Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*SJA **01** 00:17:20.6±0.8,22°.45S×65°.96W,h280km±7km,ML4.7, MW4.3*
*VAO **01** 00:17:21.9±0.5,22°.45S×66°.03W,h272km±5km,mb4.5*
*NEIC **01** 00:17:22.0±2.1,22°.58S±0°.05×66°.05W±0°.08,h262km±7km, mb4.3/125,Error ellipse: s-maj=10.5km s-min=7.2km az=80.0*
*IDC **01** 00:17:22.4±1.2,22°.50S×65°.87W,h258km±10km,mb3.8/14, mbtmp4.5/19,Error ellipse: s-maj=15.8km s-min=10.9km az=66.0*

ISC 01 00:17:20.8±0.3,**22°.53S**±0°.04×**66°.03W**±0°.04,**h251**km, **n265**,σ1§**45**/296,**mb4.3**/72,**5C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
YJA	**Yavi**	**0.59**	**54**	*eP*	**Pn**	**00 17 58.4**	**+3.7**
YJA				*eS*	**S**	**00 18 25.2**	**+4.0**
HJA	**Humahuaca**	**0.89**	**140**	*eP*	**Pn**	00 17 59.4	**+3.6**
HJA				*eP*		00 17 59.4	
SALTA		**1.71**	**189**	*eP*	**Pn**	**00 18 04.7**	**+3.3**
SALTA				*eS*	**S**	**00 18 33.5**	**0.0**
AF01	**San Pedro de A**	**2.03**	**257**		**Pn**	**00 18 06.9**	**+3.0**
AF01	**San Pedro de A**	**2.03**	**257**	*eP*	**Pn**	**00 18 07.3**	**+3.4**
AF01				*eS*	S	00 18 59.4	+22
SLA	**San Lorenzo**	**2.24**	**168**	*eP*	**Pn**	**00 18 09.1**	**+3.4**
PB09	**IPOC Station P**	**3.06**	**283**		**Pn**	**00 18 16.9**	**+2.7**
PB09				Sn	**S**	**00 18 57.4**	**+0.9**
PB09	**IPOC Station P**	**3.06**	**283**	*eP*	**Pn**	**00 18 16.6**	**+2.4**
PB09				*eS*	**S**	**00 18 59.6**	**+3.2**
PB09				IAML		00 19 04.4	
	comp=Z,545nm,0.7s						
PB06	**IPOC Station P**	**3.27**	**266**		**Pn**	**00 18 17.9**	**+1.4**
PB06				Sn	**S**	**00 19 00.5**	**-0.1**
PB06	**IPOC Station P**	**3.27**	**266**	*eP*	**Pn**	**00 18 18.7**	**+2.2**
PB06				*eS*	**S**	**00 19 02.2**	**+1.6**
PB06				IAML		00 19 06.9	
	comp=Z,764nm,0.2s						
PB03	**IPOC Station P**	**3.48**	**277**		**Pn**	**00 18 19.9**	**+1.1**
PB03				Sn	**S**	**00 19 04.4**	**-0.3**
PB03	**IPOC Station P**	**3.48**	**277**	*eP*	**Pn**	**00 18 20.5**	**+1.7**
PB03				*eS*	**S**	**00 19 04.8**	**+0.1**
PB03				IAML		00 19 06.3	
	comp=Z,2μm,0.3s						
PB01	**IPOC Station P**	**3.53**	**294**		**Pn**	**00 18 20.8**	**+1.5**
PB01				Sn	**S**	**00 19 06.5**	**+0.7**
PB01	**IPOC Station P**	**3.53**	**294**	*eP*	**Pn**	**00 18 21.2**	**+1.9**
PB01				*eS*	**S**	**00 19 06.6**	**+0.8**
PB01				IAML		00 19 07.8	
	comp=Z,729nm,0.3s						
FSA	**Cafayete**	**3.57**	**179**	*eP*	**Pn**	**00 18 22.0**	**+2.2**
PB08	**IPOC Station P**	**3.75**	**309**		**Pn**	**00 18 24.4**	**+2.2**
PB08				Sn	**S**	**00 19 12.0**	**+1.2**
PB08	**IPOC Station P**	**3.75**	**309**	*eP*	**Pn**	**00 18 24.2**	**+2.0**
PB08				*eS*	**S**	**00 19 13.7**	**+2.9**
PB08				IAML		00 19 17.7	
	comp=Z,617nm,0.3s						
PB02	**IPOC Station P**	**3.78**	**288**		**Pn**	**00 18 23.5**	**+1.3**
PB02				Sn	**S**	**00 19 10.2**	**-0.7**
PB02	**IPOC Station P**	**3.78**	**288**	*eP*	**Pn**	**00 18 23.0**	**+0.8**
PB05	**IPOC Station P**	**3.87**	**264**		**Pn**	**00 18 23.8**	**+0.6**
PB05				Sn	**S**	**00 19 11.7**	**-1.0**
PB05	**IPOC Station P**	**3.87**	**264**	*eP*	**Pn**	**00 18 23.8**	**+0.6**
GO01	**Chusmiza**	**4.10**	**313**		**Pn**	**00 18 28.1**	**+1.8**
GO01				Sn	**S**	**00 19 19.2**	**+1.0**
GO02	**Mina Guanaco**	**4.18**	**230**		**Pn**	**00 18 28.3**	**+1.2**
GO02				Sn	**S**	**00 19 20.1**	**+0.4**
HMBC	**Humberstone**	**4.23**	**301**		**Pn**	**00 18 28.2**	**+0.7**
HMBC				Sn	**S**	**00 19 19.3**	**-1.2**
HMBC	**Humberstone**	**4.23**	**301**	*eP*	**Pn**	**00 18 27.8**	**+0.3**
PB10	**IPOC Station P**	**4.28**	**256**		**Pn**	**00 18 28.7**	**+0.8**
PB10				Sn	**S**	**00 19 19.5**	**-1.8**
TA01	**Diego Aracena**	**4.33**	**296**		**Pn**	**00 18 29.1**	**+0.7**
TA01	**Diego Aracena**	**4.33**	**296**	*eP*	**Pn**	**00 18 28.6**	**+0.1**
PB11	**IPOC Station P**	**4.36**	**308**		**Pn**	**00 18 30.0**	**+0.9**
PB14	**IPOC Station P**	**4.52**	**242**		**Pn**	**00 18 31.5**	**+0.4**
PB14				Sn	**S**	**00 19 25.5**	**-1.5**
AC02	**Maricunga**	**5.13**	**213**		**Pn**	**00 18 38.9**	**+0.2**
AC02				Sn	**S**	**00 19 39.4**	**-1.3**
PB16	**IPOC Station P**	**5.29**	**321**		**Pn**	**00 18 42.7**	**+1.9**
PB16				Sn	**S**	**00 19 45.2**	**+0.7**
AC01	**Pan de Azucar**	**5.51**	**228**		**Pn**	**00 18 42.4**	**-0.4**
AC01				Sn	**S**	**00 19 44.7**	**-3.7**
PB12	**IPOC Station P**	**5.60**	**313**		**Pn**	**00 18 43.4**	**-0.7**
PB12				Sn	**S**	**00 19 47.1**	**-3.5**
AP01	**Chacalluta**	**5.78**	**315**		**Pn**	**00 18 46.6**	**+0.4**
PB18	**Visviri**	**5.88**	**326**		**Pn**	**00 18 49.8**	**+1.7**
AC06	**Mina Casimiro**	**6.21**	**218**		**Pn**	**00 18 50.9**	**-0.6**
AC06				Sn	**S**	**00 20 00.5**	**-3.6**
GO03	**Copiapo**	**6.32**	**216**		**Pn**	**00 18 52.9**	**-0.1**
GO03				Sn	**S**	**00 20 01.2**	**-5.7**
LPAZ	**La Paz**	**6.51**	**342**		**Pn**	**00 18 57.1**	**+1.1**
LPAZ				Sn	**S**	**00 20 13.2**	**+0.9**
LPAZ	**La Paz**	**6.51**	**342**	P	**Pn**	**00 18 57.9**	**+1.9**
	comp=Z,53nm,0.5s,baz=130,slow=5.1,SNR=124						
LPAZ				S	**S**	**00 20 11.4**	**-0.8**
	comp=Z,80nm,1.0s,baz=215,slow=18,SNR=13						
LPAZ	**La Paz**	**6.51**	**342**	*eP*	**Pn**	**00 18 56.5**	**+0.5**
AC04	**Llanos de Chal**	**7.26**	**218**		**Pn**	**00 19 04.3**	**-0.4**
LCO	**Las Campanas**	**7.71**	**212**		**Pn**	**00 19 10.2**	**-0.3**
SIV	**San Ignacio**	**8.01**	**37**	P	**Pn**	**00 19 14.9**	**+0.6**
	comp=Z,20nm,0.5s,baz=224,slow=9.4,SNR=154						
SIV				S	**S**	**00 20 38.8**	**-7.0**
	comp=Z,7.1nm,0.9s,baz=221,slow=20,SNR=1.0						
CO01	**Juntas del Tor**	**8.27**	**205**		**Pn**	**00 19 17.4**	**-0.2**
GO04	**Tololo Observa**	**8.73**	**208**		**Pn**	**00 19 22.7**	**-0.8**
CPUP	**Villa Florida**	**8.79**	**117**		**Pn**	**00 19 23.5**	**-0.5**
CPUP	**Villa Florida**	**8.79**	**117**	P	**Pn**	**00 19 23.7**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=210,slow=20,SNR=6.2						
CPUP	**Villa Florida**	**8.79**	**117**	*eP*	**Pn**	**00 19 25.3**	**+1.3**
BDQN	**Bodoquena, MS**	**8.89**	**78**	*eP*	**Pn**	**00 19 25.8**	**+0.5**
CFA	**Coronel Fontan**	**9.25**	**192**	P	**Pn**	**00 19 28.8**	**-1.1**
	comp=Z,2.8nm,0.3s,baz=83,slow=16,SNR=52						
CFA				S	**S**	**00 21 06.0**	**-8.5**
	comp=Z,12nm,0.3s,baz=307,slow=20,SNR=20						
CO06	**Fray Jorge**	**9.54**	**211**	Pn	**Pn**	**00 19 32.4**	**-1.0**
PTLB	**Pontes e Lacer**	**9.59**	**44**		**Pn**	**00 19 35.0**	**+0.7**
PTLB	**Pontes e Lacer**	**9.59**	**44**	*eP*	**Pn**	**00 19 34.4**	**+0.1**
CO02	**Combarbal**	**9.71**	**206**		**Pn**	**00 19 35.8**	**0.0**
AQDB	**Aquidauana**	**9.83**	**80**		**Pn**	**00 19 38.3**	**+1.0**
AQDB	**Aquidauana**	**9.83**	**80**	*eP*	**Pn**	**00 19 37.9**	**+0.6**
AMBA	**Amambai (Brazi**	**10.20**	**94**	*eP*	**Pn**	**00 19 45.5**	**+1.6**
VA03	**San Esteban**	**10.96**	**200**		**Pn**	**00 19 51.3**	**-0.1**
VILB	**Vilhena**	**11.02**	**31**		**Pn**	**00 19 53.3**	**+1.1**
VILB	**Vilhena**	**11.02**	**31**	*eP*	**Pn**	**00 19 51.6**	**-0.6**
VA06	**Catapilco**	**11.03**	**204**	Pn	**Pn**	**00 19 51.8**	**-0.3**
PEL	**Peldehue**	**11.35**	**200**		**Pn**	**00 19 55.1**	**-1.1**
PSAL	**Palomas, Salto**	**11.36**	**140**	*eP*	**Pn**	**00 19 57.8**	**+1.5**
MT08	**Bocatoma Ro**	**11.43**	**197**		**Pn**	**00 19 57.4**	**0.0**
MT16	**CCHEN**	**11.56**	**199**		**Pn**	**00 19 57.8**	**-1.1**
PP1B	**Ponte de Pedra**	**11.57**	**67**	*eP*	**Pn**	**00 19 59.4**	**+0.3**
MT05	**Renca**	**11.59**	**200**		**Pn**	**00 19 59.4**	**+0.1**
MT02	**Curacav**	**11.60**	**202**		**Pn**	**00 19 59.1**	**-0.3**
MT03	**Universidad Ad**	**11.62**	**199**		**Pn**	**00 19 59.5**	**-0.1**
SALV	**Santo Antonio**	**11.78**	**58**	*eP*	**Pn**	**00 20 02.1**	**+0.4**
LMEL	**Las Melosas**	**11.86**	**197**		**Pn**	**00 20 01.9**	**-0.8**
MT09	**Talagante**	**12.03**	**200**		**Pn**	**00 20 03.8**	**-1.0**
BO04	**La Punta**	**12.11**	**198**		**Pn**	**00 20 05.0**	**-0.7**
MT01	**Popeta**	**12.19**	**201**		**Pn**	**00 20 06.7**	**+0.1**
BO01	**Tunca**	**12.63**	**199**		**Pn**	**00 20 11.8**	**-0.2**
C2SB	**Chapadao do Su**	**12.90**	**76**	*eP*	**P**	**00 20 16.4**	**-1.0**
BO02	**Sierra Bellavi**	**12.91**	**198**		**Pn**	**00 20 14.0**	**-1.5**
PTGB	**Pitanga**	**12.99**	**102**	*eP*	**P**	**00 20 18.2**	**-0.2**
ITAB	**Concordia**	**13.46**	**113**		**Pn**	**00 20 21.9**	**-0.3**
ITAB	**Concordia**	**13.46**	**113**	*eP*	**P**	**00 20 23.2**	**-0.3**
CPSB	**Cacapava Do Su**	**13.73**	**127**	*eP*	**P**	**00 20 26.6**	**+0.1**
LDASE	**Londrina, Braz**	**13.77**	**96**	*eP*	**P**	**00 20 26.7**	**-0.3**
ML02	**Panimavida**	**14.00**	**198**	P	**Pn**	**00 20 27.3**	**-1.5**
PDRB	**Porto dos Gac**	**14.02**	**41**	*eP*	**Pn**	**00 20 28.5**	**-0.8**
PLTB	**Pedras Altas**	**14.38**	**132**		**Pn**	**00 20 32.8**	**-0.6**
PLTB	**Pedras Altas**	**14.38**	**132**	*eP*	**P**	**00 20 33.9**	**+0.2**
NNA	**Nana**	**14.70**	**314**	P	**Pn**	**00 20 39.0**	**+1.5**
	comp=Z,14nm,0.7s,baz=154,slow=9.7,SNR=5.0						
NNA				S	**S**	**00 23 17.7**	**-2.5**
	comp=Z,3.7nm,0.3s,baz=221,slow=17,SNR=1.6						
ITRB	**Iturama**	**14.89**	**82**	*eP*	**P**	**00 20 38.2**	**-1.3**
ARAG	**Araguaiana, MT**	**15.05**	**66**	*eP*	**P**	**00 20 41.1**	**-0.1**
CLDB	**Colider**	**15.17**	**42**	*eP*	**P**	**00 20 42.1**	**-0.4**
FRTB	**Fartura**	**15.20**	**96**	*eP*	**Pn**	**00 20 43.1**	**-0.3**
CNLB	**Canela**	**15.23**	**119**	*eP*	**Pn**	**00 20 43.3**	**-0.5**
BI05	**Punta Hualpn**	**15.47**	**202**	P	**P**	**00 20 42.5**	**-3.1**
TRQA	**Tornquist**	**15.87**	**168**		**P**	**00 20 49.9**	**-0.1**
TRQA					IAmb	IAmb	00 20 52.0
	comp=Z,5.8nm,0.6s						
MAJ01	**Sao Joao Batis**	**16.18**	**111**	*eP*	**P**	**00 20 53.7**	**+0.2**
BB19B	**Bebedouro**	**16.32**	**88**	*eP*	**P**	**00 20 55.3**	**+0.1**
RCLB	**Rio Claro- Sao**	**17.10**	**93**	*eP*	**P**	**00 21 04.1**	**+0.4**
SPB	**Sao Paulo**	**17.15**	**97**	P	**P**	**00 21 04.3**	**+0.2**
SPB	**Sao Paulo**	**17.15**	**97**	*eP*	**P**	**00 21 04.4**	**+0.2**
PET01	**Itanhaem-SP**	**17.31**	**100**	*eP*	**P**	**00 21 05.8**	**0.0**
IPMB	**Ipameri, GO**	**17.32**	**78**	*eP*	**P**	**00 21 06.0**	**-0.1**
SNDB	**Serra Nova Dou**	**17.54**	**56**	*eP*	**P**	**00 21 08.4**	**-0.1**
VAO	**Valinhos**	**17.59**	**95**		**P**	**00 21 09.2**	**+0.1**
VAO	**Valinhos**	**17.59**	**95**	*eP*	**P**	**00 21 09.0**	**-0.1**
BDFB	**Brasilia**	**18.34**	**71**		**P**	**00 21 18.1**	**+0.8**
BDFB	**Brasilia**	**18.34**	**71**	P	**P**	**00 21 18.3**	**+1.0**
	comp=Z,41nm,0.8s,baz=247,slow=11,SNR=55						
LR05	**Currie**	**18.36**	**195**		**P**	**00 21 17.1**	**0.0**
NPGB	**Novo Progresso**	**18.51**	**35**	*eP*	**P**	**00 21 17.2**	**-1.8**
PLCA	**Paso Flores**	**18.55**	**191**		**P**	**00 21 18.1**	**-1.1**
PLCA					IAmb	IAmb	00 21 21.0
	comp=Z,9.6nm,0.8s						
PLCA	**Paso Flores**	**18.55**	**191**	P	**P**	**00 21 19.8**	**+0.6**
	comp=Z,8.7nm,0.9s,baz=19,slow=12,SNR=14						
PLCA	**Paso Flores**	**18.55**	**191**	*eP*	**P**	**00 21 19.5**	**+0.3**
PMNB	**Patos De Minas**	**18.77**	**81**	*eP*	**P**	**00 21 21.0**	**-0.9**
PARB	**Paraibuna**	**18.82**	**96**	*eP*	**P**	**00 21 22.5**	**+0.2**
TEFE	**Tefe**	**18.95**	**4**	*eP*	**P**	**00 21 22.2**	**-1.4**
BSCB	**Bom Sucesso**	**19.80**	**90**	*eP*	**P**	**00 21 32.1**	**-0.7**
MACA	**Manacapuru-AM**	**19.94**	**16**	P	**P**	**00 21 31.3**	**-2.9**
MACA					IAmb	IAmb	00 21 35.0
	comp=Z,12nm,0.7s						
LL01	**San Ignacio de**	**20.50**	**194**	P	**P**	**00 21 39.2**	**-0.7**
ITTB	**Itaituba**	**20.62**	**30**	*eP*	**P**	**00 21 39.6**	**-1.9**
LL02	**Futaleuf**	**21.17**	**192**		**P**	**00 21 44.4**	**-2.4**
LL02					IAmb	IAmb	00 21 47.8
	comp=Z,20nm,1.1s						
DIAM	**Diamantina, MG**	**21.37**	**83**	*eP*	**P**	**00 21 48.5**	**-0.7**
SMTB	**Santa Maria do**	**22.32**	**55**	*eP*	**P**	**00 21 56.9**	**-0.9**
SDBA	**SAO DESIDERIO**	**22.50**	**67**	*eP*	**P**	**00 21 58.3**	**-1.2**
PRPB	**Parauapebas**	**22.57**	**46**	*eP*	**P**	**00 21 58.8**	**-1.2**
MAL2	**Monte Alegre,**	**23.41**	**31**		**P**	**00 22 06.9**	**-0.8**
SJMB	**Sao Joao De Ma**	**23.56**	**85**	*eP*	**P**	**00 22 08.1**	**-0.9**
RIB01	**Linhares ES**	**24.15**	**87**	*eP*	**P**	**00 22 13.2**	**-1.2**
BOAV	**Boa Vista**	**25.35**	**13**	P	**P**	**00 22 24.8**	**-0.4**
BOAV					IAmb	IAmb	00 22 25.9
	comp=Z,6.6nm,0.9s						
BOAV	**Boa Vista**	**25.35**	**13**	*eP*	**P**	**00 22 25.0**	**-0.1**
GUA01	**Guaratinga, BA**	**25.39**	**81**	*eP*	**P**	**00 22 24.8**	**-0.8**
OTAV	**Otavalo**	**25.66**	**330**	*eP*	**P**	**00 22 26.5**	**-2.0**
FLOC	**Florencia**	**25.73**	**337**	P	**P**	**00 22 27.2**	**-1.5**
FLOC					IAmb	IAmb	00 22 32.5
	comp=Z,6.5nm,0.8s						
ABR01	**Abrolhos, BA**	**26.03**	**85**	*eP*	**P**	**00 22 30.8**	**-0.5**
ROSC	**El Rosal**	**28.38**	**342**	P	**P**	**00 22 54.5**	**+1.9**
	comp=Z,5.3nm,0.3s,baz=126,slow=19,SNR=1.6						
	comp=Z,5.3nm,0.3s						
RUSC	**La Rusia**	**29.07**	**345**	P	**P**	**00 22 57.1**	**-1.7**
RUSC					IAmb	IAmb	00 23 08.3
	comp=Z,4.4nm,0.7s						
EFI	**East Falkland**	**29.75**	**170**	P	**P**	**00 23 03.7**	**-0.1**
NBAN	**Anadia - AL**	**31.24**	**71**	*eP*	**P**	**00 23 16.2**	**-1.2**
RCBR	**Riachuelo**	**33.49**	**65**		**P**	**00 23 35.4**	**-1.5**
RCBR	**Riachuelo**	**33.49**	**65**	*eP*	**P**	**00 23 37.1**	**+0.2**
MTO3	**Montecristo**	**43.23**	**326**	P	**P**	**00 25 00.2**	**+2.2**
BELA	**Belgrano 2**	**57.38**	**172**	P	**P**	**00 26 44.5**	**+1.9**
VNA3	**Neumayer Olymp**	**58.26**	**162**	P	**P**	**00 26 50.1**	**+1.7**
VNA3	**Neumayer Olymp**	**58.26**	**162**	⇑P	**P**	**00 26 50.5**	**+1.7**
	comp=Z,5.8nm,0.7s						
VNA1	**Neumayer--Stat**	**58.43**	**161**	P	**P**	**00 26 51.7**	**+1.8**
VNA1	**Neumayer--Stat**	**58.43**	**161**	⇑P	**P**	**00 26 51.7**	**+1.8**
	comp=Z,5.6nm,0.6s						
LRAL	**Lakeview Retre**	**58.76**	**339**	P	**P**	**00 26 52.7**	**0.0**
LRAL					IAmb	IAmb	00 26 53.1
	comp=Z,4.8nm,0.5s						
VNA2	**Neumayer--Watz**	**58.81**	**161**	P	**P**	**00 26 54.4**	**+1.8**
	baz=304,slow=7.1						
VNA2	**Neumayer--Watz**	**58.81**	**161**	⇑P	**P**	**00 26 54.4**	**+1.8**
	comp=Z,9.0nm,0.6s,baz=304,slow=7.1						
Y49A	**Blount Mountai**	**59.33**	**340**	P	**P**	**00 26 56.6**	**0.0**
Y49A					IAmb	IAmb	00 26 57.3
	comp=Z,6.1nm,1.0s						
FPAL	**Fort Paine**	**59.72**	**341**	P	**P**	**00 26 59.4**	**+0.2**
V55A	**Taylorsville**	**59.81**	**346**	P	**P**	**00 27 00.4**	**+0.6**
833A	**Chaparral WMA,**	**59.93**	**326**		**P**	**00 27 01.9**	**+1.2**
V53A	**Saluda**	**60.02**	**344**	P	**P**	**00 27 01.4**	**+0.1**
V53A					IAmb	IAmb	00 27 10.4
	comp=Z,12nm,1.3s						
X48A	**Hartselle**	**60.08**	**340**		**P**	**00 27 01.9**	**+0.3**
W50A	**Signal Mountai**	**60.25**	**342**	P	**P**	**00 27 02.4**	**-0.5**
W50A					IAmb	IAmb	00 27 03.9
	comp=Z,7.6nm,0.7s						
TKL	**Tuckaleechee C**	**60.26**	**343**	P	**P**	**00 27 02.1**	**-0.7**
TKL					IAmb	IAmb	00 27 43.0
	comp=Z,15nm,1.4s						
SNAA	**Sanae**	**60.45**	**161**	P	**P**	**00 27 05.3**	**+1.5**
SNAA	**Sanae**	**60.45**	**161**	⇑P	**P**	**00 27 05.3**	**+1.5**
	comp=Z,102nm,0.7s						
SNAA	**Sanae**	**60.45**	**161**		**P**	**00 27 04.0**	**+0.2**
SNAA					IAmb	IAmb	00 27 06.4
	comp=Z,5.7nm,0.9s						
SNAA	**Sanae**	**60.45**	**161**	P	**P**	**00 27 04.7**	**+1.0**
	comp=Z,4.1nm,0.7s,baz=282,slow=6.7,SNR=34						
	comp=Z,4.1nm,0.7s						
V48A	**Smith Brothers**	**61.20**	**341**	P	**P**	**00 27 09.4**	**+0.3**
V48A					IAmb	IAmb	00 27 10.1
	comp=Z,6.8nm,0.8s						
JCT	**Junction City**	**61.88**	**327**	P	**P**	**00 27 14.0**	**+0.1**
JCT					IAmb	IAmb	00 27 15.4
	comp=Z,6.3nm,0.8s						
BRDY	**Brady**	**62.14**	**328**	P	**P**	**00 27 16.4**	**+0.8**
TROLL	**Troll, Antarti**	**62.16**	**161**	P	**P**	**00 27 17.2**	**+2.0**
TROLL	**Troll, Antarti**	**62.16**	**161**	⇑P	**P**	**00 27 17.2**	**+2.0**
	comp=Z,259nm,0.6s						
SAND	**Sanderson**	**62.66**	**325**	IAmb	IAmb	00 27 21.1	
	comp=Z,8.4nm,1.3s						
PARMO	**Parma**	**62.99**	**339**	P	**P**	**00 27 20.5**	**-0.5**
TXAR	**Lajitas Array**	**63.02**	**323**	P	**P**	**00 27 20.6**	**-0.8**
TXAR	**Lajitas Array**	**63.02**	**323**	P	**P**	**00 27 22.4**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=151,slow=8.8,SNR=11						
	comp=Z,0.7nm,0.6s						
TX31	**Lajitas Ar. Si**	**63.02**	**323**	P	**P**	**00 27 20.6**	**-0.8**
Z35A	**Perchaven, San**	**63.02**	**331**	P	**P**	**00 27 20.9**	**-0.4**
Z35A					IAmb	IAmb	00 27 23.2
	comp=Z,7.3nm,0.7s						
PLPT	**Palo Pinto**	**63.08**	**330**	P	**P**	**00 27 21.1**	**-0.6**
PLPT					IAmb	IAmb	00 27 23.8
	comp=Z,13nm,1.3s						
PBMO	**Poplar Bluff**	**63.32**	**338**	P	**P**	**00 27 23.1**	**0.0**
APMT	**Aspermont**	**64.35**	**329**	P	**P**	**00 27 30.7**	**+0.7**
APMT					IAmb	IAmb	00 27 31.5
	comp=Z,6.0nm,0.7s						
DEOK	**Depew**	**64.82**	**333**	P	**P**	**00 27 33.5**	**+0.6**
VHRN	**Van Horn**	**64.86**	**323**		**P**	**00 27 33.3**	**-0.2**
VHRN					IAmb	IAmb	00 27 34.8
	comp=Z,4.5nm,0.7s						
OK052	**Battle Ridge R**	**65.08**	**333**	P	**P**	**00 27 33.8**	**-0.8**
OK029	**Liberty Lake**	**65.19**	**332**	P	**P**	**00 27 34.2**	**-1.1**
R40A	**Maddies Statio**	**65.32**	**337**	IAmb	IAmb	00 27 40.3	
	comp=Z,5.6nm,0.8s						
MNTX	**Cornudas Mount**	**65.78**	**324**	P	**P**	**00 27 39.5**	**+0.3**
MNTX					IAmb	IAmb	00 27 40.7
	comp=Z,6.7nm,1.4s						
SMWD	**Samnorwood**	**65.86**	**330**	P	**P**	**00 27 39.2**	**-0.5**
MSTX	**Muleshoe**	**66.18**	**327**		**P**	**00 27 42.2**	**+0.4**
DBIC	**Dimbokro**	**66.49**	**72**	P	**P**	**00 27 43.4**	**-0.7**
	comp=Z,9.5nm,0.8s,baz=238,slow=2.4,SNR=9.2						
	comp=Z,9.5nm,0.8s						
P38A	**Dawn**	**66.95**	**337**	P	**P**	**00 27 46.6**	**+0.2**
QSPA	**South Pole Qui**	**67.67**	**180**	P	**P**	**00 27 54.7**	**+4.0**
	comp=Z,4.0nm,0.6s,baz=139,slow=2.7,SNR=18						
TASM	**ASL Pad, Albuq**	**68.84**	**325**	P	**P**	**00 27 59.0**	**+0.5**
TASM					IAmb	IAmb	00 28 01.1
	comp=Z,3.7nm,1.0s						
TASM	**ASL Pad, Albuq**	**68.84**	**325**	P	**P**	**00 27 58.2**	**-0.3**
T25A	**Trinidad**	**69.50**	**328**	P	**P**	**00 28 02.7**	**+0.2**
T25A					IAmb	IAmb	00 28 04.7
	comp=Z,4.5nm,0.9s						
SDCO	**Great Sand Dun**	**70.51**	**328**	P	**P**	**00 28 09.4**	**+0.7**
SDCO					IAmb	IAmb	00 28 11.4
	comp=Z,3.6nm,0.8s						
S22A	**4UR Ranch, Cre**	**71.17**	**327**	P	**P**	**00 28 14.3**	**+1.6**
MVCO	**Mesa Verde**	**71.63**	**325**	P	**P**	**00 28 16.1**	**+0.7**
ECSD	**EROS Data Cent**	**71.66**	**337**	P	**P**	**00 28 14.3**	**-0.8**
ECSD					IAmb	IAmb	00 28 16.3
	comp=Z,9.4nm,1.4s						
WUAZ	**Wupatki**	**71.95**	**322**		**P**	**00 28 17.8**	**+0.6**
WUAZ					IAmb	IAmb	00 28 20.5
	comp=Z,4.1nm,0.9s						
PV22	**Blue Mesa, Par**	**72.78**	**326**		**P**	**00 28 22.4**	**+0.3**
PV22					IAmb	IAmb	00 28 24.9
	comp=Z,5.4nm,0.9s						
PV23	**Carpenter Ridg**	**72.83**	**326**	P	**P**	**00 28 23.1**	**+0.6**
PV23					IAmb	IAmb	00 28 25.2
	comp=Z,7.4nm,1.0s						
U15A	**North Rim**	**73.12**	**322**		**P**	**00 28 25.2**	**+1.0**
U15A					IAmb	IAmb	00 28 27.7
	comp=Z,3.5nm,0.8s						
O20A	**White River Ci**	**73.71**	**328**		**P**	**00 28 28.4**	**+0.9**
O20A					IAmb	IAmb	00 28 30.4
	comp=Z,7.0nm,0.8s						
KNB	**Kanab**	**73.84**	**323**	P	**P**	**00 28 28.7**	**+0.4**
KNB					IAmb	IAmb	00 28 31.9
	comp=Z,8.0nm,0.9s						
LCMT	**Little Creek M**	**74.07**	**322**	P	**P**	**00 28 30.6**	**+1.1**
V12A	**Nelson**	**74.10**	**320**	P	**P**	**00 28 29.9**	**+0.2**
V12A					IAmb	IAmb	00 28 32.5
	comp=Z,4.2nm,0.9s						
SRU	**San Rafael Swe**	**74.11**	**325**	P	**P**	**00 28 30.2**	**+0.5**
SRU					IAmb	IAmb	00 28 32.5
	comp=Z,6.2nm,0.8s						
ELS	**Elsinore Mount**	**74.27**	**317**	P	**P**	**00 28 30.7**	**0.0**
P18A	**Preston Nutter**	**74.34**	**326**	P	**P**	**00 28 30.9**	**-0.4**
P18A					IAmb	IAmb	00 28 34.3
	comp=Z,5.4nm,0.7s						
P17A	**Butcher Ranch,**	**74.49**	**326**	P	**P**	**00 28 32.8**	**+0.9**
P17A					IAmb	IAmb	00 28 34.8
	comp=Z,7.5nm,1.0s						
CCUT	**Cedar City**	**74.52**	**323**		**P**	**00 28 34.4**	**+2.1**
CCUT					IAmb	IAmb	00 28 36.0
	comp=Z,5.5nm,0.9s						
RDMU	**Red Mountain**	**74.70**	**327**	P	**P**	**00 28 33.9**	**+0.7**
RDMU					IAmb	IAmb	00 28 35.8
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.21**	**69**	P	**P**	**00 28 35.6**	**-0.7**
TORD					IAmb	IAmb	00 28 37.6
	comp=Z,3.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.21**	**69**	P	**P**	**00 28 35.7**	**-0.7**
	comp=Z,3.7nm,0.4s,baz=261,slow=3.8,SNR=4.2						
	comp=Z,3.7nm,0.4s						
BSUT	**Blindstream Ca**	**75.28**	**326**		**P**	**00 28 36.4**	**-0.3**
BSUT					IAmb	I

ZALV SKPbc **SKPbc** **00 39 33.7 -1.4**
comp=Z,0.6nm,0.5s,baz=300,slow=1.2,SNR=3.9
MKAR Makanchi Array 144.82 39 PKP **PKPdf** **00 36 28.3 +0.6**
comp=Z,1.6nm,0.7s,baz=305,slow=4.2,SNR=18
MKAR SKPbc **SKPbc** **00 39 43.4 +0.3**
comp=Z,0.8nm,0.8s,baz=321,slow=1.7,SNR=5.4
SONM Songino Array 154.03 12 PKP **PKPdf** **00 36 42.6 +0.2**
comp=Z,0.3nm,0.3s,baz=44,slow=8.8,SNR=2.4

*IDC **01** 00:30:07.6±2.4,5˚.67S×146˚.60E,h37km±19km,mb4.0/16, mbtmp4.3/18,ML3.6/2,MS3.5/25,Error ellipse: s-maj=23.3km s-min=10.7km az=97.0*
*NEIC **01** 00:30:08.5±2.1,5˚.75S±0˚.06×146˚.80E±0˚.08,h43km±7km, mb4.5/22,Error ellipse: s-maj=11.6km s-min=9.0km az=90.0*
*DJA **01** 00:30:14.8±0.8,6˚S±6˚×147˚6E±˚,h96km±5km,M4.8/22, mb4.5/22,mB5.4/7,MLv4.8/3,Mw(mB)4.9/7*
ISC 01 00:30:07.6±0.4,5.73S±0˙.04×146˚.63E±0˙.07,h35km,n109, σ1ş82/97,mb4.4/27,MS3.5/20,1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.69**	**172**		**Pn**	**00 31 03.6**	**+1.5**
PMG	**Port Moresby**	**3.69**	**172**	Pn	**Pn**	**00 31 04.3**	**+2.2**
	51nm,0.3s,baz=15,slow=6.4,SNR=67						
PMG				Sn	**Sn**	**00 31 46.2**	**+1.8**
	77nm,0.3s,baz=336,slow=19,SNR=6.7						
PMG				LR	LR	00 32 54.9	
	comp=Z,1µm,18.0s,baz=348,slow=45 158nm,0.3s						
PMG	**Port Moresby**	**3.69**	**172**	P	**Pn**	**00 31 04.4**	**+2.3**
PMG	**Port Moresby**	**3.69**	**172**	S	**Sn**	**00 31 46.3**	**+1.9**
PMG	**Port Moresby**	**3.69**	**172**	P	**Pn**	**00 31 04.5**	**+2.3**
PMG	**Port Moresby**	**3.69**	**172**	S	**Sn**	**00 31 46.3**	**+1.9**
MANU	**Manus Island**	**3.74**	**11**		**Pn**	**00 31 04.2**	**+1.3**
RABL	**Rabaul**	**5.72**	**75**		**Pn**	**00 31 28.8**	**-1.4**
JAY	**Jayapura**	**6.72**	**298**	Pn	**Pn**	**00 31 47.2**	**+3.4**
	0.6nm,0.3s,baz=94,slow=23,SNR=1.5						
JAY				LR	LR	00 35 07.6	
	comp=Z,202nm,18.3s,baz=229,slow=45						
JAY	**Jayapura**	**6.72**	**298**	P	Pn	00 31 53.3	+9.5
	0.1nm28nm,1.0s						
GENI	**Genyem**	**7.16**	**296**	P	Pn	00 31 57.6	+7.8
	0.4nm4µm76nm,1.0s						
SMPI	**Sarmi**	**8.73**	**295**	P	Pn	00 32 18.8	+7.4
	37nm,0.7s						
COEN	**Coen**	**8.85**	**202**		**Pn**	**00 32 14.2**	**+1.1**
COEN				Sn	**Sn**	**00 33 50.6**	**-1.0**
COEN	**Coen**	**8.85**	**202**	P	**Pn**	**00 32 14.6**	**+1.5**
COEN	**Coen**	**8.85**	**202**	S	**Sn**	**00 33 51.1**	**-0.6**
MTSU	**Mount Surprise**	**12.53**	**190**	P	**Pn**	**00 33 05.2**	**+1.7**
MTSU	**Mount Surprise**	**12.53**	**190**	S	**Sn**	**00 35 22.4**	**+0.5**
HNR	**Honiara**	**13.70**	**106**	LR	LR	00 37 54.4	
	comp=Z,130nm,18.4s,baz=293,slow=34						
FAKI	**Fak Fak**	**14.61**	**280**		**P**	**00 33 37.8**	**0.0**
FAKI	**Fak Fak**	**14.61**	**280**	P	**P**	**00 33 36.9**	**-0.9**
	14nm,0.9s						
SWI	**Sorong**	**16.08**	**287**	P	**P**	**00 33 54.2**	**0.0**
QIS	**Mount Isa**	**16.24**	**204**	P	**Pn**	**00 33 54.2**	**+1.1**
MTN	**Manton Dam**	**16.84**	**244**		**P**	**00 34 03.2**	**+0.6**
WB0	**Warramunga Arr**	**18.34**	**219**	P	**P**	**00 34 19.0**	**-0.1**
WR8	**Warramunga Arr**	**18.41**	**219**		**P**	**00 34 19.8**	**-0.1**
WR8				IAmb	IAmb	00 34 36.0	
	comp=Z,25nm,1.1s						
WRAB	**Tennant Creek**	**18.49**	**219**	P	**P**	**00 34 21.0**	**+0.2**
WRAB				IAmb	IAmb	00 34 40.2	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**18.49**	**219**	P	**P**	**00 34 20.0**	**-0.8**
WRA	**Warramunga Arr**	**18.50**	**219**	P	**P**	**00 34 20.1**	**-0.9**
WRA	**Warramunga Arr**	**18.50**	**219**	P	**P**	**00 34 20.2**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=43,slow=12,SNR=21						
WRA				S	**Sn**	**00 37 37.9**	**-9.3**
	comp=Z,0.7nm,0.7s,baz=38,slow=22,SNR=4.7						
WRA				PcP	**PcP**	**00 38 50.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=28,slow=2.0,SNR=6.0						
WRA				ScP	**ScP**	**00 42 22.9**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=54,slow=2.4,SNR=2.2						
WRA				LR	LR	00 43 00.2	
	comp=Z,277nm,19.0s,baz=9.5,slow=42 comp=Z,12nm,0.8s						
GUMO	**Guam**	**19.28**	**355**	LR	LR	00 41 37.4	
	comp=Z,78nm,18.3s,baz=134,slow=36						
NLAI	**Namlea**	**19.62**	**276**	P	**Pn**	**00 34 34.8**	**0.0**
	comp=Z,29nm,0.8s						
EIDS	**Eidsvold**	**19.99**	**168**	P	**P**	**00 34 37.0**	**-0.1**
EIDS				IAmb	IAmb	00 34 41.6	
	comp=Z,12nm,0.8s						
EIDS	**Eidsvold**	**19.99**	**168**	P	**P**	**00 34 38.7**	**+1.6**
KNRA	**Kununurra**	**20.12**	**239**	P	**P**	**00 34 39.7**	**+1.0**
KNRA				IAmb	IAmb	00 34 48.6	
	comp=Z,11nm,0.8s						
QLP	**Quilpie**	**20.86**	**186**	P	**P**	**00 34 48.9**	**+2.3**
AS31	**Alice Springs**	**21.63**	**213**	P	**P**	**00 34 55.8**	**+0.8**
ASAR	**Alice Springs**	**21.63**	**213**	P	**P**	**00 34 55.0**	**0.0**
ASAR	**Alice Springs**	**21.63**	**213**	P	**P**	**00 34 55.0**	**0.0**
	comp=Z,4.3nm,0.7s,baz=54,slow=8.1,SNR=40						
ASAR				S	**S**	**00 38 53.8**	**+1.0**
	comp=Z,2.4nm,0.9s,baz=28,slow=23,SNR=5.9						
ASAR				ScP	**ScP**	**00 42 30.9**	**+0.3**
	comp=Z,0.8nm,1.0s,baz=52,slow=2.2,SNR=2.6						
ASAR				LR	LR	00 44 22.3	
	comp=Z,384nm,19.1s,baz=84,slow=39 comp=Z,4.3nm,0.7s						
SOEI	**Soe**	**22.51**	**258**	P	**P**	**00 35 07.4**	**+2.9**
SOEI				IAmb	IAmb	00 35 26.5	
	comp=Z,24nm,0.9s						
SOEI	**Soe**	**22.51**	**258**	P	**P**	**00 35 05.0**	**+0.4**
SOEI	**Soe**	**22.51**	**258**	P	**P**	**00 35 06.5**	**+1.9**
	comp=Z,37nm,0.9s						
INKA	**Innaminka**	**22.59**	**194**		**P**	**00 35 04.6**	**-0.5**
INKA				IAmb	IAmb	00 35 07.9	
	comp=Z,15nm,0.5s						
BATI	**Baumata**	**23.17**	**257**	LR	LR	00 46 42.2	
	comp=Z,191nm,20.1s,baz=108,slow=43						
FITZ	**Fitzroy Crossi**	**23.89**	**237**	P	**P**	**00 35 19.0**	**+0.8**
FITZ	**Fitzroy Crossi**	**23.89**	**237**	LR	LR	00 45 51.9	
	comp=Z,208nm,19.1s,baz=37,slow=40						
LUWI	**Luwuk**	**24.26**	**280**	P	**P**	**00 35 22.5**	**+0.9**
LUWI	**Luwuk**	**24.26**	**280**	P	**P**	**00 35 23.5**	**+1.8**
LUWI	**Luwuk**	**24.26**	**280**	P	**P**	**00 35 20.7**	**-1.0**
MMRI	**Maumere**	**24.37**	**262**	P	**P**	**00 35 25.7**	**+3.0**
EDFI	**Ende, Flores**	**24.91**	**262**	P	**P**	**00 35 25.7**	**-2.1**
	comp=Z,838nmcomp=Z,18nm,0.9s						
ARMA	**Armidale**	**25.00**	**170**	P	**P**	**00 35 27.4**	**-1.0**
ARMA				IAmb	IAmb	00 35 30.3	
	comp=Z,7.0nm,0.7s						
CMSA	**Cobar Meteorol**	**25.69**	**182**	P	**P**	**00 35 35.9**	**+1.5**
WSI	**Waingapu**	**26.38**	**260**	P	**P**	**00 35 41.6**	**+0.7**
STKA	**Stephens Creek**	**26.43**	**190**	P	**P**	**00 35 41.7**	**+0.5**
STKA				IAmb	IAmb	00 35 44.5	
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**26.43**	**190**	P	**P**	**00 35 41.9**	**+0.7**
	comp=Z,6.4nm,0.8s,baz=341,slow=11,SNR=11						
STKA				LR	LR	00 47 01.8	
	comp=Z,147nm,18.2s,baz=21,slow=38 comp=Z,6.4nm,0.8s						
STKA	**Stephens Creek**	**26.43**	**190**	P	**P**	**00 35 42.4**	**+1.2**
TOLI2	**Tolitoli**	**26.69**	**284**	P	**P**	**00 35 42.9**	**-0.9**
TOLI2				IAmb	IAmb	00 35 44.9	
	comp=Z,6.5nm,0.9s						
KAPI	**Kappang**	**26.77**	**270**	LR	LR	00 47 40.4	
	comp=Z,74nm,20.1s,baz=100,slow=39						
AUSIS	**Research Schoo**	**29.49**	**176**	P	**P**	**00 36 10.8**	**+2.3**
H11S3	**WAKE ISLAND Hy**	**31.16**	**39**	T	T	01 09 19.3	
	baz=220,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**31.17**	**39**	T	T	01 09 18.0	
	baz=220,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**31.18**	**39**	T	T	01 09 20.4	
	baz=220,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**32.20**	**38**	T	T	01 10 36.6	
	baz=219,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**32.22**	**38**	T	T	01 10 39.6	
	baz=219,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**32.22**	**38**	T	T	01 10 39.6	
	baz=219,slow=76,SNR=24						
JCJ	**Chichijima**	**32.92**	**353**	LR	LR	00 49 00.4	
	comp=Z,35nm,18.9s,baz=110,slow=34						
JOW	**Kunigami**	**36.93**	**332**	LR	LR	00 49 58.3	
	comp=Z,34nm,20.1s,baz=113,slow=32						
NWAO	**Narrogin (SRO)**	**38.48**	**222**	LR	LR	00 55 12.5	
	comp=Z,236nm,18.3s,baz=262,slow=39						
JNU	**Nakatsue**	**41.43**	**340**	LR	LR	00 52 16.2	
	comp=Z,63nm,19.5s,baz=142,slow=32						
URZ	**Urewera**	**42.59**	**144**	LR	LR	00 53 41.2	
	comp=Z,66nm,21.2s,baz=304,slow=33						
MJAR	**Matsushiro Arr**	**42.79**	**350**	P	**P**	**00 38 01.9**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=141,slow=7.9,SNR=1.8 comp=Z,0.9nm,0.4s						
MRZ	**Mangatainoka R**	**43.38**	**148**	P	**P**	**00 38 05.3**	**-1.4**
SNZO	**South Karori**	**43.39**	**149**	P	**P**	**00 38 05.7**	**-1.0**
NJ2	**Nanjing**	**45.95**	**327**	*eP*	**P**	**00 38 30.0**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	**Korea Array**	**46.37**	**339**	P	**P**	**00 38 30.1**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=157,slow=10.0,SNR=6.2 comp=Z,2.5nm,0.9s						
HNS	**HongShan**	**52.22**	**328**	⇓P	**P**	**00 39 16.0**	**+0.8**
HNS				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**52.80**	**298**	P	**P**	**00 39 20.4**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=121,slow=5.9,SNR=14						
CMAR				LR	LR	01 02 13.1	
	comp=Z,7.6nm,20.5s,baz=120,slow=36 comp=Z,1.1nm,0.3s						
XAN	**Xi'an**	**53.24**	**321**	*eP*	**P**	**00 39 22.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PZH	**PanZhiHua**	**54.00**	**309**	P	**P**	**00 39 33.5**	**+4.8**
HHC	**Hu-ho-hao-te**	**56.41**	**328**	*eP*	**P**	**00 39 48.4**	**+2.6**
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				pmax	pmax		
	comp=Z,80nm,3.8s						
PETK	**Petropavlovsk-**	**59.37**	**8**	P	**P**	**00 40 06.0**	**-0.2**
PETK	**Petropavlovsk-**	**59.37**	**8**	P	**P**	**00 40 06.3**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=196,slow=15,SNR=1.9						
PETK				LR	LR	01 01 45.5	
	comp=Z,34nm,21.8s,baz=189,slow=32 comp=Z,2.0nm,0.8s						
HILR	**Hailar Array B**	**59.82**	**340**	P	**P**	**00 40 09.2**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=119,slow=12,SNR=1.6 comp=Z,0.9nm,0.4s						
SONM	**Songino Array**	**63.99**	**331**	P	**P**	**00 40 37.2**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=152,slow=6.7,SNR=4.9						
SONM				LR	LR	01 08 13.5	
	comp=Z,25nm,20.5s,baz=218,slow=36 comp=Z,0.8nm,0.5s						
MA2	**Magadan**	**65.19**	**2**	LR	LR	01 05 07.4	
	comp=Z,23nm,21.9s,baz=114,slow=32						
SEY	**Seynchan**	**68.61**	**3**	LR	LR	01 07 04.4	
	comp=Z,23nm,21.9s,baz=189,slow=32						
VNDA	**Vanda**	**72.20**	**177**	P	**P**	**00 41 27.9**	**-0.6**
VNDA				IAmb	IAmb	00 41 29.4	
	comp=Z,4.2nm,0.8s						
VNDA	**Vanda**	**72.20**	**177**	P	**P**	**00 41 28.4**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=329,slow=6.7,SNR=33						
VNDA				LR	LR	01 11 43.6	
	comp=Z,39nm,18.3s,baz=352,slow=34 comp=Z,4.1nm,0.8s						
WMQ	**Urumqi**	**72.35**	**319**	*eP*	**P**	**00 41 30.4**	**+0.3**
WMQ				PcP	**PcP**	**00 41 50.5**	**+2.6**
WMQ				S	**S**	**00 50 50.2**	**-1.0**
WMQ				SKS	**SKSac**	**00 51 27.2**	**-5.0**
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
MKAR	**Makanchi Array**	**77.06**	**321**	P	**P**	**00 41 55.7**	**-1.5**
MKAR	**Makanchi Array**	**77.06**	**321**	P	**P**	**00 41 56.2**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=126,slow=6.2,SNR=9.3 comp=Z,1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**78.59**	**328**	P	**P**	**00 42 03.4**	**-2.1**
ZALV	**Zalesovo Beam**	**78.59**	**328**	P	**P**	**00 42 03.5**	**-2.0**
	comp=Z,0.5nm,0.4s,baz=104,slow=6.3,SNR=3.7						
ZALV				LR	LR	01 15 38.7	
	comp=Z,26nm,22.0s,baz=68,slow=35 comp=Z,0.5nm,0.4s						
MAW	**Mawson**	**82.35**	**203**	P	**P**	**00 42 24.6**	**-0.9**
	comp=Z,5.9nm,0.9s,baz=119,slow=6.1,SNR=6.2						
MAW				LR	LR	01 17 50.4	
	comp=Z,29nm,19.7s,baz=79,slow=35 comp=Z,5.9nm,0.9s						
QSPA	**South Pole Qui**	**84.23**	**180**	P	**P**	**00 42 37.2**	**+1.8**
QSPA				IAmb	IAmb	00 42 38.1	
	comp=Z,6.2nm,0.8s						
QSPA	**South Pole Qui**	**84.23**	**180**	P	**P**	**00 42 36.7**	**+1.3**
	comp=Z,6.2nm,0.7s,baz=343,slow=1.4,SNR=22						
QSPA				LR	LR	01 19 36.9	
	comp=Z,41nm,18.9s,baz=26,slow=35 comp=Z,6.2nm,0.7s						
ILAR	**Eielson Array**	**85.38**	**23**	P	**P**	**00 42 38.7**	**-2.3**
ILAR	**Eielson Array**	**85.38**	**23**	P	**P**	**00 42 39.6**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=253,slow=5.3,SNR=16 comp=Z,1.5nm,0.7s						
BVAR	**Borovoye Array**	**86.34**	**324**	P	**P**	**00 42 43.6**	**-2.4**
	comp=Z,1.3nm,0.8s,baz=79,slow=8.0,SNR=5.2 comp=Z,1.3nm,0.8s						
R32K	**Eaglecrest**	**89.00**	**31**	P	**P**	**00 42 58.6**	**-0.1**
BELA	**Belgrano 2**	**96.51**	**180**	P	**P**	**00 43 32.1**	**-0.9**
BELA				IAmb	IAmb	00 43 32.7	
	comp=Z,4.0nm,1.0s						
NVAR	**Mina Array Bea**	**97.50**	**52**	P	**P**	**00 43 39.0**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=257,slow=5.2,SNR=2.4 comp=Z,0.2nm,0.5s						
PFO	**Pinyon Flats O**	**98.90**	**57**	LR	LR	01 21 35.0	
	comp=Z,31nm,18.1s,baz=210,slow=31						
PLCA	**Paso Flores**	**122.55**	**147**	PKPdf	**PKPdf**	**00 48 58.8**	**-1.2**
PLCA	**Paso Flores**	**122.55**	**147**	PKP	**PKPdf**	**00 48 58.6**	**-1.3**
	comp=Z,1.3nm,0.9s,baz=307,slow=4.1,SNR=3.2						
LPAZ	**La Paz**	**139.24**	**123**	PKP	**PKPdf**	**00 49 32.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=213,slow=5.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**144.66**	**285**	PKP	**PKPab**	**00 49 38.7**	**-1.6**
	comp=Z,2.2nm,0.6s,baz=69,slow=4.8,SNR=2.1						
DBIC	**Dimbokro**	**151.64**	**273**	PKPbc	**PKPbc**	**00 49 60.0**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=181,slow=4.3,SNR=4.1						
BDFB	**Brasilia**	**154.28**	**146**	PKPbc	**PKPbc**	**00 50 04.4**	**-0.9**
	comp=Z,3.8nm,0.6s,baz=237,slow=1.8,SNR=7.3						

IDC 01 00:54:08.6±3.3,32˚.14N×91˚.69E,h0km,mb3.2/3, mbtmp3.2/4,ML2.7/1,MS3.0/1,Error ellipse: s-maj=246.3km s-min=28.3km az=63.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**16.32**	**336**	Pn	Pn	00 57 54.7	-4.4
	baz=153,slow=13,SNR=2.0 0.2nm,0.5s						
AAK	**Ala-Archa**	**17.19**	**312**	LR	LR	01 06 23.6	
	comp=Z,50nm,19.9s,baz=134,slow=43						
KURBB	**Kurchatov Arra**	**20.88**	**336**	P	P	00 58 52.9	+0.6
	0.3nm,0.3s,baz=141,slow=11,SNR=6.8 0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**22.35**	**349**	P	P	00 59 08.0	0.0
	0.3nm,0.3s,baz=172,slow=11,SNR=1.8 0.3nm,0.3s						
ASAR	**Alice Springs**	**68.60**	**139**	P	P	01 05 13.6	0.0
	0.3nm,0.8s,baz=319,slow=6.8,SNR=1.8 0.3nm,0.8s						

GII 01 00:55:11.0±0.0,32˚.88N±0˙.01×35˚.577E±0˙.004,h4km, Mws1.4,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHM	**Kefar Nahum**	**0.00**	**46**	P	Pg	00 55 11.9	+0.2
KNHM	**Kefar Nahum**	**0.00**	**46**	S	Sg	00 55 12.4	+0.1
SPIR	**Sapir Facility**	**0.04**	**242**	P	Pg	00 55 12.1	+0.1
SPIR	**Sapir Facility**	**0.04**	**242**	S	Sg	00 55 13.3	+0.7
HDNS	**Had-Ness**	**0.07**	**50**	P	Pg	00 55 13.1	+0.5
HDNS	**Had-Ness**	**0.07**	**50**	S	Sg	00 55 14.4	+0.8
MGDL	**Migdal**	**0.07**	**235**	P	Pg	00 55 12.8	+0.2
MGDL	**Migdal**	**0.07**	**235**	S	Sg	00 55 14.3	+0.8
RMOT	**Ramot**	**0.08**	**112**	P	Pg	00 55 12.9	+0.3
RMOT	**Ramot**	**0.08**	**112**	S	Sg	00 55 14.8	+1.0
MMA0B	**Mount Meron ar**	**0.20**	**312**	P	Pg	00 55 15.6	+0.7
MMA0B	**Mount Meron ar**	**0.20**	**312**	S	Sg	00 55 19.2	+1.7
MMC7	**Mount Meron ar**	**0.21**	**312**	P	Pg	00 55 15.8	+0.7
KSHT	**Keshet**	**0.22**	**63**	P	Pg	00 55 15.6	+0.3
KSHT	**Keshet**	**0.22**	**63**	S	Sg	00 55 19.9	+1.7
GEM	**Giv'at Ha'Em**	**0.34**	**12**	P	Pg	00 55 18.3	+0.8
GEM	**Giv'at Ha'Em**	**0.34**	**12**	S	Sb	00 55 23.8	-1.5
NATI	**Neve Ativ**	**0.40**	**19**	P	Pg	00 55 19.5	+0.8
NATI	**Neve Ativ**	**0.40**	**19**	S	Sb	00 55 26.4	-0.8
MMLI	**Mount Malkishu**	**0.46**	**197**	P	Pb	00 55 20.8	-0.9
MMLI	**Mount Malkishu**	**0.46**	**197**	S	Sb	00 55 28.3	-0.6
HMDT	**Nahal Hemdat**	**0.63**	**184**	P	Pg	00 55 23.7	+0.7
HMDT	**Nahal Hemdat**	**0.63**	**184**	S	Sb	00 55 33.3	-0.4

PGC 01 01:28:26.9±95.0,44˚.24N×126˚.50W,h10km,MLSn3.0/2,

Mw3.6/2,273km west of Eugene, Oregon, Usa Off Coast Of Oregon,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
E03A	**Lebam**	**3.10**	**41**	Pn	Pn	01 29 15.0	-0.8
WISH	**Wishkah**	**3.46**	**33**	Pn	Pn	01 29 20.2	-0.5
CPW	**Capitol Peak**	**3.61**	**40**	Pn	Pn	01 29 22.0	-1.0
OSD	**Olympics--Snow**	**4.08**	**28**	Pn	Pn	01 29 28.9	-0.6
LON	**Longmire**	**4.14**	**51**	Pn	Pn	01 29 29.3	-1.0
HDW	**Hoodsport**	**4.17**	**34**	Pn	Pn	01 29 29.8	-0.9
GNW	**Green Mountain**	**4.20**	**36**	Pn	Pn	01 29 29.6	-1.3
FMW	**Mount Fremont**	**4.33**	**50**	Pn	Pn	01 29 32.0	-0.9
STW	**Striped Peak**	**4.38**	**26**	Pn	Pn	01 29 33.1	-0.3
SYMB	**Survey Mountai**	**4.71**	**22**	Pn	Pn	01 29 37.6	-0.5
CLRS	**Cowichan Lake**	**4.87**	**19**	Pn	Pn	01 29 39.5	-0.6
PGC	**Sidney**	**4.89**	**24**	Pn	Pn	01 29 40.1	-0.3
MGRB	**Mount Grey**	**4.92**	**14**	Pn	Pn	01 29 40.2	-0.8
LTY	**Liberty**	**5.07**	**51**	Pn	Pn	01 29 42.2	-0.8
SNB	**Saturna Island**	**5.09**	**26**	Pn	Pn	01 29 43.2	0.0
SHB	**Sechelt**	**5.65**	**18**	Pn	Pn	01 29 51.4	+0.3
WPB	**Watts Point**	**5.87**	**21**	Pn	Pn	01 29 52.9	-1.0
WOSB	**Woss**	**5.93**	**360**	Pn	Pn	01 29 55.5	+0.8
NCSB	**Newcastle Ridg**	**6.17**	**3**	Pn	Pn	01 29 58.7	+0.4

*NOU **01** 01:30:28.0,40˚.40S×173˚.43E,h195km,ML4.2/20,Cook Strait, New Zealand*
*WEL **01** 01:30:30.8±1.0,40˚S±4˚×17˚3E±˚,h176km±7km,M4.2/89, MLv4.2/89,Error ellipse: s-maj=10.2km s-min=4.9km az=107.6,confirmed*
ISC 01 01:30:26.2±1.6,40˚.37S±0˙.04×173˚.35E±0˙.05,h212km±8km, n153,σ1ş17/163,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHLK	**Kaihoka Lakes**	**0.59**	**252**	P	**Pn**	**01 30 56.1**	**+1.0**
DUWZ	**D'Urville Isla**	**0.61**	**135**	P	**Pn**	**01 30 56.5**	**+1.3**
DUWZ				S	**S**	**01 31 16.4**	**-1.4**
TSFS	**Takaka Scotts**	**0.63**	**220**	P	**Pn**	**01 30 56.2**	**+1.0**
TKNZ	**Takaka Hill**	**0.72**	**204**	P	**Pn**	**01 30 56.9**	**+1.2**
TKNZ				S	**S**	**01 31 16.9**	**-1.9**
QRZ	**Quartz Range**	**0.77**	**234**	P	**Pn**	**01 30 57.0**	**+1.2**
QRZ	**Quartz Range**	**0.77**	**234**	S	**S**	**01 31 17.8**	**-1.2**
QRZ	**Quartz Range**	**0.77**	**234**	P	**Pn**	**01 30 57.1**	**+1.2**
QRZ				S	**S**	**01 31 17.3**	**-1.7**
NNZ	**Nelson**	**0.84**	**179**	P	**Pn**	**01 30 57.5**	**+1.3**
NNZ				S	**S**	**01 31 18.2**	**-1.6**
NELH	**Nelson Hospita**	**0.92**	**184**	P	**Pn**	**01 30 58.3**	**+1.6**
HAVS	**Havelock**	**0.96**	**160**	P	**Pn**	**01 30 58.5**	**+1.6**
BTWS	**Nelson Brightw**	**1.03**	**189**	P	**Pn**	**01 30 58.9**	**+1.6**
NMEZ	**Namu Road**	**1.04**	**23**	P	**Pn**	**01 30 58.6**	**+1.0**
NMEZ				S	**S**	**01 31 21.1**	**-0.6**
TCW	**Tory Channel**	**1.09**	**140**	P	**Pn**	**01 30 59.4**	**+1.6**
TCW				S	**S**	**01 31 20.9**	**-1.5**
MRNZ	**Matariki Terra**	**1.12**	**204**	P	**Pn**	**01 30 59.3**	**+1.2**
MRNZ				S	**S**	**01 31 21.2**	**-1.6**
TUWZ	**Tuamarina**	**1.15**	**157**	P	**Pn**	**01 31 00.1**	**+2.0**
TUWZ				S	**S**	**01 31 21.9**	**-1.1**
MATW	**Matariki Wadsw**	**1.17**	**205**	S	**S**	**01 31 21.9**	**-1.4**
NBEZ	**Newall Road No**	**1.17**	**20**	P	**Pn**	**01 30 59.5**	**+1.0**
NBEZ				S	**S**	**01 31 23.0**	**-0.3**
KHEZ	**Kahui Hut**	**1.19**	**25**	P	**Pn**	**01 30 59.7**	**+1.0**
KHEZ	**Kahui Hut**	**1.19**	**25**	S	**S**	**01 31 23.1**	**-0.7**
KHEZ	**Kahui Hut**	**1.19**	**25**	P	**Pn**	**01 30 59.8**	**+1.0**
KHEZ				S	**S**	**01 31 22.9**	**-0.9**
PREZ	**Palmer Road**	**1.20**	**31**	P	**Pn**	**01 30 59.8**	**+1.0**
LREZ	**Lake Rotokare**	**1.22**	**42**	P	**Pn**	**01 31 00.1**	**+1.3**
NEZ	**North Egmont**	**1.24**	**28**	P	**Pn**	**01 30 59.8**	**+0.8**
PKE	**Pukeiti**	**1.27**	**23**	P	**Pn**	**01 31 00.2**	**+1.0**
KIW	**Kapiti Island**	**1.28**	**113**	P	**Pn**	**01 31 00.7**	**+1.5**
DRNZ	**Durham Road**	**1.35**	**29**	P	**Pn**	**01 31 00.3**	**+1.1**
SNZO	**South Karori**	**1.39**	**133**	P	**Pn**	**01 31 01.4**	**+1.4**
SNZO	**South Karori**	**1.39**	**133**	S	**S**	**01 31 24.8**	**-1.4**
WAZ	**Wanganui**	**1.40**	**64**	P	**Pn**	**01 31 01.8**	**+1.6**
BSWZ	**Blackbirch S

RAHZ	Arahi	3.23	64	P		Pn	01 31 20.0	+0.8
TARZ	Mount Tarawera	3.25	50	P		Pn	01 31 20.9	+1.5
MUGZ	Murupara	3.25	56	P		Pn	01 31 19.5	0.0
WHHZ	Waihua	3.26	68	P		Pn	01 31 20.7	+1.2
RTZ	Ruatahuna	3.31	59	P		Pn	01 31 20.1	-0.1
WVZ	Waitaha Valley	3.33	215	P		Pn	01 31 21.3	+1.1
OKCZ	Okains Bay	3.35	184	P		Pn	01 31 21.2	+0.6
MQZ	McQueen's Vall	3.37	189	P		Pn	01 31 21.2	+0.5
MHCZ	Mount Hutt	3.43	202	P		Pn	01 31 22.1	+0.7
AWAZ	Awhitu Peninsu	3.45	17	P		Pn	01 31 23.3	+1.5
SNGZ	Shannon Statio	3.47	64	P		Pn	01 31 22.6	+0.6
RACZ	Rakaia	3.47	195	P		Pn	01 31 22.9	+1.0
AKCZ	Akaroa Harbour	3.51	185	P		Pn	01 31 24.0	+1.5
OPRZ	Ohinepanea	3.55	46	P		Pn	01 31 24.6	+1.7
MKAZ	Moumakai	3.56	24	P		Pn	01 31 24.4	+1.3
WTAZ	Waiatarua	3.56	16	P		Pn	01 31 25.0	+1.8
KNZ	Kokohu	3.59	69	P		Pn	01 31 24.2	+0.7
URZ	Urewera	3.60	55	P		Pn	01 31 23.3	-0.2
URZ	Urewera	3.60	55	P		Pn	01 31 23.0	-0.5
RAGZ	Rawiri	3.66	60	P		Pn	01 31 24.6	+0.2
MHGZ	Mahia Peninsul	3.71	72	P		Pn	01 31 26.1	+1.1
RPZ	Rata Peaks	3.75	206	P		Pn	01 31 26.4	+1.1
RPZ	Rata Peaks	3.75	206	P		Pn	01 31 26.1	+0.7
PRGZ	Paritu Road	3.78	69	P		Pn	01 31 26.5	+0.7
RIGZ	Rimuhau	3.79	65	P		Pn	01 31 26.7	+0.8
MWZ	Matawai	3.82	59	P		Pn	01 31 26.2	-0.1
ARCZ	Arundel	3.92	204	P		Pn	01 31 28.3	+1.0
TKGZ	Te Karaka	3.98	62	P		Pn	01 31 28.6	+0.4
KUZ	Kuaotunu	4.07	28	P		Pn	01 31 30.3	+1.0
KUZ	Kuaotunu	4.07	28	P		Pn	01 31 30.2	+1.0
FOZ	Fox Glacier	4.11	219	P		Pn	01 31 30.2	+0.5
RUGZ	Raukumara Rang	4.13	56	P		Pn	01 31 29.2	-1.0
CNGZ	Carnagh Statio	4.21	65	P		Pn	01 31 31.6	+0.7
TWGZ	Tauwhareparae	4.21	60	P		Pn	01 31 31.3	+0.2
PKGZ	Pakihiroa	4.45	57	P		Pn	01 31 33.7	-0.3
MXZ	Matakaoa Point	4.77	56	P		Pn	01 31 37.8	-0.2
JCZ	Jackson Bay	5.02	221	P		Pn	01 31 41.8	+0.7
ODZ	Otahua Downs	5.08	202	P		Pn	01 31 42.5	+0.7
OUZ	Omahuta	5.15	2	P		Pn	01 31 44.9	+2.1

*NNC **01** 01:31:06.8±5.1,38˚.17N×73˚.10E,h105km±114km,mb2.9, mpv3.5,Error ellipse: s-maj=57.1km s-min=45.5km az=128.0*

*SOME **01** 01:31:10.2,39˚.02N×73˚.18E,h15km*

ISC 01 01:31:01.7±2.6,**38˚.8N**±0˚.1×**73˚.02E**±0˚.06,**h10**km,**n9,** σ2§**10**/17,**3C-1D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**3.94**	**2**	*e*P	**Pg**	**01 32 18.2**	**+1.0**
	3.7nm,0.2s						
MRKS				*e*S	**Sg**	**01 33 07.3**	**-1.0**
	10nm,0.3s						
AAK	**Ala-Archa**	**3.99**	**16**	⇑P	**Pb**	**01 32 14.4**	**+2.2**
	4.6nm,0.6s						
AAK				⇓S	**Sg**	**01 33 06.8**	**-3.1**
	9.2nm,0.8s						
KK31	**Karatay Array**	**4.70**	**337**	⇑P	**Pb**	**01 32 23.3**	**-0.8**
	2.6nm,0.3s,baz=138,slow=12,SNR=32						
KK31				S	**Sb**	**01 33 25.2**	**+4.4**
	5.2nm,0.4s,baz=144,slow=23,SNR=3.0						
KST	**Kastek**	**4.79**	**27**	*e*P	**Pg**	**01 32 33.1**	**-0.2**
	1.1nm,0.1s						
KST				*e*S	**Sg**	**01 33 33.0**	**-2.4**
	11nm,0.5s						
BRLS	**Borolday**	**4.87**	**331**	*e*P	**Pg**	**01 32 34.4**	**-0.4**
	1.1nm,0.1s						
BRLS				*e*S	**Sg**	**01 33 35.3**	**-2.5**
	7.9nm,0.6s						
MTBS	**Maitube**	**5.04**	**30**	*e*P	**Pg**	**01 32 37.6**	**-0.4**
	5.6nm,0.4s						
MTBS				*e*S	**Sg**	**01 33 40.7**	**-2.6**
	3.7nm,0.3s						
TNSS	**Tian-Shan**	**5.17**	**34**	*e*P	**Pg**	**01 32 40.5**	**-0.3**
	2.3nm,0.3s						
TNSS				*e*S	**Sg**	**01 33 45.3**	**-2.4**
	1.5nm,0.4s						
ARXS	**Arharly**	**6.50**	**32**	*e*P	**Pg**	**01 33 06.6**	**+0.5**
ARXS				*e*S	**Sg**	**01 34 30.2**	**0.0**
AB31	**Akbulak array**	**14.04**	**322**	⇑P	**P**	**01 34 27.8**	**-0.6**
	0.6nm,0.5s,baz=129,slow=12,SNR=15						

*DJA **01** 01:35:26.3±0.2,3˚.5×2˚.12×12˚.8E±˚,h10km,M4.2/9,mb5.2/1, MLv3.7/9*

*IDC **01** 01:36:58.8±10.0,9˚.55S×129˚.80E,h264km±129km, mb2.9/2,mbtmp3.5/5,Error ellipse: s-maj=104.4km s-min=52.8km az=23.0*

ISC 01 01:35:26.3±0.9,**2˚.86S**±0˚.06×**128˚.44E**±0˚.04,**h10**km,**n11,** σ1§**01**/17,**Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.69**	**135**	P	**Pg**	**01 35 39.5**	**-0.1**
MSAI				S	**Sb**	**01 35 49.9**	**0.0**
AAI	**Ambon**	**0.86**	**197**	P	**Pg**	**01 35 43.4**	**+0.6**
AAI				S	**Sg**	**01 35 55.0**	**+0.9**
NLAI	**Namlea**	**1.39**	**254**	P	**Pg**	**01 35 53.8**	**+0.8**
NLAI				S	**Sn**	**01 36 10.4**	**+0.2**
BNDI	**Bandanaira**	**2.21**	**139**	P	**Pn**	**01 36 03.0**	**0.0**
SANI	**Sanana**	**2.58**	**288**	P	**Pn**	**01 36 07.2**	**-0.9**
SANI				S	**Sn**	**01 36 40.2**	**+0.7**
SWI	**Sorong**	**3.44**	**55**	P	**Pn**	**01 36 19.6**	**-0.4**
SWI				S	**Sn**	**01 37 01.6**	**+0.7**
FAKI	**Fak Fak**	**3.80**	**91**	P	**Pn**	**01 36 25.3**	**+0.3**
FAKI				S	**Sn**	**01 37 11.1**	**+1.3**
BAKI	**Biak**	**7.84**	**78**	P	**Pn**	**01 37 21.6**	**+1.1**
FITZ	**Fitzroy Crossi**	**15.39**	**190**	P	**P**	**01 39 09.0**	**+0.7**
	1.9nm,0.7s,baz=30,slow=14,SNR=2.0						
WRA	**Warramunga Arr**	**17.93**	**162**	P	**Pn**	**01 39 33.5**	**-2.4**
	0.5nm,0.5s,baz=342,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**21.35**	**166**	P	**P**	**01 40 12.7**	**-1.1**
	1.5nm,0.5s,baz=347,slow=11,SNR=15						

*NEIC **01** 01:45:03.6±1.3,33˚.46N±0˚.02×116˚.463W±0˚.007, h10km±2km,Error ellipse: s-maj=3.3km s-min=2.9km az=7.0*

PAS 01 01:45:04.2±1.0,**33˚.48N**±0˚.02×**116˚.47W**±0˚.01,**h11**km±4km, **ML2.9**/235,**ML2.7**/66(NEIC),**Error ellipse: s-maj=2.5km s-min=1.5km az=172.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRD	**Ford Ranch, An**	**0.12**	**279**		Pg	01 45 07.3	+0.1
FRD	**Ford Ranch, An**	**0.12**	**279**		Pg	01 45 07.3	0.0
FRD					Sg	01 45 09.6	+0.2
XPFO	**Pinon Flat**	**0.14**	**3**		Pg	01 45 07.3	-0.2
XPFO					Sg	01 45 09.5	-0.4
PFO	**Pinyon Flats O**	**0.14**	**2**		Pg	01 45 07.4	-0.2
PFO				IAML		01 45 09.7	
	2µm,0.3s						
PFO				IAML		01 45 09.8	
	2µm,0.4s						
SNDA	**J Saunders Pla**	**0.14**	**302**		Pg	01 45 07.8	+0.1
SNDA					Sg	01 45 10.6	+0.4
DNR	**Dunn Ranch,Anz**	**0.17**	**303**		Pg	01 45 08.2	+0.1
BZNA	**Buzz No.'s Pla**	**0.17**	**275**		Pg	01 45 08.2	+0.1
BZNA					Sg	01 45 11.0	+0.2
PMD	**Palm Desert**	**0.19**	**23**		Pg	01 45 07.9	-0.3
BORC	**Borrego Spring**	**0.21**	**169**		Pg	01 45 08.7	0.0
BORC				IAML		01 45 11.9	
	comp=N,1µm,0.3s						
BORC				IAML		01 45 12.2	
	comp=E,1µm,0.1s						
CRY	**Cary Ranch**	**0.24**	**291**		Pg	01 45 09.3	0.0
CRY					Sg	01 45 12.9	+0.1
GVDA	**Garner Valley**	**0.26**	**318**		Sg	01 45 12.9	-0.4
MATG	**Mataguay Scout**	**0.32**	**209**		Pg	01 45 10.7	0.0
PLM	**Palomar**	**0.35**	**250**		Pg	01 45 11.3	0.0
JUEM	**Julian Eagle M**	**0.41**	**196**		Sg	01 45 17.9	+0.1
CTCC	**Cactus City**	**0.43**	**66**		Pg	01 45 12.7	-0.1
POB	**Polly Butte**	**0.44**	**299**		Sg	01 45 18.5	-0.2
SALN	**Salton City**	**0.45**	**116**		Sg	01 45 19.7	+0.8
SALN	**Salton City**	**0.45**	**116**		Pg	01 45 13.0	0.0
SALN				IAML		01 45 20.0	
	comp=E,3µm,0.3s						
SALN				IAML		01 45 22.6	
	comp=N,3µm,0.4s						
DEVC	**Devers**	**0.47**	**348**		Pg	01 45 13.1	-0.4
DEVC					Sg	01 45 20.0	+0.4
DGR	**Domenigoni Val**	**0.49**	**291**		Sg	01 45 19.7	-0.6
BACC	**Bachelor Mtn.**	**0.50**	**286**		Sg	01 45 20.1	-0.5
HMTC	**Hemet**	**0.51**	**297**		Sg	01 45 20.4	-0.4
BBSC	**Beaumont Base**	**0.62**	**316**		Sg	01 45 24.9	+0.4
DPP	**Dos Picos Cty**	**0.62**	**220**		Pg	01 45 15.8	-0.6
DPP				IAML		01 45 24.3	
	comp=N,780nm,0.3s						
DPP	**Dos Picos Cty**	**0.62**	**220**		Sg	01 45 23.9	-0.6
MURC	**Murrieta**	**0.62**	**282**		Sg	01 45 15.7	-0.6
MURC					Sg	01 45 24.2	-0.4
BOMB	**Bombay Beach**	**0.62**	**100**		Pg	01 45 16.3	-0.1
BOMB					Sb	01 45 25.6	-0.3
ERRC	**Elmore Ranch**	**0.65**	**123**		Pb	01 45 17.4	-0.1
ERRC					Sb	01 45 26.6	+0.1
BELC	**Belle Mtn. Jos**	**0.65**	**36**		Pg	01 45 16.3	-0.6
BELC				IAML		01 45 26.2	
	comp=E,489nm,0.5s						
BELC				IAML		01 45 27.8	
	comp=N,561nm,0.7s						
BELC	**Belle Mtn. Jos**	**0.65**	**36**		Sg	01 45 24.8	-0.8
EML	**El Monte Cty P**	**0.67**	**209**		Sg	01 45 24.9	-0.9
HAY	**Hayfield**	**0.69**	**70**		Sg	01 45 27.6	-0.3
FRK	**Frink**	**0.69**	**96**		Sg	01 45 26.3	-0.5
PEC	**Perris**	**0.71**	**306**		Pg	01 45 17.4	-0.7
PEC					Sg	01 45 26.8	-0.6
GORC	**Green Oak Ranc**	**0.72**	**244**		Sg	01 45 26.6	-0.8
GWSC	**Sam W. Stewart**	**0.77**	**133**		Sg	01 45 28.1	-0.5
CFT	**Crafton Hills**	**0.78**	**316**		Pg	01 45 18.7	-0.5
CPE	**Camp Elliot**	**0.79**	**223**		Pg	01 45 18.7	-0.8
CPE	**Camp Elliot**	**0.79**	**223**		Sg	01 45 28.9	-1.1
BAR	**Barrett**	**0.81**	**192**		Pg	01 45 19.0	-0.9
BAR				IAML		01 45 30.1	
	comp=N,545nm,0.2s						
BAR	**Barrett**	**0.81**	**192**		Sg	01 45 29.4	-1.1
MTRP	**Mission Trails**	**0.82**	**217**		Sg	01 45 29.6	-1.2
ELS	**Elsinore Mount**	**0.82**	**282**		Sg	01 45 29.9	-0.9
ELS	**Elsinore Mount**	**0.82**	**282**		Pg	01 45 19.2	-0.9
ELS				IAML		01 45 30.9	
	comp=N,188nm,0.2s						
GTM	**Goat Mountain**	**0.82**	**6**		Sg	01 45 29.8	-1.0
SDRC	**San Diego Road**	**0.84**	**209**		Sg	01 45 30.1	-1.3
WEMD	**Westmorland, C**	**0.86**	**120**		Pg	01 45 20.1	-0.7
BC3	**Big Chuckawall**	**0.86**	**78**		Sg	01 45 31.5	-0.7
BC3	**Big Chuckawall**	**0.86**	**78**		Pg	01 45 20.1	-0.8
IKP	**In-Ko-Pah, Jac**	**0.88**	**160**		Sg	01 45 32.2	-0.4
COK2	**Cook Ranch 2**	**0.88**	**135**		Pg	01 45 20.4	-0.8
SDMC	**San Diego Miss**	**0.89**	**220**		Sg	01 45 31.9	-1.1
DUZA	**Dulzura**	**0.91**	**197**		Sg	01 45 32.1	-1.3
YUH	**Yuha Desert**	**0.94**	**151**		Sg	01 45 20.8	-1.6
SLVP	**Salvation Pass**	**1.00**	**103**		Pg	01 45 21.1	-2.4
CBX	**Cerro Bola**	**1.17**	**188**		Pb	01 45 25.3	-1.3
CBX				IAML		01 45 41.9	
	comp=N,329nm,0.2s						
IRM	**Iron Mountain**	**1.29**	**58**		Pn	01 45 26.4	-1.9
IRM				IAML		01 45 46.5	
	comp=N,114nm,0.3s						
GLA	**Glamis**	**1.44**	**107**		Pn	01 45 28.1	-2.2
GLA				IAML		01 45 57.6	
	comp=E,102nm,0.7s						
DANC	**Danby, Needles**	**1.47**	**38**		Pb	01 45 31.4	-0.1
DANC				IAML		01 45 52.3	
	comp=E,122nm,0.3s						
DANC				IAML		01 45 55.7	
	comp=N,144nm,0.4s						
MWC	**Mount Wilson**	**1.52**	**300**		Pn	01 45 31.4	-0.2
MWC				IAML		01 45 53.5	
	comp=N,182nm,0.4s						
ESJX	**Sierra Juarez**	**1.53**	**163**		Pn	01 45 30.2	-1.5
ESJX				IAML		01 45 54.7	
	comp=E,139nm,0.1s						
ESJX				IAML		01 45 55.1	
	comp=N,77nm,0.1s						
PASC	**Pasadena Art C**	**1.59**	**296**		Pn	01 45 32.5	+0.1
PASC				IAML		01 45 53.4	
	comp=E,92nm,0.3s						
PASC				IAML		01 45 53.5	
	comp=N,84nm,0.3s						
BLYC	**Blythe**	**1.64**	**80**		Pn	01 45 30.9	-2.2
GSC	**Goldstone, Bar**	**1.84**	**351**		Pn	01 45 35.0	-0.9
GSC				IAML		01 46 15.1	
	comp=E,49nm,0.7s						
VTX	**Valle De La Tr**	**2.16**	**164**		Pn	01 45 39.0	-1.2
VTX				IAML		01 46 14.2	
	comp=E,35nm,0.4s						
CCCA	**Chr Cany lake**	**2.17**	**340**	IAML		01 46 15.0	
	comp=N,48nm,0.4s						
CCCA				IAML		01 46 21.6	
	comp=E,55nm,0.7s						
LRMC	**Laurel Mtn Rad**	**2.24**	**334**		Pn	01 45 41.0	-0.4
WSHM	**Spangler Hills**	**2.28**	**338**	IAML		01 46 25.6	
	comp=E,49nm,0.1s						
QSM	**Queen of Sheba**	**2.50**	**352**		Pn	01 45 44.3	-0.7
W13A	**Hualapai Mount**	**2.68**	**52**		Pn	01 45 46.2	-1.4
GWY	**Greenwater Val**	**2.71**	**357**		Pn	01 45 47.0	-0.9
Y14A	**Wickenburg**	**2.92**	**80**		Pn	01 45 49.2	-1.5
GRAC	**Grapevine Rang**	**3.59**	**348**	IAML		01 46 36.6	
	comp=E,9.7nm,4.8s						
GRAC				IAML		01 46 53.1	
	comp=N,11nm,4.5s						

*NNC **01** 01:58:23.8±6.5,36˚.67N×69˚.07E,h30km±158km,mb4.0, mpv3.6,Error ellipse: s-maj=109.0km s-min=30.1km az=1.0*

*IDC **01** 01:58:37.7±13.0,39˚.24N×68˚.48E,h0km,mbtmp3.7/3, ML3.3/3, Error ellipse: s-maj=302.3km s-min=29.6km az=165.0*

ISC 01 01:58:22.2±2.1,**36˚.6N**±0˚.2×**69˚.2E**±0˚.1,**h43**km,**n13,** σ1§**89**/16,**3C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.60**	**8**	P	**Pn**	**01 59 58.4**	**+1.6**
	1.9nm,0.3s,baz=349,slow=33,SNR=27						
KK31				⇑S	**Sn**	**02 01 11.4**	**+0.8**
	5.8nm,0.5s,baz=192,slow=23,SNR=4.9						
UCH	**Uchtor**	**6.97**	**34**	P	**Pn**	**02 00 02.9**	**+0.7**
	SNR=17						
EKS2	**Erkin-Say**	**7.02**	**28**	P	**Pn**	**02 00 03.8**	**+1.2**
	SNR=16						
AAK	**Ala-Archa**	**7.29**	**32**	P	**Pn**	**02 00 07.4**	**+1.1**
	SNR=12						
AAK	**Ala-Archa**	**7.29**	**32**	⇑P	**Pn**	**02 00 07.1**	**+0.7**
	1.3nm,0.4s						
AAK				⇑S	**Sn**	**02 01 30.5**	**+2.6**
	1.3nm,0.4s						
USP	**Ospenovka**	**7.81**	**29**	P	**Pn**	**02 00 13.8**	**+0.4**
	SNR=11						
TKM2	**Tokmak 2**	**8.01**	**36**	P	**Pn**	**02 00 16.7**	**+0.4**
	SNR=8.4						
MK31	**Makanchi Array**	**14.10**	**40**	⇓P	**P**	**02 01 45.8**	**-0.3**
	1.0nm,0.7s,baz=211,slow=9.8,SNR=7.7						
MKAR	**Makanchi Array**	**14.10**	**40**	Pn	**Pn**	**02 01 36.1**	**-3.2**
	0.1nm,0.3s,baz=232,slow=14,SNR=5.2						
	0.5nm,0.6s						
AB31	**Akbulak array**	**14.38**	**335**	⇓P	**Pn**	**02 01 42.2**	**-0.8**
	4.3nm,0.6s,baz=157,slow=12,SNR=67						
AB31				S	**Sn**	**02 04 19.1**	**-1.9**
	1.0nm,0.3s,baz=155,slow=23,SNR=3.9						
AKTO	**Aktyubinsk**	**16.05**	**333**	⇓P	**P**	**02 02 06.4**	**-1.2**
	3.2nm,1.2s						
ZALV	**Zalesovo Beam**	**20.47**	**27**	P	**P**	**02 02 53.4**	**-2.7**
	0.6nm,0.3s,baz=219,slow=10.0,SNR=11						
	2.0nm,0.4s						
KBZ	**Khabaz**	**21.32**	**298**	P	**P**	**02 03 08.2**	**+2.9**
	0.1nm,0.3s,baz=117,slow=9.0,SNR=4.9						
	1.5nm,0.7s						

*IDC **01** 02:20:24.2±1.5,1˚.80N×124˚.15E,h0km,mb3.8/5, mbtmp3.8/5,Error ellipse: s-maj=198.9km s-min=21.0km az=63.0*

*DJA **01** 02:20:26.0±0.3,3˚.3N±0˚.1×127˚.2E±0˚.2,**h35**km,**n9,**σ0§**92**/9, **mb3.8**/5,**Talaud Islands***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.69**	**283**	P	**Pn**	**02 20 53.2**	**-0.4**
LUWI	**Luwuk**	**6.18**	**226**	P	**Pn**	**02 21 55.8**	**+0.5**
	0.4nm2µm40nm,0.6s						
APSI	**Ampana**	**6.95**	**233**	P	**Pn**	**02 22 05.3**	**-0.5**
	0.5nm33nm,0.8s						
BSSI	**Bau Bau, Buton**	**11.53**	**215**	P	**Pn**	**02 23 09.3**	**+0.6**
WRA	**Warramunga Arr**	**24.16**	**163**	P	**P**	**02 25 38.8**	**-0.8**
	0.5nm,0.3s,baz=334,slow=11,SNR=9.9						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**27.61**	**167**	P	**P**	**02 26 09.4**	**-1.3**
	0.2nm,0.3s,baz=344,slow=8.2,SNR=4.3						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**37.58**	**160**	P	**P**	**02 27 38.3**	**+0.5**
	1.4nm,0.5s,baz=326,slow=7.6,SNR=3.7						
	1.4nm,0.5s						
MKAR	**Makanchi Array**	**58.15**	**325**	P	**P**	**02 30 16.4**	**-0.5**
	0.4nm,0.4s,baz=126,slow=7.3,SNR=4.4						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**62.33**	**327**	P	**P**	**02 30 46.4**	**+1.1**
	0.7nm,0.2s,baz=129,slow=6.6,SNR=2.2						
	0.7nm,0.2s						

*RHSSO **01** 02:28:35.6±0.7,43˚.87N×16˚.67E,h5km,ML2.1/5 VIE **01** 02:28:35.4±0.7,43˚.93N×16˚.61E,h8km,ml2.5/1,Error ellipse: s-maj=8.3km s-min=4.7km az=23.0 47 km NNE of Split*

ISC 01 02:28:31.9±0.9,**43˚.81N**±0˚.02×**16˚.53E**±0˚.02,**h13**km±7km, **n28,**σ1§**18**/56,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIJV	**Kijevo**	**0.21**	**335**	*i* Pg	**Pg**	**02 28 36.8**	**+0.1**
KIJV					Sg	**02 28 40.2**	**+0.3**
RICI	**Ricice**	**0.54**	**126**	*e*Pg	**Pb**	**02 28 43.2**	**-0.1**
RICI				*e*Sg	**Sn**	**02 28 51.8**	**-2.4**
MORI	**Morici**	**0.60**	**276**	*i* Pg	**Pg**	**02 28 43.0**	**-0.7**
MORI					Sg	**02 28 51.9**	**+0.3**
MAKA	**Makarska**	**0.63**	**146**	*i* Pg	**Pb**	**02 28 44.0**	**-0.8**
MAKA					Sn	**02 28 54.3**	**-2.2**
HVAR	**Hvar**	**0.64**	**185**	*i* Pg	**Pg**	**02 28 43.5**	**-0.8**
HVAR					Sg	**02 28 53.8**	**+0.1**
ZIRJ	**Zirje**	**0.66**	**257**	*i* Pg	**Pg**	**02 28 44.1**	**-0.7**
ZIRJ					Sg	**02 28 53.7**	**+0.1**
UDBI	**Udbina**	**0.90**	**323**	*e*Pg	**Pg**	**02 28 49.5**	**+0.1**
UDBI					Sg	**02 29 02.3**	**+0.8**
BLY	**Banja Luka**	**1.05**	**26**	*e*Pg	**Pn**	**02 28 52.5**	**+0.2**
BLY				*e*Sg	**Sn**	**02 29 06.2**	**-0.6**
LSTV	**Lastovo**	**1.07**	**166**	*i* Pg	**Pn**	**02 28 52.7**	**0.0**
LSTV					Sg	**02 29 08.4**	**+1.0**
DUGI	**Dugi Otok**	**1.08**	**280**	*e*Pg	**Pb**	**02 28 51.7**	**-0.8**
DUGI					Sg	**02 29 08.0**	**+0.3**
SLATY	**Slatina**	**1.16**	**28**	*e*Pg	**Pg**	**02 28 54.3**	**+0.1**
SLATY				*e*Sg	**Sn**	**02 29 09.6**	**+0.1**
VIRC	**Vir**	**1.17**	**295**	*e*Pg	**Pn**	**02 28 53.6**	**-0.4**
VIRC					Sg	**02 29 11.0**	**+1.2**
PLIT	**Plitvice**	**1.25**	**329**	*e*Pg	**Pn**	**02 28 55.2**	**+0.1**
PLIT					Sg	**02 29 12.6**	**+0.3**
STON	**Ston**	**1.27**	**137**	*e*Pg	**Pg**	**02 28 56.7**	**+0.4**
STON					Sg	**02 29 14.9**	**+2.1**
NVLJ	**Novalja**	**1.41**	**303**	*e*Pn	**Pb**	**02 28 58.4**	**+0.3**
NVLJ					Sg	**02 29 18.2**	**+0.8**
RABC	**Rab**	**1.57**	**307**	*i* Pn	**Pb**	**02 29 01.0**	**+0.2**
RABC					Sn	**02 29 24.0**	**+1.6**
KLINJ	**Klinje**	**1.63**	**113**	*e*Pn	**Pg**	**02 29 03.8**	**+0.6**
KLINJ				*e*Sn	**Sg**	**02 29 24.9**	**+0.6**
DBRK	**Dubrovnik**	**1.64**	**133**	*e*Pn	**Pg**	**02 29 02.8**	**-0.6**
DBRK				Sn	**Sg**	**02 29 25.9**	**+1.1**
TREB	**Trebinje**	**1.72**	**129**	*e*Pn	**Pg**	**02 29 06.0**	**+1.0**
TREB				*e*Sn	**Sg**	**02 29 27.4**	**+0.1**
MOSL	**Moslavina**	**1.81**	**5**	*e*Pn	**Pb**	**02 29 04.8**	**-0.1**
MOSL				Sn	**Sg**	**02 29 30.9**	**+0.8**
OZLJ	**Ozalj**	**1.96**	**338**	*e*Pg	**Pg**	**02 29 08.8**	**-0.6**
OZLJ				Sn	**Sg**	**02 29 33.7**	**-1.2**
RUDO	**Rudo**	**2.07**	**94**	*e*Pn	**Pb**	**02 29 09.6**	**+0.3**
RUDO				*e*Sn	**Sb**	**02 29 34.6**	**-0.3**
BRJN	**Brijuni**	**2.27**	**300**	*i* Pg	**Pb**	**02 29 13.9**	**+1.0**
BRJN				Sn	**Sb**	**02 29 40.9**	**+0.1**
KALN	**Kalnik**	**2.32**	**359**	*e*Pn	**Pb**	**02 29 12.7**	**-1.0**
KALN				Sn	**Sb**	**02 29 42.8**	**+0.6**
LOBO	**Lobor**	**2.37**	**352**	*i* Pn	**Pb**	**02 29 12.6**	**-1.9**
LOBO				Sn	**Sb**	**02 29 42.4**	**-1.1**
BEHE	**Becsehely**	**2.67**	**4**	*e*Pn	**Pb**	**02 29 18.4**	**-1.1**
BEHE				*e*Sn	**Sb**	**02 29 50.7**	**-1.4**
MORH	**Mrgy, Hungar**	**2.83**	**31**	*e*Pn	**Pb**	**02 29 20.4**	**-1.9**
MORH				*e*Sn	**Sn**	**02 29 53.5**	**+2.7**
OBKA	**Obir**	**3.04**	**333**	*e*Pn	**Pb**	**02 29 23.1**	**-2.8**
	0.3nm,0.2s						
OBKA				Sn	**Sn**	**02 29 59.5**	**+3.4**
	6.5nm,0.5s						

*NEIC **01** 02:32:42.7±1.4,8˚.54S±0˚.04×147˚.45E±0˚.06,h10km±1km, mb4.7/17,Error ellipse: s-maj=10.9km s-min=5.9km az=76.0*

*IDC **01** 02:32:43.9±3.5,8˚.61S×147˚.57E,h27km±21km,mb4.1/4, mbtmp4.3/6,ML4.3/2,MS5.0/2,Error ellipse: s-maj=35.5km s-min=25.6km az=109.0*

ISC 01 02:32:45.8±0.7,**8˚.68S**±0˚.06×**147˚.4E**±0˚.1,**h35**km,**n49,** σ1§**82**/45,**mb4.5**/11,**Eastern New Guinea region**

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

EVN	Everest	68.90 304	P	P	02 43 48.5	+0.2
SEY	Seymchan	71.51 2	LR	LR	03 13 31.3	
	comp=Z,577nm,20.7s,baz=205,slow=34					
QSPA	South Pole Qui	81.30 180	P	P	02 44 59.4	+0.9
QSPA			IAmb	IAmb	02 45 07.9	
	comp=Z,2.4nm,0.8s					
QSPA	South Pole Qui	81.30 180	P	P	02 44 59.1	+0.7
	comp=Z,2.0nm,0.7s,baz=22,slow=0.7,SNR=8.6					
	comp=Z,2.0nm,0.7s					
NIL	Nilore	81.78 306	P	P	02 45 01.8	+0.3
E19K	Redstone River	85.52 19	P	P	02 45 19.6	-0.2
E19K			IAmb	IAmb	02 45 33.1	
	comp=Z,6.9nm,1.1s					
F20K	Avaraart Lake	85.77 19	P	P	02 45 20.7	-0.4
F20K			IAmb	IAmb	02 45 51.0	
	comp=Z,4.9nm,1.3s					
ILAR	Eielson Array	87.79 23	P	P	02 45 28.4	-2.6
	comp=Z,1.1nm,0.6s,baz=259,slow=5.3,SNR=11					
MD01	Midelt array s	144.75 317	PKPdf	PKPdf	02 52 18.5	-1.2
BAUV	El Baul	145.01 87		PKPab	02 52 17.7	-2.2
BDFB	Brasilia	151.43 148		PKPbc	02 52 35.5	-1.6
BDFB	Brasilia	151.43 148	PKPbc	PKPbc	02 52 36.4	-0.8
	comp=Z,3.7nm,0.4s,baz=225,slow=1.4,SNR=9.1					
SACV	Santiago Islan	169.19 306	PKPab	PKPab	02 54 00.2	-2.2

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*IDC **01** 02:33:53.4±0.3,3˙14N×126˙96E,h0km,mb5.0/39, mbtmp5.0/42,ML5.0/3,MS4.8/29,Error ellipse: s-maj=13.4km s-min=8.0km az=71.0*

*MOS **01** 02:33:55.5±1.1,3˙22N×126˙91E,h22km,mb5.5/72, MS5.0/12,Error ellipse: s-maj=7.5km s-min=3.9km az=120.0*

*BJI **01** 02:33:56.1,2˙89N×126˙86E,h40km,mB5.5/65,mb5.2/79, Ms5.3/82,Ms7 5.1/81*

*NEIC **01** 02:33:58.5±2.3,3˙21N±0˙06×126˙99E±0˙07,h28km±3km, mb5.5/237,Ms_20 5.2/361,Mwb5.4/83,Mww5.6/12,Error ellipse: s-maj=10.3km s-min=7.6km az=66.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.96; Mθθ-0.09; Mφφ-0.86; Mrθ0.26; Mθφ0.67; Mrφ1.29; Fault plane solution: M₀1.73000×10¹⁷ NP1: φs359.42000°,δ71.98000°,λ114.31000°. NP2: φs123.82000°,δ29.93000°,λ38.31000°. Principal axes: T 1.7824, Plg56.0000°, Azm301.0000°; N -0.1058, Plg23.0000°, Azm171.0000°; P -1.6767, Plg23.0000°, Azm71.0000°;*

*ISC-PP **01** 02:33:58,3˙21N×126˙99E,h12km,Mwppsm5.9,Moment Tensor Solution. s50 Moment tensor: Scale 10¹⁷Nm; Mrr-0.15±.08; Mθθ-0.26±.16; Mφφ0.61±.11; Mrθ0.25±.13; Mθφ0.17±.12; Mrφ0.42±.09; Fault plane solution: M₀9.12000×10¹⁷ NP1:φs337.90000°,δ60.10000°, λ189.70000°. NP2:φs243.10000°,δ81.60000°, λ-30.30000°.*

*NEIC **01** 02:33:59.8,3˙19N×126˙99E,h39km*

*NEIC **01** 02:33:59.8,3˙19N×126˙99E,h18km*

*NEIC **01** 02:33:59.8,3˙49N×127˙50E,h18km,Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10¹⁷Nm; Mrr1.64; Mθθ-0.04; Mφφ-1.60; Mrθ-0.54; Mθφ-0.16; Mrφ2.07; Fault plane solution: M₀2.69000×10¹⁷ NP1: φs198.76000°,δ20.58000°,λ117.02000°. NP2: φs350.18000°,δ71.75000°,λ80.32000°. Principal axes: T 2.7577, Plg62.0000°, Azm245.0000°; N -0.1461, Plg9.0000°, Azm353.0000°; P -2.6116, Plg26.0000°, Azm88.0000°;*

*DJA **01** 02:34:00.0±0.2,3˙N±2˙×12˙7E±˙,h47km±2km,M5.3/72, mB5.8/55,mb5.3/72,MLv5.4/18,Mw5.5/94,Mw(mB)5.3/55, MwMwp5.4/43,Mwp5.5/43*

*MAN **01** 02:34:00.2,3˙23N×126˙82E,h50km,mb6.0,ML5.0,MS5.5*

*GCMT **01** 02:34:01.5±0.1,3˙29N±0˙01×127˙23E±0˙01,h16km, MW5.7/141,Moment Tensor Solution. s141,c266; s137,c258; Duration: 1s8 Moment tensor: Scale 10¹⁷ Nm; Mrr2.16±.03; Mθθ-0.17±.02; Mφφ-1.99±.02; Mrθ-1.06±.07; Mθφ-0.24±.02; Mφr4.15±.07; Best double couple: M₀4.75800×10¹⁷ NP1:φs199.00000°,δ14.00000°, λ120.00000°. NP2:φs348.00000°,δ78.00000°,λ83.00000°. Principal axes: T 4.9320, Plg57.0000°, Azm249.0000°; N -0.3480, Plg7.0000°, Azm350.0000°; P -4.5840, Plg32.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 02:33:58.8±0.3,3˙23N±0˙03×126˙99E±0˙04,h34km±1km, h33km:pP-P,n1135,σ1967/980,mb5.4/249,MS5.1/244, 62C-31D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.53	287	P	Pn	02 34 24.7	+1.0
TNTI	Ternate	2.47	171		Pn	02 34 38.1	+1.4
TNTI	Ternate	2.47	171	P	Pn	02 34 38.7	+2.0
TNTI	Ternate	2.47	171	P	Pn	02 34 38.5	+1.8
KMSI	Cibinong	4.00	229	P	Pn	02 35 01.0	+3.3
DAV	Davao City (W)	4.07	340		Pn	02 35 01.7	+3.0
DAV	Davao City (W)	4.07	340	Pn	Pn	02 35 01.9	+3.2
	baz=165,slow=1.3						
DAV				Sn	Sb	02 35 53.7	-4.8
	123nm,0.3s,baz=79,slow=23,SNR=3.6						
DAV	Davao City (W)	4.07	340	P	Pn	02 34 58.7	0.0
DAV	Davao City (W)	4.07	340	P	Pn	02 35 00.7	+2.0
SANI	Sanana	5.34	191	P	Pn	02 35 14.9	-1.3
MRSI	Marisa	5.74	242	P	Pn	02 35 24.6	+2.9
SWI	Sorong	5.89	134	P	Pn	02 35 25.1	+1.3
	1.6nm7µm332nm,1.7s						
SWI	Sorong	5.89	134	P	Pn	02 35 25.2	+1.4
LUWI	Luwuk	5.98	225		Pn	02 35 28.6	+3.6
LUWI	Luwuk	5.98	225	P	Pn	02 35 27.0	+2.0
LUWI	Luwuk	5.98	225	P	Pn	02 35 28.2	+3.2
NLAI	Namlea	6.42	179	P	Pn	02 35 32.1	+1.0
	1.0nm194nm,0.7s						
TOLI2	Tolitoli	6.55	251		Pn	02 35 34.3	+1.5
TOLI2	Tolitoli	6.55	251	P	Pn	02 35 34.1	+1.3
APSI	Ampana	6.74	232	P	Pn	02 35 40.6	+5.2
MSAI	Masohi	6.81	163	P	Pn	02 35 39.2	+2.7
	1.8nm21µm6µm398nm,1.1s						
AAI	Ambon	6.97	170	P	Pn	02 35 41.6	+2.9
	0.9nm4µm208nm,0.9s						
FAKI	Fak Fak	8.06	139		Pn	02 35 55.3	+1.8
FAKI	Fak Fak	8.06	139	P	Pn	02 35 56.0	+2.4
FAKI	Fak Fak	8.06	139	P	Pn	02 35 55.6	+2.0
	3µm209nm,1.2s						
BNDI	Bandanaira	8.23	159	P	Pn	02 35 58.0	+2.1
	19µm757nm,2.0s						
RKPI	Ransiki, Papua	8.59	123	P	Pn	02 36 02.3	+1.4
	11µm334nm,0.9s						
MYLDM	Lahad Datu	8.69	283		Pn	02 36 06.9	+4.7
MYLDM	Lahad Datu	8.69	283	P	Pn	02 36 06.0	+3.8
BBSI	Bau Bau	9.72	207	P	Pn	02 36 19.3	+3.0
BAKI	Biak	10.12	116	P	Pn	02 36 23.3	+1.5
	20µm681nm,1.8s						
SPSI	Sidrap Palu	10.15	225	P	Pn	02 36 24.8	+2.5
	2µm104nm,1.0s						
BNSI	Bone	10.23	222	P	Pn	02 36 26.5	+3.1
	11µm3µm174nm,1.6s						
KAPI	Kappang	10.92	221		Pn	02 36 33.6	+0.8
KAPI	Kappang	10.92	221	Pn	Pn	02 36 29.8	-3.0
	3.9nm,0.3s,baz=46,slow=8.4,SNR=4.2						
	8.0nm,0.4s						
KAPI	Kappang	10.92	221	P	Pn	02 36 35.4	+2.5
KAPI	Kappang	10.92	221	⇑*e*P	Pn	02 36 33.8	+0.9
KAPI				pmax	pmax		
	comp=Z,33nm,1.4s						
BKB	Balikpapan	11.03	246	P	Pn	02 36 35.8	+1.5
BSSI	Bau Bau, Buton	11.35	215	P	Pn	02 36 41.2	+2.5
	comp=Z,7µmcomp=Z,2µmcomp=Z,90nm,0.6s						
SAUI	Saumlaki	11.94	159		Pn	02 36 46.6	-0.2
SAUI	Saumlaki	11.94	159	P	Pn	02 36 47.3	+0.5
SAUI	Saumlaki	11.94	159	P	Pn	02 36 48.4	+1.6
	comp=Z,421nm,1.1s						
TGY	Tagaytay City	12.35	331	Pn	Pn	02 36 52.5	+0.1
	comp=Z,45nm,0.3s,baz=216,slow=19,SNR=3.7						
	comp=Z,141nm,0.3s						
SMPI	Sarmi	12.81	114	P	Pn	02 37 00.2	+1.5
	comp=Z,18µmcomp=Z,4µmcomp=Z,180nm,1.5s						
SOEI	Soe	13.18	192	P	Pn	02 37 06.5	+2.7
BATI	Baumata	13.75	194	Pn	Pn	02 37 15.5	+3.9
	comp=Z,9.7nm,0.3s,baz=331,slow=4.5,SNR=4.4						
BATI	Baumata	13.75	194	P	P	02 37 16.9	-2.8
	comp=Z,2µmcomp=Z,127nm,0.9s						
GENI	Genyem	14.39	114	P	Pn	02 37 22.3	+2.1
WSI	Waingapu	14.44	207	P	Pn	02 37 24.0	+3.0
	comp=Z,6µmcomp=Z,494nm,1.1s						
SBUM	Sibu	14.77	267		Pn	02 37 27.9	+2.5
SBUM	Sibu	14.77	267	P	Pn	02 37 27.5	+2.1
BASI	Baing, Sumba	14.80	205	P	P	02 37 30.0	-1.4
	comp=Z,5µmcomp=Z,6µmcomp=Z,356nm,1.5s						
JAY	Jayapura	14.85	112	Pn	Pn	02 37 25.0	-1.5
	comp=Z,3.3nm,0.3s,baz=258,slow=14,SNR=15						
JAY				Sn	Sn	02 40 06.3	-3.7
	comp=Z,0.4nm,0.3s,baz=308,slow=17,SNR=1.0						
	comp=Z,3.6nm,0.4s						
WBSI	Waikabubak, Su	14.86	211	P	P	02 37 30.8	-1.2
PLAI	Plampang	15.09	217	P	Pn	02 37 32.1	+2.4
PLAI	Plampang	15.09	217	P	P	02 37 33.0	-1.6
TWSI	Taliwang, Sumb	15.58	220	P	P	02 37 38.7	-1.3
SZP	Santa	15.61	336	P	Pn	02 37 38.0	+1.5
STKI	Sintang	15.82	259	P	P	02 37 42.6	-0.1
	comp=Z,10µmcomp=Z,329nm,1.6s						
DRS	Darwin Rock St	16.03	166	P	Pn	02 37 42.3	+0.4
SRBI	Singaraja	16.26	226	P	P	02 37 48.3	+0.8
MTN	Manton Dam	16.49	166	P	Pn	02 37 47.5	-0.2
	comp=Z,0.0nmcomp=Z,76nm,0.8s						
MTN	Manton Dam	16.49	166		Pn	02 37 47.4	-0.3
KMMI	Kalianget	16.53	232	P	P	02 37 51.1	+0.6
	comp=Z,5µmcomp=Z,4µmcomp=Z,181nm,1.3s						
DNP	Denpasar	16.67	225	P	P	02 37 52.3	+0.2
	comp=Z,580nm,1.2s						
KDU	Kakadu	16.72	161	P	Pn	02 37 50.5	-0.2
	comp=Z,63nm,1.2s						
KSM	Kuching	16.76	264	P	P	02 37 53.3	+0.3
KSM	Kuching	16.76	264	P	P	02 37 53.5	+0.4
ABJI	Asem Bagus	16.79	229	P	P	02 37 54.1	+0.7
	comp=Z,5µmcomp=Z,4µmcomp=Z,180nm,1.4s						
BWJI	Bawean	16.92	238	P	P	02 37 56.5	+1.7
	comp=Z,5µmcomp=Z,274nm,1.4s						
BLJI	Banyuglugur	17.24	231	P	P	02 37 59.6	+1.1
	comp=Z,8µmcomp=Z,4µmcomp=Z,249nm,1.5s						
JAGI	Jajag, Banyuwa	17.29	228	P	Pn	02 37 57.9	+0.1
JAGI				IAmb	IAmb	02 38 02.3	
	comp=Z,634nm,1.3s						
JAGI	Jajag, Banyuwa	17.29	228	P	P	02 37 59.8	+0.8
JAGI	Jajag, Banyuwa	17.29	228	P	P	02 38 00.9	+1.9
	comp=Z,5µmcomp=Z,4µmcomp=Z,379nm,1.3s						
TBJI	Tambak Boyo	18.11	237	P	Pn	02 38 07.7	-0.2
	comp=Z,5µmcomp=Z,3µmcomp=Z,221nm,1.4s						
NGJI	Ngawi	18.73	236	P	P	02 38 14.3	-0.6
KNRA	Kununurra	18.86	175	P	P	02 38 15.2	-1.1
	comp=Z,0.0nmcomp=Z,193nm,1.1s						
KNRA	Kununurra	18.86	175	P	P	02 38 15.3	-1.0
SMRI	Semarang	19.42	238	P	P	02 38 20.9	-1.5
SMRI	Semarang	19.42	238	P	P	02 38 21.7	-0.7
SMRI	Semarang	19.42	238	P	Pn	02 38 24.3	+0.5
PCJI	Pacitan	19.43	234	P	P	02 38 22.3	-0.2
	comp=Z,4µmcomp=Z,326nm,1.0s						
WOJI	Wonogiri, Jawa	19.43	235	P	P	02 38 21.6	-1.0
TPI	Tanjungpandan	20.22	253	P	P	02 38 30.9	-0.3
	comp=Z,6µmcomp=Z,4µmcomp=Z,236nm,1.3s						
DLV	Lat	20.27	296	P	Pn	02 38 33.8	-0.2
TWGBT	Beinan	20.30	344	P	P	02 38 30.5	-1.4
TWG	Pinlang	20.30	344	P	P	02 38 29.3	-2.7
TWG				IAmb	IAmb	02 38 43.1	
	comp=Z,411nm,1.7s						
GUMO	Guam	20.45	59	P	P	02 38 34.7	+1.1
	comp=Z,69nm,0.3s,baz=196,slow=13,SNR=3.6						
	comp=Z,69nm,0.3s						
YULB	Yu-li	20.79	345	IAmb	IAmb	02 38 55.5	
	comp=Z,177nm,1.3s						
YULB	Yu-li	20.79	345	P	P	02 38 35.9	-1.4
KPJI	Karang Pucung	20.85	240	P	P	02 38 37.0	-1.0
TPUB	Ta-pu	20.88	343	IAmb	IAmb	02 38 51.3	
	comp=Z,280nm,1.1s						
TPUB	Ta-pu	20.88	343	P	P	02 38 36.9	-1.4
MANU	Manus Island	21.03	104	P	P	02 38 39.7	-0.3
FITZ	Fitzroy Crossi	21.23	184	P	P	02 38 40.8	-1.3
	comp=Z,25nm,1.1s						
FITZ	Fitzroy Crossi	21.23	184	P	P	02 38 41.2	-0.8
FITZ	Fitzroy Crossi	21.23	184	P	P	02 38 41.0	-1.1
	comp=Z,72nm,1.0s,baz=17,slow=6.7,SNR=13						
FITZ				S	S	02 42 29.9	-6.5
	comp=Z,43nm,1.2s,baz=60,slow=16,SNR=5.8						
	comp=Z,72nm,1.0s						
FITZ	Fitzroy Crossi	21.23	184	P	P	02 38 41.6	-0.4
SSLB	Suanglung	21.26	345	P	P	02 38 40.5	-1.8
SSLB				IAmb	IAmb	02 38 44.7	
	comp=Z,303nm,1.5s						
SSLB	Suanglung	21.26	345	P	P	02 38 41.4	-0.9
YOJ	Yonaguni jima	21.46	350	P	P	02 38 44.4	0.0
LEM	Lembang	21.76	243	P	P	02 38 47.3	-0.7
	comp=Z,57nm,0.7s,baz=351,slow=23,SNR=1.8						
	comp=Z,57nm,0.7s						
YHNB	Yeheng	21.99	346	P	P	02 38 50.0	-0.3
YHNB				IAmb	IAmb	02 39 07.7	
	comp=Z,410nm,1.9s						
YHNB	Yeheng	21.99	346	P	P	02 38 50.9	+0.6
BBJI	Bungbulang	22.03	241	P	P	02 38 51.3	+0.6
CNJI	Cibinong	22.41	242	P	P	02 38 55.4	+0.6
	comp=Z,117nm,1.5s						
HKPS	Hong Kong Po S	22.67	328	P	P	02 38 59.5	+2.0
QIZ	Qiongzhong	22.97	314	P	P	02 39 02.0	+1.3
QIZ				S	S	02 43 09.1	+0.2
QIZ				LR	LR		
	comp=Z,4µm,20.2s						
QIZ				LR	LR		
	comp=Z,2µm,18.4s						
QIZ				LR	LR		
	comp=Z,5µm,21.2s						
QZH	Quanzhou	23.06	340	P	P	02 39 00.2	-1.2
QZH				S	S	02 43 06.9	-3.2
QZH				LR	LR		
	comp=Z,7µm,23.0s						
QZH				LR	LR		
	comp=Z,3µm,20.2s						
QZH				LR	LR		
	comp=Z,8µm,25.8s						
MYKOM	Kota Tinggi	23.16	267	P	P	02 39 02.5	-0.1
MYKOM	Kota Tinggi	23.16	267	P	P	02 39 02.9	+0.3
BTDF	Bukit Timah Da	23.27	266	P	P	02 39 06.1	+2.4
COEN	Coen	23.44	137	P	P	02 39 04.0	-1.3
	comp=Z,57nm,1.6s						
COEN	Coen	23.44	137	P	P	02 39 04.0	-1.3
COEN	Coen	23.44	137	P	P	02 39 04.5	-0.8
PMG	Port Moresby	23.70	122	P	P	02 39 06.8	-1.1
	comp=Z,8.5nm,0.6s,baz=315,slow=22,SNR=1.6						
PMG				LR	LR	02 50 57.3	
	comp=Z,4µm,19.8s,baz=292,slow=43						
	comp=Z,8.5nm,0.6s						
PMG	Port Moresby	23.70	122	⇓*e*P	P	02 39 06.5	-1.3
PMG				pmax	pmax		
	comp=Z,46nm,1.6s						
WB0	Warramunga Arr	23.98	163	IAmb	IAmb	02 39 13.2	
	comp=Z,116nm,0.7s						
WB9	Warramunga Arr	24.00	163	P	P	02 39 13.0	+2.4
WB9	Warramunga Arr	24.00	163	P	P	02 39 08.2	-2.5
MDSI	Maura Dua	24.05	252	P	P	02 39 12.5	+1.4
	comp=Z,2µmcomp=Z,124nm,1.4s						
KASI	Kota Agung	24.09	249	P	P	02 39 12.9	+1.4
	comp=Z,3µmcomp=Z,329nm,1.5s						
WRAB	Tennant Creek	24.12	163	P	P	02 39 10.2	-1.6
WRAB				IAmb	IAmb	02 39 14.8	
	comp=Z,262nm,1.4s						
WRAB	Tennant Creek	24.12	163	P	P	02 39 10.5	-1.3
WRAB	Tennant Creek	24.12	163	*i*P	P	02 39 10.2	-1.6
WRAB				pmax	pmax		
	comp=Z,77nm,0.9s						
WRA	Warramunga Arr	24.13	163	P	P	02 39 09.0	-2.8
WRA	Warramunga Arr	24.13	163	P	P	02 39 09.7	-2.2
	comp=Z,72nm,0.8s,baz=337,slow=10,SNR=40						
WRA				PcP	PcP	02 42 53.0	+0.4
	comp=Z,1.7nm,0.6s,baz=324,slow=2.7,SNR=2.0						
WRA				S	S	02 43 23.7	-4.0
	comp=Z,26nm,1.1s,baz=354,slow=18,SNR=7.3						
WRA				ScP	ScP	02 46 30.8	+2.0
	comp=Z,20nm,1.3s,baz=338,slow=3.0,SNR=9.1						
	comp=Z,72nm,0.8s						
WRA	Warramunga Arr	24.13	163	*i* P	P	02 39 09.6	-2.2
WRA				pmax	pmax		
	comp=Z,63nm,0.7s						
WB2	Warramunga Arr	24.14	163	P	P	02 39 10.2	-1.7
WB1	Warramunga Ar.	24.15	163	P	P	02 39 10.5	-1.5
WR8	Warramunga Arr	24.19	163	IAmb	IAmb	02 39 23.4	
	comp=Z,147nm,1.1s						
MBWA	Marble Bar	25.26	196	P	P	02 39 21.2	-0.9
	comp=Z,143nm,1.2s						
MBWA	Marble Bar	25.26	196	P	P	02 39 21.4	-0.6
MBWA	Marble Bar	25.26	196	P	P	02 39 22.0	0.0
PSAC1	Pilbara Seismi	25.59	196	P	P	02 39 24.6	-0.5
	comp=Z,132nm,1.0s						
PSA00	Pilbara Seismi	25.62	196	P	P	02 39 24.8	-0.6
	comp=Z,115nm,1.0s						
PSA00	Pilbara Seismi	25.62	196	P	P	02 39 24.1	-1.2
PSA00				IAmb	IAmb	02 39 52.3	
	comp=Z,90nm,1.1s						
PSA00	Pilbara Seismi	25.62	196	IAmb	IAmb	02 39 26.8	
	comp=Z,272nm,1.4s						
PSA00	Pilbara Seismi	25.62	196	P	P	02 39 25.4	+0.1
IPM	Ipoh	25.93	274	P	P	02 39 29.0	+0.7
IPM	Ipoh	25.93	274	P	P	02 39 31.4	+3.1
BKNI	Bangkinang	26.09	264	P	P	02 39 30.4	+0.6
KULM	Kulim	26.34	275	IAmb	IAmb	02 39 43.5	
	comp=Z,143nm,1.4s						
KULM	Kulim	26.34	275	P	P	02 39 34.3	+2.3
QIS	Mount Isa	26.68	153	P	P	02 39 34.8	-0.2
	comp=Z,80nm,0.9s						
QIS	Mount Isa	26.68	153	P	P	02 39 35.4	+0.4
MTSU	Mount Surprise	27.24	142	P	P	02 39 40.2	+0.1
	comp=Z,17nm,1.0s						
MTSU	Mount Surprise	27.24	142	P	P	02 39 41.9	+1.8
ASAR	Alice Springs	27.57	166	P	P	02 39 42.1	-0.9
ASAR	Alice Springs	27.57	166	P	P	02 39 41.2	-1.7
	comp=Z,6.7nm,0.6s,baz=353,slow=8.0,SNR=20						
ASAR				PcP	PcP	02 43 01.2	+0.8
	comp=Z,4.0nm,0.8s,baz=1.3,slow=4.2,SNR=4.3						
ASAR				S	S	02 44 25.3	+3.0
	comp=Z,1.2nm,0.8s,baz=310,slow=41,SNR=3.1						
ASAR				ScP	ScP	02 46 40.8	+2.1
	comp=Z,5.4nm,1.1s,baz=321,slow=2.3,SNR=7.0						
	comp=Z,6.7nm,0.6s						
PSI	Prapat	28.03	270	LR	LR	02 53 31.5	
	comp=Z,1µm,18.7s,baz=86,slow=42						
PSI	Prapat	28.03	270	P	P	02 39 47.0	-0.3
PSI	Prapat	28.03	270	P	P	02 39 46.7	-0.6
PSI				pmax	pmax		
	comp=Z,32nm,1.6s						
WRKA	Warakurna	28.12	177	P	P	02 39 47.6	-0.3
	comp=Z,44nm,1.3s						
SSE	Sheshan	28.26	349	P	P	02 39 49.6	+0.7
SSE				S	S	02 44 34.0	+1.2
SSE				pmax	pmax		
	comp=Z,14nm,1.0s						
SSE				pmax	pmax		
	comp=Z,370nm,6.6s						
SSE				LR	LR		
	comp=Z,830nm,20.0s						
SSE				LR	LR		
	comp=Z,1µm,16.7s						
SLVN	Son La	28.77	311	P	P	02 39 54.3	+0.5
GSI	Gunungsitoli	29.45	267	P	P	02 39 58.7	-1.2
GSI	Gunungsitoli	29.45	267	P	P	02 39 59.6	-0.2
TV1H	Townsville Har	29.65	140	P	P	02 40 02.5	+1.1
NJ2	Nanjing	29.68	346	⇓P	P	02 40 03.6	+2.1
NJ2				S	S	02 44 59.1	+3.9
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,830nm,4.3s						
NJ2				LR	LR		
	comp=Z,2µm,17.8s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,3µm,21.1s						
WHN	Wuhan	29.68	338	⇑P	P	02 40 03.5	+1.9
WHN				S	S	02 45 04.5	+9.2
WHN				pmax	pmax		
	comp=Z,86nm,1.1s						
WHN				LR	LR		
	comp=Z,10µm,20.5s						
WHN				LR	LR		
	comp=Z,13µm,26.1s						
WHN				LR	LR		
	comp=Z,20µm,23.9s						
JNU	Nakatsue	29.96	7	P	P	02 40 03.8	-0.3
JNU				IAmb	IAmb	02 40 13.0	
	comp=Z,49nm,1.0s						
JNU	Nakatsue	29.96	7	LR	LR	02 51 25.0	
	comp=Z,2µm,21.1s,baz=188,slow=35						
JNU	Nakatsue	29.96	7	P	P	02 40 04.8	+0.7
MEEK	Meekatharra	30.77	195	P	P	02 40 10.6	-0.8
	comp=Z,93nm,1.4s						
MEEK	Meekatharra	30.77	195	P	P	02 40 11.6	+0.2
CMAR	Chiang Mai Arr	31.35	301	P	P	02 40 15.9	-0.6
CMAR	Chiang Mai Arr	31.35	301	P	P	02 40 16.4	-0.2
	comp=Z,4.6nm,0.3s,baz=116,slow=7.3,SNR=29						
CMAR				PcP	PcP	02 43 10.5	+0.4
	comp=Z,1.6nm,0.4s,baz=118,slow=3.0,SNR=5.1						
CMAR				S	S	02 45 27.1	+5.3
	comp=Z,1.1nm,0.3s,baz=125,slow=16,SNR=1.6						
CMAR				ScP	ScP	02 46 53.7	+2.8
	comp=Z,2.0nm,0.3s,baz=118,slow=3.3,SNR=8.6						
	comp=Z,4.6nm,0.3s						
PATS	Pohnpei	31.40	82	IAMs_20	IAMs_20	02 51 02.9	
	comp=Z,5µm,20.0s						
CHTO	Chiang Mai	31.50	302	P	P	02 40 17.3	-0.6
CHTO				IAmb	IAmb	02 40 21.6	
	comp=Z,65nm,1.4s						
CHTO	Chiang Mai	31.50	302	P	P	02 40 17.2	-0.7
CHTO	Chiang Mai	31.50	302	P	P	02 40 17.8	-0.1
CHTO	Chiang Mai	31.50	302	P	P	02 40 17.3	-0.6
CHTO				pmax	pmax		
	comp=Z,65nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,2µm,21.0s						
CHTO	Chiang Mai	31.50	302	P	P	02 40 17.9	-0.1
ENH	Enshi	31.59	330	IAmb	IAmb	02 40 19.7	
	comp=Z,73nm,1.1s						
ENH				IAMs_20	IAMs_20	02 54 32.6	
	comp=Z,5µm,21.0s						
ENH	Enshi	31.59	330	P	P	02 40 18.8	+0.2
KMI	Kunming	31.91	315	P	P	02 40 22.4	+0.7
KMI				PP	PnPn	02 41 28.2	+1.0
KMI				S	S	02 45 28.5	-2.4
KMI				pmax	pmax		
	comp=Z,25nm,1.3s						
KMI				pmax	pmax		
	comp=Z,380nm,8.0s

KSAR Wonju Array Be 34.06 1 P **P** **02 40 40.8 +0.8**
KSAR Wonju Array Be 34.06 1 P **P** **02 40 40.8 +0.8**
TIA Tai'an 34.06 346 P **P** **02 40 41.5 +1.4**
TIA pP **sP** **02 40 53.5 +0.5**
TIA PP **PnPn** **02 41 55.8 +1.6**
TIA PcP **PcP** **02 43 19.4 +2.1**
TIA S **S** **02 46 01.7 -1.9**
TIA pmax pmax
comp=Z,27nm,1.1s
TIA pmax pmax
comp=Z,690nm,7.5s
TIA LR LR
comp=Z,2μm,17.8s
TIA LR LR
comp=Z,1μm,21.4s
TIA LR LR
comp=Z,3μm,18.8s
KSRS Korea Array 34.07 1 P **P** **02 40 40.4 +0.3**
comp=Z,12nm,0.9s,baz=177,slow=11,SNR=29
KSRS PcP **PcP** **02 43 18.0 +0.8**
comp=Z,3.6nm,0.8s,baz=176,slow=2.9,SNR=4.8
comp=Z,12nm,0.9s
KS19 Wonju Array Si 34.12 1 P **P** **02 40 41.4 +0.9**
KS19 IAmb IAmb 02 40 57.0
comp=Z,50nm,1.1s
MJAR Matsushiro Arr 34.73 16 P **P** **02 40 45.0 -0.9**
MJAR Matsushiro Arr 34.73 16 P **P** **02 40 45.7 -0.1**
comp=Z,4.2nm,0.7s,baz=182,slow=10,SNR=9.6
MJAR PcP **PcP** **02 43 19.6 +0.4**
comp=Z,6.4nm,0.9s,baz=189,slow=2.4,SNR=5.5
MJAR LR LR 02 56 08.4
comp=Z,3μm,19.6s,baz=204,slow=38
comp=Z,4.2nm,0.7s
MAJO Matsushiro 34.73 16 P **P** **02 40 44.6 -1.2**
MAJO Matsushiro 34.73 16 IAMs_20 IAMs_20 02 55 47.6
comp=Z,5μm,21.0s
MAJO Matsushiro 34.73 16 P **P** **02 40 47.4 +1.5**
MAJO Matsushiro 34.73 16⇓*eP* **P** **02 40 45.6 -0.3**
MAJO pmax pmax
comp=Z,9.0nm,1.0s
MJB9 Matsu-Tunnel 34.73 16 IAmb IAmb 02 40 52.5
comp=Z,70nm,1.5s
KMBL Kambalda 34.74 188 P **P** **02 40 45.0 -1.0**
comp=Z,36nm,1.0s
TNCH TengChong 34.94 311 P **P** **02 40 47.8 -0.2**
TNCH S **S** **02 46 15.3 -2.5**
TNCH pmax pmax
comp=Z,86nm,0.3s
TNCH pmax pmax
comp=Z,370nm,4.3s
TNCH LR LR
comp=Z,1μm,24.5s
TNCH LR LR
comp=Z,1μm,19.9s
TNCH LR LR
comp=Z,3μm,23.4s
XAN Xi'an 34.98 333 P **P** **02 40 47.6 -0.5**
XAN pP sP 02 41 01.5 +0.5
XAN S **S** **02 46 13.9 -4.0**
XAN SS **SnSn** **02 48 38.3 +3.4**
XAN pmax pmax
comp=Z,67nm,1.1s
XAN LR LR
comp=Z,3μm,22.0s
XAN LR LR
comp=Z,2μm,19.9s
XAN LR LR
comp=Z,5μm,24.0s
HNR Honiara 35.17 111 IAMs_20 IAMs_20 02 57 00.3
comp=Z,4μm,22.0s
CD2 Chengdu 35.20 324 P **P** **02 40 48.7 -1.3**
CD2 S **S** **02 46 22.5 +1.1**
CD2 pmax pmax
comp=Z,70nm,1.3s
CD2 pmax pmax
comp=Z,620nm,3.5s
CD2 LR LR
comp=Z,5μm,20.9s
CD2 LR LR
comp=Z,5μm,19.0s
CD2 LR LR
comp=Z,7μm,20.9s
DL2 Dalian 35.85 353 P **P** **02 40 57.1 +1.7**
DL2 S **S** **02 46 33.6 +2.7**
DL2 pmax pmax
comp=Z,85nm,1.4s
DL2 pmax pmax
comp=Z,990nm,4.6s
DL2 LR LR
comp=Z,930nm,25.6s
DL2 LR LR
comp=Z,3μm,18.9s
DL2 LR LR
comp=Z,3μm,23.3s
JMM Marumori 36.72 18 IAmb IAmb 02 41 36.6
comp=Z,85nm,1.1s
JMM Marumori 36.72 18 P **P** **02 41 04.9 +2.0**
EIDS Eidsvold 36.80 142 P **P** **02 41 03.0 -0.8**
comp=Z,57nm,1.1s
EIDS Eidsvold 36.80 142 IAmb IAmb 02 41 04.7
comp=Z,75nm,1.2s
EIDS Eidsvold 36.80 142 P **P** **02 41 03.3 -0.4**
TIY Taiyuan 36.82 341 P **P** **02 41 05.3 +1.4**
TIY sP sP 02 41 24.1 +7.3
TIY S **S** **02 46 47.2 +1.1**
TIY pmax pmax
comp=Z,440nm,6.5s
TIY LR LR
comp=Z,2μm,22.7s
TIY LR LR
comp=Z,2μm,24.0s
TIY LR LR
comp=Z,5μm,26.1s
BBOO Buckleboo 36.86 167 P **P** **02 41 02.8 -1.3**
comp=Z,38nm,1.4s
BBOO Buckleboo 36.86 167 P **P** **02 41 05.8 +1.7**
WHYH Whyalla 37.43 165 P **P** **02 41 10.4 +1.5**
STKA Stephens Creek 37.57 159 P **P** **02 41 08.7 -1.4**
comp=Z,335nm,0.9s
STKA Stephens Creek 37.57 159 P **P** **02 41 08.8 -1.4**
STKA Stephens Creek 37.57 159 P **P** **02 41 08.8 -1.3**
comp=Z,39nm,0.6s,baz=325,slow=9.5,SNR=44
STKA LR LR 02 59 15.8
comp=Z,2μm,19.4s,baz=331,slow=41
comp=Z,39nm,0.6s
STKA Stephens Creek 37.57 159 P **P** **02 41 09.7 -0.5**
STKA Stephens Creek 37.57 159*de*P **P** **02 41 09.7 -0.5**
BJT Baijiatuau 37.91 346 IAmb IAmb 02 41 20.8
comp=Z,115nm,1.1s
BJT Baijiatuau 37.91 346 P **P** **02 41 14.0 +1.1**
BJT Baijiatuau 37.91 346 P **P** **02 41 14.2 +1.2**
BJT pmax pmax
comp=Z,109nm,1.1s
BJT Baijiatuau 37.91 346 P **P** **02 41 14.1 +1.1**
BJT pP **pP** **02 41 21.3 -1.1**
BJI Beijing 37.93 346 P **P** **02 41 14.3 +1.2**
BJI pP **sP** **02 41 26.7 +0.6**
BJI sP pwP 02 41 35.3 +13
BJI S **S** **02 47 06.4 +3.7**
BJI ScP **ScP** **02 47 13.5 -0.4**
BJI PcS **PcS** **02 47 19.0 +1.6**
BJI sS sS 02 47 28.5 +10
BJI pmax pmax
comp=Z,52nm,1.1s
BJI pmax pmax
comp=Z,380nm,5.9s
BJI LR LR
comp=Z,760nm,18.2s
BJI LR LR
comp=Z,470nm,18.2s
BJI LR LR
comp=Z,1μm,19.9s
HTT Hallett 38.16 164 P **P** **02 41 14.9 -0.4**
comp=Z,11nm,1.4s
HTT Hallett 38.16 164 P **P** **02 41 15.9 +0.7**
AULRC Lightning Ridg 38.20 150 P **P** **02 41 15.2 -0.3**
SNY Shenyang 38.55 356 ⇑P **P** **02 41 19.8 +1.5**
SNY S **S** **02 47 15.3 +3.3**
SNY pmax pmax
comp=Z,49nm,1.0s
SNY pmax pmax
comp=Z,640nm,5.7s
SNY LR LR
comp=Z,1μm,19.0s
SNY LR LR
comp=Z,2μm,19.0s
SNY LR LR
comp=Z,2μm,19.8s
CMSA Cobar Meteorol 38.89 154 P **P** **02 41 21.1 -0.2**
comp=Z,31nm,1.3s
CMSA Cobar Meteorol 38.89 154 P **P** **02 41 21.5 +0.2**
TW1H Toowoomba 1 Ha 38.94 143 P **P** **02 41 22.6 +0.8**
LZDM Lanzhou Array 39.04 329 P **P** **02 41 23.4 +0.6**
comp=Z,3.5nm,0.5s,baz=148,slow=8.7,SNR=8.9
comp=Z,3.5nm,0.5s
LZH Lanzhou 39.06 330 *eP* **P** **02 41 23.8 +0.9**
LZH pP sP 02 41 38.7 +2.8
LZH S **S** **02 47 17.8 -2.5**
LZH sS sS 02 47 44.6 +9.3
LZH pmax pmax
comp=Z,70nm,1.3s
LZH pmax pmax
comp=Z,550nm,4.1s
LZH LR LR
comp=Z,6μm,15.5s
LZH LR LR
comp=Z,6μm,15.1s
LZH LR LR
comp=Z,7μm,14.1s
BRDH Bariadhala 39.32 303 P **P** **02 41 26.0 +1.0**
comp=Z,82nm,0.3s,baz=74,slow=7.4,SNR=5.8
AUMBR Murray Bridge 39.87 164 P **P** **02 41 31.9 +2.5**
HHC Hu-ho-hao-te 39.95 342 *eP* **P** **02 41 31.4 +1.2**
HHC pP sP 02 41 46.5 +3.3
HHC PP **PnPn** **02 43 09.3 +3.3**
HHC S **S** **02 47 33.2 -0.2**
HHC SS **SS** **02 50 23.3 -7.8**
HHC ScS **ScS** **02 51 29.6 -5.4**
HHC pmax pmax
comp=Z,24nm,0.7s
HHC pmax pmax
comp=Z,600nm,6.2s
HHC LR LR
comp=Z,1μm,17.3s
HHC LR LR
comp=Z,600nm,17.5s
HHC LR LR
comp=Z,2μm,17.1s
BTO Baotou 40.24 340 *eP* **P** **02 41 34.9 +2.3**
BTO pP **sP** **02 41 47.2 +1.6**
BTO sP pwP 02 41 52.6 +8.6
BTO S **S** **02 47 44.3 +6.6**
BTO SS **SS** **02 50 37.6 +0.8**
BTO pmax pmax
comp=Z,28nm,1.1s
BTO pmax pmax
comp=Z,1μm,8.2s
BTO LR LR
comp=Z,5μm,22.7s
BTO LR LR
comp=Z,4μm,22.2s
BTO LR LR
comp=Z,7μm,22.8s
SHL Shillong 40.38 307 P **P** **02 41 32.4 -1.7**
SHL lAmb lAmb 02 41 34.8
comp=Z,64nm,0.7s
SHL Shillong 40.38 307 P **P** **02 41 34.2 +0.1**
SNR=41
SHL Shillong 40.38 307 P **P** **02 41 32.4 -1.7**
SHL pmax pmax
comp=Z,64nm,0.7s
CN2 Changchun 40.43 358 P **P** **02 41 35.2 +1.3**
CN2 sP sP 02 41 52.9 +5.8
CN2 PcP **PcP** **02 43 37.6 +1.1**
CN2 S **S** **02 47 41.6 +1.5**
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 pmax pmax
comp=Z,600nm,7.0s
CN2 LR LR
comp=Z,1μm,19.0s
CN2 LR LR
comp=Z,2μm,19.0s
CN2 LR LR
comp=Z,2μm,19.0s
ARMA Armidale 40.91 147 P **P** **02 41 37.9 -0.3**
comp=Z,58nm,1.4s
ARMA Armidale 40.91 147 P **P** **02 41 37.6 -0.6**
ARMA Armidale 40.91 147 P **P** **02 41 39.1 +0.9**
AUPHS Peel High Scho 41.04 148 P **P** **02 41 41.4 +2.2**
USRK Ussuriysk Ar. 41.04 5 P **P** **02 41 39.4 +0.4**
comp=Z,29nm,1.1s,baz=200,slow=8.6,SNR=16
comp=Z,29nm,1.1s
ERM Erimo 41.24 18 IAMs_20 IAMs_20 02 59 59.9
comp=Z,3μm,22.0s
MDJ Mudanjiang 41.28 3 P **P** **02 41 42.1 +1.1**
MDJ lAmb lAmb 02 42 01.4
comp=Z,112nm,1.4s
MDJ Mudanjiang 41.28 3 P **P** **02 41 42.1 +1.1**
MDJ S **S** **02 47 56.1 +3.3**
MDJ pmax pmax
comp=Z,45nm,1.0s
MDJ LR LR
comp=Z,2μm,21.6s
MDJ LR LR
comp=Z,2μm,24.1s
MDJ LR LR
comp=Z,2μm,22.0s
MDJ Mudanjiang 41.28 3 P **P** **02 41 42.3 +1.3**
MDJ Mudanjiang 41.28 3 P **P** **02 41 42.4 +1.5**
MDJ pP **pP** **02 41 49.5 -0.9**
XLT XiLinHaoTe 41.64 348 *eP* **P** **02 41 45.4 +1.4**
XLT pP sP 02 41 57.7 +0.6
XLT sP pwP 02 42 03.8 +10
XLT PcS **PcS** **02 47 29.5 -2.4**
XLT S **S** **02 48 01.1 +2.7**
XLT pmax pmax
comp=Z,97nm,1.2s
XLT pmax pmax
comp=Z,830nm,7.5s
XLT LR LR
comp=Z,2μm,25.3s
XLT LR LR
comp=Z,1μm,22.7s
H11S3 WAKE ISLAND Hy 41.70 66 T T 03 26 16.1
baz=253,slow=75,SNR=9.3
H11S1 WAKE ISLAND Hy 41.71 66 T T 03 26 17.2
baz=253,slow=75,SNR=6.0
H11S2 WAKE ISLAND Hy 41.71 66 T T 03 26 21.4
baz=253,slow=75,SNR=11
ARPS Mount Arapiles 42.13 162 P **P** **02 41 47.3 -0.7**
comp=Z,50nm,1.0s
BNX BinXian 42.34 0 ⇑P **P** **02 41 50.2 +0.6**
BNX pP **pwP** **02 42 01.2 +2.1**
BNX sP **sP** **02 42 07.0 +4.2**
BNX S **S** **02 48 09.3 +0.8**
BNX pmax pmax
comp=Z,23nm,1.3s
BNX pmax pmax
comp=Z,600nm,7.3s
BNX LR LR
comp=Z,1μm,19.9s
BNX LR LR
comp=Z,2μm,22.7s
BNX LR LR
comp=Z,2μm,21.4s
YNG Young 42.42 153 P **P** **02 41 50.2 -0.2**
comp=Z,24nm,1.2s
TEY Ternei 42.49 10⇑*eP* **P** **02 41 52.3 +1.5**
TEY pmax pmax
comp=Z,20nm,1.2s
TEY pmax pmax
comp=N,20nm,0.7s
LSA Lhasa 42.96 312 IAmb IAmb 02 41 57.6
comp=Z,59nm,1.0s
LSA Lhasa 42.96 312 P **P** **02 41 52.6 -2.9**
LSA pmax pmax
comp=Z,62nm,1.5s
LSA LR LR
comp=Z,950nm,24.0s
LSA LR LR
comp=Z,550nm,21.3s
LSA LR LR
comp=Z,2μm,23.4s
LSA Lhasa 42.96 312 P **P** **02 41 56.3 +0.8**
LSA pmax pmax
comp=Z,69nm,1.5s
ASAJ Asahikawa 43.00 17 P **P** **02 41 56.6 +1.7**
comp=Z,13nm,0.7s,baz=173,slow=8.1,SNR=4.3
comp=Z,13nm,0.7s
JKA Kamikawa-asahi 43.00 17 IAmb IAmb 02 42 05.1
comp=Z,128nm,1.4s
BRAT Ballarat 43.52 160 P **P** **02 42 01.1 +1.9**
AUMTS Mt Stromlo 43.55 154 P **P** **02 42 00.3 +0.7**
CAN Canberra 43.55 154 P **P** **02 41 59.4 -0.2**
comp=Z,35nm,1.3s
CAN Canberra 43.55 154 P **P** **02 41 59.1 -0.5**
CAN IAMs_20 IAMs_20 03 03 05.7
comp=Z,4μm,19.0s
CAN Canberra 43.55 154 P **P** **02 41 59.9 +0.3**
CAN Canberra 43.55 154 P **P** **02 41 59.1 -0.5**
CAN pmax pmax
comp=Z,26nm,0.9s
CAN MLR MLR
comp=Z,4μm,19.0s
CAN Canberra 43.55 154 P **P** **02 42 00.5 +0.8**
GTA Gaotai 43.66 329 *eP* **P** **02 42 01.3 +0.7**
GTA S **S** **02 48 27.7 -0.6**
GTA pmax pmax
comp=Z,16nm,1.9s
GTA pmax pmax
comp=Z,400nm,9.5s
GTA LR LR
comp=Z,4μm,22.9s
GTA LR LR
comp=Z,3μm,22.2s
GTA LR LR
comp=Z,6μm,24.7s
CNB Canberra Magne 43.71 153 P **P** **02 42 03.0 +2.1**
SANVU Saraoutou 43.91 116 IAMs_20 IAMs_20 03 01 59.0
comp=Z,3μm,19.0s
TOO Toolangi 44.08 159 P **P** **02 42 04.3 +0.5**
comp=Z,9.9nm,1.8s
TOO Toolangi 44.08 159 P **P** **02 42 04.5 +0.7**
TOO Toolangi 44.08 159 P **P** **02 42 04.5 +0.7**
TOO pmax pmax
comp=Z,23nm,1.5s
EVN Everest 45.50 307 P **P** **02 42 15.4 -0.6**
YSS Yuzhno-Sakhali 45.66 15 *eP* **P** **02 42 16.3 +0.1**
YSS *e* 02 44 03.7
YSS *eS* **S** **02 48 55.0 -1.7**
YSS pmax pmax
comp=Z,600nm,4.3s
YSS pmax pmax
comp=Z,50nm,1.1s
DZM Mont Dzumac 46.04 125 P **P** **02 42 19.3 -0.4**
comp=Z,7.9nm,0.7s,baz=279,slow=11,SNR=6.1
comp=Z,7.9nm,0.7s
PALK Pallekele 46.25 277 P **P** **02 42 20.1 -1.3**
PALK lAmb lAmb 02 42 22.7
comp=Z,113nm,1.6s
PALK Pallekele 46.25 277 LR LR 03 02 52.2
comp=Z,994nm,21.6s,baz=99,slow=38
PALK Pallekele 46.25 277 P **P** **02 42 21.0 -0.4**
PALK Pallekele 46.25 277*de*P **P** **02 42 21.0 -0.4**
PALK pmax pmax
comp=Z,49nm,1.4s
PALK Pallekele 46.25 277 P **P** **02 42 21.1 -0.4**
HIA Hailar 46.29 353 IAMs_20 IAMs_20 03 02 35.5
comp=Z,2μm,21.0s
HIA Hailar 46.29 353 lAmb lAmb 02 42 25.5
comp=Z,50nm,1.2s
HIA Hailar 46.29 353 P **P** **02 42 23.1 +1.9**
HIA Hailar 46.29 353*c i*P **P** **02 42 22.4 +1.2**
HIA pmax pmax
comp=Z,37nm,1.1s
HILR Hailar Array B 46.57 354 P **P** **02 42 25.1 +1.6**
comp=Z,37nm,1.1s,baz=171,slow=10,SNR=14
HILR PcP **PcP** **02 43 58.2 +1.0**
comp=Z,5.3nm,0.7s,baz=169,slow=2.3,SNR=2.2
comp=Z,37nm,1.1s
HEH HeiHe 46.86 0 *eP* **P** **02 42 26.6 +1.0**
HEH pP **sP** **02 42 37.9 -1.0**
HEH PP **PP** **02 44 14.6 -1.6**
HEH S **S** **02 49 14.2 +0.3**
HEH pmax pmax
comp=Z,53nm,1.6s
HEH pmax pmax
comp=Z,760nm,7.7s
HEH LR LR
comp=Z,1μm,20.6s
HEH LR LR
comp=Z,1μm,21.8s
HEH LR LR
comp=Z,2μm,21.7s
ULN Ulaanbaatar 47.67 342 P **P** **02 42 32.6 +0.4**
ULN lAmb lAmb 02 42 53.6
comp=Z,55nm,1.0s
ULN Ulaanbaatar 47.67 342 P **P** **02 42 33.1 +0.9**
ULN P **P** **02 42 33.1 +0.9**
ULN Ulaanbaatar 47.67 342*c i*P **P** **02 42 33.2 +0.9**
ULN pmax pmax
comp=Z,53nm,1.7s
ULN Ulaanbaatar 47.67 342 P **P** **02 42 33.1 +0.9**
SONM Songino Array 47.85 341 P **P** **02 42 34.0 +0.4**
SONM lAmb lAmb 02 42 54.2
comp=Z,33nm,1.0s
SONM Songino Array 47.85 341 P **P** **02 42 34.6 +1.1**
comp=Z,13nm,0.9s,baz=162,slow=7.9,SNR=28
comp=Z,13nm,0.9s
GRNR Gornyy 48.04 8⇑*iP* **P** **02 42 36.4 +1.6**
GRNR pmax pmax
comp=Z,20nm,0.9s
TAU Tasmania Unive 49.47 160 IAMs_20 IAMs_20 03 03 40.9
comp=Z,2μm,21.0s
HYBB Hyderabad (bro 49.53 290 *eP* **P** **02 42 47.1 +0.3**
HYBB *es*P **sP** **02 42 58.8 -1.2**
HYBB *e*PP **PP** **02 44 41.7 +0.4**
HYBB *eS* **S** **02 49 53.2 +0.4**
CIT Chita 49.91 349 *eP* **P** **02 42 50.8 +1.7**
CIT *e* 02 43 02.8
CIT *e* 02 44 06.0
CIT *e* 02 45 38.5
CIT pmax pmax
comp=Z,176nm,2.5s
ZEA Zeya 50.35 0 *eP* **P** **02 42 54.3 +1.9**
ZEA *e* 02 52 39.5
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA MLR MLR
comp=N,700nm,16.0s
ZAK Zakamensk 51.08 341 *eP* **P** **02 42 58.5 +0.4**
ZAK pmax pmax
comp=Z,22nm,1.7s
TLY Talaya 52.08 342 P **P** **02 43 06.4 +0.9**
TLY Talaya 52.08 342 P **P** **02 43 06.7 +1.2**
TLY P **P** **02 43 06.7 +1.2**
TLY Talaya 52.08 342*ce*P **P** **02 43 07.4 +1.9**
TLY pmax pmax
comp=Z,61nm,1.7s
IRK Irkutsk 52.38 343 *eP* **P** **02 43 08.6 +0.9**
IRK pmax pmax
comp=Z,131nm,1.8s
WMQ Urumqi 53.28 325 *eP* **P** **02 43 15.2 +0.7**
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,290nm,5.1s
WMQ LR LR
comp=Z,4μm,24.2s
WMQ LR LR
comp=Z,2μm,20.5s
WMQ LR LR
comp=Z,4μm,23.7s
KNGR Kungurtug, Tuv 53.34 337⇓*eP* **P** **02 43 16.4 +1.5**
KNGR pmax pmax
comp=Z,20nm,1.5s
MSVF Nonsavu 54.47 114 **P** **02 43 25.5 +1.8**
MSVF Nonsavu 54.47 114 P **P** **02 43 25.4 +1.8**
MSVF Nonsavu 54.47 114⇓*eP* **P** **02 43 24.2 +0.5**
MSVF pmax pmax
comp=Z,63nm,1.2s
DGAR Diego Garcia 55.44 259 IAMs_20 IAMs_20 03 03 15.0
comp=Z,2μm,22.0s
PEA0B Petropavlovsk- 55.80 22*ce*P **P** **02 43 34.9 +2.4**
PETK Petropavlovsk- 55.80 22 **P** **02 43 34.4 +1.9**
PETK Petropavlovsk- 55.80 22 P **P** **02 43 32.2 -0.3**
comp=Z,15nm,0.6s,baz=196,slow=4.2,SNR=13
comp=Z,15nm,0.6s
PETK Petropavlovsk- 55.80 22 P **P** **02 43 34.4 +1.9**
PET Petropavlovsk 56.09 22 P **P** **02 43 34.9 +0.3**
PET Petropavlovsk 56.09 22 *eP* **P** **02 43 36.3 +1.7**
PET *eS* **S** **02 51 19.3 -1.8**
PET pmax pmax
comp=Z,400nm,3.4s

PET pmax pmax
comp=Z,200nm,11.5s
PET pmax pmax
comp=Z,18nm,0.9s
PET MLR MLR
comp=Z,900nm,18.0s
ZSN Zaisan 57.06 327 *e*P **P 02 43 41.7 -0.1**
comp=Z,21nm,1.2s
ZSN Zaisan 57.06 327 *e*P **P 02 43 41.6 -0.1**
ZSN pmax pmax
comp=Z,21nm,1.2s
DGZ Jazzator, Alta 57.16 331⇑ *e*P **P 02 43 42.8 +0.3**
DGZ pmax pmax
comp=Z,17nm,1.1s
SHLS Shalkode 57.90 320 *e*P **P 02 43 45.7 -2.1**
comp=Z,24nm,1.0s
SHLS Shalkode 57.90 320 *e*P **P 02 43 45.7 -2.1**
SHLS pmax pmax
comp=Z,24nm,1.0s
PDGK Podgornoye 57.96 321 P **P 02 43 46.8 -1.5**
OUZ Omahuta 58.03 135 IAMs_20 IAMs_20 03 07 00.7
comp=Z,2µm,22.0s
MK31 Makanchi Array 58.11 325*c i*P **P 02 43 48.1 -1.0**
MKAR Makanchi Array 58.11 325 P **P 02 43 48.7 -0.5**
MKAR Makanchi Array 58.11 325 P **P 02 43 48.4 -0.7**
comp=Z,14nm,0.7s,baz=116,slow=8.2,SNR=74
MKAR LR LR 03 12 03.5
comp=Z,2µm,18.4s,baz=96,slow=39
comp=Z,14nm,0.7s
UZB Uzynbulak 58.17 320⇑ *i*P **P 02 43 49.4 -0.4**
comp=Z,16nm,1.1s
UZB Uzynbulak 58.17 320*c i*P **P 02 43 49.3 -0.5**
UZB pmax pmax
comp=Z,16nm,1.1s
PRZ Przheval'sk 58.25 319 IAmb IAmb 02 44 14.4
comp=Z,33nm,0.8s
PRZ Przheval'sk 58.25 319 P **P 02 43 50.7 +0.3**
PRZ pmax pmax
comp=Z,42nm,1.1s
TARG Taragay, Kyrgy 58.29 318 IAmb IAmb 02 44 24.0
comp=Z,28nm,1.0s
TARG Taragay, Kyrgy 58.29 318 P **P 02 43 51.5 +0.5**
TARG pmax pmax
comp=Z,14nm,0.9s
MAKZ Makanchi 58.30 325 P **P 02 43 49.6 -0.8**
MAKZ IAmb IAmb 02 43 52.6
comp=Z,64nm,1.1s
MAKZ IAMs_20 IAMs_20 03 12 07.7
comp=Z,2µm,20.0s
MAKZ Makanchi 58.30 325 P **P 02 43 49.6 -0.8**
MAKZ pmax pmax
comp=Z,64nm,1.2s
MAKZ MLR MLR
comp=Z,2µm,20.0s
MAKZ Makanchi 58.30 325 P **P 02 43 49.8 -0.7**
MAKZ pP **pP 02 43 59.6 -0.3**
MAKZ sP **sP 02 44 03.3 -0.4**
NIL Nilore 58.44 308 P **P 02 43 51.2 -0.4**
NIL Nilore 58.44 308 P **P 02 43 51.2 -0.4**
NIL P **P 02 43 51.2 -0.4**
NIL Nilore 58.44 308 P **P 02 43 51.2 -0.4**
NIL pmax pmax
comp=Z,121nm,1.3s
NIL MLR MLR
comp=Z,500nm,20.0s
SATY Saty 58.52 320 *e*P **P 02 43 52.0 -0.3**
comp=Z,17nm,1.0s
SATY Saty 58.52 320 *e*P **P 02 43 51.9 -0.3**
SATY pmax pmax
comp=Z,17nm,1.0s
KSH Kashi 58.58 315 P **P 02 43 53.7 +1.1**
KSH S **S 02 51 56.7 +2.1**
KSH pmax pmax
comp=Z,18nm,1.4s
KSH pmax pmax
comp=Z,360nm,8.3s
KSH LR LR
comp=Z,2µm,19.2s
KSH LR LR
comp=Z,1µm,24.0s
KSH LR LR
comp=Z,1µm,20.6s
YAK Yakutsk 58.70 1 P **P 02 43 53.0 +0.1**
YAK Yakutsk 58.70 1 P **P 02 43 52.5 -0.3**
comp=Z,87nm,0.8s,baz=197,slow=2.4,SNR=18
comp=Z,87nm,0.8s
YAK Yakutsk 58.70 1 *e*P **P 02 43 52.7 -0.1**
YAK *e* 02 44 44.6
YAK *e* 02 46 05.2
YAK *e*S **S 02 51 54.9 -0.2**
YAK *e**SS sS 02 52 18.0 +7.2
YAK *e* 02 53 39.6
YAK *e*SS **SS 02 55 49.9 +1.4**
YAK pmax pmax
comp=Z,86nm,0.9s
YAK pmax pmax
comp=E,12nm,1.4s
YAK pmax pmax
comp=N,40nm,1.4s
YAK pmax pmax
comp=Z,488nm,4.4s
YAK pmax pmax
comp=E,216nm,3.5s
YAK pmax pmax
comp=N,205nm,3.0s
YAK smax smax
comp=N,392nm,3.6s
YAK smax smax
comp=E,108nm,3.1s
YAK MLR MLR
comp=Z,1µm,23.0s
YAK MLR MLR
comp=N,856nm,22.0s
YAK MLR MLR
comp=E,1µm,21.0s
KDJ Kajisay 58.89 318 P **P 02 43 54.8 0.0**
KDJ pmax pmax
comp=Z,23nm,0.8s
MA2 Magadan 59.13 14 P **P 02 43 58.9 +3.0**
MA2 Magadan 59.13 14⇑ *e*P **P 02 43 56.7 +0.8**
MA2 pmax pmax
comp=Z,56nm,1.1s
MDOK Medeo 59.45 319 *e*P **P 02 43 58.4 -0.3**
MDOK Medeo 59.45 319 *e*P **P 02 43 58.3 -0.3**
TNSS Tian-Shan 59.46 319 *e*P **P 02 43 58.5 -0.6**
TNSS Tian-Shan 59.46 319 *e*P **P 02 43 58.4 -0.6**
TDK Taldyqorghan 59.47 322 *e*P **P 02 43 58.5 -0.1**
comp=Z,21nm,1.0s
TDK Taldyqorghan 59.47 322 *e*P **P 02 43 58.5 -0.1**
TDK pmax pmax
comp=Z,21nm,1.0s
AAA Alma-Ata 59.56 319 *e*P **P 02 43 59.1 -0.2**
AAA Alma-Ata 59.56 319 *e*P **P 02 43 59.1 -0.2**
BOOM Boomskoye usch 59.87 318 IAmb IAmb 02 44 45.5
comp=Z,39nm,1.3s
JCZ Jackson Bay 60.15 146 P **P 02 44 05.0 +1.7**
TKM2 Tokmak 2 60.29 319 P **P 02 44 03.8 -0.7**
SNR=16
KBK Karagaybulak 60.61 318 P **P 02 44 06.9 +0.3**
SNR=5.0
ARLS Aral 60.69 317 P **P 02 44 07.7 +0.5**
ARLS pmax pmax
comp=Z,32nm,0.9s
UCH Uchtor 60.72 318 P **P 02 44 07.9 +0.2**
SNR=18
AAK Ala-Archa 60.90 318 P **P 02 44 08.7 +0.1**
AAK Ala-Archa 60.90 318 P **P 02 44 08.7 +0.1**
comp=Z,2.7nm,0.7s,baz=129,slow=7.0,SNR=16
comp=Z,2.7nm,0.7s
AAK Ala-Archa 60.90 318 P **P 02 44 09.7 +1.1**
AAK P **P 02 44 09.7 +1.1**
AAK Ala-Archa 60.90 318 P P 02 44 14.7 +6.0
SNR=10
AAK Ala-Archa 60.90 318*ce*P **P 02 44 08.7 +0.1**
AAK pmax pmax
comp=Z,21nm,1.7s
LBZ Lake Benmore 61.12 146 P **P 02 44 09.2 -0.7**
ZAA0 Zalesovo Array 61.15 333 P **P 02 44 09.3 -0.6**
ZAA0 IAmb IAmb 02 44 12.4
comp=Z,32nm,1.1s
ZALV Zalesovo Beam 61.15 333 P **P 02 44 08.5 -1.3**
ZALV Zalesovo Beam 61.15 333 P **P 02 44 08.6 -1.2**
comp=Z,20nm,0.8s,baz=119,slow=6.2,SNR=56
ZALV LR LR 03 12 53.4
comp=Z,786nm,20.4s,baz=130,slow=38
ZALV PKP2ab **P'P'ab 03 13 45.3 +0.6**
comp=Z,0.6nm,0.4s,baz=355,slow=3.4,SNR=3.9
comp=Z,20nm,0.8s
ZALV Zalesovo Beam 61.15 333 *i* P **P 02 44 09.6 -0.2**
ZALV pmax pmax
comp=Z,19nm,0.8s
SGDS Sogindy 61.16 319 *e*P **P 02 44 09.8 -0.4**
USP Ospenovka 61.16 319 P **P 02 44 09.6 -0.7**
SNR=18
OHH Osh 61.23 315 P **P 02 44 08.9 -1.9**
OHH pmax pmax
comp=Z,19nm,0.7s
EKS2 Erkin-Say 61.39 318 P **P 02 44 11.4 -0.5**
SNR=9.4
DRK Karamyk 61.54 314 IAmb IAmb 02 44 29.8
comp=Z,33nm,1.0s
URZ Urewera 62.00 137 LR LR 03 12 12.3
comp=Z,2µm,19.7s,baz=305,slow=37
KBL Kabul 62.03 308 P **P 02 44 15.9 -0.6**
KBL IAmb IAmb 02 44 17.3
comp=Z,71nm,1.5s
KBL Kabul 62.03 308 P **P 02 44 16.1 -0.4**
SNR=18
KBL Kabul 62.03 308 P **P 02 44 15.9 -0.6**
KBL pmax pmax
comp=Z,71nm,1.5s
RTZ Ruatahuna 62.09 137 P **P 02 44 16.5 -0.1**
RTZ IAmb IAmb 02 44 19.2
comp=Z,76nm,1.3s
BHW Baring Head 62.17 141 IAMs_20 IAMs_20 03 12 16.3
comp=Z,2µm,21.0s
MRZ Mangatainoka R 62.22 140 IAMs_20 IAMs_20 03 13 02.6
comp=Z,2µm,20.0s
ARK Arkit 62.29 316 P **P 02 44 17.6 -0.3**
ARK pmax pmax
comp=Z,49nm,1.0s
KURBB Kurchatov Arra 62.30 327 P **P 02 44 16.9 -0.7**
comp=Z,37nm,0.9s,baz=126,slow=6.2,SNR=82
KURBB PKP2bc **P'P'bc 03 13 29.5 -3.1**
comp=Z,0.2nm,0.2s,baz=275,slow=3.5,SNR=4.4
KURBB PKP2ab **P'P'ab 03 13 36.1 -4.3**
comp=Z,0.2nm,0.3s,baz=288,slow=2.7,SNR=4.0
comp=Z,37nm,0.9s
KURK Kurchatov 62.30 328 P **P 02 44 17.1 -0.5**
KURK Kurchatov 62.30 328 P **P 02 44 16.7 -0.9**
KURK P **P 02 44 16.7 -0.9**
KURK Kurchatov 62.30 328*ce*P **P 02 44 16.5 -1.1**
KURK pmax pmax
comp=Z,95nm,1.3s
KURK Kurchatov 62.30 328 P **P 02 44 17.2 -0.5**
KURK pP **pP 02 44 26.9 -0.3**
KURK PcP **PcP 02 44 56.7 -0.5**
SEY Seymchan 62.46 13 P **P 02 44 20.0 +1.5**
comp=Z,25nm,1.1s,baz=206,slow=6.0,SNR=17
comp=Z,25nm,1.1s
SEY Seymchan 62.46 13 *e*P **P 02 44 19.7 +1.2**
SEY pmax pmax
comp=Z,46nm,1.3s
MXZ Matakaoa Point 62.49 136 IAMs_20 IAMs_20 03 09 41.8
comp=Z,2µm,21.0s
TRKS Terek-Say 62.76 316 P **P 02 44 20.9 -0.2**
TRKS pmax pmax
comp=Z,28nm,1.2s
DZA Taraz 63.14 317 *e*P **P 02 44 23.2 -0.3**
comp=Z,8.3nm,0.5s
DZA Taraz 63.14 317 *e*P **P 02 44 23.1 -0.3**
DZA pmax pmax
comp=Z,8.0nm,0.5s
SIMJ Simiganj 63.30 312 P **P 02 44 23.7 -1.1**
IUG luzhnay 63.75 316⇑ *i*P **P 02 44 27.3 -0.3**
comp=Z,13nm,0.9s
IUG luzhnay 63.75 316*c i*P **P 02 44 27.3 -0.3**
IUG pmax pmax
comp=Z,13nm,0.9s
KK31 Karatay Array 63.77 317 P **P 02 44 26.6 -1.1**
KK31 IAmb IAmb 02 44 52.2
comp=Z,42nm,1.2s
KK31 Karatay Array 63.77 317 *i* P **P 02 44 26.4 -1.2**
KKAR Karatay Array 63.77 317 P **P 02 44 26.7 -1.0**
KKAR Karatay Array 63.77 317 P **P 02 44 26.7 -1.0**
CHM Chimkent 64.11 316 *e*P **P 02 44 29.8 -0.2**
CHM Chimkent 64.11 316 *e*P **P 02 44 29.7 -0.2**
BRLS Borolday 64.21 317⇑ *i*P **P 02 44 30.3 -0.3**
BRLS Borolday 64.21 317*c i*P **P 02 44 30.2 -0.3**
BVA0 Borovoye Array 67.88 327 P **P 02 44 51.0 -2.9**
BVAR Borovoye Array 67.88 327 P **P 02 44 53.5 -0.4**
comp=Z,9.6nm,0.7s,baz=130,slow=8.7,SNR=41
comp=Z,9.6nm,0.7s
BORK Borovoye 67.93 327*ce*P **P 02 44 53.7 -0.5**
BORK pmax pmax
comp=Z,24nm,1.0s
BORK Borovoye 67.93 327 P **P 02 44 53.3 -0.9**
TIXI Tiksi 68.34 1 P **P 02 44 56.0 -0.4**
TIXI IAmb IAmb 02 45 01.9
comp=Z,52nm,1.2s
TIXI Tiksi 68.34 1 IAMs_20 IAMs_20 03 14 12.9
comp=Z,2µm,22.0s
TIXI Tiksi 68.34 1⇑ *e*P **P 02 44 56.7 +0.3**
TIXI pmax pmax
comp=Z,74nm,1.7s
WSAR Wadi Sarin 68.86 294 P **P 02 44 58.4 -2.2**
MHTO MHTO 69.27 291 P **P 02 45 02.4 -0.7**
BILL Bilibino 69.97 15 P **P 02 45 07.9 +1.3**
BILL Bilibino 69.97 15 IAMs_20 IAMs_20 03 16 46.3
comp=Z,1µm,21.0s
BILL Bilibino 69.97 15⇓ *e*P **P 02 45 07.7 +1.1**
BILL pmax pmax
comp=Z,41nm,2.5s
CASY Casey 70.35 187 P **P 02 45 08.8 -0.1**
CASY Casey 70.35 187 IAMs_20 IAMs_20 03 18 18.2
comp=Z,816nm,19.0s
DRV Dumont d'Urvil 70.35 175 P **P 02 45 08.1 -0.8**
HATD Hatta, Dubai 71.28 295 P **P 02 45 16.4 +0.9**
MASF Masafi 71.31 296 P **P 02 45 16.6 +1.0**
ASHO Ashiyiah 71.34 295 P **P 02 45 17.1 +1.3**
SHME Shamm 71.39 296 P **P 02 45 15.9 -0.2**
ALNE Al Ain 71.56 294 P **P 02 45 16.5 -0.6**
ALNE P **P 02 45 16.5 -0.6**
NAZ Nazwa, Dubai 71.72 295 P **P 02 45 17.5 -0.6**
ASUD Al Ashush, Dub 72.00 295 P **P 02 45 19.1 -0.6**
NIKH Nikolski High 72.08 35 P **P 02 45 20.8 +1.1**
baz=251
RBK Rabkut 72.62 287 P **P 02 45 22.9 -0.7**
AB31 Akbulak array 72.70 321 ⇓Pn **PKiKP 02 51 19.4 -4.6**
comp=Z,0.7nm,0.7s,baz=344,slow=17,SNR=4.6
AB31 ⇑Lg Lg 02 51 53.1
comp=Z,0.2nm,0.2s,baz=348,slow=30,SNR=6.4
AB31 Akbulak array 72.70 321 *i* P **P 02 45 21.9 -1.5**
ABKAR Akbulak array 72.70 321 P **P 02 45 22.5 -0.9**
DOK Doka 72.73 288 P **P 02 45 23.8 -0.4**
DOK P **P 02 45 23.8 -0.4**
SPIA Saint Paul Isl 72.80 30 P **P 02 45 25.2 +1.4**
baz=248
WHFO Wadi Hawf 73.05 288 P **P 02 45 23.7 -2.5**
MZWR Madinat Zayed 73.25 294 P **P 02 45 26.9 -0.2**
ABTO Aybut 73.48 287 P **P 02 45 28.3 -0.4**
MZR Muzera 73.57 293 P **P 02 45 28.7 -0.4**
UNV Unalaska Valle 73.69 34 P **P 02 45 31.1 +2.0**
UNV Unalaska Valle 73.69 34 P **P 02 45 30.9 +1.8**
baz=252
GHWR Ruwais 74.18 294 P **P 02 45 32.2 -0.4**
AKUT Akutan 74.19 34 P **P 02 45 32.7 +0.7**
AKTO Aktyubinsk 74.21 322 P **P 02 45 31.4 -0.9**
SVE Sverdlovsk 74.52 328*ce*P **P 02 45 34.1 +0.1**
SVE *e*S **S 02 55 08.0 +1.2**
SVE pmax pmax
comp=Z,125nm,1.3s
GAMB Gambell 74.75 24 P **P 02 45 37.8 +2.7**
baz=245
ARTI Arti 75.58 328 P **P 02 45 38.9 -1.2**
ARTI IAmb IAmb 02 45 41.2
comp=Z,75nm,1.1s
ARTI IAMs_20 IAMs_20 03 22 39.6
comp=Z,1µm,22.0s
ARTI Arti 75.58 328*c i*P **P 02 45 39.1 -1.0**
ARTI *PP **PcP 02 45 54.8 +1.9**
ARTI PPP PPP 02 50 14.2
ARTI S **S 02 55 18.2 -0.4**
ARTI pmax pmax
comp=Z,106nm,1.4s
ARTI Arti 75.58 328 P **P 02 45 39.3 -0.7**
FALS False Pass 75.70 34 P **P 02 45 43.0 +2.2**
FALS False Pass 75.70 34 P **P 02 45 42.4 +1.6**
baz=255
M11K Mekoryuk 75.89 28 P **P 02 45 43.3 +1.6**
baz=251
S12K Black Hills 76.67 33 P **P 02 45 48.1 +1.8**
baz=256
TNA Tin City 76.95 23 IAMs_20 IAMs_20 03 20 44.1
comp=Z,1µm,22.0s
TNA Tin City 76.95 23 P **P 02 45 49.3 +1.7**
baz=248
K13K Kusilvak Mount 77.09 27 IAmb IAmb 02 45 52.4
comp=Z,95nm,1.4s
K13K Kusilvak Mount 77.09 27 P **P 02 45 50.5 +2.0**
baz=252
M13K Dall Lake 77.25 28 P **P 02 45 51.0 +1.6**
baz=254
SDPT Sand Point 77.46 34 P **P 02 45 53.2 +2.5**
SDPT Sand Point 77.46 34 P **P 02 45 52.6 +1.8**
baz=257
F14K Arctic Creek 77.54 23 P **P 02 45 53.9 +2.9**
baz=250
ANM Nome 77.61 24 P **P 02 45 53.5 +2.0**
baz=251
L14K Kuka Creek 77.82 28 IAmb IAmb 02 45 57.1
comp=Z,59nm,1.0s
L14K Kuka Creek 77.82 28 P **P 02 45 55.0 +2.5**
baz=254
J14K Nanvaranak Lak 77.82 26 P **P 02 45 54.1 +1.5**
baz=253
CHNA Chernabura Isl 77.85 35 P **P 02 45 55.1 +2.1**
baz=258
N14K Kuskokwak Cree 77.92 29 P **P 02 45 54.7 +1.5**
baz=255
O14K Tigyukauivet M 77.96 30 P **P 02 45 55.3 +1.9**
baz=256
M14K Bethel 78.00 28 P **P 02 45 55.9 +2.3**
baz=255
S14K Fog Glacier 78.17 33 P **P 02 45 57.2 +2.4**
baz=258
CCD Concordia, Ant 78.25 181 P **P 02 45 55.7 +0.5**
F15K North Star Dit 78.28 23 IAmb IAmb 02 46 21.0
comp=Z,136nm,2.0s
F15K North Star Dit 78.28 23 P **P 02 45 57.8 +2.7**
baz=251
G15K Niukluk 78.29 24 P **P 02 45 57.6 +2.4**
baz=252
L15K Ungalak Mounta 78.46 27 P **P 02 45 58.9 +2.8**
baz=255
M15K Kasigluk River 78.59 29 P **P 02 45 59.2 +2.3**
baz=256
K15K Wolf Creek Mou 78.60 27 IAmb IAmb 02 46 01.1
comp=Z,62nm,1.2s
K15K Wolf Creek Mou 78.60 27 P **P 02 45 59.6 +2.6**
baz=255
O15K Ungalikthiuk R 78.66 30 IAMs_20 IAMs_20 03 17 04.7
comp=Z,1µm,20.0s
O15K Ungalikthiuk R 78.66 30 P **P 02 45 59.5 +2.2**
baz=257
N15K Kwethluk River 78.75 29 IAmb IAmb 02 46 03.8
comp=Z,40nm,0.9s
N15K Kwethluk River 78.75 29 P **P 02 46 00.4 +2.5**
baz=257
LKRN Lenkeran, Azer 78.79 309 P **P 02 46 00.9 +2.4**
C16K Lisburne Hills 78.86 21 P **P 02 46 00.7 +2.5**
baz=250
H16K Elim 78.93 24 P **P 02 46 01.0 +2.4**
baz=254
G16K Koyuk River 79.09 24 IAMs_20 IAMs_20 03 20 01.8
comp=Z,789nm,22.0s
G16K Koyuk River 79.09 24 P **P 02 46 01.8 +2.3**
baz=254
J16K Anvik River 79.27 26 IAmb IAmb 02 46 17.5
comp=Z,41nm,1.0s
J16K Anvik River 79.27 26 P **P 02 46 02.9 +2.3**
baz=256
I17K Unalakleet 79.38 25 IAmb IAmb 02 46 18.7
comp=Z,50nm,1.1s
I17K Unalakleet 79.38 25 P **P 02 46 03.2 +2.1**
baz=255
L16K Owhat River 79.40 28 IAmb IAmb 02 46 05.6
comp=Z,46nm,0.9s
L16K IAMs_20 IAMs_20 03 20 10.1
comp=Z,801nm,20.0s
L16K Owhat River 79.40 28 P **P 02 46 03.7 +2.4**
baz=257
N16K Nishlik Lake 79.46 29 P **P 02 46 04.1 +2.4**
baz=258
D17K Noatak River 79.49 21 P **P 02 46 04.5 +2.9**
baz=252,SNR=8.7
M16K Timber Creek 79.49 28 IAmb IAmb 02 46 18.3
comp=Z,59nm,1.1s
M16K Timber Creek 79.49 28 P **P 02 46 03.8 +2.0**
baz=258
R16K Pilot Point 79.49 32 P **P 02 46 03.8 +1.9**
baz=259
P16K Nushagak River 79.55 31 P **P 02 46 05.0 +2.8**
baz=259
O16K Kokwok River B 79.61 30 IAmb IAmb 02 46 06.6
comp=Z,34nm,0.9s
O16K IAMs_20 IAMs_20 03 20 49.2
comp=Z,886nm,19.0s
O16K Kokwok River B 79.61 30 P **P 02 46 05.4 +2.9**
baz=258
RDOG Red Dog Mine 79.66 21 IAmb IAmb 02 46 20.4
comp=Z,38nm,1.0s
RDOG Red Dog Mine 79.66 21 P **P 02 46 05.3 +2.7**
baz=253
C17K DeLong Mountai 79.69 21 P **P 02 46 05.1 +2.2**
baz=252
E17K Hotham Inlet 79.77 22 P **P 02 46 05.6 +2.4**
baz=254,SNR=9.5
G17K Kiwalik Mounta 79.81 24 P **P 02 46 05.9 +2.4**
baz=255
F17K Baldwin Pennin 79.82 23 IAmb IAmb 02 46 24.5
comp=Z,70nm,1.4s
F17K IAMs_20 IAMs_20 03 22 31.0
comp=Z,687nm,20.0s
F17K Baldwin Pennin 79.82 23 P **P 02 46 05.6 +2.1**
baz=254
AKT Akhty 79.82 311 *e*P **P 02 46 05.0 +0.8**
AKT pmax pmax
comp=Z,33nm,1.3s
J17K VABM Dome 79.96 26 IAmb IAmb 02 46 14.0
comp=Z,29nm,1.0s
J17K VABM Dome 79.96 26 P **P 02 46 06.5 +2.1**
baz=257
H17K Granite Mounta 79.97 24 IAmb IAmb 02 46 31.3
comp=Z,50nm,1.3s
H17K Granite Mounta 79.97 24 P **P 02 46 07.2 +2.8**
baz=256,SNR=6.0
L17K Donlin 80.04 27 P **P 02 46 07.2 +2.4**
baz=258
MAK Makhachkala 80.11 313 *e*P **P 02 46 02.0 -3.6**
MAK *e*PPP PPP 02 50 53.9
MAK *e*S **S 02 56 00.8 -7.2**
MAK *e*SS **SS 03 01 16.0 -2.8**
MAK MLR MLR
comp=Z,1µm,19.0s
O17K Koliganek Bris 80.14 30 P **P 02 46 07.1 +1.7**
baz=259
R17L Mt. Peulik Vol 80.15 32 P **P 02 46 07.4 +1.9**
baz=260
K17K Iditarod 80.16 27 IAmb IAmb 02 46 10.3
comp=Z,59nm,1.1s
K17K Iditarod 80.16 27 P **P 02 46 07.6 +2.2**
baz=258
SEKA Sheki 80.20 311 P **P 02 46 07.1 +0.9**
N17K Nushagak Hills 80.24 29 IAmb IAmb 02 46 17.3
comp=Z,77nm,1.4s
N17K Nushagak Hills 80.24 29 P **P 02 46 08.0 +2.0**
baz=259
MNGR Mingechevir, A 80.25 311 P **P 02 46 08.1 +1.7**
CHIR Chirikof Islan 80.26 34 P **P 02 46 08.3 +2.2**
baz=261
M17K Holitna River 80.29 28 IAmb IAmb 02 46 12.3
comp=Z,31nm,0.9s
M17K IAMs_20 IAMs_20 03 24 28.6
comp=Z,948nm,22.0s
M17K Holitna River 80.29 28 P **P 02 46 08.6 +2.4**
baz=259
E18K Tukpahlearik C 80.32 22 IAmb IAmb 02 46 27.3
comp=Z,33nm,1.0s
E18K Tukpahlearik C 80.32 22 P **P 02 46 08.1 +1.9**
baz=255,SNR=11
P17K Kvichak River 80.37 31 P **P 02 46 08.4 +1.8**
baz=260
B18K Kokolik River 80.43 20 P **P 02 46 08.9 +2.2**
baz=253
C18K Utukok River 80.44 21 P **P 02 46 08.7 +1.8**
baz=254
F18K Selawik 80.48 23 P **P 02 46 09.1 +2.1**
baz=256

H18K	**Honhosa River**	**80.66**	**24**	IAmb	IAmb	02 46 12.4					
	comp=Z,108nm,1.9s										
H18K	**Honhosa River**	**80.66**	**24**	P	**P**	**02 46 09.7**	**+1.7**				
	baz=257,SNR=5.3										
G18K	**Tagagawik**	**80.70**	**24**	IAMs_20	IAMs_20	03 21 03.4					
	comp=Z,946nm,22.0s										
G18K	**Tagagawik**	**80.70**	**24**	P	**P**	**02 46 10.2**	**+1.9**				
	baz=257										
KIRV	**Kirov**	**80.78**	**329**	*de*P	**P**	**02 46 07.8**	**-1.0**				
L18K	**Granite Mounta**	**80.79**	**27**	IAmb	IAmb	02 46 35.9					
	comp=Z,66nm,1.5s										
L18K				IAMs_20	IAMs_20	03 21 03.0					
	comp=Z,909nm,22.0s										
L18K	**Granite Mounta**	**80.79**	**27**	P	**P**	**02 46 10.6**	**+1.7**				
	baz=259										
GANJ	**Ganja**	**80.82**	**310**	P	**P**	**02 46 10.9**	**+1.4**				
N18K	**Kilae Creek**	**80.90**	**29**	P	**P**	**02 46 11.1**	**+1.6**				
	baz=260										
A19K	**Wainwright**	**80.91**	**19**	P	**P**	**02 46 10.7**	**+1.4**				
	baz=254										
RAYN	**Ar Rayn**	**80.92**	**293**	P	**P**	**02 46 08.6**	**-1.8**				
RAYN	**Ar Rayn**	**80.92**	**293**	⇑P	**P**	**02 46 10.0**	**-0.4**				
RAYN	**Ar Rayn**	**80.92**	**293**	P	**P**	**02 46 09.8**	**-0.6**				
RAYN				sP	**sP**	**02 46 22.5**	**-1.5**				
BELG	**Belogornoye**	**80.96**	**322**	*d i*P	**P**	**02 46 09.5**	**-0.4**				
BELG				pmax	pmax						
	comp=Z,25nm,1.0s										
J18K	**Innoko River**	**81.01**	**26**	P	**P**	**02 46 11.7**	**+1.7**				
	baz=259										
Q18K	**Katmai Hardscr**	**81.02**	**31**	P	**P**	**02 46 11.3**	**+1.0**				
	baz=261										
P18K	**Big Mountain,**	**81.02**	**30**	IAMs_20	IAMs_20	03 21 30.0					
	comp=Z,1µm,21.0s										
P18K	**Big Mountain,**	**81.02**	**30**	P	**P**	**02 46 12.1**	**+1.9**				
	baz=261										
DDFL	**Dedoflistskaro**	**81.03**	**311**	P	**P**	**02 46 12.0**	**+1.4**				
M18K	**Stony River**	**81.07**	**28**	P	**P**	**02 46 12.0**	**+1.7**				
	baz=260										
O18K	**Koktuh Hills**	**81.10**	**30**	P	**P**	**02 46 11.7**	**+1.2**				
	baz=261										
C19K	**Lookout Ridge**	**81.12**	**20**	IAmb	IAmb	02 46 32.1					
	comp=Z,66nm,1.1s										
C19K				IAMs_20	IAMs_20	03 22 59.3					
	comp=Z,850nm,20.0s										
C19K	**Lookout Ridge**	**81.12**	**20**	P	**P**	**02 46 13.1**	**+2.6**				
	baz=256										
R18K	**Karluk**	**81.15**	**32**	IAMs_20	IAMs_20	03 19 53.7					
	comp=Z,1µm,22.0s										
R18K	**Karluk**	**81.15**	**32**	P	**P**	**02 46 12.4**	**+1.6**				
	baz=262										
SII	**Sitkinak Islan**	**81.16**	**33**	P	**P**	**02 46 12.4**	**+1.4**				
	baz=262										
GCSA	**Galena City Sc**	**81.19**	**25**	P	**P**	**02 46 12.8**	**+1.9**				
	baz=259										
F19K	**Shaleruckik Mo**	**81.26**	**23**	P	**P**	**02 46 13.6**	**+2.4**				
	baz=258										
OPO	**Ambohidratompo**	**81.37**	**251**	P	**P**	**02 46 13.0**	**0.0**				
	comp=Z,11nm,0.8s,baz=80,slow=7.5,SNR=13										
	comp=Z,11nm,0.8s										
NAX	**Nakhchivan**	**81.37**	**309**	P	**P**	**02 46 13.9**	**+1.3**				
ABPO	**Ambohimpanom**	**81.39**	**250**	P	**P**	**02 46 13.1**	**0.0**				
ABPO				IAmb	IAmb	02 46 16.1					
	comp=Z,90nm,1.6s										
ABPO	**Ambohimpanom**	**81.39**	**250**	P	**P**	**02 46 13.1**	**0.0**				
ABPO				pmax	pmax						
	comp=Z,90nm,1.6s										
ABPO	**Ambohimpanom**	**81.39**	**250**	P	**P**	**02 46 12.9**	**-0.2**				
ABPO				pP	**pP**	**02 46 22.5**	**-0.6**				
D19K	**Kuna River**	**81.49**	**21**	IAmb	IAmb	02 46 33.5					
	comp=Z,59nm,1.1s										
D19K	**Kuna River**	**81.49**	**21**	P	**P**	**02 46 14.8**	**+2.2**				
	baz=257										
H19K	**Roundabout Mou**	**81.52**	**24**	P	**P**	**02 46 15.1**	**+2.5**				
	baz=259,SNR=16										
J19K	**Poorman**	**81.59**	**26**	IAmb	IAmb	02 46 17.6					
	comp=Z,37nm,1.0s										
J19K				IAMs_20	IAMs_20	03 25 47.9					
	comp=Z,708nm,20.0s										
J19K	**Poorman**	**81.59**	**26**	P	**P**	**02 46 15.8**	**+2.7**				
	baz=260,SNR=18										
O19K	**Port Alsworth**	**81.59**	**30**	IAMs_20	IAMs_20	03 18 00.1					
	comp=Z,1µm,21.0s										
O19K	**Port Alsworth**	**81.59**	**30**	P	**P**	**02 46 15.4**	**+2.4**				
	baz=262										
E19K	**Redstone River**	**81.59**	**22**	IAmb	IAmb	02 46 34.2					
	comp=Z,67nm,0.9s										
E19K	**Redstone River**	**81.59**	**22**	P	**P**	**02 46 15.4**	**+2.4**				
	baz=258										
N19K	**Bonanza Creek**	**81.60**	**29**	IAmb	IAmb	02 46 32.8					
	comp=Z,100nm,1.5s										
N19K	**Bonanza Creek**	**81.60**	**29**	P	**P**	**02 46 15.5**	**+2.2**				
	baz=262										
L19K	**White Mountain**	**81.63**	**28**	IAMs_20	IAMs_20	03 21 40.2					
	comp=Z,844nm,21.0s										
L19K	**White Mountain**	**81.63**	**28**	P	**P**	**02 46 15.3**	**+2.0**				
	baz=261										
OHAK	**Old Harbor**	**81.73**	**33**	P	**P**	**02 46 16.4**	**+2.5**				
	baz=263										
M19K	**Big River Lodg**	**81.81**	**28**	IAMs_20	IAMs_20	03 21 44.8					
	comp=Z,884nm,21.0s										
M19K	**Big River Lodg**	**81.81**	**28**	P	**P**	**02 46 16.5**	**+2.2**				
	baz=261										
GNI	**Garni**	**82.00**	**310**	P	**P**	**02 46 17.1**	**+1.1**				
GNI				IAmb	IAmb	02 46 47.8					
	comp=Z,29nm,0.9s										
GNI	**Garni**	**82.00**	**310**	LR	LR	03 29 03.9					
	comp=Z,231nm,20.4s,baz=101,slow=40										
GNI	**Garni**	**82.00**	**310**	P	**P**	**02 46 17.0**	**+1.1**				
GNI	**Garni**	**82.00**	**310**	*c i*P	**P**	**02 46 16.7**	**+0.7**				
GNI				pmax	pmax						
	comp=Z,65nm,1.7s										
GNI	**Garni**	**82.00**	**310**	P	**P**	**02 46 15.7**	**-0.3**				
	comp=Z,684nmcomp=Z,22nm,0.9s										
P19K	**Oil Pt**	**82.06**	**30**	P	**P**	**02 46 17.4**	**+1.8**				
	baz=263										
TBLG	**Delisi**	**82.08**	**312**	P	**P**	**02 46 17.9**	**+1.8**				
D20K	**Etivluk River**	**82.08**	**21**	IAmb	IAmb	02 46 36.0					
	comp=Z,88nm,1.3s										
D20K	**Etivluk River**	**82.08**	**21**	P	**P**	**02 46 17.1**	**+1.5**				
	baz=258										
F20K	**Avaraart Lake**	**82.09**	**23**	IAmb	IAmb	02 46 32.5					
	comp=Z,33nm,1.1s										
F20K	**Avaraart Lake**	**82.09**	**23**	P	**P**	**02 46 17.6**	**+2.0**				
	baz=260,SNR=6.0										
VOI	**Vohitsoka**	**82.12**	**247**	P	**P**	**02 46 17.3**	**+0.5**				
VOI	**Vohitsoka**	**82.12**	**247**	P	**P**	**02 46 17.8**	**+0.9**				
L20K	**Farewell, AK**	**82.13**	**27**	P	**P**	**02 46 17.9**	**+2.0**				
	baz=262										
E20K	**Nigu River**	**82.14**	**21**	P	**P**	**02 46 18.4**	**+2.4**				
	baz=259										
H20K	**Anotleneega Mo**	**82.16**	**24**	P	**P**	**02 46 18.5**	**+2.5**				
	baz=260,SNR=8.4										
B20K	**Meade River**	**82.16**	**20**	P	**P**	**02 46 18.3**	**+2.4**				
	baz=258										
K20K	**Telida**	**82.17**	**27**	IAMs_20	IAMs_20	03 25 38.3					
	comp=Z,768nm,22.0s										
K20K	**Telida**	**82.17**	**27**	P	**P**	**02 46 18.5**	**+2.3**				
	baz=262										
KDAK	**Kodiak Island**	**82.17**	**32**	IAMs_20	IAMs_20	03 24 35.7					
	comp=Z,1µm,22.0s										
KDAK	**Kodiak Island**	**82.17**	**32**	P	**P**	**02 46 18.3**	**+2.0**				
	baz=264										
KDAK	**Kodiak Island**	**82.17**	**32**	P	**P**	**02 46 16.9**	**+0.6**				
I20K	**Naaghedeneel**	**82.21**	**25**	P	**P**	**02 46 18.5**	**+2.2**				
	baz=261										
J20K	**Nowinta River**	**82.26**	**26**	IAMs_20	IAMs_20	03 26 06.6					
	comp=Z,720nm,21.0s										
J20K	**Nowinta River**	**82.26**	**26**	P	**P**	**02 46 18.9**	**+2.4**				
	baz=261										
Q20K	**Shuyak Island**	**82.37**	**31**	P	**P**	**02 46 19.5**	**+2.3**				
	baz=264										
M20K	**Styx River**	**82.39**	**28**	IAMs_20	IAMs_20	03 20 51.3					
	comp=Z,884nm,22.0s										
M20K	**Styx River**	**82.39**	**28**	P	**P**	**02 46 19.9**	**+2.4**				
	baz=262										
TRLG	**Trialeti**	**82.54**	**311**	P	**P**	**02 46 19.9**	**+1.1**				
A21K	**Barrow**	**82.61**	**18**	P	**P**	**02 46 20.9**	**+2.7**				
	baz=258										
IMAR	**Indian Mountai**	**82.69**	**24**	P	**P**	**02 46 20.2**	**+1.4**				
N20K	**Mount Spurr**	**82.75**	**29**	P	**P**	**02 46 21.6**	**+2.3**				
	baz=263										
SPCR	**Spurr Chakacha**	**82.75**	**29**	P	**P**	**02 46 21.5**	**+2.2**				
	baz=263										
C21K	**Knifeblade Rid**	**82.81**	**21**	P	**P**	**02 46 22.1**	**+2.7**				
	baz=260										
HOM	**Homer**	**82.86**	**30**	P	**P**	**02 46 21.7**	**+1.9**				
	baz=264										
G21K	**Allakaket**	**82.87**	**23**	IAMs_20	IAMs_20	03 22 07.7					
	comp=Z,876nm,22.0s										
G21K	**Allakaket**	**82.87**	**23**	P	**P**	**02 46 22.1**	**+2.4**				
	baz=262										
VNDA	**Vanda**	**82.90**	**173**	P	**P**	**02 46 19.3**	**-0.3**				
VNDA	**Vanda**	**82.90**	**173**	P	**P**	**02 46 19.5**	**-0.1**				
	comp=Z,10nm,0.8s,baz=309,slow=6.2,SNR=26										
	comp=Z,10nm,0.8s										
VNDA	**Vanda**	**82.90**	**173**	P	**P**	**02 46 19.5**	**-0.1**				
VNDA				PcP	**PcP**	**02 46 24.5**	**+0.2**				
VNDA				sP	**sP**	**02 46 32.6**	**-0.7**				
B21K	**Ikpikpuk River**	**82.95**	**20**	P	**P**	**02 46 22.5**	**+2.5**				
	baz=260										
PPLA	**Purkeypile**	**82.95**	**27**	P	**P**	**02 46 22.4**	**+2.0**				
	baz=263										
F21K	**Alatna River**	**82.98**	**23**	P	**P**	**02 46 22.8**	**+2.5**				
	baz=262										
E21K	**Killik River**	**82.98**	**21**	IAmb	IAmb	02 46 40.8					
	comp=Z,69nm,1.4s										
E21K	**Killik River**	**82.98**	**21**	P	**P**	**02 46 23.1**	**+2.7**				
	baz=261										
NCK	**Nalchik**	**83.00**	**313**	⇓*e*P	**P**	**02 46 20.8**	**-0.1**				
NCK				pmax	pmax						
	comp=Z,20nm,1.1s										
CHUM	**Lake Minchumin**	**83.02**	**26**	P	**P**	**02 46 23.1**	**+2.6**				
	baz=263,SNR=8.8										
H21K	**Melozitna Rive**	**83.03**	**24**	IAmb	IAmb	02 46 41.8					
	comp=Z,54nm,1.2s										
H21K	**Melozitna Rive**	**83.03**	**24**	P	**P**	**02 46 23.2**	**+2.6**				
	baz=262,SNR=22										
A22K	**Sinclair Lake**	**83.07**	**19**	P	**P**	**02 46 21.4**	**+0.7**				
	baz=260										
SKT	**Skwentna**	**83.16**	**28**	IAmb	IAmb	02 46 24.3					
	comp=Z,51nm,1.1s										
SKT	**Skwentna**	**83.16**	**28**	P	**P**	**02 46 22.5**	**+1.2**				
	baz=264,SNR=12										
BRSE	**Bradley Lake S**	**83.33**	**30**	P	**P**	**02 46 22.7**	**+0.5**				
	baz=265										
MAW	**Mawson**	**83.38**	**200**	P	**P**	**02 46 23.2**	**+1.0**				
MAW	**Mawson**	**83.38**	**200**	P	**P**	**02 46 22.1**	**-0.1**				
	comp=Z,20nm,1.2s,baz=65,slow=6.9,SNR=8.4										
	comp=Z,20nm,1.2s										
GOF	**Gofitskoye**	**83.45**	**315**	*ce*P	**P**	**02 46 23.4**	**+0.2**				
B22K	**Teshekpuk Lake**	**83.47**	**20**	P	**P**	**02 46 24.0**	**+1.3**				
	baz=261										
SUA	**Susitna One**	**83.48**	**29**	P	**P**	**02 46 24.4**	**+1.3**				
	baz=265										
KBZ	**Khabaz**	**83.51**	**313**	P	**P**	**02 46 23.2**	**-0.2**				
	comp=Z,12nm,1.1s,baz=40,slow=1.4,SNR=13										
KBZ				LR	LR	03 27 43.1					
	comp=Z,450nm,22.0s,baz=70,slow=39										
	comp=Z,12nm,1.1s										
KBZ	**Khabaz**	**83.51**	**313**	*ce*P	**P**	**02 46 23.7**	**+0.2**				
KBZ				pmax	pmax						
	comp=Z,15nm,1.1s										
D22K	**Ayikyak River**	**83.52**	**21**	P	**P**	**02 46 25.4**	**+2.4**				
	baz=262										
F22K	**John River**	**83.52**	**22**	P	**P**	**02 46 25.0**	**+1.9**				
	baz=263										
BPAW	**Bear Paw Mtn.**	**83.62**	**26**	IAmb	IAmb	02 46 43.6					
	comp=Z,48nm,1.2s										
BPAW				IAMs_20	IAMs_20	03 24 01.7					
	comp=Z,813nm,22.0s										
BPAW	**Bear Paw Mtn.**	**83.62**	**26**	P	**P**	**02 46 25.5**	**+1.8**				
	baz=264,SNR=12										
ATD	**Arta Tunnel**	**83.63**	**281**	IAmb	IAmb	02 46 27.9					
	comp=Z,52nm,1.2s										
ATD	**Arta Tunnel**	**83.63**	**281**	LR	LR	03 25 02.0					
	comp=Z,7.6nm,19.4s,baz=76,slow=37										
ATD	**Arta Tunnel**	**83.63**	**281**	P	**P**	**02 46 24.7**	**-0.1**				
	SNR=16										
NEUR	**Neytrino**	**83.64**	**313**	*e*P	**P**	**02 46 25.5**	**+1.1**				
NEUR				pmax	pmax						
	comp=Z,8.0nm,1.3s										
H22K	**Ishtalina Cre**	**83.65**	**24**	P	**P**	**02 46 26.2**	**+2.4**				
	baz=264,SNR=18										
SLKM	**Skilak Lake**	**83.65**	**30**	IAMs_20	IAMs_20	03 23 06.6					
	comp=Z,914nm,22.0s										
KVAR	**Kislovodsk Arr**	**83.66**	**314**	LR	LR	03 27 02.6					
	comp=Z,840nm,21.8s,baz=258,slow=38										
KIV	**Kislovodsk**	**83.67**	**314**	P	**P**	**02 46 25.3**	**+0.8**				
KIV				IAmb	IAmb	02 46 26.5					
	comp=Z,34nm,1.1s										
KIV				IAMs_20	IAMs_20	03 29 05.4					
	comp=Z,872nm,22.0s										
KIV	**Kislovodsk**	**83.67**	**314**	*e*P	**P**	**02 46 24.6**	**+0.1**				
KIV				*e*S	**S**	**02 56 42.0**	**-2.9**				
KIV				pmax	pmax						
	comp=Z,18nm,1.1s										
KIV	**Kislovodsk**	**83.67**	**314**	P	**P**	**02 46 24.5**	**+0.1**				
	comp=Z,536nmcomp=Z,19nm,1.6s										
SHA1	**Shidzhatmaz**	**83.68**	**313**	*d i*P	**P**	**02 46 25.4**	**+0.7**				
G22K	**Bettles**	**83.71**	**23**	P	**P**	**02 46 25.5**	**+1.5**				
	baz=263,SNR=10										
E22K	**Anaktuvuk Pass**	**83.74**	**22**	IAMs_20	IAMs_20	03 25 48.6					
	comp=Z,698nm,20.0s										
E22K	**Anaktuvuk Pass**	**83.74**	**22**	P	**P**	**02 46 25.5**	**+1.3**				
	baz=263,SNR=15										
CUT	**Chulitna**	**83.79**	**28**	P	**P**	**02 46 25.8**	**+1.3**				
	baz=265										
M22K	**Willow**	**83.80**	**28**	P	**P**	**02 46 25.6**	**+1.1**				
	baz=265,SNR=12										
SBA	**Scott Base**	**83.81**	**172**	P	**P**	**02 46 25.6**	**+1.3**				
SBA				IAmb	IAmb	02 46 52.9					
	comp=Z,22nm,1.1s										
SBA	**Scott Base**	**83.81**	**172**	IAMs_20	IAMs_20	03 27 00.6					
	comp=Z,725nm,22.0s										
SBA	**Scott Base**	**83.81**	**172**	P	**P**	**02 46 25.6**	**+1.3**				
SBA				pmax	pmax						
	comp=Z,21nm,1.1s										
SBA				MLR	MLR						
	comp=Z,700nm,22.0s										
MLY	**Manley**	**83.82**	**25**	IAmb	IAmb	02 46 28.3					
	comp=Z,33nm,1.0s										
MLY				IAMs_20	IAMs_20	03 24 57.9					
	comp=Z,848nm,21.0s										
MLY	**Manley**	**83.82**	**25**	P	**P**	**02 46 25.8**	**+1.1**				
	baz=264										
TRF	**Thorofare Moun**	**83.87**	**27**	IAMs_20	IAMs_20	03 24 12.3					
	comp=Z,759nm,22.0s										
TRF	**Thorofare Moun**	**83.87**	**27**	P	**P**	**02 46 26.1**	**+1.0**				
	baz=265,SNR=10.0										
O22K	**Cooper Landing**	**83.89**	**30**	IAMs_20	IAMs_20	03 23 42.0					
	comp=Z,909nm,21.0s										
O22K	**Cooper Landing**	**83.89**	**30**	P	**P**	**02 46 25.9**	**+0.9**				
	baz=266										
RC01	**Rabbit Creek A**	**83.93**	**29**	IAMs_20	IAMs_20	03 19 52.0					
	comp=Z,1µm,22.0s										
RC01	**Rabbit Creek A**	**83.93**	**29**	P	**P**	**02 46 26.0**	**+0.7**				
	baz=266										
SEW	**Seward**	**84.00**	**30**	IAMs_20	IAMs_20	03 25 21.9					
	comp=Z,1µm,20.0s										
SEW	**Seward**	**84.00**	**30**	P	**P**	**02 46 26.8**	**+1.2**				
	baz=266										
D23K	**Nanushuk River**	**84.25**	**21**	P	**P**	**02 46 28.2**	**+1.5**				
	baz=264										
COLD	**Coldfoot**	**84.25**	**23**	IAmb	IAmb	02 46 31.5					
	comp=Z,38nm,1.0s										
COLD	**Coldfoot**	**84.25**	**23**	P	**P**	**02 46 28.6**	**+1.8**				
	baz=265,SNR=11										
PMR	**Palmer**	**84.26**	**29**	P	**P**	**02 46 28.3**	**+1.4**				
PMR	**Palmer**	**84.26**	**29**	P	**P**	**02 46 28.4**	**+1.5**				
	baz=266,SNR=12										
G23K	**Bananza Creek**	**84.27**	**23**	P	**P**	**02 46 28.5**	**+1.5**				
	baz=265,SNR=25										
BWN	**Browne**	**84.29**	**26**	IAMs_20	IAMs_20	03 19 58.4					
	comp=Z,664nm,20.0s										
C23K	**Itkillik River**	**84.36**	**20**	P	**P**	**02 46 29.2**	**+2.0**				
	baz=264										
H23K	**Yukon River**	**84.39**	**24**	IAmb	IAmb	02 46 48.7					
	comp=Z,45nm,1.2s										
H23K	**Yukon River**	**84.39**	**24**	P	**P**	**02 46 29.4**	**+1.8**				
	baz=265										
I23K	**Minto, Yukon-K**	**84.41**	**25**	P	**P**	**02 46 29.7**	**+2.1**				
	baz=266,SNR=14										
MCK	**McKinley**	**84.50**	**26**	IAMs_20	IAMs_20	03 24 41.8					
	comp=Z,693nm,22.0s										
MCK	**McKinley**	**84.50**	**26**	P	**P**	**02 46 30.0**	**+1.9**				
	baz=266,SNR=12										
NEA2	**Nenana**	**84.50**	**26**	IAmb	IAmb	02 46 32.7					
	comp=Z,26nm,1.0s										
NEA2				IAMs_20	IAMs_20	03 25 42.8					
	comp=Z,1µm,21.0s										
NEA2	**Nenana**	**84.50**	**26**	P	**P**	**02 46 29.1**	**+1.0**				
	baz=266,SNR=20										
RND	**Reindeer**	**84.51**	**27**	IAMs_20	IAMs_20	03 23 21.1					
	comp=Z,1µm,22.0s										
VRH	**Novokhopyorsk**	**84.53**	**321**	*e*P	**P**	**02 46 27.3**	**-1.2**				
VRH				*e*S	**SKSac**	**02 56 45.9**	**-4.1**				
VRH				pmax	pmax						
	comp=Z,80nm,1.3s										
VRH				smax	smax						
	comp=N,300nm,1.9s										
E23K	**Chandalar**	**84.55**	**22**	P	**P**	**02 46 30.2**	**+1.8**				
	baz=265										
KNK	**Knik Glacier**	**84.57**	**29**	IAMs_20	IAMs_20	03 23 52.9					
	comp=Z,955nm,21.0s										
KNK	**Knik Glacier**	**84.57**	**29**	P	**P**	**02 46 30.6**	**+2.1**				
	baz=267,SNR=13										
PWL	**Port Wells**	**84.60**	**29**	P	**P**	**02 46 29.6**	**+0.9**				
PWL				IAMs_20	IAMs_20	03 22 24.7					
	comp=Z,1µm,22.0s										
PWL	**Port Wells**	**84.60**	**29**	P	**P**	**02 46 30.4**	**+1.7**				
	baz=267,SNR=8.4										
WAT1	**Susitna Watana**	**84.61**	**27**	P	**P**	**02 46 30.7**	**+2.0**				
	baz=266										
TOLK	**Toolik Lake Re**	**84.62**	**21**	P	**P**	**02 46 30.6**	**+2.0**				
	baz=265										
SML	**Sawmill**	**84.65**	**28**	P	**P**	**02 46 30.9**	**+1.9**				
	baz=267,SNR=12										
PPT	**Papeete**	**84.72**	**108**	LR	LR	03 20 08.3					
	comp=Z,505nm,20.3s,baz=272,slow=33										
PPT2	**Papeete2**	**84.72**	**108**	*e*PKIKP	P	02 46 25.6	**-4.6**				
	comp=Z,158nm,24.5s										
PPT2	**Papeete2**	**84.72**	**108**	*e*S	**SKSac**	**02 56 52.1**	**-0.5**				
	comp=Z,667nm,26.8s										
PPT2				*e*SS	**SS**	**03 02 25.0**	**-3.6**				
	comp=Z,950nm,29.8s										
PPT2				*e*LQ	LQ	03 09 38.3					
	comp=Z,4µm,36.8s										
PPT2				*e*LR	LR	03 13 12.6					
	comp=Z,3µm,30.0s										
PPT2				*e*LR	LR	03 13 18.8					
	comp=Z,2µm,30.8s										
WRH	**Wood River Hil**	**84.91**	**26**	IAmb	IAmb	02 46 49.8					
	comp=Z,40nm,1.2s										
WRH				IAMs_20	IAMs_20	03 24 49.7					
	comp=Z,886nm,21.0s										
D24K	**Happy Valley**	**84.93**	**21**	P	**P**	**02 46 32.2**	**+2.0**				
	baz=266										
M23K	**Glacier View**	**84.94**	**28**	P	**P**	**02 46 32.2**	**+1.8**				
	baz=267,SNR=9.4										
WAT6	**Susitna Watana**	**84.97**	**28**	P	**P**	**02 46 32.1**	**+1.3**				
	baz=267,SNR=17										
E24K	**Your Creek**	**84.97**	**22**	IAmb	IAmb	02 46 40.1					
	comp=Z,28nm,1.3s										
E24K	**Your Creek**	**84.97**	**22**	P	**P**	**02 46 32.4**	**+1.9**				
	baz=266										
C24K	**Franklin Bluff**	**85.01**	**20**	P	**P**	**02 46 32.4**	**+1.8**				
	baz=266										
P23K	**Montague Islan**	**85.02**	**30**	P	**P**	**02 46 32.6**	**+1.8**				
	baz=268										
COLA	**College**	**85.04**	**25**	IAMs_20	IAMs_20	03 25 58.9					
	comp=Z,954nm,21.0s										
COLA	**College**	**85.04**	**25**	⇑*e*P	**P**	**02 46 31.1**	**+0.4**				
COLA				pmax	pmax						
	comp=Z,5.0nm,1.1s										
COLA	**College**	**85.04**	**25**	P	**P**	**02 46 33.3**	**+2.5**				
	baz=267										
CCB	**Clear Creek Bu**	**85.04**	**26**	IAmb	IAmb	02 46 50.2					
	comp=Z,31nm,1.2s										
CCB				IAMs_20	IAMs_20	03 25 06.2					
	comp=Z,842nm,20.0s										
MARD	**Mardin**	**85.05**	**307**	IAmb	IAmb	02 46 35.0					
	comp=Z,40nm,1.2s										
H24K	**Noodor Dome**	**85.08**	**24**	P	**P**	**02 46 33.8**	**+2.8**				
	baz=267,SNR=8.8										
LABN	**Labinsk**	**85.09**	**314**	*e*P	**P**	**02 46 30.7**	**-0.8**				
LABN				pmax	pmax						
	comp=Z,46nm,1.1s										
SCM	**Sheep Creek Mo**	**85.13**	**28**	P	**P**	**02 46 32.8**	**+1.4**				
	baz=268,SNR=7.3										
DHY	**Denali Highway**	**85.16**	**27**	IAMs_20	IAMs_20	03 22 30.4					
	comp=Z,1µm,21.0s										
DHY	**Denali Highway**	**85.16**	**27**	P	**P**	**02 46 33.4**	**+1.8**				
	baz

baz=269
J25K Salcha River, 86.09 26 P **P** **02 46 38.1 +2.0**
baz=269
VSR Storozhevoye 86.14 321 *e*P **P** **02 46 34.7 -1.8**
VSR pmax pmax
comp=Z,50nm,1.0s
HARP HAARP 86.17 28 P **P** **02 46 38.3 +1.8**
baz=270
LPSR Galich'ya Gora 86.28 322 *e*P **P** **02 46 37.1 -0.1**
LPSR pmax pmax
comp=Z,98nm,1.1s
RIDG Independent Ri 86.31 26 IAmb IAmb 02 46 45.6
comp=Z,26nm,1.2s
RIDG IAMs_20 IAMs_20 03 27 28.8
comp=Z,714nm,21.0s
RIDG Independent Ri 86.31 26 P **P** **02 46 39.7 +2.4**
baz=270
BMRM Bremner River 86.42 29 IAMs_20 IAMs_20 03 29 20.9
comp=Z,845nm,22.0s
BMRM Bremner River 86.42 29 P **P** **02 46 40.1 +2.3**
baz=270,SNR=6.1
N25K Chitina, Valde 86.43 29 IAmb IAmb 02 46 58.0
comp=Z,40nm,1.3s
N25K IAMs_20 IAMs_20 03 23 10.9
comp=Z,802nm,20.0s
N25K Chitina, Valde 86.43 29 P **P** **02 46 40.3 +2.5**
baz=270,SNR=5.1
BMAR Burnt Mountain 86.44 23 **P** **02 46 40.0 +2.2**
KAIM Kayak Island 86.52 30 P **P** **02 46 40.2 +2.0**
baz=270
F26K Sheenjek River 86.61 22 IAMs_20 IAMs_20 03 29 27.4
comp=Z,849nm,21.0s
F26K Sheenjek River 86.61 22 P **P** **02 46 40.1 +1.5**
baz=270
SCRK Sand Creek 86.69 26 IAMs_20 IAMs_20 03 25 56.8
comp=Z,798nm,22.0s
SCRK Sand Creek 86.69 26 P **P** **02 46 41.9 +2.7**
baz=270
G26K Porcupine Rive 86.75 23 IAmb IAmb 02 47 01.4
comp=Z,37nm,1.6s
G26K IAMs_20 IAMs_20 03 26 18.2
comp=Z,747nm,22.0s
G26K Porcupine Rive 86.75 23 P **P** **02 46 42.0 +2.8**
baz=270
C27K Jago River 86.75 21 P **P** **02 46 41.7 +2.5**
baz=270
GLB Gilahina Butte 86.81 29 IAmb IAmb 02 46 44.0
comp=Z,48nm,1.3s
GLB IAMs_20 IAMs_20 03 24 33.9
comp=Z,738nm,22.0s
J26L Joseph Creek 86.87 26 P **P** **02 46 41.8 +1.8**
baz=271
L26K Log Cabin Wild 86.99 27 IAMs_20 IAMs_20 03 25 00.9
comp=Z,979nm,20.0s
L26K Log Cabin Wild 86.99 27 P **P** **02 46 42.3 +1.7**
baz=271
MOS Moscow 87.00 326 *e*P **P** **02 46 38.6 -2.0**
MOS *e* 02 57 00.4
MOS *e*S **S** **02 57 13.6 -3.4**
MOS pmax pmax
comp=Z,300nm,2.0s
MOS pmax pmax
comp=Z,119nm,1.5s
MOS MLR MLR
comp=Z,1µm,23.0s
MOS MLR MLR
comp=E,900nm,22.0s
I26K Coal Creek Min 87.03 25 IAMs_20 IAMs_20 03 27 05.8
comp=Z,697nm,21.0s
I26K Coal Creek Min 87.03 25 P **P** **02 46 42.5 +1.8**
baz=271
CRQM Cirque 87.14 29 IAMs_20 IAMs_20 03 28 55.6
comp=Z,882nm,21.0s
CRQE Cirque 87.17 29 P **P** **02 46 43.4 +1.8**
baz=272
M26K Nabesna, AK 87.17 28 IAMs_20 IAMs_20 03 28 40.6
comp=Z,971nm,22.0s
M26K Nabesna, AK 87.17 28 P **P** **02 46 43.4 +1.9**
baz=272
MCARA McCarthy VSAT 87.19 29 P **P** **02 46 43.2 +1.7**
baz=272
TGL Tana Glacier 87.30 29 IAMs_20 IAMs_20 03 27 50.0
comp=Z,704nm,21.0s
ANN Anapa 87.43 315 *e*P **P** **02 46 41.7 -1.3**
ANN *e*S **SKSac** **02 57 06.1 -2.3**
ANN pmax pmax
comp=Z,108nm,1.4s
ANN MLR MLR
comp=Z,688nm,21.0s
K27K Chicken 87.53 26 P **P** **02 46 44.8 +1.7**
baz=272
ISLE Juniper Island 87.54 30 IAMs_20 IAMs_20 03 29 28.5
comp=Z,838nm,22.0s
E27K Coleen River 87.56 22 IAmb IAmb 02 46 46.4
comp=Z,30nm,1.3s
E27K IAMs_20 IAMs_20 03 30 39.5
comp=Z,896nm,21.0s
E27K Coleen River 87.56 22 P **P** **02 46 44.2 +1.0**
baz=272
G27K Doyon Strip 87.59 23 P **P** **02 46 45.2 +1.8**
baz=272
OBN Obninsk 87.62 325 P **P** **02 46 42.5 -1.1**
OBN IAMs_20 IAMs_20 03 31 31.1
comp=Z,1µm,21.0s
OBN Obninsk 87.62 325 LR LR 03 28 16.6
comp=Z,924nm,21.4s,baz=27,slow=37
OBN Obninsk 87.62 325 ⇓P **P** **02 46 44.0 +0.4**
OBN Obninsk 87.62 325 *c i*P **P** **02 46 43.5 -0.1**
OBN *i* 02 46 45.7
OBN *e**PP **sP** **02 46 56.8 -0.4**
OBN *i* 02 50 04.5
OBN *e*PPP PPP 02 52 11.4
OBN *e*S **S** **02 57 21.2 -1.7**
OBN *e*SSS SSS 03 06 44.0
OBN pmax pmax
comp=Z,150nm,1.7s
OBN MLR MLR
comp=Z,982nm,20.0s
OBN Obninsk 87.62 325 P **P** **02 46 43.0 -0.6**
comp=Z,82nm,1.5s
I27K Kandik River 87.66 25 P **P** **02 46 45.2 +1.4**
baz=273,SNR=10
H27K Steamboat Moun 87.67 24 P **P** **02 46 45.4 +1.6**
baz=273
L27K Beaver Creek, 87.69 27 IAMs_20 IAMs_20 03 25 43.1
comp=Z,785nm,21.0s
L27K Beaver Creek, 87.69 27 P **P** **02 46 45.6 +1.7**
baz=272
M27K Edge Creek, AK 87.69 28 IAMs_20 IAMs_20 03 28 56.4
comp=Z,994nm,22.0s
M27K Edge Creek, AK 87.69 28 P **P** **02 46 45.2 +1.1**
baz=272
BCAR Beaver Creek A 87.70 27 P **P** **02 46 43.5 -0.5**
D27M Malcolm River 87.73 21 P **P** **02 46 45.5 +1.4**
baz=273
MESA MESA 87.75 30 P **P** **02 46 45.9 +1.4**
baz=272
GRNC Granite Creek 87.83 29 IAMs_20 IAMs_20 03 24 41.0
comp=Z,786nm,21.0s
FURI Furi 87.84 279 IAMs_20 IAMs_20 03 24 46.7
comp=Z,1µm,22.0s
FURI Furi 87.84 279 LR LR 03 24 28.9
comp=Z,810nm,21.8s,baz=86,slow=35
BARN Barnard Glacie 87.86 29 IAmb IAmb 02 47 05.7
comp=Z,36nm,1.3s
BARN IAMs_20 IAMs_20 03 26 58.7
comp=Z,626nm,21.0s
CTG Chitna Glacier 88.02 29 P **P** **02 46 46.7 +1.0**
baz=273
CTGM Chitina Glacie 88.02 29 IAmb IAmb 02 47 06.5
comp=Z,34nm,1.1s
CTGM IAMs_20 IAMs_20 03 26 40.0
comp=Z,702nm,22.0s
LOGN Logan Glacier 88.19 29 IAMs_20 IAMs_20 03 25 26.6
comp=Z,698nm,21.0s
F28M Old Crow 88.24 22 IAMs_20 IAMs_20 03 28 21.6
comp=Z,1µm,21.0s
F28M Old Crow 88.24 22 P **P** **02 46 47.8 +1.3**
baz=274
E28M Babbage River 88.29 21 IAmb IAmb 02 47 28.7
comp=Z,17nm,1.1s
E28M IAMs_20 IAMs_20 03 28 14.9
comp=Z,852nm,21.0s
E28M Babbage River 88.29 21 P **P** **02 46 48.1 +1.5**
baz=274
TOKA Tokat 88.32 310 IAmb IAmb 02 46 49.9
comp=Z,29nm,1.0s

I28M Miner Creek 88.37 25 P **P** **02 46 48.7 +1.5**
baz=274
ASF Jabal al Asfar 88.38 302 LR LR 03 31 47.3
comp=Z,295nm,21.4s,baz=117,slow=39
APA Apatity 88.41 337 ⇓*i*P **P** **02 46 46.1 -1.1**
APA *e* 02 50 12.8
APA pmax pmax
comp=Z,16nm,1.2s
D28M Stokes Point 88.52 21 P **P** **02 46 49.0 +1.3**
baz=275
O28M Mount Upton 88.59 29 IAMs_20 IAMs_20 03 26 19.2
comp=Z,952nm,22.0s
O28M Mount Upton 88.59 29 P **P** **02 46 49.2 +0.6**
baz=274
PINM Pinnacle 88.61 30 P **P** **02 46 49.8 +1.4**
baz=274
DAWY Dawson 88.71 26 P **P** **02 46 49.9 +1.2**
baz=275,SNR=8.2
YUK8 Steele Glacier 88.76 29 P **P** **02 46 50.5 +1.2**
baz=274
BNN Bunyan 88.89 309 IAmb IAmb 02 46 52.2
comp=Z,50nm,1.8s
E29M Blow River 88.91 22 P **P** **02 46 51.1 +1.6**
baz=276
H29M Whitestone 88.95 24 P **P** **02 46 51.0 +1.2**
baz=276
G29M Pine Creek 89.02 23 IAmb IAmb 02 47 01.7
comp=Z,27nm,1.2s
G29M Pine Creek 89.02 23 P **P** **02 46 51.6 +1.5**
baz=276
KIBK Kibwezi 89.08 268 P **P** **02 46 52.4 +0.8**
SNR=18
M29M Somme Creek 89.27 28 IAMs_20 IAMs_20 03 28 22.2
comp=Z,818nm,20.0s
M29M Somme Creek 89.27 28 P **P** **02 46 53.4 +1.9**
baz=276
YUK4 Tatl Arm 89.29 29 P **P** **02 46 53.4 +1.7**
baz=275
L29M L29M 89.36 27 IAmb IAmb 02 46 55.6
comp=Z,18nm,1.0s
L29M IAMs_20 IAMs_20 03 26 45.4
comp=Z,1µm,21.0s
L29M L29M 89.36 27 P **P** **02 46 53.9 +2.1**
baz=276
O29M Mount Kennedy 89.42 30 IAMs_20 IAMs_20 03 30 08.3
comp=Z,816nm,21.0s
O29M Mount Kennedy 89.42 30 P **P** **02 46 53.7 +1.5**
baz=275
YUK6 Outpost Mounta 89.47 29 P **P** **02 46 54.1 +1.4**
baz=276
K29M Barlow Dome 89.55 26 IAmb IAmb 02 47 12.4
comp=Z,31nm,1.9s
K29M IAMs_20 IAMs_20 03 28 38.5
comp=Z,629nm,20.0s
K29M Barlow Dome 89.55 26 P **P** **02 46 54.5 +1.6**
baz=276
MMAI Mount Meron Ar 89.59 303 P **P** **02 46 53.7 +0.1**
comp=Z,50nm,1.2s,baz=78,slow=5.2,SNR=35
MMAI LR LR 03 33 37.2
comp=Z,338nm,20.7s,baz=71,slow=40
comp=Z,50nm,1.2s
EPYK Eagle Plains 89.59 24 P **P** **02 46 54.7 +1.8**
baz=277
G30M tAoh Zraii Nji 89.71 23 P **P** **02 46 55.1 +1.7**
baz=278
SIM Simferopol' 89.78 315 *e*P **P** **02 46 54.0 -0.1**
SIM *e*S **S** **02 57 43.0 -0.8**
SIM pmax pmax
comp=Z,24nm,1.1s
SIM smax smax
comp=E,130nm,9.5s
F30M Barrier River 89.80 22 P **P** **02 46 55.7 +2.0**
baz=278
KMBO Kilima Mbogo 89.80 269 P **P** **02 46 55.9 +0.7**
comp=E,21nm,1.0s,baz=67,slow=5.7,SNR=25
comp=E,21nm,1.0s
KMBO Kilima Mbogo 89.80 269*c i*P **P** **02 46 56.3 +1.1**
KMBO pmax pmax
comp=Z,21nm,1.0s
I30M Mount Dempster 89.88 25 P **P** **02 46 55.9 +1.5**
baz=277
HYT Haines Junctio 89.90 29 P **P** **02 46 55.8 +1.3**
baz=276
P29M Windy Craggy 89.91 30 IAMs_20 IAMs_20 03 25 18.2
comp=Z,1µm,22.0s
P29M Windy Craggy 89.91 30 P **P** **02 46 56.1 +1.7**
baz=276
J30M Hart River 89.98 25 IAMs_20 IAMs_20 03 28 38.8
comp=Z,692nm,22.0s
J30M Hart River 89.98 25 P **P** **02 46 56.1 +1.3**
baz=277
N30M Aishikik Lake 90.03 29 IAMs_20 IAMs_20 03 28 07.1
comp=Z,726nm,21.0s
N30M Aishikik Lake 90.03 29 P **P** **02 46 56.6 +1.7**
baz=277
M30M Minto, Yukon 90.03 27 P **P** **02 46 56.7 +1.7**
baz=277,SNR=7.1
P30M Million Dollar 90.25 30 P **P** **02 46 57.3 +1.3**
baz=277
MAYO Mayo, Yukon 90.30 26 P **P** **02 46 57.7 +1.5**
baz=278
KIRS Kirsehir-Merke 90.37 309 ⇑P **P** **02 46 56.9 -0.2**
ILGA Ilgaz 90.37 311 IAmb IAmb 02 46 58.9
comp=Z,37nm,1.3s
G31M Satah River 90.48 23 P **P** **02 46 57.9 +1.0**
baz=279
INK Inuvik 90.53 22 LR LR 03 29 38.1
comp=Z,354nm,20.6s,baz=300,slow=37
INK Inuvik 90.53 22 P **P** **02 46 58.4 +1.4**
baz=280
BR104 Keskin Array S 90.54 310 P **P** **02 46 57.4 -0.6**
comp=Z,84nmcomp=Z,10nm,1.0s
BR131 Keskin Array S 90.54 310 IAmb IAmb 02 46 59.8
comp=Z,17nm,1.1s
BR131 Keskin Array S 90.54 310 P **P** **02 46 56.4 -1.5**
BR131 P **P** **02 46 56.4 -1.5**
BR131 Keskin Array S 90.54 310*c i*P **P** **02 46 57.2 -0.8**
BRTR Keskin Array B 90.54 310 P **P** **02 46 57.0 -1.0**
BRTR Keskin Array B 90.54 310 P **P** **02 46 57.5 -0.5**
comp=Z,10nm,1.0s,baz=125,slow=3.1,SNR=24
BRTR LR LR 03 32 21.2
comp=Z,204nm,21.9s,baz=68,slow=39
comp=Z,10nm,1.0s
BRTR Keskin Array B 90.54 310*ce*P **P** **02 46 57.5 -0.5**
BRTR pmax pmax
comp=Z,11nm,1.0s
BR106 Keskin Array S 90.55 310 P **P** **02 46 57.8 -0.2**
comp=Z,95nmcomp=Z,10nm,1.0s
BR105 Keskin Array S 90.56 310 P **P** **02 46 57.6 -0.5**
comp=Z,110nmcomp=Z,12nm,1.0s
O30N Mendenhall 90.59 29 IAMs_20 IAMs_20 03 31 19.1
comp=Z,792nm,22.0s
O30N Mendenhall 90.59 29 P **P** **02 46 58.9 +1.3**
baz=278
F31M Tsiigehtchic 90.60 22 IAMs_20 IAMs_20 03 31 34.9
comp=Z,796nm,21.0s
F31M Tsiigehtchic 90.60 22 P **P** **02 46 59.0 +1.6**
baz=280
PLBC Pleasant Camp 90.63 30 P **P** **02 46 59.7 +1.9**
baz=277
H31M Peel River 90.63 24 P **P** **02 46 59.8 +2.1**
baz=279
N31M Braeburn, Yuko 90.64 28 IAmb IAmb 02 47 53.9
comp=Z,37nm,1.6s
N31M IAMs_20 IAMs_20 03 30 37.4
comp=Z,725nm,19.0s
N31M Braeburn, Yuko 90.64 28 P **P** **02 46 59.9 +2.0**
baz=278
S31K Pelican 90.89 32 P **P** **02 47 00.9 +1.9**
baz=277
ARCES ARCESS Array B 91.01 340 IAmb IAmb 02 47 02.7
comp=Z,35nm,1.4s
ARCES ARCESS Array B 91.01 340 P **P** **02 46 57.9 -1.4**
comp=Z,13nm,1.1s,baz=43,slow=5.5,SNR=10
ARCES LR LR 03 33 28.8
comp=Z,607nm,18.2s,baz=80,slow=39
comp=Z,13nm,1.1s
SPITS Spitsbergen Ar 91.02 349 LR LR 03 33 28.1
comp=Z,585nm,20.0s,baz=62,slow=39
CSS Mathiatis 91.17 305 IAmb IAmb 02 47 02.2
comp=Z,22nm,1.0s
CSS Mathiatis 91.17 305 P **P** **02 47 00.3 -0.5**
comp=Z,27nm,1.1s
ANTO Ankara 91.17 310 P **P** **02 47 00.3 -0.5**
comp=Z,6.4nm,1.2s
M31M Drury Creek, Y 91.19 28 IAMs_20 IAMs_20 03 28 42.8
comp=Z,1µm,22.0s
M31M Drury Creek, Y 91.19 28 P **P** **02 47 02.1 +1.8**

baz=279
WHY Whitehorse 91.20 29 P **P** **02 47 01.8 +1.3**
baz=279
LODK Lodwar 91.43 273 P **P** **02 47 01.9 -0.7**
LODK Lodwar 91.43 273 P **P** **02 47 02.5 0.0**
SIT Sitka 91.50 33 P **P** **02 47 02.6 +0.9**
baz=278
BESE Bessie Mountai 91.52 31 IAMs_20 IAMs_20 03 25 43.8
comp=Z,1µm,20.0s
KBS Kingsbay 91.54 350 *i* P P 02 46 56.6 -5.0
R32K Eaglecrest 91.75 32 P **P** **02 47 04.7 +1.7**
baz=279
S32K Killisnoo 91.84 32 IAMs_20 IAMs_20 03 26 36.3
comp=Z,1µm,22.0s
S32K Killisnoo 91.84 32 P **P** **02 47 05.0 +1.7**
baz=279
P32M Atlin 91.94 30 IAMs_20 IAMs_20 03 27 23.9
comp=Z,1µm,22.0s
P32M Atlin 91.94 30 P **P** **02 47 05.7 +1.8**
baz=280
N32M Quiet Lake 91.98 29 IAMs_20 IAMs_20 03 28 25.8
comp=Z,730nm,21.0s
N32M Quiet Lake 91.98 29 P **P** **02 47 05.8 +1.7**
baz=280
SYO Syowa Base 92.05 201⇑*e*P **P** **02 47 05.0 +0.9**
SYO Syowa Base 92.05 201⇓*e*pP pP 02 47 14.3 +0.1
SYO Syowa Base 92.05 201⇑*e*PP PP 02 50 45.8 +1.8
P33M Teslin, Yukon 92.28 29 IAMs_20 IAMs_20 03 26 26.7
comp=Z,1µm,22.0s
P33M Teslin, Yukon 92.28 29 P **P** **02 47 06.1 +0.6**
baz=280
A36M Sachs Harbour 92.39 17 IAMs_20 IAMs_20 03 34 32.9
comp=Z,553nm,20.0s
FINES FINESS Array B 92.39 332 P **P** **02 47 05.0 -0.9**
comp=Z,1.4nm,0.5s,baz=70,slow=4.5,SNR=12
comp=Z,1.4nm,0.5s
FINES FINESS Array B 92.39 332 *i* P **P** **02 47 07.1 +1.2**
FINES pmax pmax
comp=Z,1.0nm,0.5s
AK09 Malin Array Si 92.42 321 P **P** **02 47 05.4 -0.8**
AK08 Malin Array Si 92.43 321 P **P** **02 47 05.5 -0.8**
AKASG Malin Array Be 92.44 321 P **P** **02 47 04.7 -1.6**
AKASG IAmb IAmb 02 47 26.1
comp=Z,17nm,1.4s
AKASG Malin Array Be 92.44 321 P **P** **02 47 05.4 -0.9**
comp=Z,7.7nm,0.9s,baz=72,slow=4.2,SNR=13
comp=Z,7.7nm,0.9s
AKASG Malin Array Be 92.44 321*ce*P **P** **02 47 05.0 -1.3**
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 92.44 321 IAmb IAmb 02 47 25.9
comp=Z,22nm,1.3s
AKBB Malin Array Si 92.44 321⇑*e*P **P** **02 47 05.3 -1.0**
AKBB Malin Array Si 92.44 321 P **P** **02 47 05.4 -0.9**
KIEV Kiev 92.45 321 P **P** **02 47 05.5 -0.8**
KIEV IAmb IAmb 02 47 25.9
comp=Z,20nm,1.3s
KIEV Kiev 92.45 321 IAMs_20 IAMs_20 03 33 31.0
comp=Z,797nm,22.0s
KIEV Kiev 92.45 321 ⇓P **P** **02 47 05.9 -0.5**
KIEV Kiev 92.45 321 ⇓P **P** **02 47 05.9 -0.5**
KIEV Kiev 92.45 321 P **P** **02 47 05.4 -1.0**
comp=Z,56nm,1.4s
AK04 Malin Array Si 92.48 321 P **P** **02 47 05.6 -0.9**
MMPY Sheldon Lake, 92.55 27 IAmb IAmb 02 47 10.1
comp=Z,16nm,1.1s
MMPY Sheldon Lake, 92.55 27 P **P** **02 47 07.8 +1.1**
baz=282,SNR=8.4
MNK Minsk 92.68 325 *i* P **P** **02 47 06.5 -0.8**
MNK *i* 02 50 48.9
MNK *i* PPP PPP 02 52 48.3
MNK *i* S **SKSac** **02 57 35.5 -3.0**
MNK *i* *SS **S** **02 58 09.1 -0.7**
MNK *i* SS **SS** **03 04 18.5 -3.8**
MNK *i* SSS SSS 03 08 05.7
MNK pmax pmax
comp=Z,10.0nm,0.9s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK pmax pmax
comp=N,22nm,1.3s
MNK MLR MLR
comp=N,943nm,22.0s
MNK MLR MLR
comp=Z,1µm,21.0s
MNK MLR MLR
comp=E,908nm,23.0s
Q32M Nakina River 92.79 31 P **P** **02 47 09.5 +1.4**
baz=281
U33K Whale Pass 92.85 34 P **P** **02 47 08.5 +0.5**
baz=280
CRAG Craig 92.96 34 P **P** **02 47 09.7 +1.1**
baz=280
QSPA South Pole Qui 93.14 180 P **P** **02 47 12.6 +3.3**
QSPA IAmb IAmb 02 47 33.5
comp=Z,25nm,1.1s
QSPA South Pole Qui 93.14 180 IAMs_20 IAMs_20 03 32 15.1
comp=Z,1µm,20.0s
WRAK Wrangell Islan 93.22 33 IAmb IAmb 02 47 13.5
comp=Z,14nm,0.8s
WRAK Wrangell Islan 93.22 33 P **P** **02 47 11.6 +1.8**
baz=281
KIS Kishinev 93.23 317 *e*P **P** **02 47 07.0 -3.1**
KIS *e*L L 03 31 50.0
KIS LRM MLR 03 36 34.0
comp=Z,500nm,23.0s
MILM Milestii Mici 93.25 317⇑*i*P **P** **02 47 08.0 -2.1**
comp=Z,180nm,3.0s
MILM *e*L L 03 20 29.0
MILM LRM MLR 03 36 31.0
comp=Z,6µm,23.5s
TAOE Nuku Hiva Isla 93.32 99 *e*PKIKP P 02 47 00.6 -11
comp=Z,70nm,27.6s
TAOE Nuku Hiva Isla 93.32 99 *e*PP **PP** **02 50 48.7 -6.8**
comp=Z,62nm,23.7s
TAOE *e*S S 02 58 09.7 -7.5
comp=Z,519nm,28.7s
TAOE *e*SS **SS** **03 04 32.2 -1.7**
comp=Z,422nm,29.2s
TAOE Nuku Hiva Isla 93.32 99 *e*LR LR 03 17 15.8
comp=Z,2µm,28.9s
R33M Jennings River 93.36 30 IAmb IAmb 02 47 18.9
comp=Z,50nm,2.0s
R33M IAMs_20 IAMs_20 03 28 06.2
comp=Z,1µm,22.0s
R33M Jennings River 93.36 30 P **P** **02 47 12.5 +2.0**
baz=282
MI28 Mi28,Pidlybu 93.38 321 P **P** **02 47 10.4 -0.3**
LUBAR Lubar, Ukraine 93.49 320 P **P** **02 47 10.7 -0.5**
S34M Telegraph Cree 93.58 32 P **P** **02 47 13.2 +1.8**
baz=282
NOR Nord 93.61 355 *i* P **P** **02 47 11.8 +0.7**
NOR IAmb IAmb 02 47 12.5
comp=Z,12nm,1.1s
ELL Elmali 93.76 307 IAmb IAmb 02 47 14.6
comp=Z,26nm,1.3s
TIRR Tirgusor 93.88 315 IAMs_20 IAMs_20 03 38 12.4
comp=Z,801nm,22.0s
NDNU Novodnistrovsk 93.95 319 P **P** **02 47 12.9 -0.5**
VASR Vaslui 93.98 317⇑P **P** **02 47 13.3 -0.3**
DLBC Dease Lake 94.04 31 LR LR 03 28 16.5
comp=Z,479nm,19.9s,baz=265,slow=35
DLBC Dease Lake 94.04 31 P **P** **02 47 15.2 +1.5**
baz=283
TGTN Hyland Airport 94.17 28 P **P** **02 47 15.8 +1.6**
baz=284,SNR=6.5
T35M Bob Quinn 94.24 32 P **P** **02 47 15.9 +1.3**
baz=282
WTLY Watson Lake, Y 94.27 29 IAmb IAmb 02 47 35.2
comp=E,21nm,1.3s
WTLY Watson Lake, Y 94.27 29 P **P** **02 47 15.6 +1.0**
baz=284,SNR=16
GHRR 94.33 316 ⇓P **P** **02 47 15.6 +0.4**
GHRR 94.33 316 P **P** **02 47 14.5 -0.7**
RNPP9 Sopachiv 94.40 322 P **P** **02 47 14.8 -0.5**
RNPP8 Varash 94.44 322 P **P** **02 47 15.1 -0.4**
RNPP5 Staryi Chortor 94.44 322 P **P** **02 47 15.1 -0.4**
HORU Horodok 94.46 320 P **P** **02 47 15.3 -0.4**
KMPD K-Podol'skiy 94.55 319 P **P** **02 47 15.1 -1.0**
MANT Manisa 94.60 309 IAmb IAmb 02 47 17.8
comp=Z,17nm,1.2s
PABE Paberze 94.70 326 IAMs_20 IAMs_20 03 36 15.4
comp=Z,1µm,22.0s
TESR Tescani 94.78 317 ⇓P **P** **02 47 17.4 +0.2**
TESR Tescani 94.78 317 P **P** **02 47 16.8 -0.4**
comp=Z,30nm,1.6s

VRI	Vrincioaia	94.83	316	⇑P		P	02 47 17.4	-0.1
VRI	Vrincioaia	94.83	316	P		P	02 47 17.0	-0.5
	comp=Z,21nm,1.5s							
VRI	Vrincioaia	94.83	316	⇑P		P	02 47 17.4	-0.1
PLOR	Plostina	94.89	316	⇑P		P	02 47 18.7	+0.9
PLOR	Plostina	94.89	316	⇑P		P	02 47 18.7	+0.9
ONER	Baraj Valea Uz	94.98	317	⇑P		P	02 47 17.6	-0.6
NEHR	Nehoiu	95.21	316	⇓P		P	02 47 19.3	+0.1
TURR	Turia	95.29	317	⇑P		P	02 47 20.2	+0.6
MLR	Muntele Rosu	95.44	316	IAmb		IAmb	02 47 22.9	
	comp=Z,14nm,1.0s							
MLR	Muntele Rosu	95.44	316	⇓P		P	02 47 19.8	-0.6
MLR	Muntele Rosu	95.44	316	⇓P		P	02 47 19.8	-0.6
MLR	Muntele Rosu	95.44	316	P		P	02 47 19.9	-0.6
	comp=Z,13nm,0.8s							
OZUR		95.44	317	⇑P		P	02 47 20.4	+0.1
SUW	Suwalki	95.48	325	*e*P		P	02 47 20.3	+0.1
SUW	Suwalki	95.48	325	IAMs_20	IAMs_20		03 33 02.0	
	comp=Z,1µm,22.0s							
KSV	Kosov	95.51	319	P		P	02 47 20.0	-0.5
BURAR	Bucovina Array	95.55	318	P		P	02 47 20.2	-0.6
BURAR				IAmb		IAmb	02 47 23.1	
	comp=Z,12nm,0.9s							
BURAR	Bucovina Array	95.55	318	⇓P		P	02 47 21.3	+0.5
BURAR	Bucovina Array	95.55	318	⇓P		P	02 47 21.3	+0.5
BUR08	Bucovina Ar. S	95.55	318	IAmb		IAmb	02 47 21.8	
	comp=Z,14nm,1.1s							
LIRD	Liard River Hi	95.77	29	P		P	02 47 23.2	+1.8
	baz=286							
STNU	Starunia	95.80	319	P		P	02 47 21.3	-0.5
WRGLY	Wrigley	95.82	25	P		P	02 47 23.2	+1.7
	baz=289							
TOAD	Toad River Com	96.36	30	P		P	02 47 25.0	+0.8
	baz=287							
ARR	Arges	96.37	316	⇓P		P	02 47 25.1	+0.5
SHIU	Shidnytsya	96.43	320	P		P	02 47 24.5	-0.2
MEZ	Mezhgor'ye	96.48	319	P		P	02 47 24.8	-0.1
BBB	Bella Bella	96.55	37	LR		LR	03 24 45.1	
	comp=Z,469nm,21.6s,baz=276,slow=32							
KWP	Kalwaria Pacla	96.76	321	*e*P		P	02 47 26.8	+0.6
KWP	Kalwaria Pacla	96.76	321	P		P	02 47 25.8	-0.4
	comp=Z,20nm,1.2s							
CJR	Cluj-Napoca	96.81	318	⇑P		P	02 47 27.3	+0.8
CJR	Cluj-Napoca	96.81	318	⇑P		P	02 47 27.3	+0.8
BRIU	Brid	96.84	319	P		P	02 47 26.4	-0.1
LOT	Lotru	96.95	316	⇓P		P	02 47 26.7	-0.6
MUKU	Mukachevo	97.03	319	P		P	02 47 27.0	-0.4
MARR	Marisel-Cluj	97.14	318	⇓P		P	02 47 28.6	+0.5
HOLU	Holmets	97.21	320	P		P	02 47 27.9	-0.3
DRGR		97.39	318	⇑P		P	02 47 29.9	+0.7
DRGR		97.39	318	⇑P		P	02 47 29.9	+0.7
BEL	Belsk	97.41	323	*e*P		P	02 47 29.5	+0.5
DEV	Deva	97.45	317	⇓P		P	02 47 30.2	+0.9
DEV	Deva	97.45	317	⇓P		P	02 47 30.2	+0.9
GZR	Gura Zlata	97.64	316	P		P	02 47 30.2	-0.1
GZR	Gura Zlata	97.64	316	P		P	02 47 30.2	-0.1
STHS	Stebnicka Huta	97.73	321	*e*PDIFF		P	02 47 31.0	+0.4
DAG	Danmarks Havn	97.78	352	P		P	02 47 28.5	-1.7
DAG	Danmarks Havn	97.78	352	*i* P		P	02 47 29.6	-0.6
DAG				IAmb		IAmb	02 47 30.3	
	comp=Z,15nm,1.1s							
IDI	Anoyia	97.99	306	LR		LR	03 39 20.1	
	comp=Z,174nm,20.6s,baz=74,slow=40							
HERR	Herculane	98.00	316	⇓P		P	02 47 32.2	+0.3
SIRR	Siria	98.21	317	⇓P		P	02 47 33.3	+0.5
RES	Resolute Bay	98.26	10	LR		LR	03 39 23.7	
	comp=Z,230nm,18.6s,baz=328,slow=40							
NIE	Niedzica	98.33	321	*e*P		P	02 47 34.2	+0.9
NIE	Niedzica	98.33	321	P		P	02 47 32.6	-0.7
	comp=Z,3.7nm,2.4s							
HFS	Hagfors	98.58	332	P		P	02 47 34.8	+0.7
	comp=Z,1.5nm,0.5s,baz=123,slow=5.3,SNR=7.6							
HFS				LR		LR	03 36 59.5	
	comp=Z,1µm,21.3s,baz=66,slow=38							
	comp=Z,1.5nm,0.5s							
RKT	Rikitea	98.65	113	*e*LR		LR	03 19 48.6	
	comp=Z,12µm,40.0s							
PSZ	Piszkesteto	98.98	319	⇑P		Pdif	02 47 37.1	+0.8
PSZ	Piszkesteto	98.98	319	⇑P		Pdif	02 47 37.1	+0.8
LSZ	Lusaka	99.33	255	IAMs_20	IAMs_20		03 32 42.1	
	comp=Z,664nm,21.0s							
LSZ	Lusaka	99.33	255	IAmb		IAmb	02 47 39.1	
	comp=Z,9.8nm,1.2s							
LSZ	Lusaka	99.33	255	P		Pdif	02 47 37.4	-1.1
	comp=Z,1.1nm,0.3s,baz=185,slow=1.7,SNR=5.2							
	comp=Z,1.1nm,0.3s							
NB2	NORSAR Subarra	99.35	334	P		Pdif	02 47 35.9	-1.7
	comp=Z,7.5nm,1.2s,baz=68,slow=4.8							
NOA	NORSAR Array B	99.35	334	P		Pdif	02 47 36.3	-1.3
	comp=Z,2.4nm,0.9s,baz=66,slow=4.6,SNR=5.7							
NOA				LR		LR	03 36 28.6	
	comp=Z,1µm,21.6s,baz=60,slow=38							
	comp=Z,2.4nm,0.9s							
NEEM	North Greenlan	99.42	360	*i* P		Pdif	02 47 38.8	+0.8
NEEM				IAmb		IAmb	02 47 44.6	
	comp=Z,10nm,0.7s							
YKA	Yellowknife Ar	99.85	24	P		Pdif	02 47 39.7	0.0
	comp=Z,0.6nm,0.8s,baz=301,slow=5.7,SNR=3.6							
YKA				LR		LR	03 30 55.6	
	comp=Z,244nm,21.7s,baz=265,slow=34							
	comp=Z,0.6nm,0.8s							
MORC	Moravsky Berou	99.96	322	*e*PDIFF		Pdif	02 47 40.3	-0.3
DBG	Daneborg	100.06	351	*i* P		Pdif	02 47 40.9	+0.4
DBG				IAmb		IAmb	02 47 48.3	
	comp=Z,6.1nm,0.9s							
JAVC	Velka Javorina	100.14	321	*e*PDIFF		Pdif	02 47 41.9	+0.5
MORH	Mrgy, Hungar	100.25	318	⇓P		Pdif	02 47 42.0	+0.1
KSP	Ksiaz	100.40	323	*e*P		Pdif	02 47 42.5	+0.1
KSP	Ksiaz	100.40	323	P		Pdif	02 47 41.7	-0.7
NLWA	Neilton Lookou	100.45	41	IAMs_20	IAMs_20		03 26 55.7	
	comp=Z,866nm,21.0s							
MODS	Modra-Piesok	100.54	320	*e*PDIFF		Pdif	02 47 44.2	+1.1
KONO	Kongsberg	100.67	333	IAMs_20	IAMs_20		03 36 59.6	
	comp=Z,844nm,22.0s							
VRAC	Vranov	100.69	321	*e*PDIFF		Pdif	02 47 43.3	-0.5
PDG	Podgorica	100.81	314	IAMs_20	IAMs_20		03 42 35.9	
	comp=Z,698nm,22.0s							
RGN	Rugen	100.84	327	IAMs_20	IAMs_20		03 36 30.6	
	comp=Z,988nm,20.0s							
KRUC	Moravsky	100.89	321	*e*PDIFF		Pdif	02 47 44.1	-0.5
KRUC	Moravsky	100.89	321	P		Pdif	02 47 44.3	-0.3
KRUC				pmax		pmax		
	comp=Z,4.0nm,2.3s							
BRG	Berggiesshubel	101.79	323	P		Pdif	02 47 47.0	-1.6
BRG				pmax		pmax		
	comp=Z,5.0nm,1.3s							
CLL	Collm	102.19	324	IAMs_20	IAMs_20		03 37 13.7	
	comp=Z,779nm,22.0s							
CLL	Collm	102.19	324	*e*PP		PKiKP	02 52 09.0	-3.4
CLL				*e*PPP		PPP	02 54 06.0	
CLL				*e*Sdif		Sdif	02 59 36.0	+4.7
CLL				*e*SS		SS	03 07 00.0	+24
CLL				*ex*		x	03 11 36.0	
CLL				L		L	03 46 00.0	
	comp=Z,800nm,20.6s							
KHC	Kasperske Hory	102.61	322	IAMs_20	IAMs_20		03 42 20.6	
	comp=Z,752nm,21.0s							
KHC	Kasperske Hory	102.61	322	⇑*e*P		Pdif	02 47 52.0	-0.4
KHC				pmax		pmax		
	comp=Z,6.0nm,1.6s							
GERES	GERESS Array B	102.64	322	P		Pdif	02 47 52.8	+0.2
	comp=Z,1.2nm,0.9s,baz=48,slow=4.0,SNR=8.6							
M02C	Callahan	102.83	46	IAMs_20	IAMs_20		03 32 57.1	
	comp=Z,955nm,21.0s							
GRA1	Grafenberg Arr	103.85	323	IAMs_20	IAMs_20		03 42 08.5	
	comp=Z,896nm,21.0s							
GRFO	Grafenberg	103.85	323	IAMs_20	IAMs_20		03 42 42.6	
	comp=Z,923nm,21.0s							
CVS	Carmenet Viney	103.95	49	IAMs_20	IAMs_20		03 33 20.0	
	comp=Z,869nm,21.0s							
CUC	Castrocucco	103.96	312	IAMs_20	IAMs_20		03 44 49.5	
	comp=Z,588nm,22.0s							
HATC	Hat Creek Radi	104.00	47	IAMs_20	IAMs_20		03 28 46.1	
	comp=Z,978nm,21.0s							
SUTB	Sutter Butte	104.21	48	IAMs_20	IAMs_20		03 28 10.9	
	comp=Z,700nm,19.0s							
ORV	Oroville	104.33	48	IAMs_20	IAMs_20		03 29 03.1	
	comp=Z,889nm,22.0s							
JRSC	Jasper Ridge	104.37	50	IAMs_20	IAMs_20		03 34 04.2	
	comp=Z,766nm,21.0s							
CEL	Celeste	104.38	311	IAMs_20	IAMs_20		03 45 20.9	
	comp=Z,502nm,22.0s							
SNAA	Sanae	104.80	195	⇑P		Pdif	02 48 04.8	+3.2
	comp=Z,21nm,0.7s							
SNAA	Sanae	104.80	195	IAMs_20	IAMs_20		03 42 10.4	
	comp=Z,656nm,21.0s							
SNAA	Sanae	104.80	195	Pdiff	Pdif		02 48 03.4	+1.8
	comp=Z,0.8nm,0.9s,baz=152,slow=4.8,SNR=2.6							
SNAA				PKKPbc	PKKPbc		03 03 46.6	-1.4
	comp=Z,2.6nm,1.0s,baz=306,slow=4.2,SNR=5.7							
WELL	Weller Preserv	105.23	49	IAMs_20	IAMs_20		03 29 10.9	
	comp=Z,900nm,22.0s							
SUR	Sutherland	105.38	237	IAMs_20	IAMs_20		03 34 35.3	
	comp=Z,848nm,20.0s							
STU	Stuttgart	105.43	323	IAMs_20	IAMs_20		03 43 15.4	
	comp=Z,813nm,22.0s							
WVOR	Wild Horse Val	105.51	44	IAMs_20	IAMs_20		03 29 39.9	
	comp=Z,773nm,21.0s							
BMO	Blue Mountains	105.59	42	IAMs_20	IAMs_20		03 30 05.7	
	comp=Z,890nm,21.0s							
FUORN	Ofenpass-Fuorn	105.60	320	IAMs_20	IAMs_20		03 42 22.2	
	comp=Z,742nm,22.0s							
CMB	Columbia Colle	105.60	49	IAMs_20	IAMs_20		03 35 15.8	
	comp=Z,900nm,21.0s							
BFO	Black Forest	106.14	322	IAMs_20	IAMs_20		03 39 03.1	
	comp=Z,750nm,22.0s							
TUE	Stuetta	106.24	320	IAMs_20	IAMs_20		03 41 02.2	
	comp=Z,886nm,22.0s							
WLF	Walferdange	106.86	324	IAMs_20	IAMs_20		03 45 18.1	
	comp=Z,818nm,22.0s							
ECH	Echery	106.89	323	IAMs_20	IAMs_20		03 39 46.1	
	comp=Z,688nm,21.0s							
MSO	Missoula	107.00	39	IAMs_20	IAMs_20		03 31 49.9	
	comp=Z,875nm,20.0s							
NVAR	Mina Array Bea	107.05	48	Pdiff	Pdif		02 48 16.5	+3.9
	comp=Z,0.2nm,0.3s,baz=319,slow=20,SNR=3.8							
NVAR				PKKPab	PKKPdf		03 03 54.4	+1.6
	comp=Z,0.3nm,0.4s,baz=114,slow=3.6,SNR=4.6							
VES	Vestal, Richgr	107.24	51	IAMs_20	IAMs_20		03 29 30.3	
	comp=Z,681nm,21.0s							
TIN	Tinenaha, Big	107.53	50	IAMs_20	IAMs_20		03 39 54.9	
	comp=Z,829nm,18.0s							
ISA	Isabella, Lake	107.77	51	IAMs_20	IAMs_20		03 33 31.3	
	comp=Z,845nm,20.0s							
HLID	Hailey	108.00	42	IAMs_20	IAMs_20		03 31 06.5	
	comp=Z,816nm,22.0s							
LRMC	Laurel Mtn Rad	108.44	51	IAMs_20	IAMs_20		03 33 54.0	
	comp=Z,815nm,19.0s							
ELK	Elko	108.49	45	IAMs_20	IAMs_20		03 33 30.8	
	comp=Z,802nm,21.0s							
EGMT	Eagleton	109.03	36	IAMs_20	IAMs_20		03 33 27.3	
	comp=Z,782nm,22.0s							
FFC	Flin Flon	109.55	28	IAMs_20	IAMs_20		03 43 39.3	
	comp=Z,947nm,21.0s							
WIN	Windhoek	109.59	247	IAMs_20	IAMs_20		03 36 20.8	
	comp=Z,623nm,20.0s							
FXWY	Fox Creek	110.21	41	IAMs_20	IAMs_20		03 31 31.0	
	comp=Z,982nm,22.0s							
TPAW	Teton Pass	110.33	41	IAMs_20	IAMs_20		03 32 39.9	
	comp=Z,838nm,21.0s							
DUG	Dugway, Tooele	110.41	45	IAMs_20	IAMs_20		03 37 46.6	
	comp=Z,632nm,21.0s							
DANC	Danby, Needles	110.50	51	IAMs_20	IAMs_20		03 35 03.5	
	comp=Z,803nm,21.0s							
LOHW	Long Hollow	110.50	41	IAMs_20	IAMs_20		03 33 21.6	
	comp=Z,935nm,22.0s							
HWUT	Hardware Ranch	110.71	43	IAMs_20	IAMs_20		03 33 19.3	
	comp=Z,861nm,21.0s							
PDAR	Pinedale Array	111.56	41	PKKPbc	PKKPbc		03 03 25.1	-0.9
	comp=Z,0.4nm,0.7s,baz=118,slow=5.9,SNR=3.8							
PDAR				PKKPab	PKKPab		03 03 33.4	-1.6
	comp=Z,1.0nm,0.9s,baz=104,slow=6.3,SNR=5.2							
PDAR				PKKP	PKKPdf		03 03 43.8	-0.7
	comp=Z,0.6nm,0.7s,baz=114,slow=5.8,SNR=4.1							
HAYD	Hayden	114.11	43	IAMs_20	IAMs_20		03 39 37.5	
	comp=Z,436nm,21.0s							
ISCO	Idaho Springs	115.56	43	IAMs_20	IAMs_20		03 34 44.1	
	comp=Z,635nm,20.0s							
EDA	Edea	116.49	276	IAMs_20	IAMs_20		03 44 30.3	
	comp=Z,543nm,22.0s							
CART	Cartagena	117.02	315	IAMs_20	IAMs_20		03 46 05.8	
	comp=Z,380nm,20.0s							
ANMO	Albuquerque	117.17	48	⇑*i* PKIKP	PKiKP		02 52 42.7	+1.3
ANMO				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KSCO	Kaye Shedlock'	117.97	42	IAMs_20	IAMs_20		03 44 11.3	
	comp=Z,709nm,21.0s							
ESDC	Sonseca Array	118.00	319	PKP	PKPdf		02 52 41.1	-1.6
	comp=Z,1.1nm,1.2s,baz=295,slow=24,SNR=3.5							
PAB	San Pablo	118.32	319	IAMs_20	IAMs_20		03 51 33.0	
	comp=Z,628nm,22.0s							
L34A	Svendsen Farm,	120.27	36	IAMs_20	IAMs_20		03 39 30.6	
	comp=Z,676nm,22.0s							
SCHQ	Schefferville	121.02	9	PKP	PKPdf		02 52 46.4	-1.6
	comp=Z,4.6nm,1.0s,baz=273,slow=4.0,SNR=2.7							
TXAR	Lajitas Array	121.70	53	PKP	PKPdf		02 52 51.1	+1.0
TXAR	Lajitas Array	121.70	53	PKP	PKPdf		02 52 49.8	-0.3
	comp=Z,1.8nm,0.8s,baz=294,slow=1.0,SNR=16							
TORD	Torodi Ar. Bea	123.32	288	PKP	PKPdf		02 52 52.9	-0.5
	comp=Z,6.2nm,0.8s,baz=104,slow=3.1,SNR=4.4							
JCT	Junction City	124.19	50	IAMs_20	IAMs_20		03 41 58.9	
	comp=Z,587nm,22.0s							
WHTX	Lake Whitney,	125.18	47	IAMs_20	IAMs_20		03 45 51.9	
	comp=Z,678nm,22.0s							
X48A	Hartselle	130.71	38	IAMs_20	IAMs_20		03 47 53.2	
	comp=Z,502nm,20.0s							
DBIC	Dimbokro	130.93	282	PKhKP	PKPpre		02 52 46.0	
	comp=Z,2.5nm,0.8s,baz=85,slow=6.2,SNR=3.1							
DBIC				PKP	PKPdf		02 53 08.2	+0.2
	comp=Z,8.0nm,0.9s,baz=126,slow=4.8,SNR=5.2							
PLCA	Paso Flores	139.45	159	PKP	PKPdf		02 53 23.6	+0.4
	comp=Z,3.2nm,0.8s,baz=212,slow=11,SNR=5.2							
TRQA	Tornquist	144.38	168		PKPdf		02 53 32.3	+0.2
TRQA	Tornquist	144.38	168	PKIKP	PKPdf		02 53 32.3	+0.2
BO02	Sierra Bellavi	144.52	154		PKPbc		02 53 32.0	+0.9
BO01	Tunca	144.72	154		PKPab		02 53 32.0	+0.5
VA01	Torpederas	145.60	152	IAMs_20	IAMs_20		03 47 30.8	
	comp=Z,416nm,20.0s							
VA03	San Esteban	146.33	153	IAMs_20	IAMs_20		03 48 49.8	
	comp=Z,605nm,22.0s							
HDC	Heredia	146.35	67	IAMs_20	IAMs_20		03 51 33.0	
	comp=Z,487nm,20.0s							
NMDO	Nuevo Mundo	148.01	41		PKPbc		02 53 42.5	+0.7
CFA	Coronel Fontan	148.34	155	PKPbc	PKPdf		02 53 41.1	+2.1
	comp=Z,8.9nm,0.8s,baz=231,slow=3.3,SNR=22							
LCO	Las Campanas	149.34	149		PKPbc		02 53 46.0	+0.7
LCO	Las Campanas	149.34	149	PKP2	PKPbc		02 53 46.0	+0.7
OTAV	Otavalo	154.34	83	IAMs_20	IAMs_20		03 57 33.1	
	comp=Z,434nm,20.0s							
CPUP	Villa Florida	156.66	170	PKPbc	PKPdf		02 53 53.1	+1.8
	comp=Z,0.8nm,0.8s,baz=304,slow=5.7,SNR=4.2							
CPUP				PKPab	PKPab		02 54 19.4	-0.8
	comp=Z,1.7nm,0.8s,baz=58,slow=4.0,SNR=7.6							
LPAZ	La Paz	160.26	132	PKP	PKPdf		02 53 57.9	+1.2
	comp=Z,4.0nm,0.9s,baz=257,slow=2.1,SNR=8.4							
LPAZ				PKPab	PKPab		02 54 37.2	+0.1
	comp=Z,7.8nm,0.9s,baz=278,slow=4.0,SNR=7.4							
SIV	San Ignacio	165.04	149	PKP	PKPdf		02 54 00.6	-0.1
	comp=Z,3.6nm,1.0s,baz=213,slow=2.2,SNR=11							
SIV				PKPab	PKPab		02 54 56.1	-1.0
	comp=Z,4.8nm,0.9s,baz=235,slow=1.7,SNR=7.3							
BDFB	Brasilia	166.72	201	PKP	PKPdf		02 54 01.9	-0.2
	comp=Z,2.2nm,0.7s,baz=170,slow=4.9,SNR=3.0							
BDFB				PKPab	PKPab		02 55 04.6	0.0
	comp=Z,4.8nm,1.1s,baz=166,slow=7.2,SNR=4.3							

*IDC **01** 02:47:47.9±1.8,3°.21N×126°.88E,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=123.8km s-min=20.7km az=70.0*

*DJA **01** 02:47:52.1±1.0,3°N±5°×12°7E±°,h12km±12km,M3.6/7, MLv3.6/7*

ISC 01 02:47:53.5±1.5,3°.2N±0°.2×127°.1E±0°.2,h44km,n7,σ0°.93/8, mb3.6/5,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.59	288	P	Pn	02 48 18.6	-0.6
SGSI				S	Sn	02 48 39.1	+0.6
TNTI	Ternate	2.44	172	P	Pn	02 48 30.4	-0.5
FITZ	Fitzroy Crossi	21.21	184	P	P	02 52 35.8	+0.1
	2.8nm,0.8s,baz=16,slow=9.0,SNR=2.2						
	2.8nm,0.8s						
WRA	Warramunga Arr	24.09	163	P	P	02 53 05.2	0.0
	0.7nm,0.5s,baz=341,slow=9.7,SNR=12						
	0.7nm,0.5s						
ASAR	Alice Springs	27.53	166	P	P	02 53 36.9	+0.6
	0.1nm,0.5s,baz=355,slow=7.7,SNR=1.5						
	0.1nm,0.5s						
MKAR	Makanchi Array	58.16	325	P	P	02 57 41.8	-1.2
	0.3nm,0.5s,baz=115,slow=8.1,SNR=3.6						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	62.35	327	P	P	02 58 12.8	+1.3
	0.5nm,0.5s,baz=127,slow=6.2,SNR=4.8						
	0.5nm,0.5s						

DJA 01 02:34:30.7±0.3,9°S±4°×119°E±°,h108km±5km,M4.3/14, mB5.1/1,mb4.7/2,MLv4.1/14,Mw(mB)4.4/1,MwMwp5.4/1, Mwp5.6/1,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.12	259	P	Pn	02 34 53.9	+0.9
PLAI				S	Sn	02 35 10.8	+0.9
WBSI	Waikabubak, Su	1.14	154	P	Pn	02 34 53.2	-0.1
WBSI				S	Sn	02 35 10.4	+0.1
WSI	Waingapu	1.74	127	P	Pn	02 35 00.2	-0.2
TWSI	Taliwang, Sumb	1.99	266	P	Pn	02 35 04.2	+0.7
BASI	Baing, Sumba	2.31	134	P	Pn	02 35 07.4	-0.2
BSSI	Bau Bau, Buton	2.92	33	P	Pn	02 35 17.2	+1.6
MMRI	Maumere	3.31	91	P	Pn	02 35 20.8	0.0
SRBI	Singaraja	3.68	278	P	Pn	02 35 26.0	+0.3
JAGI	Jajag, Banyuwa	4.69	271	P	Pn	02 35 38.3	-1.0
BATI	Baumata	4.97	109	P	Pn	02 35 42.9	-0.3
SOEI	Soe	5.43	103	P	Pn	02 35 50.3	+0.8
	43nm,0.4s						

*BJI **01** 02:51:52.6,3°.14N×126°.67E,h31km,mb4.7/30,Ms4.6/2, Ms7 4.3/2*

*DJA **01** 02:51:52.5±0.2,3°N±2°×127°7E±°,h10km,M4.9/16, mb4.8/15,mB6.1/4,MLv4.7/16,Mw(mB)5.8/4*

*NEIC **01** 02:51:53.7±2.2,3°.21N±0°.08×127°.14E±0°.08,h35km±1km, mb4.8/35,Error ellipse: s-maj=15.4km s-min=11.0km az=230.0*

*IDC **01** 02:51:59.2±1.7,3°.12N×127°.00E,h86km±15km,mb4.2/19, mbtmp4.5/23,Error ellipse: s-maj=20.9km s-min=7.6km az=80.0*

ISC 01 02:51:54.7±0.4,3°.07N±0°.04×126°.98E±0°.06,h44km,n116, σ1°60/120,mb4.7/43,2D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.57	293	P	Pn	02 52 20.1	-0.1
SGSI				S	Sn	02 52 40.2	+0.8
TNTI	Ternate	2.31	170		Pn	02 52 27.7	-2.7
TNTI	Ternate	2.31	170	P	Pn	02 52 27.6	-2.7
TNTI				S	Sn	02 52 59.6	+2.0
DAV	Davao City (W)	4.21	341	P	Pn	02 53 01.1	+4.7
	115nm,0.3s,baz=92,slow=9.5,SNR=3.7						
DAV				S	Sn	02 53 51.0	+6.6
	101nm,0.3s,baz=310,slow=17,SNR=4.4						
SANI	Sanana	5.18	191	P	Pn	02 53 08.8	-0.9
MRSI	Marisa	5.66	243	P	Pn	02 53 16.0	-0.3
	0.5nm154nm,1.1s						
SWI	Sorong	5.79	132	P	Pn	02 53 19.0	+0.9
	0.3nm81nm,0.5s						
LUWI	Luwuk	5.86	226		Pn	02 53 20.8	+1.7
LUWI	Luwuk	5.86	226	P	Pn	02 53 27.1	+8.0
LUWI	Luwuk	5.86	226	P	Pn	02 53 18.9	-0.2
	0.8nm142nm,1.0s						
NLAI	Namlea	6.27	179	P	Pn	02 53 25.2	+0.6
	0.3nm40nm,0.6s						
TOLI2	Tolitoli	6.49	253	Pn	Pn	02 53 29.1	+1.3
APSI	Ampana	6.64	234	P	Pn	02 53 31.1	+1.4
MSAI	Masohi	6.66	163	P	Pn	02 53 31.3	+1.2
	0.5nm78nm,0.6s						
AAI	Ambon	6.82	170	P	Pn	02 53 33.6	+1.4
	0.3nm54nm,0.6s						
FAKI	Fak Fak	7.94	138		Pn	02 53 47.1	-0.5
FAKI	Fak Fak	7.94	138	P	Pn	02 53 52.2	+4.5
FAKI	Fak Fak	7.94	138	P	Pn	02 53 47.6	-0.1
	0.1nm32nm,0.9s						
BNDI	Bandanaira	8.09	159	P	Pn	02 53 51.4	+1.8
	14µm108nm,1.0s						
RKPI	Ransiki, Papua	8.51	122	P	Pn	02 53 57.2	+1.7
MYLDM	Lahad Datu

STKA	**Stephens Creek**	**37.43**	**159**	P		**P**	**02 59 03.9**	**+0.1**
STKA	**Stephens Creek**	**37.43**	**159**	P		**P**	**02 59 04.0**	**+0.3**
	comp=Z,5.4nm,0.6s,baz=338,slow=6.4,SNR=12							
	comp=Z,5.4nm,0.6s							
STKA	**Stephens Creek**	**37.43**	**159**	P		**P**	**02 59 03.9**	**+0.1**
BJT	**Baijiatuau**	**38.06**	**346**			**P**	**02 59 08.6**	**-0.4**
BJT				IAmb	IAmb		02 59 36.8	
	comp=Z,17nm,1.0s							
BJT	**Baijiatuau**	**38.06**	**346**	P		**P**	**02 59 09.4**	**+0.4**
BJI	**Beijing**	**38.08**	**347**	P		**P**	**02 59 08.8**	**-0.4**
BJI				sP		**pP**	**02 59 21.0**	**+0.5**
BJI				pmax	pmax			
	comp=Z,8.0nm,0.9s							
SNY	**Shenyang**	**38.71**	**356**	⇓P		**P**	**02 59 16.0**	**+1.6**
SNY				pmax	pmax			
	comp=Z,14nm,0.5s							
HHC	**Hu-ho-hao-te**	**40.10**	**342**	*e*P		**P**	**02 59 26.2**	**0.0**
HHC				pmax	pmax			
	comp=Z,13nm,0.6s							
SHL	**Shillong**	**40.47**	**307**	P		**P**	**02 59 27.5**	**-2.0**
SHL				IAmb	IAmb		02 59 29.7	
	comp=Z,13nm,0.6s							
CN2	**Changchun**	**40.58**	**358**	P		**P**	**02 59 29.4**	**-0.6**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
USRK	**Ussuriysk Ar.**	**41.20**	**5**	P		**P**	**02 59 34.8**	**-0.3**
	comp=Z,4.9nm,0.8s,baz=212,slow=8.7,SNR=8.0							
	comp=Z,4.9nm,0.8s							
XLT	**XiLinHaoTe**	**41.79**	**348**	*e*P		**P**	**02 59 41.0**	**+1.0**
XLT				pmax	pmax			
	comp=Z,13nm,0.8s							
GTA	**Gaotai**	**43.79**	**329**	*e*P		**P**	**02 59 58.5**	**+2.1**
GTA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
AUKSC	**Keysborough Se**	**44.17**	**159**	P		**P**	**03 00 00.1**	**+0.9**
EVN	**Everest**	**45.59**	**307**			**P**	**03 00 10.2**	**-1.2**
EVN				IAmb	IAmb		03 00 11.8	
	comp=Z,9.7nm,0.8s							
SONM	**Songino Array**	**48.00**	**341**	IAmb	IAmb		03 00 39.0	
	comp=Z,10nm,1.4s							
SONM	**Songino Array**	**48.00**	**341**	P		**P**	**03 00 28.9**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=150,slow=9.4,SNR=13							
	comp=Z,2.8nm,0.8s							
MKAR	**Makanchi Array**	**58.24**	**325**			**P**	**03 01 43.2**	**-1.4**
MKAR	**Makanchi Array**	**58.24**	**325**	P		**P**	**03 01 43.9**	**-0.8**
	comp=Z,4.8nm,0.9s,baz=120,slow=7.9,SNR=22							
	comp=Z,4.8nm,0.9s							
MAKZ	**Makanchi**	**58.42**	**325**	P		**P**	**03 01 44.4**	**-1.6**
MAKZ				IAmb	IAmb		03 01 48.2	
	comp=Z,6.4nm,0.9s							
NIL	**Nilore**	**58.53**	**308**			**P**	**03 01 45.9**	**-1.1**
NIL				IAmb	IAmb		03 01 47.2	
	comp=Z,13nm,1.1s							
ZAA0	**Zalesovo Array**	**61.29**	**333**			**P**	**03 02 04.0**	**-1.4**
ZAA0				IAmb	IAmb		03 02 06.3	
	comp=Z,5.8nm,1.0s							
ZALV	**Zalesovo Beam**	**61.29**	**333**	P		**P**	**03 02 04.0**	**-1.4**
ZALV	**Zalesovo Beam**	**61.29**	**333**	P		**P**	**03 02 04.5**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=109,slow=8.0,SNR=15							
	comp=Z,3.8nm,0.8s							
KBL	**Kabul**	**62.12**	**308**			**P**	**03 02 09.4**	**-2.3**
KBL				IAmb	IAmb		03 02 12.3	
	comp=Z,4.2nm,0.7s							
KURBB	**Kurchatov Arra**	**62.43**	**327**	P		**P**	**03 02 12.4**	**-0.8**
	comp=Z,9.9nm,0.8s,baz=124,slow=6.2,SNR=50							
	comp=Z,9.9nm,0.8s							
KURK	**Kurchatov**	**62.43**	**328**			**P**	**03 02 11.5**	**-1.7**
KURK	**Kurchatov**	**62.43**	**328**	P		**P**	**03 02 12.4**	**-0.8**
KURK				pP		**pP**	**03 02 23.7**	**-1.7**
GAR	**Garm**	**62.55**	**313**			**P**	**03 02 12.7**	**-1.8**
GAR				IAmb	IAmb		03 02 15.6	
	comp=Z,7.0nm,0.7s							
KKAR	**Karatay Array**	**63.88**	**317**	P		**P**	**03 02 21.3**	**-1.8**
BVAR	**Borovoye Array**	**68.01**	**327**	P		**P**	**03 02 48.5**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=120,slow=8.9,SNR=6.6							
	comp=Z,3.2nm,0.7s							
TIXI	**Tiksi**	**68.50**	**1**	P		**P**	**03 02 51.6**	**-0.4**
TIXI				IAmb	IAmb		03 02 52.5	
	comp=Z,5.6nm,0.6s							
TIXI	**Tiksi**	**68.50**	**1**	P		**P**	**03 02 52.0**	**0.0**
	comp=Z,2.8nm,0.3s,baz=214,slow=1.9,SNR=7.6							
	comp=Z,2.8nm,0.3s							
DRV	**Dumont d'Urvil**	**70.20**	**175**	P		**P**	**03 03 03.1**	**+0.6**
ABKAR	**Akbulak array**	**72.82**	**321**	P		**P**	**03 03 17.6**	**-1.2**
ARTI	**Arti**	**75.71**	**328**	P		**P**	**03 03 34.2**	**-1.2**
ARTI				IAmb	IAmb		03 03 35.5	
	comp=Z,8.2nm,0.7s							
RAYN	**Ar Rayn**	**80.97**	**293**	P		**P**	**03 04 04.4**	**-0.9**
RAYN	**Ar Rayn**	**80.97**	**293**	P		**P**	**03 04 05.0**	**-0.4**
E19K	**Redstone River**	**81.74**	**22**			**P**	**03 04 10.2**	**+1.7**
E19K				IAmb	IAmb		03 04 27.6	
	comp=Z,17nm,1.0s							
VNDA	**Vanda**	**82.74**	**173**	P		**P**	**03 04 13.5**	**+0.1**
VNDA	**Vanda**	**82.74**	**173**	P		**P**	**03 04 14.9**	**+1.5**
	comp=Z,3.2nm,1.0s,baz=302,slow=5.8,SNR=12							
	comp=Z,3.2nm,1.0s							
VNDA	**Vanda**	**82.74**	**173**	P		**P**	**03 04 14.6**	**+1.2**
MAW	**Mawson**	**83.23**	**200**	P		**P**	**03 04 17.8**	**+1.7**
	comp=Z,4.4nm,0.9s,baz=315,slow=23,SNR=3.0							
	comp=Z,4.4nm,0.9s							
GURO	**Guroymak-BITLI**	**84.15**	**308**	IAmb		IAmb	03 04 23.7	
	comp=Z,11nm,0.9s							
G23K	**Bananza Creek**	**84.42**	**23**	P		**P**	**03 04 23.8**	**+1.4**
ILAR	**Eielson Array**	**85.59**	**25**	P		**P**	**03 04 29.0**	**+0.8**
ILAR	**Eielson Array**	**85.59**	**25**	P		**P**	**03 04 29.0**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=253,slow=5.1,SNR=2.9							
KIBK	**Kibwezi**	**89.06**	**268**	P		**P**	**03 04 46.9**	**+0.8**
KIBK				IAmb	IAmb		03 04 48.2	
	comp=Z,7.5nm,1.1s							
BRTR	**Keskin Array B**	**90.63**	**310**	P		**P**	**03 04 52.7**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=110,slow=6.2,SNR=7.6							
	comp=Z,1.8nm,0.9s							
ARCES	**ARCESS Array B**	**91.15**	**340**	P		**P**	**03 04 54.0**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=70,slow=4.0,SNR=5.0							
	comp=Z,2.4nm,0.8s							
TXAR	**Lajitas Array**	**121.80**	**53**	PKP		**PKiKP**	**03 10 46.2**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=274,slow=3.9,SNR=4.3							

RSNC 01 02:52:31.8±0.0, 7°N±1°×77°W±°, h149km±1km, M3.1, mB4.5, mb3.7, ML2.8, Mw(mB)3.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**195**	P	Pn	02 52 52.0	-0.4
BARC				S	Sn	02 53 07.4	-0.7
BRJC	**Barrancabermej**	**0.64**	**283**	P	Pn	02 52 53.8	0.0
BRJC				S	Sn	02 53 11.2	+0.7
RUSC	**La Rusia**	**0.93**	**178**	P	Pn	02 52 55.9	-0.6
RUSC				S	Sn	02 53 14.2	-1.1
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	P	Pn	02 52 58.7	-1.2
PTBC				S	Sn	02 53 19.9	-1.4
OCAC	**Ocana**	**1.41**	**352**	P	Pn	02 53 00.0	-0.6
OCAC				S	Sn	02 53 22.2	-0.4
SPBC	**San Pablo de B**	**1.50**	**219**	P	Pn	02 53 00.9	-0.6
SPBC				S	Sn	02 53 23.2	-1.0
CHIC	**Chingaza**	**2.27**	**196**	P	Pn	02 53 09.8	-0.7
CHIC				S	Sn	02 53 39.5	-0.8
ROSC	**El Rosal**	**2.31**	**211**	P	Pn	02 53 11.4	+0.4
ROSC				S	Sn	02 53 42.0	+0.9
HELC	**Santa Helena**	**2.48**	**255**	P	Pn	02 53 12.3	-0.7
HELC				S	Sn	02 53 45.7	+1.1
CVER	**Cruz Verde, Cu**	**2.48**	**203**	P	Pn	02 53 13.2	0.0
CVER				S	Sn	02 53 44.8	-0.2
UREC	**San Jos de Ur**	**2.56**	**291**	P	Pn	02 53 12.0	-1.7
UREC				S	Sn	02 53 42.9	-3.1
GUY2C	**Guyana, Caldas**	**2.74**	**235**	P	Pn	02 53 16.1	-0.3
GUY2C				S	Sn	02 53 51.2	+0.5
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	Pn	02 53 19.4	-0.3
CBOC				S	Sn	02 53 55.7	-1.0
DBBC	**Dabeiba**	**3.07**	**274**	P	Pn	02 53 19.5	-0.7
DBBC				S	Sn	02 53 55.2	-2.3
SDV	**Santo Domingo**	**3.20**	**50**	P	Pn	02 53 21.4	-0.5
SDV				S	Sn	02 53 59.7	-0.9
ARGC	**Ariguani, Magd**	**3.21**	**340**	P	Pn	02 53 21.0	-0.8
ARGC				S	Sn	02 54 00.8	+0.2
ANIL	**Santa Ana**	**3.25**	**224**	P	Pn	02 53 23.8	+1.2
ANIL				S	Sn	02 54 02.4	+0.5
PRAC	**Prado**	**3.56**	**210**	P	Pn	02 53 25.4	-1.0
PRAC				S	Sn	02 54 07.7	-1.0
ORTC	**Ortega, Tolima**	**3.59**	**216**	P	Pn	02 53 25.9	-0.9
ORTC				S	Sn	02 54 09.3	-0.2
APAC	**Apartado, Choc**	**3.59**	**287**	P	Pn	02 53 25.7	-1.0
APAC				S	Sn	02 54 07.8	-1.6
SJCC	**San Jacinto, C**	**3.67**	**326**	P	Pn	02 53 25.6	-2.2
SJCC				S	Sn	02 54 07.4	-3.8
PLMC	**San Jos del P**	**3.68**	**239**	P	Pn	02 53 27.5	-0.5
PLMC				S	Sn	02 54 11.3	-0.3
URMC	**La Uribe, Meta**	**3.77**	**199**	P	Pn	02 53 28.5	-0.7
URMC				S	Sn	02 54 13.4	-0.4
LCBC	**Los crdobas,**	**3.80**	**302**	P	Pn	02 53 28.1	-1.3
LCBC				S	Sn	02 54 10.1	-4.0
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	P	Pn	02 53 32.2	-2.2
CRJC				S	Sn	02 54 20.6	-2.5
YOTC	**Yotoco, Valle**	**4.28**	**229**	P	Pn	02 53 34.4	-1.4
SMRC	**Santa Marta, M**	**4.44**	**346**	P	Pn	02 53 37.2	-0.7
SMRC				S	Sn	02 54 25.1	-4.2
MACC	**Macarena, Meta**	**4.71**	**189**	P	Pn	02 53 38.5	-2.9
MACC				S	Sn	02 54 29.9	-5.8
URIC	**Uribia, Colomb**	**4.97**	**13**	P	Pn	02 53 42.2	-2.6
URIC				S	Sn	02 54 39.2	-2.5
FLOC	**Florencia**	**5.79**	**206**	P	Pn	02 53 54.6	-1.2

*MOS **01** 03:02:00.7±1.0, 51°.91N×153°.21E, h522km, mb3.6/1, Error ellipse: s-maj=21.7km s-min=14.4km az=62.4*
*IDC **01** 03:02:00.3±1.5, 52°.55N×152°.62E, h490km±18km, mb2.9/8, mbtmp3.7/11, Error ellipse: s-maj=25.0km s-min=16.8km az=110.0*
*KRSC **01** 03:02:01.2±3.4, 52°.11N×154°.35E, h549km±34km, Ml3.9*
ISC 01 03:02:00.8±0.8, 52°.4N±0°.1×153°.0E±0°.1, h500km, n40, σ1s36/42, mb3.1/9, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.60**	**78**	*e*P	**P**	**03 03 10.1**	**+1.1**
PETK	**Petropavlovsk-**	**2.95**	**75**	P	**P**	**03 03 11.1**	**-0.2**
	8.2nm,0.7s,baz=299,slow=1.5,SNR=18						
ASAK	**Asacha**	**3.02**	**89**	P	**P**	**03 03 11.5**	**-0.4**
ASAK	**Asacha**	**3.02**	**89**	*e*P	**P**	**03 03 12.8**	**+0.9**
GRL	**Gorelyy**	**3.12**	**86**	P	**P**	**03 03 14.1**	**+1.4**
GRL	**Gorelyy**	**3.12**	**86**	*e*P	**P**	**03 03 14.4**	**+1.7**
KRMR	**Karymshinskiy**	**3.17**	**81**	P	**P**	**03 03 13.4**	**+0.6**
KRMR	**Karymshinskiy**	**3.17**	**81**	*e*P	**P**	**03 03 13.7**	**+0.9**
MTVR	**Mutnovka**	**3.19**	**87**	P	**P**	**03 03 13.5**	**+0.3**
MTVR	**Mutnovka**	**3.19**	**87**	*e*P	**P**	**03 03 14.6**	**+1.4**
KDTR	**Khodutka, Kamc**	**3.21**	**99**	*e*P	**P**	**03 03 12.4**	**-0.7**
KDTR				*e*S	**S**	**03 04 09.2**	**-3.0**
RUS	**Russkaya**	**3.40**	**88**	P	**P**	**03 03 14.1**	**-0.3**
RUS				S	**S**	**03 04 12.3**	**-2.2**
RUS	**Russkaya**	**3.40**	**88**	*e*P	**P**	**03 03 14.5**	**+0.1**
KOK	**Koryaka**	**3.54**	**74**	P	**P**	**03 03 17.1**	**+1.5**
KRX	**Arik**	**3.56**	**73**	P	**P**	**03 03 16.7**	**+0.9**
KRX	**Arik**	**3.56**	**73**	*e*P	**P**	**03 03 16.8**	**+1.0**
DALK	**Dalny**	**3.57**	**78**	P	**P**	**03 03 16.0**	**+0.4**
DALK	**Dalny**	**3.57**	**78**	*e*P	**P**	**03 03 16.1**	**+0.4**
KRER	**Koryakskii**	**3.61**	**74**	P	**P**	**03 03 18.4**	**+2.2**
KRER	**Koryakskii**	**3.61**	**74**	*e*P	**P**	**03 03 17.6**	**+1.4**
SMAR	**Somma**	**3.63**	**75**	P	**P**	**03 03 17.9**	**+1.5**
SMAR	**Somma**	**3.63**	**75**	*e*P	**P**	**03 03 17.5**	**+1.1**
UGLR	**Uglovaya**	**3.64**	**75**	P	**P**	**03 03 18.4**	**+2.1**
UGLR	**Uglovaya**	**3.64**	**75**	*e*P	**P**	**03 03 18.4**	**+2.1**
SDLR	**Sedlovina**	**3.68**	**75**	P	**P**	**03 03 18.2**	**+1.5**
SDLR	**Sedlovina**	**3.68**	**75**	*e*P	**P**	**03 03 18.2**	**+1.5**
KZV	**Kizimen**	**5.10**	**55**	*e*P	**P**	**03 03 30.4**	**+1.7**
TUMD	**Tumrok D**	**5.20**	**55**	P	**P**	**03 03 31.6**	**+2.2**
KBTR	**Krutoberegovo**	**6.89**	**53**	*e*P	**P**	**03 03 43.6**	**-2.0**
SEY	**Seymchan**	**10.53**	**359**	P	**P**	**03 04 22.2**	**-1.1**
	1.0nm,0.3s,baz=281,slow=24,SNR=1.9						
MJAR	**Matsushiro Arr**	**19.00**	**219**	P	**P**	**03 05 50.0**	**-0.3**
	0.3nm,0.4s,baz=20,slow=8,SNR=4.4						
ILAR	**Eielson Array**	**32.32**	**44**	P	**P**	**03 07 48.3**	**+0.7**
	0.3nm,0.5s,baz=270,slow=9.5,SNR=4.4						
FINES	**FINESS Array B**	**58.87**	**333**	P	**P**	**03 11 09.3**	**-1.1**
	1.8nm,0.9s,baz=46,slow=6.0,SNR=4.4						
	1.8nm,0.9s						
PDAR	**Pinedale Array**	**61.55**	**56**	P	**P**	**03 11 30.5**	**+1.6**
	0.3nm,0.5s,baz=7.6,slow=4.2,SNR=3.9						
	0.3nm,0.5s						
HFS	**Hagfors**	**63.10**	**339**	P	**P**	**03 11 37.2**	**-1.1**
	2.1nm,0.9s,baz=22,slow=4.7,SNR=1.9						
	2.1nm,0.9s						
EKA	**Eskdalemuir Ar**	**70.78**	**346**	P	**P**	**03 12 25.1**	**-0.6**
	1.3nm,0.7s,baz=15,slow=6.3,SNR=2.4						
	1.3nm,0.7s						
GERES	**GERESS Array B**	**73.31**	**333**	P	**P**	**03 12 40.5**	**-0.2**
	0.2nm,0.6s,baz=26,slow=28,SNR=1.7						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**73.88**	**198**	P	**P**	**03 12 44.6**	**+0.5**
	0.9nm,1.1s,baz=13,slow=5.7,SNR=2.9						
	0.9nm,1.1s						
TXAR	**Lajitas Array**	**74.82**	**62**	P	**P**	**03 12 50.5**	**+0.8**
	0.2nm,0.5s,baz=321,slow=5.4,SNR=4.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**77.59**	**198**	P	**P**	**03 13 05.5**	**+0.9**
	0.2nm,0.5s,baz=12,slow=6.0,SNR=4.7						
	0.2nm,0.5s						

IDC 01 03:09:31.0±1.4, 3°.81N×128°.37E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=72.1km s-min=24.3km az=80.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.32**	**166**	P	P	03 14 50.2	-0.4
	0.8nm,0.7s,baz=343,slow=9.9,SNR=6.8						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**27.84**	**169**	P	P	03 15 22.9	+0.6
	0.1nm,0.4s,baz=350,slow=15,SNR=2.0						
	0.1nm,0.4s						
PETK	**Petropavlovsk-**	**54.75**	**21**	P	P	03 19 01.6	-0.7
	0.9nm,0.4s,baz=223,slow=7.2,SNR=4.4						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**58.43**	**324**	P	P	03 19 29.2	+0.5
	0.1nm,0.4s,baz=134,slow=6.2,SNR=2.1						
	0.1nm,0.4s						

*MEX **01** 03:55:19.6±0.9, 15°.35N×93°.14W, h102km±8km, MD3.8*
*GCG **01** 03:55:19.9±1.7, 15°.38N×93°.11W, h83km±26km, MD3.9, ML3.4*
ISC 01 03:55:17.2±1.5, 15°.30N±0°.05×93°.18W±0°.04, h107km±10km, n20, σ1s94/39, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.41**	**355**	*e*P	**Pn**	**03 55 33.5**	**+0.3**
PCIG				*e*S	**Sn**	**03 55 44.1**	**-1.0**
PATR	**El Naranjo**	**0.93**	**101**	*e*P	**Pn**	**03 55 38.0**	**+0.3**
PATR				*e*S	**Sn**	**03 55 52.1**	**-1.0**
THIG		**0.96**	**113**	*e*P	**Pn**	**03 55 38.8**	**+1.1**
THIG				*e*S	**Sn**	**03 55 53.5**	**+0.3**
THIG		**0.96**	**113**	*e*P	**Pn**	**03 55 38.6**	**+0.8**
THIG				*e*S	**Sn**	**03 55 52.4**	**-0.8**
THIG				IAML		03 55 54.1	
	comp=N,2μm,0.2s						
PAVE	**Pavencul**	**0.97**	**96**	*e*P	**Pn**	**03 55 39.0**	**+0.9**
PAVE				*e*S	**Sn**	**03 55 53.3**	**-0.6**
CHUJ	**Union Juarez**	**1.05**	**101**	*e*P	**Pn**	**03 55 39.5**	**+0.5**
CHUJ				*e*S	**Sn**	**03 55 54.6**	**-0.7**
CCIG	**Comitan**	**1.40**	**46**	*e*P	**Pn**	**03 55 43.9**	**+1.0**
CCIG				*e*S	**Sn**	**03 56 02.7**	**+0.4**
CCIG	**Comitan**	**1.40**	**46**	*e*P	**Pn**	**03 55 44.7**	**+1.8**
CCIG				*e*S	**Sn**	**03 56 02.7**	**+0.4**
CCIG				IAML		03 56 05.3	
	comp=N,357nm,0.4s						
TGIG		**1.48**	**2**	*e*P	**Pn**	**03 55 44.2**	**+0.5**
TGIG				*e*S	**Sn**	**03 56 01.9**	**-1.8**
TGIG		**1.48**	**2**	*e*P	**Pn**	**03 55 44.2**	**+0.5**
TGIG				*e*S	**Sn**	**03 56 01.9**	**-1.8**
TGIG				IAML		03 56 02.6	
	comp=N,264nm,0.2s						
HUEH	**Huehuetenango**	**1.62**	**89**	*e*P	**Pn**	**03 55 46.3**	**+0.8**
HUEH				*e*S	**Sn**	**03 56 07.8**	**+0.8**
HUEH	**Huehuetenango**	**1.62**	**89**	*i* S	**Sn**	**03 56 08.6**	**+1.6**
RTAL	**Retalhuleu**	**1.63**	**118**	*e*P	**Pn**	**03 55 47.6**	**+2.2**
RTAL				*e*S	**Sn**	**03 56 07.5**	**+0.6**
STG2	**El Palmar, Qui**	**1.94**	**116**	*e*P	**Pn**	**03 55 47.3**	**-2.2**
STG2				*e*S	**Sn**	**03 56 07.3**	**-6.7**
UXUV	**UXUV**	**2.21**	**335**	*e*P	**Pn**	**03 55 55.1**	**+2.3**
UXUV				*e*S	**Sn**	**03 56 17.1**	**-3.0**
APG	**El Apazote**	**2.64**	**96**	*e*P	**Pn**	**03 56 00.1**	**+1.5**
APG				*e*S	**Sn**	**03 56 31.1**	**+0.7**
HUIG	**Huatulco**	**2.86**	**280**	*e*P	**Pn**	**03 56 03.6**	**+2.3**
HUIG				*e*S	**Sn**	**03 56 33.6**	**-1.7**
NEUV	**Arroyo Zacate**	**3.48**	**314**	*e*P	**Pn**	**03 56 12.1**	**+2.5**
NEUV				*e*S	**Sn**	**03 56 46.8**	**-3.2**
PETF	**Flores**	**3.57**	**63**	*e*P	**Pn**	**03 56 11.3**	**+0.6**
PETF				*e*S	**Sn**	**03 56 49.3**	**-2.9**
SCIG	**Sabancuy**	**4.12**	**27**	*e*P	**Pn**	**03 56 19.3**	**+1.2**
SCIG				*e*S	**Sn**	**03 57 03.7**	**-1.6**

IDC 01 04:04:59.4±2.5, 2°.90N×126°.63E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=214.5km s-min=28.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.93**	**162**	P	P	04 10 15.9	+0.5
	0.7nm,0.6s,baz=341,slow=10,SNR=5.7						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**27.34**	**165**	P	P	04 10 45.9	-0.4
	0.2nm,0.6s,baz=339,slow=9.2,SNR=2.1						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.17**	**326**	P	P	04 14 55.1	-0.2
	0.2nm,0.5s,baz=138,slow=6.7,SNR=1.7						
	0.2nm,0.5s						

*IDC **01** 04:14:03.0±1.1, 2°.58N×125°.63E, h0km, mb3.8/8, mbtmp3.8/8, MS3.6/1, Error ellipse: s-maj=202.9km s-min=16.6km az=66.0*
*DJA **01** 04:14:04.6±1.2, 4°.N±5°×12°.7E±°, h16km±13km, M4.0/9, mb4.0/3, MLv4.0/9*
*NEIC **01** 04:14:07.4±2.9, 3°.48N±0°.05×126°.85E±0°.09, h35km±2km, mb4.8/9, Error ellipse: s-maj=15.2km s-min=8.1km az=262.0*
ISC 01 04:14:08.1±0.7, 3°.39N±0°.06×127°.0E±0°.1, h48km, n26, σ2s37/29, mb4.0/11, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.50**	**281**	P	**Pn**	**04 14 33.6**	**+1.0**
TNTI	**Ternate**	**2.63**	**172**	Pn	**Pn**	**04 14 49.7**	**+1.7**
TNTI				Sn	**Sn**	**04 15 20.1**	**+1.4**
DAV	**Davao City (W)**	**3.92**	**339**	Pn	**Pn**	**04 15 01.4**	**-4.5**
DAV				Sn	**Sn**	**04 15 45.9**	**-4.6**
KMSI	**Cibinong**	**4.12**	**227**	P	**Pn**	**04 15 12.6**	**+4.1**
SANI	**Sanana**	**5.50**	**191**	P	**Pn**	**04 15 26.6**	**-0.9**
	0.1nm11nm,0.9s						
FAKI	**Fak Fak**	**8.17**	**140**	Pn	**Pn**	**04 16 05.2**	**+1.1**
KAPI	**Kappang**	**11.06**	**221**	Pn	**Pn**	**04 16 41.2**	**-2.4**
TPUB	**Ta-pu**	**20.73**	**343**	P	**P**	**04 18 44.7**	**-0.1**
TPUB				IAmb	IAmb	04 18 58.8	
	comp=Z,57nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.40**	**184**	P	**P**	**04 18 49.5**	**-2.4**
PMG	**Port Moresby**	**23.77**	**122**	LR	LR	04 29 30.1	
	comp=Z,152nm,19.9s,baz=12,slow=38						
WB0	**Warramunga Arr**	**24.13**	**163**	P	**P**	**04 19 17.2**	**-2.5**
WB0				IAmb	IAmb	04 19 20.9	
	comp=Z,23nm,1.7s						
WRA	**Warramunga Arr**	**24.28**	**163**	P	**P**	**04 19 18.2**	**-2.9**
WRA	**Warramunga Arr**	**24.28**	**163**	P	**P**	**04 19 18.6**	**-2.5**
	comp=Z,2.1nm,0.6s,baz=334,slow=11,SNR=26						
WRA				PcP	**PcP**	**04 23 01.8**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=319,slow=3.0,SNR=1.8						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**27.72**	**166**	P	**P**	**04 19 50.2**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=352,slow=7.7,SNR=6.5						
ASAR				PcP	**PcP**	**04 23 09.3**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=340,slow=2.9,SNR=1.9						
	comp=Z,0.3nm,0.3s						
BBOO	**Buckleboo**	**37.01**	**167**	P	**P**	**04 21 09.7**	**-3.5**
BBOO				IAmb	IAmb	04 22 17.8	
	comp=Z,48nm,1.6s						
STKA	**Stephens Creek**	**37.72**	**159**	P	**P**	**04 21 18.1**	**-1.1**
STKA	**Stephens Creek**	**37.72**	**159**	P	**P**	**04 21 18.4**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=336,slow=10.0,SNR=3.8						
	comp=Z,0.9nm,0.4s						
ARMA	**Armidale**	**41.03**	**147**	P	**P**	**04 21 46.5**	**-0.6**
ARMA				IAmb	IAmb	04 22 56.8	
	comp=Z,24nm,1.6s						
SONM	**Songino Array**	**47.70**	**341**	P	**P**	**04 22 44.3**	**+4.1**
	comp=Z,0.4nm,0.5s,baz=156,slow=11,SNR=2.4						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**57.99**	**325**	P	**P**	**04 23 56.5**

	comp=Z,90nm,0.4s						
RANF	**Ranua**	**3.23**	**244**	PN	**Pn**	**04 29 10.1**	**+1.6**
	baz=56						
RANF				SG	**Sb**	**04 29 56.3**	**+1.8**
RNF	**Rovaniemi**	**3.24**	**256**	PN	**Pn**	**04 29 09.7**	**+1.1**
	baz=69						
RNF				SN	**Sn**	**04 29 48.9**	**+1.1**
KEV	**Kevo**	**3.34**	**314**	*e*P	**Pn**	**04 29 10.9**	**+0.9**
KEV				eS	**Sn**	**04 29 48.4**	**-1.9**
KEV	**Kevo**	**3.34**	**314**	PN	**Pn**	**04 29 10.8**	**+0.8**
	baz=124						
KEV				SN	**Sn**	**04 29 49.1**	**-1.1**
ARA0	**ARCESS Array S**	**3.66**	**306**	*e*P	**Pn**	**04 29 14.6**	**+0.2**
ARA0				IAML		04 30 11.7	
	comp=Z,38nm,0.5s						
ARA0	**ARCESS Array S**	**3.66**	**306**	PN	**Pn**	**04 29 14.4**	**0.0**
	baz=116						
ARA0				SN	**Sn**	**04 29 57.6**	**-0.6**
ARCES	**ARCESS Array B**	**3.66**	**306**	Pn	**Pn**	**04 29 14.6**	**+0.1**
	comp=Z,5.1nm,0.3s,baz=122,slow=14,SNR=357						
ARCES				Pg	**Pb**	**04 29 23.5**	**+1.4**
	comp=Z,5.5nm,0.3s,baz=112,slow=15,SNR=17						
ARCES				Sn	**Sn**	**04 29 57.3**	**-0.9**
	comp=Z,2.5nm,0.3s,baz=85,slow=14,SNR=3.6						
ARCES				Lg	Lg	04 30 08.7	
	comp=Z,10nm,0.3s,baz=112,slow=29,SNR=12						
	comp=Z,15nm,0.4s						
ARCES	**ARCESS Array B**	**3.66**	**306**	P	**Pn**	**04 29 14.3**	**-0.1**
ARCES				S	**Sn**	**04 29 56.1**	**-2.1**
RMF	**Romuvaara**	**3.75**	**208**	PN	**Pn**	**04 29 17.5**	**+1.8**
	baz=25						
HEF	**Hetta**	**3.95**	**287**	*e*P	**Pn**	**04 29 18.6**	**+0.2**
HEF	**Hetta**	**3.95**	**287**	PN	**Pn**	**04 29 18.4**	**+0.1**
	baz=101						
HEF				SN	**Sn**	**04 30 03.8**	**-1.5**
TOF	**Tornio**	**4.08**	**253**	PN	**Pn**	**04 29 20.3**	**+0.2**
TOF				SN	**Sn**	**04 30 08.6**	**+0.2**
OUL	**Oulu**	**4.08**	**236**	PB	**Pb**	**04 29 27.5**	**-1.8**
KTK1	**Kautokeino**	**4.21**	**295**	*e*P	**Pn**	**04 29 22.7**	**+0.6**
KTK1				IAML		04 30 38.6	
	comp=Z,40nm,0.5s						
KTK1	**Kautokeino**	**4.21**	**295**	PN	**Pn**	**04 29 23.1**	**+1.0**
KTK1				SN	**Sn**	**04 30 09.5**	**-2.4**
PAJU	**Pajala**	**4.22**	**267**	P	**Pn**	**04 29 22.6**	**+0.4**
PAJU	**Pajala**	**4.22**	**267**	PN	**Pn**	**04 29 22.0**	**-0.1**
PAJU				SN	**Sn**	**04 30 11.0**	**-1.0**
KALU	**Kalix**	**4.53**	**253**	P	**Pn**	**04 29 26.8**	**+0.4**
KALU	**Kalix**	**4.53**	**253**	PN	**Pn**	**04 29 29.7**	**+3.3**
KALU				SN	**Sn**	**04 30 19.8**	**+0.2**
LANU	**Lannavaara**	**4.54**	**281**	PN	**Pn**	**04 29 26.2**	**-0.4**
LANU				SN	**Sn**	**04 30 18.8**	**-1.2**
ERTU	**Ertsjaerv**	**4.70**	**263**	P	**Pn**	**04 29 28.9**	**+0.2**
ERTU	**Ertsjaerv**	**4.70**	**263**	PN	**Pn**	**04 29 28.6**	**-0.1**
ERTU				SN	**Sn**	**04 30 22.4**	**-1.4**
HAMF	**Hammerfest**	**4.78**	**315**	*e*P	**Pn**	**04 29 29.9**	**+0.2**
KIF	**Kilpisjarvi**	**5.07**	**292**	*e*P	**Pn**	**04 29 33.8**	**0.0**
KUA	**Kurravaara**	**5.17**	**280**	P	**Pn**	**04 29 35.1**	**0.0**
KUA				S	**Sn**	**04 30 32.4**	**-3.0**
JETT	**Jettan, Norway**	**5.33**	**298**	*e*P	**Pn**	**04 29 37.5**	**+0.1**
FINES	**FINESS Array B**	**7.02**	**212**	Pn	**Pn**	**04 30 02.5**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=24,slow=14,SNR=12						
FINES				Sn	**Sn**	**04 31 19.8**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=27,slow=23,SNR=7.0						
FINES				Lg	Lg	04 31 53.4	
	comp=Z,2.1nm,0.3s,baz=31,slow=27,SNR=9.8						
	comp=Z,2.9nm,0.9s						
FAUS	**Fauske**	**7.15**	**277**	S	**Sn**	**04 31 18.9**	**-5.1**
HFS	**Hagfors**	**11.57**	**240**	Pn	**Pn**	**04 31 03.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=41,slow=14,SNR=9.6						
HFS				Sn	**Sn**	**04 33 04.6**	**-8.0**
	comp=Z,0.5nm,0.3s,baz=35,slow=24,SNR=6.3						
HFS				Lg	Lg	04 34 09.8	
	comp=Z,0.1nm,0.3s,baz=52,slow=26,SNR=1.5						
	comp=Z,2.3nm,0.7s						
SPITS	**Spitsbergen Ar**	**11.74**	**342**	Pn	**Pn**	**04 31 01.1**	**-4.0**
	comp=Z,3.1nm,0.5s,baz=135,slow=15,SNR=12						
NOA	**NORSAR Array B**	**11.77**	**247**	Pn	**Pn**	**04 31 05.1**	**-0.4**
	baz=49,slow=11,SNR=16						
NOA				Sn	**Sn**	**04 33 11.9**	**-5.5**
	baz=56,slow=23,SNR=4.2						
NOA				Lg	Lg	04 34 23.7	
	baz=212,slow=11,SNR=5.3						
	comp=Z,0.5nm,0.5s						
NACGM	**Naroch**	**13.16**	**198**	*e*P	**Pn**	**04 31 25.6**	**+1.1**
	comp=Z,4.0nm,0.7s,baz=13						
JMIC	**Jan Mayen**	**15.13**	**302**	Pn	**Pn**	**04 31 51.8**	**+0.4**
	comp=Z,3.6nm,0.3s,baz=337,slow=18,SNR=3.1						
ARTI	**Arti**	**15.91**	**123**	Pn	**Pn**	**04 32 00.5**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=285,slow=5.6,SNR=3.8						
ARTI				Sn	**Sn**	**04 34 51.3**	**-7.2**
	comp=Z,0.2nm,0.3s,baz=101,slow=18,SNR=1.5						
ARTI				Lg	Lg	04 36 34.5	
	comp=Z,0.1nm,0.3s,baz=350,slow=17,SNR=1.4						
AKASG	**Malin Array Be**	**17.09**	**190**	Pn	**Pn**	**04 32 13.2**	**-3.4**
	comp=Z,0.4nm,0.3s,baz=9.8,slow=12,SNR=2.6						
	comp=Z,0.7nm,0.5s						
AKTO	**Aktyubinsk**	**20.95**	**133**	P	**P**	**04 33 02.5**	**+1.8**
	comp=Z,1.0nm,0.5s,baz=355,slow=7.3,SNR=2.7						
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**21.39**	**219**	P	**P**	**04 33 09.9**	**+4.3**
	comp=Z,0.2nm,0.6s,baz=7.7,slow=8.1,SNR=2.0						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**22.74**	**112**	P	**P**	**04 33 22.1**	**+2.2**
	comp=Z,0.7nm,0.4s,baz=323,slow=9.3,SNR=3.6						
	comp=Z,0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**27.65**	**105**	P	**P**	**04 34 07.4**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=324,slow=5.8,SNR=2.7						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**32.22**	**106**	P	**P**	**04 34 49.0**	**+2.9**
	comp=Z,0.8nm,1.0s,baz=348,slow=8.1,SNR=2.2						
	comp=Z,0.8nm,1.0s						

IDC 01 04:46:14.1±2.1,3°.61N×128°.09E,h0km,mb3.8/6, mbtmp3.8/6,MS3.9/2,Error ellipse: s-maj=196.3km s-min=19.5km az=69.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.20**	**166**	P	P	04 51 32.3	-0.3
	1.2nm,0.7s,baz=344,slow=9.0,SNR=9.4						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**27.70**	**168**	P	P	04 52 03.4	-0.8
	0.3nm,0.5s,baz=345,slow=7.1,SNR=6.7						
	0.3nm,0.5s						
PALK	**Pallekele**	**47.30**	**277**	LR	LR	05 15 13.3	
	comp=Z,48nm,19.9s,baz=190,slow=37						
MKAR	**Makanchi Array**	**58.43**	**325**	P	P	04 56 12.3	+0.5
	0.5nm,0.4s,baz=119,slow=7.5,SNR=8.2						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**61.32**	**332**	P	P	04 56 31.3	-0.1
	0.6nm,0.4s,baz=142,slow=7.3,SNR=2.3						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**62.58**	**327**	P	P	04 56 39.9	-0.1
	0.7nm,0.6s,baz=128,slow=6.0,SNR=5.6						
	0.7nm,0.6s						
BVAR	**Borovoye Array**	**68.16**	**327**	P	P	04 57 16.6	+0.4
	0.7nm,0.5s,baz=145,slow=8.1,SNR=2.6						
	0.7nm,0.5s						
KBZ	**Khabaz**	**84.05**	**313**	LR	LR	05 40 59.3	
	comp=Z,176nm,18.6s,baz=276,slow=39						

*RHSSO **01** 05:01:57.0±0.7,43°.84N×16°.50E,h7km±4km,ML2.6/5*
*BEO **01** 05:01:58.0±0.9,43°.40N×16°.49E,h2km±6km,ML2.4/6*
*VIE **01** 05:01:58.6±0.9,44°.00N×16°.74E,h4km±30km,mb2.6/11, ml2.4/13,Error ellipse: s-maj=32.7km s-min=6.7km az=145.0 57 km NNE of Split*

ISC 01 05:01:55.7±1.1,43°.79N±0°.02×16°.48E±0°.02,h5km±9km, n53,σ1°38/95,2C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIJV	**Kijevo**	**0.22**	**345**	*i* Pg	**Pg**	**05 02 00.2**	**+0.2**
KIJV				Sg	**Sg**	**05 02 03.6**	**+0.8**
RICI	**Ricice**	**0.56**	**122**	*i* Pg	**Pg**	**05 02 06.6**	**+0.1**
RICI				Sg	**Sb**	**05 02 15.2**	**-1.1**
MORI	**Morici**	**0.56**	**278**	*i* Pg	**Pg**	**05 02 06.3**	**-0.2**
MORI				Sg	**Sb**	**05 02 14.9**	**-1.5**
HVAR	**Hvar**	**0.62**	**182**	*i* Pg	**Pg**	**05 02 06.9**	**-0.6**
HVAR				Sg	**Sb**	**05 02 17.2**	**-0.7**
ZIRJ	**Zirje**	**0.62**	**257**	*e*Pg	**Pg**	**05 02 07.5**	**-0.1**
ZIRJ				Sg	**Sb**	**05 02 16.5**	**-1.5**
MAKA	**Makarska**	**0.64**	**142**	*i* Pg	**Pg**	**05 02 07.4**	**-0.5**
MAKA				Sg	**Sb**	**05 02 17.9**	**-0.7**
UDBI	**Udbina**	**0.90**	**325**	*e*Pg	**Pg**	**05 02 12.3**	**-0.5**
UDBI				Sg	**Sb**	**05 02 25.2**	**-0.8**
DUGI	**Dugi Otok**	**1.05**	**281**	*i* Pg	**Pg**	**05 02 15.2**	**-0.6**
DUGI				Sg	**Sn**	**05 02 31.0**	**-1.1**
LSTV	**Lastovo**	**1.07**	**164**	*i* Pg	**Pg**	**05 02 16.1**	**0.0**
LSTV				Sg	**Sn**	**05 02 31.8**	**-0.7**
BLY	**Banja Luka**	**1.08**	**28**	*i* Pg	**Pg**	**05 02 16.0**	**-0.4**
BLY				*e*Sg	**Sg**	**05 02 30.6**	**+0.2**
VIRC	**Vir**	**1.14**	**296**	*e*Pg	**Pb**	**05 02 16.6**	**-1.3**
VIRC				Sg	**Sn**	**05 02 33.9**	**-0.5**
SLATY	**Slatina**	**1.19**	**29**	*e*Pg	**Pb**	**05 02 17.1**	**-1.6**
SLATY				*e*Sg	**Sb**	**05 02 33.1**	**-1.3**
PLIT	**Plitvice**	**1.25**	**331**	*e*Pg	**Pn**	**05 02 18.5**	**-1.4**
PLIT				Sg	**Sn**	**05 02 36.1**	**-0.9**
STON	**Ston**	**1.28**	**136**	*e*Pn	**Pn**	**05 02 18.8**	**-1.4**
STON				Sg	**Sn**	**05 02 38.4**	**+0.7**
NVLJ	**Novalja**	**1.39**	**304**	*e*Pn	**Pn**	**05 02 21.2**	**-0.6**
NVLJ				Sg	**Sg**	**05 02 41.6**	**+1.3**
RABC	**Rab**	**1.55**	**309**	*e*Pn	**Pb**	**05 02 24.3**	**-0.6**
RABC				Sn	**Sg**	**05 02 47.0**	**+1.6**
KLINJ	**Klinje**	**1.65**	**111**	*e*Pn	**Pb**	**05 02 26.3**	**-0.4**
KLINJ				*e*Sn	**Sg**	**05 02 48.7**	**-0.1**
DBRK	**Dubrovnik**	**1.66**	**132**	*e*Pn	**Pb**	**05 02 26.1**	**-0.6**
DBRK				Sn	**Sg**	**05 02 50.4**	**+1.5**
TREB	**Trebinje**	**1.74**	**128**	*e*Pn	**Pb**	**05 02 27.3**	**-0.8**
TREB				*e*Sn	**Sb**	**05 02 50.3**	**+0.1**
MOSL	**Moslavina**	**1.83**	**6**	*e*Pn	**Pn**	**05 02 27.9**	**+0.1**
MOSL				Sn	**Sg**	**05 02 54.0**	**-0.5**
OZLJ	**Ozalj**	**1.96**	**339**	*e*Pn	**Pb**	**05 02 31.1**	**-0.7**
OZLJ				Sn	**Sb**	**05 02 56.4**	**-0.2**
ZAG	**Zagreb**	**2.06**	**350**	*e*Pn	**Pb**	**05 02 32.4**	**-1.2**
ZAG				Sn	**Sb**	**05 02 58.8**	**-0.8**
RUDO	**Rudo**	**2.10**	**94**	*e*Pn	**Pb**	**05 02 32.1**	**+0.5**
RUDO				*e*Sn	**Sb**	**05 02 59.1**	**-1.6**
BBLS	**Lazi&#263i**	**2.12**	**87**	*e*Pn	**Pb**	**05 02 34.0**	**-0.6**
BBLS				*e*Sn	**Sg**	**05 03 02.6**	**-1.1**
PTJ	**Puntijarka**	**2.14**	**350**	*e*Pn	**Pb**	**05 02 33.7**	**-1.3**
PTJ				Sn	**Sb**	**05 03 01.5**	**-0.5**
BRJN	**Brijuni**	**2.25**	**301**	*e*Pg	**Pg**	**05 02 38.1**	**-0.7**
BRJN				Sg	**Sg**	**05 03 08.9**	**+0.9**
TEKS	**Tekeris**	**2.32**	**70**	*e*Pn	**Pb**	**05 02 37.9**	**-0.1**
TEKS				*e*Sn	**Sg**	**05 03 11.6**	**+1.4**
KALN	**Kalnik**	**2.34**	**360**	*e*Pn	**Pb**	**05 02 36.6**	**-1.7**
KALN				Sn	**Sb**	**05 03 06.0**	**-1.5**
LOBO	**Lobor**	**2.38**	**353**	*e*Pn	**Pn**	**05 02 35.7**	**+0.4**
LOBO				Sn	**Sb**	**05 03 06.8**	**-1.9**
KOME	**Kolasin**	**2.41**	**112**	*e*Pg	**Pb**	**05 02 38.7**	**-0.8**
KOME				*e*Sg	**Sb**	**05 03 08.9**	**-0.6**
PDG	**Podgorica**	**2.45**	**123**	*e*Pg	**Pb**	**05 02 39.6**	**-0.5**
PDG				*e*Sg	**Sb**	**05 03 09.8**	**-0.8**
DRME	**Dracevica, Mon**	**2.55**	**128**	*e*Pg	**Pn**	**05 02 39.5**	**+1.8**
DRME				*e*Sg	**Sb**	**05 03 12.7**	**-0.9**
DIVS	**Divibare**	**2.55**	**82**	*e*Pn	**Pg**	**05 02 44.2**	**-0.4**
DIVS				*e*Sn	**Sb**	**05 03 14.5**	**+0.7**
SJES	**Sjenica**	**2.59**	**101**	*e*Pn	**Pn**	**05 02 40.2**	**+1.8**
SJES				*e*Sn	**Sb**	**05 03 12.3**	**-2.7**
IVAS	**Ivanjica**	**2.67**	**93**	*e*Pn	**Pn**	**05 02 40.9**	**+1.5**
AQU	**L'Aquila**	**2.68**	**239**	*e*Sn	**Sb**	**05 03 14.5**	**-2.7**
BEHE	**Becsehely**	**2.69**	**4**	*i* Pn	**Pn**	**05 02 39.9**	**+0.3**
BEHE				*e*Sn	**Sn**	**05 03 11.9**	**-0.6**
MORH	**Mrgy, Hungar**	**2.87**	**32**	*e*Pn	**Pn**	**05 02 42.9**	**+0.9**
MORH				*e*Sn	**Sn**	**05 03 17.0**	**+0.1**
OBKA	**Obir**	**3.04**	**334**	*e*Pn	**Pn**	**05 02 46.7**	**+2.1**
	1.1nm,0.3s						
SOKA	**Soboth**	**3.06**	**341**	*e*Pn	**Pn**	**05 02 46.5**	**+1.7**
	0.6nm,0.2s						
SOKA				Sn	**Sn**	**05 03 21.3**	**-0.5**
	1.8nm,0.4s						
SELS	**Selova**	**3.42**	**98**	*e*Pn	**Pn**	**05 02 51.3**	**+1.6**
SELS				*e*Sn	**Sn**	**05 03 30.4**	**-0.3**
ARSA	**Arzberg**	**3.52**	**349**	*e*Pn	**Pn**	**05 02 51.8**	**+0.7**
	1.6nm,0.5s						
RONA	**Rosalia, Austr**	**3.91**	**358**	*e*Pn	**Pn**	**05 02 57.4**	**+1.0**
	0.9nm,0.2s						
CONA	**Conrad Observa**	**4.16**	**354**	*e*Pn	**Pn**	**05 03 00.4**	**+0.6**
	0.1nm,0.2s						
CONA				*e*Sn	**Sn**	**05 03 49.2**	**+0.3**
	1.8nm,0.4s						
ZAGS	**Zajecar**	**4.16**	**88**	*e*Pn	**Pn**	**05 03 02.5**	**+2.6**
MOA	**Molln**	**4.34**	**340**	*i* Pn	**Pn**	**05 03 04.4**	**+2.0**
	0.8nm,0.4s						
MOA				*e*Sn	**Sn**	**05 03 54.1**	**+0.7**
	1.7nm,0.4s						
BIOA	**Bad Ischl, Aus**	**4.38**	**334**	*i* Pn	**Pn**	**05 03 05.4**	**+2.6**
	0.7nm,0.3s						
LESA	**Schwarzleotal**	**4.51**	**325**	*e*Pn	**Pn**	**05 03 07.3**	**+2.6**
	0.1nm,0.1s						
MODS	**Modra-Piesok**	**4.61**	**7**	*e*PN	**Pn**	**05 03 07.6**	**+1.5**
MODS				*e*SN	**Sn**	**05 03 58.8**	**-1.3**
WTTA	**Wattenberg**	**4.86**	**317**	*i* Pn	**Pn**	**05 03 12.1**	**+2.5**
	0.3nm,0.2s						
WTTA				*e*Sn	**Sn**	**05 04 09.6**	**+3.3**
	2.5nm,0.4s						
WATA	**Walderalm**	**4.94**	**318**	*i* Pn	**Pn**	**05 03 13.6**	**+2.9**
	0.5nm,0.2s						
SQTA	**Sankt Quirin**	**5.05**	**315**	*e*Pn	**Pn**	**05 03 14.5**	**+2.4**
	0.4nm,0.2s						
MOTA	**Moosalm**	**5.18**	**315**	*e*Sn	**Sn**	**05 04 18.7**	**+4.5**
	0.2nm,0.1s						

*NEIC **01** 05:08:34.4±1.9,9°.14S±0°.09×106°.99E±0°.04,h10km±1km, mb4.6/18,Error ellipse: s-maj=16.9km s-min=2.9km az=199.0*
*DJA **01** 05:08:35.2±0.8,9°.5S±4°×10°.7E±°,h13km±8km,M4.8/25, mB5.4/9,mb5.0/13,MLv4.8/25,Mw(mB)4.8/9*
*IDC **01** 05:08:41.8±3.7,8°.92S×107°.37E,h59km±29km,mb3.9/15, mbtmp4.2/17,ML4.2/2,Error ellipse: s-maj=38.9km s-min=12.3km az=59.0*

ISC 01 05:08:33.7±0.5,9°.18S±0°.04×106°.97E±0°.05,h10km,n91, σ1°54/89,mb4.5/22,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XMI	**Christmas Isla**	**1.78**	**225**	P	**Pn**	**05 09 05.9**	**+1.3**
XMI	**Christmas Isla**	**1.78**	**225**	S	**Sn**	**05 09 25.1**	**-2.3**
BBJI	**Bungbulang**	**1.84**	**22**	P	**Pn**	**05 09 05.6**	**+0.2**
CNJI	**Cibinong**	**1.87**	**5**	P	**Pn**	**05 09 06.1**	**+0.3**
SKJI	**Sukabumi**	**2.20**	**349**	P	**Pb**	**05 09 12.3**	**-1.4**
SKJI				S	**Sb**	**05 09 40.0**	**-1.0**
LEM	**Lembang**	**2.43**	**15**	P	**Pn**	**05 09 15.3**	**+1.6**
	251nm,0.3s,baz=24,slow=8.0,SNR=80						
LEM				S	**Sn**	**05 09 40.4**	**-3.0**
	482nm,0.7s,baz=199,slow=20,SNR=2.2						
	855nm,0.5s						
LEM	**Lembang**	**2.43**	**15**	P	**Pn**	**05 09 15.2**	**+1.6**
LEM				S	**Sb**	**05 09 45.2**	**-2.5**
DBJI	**Dramaga**	**2.62**	**355**	P	**Pn**	**05 09 18.1**	**+1.9**
DBJI				S	**Sb**	**05 09 50.7**	**-2.4**
KPJI	**Karang Pucung**	**2.67**	**47**	P	**Pn**	**05 09 18.3**	**+1.5**
KPJI				S	**Sn**	**05 09 51.1**	**+1.8**
TNG	**Tangerang**	**3.01**	**354**	P	**Pn**	**05 09 22.8**	**+1.3**
TNG				S	**Sn**	**05 10 00.2**	**+2.6**
SBJI	**Serang**	**3.15**	**345**	P	**Pn**	**05 09 26.5**	**+3.0**
SBJI				S	**Sn**	**05 10 03.5**	**+2.3**
YOGI	**Yogyakarta**	**3.56**	**68**	P	**Pn**	**05 09 29.1**	**+0.1**
UGM	**Wanagama**	**3.73**	**71**		**Pn**	**05 09 31.1**	**-0.3**
UGM	**Wanagama**	**3.73**	**71**	P	**Pn**	**05 09 31.6**	**+0.1**
UGM	**Wanagama**	**3.73**	**71**	P	**Pn**	**05 09 31.4**	**-0.1**
UGM				S	**Sn**	**05 10 17.7**	**+2.1**
SMRI	**Semarang**	**4.04**	**59**		**Pn**	**05 09 36.3**	**+0.6**
SMRI	**Semarang**	**4.04**	**59**	P	**Pn**	**05 09 37.9**	**+2.3**
SMRI	**Semarang**	**4.04**	**59**	P	**Pn**	**05 09 37.9**	**+2.3**
WOJI	**Wonogiri, Jawa**	**4.13**	**71**	P	**Pn**	**05 09 37.2**	**+0.3**
PCJI	**Pacitan**	**4.27**	**77**	P	**Pn**	**05 09 39.6**	**+0.7**
KASI	**Kota Agung**	**4.39**	**326**	P	**Pn**	**05 09 41.2**	**+0.8**
NGJI	**Ngawi**	**4.80**	**68**	P	**Pn**	**05 09 49.5**	**+3.4**
LWLI	**Liwa**	**5.05**	**325**	P	**Pn**	**05 09 50.8**	**+1.2**
	200nm,0.6s						
MDSI	**Maura Dua**	**5.43**	**329**	P	**Pn**	**05 09 55.8**	**+1.1**
	48nm,0.7s						
MNAI	**Manna**	**6.23**	**320**	Pn	**Pn**	**05 10 06.2**	**+0.3**
MNAI	**Manna**	**6.23**	**320**	P	**Pn**	**05 10 06.7**	**+0.9**
MNAI	**Manna**	**6.23**	**320**	P	**Pn**	**05 10 06.5**	**+0.7**
	1.1nm4µm172nm,1.0s						
LHSI	**Lahat**	**6.33**	**327**	P	**Pn**	**05 10 08.6**	**+1.5**
TPI	**Tanjungpandan**	**6.42**	**6**	P	**Pn**	**05 10 10.0**	**+1.6**
BLJI	**Banyuglugur**	**6.71**	**78**	P	**Pn**	**05 10 14.2**	**+1.9**
	0.6nm3µm93nm,0.5s						
KSI	**Kapahiang**	**7.01**	**321**	P	Pn	05 10 25.1	+8.6
JAGI	**Jajag, Banyuwa**	**7.13**	**85**		**Pn**	**05 10 18.5**	**+0.3**
JAGI	**Jajag, Banyuwa**	**7.13**	**85**	P	**Pn**	**05 10 19.7**	**+1.5**
JAGI	**Jajag, Banyuwa**	**7.13**	**85**	P	**Pn**	**05 10 19.5**	**+1.3**
	3µm135nm,0.6s						
ABJI	**Asem Bagus**	**7.32**	**80**	P	**Pn**	**05 10 22.2**	**+1.5**
	0.4nm95nm,0.8s						
MASI	**Maura Aman, Be**	**7.62**	**322**	P	**Pn**	**05 10 26.2**	**+1.2**
	0.3nm1µm81nm,1.1s						
SRBI	**Singaraja**	**8.22**	**83**	P	**Pn**	**05 10 33.7**	**+0.5**
	1µm69nm,0.5s						
TWSI	**Taliwang, Sumb**	**9.80**	**88**	P	**Pn**	**05 10 55.8**	**+1.0**
	66nm,1.0s						
PLAI	**Plampang**	**10.68**	**89**	P	**Pn**	**05 11 07.0**	**+0.1**
PLAI	**Plampang**	**10.68**	**89**	P	**Pn**	**05 11 07.0**	**+0.1**
	868nm80nm,0.9s						
SBUM	**Sibu**	**12.69**	**25**	Pn	**Pn**	**05 11 31.0**	**-3.3**
GIRL	**Giralia**	**15.09**	**153**	Pn	**Pn**	**05 12 04.8**	**-2.3**
MBWA	**Marble Bar**	**17.11**	**136**	Pn	**Pn**	**05 12 31.4**	**-1.8**
MBWA				IAmb	IAmb	05 12 54.5	
	comp=Z,39nm,1.4s						
MBWA	**Marble Bar**	**17.11**	**136**	P	**Pn**	**05 12 31.7**	**-1.5**
PSA00	**Pilbara Seismi**	**17.47**	**136**	Pn	**Pn**	**05 12 36.1**	**-1.6**
PSA00	**Pilbara Seismi**	**17.47**	**136**	P	**Pn**	**05 12 36.4**	**-1.2**
MRSI	**Marisa**	**17.73**	**58**	P	**P**	**05 12 42.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**20.18**	**118**	P	**P**	**05 13 09.1**	**+0.6**
FITZ	**Fitzroy Crossi**	**20.18**	**118**	P	**P**	**05 13 09.7**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=252,slow=5.8,SNR=9.6						
FITZ				S	S	05 16 40.1	-15
	comp=Z,1.5nm,0.7s,baz=358,slow=20,SNR=1.3						
	comp=Z,8.7nm,0.8s						
KNRA	**Kununurra**	**22.23**	**109**	P	**P**	**05 13 28.9**	**-1.9**
KNRA				IAmb	IAmb	05 13 46.8	
	comp=Z,18nm,1.0s						
H01W3	**Cape Leeuwin H**	**26.41**	**167**	T	T	05 41 21.1	
	baz=341,slow=76,SNR=6.1						
H01W1	**Cape Leeuwin H**	**26.42**	**167**	T	T	05 41 16.4	
	baz=341,slow=76,SNR=6.9						
H01W2	**Cape Leeuwin H**	**26.42**	**167**	T	T	05 41 22.6	
	baz=341,slow=76,SNR=4.7						
WB0	**Warramunga Arr**	**28.52**	**115**	P	**P**	**05 14 29.6**	**-0.1**
WB0				IAmb	IAmb	05 14 48.8	
	comp=Z,1nm,1.4s						
WRA	**Warramunga Arr**	**28.52**	**115**	P	**P**	**05 14 29.6**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=289,slow=11,SNR=7.9						
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.59**	**344**	P	**P**	**05 14 28.7**	**-1.5**
CMAR	**Chiang Mai Arr**	**28.59**	**344**	P	**P**	**05 14 29.7**	**-0.5**
	comp=Z,1.7nm,0.3s,baz=175,slow=11,SNR=16						
	comp=Z,1.7nm,0.3s						
CHTO	**Chiang Mai**	**28.92**	**344**	P	**P**	**05 14 31.8**	**-1.4**
CHTO				IAmb	IAmb	05 14 35.0	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**29.50**	**122**	P	**P**	**05 14 37.0**	**-1.4**
ASAR	**Alice Springs**	**29.50**	**122**	P	**P**	**05 14 38.0**	**-0.4**
ASAR	**Alice Springs**	**29.50**	**122**	P	**P**	**05 14 38.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=280,slow=7.4,SNR=5.1						
	comp=Z,0.5nm,0.5s						
H08S2	**Diego Garcia H**	**34.13**	**270**	T	T	05 51 29.8	
	baz=94,slow=74,SNR=6.7						
H08S3	**Diego Garcia H**	**34.14**	**270**	T	T	05 51 31.1	
	baz=94,slow=74,SNR=12						
H08S1	**Diego Garcia H**	**34.15**	**270**	T	T	05 51 29.1	
	baz=94,slow=74,S

*IDC **01** 05:25:45.5±1.7,40.45N×20.83E,h16^{km}±10^{km},mb4.5/31, mbtmp4.6/46,ML4.3/13,MS4.0/57,Error ellipse: s-maj=7.7km s-min=7.3km az=72.0*

*SKO **01** 05:25:45.2,40.42N×20.83E,h3^{km},ML4.9*

*NEIC **01** 05:25:45.8,40.32N×20.81E,h30^{km},Moment Tensor Solution. Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.96; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$0.10; $M_{r\theta}$0.22; $M_{\theta\phi}$1.88; $M_{\phi r}$-0.53; Fault plane solution: M_o2.21000×10^{16} NP1: ϕ_s263.02000°,δ65.93000°,λ13.22000°. NP2: ϕ_s167.55000°,δ77.95000°,λ155.36000°. Principal axes: T 1.6293, Plg26.0000°, Azm123.0000°; N 0.8916, Plg63.0000°, Azm323.0000°; P -2.5209, Plg8.0000°, Azm217.0000°;*

*BEO **01** 05:25:45.6±0.3,40.57N×20.87E,h0^{km},ML4.7/7*

*SOF **01** 05:25:46.3,40.59N±0.02×20.99E±0.02,h8^{km}±4^{km}, MD5.0/9*

*MCSM **01** 05:25:46.0±0.4,40°N±4°×2°1E±°,h10^{km},mb5.0,mB5.5, MLv5.3,Mw(mB)4.9*

*GCMT **01** 05:25:46.8±0.3,40.47N±0.02×20.67E±0.02,h17^{km}±1^{km}, MW4.8/82,Moment Tensor Solution. s16,c19; s82,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.08±.12; $M_{\theta\theta}$-1.01±.08; $M_{\phi\phi}$-0.07±.07; $M_{r\theta}$-1.00±.21; $M_{\theta\phi}$1.46±.05; $M_{\phi r}$-0.66±.20; Best double couple: M_o2.15900×10^{16} NP1:ϕ_s161.00000°,δ52.00000°,λ149.00000°. NP2: ϕ_s271.00000°,δ66.00000°,λ42.00000°. Principal axes: T 2.1820, Plg46.0000°, Azm132.0000°; N -0.0470, Plg42.0000°, Azm295.0000°; P -2.1360, Plg8.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGS **01** 05:25:46.1±1.8,40.71N×21.27E,h22^{km},mb4.8*

*NEIC **01** 05:25:47.1±1.3,40.53N±0.05×20.82E±0.07,h22^{km}±4^{km}, mb5.0/96,Mwr4.7/15,Mww4.8/13,Error ellipse: s-maj=8.3km s-min=7.0km az=212.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.05; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-0.30; $M_{r\theta}$-0.79; $M_{\theta\phi}$1.29; $M_{\phi r}$-0.49; Fault plane solution: M_o1.62000×10^{16} NP1:ϕ_s181.82000°, δ65.69000°,λ163.78000°. NP2:ϕ_s278.65000°,δ75.26000°, λ25.20000°. Principal axes: T 1.7862, Plg28.0000°, Azm142.0000°; N -0.4287, Plg61.0000°, Azm307.0000°; P -1.3575, Plg6.0000°, Azm49.0000°;*

*AFAD **01** 05:25:49.0,40.50N×20.94E,h65^{km}±29^{km},MW4.6*

ISC 01 05:25:45.1±0.5,**40.46N**±0.01×**20.81E**±0.02,**h12**^{km}±3^{km}, **n993,**σ1**^{s}48**/1101,**mb4.9**/143,**MS4.1**/58,**58C-57D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.16**	**355**	Pg		**Pg**	**05 25 48.2**	**-0.8**
KBN				Sg		**Sg**	**05 25 50.6**	**-1.1**
KBN				AML		AML	05 25 51.5	
	2μm,0.5s							
KBN	**Korca**	**0.16**	**355**	P		**Pg**	**05 25 48.1**	**-0.9**
KBN				S		**Sg**	**05 25 50.7**	**-0.9**
KBN	**Korca**	**0.16**	**355**	P		**Pg**	**05 25 48.0**	**-0.9**
KBN				S		**Sg**	**05 25 50.7**	**-0.9**
NEST	**Nestorio**	**0.19**	**105**	Pg		**Pg**	**05 25 49.5**	**+0.1**
NEST				Sg		**Sg**	**05 25 53.2**	**+0.8**
NEST				AML		AML	05 25 53.9	
	1μm,0.3s							
NEST	**Nestorio**	**0.19**	**105**	P		**Pg**	**05 25 49.6**	**+0.1**
NEST				S		**Sg**	**05 25 53.1**	**+0.6**
NEST	**Nestorio**	**0.19**	**105**	P		**Pg**	**05 25 49.6**	**+0.1**
NEST				S		**Sg**	**05 25 53.2**	**+0.8**
PENT	**Pentalofos**	**0.37**	**136**	P		**Pg**	**05 25 52.5**	**-0.1**
PENT				S		**Sb**	**05 25 58.9**	**-0.5**
PENT	**Pentalofos**	**0.37**	**136**	P		**Pg**	**05 25 52.4**	**-0.1**
PENT				S		**Sb**	**05 25 58.9**	**-0.5**
LMS2	**Laimos Florina**	**0.45**	**35**	P		**Pg**	**05 25 53.3**	**-0.8**
LMS2				S		**Sg**	**05 26 00.2**	**+0.1**
OHR	**Ohrid**	**0.65**	**360**	⇓*i* Pg		**Pg**	**05 25 57.0**	**-0.7**
OHR				*i* Sg		**Sb**	**05 26 07.4**	**+0.1**
OHR				*e*Lg		Lg	05 26 08.2	
	comp=E,53μm,0.5s							
OHR				*e*Lg		Lg	05 26 12.3	
	comp=N,29μm,0.5s							
MSVA	**Metsovo**	**0.75**	**157**	P		**Pg**	**05 25 58.8**	**-0.9**
KZN	**Kozani**	**0.75**	**102**	P		**Pg**	**05 25 59.0**	**-0.8**
KZN				S		**Sb**	**05 26 11.5**	**+1.0**
KZN	**Kozani**	**0.75**	**102**	P		**Pg**	**05 25 58.9**	**-0.8**
KZN				S		**Sb**	**05 26 11.4**	**+1.0**
KZN	**Kozani**	**0.75**	**102**	P		**Pg**	**05 25 58.9**	**-0.8**
KZN				S		**Sn**	**05 26 11.7**	**-1.3**
JAN	**Janina**	**0.81**	**177**	P		**Pg**	**05 25 59.3**	**-1.4**
JAN				S		**Sg**	**05 26 11.6**	**+0.3**
JAN	**Janina**	**0.81**	**177**	P		**Pg**	**05 25 59.3**	**-1.4**
JAN				S		**Sg**	**05 26 11.6**	**+0.3**
JAN	**Janina**	**0.81**	**177**	P		**Pg**	**05 25 59.0**	**-1.8**
JAN				S		**Sg**	**05 26 10.3**	**-1.0**
PRMD	**Pramanda**	**0.96**	**166**	P		**Pg**	**05 26 02.5**	**-1.1**
NASA	**Naoussa**	**0.98**	**80**	P		**Pb**	**05 26 03.5**	**-0.5**
IGT	**Igoumenitsa**	**1.00**	**201**	P		**Pb**	**05 26 02.9**	**-1.4**
IGT	**Igoumenitsa**	**1.00**	**201**	*i* Pg		**Pb**	**05 26 03.2**	**-1.1**
IGT				*i* Sg		**Sn**	**05 26 21.0**	**+2.1**
IGT	**Igoumenitsa**	**1.00**	**201**	*e*Pg		**Pb**	**05 26 03.0**	**-1.4**
IGT				*e*Sg		**Sn**	**05 26 23.2**	**+4.3**
IGT	**Igoumenitsa**	**1.00**	**201**	P		**Pb**	**05 26 02.9**	**-1.4**
IGT	**Igoumenitsa**	**1.00**	**201**	P		**Pb**	**05 26 02.9**	**-1.4**
VLO	**Vlora**	**1.00**	**271**	Pg		**Pb**	**05 26 04.2**	**-0.2**
VLO				Sg		**Sn**	**05 26 18.4**	**-0.5**
VLO				AML		AML	05 26 25.7	
	comp=N,389nm,0.7s							
VLO	**Vlora**	**1.00**	**271**	P		**Pb**	**05 26 03.5**	**-0.8**
KEK	**Kerkira**	**1.08**	**226**			**Pn**	**05 26 07.9**	**+1.9**
KEK	**Kerkira**	**1.08**	**226**	Pn		**Pn**	**05 26 08.2**	**+2.3**
KEK				Sn		**Sn**	**05 26 22.9**	**+2.1**
KRK1	**kERKIRA**	**1.09**	**219**	P		**Pb**	**05 26 01.5**	**-4.3**
TIR	**Tirane**	**1.13**	**321**	*i* Pg		**Pb**	**05 26 05.7**	**-0.9**
TIR				*i* Sg		**Sn**	**05 26 24.8**	**+2.5**
TIR	**Tirane**	**1.13**	**321**	P		**Pb**	**05 26 05.3**	**-1.4**
LFKM	**Lefkimmi**	**1.17**	**210**	P		**Pb**	**05 26 06.8**	**-0.3**
TETR	**Tetrakomo, Epi**	**1.18**	**162**	P		**Pb**	**05 26 05.6**	**-1.8**
TETR	**Tetrakomo, Epi**	**1.18**	**162**	P		**Pb**	**05 26 06.1**	**-1.3**
THL	**Klokotos Trika**	**1.29**	**134**	P		**Pn**	**05 26 07.8**	**-1.1**
THL				S		**Sg**	**05 26 26.8**	**+0.1**
THL	**Klokotos Trika**	**1.29**	**134**	P		**Pn**	**05 26 08.0**	**-0.9**
THL				S		**Sg**	**05 26 27.0**	**+0.3**
THL	**Klokotos Trika**	**1.29**	**134**	P		**Pn**	**05 26 08.2**	**-0.7**
LIT	**Litokhoron**	**1.34**	**105**	SPECP			05 26 10.0	
LIT				P		**Pb**	**05 26 10.5**	**+0.3**
LIT				S		**Sg**	**05 26 28.6**	**+0.4**
LIT				*i* IAML			05 26 33.0	
	comp=N,4μm,0.7s							
LIT				*i* IAML			05 26 37.0	
	comp=N,3μm,0.9s							
LIT	**Litokhoron**	**1.34**	**105**			**Pb**	**05 26 10.2**	**+0.1**
LIT	**Litokhoron**	**1.34**	**105**	P		**Pn**	**05 26 09.5**	**-0.1**
LIT				S		**Sg**	**05 26 29.6**	**+1.3**
LIT	**Litokhoron**	**1.34**	**105**	*i* Pg		**Pn**	**05 26 09.4**	**-0.2**
LIT				*i* Sg		**Sg**	**05 26 30.9**	**+2.7**
LIT	**Litokhoron**	**1.34**	**105**	P		**Pb**	**05 26 10.2**	**+0.1**
LIT	**Litokhoron**	**1.34**	**105**	P		**Pn**	**05 26 09.5**	**-0.2**
LRSO	**Larissa Observ**	**1.45**	**123**	P		**Pb**	**05 26 11.7**	**-0.4**
AMPL	**Ampelaki**	**1.57**	**168**	P		**Pn**	**05 26 13.2**	**+0.4**
SKO	**Skopje**	**1.58**	**17**	*i* Pg		**Pb**	**05 26 13.9**	**-0.4**
SKO				*i* Sg		**Sg**	**05 26 36.6**	**+0.6**
VAY	**Valandovo**	**1.59**	**57**	*i* Pg		**Pb**	**05 26 13.7**	**-0.7**
VAY				*i* Sg		**Sg**	**05 26 37.6**	**+1.3**
VAY				*e*Lg		Lg	05 26 39.1	
	comp=N,17μm,0.6s							
VAY				*e*Lg		Lg	05 26 41.0	
	comp=E,16μm,0.6s							
TSLK	**Tsoukalades, L**	**1.64**	**184**	P		**Pb**	**05 26 15.3**	**0.0**
TSLK	**Tsoukalades, L**	**1.64**	**184**	P		**Pn**	**05 26 12.9**	**-0.9**
THE	**Thessaloniki**	**1.65**	**83**	Pn		**Pn**	**05 26 14.0**	**+0.1**
THE				Sn		**Sn**	**05 26 35.0**	**-0.1**
THE				AML		AML	05 26 42.2	
	comp=E,31nm,0.8s							
THE	**Thessaloniki**	**1.65**	**83**	P		**Pn**	**05 26 14.0**	**+0.1**
THE				S		**Sb**	**05 26 37.1**	**+0.8**
THE	**Thessaloniki**	**1.65**	**83**	*i* Pg		**Pn**	**05 26 14.1**	**+0.1**
THE				*i* Sg		**Sb**	**05 26 36.7**	**+0.5**
THE	**Thessaloniki**	**1.65**	**83**	P		**Pn**	**05 26 13.9**	**0.0**
THE				S		**Sb**	**05 26 37.1**	**+0.8**
THE	**Thessaloniki**	**1.65**	**83**	P		**Pn**	**05 26 14.0**	**0.0**
LKD2	**Lefkada island**	**1.68**	**184**	Pn		**Pb**	**05 26 15.5**	**-0.4**
LKD2				Sn		**Sg**	**05 26 40.1**	**+1.0**
LKD2				AML		AML	05 26 49.8	
	comp=E,85nm,0.9s							
EVR	**Evrytania**	**1.73**	**153**	P		**Pn**	**05 26 15.5**	**+0.5**
EVR	**Evrytania**	**1.73**	**153**	P		**Pn**	**05 26 14.8**	**-0.2**
KNT	**Kendrikon**	**1.73**	**66**	P		**Pn**	**05 26 15.3**	**+0.3**
KNT	**Kendrikon**	**1.73**	**66**	*i* Pn		**Pn**	**05 26 15.4**	**+0.3**
KNT				*i* Sn		**Sg**	**05 26 43.7**	**+2.7**
KNT	**Kendrikon**	**1.73**	**66**	P		**Pn**	**05 26 15.3**	**+0.3**
KNT	**Kendrikon**	**1.73**	**66**	P		**Pn**	**05 26 15.1**	**+0.1**
NYDR	**Nydri-Lefkada**	**1.75**	**183**	P		**Pb**	**05 26 17.0**	**-0.2**
HORT	**Hortiatis**	**1.75**	**85**	P		**Pn**	**05 26 15.6**	**+0.2**
AGG	**Agios Georgios**	**1.86**	**140**	SPECP			05 26 18.0	
AGG				P		**Pb**	**05 26 18.5**	**-0.6**
AGG				S		**Sb**	**05 26 41.9**	**-0.4**
AGG				*i* IAML			05 27 01.0	
	comp=E,3μm,1.0s							
AGG	**Agios Georgios**	**1.86**	**140**	P		**Pn**	**05 26 17.8**	**+1.0**
AGG	**Agios Georgios**	**1.86**	**140**	P		**Pn**	**05 26 17.8**	**+1.0**
AGG				*i* S		**Sb**	**05 26 41.8**	**-0.4**
AGG	**Agios Georgios**	**1.86**	**140**	P		**Pn**	**05 26 17.3**	**+0.6**
ULC	**Ulcinj**	**1.91**	**322**	⇓*i* Pn		**Pn**	**05 26 18.5**	**+1.1**
ULC				*i* Sn		**Sb**	**05 26 43.8**	**+0.2**
SOH	**Sokhos**	**1.97**	**79**	*i* Pn		**Pn**	**05 26 18.8**	**+0.5**
SOH				*i* Sn		**Sb**	**05 26 44.8**	**-0.7**
SOH	**Sokhos**	**1.97**	**79**	P		**Pn**	**05 26 17.3**	**-1.1**
SOH				S		**Sb**	**05 26 46.1**	**+0.6**
SOH	**Sokhos**	**1.97**	**79**	P		**Pn**	**05 26 18.6**	**+0.2**
PLG	**Polygyros**	**2.02**	**92**	P		**Pn**	**05 26 19.2**	**+0.2**
DRME	**Dracevica, Mon**	**2.11**	**325**	*e*Pg		**Pb**	**05 26 22.4**	**-0.9**
DRME	**Dracevica, Mon**	**2.11**	**325**	⇑*i* Pn		**Pn**	**05 26 21.7**	**+1.5**
DRME				*i* Sn		**Sb**	**05 26 49.5**	**+0.1**
SRS	**Serrai**	**2.21**	**72**	*i* Pn		**Pn**	**05 26 21.9**	**+0.2**
SRS	**Serrai**	**2.21**	**72**	*e*Pg		**Pn**	**05 26 22.4**	**+0.7**
SRS				*e*Sg		**Sb**	**05 26 51.1**	**-1.3**
SRS	**Serrai**	**2.21**	**72**	P		**Pn**	**05 26 22.2**	**+0.5**
PVY	**Plav**	**2.22**	**344**	⇑*i* Pn		**Pn**	**05 26 23.2**	**+1.3**
PVY				*i* Sn		**Sb**	**05 26 51.2**	**-1.6**
KKB	**Krupnik**	**2.23**	**51**	P		**Pn**	**05 26 22.8**	**+0.9**
KKB				S		**Sg**	**05 26 56.4**	**-0.4**
KKB	**Krupnik**	**2.23**	**51**	*i* Pn		**Pn**	**05 26 22.7**	**+0.9**
KKB	**Krupnik**	**2.23**	**51**	P		**Pn**	**05 26 22.6**	**+0.7**
PDG	**Podgorica**	**2.28**	**330**			**Pn**	**05 26 23.8**	**+1.2**
PDG	**Podgorica**	**2.28**	**330**	Pn		**Pn**	**05 26 23.4**	**+0.8**
PDG				Sn		**Sn**	**05 26 52.3**	**+1.8**
PDG	**Podgorica**	**2.28**	**330**	⇑P		**Pb**	**05 26 24.6**	**-1.7**
PDG				⇓S		**Sn**	**05 26 50.3**	**-0.3**
PDG	**Podgorica**	**2.28**	**330**	*e*Pg		**Pb**	**05 26 24.5**	**-1.7**
PDG				*e*Sg		**Sg**	**05 26 56.9**	**-1.6**
PDG	**Podgorica**	**2.28**	**330**	⇓*i* Pn		**Pn**	**05 26 23.8**	**+1.2**
PDG				*i* Sn		**Sn**	**05 26 52.4**	**+1.8**
TTG	**Podgorica**	**2.28**	**330**	P		**Pn**	**05 26 23.8**	**+1.2**
TTG				S		**Sn**	**05 26 52.0**	**+1.4**
BUM	**Brajici-Budva**	**2.33**	**323**	⇑*i* Pn		**Pn**	**05 26 24.2**	**+0.9**
BUM				*i* Sn		**Sn**	**05 26 53.3**	**+1.4**
BOSS	**Bosilegrad**	**2.39**	**31**	*e*Pn		**Pn**	**05 26 24.7**	**+0.6**
OUR	**Ouranopolis**	**2.43**	**92**	*e*P		**Pn**	**05 26 25.2**	**+0.6**
MMB	**Musomishta**	**2.48**	**63**	P		**Pn**	**05 26 26.2**	**+0.9**
MMB				S		**Sn**	**05 26 56.3**	**+0.8**
MMB	**Musomishta**	**2.48**	**63**	*i* Pn		**Pn**	**05 26 26.2**	**+0.9**
MMB				*i* Sn		**Sn**	**05 26 57.1**	**+1.7**
MMB	**Musomishta**	**2.48**	**63**	P		**Pn**	**05 26 24.8**	**-0.5**
MMB				S		**Sn**	**05 26 56.9**	**+1.4**
IVA	**Berane**	**2.50**	**344**	⇑*i* Pn		**Pn**	**05 26 26.0**	**+0.9**
IVA				*i* Sn		**Sn**	**05 26 57.9**	**+1.8**
CEME	**Cevo**	**2.52**	**326**	⇓*i* Pn		**Pn**	**05 26 26.4**	**+0.5**
CEME				*i* Sn		**Sb**	**05 26 59.1**	**-2.1**
KOME	**Kolasin**	**2.57**	**338**	*e*Pg		**Pb**	**05 26 29.7**	**-1.5**
KOME	**Kolasin**	**2.57**	**338**	⇓*i* Pn		**Pn**	**05 26 27.5**	**+0.8**
KOME				*i* Sn		**Sn**	**05 27 00.3**	**+2.4**
HCY	**Herceg Novi**	**2.63**	**320**	P		**Pn**	**05 26 27.5**	**+0.1**
HCY				S		**Sn**	**05 27 00.0**	**+0.7**
HCY	**Herceg Novi**	**2.63**	**320**	⇓*i* Pn		**Pn**	**05 26 27.5**	**+0.1**
HCY				*i* Sn		**Sn**	**05 27 01.2**	**+1.9**
NKME	**Niksic**	**2.69**	**329**	⇑*i* Pn		**Pn**	**05 26 29.4**	**+1.2**
NKME				*i* Sn		**Sn**	**05 27 01.9**	**+1.2**
TRAN	**Tran**	**2.74**	**30**	P		**Pn**	**05 26 29.6**	**+0.6**
TRAN				S		**Sn**	**05 27 02.5**	**+0.5**
SELS	**Selova**	**2.76**	**5**	*e*Pn		**Pn**	**05 26 29.7**	**+0.5**
PLNA	**Plana**	**2.81**	**44**	P		**Pn**	**05 26 31.3**	**+1.3**
PLNA				S		**Sn**	**05 27 03.6**	**-0.3**
VTS	**Vitosha**	**2.82**	**39**	P		**Pn**	**05 26 31.0**	**+0.9**
VTS				S		**Sn**	**05 27 04.0**	**-0.1**
VTS	**Vitosha**	**2.82**	**39**	*e*Pn		**Pn**	**05 26 31.1**	**+0.9**
VTS	**Vitosha**	**2.82**	**39**	P		**Pn**	**05 26 29.1**	**-1.0**
VTS				S		**Sb**	**05 27 07.9**	**-2.1**
SJES	**Sjenica**	**2.86**	**348**	*e*Pn		**Pn**	**05 26 32.0**	**+1.3**
SJES				*e*Sn		**Sn**	**05 27 04.9**	**-0.2**
NOCI	**Noci**	**2.87**	**278**	Pn		**Pn**	**05 26 30.4**	**-0.2**
NOCI				S		**Sb**	**05 27 09.9**	**-1.2**
TREB	**Trebinje**	**2.91**	**322**	*e*Pn		**Pn**	**05 26 31.1**	**-0.1**
BRY	**Bratogost**	**2.97**	**326**	P		**Pn**	**05 26 32.9**	**+0.8**
BRY				S		**Sn**	**05 27 11.0**	**+3.3**
BRY	**Bratogost**	**2.97**	**326**	⇓*i* Pn		**Pn**	**05 26 32.9**	**+0.8**
BRY				*i* Sn		**Sn**	**05 27 11.0**	**+3.3**
BLSH	**Balsha**	**3.02**	**37**	P		**Pn**	**05 26 34.2**	**+1.4**
BLSH				S		**Sn**	**05 27 09.2**	**+0.2**
PLE	**Pljevlja**	**3.05**	**340**	P		**Pn**	**05 26 34.3**	**+1.0**
PLE				S		**Sn**	**05 27 10.0**	**+0.2**
PLE	**Pljevlja**	**3.05**	**340**	⇓*i* Pn		**Pn**	**05 26 34.3**	**+1.0**
PLE				*i* Sn		**Sn**	**05 27 11.1**	**+1.3**
UPM	**Unac-Piva**	**3.08**	**333**	⇑*i* Pn		**Pn**	**05 26 35.0**	**+1.2**
UPM				*i* Sn		**Sn**	**05 27 11.3**	**+0.7**
GOCS	**Kraljevo Serbi**	**3.10**	**1**	*e*Pn		**Pn**	**05 26 33.9**	**0.0**
ZAPS	**Zavoj**	**3.12**	**25**	*e*Pn		**Pn**	**05 26 35.1**	**+0.9**
MATE	**Matera**	**3.13**	**275**	⇑P		**Pn**	**05 26 34.2**	**0.0**
IVAS	**Ivanjica**	**3.15**	**351**	*e*Pn		**Pn**	**05 26 34.3**	**-0.2**
KLINJ	**Klinje**	**3.17**	**329**	*e*Pn		**Pn**	**05 26 36.2**	**+1.3**
RZN	**Rozhen**	**3.22**	**66**	P		**Pn**	**05 26 37.2**	**+1.6**
RZN				S		**Sn**	**05 27 14.0**	**+0.1**
RZN	**Rozhen**	**3.22**	**66**	P		**Pn**	**05 26 35.6**	**0.0**
BOVS	**Bovan**	**3.24**	**12**	⇓P		**Pn**	**05 26 36.0**	**+0.2**
BOVS	**Bovan**	**3.24**	**12**	*e*Pn		**Pn**	**05 26 35.9**	**+0.2**
BOVS				*e*Sn		**Sn**	**05 27 15.0**	**+0.8**
PGB	**Panagyurishte**	**3.25**	**50**	P		**Pn**	**05 26 37.4**	**+1.4**
RUDO	**Rudo**	**3.33**	**342**	*e*Pn		**Pn**	**05 26 37.4**	**+0.4**
STON	**Ston**	**3.35**	**317**	*e*Pn		**Pn**	**05 26 37.6**	**+0.4**
STON				*e*Sn		**Sn**	**05 27 17.1**	**+0.3**
TIP	**Timpagrande**	**3.37**	**249**			**Pn**	**05 26 38.5**	**+0.9**
TIP	**Timpagrande**	**3.37**	**249**	⇓P		**Pn**	**05 26 37.2**	**-0.4**
TIP	**Timpagrande**	**3.37**	**249**	Pn		**Pn**	**05 26 36.6**	**-1.0**
ITM	**Ithomi**	**3.39**	**165**			**Pn**	**05 26 40.6**	**+2.7**
ITM	**Ithomi**	**3.39**	**165**	P		**Pn**	**05 26 40.9**	**+3.0**
ITM				S		**Sb**	**05 27 23.6**	**-2.8**
PLD	**Plovdiv**	**3.41**	**59**	*i* Pn		**Pn**	**05 26 39.4**	**+1.3**
PLD	**Plovdiv**	**3.41**	**59**	*e*Pn		**Pn**	**05 26 39.6**	**+1.5**
PLD				*e*Sn		**Sn**	**05 27 18.8**	**+0.3**
PLD	**Plovdiv**	**3.41**	**59**	P		**Pn**	**05 26 39.1**	**+1.0**
GRUS	**Gruza**	**3.42**	**359**	*e*Pn		**Pn**	**05 26 38.6**	**+0.3**
BLKB	**Belogradchik**	**3.45**	**23**	*e*Pn		**Pn**	**05 26 39.6**	**+0.9**
ZAGS	**Zajecar**	**3.51**	**17**	*e*Pn		**Pn**	**05 26 40.1**	**+0.7**
BBLS	**Lazi&#263i**	**3.56**	**343**	*e*Pn		**Pn**	**05 26 41.8**	**+1.7**
KDZ	**Kurdzhali**	**3.62**	**70**	*e*P		**Pn**	**05 26 42.2**	**+1.2**
KDZ	**Kurdzhali**	**3.62**	**70**	P		**Pn**	**05 26 42.5**	**+1.5**
KDZ	**Kurdzhali**	**3.62**	**70**	P		**Pn**	**05 26 41.5**	**+0.5**
KDZ				S		**Sn**	**05 27 24.9**	**+1.3**
MPEP	**Malo Peshtene**	**3.63**	**36**	P		**Pn**	**05 26 42.1**	**+1.1**
RDO	**Rodhopi**	**3.66**	**78**			**Pn**	**05 26 41.4**	**0.0**
RDO	**Rodhopi**	**3.66**	**78**	P		**Pn**	**05 26 41.7**	**+0.3**
RDO				S		**Sn**	**05 27 26.6**	**+2.2**
RDO	**Rodhopi**	**3.66**	**78**	*e*P		**Pn**	**05 26 41.7**	**+0.3**
DIVS	**Divibare**	**3.68**	**351**	*e*Pn		**Pn**	**05 26 42.1**	**+0.2**
DIVS				*e*Sn		**Sn**	**05 27 25.6**	**+0.4**
ACER	**Acerenza**	**3.71**	**277**			**Pn**	**05 26 43.8**	**+1.4**
BORS2	**Bor- Borsko je**	**3.73**	**14**	*e*Pn		**Pn**	**05 26 41.4**	**-1.1**
TRUS	**Trudelj**	**3.77**	**356**	*e*Pn		**Pn**	**05 26 43.6**	**+0.6**
VALD	**Valchedram**	**3.77**	**30**	P		**Pn**	**05 26 44.1**	**+1.1**
SVIS	**Svilajnac**	**3.81**	**4**	*e*Pn		**Pn**	**05 26 44.4**	**+0.8**
CUC	**Castrocucco**	**3.85**	**265**			**Pn**	**05 26 45.3**	**+1.2**
GOAD	**anakkale-G¶**	**3.91**	**93**	P		**Pn**	**05 26 45.2**	**+0.2**
DIM	**Dimitrovgrad**	**3.93**	**65**	P		**Pn**	**05 26 45.9**	**+0.7**
ALN	**Alexandroupoli**	**4.01**	**82**	SPECP			05 26 46.0	
ALN				P		**Pn**	**05 26 46.5**	**+0.3**
ALN	**Alexandroupoli**	**4.01**	**82**			**Pn**	**05 26 46.6**	**+0.3**
ALN	**Alexandroupoli**	**4.01**	**82**	*e*P		**Pn**	**05 26 46.2**	**-0.1**
ALN	**Alexandroupoli**	**4.01**	**82**	P		**Pn**	**05 26 46.6**	**+0.3**
SGRT	**San Giovanni R**	**4.04**	**290**			**Pn**	**05 26 46.9**	**+0.1**
SGRT	**San Giovanni R**	**4.04**	**290**	P		**Pn**	**05 26 46.7**	**0.0**
BOZC	**Bozcaada**	**4.07**	**97**	SPECP			05 26 46.0	
BOZC				P		**Pn**	**05 26 46.8**	**-0.3**
PLVB	**Pleven**	**4.08**	**43**	⇓P		**Pn**	**05 26 48.3**	**+1.1**
ENEZ	**Enez**	**4.08**	**84**	*e*P		**Pb**	**05 26 53.1**	**-3.8**
CAVK	**Edirne/Enez-Ca**	**4.09**	**85**	P		**Pn**	**05 26 52.0**	**+4.6**
CAVK	**Edirne/Enez-Ca**	**4.09**	**85**	⇑P		**Pn**	**05 26 50.2**	**+2.8**
PUNG	**Punghina**	**4.12**	**22**	⇓P		**Pn**	**05 26 48.5**	**+0.7**
ECEA	**Canakkale, Ece**	**4.13**	**94**	SPECP			05 26 49.0	
ECEA				P		**Pn**	**05 26 49.0**	**+1.1**
TEKS	**Tekeris**	**4.19**	**347**	*e*Pn		**Pn**	**05 26 49.2**	**+0.4**
KOCA	**Canakkale, Ayv**	**4.21**	**101**	P		**Pn**	**05 26 51.5**	**+2.4**
KOCA				S		**Sn**	**05 27 36.4**	**-1.7**
PVL	**Pavlikeni**	**4.21**	**49**	P		**Pn**	**05 26 49.6**	**+0.6**
AVAS	**Avala Beograd**	**4.24**	**357**	*e*Pn		**Pn**	**05 26 49.2**	**-0.2**
EZN	**Ezine**	**4.28**	**97**	SPECP			05 26 51.0	
EZN				P		**Pn**	**05 26 51.5**	**+1.5**
EZN	**Ezine**	**4.28**	**97**	*e*P		**Pn**	**05 26 51.3**	**+1.3**
EZN	**Ezine**	**4.28**	**97**	*i* P		**Pn**	**05 26 51.5**	**+1.5**
BEO	**Beograd**	**4.35**	**357**	*e*Pn		**Pn**	**05 26 50.6**	**-0.4**
BEO	**Beograd**	**4.35**	**357**	P		**Pn**	**05 26 50.8**	**-0.2**
COMU	**Canakkale**	**4.35**	**93**	*e*P		**Pn**	**05 26 48.7**	**-2.3**
ERIK	**Erikli-Kesan**	**4.35**	**85**	P		**Pn**	**05 26 49.8**	**-1.2**
ERIK	**Erikli-Kesan**	**4.35**	**85**	*e*P		**Pn**	**05 26 51.5**	**+0.5**
DJES	**Djerdap**	**4.39**	**16**	⇑P		**Pn**	**05 26 52.1**	**+0.6**
DJES	**Djerdap**	**4.39**	**16**	*e*Pn		**Pn**	**05 26 51.8**	**+0.3**
CEL	**Celeste**	**4.40**	**242**			**Pn**	**05 26 51.7**	**0.0**
CEL	**Celeste**	**4.40**	**242**	Pn		**Pn**	**05 26 51.0**	**-0.7**
VLAD	**Vladila**	**4.43**	**36**	⇑P		**Pn**	**05 26 53.2**	**+1.2**
CRAR	**CRAIOVA**	**4.45**	**29**	⇓P		**Pn**	**05 26 54.5**	**+2.2**
CRAR	**CRAIOVA**	**4.45**	**29**	P		**Pn**	**05 26 54.5**	**+2.2**
BAYC	**CANAKKALE_Bayr**	**4.46**	**97**	SPECP			05 26 53.0	
BAYC	

FDMO	**Fiordimonte**	**6.32**	**297**			**Pn**	**05 27 18.2**	**+0.2**
NAZL	**Nazilli-Aydin**	**6.33**	**111**	*e*	P	**Pn**	**05 27 20.8**	**+2.6**
AMRR	**Amara**	**6.36**	**47**	⇓	P	**Pn**	**05 27 21.1**	**+2.6**
AMRR	**Amara**	**6.36**	**47**		P	**Pn**	**05 27 21.1**	**+2.6**
KULA	**Kula-Manisa**	**6.38**	**105**	*e*	P	**Pn**	**05 27 21.5**	**+2.5**
NEHR	**Nehoiu**	**6.39**	**37**	⇓	P	**Pn**	**05 27 21.0**	**+2.0**
ZAG	**Zagreb**	**6.41**	**328**		P	**Pn**	**05 27 20.5**	**+1.2**
ZAG					pmax	pmax		
	comp=Z,536nm,0.7s							
MARR	**Marisel-Cluj**	**6.43**	**14**	⇓	P	**Pn**	**05 27 20.2**	**+0.5**
DOPR	**Dopca**	**6.44**	**30**	⇓	P	**Pn**	**05 27 21.1**	**+1.5**
BOJS	**Bojanci**	**6.48**	**323**	*i*	Pn	**Pn**	**05 27 20.3**	**+0.2**
BOJS					*e*		05 27 23.6	
BOJS					*e*		05 27 52.8	
BOJS					*e*Sn	**Sn**	**05 28 33.9**	**0.0**
BOJS					*e*		05 29 10.2	
PTJ	**Puntijarka**	**6.49**	**329**		P	**Pn**	**05 27 20.5**	**+0.1**
CESX	**Cesi**	**6.53**	**292**			**Pn**	**05 27 21.3**	**+0.3**
CJR	**Cluj-Napoca**	**6.57**	**17**	⇓	P	**Pn**	**05 27 22.3**	**+0.8**
CJR	**Cluj-Napoca**	**6.57**	**17**		P	**Pn**	**05 27 22.2**	**+0.8**
BOSR	**Bodos**	**6.63**	**31**	⇑	P	**Pn**	**05 27 24.1**	**+1.7**
BISRR	**Bisoca**	**6.67**	**38**	⇓	P	**Pn**	**05 27 25.5**	**+2.6**
BISRR	**Bisoca**	**6.67**	**38**		Pn	**Pn**	**05 27 25.2**	**+2.2**
	comp=Z,3.8nmcomp=Z,8µmcomp=Z,599nm,0.8s							
BEHE	**Becsehely**	**6.68**	**335**			**Pn**	**05 27 23.5**	**+0.5**
BEHE	**Becsehely**	**6.68**	**335**	*e*	Pn	**Pn**	**05 27 22.9**	**-0.1**
GRER		**6.68**	**41**	⇑	P	**Pn**	**05 27 25.3**	**+2.3**
OZUR		**6.70**	**31**	⇑	P	**Pn**	**05 27 25.7**	**+2.4**
YER	**Yerkesik**	**6.72**	**117**	*e*	P	**Pn**	**05 27 27.9**	**+4.3**
TLBR	**Topalu**	**6.73**	**50**	⇓	P	**Pn**	**05 27 25.3**	**+1.7**
TVSB	**Tavsanli**	**6.73**	**96**	*e*	P	**Pn**	**05 27 26.3**	**+2.5**
SILT	**Sile**	**6.74**	**81**	⇑	P	**Pn**	**05 27 25.5**	**+1.7**
HARR	**Harsova**	**6.74**	**49**	⇑	P	**Pn**	**05 27 25.5**	**+1.7**
HARR	**Harsova**	**6.74**	**49**		P	**Pn**	**05 27 25.5**	**+1.7**
MFTR	**Murfatlar**	**6.75**	**54**	⇑	P	**Pn**	**05 27 26.8**	**+2.8**
TURR	**Turia**	**6.76**	**33**	⇑	P	**Pn**	**05 27 26.0**	**+1.9**
GEDZ	**Gediz**	**6.78**	**99**	*e*	P	**Pn**	**05 27 26.1**	**+1.6**
MURB	**Monte Urbino**	**6.78**	**297**			**Pn**	**05 27 25.0**	**+0.6**
BSZH	**Besenyszg**	**6.84**	**357**	⇓	P	**Pn**	**05 27 26.4**	**+1.2**
ZKR	**Zakros**	**6.84**	**140**	*e*	P	**Pn**	**05 27 29.8**	**+4.5**
MESR	**Meseseni**	**6.86**	**12**	⇑	P	**Pn**	**05 27 27.0**	**+1.5**
PLOR	**Plostina**	**6.87**	**36**	⇑	P	**Pn**	**05 27 28.0**	**+2.3**
PLOR	**Plostina**	**6.87**	**36**		P	**Pn**	**05 27 28.0**	**+2.3**
PLOR5	**Plostina Array**	**6.87**	**37**		Pn	**Pn**	**05 27 27.9**	**+2.2**
	comp=Z,1.3nmcomp=Z,2µmcomp=Z,201nm,0.8s							
TURN	**Turunc**	**6.89**	**120**	*e*	P	**Pn**	**05 27 28.5**	**+2.6**
TIRR	**Tirgusor**	**6.90**	**52**			**Pn**	**05 27 25.9**	**0.0**
TIRR	**Tirgusor**	**6.90**	**52**	⇑	P	**Pn**	**05 27 27.4**	**+1.5**
TIRR	**Tirgusor**	**6.90**	**52**		P	**Pn**	**05 27 27.4**	**+1.5**
TIRR	**Tirgusor**	**6.90**	**52**		Pn	**Pn**	**05 27 27.2**	**+1.3**
	comp=Z,1.9nmcomp=Z,137nm,1.1s							
VRI	**Vrincioaia**	**6.92**	**37**	⇓	P	**Pn**	**05 27 27.9**	**+1.5**
VRI	**Vrincioaia**	**6.92**	**37**		P	**Pn**	**05 27 27.8**	**+1.5**
VRI	**Vrincioaia**	**6.92**	**37**		Pn	**Pn**	**05 27 28.6**	**+2.3**
	comp=Z,0.7nmcomp=Z,2µmcomp=Z,190nm,0.8s							
ODBI	**Odobesti**	**7.00**	**39**		Pn	**Pn**	**05 27 30.7**	**+3.4**
	comp=Z,0.5nmcomp=Z,129nm,0.8s							
KARP	**Karpathos**	**7.02**	**132**			**Pn**	**05 27 29.8**	**+2.2**
KARP	**Karpathos**	**7.02**	**132**		Pn	**Pn**	**05 27 30.2**	**+2.5**
	comp=Z,1.6nmcomp=Z,4µmcomp=Z,532nm,1.0s							
TPGR	**Topolog**	**7.12**	**49**	⇑	P	**Pn**	**05 27 30.4**	**+1.3**
BUD	**Budapest**	**7.13**	**350**		P	**Pn**	**05 27 28.6**	**-0.6**
BUD					pmax	pmax		
	comp=Z,159nm,0.7s							
ARG	**Arkhangelos**	**7.15**	**124**		Pn	**Pn**	**05 27 31.3**	**+1.9**
ARG	**Arkhangelos**	**7.15**	**124**		P	Pn	05 27 35.3	+5.9
ARG	**Arkhangelos**	**7.15**	**124**	*e*	P	Pn	05 27 36.3	+6.9
ARG	**Arkhangelos**	**7.15**	**124**		P	**Pn**	**05 27 31.3**	**+1.9**
CFR	**Carcaliu**	**7.16**	**46**	⇓	P	**Pn**	**05 27 32.0**	**+2.4**
CFR	**Carcaliu**	**7.16**	**46**		P	**Pn**	**05 27 31.9**	**+2.4**
LJU	**Ljubljana**	**7.22**	**323**		P	**Pn**	**05 27 30.2**	**-0.1**
LJU					pmax	pmax		
	comp=Z,946nm,0.9s							
APMY	**Acipayam-Deniz**	**7.26**	**112**	*e*	P	**Pn**	**05 27 34.0**	**+2.9**
TRI	**Trieste**	**7.35**	**318**			**Pn**	**05 27 31.5**	**-0.7**
TRI	**Trieste**	**7.35**	**318**		Pn	**Pn**	**05 27 31.4**	**-0.7**
TRI	**Trieste**	**7.35**	**318**		P	**Pn**	**05 27 31.5**	**-0.7**
GHRR		**7.38**	**39**		Pn	**Pn**	**05 27 34.3**	**+1.7**
TESR	**Tescani**	**7.39**	**33**	⇑	P	**Pn**	**05 27 34.2**	**+1.5**
TESR	**Tescani**	**7.39**	**33**		Pn	**Pn**	**05 27 34.1**	**+1.5**
	comp=Z,0.4nmcomp=Z,49nm,0.7s							
SCTR	**Scanteiesti**	**7.40**	**43**	⇑	P	**Pn**	**05 27 33.6**	**+0.7**
BORA	**Eskisehir**	**7.41**	**91**			**Pn**	**05 27 34.6**	**+1.4**
BMR	**Baia Mare**	**7.46**	**14**		P	**Pn**	**05 27 37.1**	**+3.4**
BMR					pmax	pmax		
	comp=Z,114nm,1.1s							
PSZ	**Piszkesteto**	**7.48**	**355**			**Pn**	**05 27 34.4**	**+0.3**
PSZ	**Piszkesteto**	**7.48**	**355**	⇑	P	**Pn**	**05 27 33.9**	**-0.1**
PSZ	**Piszkesteto**	**7.48**	**355**	*e*	P	**Pn**	**05 27 35.3**	**+1.3**
PSZ	**Piszkesteto**	**7.48**	**355**		P	**Pn**	**05 27 34.4**	**+0.3**
SOKA	**Soboth**	**7.49**	**328**	*i*	Pn	**Pn**	**05 27 34.0**	**-0.2**
	comp=Z,25nm,0.5s,SNR=45							
CAME	**Cameli-Denizli**	**7.52**	**115**	*e*	P	**Pn**	**05 27 39.1**	**+4.5**
TLCR		**7.54**	**49**	⇓	P	**Pn**	**05 27 36.9**	**+2.0**
TLCR		**7.54**	**49**		P	**Pn**	**05 27 36.8**	**+2.0**
OBKA	**Obir**	**7.56**	**325**	*i*	Pn	**Pn**	**05 27 35.3**	**+0.1**
	comp=Z,22nm,0.5s,SNR=26							
OBKA					*e*Sn	**Sn**	**05 28 59.1**	**-1.7**
	comp=Z,62nm,0.5s							
SRO	**Srobarova**	**7.56**	**347**		P	**Pn**	**05 27 38.0**	**+2.9**
SRO					pmax	pmax		
	comp=Z,178nm,1.1s							
SRO	**Srobarova**	**7.56**	**347**	*e*	PN	**Pn**	**05 27 38.2**	**+3.1**
SRO					*e*SN	**Sn**	**05 29 03.7**	**+3.1**
VLDR	**Vladesti**	**7.56**	**42**	⇑	P	**Pn**	**05 27 37.2**	**+2.1**
OSSC	**Osservatorio P**	**7.75**	**296**			**Pn**	**05 27 37.5**	**-0.2**
ARSA	**Arzberg**	**7.78**	**332**		Pn	**Pn**	**05 27 38.8**	**+0.7**
ARSA	**Arzberg**	**7.78**	**332**	*i*	Pn	**Pn**	**05 27 38.4**	**+0.3**
	comp=Z,33nm,0.6s,SNR=90							
ARSA					*e*Sn	**Sn**	**05 29 05.3**	**-0.8**
	comp=Z,17nm,0.5s							
CASP	**Castiglione de**	**7.80**	**291**			**Pn**	**05 27 38.3**	**-0.1**
BURAR	**Bucovina Array**	**7.82**	**22**			**Pn**	**05 27 39.5**	**+0.7**
BURAR	**Bucovina Array**	**7.82**	**22**	⇑	P	**Pn**	**05 27 40.2**	**+1.5**
BURAR	**Bucovina Array**	**7.82**	**22**		P	**Pn**	**05 27 40.2**	**+1.5**
SOP	**Sopron**	**7.84**	**338**		P	**Pn**	**05 27 40.2**	**+1.4**
SOP					pmax	pmax		
	comp=Z,89nm,0.9s							
BUR08	**Bucovina Ar. S**	**7.84**	**22**			**Pn**	**05 27 39.7**	**+0.6**
BERU	**Beregovo**	**7.88**	**9**		Pn	**Pn**	**05 27 42.2**	**+2.8**
MDUB	**Mudurnu**	**7.92**	**87**			**Pn**	**05 27 40.5**	**+0.4**
RONA	**Rosalia, Austr**	**7.93**	**337**	*i*	Pn	**Pn**	**05 27 41.3**	**+1.2**
	comp=Z,16nm,0.6s,SNR=23							
RAKU	**Rahkiv**	**7.94**	**17**		Pn	Pn	05 27 46.2	+6.0
PRED	**Cave del Predi**	**7.96**	**321**			**Pn**	**05 27 40.1**	**-0.5**
ISP	**Isparta**	**8.00**	**106**			**Pn**	**05 27 43.3**	**+2.0**
ISP	**Isparta**	**8.00**	**106**	*e*	P	**Pn**	**05 27 43.5**	**+2.3**
ISP	**Isparta**	**8.00**	**106**	*de*	P	**Pn**	**05 27 43.2**	**+2.0**
KECS	**Kecovo**	**8.02**	**358**	*e*	P	**Pn**	**05 27 42.6**	**+1.2**
KECS	**Kecovo**	**8.02**	**358**	*e*	PN	**Pn**	**05 27 42.6**	**+1.2**
BRIU	**Brid**	**8.03**	**11**		Pn	**Pn**	**05 27 44.8**	**+3.3**
ELL	**Elmali**	**8.03**	**115**		P	**Pn**	**05 27 46.2**	**+4.5**
MYKA	**Terra Mystica**	**8.06**	**322**	*i*	Pn	**Pn**	**05 27 41.9**	**-0.1**
	comp=Z,11nm,0.4s,SNR=17							
AKAS	**Kas**	**8.10**	**119**			**Pn**	**05 27 46.6**	**+3.9**
MUKU	**Mukachevo**	**8.10**	**9**		Pn	**Pn**	**05 27 45.4**	**+3.0**
HOLU	**Holmets**	**8.14**	**7**		Pn	**Pn**	**05 27 43.9**	**+0.9**
ZST	**Bratislava**	**8.17**	**342**	*e*	P	**Pn**	**05 27 45.8**	**+2.4**
ZST					*e*		05 29 16.6	
ZST	**Bratislava**	**8.17**	**342**	*e*	PN	**Pn**	**05 27 45.8**	**+2.4**
ZST					*e*SN	**Sn**	**05 29 16.6**	**+1.0**
ZCCA	**Zocca**	**8.24**	**301**			**Pn**	**05 27 45.4**	**+1.0**
CONA	**Conrad Observa**	**8.26**	**336**	*i*	Pn	**Pn**	**05 27 45.2**	**+0.5**
	comp=Z,20nm,0.9s,SNR=15							
STAL	**STALIGIAL**	**8.26**	**317**			**Pn**	**05 27 43.7**	**-1.1**
MEZ	**Mezhgor'ye**	**8.28**	**13**		Pn	**Pn**	**05 27 48.3**	**+3.4**
TEOL	**Teolo**	**8.30**	**309**			**Pn**	**05 27 43.9**	**-1.3**
MODS	**Modra-Piesok**	**8.30**	**343**	*e*	P	**Pn**	**05 27 46.7**	**+1.5**
MODS					*e*		05 29 20.5	
MODS	**Modra-Piesok**	**8.30**	**343**	*e*	PN	**Pn**	**05 27 46.6**	**+1.4**
MODS					*e*SN	**Sn**	**05 29 20.5**	**+1.7**
SMOL	**Smolenice**	**8.40**	**344**	*e*	P	**Pn**	**05 27 49.4**	**+2.8**
SMOL					*e*		05 29 20.9	
KSV	**Kosov**	**8.42**	**20**		Pn	**Pn**	**05 27 51.1**	**+4.2**
KBA	**Koelnbreinsper**	**8.53**	**323**	*i*	Pn	**Pn**	**05 27 48.6**	**0.0**
	comp=Z,15nm,0.4s,SNR=28							
KBA					*e*Sn	**Sn**	**05 29 22.1**	**-2.6**
	comp=Z,36nm,0.5s							
KBA	**Koelnbreinsper**	**8.53**	**323**		P	**Pn**	**05 27 48.8**	**+0.3**
KBA					pmax	pmax		
	comp=Z,170nm,1.1s							
STNU	**Starunia**	**8.66**	**16**		Pn	**Pn**	**05 27 54.5**	**+4.4**
MILM	**Milestii Mici**	**8.67**	**39**		P	**Pn**	**05 27 53.0**	**+2.7**
MILM					pmax	pmax		
	comp=Z,111nm,0.9s							
MILM	**Milestii Mici**	**8.67**	**39**	*e*	P	**Pn**	**05 27 49.5**	**-0.8**
	comp=Z,120nm,1.4s							
MILM					LRM	MLR	05 31 44.0	
	comp=Z,2µm,10.5s							
JAVC	**Velka Javorina**	**8.69**	**346**	*e*	PN	**Pn**	**05 27 52.1**	**+1.6**
ABTA	**Abfaltersbach**	**8.69**	**319**	*i*	Pn	**Pn**	**05 27 50.6**	**-0.1**
	comp=Z,23nm,0.5s,SNR=40							
ABTA					*e*Sn	**Sn**	**05 29 27.0**	**-1.6**
	comp=Z,96nm,0.7s							
CTI	**Castel Tesino**	**8.70**	**313**			**Pn**	**05 27 50.0**	**-0.8**
CTI	**Castel Tesino**	**8.70**	**313**		P	**Pn**	**05 27 50.0**	**-0.8**
KIS	**Kishinev**	**8.73**	**39**	*e*	P	**Pn**	**05 27 50.0**	**-1.1**
KIS					*e*L	L	05 31 13.0	
KIS					LRM	MLR	05 31 47.0	
	comp=Z,800nm,9.0s							
LANS	**Liptovska Anna**	**8.74**	**354**	*e*	P	**Pn**	**05 27 54.3**	**+3.1**
LANS					*e*		05 29 33.1	
LANS	**Liptovska Anna**	**8.74**	**354**	*e*	PN	**Pn**	**05 27 54.3**	**+3.1**
LANS					*e*SN	**Sn**	**05 29 33.1**	**+3.5**
MOA	**Molln**	**8.75**	**330**	*i*	Pn	**Pn**	**05 27 52.2**	**+0.8**
	comp=Z,24nm,0.6s,SNR=38							
MOA					*e*Sn	**Sn**	**05 29 29.0**	**-0.9**
	comp=Z,18nm,0.4s							
VSL	**Villasalto**	**8.83**	**267**			**Pn**	**05 27 52.0**	**-0.5**
PRMA	**PARMA**	**8.85**	**302**			**Pn**	**05 27 52.9**	**+0.2**
BIOA	**Bad Ischl, Aus**	**8.87**	**327**	*i*	Pn	**Pn**	**05 27 53.7**	**+0.6**
	comp=Z,14nm,0.5s,SNR=43							
BIOA					*e*Sn	**Sn**	**05 29 33.7**	**+0.7**
	comp=Z,32nm,0.5s							
STHS	**Stebnicka Huta**	**8.96**	**2**	*e*	P	**Pn**	**05 27 55.3**	**+1.1**
STHS					*e*		05 29 37.9	
STHS	**Stebnicka Huta**	**8.96**	**2**	*e*	PN	**Pn**	**05 27 55.3**	**+1.1**
STHS					*e*SN	**Sn**	**05 29 37.9**	**+2.9**
NIE	**Niedzica**	**8.96**	**358**	*e*	P	**Pn**	**05 27 56.8**	**+2.5**
NIE	**Niedzica**	**8.96**	**358**		P	**Pn**	**05 27 56.5**	**+2.3**
NIE	**Niedzica**	**8.96**	**358**		Pn	**Pn**	**05 27 56.6**	**+2.3**
KMPD	**K-Podol'skiy**	**9.05**	**25**		Pn	Pn	05 27 58.6	+3.2
KMPD					Pn	**Pn**	**05 27 58.1**	**+2.7**
LESA	**Schwarzleotal**	**9.09**	**323**	*i*	Pn	**Pn**	**05 27 56.3**	**+0.1**
	comp=Z,16nm,0.4s,SNR=56							
LESA					*e*Sn	**Sn**	**05 29 38.3**	**-0.1**
	comp=Z,91nm,0.8s							
SALO	**Salr**	**9.12**	**308**			**Pn**	**05 27 55.6**	**-0.9**
MAUC	**Maruska**	**9.15**	**348**	*e*	PN	**Pn**	**05 27 59.9**	**+3.1**
KRUC	**Moravsky**	**9.15**	**341**	*e*	PN	**Pn**	**05 27 56.9**	**+0.1**
KRUC	**Moravsky**	**9.15**	**341**		P	**Pn**	**05 27 57.7**	**+0.9**
KRUC					pmax	pmax		
	comp=Z,22nm,0.8s							
MSSA	**Maissana**	**9.20**	**298**			**Pn**	**05 27 56.7**	**-0.8**
ANTO	**Ankara**	**9.20**	**90**			**Pn**	**05 27 58.1**	**+0.5**
ANTO	**Ankara**	**9.20**	**90**		P	**Pn**	**05 27 58.1**	**+0.5**
KWP	**Kalwaria Pacla**	**9.27**	**8**	*e*	P	**Pn**	**05 28 02.4**	**+3.9**
KWP	**Kalwaria Pacla**	**9.27**	**8**		P	**Pn**	**05 28 01.1**	**+2.7**
KWP	**Kalwaria Pacla**	**9.27**	**8**		Pn	**Pn**	**05 28 02.0**	**+3.6**
RJOB	**Jochberg**	**9.27**	**324**	*e*	Pn	**Pn**	**05 27 58.3**	**-0.3**
VRAC	**Vranov**	**9.33**	**343**		Pn	**Pn**	**05 27 59.5**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=171,slow=12,SNR=23							
VRAC					Sn	**Sn**	**05 29 44.3**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=344,slow=23,SNR=2.1							
VRAC					Lg	Lg	05 30 38.4	
	comp=Z,0.4nm,0.3s,baz=209,slow=18,SNR=0.7							
VRAC					LR	LR	05 31 42.6	
	comp=Z,784nm,18.9s,baz=166,slow=38							
	comp=Z,26nm,0.8s							
VRAC	**Vranov**	**9.33**	**343**	⇓	P	**Pn**	**05 28 00.4**	**+1.0**
VRAC	**Vranov**	**9.33**	**343**	*e*	PN	**Pn**	**05 28 00.0**	**+0.6**
VRAC	**Vranov**	**9.33**	**343**		P	**Pn**	**05 28 00.4**	**+1.0**
SORM	**Soroca**	**9.38**	**33**	⇑	P	**Pn**	**05 28 01.0**	**+1.0**
SORM	**Soroca**	**9.38**	**33**		P	**Pn**	**05 28 01.0**	**+1.0**
BOB	**Bobbio (Coli)**	**9.41**	**301**		P	**Pn**	**05 28 01.3**	**+0.8**
BOB					pmax	pmax		
	comp=Z,124nm,1.0s							
WTTA	**Wattenberg**	**9.48**	**319**	*i*	Pn	**Pn**	**05 28 01.3**	**-0.3**
	comp=Z,16nm,0.5s,SNR=54							
WTTA					*e*Sn	**Sn**	**05 29 47.4**	**-0.8**
	comp=Z,704nm,1.3s							
WTTA	**Wattenberg**	**9.48**	**319**		P	**Pn**	**05 28 02.4**	**+0.8**
WTTA					pmax	pmax		
	comp=Z,191nm,0.8s							
OKC	**Ostrava-Krasne**	**9.56**	**350**		P	**Pn**	**05 28 04.6**	**+2.2**
OKC					pmax	pmax		
	comp=Z,57nm,1.0s							
OKC	**Ostrava-Krasne**	**9.56**	**350**	*e*	SN	**Sn**	**05 29 53.9**	**+4.2**
OKC					AMS	AMS	05 33 00.0	
	comp=Z,2µm,8.6s							
WATA	**Walderalm**	**9.56**	**319**	*i*	Pn	**Pn**	**05 28 02.8**	**+0.1**
	comp=Z,39nm,0.4s,SNR=119							
WATA					*e*Sn	**Sn**	**05 29 49.1**	**-0.9**
	comp=Z,171nm,1.1s							
MORC	**Moravsky Berou**	**9.59**	**347**			**Pn**	**05 28 03.5**	**+0.5**
MORC	**Moravsky Berou**	**9.59**	**347**	⇑	P	**Pn**	**05 28 04.3**	**+1.4**
MORC	**Moravsky Berou**	**9.59**	**347**	*e*	PN	**Pn**	**05 28 03.8**	**+0.8**
MORC	**Moravsky Berou**	**9.59**	**347**		P	**Pn**	**05 28 04.3**	**+1.4**
TREC	**Trest**	**9.60**	**339**		AMS	AMS	05 32 10.0	
	comp=Z,7µm,10.1s							
SLUM	**Salum**	**9.64**	**157**		P	**Pn**	**05 28 00.3**	**-3.3**
SQTA	**Sankt Quirin**	**9.67**	**317**	*i*	Pn	**Pn**	**05 28 04.6**	**+0.5**
	comp=Z,36nm,0.7s,SNR=64							
SQTA					*e*Sn	**Sn**	**05 29 52.4**	**-0.4**
	comp=Z,131nm,0.9s							
OJC	**Ojcow**	**9.78**	**356**	*e*	P	**Pn**	**05 28 08.0**	**+2.5**
OJC	**Ojcow**	**9.78**	**356**			**Pn**	**05 28 06.9**	**+1.4**
OJC	**Ojcow**	**9.78**	**356**		P	**Pn**	**05 28 06.9**	**+1.4**
GEC2	**GERESS Array S**	**9.78**	**331**			**Pn**	**05 28 06.3**	**+0.6**
GEC2	**GERESS Array S**	**9.78**	**331**		P	**Pn**	**05 28 07.3**	**+1.7**
GEC2					pmax	pmax		
	comp=Z,57nm,0.9s							
GEC2	**GERESS Array S**	**9.78**	**331**	*e*	Pn	**Pn**	**05 28 06.7**	**+1.0**
GERES	**GERESS Array B**	**9.78**	**331**			**Pn**	**05 28 06.2**	**+0.6**
GERES	**GERESS Array B**	**9.78**	**331**		Pn	**Pn**	**05 28 06.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=147,slow=13,SNR=114							
GERES					Sn	**Sn**	**05 29 53.1**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=145,slow=24,SNR=2.0							
GERES					ScP	**ScP**	**05 37 50.0**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=198,slow=2.8,SNR=4.3							
	comp=Z,22nm,0.8s							
FETA	**Feichten**	**9.80**	**315**	*i*	Pn	**Pn**	**05 28 05.5**	**-0.4**
	comp=Z,4.0nm,0.4s,SNR=35							
FETA					*e*Sn	**Sn**	**05 29 54.6**	**-1.2**
	comp=Z,61nm,1.0s							
MOTA	**Moosalm**	**9.81**	**318**	*i*	Pn	**Pn**	**05 28 06.3**	**+0.3**
	comp=Z,42nm,0.7s,SNR=98							
MOTA					*e*Sn	**Sn**	**05 29 56.3**	**+0.2**
	comp=Z,280nm,0.9s							
FUORN	**Ofenpass-Fuorn**	**9.81**	**312**			**Pn**	**05 28 05.9**	**-0.3**
ILGA	**Ilgaz**	**9.82**	**82**			**Pn**	**05 28 07.4**	**+1.1**
BR131	**Keskin Array S**	**9.86**	**90**			**Pn**	**05 28 07.9**	**+1.1**
BR131	**Keskin Array S**	**9.86**	**90**	*d*	P	**Pn**	**05 28 08.0**	**+1.2**
BRTR	**Keskin Array B**	**9.86**	**90**			**Pn**	**05 28 07.7**	**+0.9**
BRTR	**Keskin Array B**	**9.86**	**90**		Pn	**Pn**	**05 28 08.2**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=269,slow=13,SNR=26							
BRTR					Sn	**Sn**	**05 29 54.6**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=278,slow=24,SNR=0.8							
BRTR					Lg	Lg	05 30 50.9	
	baz=271,slow=20							
BRTR					LR	LR	05 31 53.9	
	comp=Z,468nm,18.7s,baz=279,slow=37							
BRTR					PcP	**PcP**	**05 34 19.1**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=195,slow=2.3,SNR=4.9							
	comp=Z,4.5nm,0.6s							
BRTR	**Keskin Array B**	**9.86**	**90**	*i*	P	**Pn**	**05 28 08.1**	**+1.3**
BRTR					pmax	pmax		
	comp=Z,6.0nm,0.8s							
PCP	**Piancastagn**	**9.93**	**298**		P	**Pn**	**05 28 08.0**	**+0.4**
KRLC	**Kraliky**	**10.02**	**345**	*e*	P	**Pn**	**05 28 11.2**	**+2.4**
KRLC					MLR	MLR		
	comp=Z,3µm,11.6s							
KRLC	**Kraliky**	**10.02**	**345**	*e*	PN	**Pn**	**05 28 11.2**	**+2.4**
KRLC					AMS	AMS	05 32 50.0	
	comp=Z,3µm,11.6s							
KHC	**Kasperske Hory**	**10.07**	**332**	*ce*	P	**Pn**	**05 28 09.9**	**+0.4**
KHC					pmax	pmax		
	comp=Z,100nm,1.3s							
KHC	**Kasperske Hory**	**10.07**	**332**	*e*	PN	**Pn**	**05 28 10.5**	**+1.0**
KHC					*ex*	x	05 28 39.5	
KHC					*e*SN	**Sn**	**05 30 01.8**	**-0.5**
KHC					AMS	AMS	05 32 30.0	
	comp=Z,4µm,15.5s							
KHC	**Kasperske Hory**	**10.07**	**332**		Pn	**Pn**	**05 28 10.4**	**+1.0**
RETA	**Reutte**	**10.08**	**317**	*i*	Pn	**Pn**	**05 28 09.4**	**-0.2**
	comp=Z,8.0nm,0.4s,SNR=11							
RETA					*e*Sn	**Sn**	**05 30 01.6**	**-1.0**
	comp=Z,112nm,1.0s							
ZVC	**Zvikov**	**10.12**	**335**	*e*	PN	**Pn**	**05 28 11.8**	**+1.7**
ZVC					AMS	AMS	05 32 30.0	
	comp=Z,6µm,11.6s							
KIRS	**Kirsehir-Merke**	**10.18**	**93**	⇓	P	**Pn**	**05 28 13.1**	**+2.0**
KEST	**Kesra**	**10.19**	**246**		Pn	**Pn**	**05 28 14.2**	**+3.0**
KEST	**Kesra**	**10.19**	**246**		Pn	**Pn**	**05 28 11.4**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=16,slow=1.7,SNR=24							
KEST					LR	LR	05 33 26.5	
	comp=Z,584nm,19.1s,baz=46,slow=45							
	comp=Z,39nm,0.8s							
TUE	**Stuetta**	**10.26**	**310**			**Pn**	**05 28 11.8**	**-0.5**
FUR	**Furstenfeldbru**	**10.28**	**322**		P	**Pn**	**05 28 12.6**	**+0.2**
FUR					pmax	pmax		
	comp=Z,100nm,0.9s							
FUR	**Furstenfeldbru**	**10.28**	**322**	*e*	Pn	**Pn**	**05 28 12.4**	**0.0**
WET	**Wettzell**	**10.34**	**330**		P	**Pn**	**05 28 13.1**	**-0.1**
WET					pmax	pmax		
	comp=Z,48nm,0.8s							
WET	**Wettzell**	**10.34**	**330**	*e*	Pn	**Pn**	**05 28 12.6**	**-0.6**
DPC	**Dobruska-Polom**	**10.37**	**344**	*e*	P	**Pn**	**05 28 15.4**	**+1.7**
DPC					MLR	MLR		
	comp=Z,4µm,10.3s							
DPC	**Dobruska-Polom**	**10.37**	**344**	*e*	PN	**Pn**	**05 28 15.4**	**+1.7**
DPC					AMS	AMS	05 32 50.0	
	comp=Z,4µm,10.3s							
DAVA	**Damuels**	**10.42**	**314**	*i*	Pn	**Pn**	**05 28 14.0**	**-0.4**
	comp=Z,21nm,0.4s,SNR=27					

TNS Taunus Mts 13.05 322 P Pn 05 28 50.9 +0.7
TNS pmax pmax
comp=Z,37nm,0.6s
TNS Taunus Mts 13.05 322 *e*Pn Pn 05 28 49.0 -1.3
GAZ Gaziantep 13.21 99 Pn Pn 05 28 53.5 +1.0
SUW Suwalki 13.65 6 *e*P Pn 05 29 02.1 +3.8
SUW Suwalki 13.65 6 Pn 05 28 57.5 -0.8
SUW Suwalki 13.65 6 *e*P P 05 29 03.0 -4.2
SUW Suwalki 13.65 6 P Pn 05 28 57.5 -0.8
WLF Walferdange 13.83 317 Pn 05 29 01.1 +0.3
WLF Walferdange 13.83 317 *d*P Pn 05 29 01.3 +0.5
comp=Z,18nm,1.0s
WLF Walferdange 13.83 317 P Pn 05 29 01.1 +0.3
WLF Walferdange 13.83 317 *e*Pn Pn 05 29 01.4 +0.5
MMA0B Mount Meron ar 13.86 118 P Pn 05 29 01.1 -0.2
MMAI Mount Meron Ar 13.86 118 Pn Pn 05 29 00.1 -1.2
comp=Z,2.0nm,0.3s,baz=310,slow=11,SNR=12
MMAI Sn **Sn** 05 31 35.5 +0.4
comp=Z,1.6nm,0.3s,baz=310,slow=22,SNR=2.4
MMAI LR LR 05 35 31.1
comp=Z,640nm,18.4s,baz=312,slow=42
comp=Z,5.8nm,0.6s
GEM Giv'at Ha'Em 13.92 117 P Pn 05 29 02.2 +0.1
NATI Neve Ativ 13.94 116 P Pn 05 29 02.2 -0.2
LOR Lormes 13.97 305 P Pn 05 29 01.6 -1.3
LOR pmax pmax
comp=Z,30nm,0.8s
SLTI Sal'it 14.09 121 P Pn 05 29 04.8 +0.3
MMLI Mount Malkishu 14.22 120 P Pn 05 29 05.8 -0.5
BHOU Houvegnez 14.32 319 *d*P Pn 05 29 10.1 +2.6
comp=Z,12nm,1.0s
SOC Sochi 14.40 71 *e*P Pn 05 29 05.7 -2.9
SOC *e* 05 31 45.6
SOC MLR MLR
comp=Z,241nm,16.0s
HMDT Nahal Hemdat 14.40 120 P Pn 05 29 08.4 -0.4
BTNL Ternell 14.40 320 *d*P Pn 05 29 08.8 +0.1
comp=Z,12nm,0.9s
BTNL *d*S **Sn** 05 31 43.6 -4.7
BUG Bochum--Univer 14.43 324 P P 05 29 14.4 -1.5
MEM Membach 14.48 319 *d*P Pn 05 29 11.8 +2.1
comp=Z,27nm,1.0s
MEM Membach 14.48 319 P Pn 05 29 12.4 +2.7
MEM pmax pmax
comp=Z,41nm,1.1s
KZIT Kziot 14.58 127 P Pn 05 29 09.0 -2.2
BALJ Balqa 14.58 120 Pn 05 29 11.7 +0.4
RCHB Rochefort 14.60 317 *d*P Pn 05 29 10.9 -0.5
comp=Z,17nm,1.0s
NBNS Bani Suef 14.62 141 P Pn 05 29 08.0 -3.8
BSTI Sart Tilman 14.68 319 *d*P Pn 05 29 09.4 -3.1
comp=Z,5.8nm,1.0s
BSTI *d*S **Sn** 05 31 51.8 -3.2
YTIR Yattir 14.71 124 P Pn 05 29 12.2 -0.8
DSI Dead Sea 14.74 122 P Pn 05 29 12.9 -0.5
BEBN Eben Emael 14.76 319 *d*P Pn 05 29 16.5 +3.0
comp=Z,30nm,0.6s
BGES Gesves 14.81 317 *d*P Pn 05 29 14.6 +0.4
comp=Z,18nm,0.8s
MNK Minsk 14.82 16 *i*P Pn 05 29 15.5 +1.1
comp=E,16nm,0.9s
MNK *i*P Pn 05 29 15.5 +1.1
comp=N,26nm,1.0s
MNK *i*P Pn 05 29 15.5 +1.1
comp=Z,77nm,0.8s,baz=201
MNK *i*PP PnPn 05 29 23.5 +1.2
MNK *i*S **Sn** 05 31 59.7 +1.2
MNK *i*SS SnSn 05 32 13.5 +2.5
MNK *i*LQ LQ 05 33 34.8
MNK *i*LR LR 05 34 42.0
MNK *i*LRM MLR 05 35 02.1
comp=N,668nm,14.8s
MNK *i*LRM MLR 05 35 16.8
comp=E,368nm,14.0s
MNK *i*LRM MLR 05 35 24.6
comp=Z,520nm,14.5s
MNK Minsk 14.82 16 *i*P Pn 05 29 15.5 +1.1
MNK *i*S **Sn** 05 31 59.6 +1.2
MNK pmax pmax
comp=E,16nm,0.9s
MNK pmax pmax
comp=N,26nm,1.0s
MNK pmax pmax
comp=Z,77nm,0.8s
MNK MLR MLR
comp=N,668nm,15.0s
MNK MLR MLR
comp=E,368nm,14.0s
MNK MLR MLR
comp=Z,520nm,15.0s
MSBI Mazada 14.90 123 P Pn 05 29 15.1 -0.4
DOU Dourbes 14.90 316 *d*P Pn 05 29 14.9 -0.5
comp=Z,14nm,1.1s
BMRD Maredsous 14.93 317 *d*P Pn 05 29 15.5 -0.3
comp=Z,13nm,1.1s
NACGM Naroch 14.99 13⇑ *i*P P 05 29 20.6 -1.5
comp=Z,111nm,0.9s,baz=198
GHAJ Ghor Haditha 15.04 123 Pn 05 29 17.7 +0.4
GHAJ IAmb IAmb 05 29 29.4
comp=Z,89nm,1.1s
GHAJ Ghor Haditha 15.04 123 P Pn 05 29 17.2 -0.2
KOPT Kop Dagi 15.05 85 Pn 05 29 16.2 -1.6
KOPT IAmb IAmb 05 29 40.3
comp=Z,54nm,1.2s
PABE Paberze 15.20 7 Pn 05 29 19.0 -0.3
PABE Paberze 15.20 7 *e*P Pn 05 29 19.9 +0.6
CLF Chambon-Foret 15.27 306 P Pn 05 29 19.1 -1.2
ZFRI Zfri 15.30 126 P Pn 05 29 20.1 -0.8
KRMI Paran Flat 15.34 128 P Pn 05 29 21.7 +0.4
PRNI Paran 15.34 127 P Pn 05 29 21.0 -0.4
ASF Jabal al Asfar 15.37 118 Pn Pn 05 29 20.9 -0.9
comp=Z,0.5nm,0.3s,baz=154,slow=1.7,SNR=11
ASF LR LR 05 36 29.3
comp=Z,564nm,18.9s,baz=339,slow=42
comp=Z,4.6nm,0.8s
ASF Jabal al Asfar 15.37 118 P Pn 05 29 21.0 -0.9
UCC Uccle 15.43 318 Pn Pn 05 29 22.3 -0.1
UCC Uccle 15.43 318 *d*P P 05 29 28.2 +1.2
comp=Z,19nm,0.9s
UCC Uccle 15.43 318 P Pn 05 29 22.3 -0.1
UCC pmax pmax
comp=Z,21nm,0.9s
ISAL Salakas 15.52 11 *e*P P 05 29 27.8 -0.2
HRFI Mount Harif 15.58 127 P Pn 05 29 24.6 0.0
PBUR Paburge 15.59 2 *e*P P 05 29 29.0 +0.4
VSVD Vaisvydziai 15.66 7 *e*P P 05 29 29.4 -0.1
MBRI Mt Berech 15.68 128 P Pn 05 29 25.7 -0.3
EIL Elat 15.79 129 Pn Pn 05 29 25.4 -1.9
comp=Z,1.3nm,0.3s,baz=332,slow=13,SNR=7.7
EIL Sn **Sn** 05 32 14.5 -7.7
comp=Z,0.5nm,0.3s,baz=269,slow=17,SNR=2.0
EIL LR LR 05 37 21.2
comp=Z,245nm,19.8s,baz=328,slow=44
comp=Z,9.2nm,0.6s
EIL Elat 15.79 129 P Pn 05 29 25.8 -1.5
MARD Mardin 15.87 95 Pn 05 29 29.2 +0.8
LUNU Lund 15.94 345 *i*P P 05 29 32.3 -0.3
BJUU Bjuv 16.44 344 *i*P P 05 29 38.5 +0.4
GURO Guroymak-BITLI 16.49 90 P 05 29 37.8 -1.2
SHA1 Shidzhatmaz 16.54 71⇑ *e*P P 05 29 39.2 -0.4
NEUR Neytrino 16.54 73‖ *e*P P 05 29 38.7 -0.9
NEUR pmax pmax
comp=Z,11nm,2.3s
KIV Kislovodsk 16.57 71 Pn Pn 05 29 37.7 +0.4
KIV Kislovodsk 16.57 71 *i*P P 05 29 41.3 +1.5
SNR=6.2
KIV Kislovodsk 16.57 71 *e*P Pn 05 29 37.8 +0.4
KIV *e*S **Sn** 05 32 43.0 +1.8
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,124nm,14.0s
VORD Divnogorie 16.60 45 *e*P Pn 05 29 34.8 -2.6
VORD pmax pmax
comp=Z,50nm,1.0s
DEL Delary 16.65 346 *i*P P 05 29 40.1 -0.4
VSR Storozhevoye 16.66 44 *e*P Pn 05 29 35.4 -2.9
VSR pmax pmax
comp=Z,10.0nm,1.0s
KBZ Khabaz 16.71 71 Pn P 05 29 40.2 -1.0
comp=Z,0.4nm,0.3s,baz=259,slow=8.6,SNR=11
KBZ PcP **PcP** 05 34 28.1 +0.4
comp=Z,4.3nm,0.8s,baz=140,slow=4.5,SNR=4.0
KBZ ScP **ScP** 05 38 01.8 -0.2
comp=Z,8.4nm,1.0s,baz=294,slow=1.8,SNR=6.2
comp=Z,7.2nm,0.9s
KBZ Khabaz 16.71 71‖ *e*P P 05 29 41.6 +0.4
KBZ pmax pmax
comp=Z,23nm,1.5s
GOF Gofitskoye 16.95 67 *c*e*P* P 05 29 44.1 +0.2
LPSR Galich'ya Gora 17.34 40 *e*P Pn 05 29 45.8 -1.0
LPSR *e*S **Sn** 05 32 59.1 -0.4
LPSR pmax pmax
comp=Z,53nm,0.9s
LPSR smax smax
comp=N,200nm,3.6s
FABU Falkenberg 17.37 345 *i*P P 05 29 49.9 +1.6
MUD Monsted U'grnd 17.72 338 *i*P P 05 29 53.6 +1.3
ONAU Onsala 17.90 344 *i*P P 05 29 56.3 +2.1
BORU Boraas 17.95 346 *i*P P 05 29 56.5 +1.7
OBN Obninsk 18.02 30 P Pn 05 29 55.3 +0.2
OBN IAmb IAmb 05 30 00.2
comp=Z,150nm,1.1s
OBN Obninsk 18.02 30 P Pn 05 29 54.7 -0.4
comp=Z,6.9nm,0.3s,baz=159,slow=19,SNR=10
comp=Z,23nm,0.4s
OBN Obninsk 18.02 30 *c*iP P 05 29 55.4 -0.1
OBN *i*S **Sn** 05 33 13.4 -2.4
OBN pmax pmax
comp=Z,129nm,1.2s
OBN MLR MLR
comp=Z,454nm,16.0s
VRH Novokhopyorsk 18.04 46 *e*P Pn 05 29 54.8 -0.6
VRH *e*S **Sn** 05 33 18.9 +2.5
VRH pmax pmax
comp=Z,36nm,0.7s
VRH smax smax
comp=N,100nm,0.9s
GNI Garni 18.25 83 P Pn 05 29 58.2 -0.1
GNI IAmb IAmb 05 30 17.0
comp=Z,124nm,1.2s
GNI Garni 18.25 83 P P 05 29 59.0 +0.5
comp=Z,4.2nm,0.3s,baz=259,slow=1.1,SNR=11
comp=Z,32nm,0.6s
GNI Garni 18.25 83 P P 05 30 01.6 +3.1
GNI Garni 18.25 83 *c*e*P* P 05 30 00.3 +1.8
GNI pmax pmax
comp=Z,101nm,1.7s
VSU Vasula 18.41 10 *e*P P 05 29 59.0 -0.9
VSU Vasula 18.41 10 *c*iP P 05 29 58.8 -1.0
VSU pmax pmax
comp=Z,46nm,0.7s
TJOU Tjoern 18.55 345 *i*P Pn 05 30 03.6 +2.1
MOS Moscow 18.89 30 *e*P P 05 30 01.9 -3.2
MOS *e*S **Sn** 05 33 33.1 -3.7
MOS pmax pmax
comp=Z,200nm,1.3s
MOS pmax pmax
comp=Z,133nm,1.2s
MOS MLR MLR
comp=Z,1μm,14.0s
GUD Guadarrama 18.95 279 P P 05 30 06.1 -0.1
ESBB Sonseca Array 18.96 276 P P 05 30 06.2 0.0
ESDC Sonseca Array 18.96 276 P P 05 30 05.8 -0.4
ESDC Sonseca Array 18.96 276 P Pn 05 30 06.8 -0.1
comp=Z,0.5nm,0.3s,baz=74,slow=11,SNR=119
ESDC LR LR 05 36 45.9
comp=Z,292nm,21.2s,baz=82,slow=35
comp=Z,16nm,0.8s
NAX Nakhchivan 19.00 86 P Pn 05 30 08.9 +1.6
PAB San Pablo 19.28 275 P P 05 30 09.8 +0.1
PAB San Pablo 19.28 275 P P 05 30 09.8 +0.1
PAB pmax pmax
comp=Z,46nm,1.2s
GANJ Ganja 19.38 81 P Pn 05 30 12.7 +0.9
AAL Aland 19.74 359 *e*P P 05 30 13.5 -0.9
MONM Monmouth 19.83 313 *e*P P 05 30 16.2 +0.8
MONM IAmb IAmb 05 30 20.3
comp=Z,39nm,1.0s
SNART Snartemo 19.89 339 *e*P Pn 05 30 21.8 +4.1
MEF Metsahovi 19.90 5 *e*P P 05 30 15.8 -0.4
SEKA Sheki 19.96 79 P Pn 05 30 19.9 +1.1
LBWR Ladybower, Pea 19.99 318 *e*P P 05 30 17.9 +0.6
LBWR IAmb IAmb 05 30 24.7
comp=Z,30nm,0.8s
MCH1 Michaelchurch 20.00 313 *e*P P 05 30 17.9 +0.5
MCH1 IAmb IAmb 05 30 22.0
comp=Z,47nm,0.9s
MAK Makhachkala 20.06 74 *e*P P 05 30 14.2 -3.9
MAK *e*S **S** 05 33 58.9 -4.3
MAK pmax pmax
comp=Z,463nm,1.4s
MAK MLR MLR
comp=Z,654nm,13.0s
HLM1 Long Mynd 20.17 315 *e*P Pn 05 30 20.3 -0.8
HLM1 IAmb IAmb 05 30 23.1
comp=Z,24nm,0.8s
HFS Hagfors 20.19 350 P P 05 30 19.0 -0.3
comp=Z,22nm,0.7s,baz=157,slow=11,SNR=44
HFS PcP **PcP** 05 34 33.4 +0.1
comp=Z,1.8nm,0.7s,baz=160,slow=4.6,SNR=1.7
HFS LR LR 05 38 26.7
comp=Z,358nm,18.2s,baz=162,slow=38
comp=Z,22nm,0.7s
HPK Haverah Park 20.24 319 *e*P P 05 30 20.4 +0.5
HPK IAmb IAmb 05 30 22.9
comp=Z,29nm,0.7s
AKT Akhty 20.33 78 *e*P Pn 05 30 24.3 +1.1
AKT *e*PPP PPP 05 30 48.6
AKT pmax pmax
comp=Z,26nm,0.7s
KONO Kongsberg 20.45 344 *e*P P 05 30 23.0 +0.8
HTL Hartland 20.46 309 *e*P P 05 30 23.2 +0.9
HTL IAmb IAmb 05 30 28.1
comp=Z,57nm,0.8s
OSL Oslo 20.49 345 *e*P P 05 30 21.6 -1.0
FOEL Foel Wylfa 20.52 315 *e*P P 05 30 23.7 +0.7
FOEL IAmb IAmb 05 30 27.6
comp=Z,44nm,0.8s
RAF Rauma 20.59 1 *e*P P 05 30 22.8 -0.9
PBRG Braganca 20.76 283 *e*P P 05 30 25.5 -0.2
PBRG *i*IAmb IAmb 05 30 35.9
comp=Z,60nm,1.3s
BLS5 Blasjo 21.02 339 *e*P P 05 30 30.6 +2.2
MVO Moncorvo 21.05 281 *e*P P 05 30 28.4 -0.5
MVO *i*IAmb IAmb 05 30 33.4
comp=Z,39nm,1.3s
MVO *e*LR LR 05 39 05.2
MVO *i*IAms_20 IAms_20 05 41 53.0
comp=Z,419nm,18.0s
NC602 NORSAR Array S 21.09 347 P P 05 30 27.6 -1.5
NC602 IAmb IAmb 05 30 35.2
comp=Z,38nm,0.7s
NC602 NORSAR Array S 21.09 347 *e*P P 05 30 28.5 -0.6
NORES NORESS Array B 21.09 347 P P 05 30 28.6 -0.5
NORES pmax pmax
comp=Z,2.0nm,0.5s
KMY Karmoy 21.18 338 *e*P P 05 30 29.8 -0.2
FINES FINESS Array B 21.25 7 P P 05 30 29.4 -1.4
FINES FINESS Array B 21.25 7 P P 05 30 29.8 -1.1
comp=Z,10nm,0.4s,baz=180,slow=11,SNR=47
FINES S **S** 05 34 22.5 -4.1
comp=Z,5.2nm,0.9s,baz=190,slow=14,SNR=2.6
FINES PcP **PcP** 05 34 34.3 -0.9
comp=Z,2.8nm,0.5s,baz=131,slow=3.2,SNR=7.1
FINES ScP **ScP** 05 38 09.8 -2.0
comp=Z,3.6nm,0.8s,baz=134,slow=8.2,SNR=4.2
FINES LR LR 05 39 45.1
comp=Z,504nm,20.1s,baz=192,slow=40
comp=Z,10nm,0.4s
FINES FINESS Array B 21.25 7 *i*P P 05 30 29.7 -1.1
FINES pmax pmax
comp=Z,11nm,0.4s
FIA1 FINESS Array S 21.25 7 P P 05 30 30.0 -0.9
NAO01 NORSAR Array S 21.30 347 P P 05 30 31.0 -0.4
NAO01 IAmb IAmb 05 30 44.2
comp=Z,51nm,0.9s
ODD1 Odda 21.39 340 *e*P P 05 30 32.9 +0.5
NB2 NORSAR Subarra 21.43 347 P P 05 30 32.3 -0.5
comp=Z,34nm,0.9s,baz=154,slow=10
NOA NORSAR Array B 21.43 347 P P 05 30 31.9 -0.9
comp=Z,19nm,0.9s,baz=162,slow=11,SNR=36
NOA LR LR 05 39 26.8
comp=Z,392nm,18.8s,baz=170,slow=38
comp=Z,19nm,0.9s
MTE Manteigas 21.55 279 P P 05 30 33.9 -0.3
MTE IAmb IAmb 05 30 43.4
comp=Z,56nm,0.9s
MTE Manteigas 21.55 279 *e*P P 05 30 34.0 -0.3
MTE *i*IAmb IAmb 05 30 40.4
comp=Z,98nm,1.2s
MTE *e*S Sn 05 34 47.4 +6.1
MTE *e*LR LR 05 37 29.1
MTE *i*IAMs_20 IAMs_20 05 41 51.3
comp=Z,387nm,18.0s
MTE Manteigas 21.55 279 *e*P P 05 30 34.0 -0.3
PVRL Vila Real 21.55 282 *e*P P 05 30 36.8 +2.6
PVRL *i*IAmb IAmb 05 30 48.7
comp=Z,64nm,1.7s
PCBR Castelo Branco 21.59 278 *e*P P 05 30 33.8 -0.9
PCBR *i*IAmb IAmb 05 30 42.7
comp=Z,46nm,1.3s
POLO Lamas de Olo 21.59 282 *e*P P 05 30 34.8 0.0
POLO *i*IAmb IAmb 05 30 50.2
comp=Z,20nm,1.5s
PMRV Marv??o 21.61 276 *e*P P 05 30 33.1 -1.8
PMRV *i*IAmb IAmb 05 30 42.7
comp=Z,68nm,1.6s
PMRV *e*LR LR 05 37 38.5
PMRV *i*IAMs_20 IAMs_20 05 43 03.2
comp=Z,263nm,18.0s
PBAR Barrancos 21.63 273 *e*P P 05 30 34.2 -0.9
PBAR *i*IAmb IAmb 05 30 42.9
comp=Z,78nm,1.4s
SKAR Skarslia 21.67 343 *e*P P 05 30 35.0 -0.4
MDT Midelt 21.73 257 P P 05 30 35.3 -1.0
comp=Z,16nm,1.0s,baz=84,slow=13,SNR=18
MDT LR LR 05 39 19.1
comp=Z,215nm,18.2s,baz=62,slow=37
comp=Z,16nm,1.0s
EKA Eskdalemuir Ar 21.74 321 P P 05 30 35.9 -0.2
comp=Z,15nm,0.6s,baz=119,slow=10,SNR=30
comp=Z,15nm,0.6s
ESK Eskdalemuir 21.75 321 P P 05 30 36.0 -0.2
ESK IAmb IAmb 05 30 49.0
comp=Z,66nm,1.1s
ESK Eskdalemuir 21.75 321 *e*P P 05 30 36.2 0.0
ESK IAmb IAmb 05 30 38.7
comp=Z,26nm,0.8s
ESK Eskdalemuir 21.75 321 P P 05 30 36.0 -0.2
ESK pmax pmax
comp=Z,66nm,1.1s
PVIS Viseu 21.76 280 *e*P P 05 30 35.9 -0.6
MD01 Midelt array s 21.81 258 P P 05 30 36.3 -1.0
TAM Tamanrasset 21.84 221 P P 05 30 39.5 +1.9
TAM IAmb IAmb 05 30 46.6
comp=Z,58nm,0.9s
TAM Tamanrasset 21.84 221 P P 05 30 39.5 +1.9
TAM pmax pmax
comp=Z,58nm,0.9s
BELG Belogornoye 21.86 48 P P 05 30 36.9 -0.5
comp=Z,16nm,0.6s,baz=101,slow=3.9,SNR=14
comp=Z,16nm,0.6s
BELG Belogornoye 21.86 48 *d*iP P 05 30 38.4 +1.0
BELG pmax pmax
comp=Z,13nm,0.9s
KEF Keuruu 21.87 5 *e*P P 05 30 36.5 -0.9
PESTR Estremoz 21.88 275 P P 05 30 38.5 +0.7
PESTR Estremoz 21.88 275 *e*P P 05 30 37.2 -0.6
PESTR *i*IAmb IAmb 05 30 45.3
comp=Z,44nm,1.5s
PGAV Gavieira, Arco 21.88 283 *e*P P 05 30 37.7 -0.2
PGAV *i*IAmb IAmb 05 30 44.4
comp=Z,92nm,1.3s
PGAV *i*tx tx 05 30 44.4
PGAV *e*LR LR 05 39 52.1
PGAV *i*IAMs_20 IAMs_20 05 42 36.1
comp=Z,418nm,18.0s
EDI Edinburgh 22.08 322 *e*P P 05 30 40.5 +0.8
EDI IAmb IAmb 05 30 43.3
comp=Z,28nm,0.6s
BER Bergen 22.14 339 *e*P P 05 30 38.5 -1.7
NEWG New Galloway 22.14 320 *e*P P 05 30 41.3 +0.9
PSARD Sardoal 22.16 277 *e*P P 05 30 38.0 -2.8
PSARD *i*IAmb IAmb 05 30 46.1
comp=Z,68nm,1.2s
PARRA Arraiolos 22.24 275 *e*P P 05 30 38.9 -11
PARRA *i*IAmb IAmb 05 30 46.2
comp=Z,50nm,1.2s
ASK Askoy 22.26 339 *e*P P 05 30 39.2 -2.3
EVO Evora 22.28 274 *e*P P 05 30 51.0 +8.9
EVO *i*IAmb IAmb 05 30 56.4
comp=Z,24nm,1.5s
IWEX Carrickbyrne, 22.29 312 P P 05 30 46.0 +4.0
PBEJ Beja 22.30 273 *e*P P 05 30 40.9 -1.4
PBEJ *i*IAmb IAmb 05 30 46.5
comp=Z,38nm,1.2s
PMTG Montargil 22.32 276 *e*P P 05 30 40.2 -2.3
PMTG *i*IAmb IAmb 05 30 47.2
comp=Z,45nm,1.1s
PCAS Casmilo, Conde 22.33 279 *e*P P 05 30 42.1 -0.5
PCAS *i*IAmb IAmb 05 30 50.5
comp=Z,63nm,1.2s
PVAQ Vaqueiros 22.36 271 P P 05 30 42.1 -0.8
PVAQ Vaqueiros 22.36 271 *e*P P 05 30 42.3 -0.6
PVAQ *i*IAmb IAmb 05 30 47.6
comp=Z,74nm,1.2s
PVAQ *e*LR LR 05 39 51.3
PVAQ *i*IAMs_20 IAMs_20 05 43 24.7
comp=Z,180nm,18.0s
DSB Dublin 22.40 314 P P 05 30 45.2 +2.0
PCVE Castro Verde 22.54 272 *e*P P 05 30 45.5 +0.6
PCVE *i*IAmb IAmb 05 31 05.9
comp=Z,44nm,1.3s
PBDV Barranco-do-Ve 22.57 271 *e*P P 05 30 43.6 -1.6
PBDV *i*IAmb IAmb 05 30 50.0
comp=Z,105nm,1.2s
HYA Hoyanger 22.59 341 *e*P P 05 30 44.8 -0.3
MESJ Messejana 22.62 273 *e*P P 05 30 45.6 -0.1
MESJ IAmb IAmb 05 30 51.0
comp=Z,34nm,1.1s
MESJ *e*S **S** 05 34 55.0 +1.8
MESJ Messejana 22.62 273 P P 05 30 45.4 -0.2
MESJ Messejana 22.62 273 *e*P P 05 30 45.9 +0.2
MESJ *i*IAmb IAmb 05 31 05.1
comp=Z,48nm,1.5s
MESJ Messejana 22.62 273 *e*P P 05 30 45.6 -0.1
MESJ *e*S **S** 05 34 55.0 +1.8
VAF Ylistaro 22.64 2 *e*P P 05 30 45.7 0.0
PSBE So Bento 22.66 277 *e*P P 05 30 44.9 -1.2
PSBE *i*IAmb IAmb 05 31 08.5
comp=Z,60nm,1.4s
DOMB Dombas 22.75 346 *e*P P 05 30 47.7 +0.8
INVG Invergeldie, C 22.76 323 *e*P P 05 30 46.5 -0.5
INVG IAmb IAmb 05 30 50.3
comp=Z,15nm,0.8s
SUE Sulen 22.86 340 *e*P P 05 30 47.7 -0.2
CLGH Cloghs, Cushen 23.06 318 *e*P P 05 30 49.8 -0.4
PTEO Sao Teotonio 23.08 272 *e*P P 05 30 48.7 -1.9
PTEO *i*IAmb IAmb 05 30 58.2
comp=Z,52nm,1.8s
PFVI Vila Bisbo 23.28 271 P P 05 30 52.6 +0.1
PFVI Vila Bisbo 23.28 271 *e*P P 05 30 49.4 -3.2
PFVI *i*IAmb IAmb 05 31 14.0
comp=Z,83nm,1.6s
AKN Aaknes 23.29 344 *e*P P 05 30 51.2 -1.2
JOF Joensuu 23.35 12 *e*P P 05 30 52.8 -0.2
KLMR Klimovskoe 23.45 23 *e*P P 05 30 51.7 -2.2
KLMR pmax pmax
comp=Z,119nm,1.3s
KLMR MLR MLR
comp=Z,577nm,11.0s
MOL Molde 23.53 345 *e*P P 05 30 55.5 +0.7
IDGL Inch Island, C 23.78 317 P P 05 30 56.7 -0.5
KPL Plockton 24.00 324 *e*P P 05 30 58.9 -0.4
KPL IAmb IAmb 05 31 04.7
comp=Z,13nm,0.9s
IGLA Glengowla, Co 24.13 313 P P 05 31 01.5 +0.9
VAL Valentia 24.17 309 P P 05 31 06.1 +5.1
LINV Loch Inver, As 24.26 326 *e*P P 05 31 01.0 -0.7
NSS Namsos 24.65 351 *e*P P 05 31 05.5 +0.3
OUL Oulu 24.84 5 P P 05 31 05.6 -1.3
OUL pmax pmax
comp=Z,53nm,0.9s
LEWI Lewis, Hebride 24.99 324 *e*P P 05 31 08.6 +0.2
LEWI IAmb IAmb 05 31 13.7
comp=Z,34nm,0.8s
KIRV Kirov 25.64 35 LR LR 05 41 11.3
comp=Z,189nm,18.5s,baz=313,slow=36
KIRV Kirov 25.64 35‖ *e*P P 05 31 14.1 -0.1
MSF Maaselka 25.92 8 P P 05 31 16.5 -0.2
MSF pmax pmax
comp=Z,54nm,1.0s
LEIR Leirfjorden 26.06 353 *e*P P 05 31 19.4 +1.4

RAYN Ar Rayn 26.77 122 P **P** **05 31 24.4 -0.5**
RAYN Ar Rayn 26.77 122 *i* P **P** **05 31 25.2 +0.3**
SNR=6.9
RAYN Ar Rayn 26.77 122 P **P** **05 31 24.4 -0.5**
RAYN pmax pmax
comp=Z,9.0nm,1.0s
AKTO Aktyubinsk 27.68 56 LR LR 05 43 29.7
comp=Z,190nm,20.1s,baz=262,slow=38
STEI Steigen 27.69 355 *eP* **P** **05 31 34.2 +1.6**
APA Apatity 28.03 10⇓ *eP* **P** **05 31 35.5 -0.2**
APA *e* 05 32 23.6
APA MLR MLR
comp=Z,950nm,10.3s
LVZ Lovozero 28.51 11 P **P** **05 31 39.2 -0.8**
LVZ Lovozero 28.51 11 P **P** **05 31 39.2 -0.8**
LVZ pmax pmax
comp=Z,14nm,0.8s
KTK1 Kautokeino 28.64 2 *eP* **P** **05 31 39.9 -1.2**
AB31 Akbulak array 28.83 59 P **P** **05 31 41.9 -1.1**
ABKAR Akbulak array 28.83 59 P **P** **05 31 41.7 -1.2**
ARTI Arti 29.13 44 P **P** **05 31 44.8 -0.8**
ARTI IAmb IAmb 05 31 52.4
comp=Z,20nm,0.7s
ARTI Arti 29.13 44 P **P** **05 31 45.3 -0.3**
ARTI 05 32 35.4
ARTI 05 34 51.1
ARTI S **S** **05 36 39.5 +2.4**
ARTI SS **SnSn** **05 38 00.2 -1.0**
ARTI MLR MLR
comp=Z,425nm,13.0s
JETT Jettan, Norway 29.16 360 *eP* **P** **05 31 44.8 -0.9**
ARA0 ARCESS Array S 29.24 3 *eP* **P** **05 31 44.7 -1.8**
ARCES ARCESS Array B 29.24 3 P **P** **05 31 45.0 -1.4**
comp=Z,5.2nm,0.5s,baz=185,slow=11,SNR=91
ARCES PcP **PcP** **05 34 52.6 -0.4**
comp=Z,4.0nm,0.8s,baz=160,slow=2.9,SNR=2.7
ARCES LR LR 05 43 18.7
comp=Z,181nm,21.0s,baz=184,slow=36
comp=Z,5.2nm,0.5s
SVE Sverdlovsk 30.45 44 *eP* P 05 32 02.9 +5.6
SVE pmax pmax
comp=Z,27nm,0.9s
TORD Torodi Ar. Bea 31.97 217 P **P** **05 32 10.9 0.0**
comp=Z,6.3nm,0.3s,baz=31,slow=11,SNR=3.5
TORD PcP **PcP** **05 35 01.0 0.0**
comp=Z,3.4nm,0.4s,baz=334,slow=23,SNR=1.6
comp=Z,6.3nm,0.3s
MZR Muzera 32.55 112 *i* P **P** **05 32 14.9 -1.1**
SNR=6.8
SHME Shamm 32.62 105 *i* P **P** **05 32 15.6 -1.1**
SNR=7.2
BANOM Banah 32.81 105 *i* P **P** **05 32 17.1 -1.3**
SNR=7.8
ASUD Al Ashush, Dub 32.86 108 P **P** **05 32 18.6 -0.3**
NAZ Nazwa, Dubai 32.89 107 *i* P **P** **05 32 18.6 -0.5**
SNR=11
FAQ Al Faqa, Dubai 32.98 108 P **P** **05 32 19.0 -0.9**
MSFE Esma-Masafi 33.03 106 P **P** **05 32 19.7 -0.6**
HRA Herat 33.23 87 P **P** **05 32 22.4 +0.2**
UOSS Minazif 33.31 107 P **P** **05 32 21.6 -1.2**
UOSS IAmb IAmb 05 32 22.3
comp=Z,14nm,0.8s
UOSS Minazif 33.31 107 P **P** **05 32 21.4 -1.3**
HATD Hatta, Dubai 33.33 107 P **P** **05 32 22.0 -0.9**
ALNE Al Ain 33.51 108 *i* P **P** **05 32 23.4 -1.1**
SNR=14
JMIC Jan Mayen 34.03 343 LR LR 05 46 31.7
comp=Z,119nm,19.6s,baz=104,slow=37
SOHO SOHO 34.03 108 *i* P **P** **05 32 28.1 -1.0**
SNR=12
BORG Borgarnes 34.24 329 LR LR 05 47 03.9
comp=Z,286nm,20.9s,baz=123,slow=37
ATD Arta Tunnel 34.77 140 P **P** **05 32 36.6 +1.1**
ATD IAmb IAmb 05 32 44.6
comp=Z,50nm,1.5s
FURI Furi 35.23 148 LR LR 05 49 24.8
comp=Z,128nm,18.0s,baz=342,slow=40
BORK Borovoye 35.47 52*ce***P** **P** **05 32 41.0 -0.2**
BORK pmax pmax
comp=Z,12nm,1.3s
BVAR Borovoye Array 35.51 52 P **P** **05 32 41.9 +0.3**
comp=Z,2.3nm,0.5s,baz=250,slow=4.4,SNR=13
BVAR PcP **PcP** **05 35 10.5 0.0**
comp=Z,2.4nm,0.6s,baz=272,slow=3.8,SNR=2.3
BVAR LR LR 05 49 00.9
comp=Z,144nm,20.7s,baz=264,slow=39
comp=Z,2.3nm,0.5s
KK31 Karatay Array 36.73 69 P **P** **05 32 50.5 -1.5**
KK31 Karatay Array 36.73 69 *eP* **P** **05 32 51.6 -0.4**
KKAR Karatay Array 36.73 69 P **P** **05 32 51.2 -0.9**
KKAR Karatay Array 36.73 69 P **P** **05 32 51.2 -0.9**
SIMJ Simiganj 36.84 77 P **P** **05 32 53.0 -0.3**
CHGR Chuyangaron 36.95 77 P **P** **05 32 53.1 -1.0**
CHGR Chuyangaron 36.95 77 P **P** **05 32 53.1 -1.0**
CHGR pmax pmax
comp=Z,32nm,0.7s
SCO Scoresbysund 37.14 338 *i* P **P** **05 32 58.2 +3.0**
SCO IAmb IAmb 05 33 03.6
comp=Z,38nm,1.2s
TRKS Terek-Say 37.57 71 P **P** **05 32 59.7 +0.3**
TRKS pmax pmax
comp=Z,11nm,1.0s
GAR Garm 37.70 76 P **P** **05 32 59.8 -0.7**
GAR IAmb IAmb 05 33 34.0
comp=Z,23nm,0.8s
SPITS Spitsbergen Ar 37.87 359 P **P** **05 33 01.2 -0.1**
comp=Z,5.6nm,0.8s,baz=163,slow=10,SNR=12
SPITS PcP **PcP** **05 35 17.3 0.0**
comp=Z,3.6nm,0.5s,baz=139,slow=6.4,SNR=9.7
SPITS LR LR 05 50 11.9
comp=Z,270nm,20.3s,baz=164,slow=39
comp=Z,5.6nm,0.8s
KBL Kabul 38.34 83 P **P** **05 33 05.5 -0.5**
KBL IAmb IAmb 05 33 08.9
comp=Z,28nm,1.4s
KBL Kabul 38.34 83 P **P** **05 33 05.5 -0.5**
KBL pmax pmax
comp=Z,28nm,1.5s
KBS Kingsbay 38.74 357 *i* P **P** **05 33 12.2 +3.6**
DBG Daneborg 38.86 343 *i* P **P** **05 33 12.9 +3.2**
LODK Lodwar 39.15 157 P **P** **05 33 13.3 +0.6**
LODK IAmb IAmb 05 33 15.6
comp=Z,35nm,0.9s
AAK Ala-Archa 39.68 69 P **P** **05 33 16.2 -0.9**
AAK Ala-Archa 39.68 69 LR LR 05 54 13.5
comp=Z,127nm,20.4s,baz=290,slow=43
AAK Ala-Archa 39.68 69 P **P** **05 33 15.6 -1.5**
AAK Ala-Archa 39.68 69⇑ *eP* **P** **05 33 16.9 -0.2**
AAK pmax pmax
comp=Z,3.0nm,0.7s
DAG Danmarks Havn 40.12 347 *eP* **P** **05 33 20.3 +0.2**
DAG IAmb IAmb 05 33 27.7
comp=Z,5.7nm,0.7s
KURBB Kurchatov Arra 40.73 56 P **P** **05 33 24.7 -0.7**
comp=Z,0.4nm,0.3s,baz=285,slow=9.5,SNR=6.3
KURBB PcP **PcP** **05 35 26.4 -0.3**
comp=Z,2.1nm,0.2s,baz=274,slow=3.9,SNR=9.3
KURBB LR LR 05 53 35.4
comp=Z,164nm,18.4s,baz=162,slow=41
comp=Z,0.4nm,0.3s
KURBB Kurchatov Arra 40.73 56 P **P** **05 33 27.5 +2.0**
DBIC Dimbokro 40.74 221 P **P** **05 33 25.8 -0.1**
DBIC IAmb IAmb 05 33 31.6
comp=Z,17nm,0.8s
DBIC Dimbokro 40.74 221 P **P** **05 33 25.3 -0.6**
comp=Z,11nm,0.8s,baz=56,slow=8.4,SNR=12
DBIC LR LR 05 51 29.1
comp=Z,115nm,19.6s,baz=44,slow=38
comp=Z,11nm,0.8s
DBIC Dimbokro 40.74 221 P **P** **05 33 25.8 -0.1**
DBIC pmax pmax
comp=Z,17nm,0.9s
BOOM Boomskoye usch 40.74 68 P **P** **05 33 25.5 -0.4**
BOOM Boomskoye usch 40.74 68 P **P** **05 33 25.5 -0.4**
BOOM pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 40.77 55 P **P** **05 33 24.5 -1.3**
KURK Kurchatov 40.77 55⇓ *eP* **P** **05 33 25.5 -0.3**
KURK pmax pmax
comp=Z,5.0nm,1.0s
BBTS Babate 41.44 243 LR LR 05 52 09.7
comp=Z,163nm,18.4s,baz=42,slow=38
NIL Nilore 41.89 82 P **P** **05 33 34.6 -0.7**
NIL IAmb IAmb 05 33 46.4
comp=Z,19nm,0.8s
NIL Nilore 41.89 82 P **P** **05 33 34.6 -0.7**
NIL pmax pmax
comp=Z,19nm,0.8s
TARG Taragay, Kyrgy 42.29 69 P **P** **05 33 38.5 -0.5**
TARG Taragay, Kyrgy 42.29 69 P **P** **05 33 38.5 -0.5**
TARG pmax pmax
comp=Z,7.0nm,1.0s
SUMG Summit 42.78 338 P **P** **05 33 42.9 +0.4**
SUMG Summit 42.78 338 P **P** **05 33 42.9 +0.4**
SUMG pmax pmax
comp=Z,22nm,1.2s
SUMG Summit 42.78 338 *eP* **P** **05 33 44.0 +1.5**
SUMG IAmb IAmb 05 33 46.5
comp=Z,14nm,0.9s
NOR Nord 43.24 352 P **P** **05 33 45.1 -0.6**
NOR pmax pmax
comp=Z,15nm,0.8s
NOR Nord 43.24 352 *eP* **P** **05 33 45.9 +0.2**
NOR IAmb IAmb 05 33 52.6
comp=Z,18nm,1.1s
MAKZ Makanchi 43.74 61 P **P** **05 33 49.3 -0.8**
MAKZ Makanchi 43.74 61 P **P** **05 33 49.3 -0.8**
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 43.95 60*c* *i* P **P** **05 33 50.9 -0.9**
MKAR Makanchi Array 43.95 60 P **P** **05 33 50.7 -1.1**
MKAR Makanchi Array 43.95 60 P **P** **05 33 51.0 -0.8**
comp=Z,8.3nm,0.6s,baz=282,slow=6.9,SNR=52
MKAR PcP **PcP** **05 35 37.5 0.0**
comp=Z,4.3nm,0.8s,baz=290,slow=4.0,SNR=3.1
MKAR ScP **ScP** **05 39 26.1 -2.9**
comp=Z,1.3nm,0.8s,baz=0.0,slow=3.6,SNR=4.3
MKAR LR LR 05 52 33.3
comp=Z,93nm,19.8s,baz=294,slow=37
comp=Z,8.3nm,0.6s
MKAR Makanchi Array 43.95 60 P **P** **05 33 50.7 -1.1**
ZALV Zalesovo Beam 44.03 50 P **P** **05 33 52.1 -0.2**
ZALV Zalesovo Beam 44.03 50 P **P** **05 33 51.4 -0.9**
comp=Z,7.2nm,0.6s,baz=275,slow=8.3,SNR=21
ZALV LR LR 05 54 43.4
comp=Z,107nm,19.7s,baz=257,slow=40
comp=Z,7.2nm,0.6s
ZALV Zalesovo Beam 44.03 50 P **P** **05 33 52.1 -0.2**
KMBO Kilima Mbogo 44.03 156 P **P** **05 33 51.6 -1.4**
comp=Z,15nm,0.8s,baz=353,slow=7.1,SNR=15
comp=Z,15nm,0.8s
KMBO Kilima Mbogo 44.03 156 *i* P **P** **05 33 54.5 +1.5**
KMBO pmax pmax
comp=Z,13nm,0.7s
NRS Narsarsuaq 44.40 321 *i* P **P** **05 33 54.2 -0.9**
DY2G Dye2 44.65 328 *i* P **P** **05 34 00.8 +3.4**
DY2G IAmb IAmb 05 34 05.7
comp=Z,68nm,1.3s
KIBK Kibwezi 45.42 155 P **P** **05 34 04.6 +0.7**
SFJD Kangerlussuaq 46.38 329 LR LR 05 54 31.6
comp=Z,417nm,18.6s,baz=88,slow=37
DGZ Jazzator, Alta 46.51 55⇑ *eP* **P** **05 34 11.3 -1.0**
DGZ pmax pmax
comp=Z,2.0nm,0.9s
SAATT Saattut 46.67 334 *i* P **P** **05 34 14.3 +1.3**
SAATT IAmb IAmb 05 34 16.8
comp=Z,22nm,0.9s
NEEM North Greenlan 46.94 343 *i* P **P** **05 34 15.0 -0.4**
NEEM IAmb IAmb 05 34 19.2
comp=Z,13nm,0.8s
GDH Godhavn 47.36 332 *i* P **P** **05 34 20.4 +2.0**
GDH IAmb IAmb 05 34 21.4
comp=Z,24nm,0.9s
UPNV Upernavik 48.05 337 *i* P **P** **05 34 26.5 +2.8**
UPNV IAmb IAmb 05 34 30.4
comp=Z,35nm,1.2s
KULLO Kullorsuaq 48.30 339 *i* P **P** **05 34 27.6 +2.0**
KULLO IAmb IAmb 05 34 29.4
comp=Z,29nm,1.1s
WMQ Urumqi 48.49 63 *eP* **P** **05 34 27.5 -0.1**
WMQ S **S** **05 41 25.7 -2.7**
WMQ pmax pmax
comp=Z,34nm,0.9s
WMQ LR LR
comp=Z,210nm,21.1s
FRB Frobisher Bay 54.35 327 LR LR 05 58 22.2
comp=Z,300nm,20.4s,baz=94,slow=36
EVN Everest 54.84 81 P **P** **05 35 14.8 -1.2**
EVN IAmb IAmb 05 35 30.0
comp=Z,18nm,0.7s
LSZ Lusaka 55.88 171 P **P** **05 35 22.5 -0.2**
LSZ Lusaka 55.88 171 LR LR 06 00 43.3
comp=Z,139nm,21.9s,baz=326,slow=38
LSZ Lusaka 55.88 171 P **P** **05 35 22.5 -0.2**
LSZ pmax pmax
comp=Z,6.0nm,0.7s
SCHQ Schefferville 56.94 316 P **P** **05 35 29.4 -0.6**
SCHQ Schefferville 56.94 316 P **P** **05 35 29.9 0.0**
comp=Z,14nm,0.7s,baz=62,slow=4.8,SNR=11
SCHQ LR LR 05 59 21.4
comp=Z,145nm,18.5s,baz=64,slow=35
comp=Z,14nm,0.7s
TIXI Tiksi 57.44 21 LR LR 06 03 23.2
comp=Z,173nm,18.7s,baz=18,slow=39
TIXI Tiksi 57.44 21⇓ *eP* **P** **05 35 33.5 +0.4**
TIXI pmax pmax
comp=Z,6.0nm,1.3s
RES Resolute Bay 57.64 344 LR LR 06 01 43.8
comp=Z,136nm,19.1s,baz=29,slow=37
GTA Gaotai 58.57 63 *eP* **P** **05 35 41.5 -0.2**
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA LR LR
comp=Z,150nm,16.4s
GTA LR LR
comp=Z,170nm,17.8s
XAUDM Khaudum 58.70 179 P **P** **05 35 43.0 +0.3**
XAUDM IAmb IAmb 05 35 44.3
comp=Z,12nm,0.6s
SONM Songino Array 58.85 52 P **P** **05 35 43.1 -0.5**
comp=Z,1.6nm,0.7s,baz=291,slow=9.7,SNR=7.3
SONM PcP **PcP** **05 36 33.3 +0.3**
comp=Z,2.3nm,0.8s,baz=248,slow=1.6,SNR=2.0
SONM LR LR 06 04 32.5
comp=Z,80nm,19.8s,baz=288,slow=40
comp=Z,1.6nm,0.7s
ULN Ulaanbaatar 59.23 51⇑ *eP* **P** **05 35 47.7 +1.5**
ULN pmax pmax
comp=Z,2.0nm,1.0s
TSUM Tsumeb 59.43 184 P **P** **05 35 48.1 +0.3**
TSUM IAmb IAmb 05 35 48.7
comp=Z,6.8nm,0.8s
TSUM Tsumeb 59.43 184 LR LR 06 03 18.1
comp=Z,197nm,19.4s,baz=335,slow=38
QNGWA Qangwa 59.68 180 P **P** **05 35 49.8 +0.4**
QNGWA IAmb IAmb 05 35 50.9
comp=Z,8.4nm,0.6s
QNGWA Qangwa 59.68 180 *i* P **P** **05 35 50.5 +1.0**
BRDH Bariadhala 61.37 84 LR LR 06 06 24.3
comp=Z,109nm,18.3s,baz=327,slow=40
GRTLG Ghanzi 61.51 180 P **P** **05 36 02.2 +0.4**
GRTLG Ghanzi 61.51 180 *i* P **P** **05 36 03.0 +1.1**
BROLN TIhalogang 61.55 173 *i* P **P** **05 36 03.3 +1.2**
PALK Pallekele 62.55 105 LR LR 06 06 11.7
comp=Z,117nm,19.5s,baz=327,slow=39
WIN Windhoek 62.80 184 P **P** **05 36 10.8 +0.2**
WIN Windhoek 62.80 184 P **P** **05 36 10.8 +0.2**
WIN pmax pmax
comp=Z,18nm,0.8s
LZDM Lanzhou Array 62.97 65 P **P** **05 36 11.3 -0.7**
comp=Z,2.2nm,0.3s,baz=309,slow=9.4,SNR=4.5
comp=Z,2.2nm,0.3s
LZH Lanzhou 63.00 64 *eP* **P** **05 36 11.7 -0.3**
LZH sP sP 05 36 18.1 0.0
LZH pmax pmax
comp=Z,17nm,1.2s
LZH LR LR
comp=Z,180nm,14.1s
LZH LR LR
comp=Z,190nm,13.4s
LZH LR LR
comp=Z,190nm,14.4s
KGCAE Kacgae 63.00 179 P **P** **05 36 13.1 +1.2**
KGCAE Kacgae 63.00 179 *i* P **P** **05 36 13.4 +1.6**
YAK Yakutsk 63.02 30 LR LR 06 06 39.2
comp=Z,213nm,18.9s,baz=302,slow=39
KOOLE Kule 63.13 181 *i* P **P** **05 36 14.1 +1.4**
LPHEP Lephephe 63.67 175 P **P** **05 36 17.2 +0.9**
LPHEP Lephephe 63.67 175 *i* P **P** **05 36 17.8 +1.5**
LKGWB Lokgwabe 64.25 180 P **P** **05 36 20.6 +0.6**
BTO Baotou 64.72 57 *eP* **P** **05 36 21.8 -1.4**
BTO pP **pP** **05 36 26.6 -1.0**
BTO sP **sP** **05 36 28.8 -0.5**
BTO pmax pmax
comp=Z,26nm,0.7s
BTO pmax pmax
comp=Z,130nm,7.7s
LBTB Lobatse 65.29 175 P **P** **05 36 27.6 +0.7**
LBTB Lobatse 65.29 175 LR LR 06 06 36.1
comp=Z,122nm,19.0s,baz=358,slow=38
LBTB Lobatse 65.29 175 P **P** **05 36 27.6 +0.7**
LBTB pmax pmax
comp=Z,17nm,0.7s
HHC Hu-ho-hao-te 65.57 56 *eP* **P** **05 36 29.2 +0.5**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,69nm,4.3s
HHC LR LR
comp=Z,140nm,17.6s
HHC LR LR
comp=Z,120nm,18.1s
MAKGR Makgori 66.04 176 *i* P **P** **05 36 32.9 +1.2**
PZH PanZhiHua 66.76 74 P **P** **05 36 35.0 -1.6**
PZH pmax pmax
comp=Z,10.0nm,0.6s
XAN Xi'an 67.60 64 P **P** **05 36 41.5 -0.2***c*
XAN pP sP 05 36 47.2 -0.7
XAN pmax pmax
comp=Z,21nm,0.9s
BILL Bilibino 68.74 13⇑ *eP* **P** **05 36 48.5 +0.3**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BOSA Boshof 68.85 176 P **P** **05 36 50.2 +0.8**
BOSA Boshof 68.85 176 P **P** **05 36 50.0 +0.6**
comp=Z,20nm,0.7s,baz=355,slow=7.0,SNR=49
BOSA LR LR 06 10 16.5
comp=Z,107nm,18.7s,baz=9.0,slow=39
comp=Z,20nm,0.7s
BOSA Boshof 68.85 176 P **P** **05 36 50.2 +0.8**
BOSA pmax pmax
comp=Z,24nm,0.8s
SADO Sadowa 68.91 311 LR LR 06 07 30.9
comp=Z,1µm,18.0s,baz=118,slow=36
HEH HeiHe 69.17 41 *eP* **P** **05 36 50.7 -0.4**
HEH pmax pmax
comp=Z,6.0nm,0.9s
CMAR Chiang Mai Arr 69.37 83 P **P** **05 36 51.5 -1.4**
comp=Z,1.8nm,0.5s,baz=305,slow=7.7,SNR=14
comp=Z,1.8nm,0.5s
SEY Seymchan 69.93 21 LR LR 06 11 16.8
comp=Z,139nm,19.4s,baz=323,slow=39
SEY Seymchan 69.93 21 *eP* P 05 37 06.9 +11
SEY pmax pmax
comp=Z,10.0nm,1.4s
F31M Tsiigehtchic 70.70 350 P **P** **05 37 00.0 -0.2**
F31M IAmb IAmb 05 37 06.4
comp=Z,16nm,0.8s
F28M Old Crow 71.25 352 P **P** **05 37 03.2 -0.5**
F28M IAmb IAmb 05 37 31.6
comp=Z,8.1nm,0.8s
YKA Yellowknife Ar 71.32 340 P **P** **05 37 03.9 -0.2**
comp=Z,1.2nm,0.6s,baz=50,slow=11,SNR=7.7
YKA LR LR 06 11 00.3
comp=Z,173nm,18.1s,baz=3.0,slow=38
comp=Z,1.2nm,0.6s
TIA Tai'an 71.80 58 P **P** **05 37 06.6 -0.9**
TIA pmax pmax
comp=Z,9.0nm,1.2s
F24K Squaw Lake 72.00 355 P **P** **05 37 08.8 +0.6**
F24K IAmb IAmb 05 37 16.0
comp=Z,17nm,1.2s
EPYK Eagle Plains 72.10 351 P **P** **05 37 09.2 +0.3**
EPYK IAmb IAmb 05 37 34.5
comp=Z,8.8nm,0.8s
MA2 Magadan 72.12 24 LR LR 06 13 01.9
comp=Z,107nm,19.1s,baz=299,slow=39
G27K Doyon Strip 72.21 353 P **P** **05 37 09.8 +0.3**
EPLO Experimental L 73.40 322 P **P** **05 37 16.9 +0.1**
EPLO IAmb IAmb 05 37 21.7
comp=Z,17nm,1.0s
EYMN Ely 73.51 320 P **P** **05 37 18.5 +1.0**
EYMN IAmb IAmb 05 37 23.4
comp=Z,14nm,1.0s
ULM Lac du Bonnet 74.00 323 P **P** **05 37 20.8 +0.6**
comp=Z,14nm,0.6s,baz=27,slow=6.1,SNR=8.2
comp=Z,14nm,0.6s
ULM Lac du Bonnet 74.00 323⇑ *eP* **P** **05 37 20.2 -0.1**
MDP Montagnes des 74.12 263 LR LR 06 04 00.8
comp=Z,32nm,20.0s,baz=46,slow=31
DAWY Dawson 74.64 351 P **P** **05 37 24.3 +0.5**
DAWY IAmb IAmb 05 37 30.2
comp=Z,14nm,1.1s
MAYO Mayo, Yukon 74.64 349 P **P** **05 37 24.0 +0.2**
MAYO IAmb IAmb 05 37 36.0
comp=Z,22nm,0.9s
ILAR Eielson Array 74.66 355 P **P** **05 37 24.3 +0.4**
comp=Z,8.8nm,0.3s,baz=356,slow=4.1,SNR=9.2
comp=Z,8.8nm,0.3s
HDA Harding Lake 75.02 355 P **P** **05 37 26.1 +0.1**
HDA IAmb IAmb 05 37 31.8
comp=Z,14nm,0.8s
WRH Wood River Hil 75.04 355 P **P** **05 37 26.1 0.0**
WRH IAmb IAmb 05 37 32.0
comp=Z,12nm,0.9s
SCRK Sand Creek 75.20 353 P **P** **05 37 27.8 +0.6**
USRK Ussuriysk Ar. 75.47 44 P **P** **05 37 29.2 +0.3**
comp=Z,3.7nm,0.8s,baz=338,slow=4.6,SNR=4.2
comp=Z,3.7nm,0.8s
NJ2 Nanjing 75.48 60 *eP* **P** **05 37 28.1 -1.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
K24K Donnelly Dome 75.53 354 P **P** **05 37 29.8 +0.9**
K24K IAmb IAmb 05 37 36.9
comp=Z,19nm,1.0s
DOT Dot Lake 75.53 353 P **P** **05 37 29.3 +0.3**
DOT IAmb IAmb 05 37 35.7
comp=Z,13nm,0.9s
TMAB Tom-Au,PA,Br 75.65 254 *eP* **P** **05 37 31.8 +1.5**
BCAR Beaver Creek A 75.88 352 P **P** **05 37 32.2 +1.2**
DHY Denali Highway 76.37 354 P **P** **05 37 33.8 -0.1**
DHY IAmb IAmb 05 37 40.0
comp=Z,20nm,1.0s
PPLA Purkeypile 76.83 357 P **P** **05 37 37.1 +0.6**
PPLA IAmb IAmb 05 37 42.6
comp=Z,21nm,0.9s
TKL Tuckaleechee C 77.36 306 LR LR 06 11 01.9
comp=Z,102nm,19.6s,baz=52,slow=35
HYT Haines Junctio 77.52 349 P **P** **05 37 41.2 +0.9**
HYT IAmb IAmb 05 37 49.1
comp=Z,11nm,1.1s
KSRS Korea Array 77.72 51 P **P** **05 37 41.2 -0.5**
comp=Z,4.6nm,0.6s,baz=314,slow=5.2,SNR=12
comp=Z,4.6nm,0.6s
SKT Skwentna 77.72 356 P **P** **05 37 41.5 +0.2**
SKT IAmb IAmb 05 37 47.6
comp=Z,10nm,0.6s
R33M Jennings River 77.79 346 P **P** **05 37 42.5 +0.6**
R33M IAmb IAmb 05 38 13.6
comp=Z,9.9nm,0.9s
CRQM Cirque 78.28 352 P **P** **05 37 44.4 -0.3**
T47A Sharon Grove 78.50 309 P **P** **05 37 46.5 +0.4**
DLBC Dease Lake 78.50 345 LR LR 06 12 05.1
comp=Z,83nm,19.5s,baz=325,slow=35
W50A Signal Mountai 78.61 307 P **P** **05 37 46.8 0.0**
W50A IAmb IAmb 05 37 52.0
comp=Z,17nm,0.8s
YSS Yuzhno-Sakhali 78.79 36 *eP* **P** **05 37 48.0 +0.5**
YSS pmax pmax
comp=Z,50nm,1.1s
E28A Huff 78.87 323 P **P** **05 37 48.5 +0.4**
ECSD EROS Data Cent 79.01 319 P **P** **05 37 48.7 -0.1**
ECSD IAmb IAmb 05 37 53.9
comp=Z,11nm,0.9s
PETK Petropavlovsk- 79.63 25 P **P** **05 37 52.5 +0.4**
comp=Z,2.9nm,0.7s,baz=17,slow=5.3,SNR=1.7
comp=Z,2.9nm,0.7s
SMTB Santa Maria do 79.71 249 *eP* **P** **05 37 53.3 +0.3**
GUA01 Guaratinga, BA 79.88 238 *eP* **P** **05 37 55.0 +1.2**
X48A Hartselle 80.17 307 P **P** **05 37 55.2 -0.1**
X48A IAmb IAmb 05 38 00.1
comp=Z,19nm,0.8s
CCM Cathedral Cave 80.17 312 P **P** **05 37 55.3 +0.1**
CCM IAmb IAmb 05 37 59.9
comp=Z,16nm,0.8s
CCM Cathedral Cave 80.17 312 P **P** **05 37 55.3 +0.1**
CCM pmax pmax
comp=Z,16nm,0.8s

ABR01	Abrolhos, BA	80.19	236	eP	P	05 37 57.1	+1.8
SDBA	SAO DESIDERIO	80.29	245	eP	P	05 37 56.9	+0.8
P38A	Dawn	80.34	314	P	P	05 37 56.2	+0.1
LRAL	Lakeview Retre	81.09	306	P	P	05 38 00.2	-0.1
LRAL				IAmb	IAmb	05 38 05.3	
	comp=Z,20nm,0.8s						
RSSD	Black Hills	82.27	323	P	P	05 38 06.5	0.0
RSSD				IAmb	IAmb	05 38 12.1	
	comp=Z,12nm,1.1s						
RSSD	Black Hills	82.27	323	P	P	05 38 06.6	0.0
RSSD				pmax	pmax		
	comp=Z,12nm,1.2s						
SJMB	Sao Joao De Ma	82.32	238	eP	P	05 38 07.8	+1.0
146A	Union	82.63	307	P	P	05 38 07.5	-0.9
ITTB	Itaituba	82.64	258	eP	P	05 38 09.1	+0.5
JTMT	Jette	83.55	331	P	P	05 38 13.6	+0.6
DIAM	Diamantina, MG	83.65	240	eP	P	05 38 14.5	+0.6
BBB	Bella Bella	83.85	341	LR	LR	06 17 27.7	
	comp=Z,130nm,18.6s,baz=38,slow=37						
MIAR	Mount Ida	83.98	311	P	P	05 38 16.7	+1.4
MIAR				pmax	pmax		
	comp=Z,28nm,1.0s						
NEW	Newport	84.11	333	P	P	05 38 16.9	+1.1
NEW				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NPGB	Novo Progresso	84.13	256	eP	P	05 38 16.9	+0.6
MJAR	Matsushiro Arr	84.24	46	P	P	05 38 15.8	-0.8
	comp=Z,8.5nm,0.9s,baz=313,slow=5.1,SNR=10						
	comp=Z,8.5nm,0.9s						
SNDB	Serra Nova Dou	84.48	249	eP	P	05 38 18.6	+0.7
BDFB	Brasilia	84.70	244	P	P	05 38 19.5	+0.4
	comp=Z,7.9nm,0.9s,baz=9.0,slow=4.0,SNR=12						
BDFB				LR	LR	06 17 14.8	
	comp=Z,94nm,19.2s,baz=64,slow=36						
	comp=Z,7.9nm,0.9s						
SDV	Santo Domingo	85.39	278	eP	P	05 38 23.1	+0.2
MACA	Manacapuru-AM	85.56	262	P	P	05 38 22.9	-0.5
MACA	Manacapuru-AM	85.56	262	eP	P	05 38 24.1	+0.6
TPAW	Teton Pass	85.78	327	P	P	05 38 25.3	+0.8
TPAW				IAmb	IAmb	05 38 31.3	
	comp=Z,7.1nm,1.1s						
PDAR	Pinedale Array	85.78	326	P	P	05 38 24.2	-0.3
	comp=Z,1.3nm,0.5s,baz=61,slow=8.0,SNR=14						
PDAR				LR	LR	06 16 31.1	
	comp=Z,139nm,21.7s,baz=19,slow=36						
	comp=Z,1.3nm,0.5s						
IPMB	Ipameri, GO	86.47	243	eP	P	05 38 28.8	+1.0
WMOK	Wichita Mounta	86.76	314	P	P	05 38 30.6	+1.4
WMOK				pmax	pmax		
	comp=Z,19nm,1.0s						
PDRB	Porto dos Gac	88.16	253	eP	P	05 38 36.8	+0.7
DUG	Dugway, Tooele	89.29	326	P	P	05 38 42.3	+1.0
DUG				pmax	pmax		
	comp=Z,18nm,0.9s						
WVOR	Wild Horse Val	89.69	331	P	P	05 38 44.3	+1.2
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANMO	Albuquerque	90.62	319	LR	LR	06 18 04.7	
	comp=Z,196nm,21.5s,baz=132,slow=35						
ANMO	Albuquerque	90.62	319	P	P	05 38 48.5	+0.8
ANMO				pmax	pmax		
	comp=Z,8.0nm,3.0s						
PP1B	Ponte de Pedra	90.82	248	eP	P	05 38 49.2	+0.7
YBH	Yreka Blue Hor	91.75	334	LR	LR	06 22 26.5	
	comp=Z,11nm,18.8s,baz=42,slow=37						
NVAR	Mina Array Bea	93.03	329	P	P	05 38 59.2	+0.4
	comp=Z,1.0nm,0.9s,baz=32,slow=5.5,SNR=5.7						
NVAR				PKKP	PKKPdf	05 56 02.8	-0.9
	comp=Z,0.5nm,0.8s,baz=225,slow=2.6,SNR=3.6						
NVAR				LR	LR	06 22 32.4	
	comp=Z,228nm,18.6s,baz=28,slow=37						
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	93.55	314	P	P	05 39 02.0	+0.8
	comp=Z,7.4nm,0.8s,baz=62,slow=4.8,SNR=32						
	comp=Z,7.4nm,0.8s						
TUC	Tucson	94.88	321	P	P	05 39 07.7	+0.5
TUC				pmax	pmax		
	comp=Z,5.0nm,1.7s						
JTS	Las Juntas de	95.12	288	LR	LR	06 20 10.7	
	comp=Z,76nm,18.3s,baz=43,slow=34						
PFO	Pinyon Flats O	96.40	325	LR	LR	06 23 51.5	
	comp=Z,126nm,19.4s,baz=32,slow=36						
CMIG	Matias Romero	97.33	300	LR	LR	06 24 42.9	
	comp=Z,75nm,18.8s,baz=1.0,slow=36						
CPUP	Villa Florida	98.30	243	LR	LR	06 26 31.3	
	comp=Z,19nm,18.2s,baz=264,slow=37						
LPAZ	La Paz	99.59	257	LR	LR	06 26 39.9	
	comp=Z,55nm,18.0s,baz=43,slow=37						
NVL	N'lazarevskaya	111.11	183	i PKIKP	PKiKP	05 44 22.9	+5.7
NVL				e		05 45 00.9	
NVL				ePPP	PPP	05 47 21.0	
NVL				eSS	SS	06 00 35.3	+6.7
NVL				eSSS	SSS	06 04 43.6	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				pmax	pmax		
	comp=N,495nm,19.0s						
NVL				MLR	MLR		
	comp=Z,151nm,21.0s						
SNAA	Sanae	113.09	188	PP	PP	05 45 11.2	0.0
	comp=Z,1.1nm,0.9s,baz=53,slow=3.6,SNR=4.3						
WRA	Warramunga Arr	120.38	91	PKP	PKPdf	05 44 35.7	-0.9
	comp=Z,2.2nm,0.6s,baz=313,slow=1.8,SNR=18						
ASAR	Alice Springs	122.17	95	PKP	PKPdf	05 44 39.3	-0.7
	comp=Z,8.7nm,0.5s,baz=308,slow=1.6,SNR=107						
QSPA	South Pole Qui	130.31	180	PKP	PKiKP	05 44 55.0	0.0
	comp=Z,1.1nm,0.6s,baz=153,slow=0.9,SNR=10						
QSPA				PP	PP	05 47 08.7	+0.2
	comp=Z,1.0nm,0.9s,baz=237,slow=2.2,SNR=3.0						
STKA	Stephens Creek	132.22	99	PKP	PKPdf	05 44 58.3	-0.5
	comp=Z,5.0nm,0.6s,baz=341,slow=2.9,SNR=10.0						
VNDA	Vanda	139.47	168	PKP	PKPdf	05 45 10.7	-0.3
	comp=Z,0.3nm,0.6s,baz=333,slow=8.3,SNR=1.8						

*ATH **01** 05:31:45.3, 40.48N×20.70E, h2km, ML2.9/13, Manual Solution by S.Koutrakis First location: 2019/11/01 05:33:07, This location: 2020/06/30 04:55:11 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*PDG **01** 05:31:46.9±0.8, 40.51N×20.74E, h6km±2km, ML2.9/12, Error ellipse: s-maj=1.5km s-min=3.7km az=0.0*

*BEO **01** 05:31:46.8±0.3, 40.53N×20.96E, h0km, ML2.7/3*

*TIR **01** 05:31:46.5, 40.51N×20.81E, h16km±1km, Ml2.9/7*

*THE **01** 05:31:46.4, 40.5N±0.9×2.1E±°, h1km±1km, M2.8/10, MLh2.8/10*

*SKO **01** 05:31:48.1, 40.50N×20.87E, h13km, ML2.8*

ISC 01 05:31:46.8±1.0, **40.48N**±0.01×**20.79E**±0.02, **h5**km±8km, **n73**, σ1°**05**/120, **7C-5D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.14**	**358**	Pg	**Pg**	**05 31 49.6**	**-0.1**
KBN				Sg	**Sg**	**05 31 51.6**	**-0.2**
KBN				AML	AML	05 31 52.8	
	37nm,0.2s						
KBN	**Korca**	**0.14**	**358**	P	**Pg**	**05 31 49.7**	**-0.1**
KBN				S	**Sg**	**05 31 51.7**	**-0.1**
NEST	**Nestorio**	**0.21**	**108**	Pg	**Pg**	**05 31 51.2**	**+0.4**
NEST				Sn	**Sg**	**05 31 55.0**	**+1.4**
NEST				AML	AML	05 31 55.6	
	12nm,0.4s						
NEST	**Nestorio**	**0.21**	**108**	P	**Pg**	**05 31 51.2**	**+0.4**
NEST				S	**Sg**	**05 31 55.1**	**+1.5**
NEST	**Nestorio**	**0.21**	**108**	P	**Pg**	**05 31 51.1**	**+0.3**
NEST				S	**Sg**	**05 31 54.6**	**+1.1**
PENT	**Pentalofos**	**0.39**	**137**	P	**Pg**	**05 31 54.2**	**-0.1**
PENT				S	**Sg**	**05 32 00.9**	**+1.5**
PENT	**Pentalofos**	**0.39**	**137**	P	**Pg**	**05 31 54.0**	**-0.2**
PENT				S	**Sg**	**05 31 59.2**	**-0.2**
OHR	**Ohrid**	**0.63**	**0**	*i* Pg	**Pg**	**05 31 59.3**	**+0.4**
OHR				*i* Sg	**Sb**	**05 32 09.1**	**-0.5**
OHR				eLg	Lg	05 32 09.7	
	comp=E,782nm,0.6s						
OHR				eLg	Lg	05 32 10.1	
	comp=N,263nm,0.3s						
KZN	**Kozani**	**0.77**	**103**	P	**Pg**	**05 32 01.1**	**-0.4**
KZN				S	**Sb**	**05 32 13.8**	**+0.4**
KZN	**Kozani**	**0.77**	**103**	P	**Pg**	**05 32 01.1**	**-0.4**
KZN				S	**Sb**	**05 32 13.4**	**0.0**
JAN	**Janina**	**0.82**	**177**	P	**Pg**	**05 32 00.9**	**-1.7**
JAN	**Janina**	**0.82**	**177**	P	**Pg**	**05 32 00.9**	**-1.7**
JAN				S	**Sg**	**05 32 12.2**	**-1.0**
PRMD	**Pramanda**	**0.98**	**166**	P	**Pg**	**05 32 04.6**	**-0.9**
PRMD				S	**Sb**	**05 32 19.6**	**+0.1**
VLO	**Vlora**	**0.99**	**270**	Pg	**Pg**	**05 32 05.5**	**-0.3**
VLO				Sg	**Sg**	**05 32 19.2**	**+0.6**
IGT	**Igoumenitsa**	**1.01**	**201**	Pg	**Pg**	**05 32 05.9**	**-0.3**
IGT				Sg	**Sn**	**05 32 21.8**	**-0.4**
IGT				AML	AML	05 32 28.5	
	comp=N,0.6nm,0.5s						
IGT	**Igoumenitsa**	**1.01**	**201**	P	**Pg**	**05 32 05.7**	**-0.3**
IGT				S	**Sb**	**05 32 20.5**	**+0.2**
IGT	**Igoumenitsa**	**1.01**	**201**	*i* Pg	**Pg**	**05 32 05.8**	**-0.3**
IGT				*i* Sg	**Sn**	**05 32 22.6**	**+0.4**
IGT	**Igoumenitsa**	**1.01**	**201**	ePg	**Pg**	**05 32 05.5**	**-0.6**
IGT				eSg	**Sn**	**05 32 22.6**	**+0.4**
IGT	**Igoumenitsa**	**1.01**	**201**	P	**Pg**	**05 32 04.4**	**-1.8**
IGT				S	**Sg**	**05 32 17.6**	**-1.6**
KEK	**Kerkira**	**1.08**	**225**	Pn	**Pn**	**05 32 12.4**	**+3.8**
KEK				Sn	**Sn**	**05 32 26.6**	**+2.6**
TIR	**Tirane**	**1.12**	**321**	Pn	**Pg**	**05 32 06.9**	**-1.3**
TIR				Sn	**Sb**	**05 32 23.6**	**+0.1**
TIR				AML	AML	05 32 33.4	
	comp=N,0.6nm,0.6s						
TIR	**Tirane**	**1.12**	**321**	*i* Pg	**Pg**	**05 32 07.4**	**-0.8**
TETR	**Tetrakomo, Epi**	**1.19**	**162**	P	**Pg**	**05 32 08.9**	**-0.8**
TETR				S	**Sn**	**05 32 27.0**	**+0.1**
TETR	**Tetrakomo, Epi**	**1.19**	**162**	P	**Pg**	**05 32 09.4**	**-0.2**
TETR				S	**Sb**	**05 32 25.8**	**+0.1**
THL	**Klokotos Trika**	**1.31**	**134**	Pn	**Pn**	**05 32 10.2**	**-1.5**
THL				Sn	**Sn**	**05 32 29.8**	**+0.2**
THL	**Klokotos Trika**	**1.31**	**134**	P	**Pn**	**05 32 10.9**	**-0.9**
THL				S	**Sn**	**05 32 30.2**	**+0.6**
THL	**Klokotos Trika**	**1.31**	**134**	P	**Pn**	**05 32 11.2**	**-0.6**
THL				S	**Sn**	**05 32 29.7**	**+0.1**
LIT	**Litokhoron**	**1.35**	**106**	P	**Pn**	**05 32 11.8**	**-0.5**
LIT	**Litokhoron**	**1.35**	**106**	*i* Pg	**Pg**	**05 32 12.8**	**+0.1**
LIT				*i* Sg	**Sn**	**05 32 32.2**	**+1.5**
LIT	**Litokhoron**	**1.35**	**106**	P	**Pn**	**05 32 12.2**	**-0.2**
LIT				S	**Sn**	**05 32 31.3**	**+0.5**
SKO	**Skopje**	**1.57**	**18**	*i* Pn	**Pg**	**05 32 17.0**	**+0.1**
VAY	**Valandovo**	**1.59**	**57**	*i* Pg	**Pn**	**05 32 15.8**	**+0.2**
VAY				*i* Sg	**Sg**	**05 32 38.4**	**+0.5**
VAY				eLg	Lg	05 32 41.4	
	comp=E,64nm,0.7s						
VAY				eLg	Lg	05 32 44.8	
	comp=N,95nm,0.7s						
THE	**Thessaloniki**	**1.66**	**84**	*i* Pn	**Pb**	**05 32 17.4**	**-0.5**
LKD2	**Lefkada island**	**1.69**	**184**	Pn	**Pb**	**05 32 18.6**	**+0.2**
LKD2				Sn	**Sg**	**05 32 44.5**	**+3.4**
LKD2				AML	AML	05 32 52.8	
	comp=N,0.5nm,0.6s						
KNT	**Kendrikon**	**1.74**	**66**	P	**Pn**	**05 32 17.2**	**-0.4**
KNT	**Kendrikon**	**1.74**	**66**	*i* Pn	**Pn**	**05 32 17.6**	**-0.1**
KNT	**Kendrikon**	**1.74**	**66**	P	**Pn**	**05 32 17.4**	**-0.3**
EVR	**Evrytania**	**1.75**	**153**	P	**Pn**	**05 32 18.0**	**+0.1**
HORT	**Hortiatis**	**1.76**	**85**	P	**Pn**	**05 32 17.3**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.79**	**144**	P	**Pn**	**05 32 19.1**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.79**	**144**	P	**Pn**	**05 32 17.8**	**-0.6**
EVGI	**Lefkada island**	**1.86**	**183**	P	**Pn**	**05 32 19.1**	**-0.2**
AGG	**Agios Georgios**	**1.88**	**140**	P	**Pn**	**05 32 19.6**	**0.0**
AGG	**Agios Georgios**	**1.88**	**140**	P	**Pn**	**05 32 19.9**	**+0.3**
ULC	**Ulcinj**	**1.89**	**322**	⇑*i* Pn	**Pn**	**05 32 19.1**	**-0.7**
ULC				*i* Sn	**Sb**	**05 32 46.4**	**+0.7**
SOH	**Sokhos**	**1.98**	**79**	P	**Pn**	**05 32 21.2**	**+0.1**
FSK	**Fiskardo**	**2.02**	**185**	P	**Pn**	**05 32 20.6**	**-1.0**
PLG	**Polygyros**	**2.03**	**92**	P	**Pn**	**05 32 21.9**	**+0.2**
DRME	**Dracevica, Mon**	**2.09**	**325**	ePg	**Pb**	**05 32 23.9**	**-1.4**
DRME				eSg	**Sg**	**05 32 56.0**	**+2.0**
DRME	**Dracevica, Mon**	**2.09**	**325**	⇓*i* Pn	**Pn**	**05 32 23.0**	**+0.4**
DRME				*i* Sn	**Sb**	**05 32 51.4**	**-0.2**
PVY	**Plav**	**2.21**	**344**	⇓*i* Pn	**Pn**	**05 32 25.6**	**+1.4**
PVY				*i* Sn	**Sb**	**05 32 54.6**	**-0.3**
SRS	**Serrai**	**2.22**	**72**	ePg	**Pn**	**05 32 24.6**	**+0.3**
SRS				eSg	**Sn**	**05 32 50.9**	**-1.2**
SRS	**Serrai**	**2.22**	**72**	P	**Pn**	**05 32 24.6**	**+0.3**
PDG	**Podgorica**	**2.27**	**330**	Pn	**Pn**	**05 32 26.2**	**+1.2**
PDG				Sn	**Sb**	**05 32 56.9**	**+0.4**
PDG	**Podgorica**	**2.27**	**330**	ePg	**Pn**	**05 32 25.7**	**+0.8**
PDG				eSg	**Sg**	**05 32 58.3**	**-1.3**
PDG	**Podgorica**	**2.27**	**330**	⇓*i* Pn	**Pn**	**05 32 25.5**	**+0.6**
PDG				*i* Sn	**Sb**	**05 32 55.2**	**-1.3**
BUM	**Brajici-Budva**	**2.31**	**323**	⇑*i* Pn	**Pn**	**05 32 25.6**	**-0.1**
BUM				*i* Sn	**Sn**	**05 32 55.8**	**+1.2**
BOSS	**Bosilegrad**	**2.38**	**32**	ePn	**Pn**	**05 32 26.8**	**+0.3**
IVA	**Berane**	**2.48**	**345**	⇑*i* Pn	**Pn**	**05 32 29.6**	**+1.6**
IVA				*i* Sn	**Sb**	**05 33 00.8**	**-2.1**
CEME	**Cevo**	**2.50**	**326**	⇑*i* Pn	**Pn**	**05 32 28.3**	**+0.1**
CEME				*i* Sn	**Sn**	**05 33 00.8**	**+1.6**
KOME	**Kolasin**	**2.56**	**338**	ePg	**Pb**	**05 32 32.0**	**-1.2**
KOME				eSg	**Sg**	**05 33 07.6**	**-1.3**
KOME	**Kolasin**	**2.56**	**338**	⇓*i* Pn	**Pn**	**05 32 29.7**	**+0.7**
KOME				*i* Sn	**Sb**	**05 33 02.9**	**-2.1**
HCY	**Herceg Novi**	**2.62**	**319**	⇑*i* Pn	**Pn**	**05 32 29.5**	**-0.3**
HCY				*i* Sn	**Sn**	**05 33 03.9**	**+1.9**
KLV	**Kalavryta, Ach**	**2.65**	**156**	Pn	**Pb**	**05 32 33.7**	**-1.1**
NKME	**Niksic**	**2.67**	**330**	⇓*i* Pn	**Pn**	**05 32 31.1**	**+0.6**
NKME				*i* Sn	**Sn**	**05 33 05.5**	**+2.2**
SELS	**Selova**	**2.75**	**5**	ePn	**Pn**	**05 32 33.3**	**+1.7**
SELS				eSn	**Sn**	**05 33 05.1**	**-0.2**
SJES	**Sjenica**	**2.85**	**348**	ePn	**Pn**	**05 32 33.9**	**+0.9**
BRY	**Bratogost**	**2.95**	**326**	⇑*i* Pn	**Pn**	**05 32 35.3**	**+0.8**
BRY				*i* Sn	**Sn**	**05 33 11.7**	**+1.3**
UPM	**Unac-Piva**	**3.07**	**333**	⇑*i* Pn	**Pn**	**05 32 36.5**	**+0.4**
UPM				*i* Sn	**Sn**	**05 33 14.8**	**+1.5**
GOCS	**Kraljevo Serbi**	**3.08**	**1**	ePn	**Pn**	**05 32 35.7**	**-0.6**
IVAS	**Ivanjica**	**3.13**	**351**	ePn	**Pn**	**05 32 38.0**	**+1.1**
STON	**Ston**	**3.33**	**317**	ePn	**Pn**	**05 32 39.2**	**-0.3**
DIVS	**Divibare**	**3.67**	**351**	ePn	**Pn**	**05 32 45.9**	**+1.6**

*MEX **01** 05:35:25.0±0.4, 14.76N×92.38W, h91km±6km, MD3.6*

*GCG **01** 05:35:25.7±0.7, 14.70N×92.38W, h72km±5km, MD3.6, ML3.2*

ISC 01 05:35:19.8±2.5, **14.4N**±0.1×**92.5W**±0.1, **h93**km±14km, **n11**, σ1°**90**/18, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.50**	**21**	eS	**Sn**	**05 35 45.8**	**-0.2**
SMCA	**Catarina**	**0.55**	**41**	*i* P	**Pn**	**05 35 37.3**	**+1.9**
SMCA				eS	**Sn**	**05 35 46.9**	**0.0**
PATR	**El Naranjo**	**0.71**	**17**	eP	**Pn**	**05 35 37.7**	**+0.8**
PATR				eS	**Sn**	**05 35 47.7**	**-2.0**
CHUJ	**Union Juarez**	**0.73**	**27**	eP	**Pn**	**05 35 38.6**	**+1.4**
CHUJ				eS	**Sn**	**05 35 48.8**	**-1.4**
PAVE	**Pavencul**	**0.80**	**19**	eP	**Pn**	**05 35 38.8**	**+1.0**
PAVE				eS	**Sn**	**05 35 49.4**	**-1.8**
STG2	**El Palmar, Qui**	**1.04**	**90**	eP	**Pn**	**05 35 41.0**	**+0.7**
STG2				eS	**Sn**	**05 35 53.6**	**-2.2**
PCIG		**1.46**	**330**	eP	**Pn**	**05 35 46.2**	**+1.0**
PCIG				eS	**Sn**	**05 36 03.2**	**-1.3**
CCIG	**Comitan**	**1.86**	**9**	eP	**Pn**	**05 35 52.9**	**+2.4**
CCIG				eS	**Sn**	**05 36 12.6**	**-1.2**
CCIG	**Comitan**	**1.86**	**9**	eP	**Pn**	**05 35 52.8**	**+2.3**
FG16	**Alotenango, Sa**	**1.89**	**95**	eP	**Pn**	**05 35 51.8**	**+0.9**
TGIG		**2.42**	**345**	eS	**Sn**	**05 36 23.0**	**-3.6**

*THE **01** 05:38:39.5, 40.1N×20.2E±°, h0km±1km, M2.5/7, MLh2.5/7*

*ATH **01** 05:38:39.5, 40.45N×20.77E, h2km±1km, ML2.5/7, Manual Solution by S.Koutrakis First location: 2019/11/01 05:40:21, This location: 2020/06/30 04:54:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*TIR **01** 05:38:41.1, 40.49N×20.85E, h11km±1km, Ml2.7/3*

ISC 01 05:38:40.1±1.1, **40.47N**±0.02×**20.78E**±0.03, **h3**km±10km, **n25**, σ0°**81**/43, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.15**	**2**	Pg	**Pg**	**05 38 42.9**	**-0.1**
KBN				Sg	**Sg**	**05 38 45.9**	**+0.8**
KBN	**Korca**	**0.15**	**2**	P	**Pg**	**05 38 42.9**	**-0.1**
KBN				S	**Sg**	**05 38 45.4**	**+0.4**
NEST	**Nestorio**	**0.21**	**106**	Pg	**Pg**	**05 38 44.3**	**0.0**
NEST				Sg	**Sg**	**05 38 48.0**	**+1.0**
NEST				AML	AML	05 38 48.7	
	6.5nm,0.3s						
NEST	**Nestorio**	**0.21**	**106**	P	**Pg**	**05 38 44.4**	**+0.2**
NEST				S	**Sg**	**05 38 48.5**	**+1.5**
NEST							
NEST	**Nestorio**	**0.21**	**106**	P	**Pg**	**05 38 44.2**	**0.0**
NEST				S	**Sg**	**05 38 46.9**	**-0.2**
PENT	**Pentalofos**	**0.39**	**135**	P	**Pg**	**05 38 47.1**	**-0.5**
PENT				S	**Sg**	**05 38 53.7**	**+1.0**
PENT	**Pentalofos**	**0.39**	**135**	P	**Pg**	**05 38 47.0**	**-0.5**
PENT				S	**Sg**	**05 38 52.2**	**-0.5**
KZN	**Kozani**	**0.78**	**102**	P	**Pg**	**05 38 54.8**	**-0.1**
KZN				S	**Sb**	**05 39 07.5**	**+0.3**
KZN	**Kozani**	**0.78**	**102**	P	**Pg**	**05 38 54.7**	**-0.1**
KZN				S	**Sg**	**05 39 05.3**	**+0.3**
JAN	**Janina**	**0.82**	**176**	P	**Pg**	**05 38 54.8**	**-0.9**
VLO	**Vlora**	**0.98**	**270**	Pg	**Pn**	**05 38 59.8**	**-0.9**
VLO				Sg	**Sn**	**05 39 15.3**	**+0.2**
IGT	**Igoumenitsa**	**1.00**	**200**	P	**Pn**	**05 39 01.2**	**+0.2**
IGT				Sg	**Sn**	**05 39 16.7**	**+1.1**
IGT	**Igoumenitsa**	**1.00**	**200**	P	**Pb**	**05 38 59.1**	**-0.9**
IGT	**Igoumenitsa**	**1.00**	**200**	P	**Pb**	**05 38 59.1**	**-0.9**
TIR	**Tirane**	**1.11**	**322**	Pg	**Pn**	**05 39 02.2**	**-0.4**
TIR				S	**Sn**	**05 39 19.7**	**+1.2**
TIR				AML	AML	05 39 25.5	
	0.5nm,1.0s						
TETR	**Tetrakomo, Epi**	**1.19**	**161**	P	**Pg**	**05 39 02.5**	**-0.4**
TETR				S	**Sn**	**05 39 19.7**	**-0.7**
THL	**Klokotos Trika**	**1.31**	**133**	P	**Pg**	**05 39 04.8**	**-0.4**
THL				S	**Sn**	**05 39 23.4**	**+0.1**
THL	**Klokotos Trika**	**1.31**	**133**	P	**Pg**	**05 39 04.6**	**-0.6**
THL				S	**Sg**	**05 39 21.3**	**-0.9**
LIT	**Litokhoron**	**1.36**	**105**	P	**Pb**	**05 39 05.8**	**-0.4**
LIT				S	**Sn**	**05 39 26.0**	**+1.5**
LIT	**Litokhoron**	**1.36**	**105**	P	**Pg**	**05 39 05.7**	**-0.4**
LIT				S	**Sb**	**05 39 23.9**	**0.0**
LKD2	**Lefkada island**	**1.69**	**183**	Pn	**Pg**	**05 39 13.2**	**+0.8**
LKD2				Sn	**Sg**	**05 39 36.8**	**+2.6**
LKD2				AML	AML	05 39 43.8	
	0.3nm,0.5s						
KNT	**Kendrikon**	**1.75**	**66**	P	**Pn**	**05 39 10.7**	**-0.6**
KNT	**Kendrikon**	**1.75**	**66**	P	**Pn**	**05 39 11.2**	**-0.1**
HORT	**Hortiatis**	**1.77**	**85**	P	**Pn**	**05 39 10.8**	**-0.8**
AGG	**Agios Georgios**	**1.88**	**140**	P	**Pn**	**05 39 13.6**	**+0.5**

TIR 01 05:40:03.9, 40.49N×20.86E, h6km±23km**, Ml2.7/3, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.14**	**338**	Pg	Pg	05 40 04.9	-2.0
KBN				S	Sg	05 40 07.6	-1.2
KBN	**Korca**	**0.14**	**338**	Pg	Pg	05 40 04.9	-2.0
KBN				S	Sg	05 40 07.8	-1.0
KBN				AML	AML	05 40 08.1	
	20nm,0.3s						
NEST	**Nestorio**	**0.17**	**118**	Pg	Pg	05 40 06.5	-0.8
NEST				Sg	Sg	05 40 10.2	+0.7
NEST				AML	AML	05 40 10.7	
	7.5nm,0.2s						
NEST	**Nestorio**	**0.17**	**118**	Pg	Pg	05 40 06.5	-0.8
NEST				Sg	Sg	05 40 10.2	+0.7
NEST				AML	AML	05 40 10.6	
	4.3nm,0.2s						
VLO	**Vlora**	**1.04**	**269**	P	Pg	05 40 23.6	-0.2
VLO				Sg	Sn	05 40 39.0	-0.7
VLO				AML	AML	05 40 41.4	
	1.5nm,0.4s						
IGT	**Igoumenitsa**	**1.04**	**203**	Pg	Pg	05 40 24.0	+0.2
IGT				Sg	Sn	05 40 39.0	-0.7
TIR	**Tirane**	**1.14**	**319**	Pn	Pn	05 40 26.1	-0.2
TIR				Sn	Sn	05 40 42.6	+0.4
TIR				AML	AML	05 40 46.2	
	0.2nm,0.6s						
TIR	**Tirane**	**1.14**	**319**	Pn	Pg	05 40 25.2	-0.5
TIR				Sn	Sn	05 40 42.3	+0.1
TIR				AML	AML	05 40 46.2	
	0.2nm,0.6s						

*BJI **01** 06:07:53.9, 6.61N×125.26E, h15km, mB5.1/13, mb4.8/54, Ms4.5/36, Ms7 4.2/35*

*IDC **01** 06:07:54.4±0.5, 6.68N×124.98E, h0km, mb4.4/23, mbtmp4.4/26, ML4.7/3, MS3.9/50, Error ellipse: s-maj=11.9km s-min=8.3km az=141.0*

*DJA **01** 06:07:55.8±0.5, 7.1N±8.8×12.5E±°, h12km±8km, M5.1/16, mb5.2/16, mB5.5/13, MLv5.4/11, Mw(mB)4.9/13, MwMwp5.3/3, Mwp5.5/3*

*MAN **01** 06:07:56.0, 6.81N×125.05E, h10km, mb5.5, ML4.5, MS4.7*

MAN INTENSITY V - KIDAPAWAN CITY; MAGSAYSAY DAVAO DEL SUR; INTENSITY IV - PIKIT COTABATO; BANSALAN DAVAO DEL SUR; INTENSITY III - DAVAO CITY.

*NEIC **01** 06:07:56.1±1.0, 6.75N

TPUB Ta-pu 16.98 346 Pn **Pn** **06 11 53.4 -0.5**
JAY Jayapura 18.17 120 LR LR 06 18 23.1
comp=Z,189nm,21.2s,baz=260,slow=35
JAGI Jajag, Banyuwa 18.60 216 P **P** **06 12 13.1 -0.7**
JAGI IAmb IAmb 06 12 21.5
comp=Z,68nm,1.1s
QIZ Qiongzhong 19.15 311 P **Pn** **06 12 21.4 +0.7**
QIZ S **S** **06 15 57.4 +0.3**
QIZ LR LR
comp=Z,980nm,10.0s
QIZ LR LR
comp=Z,1μm,9.5s
QIZ LR LR
comp=Z,870nm,18.2s
JOW Kunigami 20.20 8 P **P** **06 12 30.4 -0.8**
JOW IAmb IAmb 06 12 33.4
comp=Z,59nm,0.9s
JOW Kunigami 20.20 8 P **P** **06 12 31.9 +0.6**
comp=Z,52nm,0.9s,baz=242,slow=7.8,SNR=6.4
comp=Z,52nm,0.9s
MTN Manton Dam 20.40 163 P Pn 06 12 35.4 -0.1
comp=Z,36nm,1.1s
MTN Manton Dam 20.40 163 P **P** **06 12 32.4 -1.0**
MTN IAmb IAmb 06 12 42.5
comp=Z,154nm,1.9s
GUMO Guam 20.67 69 LR LR 06 19 10.2
comp=Z,268nm,21.3s,baz=239,slow=33
KDU Kakadu 20.69 159 P **P** **06 12 36.3 -0.3**
comp=Z,39nm,0.8s
LEM Lembang 21.99 232 P **P** **06 12 49.0 -1.7**
comp=Z,11nm,0.4s,baz=331,slow=23,SNR=1.4
comp=Z,11nm,0.4s
KNRA Kununurra 22.59 171 P **P** **06 12 57.9 +0.8**
comp=Z,107nm,0.9s
IPM Ipoh 23.98 266 P **P** **06 13 09.6 -1.5**
IPM IAmb IAmb 06 13 22.3
comp=Z,52nm,1.3s
KULM Kulim 24.28 268 P **P** **06 13 13.8 -0.1**
KULM IAmb IAmb 06 13 25.4
comp=Z,52nm,1.1s
SSE Sheshan 24.48 352 P **P** **06 13 16.5 +1.0**
SSE S **S** **06 17 38.8 +3.0**
SSE pmax pmax
comp=Z,23nm,0.7s
SSE pmax pmax
comp=Z,88nm,3.9s
SSE LR LR
comp=Z,160nm,17.3s
SSE LR LR
comp=Z,230nm,17.2s
FITZ Fitzroy Crossi 24.70 179 P **P** **06 13 17.4 -0.3**
comp=Z,8.3nm,0.8s
FITZ Fitzroy Crossi 24.70 179 P **P** **06 13 17.1 -0.5**
BKNI Bangkinang 24.76 256 P **P** **06 13 17.2 -1.1**
NJ2 Nanjing 25.82 348 *e*P **P** **06 13 29.7 +2.1**
NJ2 pmax pmax
comp=Z,15nm,0.6s
PSI Prapat 26.29 263 LR LR 06 27 06.6
comp=Z,277nm,18.0s,baz=60,slow=44
RPSI Rantau Prapat 26.31 262 P **P** **06 13 31.6 -0.8**
RPSI IAmb IAmb 06 13 44.1
comp=Z,36nm,1.3s
JNU Nakatsue 26.79 11 LR LR 06 24 19.9
comp=Z,186nm,20.0s,baz=222,slow=37
PMG Port Moresby 27.29 126 P **P** **06 13 39.0 -2.0**
PMG IAmb IAmb 06 13 46.0
comp=Z,40nm,0.9s
PMG Port Moresby 27.29 126 LR LR 06 25 31.9
comp=Z,130nm,21.2s,baz=218,slow=39
COEN Coen 27.36 139 P **P** **06 13 41.5 -0.2**
comp=Z,30nm,1.1s
COEN Coen 27.36 139 P **P** **06 13 40.1 -1.6**
COEN IAmb IAmb 06 13 59.5
comp=Z,28nm,1.1s
GSI Gunungsitoli 27.89 260 P **P** **06 13 45.9 -0.7**
WB0 Warramunga Arr 27.93 161 P **P** **06 13 45.9 -0.9**
WB0 IAmb IAmb 06 14 08.2
comp=Z,30nm,1.1s
CM31 Chiang Mai Arr 27.93 297 P **P** **06 13 45.9 -0.9**
CM31 IAmb IAmb 06 14 16.1
comp=Z,18nm,1.2s
CMAR Chiang Mai Arr 27.93 297 P **P** **06 13 47.2 +0.4**
comp=Z,1.4nm,0.3s,baz=117,slow=7.3,SNR=11
CMAR LR LR 06 24 58.0
comp=Z,108nm,19.4s,baz=105,slow=37
comp=Z,1.4nm,0.3s
KMI Kunming 28.06 313 P **P** **06 13 50.9 +2.6**
KMI pmax pmax
comp=Z,23nm,1.2s
KMI LR LR
comp=Z,410nm,16.7s
KMI LR LR
comp=Z,340nm,18.5s
KMI LR LR
comp=Z,340nm,19.1s
WRAB Tennant Creek 28.07 161 P **P** **06 13 47.2 -0.8**
WRAB IAmb IAmb 06 14 09.6
comp=Z,23nm,1.1s
WRA Warramunga Arr 28.07 161 P **P** **06 13 45.0 -3.1**
WRA Warramunga Arr 28.07 161 P **P** **06 13 46.8 -1.3**
comp=Z,4.5nm,0.7s,baz=338,slow=9.7,SNR=20
comp=Z,4.5nm,0.7s
WR8 Warramunga Arr 28.14 161 P **P** **06 13 48.1 -0.5**
WR8 IAmb IAmb 06 14 22.6
comp=Z,12nm,0.8s
JHJ Hachijo jima 2 29.60 26 LR LR 06 25 20.0
comp=Z,308nm,20.6s,baz=132,slow=35
JHJ2 Mitsune 29.61 26 P **P** **06 14 01.4 -0.2**
PZH PanZhiHua 29.61 314 P **P** **06 14 05.3 +3.4**
INU Inuyama 30.52 20 P **P** **06 14 08.6 -1.1**
INU IAmb IAmb 06 14 21.2
comp=Z,23nm,1.1s
KSAR Wonju Array Be 30.66 4 P **P** **06 14 09.6 -1.2**
KSRS Korea Array 30.67 5 P **P** **06 14 11.2 +0.3**
comp=Z,2.3nm,0.7s,baz=184,slow=9.4,SNR=9.1
comp=Z,2.3nm,0.7s
QIS Mount Isa 30.70 152 P **P** **06 14 13.3 +1.9**
XAN Xi'an 30.96 333 P **P** **06 14 14.0 +0.3**
XAN pP sP 06 14 18.9 +0.9
XAN pmax pmax
comp=Z,13nm,1.1s
XAN LR LR
comp=Z,280nm,18.3s
XAN LR LR
comp=Z,470nm,19.2s
XAN LR LR
comp=Z,480nm,15.1s
CD2 Chengdu 31.21 323 P **P** **06 14 16.8 +0.9**
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 LR LR
comp=Z,2μm,17.8s
CD2 LR LR
comp=Z,1μm,15.2s
CD2 LR LR
comp=Z,840nm,15.2s
AS31 Alice Springs 31.46 164 P **P** **06 14 17.2 -0.8**
ASAR Alice Springs 31.46 164 P **P** **06 14 17.2 -0.8**
comp=Z,1.5nm,0.6s,baz=342,slow=6.7,SNR=20
ASAR LR LR 06 27 57.9
comp=Z,85nm,19.9s,baz=292,slow=38
comp=Z,1.5nm,0.6s
WRKA Warakurna 31.76 174 P **P** **06 14 22.3 +1.5**
comp=Z,9.0nm,2.4s
HNS HongShan 31.91 344 ⇑P **P** **06 14 22.2 +0.3**
HNS pmax pmax
comp=Z,8.0nm,0.9s
HNS LR LR
comp=Z,200nm,17.7s
HNS LR LR
comp=Z,350nm,21.2s
HNS LR LR
comp=Z,330nm,22.0s
MJAR Matsushiro Arr 32.01 20 IAmb IAmb 06 14 25.6
comp=Z,7.6nm,1.2s
MJAR Matsushiro Arr 32.01 20 P **P** **06 14 20.5 -2.3**
comp=Z,4.7nm,0.8s,baz=190,slow=9.6,SNR=7.8
MJAR LR LR 06 26 46.2
comp=Z,339nm,19.9s,baz=227,slow=35
BJI Beijing 34.08 348 P **P** **06 14 40.1 -0.7**
BJI pmax pmax
comp=Z,7.0nm,1.2s
SNY Shenyang 34.95 358 ⇓P **P** **06 14 48.9 +0.6**
SNY pmax pmax
comp=Z,24nm,1.1s
LZDM Lanzhou Array 35.02 329 P **P** **06 14 50.3 +0.9**
comp=Z,1.1nm,0.3s,baz=88,slow=22,SNR=3.5
LZDM LR LR 06 29 34.7
comp=Z,201nm,21.7s,baz=30,slow=37
comp=Z,1.1nm,0.3s
LZH Lanzhou 35.05 329 *e*P **P** **06 14 51.4 +1.9**
LZH sP sP 06 14 57.3 +3.5
LZH pmax pmax
comp=Z,21nm,1.2s
LZH LR LR
comp=Z,410nm,12.7s
LZH LR LR
comp=Z,380nm,12.4s
LZH LR LR
comp=Z,360nm,13.7s
BRDH Bariadhala 35.83 300 LR LR 06 30 44.3
comp=Z,166nm,19.1s,baz=119,slow=38
HHC Hu-ho-hao-te 36.01 343 *e*P **P** **06 14 59.9 +2.3**
HHC pP sP 06 15 04.8 +2.6
HHC S **S** **06 20 37.9 +1.3**
HHC sS sS 06 20 47.6 +5.9
HHC SS **SnSn** **06 23 02.8 +1.8**
HHC pmax pmax
comp=Z,15nm,0.5s
HHC pmax pmax
comp=Z,88nm,4.0s
HHC LR LR
comp=Z,260nm,16.1s
HHC LR LR
comp=Z,260nm,16.7s
HHC LR LR
comp=Z,340nm,17.2s
SHL Shillong 36.74 304 P **P** **06 15 04.1 0.0**
SHL IAmb IAmb 06 15 18.8
comp=Z,21nm,0.9s
FORT Forrest 37.44 176 P **P** **06 15 11.9 +2.2**
comp=Z,20nm,1.0s
INKA Innaminka 37.52 157 P **P** **06 15 09.4 -1.0**
USRK Ussuriysk Ar. 37.79 8 P **P** **06 15 13.4 +0.9**
comp=Z,21nm,0.8s,baz=196,slow=8.0,SNR=19
comp=Z,21nm,0.8s
MDJ Mudanjiang 37.92 5 P **P** **06 15 15.0 +1.3**
MDJ pmax pmax
comp=Z,39nm,1.0s
HNR Honiara 38.34 114 LR LR 06 29 23.7
comp=Z,77nm,20.9s,baz=306,slow=34
BNX BinXian 38.89 3 ⇓P **P** **06 15 22.8 +1.0**
BNX pmax pmax
comp=Z,8.0nm,1.1s
LSA Lhasa 39.19 310 P **P** **06 15 24.3 -0.8**
GTA Gaotai 39.64 329 P **P** **06 15 30.8 +2.4**
GTA pP sP 06 15 36.5 +3.8
GTA pmax pmax
comp=Z,17nm,1.0s
GTA LR LR
comp=Z,190nm,14.9s
GTA LR LR
comp=Z,290nm,14.9s
GTA LR LR
comp=Z,260nm,16.7s
NWAO Narrogin (SRO) 40.15 190 LR LR 06 33 50.6
comp=Z,76nm,20.9s,baz=84,slow=39
ASAJ Asahikawa 40.27 20 LR LR 06 31 37.9
comp=Z,258nm,20.5s,baz=163,slow=35
BBOO Buckleboo 40.73 166 P **P** **06 15 36.5 -0.8**
comp=Z,37nm,0.9s
BBOO Buckleboo 40.73 166 P **P** **06 15 36.0 -1.3**
BBOO IAmb IAmb 06 15 51.2
comp=Z,24nm,0.8s
STKA Stephens Creek 41.55 159 P **P** **06 15 44.2 +0.1**
comp=Z,101nm,1.1s
STKA Stephens Creek 41.55 159 P **P** **06 15 43.4 -0.6**
STKA Stephens Creek 41.55 159 P **P** **06 15 44.0 -0.1**
comp=Z,4.1nm,0.5s,baz=324,slow=9.5,SNR=9.7
STKA LR LR 06 33 59.5
comp=Z,74nm,21.2s,baz=1.7,slow=38
comp=Z,4.1nm,0.5s
EVN Everest 41.85 305 P **P** **06 15 45.9 -1.5**
EVN IAmb IAmb 06 16 05.5
comp=Z,25nm,1.1s
HTT Hallett 42.09 163 P **P** **06 15 49.1 +0.6**
comp=Z,9.7nm,1.5s
HILR Hailar Array B 42.88 355 P **P** **06 15 55.6 +0.8**
comp=Z,3.0nm,0.5s,baz=163,slow=11,SNR=7.1
comp=Z,3.0nm,0.5s
HEH HeiHe 43.40 2 *e*P **P** **06 15 58.9 +0.1**
HEH pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 43.74 343 P **P** **06 16 01.2 -0.6**
SONM Songino Array 43.91 342 P **P** **06 16 02.5 -0.6**
SONM Songino Array 43.91 342 P **P** **06 16 03.5 +0.4**
comp=Z,0.8nm,0.4s,baz=165,slow=7.2,SNR=6.7
SONM LR LR 06 36 02.4
comp=Z,320nm,18.6s,baz=156,slow=38
comp=Z,0.8nm,0.4s
PALK Pallekele 43.97 273 LR LR 06 35 04.9
comp=Z,129nm,21.7s,baz=79,slow=37
ARMA Armidale 44.91 147 P **P** **06 16 13.6 +2.1**
comp=Z,12nm,0.8s
TOO Toolangi 48.06 158 P **P** **06 16 35.2 -0.8**
TOO IAmb IAmb 06 16 45.8
comp=Z,19nm,1.6s
WMQ Urumqi 49.28 325 *e*P **P** **06 16 46.6 +1.2**
WMQ sP sP 06 16 54.2 +4.4
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ LR LR
comp=Z,430nm,19.9s
WMQ LR LR
comp=Z,310nm,22.7s
WMQ LR LR
comp=Z,250nm,22.7s
HMDM Hanimaadhoo 51.45 273 P **P** **06 17 01.5 -0.7**
PETK Petropavlovsk- 53.33 24 P **P** **06 17 15.9 +0.4**
comp=Z,16nm,0.9s,baz=207,slow=5.6,SNR=12
PETK LR LR 06 39 50.3
comp=Z,169nm,19.8s,baz=219,slow=36
comp=Z,16nm,0.9s
MKAR Makanchi Array 54.11 325 P **P** **06 17 21.2 -0.1**
MKAR Makanchi Array 54.11 325 P **P** **06 17 22.0 +0.7**
comp=Z,2.6nm,0.6s,baz=122,slow=8.0,SNR=22
MKAR LR LR 06 40 41.4
comp=Z,131nm,21.9s,baz=122,slow=36
comp=Z,2.6nm,0.6s
MAKZ Makanchi 54.30 325 P **P** **06 17 22.0 -0.7**
MAKZ IAmb IAmb 06 17 36.2
comp=Z,16nm,1.1s
TARG Taragay, Kyrgy 54.38 317 P **P** **06 17 24.1 +0.3**
TARG IAmb IAmb 06 17 41.7
comp=Z,23nm,1.6s
KSH Kashi 54.72 314 P **P** **06 17 30.3 +4.3**
KSH sP sP 06 17 36.2 +5.7
KSH pmax pmax
comp=Z,6.0nm,1.3s
KDJ Kajisay 54.97 318 P **P** **06 17 28.2 +0.4**
KDJ IAmb IAmb 06 17 37.1
comp=Z,10nm,0.8s
YAK Yakutsk 55.27 3 LR LR 06 43 11.3
comp=Z,145nm,19.5s,baz=190,slow=38
BOOM Boomskoye usch 55.96 318 P **P** **06 17 34.1 -0.8**
AAK Ala-Archa 56.99 317 P **P** **06 17 42.2 -0.1**
AAK IAmb IAmb 06 17 53.1
comp=Z,16nm,1.6s
AAK Ala-Archa 56.99 317 LR LR 06 43 59.2
comp=Z,217nm,22.0s,baz=104,slow=38
ZAA0 Zalesovo Array 57.13 333 P **P** **06 17 42.3 -0.6**
ZALV Zalesovo Beam 57.13 333 P **P** **06 17 41.9 -1.0**
comp=Z,1.9nm,0.7s,baz=120,slow=8.8,SNR=5.8
ZALV LR LR 06 43 51.2
comp=Z,99nm,18.6s,baz=59,slow=38
comp=Z,1.9nm,0.7s
KURBB Kurchatov Arra 58.29 327 P **P** **06 17 51.1 +0.1**
comp=Z,4.1nm,0.8s,baz=126,slow=6.0,SNR=22
comp=Z,4.1nm,0.8s
KURK Kurchatov 58.29 327 P **P** **06 17 50.9 -0.2**
KURK IAmb IAmb 06 18 04.8
comp=Z,10nm,0.9s
KBL Kabul 58.35 307 P **P** **06 17 51.7 -0.4**
KBL IAmb IAmb 06 18 00.2
comp=Z,8.3nm,0.9s
GAR Garm 58.64 312 P **P** **06 17 53.7 -0.3**
CHGR Chuyangaron 59.40 311 P **P** **06 17 58.1 -1.0**
CHGR IAmb IAmb 06 18 13.3
comp=Z,12nm,0.7s
SEY Seymchan 59.51 14 LR LR 06 42 49.8
comp=Z,76nm,21.3s,baz=218,slow=35
SIMJ Simiganj 59.51 311 P **P** **06 18 00.2 +0.3**
SIMJ IAmb IAmb 06 18 36.0
comp=Z,7.5nm,1.1s
KK31 Karatay Array 59.87 316 P **P** **06 18 02.6 +0.3**
KK31 IAmb IAmb 06 18 10.0
comp=Z,17nm,1.0s
KKAR Karatay Array 59.87 316 P **P** **06 18 02.1 -0.2**
SHEM Shemya Is, Ala 60.77 32 LR LR 06 40 20.1
comp=Z,43nm,20.6s,baz=280,slow=32
BVAR Borovoye Array 63.87 327 P **P** **06 18 28.8 -0.2**
comp=Z,2.9nm,0.8s,baz=111,slow=8.3,SNR=9.8
BVAR LR LR 06 48 52.7
comp=Z,57nm,19.2s,baz=100,slow=38
comp=Z,2.9nm,0.8s
TIXI Tiksi 64.87 1 P **P** **06 18 35.1 0.0**
TIXI Tiksi 64.87 1 LR LR 06 48 24.9
comp=Z,194nm,20.4s,baz=198,slow=37
URZ Urewera 65.90 137 LR LR 06 46 11.6
comp=Z,61nm,22.0s,baz=294,slow=35
AB31 Akbulak array 68.75 320 P **P** **06 18 59.9 -0.4**
AB31 IAmb IAmb 06 19 08.1
comp=Z,8.0nm,1.0s
ABKAR Akbulak array 68.75 320 P **P** **06 18 59.5 -0.8**
AKTO Aktyubinsk 70.25 321 LR LR 06 51 58.9
comp=Z,166nm,21.7s,baz=191,slow=38
ARTI Arti 71.57 327 LR LR 06 53 54.4
comp=Z,61nm,18.1s,baz=119,slow=38
KIRV Kirov 76.77 329 LR LR 06 57 07.2
comp=Z,100nm,19.2s,baz=103,slow=38
RAYN Ar Rayn 77.74 293 P **P** **06 19 53.6 -0.4**
GNI Garni 78.25 309 LR LR 06 58 37.0
comp=Z,30nm,22.0s,baz=92,slow=39
KBZ Khibaz 79.68 313 LR LR 06 59 31.3
comp=Z,86nm,18.6s,baz=88,slow=39
KDAK Kodiak Island 80.27 33 LR LR 06 51 07.3
comp=Z,108nm,21.7s,baz=235,slow=32
BPAW Bear Paw Mtn. 81.34 26 P **P** **06 20 12.4 -0.3**
BPAW IAmb IAmb 06 20 19.0
comp=Z,18nm,1.0s
TRF Thorofare Moun 81.62 27 P **P** **06 20 14.2 -0.2**
SEW Seward 81.96 30 P **P** **06 20 15.4 -0.6**
H23K Yukon River 82.01 24 P **P** **06 20 16.1 -0.1**
H23K IAmb IAmb 06 20 22.9
comp=Z,11nm,1.0s
I23K Minto, Yukon-K 82.07 25 P **P** **06 20 15.9 -0.6**
PMR Palmer 82.13 29 P **P** **06 20 16.3 -0.6**
NEA2 Nenana 82.19 26 P **P** **06 20 18.0 +0.8**
NEA2 IAmb IAmb 06 20 23.9
comp=Z,10nm,1.0s
MCK McKinley 82.23 27 P **P** **06 20 17.9 +0.4**
RND Reindeer 82.27 27 P **P** **06 20 16.9 -0.8**
RND IAmb IAmb 06 20 24.8
comp=Z,15nm,1.0s
HDA Harding Lake 83.10 26 P **P** **06 20 21.2 -0.8**
HDA IAmb IAmb 06 20 28.3
comp=Z,7.0nm,0.7s
IL31 83.12 26 P **P** **06 20 21.7 -0.3**
IL31 IAmb IAmb 06 20 27.8
comp=Z,11nm,1.1s
ILAR Eielson Array 83.12 26 P **P** **06 20 21.4 -0.7**
comp=Z,1.3nm,0.8s,baz=246,slow=5.7,SNR=9.2
OBN Obninsk 83.62 325 LR LR 06 59 07.3
comp=Z,87nm,21.1s,baz=146,slow=37
BMAR Burnt Mountain 83.97 23 P **P** **06 20 26.3 -0.1**
RIDG Independent Ri 84.05 27 P **P** **06 20 26.3 -0.6**
MAW Mawson 85.99 200 LR LR 06 59 14.7
comp=Z,34nm,19.4s,baz=84,slow=36
MMAI Mount Meron Ar 86.04 303 P **P** **06 20 37.7 +0.1**
comp=Z,0.5nm,0.2s,baz=99,slow=9.5,SNR=3.6
comp=Z,0.5nm,0.2s
VNDA Vanda 86.63 172 P **P** **06 20 39.2 -0.1**
comp=Z,1.3nm,0.8s,baz=337,slow=5.4,SNR=6.3
comp=Z,1.3nm,0.8s
BRTR Keskin Array B 86.79 309 P **P** **06 20 40.6 -0.7**
comp=Z,0.3nm,0.3s,baz=91,slow=4.3,SNR=2.3
BRTR LR LR 07 04 55.1
comp=Z,28nm,21.1s,baz=84,slow=39
comp=Z,0.3nm,0.3s
ARCES ARCESS Array B 87.04 340 LR LR 07 04 11.2
comp=Z,75nm,19.0s,baz=74,slow=39
SPITS Spitsbergen Ar 87.20 349 LR LR 07 05 21.0
comp=Z,103nm,18.1s,baz=56,slow=40
PPT2 Papeete2 87.66 108 *e*LR LR 06 48 31.2
comp=Z,129nm,24.0s
PPT2 *e*LR LR 06 48 36.0
comp=Z,130nm,25.2s
FINES FINESS Array B 88.38 332 P **P** **06 20 46.8 -1.3**
comp=Z,2.6nm,0.9s,baz=57,slow=5.1,SNR=2.3
FINES LR LR 07 02 53.6
comp=Z,116nm,20.9s,baz=71,slow=37
comp=Z,2.6nm,0.9s
AKASG Malin Array Be 88.48 321 P **P** **06 20 48.4 -0.5**
comp=Z,0.3nm,0.3s,baz=73,slow=4.3,SNR=1.9
AKASG LR LR 07 03 46.6
comp=Z,56nm,18.6s,baz=78,slow=38
comp=Z,0.3nm,0.3s
TBI Tubuai 88.56 114 *e*LR LR 06 48 59.7
comp=Z,1μm,31.0s
TBI *e*LR LR 06 49 02.3
comp=Z,1μm,27.0s
MLR Muntele Rosu 91.55 316 LR LR 07 06 17.5
comp=Z,132nm,21.8s,baz=76,slow=38
DLBC Dease Lake 92.03 31 LR LR 06 58 33.0
comp=Z,53nm,20.1s,baz=292,slow=33
HFS Hagfors 94.56 332 LR LR 07 05 43.6
comp=Z,172nm,21.3s,baz=70,slow=37
RES Resolute Bay 95.15 10 LR LR 07 09 04.5
comp=Z,58nm,18.0s,baz=354,slow=38
NOA NORSAR Array B 95.33 333 LR LR 07 10 22.3
comp=Z,60nm,18.7s,baz=70,slow=39
TAOE Nuku Hiva Isla 95.77 98 *e*LR LR 06 52 16.0
comp=Z,168nm,24.7s
QSPA South Pole Qui 96.64 180 P **P** **06 21 23.7 -2.6**
QSPA South Pole Qui 96.64 180 P **P** **06 21 25.5 -0.8**
comp=Z,0.3nm,0.7s,baz=26,slow=5.8,SNR=1.4
comp=Z,0.3nm,0.7s
VRAC Vranov 96.72 321 LR LR 07 07 26.0
comp=Z,83nm,20.4s,baz=69,slow=37
YKA Yellowknife Ar 97.45 24 P Pdif 06 21 30.9 +0.8
comp=Z,1.4nm,0.8s,baz=300,slow=5.6,SNR=3.2
comp=Z,1.4nm,0.8s
LSZ Lusaka 98.31 256 LR LR 07 02 49.0
comp=Z,79nm,21.5s,baz=134,slow=34
GERES GERESS Array B 98.67 321 LR LR 07 09 32.2
comp=Z,60nm,19.5s,baz=72,slow=38
RKT Rikitea 101.80 112 *e*LR LR 06 55 10.2
comp=Z,5μm,36.5s
TXAR Lajitas Array 121.03 50 PKP **PKiKP** **06 26 50.8 +0.7**
comp=Z,0.2nm,0.8s,baz=132,slow=40,SNR=2.2
PLCA Paso Flores 143.42 160 PKP **PKPdf** **06 27 30.6 -0.9**
comp=Z,1.6nm,0.9s,baz=237,slow=22,SNR=1.6
LPAZ La Paz 164.02 127 PKP **PKPdf** **06 28 01.6 0.0**
comp=Z,1.1nm,0.8s,baz=244,slow=4.3,SNR=2.5

*JSN **01** 06:19:30.8±0.4, 18°.73N×76°.60W, h16km±4km, MD2.7*
*SSNC **01** 06:19:31.3±1.5, 18°.84N×76°.62W, h19km±10km, MD2.9, ML1.6*

ISC 01 06:19:28.7±1.4**, 18°.82N**±0°.05×**76°.62W**±0°.06**, h25**km±16km**, n12**, σ0**s94/22, 2C-1D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
GWJ	**Greenwich**	**0.75**	**188**	⇑*i*P	**Pb**	**06 19 43.0**	**-0.2**
STH	**Stony Hill**	**0.77**	**194**	⇓*i*P	**Pb**	**06 19 42.9**	**-0.5**
MTDJ	**Mount Denham**	**1.05**	**236**	*i* P	**Pb**	**06 19 49.0**	**+0.6**
MTDJ	**Mount Denham**	**1.05**	**236**	*e*P	**Pn**	**06 19 48.0**	**-0.1**
MTDJ				*e*S	**Sn**	**06 20 02.1**	**+0.1**
MTDJ				IAML		06 20 03.4	
	26nm,0.2s						
MTDJ				IAML		06 20 04.2	
	comp=Z,21nm,0.2s						
CHIV	**Chivirico**	**1.16**	**9**	*e*P	**Pn**	**06 19 49.8**	**+0.4**
CHIV				*e*S	**Sn**	**06 20 03.5**	**-1.0**
CHIV				IAML		06 20 06.3	
	comp=N,4.4nm,0.1s						
CHIV				IAML		06 20 06.9	
	comp=E,3.9nm,0.1s						
LMGC	**Las Mercedes**	**1.29**	**344**	*e*P	**Pn**	**06 19 51.7**	**+0.5**
LMGC				*e*S	**Sn**	**06 20 06.4**	**-1.2**
LMGC				IAML		06 20 08.0	
	comp=E,6.5nm,0.1s						
LMGC				IAML		06 20 08.1	
	comp=N,20nm,0.0s						
MARVS	**Santiago de Cu**	**1.35**	**30**	*e*P	**Pb**	**06 19 53.2**	**-0.1**
MARVS				*e*S	**Sn**	**06 20 09.3**	**+0.1**
MARVS				IAML		06 20 11.3	
	comp=N,5.0nm,0.1s						
MARVS				IAML		06 20 11.5	
	comp=E,6.6nm,0.1s						

RCC	**Rio Carpintero**	**1.45**	**37**	*eP*		**Pb**	06 19 54.7	-0.4
RCC				*eS*		**Sn**	**06 20 11.6**	**-0.2**
GTBY	**Guantanamo Bay**	**1.80**	**52**	*eP*		**Pn**	06 19 59.5	+1.3
GTBY				*eS*		**Sn**	**06 20 18.8**	**-1.4**
GTBY				*eSg*		**Sb**	**06 20 22.7**	**-0.4**
PINC	**Pinares de May**	**1.83**	**25**	*eP*		**Pn**	**06 20 00.1**	**+1.5**
PINC				*eS*		**Sn**	**06 20 19.9**	**-1.0**
PINC				IAML			06 20 24.3	
	comp=E,10nm,0.1s							
PINC				IAML			06 20 24.3	
	comp=N,8.1nm,0.1s							
SABCS	**La Quijada**	**1.96**	**39**	*eP*		**Pn**	**06 20 01.9**	**+1.4**
SABCS				⇑*eS*		**Sn**	**06 20 24.7**	**+0.3**
QMBU	**Quimbuelo**	**2.18**	**51**	*eP*		**Pn**	**06 20 04.3**	**+0.8**
QMBU				*eS*		**Sn**	**06 20 28.3**	**-1.5**
QMBU				IAML			06 20 31.2	
	comp=E,7.4nm,0.1s							
QMBU				IAML			06 20 31.4	
	comp=N,7.0nm,0.2s							

*RSNC **01** 06:25:21.6±0.0, 7°N±1°×7°3W±°, h140km±1km, M3.6, mB4.7, mb4.3, ML3.2, MLv3.9, Mw(mB)3.9*
*IDC **01** 06:25:22.8±5.9, 6°.63N×73°.29W, h174km±37km, mb2.9/2, mbtmp3.5/3, Error ellipse: s-maj=101.5km s-min=32.9km az=76.0*
ISC 01 06:25:19.3±0.8, **6°.86N**±0°.03×**73°.14W**±0°.05, **h152**km±6km, **n47**, σ1**s54**/83, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**189**	P		**Pn**	**06 25 40.6**	**+0.4**
BARC				S		**Sn**	**06 25 55.4**	**-0.8**
BRJC	**Barrancabermej**	**0.61**	**280**	P		**Pn**	**06 25 42.4**	**+1.0**
BRJC				S		**Sn**	**06 25 59.0**	**+0.8**
PAMC	**Pamplona, Colo**	**0.64**	**43**	P		**Pn**	**06 25 43.5**	**+1.3**
PAMC				S		**Sn**	**06 26 00.3**	**+0.7**
RUSC	**La Rusia**	**0.97**	**177**	P		**Pn**	**06 25 44.5**	**0.0**
RUSC				S		**Sn**	**06 26 02.7**	**-1.0**
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	P		**Pn**	**06 25 47.3**	**-0.1**
PTBC				S		**Sn**	**06 26 08.0**	**-0.9**
OCAC	**Ocana**	**1.38**	**353**	P		**Pn**	**06 25 49.0**	**+1.1**
OCAC				S		**Sn**	**06 26 10.6**	**+0.8**
SPBC	**San Pablo de B**	**1.52**	**218**	P		**Pn**	**06 25 49.6**	**+0.3**
SPBC				S		**Sn**	**06 26 11.2**	**-1.1**
CHIC	**Chingaza**	**2.30**	**195**	P		**Pn**	**06 25 58.9**	**+0.5**
CHIC				S		**Sn**	**06 26 27.6**	**-1.0**
ROSC	**El Rosal**	**2.33**	**210**	P		**Pn**	**06 26 00.7**	**+1.9**
	131nm,0.3s,baz=38,slow=12,SNR=71							
ROSC				S		**Sn**	**06 26 29.9**	**+0.7**
	351nm,0.6s,baz=66,slow=20,SNR=21							
ROSC	**El Rosal**	**2.33**	**210**	P		**Pn**	**06 26 00.3**	**+1.5**
ROSC				S		**Sn**	**06 26 28.7**	**-0.5**
HELC	**Santa Helena**	**2.47**	**254**	P		**Pn**	**06 26 01.0**	**+0.6**
HELC				S		**Sn**	**06 26 31.7**	**-0.4**
CVER	**Cruz Verde, Cu**	**2.51**	**202**	P		**Pn**	**06 26 02.1**	**+1.1**
CVER				S		**Sn**	**06 26 32.8**	**-0.4**
UREC	**San Jos de Ur**	**2.53**	**291**	P		**Pn**	**06 26 01.0**	**+0.1**
UREC				S		**Sn**	**06 26 32.9**	**-0.1**
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P		**Pn**	**06 26 05.3**	**+1.3**
GUY2C				S		**Sn**	**06 26 36.2**	**-2.3**
CBOC	**Ciudad Bolivar**	**3.02**	**251**	P		**Pn**	**06 26 08.7**	**+1.5**
CBOC				S		**Sn**	**06 26 45.0**	**+0.8**
DBBC	**Dabeiba**	**3.05**	**273**	P		**Pn**	**06 26 08.8**	**+1.4**
DBBC				S		**Sn**	**06 26 44.5**	**-0.2**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P		**Pn**	**06 26 11.3**	**+2.4**
ARGC				S		**Sn**	**06 26 49.8**	**+2.5**
ANIL	**Santa Ana**	**3.26**	**224**	P		**Pn**	**06 26 12.1**	**+1.8**
ANIL				S		**Sn**	**06 26 50.5**	**+0.7**
APAC	**Apartado, Choc**	**3.56**	**287**	P		**Pn**	**06 26 15.1**	**+1.2**
APAC				S		**Sn**	**06 26 56.9**	**+0.6**
PRAC	**Prado**	**3.58**	**209**	P		**Pn**	**06 26 14.1**	**-0.1**
PRAC				S		**Sn**	**06 26 56.3**	**-0.5**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P		**Pn**	**06 26 15.0**	**+0.5**
ORTC				S		**Sn**	**06 26 58.7**	**+1.3**
SJCC	**San Jacinto, C**	**3.63**	**326**	P		**Pn**	**06 26 15.1**	**+0.3**
SJCC				S		**Sn**	**06 26 56.8**	**-1.1**
PLMC	**San Jos del P**	**3.68**	**238**	P		**Pn**	**06 26 16.5**	**+1.0**
PLMC				S		**Sn**	**06 27 00.0**	**+0.8**
LCBC	**Los crdobas,**	**3.76**	**302**	P		**Pn**	**06 26 17.4**	**+0.9**
LCBC				S		**Sn**	**06 27 01.7**	**+0.8**
URMC	**La Uribe, Meta**	**3.80**	**199**	P		**Pn**	**06 26 17.7**	**+0.6**
URMC				S		**Sn**	**06 27 01.9**	**-0.1**
CRJC	**Cerrejon, Guaj**	**4.14**	**4**	P		**Pn**	**06 26 21.4**	**-0.1**
CRJC				S		**Sn**	**06 27 07.9**	**-2.0**
YOTC	**Yotoco, Valle**	**4.29**	**228**	P		**Pn**	**06 26 23.5**	**0.0**
SMRC	**Santa Marta, M**	**4.40**	**346**	P		**Pn**	**06 26 25.8**	**+0.9**
SMRC				S		**Sn**	**06 27 14.1**	**-1.9**
PTAC	**Punta Ardita,**	**4.64**	**274**	P		**Pn**	**06 26 26.3**	**-1.7**
PTAC				S		**Sn**	**06 27 21.9**	**+0.3**
MACC	**Macarena, Meta**	**4.74**	**189**	P		**Pn**	**06 26 27.8**	**-1.6**
MACC				S		**Sn**	**06 27 19.4**	**-4.6**
URIC	**Uribia, Colomb**	**4.94**	**13**	P		**Pn**	**06 26 31.4**	**-0.5**
URIC				S		**Sn**	**06 27 27.1**	**-1.5**
POPC	**Popayan, Colom**	**5.56**	**220**	P		**Pn**	**06 26 40.8**	**+0.5**
	15nm,0.5s							
POPC				S		**Sn**	**06 27 43.6**	**-0.1**
	15nm,0.5s							
FLOC	**Florencia**	**5.81**	**206**	P		**Pn**	**06 26 43.6**	**0.0**
	384nm13nm,1.2s							
FLOC				S		**Sn**	**06 27 49.9**	**+0.3**
	384nm13nm,1.2s							
CRUC	**La Cruz**	**6.49**	**216**	P		**Pn**	**06 26 51.7**	**-1.2**
	9µm939nm,2.5s							
CRUC				S		**Sn**	**06 28 08.3**	**+2.1**
	9µm939nm,2.5s							
GCUF	**Volcan Galeras**	**7.00**	**217**	P		**Pn**	**06 27 01.5**	**+1.7**
GCUF				S		**Sn**	**06 28 18.7**	**+0.1**
SGC2	**Sao Gabriel da**	**9.29**	**138**	P		**Pn**	**06 27 30.8**	**+0.8**
SGC2				S		**Sn**	**06 29 14.6**	**+1.5**
MTDJ	**Mount Denham**	**12.08**	**340**	*eP*		**P**	**06 28 10.7**	**-2.3**
MTDJ				*eS*		**Sn**	**06 30 12.6**	**-7.7**
GTBY	**Guantanamo Bay**	**13.12**	**352**	*eP*		**P**	**06 28 24.2**	**-0.4**
MASC	**Masc**	**13.27**	**356**	*eP*		**P**	**06 28 26.0**	**-0.2**
RCC	**Rio Carpintero**	**13.29**	**349**	*eP*		**P**	**06 28 26.9**	**+0.6**
QMBU	**Quimbuelo**	**13.36**	**353**	*eP*		**P**	**06 28 26.9**	**-0.2**
SABCS	**La Quijada**	**13.58**	**351**	*eP*		**P**	**06 28 31.6**	**+1.9**
PINC	**Pinares de May**	**13.78**	**350**	*eP*		**P**	**06 28 34.0**	**+2.1**
TXAR	**Lajitas Array**	**36.42**	**312**	P		**P**	**06 32 11.4**	**+1.9**
	0.3nm,0.4s,baz=128,slow=8.7,SNR=5.8 0.3nm,0.4s							
PDAR	**Pinedale Array**	**48.03**	**324**	P		**P**	**06 33 45.1**	**+1.6**
	0.2nm,0.4s,baz=102,slow=5.9,SNR=2.5 0.2nm,0.4s							
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc		**PKPbc**	**06 44 50.2**	**-0.4**
	0.1nm,0.4s,baz=96,slow=3.6,SNR=1.7							
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc		**PKiKP**	**06 44 53.5**	**-0.8**
	0.2nm,0.5s,baz=107,slow=2.3,SNR=2.1							

*SNET **01** 06:25:52.0±34.0, 11°.54N×86°.83W, h74km, ML4.0*
*CATAC **01** 06:26:31.8±0.5, 13°N±2°×9°0W±°, h21km±2km, M2.8/18, MLv2.8/18, Error ellipse: s-maj=5.9km s-min=4.3km az=42.6, confirmed*
ISC 01 06:26:31.4±2.0, **13°.18N**±0°.08×**89°.88W**±0°.07, **h29**km, **n58**, σ0**s76**/60, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.63**	**61**	*eP*		**Pb**	**06 26 44.1**	**+0.2**
LALI				*eS*		**Sb**	**06 26 52.4**	**0.0**
LALI	**Alcalda de L**	**0.63**	**61**	P		**Pb**	**06 26 44.1**	**+0.2**
JAYA	**Jayaque - finc**	**0.63**	**42**	*eP*		**Pb**	**06 26 44.4**	**+0.3**
JAYA				*eS*		**Sn**	**06 26 53.3**	**-0.5**
JAYA	**Jayaque - finc**	**0.63**	**42**	P		**Pb**	**06 26 44.5**	**+0.3**
JAYA	**Jayaque - finc**	**0.63**	**42**	S		**Sn**	**06 26 53.5**	**-0.3**
FAME	**Alcaldia de Sa**	**0.67**	**349**	P		**Pb**	**06 26 45.2**	**+0.5**
FAME	**Alcaldia de Sa**	**0.67**	**349**	S		**Sb**	**06 26 54.9**	**+1.3**
CEVE	**Cerro Verde**	**0.69**	**21**	*eP*		**Pb**	**06 26 45.8**	**+0.6**
CEVE	**Cerro Verde**	**0.69**	**21**	S		**Sn**	**06 26 56.2**	**+0.9**
CEVE	**Cerro Verde**	**0.69**	**21**	P		**Pn**	**06 26 46.0**	**+0.6**
SBLS	**San Blas**	**0.70**	**21**	*eP*		**Pb**	**06 26 45.6**	**+0.3**
SNJE	**San Jose**	**0.73**	**22**	*eP*		**Pb**	**06 26 46.1**	**+0.3**
RTR	**El Retiro**	**0.75**	**18**	*eP*		**Pb**	**06 26 46.5**	**+0.5**
CEDA	**San Andres**	**0.78**	**38**	S		**Sn**	**06 26 57.2**	**-0.1**
CEDA	**San Andres**	**0.78**	**38**	P		**Pb**	**06 26 47.0**	**+0.5**
PANCS	**Alcalda de**	**0.81**	**58**	P		**Pb**	**06 26 47.1**	**+0.1**
PANCS	**Alcalda de**	**0.81**	**58**	S		**Sb**	**06 26 57.0**	**-0.6**
UEES	**Universidad Ev**	**0.82**	**50**	P		**Pb**	**06 26 47.2**	**0.0**
UEES	**Universidad Ev**	**0.82**	**50**	S		**Sb**	**06 26 58.1**	**0.0**
LOMA	**Loma Larga**	**0.83**	**56**	*eP*		**Pb**	**06 26 47.4**	**0.0**
LOMA	**Loma Larga**	**0.83**	**56**	S		**Sb**	**06 26 58.0**	**-0.4**
LOMA	**Loma Larga**	**0.83**	**56**	P		**Pb**	**06 26 47.3**	**-0.1**
SLOZ	**Alcaldia de Sa**	**0.84**	**7**	P		**Pn**	**06 26 44.0**	**-3.5**
SLOZ	**Alcaldia de Sa**	**0.84**	**7**	S		**Sb**	**06 26 56.9**	**-1.8**
UNIC	**Universidad Ca**	**0.86**	**22**	P		**Pn**	**06 26 47.8**	**+0.2**
UNIC	**Universidad Ca**	**0.86**	**22**	S		**Sb**	**06 26 59.2**	**+0.2**
IGN	**Direccin Gen**	**0.87**	**53**	S		**Sn**	**06 26 59.4**	**-0.2**
IGN	**Direccin Gen**	**0.87**	**53**	P		**Pn**	**06 26 48.0**	**+0.2**
UDBS	**Universidad Do**	**0.89**	**53**	S		**Sb**	**06 26 59.6**	**-0.2**
UDBS	**Universidad Do**	**0.89**	**53**	P		**Pn**	**06 26 47.7**	**-0.3**
LBRS	**Las Brisas**	**0.99**	**56**	*eP*		**Pn**	**06 26 49.4**	**0.0**
PAVA	**Las Pavas**	**1.06**	**60**	*eP*		**Pn**	**06 26 51.0**	**+0.6**
PAVA	**Las Pavas**	**1.06**	**60**	P		**Pn**	**06 26 50.6**	**+0.1**
PAVA	**Las Pavas**	**1.06**	**60**	S		**Sb**	**06 27 04.9**	**0.0**
TECO	**Alcaldia de Te**	**1.13**	**72**	*eP*		**Pn**	**06 26 50.8**	**-0.5**
TECO	**Alcaldia de Te**	**1.13**	**72**	S		**Sn**	**06 27 05.2**	**-0.7**
TECO	**Alcaldia de Te**	**1.13**	**72**	P		**Pn**	**06 26 50.8**	**-0.5**
UESV	**Universidad de**	**1.16**	**67**	*eP*		**Pn**	**06 26 51.7**	**-0.1**
UESV	**Universidad de**	**1.16**	**67**	P		**Pn**	**06 26 51.4**	**-0.3**
UESV	**Universidad de**	**1.16**	**67**	S		**Sn**	**06 27 06.8**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.24**	**65**	*eP*		**Pn**	**06 26 53.1**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.24**	**65**	S		**Sb**	**06 27 09.4**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.24**	**65**	P		**Pn**	**06 26 53.4**	**+0.6**
MTO3	**Montecristo**	**1.31**	**23**	P		**Pn**	**06 26 54.2**	**+0.2**
MTO3	**Montecristo**	**1.31**	**23**	S		**Sn**	**06 27 11.0**	**+0.3**
LLGN	**La Laguna**	**1.34**	**43**	P		**Pn**	**06 26 54.2**	**0.0**
LLGN	**La Laguna**	**1.34**	**43**	S		**Sb**	**06 27 11.9**	**-0.8**
ESQI	**Esquipulas**	**1.47**	**21**	P		**Pn**	**06 26 56.1**	**0.0**
ESQI	**Esquipulas**	**1.47**	**21**	S		**Sb**	**06 27 16.2**	**-0.2**
PACA	**Pacayal**	**1.55**	**79**	S		**Sn**	**06 27 16.9**	**+0.6**
PACA	**Pacayal**	**1.55**	**79**	P		**Pn**	**06 26 58.1**	**+0.9**
SARH	**Santa Rosa de**	**1.92**	**34**	P		**Pn**	**06 27 02.9**	**+0.6**
SARH	**Santa Rosa de**	**1.92**	**34**	S		**Sn**	**06 27 26.1**	**+0.5**
LCND	**La Caada**	**1.95**	**86**	P		**Pn**	**06 27 03.9**	**+1.4**
LCND	**La Caada**	**1.95**	**86**	S		**Sb**	**06 27 27.9**	**-2.2**
CNCH	**Conchagua**	**2.00**	**87**	P		**Pn**	**06 27 03.6**	**+0.2**
CNCH	**Conchagua**	**2.00**	**87**	S		**Sn**	**06 27 28.1**	**+0.6**
POLN	**Al Sur del Vol**	**3.04**	**100**	P		**Pn**	**06 27 17.1**	**-0.5**

*BER **01** 06:30:53.9±2.8, 79°.31N×3°.20E, h10km, mb(Pn)3.9, ML2.0(DNK), Confirmed Earthquake*
*NAO **01** 06:30:54.0±0.9, 79°.29N×3°.43E, h15km, ML3.3*
*KOLA **01** 06:30:55.9, 79°.11N×4°.34E, h0km, ML2.4, Greenland sea,Knipovich ridge, north*
*DNK **01** 06:30:55.0±1.8, 79°.21N×3°.24E, h36km±38km, ML1.9*
*FCIAR **01** 06:30:57.0, 79°.04N×4°.42E, h10km, station OMEGA has station magnitude of 3.60*
ISC 01 06:30:50.0±1.7, **79°.12N**±0°.06×**3°.05E**±0°.04, **h11**km±12km, **n41**, σ2**s46**/67, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.71**	**92**	Pn		**Pg**	**06 31 22.0**	**-0.8**
KBS				Sn		**Sn**	**06 31 41.1**	**-0.5**
KBS	**Kingsbay**	**1.71**	**92**	P		**Pb**	**06 31 21.7**	**+0.3**
KBS				S		**Sn**	**06 31 40.2**	**-1.4**
KBS	**Kingsbay**	**1.71**	**92**	*eP*		**Pg**	**06 31 22.0**	**-0.8**
KBS				*eS*		**Sn**	**06 31 40.9**	**-0.7**
KBS				IAML			06 31 42.9	
	comp=Z,59nm,0.3s							
KBS	**Kingsbay**	**1.71**	**92**	*i* P		**Pg**	**06 31 21.9**	**-1.0**
KBS				*i* S		**Sn**	**06 31 41.4**	**-0.2**
KBS	**Kingsbay**	**1.71**	**92**	*i* P		**Pb**	**06 31 21.5**	**+0.1**
KBS				*i* S		**Sn**	**06 31 40.0**	**-1.6**
BRBB	**Barentsburg B**	**2.44**	**109**	Pn		**Pb**	**06 31 33.1**	**-0.8**
BRBB				Sn		**Sb**	**06 32 02.6**	**-1.3**
BRBB	**Barentsburg B**	**2.44**	**109**	P		**Pb**	**06 31 32.9**	**-1.0**
BRBB				S		**Sn**	**06 32 00.9**	**+1.4**
BRBB	**Barentsburg B**	**2.44**	**109**	*eP*		**Pb**	**06 31 32.9**	**-1.0**
BRBB				*eS*		**Sn**	**06 32 01.2**	**+1.6**
BRBA	**Barentsburg A**	**2.46**	**110**	Pn		**Pb**	**06 31 34.1**	**-0.1**
BRBA				Sn		**Sb**	**06 32 02.5**	**-2.0**
BRBA	**Barentsburg A**	**2.46**	**110**	*eP*		**Pb**	**06 31 33.5**	**-0.7**
BRBA				IAML			06 32 05.1	
	comp=Z,44nm,0.6s							
SPA0	**Spitsbergen Ar**	**2.80**	**103**	Pn		**Pb**	**06 31 38.1**	**-1.8**
	baz=289,slow=7.9							
SPA0				Sn		**Sn**	**06 32 08.8**	**+0.5**
	baz=288,slow=12							
SPA0	**Spitsbergen Ar**	**2.80**	**103**	*eP*		**Pb**	**06 31 38.1**	**-1.8**
SPA0				*eS*		**Sn**	**06 32 08.8**	**+0.5**
SPA0	**Spitsbergen Ar**	**2.80**	**103**	Pn		**Pb**	**06 31 38.1**	**-1.8**
	baz=289,slow=7.9							
SPA0				Sn		**Sn**	**06 32 08.8**	**+0.5**
	baz=288,slow=12							
SPA0				IAML			06 32 22.2	
	comp=Z,45nm,0.7s							
SPITS	**Spitsbergen Ar**	**2.80**	**103**	P		**Pb**	**06 31 38.0**	**-1.9**
SPITS				S		**Sn**	**06 32 09.9**	**+1.5**
HSPB	**Hornsund (broa**	**3.35**	**123**	Pn		**Pn**	**06 31 46.0**	**+3.9**
HSPB				Sn		**Sn**	**06 32 25.0**	**+3.1**
HSPB	**Hornsund (broa**	**3.35**	**123**	P		**Pb**	**06 31 46.2**	**-3.1**
HSPB				S		**Sn**	**06 32 23.4**	**+1.5**
HSPB	**Hornsund (broa**	**3.35**	**123**	*eP*		**Pn**	**06 31 46.1**	**+3.9**
HSPB				*eS*		**Sn**	**06 32 20.5**	**-1.4**
HSPB	**Hornsund (broa**	**3.35**	**123**	*eP*		**Pn**	**06 31 45.7**	**+3.5**
HSPB				IAML			06 32 30.4	
	comp=Z,13nm,0.9s							
NOR	**Nord**	**4.12**	**316**	Pn		**Pn**	**06 31 53.8**	**+1.0**
NOR	**Nord**	**4.12**	**316**	*eP*		**Pn**	**06 31 53.7**	**+0.9**
NOR	**Nord**	**4.12**	**316**	*i* P		**Pn**	**06 31 53.0**	**+0.2**
NOR				*i* S		**Sn**	**06 32 39.7**	**-1.2**
NOR				IAML			06 32 40.7	
	comp=Z,7.8nm,0.5s							
NOR	**Nord**	**4.12**	**316**	*i* P		**Pn**	**06 31 52.7**	**-0.1**
NOR				IAML			06 32 41.0	
	comp=Z,5.0nm,0.4s							
DAG	**Danmarks Havn**	**5.10**	**253**	*eP*		**Pn**	**06 32 08.0**	**+1.8**
DAG	**Danmarks Havn**	**5.10**	**253**	*i* P		**Pn**	**06 32 07.8**	**+1.6**
DAG				*i* S		**Sn**	**06 33 00.4**	**-4.5**
DAG				IAML			06 33 04.5	
	comp=Z,8.5nm,0.3s							
DAG	**Danmarks Havn**	**5.10**	**253**	*i* P		**Pn**	**06 32 07.6**	**+1.4**
DAG				IAML			06 33 04.6	
	comp=Z,7.2nm,0.4s							
HOPEN	**Hopen**	**5.31**	**108**	Pn		**Pn**	**06 32 11.7**	**+2.6**
HOPEN				Sn		**Sn**	**06 33 08.6**	**-1.5**
HOPEN	**Hopen**	**5.31**	**108**	*eP*		**Pn**	**06 32 11.4**	**+2.4**
HOPEN				*eS*		**Sn**	**06 33 07.4**	**-2.7**
HOPEN	**Hopen**	**5.31**	**108**	*eP*		**Pn**	**06 32 11.9**	**+2.9**
HOPEN				*eS*		**Sn**	**06 33 11.4**	**-1.7**
HOPEN				IAML			06 33 34.1	
	comp=Z,20nm,0.7s							
DBG	**Daneborg**	**7.15**	**240**	Pn		**Pn**	**06 32 37.0**	**+2.7**
DBG				Sn		**Sn**	**06 33 49.6**	**-5.8**
DBG	**Daneborg**	**7.15**	**240**	Pn		**Pn**	**06 32 37.0**	**+2.7**
DBG				Sn		**Sn**	**06 33 49.6**	**-5.8**
DBG	**Daneborg**	**7.15**	**240**	*i* P		**Pn**	**06 32 37.1**	**+2.7**
DBG				*i* S		**Sn**	**06 33 49.2**	**-6.2**
DBG				IAML			06 33 54.0	
	comp=Z,3.4nm,0.3s							
DBG	**Daneborg**	**7.15**	**240**	*i* P		**Pn**	**06 32 35.3**	**+1.0**
DBG				IAML			06 33 55.8	
	comp=Z,2.4nm,0.3s							
ZFI2	**Zemlya Franca-**	**7.79**	**56**	*eP*		**Pn**	**06 32 45.9**	**+2.8**
ZFI2				*eS*		**Sn**	**06 34 07.6**	**-3.6**
OMEGA	**Omega**	**7.81**	**57**	P		**Pn**	**06 32 45.9**	**+2.6**
OMEGA				*eS*		**Sn**	**06 34 08.0**	**-3.6**
	comp=Z,15nm,3.1s							
JNW	**Jan Mayen West**	**8.63**	**206**	*eP*		**Pn**	**06 32 58.5**	**+3.9**
JNE	**Jan Mayen East**	**8.66**	**205**	*eP*		**Pn**	**06 32 58.8**	**+3.8**
JMIC	**Jan Mayen**	**8.68**	**206**	*eP*		**Pn**	**06 32 58.8**	**+3.6**
NEEM	**North Greenlan**	**10.77**	**289**	*i* P		**Pn**	**06 33 23.8**	**-0.4**
NEEM				*i* S		Sn	06 35 14.8	-10
NEEM	**North Greenlan**	**10.77**	**289**	*i* P		**Pn**	**06 33 23.6**	**-0.6**
NEEM				IAML			06 35 18.6	
	comp=Z,2.8nm,0.3s							
SUMG	**Summit**	**11.75**	**259**	*i* P		**Pn**	**06 33 38.9**	**+1.2**
SUMG	**Summit**	**11.75**	**259**	*i* P		**Pn**	**06 33 38.7**	**+1.1**

RSNC 01 06:37:49.8±0.0, **7°N**±1°×**7°3W**±°, **h148**km±2km, **M3.3, mb3.6, ML3.0, MLv3.7, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**183**	P		Pn	06 38 09.9	-0.4
BARC				S		Sn	06 38 24.9	-1.0
BRJC	**Barrancabermej**	**0.58**	**282**	P		Pn	06 38 11.4	0.0
BRJC				S		Sn	06 38 28.3	+0.6
RUSC	**La Rusia**	**0.95**	**175**	P		Pn	06 38 13.7	-0.9
RUSC				S		Sn	06 38 32.8	-0.7
PTBC	**PUERTO BERRIO,**	**1.31**	**257**	P		Pn	06 38 16.2	-1.1
PTBC				S		Sn	06 38 37.6	-0.7
OCAC	**Ocana**	**1.39**	**354**	P		Pn	06 38 17.8	-0.4
OCAC				S		Sn	06 38 39.8	-0.2
SPBC	**San Pablo de B**	**1.49**	**217**	P		Pn	06 38 18.6	-0.6
SPBC				S		Sn	06 38 41.4	-0.3
CHIC	**Chingaza**	**2.28**	**194**	P		Pn	06 38 27.8	-0.7
CHIC				S		Sn	06 38 57.4	-0.9
ROSC	**El Rosal**	**2.30**	**210**	P		Pn	06 38 29.5	+0.7
ROSC				S		Sn	06 38 59.6	+0.8
HELC	**Santa Helena**	**2.43**	**255**	P		Pn	06 38 30.5	+0.1
HELC				S		Sn	06 39 01.2	-0.4
CVER	**Cruz Verde, Cu**	**2.48**	**201**	P		Pn	06 38 31.3	+0.2
CVER				S		Sn	06 39 03.4	+0.5
UREC	**San Jos de Ur**	**2.51**	**291**	P		Pn	06 38 29.5	-1.5
UREC				S		Sn	06 39 01.8	-0.9
GUY2C	**Guyana, Caldas**	**2.72**	**234**	P		Pn	06 38 34.3	+0.3
GUY2C				S		Sn	06 39 07.3	-0.7
CBOC	**Ciudad Bolivar**	**2.99**	**251**	P		Pn	06 38 37.5	+0.4
CBOC				S		Sn	06 39 12.8	-0.9
DBBC	**Dabeiba**	**3.02**	**273**	P		Pn	06 38 37.0	-0.5
DBBC				S		Sn	06 39 12.3	-2.0
ARGC	**Ariguani, Magd**	**3.17**	**340**	P		Pn	06 38 40.0	+0.7
ARGC				S		Sn	06 39 19.1	+1.4
ANIL	**Santa Ana**	**3.23**	**224**	P		Pn	06 38 41.1	+0.8
ANIL				S		Sn	06 39 21.0	+1.6
APAC	**Apartado, Choc**	**3.54**	**287**	P		Pn	06 38 43.6	-0.4
APAC				S		Sn	06 39 25.0	-1.1
PRAC	**Prado**	**3.55**	**209**	P		Pn	06 38 43.2	-1.1
PRAC				S		Sn	06 39 25.2	-1.5
ORTC	**Ortega, Tolima**	**3.58**	**215**	P		Pn	06 38 44.0	-0.6
ORTC				S		Sn	06 39 25.6	-1.5
SJCC	**San Jacinto, C**	**3.62**	**327**	P		Pn	06 38 43.5	-1.7
SJCC				S		Sn	06 39 24.9	-3.2
PLMC	**San Jos del P**	**3.65**	**238**	P		Pn	06 38 45.5	0.0
PLMC				S		Sn	06 39 28.5	-0.3
URMC	**La Uribe, Meta**	**3.78**	**199**	P		Pn	06 38 46.8	-0.4
URMC				S		Sn	06 39 29.9	-1.9
CRJC	**Cerrejon, Guaj**	**4.15**	**4**	P		Pn	06 38 50.3	-1.8
CRJC				S		Sn	06 39 36.9	-3.7
YOTC	**Yotoco, Valle**	**4.25**	**228**	P		Pn	06 38 53.0	-0.5
YOTC				S		Sn	06 39 41.2	-1.8
SMRC	**Santa Marta, M**	**4.41**	**346**	P		Pn	06 38 55.1	-0.3
SMRC				S		Sn	06 39 43.7	-2.8
MACC	**Macarena, Meta**	**4.72**	**188**	P		Pn	06 38 57.0	-2.6
MACC				S		Sn	06 39 48.0	-6.0
POPC	**Popayan, Colom**	**5.53**	**219**	P		Pn	06 39 09.7	-0.7
	4.5nm,0.7s							
POPC				S		Sn	06 40 11.6	-1.8
	4.5nm,0.7s							
FLOC	**Florencia**	**5.79**	**205**	P		Pn	06 39 11.9	-1.9
FLOC				S		Sn	06 40 16.7

	3.7nm,0.1s						
KUU				*e*S		**Sn**	**06 43 28.4 +0.9**
	23nm,0.2s						
KDJ	**Kajisay**	**1.46**	**210**	⇑*e*P		**Pn**	**06 43 10.5 +0.4**
KDJ				⇑*i*S		**Sn**	**06 43 29.5 +0.6**
TDK	**Taldyqorghan**	**1.61**	**6**	P		**Pn**	**06 43 12.6 +0.6**
	41nm,0.1s						
TDK				S		**Sn**	**06 43 33.6 +1.2**
	140nm,0.4s						
TDK	**Taldyqorghan**	**1.61**	**6**	*e*P		**Pn**	**06 43 12.7 +0.6**
	41nm,0.1s						
TDK				*e*S		**Sn**	**06 43 33.6 +1.2**
	140nm,0.4s						
KST	**Kastek**	**1.65**	**258**	P		**Pn**	**06 43 14.1 +1.4**
	6.2nm,0.2s						
KST				S		**Sb**	**06 43 35.9 +1.0**
	32nm,0.3s						
KST	**Kastek**	**1.65**	**258**	*e*P		**Pn**	**06 43 14.1 +1.4**
	6.2nm,0.2s						
KST				*e*S		**Sb**	**06 43 35.9 +1.0**
	32nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.69**	**189**	⇓*e*P		**Pn**	**06 43 13.6 +0.1**
TARG				⇓*e*S		**Sn**	**06 43 35.2 +0.3**
DGS	**Degeres**	**1.75**	**266**	P		**Pn**	**06 43 15.9 +1.8**
	4.9nm,0.2s						
DGS				S		**Sb**	**06 43 39.1 +1.2**
	40nm,0.3s						
ULHL	**Ulahol**	**1.82**	**232**	⇑*i*P		**Pn**	**06 43 15.6 +0.4**
ULHL				⇑*i*S		**Sn**	**06 43 38.7 +0.8**
BOOM	**Boomskoye usch**	**1.87**	**242**	⇑*i*P		**Pn**	**06 43 16.0 +0.3**
BOOM				⇑*i*S		**Sn**	**06 43 39.7 +0.7**
TKM2	**Tokmak 2**	**1.94**	**257**	⇑*i*P		**Pn**	**06 43 16.9 +0.2**
TKM2				⇑*i*S		**Sn**	**06 43 41.4 +0.6**
KAPS	**Kapalarasan**	**2.07**	**24**	Pg		**Pn**	**06 43 20.1 +1.7**
	16nm,0.2s						
KAPS				Lg	Lg		06 43 46.3
	66nm,0.2s						
KBK	**Karagaybulak**	**2.47**	**254**	⇑*i*P		**Pn**	**06 43 24.4 +0.4**
KBK				⇑*i*S		**Sn**	**06 43 54.2 +0.3**
CHMS	**Chumysh**	**2.53**	**262**	⇑*i*P		**Pn**	**06 43 24.8 +0.1**
CHMS				⇑*i*S		**Sn**	**06 43 55.5 +0.5**
USP	**Ospenovka**	**2.68**	**268**	⇓*i*P		**Pn**	**06 43 26.8 +0.1**
USP				⇓*i*S		**Sn**	**06 43 59.0 +0.2**
AAK	**Ala-Archa**	**2.80**	**255**	⇑Pg		**Pb**	**06 43 34.7 +0.7**
	0.2nm,0.3s						
AAK				⇓Lg	Lg		06 44 12.5
	1.0nm,0.4s						
AAK	**Ala-Archa**	**2.80**	**255**	⇑*i*P		**Pn**	**06 43 28.7 +0.2**
AAK				⇑*i*S		**Sn**	**06 44 02.0 +0.1**
UCH	**Uchtor**	**2.93**	**248**	⇑*i*P		**Pn**	**06 43 30.9 +0.3**
UCH				⇑*i*S		**Sn**	**06 44 05.3 -0.3**
JNKS	**Jany-Kuch**	**2.99**	**219**	⇑*i*P		**Pn**	**06 43 32.0 +0.8**
JNKS				⇑*i*S		**Sn**	**06 44 06.6 -0.2**
ARLS	**Aral**	**3.23**	**243**	⇑*i*P		**Pn**	**06 43 34.6 +0.2**
ARLS				⇑*i*S		**Sn**	**06 44 12.1 -0.3**
MRKS	**Merke**	**3.68**	**261**	Pg		**Pb**	**06 43 50.3 +1.4**
	1.4nm,0.2s						
MRKS				Lg	Lg		06 44 38.4
	6.7nm,0.3s						
MRKS	**Merke**	**3.68**	**261**	*e*P		**Pb**	**06 43 49.7 +0.7**
	0.3nm,0.1s						
MRKS				*e*S		**Sb**	**06 44 36.9 +3.7**
	6.7nm,0.3s						
MAKZ	**Makanchi**	**4.35**	**37**	⇓Lg	Lg		06 45 00.9
	1.0nm,0.3s						
MK31	**Makanchi Array**	**4.48**	**39**	Pn		**Pn**	**06 43 49.9 -1.5**
	0.2nm,0.1s,baz=114,slow=11,SNR=5.1						
MK31				⇑Pg		**Pb**	**06 44 03.0 +0.5**
	1.2nm,0.7s,baz=217,slow=13,SNR=4.3						
MK31				⇑Sn		**Sn**	**06 44 42.3 -0.8**
	0.7nm,0.5s						
MK31				⇑Lg	Lg		06 45 04.0
	1.0nm,0.5s,baz=216,slow=29,SNR=4.0						
DEL	**Delary**	**41.84**	**311**	*i*P		**P**	**06 50 34.0 +1.0**

*TIR **01** 06:53:12.5, 42°.23N×20°.82E, h11km, MI3.1/1*
*SKO **01** 06:53:14.2, 42°.17N×20°.55E, h17km, ML3.3*
*PDG **01** 06:53:15.9±0.5, 42°.14N×20°.58E, h14km±1km, ML3.2/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*IDC **01** 06:53:15.5±1.5, 42°.30N×20°.59E, h0km, mb3.8/5, mbtmp3.6/12, ML3.0/6, Error ellipse: s-maj=23.4km s-min=15.2km az=178.0*
*BEO **01** 06:53:15.1±0.4, 42°.07N×20°.62E, h15km±2km, ML3.1/17*
*THE **01** 06:53:20.3, 42°.N±6″×2″.1E±″, h32km±20km, M2.9/10, MLh2.9/10*

ISC 01 06:53:14.9±1.1, 42°.11N±0°.02×20°.61E±0°.02, h4km±8km, n120, σ1§45/179, mb3.8/4, 21C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKO	**Skopje**	**0.63**	**103**	*i* Pg		**Pg**	**06 53 27.0**	**-0.1**
SKO				*i* Sg		**Sb**	**06 53 37.7**	**0.0**
PVY	**Plav**	**0.68**	**315**	⇑*i*Pg		**Pg**	**06 53 26.9**	**-1.1**
PVY				*i* Sg		**Sg**	**06 53 37.5**	**+0.6**
IVA	**Berane**	**0.93**	**325**	⇓*i*Pg		**Pg**	**06 53 32.3**	**-0.4**
IVA				*i* Sg		**Sb**	**06 53 45.7**	**-0.6**
TIR	**Tirane**	**0.95**	**216**	Pn		**Pb**	**06 53 34.4**	**+0.5**
TIR				Sn		**Sn**	**06 53 50.9**	**+2.0**
TIR				AML		AML	06 53 52.2	
	1.5nm,0.7s							
TIR	**Tirane**	**0.95**	**216**	*i* Pg		**Pg**	**06 53 33.4**	**+0.3**
TIR				*i* Sg		**Sn**	**06 53 48.2**	**-0.7**
OHR	**Ohrid**	**1.01**	**172**	*i* Pg		**Pg**	**06 53 33.3**	**-0.9**
OHR				*i* Sg		**Sb**	**06 53 48.5**	**-0.1**
OHR				*e*Lg		Lg	06 53 48.6	
	comp=E,1μm,0.7s							
OHR				*e*Lg		Lg	06 53 51.8	
	comp=N,1μm,0.7s							
ULC	**Ulcinj**	**1.03**	**262**	⇑*i*Pg		**Pg**	**06 53 33.7**	**-0.9**
ULC				*i* Sg		**Sb**	**06 53 49.4**	**+0.3**
PDG	**Podgorica**	**1.06**	**288**	Pn		**Pg**	**06 53 34.2**	**-1.0**
PDG				Sn		**Sn**	**06 53 51.9**	**+0.4**
PDG	**Podgorica**	**1.06**	**288**	⇑P		**Pg**	**06 53 34.1**	**-1.0**
PDG				⇑S		**Sg**	**06 53 47.8**	**-1.0**
PDG	**Podgorica**	**1.06**	**288**	*e*Pg		**Pg**	**06 53 33.9**	**-1.2**
PDG				*e*Sg		**Sb**	**06 53 49.9**	**+0.1**
PDG	**Podgorica**	**1.06**	**288**	⇑*i*Pg		**Pg**	**06 53 33.4**	**-1.8**
PDG				*i* Sg		**Sb**	**06 53 50.3**	**+0.5**
DRME	**Dracevica, Mon**	**1.06**	**274**	*e*Pg		**Pg**	**06 53 34.1**	**-1.2**
DRME				*e*Sg		**Sb**	**06 53 49.7**	**-0.4**
DRME	**Dracevica, Mon**	**1.06**	**274**	⇓*i*Pg		**Pg**	**06 53 33.9**	**-1.4**
DRME				*i* Sg		**Sb**	**06 53 50.9**	**+0.8**
KOME	**Kolasin**	**1.10**	**313**	*e*Pg		**Pg**	**06 53 34.6**	**-1.3**
KOME				*e*Sg		**Sn**	**06 53 52.5**	**-0.2**
KOME	**Kolasin**	**1.10**	**313**	⇓*i*Pg		**Pg**	**06 53 34.7**	**-1.2**
KOME				*i* Sg		**Sb**	**06 53 51.6**	**+0.5**
SELS	**Selova**	**1.17**	**19**	*e*Pg		**Pg**	**06 53 37.5**	**+0.2**
SELS				*e*Sg		**Sn**	**06 54 0.0**	**-0.4**
SJES	**Sjenica**	**1.24**	**338**	*e*Pg		**Pg**	**06 53 37.9**	**-0.8**
SJES				*e*Sg		**Sn**	**06 53 56.7**	**+0.4**
BUM	**Brajici-Budva**	**1.29**	**279**	⇓*i*Pg		**Pg**	**06 53 38.4**	**-1.2**
BUM				*i* Sg		**Sn**	**06 53 58.7**	**+1.2**
CEME	**Cevo**	**1.33**	**290**	⇑*i*Pg		**Pn**	**06 53 38.1**	**-2.2**
CEME				*i* Sg		**Sn**	**06 53 59.7**	**+1.3**
NKME	**Niksic**	**1.39**	**299**	⇑*i*Pg		**Pn**	**06 53 40.2**	**-0.9**
NKME				*i* Sg		**Sn**	**06 54 01.3**	**+1.4**
BOSS	**Bosilegrad**	**1.44**	**74**	*e*Pg		**Pn**	**06 53 41.6**	**-0.1**
BOSS				*e*Sg		**Sb**	**06 54 00.5**	**-0.4**
GOCS	**Kraljevo Serbi**	**1.46**	**7**	*e*Pg		**Pn**	**06 53 41.6**	**-0.5**
GOCS				*e*Sg		**Sg**	**06 54 02.6**	**+0.7**
KBN	**Korca**	**1.49**	**175**	Pg		**Pn**	**06 53 42.5**	**0.0**
KBN				Sg		**Sg**	**06 54 04.4**	**+1.5**
KBN	**Korca**	**1.49**	**175**	P		**Pb**	**06 53 43.4**	**+0.2**
KBN				S		**Sn**	**06 54 01.4**	**-1.1**
IVAS	**Ivanjica**	**1.50**	**347**	*e*Pg		**Pn**	**06 53 42.2**	**-0.4**
IVAS				*e*Sg		**Sg**	**06 54 03.8**	**+0.6**
PLE	**Pljevlja**	**1.51**	**324**	⇑*i*Pg		**Pn**	**06 53 43.1**	**+0.2**
PLE				*i* Sg		**Sg**	**06 54 04.7**	**+1.1**
HCY	**Herceg Novi**	**1.61**	**283**	⇓*i*Pn		**Pn**	**06 54 44.0**	**0.0**
HCY				*i* Sn		**Sg**	**06 54 07.4**	**+0.9**
UPM	**Unac-Piva**	**1.67**	**311**	⇓*i*Pn		**Pn**	**06 53 45.4**	**+0.4**
UPM				*i* Sn		**Sb**	**06 54 07.9**	**+0.3**
VAY	**Valandovo**	**1.67**	**118**	*i* Pg		**Pn**	**06 53 45.4**	**+0.6**
VAY				*i* Sg		**Sg**	**06 54 09.1**	**+0.7**
VAY				*e*Lg		Lg	06 54 09.4	
	comp=N,207nm,0.5s							
VAY				*e*Lg		Lg	06 54 10.8	
	comp=E,230nm,0.6s							
BOVS	**Bovan**	**1.72**	**27**	⇓P		**Pg**	**06 53 47.6**	**-0.3**
BOVS				⇑S		**Sg**	**06 54 10.4**	**+0.2**
BOVS	**Bovan**	**1.72**	**27**	*e*Pn		**Pn**	**06 53 45.4**	**-0.2**
BOVS				*e*Sn		**Sn**	**06 54 07.2**	**-0.8**
BRY	**Bratogost**	**1.72**	**298**	⇑*i*Pn		**Pn**	**06 53 45.9**	**+0.1**
BRY				*i* Sn		**Sb**	**06 54 09.5**	**+0.3**
NEST	**Nestorio**	**1.73**	**169**	Pg		**Pb**	**06 53 46.9**	**-0.4**
NEST				Sg		**Sg**	**06 54 12.3**	**+1.9**
NEST	**Nestorio**	**1.73**	**169**	P		**Pb**	**06 53 46.7**	**-0.6**
NEST				S		**Sn**	**06 54 08.3**	**0.0**
RUDO	**Rudo**	**1.76**	**329**	*e*Pn		**Pn**	**06 53 46.5**	**+0.3**
GRUS	**Gruza**	**1.78**	**2**	*e*Pn		**Pn**	**06 53 46.1**	**-0.3**
GRUS				*e*Sn		**Sn**	**06 54 09.0**	**-0.4**
TREB	**Trebinje**	**1.78**	**291**	*e*Pn		**Pb**	**06 53 47.9**	**-0.2**
KLINJ	**Klinje**	**1.83**	**306**	*e*Pn		**Pn**	**06 53 47.8**	**+0.6**
ZAPS	**Zavoj**	**1.89**	**51**	*e*Pn		**Pn**	**06 53 48.0**	**+0.1**
ZAPS				*e*Sn		**Sn**	**06 54 12.1**	**-0.1**
KKB	**Krupnik**	**1.90**	**97**	P		**Pn**	**06 53 48.8**	**+0.8**
KKB	**Krupnik**	**1.90**	**97**	*i* Pn		**Pb**	**06 53 49.6**	**-0.4**
PENT	**Pentalofos**	**1.96**	**168**	P		**Pb**	**06 53 50.6**	**-0.6**
PENT				S		**Sn**	**06 54 13.7**	**-0.3**
KNT	**Kendrikon**	**1.96**	**118**	P		**Pn**	**06 53 49.1**	**+0.2**
KNT				S		**Sn**	**06 54 11.6**	**-2.2**
KNT	**Kendrikon**	**1.96**	**118**	*i* Pn		**Pn**	**06 53 49.0**	**+0.2**
BBLS	**Lazi&#263i**	**1.96**	**334**	*e*Pn		**Pn**	**06 53 49.0**	**0.0**
KZN	**Kozani**	**2.00**	**154**	P		**Pn**	**06 53 50.4**	**+0.9**
KZN				S		**Sn**	**06 54 14.7**	**-0.5**
DIVS	**Divibare**	**2.04**	**347**	*e*Pn		**Pn**	**06 53 49.5**	**-0.5**
DIVS				*e*Sn		**Sn**	**06 54 15.4**	**-0.5**
KTI	**Kastanea**	**2.06**	**146**	P		**Pn**	**06 53 51.2**	**+0.9**
ZAGS	**Zajecar**	**2.07**	**34**	*e*Pn		**Pn**	**06 53 50.4**	**0.0**
ZAGS				*e*Sn		**Sn**	**06 54 15.5**	**-1.2**
TRUS	**Trudelj**	**2.12**	**356**	*e*Pn		**Pn**	**06 53 51.2**	**+0.2**
TRUS				*e*Sn		**Sn**	**06 54 16.2**	**-1.5**
BLKB	**Belogradchik**	**2.14**	**44**	⇓S		**Sb**	**06 54 20.8**	**-0.3**
SVIS	**Svilajnac**	**2.20**	**11**	*e*Sn		**Sn**	**06 54 18.1**	**-1.6**
BORS2	**Bor- Borsko je**	**2.23**	**27**	*e*Pn		**Pn**	**06 53 51.1**	**-1.5**
BORS2				*e*Sn		**Sn**	**06 54 18.9**	**-1.7**
THE	**Thessaloniki**	**2.31**	**129**	P		**Pn**	**06 53 54.5**	**+0.9**
THE	**Thessaloniki**	**2.31**	**129**	*i* Pn		**Pn**	**06 53 55.2**	**+1.6**
HORT	**Hortiatis**	**2.41**	**128**	P		**Pn**	**06 53 55.7**	**+0.6**
MMB	**Musomishta**	**2.41**	**103**	P		**Pn**	**06 53 56.1**	**+0.9**
MMB	**Musomishta**	**2.41**	**103**	*i* Pn		**Pn**	**06 53 56.5**	**+1.4**
SOH	**Sokhos**	**2.43**	**121**	P		**Pn**	**06 53 56.2**	**+0.8**
SOH	**Sokhos**	**2.43**	**121**	*i* Pn		**Pn**	**06 53 56.1**	**+0.8**
SRS	**Serrai**	**2.45**	**113**	P		**Pn**	**06 53 56.2**	**+0.6**
SRS	**Serrai**	**2.45**	**113**	*i* Pn		**Pn**	**06 53 57.1**	**+1.6**
LIT	**Litokhoron**	**2.46**	**144**	P		**Pn**	**06 53 56.5**	**+0.7**
LIT	**Litokhoron**	**2.46**	**144**	*i* Pn		**Pn**	**06 53 56.6**	**+0.8**
KEK	**Kerkira**	**2.48**	**195**	Pn		**Pb**	**06 53 58.7**	**-1.2**
KEK				Pn		**Pg**	**06 54 02.0**	**-0.3**
KEK				Sn		**Sg**	**06 54 33.3**	**-1.1**
KEK				Sn		**Sg**	**06 54 33.4**	**-1.1**
TEKS	**Tekeris**	**2.56**	**342**	*e*Pn		**Pn**	**06 53 56.9**	**-0.3**
TEKS				*e*Sn		**Sn**	**06 54 28.1**	**-0.6**
AVAS	**Avala Beograd**	**2.58**	**358**	*e*Pn		**Pn**	**06 53 55.9**	**-1.6**
IGT	**Igoumenitsa**	**2.59**	**185**	Pn		**Pb**	**06 54 00.1**	**-1.7**
IGT				Sn		**Sb**	**06 54 35.6**	**+1.7**
THL	**Klokotos Trika**	**2.76**	**157**	Pn		**Pn**	**06 54 00.9**	**+1.0**
MDVR	**Moldovita**	**2.79**	**16**	⇑P		**Pn**	**06 54 02.0**	**+1.7**
MDVR				⇓S		**Sn**	**06 54 35.5**	**+1.2**
VRSS	**Vrsac**	**3.05**	**10**	*e*Pn		**Pn**	**06 54 02.0**	**-1.9**
VRSS				*e*Sn		**Sn**	**06 54 39.0**	**-1.9**
HERR	**Herculane**	**3.06**	**25**	⇓P		**Pn**	**06 54 04.5**	**+0.5**
FRGS	**Fruska Gora**	**3.10**	**349**	*e*Pn		**Pn**	**06 54 04.1**	**-0.5**
PLVB	**Pleven**	**3.21**	**65**	⇑P		**Pn**	**06 54 08.5**	**+2.4**
MATE	**Matera**	**3.28**	**245**	⇑P		**Pn**	**06 54 07.5**	**+0.4**
MATE				⇑S		**Sn**	**06 54 44.8**	**-1.7**
LKD2	**Lefkada island**	**3.32**	**179**	P		**Pn**	**06 54 09.3**	**+1.7**
LKD2				Sn		**Sb**	**06 54 54.1**	**-1.0**
BZS	**Buzias**	**3.58**	**11**	⇑P		**Pn**	**06 54 11.7**	**+0.6**
BLY	**Banja Luka**	**3.63**	**318**	*e*Pn		**Pg**	**06 54 23.5**	**-0.9**
BLY	**Banja Luka**	**3.63**	**318**	⇑P		**Pn**	**06 54 12.1**	**+0.3**
GZR	**Gura Zlata**	**3.63**	**25**	⇑P		**Pn**	**06 54 12.6**	**+0.6**
SURR	**Surduc**	**3.80**	**16**	⇑P		**Pn**	**06 54 15.0**	**+0.8**
TIP	**Timpagrande**	**4.14**	**226**	⇑P		**Pn**	**06 54 19.0**	**0.0**
MORH	**Mrgy, Hungar**	**4.34**	**342**	*e*Pn		**Pn**	**06 54 20.9**	**-0.6**
MORH	**Mrgy, Hungar**	**4.34**	**342**	⇓P		**Pn**	**06 54 21.7**	**+0.1**
ARR	**Arges**	**4.37**	**40**	⇑P		**Pn**	**06 54 23.2**	**+1.2**
MARR	**Marisel-Cluj**	**4.90**	**21**	⇓P		**Pn**	**06 54 30.7**	**+1.2**
DRGR		**4.91**	**17**	⇓P		**Pn**	**06 54 30.3**	**+0.8**
MLR	**Muntele Rosu**	**5.13**	**47**	Pn		**Pn**	**06 54 33.7**	**+1.1**
	comp=E,1.4nm,0.3s,baz=314,slow=12,SNR=9.4							
MLR				Sn		**Sn**	**06 55 31.8**	**-0.3**
	comp=E,0.5nm,0.3s,baz=168,slow=20,SNR=3.2 comp=E,2.9nm,0.3s							
MLR	**Muntele Rosu**	**5.13**	**47**	⇑P		**Pn**	**06 54 34.7**	**+2.2**
BEHE	**Becsehely**	**5.15**	**329**	*e*Pn		**Pn**	**06 54 31.1**	**-1.7**
AQU	**L'Aquila**	**5.36**	**275**	*e*Pn		**Pn**	**06 54 36.2**	**+0.6**
PSZ	**Piszkesteto**	**5.83**	**355**	⇓P		**Pn**	**06 54 42.4**	**+0.4**
SOKA	**Soboth**	**6.07**	**321**	*i* Pn		**Pn**	**06 54 45.4**	**0.0**
	comp=E,1.0nm,0.4s							
OBKA	**Obir**	**6.18**	**317**	*e*Pn		**Pn**	**06 54 48.5**	**+1.5**
	comp=E,1.1nm,0.4s							
ARSA	**Arzberg**	**6.29**	**327**	*i* Pn		**Pn**	**06 54 48.8**	**+0.5**
	comp=E,1.3nm,0.3s							
ARSA				*e*Sn		**Sn**	**06 55 58.4**	**-2.2**
	comp=E,1.4nm,0.4s							
KECS	**Kecovo**	**6.37**	**359**	*e*PN		**Pn**	**06 54 50.9**	**+1.4**
KECS				*e*SN		**Sn**	**06 55 59.8**	**-2.8**
MODS	**Modra-Piesok**	**6.69**	**341**	*e*PN		**Pn**	**06 54 55.2**	**+1.4**
MODS				*e*SN		**Sn**	**06 56 06.0**	**-4.4**
CONA	**Conrad Observa**	**6.72**	**332**	*e*Pn		**Pn**	**06 54 58.9**	**+4.6**
	comp=E,2.2nm,0.8s							
MYKA	**Terra Mystica**	**6.73**	**314**	*e*Pn		**Pn**	**06 54 57.9**	**+3.4**
	comp=E,1.4nm,0.3s							
KBA	**Koelnreinsper**	**7.18**	**316**	*e*Pn		**Pn**	**06 55 03.7**	**+3.0**
	comp=E,3.3nm,0.9s							
MOA	**Molln**	**7.29**	**324**	*e*Pn		**Pn**	**06 55 05.7**	**+3.6**
	comp=E,1.9nm,0.6s							
MOA				*i* Sn		**Sn**	**06 56 23.9**	**-1.4**
	comp=E,2.0nm,0.4s							
STHS	**Stebnicka Huta**	**7.32**	**3**	*e*PN		**Pn**	**06 55 04.1**	**+1.6**
ABTA	**Abfaltersbach**	**7.42**	**311**	*i* Pn		**Pn**	**06 55 06.1**	**+2.1**
	comp=E,2.1nm,0.3s							
IDI	**Anoyia**	**7.59**	**152**	Pn		**Pn**	**06 55 10.3**	**+4.0**
	comp=E,8.7nm,0.9s,baz=306,slow=1.1,SNR=3.0							
IDI				Sn		**Sn**	**06 56 27.1**	**-5.7**
	comp=E,0.3nm,0.3s,baz=306,slow=18,SNR=2.1							
LESA	**Schwarzleotal**	**7.75**	**316**	*i* Pn		**Pn**	**06 55 12.3**	**+3.8**
	comp=E,1.7nm,0.4s,SNR=5.2							
WTTA	**Wattenberg**	**8.21**	**312**	*e*Pn		**Pn**	**06 55 17.6**	**+2.8**
	comp=E,0.8nm,0.2s							
WATA	**Walderalm**	**8.28**	**312**	*i* Pn		**Pn**	**06 55 19.2**	**+3.3**
	comp=E,0.7nm,0.2s							
GERES	**GERESS Array B**	**8.30**	**327**	Pn		**Pn**	**06 55 16.8**	**+0.8**
	baz=148,slow=13,SNR=3.6 comp=E,0.3nm,0.4s							
SQTA	**Sankt Quirin**	**8.42**	**311**	*i* Pn		**Pn**	**06 55 20.8**	**+3.1**
	comp=E,1.8nm,0.3s							
SQTA				*e*Sn		**Sn**	**06 56 56.5**	**+3.3**
	comp=E,7.4nm,0.7s							
MOTA	**Moosalm**	**8.55**	**311**	*i* Pn		**Pn**	**06 55 22.8**	**+3.3**
	comp=E,0.6nm,0.2s							
MOTA				*e*Sn		**Sn**	**06 56 59.1**	**+2.6**
	comp=E,3.9nm,0.6s							
FETA	**Feichten**	**8.59**	**308**	*e*Pn		Pn	06 55 25.4	+5.3
	comp=E,1.4nm,0.6s							
HFS	**Hagfors**	**18.54**	**349**	P		**P**	**06 57 31.5**	**-0.7**
	comp=E,0.2nm,0.3s,baz=172,slow=13,SNR=2.4 comp=E,3.1nm,0.9s							
ESDC	**Sonseca Array**	**18.72**	**271**	P		**Pn**	**06 57 34.9**	**+0.1**
	comp=E,0.1nm,0.3s,baz=75,slow=9.8,SNR=2.7 comp=E,0.4nm,0.8s							
FINES	**FINESS Array B**	**19.64**	**8**	P		**P**	**06 57 43.4**	**-0.8**
	comp=E,0.2nm,0.3s,baz=187,slow=9.8,SNR=1.9 comp=E,2.2nm,0.9s							
NOA	**NORSAR Array B**	**19.79**	**346**	P		**P**	**06 57 44.8**	**-1.2**
	baz=149,slow=11,SNR=1.1 comp=E,0.2nm,0.5s							
EKA	**Eskdalemuir Ar**	**20.38**	**319**	P		**P**	**06 57 51.6**	**-0.7**
	comp=E,0.9nm,0.5s,baz=112,slow=9.5,SNR=6.0 comp=E,0.9nm,0.5s							
ARCES	**ARCESS Array B**	**27.61**	**4**	P		**P**	**06 59 01.9**	**-0.9**
	comp=E,2.5nm,0.8s,baz=187,slow=9.3,SNR=7.3 comp=E,2.5nm,0.8s							
ZALV	**Zalesovo Beam**	**43.09**	**51**	P		**P**	**07 01 15.5**	**-0.3**
	comp=E,2.0nm,0.7s,baz=286,slow=7.6,SNR=6.1 comp=E,2.0nm,0.7s							
MKAR	**Makanchi Array**	**43.28**	**62**	P		**P**	**07 01 18.1**	**+0.6**
	comp=E,0.9nm,0.6s,baz=289,slow=7.0,SNR=9.9 comp=E,0.9nm,0.6s							
SONM	**Songino Array**	**57.96**	**52**	P		**P**	**07 03 09.7**	**+1.3**
	comp=E,0.3nm,0.4s,baz=298,slow=3.1,SNR=1.5 comp=E,0.3nm,0.4s							

*BER **01** 06:59:10.6±2.3, 81°.62N×3°.61W, h10km, mb(Pn)3.4, ML2.1(DNK), Confirmed Earthquake*
*DNK **01** 06:59:11.9±1.6, 81°.70N×3°.43W, h36km±16km, ML2.1*
*FCIAR **01** 06:59:12.0, 81°.64N×1°.44W, h10km, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.50*
*KOLA **01** 06:59:13.3, 81°.88N×0°.56W, h0km, ML2.4, Error ellipse: s-maj=108.5km s-min=27.9km az=40.0, Arctic Ocean*

ISC 01 06:59:12.8±3.8, 81°.1N±0°.3×3°.42W±0°.07, h10km, n21, σ1§48/31, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NOR	**Nord**	**2.06**	**290**	*e*P		Pn	06 59 41.0	-6.3
NOR				*i* S		Sn	07 00 02.9	-10
NOR				IAML			07 00 06.7	
	comp=Z,18nm,0.7s							
NOR	**Nord**	**2.06**	**290**	*e*P		Pn	06 59 41.0	-6.3
NOR				*i* S		Sn	07 00 02.9	-10
NOR				IAML			07 00 06.7	
	comp=Z,18nm,0.7s							
KBS	**Kingsbay**	**3.45**	**122**	P		**Pn**	**07 00 06.8**	**+0.4**
KBS				S		**Sn**	**07 00 46.6**	**-0.6**
KBS	**Kingsbay**	**3.45**	**122**	*e*P		**Pn**	**07 00 06.8**	**+0.4**
KBS				*e*S		**Sn**	**07 00 46.7**	**-0.6**
KBS				IAML			07 00 52.7	
	comp=Z,4.6nm,0.4s							
KBS	**Kingsbay**	**3.45**	**122**	*i* P		**Pn**	**07 00 07.0**	**+0.6**
KBS				*i* S		**Sn**	**07 00 46.4**	**-0.8**
BRBB	**Barentsburg B**	**4.38**	**125**	P		**Pn**	**07 00 21.2**	**+2.0**
BRBB				S		**Sn**	**07 01 10.9**	**+0.8**
BRBB	**Barentsburg B**	**4.38**	**125**	*e*P		**Pn**	**07 00 20.3**	**+1.2**
BRBB				*e*S		**Sn**	**07 01 10.3**	**+0.1**
BRBA	**Barentsburg A**	**4.41**	**125**	*e*P		**Pn**	**07 00 20.6**	**+1.1**
BRBA				IAML			07 01 21.8	
	comp=Z,6.8nm,0.9s							
SPA0	**Spitsbergen Ar**	**4.60**	**119**	*e*P		**Pn**	**07 00 22.1**	**-0.2**
SPA0				*e*S		**Sn**	**07 01 15.0**	**-0.6**
SPA0	**Spitsbergen Ar**	**4.60**	**119**	*e*P		**Pn**	**07 00 22.4**	**+0.2**
SPA0				IAML			07 01 02.5	
	comp=Z,4.7nm,0.9s							
SPA0				*e*S		**Sn**	**07 01 14.4**	**-1.2**
SPITS	**Spitsbergen Ar**	**4.60**	**119**	P		**Pn**	**07 00 22.4**	**+0.2**
SPITS				S		**Sn**	**07 01 15.9**	**+0.3**
DAG	**Danmarks Havn**	**5.23**	**222**	*i* P		**Pn**	**07 00 32.7**	**+1.9**
DAG				*i* S		**Sn**	**07 01 30.7**	**-0.3**
DAG				IAML			07 01 36.3	
	comp=Z,8.0nm,0.4s							
DAG	**Danmarks Havn**	**5.23**	**222**	*i* P		**Pn**	**07 00 32.7

O02D	**Mt. Diablo Mer**	**2.65**	**294**		Pn	07 00 45.8 +0.4
O02D				IAML		07 01 37.7
	comp=N,41nm,1.0s					
O02D				IAML		07 01 42.5
	comp=E,46nm,0.7s					
HOPS	**Hopland Field**	**2.69**	**268**		Pn	07 00 47.4 +1.7
JRSC	**Jasper Ridge**	**2.69**	**231**		Pn	07 00 47.4 +1.7
JRSC				IAML		07 01 27.1
	comp=E,42nm,1.2s					
MCCM	**Marconi Confer**	**2.73**	**250**		Pn	07 00 47.2 +0.9
MCCM				IAML		07 01 29.6
	comp=E,60nm,0.9s					
MCCM				IAML		07 01 41.8
	comp=N,54nm,1.1s					
SAO	**San Andreas Ge**	**2.77**	**212**		Pn	07 00 48.5 +1.6
BBGB	**Big Mountain B**	**2.79**	**204**		Pn	07 00 48.9 +1.7
SGV	**South Grapevin**	**2.97**	**136**		Pn	07 00 50.6 +0.8
N02D	**Trinity Center**	**2.99**	**309**		Pn	07 00 50.2 +0.2
N02D				IAML		07 01 47.1
	comp=E,62nm,0.7s					
N02D				IAML		07 01 48.1
	comp=N,48nm,0.8s					
KHBM	**Hayfork Bally**	**3.16**	**300**		Pn	07 00 54.0 +1.6
KHBM				IAML		07 01 53.9
	comp=N,30nm,1.2s					
R11B	**Troy Canyon, C**	**3.25**	**103**		Pn	07 00 53.4 -0.3
R11B				IAML		07 01 46.2
	comp=N,30nm,0.5s					
WCT	**Wildcat Mounta**	**3.33**	**134**		Pn	07 00 55.8 +1.2
WCT				IAML		07 01 52.9
	comp=N,35nm,0.7s					
WCT				IAML		07 01 53.1
	comp=E,40nm,0.5s					
M02C	**Callahan**	**3.34**	**313**		Pn	07 00 55.5 +0.7
HULI	**Fort Hunter Li**	**3.36**	**203**		Pn	07 00 55.6 +0.5
HULI				IAML		07 01 57.7
	comp=E,31nm,1.2s					
HULI				IAML		07 01 58.0
	comp=N,47nm,1.9s					
TPNV	**Topopah Spring**	**3.44**	**128**		Pn	07 00 57.2 +0.9
TPNV				IAML		07 01 57.6
	comp=N,37nm,0.7s					
YBH	**Yreka Blue Hor**	**3.50**	**319**		Pn	07 00 57.5 +0.5
YBH				IAML		07 02 28.4
	comp=N,21nm,0.3s					
L04D	**Klamath Falls**	**3.69**	**327**		Pn	07 00 59.5 -0.2
L04D				IAML		07 02 11.6
	comp=E,17nm,1.6s					
ELK	**Elko**	**3.73**	**63**		Pn	07 01 00.4 +0.1
GWY	**Greenwater Val**	**3.77**	**141**		Pn	07 01 01.7 +1.0
GWY				IAML		07 02 13.0
	comp=E,24nm,1.0s					
GWY				IAML		07 02 19.5
	comp=N,17nm,1.2s					
JCC	**Jacoby Creek,**	**3.78**	**298**	Pn	Pn	07 01 01.9 +1.2
JCC				IAML		07 02 24.9
	comp=E,17nm,2.5s					
JCC				IAML		07 02 24.9
	comp=N,16nm,2.8s					
QSM	**Queen of Sheba**	**3.85**	**144**		Pn	07 01 02.4 +0.6
SPR3	**Spring Creek 3**	**4.12**	**90**		Pn	07 01 06.5 +0.8
KSXB	**Camp Six Broad**	**4.21**	**311**	Pn	Pn	07 01 08.0 +1.2
KSXB				IAML		07 02 40.0
	comp=E,15nm,2.1s					
KSXB				IAML		07 03 10.6
	comp=N,17nm,2.4s					
BBOR	**Butler Butte**	**4.40**	**329**	Pn	Pn	07 01 11.6 +2.1
GSC	**Goldstone, Bar**	**4.44**	**149**	Pn	Pn	07 01 12.0 +2.1
GSC				IAML		07 02 38.1
	comp=N,11nm,1.4s					
GSC				IAML		07 02 46.6
	comp=E,14nm,2.0s					
I07A	**Izee**	**4.94**	**1**	Pn	Pn	07 01 15.5 -1.3
I07A				IAML		07 03 15.8
	comp=E,10nm,5.0s					
I07A				IAML		07 03 55.0
	comp=N,7.6nm,4.5s					
DUG	**Dugway, Tooele**	**5.36**	**76**		Pn	07 01 23.7 +1.0
DUG				IAML		07 03 02.2
	comp=N,12nm,1.2s					
DUG				IAML		07 03 08.8
	comp=N,11nm,0.8s					

*NEIC **01** 07:04:41.7±1.6, 1.49N±0.02×85.28W±0.09, h10km±2km, mb4.4/8, Error ellipse: s-maj=14.5km s-min=3.2km az=271.0*

*GCMT **01** 07:04:44.7±0.4, 1.46N±0.02×85.21W±0.02, h20km±1km, MW4.7/84, Moment Tensor Solution. s15,c17; s84,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~0.19±.08; $M_{\theta\theta}$0.47±.06; $M_{\phi\phi}$-0.28±.07; $M_{r\theta}$0.01±.13; $M_{\theta\phi}$1.49±.06; $M_{\phi r}$~0.11±.13; Best double couple: $M_0$1.54200×10^{16} NP1:ϕs7.00000°,δ88.00000°,λ-176.00000°. NP2: ϕs277.00000°,δ86.00000°,λ-2.00000°. Principal axes: T 1.6330, Plg2.0000°, Azm142.0000°; N -0.1820, Plg85.0000°, Azm30.0000°; P -1.4500, Plg4.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 07:04:43.2±0.8, 1.48N±0.08×85.31W±0.09, h27km, n40, σ1§35/40, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAYG	**Puerto Ayora**	**5.41**	**247**	Pn	**Pn**	**07 06 02.8**	**+0.5**
OTAV	**Otavalo**	**6.97**	**100**		**Pn**	**07 06 23.2**	**-0.8**
OTAV	**Otavalo**	**6.97**	**100**	P	**Pn**	**07 06 23.7**	**-0.4**
	14nm,1.1s						
CUSE	**Cuicocha Este**	**7.01**	**100**	P	**Pn**	**07 06 24.4**	**-0.2**
	2µm49nm,0.5s						
SLOR	**San Lorenzo -**	**7.16**	**108**		**Pn**	**07 06 25.9**	**-0.7**
COHC	**Cochancay**	**7.21**	**123**		**Pn**	**07 06 25.0**	**-2.0**
COHC	**Cochancay**	**7.21**	**123**	P	**Pn**	**07 06 25.3**	**-1.7**
	2µm132nm,0.6s						
GR1C	**Gorgona, Isla**	**7.30**	**78**	P	**Pn**	**07 06 27.3**	**-0.9**
PIAT	**Ana Tenorio**	**7.47**	**109**	P	**Pn**	**07 06 30.7**	**-0.1**
	13nm,1.2s						
TULM	**Tulcn-Chalpat**	**7.56**	**96**	P	**Pn**	**07 06 34.5**	**+2.3**
	33nm,1.2s						
BONI	**La Bonita**	**7.85**	**97**	P	**Pn**	**07 06 38.2**	**+2.2**
	16nm,0.9s						
MCRA	**Macar, Loja**	**7.90**	**137**	P	**Pn**	**07 06 35.0**	**-1.5**
	2µm109nm,0.5s						
JUD3	**Juan Diaz 3**	**8.63**	**359**	Pn	**Pn**	**07 06 46.1**	**-0.5**
POPC	**Popayan, Colom**	**8.69**	**83**	P	**Pn**	**07 06 47.3**	**-0.3**
	428nm28nm,1.3s						
JTS	**Las Juntas de**	**8.76**	**2**		**Pn**	**07 06 49.5**	**+1.2**
SOCE	**Pocosol**	**8.87**	**4**	Pn	**Pn**	**07 06 48.9**	**-0.9**
YOTC	**Yotoco, Valle**	**9.29**	**74**	P	**Pn**	**07 06 56.1**	**+0.4**
	10nm,1.3s						
FLOC	**Florencia**	**9.66**	**89**		**Pn**	**07 07 00.4**	**-0.2**
CBOC	**Ciudad Bolivar**	**10.25**	**65**	P	**Pn**	**07 07 09.4**	**+0.6**
	26nm,1.4s						
ANIL	**Santa Ana**	**10.34**	**73**	P	**Pn**	**07 07 11.6**	**+1.5**
	23nm,1.2s						
ORTC	**Ortega, Tolima**	**10.34**	**76**	P	**Pn**	**07 07 11.9**	**+1.9**
	599nm59nm,1.4s						
PTLC	**Puerto Leguiza**	**10.59**	**97**	P	**Pn**	**07 07 13.6**	**+0.2**
	24nm,1.3s						
GUY2C	**Guyana, Caldas**	**10.60**	**69**	P	**Pn**	**07 07 14.3**	**+0.4**
	12nm,1.0s						
DBBC	**Dabeiba**	**10.61**	**59**	P	**Pn**	**07 07 16.9**	**+3.2**
PRAC	**Prado**	**10.65**	**78**	P	**Pn**	**07 07 14.7**	**+0.5**
	17nm,1.3s						
APAC	**Apartado, Choc**	**10.79**	**53**	P	**Pn**	**07 07 19.6**	**+3.6**
	28nm,1.6s						
HELC	**Santa Helena**	**10.82**	**64**	P	**Pn**	**07 07 17.9**	**+1.0**
	660nm37nm,1.7s						
CRIN	**San Cristobal**	**11.28**	**351**	Pn	**Pn**	**07 07 23.1**	**+0.2**
ROSC	**El Rosal**	**11.47**	**73**	Pn	**Pn**	**07 07 24.1**	**-1.6**
MACC	**Macarena, Meta**	**11.48**	**87**	P	**Pn**	**07 07 25.6**	**+0.1**
	25nm,1.3s						
RUSC	**La Rusia**	**12.96**	**70**	Pn	**Pn**	**07 07 45.8**	**-0.5**
NNA	**Nana**	**15.80**	**148**	Pn	**Pn**	**07 08 24.6**	**+0.5**
NNA				IAmb	IAmb	07 08 50.4	
	comp=Z,38nm,1.3s						
SDV	**Santo Domingo**	**16.36**	**63**	Pn	**Pn**	**07 08 30.3**	**-1.1**
SDV				IAmb	IAmb	07 08 38.4	
	comp=Z,37nm,1.5s						
SDV	**Santo Domingo**	**16.36**	**63**	P	**P**	**07 08 34.3**	**+0.2**
MTDJ	**Mount Denham**	**18.31**	**24**	P	**P**	**07 08 55.3**	**-0.2**
BAUV	**El Baul**	**18.72**	**66**		**P**	**07 08 58.8**	**-1.1**
LPAZ	**La Paz**	**24.49**	**137**		**P**	**07 10 00.9**	**-0.2**
LPAZ				IAmb	IAmb	07 10 03.3	
	comp=Z,11nm,1.0s						
PB16	**IPOC Station P**	**25.09**	**142**	P	**P**	**07 10 07.7**	**+1.2**
GO01	**Chusmiza**	**26.30**	**144**	P	**P**	**07 10 19.4**	**+2.0**
GO01				IAmb	IAmb	07 10 24.0	
	comp=Z,11nm,1.2s						
HNDO	**Hondo**	**30.90**	**336**	P	**P**	**07 10 57.1**	**-0.6**

*SJA **01** 07:10:57.5±0.6, 24.12S×67.17W, h193km±5km, ML3.6, MW3.6*

*GUC **01** 07:10:59.3±0.6, 24.05S×67.43W, h218km±4km, ML3.8*

ISC 01 07:10:56.8±1.7, 24.10S±0.04×67.16W±0.05, h204km±12km, n38, σ1§46/67, 4C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.76**	**99**	*e*P	**Pn**	**07 11 26.1**	**-0.1**
SALTA				*e*P	**Pn**	**07 11 26.1**	**-0.1**
SALTA				*e*P	**Pn**	**07 11 26.1**	**-0.1**
AF01	**San Pedro de A**	**1.48**	**320**	*e*P	**Pn**	**07 11 32.5**	**+1.4**
AF01				*e*S	**S**	**07 11 58.3**	**+1.0**
AF01				IAML		07 12 00.7	
	comp=N,296nm,0.3s						
AF01	**San Pedro de A**	**1.48**	**320**	*e*P	**Pn**	**07 11 29.2**	**-1.8**
AF01				*e*S	**S**	**07 11 59.0**	**+1.8**
AF01				IAML		07 12 05.2	
	comp=Z,186nm,0.2s						
SLA	**San Lorenzo**	**1.63**	**113**	*e*P	Pn	07 11 28.2	-4.0
SLA				*e*S	**S**	**07 11 54.7**	**-4.6**
FSA	**Cafayete**	**2.27**	**152**	*e*P	Pn	07 11 26.0	-13
YJA	**Yavi**	**2.44**	**39**	*e*P	**Pn**	**07 11 43.8**	**+3.0**
YJA				*e*S	**S**	**07 12 15.4**	**+0.9**
GO02	**Mina Guanaco**	**2.45**	**244**	*e*P	**Pn**	**07 11 42.1**	**+1.3**
GO02				*e*S	**S**	**07 12 14.8**	**+0.4**
GO02	**Mina Guanaco**	**2.45**	**244**	*e*P	**Pn**	**07 11 41.4**	**+0.6**
GO02				*e*S	**S**	**07 12 15.1**	**+0.6**
GO02				IAML		07 12 15.9	
	comp=Z,416nm,0.1s						
PB06	**IPOC Station P**	**2.62**	**302**	*e*P	**Pn**	**07 11 43.7**	**+1.2**
PB06				*e*S	**S**	**07 12 16.6**	**-0.9**
PB06				IAML		07 12 19.9	
	comp=N,417nm,0.2s						
PB06	**IPOC Station P**	**2.62**	**302**	*e*P	**Pn**	**07 11 43.7**	**+1.2**
PB06				*e*S	**S**	**07 12 16.7**	**-0.7**
PB06				IAML		07 12 19.0	
	comp=Z,230nm,0.1s						
PB09	**IPOC Station P**	**2.99**	**320**	*e*P	**Pn**	**07 11 48.3**	**+1.5**
PB09				*e*S	**S**	**07 12 25.3**	**0.0**
PB09				IAML		07 12 32.7	
	comp=E,101nm,0.6s						
PB09	**IPOC Station P**	**2.99**	**320**	*e*P	**Pn**	**07 11 48.4**	**+1.6**
PB09				*e*S	**S**	**07 12 25.7**	**+0.4**
PB09				IAML		07 12 30.4	
	comp=Z,123nm,0.5s						
PB14	**IPOC Station P**	**3.01**	**259**	*e*P	**Pn**	**07 11 48.5**	**+1.4**
PB14				*e*S	**S**	**07 12 24.9**	**-0.7**
PB14				IAML		07 12 27.7	
	comp=E,136nm,0.4s						
PB14	**IPOC Station P**	**3.01**	**259**	*e*P	**Pn**	**07 11 47.9**	**+0.9**
PB14				*e*S	**S**	**07 12 25.0**	**-0.7**
PB14				IAML		07 12 27.8	
	comp=Z,196nm,0.2s						
PB05	**IPOC Station P**	**3.06**	**293**	*e*P	**Pn**	**07 11 48.0**	**+0.5**
PB05				*e*S	**S**	**07 12 24.7**	**-1.8**
PB05				IAML		07 12 31.2	
	comp=N,144nm,0.2s						
PB05	**IPOC Station P**	**3.06**	**293**	*e*P	**Pn**	**07 11 48.4**	**+0.8**
PB05				*e*S	**S**	**07 12 25.7**	**-0.8**
PB05				IAML		07 12 29.2	
	comp=Z,63nm,0.1s						
PB03	**IPOC Station P**	**3.14**	**310**	*e*P	**Pn**	**07 11 49.4**	**+0.8**
PB03				*i* S	**S**	**07 12 27.4**	**-1.0**
PB03				IAML		07 12 29.5	
	comp=N,198nm,0.1s						
PB03	**IPOC Station P**	**3.14**	**310**	*e*P	**Pn**	**07 11 49.6**	**+1.1**
PB03				*e*S	**S**	**07 12 27.4**	**-1.0**
PB03				IAML		07 12 33.7	
	comp=Z,145nm,0.3s						
PB10	**IPOC Station P**	**3.17**	**280**	*e*P	**Pn**	**07 11 49.2**	**+0.6**
PB10				*e*S	**S**	**07 12 27.0**	**-1.5**
PB10				IAML		07 12 29.8	
	comp=N,226nm,0.4s						
PB10	**IPOC Station P**	**3.17**	**280**	*e*P	**Pn**	**07 11 49.8**	**+1.2**
PB10				*e*S	**S**	**07 12 28.6**	**+0.1**
PB10				IAML		07 12 29.6	
	comp=Z,151nm,0.6s						
AC02	**Maricunga**	**3.25**	**213**	*i* S	**S**	**07 12 33.2**	**+1.9**
AC02	**Maricunga**	**3.25**	**213**	*e*P	**Pn**	**07 11 51.8**	**+1.6**
AC02				*e*S	S	07 12 15.9	-15
AC01	**Pan de Azucar**	**3.73**	**236**	*e*P	**Pn**	**07 11 55.6**	**+0.3**
AC01				*i* S	**S**	**07 12 39.1**	**-1.7**
AC01	**Pan de Azucar**	**3.73**	**236**	*e*P	**Pn**	**07 11 55.7**	**+0.3**
AC01				*e*S	**S**	**07 12 39.5**	**-1.3**
AC01				IAML		07 12 39.8	
	comp=Z,65nm,0.9s						
PB01	**IPOC Station P**	**3.73**	**324**	*e*P	**Pn**	**07 11 56.0**	**+0.4**
PB01				*e*S	**S**	**07 12 39.7**	**-1.3**
PB01	**IPOC Station P**	**3.73**	**324**	*e*P	**Pn**	**07 11 56.3**	**+0.7**
PB01				*e*S	**S**	**07 12 40.2**	**-0.9**
PB01				IAML		07 12 43.6	
	comp=Z,65nm,0.2s						
PB02	**IPOC Station P**	**3.75**	**317**	*e*P	**Pn**	**07 11 56.2**	**+0.4**
PB02				*e*S	**S**	**07 12 40.4**	**-1.1**
PB02	**IPOC Station P**	**3.75**	**317**	*e*P	**Pn**	**07 11 56.5**	**+0.7**
PB02				*e*S	**S**	**07 12 40.8**	**-0.7**
PB02				IAML		07 12 41.6	
	comp=Z,135nm,0.3s						
PATCX	**Punta Patache**	**4.28**	**319**	*e*P	**Pn**	**07 12 03.4**	**+1.0**
PATCX				*e*S	**S**	**07 12 49.8**	**-3.7**
PATCX				IAML		07 13 04.3	
	comp=Z,36nm,0.4s						
PB08	**IPOC Station P**	**4.35**	**334**	*e*P	**Pn**	**07 12 04.9**	**+1.2**
PB08	**IPOC Station P**	**4.35**	**334**	*e*P	**Pn**	**07 12 05.0**	**+1.4**
PB08				*e*S	**S**	**07 12 55.0**	**-0.6**
PB08				IAML		07 12 56.3	
	comp=Z,28nm,0.5s						
GO03	**Copiapo**	**4.45**	**218**	*i* S	**S**	**07 12 55.9**	**-1.2**
GO03	**Copiapo**	**4.45**	**218**	*e*P	**Pn**	**07 12 05.1**	**+0.7**
GO03				*e*S	**S**	**07 12 56.2**	**-0.9**
GO03				IAML		07 12 58.2	
	comp=Z,62nm,0.3s						
TA01	**Diego Aracena**	**4.50**	**321**	*e*P	**Pn**	**07 12 05.6**	**+0.6**
TA01	**Diego Aracena**	**4.50**	**321**	*e*P	**Pn**	**07 12 05.7**	**+0.6**
TA01				*e*S	**S**	**07 12 53.9**	**-4.3**
TA01				IAML		07 13 00.8	
	comp=Z,29nm,1.6s						
GO01	**Chusmiza**	**4.80**	**336**	*e*P	**Pn**	**07 12 10.6**	**+1.3**
GO01				*e*S	**S**	**07 13 05.8**	**-0.1**
GO01				IAML		07 13 08.6	
	comp=Z,15nm,0.8s						
PB11	**IPOC Station P**	**4.90**	**331**	*e*P	**Pn**	**07 12 10.1**	**-0.2**
PB11				*e*S	**S**	**07 13 05.1**	**-2.7**
PB11				IAML		07 13 09.7	
	comp=Z,27nm,0.4s						
AC04	**Llanos de Chal**	**5.39**	**220**	*e*S	S	07 13 07.2	-12
AC04				IAML		07 13 27.3	
	comp=Z,20nm,0.8s						

*IDC **01** 07:14:41.9±1.0, 3.26N×127.18E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=65.9km s-min=16.8km az=71.0*

*DJA **01** 07:14:47.7±1.0, 3.5N±5×12.7E±°, h14km±11km, M4.2/9, mb4.5/1, MLv4.0/9*

ISC 01 07:14:48.6±1.0, 3.3N±0.1×127.0E±0.2, h48km, n10, σ1§18/10, mb3.8/8, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.56**	**285**	P	**Pn**	**07 15 14.2**	**+0.3**
TNTI	**Ternate**	**2.51**	**172**	P	**Pn**	**07 15 28.4**	**+1.4**
FITZ	**Fitzroy Crossi**	**21.29**	**184**	P	**P**	**07 19 30.4**	**-0.9**
	1.8nm,0.7s,baz=6.9,slow=12,SNR=5.7						
	1.8nm,0.7s						
WRA	**Warramunga Arr**	**24.17**	**163**	P	**P**	**07 19 59.2**	**-1.4**
	1.5nm,0.6s,baz=341,slow=10,SNR=13						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**27.61**	**166**	P	**P**	**07 20 30.8**	**-0.9**
	0.2nm,0.4s,baz=345,slow=8.9,SNR=7.6						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**37.60**	**159**	P	**P**	**07 21 58.2**	**-0.6**
	1.8nm,0.6s,baz=329,slow=11,SNR=4.0						
	1.8nm,0.6s						
MKAR	**Makanchi Array**	**58.10**	**325**	P	**P**	**07 24 36.7**	**-0.5**
	0.5nm,0.4s,baz=122,slow=8.0,SNR=5.1						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**62.28**	**327**	P	**P**	**07 25 06.8**	**+1.1**
	0.6nm,0.3s,baz=126,slow=6.1,SNR=11						
	0.6nm,0.3s						
BVAR	**Borovoye Array**	**67.86**	**327**	P	**P**	**07 25 43.4**	**+1.4**
	0.4nm,0.4s,baz=123,slow=5.3,SNR=2.1						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**85.38**	**25**	P	**P**	**07 27 20.2**	**-0.4**
	0.1nm,0.8s,baz=258,slow=6.5,SNR=1.1						
	0.1nm,0.8s						

IDC 01 07:51:47.5±79.0, 12.71S×173.44E, h0km, mb3.9/3, mbtmp3.9/3, MS4.6/1, Error ellipse: s-maj=1381.0km s-min=156.3km az=67.0, North of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.90**	**232**	P	P	07 58 41.0	0.0
	1.2nm,0.3s,baz=49,slow=11,SNR=2.0						
	1.2nm,0.3s						
WRA	**Warramunga Arr**	**38.13**	**254**	P	P	07 59 08.9	+0.2
	0.3nm,0.4s,baz=85,slow=8.5,SNR=1.8						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**38.98**	**248**	P	P	07 59 15.4	-0.4
	1.0nm,0.4s,baz=78,slow=8.9,SNR=6.9						
	1.0nm,0.4s						
DAV	**Davao City (W)**	**51.46**	**290**	LR	LR	08 19 42.3	
	comp=Z,632nm,20.0s,baz=20,slow=32						

*IDC **01** 07:52:11.1±1.8, 14.72S×170.58E, h623km±20km, mb3.1/9, mbtmp4.1/10, Error ellipse: s-maj=25.2km s-min=16.5km az=134.0*

*NEIC **01** 07:52:11.7±1.4, 14.9S±0.1×170.7E±0.2, h634km±6km, mb4.2/16, Error ellipse: s-maj=23.3km s-min=17.2km az=104.0*

ISC 01 07:52:12.7±0.6, 14.96S±0.09×170.7E±0.1, h650km, n34, σ1§36/37, mb4.2/17, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.37**	**261**		**P**	**07 53 35.4**	**-2.6**
MARNC	**Mare, Loyalty**	**6.95**	**201**		**P**	**07 54 01.6**	**-2.9**
MSVF	**Nonsavu**	**7.61**	**112**		**P**	**07 54 08.1**	**-2.4**
DZM	**Mont Dzumac**	**8.13**	**209**		**P**	**07 54 14.2**	**-0.9**
	5.1nm,0.6s,baz=319,slow=20,SNR=1.7						
DZM					S	**07 55 53.9**	**-1.3**
	6.4nm,0.9s,baz=355,slow=22,SNR=1.4						
PINNC	**Pines Island,**	**8.20**	**201**		**P**	**07 54 15.1**	**-0.5**
EIDS	**Eidsvold**	**21.07**	**237**		**P**	**07 56 13.9**	**0.0**
EIDS					IAmb	IAmb 07 56 54.0	
	comp=Z,10nm,1.1s						
ARMA	**Armidale**	**23.29**	**225**		**P**	**07 56 34.6**	**+1.0**
ARMA					IAmb	IAmb 07 56 57.2	
	comp=Z,5.7nm,1.1s						
STKA	**Stephens Creek**	**31.40**	**232**		**P**	**07 57 44.7**	**+0.9**
	comp=Z,6.8nm,0.4s,baz=60,slow=9.9,SNR=36						
	comp=Z,6.8nm,0.4s						
TOO	**Toolangi**	**31.70**	**220**	P	**P**	**07 57 47.0**	**+0.7**
WB0	**Warramunga Arr**	**34.90**	**257**	P	**P**	**07 58 12.5**	**-0.7**
WB0					IAmb	IAmb 07 58 13.4	
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**34.96**	**257**	P	**P**	**07 58 12.5**	**-1.1**
WRA	**Warramunga Arr**	**34.96**	**257**	P	**P**	**07 58 13.1**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=86,slow=9.2,SNR=30						
WRA					ScP	**ScP**	**08 03 14.7**	**+2.7**
	comp=Z,0.4nm,0.8s,baz=94,slow=3.9,SNR=2.3						
	comp=Z,3.2nm,0.7s						
AS31	**Alice Springs**	**35.67**	**250**	P	**P**	**07 58 18.8**	**-0.7**
ASAR	**Alice Springs**	**35.67**	**250**	P	**P**	**07 58 18.9**	**-0.6**
ASAR	**Alice Springs**	**35.67**	**250**	P	**P**	**07 58 19.3**	**-0.2**
	comp=Z,6.3nm,0.4s,baz=81,slow=9.3,SNR=47						
ASAR					ScP	**ScP**	**08 03 17.6**	**+3.0**
	comp=Z,0.4nm,0.6s,baz=91,slow=3.8,SNR=4.1						
	comp=Z,6.3nm,0.4s						
MTN	**Manton Dam**	**38.40**	**268**		**P**	**07 58 41.4**	**-0.2**
JNU	**Nakatsue**	**61.06**	**322**		**P**	**08 01 26.0**	**-0.1**
JNU					IAmb	IAmb 08 01 39.2	
	comp=Z,20nm,1.2s						
SBA	**Scott Base**	**62.94**	**181**		**P**	**08 01 38.3**	**+0.9**
CASY	**Casey**	**64.58**	**203**		**P**	**08 01 47.6**	**-0.3**
PETK	**Petropavlovsk-**	**68.70**	**352**		**P**	**08 02 13.0**	**-0.2**
PETK	**Petropavlovsk-**	**68.70**	**352**	P	**P**	**08 02 13.5**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=185,slow=7.1,SNR=5.9						
	comp=Z,1.8nm,0.6s						
QSPA	**South Pole Qui**	**75.07**	**180**	P	**P**	**08 02 52.1**	**+2.2**
QSPA	**South Pole Qui**	**75.07**	**180**	P	**P**	**08 02 52.2**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=264,slow=0.0,SNR=9.8						
	comp=Z,0.7nm,0.6s						
K15K	**Wolf Creek Mou**	**80.05**	**13**	P	**P**	**08 03 16.9**	**+0.6**
L18K	**Granite Mounta**	**81.10**	**15**	P	**P**	**08 03 22.5**	**+0.7**
L18K					IAmb	IAmb 08 03 40.9	
	comp=Z,12nm,1.4s						
J16K	**Anvik River**	**81.13**	**13**	P	**P**	**08 03 21.5**	**-0.3**
M19K	**Big River Lodg**	**81.42**	**16**	P	**P**	**08 03 22.6**	**-0.8**
M19K					IAmb	IAmb 08 03 47.9	
	comp=Z,17nm,1.4s						
L19K	**White Mountain**	**81.53**	**16**	P	**P**	**08 03 24.1**	**+0.1**
L19K					IAmb	IAmb 08 03 26.1	
	comp=Z,8.4nm,1.1s						
J17K	**VABM Dome**	**81.56**	**13**	P	**P**	**08 03 24.1**	**+0.1**
J17K					IAmb	IAmb 08 03 27.3	
	comp=Z,12nm,1.4s						
NVAR	**Mina Array Bea**	**84.95**	**48**	P	**P**	**08 03 42.6**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=254,slow=4.7,SNR=5.2						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**85.76**	**17**	P	**P**	**08 03 42.6**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=238,slow=5.0,SNR=6.5						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**92.71**	**47**	P	**P**	**08 04 18.0**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=249,slow=3.8,SNR=1.1						
	comp=Z,0.1nm,0.5s						
TXAR	**Lajitas Array**	**93.52**	**61**	P	**P**	**08 04 22.4**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=247,slow=4.2,SNR=1.

ANX				S		Sg	07 53 45.2	-0.6
TETR	**Tetrakomo, Epi**	**0.58**	**294**	P		Pg	07 53 38.9	-1.1
TETR				S		Sg	07 53 47.8	-0.1
TETR	**Tetrakomo, Epi**	**0.58**	**294**	P		Pg	07 53 39.0	-1.1
TETR				S		Sg	07 53 47.6	-0.3
PVO	**Paravola**	**0.60**	**215**	P		Pg	07 53 39.1	-1.1
PVO				S		Sg	07 53 47.9	-0.3
PVO	**Paravola**	**0.60**	**215**	P		Pg	07 53 39.5	-0.8
PVO				S		Sg	07 53 47.7	-0.5
AMPL	**Ampelaki**	**0.61**	**253**	P		Pg	07 53 39.3	-1.2
AMPL				S		Sg	07 53 48.4	-0.3
AXAR	**Agios Charalam**	**0.64**	**122**	P		Pb	07 53 40.9	-0.1
AXAR				S		Sb	07 53 50.6	+1.0
AXAR	**Agios Charalam**	**0.64**	**122**	P		Pb	07 53 41.3	+0.3
AXAR				S		Sb	07 53 50.1	+0.5
LRSO	**Larissa Observ**	**0.66**	**31**	P		Pb	07 53 41.7	+0.4
LRSO				S		Sb	07 53 52.0	+2.1
LRSO	**Larissa Observ**	**0.66**	**31**	P		Pb	07 53 41.4	+0.2
LRSO				S		Sg	07 53 50.0	-0.1
EFP	**Efpalio**	**0.68**	**184**	P		Pg	07 53 40.9	-0.9
EFP				S		Sg	07 53 50.7	-0.2
EFP	**Efpalio**	**0.68**	**184**	P		Pg	07 53 40.9	-0.9
EFP				S		Sg	07 53 50.5	-0.4
SERG	**Sergoula**	**0.70**	**174**	P		Pg	07 53 41.0	-1.1
KALE	**Kalithea**	**0.73**	**169**	P		Pg	07 53 41.8	-1.0
KALE				S		Sb	07 53 52.2	+0.1
KALE	**Kalithea**	**0.73**	**169**	P		Pg	07 53 42.3	-0.4
KALE				S		Sb	07 53 52.1	-0.1
TRIZ	**Trizonia**	**0.75**	**173**	P		Pg	07 53 42.5	-0.5
TRIZ				S		Sb	07 53 52.9	+0.3
PRMD	**Pramanda**	**0.79**	**302**	P		Pg	07 53 43.1	-0.8
PRMD				S		Sg	07 53 52.6	+0.7
UPR	**University Cam**	**0.83**	**189**	P		Pb	07 53 44.5	+0.2
UPR				S		Sb	07 53 56.6	+1.5
AST1	**Astakos**	**0.88**	**231**	P		Pg	07 53 45.3	-0.3
ATAL	**Atalanti**	**0.93**	**116**	P		Pg	07 53 45.6	-0.9
ATAL				S		Sb	07 53 59.0	+1.2
ATAL	**Atalanti**	**0.93**	**116**	P		Pb	07 53 45.9	0.0
ATAL				S		Sb	07 53 57.8	0.0
LKR	**Lokris**	**0.93**	**119**	P		Pg	07 53 45.8	-0.7
LKR	**Lokris**	**0.93**	**119**	P		Pb	07 53 46.0	+0.1
LKR				S		Sg	07 53 57.6	-1.2
NEO	**Neokhori**	**1.00**	**78**	P		Pb	07 53 47.3	+0.1
NEO				S		Sn	07 54 02.5	+1.3
NEO	**Neokhori**	**1.00**	**78**	P		Pb	07 53 47.4	+0.2
NEO				S		Sb	07 54 01.1	+1.0
AXS	**Araxos**	**1.02**	**207**	P		Pg	07 53 47.4	-0.7
AXS				S		Sb	07 54 01.3	+0.9
JAN	**Janina**	**1.02**	**303**	P		Pg	07 53 48.0	-0.3
JAN				S		Sg	07 54 01.9	+0.3
TSLK	**Tsoukalades, L**	**1.06**	**255**	P		Pg	07 53 48.1	-0.8
TSLK				S		Sb	07 54 03.1	+1.5
TSLK	**Tsoukalades, L**	**1.06**	**255**	P		Pg	07 53 48.0	-0.9
TSLK				S		Sg	07 54 01.1	-1.6
NYDR	**Nydri-Lefkada**	**1.06**	**249**	P		Pg	07 53 48.0	-0.9
LKD2	**Lefkada island**	**1.06**	**253**	P		Pg	07 53 48.5	-0.6
KLV	**Kalavryta, Ach**	**1.07**	**172**	P		Pg	07 53 48.0	-1.2
KLV				S		Sg	07 54 02.4	-0.9
LIT	**Litokhoron**	**1.07**	**22**			Pg	07 53 48.0	-1.2
LIT					Sn	Sn	07 54 04.2	+1.2
LIT	**Litokhoron**	**1.07**	**22**	P		Pg	07 53 48.7	-0.5
LIT				S		Sg	07 54 02.7	-0.7
RLS	**Riolos of Patr**	**1.12**	**200**	P		Pb	07 53 49.0	-0.1
RLS				S		Sg	07 54 04.1	-0.6
EVGI	**Lefkada island**	**1.13**	**245**	P		Pb	07 53 49.1	-0.2
DRO	**Drossia**	**1.17**	**190**	P		Pb	07 53 50.0	-0.1
DRO				S		Sg	07 54 05.8	-0.6
GUR	**Goura**	**1.21**	**166**	P		Pb	07 53 50.6	-0.2
KZN	**Kozani**	**1.21**	**353**	P		Pn	07 53 51.1	+0.6
KZN	**Kozani**	**1.21**	**353**	P		Pn	07 53 51.0	+0.6
KZN				S		Sb	07 54 06.9	+0.8
PENT	**Pentalofos**	**1.26**	**330**	P		Pn	07 53 51.8	+0.6
PENT				S		Sg	07 54 09.3	0.0
FSK	**Fiskardo**	**1.27**	**240**	P		Pn	07 53 50.9	-0.3
FSK	**Fiskardo**	**1.27**	**240**	P		Pn	07 53 51.3	+0.1
KTI	**Kastanea**	**1.29**	**5**	P		Pg	07 53 53.1	-0.2
IGT	**Igoumenitsa**	**1.33**	**289**	P		Pn	07 53 52.8	+0.7
IGT	**Igoumenitsa**	**1.33**	**289**	P		Pn	07 53 53.1	+1.0
LTK	**Loutraki**	**1.34**	**144**	P		Pn	07 53 52.6	+0.4
LTK				S		Sg	07 54 11.2	-0.5
VIL2	**Platees**	**1.36**	**131**	P		Pg	07 53 54.4	-0.2
LOUT	**Loutraki**	**1.37**	**144**	P		Pb	07 53 53.5	0.0
LOUT				S		Sb	07 54 10.5	-0.2
CLEM	**Kyllini,Ilia,G**	**1.38**	**208**	P		Pb	07 53 54.3	+0.7
VLS	**Valsamata**	**1.42**	**230**	P		Pn	07 53 53.2	-0.1
AOS2	**Alonissos-2**	**1.47**	**88**	P		Pn	07 53 54.2	+0.3
PSDA	**Pessada-Kefalo**	**1.47**	**228**	P		Pn	07 53 54.0	+0.2
NEST	**Nestorio**	**1.48**	**332**	P		Pn	07 53 55.7	+1.5
DMLN	**Damoulianata-K**	**1.52**	**236**	P		Pn	07 53 55.0	+0.4
STFN	**Stefani**	**1.55**	**126**	P		Pn	07 53 55.9	+0.8
KYPS	**Kipseli, Zakin**	**1.57**	**215**	P		Pn	07 53 56.6	+1.3
MAGU	**Magoula**	**1.59**	**130**	P		Pn	07 53 56.5	+0.9
ORTH	**Orthonies,Zaky**	**1.60**	**219**	P		Pn	07 53 57.3	+1.5
LTHK	**Lithakia**	**1.65**	**213**	P		Pn	07 53 57.4	+0.9
PLG	**Polygyros**	**1.71**	**42**	P		Pn	07 53 57.4	+0.1
THE	**Thessaloniki**	**1.71**	**27**	P		Pn	07 53 58.1	+0.9
THE	**Thessaloniki**	**1.71**	**27**	P		Pn	07 53 57.6	+0.4
HORT	**Hortiatis**	**1.73**	**30**	P		Pn	07 53 57.8	+0.2
HORT	**Hortiatis**	**1.73**	**30**	P		Pn	07 53 57.6	+0.1
KYMI	**Kymi, Euboea I**	**1.74**	**105**	P		Pn	07 53 58.4	+0.8
KYMI	**Kymi, Euboea I**	**1.74**	**105**	P		Pn	07 53 58.2	+0.6
ATH	**Athens Observa**	**1.78**	**129**	P		Pn	07 53 59.4	+1.1
ATH	**Athens Observa**	**1.78**	**129**	P		Pn	07 53 59.4	+1.1
ATHU	**Athens Univers**	**1.83**	**128**	P		Pn	07 53 59.8	+0.9
ATHU	**Athens Univers**	**1.83**	**128**	P		Pn	07 53 59.7	+0.8
PTL	**Penteli**	**1.83**	**125**	P		Pn	07 53 59.9	+0.9
PTL	**Penteli**	**1.83**	**125**	P		Pn	07 54 00.1	+1.1
MET2	**Kameni Chora,**	**1.84**	**144**	P		Pn	07 53 59.5	+0.5
MET5	**Makryloggos,Me**	**1.85**	**143**	P		Pn	07 53 59.9	+0.8
DION	**Dionisos Attik**	**1.86**	**123**	P		Pn	07 54 00.3	+1.0
DION	**Dionisos Attik**	**1.86**	**123**	P		Pn	07 54 00.1	+0.8
MET4	**Agioi Theodoro**	**1.86**	**142**	P		Pn	07 54 00.2	+0.8
VLY	**Voula,Athens**	**1.91**	**130**	P		Pn	07 54 00.8	+0.8
ITM	**Ithomi**	**1.93**	**181**			Pb	07 54 02.5	-0.4
OUR	**Ouranopolis**	**1.98**	**51**	P		Pn	07 54 01.7	+0.7
OHR	**Ohrid**	**2.19**	**336**	*i* Pn		Pb	07 54 07.2	-0.3
VAY	**Valandovo**	**2.26**	**12**	*i* Pn		Pn	07 54 06.4	+1.5
SRS	**Serrai**	**2.37**	**31**	*e*Pg		Pn	07 54 07.1	+0.8
SRS				*e*Sg		Sn	07 54 33.4	-1.4
SKO	**Skopje**	**2.89**	**352**	*i* Pn		Pn	07 54 08.8	-2.7
BOSS	**Bosilegrad**	**3.41**	**6**	*e*Pn		Pn	07 54 22.0	+1.4
RDO	**Rodhopi**	**3.42**	**52**			Pn	07 54 20.9	+0.2
EZN	**Ezine**	**3.45**	**77**	⇓P		Pb	07 54 26.4	-2.5
APE	**Apeiranthos**	**3.48**	**125**	⇑P		Pb	07 54 27.0	-2.4
ALN	**Alexandroupoli**	**3.61**	**59**	Pn		Pn	07 54 23.1	-0.3
VTS	**Vitosha**	**3.64**	**15**	*e*Pn		Pn	07 54 25.5	+1.6
VTS				*e*Sn		Sn	07 55 00.7	-5.7
PDG	**Podgorica**	**3.90**	**329**	Pn		Pn	07 54 29.3	+2.0
TIP	**Timpagrande**	**4.04**	**273**			Pn	07 54 31.1	+1.7
TIP	**Timpagrande**	**4.04**	**273**	⇓P		Pn	07 54 31.7	+2.2
SELS	**Selova**	**4.16**	**351**	*e*Pn		Pn	07 54 32.4	+1.5
SELS				*e*Sn		Sn	07 55 14.0	-5.0
ZAPS	**Zavoj**	**4.19**	**7**	*e*Pn		Pn	07 54 33.3	+1.9
MATE	**Matera**	**4.33**	**293**	⇑P		Pn	07 54 35.7	+2.5
SJES	**Sjenica**	**4.41**	**341**	*e*Pn		Pn	07 54 37.2	+2.7
IDI	**Anoyia**	**4.47**	**148**			Pn	07 54 35.7	+0.4
IDI	**Anoyia**	**4.47**	**148**	Pn		Pn	07 54 34.3	-1.0
	1.3nm,0.3s,baz=86,slow=1.7,SNR=6.1							
IDI					Sn	Sn	07 55 27.0	+0.1
	6.6nm,0.3s,baz=317,slow=14,SNR=8.5							
	2.6nm,0.5s							
GOCS	**Kraljevo Serbi**	**4.53**	**350**	*e*Pn		Pn	07 54 37.5	+1.4
GOCS				*e*Sn		Sn	07 55 22.4	-5.8
BOVS	**Bovan**	**4.53**	**358**	⇓P		Pn	07 54 37.2	+1.2
BOVS	**Bovan**	**4.53**	**358**	*e*Pn		Pn	07 54 37.0	+1.0
BOVS				*e*Sn		Sn	07 55 22.6	-5.5
BLKB	**Belogradchik**	**4.54**	**7**	*e*Pn		Pn	07 54 38.5	+2.3
BLKB				*e*Sn		Sn	07 55 22.2	-6.4
IVAS	**Ivanjica**	**4.67**	**344**	*e*Pn		Pn	07 54 39.1	+1.1
ZAGS	**Zajecar**	**4.71**	**2**	*e*Pn		Pn	07 54 39.8	+1.4
ZAGS				*e*Sn		Sn	07 55 25.5	-7.0
PLVB	**Pleven**	**4.72**	**24**	⇓P		Pn	07 54 40.9	+2.2
CEL	**Celeste**	**4.82**	**262**			Pn	07 54 41.7	+1.6
CUC	**Castrocucco**	**4.83**	**282**			Pn	07 54 43.5	+3.3
ELND	**Elena**	**4.83**	**37**	⇑P		Pn	07 54 44.0	+3.9
GRUS	**Gruza**	**4.87**	**349**	*e*Pn		Pn	07 54 42.4	+1.7
GRUS				*e*Sn		Sn	07 55 31.5	-5.0
ACER	**Acerenza**	**4.92**	**292**			Pn	07 54 42.6	+1.2
BBLS	**Lazi&#263i**	**5.13**	**339**	*e*Pn		Pn	07 54 46.5	+2.2
BBLS				*e*Sn		Sn	07 55 38.3	-4.7
DIVS	**Divibare**	**5.20**	**344**	*e*Pn		Pn	07 54 47.0	+1.7
DIVS				*e*Sn		Sn	07 55 40.0	-4.8
TRUS	**Trudelj**	**5.24**	**348**	*e*Pn		Pn	07 54 47.1	+1.3
SGRT	**San Giovanni R**	**5.43**	**301**			Pn	07 54 49.5	+1.0
MDVR	**Moldovita**	**5.67**	**358**	⇓P		Pn	07 54 52.9	+1.2
ARG	**Arkhangelos**	**5.68**	**119**	Pn		Pn	07 54 50.9	-0.9
TEKS	**Tekeris**	**5.73**	**342**	*e*Pn		Pn	07 54 54.1	+1.5
PAOL	**Paolisi**	**5.99**	**291**			Pn	07 54 58.5	+2.4
VAE	**Valguarnera**	**6.16**	**257**	Pn		Pn	07 55 00.2	+1.8
	0.8nm,0.3s,baz=352,slow=22,SNR=1.3							
VAE					Sn	Sn	07 56 12.3	+3.9
	1.6nm,0.3s,baz=0.9,slow=22,SNR=1.6							
	4.1nm,0.4s							
FRGS	**Fruska Gora**	**6.25**	**346**	*e*Pn		Pn	07 55 00.6	+0.9
RAFF	**Raffo Rosso**	**6.28**	**255**	Pn		Pn	07 55 01.4	+1.4
GZR	**Gura Zlata**	**6.31**	**5**	⇓P		Pn	07 55 02.8	+2.3
LOT	**Lotru**	**6.48**	**11**	⇑P		Pn	07 55 04.4	+1.6
BZS	**Buzias**	**6.51**	**358**	⇓P		Pn	07 55 05.5	+2.3
ARR	**Arges**	**6.56**	**17**	⇓P		Pn	07 55 05.6	+1.6
BORA	**Eskisehir**	**6.62**	**81**	Pn		Pn	07 55 06.0	+1.3
SURR	**Surduc**	**6.64**	**1**	⇑P		Pn	07 55 07.0	+2.0
BLY	**Banja Luka**	**6.67**	**329**	⇓P		Pn	07 55 05.8	+0.5
INTR	**Introdacqua**	**6.79**	**298**			Pn	07 55 09.4	+2.3
MLR	**Muntele Rosu**	**7.03**	**24**			Pn	07 55 09.8	-0.6
MLR	**Muntele Rosu**	**7.03**	**24**	Pn		Pn	07 55 11.9	+1.5
	6.2nm,0.5s,baz=162,slow=19,SNR=9.1							
MLR					Sn	Sn	07 56 30.7	+0.8
	baz=91,slow=18							
MLR					Lg	Lg	07 57 12.2	
	baz=299,slow=23							
MLR	**Muntele Rosu**	**7.03**	**24**	⇓P		Pn	07 55 14.0	+3.5
NEHR	**Nehoiu**	**7.08**	**26**	⇓P		Pn	07 55 13.9	+2.7
CAMP	**Campotosto**	**7.33**	**301**	Pn		Pn	07 55 16.6	+1.9
BISRR	**Bisoca**	**7.33**	**27**	⇑P		Pn	07 55 17.6	+3.0
MORH	**Mrgy, Hungar**	**7.51**	**342**	⇑P		Pn	07 55 18.0	+1.1
PLOR	**Plostina**	**7.58**	**26**	⇓P		Pn	07 55 21.2	+3.3
MARR	**Marisel-Cluj**	**7.61**	**6**	⇑P		Pn	07 55 19.8	+1.4
VRI	**Vrincioaia**	**7.62**	**26**	⇑P		Pn	07 55 22.1	+3.7
NRCA	**Norcia**	**7.66**	**302**			Pn	07 55 21.3	+2.2
DRGR		**7.70**	**4**	⇓P		Pn	07 55 21.7	+2.1
FDMO	**Fiordimonte**	**7.77**	**303**			Pn	07 55 22.6	+2.1
MURB	**Monte Urbino**	**8.24**	**303**	Pn		Pn	07 55 30.0	+3.0
BEHE	**Becsehely**	**8.29**	**334**	Pn		Pn	07 55 27.7	+0.1
ANTO	**Ankara**	**8.41**	**81**	Pn		Pn	07 55 29.9	+0.5
BURAR	**Bucovina Array**	**8.83**	**15**	⇑P		Pn	07 55 37.9	+2.9
BUR08	**Bucovina Ar. S**	**8.85**	**14**	Pn		Pn	07 55 36.2	+0.7
PSZ	**Piszkesteto**	**8.93**	**351**			Pn	07 55 37.8	+1.2
PSZ	**Piszkesteto**	**8.93**	**351**	⇓P		Pn	07 55 39.0	+2.5
TRI	**Trieste**	**8.96**	**320**	Pn		Pn	07 55 37.1	+0.4
BRTR	**Keskin Array B**	**9.06**	**82**	Pn		Pn	07 55 40.4	+2.1
	0.1nm,0.3s,baz=259,slow=8.2,SNR=1.8							
BRTR					LR	LR	07 59 05.9	
	comp=Z,41nm,21.9s,baz=276,slow=38							
	0.5nm,0.5s							
SABO	**M.te Sabotino**	**9.23**	**321**	Pn		Pn	07 55 41.0	+0.4
ARSA	**Arzberg**	**9.40**	**332**	Pn		Pn	07 55 43.2	+0.4
PRED	**Cave del Predi**	**9.58**	**323**	Pn		Pn	07 55 46.0	+0.7
TEOL	**Teolo**	**9.86**	**313**	Pn		Pn	07 55 49.3	+0.1
CTI	**Castel Tesino**	**10.29**	**316**	Pn		Pn	07 55 56.1	+1.0
FUORN	**Ofenpass-Fuorn**	**11.39**	**315**	Pn		Pn	07 56 10.9	+0.5
GERES	**GERESS Array B**	**11.40**	**331**			Pn	07 56 11.1	+0.8
GERES	**GERESS Array B**	**11.40**	**331**	Pn		Pn	07 56 12.5	+2.2
	0.3nm,0.5s,baz=150,slow=14,SNR=1.7							
TUE	**Stuetta**	**11.82**	**313**	Pn		Pn	07 56 19.1	+2.9
ASF	**Jabal al Asfar**	**13.97**	**111**	LR		LR	08 03 15.6	
	comp=Z,40nm,18.1s,baz=306,slow=42							
NACGM	**Naroch**	**16.14**	**10**	*eP*		**P**	**07 57 18.1**	**+0.9**
	comp=Z,15nm,0.8s,baz=194							
PABE	**Paberze**	**16.46**	**4**	Pn		Pn	07 57 18.8	+0.6
ESDC	**Sonseca Array**	**20.03**	**280**	P		**P**	**07 58 01.1**	**+0.8**
ESDC	**Sonseca Array**	**20.03**	**280**	P		**P**	**07 57 59.9**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=77,slow=11,SNR=5.5							
ESDC					LR	LR	08 06 00.9	
	comp=Z,46nm,18.0s,baz=36,slow=38							
	comp=Z,1.0nm,0.9s							
HFS	**Hagfors**	**21.68**	**349**	P		**P**	**07 58 17.7**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=164,slow=12,SNR=11							
	comp=Z,1.9nm,0.5s							
FINES	**FINESS Array B**	**22.51**	**5**	P		**P**	**07 58 27.6**	**+0.9**
FINES	**FINESS Array B**	**22.51**	**5**	P		**P**	**07 58 24.8**	**-1.9**
	comp=Z,6.8nm,0.9s,baz=170,slow=14,SNR=6.5							
FIA1	**FINESS Array S**	**22.51**	**5**	P		**P**	**07 58 26.6**	**0.0**
NB2	**NORSAR Subarra**	**22.95**	**347**	P		**P**	**07 58 31.9**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=156,slow=9.3							
NOA	**NORSAR Array B**	**22.95**	**347**	P		**P**	**07 58 30.7**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=158,slow=8.6,SNR=3.9							
	comp=Z,0.3nm,0.5s							
EKA	**Eskdalemuir Ar**	**23.35**	**322**	P		**P**	**07 58 35.5**	**0.0**
	comp=Z,1.3nm,0.7s,baz=123,slow=9.1,SNR=3.7							
	comp=Z,1.3nm,0.7s							
ARCES	**ARCESS Array B**	**30.55**	**2**	P		**P**	**07 59 40.4**	**+0.1**
ARCES	**ARCESS Array B**	**30.55**	**2**	P		**P**	**07 59 40.5**	**+0.1**
	comp=Z,7.7nm,0.7s,baz=195,slow=3.8,SNR=6.1							
	comp=Z,2.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**31.46**	**220**	P		**P**	**07 59 49.3**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=30,slow=12,SNR=2.6							
	comp=Z,1.2nm,0.3s							
BVAR	**Borovoye Array**	**35.66**	**51**	P		**P**	**08 00 24.9**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=270,slow=5.8,SNR=4.1							
	comp=Z,1.2nm,0.7s							
KK31	**Karatay Array**	**36.40**	**68**	P		**P**	**08 00 31.8**	**+0.2**
KKAR	**Karatay Array**	**36.40**	**68**	P		**P**	**08 00 32.0**	**+0.4**
LODK	**Lodwar**	**37.55**	**158**	P		**P**	**08 00 41.2**	**-0.5**
SPB2	**Spitsbergen Ar**	**39.25**	**358**	P		**P**	**08 00 55.6**	**+0.4**
SPITS	**Spitsbergen Ar**	**39.25**	**358**	P		**P**	**08 00 56.2**	**+0.9**
	comp=Z,7.2nm,0.9s,baz=190,slow=13,SNR=1.7							
	comp=Z,7.2nm,0.9s							
KURBB	**Kurchatov Arra**	**40.77**	**54**	P		**P**	**08 01 08.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=282,slow=8.8,SNR=9.5							
	comp=Z,1.2nm,0.6s							
NIL	**Nilore**	**41.21**	**81**	P		**P**	**08 01 11.9**	**-0.1**
NIL				IAmb		IAmb	08 01 14.4	
	comp=Z,5.4nm,0.8s							
MKAR	**Makanchi Array**	**43.86**	**60**	P		**P**	**08 01 33.8**	**+0.4**
MKAR	**Makanchi Array**	**43.86**	**60**	P		**P**	**08 01 33.6**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=276,slow=7.9,SNR=6.6							
	comp=Z,0.8nm,0.7s							
ZAA0	**Zalesovo Array**	**44.23**	**49**	P		**P**	**08 01 36.3**	**0.0**
ZAA0				IAmb		IAmb	08 01 38.2	
	comp=Z,3.2nm,0.9s							
ZALV	**Zalesovo Beam**	**44.23**	**49**	P		**P**	**08 01 36.6**	**+0.3**
ZALV	**Zalesovo Beam**	**44.23**	**49**	P		**P**	**08 01 36.9**	**+0.7**
	comp=Z,2.0nm,0.3s,baz=270,slow=8.6,SNR=8.8							
	comp=Z,2.0nm,0.3s							
EVN	**Everest**	**54.17**	**81**	P		**P**	**08 02 52.7**	**-0.8**
EVN				IAmb		IAmb	08 02 54.7	
	comp=Z,3.7nm,0.8s							
SONM	**Songino Array**	**59.00**	**51**	P		**P**	**08 03 26.9**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=287,slow=6.9,SNR=1.6							
	comp=Z,0.4nm,0.6s							
BRDH	**Bariadhala**	**60.64**	**84**	LR		LR	08 37 19.5	
	comp=Z,38nm,18.8s,baz=292,slow=43							
ILAR	**Eielson Array**	**76.09**	**355**	P		**P**	**08 05 15.4**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=340,slow=4.1,SNR=4.6							
	comp=Z,0.3nm,0.6s							
J26L	**Joseph Creek**	**76.10**	**354**	P		**P**	**08 05 15.9**	**+1.3**
J26L				IAmb		IAmb	08 05 50.9	
	comp=Z,6.9nm,1.4s							
DAWY	**Dawson**	**76.11**	**352**	P		**P**	**08 05 16.0**	**+1.4**
DAWY				IAmb		IAmb	08 05 16.4	
	comp=Z,3.0nm,0.9s							
MMPY	**Sheldon Lake,**	**76.36**	**348**	P		**P**	**08 05 17.7**	**+1.6**
MMPY				IAmb		IAmb	08 05 19.9	
	comp=Z,8.5nm,1.5s							
HDA	**Harding Lake**	**76.45**	**355**	P		**P**	**08 05 16.5**	**0.0**
HDA				IAmb		IAmb	08 05 59.2	
	comp=Z,6.9nm,1.4s							

*IDC **01** 08:09:52.7±7.5, 32°.75N×48°.11E, h0km, mb3.6/5, mbtmp3.6/6, ML3.6/1, MS2.4/1, Error ellipse: s-maj=138.2km s-min=35.0km az=7.0*
*TEH **01** 08:09:55.8, 32°.82N×48°.19E, h8km±32km*
*OMAN **01** 08:10:01.8±1.3, 32°.46N×48°.72E, h10km, mb3.6/7, ms2.7/3, Error ellipse: s-maj=12.8km s-min=9.6km az=179.0*
*DSN **01** 08:10:03.7±2.8, 32°.06N×48°.49E, h10km, ML3.0/1, Error ellipse: s-maj=36.4km s-min=15.0km az=0.0*

ISC 01 08:09:54.4±0.7, **32°.70N**±0°.04×**48°.15E**±0°.05, **h10**km, **n87, σ2933/94, mb3.6/5, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDOB	**Doab**	**1.09**	**1**	Pg	**Pb**	**08 10 14.3**	**-1.2**
BDRS	**Dareh Seyedi**	**1.40**	**26**	Pg	**Pn**	**08 10 20.1**	**-0.2**
AHWZ	**Ahwaz**	**1.43**	**163**	Pg	**Pg**	**08 10 25.7**	**+3.9**
IGHG	**Ghaleghazi**	**2.10**	**321**	Pn	**Pn**	**08 10 32.1**	**+2.3**
IALM	**Almabolaq**	**2.16**	**0**	Pn	**Pn**	**08 10 33.2**	**+2.5**
JHBN	**Jahan bin**	**2.18**	**102**	Pn	**Pb**	**08 10 34.3**	**+0.2**
SNQR	**Sonqor, Kerman**	**2.20**	**349**	Pn	**Pn**	**08 10 33.7**	**+2.4**
HAGD	**Aghdareh**	**2.28**	**21**	Pn	**Pn**	**08 10 33.3**	**+1.0**
IPIR	**Pirpir**	**2.31**	**90**	Pn	**Pn**	**08 10 36.4**	**+3.5**
ZNGN	**Zangian**	**2.36**	**103**	Pn	**Pb**	**08 10 36.8**	**-0.4**
IDHR	**Dehrash**	**2.48**	**324**	Pn	**Pn**	**08 10 37.3**	**+2.2**
IBRJ	**Brojen**	**2.75**	**106**	Pn	**Pn**	**08 10 42.0**	**+3.2**
KGS1	**Ghasr-e-Shirin**	**2.80**	**311**	Pn	**Pn**	**08 10 42.2**	**+2.9**
HGHA	**Hamedan- Ghaye**	**2.85**	**12**	Pn	**Pn**	**08 10 42.5**	**+2.4**
QAMS	**Qamsar**	**2.91**	**68**	Pn	**Pn**	**08 10 43.6**	**+2.5**
IKLH	**Kolahrood**	**2.95**	**77**	Pn	**Pn**	**08 10 44.4**	**+2.8**
QABG	**Abgarm-Qazvin**	**3.23**	**21**	Pn	**Pn**	**08 10 47.6**	**+2.1**
IQOM	**Qom**	**3.24**	**48**	Pn	**Pn**	**08 10 48.0**	**+2.4**
IGAR	**Gharneh**	**3.30**	**94**	Pn	**Pn**	**08 10 49.2**	**+2.8**
KLNJ	**Kolanjah**	**3.38**	**119**	Pn	**Pn**	**08 10 51.4**	**+3.8**
IZEF	**Zefreh**	**3.53**	**86**	Pn	**Pn**	**08 10 52.4**	**+2.8**
KBD	**Kabd**	**3.53**	**186**	P	**Pb**	**08 10 54.8**	**-2.2**
KBD				S	**Sb**	**08 11 37.0**	**-2.9**
IRAM	**Ramesheh**	**3.69**	**103**	Pn	**Pn**	**08 10 54.4**	**+2.6**
IVRN	**Varamin**	**3.76**	**51**	Pn	**Pn**	**08 10 55.2**	**+2.6**
ISFB	**Sefidab**	**3.80**	**63**	Pn	**Pn**	**08 10 55.1**	**+2.0**
ZNJK	**Zanjan**	**3.99**	**6**	Pn	**Pn**	**08 10 58.2**	**+2.3**
IGZV	**Ghazvin**	**4.06**	**24**	Pn	**Pn**	**08 10 58.6**	**

h15km:pP-P,n371,σ1ş73/388,mb4.4/78,MS3.4/23,
18C-19D,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDOB	Doab	1.08	4	Pg	Pg	08 21 16.4	-1.9
BDRS	Dareh Seyedi	1.41	28	Pg	Pn	08 21 22.2	-0.5
AHWZ	Ahwaz	1.45	161	Pg	Pg	08 21 27.8	+2.6
IGHG	Ghaleghazi	2.06	322	Pn	Pb	08 21 34.1	-0.5
IALM	Almabolaq	2.15	2	Pn	Pn	08 21 34.6	+1.7
SNQR	Sonqor, Kerman	2.18	350	Pn	Pn	08 21 35.4	+2.1
JHBN	Jahan bin	2.22	102	Pn	Pb	08 21 36.4	-0.9
HAGD	Aghdareh	2.29	22	Pn	Pn	08 21 35.4	+0.7
GLG1	Gilan-e-Gharb	2.31	308	Pn	Pb	08 21 37.3	-1.3
IPIR	Pirpir	2.36	90	Pn	Pn	08 21 38.0	+2.3
ZNGN	Zangian	2.41	103	Pn	Pn	08 21 38.8	+2.3
IDHR	Dehrash	2.45	325	Pn	Pn	08 21 39.2	+2.4
KGS1	Ghasr-e-Shirin	2.76	311	Pn	Pn	08 21 43.7	+2.7
ABEH	Behbahan	2.79	138	Pn	Pb	08 21 45.0	-1.8
IBRJ	Brojen	2.80	106	Pn	Pn	08 21 44.2	+2.5
HGHA	Hamedan- Ghaye	2.85	13	Pn	Pn	08 21 44.8	+2.3
QAMS	Qamsar	2.95	69	Pn	Pn	08 21 45.4	+1.5
IKLH	Kolahrood	2.99	77	Pn	Pn	08 21 46.2	+1.8
QABG	Abgarm-Qazvin	3.24	22	Pn	Pn	08 21 49.5	+1.7
IQOM	Qom	3.27	48	Pn	Pn	08 21 49.6	+1.3
IGAR	Gharneh	3.35	94	Pn	Pn	08 21 51.3	+2.0
KLNJ	Kolanjah	3.42	119	Pn	Pn	08 21 52.8	+2.4
KLNJ	Kolanjah	3.42	119	ePnA		08 21 52.3	
KLNJ				eSg	Sn	08 22 35.4	+4.5
KLNJ				IAML		08 23 18.2	
	comp=Z,2μm,1.0s						
KBD	Kabd	3.53	186	P	Pb	08 21 56.7	-2.8
KBD				S	Sb	08 22 39.1	-3.1
IZEF	Zefreh	3.57	86	Pn	Pn	08 21 54.4	+2.0
IRAM	Rameshеh	3.74	103	Pn	Pn	08 21 56.3	+1.7
IVRN	Varamin	3.79	52	Pn	Pn	08 21 56.6	+1.4
ISFB	Sefidab	3.83	63	Pn	Pn	08 21 57.2	+1.4
THKV	Tehran--Karaj	3.95	35	ePnA		08 21 59.7	
THKV				IAML		08 23 19.9	
	comp=Z,570nm,1.0s						
NASN	Na'in	3.97	87	ePnA		08 21 59.5	
NASN				IAML		08 22 10.9	
	comp=Z,540nm,1.0s						
ZNJK	Zanjan	3.99	7	Pn	Pn	08 21 59.1	+1.0
ZNJK	Zanjan	3.99	7	ePnA		08 22 00.2	
ZNJK				IAML		08 23 16.7	
	comp=Z,280nm,1.0s						
CHTH	Charan	4.06	37	ePnA		08 22 01.4	
CHTH				IAML		08 23 08.5	
	comp=Z,610nm,1.0s						
IGZV	Ghazvin	4.07	25	Pn	Pn	08 22 00.8	+1.6
JIR1	Jirandeh	4.24	19	Pn	Pn	08 22 02.5	+1.1
DAMV	Damavand	4.34	47	ePnA		08 22 04.0	
DAMV				IAML		08 23 23.8	
	comp=Z,600nm,1.0s						
KAZ2	Kazeron-Fars-I	4.34	134	Pn	Pn	08 22 06.2	+3.4
IDMV	Damavand	4.34	48	Pn	Pn	08 22 04.3	+1.2
MAHB	Mahabad	4.50	335	Pn	Pn	08 22 07.4	+2.3
IHSH	Hashtrud	4.64	352	Pn	Pn	08 22 09.1	+1.9
MZPU	Pul - Mazandar	4.70	37	Pn	Pn	08 22 10.1	+2.2
ANAR	Anarak	4.70	83	Pn	Pn	08 22 09.8	+1.2
ILAS	Lasjerd	4.84	55	Pn	Pn	08 22 10.9	+1.1
IFIR	Firoozkooh	4.85	52	Pn	Pn	08 22 11.5	+1.5
SHI	Shiraz	4.86	128	Pn	Pn	08 22 12.5	+2.4
IPRN	Peran	4.97	44	Pn	Pn	08 22 12.8	+1.2
DSBU	Dashti - Bushe	5.12	147	Pn	Pn	08 22 17.1	+3.7
ISRB	Sarab	5.12	356	Pn	Pn	08 22 15.5	+1.9
IALA	Alasht	5.15	48	Pn	Pn	08 22 15.7	+1.5
IAZR	Azarshahr	5.26	341	Pn	Pn	08 22 17.7	+2.2
ICHK	Chekchek	5.36	93	Pn	Pn	08 22 18.4	+1.6
YZKH	Yazd	5.50	92	ePn	Pn	08 22 19.9	+1.2
YZKH				IAML		08 24 15.6	
	comp=Z,170nm,1.0s						
IANJ	Anjilo	5.56	59	Pn	Pn	08 22 20.9	+1.2
IHRS	Heris	5.67	352	Pn	Pn	08 22 23.2	+2.1
IMEH	Mehriz	5.69	102	Pn	Pn	08 22 22.8	+1.4
ITBZ	Tabriz	5.74	344	Pn	Pn	08 22 23.6	+1.5
IKIA	Kiasar	5.79	51	Pn	Pn	08 22 24.4	+1.6
ISHB	Shabestar	5.92	341	Pn	Pn	08 22 25.7	+1.1
LKRN	Lenkeran, Azer	6.02	5	P	Pn	08 22 27.3	+1.6
IGLO	Ghaloghah	6.06	50	Pn	Pn	08 22 28.2	+1.6
GRMI	Germi	6.09	359	Pn	Pn	08 22 28.7	+1.8
GRMI	Germi	6.09	359	ePn	Pn	08 22 29.4	+2.5
GRMI				IAML		08 22 30.0	
	comp=Z,230nm,1.0s						
IMRD	Marand	6.30	343	Pn	Pn	08 22 32.3	+2.5
IBAF	Bafgh	6.43	98	Pn	Pn	08 22 33.6	+1.9
NAX	Nakhchivan	6.79	343	P	Pn	08 22 39.9	+3.4
SAKB	Bahrain	7.03	162	P	Pn	08 22 43.0	+3.3
SAKB				S	Sn	08 23 59.4	0.0
TNSJ	Nastanj	7.24	78	Pn	Pn	08 22 43.1	+0.5
TPRV	Parvadeh(Tabas	7.24	85	Pn	Pn	08 22 43.7	+1.1
SHMA	Al-Shehemyia	7.27	159	P	Pn	08 22 43.5	+2.6
SHRO	Shahrood	7.32	61	ePn	Pn	08 22 45.2	+1.4
SHRO				IAML		08 22 51.4	
	comp=Z,85nm,1.0s						
KHGB	Koh Gabri	7.52	106	Pn	Pn	08 22 47.1	+0.5
MARD	Mardin	7.56	309		Pn	08 22 47.5	+0.4
TABS	Tabas	7.62	80	ePn	Pn	08 22 48.6	+0.7
TABS				IAML		08 25 15.4	
	comp=Z,150nm,1.0s						
TKDS	Koohdasht(Taba	7.62	81	Pn	Pn	08 22 48.8	+0.8
GURO	Guroymak-BITLI	7.64	321		Pn	08 22 48.8	+0.6
TAPT	Tabas- Tapeh t	7.85	71	Pn	Pn	08 22 50.8	-0.3
KRBR	Kerman	7.89	108	Pn	Pn	08 22 53.5	+1.7
KRBR	Kerman	7.89	108	ePn	Pn	08 22 53.7	+1.9
KRBR				IAML		08 24 30.8	
	comp=Z,59nm,1.0s						
GNI	Garni	7.91	341	Pn	Pn	08 22 53.5	+1.7
GNI	Garni	7.91	341	Pn	Pn	08 22 54.2	+2.4
	comp=Z,1.2nm,0.3s,baz=58,slow=18,SNR=1.4						
GNI				Pg	Pb	08 23 19.7	+5.6
	comp=Z,0.9nm,0.3s,baz=176,slow=10,SNR=5.9						
GNI				Lg	Lg	08 25 06.6	
	comp=Z,1.3nm,0.3s,baz=210,slow=23,SNR=1.2						
	comp=Z,8.0nm,0.5s						
GNI	Garni	7.91	341	iP	Pn	08 22 54.1	+2.3
SMRA	Abu-Samra	8.28	163	P	Pn	08 22 59.2	+2.4
SMRA				S	Sn	08 24 30.6	+0.5
TRNA	Turayna	8.40	160	P	Pn	08 23 01.4	+2.9
	SNR=48						
TRNA				S	Sn	08 24 33.1	+0.1
SEKA	Sheki	8.52	355	P	Pn	08 23 03.0	+2.9
AKT	Akhty	8.77	358	eP	Pn	08 23 06.8	+3.2
AKT				pmax	pmax		
	comp=Z,26nm,0.6s						
AKT				MLR	MLR		
	comp=Z,226nm,14.0s						
ITEG	Tejag	8.97	86	Pn	Pn	08 23 07.5	+1.0
BJRD	Bojnurd	9.11	54	ePn	Pn	08 23 10.3	+2.1
SLWR	Sila	9.17	159	P	Pn	08 23 11.1	+2.1
SLWR				S	Sn	08 24 49.6	-2.3
AFRZ	Afriz	9.19	83	Pn	Pn	08 23 10.2	+0.7
IKOO	Kooshah	9.21	89	Pn	Pn	08 23 10.9	+1.1
ISFR	Sfrayin	9.22	59	Pn	Pn	08 23 11.7	+1.7
RAYN	Ar Rayn	9.43	195		Pn	08 23 14.9	+2.2
RAYN	Ar Rayn	9.43	195	iP	Pn	08 23 14.7	+2.1
	SNR=8.4						
RAYN	Ar Rayn	9.43	195	P	Pn	08 23 14.9	+2.2
ASF	Jabal al Asfar	9.48	270	Pn	Pn	08 23 13.1	-0.3
	comp=Z,3.1nm,0.3s,baz=124,slow=9.3,SNR=11						
ASF				Sn	Sn	08 24 57.3	-2.4
	comp=Z,2.4nm,0.3s,baz=304,slow=23,SNR=1.8						
ASF				Lg	Lg	08 25 57.0	
	comp=Z,0.7nm,0.3s,baz=243,slow=18,SNR=1.4						
ASF				LR	LR	08 28 01.3	
	comp=Z,323nm,19.3s,baz=131,slow=45						
	comp=Z,3.8nm,0.3s						
KBAM	BAM	9.58	109	Pn	Pn	08 23 15.5	+0.7
IAKL	Akhelmad	9.60	63	Pn	Pn	08 23 17.0	+1.8
SHME	Shamm	9.65	131	Pn	Pn	08 23 15.1	+0.4
SHME				S	Sn	08 25 00.1	-3.7
SHME	Shamm	9.65	131	P	Pn	08 23 15.6	-0.1
SHME				S	Sn	08 24 58.1	-5.7
GHWR	Ruwais	9.67	153	P	Pn	08 23 17.8	+1.9
GHWR				S	Sn	08 25 02.5	-1.8
IPAY	Payeh	9.73	64	Pn	Pn	08 23 17.5	+0.5
BANOM	Banah	9.84	131	P	Pn	08 23 18.2	-0.1
BANOM				S	Sn	08 25 04.6	-3.9
BANOM	Banah	9.84	131	iP	Pn	08 23 17.7	-0.6
	SNR=16						
IEMG	Emamgholi	9.85	59	Pn	Pn	08 23 20.3	+1.8
IMOG	Moghan	9.89	67	Pn	Pn	08 23 20.7	+1.5
AJN	Ajban	10.12	142	P	Pn	08 23 24.0	+2.0
NAZ	Nazwa, Dubai	10.15	137	P	Pn	08 23 24.9	+2.4
NAZ	Nazwa, Dubai	10.15	137	iP	Pn	08 23 23.5	+1.0
	SNR=17						
MASF	Masafi	10.15	134	P	Pn	08 23 23.1	+0.5
	SNR=14						
MSFE	Esma-Masafi	10.16	134	iP	Pn	08 23 23.9	+1.1
	SNR=14						
IKRD	Kardeh	10.24	63	Pn	Pn	08 23 26.0	+2.1
ASUD	Al Ashush, Dub	10.25	140	P	Pn	08 23 25.8	+1.9
	SNR=10						
ASUD	Al Ashush, Dub	10.25	140	iP	Pn	08 23 24.9	+1.0
	SNR=10						
MAK	Makhachkala	10.25	358	ciP	Pn	08 23 19.5	-4.3
MAK				eS	Sn	08 25 13.1	-5.3
MAK				pmax	pmax		
	comp=Z,812nm,1.6s						
MAK				MLR	MLR		
	comp=Z,201nm,13.0s						
MZWR	Madinat Zayed	10.26	149	P	Pn	08 23 26.3	+2.2
SHRT	Shahrakht	10.27	81	iP	Pn	08 23 25.2	+1.1
MDH	Madha	10.29	134	P	Pn	08 23 25.1	+0.6
UOSS	Minazif	10.50	135		Pn	08 23 27.1	-0.2
UOSS	Minazif	10.50	135	P	Pn	08 23 28.4	+1.1
UOSS				P	Pn	08 23 28.4	+1.1
HATD	Hatta, Dubai	10.55	136	P	Pn	08 23 30.0	+2.0
HATD				P	Pn	08 23 30.0	+2.0
HATD	Hatta, Dubai	10.55	136	iP	Pn	08 23 28.4	+0.4
	SNR=6.3						
IMYA	Miami	10.55	67	Pn	Pn	08 23 29.8	+1.7
ASHO	Ashiyiah	10.61	137	P	Pn	08 23 29.6	+0.8
ASHO				P	Pn	08 23 29.6	+0.8
ASHO	Ashiyiah	10.61	137	iP	Pn	08 23 29.0	+0.1
	SNR=16						
MMAI	Mount Meron Ar	10.68	275	Pn	Pn	08 23 29.5	-0.3
	comp=Z,0.5nm,0.4s,baz=104,slow=12,SNR=0.8						
MMAI				Sn	Sn	08 25 29.6	+0.4
	comp=Z,1.5nm,0.3s,baz=166,slow=25,SNR=1.6						
MMAI				Lg	Lg	08 26 33.2	
	baz=61,slow=27						
MMAI				LR	LR	08 28 39.9	
	comp=Z,371nm,18.0s,baz=83,slow=43						
MZR	Muzera	10.77	152	P	Pn	08 23 33.1	+2.0
MZR	Muzera	10.77	152	iP	Pn	08 23 32.4	+1.4
	SNR=22						
ALNE	Al Ain	10.94	140	P	Pn	08 23 34.1	+0.8
	SNR=12						
ALNE	Al Ain	10.94	140	iP	Pn	08 23 34.0	+0.8
	SNR=12						
SOHO	SOHO	11.31	137	P	Pn	08 23 38.3	-0.1
SOHO	SOHO	11.31	137	P	Pn	08 23 37.7	-0.6
NCK	Nalchik	11.34	343	iP	Pn	08 23 40.1	+1.4
NEUR	Neytrino	11.36	340	iP	Pn	08 23 43.9	+4.7
EIL	Elat	11.65	258	Pn	Pn	08 23 40.5	-2.6
	comp=Z,1.2nm,0.3s,baz=21,slow=8.5,SNR=7.3						
EIL				Lg	Lg	08 27 06.1	
	comp=Z,0.9nm,0.3s,baz=31,slow=6.5,SNR=2.3						
EIL				LR	LR	08 29 30.5	
	comp=Z,443nm,18.1s,baz=339,slow=44						
KBZ	Khabaz	11.74	341	Pn	Pn	08 23 45.8	+1.7
	baz=330,slow=14,SNR=1.3						
KBZ				LR	LR	08 28 43.6	
	comp=Z,216nm,18.1s,baz=124,slow=40						
	comp=Z,2.6nm,1.0s						
KBZ	Khabaz	11.74	341	iP	Pn	08 23 47.3	+3.2
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SHA1	Shidzhatmaz	11.81	340	iP	Pn	08 23 46.1	+0.7
ARQ	Araqi	11.93	139	P	Pn	08 23 47.1	+0.2
	SNR=14						
ARQ				P	Pn	08 23 47.1	+0.2
	SNR=14						
KIV	Kislovodsk	12.01	341	eP	Pn	08 23 48.7	+0.8
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,90nm,13.0s						
SOC	Sochi	12.70	331	eP	Pn	08 23 57.9	+0.7
SOC				e		08 26 21.3	
SOC				pmax	pmax		
	comp=Z,21nm,0.7s						
SOC				MLR	MLR		
	comp=Z,141nm,11.0s						
SMDO	Samad	13.02	135	P	Pn	08 24 02.6	+0.7
SMDO				P	Pn	08 24 02.6	+0.7
JMDO	Jabal Madar	13.58	137	P	Pn	08 24 09.0	-0.5
	SNR=8.7						
BR131	Keskin Array S	13.60	305		Pn	08 24 11.5	+1.7
BR131	Keskin Array S	13.60	305	iP	Pn	08 24 12.6	+2.8
BRTR	Keskin Array B	13.60	305	Pn	Pn	08 24 11.9	+2.1
BRTR	Keskin Array B	13.60	305	Pn	Pn	08 24 13.0	+3.2
	comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=7.3						
BRTR				LR	LR	08 31 14.1	
	comp=Z,33nm,20.4s,baz=114,slow=45						
	comp=Z,2.1nm,1.0s						
BRTR	Keskin Array B	13.60	305	iP	Pn	08 24 13.6	+3.8
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANN	Anapa	14.65	329	eP	Pn	08 24 22.8	-1.1
ANN				pmax	pmax		
	comp=Z,92nm,1.5s						
DOK	Doka	15.04	157	P	Pn	08 24 29.5	+0.2
ISP	Isparta	15.23	294	iP	P	08 24 35.9	-0.9
WHFO	Wadi Hawf	15.59	159	P	Pn	08 24 36.3	-0.2
	SNR=45						
ABTO	Aybut	15.99	162	P	Pn	08 24 41.6	-0.2
RBK	Rabkat	16.11	159	P	Pn	08 24 43.8	+0.5
SHAO	Shalim	16.11	153	P	Pn	08 24 43.5	+0.1
	SNR=12						
SHAO	Shalim	16.11	153	iP	Pn	08 24 43.0	-0.4
	SNR=12						
DMTO	DMTO	16.15	156	P	Pn	08 24 43.4	-0.5
MANT	Manisa	16.90	295		P	08 24 56.7	+1.3
MANT				IAmb	IAmb	08 24 59.7	
	comp=Z,38nm,1.4s						
KBL	Kabul	17.55	78		Pn	08 25 01.9	+0.4
KBL	Kabul	17.55	78	P	Pn	08 25 01.9	+0.4
KBL				pmax	pmax		
	comp=Z,20nm,1.0s						
SIMJ	Simiganj	17.98	65	P	Pn	08 25 06.1	-0.8
CHGR	Chuyangaron	18.10	65		Pn	08 25 07.7	-0.5
CHGR				IAmb	IAmb	08 25 11.1	
	comp=Z,47nm,1.1s						
CHGR	Chuyangaron	18.10	65	P	Pn	08 25 07.7	-0.5
CHGR				pmax	pmax		
	comp=Z,47nm,1.1s						
AB31	Akbulak array	18.76	25	P	P	08 25 15.1	-0.5
ABKAR	Akbulak array	18.76	25	P	P	08 25 14.9	-0.7
GAR	Garm	19.06	64	P	P	08 25 18.3	-0.8
GAR				IAmb	IAmb	08 25 38.0	
	comp=Z,27nm,0.9s						
VRH	Novokhopyorsk	19.07	348	eP	P	08 25 17.5	-1.5
VRH				pmax	pmax		
	comp=Z,30nm,0.5s						
AKTO	Aktyubinsk	19.18	20	P	P	08 25 20.4	+0.2
	comp=Z,0.8nm,0.3s,baz=205,slow=8.8,SNR=17						
AKTO				LR	LR	08 33 38.0	
	comp=Z,60nm,21.4s,baz=230,slow=40						
	comp=Z,4.2nm,0.5s						
VORD	Divnogorie	19.36	343	eP	P	08 25 19.5	-2.7
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
IDI	Anoyia	19.41	284	P	P	08 25 23.6	+0.7
IDI				IAmb	IAmb	08 25 46.9	
	comp=Z,23nm,0.8s						
IDI	Anoyia	19.41	284	P	Pn	08 25 24.7	+0.6
	comp=Z,2.3nm,0.3s,baz=63,slow=8.5,SNR=11						
	comp=Z,7.4nm,0.3s						
VSR	Storozhevoye	19.63	343	eP	P	08 25 21.9	-3.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BELG	Belogornoye	19.68	359	P	P	08 25 26.0	+0.3
	comp=Z,1.1nm,0.3s,baz=153,slow=3.4,SNR=4.3						
	comp=Z,23nm,0.7s						
BELG	Belogornoye	19.68	359	iP	P	08 25 25.9	+0.3
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CFR	Carcaliu	19.84	315	↓P	P	08 25 28.9	+1.4
CFR	Carcaliu	19.84	315	P	P	08 25 28.8	+1.4
RDO	Rodhopi	19.86	302	P	Pn	08 25 29.9	+0.5
RDO				IAmb	IAmb	08 25 38.8	
	comp=Z,30nm,1.2s						
RAZG	Razgrad	20.09	309	↓P	Pn	08 25 33.0	+1.0
ELND	Elena	20.25	307	↓P	Pn	08 25 34.5	+0.5
TRKS	Terek-Say	20.33	58	P	P	08 25 32.4	-0.7
TRKS				pmax	pmax		
	comp=Z,19nm,0.9s						
KK31	Karatay Array	20.45	53	P	P	08 25 34.6	+0.4
KK31	Karatay Array	20.45	53	P	P	08 25 34.6	+0.4
KK31				pmax	pmax		
	comp=Z,15nm,1.3s						
KKAR	Karatay Array	20.45	53	P	P	08 25 33.4	-0.8
KKAR	Karatay Array	20.45	53	P	P	08 25 33.4	-0.8
LPSR	Galich'ya Gora	20.96	344	eP	P	08 25 38.4	-1.2
LPSR				eS	S	08 29 25.9	-6.7
LPSR				pmax	pmax		
	comp=Z,107nm,0.7s						
LPSR				smax	smax		
	comp=E,200nm,4.0s						
VRI	Vrincioaia	21.04	315	↓P	P	08 25 42.0	+1.5
VRI	Vrincioaia	21.04	315	P	P	08 25 42.0	+1.5
VRI	Vrincioaia	21.04	315	P	P	08 25 42.2	+1.6
	comp=E,21nm,1.6s						
NIL	Nilore	21.07	81	P	P	08 25 40.7	-0.2
NIL	Nilore	21.07	81	P	P	08 25 40.7	-0.2
NIL				pmax	pmax		
	comp=Z,78nm,1.1s						
PLOR5	Plostina Array	21.07	315	P	P	08 25 42.4	+1.5
	comp=Z,23nm,1.1s						
PLOR	Plostina	21.08	315	↓P	P	08 25 43.3	+2.3
PLOR	Plostina	21.08	315	P	P	08 25 43.3	+2.3
NEHR	Nehoiu	21.08	313	↓P	P	08 25 43.1	+2.1
PLVB	Pleven	21.27	307	↓P	P	08 25 45.1	+2.1
MLR	Muntele Rosu	21.33	313	P	P	08 25 44.6	+0.8
MLR				IAmb	IAmb	08 26 01.0	
	comp=Z,24nm,1.2s						
MLR	Muntele Rosu	21.33	313	P	P	08 25 44.4	+0.7
	comp=Z,5.3nm,0.6s,baz=93,slow=4.0,SNR=6.0						
	comp=Z,5.3nm,0.6s						
MLR	Muntele Rosu	21.33	313	↓P	P	08 25 46.1	+2.4
MLR	Muntele Rosu	21.33	313	P	P	08 25 46.1	+2.4
TESR	Tescani	21.43	316	↓P	P	08 25 45.4	+0.7
TESR	Tescani	21.43	316	P	P	08 25 45.6	+0.9
	comp=Z,27nm,0.8s						
SORM	Soroca	21.43	322	↑P	P	08 25 46.4	+1.7
SORM	Soroca	21.43	322	P	P	08 25 46.4	+1.7
ONER	Baraj Valea Uz	21.49	316	↓P	P	08 25 46.8	+1.5
TURR	Turia	21.57	315	↓P	P	08 25 47.8	+1.6
ARSB	Arslanbob	21.60	59	P	P	08 25 46.4	-0.3
ARSB	Arslanbob	21.60	59	P	P	08 25 46.4	-0.3
ARSB				pmax	pmax		
	comp=Z,13nm,1.1s						
OZUR		21.73	314	↓P	P	08 25 49.5	+1.6
BOSR	Bodos	21.79	314	↓P	P	08 25 49.7	+1.1
ITM	Ithomi	21.88	289	P	P	08 25 50.8	+1.2
DOPR	Dopca	21.90	314	↑P	P	08 25 51.5	+1.7
BIZ	Bicaz	21.98	317	↑P	P	08 25 52.5	+2.0
ARR	Arges	22.09	312	↓P	P	08 25 53.5	+1.7
NDNU	Novodnistrovsk	22.24	322	P	P	08 25 53.3	0.0
AK07	Malin Array Si	22.63	328	P	P	08 25 56.6	-0.9
AK09	Malin Array Si	22.64	328	P	P	08 25 56.7	-0.9
AK10	Malin Array Si	22.65	328	P	P	08 25 56.6	-1.0
AK06	Malin Array Si	22.66	328	P	P	08 25 57.6	-0.2
AK08	Malin Array Si	22.67	328	P	P	08 25 57.8	-0.1
AK08				pP	pP	08 26 00.9	-1.5
LOT	Lotru	22.67	311	↓P	P	08 25 59.2	+1.1
KMPD	K-Podol'skiy	22.70	321	P	P	08 25 57.2	-1.0
KMPD				P	P	08 25 57.2	-1.0
KMPD				pmax	pP	08 26 00.9	-1.8
ARLS	Aral	22.71	59	P	P	08 25 59.9	+1.2
ARLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKASG	Malin Array Be	22.73	328	P	P	08 25 57.2	-1.4
	comp=Z,2.2nm,0.6s,baz=139,slow=9.6,SNR=13						
AKASG				LR	LR	08 36 33.6	
	comp=Z,110nm,19.7s,baz=104,slow=41						
	comp=Z,2.2nm,0.6s						
AKASG	Malin Array Be	22.73	328	iP	P	08 25 57.5	-1.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	Malin Array Si	22.73	328	P	P	08 25 58.0	-0.5
AKBB				IAmb	IAmb	08 26 00.3	
	comp=Z,13nm,0.9s						
AKBB	Malin Array Si	22.73	328	P	P	08 25 58.0	-0.5
AKBB				pmax	pmax		
	comp=Z,13nm,0.9s						
AKBB	Malin Array Si	22.73	328	P	P	08 25 57.5	-1.0
KIEV	Kiev	22.73	328	P	P	08 25 57.8	-0.7
KIEV				IAmb	IAmb	08 26 00.3	
	comp=Z,11nm,0.9s						
KIEV	Kiev	22.73	328	↑P	P	08 25 59.1	+0.6
KIEV	Kiev	22.73	328	P	P	08 25 59.1	+0.6
KIEV	Kiev	22.73	328	P	P	08 25 57.6	-1.0
	comp=Z,59nm,1.2s						
AK19	Malin Array Si	22.84	328	P	P	08 25 58.5	-1.2
BURAR	Bucovina Array	22.85	317	↑P	P	08 26 00.8	+0.8
BURAR	Bucovina Array	22.85	317	P	P	08 26 00.8	+0.8
BUR08	Bucovina Ar. S	22.87	317	P	P	08 26 00.5	+0.3
BUR08				IAmb	IAmb	08 26 20.1	
	comp=Z,7.3nm,0.8s						
LUBAR	Lubar, Ukraine	22.88	325	P	P	08 25 59.6	-0.6
AAK	Ala-Archa	23.05	57	P	P	08 26 01.8	-0.3
AAK	Ala-Archa	23.05	57	LR	LR	08 36 28.9	
	comp=Z,125nm,18.4s,baz=269,slow=40						
AAK	Ala-Archa	23.05	57	iP	P	08

	comp=Z,104nm,18.0s,baz=11,slow=36							
KWP	**Kalwaria Pacla**	**25.34**	**319**	*e*P		**P**	**08 26 24.7**	**+1.3**
KWP	**Kalwaria Pacla**	**25.34**	**319**	P		**P**	**08 26 24.8**	**+1.3**
	comp=Z,27nm,0.5s							
BORK	**Borovoye**	**25.86**	**32**	*i* P		**P**	**08 26 28.6**	**+0.5**
BORK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
BVAR	**Borovoye Array**	**25.87**	**32**	P		**P**	**08 26 28.7**	**+0.4**
	comp=Z,6.0nm,0.9s,baz=224,slow=8.3,SNR=12							
BVAR				ScP		**ScP**	**08 33 33.5**	**-2.5**
	comp=Z,2.1nm,0.7s,baz=289,slow=4.4,SNR=6.9							
BVAR				LR		LR	08 38 55.2	
	comp=Z,62nm,18.9s,baz=203,slow=42							
	comp=Z,6.0nm,0.9s							
KIRV	**Kirov**	**25.90**	**2**	LR		LR	08 38 49.3	
	comp=Z,71nm,18.1s,baz=189,slow=41							
KECS	**Kecovo**	**26.04**	**315**	*e*P		**P**	**08 26 33.6**	**+3.8**
KECS	**Kecovo**	**26.04**	**315**	*e*P		**P**	**08 26 33.6**	**+3.8**
STHS	**Stebnicka Huta**	**26.04**	**318**	*e*P		**P**	**08 26 33.8**	**+4.0**
STHS	**Stebnicka Huta**	**26.04**	**318**	*e*P		**P**	**08 26 33.8**	**+4.0**
MNK	**Minsk**	**26.07**	**333**	*i* P		**P**	**08 26 30.6**	**+0.6**
	comp=E,28nm,0.9s							
MNK				*i* P		**P**	**08 26 30.6**	**+0.6**
	comp=N,37nm,1.0s							
MNK				*i* P		**P**	**08 26 30.6**	**+0.6**
	comp=Z,39nm,0.7s,baz=138							
MNK				*i* PP		**PnPn**	**08 27 08.0**	**-0.1**
MNK				*i* PPP		PPP	08 27 16.5	
MNK				*i* S		**S**	**08 31 02.5**	**+2.0**
MNK				*i* SS		**SnSn**	**08 32 02.2**	**+3.8**
MNK				*i* LQ		LQ	08 34 05.2	
MNK				*i* LR		LR	08 36 19.0	
MNK				*i* LRM		MLR	08 38 19.3	
	comp=Z,79nm,17.9s							
MNK				*i* LRM		MLR	08 38 47.7	
	comp=E,225nm,23.8s							
MNK				*i* LRM		MLR	08 38 51.5	
	comp=N,122nm,25.8s							
MNK	**Minsk**	**26.07**	**333**	*i* P		**P**	**08 26 30.5**	**+0.6**
MNK				*i* PPP		PPP	08 27 16.5	
MNK				*i* S		**S**	**08 31 02.4**	**+2.0**
MNK				*i* SS		**SnSn**	**08 32 02.2**	**+3.8**
MNK				pmax	pmax			
	comp=Z,39nm,0.7s							
MNK				pmax	pmax			
	comp=N,37nm,1.0s							
MNK				pmax	pmax			
	comp=E,28nm,0.9s							
MNK				MLR	MLR			
	comp=Z,79nm,18.0s							
MNK				MLR	MLR			
	comp=E,225nm,24.0s							
MNK				MLR	MLR			
	comp=N,122nm,26.0s							
TIP	**Timpagrande**	**26.10**	**293**	P		**P**	**08 26 31.6**	**+1.1**
TIP				IAmb	IAmb		08 26 34.0	
	comp=Z,15nm,0.9s							
TIP	**Timpagrande**	**26.10**	**293**	⇓P		**P**	**08 26 32.6**	**+2.1**
PSZ	**Piszkesteto**	**26.14**	**314**	P		**P**	**08 26 32.3**	**+1.6**
PSZ	**Piszkesteto**	**26.14**	**314**	⇑P		**P**	**08 26 32.5**	**+1.6**
PSZ	**Piszkesteto**	**26.14**	**314**	P		**P**	**08 26 32.4**	**+1.6**
MORH	**Mrgy, Hungar**	**26.27**	**310**	⇓P		**P**	**08 26 33.4**	**+1.6**
MORH	**Mrgy, Hungar**	**26.27**	**310**	P		**P**	**08 26 32.9**	**+1.1**
	comp=Z,6.8nm,1.2s							
MATE	**Matera**	**26.29**	**297**	⇑P		**P**	**08 26 33.9**	**+1.8**
NIE	**Niedzica**	**26.58**	**317**	*e*P		**P**	**08 26 40.2**	**+5.5**
NIE	**Niedzica**	**26.58**	**317**	P		**P**	**08 26 39.8**	**+5.1**
CEL	**Celeste**	**26.72**	**291**	P		**P**	**08 26 37.2**	**+1.1**
CEL				IAmb	IAmb		08 26 47.5	
	comp=Z,11nm,0.7s							
NACGM	**Naroch**	**26.80**	**332**	*e*P		**P**	**08 26 37.1**	**+0.6**
	comp=Z,22nm,0.8s,baz=137							
CUC	**Castrocucco**	**26.89**	**295**	P		**P**	**08 26 39.6**	**+2.0**
CUC				IAmb	IAmb		08 26 41.6	
	comp=Z,28nm,1.4s							
LANS	**Liptovska Anna**	**26.94**	**316**	*e*P		**P**	**08 26 39.9**	**+1.9**
LANS	**Liptovska Anna**	**26.94**	**316**	*e*P		**P**	**08 26 39.9**	**+1.9**
OJC	**Ojcow**	**27.25**	**318**	*e*P		**P**	**08 26 42.1**	**+1.4**
OJC	**Ojcow**	**27.25**	**318**	P		**P**	**08 26 41.0**	**+0.2**
OJC	**Ojcow**	**27.25**	**318**	P		**P**	**08 26 41.0**	**+0.2**
OJC	**Ojcow**	**27.25**	**318**	P		**P**	**08 26 40.9**	**+0.2**
	comp=Z,15nm,1.0s							
OJC				pP		**pP**	**08 26 44.0**	**-1.5**
	comp=Z,15nm,1.0s							
KURBB	**Kurchatov Arra**	**28.65**	**42**	P		**P**	**08 26 53.0**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=247,slow=9.5,SNR=6.1							
KURBB				ScP		**ScP**	**08 33 42.1**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=261,slow=6.3,SNR=5.2							
	comp=Z,1.0nm,0.7s							
VRAC	**Vranov**	**28.71**	**315**	LR		LR	08 40 46.8	
	comp=Z,57nm,18.4s,baz=130,slow=41							
KLMR	**Klimovskoe**	**28.72**	**351**	*e*P		**P**	**08 26 52.1**	**-1.5**
KLMR				pmax	pmax			
	comp=Z,9.0nm,0.7s							
KURK	**Kurchatov**	**28.74**	**42**	P		**P**	**08 26 53.0**	**-1.0**
KURK	**Kurchatov**	**28.74**	**42**	*i* P		**P**	**08 26 55.8**	**+1.8**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
MK31	**Makanchi Array**	**29.56**	**52**	*ce*P		**P**	**08 27 02.1**	**+0.7**
MKAR	**Makanchi Array**	**29.56**	**52**	P		**P**	**08 27 01.5**	**+0.2**
MKAR	**Makanchi Array**	**29.56**	**52**	P		**P**	**08 27 02.0**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=245,slow=7.9,SNR=20							
MKAR				LR		LR	08 40 40.3	
	comp=Z,60nm,18.5s,baz=241,slow=40							
	comp=Z,2.3nm,0.6s							
MKAR	**Makanchi Array**	**29.56**	**52**	*ce*P		**P**	**08 27 02.2**	**+0.8**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MOA	**Molln**	**29.63**	**311**	*i* P		**P**	**08 27 03.3**	**+1.3**
	comp=Z,2.1nm,0.4s							
BIOA	**Bad Ischl, Aus**	**29.99**	**310**	*i* P		**P**	**08 27 06.3**	**+1.2**
	comp=Z,1.6nm,0.3s							
KBA	**Koelnbreinsper**	**30.00**	**309**	*i* P		**P**	**08 27 06.8**	**+1.4**
	comp=Z,3.5nm,0.7s							
GERES	**GERESS Array B**	**30.31**	**312**	P		**P**	**08 27 08.4**	**+0.3**
GERES	**GERESS Array B**	**30.31**	**312**	P		**P**	**08 27 08.5**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=121,slow=9.5,SNR=8.3							
	comp=Z,0.8nm,0.6s							
LESA	**Schwarzleotal**	**30.54**	**309**	*e*P		**P**	**08 27 10.9**	**+0.8**
	comp=Z,1.1nm,0.4s							
WTTA	**Wattenberg**	**31.18**	**309**	*e*P		**P**	**08 27 16.6**	**+0.7**
	comp=Z,3.0nm,0.4s							
SQTA	**Sankt Quirin**	**31.45**	**308**	*e*P		**P**	**08 27 18.8**	**+0.6**
	comp=Z,6.7nm,0.4s							
MOTA	**Moosalm**	**31.55**	**309**	*i* P		**P**	**08 27 19.5**	**+0.4**
	comp=Z,2.5nm,0.3s							
FETA	**Feichten**	**31.72**	**308**	*e*P		**P**	**08 27 21.4**	**+0.8**
	comp=Z,1.9nm,0.4s							
RETA	**Reutte**	**31.81**	**309**	*i* P		**P**	**08 27 21.6**	**+0.3**
	comp=Z,0.9nm,0.3s							
FINES	**FINESS Array B**	**32.10**	**340**	P		**P**	**08 27 23.5**	**0.0**
	comp=Z,3.5nm,0.4s,baz=145,slow=9.4,SNR=35							
FINES				ScP		**ScP**	**08 33 53.8**	**-1.7**
	comp=Z,1.6nm,0.8s,baz=152,slow=7.1,SNR=4.0							
	comp=Z,3.5nm,0.4s							
FINES	**FINESS Array B**	**32.10**	**340**	*i* P		**P**	**08 27 23.7**	**+0.2**
FINES				pmax	pmax			
	comp=Z,4.0nm,0.4s							
DAVA	**Damuels**	**32.34**	**308**	*i* P		**P**	**08 27 26.5**	**+0.4**
	comp=Z,3.4nm,0.3s							
WMQ	**Urumqi**	**32.73**	**59**	*e*P		**P**	**08 27 31.9**	**+2.5**
WMQ				LR	LR			
	comp=Z,180nm,19.9s							
ZALV	**Zalesovo Beam**	**33.57**	**40**	P		**P**	**08 27 35.6**	**-0.9**
ZALV	**Zalesovo Beam**	**33.57**	**40**	P		**P**	**08 27 37.3**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=264,slow=9.1,SNR=5.0							
ZALV				LR		LR	08 45 04.7	
	comp=Z,32nm,18.9s,baz=78,slow=43							
	comp=Z,1.2nm,0.3s							
EVN	**Everest**	**33.63**	**88**	P		**P**	**08 27 37.2**	**-0.9**
EVN				IAmb	IAmb		08 28 15.1	
	comp=Z,4.7nm,0.7s							
DGZ	**Jazzator, Alta**	**33.66**	**48**	*i* P		**P**	**08 27 37.7**	**+0.2**
DGZ				pmax	pmax			
	comp=Z,2.0nm,0.8s							
BNI	**Bardonecchia**	**34.16**	**303**	P		**P**	**08 27 42.6**	**+0.7**
BNI	**Bardonecchia**	**34.16**	**303**	P		**P**	**08 27 42.6**	**+0.7**
BNI				pmax	pmax			
	comp=Z,12nm,0.7s							
HFS	**Hagfors**	**35.54**	**331**	P		**P**	**08 27 53.5**	**+0.1**
	comp=Z,7.5nm,0.7s,baz=124,slow=9.6,SNR=34							
HFS				LR		LR	08 44 44.9	
	comp=Z,81nm,18.2s,baz=84,slow=40							
	comp=Z,7.5nm,0.7s							
NB2	**NORSAR Subarra**	**37.06**	**331**	P		**P**	**08 28 05.6**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=121,slow=8.6							
NOA	**NORSAR Array B**	**37.06**	**331**	P		**P**	**08 28 06.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=122,slow=8.4,SNR=6.0							
NOA				LR		LR	08 44 40.9	
	comp=Z,38nm,18.7s,baz=130,slow=38							
	comp=Z,0.9nm,0.6s							
GOMU	**GeErMu**	**38.40**	**71**	P		**P**	**08 28 17.2**	**-1.3**
GOMU				pP	pP		08 28 20.2	-3.2
GOMU				sP	sP		08 28 24.1	-1.2
GOMU				pmax	pmax			
	comp=Z,7.0nm,0.7s							
SHL	**Shillong**	**38.69**	**89**	P		**P**	**08 28 19.9**	**-1.0**
SHL				IAmb	IAmb		08 28 22.0	
	comp=Z,18nm,1.3s							
SHL	**Shillong**	**38.69**	**89**	P		**P**	**08 28 19.9**	**-1.0**
SHL				pmax	pmax			
	comp=Z,18nm,1.3s							
ARCES	**ARCESS Array B**	**39.00**	**348**	IAmb		IAmb	08 28 40.8	
	comp=Z,21nm,1.4s							
ARCES	**ARCESS Array B**	**39.00**	**348**	P		**P**	**08 28 23.2**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=336,slow=2.7,SNR=6.9							
ARCES				ScP		**ScP**	**08 34 19.0**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=160,slow=2.9,SNR=1.2							
ARCES				LR		LR	08 45 49.8	
	comp=Z,80nm,20.3s,baz=172,slow=38							
	comp=Z,2.3nm,0.9s							
KNGR	**Kungurtug, Tuv**	**40.19**	**49**	*i* P		**P**	**08 28 33.7**	**+0.7**
KNGR				pmax	pmax			
	comp=Z,7.0nm,0.9s							
GTA	**Gaotai**	**41.87**	**66**	*e*P		**P**	**08 28 48.1**	**+1.1**
GTA				pP	sP		08 28 53.3	-0.5
GTA				pmax	pmax			
	comp=Z,6.0nm,1.3s							
EKA	**Eskdalemuir Ar**	**42.03**	**318**	P		**P**	**08 28 47.6**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=110,slow=7.9,SNR=5.9							
	comp=Z,1.3nm,0.6s							
ESDC	**Sonseca Array**	**42.09**	**295**	P		**P**	**08 28 48.6**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=68,slow=8.9,SNR=5.6							
ESDC				LR		LR	08 47 08.6	
	comp=Z,38nm,20.0s,baz=112,slow=37							
	comp=Z,0.6nm,0.6s							
LZDM	**Lanzhou Array**	**45.51**	**70**	P		**P**	**08 29 17.3**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=268,slow=9.9,SNR=1.6							
	comp=Z,1.0nm,0.3s							
LZH	**Lanzhou**	**45.60**	**70**	*e*P		**P**	**08 29 18.6**	**+1.5**
LZH				sP	sP		08 29 25.7	+1.8
LZH				pmax	pmax			
	comp=Z,27nm,1.2s							
SONM	**Songino Array**	**45.91**	**53**	IAmb		IAmb	08 29 20.9	
	comp=Z,1.5nm,1.0s							
SONM	**Songino Array**	**45.91**	**53**	P		**P**	**08 29 19.6**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=286,slow=7.6,SNR=4.4							
	comp=Z,0.6nm,0.4s							
ULN	**Ulaanbaatar**	**46.35**	**53**	P		**P**	**08 29 21.2**	**-1.6**
ULN				IAmb	IAmb		08 29 24.4	
	comp=Z,7.3nm,1.2s							
ULN	**Ulaanbaatar**	**46.35**	**53**	*ce*P		**P**	**08 29 23.6**	**+0.8**
ULN				pmax	pmax			
	comp=Z,5.0nm,1.1s							
TORD	**Torodi Ar. Bea**	**46.53**	**256**	P		**P**	**08 29 24.7**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=54,slow=8.6,SNR=2.1							
	comp=Z,1.5nm,0.3s							
PZH	**PanZhiHua**	**46.65**	**83**	P		**P**	**08 29 26.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**47.59**	**94**	P		**P**	**08 29 32.2**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=291,slow=7.5,SNR=8.0							
	comp=Z,1.3nm,0.3s							
CMAR	**Chiang Mai Arr**	**47.59**	**94**	*ce*P		**P**	**08 29 32.5**	**-0.2**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
SPITS	**Spitsbergen Ar**	**47.62**	**352**	P		**P**	**08 29 32.4**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=138,slow=11,SNR=7.9							
	comp=Z,1.7nm,0.4s							
KMI	**Kunming**	**47.99**	**84**	P		**P**	**08 29 36.3**	**+0.3**
KMI				pmax	pmax			
	comp=Z,11nm,1.1s							
KMI				LR	LR			
	comp=Z,160nm,19.3s							
XAN	**Xi'an**	**50.14**	**71**	P		**P**	**08 29 52.3**	**+0.1**
XAN				pmax	pmax			
	comp=Z,20nm,1.0s							
HHC	**Hu-ho-hao-te**	**50.50**	**62**	*e*P		**P**	**08 29 53.6**	**-1.3**
HHC				pmax	pmax			
	comp=Z,12nm,0.6s							
HHC				pmax	pmax			
	comp=Z,98nm,4.2s							
LSZ	**Lusaka**	**51.37**	**205**	LR		LR	08 52 04.8	
	comp=Z,55nm,19.9s,baz=179,slow=36							
LYN	**LuoYang**	**52.80**	**69**	*e*P		**P**	**08 30 13.1**	**+1.1**
LYN				pmax	pmax			
	comp=Z,16nm,0.7s							
HILR	**Hailar Array B**	**54.49**	**49**	P		**P**	**08 30 24.9**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=254,slow=5.5,SNR=4.1							
	comp=Z,1.8nm,0.5s							
DBIC	**Dimbokro**	**55.48**	**254**	IAmb		IAmb	08 30 38.2	
	comp=Z,16nm,1.2s							
DBIC	**Dimbokro**	**55.48**	**254**	P		**P**	**08 30 32.3**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=332,slow=1.8,SNR=3.0							
DBIC				LR		LR	08 57 34.2	
	comp=Z,91nm,18.0s,baz=98,slow=40							
	comp=Z,1.1nm,0.4s							
TIXI	**Tiksi**	**56.44**	**22**	*i* P		**P**	**08 30 40.6**	**+2.8**
TIXI				pmax	pmax			
	comp=Z,2.0nm,1.1s							
SUMG	**Summit**	**58.13**	**339**	*i* P		**P**	**08 30 51.0**	**+0.7**
NJ2	**Nanjing**	**58.67**	**70**	*e*P		**P**	**08 30 53.0**	**-1.2**
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.5s							
LBTB	**Lobatse**	**61.27**	**203**	LR		LR	08 57 57.0	
	comp=Z,60nm,18.9s,baz=18,slow=36							
KSRS	**Korea Array**	**63.63**	**61**	P		**P**	**08 31 26.5**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=284,slow=5.8,SNR=2.7							
	comp=Z,1.3nm,0.6s							
BOSA	**Boshof**	**64.72**	**202**	P		**P**	**08 31 35.2**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=48,slow=6.9,SNR=3.8							
	comp=Z,1.3nm,0.6s							
FRB	**Frobisher Bay**	**71.73**	**335**	LR		LR	09 04 30.1	
	comp=Z,52nm,20.0s,baz=75,slow=36							
ILAR	**Eielson Array**	**82.14**	**6**	P		**P**	**08 33 16.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=328,slow=5.7,SNR=6.3							
	comp=Z,0.3nm,0.6s							
FITZ	**Fitzroy Crossi**	**89.60**	**112**	P		**P**	**08 33 54.6**	**0.0**
	comp=Z,2.6nm,0.7s,baz=280,slow=6.1,SNR=2.5							
	comp=Z,2.6nm,0.7s							
JAY	**Jayapura**	**93.54**	**91**	LR		LR	09 21 50.4	
	comp=Z,37nm,18.4s,baz=107,slow=39							
WRA	**Warramunga Arr**	**97.49**	**109**	P		**P**	**08 34 29.6**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=310,slow=4.5,SNR=7.9							
	comp=Z,0.9nm,0.8s							
TKL	**Tuckaleechee C**	**98.41**	**322**	LR		LR	09 20 33.5	
	comp=Z,33nm,19.2s,baz=139,slow=36							
ASAR	**Alice Springs**	**99.10**	**112**	P		**Pdif**	**08 34 37.3**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=312,slow=5.3,SNR=5.1							
	comp=Z,0.3nm,0.6s							
QSPA	**South Pole Qui**	**122.54**	**180**	PKP		**PKiKP**	**08 39 53.0**	**+1.5**
	comp=Z,0.7nm,0.9s,baz=19,slow=5.8,SNR=2.0							

*IDC **01** 08:22:38.6±5.6,2˚.00N×100˚.01E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=306.3km s-min=30.9km az=55.0*

*DJA **01** 08:22:55.6±0.4,2˚N±3˚×9˚9E±˚,h148km±4km,M3.6/14, mB5.7/2,mb3.7/1,MLv3.5/14,Mw(mB)5.2/2*

ISC 01 08:22:54.6±1.1,17˚N±0˚.1×99˚.5E±0˚.1,h150km,n21, σ1s08/16,mb3.4/3,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.85**	**176**	P	**Pn**	**08 23 19.2**	**+1.0**
MNSI				S	**Sn**	**08 23 38.4**	**+2.2**
GSI	**Gunungsitoli**	**1.97**	**260**	P	**Pn**	**08 23 30.6**	**+1.2**
PBSI	**Pulau Batu**	**2.09**	**216**	P	**Pn**	**08 23 30.5**	**-0.4**
PPI	**Padang Panjang**	**2.27**	**157**	P	**Pn**	**08 23 33.5**	**+0.6**
KCSI	**Kotacane, Aceh**	**2.55**	**317**	P	**Pn**	**08 23 37.0**	**+0.6**
PDSI	**Padang**	**2.71**	**160**	P	**Pn**	**08 23 38.9**	**+0.5**
SISI	**Saibi**	**2.98**	**188**	P	**Pn**	**08 23 40.5**	**-1.3**
SNSI	**Sinabang, Aceh**	**3.28**	**283**	P	**Pn**	**08 23 46.3**	**+0.8**
MLSI	**Meulaboh, Aceh**	**4.05**	**310**	P	**Pn**	**08 23 55.4**	**-0.2**
KRJI	**Kerinci**	**4.19**	**152**	P	**Pn**	**08 23 58.2**	**+0.7**
KSI	**Kapahiang**	**6.10**	**150**	P	**Pn**	**08 24 23.4**	**+0.7**
MDSI	**Maura Dua**	**7.67**	**143**	P	**Pn**	**08 24 44.4**	**+0.8**
H01W3	**Cape Leeuwin H** baz=341	**38.84**	**161**	T	T	09 11 20.2	
H01W2	**Cape Leeuwin H** baz=341	**38.85**	**161**	T	T	09 11 19.1	
H01W1	**Cape Leeuwin H** baz=341	**38.85**	**161**	T	T	09 11 21.4	
WRA	**Warramunga Arr** 1.4nm,0.5s,baz=302,slow=9.1,SNR=25	**40.33**	**124**	P	**P**	**08 30 16.3**	**-1.5**
	1.4nm,0.5s						
ASAR	**Alice Springs** 0.2nm,0.6s,baz=308,slow=9.0,SNR=2.0	**41.85**	**129**	P	**P**	**08 30 29.5**	**-0.6**
	0.2nm,0.6s						
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=159,slow=8.1,SNR=2.6	**47.41**	**344**	P	**P**	**08 31 13.2**	**-0.7**
	0.4nm,0.4s						
H04N2	**CROZET ISLANDS** baz=52	**63.45**	**215**	T	T	09 42 11.2	
H04N1	**CROZET ISLANDS** baz=52	**63.47**	**215**	T	T	09 42 08.4	
H04N3	**CROZET ISLANDS** baz=52	**63.47**	**215**	T	T	09 42 07.9	

IDC 01 08:25:16.1±10.0,22˚.46S×172˚.39W,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=434.8km s-min=43.5km az=145.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 0.3nm,0.5s,baz=97,slow=7.0,SNR=4.5	**49.18**	**258**	P	P	08 34 06.0	-0.4
	0.3nm,0.5s						
WRA	**Warramunga Arr** 0.9nm,0.7s,baz=103,slow=7.9,SNR=5.1	**49.51**	**262**	P	P	08 34 09.1	+0.2
	0.9nm,0.7s						
ILAR	**Eielson Array** 0.7nm,0.9s,baz=200,slow=7.1,SNR=4.5	**89.17**	**11**	P	P	08 38 13.1	-0.1
	0.7nm,0.9s						

IDC 01 08:28:42.6±2.6,6˚.63N×125˚.94E,h0km,mb3.8/4, mbtmp3.8/4,MS3.4/3,Error ellipse: s-maj=120.5km s-min=8.2km az=57.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)** 265nm,0.3s,baz=254,slow=8.8,SNR=20	**0.56**	**320**	Pg	Pg	08 28 53.7	+0.3
DAV				Lg	Lg	08 29 01.0	
	426nm,0.3s,baz=27,slow=2.8,SNR=9.3						
DAV				LR	LR	08 29 22.3	
	comp=Z,1μm,21.7s,baz=346,slow=71						
GUMO	**Guam** comp=Z,42nm,18.0s,baz=98,slow=40	**19.86**	**68**	LR	LR	08 42 04.5	
FITZ	**Fitzroy Crossi** 1.4nm,0.5s,baz=359,slow=5.8,SNR=8.3	**24.58**	**181**	P	P	08 34 04.7	+0.1
	1.4nm,0.5s						
WRA	**Warramunga Arr** 0.6nm,0.7s,baz=342,slow=9.3,SNR=5.4	**27.67**	**163**	P	P	08 34 32.0	-0.5
	0.6nm,0.7s						
ASAR	**Alice Springs** 0.4nm,0.5s,baz=344,slow=8.2,SNR=7.6	**31.10**	**166**	P	P	08 35 03.5	+0.5
	0.4nm,0.5s						
STKA	**Stephens Creek** 2.0nm,0.8s,baz=354,slow=9.2,SNR=3.2	**41.11**	**160**	P	P	08 36 27.9	-0.6
	2.0nm,0.8s						
MAW	**Mawson** comp=Z,36nm,18.9s,baz=67,slow=36	**86.19**	**200**	LR	LR	09 20 25.2	
VNDA	**Vanda** comp=Z,25nm,19.0s,baz=333,slow=36	**86.39**	**173**	LR	LR	09 21 16.5	

*BUT **01** 08:37:30.3±1.2,47˚.36N±0˚.03×112˚.87W±0˚.03,h28km±8km, Error ellipse: s-maj=5.0km s-min=3.2km az=180.0*

NEIC 01 08:37:30.0±0.8,47˚.33N±0˚.04×112˚.88W±0˚.04,h33km±7km, ML2.5/20,ML2.9/20(BUT),Error ellipse: s-maj=5.9km s-min=3.4km az=194.0,Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVMT	**Ovando**	**0.28**	**197**		Pn	08 37 37.9	0.0
SLMT	**Seeley Lake**	**0.43**	**258**		Pb	08 37 39.6	0.0
CHMT	**Chamberlain Mo**	**0.49**	**212**		Pn	08 37 41.0	+0.1
LYMT	**Lyon Mountain**	**0.54**	**132**		Pb	08 37 41.4	+0.1
BEMT	**Mount Belmont**	**0.69**	**147**		Pb	08 37 44.0	+0.1
SWMT	**Swartz Lake**	**0.78**	**283**		Pn	08 37 44.8	0.0
PCMT	**Pistol Creek**	**0.79**	**262**		Pb	08 37 45.3	-0.2
PCMT					Sb	08 37 56.8	+0.8
MSO	**Missoula**	**0.89**	**236**		Pb	08 37 47.1	+0.2
MSO				Sg	Sb	08 37 59.0	+0.5
MSO				IAML		08 38 02.5	
	110nm,0.3s						
YBMT	**Yellow Bay**	**0.93**	**305**		Pn	08 37 47.2	+0.3
BPMT	**Black Pine Rid**	**0.98**	**204**		Pb	08 37 49.1	+0.5
JTMT	**Jette**	**1.04**	**294**		Pn	08 37 48.9	+0.5
FBMT	**Ferry Basin**	**1.05**	**275**		Pb	08 37 49.3	-0.5
ALMT	**Alberton, Mont**	**1.11**	**255**		Pb	08 37 50.8	0.0
VCMT	**Victor**	**1.27**	**226**		Pb	08 37 52.5	-0.8
NDMT	**Ninemile Divid**	**1.31**	**268**		Pb	08 37 53.7	-0.5
BUT	**Butte**	**1.34**	**171**		Pb	08 37 53.8	-0.8
BSMT	**Bassoo Peak**	**1.39**	**293**		Pb	08 37 54.7	-0.9
BHMT	**Big Hole Peak**	**1.49**	**280**		Pb	08 37 56.1	-1.0
LRM	**Limekiln Ridge**	**1.54**	**169**		Pn	08 37 56.1	+0.8
HBMT	**Mount

LEM Lembang 1.12 343 P Pn 08 38 30.4 +1.3
KPJI Karang Pucung 1.13 60 P Pn 08 38 29.4 +0.4
SKJI Sukabumi 1.64 303 P Pn 08 38 35.9 +0.2
DBJI Dramaga 1.79 319 P Pn 08 38 39.3 +1.6
TNG Tangerang 2.15 323 P Pn 08 38 44.0 +1.4
YOGI Yogyakarta 2.33 88 P Pn 08 38 43.8 -1.1
SBJI Serang 2.53 314 P Pn 08 38 48.1 +0.4
UGM Wanagama 2.55 90 Pn 08 38 47.6 -0.5
UGM Wanagama 2.55 90 P Pn 08 38 47.5 -0.5
UGM Wanagama 2.55 90 P Pn 08 38 47.2 -0.8
SMRI Semarang 2.62 71 Pn 08 38 50.1 +1.2
SMRI Semarang 2.62 71 P Pn 08 38 50.6 +1.7
SMRI Semarang 2.62 71 P Pn 08 38 50.5 +1.7
WOJI Wonogiri, Jawa 2.95 89 P Pn 08 38 52.6 -0.8
PCJI Pacitan 3.21 95 P Pn 08 38 56.7 -0.2
XMI Christmas Isla 3.37 221 P Pn 08 38 55.3 -3.8
NGJI Ngawi 3.52 81 P Pn 08 39 02.0 +0.8
TBJI Tambak Boyo 4.02 75 P Pn 08 39 08.6 +0.7
KASI Kota Agung 4.17 304 P Pn 08 39 10.2 +0.2
KLI Kotabumi 4.31 314 P Pn 08 39 13.5 +1.6
GRJI Gresik 4.60 78 P Pn 08 39 16.4 +0.5
LWLI Liwa 4.81 306 P Pn 08 39 19.4 +0.5
MDSI Maura Dua 5.06 312 P Pn 08 39 23.4 +1.2
105nm,0.8s
BWJI Bawean 5.11 67 P Pn 08 39 24.6 +1.8
TPI Tanjungpandan 5.13 357 P Pn 08 39 24.9 +1.8
62nm,0.9s
BLJI Banyuglugur 5.60 89 P Pn 08 39 29.3 -0.3
0.9nm3µm139nm,0.6s
LHSI Lahat 5.98 312 P Pn 08 39 36.3 +1.5
0.4nm3µm91nm,1.1s
KMMI Kalianget 6.03 82 P Pn 08 39 34.2 -1.3
0.3nm50nm,0.9s
JAGI Jajag, Banyuwa 6.17 96 Pn 08 39 38.5 +1.1
JAGI Jajag, Banyuwa 6.17 96 P Pn 08 39 38.8 +1.4
JAGI Jajag, Banyuwa 6.17 96 P Pn 08 39 37.3 -0.1
1.2nm3µm125nm,0.7s
ABJI Asem Bagus 6.23 89 P Pn 08 39 37.7 -0.5
KSI Kapahiang 6.80 308 P Pn 08 39 46.6 +0.5
136nm,0.6s
SRBI Singaraja 7.20 92 P Pn 08 39 53.0 +1.5
MASI Maura Aman, Be 7.39 310 P Pn 08 39 55.7 +1.5
0.5nm115nm,0.8s
DSRI Dabo 8.11 335 P Pn 08 40 06.5 +2.6
48nm,0.9s
KRJI Kerinci 8.66 311 P Pn 08 40 13.3 +1.7
TWSI Taliwang, Sumb 8.88 96 P Pn 08 40 14.6 +0.1
1µm77nm,0.7s
PPSI Pulau Pagai 9.41 302 P Pn 08 40 20.3 -1.4
KSM Kuching 9.61 14 Pn Pn 08 40 24.3 -0.2
KSM Kuching 9.61 14 P Pn 08 40 28.1 +3.6
PLAI Plampang 9.77 96 P Pn 08 40 27.0 +0.4
PLAI Plampang 9.77 96 P Pn 08 40 26.6 0.0
714nm66nm,0.7s
MYKOM Kota Tinggi 10.46 337 Pn 08 40 35.1 -1.0
SISI Saibi 10.98 306 P Pn 08 40 43.3 +0.1
BKB Balikpapan 11.10 54 Pn Pn 08 40 45.2 +0.5
SBUM Sibu 11.14 23 Pn 08 40 46.2 +1.0
SBUM Sibu 11.14 23 P Pn 08 40 49.7 +4.4
WBSI Waikabubak, Su 11.44 99 P Pn 08 40 50.2 +0.7
45nm,0.7s
KAPI Kappang 12.08 77 LR LR 08 46 21.1
comp=Z,181nm,19.8s,baz=265,slow=41
BKSI Bulukumba 12.37 79 P Pn 08 41 03.2 +1.1
23nm,1.1s
PSI Prapat 13.94 319 LR LR 08 47 29.4
comp=Z,86nm,19.4s,baz=132,slow=40
BATI Baumata 15.69 100 P Pn 08 41 44.9 -0.9
26nm,0.3s,baz=101,slow=16,SNR=1.8
SOEI Soe 16.23 98 Pn Pn 08 41 51.3 -1.5
SOEI Soe 16.23 98 P P 08 41 55.6 +0.9
SOEI Soe 16.23 98 P Pn 08 41 52.9 +0.1
97nm,0.8s
SANI Sanana 18.89 73 P P 08 42 24.4 +0.6
44nm,0.8s
FITZ Fitzroy Crossi 19.98 122 P 08 42 34.6 -1.0
FITZ Fitzroy Crossi 19.98 122 P P 08 42 35.9 +0.3
15nm,0.9s,baz=271,slow=8.0,SNR=16
FITZ S S 08 46 05.0 -12
2.6nm,0.7s,baz=210,slow=22,SNR=1.9
FITZ LR LR 08 50 21.4
comp=Z,79nm,19.9s,baz=2.0,slow=37
FITZ Fitzroy Crossi 19.98 122 P Pn 08 42 37.3 -0.6
TNTI Ternate 21.20 67 P P 08 42 47.9 -0.9
DAV Davao City (W) 23.03 50 LR LR 08 52 13.3
comp=Z,51nm,21.2s,baz=236,slow=37
MTN Manton Dam 23.32 104 P P 08 43 09.6 -1.5
FAKI Fak Fak 24.69 80 P P 08 43 20.2 -3.3
FAKI Fak Fak 24.69 80 P P 08 43 23.8 +0.2
15nm,0.6s
TGY Tagaytay City 25.39 31 LR LR 08 54 55.4
comp=Z,109nm,18.2s,baz=170,slow=40
H01W3 Cape Leeuwin H 27.44 169 T T 09 13 43.5
baz=343,slow=78,SNR=4.7
H01W1 Cape Leeuwin H 27.46 169 T T 09 13 46.9
baz=343,slow=78,SNR=4.5
H01W2 Cape Leeuwin H 27.46 169 T T 09 13 44.4
baz=343,slow=78,SNR=4.9
CMAR Chiang Mai Arr 27.66 341 P P 08 43 48.0 -2.3
0.8nm,0.3s,baz=182,slow=9.5,SNR=4.9
CMAR PcP PcP 08 47 06.9 +0.7
0.9nm,0.3s,baz=156,slow=3.3,SNR=5.1
CMAR LR LR 08 56 30.9
comp=Z,61nm,19.1s,baz=170,slow=40
0.8nm,0.3s
WRA Warramunga Arr 28.22 118 P P 08 43 53.4 -1.9
WRA Warramunga Arr 28.22 118 P P 08 43 55.2 -0.1
2.0nm,0.9s,baz=288,slow=11,SNR=10
WRA PcP PcP 08 47 07.4 -0.2
0.3nm,0.5s,baz=300,slow=2.3,SNR=2.0
WRA LR LR 08 55 14.1
comp=Z,88nm,19.1s,baz=357,slow=36
2.0nm,0.9s
WR8 Warramunga Arr 28.37 118 P P 08 43 56.0 -0.7
ASAR Alice Springs 29.40 125 P P 08 44 05.7 -0.1
2.4nm,0.9s,baz=300,slow=8.5,SNR=14
ASAR PcP PcP 08 47 10.9 +0.4
1.2nm,0.8s,baz=344,slow=1.8,SNR=5.7
ASAR LR LR 08 57 22.8
comp=Z,44nm,18.1s,baz=290,slow=39
2.4nm,0.9s
BRDH Bariadhala 34.34 333 LR LR 08 59 33.4
comp=Z,68nm,18.3s,baz=146,slow=38
PZH PanZhiHua 34.73 350 P P 08 44 54.3 +1.8
COEN Coen 35.08 103 P P 08 44 54.6 -1.0
COEN IAmb IAmb 08 45 23.4
comp=Z,21nm,1.4s
H08S2 Diego Garcia H 35.12 268 T T 09 22 09.5
baz=93,slow=76,SNR=609
H08S3 Diego Garcia H 35.13 268 T T 09 22 08.2
baz=93,slow=76,SNR=73
H08S1 Diego Garcia H 35.14 268 T T 09 22 08.8
baz=93,slow=76,SNR=73
WHN Wuhan 38.72 9 P P 08 45 20.4 -5.8
STKA Stephens Creek 39.34 132 P 08 45 31.7 +0.3
STKA Stephens Creek 39.34 132 P P 08 45 31.7 +0.3
comp=Z,8.3nm,0.5s,baz=318,slow=7.4,SNR=31
STKA LR LR 09 04 38.6
comp=Z,32nm,18.2s,baz=313,slow=40
comp=Z,8.3nm,0.5s
JOW Kunigami 39.77 29 LR LR 09 01 08.5
comp=Z,55nm,21.8s,baz=138,slow=35
NJ2 Nanjing 41.08 14 eP P 08 45 46.0 +0.3
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
EVN Everest 41.09 331 P P 08 45 44.7 -2.0
JNU Nakatsue 46.27 27 LR LR 09 05 59.1
comp=Z,41nm,20.9s,baz=224,slow=36
JCJ Chichijima 48.08 42 LR LR 09 07 09.0
comp=Z,17nm,21.4s,baz=94,slow=36
BTO Baotou 48.31 2 eP P 08 46 45.3 +2.0
BTO pP pP 08 47 04.1 +3.0
BTO sP sP 08 47 12.8 +3.6
BTO pmax pmax
comp=Z,20nm,0.8s
BTO pmax pmax
comp=Z,140nm,4.1s
HHC Hu-ho-hao-te 48.63 4 eP P 08 46 48.4 +2.6
HHC pmax pmax
comp=Z,16nm,0.7s
HHC pmax pmax
comp=Z,95nm,4.6s
KSRS Korea Array 48.84 21 P P 08 46 44.5 -2.7
comp=Z,0.4nm,0.3s,baz=205,slow=5.4,SNR=1.7
comp=Z,0.4nm,0.3s

SONM Songino Array 55.52 359 P P 08 47 35.9 -0.9
comp=Z,2.1nm,0.6s,baz=179,slow=8.7,SNR=9.0
SONM PcP PcP 08 48 35.7 -0.3
comp=Z,3.6nm,0.6s,baz=172,slow=4.1,SNR=10
SONM LR LR 09 13 07.9
comp=Z,78nm,20.9s,baz=182,slow=38
comp=Z,2.1nm,0.6s
KBL Kabul 56.00 321 P P 08 47 41.0 +0.4
KBL IAmb IAmb 08 48 13.1
comp=Z,4.6nm,0.7s
KDJ Kajisay 57.19 333 P P 08 47 47.6 -1.3
KDJ IAmb IAmb 08 47 50.7
comp=Z,12nm,1.3s
BOOM Boomskoye usch 58.04 332 P P 08 47 52.9 -1.9
BOOM IAmb IAmb 08 48 04.9
comp=Z,11nm,1.2s
GAR Garm 58.29 326 P 08 47 54.5 -2.1
GAR IAmb IAmb 08 47 56.0
comp=Z,6.6nm,0.6s
CASY Casey 58.31 179 P P 08 47 56.1 -0.1
CHGR Chuyangaron 58.70 325 P 08 47 57.0 -2.4
SIMJ Simiganj 58.79 325 P P 08 47 57.2 -2.9
SIMJ IAmb IAmb 08 47 59.2
comp=Z,9.0nm,1.4s
AAK Ala-Archa 58.83 332 P P 08 47 58.0 -2.3
AAK IAmb IAmb 08 48 13.1
comp=Z,5.8nm,0.9s
AAK Ala-Archa 58.83 332 LR LR 09 17 13.0
comp=Z,32nm,18.4s,baz=122,slow=40
MKAR Makanchi Array 59.05 340 P P 08 48 00.5 -1.1
MKAR Makanchi Array 59.05 340 P P 08 47 59.8 -1.9
comp=Z,5.8nm,0.5s,baz=151,slow=7.9,SNR=15
MKAR PcP PcP 08 48 49.9 0.0
comp=Z,2.1nm,0.7s,baz=153,slow=8.2,SNR=3.7
MKAR LR LR 09 16 24.8
comp=Z,25nm,20.2s,baz=152,slow=39
comp=Z,5.8nm,0.5s
HRA Herat 60.31 317 P P 08 48 10.5 -0.2
HRA IAmb IAmb 08 48 57.2
comp=Z,3.3nm,0.5s
VOI Vohitsoka 60.36 249 P P 08 48 12.2 +1.0
KKAR Karatay Array 61.12 329 P P 08 48 14.0 -1.8
H04N2 CROZET ISLANDS 61.20 221 T T 09 55 06.3
baz=69,slow=75,SNR=171
H04N1 CROZET ISLANDS 61.21 221 T T 09 55 23.1
baz=69,slow=75,SNR=962
H04N3 CROZET ISLANDS 61.21 221 T T 09 55 21.8
baz=69,slow=75,SNR=345
H04S1 CROZET ISLANDS 61.36 220 T T 09 55 13.9
baz=69,slow=76,SNR=21
H04S3 CROZET ISLANDS 61.37 220 T T 09 55 19.9
baz=69,slow=76,SNR=13
H04S2 CROZET ISLANDS 61.38 220 T T 09 55 24.3
baz=69,slow=76,SNR=10
DRV Dumont d'Urvil 62.63 166 P P 08 48 25.5 -0.1
KURBB Kurchatov Arra 63.62 340 P P 08 48 30.9 -1.4
comp=Z,2.8nm,0.7s,baz=156,slow=5.7,SNR=11
KURBB PcP PcP 08 49 07.9 -0.2
comp=Z,1.3nm,0.5s,baz=148,slow=4.0,SNR=6.1
KURBB LR LR 09 19 23.6
comp=Z,40nm,20.2s,baz=174,slow=39
comp=Z,2.8nm,0.7s
KURK Kurchatov 63.67 340 P P 08 48 31.5 -1.2
ZALV Zalesovo Beam 64.64 345 P P 08 48 36.5 -2.5
comp=Z,1.4nm,0.5s,baz=108,slow=9.5,SNR=4.2
comp=Z,1.4nm,0.5s
MAW Mawson 66.78 197 P P 08 48 53.7 +1.2
comp=Z,4.1nm,0.7s,baz=26,slow=5.4,SNR=6.7
comp=Z,4.1nm,0.7s
CCD Concordia, Ant 67.72 176 P P 08 49 00.3 +1.4
BKZ Black Stump Fm 68.43 129 P P 08 49 02.4 -1.2
RAYN Ar Rayn 68.50 299 P P 08 49 02.4 -1.9
RAYN IAmb IAmb 08 49 05.0
comp=Z,10nm,1.3s
BVAR Borovoye Array 68.57 337 P P 08 49 03.3 -0.7
comp=Z,5.9nm,0.6s,baz=140,slow=7.8,SNR=19
BVAR LR LR 09 22 27.3
comp=Z,45nm,19.9s,baz=182,slow=39
comp=Z,5.9nm,0.6s
AB31 Akbulak array 70.67 329 P P 08 49 15.8 -1.2
AB31 IAmb IAmb 08 49 17.0
comp=Z,14nm,0.6s
ABKAR Akbulak array 70.67 329 P P 08 49 16.3 -0.7
YAK Yakutsk 71.74 11 LR LR 09 25 40.4
comp=Z,25nm,18.5s,baz=240,slow=40
AKTO Aktyubinsk 72.38 329 P P 08 49 25.8 -1.5
comp=Z,2.4nm,0.5s,baz=129,slow=5.1,SNR=5.2
comp=Z,2.4nm,0.5s
PETK Petropavlovsk- 73.93 29 P P 08 49 34.0 -2.4
comp=Z,7.3nm,1.1s,baz=239,slow=7.8,SNR=4.3
comp=Z,7.3nm,1.1s
VNDA Vanda 74.91 170 P P 08 49 41.9 +0.2
VNDA Vanda 74.91 170 P P 08 49 42.8 +1.1
comp=Z,2.2nm,0.8s,baz=282,slow=6.8,SNR=13
comp=Z,2.2nm,0.8s
VNDA Vanda 74.91 170 P P 08 49 42.8 +1.1
VNDA pP sP 08 50 06.2 -0.9
MA2 Magadan 75.40 21 LR LR 09 25 30.7
comp=Z,31nm,18.1s,baz=124,slow=38
ARTI Arti 75.89 334 P P 08 49 46.2 -1.4
ARTI Arti 75.89 334 P P 08 49 45.8 -1.9
comp=Z,6.3nm,0.5s,baz=90,slow=5.2,SNR=6.5
ARTI LR LR 09 26 15.2
comp=Z,34nm,19.0s,baz=166,slow=38
comp=Z,6.3nm,0.5s
ARTI Arti 75.89 334 P P 08 49 46.9 -0.7
ARTI sP sP 08 50 21.5 +7.3
SBA Scott Base 75.98 169 P P 08 49 48.5 +0.7
MBAR Mbarara 77.25 271 P P 08 49 58.6 +2.1
KBZ Khabaz 77.95 318 P P 08 49 58.9 -0.6
comp=Z,4.6nm,1.0s,baz=140,slow=6.1,SNR=4.8
comp=Z,4.6nm,1.0s
LSZ Lusaka 78.12 256 P P 08 50 00.3 -0.9
LSZ IAmb IAmb 08 50 03.4
comp=Z,7.5nm,0.7s
LPHEP Lephephe 79.67 248 P P 08 50 10.5 +0.9
LPHEP IAmb IAmb 08 50 11.9
comp=Z,14nm,0.8s
LBTB Lobatse 79.80 246 P P 08 50 10.3 +0.1
LBTB IAmb IAmb 08 52 10.6
comp=Z,42nm,2.0s
BOSA Boshof 79.87 242 P P 08 50 10.9 +0.4
BOSA IAmb IAmb 08 50 25.9
comp=Z,28nm,1.6s
BOSA Boshof 79.87 242 P P 08 50 11.7 +1.1
comp=Z,3.4nm,0.7s,baz=102,slow=4.0,SNR=12
BOSA LR LR 09 22 34.7
comp=Z,24nm,19.4s,baz=30,slow=33
comp=Z,3.4nm,0.7s
MMAI Mount Meron Ar 79.89 305 P P 08 50 11.1 +0.7
comp=Z,1.0nm,0.3s,baz=91,slow=5.0,SNR=5.3
comp=Z,1.0nm,0.3s
TIXI Tiksi 80.59 7 P P 08 50 10.8 -2.5
TIXI Tiksi 80.59 7 LR LR 09 27 55.8
comp=Z,26nm,19.5s,baz=199,slow=37
KIRV Kirov 81.11 333 LR LR 09 29 47.1
comp=Z,35nm,18.2s,baz=100,slow=38
QSPA South Pole Qui 82.09 180 P P 08 50 24.5 +3.0
comp=Z,4.3nm,1.0s,baz=283,slow=1.4,SNR=15
comp=Z,4.3nm,1.0s
QSPA South Pole Qui 82.09 180 P P 08 50 25.7 +4.1
BR131 Keskin Array S 83.13 312 P P 08 50 26.3 -1.2
BR131 IAmb IAmb 08 50 29.6
comp=Z,13nm,1.5s
BRTR Keskin Array B 83.13 312 P P 08 50 26.7 -0.8
BRTR Keskin Array B 83.13 312 P P 08 50 27.2 -0.3
comp=Z,2.6nm,0.7s,baz=134,slow=7.1,SNR=12
BRTR LR LR 09 31 60.0
comp=Z,11nm,18.2s,baz=31,slow=39
comp=Z,2.6nm,0.7s
SUR Sutherland 83.41 238 P P 08 50 30.7 +1.5
GRTLG Ghanzi 84.14 249 P P 08 50 34.2 +1.1
GRTLG IAmb IAmb 08 53 20.9
comp=Z,20nm,1.2s
IDI Anoyia 88.89 306 P P 08 50 55.4 -0.5
comp=Z,12nm,0.9s,baz=162,slow=21,SNR=3.7
comp=Z,12nm,0.9s
SNAA Sanae 88.94 197 ⇓P P 08 50 57.0 +1.6
comp=Z,88nm,0.8s
SNAA Sanae 88.94 197 P P 08 50 55.7 +0.2
SNAA IAmb IAmb 08 50 57.8
comp=Z,3.8nm,0.8s
SNAA Sanae 88.94 197 P P 08 50 55.5 +0.1
comp=Z,3.3nm,0.8s,baz=117,slow=6.0,SNR=18
comp=Z,3.3nm,0.8s
AKASG Malin Array Be 88.98 321 P P 08 50 54.4 -1.4
comp=Z,1.0nm,0.5s,baz=84,slow=4.4,SNR=5.4

AKASG LR LR 09 37 41.7
comp=Z,14nm,19.0s,baz=50,slow=40
comp=Z,1.0nm,0.5s
MLR Muntele Rosu 90.01 316 P P 08 51 00.8 -0.1
comp=Z,3.0nm,0.7s,baz=31,slow=22,SNR=3.2
comp=Z,3.0nm,0.7s
VNA2 Neumayer--Watz 90.59 197 ⇓P P 08 51 04.7 +1.7
comp=Z,4.4nm,0.7s,baz=101,slow=4.9
BURAR Bucovina Array 90.91 318 P P 08 51 05.2 +0.2
VNA1 Neumayer--Stat 90.97 197 ⇓P P 08 51 06.8 +2.0
comp=Z,4.6nm,0.9s
VNA3 Neumayer Olymp 91.10 197 ⇓P P 08 51 06.8 +1.4
comp=Z,2.7nm,0.8s
FINES FINESS Array B 93.01 332 P P 08 51 13.5 -0.8
comp=Z,2.9nm,0.8s,baz=104,slow=8.0,SNR=6.6
comp=Z,2.9nm,0.8s
ARCES ARCESS Array B 94.71 340 P P 08 51 20.5 -1.5
comp=Z,4.7nm,1.1s,baz=101,slow=6.4,SNR=3.6
ARCES LR LR 09 39 35.4
comp=Z,19nm,18.1s,baz=154,slow=39
comp=Z,4.7nm,1.1s
VRAC Vranov 96.81 319 LR LR 09 43 20.7
comp=Z,30nm,18.1s,baz=325,slow=40
SPITS Spitsbergen Ar 98.01 348 LR LR 09 43 29.6
comp=Z,32nm,18.4s,baz=100,slow=40
GERES GERESS Array B 98.69 318 P P 08 51 40.0 -0.6
comp=Z,0.1nm,0.3s,baz=126,slow=5.1,SNR=2.5
comp=Z,0.1nm,0.3s
HFS Hagfors 98.92 330 P P 08 51 39.9 -1.4
comp=Z,1.5nm,0.8s,baz=64,slow=3.4,SNR=2.1
comp=Z,1.5nm,0.8s
NVAR Mina Array Bea 128.51 46 PKP PKPdf 08 57 07.5 -0.9
comp=Z,0.5nm,0.7s,baz=337,slow=2.6,SNR=3.9
PLCA Paso Flores 131.58 182 PKP PKPdf 08 57 13.6 -0.5
comp=Z,1.8nm,0.9s,baz=181,slow=3.1,SNR=3.3
PDAR Pinedale Array 132.16 37 PKP PKPdf 08 57 13.4 -1.8
comp=Z,0.4nm,0.6s,baz=321,slow=0.9,SNR=5.0
CPUP Villa Florida 143.08 202 PKP PKPbc 08 57 33.6 +1.1
comp=Z,0.5nm,0.8s,baz=327,slow=6.8,SNR=3.4
TXAR Lajitas Array 143.44 50 PKP PKPbc 08 57 34.1 +0.5
comp=Z,1.1nm,0.7s,baz=275,slow=0.8,SNR=13
BDFB Brasilia 146.62 226 PKPbc PKPbc 08 57 43.9 +0.3
comp=Z,7.3nm,0.7s,baz=123,slow=2.5,SNR=12

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*ASRS **01** 08:57:20.0±1.7, 52.74N±90.09E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
*IDC **01** 08:57:38.4±3.4, 53.61N±90.92E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=28.8km s-min=23.1km az=46.0*
*NNC **01** 08:57:47.5±2.9, 53.41N±90.49E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=23.1km s-min=19.7km az=81.0, Suspected Mining explosion.*

ISC 01 08:57:48.0±4.0, 53.2N±0.1×90.5E±0.2, h0km, n9, σ2s60/11, 7C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.46**	**284**	⇑Pn		**Pn**	**Pn**	**08 58 43.1**	**0.0**
	1.9nm,0.7s								
ZAA0				⇑Lg		Lg	Lg	08 59 34.5	
	4.3nm,0.7s								
ZALV	**Zalesovo Beam**	**3.46**	**284**	Pg		**Pn**	**Pn**	**08 58 44.2**	**+1.2**
	1.7nm,0.3s,baz=95,slow=15,SNR=14								
ZALV				Lg		Lg	Lg	08 59 34.5	
	3.0nm,0.3s,baz=92,slow=25,SNR=10								
KURK	**Kurchatov**	**7.76**	**256**	⇓Pn		**Pn**	**Pn**	**08 59 41.0**	**-1.1**
	1.2nm,1.0s								
KURK				⇓Sn		**Sn**	**Sn**	**09 01 12.7**	**+2.1**
	2.7nm,0.7s								
KURK				⇑Lg		Lg	Lg	09 01 57.6	
	8.3nm,1.1s								
KURBB	**Kurchatov Arra**	**7.85**	**255**	Pn		Pn	Pn	08 59 38.4	-4.9
	0.1nm,0.3s,baz=66,slow=15,SNR=12								
KURBB				Sn		**Sn**	**Sn**	**09 01 09.0**	**-3.8**
	0.1nm,0.3s,baz=67,slow=27,SNR=10								
KURBB				Lg		Lg	Lg	09 02 00.2	
	baz=59,slow=32,SNR=1.8								
	1.5nm,0.5s								
KURBB	**Kurchatov Arra**	**7.85**	**255**	⇓Pn		**Pn**	**Pn**	**08 59 42.0**	**-1.3**
	3.4nm,0.6s								
KURBB				⇑Sn		**Sn**	**Sn**	**09 01 13.4**	**+0.6**
	28nm,0.8s								
KURBB				⇑Lg		Lg	Lg	09 02 02.6	
	25nm,0.9s								
MK31	**Makanchi Array**	**8.34**	**223**	⇑Pn		**Pn**	**Pn**	**08 59 50.8**	**+0.8**
	0.4nm,0.4s,baz=48,slow=14,SNR=4.7								
MK31				⇓Sn		**Sn**	**Sn**	**09 01 29.5**	**+4.7**
	0.9nm,0.6s,baz=24,slow=12,SNR=4.2								
MK31				⇑Lg		Lg	Lg	09 02 16.4	
	4.6nm,0.8s,baz=16,slow=40,SNR=6.3								
MKAR	**Makanchi Array**	**8.34**	**223**	Pn		**Pn**	**Pn**	**08 59 47.1**	**-3.0**
	0.2nm,0.3s,baz=36,slow=16,SNR=7.3								
MKAR				Sn		**Sn**	**Sn**	**09 01 24.9**	**0.0**
	0.1nm,0.3s,baz=33,slow=24,SNR=1.0								
MKAR				Lg		Lg	Lg	09 02 17.5	
	0.2nm,0.3s,baz=38,slow=32,SNR=8.2								
	0.4nm,0.5s								
SONM	**Songino Array**	**11.46**	**112**	Lg		Lg	Lg	09 03 37.5	
	0.4nm,0.3s,baz=300,slow=26,SNR=2.3								
I34MN	**SONGINO INFRAS**	**11.49**	**112**	I		I	I	10 03 40.0	
	baz=311,slow=327,SNR=1.7								

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*VKMS **01** 09:00:02.0, 52.32N×35.44E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
*IDC **01** 09:00:05.8±3.9, 52.40N±90.56E, h0km, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=43.3km s-min=16.0km az=115.0*

ISC 01 09:00:13.5±3.1, 52.8N±0.1×33.9E±0.3, h0km, n4, σ1s66/6, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.59**	**236**	Pn		**Pn**	**Pn**	**09 01 11.1**	**+0.7**
	0.7nm,0.3s,baz=53,slow=11,SNR=1.7								
AKASG				Pg		**Pg**	**Pg**	**09 01 23.3**	**+0.9**
	1.4nm,0.3s,baz=60,slow=15,SNR=4.4								
AKASG				Sn		**Sb**	**Sb**	**09 02 00.2**	**-1.8**
	1.9nm,0.3s,baz=62,slow=18,SNR=4.2								
AKASG				Lg		Lg	Lg	09 02 16.8	
	3.2nm,0.3s,baz=137,slow=30,SNR=5.8								
	0.4nm,0.3s								
I43RU	**DUBNA INFRASON**	**4.36**	**25**	I		I	I	09 28 50.0	
	0.1nm,0.7s,baz=185,slow=323,SNR=2.3								
FINES	**FINESS Array B**	**9.62**	**337**	Pn		**Pn**	**Pn**	**09 02 31.9**	**-1.2**
	0.2nm,0.3s,baz=150,slow=14,SNR=1.1								
FINES				Sn		**Sn**	**Sn**	**09 04 23.2**	**+1.4**
	0.1nm,0.3s,baz=156,slow=22,SNR=1.2								
	0.9nm,0.7s								
ARCES	**ARCESS Array B**	**17.22**	**350**	P		**P**	**P**	**09 04 16.5**	**-0.3**
	0.1nm,0.3s,baz=156,slow=12,SNR=8.0								
	2.2nm,0.9s								

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*ASRS **01** 09:05:01.0±2.0, 53.72N×91.11E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
*IDC **01** 09:05:05.1±4.0, 53.75N×91.05E, h0km, mbtmp3.0/3, ML2.7/3, Error ellipse: s-maj=36.8km s-min=26.6km az=73.0.*
*NNC **01** 09:05:12.3±2.6, 53.16N×90.42E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=23.6km s-min=16.4km az=137.0, Suspected Mining explosion.*

ISC 01 09:05:09.3±4.3, 53.8N±0.1×90.4E±0.2, h0km, n7, σ0s90/8, 3C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.31**	**275**	⇓Pn		**Pb**	**Pb**	**09 06 07.5**	**-1.2**
	1.0nm,0.8s,baz=99,slow=16								
ZAA0				⇑Lg		Lg	Lg	09 07 01.2	
	4.7nm,0.8s								
ZALV	**Zalesovo Beam**	**3.31**	**275**	Pn		**Pn**	**Pn**	**09 06 03.5**	**+1.3**
	1.0nm,0.3s,baz=94,slow=16,SNR=8.3								
ZALV				Lg		Lg	Lg	09 07 02.7	
	1.4nm,0.3s,baz=95,slow=25,SNR=11								
	0.6nm,0.3s								
KURK	**Kurchatov**	**7.85**	**252**	⇓Sn		**Sn**	**Sn**	**09 08 34.1**	**+0.1**
	1.7nm,0.6s								
KURK				⇓Lg		Lg	Lg	09 09 19.2	
	3.6nm,0.8s								
KURBB	**Kurchatov Arra**	**7.94**	**251**	Pn		**Pn**	**Pn**	**09 07 06.1**	**+0.3**

0.1nm,0.3s,baz=68,slow=15,SNR=6.9
1.4nm,0.6s
KURBB **Kurchatov Arra 7.94 251** ⇑Pn **Pn 09 07 05.9 0.0**
3.7nm,0.8s
KURBB ⇓Sn **Sn 09 08 36.8 +0.5**
13nm,0.7s
KURBB ⇑Lg Lg 09 09 20.0
13nm,0.9s
MKAR Makanchi Array 8.70 220 Pn **Pn 09 07 16.4 +0.1**
0.2nm,0.3s,baz=32,slow=14,SNR=5.4
MKAR Sn **Sn 09 08 55.6 +0.7**
0.1nm,0.3s,baz=34,slow=18,SNR=1.5
MKAR Lg Lg 09 09 49.0
0.1nm,0.3s,baz=39,slow=30,SNR=3.9
0.2nm,0.4s
I34MN SONGINO INFRAS 11.75 114 I I 10 10 40.0
baz=311,slow=328,SNR=1.3

*IDC **01** 09:16:04.5±1.4, 12°.66N×142°.94E, h102km±14km, mb3.8/18, mbtmp4.1/19, MS3.0/13, Error ellipse: s-maj=14.3km s-min=12.0km az=102.0*
*NEIC **01** 09:16:05.0±1.1, 12°.63N±0°.09×142°.93E±0°.06, h101km±7km, mb4.4/47, Error ellipse: s-maj=13.5km s-min=7.7km az=164.0*
ISC 01 09:16:04.1±0.4, 12°.62N±0°.07×142°.91E±0°.07, h100km, n94, σ0°75/80, mb4.3/41, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.14**	**63**	P	**Pn**	**09 16 39.1**	**+0.7**
	116nm,0.3s,baz=67,slow=1.0,SNR=26						
GUMO				LR	LR	09 16 54.9	
	comp=Z,49nm,20.0s,baz=256,slow=24						
GUMO				S	**Sn**	**09 17 05.0**	**+0.3**
	756nm,0.3s,baz=60,slow=22,SNR=19						
PATS	**Pohnpei**	**16.22**	**109**		**Pn**	**09 19 45.0**	**-1.3**
DAV	**Davao City (W)**	**17.94**	**254**	LR	LR	09 25 14.4	
	comp=Z,113nm,21.8s,baz=46,slow=31						
FAKI	**Fak Fak**	**18.72**	**215**	P	**P**	**09 20 14.3**	**-0.7**
FAKI				IAmb	IAmb	09 20 30.6	
	comp=Z,12nm,0.7s						
JOW	**Kunigami**	**19.72**	**318**	LR	LR	09 28 30.4	
	comp=Z,23nm,19.3s,baz=90,slow=38						
TGY	**Tagaytay City**	**21.43**	**276**	P	**P**	**09 20 44.6**	**+0.2**
	comp=Z,102nm,0.4s,baz=121,slow=12,SNR=6.0						
JMN	**Monobe**	**22.57**	**340**	P	**P**	**09 20 57.4**	**+1.2**
JMN				IAmb	IAmb	09 21 10.3	
	comp=Z,19nm,1.1s						
YULB	**Yu-li**	**23.15**	**301**	P	**P**	**09 21 02.0**	**+0.1**
JNU	**Nakatsue**	**23.19**	**334**	P	**P**	**09 21 03.5**	**+1.3**
JNU				IAmb	IAmb	09 21 27.5	
	comp=Z,11nm,1.0s						
SSLB	**Suanglung**	**23.60**	**301**	P	**P**	**09 21 06.5**	**+0.4**
H11S3	**WAKE ISLAND Hy**	**23.62**	**73**	T	T	09 45 48.0	
	baz=253						
H11S1	**WAKE ISLAND Hy**	**23.64**	**73**	T	T	09 45 45.5	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**23.64**	**73**	T	T	09 45 41.7	
	baz=253						
H11N1	**WAKE ISLAND Hy**	**24.07**	**70**	T	T	09 46 05.4	
	baz=255,slow=75,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**24.08**	**70**	T	T	09 45 39.1	
	baz=255,slow=75,SNR=2.8						
H11N3	**WAKE ISLAND Hy**	**24.09**	**70**	T	T	09 45 38.0	
	baz=255,slow=75,SNR=3.7						
LUWI	**Luwuk**	**24.16**	**237**	P	**P**	**09 21 09.9**	**-1.3**
MJAR	**Matsushiro Arr**	**24.20**	**351**	P	**P**	**09 21 09.3**	**-2.0**
	comp=Z,0.6nm,0.4s,baz=165,slow=11,SNR=4.8						
MJAR				LR	LR	09 28 37.7	
	comp=Z,27nm,19.0s,baz=142,slow=31						
	comp=Z,0.6nm,0.4s						
TOLI2	**Tolitoli**	**24.73**	**244**	P	**P**	**09 21 15.9**	**-0.5**
TOLI2				IAmb	IAmb	09 21 31.8	
	comp=Z,8.4nm,0.8s						
COEN	**Coen**	**26.40**	**179**	P	**P**	**09 21 31.9**	**+0.4**
COEN				IAmb	IAmb	09 21 41.3	
	comp=Z,8.4nm,1.1s						
HNR	**Honiara**	**27.68**	**142**	LR	LR	09 31 27.5	
	comp=Z,33nm,19.7s,baz=358,slow=33						
MTN	**Manton Dam**	**27.86**	**205**	P	**P**	**09 21 43.9**	**-0.6**
MTN				IAmb	IAmb	09 22 07.4	
	comp=Z,16nm,1.1s						
KSRS	**Korea Array**	**28.14**	**334**	P	**P**	**09 21 46.4**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=146,slow=4.1,SNR=1.6						
	comp=Z,0.4nm,0.4s						
KAPI	**Kappang**	**28.93**	**234**	P	**P**	**09 21 53.6**	**-0.5**
KNRA	**Kununurra**	**31.41**	**207**	P	**P**	**09 22 16.4**	**+0.6**
KNRA				IAmb	IAmb	09 22 45.4	
	comp=Z,10.0nm,1.1s						
WB0	**Warramunga Arr**	**33.26**	**195**	P	**P**	**09 22 32.1**	**+0.1**
WR8	**Warramunga Arr**	**33.41**	**194**	P	**P**	**09 22 33.2**	**-0.2**
WR8				IAmb	IAmb	09 22 40.6	
	comp=Z,6.1nm,1.1s						
WRAB	**Tennant Creek**	**33.42**	**195**	P	**P**	**09 22 33.4**	**-0.1**
WRAB				IAmb	IAmb	09 22 44.1	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**33.44**	**195**	P	**P**	**09 22 32.5**	**-1.1**
WRA	**Warramunga Arr**	**33.44**	**195**	P	**P**	**09 22 33.4**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=15,slow=9.8,SNR=18						
	comp=Z,2.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**34.96**	**210**	P	**P**	**09 22 45.8**	**-0.9**
AS31	**Alice Springs**	**37.12**	**194**	P	**P**	**09 23 05.4**	**+0.2**
ASAR	**Alice Springs**	**37.12**	**194**	P	**P**	**09 23 05.5**	**+0.3**
ASAR	**Alice Springs**	**37.12**	**194**	P	**P**	**09 23 05.3**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=22,slow=12,SNR=34						
	comp=Z,1.1nm,0.7s						
EIDS	**Eidsvold**	**38.59**	**168**	P	**P**	**09 23 17.5**	**+0.1**
EIDS				IAmb	IAmb	09 23 29.7	
	comp=Z,4.0nm,0.9s						
MBWA	**Marble Bar**	**40.56**	**214**	P	**P**	**09 23 34.0**	**+0.1**
PETK	**Petropavlovsk-**	**42.08**	**13**	P	**P**	**09 23 45.8**	**-0.2**
PETK	**Petropavlovsk-**	**42.08**	**13**	P	**P**	**09 23 45.3**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=165,slow=3.3,SNR=7.9						
	comp=Z,2.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.68**	**284**	P	**P**	**09 23 51.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**42.68**	**284**	P	**P**	**09 23 52.0**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=86,slow=6.3,SNR=20						
	comp=Z,4.6nm,0.8s						
STKA	**Stephens Creek**	**44.26**	**182**	P	**P**	**09 24 03.2**	**-0.5**
STKA				IAmb	IAmb	09 24 09.2	
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**44.26**	**182**	P	**P**	**09 24 03.4**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=6.3,slow=8.5,SNR=6.5						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**46.45**	**326**	P	**P**	**09 24 21.1**	**+0.1**
SONM	**Songino Array**	**46.45**	**326**	P	**P**	**09 24 21.7**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=140,slow=5.7,SNR=5.1						
SONM				LR	LR	09 43 22.7	
	comp=Z,32nm,20.4s,baz=104,slow=35						
	comp=Z,1.0nm,0.5s						
SHEM	**Shemya Is, Ala**	**47.15**	**25**	LR	LR	09 43 17.9	
	comp=Z,17nm,19.6s,baz=307,slow=35						
SHL	**Shillong**	**49.64**	**293**	P	**P**	**09 24 45.1**	**-0.9**
TOO	**Toolangi**	**49.98**	**177**	P	**P**	**09 24 48.8**	**+0.7**
TOO				IAmb	IAmb	09 24 51.0	
	comp=Z,3.0nm,0.8s						
EVN	**Everest**	**54.35**	**295**	P	**P**	**09 25 21.5**	**0.0**
EVN				IAmb	IAmb	09 25 23.5	
	comp=Z,2.7nm,0.5s						
MKAR	**Makanchi Array**	**60.88**	**317**	P	**P**	**09 26 06.4**	**+0.1**
MKAR	**Makanchi Array**	**60.88**	**317**	P	**P**	**09 26 06.7**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=96,slow=8.3,SNR=8.1						
	comp=Z,0.7nm,0.5s						
MAKZ	**Makanchi**	**61.09**	**317**	P	**P**	**09 26 06.7**	**-1.0**
MAKZ				IAmb	IAmb	09 26 09.6	
	comp=Z,3.3nm,1.0s						
ZALV	**Zalesovo Beam**	**61.31**	**325**	P	**P**	**09 26 09.3**	**+0.3**
ZALV	**Zalesovo Beam**	**61.31**	**325**	P	**P**	**09 26 09.4**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=103,slow=7.9,SNR=3.8						
	comp=Z,1.4nm,0.4s						
PALK	**Pallekele**	**61.40**	**271**	LR	LR	09 53 45.6	
	comp=Z,8.2nm,19.2s,baz=89,slow=37						
N15K	**Kwethluk River**	**63.01**	**28**	P	**P**	**09 26 20.7**	**+0.4**
N15K				IAmb	IAmb	09 26 25.0	
	comp=Z,5.5nm,0.9s						
KDJ	**Kajisay**	**63.67**	**311**	P	**P**	**09 26 23.9**	**-1.3**
KDJ				IAmb	IAmb	09 26 27.0	
	comp=Z,2.8nm,0.8s						
L16K	**Owhat River**	**63.90**	**27**	P	**P**	**09 26 24.7**	**-1.4**
KURK	**Kurchatov**	**64.11**	**320**	P	**P**	**09 26 28.2**	**+0.6**
KURBB	**Kurchatov Arra**	**64.14**	**320**	P	**P**	**09 26 28.4**	**+0.6**
	comp=Z,3.7nm,0.4s,baz=106,slow=6.5,SNR=12						
	comp=Z,3.7nm,0.4s						
N17K	**Nushagak Hills**	**64.49**	**28**	P	**P**	**09 26 30.4**	**+0.5**
N17K				IAmb	IAmb	09 26 48.7	
	comp=Z,5.2nm,1.1s						
BOOM	**Boomskoye usch**	**64.63**	**311**	P	**P**	**09 26 32.6**	**+1.2**
M17K	**Holitna River**	**64.69**	**27**	P	**P**	**09 26 30.2**	**-1.0**
F17K	**Baldwin Pennin**	**65.22**	**21**	P	**P**	**09 26 35.5**	**+0.9**
F17K				IAmb	IAmb	09 26 56.7	
	comp=Z,3.5nm,1.0s						
AAK	**Ala-Archa**	**65.71**	**311**	LR	LR	09 56 53.1	
	comp=Z,12nm,18.9s,baz=83,slow=37						
N19K	**Bonanza Creek**	**65.84**	**28**	P	**P**	**09 26 39.5**	**+0.7**
N19K				IAmb	IAmb	09 26 59.5	
	comp=Z,7.9nm,1.1s						
KDAK	**Kodiak Island**	**65.90**	**32**	P	**P**	**09 26 39.5**	**+0.4**
KDAK				IAmb	IAmb	09 27 08.3	
	comp=Z,6.7nm,1.0s						
KDAK	**Kodiak Island**	**65.90**	**32**	LR	LR	09 58 00.6	
	comp=Z,12nm,18.1s,baz=201,slow=38						
G18K	**Tagagawik**	**65.94**	**23**	P	**P**	**09 26 39.5**	**+0.3**
G18K				IAmb	IAmb	09 26 49.1	
	comp=Z,4.7nm,1.1s						
CNPM	**China Poot**	**67.03**	**30**	P	**P**	**09 26 46.1**	**-0.1**
D20K	**Etivluk River**	**67.81**	**20**	P	**P**	**09 26 51.9**	**+0.9**
D20K				IAmb	IAmb	09 26 53.2	
	comp=Z,3.2nm,0.9s						
MLY	**Manley**	**68.73**	**25**	P	**P**	**09 26 57.5**	**+0.6**
BVAR	**Borovoye Array**	**69.51**	**322**	P	**P**	**09 27 02.5**	**+0.6**
	comp=Z,3.9nm,0.3s,baz=104,slow=8.1,SNR=14						
	comp=Z,3.9nm,0.3s						
ILAR	**Eielson Array**	**70.26**	**25**	P	**P**	**09 27 05.6**	**-0.7**
ILAR	**Eielson Array**	**70.26**	**25**	P	**P**	**09 27 05.0**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=250,slow=6.2,SNR=20						
	comp=Z,1.1nm,0.6s						
J26L	**Joseph Creek**	**71.61**	**26**	P	**P**	**09 27 14.9**	**+0.4**
BMAR	**Burnt Mountain**	**71.73**	**23**	P	**P**	**09 27 16.4**	**+1.2**
DAWY	**Dawson**	**73.36**	**27**	P	**P**	**09 27 26.0**	**+1.1**
F30M	**Barrier River**	**75.11**	**23**	P	**P**	**09 27 36.0**	**+1.1**
G31M	**Satah River**	**75.67**	**24**	P	**P**	**09 27 38.4**	**+0.4**
G31M				IAmb	IAmb	09 27 39.1	
	comp=Z,4.6nm,0.8s						
AB31	**Akbulak array**	**75.98**	**318**	P	**P**	**09 27 40.5**	**+0.3**
ABKAR	**Akbulak array**	**75.98**	**318**	P	**P**	**09 27 40.5**	**+0.3**
BBB	**Bella Bella**	**79.53**	**39**	LR	LR	10 01 30.1	
	comp=Z,21nm,19.5s,baz=216,slow=34						
YKA	**Yellowknife Ar**	**84.59**	**27**	P	**P**	**09 28 24.3**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=333,slow=7.1,SNR=2.4						
	comp=Z,1.0nm,0.6s						
RES	**Resolute Bay**	**85.93**	**13**	P	**P**	**09 28 33.1**	**+0.5**
RES				IAmb	IAmb	09 28 34.2	
	comp=Z,3.4nm,0.7s						
ARCES	**ARCESS Array B**	**87.41**	**342**	P	**P**	**09 28 39.4**	**-0.6**
	comp=Z,3.0nm,1.0s,baz=80,slow=5.6,SNR=6.2						
	comp=Z,3.0nm,1.0s						
NVAR	**Mina Array Bea**	**89.01**	**51**	P	**P**	**09 28 48.6**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=265,slow=5.4,SNR=11						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**91.23**	**335**	P	**P**	**09 28 57.3**	**-0.6**
FINES	**FINESS Array B**	**91.23**	**335**	P	**P**	**09 28 57.4**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=67,slow=6.4,SNR=5.4						
FINES				LR	LR	10 12 40.7	
	comp=Z,27nm,18.1s,baz=162,slow=37						
	comp=Z,0.9nm,0.5s						
PDAR	**Pinedale Array**	**94.00**	**45**	P	**P**	**09 29 10.6**	**-0.8**
PDAR	**Pinedale Array**	**94.00**	**45**	P	**P**	**09 29 11.3**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=276,slow=7.8,SNR=2.2						
	comp=Z,0.2nm,0.6s						
NOA	**NORSAR Array B**	**97.27**	**339**	LR	LR	10 17 33.0	
	comp=Z,9.0nm,18.1s,baz=240,slow=38						
PLCA	**Paso Flores**	**139.46**	**140**	PKP	**PKPdf**	**09 35 20.8**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=216,slow=3.3,SNR=2.8						
LPAZ	**La Paz**	**149.73**	**101**	PKPbc	**PKiKP**	**09 35 45.9**	**+0.9**
	comp=Z,8.7nm,0.7s,baz=267,slow=2.1,SNR=22						
CPUP	**Villa Florida**	**156.59**	**129**	PKPab	**PKPab**	**09 36 18.2**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=120,slow=3.2,SNR=5.5						

TAP 01 09:20:54.4, 24°.54N×121°.61E, h6km, ML1.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LATG	**Datong**	**0.08**	**267**	*i* P	Pg	09 20 57.1	+0.7
LATG				*i* S	Sg	09 20 58.5	+0.7
ENTT	**Nioudou**	**0.11**	**337**	*i* P	Pg	09 20 57.3	+0.6
ENTT				*i* S	Sg	09 20 59.3	+0.9
NDS	**Dongshan**	**0.13**	**45**	P	Pg	09 20 57.8	+0.6
EWUT	**Wuta**	**0.18**	**122**	P	Pg	09 20 58.6	+0.6
EWUT				S	Sg	09 21 00.9	+0.6
FUSB	**Fushanzhiwuyua**	**0.22**	**354**	P	Pg	09 20 56.9	-1.9
TWC	**Suao**	**0.23**	**72**	*i* P	Pg	09 20 59.5	+0.7
TWC				S	Sg	09 21 02.6	+0.7
NNSB	**Datong**	**0.24**	**242**	P	Pg	09 20 59.6	+0.5
NNS	**Nan Shan**	**0.24**	**246**	*e*P	Pg	09 20 59.6	+0.5
NNS				*e*S	Sg	09 21 03.5	+1.1
YHNB	**Yeheng**	**0.25**	**301**	*i* P	Pg	09 21 00.2	+0.9
YHNB				*i* S	Sg	09 21 03.5	+0.7
NWLT	**Wulai**	**0.26**	**337**	P	Pg	09 21 00.3	+0.8
NWLT				S	Sg	09 21 03.6	+0.7
NSK	**Sanguang**	**0.27**	**300**	P	Pg	09 21 00.4	+0.8
NSK				S	Sg	09 21 03.5	+0.2
ETLH	**Xiulin Townshi**	**0.35**	**200**	*e*P	Pg	09 21 02.1	+0.9
ETLH				S	Sg	09 21 06.3	+0.4
NACB	**Ninganchiao**	**0.36**	**183**	*e*P	Pb	09 21 02.9	-0.3
NACB				*e*S	Sg	09 21 07.3	+1.1
NACB	**Ninganchiao**	**0.36**	**183**	P	Pb	09 21 02.8	-0.5
TIPB	**Shuangxi**	**0.47**	**24**	*e*P	Pb	09 21 04.4	-0.7
TIPB				S	Sg	09 21 10.2	+0.5

ASRS 01 09:23:16.0±0.6, 54°.41N×86°.84E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 01 09:23:31.0±0.9, 53°.66N×87°.94E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

*NEIC **01** 09:33:17.2±2.3, 36°.57N±0°.01×117°.98W±0°.01, h10km±2km, Error ellipse: s-maj=3.0km s-min=2.1km az=120.0*
PAS 01 09:33:17.7±2.1, 36°.57N±0°.01×117°.98W±0°.01, h11km±7km, Mwr3.6/4, ML3.4/112(NEIC), Error ellipse: s-maj=1.7km s-min=1.7km az=128.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGO	**Cerro Gordo**	**0.14**	**97**		Pb	09 33 24.2	+1.6
CWC	**Cottonwood Cre**	**0.15**	**213**		Pg	09 33 21.2	-0.1
CWC				IAML		09 33 24.2	
	comp=E,18μm,0.2s						
MFS	**McCloud Flat S**	**0.46**	**168**		Pg	09 33 26.2	-0.6
MFS					Sg	09 33 33.0	+0.1
TIN	**Tinemaha, Big**	**0.53**	**337**		Pg	09 33 27.6	-0.4
TIN					Sg	09 33 35.3	+0.3
WRVM	**Rose V. Centra**	**0.56**	**173**		Pg	09 33 28.1	-0.6
WRVM					Sg	09 33 36.0	-0.2
WCSM	**Coso Springs S**	**0.57**	**163**		Pg	09 33 28.2	-0.5
WCSM					Sg	09 33 36.2	-0.1
WVPM	**Volcano Peak E**	**0.63**	**168**		Pg	09 33 29.3	-0.7
WVPM					Sg	09 33 38.1	-0.2
GRAC	**Grapevine Rang**	**0.65**	**49**		Pg	09 33 30.1	-0.2
GRAC	**Grapevine Rang**	**0.65**	**49**		Sg	09 33 39.1	+0.3
LCH	**Last Change Ra**	**0.71**	**22**		Pg	09 33 30.7	-0.9
LCH					Sg	09 33 40.6	-0.4
WNMM	**Nine Mile Cany**	**0.73**	**175**		Pg	09 33 31.1	-0.7
WNMM					Sg	09 33 40.7	-0.6
SPG2	**Springville 2**	**0.74**	**240**		Pg	09 33 31.2	-0.8
SPG2					Sg	09 33 40.8	-0.8
TOW	**Tower One**	**0.78**	**167**		Pg	09 33 32.4	-0.3
TOW					Sb	09 33 44.0	+0.1
DSP	**Deep Springs**	**0.80**	**0**		Pg	09 33 32.2	-0.9
DSP	**Deep Springs**	**0.80**	**0**		Sg	09 33 43.1	-0.5
CLC	**China Lake**	**0.81**	**158**		Pg	09 33 32.5	-0.9
CLC					Sg	09 33 43.5	-0.5
CLC				IAML		09 33 47.2	
	comp=N,995nm,0.9s						
SGV	**South Grapevin**	**0.86**	**61**		Pg	09 33 33.7	-0.7
SGV					Sg	09 33 45.4	-0.3
SRTC	**Snort**	**0.89**	**168**		Pg	09 33 34.6	-0.3
SRTC					Sb	09 33 47.6	+0.4
WORM	**Onyx Ranch**	**0.90**	**194**		Pg	09 33 34.0	-1.0
WORM					Sg	09 33 45.8	-0.9
FURC	**Furnace Creek,**	**0.90**	**96**		Pg	09 33 34.2	-0.9
FURC					Sg	09 33 46.6	-0.3
FURC				IAML		09 33 52.7	
	comp=N,2μm,0.7s						
MTUM	**Tungsten Hills**	**0.91**	**329**		Pg	09 33 34.3	-1.0
WHFM	**Hanning Flat**	**0.92**	**199**		Pg	09 33 34.5	-0.9
WHFM					Sg	09 33 46.8	-0.7
GMN	**Gold Mountain**	**0.93**	**38**		Pg	09 33 34.9	-0.8
GMN				IAML		09 33 49.3	
	comp=E,886nm,0.4s						
GMN	**Gold Mountain**	**0.93**	**38**		Sg	09 33 47.2	-0.6
GPO	**China Lake**	**0.95**	**164**		Pg	09 33 35.4	-0.7
GPO					Sb	09 33 49.0	0.0
WASM	**Alta Sierra Ca**	**0.95**	**210**		Pg	09 33 35.3	-0.8
WASM					Sg	09 33 48.0	-0.6
ISA	**Isabella, Lake**	**0.99**	**204**		Pg	09 33 35.8	-1.0
ISA				IAML		09 33 49.9	
	comp=E,960nm,0.2s						
ISA				IAML		09 33 50.2	
	comp=N,676nm,0.2s						
ISA	**Isabella, Lake**	**0.99**	**204**		Sg	09 33 48.4	-1.3
WBSM	**Bird Springs**	**1.04**	**187**		Pg	09 33 36.7	-1.0
WBSM					Sg	09 33 50.5	-0.7
WSHM	**Spangler Hills**	**1.04**	**158**		Pg	09 33 36.7	-1.1
WSHM				IAML		09 33 51.3	
	comp=N,1μm,0.3s						
WSHM				IAML		09 33 51.5	
	comp=N,2μm,0.2s						
WSHM	**Spangler Hills**	**1.04**	**158**		Sg	09 33 50.8	-0.6
QSM	**Queen of Sheba**	**1.08**	**124**		Pb	09 33 37.3	-1.1
QSM				IAML		09 33 53.6	
	comp=E,1μm,0.4s						
QSM				IAML		09 33 55.8	
	comp=N,999nm,0.6s						
WCT	**Wildcat Mounta**	**1.11**	**78**		Pb	09 33 38.0	-1.0
WCT				IAML		09 33 53.8	
	comp=N,1μm,0.4s						
WCT				IAML		09 33 54.4	
	comp=E,1μm,0.2s						
WCT	**Wildcat Mounta**	**1.11**	**78**		Sb	09 33 52.7	-0.8
LRMC	**Laurel Mtn Rad**	**1.11**	**168**		Pb	09 33 37.8	-1.3
LRMC					Sg	09 33 53.3	-0.3
LRMC				IAML		09 33 55.1	
	comp=N,950nm,0.2s						
LRMC				IAML		09 33 55.6	
	comp=E,1μm,0.7s						
GWY	**Greenwater Val**	**1.12**	**110**		Pb	09 33 38.0	-1.3
GWY					Sg	09 33 53.5	-0.4
GWY				IAML		09 33 55.0	
	comp=E,791nm,0.5s						
GWY				IAML		09 33 55.1	
	comp=N,663nm,0.5s						
CCCA	**Chr Cany lake**	**1.15**	**154**		Pb	09 33 38.5	-1.2
CCCA					Sg	09 33 55.2	+0.3
CCCA				IAML		09 33 57.5	
	comp=E,1μm,0.7s						
VES	**Vestal, Richgr**	**1.15**	**231**		Pb	09 33 38.9	-0.8
VES				IAML		09 33 57.2	
	comp=E,914nm,0.7s						
VES	**Vestal, Richgr**	**1.15**	**231**		Sb	09 33 54.4	-0.3
VOG	**Valley Oaks Go**	**1.16**	**258**		Pb	09 33 39.0	-0.8
VOG					Sb	09 33 54.8	-0.1
MLAC	**Mammoth, Mammo**	**1.26**	**327**		Pn	09 33 40.7	-0.9
MLAC					Sb	09 33 58.0	-0.1
DTP	**Desert Tortois**	**1.30**	**175**		Pn	09 33 40.5	-1.5
DTP					Sb	09 33 58.6	-0.4
KCC	**Kaiser Creek**	**1.31**	**305**		Pn	09 33 41.2	-0.9
KCC					Sb	09 33 58.0	-1.4
MCSM	**Casa Diablo Ho**	**1.31**	**326**		Pn	09 33 41.7	-0.6
AMDNV	**Amargosa**	**1.37**	**94**		Pn	09 33 41.5	-1.3
AMDNV					Sb	09 34 00.9	0.0
MDPB	**Devils Postpil**	**1.38**	**321**		Pn	09 33 42.6	-0.6
MDPB					Sb	09 34 00.9	-0.6
CCAC	**Calif City Air**	**1.41**	**181**		Pn	09 33 42.4	-1.0
CCAC					Sn	09 34 02.1	0.0
FRI	**Friant**	**1.45**	**287**		Pn	09 33 43.4	-0.5
FRI					Sn	09 34 02.6	-0.4
TEJ	**El Tejon**	**1.46**	**204**		Pn	09 33 43.6	-0.4
BAKC	**Calstate**	**1.53**	**217**		Pb	09 33 45.9	-0.2
ARVC	**Arvin**	**1.60**	**206**		Pn	09 33 46.0	+0.1
EDW2	**Edwards Air Fo**	**1.68**	**180**		Pn	09 33 46.1	-1.1
TPO	**Tropico Hills**	**1.70**	**187**	Pn	Pn	09 33 46.5	-0.9
TPO				IAML		09 34 13.8	
	comp=E,676nm,0.6s						
TPO				IAML		09 34 20.6	
	comp=N,509nm,0.8s						
LHV	**Little Huntoon**	**1.73**	**346**		Pn	09 33 47.6	-0.1
LHV				IAML		09 34 16.7	
	comp=E,634nm,0.6s						
LHV				IAML		09 34 19.1	
	comp=N,581nm,0.6s						
HYS	**Haystack Butte**	**1.73**	**169**		Pn	09 33 46.7	-1.1
NV11	**Mina Array Sit**	**1.86**	**356**		Pn	09 33 49.5	-0.3
RRX	**Edison Barstow**	**1.87**	**154**		Pb	09 33 52.5	+0.6
SBB	**Saddle Back Bu**	**1.88**	**176**		Pb	09 33 52.3	+0.2
CRGC	**Crocker Grade**	**1.94**	**228**		Pb	09 33 52.6	-0.6
CARC	**Carrizo Plain**	**1.97**	**231**		Pn	09 33 50.6	-0.6
BCW	**Bitter Crk WRg**	**2.00**	**216**		Pn	09 33 50.9	-0.7
TUQ	**Turquoise Moun**	**2.01**	**124**		Pn	09 33 50.3	-1.4
LRRC	**Littlerock Res**	**2.04**	**181**		Pn	09 33 51.2	-0.8
SMMC	**Simmler**	**2.06**	**233**		Pn	09 33 51.6	-0.8
HOLC	**

BLYC				IAML		09 35 27.6	
	comp=N,34nm,0.7s						
BLYC				IAML		09 35 33.3	
	comp=E,37nm,1.1s						
BAR	**Barrett**	**4.03 164**			Pn	09 34 18.9	-0.5
BAR				IAML		09 35 23.9	
	comp=N,35nm,0.6s						
BAR				IAML		09 35 30.5	
	comp=E,34nm,0.8s						
MCCM	**Marconi Confer**	**4.21 293**	Pn	Pn		09 34 22.7	+0.8
MCCM				IAML		09 35 24.4	
	comp=E,68nm,1.7s						
MCCM				IAML		09 35 38.7	
	comp=N,43nm,1.3s						
YUH	**Yuha Desert**	**4.26 156**	Pn	Pn		09 34 21.5	-1.1
GLA	**Glamis**	**4.36 143**	Pn	Pn		09 34 22.4	-1.6
GLA				IAML		09 35 44.4	
	comp=N,40nm,0.8s						
GLA				IAML		09 35 46.4	
	comp=E,66nm,0.9s						
CBX	**Cerro Bola**	**4.38 165**			Pn	09 34 24.5	+0.1
Y14A	**Wickenburg**	**4.84 121**	Pn	Pn		09 34 29.2	-1.4
Y14A				IAML		09 35 57.3	
	comp=E,19nm,0.7s						
Y14A				IAML		09 36 02.4	
	comp=N,23nm,0.9s						
ESJX	**Sierra Juarez**	**4.85 159**			Pn	09 34 30.7	-0.2
M02C	**Callahan**	**6.13 323**	Pn	Pn		09 34 46.9	-1.4

GUC 01 09:41:52.3±0.8, 30°.08S×71°.50W, h27km±3km, ML3.6, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.60**	**191**	⇑*eP*		Pn		09 42 05.1	-0.1
CO06				*eS*		Sn		09 42 13.6	-0.5
CO06				IAML				09 42 14.1	
	comp=E,9µm,0.1s								
GO04	**Tololo Observa**	**0.61**	**99**	⇓*eP*		Pn		09 42 06.7	+1.2
GO04				*eS*		Sn		09 42 15.3	+0.7
GO04				IAML				09 42 19.1	
	comp=E,6µm,0.5s								
CO03	**El Pedregal**	**1.03**	**137**	*eP*		Pb		09 42 12.5	+0.9
CO03				*eS*		Sb		09 42 26.9	+2.0
CO03				IAML				09 42 30.2	
	comp=E,3µm,0.3s								
CO02	**Combarbal**	**1.20**	**159**	*eP*		Pb		09 42 15.0	+0.5
CO02				*eS*		Sb		09 42 31.7	+2.0
CO02				IAML				09 42 33.9	
	comp=E,3µm,0.2s								
CO01	**Juntas del Tor**	**1.22**	**86**⇑	*eP*		Pb		09 42 16.0	+1.1
LCO	**Las Campanas**	**1.27**	**33**	*eP*		Pb		09 42 15.6	-0.2
AC04	**Llanos de Chal**	**1.90**	**11**⇑	*eP*		Pb		09 42 25.3	-1.1
AC04				*eS*		Sb		09 42 50.7	+1.0
AC04				IAML				09 42 55.8	
	comp=E,485nm,0.2s								
CO04	**Los Peladeros**	**2.01**	**167**⇑	*eP*		Pb		09 42 27.6	-0.7
CO04				*eS*		Sb		09 42 54.8	+1.7
CO04				IAML				09 42 58.5	
	comp=E,447nm,0.3s								
VA06	**Catapilco**	**2.48**	**176**	*eP*		Pn		09 42 32.4	+1.4
VA06				IAML				09 43 13.0	
	comp=E,305nm,0.5s								
GO03	**Copiapo**	**2.71**	**24**	*eP*		Pn		09 42 37.1	+2.9
GO03				*eS*		Sb		09 43 11.9	-1.1
GO03				IAML				09 43 24.4	
	comp=N,191nm,0.4s								
VA03	**San Esteban**	**2.80**	**163**	*eP*		Pb		09 42 38.5	-3.1
VA03				IAML				09 43 26.1	
	comp=E,276nm,0.3s								
AC06	**Mina Casimiro**	**2.89**	**21**	*eP*		Pn		09 42 39.5	+2.9
AC06				*eS*		Sb		09 43 15.5	-2.6
AC06				IAML				09 43 26.3	
	comp=E,170nm,0.4s								
ROCH	**El Roble**	**2.92**	**172**	*eP*		Pb		09 42 43.2	-0.6
ROCH				IAML				09 43 29.8	
	comp=N,255nm,0.3s								
PEL	**Peldehue**	**3.13**	**167**	*eP*		Pn		09 42 42.6	+2.6
PEL				IAML				09 43 34.2	
	comp=E,102nm,0.7s								
MT02	**Curacav**	**3.19**	**175**	*eP*		Pn		09 42 42.3	+1.6
MT02				IAML				09 43 34.0	
	comp=E,56nm,0.4s								
MT10	**Hacienda Santa**	**3.29**	**166**	*eP*		Pn		09 42 45.5	+3.2
MT10				IAML				09 43 44.3	
	comp=E,308nm,0.8s								
MT05	**Renca**	**3.37**	**169**	*eP*		Pn		09 42 44.0	+0.8
MT05				IAML				09 43 41.2	
	comp=E,248nm,0.3s								
MT14	**Cerro Cal¡n**	**3.41**	**166**	*eP*		Pn		09 42 46.8	+3.0
MT14				IAML				09 43 49.5	
	comp=E,155nm,0.3s								
MT16	**CCHEN**	**3.44**	**166**	IAML				09 43 46.8	
	comp=N,68nm,0.5s								
MT03	**Universidad Ad**	**3.51**	**166**	*eP*		Pn		09 42 48.2	+3.0
MT03				IAML				09 43 51.1	
	comp=E,175nm,0.2s								
MT04	**Ro Olivares**	**3.51**	**161**	*eP*		Pb		09 42 50.0	-4.0
MT04				IAML				09 43 42.2	
	comp=N,71nm,0.4s								
MT08	**Bocatoma Ro**	**3.59**	**160**	*eP*		Pb		09 42 51.8	-3.4
MT08				IAML				09 43 50.5	
	comp=E,57nm,0.3s								
MT15	**Las Vizcachas**	**3.61**	**167**	*eP*		Pn		09 42 48.5	+2.0
MT09	**Talagante**	**3.71**	**173**	*eP*		Pn		09 42 50.1	+2.1
MT01	**Popeta**	**3.78**	**177**	*eP*		Pn		09 42 50.3	+1.5
AC02	**Maricunga**	**3.85**	**33**	*eP*		Pn		09 42 53.5	+3.4
AC02				*eS*		Sb		09 43 41.3	-4.8
LMEL	**Las Melosas**	**3.92**	**164**	*eP*		Pn		09 42 54.1	+3.3
AC01	**Pan de Azucar**	**4.00**	**12**	*eP*		Pn		09 42 50.9	-0.9
TCA	**Tanti**	**6.08**	**104**	*eP*		Pn		09 43 23.2	+2.8

ASRS 01 09:44:38.0±0.6, 54°.15N×87°.03E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 01 09:45:25.0±1.4, 53°.64N×86°.91E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

*HEL **01** 10:00:49.5±0.2, 64°.67N×30°.69E, h0km, ML2.0, Suspected explosion*
*IDC **01** 10:00:49.0±2.5, 64°.42N×31°.61E, h0km, mbtmp3.0/4, ML2.3/4, Error ellipse: s-maj=34.8km s-min=10.2km az=112.0*
*KOLA **01** 10:00:51.9, 64°.61N×30°.76E, h0km, ML2.2, Error ellipse: s-maj=19.5km s-min=10.5km az=160.0, Karelia*
*UPP **01** 10:01:02.2±3.1, 64°.56N×28°.88E, h0km, ML1.7, Presumed earthquake*

ISC 01 10:00:50.0±0.9, 64°.66N±0°.03×30°.37E±0°.04, h0km, n42, σ1§86/59, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.48**	**204**	PG		**Pg**		**10 01 00.1**	**+0.8**
RMF				smax		smax		10 01 07.4	
	comp=Z,27nm,0.2s								
KU1	**Kurvinen**	**0.97**	**340**	PG		**Pg**		**10 01 08.1**	**-0.6**
KU1				SN		**Sn**		**10 01 24.7**	**-0.8**
MSF	**Maaselka**	**1.38**	**337**	PG		**Pg**		**10 01 15.6**	**-0.8**
MSF				SN		**Sn**		**10 01 36.5**	**+1.1**
KU6	**Riekki**	**1.39**	**352**	PG		**Pg**		**10 01 15.0**	**-1.6**
	baz=163								
KU6				smax		smax		10 01 31.8	
	comp=Z,13nm,0.2s								
KU6				SN		**Sb**		**10 01 35.4**	**+0.4**
KU2	**Taivalkoski**	**1.39**	**320**	PG		**Pg**		**10 01 16.2**	**-0.4**
	baz=130								
NIF	**Nilsia**	**1.70**	**223**	PG		**Pg**		**10 01 22.2**	**-0.4**
NIF				smax		smax		10 01 43.1	
	comp=Z,14nm,0.2s								
OLKF	**Oulanka, Finla**	**1.72**	**347**	PG		**Pn**		**10 01 21.1**	**-0.1**
OLKF				smax		smax		10 01 41.6	
	comp=Z,11nm,0.2s								
JOF	**Joensuu**	**1.80**	**166**	PG		**Pn**		**10 01 21.3**	**-1.0**
RANF	**Ranua**	**2.03**	**314**	PG		**Pb**		**10 01 27.6**	**-0.1**
OBF4	**Vikkela, Lumij**	**2.27**	**276**	PG		**Pg**		**10 01 32.4**	**-1.1**
	baz=92								
OBF4				smax		smax		10 02 00.5	
	comp=Z,11nm,0.2s								
KVDA	**Kovda**	**2.29**	**26**	P		**Pn**		**10 01 29.2**	**+0.2**
KVDA				S		**Sn**		**10 01 58.6**	**+0.8**
OUF	**Merijarvi**	**2.46**	**266**	PB		**Pb**		**10 01 34.7**	**-0.3**
	baz=80								
OUF				smax		smax		10 02 05.9	
	comp=Z,13nm,0.2s								
OUF				SG		**Sg**		**10 02 09.0**	**+0.1**
OBF0	**Syolatti, Pyha**	**2.65**	**269**	PG		**Pg**		**10 01 40.9**	**+0.1**
OBF0				smax		smax		10 02 11.6	
	comp=Z,7.7nm,0.2s								
RNF	**Rovaniemi**	**2.67**	**319**	PG		**Pb**		**10 01 38.1**	**-0.4**
	baz=137								
RNF				SG		**Sg**		**10 02 15.8**	**+0.2**
SUF	**Sumiainen**	**2.71**	**226**	PG		**Pb**		**10 01 39.2**	**-0.1**
SUF				smax		smax		10 02 12.4	
	comp=Z,3.2nm,0.2s								
TOF	**Tornio**	**2.91**	**302**	PG		**Pb**		**10 01 43.1**	**+0.4**
TOF				smax		smax		10 02 18.1	
	comp=Z,3.2nm,0.2s								
OBF8	**Ulkokalla**	**3.02**	**267**	PB		**Pb**		**10 01 44.0**	**-0.5**
VRF	**Varrio**	**3.12**	**355**	PB		**Pn**		**10 01 42.9**	**+2.5**
VRF				smax		smax		10 02 21.2	
	comp=Z,3.2nm,0.2s								
VRF				SG		**Sb**		**10 02 27.0**	**+2.2**
KAF	**Kangasniemi**	**3.14**	**217**	PG		**Pb**		**10 01 46.3**	**-0.4**
APA0	**Apatity Array**	**3.15**	**19**	P		**Pn**		**10 01 41.8**	**+1.0**
APA0				S		**Sn**		**10 02 19.5**	**+0.6**
KALU	**Kalix**	**3.19**	**295**	P		**Pb**		**10 01 46.5**	**-0.9**
KALU	**Kalix**	**3.19**	**295**	PB		**Pb**		**10 01 46.5**	**-0.9**
	baz=106								
KALU				SG		**Sg**		**10 02 30.6**	**-1.7**
RUF	**Ruokolahti**	**3.31**	**192**	PB		**Pb**		**10 01 47.4**	**-2.2**
KEF	**Keuruu**	**3.52**	**227**	PB		**Pb**		**10 01 50.9**	**-2.2**
LVZ	**Lovozero**	**3.68**	**26**	PB		**Pn**		**10 01 49.9**	**+1.7**
FIA0	**FINESS Array S**	**3.77**	**213**	PB		**Pb**		**10 01 54.2**	**-3.2**
FINES	**FINESS Array B**	**3.77**	**213**	Pn		**Pn**		**10 01 50.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=36,slow=13,SNR=8.7								
FINES				Sn		**Sn**		**10 02 37.0**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=30,slow=22,SNR=1.7								
FINES				Lg		Lg		10 02 49.9	
	comp=Z,1.4nm,0.3s,baz=39,slow=27,SNR=13								
	comp=Z,0.9nm,0.6s								
VAF	**Ylistaro**	**3.78**	**248**	PB		**Pb**		**10 01 55.4**	**-2.1**
	baz=64								
SJUU	**Sjulsmark**	**3.81**	**287**	P		**Pb**		**10 01 54.0**	**-4.0**
PAJU	**Pajala**	**3.81**	**312**	PB		**Pb**		**10 01 54.6**	**-3.6**
BURU	**Burvik**	**3.88**	**273**	P		**Pn**		**10 01 54.0**	**+3.3**
BURU				S		**Sn**		**10 02 33.2**	**-3.7**
BURU	**Burvik**	**3.88**	**273**	PB		**Pb**		**10 01 55.9**	**-3.2**
ERTU	**Ertsjaerv**	**3.89**	**303**	PB		**Pb**		**10 01 55.7**	**-3.7**
ODEU	**Stanfors**	**4.18**	**271**	P		**Pn**		**10 01 57.7**	**+2.8**
SVAU	**Svanoeiden**	**4.66**	**273**	P		**Pn**		**10 02 04.8**	**+3.3**
TERR	**Teriberka**	**4.93**	**20**	P		**Pn**		**10 02 06.5**	**+1.4**
TERR				S		**Sn**		**10 03 01.2**	**-1.6**
ARCES	**ARCESS Array B**	**5.25**	**341**	Pn		**Pn**		**10 02 11.0**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=155,slow=15,SNR=26								
ARCES				Sn		**Sn**		**10 03 09.3**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=151,slow=21,SNR=2.4								
	comp=Z,0.5nm,0.2s								
ARCES	**ARCESS Array B**	**5.25**	**341**	P		**Pn**		**10 02 11.6**	**+1.9**
ARCES				S		**Sn**		**10 03 10.1**	**-0.8**
VADS	**Vadso**	**5.50**	**356**	P		**Pn**		**10 02 15.0**	**+1.9**
VADS				S		**Sn**		**10 03 16.5**	**-0.4**
FAUS	**Fauske**	**6.72**	**301**	P		**Pn**		**10 02 33.7**	**+3.9**
FAUS				S		**Sn**		**10 03 47.5**	**+0.5**
HFS	**Hagfors**	**8.96**	**247**	Pn		**Pn**		**10 03 01.7**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=58,slow=14,SNR=7.2								
HFS				Sn		**Sn**		**10 04 42.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=69,slow=32,SNR=1.6								
HFS				Lg		Lg		10 05 32.4	
	comp=Z,0.2nm,0.3s,baz=59,slow=31,SNR=1.6								
	comp=Z,0.5nm,0.3s								
NOA	**NORSAR Array B**	**9.46**	**256**	Pn		**Pn**		**10 03 08.7**	**+1.2**
	baz=66,slow=13,SNR=1.5								
	comp=Z,0.3nm,0.6s								

*TEH **01** 10:04:39.7, 26°.03N×54°.77E, h9km±103km*
*DSN **01** 10:04:40.5±1.0, 26°.28N×54°.71E, h10km, ML3.1/13, Error ellipse: s-maj=11.5km s-min=2.4km az=157.0*
*OMAN **01** 10:04:43.2±0.2, 26°.24N×54°.70E, h32km±3km, ml3.3/17, Error ellipse: s-maj=4.4km s-min=1.5km az=325.0*

ISC 01 10:04:42.7±1.6, 26°.09N±0°.05×54°.80E±0°.04, h8km±12km, n53, σ0§53/67, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UMQ	**Umm Al-Quwin**	**0.96**	**126**	P		**Pn**		**10 05 02.6**	**0.0**
	SNR=7.9								
UMQ				S		**Sn**		**10 05 17.5**	**+1.0**
	SNR=5.6								
UMQ	**Umm Al-Quwin**	**0.96**	**126**	*eP*		**Pb**		**10 05 01.8**	**+0.1**
	SNR=7.9								
SHME	**Shamm**	**1.21**	**92**	P		**Pn**		**10 05 04.9**	**-1.0**
	SNR=50								
SHME				S		**Sn**		**10 05 22.3**	**-0.3**
	SNR=8.7								
SHME	**Shamm**	**1.21**	**92**	*eP*		**Pn**		**10 05 04.7**	**-1.2**
	SNR=21								
SHME				S		**Sn**		**10 05 23.0**	**+0.4**
NAZ	**Nazwa, Dubai**	**1.35**	**144**	P		**Pb**		**10 05 08.4**	**+0.1**
	SNR=11								
NAZ				S		**Sg**		**10 05 27.4**	**+1.4**
	SNR=6.5								
NAZ	**Nazwa, Dubai**	**1.35**	**144**	*eP*		**Pg**		**10 05 08.5**	**-0.1**
	SNR=11								
BANOM	**Banah**	**1.36**	**97**	P		**Pn**		**10 05 07.3**	**-0.8**
BANOM				S		**Sn**		**10 05 26.3**	**-0.1**
BANOM	**Banah**	**1.36**	**97**	*eP*		**Pn**		**10 05 06.9**	**-1.2**
	SNR=27								
BANOM				S		**Sg**		**10 05 26.8**	**+0.3**
MASF	**Masafi**	**1.42**	**120**	P		**Pn**		**10 05 08.8**	**-0.1**
	SNR=15								
MASF				S		**Sg**		**10 05 28.5**	**0.0**
	SNR=13								
MSFE	**Esma-Masafi**	**1.43**	**120**	*eP*		**Pn**		**10 05 08.8**	**-0.2**
	SNR=15								
FAQ	**Al Faqa, Dubai**	**1.52**	**152**	P		**Pn**		**10 05 10.6**	**+0.3**
FAQ				S		**Sg**		**10 05 31.4**	**-0.2**
FAQ	**Al Faqa, Dubai**	**1.52**	**152**	P		**Pb**		**10 05 10.7**	**-0.5**
AJN	**Ajban**	**1.53**	**174**	P		**Pb**		**10 05 10.9**	**-0.4**
AJN				S		**Sg**		**10 05 31.8**	**-0.2**
	SNR=7.6								
AJN	**Ajban**	**1.53**	**174**	*eP*		**Pn**		**10 05 10.7**	**+0.3**
	SNR=7.3								
ASUD	**Al Ashush, Dub**	**1.54**	**162**	P		**Pb**		**10 05 11.2**	**-0.2**
	SNR=9.5								
ASUD				S		**Sg**		**10 05 32.4**	**+0.3**
ASUD	**Al Ashush, Dub**	**1.54**	**162**	*eP*		**Pb**		**10 05 11.1**	**-0.3**
	SNR=9.5								
MDH	**Madha**	**1.57**	**120**	P		**Pn**		**10 05 10.8**	**-0.1**
	SNR=6.9								
MDH				S		**Sb**		**10 05 32.1**	**+0.1**
	SNR=11								
MDH	**Madha**	**1.57**	**120**	P		**Pn**		**10 05 10.6**	**-0.3**
LAR1	**LAR**	**1.62**	**347**	Pg		**Pn**		**10 05 11.4**	**-0.2**
UOSS	**Minazif**	**1.71**	**132**	Pg		**Pn**		**10 05 12.1**	**-0.7**
UOSS	**Minazif**	**1.71**	**132**	P		**Pn**		**10 05 12.9**	**0.0**
UOSS				S		**Sb**		**10 05 35.7**	**-0.4**
UOSS	**Minazif**	**1.71**	**132**	*eP*		**Pn**		**10 05 12.6**	**-0.2**
	SNR=11								
HATD	**Hatta, Dubai**	**1.74**	**136**	P		**Pn**		**10 05 13.6**	**+0.2**
HATD				S		**Sb**		**10 05 37.1**	**0.0**
	SNR=6.4								
HATD	**Hatta, Dubai**	**1.74**	**136**	P		**Pn**		**10 05 13.8**	**+0.4**
GENO	**Geno**	**1.79**	**43**	Pn		**Pn**		**10 05 14.7**	**+0.5**
ASHO	**Ashiyiah**	**1.81**	**141**	P		**Pn**		**10 05 14.4**	**+0.1**
	SNR=14								
ASHO				S		**Sb**		**10 05 38.9**	**-0.1**
ASHO	**Ashiyiah**	**1.81**	**141**	*eP*		**Pn**		**10 05 14.4**	**+0.1**
	SNR=14								
LMD1	**Lamerd**	**1.92**	**311**	Pn		**Pn**		**10 05 15.5**	**-0.2**
ALNE	**Al Ain**	**2.20**	**157**	P		**Pn**		**10 05 19.9**	**+0.2**
	SNR=7.4								
ALNE	**Al Ain**	**2.20**	**157**	*eP*		**Pn**		**10 05 20.6**	**+0.9**
	SNR=7.4								
MZWR	**Madinat Zayed**	**2.47**	**200**	P		**Pn**		**10 05 22.7**	**-0.5**
SOHO	**SOHO**	**2.50**	**141**	P		**Pn**		**10 05 23.5**	**-0.3**
ARQ	**Araqi**	**3.16**	**150**	P		**Pn**		**10 05 33.0**	**+0.1**
	SNR=13								
KHNJ	**Kahnooj**	**3.19**	**54**	Pn		**Pn**		**10 05 32.8**	**-0.4**
HOQ	**Hoqain**	**3.38**	**137**	Pn		**Pn**		**10 05 35.3**	**-0.6**
HOQ	**Hoqain**	**3.38**	**137**	P		**Pn**		**10 05 35.6**	**-0.3**
	SNR=5.4								
NGRK	**Negar Kerman**	**3.93**	**25**	Pn		**Pn**		**10 05 44.0**	**+0.2**
SMDO	**Samad**	**4.23**	**135**	P		**Pn**		**10 05 47.9**	**+0.3**
KBAM	**BAM**	**4.44**	**46**	Pn		**Pn**		**10 05 51.1**	**+0.6**
CHMN	**Cheshme madani**	**4.47**	**32**	Pn		**Pn**		**10 05 51.9**	**+0.7**
KHGB	**Koh Gabri**	**4.52**	**19**	Pn		**Pn**		**10 05 52.8**	**+1.1**
CHBR	**Chabahar**	**5.14**	**94**	Pn		**Pn**		**10 05 59.8**	**-0.4**
IMEH	**Mehriz**	**5.28**	**358**	Pn		**Pn**		**10 06 03.1**	**+0.9**
IBAF	**Bafgh**	**5.52**	**7**	Pn		**Pn**		**10 06 05.7**	**+0.3**
KLNJ	**Kolanjah**	**5.65**	**331**	Pn		**Pn**		**10 06 07.6**	**+0.1**
JLN	**Jalan Bani Buh**	**5.76**	**132**	P		**Pn**		**10 06 07.8**	**-0.7**
NGCH	**Negor - Chabah**	**5.76**	**96**	Pn		**Pn**		**10 06 08.5**	**-0.1**
NGCH	**Negor - Chabah**	**5.76**	**96**	P		**Pn**		**10 06 08.7**	**+0.1**
MHTO	**MHTO**	**5.85**	**150**	P		**Pn**		**10 06 09.4**	**-0.5**
	SNR=12								
IRAM	**Ramesheh**	**6.08**	**340**	Pn		**Pn**		**10 06 13.7**	**+0.6**
SRVN	**Saravan**	**6.92**	**77**	Pn		**Pn**		**10 06 24.7**	**+0.1**
IPIR	**Pirpir**	**7.40**	**334**	Pn		**Pn**		**10 06 31.0**	**-0.3**
WHFO	**Wadi Hawf**	**8.19**	**187**	P		**Pn**		**10 06 40.9**	**-1.1**
	SNR=11								

*IDC **01** 10:17:01.9±1.1, 36°.53N×31°.36E, h70km±13km, mb3.8/13, mbtmp4.1/23, MS2.8/3, Error ellipse: s-maj=9.9km s-min=9.6km az=68.0*
*MOS **01** 10:17:03.4±0.9, 36°.53N×31°.47E, h92km, mb4.1/9, Error ellipse: s-maj=7.6km s-min=4.6km az=106.0*
*HLW **01** 10:17:04.1, 36°.40N×31°.32E, h25km±3km, Ml4.1*
*MCSM **01** 10:17:04.6±0.4, 36°.N±4°×3°.1E±°, h87km±5km, mb4.0, mB7.1, MLv4.0, Mw(mB)7.0*
*NEIC **01** 10:17:04.5±1.7, 36°.50N±0°.04×31°.46E±0°.06, h89km±8km, mb4.1/19, Error ellipse: s-maj=8.4km s-min=2.2km az=124.0*
*NIC **01** 10:17:04.7, 36°.26N×31°.38E, h95km±6km, Ml3.8/10*
*ISK **01** 10:17:04.1, 36°.57N×31°.41E, h86km, ML4.1/76*
*AFAD **01** 10:17:06.1, 36°.60N×31°.35E, h50km±6km, MW3.8*
*GII **01** 10:17:07.4±0.0, 36°.213N±0°.002×31°.533E±0°.001, h91km, Mws3.9, confirmed*

ISC 01 10:17:03.5±0.6, 36°.43N±0°.03×31°.45E±0°.02, h90km±5km, n371, σ1§48/414, mb4.0/22, 17C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MNVG	**Manavgat-Antal**	**0.36**	**356**	Pg		**Pn**		**10 17 16.7**	**-0.6**
MNVG				Sg		**Sn**		**10 17 26.0**	**-1.5**
GAZI	**Gazipasa**	**0.72**	**105**	Pg		**Pn**		**10 17 22.1**	**+1.8**
KEMT	**Kemer-ANTALYA**	**0.74**	**284**	Pg		**Pn**		**10 17 20.8**	**+0.4**
ANTB	**Antalya**	**0.80**	**306**	Pg		**Pn**		**10 17 21.3**	**+0.4**
ANTB				Sg		**Sn**		**10 17 33.0**	**-0.9**
AKUM	**Antalya-Kumluc**	**0.90**	**264**	P		**Pn**		**10 17 22.6**	**+0.5**
AKUM				S		**Sn**		**10 17 42.3**	**+6.4**
AKUM				*i* IAML				10 17 44.0	
	comp=E,2µm,0.8s								
AKUM				*i* IAML				10 17 45.0	
	comp=N,3µm,0.4s								
HDMB	**Hadim**	**0.99**	**57**	Pg		**Pn**		**10 17 24.1**	**+0.8**
SEYD	**Seydisehir-KON**	**1.02**	**18**	Pg		**Pn**		**10 17 23.6**	**0.0**
SEYD				Sg		**Sn**		**10 17 37.3**	**-1.3**
SEDI	**Konya, Seydise**	**1.05**	**13**	SPECP				10 17 24.0	
SEDI				P		**Pn**		**10 17 24.1**	**+0.2**
SEDI				S		**Sn**		**10 17 37.8**	**-1.4**
SEDI				*i* IAML				10 17 39.0	
	comp=E,5µm,0.5s								
SEDI				*i* IAML				10 17 40.0	
	comp=N,3µm,0.7s								
KORT	**Korkueli**	**1.05**	**303**	P		**Pn**		**10 17 23.5**	**-0.5**
KORT	**Korkueli**	**1.05**	**303**	Pg		**Pn**		**10 17 23.5**	**-0.5**
BUCA	**Burdur, Bucak-**	**1.15**	**322**	SPECP				10 17 25.0	
BUCA				P		**Pn**		**10 17 25.6**	**+0.6**
BUCA				S		**Sn**		**10 17 39.0**	**-2.1**
BUCA				*i* IAML				10 17 48.0	
	comp=N,918nm,0.5s								
BCK	**Bucak**	**1.24**	**326**	Pn		**Pn**		**10 17 25.7**	**-0.4**
BCK	**Bucak**	**1.24**	**326**	P		**Pn**		**10 17 25.7**	**-0.4**
DEMR	**Demre-Antalya**	**1.26**	**262**	Pn		**Pn**		**10 17 27.5**	**+1.2**
BOZY	**Bozyazi-Mersin**	**1.27**	**104**	Pn		**Pn**		**10 17 28.7**	**+2.3**
ELL	**Elmali**	**1.28**	**285**			**Pn**		**10 17 28.7**	**+2.0**
ELL	**Elmali**	**1.28**	**285**	Pn		**Pn**		**10 17 27.2**	**+0.5**
ELL	**Elmali**	**1.28**	**285**	P		**Pn**		**10 17 28.7**	**+2.0**
ELL	**Elmali**	**1.28**	**285**	P		**Pn**		**10 17 29.1**	**+2.4**
ELL				S		**Sn**		**10 17 47.4**	**+3.4**
TEKE	**Tekeli-Mersin**	**1.37**	**102**	Pn		**Pn**		**10 17 29.8**	**+2.1**
BERE	**Bereket-Mersin**	**1.43**	**93**	Pn		**Pn**		**10 17 30.6**	**+2.1**
AKAS	**Kas**	**1.50**	**263**			**Pn**		**10 17 30.3**	**+0.9**
AKAS				Sn		**Sn**		**10 17 50.0**	**+1.0**
AKAS	**Kas**	**1.50**	**263**	Pn		**Pn**		**10 17 30.6**	**+1.2**
KSL	**Kastellorizon**	**1.54**	**260**	P		**Pn**		**10 17 31.1**	**+1.4**
KSL				S		**Sn**		**10 17 49.8**	**+0.3**
KNIK	**Mula-Seydike**	**1.57**	**286**	SPECP				10 17 32.0	
KNIK				P		**Pn

XYLS Xyliatos 1.92 137⇑ *e*P Pn 10 17 35.3 +0.6
XYLS S Sn 10 17 58.6 +0.1
XYLS AML AML 10 18 05.1
2.4nm,0.2s
XYLS AML AML 10 18 06.2
2.9nm,0.2s
SILI Silifke-Mersin 2.00 91 Pn Pn 10 17 37.9 +2.3
APMY Acipayam-Deniz 2.01 302 Pn Pn 10 17 36.4 +0.5
ATHAL Athalassa 2.04 129 P Pn 10 17 37.4 +1.2
ATHAL S Sn 10 18 01.8 +0.7
ATHAL AML AML 10 18 08.4
6.3nm,0.4s
ATHAL AML AML 10 18 16.5
4.7nm,0.5s
LFK Lefkose 2.04 124 Pn Pn 10 17 38.1 +1.8
APOL The Sanctuary 2.10 146 P Pn 10 17 38.7 +1.6
KZIL AFYON_Kizioren 2.10 331 SPECP 10 17 36.0
KZIL P Pn 10 17 36.6 -0.6
KZIL S Sn 10 18 00.5 -2.3
CSS Mathiatis 2.12 133 Pn 10 17 37.5 +0.2
CSS Mathiatis 2.12 133 Pn Pn 10 17 37.7 +0.4
CSS Mathiatis 2.12 133 P Pn 10 17 37.5 +0.2
CSS Mathiatis 2.12 133 P Pn 10 17 37.7 +0.4
CSS S Sn 10 18 03.4 +0.4
CSS AML AML 10 18 15.3
1.3nm,0.5s
CSS AML AML 10 18 16.2
1.2nm,0.3s
KIZK Mersin 2.17 88 Pn Pn 10 17 40.4 +2.4
ASGA Asgata 2.20 138 P Pn 10 17 39.6 +1.2
ASGA S Sn 10 18 06.8 +1.9
ASGA AML AML 10 18 17.5
1.4nm,0.4s
ASGA AML AML 10 18 20.1
1.6nm,0.7s
SHUT Suhut-Afyon 2.24 342 Pn Pn 10 17 38.7 -0.3
MVOU Mavrovouni 2.27 128 P Pn 10 17 39.6 +0.4
MVOU S Sn 10 18 05.2 -1.3
MVOU AML AML 10 18 07.9
2.1nm,0.4s
MVOU AML AML 10 18 08.9
1.8nm,0.3s
DNIZ Denizli-Tavas- 2.27 302 P Pn 10 17 40.8 +1.4
DNIZ S Sn 10 18 07.1 +0.3
DNIZ *i* IAML 10 18 12.0
comp=N,1µm,0.4s
DNIZ *i* IAML 10 18 13.0
comp=E,1µm,0.5s
YESY Yesilyurt 2.28 53 Pn Pn 10 17 40.5 +1.0
TAVA DENIZLI_Tavas 2.28 298 SPECP 10 17 40.0
TAVA P Pn 10 17 40.5 +1.0
TAVA *i* IAML 10 18 13.0
comp=N,471nm,0.8s
DALY Dalyan (Mula) 2.28 281 Pn Pn 10 17 40.9 +1.5
BLVD Bolvadin-AFYON 2.38 353 Pn Pn 10 17 40.9 +0.1
SULT Sultanhani-AKS 2.41 42 Pn Pn 10 17 42.2 +0.9
CHBY Cihanbeyli 2.44 28 Pn Pn 10 17 41.9 +0.3
KHL Karahalli 2.44 321 Pn Pn 10 17 41.6 0.0
KIZT Kizilcal 2.47 8 Pn Pn 10 17 41.6 -0.5
MERS Mersin 2.51 79 Pn Pn 10 17 44.7 +2.2
PARAL Paralimni 2.55 123 P Pn 10 17 44.8 +1.8
PARAL S Sn 10 18 14.4 +1.2
PARAL AML AML 10 18 31.9
0.8nm,0.6s
PARAL AML AML 10 18 37.7
1.0nm,0.7s
TURN Turunc 2.60 279 SPECP 10 17 45.0
TURN P Pn 10 17 45.3 +1.6
TURN Turunc 2.60 279 Pn Pn 10 17 44.9 +1.2
YER Yerkesik 2.64 286 Pn Pn 10 17 45.4 +1.2
YER Yerkesik 2.64 286 P Pn 10 17 45.4 +1.2
MULA Mugla, Merkez- 2.64 289 SPECP 10 17 45.0
MULA P Pn 10 17 45.9 +1.6
ARG Arkhangelos 2.69 266 Pn 10 17 45.6 +0.7
ARG Sn Sn 10 18 15.4 -1.3
ARG Arkhangelos 2.69 266 Pn Pn 10 17 46.8 +1.9
ARG Arkhangelos 2.69 266 P Pn 10 17 45.6 +0.7
ARG 10 18 15.4
ARG Arkhangelos 2.69 266 P Pn 10 17 45.3 +0.4
ARG S Sn 10 18 16.3 -0.5
KULU Kulu 2.88 25 Pn Pn 10 17 47.8 +0.2
GULA Gulagac 2.93 48 Pn Pn 10 17 48.9 +0.7
CIFT Cifteler, Eski 2.94 354 Pn Pn 10 17 47.9 -0.4
NAZL Nazilli-Aydin 2.95 302 Pn Pn 10 17 48.8 +0.4
KARA Karaisali 3.01 73 Pn Pn 10 17 51.6 +2.5
SERE Sereflikochisa 3.02 33 Pn Pn 10 17 49.8 +0.4
KULA Kula-Manisa 3.04 314 Pn Pn 10 17 49.4 -0.3
GEDZ Gediz 3.07 329 Pn Pn 10 17 50.3 +0.2
MLSB Milas 3.07 287 Pn Pn 10 17 51.2 +1.2
CMRD Camardi-Nigde 3.09 65 Pn Pn 10 17 52.1 +1.8
MANT Manisa 3.09 313 Pn 10 17 50.5 0.0
SHAP Saphane-Kutahy 3.13 326 Pn Pn 10 17 50.5 -0.4
AYDB Zeytinkoy-Aydi 3.22 299 Pn Pn 10 17 52.1 0.0
ODEM Odemis-Izmir 3.26 305 Pn Pn 10 17 53.4 +0.8
SMAA Simav-Kutahya 3.31 324 Pn Pn 10 17 54.2 +1.0
KIRS Kirsehir-Merke 3.33 35 ⇑P Pn 10 17 53.8 +0.2
BODT Bodrum 3.38 282 Pn Pn 10 17 55.9 +1.7
YKAV Yalikavak-Bodr 3.42 283 Pn Pn 10 17 56.1 +1.4
KAMT Kaman 3.44 31 Pn Pn 10 17 55.2 +0.2
CEYT Ceyhan 3.50 79 Pn Pn 10 17 57.4 +1.6
BORA Eskisehir 3.53 347 Pn 10 17 55.7 -0.7
GORD Gordes-Manisa 3.59 315 Pn Pn 10 17 57.9 +0.9
KARP Karpathos 3.59 257 Pn 10 17 58.2 +1.3
KARP Karpathos 3.59 257 Pn Pn 10 17 59.2 +2.2
KARP Karpathos 3.59 257 Pn Pn 10 17 58.3 +1.3
KARP Karpathos 3.59 257 P Pn 10 17 58.3 +1.3
KARP S Sn 10 18 38.3 -0.1
ANTO Ankara 3.59 17 Pn 10 17 57.0 -0.1
ANTO Ankara 3.59 17 ⇓P Pn 10 18 01.1 +4.0
ANTO Ankara 3.59 17 P Pn 10 17 57.0 -0.1
ANTO Ankara 3.59 17 Pn Pn 10 17 57.3 +0.2
GCAM G?zelcaml? 3.60 292 Pn Pn 10 17 57.6 +0.5
GOMA Golmarmara-Man 3.61 310 Pn Pn 10 17 57.6 +0.3
BR104 Keskin Array S 3.70 27 Pn Pn 10 17 58.2 -0.4
BR105 Keskin Array S 3.70 27 Pn Pn 10 17 58.4 -0.2
BR106 Keskin Array S 3.72 27 Pn Pn 10 17 58.6 -0.2
BR131 Keskin Array S 3.72 27 Pn 10 17 58.8 0.0
BR131 Keskin Array S 3.72 27 *i* P Pn 10 17 58.5 -0.3
BRTR Keskin Array B 3.72 27 Pn 10 17 58.6 -0.3
BRTR Keskin Array B 3.72 27 P Pn 10 17 57.6 -1.2
15nm,0.3s,baz=204,slow=15,SNR=264
BRTR S Sn 10 18 38.7 -2.9
32nm,0.3s,baz=203,slow=25,SNR=6.0
BRTR Keskin Array B 3.72 27 *i* P Pn 10 17 58.5 -0.3
BRTR pmax pmax
comp=Z,12nm,0.3s
TAHT Tahtakopru-Hat 3.82 89 Pn Pn 10 18 02.5 +2.4
BLCB Balcova 4.02 300 Pn Pn 10 18 03.6 +0.9
MDUB Mudurnu 4.04 357 Pn 10 18 04.4 +1.2
BNN Bunyan 4.24 54 Pn 10 18 07.7 +1.7
BNN Bunyan 4.24 54 Pn Pn 10 18 07.2 +1.2
HWQ Hawqa 4.25 119 *e*P Pn 10 18 07.0 +0.8
BHL Bhannes 4.27 125 *e*P Pn 10 18 06.4 +0.1
BEIL Beino 4.30 115 *e*P Pn 10 18 07.4 +0.8
URLA Izmir 4.32 298 Pn Pn 10 18 07.4 +0.5
SAHE Sakarya_HENDEK 4.44 354 ⇑P Pn 10 18 08.7 +0.2
ZAHL Zahle 4.45 124 *e*P Pn 10 18 09.7 +0.9
ZKR Zakros 4.45 254 Pn Pn 10 18 10.9 +2.2
DKL Dikili 4.46 308 Pn Pn 10 18 09.5 +0.7
QRWL Qaraoun 4.51 128 *e*P Pn 10 18 10.7 +1.2
HNTI Hanita 4.53 136 P Pn 10 18 10.9 +1.1
HNTI Hanita 4.53 136 S Sn 10 19 00.7 -0.6
FKH Fakeheh 4.60 117 *e*P Pn 10 18 12.1 +1.2
RCY Rachaya 4.64 128 *e*P Pn 10 18 12.7 +1.3
SHBL Chebaa 4.68 130 *e*P Pn 10 18 13.7 +1.8
GAZ Gaziantep 4.68 79 Pn 10 18 13.0 +1.2
GAZ Gaziantep 4.68 79 Pn Pn 10 18 13.9 +2.0
MMC7 Mount Meron ar 4.70 135 P Pn 10 18 13.5 +1.4
MMA0B Mount Meron ar 4.71 135 P Pn 10 18 13.8 +1.5
MMA0B Mount Meron ar 4.71 135 S Sn 10 19 05.4 -0.3
MMAI Mount Meron Ar 4.71 135 P Pn 10 18 13.2 +0.9
comp=Z,73nm,0.3s,baz=305,slow=13,SNR=363
MMAI S Sn 10 19 04.6 -1.1
comp=Z,37nm,0.3s,baz=303,slow=29,SNR=11
MMAI LR LR 10 20 35.7
comp=Z,31nm,18.5s,baz=326,slow=44
CHOS Chios island 4.72 296 Pn Pn 10 18 13.2 +0.8
GEM Giv'at Ha'Em 4.72 132 P Pn 10 18 13.8 +1.4
GEM Giv'at Ha'Em 4.72 132 S Sn 10 19 05.8 -0.1
NATI Neve Ativ 4.73 131 P Pn 10 18 14.1 +1.6
NATI Neve Ativ 4.73 131 S Sn 10 19 06.0 -0.1

OFRI `Ofer 4.79 141 P Pn 10 18 14.2 +0.9
OFRI `Ofer 4.79 141 S Sn 10 19 06.1 -1.5
APE Apeiranthos 4.80 279 Pn Pn 10 18 14.7 +1.3
APE Apeiranthos 4.80 279 *i* P Pn 10 18 14.1 +0.7
APE Apeiranthos 4.80 279 P Pn 10 18 14.0 +0.6
BLGI Bet Lehem HaGe 4.81 139 P Pn 10 18 14.6 +1.0
BLGI Bet Lehem HaGe 4.81 139 S Sn 10 19 07.6 -0.4
ILGA Ilgaz 4.94 20 Pn Pn 10 18 14.9 -0.7
KSHT Keshet 4.97 132 P Pn 10 18 17.3 +1.4
KSHT Keshet 4.97 132 S Sn 10 19 11.6 -0.5
SLTI Sal'it 5.12 144 P Pn 10 18 18.9 +1.1
SLTI Sal'it 5.12 144 S Sn 10 19 13.8 -1.9
MMLI Mount Malkishu 5.16 139 P Pn 10 18 19.5 +1.2
MMLI Mount Malkishu 5.16 139 S Sn 10 19 15.8 -0.7
EZN Ezine 5.28 312 ⇑P Pn 10 18 21.3 +1.5
EZN Ezine 5.28 312 ⇑P Pn 10 18 21.3 +1.5
SALP Salfit 5.34 143 P Pn 10 18 21.9 +1.1
SALP Salfit 5.34 143 S Sn 10 19 20.3 -0.7
HMDT Nahal Hemdat 5.36 140 P Pn 10 18 23.2 +2.2
HMDT Nahal Hemdat 5.36 140 S Sn 10 19 21.0 -0.4
IDI Anoyia 5.45 260 Pn 10 18 22.9 +0.6
IDI Anoyia 5.45 260 P Pn 10 18 21.6 -0.7
comp=Z,34nm,0.3s,baz=100,slow=11,SNR=49
IDI S Sn 10 19 19.9 -3.8
comp=Z,24nm,0.4s,baz=51,slow=11,SNR=6.4
BALJ Balqa 5.55 140 Pn 10 18 25.9 +2.3
UJAP Al Uja 5.57 142 P Pn 10 18 25.0 +1.1
UJAP Al Uja 5.57 142 S Sn 10 19 25.8 -0.6
AMAZ Amatzia 5.67 149 P Pn 10 18 26.4 +1.2
AMAZ Amatzia 5.67 149 S Sn 10 19 28.0 -1.0
DSI Dead Sea 5.84 145 P Pn 10 18 28.4 +0.7
DSI Dead Sea 5.84 145 S Sn 10 19 32.2 -1.0
YTIR Yattir 5.90 148 P Pn 10 18 29.8 +1.3
YTIR Yattir 5.90 148 S Sn 10 19 33.8 -1.0
KZIT Kziot 6.03 155 P Pn 10 18 31.1 +1.0
KZIT Kziot 6.03 155 S Sn 10 19 36.7 -1.1
MSBI Mazada 6.05 146 P Pn 10 18 31.4 +1.1
MSBI Mazada 6.05 146 S Sn 10 19 37.3 -0.9
ALN Alexandroupoli 6.15 318 Pn Pn 10 18 32.4 +0.7
ALN Alexandroupoli 6.15 318 P Pn 10 18 32.4 +0.7
GHAJ Ghor Haditha 6.15 145 Pn 10 18 34.2 +2.4
GHAJ Ghor Haditha 6.15 145 P Pn 10 18 34.1 +2.3
GHAJ Ghor Haditha 6.15 145 S Sn 10 19 39.8 -0.9
MATC Matruh 6.17 216 P Pn 10 18 32.2 +0.2
ASF Jabal al Asfar 6.19 132 P Pn 10 18 33.8 +1.4
comp=Z,9.2nm,0.4s,baz=333,slow=8.2,SNR=26
ASF S Sn 10 19 44.5 +2.7
comp=Z,9.0nm,0.3s,baz=306,slow=19,SNR=1.3
IDAN Idan 6.43 149 P Pn 10 18 36.6 +1.0
IDAN Idan 6.43 149 S Sn 10 19 46.4 -1.0
RMNI Mount Ramon 6.44 154 P Pn 10 18 36.7 +0.9
RMNI Mount Ramon 6.44 154 S Sn 10 19 47.0 -0.9
HHAG Hagoal 6.48 175 P Pn 10 18 38.5 +2.1
KOT Kottamia 6.49 177 P Pn 10 18 37.8 +1.3
KOT S Sn 10 19 47.6 -1.5
RDO Rodhopi 6.60 317 Pn 10 18 38.9 +1.1
ZFRI Zfri 6.63 151 P Pn 10 18 39.1 +0.7
ZFRI Zfri 6.63 151 S Sn 10 19 51.3 -1.2
HMYD Mayadein 6.64 185 P Pn 10 18 41.4 +2.9
SUZ Suez 6.67 170 P Pn 10 18 40.4 +1.4
PRNI Paran 6.75 153 P Pn 10 18 40.9 +0.9
PRNI Paran 6.75 153 S Sn 10 19 54.5 -0.9
KRMI Paran Flat 6.87 156 P Pn 10 18 42.3 +0.7
KRMI Paran Flat 6.87 156 S Sn 10 19 57.3 -0.9
HRFI Mount Harif 7.05 154 P Pn 10 18 44.9 +0.8
HRFI Mount Harif 7.05 154 S Sn 10 20 01.7 -1.0
ZNM Zenema 7.13 170 P Pn 10 18 46.8 +1.6
SLUM Salum 7.15 228 P Pn 10 18 46.5 +1.1
ZAF Zafarana 7.19 172 S Sn 10 20 03.8 -2.3
MBRI Mt Berech 7.22 155 P Pn 10 18 47.0 +0.5
MBRI Mt Berech 7.22 155 S Sn 10 20 06.3 -0.8
EIL Elat 7.35 155 P Pn 10 18 49.2 +1.0
comp=Z,49nm,0.4s,baz=311,slow=11,SNR=166
EIL S Sn 10 20 07.3 -2.8
comp=Z,54nm,0.4s,baz=34,slow=15,SNR=8.6
EIL Elat 7.35 155 P Pn 10 18 49.2 +1.0
EIL Elat 7.35 155 S Sn 10 20 07.7 -2.3
RYAN Fayoum 7.39 188 P Pn 10 18 50.4 +1.7
RYAN S Sn 10 20 07.0 -4.1
MARD Mardin 7.53 80 Pn 10 18 51.4 +0.7
ITM Ithomi 7.68 278 Pn Pn 10 18 54.9 +2.3
ELND Elena 7.78 328 ⇓P Pn 10 18 55.4 +1.4
NBNS Bani Suef 7.79 181 P Pn 10 18 55.9 +1.7
NBNS S Sn 10 20 16.6 -4.1
TIRR Tirgusor 8.35 345 Pn Pn 10 19 00.3 -1.3
TIRR Tirgusor 8.35 345 P Pn 10 19 00.3 -1.3
TIRR Tirgusor 8.35 345 Pn Pn 10 19 01.7 +0.1
comp=Z,40nm,1.3s
TPGR Topolog 8.73 346 ⇑P Pn 10 19 07.0 +0.1
TAMRE El Minia 8.73 183 P Pn 10 19 09.7 +2.6
SWA2 8.76 217 S Sn 10 20 39.1 -5.3
ASUT 9.01 179 P Pn 10 19 13.4 +2.7
ASUT S Sn 10 20 46.5 -3.9
CFR Carcaliu 9.09 345 ⇓P Pn 10 19 12.1 +0.3
CFR Carcaliu 9.09 345 ⇓P Pn 10 19 12.1 +0.3
HHRG Al Ghardaqah 9.36 168 P Pn 10 19 18.7 +3.1
ISR Istrita 9.44 338 Pn Pn 10 19 17.2 +0.6
comp=Z,37nm,2.1s
BISRR Bisoca 9.79 340 Pn Pn 10 19 21.1 -0.2
comp=Z,91µmcomp=Z,34nm,1.1s
MLR Muntele Rosu 9.96 337 P Pn 10 19 21.4 -2.4
comp=Z,1.9nm,0.5s,baz=166,slow=17,SNR=4.5
MLR Muntele Rosu 9.96 337 ⇑P Pn 10 19 25.1 +1.3
MLR Muntele Rosu 9.96 337 ⇑P Pn 10 19 25.1 +1.3
VRI Vrincioaia 10.08 341 ⇑P Pn 10 19 26.1 +0.9
VRI Vrincioaia 10.08 341 ⇑P Pn 10 19 26.1 +0.9
PLOR Plostina 10.08 340 ⇑P Pn 10 19 28.6 +3.2
PLOR Plostina 10.08 340 ⇑P Pn 10 19 28.6 +3.2
BOVS Bovan 10.37 317 ⇑P Pn 10 19 28.0 -1.2
TESR Tescani 10.70 342 Pn Pn 10 19 33.6 -0.1
comp=Z,13nm,1.8s
HERR Herculane 10.87 324 ⇑P Pn 10 19 35.1 -1.0
AKRG Al Kharijah 10.92 185 P Pn 10 19 38.2 +1.3
HDK1 Dakhla 10.99 190 P Pn 10 19 39.5 +1.6
NEUR Neytrino 11.01 48 *i* P Pn 10 19 36.7 -1.4
GZR Gura Zlata 11.10 326 ⇓P Pn 10 19 39.6 +0.5
GZR Gura Zlata 11.10 326 ⇓P Pn 10 19 39.6 +0.5
SHA1 Shidzhatmaz 11.26 46 *i* P Pn 10 19 42.8 +1.2
KBZ Khabaz 11.40 47 *i* P Pn 10 19 44.5 +1.4
TIP Timpagrande 11.94 288 Pn Pn 10 19 49.9 -0.7
TIP Timpagrande 11.94 288 Pn Pn 10 19 51.1 +0.5
comp=Z,7.4nm,1.4s
CUC Castrocucco 12.80 291 Pn 10 20 01.8 -0.3
MORH Mrgy, Hungar 13.70 319 Pn Pn 10 20 14.4 +0.6
comp=Z,4.8nm,0.8s
PSZ Piszkesteto 14.31 327 P P 10 20 27.2 +1.0
PSZ pmax pmax
comp=Z,18nm,0.8s
KIEV Kiev 14.35 354 Pn Pn 10 20 22.9 +0.7
comp=Z,133nm,0.9s
AKASG Malin Array Be 14.36 354 Pn 10 20 20.9 -1.4
AKASG Malin Array Be 14.36 354 P Pn 10 20 19.3 -3.0
comp=Z,0.3nm,0.3s,baz=179,slow=11,SNR=4.4
AKASG Malin Array Be 14.36 354 *i* P Pn 10 20 20.1 -2.2
AKBB Malin Array Si 14.36 354 Pn Pn 10 20 22.8 +0.5
AK04 Malin Array Si 14.38 354 Pn Pn 10 20 23.3 +0.7
AK20 Malin Array Si 14.42 354 Pn Pn 10 20 23.8 +0.8
MI28 Mi28,Pidlybu 14.75 351 Pn Pn 10 20 28.5 +1.2
PTJ Puntijarka 15.00 314 P P 10 20 35.8 +1.9
RNPP5 Staryi Chortor 15.32 347 P Pn 10 20 35.6 +1.0
RNPP8 Varash 15.43 347 P Pn 10 20 36.7 +0.7
LANS Liptovska Anna 15.43 329 *e*P P 10 20 40.8 +2.1
LANS pmax pmax
comp=Z,8.0nm,1.1s
LANS Liptovska Anna 15.43 329 *e*P P 10 20 40.8 +2.1
MODS Modra-Piesok 15.85 323 *e*P P 10 20 43.8 +0.6
MODS pmax pmax
comp=Z,28nm,1.0s
MODS Modra-Piesok 15.85 323 *e*P P 10 20 43.8 +0.6
SMOL Smolenice 15.87 324 *e*P P 10 20 44.8 +1.3
SMOL pmax pmax
comp=Z,8.0nm,0.8s
SOKA Soboth 15.97 315 *e*P P 10 20 45.0 +0.3
comp=Z,1.9nm,0.6s
ARSA Arzberg 16.02 317 Pn 10 20 42.4 -1.1
ARSA IAmb IAmb 10 20 47.1
comp=Z,8.9nm,0.8s
ARSA Arzberg 16.02 317 *e*P P 10 20 46.1 +0.9
comp=Z,6.7nm,0.8s,SNR=5.8
OBKA Obir 16.15 314 *e*P P 10 20 47.3 +0.6
comp=Z,6.6nm,0.8s
OJC Ojcow 16.15 332 P P 10 20 47.0 +0.4

comp=Z,6.5nm,1.5s
VRAC Vranov 16.82 325 P Pn 10 20 51.6 -1.7
comp=Z,3.4nm,0.7s,baz=112,slow=13,SNR=4.8
KBA Koelnbreinsper 17.16 314 *e*P P 10 20 60.0 +2.1
comp=Z,6.5nm,0.6s
KBA Koelnbreinsper 17.16 314 P P 10 21 00.1 +2.2
KBA pmax pmax
comp=Z,17nm,0.9s
TEOL Teolo 17.38 307 IAmb IAmb 10 21 01.8
comp=Z,16nm,0.8s
ABTA Abfaltersbach 17.48 312 *e*P P 10 21 02.6 +1.3
comp=Z,2.1nm,0.7s
CTI Castel Tesino 17.68 309 P Pn 10 21 04.2 +0.2
CTI IAmb IAmb 10 21 11.7
comp=Z,7.6nm,0.9s
CTI Castel Tesino 17.68 309 P Pn 10 21 04.2 +0.2
CTI pmax pmax
comp=Z,8.0nm,0.9s
DPC Dobruska-Polom 17.68 327 P Pn 10 21 04.3 +0.4
comp=Z,3.8nm,0.6s
LESA Schwarzleotal 17.72 314 *e*Pn Pn 10 21 05.8 +1.4
comp=Z,1.1nm,0.3s
GEC2 GERESS Array S 17.96 319 P P 10 21 07.2 +0.5
GEC2 GERESS Array S 17.96 319 P Pn 10 21 08.1 +0.8
GERES GERESS Array B 17.96 319 P Pn 10 21 07.8 +0.5
GERES GERESS Array B 17.96 319 P P 10 21 05.3 -1.4
comp=Z,4.2nm,0.7s,baz=116,slow=12,SNR=24
GERES GERESS Array B 17.96 319 P Pn 10 21 07.8 +0.5
KSP Ksiaz 18.06 328 P P 10 21 08.0 +0.4
comp=Z,5.7nm,1.1s
KSP pP pP 10 21 25.0 +0.1
comp=Z,5.7nm,1.1s
KHC Kasperske Hory 18.20 320 *e*P P 10 21 08.4 -0.8
KHC Kasperske Hory 18.20 320 P P 10 21 09.4 +0.2
comp=Z,5.1nm,0.7s
SALO Salr 18.22 307 P 10 21 10.2 +0.7
SALO IAmb IAmb 10 21 23.5
comp=Z,13nm,1.1s
WTTA Wattenberg 18.25 313 *e*Pn Pn 10 21 11.0 +0.1
comp=Z,7.8nm,0.6s,SNR=6.3
WTTA Wattenberg 18.25 313 P Pn 10 21 11.2 +0.3
WTTA pmax pmax
comp=Z,21nm,0.9s
WATA Walderalm 18.32 313 *e*Pn Pn 10 21 11.9 +0.1
comp=Z,4.6nm,0.8s
SQTA Sankt Quirin 18.49 312 *i* Pn Pn 10 21 13.6 -0.1
comp=Z,16nm,0.8s,SNR=7.2
SUW Suwalki 18.50 344 P P 10 21 12.5 +0.1
SUW Suwalki 18.50 344 P P 10 21 12.5 +0.1
WET Wettzell 18.57 319 P P 10 21 13.5 +0.2
WET pmax pmax
comp=Z,14nm,0.6s
MOTA Moosalm 18.61 312 *i* Pn P 10 21 14.6 +0.7
comp=Z,9.5nm,0.7s,SNR=7.6
FETA Feichten 18.69 311 *i* Pn Pn 10 21 16.1 0.0
comp=Z,12nm,0.8s,SNR=11
NACGM Naroch 18.75 352 *e*P P 10 21 14.8 -0.4
comp=Z,15nm,0.8s,baz=168
FUORN Ofenpass-Fuorn 18.80 309 P P 10 21 15.9 -0.1
FUORN IAmb IAmb 10 21 20.8
comp=Z,9.2nm,1.1s
RETA Reutte 18.88 312 *i* P P 10 21 17.3 +0.5
comp=Z,8.7nm,0.4s,SNR=6.6
OBN Obninsk 19.02 9⇓ *e*P P 10 21 19.1 +1.1
OBN *e*S S 10 24 45.8 -3.1
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN MLR MLR
comp=Z,34nm,18.0s
DAVA Damuels 19.32 311 *i* P P 10 21 22.5 +0.9
comp=Z,8.5nm,0.5s,SNR=6.6
BELG Belogornoye 19.63 31 P P 10 21 24.7 0.0
comp=Z,9.9nm,0.6s,baz=24,slow=8.7,SNR=7.4
BELG Belogornoye 19.63 31 *i* P P 10 21 24.7 0.0
BELG pmax pmax
comp=Z,2.0nm,0.8s
CLL Collm 19.87 324 P P 10 21 28.0 +0.6
CLL IAmb IAmb 10 21 31.9
comp=Z,4.0nm,0.7s
CLL Collm 19.87 324 *i* P P 10 21 27.1 -0.2
CLL pmax pmax
comp=Z,5.0nm,0.6s
CLL Collm 19.87 324 P Pn 10 21 30.4 +0.7
comp=Z,6.1nm,1.3s
CLL Collm 19.87 324 *i* P P 10 21 27.1 -0.2
comp=Z,5.0nm,0.6s
MOX Moxa 20.13 321 P P 10 21 31.1 +0.9
MOX pmax pmax
comp=Z,10.0nm,0.9s
SENIN Lac Senin/Sane 20.59 306 P P 10 21 35.7 +0.3
SENIN IAmb IAmb 10 21 39.2
comp=Z,12nm,0.7s
BNI Bardonecchia 20.59 302 P P 10 21 36.1 +0.7
BNI IAmb IAmb 10 21 38.5
comp=Z,7.7nm,0.8s
BNI Bardonecchia 20.59 302 P P 10 21 36.1 +0.7
BNI pmax pmax
comp=Z,8.0nm,0.8s
BFO Black Forest 20.72 312 P P 10 21 37.0 +0.3
BFO IAmb IAmb 10 21 39.8
comp=Z,10nm,0.8s
BFO Black Forest 20.72 312 P P 10 21 37.0 +0.3
BFO pmax pmax
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 22.11 302 P P 10 21 50.2 -1.3
SSB Saint Sauveur 22.11 302 P P 10 21 50.2 -1.3
SSB pmax pmax
comp=Z,4.0nm,0.9s
AB31 Akbulak array 24.35 49 P P 10 22 13.1 +0.3
ABKAR Akbulak array 24.35 49 P P 10 22 13.5 +0.7
KLMR Klimovskoe 24.98 9 *e*P P 10 22 16.2 -2.3
KLMR *e**PP pP 10 22 36.1 -2.8
KLMR pmax pmax
comp=Z,8.0nm,0.6s
KIRV Kirov 25.11 22 *i* P P 10 22 18.2 -1.4
FINES FINESS Array B 25.27 354 P P 10 22 20.0 -1.0
FINES FINESS Array B 25.27 354 P P 10 22 19.8 -1.2
comp=Z,5.5nm,0.6s,baz=156,slow=11,SNR=34
comp=Z,5.5nm,0.6s
FIA1 FINESS Array S 25.27 354 P P 10 22 19.8 -1.3
HFS Hagfors 26.33 340 P P 10 22 29.9 -0.8
comp=Z,4.4nm,1.0s,baz=134,slow=12,SNR=7.0
comp=Z,4.4nm,1.0s
ARTI Arti 26.97 34 P P 10 22 36.4 -0.1
ARTI IAmb IAmb 10 22 41.5
comp=Z,8.0nm,0.7s
ARTI Arti 26.97 34 *d* *i* P P 10 22 37.1 +0.6
ARTI 10 23 22.2
ARTI S S 10 27 09.1 +2.1
ARTI SS SnSn 10 28 23.8 +1.7
ARTI pmax pmax
comp=Z,16nm,2.1s
NOA NORSAR Array B 27.77 339 P P 10 22 43.0 -0.7
comp=Z,0.5nm,0.6s,baz=156,slow=9.2,SNR=3.5
comp=Z,0.5nm,0.6s
NOA NORSAR Array B 27.77 339 P P 10 22 43.0 -0.7
ESDC Sonseca Array 27.96 287 P P 10 22 45.7 0.0
comp=Z,0.5nm,0.4s,baz=74,slow=9.6,SNR=7.6
comp=Z,0.5nm,0.4s
EKA Eskdalemuir Ar 30.18 320 P P 10 23 03.7 -1.3
comp=Z,0.5nm,0.4s,baz=100,slow=8.7,SNR=2.4
comp=Z,0.5nm,0.4s
BORK Borovoye 31.74 46 *i* P P 10 23 17.4 -1.4
BORK pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 33.32 356 P P 10 23 32.0 -0.4
ARCES ARCESS Array B 33.32 356 P P 10 23 31.5 -0.9
comp=Z,3.1nm,0.7s,baz=164,slow=8.6,SNR=22
ARCES LR LR 10 38 27.8
comp=Z,18nm,18.8s,baz=120,slow=39
comp=Z,3.1nm,0.7s
ARCES ARCESS Array B 33.32 356 P P 10 23 32.0 -0.4
ARCES pmax pmax
comp=Z,28nm,1.5s
KURBB Kurchatov Arra 36.33 52 P P 10 23 59.1 +0.7
comp=Z,0.9nm,0.5s,baz=274,slow=9.0,SNR=6.0
comp=Z,0.9nm,0.5s
KURK Kurchatov 36.40 52 *e*P P 10 23 58.8 -0.2
KURK pmax pmax
comp=Z,1.0nm,0.6s
MK31 Makanchi Array 38.78 58 P P 10 24 21.3 +2.0
MK31 Makanchi Array 38.78 58 *i* P P 10 24 20.0 +0.7
MKAR Makanchi Array 38.78 58 P P 10 24 21.3 +2.0
MKAR Makanchi Array 38.78 58 P P 10 24 21.0 +1.7
comp=Z,0.3nm,0.3s,baz=264,slow=9.8,SNR=5.2
MKAR LR LR 10 41 19.7

comp=Z,29nm,18.5s,baz=318,slow=38
comp=Z,0.3nm,0.3s

MKAR	**Makanchi Array**	**38.78**	**58**	*i* P		**P**		**10 24 21.0**	**+1.7**
ZAA0	**Zalesovo Array**	**40.42**	**47**	P		**P**		**10 24 32.6**	**0.0**
ZAA0				IAmb		IAmb		10 25 10.2	

comp=Z,1.6nm,0.7s

ZALV	**Zalesovo Beam**	**40.42**	**47**	P		**P**		**10 24 33.2**	**+0.5**
ZALV	**Zalesovo Beam**	**40.42**	**47**	P		**P**		**10 24 32.6**	**-0.1**

comp=Z,1.5nm,0.6s,baz=248,slow=9.3,SNR=6.2
comp=Z,1.5nm,0.6s

ZALV	**Zalesovo Beam**	**40.42**	**47**	*i* P		**P**		**10 24 32.5**	**-0.1**
ZALV				pmax		pmax			

comp=Z,1.0nm,0.6s

SPITS	**Spitsbergen Ar**	**42.34**	**355**	P		**P**		**10 24 47.4**	**-0.8**

comp=Z,1.9nm,0.5s,baz=148,slow=11,SNR=5.3
comp=Z,1.9nm,0.5s

WMQ	**Urumqi**	**42.92**	**62**	*e*P		**P**		**10 24 56.5**	**+3.2**
WMQ				sP		sP		10 25 28.0	+2.8
WMQ				ScP		**ScP**		**10 30 29.3**	**+3.9**
WMQ				S		**S**		**10 31 11.0**	**-0.6**
WMQ				pmax		pmax			

comp=Z,22nm,0.8s

DBIC	**Dimbokro**	**44.46**	**237**	P		**P**		**10 25 06.7**	**+0.8**
DBIC	**Dimbokro**	**44.46**	**237**	P		**P**		**10 25 07.3**	**+1.5**

comp=Z,4.0nm,0.4s,baz=64,slow=8.9,SNR=9.0
comp=Z,4.0nm,0.4s

PZH	**PanZhiHua**	**59.59**	**78**	P		**P**		**10 26 58.6**	**+0.3**
HHC	**Hu-ho-hao-te**	**60.64**	**59**	*e*P		**P**		**10 27 04.8**	**-0.4**
HHC				pmax		pmax			

comp=Z,13nm,0.7s

HHC				pmax		pmax			

comp=Z,51nm,3.6s

XAN	**Xi'an**	**61.66**	**67**	*e*P		**P**		**10 27 11.9**	**-0.2**
XAN				pmax		pmax			

comp=Z,6.0nm,1.3s

SCHQ	**Schefferville**	**65.48**	**321**	IAmb		IAmb		10 27 44.5	

comp=Z,225nm,1.4s

SCHQ	**Schefferville**	**65.48**	**321**	P		**P**		**10 27 35.1**	**-1.8**

comp=Z,4.6nm,0.7s,baz=44,slow=6.9,SNR=4.9
comp=Z,4.6nm,0.7s

ILAR	**Eielson Array**	**79.12**	**359**	P		**P**		**10 28 58.5**	**+0.7**
ILAR	**Eielson Array**	**79.12**	**359**	P		**P**		**10 28 57.8**	**0.0**

comp=Z,0.4nm,0.8s,baz=346,slow=5.7,SNR=4.3
comp=Z,0.4nm,0.8s

ILAR	**Eielson Array**	**79.12**	**359**	P		**P**		**10 28 58.5**	**+0.7**

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*ZUR **01** 10:37:44.9,45˚.89N×6˚.91E, h1km, MLh1.5/17, Error ellipse: s-maj=1139.2km s-min=536.4km az=208.0*
*GEN **01** 10:37:44.9,45˚.88N×7˚.01E, h11km±1km, Ml1.1*
*LDG **01** 10:37:45.1±0.1,45˚.88N×6˚.94E, h5km, Md2.2/1, Ml2.1/12, Error ellipse: s-maj=1.2km s-min=1.0km az=112.0*
*ROM **01** 10:37:45.2±0.2,45˚.868N±0˚.008×6˚.97E±0˚.02, h11km, ML1.3/9, Error ellipse: s-maj=1.4km s-min=0.8km az=291.0*

STR 01 10:37:45.3±0.3, 46˚N±2˚×±˚, h5km, MLv1.5/9, 12C-10D, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BLANC	**P.ta Helbronne**	**0.04**	**173**	↑P		Pg	10 37 46.3	-0.5
BLANC				S		Sg	10 37 47.2	-0.8
BLANC	**P.ta Helbronne**	**0.04**	**173**	↑P		Pg	10 37 46.3	-0.5
BLANC				S		Sg	10 37 47.2	-0.7
MFERR	**Prayon, Val Fe**	**0.15**	**62**	↑P		Pg	10 37 48.3	0.0
MFERR				S		Sg	10 37 50.4	+0.1
MFERR	**Prayon, Val Fe**	**0.15**	**62**	↑P		Pg	10 37 48.3	0.0
MFERR				S		Sg	10 37 50.5	+0.2
MRGE	**Morge**	**0.15**	**140**	↑P		Pg	10 37 48.5	+0.1
MRGE				S		Sg	10 37 51.0	+0.7
MRGE	**Morge**	**0.15**	**140**	↑P		Pg	10 37 48.5	+0.1
MRGE				S		Sg	10 37 51.1	+0.8
MRGE	**Morge**	**0.15**	**140**	P		Pg	10 37 48.5	+0.1
MRGE				S		Sg	10 37 51.0	+0.7
MRGE	**Morge**	**0.15**	**140**	P		Pg	10 37 48.5	+0.1
MRGE				S		Sg	10 37 51.1	+0.8
MRGE				AML		AML		

comp=E,174μm,1.0s

MRGE				AML		AML			

comp=N,348μm,0.2s

MRGE				AML		AML			

comp=E,130μm,0.3s

MRGE				AML		AML			

comp=N,347μm,0.2s

REMY	**Saint-Rhmy-en**	**0.17**	**105**	↑P		Pg		10 37 49.0	+0.3
REMY				S		Sg		10 37 51.9	+1.0
REMY	**Saint-Rhmy-en**	**0.17**	**105**	↑P		Pg		10 37 49.0	+0.3
REMY				S		Sg		10 37 52.0	+1.0
REMY	**Saint-Rhmy-en**	**0.17**	**105**	P		Pg		10 37 49.0	+0.3
REMY				S		Sg		10 37 51.9	+1.0
REMY	**Saint-Rhmy-en**	**0.17**	**105**	P		Pg		10 37 49.0	+0.3
REMY				S		Sg		10 37 51.9	+0.9
REMY				AML		AML			

comp=E,143μm,1.5s

REMY				AML		AML			

comp=N,301μm,0.4s

REMY				AML		AML			

comp=E,132μm,0.4s

REMY				AML		AML			

comp=N,226μm,0.1s

REMY	**Saint-Rhmy-en**	**0.17**	**105**	Pg		Pg		10 37 49.0	+0.3
REMY				S		Sg		10 37 51.8	+0.8
SEMOS	**Emosson Stauma**	**0.19**	**2**	↓Pg		Pg		10 37 48.8	-0.3
SEMOS				S		Sg		10 37 51.2	-0.3
SEMOS	**Emosson Stauma**	**0.19**	**2**	↓Pg		Pg		10 37 48.8	-0.3
SEMOS				S		Sg		10 37 51.3	-0.3
OGSI	**Sixt**	**0.22**	**327**	Pg		Pg		10 37 49.1	-0.6
OGSI				S		Sg		10 37 51.9	-0.7
OGSI	**Sixt**	**0.22**	**327**	↑Pg		Pg		10 37 49.1	-0.5
OGSI				S		Sg		10 37 51.9	-0.7
OGSI	**Sixt**	**0.22**	**327**	Pg		Pg		10 37 49.2	-0.5
OGSI				S		Sg		10 37 51.9	-0.6
SALAN	**Lac Salanfe**	**0.26**	**7**	↓Pg		Pg		10 37 50.3	-0.2
SALAN				S		Sg		10 37 53.7	-0.3
SALAN	**Lac Salanfe**	**0.26**	**7**	↓Pg		Pg		10 37 50.3	-0.2
SALAN				S		Sg		10 37 53.8	-0.3
RSL	**Roselend**	**0.29**	**228**	↑Pg		Pg		10 37 50.6	-0.3
RSL				S		Sg		10 37 54.2	-0.5
RSL	**Roselend**	**0.29**	**228**	↑Pg		Pg		10 37 50.6	-0.3
RSL				S		Sg		10 37 54.3	-0.5
RSL	**Roselend**	**0.29**	**228**	P		Pg		10 37 50.6	-0.4
RSL				S		Sg		10 37 54.3	-0.5
RSL	**Roselend**	**0.29**	**228**	Pg		Pg		10 37 50.6	-0.3
RSL				S		Sg		10 37 54.1	-0.6
FULLY	**Reservoir Maze**	**0.31**	**28**	Pg		Pg		10 37 51.1	-0.2
LAVEY	**Lavey les Bain**	**0.33**	**12**	↓Pg		Pg		10 37 51.3	-0.3
LAVEY				S		Sg		10 37 55.5	-0.4
ILLEZ	**Chalet Vouargn**	**0.34**	**2**	↓Pg		Pg		10 37 51.6	-0.4
ILLEZ				S		Sg		10 37 56.0	-0.4
RAW4	**Former Reservo**	**0.37**	**28**	↓Pg		Pg		10 37 52.3	-0.2
RAW4				S		Sg		10 37 57.8	+0.4
DIX	**Grande Dixence**	**0.39**	**59**	Pg		Pg		10 37 52.8	-0.2
DIX				S		Sg		10 37 58.0	-0.1
DIX	**Grande Dixence**	**0.39**	**59**	Pg		Pg		10 37 52.8	-0.2
DIX				S		Sg		10 37 58.1	+0.1
DIX	**Grande Dixence**	**0.39**	**59**	P		Pg		10 37 52.8	-0.1
DIX				S		Sg		10 37 58.0	-0.1
DIX	**Grande Dixence**	**0.39**	**59**	P		Pg		10 37 52.8	-0.1
DIX				S		Sg		10 37 58.3	+0.2
DIX				AML		AML			

comp=E,197μm,0.2s

DIX				AML		AML			

comp=N,187μm,1.0s

DIX				AML		AML			

comp=E,197μm,0.2s

DIX				AML		AML			

comp=N,178μm,0.2s

DIX	**Grande Dixence**	**0.39**	**59**	Pg		Pg		10 37 52.8	-0.1
DIX				S		Sg		10 37 58.0	-0.1
GRYON	**Gryon**	**0.39**	**19**	↓Pg		Pg		10 37 52.6	-0.3
GRYON				S		Sg		10 37 57.8	-0.2
LPL	**La Plagne**	**0.39**	**201**	*e*Pg		Pg		10 37 52.8	-0.1
LPL				*e*Sg		Sg		10 37 57.9	-0.1

comp=N,1106μm,31.2s

LPG	**La Plagne**	**0.40**	**198**	*e*Pg		Pg		10 37 53.1	-0.1
LPG				*e*Sg		Sg		10 37 58.5	0.0

comp=N,16nm,0.3s

SHER	**Hrmence, R**	**0.45**	**47**	↑Pg		Pg		10 37 53.9	0.0
SHER				S		Sg		10 38 00.1	+0.3
LSD	**Lago del Serru**	**0.45**	**161**	Pg		Pg		10 37 53.9	-0.1
LSD	**Lago del Serru**	**0.45**	**161**	Pg		Pg		10 37 53.9	0.0
LSD				Sg		Sg		10 37 59.8	0.0
LSD	**Lago del Serru**	**0.45**	**161**	P		Pg		10 37 53.9	-0.1
LSD				S		Sg		10 37 59.8	0.0
LSD	**Lago del Serru**	**0.45**	**161**	P		Pg		10 37 54.0	0.0
LSD				S		Sg		10 38 00.0	+0.2
LSD				AML		AML			

comp=E,47μm,1.1s

LSD				AML		AML			

comp=N,33μm,1.6s

LSD				AML		AML			

comp=E,37μm,0.1s

LSD				AML		AML			

comp=N,23μm,0.1s

LSD	**Lago del Serru**	**0.45**	**161**	Pg		Pg		10 37 53.9	0.0
LSD				Sg		Sg		10 38 00.0	+0.2
AIGLE	**Aigle**	**0.46**	**2**	↓Pg		Pg		10 37 53.9	-0.3
AIGLE				Sg		Sg		10 37 59.8	-0.4
AIGLE	**Aigle**	**0.46**	**2**	↓Pg		Pg		10 37 53.9	-0.3
AIGLE				Sg		Sg		10 37 59.9	-0.4
AIGLE	**Aigle**	**0.46**	**2**	Pg		Pg		10 37 54.0	-0.2
AIGLE				Sg		Sg		10 37 59.8	-0.4
RAW2	**Sanetsch, VS**	**0.51**	**32**	Pg		Pg		10 37 54.9	-0.2
RAW2				Sg		Sg		10 38 02.2	+0.4
MH44	**Zermatt, Posit**	**0.53**	**79**	Pg		Pg		10 37 55.0	-0.5
CIRO	**Champorcher**	**0.53**	**122**	Pg		Pg		10 37 55.3	-0.2
CIRO	**Champorcher**	**0.53**	**122**	Pg		Pg		10 37 55.3	-0.2
CIRO				Sg		Sg		10 38 02.5	+0.1
CIRO	**Champorcher**	**0.53**	**122**	P		Pg		10 37 55.3	-0.2
CIRO				S		Sg		10 38 02.5	+0.1
CIRO	**Champorcher**	**0.53**	**122**	P		Pg		10 37 55.3	-0.2
CIRO				S		Sg		10 38 02.5	+0.1
CIRO	**Champorcher**	**0.53**	**122**	Pg		Pg		10 37 55.4	-0.2
CIRO				Sg		Sg		10 38 02.5	+0.1
SENIN	**Lac Senin/Sane**	**0.55**	**28**	P		Pg		10 37 55.6	-0.3
SENIN				S		Sg		10 38 03.1	+0.1
VANNI	**Vissoie, Val d**	**0.57**	**55**	P		Pg		10 37 56.2	-0.1
VANNI				S		Sg		10 38 03.4	-0.3
SATI	**Passo dei Sala**	**0.66**	**90**	P		Pg		10 37 57.9	-0.1
SATI				S		Sg		10 38 06.0	-0.6
SATI	**Passo dei Sala**	**0.66**	**90**	Pg		Pg		10 37 58.0	0.0
SATI				Sg		Sg		10 38 06.4	-0.2
TRAV	**Traversella**	**0.68**	**122**	P		Pg		10 37 58.2	-0.2
TRAV	**Traversella**	**0.68**	**122**	Pg		Pg		10 37 58.2	-0.3
TRAV				Sg		Sg		10 38 07.7	+0.4
EMBD	**Embd, Matterta**	**0.71**	**62**	P		Pg		10 37 58.5	-0.5
EMBD				S		Sg		10 38 07.5	-0.8
EMBD	**Embd, Matterta**	**0.71**	**62**	Pg		Pg		10 37 58.5	-0.5
EMBD				Sg		Sg		10 38 08.8	+0.5
OGMY	**Moye**	**0.72**	**270**	Pg		Pg		10 37 59.0	-0.2
MMK	**Mattmark**	**0.74**	**76**	P		Pg		10 37 59.3	-0.3
MMK				S		Sg		10 38 08.1	-1.2
RSP	**Reno Superiore**	**0.77**	**162**	P		Pg		10 37 59.5	-0.6
RSP				S		Sg		10 38 10.7	+0.6
RSP	**Reno Superiore**	**0.77**	**162**	P		Pg		10 37 59.8	-0.3
RSP				S		Sg		10 38 09.4	-0.7
RSP				AML		AML			

comp=E,18μm,0.2s

RSP	**Reno Superiore**	**0.77**	**162**	Pg		Pg		10 37 59.9	-0.2
RSP				Sg		Sg		10 38 10.7	+0.6
LAUCH	**Lauchernalp**	**0.79**	**47**	P		Pg		10 38 00.1	-0.4
SIMPL	**Simplonpass**	**0.84**	**64**	P		Pg		10 38 00.8	-0.7
SIMPL				S		Sg		10 38 12.1	-0.3
TORNY	**Torny/Romont**	**0.89**	**1**	Pg		Pg		10 38 02.6	+0.2
TORNY				Sg		Sb		10 38 14.9	-0.7
OGSM	**Saint Maurice**	**0.90**	**253**	Pg		Pg		10 38 02.6	0.0
OGSM				Sg		Sg		10 38 14.8	+0.5
CABF	**La Chapelle**	**0.93**	**322**	*e*Pg		Pg		10 38 03.1	-0.1
CABF				*e*Sg		Sn		10 38 18.4	-0.6

comp=E,21nm,0.3s

OG35	**Corcelles**	**0.96**	**280**	Pg		Pg		10 38 03.6	-0.1
OG35				Sg		Sg		10 38 16.5	+0.3
RRL	**Rocca Remolon**	**0.97**	**186**	Pg		Pg		10 38 03.8	0.0
RRL				Sg		Sg		10 38 16.9	+0.5
BHB	**Bricherasio**	**1.07**	**167**	Pg		Pg		10 38 05.7	-0.1
BHB				Sg		Sg		10 38 19.6	0.0
BRANT	**Les Verrieres**	**1.10**	**344**	Pg		Pg		10 38 06.4	0.0
RIVEL	**MONT RIVEL**	**1.12**	**322**	Pg		Pb		10 38 07.4	+0.2
RIVEL				Sg		Sb		10 38 22.0	-0.1
MBDF	**Montbardon**	**1.16**	**186**	*e*Pg		Pg		10 38 06.8	-0.7
MBDF				*e*Sg		Sg		10 38 22.0	-0.6

comp=E,3.0nm,0.4s

ORIF	**Oris-en-Rattie**	**1.21**	**218**	*e*Pg		Pg		10 38 07.4	-1.2
ORIF				*e*Sg		Sg		10 38 23.4	-0.9

comp=E,11nm,0.6s

CHMF	**Charmoille**	**1.38**	**352**	Pn		Pn		10 38 11.1	-0.2
CHMF				Sn		Sb		10 38 29.6	0.0
VIVF	**Saint-Julien-l**	**1.89**	**238**	*e*Pg		Pb		10 38 20.5	+0.2
VIVF				*e*Sg		Sb		10 38 44.3	0.0

comp=E,3.5nm,0.3s

HINF	**Hinteralfeld**	**1.94**	**359**	*e*Pn		Pn		10 38 17.9	-1.0
HINF	**Hinteralfeld**	**1.94**	**359**	*e*Pg		Pb		10 38 21.2	+0.1
HINF				*e*Sg		Sb		10 38 45.9	+0.3

comp=E,2.8nm,0.3s

HAU	**Haudompre**	**2.16**	**350**	*e*Pn		Pn		10 38 20.9	-1.1
HAU	**Haudompre**	**2.16**	**350**	*e*Pg		Pg		10 38 26.2	-0.5
SMF	**Signal de Mont**	**2.27**	**291**	*e*Pn		Pn		10 38 21.3	-2.2
SMF	**Signal de Mont**	**2.27**	**291**	*e*Pg		Pb		10 38 27.1	+0.3
SMF				*e*Sn		Sn		10 38 48.6	-3.3
SMF				*e*Sg		Sb		10 38 56.2	+1.0

comp=E,4.0nm,0.3s

LOR	**Lormes**	**2.53**	**304**	*e*Pg		Pg		10 38 32.8	-1.0

baz=124

LOR				*e*Sn		Sn		10 38 54.8	-3.5
LOR				*e*Sg		Sg		10 39 05.1	-1.5

comp=E,2.6nm,0.3s

CDF	**Champ du Feu**	**2.54**	**5**	*e*Pn		Pn		10 38 26.1	-1.2
CDF	**Champ du Feu**	**2.54**	**5**	*e*Pg		Pb		10 38 32.6	+1.1
CDF				*e*Sg		Sb		10 39 04.6	+1.5

comp=E,1.3nm,0.5s

AVF	**Avril sur Loir**	**2.64**	**291**	*e*Pg		Pg		10 38 34.9	-0.9
AVF				*e*Sg		Sb		10 39 07.4	+1.7

comp=E,1.7nm,0.3s

SSF	**Saint Saulge**	**2.64**	**298**	*e*Pn		Pn		10 38 27.2	-1.4
SSF	**Saint Saulge**	**2.64**	**298**	*e*Pg		Pg		10 38 34.7	-1.2
SSF				*e*Sn		Sn		10 38 57.4	-3.6
SSF				*e*Sg		Sg		10 39 08.9	-1.3

comp=E,3.1nm,0.5s

TCF	**Toulx Ste Croi**	**3.31**	**279**	*e*Pn		Pn		10 38 36.1	-1.7
TCF	**Toulx Ste Croi**	**3.31**	**279**	*e*Pg		Pg		10 38 47.0	-1.7
TCF				*e*Sg		Sg		10 39 29.7	-1.8

comp=E,1.0nm,0.3s

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*IDC **01** 10:46:44.4±0.7, 2˚.76N×128˚.30E, h0km, mb4.0/12, mbtmp4.0/13, ML3.9/1, MS3.3/2, Error ellipse: s-maj=32.6km s-min=13.6km az=75.0*
*DJA **01** 10:46:49.6±0.6, 3˚N±3˚×12˚8E±˚, h17km±3km, M4.5/15, mB5.1/5, mb4.5/6, MLv4.5/15, Mw(mB)4.4/5*
*NEIC **01** 10:46:52.4±1.4, 2˚.69N±0˚.08×128˚.4E±0˚.1, h54km±6km, mb4.2/12, Error ellipse: s-maj=16.1km s-min=9.8km az=68.0*

ISC 01 10:46:50.2±0.6, 2˚.78N±0˚.06×128˚.37E±0˚.06, h35km, n53, σ1s37/53, mb4.1/14, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**2.23**	**207**			**Pn**	**10 47 25.2**	**+0.5**
TNTI	**Ternate**	**2.23**	**207**	P		**Pn**	**10 47 25.0**	**+0.3**
TNTI	**Ternate**	**2.23**	**207**	P		**Pn**	**10 47 24.8**	**+0.1**
SGSI	**Sangihe**	**2.98**	**288**	P		**Pn**	**10 47 35.2**	**+0.2**
SGSI				S		**Sn**	**10 48 12.4**	**+2.8**
SWI	**Sorong**	**4.62**	**141**	P		**Pn**	**10 47 58.8**	**+1.1**
SWI				S		**Sn**	**10 48 52.2**	**+2.0**
KMSI	**Cibinong**	**4.90**	**244**	P		**Pn**	**10 48 03.2**	**+1.7**
KMSI				S		**Sn**	**10 48 58.9**	**+1.8**
SANI	**Sanana**	**5.35**	**206**	P		**Pn**	**10 48 08.5**	**+0.8**
SANI	**Sanana**	**5.35**	**206**	P		**Pn**	**10 48 07.9**	**+0.2**

0.1nm29nm,0.8s

SANI				S		**Sn**	**10 49 09.8**	**+1.7**

0.1nm29nm,0.8s

NLAI	**Namlea**	**6.11**	**192**	P		**Pn**	**10 48 20.5**	**+2.4**

0.1nm40nm,0.6s

LUWI	**Luwuk**	**6.76**	**236**	P		**Pn**	**10 48 28.8**	**+1.8**
LUWI				S		**Sn**	**10 49 44.4**	**+1.5**
MRSI	**Marisa**	**6.82**	**251**	P		**Pn**	**10 48 29.6**	**+1.7**

0.3nm970nm48nm,0.5s

FAKI	**Fak Fak**	**6.86**	**146**	Pn		**Pn**	**10 48 29.8**	**+1.4**
FAKI	**Fak Fak**	**6.86**	**146**	P		**Pn**	**10 48 28.7**	**+0.3**

0.1nm19nm,0.8s

TOLI2	**Tolitoli**	**7.76**	**258**			**Pn**	**10 48 40.6**	**-0.3**
TOLI2	**Tolitoli**	**7.76**	**258**	P		**Pn**	**10 48 40.2**	**-0.6**

MYLDM	**Lahad Datu**	**10.13**	**284**	Pn		**Pn**	**10 49 15.7**	**+2.4**
MYLDM	**Lahad Datu**	**10.13**	**284**	P		**Pn**	**10 49 16.1**	**+2.8**
KAPI	**Kappang**	**11.58**	**228**	Pn		**Pn**	**10 49 30.3**	**-2.8**

0.9nm,0.3s,baz=106,slow=22,SNR=1.6

KAPI				Sn		**Sn**	**10 51 39.5**	**-1.7**

1.1nm,0.3s,baz=57,slow=17,SNR=1.3
3.6nm,0.3s

BATI	**Baumata**	**13.72**	**200**	LR		LR		10 56 19.0	

comp=Z,135nm,18.3s,baz=250,slow=42

SBUM	**Sibu**	**16.14**	**269**	P		**P**		**10 50 37.9**	**+0.5**
SBUM				IAmb		IAmb		10 50 39.8	

comp=Z,15nm,0.8s

JAGI	**Jajag, Banyuwa**	**18.05**	**232**			**Pn**		**10 50 58.1**	**-0.3**
JAGI				IAmb		IAmb		10 51 01.3	

comp=Z,25nm,1.1s

KNRA	**Kununurra**	**18.34**	**179**	P		**P**		**10 51 01.0**	**-0.8**
KNRA				IAmb		IAmb		10 51 03.3	

comp=Z,8.9nm,0.7s

FITZ	**Fitzroy Crossi**	**20.92**	**187**	P		**P**		**10 51 28.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**20.92**	**187**	P		**P**		**10 51 28.3**	**-1.6**

comp=Z,2.3nm,0.5s,baz=24,slow=9.4,SNR=11

FITZ				LR		LR		11 00 08.7	

comp=Z,66nm,18.4s,baz=14,slow=38
comp=Z,2.3nm,0.5s

TPUB	**Ta-pu**	**21.74**	**340**	P		**P**		**10 51 38.9**	**+0.2**
WB0	**Warramunga Arr**	**23.17**	**165**			**P**		**10 51 52.8**	**-1.1**
WRAB	**Tennant Creek**	**23.32**	**166**	P		**P**		**10 51 54.4**	**-1.0**
WRAB				IAmb		IAmb		10 51 55.0	

comp=Z,5.5nm,0.5s

WRA	**Warramunga Arr**	**23.32**	**166**			**P**		**10 51 53.3**	**-2.1**
WRA	**Warramunga Arr**	**23.32**	**166**	P		**P**		**10 51 54.2**	**-1.2**

comp=Z,4.2nm,0.3s,baz=344,slow=10,SNR=81
comp=Z,4.2nm,0.3s

WR8	**Warramunga Arr**	**23.38**	**165**			**P**		**10 51 55.1**	**-0.8**
WR8				IAmb		IAmb		10 51 56.9	

comp=Z,6.0nm,0.8s

AS31	**Alice Springs**	**26.83**	**169**	P		**P**		**10 52 26.5**	**-1.0**
ASAR	**Alice Springs**	**26.83**	**169**	P		**P**		**10 52 26.5**	**-1.0**

comp=Z,1.0nm,0.5s,baz=356,slow=8.2,SNR=30

ASAR				PcP		**PcP**		**10 55 48.5**	**-1.3**

comp=Z,0.3nm,0.6s,baz=342,slow=2.3,SNR=4.9
comp=Z,1.0nm,0.5s

**CM

0.2nm,0.3s,baz=356,slow=5.0,SNR=9.0
0.2nm,0.3s
FINES FINESS Array B 70.11 332 P **P** 11 17 56.4 -0.3
0.6nm,0.4s,baz=69,slow=6.9,SNR=8.7
0.6nm,0.4s
ESDC Sonseca Array 98.61 331 P Pdif 11 20 20.9 -0.8
0.2nm,0.4s,baz=334,slow=7.1,SNR=1.5
0.2nm,0.4s

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*IDC **01** 11:32:47.0±2.9,5.97S×145.57E,h84km±28km,mb3.5/5, mbtmp3.9/8,Error ellipse: s-maj=40.8km s-min=20.5km az=72.0*

ISC 01 11:32:47.9±1.6,6.0S±0.2×145.7E±0.2,h109km,n8, σ1.93/9,mb3.9/4,New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.68**	**157**	P		**Pn**	**11 33 42.8**	**-0.1**
	128nm,0.4s,baz=324,slow=8.7,SNR=96							
PMG				S		**Sn**	**11 34 23.1**	**-2.5**
	141nm,0.4s,baz=336,slow=20,SNR=26							
JAY	**Jayapura**	**6.05**	**305**	P		**Pn**	**11 34 12.3**	**-2.8**
	9.3nm,0.6s,baz=150,slow=18,SNR=1.2							
WRA	**Warramunga Arr**	**17.70**	**217**	P		**P**	**11 36 47.0**	**0.0**
	0.6nm,0.5s,baz=42,slow=12,SNR=5.3							
ASAR	**Alice Springs**	**20.89**	**212**	P		**P**	**11 37 22.6**	**+1.0**
	0.5nm,0.5s,baz=47,slow=8.2,SNR=10							
	0.5nm,0.5s							
FITZ	**Fitzroy Crossi**	**22.95**	**237**	P		**P**	**11 37 42.9**	**-0.2**
	3.2nm,0.7s,baz=72,slow=12,SNR=6.9							
	3.2nm,0.7s							
STKA	**Stephens Creek**	**26.02**	**188**	P		**P**	**11 38 12.9**	**+2.1**
	2.9nm,0.8s,baz=10,slow=11,SNR=5.0							
	2.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**52.10**	**299**	P		**P**	**11 41 49.0**	**+1.8**
	1.5nm,0.6s,baz=124,slow=5.8,SNR=11							
	1.5nm,0.6s							
MKAR	**Makanchi Array**	**76.67**	**321**	P		**P**	**11 44 27.4**	**+0.5**
	0.4nm,0.6s,baz=111,slow=6.6,SNR=4.6							
	0.4nm,0.6s							

ROM 01 11:51:04.1±0.1,43.372N±0.003×12.722E±0.004, h13km,ML1.0/12,4D,Error ellipse: s-maj=0.3km s-min=0.1km az=253.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ATSC	**Scheggia e Pas**	**0.06**	**333**	P		Pg	11 51 06.9	+0.2
ATSC				S		Sg	11 51 08.9	+0.3
SSFR	**Montelago di S**	**0.08**	**34**	P		Pg	11 51 07.1	+0.2
SSFR				S		Sg	11 51 09.3	+0.4
FOSV	**Fossato di Vic**	**0.08**	**160**	⇓P		Pg	11 51 07.1	+0.2
FOSV				S		Sg	11 51 09.2	+0.4
FOSV					AML	AML		
	comp=E,86μm,0.1s							
FOSV					AML	AML		
	comp=N,68μm,0.4s							
ATFO	**Monte Foce - G**	**0.11**	**267**	P		Pg	11 51 07.5	+0.2
ATFO				S		Sg	11 51 09.9	+0.3
ATFO					AML	AML		
	comp=N,89μm,0.8s							
ATFO					AML	AML		
	comp=E,190μm,0.2s							
FRON	**Frontone**	**0.15**	**1**	P		Pg	11 51 07.9	+0.2
FRON				S		Sg	11 51 10.9	+0.7
FRON					AML	AML		
	comp=N,91μm,0.3s							
FRON					AML	AML		
	comp=E,76μm,0.4s							
ATBU	**Serra di Buran**	**0.16**	**309**	P		Pg	11 51 08.3	+0.3
ATBU				S		Sb	11 51 11.8	-0.5
MURB	**Monte Urbino**	**0.18**	**233**	P		Pg	11 51 08.6	+0.3
MURB				S		Sb	11 51 12.2	-0.6
MURB					AML	AML		
	comp=N,101μm,0.2s							
MURB					AML	AML		
	comp=E,115μm,1.0s							
MURB					AML	AML		
	comp=E,115μm,1.0s							
ATCC	**AVT- Casa Cast**	**0.20**	**198**	P		Pg	11 51 08.7	+0.2
ATCC				S		Sb	11 51 12.5	-0.7
ATCC					AML	AML		
	comp=E,49μm,1.6s							
ATCC					AML	AML		
	comp=E,49μm,1.6s							
ATCC					AML	AML		
	comp=N,78μm,0.2s							
ATCC					AML	AML		
	comp=E,49μm,0.4s							
ARVD	**Arcevia**	**0.20**	**52**	⇓P		Pg	11 51 08.3	-0.3
ARVD				S		Sg	11 51 12.4	+0.7
ARVD					AML	AML		
	comp=N,56μm,0.2s							
ARVD					AML	AML		
	comp=E,97μm,0.1s							
ARVD					AML	AML		
	comp=N,56μm,1.8s							
ATVO	**AVT- Monte Val**	**0.23**	**273**	⇓P		Pg	11 51 09.2	+0.1
ATVO				S		Sg	11 51 13.1	+0.6
MPAG	**Monte Paganucc**	**0.26**	**6**	P		Pg	11 51 10.0	+0.4
MPAG				S		Sb	11 51 14.7	-0.4
EL6	**Elcito**	**0.28**	**99**	⇓P		Pg	11 51 10.3	+0.3
EL6				S		Sb	11 51 15.2	-0.5

ROM 01 11:51:51.2±0.1,44.200N±0.006×11.84E±0.01,h24km±1km, ML2.0/52,3C-4D,Error ellipse: s-maj=0.8km s-min=0.2km az=74.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
FAEN	**Faenza**	**0.09**	**18**	P		Pb	11 51 55.3	-0.3
FAEN				S		Sb	11 51 60.0	+1.4
LMD	**Lutirano**	**0.15**	**217**	⇓P		Pb	11 51 55.6	-0.6
LMD				S		Sb	11 51 59.4	-0.2
LMD					AML	AML		
	comp=N,9765μm,0.1s							
LMD					AML	AML		
	comp=E,6240μm,0.2s							
LMD					AML	AML		
	comp=E,6237μm,0.2s							
LMD					AML	AML		
	comp=N,9782μm,0.1s							
IMOL	**Imola, Italy**	**0.17**	**337**	⇑P		Pb	11 51 56.6	+0.3
IMOL				S		Sb	11 52 01.7	+1.9
IMOL					AML	AML		
	comp=E,7245μm,0.3s							
IMOL					AML	AML		
	comp=N,2960μm,0.2s							
IMOL					AML	AML		
	comp=N,2958μm,0.2s							
IMOL					AML	AML		
	comp=E,7247μm,0.3s							
IMOL					AML	AML		
	comp=E,7245μm,0.3s							
BRSN	**Barisano**	**0.19**	**64**	P		Pb	11 51 56.5	-0.1
BRSN				S		Sb	11 52 01.9	+1.7
BRIS	**BRISIGHELLA**	**0.24**	**258**	⇑P		Pb	11 51 54.8	-2.4
BRIS				S		Sb	11 51 57.9	-3.5
BRIS					AML	AML		
	comp=E,3775μm,0.3s							
BRIS					AML	AML		
	comp=N,2610μm,0.3s							
BRIS					AML	AML		
	comp=E,3770μm,0.3s							
BRIS					AML	AML		
	comp=N,2605μm,0.3s							
BRIS					AML	AML		
	comp=E,3770μm,0.3s							
BRIS					AML	AML		
	comp=N,2605μm,0.3s							
BRIS					AML	AML		
	comp=E,4220μm,0.3s							
BRIS					AML	AML		
	comp=N,2390μm,0.3s							
BRIS					AML	AML		
	comp=E,4222μm,0.3s							
BRIS					AML	AML		
	comp=N,2393μm,0.3s							
BRIS					AML	AML		
	comp=N,2606μm,0.3s							
BRIS					AML	AML		
	comp=E,3772μm,0.3s							
SFI	**Santa Sofia**	**0.29**	**179**	⇓P		Pb	11 51 57.5	-0.5
SFI				S		Sb	11 52 02.9	+0.1
SFI					AML	AML		
	comp=N,448μm,0.5s							
SFI					AML	AML		
	comp=N,500μm,0.5s							
SFI					AML	AML		
	comp=E,804μm,0.5s							
SFI					AML	AML		
	comp=N,448μm,0.5s							
SFI					AML	AML		
	comp=E,768μm,0.5s							
SFI					AML	AML		
	comp=N,410μm,0.2s							
SFI					AML	AML		
	comp=E,747μm,0.2s							
SFI					AML	AML		
	comp=E,735μm,0.2s							
SFI					AML	AML		
	comp=N,392μm,0.2s							
MTRZ	**Monterenzio**	**0.32**	**304**	⇑P		Pb	11 51 59.1	+0.7
SEI	**Scarperia**	**0.38**	**247**	P		Pb	11 51 59.2	-0.1
SEI				S		Sb	11 52 05.6	+0.8
SEI					AML	AML		
	comp=E,652μm,0.2s							
SEI					AML	AML		
	comp=N,1450μm,0.4s							
SEI					AML	AML		
	comp=E,652μm,0.2s							
SEI					AML	AML		
	comp=N,1449μm,0.4s							
SEI					AML	AML		
	comp=E,652μm,1.8s							
ASQU	**Asqua**	**0.41**	**185**	⇓P		Pb	11 51 59.3	-0.5
ASQU				S		Sb	11 52 06.0	+0.3
ASQU					AML	AML		
	comp=N,170μm,0.8s							
ASQU					AML	AML		
	comp=E,228μm,0.3s							
ASQU					AML	AML		
	comp=E,227μm,0.3s							
ASQU					AML	AML		
	comp=N,157μm,0.2s							
RUFI	**Rufina**	**0.43**	**213**	⇓P		Pb	11 51 60.0	-0.2
RUFI				S		Sb	11 52 07.2	+0.9
RUFI					AML	AML		
	comp=E,220μm,0.9s							
RUFI					AML	AML		
	comp=N,96μm,1.3s							
RUFI					AML	AML		
	comp=E,152μm,0.3s							
RUFI					AML	AML		
	comp=N,89μm,0.3s							
MOCL	**Monte Cuccoli**	**0.51**	**248**	P		Pb	11 52 01.8	+0.2
MOCL				S		Sb	11 52 09.9	+1.2
MOCL					AML	AML		
	comp=N,136μm,0.3s							
MOCL					AML	AML		
	comp=E,130μm,0.8s							
MOCL					AML	AML		
	comp=N,136μm,0.3s							
MOCL					AML	AML		
	comp=E,128μm,0.3s							
MOCL					AML	AML		
	comp=N,136μm,0.3s							
CPGN	**Carpegna, Ital**	**0.53**	**139**	P		Pb	11 52 02.3	+0.3
CPGN				S		Sn	11 52 11.9	+0.2
CPGN					AML	AML		
	comp=E,167μm,0.7s							
CPGN					AML	AML		
	comp=N,292μm,0.8s							
CPGN					AML	AML		
	comp=E,168μm,0.7s							
CPGN					AML	AML		
	comp=N,208μm,0.3s							
CPGN					AML	AML		
	comp=E,314μm,0.3s							
CPGN					AML	AML		
	comp=E,167μm,0.7s							
CRE	**Caprese Michel**	**0.59**	**172**	P		Pb	11 52 02.4	-0.5
CRE				S		Sn	11 52 12.0	-1.1
CRE					AML	AML		
	comp=E,164μm,0.6s							
CRE					AML	AML		
	comp=N,249μm,0.2s							
CRE					AML	AML		
	comp=E,105μm,0.6s							
CRE					AML	AML		
	comp=N,249μm,0.2s							
MPPT	**Montemurlo**	**0.59**	**246**	P		Pb	11 52 03.3	+0.4
MPPT				S		Sn	11 52 12.8	-0.3
PARC	**Parchiule**	**0.62**	**152**	P		Pb	11 52 03.1	-0.4
PARC				S		Sn	11 52 12.9	-1.0
PARC					AML	AML		
	comp=E,136μm,1.3s							
PARC					AML	AML		
	comp=N,121μm,0.6s							
PARC					AML	AML		
	comp=E,99μm,0.3s							
PARC					AML	AML		
	comp=N,114μm,0.3s							
SSP9	**Sansepolcro**	**0.66**	**161**	P		Pb	11 52 03.8	-0.3
SSP9				S		Sn	11 52 14.1	-0.7
SSP9					AML	AML		
	comp=E,63μm,0.5s							
SSP9					AML	AML		
	comp=N,91μm,0.6s							
PE3	**Peglio**	**0.69**	**136**	P		Pb	11 52 04.7	0.0
PE3				S		Sn	11 52 16.7	+1.1
PE3					AML	AML		
	comp=E,537μm,1.1s							
PE3					AML	AML		
	comp=N,657μm,0.4s							
PE3					AML	AML		
	comp=E,523μm,0.4s							
PE3					AML	AML		
	comp=N,657μm,0.4s							
PESA	**Pesaro**	**0.77**	**109**	P		Pn	11 52 06.9	+0.3
OSSC	**Osservatorio P**	**0.80**	**213**	P		Pn	11 52 07.2	+0.2
OSSC					AML	AML		
	comp=E,56μm,0.6s							
OSSC					AML	AML		
	comp=N,64μm,1.1s							
OSSC					AML	AML		
	comp=E,121μm,0.6s							
OSSC					AML	AML		
	comp=N,58μm,0.7s							
OSSC					AML	AML		
	comp=E,56μm,0.6s							
CSNT	**Castellina Chi**	**0.83**	**209**	P		Pn	11 52 07.8	+0.4
CSNT					AML	AML		
	comp=E,39μm,0.4s							
CSNT					AML	AML		
	comp=N,67μm,0.5s							
CSNT					AML	AML		
	comp=N,67μm,0.5s							
CSNT					AML	AML		
	comp=E,39μm,0.4s							
PIEI	**Pieia**	**0.83**	**143**	P		Pb	11 52 06.6	-0.4
PIEI					AML	AML		
	comp=E,64μm,1.6s							
PIEI					AML	AML		
	comp=N,46μm,0.7s							
PIEI					AML	AML		
	comp=N,32μm,0.3s							
PIEI					AML	AML		
	comp=E,59μm,0.3s							
MPAG	**Monte Paganucc**	**0.88**	**130**	P		Pb	11 52 07.6	-0.2
MPAG					AML	AML		
	comp=E,52μm,0.7s							
MPAG					AML	AML		
	comp=N,77μm,0.4s							
MPAG					AML	AML		
	comp=E,50μm,0.4s							
MPAG					AML	AML		
	comp=N,77μm,0.4s							
MPAG					AML	AML		
	comp=N,77μm,1.6s							
MPAG					AML	AML		
	comp=E,50μm,1.6s							
BDI	**Bagni Di Lucca**	**0.90**	**262**	P		Pn	11 52 09.4	+0.9
ATVO	**AVT- Monte Val**	**0.92**	**153**	P		Pn	11 52 08.6	-0.1
ATVO					AML	AML		
	comp=N,74μm,0.4s							
ATVO					AML	AML		
	comp=E,75μm,0.8s							
ATVO					AML	AML		
	comp=E,75μm,0.7s							
ATVO					AML	AML		
	comp=N,74μm,0.4s							
FRON	**Frontone**	**0.94**	**136**	P		Pb	11 52 08.8	0.0
FRON					AML	AML		
	comp=N,66μm,1.2s							
FRON					AML	AML		
	comp=E,47μm,1.6s							
FRON					AML	AML		
	comp=N,53μm,0.2s							
FRON					AML	AML		
	comp=E,40μm,0.6s							
TEOL	**Teolo**	**1.17**	**354**	P		Pn	11 52 12.1	0.0
EQUI	**Equi**	**1.21**	**269**	P		Pb	11 52 15.1	+1.6
MARN	**Marana (Italy)**	**1.50**	**343**	P		Pn	11 52 17.0	+0.3
CGRP	**Cima Grappa**	**1.68**	**359**	P		Pn	11 52 19.2	-0.1
CGRP					AML	AML		
	comp=N,41μm,0.5s							
CGRP					AML	AML		
	comp=E,50μm,0.3s							
DOSS	**Dosso del Somm**	**1.74**	**345**	P		Pn	11 52 20.4	+0.3
DOSS					AML	AML		
	comp=E,54μm,0.5s							
DOSS					AML	AML		
	comp=N,41μm,0.5s							
DOSS					AML	AML		
	comp=N,40μm,0.3s							
DOSS					AML	AML		
	comp=E,54μm,0.5s							
VARA	**Varagna**	**1.76**	**338**	P		Pn	11 52 20.7	+0.3
VARA					AML	AML		
	comp=E,65μm,0.2s							
VARA					AML	AML		
	comp=N,56μm,1.2s							
VARA					AML	AML		
	comp=E,65μm,0.2s							
VARA					AML	AML		
	comp=N,49μm,0.4s							
PANI	**Panarotta**	**1.88**	**349**		AML	AML		
	comp=E,20μm,0.2s							
PANI					AML	AML		
	comp=N,24μm,0.3s							
PANI					AML	AML		
	comp=N,24μm,1.7s							
VINO	**Villanova**	**2.29**	**26**		AML	AML		
	comp=N,15μm,0.5s							
VINO					AML	AML		
	comp=E,22μm,1.4s							
VINO					AML	AML		
	comp=N,18μm,1.2s							
VINO					AML	AML		
	comp=E,14μm,0.4s							
SQTA	**Sankt Quirin**	**3.05**	**352**	*e*Pn		Pn	11 52 40.8	+2.7
	comp=E,0.5nm,0.1s							
SQTA				*e*Sn		Sb	11 53 18.4	-3.4
	comp=E,1.4nm,0.2s							
WTTA	**Wattenberg**	**3.07**	**357**	*e*Pn		Pn	11 52 40.8	+2.4
	comp=E,1.2nm,0.4s							
WTTA				*e*Sn		Sn	11 53 16.7	+2.3
	comp=E,1.3nm,0.4s							
WATA	**Walderalm**	**3.14**	**357**	*e*Pn		Pn	11 52 41.4	+2.1
	comp=E,0.3nm,0.1s							
WATA				*e*Sn		Sn	11 53 20.1	+3.9
	comp=E,0.9nm,0.3s							
MOTA	**Moosalm**	**3.19**	**351**	*e*Pn		Pn	11 52 41.1	+1.1
	comp=E,0.1nm,0.1s							
LESA	**Schwarzleotal**	**3.28**	**10**	*i* Pn		Pn	11 52 43.9	+2.7
	comp=E,0.5nm,0.2s							
LESA				*e*Sn		Sn	11 53 21.9	+2.5
	comp=E,1.1nm,0.3s							

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*IDC **01** 12:03:21.1±1.3,31.05S×178.34W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=35.6km s-min=22.3km az=102.0*

ISC 01 12:03:23.2±1.5,31.2S±0.2×178.4W±0.7,h87km,n18, σ1.66/25,mb4.2/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.98**	**13**	P		**Pn**	**12 03 55.9**	**+0.8**
GLKZ				S		**Sn**	**12 04 16.9**	**-2.4**
RAO	**Raoul Island**	**1.99**	**13**	Pn		**Pn**	**12 03 55.1**	**-0.1**
	47nm,0.3s,baz=126,slow=19,SNR=1.3							
RAO					Sn	**Sn**	**12 04 18.3**	**-1.2**
	141nm,0.3s,baz=287,slow=19,SNR=6.1							
RIZ	**Raoul Island**	**2.00**	**13**	S		**Sn**	**12 04 19.5**	**-0.1**
WMGZ	**Waiomatatini S**	**7.10**	**201**	P		**Pn**	**12 05 03.7**	**-0.6**
WMGZ				S		**Sn**	**12 06 23.5**	**+0.2**
PKGZ	**Pakihiroa**	**7.24**	**202**	P		**Pn**	**12 05 05.8**	**-0.5**
PKGZ				S		**Sn**	**12 06 28.2**	**+1.2**
HAZ	**Te Kaha**	**7.25**	**204**	P		**Pn**	**12 05 05.6**	**-0.7**
HAZ				S		**Sn**	**12 06 30.0**	**+3.0**
PUZ	**Puketiti**	**7.38**	**201**	P		**Pn**	**12 05 06.4**	**-1.7**
PUZ				S		**Sn**	**12 06 28.8**	**-1.5**
RUGZ	**Raukumara Rang**	**7.47**	**204**	P		**Pn**	**12 05 08.6**	**-0.9**
RUGZ				S		**Sn**	**12 06 33.0**	**+0.3**
OUZ	**Omahuta**	**7.78**	**237**	P		Pn	12 05 22.8	+9.1
MWZ	**Matawai**	**7.85**	**204**	P		**Pn**	**12 05 12.4**	**-2.2**
MWZ				S		**Sn**	**12 06 42.5**	**+0.6**
URZ	**Urewera**	**7.94**	**206**	Pn		**Pn**	**12 05 13.7**	**-2.0**
	0.7nm,0.3s,baz=350,slow=19,SNR=9.2							
URZ					Sn	**Sn**	**12 06 43.4**	**-0.5**
	3.3nm,0.3s,baz=220,slow=21,SNR=22							
URZ	**Urewera**	**7.94**	**206**	P		**Pn**	**12 05 14.0**	**-1.7**
URZ				S		**Sn**	**12 06 43.5**	**-0.4**
SNGZ	**Shannon Statio**	**8.32**	**203**	P		**Pn**	**12 05 18.4**	**-2.6**
SNGZ				S		**Sn**	**12 06 53.5**	**+0.2**
MTHZ	**Maungataniwha**	**8.56**	**206**	P		**Pn**	**12 05 23.6**	**-0.7**
ASAR	**Alice Springs**	**42.69**	**268**	P		P	12 11 20.7	+9.0
	2.2nm,0.6s,baz=107,slow=7.6,SNR=24							
	2.2nm,0.6s							
WRA	**Warramunga Arr**	**43.76**	**273**	P		P	12 11 29.2	+9.0
	4.4nm,0.4s,baz=114,slow=8.1,SNR=39							
	4.4nm,0.4s							
QSPA	**South Pole Qui**	**58.91**	**180**	P		P	12 13 23.1	+10
	0.6nm,0.8s,baz=36,slow=8.1,SNR=20							
	0.6nm,0.8s							
FINES	**FINESS Array B**	**145.76**	**339**	PKPbc		**PKiKP**	**12 22 58.8**	**+3.9**
	0.6nm,0.3s,baz=35,slow=5.1,SNR=6.2							

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*JMA **01** 12:35:35.1±0.4,34°N±1°×13°7E±°,h351km±3km,MV2.9/31, SE OFF KII PENINSULA*

*IDC **01** 12:35:35.4±0.6,33.86N×137.34E,h343km±7km,mb3.0/8, mbtmp3.8/13,Error ellipse: s-maj=15.5km s-min=10.6km az=68.0*

ISC 01 12:35:35.7±0.7,33.94N±0.07×137.38E±0.06,h345km±6km, n38,σ0.86/48,mb3.2/8,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TTO2	**TONANKAI O.B.S**	**0.36**	**235**	P		**Pn**	**12 36 19.6**	**+0.8**
TTO1	**TONANKAI O.B.S**	**0.59**	**238**	P		**Pn**	**12 36 19.9**	**+0.6**
JIE	**Ise**	**0.72**	**309**	P		**Pn**	**12 36 20.4**	**+0.5**
JIE				S		**S**	**12 36 55.4**	**0.0**
JSG	**Sagara**	**0.99**	**42**	P		**Pn**	**12 36 21.8**	**+1.0**
INU	**Inuyama**	**1.44**	**348**	P		**Pn**	**12 36 23.3**	**+0.4**
JTNC	**Tanabenakahech**	**1.48**	**266**	P		**Pn**	**12 36 23.3**	**+0.1**
JTNC				*e*S		**S**	**12 37 00.3**	**-1.0**
JWY	**Kouya**	**1.51**	**281**	P		**Pn**	**12 36 23.8**	**+0.4**
JWY				*e*S		**S**	**12 37 01.0**	**-0.8**
JGF	**Kuroka**	**1.66**	**359**	P		**Pn**	**12 36 24.4**	**+0.1**
JYTA	**Yamagatataniai**	**1.73**	**342**	P		**Pn**	**12 36 25.2**	**+0.6**
JYTA				*e*S		**S**	**12 37 03.8**	**-0.2**
JYN	**Shimob**	**1.82**	**31**	*e*P		**Pn**	**12 36 25.6**	**+0.2**
JOD2	**Odawara 2**	**1.93**	**46**	*e*P		**Pn**	**12 36 26.1**	**+0.1**
JWT	**Wachi**	**2.11**	**310**	P		**Pn**	**12 36 27.7**	**+0.5**
JWT				*e*S		**S**	**12 37 07.9**	**-0.8**
JHJ	**Hachijo jima 2**	**2.17**	**112**	P		**Pn**	**12 36 27.9**	**+0.1**
	100nm,0.6s,baz=25,slow=19,SNR=2.1							
JHJ				S		**S**	**12 37 10.3**	**+0.7**
	44nm,0.4s,baz=273,slow=17,SNR=6.5							
JHJ2	**Mitsune**	**2.20**	**111**	P		**Pn**	**12 36 28.3**	**+0.3**
JHJ2	**Mitsune**	**2.20**	**111**	*e*P		**Pn**	**12 36 28.7**	**+0.7**
JRY	**Ryogami san**	**2.42**	**31**	P		**Pn**	**12 36 30.1**	**+0.5**
JAI	**Aioi**	**2.44**	**267**	P		**Pn**	**12 36 29.8**	**-0.1**
JKG	**Kaga**	**2.48**	**340**	*e*P		**Pn**	**12 36 30.7**	**+0.6**
MJAR	**Matsushiro Arr**	**2.68**	**14**	P		**Pn**	**12 36 31.9**	**+0.1**
	19nm,0.5s,baz=185,slow=9.7,SNR=95							
MJAR				S		**S**	**12 37 16.6**	**-0.4**
	8.6nm,0.9s,baz=192,slow=16,SNR=7.4							
MAJO	**Matsushiro**	**2.68**	**14**	P		**Pn**	**12 36 32.0**	**+0.2**
MAT	**Matsushiro**	**2.68**	**14**	P		**Pn**	**12 36 32.0**	**+0.1**
MAT				*e*S		**S**	**12 37 16.4**	**-0.6**

JMN	**Monobe**	**2.92**	**267**	P		**Pn**	**12 36 34.0**	**0.0**
JMN	**Monobe**	**2.92**	**267**	P		**Pn**	**12 36 34.1**	**+0.1**
JAG	**Ashikaga**	**3.00**	**34**	*eP*		**Pn**	**12 36 33.5**	**-1.1**
JAG				*eS*		**S**	**12 37 19.5**	**-2.6**
BSO1	**Boso 1**	**3.06**	**76**	*eP*		**Pn**	**12 36 32.9**	**-1.7**
BSO1				*eS*		**S**	**12 37 20.7**	**-1.4**
JMM	**Marumori**	**4.80**	**34**	P		**Pn**	**12 36 51.9**	**-0.8**
JNU	**Nakatsue**	**5.49**	**263**	P		**Pn**	**12 37 00.2**	**-0.4**
	13nm,0.9s,baz=76,slow=7.3,SNR=5.5							
JNU	**Nakatsue**	**5.49**	**263**	P		**Pn**	**12 37 00.9**	**+0.3**
KSRS	**Korea Array**	**8.45**	**297**	P		**Pn**	**12 37 35.5**	**+0.4**
	2.1nm,0.6s,baz=109,slow=5.2,SNR=8.7							
ASAJ	**Asahikawa**	**10.94**	**20**	P		**P**	**12 38 06.8**	**+1.2**
	9.7nm,0.9s,baz=228,slow=15,SNR=1.4							
SONM	**Songino Array**	**27.02**	**310**	P		**P**	**12 40 49.1**	**+1.9**
	0.7nm,0.6s,baz=104,slow=6.1,SNR=2.5							
	0.7nm,0.6s							
CMAR	**Chiang Mai Arr**	**37.53**	**256**	P		**P**	**12 42 17.1**	**-1.0**
	0.6nm,0.5s,baz=45,slow=8.2,SNR=5.1							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**43.05**	**304**	P		**P**	**12 43 02.8**	**+0.2**
	0.7nm,0.5s,baz=93,slow=11,SNR=8.6							
	0.7nm,0.5s							
KURBB	**Kurchatov Arra**	**45.38**	**310**	P		**P**	**12 43 20.1**	**-0.7**
	0.3nm,0.3s,baz=85,slow=9.5,SNR=1.5							
	0.3nm,0.3s							
WRA	**Warramunga Arr**	**53.66**	**184**	P		**P**	**12 44 21.4**	**-1.4**
	1.9nm,0.9s,baz=360,slow=7.5,SNR=11							
	1.9nm,0.9s							
ILAR	**Eielson Array**	**53.85**	**31**	P		**P**	**12 44 23.8**	**+0.1**
	0.2nm,0.5s,baz=261,slow=5.5,SNR=7.7							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**57.38**	**184**	P		**P**	**12 44 48.1**	**-1.0**
	0.3nm,0.4s,baz=356,slow=5.3,SNR=13							
	0.3nm,0.4s							
TXAR	**Lajitas Array**	**94.62**	**50**	P		**P**	**12 48 19.4**	**+1.1**
	0.2nm,0.5s,baz=299,slow=2.3,SNR=3.5							
	0.2nm,0.5s							

*CATAC **01** 12:38:48.7±0.4,14°N±2°×9°2W±°, h11km±2km, M4.7/31, mb5.0/2, mB5.4/1, MLv4.6/31, Mw(mB)4.8/1, Error ellipse: s-maj=4.6km s-min=2.5km az=39.9, confirmed*
*SNET **01** 12:38:49.3±3.5, 13°99N×91°59W, h20km, ML4.6*
*IDC **01** 12:38:49.8±2.9, 13°86N×91°66W, h53km±22km, mb3.4/4, mbtmp3.7/6, ML1.4/1, MS2.7/1, Error ellipse: s-maj=25.6km s-min=12.0km az=0.0*
*GCG **01** 12:38:51.1±1.7, 14°00N×91°55W, h42km±29km, MD4.2, ML4.7*

ISC 01 12:38:47.5±1.4,**13°87N**±0°04×**91°62W**±0°04,**h19**km±5km, **n91**,σ1°**97**/115,**mb3.8**/4,**1C**,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG2	**El Palmar, Qui**	**0.61**	**23**	*eP*	**Pn**	**12 39 04.7**	**+3.4**
RTAL	**Retalhuleu**	**0.66**	**353**	*eP*	**Pn**	**12 39 02.7**	**+0.8**
RTAL				*eS*	**Sn**	**12 39 12.2**	**+0.5**
RTAL	**Retalhuleu**	**0.66**	**353**	P	**Pn**	**12 39 02.8**	**+1.0**
RTAL				S	**Sn**	**12 39 10.8**	**-0.9**
ESSG	**Sabana Grande**	**0.92**	**56**	*eP*	**Pg**	**12 39 05.7**	**+0.2**
ESSG				*eS*	**Sb**	**12 39 17.2**	**+0.4**
SOKI	**Kika Raxquin**	**0.97**	**12**	*eP*	**Pn**	**12 39 06.9**	**+0.4**
SOKI				*eS*	**Sb**	**12 39 18.9**	**+0.3**
SOKI				IAML		12 39 24.0	
	comp=E,12μm,0.4s						
QUEO	**Labor Ovalle**	**1.00**	**6**	*eP*	**Pg**	**12 39 07.7**	**+0.7**
QUEO				*eS*	**Sg**	**12 39 20.6**	**+0.3**
SMCA	**Catarina**	**1.08**	**336**	*eP*	**Pn**	**12 39 08.0**	**+0.4**
SMCA				*eS*	**Sb**	**12 39 21.5**	**+0.2**
ESSJ	**San Jos, E**	**1.13**	**106**	*i P*	**Pn**	**12 39 05.3**	**-3.0**
FG16	**Alotenango, Sa**	**1.15**	**69**	*i P*	**Pn**	**12 39 06.5**	**-2.3**
FG16				*eS*	**Sb**	**12 39 18.3**	**-5.2**
THIG		**1.21**	**329**	*i P*	**Pb**	**12 39 10.2**	**+0.4**
THIG				*eS*	**Sn**	**12 39 25.4**	**+0.2**
THIG				IAML		12 39 30.5	
	comp=E,11μm,0.3s						
PCG5	**San Vicente Pa**	**1.25**	**74**	*eP*	**Pn**	**12 39 08.4**	**-1.8**
PCG5				*eS*	**Sb**	**12 39 21.9**	**-4.6**
GCG4	**OSOP**	**1.27**	**56**	*eP*	**Pg**	**12 39 11.8**	**-0.4**
GCG4				*eS*	**Sb**	**12 39 27.3**	**+0.2**
HUEH	**Huehuetenango**	**1.45**	**4**	*eP*	**Pb**	**12 39 14.2**	**+0.3**
HUEH				*eS*	**Sb**	**12 39 33.3**	**+1.2**
HUEH	**Huehuetenango**	**1.45**	**4**	*eP*	**Pb**	**12 39 14.3**	**+0.3**
HUEH				*eS*	**Sg**	**12 39 33.7**	**-0.7**
HUEH				IAML		12 39 40.8	
	comp=E,9μm,0.4s						
HUEH	**Huehuetenango**	**1.45**	**4**	P	**Pb**	**12 39 14.5**	**+0.5**
QUIS	**Sacapulas**	**1.50**	**20**	*eP*	**Pb**	**12 39 15.1**	**+0.2**
QUIS				*eS*	**Sn**	**12 39 32.7**	**0.0**
QUIS				IAML		12 39 35.9	
	comp=E,12μm,0.4s						
FAME	**Alcaldia de Sa**	**1.56**	**91**	P	**Pn**	**12 39 14.8**	**+0.6**
APG	**El Apazote**	**1.59**	**45**	P	**Pb**	**12 39 16.1**	**-0.4**
	comp=E,87nm,0.4s,baz=132,slow=12,SNR=998						
APG				S	**Sb**	**12 39 36.5**	**+0.3**
	comp=E,197nm,0.6s,baz=81,slow=18,SNR=17						
APG	**El Apazote**	**1.59**	**45**	*i P*	**Pb**	**12 39 16.0**	**-0.4**
RBDL	**Robledal**	**1.89**	**82**	*eP*	**Pb**	**12 39 20.8**	**-0.8**
RBDL				*eS*	**Sn**	**12 39 43.3**	**+0.9**
RTR	**El Retiro**	**1.92**	**89**	*eP*	**Pb**	**12 39 21.2**	**+0.8**
CEVE	**Cerro Verde**	**1.94**	**91**	*eP*	**Pb**	**12 39 21.3**	**-1.0**
CEVE				*eS*	**Sn**	**12 39 44.1**	**+0.5**
CEVE	**Cerro Verde**	**1.94**	**91**	P	**Pb**	**12 39 21.4**	**-1.0**
CEVE	**Cerro Verde**	**1.94**	**91**	S	**Sb**	**12 39 46.3**	**0.0**
SBLS	**San Blas**	**1.94**	**91**	*eP*	**Pb**	**12 39 21.3**	**-1.1**
SNJE	**San Jose**	**1.95**	**90**	*eP*	**Pn**	**12 39 21.4**	**+1.6**
SNJE				*eP*		12 39 21.5	
UNIC	**Universidad Ca**	**2.01**	**87**	P	**Pb**	**12 39 22.5**	**-1.1**
UNIC	**Universidad Ca**	**2.01**	**87**	S	**Sb**	**12 39 47.6**	**-0.7**
JAYA	**Jayaque - finc**	**2.12**	**96**	*eP*	**Pn**	**12 39 23.3**	**+1.3**
JAYA				*eS*	**Sn**	**12 39 47.9**	**-0.1**
JAYA	**Jayaque - finc**	**2.12**	**96**	P	**Pn**	**12 39 23.3**	**+1.3**
CEDA	**San Andres**	**2.16**	**91**	P	**Pb**	**12 39 24.5**	**-1.5**
MTO3	**Montecristo**	**2.25**	**76**	*eP*	**Pn**	**12 39 24.8**	**+0.9**
MTO3	**Montecristo**	**2.25**	**76**	P	**Pn**	**12 39 24.9**	**+0.9**
MTO3	**Montecristo**	**2.25**	**76**	S	**Sb**	**12 39 54.5**	**-0.8**
LALI	**Alcalda de L**	**2.26**	**99**	P	**Pn**	**12 39 25.6**	**+1.6**
BOQS	**Boqueron**	**2.27**	**93**	*eP*	**Pn**	**12 39 26.2**	**+1.9**
PIC2	**El Picacho**	**2.30**	**93**	*eP*	**Pb**	**12 39 26.9**	**-1.6**
PIC2				*eS*	**Sb**	**12 39 56.2**	**-0.4**
ESQI	**Esquipulas**	**2.31**	**72**	*eP*	**Pn**	**12 39 25.9**	**+1.2**
ESQI	**Esquipulas**	**2.31**	**72**	S	**Sb**	**12 39 55.9**	**-1.0**
ESQI	**Esquipulas**	**2.31**	**72**	P	**Pn**	**12 39 25.9**	**+1.2**
UEES	**Universidad Ev**	**2.32**	**93**	*eP*	**Pn**	**12 39 26.8**	**+2.1**
UEES	**Universidad Ev**	**2.32**	**93**	P	**Pb**	**12 39 27.0**	**-1.7**
IGN	**Direccin Gen**	**2.38**	**93**	P	**Pb**	**12 39 28.2**	**-1.7**
IGN	**Direccin Gen**	**2.38**	**93**	S	**Sn**	**12 39 57.0**	**+2.6**
LOMA	**Loma Larga**	**2.39**	**95**	*eP*	**Pn**	**12 39 27.6**	**+1.9**
LOMA				*eS*	**Sn**	**12 39 55.5**	**+0.9**
LOMA	**Loma Larga**	**2.39**	**95**	P	**Pn**	**12 39 27.7**	**+1.9**
UDBS	**Universidad Do**	**2.40**	**93**	S	**Sn**	**12 39 57.4**	**+2.6**
CCIG	**Comitan**	**2.45**	**348**	S	**Sn**	**12 39 58.8**	**+2.6**
CCIG	**Comitan**	**2.45**	**348**	P	**Pb**	**12 39 29.2**	**-1.9**
LFRS	**El Faro**	**2.50**	**95**	*eP*	**Pn**	**12 39 29.4**	**+2.1**
LBRS	**Las Brisas**	**2.50**	**93**	*eP*	**Pb**	**12 39 30.2**	**-1.7**
PAVA	**Las Pavas**	**2.61**	**93**	*eP*	**Pn**	**12 39 30.8**	**+2.1**
PAVA				*eS*	**Sn**	**12 40 01.2**	**+1.2**
PAVA	**Las Pavas**	**2.61**	**93**	P	**Pn**	**12 39 30.9**	**+2.1**
LLGN	**La Laguna**	**2.61**	**83**	P	**Pn**	**12 39 29.9**	**+1.1**
UESV	**Universidad de**	**2.76**	**94**	P	**Pb**	**12 39 33.8**	**-2.5**
TECO	**Alcaldia de Te**	**2.78**	**96**	P	**Pn**	**12 39 33.0**	**+2.0**
SCLA	**Alcaldia de Sa**	**2.81**	**93**	P	**Pn**	**12 39 34.1**	**+2.6**
SARH	**Santa Rosa de**	**2.91**	**72**	P	**Pn**	**12 39 34.8**	**+1.8**
TECA	**Tecapa**	**3.05**	**97**	*eP*	**Pn**	**12 39 37.2**	**+2.2**
PACA	**Pacayal**	**3.23**	**97**	P	**Pn**	**12 39 40.4**	**+3.1**
PACA	**Pacayal**	**3.23**	**97**	S	**Sn**	**12 40 18.7**	**+3.4**
LCY	**Lacayo**	**3.26**	**97**	*eP*	**Pn**	**12 39 40.2**	**+2.5**
RANC	**El Ranchito**	**3.27**	**97**	*eP*	**Pn**	**12 39 39.6**	**+1.7**
BLLM	**Bellamira**	**3.31**	**97**	*eP*	**Pn**	**12 39 41.0**	**+2.6**
PETF	**Flores**	**3.47**	**29**	S	**Sn**	**12 40 24.5**	**+3.4**
PETF	**Flores**	**3.47**	**29**	P	**Pn**	**12 39 42.1**	**+1.6**
MARCA	**Marcala la Paz**	**3.49**	**85**	P	**Pn**	**12 39 43.8**	**+2.9**
LCND	**La Caada**	**3.67**	**98**	*eP*	**Pn**	**12 39 45.5**	**+2.3**
LCND	**La Caada**	**3.67**	**98**	P	**Pn**	**12 39 45.9**	**+2.6**
CNCH	**Conchagua**	**3.73**	**99**	P	**Pn**	**12 39 46.3**	**+2.1**
CNCH	**Conchagua**	**3.73**	**99**	S	**Sn**	**12 40 30.9**	**+3.2**
CSGN	**Cosiguina Volc**	**4.05**	**102**	P	**Pn**	**12 39 50.6**	**+2.1**
CSGN				S	**Sn**	**12 40 38.8**	**+3.2**
POTN	**Potosi Cosigui**	**4.09**	**102**	P	**Pn**	**12 39 51.3**	**+2.2**
POTN				S	**Sn**	**12 40 40.7**	**+4.2**
TGUH	**Tegucigalpa,Un**	**4.22**	**87**	P	**Pn**	**12 39 53.1**	**+2.1**
TGUH				S	**Sn**	**12 40 43.1**	**+3.2**
CMIG	**Matias Romero**	**4.49**	**316**	P	**Pn**	**12 39 55.9**	**+1.3**
	comp=E,84nm,0.2s,baz=118,slow=11,SNR=151						
CMIG				S	**Sn**	**12 40 45.7**	**-0.7**
	comp=E,85nm,0.4s,baz=240,slow=16,SNR=5.2						
CMIG				LR	LR	12 41 49.5	
	comp=E,104nm,21.8s,baz=172,slow=40						
CRIN	**San Cristobal**	**4.60**	**104**	P	**Pn**	**12 39 59.2**	**+3.1**
CRIN	**San Cristobal**	**4.60**	**104**	S	**Sn**	**12 40 53.2**	**+4.1**
YUSH	**Yuscaran**	**4.64**	**88**	P	**Pn**	**12 39 57.9**	**+1.2**
YUSH	**Yuscaran**	**4.64**	**88**	S	**Sn**	**12 40 53.2**	**+3.1**
CNGN	**Cerro Negro**	**4.98**	**105**	P	**Pn**	**12 40 03.7**	**+2.4**
CNGN	**Cerro Negro**	**4.98**	**105**	S	**Sn**	**12 41 01.9**	**+3.4**
SCIG	**Sabancuy**	**5.09**	**5**	P	**Pn**	**12 40 03.8**	**+1.0**
LIMN	**Finca el Limon**	**5.17**	**98**	P	**Pn**	**12 40 06.6**	**+2.6**
TEIG	**Tepich**	**7.08**	**26**	P	**Pn**	**12 40 30.8**	**+0.6**
	baz=133,slow=24,SNR=43						
TEIG				S	**Sn**	**12 41 46.2**	**-4.0**
	baz=310,slow=24,SNR=1.4						
JTS	**Las Juntas de**	**7.42**	**118**	P	**Pn**	**12 40 35.4**	**+0.4**
	comp=E,2.3nm,0.3s,baz=311,slow=20,SNR=2.3						
TXAR	**Lajitas Array**	**19.01**	**326**	P	**P**	**12 43 08.6**	**+0.2**
	comp=E,2.3nm,0.7s,baz=147,slow=9.4,SNR=34						
ANMO	**Albuquerque**	**24.90**	**330**	P	**P**	**12 44 08.8**	**-0.7**
	comp=E,1.2nm,0.5s,baz=82,slow=7.1,SNR=5.5						
	comp=E,1.2nm,0.5s						
PDAR	**Pinedale Array**	**32.69**	**335**	P	**P**	**12 45 16.4**	**-2.5**
	comp=E,0.2nm,0.6s,baz=136,slow=8.1,SNR=2.7						
	comp=E,0.2nm,0.6s						
NVAR	**Mina Array Bea**	**34.01**	**321**	P	**P**	**12 45 29.1**	**-1.4**
	comp=E,0.7nm,0.6s,baz=127,slow=8.0,SNR=8.5						
	comp=E,0.7nm,0.6s						
ILAR	**Eielson Array**	**63.11**	**337**	P	P	12 49 10.7	-2.9
	comp=E,0.3nm,0.5s,baz=123,slow=5.0,SNR=7.8						
	comp=E,0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**146.23**	**342**	PKPbc	**PKPdf**	**12 58 24.9**	**-1.7**
	comp=E,0.7nm,0.4s,baz=338,slow=3.8,SNR=5.5						

IDC 01 12:47:14.6±3.7,**24°56N**×**95°00E**,**h167**km±38km,**mb3.3**/3, **mbtmp3.5**/4,**MS3.4**/1,**Error ellipse: s-maj=170.4km s-min=19.6km az=60.0**,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.10**	**148**	P	Pn	12 48 56.1	0.0
	0.3nm,0.3s,baz=326,slow=12,SNR=1.2						
MKAR	**Makanchi Array**	**24.41**	**339**	P	P	12 52 17.5	0.0
	0.4nm,0.5s,baz=148,slow=9.5,SNR=7.8						
	0.4nm,0.5s						
PETK	**Petropavlovsk-**	**54.43**	**41**	LR	LR	13 21 03.4	
	comp=Z,33nm,19.9s,baz=251,slow=37						
WRA	**Warramunga Arr**	**58.51**	**136**	P	P	12 56 53.2	-0.4
	0.5nm,0.4s,baz=316,slow=7.2,SNR=8.9						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**61.01**	**139**	P	P	12 57 10.9	+0.2
	0.5nm,0.3s,baz=316,slow=6.4,SNR=17						
	0.5nm,0.3s						

*NEIC **01** 12:51:49.5±1.4, 35°12N±0°02×95°34W±0°02, h7km±5km, Error ellipse: s-maj=3.0km s-min=2.1km az=141.0*

NEIC 01 12:51:49.5±1.7,**35°15N**±0°01×**95°34W**±0°02,**h5**km±1km, **mb_Lg2.1**/11,**ML2.6**/14,**ML2.3**/6,**Error ellipse: s-maj=3.4km s-min=2.9km az=110.0**,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUL3	**Leonard**	**0.88**	**335**		Pg	12 52 05.8	-0.5
TUL3					Sg	12 52 17.5	-0.2
RLO	**Rose Lookout**	**1.08**	**14**		Pg	12 52 09.7	-0.5
RLO					Sg	12 52 23.7	-0.5
RLO				IAML		12 52 29.6	
	comp=N,168nm,0.2s						
DEOK	**Depew**	**1.19**	**308**		Pg	12 52 11.8	-0.5
DEOK					Sg	12 52 27.6	-0.2
DEOK				IAML		12 52 27.8	
	comp=N,128nm,0.2s						
DEOK				IAML		12 52 29.8	
	comp=E,131nm,0.2s						
OK052	**Battle Ridge R**	**1.48**	**307**		Pn	12 52 16.7	-0.1
U38A	**Gravette**	**1.53**	**30**		Pn	12 52 17.5	0.0
U38A					Sn	12 52 37.9	0.0
QUOK	**Quay**	**1.53**	**314**		Pn	12 52 17.4	-0.1
QUOK					Sb	12 52 38.3	+0.1
MIAR	**Mount Ida**	**1.56**	**111**		Pb	12 52 18.5	-0.3
MIAR				IAmb_Lg		12 52 38.5	
	comp=Z,7.0nm,1.2s						
HHAR	**Hobbs**	**1.63**	**44**		Pn	12 52 18.9	+0.1
HHAR					Sb	12 52 40.8	-0.1
FNO	**Franklin**	**1.69**	**275**		Pn	12 52 20.2	+0.4
FNO					Sg	12 52 43.5	-0.5
OK048	**Pawnee Station**	**1.84**	**315**		Pn	12 52 21.6	-0.1
OK051	**E0350 and S346**	**1.84**	**319**		Pn	12 52 22.1	+0.3
OK029	**Liberty Lake**	**1.86**	**292**		Pn	12 52 21.2	-0.8
T35A	**Sooner Cattle**	**2.03**	**332**	Pn	Pn	12 52 25.5	+1.1
T35A				IAmb_Lg		12 52 53.4	
	comp=Z,6.4nm,1.0s						
X34A	**Smith Ranch, M**	**2.11**	**257**	Pn	Pb	12 52 27.4	-0.9
X40A	**Basin Creek Fa**	**2.15**	**106**	Pn	Pb	12 52 28.1	-0.9
WHAR	**Wooly Hollow**	**2.50**	**85**		Pn	12 52 31.2	+0.3
CROK	**Carrier**	**2.56**	**304**	IAmb_Lg		12 53 16.6	
	comp=Z,11nm,0.8s						
FCAR	**Ozark Folk Cen**	**2.73**	**73**		Pn	12 52 34.2	+0.2
WMOK	**Wichita Mounta**	**2.85**	**263**		Pn	12 52 35.9	+0.3
WMOK	**Wichita Mounta**	**2.85**	**263**	Pn	Pn	12 52 35.8	+0.1
R40A	**Maddies Statio**	**4.02**	**37**	IAmb_Lg		12 53 55.2	
	comp=Z,12nm,1.0s						

ISC 01 13:14:38.7±1.5,**44°98N**±0°06×**16°95E**±0°04,**h5**km±14km, **n9**,σ0°**46**/18,**1C**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.28**	**144**	*i* Pg	**Pg**	**13 14 44.2**	**-0.1**
BLY				*e*Sg	**Sg**	**13 14 48.5**	**+0.5**
MOSL	**Moslavina**	**0.65**	**348**	*e*Pg	**Pn**	**13 14 54.4**	**-0.2**
MOSL				Sg	**Sn**	**13 15 05.1**	**-0.1**
PLIT	**Plitvice**	**0.95**	**264**	*i* Pg	**Pg**	**13 14 56.6**	**-0.3**
PLIT				Sg	**Sg**	**13 15 09.0**	**-0.1**
UDBI	**Udbina**	**0.96**	**242**	*e*Pg	**Pg**	**13 14 56.9**	**-0.1**
UDBI				Sg	**Sg**	**13 15 08.7**	**-0.8**
KIJV	**Kijevo**	**1.05**	**202**	*i* Pg	**Pg**	**13 14 58.0**	**-0.8**
KIJV				Sg	**Sg**	**13 15 12.4**	**0.0**
MORI	**Morici**	**1.43**	**219**	*e*Pg	**Pb**	**13 15 05.8**	**+0.1**
MORI				Sg	**Sb**	**13 15 24.1**	**-0.1**
VIRC	**Vir**	**1.52**	**244**	*e*Pn	**Pg**	**13 15 08.7**	**+0.9**
VIRC				Sg	**Sb**	**13 15 27.3**	**+0.5**
ZIRJ	**Zirje**	**1.62**	**216**	*i* Pn	**Pb**	**13 15 09.3**	**+0.2**
ZIRJ				Sn	**Sg**	**13 15 30.7**	**-0.1**
DUGI	**Dugi Otok**	**1.68**	**235**	*i* Pn	**Pb**	**13 15 10.2**	**+0.1**
DUGI				Sn	**Sg**	**13 15 33.0**	**+0.4**

*JMA **01** 13:28:38.8±0.1, 22°7N±0°2×121°5E±0°2, h10km±1km, MV4.0/17, TAIWAN REGION*
*TAP **01** 13:28:39.0, 22°60N×121°33E, h36km, ML4.0, C*

ISC 01 13:28:38.9±0.9,**22°58N**±0°02×**121°35E**±0°02,**h29**km±6km, **n158**,σ0°**93**/238,**31C-14D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.15**	**50**	*i* P	**Pn**	**13 28 45.5**	**+0.3**
LDUT				S	**Sb**	**13 28 49.9**	**+1.7**
TTN	**Taitung**	**0.26**	**313**	P	**Pn**	**13 28 46.9**	**+0.2**
TTN				S	**Sn**	**13 28 52.6**	**+0.8**
TWGBT	**Beinan**	**0.34**	**314**	*i* P	**Pb**	**13 28 46.8**	**-0.1**
TWGBT				*e*S	**Sb**	**13 28 51.7**	**-0.6**
TWG	**Pinlang**	**0.35**	**313**	*i* P	**Pb**	**13 28 46.9**	**-0.1**
TWG				*e*S	**Sb**	**13 28 51.5**	**-1.0**
ECL	**Taimali**	**0.36**	**273**	P	**Pb**	**13 28 46.8**	**-0.3**
ECL				*e*S	**Sb**	**13 28 51.7**	**-1.1**
LONT	**Longtian**	**0.38**	**328**	*i* P	**Pb**	**13 28 47.6**	**+0.2**
LONT				*e*S	**Sb**	**13 28 53.1**	**-0.2**
EDH	**Donghe**	**0.40**	**354**	P	**Pb**	**13 28 48.0**	**+0.4**
EDH				*e*S	**Sn**	**13 28 54.7**	**-0.5**
TAW	**Tawu**	**0.47**	**242**	*i* P	**Pb**	**13 28 48.8**	**0.0**
TAW				S	**Sb**	**13 28 54.8**	**-0.8**
TAWH	**Dawu Township**	**0.49**	**241**	*i* P	**Pb**	**13 28 49.0**	**0.0**
TAWH				S	**Sb**	**13 28 55.1**	**-0.8**
EAST	**Anshuo**	**0.50**	**247**	*i* P	**Pb**	**13 28 49.2**	**-0.1**
EAST				S	**Sb**	**13 28 55.3**	**-1.1**
CHKT	**Chengkung**	**0.52**	**2**	*i* P	**Pb**	**13 28 49.6**	**+0.1**
CHKT				S	**Sb**	**13 28 56.9**	**+0.1**
ECS	**Chishang**	**0.53**	**347**	*i* P	**Pb**	**13 28 49.8**	**0.0**
ECS				S	**Sb**	**13 28 57.4**	**+0.3**
LAY	**Lan-yu**	**0.57**	**161**	*eP*	**Pb**	**13 28 50.6**	**+0.3**
EHD	**Haiduan**	**0.58**	**347**	P	**Pb**	**13 28 51.0**	**+0.4**
EHD				*eS*	**Sb**	**13 28 58.0**	**-0.6**
CHKH	**Chenggong**	**0.61**	**4**	*i* P	**Pb**	**13 28 51.0**	**-0.1**
CHKH				S	**Sb**	**13 28 59.4**	**-0.1**
LYUB	**Lan-yu**	**0.61**	**159**	*i* P	**Pb**	**13 28 50.3**	**-0.8**
FULB	**Fuli**	**0.62**	**355**	*eP*	**Pb**	**13 28 51.0**	**-0.2**
FULB				S	**Sb**	**13 28 59.6**	**-0.1**
SLIU	**Shizi**	**0.62**	**235**	P	**Pb**	**13 28 51.0**	**-0.3**
SLIU				*eS*	**Sb**	**13 28 58.9**	**-0.8**
MASBT	**Mashibuluo**	**0.66**	**273**	*i* P	**Pb**	**13 28 51.6**	**-0.3**
ELDTW	**Lidau**	**0.68**	**333**	*i* P	**Pb**	**13 28 51.2**	**-1.2**
SSD	**Sandimen**	**0.68**	**284**	*i* P	**Pb**	**13 28 51.6**	**-0.6**
SCZT	**Fangliau**	**0.70**	**253**	P	**Pb**	**13 28 52.4**	**-0.2**
SCZT				S	**Sb**	**13 29 01.1**	**-0.9**
SMST	**Manzhou Townsh**	**0.73**	**221**	*eP*	**Pb**	**13 28 52.8**	**-0.2**
SMST				*eS*	**Sb**	**13 29 02.1**	**-0.6**
ECBN	**Changbin**	**0.74**	**7**	P	**Pb**	**13 28 53.1**	**-0.2**
ECBN				S	**Sb**	**13 29 03.1**	**+0.1**
EYUL	**Yuli**	**0.77**	**358**	*eP*	**Pb**	**13 28 52.9**	**-0.7**
TWF1	**Yuli**	**0.77**	**356**	*i* P	**Pb**	**13 28 52.4**	**-1.4**
STYH	**Taoyuan**	**0.79**	**318**	P	**Pn**	**13 28 53.6**	**-0.4**
STYH				S	**Sb**	**13 29 03.3**	**-1.2**
TSEB	**Hengchuen, Pin**	**0.79**	**212**	P	**Pn**	**13 28 54.3**	**+0.2**
TSEB				S	**Sb**	**13 29 05.5**	**+1.0**
TSPT	**Pingtung City**	**0.79**	**277**	*eP*	**Pb**	**13 28 54.8**	**+0.7**
STYT	**Tauyuan**	**0.80**	**317**	*i* P	**Pn**	**13 28 53.7**	**-0.6**
STYT				*eS*	**Sb**	**13 29 03.5**	**-1.3**
HEN	**Hengchun**	**0.80**	**225**	*eP*	**Pb**	**13 28 54.2**	**0.0**
HEN				*eS*	**Sb**	**13 29 04.6**	**-0.2**
SGLT	**Jiouru**	**0.81**	**281**	P	**Pn**	**13 28 54.9**	**+0.6**
TWKBT	**Hengchun**	**0.81**	**218**	*i* P	**Pn**	**13 28 54.1**	**-0.2**
TWKBT				*i* S	**Sb**	**13 29 04.4**	**-0.5**
TWK1	**Hengchun**	**0.81**	**219**	*i* P	**Pn**	**13 28 54.1**	**-0.2**
TWK1				S	**Sb**	**13 29 04.7**	**-0.2**
YULB	**Yu-li**	**0.81**	**357**	*i* P	**Pn**	**13 28 52.8**	**-1.6**
SCST	**Cishan**	**0.85**	**291**	*eP*	**Pb**	**13 28 55.5**	**+0.5**
SGST	**Jiashian**	**0.87**	**306**	*i* P	**Pn**	**13 28 54.8**	**-0.3**
SGST				*eS*	**Sb**	**13 29 06.5**	**-0.2**
TWM1	**Shoushan**	**0.89**	**286**	*i* P	**Pb**	**13 28 56.9**	**+1.2**
TWM1				*eS*	**Sb**	**13 29 10.3**	**+3.0**
EHYH	**Wanrong**	**0.91**	**360**	*eP*	**Pn**	**13 28 54.5**	**-1.3**
HGSD	**Ruisui**	**0.91**	**4**	P	**Pn**	**13 28 55.2**	**-0.6**
EHY	**Hungye**	**0.92**	**359**	P	**Pn**	**13 28 54.5**	**-1.5**
TWP	**Hsiaoliuchiu**	**0.94**	**256**	*eP*	**Pb**	**13 28 58.8**	**+2.3**
CHN1	**Nanshi**	**0.97**	**309**	*i* P	**

NWLT	**Wulai**	**2.19**	**4**	*eP*	**Pn**	**13 29 14.1 +0.6**
EGS		**2.32**	**13**	*eP*	**Pn**	**13 29 16.8 +1.7**
JYNG	**Yonagunijimaku**	**2.37**	**38**	P	**Pn**	**13 29 16.9 +1.1**
JYNG				*eS*	**Sn**	**13 29 44.7 +0.7**
TATO	**Taipei**	**2.39**	**3**	*eP*	**Pn**	**13 29 17.0 +0.9**
TWA	**Mucha**	**2.40**	**5**	*eP*	**Pn**	**13 29 17.5 +1.2**
YOJ	**Yonaguni jima**	**2.42**	**39**	*eP*	**Pn**	**13 29 17.5 +1.1**
YOJ				*eS*	**Sn**	**13 29 45.9 +0.8**
YOJ	**Yonaguni jima**	**2.42**	**39**	*eP*	**Pn**	**13 29 17.5 +1.1**
YOJ				S	**Sn**	**13 29 45.5 +0.4**
TIPB	**Shuangxi**	**2.42**	**10**	*eP*	**Pn**	**13 29 17.7 +1.1**
TWB1	**Santiao Chiao**	**2.49**	**13**	*eP*	**Pn**	**13 29 18.8 +1.4**
TWS1	**Kuangyinshan**	**2.51**	**1**	*eP*	**Pn**	**13 29 19.3 +1.5**
NWF	**Wu-fen Shan**	**2.51**	**9**	*eP*	**Pn**	**13 29 18.9 +1.0**
WFSB	**Wu-fen Shan**	**2.51**	**9**	*eP*	**Pn**	**13 29 19.0 +1.2**
SXI1	**Grass Mountain**	**2.55**	**11**	*eP*	**Pn**	**13 29 19.5 +1.1**
YM01	**YM01**	**2.56**	**4**	*eP*	**Pn**	**13 29 19.2 +0.6**
ZUZH	**Zhuzihu**	**2.58**	**4**	*eP*	**Pn**	**13 29 19.4 +0.6**
ANP	**Anpu**	**2.60**	**3**	*eP*	**Pn**	**13 29 21.3 +2.2**
YM08	**YM08**	**2.61**	**5**	*eP*	**Pn**	**13 29 18.6 -0.5**
HATJ	**Hateruma jima**	**2.70**	**56**	*eP*	**Pn**	**13 29 21.5 +1.2**
HATJ				S	**Sn**	**13 29 50.9 -1.0**
TWY	**Chenhua**	**2.70**	**5**	*eP*	**Pn**	**13 29 22.2 +1.9**
IRIF	**Iriomote-Funau**	**2.80**	**51**	P	**Pn**	**13 29 23.0 +1.3**
IRIF				*eS*	**Sn**	**13 29 54.8 +0.3**
JKRS	**Kuro-shima**	**2.95**	**55**	P	**Pn**	**13 29 25.1 +1.3**
JKRS				*eS*	**Sn**	**13 29 57.8 -0.4**
PCYT	**Pengchaiyu**	**3.11**	**12**	*eP*	**Pn**	**13 29 27.1 +1.1**
JIJ	**Ishigaki jima**	**3.12**	**55**	P	**Pn**	**13 29 26.9 +0.7**
JIJ				*eS*	**Sn**	**13 30 01.5 -1.0**
PTMZ	**Houxiangcun**	**3.19**	**321**	*eP*	**Pn**	**13 29 27.6 +0.5**
PTMZ				*eS*	**Sn**	**13 30 02.7 -1.5**
KNM	**Kinmen**	**3.24**	**305**	*eP*	**Pn**	**13 29 29.7 +1.9**
KNMB	**Chin-men Tao**	**3.30**	**305**	*eP*	**Pn**	**13 29 29.3 +0.7**
KNMB				*eS*	**Sn**	**13 30 06.3 -0.7**
JISG	**Ishigakijimahi**	**3.37**	**53**	P	**Pn**	**13 29 30.2 +0.6**
JISG				S	**Sn**	**13 30 07.9 -0.8**
ZPLA	**Ao Xicun**	**3.57**	**293**	*eP*	**Pn**	**13 29 32.6 +0.3**
JTJ	**Tarama**	**3.70**	**56**	*eP*	**Pn**	**13 29 35.2 +1.1**
JTJ				*eS*	**Sn**	**13 30 16.8 +0.1**
DSXP	**Dongshan**	**3.78**	**288**	*eP*	**Pn**	**13 29 35.7 +0.5**
DSXP				*eS*	**Sn**	**13 30 17.0 -1.8**
MATB	**Ma-tsu**	**3.78**	**341**	*eP*	**Pn**	**13 29 35.4 +0.2**
MATB				*eS*	**Sn**	**13 30 16.6 -2.1**
AXDP	**Jialang**	**3.86**	**307**	*eP*	**Pn**	**13 29 36.9 +0.5**
AXDP				*eS*	**Sn**	**13 30 19.1 -1.6**
MHZQ	**Yeshan**	**4.09**	**329**	*eP*	**Pn**	**13 29 39.7 +0.2**
MHZQ				*eS*	**Sn**	**13 30 24.3 -2.2**
JIRB	**Irabujima**	**4.16**	**57**	*eP*	**Pn**	**13 29 41.2 +0.8**
JIRB				*eS*	**Sn**	**13 30 26.6 -0.5**
JMJ2	**Miyako jima3**	**4.24**	**59**	*eP*	**Pn**	**13 29 42.6 +1.1**
JMJ2				*eS*	**Sn**	**13 30 30.2 +0.3**
JMJ	**Miyako jima 2**	**4.25**	**58**	*eP*	**Pn**	**13 29 42.5 +0.9**
JMJ				*eS*	**Sn**	**13 30 29.3 -0.9**
JIKM	**Ikemajima**	**4.27**	**56**	*eP*	**Pn**	**13 29 43.0 +1.1**
JIKM				S	**Sn**	**13 30 30.0 -0.8**
XPSS	**Dashiqiu**	**4.46**	**347**	*eP*	**Pn**	**13 29 44.6 0.0**
SXFK	**Yanhouchang**	**5.08**	**319**	*eP*	**Pn**	**13 29 53.3 +0.1**

IDC 01 13:32:40.8±2.0, 2.73N×126.03E, h0km, mb3.3/3, mbtmp3.4/3, ML5.0/1, Error ellipse: s-maj=118.5km s-min=25.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**13.06**	**190**	Pn	**Pn**	13 35 48.1	+0.3
	7.3nm,0.3s,baz=27,slow=4.5,SNR=5.2						
WRA	**Warramunga Arr**	**23.96**	**160**	P	P	13 37 56.5	-0.5
	0.7nm,0.9s,baz=337,slow=9.9,SNR=2.2 0.7nm,0.9s						
ASAR	**Alice Springs**	**27.33**	**164**	P	P	13 38 27.8	+0.1
	0.2nm,0.5s,baz=345,slow=9.4,SNR=2.6 0.2nm,0.5s						
MKAR	**Makanchi Array**	**57.98**	**326**	P	P	13 42 35.4	+0.1
	0.2nm,0.4s,baz=123,slow=6.4,SNR=5.3 0.2nm,0.4s						

*SKO **01** 13:35:10.7, 41.82N×20.96E, h15km, ML2.7*
*BEO **01** 13:35:11.0±0.3, 41.89N×20.91E, h14km±4km, ML2.3/14*
*PDG **01** 13:35:12.5±0.3, 42.17N×20.89E, h4km±1km, ML2.7/13, Error ellipse: s-maj=1.3km s-min=1.8km az=0.0*

ISC 01 13:35:10.1±1.0, 41.88N±0.03×20.91E±0.02, h16km±9km, n40, σ1¶19/70, 3C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.41**	**77**	*i* Pg	**Pb**	**13 35 18.6**	**-0.3**
SKO				*i* Sg	**Sb**	**13 35 24.2**	**-0.7**
OHR	**Ohrid**	**0.77**	**186**	*i* Pg	**Pb**	**13 35 24.9**	**-0.2**
OHR				*i* Sg	**Sn**	**13 35 37.2**	**-0.5**
OHR				*e*Lg	Lg	13 35 37.5	
	comp=E,384nm,0.5s						
OHR				*e*Lg	Lg	13 35 38.6	
	comp=N,206nm,0.6s						
PVY	**Plav**	**1.00**	**316**	*e*Pg	**Pb**	**13 35 28.8**	**-0.4**
PVY	**Plav**	**1.00**	**316**	↑*i*Pg	**Pb**	**13 35 26.4**	**-2.8**
PVY				*i* Sg	**Sb**	**13 35 38.0**	**-4.2**
ULC	**Ulcinj**	**1.24**	**274**	↓*i*Pg	**Pg**	**13 35 34.2**	**+0.1**
ULC				*i* Sg	**Sg**	**13 35 53.2**	**+2.9**
BEY	**Berane**	**1.24**	**323**	*e*Pg	**Pb**	**13 35 33.8**	**+0.5**
IVA	**Berane**	**1.24**	**323**	↓*i*Pg	**Pn**	**13 35 30.3**	**-2.6**
IVA				*i* Sg	**Sb**	**13 35 45.4**	**-3.7**
DRME	**Dracevica, Mon**	**1.32**	**284**	*e*Pg	**Pg**	**13 35 35.7**	**+0.2**
DRME	**Dracevica, Mon**	**1.32**	**284**	↓*i*Pg	**Pg**	**13 35 35.1**	**-0.4**
DRME				*i* Sg	**Sg**	**13 35 53.5**	**+0.8**
BOSS	**Bosilegrad**	**1.32**	**62**	*e*Pg	**Pg**	**13 35 35.2**	**-0.4**
BOSS				*e*Sg	**Sg**	**13 35 53.6**	**+0.8**
PDG	**Podgorica**	**1.35**	**295**	*e*Pg	**Pb**	**13 35 35.5**	**+0.6**
PDG				*e*Sg	**Sg**	**13 35 54.3**	**+0.8**
PDG	**Podgorica**	**1.35**	**295**	↓*i*Pg	**Pn**	**13 35 34.0**	**-0.2**
PDG				*i* Sg	**Sn**	**13 35 52.3**	**+0.5**
SELS	**Selova**	**1.35**	**7**	*e*Pg	**Pn**	**13 35 34.6**	**+0.3**
SELS				*e*Sg	**Sn**	**13 35 52.6**	**+0.7**
VAY	**Valandovo**	**1.37**	**114**	*i* Pg	**Pg**	**13 35 36.0**	**-0.3**
VAY				*i* Sg	**Sg**	**13 35 53.8**	**-0.4**
VAY				*e*Lg	Lg	13 35 54.1	
	comp=E,70nm,0.5s						
VAY				*e*Lg	Lg	13 35 54.6	
	comp=N,114nm,0.7s						
KOME	**Kolasin**	**1.42**	**314**	*e*Pg	**Pn**	**13 35 35.9**	**+0.6**
KOME	**Kolasin**	**1.42**	**314**	↓*i*Pg	**Pn**	**13 35 34.5**	**-0.8**
KOME				*i* Sg	**Sn**	**13 35 52.3**	**-1.4**
SJES	**Sjenica**	**1.54**	**334**	*e*Pg	**Pb**	**13 35 38.6**	**+0.2**
SJES				*e*Sg	**Sg**	**13 35 57.6**	**+0.2**
BUM	**Brajici-Budva**	**1.56**	**286**	↑*i*Pg	**Pb**	**13 35 38.4**	**-0.2**
BUM				*i* Sg	**Sg**	**13 36 00.6**	**+0.3**
CEME	**Cevo**	**1.62**	**295**	↓*i*Pg	**Pn**	**13 35 39.0**	**+0.9**
CEME				*i* Sg	**Sg**	**13 36 02.1**	**-0.2**
KNT	**Kendrikon**	**1.66**	**115**	*i* Pn	**Pb**	**13 35 40.1**	**-0.1**
KKB	**Krupnik**	**1.66**	**91**	*i* Pn	**Pb**	**13 35 40.4**	**+0.1**
GOCS	**Kraljevo Serbi**	**1.68**	**359**	*e*Pg	**Pn**	**13 35 39.4**	**+0.4**
GOCS				*e*Sg	**Sg**	**13 36 04.8**	**+0.5**
NKME	**Niksic**	**1.70**	**302**	↑*i*Pg	**Pb**	**13 35 40.5**	**-0.5**
NKME				*i* Sg	**Sb**	**13 36 03.8**	**+1.6**
IVAS	**Ivanjica**	**1.79**	**342**	*e*Pn	**Pn**	**13 35 40.5**	**+0.1**
IVAS				*e*Sg	**Sg**	**13 36 08.1**	**+0.5**
PLE	**Pljevlja**	**1.83**	**323**	↓*i*Pn	**Pn**	**13 35 40.5**	**-0.5**
PLE				*i* Sn	**Sb**	**13 36 06.1**	**0.0**
BOVS	**Bovan**	**1.85**	**18**	*e*Pg	**Pb**	**13 35 42.8**	**-0.8**
BOVS				*e*Sg	**Sb**	**13 36 08.1**	**+1.6**
VTS	**Vitosha**	**1.88**	**66**	*e*Pg	**Pg**	**13 35 45.8**	**-0.4**
VTS				*e*Sg	**Sg**	**13 36 10.0**	**-0.6**
HCY	**Herceg Novi**	**1.88**	**288**	↓*i*Pn	**Pb**	**13 35 44.0**	**-0.1**
HCY				*i* Sn	**Sg**	**13 36 10.4**	**-0.2**
ZAPS	**Zavoj**	**1.89**	**42**	*e*Pg	**Pb**	**13 35 45.2**	**+1.0**
ZAPS				*e*Sg	**Sg**	**13 36 10.6**	**-0.3**
UPM	**Unac-Piva**	**1.98**	**312**	↓*i*Pn	**Pb**	**13 35 45.1**	**-0.8**
UPM				*i* Sn	**Sn**	**13 36 09.9**	**+2.1**
GRUS	**Gruza**	**2.01**	**356**	*e*Pn	**Pn**	**13 35 44.8**	**+1.4**
GRUS				*e*Sg	**Sg**	**13 36 15.6**	**+0.7**
BRY	**Bratogost**	**2.03**	**301**	↓*i*Pn	**Pb**	**13 35 46.5**	**-0.2**
BRY				*i* Sn	**Sb**	**13 36 12.3**	**+0.5**
TREB	**Trebinje**	**2.07**	**295**	*e*Pg	**Pb**	**13 35 48.2**	**+0.9**
TREB				*e*Sg	**Sg**	**13 36 17.2**	**+0.4**
RUDO	**Rudo**	**2.07**	**327**	*e*Pg	**Pb**	**13 35 46.8**	**-0.6**
ZAGS	**Zajecar**	**2.17**	**26**	*e*Pn	**Pn**	**13 35 47.1**	**+1.6**
ZAGS				*e*Sg	**Sb**	**13 36 17.7**	**+2.2**
BLKB	**Belogradchik**	**2.18**	**36**	*e*Pg	**Pg**	**13 35 50.8**	**-1.0**
BLKB				*e*Sg	**Sg**	**13 36 18.7**	**-1.4**
BBLS	**Lazi&#263i**	**2.27**	**331**	*e*Pn	**Pn**	**13 35 47.9**	**+0.9**
DIVS	**Divibare**	**2.32**	**343**	*e*Pn	**Pn**	**13 35 48.2**	**+0.5**
TRUS	**Trudelj**	**2.37**	**351**	*e*Pg	**Pb**	**13 35 52.6**	**+0.2**
TRUS				*e*Sg	**Sg**	**13 36 25.9**	**-0.4**
IGT	**Igoumenitsa**	**2.38**	**191**	*e*Pg	**Pb**	**13 35 52.1**	**-0.5**

*IDC **01** 13:52:44.0±2.0, 3.08S×130.67E, h0km, mb3.9/4, mbtmp3.8/6, ML4.0/2, MS3.1/6, Error ellipse: s-maj=83.6km s-min=22.6km az=71.0*
*DJA **01** 13:52:47.6±0.2, 3.2°S×2.3°×13.0°E±.1°, h10km, M4.1/12, mB5.1/1, mb4.7/2, MLv3.9/12, Mw(mB)4.5/1*

ISC 01 13:52:48.4±0.8, 3.16S±0.06×130.50E±0.03, h24km, n22, σ2834/24, mb3.8/3, MS3.0/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.48**	**204**	P	**Pb**	**13 53 16.1**	**+1.0**
MSAI	**Masohi**	**1.58**	**263**	P	**Pn**	**13 53 16.0**	**+1.1**
MSAI				S	**Sb**	**13 53 37.0**	**+0.5**
FAKI	**Fak Fak**	**1.76**	**82**	P	**Pn**	**13 53 18.4**	**+1.0**
FAKI				S	**Sb**	**13 53 42.1**	**+0.4**
AAI	**Ambon**	**2.36**	**257**	P	**Pn**	**13 53 27.4**	**+1.8**
SWI	**Sorong**	**2.41**	**18**	P	**Pn**	**13 53 24.6**	**-1.7**
KMPI	**Kaimana, Papua**	**3.23**	**99**	P	**Pn**	**13 53 39.9**	**+2.2**
KMPI				S	**Sn**	**13 54 19.7**	**+4.2**
NLAI	**Namlea**	**3.40**	**269**	P	**Pn**	**13 53 40.8**	**+0.9**
NLAI				S	**Sn**	**13 54 21.5**	**+2.0**
RKPI	**Ransiki, Papua**	**4.02**	**66**	P	**Pn**	**13 53 48.8**	**+0.3**
RKPI				S	**Sn**	**13 54 36.2**	**+1.3**
SANI	**Sanana**	**4.64**	**284**	P	**Pn**	**13 53 56.5**	**-0.5**
BAKI	**Biak**	**5.93**	**71**	P	**Pn**	**13 54 15.7**	**+0.9**
BATI	**Baumata**	**9.75**	**224**	LR	LR	13 59 20.7	
	comp=Z,180nm,18.9s,baz=359,slow=40						
KAPI	**Kappang**	**10.88**	**260**	LR	LR	14 00 28.1	
	comp=Z,74nm,20.9s,baz=65,slow=42						
DAV	**Davao City (W)**	**11.29**	**334**	LR	LR	14 00 43.3	
	comp=Z,111nm,19.0s,baz=92,slow=42						
FITZ	**Fitzroy Crossi**	**15.59**	**197**	Pn	**Pn**	**13 56 25.6**	**-1.1**
	0.4nm,0.3s,baz=18,slow=11,SNR=8.8						
FITZ				Sn	**Sn**	**13 59 16.9**	**-1.9**
	0.1nm,0.3s,baz=3.2,slow=18,SNR=1.5 2.9nm,0.7s						
WRA	**Warramunga Arr**	**17.09**	**168**	Pn	**Pn**	**13 56 42.9**	**-3.0**
	0.6nm,0.3s,baz=348,slow=13,SNR=22						
WRA				Sn	**Sn**	**13 59 47.9**	**-7.5**
	0.2nm,0.3s,baz=346,slow=24,SNR=4.7 0.2nm,0.3s						
ASAR	**Alice Springs**	**20.65**	**171**	P	**P**	**13 57 27.3**	**+0.9**
	12nm,0.6s,baz=352,slow=10,SNR=205						
ASAR				S	**S**	**14 01 15.3**	**-1.0**
	1.9nm,1.0s,baz=350,slow=19,SNR=7.6 12nm,0.6s						
GUMO	**Guam**	**21.91**	**40**	LR	LR	14 06 09.7	
	comp=Z,19nm,18.0s,baz=171,slow=37						
JOW	**Kunigami**	**29.90**	**356**	LR	LR	14 09 25.6	
	comp=Z,45nm,21.0s,baz=302,slow=34						
JCJ	**Chichijima**	**32.13**	**20**	LR	LR	14 11 31.7	
	comp=Z,30nm,19.6s,baz=60,slow=35						
CMAR	**Chiang Mai Arr**	**37.78**	**306**	P	**P**	**14 00 04.3**	**+1.3**
	0.4nm,0.4s,baz=116,slow=8.9,SNR=7.5 0.4nm,0.4s						
MKAR	**Makanchi Array**	**65.33**	**326**	P	**P**	**14 03 27.4**	**-1.2**
	0.5nm,0.6s,baz=129,slow=7.8,SNR=6.6 0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**69.54**	**328**	P	**P**	**14 03 54.5**	**-0.7**
	1.1nm,1.0s,baz=120,slow=6.8,SNR=4.6 1.1nm,1.0s						

*SCB **01** 14:29:11.2±1.4, 21.26S×67.28W, h186km±11km, MB4.9, ML3.5/2, Error ellipse: s-maj=4.8km s-min=3.8km az=0.0*
*IDC **01** 14:29:15.4±8.6, 20.72S×66.87W, h220km±59km, mb3.5/2, mbtmp3.8/3, Error ellipse: s-maj=107.8km s-min=43.7km az=24.0*

ISC 01 14:29:10.6±1.0, 21.25S±0.05×67.27W±0.05, h200km, n23, σ1¶11/27, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.53**	**91**	Pg	**Pn**	**14 29 45.1**	**+0.1**
MOCB				Sg	**Sn**	**14 30 09.9**	**-1.7**
MOCB				IAML		14 30 10.7	
	277nm,0.4s						
YJA	**Yavi**	**1.88**	**120**	Pg	**Pn**	**14 29 49.2**	**+0.8**
PB09	**IPOC Station P**	**1.91**	**253**	Pg	**Pn**	**14 29 49.0**	**+0.6**
PB08	**IPOC Station P**	**2.07**	**302**	Pg	**Pn**	**14 29 50.9**	**+0.6**
PB01	**IPOC Station P**	**2.08**	**275**	Pg	**Pn**	**14 29 50.7**	**+0.7**
PB01				Sg	**Sn**	**14 30 19.5**	**-1.1**
PB01				IAML		14 30 20.9	
	224nm,0.3s						
GO01	**Chusmiza**	**2.39**	**311**	Pg	**Pn**	**14 29 53.9**	**+0.1**
PB02	**IPOC Station P**	**2.45**	**268**	Pg	**Pn**	**14 29 54.3**	**+0.3**
PB02				Sg	**Sn**	**14 30 25.9**	**-1.9**
PB06	**IPOC Station P**	**2.58**	**235**	Pg	**Pn**	**14 29 56.0**	**+0.5**
PB11	**IPOC Station P**	**2.68**	**303**	Pg	**Pn**	**14 29 56.3**	**-0.4**
SOEO	**Opoqueri**	**2.73**	**348**	Pg	**Pn**	**14 29 58.4**	**+0.8**
SOET	**ToroToro**	**3.41**	**24**	Pg	**Pn**	**14 30 05.5**	**0.0**
PB16	**IPOC Station P**	**3.58**	**324**	Pg	**Pn**	**14 30 08.6**	**+0.8**
BBOJ	**La Paz, Jacaqu**	**4.33**	**348**	Pg	**Pn**	**14 30 18.7**	**+1.6**
PB14	**IPOC Station P**	**4.43**	**220**	Pg	**Pn**	**14 30 17.9**	**-0.2**
GO02	**Mina Guanaco**	**4.44**	**208**	Pg	**Pn**	**14 30 18.5**	**+0.3**
BBOE	**La Paz, Chanca**	**4.46**	**351**	Pg	**Pn**	**14 30 20.1**	**+1.4**
BBOD	**La Paz, Gloria**	**4.75**	**344**	Pg	**Pn**	**14 30 23.8**	**+1.4**
LPAZ	**La Paz**	**5.00**	**351**	P	**Pn**	**14 30 25.6**	**0.0**
	2.4nm,0.4s,baz=162,slow=9.6,SNR=13						
LPAZ				S	**Sn**	**14 31 21.6**	**-3.1**
	2.3nm,0.6s,baz=356,slow=18,SNR=5.0						
LPAZ	**La Paz**	**5.00**	**351**	Pg	**Pn**	**14 30 25.8**	**+0.2**
BBOB	**La Paz, Bander**	**5.14**	**351**	Pg	**Pn**	**14 30 27.4**	**+0.1**
TXAR	**Lajitas Array**	**61.31**	**324**	P	**P**	**14 39 06.6**	**+1.4**
	0.2nm,0.3s,baz=149,slow=6.9,SNR=1.6 0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**75.84**	**70**	P	**P**	**14 40 34.9**	**-0.4**
	1.5nm,0.3s,baz=247,slow=4.0,SNR=2.5 1.5nm,0.3s						
MKAR	**Makanchi Array**	**144.53**	**37**	PKP	**PKPdf**	**14 48 23.8**	**+0.7**
	0.6nm,0.6s,baz=325,slow=3.5,SNR=6.2						

*UPP **01** 14:36:16.7±0.0, 57.36N×13.09E, h17km±1km, ML2.4, Confirmed Earthquake*
*BER **01** 14:36:16.7±2.5, 57.38N×13.10E, h0km±5km, ML2.0, ML2.4(UPP), Confirmed Earthquake*
*DNK **01** 14:36:16.7±1.7, 57.36N×13.07E, h12km±2km, ML2.7, ML2.4(UPP), Confirmed Earthquake*
*IDC **01** 14:36:23.0±3.0, 57.93N×13.11E, h0km, mbtmp3.4/2, ML1.9/3, Error ellipse: s-maj=26.9km s-min=11.9km az=28.0*

ISC 01 14:36:15.3±0.9, 57.38N±0.01×13.08E±0.02, h15km±8km, n70, σ1¶10/142, 7C-15D, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORU	**Boraas**	**0.31**	**327**	↓P	**Pb**	**14 36 23.1**	**+0.6**
BORU				S	**Sb**	**14 36 27.7**	**+0.4**
BORU	**Boraas**	**0.31**	**327**	↓P	**Pb**	**14 36 23.1**	**+0.6**
BORU				S	**Sb**	**14 36 27.7**	**+0.4**
BORU	**Boraas**	**0.31**	**327**	↓P	**Pb**	**14 36 23.1**	**+0.6**
BORU				↓*i*P	**Pb**	**14 36 23.1**	**+0.6**
BORU				*i* S	**Sb**	**14 36 27.6**	**+0.4**
BORU				S	**Sb**	**14 36 27.7**	**+0.4**
GNOU	**Gnosjoe**	**0.38**	**103**	P	**Pb**	**14 36 23.7**	**0.0**
GNOU				S	**Sg**	**14 36 28.7**	**+0.6**
GNOU	**Gnosjoe**	**0.38**	**103**	P	**Pb**	**14 36 23.7**	**0.0**
GNOU				S	**Sg**	**14 36 28.7**	**+0.6**
GNOU	**Gnosjoe**	**0.38**	**103**	P	**Pb**	**14 36 23.7**	**0.0**
GNOU				S	**Sg**	**14 36 28.7**	**+0.6**
FABU	**Falkenberg**	**0.43**	**208**	↑P	**Pb**	**14 36 24.5**	**-0.1**
FABU				S	**Sg**	**14 36 30.1**	**+0.4**
FABU	**Falkenberg**	**0.43**	**208**	↑P	**Pb**	**14 36 24.5**	**-0.1**
FABU				S	**Sg**	**14 36 30.1**	**+0.4**
FABU	**Falkenberg**	**0.43**	**208**	↑*i*P	**Pb**	**14 36 24.5**	**-0.1**
FABU				↑P	**Pb**	**14 36 24.5**	**-0.1**
FABU				*i* S	**Sg**	**14 36 30.0**	**+0.4**
FABU				S	**Sg**	**14 36 30.1**	**+0.4**
ONAU	**Onsala**	**0.63**	**272**	↓P	**Pb**	**14 36 28.4**	**+0.4**
ONAU				S	**Sb**	**14 36 36.8**	**+0.1**
ONAU	**Onsala**	**0.63**	**272**	↓P	**Pb**	**14 36 28.4**	**+0.4**
ONAU				S	**Sb**	**14 36 36.8**	**+0.1**
ONAU	**Onsala**	**0.63**	**272**	↓P	**Pb**	**14 36 28.4**	**+0.4**
ONAU				↓*i*P	**Pb**	**14 36 28.4**	**+0.4**
ONAU				*i* S	**Sb**	**14 36 36.7**	**+0.1**
ONAU				S	**Sb**	**14 36 36.8**	**+0.1**
FKPU	**Falk**	**0.85**	**23**	↑↑P	**Pb**	**14 36 32.3**	**+0.4**
FKPU				S	**Sb**	**14 36 43.6**	**+0.5**
FKPU	**Falk**	**0.85**	**23**	↑↑P	**Pb**	**14 36 32.3**	**+0.4**
FKPU				S	**Sb**	**14 36 43.6**	**+0.5**
FKPU	**Falk**	**0.85**	**23**	↑↑P	**Pb**	**14 36 32.3**	**+0.4**
FKPU				S	**Sb**	**14 36 43.6**	**+0.5**
DEL	**Delary**	**1.01**	**154**	↓↓P	**Pg**	**14 36 34.1**	**-0.7**
DEL				S	**Sg**	**14 36 47.2**	**-0.8**
DEL	**Delary**	**1.01**	**154**	↓↓P	**Pg**	**14 36 34.1**	**-0.7**
DEL				S	**Sg**	**14 36 47.2**	**-0.8**
DEL	**Delary**	**1.01**	**154**	*i* P	**Pg**	**14 36 34.1**	**-0.7**
				↓↓P	**Pg**	**14 36 34.1**	**-0.7**
DEL				*i* S	**Sg**	**14 36 47.2**	**-0.8**
DEL				S	**Sg**	**14 36 47.2**	**-0.8**
TJOU	**Tjoern**	**1.02**	**311**	P	**Pb**	**14 36 35.0**	**+0.4**
TJOU				S	**Sb**	**14 36 48.6**	**+0.8**
TJOU	**Tjoern**	**1.02**	**311**	P	**Pb**	**14 36 35.0**	**+0.4**
TJOU				S	**Sb**	**14 36 48.6**	**+0.8**
TJOU	**Tjoern**	**1.02**	**311**	P	**Pb**	**14 36 35.0**	**+0.4**
TJOU				*i* P	**Pg**	**14 36 35.1**	**+0.1**
TJOU				S	**Sb**	**14 36 48.6**	**+0.8**
TJOU				*i* S	**Sb**	**14 36 48.7**	**+0.8**
VXJU	**Vaexsjoe**	**1.11**	**114**	↓↓P	**Pg**	**14 36 36.2**	**-0.5**
VXJU				S	**Sg**	**14 36 50.9**	**-0.4**
VXJU	**Vaexsjoe**	**1.11**	**114**	↓↓P	**Pg**	**14 36 36.2**	**-0.5**
VXJU				S	**Sg**	**14 36 50.9**	**-0.4**
EKSU	**Eksjoe**	**1.22**	**80**	P	**Pb**	**14 36 38.2**	**+0.2**
EKSU				S	**Sg**	**14 36 54.2**	**-0.4**
EKSU	**Eksjoe**	**1.22**	**80**	P	**Pb**	**14 36 38.2**	**+0.2**
EKSU				S	**Sg**	**14 36 54.2**	**-0.4**
VANU	**Vaenersborg**	**1.24**	**335**	↓↓P	**Pn**	**14 36 38.8**	**+0.7**
VANU				S	**Sn**	**14 36 55.6**	**+1.1**
VANU	**Vaenersborg**	**1.24**	**335**	↓↓P	**Pn**	**14 36 38.8**	**+0.7**
VANU				S	**Sn**	**14 36 55.6**	**+1.1**
BJUU	**Bjuv**	**1.31**	**181**	P	**Pn**	**14 36 39.2**	**+0.2**
BJUU				S	**Sb**	**14 36 55.8**	**-0.4**
BJUU	**Bjuv**	**1.31**	**181**	*e*P	**Pn**	**14 36 39.4**	**+0.4**
BJUU				*i* S	**Sb**	**14 36 56.0**	**-0.1**
BJUU	**Bjuv**	**1.31**	**181**	P	**Pn**	**14 36 39.2**	**+0.2**
BJUU				*e*P	**Pn**	**14 36 39.4**	**+0.4**
BJUU				S	**Sb**	**14 36 55.8**	**-0.4**
BJUU				*i* S	**Sb**	**14 36 56.0**	**-0.1**
LNKU	**Linkoeping**	**1.55**	**56**	P	**Pb**	**14 36 43.9**	**+0.3**
LNKU				S	**Sg**	**14 37 04.9**	**-0.3**
LNKU	**Linkoeping**	**1.55**	**56**	P	**Pb**	**14 36 43.9**	**+0.3**
LNKU				S	**Sg**	**14 37 04.9**	**-0.3**
NASU	**Vaermlandsnaes**	**1.56**	**2**	P	**Pb**	**14 36 44.1**	**+0.3**
NASU				S	**Sg**	**14 37 04.7**	**-0.7**
NASU	**Vaermlandsnaes**	**1.56**	**2**	P	**Pb**	**14 36 44.1**	**+0.3**
NASU				S	**Sg**	**14 37 04.7**	**-0.7**
OVD	**Ostervraa, Den**	**1.56**	**269**	*i* P	**Pg**	**14 36 45.0**	**-0.3**
OVD				*i* S	**Sg**	**14 37 06.2**	**+0.7**
OVD				IAML		14 37 08.9	
	comp=Z,159nm,0.2s						
OVD	**Ostervraa, Den**	**1.56**	**269**	*i* P	**Pg**	**14 36 45.0**	**-0.3**
OVD				*i* S	**Sg**	**14 37 06.2**	**+0.7**
OVD				IAML		14 37 08.9	
	comp=Z,159nm,0.2s						
OSKU	**Oskarshamn**	**1.65**	**95**	P	**Pb**	**14 36 45.3

NEST				S	Sg	14 56 39.2	-0.2
PENT	**Pentalofos**	**0.41**	**130**	P	Pg	14 56 39.6	+0.3
PENT				S	Sg	14 56 44.6	0.0
LMS2	**Laimos Florina**	**0.49**	**40**	P	Pg	14 56 40.6	-0.1
LMS2				S	Sg	14 56 46.7	-0.4
OHR	**Ohrid**	**0.65**	**4**	*i* Pg	Pb	14 56 45.6	+0.2
OHR				*i* Sg	Sb	14 56 55.2	+0.3
KZN	**Kozani**	**0.81**	**101**	P	Pg	14 56 46.3	-0.6
KZN				S	Sg	14 56 56.4	-0.9
IGT	**Igoumenitsa**	**0.98**	**198**	Pg	Pg	14 56 49.6	-0.5
IGT				Sg	Sg	14 57 03.2	+0.4
IGT				AMd		14 57 50.4	
IGT	**Igoumenitsa**	**0.98**	**198**	*i* Pg	Pn	14 56 51.8	-0.1
IGT				*i* Sg	Sn	14 57 07.8	+1.5
IGT	**Igoumenitsa**	**0.98**	**198**	P	Pb	14 56 50.7	-0.2
IGT				S	Sn	14 57 07.3	+1.1
KEK	**Kerkira**	**1.04**	**224**	Pn	Pg	14 56 50.8	-0.5
KEK				Sn	Sn	14 57 06.9	-0.8
KEK				AML	AML	14 57 20.1	
	182nm,0.2s						
KEK				AMd		14 57 52.3	
TETR	**Tetrakomo, Epi**	**1.19**	**159**	P	Pn	14 56 54.2	-0.7
LIT	**Litokhoron**	**1.39**	**104**	P	Pg	14 56 57.5	-0.5
LKD2	**Lefkada island**	**1.67**	**182**	Sn	Sg	14 57 25.8	+0.8

DJA 01 14:58:03.1±0.3, 6°S±3°×13°3E±°, h43km±13km, M4.0/11, mB4.7/1, mb3.9/10, MLv4.0/11, Mw(mB)3.9/1, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.59**	**228**	P	Pn	14 58 41.8	-0.7
KMPI	**Kaimana, Papua**	**2.61**	**10**	P	Pn	14 58 42.0	-0.8
FAKI	**Fak Fak**	**3.46**	**343**	P	Pn	14 58 53.3	-1.2
BNDI	**Bandanaira**	**3.75**	**297**	P	Pn	14 58 58.6	+0.2
RKPI	**Ransiki, Papua**	**4.80**	**11**	P	Pn	14 59 14.4	+1.5
MSAI	**Masohi**	**5.18**	**304**	P	Pn	14 59 17.2	-1.0
	0.1nm783nm16nm,0.6s						
SWI	**Sorong**	**5.71**	**340**	P	Pn	14 59 25.0	-0.4
	0.1nm5.8nm,0.8s						
BAKI	**Biak**	**5.78**	**30**	P	Pn	14 59 27.5	+1.1
NLAI	**Namlea**	**6.82**	**296**	P	Pn	14 59 42.9	+2.2
	0.1nm16nm,0.7s						

*IDC **01** 15:12:54.6±1.6, 43°.81N×129°.33W, h0km, mb3.6/5, mbtmp3.6/9, ML3.4/4, MS3.1/6, Error ellipse: s-maj=39.8km s-min=13.9km az=38.0*

*NEIC **01** 15:12:54.9±2.0, 44°.02N±0°.09×129°.4W±0°.2, h10km±2km, mb3.5/5, ML3.3/48, Error ellipse: s-maj=20.9km s-min=13.9km az=248.0*

ISC 01 15:12:57.1±1.1, 43°.98N±0°.09×129°.1W±0°.1, h15km, n77, σ1#44/68, mb3.8/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.66**	**106**	Pn	**Pn**	**15 13 51.9**	**-1.4**
KEBM				IAML		15 14 39.6	
	comp=E,82nm,1.4s						
KEBM				IAML		15 14 41.6	
	comp=N,70nm,1.1s						
I02E	**Swisshome, OR**	**3.81**	**86**	Pn	**Pn**	**15 13 55.2**	**+0.1**
J01E	**Myrtle Point**	**3.86**	**100**	Pn	**Pn**	**15 13 54.4**	**-1.5**
J01E				IAML		15 15 14.5	
	comp=E,30nm,2.1s						
K02D	**Willamette Mer**	**4.19**	**106**		**Pn**	**15 13 59.2**	**-1.2**
K02D				IAML		15 14 50.1	
	comp=N,27nm,2.6s						
I03D	**Drain, OR**	**4.19**	**92**		**Pn**	**15 14 01.3**	**+0.9**
COR	**Corvallis**	**4.23**	**80**		**Pn**	**15 14 01.1**	**+0.3**
COR				IAML		15 15 10.7	
	comp=N,25nm,3.0s						
COR				IAML		15 15 20.1	
	comp=N,25nm,1.7s						
G03D	**McMinnville, O**	**4.36**	**72**		**Pn**	**15 14 03.2**	**+0.4**
G03D				IAML		15 14 55.1	
	comp=N,34nm,1.5s						
G03D				IAML		15 14 58.1	
	comp=E,32nm,1.2s						
F03A	**Seaside**	**4.41**	**62**		**Pn**	**15 14 03.6**	**+0.2**
KSXB	**Camp Six Broad**	**4.42**	**117**	Pn	**Pn**	**15 14 02.7**	**-0.9**
KSXB				IAML		15 15 30.6	
	comp=E,20nm,4.3s						
BUCK	**Buck Mountain**	**4.43**	**85**		**Pn**	**15 14 05.2**	**+1.4**
BUCK				IAML		15 15 08.3	
	comp=N,23nm,2.6s						
BUCK				IAML		15 15 10.9	
	comp=E,26nm,2.0s						
L02F	**Cave Junction**	**4.48**	**113**	Pn	**Pn**	**15 14 03.7**	**-0.6**
H04D	**Lebanon**	**4.62**	**81**		**Pn**	**15 14 06.4**	**+0.1**
H04D				IAML		15 15 59.2	
	comp=E,38nm,0.1s						
E03A	**Lebam**	**4.69**	**55**		**Pn**	**15 14 06.6**	**-0.6**
E03A				IAML		15 15 17.4	
	comp=E,25nm,1.4s						
E03A				IAML		15 15 47.5	
	comp=N,24nm,3.5s						
BBOR	**Butler Butte**	**4.82**	**101**		**Pn**	**15 14 09.8**	**+0.5**
BBOR				IAML		15 15 15.7	
	comp=E,19nm,1.1s						
BBOR				IAML		15 15 20.4	
	comp=N,15nm,2.1s						
I04A	**Tendick Farm,**	**4.86**	**90**		**Pn**	**15 14 10.1**	**+0.4**
I04A				IAML		15 16 55.7	
	comp=N,22nm,0.1s						
G04A	**Mulino**	**4.90**	**73**		**Pn**	**15 14 08.0**	**-2.2**
NLWA	**Neilton Lookou**	**5.02**	**45**		**Pn**	**15 14 11.7**	**-0.1**
NLWA				IAML		15 15 09.0	
	comp=N,14nm,0.9s						
NLWA				IAML		15 15 10.6	
	comp=N,21nm,0.4s						
H04A	**Detroit Lake**	**5.03**	**80**	Pn	**Pn**	**15 14 11.9**	**0.0**
C03A	**Quillayute Air**	**5.08**	**37**		**Pn**	**15 14 12.2**	**-0.4**
J04A	**Umpqua Nationa**	**5.15**	**96**		**Pn**	**15 14 15.7**	**+1.9**
YBH	**Yreka Blue Hor**	**5.23**	**113**	Pn	**Pn**	**15 14 15.8**	**+1.0**
	comp=N,0.1nm,0.3s,baz=297,slow=2.3,SNR=12						
YBH				Sn	**Sn**	**15 15 15.8**	**+1.0**
	baz=184,slow=19,SNR=1.5						
WIFE	**Three Sisters-**	**5.27**	**87**		**Pn**	**15 14 16.4**	**+0.9**
L04D	**Klamath Falls**	**5.30**	**107**		**Pn**	**15 14 16.7**	**+0.9**
HOOD	**Mount Hood Mea**	**5.50**	**73**		**Pn**	**15 14 19.8**	**+1.3**
KMRM	**Mail Ridge**	**5.51**	**131**	Pn	**Pn**	**15 14 20.7**	**+2.1**
B04A	**Port Angeles**	**5.65**	**42**		**Pn**	**15 14 20.2**	**-0.2**
GNW	**Green Mountain**	**5.68**	**49**		**Pn**	**15 14 20.9**	**0.0**
J05D	**Fort Rock, OR**	**5.77**	**94**		**Pn**	**15 14 23.5**	**+1.2**
PINE	**Pine Mountain**	**5.92**	**89**		**Pn**	**15 14 25.6**	**+1.2**
CLRS	**Cowichan Lake**	**5.94**	**34**		**Pn**	**15 14 24.5**	**0.0**
O02D	**Mt. Diablo Mer**	**6.06**	**127**	Pn	**Pn**	**15 14 27.2**	**+1.1**
PGC	**Sidney**	**6.10**	**38**		**Pn**	**15 14 26.3**	**-0.3**
K05A	**Summer Lake**	**6.13**	**99**		**Pn**	**15 14 28.5**	**+1.2**
G06A	**Carlson Farm,**	**6.19**	**75**		**Pn**	**15 14 28.9**	**+1.0**
HOPS	**Hopland Field**	**6.75**	**136**	Pn	**Pn**	**15 14 36.2**	**+0.6**
LTY	**Liberty**	**6.77**	**58**		**Pn**	**15 14 36.9**	**+0.9**
I07A	**Izee**	**6.94**	**86**		**Pn**	**15 14 38.5**	**+0.2**
HAWA	**Hanford**	**7.20**	**67**		**Pn**	**15 14 42.1**	**+0.4**
ORV	**Oroville**	**7.21**	**125**		**Pn**	**15 14 46.2**	**+4.2**
BEKR	**Beckworth**	**7.72**	**119**		**Pn**	**15 14 50.4**	**+1.3**
BBB	**Bella Bella**	**8.23**	**4**	Pn	**Pn**	**15 14 58.9**	**+3.0**
	comp=N,0.3nm,0.3s,baz=189,slow=16,SNR=2.2						
	comp=N,5.3nm,1.0s						
LLLB	**Lillooet**	**8.25**	**34**	Pn	**Pn**	**15 14 54.2**	**-2.0**
PNTR	**Pine Nut**	**8.66**	**121**	Pn	**Pn**	**15 15 01.6**	**-0.3**
F10A	**Beach Ranch, E**	**8.67**	**73**	Pn	**Pn**	**15 15 04.4**	**+2.4**
WAKR	**Walker**	**9.12**	**124**	Pn	**Pn**	**15 15 09.8**	**+1.5**
NEW	**Newport**	**9.37**	**59**	Pn	**Pn**	**15 15 08.7**	**-2.8**
PLID	**Pearl Lake**	**9.44**	**79**	Pn	**Pn**	**15 15 12.1**	**-0.6**
NVAR	**Mina Array Bea**	**9.86**	**121**	Pn	**Pn**	**15 15 20.5**	**+2.1**
	comp=N,0.2nm,0.3s,baz=310,slow=8.6,SNR=9.9						
NVAR				LR	LR	15 19 03.5	
	comp=N,85nm,18.6s,baz=306,slow=37						
	comp=N,1.3nm,0.7s						
ELK	**Elko**	**10.78**	**103**	Pn	**Pn**	**15 15 34.0**	**+3.0**
	comp=N,0.1nm,0.3s,baz=294,slow=11,SNR=6.1						
ELK				LR	LR	15 20 03.5	
	comp=N,79nm,18.6s,baz=287,slow=39						
	comp=N,1.3nm,0.7s						
FURC	**Furnace Creek,**	**12.00**	**125**	Pn	**Pn**	**15 15 49.1**	**+1.6**
GWY	**Greenwater Val**	**12.31**	**125**	Pn	**Pn**	**15 15 53.3**	**+1.4**
QSM	**Queen of Sheba**	**12.34**	**126**	Pn	**Pn**	**15 15 55.4**	**+3.2**
GSC	**Goldstone, Bar**	**12.85**	**128**	Pn	**Pn**	**15 15 57.6**	**-1.5**
YHH	**Holmes Hill**	**13.10**	**80**	Pn	**Pn**	**15 16 03.9**	**+1.1**
MTPC	**Mountain Pass**	**13.45**	**125**	Pn	**Pn**	**15 16 09.4**	**+2.0**
BELC	**Belle Mtn. Jos**	**14.25**	**130**	Pn	**Pn**	**15 16 19.0**	**+0.6**
PDAR	**Pinedale Array**	**14.29**	**88**	Pn	**Pn**	**15 16 20.3**	**+1.4**
PDAR	**Pinedale Array**	**14.29**	**88**	Pn	**P**	**15 16 24.0**	**-2.2**
	comp=N,0.1nm,0.3s,baz=281,slow=14,SNR=8.3						
PDAR				LR	LR	15 21 34.9	
	comp=N,79nm,20.2s,baz=268,slow=36						
	comp=N,1.3nm,1.1s						
PFO	**Pinyon Flats O**	**14.29**	**132**	LR	LR	15 21 16.1	
	comp=N,87nm,19.6s,baz=294,slow=35						
DLBC	**Dease Lake**	**14.48**	**358**	LR	LR	15 21 16.1	
	comp=N,114nm,20.0s,baz=124,slow=34						
BORC	**Borrego Spring**	**14.58**	**133**	Pn	**Pn**	**15 16 20.7**	**-2.1**
BC3	**Big Chuckawall**	**14.81**	**130**	Pn	**Pn**	**15 16 25.8**	**-0.2**
U15A	**North Rim**	**14.90**	**115**	Pn	**Pn**	**15 16 27.6**	**+0.2**
ESJX	**Sierra Juarez**	**15.82**	**135**	Pn	**Pn**	**15 16 39.5**	**+0.2**
PV21	**Cone Mtn., Par**	**16.08**	**103**	Pn	**Pn**	**15 16 42.7**	**0.0**
PV21				IAmb	IAmb	15 16 57.8	
	comp=Z,4.9nm,1.0s						
KDAK	**Kodiak Island**	**20.10**	**322**	LR	LR	15 23 04.2	
	comp=Z,69nm,19.4s,baz=105,slow=30						
YKA	**Yellowknife Ar**	**20.39**	**20**	P	Pn	15 17 35.7	+0.6
	comp=Z,1.1nm,0.9s,baz=214,slow=11,SNR=1.5						
	comp=Z,1.1nm,0.9s						
ILAR	**Eielson Array**	**23.09**	**341**	P	**P**	**15 18 02.2**	**+0.3**
	comp=Z,3.6nm,1.3s,baz=138,slow=8.9,SNR=9.3						
	comp=Z,3.6nm,1.3s						
TXAR	**Lajitas Array**	**24.99**	**117**	P	**P**	**15 18 21.0**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=318,slow=8.1,SNR=7.0						
	comp=Z,0.4nm,0.8s						
PETK	**Petropavlovsk-**	**47.30**	**308**	P	**P**	**15 21 29.3**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=76,slow=8.3,SNR=2.3						
	comp=Z,2.9nm,0.9s						
H11N3	**WAKE ISLAND Hy**	**57.95**	**267**	T	T	16 25 35.6	
	baz=49,slow=75,SNR=572						
H11N2	**WAKE ISLAND Hy**	**57.95**	**267**	T	T	16 25 35.6	
	baz=49,slow=75,SNR=463						
H11N1	**WAKE ISLAND Hy**	**57.97**	**267**	T	T	16 25 36.8	
	baz=49,slow=75,SNR=414						
H11S1	**WAKE ISLAND Hy**	**58.88**	**266**	T	T	16 26 41.8	
	baz=49,slow=75,SNR=128						
H11S2	**WAKE ISLAND Hy**	**58.89**	**266**	T	T	16 26 38.8	
	baz=49,slow=75,SNR=87						
H11S3	**WAKE ISLAND Hy**	**58.90**	**266**	T	T	16 26 44.1	
	baz=49,slow=75,SNR=80						
KURBB	**Kurchatov Arra**	**82.75**	**343**	P	**P**	**15 25 20.5**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=20,slow=4.6,SNR=5.4						
	comp=Z,0.3nm,0.3s						

*UCR **01** 15:24:08.4±1.3, 11°.43N×86°.89W, h0km±48km, MW5.8, MB5.4(NEIC)*

*CATAC **01** 15:24:09.5±0.5, 11°N±2°×8°7W±°, h25km±6km, M5.6/41, MLv5.6/41, Error ellipse: s-maj=4.6km s-min=3.5km az=20.3, confirmed*

*SNET **01** 15:24:09.8±3.1, 11°.40N×86°.92W, h10km±309km, ML5.6*

*NEIC **01** 15:24:10.1±2.2, 11°.71N±0°.05×86°.58W±0°.07, h35km±1km, mb5.5/672, Mww5.4/55, Error ellipse: s-maj=13.1km s-min=6.6km az=243.0*

*IDC **01** 15:24:11.2±1.2, 11°.75N×86°.57W, h43km±10km, mb4.5/23, mbtmp4.7/26, ML3.4/3, MS5.0/58, Error ellipse: s-maj=19.4km s-min=7.7km az=51.0*

*MOS **01** 15:24:11.1±1.3, 11°.67N×86°.69W, h59km, mb5.4/17, Error ellipse: s-maj=13.2km s-min=5.5km az=114.5*

*NEIC **01** 15:24:12.2, 11°.47N×86°.89W, h30km, Moment Tensor Solution. Duration: 2s9 Moment tensor: Scale 10¹⁷Nm; Mrr1.46; Mθθ-1.12; Mφφ-0.35; Mrθ0.76; Mθφ0.91; Mφr-0.19; Fault plane solution: M₀1.79000×10¹⁷ NP1: φs314.61000°, δ33.50000°, λ107.58000°. NP2: φs113.81000°, δ58.26000°, λ78.70000°. Principal axes: T 1.6717, Plg74.0000°, Azm353.0000°; N 0.2102, Plg10.0000°, Azm120.0000°; P -1.8819, Plg13.0000°, Azm212.0000°;*

*NEIC **01** 15:24:12.2, 11°.57N×86°.78W, h30km*

*GCMT **01** 15:24:13.1±0.1, 11°.24N±0°.01×87°.12W±0°.01, h34km, MW5.5/140, Moment Tensor Solution. s138,c253; s140,c248; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr2.11±.03; Mθθ-1.47±.02; Mφφ-0.63±.03; Mrθ1.08±.03; Mθφ1.35±.02; Mφr-0.83±.04; Best double couple: M₀2.66200×10¹⁷ NP1:φs306.00000°, δ30.00000°, λ89.00000°. NP2:φs127.00000°, δ60.00000°, λ91.00000°. Principal axes: T 2.4840, Plg75.0000°, Azm39.0000°; N 0.3580, Plg1.0000°, Azm307.0000°; P -2.8410, Plg15.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 15:24:08.6±0.5, 11°.44N±0°.02×86°.99W±0°.02, h33km±1km, n1065, σ1#71/801, mb5.5/356, MS5.2/78, 15C-24D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.83**	**28**	⇓P	**Pb**	**15 24 25.7**	**+1.0**
ABCN	**Banco Central**	**0.95**	**44**	S	**Sb**	**15 24 40.2**	**+1.3**
ABCN	**Banco Central**	**0.95**	**44**	P	**Pb**	**15 24 27.5**	**+0.9**
SABN	**Sabanita**	**0.95**	**57**	⇓P	**Pn**	**15 24 25.9**	**+0.2**
AMTN	**Mateare**	**0.96**	**34**	P	**Pb**	**15 24 28.0**	**+1.2**
UNAN	**Cigeo UNAN**	**0.97**	**46**	⇓P	**Pb**	**15 24 27.1**	**+0.2**
UNAN				S	**Sb**	**15 24 40.8**	**+1.3**
USIM	**UNAN**	**0.97**	**46**		Pn	15 24 17.7	-8.2
NANN	**Nandasmo**	**0.98**	**60**	S	**Sb**	**15 24 40.9**	**+1.0**
NANN	**Nandasmo**	**0.98**	**60**	⇓P	**Pb**	**15 24 28.3**	**+1.1**
MASN	**Masaya**	**0.98**	**56**	P	**Pb**	**15 24 27.4**	**+0.2**
MASN				S	**Sb**	**15 24 40.8**	**+0.9**
MASN	**Masaya**	**0.98**	**56**	eP	**Pb**	**15 24 26.9**	**-0.3**
MAS3	**Al N del Volca**	**0.98**	**54**	⇓P	**Pb**	**15 24 27.0**	**-0.2**
NADN	**Granada**	**0.98**	**72**	⇓P	**Pb**	**15 24 27.2**	**0.0**
NADN				S	**Sb**	**15 24 41.7**	**+1.8**
NADN	**Granada**	**0.98**	**72**	eP	**Pb**	**15 24 27.2**	**0.0**
TISN	**Laguna Tiscapa**	**0.99**	**45**	⇓P	**Pb**	**15 24 27.5**	**+0.2**
APQ2	**Apoyeque**	**0.99**	**41**	⇓P	**Pb**	**15 24 27.3**	**-0.1**
APQ2				S	**Sb**	**15 24 40.7**	**+0.6**
APQ2	**Apoyeque**	**0.99**	**41**	⇓P	**Pb**	**15 24 27.6**	**+0.3**
ALLN	**Telcor Managua**	**0.99**	**44**	P	**Pb**	**15 24 27.9**	**+0.5**
ALLN	**Telcor Managua**	**0.99**	**44**	S	**Sb**	**15 24 41.7**	**+1.5**
APYN	**Apoyeque**	**1.00**	**38**	P	**Pb**	**15 24 28.6**	**+1.0**
APYN				S	**Sb**	**15 24 42.1**	**+1.6**
APQ3	**Volcan Apoyequ**	**1.02**	**36**	⇓P	**Pb**	**15 24 28.4**	**+0.5**
APQ3				S	**Sb**	**15 24 43.4**	**+2.4**
APQN	**BB Volcan Apoy**	**1.03**	**41**	⇓P	**Pb**	**15 24 27.1**	**+0.4**
WILN	**Americas 2**	**1.06**	**47**	⇓P	**Pb**	**15 24 28.6**	**+0.1**
WILN				S	**Sb**	**15 24 43.8**	**+1.7**
AERN	**Aeropuerto Man**	**1.06**	**49**	P	**Pb**	**15 24 28.7**	**+0.2**
AERN	**Aeropuerto Man**	**1.06**	**49**	S	**Sb**	**15 24 43.8**	**+1.6**
CNGA	**AI SSO del Vol**	**1.08**	**15**	⇓P	**Pb**	**15 24 29.1**	**+0.2**
CNGA				S	**Sb**	**15 24 44.8**	**+2.0**
CNGN	**Cerro Negro**	**1.09**	**15**		**Pn**	**15 24 23.4**	**-4.2**
CNGN				Sn	**Sn**	**15 24 35.4**	**-6.1**
CNGN	**Cerro Negro**	**1.09**	**15**	S	**Sb**	**15 24 45.1**	**+2.1**
CNGN	**Cerro Negro**	**1.09**	**15**	⇓P	**Pb**	**15 24 29.2**	**+0.2**
CNGN	**Cerro Negro**	**1.09**	**15**	eP	**Pb**	**15 24 29.3**	**+0.2**
MOM2	**El Cardon**	**1.10**	**26**	⇓P	**Pb**	**15 24 29.6**	**+0.3**
MOM2				S	**Sb**	**15 24 45.2**	**+1.8**
ARIN	**Rivas**	**1.13**	**89**	S	**Sn**	**15 24 42.6**	**+0.2**
ARIN	**Rivas**	**1.13**	**89**	eP	**Pn**	**15 24 26.6**	**-1.4**
MOM3	**MOM3**	**1.16**	**23**	⇓P	**Pb**	**15 24 30.2**	**0.0**
MOM3				S	**Sb**	**15 24 46.3**	**+1.4**
HERN	**Volcan Telica**	**1.17**	**7**	Pn	**Pn**	**15 24 26.8**	**-2.0**
POLN	**Al Sur del Vol**	**1.21**	**8**	⇓P	**Pb**	**15 24 30.8**	**-0.3**
POLN				S	**Sb**	**15 24 47.9**	**+1.4**
PKGN	**Cerro Pekin**	**1.22**	**0**	⇓P	**Pb**	**15 24 31.4**	**+0.2**
PKGN				S	**Sb**	**15 24 49.0**	**+2.4**
CRIN	**San Cristobal**	**1.25**	**357**		**Pn**	**15 24 26.2**	**-3.7**
CRIN	**San Cristobal**	**1.25**	**357**	⇓P	**Pb**	**15 24 32.1**	**+0.3**
CRIN	**San Cristobal**	**1.25**	**357**	eP	**Pb**	**15 24 32.0**	**+0.2**
MORN	**Al O del Volca**	**1.31**	**85**	⇑P	**Pn**	**15 24 31.7**	**+1.0**
CONN	**Concepcion**	**1.34**	**85**	⇓P	**Pn**	**15 24 31.6**	**+0.6**
LCRUZ	**La Cruz**	**1.38**	**105**	eP	**Pn**	**15 24 32.0**	**+0.5**
CARN	**Rivas**	**1.46**	**100**	P	**Pb**	**15 24 34.0**	**-1.2**
CARN	**Rivas**	**1.46**	**100**	eP	**Pn**	**15 24 33.5**	**+0.9**
AESN	**El Sauce Leon**	**1.50**	**17**	S	**Sb**	**15 24 56.0**	**+1.3**
AESN	**El Sauce Leon**	**1.50**	**17**	P	**Pb**	**15 24 35.2**	**-0.7**
ELI1	**Hacienda Flor**	**1.61**	**119**	eP	**Pn**	**15 24 36.2**	**+1.4**
CSGN	**Cosiguina Volc**	**1.63**	**340**	⇑P	**Pb**	**15 24 37.4**	**-0.7**
CSGN				S	**Sb**	**15 24 59.2**	**+0.9**
CSGN	**Cosiguina Volc**	**1.63**	**340**	eP	**Pb**	**15 24 37.4**	**-0.7**
POTN	**Potosi Cosigui**	**1.63**	**342**	⇑P	**Pb**	**15 24 37.4**	**-0.7**
POTN	**Potosi Cosigui**	**1.63**	**342**	eP	**Pb**	**15 24 37.3**	**-0.9**
ALIBA	**Liberia Airpor**	**1.65**	**121**	eP	**Pn**	**15 24 36.6**	**+1.4**
LAPC	**Finca la Perla**	**1.66**	**114**	eP	**Pn**	**15 24 36.0**	**+0.6**
BUAI	**Buenos Aires**	**1.72**	**109**	eP	**Pn**	**15 24 37.2**	**+1.0**
VRLE	**La Escondida,**	**1.72**	**112**	eP	**Pn**	**15 24 37.2**	**+0.9**
DELF	**Filadelfia**	**1.72**	**125**	eP	**Pn**	**15 24 37.4**	**+1.2**
LIMN	**Finca el Limon**	**1.72**	**21**	P	**Pb**	**15 24 38.3**	**-1.4**
VORI	**VORI**	**1.72**	**111**	eP	**Pb**	**15 24 39.0**	**-0.8**
PEJA	**Penjamo Buenos**	**1.73**	**108**	eP	**Pb**	**15 24 38.0**	**-1.8**
GPS3	**Bodega del ICE**	**1.73**	**113**	eP	**Pb**	**15 24 38.1**	**-1.7**
GPS2	**Hotel Rincn d**	**1.74**	**113**	eP	**Pn**	**15 24 37.8**	**+1.1**
MATN	**Matagalpa**	**1.81**	**35**	⇓P	**Pn**	**15 24 38.1**	**+0.6**
SACU	**Santa Cruz**	**1.81**	**130**	eP	**Pn**	**15 24 43.5**	**+2.4**
SAJU	**San Juanillo,**	**1.85**	**137**	eP	**Pn**	**15 24 37.5**	**-0.6**
JUD3	**Juan Diaz 3**	**1.90**	**132**		**Pn**	**15 24 36.8**	**-2.0**
JUD3	**Juan Diaz 3**	**1.90**	**132**	eP	**Pn**	**15 24 39.0**	**+0.2**
HORNC	**Hornillas**	**1.92**	**112**	eP	**Pn**	**15 24 40.6**	**+1.6**
PLVR	**Palo Verde**	**1.94**	**124**	eP	**Pb**	**15 24 43.1**	**-0.4**
VMAR	**Armenia, Volca**	**1.94**	**109**	eP	**Pn**	**15 24 40.6**	**+1.3**
CUI	**Cuipilapa**	**1.95**	**113**	eP	**Pn**	**15 24 41.0**	**+1.6**
NICO	**Nicoya**	**1.99**	**131**	eP	**Pb**	**15 24 44.9**	**+0.7**
CNCH	**Conchagua**	**2.00**	**336**	*i* P	**Pb**	**15 24 42.7**	**-1.8**
CNCH				eS	**Sb**	**15 25 08.2**	**-1.0**
MOTZ	**Rio Naranjo**	**2.02**	**112**	eP	**Pn**	**15 24 42.3**	**+1.9**
LCND	**La Caada**	**2.06**	**335**	eP	**Pb**	**15 24 43.4**	**-2.0**
LCND				eP	**Pn**	**15 24 43.7**	**+2.8**
LCND				eS	**Sb**	**15 25 08.8**	**-1.8**
LCND	**La Caada**	**2.06**	**335**	⇑P	**Pb**	**15 24 43.3**	**-2.1**
TENO	**El Achiote**	**2.10**	**110**	eP	**Pn**	**15 24 43.2**	**+1.6**
TIMP	**Tierras Morena**	**2.11**	**114**	eP	**Pn**	**15 24 43.4**	**+1.7**
CNAS	**Canas**	**2.11**	**118**	eP	**Pb**	**15 24 45.5**	**-0.8**
INVE	**Universidad In**	**2.12**	**117**	eP	**Pn**	**15 24 44.0**	**+2.2**
RCON	**San Juan de Ri**	**2.19**	**22**	⇑P	**Pn**	**15 24 45.3**	**+2.5**
TILA	**Tilaran**	**2.20**	**116**	eP	**Pn**	**15 24 46.1**	**-1.7**
QUEB	**Quebradon, Cot**	**2.21**	**111**	eP	**Pn**	**15 24 44.6**	**+1.6**
NYURE	**Nandayure**	**2.23**	**130**	eP	**Pn**	**15 24 44.0**	**+0.8**
OCON	**Estacion meteo**	**2.23**	**13**	P	**Pb**	**15 24 46.3**	**-2.1**
RCPN	**Sur Rio San Ju**	**2.25**	**23**	P	**Pb**	**15 24 46.3**	**-2.4**
RCVN	**Varillal2**	**2.27**	**20**	⇑P	**Pn**	**15 24 46.4**	**+2.5**
CHIK	**Chiripa**	**2.27**	**116**	eP	**Pb**	**15 24 47.1**	**-1.9**
JUNT	**Juntas**	**2.30**	**120**	eP	**Pb**	**15 24 47.7**	**-1.8**
JTS	**Las Juntas de**	**2.30**	**120**		**Pn**	**15 24 43.0**	**-1.2**
JTS	**Las Juntas de**	**2.30**	**120**	P	**Pn**	**15 24 45.2**	**+0.9**
	60nm,0.3s,baz=302,slow=12,SNR=83						
JTS				S	**Sn**	**15 25 11.1**	**-0.4**
	848nm,0.3s,baz=279,slow=18,SNR=5.6						
JTS				LR	LR	15 25 28.0	
	comp=Z,13µm,18.5s,baz=302,slow=36						
	328nm,0.3s						
JTS	**Las Juntas de**	**2.30**	**120**	*i* P	**Pn**	**15 24 45.3**	**+1.0**
JTS	**Las Juntas de**	**2.30**	**120**	eP	**Pn**	**15 24 45.9**	**+1.6**
CNRM	**Centro Naciona**	**2.33**	**330**	eP	**Pb**	**15 24 48.6**	**-1.3**
CNRM				eS	**Sb**	**15 25 17.5**	**-0.9**
BLLM	**Bellamira**	**2.34**	**329**	eP	**Pn**	**15 24 44.7**	**-0.1**
VSM	**San Miguel**	**2.34**	**328**	eP	**Pn**	**15 24 47.2**	**+2.1**
LCY	**Lacayo**	**2.35**	**327**	eP	**Pn**	**15 24 47.3**	**+2.3**
RANC	**El Ranchito**	**2.35**	**327**	eP	**Pb**	**15 24 48.4**	**-2.2**
TABAC	**Tabacon**	**2.37**	**113**	eP	**Pn**	**15 24 46.3**	**+1.0**
MTEVE	**Monteverde**	**2.40**	**118**	eP	**Pn**	**15 24 47.7**	**+2.0**
PACA	**Pacayal**	**2.40**	**327**	eP	**Pb**	**15 24 49.7**	**-1.6**
REZ	**Monterrey de S**	**2.42**	**112**	eP	**Pb**

HELC Santa Helena 12.46 114 P Pn 15 27 06.3 +2.2
6µm2µm34nm,2.7s
MGV Manicaragua 12.55 31 eP Pn 15 27 06.5 +1.6
TUMC Tumaco 12.59 139 P P 15 27 16.1 -0.5
ARGC Ariguani, Magd 12.62 96 P Pn 15 27 07.6 +1.7
7µm3µm80nm,1.5s
CAMR Camarioca 12.73 24 eP Pn 15 27 11.8 +4.4
TLIG Tlapa 12.76 300 Pn 15 27 12.6 +4.8
LMGC Las Mercedes 12.87 47 eP Pn 15 27 11.7 +2.4
YOTC Yotoco, Valle 12.88 124 P Pn 15 27 13.2 +3.6
1µm33nm,1.8s
GUY2C Guyana, Caldas 13.05 117 P Pn 15 27 13.2 +1.0
4µm2µm100nm,0.6s
CCCC Cccc 13.13 41 eP P 15 27 20.0 -2.5
CHIV Chivirico 13.24 49 eP Pn 15 27 16.9 +2.5
PTBC PUERTO BERRIO, 13.30 110 P Pn 15 27 16.7 +1.5
238nm16nm,1.2s
ANIL Santa Ana 13.38 120 P P 15 27 23.0 -2.7
POPC Popayan, Colom 13.52 130 P P 15 27 23.0 -4.2
2µm150nm,1.4s
YAR Yar 13.53 48 eP Pn 15 27 21.0 +2.7
MARVS Santiago de Cu 13.64 50 eP Pn 15 27 21.5 +1.7
RCC Rio Carpintero 13.79 51 eP Pn 15 27 23.1 +1.2
BRJC Barrancabermej 13.80 108 P Pn 15 27 24.9 +2.8
6µm2µm29nm,0.7s
ORTC Ortega, Tolima 13.83 122 P Pn 15 27 25.6 +3.1
3µm2µm91nm,0.6s
OCAC Ocana 13.84 102 P Pn 15 27 24.3 +1.6
5µm2µm125nm,0.7s
CRJC Cerrejon, Guaj 13.84 90 P Pn 15 27 20.8 -1.9
6µm1µm34nm,1.2s
GCUF Volcan Galeras 13.95 136 P P 15 27 29.0 -3.2
3µm95nm,1.6s
OTAV Otavalo 13.99 142 P 15 27 29.4 -3.2
OTAV Otavalo 13.99 142 P P 15 27 29.5 -3.2
OTAV Otavalo 13.99 142 eP P 15 27 30.4 -2.3
OTAV Otavalo 13.99 142 P P 15 27 38.6 +6.0
SPBC San Pablo de B 14.00 113 P P 15 27 30.6 -1.8
PINC Pinares de May 14.02 49 eP Pn 15 27 26.2 +1.2
HLGC Holguin 14.08 47 eP Pn 15 27 27.2 +1.4
ROSC El Rosal 14.14 117 P P 15 27 31.4 -2.9
40nm,0.6s,baz=298,slow=14,SNR=8.0
ROSC LR LR 15 32 34.9
comp=Z,10µm,21.7s,baz=322,slow=36
ROSC El Rosal 14.14 117 P P 15 27 31.4 -2.9
2µm137nm,1.2s
GTBY Guantanamo Bay 14.20 52 eP Pn 15 27 30.4 +2.9
PRAC Prado 14.23 122 P P 15 27 32.1 -2.8
2µm62nm,0.6s
BONI La Bonita 14.40 139 P P 15 27 39.9 +2.9
NMDO Nuevo Mundo 14.67 50 eP Pn 15 27 36.6 +2.8
URIC Uribia, Colomb 14.69 87 P Pn 15 27 34.2 0.0
6µm2µm79nm,1.2s
MOAC Moa 14.74 50 eP P 15 27 38.1 -2.3
CHIC Chingaza 14.76 116 P Pn 15 27 38.3 +2.8
4µm2µm62nm,1.2s
URMC La Uribe, Meta 14.91 122 P P 15 27 41.2 -1.3
1µm54nm,0.9s
FLOC Florencia 14.91 130 Pn 15 27 37.3 +0.1
FLOC Florencia 14.91 130 P P 15 27 41.6 -0.9
2µm3µm260nm,1.5s
COHC Cochancay 15.81 150 P P 15 27 51.9 -0.5
JRQG Juriquilla Cam 15.87 307 Pn P 15 27 52.1 -1.2
MACC Macarena, Meta 15.97 124 P P 15 27 53.0 -1.2
2µm64nm,1.7s
SDV Santo Domingo 16.29 97 Pn 15 27 52.7 -2.5
SDV Santo Domingo 16.29 97 P Pn 15 27 52.8 -2.5
0.6nm,0.3s,baz=282,slow=10,SNR=14
SDV PcP PcP 15 32 48.5 +0.1
3.5nm,0.4s,baz=297,slow=4.5,SNR=3.6
SDV LR LR 15 36 25.4
comp=Z,3µm,18.1s,baz=54,slow=46
4.9nm,0.7s
SDV Santo Domingo 16.29 97 eP Pn 15 27 56.5 +1.2
SDV Santo Domingo 16.29 97 P P 15 27 57.3 -0.7
PTGC Puerto Gaitan, 16.37 115 P Pn 15 27 56.3 +0.2
PTLC Puerto Leguiza 16.49 132 P P 15 28 04.5 +4.5
MCRA Macar, Loja 17.19 156 P P 15 28 08.2 +0.4
DWPF Disney Wildern 17.38 17 eP P 15 28 11.3 +1.6
GRTK Grand Turk 18.19 55 eP Pn 15 28 17.1 -1.6
ZAIG Zacatecas 18.65 309 P Pn 15 28 24.9 +0.3
BAUV El Baul 18.81 96 P P 15 28 24.4 -1.2
KVTX Kingsville 19.02 329 P Pn 15 28 28.8 +0.2
KVTX IAmb IAmb 15 28 33.9
comp=Z,280nm,0.9s
HBVL Hebbronville 19.04 326 P Pn 15 28 28.9 0.0
BRAL Brewton 19.63 360 P P 15 28 32.0 -2.4
BRAL IAmb IAmb 15 28 43.8
comp=Z,476nm,1.4s
346A Big Creek Wild 19.98 354 P P 15 28 34.7 -3.5
346A IAmb IAmb 15 28 47.7
comp=Z,578nm,1.6s
352A Blakely 20.03 5 P P 15 28 38.8 -0.1
352A IAmb IAmb 15 28 46.2
comp=Z,427nm,1.0s
441A DeRidder 20.06 344 P P 15 28 36.3 -2.8
HKT Hockley 20.17 337 P P 15 28 38.0 -2.3
HKT Hockley 20.17 337 i P Pn 15 28 42.7 +0.4
HKT pmax pmax
comp=Z,814nm,1.1s
833A Chaparral WMA, 20.42 327 P P 15 28 41.9 -1.2
MLDN Muldoon 20.52 334 P P 15 28 43.6 -0.5
HNVL Huntsville, TX 20.77 339 P P 15 28 45.4 -1.4
VBMS Vicksburg 20.93 352 P P 15 28 46.3 -2.3
VBMS IAmb IAmb 15 28 54.7
comp=Z,430nm,1.2s
146A Union 21.18 355 P P 15 28 49.0 -2.3
SJG San Juan 21.20 69 P P 15 28 53.9 +2.4
comp=Z,10nm,0.3s,baz=277,slow=9.0,SNR=3.0
SJG LR LR 15 36 56.5
comp=Z,4µm,19.6s,baz=228,slow=37
HNDO Hondo 21.34 329 P P 15 28 53.4 +0.4
HNDO IAmb IAmb 15 29 08.0
comp=Z,281nm,1.3s
NATX Nacogdoches 21.43 342 P P 15 28 53.2 -0.7
LRAL Lakeview Retre 21.49 360 P P 15 28 51.7 -2.8
LRAL IAmb IAmb 15 29 00.1
comp=Z,221nm,1.1s
143A Socs Landing, 21.55 350 P P 15 28 51.6 -3.6
143A IAmb IAmb 15 29 03.2
comp=Z,143nm,1.0s
435B Jarrell 21.61 335 P P 15 28 54.7 -1.2
Z47A Carrollton 21.68 358 P P 15 28 52.0 -4.6
Z47A IAmb IAmb 15 29 02.2
comp=Z,338nm,1.2s
237A Washetta, Mont 22.02 340 P P 15 28 59.9 -0.4
237A IAmb IAmb 15 29 17.9
comp=Z,264nm,0.9s
GOGA Godfrey 22.11 8 P P 15 28 59.0 -2.1
GOGA IAmb IAmb 15 29 07.0
comp=Z,379nm,1.6s
GOGA Godfrey 22.11 8 P P 15 28 59.0 -2.1
GOGA pmax pmax
comp=Z,379nm,1.6s
Z41A Richland Creek 22.36 347 P P 15 29 03.0 -0.8
Z41A IAmb IAmb 15 29 08.7
comp=Z,157nm,0.9s
Y52A Lilburn 22.48 6 IAmb IAmb 15 29 22.2
comp=Z,237nm,1.0s
BRDY Brady 22.66 332 IAmb IAmb 15 29 18.4
comp=Z,250nm,1.0s
WLAR White Oak Lake 22.84 347 IAmb IAmb 15 29 13.6
comp=Z,210nm,0.9s
X48A Hartselle 22.91 360 IAmb IAmb 15 29 32.6
comp=Z,236nm,1.4s
FPAL Fort Paine 23.03 3 IAmb IAmb 15 29 14.1
comp=Z,330nm,2.0s
JSC Jenkinsville 23.33 12 IAmb IAmb 15 29 31.8
comp=Z,158nm,1.0s
HPIG 23.38 314 IAmb IAmb 15 29 28.6
comp=Z,112nm,1.0s
OZNA Ozona 23.40 328 IAmb IAmb 15 29 38.2
comp=Z,86nm,0.8s
PLAL Pickwick Lake 23.46 358 IAmb IAmb 15 29 17.5
comp=Z,152nm,1.1s
X40A Basin Creek Fa 23.55 348 IAmb IAmb 15 29 18.3
comp=Z,333nm,1.5s
TXAR Lajitas Array 23.64 321 P P 15 29 18.3 +1.2
TXAR PcP 15 33 04.5 +3.1
TXAR Lajitas Array 23.64 321 P P 15 29 18.5 +1.3
comp=Z,69nm,0.9s,baz=133,slow=7.6,SNR=224
TXAR PcP PcP 15 33 04.0 +2.6
comp=Z,12nm,0.9s,baz=136,slow=2.0,SNR=4.9
TXAR LR LR 15 41 38.6
comp=Z,673nm,18.5s,baz=129,slow=44
comp=Z,69nm,0.9s
TX31 Lajitas Ar. Si 23.64 321 IAmb IAmb 15 29 28.9
comp=Z,196nm,0.8s
SWET Sewanee 23.69 2 IAmb IAmb 15 29 29.0
comp=Z,176nm,1.2s
W50A Signal Mountai 23.70 3 IAmb IAmb 15 29 31.9
comp=Z,94nm,0.9s
UALR University of 23.74 349 IAmb IAmb 15 29 19.9
comp=Z,279nm,1.1s
CZSB Cruzeiro do Su 23.76 143 P P 15 29 19.7 +1.4
CZSB IAmb IAmb 15 29 38.0
comp=Z,127nm,1.2s
CZSB Cruzeiro do Su 23.76 143 eP P 15 29 20.6 +2.3
MIAR Mount Ida 23.77 346 P P 15 29 18.9 +0.7
MIAR pmax pmax
comp=Z,170nm,0.8s
X58A Rowland 24.04 16 IAmb IAmb 15 29 44.5
comp=Z,275nm,1.3s
KMSC Kings Mountain 24.15 11 IAmb IAmb 15 29 44.9
comp=Z,115nm,1.1s
SGCY Sterling City 24.19 330 IAmb IAmb 15 29 33.8
comp=Z,218nm,1.0s
H06E1 SOCORRO T-PHAS 24.22 290 T T 15 54 28.6
SNR=186
WHAR Wooly Hollow 24.23 349 IAmb IAmb 15 29 24.2
comp=Z,288nm,1.3s
TKL Tuckaleechee C 24.29 6 IAmb IAmb 15 29 37.9
comp=Z,272nm,1.4s
TKL Tuckaleechee C 24.29 6 P P 15 29 23.1 +0.1
comp=Z,105nm,1.0s,baz=176,slow=13,SNR=33
TKL LR LR 15 39 11.6
comp=Z,3µm,20.2s,baz=196,slow=38
comp=Z,105nm,1.0s
ALPN Alpine 24.37 323 IAmb IAmb 15 29 35.9
comp=Z,114nm,0.9s
HALT Halls 24.45 355 IAmb IAmb 15 29 27.2
comp=Z,320nm,1.4s
GNAR Gosnell 24.57 354 IAmb IAmb 15 29 27.3
comp=Z,269nm,1.2s
PEBM Pemiscott Bayo 24.70 354 IAmb IAmb 15 29 29.0
comp=Z,163nm,0.9s
FCAR Ozark Folk Cen 24.78 350 IAmb IAmb 15 29 28.8
comp=Z,192nm,1.3s
LCAR Lake Charles 24.81 352 IAmb IAmb 15 29 29.0
comp=Z,257nm,1.3s
V55A Watsonville 24.86 11 IAmb IAmb 15 29 41.5
comp=Z,197nm,1.5s
U49A Red Boiling Sp 24.99 2 IAmb IAmb 15 29 33.3
comp=Z,187nm,1.4s
SLBS Sierra La Lagu 25.00 302 P P 15 29 33.1 +3.4
SLBS IAmb IAmb 15 29 47.5
comp=Z,180nm,1.2s
SN07 Snyder 07 25.04 332 IAmb IAmb 15 29 34.0
comp=Z,104nm,0.9s
TZTN Tazewell 25.18 7 IAmb IAmb 15 29 49.2
comp=Z,178nm,1.3s
PECS Pecos 25.24 324 IAmb IAmb 15 29 43.3
comp=Z,142nm,1.0s
V58A Windy Hill, Pi 25.27 15 IAmb IAmb 15 29 47.1
comp=Z,128nm,0.7s
POST Post 25.31 331 IAmb IAmb 15 29 43.3
comp=Z,174nm,1.0s
NNA Nana 25.36 156 LR LR 15 38 32.5
comp=Z,2µm,20.9s,baz=342,slow=34
NNA Nana 25.36 156 i P P 15 29 33.6 +0.7
NNA pmax pmax
comp=Z,77nm,1.5s
U54A Nelsons Funny 25.40 10 IAmb IAmb 15 30 04.5
comp=Z,354nm,1.6s
PBMO Poplar Bluff 25.42 354 IAmb IAmb 15 29 35.2
comp=Z,240nm,1.3s
T47A Sharon Grove 25.44 360 IAmb IAmb 15 29 35.1
comp=Z,312nm,1.5s
VHRN Van Horn 25.47 322 IAmb IAmb 15 29 45.4
comp=Z,93nm,1.0s
LPIG La Paz 25.48 303 LR LR 15 40 25.9
comp=Z,3µm,20.0s,baz=116,slow=38
T45A Paducah 25.51 357 P P 15 29 33.4 -0.6
HHAR Hobbs 25.52 347 IAmb IAmb 15 29 35.7
comp=Z,102nm,1.0s
DKNS Dickens 25.54 332 IAmb IAmb 15 29 39.0
comp=Z,143nm,0.8s
WMOK Wichita Mounta 25.56 337 P P 15 29 34.9 +0.3
WMOK pmax pmax
comp=Z,914nm,1.2s
RLO Rose Lookout 25.67 345 IAmb IAmb 15 29 37.0
comp=Z,79nm,0.9s
U38A Gravette 25.77 346 IAmb IAmb 15 29 37.9
comp=Z,187nm,1.1s
DEOK Depew 25.78 342 IAmb IAmb 15 29 55.5
comp=Z,172nm,0.8s
CGM3 Cape Girardeau 25.86 355 IAmb IAmb 15 29 38.8
comp=Z,92nm,1.3s
MGMO Mountain Grove 26.04 350 IAmb IAmb 15 29 40.5
comp=Z,156nm,1.2s
S44A Carbondale 26.22 356 IAmb IAmb 15 29 42.2
comp=Z,239nm,1.3s
SIUC Southern Illin 26.24 356 IAmb IAmb 15 29 42.3
comp=Z,245nm,1.3s
T57A Hurt 26.38 14 IAmb IAmb 15 29 59.2
comp=Z,174nm,1.4s
USIN University of 26.42 359 IAmb IAmb 15 30 16.6
comp=Z,128nm,1.1s
WCI Wyandotte Cave 26.68 1 P P 15 29 44.3 -0.3
WCI Wyandotte Cave 26.68 1 P P 15 29 44.3 -0.3
WCI pmax pmax
comp=Z,518nm,1.9s
S54A Dingess, Beckl 26.74 10 IAmb IAmb 15 30 09.4
comp=Z,108nm,1.2s
TEFE Tefe 26.74 122 eP P 15 29 46.1 +0.7
CCM Cathedral Cave 26.78 353 P P 15 29 44.7 -0.8
CCM Cathedral Cave 26.78 353 P P 15 29 44.7 -0.8
CCM pmax pmax
comp=Z,309nm,1.4s
T35A Sooner Cattle 26.78 343 IAmb IAmb 15 29 46.9
comp=Z,258nm,1.4s
R49A Shelbyville 26.79 3 IAmb IAmb 15 29 47.5
comp=Z,231nm,1.5s
R50A Paris 26.83 5 IAmb IAmb 15 29 48.3
comp=Z,214nm,1.7s
CROK Carrier 26.86 340 IAmb IAmb 15 29 50.8
comp=Z,152nm,0.8s
OK038 West end E0370 27.09 339 IAmb IAmb 15 29 59.7
comp=Z,146nm,0.9s
R40A Maddies Statio 27.15 351 IAmb IAmb 15 29 49.9
comp=Z,75nm,0.8s
OLIL Olney 27.20 358 IAmb IAmb 15 29 51.0
comp=Z,230nm,1.4s
SLM Saint Louis 27.24 354 IAmb IAmb 15 29 50.9
comp=Z,147nm,1.4s
KAN14 Manchester OK 27.26 341 IAmb IAmb 15 29 54.6
comp=Z,100nm,0.9s
KAN01 Arponia South 27.38 341 IAmb IAmb 15 30 05.1
comp=Z,89nm,0.7s
Q44A Meyer Farm, Va 27.41 357 IAmb IAmb 15 29 53.1
comp=Z,136nm,0.9s
R55A Marlinton 27.43 12 IAmb IAmb 15 29 54.5
comp=Z,262nm,1.7s
BLO Bloomington 27.62 1 IAmb IAmb 15 29 54.7
comp=Z,71nm,0.9s
R58B Mineral 27.64 16 IAmb IAmb 15 30 16.4
comp=Z,139nm,1.5s
BOAV Boa Vista 27.74 107 eP P 15 29 53.3 -1.1
P48A Milroy 27.94 3 IAmb IAmb 15 29 57.2
comp=Z,186nm,1.3s
Q54A Coxs Mills 27.97 10 IAmb IAmb 15 29 58.8
comp=Z,171nm,1.5s
P46A Rosedale 28.06 360 IAmb IAmb 15 29 58.5
comp=Z,119nm,1.3s
P51A Williamsport 28.14 6 IAmb IAmb 15 29 59.8
comp=Z,167nm,1.5s
P43A Skaggs, Pawnee 28.18 356 IAmb IAmb 15 29 59.5
comp=Z,164nm,1.3s
P40A Paris 28.33 352 IAmb IAmb 15 30 00.4
comp=Z,168nm,1.6s
P53A Whipple 28.37 9 IAmb IAmb 15 30 03.3
comp=Z,136nm,1.2s
121A Cookes Peak, D 28.40 321 IAmb IAmb 15 30 13.0
comp=Z,116nm,1.1s
P52A Corning 28.41 8 IAmb IAmb 15 30 03.1
comp=Z,265nm,1.6s
SRIG Santa Rosalia 28.50 307 IAmb IAmb 15 30 06.6
comp=Z,212nm,1.4s
319A Douglas 28.60 317 IAmb IAmb 15 30 14.5
comp=Z,89nm,1.0s
O49A Covington 28.73 4 IAmb IAmb 15 30 04.6
comp=Z,184nm,1.3s
SFIN Lafayette 28.82 360 IAmb IAmb 15 30 04.9
comp=Z,204nm,1.4s
R32A Long Quarter, 28.84 341 IAmb IAmb 15 30 13.1
comp=Z,93nm,1.1s
Y22A Socorro 28.89 324 IAmb IAmb 15 30 34.5
comp=Z,141nm,1.3s
ACSO Alum Creek Sta 28.89 6 IAmb IAmb 15 30 07.2
comp=Z,63nm,0.8s
O52A Adamsville 28.92 8 IAmb IAmb 15 30 07.6
comp=Z,154nm,1.3s
P57A Homestead Farm 29.04 14 IAmb IAmb 15 30 09.9
comp=Z,226nm,1.7s
O53A New Philadelph 29.14 9 IAmb IAmb 15 30 08.9
comp=Z,107nm,1.1s
ANMO Albuquerque 29.34 326 P P 15 30 09.5 +0.8
ANMO PcP 15 33 12.6 -2.1
ANMO Albuquerque 29.34 326 P P 15 30 10.5 +1.8
comp=Z,26nm,0.9s,baz=188,slow=7.1,SNR=18
ANMO PcP PcP 15 33 15.2 +0.5
comp=Z,11nm,1.0s,baz=153,slow=4.5,SNR=3.7
ANMO LR LR 15 43 54.4
comp=Z,1µm,18.6s,baz=214,slow=40
comp=Z,26nm,0.9s
ANMO Albuquerque 29.34 326 ce P P 15 30 10.2 +1.5
ANMO pmax pmax
comp=Z,63nm,1.7s
TASM ASL Pad, Albuq 29.34 326 IAmb IAmb 15 30 21.4
comp=Z,47nm,0.9s
N41A Harden Midland 29.35 354 IAmb IAmb 15 30 09.2
comp=Z,135nm,1.1s
CBKS Cedar Bluff 29.54 340 IAmb IAmb 15 31 08.9
comp=Z,178nm,1.3s
N51A Ashland 29.64 7 IAmb IAmb 15 30 12.7
comp=Z,135nm,1.4s
N53A Lisbon 29.75 9 IAmb IAmb 15 30 14.0
comp=Z,286nm,1.8s
N38A Joes South Por 29.75 350 IAmb IAmb 15 30 13.1
comp=Z,77nm,0.6s
M44A Midewin, Midew 29.84 358 IAmb IAmb 15 30 13.4
comp=Z,134nm,1.2s
MACA Manacapuru-AM 29.91 117 eP P 15 30 14.6 +0.9
PAMR Moraine State 30.00 10 IAmb IAmb 15 30 17.1
comp=Z,134nm,1.5s
T25A Trinidad 30.01 331 IAmb IAmb 15 30 25.6
comp=Z,85nm,1.1s
M50A Fremont 30.05 6 IAmb IAmb 15 30 16.8
comp=Z,168nm,1.4s
SSPA Standing Stone 30.17 14 P P 15 30 15.2 -0.4
TUC Tucson 30.18 317 P P 15 31 20.1 +4.9
HQIL Hanson Quary C 30.25 359 IAmb IAmb 15 30 17.1
comp=Z,127nm,1.1s
L46A Eue Claire 30.46 1 P P 15 30 15.3 -3.0
N58A Sunbury 30.65 15 IAmb IAmb 15 30 23.6
comp=Z,231nm,1.8s
L40A Anamosa 30.73 354 IAmb IAmb 15 30 22.1
comp=Z,128nm,1.0s
KSCO Kaye Shedlock' 30.79 336 IAmb IAmb 15 30 32.0
comp=Z,91nm,1.0s
SCIA State Center 30.84 351 IAmb IAmb 15 30 22.9
comp=Z,129nm,1.1s
SDCO Great Sand Dun 31.01 331 P P 15 30 25.0 +1.5
K43A Burlington 31.17 358 IAmb IAmb 15 30 25.8
comp=Z,110nm,1.1s
L34A Svendsen Farm, 31.50 347 P P 15 30 26.2 -1.2
X16A Lo Mia Camp, P 31.93 320 IAmb IAmb 15 30 44.7
comp=Z,51nm,0.8s
BINY Binghamton 32.11 15 IAmb IAmb 15 30 44.2
comp=Z,66nm,0.9s
L59A Walton 32.36 17 IAmb IAmb 15 31 05.8
comp=Z,91nm,1.2s
WUAZ Wupatki 32.61 321 IAmb IAmb 15 30 50.7
comp=Z,96nm,1.0s
PV15 Paradox Valley 32.96 328 IAmb IAmb 15 30 54.5
comp=Z,61nm,1.0s
PV13 Radium Mtn., P 33.00 327 IAmb IAmb 15 30 52.9
comp=Z,79nm,0.9s
PV03 Paradox Valley 33.09 328 IAmb IAmb 15 30 53.5
comp=Z,90nm,0.9s
PV05 Paradox Valley 33.09 327 IAmb IAmb 15 30 53.3
comp=Z,87nm,0.9s
PV16 Nyswonger Mesa 33.16 328 IAmb IAmb 15 30 54.1
comp=Z,97nm,0.9s
VTX Valle De La Tr 33.19 311 IAmb IAmb 15 30 47.9
comp=Z,61nm,1.4s
J57A Williamstown 33.25 15 IAmb IAmb 15 30 58.8
comp=Z,72nm,1.0s
PV22 Blue Mesa, Par 33.26 328 IAmb IAmb 15 30 56.5
comp=Z,115nm,1.2s
PV14 Lion Creek, Pa 33.27 327 IAmb IAmb 15 30 55.0
comp=Z,72nm,0.9s
LPAZ La Paz 33.27 146 P P 15 30 45.0 +1.1
LPAZ La Paz 33.27 146 P P 15 30 45.4 +1.5
comp=Z,0.8nm,0.3s,baz=308,slow=6.2,SNR=4.4
LPAZ PcP PcP 15 33 26.8 +0.9
comp=Z,1.6nm,0.4s,baz=354,slow=3.8,SNR=3.8
LPAZ LR LR 15 44 26.8
comp=Z,4µm,20.0s,baz=310,slow=36
comp=Z,0.8nm,0.3s
LPAZ La Paz 33.27 146 eP P 15 30 45.6 +1.7
L61B Northampton 33.32 19 IAmb IAmb 15 30 59.8
comp=Z,66nm,1.1s
GLA Glamis 33.38 315 IAmb IAmb 15 30 57.2
comp=Z,49nm,0.9s
PV21 Cone Mtn., Par 33.38 328 IAmb IAmb 15 30 56.8
comp=Z,38nm,0.9s
ESJX Sierra Juarez 33.62 312 P P 15 30 47.6 +1.3
ESJX IAmb IAmb 15 30 52.1
comp=Z,44nm,1.0s
PB18 Visviri 33.63 149 P P 15 30 48.6 +1.7
PB18 IAmb IAmb 15 31 39.6
comp=Z,96nm,1.2s
U15A North Rim 33.77 322 IAmb IAmb 15 31 00.6
comp=Z,44nm,1.0s
SADO Sadowa 33.89 10 P P 15 30 48.1 -0.2
comp=Z,212nm,0.7s,baz=192,slow=4.2,SNR=9.5
SADO LR LR 15 44 28.4
comp=Z,22µm,20.8s,baz=224,slow=36
W13A Hualapai Mount 33.93 318 IAmb IAmb 15 31 02.1
comp=Z,40nm,1.0s
YUH Yuha Desert 33.94 313 IAmb IAmb 15 30 54.6
comp=Z,57nm,1.3s
SPMN Marine on St. 34.03 353 P P 15 30 47.9 -1.6
NEE2 Needles Airpor 34.22 317 IAmb IAmb 15 31 04.0
comp=Z,45nm,0.9s
PB16 IPOC Station P 34.25 150 P P 15 30 55.1 +2.8
CBX Cerro Bola 34.30 312 IAmb IAmb 15 30 58.0
comp=Z,99nm,1.2s
SUSD Miller 34.46 345 P P 15 30 52.5 -0.8
KNB Kanab 34.47 322 IAmb IAmb 15 31 07.2
comp=Z,115nm,1.1s
BUKO Buck Lake 34.50 9 P P 15 30 52.7 -0.9
MDP Montagnes des 34.54 98 LR LR 15 46 14.5
comp=Z,5µm,18.5s,baz=283,slow=39
PMD Palm Desert 34.79 314 IAmb IAmb 15 31 09.4
comp=Z,43nm,1.0s
Q16A Castle Valley 34.82 326 IAmb IAmb 15 31 09.7
comp=Z,77nm,0.9s
PFO Pinyon Flats O 34.83 314 P P 15 30 57.0 +0.2
PFO Pinyon Flats O 34.83 314 LR LR 15 47 38.4
comp=Z,2µm,19.5s,baz=128,slow=40
PFO Pinyon Flats O 34.83 314 i P P 15 30 57.5 +0.7
PFO pmax pmax
comp=Z,60nm,1.3s
PFO Pinyon Flats O 34.83 314 P P 15 31 01.0 +4.2
PFO pP sP 15 31 09.3 -1.2
PFO PcP PcP 15 31 31.5 +1.9
ITTB Itaituba 34.83 115 eP P 15 30 55.3 -1.5
P18A Preston Nutter 34.83 328 IAmb IAmb 15 31 08.8
comp=Z,90nm,1.0s
DNR Dunn Ranch,Anz 34.93 314 IAmb IAmb 15 31 11.0
comp=Z,43nm,0.9s
V12A Nelson 34.94 318 IAmb IAmb 15 31 10.4
comp=Z,39nm,0.9s
SZCU Shurtz Canyon 35.01 322 IAmb IAmb 15 31 11.5
comp=Z,57nm,0.9s
TMUT Trail Mountain 35.11 326 IAmb IAmb 15 31 12.0
comp=Z,123nm,1.3s
CCUT Cedar City 35.15 322 IAmb IAmb 15 31 12.6
comp=Z,50nm,1.0s
F33A 5 Mile Ranch, 35.19 349 P P 15 30 58.0 -1.6
RDMU Red Mountain 35.19 329 IAmb IAmb 15 31 11.2
comp=Z,55nm,1.1s
K22A Casper 35.44 335 IAmb IAmb 15 31 13.1
comp=Z,70nm,1.1s
RSSD Black Hills 35.73 339 P P 15 31 04.9 +0.4
RSSD IAmb IAmb 15 31 07.5
comp=Z,147nm,1.9s
RSSD Black Hills 35.73 339 P P 15 31 04.9 +0.4

RSSD pmax pmax
comp=Z,147nm,1.9s
RSSD Black Hills 35.73 339 P P 15 31 06.0 +1.5
BSUT Blindstream Ca 35.77 328 P P 15 31 06.3 +1.3
BSUT IAmb IAmb 15 31 16.9
comp=Z,77nm,1.0s
MNTQ Montreal, Queb 35.81 16 IAmb IAmb 15 31 17.8
comp=Z,100nm,1.1s
MPU Maple Canyon 35.85 327 IAmb IAmb 15 31 17.4
comp=Z,92nm,1.0s
VILB Vilhena 35.97 132 IAmb IAmb 15 31 12.3
comp=Z,127nm,1.3s
VILB Vilhena 35.97 132 eP P 15 31 07.2 +0.6
JLU Jordanelle 36.17 328 IAmb IAmb 15 31 20.5
comp=Z,47nm,0.8s
MWC Mount Wilson 36.28 314 IAmb IAmb 15 31 23.0
comp=Z,51nm,1.1s
PASC Pasadena Art C 36.34 314 IAmb IAmb 15 31 15.1
comp=Z,65nm,1.2s
CTU Camp Tracy 36.40 328 IAmb IAmb 15 31 22.0
comp=Z,77nm,0.9s
NPGB Novo Progresso 36.43 119 eP P 15 31 08.8 -1.8
G62A West of Eustis 36.49 20 IAmb IAmb 15 31 28.8
comp=Z,80nm,1.0s
TCUT Toone Canyon 36.53 328 IAmb IAmb 15 31 27.7
comp=Z,69nm,0.9s
TPNV Topopah Spring 36.57 319 IAmb IAmb 15 31 25.0
comp=Z,51nm,0.9s
EYMN Ely 36.59 355 IAmb IAmb 15 31 11.6
comp=Z,109nm,1.2s
DUG Dugway, Tooele 36.62 326 IAmb IAmb 15 31 24.2
comp=Z,64nm,1.1s
SPR3 Spring Creek 3 36.67 323 IAmb IAmb 15 31 24.7
comp=Z,63nm,1.0s
S11A Rachel 36.67 320 IAmb IAmb 15 31 26.4
comp=Z,91nm,1.0s
FURC Furnace Creek, 36.69 318 IAmb IAmb 15 31 29.2
comp=Z,50nm,1.0s
TPO Tropico Hills 36.74 315 IAmb IAmb 15 31 18.9
comp=Z,63nm,1.3s
PDAR Pinedale Array 36.87 332 P P 15 31 14.5 +0.3
PDAR PcP PcP 15 33 36.0 +0.4
PDAR ScP ScP 15 37 23.8 +3.7
PDAR Pinedale Array 36.87 332 P P 15 31 14.9 +0.7
comp=Z,11nm,0.6s,baz=141,slow=8.7,SNR=90
PDAR PcP PcP 15 33 36.2 +0.6
comp=Z,9.3nm,1.1s,baz=162,slow=4.0,SNR=5.1
PDAR ScP ScP 15 37 21.7 +1.5
comp=Z,1.0nm,0.7s,baz=173,slow=5.3,SNR=5.6
PDAR LR LR 15 50 59.8
comp=Z,1µm,19.1s,baz=120,slow=44
comp=Z,11nm,0.6s
OSI Osito Audit: C 36.95 314 IAmb IAmb 15 31 30.5
comp=Z,77nm,1.4s
GRAC Grapevine Rang 37.32 318 IAmb IAmb 15 31 31.3
comp=Z,57nm,0.9s
ISA Isabella, Lake 37.33 315 P P 15 31 18.8 +0.7
ISA Isabella, Lake 37.33 315 P P 15 31 18.8 +0.7
ISA pmax pmax
comp=Z,14nm,0.9s
SIV San Ignacio 37.42 136 P P 15 31 20.2 +1.2
comp=Z,28nm,0.5s,baz=317,slow=12,SNR=152
SIV PcP PcP 15 33 38.5 +1.1
comp=Z,4.1nm,0.7s,baz=302,slow=4.2,SNR=3.2
SIV LR LR 15 47 22.3
comp=Z,4µm,19.7s,baz=304,slow=37
comp=Z,28nm,0.5s
AHID Auburn Hatcher 37.60 330 IAmb IAmb 15 31 35.1
comp=Z,122nm,1.1s
PDRB Porto dos Gac 37.78 126 eP P 15 31 20.8 -1.3
DSP Deep Springs 37.93 318 P P 15 31 24.8 +1.7
LOHW Long Hollow 38.01 332 IAmb IAmb 15 31 36.8
comp=Z,37nm,0.8s
TPAW Teton Pass 38.08 331 IAmb IAmb 15 31 41.6
comp=Z,89nm,0.8s
CLDB Colider 38.10 124 eP P 15 31 25.4 +0.7
MOOW Moose Ponds 38.18 332 IAmb IAmb 15 31 41.6
comp=Z,121nm,1.8s
ELK Elko 38.35 325 IAmb IAmb 15 31 39.0
comp=Z,59nm,1.1s
ELK Elko 38.35 325 P P 15 31 28.8 +2.0
PTLB Pontes e Lacer 38.40 134 P P 15 31 27.1 0.0
PTLB IAmb IAmb 15 31 30.7
comp=Z,141nm,2.0s
PTLB Pontes e Lacer 38.40 134 eP P 15 31 27.4 +0.3
FLWY Flagg Ranch 38.42 332 IAmb IAmb 15 31 44.8
comp=Z,87nm,1.1s
H17A Grant Village 38.60 333 IAmb IAmb 15 31 37.0
comp=Z,112nm,1.7s
LKWY Lake 38.66 333 IAmb IAmb 15 31 50.0
comp=Z,107nm,1.5s
NVAR Mina Array Bea 38.76 319 P P 15 31 32.9 +2.6
comp=Z,21nm,0.9s,baz=119,slow=6.9,SNR=30
NVAR PcP PcP 15 33 43.7 +2.2
comp=Z,14nm,0.7s,baz=95,slow=3.6,SNR=13
NVAR ScP ScP 15 37 28.7 +1.3
comp=Z,1.8nm,0.8s,baz=112,slow=3.2,SNR=4.9
NVAR LR LR 15 51 40.9
comp=Z,3µm,18.1s,baz=132,slow=43
comp=Z,21nm,0.9s
YFT Old Faithful 38.76 332 IAmb IAmb 15 31 44.2
comp=Z,97nm,1.2s
YNE Yellowstone No 38.83 334 IAmb IAmb 15 31 46.3
comp=Z,195nm,1.8s
YMR Madison River 38.99 333 IAmb IAmb 15 31 38.2
comp=Z,99nm,1.3s
RYN Ryan 39.01 319 P P 15 31 34.0 +1.7
YHB Horse Butte 39.16 332 IAmb IAmb 15 31 52.4
comp=Z,130nm,1.8s
ULM Lac du Bonnet 39.38 351 P P 15 31 33.3 -1.7
comp=Z,96nm,0.9s,baz=168,slow=10,SNR=39
ULM LR LR 15 48 41.9
comp=Z,1µm,21.8s,baz=170,slow=38
comp=Z,96nm,0.9s
ULM Lac du Bonnet 39.38 351 i P P 15 31 33.5 -1.5
CMB Columbia Colle 39.90 317 P P 15 31 40.8 +1.3
CMB Columbia Colle 39.90 317 P P 15 31 40.8 +1.3
CMB pmax pmax
comp=Z,33nm,1.2s
SAO San Andreas Ge 39.95 315 P P 15 31 43.0 +3.0
BOZ Bozeman (W) 40.01 333 P P 15 31 41.9 +1.4
DLMT Dillon 40.27 332 IAmb IAmb 15 31 54.4
comp=Z,89nm,1.1s
MPK Martis Peak 40.36 319 IAmb IAmb 15 31 56.7
comp=Z,70nm,1.2s
MHC Mount Hamilton 40.38 316 P P 15 31 44.3 +0.6
MHC Mount Hamilton 40.38 316 P P 15 31 44.3 +0.6
MHC pmax pmax
comp=Z,49nm,1.2s
JRSC Jasper Ridge 40.82 315 IAmb IAmb 15 31 52.2
comp=Z,85nm,1.4s
SALV Santo Antonio 41.20 131 eP P 15 31 50.2 -0.3
WVOR Wild Horse Val 41.38 324 IAmb IAmb 15 32 03.4
comp=Z,74nm,0.9s
WVOR Wild Horse Val 41.38 324 P P 15 31 54.1 +2.2
MCCM Marconi Confer 41.63 316 IAmb IAmb 15 32 06.5
comp=Z,99nm,1.1s
AC02 Maricunga 41.81 156 P P 15 31 59.0 +3.1
O03E Paynes Creek 42.05 319 P P 15 31 57.9 +0.6
O03E IAmb IAmb 15 32 20.0
comp=Z,87nm,1.4s
BMO Blue Mountains 42.23 328 P P 15 31 59.4 +0.7
SNDB Serra Nova Dou 42.40 122 eP P 15 32 00.4 +0.1
O02D Mt. Diablo Mer 42.62 319 P P 15 32 04.3 +2.4
PP1B Ponte de Pedra 42.88 132 eP P 15 32 05.1 +0.9
KMRM Mail Ridge 43.24 318 IAmb IAmb 15 32 20.0
comp=Z,63nm,1.0s
YBH Yreka Blue Hor 43.41 321 LR LR 15 52 52.5
comp=Z,181nm,21.4s,baz=121,slow=40
L04D Klamath Falls 43.43 321 P P 15 32 09.2 +0.7
L04D IAmb IAmb 15 32 23.3
comp=Z,94nm,1.2s
BDQN Bodoquena, MS 43.46 137 eP P 15 32 09.1 +0.2
MURT Porto Murtinho 43.74 139 eP P 15 32 11.3 +0.2
E09A Wood Farm, Sta 43.79 329 IAmb IAmb 15 32 22.6
comp=Z,75nm,1.1s
J04A Umpqua Nationa 43.90 323 IAmb IAmb 15 32 23.7
comp=Z,90nm,1.1s
ARAG Araguaiana, MT 44.04 127 eP P 15 32 12.7 -0.9
RPN Rapa Nui 44.05 209 LR LR 15 45 52.4
comp=Z,3µm,20.8s,baz=46,slow=29
SMTB Santa Maria do 44.07 116 eP P 15 32 14.1 +0.3
AQDB Aquidauana 44.19 136 eP P 15 32 15.0 +0.3
CO06 Fray Jorge 44.40 161 P P 15 32 18.2 +2.0
HAWA Hanford 44.42 328 IAmb IAmb 15 32 26.7
comp=Z,52nm,1.1s

NEW Newport 44.51 331 P P 15 32 17.8 +0.8
D08A Wollman Farm, 44.55 329 IAmb IAmb 15 32 28.0
comp=Z,57nm,1.0s
G05A Wamic 44.65 325 IAmb IAmb 15 32 30.1
comp=Z,117nm,1.1s
WAH2 Wahluke Slope 44.67 328 IAmb IAmb 15 32 28.9
comp=Z,95nm,1.0s
FFC Flin Flon 44.77 348 P P 15 32 18.3 -0.7
FFC IAmb IAmb 15 32 20.4
comp=Z,61nm,1.0s
FFC Flin Flon 44.77 348 P P 15 32 18.3 -0.7
FFC pmax pmax
comp=Z,61nm,1.0s
FFC Flin Flon 44.77 348 P P 15 32 19.0 0.0
FFC sP sP 15 32 32.5 -0.1
CO03 El Pedregal 44.86 160 P P 15 32 21.4 +1.4
HOOD Mount Hood Mea 44.88 325 P P 15 32 21.4 +1.2
I03D Drain, OR 44.90 322 IAmb IAmb 15 32 37.7
comp=Z,54nm,1.2s
BUCK Buck Mountain 44.98 323 P P 15 32 21.5 +0.7
BUCK IAmb IAmb 15 34 05.4
comp=Z,138nm,1.4s
H04D Lebanon 45.02 324 IAmb IAmb 15 32 33.6
comp=Z,60nm,1.2s
G04A Mulino 45.28 325 P P 15 32 24.6 +1.5
G04A PcP PcP 15 34 04.5 +1.9
H03N2 Juan Fernandez 45.28 171 T T 16 20 46.1
baz=348,slow=76,SNR=18
H03N1 Juan Fernandez 45.29 170 T T 16 20 47.3
baz=348,slow=76,SNR=18
H03N3 Juan Fernandez 45.30 171 T T 16 21 00.2
baz=348,slow=76,SNR=18
LTY Liberty 45.58 328 IAmb IAmb 15 32 36.9
comp=Z,53nm,1.2s
G03D McMinnville, O 45.73 324 IAmb IAmb 15 32 37.9
comp=Z,58nm,0.9s
SCHQ Schefferville 46.11 16 P P 15 32 28.2 -1.4
comp=Z,13nm,0.6s,baz=207,slow=5.8,SNR=14
SCHQ LR LR 15 51 41.8
comp=Z,4µm,21.7s,baz=212,slow=36
comp=Z,13nm,0.6s
ZON Zonda 46.21 158 P P 15 32 34.1 +3.5
D05A Enumclaw 46.22 327 IAmb IAmb 15 32 41.5
comp=Z,71nm,1.1s
AMBA Amambai (Brazi 46.35 138 eP P 15 32 32.3 +0.4
VA03 San Esteban 46.67 161 P P 15 32 36.7 +2.4
E03A Lebam 46.69 326 IAmb IAmb 15 32 45.2
comp=Z,46nm,1.0s
RADR Rader Ridge 46.74 325 P P 15 32 35.4 +0.7
BDFB Brasilia 47.04 124 P P 15 32 37.0 -0.4
comp=Z,10nm,0.7s,baz=303,slow=12,SNR=11
BDFB LR LR 15 53 20.6
comp=Z,3µm,19.4s,baz=305,slow=37
comp=Z,10nm,0.7s
CPUP Villa Florida 47.34 143 P P 15 32 39.4 -0.1
CPUP Villa Florida 47.34 143 P P 15 32 38.5 -1.0
comp=Z,0.9nm,0.7s,baz=0.0,slow=1.0,SNR=6.6
CPUP LR LR 15 54 10.5
comp=Z,268nm,19.1s,baz=184,slow=38
CPUP Villa Florida 47.34 143 P P 15 32 39.4 -0.1
CPUP pmax pmax
comp=Z,27nm,1.9s
NLWA Neilton Lookou 47.36 326 P P 15 32 40.8 +1.3
NLWA IAmb IAmb 15 34 13.9
comp=Z,42nm,1.1s
MT08 Bocatoma Ro 47.48 161 IAmb IAmb 15 32 59.1
comp=Z,48nm,1.0s
ITRB Iturama 47.53 130 eP P 15 32 41.3 +0.2
FCC Fort Churchill 47.53 355 P P 15 32 39.8 -0.7
FCC Fort Churchill 47.53 355 P P 15 32 39.8 -0.7
FCC pmax pmax
comp=Z,230nm,1.8s
B04A Port Angeles 47.57 327 IAmb IAmb 15 32 53.8
comp=Z,72nm,1.2s
PGC Sidney 47.90 328 IAmb IAmb 15 34 15.4
comp=Z,38nm,1.2s
IPMB Ipameri, GO 48.16 127 eP P 15 32 45.0 -1.1
CLRS Cowichan Lake 48.36 328 IAmb IAmb 15 33 02.8
comp=Z,59nm,1.6s
LLLB Lillooet 48.38 331 IAmb IAmb 15 32 58.9
comp=Z,96nm,1.4s
PTGB Pitanga 49.52 137 eP P 15 32 55.3 -1.1
BB19B Bebedouro 49.72 130 eP P 15 32 56.9 -1.0
JANB Januaria 49.80 121 eP P 15 32 58.0 -0.7
PMNB Patos De Minas 49.87 126 eP P 15 32 58.8 -0.4
PSAL Palomas, Salto 50.82 147 eP P 15 33 07.8 +1.7
ITAB Concordia 51.20 139 eP P 15 33 08.4 -0.6
DIAM Diamantina, MG 51.96 124 eP P 15 33 13.6 -1.4
BBB Bella Bella 52.41 329 LR LR 15 59 24.5
comp=Z,2µm,20.9s,baz=132,slow=40
BLKN Baker Lake 53.18 355 P P 15 33 22.3 -0.9
BLKN IAmb IAmb 15 33 25.2
comp=Z,61nm,1.1s
PLTB Pedras Altas 53.55 144 eP P 15 33 27.1 +0.7
FRB Frobisher Bay 53.83 10 LR LR 15 57 48.8
comp=Z,2µm,18.1s,baz=198,slow=38
PLCA Paso Flores 54.09 165 P P 15 33 31.3 +1.0
comp=Z,3.5nm,0.9s,baz=336,slow=9.3,SNR=4.7
PLCA LR LR 15 52 55.9
comp=Z,699nm,18.6s,baz=7.0,slow=32
comp=Z,3.5nm,0.9s
PLCA Paso Flores 54.09 165 eP P 15 33 32.6 +2.3
TRQA Tornquist 54.52 156 P P 15 33 34.7 +1.3
TRQA Tornquist 54.52 156 P P 15 33 34.7 +1.3
TRQA pmax pmax
comp=Z,38nm,1.4s
YKAW1 Yellowknife Wh 54.66 345 P P 15 33 32.6 -1.4
YKAW1 IAmb IAmb 15 33 34.9
comp=Z,68nm,1.2s
YKA Yellowknife Ar 54.70 345 P P 15 33 33.5 -0.8
comp=Z,28nm,1.0s,baz=145,slow=6.7,SNR=39
YKA PcP PcP 15 34 36.9 +0.2
comp=Z,4.7nm,0.7s,baz=152,slow=3.7,SNR=6.0
YKA LR LR 15 57 37.1
comp=Z,650nm,21.1s,baz=149,slow=37
comp=Z,28nm,1.0s
TOAD Toad River Com 55.35 337 P P 15 33 38.9 -0.2
baz=132,SNR=7.3
KOTAN Kotaneelee Air 55.79 339 P P 15 33 42.5 +0.2
baz=134,SNR=5.5
LIRD Liard River Hi 56.05 337 P P 15 33 44.5 +0.3
baz=132
LL02 Futaif 56.10 167 P P 15 33 44.9 +0.3
T35M Bob Quinn 56.23 333 P P 15 33 46.9 +1.4
baz=126
TAOE Nuku Hiva Isla 56.58 251 eP P 15 33 44.4 -4.3
comp=Z,144nm,24.4s
TAOE eS S 15 41 38.9 0.0
comp=Z,1µm,25.2s
TAOE eSS SS 15 45 26.6 -0.3
comp=Z,310nm,25.2s
TAOE eLQ LQ 15 48 07.9
comp=Z,1µm,34.3s
TAOE eLR LR 15 50 27.2
comp=Z,2µm,22.2s
WRAK Wrangell Islan 56.86 332 P P 15 33 50.8 +0.8
baz=123
DLBC Dease Lake 57.01 335 LR LR 16 03 31.4
comp=Z,1µm,18.7s,baz=96,slow=42
DLBC Dease Lake 57.01 335 P P 15 33 52.0 +0.9
baz=127,SNR=16
U33K Whale Pass 57.06 331 P P 15 33 52.4 +1.2
baz=122
WTLY Watson Lake, Y 57.55 337 IAmb IAmb 15 33 56.7
comp=Z,33nm,1.0s
WRGLY Wrigley 57.81 341 IAmb IAmb 15 33 57.5
comp=Z,40nm,1.2s
WRGLY Wrigley 57.81 341 P P 15 33 56.1 -0.4
baz=136
R33M Jennings River 57.98 335 IAmb IAmb 15 34 00.3
comp=Z,36nm,1.1s
R33M Jennings River 57.98 335 P P 15 33 58.4 +0.5
baz=126
RKT Rikitea 58.19 234 eS S 15 41 59.3 -0.2
comp=Z,7µm,26.5s
RKT eLQ LQ 15 48 46.7
comp=Z,6µm,30.2s
RKT eLR LR 15 51 14.8
comp=Z,5µm,24.5s
TGTN Hyland Airport 58.26 338 P P 15 34 00.5 +0.7
baz=130,SNR=8.7
Q32M Nakina River 58.27 334 IAmb IAmb 15 34 02.8
comp=Z,51nm,1.2s
Q32M Nakina River 58.27 334 P P 15 34 00.8 +0.8
baz=125
S32K Killisnoo 58.46 332 P P 15 34 02.0 +0.9
baz=122

SIT Sitka 58.59 331 P P 15 34 02.9 +0.8
baz=121
R32K Eaglecrest 58.86 333 P P 15 34 05.1 +1.1
baz=122
P33M Teslin, Yukon 59.21 335 IAmb IAmb 15 34 07.8
comp=Z,36nm,1.4s
P33M Teslin, Yukon 59.21 335 P P 15 34 06.9 +0.4
baz=125,SNR=6.5
P32M Atlin 59.23 334 P P 15 34 07.2 +0.6
baz=124
S31K Pelican 59.48 332 P P 15 34 08.7 +0.6
baz=120
SKAG Skagway 59.85 334 P P 15 34 11.5 +0.8
baz=122
N32M Quiet Lake 59.86 336 IAmb IAmb 15 34 12.7
comp=Z,44nm,1.1s
N32M Quiet Lake 59.86 336 P P 15 34 11.1 +0.2
baz=125
MMPY Sheldon Lake, 60.05 338 IAmb IAmb 15 34 14.2
comp=Z,80nm,1.3s
MMPY Sheldon Lake, 60.05 338 P P 15 34 12.7 +0.6
baz=128,SNR=21
PLBC Pleasant Camp 60.30 333 P P 15 34 15.2 +1.3
baz=121
WHY Whitehorse 60.31 335 IAmb IAmb 15 34 16.9
comp=Z,62nm,1.4s
WHY Whitehorse 60.31 335 P P 15 34 14.2 +0.1
baz=123,SNR=5.8
SFJD Kangerlussuaq 60.56 16 LR LR 16 00 03.5
comp=Z,3µm,21.4s,baz=219,slow=36
O30N Mendenhall 60.87 335 IAmb IAmb 15 34 19.9
comp=Z,55nm,1.2s
O30N Mendenhall 60.87 335 P P 15 34 18.2 +0.4
baz=122,SNR=12
P30M Million Dollar 60.90 334 P P 15 34 18.9 +0.9
baz=121
M31M Drury Creek, Y 60.98 337 IAmb IAmb 15 34 20.4
comp=Z,34nm,1.4s
M31M Drury Creek, Y 60.98 337 P P 15 34 18.9 +0.4
baz=124,SNR=6.3
P29M Windy Craggy 60.99 333 IAmb IAmb 15 34 21.0
comp=Z,77nm,1.2s
P29M Windy Craggy 60.99 333 P P 15 34 19.1 +0.5
baz=120
N31M Braeburn, Yuko 61.13 336 IAmb IAmb 15 34 21.4
comp=Z,47nm,1.2s
N31M Braeburn, Yuko 61.13 336 P P 15 34 20.1 +0.6
baz=122,SNR=5.3
HYT Haines Junctio 61.49 335 P P 15 34 22.9 +0.8
baz=120,SNR=5.2
N30M Aishikik Lake 61.65 335 P P 15 34 23.7 +0.6
baz=121,SNR=8.0
O29M Mount Kennedy 61.69 334 P P 15 34 24.2 +0.7
baz=119
PNL Peninsula 61.75 333 P P 15 34 24.4 +0.7
baz=118
YUK6 Outpost Mounta 61.92 334 P P 15 34 26.1 +1.0
baz=120
M30M Minto, Yukon 62.12 336 IAmb IAmb 15 34 27.8
comp=Z,51nm,1.3s
M30M Minto, Yukon 62.12 336 P P 15 34 26.3 +0.2
baz=122,SNR=9.8
YUK4 Talbot Arm 62.24 335 P P 15 34 28.1 +0.9
baz=120
PINM Pinnacle 62.33 333 P P 15 34 28.3 +0.6
baz=117
O28M Mount Upton 62.62 334 P P 15 34 30.3 +0.4
baz=118
YUK8 Steele Glacier 62.68 334 P P 15 34 31.2 +1.0
baz=118
M29M Somme Creek 62.71 336 IAmb IAmb 15 34 32.3
comp=Z,71nm,1.2s
M29M Somme Creek 62.71 336 P P 15 34 30.7 +0.5
baz=120,SNR=24
L29M L29M 62.92 337 IAmb IAmb 15 34 33.2
comp=Z,43nm,1.1s
L29M L29M 62.92 337 P P 15 34 31.9 +0.3
baz=121
J30M Hart River 63.03 338 P P 15 34 32.6 +0.3
baz=123,SNR=9.2
H31M Peel River 63.05 340 IAmb IAmb 15 34 33.8
comp=Z,56nm,1.4s
H31M Peel River 63.05 340 P P 15 34 32.4 +0.1
baz=126,SNR=9.2
K29M Barlow Dome 63.07 337 IAmb IAmb 15 34 34.1
comp=Z,33nm,1.2s
K29M Barlow Dome 63.07 337 P P 15 34 32.7 +0.1
baz=122,SNR=10
MESA MESA 63.13 333 P P 15 34 33.4 +0.3
baz=116
CTG Chitna Glacier 63.21 334 P P 15 34 34.7 +1.2
baz=117
GRNC Granite Creek 63.28 333 IAmb IAmb 15 34 41.0
comp=Z,54nm,1.3s
RES Resolute Bay 63.38 358 IAmb IAmb 15 35 11.7
comp=Z,72nm,1.8s
RES Resolute Bay 63.38 358 LR LR 16 04 18.3
comp=Z,719nm,18.6s,baz=178,slow=38
I30M Mount Dempster 63.41 339 IAmb IAmb 15 34 36.5
comp=Z,64nm,1.2s
I30M Mount Dempster 63.41 339 P P 15 34 35.0 +0.1
baz=123,SNR=32
F31M Tsiigehtchic 63.83 342 IAmb IAmb 15 34 38.8
comp=Z,81nm,1.3s
F31M Tsiigehtchic 63.83 342 P P 15 34 37.1 -0.2
baz=127,SNR=13
CRQE Cirque 63.89 333 P P 15 34 38.7 +0.7
baz=115
DAWY Dawson 63.90 337 P P 15 34 37.8 -0.2
baz=120,SNR=11
M27K Edge Creek, AK 64.07 335 P P 15 34 39.7 +0.5
baz=117,SNR=6.1
MCARA McCarthy VSAT 64.12 334 IAmb IAmb 15 34 42.0
comp=Z,34nm,1.1s
MCARA McCarthy VSAT 64.12 334 P P 15 34 40.9 +1.4
baz=115
EPYK Eagle Plains 64.17 340 IAmb IAmb 15 34 41.2
comp=Z,69nm,1.2s
EPYK Eagle Plains 64.17 340 P P 15 34 40.0 +0.3
baz=124,SNR=12
INK Inuvik 64.30 343 IAmb IAmb 15 34 41.9
comp=Z,57nm,1.2s
INK Inuvik 64.30 343 LR LR 16 06 27.7
comp=Z,1µm,20.4s,baz=128,slow=40
INK Inuvik 64.30 343 P P 15 34 40.5 +0.1
baz=128,SNR=19
G30M tAoh Zraii Nji 64.34 341 IAmb IAmb 15 34 42.2
comp=Z,93nm,2.0s
G30M tAoh Zraii Nji 64.34 341 P P 15 34 40.3 -0.6
baz=124
BCAR Beaver Creek A 64.35 336 P P 15 34 40.7 -0.3
L27K Beaver Creek, 64.37 336 IAmb IAmb 15 34 43.1
comp=Z,57nm,1.2s
L27K Beaver Creek, 64.37 336 P P 15 34 41.8 +0.7
baz=117
GLB Gilahina Butte 64.49 334 IAmb IAmb 15 34 44.3
comp=Z,46nm,1.2s
M26K Nabesna, AK 64.56 335 IAmb IAmb 15 36 40.2
comp=Z,58nm,2.0s
M26K Nabesna, AK 64.56 335 P P 15 34 42.9 +0.6
baz=116
F30M Barrier River 64.57 341 P P 15 34 42.6 +0.4
baz=125
H29M Whitestone 64.64 339 IAmb IAmb 15 34 44.5
comp=Z,49nm,1.2s
H29M Whitestone 64.64 339 P P 15 34 43.3 +0.5
baz=122,SNR=10
BMRM Bremner River 64.65 333 P P 15 34 44.0 +1.0
baz=113
I28M Miner Creek 64.80 338 IAmb IAmb 15 34 46.5
comp=Z,49nm,1.8s
I28M Miner Creek 64.80 338 P P 15 34 43.9 0.0
baz=120
G29M Pine Creek 64.90 340 IAmb IAmb 15 34 46.2
comp=Z,85nm,1.2s
G29M Pine Creek 64.90 340 P P 15 34 44.9 +0.4
baz=122,SNR=12
N25K Chitina, Valde 64.91 334 IAmb IAmb 15 35 05.8
comp=Z,52nm,1.4s
N25K Chitina, Valde 64.91 334 P P 15 34 45.7 +1.1
baz=114
K27K Chicken 64.91 337 P P 15 34 45.1 +0.5
baz=117
L26K Log Cabin Wild 64.97 335 IAmb IAmb 15 34 46.3
comp=Z,48nm,1.6s
L26K Log Cabin Wild 64.97 335 P P 15 34 45.6 +0.6
baz=116
EYAK Cordova Ski Ar 65.00 332 P P 15 34 45.9 +0.8

baz=112
KULLO **Kullorsuaq** 65.32 8 *i* P P 15 34 47.1 +0.2
KULLO IAmb IAmb 15 34 48.4
comp=Z,11nm,0.9s
KLU **Klutina** 65.44 333 IAmb IAmb 15 35 01.0
comp=Z,53nm,1.4s
KLU **Klutina** 65.44 333 P P 15 34 48.8 +0.7
baz=112
HARP **HAARP** 65.47 334 P P 15 34 49.0 +0.8
baz=114
I27K **Kandik River** 65.48 338 P P 15 34 48.7 +0.4
baz=118,SNR=20
DOT **Dot Lake** 65.53 336 IAmb IAmb 15 34 50.7
comp=Z,53nm,1.2s
P23K **Montague Islan** 65.57 331 P P 15 34 49.4 +0.5
baz=110
SCRK **Sand Creek** 65.64 336 IAmb IAmb 15 34 51.6
comp=Z,73nm,1.6s
SCRK **Sand Creek** 65.64 336 P P 15 34 49.9 +0.5
baz=115,SNR=13
E29M **Blow River** 65.67 342 IAmb IAmb 15 34 51.3
comp=Z,111nm,1.7s
E29M **Blow River** 65.67 342 P P 15 34 49.8 +0.4
baz=123,SNR=11
J26L **Joseph Creek** 65.71 337 IAmb IAmb 15 34 52.1
comp=Z,72nm,1.3s
J26L **Joseph Creek** 65.71 337 P P 15 34 50.6 +0.8
baz=116,SNR=23
GLI **Glacier Island** 65.74 332 P P 15 34 51.4 +1.4
baz=111
H27K **Steamboat Moun** 65.75 339 P P 15 34 50.8 +0.8
baz=119
M24K **Tolsona, Glenn** 65.79 334 P P 15 34 51.9 +1.6
baz=112
TULEG **Thule** 65.80 5 *i* P P 15 34 51.5 +1.4
TULEG IAmb IAmb 15 34 53.3
comp=Z,835nm,2.0s
PAX **Paxson** 65.83 335 P P 15 34 51.0 +0.3
baz=113,SNR=5.6
F28M **Old Crow** 65.88 340 IAmb IAmb 15 34 52.6
comp=Z,64nm,1.2s
F28M **Old Crow** 65.88 340 P P 15 34 51.2 +0.4
baz=121,SNR=18
RIDG **Independent Ri** 65.89 336 IAmb IAmb 15 34 53.0
comp=Z,60nm,1.2s
RIDG **Independent Ri** 65.89 336 P P 15 34 51.5 +0.6
baz=114,SNR=14
I26K **Coal Creek Min** 65.91 338 IAmb IAmb 15 34 52.6
comp=Z,83nm,1.3s
I26K **Coal Creek Min** 65.91 338 P P 15 34 51.1 +0.2
baz=117
G27K **Doyon Strip** 66.08 339 P P 15 34 52.1 0.0
baz=119,SNR=7.9
SCM **Sheep Creek Mo** 66.19 333 P P 15 34 52.5 -0.5
baz=111
E28M **Babbage River** 66.29 341 P P 15 34 52.8 -0.6
baz=122
K24K **Donnelly Dome** 66.29 336 IAmb IAmb 15 34 55.3
comp=Z,56nm,1.2s
K24K **Donnelly Dome** 66.29 336 P P 15 34 54.0 +0.5
baz=114,SNR=8.7
PWL **Port Wells** 66.30 332 IAmb IAmb 15 34 56.9
comp=Z,79nm,1.4s
PWL **Port Wells** 66.30 332 P P 15 34 55.0 +1.4
baz=110
M23K **Glacier View** 66.35 333 P P 15 34 54.3 +0.4
baz=111
D28M **Stokes Point** 66.44 342 P P 15 34 54.7 +0.5
baz=123
J25K **Salcha River,** 66.46 336 IAmb IAmb 15 34 57.8
comp=Z,90nm,1.6s
J25K **Salcha River,** 66.46 336 P P 15 34 55.2 +0.6
baz=114
KNK **Knik Glacier** 66.55 333 IAmb IAmb 15 34 59.0
comp=Z,51nm,1.2s
KNK **Knik Glacier** 66.55 333 P P 15 34 55.6 +0.5
baz=110
SEW **Seward** 66.57 331 P P 15 34 55.5 +0.3
baz=108
SML **Sawmill** 66.63 333 IAmb IAmb 15 34 57.5
comp=Z,87nm,1.6s
SML **Sawmill** 66.63 333 P P 15 34 55.8 +0.1
baz=110
WAT6 **Susitna Watana** 66.64 334 P P 15 34 55.7 -0.2
baz=111,SNR=12
DHY **Denali Highway** 66.67 334 P P 15 34 56.0 -0.1
baz=112
E27K **Coleen River** 66.73 341 IAmb IAmb 15 34 58.0
comp=Z,36nm,1.3s
E27K **Coleen River** 66.73 341 P P 15 34 56.5 +0.3
baz=119,SNR=6.3
O22K **Cooper Landing** 66.82 331 P P 15 34 55.9 -0.9
baz=108
GHO **Glory Hole Cre** 66.88 333 IAmb IAmb 15 35 09.8
comp=Z,38nm,1.1s
G26K **Porcupine Rive** 66.89 339 IAmb IAmb 15 35 00.1
comp=Z,69nm,1.8s
G26K **Porcupine Rive** 66.89 339 P P 15 34 57.5 +0.3
baz=117,SNR=8.3
PMR **Palmer** 66.91 333 P P 15 34 57.7 +0.3
baz=109
PMOZ **Porto Moniz, M** 66.95 59 *e*LR LR 15 55 14.8
PMOZ *i* IAMs_20 IAMs_20 16 02 56.1
comp=Z,2µm,18.0s
HDA **Harding Lake** 67.00 336 IAmb IAmb 15 34 59.5
comp=Z,75nm,1.2s
HDA **Harding Lake** 67.00 336 P P 15 34 58.1 +0.1
baz=113,SNR=21
RC01 **Rabbit Creek A** 67.02 332 P P 15 34 58.5 +0.3
baz=109
D27M **Malcolm River** 67.07 342 P P 15 34 58.4 +0.1
baz=120
BRSE **Bradley Lake S** 67.08 330 P P 15 34 59.7 +1.2
baz=107
WAT1 **Susitna Watana** 67.08 334 P P 15 34 58.9 +0.3
baz=110
IL31 67.12 336 IAmb IAmb 15 35 00.2
comp=Z,42nm,1.1s
ILAR **Eielson Array** 67.12 336 P P 15 34 57.3 -1.4
ILAR **Eielson Array** 67.12 336 P P 15 34 58.5 -0.2
comp=Z,35nm,1.2s,baz=110,slow=6.1,SNR=88
ILAR PP PP 15 37 26.6 -0.1
comp=Z,5.7nm,1.0s,baz=112,slow=7.3,SNR=5.4
ILAR LR LR 16 07 41.1
comp=Z,2µm,21.3s,baz=106,slow=39
comp=Z,35nm,1.2s
H25L **Birch Creek** 67.32 338 P P 15 35 00.8 +0.8
baz=114,SNR=9.6
F26K **Sheenjek River** 67.35 340 P P 15 35 00.8 +0.6
baz=117,SNR=6.0
BMAR **Burnt Mountain** 67.38 339 P P 15 35 00.6 +0.3
M22K **Willow** 67.41 333 P P 15 35 00.7 +0.2
baz=108
SUMG **Summit** 67.45 14 *i* P P 15 35 02.0 +0.9
KDAK **Kodiak Island** 67.46 328 LR LR 16 05 41.3
comp=Z,1µm,21.3s,baz=110,slow=37
KDAK **Kodiak Island** 67.46 328 P P 15 35 01.9 +0.9
baz=105
KDAK **Kodiak Island** 67.46 328 P P 15 35 01.9 +0.9
POKR **Poker Plat Res** 67.47 337 P P 15 35 01.2 +0.3
baz=112
COLA **College** 67.54 336 P P 15 35 01.4 0.0
COLA IAmb IAmb 15 35 04.5
comp=Z,69nm,1.4s
COLA **College** 67.54 336 *i* P P 15 35 01.3 0.0
COLA pmax pmax
comp=Z,55nm,1.5s
COLA **College** 67.54 336 P P 15 35 02.5 +1.2
baz=112
COLA **College** 67.54 336 P P 15 35 02.1 +0.8
MCK **McKinley** 67.56 335 IAmb IAmb 15 35 14.6
comp=Z,53nm,1.1s
MCK **McKinley** 67.56 335 P P 15 35 01.9 +0.3
baz=110,SNR=13
Q20K **Shuyak Island** 67.58 329 P P 15 35 02.1 +0.5
baz=105
SUA **Susitna One** 67.60 332 P P 15 35 02.6 +0.7
baz=108
G25K **Bearman Lake** 67.63 338 P P 15 35 02.6 +0.7
baz=114,SNR=6.0
OHAK **Old Harbor** 67.69 327 P P 15 35 02.9 +0.5
baz=104
CUT **Chulitna** 67.69 333 P P 15 35 02.8 +0.4
baz=109
F25K **Christian Rive** 67.82 339 IAmb IAmb 15 35 06.9
comp=Z,78nm,1.8s
F25K **Christian Rive** 67.82 339 P P 15 35 04.1 +0.9
baz=115
USHA **Ushuaia** 67.85 169 LR LR 15 59 14.6
comp=Z,1µm,20.1s,baz=348,slow=31
H24K **Noodor Dome** 67.92 337 IAmb IAmb 15 35 05.6
comp=Z,42nm,1.2s
H24K **Noodor Dome** 67.92 337 P P 15 35 04.2 +0.4
baz=112,SNR=14
NEA2 **Nenana** 67.93 336 IAmb IAmb 15 35 05.1
comp=Z,39nm,1.3s
NEA2 **Nenana** 67.93 336 P P 15 35 03.7 -0.1
baz=111,SNR=13
SII **Sitkinak Islan** 68.01 327 P P 15 35 04.8 +0.3
baz=103
E25K **Arctic Village** 68.02 340 P P 15 35 05.3 +0.9
baz=115
TRF **Thorofare Moun** 68.04 334 IAmb IAmb 15 35 09.3
comp=Z,50nm,1.2s
TRF **Thorofare Moun** 68.04 334 P P 15 35 05.1 +0.3
baz=109,SNR=9.0
C27K **Jago River** 68.10 342 P P 15 35 05.6 +0.7
baz=118
G24K **Hadweenzic Riv** 68.11 338 IAmb IAmb 15 35 07.2
comp=Z,54nm,1.2s
G24K **Hadweenzic Riv** 68.11 338 P P 15 35 05.7 +0.8
baz=113
SKT **Skwentna** 68.12 333 IAmb IAmb 15 35 06.8
comp=Z,101nm,1.6s
SKT **Skwentna** 68.12 333 P P 15 35 05.3 +0.2
baz=107,SNR=8.6
SPU **Mount Spurr** 68.12 332 IAmb IAmb 15 35 06.9
comp=Z,40nm,1.4s
PPT **Papeete** 68.20 246 LR LR 15 56 23.7
comp=Z,1µm,19.9s,baz=58,slow=28
SPCR **Spurr Chakacha** 68.20 332 P P 15 35 06.0 +0.4
baz=106
PPT2 **Papeete2** 68.21 246 *e*P P 15 35 03.0 -3.4
comp=Z,163nm,25.5s
PPT2 *e*S S 15 44 04.5 -0.5
PPT2 comp=Z,681nm,24.5s
PPT2 *e*SS SS 15 48 25.7 -2.9
PPT2 comp=Z,357nm,26.0s
PPT2 *e*LQ LQ 15 52 11.4
PPT2 comp=Z,244nm,21.0s
PPT2 *e*LR LR 15 55 50.2
PPT2 comp=Z,2µm,23.8s
PPT2 *e*LR LR 15 55 55.8
comp=Z,2µm,24.2s
I23K **Minto, Yukon-K** 68.24 336 IAmb IAmb 15 35 07.6
comp=Z,53nm,1.1s
I23K **Minto, Yukon-K** 68.24 336 P P 15 35 06.3 +0.6
baz=110,SNR=9.6
RED **Redoubt Volcan** 68.25 331 IAmb IAmb 15 35 10.4
comp=Z,39nm,1.0s
ILSW **Iliamna Southw** 68.31 330 IAmb IAmb 15 35 09.1
comp=Z,61nm,1.4s
KIP **Kipa** 68.38 289 *i* P P 15 35 07.9 +0.5
BBTS **Babate** 68.47 79 LR LR 16 00 27.3
comp=Z,523nm,22.0s,baz=314,slow=32
NEEM **North Greenlan** 68.53 8 *i* P P 15 35 06.7 -1.1
NEEM IAmb IAmb 15 35 09.6
comp=Z,30nm,1.1s
BPAW **Bear Paw Mtn.** 68.54 335 IAmb IAmb 15 35 09.1
comp=Z,48nm,1.1s
BPAW **Bear Paw Mtn.** 68.54 335 P P 15 35 07.8 +0.1
baz=108,SNR=15
H23K **Yukon River** 68.55 337 IAmb IAmb 15 35 09.4
comp=Z,79nm,1.8s
H23K **Yukon River** 68.55 337 P P 15 35 08.0 +0.3
baz=111
F24K **Squaw Lake** 68.58 339 IAmb IAmb 15 35 11.5
comp=Z,57nm,1.6s
F24K **Squaw Lake** 68.58 339 P P 15 35 08.7 +0.8
baz=113
CHIR **Chirikof Islan** 68.64 326 P P 15 35 09.5 +1.1
baz=101
PPLA **Purkeypile** 68.68 333 P P 15 35 09.0 +0.3
baz=107
MLY **Manley** 68.75 336 IAmb IAmb 15 35 10.5
comp=Z,58nm,1.2s
MLY **Manley** 68.75 336 P P 15 35 09.2 +0.2
baz=109
D25K **Kavik River** 68.81 341 IAmb IAmb 15 35 13.1
comp=Z,108nm,1.8s
D25K **Kavik River** 68.81 341 P P 15 35 09.5 +0.2
baz=115,SNR=5.3
M20K **Styx River** 68.81 332 IAmb IAmb 15 35 11.1
comp=Z,97nm,1.8s
M20K **Styx River** 68.81 332 P P 15 35 09.7 +0.1
baz=106
Q18K **Katmai Hardscr** 68.91 329 P P 15 35 10.4 +0.2
baz=103
O19K **Port Alsworth** 68.93 330 IAmb IAmb 15 35 11.5
comp=Z,66nm,1.6s
O19K **Port Alsworth** 68.93 330 P P 15 35 10.0 -0.1
baz=104
E24K **Your Creek** 69.00 339 P P 15 35 10.8 +0.3
baz=112
CHUM **Lake Minchumin** 69.03 334 P P 15 35 10.4 -0.4
baz=107
G23K **Bananza Creek** 69.05 338 IAmb IAmb 15 35 13.1
comp=Z,38nm,1.1s
G23K **Banza Creek** 69.05 338 P P 15 35 11.6 +0.8
baz=110,SNR=14
N19K **Bonanza Creek** 69.16 331 P P 15 35 11.7 -0.1
N19K IAmb IAmb 15 35 13.2
comp=Z,40nm,1.2s
N19K **Bonanza Creek** 69.16 331 P P 15 35 11.6 -0.1
baz=104,SNR=5.4
P18K **Big Mountain,** 69.19 329 P P 15 35 11.8 0.0
baz=103
Q17K **Contact Creek** 69.28 328 P P 15 35 12.7 +0.2
baz=102
H22K **Ishtalitna Cre** 69.28 337 P P 15 35 12.4 +0.1
baz=109
O18K **Koktuh Hills** 69.28 330 P P 15 35 12.3 -0.1
baz=103
I21K **Tanana** 69.29 336 IAmb IAmb 15 35 13.8
comp=Z,43nm,1.1s
I21K **Tanana** 69.29 336 P P 15 35 12.4 +0.1
baz=108
COLD **Coldfoot** 69.30 338 IAmb IAmb 15 35 15.0
comp=Z,54nm,1.2s
COLD **Coldfoot** 69.30 338 P P 15 35 13.1 +0.8
baz=110,SNR=13
L20K **Farewell, AK** 69.31 333 P P 15 35 12.5 0.0
baz=105,SNR=11
E23K **Chandalar** 69.39 339 IAmb IAmb 15 35 15.3
comp=Z,48nm,1.2s
E23K **Chandalar** 69.39 339 P P 15 35 13.5 +0.5
baz=111
PLK4 **Peulik 4** 69.39 327 IAmb IAmb 15 35 15.5
comp=Z,79nm,1.1s
R17L **Mt. Peulik Vol** 69.40 327 P P 15 35 14.0 +0.9
baz=101
BORG **Borgarnes** 69.43 25 LR LR 16 05 10.0
comp=Z,1µm,19.1s,baz=248,slow=36
D24K **Happy Valley** 69.53 340 P P 15 35 13.8 +0.1
baz=112
TOLK **Toolik Lake Re** 69.59 340 P P 15 35 14.5 +0.3
baz=112
K20K **Telida** 69.63 334 IAmb IAmb 15 35 15.7
comp=Z,54nm,1.3s
K20K **Telida** 69.63 334 P P 15 35 14.4 -0.1
baz=105,SNR=12
G22K **Bettles** 69.67 338 P P 15 35 15.2 +0.6
baz=109,SNR=7.6
L19K **White Mountain** 69.68 332 P P 15 35 15.2 +0.4
L19K **White Mountain** 69.68 332 P P 15 35 14.5 -0.3
baz=104
C24K **Franklin Bluff** 69.72 341 P P 15 35 15.0 +0.2
baz=113
Q16K **King Salmon** 69.76 329 P P 15 35 15.9 +0.7
baz=101
H21K **Melozitna Rive** 69.77 336 P P 15 35 15.0 -0.2
baz=107,SNR=6.2
N18K **Kilae Creek** 69.80 331 IAmb IAmb 15 35 17.1
comp=Z,37nm,1.2s
N18K **Kilae Creek** 69.80 331 P P 15 35 15.7 +0.1
baz=103
J20K **Nowinta River** 69.89 335 IAmb IAmb 15 35 17.3
comp=Z,131nm,1.8s
J20K **Nowinta River** 69.89 335 P P 15 35 15.9 -0.1
baz=106
M18K **Stony River** 69.96 332 P P 15 35 16.4 0.0
baz=103,SNR=6.2
R16K **Pilot Point** 70.03 327 P P 15 35 18.0 +1.1
baz=100
D23K **Nanushuk River** 70.08 340 IAmb IAmb 15 35 19.4
comp=Z,56nm,1.4s
D23K **Nanushuk River** 70.08 340 P P 15 35 17.8 +0.7
baz=111
F22K **John River** 70.11 338 P P 15 35 18.2 +0.8
baz=109
E22K **Anaktuvuk Pass** 70.19 339 P P 15 35 18.1 +0.3
baz=109,SNR=6.2
I20K **Naaghedeneel** 70.20 335 P P 15 35 18.0 +0.2
baz=106
O17K **Koliganek Bris** 70.20 330 P P 15 35 18.5 +0.6
baz=101
TBI **Tubuai** 70.20 240 *e*PKP1 P 15 35 13.1 -5.5
comp=Z,1µm,30.8s
TBI *e*S S 15 44 27.6 -0.7
comp=Z,3µm,26.8s
TBI *e*SS SS 15 49 01.0 +1.9
comp=Z,948nm,25.5s
TBI *e*LR LR 15 56 42.2
comp=Z,8µm,24.8s
TBI *e*LR LR 15 56 42.2
comp=Z,2µm,25.5s
IMAR **Indian Mountai** 70.24 336 P P 15 35 17.0 -1.1
G21K **Allakaket** 70.30 337 IAmb IAmb 15 35 20.5
comp=Z,63nm,1.1s
G21K **Allakaket** 70.30 337 P P 15 35 19.1 +0.6
baz=107,SNR=19
C23K **Itkillik River** 70.38 341 P P 15 35 19.0 +0.1
baz=111
N17K **Nushagak Hills** 70.40 330 P P 15 35 18.5 -0.7
N17K IAmb IAmb 15 35 21.0
comp=Z,48nm,1.4s
N17K **Nushagak Hills** 70.40 330 P P 15 35 19.3 +0.1
baz=102
J19K **Poorman** 70.47 334 P P 15 35 19.2 -0.4
baz=104
F21K **Alatna River** 70.50 338 IAmb IAmb 15 35 22.1
comp=Z,52nm,1.1s
F21K **Alatna River** 70.50 338 P P 15 35 20.6 +0.8
baz=107
P16K **Nushagak River** 70.51 329 P P 15 35 20.5 +0.6
baz=100
L18K **Granite Mounta** 70.52 332 IAmb IAmb 15 35 21.3
comp=Z,45nm,1.5s
L18K **Granite Mounta** 70.52 332 P P 15 35 19.9 0.0
baz=102
H20K **Anotleneega Mo** 70.55 336 P P 15 35 19.9 -0.1
baz=105
O16K **Kokwok River B** 70.66 329 IAmb IAmb 15 35 24.4
comp=Z,55nm,1.4s
O16K **Kokwok River B** 70.66 329 P P 15 35 20.7 -0.1
baz=100
M17K **Holitna River** 70.69 331 P P 15 35 21.1 +0.1
baz=102
CHNA **Chernabura Isl** 70.71 324 P P 15 35 21.8 +0.6
baz=97
D22K **Ayikyak River** 70.74 340 P P 15 35 21.4 +0.2
baz=109
J18K **Innoko River** 70.81 334 IAmb IAmb 15 35 22.9
comp=Z,70nm,1.9s
J18K **Innoko River** 70.81 334 P P 15 35 21.3 -0.4
baz=103
S14K **Fog Glacier** 70.89 326 P P 15 35 23.0 +0.6
baz=98
E21K **Killik River** 71.05 339 IAmb IAmb 15 35 34.7
comp=Z,88nm,1.8s
E21K **Killik River** 71.05 339 P P 15 35 23.0 0.0
baz=107
SCO **Scoresbysund** 71.05 19 *i* P P 15 35 25.2 +2.2
SCO IAmb IAmb 15 35 27.4
comp=Z,5.1nm,0.6s
N16K **Nishlik Lake** 71.16 330 P P 15 35 24.1 +0.2
baz=100
GCSA **Galena City Sc** 71.18 335 P P 15 35 24.1 +0.2
baz=103
H19K **Roundabout Mou** 71.19 336 IAmb IAmb 15 35 25.4
comp=Z,66nm,1.2s
H19K **Roundabout Mou** 71.19 336 P P 15 35 24.1 +0.2
baz=104,SNR=14
L17K **Donlin** 71.24 332 P P 15 35 24.1 -0.2
baz=101
SDPT **Sand Point** 71.28 325 P P 15 35 25.0 +0.4
baz=97
F20K **Avaraart Lake** 71.29 337 P P 15 35 24.9 +0.4
baz=105
M16K **Timber Creek** 71.34 331 P P 15 35 25.1 +0.1
baz=100
K17K **Iditarod** 71.36 333 P P 15 35 24.9 -0.1
baz=101
B22K **Teshekpuk Lake** 71.45 341 P P 15 35 25.9 +0.5
baz=108
O15K **Ungalikthiuk R** 71.46 329 P P 15 35 25.6 0.0
baz=99
C21K **Knifeblade Rid** 71.54 340 P P 15 35 26.2 +0.2
baz=107
B21K **Ikpikpuk River** 71.62 340 P P 15 35 26.8 +0.4
baz=107
L16K **Owhat River** 71.71 331 P P 15 35 27.6 +0.5
baz=100
N15K **Kwethluk River** 71.75 330 P P 15 35 28.1 +0.7
baz=99
E20K **Nigu River** 71.78 338 P P 15 35 28.0 +0.5
baz=105
J17K **VABM Dome** 71.84 333 IAmb IAmb 15 35 29.7
comp=Z,46nm,1.4s
J17K **VABM Dome** 71.84 333 P P 15 35 28.2 +0.3
baz=101
H18K **Honhosa River** 71.89 335 IAmb IAmb 15 35 30.4
comp=Z,46nm,1.2s
H18K **Honhosa River** 71.89 335 P P 15 35 28.8 +0.7
baz=102
E19K **Redstone River** 71.97 338 P P 15 35 28.7 +0.1
baz=104
F19K **Shaleruckik Mo** 72.02 337 P P 15 35 29.1 +0.2
baz=103
D20K **Etivluk River** 72.06 339 IAmb IAmb 15 35 30.9
comp=Z,64nm,1.2s
D20K **Etivluk River** 72.06 339 P P 15 35 29.6 +0.5
baz=105,SNR=8.1
M15K **Kasigluk River** 72.13 330 P P 15 35 30.4 +0.8
baz=98
G18K **Tagagawik** 72.16 336 IAmb IAmb 15 35 31.9
comp=Z,41nm,1.1s
G18K **Tagagawik** 72.16 336 P P 15 35 30.4 +0.6
baz=102
O14K **Tigyukauivet M** 72.21 329 P P 15 35 31.1 +0.9
baz=97
S12K **Black Hills** 72.22 325 P P 15 35 30.9 +0.6
baz=96
H17K **Granite Mounta** 72.49 335 P P 15 35 32.7 +0.9
baz=100
J16K **Anvik River** 72.50 333 IAmb IAmb 15 35 34.5
comp=Z,64nm,1.2s
J16K **Anvik River** 72.50 333 P P 15 35 33.0 +1.2
baz=99
N14K **Kuskokwak Cree** 72.51 329 P P 15 35 33.3 +1.4
baz=97
D19K **Kuna River** 72.54 339 IAmb IAmb 15 35 35.0
comp=Z,47nm,1.2s
D19K **Kuna River** 72.54 339 P P 15 35 32.3 +0.3
baz=103,SNR=5.7
B20K **Meade River** 72.58 340 P P 15 35 32.7 +0.6
baz=105
I17K **Unalakleet** 72.64 334 P P 15 35 33.6 +1.0
baz=99
L15K **Ungalak Mounta** 72.65 331 P P 15 35 33.7 +1.0
baz=98
F18K **Selawik** 72.70 336 P P 15 35 33.3 +0.3
baz=101,SNR=5.3
M14K **Bethel** 72.75 330 P P 15 35 34.3 +0.9
baz=97,SNR=7.1
K15K **Wolf Creek Mou** 72.76 332 IAmb IAmb 15 35 36.2
comp=Z,75nm,1.2s
K15K **Wolf Creek Mou** 72.76 332 P P 15 35 34.6 +1.2
baz=98
G17K **Kiwalik Mounta** 72.90 335 P P 15 35 34.8 +0.7
baz=100
FALS **False Pass** 72.92 324 P P 15 35 35.3 +0.9
baz=94
L14K **Kuka Creek** 73.18 331 P P 15 35 36.6 +0.7
baz=97
C19K **Lookout Ridge** 73.19 339 IAmb IAmb 15 35 38.2
comp=Z,50nm,1.1s
C19K **Lookout Ridge** 73.19 339 P P 15 35 36.9 +1.0
baz=102
E18K **Tukpahlearik C** 73.23 337 P P 15 35 36.3 +0.3
baz=100
F17K **Baldwin Pennin** 73.30 336 P P 15 35 37.0 +0.5
baz=100
M13K **Dall Lake** 73.39 330 P P 15 35 38.4 +1.3

baz=96
H16K Elim 73.42 334 P **P** **15 35 38.0 +0.8**
baz=98
G16K Koyuk River 73.58 335 P **P** **15 35 38.9 +0.8**
baz=98
E17K Hotham Inlet 73.64 337 P **P** **15 35 38.8 +0.4**
baz=99,SNR=10
C18K Utukok River 73.67 338 P **P** **15 35 39.0 +0.3**
baz=100
J14K Nanvaranak Lak 73.75 332 IAmb IAmb 15 35 42.1
comp=Z,71nm,1.1s
J14K Nanvaranak Lak 73.75 332 P **P** **15 35 40.5 +1.3**
baz=96
MORF Marmelete 73.92 54 *e*P **P** **15 35 40.0 -0.8**
MORF IAMs_20 IAMs_20 16 05 54.4
comp=Z,2μm,19.7s
MORF Marmelete 73.92 54 *e*P **P** **15 35 40.0 -0.8**
A19K Wainwright 73.93 340 P **P** **15 35 40.7 +0.6**
baz=101
DAG Danmarks Havn 74.03 13 *i* P **P** **15 35 38.0 -2.6**
DAG IAmb IAmb 15 35 39.9
comp=Z,4.6nm,0.9s
PGAV Gavieira, Arco 74.08 50 *e*P **P** **15 35 43.9 +2.2**
PGAV *e*LR LR 15 58 31.8
PGAV *i* IAMs_20 IAMs_20 16 09 11.0
comp=Z,804nm,18.0s
K13K Kusilvak Mount 74.18 331 P **P** **15 35 42.3 +0.6**
baz=95
RDOG Red Dog Mine 74.20 338 P **P** **15 35 41.9 +0.1**
baz=98
D17K Noatak River 74.21 337 P **P** **15 35 42.2 +0.4**
baz=98
G15K Niukluk 74.23 335 P **P** **15 35 43.1 +1.1**
baz=97
MESJ Messejana 74.24 54 *e*P **P** **15 35 42.0 -0.6**
MESJ IAMs_20 IAMs_20 16 05 01.2
comp=Z,2μm,18.5s
MESJ Messejana 74.24 54 *e*P **P** **15 35 42.0 -0.6**
C17K DeLong Mountai 74.36 338 P **P** **15 35 43.6 +0.8**
baz=98
F15K North Star Dit 74.57 335 IAmb IAmb 15 35 46.5
comp=Z,68nm,1.1s
F15K North Star Dit 74.57 335 P **P** **15 35 44.9 +1.0**
baz=96
PVAQ Vaqueiros 74.66 54 *e*P **P** **15 35 49.0 +4.0**
PVAQ *e*LR LR 15 59 20.9
PVAQ *i* IAMs_20 IAMs_20 16 06 29.9
comp=Z,1μm,18.0s
MTE Manteigas 74.67 51 *e*P **P** **15 35 43.2 -1.9**
MTE *e*LR LR 15 59 25.3
MTE *i* IAMs_20 IAMs_20 16 05 28.2
comp=Z,2μm,20.0s
UNV Unalaska Valle 74.67 323 P **P** **15 35 46.2 +1.5**
baz=91,SNR=5.3
ANM Nome 74.75 334 P **P** **15 35 46.0 +1.0**
baz=95
M11K Mekoryuk 74.80 330 P **P** **15 35 46.1 +0.8**
baz=93
PMRV Marv??o 74.82 52 *e*LR LR 16 00 54.2
PMRV *i* IAMs_20 IAMs_20 16 05 03.1
comp=Z,1μm,20.0s
MVO Moncorvo 75.03 50 *e*P **P** **15 35 51.0 +3.8**
MVO *e*LR LR 15 59 37.2
MVO *i* IAMs_20 IAMs_20 16 05 40.3
comp=Z,926nm,20.0s
C16K Lisburne Hills 75.13 338 IAmb IAmb 15 35 49.0
comp=Z,65nm,1.2s
C16K Lisburne Hills 75.13 338 P **P** **15 35 47.8 +0.7**
baz=96
F14K Arctic Creek 75.24 335 P **P** **15 35 48.4 +0.6**
baz=95
JMIC Jan Mayen 75.50 19 LR LR 16 10 17.2
comp=Z,358nm,18.4s,baz=264,slow=37
TNA Tin City 75.91 335 P **P** **15 35 52.7 +1.0**
baz=93
NIKH Nikolski High 76.07 322 P **P** **15 35 53.8 +1.0**
baz=89
SPIA Saint Paul Isl 76.83 326 P **P** **15 35 58.4 +1.4**
baz=89
EKA Eskdalemuir Ar 77.17 36 P **P** **15 35 56.2 -2.8**
comp=Z,3.9nm,0.8s,baz=273,slow=5.5,SNR=7.8
comp=Z,3.9nm,0.8s
ESDC Sonseca Array 77.45 52 P **P** **15 35 57.7 -3.3**
comp=Z,2.2nm,0.7s,baz=271,slow=5.5,SNR=11
ESDC LR LR 16 06 10.3
comp=Z,1μm,20.0s,baz=270,slow=33
comp=Z,2.2nm,0.7s
GAMB Gambell 77.49 333 P **P** **15 36 01.3 +0.8**
baz=89
MDT Midelt 77.54 59 LR LR 16 08 17.9
comp=Z,2μm,18.4s,baz=284,slow=34
PMSA Palmer Station 77.94 170 LR LR 16 05 01.9
comp=Z,648nm,18.4s,baz=338,slow=31
RAR Rarotonga 78.47 245 LR LR 16 03 31.0
comp=Z,757nm,18.8s,baz=85,slow=30
SMAI San Martin Ant 80.64 173 P **P** **15 36 15.8 -1.7**
ADK Adak 80.92 321 P **P** **15 36 22.1 +2.6**
DBIC Dimbokro 81.02 85 LR LR 16 10 57.7
comp=Z,567nm,19.0s,baz=297,slow=35
KIWB Kanaga Island 81.21 321 P **P** **15 36 19.4 -1.7**
SPITS Spitsbergen Ar 81.60 12 LR LR 16 13 04.8
comp=Z,2μm,21.2s,baz=281,slow=36
NB2 NORSAR Subarra 84.02 29 P **P** **15 36 36.5 +0.8**
comp=Z,1.1nm,0.8s,baz=284,slow=5.1
NOA NORSAR Array B 84.02 29 P **P** **15 36 35.8 +0.2**
comp=Z,2.1nm,0.9s,baz=282,slow=5.3,SNR=5.8
NOA LR LR 16 11 08.7
comp=Z,938nm,20.4s,baz=275,slow=34
comp=Z,2.1nm,0.9s
HFS Hagfors 85.43 30 P **P** **15 36 41.3 -1.4**
comp=Z,0.7nm,0.4s,baz=262,slow=10.0,SNR=6.5
HFS LR LR 16 11 38.6
comp=Z,651nm,20.6s,baz=276,slow=34
comp=Z,0.7nm,0.4s
BILL Bilibino 85.62 339 P **P** **15 36 42.7 -0.8**
BILL IAmb IAmb 15 36 45.3
comp=Z,30nm,0.9s
BILL Bilibino 85.62 339 *ce*P **P** **15 36 44.1 +0.6**
BILL pmax pmax
comp=Z,71nm,1.7s
BILL Bilibino 85.62 339 P **P** **15 36 43.9 +0.4**
DAVA Damuels 86.30 43 *e*P **P** **15 36 45.9 -1.6**
comp=Z,2.4nm,0.6s
RETA Reutte 86.84 42 *e*P **P** **15 36 48.4 -1.6**
comp=Z,0.1nm,0.2s
FETA Feichten 86.92 43 *e*P **P** **15 36 48.6 -2.0**
comp=Z,4.3nm,1.2s
ARCES ARCESS Array B 86.98 19 P **P** **15 36 49.1 -1.1**
comp=Z,2.0nm,0.9s,baz=299,slow=4.9,SNR=5.5
ARCES LR LR 16 14 36.8
comp=Z,766nm,19.1s,baz=294,slow=35
comp=Z,2.0nm,0.9s
MOTA Moosalm 87.09 42 *e*P **P** **15 36 49.5 -1.9**
comp=Z,7.6nm,1.9s
CLL Collm 87.32 38 *i* P **P** **15 36 49.4 -2.8**
CLL *e*S S 15 47 21.0 -9.2
CLL pmax pmax
comp=Z,7.0nm,1.3s
CLL MLR MLR
comp=Z,2μm,20.1s
WATA Walderalm 87.41 42 *e*P **P** **15 36 49.3 -3.6**
comp=Z,7.2nm,1.6s
WTTA Wattenberg 87.47 42 *e*P **P** **15 36 49.8 -3.4**
comp=Z,3.3nm,1.0s
LESA Schwarzleotal 88.11 42 *e*P **P** **15 36 53.2 -3.0**
comp=Z,4.4nm,1.0s
ABTA Abfaltersbach 88.17 43 *e*P **P** **15 36 53.0 -3.5**
comp=Z,0.6nm,0.4s
KHC Kasperske Hory 88.25 40 *ce*P **P** **15 36 55.4 -1.3**
KHC pmax pmax
comp=Z,7.0nm,2.5s
KHC Kasperske Hory 88.25 40 P **P** **15 36 56.5 -0.2**
comp=Z,3.8nm,0.9s
GERES GERESS Array B 88.40 40 P **P** **15 36 57.0 -0.6**
comp=Z,0.8nm,0.8s,baz=290,slow=2.8,SNR=6.2
GERES LR LR 16 12 56.3
comp=Z,2μm,19.9s,baz=276,slow=33
comp=Z,0.8nm,0.8s
GERES GERESS Array B 88.40 40 P **P** **15 36 57.0 -0.6**
KEST Kesra 88.47 54 LR LR 16 11 20.2
comp=Z,957nm,22.0s,baz=275,slow=32
KBA Koelnbreinsper 88.64 42 *e*P **P** **15 36 55.4 -3.4**
comp=Z,0.3nm,0.4s
MYKA Terra Mystica 88.96 43 *e*P **P** **15 36 57.9 -2.2**
comp=Z,0.4nm,0.3s
CONA Conrad Observa 90.04 41 *e*P **P** **15 37 03.1 -2.2**
comp=Z,0.7nm,0.7s
VRAC Vranov 90.09 40 LR LR 16 13 21.5
comp=Z,2μm,20.8s,baz=280,slow=33
APA Apatity 90.48 19‖ *e*P **P** **15 37 03.5 -3.2**
APA MLR MLR
comp=Z,1μm,19.4s
FINES FINESS Array B 90.67 26 P **P** **15 37 07.0 -0.7**
comp=Z,0.9nm,0.7s,baz=305,slow=4.9,SNR=3.6
FINES LR LR 16 14 39.2
comp=Z,1μm,21.1s,baz=290,slow=34
comp=Z,0.9nm,0.7s
FINES FINESS Array B 90.67 26 P **P** **15 37 07.0 -0.7**
MODS Modra-Piesok 90.81 40 *e*P **P** **15 37 09.5 +0.8**
MODS Modra-Piesok 90.81 40 *e*P **P** **15 37 09.5 +0.8**
VAE Valguarnera 91.99 51 LR LR 16 16 52.2
comp=Z,1μm,18.7s,baz=346,slow=35
MORH Mrgy, Hungar 92.38 42 P **P** **15 37 15.9 -0.1**
SEY Seymchan 93.05 337 P **P** **15 37 19.0 +0.3**
comp=Z,7.4nm,0.9s,baz=69,slow=9.3,SNR=6.8
SEY LR LR 16 25 18.8
comp=Z,503nm,20.4s,baz=46,slow=40
comp=Z,7.4nm,0.9s
SEY Seymchan 93.05 337 *e*P **P** **15 37 18.1 -0.6**
SEY pmax pmax
comp=Z,8.0nm,1.1s
TIXI Tiksi 93.71 349 P **P** **15 37 20.7 -0.9**
TIXI IAmb IAmb 15 37 22.5
comp=Z,7.2nm,0.6s
TIXI Tiksi 93.71 349 LR LR 16 22 35.4
comp=Z,909nm,21.1s,baz=32,slow=38
TIXI Tiksi 93.71 349 *ce*P **P** **15 37 20.9 -0.7**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
MNK Minsk 94.61 32 *i* P **P** **15 37 25.0 -1.1**
MNK *i* *PP **sP** **15 37 39.7 -0.6**
MNK *i* 15 41 12.9
MNK *i* PPP PPP 15 43 14.5
MNK *i* S **SKSac** **15 47 55.5 -3.5**
MNK *i* *SS **SKKSac** **15 48 21.6 +0.9**
MNK *i* SS **SS** **15 54 59.4 +0.1**
MNK *i* SSS SSS 15 58 41.8
MNK pmax pmax
comp=E,22nm,1.0s
MNK pmax pmax
comp=Z,5.0nm,0.8s
MNK pmax pmax
comp=N,19nm,0.9s
MNK MLR MLR
comp=Z,690nm,19.0s
MNK MLR MLR
comp=N,432nm,18.0s
MNK MLR MLR
comp=E,892nm,20.0s
PET Petropavlovsk 95.00 326 *e*P **P** **15 37 27.7 -0.2**
PET *e* 15 41 14.3
PET *e*S **S** **15 48 37.3 -2.8**
PET *e*PPS PPS 15 50 39.4
PET pmax pmax
comp=Z,100nm,16.1s
PET pmax pmax
comp=Z,100nm,16.1s
PET MLR MLR
comp=Z,400nm,20.0s
PETK Petropavlovsk- 95.48 327 P **P** **15 37 30.9 +0.7**
comp=Z,3.5nm,0.9s,baz=86,slow=33,SNR=1.2
PETK LR LR 16 22 07.6
comp=Z,264nm,20.9s,baz=63,slow=36
comp=Z,3.5nm,0.9s
MA2 Magadan 95.54 334 LR LR 16 25 42.7
comp=Z,480nm,21.2s,baz=80,slow=39
RAO Raoul Island 96.30 242 LR LR 16 10 49.7
comp=Z,354nm,20.3s,baz=108,slow=29
AKASG Malin Array Be 97.08 35 LR LR 16 18 44.0
comp=Z,2μm,20.7s,baz=279,slow=34
MLR Muntele Rosu 97.39 41 LR LR 16 19 32.7
comp=Z,1μm,19.4s,baz=294,slow=34
SKR Severo-Kuril's 97.47 325 *e*P **P** **15 37 38.3 -0.9**
SKR pmax pmax
comp=Z,100nm,4.3s
SKR MLR MLR
comp=Z,600nm,20.0s
SNAA Sanae 98.94 161 P Pdif 15 37 46.8 +1.5
comp=Z,0.6nm,0.7s,baz=270,slow=19,SNR=3.5
comp=Z,0.6nm,0.7s
MAK Makhachkala 111.75 34 *i* P **Pdif** **15 38 38.3 -4.6**
MAK *i* 15 42 37.3
MAK *e* 15 42 54.0
MAK *e* 15 43 17.5
MAK *e* 15 49 13.3
MAK *e*SS SS 15 58 56.8 +1.3
MAK *e*SSS SSS 16 03 04.3
MAK pmax pmax
comp=Z,589nm,1.4s
BVAR Borovoye Array 112.93 15 PKiKP **PKiKP** **15 42 43.6 +1.4**
comp=Z,1.0nm,0.7s,baz=338,slow=1.6,SNR=4.8
ZALV Zalesovo Beam 114.50 5 PKP **PKiKP** **15 42 45.1 -0.1**
comp=Z,1.1nm,0.6s,baz=333,slow=1.6,SNR=6.1
BOSA Boshof 114.84 116 PKP **PKiKP** **15 42 47.3 +0.6**
comp=Z,4.4nm,0.8s,baz=275,slow=2.2,SNR=6.4
HILR Hailar Array B 114.87 341 PKP PKPdf 15 42 47.6 +1.5
comp=Z,2.8nm,0.6s,baz=13,slow=1.9,SNR=4.1
BNX BinXian 115.21 334‖ PKP **PKiKP** **15 42 43.7 -3.1**
MJAR Matsushiro Arr 116.08 320 PKP **PKPdf** **15 42 50.1 +1.3**
comp=Z,2.9nm,0.9s,baz=58,slow=3.0,SNR=4.3
KURK Kurchatov 116.84 10 PKiKP **PKiKP** **15 42 50.4 +0.6**
KURBB Kurchatov Arra 116.92 10 PKP **PKiKP** **15 42 50.4 +0.5**
comp=Z,1.1nm,0.5s,baz=344,slow=2.3,SNR=12
KNGR Kungurtug, Tuv 118.09 357 *i* PKiKP **PKPdf** **15 42 52.5 +0.1**
DGZ Jazzator, Ålta 118.92 4 *i* PKiKP **PKPdf** **15 42 53.0 -1.1**
ULN Ulaanbaatar 119.65 349 *c* *i* PKiKP **PKPdf** **15 42 53.9 -1.6**
ULN pmax pmax
comp=Z,12nm,1.7s
SONM Songino Array 119.80 350 PKP **PKPdf** **15 42 55.9 +0.1**
comp=Z,4.3nm,0.6s,baz=4.9,slow=1.0,SNR=19
MAW Mawson 120.46 167 PKiKP **PKiKP** **15 42 58.0 +1.7**
comp=Z,2.7nm,0.7s,baz=224,slow=11,SNR=4.1
MAW Mawson 120.46 167 PKiKP **PKiKP** **15 42 58.0 +1.7**
XLT XiLinHaoTe 121.06 341 *e*PKP **PKiKP** **15 42 59.9 +1.5**
XLT LR LR
comp=Z,57nm,20.2s
XLT LR LR
comp=Z,480nm,22.0s
XLT LR LR
comp=Z,900nm,23.8s
MK31 Makanchi Array 121.24 9 *ce*PKiKP **PKiKP** **15 42 59.3 +0.7**
MKAR Makanchi Array 121.24 9 PKP **PKPdf** **15 42 58.4 0.0**
comp=Z,0.8nm,0.6s,baz=338,slow=2.2,SNR=11
KSRS Korea Array 121.36 328 PKP **PKiKP** **15 42 59.9 +0.9**
comp=Z,16nm,0.7s,baz=13,slow=1.4,SNR=42
KSAR Wonju Array Be 121.39 328 **PKiKP** **15 43 00.1 +1.0**
KSAR Wonju Array Be 121.39 328 PKiKP **PKiKP** **15 43 00.1 +1.0**
DL2 Dalian 123.25 333 SS SS 16 01 28.4 +3.9
DL2 AMB AMB
comp=Z,130nm,6.3s
DL2 LR LR
comp=N,220nm,20.8s
DL2 LR LR
comp=E,640nm,19.9s
DL2 LR LR
comp=Z,640nm,25.7s
AAK Ala-Archa 123.57 16 *ce*PKiKP **PKPdf** **15 43 02.2 -1.0**
AAK pmax pmax
comp=Z,8.0nm,2.5s
KMBO Kilima Mbogo 123.73 84 *i* PKiKP **PKPdf** **15 43 03.9 -0.5**
KMBO pmax pmax
comp=Z,56nm,0.3s
WMQ Urumqi 124.79 5 *e*PKP **PKiKP** **15 43 06.0 +0.3**
WMQ LR LR
comp=Z,1μm,23.3s
WMQ LR LR
comp=Z,770nm,21.7s
WMQ LR LR
comp=Z,1μm,24.9s
HHC Hu-ho-hao-te 125.22 343 *e*PKP **PKiKP** **15 43 07.8 +1.1**
HHC PP **PP** **15 44 59.2 +4.3**
HHC SKS **SKSdf** **15 50 13.7 -2.4**
HHC SKKS **SKKSac** **15 51 49.0 -3.2**
HHC SS **SS** **16 01 53.4 +4.2**
HHC AMB AMB
comp=Z,120nm,7.7s
HHC LR LR
comp=Z,480nm,19.2s
HHC LR LR
comp=Z,310nm,19.0s
HHC LR LR
comp=Z,790nm,19.2s
BTO Baotou 125.88 344 *e*PKP **PKiKP** **15 43 09.2 +1.2**
BTO PP **PP** **15 45 04.8 +5.5**
BTO SS SS 16 01 57.7 +0.3
BTO LR LR
comp=Z,1μm,22.0s
BTO LR LR
comp=Z,900nm,20.6s
BTO LR LR
comp=Z,1μm,21.8s
KSH Kashi 126.88 16 PKP **PKiKP** **15 43 11.6 +1.5**
KSH LR LR
comp=Z,410nm,21.3s
KSH LR LR
comp=Z,540nm,19.9s
KSH LR LR
comp=Z,620nm,20.5s
HNS HongShan 127.32 338⇑ PKP **PKiKP** **15 43 11.9 +1.1**
HNS PP **PP** **15 45 16.0 +7.2**
HNS LR LR
comp=Z,560nm,21.6s
HNS LR LR
comp=Z,200nm,17.5s
HNS LR LR
comp=Z,590nm,21.8s
TIA Tai'an 127.43 335 PKP **PKiKP** **15 43 12.1 +1.0**
TIA PP **PP** **15 45 11.6 +1.9**
TIY Taiyuan 127.82 340 PKP **PKiKP** **15 43 13.2 +1.2**
TIY PP PP 15 45 20.9 +8.7
TIY AMB AMB
comp=Z,120nm,6.2s
TIY LR LR
comp=Z,550nm,23.4s
TIY LR LR
comp=Z,440nm,22.0s
TIY LR LR
comp=Z,580nm,25.4s
GTA Gaotai 129.02 353 PKP **PKiKP** **15 43 14.9 +0.5**
GTA LR LR
comp=Z,550nm,23.3s
GTA LR LR
comp=Z,460nm,21.1s
GTA LR LR
comp=Z,850nm,24.4s
NJ2 Nanjing 130.18 331‖ PKP **PKiKP** **15 43 17.6 +0.9**
STKA Stephens Creek 130.95 238 PKP **PKiKP** **15 43 19.8 +1.6**
comp=Z,3.3nm,0.7s,baz=127,slow=5.1,SNR=5.3
STKA Stephens Creek 130.95 238 *i* PKIKP **PKiKP** **15 43 17.9 -0.3**
LZH Lanzhou 131.64 348 *e*PKP **PKiKP** **15 43 20.6 +0.8**
LZH sPKP sPKPdf 15 43 41.6 +8.1
LZH LR LR
comp=Z,990nm,20.0s
LZH LR LR
comp=Z,550nm,21.0s
LZH LR LR
comp=Z,1μm,20.6s
LZDM Lanzhou Array 131.79 348 PKP **PKiKP** **15 43 20.3 0.0**
comp=Z,3.8nm,0.4s,baz=87,slow=3.0,SNR=1.1
XAN Xi'an 132.31 342 PKP **PKiKP** **15 43 21.7 +0.6**
XAN sPKP sPKPdf 15 43 42.2 +7.6
XAN LR LR
comp=Z,640nm,23.4s
XAN LR LR
comp=Z,730nm,20.6s
XAN LR LR
comp=Z,1μm,23.4s
GOMU GeErMu 132.59 358 PKP **PKPdf** **15 43 20.7 -0.2**
GOMU PP **PP** **15 45 45.6 +2.3**
GOMU SS SS 16 03 19.6 -0.8
GOMU LR LR
comp=Z,390nm,23.3s
GOMU LR LR
comp=Z,140nm,23.8s
WHN Wuhan 133.49 334 PKP **PKiKP** **15 43 24.3 +0.9**
WHN LR LR
comp=Z,1μm,16.9s
ASAR Alice Springs 139.31 247 PKhKP PKPpre 15 43 26.5
comp=Z,0.8nm,0.5s,baz=105,slow=2.8,SNR=9.5
ASAR PKP **PKPdf** **15 43 33.6 +0.4**
comp=Z,3.1nm,0.6s,baz=98,slow=1.8,SNR=14
ASAR SKPab **SKPab** **15 47 16.8 +0.4**
comp=Z,1.2nm,0.8s,baz=95,slow=2.5,SNR=4.0
WRAB Tennant Creek 139.41 253‖ *e*PKIKP **PKPdf** **15 43 32.0 -1.4**
WRAB pmax pmax
comp=Z,14nm,1.3s
WRA Warramunga Arr 139.42 253 PKhKP PKPpre 15 43 25.6
comp=Z,0.8nm,0.5s,baz=94,slow=2.7,SNR=4.9
WRA PKP **PKPdf** **15 43 33.1 -0.4**
comp=Z,5.2nm,0.7s,baz=90,slow=2.2,SNR=15
PZH PanZhiHua 141.34 347 PKP **PKPdf** **15 43 35.0 -2.0**
PZH PP **PP** **15 46 43.6 +5.8**
PZH SS SS 16 05 04.7 +0.4
PZH LR LR
comp=Z,290nm,18.2s
PZH LR LR
comp=Z,320nm,21.4s
PZH LR LR
comp=Z,330nm,21.0s
KMI Kunming 142.44 345 PKP **PKPdf** **15 43 36.1 -3.0**
KMI PP PP 15 46 52.8 +8.1
KMI AMB AMB
comp=Z,150nm,14.4s
KMI LR LR
comp=Z,450nm,21.7s
KMI LR LR
comp=Z,540nm,23.0s
KMI LR LR
comp=Z,440nm,23.0s
TNCH TengChong 143.36 352 PKP **PKPdf** **15 43 40.3 -0.4**
QIZ Qiongzhong 145.47 331 PKPbc **PKPab** **15 43 46.0 +1.6**
QIZ PP **PP** **15 47 03.3 +0.3**
QIZ SS SS 16 05 53.3 +0.7
QIZ LR LR
comp=Z,680nm,16.6s
QIZ LR LR
comp=Z,590nm,17.5s
QIZ LR LR
comp=Z,530nm,25.1s
HYBB Hyderabad (bro 147.96 27 *e*PKPab **PKPbc** **15 43 52.1 +0.5**
HYBB *e*PKiKP **PKiKP** **15 43 52.6 -0.8**
HYBB *e*PP **PP** **15 47 17.1 -0.5**
HYBB *e*SKSdf **SKSdf** **15 50 53.2 -1.9**
LUWI Luwuk 148.71 287 **PKPbc** **15 43 53.8 +0.2**
CMAR Chiang Mai Arr 149.72 349 PKP **PKPdf** **15 43 52.4 +1.0**
comp=Z,9.6nm,0.8s,baz=336,slow=1.8,SNR=27
CMAR PKPbc **PKiKP** **15 43 57.0 -0.1**
comp=Z,9.9nm,0.8s,baz=7.2,slow=1.4,SNR=56
KULM Kulim 161.72 335 **PKPdf** **15 44 08.2 +0.8**

*TIR **01** 15:28:51.5, 40˚.44N×20˚.74E, h12km±2km, Md2.5/5, Ml4.1/2*
*ATH **01** 15:28:51.6, 40˚.50N×20˚.70E, h10km±1km, ML2.3/7,*
Manual Solution by E.Daskalaki First location: 2019/11/01 15:30:32, This location: 2019/11/01 16:25:24 ML
Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km

ISC 01 15:28:51.7±1.0, 40˚.49N±0˚.03×20˚.73E±0˚.04, h13km±7km, n18, σ0°.77/29, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.14**	**17**	Pg	**Pg**	**15 28 55.2**	**-0.2**
KBN				Sg	**Sg**	**15 28 57.8**	**-0.1**
KBN				AMd		15 29 25.5	
NEST	**Nestorio**	**0.25**	**106**	Pg	**Pg**	**15 28 56.6**	**-0.5**
NEST				Sg	**Sg**	**15 29 00.2**	**-0.5**
NEST				AML	AML	15 29 01.6	
	7.3nm,0.2s						
NEST				AMd		15 29 37.3	
NEST	**Nestorio**	**0.25**	**106**	P	**Pg**	**15 28 57.5**	**+0.4**
NEST				S	**Sg**	**15 29 01.4**	**+0.7**
PENT	**Pentalofos**	**0.42**	**133**	P	**Pg**	**15 29 00.3**	**+0.1**
PENT				S	**Sb**	**15 29 07.1**	**-0.5**
LMS2	**Laimos Florina**	**0.47**	**42**	P	**Pg**	**15 29 01.1**	**+0.1**
OHR	**Ohrid**	**0.63**	**5**	*i* Pg	**Pn**	**15 29 06.4**	**-0.1**
OHR				*i* Sg	**Sn**	**15 29 16.3**	**-0.2**
MSVA	**Metsovo**	**0.79**	**154**	P	**Pb**	**15 29 07.8**	**+0.4**
KZN	**Kozani**	**0.81**	**102**	P	**Pb**	**15 29 07.9**	**+0.1**
KZN				S	**Sb**	**15 29 18.9**	**+0.1**
JAN	**Janina**	**0.83**	**174**	P	**Pb**	**15 29 07.8**	**-0.2**
JAN				S	**Sb**	**15 29 19.2**	**0.0**
IGT	**Igoumenitsa**	**1.00**	**198**	Pg	**Pg**	**15 29 10.5**	**-0.5**
IGT				Sg	**Sn**	**15 29 24.4**	**-1.1**
IGT				AMd		15 30 19.9	
IGT	**Igoumenitsa**	**1.00**	**198**	P	**Pn**	**15 29 11.2**	**-0.3**

KEK	**Kerkira**	**1.05 223**	Pg	**Pn**	**15 29 15.4**	**+3.1**
KEK			Sg	**Sn**	**15 29 26.1**	**-0.7**
KEK			AML	AML	15 29 33.4	
	296nm,0.1s					
KEK			AMd		15 30 31.8	
TETR	**Tetrakomo, Epi**	**1.21 160**	P	**Pg**	**15 29 14.7**	**-0.4**
TETR			S	**Sn**	**15 29 31.4**	**+0.5**
THL	**Klokotos Trika**	**1.35 133**	P	**Pb**	**15 29 16.7**	**-0.1**
THL			S	**Sg**	**15 29 35.1**	**0.0**
LIT	**Litokhoron**	**1.40 105**	P	**Pb**	**15 29 17.9**	**+0.1**
LKD2	**Lefkada island**	**1.69 182**	Pn	**Pb**	**15 29 22.4**	**-0.4**
LKD2			AMd		15 30 28.2	
AGG	**Agios Georgios**	**1.91 139**	P	**Pb**	**15 29 25.9**	**-0.6**
NACGM	**Naroch**	**14.98 14**	*eP*	**Pn**	**15 32 22.8**	**-0.3**

*CNRM **01** 15:28:58.2, 35˚.66N× 1˚.35W, h1km, ML1.9*
*MDD **01** 15:28:59.4± 1.0, 35˚.50N× 1˚.05W, h4km± 15km, mb_Lg2.5/15, Error ellipse: s-maj=18.4km s-min=5.6km az=159.0*
ISC 01 15:28:57.8±1.7, 35˚.52N±0˚.06× 1˚.10W±0˚.06, h12km±13km, n29, σ1§58/47, Northern Algeria

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
TAF	**Taforalt**	**1.28 237**	P	**Pg**	**15 29 21.4**	**-1.1**
TAF	**Taforalt**	**1.28 237**	S	**Sg**	**15 29 38.4**	**-0.8**
WMELI	**Melilla**	**1.53 263**	Sn	**Sn**	**15 29 46.4**	**+1.6**
WMELI			Pn	**Pg**	**15 29 28.1**	**+1.0**
EMLI	**Melilla**	**1.53 262**	Sn	**Sn**	**15 29 47.2**	**+2.4**
EMLI			Pn	**Pg**	**15 29 28.2**	**+1.1**
GOG	**Mont Gurugu**	**1.58 260**	P	**Pn**	**15 29 25.0**	**-0.7**
GOG	**Mont Gurugu**	**1.58 260**	S	**Sn**	**15 29 45.4**	**-0.8**
EALB	**Alboran**	**1.63 286**	Sn	**Sn**	**15 29 47.4**	**+0.1**
ENIJ	**Nijar**	**1.71 329**	Pn	**Pn**	**15 29 27.5**	**0.0**
ENIJ			Sn	**Sn**	**15 29 48.3**	**-1.0**
ENIJ	**Nijar**	**1.71 329**	Pn	**Pn**	**15 29 27.5**	**0.0**
ENIJ			Sn	**Sn**	**15 29 47.3**	**-2.1**
ENIJ			*i* IVmb_Lg		15 29 49.8	
CART	**Cartagena**	**2.07 2**	Pn	**Pn**	**15 29 32.2**	**-0.2**
CART			Sn	**Sn**	**15 29 56.2**	**-1.9**
CART	**Cartagena**	**2.07 2**	P	**Pn**	**15 29 32.7**	**+0.2**
CART	**Cartagena**	**2.07 2**	S	**Sn**	**15 29 58.5**	**+0.3**
EMUR	**La Murta**	**2.33 357**	Pn	**Pn**	**15 29 36.2**	**+0.3**
EMUR			Sn	**Sn**	**15 30 03.7**	**-0.9**
EMUR	**La Murta**	**2.33 357**	Pn	**Pn**	**15 29 36.3**	**+0.3**
EMUR			Sn	**Sn**	**15 30 04.6**	**0.0**
EMUR			*i* IVmb_Lg		15 30 05.7	
ELGU	**Los Guajares,**	**2.45 304**	Sn	**Sn**	**15 30 07.0**	**-0.7**
ELGU	**Los Guajares,**	**2.45 304**	Pn	**Pn**	**15 29 39.9**	**+2.2**
ELGU			Sn	**Sn**	**15 30 04.6**	**-3.1**
ELGU			*i* IVmb_Lg		15 30 11.3	
EQUE	**Quentar**	**2.53 312**	Pn	**Pn**	**15 29 41.0**	**+2.1**
EQUE			Sn	**Sb**	**15 30 12.0**	**-2.5**
EQUE			*i* IVmb_Lg		15 30 20.2	
EQTA	**Presa de Quent**	**2.54 312**	Pn	**Pn**	**15 29 40.8**	**+1.8**
EQTA			Sn	**Sn**	**15 30 09.9**	**0.0**
EQES	**Quesada**	**2.78 326**	Pn	**Pn**	**15 29 45.0**	**+2.7**
EQES			Sn	**Sn**	**15 30 17.9**	**+2.0**
EQES			*i* IVmb_Lg		15 30 22.0	
E0803	**Jimena (Jaen)**	**3.00 321**	Pn	**Pn**	**15 29 47.8**	**+2.5**
E0803			Sn	**Sb**	**15 30 25.6**	**-2.3**
ETOB	**Tobarra**	**3.14 354**	Pn	**Pn**	**15 29 49.2**	**+1.9**
ETOB			Sn	**Sn**	**15 30 23.7**	**-1.2**
ETOB	**Tobarra**	**3.14 354**	Pn	**Pn**	**15 29 49.1**	**+1.9**
ETOB			Sn	**Sn**	**15 30 26.8**	**+1.9**
ETOB			*i* IVmb_Lg		15 30 35.5	
EMIJ	**Mijas**	**3.16 290**	Pn	**Pn**	**15 29 47.7**	**+0.3**
EMIJ			Sn	**Sn**	**15 30 24.4**	**-0.7**
EADA	**Adamuz**	**3.84 315**	Pn	**Pn**	**15 29 59.5**	**+2.6**
EADA			Sn	**Sn**	**15 30 43.5**	**+1.5**
EADA			*i* IVmb_Lg		15 30 54.7	
EIBI	**Ibiza**	**4.01 28**	Pn	**Pn**	**15 30 00.9**	**+1.7**
EIBI			Sn	**Sn**	**15 30 46.5**	**+0.4**
EIBI			*i* IVmb_Lg		15 30 49.7	
MD31	**MD31**	**4.02 230**	P	**Pn**	**15 30 00.5**	**+1.2**
PAB	**San Pablo**	**4.78 328**	Pn	**Pn**	**15 30 11.8**	**+2.0**
PAB			Sn	**Sn**	**15 31 04.9**	**-0.3**
PAB			*i* IVmb_Lg		15 31 16.3	
YEBES	**Yebes (Guadala**	**5.24 343**	Pn	**Pn**	**15 30 17.3**	**+1.2**
ETOS	**Mallorca**	**5.26 35**	Pn	**Pn**	**15 30 17.1**	**+0.8**
ETOS			*i* IVmb_Lg		15 31 09.6	

*IDC **01** 15:35:10.7± 1.0, 6˚.74N× 72˚.96W, h159km± 16km, mb2.7/1, mbtmp3.5/3, Error ellipse: s-maj=55.1km s-min=7.7km az=132.0*
*FUNV **01** 15:35:11.7, 6˚.87N× 73˚.08W, h161km, MW3.9*
*RSNC **01** 15:35:11.6± 0.0, 7˚.N± 1˚× 7˚.3W± ˚, h152km± 1km, M3.3, mb3.9, ML3.0*
ISC 01 15:35:10.2±0.9, 6˚.86N±0˚.03× 73˚.08W±0˚.03, h156km±7km, n42, σ1§58/82, Northern Colombia

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28 201**	P	**Pn**	**15 35 32.3**	**+0.5**
BARC			S	**Sn**	**15 35 47.6**	**-0.6**
BRJC	**Barrancabermej**	**0.67 280**	P	**Pn**	**15 35 34.0**	**+0.8**
BRJC			S	**Sn**	**15 35 51.2**	**+0.5**
RUSC	**La Rusia**	**0.96 180**	P	**Pn**	**15 35 36.7**	**+0.3**
RUSC			S	**Sn**	**15 35 55.0**	**-0.4**
CAPV	**Capacho**	**1.26 37**	*eP*	**Pn**	**15 35 40.1**	**+2.0**
CAPV			*eS*	**Sn**	**15 36 00.7**	**+1.2**
OCAC	**Ocana**	**1.39 350**	P	**Pn**	**15 35 40.4**	**+1.0**
OCAC			S	**Sn**	**15 36 02.3**	**+0.6**
PTBC	**PUERTO BERRIO,**	**1.40 257**	P	**Pn**	**15 35 38.6**	**-0.7**
PTBC			S	**Sn**	**15 36 00.4**	**-1.1**
SPBC	**San Pablo de B**	**1.55 219**	P	**Pn**	**15 35 41.1**	**+0.2**
SPBC			S	**Sn**	**15 36 03.7**	**-0.8**
CHIC	**Chingaza**	**2.31 196**	P	**Pn**	**15 35 50.0**	**+0.2**
CHIC			S	**Sn**	**15 36 20.1**	**-0.1**
ROSC	**El Rosal**	**2.35 212**	P	**Pn**	**15 35 51.7**	**+1.4**
	98nm,0.3s,baz=30,slow=20,SNR=52					
ROSC			S	**Sn**	**15 36 21.5**	**+0.3**
	237nm,0.5s,baz=80,slow=18,SNR=12					
ROSC	**El Rosal**	**2.35 212**	P	**Pn**	**15 35 51.8**	**+1.5**
ROSC			S	**Sn**	**15 36 23.0**	**+1.8**
HELC	**Santa Helena**	**2.52 255**	P	**Pn**	**15 35 53.1**	**+0.8**
HELC			S	**Sn**	**15 36 24.3**	**-0.4**
CVER	**Cruz Verde, Cu**	**2.52 203**	P	**Pn**	**15 35 53.5**	**+1.1**
CVER			S	**Sn**	**15 36 26.0**	**+1.0**
UREC	**San Jos de Ur**	**2.59 290**	P	**Pn**	**15 35 51.7**	**-1.1**
UREC			S	**Sn**	**15 36 23.5**	**-2.1**
GUY2C	**Guyana, Caldas**	**2.79 235**	P	**Pn**	**15 35 56.1**	**+0.4**
GUY2C			S	**Sn**	**15 36 30.8**	**0.0**
PTGC	**Puerto Gaitan,**	**2.81 160**	P	**Pn**	**15 35 55.3**	**-0.2**
PTGC			S	**Sn**	**15 36 28.5**	**-2.0**
CBOC	**Ciudad Bolivar**	**3.08 251**	P	**Pn**	**15 35 59.8**	**+0.8**
CBOC			S	**Sn**	**15 36 36.1**	**-0.6**
DBBC	**Dabeiba**	**3.11 273**	P	**Pn**	**15 35 59.7**	**+0.4**
DBBC			S	**Sn**	**15 36 35.3**	**-2.0**
SDV	**Santo Domingo**	**3.15 50**	P	**Pn**	**15 36 01.5**	**+1.6**
	14nm,0.3s,baz=218,slow=3.0,SNR=11					
SDV			S	**Sn**	**15 36 39.0**	**+0.5**
	40nm,0.3s,baz=281,slow=19,SNR=27					
SDV	**Santo Domingo**	**3.15 50**	P	**Pn**	**15 36 01.8**	**+1.8**
SDV			S	**Sn**	**15 36 39.3**	**+0.8**
ARGC	**Ariguani, Magd**	**3.19 339**	P	**Pn**	**15 36 01.9**	**+1.6**
ARGC			S	**Sn**	**15 36 40.3**	**+1.1**
MCQV	**Machiques**	**3.22 10**	*eP*	**Pn**	**15 36 02.3**	**+1.7**
MCQV			*eS*	**Sn**	**15 36 35.6**	**-4.1**
ANIL	**Santa Ana**	**3.30 225**	P	**Pn**	**15 36 03.2**	**+1.3**
ANIL			S	**Sn**	**15 36 43.0**	**+1.0**
PRAC	**Prado**	**3.60 210**	P	**Pn**	**15 36 05.1**	**-0.5**
PRAC			S	**Sn**	**15 36 48.0**	**-0.6**
APAC	**Apartado, Choc**	**3.62 287**	P	**Pn**	**15 36 06.1**	**+0.3**
APAC			S	**Sn**	**15 36 48.4**	**-0.5**
ORTC	**Ortega, Tolima**	**3.64 216**	P	**Pn**	**15 36 06.3**	**+0.3**
ORTC			S	**Sn**	**15 36 49.2**	**-0.2**
SJCC	**San Jacinto, C**	**3.66 326**	P	**Pn**	**15 36 06.2**	**-0.2**
SJCC			S	**Sn**	**15 36 47.4**	**-2.6**
PLMC	**San Jos del P**	**3.73 239**	P	**Pn**	**15 36 07.6**	**+0.3**
PLMC			S	**Sn**	**15 36 50.8**	**-0.7**
LCBC	**Los crdobas,**	**3.81 302**	P	**Pn**	**15 36 08.5**	**+0.2**
LCBC			S	**Sn**	**15 36 54.0**	**+0.6**
URMC	**La Uribe, Meta**	**3.81 200**	P	**Pn**	**15 36 08.8**	**+0.4**
URMC			S	**Sn**	**15 36 53.7**	**+0.1**
CRJC	**Cerrejon, Guaj**	**4.14 3**	P	**Pn**	**15 36 12.5**	**-0.1**
CRJC			S	**Sn**	**15 37 00.0**	**-1.2**
GUVC	**San Jose del G**	**4.31 174**	P	**Pn**	**15 36 13.9**	**-0.9**
GUVC			S	**Sn**	**15 37 03.1**	**-1.9**
YOTC	**Yotoco, Valle**	**4.33 229**	P	**Pn**	**15 36 14.8**	**-0.3**
YOTC			S	**Sn**	**15 37 05.3**	**-0.2**
SMRC	**Santa Marta, M**	**4.42 345**	P	**Pn**	**15 36 17.3**	**+1.1**
SMRC			S	**Sn**	**15 37 05.5**	**-2.2**
PTAC	**Punta Ardita,**	**4.70 274**	P	**Pn**	**15 36 19.2**	**-0.6**
PTAC			S	**Sn**	**15 37 12.3**	**-1.8**
MACC	**Macarena, Meta**	**4.74 189**	P	**Pn**	**15 36 19.1**	**-1.4**
MACC			S	**Sn**	**15 37 11.8**	**-3.5**
URIC	**Uribia, Colomb**	**4.93 13**	P	**Pn**	**15 36 22.5**	**-0.4**
URIC			S	**Sn**	**15 37 18.9**	**-0.7**
BAUV	**El Baul**	**5.41 67**	*eP*	**Pn**	**15 36 28.4**	**-0.7**
BAUV			*eS*	**Sn**	**15 37 24.4**	**-6.5**
POPC	**Popayan, Colom**	**5.59 220**	P	**Pn**	**15 36 32.7**	**+0.9**
	5.6nm,0.5s					
POPC			S	**Sn**	**15 37 35.3**	**-0.3**
	5.6nm,0.5s					
FLOC	**Florencia**	**5.83 206**	P	**Pn**	**15 36 34.3**	**-0.6**
	17nm,0.9s					
FLOC			S	**Sn**	**15 37 40.7**	**-0.5**
	17nm,0.9s					
BENV	**Beln**	**6.24 60**	*eP*	**Pn**	**15 36 40.1**	**-0.1**
BENV			*eS*	**Sn**	**15 37 44.6**	**-6.2**
TXAR	**Lajitas Array**	**36.47 312**	P	**P**	**15 42 01.9**	**+1.4**
	0.2nm,0.6s,baz=113,slow=10,SNR=2.1					
	0.2nm,0.6s					
WRA	**Warramunga Arr**	**150.39 241**	PKPbc	**PKPbc**	**15 54 43.7**	**-0.5**
	0.2nm,0.4s,baz=109,slow=2.2,SNR=1.4					

RSNC 01 15:37:48.7±0.0, 6˚.N± 1˚× 7˚.4W± ˚, h106km± 1km, M2.8, mb3.6, ML2.6, Northern Colombia

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
BARC	**Barichara**	**0.52 68**	P	Pn	15 38 05.3	-0.2
BARC			S	Sn	15 38 18.4	+0.2
BRJC	**Barrancabermej**	**0.57 353**	P	Pn	15 38 05.3	-0.4
BRJC			S	Sn	15 38 18.9	+0.5
RUSC	**La Rusia**	**0.77 131**	P	Pn	15 38 07.1	-0.8
RUSC			S	Sn	15 38 21.7	-0.5
PTBC	**PUERTO BERRIO,**	**0.79 280**	P	Pn	15 38 06.3	-1.2
PTBC			S	Sn	15 38 20.7	-1.0
SPBC	**San Pablo de B**	**0.84 208**	P	Pn	15 38 07.6	-0.5
SPBC			S	Sn	15 38 22.6	-0.1
ROSC	**El Rosal**	**1.68 203**	P	Pn	15 38 18.0	+0.1
ROSC			S	Sn	15 38 40.9	+0.9
CHIC	**Chingaza**	**1.76 182**	P	Pn	15 38 18.3	-0.6
CHIC			S	Sn	15 38 42.0	+0.2
HELC	**Santa Helena**	**1.86 264**	P	Pn	15 38 20.0	-0.1
HELC			S	Sn	15 38 44.2	+0.2
OCAC	**Ocana**	**1.86 11**	P	Pn	15 38 19.5	-0.4
OCAC			S	Sn	15 38 44.0	+0.3
CVER	**Cruz Verde, Cu**	**1.91 192**	P	Pn	15 38 21.6	+0.7
CVER			S	Sn	15 38 46.0	+0.7
GUY2C	**Guyana, Caldas**	**2.05 235**	P	Pn	15 38 22.6	0.0
GUY2C			S	Sn	15 38 48.7	+0.2
UREC	**San Jos de Ur**	**2.29 306**	P	Pn	15 38 23.1	-2.1
UREC			S	Sn	15 38 51.1	-2.1
CBOC	**Ciudad Bolivar**	**2.39 257**	P	Pn	15 38 26.8	+0.1
CBOC			S	Sn	15 38 56.0	+0.1
ANIL	**Santa Ana**	**2.56 222**	P	Pn	15 38 29.2	+0.1
ANIL			S	Sn	15 39 01.6	+1.5
DBBC	**Dabeiba**	**2.60 284**	P	Pn	15 38 29.3	0.0
DBBC			S	Sn	15 39 00.1	-0.5
ORTC	**Ortega, Tolima**	**2.93 212**	P	Pn	15 38 32.9	-0.9
ORTC			S	Sn	15 39 08.9	+0.5
PRAC	**Prado**	**2.93 204**	P	Pn	15 38 32.9	-0.9
PRAC			S	Sn	15 39 08.2	-0.2
PLMC	**San Jos del P**	**2.99 240**	P	Pn	15 38 34.4	-0.2
PLMC			S	Sn	15 39 10.3	+0.3
URMC	**La Uribe, Meta**	**3.21 193**	P	Pn	15 38 37.4	-0.1
URMC			S	Sn	15 39 15.7	+0.5
APAC	**Apartado, Choc**	**3.25 297**	P	Pn	15 38 37.1	-0.8
APAC			S	Sn	15 39 15.5	-0.5
YOTC	**Yotoco, Valle**	**3.59 228**	P	Pn	15 38 40.7	-1.9
LCBC	**Los crdobas,**	**3.62 313**	P	Pn	15 38 41.4	-1.5
LCBC			S	Sn	15 39 25.2	+0.3
SJCC	**San Jacinto, C**	**3.78 337**	P	Pn	15 38 43.7	-1.4
SJCC			S	Sn	15 39 26.1	-2.7
SDV	**Santo Domingo**	**3.89 50**	P	Pn	15 38 45.8	-1.0
SDV			S	Sn	15 39 29.6	-2.1
CRJC	**Cerrejon, Guaj**	**4.66 10**	P	Pn	15 38 55.4	-1.6
CRJC			S	Sn	15 39 48.6	-1.4
URIC	**Uribia, Colomb**	**5.52 17**	P	Pn	15 39 06.2	-2.4
URIC			S	Sn	15 40 08.8	-2.0

*IDC **01** 15:37:48.3± 20.0, 47˚.38N× 150˚.82E, h134km± 86km, mb3.0/1, mbtmp3.8/4, MS2.8/1, Error ellipse: s-maj=246.1km s-min=90.8km az=103.0*
*SKHL **01** 15:37:51.2± 0.5, 44˚.70N× 151˚.90E, h61km± 7km, mb4.7/2*
*JMA **01** 15:37:53.2± 0.8, 46˚.N± 6˚× 15˚.E± ˚, h196km, MW3.7/13, KURILE ISLANDS REGION*
ISC 01 15:37:53.5±3.6, 45˚.0N±0˚.2× 151˚.5E±0˚.2, h150km, n27, σ1§20/27, Kuril Islands

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.56 276**	*eP*	**Pn**	**15 38 35.6**	**+0.4**
KUR			AMB	AMB	15 38 36.6	
	70nm,0.4s					
KUR			*eS*	**Sn**	**15 39 08.7**	**+1.3**
KUR			A	A	15 39 09.5	
	100nm,0.3s					
KUR			A	A	15 39 09.5	
	100nm,0.3s					
YUK	**Yuzh-Kuril'sk**	**4.13 258**	*eP*	**Pn**	**15 38 56.2**	**+0.9**
YUK			AMB	AMB	15 38 56.6	
	140nm,0.5s					
YUK			*eS*	**Sn**	**15 39 43.5**	**+0.2**
YUK			A	A	15 39 45.0	
	290nm,0.6s					
YUK			A	A	15 39 45.0	
	200nm,0.6s					
NEM2	**Nemuro 2**	**4.43 250**	*eP*	**Pn**	**15 39 00.2**	**+0.9**
NEM2			*eS*	**Sn**	**15 39 52.1**	**+1.5**
NMR	**Nemuro--Hokkai**	**4.44 250**	*i* P	**Pn**	**15 39 00.3**	**+0.9**
GLVR	**Golovnino**	**4.45 255**	*eP*	**Pn**	**15 39 00.3**	**+0.8**
GLVR			AMB	AMB	15 39 03.3	
	70nm,0.2s					
GLVR			*eS*	**Sn**	**15 39 52.5**	**+1.5**
GLVR			A	A	15 40 00.2	
	130nm,0.3s					
GLVR			A	A	15 40 00.2	
	160nm,0.3s					
JRA	**Rausu**	**4.67 259**	*eP*	**Pn**	**15 39 02.4**	**0.0**
JNK	**Nakash**	**5.05 256**	*eP*	**Pn**	**15 39 07.8**	**+0.4**
AKK	**Akkeshi**	**5.18 250**	*eP*	**Pn**	**15 39 09.7**	**+0.6**
AKK			*eS*	**Sn**	**15 40 08.8**	**+0.6**
JAK	**Akkeshi**	**5.28 250**	*eS*	**Sn**	**15 40 12.0**	**+1.3**
JTKR	**Abashiri--Toko**	**5.51 262**	*eP*	**Pn**	**15 39 11.9**	**-1.6**
JAR	**Ashorobuto**	**5.80 255**	*eP*	**Pn**	**15 39 17.9**	**+0.5**
JAR			*eS*	**Sn**	**15 40 23.7**	**+0.7**
JOB	**Onbets**	**5.90 252**	*eP*	**Pn**	**15 39 18.9**	**+0.2**
JOB			*eS*	**Sn**	**15 40 25.2**	**-0.1**
JCH	**Churui**	**6.33 251**	*eP*	**Pn**	**15 39 24.1**	**-0.5**
JCH			*eS*	**Sn**	**15 40 34.6**	**-1.2**
JKK2	**Kamakawa 2**	**6.34 263**	*eP*	**Pn**	**15 39 22.4**	**-2.3**
ASAJ	**Asahikawa**	**6.40 265**	P	**Pn**	**15 39 23.2**	**-2.2**
	25nm,0.6s,baz=85,slow=9.8,SNR=18					
JNBK	**Urakawa-nobuka**	**6.89 250**	*eP*	**Pn**	**15 39 31.1**	**-0.8**
JANG	**Nango**	**8.67 241**	*eP*	**Pn**	**15 39 55.2**	**-0.5**
JANG			*eS*	**Sn**	**15 41 29.4**	**-2.6**
PETK	**Petropavlovsk-**	**9.07 25**	LR	LR	15 41 54.3	
	comp=Z,79nm,20.8s,baz=134,slow=34					
USRK	**Ussuriysk Ar.**	**13.90 274**	P	Pn	15 40 54.2	-10
	2.3nm,0.5s,baz=76,slow=12,SNR=5.6					
KSRS	**Korea Array**	**19.21 255**	P	**P**	**15 42 05.8**	**+0.1**
	1.0nm,0.5s,baz=56,slow=11,SNR=4.9					
H11N2	**WAKE ISLAND Hy**	**28.28 148**	T	T	16 15 30.1	
	baz=338					
H11N1	**WAKE ISLAND Hy**	**28.30 148**	T	T	16 15 17.2	
	baz=338					
H11N3	**WAKE ISLAND Hy**	**28.30 148**	T	T	16 15 26.6	
	baz=338					
H11S1	**WAKE ISLAND Hy**	**29.33 149**	T	T	16 16 57.9	
	baz=337					
H11S3	**WAKE ISLAND Hy**	**29.34 149**	T	T	16 16 54.1	
	baz=337					
H11S2	**WAKE ISLAND Hy**	**29.35 149**	T	T	16 16 40.9	
	baz=337					
MKAR	**Makanchi Array**	**46.73 298**	P	P	15 45 52.0	-15
	0.5nm,0.8s,baz=58,slow=9.6,SNR=2.4					

*NEIC **01** 15:38:35.8± 2.3, 28˚.19N± 0˚.07× 129˚.48E± 0˚.02, h44km± 10km, mb4.4/7, Error ellipse: s-maj=10.5km s-min=2.1km az=170.0*
*NIED **01** 15:38:37.5, 28˚.36N× 129˚.50E, h35km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr 0.29; Mθθ 1.53; Mφφ -1.83; Mrθ 1.15; Mrφ -0.00; Mθφ 1.20; Fault plane solution: Mo 2.38000×10^15 NP1: φs 137.00000°, δ 45.00000°, λ 6.00000°. NP2: φs 42.00000°, δ 85.00000°, λ 135.00000°.*
*JMA **01** 15:38:37.5± 0.2, 28˚.4N± 0˚.9× 129˚.5E± 0˚.7, h35km± 1km, MD4.2/27, MV4.2/27, NEAR AMAMI-OSHIMA ISLAND*
JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.
*IDC **01** 15:38:39.5± 1.2, 28˚.34N× 129˚.47E, h66km± 11km, mb3.7/18, mbtmp4.1/22, MS3.0/3, Error ellipse: s-maj=19.7km s-min=8.4km az=111.0*
ISC 01 15:38:35.6±0.9, 28˚.25N±0˚.03× 129˚.62E±0˚.04, h33km±3km, n83, σ2§04/90, mb4.1/21, Ryukyu Islands

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.17 357**	*i* P	**Pb**	**15 38 43.2**	**+1.3**
JAM			*eS*	**Sb**	**15 38 47.5**	**+1.3**
JAM	**Amami Oshima**	**0.17 357**	A	A	15 38 43.2	
	comp=N,26nm,0.4s,comp=E,21nm,0.5s					
JZK	**Kikaishima**	**0.32 78**	*eP*	**Pn**	**15 38 46.9**	**+3.0**
JZK	**Kikaishima**	**0.32 78**	A	A	15 38 46.9	
	comp=N,56nm,1.1s,comp=E,57nm,1.3s					
JAMN	**Amaminishikomi**	**0.39 270**	*i* P	**Pb**	**15 38 45.5**	**+0.9**
JAMN			*eS*	**Sb**	**15 38 51.6**	**+0.9**
JAMN	**Amaminishikomi**	**0.39 270**	A	A	15 38 45.5	
	comp=N,53nm,1.3s,comp=E,45nm,0.3s					
JTK	**Tokunoshima**	**0.74 232**	*i* P	**Pb**	**15 38 51.2**	**+0.9**
JTK			*eS*	**Sb**	**15 39 00.9**	**+0.8**
JTK	**Tokunoshima**	**0.74 232**	A	A	15 38 51.2	
	comp=N,12nm,0.3s,comp=E,19nm,0.4s					
JTAJ	**Takarajima**	**0.97 338**	*i* P	**Pn**	**15 38 52.7**	**-0.3**
JTAJ			S	**Sn**	**15 39 02.9**	**-2.7**
JOKE	**Okinoerabujima**	**1.28 227**	*i* P	**Pb**	**15 38 59.9**	**+0.8**
JOKE			*eS*	**Sb**	**15 39 16.7**	**+1.4**
JOKE	**Okinoerabujima**	**1.28 227**	A	A	15 38 59.9	
	comp=N,7.0nm,1.1s,comp=E,8.0nm,1.3s					
JYRO	**Yoronjima**	**1.59 221**	*i* P	**Pb**	**15 39 04.6**	**+0.1**
JYRO			*eS*	**Sb**	**15 39 24.9**	**+0.6**
JNN	**Nakanoshima**	**1.61 8**	*i* P	**Pn**	**15 39 02.3**	**+0.6**
JNN			*eS*	**Sn**	**15 39 20.9**	**-0.3**
JNN	**Nakanoshima**	**1.61 8**	A	A	15 39 02.3	
	comp=N,6.0nm,1.0s,comp=E,8.0nm,1.0s					
JOW	**Kunigami**	**1.84 221**		**Pn**	**15 39 05.8**	**+0.8**
JOW	**Kunigami**	**1.84 221**	P	**Pb**	**15 39 07.5**	**-1.2**
	comp=E,289nm,0.3s,baz=24,slow=11,SNR=182					
JOW			S	**Sb**	**15 39 31.4**	**0.0**
	comp=E,351nm,0.3s,baz=120,slow=20,SNR=6.6					
JOW			LR	LR	15 39 59.0	
	comp=E,151nm,18.3s,baz=289,slow=43					
JOW	**Kunigami**	**1.84 221**	P	**Pb**	**15 39 07.9**	**-0.9**
JOW	**Kunigami**	**1.84 221**	S	**Sb**	**15 39 33.4**	**+2.0**
JOW	**Kunigami**	**1.84 221**	*eP*	**Pb**	**15 39 07.8**	**-0.9**
JOW	**Kunigami**	**1.84 221**	A	A	15 39 07.8	
	comp=N,3.0nm,1.6s,comp=E,4.0nm,1.2s					
JIH	**Iheya**	**1.90 231**	P	**Pn**	**15 39 07.8**	**+2.2**
JIH			*eS*	**Sn**	**15 39 31.4**	**+3.1**
JYAK	**Yakushimahirau**	**2.13 21**	P	**Pn**	**15 39 10.7**	**+1.7**
JYAK			*eS*	**Sn**	**15 39 35.5**	**+1.2**
JNTH	**Nagotoyohara**	**2.23 220**	P	**Pn**	**15 39 13.3**	**+3.1**
JKC	**Kuchinoerabu**	**2.27 13**	P	**Pn**	**15 39 11.8**	**+1.1**
JKC			*eS*	**Sn**	**15 39 37.5**	**0.0**
JMTN	**Minamitane**	**2.42 27**	P	**Pn**	**15 39 14.9**	**+2.0**
JJT3	**Tamagusuku3**	**2.65 218**	P	**Pn**	**15 39 19.1**	**+3.0**
JJT3	**Tamagusuku3**	**2.65 218**	A	A	15 39 19.1	
	comp=N,6.0nm,1.4s,comp=E,6.0nm,2.2s					
JAGN	**Aguni-jima**	**2.68 233**	P	**Pn**	**15 39 19.0**	**+2.6**
JAGN			S	**Sn**	**15 39 50.5**	**+2.9**
JTN	**Tanegashima 3**	**2.68 26**	P	**Pn**	**15 39 18.8**	**+2.4**
JTN			*eS*	**Sn**	**15 39 50.6**	**+2.9**
JKDJ	**Kitadaitoujima**	**2.73 146**	P	**Pn**	**15 39 19.6**	**+2.4**
JKDJ			*eS*	**Sn**	**15 39 49.8**	**+0.7**
JMZ	**Minamidaito 2**	**2.81 149**	Pn	**Pn**	**15 39 20.1**	**+1.8**
JMZ			Sn	**Sn**	**15 39 50.9**	**0.0**
JMZ	**Minamidaito 2**	**2.81 149**	P	**Pn**	**15 39 21.7**	**+3.5**
JMZ	**Minamidaito 2**	**2.81 149**	P	**Pn**	**15 39 20.2**	**+2.0**
JMZ			*eS*	**Sn**	**15 39 51.5**	**+0.6**
JKE	**Kume jima 2**	**3.16 233**	P	**Pn**	**15 39 25.5**	**+2.4**
JKE			*eS*	**Sn**	**15 40 02.1**	**+2.6**
JNU	**Nakatsue**	**4.98 12**		**Pn**	**15 39 50.

ILAR	**Eielson Array**	**62.09**	**29**	P	**P**	**15 48 51.9**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=291,slow=7.6,SNR=6.9 comp=Z,0.4nm,0.6s							
INK	**Inuvik**	**66.56**	**24**	P	**P**	**15 49 22.5**	**+0.6**	
INK				IAmb	IAmb	15 49 24.7		
	comp=Z,6.9nm,0.9s							
SPITS	**Spitsbergen Ar**	**67.12**	**348**	P	**P**	**15 49 24.7**	**-0.7**	
	comp=Z,7.6nm,0.8s,baz=55,slow=11,SNR=4.9 comp=Z,7.6nm,0.8s							
ARCES	**ARCESS Array B**	**68.59**	**339**	P	**P**	**15 49 33.4**	**-1.4**	
	comp=Z,1.0nm,0.7s,baz=63,slow=5.5,SNR=6.2 comp=Z,1.0nm,0.7s							
KVAR	**Kislovodsk Arr**	**68.91**	**309**	LR	LR	16 26 29.0		
	comp=Z,305nm,18.6s,baz=294,slow=42							
FINES	**FINESS Array B**	**71.72**	**331**	P	**P**	**15 49 52.5**	**-1.5**	
FINES	**FINESS Array B**	**71.72**	**331**	P	**P**	**15 49 52.8**	**-1.2**	
	comp=Z,2.3nm,0.4s,baz=62,slow=5.5,SNR=49 comp=Z,2.3nm,0.4s							
AKASG	**Malin Array Be**	**74.80**	**320**	P	**P**	**15 50 11.4**	**-1.0**	
	comp=Z,0.7nm,0.4s,baz=61,slow=6.2,SNR=4.4 comp=Z,0.7nm,0.4s							
BRTR	**Keskin Array B**	**76.77**	**308**	P	**P**	**15 50 23.2**	**-0.9**	
	comp=Z,2.7nm,1.0s,baz=64,slow=3.4,SNR=6.6 comp=Z,2.7nm,1.0s							
HFS	**Hagfors**	**77.61**	**333**	P	**P**	**15 50 27.4**	**-0.8**	
	comp=Z,1.3nm,0.5s,baz=64,slow=3.4,SNR=10 comp=Z,1.3nm,0.5s							
NB2	**NORSAR Subarra**	**78.05**	**334**	P	**P**	**15 50 29.7**	**-1.0**	
	comp=Z,1.9nm,0.7s,baz=52,slow=5.9							
NOA	**NORSAR Array B**	**78.05**	**334**	P	**P**	**15 50 29.8**	**-0.9**	
	comp=Z,1.1nm,0.6s,baz=52,slow=5.7,SNR=6.0 comp=Z,1.1nm,0.6s							
GERES	**GERESS Array B**	**84.33**	**323**	P	**P**	**15 51 04.6**	**+0.2**	
	comp=Z,0.3nm,0.5s,baz=58,slow=6.3,SNR=4.6 comp=Z,0.3nm,0.5s							

*IDC **01** 15:46:44.8±2.2,35˚.65N×140˚.77E, h42km±19km, mb3.4/10, mbtmp3.7/13, ML3.4/3, Error ellipse: s-maj=22.8km s-min=9.3km az=73.0*
*JMA **01** 15:46:45.1±0.2,35˚.7N±0˚.6×140˚.7E±0˚.8, h50km±1km, MV3.2/35, NEAR CHOSHI CITY .*
JMA Felt I J1 at NEAR CHOSHI CITY .

ISC 01 15:46:43.6±0.8, 35°73N±0°.03×140°.98E±0°.07, h33km, n34, σ1s19/34, mb3.6/10, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.43**	**303**	⇓*iP*	**Pn**	**15 46 54.7**	**+1.2**
JIHU				⇓S	S	15 47 02.2	+2.0
JSMT	**Sammumatsuo**	**0.44**	**258**	*i*P	**Pn**	**15 46 53.8**	**+0.3**
JYT	**Yasato**	**0.80**	**308**	⇓*i*P	**Pb**	**15 46 58.2**	**-1.0**
JYT				⇓*e*S	**Sn**	**15 47 07.7**	**-1.6**
BSO4	**Boso 4**	**0.91**	**215**	P	**Pb**	**15 47 00.2**	**-0.6**
JHO	**Hitachi**	**0.94**	**340**	⇓*i*P	**Pb**	**15 47 01.9**	**+0.5**
BSO3	**Boso 3**	**1.00**	**202**	P	**Pb**	**15 47 01.9**	**-0.4**
BSO1	**Boso 1**	**1.08**	**180**	P	**Pb**	**15 47 03.7**	**+0.4**
JMM	**Marumori**	**2.13**	**356**	P	**Pb**	**15 47 20.0**	**-1.6**
JMM	**Marumori**	**2.13**	**356**	S	**Sb**	**15 47 46.9**	**-0.8**
MJAR	**Matsushiro Arr**	**2.38**	**291**	P	**Pn**	**15 47 20.1**	**-0.2**
	2.2nm,0.3s,baz=97,slow=14,SNR=126							
MJAR				S	**Sn**	**15 47 46.2**	**-2.2**
	9.0nm,0.3s,baz=121,slow=22,SNR=3.2 6.0nm,0.3s							
MAJO	**Matsushiro**	**2.38**	**291**	P	**Pn**	**15 47 21.0**	**+0.7**
JSG	**Sagara**	**2.52**	**246**	P	**Pn**	**15 47 23.5**	**+1.4**
JHJ2	**Mitsune**	**2.79**	**200**	P	**Pn**	**15 47 26.1**	**+0.3**
JHJ2	**Mitsune**	**2.79**	**200**	S	**Sn**	**15 47 59.7**	**+1.4**
JHJ	**Hachijo jima 2**	**2.79**	**201**	P	**Pn**	**15 47 25.5**	**-0.4**
	30nm,0.3s,baz=24,slow=12,SNR=13							
JHJ				S	**Sn**	**15 47 56.3**	**-2.1**
	103nm,0.3s,baz=49,slow=20,SNR=7.1 44nm,0.3s							
JGF	**Kuroka**	**2.95**	**268**	P	**Pn**	**15 47 28.8**	**+0.7**
JGF	**Kuroka**	**2.95**	**268**	S	**Sn**	**15 48 04.4**	**+2.0**
JSD	**Sado**	**3.17**	**317**	P	**Pn**	**15 47 32.4**	**+1.3**
INU	**Inuyama**	**3.25**	**264**	P	**Pn**	**15 47 33.7**	**+1.5**
JTM	**Tenmabayashi**	**5.05**	**1**	P	Pn	15 47 59.7	+2.8
ASAJ	**Asahikawa**	**8.47**	**8**	P	**Pn**	**15 48 44.2**	**+0.4**
	0.8nm,0.3s,baz=192,slow=14,SNR=7.0 2.0nm,0.3s							
H11S1	**WAKE ISLAND Hy**	**28.48**	**120**	T	T	16 22 37.0		
	baz=312,slow=75,SNR=9.5							
H11S3	**WAKE ISLAND Hy**	**28.48**	**120**	T	T	16 23 04.4		
	baz=312,slow=75,SNR=7.2							
H11S2	**WAKE ISLAND Hy**	**28.50**	**120**	T	T	16 22 38.7		
	baz=312,slow=75,SNR=5.8							
ZALV	**Zalesovo Beam**	**42.54**	**313**	P	**P**	**15 54 35.0**	**-0.9**	
	0.5nm,0.4s,baz=90,slow=8.6,SNR=2.3 0.5nm,0.4s							
MKAR	**Makanchi Array**	**44.52**	**303**	P	**P**	**15 54 50.8**	**-1.1**	
	0.5nm,0.5s,baz=86,slow=9.6,SNR=7.1 0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**46.53**	**309**	P	**P**	**15 55 06.6**	**-1.1**	
	1.5nm,0.3s,baz=84,slow=8.5,SNR=2.5 1.5nm,0.3s							
ILAR	**Eielson Array**	**50.78**	**32**	P	**P**	**15 55 42.4**	**+2.2**	
	0.3nm,0.7s,baz=264,slow=6.7,SNR=5.2 0.3nm,0.7s							
BVAR	**Borovoye Array**	**51.19**	**313**	P	**P**	**15 55 43.5**	**0.0**	
	0.4nm,0.4s,baz=91,slow=9.3,SNR=2.9 0.4nm,0.4s							
WRA	**Warramunga Arr**	**55.73**	**188**	P	**P**	**15 56 16.3**	**-0.7**	
	0.2nm,0.3s,baz=8.6,slow=7.5,SNR=11 0.2nm,0.3s							
ASAR	**Alice Springs**	**59.45**	**188**	P	**P**	**15 56 42.9**	**-0.3**	
	0.1nm,0.5s,baz=17,slow=10,SNR=5.4 0.1nm,0.5s							
FINES	**FINESS Array B**	**69.80**	**332**	P	**P**	**15 57 50.3**	**0.0**	
	0.8nm,0.8s,baz=51,slow=6.4,SNR=3.9 0.8nm,0.8s							
HFS	**Hagfors**	**75.12**	**336**	P	**P**	**15 58 21.8**	**-0.2**	
	1.5nm,0.9s,baz=32,slow=8.5,SNR=1.3 1.5nm,0.9s							
NOA	**NORSAR Array B**	**75.25**	**337**	P	**P**	**15 58 22.9**	**+0.2**	
	0.3nm,0.5s,baz=56,slow=6.3,SNR=1.7 0.3nm,0.5s							

IDC 01 15:57:49.8±8.5, 7°27S×129°35E, h173km±90km, mb3.1/1, mbtmp3.8/5, Error ellipse: s-maj=81.3km s-min=25.1km az=38.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.33**	**242**	P	Pn	15 59 22.2	+1.1
	9.8nm,0.4s,baz=85,slow=12,SNR=2.3						
BATI				S	Sn	16 00 32.9	-0.1
	14nm,0.3s,baz=221,slow=20,SNR=7.8						
FITZ	**Fitzroy Crossi**	**11.35**	**198**	P	Pn	16 00 27.0	-0.1
	2.9nm,0.7s,baz=35,slow=13,SNR=15						
FITZ				S	Sn	16 02 27.8	-5.4
	1.0nm,0.3s,baz=119,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**13.50**	**159**	P	Pn	16 00 52.5	-2.0
	0.5nm,0.5s,baz=341,slow=13,SNR=11						
WRA				S	Sn	16 03 15.2	-9.5
	0.9nm,0.3s,baz=334,slow=22,SNR=9.2						
ASAR	**Alice Springs**	**16.88**	**165**	P	Pn	16 01 37.0	+0.9
	2.2nm,0.6s,baz=343,slow=10,SNR=28						
ASAR				S	S	16 04 38.9	-3.6
	0.4nm,0.6s,baz=345,slow=24,SNR=6.3						
MKAR	**Makanchi Array**	**68.10**	**327**	P	P	16 08 30.8	-0.1
	0.3nm,0.4s,baz=121,slow=6.4,SNR=5.8 0.3nm,0.4s						

*IDC **01** 16:17:13.6±2.0, 32˚.99S×179˚.26W, h0km, mb3.7/4, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=46.4km s-min=34.9km az=63.0*
*WEL **01** 16:17:18.5±0.7, 34˚S±8˚×17˚9W±2˚.0, h12km, M4.0/7, mB4.9/2, ML4.3/11, MLv4.0/7, Mw(mB)4.2/2, Error ellipse: s-maj=27.8km s-min=4.3km az=110.8, confirmed*

ISC 01 16:17:16.3±1.0, 33°18S±0°.09×179°.5W±0°.2, h10km, n23, σ1s45/27, mb3.5/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.14**	**20**	P	**Pn**	**16 18 19.5**	**-0.1**
RIZ	**Raoul Island**	**4.16**	**20**	S	**Sb**	**16 19 17.7**	**-2.2**
MXZ	**Matakaoa Point**	**4.71**	**201**	P	**Pn**	**16 18 29.1**	**+1.7**
WMGZ	**Waiomatatini S**	**4.92**	**199**	P	**Pn**	**16 18 31.9**	**+1.6**
WMGZ				S	**Sn**	**16 19 25.5**	**-1.8**
HAZ	**Te Kaha**	**5.06**	**205**	P	**Pn**	**16 18 32.2**	**-0.1**
HAZ				S	**Sn**	**16 19 30.6**	**-0.1**
PKGZ	**Pakihiroa**	**5.06**	**202**	P	**Pn**	**16 18 33.1**	**+0.9**
PKGZ				S	**Sn**	**16 19 30.7**	**-0.1**
PUZ	**Puketiti**	**5.20**	**200**	P	**Pn**	**16 18 34.7**	**+0.5**
PUZ				S	**Sn**	**16 19 32.0**	**-2.2**
RUGZ	**Raukumara Rang**	**5.29**	**205**	P	**Pn**	**16 18 36.2**	**+0.8**
TWGZ	**Tauwhareparae**	**5.38**	**201**	P	**Pn**	**16 18 38.0**	**+1.4**
TWGZ				S	**Sn**	**16 19 37.1**	**-1.6**
CNGZ	**Carnagh Statio**	**5.60**	**198**	P	**Pn**	**16 18 39.5**	**-0.2**
TKGZ	**Te Karaka**	**5.66**	**201**	P	**Pn**	**16 18 41.8**	**+1.3**
MWZ	**Matawai**	**5.67**	**204**	P	**Pn**	**16 18 41.1**	**+0.5**
MWZ				S	**Sn**	**16 19 43.2**	**-2.5**
WCZ	**Waipu Caves**	**5.75**	**240**	P	Pn	16 18 47.8	+6.2
URZ	**Urewera**	**5.75**	**207**	Pn	**Pn**	**16 18 42.0**	**+0.3**
	2.3nm,0.3s,baz=68,slow=17,SNR=19						
URZ				Sn	**Sn**	**16 19 44.6**	**-3.1**
	2.0nm,0.3s,baz=94,slow=23,SNR=6.4 4.6nm,0.3s						
URZ	**Urewera**	**5.75**	**207**	P	**Pn**	**16 18 41.5**	**-0.2**
URZ				S	**Sn**	**16 19 45.6**	**-2.2**
ASAR	**Alice Springs**	**41.74**	**271**	P	**P**	**16 25 06.8**	**+1.1**
	0.4nm,0.4s,baz=108,slow=7.1,SNR=14 0.4nm,0.4s						
WRA	**Warramunga Arr**	**42.98**	**276**	P	**P**	**16 25 16.6**	**+0.7**
	0.5nm,0.4s,baz=117,slow=8.2,SNR=10 0.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**51.11**	**273**	P	**P**	**16 26 19.8**	**+0.4**
	1.9nm,0.8s,baz=127,slow=5.1,SNR=1.4 1.9nm,0.8s						
QSPA	**South Pole Qui**	**56.94**	**180**	P	**P**	**16 27 02.5**	**+1.0**
	0.3nm,0.7s,baz=32,slow=4.6,SNR=1.2 0.3nm,0.7s						
H03N3	**Juan Fernandez**	**80.23**	**124**	T	T	17 58 03.2	
	baz=234						
H03N2	**Juan Fernandez**	**80.23**	**123**	T	T	17 57 54.8	
	baz=234						
H03N1	**Juan Fernandez**	**80.25**	**124**	T	T	17 57 53.4	
	baz=234						
FINES	**FINESS Array B**	**147.25**	**337**	PKPbc	**PKPdf**	**16 36 56.5**	**-0.3**
	1.0nm,0.5s,baz=64,slow=4.4,SNR=9.5						

CATAC 01 16:20:38.3±0.5, 11°N±2˚×87°W±˚, h18km±4km, M4.0/40, MLv4.0/40, 10C-4D, Error ellipse: s-maj=4.1km s-min=2.6km az=39.8, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**0.87**	**26**	⇓P	Pb	16 20 55.0	0.0
CRUN	**El Crucero**	**0.89**	**49**	P	Pb	16 20 54.1	-1.3
ABCN	**Banco Central**	**0.98**	**43**	S	Sb	16 21 09.7	+0.2
ABCN	**Banco Central**	**0.98**	**43**	P	Pb	16 20 57.2	0.0
SABN	**Sabanita**	**0.98**	**55**	⇑P	Pb	16 20 55.7	-1.2
AMTN	**Mateare**	**1.00**	**33**	S	Sg	16 21 10.8	-0.1
AMTN	**Mateare**	**1.00**	**33**	⇓P	Pn	16 20 57.4	-0.1
UNAN	**Cigeo UNAN**	**1.00**	**45**	⇑P	Pb	16 20 57.1	0.0
UNAN				S	Sn	16 21 12.4	+1.2
NADN	**Granada**	**1.00**	**69**	⇑P	Pb	16 20 56.9	-0.3
NADN				S	Sn	16 21 11.6	+0.4
NANN	**Nandasmo**	**1.01**	**57**	S	Sn	16 21 12.3	+1.0
NANN	**Nandasmo**	**1.01**	**57**	P	Pg	16 20 57.9	0.0
MASN	**Masaya**	**1.01**	**54**	P	Pb	16 20 57.0	-0.3
MAS3	**Al N del Volca**	**1.01**	**52**	⇑P	Pb	16 20 56.7	-0.6
MAS3				S	Sb	16 21 10.8	+0.5
TISN	**Laguna Tiscapa**	**1.02**	**43**	⇑P	Pb	16 20 57.4	-0.2
APQ2	**Apoyeque**	**1.03**	**39**	P	Pb	16 20 56.7	-0.9
APQ2	**Apoyeque**	**1.03**	**39**	⇓P	Pb	16 20 57.2	-0.4
APQ2				S	Sn	16 21 12.3	+0.4
ALLN	**Telcor Managua**	**1.03**	**43**	P	Pb	16 20 57.7	0.0
ALLN	**Telcor Managua**	**1.03**	**43**	S	Sn	16 21 12.3	+0.4
APYN	**Apoyeque**	**1.04**	**37**	⇓P	Pg	16 20 58.4	-0.1
APQ3	**Volcan Apoyequ**	**1.06**	**35**	⇑P	Pb	16 20 58.3	+0.1
APQN	**BB Volcan Apoy**	**1.06**	**39**	⇑P	Pb	16 20 56.9	-1.4
WILN	**Americas 2**	**1.09**	**46**	P	Pb	16 20 58.2	-0.5
WILN				S	Sn	16 21 13.5	0.0
AERN	**Aeropuerto Man**	**1.10**	**47**	P	Pb	16 20 58.2	-0.6
CNGA	**Al SSO del Vol**	**1.13**	**14**	⇑P	Pn	16 20 59.3	0.0
ARIN	**Rivas**	**1.13**	**87**	P	Pn	16 20 58.6	-0.7
ARIN	**Rivas**	**1.13**	**87**	S	Sb	16 21 13.0	-0.9
CNGN	**Cerro Negro**	**1.13**	**14**	P	Pn	16 20 58.9	-0.5
CNGN	**Cerro Negro**	**1.13**	**14**	S	Sb	16 21 14.0	0.0
MOM2	**El Cardon**	**1.15**	**25**	P	Pn	16 20 59.1	-0.5
MOM2				S	Sb	16 21 14.5	+0.3
MOM3	**MOM3**	**1.20**	**23**	P	Pn	16 21 00.1	-0.2
MOM3				S	Sg	16 21 17.3	0.0
PLRN	**Geotermica Pol**	**1.20**	**10**	P	Pb	16 21 00.6	0.0
POLN	**Al Sur del Vol**	**1.26**	**8**	P	Pn	16 21 01.1	0.0
POLN				S	Sb	16 21 17.2	-0.3
PKGN	**Cerro Pekin**	**1.27**	**1**	P	Pn	16 21 01.2	0.0
PKGN				S	Sn	16 21 18.1	+0.4
CRIN	**San Cristobal**	**1.30**	**357**	S	Sb	16 21 18.8	+0.1
CRIN	**San Cristobal**	**1.30**	**357**	P	Pn	16 21 01.8	+0.1
MORN	**Al O del Volca**	**1.32**	**83**	P	Pn	16 21 01.3	-0.7
MORN				S	Sn	16 21 19.2	0.0
CONN	**Concepcion**	**1.35**	**83**	P	Pn	16 21 01.4	-0.9
CONN				S	Sn	16 21 19.9	+0.1
CARN	**Rivas**	**1.45**	**98**	P	Pn	16 21 03.8	+0.1
CARN				S	Sb	16 21 24.1	+1.0
ELI1	**Hacienda Flor**	**1.59**	**118**	P	Pb	16 21 07.1	-0.2
ELI1	**Hacienda Flor**	**1.59**	**118**	S	Sn	16 21 26.4	+0.5
CSGN	**Cosiguina Volc**	**1.67**	**341**	⇑P	Pn	16 21 06.7	-0.1
CSGN				S	Sn	16 21 28.5	+0.7
POTN	**Potosi Cosigui**	**1.67**	**342**	P	Pn	16 21 06.8	+0.1
POTN				S	Sn	16 21 27.9	+0.1
LIMN	**Finca el Limon**	**1.77**	**20**	⇑P	Pn	16 21 07.9	-0.2
LIMN				S	Sn	16 21 30.3	+0.1
MATN	**Matagalpa**	**1.85**	**34**	P	Pn	16 21 08.0	-1.2
MATN	**Matagalpa**	**1.85**	**34**	S	Sn	16 21 31.8	-0.4
CNCH	**Conchagua**	**2.04**	**336**	S	Sn	16 21 38.3	+1.1
CNCH	**Conchagua**	**2.04**	**336**	P	Pn	16 21 12.6	+0.6
LCND	**La Caada**	**2.10**	**335**	P	Pn	16 21 12.8	+0.2
RCON	**San Juan de Ri**	**2.23**	**21**	P	Pn	16 21 14.0	-0.6
RCPN	**Sur Rio San Ju**	**2.29**	**22**	P	Pn	16 21 15.7	+0.3

*IDC **01** 16:33:19.6±0.6, 3˚.23S×130˚.83E, h0km, mb4.2/15, mbtmp4.3/18, ML2.9/2, MS3.9/22, Error ellipse: s-maj=23.2km s-min=12.6km az=79.0*
*DJA **01** 16:33:22.1±0.1, 3˚S±2˚×13˚1E±˚, h10km, M4.7/49, mb4.9/49, mB5.2/14, MLv4.7/14, Mw(mB)4.6/14*
*NEIC **01** 16:33:25.1±1.4, 3˚.27S±0˚.08×130˚.69E±0˚.06, h47km±7km, mb4.7/28, Error ellipse: s-maj=11.7km s-min=8.7km az=186.0*

ISC 01 16:33:24.4±0.5, 3°35S±0°.04×130°70E±0°.04, h39km±2km, n155, σ2s12/147, mb4.7/39, MS4.0/20, 1C, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.41**	**214**	P	**Pn**	**16 33 48.1**	**+0.6**
BNDI				S	**Sn**	**16 34 09.0**	**+4.1**
FAKI	**Fak Fak**	**1.61**	**75**	P	**Pn**	**16 33 50.9**	**+0.7**
FAKI				Sn	**Sn**	**16 34 14.2**	**+4.4**
FAKI	**Fak Fak**	**1.61**	**75**	P	**Pn**	**16 33 50.6**	**+0.3**
FAKI				S	**Sn**	**16 34 12.8**	**+3.0**
MSAI	**Masohi**	**1.77**	**270**	P	**Pn**	**16 33 52.6**	**+0.1**
MSAI				S	**Sn**	**16 34 16.7**	**+3.0**
AAI	**Ambon**	**2.52**	**262**	P	**Pn**	**16 34 03.6**	**+0.7**
SWI	**Sorong**	**2.53**	**13**	P	**Pn**	**16 34 01.1**	**-1.9**
SWI				S	**Sn**	**16 34 32.7**	**0.0**
KMPI	**Kaimana, Papua**	**3.02**	**96**	P	**Pn**	**16 34 10.9**	**+1.3**
KMPI				S	**Sn**	**16 34 48.2**	**+3.6**
NLAI	**Namlea**	**3.59**	**272**	P	**Pn**	**16 34 18.2**	**+0.6**
RKPI	**Ransiki, Papua**	**3.93**	**62**	P	**Pn**	**16 34 22.5**	**+0.3**
RKPI				S	**Sn**	**16 35 08.4**	**+1.3**
SAUI	**Saumlaki**	**4.64**	**173**	P	**Pn**	**16 34 33.8**	**+1.8**
SAUI	**Saumlaki**	**4.64**	**173**	P	**Pn**	**16 34 33.7**	**+1.7**
SANI	**Sanana**	**4.88**	**285**	P	**Pn**	**16 34 33.3**	**-2.0**
BAKI	**Biak**	**5.81**	**68**	P	**Pn**	**16 34 50.6**	**+2.5**
	0.8nm2µm176nm,0.8s						
KDI	**Kendari**	**8.09**	**265**	P	**Pn**	**16 35 19.9**	**+0.6**
SMPI	**Sarmi**	**8.12**	**81**	P	**Pn**	**16 35 19.9**	**+0.1**
	30nm,0.7s						
LUWI	**Luwuk**	**8.25**	**286**		**Pn**	**16 35 19.9**	**-1.7**
LUWI	**Luwuk**	**8.25**	**286**	P	**Pn**	**16 35 21.7**	**+0.2**
	1µm90nm,1.0s						
SOEI	**Soe**	**9.02**	**225**		**Pn**	**16 35 30.3**	**-1.9**
SOEI	**Soe**	**9.02**	**225**	P	**Pn**	**16 35 33.6**	**+1.4**
	1µm104nm,0.9s						
APSI	**Ampana**	**9.36**	**285**	P	**Pn**	**16 35 37.4**	**+0.5**
	942nm60nm,1.1s						
KDU	**Kakadu**	**9.44**	**169**	P	**Pn**	**16 35 37.0**	**-0.9**
	comp=Z,29nm,0.7s						
KDU				S	**Sn**	**16 37 18.1**	**-4.7**
MTN	**Manton Dam**	**9.44**	**177**	P	**Pn**	**16 35 37.5**	**-0.5**
	comp=Z,58nm,0.4s						
MTN				S	**Sn**	**16 37 19.6**	**-3.3**
MTN	**Manton Dam**	**9.44**	**177**		**Pn**	**16 35 37.2**	**-0.8**
GENI	**Genyem**	**9.49**	**86**	P	**Pn**	**16 35 40.6**	**+2.0**
MRSI	**Marisa**	**9.54**	**293**	P	**Pn**	**16 35 37.5**	**-1.8**
	comp=Z,39nm,0.7s						
BATI	**Baumata**	**9.76**	**225**	Pn	**Pn**	**16 35 45.4**	**+3.1**
	comp=Z,48nm,0.7s,baz=35,slow=4.4,SNR=20						
BATI				Sn	**Sn**	**16 37 37.1**	**+6.5**
	comp=Z,0.6nm,0.3s,baz=58,slow=19,SNR=1.8						
BATI				LR	LR	16 39 27.5	
	comp=Z,760nm,21.8s,baz=101,slow=37						
BATI	**Baumata**	**9.76**	**225**	P	**Pn**	**16 35 44.6**	**+2.3**
	comp=Z,55nm,0.8s						
MMRI	**Maumere**	**9.92**	**238**		**Pn**	**16 35 48.9**	**+4.4**
MMRI	**Maumere**	**9.92**	**238**	P	**Pn**	**16 35 48.0**	**+3.5**
	comp=Z,84nm,1.2s						
JAY	**Jayapura**	**10.03**	**86**	Pn	**Pn**	**16 35 48.5**	**+2.5**
	comp=Z,0.7nm,0.3s,baz=316,slow=4.9,SNR=3.9						
JAY	**Jayapura**	**10.03**	**86**	P	**Pn**	**16 35 49.1**	**+3.1**
BSSI	**Bau Bau, Buton**	**10.54**	**254**	P	**Pn**	**16 35 54.9**	**+1.8**
	comp=Z,751nmcomp=Z,72nm,1.2s						
BNSI	**Bone**	**10.62**	**264**	P	**Pn**	**16 35 53.7**	**-0.4**
	comp=Z,36nm,0.7s						
BKSI	**Bulukumba**	**10.73**	**259**	P	**Pn**	**16 35 56.3**	**+0.8**
	comp=Z,685nmcomp=Z,76nm,1.4s						
TOLI2	**Tolitoli**	**10.86**	**294**		**Pn**	**16 35 57.9**	**+0.5**
MMPI	**Merauke**	**10.89**	**118**	P	**Pn**	**16 36 00.4**	**+2.6**
SPSI	**Sidrap Palu**	**10.92**	**266**	P	**Pn**	**16 35 59.0**	**+0.7**
	comp=Z,29nm,0.9s						
KAPI	**Kappang**	**11.04**	**261**	Pn	**Pn**	**16 36 01.6**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=120,slow=6.4,SNR=5.7						
KAPI				LR	LR	16 41 24.9	
	comp=Z,904nm,19.6s,baz=76,slow=43 comp=Z,13nm,0.9s						
WSI	**Waingapu**	**12.09**	**238**	P	**Pn**	**16 36 14.4**	**+0.2**
KNRA	**Kununurra**	**12.40**	**189**	P	**Pn**	**16 36 15.5**	**-2.8**
	comp=Z,39nm,0.8s						
KNRA				S	**Sn**	**16 38 30.1**	**-5.2**
KNRA	**Kununurra**	**12.40**	**189**		**Pn**	**16 36 15.6**	**-2.8**
WBSI	**Waikabubak, Su**	**12.85**	**240**	P	**Pn**	**16 36 24.6**	**-0.1**
	comp=Z,63nm,0.9s						
PLAI	**Plampang**	**13.95**	**246**	P	**Pn**	**16 36 40.4**	**+0.8**
	comp=Z,892nmcomp=Z,82nm,0.9s						
TWSI	**Taliwang, Sumb**	**14.74**	**248**	P	**Pn**	**16 36 50.4**	**+0.1**
	comp=Z,44nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.47**	**198**	P	**Pn**	**16 36 57.5**	**-2.5**
	comp=Z,4.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**15.47**	**198**		**Pn**	**16 36 57.1**	**-2.8**
FITZ	**Fitzroy Crossi**	**15.47**	**198**	Pn	**Pn**	**16 36 55.7**	**-4.2**
	comp=Z,0.6nm,0.3s,baz=24,slow=10,SNR=16						
FITZ				Sn	**Sn**	**16 39 44.0**	**-6.3**
	comp=Z,0.8nm,0.3s,baz=217,slow=18,SNR=4.6						
BBKI	**Banjar Baru**	**15.83**	**269**	P	**P**	**16 37 06.2**	**-1.7**
	comp=Z,78nm,1.3s						
MTKI	**Muara Teweh, K**	**15.97**	**278**	P	**P**	**16 37 07.8**	**-1.7**
	comp=Z,2µmcomp=Z,39nm,1.0s						
COEN	**Coen**	**16.21**	**131**	P	**Pn**	**16 37 08.6**	**-0.9**
	comp=Z,58nm,1.0s						
COEN	**Coen**	**16.21**	**131**		**Pn**	**16 37 07.1**	**-2.4**
COEN				IAmb	IAmb	16 37 14.8	
	comp=Z,89nm,1.3s						
WB0	**Warramunga Arr**	**16.71**	**168**		**Pn**	**16 37 11.7**	**-4.0**
WB0				IAmb	IAmb	16 37 20.5	
	comp=Z,56nm,0.8s						
WRAB	**Tennant Creek**	**16.86**	**168**		**Pn**	**16 37 12.6**	**-5.1**
WRAB				IAmb	IAmb	16 37 28.7	
	comp=Z,39nm,0.8s						
WRA	**Warramunga Arr**	**16.87**	**168**		**Pn**	**16 37 13.3**	**-4.4**
WRA	**Warramunga Arr**	**16.87**	**168**	Pn	**Pn**	**16 37 12.4**	**-5.3**
	comp=Z,1.1nm,0.3s,baz=349,slow=12,SNR=25						
WRA				Sn	Sn	16 40 14.1	-10
	comp=Z,1.3nm,0.3s,baz=349,slow=22,SNR=6.5						
WB2	**Warramunga Arr**	**16.87**	**168**	P	**Pn**	**16

NJ2 Nanjing 36.96 343 *e*P P **16 40 31.8 +1.8**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
WHN Wuhan 37.15 336 P P **16 40 33.5 +1.9**
JHJ Hachijo jima 2 37.28 13 LR LR 16 56 09.7
comp=Z,201nm,18.1s,baz=110,slow=37
CMAR Chiang Mai Arr 38.05 306 P P **16 40 40.7 +1.2**
comp=Z,1.2nm,0.9s,baz=126,slow=6.2,SNR=12
comp=Z,1.2nm,0.9s
MJAR Matsushiro Arr 40.30 9 P P **16 40 56.4 -1.7**
comp=Z,1.8nm,0.7s,baz=187,slow=8.8,SNR=5.3
comp=Z,1.8nm,0.7s
KSRS Korea Array 40.68 357 P P **16 41 01.2 +0.1**
comp=Z,2.5nm,0.6s,baz=174,slow=9.5,SNR=19
comp=Z,2.5nm,0.6s
PZH PanZhiHua 40.80 318 P P **16 41 03.9 +1.5**
XAN Xi'an 42.48 333 *e*P P **16 41 12.4 -3.6**
XAN pmax pmax
comp=Z,9.0nm,0.8s
LZH Lanzhou 46.58 330 *e*P P **16 41 49.5 +0.7**
LZH pP pP 16 41 59.0 -1.0
LZH pmax pmax
comp=Z,15nm,1.3s
CN2 Changchun 47.17 355 P P **16 41 53.1 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 47.34 340 *e*P P **16 41 54.2 -0.4**
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,96nm,4.1s
USRK Ussuriysk Ar. 47.35 1 P P **16 41 55.2 +0.7**
comp=Z,2.3nm,0.7s,baz=165,slow=7.7,SNR=8.2
comp=Z,2.3nm,0.7s
ASAJ Asahikawa 48.45 11 LR LR 17 01 25.1
comp=Z,176nm,21.4s,baz=128,slow=35
EVN Everest 52.45 309 P P **16 42 33.1 -1.2**
EVN IAmb IAmb 16 42 39.1
comp=Z,5.9nm,0.6s
HEH HeiHe 53.47 357 *e*P P **16 42 39.8 -0.8**
HEH pmax pmax
comp=Z,12nm,1.2s
HILR Hailar Array B 53.54 351 P P **16 42 41.3 +0.1**
comp=Z,1.2nm,0.4s,baz=188,slow=8.7,SNR=2.8
comp=Z,1.2nm,0.4s
SONM Songino Array 55.24 340 P P **16 42 54.4 +0.6**
comp=Z,1.9nm,0.7s,baz=155,slow=8.8,SNR=11
comp=Z,1.9nm,0.7s
PETK Petropavlovsk- 60.66 18 LR LR 17 11 11.7
comp=Z,61nm,18.3s,baz=248,slow=38
MA2 Magadan 64.71 11 LR LR 17 10 13.9
comp=Z,90nm,20.9s,baz=112,slow=34
YAK Yakutsk 65.20 359 P P **16 43 60.0 -1.5**
YAK Yakutsk 65.20 359 LR LR 17 12 43.5
comp=Z,88nm,20.2s,baz=200,slow=36
MKAR Makanchi Array 65.60 326 P P **16 44 02.1 -2.3**
MKAR Makanchi Array 65.60 326 P P **16 44 04.8 +0.4**
comp=Z,2.8nm,0.5s,baz=116,slow=8.6,SNR=42
comp=Z,2.8nm,0.5s
MAKZ Makanchi 65.78 326 P P **16 44 04.8 -0.9**
MAKZ IAmb IAmb 16 44 08.0
comp=Z,15nm,1.5s
KDJ Kajisay 66.25 319 P P **16 44 07.5 -1.5**
SHEM Shemya Is, Ala 66.73 27 LR LR 17 10 21.1
comp=Z,85nm,18.9s,baz=240,slow=33
ZALV Zalesovo Beam 68.66 333 P P **16 44 23.5 -0.1**
comp=Z,2.6nm,0.4s,baz=138,slow=7.6,SNR=5.0
comp=Z,0.6nm,0.4s
ARSB Arslanbob 68.69 317 P P **16 44 23.6 -0.8**
ARSB IAmb IAmb 16 44 42.8
comp=Z,11nm,1.4s
KURBB Kurchatov Arra 69.80 328 P P **16 44 31.3 +0.5**
comp=Z,2.2nm,0.6s,baz=128,slow=5.9,SNR=28
comp=Z,2.2nm,0.6s
KURK Kurchatov 69.80 328 P P **16 44 30.8 0.0**
KURK IAmb IAmb 16 45 12.7
comp=Z,5.7nm,0.9s
TIXI Tiksi 74.87 359 LR LR 17 17 50.0
comp=Z,110nm,20.8s,baz=200,slow=36
BVAR Borovoye Array 75.38 327 P P **16 45 04.6 +0.6**
comp=Z,1.8nm,0.5s,baz=120,slow=8.8,SNR=11
comp=Z,1.8nm,0.5s
VNDA Vanda 75.97 173 P P **16 45 08.3 +1.4**
VNDA Vanda 75.97 173 P P **16 45 07.8 +1.0**
comp=Z,1.3nm,0.8s,baz=305,slow=8.3,SNR=6.1
comp=Z,1.3nm,0.8s
MAW Mawson 78.58 201 P P **16 45 22.9 +1.3**
comp=Z,3.1nm,0.8s,baz=66,slow=3.9,SNR=3.6
comp=Z,3.1nm,0.8s
PPT2 Papeete2 79.21 107 *e*LR LR 17 10 00.3
comp=Z,147nm,30.8s
PPT2 *e*LR LR 17 10 03.6
comp=Z,189nm,31.5s
TBI Tubuai 79.36 113 *e*LR LR 17 10 12.9
comp=Z,697nm,31.2s
ABKAR Akbulak array 80.11 321 P P **16 45 29.2 -1.2**
KDAK Kodiak Island 85.77 32 LR LR 17 19 53.8
comp=Z,56nm,19.0s,baz=243,slow=33
QSPA South Pole Qui 86.60 180 P P **16 46 04.0 +0.4**
QSPA IAmb IAmb 16 46 11.2
comp=Z,2.9nm,0.8s
QSPA South Pole Qui 86.60 180 P P **16 46 06.3 +2.7**
comp=Z,2.5nm,0.7s,baz=53,slow=1.8,SNR=3.2
comp=Z,2.5nm,0.7s
TAOE Nuku Hiva Isla 88.66 99 *e*LR LR 17 14 24.9
comp=Z,175nm,26.9s
GNI Garni 89.05 310 LR LR 17 30 18.7
comp=Z,78nm,21.2s,baz=122,slow=38
ILAR Eielson Array 89.77 25 P P **16 46 18.8 +0.3**
comp=Z,0.5nm,0.7s,baz=255,slow=4.7,SNR=6.6
ILAR LR LR 17 25 04.5
comp=Z,38nm,19.2s,baz=261,slow=35
comp=Z,0.5nm,0.7s
FURI Furi 92.50 279 LR LR 17 28 04.7
comp=Z,123nm,19.6s,baz=127,slow=36
BRTR Keskin Array B 97.56 309 LR LR 17 38 18.6
comp=Z,49nm,18.5s,baz=116,slow=40
DLBC Dease Lake 97.70 32 LR LR 17 26 43.2
comp=Z,60nm,19.2s,baz=280,slow=33
TROLL Troll, Antarti 97.85 194 ⇑P P **16 46 54.8 -1.0**
comp=Z,46nm,0.8s
BBB Bella Bella 99.50 38 LR LR 17 24 17.1
comp=Z,35nm,21.4s,baz=224,slow=31
TORD Torodi Ar. Bea 128.69 284 PKP **PKiKP 16 52 30.1 +0.9**
comp=Z,0.4nm,0.6s,baz=79,slow=3.5,SNR=3.9
CPUP Villa Florida 149.49 166 PKPbc **PKiKP 16 53 11.7 +0.2**
comp=Z,0.8nm,0.6s,baz=178,slow=2.6,SNR=5.1
LPAZ La Paz 153.03 137 PKPbc **PKiKP 16 53 21.5 +1.8**
comp=Z,1.5nm,0.7s,baz=244,slow=1.6,SNR=5.5
SIV San Ignacio 157.53 149 PKPab **PKPab 16 53 50.4 +1.1**
comp=Z,1.1nm,0.8s,baz=232,slow=4.1,SNR=4.5

*RSNC **01** 16:53:51.8±0.0,5˚N±1˚×7˚4W±˚, h150km±2km, M3.5, mb3.9, ML3.3*
*IDC **01** 16:53:52.7±3.5,5.°17N×74.°85W, h150km±85km, mb3.9/1, mbtmp4.4/1, Error ellipse: s-maj=389.9km s-min=54.1km az=87.0*
ISC 01 16:53:51.1±0.9,**5.°32N**±0.°03×**73.°72W**±0.°04,**h157**km±6km, **n38**,σ1ᵗ**50/69**,**Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.49**	**313**	P	**Pn**	**16 54 13.3**	**-0.1**
SPBC				S	**Sn**	**16 54 29.6**	**-0.7**
CHIC	**Chingaza**	**0.68**	**181**	P	**Pn**	**16 54 14.3**	**-0.5**
CHIC				S	**Sn**	**16 54 30.6**	**-2.3**
ROSC	**El Rosal**	**0.76**	**232**	P	**Pn**	**16 54 15.9**	**+0.7**
	574nm,0.3s,baz=103,slow=12,SNR=135						
ROSC				S	**Sn**	**16 54 33.3**	**-0.4**
	889nm,0.3s,baz=186,slow=23,SNR=9.5						
ROSC	**El Rosal**	**0.76**	**232**	P	**Pn**	**16 54 16.0**	**+0.7**
ROSC				S	**Sn**	**16 54 33.6**	**-0.1**
RUSC	**La Rusia**	**0.85**	**48**	P	**Pn**	**16 54 16.6**	**+0.6**
RUSC				S	**Sn**	**16 54 34.9**	**-0.1**
CVER	**Cruz Verde, Cu**	**0.86**	**204**	P	**Pn**	**16 54 16.4**	**+0.3**
CVER				S	**Sn**	**16 54 34.1**	**-1.1**
BARC	**Barichara**	**1.38**	**23**	P	**Pn**	**16 54 20.5**	**+0.2**
BARC				S	**Sn**	**16 54 42.1**	**-0.6**
PTBC	**PUERTO BERRIO,**	**1.42**	**329**	P	**Pn**	**16 54 19.9**	**-0.6**
PTBC				S	**Sn**	**16 54 42.4**	**-0.7**
GUY2C	**Guyana, Caldas**	**1.64**	**267**	P	**Pn**	**16 54 23.0**	**-0.3**
GUY2C				S	**Sn**	**16 54 47.2**	**-0.6**
BRJC	**Barrancabermej**	**1.65**	**359**	P	**Pn**	**16 54 23.5**	**+0.7**
BRJC				S	**Sn**	**16 54 48.3**	**+1.0**
ANIL	**Santa Ana**	**1.87**	**244**	P	**Pn**	**16 54 25.3**	**-0.2**
ANIL				S	**Sn**	**16 54 50.9**	**-1.0**
PTGC	**Puerto Gaitan,**	**1.93**	**125**	P	**Pn**	**16 54 25.6**	**-0.3**
PTGC				S	**Sn**	**16 54 50.9**	**-1.8**
PRAC	**Prado**	**1.97**	**216**	P	**Pn**	**16 54 26.1**	**-0.4**
PRAC				S	**Sn**	**16 54 52.1**	**-1.6**
HELC	**Santa Helena**	**2.00**	**296**	P	**Pn**	**16 54 27.2**	**+0.1**
HELC				S	**Sn**	**16 54 54.4**	**-0.3**
ORTC	**Ortega, Tolima**	**2.07**	**228**	P	**Pn**	**16 54 26.9**	**-0.6**
ORTC				S	**Sn**	**16 54 54.1**	**-1.5**
URMC	**La Uribe, Meta**	**2.16**	**198**	P	**Pn**	**16 54 28.5**	**-0.1**
URMC				S	**Sn**	**16 54 56.6**	**-1.0**
CBOC	**Ciudad Bolivar**	**2.35**	**284**	P	**Pn**	**16 54 30.9**	**-0.1**
CBOC				S	**Sn**	**16 55 01.2**	**-0.5**
PLMC	**San Jos del P**	**2.59**	**261**	P	**Pn**	**16 54 34.8**	**+1.0**
PLMC				S	**Sn**	**16 55 07.6**	**+0.9**
OCAC	**Ocana**	**2.93**	**8**	P	**Pn**	**16 54 39.1**	**+1.0**
OCAC				S	**Sn**	**16 55 15.3**	**+0.8**
YOTC	**Yotoco, Valle**	**2.94**	**243**	P	**Pn**	**16 54 37.6**	**-0.5**
YOTC				S	**Sn**	**16 55 13.0**	**-1.5**
GUVC	**San Jose del G**	**2.96**	**158**	P	**Pn**	**16 54 37.5**	**-0.8**
GUVC				S	**Sn**	**16 55 12.7**	**-2.2**
DBBC	**Dabeiba**	**3.00**	**304**	P	**Pn**	**16 54 39.3**	**+0.4**
DBBC				S	**Sn**	**16 55 16.9**	**+1.0**
URMC	**San Jos de Ur**	**3.02**	**323**	P	**Pn**	**16 54 37.5**	**-1.6**
UREC				S	**Sn**	**16 55 13.8**	**-2.4**
MACC	**Macarena, Meta**	**3.15**	**182**	P	**Pn**	**16 54 39.0**	**-1.8**
MACC				S	**Sn**	**16 55 15.7**	**-3.6**
APAC	**Apartado, Choc**	**3.83**	**312**	P	**Pn**	**16 54 49.1**	**-0.3**
APAC				S	**Sn**	**16 55 34.2**	**-0.6**
POPC	**Popayan, Colom**	**4.04**	**227**	P	**Pn**	**16 54 52.3**	**0.0**
FLOC	**Florencia**	**4.18**	**208**	P	**Pn**	**16 54 53.5**	**-0.5**
LCBC	**Los crdobas,**	**4.39**	**323**	P	**Pn**	**16 54 55.4**	**-1.3**
LCBC				S	**Sn**	**16 55 46.9**	**-1.0**
ARGC	**Ariguani, Magd**	**4.54**	**353**	P	**Pn**	**16 54 59.0**	**+0.3**
ARGC				S	**Sn**	**16 55 50.9**	**-0.6**
SDV	**Santo Domingo**	**4.69**	**41**	P	**Pn**	**16 55 00.9**	**+0.2**
SDV				S	**Sn**	**16 55 55.8**	**+0.8**
SJCC	**San Jacinto, C**	**4.78**	**342**	P	**Pn**	**16 55 00.6**	**-1.2**
SJCC				S	**Sn**	**16 55 53.2**	**-3.9**
CRJC	**Cerrejon, Guaj**	**5.73**	**8**	P	**Pn**	**16 55 13.3**	**-1.1**
CRJC				S	**Sn**	**16 56 16.2**	**-3.4**
SMRC	**Santa Marta, M**	**5.83**	**355**	P	**Pn**	**16 55 14.7**	**-1.0**
	19nm,1.3s						
SMRC				S	**Sn**	**16 56 17.9**	**-4.1**
	19nm,1.3s						
URIC	**Uribia, Colomb**	**6.57**	**15**	P	**Pn**	**16 55 24.7**	**-0.8**
	14nm,1.4s						
URIC				S	**Sn**	**16 56 35.3**	**-4.3**
	14nm,1.4s						
SGC2	**Sao Gabriel da**	**8.65**	**129**	P	Pn	16 55 50.0	-3.2
SGC2				S	Sn	16 57 23.0	-6.5
ILAR	**Eielson Array**	**78.07**	**335**	P	**P**	**17 05 32.7**	**+0.5**
	4.6nm,1.4s,baz=101,slow=3.9,SNR=4.0						
	4.6nm,1.4s						
ASAR	**Alice Springs**	**147.74**	**233**	PKPbc	**PKPdf**	**17 13 17.1**	**+1.9**
	0.5nm,0.9s,baz=132,slow=3.5,SNR=8.6						
WRA	**Warramunga Arr**	**149.08**	**239**	PKPbc	**PKPdf**	**17 13 20.8**	**+3.3**
	0.1nm,0.3s,baz=105,slow=3.3,SNR=1.1						

*IDC **01** 16:58:18.1±1.3,2.°65N×126.°03E, h0km, mb3.7/6, mbtmp3.7/6, MS3.8/1, Error ellipse: s-maj=165.6km s-min=18.3km az=66.0*
*DJA **01** 16:58:21.3±0.3,3˚N±3˚×12˚7E±˚, h10km, M3.7/11, mb3.9/2, MLv3.5/11*
ISC 01 16:58:22.8±1.1,**3.°1N**±0.°1×**127.°0E**±0.°2,**h35**km,**n12**, σ1ᵗ**31/12**,**mb3.9/6**,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.53**	**291**	P	**Pn**	**16 58 48.7**	**+1.0**
TNTI	**Ternate**	**2.38**	**170**	P	**Pn**	**16 59 01.3**	**+1.9**
LBMI	**Labuha**	**3.79**	**172**	P	**Pn**	**16 59 20.2**	**+1.4**
KMSI	**Cibinong**	**3.92**	**230**	P	**Pn**	**16 59 21.7**	**+1.1**
SANI	**Sanana**	**5.24**	**191**	P	**Pn**	**16 59 38.8**	**0.0**
WRA	**Warramunga Arr**	**24.05**	**163**	P	**P**	**17 03 33.4**	**-1.6**
	0.8nm,0.4s,baz=339,slow=10,SNR=6.5						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**27.49**	**166**	P	**P**	**17 04 04.6**	**-1.5**
	0.3nm,0.6s,baz=346,slow=7.7,SNR=6.6						
ASAR				PcP	**PcP**	**17 07 24.6**	**+0.6**
	0.2nm,0.5s,baz=338,slow=2.2,SNR=1.9						
	0.3nm,0.6s						
STKA	**Stephens Creek**	**37.50**	**159**	P	**P**	**17 05 32.7**	**-0.7**
	1.0nm,0.3s,baz=323,slow=10,SNR=3.0						
	1.0nm,0.3s						
SONM	**Songino Array**	**47.93**	**341**	LR	LR	17 30 04.4	
	comp=Z,93nm,18.6s,baz=208,slow=40						
MKAR	**Makanchi Array**	**58.17**	**325**	P	**P**	**17 08 12.6**	**-0.7**
	0.6nm,0.6s,baz=122,slow=8.3,SNR=7.4						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**61.22**	**333**	P	**P**	**17 08 35.5**	**+1.3**
	0.8nm,0.6s,baz=119,slow=5.2,SNR=3.5						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**62.36**	**327**	P	**P**	**17 08 41.5**	**-0.4**
	0.9nm,0.7s,baz=124,slow=6.0,SNR=6.6						
	0.9nm,0.7s						

*IDC **01** 17:23:24.2±1.8,2.°99N×126.°73E, h0km, mb3.5/5, mbtmp3.6/5, Error ellipse: s-maj=126.4km s-min=20.4km az=70.0*
*DJA **01** 17:23:29.2±1.2,3˚N±5˚×12˚7E±˚, h19km±13km, M3.5/8, mb3.6/3, MLv3.5/8*
ISC 01 17:23:30.4±1.2,**3.°2N**±0.°1×**127.°0E**±0.°1,**h44**km,**n9**, σ1ᵗ**58/11**,**mb3.6/5**,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.54**	**290**	P	**Pn**	**17 23 55.7**	**+0.2**
SGSI				S	**Sn**	**17 24 16.6**	**+2.2**
TNTI	**Ternate**	**2.40**	**171**	P	**Pn**	**17 24 09.3**	**+2.1**
TNTI				S	**Sn**	**17 24 37.1**	**+1.7**
SANI	**Sanana**	**5.26**	**191**	P	**Pn**	**17 24 45.4**	**-1.2**
	0.0nm3.8nm,1.5s						
SWI	**Sorong**	**5.85**	**133**	P	**Pn**	**17 24 55.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**21.16**	**184**	P	**P**	**17 28 10.4**	**-1.6**
	2.9nm,1.1s,baz=10,slow=11,SNR=1.4						
	2.9nm,1.1s						
WRA	**Warramunga Arr**	**24.06**	**163**	P	**P**	**17 28 40.4**	**-1.4**
	0.5nm,0.3s,baz=340,slow=10,SNR=5.8						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**27.50**	**166**	P	**P**	**17 29 11.7**	**-1.2**
	0.4nm,0.8s,baz=348,slow=8.1,SNR=8.8						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**58.17**	**325**	P	**P**	**17 33 19.8**	**-0.2**
	0.4nm,0.7s,baz=117,slow=7.4,SNR=6.0						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**62.36**	**327**	P	**P**	**17 33 48.6**	**+0.1**
	0.5nm,0.6s,baz=127,slow=6.9,SNR=4.7						
	0.5nm,0.6s						

*IDC **01** 17:29:51.5±5.5,47.°78N×91.°67W, h0km, mbtmp3.2/1, ML3.9/1, Error ellipse: s-maj=57.9km s-min=20.9km az=73.0*
*NEIC **01** 17:30:03.2±2.1,47.°48N±0.°02×93.°09W±0.°07, h0km±2km, mb_Lg2.7/8, Error ellipse: s-maj=7.9km s-min=3.0km az=279.0*
ISC 01 17:30:01.8±1.1,**47.°44N**±0.°05×**93.°06W**±0.°05,**h0**km,**n15**, σ0ˢ**94/12**,**Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**1.17**	**64**		**Pb**	**17 30 24.9**	**-0.1**
E38A	**The Farm, Brul**	**1.33**	**128**		**Pn**	**17 30 28.4**	**+0.9**
E38A				IAmb_Lg		17 30 48.4	
	comp=Z,30nm,0.8s						
AGMN	**Agassiz Nation**	**2.07**	**295**	IAmb_Lg		17 31 05.8	
	comp=Z,28nm,1.3s						
SPMN	**Marine on St.**	**2.22**	**175**		**Pb**	**17 30 42.1**	**-0.7**
EPLO	**Experimental L**	**2.28**	**349**		**Pb**	**17 30 43.0**	**-0.8**
TBO	**Thunder Bay**	**2.73**	**62**	Pn	**Pn**	**17 30 47.0**	**0.0**
F33A	**5 Mile Ranch,**	**2.74**	**235**	Pn	**Pn**	**17 30 47.4**	**+0.4**
G40A	**Rib Lake**	**2.94**	**137**		**Pn**	**17 30 49.8**	**+0.1**
ULM	**Lac du Bonnet**	**3.37**	**328**		**Pn**	**17 30 54.4**	**-1.3**
ULM				IAmb_Lg		17 31 49.0	
	comp=Z,20nm,0.8s						
ULM	**Lac du Bonnet**	**3.37**	**328**	Pg	**Pn**	**17 30 57.5**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=127,slow=18,SNR=1.8						
ULM				Lg	Lg	17 31 45.9	
	comp=Z,1.9nm,0.3s,baz=69,slow=21,SNR=12						
I10CA	**LAC DU BONNET**	**3.39**	**326**	I	I	17 52 50.0	
	baz=128,slow=351,SNR=1.4						
MDND	**Maddock**	**4.44**	**278**	IAmb_Lg		17 32 22.6	
	comp=Z,24nm,0.8s						
ECSD	**EROS Data Cent**	**4.47**	**215**		**Pn**	**17 31 11.4**	**+0.6**
L40A	**Anamosa**	**5.53**	**166**	Pn	**Pn**	**17 31 25.1**	**-0.3**
PDAR	**Pinedale Array**	**12.55**	**254**	Pn	**Pn**	**17 33 02.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=57,slow=11,SNR=4.3						
	comp=Z,0.4nm,0.6s						

*NIED **01** 17:45:38.5, 33.°85N×140.°17E, h84km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.34; $M_{\theta\theta}$3.79; $M_{\phi\phi}$-4.13; $M_{r\theta}$-0.64; $M_{\theta\phi}$-2.84; $M_{r\phi}$-0.63; Fault plane solution: $M_0$4.95000×10^{14} NP1: ϕ_s333.00000°, δ80.00000°, λ-2.00000°. NP2:ϕ_s63.00000°, δ88.00000°, λ-170.00000°.*
*IDC **01** 17:45:38.4±1.0, 33.°76N×140.°13E, h88km±6km, mb3.5/10, mbtmp3.8/12, MS3.2/1 Error ellipse: s-maj=25.7km s-min=8.9km az=75.0*
*NEIC **01** 17:45:38.7±2.0, 33.°79N±0.°06×140.°2E±0.°1, h89km±9km, mb4.3/9, Error ellipse: s-maj=15.9km s-min=8.4km az=90.0*
*JMA **01** 17:45:38.5±0.1, 33.°9N±0.°3×140.°2E±0.°7, h84km±1km, MV3.7/37, FAR S OFF BOSO PENINSULA*
ISC 01 17:45:38.0±0.8,**33.°80N**±0.°04×**140.°20E**±0.°05,**h87**km±6km, **n77**,σ1ᵗ**35/81**,**mb4.0/15**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.51**	**280**	*e*P	**Pn**	**17 45 52.5**	**0.0**
JMKN				*e*S	**Sn**	**17 46 02.7**	**-0.6**
JMYK	**Miyake Tsubota**	**0.60**	**296**	P	**Pn**	**17 45 53.4**	**+0.2**
JMYK				*e*S	**Sn**	**17 46 05.0**	**+0.4**
JHJ2	**Mitsune**	**0.76**	**205**		**Pn**	**17 45 55.3**	**+0.4**
JHJ2				Sn	**Sn**	**17 46 07.0**	**-0.3**
JHJ2	**Mitsune**	**0.76**	**205**	P	**Pn**	**17 45 55.7**	**+0.9**
JHJ2	**Mitsune**	**0.76**	**205**	*e*P	**Pn**	**17 45 55.7**	**+0.9**
JHJ2				*e*S	**Sn**	**17 46 09.0**	**+1.6**
JHJ	**Hachijo jima 2**	**0.77**	**207**	P	**Pn**	**17 45 55.0**	**+0.1**
	1μm,0.3s,baz=58,slow=13,SNR=306						
JHJ				S	**Sn**	**17 46 08.2**	**+0.7**
	2μm,0.3s,baz=98,slow=23,SNR=11						
JHCJ	**Hachijojimakas**	**0.80**	**205**	P	**Pn**	**17 45 56.0**	**+0.7**
JHCJ				*e*S	**Sn**	**17 46 09.1**	**+0.9**
JSKK	**Shikinejimakit**	**0.97**	**303**	*e*P	**Pn**	**17 45 57.2**	**+0.1**
JSKK				*e*S	**Sn**	**17 46 11.3**	**-0.2**
BSO3	**Boso 3**	**1.03**	**15**	P	**Pn**	**17 45 58.2**	**+0.7**
BSO3				*e*S	**Sn**	**17 46 14.3**	**+2.1**
BSO1	**Boso 1**	**1.07**	**37**	P	**Pn**	**17 45 58.2**	**+0.5**
BSO1				*e*S	**Sn**	**17 46 13.7**	**+1.2**
JIM2	**Oshima 3**	**1.11**	**325**	*e*P	**Pn**	**17 45 58.7**	**-0.1**
JIM2				*e*S	**Sn**	**17 46 13.9**	**-0.5**
BSO4	**Boso 4**	**1.19**	**6**	*e*P	**Pn**	**17 46 00.4**	**+0.8**
JAOM	**Aogashimamukai**	**1.38**	**195**	*e*P	**Pn**	**17 46 04.1**	**+1.9**
JIZS	**Izushimoda**	**1.42**	**310**	P	**Pn**	**17 46 03.0**	**+0.3**
JOD2	**Odawara 2**	**1.72**	**328**	P	**Pn**	**17 46 06.9**	**+0.4**
JOD2				*e*S	**Sn**	**17 46 27.8**	**-0.2**
JSG	**Sagara**	**1.88**	**298**	Pn	**Pn**	**17 46 09.7**	**+1.2**
JSG	**Sagara**	**1.88**	**298**	P	**Pn**	**17 46 09.9**	**+1.4**
TK02	**Tokai 2**	**2.03**	**275**	P	**Pn**	**17 46 11.5**	**+1.2**
SHZ3	**Shizuoka 3**	**2.07**	**308**	P	**Pn**	**17 46 12.4**	**+1.3**
JYN	**Shimob**	**2.17**	**322**	P	**Pn**	**17 46 13.6**	**+1.2**
JGF	**Kuroka**	**2.95**	**308**		**Pn**	**17 46 24.0**	**+1.3**
JGF	**Kuroka**	**2.95**	**308**	P	**Pn**	**17 46 24.6**	**+1.8**
INU	**Inuyama**	**3.04**	**301**		**Pn**	**17 46 25.4**	**+1.5**
INU	**Inuyama**	**3.04**	**301**	P	**Pn**	**17 46 25.5**	**+1.5**
MJAR	**Matsushiro Arr**	**3.18**	**330**	P	**Pn**	**17 46 26.9**	**+1.0**
	44nm,0.7s,baz=157,slow=11,SNR=118						
MJAR				S	**Sn**	**17 47 03.3**	**+0.5**
	21nm,0.5s,baz=152,slow=24,SNR=9.3						
MAJO	**Matsushiro**	**3.18**	**330**		**Pn**	**17 46 27.4**	**+1.5**
MAJO	**Matsushiro**	**3.18**	**330**	P	**Pn**	**17 46 27.9**	**+2.0**
MAJO	**Matsushiro**	**3.18**	**330**	S	**Sn**	**17 47 06.1**	**+3.2**
MJB9	**Matsu-Tunnel**	**3.19**	**330**	Pn	**Pn**	**17 46 27.5**	**+1.5**
JMM	**Marumori**	**4.08**	**7**		**Pn**	**17 46 37.2**	**-0.9**
JMM	**Marumori**	**4.08**	**7**	P	**Pn**	**17 46 36.9**	**-1.2**
JSD	**Sado**	**4.51**	**340**	Pn	**Pn**	**17 46 43.3**	**-0.6**
JSD	**Sado**	**4.51**	**340**	P	**Pn**	**17 46 44.5**	**+0.6**
JMN	**Monobe**	**5.26**	**271**		**Pn**	**17 46 53.3**	**-0.9**
JMN	**Monobe**	**5.26**	**271**	P	**Pn**	**17 46 55.4**	**+1.2**
JCJ	**Chichijima**	**6.90**	**165**	P	Pn	17 47 07.1	-9.5
	38nm,0.7s,baz=3.5,slow=19,SNR=1.7						
JCJ				S	Sn	17 48 21.8	-12
	76nm,0.8s,baz=239,slow=20,SNR=2.6						
JTM	**Tenmabayashi**	**7.00**	**5**	Pn	**Pn**	**17 47 14.5**	**-3.3**
JNU	**Nakatsue**	**7.81**	**268**		**Pn**	**17 47 28.1**	**-0.9**
JNU	**Nakatsue**	**7.81**	**268**	P	**Pn**	**17 47 30.6**	**+1.5**
	3.7nm,0.4s,baz=64,slow=1.8,SNR=9.0						
JNU	**Nakatsue**	**7.81**	**268**	P	**Pn**	**17 47 29.0**	**0.0**
ERM	**Erimo**	**8.52**	**15**	Pn	**Pn**	**17 47 35.5**	**-3.1**
ERM	**Erimo**	**8.52**	**15**	P	**Pn**	**17 47 37.8**	**-0.8**
JEM	**Erimo**	**8.53**	**15**	P	**Pn**	**17 47 37.7**	**-0.9**
ASAJ	**Asahikawa**	**10.47**	**10**	P	**Pn**	**17 48 02.4**	**-2.7**
	5.7nm,0.7s,baz=191,slow=18,SNR=6.5						
JKA	**Kamikawa-asahi**	**10.47**	**10**		**Pn**	**17 48 01.7**	**-3.3**
KSRS	**Korea Array**	**10.63**	**294**	P	**Pn**	**17 48 11.2**	**+3.9**
	2.5nm,0.8s,baz=106,slow=14,SNR=8.1						
PETK	**Petropavlovsk-**	**22.99**	**28**	P	**P**	**17 50 36.6**	**+1.4**
	4.0nm,0.9s,baz=207,slow=12,SNR=1.3						
	4.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.55**	**114**	T	T	18 20 12.5	
	baz=306,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**27.56**	**114**	T	T	18 20 13.7	
	baz=306,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy**	**27.57**	**114**	T	T	18 20 13.5	
	baz=306,slow=75,SNR=25						
H11S3	**WAKE ISLAND Hy**	**28.14**	**116**	T	T	18 20 59.0	
	baz=307						
H11S1	**WAKE ISLAND Hy**	**28.14**	**116**	T	T	18 21 00.7	
	baz=307						
**H11

comp=Z,1.2nm,0.7s,baz=52,slow=6.6,SNR=6.5
comp=Z,1.2nm,0.7s

IDC 01 17:48:07.0±2.0, 3°.26N×127°.21E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=134.8km s-min=22.2km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.28**	**184**	P	P	17 52 54.4	-0.8
	2.5nm,1.0s,baz=0.0,slow=13,SNR=1.5 2.5nm,1.0s						
WRA	**Warramunga Arr**	**24.10**	**163**	P	P	17 53 24.4	-0.1
	0.5nm,0.5s,baz=342,slow=9.1,SNR=3.0 0.5nm,0.5s						
ASAR	**Alice Springs**	**27.55**	**167**	P	P	17 53 55.8	0.0
	1.4nm,1.2s,baz=349,slow=7.3,SNR=7.8 1.4nm,1.2s						
MKAR	**Makanchi Array**	**58.21**	**325**	P	P	17 58 04.6	+1.5
	0.2nm,0.5s,baz=125,slow=8.0,SNR=2.6 0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**62.39**	**327**	P	P	17 58 30.7	-0.9
	0.1nm,0.3s,baz=136,slow=5.2,SNR=1.6 0.1nm,0.3s						

*IDC **01** 17:48:26.2±1.5, 3°.06N×126°.98E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=110.1km s-min=18.1km az=72.0*

ISC 01 17:48:32.2±1.6, 3°.0N±0°.2×127°.1E±0°.8, h44km, n6, σ0.64/6, mb3.6/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.05**	**184**	P	P	**17 53 13.1**	**+0.5**
	1.2nm,0.6s,baz=9.8,slow=9.8,SNR=1.6 1.2nm,0.6s						
WRA	**Warramunga Arr**	**23.92**	**163**	P	P	**17 53 42.4**	**0.0**
	1.1nm,0.6s,baz=342,slow=10.0,SNR=5.6 1.1nm,0.6s						
ASAR	**Alice Springs**	**27.36**	**166**	P	P	**17 54 12.9**	**-0.6**
	0.5nm,0.9s,baz=344,slow=7.5,SNR=5.7 0.5nm,0.9s						
SONM	**Songino Array**	**48.06**	**341**	P	P	**17 57 08.0**	**+0.6**
	0.3nm,0.5s,baz=160,slow=8.6,SNR=2.2 0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.32**	**325**	P	P	**17 58 22.5**	**-0.3**
	0.5nm,0.5s,baz=116,slow=8.1,SNR=9.6 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**62.51**	**327**	P	P	**17 58 50.8**	**-0.5**
	0.7nm,0.7s,baz=129,slow=6.3,SNR=5.6 0.7nm,0.7s						

*IDC **01** 17:51:28.7±0.5, 28°.52S×176°.34W, h0km, mb4.5/13, mbtmp4.4/15, ML4.1/2, MS3.7/14, Error ellipse: s-maj=19.4km s-min=16.6km az=145.0*
*NEIC **01** 17:51:29.9±2.0, 28°.75S±0°.07×176°.30W±0°.07, h10km±1km, mb4.8/25, Error ellipse: s-maj=13.2km s-min=9.9km az=29.0*

ISC 01 17:51:32.8±0.5, 28°.71S±0°.08×176°.36W±0°.08, h29km, n81, σ1.25/73, mb4.8/29, MS3.8/13, 6C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.47**	**248**		**Pn**	**17 51 56.7**	**-0.6**
RAO	**Raoul Island**	**1.47**	**248**	Pn	**Pn**	**17 51 57.8**	**+0.5**
	264nm,0.3s,baz=83,slow=9.1,SNR=12						
RAO				Sn	**Sn**	**17 52 16.8**	**+1.3**
	249nm,0.3s,baz=30,slow=20,SNR=7.7						
MXZ	**Matakaoa Point**	**9.89**	**205**	Pn	**Pn**	**17 53 51.1**	**-1.9**
URZ	**Urewera**	**10.97**	**208**	Pn	Pn	17 54 02.9	-4.8
	1.2nm,0.3s,baz=257,slow=4.3,SNR=16						
URZ				Sn	**Sn**	**17 56 06.0**	**-3.4**
	3.9nm,0.3s,baz=192,slow=21,SNR=9.7						
RTZ	**Ruatahuna**	**11.32**	**208**	Pn	Pn	17 54 08.8	-3.9
RAR	**Rarotonga**	**16.78**	**67**	LR	LR	18 02 19.7	
	comp=Z,202nm,18.7s,baz=268,slow=39						
DZM	**Mont Dzumac**	**16.87**	**289**	Pn	**P**	**17 55 27.7**	**-1.2**
	0.5nm,0.3s,baz=112,slow=14,SNR=5.6 4.6nm,0.9s						
RPZ	**Rata Peaks**	**18.06**	**211**	P	**Pn**	**17 55 42.3**	**+0.8**
	0.7nm,0.3s,baz=47,slow=2.3,SNR=1.7 5.9nm,0.6s						
PPT	**Papeete**	**26.95**	**72**	LR	LR	18 06 53.5	
	comp=Z,109nm,18.9s,baz=286,slow=34						
ARMA	**Armidale**	**27.85**	**259**	P	**P**	**17 57 18.6**	**-1.4**
ARMA				IAmb	IAmb	17 57 29.0	
	comp=Z,44nm,1.6s						
HNR	**Honiara**	**29.37**	**306**	LR	LR	18 06 36.5	
	comp=Z,129nm,19.5s,baz=173,slow=31						
STKA	**Stephens Creek**	**36.28**	**254**	P	**P**	**17 58 32.3**	**-1.4**
STKA	**Stephens Creek**	**36.28**	**254**	P	**P**	**17 58 35.0**	**+1.2**
	comp=Z,4.1nm,0.8s,baz=89,slow=9.4,SNR=5.9						
STKA				LR	LR	18 12 47.1	
	comp=Z,189nm,18.5s,baz=48,slow=35 comp=Z,4.1nm,0.8s						
BBOO	**Buckleboo**	**40.82**	**252**	P	**P**	**17 59 10.3**	**-1.6**
BBOO				IAmb	IAmb	18 00 18.1	
	comp=Z,37nm,1.4s						
AS31	**Alice Springs**	**44.66**	**264**	P	**P**	**17 59 41.8**	**-1.3**
ASAR	**Alice Springs**	**44.66**	**264**	P	**P**	**17 59 41.8**	**-1.4**
ASAR	**Alice Springs**	**44.66**	**264**	P	**P**	**17 59 43.5**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=104,slow=7.5,SNR=28						
ASAR				LR	LR	18 18 09.8	
	comp=Z,226nm,18.6s,baz=104,slow=36 comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**45.50**	**270**	P	**P**	**17 59 49.7**	**-0.2**
WRA	**Warramunga Arr**	**45.50**	**270**	P	**P**	**17 59 50.0**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=108,slow=7.7,SNR=24						
WRA				PcP	**PcP**	**18 01 28.5**	**0.0**
	comp=Z,1.0nm,0.8s,baz=106,slow=3.4,SNR=2.8						
WRA				LR	LR	18 18 04.2	
	comp=Z,54nm,19.5s,baz=5.5,slow=35 comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**45.51**	**270**	P	**P**	**17 59 49.2**	**-0.8**
WB0				IAmb	IAmb	17 59 52.0	
	comp=Z,8.7nm,0.9s						
FORT	**Forrest**	**47.88**	**253**	P	**P**	**18 00 07.9**	**-0.5**
FORT				IAmb	IAmb	18 01 46.6	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**52.03**	**272**	P	**P**	**18 00 40.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**53.82**	**268**	P	**P**	**18 00 53.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**53.82**	**268**	P	**P**	**18 00 53.5**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=118,slow=6.6,SNR=10 comp=Z,4.5nm,0.7s						
GUMO	**Guam**	**56.33**	**313**	LR	LR	18 22 51.4	
	comp=Z,43nm,20.4s,baz=132,slow=34						
CASY	**Casey**	**57.29**	**207**	P	**P**	**18 01 18.9**	**+1.4**
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**18 01 50.0**	**+3.9**
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**18 01 49.6**	**+3.6**
	comp=Z,9.2nm,0.9s,baz=45,slow=2.1,SNR=23						
QSPA				LR	LR	18 27 03.5	
	comp=Z,56nm,18.4s,baz=32,slow=35 comp=Z,9.2nm,0.9s						
BELA	**Belgrano 2**	**71.26**	**172**	P	**P**	**18 02 45.7**	**-3.2**
MJAR	**Matsushiro Arr**	**77.69**	**324**	P	**P**	**18 03 26.7**	**0.0**
	comp=Z,2.5nm,0.8s,baz=153,slow=5.4,SNR=7.5 comp=Z,2.5nm,0.8s						
SYO	**Syowa Base**	**79.07**	**192**	⇑eP	**P**	**18 03 35.4**	**+1.5**
TROLL	**Troll, Antarti**	**79.55**	**180**	⇑P	**P**	**18 03 37.7**	**+1.0**
	comp=Z,283nm,0.6s						
SNAA	**Sanae**	**79.79**	**178**	⇑P	**P**	**18 03 38.9**	**+0.9**
	comp=Z,96nm,0.8s						
SNAA	**Sanae**	**79.79**	**178**	P	**P**	**18 03 38.0**	**+0.1**
SNAA	**Sanae**	**79.79**	**178**	P	**P**	**18 03 38.5**	**+0.6**
	comp=Z,4.4nm,0.9s,baz=189,slow=4.8,SNR=15 comp=Z,4.4nm,0.9s						
VNA3	**Neumayer Olymp**	**79.88**	**176**	⇑P	**P**	**18 03 39.0**	**+0.6**
	comp=Z,10nm,0.7s						
VNA2	**Neumayer--Watz**	**80.34**	**176**	⇑P	**P**	**18 03 41.9**	**+1.1**
	comp=Z,8.3nm,0.8s,baz=168,slow=4.8						
VNA1	**Neumayer--Stat**	**80.56**	**176**	⇑P	**P**	**18 03 43.0**	**+1.1**
	comp=Z,11nm,1.0s						
LPIG	**La Paz**	**82.43**	**57**	LR	LR	18 34 45.6	
	comp=Z,52nm,18.2s,baz=63,slow=32						
PLCA	**Paso Flores**	**82.60**	**132**	P	**P**	**18 03 54.5**	**+1.1**
	comp=Z,3.9nm,1.0s,baz=204,slow=6.5,SNR=3.1						
PLCA				LR	LR	18 34 38.8	
	comp=Z,44nm,18.1s,baz=260,slow=31 comp=Z,3.9nm,1.0s						
PFO	**Pinyon Flats O**	**84.02**	**47**	LR	LR	18 35 42.2	
	comp=Z,48nm,18.6s,baz=222,slow=32						
PETK	**Petropavlovsk-**	**84.55**	**345**	P	**P**	**18 04 03.5**	**+0.8**
	comp=Z,16nm,1.1s,baz=159,slow=5.8,SNR=4.2						
	comp=Z,16nm,1.1s						
O02D	**Mt. Diablo Mer**	**84.69**	**38**	P	**P**	**18 04 04.4**	**+0.4**
O02D				IAmb	IAmb	18 04 06.1	
	comp=Z,7.5nm,1.0s						
QSM	**Queen of Sheba**	**85.28**	**45**	P	**P**	**18 04 06.5**	**-0.3**
QSM				IAmb	IAmb	18 04 08.3	
	comp=Z,9.1nm,1.4s						
O03E	**Paynes Creek**	**85.31**	**39**	P	**P**	**18 04 06.7**	**-0.4**
WAKR	**Walker**	**85.42**	**41**	P	**P**	**18 04 07.2**	**-0.6**
WAKR				IAmb	IAmb	18 04 09.7	
	comp=Z,5.1nm,1.2s						
NVAR	**Mina Array Bea**	**86.03**	**42**	P	**P**	**18 04 11.0**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=220,slow=8.5,SNR=10 comp=Z,2.3nm,0.9s						
TPNV	**Topopah Spring**	**86.30**	**44**	P	**P**	**18 04 12.1**	**0.0**
TPNV				IAmb	IAmb	18 04 58.7	
	comp=Z,13nm,1.7s						
RPSI	**Rantau Prapat**	**86.64**	**275**	P	**P**	**18 04 13.0**	**-1.2**
PRN	**Pahroc Range**	**87.32**	**44**	P	**P**	**18 04 16.3**	**-0.8**
PRN				IAmb	IAmb	18 04 19.1	
	comp=Z,6.9nm,1.1s						
KDAK	**Kodiak Island**	**88.45**	**12**	LR	LR	18 39 28.0	
	comp=Z,28nm,18.4s,baz=137,slow=33						
G08A	**Pilot Rock**	**90.26**	**36**	P	**P**	**18 04 31.0**	**+0.3**
G08A				IAmb	IAmb	18 04 32.2	
	comp=Z,5.4nm,1.1s						
TXAR	**Lajitas Array**	**90.28**	**56**	P	**P**	**18 04 30.4**	**-0.8**
TXAR	**Lajitas Array**	**90.28**	**56**	P	**P**	**18 04 31.2**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=211,slow=7.1,SNR=7.6						
TXAR				LR	LR	18 39 50.6	
	comp=Z,34nm,18.4s,baz=344,slow=32 comp=Z,1.3nm,1.0s						
MNTX	**Cornudas Mount**	**90.34**	**54**		**P**	**18 04 29.0**	**-2.2**
MNTX				IAmb	IAmb	18 05 02.8	
	comp=Z,8.6nm,1.3s						
F10A	**Beach Ranch, E**	**91.62**	**37**	P	**P**	**18 04 35.9**	**-1.0**
F10A				IAmb	IAmb	18 04 37.6	
	comp=Z,6.0nm,0.9s						
PLID	**Pearl Lake**	**91.70**	**38**		**P**	**18 04 37.0**	**-0.6**
PLID				IAmb	IAmb	18 04 38.4	
	comp=Z,7.8nm,1.2s						
NEW	**Newport**	**93.17**	**35**	LR	LR	18 40 28.0	
	comp=Z,56nm,18.3s,baz=170,slow=32						
CMAR	**Chiang Mai Arr**	**94.20**	**289**	P	**P**	**18 04 50.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**94.20**	**289**	P	**P**	**18 04 51.4**	**+1.9**
	comp=Z,0.9nm,0.9s,baz=123,slow=2.6,SNR=8.2 comp=Z,0.9nm,0.9s						
ILAR	**Eielson Array**	**95.97**	**12**	P	**P**	**18 04 55.6**	**-0.8**
ILAR	**Eielson Array**	**95.97**	**12**	P	**P**	**18 04 55.8**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=227,slow=4.8,SNR=7.2 comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**117.77**	**310**		**PKPdf**	**18 10 15.2**	**-0.9**
MKAR	**Makanchi Array**	**117.77**	**310**	PKP	**PKPdf**	**18 10 15.6**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=132,slow=1.8,SNR=5.7						
KURK	**Kurchatov**	**120.90**	**314**		**PKPdf**	**18 10 20.9**	**-1.0**
KURBB	**Kurchatov Arra**	**120.94**	**314**	PKP	**PKPdf**	**18 10 21.4**	**-0.6**
	comp=Z,0.4nm,0.2s,baz=90,slow=2.2,SNR=6.8						
BVAR	**Borovoye Array**	**126.18**	**317**	PKP	**PKPdf**	**18 10 32.0**	**0.0**
	comp=Z,1.5nm,0.9s,baz=96,slow=6.1,SNR=4.7						
H10N3	**ASCENSION HYDR**	**139.67**	**152**	T	T	20 48 27.2	
	baz=203,slow=75,SNR=3.7						
H10N1	**ASCENSION HYDR**	**139.67**	**152**	T	T	20 48 06.3	
	baz=203,slow=75,SNR=3.3						
H10N2	**ASCENSION HYDR**	**139.69**	**152**	T	T	20 48 15.3	
	baz=203,slow=75,SNR=4.3						
FINES	**FINESS Array B**	**144.02**	**342**	PKP	PKPbc	18 11 02.7	-0.1
	comp=Z,5.8nm,0.9s,baz=66,slow=3.2,SNR=21						
KBZ	**Khabaz**	**145.31**	**306**	PKPbc	**PKPdf**	**18 11 08.3**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=155,slow=2.0,SNR=4.6						
NB2	**NORSAR Subarra**	**147.27**	**353**	PKP	**PKPbc**	**18 11 12.5**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=8.7,slow=2.9						
NOA	**NORSAR Array B**	**147.27**	**353**	PKPbc	**PKPbc**	**18 11 12.5**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=13,slow=4.5,SNR=12						
HFS	**Hagfors**	**147.85**	**351**	PKPbc	**PKPbc**	**18 11 13.8**	**-0.6**
	comp=Z,9.6nm,0.8s,baz=48,slow=2.1,SNR=13						
AKASG	**Malin Array Be**	**150.77**	**326**	PKPbc	**PKPbc**	**18 11 21.3**	**-0.6**
	comp=Z,6.8nm,0.9s,baz=46,slow=2.2,SNR=14						
MMAI	**Mount Meron Ar**	**152.45**	**287**	PKPbc	**PKiKP**	**18 11 28.1**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=93,slow=5.8,SNR=4.1						
MMAI				PKPab	**pPKPbc**	**18 11 34.8**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=107,slow=1.1,SNR=4.6						
BRTR	**Keskin Array B**	**152.99**	**302**		**PKPdf**	**18 11 18.3**	**-2.0**
BRTR	**Keskin Array B**	**152.99**	**302**	PKP	**PKPdf**	**18 11 19.6**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=102,slow=3.2,SNR=1.5						
BRTR				PKPbc	**pPKPdf**	**18 11 27.9**	**-0.4**
	comp=Z,2.3nm,1.1s,baz=48,slow=4.3,SNR=4.0						
GERES	**GERESS Array B**	**158.45**	**342**	PKPab	**PKPab**	**18 12 02.0**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=44,slow=6.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**164.41**	**173**	PKP	**PKPdf**	**18 11 33.6**	**-0.7**
	comp=Z,1.1nm,1.1s,baz=210,slow=0.5,SNR=5.3						
TORD				PKPab	**PKPab**	**18 12 29.6**	**+1.0**
	comp=Z,4.4nm,0.8s,baz=165,slow=3.1,SNR=20						

*HEL **01** 18:01:02.5±0.5, 67°.17N×20°.73E, h0km, ML2.1, Explosion*
*IDC **01** 18:01:04.5±1.0, 67°.07N×20°.91E, h0km, mbtmp2.9/4, ML1.9/3, Error ellipse: s-maj=19.6km s-min=8.6km az=112.0*
*UPP **01** 18:01:04.4±0.1, 67°.06N×20°.93E, h0km, ML2.7, Suspected explosion*

ISC 01 18:01:04.0±0.8, 67°.09N±0°.02×20°.88E±0°.03, h0km, n47, σ1.48/60, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.13**	**285**	P	**Pg**	**18 01 07.6**	**+1.1**
	baz=120						
DUNU				S	**Sg**	**18 01 09.8**	**+1.8**
MASU	**Masugnsbyn**	**0.57**	**49**	P	**Pg**	**18 01 15.5**	**+0.5**
MASU				S	**Sg**	**18 01 23.4**	**+1.1**
ERTU	**Ertsjaerv**	**0.75**	**136**	P	**Pg**	**18 01 17.8**	**-0.5**
ERTU	**Ertsjaerv**	**0.75**	**136**	PG	**Pg**	**18 01 17.7**	**-0.6**
ERTU				SG	**Sg**	**18 01 28.5**	**+0.5**
PAJU	**Pajala**	**0.88**	**93**	P	**Pg**	**18 01 20.3**	**-0.6**
PAJU	**Pajala**	**0.88**	**93**	PG	**Pg**	**18 01 20.2**	**-0.6**
PAJU				SB	**Sb**	**18 01 36.0**	**+1.7**
KUA	**Kurravaara**	**0.89**	**347**	P	**Pg**	**18 01 21.4**	**+0.2**
KUA				S	**Sb**	**18 01 34.1**	**-0.8**
HARU	**Harads**	**0.93**	**178**	P	**Pg**	**18 01 21.4**	**-0.5**
SALU	**Saltoluokta**	**0.97**	**289**	P	**Pg**	**18 01 22.9**	**+0.3**
LANU	**Lannavaara**	**1.05**	**23**	P	**Pg**	**18 01 23.9**	**-0.3**
LANU	**Lannavaara**	**1.05**	**23**	PN	**Pg**	**18 01 23.9**	**-0.3**
	baz=211						
LANU				SG	**Sg**	**18 01 32.4**	**-5.4**
NIKU	**Nikkaluokta**	**1.06**	**319**	P	**Pg**	**18 01 24.4**	**+0.2**
KOVU	**Salmi**	**1.17**	**347**	P	**Pg**	**18 01 26.4**	**0.0**
KALU	**Kalix**	**1.59**	**140**	P	**Pn**	**18 01 32.9**	**-0.4**
KALU	**Kalix**	**1.59**	**140**	PG	**Pn**	**18 01 32.5**	**-0.8**
SJUU	**Sjulsmark**	**1.62**	**169**	P	**Pn**	**18 01 33.6**	**-0.1**
HEF	**Hetta**	**1.69**	**37**	eP	**Pn**	**18 01 35.0**	**+0.1**
TOF	**Tornio**	**1.71**	**125**	PG	**Pn**	**18 01 35.0**	**0.0**
TOF				smax	smax	18 01 56.4	
	comp=Z,16nm,0.2s						
TOF				SG	**Sn**	**18 01 58.5**	**+1.0**
KIF	**Kilpisjarvi**	**1.92**	**359**	eP	**Pb**	**18 01 40.0**	**+0.1**
RNF	**Rovaniemi**	**2.08**	**101**	PG	**Pn**	**18 01 41.1**	**+0.9**
BURU	**Burvik**	**2.53**	**175**	PG	**Pn**	**18 01 47.2**	**+0.9**
	baz=357						
RANF	**Ranua**	**2.60**	**112**	PB	**Pn**	**18 01 48.0**	**+0.8**
	baz=299						
RANF				SB	**Sb**	**18 02 23.9**	**+0.1**
OBF4	**Vikkela, Lumij**	**2.87**	**141**	PB	**Pn**	**18 01 51.5**	**+0.6**
	baz=329						
OBF4				smax	smax	18 02 29.8	
	comp=Z,5.0nm,0.2s						
OUL	**Oulu**	**2.87**	**132**	PB	**Pn**	**18 01 52.6**	**+1.7**
OBF0	**Syolatti, Pyha**	**2.95**	**150**	PB	**Pn**	**18 01 53.8**	**+1.8**
OBF0				smax	smax	18 02 32.1	
	comp=Z,5.9nm,0.2s						
ARA0	**ARCESS Array S**	**3.00**	**33**	PB	**Pn**	**18 01 53.7**	**+1.0**
	baz=216						
ARCES	**ARCESS Array B**	**3.00**	**33**	Pn	**Pn**	**18 01 53.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=214,slow=14,SNR=49						
ARCES				Sn	**Sn**	**18 02 30.8**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=216,slow=24,SNR=10.0 comp=Z,1.2nm,0.2s						
RAJF	**Raja-Jooseppi**	**3.15**	**60**	PN	**Pn**	**18 01 55.0**	**+0.2**
OUF	**Merijarvi**	**3.16**	**148**	PB	**Pn**	**18 01 57.2**	**+2.2**
UMAU	**Umeaa**	**3.22**	**182**	PB	**Pn**	**18 01 56.6**	**+0.8**
UMAU				SB	**Sn**	**18 02 36.8**	**+2.0**
KU2	**Taivalkoski**	**3.27**	**112**	PN	**Pn**	**18 01 57.2**	**+0.8**
	baz=299						
VRF	**Varrio**	**3.43**	**75**	PN	**Pn**	**18 01 59.8**	**+1.1**
OLKF	**Oulanka, Finla**	**3.47**	**99**	PB	**Pn**	**18 02 02.0**	**+2.7**
MSF	**Maaselka**	**3.48**	**106**	PB	**Pn**	**18 02 01.3**	**+2.0**
KEV	**Kevo**	**3.50**	**37**	PB	**Pn**	**18 02 00.5**	**+0.8**
KU6	**Riekki**	**3.76**	**102**	PG	**Pb**	**18 02 12.2**	**+1.1**
	baz=290						
HUSU	**Husum**	**3.83**	**191**	PB	**Pn**	**18 02 05.5**	**+1.4**
HUSU				SG	**Sb**	**18 02 58.8**	**-0.4**
VAF	**Ylistaro**	**4.13**	**169**	eP	**Pn**	**18 02 09.4**	**+1.1**
VAF	**Ylistaro**	**4.13**	**169**	PB	**Pn**	**18 02 11.0**	**+2.7**
HEMU	**Hemsoen**	**4.59**	**197**	PG	**Pb**	**18 02 23.5**	**-1.9**
KEF	**Keuruu**	**5.23**	**159**	eP	**Pn**	**18 02 25.3**	**+1.9**
JOF	**Joensuu**	**6.08**	**129**	eP	**Pn**	**18 02 36.7**	**+1.6**
FINES	**FINESS Array B**	**6.10**	**156**	Pn	**Pn**	**18 02 36.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=341,slow=13,SNR=7.2						
FINES				Sn	**Sn**	**18 03 45.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=343,slow=23,SNR=5.1 comp=Z,1.9nm,1.0s						
RAF	**Rauma**	**6.10**	**176**	eP	**Pn**	**18 02 35.9**	**+0.5**
AAL	**Aland**	**6.95**	**184**	eP	**Pn**	**18 02 47.9**	**+0.9**
NOA	**NORSAR Array B**	**7.40**	**219**	Pn	**Pn**	**18 02 51.3**	**-1.9**
	baz=37,slow=19,SNR=1.4 comp=Z,0.2nm,0.6s						
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**18 02 56.1**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=24,slow=14,SNR=1.7						
HFS				Sn	**Sn**	**18 04 20.1**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=15,slow=18,SNR=2.1						

*NEIC **01** 18:01:59.7±2.8, 44°.16N±0°.05×105°.50W±0°.05, h0km±1km, ML3.1/42, Error ellipse: s-maj=9.7km s-min=5.7km az=338.0*
*IDC **01** 18:02:01.5±1.8, 44°.08N×105°.62W, h0km, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=51.2km s-min=10.4km az=147.0*

ISC 01 18:01:59.1±1.1, 44°.02N±0°.05×105°.55W±0°.07, h0km, n26, σ1.25/25, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.10**	**84**		**Pn**	**18 02 20.5**	**-1.5**
K22A	**Casper**	**1.54**	**208**		**Pg**	**18 02 31.2**	**+2.6**
K22A				IAML		18 02 55.8	
	159nm,0.3s						
K22A				IAML		18 02 56.3	
	260nm,0.3s						
LAO	**LASA Array**	**2.71**	**350**	Pn	**Pb**	**18 02 48.3**	**-0.2**
LAO				IAML		18 03 31.7	
	120nm,0.8s						
RLMT	**Red Lodge**	**2.88**	**294**		**Pb**	**18 02 49.6**	**-1.8**
RLMT				IAML		18 03 43.6	
	48nm,0.8s						
RLMT				IAML		18 03 47.4	
	49nm,1.5s						
BW06	**Boulder Array**	**3.18**	**248**		**Pn**	**18 02 52.3**	**+1.7**
PD31	**Pinedale Array**	**3.18**	**248**		**Pb**	**18 02 54.7**	**-1.9**
PDAR	**Pinedale Array**	**3.18**	**248**		**Pb**	**18 02 54.0**	**-2.6**
PDAR	**Pinedale Array**	**3.18**	**248**	Pn	**Pb**	**18 02 55.1**	**-1.4**
	0.8nm,0.3s,baz=70,slow=16,SNR=26						
PDAR				Lg	Lg	18 03 41.4	
	0.8nm,0.3s,baz=64,slow=34,SNR=3.9 2.0nm,0.3s						
YNE	**Yellowstone No**	**3.34**	**289**		**Pn**	**18 02 53.7**	**+0.9**
YNE				IAML		18 03 59.3	
	comp=N,25nm,0.7s						
YNE				IAML		18 04 06.6	
	comp=E,23nm,1.0s						
YMP	**Mirror Lake Pl**	**3.38**	**284**		**Pn**	**18 02 54.3**	**+0.9**
YMP				IAML		18 03 53.4	
	comp=N,38nm,0.9s						
YMP				IAML		18 03 57.1	
	comp=E,44nm,1.0s						
LOHW	**Long Hollow**	**3.68**	**265**	Pn	**Pn**	**18 02 57.8**	**+0.3**
LOHW				IAML		18 04 40.7	
	comp=E,17nm,3.5s						
FLWY	**Flagg Ranch**	**3.71**	**273**		**Pn**	**18 02 58.2**	**+0.3**
FLWY				IAML		18 04 12.8	
	comp=E,43nm,2.6s						
HAYD	**Hayden**	**3.72**	**201**		**Pn**	**18 02 58.7**	**+0.7**
HAYD				IAML		18 04 46.4	
	comp=N,35nm,1.8s						
HAYD				IAML		18 04 50.6	
	comp=E,23nm,1.8s						
MOOW	**Moose Ponds**	**3.77**	**268**		**Pn**	**18 02 59.2**	**+0.6**
YPP	**Pitchstone Pla**	**3.79**	**276**		**Pn**	**18 02 59.2**	**+0.2**
YPP				IAML		18 04 19.7	
	comp=E,19nm,3.1s						
YHH	**Holmes Hill**	**3.88**	**283**		**Pn**	**18 02 59.8**	**-0.4**
YHL	**Hebgen Lake**	**4.12**	**284**		**Pn**	**18 03 03.7**	**+0.2**
YHL				IAML		18 04 25.6	
	comp=N,24nm,1.1s						
YHL				IAML		18 04 26.0	
	comp=E,21nm,1.7s						
ISCO	**Idaho Springs**	**4.21**	**181**	Pn	**Pn**	**18 03 04.8**	**-0.1**
ISCO				IAML		18 04 18.2	
	comp=E,15nm,1.5s						
ISCO				IAML		18 05 30.1	

mbtmp4.4/21,MS3.7/31,Error ellipse: s-maj=12.5km s-min=8.7km az=158.0

*BJI **01** 18:38:34.4,6.68N×125.15E,h14km,mB4.9/14,mb4.8/61, Ms4.3/28,Ms7 4.0/27*

*NEIC **01** 18:38:37.0±1.5,6.81N±0.06×125.08E±0.04,h15km±4km, mb4.8/81,Error ellipse: s-maj=9.3km s-min=5.3km az=151.0*

*GCMT **01** 18:38:39.0±0.3,6.92N±0.02×125.06E±0.02,h19km±1km, MW4.7/75,Moment Tensor Solution. s12,c14; s75,c108; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.40±.10; Mθθ1.48±.07; Mϕϕ-1.08±.07; Mrθ-0.29±.12; Mθϕ-0.47±.06; Mϕr-0.20±.16; Best double couple: Mo1.41700×10¹⁶ NP1:ϕs325.00000°,δ73.00000°,λ-7.00000°. NP2: ϕs57.00000°,δ84.00000°,λ-163.00000°. Principal axes: T 1.5970, Plg7.0000°, Azm190.0000°; N -0.3570, Plg72.0000°, Azm77.0000°; P -1.2380, Plg17.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **01** 18:38:39.6±0.6,7.7N±2.2×12.5E±.5,h17km±4km,M4.9/37, mb4.8/37,mB5.3/13,MLv5.1/9,Mw(mB)4.7/13, MwMwp4.5/1,Mwp4.9/1*

ISC 01 18:38:36.5±0.3,**6.80N**±0.04×**125.09E**±0.04,**h13**km,**n186,** σ1§**94**/164,**mb4.8**/78,**MS3.8**/36,**1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.56**	**61**		**Pg**	**18 38 47.6**	**+0.1**
DAV					**Sb**	**18 38 57.5**	**+1.4**
DAV	**Davao City (W)**	**0.56**	**61**	Pg	**Pb**	**18 38 48.3**	**+0.1**
	2µm,0.3s,baz=240,slow=2.0,SNR=82						
DAV				Lg	Lg	18 38 59.4	
	3µm,0.3s,baz=2.8,slow=22,SNR=18						
DAV				LR	LR	18 39 19.1	
	comp=Z,5µm,19.4s,baz=318,slow=60						
DAV	**Davao City (W)**	**0.56**	**61**	P	**Pn**	**18 38 50.0**	**-0.2**
SGSI	**Sangihe**	**3.12**	**172**	P	**Pn**	**18 39 28.4**	**+2.9**
SGSI				S	**Sb**	**18 40 08.0**	**-1.9**
KMSI	**Cibinong**	**6.28**	**190**	P	**Pn**	**18 40 12.4**	**+3.5**
TNTI	**Ternate**	**6.40**	**159**		**Pn**	**18 40 09.8**	**-0.9**
TNTI				Sn	**Sn**	**18 41 26.3**	**+2.7**
TNTI	**Ternate**	**6.40**	**159**	P	**Pn**	**18 40 14.8**	**+4.2**
TNTI	**Ternate**	**6.40**	**159**	P	**Pn**	**18 40 13.5**	**+2.9**
	0.3nm1µm105nm,1.1s						
MYLDM	**Lahad Datu**	**6.75**	**257**		**Pn**	**18 40 14.2**	**-1.2**
MRSI	**Marisa**	**7.02**	**207**	P	**Pn**	**18 40 20.7**	**+1.6**
	0.9nm2µm144nm,0.7s						
TOLI2	**Tolitoli**	**7.09**	**217**		**Pn**	**18 40 18.3**	**-1.9**
TOLI2				Sn	**Sn**	**18 41 38.0**	**-2.7**
TOLI2	**Tolitoli**	**7.09**	**217**	P	**Pn**	**18 40 18.8**	**-1.3**
LUWI	**Luwuk**	**8.12**	**197**		**Pn**	**18 40 34.4**	**+0.2**
LUWI				Sn	**Sn**	**18 42 06.3**	**+0.3**
LUWI	**Luwuk**	**8.12**	**197**	P	**Pn**	**18 40 36.3**	**+2.1**
LUWI	**Luwuk**	**8.12**	**197**	P	**Pn**	**18 40 38.1**	**+3.9**
TGY	**Tagaytay City**	**8.33**	**331**	LR	LR	18 44 47.8	
	comp=Z,373nm,18.4s,baz=109,slow=45						
APSI	**Ampana**	**8.39**	**204**	P	**Pn**	**18 40 42.7**	**+4.8**
	1µm176nm,1.0s						
SANI	**Sanana**	**8.83**	**174**	P	**Pn**	**18 40 45.2**	**+1.2**
I39PW	**PALAU INFRASON**	**9.42**	**85**	I	I	19 31 30.0	
	baz=268,slow=285,SNR=0.7						
SWI	**Sorong**	**9.79**	**141**	P	**Pn**	**18 41 00.6**	**+3.5**
	22nm,1.3s						
NLAI	**Namlea**	**10.17**	**169**	P	**Pn**	**18 41 04.3**	**+2.0**
	843nm42nm,0.6s						
AAI	**Ambon**	**10.87**	**163**	P	**Pn**	**18 41 14.0**	**+2.1**
	55nm,1.0s						
FAKI	**Fak Fak**	**12.01**	**143**		**Pn**	**18 41 26.8**	**-0.8**
FAKI	**Fak Fak**	**12.01**	**143**	P	**Pn**	**18 41 31.6**	**+4.0**
FAKI	**Fak Fak**	**12.01**	**143**	P	**Pn**	**18 41 31.4**	**+3.8**
	56nm,1.2s						
BNSI	**Bone**	**12.18**	**204**	P	**Pn**	**18 41 34.7**	**+4.8**
	24nm,1.1s						
KAPI	**Kappang**	**12.88**	**205**	Pn	**Pn**	**18 41 38.0**	**-1.5**
KAPI	**Kappang**	**12.88**	**205**	Pn	**P**	**18 41 47.0**	**-3.2**
	1.2nm,0.3s,baz=0.2,slow=10,SNR=3.5						
KAPI				LR	LR	18 46 51.4	
	comp=Z,426nm,20.8s,baz=52,slow=39						
SBUM	**Sibu**	**13.53**	**252**		**Pn**	**18 41 46.7**	**-1.7**
MMRI	**Maumere**	**15.59**	**191**		**Pn**	**18 42 15.8**	**-0.4**
MMRI	**Maumere**	**15.59**	**191**	P	**P**	**18 42 21.0**	**+0.6**
	1µm44nm,1.1s						
KSM	**Kuching**	**15.65**	**251**	Pn	**Pn**	**18 42 16.6**	**-0.4**
SOEI	**Soe**	**16.46**	**183**		**Pn**	**18 42 27.4**	**-0.1**
SOEI	**Soe**	**16.46**	**183**	P	**P**	**18 42 32.5**	**+2.3**
	52nm,1.1s						
YULB	**Yu-li**	**16.90**	**348**	Pn	**Pn**	**18 42 31.8**	**-1.1**
BATI	**Baumata**	**16.95**	**185**	Pn	**P**	**18 42 35.0**	**-0.5**
	2.2nm,0.3s,baz=313,slow=2.4,SNR=10						
BATI				LR	LR	18 49 42.3	
	comp=Z,294nm,22.0s,baz=4.5,slow=40						
BATI	**Baumata**	**16.95**	**185**	P	**P**	**18 42 36.5**	**+1.0**
	67nm,0.9s						
DLV	**Lat**	**17.15**	**289**	P	**Pn**	**18 42 36.8**	**+0.4**
WBSI	**Waikabubak, Su**	**17.29**	**199**	P	**P**	**18 42 42.4**	**+3.1**
	48nm,1.1s						
SSLB	**Suanglung**	**17.36**	**347**	P	**Pn**	**18 42 37.8**	**-0.9**
TWSI	**Taliwang, Sumb**	**17.46**	**208**	P	**P**	**18 42 44.1**	**+2.9**
	27nm,0.9s						
YHNB	**Yeheng**	**18.12**	**349**	P	**Pn**	**18 42 45.9**	**-2.3**
JAY	**Jayapura**	**18.13**	**120**	LR	LR	18 49 38.0	
	comp=Z,206nm,21.4s,baz=332,slow=36						
JAGI	**Jajag, Banyuwa**	**18.68**	**216**	P	**Pn**	**18 42 55.3**	**+0.4**
QIZ	**Qiongzhong**	**19.18**	**311**	P	**Pn**	**18 43 00.9**	**-0.1**
QIZ				S	**S**	**18 46 36.7**	**-0.6**
QIZ				LR	LR		
	comp=N,560nm,12.6s						
QIZ				LR	LR		
	comp=E,500nm,14.3s						
QIZ				LR	LR		
	comp=Z,690nm,19.3s						
JOW	**Kunigami**	**20.16**	**8**	P	**P**	**18 43 10.6**	**0.0**
JOW				IAmb	IAmb	18 43 17.5	
	comp=Z,61nm,0.9s						
JOW	**Kunigami**	**20.16**	**8**	P	Pn	18 43 15.0	+2.5
	comp=Z,51nm,0.8s,baz=210,slow=6.8,SNR=7.3						
JOW				LR	LR	18 51 13.5	
	comp=Z,142nm,20.6s,baz=179,slow=38						
MTN	**Manton Dam**	**20.42**	**163**	P	**P**	**18 43 13.9**	**+0.3**
GUMO	**Guam**	**20.60**	**69**	LR	LR	18 49 39.2	
	comp=Z,134nm,21.4s,baz=236,slow=32						
MYKOM	**Kota Tinggi**	**21.75**	**258**	P	**P**	**18 43 28.2**	**+0.2**
LEM	**Lembang**	**22.07**	**233**	P	**P**	**18 43 34.3**	**+2.8**
	comp=Z,15nm,0.4s,baz=24,slow=10.0,SNR=6.4						
LEM	**Lembang**	**22.07**	**233**	P	**P**	**18 43 36.4**	**+4.8**
	comp=Z,35nm,1.0s						
KNRA	**Kununurra**	**22.62**	**171**	P	**P**	**18 43 37.2**	**-0.1**
KNRA				IAmb	IAmb	18 43 44.2	
	comp=Z,40nm,0.8s						
MDSI	**Maura Dua**	**23.69**	**242**	P	**P**	**18 43 52.7**	**+4.4**
	comp=Z,17nm,0.9s						
LHSI	**Lahat**	**23.97**	**244**	P	**P**	**18 43 57.5**	**+6.5**
	comp=Z,1µmcomp=Z,30nm,0.4s						
LWLI	**Liwa**	**24.05**	**241**	P	**P**	**18 43 57.2**	**+5.4**
IPM	**Ipoh**	**24.05**	**266**	P	**P**	**18 43 51.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**24.74**	**179**	P	**P**	**18 43 58.0**	**0.0**
KRJI	**Kerinci**	**25.18**	**250**	P	**P**	**18 44 07.4**	**+5.3**
	comp=Z,98nm,1.1s						
NJ2	**Nanjing**	**25.79**	**348**	*e*P	**P**	**18 44 09.6**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
PSI	**Prapat**	**26.36**	**263**	LR	LR	18 58 23.2	
	comp=Z,113nm,18.1s,baz=68,slow=45						
JNU	**Nakatsue**	**26.74**	**11**	LR	LR	18 54 39.6	
	comp=Z,32nm,21.8s,baz=184,slow=36						
PMG	**Port Moresby**	**27.25**	**126**	LR	LR	18 56 11.6	
	comp=Z,100nm,19.4s,baz=308,slow=39						
COEN	**Coen**	**27.34**	**139**	P	**P**	**18 44 19.0**	**-2.5**
ENH	**Enshi**	**27.57**	**330**		**P**	**18 44 22.7**	**-0.8**
ENH				IAmb	IAmb	18 44 32.7	
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**27.94**	**161**	P	**P**	**18 44 25.4**	**-1.5**
WB0				IAmb	IAmb	18 44 44.7	
	comp=Z,23nm,1.1s						
GSI	**Gunungsitoli**	**27.97**	**260**	P	**P**	**18 44 26.1**	**-1.1**
GSI				IAmb	IAmb	18 44 41.7	
	comp=Z,23nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.97**	**297**	P	**P**	**18 44 26.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**27.97**	**297**	P	**P**	**18 44 27.4**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=117,slow=6.8,SNR=13						
CMAR				LR	LR	18 55 39.7	
	comp=Z,122nm,18.8s,baz=115,slow=37						
	comp=Z,1.1nm,0.4s						
KMI	**Kunming**	**28.09**	**313**	P	**P**	**18 44 30.3**	**+1.9**
KMI				pP	sP	18 44 35.2	+1.0
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI				LR	LR		
	comp=Z,220nm,12.7s						
KMI				LR	LR		
	comp=Z,200nm,21.7s						
KMI				LR	LR		
	comp=Z,230nm,18.4s						
WRA	**Warramunga Arr**	**28.09**	**161**	P	**P**	**18 44 25.9**	**-2.3**
WRA	**Warramunga Arr**	**28.09**	**161**	P	**P**	**18 44 27.6**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=330,slow=11,SNR=11						
	comp=Z,2.5nm,0.8s						
CHTO	**Chiang Mai**	**28.10**	**298**	P	**P**	**18 44 28.0**	**-0.4**
CHTO				IAmb	IAmb	18 45 09.0	
	comp=Z,26nm,1.9s						
JHJ	**Hachijo jima 2**	**29.54**	**26**	LR	LR	18 56 02.8	
	comp=Z,162nm,19.8s,baz=88,slow=35						
PZH	**PanZhiHua**	**29.63**	**314**	P	**P**	**18 44 42.5**	**+0.5**
INU	**Inuyama**	**30.46**	**19**	P	**P**	**18 44 47.8**	**-1.2**
KSRS	**Korea Array**	**30.63**	**4**	P	**P**	**18 44 50.7**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=180,slow=9.0,SNR=12						
	comp=Z,2.9nm,0.8s						
XAN	**Xi'an**	**30.96**	**333**	P	**P**	**18 44 53.9**	**+0.3**
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
TNCH	**TengChong**	**31.21**	**308**	*e*P	**P**	**18 44 57.6**	**+1.5**
TNCH				pmax	pmax		
	comp=Z,16nm,0.9s						
CD2	**Chengdu**	**31.22**	**323**	P	**P**	**18 44 56.0**	**+0.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
CD2				LR	LR		
	comp=Z,340nm,15.2s						
CD2				LR	LR		
	comp=Z,630nm,19.0s						
CD2				LR	LR		
	comp=Z,310nm,18.4s						
AS31	**Alice Springs**	**31.48**	**164**	P	**P**	**18 44 57.4**	**-0.8**
ASAR	**Alice Springs**	**31.48**	**164**	P	**P**	**18 44 57.1**	**-1.1**
ASAR	**Alice Springs**	**31.48**	**164**	P	**P**	**18 44 57.6**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=341,slow=7.0,SNR=53						
ASAR				PcP	**PcP**	**18 47 50.7**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=341,slow=2.9,SNR=2.5						
	comp=Z,2.5nm,0.6s						
HNS	**HongShan**	**31.89**	**344**	⇑P	**P**	**18 45 02.6**	**+1.0**
HNS				S	**S**	**18 50 15.5**	**+3.2**
HNS				pmax	pmax		
	comp=Z,14nm,1.2s						
HNS				LR	LR		
	comp=Z,150nm,18.4s						
HNS				LR	LR		
	comp=Z,330nm,18.6s						
HNS				LR	LR		
	comp=Z,300nm,16.5s						
MJAR	**Matsushiro Arr**	**31.95**	**20**	P	**P**	**18 45 01.6**	**-0.6**
	comp=Z,8.8nm,0.8s,baz=195,slow=9.5,SNR=12						
MJAR				LR	LR	18 57 28.2	
	comp=Z,150nm,19.9s,baz=208,slow=35						
	comp=Z,8.8nm,0.8s						
BJT	**Baijiatuan**	**34.03**	**348**		**P**	**18 45 19.6**	**-0.8**
BJT				IAmb	IAmb	18 45 21.9	
	comp=Z,16nm,0.9s						
BJI	**Beijing**	**34.05**	**348**	P	**P**	**18 45 21.4**	**+0.9**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
JMM	**Marumori**	**34.06**	**22**	P	**P**	**18 45 19.6**	**-1.0**
LZDM	**Lanzhou Array**	**35.02**	**329**	P	**P**	**18 45 28.5**	**-0.8**
	comp=Z,3.0nm,0.4s,baz=160,slow=9.2,SNR=1.5						
	comp=Z,3.0nm,0.4s						
LZH	**Lanzhou**	**35.05**	**329**	*e*P	**P**	**18 45 31.1**	**+1.7**
LZH				sP	sP	18 45 39.9	+4.7
LZH				sS	sS	18 51 15.7	+7.3
LZH				pmax	pmax		
	comp=Z,38nm,1.3s						
LZH				LR	LR		
	comp=Z,210nm,13.7s						
LZH				LR	LR		
	comp=Z,240nm,13.7s						
LZH				LR	LR		
	comp=Z,230nm,13.7s						
HHC	**Hu-ho-hao-te**	**36.00**	**342**	*e*P	**P**	**18 45 38.6**	**+1.2**
HHC				pP	sP	18 45 45.3	+2.1
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,66nm,4.8s						
HHC				LR	LR		
	comp=Z,190nm,16.4s						
HHC				LR	LR		
	comp=Z,150nm,16.5s						
HHC				LR	LR		
	comp=Z,200nm,16.7s						
BTO	**Baotou**	**36.26**	**340**	*e*P	**P**	**18 45 42.6**	**+2.9**
BTO				pP	**sP**	**18 45 47.2**	**+1.7**
BTO				sP	**pP**	**18 45 49.8**	**+6.0**
BTO				pmax	pmax		
	comp=Z,24nm,1.1s						
BTO				pmax	pmax		
	comp=Z,110nm,5.2s						
BTO				LR	LR		
	comp=Z,450nm,17.9s						
BTO				LR	LR		
	comp=Z,570nm,21.9s						
BTO				LR	LR		
	comp=Z,470nm,23.4s						
SHL	**Shillong**	**36.78**	**304**	P	**P**	**18 45 43.1**	**-1.3**
SHL				IAmb	IAmb	18 45 46.4	
	comp=Z,16nm,0.7s						
USRK	**Ussuriysk Ar.**	**37.74**	**8**	P	**P**	**18 45 53.3**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=190,slow=9.5,SNR=11						
	comp=Z,5.4nm,0.8s						
XLT	**XiLinHaoTe**	**37.79**	**349**	*e*P	**P**	**18 45 53.5**	**+0.9**
XLT				pmax	pmax		
	comp=Z,19nm,1.1s						
XLT				pmax	pmax		
	comp=Z,56nm,3.5s						
MDJ	**Mudanjiang**	**37.88**	**5**		**P**	**18 45 52.3**	**-0.9**
MDJ				IAmb	IAmb	18 46 01.7	
	comp=Z,13nm,0.8s						
HNR	**Honiara**	**38.29**	**114**	LR	LR	19 01 06.9	
	comp=Z,53nm,18.4s,baz=343,slow=35						
LSA	**Lhasa**	**39.21**	**310**		**P**	**18 46 03.9**	**-1.3**
LSA	**Lhasa**	**39.21**	**310**	P	**P**	**18 46 03.7**	**-1.6**
GTA	**Gaotai**	**39.64**	**329**	P	**P**	**18 46 10.6**	**+2.3**
GTA				pP	sP	18 46 16.0	+1.9
GTA				pmax	pmax		
	comp=Z,33nm,1.0s						
GTA				LR	LR		
	comp=Z,200nm,14.5s						
GTA				LR	LR		
	comp=Z,170nm,16.7s						
GTA				LR	LR		
	comp=Z,220nm,18.2s						
ASAJ	**Asahikawa**	**40.21**	**20**	LR	LR	19 02 20.8	
	comp=Z,67nm,20.2s,baz=123,slow=35						
GOMU	**GeErMu**	**40.28**	**321**	P	**P**	**18 46 15.1**	**+1.1**
GOMU				pP	pP	18 46 18.2	+0.1
GOMU				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GOMU				LR	LR		
	comp=Z,50nm,12.6s						
GOMU				LR	LR		
	comp=Z,130nm,16.1s						
BBOO	**Buckleboo**	**40.75**	**166**	P	**P**	**18 46 17.2**	**-0.1**
BBOO				IAmb	IAmb	18 46 27.1	
	comp=Z,20nm,0.8s						
STKA	**Stephens Creek**	**41.56**	**159**	P	**P**	**18 46 24.2**	**+0.2**
STKA	**Stephens Creek**	**41.56**	**159**	P	**P**	**18 46 24.7**	**+0.7**
	comp=Z,2.7nm,0.5s,baz=347,slow=7.7,SNR=8.0						
STKA				LR	LR	19 05 18.9	
	comp=Z,90nm,21.2s,baz=12,slow=39						
	comp=Z,2.7nm,0.5s						
EVN	**Everest**	**41.88**	**305**	P	**P**	**18 46 26.9**	**-0.7**
HIA	**Hailar**	**42.56**	**355**	IAmb	IAmb	18 46 34.2	
	comp=Z,14nm,1.0s						
HILR	**Hailar Array B**	**42.85**	**355**	P	**P**	**18 46 35.1**	**+0.7**
	comp=Z,9.0nm,0.8s,baz=170,slow=11,SNR=9.2						
	comp=Z,9.0nm,0.8s						
HEH	**HeiHe**	**43.36**	**2**	*e*P	**P**	**18 46 38.8**	**+0.4**
HEH				pmax	pmax		
	comp=Z,22nm,0.9s						
ULN	**Ulaanbaatar**	**43.72**	**342**	P	**P**	**18 46 40.9**	**-0.7**
SONM	**Songino Array**	**43.89**	**342**	P	**P**	**18 46 43.0**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=159,slow=8.4,SNR=13						
SONM				LR	LR	19 05 59.2	
	comp=Z,246nm,21.6s,baz=155,slow=38						
	comp=Z,2.1nm,0.8s						
PALK	**Pallekele**	**44.04**	**273**	LR	LR	19 07 39.5	
	comp=Z,42nm,18.7s,baz=86,slow=40						
WMQ	**Urumqi**	**49.29**	**325**	*e*P	**P**	**18 47 27.8**	**+2.5**
WMQ				sP	sP	18 47 35.2	+4.0
WMQ				PP	**PP**	**18 49 24.1**	**+4.8**
WMQ				S	**S**	**18 54 32.7**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,39nm,0.7s						
WMQ				LR	LR		
	comp=Z,230nm,17.9s						
WMQ				LR	LR		
	comp=Z,240nm,20.1s						
WMQ				LR	LR		
	comp=Z,190nm,20.5s						
PETK	**Petropavlovsk-**	**53.27**	**24**	P	**P**	**18 47 56.3**	**+1.4**
	comp=Z,11nm,0.9s,baz=228,slow=3.8,SNR=4.7						
PETK				LR	LR	19 10 51.9	
	comp=Z,71nm,19.8s,baz=235,slow=36						
	comp=Z,11nm,0.9s						
MKAR	**Makanchi Array**	**54.12**	**325**	P	**P**	**18 48 01.2**	**-0.1**
MKAR				PcP	**PcP**	**18 49 05.4**	**-0.6**
MKAR	**Makanchi Array**	**54.12**	**325**	P	**P**	**18 48 01.7**	**+0.4**
	comp=Z,5.6nm,0.7s,baz=126,slow=8.1,SNR=66						
MKAR				LR	LR	19 11 37.6	
	comp=Z,60nm,21.0s,baz=100,slow=37						
	comp=Z,5.6nm,0.7s						
MAKZ	**Makanchi**	**54.31**	**325**	P	**P**	**18 48 02.2**	**-0.5**
MAKZ				IAmb	IAmb	18 48 04.3	
	comp=Z,6.8nm,0.8s						
TARG	**Taragay, Kyrgy**	**54.39**	**317**	P	**P**	**18 48 03.1**	**-0.8**
TARG				IAmb	IAmb	18 48 29.0	
	comp=Z,6.6nm,0.9s						
KSH	**Kashi**	**54.74**	**314**	P	**P**	**18 48 08.6**	**+2.5**
KSH				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NIL	**Nilore**	**54.78**	**307**	P	**P**	**18 48 05.7**	**-0.7**
KDJ	**Kajisay**	**54.99**	**318**		**P**	**18 48 06.3**	**-1.6**
KDJ				IAmb	IAmb	18 48 10.2	
	comp=Z,8.7nm,0.9s						
YAK	**Yakutsk**	**55.23**	**3**	P	**P**	**18 48 09.1**	**+0.2**
TKM2	**Tokmak 2**	**56.38**	**318**	P	**P**	**18 48 19.1**	**+1.1**
	SNR=13						
KBK	**Karagaybulak**	**56.71**	**317**	P	**P**	**18 48 21.9**	**+1.7**
	SNR=7.4						
UCH	**Uchtor**	**56.83**	**317**	P	**P**	**18 48 22.9**	**+1.5**
	SNR=20						
AAK	**Ala-Archa**	**57.01**	**317**	P	**P**	**18 48 21.7**	**-0.6**
AAK	**Ala-Archa**	**57.01**	**317**	LR	LR	19 12 56.6	
	comp=Z,89nm,22.0s,baz=103,slow=36						
ZALV	**Zalesovo Beam**	**57.13**	**333**	P	**P**	**18 48 22.0**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=123,slow=5.5,SNR=7.0						
ZALV				LR	LR	19 14 32.7	
	comp=Z,54nm,20.6s,baz=130,slow=38						
	comp=Z,1.3nm,0.7s						
USP	**Ospenovka**	**57.26**	**318**	P	**P**	**18 48 24.8**	**+0.8**
	SNR=17						
EKS2	**Erkin-Say**	**57.50**	**317**	P	**P**	**18 48 27.0**	**+1.3**
	SNR=14						
ARSB	**Arslanbob**	**57.54**	**315**	P	**P**	**18 48 26.3**	**+0.2**
ARSB				IAmb	IAmb	18 48 28.1	
	comp=Z,21nm,1.4s						
DRK	**Karamyk**	**57.73**	**313**	IAmb	IAmb	18 48 40.0	
	comp=Z,15nm,1.1s						
KURBB	**Kurchatov Arra**	**58.29**	**327**	P	**P**	**18 48 30.8**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=126,slow=5.9,SNR=73						
	comp=Z,6.5nm,0.8s						
KURK	**Kurchatov**	**58.29**	**327**	P	**P**	**18 48 29.8**	**-1.2**
KURK				IAmb	IAmb	18 48 32.5	
	comp=Z,10nm,0.8s						
KBL	**Kabul**	**58.38**	**306**	P	**P**	**18 48 32.2**	**-0.1**
KBL				IAmb	IAmb	18 48 40.4	
	comp=Z,5.5nm,0.7s						
SIMJ	**Simiganj**	**59.53**	**311**	P	**P**	**18 48 39.6**	**-0.4**
SIMJ				IAmb	IAmb	18 48 41.6	
	comp=Z,16nm,1.6s						
KKAR	**Karatay Array**	**59.89**	**316**	P	**P**	**18 48 41.9**	**-0.4**
BVAR	**Borovoye Array**	**63.88**	**327**	P	**P**	**18 49 08.2**	**-0.7**
	comp=Z,5.3nm,0.9s,baz=111,slow=8.1,SNR=18						
BVAR				LR	LR	19 18 07.6	
	comp=Z,68nm,20.1s,baz=121,slow=37						
	comp=Z,5.3nm,0.9s						
TIXI	**Tiksi**	**64.83**	**1**	P	**P**	**18 49 13.2**	**-1.5**
TIXI				IAmb	IAmb	18 49 24.3	
	comp=Z,9.1nm,1.1s						
AB31	**Akbulak array**	**68.76**	**320**	P	**P**	**18 49 39.1**	**-1.1**
AB31				IAmb	IAmb	18 49 41.0	
	comp=Z,9.0nm,1.1s						
ABKAR	**Akbulak array**	**68.76**	**320**	P	**P**	**18 49 39.1**	**-1.1**
CASY	**Casey**	**73.66**	**186**	P	**P**	**18 50 09.3**	**-0.2**
CASY				IAmb	IAmb	18 50 22.4	
	comp=Z,8.3nm,0.8s						
RAYN	**Ar Rayn**	**77.79**	**293**	P	**P**	**18 50 32.8**	**-1.4**
RAYN				IAmb	IAmb	18 50 36.0	
	comp=Z,7.8nm,0.8s						
E19K	**Redstone River**	**79.04**	**23**	IAmb	IAmb	18 50 49.2	
	comp=Z,9.3nm,1.0s						
H19K	**Roundabout Mou**	**79.07**	**25**	IAmb	IAmb	18 50 49.0	
	comp=Z,9.4nm,0.9s						
KBZ	**Khabaz**	**79.70**	**313**	P	**P**	**18 50 43.0**	**-1.2**
	comp=Z,4.3nm,1.0s,baz=76,slow=11,SNR=3.6						
	comp=Z,4.3nm,1.0s						
M20K	**Styx River**	**80.17**	**28**	P	**P**	**18 50 46.2**	**-0.2**
M20K				IAmb	IAmb	18 50 55.8	
	comp=Z,9.7nm,1.0s						
GURO	**Guroymak-BITLI**	**80.38**	**308**	P	**P**	**18 50 47.2**	**-1.0**
GURO				IAmb	IAmb	18 53 14.9	
	comp=Z,12nm,0.7s						
I21K	**Tanana**	**80.90**	**25**	IAmb	IAmb	18 50 52.7	
	comp=Z,6.4nm,0.7s						
BPAW	**Bear Paw Mtn.**	**81.27**	**26**	IAmb	IAmb	18 50 54.2	
	comp=Z,14nm,0.8s						
MLY	**Manley**	**81.42**	**25**	IAmb	IAmb	18 50 55.0	
	comp=Z,6.9nm,0.8s						
COLD	**Coldfoot**	**81.73**	**23**	IAmb	IAmb	18 50 57.0	
	comp=Z,9.0nm,0.9s						
G23K	**Bananza Creek**	**81.78**	**24**	IAmb	IAmb	18 50 57.4	
	comp=Z,6.1nm,0.8s						
H23K	**Yukon River**	**81.94**	**24**	IAmb	IAmb	18 51 05.6	
	comp=Z,5.8nm,0.8s						
NEA2	**Nenana

AKASG				LR	LR	19 33 42.3		
	comp=Z,52nm,20.2s,baz=44,slow=37							
	comp=Z,1.4nm,0.7s							
TBI	**Tubuai**	**88.51**	**114**	*e*LR	LR	19 19 19.9		
	comp=Z,826nm,38.5s							
HFS	**Hagfors**	**94.56**	**332**	LR	LR	19 36 23.2		
	comp=Z,69nm,21.4s,baz=64,slow=37							
SYO	**Syowa Base**	**94.68**	**201**	⇓*e*P	**P**	**18 51 58.1**	**+1.1**	
QSPA	**South Pole Qui**	**96.68**	**180**	LR	LR	19 38 32.2		
	comp=Z,20nm,18.8s,baz=10.0,slow=37							
LSZ	**Lusaka**	**98.39**	**256**	LR	LR	19 34 14.5		
	comp=Z,43nm,18.9s,baz=155,slow=34							
TORD	**Torodi Ar. Bea**	**120.39**	**289**	PKP	**PKPdf**	**18 57 27.3**	**-1.5**	
	comp=Z,0.9nm,0.9s,baz=88,slow=3.0,SNR=3.7							
TXAR	**Lajitas Array**	**120.96**	**50**	PKP	**PKPdf**	**18 57 29.4**	**-0.2**	
	comp=Z,0.2nm,0.3s,baz=287,slow=4.1,SNR=2.3							
LPAZ	**La Paz**	**163.99**	**127**		**PKPdf**	**18 58 40.5**	**-1.0**	
LPAZ	**La Paz**	**163.99**	**127**	PKP	**PKPdf**	**18 58 42.0**	**+0.6**	
	comp=Z,0.9nm,0.6s,baz=192,slow=1.9,SNR=4.3							

*JSO **01** 18:40:41.9±0.2,33°N×3°×3°6E±°, h2km±3km, M3.3/14, MLv3.3/14, MLv3.6/23*
*GII **01** 18:40:41.3±0.0, 32°.888N±0°.001×35°.576E±0°.001, h5km, Mws3.1, confirmed*
*AFAD **01** 18:40:42.9, 32°.81N×35°.31E, h7km±4km, ML3.5*
*HLW **01** 18:40:43.1, 32°.83N×35°.58E, h6km±1km, Ml3.3*
*GRAL **01** 18:40:43.0±0.3, 32°.90N×35°.64E, h2km±1km, MD3.5*

ISC 01 18:40:41.3±0.8, 32°.89N±0°.01×35°.58E±0°.02, h9km±4km, n93, σ1§06/108, 16C, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KNHM	**Kefar Nahum**	**0.01**	**165**	⇑P		**Pg**		**18 40 42.4**	**-0.4**
KNHM	**Kefar Nahum**	**0.01**	**165**	S		**Sg**		**18 40 43.3**	**-0.6**
SPIR	**Sapir Facility**	**0.04**	**230**	⇑P		**Pg**		**18 40 42.8**	**-0.1**
AMID	**Amiad**	**0.05**	**318**	⇑P		**Pg**		**18 40 43.2**	**+0.1**
AMID	**Amiad**	**0.05**	**318**	S		**Sg**		**18 40 44.7**	**+0.2**
HDNS	**Had-Ness**	**0.07**	**56**	⇑P		**Pg**		**18 40 43.5**	**+0.3**
HDNS	**Had-Ness**	**0.07**	**56**	S		**Sg**		**18 40 45.6**	**+0.9**
MGDL	**Migdal**	**0.08**	**229**	⇑P		**Pg**		**18 40 43.5**	**+0.1**
RMOT	**Ramot**	**0.08**	**118**	P		**Pg**		**18 40 43.5**	**0.0**
RMOT	**Ramot**	**0.08**	**118**	S		**Sg**		**18 40 45.1**	**0.0**
TVER	**Teveria**	**0.11**	**196**	⇑P		**Pg**		**18 40 43.9**	**0.0**
TVER	**Teveria**	**0.11**	**196**	S		**Sg**		**18 40 46.2**	**+0.5**
ENGV	**Ein-Gev**	**0.12**	**155**	⇑P		**Pg**		**18 40 44.2**	**+0.2**
GOLA	**Golan Heights**	**0.19**	**161**	⇑P		**Pg**		**18 40 45.5**	**+0.3**
GOLA	**Golan Heights**	**0.19**	**161**	S		**Sg**		**18 40 49.2**	**+1.3**
MMA0B	**Mount Meron ar**	**0.19**	**310**	P		**Pg**		**18 40 45.8**	**+0.5**
MMA0B	**Mount Meron ar**	**0.19**	**310**	S		**Sg**		**18 40 49.6**	**+1.6**
SHGL	**Shaar Hagolan**	**0.21**	**174**	P		**Pg**		**18 40 46.1**	**+0.6**
KSHT	**Keshet**	**0.22**	**65**	P		**Pg**		**18 40 45.9**	**+0.2**
KSHT	**Keshet**	**0.22**	**65**	S		**Sg**		**18 40 49.9**	**+1.2**
MNHA	**Menahamia**	**0.23**	**185**	⇑P		**Pg**		**18 40 46.0**	**+0.2**
MNHA	**Menahamia**	**0.23**	**185**	S		**Sg**		**18 40 50.4**	**+1.4**
GEM	**Giv'at Ha'Em**	**0.33**	**13**	P		**Pg**		**18 40 48.2**	**+0.4**
GEM	**Giv'at Ha'Em**	**0.33**	**13**	⇑P		**Pg**		**18 40 48.2**	**+0.4**
GEM	**Giv'at Ha'Em**	**0.33**	**13**	S		**Sb**		**18 40 53.9**	**-0.8**
BLGI	**Bet Lehem HaGe**	**0.36**	**244**	P		**Pg**		**18 40 48.5**	**+0.1**
BLGI	**Bet Lehem HaGe**	**0.36**	**244**	⇑P		**Pg**		**18 40 48.8**	**+0.4**
BLGI	**Bet Lehem HaGe**	**0.36**	**244**	S		**Sg**		**18 40 54.3**	**+1.1**
HNTI	**Hanita**	**0.39**	**300**	P		**Pg**		**18 40 49.5**	**+0.6**
HNTI				S		**Sg**		**18 40 53.8**	**-0.2**
HNTI	**Hanita**	**0.39**	**300**	⇑P		**Pg**		**18 40 49.4**	**+0.5**
HNTI	**Hanita**	**0.39**	**300**	S		**Sb**		**18 40 56.2**	**-0.3**
NATI	**Neve Ativ**	**0.39**	**20**	P		**Pg**		**18 40 49.3**	**+0.3**
NATI	**Neve Ativ**	**0.39**	**20**	⇑P		**Pg**		**18 40 49.2**	**+0.3**
NATI	**Neve Ativ**	**0.39**	**20**	S		**Sb**		**18 40 56.0**	**-0.5**
MMLI	**Mount Malkishu**	**0.47**	**196**	⇑P		**Pg**		**18 40 50.6**	**+0.1**
MMLI	**Mount Malkishu**	**0.47**	**196**	S		**Sb**		**18 40 58.1**	**-0.8**
SHBL	**Chebaa**	**0.48**	**17**	*e*P		**Pb**		**18 40 51.2**	**-0.8**
SHBL				*e*S		**Sg**		**18 40 57.0**	**+0.1**
QRNJ	**Al-Qirein**	**0.56**	**180**	P		**Pg**		**18 40 52.1**	**+0.1**
OFRI	**`Ofer**	**0.57**	**242**	P		**Pg**		**18 40 52.5**	**+0.3**
OFRI	**`Ofer**	**0.57**	**242**	⇑P		**Pg**		**18 40 52.4**	**+0.1**
OFRI	**`Ofer**	**0.57**	**242**	S		**Sb**		**18 41 01.3**	**-0.2**
HMDT	**Nahal Hemdat**	**0.64**	**184**	⇑P		**Pg**		**18 40 53.5**	**-0.1**
HMDT	**Nahal Hemdat**	**0.64**	**184**	S		**Sb**		**18 41 03.3**	**-0.3**
RCY	**Rachaya**	**0.64**	**20**	*e*P		**Pg**		**18 40 53.9**	**+0.2**
RCY				*e*S		**Sg**		**18 41 02.2**	**+0.1**
QRWL	**Qaraoun**	**0.66**	**8**	*e*P		**Pb**		**18 40 54.4**	**-0.6**
SLTI	**Sal'it**	**0.79**	**215**	P		**Pg**		**18 40 56.5**	**0.0**
SLTI	**Sal'it**	**0.79**	**215**	P		**Pg**		**18 40 56.1**	**-0.4**
SLTI	**Sal'it**	**0.79**	**215**	S		**Sb**		**18 41 08.2**	**+0.2**
SALP	**Salfit**	**0.88**	**202**	P		**Pg**		**18 40 58.1**	**-0.1**
SALP				S		**Sb**		**18 41 10.8**	**+0.1**
HSUJ	**Al Zarqa**	**0.94**	**146**	P		**Pg**		**18 40 59.3**	**-0.1**
ZAHL	**Zahle**	**1.00**	**15**	*e*P		**Pb**		**18 41 00.5**	**-0.3**
BHL	**Bhannes**	**1.01**	**4**	*e*P		**Pb**		**18 41 00.9**	**-0.1**
ASF	**Jabal al Asfar**	**1.33**	**122**	P		**Pn**		**18 41 28.7**	**-0.3**
DSI	**Dead Sea**	**1.33**	**187**	P		**Pn**		**18 41 05.6**	**-0.4**
DSI	**Dead Sea**	**1.33**	**187**	P		**Pn**		**18 41 05.1**	**-0.9**
HWQ	**Hawqa**	**1.42**	**12**	*e*P		**Pb**		**18 41 07.7**	**-0.3**
HWQ				*e*S		**Sb**		**18 41 25.8**	**-0.4**
AMAZ	**Amatzia**	**1.47**	**203**	P		**Pn**		**18 41 08.3**	**+0.4**
AMAZ	**Amatzia**	**1.47**	**203**	S		**Sg**		**18 41 28.8**	**+0.3**
FKH	**Fakeheh**	**1.52**	**27**	*e*P		**Pb**		**18 41 09.2**	**-0.5**
YTIR	**Yattir**	**1.57**	**195**	P		**Pn**		**18 41 09.8**	**+0.4**
YTIR	**Yattir**	**1.57**	**195**	P		**Pn**		**18 41 09.6**	**+0.1**
YTIR	**Yattir**	**1.57**	**195**	S		**Sb**		**18 41 31.1**	**+0.4**
GHAJ	**Ghor Haditha**	**1.58**	**180**	P		**Pb**		**18 41 10.2**	**-0.5**
GHAJ	**Ghor Haditha**	**1.58**	**180**	P		**Pn**		**18 41 09.8**	**+0.4**
GHAJ	**Ghor Haditha**	**1.58**	**180**	S		**Sb**		**18 41 31.2**	**+0.4**
MSBI	**Mazada**	**1.58**	**187**	P		**Pn**		**18 41 09.5**	**+0.1**
MSBI	**Mazada**	**1.58**	**187**	S		**Sb**		**18 41 31.0**	**+0.2**
SWQJ	**Swaqa**	**1.69**	**166**	P		**Pn**		**18 41 09.5**	**-1.6**
BEIL	**Beino**	**1.72**	**17**	*e*P		**Pb**		**18 41 12.3**	**-0.8**
KZIT	**Kziot**	**2.22**	**207**	P		**Pn**		**18 41 19.1**	**+0.8**
ZFRI	**Zfri**	**2.35**	**188**	P		**Pn**		**18 41 21.3**	**+1.2**
ZFRI	**Zfri**	**2.35**	**188**	P		**Pn**		**18 41 21.1**	**+1.0**
ZFRI	**Zfri**	**2.35**	**188**	S		**Sn**		**18 41 50.4**	**+1.2**
PRNI	**Paran**	**2.58**	**191**	P		**Pn**		**18 41 24.5**	**+1.3**
KRMI	**Paran Flat**	**2.86**	**195**	P		**Pn**		**18 41 28.3**	**+1.2**
HRFI	**Mount Harif**	**2.88**	**189**	P		**Pn**		**18 41 28.7**	**+1.3**
HRFI	**Mount Harif**	**2.88**	**189**	P		**Pn**		**18 41 27.6**	**+0.2**
MBRI	**Mt Berech**	**3.14**	**191**	P		**Pn**		**18 41 32.1**	**+1.1**
GULN	**MERSIN_Gulnar**	**3.69**	**334**	P		**Pn**		**18 41 38.0**	**-0.4**
GULN				S		**Sn**		**18 42 20.7**	**-1.4**
HBST	**Basata**	**3.73**	**191**	P		**Pn**		**18 41 40.7**	**+1.6**
KIZK	**Mersin**	**3.77**	**342**	P		**Pn**		**18 41 40.2**	**+0.6**
KIZK				S		**Sn**		**18 42 23.3**	**-0.7**
HASA	**Hatay-Hassa-Ha**	**3.92**	**11**	P		**Sn**		**18 42 28.2**	**+0.3**
ERMK	**Ermenek**	**4.34**	**330**	P		**Pn**		**18 41 50.2**	**+2.6**
ERMK				S		**Sn**		**18 42 38.7**	**+0.4**
AKO	**Adana**	**4.56**	**359**	P		**Pn**		**18 41 52.9**	**+2.4**
AKO				S		**Sn**		**18 42 43.3**	**-0.5**
HKAT	**Jabal Katrina**	**4.56**	**198**	P		**Pn**		**18 41 52.2**	**+1.5**
KERG	**Konya-Eregli**	**4.67**	**346**	P		**Pn**		**18 41 51.8**	**-0.3**
KERG				S		**Sn**		**18 42 47.2**	**+0.9**
TR2	**Tor 2**	**4.77**	**200**	P		**Pn**		**18 41 53.9**	**+0.6**
KKBE	**Karaman, Kazim**	**4.83**	**334**	P		**Pn**		**18 41 55.8**	**+1.6**
KKBE				S		**Sn**		**18 42 52.0**	**+1.7**
RYAN	**Fayoum**	**5.93**	**232**	P		**Pn**		**18 42 10.5**	**+1.3**
RYAN				S		**Sn**		**18 43 14.6**	**-2.6**
IZZE	**Mula-Seydike**	**6.32**	**306**	P		**Pn**		**18 42 15.1**	**+0.5**
IZZE				*i* IAML				18 44 12.0	
	comp=N,21nm,1.9s								
IZZE				*i* IAML				18 44 53.0	
	comp=E,20nm,1.9s								
SABU	**Mula-Dalaman**	**6.70**	**308**	P		**Pn**		**18 42 20.2**	**+0.4**
SABU				S		**Sn**		**18 43 33.5**	**-2.8**
SABU				*i* IAML				18 44 38.0	
	comp=N,16nm,2.0s								
SABU				*i* IAML				18 44 54.0	
	comp=E,18nm,2.3s								
DNZT	**Denizli-Tavas-**	**6.93**	**311**	P		**Pn**		**18 42 24.7**	**+1.7**
DNZT				S		**Sn**		**18 43 38.2**	**-3.8**
DNZT				*i* IAML				18 44 10.0	
	comp=N,11nm,2.9s								
TAVA	**DENIZLI_Tavas**	**7.11**	**312**	P		**Pn**		**18 42 26.4**	**+0.8**
TAVA				S		**Sn**		**18 43 42.0**	**-4.6**

TRN 01 18:45:20.4, 17°.83N×62°.28W, h15km, MD3.5, North-west of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.50**	**109**	*e*P		Pn		18 45 32.2	-0.8
ANWB				*e*S		Sn		18 45 40.7	-0.6
SKI	**Saint Kitts**	**0.66**	**221**	*e*P		Pn		18 45 36.1	+0.8
SKI				*e*S		Sn		18 45 47.4	+2.0
SKOC	**St. Kitts, UWI**	**0.69**	**219**	*e*P		Pn		18 45 35.6	0.0
SKOC				*e*S		Sn		18 45 46.9	+0.9
MBFL	**Flemmings, Mon**	**1.08**	**177**	*e*P		Pg		18 45 41.7	+0.3
MBFL				*e*S		Sn		18 45 58.8	+3.1
MBWH	**Windy Hill**	**1.09**	**176**	*e*P		Pg		18 45 41.5	0.0
MBWH				*e*S		Sn		18 45 58.9	+3.0
MLYT	**Lee's Yard**	**1.11**	**176**	*e*P		Pg		18 45 43.8	+1.9
MLYT				*e*S		Sn		18 45 58.9	+2.5
DHSZ	**Broadband at M**	**1.63**	**162**	*e*P		Pb		18 45 49.5	-0.6
DHSZ				*e*S		Sb		18 46 11.0	+0.5
ATGZ	**Broadband at L**	**1.81**	**163**	*e*P		Pb		18 45 53.1	-0.1
ATGZ				*e*S		Sg		18 46 17.3	-1.4
MMLZ	**Guadeloupe Bro**	**1.87**	**162**	*e*P		Pb		18 45 54.2	-0.1
MMLZ				*e*S		Sb		18 46 18.2	+0.7
TBG	**Guadaloupe-3**	**2.06**	**163**	*e*P		Pn		18 45 55.0	+0.5
DSLB	**Salisbury**	**2.52**	**161**	*e*P		Pn		18 46 02.6	+1.8
DSLB				*e*S		Sb		18 46 34.2	-2.0

*IDC **01** 18:50:08.6±2.7, 31°.39S×177°.12W, h0km, mb3.8/3, mbtmp3.9/5, ML3.9/2, Error ellipse: s-maj=59.1km s-min=27.0km az=112.0*

ISC 01 18:50:10.9±2.5, 31°.37S±0°.09×176°.9W±0°.3, h35km, n6, σ1§59/8, mb4.0/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.29**	**337**	Pn		**Pn**		**18 50 45.7**	**-0.4**
	99nm,0.3s,baz=158,slow=23,SNR=7.4								
RAO				Sn		**Sn**		**18 51 11.5**	**-1.5**
	115nm,0.3s,baz=90,slow=21,SNR=2.4								
	293nm,0.2s								
URZ	**Urewera**	**8.46**	**214**	Pn		**Pn**		**18 52 08.9**	**-1.9**
	0.5nm,0.3s,baz=41,slow=20,SNR=1.6								
URZ				Sn		**Sn**		**18 53 44.5**	**-0.4**
	1.3nm,0.3s,baz=159,slow=23,SNR=8.0								
	8.8nm,1.0s								
STKA	**Stephens Creek**	**35.20**	**258**	P		**P**		**18 57 03.5**	**+1.8**
	1.7nm,0.7s,baz=78,slow=9.3,SNR=2.4								
	1.7nm,0.7s								
ASAR	**Alice Springs**	**44.01**	**267**	P		**P**		**18 58 16.5**	**+1.3**
	0.5nm,0.6s,baz=102,slow=7.0,SNR=14								
	0.5nm,0.6s								
WRA	**Warramunga Arr**	**45.09**	**273**	P		**P**		**18 58 24.9**	**+1.1**
	0.3nm,0.5s,baz=113,slow=7.6,SNR=6.9								
	0.9nm,0.5s								
FINES	**FINESS Array B**	**146.38**	**340**	PKPbc		**PKiKP**		**19 09 50.2**	**-0.1**
	0.8nm,0.5s,baz=24,slow=2.8,SNR=7.6								

*IDC **01** 19:15:20.5±2.5, 19°.62S×169°.22E, h0km, mb4.5/4, mbtmp4.4/6, ML3.9/2, MS3.1/1, Error ellipse: s-maj=49.5km s-min=37.1km az=34.0*
*NEIC **01** 19:15:28.0±1.5, 20°.12S±0°.05×169°.3E±0°.1, h47km±10km, mb4.6/14, Error ellipse: s-maj=17.2km s-min=7.0km az=88.0*

ISC 01 19:15:26.4±0.9, 20°.08S±0°.07×169°.2E±0°.1, h35km, n27, σ1§41/31, mb4.6/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.80**	**219**			**Pn**		**19 15 56.9**	**+1.9**
MARNC				Sn		**Sn**		**19 16 16.3**	**-0.3**
PINNC	**Pines Island,**	**3.03**	**213**			**Pn**		**19 16 13.8**	**+1.9**
PINNC				Sn		**Sn**		**19 16 46.8**	**-0.1**
DZM	**Mont Dzumac**	**3.28**	**232**	Pn		**Pn**		**19 16 17.3**	**+1.8**
	9.2nm,0.3s,baz=75,slow=19,SNR=96								
DZM				Sn		**Sn**		**19 16 54.4**	**+1.1**
	62nm,0.3s,baz=119,slow=22,SNR=5.8								
	31nm,0.3s								
ONTNC	**Ouen Toro**	**3.42**	**229**			**Pn**		**19 16 19.6**	**+2.4**
ONTNC				Sn		**Sn**		**19 16 56.9**	**+0.4**
SANVU	**Saraoutou**	**5.00**	**337**	Pn		**Pn**		**19 16 41.4**	**+2.4**
ARMA	**Armidale**	**18.94**	**234**	P		**P**		**19 19 41.1**	**-3.5**
ARMA				IAmb		IAmb		19 19 53.7	
	comp=Z,18nm,1.1s								
URZ	**Urewera**	**19.36**	**161**	P		**Pn**		**19 19 52.6**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=315,slow=11,SNR=1.7								
	comp=Z,9.1nm,0.9s								
RTZ	**Ruatahuna**	**19.65**	**162**	P		**P**		**19 19 51.3**	**-1.0**
RTZ				IAmb		IAmb		19 20 27.7	
	comp=Z,31nm,1.3s								
STKA	**Stephens Creek**	**27.41**	**239**	P		**P**		**19 21 07.7**	**-1.2**
STKA				IAmb		IAmb		19 21 34.4	
	comp=Z,34nm,1.2s								
STKA	**Stephens Creek**	**27.41**	**239**	P		**P**		**19 21 08.9**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=65,slow=11,SNR=4.8								
	comp=Z,2.3nm,0.7s								
WB0	**Warramunga Arr**	**32.73**	**264**	P		**P**		**19 21 54.9**	**-1.2**
WB0				IAmb		IAmb		19 21 56.6	
	comp=Z,11nm,1.3s								
WRA	**Warramunga Arr**	**32.76**	**264**	P		**P**		**19 21 54.7**	**-1.6**
WRA	**Warramunga Arr**	**32.76**	**264**	P		**P**		**19 21 55.2**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=91,slow=8.5,SNR=23								
	comp=Z,1.6nm,0.5s								
AS31	**Alice Springs**	**32.94**	**257**	P		**P**		**19 21 56.5**	**-1.4**
AS31				IAmb		IAmb		19 21 58.5	
	comp=Z,4.9nm,0.6s								
ASAR	**Alice Springs**	**32.94**	**257**	P		**P**		**19 21 57.0**	**-0.9**
ASAR	**Alice Springs**	**32.94**	**257**	P		**P**		**19 21 57.8**	**-0.1**
	comp=Z,10nm,0.7s,baz=84,slow=9.0,SNR=195								
ASAR				LR		LR		19 33 55.3	
	comp=Z,37nm,21.4s,baz=112,slow=34								
	comp=Z,10nm,0.7s								
MTN	**Manton Dam**	**37.18**	**275**	P		**P**		**19 22 34.2**	**-0.3**
FORT	**Forrest**	**38.50**	**246**	P		**P**		**19 22 45.1**	**-0.3**
FORT				IAmb		IAmb		19 23 22.8	
	comp=Z,14nm,1.1s								
KNRA	**Kununurra**	**38.70**	**270**	P		**P**		**19 22 47.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.17**	**265**	P		**P**		**19 23 08.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**41.17**	**265**	P		**P**		**19 23 08.1**	**+0.3**
	comp=Z,7.4nm,0.8s,baz=118,slow=6.5,SNR=9.8								
	comp=Z,7.4nm,0.8s								
MBWA	**Marble Bar**	**46.20**	**260**	P		**P**		**19 23 48.0**	**-0.3**
TOLI2	**Tolitoli**	**51.93**	**288**	P		**P**		**19 24 32.0**	**-0.2**
TOLI2				IAmb		IAmb		19 24 56.4	
	comp=Z,12nm,1.1s								
VNDA	**Vanda**	**57.60**	**182**	P		**P**		**19 25 12.0**	**-0.4**
CASY	**Casey**	**59.36**	**204**	P		**P**		**19 25 24.9**	**+0.1**
CASY				IAmb		IAmb		19 25 43.8	
	comp=Z,14nm,1.4s								
GERES	**GERESS Array B**	**145.23**	**331**			**PKPbc**		**19 34 59.0**	**-1.1**
GERES	**GERESS Array B**	**145.23**	**331**	PKP		**PKPbc**		**19 34 59.0**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=29,slow=2.4,SNR=8.2								

*MOS **01** 19:17:39.6±1.3, 46°.17N×153°.25E, h32km, mb4.7/25, Error ellipse: s-maj=7.7km s-min=6.2km az=77.2*
*IDC **01** 19:17:39.5±0.6, 46°.18N×152°.95E, h0km, mb4.0/27, mbtmp4.0/33, ML3.8/4, MS3.7/35, Error ellipse: s-maj=15.8km s-min=13.2km az=147.0*
*NIED **01** 19:17:40.7, 46°.42N×153°.16E, h30km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr 1.62; Mθθ 0.25; Mϕϕ -1.87; Mrθ -4.07; Mrϕ -1.27; Mθϕ -0.26; Fault plane solution: M0 4.49000×10^15 NP1: ϕs 3.00000°, δ 25.00000°, λ 22.00000°. NP2: ϕs 253.00000°, δ 81.00000°, λ 113.00000°.*
*SKHL **01** 19:17:40.5±0.0, 45°.80N×153°.50E, h36km±6km, mb5.2/5, mbv5.7/2, msh5.4/3*
*NEIC **01** 19:17:49.5±2.1, 47°.1N±0°.2×151°.7E±0°.2, h15km±6km, mb4.5/32, Error ellipse: s-maj=25.1km s-min=10.9km az=150.0*

ISC 01 19:17:44.0±0.6, 46°.10N±0°.06×153°.02E±0°.06, h31km, n193, σ1§79/168, mb4.4/73, MS4.0/33, 7C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.71**	**258**	*e*PN		**Pn**		**19 18 39.4**	**+0.3**
KUR				*e*S		**Sn**		**19 19 24.5**	**+2.7**
KUR				pmax	pmax				
	comp=N,75nm,0.3s								
KUR				pmax	pmax				
	comp=Z,337nm,0.3s								
KUR				pmax	pmax				
	comp=E,24nm,0.2s								
KUR				smax	smax				
	comp=N,264nm,0.6s								
KUR				smax	smax				
	comp=E,168nm,0.5s								
KUR	**Kuril'sk**	**3.71**	**258**	*e*P		**Pn**		**19 18 39.7**	**+0.6**
KUR				AMB	AMB	19 18 45.5			
	comp=E,320nm,0.3s								
KUR				*e*S		**Sn**		**19 19 24.1**	**+2.3**
KUR				A	A	19 19 30.9			
	comp=E,190nm,0.5s								
KUR				A	A	19 19 30.9			
	comp=E,390nm,0.5s								
SKR	**Severo-Kuril's**	**5.03**	**23**	*e*PN		**Pn**		**19 18 53.5**	**-3.7**
SKR				pmax	pmax				
	comp=Z,29nm,0.3s								
SKR				MLR	MLR				
	comp=Z,1μm,13.0s								
SKR	**Severo-Kuril's**	**5.03**	**23**	*e*P		**Pn**		**19 18 56.8**	**-0.4**
SKR				AMB	AMB	19 18 58.7			
	comp=E,670nm,2.0s								
SKR				AMB	AMB	19 18 59.8			
	comp=Z,100nm,0.7s								
SKR				*e*S		**Sn**		**19 19 50.6**	**-3.6**
SKR				A	A	19 19 51.8			
	comp=Z,70nm,0.5s								
SKR				A	A	19 19 51.8			
	comp=Z,110nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**5.47**	**250**	*e*PN		**Pn**		**19 19 04.5**	**+1.2**
YUK				pmax	pmax				
	comp=Z,132nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**5.47**	**250**	*e*P		**Pn**		**19 19 03.6**	**+0.3**
YUK				AMB	AMB	19 19 05.7			
	comp=E,160nm,0.2s								
YUK				*e*S		**Sn**		**19 20 06.0**	**+0.8**
YUK				A	A	19 20 08.5			
	comp=Z,3μm,2.0s								
YUK				A	A	19 20 08.5			
	comp=Z,2μm,2.0s								
YUK				A	A	19 20 09.2			
	comp=Z,300nm,0.5s								
YUK				A	A	19 20 09.2			
	comp=E,160nm,0.5s								
GLVR	**Golovnino**	**5.83**	**249**	*e*PN		**Pn**		**19 19 08.5**	**+0.4**
GLVR				*e*S		**Sn**		**19 20 16.5**	**+2.7**
GLVR				pmax	pmax				
	comp=Z,95nm,0.1s								
GLVR				smax	smax				
	comp=N,325nm,0.4s								
GLVR				smax	smax				
	comp=E,171nm,0.3s								
GLVR	**Golovnino**	**5.83**	**249**	*e*P		**Pn**		**19 19 08.5**	**+0.4**
GLVR				AMB	AMB	19 19 09.6			
	comp=E,100nm,0.1s								
GLVR				*e*S		**Sn**		**19 20 16.5**	**+2.7**
GLVR				A	A	19 20 18.0			
	comp=E,330nm,0.4s								
GLVR				A	A	19 20 18.0			
	comp=E,170nm,0.4s								
RUSJ	**Misakicho**	**5.85**	**253**	*e*PN		**Pn**		**19 19 10.9**	**+2.4**
RUSJ				*e*S		**Sn**		**19 20 17.4**	**+2.9**
NMR	**Nemuro--Hokkai**	**5.87**	**245**	⇑*i*PN		**Pn**		**19 19 07.4**	**-1.3**
NMR	**Nemuro--Hokkai**	**5.87**	**245**	*i* P		**Pn**		**19 19 07.7**	**-1.0**
NMR				*i* S		**Sn**		**19 20 12.5**	**-2.3**
PAU	**Pauzhetka**	**5.93**	**24**	*e*P		**Pn**		**19 19 10.1**	**+0.6**
PAU				AMB	AMB	19 19 14.4			
	comp=E,70nm,0.8s								
PAU				*e*S		**Sn**		**19 20 13.9**	**-2.4**
PAU				A	A	19 20 15.0			
	comp=E,100nm,0.3s								
PAU				A	A	19 20 15.0			
	comp=E,150nm,0.3s								
AKK	**Akkeshi**	**6.60**	**245**	*e*P		**Pn**		**19 19 17.9**	**-0.9**
YSS	**Yuzhno-Sakhali**	**7.13**	**281**	Pn		Pn		19 19 17.9	-8.2
YSS	**Yuzhno-Sakhali**	**7.13**	**

YAK Yakutsk 20.84 328 *e*P P 19 22 22.1 -0.6
YAK *e* 19 22 39.3
YAK *e*S S 19 26 13.2 0.0
YAK *e* 19 26 32.6
YAK *e*SS SnSn 19 26 34.9 +0.7
YAK *e* 19 33 49.6
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.4s
YAK pmax pmax
comp=Z,109nm,2.8s
YAK smax smax
comp=N,169nm,2.7s
YAK smax smax
comp=E,105nm,3.0s
JNU Nakatsue 21.34 240 LR LR 19 30 57.9
comp=E,52nm,19.6s,baz=46,slow=37
BILL Bilibino 23.04 13 *i*P P 19 22 46.3 +0.1
BILL pmax pmax
comp=Z,12nm,2.3s
BILL Bilibino 23.04 13 *e*P P 19 22 46.3 +0.1
TIXI Tiksi 28.07 344 LR LR 19 35 46.0
comp=Z,164nm,18.1s,baz=195,slow=39
H11N2 WAKE ISLAND Hy 28.67 152 T T 19 55 27.7
baz=342,slow=75
H11N1 WAKE ISLAND Hy 28.69 152 T T 19 55 30.9
baz=342,slow=75
H11N3 WAKE ISLAND Hy 28.69 152 T T 19 55 30.9
baz=342,slow=75
NJ2 Nanjing 29.75 254 *e*P P 19 23 51.7 +4.2
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
H11S1 WAKE ISLAND Hy 29.75 153 T T 19 57 06.4
baz=336,slow=76
H11S3 WAKE ISLAND Hy 29.76 153 T T 19 56 43.2
baz=336,slow=76
H11S2 WAKE ISLAND Hy 29.77 153 T T 19 56 50.7
baz=336,slow=76
HHC Hu-ho-hao-te 30.28 275 *e*P P 19 23 51.0 -1.3
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,34nm,4.5s
HHC LR LR
comp=N,130nm,12.2s
HHC LR LR
comp=E,150nm,12.6s
HHC LR LR
comp=Z,210nm,12.2s
ULN Ulaanbaatar 31.06 290*ce*P P 19 23 59.6 +0.5
ULN pmax pmax
comp=Z,10.0nm,2.5s
ULN Ulaanbaatar 31.06 290 *e*P P 19 23 59.6 +0.5
SONM Songino Array 31.49 290 P P 19 24 02.3 -0.6
comp=Z,0.2nm,0.3s,baz=91,slow=6.7,SNR=3.7
SONM LR LR 19 37 43.8
comp=Z,136nm,18.6s,baz=71,slow=38
comp=Z,0.2nm,0.3s
D19K Kuna River 33.24 30 P P 19 24 19.2 +1.4
D19K IAmb IAmb 19 24 33.4
comp=Z,11nm,1.2s
XAN Xi'an 35.40 266 P P 19 24 43.5 +6.6
XAN pP pwP 19 24 53.6 +4.7
XAN pmax pmax
comp=Z,10.0nm,1.3s
COLA College 36.69 38 *i*P P 19 24 49.6 +2.1
COLA pmax pmax
comp=Z,29nm,2.7s
ILAR Eielson Array 37.10 38 P P 19 24 51.1 0.0
comp=Z,0.6nm,0.9s,baz=258,slow=8.4,SNR=5.7
comp=Z,0.6nm,0.9s
LZH Lanzhou 37.85 273 *e*P P 19 24 59.3 +1.4
LZH pP sP 19 25 09.7 +0.5
LZH sP pwP 19 25 14.4 +4.3
LZH pmax pmax
comp=Z,16nm,1.3s
LZH LR LR
comp=N,150nm,12.7s
LZH LR LR
comp=E,140nm,13.7s
LZH LR LR
comp=Z,150nm,13.7s
GTA Gaotai 39.01 280 *e*P P 19 25 09.5 +1.9
GTA sP pwP 19 25 36.2 +16
GTA pmax pmax
comp=Z,6.0nm,0.9s
ZALV Zalesovo Beam 42.94 306 P P 19 25 37.8 -1.8
comp=Z,0.8nm,0.6s,baz=93,slow=5.2,SNR=3.8
ZALV LR LR 19 44 37.5
comp=Z,263nm,18.3s,baz=70,slow=38
comp=Z,0.8nm,0.6s
ZALV Zalesovo Beam 42.94 306 *e*P P 19 25 39.7 +0.1
ZALV pmax pmax
comp=Z,1.0nm,0.6s
PZH PanZhiHua 44.86 262 P P 19 25 57.6 +2.1
WMQ Urumqi 45.10 292 *e*P P 19 25 54.7 -2.5
WMQ pP pwP 19 26 09.9 -1.1
WMQ sP sP 19 26 15.2 +6.8
WMQ PcP PP 19 27 44.5 +1.8
WMQ S S 19 32 24.4 -10
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ LR LR
comp=Z,62nm,15.5s
MK31 Makanchi Array 47.19 298*ce*P P 19 26 13.1 -0.4
MKAR Makanchi Array 47.19 298 P P 19 26 11.3 -2.1
MKAR Makanchi Array 47.19 298 P P 19 26 12.1 -1.3
comp=Z,2.1nm,0.8s,baz=64,slow=8.5,SNR=15
MKAR LR LR 19 47 10.1
comp=Z,238nm,18.1s,baz=80,slow=38
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 47.19 298 *e*P P 19 26 13.0 -0.5
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 47.19 298 *e*P P 19 26 13.0 -0.5
MAKZ Makanchi 47.37 298 P P 19 26 13.4 -1.5
MAKZ Makanchi 47.37 298 P P 19 26 13.4 -1.5
MAKZ pmax pmax
comp=Z,3.0nm,1.1s
KURK Kurchatov 47.67 304 P P 19 26 14.0 -3.2
KURK IAmb IAmb 19 26 16.9
comp=Z,3.7nm,0.9s
KURK Kurchatov 47.67 304*ce*P P 19 26 16.2 -0.9
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 47.67 304 *e*P P 19 26 16.2 -0.9
KURBB Kurchatov Arra 47.76 304 P P 19 26 16.1 -1.7
comp=Z,2.9nm,0.9s,baz=66,slow=8.2,SNR=9.1
KURBB LR LR 19 47 14.0
comp=Z,70nm,18.8s,baz=180,slow=37
comp=Z,2.9nm,0.9s
BBB Bella Bella 49.56 53 LR LR 19 45 07.2
comp=Z,18nm,21.0s,baz=192,slow=33
LSA Lhasa 50.25 274 P P 19 26 36.5 -1.2
LSA IAmb IAmb 19 26 45.0
comp=Z,3.6nm,0.9s
LSA Lhasa 50.25 274 P P 19 26 35.3 -2.4
LSA Lhasa 50.25 274 P P 19 26 36.6 -1.2
LSA pmax pmax
comp=Z,4.0nm,0.9s
BVAR Borovoye Array 51.22 310 P P 19 26 42.8 -1.4
comp=Z,1.0nm,0.4s,baz=42,slow=10.0,SNR=9.7
BVAR LR LR 19 50 15.3
comp=Z,144nm,18.6s,baz=62,slow=38
comp=Z,1.0nm,0.4s
BORK Borovoye 51.25 310*ce*P P 19 26 44.0 -0.4
BORK pmax pmax
comp=Z,4.0nm,1.3s
RES Resolute Bay 51.47 18 LR LR 19 49 31.1
comp=Z,25nm,21.3s,baz=279,slow=37
YKA Yellowknife Ar 51.49 36 P P 19 26 45.6 -0.4
comp=Z,0.5nm,0.8s,baz=299,slow=7.4,SNR=2.0
comp=Z,0.5nm,0.8s
CMAR Chiang Mai Arr 52.16 257 P P 19 26 52.6 +1.0
comp=Z,0.6nm,0.8s,baz=37,slow=7.5,SNR=6.2
CMAR LR LR 19 52 45.5
comp=Z,36nm,18.2s,baz=60,slow=40
comp=Z,0.6nm,0.8s
CMAR Chiang Mai Arr 52.16 257 *e*P P 19 26 53.6 +2.0
CMAR pmax pmax
comp=Z,1.0nm,0.7s
AAK Ala-Archa 54.06 297 P 19 27 02.9 -2.7
AAK Ala-Archa 54.06 297 LR LR 19 51 22.1
comp=Z,136nm,18.3s,baz=45,slow=38
AAK Ala-Archa 54.06 297*ce*P P 19 27 06.2 +0.6
AAK pmax pmax
comp=Z,3.0nm,0.7s
AAK Ala-Archa 54.06 297 *e*P P 19 27 06.2 +0.6
EVN Everest 54.32 275 P 19 27 08.0 -0.2
EVN IAmb IAmb 19 27 23.7
comp=Z,5.2nm,1.0s
ARTI Arti 55.55 318 LR LR 19 53 20.6
comp=Z,122nm,18.7s,baz=38,slow=39
ARTI Arti 55.55 318*d i*P P 19 27 16.6 +0.7
ARTI 19 29 14.7
ARTI S S 19 34 59.5 +0.4
ARTI SS SS 19 38 38.5 -5.0
ARTI pmax pmax
comp=Z,12nm,2.6s
HNR Honiara 55.62 172 LR LR 19 49 59.0
comp=Z,30nm,19.2s,baz=303,slow=35
ARSB Arslanbob 55.73 296 P P 19 27 16.1 -1.5
ARSB IAmb IAmb 19 27 25.6
comp=Z,4.6nm,1.1s
ARSB Arslanbob 55.73 296 P P 19 27 16.1 -1.5
ARSB pmax pmax
comp=Z,5.0nm,1.1s
KK31 Karatay Array 56.26 299 P P 19 27 18.6 -2.5
KK31 Karatay Array 56.26 299 P P 19 27 18.7 -2.5
KK31 pmax pmax
comp=Z,4.0nm,1.4s
KKAR Karatay Array 56.26 299 P 19 27 18.3 -2.9
KKAR Karatay Array 56.26 299 P P 19 27 18.3 -2.9
ARCES ARCESS Array B 58.45 341 P P 19 27 35.3 -0.9
comp=Z,1.4nm,0.6s,baz=23,slow=5.9,SNR=6.9
comp=Z,1.4nm,0.6s
ARCES ARCESS Array B 58.45 341 *e*P P 19 27 37.0 +0.8
ARCES pmax pmax
comp=Z,2.0nm,0.8s
GAR Garm 58.73 295 P P 19 27 38.9 0.0
AB31 Akbulak array 58.79 310 P 19 27 37.4 -1.5
ABKAR Akbulak array 58.79 310 P P 19 27 37.1 -1.8
AKTO Aktyubinsk 59.11 312 LR LR 19 55 35.0
comp=Z,344nm,18.4s,baz=132,slow=39
CHGR Chuyangaron 59.66 296 P P 19 27 44.6 -0.7
CHGR pmax pmax
comp=Z,24nm,1.1s
NIL Nilore 60.05 289 P 19 27 47.1 -0.8
NIL Nilore 60.05 289 P P 19 27 47.1 -0.8
NIL pmax pmax
comp=Z,10.0nm,0.9s
BEKR Beckworth 60.65 62 P P 19 28 02.6 +10
CMB Columbia Colle 61.75 63 P P 19 28 08.9 +9.4
CMB IAmb IAmb 19 28 12.9
comp=Z,3.5nm,1.1s
KBL Kabul 62.25 292 P P 19 28 01.6 -1.4
KBL Kabul 62.25 292 P P 19 28 01.6 -1.4
KBL pmax pmax
comp=Z,7.0nm,1.1s
LHV Little Huntoon 62.78 62 P P 19 28 16.2 +10
NVAR Mina Array Bea 62.80 62 P P 19 28 07.5 +0.9
comp=Z,1.4nm,0.7s,baz=282,slow=7.1,SNR=7.2
comp=Z,1.4nm,0.7s
MDPB Devils Postpil 62.81 63 P P 19 28 18.7 +12
MDPB IAmb IAmb 19 28 20.7
comp=Z,2.7nm,0.9s
BELG Belogornoye 62.98 318 P P 19 28 06.4 -0.8
comp=Z,3.3nm,0.3s,baz=24,slow=5.6,SNR=8.0
comp=Z,3.3nm,0.3s
DSP Deep Springs 63.66 63 P 19 28 23.8 +12
DSP IAmb IAmb 19 28 26.5
comp=Z,5.2nm,1.1s
R11B Troy Canyon, C 64.50 61 P 19 28 29.2 +11
R11B IAmb IAmb 19 28 31.7
comp=Z,4.8nm,1.4s
FINES FINESS Array B 64.60 335 P P 19 28 16.9 -0.9
comp=Z,0.7nm,0.3s,baz=38,slow=5.8,SNR=24
FINES LR LR 19 59 05.8
comp=Z,75nm,18.4s,baz=28,slow=38
comp=Z,0.7nm,0.3s
FINES FINESS Array B 64.60 335 *e*P P 19 28 17.5 -0.3
FINES pmax pmax
comp=Z,1.0nm,0.3s
MPMC Manual Prospec 64.79 64 P P 19 28 31.1 +11
MPMC IAmb IAmb 19 28 33.0
comp=Z,2.8nm,0.9s
CLC China Lake 64.88 64 P P 19 28 30.9 +11
CLC IAmb IAmb 19 28 33.9
comp=Z,5.0nm,1.0s
PDAR Pinedale Array 65.18 54 P P 19 28 22.4 +0.2
comp=Z,0.3nm,0.6s,baz=316,slow=4.6,SNR=4.6
comp=Z,0.3nm,0.6s
HEL Helsinki 65.94 334 P P 19 28 29.8 +3.3
HEL pmax pmax
comp=Z,3.0nm,0.9s
SHPR Sheep Range 65.95 62 P 19 28 38.5 +11
VRH Novokhopyorsk 66.47 320 *e*P P 19 28 26.4 -3.6
VRH pmax pmax
comp=Z,10.0nm,0.9s
HRA Herat 66.67 296 P 19 28 31.5 -0.5
HRA IAmb IAmb 19 28 33.9
comp=Z,2.6nm,0.7s
VSR Storozhevoye 67.58 322 *e*P P 19 28 33.8 -3.3
VSR pmax pmax
comp=Z,3.0nm,0.9s
WRA Warramunga Arr 67.88 199 P P 19 28 38.9 -0.3
comp=Z,1.5nm,0.9s,baz=17,slow=6.0,SNR=5.2
comp=Z,1.5nm,0.9s
PV11 David Mesa, Pa 68.53 57 P P 19 28 52.1 +8.5
PV12 Saucer Basin, 68.56 57 P P 19 28 53.0 +9.2
NB2 NORSAR Subarra 68.82 341 P P 19 28 44.9 +0.1
comp=Z,1.1nm,0.7s,baz=27,slow=6.5
NOA NORSAR Array B 68.82 341 P P 19 28 44.6 -0.2
comp=Z,1.8nm,0.7s,baz=28,slow=6.5,SNR=17
NOA LR LR 20 03 27.5
comp=Z,63nm,18.0s,baz=30,slow=40
comp=Z,1.8nm,0.7s
NOA NORSAR Array B 68.82 341 *e*P P 19 28 44.6 -0.2
NOA pmax pmax
comp=Z,3.0nm,1.0s
NORES NORESS Array B 69.02 341 P P 19 28 45.4 -0.6
HFS Hagfors 69.04 340 P P 19 28 45.7 -0.4
comp=Z,2.1nm,0.4s,baz=43,slow=4.2,SNR=24
HFS LR LR 20 01 41.8
comp=Z,56nm,19.1s,baz=60,slow=38
comp=Z,2.1nm,0.4s
KVAR Kislovodsk Arr 71.20 314 P P 19 29 01.3 +1.5
comp=Z,2.4nm,0.7s,baz=45,slow=1.4,SNR=1.6
comp=Z,2.4nm,0.7s
KIV Kislovodsk 71.21 314 *e*P P 19 28 58.7 -1.1
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV Kislovodsk 71.21 314 *e*P P 19 28 58.7 -1.1
KBZ Khabaz 71.27 314 P P 19 29 00.9 +1.0
comp=Z,3.6nm,0.8s,baz=69,slow=4.4,SNR=5.8
KBZ LR LR 20 03 14.8
comp=Z,38nm,20.4s,baz=22,slow=38
comp=Z,3.6nm,0.8s
KBZ Khabaz 71.27 314 *e*P P 19 29 01.7 +1.7
KBZ pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 71.27 314 *e*P P 19 29 01.7 +1.7
ASAR Alice Springs 71.57 198 P P 19 29 03.0 +1.0
comp=Z,0.8nm,0.8s,baz=10.0,slow=6.1,SNR=5.2
comp=Z,0.8nm,0.8s
ASAR Alice Springs 71.57 198 P P 19 29 03.0 +1.0
AKASG Malin Array Be 72.05 326 P P 19 29 04.2 -0.4
comp=Z,1.3nm,0.3s,baz=33,slow=6.0,SNR=4.1
AKASG LR LR 20 03 01.2
comp=Z,71nm,18.5s,baz=24,slow=38
comp=Z,1.3nm,0.3s
AKASG Malin Array Be 72.05 326*ce*P P 19 29 04.0 -0.6
AKASG pmax pmax
comp=Z,1.0nm,0.3s
GNI Garni 72.90 310 LR LR 20 04 51.2
comp=Z,87nm,18.1s,baz=63,slow=39
OJC Ojcow 75.86 331 P P 19 29 26.7 -0.2
OJC Ojcow 75.86 331 P P 19 29 26.7 -0.2
STHS Stebnicka Huta 76.05 330 *e*P P 19 29 30.5 +2.5
STHS Stebnicka Huta 76.05 330 *e*P P 19 29 30.5 +2.5
BURAR Bucovina Array 76.09 327 P 19 29 27.9 -0.6
BURAR IAmb IAmb 19 29 30.1
comp=Z,5.3nm,0.8s
BURAR Bucovina Array 76.09 327 P P 19 29 27.9 -0.6
BURAR pmax pmax
comp=Z,5.0nm,0.7s
QUOK Quay 76.88 51 P P 19 29 41.1 +8.1
EKA Eskdalemuir Ar 76.96 346 P P 19 29 34.7 +1.6
comp=Z,0.5nm,0.4s,baz=21,slow=5.3,SNR=6.3
comp=Z,0.5nm,0.4s
VRAC Vranov 77.70 332 LR LR 20 07 28.7
comp=Z,70nm,20.1s,baz=27,slow=38
TXAR Lajitas Array 77.87 60 P P 19 29 39.1 +0.3
comp=Z,0.7nm,0.6s,baz=305,slow=4.1,SNR=14
comp=Z,0.7nm,0.6s
TREC Trest 78.06 333 P P 19 29 39.5 +0.1
TREC pmax pmax
comp=Z,9.0nm,0.7s
BRTR Keskin Array B 78.82 317 P P 19 29 44.7 +0.9
comp=Z,2.2nm,0.9s,baz=82,slow=4.2,SNR=6.4
BRTR LR LR 20 10 15.6
comp=Z,58nm,18.6s,baz=43,slow=40
comp=Z,2.2nm,0.9s
GERES GERESS Array B 79.01 334 P P 19 29 45.1 +0.4
comp=Z,0.9nm,0.8s,baz=25,slow=7.3,SNR=4.7
GERES LR LR 20 08 13.7
comp=Z,42nm,18.3s,baz=74,slow=38
comp=Z,0.9nm,0.8s
CONA Conrad Observa 79.14 332 *e*P P 19 29 44.8 -0.6
comp=Z,1.3nm,0.7s
RONA Rosalia, Austr 79.20 332 *e*P P 19 29 45.4 -0.3
comp=Z,3.1nm,0.6s
MOA Molln 79.72 333 *ep*P P 19 29 49.3 +0.9
comp=Z,1.1nm,0.8s
BIOA Bad Ischl, Aus 80.06 333 *e*P P 19 29 50.1 -0.2
comp=Z,0.4nm,0.6s
SOKA Soboth 80.51 332 *e*P P 19 29 50.7 -2.2
comp=Z,0.9nm,0.7s
LESA Schwarzleotal 80.59 334 *ep*P P 19 29 54.0 +0.7
comp=Z,2.8nm,0.9s
KBA Koelnbreinsper 80.69 333 *ep*P P 19 29 55.6 +1.6
comp=Z,4.1nm,0.8s
KBA Koelnbreinsper 80.69 333 P P 19 29 54.9 +1.0
KBA pmax pmax
comp=Z,9.0nm,0.9s
WATA Walderalm 81.00 335 *ep*P P 19 29 56.7 +1.2
comp=Z,2.4nm,0.8s
WTTA Wattenberg 81.05 335 *ep*P P 19 29 57.3 +1.4
comp=Z,1.9nm,0.7s
WTTA Wattenberg 81.05 335 P P 19 29 57.0 +1.2
WTTA pmax pmax
comp=Z,6.0nm,0.9s
MOTA Moosalm 81.13 335 *ep*P P 19 29 57.3 +1.0
comp=Z,2.8nm,1.0s
SQTA Sankt Quirin 81.22 335 *ep*P P 19 29 58.2 +1.5
comp=Z,1.1nm,0.8s
FETA Feichten 81.54 335 *ep*P P 19 29 58.6 +0.2
comp=Z,1.7nm,0.9s
PPT Papeete 81.83 126 LR LR 20 01 56.9
comp=Z,58nm,19.4s,baz=12,slow=32
TUE Stuetta 82.44 336 P 19 30 03.6 +0.4
TUE IAmb IAmb 19 30 11.0
comp=Z,5.5nm,0.9s
ASF Jabal al Asfar 83.06 310 LR LR 20 13 19.6
comp=Z,65nm,18.0s,baz=13,slow=40
MMAI Mount Meron Ar 83.20 311 P P 19 30 08.8 +1.6
comp=Z,1.8nm,0.7s,baz=23,slow=7.8,SNR=1.8
MMAI LR LR 20 12 07.0
comp=Z,120nm,18.4s,baz=27,slow=39
comp=Z,1.8nm,0.7s
EIL Elat 86.06 310 LR LR 20 11 50.7
comp=Z,57nm,18.9s,baz=74,slow=38
VAE Valguarnera 88.86 328 LR LR 20 15 37.4
comp=Z,76nm,18.1s,baz=112,slow=39
ESDC Sonseca Array 92.15 342 LR LR 20 15 29.0
comp=Z,35nm,21.2s,baz=326,slow=38
H03N2 Juan Fernandez 138.81 91 T T 22 12 39.4
baz=306
H03N1 Juan Fernandez 138.82 91 T T 22 12 41.1
baz=306
H03N3 Juan Fernandez 138.82 91 T T 22 12 41.1
baz=306
PLCA Paso Flores 148.21 96 PKPbc **PKPbc 19 37 26.6 +0.2**
comp=Z,4.7nm,0.9s,baz=262,slow=7.1,SNR=6.7
SNAA Sanae 151.91 196 PKPbc **PKPbc 19 37 33.9 -0.5**
comp=Z,0.4nm,0.7s,baz=204,slow=2.5,SNR=1.6

IDC 01 19:23:00.4±5.7, 7°43S×133°57E, h0km, mb4.1/1, mbtmp3.9/4, ML3.5/3, Error ellipse: s-maj=75.0km s-min=53.5km az=142.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.46**	**177**	Pn	Pn	19 25 59.8	+0.6
	0.4nm,0.3s,baz=356,slow=13,SNR=7.5						
WRA				Sn	Sn	19 28 21.0	+2.2
	0.3nm,0.3s,baz=2.8,slow=23,SNR=5.7						
	0.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**13.12**	**215**	Pn	Pn	19 26 06.6	-1.5
	0.1nm,0.3s,baz=36,slow=13,SNR=9.2						
FITZ				Sn	Sn	19 28 34.3	-0.6
	0.6nm,0.3s,baz=192,slow=15,SNR=8.9						
	3.7nm,0.9s						
ASAR	**Alice Springs**	**16.15**	**179**	Pn	Pn	19 26 48.0	-0.9
	0.3nm,0.3s,baz=4.3,slow=12,SNR=24						
ASAR				Sn	Sn	19 29 51.0	+2.2
	0.1nm,0.3s,baz=357,slow=12,SNR=4.4						
	1.5nm,0.6s						
STKA	**Stephens Creek**	**25.45**	**164**	P	P	19 28 30.5	+0.4
	1.3nm,0.3s,baz=354,slow=11,SNR=5.8						
	1.3nm,0.3s						

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*IDC **01** 19:23:35.1±1.6, 30°51N×50°64E, h0km, mb4.0/12, mbtmp4.0/14, ML3.6/2, Error ellipse: s-maj=37.6km s-min=19.1km az=162.0*

*NEIC **01** 19:23:35.2±1.4, 30°43N±0°04×50°64E±0°10, h10km±1km, mb4.0/13, Error ellipse: s-maj=15.4km s-min=4.7km az=246.0*

*TEH **01** 19:23:38.3, 30°50N×50°80E, h16km±16km*

*DSN **01** 19:23:42.5±2.8, 29°91N×50°83E, h10km, ML3.6/10, Error ellipse: s-maj=36.9km s-min=10.8km az=2.0*

*OMAN **01** 19:23:43.9±0.1, 30°13N×51°14E, h15km, mb4.3/12, Error ellipse: s-maj=1.2km s-min=1.0km az=340.0*

ISC 01 19:23:35.9±0.5, 30°43N±0°04×50°79E±0°04, h10km, n127, σ2 32/150, mb4.0/18, 1C, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.49**	**290**	Pg	**Pb**	**19 23 47.4**	**+0.8**
ABEH				Sg	**Sb**	**19 23 56.1**	**+2.2**
KLNJ	**Kolanjah**	**0.90**	**50**	Pg	**Pg**	**19 23 55.0**	**+1.6**
KAZ2	**Kazeron-Fars-I**	**1.11**	**137**	Pg	**Pn**	**19 24 00.3**	**+2.7**
IBRJ	**Brojen**	**1.53**	**15**	Pg	**Pn**	**19 24 05.7**	**+2.2**
ZNGN	**Zangian**	**1.68**	**2**	Pg	**Pb**	**19 24 08.8**	**+1.6**
SHI	**Shiraz**	**1.69**	**117**	Pg	**Pb**	**19 24 09.5**	**+2.3**
JHBN	**Jahan bin**	**1.80**	**357**	Pg	**Pn**	**19 24 09.9**	**+2.6**
IRAM	**Ramesheh**	**1.94**	**44**	Pn	**Pn**	**19 24 13.0**	**+3.9**
DSBU	**Dashti - Bushe**	**2.10**	**169**	Pn	**Pb**	**19 24 15.3**	**+1.3**
IGAR	**Gharneh**	**2.24**	**28**	Pn	**Pn**	**19 24 16.3**	**+3.0**
IPIR	**Pirpir**	**2.25**	**2**	Pn	**Pn**	**19 24 16.2**	**+2.8**
IZEF	**Zefreh**	**2.79**	**28**	Pn	**Pn**	**19 24 23.8**	**+3.0**
IKLH	**Kolahrood**	**2.96**	**13**	Pn	**Pn**	**19 24 25.6**	**+2.5**
QAMS	**Qamsar**	**3.34**	**9**	Pn	**Pn**	**19 24 31.5**	**+3.1**
IMEH	**Mehriz**	**3.42**	**73**	Pn	**Pn**	**19 24 33.2**	**+3.6**
ICHK	**Chekchek**	**3.59**	**59**	Pn	**Pn**	**19 24 34.9**	**+3.1**
ANAR	**Anarak**	**3.72**	**42**	Pn	**Pn**	**19 24 36.5**	**+3.0**
BDRS	**Dareh Seyedi**	**3.87**	**336**	Pn	**Pn**	**19 24 38.3**	**+2.6**
ISFB	**Sefidab**	**4.10**	**17**	Pn	**Pn**	**19 24 41.3**	**+2.6**
IBAF	**Bafgh**	**4.26**	**73**	Pn	**Pn**	**19 24 44.5**	**+3.4**
IQOM	**Qom**	**4.41**	**3**	Pn	**Pn**	**19 24 45.6**	**+2.5**
SAKB	**Bahrain**	**4.44**	**183**	P	**Pn**	**19 24 47.4**	**+4.1**
SAKB				S	**Sn**	**19 25 38.7**	**+3.7**
SHMA	**Al-Shehemyia**	**4.56**	**178**	P	**Pn**	**19 24 48.5**	**+3.7**
SHMA				S	**Sn**	**19 25 40.4**	**+2.4**
IVRN	**Varamin**	**4.62**	**10**	Pn	**Pn**	**19 24 48.6**	**+2.7**
KHGB	**Koh Gabri**	**4.92**	**89**	Pn	**Pn**	**19 24 53.3**	**+3.3**
SNQR	**Sonqor, Kerman**	**5.16**	**330**	Pn	**Pn**	**19 24 55.2**	**+1.8**
NGRK	**Negar Kerman**	**5.21**	**97**	Pn	**Pn**	**19 24 58.1**	**+3.8**
IDMV	**Damavand**	**5.24**	**11**	Pn	**Pn**	**19 24 57.4**	**+2.8**
ILAS	**Lasjerd**	**5.27**	**20**	Pn	**Pn**	**19 24 57.5**	**+2.7**
IGHG	**Ghaleghazi**	**5.28**	**319**	Pn	**Pn**	**19 24 58.3**	**+3.3**
HGHA	**Hamedan- Ghaye**	**5.30**	**343**	Pn	**Pn**	**19 24 57.9**	**+2.6**
QABG	**Abgarm-Qazvin**	**5.36**	**349**	Pn	**Pn**	**19 24 58.8**	**+2.7**
IFIR	**Firoozkooh**	**5.45**	**17**	Pn	**Pn**	**19 24 59.9**	**+2.4**
GLG1	**Gilan-e-Gharb**	**5.53**	**313**	Pn	**Pn**	**19 25 00.5**	**+2.2**
IDHR	**Dehrash**	**5.65**	**320**	Pn	**Pn**	**19 25 02.5**	**+2.4**
TPRV	**Parvadeh(Tabas**	**5.65**	**61**	Pn	**Pn**	**19 25 03.4**	**+3.4**
SMRA	**Abu-Samra**	**5.66**	**180**	P	**Pn**	**19 25 03.0**	**+3.0**
SMRA				S	**Sn**	**19 26 07.6**	**+2.5**
TRNA	**Turayna**	**5.68**	**176**	P	**Pn**	**19 25 03.7**	**+3.3**
	SNR=42						

TRNA S Sn 19 26 08.2 +2.5
CHMN Cheshme madani 5.88 94 Pn Pn 19 25 06.9 +3.5
IALA Alasht 5.89 16 Pn Pn 19 25 06.1 +2.6
IPRN Peran 5.94 12 Pn Pn 19 25 07.1 +3.1
IGZV Ghazvin 5.96 356 Pn Pn 19 25 07.0 +2.6
MZPU Pul - Mazandar 6.03 6 Pn Pn 19 25 08.5 +3.2
TNSJ Nastanj 6.06 53 Pn Pn 19 25 09.0 +3.3
TKDS Koohdasht(Taba 6.25 58 Pn Pn 19 25 11.4 +3.2
IKIA Kiasar 6.25 22 Pn Pn 19 25 11.4 +3.0
SLWR Sila 6.38 173 P Pn 19 25 12.4 +2.4
SLWR S Sn 19 26 23.6 +0.6
SHME Shamm 6.43 131 P Pn 19 25 12.5 +1.9
SHME S Sn 19 26 22.6 -1.4
SHME Shamm 6.43 131 *i* P Pn 19 25 12.0 +1.4
SNR=6.8
SHME S Sn 19 26 21.3 -2.8
IGLO Ghaloghah 6.57 22 Pn Pn 19 25 16.0 +3.3
BANOM Banah 6.62 131 P Pn 19 25 14.6 +1.3
BANOM S Sn 19 26 26.6 -2.2
BANOM Banah 6.62 131 *i* P Pn 19 25 14.3 +1.1
SNR=36
GHWR Ruwais 6.70 163 P Pn 19 25 17.2 +2.8
GHWR S Sn 19 26 29.2 -1.7
MASF Masafi 6.93 135 P Pn 19 25 19.3 +1.8
MASF S Sn 19 26 34.1 -2.3
NAZ Nazwa, Dubai 6.93 140 P Pn 19 25 20.1 +2.6
NAZ S Sn 19 26 35.4 -1.0
NAZ Nazwa, Dubai 6.93 140 P Pn 19 25 19.3 +1.8
AJN Ajban 6.93 146 P Pn 19 25 20.7 +3.2
AJN S Sn 19 26 35.3 -1.2
MSFE Esma-Masafi 6.94 135 P Pn 19 25 18.9 +1.3
TAPT Tabas- Tapeh t 6.97 49 Pn Pn 19 25 21.0 +2.8
ASUD Al Ashush, Dub 7.05 144 P Pn 19 25 21.4 +2.3
SNR=22
ASUD S Sn 19 26 38.9 -0.4
ASUD Al Ashush, Dub 7.05 144 *i* P Pn 19 25 21.4 +2.3
SNR=22
MDH Madha 7.06 135 P Pn 19 25 21.0 +1.7
MDH S Sn 19 26 36.5 -3.2
MDH Madha 7.06 135 P Pn 19 25 20.6 +1.2
MZWR Madinat Zayed 7.19 157 P Pn 19 25 24.3 +3.2
MZWR S Sn 19 26 41.1 -1.8
ITEG Tejag 7.22 68 Pn Pn 19 25 26.4 +3.6
UOSS Minazif 7.27 137 Pn Pn 19 25 21.9 -0.3
UOSS Minazif 7.27 137 P Pn 19 25 24.0 +1.8
UOSS S Sn 19 26 42.0 -2.9
IKOO Kooshah 7.30 72 Pn Pn 19 25 26.4 +3.6
ASHO Ashiyiah 7.39 139 P Pn 19 25 25.8 +1.9
ASHO S Sn 19 26 45.4 -2.4
ASHO Ashiyiah 7.39 139 *i* P Pn 19 25 25.1 +1.2
SNR=11
ALNE Al Ain 7.73 144 P Pn 19 25 30.6 +2.1
SNR=9.4
ALNE S Sn 19 26 53.8 -2.4
ALNE Al Ain 7.73 144 *i* P Pn 19 25 30.3 +1.7
SNR=9.4
MZR Muzera 7.78 161 P Pn 19 25 32.0 +2.9
MZR S Sn 19 26 55.6 -1.7
MZR Muzera 7.78 161 *i* P Pn 19 25 31.0 +1.9
SNR=8.3
SOHO SOHO 8.09 139 P Pn 19 25 34.5 +1.1
SOHO S Sn 19 27 01.8 -3.2
RAYN Ar Rayn 8.34 216 Pn Pn 19 25 34.9 -2.0
RAYN Ar Rayn 8.34 216 P Pn 19 25 36.4 -0.5
UMZA Um Al Zommool 8.62 152 P Pn 19 25 42.4 +1.6
UMZA S Sn 19 27 14.2 -3.9
ARQ Araqi 8.72 143 P Pn 19 25 44.5 +2.3
ARQ S Sn 19 27 17.2 -3.4
HOQ Hoqain 8.96 138 P Pn 19 25 47.0 +1.5
SMDO Samad 9.79 137 P Pn 19 25 59.4 +2.4
WSAR Wadi Sarin 10.01 134 P Pn 19 26 00.5 +0.7
JMDO Jabal Madar 10.36 139 P Pn 19 26 07.4 +2.8
MARD Mardin 10.78 312 Pn Pn 19 26 07.4 -3.0
MHTO MHTO 11.41 144 P Pn 19 26 20.0 +1.0
SNR=15
ASF Jabal al Asfar 12.01 282 Pn Pn 19 26 25.4 -1.7
0.3nm,0.3s,baz=113,slow=8.3,SNR=1.6
ASF Sn Sn 19 28 36.8 -4.5
0.5nm,0.3s,baz=340,slow=21,SNR=2.0
0.7nm,0.3s
DQM DQM 12.11 148 P Pn 19 26 28.6 +0.1
DOK Doka 12.14 165 P Pn 19 26 29.1 +0.1
WHFO Wadi Hawf 12.75 167 P Pn 19 26 37.8 +0.5
SNR=57
SHAO Shalim 13.11 159 P Pn 19 26 42.2 -0.1
RBK Rabkut 13.24 166 P Pn 19 26 44.2 +0.2
SNR=6.5
MMAI Mount Meron Ar 13.35 285 Pn Pn 19 26 44.9 -0.6
0.5nm,0.3s,baz=95,slow=16,SNR=1.3
0.3nm,0.4s
BRTR Keskin Array B 16.80 308 P Pn 19 27 31.1 -0.3
BRTR Keskin Array B 16.80 308 Pn P 19 27 34.5 +1.0
0.1nm,0.3s,baz=119,slow=13,SNR=3.8
SIMJ Simiganj 17.09 56 P Pn 19 27 36.3 +1.3
AB31 Akbulak array 20.05 18 P P 19 28 07.8 -1.2
ABKAR Akbulak array 20.05 18 P P 19 28 08.3 -0.7
KKAR Karatay Array 20.18 46 P P 19 28 10.1 -0.5
AKTO Aktyubinsk 20.71 13 P P 19 28 15.8 -0.4
1.3nm,0.4s,baz=229,slow=6.4,SNR=5.6
1.3nm,0.4s
KDJ Kajisay 24.17 54 P P 19 28 51.7 -0.8
KDJ IAmb IAmb 19 29 05.2
comp=Z,2.8nm,0.9s
TARG Taragay, Kyrgy 24.48 55 P P 19 28 53.2 -2.4
TARG IAmb IAmb 19 29 06.6
comp=Z,6.9nm,1.5s
AKBB Malin Array Si 25.88 328 P P 19 29 04.6 -3.1
AKBB Malin Array Si 25.88 328 *ce* P P 19 29 04.8 -2.8
AKBB Malin Array Si 25.88 328 pmax pmax
comp=Z,5.0nm,0.8s
KIEV Kiev 25.88 328 P P 19 29 05.3 -2.4
KIEV Kiev 25.88 328 P P 19 29 05.3 -2.4
KIEV Kiev 25.88 328 pmax pmax
comp=Z,5.0nm,0.8s
BURAR Bucovina Array 26.07 318 P P 19 29 07.8 -1.8
BUR08 Bucovina Ar. S 26.10 318 P P 19 29 08.2 -1.7
BUR08 IAmb IAmb 19 29 21.8
comp=Z,6.8nm,1.5s
BVAR Borovoye Array 26.73 27 P P 19 29 16.8 +1.4
comp=Z,3.5nm,0.5s,baz=225,slow=6.8,SNR=23
BVAR PcP PcP 19 32 38.8 +0.4
comp=Z,0.4nm,0.4s,baz=221,slow=4.6,SNR=3.6
comp=Z,3.5nm,0.5s
KURBB Kurchatov Arra 28.91 38 P P 19 29 36.6 +1.8
comp=Z,1.3nm,0.6s,baz=240,slow=9.7,SNR=9.6
comp=Z,1.3nm,0.6s
KURK Kurchatov 29.01 38 P P 19 29 34.9 -0.8
KURK IAmb IAmb 19 29 39.0
comp=Z,2.2nm,0.8s
MAKZ Makanchi 29.10 47 P P 19 29 36.2 -0.4
MAKZ IAmb IAmb 19 29 43.7
comp=Z,3.2nm,1.4s
MK31 Makanchi Array 29.29 47 P P 19 29 37.1 -1.3
MK31 IAmb IAmb 19 29 46.3
comp=Z,2.9nm,1.5s
MKAR Makanchi Array 29.29 47 P P 19 29 37.4 -1.0
MKAR Makanchi Array 29.29 47 P P 19 29 39.8 +1.5
comp=Z,0.4nm,0.4s,baz=244,slow=11,SNR=7.3
comp=Z,0.4nm,0.4s
EVN Everest 31.47 85 P P 19 29 56.2 -2.3
ZALV Zalesovo Beam 33.94 36 P P 19 30 20.2 +1.1
comp=Z,1.9nm,0.7s,baz=260,slow=11,SNR=9.8
comp=Z,1.9nm,0.7s
FIA1 FINESS Array S 35.02 340 P P 19 30 27.3 -1.0
FINES FINESS Array B 35.02 340 P P 19 30 27.4 -0.9
FINES FINESS Array B 35.02 340 P P 19 30 27.7 -0.6
comp=Z,0.7nm,0.4s,baz=140,slow=10,SNR=12
comp=Z,0.7nm,0.4s
HFS Hagfors 38.64 331 P P 19 30 57.9 -1.3
comp=Z,0.9nm,0.5s,baz=124,slow=13,SNR=1.9
comp=Z,0.9nm,0.5s
ARCES ARCESS Array B 41.72 347 P P 19 31 24.9 +0.3
comp=Z,3.5nm,0.9s,baz=139,slow=7.5,SNR=2.6
comp=Z,3.5nm,0.9s
TORD Torodi Ar. Bea 48.33 260 P P 19 32 18.2 +0.3
comp=Z,0.6nm,0.7s,baz=54,slow=10,SNR=8.6
comp=Z,0.6nm,0.7s
SPITS Spitsbergen Ar 50.21 351 P P 19 32 31.3 -0.1
comp=Z,12nm,0.9s,baz=148,slow=12,SNR=4.2
comp=Z,12nm,0.9s
KSRS Korea Array 62.73 61 P P 19 34 01.2 0.0
comp=Z,0.5nm,0.4s,baz=280,slow=6.6,SNR=2.3
comp=Z,0.5nm,0.4s
ILAR Eielson Array 84.11 8 P P 19 36 06.5 -0.2
comp=Z,0.6nm,0.9s,baz=353,slow=3.3,SNR=4.4
comp=Z,0.6nm,0.9s

*IDC **01** 19:26:45.0±0.7,22.°03N×144.°62E,h0km,mb3.9/15, mbtmp3.9/16,ML3.2/1,Error ellipse: s-maj=26.0km s-min=16.1km az=83.0*
*NEIC **01** 19:26:51.5±1.9,22.°23N±0.°08×144.°4E±0.°1,h35km±1km, mb4.3/22,Error ellipse: s-maj=20.9km s-min=11.4km az=64.0*
ISC 01 19:26:50.7±0.7,22.°19N±0.°08×144.°4E±0.°1,h35km,n56, σ1ᵗ12/52,mb4.2/24,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.27**	**338**		**Pn**	**Pn**	**19 28 06.7**	**-0.3**
JCJ						**Sn**	**19 29 06.5**	**-0.1**
JCJ	**Chichijima**	**5.27**	**338**	Pn		**Pn**	**19 28 04.6**	**-2.4**
	17nm,0.3s,baz=1.1,slow=8.9,SNR=37							
JCJ					Sn	**Sn**	**19 29 04.2**	**-2.3**
	60nm,0.3s,baz=308,slow=24,SNR=16							
JMN	**Monobe**	**14.75**	**323**	Pn		**Pn**	**19 30 16.0**	**-0.9**
MJAR	**Matsushiro Arr**	**15.27**	**341**	Pn		**Pn**	**19 30 23.3**	**-0.4**
	0.1nm,0.3s,baz=165,slow=12,SNR=3.4							
	1.0nm,0.8s							
MAJO	**Matsushiro**	**15.27**	**341**	Pn		**Pn**	**19 30 22.8**	**-0.9**
MJB9	**Matsu-Tunnel**	**15.27**	**341**	Pn		**Pn**	**19 30 23.1**	**-0.7**
JMM	**Marumori**	**15.93**	**350**			**Pn**	**19 30 31.3**	**-0.8**
JMM					IAmb	IAmb	19 30 40.6	
	comp=Z,16nm,0.8s							
KSRS	**Korea Array**	**20.80**	**321**	P		Pn	19 31 31.9	+0.4
	comp=Z,0.4nm,0.5s,baz=147,slow=8.7,SNR=7.7							
	comp=Z,0.4nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**21.18**	**93**	T		T	19 53 51.7	
	baz=277							
H11N2	**WAKE ISLAND Hy**	**21.19**	**92**	T		T	19 54 08.6	
	baz=277							
H11N3	**WAKE ISLAND Hy**	**21.20**	**93**	T		T	19 53 59.7	
	baz=277							
H11S3	**WAKE ISLAND Hy**	**21.25**	**96**	T		T	19 53 24.1	
	baz=276							
H11S1	**WAKE ISLAND Hy**	**21.26**	**96**	T		T	19 53 43.3	
	baz=276							
H11S2	**WAKE ISLAND Hy**	**21.27**	**96**	T		T	19 53 32.2	
	baz=276							
SSLB	**Suanglung**	**21.60**	**279**	P		**P**	**19 31 37.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**24.21**	**338**	P		**P**	**19 32 03.7**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=218,slow=32,SNR=3.0							
	comp=Z,2.4nm,0.7s							
SONM	**Songino Array**	**39.67**	**320**	P		**P**	**19 34 21.8**	**+2.4**
	comp=Z,0.3nm,0.6s,baz=119,slow=5.6,SNR=3.0							
	comp=Z,0.3nm,0.6s							
KNRA	**Kununurra**	**40.62**	**203**	P		**P**	**19 34 26.6**	**-0.8**
KNRA					IAmb	IAmb	19 34 44.9	
	comp=Z,12nm,1.2s							
WB0	**Warramunga Arr**	**42.82**	**194**	P		**P**	**19 34 44.3**	**-1.1**
WB0					IAmb	IAmb	19 34 56.7	
	comp=Z,9.9nm,1.4s							
WR8	**Warramunga Arr**	**42.98**	**194**	P		**P**	**19 34 45.3**	**-1.4**
WR8					IAmb	IAmb	19 35 03.9	
	comp=Z,9.0nm,1.3s							
WRA	**Warramunga Arr**	**43.00**	**194**	P		**P**	**19 34 45.3**	**-1.6**
	comp=Z,1.4nm,0.5s,baz=17,slow=9.0,SNR=13							
	comp=Z,1.4nm,0.5s							
FITZ	**Fitzroy Crossi**	**44.03**	**206**	P		**P**	**19 34 54.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**44.03**	**206**	P		**P**	**19 34 54.8**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=36,slow=8.7,SNR=2.5							
	comp=Z,3.1nm,0.8s							
KULM	**Kulim**	**45.45**	**255**	P		**P**	**19 35 07.3**	**+0.6**
KULM					IAmb	IAmb	19 35 22.4	
	comp=Z,17nm,1.4s							
AS31	**Alice Springs**	**46.70**	**193**	P		**P**	**19 35 15.7**	**-0.6**
ASAR	**Alice Springs**	**46.70**	**193**	P		**P**	**19 35 14.7**	**-1.6**
ASAR	**Alice Springs**	**46.70**	**193**	P		**P**	**19 35 14.4**	**-1.9**
	comp=Z,0.7nm,0.6s,baz=15,slow=9.1,SNR=16							
	comp=Z,0.7nm,0.6s							
GSI	**Gunungsitoli**	**49.99**	**252**	P		**P**	**19 35 42.6**	**+0.7**
EVN	**Everest**	**52.04**	**289**	P		**P**	**19 35 57.8**	**-0.2**
EVN					IAmb	IAmb	19 36 08.4	
	comp=Z,2.1nm,0.6s							
ZALV	**Zalesovo Beam**	**54.51**	**321**	P		**P**	**19 36 16.0**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=106,slow=7.2,SNR=2.2							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**55.17**	**312**	P		**P**	**19 36 20.6**	**+0.7**
MKAR					PcP	**PcP**	**19 37 21.2**	**+0.4**
MKAR	**Makanchi Array**	**55.17**	**312**	P		**P**	**19 36 21.7**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=89,slow=9.0,SNR=16							
	comp=Z,1.1nm,0.6s							
MAKZ	**Makanchi**	**55.39**	**312**	P		**P**	**19 36 22.0**	**+0.6**
MAKZ					IAmb	IAmb	19 36 24.6	
	comp=Z,1.9nm,0.8s							
OHAK	**Old Harbor**	**56.70**	**35**	P		**P**	**19 36 31.5**	**+0.9**
D19K	**Kuna River**	**57.83**	**22**	P		**P**	**19 36 39.5**	**+1.1**
KURBB	**Kurchatov Arra**	**57.91**	**317**	P		**P**	**19 36 40.9**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=96,slow=7.4,SNR=6.4							
	comp=Z,1.2nm,0.3s							
D20K	**Etivluk River**	**58.42**	**22**	P		**P**	**19 36 43.7**	**+1.1**
BPAW	**Bear Paw Mtn.**	**59.23**	**28**	P		**P**	**19 36 49.4**	**+1.1**
PWL	**Port Wells**	**59.84**	**31**	P		**P**	**19 36 52.3**	**-0.2**
ILAR	**Eielson Array**	**61.11**	**27**	P		**P**	**19 37 00.0**	**-1.0**
ILAR	**Eielson Array**	**61.11**	**27**	P		**P**	**19 37 00.7**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=254,slow=5.7,SNR=8.1							
	comp=Z,0.5nm,0.7s							
BVAR	**Borovoye Array**	**63.01**	**319**	P		**P**	**19 37 15.9**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=83,slow=7.4,SNR=9.8							
	comp=Z,1.4nm,0.5s							
L27K	**Beaver Creek,**	**63.13**	**29**	P		**P**	**19 37 15.2**	**+0.5**
L27K					IAmb	IAmb	19 37 21.5	
	comp=Z,5.9nm,1.4s							
KK31	**Karatay Array**	**63.61**	**308**	P		**P**	**19 37 18.9**	**+0.7**
KK31					IAmb	IAmb	19 37 20.9	
	comp=Z,1.9nm,0.8s							
KKAR	**Karatay Array**	**63.61**	**308**	P		**P**	**19 37 19.1**	**+0.9**
I30M	**Mount Dempster**	**65.59**	**27**	P		**P**	**19 37 31.0**	**+0.1**
I30M					IAmb	IAmb	19 37 57.1	
	comp=Z,5.1nm,1.4s							
AB31	**Akbulak array**	**69.95**	**316**	P		**P**	**19 37 58.5**	**0.0**
AB31					IAmb	IAmb	19 38 28.2	
	comp=Z,1.6nm,1.0s							
ABKAR	**Akbulak array**	**69.95**	**316**	P		**P**	**19 37 58.6**	**+0.1**
ARCES	**ARCESS Array B**	**78.80**	**342**	P		**P**	**19 38 51.3**	**+1.7**
	comp=Z,4.4nm,1.0s,baz=60,slow=7.2,SNR=4.1							
	comp=Z,4.4nm,1.0s							
NVAR	**Mina Array Bea**	**81.98**	**52**	P		**P**	**19 39 07.7**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=273,slow=5.7,SNR=5.1							
	comp=Z,0.8nm,0.7s							
FINES	**FINESS Array B**	**83.21**	**335**	P		**P**	**19 39 13.1**	**-0.1**
FINES	**FINESS Array B**	**83.21**	**335**	P		**P**	**19 39 13.5**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=67,slow=5.2,SNR=12							
	comp=Z,0.8nm,0.5s							
PDAR	**Pinedale Array**	**86.28**	**45**	P		**P**	**19 39 29.0**	**-0.3**
PDAR	**Pinedale Array**	**86.28**	**45**	P		**P**	**19 39 29.2**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=323,slow=2.2,SNR=2.6							
	comp=Z,0.3nm,0.7s							
LPAZ	**La Paz**	**148.81**	**85**	PKPbc		**PKPbc**	**19 46 35.1**	**-1.1**
LPAZ	**La Paz**	**148.81**	**85**	PKPbc		**PKPbc**	**19 46 34.6**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=270,slow=4.0,SNR=5.2							

*SJA **01** 20:10:39.9±0.6,20.°70S×67.°35W,h221km±5km,ML3.5, MW3.5*
*SCB **01** 20:10:41.8±1.4,20.°76S×67.°34W,h196km±12km,MB4.2, ML3.4/2,Error ellipse: s-maj=5.0km s-min=4.7km az=0.0*
*GUC **01** 20:10:43.1±0.6,20.°77S×67.°59W,h219km±6km,ML3.4*
ISC 01 20:10:40.4±1.6,20.°75S±0.°04×67.°37W±0.°04, h217km±12km,n50,σ1ᵗ16/79,2C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.70**	**107**	Pg		**Pn**	**20 11 18.2**	**+0.4**
MOCB				Sg		**S**	**20 11 44.2**	**-2.5**
MOCB				IAML			20 11 45.3	
	212nm,0.4s							
PB08	**IPOC Station P**	**1.77**	**290**	*i*P		**Pn**	**20 11 19.6**	**+1.1**
PB08				*e*S		**S**	**20 11 47.8**	**0.0**
PB08				IAML			20 11 49.5	
	comp=N,101nm,0.4s							
PB08	**IPOC Station P**	**1.77**	**290**	Pg		**Pn**	**20 11 19.5**	**+1.1**
PB08	**IPOC Station P**	**1.77**	**290**	*e*P		**Pn**	**20 11 19.5**	**+1.1**
PB08				*e*S		**S**	**20 11 49.7**	**+1.9**
PB08				IAML			20 11 50.2	
	comp=Z,58nm,0.4s							
PB01	**IPOC Station P**	**2.00**	**261**	*e*P		**Pn**	**20 11 20.6**	**+0.4**
PB01				*e*S		**S**	**20 11 49.3**	**-1.7**
PB01				IAML			20 11 51.5	
	comp=E,129nm,0.2s							
PB01	**IPOC Station P**	**2.00**	**261**	Pg		**Pn**	**20 11 20.8**	**+0.6**
PB01				Sg		**S**	**20 11 49.8**	**-1.2**
PB01				IAML			20 11 51.5	
	comp=E,129nm,0.2s							
PB01	**IPOC Station P**	**2.00**	**261**	*e*P		**Pn**	**20 11 20.8**	**+0.6**
PB01				*e*S		**S**	**20 11 50.7**	**-0.3**
PB01				IAML			20 11 51.0	
	comp=Z,104nm,0.2s							
GO01	**Chusmiza**	**2.02**	**302**	*e*P		**Pn**	**20 11 22.0**	**+1.1**
GO01	**Chusmiza**	**2.02**	**302**	Pg		**Pn**	**20 11 21.8**	**+0.9**
GO01	**Chusmiza**	**2.02**	**302**	*e*P		**Pn**	**20 11 22.9**	**+2.0**
PB09	**IPOC Station P**	**2.03**	**239**	*e*P		**Pn**	**20 11 21.8**	**+1.2**
PB09				IAML			20 11 53.5	
	comp=E,58nm,0.2s							
PB09	**IPOC Station P**	**2.03**	**239**	Pg		**Pn**	**20 11 21.9**	**+1.3**
PB09	**IPOC Station P**	**2.03**	**239**	*e*P		**Pn**	**20 11 21.8**	**+1.2**
PB09				*e*S		**S**	**20 11 52.1**	**+0.3**
PB09				IAML			20 11 53.3	
	comp=Z,84nm,0.2s							
SOEO	**Opoqueri**	**2.23**	**347**	Pg		**Pn**	**20 11 23.0**	**0.0**
YJA	**Yavi**	**2.24**	**130**	*e*P		**Pn**	**20 11 23.5**	**+0.5**
YJA	**Yavi**	**2.24**	**130**	Pg		**Pn**	**20 11 23.8**	**+0.8**
YJA	**Yavi**	**2.24**	**130**	*e*P		**Pn**	**20 11 24.0**	**+0.9**
YJA				*e*S		**S**	**20 11 55.0**	**-1.1**
PB11	**IPOC Station P**	**2.36**	**294**	*e*P		**Pn**	**20 11 24.7**	**+0.7**
PB11				*e*S		**S**	**20 11 56.6**	**-1.1**
PB11	**IPOC Station P**	**2.36**	**294**	Pg		**Pn**	**20 11 24.8**	**+0.8**
PB11	**IPOC Station P**	**2.36**	**294**	*e*P		**Pn**	**20 11 24.2**	**+0.2**
PB11				*e*S		**S**	**20 11 56.9**	**-0.8**
PB11				IAML			20 11 59.8	
	comp=Z,163nm,0.4s							
HMBC	**Humberstone**	**2.40**	**281**	*e*P		**Pn**	**20 11 24.6**	**+0.3**
HMBC				*e*S		**S**	**20 11 57.3**	**-1.2**
HMBC				IAML			20 11 59.3	
	comp=N,140nm,0.2s							
HMBC	**Humberstone**	**2.40**	**281**	*e*P		**Pn**	**20 11 24.7**	**+0.3**
HMBC				*e*S		**S**	**20 11 58.0**	**-0.5**
HMBC				IAML			20 11 58.2	
	comp=Z,177nm,0.4s							
PB02	**IPOC Station P**	**2.42**	**256**	*e*P		**Pn**	**20 11 25.4**	**+0.7**
PB02				*e*S		**S**	**20 11 57.5**	**-1.4**
PB02	**IPOC Station P**	**2.42**	**256**	Pg		**Pn**	**20 11 25.7**	**+1.1**
PB02	**IPOC Station P**	**2.42**	**256**	*e*P		**Pn**	**20 11 25.3**	**+0.7**
PB02				*e*S		**S**	**20 11 58.2**	**-0.7**
PB02				IAML			20 11 59.3	
	comp=Z,414nm,0.2s							
PATCX	**Punta Patache**	**2.60**	**268**	*e*P		**Pn**	**20 11 27.2**	**+0.7**
PATCX				*e*S		**S**	**20 12 00.9**	**-1.4**
PATCX				IAML			20 12 02.4	
	comp=N,183nm,0.1s							
PATCX	**Punta Patache**	**2.60**	**268**	*e*P		**Pn**	**20 11 27.1**	**+0.7**
PATCX				IAML			20 12 01.9	
	comp=Z,83nm,0.6s							
PATCX				*e*S		**S**	**20 12 02.1**	**-0.1**
TA02	**Huaiquique**	**2.63**	**280**	*e*P		**Pn**	**20 11 27.5**	**+0.7**
TA02	**Huaiquique**	**2.63**	**280**	*e*P		**Pn**	**20 11 27.4**	**+0.7**
TA02				*e*S		**S**	**20 12 02.0**	**-0.6**
TA02				IAML			20 12 02.2	
	comp=Z,283nm,0.3s							
TA01	**Diego Aracena**	**2.63**	**273**	*i*P		**Pn**	**20 11 27.2**	**+0.4**
TA01				*e*S		**S**	**20 12 00.4**	**-2.3**
TA01				IAML			20 12 01.3	
	comp=E,181nm,0.3s							
TA01	**Diego Aracena**	**2.63**	**273**	*e*P		**Pn**	**20 11 27.1**	**+0.4**
TA01				*e*S		**S**	**20 12 01.1**	**-1.7**
TA01				IAML			20 12 01.5	
	comp=Z,68nm,0.2s							
PB06	**IPOC Station P**	**2.82**	**226**	*e*P		**Pn**	**20 11 30.1**	**+1.1**
PB06				*e*S		**S**	**20 12 06.2**	**-0.7**
PB06				IAML			20 12 07.3	
	comp=E,158nm,0.3s							
PB06	**IPOC Station P**	**2.82**	**226**	Pg		**Pn**	**20 11 30.5**	**+1.5**
PB06	**IPOC Station P**	**2.82**	**226**	*e*P		**Pn**	**20 11 29.9**	**+0.9**
PB06				*e*S		**S**	**20 12 07.1**	**+0.2**
PB06				IAML			20 12 08.6	
	comp=Z,110nm,0.3s							
SOET	**ToroToro**	**3.00**	**30**	Pg		**Pn**	**20 11 31.7**	**+0.3**
HJA	**Humahuaca**	**3.05**	**144**	*e*P		**Pn**	**20 11 33.5**	**+1.6**
HJA				*e*S		**S**	**20 12 12.0**	**0.0**
HJA				IAML			20 12 12.6	
	comp=Z,61nm,0.6s							
PB16	**IPOC Station P**	**3.13**	**320**	*e*P		**Pn**	**20 11 35.3**	**+2.2**
PB16				IAML			20 12 18.2	
	comp=E,29nm,0.5s							
PB16	**IPOC Station P**	**3.13**	**320**	*e*P		**Pn**	**20 11 35.5**	**+2.4**
PB16				*e*S		**S**	**20 12 12.4**	**-1.6**
PB05	**IPOC Station P**	**3.36**	**231**	*e*P		**Pn**	**20 11 36.2**	**+0.9**
PB05	**IPOC Station P**	**3.36**	**231**	*e*P		**Pn**	**20 11 36.1**	**+0.9**
PB05				*e*S		**S**	**20 12 16.9**	**-1.1**
PB05				IAML			20 12 18.9	
	comp=Z,60nm,0.2s							
PB12	**IPOC Station P**	**3.50**	**307**	*e*P		**Pn**	**20 11 37.0**	**+0.2**
PB12	**IPOC Station P**	**3.50**	**307**	*e*P		**Pn**	**20 11 37.0**	**+0.2**
PB12				*e*S		**S**	**20 12 19.7**	**-1.3**
PB12				IAML			20 12 24.0	
	comp=Z,40nm,0.1s							
PB10	**IPOC Station P**	**4.03**	**226**	*e*P		**Pn**	**20 11 43.7**	**+0.6**
PB10				*e*S		**S**	**20 12 30.3**	**-2.1**
PB10				IAML			20 13 00.2	
	comp=Z,22nm,1.9s							
AZAP	**Zapla**	**4.07**	**149**	*e*P		**Pn**	**20 11 44.8**	**+1.0**
AZAP				*e*S		**S**	**20 12 32.9**	**-0.7**
AZAP				IAML			20 12 36.3	
	comp=Z,47nm,0.5s							
LPAZ	**La Paz**	**4.49**	**351**	Pg		**Pn**	**20 11 50.2**	**+0.7**
BBOB	**La Paz, Bander**	**4.64**	**351**	Pg		**Pn**	**20 11 53.5**	**+2.3**
PB14	**IPOC Station P**	**4.77**	**215**	Pg		**Pn**	**20 11 53.6**	**+1.1**
PB14	**IPOC Station P**	**4.77**	**215**	*e*P		**Pn**	**20 11 53.3**	**+0.8**
PB14				*e*S		**S**	**20 12 47.1**	**-2.2**
PB14				IAML			20 12 49.3	
	comp=Z,28nm,0.6s							
GO02	**Mina Guanaco**	**4.85**	**205**	Pg		**Pn**	**20 11 54.1**	**+0.6**
GO02	**Mina Guanaco**	**4.85**	**205**	*e*P		**Pn**	**20 11 54.4**	**+0.9**
GO02				*e*S		**S**	**20 12 50.5**	**-0.7**
GO02				IAML			20 12 53.5	
	comp=Z,70nm,0.3s							

*IDC **01** 20:22:10.7±1.3,36.°35N×28.°85E,h0km,mb3.9/2, mbtmp3.6/9,ML3.3/6,MS2.4/2,Error ellipse: s-maj=20.7km s-min=15.8km az=38.0*
*AFAD **01** 20:22:11.9,36.°44N×28.°68E,h7km±2km,MW3.5*
*ISK **01** 20:22:11.4

AKAS				P	Pb	20 22 27.4	-0.2
AKAS	**Kas**	**0.76**	**106**	Pg	Pb	20 22 27.4	-0.2
KSL	**Kastellorizon**	**0.77**	**112**	P	Pb	20 22 27.7	+0.1
KSL				S	Sb	20 22 39.4	+1.2
KSL	**Kastellorizon**	**0.77**	**112**	P	Pb	20 22 27.3	-0.3
KSL				S	Sb	20 22 38.4	+0.1
YER	**Yerkesik**	**0.77**	**334**	Pg	Pb	20 22 27.6	-0.2
YER	**Yerkesik**	**0.77**	**334**	P	Pb	20 22 28.2	+0.4
YER				S	Sb	20 22 39.5	+1.0
KNIK	**Mula-Seydike**	**0.80**	**60**	SPECP		20 22 27.0	
KNIK				P	Pg	20 22 27.7	+0.1
KNIK				S	Sb	20 22 39.8	+0.3
CAEL	**Denizli, Camel**	**0.84**	**36**	SPECP		20 22 28.0	
CAEL				P	Pg	20 22 28.1	-0.2
MULA	**Mugla, Merkez-**	**0.87**	**339**	P	Pg	20 22 28.8	-0.1
MULA				S	Sg	20 22 40.2	+0.1
DNZT	**Denizli-Tavas-**	**0.87**	**17**	SPECP		20 22 28.0	
DNZT				P	Pg	20 22 28.7	-0.2
DAT	**Datca**	**0.95**	**288**	Pg	Pb	20 22 30.6	-0.4
DEMR	**Demre-Antalya**	**0.99**	**102**	Pg	Pb	20 22 31.7	+0.2
ELL	**Elmali**	**1.01**	**72**	Pg	Pg	20 22 31.5	-0.1
TAVA	**DENIZLI_Tavas**	**1.03**	**9**	SPECP		20 22 31.0	
TAVA				P	Pg	20 22 31.7	-0.3
TAVA				S	Sb	20 22 46.6	+0.5
YAZI	**Mula-Dat§a-**	**1.04**	**284**	P	Pb	20 22 32.3	0.0
YAZI				S	Sb	20 22 45.9	-0.2
GOLH	**Golhisar**	**1.05**	**41**	SPECP		20 22 31.0	
GOLH				P	Pg	20 22 31.9	-0.3
GOLH				S	Sn	20 22 47.7	-0.4
APMY	**Acipayam-Deniz**	**1.13**	**25**	Pn	Pg	20 22 33.5	-0.4
BDRM	**Kayabasi**	**1.19**	**302**	P	Pn	20 22 35.3	+0.3
BDRM				S	Sn	20 22 50.1	+0.6
DNIZ	**Denizli-Tavas-**	**1.21**	**13**	P	Pg	20 22 34.5	-0.8
DNIZ				S	Sn	20 22 51.9	-0.2
BODT	**Bodrum**	**1.28**	**299**	Pn	Pg	20 22 38.0	+1.3
BODT	**Bodrum**	**1.28**	**299**	P	Pg	20 22 37.7	+1.0
BODT				S	Sn	20 22 55.7	+2.0
AKUM	**Antalya-Kumluc**	**1.33**	**95**	P	Pg	20 22 38.0	+0.5
AKUM				S	Sn	20 22 58.7	+3.9
YKAV	**Yalikavak-Bodr**	**1.33**	**301**	Pn	Pg	20 22 37.4	-0.3
ESEN	**Aydn-Nazilli**	**1.38**	**348**	P	Pb	20 22 38.0	-0.2
ESEN				S	Sb	20 22 54.7	-1.3
AYDN	**Tasoluk**	**1.38**	**332**	P	Pg	20 22 38.7	0.0
AYDN				S	Sg	20 22 56.5	-0.1
KORT	**Korkueli**	**1.43**	**67**	P	Pg	20 22 41.0	+1.4
KORT				S	Sg	20 23 03.3	+5.1
KORT	**Korkueli**	**1.43**	**67**	Pn	Pg	20 22 40.2	+0.6
INCE	**Denizli-Bozkur**	**1.44**	**29**	P	Pb	20 22 39.2	0.0
INCE				S	Sg	20 23 00.1	+1.6
KLNA	**Kalymnos**	**1.48**	**291**	P	Pn	20 22 38.9	-0.2
KEMT	**Kemer-ANTALYA**	**1.50**	**83**	Pn	Pg	20 22 40.7	-0.1
KARP	**Karpathos**	**1.54**	**235**	Pn	Pg	20 22 41.7	0.0
KARP	**Karpathos**	**1.54**	**235**	P	Pg	20 22 41.4	-0.3
KARP				S	Sg	20 23 03.3	+1.6
KARP	**Karpathos**	**1.54**	**235**	P	Pb	20 22 40.4	-0.5
DDIM	**Aydin, Didim**	**1.55**	**311**	P	Pb	20 22 40.8	-0.2
DDIM				S	Sg	20 23 03.2	+1.2
NAZL	**Nazilli-Aydin**	**1.55**	**348**	Pn	Pb	20 22 40.9	-0.3
ANTB	**Antalya**	**1.63**	**73**	Pn	Pb	20 22 42.6	+0.2
AYDB	**Zeytinkoy-Aydi**	**1.64**	**337**	Pn	Pb	20 22 42.0	-0.6
BRDR	**BURDUR-Merkez**	**1.65**	**41**	P	Pb	20 22 43.1	+0.2
BRDR				S	Sg	20 23 05.3	-0.1
GCAM	**G?zelcaml?**	**1.72**	**317**	P	Pb	20 22 43.1	-0.9
GCAM				S	Sg	20 23 07.4	0.0
GCAM	**G?zelcaml?**	**1.72**	**317**	Pn	Pb	20 22 43.1	-0.9
BUCA	**Burdur, Bucak-**	**1.73**	**59**	P	Pg	20 22 45.3	0.0
BUCA				S	Sg	20 23 08.9	+1.2
KIRA	**zmir-Kiraz**	**1.77**	**352**	P	Pb	20 22 44.1	-0.7
KIRA				S	Sb	20 23 06.8	-0.4
BASM	**Basmaki-Afyon**	**1.82**	**36**	Pn	Pn	20 22 44.7	+0.9
ODEM	**Odemis-Izmir**	**1.90**	**345**	Pn	Pn	20 22 45.7	+0.8
SMG	**Samos**	**1.96**	**311**	P	Pn	20 22 45.9	+0.2
SMG				S	Sn	20 23 10.9	+0.5
SMG	**Samos**	**1.96**	**311**	P	Pn	20 22 45.6	0.0
SMG				S	Sn	20 23 10.8	+0.5
ISP	**Isparta**	**2.00**	**46**	Pn	Pn	20 22 47.1	+0.8
ISP	**Isparta**	**2.00**	**46**	P	Pb	20 22 47.6	-1.2
PASA	**Karahalli, USA**	**2.00**	**18**	P	Pn	20 22 46.8	+0.5
PASA				S	Sn	20 23 12.2	+0.6
KULA	**Kula-Manisa**	**2.07**	**359**	Pn	Pn	20 22 47.9	+0.7
GMLD	**Gumuldur**	**2.17**	**319**	Pn	Pb	20 22 50.1	-1.5
GOMA	**Golmarmara-Man**	**2.34**	**345**	Pn	Pn	20 22 51.9	+0.9
BLCB	**Balcova**	**2.35**	**326**	Pn	Pn	20 22 51.3	+0.3
BLCB	**Balcova**	**2.35**	**326**	P	Pn	20 22 51.2	+0.2
GORD	**Gordes-Manisa**	**2.50**	**350**	Pn	Pn	20 22 53.7	+0.6
URLA	**Izmir**	**2.55**	**319**	Pn	Pb	20 22 55.9	-2.2
APE	**Apeiranthos**	**2.63**	**285**	P	Pn	20 22 55.5	+0.6
APE	**Apeiranthos**	**2.63**	**285**	P	Pn	20 22 55.2	+0.3
NPS	**Neapolis**	**2.78**	**246**	P	Pn	20 22 58.5	+1.6
NPS	**Neapolis**	**2.78**	**246**	P	Pn	20 22 57.8	+0.9
CHOS	**Chios island**	**2.87**	**313**	P	Pn	20 22 58.9	+0.7
CHOS	**Chios island**	**2.87**	**313**	P	Pn	20 22 58.4	+0.2
AKMS	**Akamas**	**3.28**	**115**	P	Pn	20 23 02.8	-0.9
IDI	**Anoyia**	**3.31**	**251**	Pn	Pn	20 23 05.2	+0.9
	9.7nm,0.3s,baz=68,slow=19,SNR=33						
IDI				Sn	Sn	20 23 46.1	+2.3
	11nm,0.3s,baz=5.7,slow=5.6,SNR=12						
IDI	**Anoyia**	**3.31**	**251**	P	Pn	20 23 05.2	+0.9
PRK	**Paraskevi**	**3.40**	**326**	P	Pn	20 23 06.4	+1.0
PRK	**Paraskevi**	**3.40**	**326**	P	Pn	20 23 05.8	+0.4
ALFC	**Alefka**	**3.42**	**111**	P	Pn	20 23 04.7	-1.0
NATA	**Nata**	**3.56**	**117**	P	Pn	20 23 07.0	-0.6
SIGR	**SIGRI**	**3.57**	**322**	P	Pn	20 23 08.7	+1.0
KARY	**Karystos**	**3.76**	**296**	P	Pn	20 23 10.2	-0.2
EZN	**Ezine**	**3.86**	**332**	P	Pn	20 23 13.1	+1.3
CSS	**Mathiatis**	**4.04**	**110**	P	Pn	20 23 13.8	-0.5
ASGA	**Asgata**	**4.05**	**113**	P	Pn	20 23 13.9	-0.6
GVD	**Gavdhos**	**4.09**	**248**	P	Pn	20 23 16.7	+1.8
DION	**Dionisos Attik**	**4.14**	**295**	P	Pn	20 23 16.5	+0.8
MVOU	**Mavrovouni**	**4.25**	**108**	P	Pn	20 23 16.4	-0.7
ANTO	**Ankara**	**4.70**	**42**	P	Pn	20 23 26.5	+3.1
KIRS	**Kirsehir-Merke**	**4.92**	**55**	⇓P	Pn	20 23 28.8	+2.3
BRTR	**Keskin Array B**	**5.09**	**48**	Pn	Pn	20 23 29.4	+0.6
	0.8nm,0.3s,baz=230,slow=15,SNR=22						
BRTR				Sn	Sn	20 24 29.4	+1.7
	0.8nm,0.3s,baz=225,slow=22,SNR=9.1						
	2.1nm,0.4s						
MMAI	**Mount Meron Ar**	**6.49**	**120**	Pn	Pn	20 23 46.0	-2.0
	3.5nm,0.3s,baz=299,slow=12,SNR=6.1						
MMAI				Sn	Sn	20 24 59.3	-2.9
	3.0nm,0.3s,baz=301,slow=27,SNR=6.0						
MMAI				LR	LR	20 27 24.7	
	comp=Z,18nm,21.3s,baz=322,slow=50						
	2.2nm,0.3s						
ASF	**Jabal al Asfar**	**8.00**	**120**	Pn	Pn	20 24 07.2	-1.6
	0.2nm,0.3s,baz=311,slow=10,SNR=1.5						
ASF				Sn	Sn	20 25 37.2	-2.3
	0.1nm,0.3s,baz=286,slow=20,SNR=0.9						
	0.7nm,0.4s						
EIL	**Elat**	**8.55**	**140**	Pn	Pn	20 24 14.4	-1.8
	0.8nm,0.3s,baz=350,slow=2.9,SNR=12						
EIL				Sn	Sn	20 25 47.4	-5.4
	1.9nm,0.3s,baz=344,slow=4.4,SNR=7.4						
	2.0nm,0.3s						
BOVS	**Bovan**	**8.96**	**325**	P	Pn	20 24 24.4	+2.6
BISRR	**Bisoca**	**9.22**	**351**	⇓P	Pn	20 24 28.2	+2.8
MLR	**Muntele Rosu**	**9.28**	**348**	Pn	Pn	20 24 28.4	+2.1
	0.2nm,0.3s,baz=224,slow=4.9,SNR=4.3						
MLR				LR	LR	20 28 47.5	
	comp=Z,35nm,18.1s,baz=224,slow=42						
	2.9nm,0.8s						
MLR	**Muntele Rosu**	**9.28**	**348**	⇓P	Pn	20 24 28.4	+2.1
GERES	**GERESS Array B**	**16.56**	**323**	Pn	P	20 26 08.2	+0.9
	baz=134,slow=15,SNR=5.0						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**25.08**	**357**	P	P	20 27 37.2	+0.4
	3.6nm,0.8s,baz=175,slow=8.5,SNR=8.8						
	3.6nm,0.8s						
MKAR	**Makanchi Array**	**40.66**	**58**	P	P	20 29 51.6	-1.1
	0.6nm,0.6s,baz=279,slow=6.9,SNR=6.2						
	0.6nm,0.6s						

*CATAC **01** 20:25:20.4±0.3, 16˚N±2˚×9˚0W±˚, h10km, M4.7/17, MLv4.7/17, Error ellipse: s-maj=4.3km s-min=2.4km az=19.0, confirmed*
*NEIC **01** 20:25:21.7±1.8, 15˚.82N±0˚.04×89˚.89W±0˚.04, h39km±17km, mb4.0/25, Error ellipse: s-maj=7.5km s-min=1.9km az=48.0*
*SNET **01** 20:25:22.0±4.5, 15˚.87N×89˚.90W, h27km, ML3.7, ML4.6*
ISC 01 20:25:17.3±1.2, **15˚.85N**±0˚.03×**89˚.89W**±0˚.02, **h9**km±10km, **n110**, σ1§**21**/124, **mb4.0**/4, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETF	**Flores**	**1.06**	**1**	Pn	**Pn**	**20 25 39.2**	**+0.8**
PETF				Sn	**Sn**	**20 25 54.9**	**+1.7**
PETF	**Flores**	**1.06**	**1**	*eP*	**Pn**	**20 25 39.9**	**+1.6**
PETF	**Flores**	**1.06**	**1**	P	**Pn**	**20 25 39.2**	**+0.8**
IZABA	**Izabal, Puerto**	**1.26**	**95**	*eP*	**Pg**	**20 25 42.1**	**+0.6**
IZABA	**Izabal, Puerto**	**1.26**	**95**	P	**Pg**	**20 25 42.2**	**+0.6**
ESQI	**Esquipulas**	**1.39**	**158**		**Pg**	**20 25 44.2**	**+0.2**
ESQI				Sn	**Sn**	**20 26 01.4**	**-0.2**
ESQI	**Esquipulas**	**1.39**	**158**	*eP*	**Pg**	**20 25 44.3**	**+0.3**
ESQI				*eS*	**Sg**	**20 26 02.4**	**+0.3**
ESQI	**Esquipulas**	**1.39**	**158**	P	**Pg**	**20 25 44.5**	**+0.4**
ESQI	**Esquipulas**	**1.39**	**158**	S	**Sg**	**20 26 03.2**	**+1.1**
SARH	**Santa Rosa de**	**1.53**	**134**	P	**Pg**	**20 25 46.7**	**+0.1**
SARH	**Santa Rosa de**	**1.53**	**134**	S	**Sg**	**20 26 07.4**	**+0.8**
MTO3	**Montecristo**	**1.53**	**160**		**Pb**	**20 25 46.0**	**-0.1**
MTO3				Sn	**Sb**	**20 26 06.1**	**+0.4**
MTO3	**Montecristo**	**1.53**	**160**	*eP*	**Pb**	**20 25 46.4**	**+0.3**
MTO3	**Montecristo**	**1.53**	**160**	S	**Sg**	**20 26 07.8**	**+1.1**
MTO3	**Montecristo**	**1.53**	**160**	P	**Pb**	**20 25 46.3**	**+0.3**
HUEH	**Huehuetenango**	**1.64**	**251**	Pn	**Pg**	**20 25 48.4**	**-0.4**
HUEH				Sn	**Sb**	**20 26 09.2**	**+0.3**
HUEH	**Huehuetenango**	**1.64**	**251**	*eP*	**Pg**	**20 25 48.9**	**+0.1**
HUEH				*eS*	**Sg**	**20 26 10.4**	**+0.2**
HUEH				IAML		20 26 22.4	
	comp=Z,8μm,0.3s						
HUEH	**Huehuetenango**	**1.64**	**251**	P	**Pg**	**20 25 49.5**	**+0.7**
HUEH	**Huehuetenango**	**1.64**	**251**	S	**Sg**	**20 26 12.0**	**+1.8**
RBDL	**Robledal**	**1.74**	**173**	*eP*	**Pb**	**20 25 49.7**	**+0.1**
RBDL				*eS*	**Sb**	**20 26 13.0**	**+1.4**
SLOZ	**Alcaldia de Sa**	**1.82**	**177**	*eP*	**Pn**	**20 25 47.0**	**-1.9**
SLOZ	**Alcaldia de Sa**	**1.82**	**177**	P	**Pb**	**20 25 51.1**	**+0.3**
SLOZ	**Alcaldia de Sa**	**1.82**	**177**	S	**Sb**	**20 26 15.0**	**+1.2**
LOAL	**Lomas de Alarc**	**1.85**	**177**	*eP*	**Pg**	**20 25 52.4**	**-0.3**
LOAL				*eS*	**Sg**	**20 26 16.6**	**-0.2**
LOAL	**Lomas de Alarc**	**1.85**	**177**	P	**Pg**	**20 25 52.7**	**-0.1**
UNIC	**Universidad Ca**	**1.89**	**170**	P	**Pb**	**20 25 52.6**	**+0.6**
UNIC	**Universidad Ca**	**1.89**	**170**	S	**Sg**	**20 26 17.9**	**-0.2**
LLGN	**La Laguna**	**1.91**	**151**	*eP*	**Pb**	**20 25 52.0**	**-0.4**
LLGN	**La Laguna**	**1.91**	**151**	P	**Pb**	**20 25 52.7**	**+0.2**
NUBE	**Las Nubes**	**1.94**	**177**	*eP*	**Pb**	**20 25 52.5**	**-0.5**
RTR	**El Retiro**	**1.96**	**173**	*eP*	**Pb**	**20 25 53.7**	**+0.4**
SNJE	**San Jose**	**1.99**	**172**	*eP*	**Pb**	**20 25 53.6**	**-0.2**
SNJE				*eS*	**Sb**	**20 26 20.3**	**+1.4**
FAME	**Alcaldia de Sa**	**2.00**	**183**	S	**Sg**	**20 26 22.0**	**+0.3**
SBLS	**San Blas**	**2.02**	**173**	*eP*	**Pb**	**20 25 55.2**	**+0.8**
CEVE	**Cerro Verde**	**2.03**	**173**	P	**Pg**	**20 25 55.7**	**-0.5**
CEDA	**San Andres**	**2.09**	**167**	*eS*	**Sb**	**20 26 23.6**	**+1.9**
CEDA	**San Andres**	**2.09**	**167**	S	**Sb**	**20 26 22.9**	**+1.2**
PIC2	**El Picacho**	**2.19**	**164**	*eP*	**Pb**	**20 25 58.2**	**+1.0**
PIC2				*eS*	**Sg**	**20 26 27.1**	**-0.5**
BOQS	**Boqueron**	**2.19**	**164**	*eP*	**Pb**	**20 25 57.4**	**+0.2**
RTAL	**Retalhuleu**	**2.19**	**233**	Pn	**Pb**	**20 25 56.2**	**-0.9**
RTAL				Sn	**Sb**	**20 26 25.6**	**+1.3**
RTAL	**Retalhuleu**	**2.19**	**233**	*eP*	**Pb**	**20 25 57.3**	**+0.2**
RTAL	**Retalhuleu**	**2.19**	**233**	P	**Pg**	**20 25 58.6**	**-0.7**
RTAL	**Retalhuleu**	**2.19**	**233**	S	**Sb**	**20 26 26.1**	**+1.7**
PMON	**Piamonte**	**2.20**	**165**	*eP*	**Pb**	**20 25 57.9**	**+0.5**
PMON				*eS*	**Sg**	**20 26 27.8**	**-0.3**
PMON	**Piamonte**	**2.20**	**165**	P	**Pb**	**20 25 58.1**	**+0.7**
PMON	**Piamonte**	**2.20**	**165**	S	**Sb**	**20 26 25.4**	**+0.6**
CCIG	**Comitan**	**2.20**	**281**		**Pb**	**20 25 56.1**	**-1.3**
CCIG	**Comitan**	**2.20**	**281**	S	**Sg**	**20 26 27.1**	**-1.0**
UEES	**Universidad Ev**	**2.22**	**163**	S	**Sb**	**20 26 25.8**	**+0.6**
LFU	**La Fuente**	**2.22**	**150**	*eP*	**Pb**	**20 25 57.9**	**+0.2**
JAYA	**Jayaque - finc**	**2.23**	**169**	S	**Sb**	**20 26 26.4**	**+1.0**
JAYA	**Jayaque - finc**	**2.23**	**169**	P	**Pb**	**20 25 58.5**	**+0.6**
IGN	**Direccin Gen**	**2.24**	**162**	S	**Sb**	**20 26 26.4**	**+0.5**
UTEC	**Universidad Te**	**2.24**	**163**	S	**Sb**	**20 26 26.4**	**+0.5**
LBRS	**Las Brisas**	**2.26**	**159**	*eP*	**Pb**	**20 25 58.6**	**+0.2**
LBRS				IAML		20 26 39.5	
	comp=Z,80nm,0.5s						
LOMA	**Loma Larga**	**2.30**	**162**	*eP*	**Pb**	**20 25 59.4**	**+0.3**
LOMA				*eS*	**Sb**	**20 26 28.4**	**+0.6**
LOMA	**Loma Larga**	**2.30**	**162**	P	**Pb**	**20 25 59.7**	**+0.6**
LOMA	**Loma Larga**	**2.30**	**162**	S	**Sb**	**20 26 27.9**	**+0.1**
INTHN	**La Esperanza I**	**2.31**	**131**	S	**Sb**	**20 26 27.9**	**-0.1**
PAVA	**Las Pavas**	**2.32**	**156**	P	**Pb**	**20 25 59.9**	**+0.5**
PAVA	**Las Pavas**	**2.32**	**156**	S	**Sb**	**20 26 28.3**	**0.0**
LFRS	**El Faro**	**2.36**	**160**	*eP*	**Pb**	**20 26 00.4**	**+0.3**
LALI	**Alcalda de L**	**2.42**	**167**	*eP*	**Pb**	**20 26 00.7**	**+0.7**
LALI				*eS*	**Sg**	**20 26 33.7**	**+1.3**
LALI	**Alcalda de L**	**2.42**	**167**	S	**Sb**	**20 26 30.9**	**+0.1**
SCLA	**Alcaldia de Sa**	**2.42**	**152**	*eP*	**Pb**	**20 26 01.8**	**+0.8**
SCLA				*eS*	**Sg**	**20 26 33.8**	**-1.2**
SCLA				IAML		20 26 38.5	
	comp=Z,273nm,0.6s						
SCLA	**Alcaldia de Sa**	**2.42**	**152**	S	**Sb**	**20 26 30.6**	**-0.4**
MARCA	**Marcala la Paz**	**2.46**	**133**	S	**Sb**	**20 26 31.6**	**-0.8**
TECO	**Alcaldia de Te**	**2.54**	**155**	S	**Sb**	**20 26 33.8**	**-0.8**
PQSS	**Presa 15 de Se**	**2.56**	**150**	S	**Sb**	**20 26 34.2**	**-0.9**
TECA	**Tecapa**	**2.70**	**150**	*eP*	**Pb**	**20 26 06.4**	**+0.4**
PACA	**Pacayal**	**2.81**	**147**	S	**Sb**	**20 26 40.4**	**-2.1**
RANC	**El Ranchito**	**2.86**	**147**	*eS*	**Sg**	**20 26 47.1**	**-2.2**
CNRM	**Centro Naciona**	**2.89**	**145**	S	**Sb**	**20 26 42.3**	**-2.3**
TGUH	**Tegucigalpa,Un**	**3.10**	**125**		**Pn**	**20 26 08.5**	**+1.9**
TGUH	**Tegucigalpa,Un**	**3.10**	**125**	S	**Sb**	**20 26 47.1**	**-3.6**
CRIN	**San Cristobal**	**4.17**	**138**	Pn	**Pn**	**20 26 26.0**	**+1.1**
CNGN	**Cerro Negro**	**4.55**	**137**	Pn	**Pn**	**20 26 27.6**	**+1.1**
TEIG	**Tepich**	**4.61**	**19**		**Pn**	**20 26 29.0**	**+1.8**
SIUN	**Universidad Ur**	**5.39**	**113**	Pn	**Pn**	**20 26 38.5**	**+0.6**
TLIG	**Tlapa**	**8.48**	**283**		**Pn**	**20 27 21.3**	**+0.7**
SOR	**Soroa**	**9.48**	**42**		**Pn**	**20 27 36.2**	**+2.1**
CAMR	**Camarioca**	**10.77**	**47**	Pn	**Pn**	**20 27 54.0**	**+2.2**
MTDJ	**Mount Denham**	**12.05**	**77**	Pn	**Pn**	**20 28 10.7**	**+1.2**
HBVL	**Hebbronville**	**13.82**	**325**	Pn	**Pn**	**20 28 34.9**	**+1.3**
553A	**Crawfordville**	**15.12**	**18**	Pn	**Pn**	**20 28 46.4**	**-4.8**
833A	**Chaparral WMA,**	**15.21**	**326**		**Pn**	**20 28 47.8**	**-4.6**
833A				IAmb	IAmb	20 29 02.8	
	comp=Z,11nm,0.8s						
352A	**Blakely**	**16.20**	**15**	Pn	**Pn**	**20 29 03.1**	**-2.1**
DRIO	**Del Rio**	**16.73**	**326**		**Pn**	**20 29 11.7**	**-0.3**
DRIO				IAmb	IAmb	20 29 35.0	
	comp=Z,4.5nm,0.6s						
237A	**Washetta, Mont**	**16.95**	**343**		**P**	**20 29 14.8**	**-2.0**
BRDY	**Brady**	**17.47**	**333**		**P**	**20 29 21.9**	**-0.6**
SAND	**Sanderson**	**17.98**	**323**		**P**	**20 29 28.1**	**-0.1**
TX31	**Lajitas Ar. Si**	**18.46**	**319**		**Pn**	**20 29 34.1**	**+0.4**
TXAR	**Lajitas Array**	**18.46**	**319**		**Pn**	**20 29 34.1**	**+0.4**
ALPN	**Alpine**	**19.18**	**321**	P	**Pn**	**20 29 42.0**	**-0.4**
MNHN	**Monahans**	**19.38**	**325**	P	**Pn**	**20 29 43.5**	**-1.2**
APMT	**Aspermont**	**19.70**	**334**	P	**Pn**	**20 29 47.4**	**-1.2**
APMT				IAmb	IAmb	20 29 59.6	
	comp=Z,7.3nm,0.7s						
SDV	**Santo Domingo**	**20.03**	**108**		Pn	20 29 51.6	-1.1
SDV				IAmb	IAmb	20 30 01.6	
	comp=Z,13nm,0.9s						
POST	**Post**	**20.11**	**331**	P	**P**	**20 29 51.4**	**-0.2**
POST				IAmb	IAmb	20 30 07.2	
	comp=Z,9.7nm,0.9s						
VHRN	**Van Horn**	**20.29**	**320**		**P**	**20 29 52.9**	**-0.7**
WMOK	**Wichita Mounta**	**20.43**	**339**	P	**P**	**20 29 53.8**	**-1.3**
MNTX	**Cornudas Mount**	**21.17**	**321**	P	**P**	**20 30 02.3**	**-0.7**
MNTX				IAmb	IAmb	20 30 10.6	
	comp=Z,7.2nm,1.5s						
BAUV	**El Baul**	**22.40**	**105**		**P**	**20 30 17.0**	**+0.6**
121A	**Cookes Peak, D**	**23.23**	**319**		**P**	**20 30 25.7**	**+0.7**
121A				IAmb	IAmb	20 30 31.3	
	comp=Z,6.3nm,1.1s						
BNM	**Barren Site**	**23.64**	**323**	P	**P**	**20 30 29.6**	**+0.3**
Y22A	**Socorro**	**23.69**	**323**	P	**P**	**20 30 28.6**	**-1.1**
Y22A				IAmb	IAmb	20 30 35.5	
	comp=Z,10nm,1.4s						
Q51A	**Peebles**	**23.79**	**13**	P	**P**	**20 30 30.8**	**+0.4**
SBM	**South Baldy**	**23.84**	**322**	P	**P**	**20 30 30.8**	**-0.6**
LENM	**Lemitar**	**23.86**	**323**	P	**P**	**20 30 29.3**	**-2.0**
ANMO	**Albuquerque**	**24.13**	**325**	P	**P**	**20 30 33.1**	**-0.8**
ANMO				IAmb	IAmb	20 31 11.8	
	comp=Z,3.4nm,1.1s						
T25A	**Trinidad**	**24.80**	**331**	P	**P**	**20 30 42.0**	**+2.0**

*IDC **01** 20:28:31.0±14.0, 18˚.42S×178˚.29W, h476km±158km, mb3.2/7, mbtmp4.1/7, Error ellipse: s-maj=51.2km s-min=31.7km az=71.0*
*NEIC **01** 20:28:32.2±0.9, 18˚.6S±0˚.2×178˚.3W±0˚.2, h486km±11km, mb4.3/18, Error ellipse: s-maj=31.7km s-min=23.9km az=142.0*
ISC 01 20:28:33.3±0.9, **18˚.5S**±0˚.2×**178˚.4W**±0˚.2, **h500**km, **n27**, σ0§**69**/27, **mb4.2**/16, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.45**	**283**	P	**P**	**20 29 46.4**	**-1.2**
ARMA	**Armidale**	**29.63**	**241**	P	**P**	**20 33 56.3**	**-1.3**
ARMA				IAmb	IAmb	20 34 35.9	
	comp=Z,19nm,1.4s						
COEN	**Coen**	**37.10**	**271**	P	**P**	**20 35 01.2**	**+0.4**
COEN				IAmb	IAmb	20 35 39.5	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	**38.33**	**242**	P	**P**	**20 35 10.8**	**+0.1**
STKA	**Stephens Creek**	**38.33**	**242**	P	**P**	**20 35 11.3**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=92,slow=11,SNR=12						
	comp=Z,3.1nm,0.7s						
BBOO	**Buckleboo**	**43.10**	**242**	P	**P**	**20 35 49.3**	**+0.4**
WR8	**Warramunga Arr**	**44.36**	**260**	P	**P**	**20 35 58.6**	**-0.3**
WR8				IAmb	IAmb	20 36 41.0	
	comp=Z,8.1nm,1.4s						
WB0	**Warramunga Arr**	**44.48**	**260**	P	**P**	**20 35 59.9**	**+0.1**
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**20 35 59.5**	**-0.5**
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**20 36 00.0**	**0.0**
	comp=Z,1.2nm,0.5s,baz=96,slow=6.6,SNR=15						
	comp=Z,1.2nm,0.5s						
AS31	**Alice Springs**	**44.62**	**255**	P	**P**	**20 36 01.1**	**+0.3**
ASAR	**Alice Springs**	**44.62**	**255**	P	**P**	**20 36 00.7**	**-0.2**
ASAR	**Alice Springs**	**44.62**	**255**	P	**P**	**20 36 01.4**	**+0.6**
	comp=Z,9.4nm,0.5s,baz=90,slow=8.5,SNR=178						
	comp=Z,9.4nm,0.5s						
FORT	**Forrest**	**49.74**	**245**	P	**P**	**20 36 39.3**	**0.0**
FORT				IAmb	IAmb	20 37 11.2	
	comp=Z,11nm,1.1s						
KNRA	**Kununurra**	**50.42**	**265**	P	**P**	**20 36 45.1**	**+0.6**
KNRA				IAmb	IAmb	20 37 27.8	
	comp=Z,20nm,1.2s						
FITZ	**Fitzroy Crossi**	**52.92**	**261**	P	**P**	**20 37 03.5**	**+0.9**
QSPA	**South Pole Qui**	**71.53**	**180**	P	**P**	**20 39 03.2**	**+0.2**
QSPA				IAmb	IAmb	20 39 28.4	
	comp=Z,6.7nm,1.5s						
QSPA	**South Pole Qui**	**71.53**	**180**	P	**P**	**20 39 03.4**	**+0.4**
	comp=Z,2.4nm,0.9s,baz=39,slow=3.4,SNR=7.7						
	comp=Z,2.4nm,0.9s						
K15K	**Wolf Creek Mou**	**81.65**	**8**	P	**P**	**20 39 59.8**	**+1.6**
**L18K

BUAI	**Buenos Aires**	**1.77**	**104**	*e*P	**Pn**	**21 36 37.4**	**+1.0**
VORI	**VORI**	**1.77**	**106**	*e*P	**Pb**	**21 36 38.4**	**-0.5**
GPS1	**Guardaparques**	**1.78**	**108**	*e*P	**Pn**	**21 36 36.9**	**+0.4**
GPS2	**Hotel Rincn d**	**1.79**	**108**	*e*P	**Pn**	**21 36 37.1**	**+0.5**
SAJU	**San Juanillo,**	**1.83**	**133**	*e*P	**Pn**	**21 36 36.7**	**-0.4**
LIMN	**Finca el Limon**	**1.86**	**22**	P	**Pn**	**21 36 38.0**	**+0.3**
LIMN				S	**Sn**	**21 37 01.9**	**+1.2**
JUD3	**Juan Diaz 3**	**1.90**	**127**	*e*P	**Pn**	**21 36 38.0**	**-0.2**
PLVR	**Palo Verde**	**1.95**	**120**	*e*P	**Pb**	**21 36 42.2**	**+0.2**
MATN	**Matagalpa**	**1.96**	**35**	P	**Pn**	**21 36 38.0**	**-1.0**
HORNC	**Hornillas**	**1.96**	**108**	*e*P	**Pn**	**21 36 40.2**	**+1.2**
NICO	**Nicoya**	**1.99**	**126**	*e*P	**Pb**	**21 36 42.1**	**-0.4**
CUI	**Cuipilapa**	**1.99**	**109**	*e*P	**Pn**	**21 36 40.3**	**+0.9**
VMAR	**Armenia, Volca**	**1.99**	**104**	*e*P	**Pn**	**21 36 40.2**	**+0.8**
MOTZ	**Rio Naranjo**	**2.07**	**108**	*e*P	**Pn**	**21 36 41.4**	**+1.0**
CNCH	**Conchagua**	**2.08**	**339**	*e*P	**Pn**	**21 36 42.0**	**+1.3**
CNCH	**Conchagua**	**2.08**	**339**	S	**Sb**	**21 37 08.4**	**-1.2**
CNCH	**Conchagua**	**2.08**	**339**	⇑P	**Pn**	**21 36 42.0**	**+1.3**
INVE	**Universidad In**	**2.15**	**113**	*e*P	**Pb**	**21 36 45.9**	**+0.7**
TIMP	**Tierras Morena**	**2.15**	**110**	*e*P	**Pb**	**21 36 43.8**	**-1.6**
TENO	**El Achiote**	**2.15**	**106**	*e*P	**Pn**	**21 36 41.8**	**+0.2**
TILA	**Tilaran**	**2.24**	**112**	*e*P	**Pb**	**21 36 46.7**	**-0.1**
JUNT	**Juntas**	**2.32**	**116**	*e*P	**Pb**	**21 36 47.6**	**-0.6**
JTS	**Las Juntas de**	**2.32**	**116**	Pn	**Pn**	**21 36 44.4**	**+0.5**
	13nm,0.3s,baz=300,slow=12,SNR=33						
JTS				Sn	**Sn**	**21 37 10.1**	**-1.8**
	24nm,0.3s,baz=318,slow=9.9,SNR=7.4						
JTS				LR	LR	21 37 18.1	
	comp=Z,59nm,18.2s,baz=302,slow=33 60nm,0.5s						
JTS	**Las Juntas de**	**2.32**	**116**	P	**Pn**	**21 36 44.7**	**+0.7**
JTS	**Las Juntas de**	**2.32**	**116**	*e*P	**Pn**	**21 36 44.6**	**+0.7**
RCON	**San Juan de Ri**	**2.33**	**23**	⇓P	**Pn**	**21 36 45.3**	**+1.1**
OCON	**Estacion meteo**	**2.37**	**14**	S	**Sn**	**21 37 15.6**	**+2.5**
RCPN	**Sur Rio San Ju**	**2.39**	**24**	S	**Sn**	**21 37 15.1**	**+1.4**
RCPN	**Sur Rio San Ju**	**2.39**	**24**	⇓P	**Pn**	**21 36 46.2**	**+1.2**
LCY	**Lacayo**	**2.41**	**330**	*e*P	**Pb**	**21 36 48.4**	**-1.3**
RCVN	**Varillal2**	**2.41**	**21**	⇓P	**Pn**	**21 36 46.2**	**+0.9**
RANC	**El Ranchito**	**2.41**	**331**	*e*P	**Pb**	**21 36 48.5**	**-1.3**
RANC				*e*S	**Sn**	**21 37 13.4**	**-0.8**
TABAC	**Tabacon**	**2.41**	**110**	*e*P	**Pb**	**21 36 48.1**	**-1.7**
JCR1	**Jicaral**	**2.42**	**127**	*e*P	**Pb**	**21 36 50.2**	**+0.3**
MTEVE	**Monteverde**	**2.42**	**114**	*e*P	**Pn**	**21 36 47.8**	**+2.4**
PACA	**Pacayal**	**2.46**	**330**	*e*P	**Pb**	**21 36 49.0**	**-1.6**
PACA				*e*S	**Sn**	**21 37 16.1**	**+0.8**
PACA	**Pacayal**	**2.46**	**330**	S	**Sn**	**21 37 18.1**	**+2.7**
CASO	**Castillo**	**2.46**	**111**	*e*P	**Pb**	**21 36 49.6**	**-1.0**
VARE2	**V. Arenal**	**2.47**	**110**	*e*P	**Pb**	**21 36 50.4**	**-0.4**
ARE1	**Arenal 1**	**2.47**	**110**	*e*P	**Pb**	**21 36 50.6**	**-0.2**
CEDE	**Laguna Cedeo**	**2.47**	**109**	*e*P	**Pn**	**21 36 48.5**	**+2.4**
FORC	**Fortuna**	**2.51**	**110**	*e*P	**Pb**	**21 36 51.4**	**-0.1**
YUSH	**Yuscaran**	**2.63**	**5**	S	**Sn**	**21 37 20.8**	**+1.3**
YUSH	**Yuscaran**	**2.63**	**5**	⇑P	**Pn**	**21 36 49.7**	**+1.5**
SCLA	**Alcaldia de Sa**	**2.86**	**326**	*e*P	**Pb**	**21 36 55.3**	**-2.2**
VPL1	**V. Platanar**	**2.87**	**111**	*e*P	**Pb**	**21 36 56.0**	**-1.6**
ACOS	**Acosta**	**3.24**	**118**	*e*P	**Pb**	**21 37 02.6**	**-1.4**
PAR1A	**Puntarenas Pro**	**3.26**	**121**	*e*P	**Pn**	**21 36 59.6**	**+2.7**
PICV	**PH. Pirrs**	**3.30**	**120**	*e*P	**Pn**	**21 36 59.9**	**+2.5**
VICA	**Volcano Irazu**	**3.44**	**112**	*e*P	**Pn**	**21 37 03.4**	**+3.7**
PIEC	**Cerro El Cedra**	**3.50**	**116**	*e*P	**Pn**	**21 37 02.6**	**+2.2**
ABRB	**Las Abras (San**	**3.55**	**111**	*e*P	**Pb**	**21 37 06.2**	**-3.1**
BUS1	**Rivas**	**3.72**	**118**	*e*P	**Pn**	**21 37 05.6**	**+2.1**
CEUA	**Cerro Uatsi, L**	**4.41**	**112**	*e*P	**Pn**	**21 37 14.8**	**+2.2**
PIRO	**Carate, Puerto**	**4.69**	**128**	*e*P	**Pn**	**21 37 19.1**	**+2.6**
TXAR	**Lajitas Array**	**23.68**	**322**	P	**P**	**21 41 18.6**	**+1.3**
	1.1nm,0.8s,baz=144,slow=9.3,SNR=9.5						
TXAR				PcP	**PcP**	**21 45 02.5**	**+1.0**
	0.4nm,0.7s,baz=132,slow=3.0,SNR=3.8 1.1nm,0.8s						
H06E1	**SOCORRO T-PHAS**	**24.18**	**291**	T	T	22 06 29.8	
	SNR=7.5						
MDP	**Montagnes des**	**34.61**	**97**	LR	LR	22 00 05.3	
	comp=Z,46nm,19.1s,baz=330,slow=42						
PDAR	**Pinedale Array**	**36.94**	**332**	P	**P**	**21 43 14.4**	**-0.2**
	0.2nm,0.5s,baz=128,slow=10,SNR=3.7 0.2nm,0.5s						
FRB	**Frobisher Bay**	**53.97**	**10**	LR	LR	22 08 00.9	
	comp=Z,25nm,19.0s,baz=48,slow=36						
ILAR	**Eielson Array**	**67.19**	**336**	P	**P**	**21 46 57.3**	**-1.9**
	0.3nm,0.9s,baz=112,slow=7.9,SNR=2.5 0.3nm,0.9s						
SONM	**Songino Array**	**119.90**	**350**	PKP	**PKPdf**	**21 54 55.5**	**-0.6**
	0.1nm,0.4s,baz=36,slow=2.5,SNR=1.9						
KSRS	**Korea Array**	**121.42**	**328**	PKP	**PKiKP**	**21 54 59.3**	**+0.1**
	0.9nm,0.6s,baz=9.3,slow=2.0,SNR=2.7						
ASAR	**Alice Springs**	**139.18**	**247**	PKP	**PKPdf**	**21 55 33.8**	**+0.7**
	0.2nm,0.6s,baz=70,slow=1.4,SNR=1.5						
WRA	**Warramunga Arr**	**139.30**	**253**	PKP	**PKiKP**	**21 55 35.1**	**-0.5**
	0.2nm,0.2s,baz=88,slow=1.2,SNR=1.3						
CMAR	**Chiang Mai Arr**	**149.82**	**349**	PKP	**PKPdf**	**21 55 50.6**	**-0.9**
	0.6nm,0.3s,baz=287,slow=3.0,SNR=4.3						
CMAR				PKPbc	**PKiKP**	**21 55 56.8**	**-0.5**
	0.7nm,0.3s,baz=357,slow=1.9,SNR=2.7						

*NEIC **01** 21:38:52.1±1.6, 17.5°S±0.2×178.9°W±0.1, h521km±8km, mb4.0/88, Error ellipse: s-maj=26.7km s-min=16.2km az=144.0*
*IDC **01** 21:38:53.4±2.7, 17.73°S×178.92°W, h538km±30km, mb3.3/10, mbtmp4.2/11, Error ellipse: s-maj=26.4km s-min=13.6km az=151.0*

ISC 01 21:38:52.8±0.6**, 17.7°S**±0.1×**178.8°W**±0.1**, h539**km**, n122,** σ0**88**/123**, mb4.0**/52**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.98**	**269**		**P**	**21 40 08.1**	**+1.3**
AFI	**Afiamalu**	**7.76**	**62**	P	**P**	**21 40 44.7**	**-3.3**
MARNC	**Mare, Loyalty**	**12.95**	**251**	P	**P**	**21 41 40.5**	**-0.6**
PINNC	**Pines Island,**	**13.79**	**247**	P	**P**	**21 41 49.2**	**-0.6**
DZM	**Mont Dzumac**	**14.52**	**250**	P	**P**	**21 41 56.4**	**-1.2**
	11nm,1.1s,baz=135,slow=19,SNR=1.6						
URZ	**Urewera**	**20.79**	**189**	P	**P**	**21 42 55.1**	**-1.3**
	9.2nm,0.7s,baz=74,slow=6.8,SNR=2.5 9.2nm,0.7s						
THZ	**Tophouse**	**25.01**	**195**	P	**P**	**21 43 34.4**	**+0.3**
ARMA	**Armidale**	**29.70**	**239**	P	**P**	**21 44 16.4**	**+1.0**
ARMA				IAmb	IAmb	21 44 17.4	
	comp=Z,3.1nm,0.7s						
STKA	**Stephens Creek**	**38.38**	**241**	P	**P**	**21 45 29.1**	**+0.9**
STKA	**Stephens Creek**	**38.38**	**241**	P	**P**	**21 45 29.2**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=102,slow=12,SNR=4.3 comp=Z,2.5nm,0.5s						
BBOO	**Buckleboo**	**43.16**	**241**	P	**P**	**21 46 06.6**	**+0.5**
WR8	**Warramunga Arr**	**44.13**	**259**	P	**P**	**21 46 13.1**	**-0.7**
WR8				IAmb	IAmb	21 46 22.5	
	comp=Z,3.6nm,1.1s						
WB0	**Warramunga Arr**	**44.24**	**260**	P	**P**	**21 46 13.2**	**-1.5**
WB2	**Warramunga Arr**	**44.27**	**259**	P	**P**	**21 46 14.6**	**-0.3**
WRA	**Warramunga Arr**	**44.28**	**259**	P	**P**	**21 46 14.3**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=95,slow=7.4,SNR=5.8 comp=Z,0.7nm,0.6s						
AS31	**Alice Springs**	**44.47**	**254**	P	**P**	**21 46 16.5**	**+0.1**
AS31				IAmb	IAmb	21 46 17.1	
	comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**44.47**	**254**	P	**P**	**21 46 16.2**	**-0.2**
ASAR	**Alice Springs**	**44.47**	**254**	P	**P**	**21 46 16.6**	**+0.2**
	comp=Z,6.7nm,0.5s,baz=88,slow=8.2,SNR=128						
ASAR				PcP	**PcP**	**21 47 48.9**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=98,slow=3.3,SNR=5.2						
ASAR				S	**S**	**21 52 10.9**	**-1.6**
	comp=Z,0.9nm,0.9s,baz=85,slow=18,SNR=4.5 comp=Z,6.7nm,0.5s						
FORT	**Forrest**	**49.74**	**244**	P	**P**	**21 46 55.8**	**-0.1**
KNRA	**Kununurra**	**50.11**	**264**	P	**P**	**21 46 57.1**	**-1.7**
KNRA				IAmb	IAmb	21 47 12.2	
	comp=Z,9.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.67**	**260**	P	**P**	**21 47 16.7**	**-0.6**
MJAR	**Matsushiro Arr**	**67.50**	**324**	P	**P**	**21 48 54.6**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=149,slow=9.6,SNR=2.4 comp=Z,1.2nm,0.6s						
N02D	**Trinity Center**	**78.17**	**40**	P	**P**	**21 49 56.1**	**-0.5**
KDAK	**Kodiak Island**	**78.29**	**14**	P	**P**	**21 49 56.5**	**-0.2**
M02C	**Callahan**	**78.33**	**40**	P	**P**	**21 49 56.4**	**-1.0**
PNTR	**Pine Nut**	**79.06**	**43**	P	**P**	**21 50 01.9**	**+0.3**
PNTR				IAmb	IAmb	21 50 03.9	
	comp=Z,3.4nm,0.7s						
N15K	**Kwethluk River**	**79.06**	**9**	P	**P**	**21 50 01.1**	**+0.3**
N15K				IAmb	IAmb	21 50 04.4	
	comp=Z,8.3nm,1.1s						
P18K	**Big Mountain,**	**79.20**	**12**	P	**P**	**21 50 00.7**	**-0.9**
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**21 50 05.2**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=225,slow=7.6,SNR=6.6 comp=Z,1.3nm,0.7s						
M16K	**Timber Creek**	**80.06**	**10**	P	**P**	**21 50 03.1**	**-2.9**
M16K				IAmb	IAmb	21 50 04.1	
	comp=Z,5.4nm,1.0s						
TPNV	**Topopah Spring**	**80.16**	**46**	P	**P**	**21 50 07.1**	**-0.2**
ILSW	**Iliamna Southw**	**80.17**	**13**	P	**P**	**21 50 06.3**	**-0.4**
ILSW				IAmb	IAmb	21 50 08.9	
	comp=Z,4.9nm,0.7s						
N18K	**Kilae Creek**	**80.26**	**11**	P	**P**	**21 50 06.4**	**-0.7**
N18K				IAmb	IAmb	21 50 15.4	
	comp=Z,6.1nm,1.2s						
K05A	**Summer Lake**	**80.29**	**39**	P	**P**	**21 50 08.4**	**+0.5**
K05A				IAmb	IAmb	21 50 10.0	
	comp=Z,5.0nm,1.1s						
J05D	**Fort Rock, OR**	**80.41**	**39**	P	**P**	**21 50 09.3**	**+0.8**
J05D				IAmb	IAmb	21 50 10.5	
	comp=Z,3.4nm,0.7s						
L16K	**Owhat River**	**80.63**	**9**	P	**P**	**21 50 08.9**	**0.0**
L16K				IAmb	IAmb	21 50 10.4	
	comp=Z,8.0nm,1.1s						
N19K	**Bonanza Creek**	**80.66**	**12**	P	**P**	**21 50 08.4**	**-0.9**
N19K				IAmb	IAmb	21 50 09.2	
	comp=Z,5.2nm,1.0s						
K15K	**Wolf Creek Mou**	**80.89**	**8**	P	**P**	**21 50 11.1**	**+0.8**
K15K				IAmb	IAmb	21 50 12.8	
	comp=Z,5.2nm,0.9s						
SLKM	**Skilak Lake**	**81.28**	**14**	P	**P**	**21 50 12.0**	**-0.4**
SPU	**Mount Spurr**	**81.48**	**13**	P	**P**	**21 50 12.6**	**-0.9**
SPU				IAmb	IAmb	21 50 24.6	
	comp=Z,3.6nm,1.1s						
L18K	**Granite Mounta**	**81.56**	**10**	P	**P**	**21 50 14.2**	**+0.4**
L18K				IAmb	IAmb	21 50 15.2	
	comp=Z,4.0nm,0.8s						
K17K	**Iditarod**	**81.76**	**9**	P	**P**	**21 50 15.6**	**+0.8**
K17K				IAmb	IAmb	21 50 31.1	
	comp=Z,5.8nm,1.1s						
STLK	**Strandline Lak**	**81.82**	**13**	P	**P**	**21 50 14.2**	**-1.0**
STLK				IAmb	IAmb	21 50 15.1	
	comp=Z,2.5nm,0.8s						
L19K	**White Mountain**	**81.85**	**11**	P	**P**	**21 50 15.9**	**+0.7**
L19K				IAmb	IAmb	21 50 18.3	
	comp=Z,3.3nm,1.0s						
I07A	**Izee**	**81.89**	**39**	P	**P**	**21 50 17.2**	**+1.2**
M20K	**Styx River**	**81.90**	**12**	P	**P**	**21 50 14.9**	**-0.8**
J16K	**Anvik River**	**81.97**	**8**	P	**P**	**21 50 16.5**	**+0.7**
J16K				IAmb	IAmb	21 50 35.0	
	comp=Z,7.1nm,1.1s						
SUA	**Susitna One**	**82.02**	**13**	P	**P**	**21 50 15.8**	**-0.5**
PWL	**Port Wells**	**82.03**	**15**	P	**P**	**21 50 15.7**	**-0.6**
PWL				IAmb	IAmb	21 50 24.6	
	comp=Z,5.2nm,1.0s						
J17K	**VABM Dome**	**82.29**	**9**	P	**P**	**21 50 18.2**	**+0.7**
J17K				IAmb	IAmb	21 50 31.4	
	comp=Z,7.3nm,1.1s						
GHO	**Glory Hole Cre**	**82.70**	**14**	P	**P**	**21 50 19.4**	**-0.3**
GHO				IAmb	IAmb	21 50 20.6	
	comp=Z,5.6nm,0.9s						
J18K	**Innoko River**	**82.72**	**10**	P	**P**	**21 50 20.1**	**+0.4**
J18K				IAmb	IAmb	21 50 21.0	
	comp=Z,3.2nm,0.8s						
SML	**Sawmill**	**82.86**	**14**	P	**P**	**21 50 20.2**	**-0.3**
SML				IAmb	IAmb	21 50 22.4	
	comp=Z,6.6nm,0.9s						
CUT	**Chulitna**	**82.96**	**13**	P	**P**	**21 50 21.0**	**+0.1**
PPLA	**Purkeypile**	**83.01**	**12**	P	**P**	**21 50 20.5**	**-0.8**
PPLA				IAmb	IAmb	21 50 37.3	
	comp=Z,5.5nm,1.2s						
BMRM	**Bremner River**	**83.06**	**16**	P	**P**	**21 50 21.8**	**+0.3**
K20K	**Telida**	**83.07**	**11**	P	**P**	**21 50 21.5**	**0.0**
K20K				IAmb	IAmb	21 50 22.2	
	comp=Z,4.6nm,0.9s						
WAX	**Waxell Ridge**	**83.11**	**17**	P	**P**	**21 50 21.3**	**-0.4**
WAX				IAmb	IAmb	21 50 21.6	
	comp=Z,7.6nm,1.0s						
SCM	**Sheep Creek Mo**	**83.12**	**14**	P	**P**	**21 50 21.9**	**+0.1**
TGL	**Tana Glacier**	**83.37**	**17**	P	**P**	**21 50 22.8**	**-0.3**
J19K	**Poorman**	**83.39**	**10**	P	**P**	**21 50 23.2**	**+0.3**
TABL	**Table Mountain**	**83.59**	**18**	P	**P**	**21 50 22.6**	**-1.7**
VRDI	**Verde Repeater**	**83.59**	**16**	P	**P**	**21 50 23.5**	**-0.8**
VRDI				IAmb	IAmb	21 50 35.4	
	comp=Z,4.1nm,1.1s						
N25K	**Chitina, Valde**	**83.61**	**16**	P	**P**	**21 50 24.1**	**0.0**
M24K	**Tolsona, Glenn**	**83.64**	**15**	P	**P**	**21 50 25.2**	**+0.9**
M24K				IAmb	IAmb	21 50 40.7	
	comp=Z,6.5nm,1.0s						
GRNC	**Granite Creek**	**83.65**	**17**	P	**P**	**21 50 24.4**	**-0.2**
GRNC				IAmb	IAmb	21 50 34.4	
	comp=Z,6.5nm,1.1s						
GLB	**Gilahina Butte**	**83.67**	**16**	P	**P**	**21 50 24.6**	**+0.1**
J20K	**Nowinta River**	**83.81**	**11**	P	**P**	**21 50 25.1**	**+0.1**
J20K				IAmb	IAmb	21 50 25.8	
	comp=Z,1.8nm,0.6s						
TRF	**Thorofare Moun**	**83.89**	**12**	P	**P**	**21 50 25.1**	**-0.5**
TRF				IAmb	IAmb	21 50 25.8	
	comp=Z,5.4nm,0.9s						
LOGN	**Logan Glacier**	**83.94**	**18**	P	**P**	**21 50 25.9**	**-0.1**
BARN	**Barnard Glacie**	**83.94**	**17**	P	**P**	**21 50 26.5**	**+0.4**
CTGM	**Chitina Glacie**	**83.96**	**17**	P	**P**	**21 50 26.4**	**+0.4**
CTGM				IAmb	IAmb	21 50 39.9	
	comp=Z,4.2nm,1.1s						
R32K	**Eaglecrest**	**84.03**	**22**	P	**P**	**21 50 28.9**	**+2.6**
O28M	**Mount Upton**	**84.13**	**18**	P	**P**	**21 50 27.5**	**+0.4**
O28M				IAmb	IAmb	21 50 27.8	
	comp=Z,4.0nm,0.7s						
RND	**Reindeer**	**84.15**	**13**	P	**P**	**21 50 27.2**	**+0.3**
DHY	**Denali Highway**	**84.19**	**14**	P	**P**	**21 50 27.0**	**-0.2**
DHY				IAmb	IAmb	21 50 33.3	
	comp=Z,4.0nm,1.1s						
BPAW	**Bear Paw Mtn.**	**84.33**	**12**	P	**P**	**21 50 27.5**	**-0.2**
M26K	**Nabesna, AK**	**84.69**	**16**	P	**P**	**21 50 29.7**	**+0.3**
H19K	**Roundabout Mou**	**84.69**	**9**	P	**P**	**21 50 29.8**	**+0.5**
G18K	**Tagagawik**	**84.72**	**8**	P	**P**	**21 50 28.9**	**-0.6**
G18K				IAmb	IAmb	21 50 33.9	
	comp=Z,4.1nm,1.1s						
S34M	**Telegraph Cree**	**85.01**	**23**	P	**P**	**21 50 32.4**	**+1.3**
K24K	**Donnelly Dome**	**85.19**	**14**	P	**P**	**21 50 32.5**	**+0.6**
MLY	**Manley**	**85.21**	**12**	P	**P**	**21 50 31.3**	**-0.7**
WRH	**Wood River Hil**	**85.25**	**13**	P	**P**	**21 50 31.7**	**-0.4**
Q32M	**Nakina River**	**85.34**	**22**	P	**P**	**21 50 33.9**	**+1.0**
Q32M				IAmb	IAmb	21 50 34.2	
	comp=Z,2.5nm,0.7s						
RIDG	**Independent Ri**	**85.35**	**14**	P	**P**	**21 50 32.9**	**+0.2**
RIDG				IAmb	IAmb	21 50 33.3	
	comp=Z,2.0nm,0.7s						
H21K	**Melozitna Rive**	**85.40**	**11**	P	**P**	**21 50 34.0**	**+1.2**
HDA	**Harding Lake**	**85.44**	**13**	P	**P**	**21 50 33.4**	**+0.3**
HDA				IAmb	IAmb	21 50 33.7	
	comp=Z,3.0nm,0.6s						
DOT	**Dot Lake**	**85.46**	**15**	P	**P**	**21 50 33.4**	**+0.2**
CCB	**Clear Creek Bu**	**85.47**	**13**	P	**P**	**21 50 32.4**	**-0.7**
IMAR	**Indian Mountai**	**85.54**	**10**	P	**P**	**21 50 33.6**	**+0.2**
F19K	**Shaleruckik Mo**	**85.73**	**8**	P	**P**	**21 50 34.0**	**-0.3**
SCRK	**Sand Creek**	**85.76**	**15**	P	**P**	**21 50 35.1**	**+0.4**
IL31		**85.77**	**13**	P	**P**	**21 50 34.2**	**-0.3**
ILAR	**Eielson Array**	**85.77**	**13**	P	**P**	**21 50 34.0**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=224,slow=5.3,SNR=22 comp=Z,0.8nm,0.4s						
M29M	**Somme Creek**	**85.97**	**18**	P	**P**	**21 50 36.2**	**+0.5**
M29M				IAmb	IAmb	21 50 42.4	
	comp=Z,2.2nm,1.0s						
J25K	**Salcha River,**	**85.97**	**14**	P	**P**	**21 50 35.6**	**0.0**
J25K				IAmb	IAmb	21 50 35.9	
	comp=Z,1.8nm,0.7s						
G21K	**Allakaket**	**86.07**	**10**	P	**P**	**21 50 35.9**	**-0.1**
F20K	**Avaraart Lake**	**86.22**	**9**	P	**P**	**21 50 36.5**	**-0.1**
F20K				IAmb	IAmb	21 50 39.4	
	comp=Z,2.5nm,1.0s						
TXAR	**Lajitas Array**	**86.22**	**58**	P	**P**	**21 50 39.8**	**+2.1**
	comp=Z,1.1nm,0.7s,baz=211,slow=5.7,SNR=12 comp=Z,1.1nm,0.7s						
K27K	**Chicken**	**86.27**	**15**	P	**P**	**21 50 39.0**	**+2.1**
J26L	**Joseph Creek**	**86.30**	**15**	P	**P**	**21 50 38.5**	**+1.3**
E19K	**Redstone River**	**86.39**	**8**	P	**P**	**21 50 37.4**	**0.0**
PD31	**Pinedale Array**	**87.47**	**44**	P	**P**	**21 50 44.0**	**+0.6**
PD31				IAmb	IAmb	21 50 44.4	
	comp=Z,1.0nm,0.5s						
PDAR	**Pinedale Array**	**87.47**	**44**	P	**P**	**21 50 44.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=216,slow=3.9,SNR=8.5 comp=Z,0.6nm,0.5s						
SNAA	**Sanae**	**90.82**	**179**	P	**P**	**21 50 58.8**	**+0.4**
SNAA	**Sanae**	**90.82**	**179**	P	**P**	**21 50 58.1**	**-0.2**
	comp=Z,1.4nm,1.2s,baz=272,slow=12,SNR=6.2 comp=Z,1.4nm,1.2s						
MKAR	**Makanchi Array**	**108.70**	**314**	PKiKP	**PKiKP**	**21 56 19.6**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=170,slow=0.9,SNR=4.2						
BVAR	**Borovoye Array**	**116.43**	**321**	PKP	**PKPdf**	**21 56 34.4**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=60,slow=1.6,SNR=4.8						
BRTR	**Keskin Array B**	**144.35**	**315**	PKP	PKPbc	21 57 28.0	+0.1
	comp=Z,0.7nm,0.6s,baz=110,slow=2.8,SNR=7.4						
MLR	**Muntele Rosu**	**145.44**	**329**	PKPbc	**PKPbc**	**21 57 31.2**	**+0.2**
	baz=351,slow=19						
MMAI	**Mount Meron Ar**	**145.69**	**303**	PKPbc	**PKPbc**	**21 57 32.5**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=90,slow=3.3,SNR=6.6						
GERES	**GERESS Array B**	**147.30**	**345**	PKPbc	**PKPbc**	**21 57 36.5**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=21,slow=3.1,SNR=11						
CONA	**Conrad Observa**	**147.54**	**341**	*e*PKP	**PKPbc**	**21 57 37.3**	**+0.7**
	comp=Z,1.5nm,0.6s						
MOA	**Molln**	**148.07**	**343**	*e*PKP	**PKiKP**	**21 57 39.4**	**+0.2**
	comp=Z,1.0nm,0.7s						
LESA	**Schwarzleotal**	**148.88**	**345**	*e*PKP	**PKPbc**	**21 57 40.4**	**+0.4**
	comp=Z,0.4nm,0.4s						
KBA	**Koelnbreinsper**	**149.03**	**344**	*e*PKP	**PKPbc**	**21 57 40.1**	**-0.3**
	comp=Z,1.0nm,0.7s						
WTTA	**Wattenberg**	**149.28**	**346**	*e*PKP	**PKPbc**	**21 57 41.0**	**-0.1**
	comp=Z,0.7nm,0.5s						
MYKA	**Terra Mystica**	**149.36**	**343**	*e*PKP	**PKPbc**	**21 57 41.0**	**-0.1**
	comp=Z,0.8nm,0.6s						
SQTA	**Sankt Quirin**	**149.42**	**346**	*i* PKP	**PKPbc**	**21 57 41.4**	**+0.2**
	comp=Z,1.6nm,0.6s						
ABTA	**Abfaltersbach**	**149.55**	**345**	*e*PKP	**PKPbc**	**21 57 41.0**	**-0.6**
	comp=Z,1.4nm,0.9s						
ESDC	**Sonseca Array**	**157.65**	**10**	PKP	**PKPdf**	**21 57 50.1**	**+2.3**
	comp=Z,0.2nm,0.4s,baz=20,slow=39,SNR=2.1						

*SJA **01** 22:05:52.1±0.7, 23.43°S×66.73°W, h236km±4km, ML4.6, MW4.3*
*IDC **01** 22:05:53.8±1.4, 23.44°S×66.55°W, h198km±13km, mb3.8/16, mbtmp4.4/23, Error ellipse: s-maj=13.8km s-min=9.5km az=69.0*
*GUC **01** 22:05:54.6±0.6, 23.51°S×66.88°W, h201km±4km, ML4.6*
*NEIC **01** 22:05:54.3±2.6, 23.51°S±0.03×66.78°W±0.09, h208km±8km, mb4.5/33, Mwr4.4(GUC), Error ellipse: s-maj=11.8km s-min=2.3km az=105.0*
*VAO **01** 22:05:56.0±0.9, 23.35°S×66.54°W, h219km±6km, mb4.6*

ISC 01 22:05:54.7±0.6**, 23.44°S**±0.03×**66.77°W**±0.04**, h213**km±5km**, n200,** σ1**56**/247**, mb4.3**/31**, 18C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.87**	**153**⇓	*e*P	**Pn**	**22 06 25.5**	**-0.2**
SALTA				*e*S	**S**	**22 06 48.8**	**-0.9**
SALTA		**0.87**	**153**	*e*P	Pn	22 06 19.8	-5.9
SALTA				*e*P		22 06 20.1	
SALTA				*e*P		22 06 25.5	
SALTA				*e*S	**S**	**22 06 51.1**	**+1.4**
HJA	**Humahuaca**	**1.28**	**80**	*e*P	**Pn**	**22 06 28.0**	**-0.3**
AF01	**San Pedro de A**	**1.38**	**290**		**Pn**	**22 06 30.0**	**+1.1**
AF01	**San Pedro de A**	**1.38**	**290**⇑	*e*P	**Pn**	**22 06 30.1**	**+1.2**
AF01				IAML		22 07 14.4	
	comp=N,2μm,0.6s

HMBC	**Humberstone**	**4.28**	**317**	*eP*		**Pn**	**22 06 59.0**	**-1.6**
HMBC				*eS*		**S**	**22 07 49.5**	**-2.6**
HMBC				IAML			22 07 54.7	
	comp=Z,1μm,0.3s							
GO01	**Chusmiza**	**4.38**	**329**			**Pn**	**22 07 02.5**	**+0.3**
GO01	**Chusmiza**	**4.38**	**329**	⇑*iP*		**Pn**	**22 07 02.5**	**+0.3**
GO01				*i* S		**S**	**22 07 53.7**	**-1.2**
GO01	**Chusmiza**	**4.38**	**329**	*eP*		**Pn**	**22 07 02.2**	**0.0**
GO01				*eS*		**S**	**22 07 51.4**	**-3.6**
GO01				IAML			22 08 01.8	
	comp=Z,320nm,0.3s							
AC01	**Pan de Azucar**	**4.40**	**231**			**Pn**	**22 06 60.0**	**-1.8**
AC01				Sn		**S**	**22 07 50.5**	**-4.0**
AC01	**Pan de Azucar**	**4.40**	**231**	⇑*eP*		**Pn**	**22 07 00.1**	**-1.8**
AC01	**Pan de Azucar**	**4.40**	**231**	*eP*		**Pn**	**22 07 00.1**	**-1.8**
AC01				*eS*		**S**	**22 07 51.1**	**-3.4**
AC01				IAML			22 07 54.6	
	comp=Z,308nm,0.3s							
TA02	**Huaiquique**	**4.44**	**315**	*eP*		**Pn**	**22 07 01.1**	**-1.4**
TA02	**Huaiquique**	**4.44**	**315**	*eP*		**Pn**	**22 07 02.5**	**+0.1**
TA02				*eS*		**S**	**22 07 54.0**	**-1.4**
PB11	**IPOC Station P**	**4.54**	**323**			**Pn**	**22 07 03.3**	**-0.6**
PB11				Sn		**S**	**22 07 56.9**	**-1.2**
PB11	**IPOC Station P**	**4.54**	**323**	*eP*		**Pn**	**22 07 02.9**	**-1.0**
PB11				*i* S		**S**	**22 07 55.2**	**-2.8**
PB11	**IPOC Station P**	**4.54**	**323**	*eP*		**Pn**	**22 07 02.5**	**-1.4**
PB11				*eS*		**S**	**22 07 56.0**	**-2.1**
AC06	**Mina Casimiro**	**5.07**	**219**			**Pn**	**22 07 08.3**	**-2.0**
AC06				Sn		**S**	**22 08 06.2**	**-3.6**
AC06	**Mina Casimiro**	**5.07**	**219**	*eP*		**Pn**	**22 07 08.0**	**-2.3**
AC06				*i* S		**S**	**22 08 05.5**	**-4.2**
GO03	**Copiapo**	**5.18**	**216**			**Pn**	**22 07 10.0**	**-1.8**
GO03				Sn		**S**	**22 08 09.0**	**-3.5**
GO03	**Copiapo**	**5.18**	**216**	*eS*		**S**	**22 08 08.7**	**-3.8**
PB16	**IPOC Station P**	**5.69**	**333**			**Pn**	**22 07 18.9**	**0.0**
PB16				Sn		**S**	**22 08 23.3**	**-1.8**
PB12	**IPOC Station P**	**5.84**	**325**			**Pn**	**22 07 18.8**	**-1.5**
AP01	**Chacalluta**	**6.05**	**326**	Pn		**Pn**	**22 07 22.0**	**-0.8**
AC04	**Llanos de Chal**	**6.12**	**218**			**Pn**	**22 07 20.9**	**-2.8**
PB18	**Visviri**	**6.35**	**336**			**Pn**	**22 07 30.0**	**+2.7**
LCO	**Las Campanas**	**6.57**	**212**			**Pn**	**22 07 27.1**	**-2.6**
CO01	**Juntas del Tor**	**7.15**	**204**			**Pn**	**22 07 36.2**	**-1.0**
LPAZ	**La Paz**	**7.23**	**350**	Pn		**Pn**	**22 07 39.5**	**+0.8**
LPAZ	**La Paz**	**7.23**	**350**	P		**Pn**	**22 07 39.1**	**+0.4**
	comp=Z,16nm,0.3s,baz=162,slow=6.4,SNR=74							
LPAZ				S		**S**	**22 09 00.5**	**-0.9**
	comp=Z,7.4nm,0.6s,baz=187,slow=16,SNR=4.0							
LPAZ	**La Paz**	**7.23**	**350**	*eP*		**Pn**	**22 07 39.4**	**+0.6**
GO04	**Tololo Observa**	**7.61**	**207**			**Pn**	**22 07 40.2**	**-2.8**
CFA	**Coronel Fontan**	**8.23**	**189**	P		**Pn**	**22 07 48.9**	**-2.1**
	comp=Z,3.5nm,0.3s,baz=54,slow=18,SNR=47							
CFA				S		S	22 09 14.3	-10
	comp=Z,7.0nm,0.3s,baz=90,slow=20,SNR=16							
ZON	**Zonda**	**8.25**	**191**	Pn		**Pn**	**22 07 49.1**	**-2.1**
CO06	**Fray Jorge**	**8.45**	**210**	Pn		**Pn**	**22 07 50.2**	**-3.0**
CO02	**Combarbal**	**8.59**	**205**			**Pn**	**22 07 52.4**	**-3.3**
CPUP	**Villa Florida**	**9.04**	**110**			**Pn**	**22 07 59.5**	**-2.0**
CPUP	**Villa Florida**	**9.04**	**110**	P		**Pn**	**22 07 58.6**	**-2.9**
	comp=Z,3.2nm,0.8s,baz=209,slow=11,SNR=20							
SIV	**San Ignacio**	**9.15**	**37**	P		**Pn**	**22 08 00.6**	**-2.4**
	comp=Z,17nm,0.5s,baz=238,slow=9.3,SNR=105							
SIV				S		S	22 09 30.6	-15
	comp=Z,5.2nm,0.9s,baz=218,slow=18,SNR=3.3							
BDQN	**Bodoquena, MS**	**9.77**	**74**	*eP*		**Pn**	**22 08 08.3**	**-2.6**
VA03	**San Esteban**	**9.86**	**199**	Pn		**Pn**	**22 08 09.3**	**-2.8**
VA06	**Catapilco**	**9.92**	**203**	Pn		**Pn**	**22 08 09.4**	**-3.3**
MT08	**Bocatona Ro**	**10.36**	**195**	Pn		**Pn**	**22 08 17.8**	**-0.8**
AQDB	**Aquidauana**	**10.69**	**76**	Pn		**Pn**	**22 08 21.6**	**-1.1**
PTLB	**Pontes e Lacer**	**10.73**	**44**	Pn		**Pn**	**22 08 21.8**	**-1.4**
PTLB	**Pontes e Lacer**	**10.73**	**44**	*eP*		**Pn**	**22 08 21.2**	**-2.0**
AMBA	**Amambai (Brazi**	**10.85**	**90**	*eP*		**Pn**	**22 08 21.9**	**-2.9**
VILB	**Vilhena**	**12.16**	**32**			**Pn**	**22 08 42.5**	**+1.1**
VILB	**Vilhena**	**12.16**	**32**	*eP*		**Pn**	**22 08 42.2**	**+0.8**
PP1B	**Ponte de Pedra**	**12.57**	**65**	*eP*		**Pn**	**22 08 43.8**	**-2.7**
SALV	**Santo Antonio**	**12.85**	**56**	*eP*		**Pn**	**22 08 48.1**	**-2.0**
PTGB	**Pitanga**	**13.50**	**98**	*eP*		**Pn**	**22 08 57.6**	**-0.6**
CPSB	**Cacapava Do Su**	**13.76**	**123**	*eP*		**Pn**	**22 08 59.9**	**-1.4**
ITAB	**Concordia**	**13.77**	**109**			**Pn**	**22 08 59.9**	**-1.5**
C2SB	**Chapadao do Su**	**13.81**	**73**	*eP*		**Pn**	**22 09 00.7**	**-1.3**
PLTB	**Pedras Altas**	**14.31**	**128**			**Pn**	**22 09 07.0**	**-1.0**
PLTB	**Pedras Altas**	**14.31**	**128**	*eP*		**Pn**	**22 09 07.8**	**-0.2**
H03N1	**Juan Fernandez**	**14.59**	**224**	P		**P**	**22 09 14.2**	**+2.3**
	baz=110,slow=14,SNR=4.9							
H03N2	**Juan Fernandez**	**14.60**	**224**	P		**P**	**22 09 14.2**	**+2.2**
	baz=110,slow=14,SNR=4.1							
H03N3	**Juan Fernandez**	**14.61**	**224**	P		**P**	**22 09 14.0**	**+1.8**
	baz=110,slow=14,SNR=5.6							
H03S3	**Juan Fernandez**	**14.84**	**223**	P		**P**	**22 09 16.4**	**+1.7**
	baz=212,slow=28,SNR=5.7							
H03S1	**Juan Fernandez**	**14.85**	**223**	P		**P**	**22 09 16.2**	**+1.4**
	baz=212,slow=28,SNR=4.7							
H03S2	**Juan Fernandez**	**14.85**	**223**	P		**P**	**22 09 16.4**	**+1.5**
	baz=212,slow=28,SNR=6.7							
NNA	**Nana**	**14.88**	**318**	P		**P**	**22 09 17.5**	**+1.8**
	comp=Z,7.5nm,0.7s,baz=186,slow=12,SNR=2.3							
NNA				S		**S**	**22 12 02.6**	**+2.6**
	comp=Z,3.1nm,0.3s,baz=218,slow=20,SNR=1.8							
TRQA	**Tornquist**	**15.13**	**165**	P		**Pn**	**22 09 17.1**	**-0.9**
PDRB	**Porto dos Gac**	**15.16**	**41**	*eP*		**Pn**	**22 09 16.6**	**-1.9**
ITRB	**Iturama**	**15.71**	**79**	*eP*		**P**	**22 09 23.2**	**-1.6**
FRTB	**Fartura**	**15.80**	**93**	*eP*		**P**	**22 09 24.8**	**-1.0**
ARAG	**Araguaiana, MT**	**16.05**	**64**	*eP*		**P**	**22 09 27.4**	**-1.2**
CLDB	**Colider**	**16.30**	**42**	*eP*		**P**	**22 09 30.2**	**-1.1**
MAJ01	**Sao Joao Batis**	**16.52**	**107**	*eP*		**P**	**22 09 32.5**	**-1.1**
BB19B	**Bebedouro**	**17.06**	**86**	*eP*		**P**	**22 09 38.4**	**-1.2**
LR05	**Currie**	**17.31**	**194**	P		**P**	**22 09 42.2**	**+0.1**
LR05				IAmb		IAmb	22 09 48.4	
	comp=Z,24nm,0.9s							
LR04	**Corral**	**17.33**	**197**	P		**P**	**22 09 42.5**	**+0.2**
PLCA	**Paso Flores**	**17.53**	**190**	P		**P**	**22 09 44.4**	**-0.2**
	comp=Z,4.4nm,0.7s,baz=2.1,slow=12,SNR=16							
SPB	**Sao Paulo**	**17.74**	**94**	P		**P**	**22 09 46.6**	**-0.3**
SPB				IAmb		IAmb	22 09 52.1	
	comp=Z,16nm,0.8s							
RCLB	**Rio Claro- Sao**	**17.76**	**90**	*eP*		**P**	**22 09 46.2**	**-1.1**
PET01	**Itanhaem-SP**	**17.86**	**97**	*eP*		**P**	**22 09 47.1**	**-1.1**
IPMB	**Ipameri, GO**	**18.19**	**76**	*eP*		**P**	**22 09 50.6**	**-1.3**
VAO	**Valinhos**	**18.21**	**93**	P		**P**	**22 09 51.4**	**-0.9**
VAO	**Valinhos**	**18.21**	**93**	*eP*		**P**	**22 09 51.0**	**-1.2**
SNDB	**Serra Nova Dou**	**18.62**	**55**	*eP*		**P**	**22 09 55.2**	**-1.4**
LL05	**Los Muermos**	**18.77**	**196**	P		**P**	**22 09 57.4**	**-0.5**
BDFB	**Brasilia**	**19.30**	**70**	P		**P**	**22 10 03.7**	**-0.3**
BDFB	**Brasilia**	**19.30**	**70**	P		**P**	**22 10 03.2**	**-0.7**
	comp=Z,46nm,0.7s,baz=248,slow=11,SNR=70							
PARB	**Paraibuna**	**19.42**	**94**	*eP*		**P**	**22 10 03.7**	**-1.5**
PMNB	**Patos De Minas**	**19.60**	**79**	*eP*		**P**	**22 10 05.8**	**-1.4**
NPGB	**Novo Progresso**	**19.65**	**36**	*eP*		**P**	**22 10 05.0**	**-2.7**
TEFE	**Tefe**	**19.93**	**6**	*eP*		**P**	**22 10 10.4**	**-0.2**
LL02	**Futaleuf**	**20.14**	**191**	P		**P**	**22 10 14.0**	**+1.4**
LL02				IAmb		IAmb	22 10 15.2	
	comp=Z,29nm,0.9s							
GO07	**Milladeo Hill,**	**20.43**	**195**	P		**P**	**22 10 14.5**	**-1.2**
BSCB	**Bom Sucesso**	**20.51**	**87**	*eP*		**P**	**22 10 15.4**	**-1.5**
MACA	**Manacapuru-AM**	**21.01**	**17**	P		**P**	**22 10 21.8**	**-0.3**
ITTB	**Itaituba**	**21.76**	**31**	*eP*		**P**	**22 10 27.1**	**-2.6**
DUB01	**Friburgo-RJ**	**22.54**	**91**	*eP*		**P**	**22 10 35.9**	**-1.1**
CAM01	**Campos-RJ**	**23.23**	**91**	*eP*		**P**	**22 10 41.9**	**-1.3**
SMTB	**Santa Maria do**	**23.40**	**55**	*eP*		**P**	**22 10 43.6**	**-1.2**
SDBA	**SAO DESIDERIO**	**23.49**	**66**	*eP*		**P**	**22 10 43.7**	**-2.0**
PRPB	**Parauapebas**	**23.69**	**46**	*eP*		**P**	**22 10 46.2**	**-1.3**
MAL2	**Monte Alegre,**	**24.55**	**32**	P		**P**	**22 10 54.2**	**-1.0**
MAL2				IAmb		IAmb	22 10 57.2	
	comp=Z,27nm,0.7s							
RIB01	**Linhares ES**	**24.89**	**86**	*eP*		**P**	**22 10 56.3**	**-2.0**
GUA01	**Guaratinga, BA**	**26.21**	**80**	*eP*		**P**	**22 11 09.0**	**-1.3**
BOAV	**Boa Vista**	**26.39**	**14**	P		**P**	**22 11 11.5**	**-0.3**
BOAV	**Boa Vista**	**26.39**	**14**	*eP*		**P**	**22 11 11.3**	**-0.5**
CMC01	**Camacan, BA**	**26.90**	**78**	*eP*		**P**	**22 11 14.8**	**-1.6**
EFI	**East Falkland**	**28.97**	**169**	P		**P**	**22 11 34.0**	**-0.3**
EFI				IAmb		IAmb	22 11 53.4	
	comp=Z,14nm,0.9s							
MDP	**Montagnes des**	**31.55**	**28**	P		**P**	**22 11 56.4**	**-1.0**
	comp=Z,3.2nm,0.4s,baz=217,slow=8.0,SNR=16							
	comp=Z,3.2nm,0.4s							
RCBR	**Riachuelo**	**34.50**	**64**	P		**P**	**22 12 22.3**	**-0.7**
RCBR				IAmb		IAmb	22 12 23.1	
	comp=Z,16nm,0.8s							
TEIG	**Tepich**	**48.20**	**333**	P		**P**	**22 14 14.4**	**+0.4**
TEIG				IAmb		IAmb	22 14 15.6	
	comp=Z,12nm,0.7s							
VNA3	**Neumayer Olymp**	**57.61**	**161**	⇑P		**P**	**22 15 22.9**	**+0.8**
	comp=Z,6.5nm,0.7s							
VNA1	**Neumayer--Stat**	**57.80**	**160**	⇑P		**P**	**22 15 24.7**	**+1.3**
	comp=Z,5.8nm,0.9s							
VNA2	**Neumayer--Watz**	**58.17**	**161**	⇑P		**P**	**22 15 26.9**	**+0.9**
	comp=Z,6.0nm,0.6s,baz=279,slow=7.4							
SNAA	**Sanae**	**59.80**	**161**	⇑P		**P**	**22 15 37.8**	**+0.5**
	comp=Z,100nm,0.7s							
SNAA	**Sanae**	**59.80**	**161**	P		**P**	**22 15 38.0**	**+0.7**
	comp=Z,3.7nm,0.7s,baz=279,slow=7.9,SNR=40							
	comp=Z,3.7nm,0.7s							
833A	**Chaparral WMA,**	**60.31**	**327**	P		**P**	**22 15 38.8**	**-2.4**
833A				IAmb		IAmb	22 15 43.6	
	comp=Z,14nm,0.8s							
HNDO	**Hondo**	**61.25**	**328**	P		**P**	**22 15 48.6**	**+1.1**
HNDO				IAmb		IAmb	22 15 49.6	
	comp=Z,5.4nm,0.8s							
TROLL	**Troll, Antarti**	**61.52**	**161**	⇑P		**P**	**22 15 49.8**	**+0.9**
	comp=Z,333nm,0.9s							
BRDY	**Brady**	**62.56**	**329**	P		**P**	**22 15 56.0**	**-0.3**
SAND	**Sanderson**	**63.03**	**326**			**P**	**22 15 59.9**	**+0.6**
SAND				IAmb		IAmb	22 16 01.8	
	comp=Z,6.9nm,1.0s							
TXAR	**Lajitas Array**	**63.35**	**324**	P		**P**	**22 16 02.8**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=149,slow=6.9,SNR=9.9							
	comp=Z,0.6nm,0.5s							
TX31	**Lajitas Ar. Si**	**63.35**	**324**	P		**P**	**22 16 02.9**	**+1.3**
WTFS	**Witchita Falls**	**64.40**	**331**	P		**P**	**22 16 09.3**	**+1.1**
VHRN	**Van Horn**	**65.19**	**324**			**P**	**22 16 15.0**	**+1.5**
VHRN				IAmb		IAmb	22 16 15.9	
	comp=Z,5.5nm,0.7s							
CCM	**Cathedral Cave**	**65.35**	**339**	P		**P**	**22 16 13.4**	**-0.8**
CCM				IAmb		IAmb	22 16 15.3	
	comp=Z,9.3nm,0.7s							
MNTX	**Cornudas Mount**	**66.11**	**324**			**P**	**22 16 18.2**	**-1.0**
MNTX				IAmb		IAmb	22 16 20.9	
	comp=Z,7.7nm,1.1s							
QSPA	**South Pole Qui**	**66.76**	**180**	P		**P**	**22 16 26.6**	**+3.5**
	comp=Z,8.3nm,0.5s,baz=196,slow=0.6,SNR=38							
DBIC	**Dimbokro**	**67.43**	**72**	P		**P**	**22 16 26.2**	**-1.6**
DBIC				IAmb		IAmb	22 16 27.5	
	comp=Z,9.4nm,1.1s							
DBIC	**Dimbokro**	**67.43**	**72**	P		**P**	**22 16 26.3**	**-1.6**
	comp=Z,3.2nm,0.6s,baz=263,slow=7.6,SNR=7.6							
	comp=Z,3.2nm,0.6s							
ANMO	**Albuquerque**	**69.20**	**326**	P		**P**	**22 16 40.0**	**+1.3**
	comp=Z,4.6nm,0.8s,baz=230,slow=7.1,SNR=13							
	comp=Z,4.6nm,0.8s							
PFO	**Pinyon Flats O**	**73.86**	**319**	P		**P**	**22 17 08.0**	**+1.5**
	comp=Z,3.5nm,0.5s,baz=96,slow=2.9,SNR=3.0							
	comp=Z,1.3nm,0.5s							
VNDA	**Vanda**	**75.28**	**190**	P		**P**	**22 17 15.6**	**+1.7**
VNDA	**Vanda**	**75.28**	**190**	P		**P**	**22 17 15.2**	**+1.3**
	comp=Z,1.7nm,1.0s,baz=135,slow=1.8,SNR=6.1							
	comp=Z,1.7nm,1.0s							
TORD	**Torodi Ar. Bea**	**76.18**	**69**	P		**P**	**22 17 18.9**	**-1.0**
	comp=Z,3.5nm,0.5s,baz=263,slow=4.1,SNR=12							
	comp=Z,3.5nm,0.5s							
PDAR	**Pinedale Array**	**76.78**	**329**	P		**P**	**22 17 24.6**	**+1.5**
PDAR	**Pinedale Array**	**76.78**	**329**	P		**P**	**22 17 24.2**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=126,slow=7.7,SNR=15							
	comp=Z,1.3nm,0.6s							
HWUT	**Hardware Ranch**	**76.87**	**327**	P		**P**	**22 17 25.6**	**+2.1**
HWUT				IAmb		IAmb	22 17 26.3	
	comp=Z,4.8nm,0.8s							
TSUM	**Tsumeb**	**77.60**	**106**	P		**P**	**22 17 27.4**	**-0.7**
TSUM	**Tsumeb**	**77.60**	**106**	P		**P**	**22 17 27.1**	**-1.0**
	comp=Z,2.3nm,0.8s,baz=248,slow=8.8,SNR=3.8							
	comp=Z,2.3nm,0.8s							
SCHQ	**Schefferville**	**77.95**	**360**	IAmb		IAmb	22 17 30.1	
	comp=Z,68nm,0.8s							
SCHQ	**Schefferville**	**77.95**	**360**	P		**P**	**22 17 28.9**	**0.0**
	comp=Z,6.0nm,0.8s,baz=158,slow=5.4,SNR=2.7							
	comp=Z,6.0nm,0.8s							
TPAW	**Teton Pass**	**77.99**	**329**	P		**P**	**22 17 32.1**	**+2.4**
TPAW				IAmb		IAmb	22 17 32.8	
	comp=Z,6.0nm,1.1s							
MOOW	**Moose Ponds**	**78.09**	**329**	P		**P**	**22 17 32.1**	**+1.8**
NVAR	**Mina Array Bea**	**78.24**	**321**	P		**P**	**22 17 32.8**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=161,slow=6.6,SNR=5.4							
	comp=Z,1.0nm,0.7s							
BOSA	**Boshof**	**80.80**	**117**	P		**P**	**22 17 44.5**	**-0.8**
	comp=Z,2.3nm,0.9s,baz=284,slow=4.5,SNR=5.1							
	comp=Z,2.3nm,0.9s							
MAW	**Mawson**	**81.90**	**163**	P		**P**	**22 17 50.8**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=233,slow=8.7,SNR=5.1							
	comp=Z,3.4nm,0.6s							
ESDC	**Sonseca Array**	**85.85**	**43**	P		**P**	**22 18 11.1**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=152,slow=6.7,SNR=4.2							
	comp=Z,1.0nm,0.9s							
YKA	**Yellowknife Ar**	**93.68**	**340**	P		**P**	**22 18 46.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=134,slow=0.7,SNR=5.5							
	comp=Z,0.8nm,0.7s							
ASAR	**Alice Springs**	**129.04**	**205**	PKP		**PKPdf**	**22 24 38.0**	**0.0**
	comp=Z,1.3nm,0.8s,baz=154,slow=2.6,SNR=9.9							
WRA	**Warramunga Arr**	**132.21**	**207**	PKP		**PKPdf**	**22 24 44.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=164,slow=1.5,SNR=6.3							
BVAR	**Borovoye Array**	**136.23**	**36**	PKP		**PKPdf**	**22 24 50.0**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=325,slow=1.8,SNR=2.8							
KURBB	**Kurchatov Arra**	**141.81**	**36**	PKhKP		PKPpre	22 24 56.9	
	comp=Z,0.8nm,0.7s,baz=303,slow=2.7,SNR=6.4							
KURBB				PKP		**PKiKP**	**22 25 02.2**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=303,slow=2.7,SNR=3.5							
ZALV	**Zalesovo Beam**	**142.81**	**28**	PKhKP		PKPpre	22 24 58.7	
	comp=Z,1.2nm,0.5s,baz=303,slow=3.8,SNR=6.7							
ZALV				PKP		**PKPdf**	**22 25 03.2**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=312,slow=4.3,SNR=5.9							
MKAR	**Makanchi Array**	**145.97**	**39**	PKPbc		**PKPbc**	**22 25 09.3**	**-0.1**
	comp=Z,5.2nm,0.8s,baz=300,slow=3.3,SNR=36							
HILR	**Hailar Array B**	**153.44**	**350**	PKP		**PKPdf**	**22 25 20.9**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=64,slow=6.6,SNR=1.6							
SONM	**Songimo Array**	**155.06**	**11**	PKP		**PKPdf**	**22 25 23.9**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=343,slow=4.5,SNR=2.8							
SONM				PKPab		**PKPab**	**22 25 48.2**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=306,slow=4.2,SNR=4.4							

TAP 01 22:30:37.4, 23.08N×120.73E, h6km, ML2.0, 3C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan**	**0.08**	**15**	⇑*iP*	Pg	22 30 39.9	+0.6
STYT				*i* S	Sg	22 30 41.8	+1.0
STYH	**Taoyuan**	**0.09**	**24**	*i* P	Pg	22 30 40.3	+0.8
STYH				*i* S	Sg	22 30 42.3	+1.3
CHN1	**Nanshi**	**0.21**	**298**	P	Pg	22 30 42.3	+0.7
CHN1				*i* S	Sg	22 30 46.5	+1.9
TPUB	**Ta-pu**	**0.24**	**336**	⇑*iP*	Pg	22 30 42.8	+0.8
TPUB				*i* S	Sg	22 30 46.9	+1.6
SNST	**Tainan City**	**0.26**	**302**	*eP*	Pb	22 30 43.5	-0.9
SNST				S	Sb	22 30 48.1	-1.0
ELDTW	**Lidau**	**0.28**	**68**	*i* P	Pb	22 30 44.5	-0.4
ELDTW				*i* S	Sb	22 30 48.9	-1.0
TWK	**Hsinying**	**0.29**	**309**	⇑*iP*	Pb	22 30 44.3	-0.7
TWK				*i* S	Sb	22 30 49.0	-1.1
SCST	**Cishan**	**0.30**	**228**	P	Pb	22 30 44.6	-0.5
SCST				S	Sb	22 30 51.3	+1.1
SSD	**Sandimen**	**0.35**	**196**	P	Pb	22 30 45.3	-0.6
SSD				S	Sb	22 30 50.6	-1.1
WCKO	**Fanlu**	**0.37**	**341**	*eP*	Pb	22 30 46.4	0.0
WCKO				*i* S	Sb	22 30 52.0	-0.5
TSMG	**Majia**	**0.39**	**192**	*eP*	Pg	22 30 45.5	+0.7
TWM1	**Shoushan**	**0.39**	**228**	*eP*	Pb	22 30 46.2	-0.4
LONT	**Longtian**	**0.41**	**116**	*eP*	Pb	22 30 47.0	0.0
LONT				*eS*	Sb	22 30 54.0	+0.6
TWG	**Pinlang**	**0.41**	**130**	*eP*	Pb	22 30 46.9	-0.1
TWG				S	Sb	22 30 52.9	-0.5
TWGBT	**Beinan**	**0.41**	**130**	*i* P	Pb	22 30 47.2	+0.1
TWGBT				*eS*	Sb	22 30 54.2	+0.6
ALS	**Alishan**	**0.43**	**9**	*i* P	Pb	22 30 46.8	-0.8
ALS				*i* S	Sb	22 30 53.9	-0.9
EHD	**Haiduan**	**0.44**	**81**	*eP*	Pb	22 30 47.6	+0.1
EHD				*i* S	Sb	22 30 54.2	-0.1
YUS	**Yu-Shan**	**0.45**	**26**	P	Pb	22 30 47.6	-0.4
YUS				S	Sb	22 30 54.4	-0.8
MASBT	**Mashibuluo**	**0.48**	**191**	*i* P	Pb	22 30 47.7	-0.5
MASBT				*i* S	Sg	22 30 54.0	+1.1
CHY	**Chiayi**	**0.50**	**325**	*eS*	Sb	22 30 56.7	+0.5
CHN5	**Tsauling**	**0.51**	**354**	*eP*	Pb	22 30 48.5	-0.3
CHN5				S	Sb	22 30 56.8	+0.2
ECL	**Taimali**	**0.53**	**157**	P	Pb	22 30 49.4	+0.4
ECL				S	Sb	22 30 55.8	-1.0
FULB	**Fuli**	**0.53**	**77**	*eP*	Pb	22 30 49.8	+0.8
FULB				*eS*	Sb	22 30 58.3	+1.4
EDH	**Donghe**	**0.54**	**102**	*eP*	Pb	22 30 49.7	+0.5
TWF1	**Yuli**	**0.58**	**63**	P	Pb	22 30 50.1	+0.2
TSCK	**Chigu Township**	**0.60**	**276**	*eP*	Pb	22 30 51.1	+0.8
YULB	**Yu-li**	**0.60**	**59**	P	Pb	22 30 50.1	-0.2
YULB				*eS*	Sb	22 30 58.6	-0.5
WDLH	**Douliu**	**0.63**	**343**	*eP*	Pb	22 30 51.2	+0.4
WSL	**Shuilin Townsh**	**0.64**	**313**	*eP*	Pb	22 30 51.2	+0.3
EHY	**Hungye**	**0.69**	**52**	*eP*	Pb	22 30 51.6	-0.1
EAST	**Anshuo**	**0.71**	**171**	*eP*	Pb	22 30 52.1	0.0
SSLB	**Suanglung**	**0.73**	**16**	*eP*	Pg	22 30 51.9	+0.5
HGSD	**Ruisui**	**0.75**	**57**	*eP*	Pn	22 30 54.8	+0.3
VWDT	**VWDT**	**0.76**	**29**	*eP*	Pg	22 30 52.0	0.0
SMLT	**Sun Moon Lake**	**0.81**	**11**	*eP*	Pn	22 30 55.0	-0.4
SMLT				S	Sn	22 31 07.0	-0.8
TYC	**Yuchr**	**0.82**	**8**	*eP*	Pb	22 30 54.5	+0.4
WARBT	**Fenglin Townsh**	**0.87**	**43**	*eP*	Pg	22 30 54.4	+0.3
WUSB	**Renai**	**0.97**	**21**	*eP*	Pg	22 30 55.8	-0.2
WCS	**Beigang Elemen**	**0.98**	**10**	*eP*	Pn	22 30 57.7	+0.1
LXIB	**Xiulin Townshi**	**1.12**	**34**	*eP*	Pn	22 30 59.9	+0.2

IDC 01 22:34:45.0±2.3, 6.67S×129.35E, h0km, mb3.5/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=151.8km s-min=31.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.06**	**160**	Pn	Pn	22 38 05.7	+0.1
	0.4nm,0.3s,baz=343,slow=13,SNR=2.2						
WRA				Sn	Sn	22 40 28.6	-14
	1.0nm,0.3s,baz=334,slow=22,SNR=6.8						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**17.46**	**166**	P	Pn	22 38 50.1	-0.1
	0.3nm,0.3s,baz=344,slow=11,SNR=12						
ASAR				S	Sn	22 41 51.5	-

baz=156,slow=25
MKAR LR LR 22 44 15.5
comp=Z,868nm,20.2s,baz=150,slow=38
comp=Z,1.8nm,0.7s
BRDH Bariadhala 12.67 168 LR LR 22 44 44.1
comp=Z,701nm,19.8s,baz=350,slow=40
MAKZ Makanchi 12.75 338 Pn Pn 22 39 13.6 -2.1
MAKZ Makanchi 12.75 338 P Pn **22 39 13.6 -2.1**
TKM2 Tokmak 2 12.92 311 P Pn **22 39 18.5 +0.2**
SNR=18
NIL Nilore 13.03 268 Pn Pn 22 39 19.6 -0.1
NIL Nilore 13.03 268 P Pn **22 39 19.6 -0.1**
TNCH TengChong 13.07 138 P Pn **22 39 19.9 -0.5**
TNCH pmax pmax
comp=Z,24nm,0.8s
TNCH LR LR
comp=Z,1μm,6.3s
TNCH LR LR
comp=Z,1μm,6.5s
TNCH LR LR
comp=Z,2μm,14.1s
JHNI Jhansi 13.18 226 *e*P **Pn 22 39 21.5 -0.1**
ARLS Aral 13.23 305 P Pn **22 39 21.7 -0.8**
ARLS pmax pmax
comp=Z,20nm,1.2s
UCH Uchtor 13.27 306 P Pn **22 39 23.0 -0.2**
SNR=8.0
FRU1 Bishkek 13.47 309 Pn Pn **22 39 24.6 -1.1**
FRU1 Bishkek 13.47 309 P Pn **22 39 24.6 -1.1**
AAK Ala-Archa 13.48 308 Pn Pn 22 39 25.7 -0.1
AAK Ala-Archa 13.48 308 Pn Pn **22 39 26.3 +0.5**
comp=Z,0.1nm,0.3s,baz=143,slow=11,SNR=13
AAK Lg Lg 22 43 26.8
comp=Z,0.1nm,0.3s,baz=180,slow=12,SNR=1.8
AAK LR LR 22 45 10.7
comp=Z,1μm,20.9s,baz=114,slow=40
comp=Z,5.5nm,0.9s
AAK Ala-Archa 13.48 308 P Pn **22 39 27.1 +1.3**
SNR=9.7
AAK Ala-Archa 13.48 308*ce*P Pn **22 39 26.4 +0.6**
AAK pmax pmax
comp=Z,37nm,2.5s
EKS2 Erkin-Say 13.96 307 P Pn **22 39 33.8 +1.6**
SNR=12
PZH PanZhiHua 13.98 125 P Pn **22 39 31.9 -0.9**
PZH S Sn **22 42 11.2 +3.1**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,130nm,8.6s
PZH LR LR
comp=Z,2μm,19.0s
PZH LR LR
comp=Z,1μm,19.0s
PZH LR LR
comp=Z,980nm,12.0s
DRK Karamyk 14.29 293 Pn Pn **22 39 37.6 +0.6**
DRK Karamyk 14.29 293 P Pn **22 39 37.6 +0.6**
DGZ Jazzator, Alta 14.56 356 *i* P Pn **22 39 39.5 -1.1**
GAR Garm 15.34 290 Pn Pn **22 39 48.1 -2.9**
BHPL Bhopal 15.54 223 *e*P P **22 39 56.9 -1.1**
BHPL IAmb IAmb 22 40 03.0
comp=Z,33nm,1.4s
KMI Kunming 15.57 126 P Pn **22 39 55.5 +1.2**
KMI S Sn **22 42 53.0 +6.0**
KMI pmax pmax
comp=Z,14nm,0.8s
KMI LR LR
comp=Z,2μm,16.9s
KMI LR LR
comp=Z,1μm,16.0s
KMI LR LR
comp=Z,1μm,11.0s
CHGR Chuyangaron 16.19 288 Pn 22 39 59.8 -2.2
CHGR Chuyangaron 16.19 288 P Pn **22 39 59.8 -2.2**
CHGR pmax pmax
comp=Z,23nm,1.1s
SIMJ Simiganj 16.30 288 P Pn **22 40 00.4 -3.2**
KK31 Karatay Array 16.32 305 Pn 22 40 02.7 -0.9
KK31 Karatay Array 16.32 305 P Pn **22 40 02.7 -0.9**
KK31 pmax pmax
comp=Z,28nm,1.5s
KKAR Karatay Array 16.32 305 Pn 22 40 02.9 -0.7
KKAR Karatay Array 16.32 305 P Pn **22 40 02.9 -0.7**
KBL Kabul 16.34 274 Pn 22 40 02.4 -1.7
KBL Kabul 16.34 274 P Pn **22 40 02.4 -1.7**
KBL pmax pmax
comp=Z,28nm,1.3s
XAN Xi'an 16.50 88 P P **22 40 08.5 -0.2**
XAN S S **22 43 15.9 -5.4**
XAN pmax pmax
comp=Z,17nm,1.4s
XAN LR LR
comp=Z,5μm,14.0s
XAN LR LR
comp=Z,2μm,14.4s
XAN LR LR
comp=Z,2μm,10.1s
KNGR Kungurtug, Tuv 16.64 19 *i* P Pn **22 40 06.8 -1.0**
KURBB Kurchatov Arra 17.19 337 Pn Pn **22 40 13.1 -1.4**
comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=41
KURBB Lg Lg 22 45 22.1
baz=127,slow=26
KURBB LR LR 22 47 01.9
comp=Z,546nm,18.7s,baz=152,slow=38
comp=Z,12nm,0.9s
KURK Kurchatov 17.25 337 Pn 22 40 12.5 -2.7
KURK Kurchatov 17.25 337*ce*P Pn **22 40 13.6 -1.6**
KURK pmax pmax
comp=Z,15nm,1.0s
BTO Baotou 17.50 66 *e*P Pn **22 40 18.2 -0.4**
BTO pP **pP 22 40 21.8 -2.2**
BTO sP **sP 22 40 25.2 -0.8**
BTO PP **PnPn 22 40 33.0 +4.2**
BTO S **Sn 22 43 32.0 -1.5**
BTO sS **S 22 43 37.5 -4.2**
BTO SS **SnSn 22 43 54.7 +7.9**
BTO pmax pmax
comp=Z,15nm,1.2s
BTO pmax pmax
comp=Z,160nm,3.6s
BTO LR LR
comp=Z,4μm,14.1s
BTO LR LR
comp=Z,4μm,19.2s
SONM Songino Array 18.15 40 P **P 22 40 26.7 -0.2**
comp=Z,0.3nm,0.3s,baz=231,slow=12,SNR=62
SONM LR LR 22 47 55.6
comp=Z,2μm,21.1s,baz=232,slow=39
comp=Z,18nm,0.9s
ZAK Zakamensk 18.45 30 *e*P **P 22 40 29.2 -0.9**
ZAK pmax pmax
comp=Z,21nm,1.4s
ULN Ulaanbaatar 18.52 41 P 22 40 29.9 -1.1
ULN Ulaanbaatar 18.52 41*ce*P **Pn 22 40 31.4 +0.2**
ULN pmax pmax
comp=Z,8.0nm,0.9s
MOY Mondy 18.63 24 *e*P **P 22 40 30.0 -2.2**
MOY pmax pmax
comp=Z,30nm,1.9s
HHC Hu-ho-hao-te 18.70 66 *e*P **P 22 40 32.0 -1.0**
HHC PP **PnPn 22 40 46.4 +1.2**
HHC S **Sn 22 43 55.7 -6.8**
HHC sS S 22 44 02.9 -3.1
HHC SS **SnSn 22 44 18.8 +2.6**
HHC pmax pmax
comp=Z,6.0nm,0.5s
HHC pmax pmax
comp=Z,61nm,3.8s
HHC LR LR
comp=Z,970nm,9.8s
HHC LR LR
comp=Z,570nm,10.6s
CMAR Chiang Mai Arr 18.87 149 P **P 22 40 34.7 -0.2**
comp=Z,0.7nm,0.3s,baz=329,slow=12,SNR=11
CMAR LR LR 22 48 29.1
comp=Z,462nm,19.3s,baz=330,slow=39
comp=Z,1.5nm,0.4s
ZALV Zalesovo Beam 19.00 353 P **P 22 40 35.7 -0.3**
comp=Z,0.2nm,0.3s,baz=166,slow=10,SNR=25
ZALV LR LR 22 48 16.5
comp=Z,1μm,18.6s,baz=176,slow=38
comp=Z,11nm,0.9s
ZALV Zalesovo Beam 19.00 353 *i* P **Pn 22 40 36.2 -0.5**
ZALV pmax pmax
comp=Z,11nm,0.9s

IRK Irkutsk 20.28 28 *e*P Pn 22 40 51.9 -0.2
IRK pmax pmax
comp=Z,84nm,2.9s
HNS HongShan 20.89 76 ⇑P Pn 22 40 58.2 -1.0
HNS pmax pmax
comp=Z,6.0nm,0.8s
HNS LR LR
comp=Z,780nm,10.3s
HNS LR LR
comp=Z,820nm,9.0s
HNS LR LR
comp=Z,890nm,14.5s
HRA Herat 21.91 276 P **P 22 41 09.2 +1.2**
HRA IAmb IAmb 22 41 15.9
comp=Z,30nm,1.2s
BJT Baijiatuau 22.08 69 P **P 22 41 09.4 -0.2**
BJT pmax pmax
comp=Z,11nm,1.3s
BVAR Borovoye Array 22.15 329 P **P 22 41 10.6 +0.3**
comp=Z,15nm,0.9s,baz=138,slow=9.8,SNR=44
BVAR LR LR 22 50 54.5
comp=Z,512nm,18.5s,baz=134,slow=40
comp=Z,15nm,0.9s
BORK Borovoye 22.20 329*ce*P **P 22 41 11.9 +1.2**
BORK pmax pmax
comp=Z,34nm,1.1s
XLT XiLinHaoTe 22.61 59 *e*P **P 22 41 16.9 +1.6**
XLT PcS **PcS 22 48 45.0 -2.0**
XLT pmax pmax
comp=Z,13nm,1.1s
XLT LR LR
comp=Z,200nm,11.0s
XLT LR LR
comp=Z,840nm,11.8s
XLT LR LR
comp=Z,2μm,13.7s
TIA Tai'an 22.90 79 P **P 22 41 18.8 +0.5**
TIA S **S 22 45 30.1 +2.0**
TIA pmax pmax
comp=Z,9.0nm,1.3s
TIA LR LR
comp=Z,470nm,13.1s
TIA LR LR
comp=Z,930nm,10.8s
TIA LR LR
comp=Z,910nm,11.5s
QIZ Qiongzhong 24.52 126 P **P 22 41 34.7 +0.5**
QIZ S **S 22 45 56.4 +1.7**
QIZ LR LR
comp=Z,810nm,13.7s
QIZ LR LR
comp=Z,960nm,13.1s
QIZ LR LR
comp=Z,1μm,17.5s
NJ2 Nanjing 25.07 89 *e*P **P 22 41 35.4 -3.7**
NJ2 pmax pmax
comp=Z,42nm,0.8s
NJ2 LR LR
comp=Z,2μm,18.0s
NJ2 LR LR
comp=Z,710nm,16.1s
NJ2 LR LR
comp=Z,690nm,9.0s
AB31 Akbulak array 25.48 312 P **P 22 41 42.4 -0.1**
AB31 IAmb IAmb 22 41 49.2
comp=Z,12nm,0.9s
ABKAR Akbulak array 25.48 312 P **P 22 41 42.6 0.0**
HILR Hailar Array B 26.71 48 P **P 22 41 54.3 +0.5**
comp=Z,0.5nm,0.3s,baz=172,slow=4.4,SNR=1.6
comp=Z,0.5nm,0.3s
AKTO Aktyubinsk 27.08 314 LR LR 22 54 07.6
comp=Z,771nm,19.2s,baz=84,slow=40
SSE Sheshan 27.25 89 P **P 22 41 57.4 -1.4**
SSE S **S 22 46 37.5 -0.5**
SSE pmax pmax
comp=Z,11nm,0.6s
SSE pmax pmax
comp=Z,34nm,3.6s
SSE LR LR
comp=Z,620nm,16.8s
SSE LR LR
comp=Z,220nm,16.8s
PALK Pallekele 28.77 197 LR LR 22 54 35.2
comp=Z,238nm,19.8s,baz=20,slow=38
SVE Sverdlovsk 28.89 327 *e*P P 22 42 18.1 +5.0
SVE pmax pmax
comp=Z,9.0nm,1.2s
SVE MLR MLR
comp=Z,445nm,14.0s
CN2 Changchun 29.28 62 P P 22 42 21.5 +4.7
CN2 S **S 22 47 11.8 +2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,2μm,15.0s
CN2 LR LR
comp=Z,1μm,15.0s
CN2 LR LR
comp=Z,1μm,15.0s
ARTI Arti 29.66 325 LR LR 22 55 34.2
comp=Z,723nm,18.1s,baz=120,slow=39
ARTI Arti 29.66 325*c* *i*P **P 22 42 22.2 +2.2**
ARTI 22 43 14.4
ARTI S **S 22 47 19.4 +4.0**
ARTI SS **SnSn 22 48 45.8 +1.8**
ARTI pmax pmax
comp=Z,12nm,2.1s
ARTI MLR MLR
comp=Z,712nm,15.0s
KSRS Korea Array 31.36 74 P **P 22 42 32.6 -2.6**
comp=Z,1.2nm,0.5s,baz=268,slow=7.5,SNR=5.5
comp=Z,1.2nm,0.5s
MAK Makhachkala 32.82 296 *e*P P 22 42 42.2 -5.8
MAK *e*S **S 22 47 57.1 -8.0**
MAK pmax pmax
comp=Z,1μm,1.7s
MAK MLR MLR
comp=Z,553nm,19.0s
PSI Prapat 33.52 162 LR LR 22 57 32.6
comp=Z,167nm,20.9s,baz=327,slow=38
JNU Nakatsue 34.60 81 LR LR 22 57 11.7
comp=Z,165nm,18.4s,baz=294,slow=37
KIRV Kirov 34.96 324 LR LR 23 00 01.9
comp=Z,282nm,20.6s,baz=115,slow=41
KIRV Kirov 34.96 324*ce*P **P 22 43 07.9 +1.6**
GNI Garni 35.06 292 LR LR 23 00 12.1
comp=Z,258nm,19.0s,baz=100,slow=41
TGY Tagaytay City 35.62 118 LR LR 22 58 14.5
comp=Z,471nm,21.5s,baz=284,slow=37
MYKOM Kota Tinggi 36.00 154 P **P 22 43 16.6 +0.9**
MYKOM IAmb IAmb 22 43 20.7
comp=Z,9.9nm,1.2s
KBZ Khabaz 36.16 298 LR LR 23 00 53.1
comp=Z,367nm,19.7s,baz=86,slow=41
KIV Kislovodsk 36.31 298 P **P 22 43 19.6 +1.3**
KIV IAmb IAmb 22 43 26.8
comp=Z,15nm,1.2s
KIV Kislovodsk 36.31 298 *e*P **P 22 43 20.0 +1.7**
KIV pmax pmax
comp=Z,7.0nm,1.0s
YAK Yakutsk 37.04 31 P **P 22 43 23.3 -0.8**
YAK IAmb IAmb 22 43 25.6
comp=Z,11nm,0.7s
YAK Yakutsk 37.04 31 LR LR 22 59 20.2
comp=Z,356nm,18.3s,baz=236,slow=38
YAK Yakutsk 37.04 31*ce*P **P 22 43 22.4 -1.7**
YAK pmax pmax
comp=Z,13nm,0.7s
GURO Guroymak-BITLI 37.36 289 P **P 22 43 28.2 +0.9**
KOPT Kop Dagi 38.30 292 P **P 22 43 35.6 +0.2**
KOPT IAmb IAmb 22 43 53.1
comp=Z,13nm,1.0s
KSM Kuching 38.99 145 P **P 22 43 41.2 +0.2**
KSM IAmb IAmb 22 43 46.0
comp=Z,21nm,1.2s
RAYN Ar Rayn 39.31 265 P **P 22 43 44.8 +1.0**
RAYN Ar Rayn 39.31 265 P **P 22 43 44.8 +1.0**
RAYN pmax pmax
comp=Z,2.0nm,0.9s
MJAR Matsushiro Arr 39.62 73 LR LR 23 01 30.9
comp=Z,166nm,18.4s,baz=289,slow=38
MOS Moscow 40.31 317 *e*P **P 22 43 51.5 -0.1**
KLMR Klimovskoe 40.45 325 *e*P **P 22 43 51.6 -1.1**
KLMR pmax pmax
comp=Z,9.0nm,1.1s
OBN Obninsk 40.82 316 LR LR 23 01 43.1
comp=Z,236nm,18.3s,baz=310,slow=37
OBN Obninsk 40.82 316 ⇓*i*P **P 22 43 56.6 +0.8**
OBN *e**PP **pP 22 44 00.0 -0.5**
OBN *i* *SP **sP 22 44 03.7 +1.3**
OBN 22 45 31.0
OBN 22 45 57.0
OBN S **S 22 50 12.0 +5.4**
OBN *i* SSS SSS 22 53 37.8
OBN pmax pmax
comp=Z,40nm,3.5s
OBN MLR MLR
comp=Z,324nm,17.0s
ASAJ Asahikawa 41.64 61 LR LR 23 02 21.7
comp=Z,483nm,18.3s,baz=352,slow=38
JHJ Hachijo jima 2 41.77 78 LR LR 23 02 58.5
comp=Z,353nm,18.6s,baz=273,slow=39
TIXI Tiksi 42.03 18 P **P 22 44 04.3 -1.3**
TIXI IAmb IAmb 22 44 06.3
comp=Z,7.6nm,0.8s
TIXI Tiksi 42.03 18 LR LR 23 02 12.8
comp=Z,488nm,21.5s,baz=212,slow=37
TIXI Tiksi 42.03 18*ce*P **P 22 44 05.6 +0.1**
TIXI pmax pmax
comp=Z,10.0nm,1.0s
ERM Erimo 42.34 64 P **P 22 44 07.9 -0.5**
ERM Erimo 42.34 64 P **P 22 44 07.9 -0.5**
ERM pmax pmax
comp=Z,95nm,1.2s
ASF Jabal al Asfar 43.00 281 LR LR 23 04 53.8
comp=Z,313nm,21.6s,baz=121,slow=40
BR131 Keskin Array S 43.55 293 P **P 22 44 18.3 -0.2**
BR131 Keskin Array S 43.55 293 *i* P **P 22 44 20.7 +2.2**
BRTR Keskin Array B 43.55 293 P **P 22 44 18.3 -0.2**
BRTR Keskin Array B 43.55 293 P **P 22 44 18.8 +0.3**
comp=Z,1.5nm,0.8s,baz=106,slow=8.0,SNR=6.4
BRTR LR LR 23 05 37.2
comp=Z,120nm,18.6s,baz=78,slow=40
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 43.55 293 *i* P **P 22 44 21.0 +2.5**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
DAV Davao City (W) 43.74 121 LR LR 23 03 49.8
comp=Z,482nm,18.5s,baz=348,slow=38
MMAI Mount Meron Ar 43.93 283 LR LR 23 06 53.8
comp=Z,207nm,19.2s,baz=86,slow=42
APA Apatity 44.97 333⇓*e*P **P 22 44 24.6 -4.7**
APA *e* 22 46 11.3
AKASG Malin Array Be 45.14 309 P **P 22 44 31.6 +0.7**
comp=Z,0.4nm,0.4s,baz=76,slow=7.8,SNR=2.2
AKASG LR LR 23 06 59.6
comp=Z,391nm,19.0s,baz=84,slow=41
comp=Z,0.4nm,0.4s
EIL Elat 45.43 279 LR LR 23 07 20.3
comp=Z,546nm,19.2s,baz=74,slow=41
MA2 Magadan 46.34 38 LR LR 23 05 09.4
comp=Z,417nm,19.1s,baz=316,slow=38
NACGM Naroch 46.43 315 *e*P P 22 44 33.1 -7.9
comp=Z,9.0nm,0.8s,baz=88
FIA1 FINESS Array S 46.96 324 P **P 22 44 45.3 +0.2**
FINES FINESS Array B 46.96 324 P **P 22 44 45.3 +0.2**
FINES FINESS Array B 46.96 324 P **P 22 44 46.5 +1.4**
comp=Z,1.8nm,0.8s,baz=142,slow=9.6,SNR=3.8
FINES LR LR 23 04 00.6
comp=Z,265nm,20.7s,baz=91,slow=35
comp=Z,1.8nm,0.8s
FINES FINESS Array B 46.96 324 *i* P **P 22 44 48.0 +2.9**
FINES pmax pmax
comp=Z,2.0nm,0.9s
SEY Seymchan 47.36 34 LR LR 23 06 24.4
comp=Z,589nm,19.2s,baz=262,slow=38
SEY Seymchan 47.36 34*ce*P **P 22 44 48.7 +0.5**
SEY pmax pmax
comp=Z,23nm,1.6s
MLR Muntele Rosu 47.98 302 LR LR 23 08 43.2
comp=Z,539nm,20.4s,baz=62,slow=40
KAPI Kappang 49.38 138 LR LR 23 08 17.5
comp=Z,122nm,19.0s,baz=286,slow=39
PETK Petropavlovsk- 50.48 47 LR LR 23 08 30.5
comp=Z,452nm,18.3s,baz=267,slow=38
SPITS Spitsbergen Ar 52.29 346 LR LR 23 09 45.5
comp=Z,247nm,20.4s,baz=126,slow=38
HFS Hagfors 53.06 323 LR LR 23 11 08.8
comp=Z,267nm,19.2s,baz=78,slow=39
BILL Bilibino 53.22 27 P **P 22 45 32.5 0.0**
BILL IAmb IAmb 22 45 35.9
comp=Z,8.7nm,1.1s
BILL Bilibino 53.22 27*ce*P **P 22 45 33.7 +1.2**
BILL pmax pmax
comp=Z,12nm,1.5s
VRAC Vranov 53.40 309 LR LR 23 10 06.0
comp=Z,249nm,21.8s,baz=80,slow=38
PDG Podgorica 53.40 300 P **P 22 45 35.4 +1.2**
PDG IAmb IAmb 22 45 40.6
comp=Z,11nm,1.3s
NC405 NORSAR Array S 53.89 324 P **P 22 45 36.5 -1.0**
NC405 IAmb IAmb 22 45 38.5
comp=Z,13nm,1.1s
NB2 NORSAR Subarra 54.14 324 P **P 22 45 39.4 0.0**
comp=Z,6.1nm,1.4s,baz=83,slow=7.4
NOA NORSAR Array B 54.14 324 P **P 22 45 39.3 -0.2**
comp=Z,0.7nm,0.8s,baz=82,slow=7.1,SNR=4.7
NOA LR LR 23 10 39.4
comp=Z,183nm,18.2s,baz=95,slow=38
comp=Z,0.7nm,0.8s
GUMO Guam 54.55 99 LR LR 23 07 45.8
comp=Z,99nm,21.9s,baz=188,slow=35
GERES GERESS Array B 55.35 309 P **P 22 45 50.0 +1.5**
comp=Z,0.2nm,0.4s,baz=75,slow=7.1,SNR=5.6
GERES LR LR 23 12 46.0
comp=Z,309nm,20.2s,baz=86,slow=40
comp=Z,0.2nm,0.4s
SOEI Soe 55.79 136 P **P 22 45 51.1 -0.9**
BATI Baumata 55.82 137 LR LR 23 11 31.7
comp=Z,215nm,21.2s,baz=309,slow=38
CTI Castel Tesino 57.51 306 P **P 22 46 04.4 +0.5**
CTI IAmb IAmb 22 46 10.7
comp=Z,7.0nm,1.4s
CTI Castel Tesino 57.51 306 P **P 22 46 04.4 +0.5**
CTI pmax pmax
comp=Z,7.0nm,1.4s
MURB Monte Urbino 57.84 303 P **P 22 46 07.6 +1.4**
VAE Valguarnera 58.57 296 LR LR 23 16 06.9
comp=Z,77nm,18.2s,baz=80,slow=41
CASP Castiglione de 59.14 303 P **P 22 46 15.1 -0.2**
JMIC Jan Mayen 59.54 338 LR LR 23 15 48.8
comp=Z,129nm,18.5s,baz=92,slow=40
SHEM Shemya Is, Ala 60.19 44 LR LR 23 14 37.6
comp=Z,218nm,18.4s,baz=278,slow=38
KEST Kesra 63.00 296 LR LR 23 20 26.5
comp=Z,99nm,18.1s,baz=339,slow=42
FITZ Fitzroy Crossi 63.41 141 LR LR 23 17 32.8
comp=Z,96nm,19.3s,baz=334,slow=39
BORG Borgarnes 66.65 334 LR LR 23 15 27.9
comp=Z,100nm,18.3s,baz=52,slow=35
TOLK Toolik Lake Re 67.87 20 P **P 22 47 11.7 -0.9**
IMAR Indian Mountai 68.33 23 P **P 22 47 15.1 -0.3**
MORW Morawa 68.82 155 P **P 22 47 20.1 +1.2**
CLES Cleveland East 68.94 40 P **P 22 47 18.4 -1.0**
CART Cartagena 69.57 302 P **P 22 47 24.9 +1.3**
WRA Warramunga Arr 69.72 134 IAmb IAmb 22 47 27.8
comp=Z,0.2nm,0.9s
WRA Warramunga Arr 69.72 134 P **P 22 47 23.3 -1.3**
comp=Z,1.9nm,0.7s,baz=331,slow=6.2,SNR=10.0
comp=Z,1.9nm,0.7s
BMAR Burnt Mountain 70.07 19 P **P 22 47 26.3 +0.1**
RES Resolute Bay 70.39 1 LR LR 23 20 53.5
comp=Z,122nm,18.3s,baz=26,slow=38
ESDC Sonseca Array 70.56 305 P **P 22 47 31.9 +2.1**
comp=Z,0.6nm,0.9s,baz=69,slow=5.9,SNR=2.5
ESDC LR LR 23 21 05.5
comp=Z,190nm,20.5s,baz=60,slow=38
comp=Z,0.6nm,0.9s
NEA2 Nenana 70.73 23 P **P 22 47 30.4 +0.1**
NEA2 IAmb IAmb 22 47 32.8
comp=Z,16nm,1.5s
PPLA Purkeypile 70.83 25 P **P 22 47 30.4 -0.7**
F28M Old Crow 71.16 18 P **P 22 47 32.9 0.0**
F28M IAmb IAmb 22 47 37.3
comp=Z,10nm,1.4s
ILAR Eielson Array 71.29 22 P **P 22 47 33.0 -0.7**
ILAR Eielson Array 71.29 22 P **P 22 47 32.1 -1.6**
comp=Z,2.9nm,1.1s,baz=303,slow=5.3,SNR=16
ILAR PP **PP 22 50 09.4 -1.7**
comp=Z,1.3nm,1.1s,baz=320,slow=7.8,SNR=7.1
ILAR LR LR 23 20 41.2
comp=Z,186nm,21.2s,baz=286,slow=38
comp=Z,2.9nm,1.1s

ILAR	**Eielson Array**	**71.29**	**22**	P	**P**		**22 47 33.0**	**-0.7**
SKT	**Skwentna**	**71.66**	**26**	P	**P**		**22 47 35.1**	**-0.9**
CUT	**Chulitna**	**71.82**	**25**	P	**P**		**22 47 37.5**	**+0.7**
INK	**Inuvik**	**72.09**	**15**	P	**P**		**22 47 37.8**	**-0.6**
INK				IAmb	IAmb		22 47 39.6	
	comp=Z,17nm,1.5s							
INK	**Inuvik**	**72.09**	**15**	LR	LR		23 22 38.6	
	comp=Z,129nm,21.4s,baz=334,slow=39							
INK	**Inuvik**	**72.09**	**15**	P	**P**		**22 47 37.8**	**-0.6**
INK				pmax	pmax			
	comp=Z,17nm,1.5s							
RED	**Redoubt Volcan**	**72.24**	**27**	P	**P**		**22 47 40.1**	**+0.6**
RED				IAmb	IAmb		22 47 42.0	
	comp=Z,5.5nm,0.8s							
K24K	**Donnelly Dome**	**72.32**	**22**	P	**P**		**22 47 39.8**	**-0.1**
ASAR	**Alice Springs**	**72.39**	**137**	P	**P**		**22 47 39.8**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=323,slow=5.7,SNR=13							
ASAR				LR	LR		23 25 26.2	
	comp=Z,57nm,19.5s,baz=296,slow=41							
	comp=Z,1.2nm,0.7s							
J26L	**Joseph Creek**	**72.48**	**21**		**P**		**22 47 40.9**	**-0.1**
J26L				IAmb	IAmb		22 47 41.9	
	comp=Z,3.7nm,1.0s							
G30M	**tAoh Zraii Nji**	**72.55**	**17**	P	**P**		**22 47 41.0**	**-0.2**
G30M				IAmb	IAmb		22 47 42.4	
	comp=Z,13nm,1.2s							
SCRK	**Sand Creek**	**72.74**	**22**	P	**P**		**22 47 42.1**	**-0.5**
SCRK				IAmb	IAmb		22 47 43.6	
	comp=Z,6.7nm,1.3s							
F31M	**Tsiigehtchic**	**72.75**	**16**	P	**P**		**22 47 41.2**	**-1.2**
F31M				IAmb	IAmb		22 47 43.6	
	comp=Z,9.5nm,1.3s							
NWAO	**Narrogin (SRO)**	**72.76**	**155**	LR	LR		23 19 46.2	
	comp=Z,98nm,21.4s,baz=316,slow=36							
SFJD	**Kangerlussuaq**	**73.61**	**345**	LR	LR		23 24 07.8	
	comp=Z,138nm,18.6s,baz=33,slow=39							
KDAK	**Kodiak Island**	**74.05**	**29**	LR	LR		23 23 46.4	
	comp=Z,354nm,18.8s,baz=304,slow=39							
L27K	**Beaver Creek,**	**74.07**	**22**	P	**P**		**22 47 49.8**	**-0.5**
L27K				IAmb	IAmb		22 47 53.0	
	comp=Z,6.8nm,1.4s							
BCAR	**Beaver Creek A**	**74.08**	**22**	P	**P**		**22 47 49.9**	**-0.5**
OHAK	**Old Harbor**	**74.13**	**30**	P	**P**		**22 47 49.8**	**-0.9**
OHAK				IAmb	IAmb		22 47 56.0	
	comp=Z,14nm,1.0s							
MDT	**Midelt**	**74.53**	**299**	LR	LR		23 27 37.0	
	comp=Z,63nm,18.3s,baz=52,slow=41							
FRB	**Frobisher Bay**	**79.80**	**350**	LR	LR		23 26 18.0	
	comp=Z,185nm,21.6s,baz=32,slow=38							
TORD	**Torodi Ar. Bea**	**80.32**	**279**	P	**P**		**22 48 26.9**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=46,slow=6.2,SNR=4.3							
	comp=Z,1.4nm,0.6s							
YKA	**Yellowknife Ar**	**80.85**	**11**	LR	LR		23 26 58.6	
	comp=Z,82nm,19.4s,baz=304,slow=38							
DLBC	**Dease Lake**	**81.22**	**20**	LR	LR		23 29 34.0	
	comp=Z,106nm,18.0s,baz=296,slow=39							
STKA	**Stephens Creek**	**83.03**	**137**	LR	LR		23 30 47.2	
	comp=Z,52nm,19.9s,baz=325,slow=40							
LBTB	**Lobatse**	**84.69**	**235**	LR	LR		23 26 58.9	
	comp=Z,40nm,18.1s,baz=45,slow=36							
BBB	**Bella Bella**	**87.18**	**22**	LR	LR		23 32 43.3	
	comp=Z,88nm,18.5s,baz=321,slow=39							
BOSA	**Boshof**	**87.34**	**232**	LR	LR		23 26 09.4	
	comp=Z,65nm,20.4s,baz=32,slow=34							
SCHQ	**Schefferville**	**87.97**	**346**	LR	LR		23 33 58.8	
	comp=Z,139nm,18.1s,baz=12,slow=39							
DBIC	**Dimbokro**	**89.28**	**278**	LR	LR		23 32 51.4	
	comp=Z,167nm,19.0s,baz=76,slow=38							
NEW	**Newport**	**93.74**	**17**	LR	LR		23 35 58.0	
	comp=Z,101nm,19.7s,baz=343,slow=38							
BBTS	**Babate**	**93.85**	**291**	LR	LR		23 37 45.9	
	comp=Z,71nm,19.5s,baz=76,slow=39							
ULM	**Lac du Bonnet**	**94.85**	**3**	LR	LR		23 35 14.5	
	comp=Z,62nm,19.7s,baz=17,slow=37							
QSPA	**South Pole Qui**	**124.95**	**180**	PKP	**PKiKP**		**22 55 14.4**	**+0.3**
	comp=Z,2.2nm,1.1s,baz=278,slow=2.7,SNR=4.4							
CPUP	**Villa Florida**	**149.81**	**278**	PKPbc	**PKPbc**		**22 56 04.2**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=4,3,slow=8.5,SNR=3.2							
LPAZ	**La Paz**	**152.18**	**307**	PKP	**PKPdf**		**22 56 04.5**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=84,slow=6.6,SNR=3.6							

*JMA **01** 22:49:39.5±0.2,22.7N±0.9×122.4E±0.5,h39km,MV4.1/18, TAIWAN REGION*
*TAP **01** 22:49:40.4,22.64N×122.34E,h43km,ML4.1,D*
*IDC **01** 22:49:45.6±12.0,23.38N×121.50E,h0km,mb3.7/5, mbtmp3.7/6,ML3.7/1,Error ellipse: s-maj=231.3km s-min=41.5km az=132.0*

ISC 01 22:49:36.7±1.2,22.67N±0.02×122.39E±0.02,h4km±9km, n174,σ1°13/296,mb3.8/5,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.85**	**270**	P	**Pb**	**22 49 54.6**	**+0.5**
LDUT				S	**Sg**	**22 50 04.3**	**+0.1**
LAY	**Lan-yu**	**1.00**	**231**	P	**Pg**	**22 49 56.4**	**+0.4**
LAY				eS	**Sg**	**22 50 07.7**	**-1.2**
LYUB	**Lan-yu**	**1.00**	**229**	↑P	**Pg**	**22 49 56.7**	**+0.7**
LYUB				S	**Sg**	**22 50 07.6**	**-1.4**
CHKT	**Chengkung**	**1.04**	**294**	*i* P	**Pn**	**22 49 57.5**	**-0.5**
CHKT				*i* S	**Sg**	**22 50 09.3**	**-0.9**
EDH	**Donghe**	**1.05**	**287**	*i* P	**Pn**	**22 49 57.7**	**-0.5**
EDH				S	**Sg**	**22 50 10.1**	**-0.4**
CHKH	**Chenggong**	**1.06**	**300**	*i* P	**Pn**	**22 49 57.8**	**-0.5**
CHKH				*i* S	**Sg**	**22 50 10.2**	**-0.4**
ECBN	**Changbin**	**1.08**	**307**	P	**Pn**	**22 49 58.3**	**-0.3**
ECBN				S	**Sg**	**22 50 11.2**	**-0.3**
FULB	**Fuli**	**1.14**	**298**	*i* P	**Pg**	**22 49 59.1**	**+0.5**
FULB				eS	**Sg**	**22 50 12.8**	**-0.6**
TTN	**Taitung**	**1.15**	**274**	eP	**Pb**	**22 49 58.6**	**-0.6**
TTN				S	**Sb**	**22 50 13.0**	**-1.5**
ECS	**Chishang**	**1.16**	**292**	eP	**Pn**	**22 49 60.0**	**+0.2**
ECS				S	**Sg**	**22 50 14.4**	**+0.3**
LONT	**Longtian**	**1.19**	**282**	*i* P	**Pb**	**22 49 59.8**	**-0.1**
LONT				*i* S	**Sb**	**22 50 15.1**	**-0.5**
EHD	**Haiduan**	**1.19**	**294**	P	**Pg**	**22 50 00.4**	**+0.8**
EHD				eS	**Sb**	**22 50 14.7**	**-1.0**
EYUL	**Yuli**	**1.20**	**304**	P	**Pg**	**22 50 00.4**	**+0.8**
EYUL				S	**Sb**	**22 50 14.7**	**-1.1**
HGSD	**Ruisui**	**1.21**	**313**	*i* P	**Pb**	**22 49 59.9**	**-0.2**
HGSD				eS	**Sb**	**22 50 13.8**	**-2.4**
TWF1	**Yuli**	**1.22**	**304**	eP	**Pg**	**22 50 00.4**	**+0.3**
TWF1				eS	**Sb**	**22 50 14.2**	**-2.1**
TWGBT	**Beinan**	**1.22**	**277**	P	**Pg**	**22 50 00.8**	**+0.7**
TWGBT	**Beinan**	**1.22**	**277**	S	**Sb**	**22 50 15.5**	**-1.0**
TWGBT	**Beinan**	**1.22**	**277**	P	**Pg**	**22 50 00.7**	**+0.5**
TWGBT				S	**Sb**	**22 50 15.1**	**-1.3**
TWG	**Pinlang**	**1.23**	**277**	P	**Pg**	**22 50 00.9**	**+0.7**
TWG				*i* S	**Sb**	**22 50 15.2**	**-1.5**
YULB	**Yu-li**	**1.24**	**306**	P	**Pg**	**22 50 00.7**	**+0.3**
YULB	**Yu-li**	**1.24**	**306**	S	**Sg**	**22 50 16.6**	**0.0**
YULB	**Yu-li**	**1.24**	**306**	*i* P	**Pg**	**22 50 00.8**	**+0.3**
YULB				S	**Sb**	**22 50 16.2**	**-0.8**
EHYH	**Wanrong**	**1.27**	**311**	*i* P	**Pg**	**22 50 01.2**	**+0.2**
EHYH				eS	**Sb**	**22 50 17.1**	**-0.7**
EHY	**Hungye**	**1.29**	**310**	*i* P	**Pb**	**22 50 01.4**	**-0.1**
EHY				S	**Sb**	**22 50 16.8**	**-1.7**
TEGC	**Jichi Village**	**1.30**	**323**	P	**Pg**	**22 50 01.8**	**+0.2**
TEGC				S	**Sb**	**22 50 17.4**	**-1.3**
ECL	**Taimali**	**1.33**	**267**	eP	**Pn**	**22 50 02.1**	**0.0**
ECL				S	**Sb**	**22 50 17.0**	**-2.6**
EGFH	**Guangfu**	**1.33**	**318**	P	**Pb**	**22 50 02.1**	**-0.1**
EGFH				S	**Sb**	**22 50 18.3**	**-1.4**
SHUL	**Shoufeng**	**1.35**	**326**	P	**Pg**	**22 50 02.7**	**+0.1**
SHUL				S	**Sb**	**22 50 19.1**	**-1.0**
ELDTW	**Lidau**	**1.37**	**292**	P	**Pb**	**22 50 02.9**	**-0.1**
ELDTW				eS	**Sb**	**22 50 19.0**	**-1.9**
WARBT	**Fenglin Townsh**	**1.39**	**319**	eP	**Pb**	**22 50 03.2**	**-0.2**
WARBT				S	**Sb**	**22 50 19.5**	**-2.0**
TEYL	**Yanliau Villag**	**1.40**	**329**	P	**Pg**	**22 50 03.6**	**+0.1**
TEYL				S	**Sn**	**22 50 21.2**	**-0.7**
TAW	**Tawu**	**1.42**	**258**	P	**Pg**	**22 50 04.7**	**+0.7**
TAW				eS	**Sn**	**22 50 19.7**	**-2.7**
TAWH	**Dawu Township**	**1.43**	**257**	eP	**Pn**	**22 50 03.7**	**+0.3**
TAWH				eS	**Sn**	**22 50 20.1**	**-2.6**
ESL	**Shilin**	**1.44**	**322**	P	**Pn**	**22 50 03.5**	**-0.1**
ESL				S	**Sn**	**22 50 20.3**	**-2.7**
EOS4	**EOS4**	**1.45**	**357**	eP	**Pb**	**22 50 04.2**	**+0.2**
EOS4				S	**Sn**	**22 50 21.7**	**-0.8**
EAST	**Anshuo**	**1.46**	**259**	P	**Pb**	**22 50 04.4**	**0.0**
EAST				S	**Sn**	**22 50 21.5**	**-1.9**
HWA	**Hwalien**	**1.49**	**331**	P	**Pb**	**22 50 04.8**	**-0.1**
HWA				S	**Sn**	**22 50 23.1**	**-1.0**
ETM	**Tongmen**	**1.53**	**327**	eP	**Pb**	**22 50 05.4**	**-0.3**
ETM				eS	**Sn**	**22 50 22.7**	**-2.5**
YUS	**Yu-Shan**	**1.56**	**302**	P	**Pb**	**22 50 06.2**	**-0.2**
STYH	**Taoyuan**	**1.57**	**289**	P	**Pb**	**22 50 06.4**	**+0.1**
STYH				eS	**Sn**	**22 50 23.0**	**-3.1**
VWDT	**VWDT**	**1.58**	**313**	*i* P	**Pb**	**22 50 06.5**	**+0.1**
VWDT				S	**Sn**	**22 50 25.0**	**-1.3**
SMST	**Manzhou Townsh**	**1.58**	**246**	eP	**Pb**	**22 50 06.1**	**-0.4**
SMST				eS	**Sn**	**22 50 23.3**	**-3.0**
TWD	**Chiawan**	**1.58**	**333**	P	**Pb**	**22 50 05.9**	**-0.6**
TWD				S	**Sn**	**22 50 23.9**	**-2.5**
EOS3	**EOS3**	**1.61**	**358**	*i* P	**Pb**	**22 50 07.2**	**+0.3**
EOS3				S	**Sb**	**22 50 26.6**	**-0.9**
TSMG	**Majia**	**1.61**	**272**	eP	**Pb**	**22 50 06.5**	**-0.6**
LXIB	**Xiulin Townshi**	**1.62**	**326**	P	**Pb**	**22 50 06.6**	**-0.7**
LXIB				S	**Sn**	**22 50 25.6**	**-1.9**
MASBT	**Mashibuluo**	**1.63**	**268**	P	**Pb**	**22 50 06.8**	**-0.5**
SSD	**Sandimen**	**1.63**	**273**	eP	**Pn**	**22 50 06.5**	**+0.4**
TWKBT	**Hengchun**	**1.63**	**244**	P	**Pn**	**22 50 06.7**	**+0.5**
TWKBT				S	**Sn**	**22 50 24.8**	**-2.9**
TWK1	**Hengchun**	**1.64**	**244**	P	**Pn**	**22 50 07.0**	**+0.7**
TWK1				eS	**Sn**	**22 50 25.1**	**-2.7**
ETL	**Fush Village**	**1.64**	**335**	eP	**Pb**	**22 50 06.9**	**-0.6**
ETL				eS	**Sn**	**22 50 26.3**	**-1.6**
NACB	**Ninganchiao**	**1.67**	**334**	P	**Pb**	**22 50 07.1**	**-0.9**
NACB	**Ninganchiao**	**1.67**	**334**	S	**Sn**	**22 50 26.8**	**-1.7**
NACB	**Ninganchiao**	**1.67**	**334**	P	**Pn**	**22 50 06.9**	**+0.2**
NACB				S	**Sn**	**22 50 26.2**	**-2.3**
SCZT	**Fangliau**	**1.67**	**260**	eP	**Pb**	**22 50 07.9**	**-0.1**
HEN	**Hengchun**	**1.67**	**247**	eP	**Pn**	**22 50 07.4**	**+0.7**
HEN				S	**Sn**	**22 50 26.4**	**-2.1**
ALS	**Alishan**	**1.68**	**300**	*i* P	**Pb**	**22 50 08.7**	**+0.3**
ALS				*i* S	**Sn**	**22 50 28.6**	**-0.8**
OWD	**Renai**	**1.70**	**319**	P	**Pb**	**22 50 08.0**	**-0.6**
OWD				S	**Sn**	**22 50 27.0**	**-2.5**
SGST	**Jiashian**	**1.72**	**284**	*i* P	**Pb**	**22 50 08.6**	**-0.3**
SGST				eS	**Sb**	**22 50 29.7**	**-1.2**
SSLB	**Suanglung**	**1.73**	**310**	P	**Pb**	**22 50 08.7**	**-0.3**
SSLB	**Suanglung**	**1.73**	**310**	P	**Pb**	**22 50 08.5**	**-0.5**
SSLB				S	**Sn**	**22 50 28.0**	**-2.1**
TPUB	**Ta-pu**	**1.74**	**291**	P	**Pg**	**22 50 10.2**	**+0.1**
TPUB	**Ta-pu**	**1.74**	**291**	S	**Sb**	**22 50 31.2**	**-0.3**
TPUB	**Ta-pu**	**1.74**	**291**	eP	**Pg**	**22 50 10.2**	**+0.1**
ETLH	**Xiulin Townshi**	**1.74**	**331**	P	**Pb**	**22 50 08.5**	**-0.8**
ETLH				S	**Sn**	**22 50 28.7**	**-1.9**
EOS2	**EOS2**	**1.75**	**355**	P	**Pb**	**22 50 09.5**	**+0.2**
EOS2				S	**Sb**	**22 50 30.6**	**-0.9**
WHYT	**Xinyi Township**	**1.75**	**306**	P	**Pb**	**22 50 09.4**	**+0.1**
WHYT				eS	**Sn**	**22 50 30.0**	**-0.5**
EAHA	**Aohua**	**1.76**	**340**	eP	**Pb**	**22 50 09.0**	**-0.5**
EAHA				S	**Sn**	**22 50 29.6**	**-1.2**
SGLT	**Jiouru**	**1.76**	**272**	eP	**Pg**	**22 50 10.9**	**+0.5**
WUSB	**Renai**	**1.76**	**319**	eP	**Pb**	**22 50 08.8**	**-0.8**
WUSB				S	**Sn**	**22 50 29.1**	**-2.0**
SCST	**Cishan**	**1.77**	**277**	P	**Pg**	**22 50 10.6**	**0.0**
SCST				eS	**Sg**	**22 50 34.0**	**+0.5**
CHN1	**Nanshi**	**1.79**	**287**	P	**Pg**	**22 50 11.1**	**-0.1**
CHN1				S	**Sb**	**22 50 33.0**	**0.0**
WHF	**Hehuan Shan**	**1.80**	**325**	eP	**Pb**	**22 50 09.5**	**-1.0**
WHF				S	**Sn**	**22 50 30.3**	**-2.1**
WCKO	**Fanlu**	**1.82**	**295**	eP	**Pg**	**22 50 11.4**	**-0.1**
WCKO				eS	**Sg**	**22 50 34.8**	**-0.3**
TWM1	**Shoushan**	**1.82**	**275**	eP	**Pb**	**22 50 10.9**	**+0.2**
CHN5	**Tsauling**	**1.83**	**301**	eP	**Pg**	**22 50 11.5**	**-0.3**
CHN5				eS	**Sg**	**22 50 35.8**	**+0.3**
SMLT	**Sun Moon Lake**	**1.83**	**312**	eP	**Pb**	**22 50 10.6**	**-0.2**
SMLT				eS	**Sg**	**22 50 34.7**	**-0.8**
SNST	**Tainan City**	**1.83**	**288**	*i* P	**Pg**	**22 50 11.8**	**-0.1**
SNST				S	**Sg**	**22 50 35.0**	**-0.6**
JYNG	**Yonagunijimaku**	**1.84**	**16**	P	**Pb**	**22 50 10.2**	**-0.8**
JYNG				eS	**Sn**	**22 50 32.4**	**-0.5**
ENA	**Nanau**	**1.85**	**341**	eP	**Pb**	**22 50 10.4**	**-0.7**
ENA				eS	**Sn**	**22 50 32.0**	**-1.0**
TWK	**Hsinying**	**1.85**	**289**	eP	**Pg**	**22 50 12.0**	**-0.3**
TWK				S	**Sb**	**22 50 35.2**	**+0.5**
EWUT	**Wuta**	**1.85**	**342**	eP	**Pb**	**22 50 10.5**	**-0.6**
EWUT				eS	**Sn**	**22 50 32.5**	**-0.7**
TYC	**Yuchr**	**1.87**	**311**	eP	**Pb**	**22 50 11.3**	**-0.2**
YOJ	**Yonaguni jima**	**1.87**	**18**	P	**Pb**	**22 50 11.0**	**-0.4**
YOJ	**Yonaguni jima**	**1.87**	**18**	S	**Sb**	**22 50 34.0**	**-1.2**
YOJ	**Yonaguni jima**	**1.87**	**18**	eP	**Pb**	**22 50 10.8**	**-0.6**
YOJ				eS	**Sb**	**22 50 33.9**	**-1.2**
YOJ	**Yonaguni jima**	**1.87**	**18**	P	**Pb**	**22 50 10.7**	**-0.7**
YOJ				S	**Sn**	**22 50 33.4**	**-0.1**
HATJ	**Hateruma jima**	**1.89**	**43**	P	**Pn**	**22 50 12.4**	**+1.1**
HATJ				eS	**Sn**	**22 50 32.7**	**-1.4**
SHHT	**Tainan City**	**1.92**	**281**	eP	**Pg**	**22 50 14.6**	**+1.0**
TWT	**Tachien**	**1.93**	**325**	eP	**Pb**	**22 50 12.9**	**+0.3**
TWT				S	**Sn**	**22 50 34.1**	**-1.2**
WCS	**Beigang Elemen**	**1.94**	**316**	eP	**Pb**	**22 50 12.4**	**-0.2**
TDCB	**Techi**	**1.94**	**324**	P	**Pb**	**22 50 12.2**	**-0.5**
TDCB				eS	**Sn**	**22 50 34.0**	**-1.5**
ESAO	**Su ao**	**1.96**	**345**	P	**Pb**	**22 50 12.6**	**-0.4**
ESAO				eS	**Sn**	**22 50 34.9**	**-0.9**
CHN2	**Minshiung**	**1.96**	**296**	eP	**Pg**	**22 50 14.7**	**+0.3**
CHN2				eS	**Sg**	**22 50 39.1**	**-0.7**
WGK	**Gukeng**	**1.96**	**301**	eP	**Pg**	**22 50 14.4**	**0.0**
WSSB	**Gushan**	**1.97**	**270**	eP	**Pg**	**22 50 15.4**	**+0.9**
WSSB				eS	**Sg**	**22 50 39.3**	**-0.7**
WNT	**Mingjian**	**1.98**	**308**	eP	**Pg**	**22 50 14.1**	**-0.6**
WNT				*i* S	**Sg**	**22 50 38.9**	**-1.4**
NNSB	**Datong**	**1.98**	**332**	eP	**Pg**	**22 50 12.6**	**-0.8**
NNSB				S	**Sn**	**22 50 35.1**	**-1.3**
WDLH	**Douliu**	**1.98**	**301**	*i* P	**Pg**	**22 50 14.6**	**-0.2**
WDLH				*i* S	**Sb**	**22 50 39.1**	**+0.7**
CHY	**Chiayi**	**1.99**	**295**	eP	**Pb**	**22 50 14.0**	**+0.5**
CHY				S	**Sb**	**22 50 38.3**	**-0.3**
TWC	**Suao**	**1.99**	**346**	eP	**Pb**	**22 50 13.2**	**-0.4**
TWC				S	**Sn**	**22 50 35.8**	**-0.7**
NNS	**Nan Shan**	**1.99**	**332**	eP	**Pb**	**22 50 13.0**	**-0.7**
NNS				eS	**Sn**	**22 50 35.9**	**-0.9**
WDL	**Douliou City**	**2.00**	**302**	eP	**Pg**	**22 50 15.2**	**+0.1**
WDL				S	**Sb**	**22 50 38.8**	**0.0**
LATG	**Datong**	**2.02**	**337**	P	**Pb**	**22 50 13.2**	**-0.9**
LATG				*i* S	**Sn**	**22 50 36.6**	**-0.8**
NDS	**Dongshan**	**2.05**	**343**	eP	**Pb**	**22 50 13.5**	**-1.1**
NDS				eS	**Sn**	**22 50 37.8**	**-0.2**
IRIF	**Iriomote-Funau**	**2.06**	**36**	*i* P	**Pn**	**22 50 13.3**	**+1.2**
IRIF				S	**Sn**	**22 50 38.2**	**-0.1**
WHP	**Taichung City**	**2.08**	**321**	eP	**Pb**	**22 50 13.9**	**+0.4**
WHP				eS	**Sb**	**22 50 39.2**	**-2.1**
ENTT	**Nioudou**	**2.10**	**339**	eP	**Pb**	**22 50 14.2**	**-1.2**
ENTT				eS	**Sn**	**22 50 38.7**	**-0.6**
CHN8	**Yiju**	**2.12**	**289**	eP	**Pb**	**22 50 16.3**	**+0.6**
CHN8				eS	**Sb**	**22 50 42.7**	**+0.4**
JKRS	**Kuro-shima**	**2.15**	**43**	P	**Pn**	**22 50 14.7**	**+1.3**
JKRS				eS	**Sn**	**22 50 39.2**	**-1.3**
TCU	**Taichung**	**2.16**	**313**	eP	**Pg**	**22 50 17.3**	**-0.8**
WSL	**Shuilin Townsh**	**2.17**	**293**	eP	**Pb**	**22 50 16.2**	**-0.3**
WSL				S	**Sb**	**22 50 42.5**	**-1.2**
TSCK	**Chigu Township**	**2.18**	**283**	eP	**Pb**	**22 50 16.7**	**0.0**
TSCK				S	**Sb**	**22 50 43.2**	**-0.9**
WCHH	**Zhanghua**	**2.19**	**310**	eP	**Pb**	**22 50 17.2**	**+0.3**
WCHH				eS	**Sb**	**22 50 44.7**	**+0.2**
WCH1	**Changhua City**	**2.20**	**310**	eP	**Pb**	**22 50 17.8**	**+0.8**
WCH1				eS	**Sb**	**22 50 45.3**	**+0.7**
YHNB	**Yeheng**	**2.20**	**335**	P	**Pb**	**22 50 16.0**	**-1.1**
YHNB	**Yeheng**	**2.20**	**335**	P	**Pb**	**22 50 16.7**	**-1.3**
YHNB				S	**Sn**	**22 50 40.9**	**-0.8**
EGS		**2.21**	**349**	eP	**Pb**	**22 50 16.4**	**-0.7**
EGS				eS	**Sn**	**22 50 41.3**	**-0.5**
FUSB	**Fushanzhiwuyua**	**2.21**	**341**	eP	**Pb**	**22 50 16.0**	**-1.2**
FUSB				eS	**Sn**	**22 50 41.9**	**-0.1**
NSK	**Sanguang**	**2.21**	**335**	eP	**Pb**	**22 50 16.0**	**-1.3**
NSK				eS	**Sn**	**22 50 41.4**	**-0.7**
TWQ1	**Liyutan**	**2.24**	**319**	eP	**Pb**	**22 50 18.1**	**+0.4**
TWQ1				eS	**Sb**	**22 50 45.5**	**-0.2**
NWLT	**Wulai**	**2.25**	**339**	eP	**Pb**	**22 50 17.1**	**-0.9**
NWLT				S	**Sn**	**22 50 42.8**	**-0.2**
NFF	**Wufeng Townshi**	**2.28**	**329**	eP	**Pb**	**22 50 18.0**	**-0.4**
NFF				*i* S	**Sn**	**22 50 44.3**	**+0.6**
WTCT	**Ta-ch'eng**	**2.28**	**302**	eP	**Pb**	**22 50 17.8**	**-0.6**
WTCT				eS	**Sb**	**22 50 46.0**	**-0.9**
WDJ	**Dajia District**	**2.32**	**316**	eP	**Pb**	**22 50 18.7**	**-0.4**
WDJ				eS	**Sb**	**22 50 47.8**	**-0.3**
JIJ	**Ishigaki jima**	**2.33**	**43**	*i* P	**Pn**	**22 50 16.6**	**+0.8**
JIJ				S	**Sn**	**22 50 42.6**	**-2.2**
NSTT	**Nanjuang**	**2.33**	**327**	eP	**Pb**	**22 50 18.7**	**-0.6**
NSTT				eS	**Sn**	**22 50 45.4**	**+0.4**
LIOB	**Emei**	**2.34**	**328**	eP	**Pb**	**22 50 19.4**	**0.0**
LIOB				S	**Sb**	**22 50 46.8**	**-1.9**
TIPB	**Shuangxi**	**2.35**	**347**	P	**Pb**	**22 50 18.7**	**-1.0**
TIPB				S	**Sn**	**22 50 45.7**	**+0.3**
TWB1	**Santiao Chiao**	**2.36**	**351**	P	**Pb**	**22 50 18.3**	**-1.5**
TWB1				eS	**Sn**	**22 50 44.6**	**-0.9**
NMLH	**Miaoli**	**2.37**	**322**	eP	**Pb**	**22 50 19.8**	**-0.2**
NMLH				eS	**Sb**	**22 50 47.0**	**-2.6**
KSHI	**Guanxi Townshi**	**2.38**	**332**	eP	**Pb**	**22 50 18.5**	**-1.6**
KSHI				eS	**Sb**	**22 50 47.6**	**-2.1**
TWA	**Mucha**	**2.42**	**342**	eP	**Pb**	**22 50 21.1**	**+0.3**
TWA				eS	**Sb**	**22 50 48.4**	**-2.5**
TATO	**Taipei**	**2.44**	**340**	S	**Sb**	**22 50 49.1**	**-2.5**
TATO	**Taipei**	**2.44**	**340**	P	**Pb**	**22 50 19.5**	**-1.6**
NWF	**Wu-fen Shan**	**2.45**	**347**	P	**Pb**	**22 50 20.3**	**-1.2**
NWF				S	**Sn**	**22 50 48.0**	**-0.1**
WFSB	**Wu-fen Shan**	**2.45**	**347**	P	**Pb**	**22 50 20.4**	**-1.0**
WFSB				S	**Sn**	**22 50 48.1**	**+0.2**
SXI1	**Grass Mountain**	**2.46**	**349**	eP	**Pb**	**22 50 19.8**	**-1.7**
SXI1				eS	**Sn**	**22 50 49.1**	**+0.9**
HSN	**Hsinchu**	**2.49**	**329**	eS	**Sb**	**22 50 51.1**	**-1.9**
TNOU	**National Taiwa**	**2.53**	**347**	eP	**Pn**	**22 50 19.5**	**+0.9**
TNOU				eS	**Sn**	**22 50 49.6**	**-0.3**
NCUH	**Zhongli**	**2.54**	**334**	eS	**Sb**	**22 50 51.9**	**-2.6**
YM01	**YM01**	**2.58**	**343**	eP	**Pb**	**22 50 22.3**	**-1.3**
YM01				eS	**Sn**	**22 50 52.4**	**+1.3**
TWS1	**Kuangyinshan**	**2.58**	**340**	eP	**Pb**	**22 50 23.2**	**-0.3**
TWS1				eS	**Sn**	**22 50 52.2**	**+1.1**
WDGT	**Dungji**	**2.59**	**284**	eP	**Pn**	**22 50 21.2**	**+1.9**
WDGT				eS	**Sn**	**22 50 50.9**	**-0.3**
JISG	**Ishigakijimahi**	**2.59**	**42**	*i* P	**Pn**	**22 50 20.1**	**+0.7**
JISG				S	**Sn**	**22 50 49.8**	**-1.6**
ZUZH	**Zhuzihu**	**2.60**	**343**	eP	**Pb**	**22 50 22.5**	**-1.4**
ZUZH				eS	**Sn**	**22 50 51.2**	**-0.4**
YM08	**YM08**	**2.61**	**344**	eP	**Pb**	**22 50 22.0**	**-2.1**
YM08				eS	**Sn**	**22 50 52.5**	**+0.7**
NTST	**Danshui**	**2.63**	**341**	eP	**Pb**	**22 50 24.1**	**-0.3**
NTST				eS	**Sn**	**22 50 53.7**	**+1.5**
PHUB	**P'eng-hu**	**2.73**	**288**	eP	**Pn**	**22 50 23.1**	**+1.8**
PHUB				eS	**Sn**	**22 50 54.6**	**-0.2**
PNG	**Penghu**	**2.76**	**289**	P	**Pn**	**22 50 23.8**	**+2.0**
PNG				eS	**Sn**	**22 50 55.6**	**+0.1**
VCHM	**Qimei**	**2.78**	**282**	eP	**Pn**	**22 50 23.6**	**+1.6**
JTJ	**Tarama**	**2.89**	**47**	*i* P	**Pn**	**22 50 24.6**	**

CEL					AML	AML		
	comp=N,24µm,1.1s							
CEL					AML	AML		
	comp=E,87µm,5.9s							
GRI	**Girifalco**	**0.66**	**83**	P		Pn	23 28 17.9	+0.5
CAR1	**CAROLEI**	**0.70**	**44**	P		Pn	23 28 17.6	-0.1
CAR1				S		Sn	23 28 35.4	-0.5
CAR1				AML		AML		
	comp=E,173µm,5.3s							
CAR1				AML		AML		
	comp=N,41µm,1.1s							
CAR1				AML		AML		
	comp=N,234µm,0.9s							
CAR1				AML		AML		
	comp=E,45µm,0.3s							
PLAC	**Placanica**	**0.73**	**114**	P		Pn	23 28 18.0	+0.1
PLAC				S		Sn	23 28 35.6	-0.5
PLAC				AML		AML		
	comp=N,22µm,1.0s							
PLAC				AML		AML		
	comp=E,76µm,4.0s							
PLAC				AML		AML		
	comp=E,36µm,2.0s							
PLAC				AML		AML		
	comp=N,74µm,9.9s							
SPS2	**Spezzano della**	**0.80**	**47**	P		Pn	23 28 18.5	+0.1
SPS2				S		Sn	23 28 36.8	-0.3
SPS2				AML		AML		
	comp=E,11µm,1.2s							
SPS2				AML		AML		
	comp=N,18µm,0.2s							
SPS2				AML		AML		
	comp=N,18µm,0.2s							
SPS2				AML		AML		
	comp=E,11µm,0.8s							
SPS2				AML		AML		
	comp=E,11µm,1.7s							
SPS2				AML		AML		
	comp=N,18µm,0.2s							
CET2	**Cetraro**	**0.83**	**20**	P		Pn	23 28 18.8	+0.2
CET2				S		Sn	23 28 36.6	-0.9
CET2				AML		AML		
	comp=E,73µm,1.1s							
CET2				AML		AML		
	comp=N,86µm,0.4s							
CET2				AML		AML		
	comp=N,86µm,0.4s							
CET2				AML		AML		
	comp=E,73µm,1.1s							
CELI	**Celico**	**0.97**	**47**	P		Pn	23 28 20.4	+0.7
CELI				S		Sn	23 28 38.9	-0.6
CELI				AML		AML		
	comp=N,48µm,2.9s							
CELI				AML		AML		
	comp=E,55µm,3.2s							
CELI				AML		AML		
	comp=N,223µm,1.8s							
CELI				AML		AML		
	comp=E,198µm,1.8s							
TIP	**Timpagrande**	**1.01**	**64**	P		Pn	23 28 20.1	+0.1
TIP				S		Sn	23 28 39.5	-0.4
TIP				AML		AML		
	comp=E,96µm,6.7s							
TIP				AML		AML		
	comp=N,17µm,2.2s							
TIP				AML		AML		
	comp=N,80µm,5.2s							
TIP				AML		AML		
	comp=E,17µm,2.6s							
GRIS	**Grisolia**	**1.01**	**12**	P		Pn	23 28 20.3	+0.4
GRIS				S		Sn	23 28 39.7	-0.2
SALB	**San Lorenzo Be**	**1.27**	**27**	P		Pn	23 28 23.1	+0.8
SALB				S		Sn	23 28 44.1	0.0
SALB				AML		AML		
	comp=N,16µm,1.6s							
SALB				AML		AML		
	comp=E,22µm,0.3s							
SIRI	**Monte Sirino -**	**1.45**	**9**	P		Pn	23 28 24.3	+0.3

*NEIC **01** 23:28:15.4±1.6,31°.65N±0°.01×104°.28W±0°.02,h5km±1km, mb_Lg2.3/24, ML2.5/50, Error ellipse: s-maj=2.9km s-min=2.4km az=152.0*

TXNET 01 23:28:15.1,31°.7N±0°.7×104°.3W±0°.8,h8km±1km, ML2.5/14, 1C, Error ellipse: s-maj=1.4km s-min=0.9km az=54.7, final, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.12**	**358**	⇑P	Pg	23 28 18.7	+0.7
TPB09				S	Sg	23 28 20.7	+0.7
TPB11	**China Draw**	**0.36**	**38**	P	Pg	23 28 22.9	+0.6
TPB11				S	Sg	23 28 27.8	+0.7
TPB13	**Reeves - Culbe**	**0.40**	**104**	S	Sb	23 28 29.9	-0.9
PECS	**Pecos**	**0.46**	**127**		Pg	23 28 24.9	+0.7
PECS					Sg	23 28 31.4	+1.2
PECS				IAML		23 28 31.6	
	324nm,0.4s						
PECS				IAML		23 28 31.8	
	309nm,0.3s						
PECS	**Pecos**	**0.46**	**127**	P	Pb	23 28 25.0	-0.6
PECS				S	Sg	23 28 31.4	+1.2
TPB12	**Southwest of T**	**0.52**	**146**	P	Pb	23 28 26.0	-0.7
TPB12				S	Sg	23 28 33.2	+1.0
TPB07	**Mentone**	**0.54**	**97**	P	Pb	23 28 26.9	-0.1
TPB07				S	Sb	23 28 34.2	-0.8
TPB10	**Southeast of T**	**0.59**	**128**	P	Pb	23 28 27.5	-0.3
TPB10				S	Sb	23 28 35.7	-0.7
CLNB	**Carlsbad**	**0.71**	**30**		Pg	23 28 29.1	+0.3
CLNB					Sg	23 28 38.8	+0.7
CLNB	**Carlsbad**	**0.71**	**30**	P	Pg	23 28 29.2	+0.4
CLNB				S	Sg	23 28 38.4	+0.4
PCOS	**Crockett Middl**	**0.71**	**109**	S	Sb	23 28 39.6	-0.3
CBET	**Carlsbad E Tow**	**0.81**	**19**	P	Pb	23 28 31.6	0.0
TPB01	**Permian Basin**	**0.83**	**148**	P	Pg	23 28 31.1	0.0
TPB01				S	Sg	23 28 42.0	+0.1
TPB03	**Saragosa**	**0.88**	**130**	S	Sb	23 28 44.4	-0.2
TPB06	**Permian Basin**	**0.92**	**90**	S	Sb	23 28 46.3	+0.4
MNTX	**Cornudas Mount**	**0.93**	**273**		Pg	23 28 33.1	+0.1
MNTX					Sb	23 28 45.7	-0.3
MNTX	**Cornudas Mount**	**0.93**	**273**	P	Pg	23 28 33.1	+0.1
MNTX				S	Sg	23 28 45.4	+0.4
TPB04	**Verhalen**	**0.99**	**117**	P	Pg	23 28 33.2	-1.0
HTMS	**Hat Mesa**	**0.99**	**34**		Pb	23 28 34.6	-0.1
HTMS	**Hat Mesa**	**0.99**	**34**	P	Pg	23 28 34.4	+0.1
HTMS				S	Sb	23 28 48.2	+0.2
TPB27	**North of Pyote**	**1.00**	**94**	S	Sb	23 28 48.4	+0.3
TPB16	**Coyonosa**	**1.03**	**120**	P	Pb	23 28 35.4	0.0
TPB16				S	Sb	23 28 49.6	+0.4
NM01	**Eunice**	**1.04**	**47**	P	Pg	23 28 35.2	+0.1
NM01				S	Sb	23 28 49.5	+0.2
VHRN	**Van Horn**	**1.04**	**215**		Pg	23 28 35.2	0.0
VHRN	**Van Horn**	**1.04**	**215**	P	Pg	23 28 35.1	-0.1
VHRN				S	Sg	23 28 48.8	0.0
TPB05	**Hovey Rd**	**1.10**	**131**	P	Pg	23 28 36.5	+0.1
TPB05				S	Sb	23 28 51.3	+0.1
MNHN	**Monahans**	**1.35**	**103**		Pn	23 28 40.1	-0.2
MNHN	**Monahans**	**1.35**	**103**	P	Pb	23 28 40.8	+0.1
MNHN				S	Sn	23 28 59.1	+0.6
ALPN	**Alpine**	**1.39**	**156**		Pn	23 28 40.6	-0.4
ALPN				Sg	Sb	23 28 58.9	-0.6
ALPN				IAML		23 29 06.7	
	87nm,0.3s						
ALPN	**Alpine**	**1.39**	**156**	P	Pn	23 28 40.7	-0.3
ALPN				S	Sb	23 28 59.0	-0.5
TPB08	**Permian Basin**	**1.41**	**122**	P	Pg	23 28 43.4	+1.2
TPB08				S	Sg	23 29 01.8	+1.4
CPRX	**Cap Rock**	**1.42**	**15**		Sg	23 28 42.3	-0.2
CPRX					Sg	23 29 02.1	+1.2
CPRX	**Cap Rock**	**1.42**	**15**	P	Pb	23 28 42.1	0.0
ODSA	**Odessa**	**1.56**	**72**		Pn	23 28 42.9	-0.4
ODSA					Sg	23 29 07.7	+2.5
ODSA	**Odessa**	**1.56**	**72**	P	Pg	23 28 44.7	-0.3
ODSA				S	Sb	23 29 04.3	0.0
TMB04	**Seminole**	**1.82**	**57**	S	Sg	23 29 13.7	+0.1
TMB01	**Midkiff**	**1.89**	**89**	S	Sg	23 29 15.0	-0.8
TMB02	**Rankin**	**1.98**	**103**	P	Pb	23 28 51.4	-0.1
TMB02				S	Sb	23 29 17.3	+0.9
TMB06	**Greenwood**	**2.15**	**81**	S	Sb	23 29 22.2	+0.9
TMB05	**Klondike**	**2.29**	**64**	P	Pb	23 28 56.2	-0.5
TX31	**Lajitas Ar. Si**	**2.37**	**167**		Pn	23 28 55.1	+0.6
TX31	**Lajitas Ar. Si**	**2.37**	**167**	P	Pb	23 28 56.4	-1.8
TX31				Pg	Pg	23 28 58.0	-2.6
TXAR	**Lajitas Array**	**2.37**	**167**		Pn	23 28 55.5	+1.0
TXAR				Sg	Sg	23 29 30.5	-0.9
SAND	**Sanderson**	**2.52**	**132**		Pn	23 28 56.9	+0.4
SAND				IAML		23 29 35.9	
	24nm,0.6s						
SAND	**Sanderson**	**2.52**	**132**	P	Pb	23 28 59.2	-1.5
MSTX	**Muleshoe**	**2.65**	**29**		Pn	23 28 58.0	-0.3
MSTX				IAmb_Lg		23 29 41.9	
	comp=Z,9.6nm,0.8s						
SGCY	**Sterling City**	**2.71**	**84**	Pn	Pn	23 28 59.1	-0.1
SGCY	**Sterling City**	**2.71**	**84**	P	Pn	23 29 01.4	+2.3
POST	**Post**	**2.75**	**58**		Pn	23 28 59.8	+0.1
OZNA	**Ozona**	**2.81**	**104**	Pn	Pn	23 29 01.4	+0.9
CRNM	**Carthage**	**3.08**	**319**		Pn	23 29 04.9	+0.6
121A	**Cookes Peak, D**	**3.09**	**287**		Pn	23 29 05.8	+1.4
121A				IAML		23 29 54.3	
	comp=E,13nm,0.4s						
121A				IAML		23 29 56.9	
	comp=N,15nm,0.3s						
121A				IAmb_Lg		23 29 58.2	
	comp=Z,8.6nm,1.0s						
BNM	**Barren Site**	**3.17**	**322**		Pn	23 29 08.1	+2.5
Y22A	**Socorro**	**3.20**	**316**		Pn	23 29 08.0	+2.0
DKNS	**Dickens**	**3.48**	**54**	IAmb_Lg		23 30 14.1	
	comp=Z,8.8nm,0.8s						
ABQ	**Albuquerque**	**3.75**	**332**	IAML		23 30 11.8	
	comp=Z,11nm,0.6s						
ANMO	**Albuquerque**	**3.75**	**332**	IAML		23 30 11.8	
	comp=Z,9.3nm,0.6s						
ANMO				IAmb_Lg		23 30 14.2	
	comp=Z,9.5nm,1.0s						
ANMO				IAML		23 30 26.3	
	comp=Z,5.7nm,3.7s						
DRIO	**Del Rio**	**3.87**	**124**	IAmb_Lg		23 30 26.5	
	comp=Z,7.1nm,0.9s						
APMT	**Aspermont**	**3.90**	**64**	IAmb_Lg		23 30 22.4	
	comp=Z,7.8nm,0.8s						
ABTX	**Abilene, Hawle**	**4.07**	**75**	IAmb_Lg		23 30 30.4	
	comp=Z,6.6nm,0.8s						
HNDO	**Hondo**	**4.81**	**115**	IAmb_Lg		23 30 53.0	
	comp=Z,7.1nm,0.9s						

*SJA **01** 23:43:22.7±0.7,29°.19S×72°.11W,h12km±3km, ML4.1, MW3.8*

*IDC **01** 23:43:24.7±0.8,29°.23S×71°.61W,h0km, mb3.7/6, mbtmp3.6/9, ML3.6/3, MS3.2/2, Error ellipse: s-maj=34.7km s-min=22.1km az=84.0*

*GUC **01** 23:43:27.8±0.8,29°.25S×71°.59W,h40km±2km, ML4.2*

*NEIC **01** 23:43:28.5±1.4,29°.18S±0°.04×71°.9W±0°.1,h37km±10km, mb4.1/7, ML4.2(GUC), Error ellipse: s-maj=13.0km s-min=5.9km az=95.0*

ISC 01 23:43:24.3±1.4, 29°.23S±0°.02×71°.83W±0°.04, h1km±9km, n117, σ1$98/140, mb4.1/8, 8C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.02**	**78**		Pn	23 43 45.6	-0.4
LCO				Sn	Sb	23 43 57.3	-1.5
LCO	**Las Campanas**	**1.02**	**78**	eP	Pb	23 43 44.9	0.0
LCO				eS	Sb	23 43 57.3	-1.5
LCO	**Las Campanas**	**1.02**	**78**	eP	Pg	23 43 44.3	+0.5
LCO				IAML		23 44 02.4	
	comp=Z,6µm,0.6s						
AC04	**Llanos de Chal**	**1.22**	**33**		Pg	23 43 49.0	+1.2
AC04				Sn	Sg	23 44 04.2	+0.5
AC04	**Llanos de Chal**	**1.22**	**33**	⇓eP	Pg	23 43 48.8	+1.0
AC04				eS	Sg	23 44 04.5	+0.9
AC04	**Llanos de Chal**	**1.22**	**33**	eP	Pb	23 43 48.2	-0.1
AC04				eS	Sn	23 44 06.3	+0.5
GO04	**Tololo Observa**	**1.30**	**136**		Pg	23 43 50.8	+1.5
GO04				Sn	Sn	23 44 07.0	-1.0
GO04	**Tololo Observa**	**1.30**	**136**	eP	Pg	23 43 50.6	+1.4
GO04				eS	Sb	23 44 06.2	-0.8
GO04	**Tololo Observa**	**1.30**	**136**	eP	Pg	23 43 50.7	+1.5
GO04				IAML		23 44 12.9	
	comp=Z,3µm,0.8s						
CO06	**Fray Jorge**	**1.45**	**173**		Pb	23 43 53.0	+0.9
CO06	**Fray Jorge**	**1.45**	**173**	⇓eP	Pb	23 43 52.8	+0.7
CO06				IAML		23 44 20.4	
	comp=E,10µm,0.1s						
CO01	**Juntas del Tor**	**1.69**	**116**		Pg	23 43 56.8	+0.1
CO01				Sn	Sb	23 44 17.0	-1.2
CO01	**Juntas del Tor**	**1.69**	**116**	⇓eP	Pb	23 43 56.5	+0.2
CO01				IAML		23 44 18.4	
	comp=N,5µm,0.3s						
CO01	**Juntas del Tor**	**1.69**	**116**	eP	Pb	23 43 56.6	+0.3
CO03	**El Pedregal**	**1.88**	**148**		Pb	23 43 59.1	-0.4
CO03				Sn	Sb	23 44 23.3	-0.3
CO02	**Combarbal**	**2.09**	**160**		Pn	23 44 01.8	+1.1
CO02	**Combarbal**	**2.09**	**160**	⇓eP	Pb	23 44 02.2	-0.9
CO02				IAML		23 44 39.0	
	comp=E,5µm,0.3s						
CO02	**Combarbal**	**2.09**	**160**	eP	Pn	23 43 56.8	-3.9
CO02				eS	Sb	23 44 29.5	-0.2
CO02				IAML		23 44 40.9	
	comp=Z,2µm,0.5s						
GO03	**Copiapo**	**2.16**	**41**		Pn	23 44 01.6	+0.1
GO03	**Copiapo**	**2.16**	**41**	eP	Pn	23 44 02.1	+0.6
GO03				eS	Sn	23 44 28.3	-0.6
GO03				IAML		23 44 38.2	
	comp=N,2µm,0.8s						
GO03	**Copiapo**	**2.16**	**41**	eP	Pn	23 44 02.1	+0.6
GO03				eS	Sg	23 44 32.8	-0.9
GO03				IAML		23 44 36.6	
	comp=Z,982nm,0.5s						
ACDV	**Cuesta del Vie**	**2.54**	**112**	eP	Pb	23 44 10.3	-0.5
ACDV				IAML		23 44 51.2	
	comp=Z,445nm,0.5s						
ACCO	**Cerro Coronel**	**2.76**	**120**	eP	Pb	23 44 14.0	-0.6
ACCO				eS	Sg	23 44 50.5	-2.4
CO04	**Los Peladeros**	**2.90**	**165**	⇓eP	Pn	23 44 14.2	+2.3
CO04				IAML		23 44 59.2	
	comp=E,986nm,0.7s						
AGUA	**GUANDACOL**	**2.93**	**96**	eP	Pb	23 44 16.9	-0.6
AGUA				IAML		23 45 06.9	
	comp=Z,530nm,0.7s						
VCA	**Vinchina**	**3.22**	**82**	eP	Pb	23 44 20.7	-1.7
VCA				IAML		23 45 20.7	
	comp=Z,326nm,0.4s						
AC01	**Pan de Azucar**	**3.26**	**20**		Pn	23 44 16.0	-0.7
AC01	**Pan de Azucar**	**3.26**	**20**	eP	Pn	23 44 16.3	-0.3
AC01	**Pan de Azucar**	**3.26**	**20**	eP	Pn	23 44 16.4	-0.2
AC01				eS	Sb	23 45 04.2	+0.9
AC01				IAML		23 45 12.4	
	comp=Z,219nm,0.6s						
VA06	**Catapilco**	**3.35**	**172**		Pn	23 44 19.2	+1.4
VA06	**Catapilco**	**3.35**	**172**	eP	Pn	23 44 19.3	+1.5
VA06				IAML		23 45 25.1	
	comp=E,883nm,0.4s						
RTLS	**Leoncito**	**3.37**	**140**	eP	Pb	23 44 23.1	-1.8
RTLS				eS	Sb	23 45 06.8	+0.2
RTLS				IAML		23 45 17.0	
	comp=Z,914nm,0.9s						
AC02	**Maricunga**	**3.38**	**46**		Pn	23 44 19.7	+1.0
AC02	**Maricunga**	**3.38**	**46**	⇓eP	Pn	23 44 20.4	+1.6
AC02				IAML		23 45 14.5	
	comp=E,477nm,0.5s						
AC02	**Maricunga**	**3.38**	**46**	eP	Pn	23 44 20.4	+1.7
AC02				eS	Sb	23 45 03.8	-3.4
AC02				IAML		23 45 16.5	
	comp=Z,343nm,0.7s						
ZON	**Zonda**	**3.57**	**131**		Pn	23 44 22.6	+1.7
ZON	**Zonda**	**3.57**	**131**	eP	Pn	23 44 23.8	+2.8
ZON				eS	Sb	23 45 09.8	-2.4
ZON				IAML		23 45 26.7	
	comp=Z,154nm,1.0s						
VA03	**San Esteban**	**3.69**	**163**		Pn	23 44 24.1	+1.5
VA03	**San Esteban**	**3.69**	**163**	eP	Pn	23 44 25.3	+2.7
VA03	**San Esteban**	**3.69**	**163**	eP	Pn	23 44 24.8	+2.2
VA03				eS	Sn	23 45 08.8	+2.0
VA03				IAML		23 45 29.6	
	comp=Z,274nm,0.3s						
VA01	**Torpederas**	**3.78**	**178**		Pn	23 44 24.5	+0.8
VA01	**Torpederas**	**3.78**	**178**	eP	Pn	23 44 24.3	+0.6
ROCH	**El Roble**	**3.79**	**169**	⇑eP	Pn	23 44 25.8	+1.7
CFA	**Coronel Fontan**	**3.90**	**128**	eP	Pn	23 44 28.8	+3.3
CFA				eP	Pb	23 44 29.2	-4.7
CFA				eS	Sb	23 45 18.8	-3.0
PEL	**Peldehue**	**4.02**	**166**		Pn	23 44 28.7	+1.6
PEL	**Peldehue**	**4.02**	**166**	eP	Pn	23 44 28.5	+1.4
AVFE	**Valle Fertil**	**4.06**	**112**	eP	Pn	23 44 30.7	+3.1
AVFE				IAML		23 45 42.7	
	comp=Z,109nm,0.5s						
MT02	**Curacav**	**4.06**	**172**		Pn	23 44 28.6	+1.0
MT02	**Curacav**	**4.06**	**172**	eP	Pn	23 44 28.9	+1.3
MT02				eS	Sn	23 45 18.2	+2.5
MT02				IAML		23 45 42.9	
	comp=Z,142nm,1.2s						
ASAL	**Salagasta**	**4.22**	**143**	eP	Pb	23 44 35.2	-4.2
ASAL				eS	Sg	23 45 37.2	-2.8
MT05	**Renca**	**4.25**	**168**		Pn	23 44 31.7	+1.4
MT05	**Renca**	**4.25**	**168**	eP	Pn	23 44 32.1	+1.8
MT05				eP	Pb	23 44 32.8	-7.2
MT05				eS	Sn	23 45 22.9	+2.4
MT05				IAML		23 45 44.9	
	comp=Z,205nm,0.5s						
MT16	**CCHEN**	**4.33**	**165**		Pn	23 44 33.6	+2.3
MT03	**Universidad Ad**	**4.39**	**165**		Pn	23 44 34.5	+2.2
MT03	**Universidad Ad**	**4.39**	**165**	eP	Pn	23 44 34.6	+2.3
MT03				eP	Pb	23 44 35.2	-7.2
MT03				eS	Sn	23 45 26.1	+1.9
MT03				IAML		23 45 52.4	
	comp=Z,184nm,1.0s						
MT04	**Ro Olivares**	**4.40**	**161**	eP	Pn	23 44 35.7	+3.2
MT04				eS	Sn	23 45 28.2	+3.6
MT04				IAML		23 45 42.6	
	comp=Z,101nm,0.5s						
MT08	**Bocatoma Ro**	**4.48**	**160**		Pn	23 44 38.0	+4.5
MT08	**Bocatoma Ro**	**4.48**	**160**	eP	Pb	23 44 39.2	-4.6
MT08				eS	Sn	23 45 31.6	+5.2
GO02	**Mina Guanaco**	**4.52**	**27**		Pn	23 44 33.8	-0.4
GO02	**Mina Guanaco**	**4.52**	**27**	eP	Pn	23 44 34.2	-0.1
GO02				eS	Sb	23 45 41.2	+1.4
GO02				IAML		23 46 00.6	
	comp=Z,215nm,0.6s						
MT09	**Talagante**	**4.58**	**171**		Pn	23 44 36.0	+1.1
MT01	**Popeta**	**4.64**	**174**		Pn	23 44 36.7	+1.1
MT01	**Popeta**	**4.64**	**174**	eP	Pn	23 44 37.0	+1.4
MT01				eS	Sn	23 45 31.5	+1.3
PB14	**IPOC Station P**	**4.76**	**16**		Pn	23 44 37.4	-0.2
LMEL	**Las Melosas**	**4.80**	**164**		Pn	23 44 40.3	+2.3
BO04	**La Punta**	**4.85**	**168**		Pn	23 44 39.9	+1.3
BO01	**Tunca**	**5.18**	**173**		Pn	23 44 43.8	+0.8
BO01	**Tunca**	**5.18**	**173**	IAML		23 46 11.2	
	comp=Z,62nm,0.5s						
CYA	**Choya**	**5.35**	**83**	eP	Pn	23 44 47.7	+2.3
BO02	**Sierra Bellavi**	**5.61**	**171**		Pn	23 44 50.0	+1.0
ML02	**Panimavida**	**6.52**	**177**	Pn	Pn	23 45 02.0	+0.6
TCA	**Tanti**	**6.60**	**110**	eP	Pn	23 45 03.3	+0.7
AF01	**San Pedro de A**	**7.07**	**29**	Pn	Pn	23 45 07.7	-1.6
H03N1	**Juan Fernandez**	**7.36**	**234**	Pn	Pn	23 45 14.2	+1.5
	baz=355,slow=70						
H03N1				Sn	Sn	23 46 30.1	-6.7
	baz=354,slow=79						
H03N1				T	T	23 52 54.7	
	baz=62,slow=71,SNR=2505						
H03N2	**Juan Fernandez**	**7.38**	**234**	Pn	Pn	23 45 14.2	+1.3
	baz=355,slow=70						
H03N2				Sn	Sn	23 46 30.1	-7.0
	baz=354,slow=79						
H03N2				T	T	23 53 01.9	
	baz=62,slow=71,SNR=2244						
H03N3	**Juan Fernandez**	**7.38**	**233**	Pn	Pn	23 45 14.0	+1.0
	baz=355,slow=70						
H03N3				Sn	Sn	23 46 29.9	-7.4
	baz=354,slow=79						
H03N3				T	T	23 53 00.7	
	baz=62,slow=71,SNR=2105						
BI02	**San Fabin de**	**7.42**	**177**		Pn	23 45 14.4	+0.6
H03S3	**Juan Fernandez**	**7.58**	**231**	Pn	Pn	23 45 16.7	+1.0
	baz=106,slow=79						
H03S3				Sn	Sn	23 46 33.7	-8.4
	baz=10,slow=28						
H03S1	**Juan Fernandez**	**7.58**	**231**	Pn	Pn	23 45 16.5	+0.7
	baz=106,slow=79						
H03S1				Sn	Sn	23 46 33.5	-8.7
	baz=10,slow=28						
H03S2	**Juan Fernandez**	**7.59**	**231**	Pn	Pn	23 45 16.7	+0.8
	baz=106,slow=79						
H03S2				Sn	Sn	23 46 33.8	-8.8
	baz=10,slow=28						
PLCA	**Paso Flores**	**11.52**	**175**	Pn	Pn	23 46 09.9	-0.1
PLCA	**Paso Flores**	**11.52**	**175**	Pn	Pn	23 46 10.8	+0.7
	comp=Z,0.1nm,0.3s,baz=336,slow=13,SNR=3.4						
PLCA				LR	LR	23 50 55.1	
	comp=Z,78nm,18.3s,baz=40,slow=39						
	comp=Z,1.8nm,0.8s						
TRQA	**Tornquist**	**12.03**	**140**		Pn	23 46 19.1	+2.2
CPUP	**Villa Florida**	**13.16**	**81**	Pn	Pn	23 46 34.4	+2.0
CPUP	**Villa Florida**	**13.16**	**81**	Pn	Pn	23 46 32.1	-0.3
	baz=233,slow=7.6,SNR=2.0						
	comp=Z,0.1nm,0.3s						
LPAZ	**La Paz**	**13.33**	**16**	Pn	Pn	23 46 36.2	+0.9
LPAZ	**La Paz**	**13.33**	**16**	Pn	Pn	23 46 36.6	+1.3
	comp=Z,0.1nm,0.3s,baz=214,slow=8.7,SNR=3.6						
	comp=Z,0.4nm,0.4s						
PLTB	**Pedras Altas**	**15.92**	**104**	Pn	Pn	23 47 08.7	-0.9
PLTB				IAmb	IAmb	23 47 20.3	
	comp=Z,30nm,1.4s						
COYC	**Coyhaique**	**16.31**	**181**	Pn	Pn	23 47 14.4	-0.2
COYC				IAmb	IAmb	23 47 31.0	
	comp=Z,9.7nm,1.1s						
AQDB	**Aquidauana**	**17.03**	**63**	Pn	Pn	23 47 23.1	-0.7
AQDB				IAmb	IAmb	23 48 06.4	
	comp=Z,4.1nm,1.1s						
ITAB	**Concordia**	**17.48**	**88**	P	P	23 47 31.4	+0.7
ITAB				IAmb	IAmb	23 47 33.8	
	comp=Z,35nm,1.5s						
PTLB	**Pontes e Lacer**	**18.04**	**43**		Pn	23 47 34.9	-1.6
BOAV	**Boa Vista**	**33.27**	**21**	P	P	23 50 02.0	-1.4
BOAV				IAmb	IAmb	23 50 45.8	
	comp=Z,6.5nm,1.4s						
PAYG	**Puerto Ayora**	**33.41**	**325**	P	P	23 50 01.1	-3.6
VNA3	**Neumayer Olymp**	**53.72**	**159**	⇑P	P	23 52 48.1	+0.5
	comp=Z,2.8nm,0.8s						
SNAA	**Sanae**	**55.94**	**159**	⇑P	P	23 53 04.1	+0.3
	comp=Z,33nm,0.4s						
SNAA	**Sanae**	**55.94**	**159**	P	P	23 53 03.4	-0.3
	comp=Z,1.6nm,0.5s,baz=289,slow=8.3,SNR=37						
	comp=Z,1.6nm,0.5s						
TROLL	**Troll, Antarti**	**57.65**	**159**	⇑P	P	23 53 16.3	+0.3
	comp=Z,30nm,0.5s						
QSPA	**South Pole Qui**	**60.99**	**180**	P	P	23 53 42.6	+3.4
	comp=Z,0.8nm,0.7s,baz=177,slow=1.5,SNR=6.8						
TXAR	**Lajitas Array**	**65.70**	**330**	P	P	23 54 12.9	+2.2
	comp=Z,0.2nm,0.6s,baz=148

*NEIC **02** 00:13:34.9±1.4,36°.54N±0°.05×69°.99E±0°.09, h222km±11km, mb4.0/4, Error ellipse: s-maj=9.9km s-min=6.6km az=98.0*
*NNC **02** 00:13:41.8±5.4,37°.12N×70°.17E, h240km×99km, mb2.1, mpv3.2, Error ellipse: s-maj=63.7km s-min=37.9km az=14.0*

ISC 02 00:13:34.1±0.7,**36°.51N**±0°.05×**70°.14E**±0°.06,**h213**km,**n44,** σ1§**70**/50,**3C-2D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.16**	**205**		**Pn**	**00 14 16.6**	**+1.1**
KBL				Sn	**S**	**00 14 47.8**	**+0.4**
CHGR	**Chuyangaron**	**2.28**	**340**		**Pn**	**00 14 17.4**	**+0.9**
CHGR				Sn	**S**	**00 14 49.1**	**-0.3**
SIMJ	**Simiganj**	**2.32**	**338**		**Pn**	**00 14 17.9**	**+0.9**
SIMJ				Sn	**S**	**00 14 49.8**	**-0.5**
GAR	**Garm**	**2.49**	**3**		**Pn**	**00 14 20.2**	**+1.4**
GAR				Sn	**S**	**00 14 52.9**	**-0.6**
DRK	**Karamyk**	**3.24**	**23**		**Pn**	**00 14 29.3**	**+1.8**
DRK				Sn	**S**	**00 15 10.2**	**+1.2**
NIL	**Nilore**	**3.83**	**137**		**Pn**	**00 14 36.4**	**+2.1**
ARSB	**Arslanbob**	**5.29**	**24**		**Pn**	**00 14 53.4**	**+0.9**
JMU	**Jammu**	**5.46**	**133**	*eS*	**S**	**00 15 54.9**	**-3.1**
JMU				IAML		00 15 57.6	
	comp=N,155nm,0.4s						
JMU				IAML		00 15 57.8	
	comp=E,113nm,0.4s						
KSH	**Kashi**	**5.50**	**55**	Pn	Pn	00 14 51.5	-3.7
KSH				Sn	S	00 15 51.0	-8.2
KSH				smax	smax		
	comp=N,33nm,0.4s						
KSH				smax	smax		
	comp=E,35nm,1.0s						
TSSA	**Tissa**	**6.16**	**125**	*eP*	**Pn**	**00 15 04.3**	**+0.5**
TSSA				*eS*	**S**	**00 16 11.0**	**-3.9**
TSSA				IAML		00 16 12.9	
	comp=N,195nm,0.4s						
TSSA				IAML		00 16 15.2	
	comp=E,193nm,0.1s						
ALCI	**Alchi Leh**	**6.20**	**110**	*eP*	**Pn**	**00 15 04.5**	**+0.1**
ALCI				*eS*	**S**	**00 16 13.8**	**-2.1**
ALCI				IAML		00 16 16.4	
	comp=E,295nm,0.4s						
ALCI				IAML		00 16 18.1	
	comp=N,208nm,0.2s						
KK31	**Karatay Array**	**6.59**	**2**	Pn	**Pn**	**00 15 10.4**	**+1.4**
KK31	**Karatay Array**	**6.59**	**2**	⇑P	**Pn**	**00 15 09.3**	**+0.3**
	comp=N,0.7nm,0.2s,baz=181,slow=13,SNR=7.2						
KK31				⇓S	**S**	**00 16 18.9**	**-5.6**
	comp=N,1.4nm,0.4s,baz=187,slow=23,SNR=4.5						
KKAR	**Karatay Array**	**6.59**	**2**	Pn	**Pn**	**00 15 10.2**	**+1.1**
DHRM	**DHARAMSHALA**	**6.64**	**128**	*eP*	**Pn**	**00 15 10.3**	**+0.3**
DHRM				IAML		00 16 25.6	
	comp=N,228nm,0.4s						
DHRM				IAML		00 16 26.9	
	comp=E,273nm,0.6s						
UCH	**Uchtor**	**6.64**	**29**	P	**Pn**	**00 15 11.1**	**+1.0**
	SNR=15						
EKS2	**Erkin-Say**	**6.75**	**23**	P	**Pn**	**00 15 12.4**	**+1.1**
	SNR=15						
HRA	**Herat**	**6.78**	**254**		**Pn**	**00 15 11.6**	**-0.3**
AAK	**Ala-Archa**	**6.98**	**27**		**Pn**	**00 15 15.4**	**+1.2**
AAK	**Ala-Archa**	**6.98**	**27**	P	**Pn**	**00 15 16.6**	**+2.4**
	SNR=10						
AAK	**Ala-Archa**	**6.98**	**27**	⇑P	**Pn**	**00 15 15.1**	**+0.8**
	comp=E,0.5nm,0.3s						
AAK				⇓S	**S**	**00 16 30.7**	**-3.2**
	comp=E,5.8nm,0.7s						
BHK	**Bhakra**	**7.28**	**132**	IAML		00 16 40.4	
	comp=E,49nm,0.3s						
BHK				*eS*	**S**	**00 16 40.9**	**0.0**
BHK				IAML		00 16 41.6	
	comp=N,59nm,0.3s						
ULHL	**Ulahol**	**7.42**	**38**	P	**Pn**	**00 15 20.9**	**+0.9**
	SNR=8.4						
BOOM	**Boomskoye usch**	**7.46**	**35**		**Pn**	**00 15 21.5**	**+1.0**
USP	**Ospenovka**	**7.53**	**25**	P	**Pn**	**00 15 23.0**	**+1.8**
	SNR=8.6						
TKM2	**Tokmak 2**	**7.66**	**32**	P	**Pn**	**00 15 24.7**	**+1.7**
	SNR=7.7						
KDJ	**Kajisay**	**7.83**	**42**	Pn	**Pn**	**00 15 26.0**	**+0.8**
SMLA	**Simla**	**7.94**	**131**	*eP*	**Pn**	**00 15 26.4**	**-0.1**
SMLA				*eS*	S	00 16 51.3	-5.0
SMLA				IAML		00 16 53.3	
	comp=N,65nm,0.3s						
SMLA				IAML		00 16 54.7	
	comp=E,34nm,0.3s						
PRZ	**Przheval'sk**	**8.73**	**44**		**Pn**	**00 15 38.4**	**+1.4**
KUDL	**Kundal**	**9.92**	**145**	*eS*	S	00 17 34.3	-9.1
KUDL				IAML		00 17 39.5	
	comp=E,18nm,0.7s						
KUDL				IAML		00 17 42.7	
	comp=N,10nm,0.4s						
MAKZ	**Makanchi**	**13.55**	**37**	Pn	**Pn**	**00 16 38.5**	**+0.6**
MK31	**Makanchi Array**	**13.70**	**38**		**Pn**	**00 16 41.5**	**+1.9**
MKAR	**Makanchi Array**	**13.70**	**38**		**Pn**	**00 16 40.7**	**+1.0**
AB31	**Akbulak array**	**14.75**	**333**		**Pn**	**00 16 51.3**	**-1.2**
AB31	**Akbulak array**	**14.75**	**333**	⇑P	**Pn**	**00 16 52.8**	**+0.3**
	comp=N,0.3nm,0.4s,baz=142,slow=11,SNR=8.8						
ABKAR	**Akbulak array**	**14.75**	**333**		**Pn**	**00 16 51.8**	**-0.6**
WMQ	**Urumqi**	**15.26**	**56**	*eP*	**P**	**00 17 02.1**	**+3.1**
EVN	**Everest**	**16.47**	**116**	P	**P**	**00 17 14.8**	**+1.7**
EVN				IAmb	IAmb	00 17 20.1	
	comp=Z,3.5nm,0.6s						
UOSS	**Minazif**	**16.60**	**230**	P	**P**	**00 17 12.3**	**-1.6**
GNI	**Garni**	**20.23**	**288**	P	**P**	**00 17 51.4**	**-1.7**
GNI				IAmb	IAmb	00 18 04.0	
	comp=Z,6.9nm,1.1s						
ARTI	**Arti**	**21.41**	**342**	P	**P**	**00 18 05.7**	**+0.6**
PZH	**PanZhiHua**	**28.62**	**101**	P	**P**	**00 19 12.3**	**+1.3**
XAN	**Xi'an**	**31.62**	**83**	*eP*	P	00 19 30.9	-6.2
HHC	**Hu-ho-hao-te**	**32.41**	**69**	*eP*	**P**	**00 19 43.8**	**-0.2**
HHC				pmax	pmax		
	comp=Z,17nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,4.2s						

NNC 02 00:47:23.7±3.2,**38°.66N**×**69°.07E,h0**km,**mb3.7,mpv3.4, 4C-3D,Error ellipse: s-maj=24.5km s-min=21.8km az=164.0,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**3.56**	**12**	Pg	Pb	00 48 28.3	+0.7
	36nm,0.5s						
IUG				Lg	Lg	00 49 16.4	
	50nm,1.3s						
BRLS	**Boroldav**	**4.41**	**7**	Pg	Pb	00 48 40.4	-1.6
	4.5nm,0.6s						
BRLS				Lg	Lg	00 49 36.6	
	19nm,0.7s						
KK31	**Karatay Array**	**4.58**	**13**	⇓Pn	Pn	00 48 34.0	-0.2
	0.3nm,0.2s,baz=200,slow=16,SNR=12						
KK31				⇓Pg	Pb	00 48 46.2	+1.4
	2.9nm,0.3s,baz=193,slow=17,SNR=13						
KK31				⇑Lg	Lg	00 49 47.1	
	4.1nm,0.4s,baz=190,slow=30,SNR=8.2						
MRKS	**Merke**	**5.16**	**36**	Pg	Pn	00 48 41.5	-0.8
	9.0nm,1.2s						
MRKS				Lg	Lg	00 49 38.8	
AAK	**Ala-Archa**	**5.73**	**44**	⇑Pn	Pn	00 48 48.9	-1.2
	0.5nm,0.4s						
AAK				⇑Sn	Sn	00 49 59.7	+3.0
	0.6nm,0.5s						
AAK				⇓Lg	Lg	00 50 20.3	
	2.5nm,0.7s						
AB31	**Akbulak array**	**12.46**	**331**	⇑P	Pn	00 50 23.3	+1.1
	0.4nm,0.5s,baz=160,slow=12,SNR=11						

IDC 02 00:51:48.5±1.9,**60°.93S**×**44°.57W,h0**km,**mb4.0**/1, **mbtmp4.0**/1,**MS3.1**/4,**Error ellipse: s-maj=110.8km s-min=76.6km az=0.0,Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**19.42**	**141**	LR	LR	01 01 16.2	
	comp=Z,55nm,20.5s,baz=11,slow=29						
PLCA	**Paso Flores**	**25.73**	**310**	LR	LR	01 06 05.0	
	comp=Z,65nm,20.7s,baz=142,slow=33						
CPUP	**Villa Florida**	**35.66**	**340**	LR	LR	01 13 03.0	
	comp=Z,9.4nm,19.6s,baz=335,slow=36						
LPAZ	**La Paz**	**47.69**	**329**	LR	LR	01 20 37.3	
	comp=Z,35nm,18.6s,baz=46,slow=36						
H04S2	**CROZET ISLANDS**	**53.35**	**122**	T	T	01 57 32.0	
	baz=219						
H04S3	**CROZET ISLANDS**	**53.36**	**122**	T	T	01 57 29.2	
	baz=219						
H04S1	**CROZET ISLANDS**	**53.37**	**122**	T	T	01 57 33.8	
	baz=219						
TORD	**Torodi Ar. Bea**	**82.44**	**45**	P	P	01 04 12.3	0.0
	1.0nm,0.8s,baz=190,slow=5.1,SNR=5.9						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**146.41**	**311**	PKPbc	PKPdf	01 11 28.7	+0.4
	0.8nm,1.0s,baz=130,slow=1.4,SNR=5.2						
MKAR	**Makanchi Array**	**146.65**	**91**	PKPbc	PKPdf	01 11 29.4	+0.1
	1.1nm,0.8s,baz=239,slow=3.7,SNR=5.5						
KURBB	**Kurchatov Arra**	**147.41**	**82**	PKPbc	PKPbc	01 11 32.4	-0.5
	0.7nm,0.8s,baz=232,slow=4.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**152.51**	**82**	PKPbc	PKiKP	01 11 45.7	+0.2
	1.0nm,0.6s,baz=224,slow=4.1,SNR=4.2						

*SKO **02** 01:00:21.7, 42°.17N×20°.55E, h19km, ML2.8*
*BEO **02** 01:00:22.7±0.4, 42°.09N×20°.59E, h11km±2km, ML2.6/17*
*VIE **02** 01:00:25.3±1.2, 42°.85N×21°.44E, h8km, mb2.9/10, ms3.6/10, Error ellipse: s-maj=28.0km s-min=7.5km az=30.0 65 km SW of Nisch*
*THE **02** 01:00:26.3, 42°.N±9°×2°.1E±1°.0, h28km±22km, M2.5/10, MLh2.5/10*

ISC 02 01:00:22.7±0.7,**42°.14N**±0°.02×**20°.67E**±0°.02,**h10**km,**n98,** σ2§**02**/146,**7C-4D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.60**	**106**	*i* Pg	**Pb**	**01 00 34.5**	**-0.8**
SKO				*i* Sg	**Sn**	**01 00 45.4**	**-1.6**
TIR	**Tirane**	**0.99**	**217**	*i* Pg	**Pg**	**01 00 40.7**	**-1.1**
OHR	**Ohrid**	**1.03**	**175**	*i* Pg	**Pg**	**01 00 41.0**	**-1.6**
OHR				*i* Sg	**Sb**	**01 00 56.1**	**-0.3**
OHR				*eLg*	Lg	01 00 56.3	
	comp=E,284nm,0.7s						
OHR				*eLg*	Lg	01 00 59.4	
	comp=N,419nm,0.7s						
PDG	**Podgorica**	**1.09**	**286**	⇑P	**Pb**	**01 00 41.3**	**-2.3**
PDG	**Podgorica**	**1.09**	**286**	*ePg*	**Pb**	**01 00 41.3**	**-2.3**
PDG				*eSg*	**Sg**	**01 00 56.5**	**-1.3**
DRME	**Dracevica, Mon**	**1.10**	**273**	*ePg*	**Pb**	**01 00 41.5**	**-2.4**
DRME				*eSg*	**Sg**	**01 00 56.1**	**-2.2**
KOME	**Kolasin**	**1.11**	**310**	*ePg*	**Pg**	**01 00 42.3**	**-1.8**
KOME				*eSg*	**Sg**	**01 00 57.7**	**-0.8**
SELS	**Selova**	**1.13**	**17**	*ePg*	**Pn**	**01 00 45.1**	**+0.5**
SELS				*eSg*	**Sn**	**01 01 01.6**	**+1.4**
SJES	**Sjenica**	**1.23**	**336**	*ePg*	**Pg**	**01 00 45.7**	**-0.7**
SJES				*eSg*	**Sn**	**01 01 02.8**	**-0.1**
BOSS	**Bosilegrad**	**1.39**	**75**	*ePg*	**Pg**	**01 00 49.2**	**-0.2**
BOSS				*eSg*	**Sg**	**01 01 07.9**	**+0.5**
GOCS	**Kraljevo Serbi**	**1.43**	**6**	*ePg*	**Pg**	**01 00 49.4**	**-0.8**
GOCS				*eSg*	**Sg**	**01 01 10.2**	**+1.5**
IVAS	**Ivanjica**	**1.48**	**345**	*ePg*	**Pb**	**01 00 49.7**	**-0.7**
IVAS				*eSg*	**Sg**	**01 01 10.0**	**-0.5**
KBN	**Korca**	**1.52**	**177**	P	**Pb**	**01 00 50.4**	**-0.6**
KBN				S	**Sb**	**01 01 09.9**	**-0.4**
TRAN	**Tran**	**1.62**	**64**	*i* P	**Pg**	**01 00 53.6**	**-0.2**
VAY	**Valandovo**	**1.64**	**119**	*i* Pg	**Pb**	**01 00 53.0**	**0.0**
VAY				*i* Sg	**Sg**	**01 01 16.7**	**+1.2**
VAY				*eLg*	Lg	01 01 18.0	
	comp=N,80nm,0.8s						
VAY				*eLg*	Lg	01 01 21.6	
	comp=E,69nm,0.5s						
BOVS	**Bovan**	**1.68**	**27**	⇑P	**Pg**	**01 00 55.5**	**+0.6**
BOVS	**Bovan**	**1.68**	**27**	*ePn*	**Pb**	**01 00 53.0**	**-0.7**
BOVS				*eSn*	**Sg**	**01 01 15.0**	**-1.6**
GRUS	**Gruza**	**1.75**	**1**	*ePn*	**Pb**	**01 00 53.7**	**-1.2**
GRUS				*eSn*	**Sb**	**01 01 16.9**	**0.0**
NEST	**Nestorio**	**1.75**	**170**	P	**Pn**	**01 00 53.6**	**+0.4**
NEST				S	**Sn**	**01 01 15.6**	**+0.1**
TREB	**Trebinje**	**1.81**	**289**	*ePn*	**Pb**	**01 00 56.1**	**+0.1**
ZAPS	**Zavoj**	**1.84**	**51**	*ePn*	**Pb**	**01 00 55.5**	**-0.9**
ZAPS				*eSn*	**Sg**	**01 01 20.1**	**-1.7**
KLINJ	**Klinje**	**1.85**	**304**	*ePn*	**Pb**	**01 00 56.1**	**-0.6**
KKB	**Krupnik**	**1.86**	**98**	P	**Pb**	**01 00 55.8**	**-0.9**
KKB				S	**Sb**	**01 01 18.7**	**-1.4**
KKB	**Krupnik**	**1.86**	**98**	*i* P	**Pb**	**01 00 56.1**	**-0.7**
KKB	**Krupnik**	**1.86**	**98**	*i* Pn	**Pb**	**01 00 56.0**	**-0.7**
KNT	**Kendrikon**	**1.94**	**120**	P	**Pb**	**01 00 56.6**	**-1.5**
KNT	**Kendrikon**	**1.94**	**120**	*i* Pn	**Pb**	**01 00 56.5**	**-1.5**
DBRK	**Dubrovnik**	**1.94**	**287**	*i* Pn	**Pb**	**01 00 58.0**	**-0.1**
DBRK				Sn	**Sg**	**01 01 25.4**	**+0.3**
BBLS	**Lazi&#263i**	**1.96**	**332**	*ePn*	**Pn**	**01 00 56.3**	**+0.2**
BBLS				*eSn*	**Sn**	**01 01 20.5**	**-0.2**
VTS	**Vitosha**	**1.96**	**75**	P	**Pb**	**01 00 57.5**	**-1.1**
VTS	**Vitosha**	**1.96**	**75**	*i* P	**Pb**	**01 00 57.6**	**-1.0**
KZN	**Kozani**	**2.01**	**155**	P	**Pb**	**01 00 58.1**	**-1.4**
DIVS	**Divibare**	**2.02**	**346**	*ePn*	**Pn**	**01 00 57.3**	**+0.4**
DIVS				*eSn*	**Sb**	**01 01 23.6**	**-1.2**
ZAGS	**Zajecar**	**2.03**	**34**	*ePn*	**Pb**	**01 00 58.1**	**-1.5**
ZAGS				*eSn*	**Sb**	**01 01 24.6**	**-0.3**
TRUS	**Trudelj**	**2.09**	**355**	*ePn*	**Pn**	**01 00 57.0**	**-0.8**
TRUS				*eSn*	**Sb**	**01 01 24.0**	**-0.9**
BORS2	**Bor- Borsko je**	**2.18**	**26**	*ePn*	**Pn**	**01 00 59.2**	**+0.1**
BORS2				*eSn*	**Sn**	**01 01 26.5**	**+0.3**
THE	**Thessaloniki**	**2.29**	**130**	*i* Pn	**Pb**	**01 01 03.0**	**-1.2**
STON	**Ston**	**2.31**	**289**	*i* Pn	**Pb**	**01 01 02.9**	**-1.6**
STON				Sn	**Sb**	**01 01 34.1**	**+1.0**
MMB	**Musomishta**	**2.38**	**103**	P	**Pn**	**01 01 03.2**	**+1.4**
MMB	**Musomishta**	**2.38**	**103**	*i* Pn	**Pb**	**01 01 03.7**	**-1.9**
SOH	**Sokhos**	**2.41**	**122**	P	**Pn**	**01 01 03.2**	**+0.9**
SOH	**Sokhos**	**2.41**	**122**	*i* Pn	**Pn**	**01 01 03.5**	**+1.3**
SRS	**Serrai**	**2.42**	**114**	P	**Pn**	**01 01 03.4**	**+1.1**
SRS	**Serrai**	**2.42**	**114**	*i* Pn	**Pn**	**01 01 03.7**	**+1.3**
LIT	**Litokhoron**	**2.46**	**145**	P	**Pn**	**01 01 03.9**	**+1.0**
LIT	**Litokhoron**	**2.46**	**145**	*i* Pn	**Pn**	**01 01 04.2**	**+1.2**
TEKS	**Tekeris**	**2.55**	**341**	*ePn*	**Pn**	**01 01 04.1**	**0.0**
TEKS				*eSn*	**Sn**	**01 01 35.3**	**+0.1**
IGT	**Igoumenitsa**	**2.62**	**186**	P	**Pn**	**01 01 06.1**	**+1.1**
PRMD	**Pramanda**	**2.63**	**173**	P	**Pb**	**01 01 08.1**	**-1.8**
THL	**Klokotos Trika**	**2.77**	**158**	P	**Pn**	**01 01 07.9**	**+0.7**
LSTV	**Lastovo**	**2.86**	**284**	*ePn*	**Pn**	**01 01 10.0**	**+1.6**
LSTV				Sn	**Sb**	**01 01 47.9**	**-1.1**
MAKA	**Makarska**	**2.92**	**294**	*ePn*	**Pn**	**01 01 11.4**	**+2.2**
MAKA				Sn	**Sb**	**01 01 48.8**	**-1.9**
RICI	**Ricice**	**2.93**	**299**	*i* Pn	**Pb**	**01 01 12.3**	**-2.8**
RICI				Sn	**Sb**	**01 01 48.0**	**-3.0**
HERR	**Herculane**	**3.02**	**24**	⇑P	**Pb**	**01 01 15.0**	**-1.6**
FRGS	**Fruska Gora**	**3.08**	**349**	*ePn*	**Pn**	**01 01 12.1**	**+0.7**
FRGS				*eSn*	**Sn**	**01 01 48.3**	**0.0**
KAVA	**Kavala**	**3.10**	**110**	P	**Pn**	**01 01 13.2**	**+1.5**
PLVB	**Pleven**	**3.17**	**66**	⇑P	**Pg**	**01 01 24.1**	**+0.7**
HVAR	**Hvar**	**3.28**	**290**	*ePn*	**Pn**	**01 01 15.8**	**+1.7**
HVAR				Sn	**Sb**	**01 01 56.8**	**-4.2**
EVR	**Evrytania**	**3.34**	**165**	P	**Pn**	**01 01 17.0**	**+1.9**
AGG	**Agios Georgios**	**3.36**	**157**	P	**Pn**	**01 01 16.1**	**+0.8**
BZS	**Buzias**	**3.54**	**11**	⇑P	**Pn**	**01 01 19.3**	**+1.5**
GZR	**Gura Zlata**	**3.59**	**24**	⇑P	**Pn**	**01 01 20.5**	**+2.0**
KJJV	**Kijevo**	**3.64**	**302**	*i* Pn	**Pn**	**01 01 22.3**	**+3.3**
KJJV				Sn	**Sn**	**01 02 05.6**	**+3.6**
SLATY	**Slatina**	**3.64**	**319**	*ePn*	**Pn**	**01 01 21.9**	**+2.9**
BLY	**Banja Luka**	**3.64**	**317**	*ePn*	**Pn**	**01 01 21.0**	**+1.9**
BLY	**Banja Luka**	**3.64**	**317**	*ePn*	**Pn**	**01 01 19.7**	**+0.6**
SURR	**Surduc**	**3.76**	**16**	⇓P	**Pb**	**01 01 25.0**	**-4.2**
RDO	**Rodhopi**	**3.78**	**104**	P	**Pn**	**01 01 22.8**	**+1.7**
ELND	**Elena**	**3.93**	**77**	⇓P	**Pg**	**01 01 35.5**	**-2.4**
ZIRJ	**Zirje**	**3.99**	**294**	*i* Pn	**Pn**	**01 01 25.7**	**+1.8**
ZIRJ				Sn	**Sn**	**01 02 13.7**	**+3.0**
LOT	**Lotru**	**4.00**	**33**	⇓P	**Pn**	**01 01 27.6**	**+3.5**
MORI	**Morici**	**4.03**	**297**	*ePn*	**Pn**	**01 01 26.9**	**+2.5**
MORI				Sn	**Sn**	**01 02 15.2**	**+3.6**
UDBI	**Udbina**	**4.30**	**305**	*i* Pn	Pn	01 01 32.6	+4.3
UDBI				Sn	**Sn**	**01 02 22.7**	**+4.2**
MORH	**Mrgy, Hungar**	**4.33**	**341**	*ePn*	**Pn**	**01 01 28.5**	**0.0**
MORH	**Mrgy, Hungar**	**4.33**	**341**	⇑P	**Pn**	**01 01 29.0**	**+0.5**
DUGI	**Dugi Otok**	**4.51**	**296**	*ePn*	**Pn**	**01 01 33.1**	**+2.1**
DUGI				Sn	**Sn**	**01 02 26.1**	**+2.6**
PLIT	**Plitvice**	**4.58**	**308**	*ePn*	**Pn**	**01 01 35.9**	**+3.9**
PLIT				Sn	**Sn**	**01 02 28.0**	**+2.7**
VIRC	**Vir**	**4.63**	**300**	*ePn*	**Pn**	**01 01 35.0**	**+2.3**
VIRC				Sn	**Sn**	**01 02 29.1**	**+2.6**
NVLJ	**Novalja**	**4.87**	**302**	*ePn*	**Pn**	**01 01 38.3**	**+2.3**
NVLJ				Sn	**Sn**	**01 02 35.1**	**+2.7**
DRGR		**4.87**	**17**	⇓P	**Pn**	**01 01 39.3**	**+3.2**
RABC	**Rab**	**5.02**	**303**	*i* Pn	**Pn**	**01 01 40.1**	**+2.1**
RABC				Sn	**Sn**	**01 02 39.2**	**+3.2**
GBRS	**Gornja Briga**	**5.42**	**311**	*i* Pn	**Pn**	**01 01 46.9**	**+3.3**
BRJN	**Brijuni**	**5.74**	**301**	*ePn*	**Pn**	**01 01 49.8**	**+1.9**
BRJN				Sn	**Sn**	**01 02 56.0**	**+2.3**
CEY	**Cerknica**	**5.76**	**311**	*ePn*	**Pn**	**01 01 51.3**	**+3.0**
JAVS	**Javornik**	**6.06**	**310**	*i* Pn	**Pn**	**01 01 54.8**	**+2.3**
SOKA	**Soboth**	**6.07**	**320**	*i* Pn	**Pn**	**01 01 54.0**	**+1.4**
	comp=E,0.8nm,0.4s						
SOKA				*i* Sn	**Sn**	**01 03 04.5**	**+2.4**
	comp=E,0.6nm,0.4s						
OBKA	**Obir**	**6.19**	**317**	*i* Pn	**Pn**	**01 01 56.0**	**+1.7**
	comp=E,0.4nm,0.2s						
OBKA				*e*Sn	**Sn**	**01 03 07.3**	**+2.2**
	comp=E,4.1nm,0.6s						
ARSA	**Arzberg**	**6.29**	**326**	*i* Pn	**Pn**	**01 01 55.6**	**+0.1**
	comp=E,0.6nm,0.2s						
ARSA				*i* Sn	**Sn**	**01 03 05.7**	**-1.7**
	comp=E,1.8nm,0.6s						
KBA	**Koelnbreinsper**	**7.19**	**316**	*i* Pn	**Pn**	**01 02 08.7**	**+0.7**
	comp=E,0.7nm,0.4s						
MOA	**Molln**	**7.29**	**324**	*i* Pn	**Pn**	**01 02 07.2**	**-2.0**
	comp=E,1.0nm,0.5s						
MOA				*i* Sn	**Sn**	**01 03 30.1**	**-1.9**
	comp=E,0.8nm,0.4s						
BIOA	**Bad Ischl, Aus**	**7.46**	**320**	*i* Pn	**Pn**	**01 02 14.5**	**+2.9**
	comp=E,0.7nm,0.3s						
LESA	**Schwarzleotal**	**7.76**	**316**	*ePn*	**Pn**	**01 02 17.9**	**+2.2**
	comp=E,2.3nm,0.5s						
WTTA	**Wattenberg**	**8.22**	**312**	*i* Pn	**Pn**	**01 02 23.0**	**+0.9**
	comp=E,0.4nm,0.2s						
WTTA				*i* Sn	**Sn**	**01 03 59.6**	**+4.5**
	comp=E,2.3nm,0.4s						
WATA	**Walderalm**	**8.29**	**312**	*i* Pn	**Pn**	**01 02 27.2**	**+4.0**
	comp=E,0.5nm,0.3s						
WATA				*i* Sn	**Sn**	**01 04 00.8**	**+3.9**
	comp=E,1.9nm,0.5s						
SQTA	**Sankt Quirin**	**8.44**	**310**	*i* Pn	**Pn**	**01 02 29.0**	**+4.0**
	comp=E,1.1nm,0.2s						
SQTA				*i* Sn	**Sn**	**01 04 03.4**	**+3.1**
	comp=E,1.1nm,0.4s						
MOTA	**Moosalm**	**8.56**	**311**	*i* Pn	**Pn**	**01 02 30.5**	**+3.6**
	comp=E,0.6nm,0.3s						
MOTA				*i* Sn	**Sn**	**01 04 07.0**	**+3.4**
	comp=E,2.0nm,0.4s						
FETA	**Feichten**	**8.61**	**308**	*ePn*	**Pn**	**01 02 28.5**	**+1.1**
	comp=E,0.4nm,0.5s						
FETA				*i* Sn	**Sn**	**01 04 09.6**	**+5.0**
	comp=E,0.8nm,0.5s						
RETA	**Reutte**	**8.84**	**311**	*i* Sn	**Sn**	**01 04 14.1**	**+4.0**
	comp=E,0.5nm,0.2s						

*IDC **02** 02:05:58.7±0.8,3°.11N×126°.89E, h0km, mb4.1/11, mbtmp4.1/11,MS3.3/9, Error ellipse: s-maj=57.8km s-min=14.2km az=75.0*
*NEIC **02** 02:06:05.6±1.6,3°.26N±0°.09×127°.05E±0°.06, h46km±9km, mb4.5/12, Error ellipse: s-maj=14.2km s-min=8.4km az=199.0*

ISC 02 02:06:05.1±0.6,**3°.26N**±0°.08×**127°.1E**±0°.1,**h48**km,**n38,** σ1§**02**/30,**mb4.1**/15,**MS3.4**/8,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.49**	**173**	Pn	**Pn**	**02 06 43.9**	**+0.7**
LUWI	**Luwuk**	**6.05**	**225**		**Pn**	**02 07 32.8**	**+0.7**
TOLI2	**Tolitoli**	**6.62**	**251**	Pn	**Pn**	**02 07 39.4**	**-0.5**
JAY	**Jayapura**	**14.80**	**113**	LR	LR	02 15 30.0	
	comp=Z,135nm,18.3s,baz=152,slow=38						
MTN	**Manton Dam**	**16.50**	**166**		**P**	**02 09 54.9**	**-0.5**
KNRA	**Kununurra**	**18.89**	**175**	P	**P**	**02 10 22.1**	**+0.4**
KNRA				IAmb	IAmb	02 10 35.5	
	comp=Z,11nm,0.9s						
TPUB	**Ta-pu**	**20.87**	**343**	P	**P**	**02 10 42.5**	**-0.8**
TPUB				IAmb	IAmb	02 10 58.2	
	comp=Z,69nm,1.3s						
FITZ	**Fitzroy Crossi**	**21.27**	**184**	P	**P**	**02 10 46.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**21.27**	**184**	P	**P**	**02 10 46.6**	**-1.0**
	comp=Z,4.1nm,1.0s,baz=326,slow=21,SNR=3.1						
	comp=Z,4.1nm,1.0s				

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBRS	**Gornja Briga**	**0.37**	**10**	*i* Pg	**Pg**	**02 14 44.5**	**+0.6**
GBRS				*i* Sg	**Sb**	**02 14 50.8**	**-0.7**
RABC	**Rab**	**0.42**	**173**	*e*Pg	**Pg**	**02 14 44.1**	**-0.5**
RABC				Sg	**Sg**	**02 14 50.7**	**+0.7**
BOJS	**Bojanci**	**0.51**	**48**	*i* Pg	**Pb**	**02 14 47.1**	**-0.7**
BOJS				*i* Sg	**Sb**	**02 14 55.0**	**-0.4**
BOJS				IAML		02 14 55.9	
	comp=Z,2.4nm,0.2s						
NVLJ	**Novalja**	**0.61**	**169**	*i* Pg	**Pg**	**02 14 48.1**	**-0.2**
NVLJ				Sg	**Sg**	**02 14 57.1**	**+0.9**
SKDS	**Skadanscina**	**0.62**	**308**	*i* Sg	**Sg**	**02 14 56.5**	**-0.3**
SKDS				IAML		02 14 57.8	
	comp=Z,1.1nm,0.1s						
VISS	**Visnje**	**0.65**	**8**	*i* Pg	**Pg**	**02 14 49.2**	**+0.2**
VISS				IAML		02 15 02.2	
	comp=Z,0.6nm,0.1s						
PLIT	**Plitvice**	**0.70**	**114**	*e*Pg	**Pb**	**02 14 50.5**	**-0.7**
PLIT				Sg	**Sb**	**02 15 01.0**	**-0.1**
VIRC	**Vir**	**0.90**	**164**	*e*Pg	**Pg**	**02 14 53.3**	**-0.6**
VIRC				Sg	**Sb**	**02 15 06.8**	**+0.1**
DUGI	**Dugi Otok**	**1.20**	**168**	*i* Pg	**Pn**	**02 15 00.1**	**+0.5**
DUGI				Sg	**Sn**	**02 15 17.0**	**+0.9**

IDC ***02*** *02:22:25.8±3.0, 40.˚19S×179.˚45E, h0km, mb3.6/2, mbtmp3.8/3, ML4.3/1, MS4.5/1, Error ellipse: s-maj=81.9km s-min=55.3km az=30.0*

NOU ***02*** *02:22:29.1, 37.˚16S×179.˚77E, h0km, MLv4.3/11, Off E. Coast of N. Island, N.Z.*

WEL ***02*** *02:22:42.3±0.8, 37˚S±3˚×17˚9E±˚, h27km±4km, M3.5/24, ML3.8/25, MLv3.5/24, Error ellipse: s-maj=8.0km s-min=4.2km az=81.7, confirmed*

ISC 02 02:22:37.4±2.2, 37˚21S±0.˚06×179˚08E±0.˚09, h32km±11km, n94, σ1°63/110, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.71**	**240**	P	**Pb**	**02 22 51.5**	**+0.1**
MXZ	**Matakaoa Point**	**0.71**	**240**	P	**Pb**	**02 22 51.6**	**+0.1**
MXZ				S	**Sb**	**02 22 59.4**	**-1.6**
TDHS	**Te Araroa Dist**	**0.71**	**233**	P	**Pn**	**02 22 52.5**	**+1.2**
WMGZ	**Waiomatatini S**	**0.81**	**221**	P	**Pn**	**02 22 54.9**	**+2.2**
WMGZ				S	**Sn**	**02 23 05.5**	**+1.9**
PKGZ	**Pakihiroa**	**1.04**	**230**	P	**Pb**	**02 22 57.9**	**+1.0**
PKGZ				S	**Sb**	**02 23 10.5**	**+0.4**
PUZ	**Puketiti**	**1.09**	**217**	P	**Pb**	**02 22 58.4**	**+0.7**
PUZ				S	**Sb**	**02 23 12.0**	**+0.5**
HAZ	**Te Kaha**	**1.17**	**242**	P	**Pb**	**02 22 58.5**	**+0.9**
TWGZ	**Tauwhareparae**	**1.31**	**222**	P	**Pb**	**02 23 01.8**	**+0.4**
RUGZ	**Raukumara Rang**	**1.35**	**235**	P	**Pb**	**02 23 02.4**	**+0.2**
CNGZ	**Carnagh Statio**	**1.45**	**208**	P	**Pb**	**02 23 04.2**	**+0.3**
TKGZ	**Te Karaka**	**1.57**	**218**	P	**Pb**	**02 23 04.9**	**-1.0**
MWZ	**Matawai**	**1.67**	**227**	P	**Pb**	**02 23 06.5**	**-1.1**
WHRZ	**Whale Island**	**1.80**	**248**	P	**Pn**	**02 23 08.1**	**+1.9**
RIGZ	**Rimuhau**	**1.83**	**214**	P	**Pn**	**02 23 08.4**	**+1.7**
RAGZ	**Rawiri**	**1.85**	**225**	P	**Pn**	**02 23 09.0**	**+2.0**
URZ	**Urewera**	**1.89**	**235**	Pn	**Pb**	**02 23 09.8**	**-1.4**
	60nm,0.3s,baz=292,slow=1.0,SNR=54						
URZ				Sn	**Sn**	**02 23 31.1**	**+1.0**
	76nm,0.3s,baz=198,slow=18,SNR=25						
	116nm,0.3s						
URZ	**Urewera**	**1.89**	**235**	P	**Pn**	**02 23 09.5**	**+2.1**
URZ	**Urewera**	**1.89**	**235**	P	**Pn**	**02 23 09.3**	**+1.8**
URZ				S	**Sn**	**02 23 30.7**	**+0.6**
PRGZ	**Paritu Road**	**1.96**	**209**	P	**Pn**	**02 23 10.2**	**+1.7**
MARZ	**Manawahe**	**2.07**	**247**	P	**Pn**	**02 23 11.4**	**+1.4**
EDRZ	**Edgecumbe**	**2.07**	**243**	P	**Pn**	**02 23 11.7**	**+1.7**
SNGZ	**Shannon Statio**	**2.09**	**221**	P	**Pn**	**02 23 12.1**	**+1.8**
OPRZ	**Ohinepanea**	**2.11**	**252**	P	**Pn**	**02 23 11.7**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.15**	**205**	P	**Pn**	**02 23 13.1**	**+1.9**
RTZ	**Ruatahuna**	**2.18**	**229**	P	**Pn**	**02 23 14.0**	**+2.5**
MUGZ	**Murupara**	**2.23**	**235**	P	**Pn**	**02 23 14.1**	**+1.9**
MYRZ	**Mayor Island**	**2.27**	**267**	P	**Pn**	**02 23 14.4**	**+1.7**
TARZ	**Mount Tarawera**	**2.29**	**243**	P	**Pn**	**02 23 15.3**	**+2.2**
TGRZ	**Tauranga**	**2.31**	**256**	P	**Pn**	**02 23 14.7**	**+1.4**
RAHZ	**Arahi**	**2.33**	**222**	P	**Pn**	**02 23 15.1**	**+1.6**
RRRZ	**Republican Roa**	**2.33**	**240**	P	**Pn**	**02 23 16.0**	**+2.4**
KARZ	**Kaharoa**	**2.40**	**249**	P	**Pn**	**02 23 16.2**	**+1.7**
HLRZ	**Highlands Stat**	**2.41**	**243**	P	**Pn**	**02 23 16.1**	**+1.4**
MTHZ	**Maungataniwha**	**2.42**	**226**	P	**Pn**	**02 23 16.7**	**+1.9**
MTHZ				S	**Sn**	**02 23 44.3**	**+1.0**
NMHZ	**Naumai**	**2.61**	**223**	P	**Pn**	**02 23 19.3**	**+1.9**
NMHZ				S	**Sn**	**02 23 49.2**	**+1.2**
ARHZ	**Aropaoanui**	**2.63**	**218**	P	**Pn**	**02 23 19.1**	**+1.4**
ARHZ				S	**Sn**	**02 23 48.8**	**+0.3**
MRHZ	**Matea Rd**	**2.66**	**232**	P	**Pn**	**02 23 20.0**	**+1.8**
MRHZ				S	**Sn**	**02 23 49.7**	**+0.3**
KUZ	**Kuaotunu**	**2.73**	**279**	P	**Pn**	**02 23 19.7**	**+0.7**
KUZ	**Kuaotunu**	**2.73**	**279**	P	**Pn**	**02 23 19.8**	**+0.7**
KUZ				S	**Sn**	**02 23 48.3**	**-2.7**
BKZ	**Black Stump Fm**	**2.83**	**225**	P	**Pn**	**02 23 21.9**	**+1.4**
BKZ	**Black Stump Fm**	**2.83**	**225**	P	**Pn**	**02 23 21.8**	**+1.3**
BKZ				S	**Sn**	**02 23 51.9**	**-1.6**
TOZ	**Tahuroa Road**	**2.90**	**258**	P	**Pn**	**02 23 22.7**	**+1.4**
TOZ				S	**Sn**	**02 23 54.4**	**-0.7**
CKHZ	**Cape Kidnapper**	**2.91**	**212**	P	**Pn**	**02 23 22.3**	**+0.7**
CKHZ				S	**Sn**	**02 23 54.7**	**-0.8**
MCHZ	**McNeill Hill**	**2.92**	**219**	P	**Pn**	**02 23 22.9**	**+1.2**
MCHZ				S	**Sn**	**02 23 56.1**	**+0.5**
KWHZ	**Kaweka Forest**	**3.05**	**223**	P	**Pn**	**02 23 24.3**	**+0.8**
KWHZ				S	**Sn**	**02 23 58.2**	**-0.7**
GRZ	**Great Barrier**	**3.06**	**287**	P	**Pn**	**02 23 25.2**	**+1.5**
KAHZ	**Kahuranaki**	**3.11**	**213**	P	**Pn**	**02 23 24.7**	**+0.3**
MKAZ	**Moumakai**	**3.14**	**271**	P	**Pn**	**02 23 25.9**	**+1.3**
MKAZ				S	**Sn**	**02 23 58.1**	**-2.9**
WIAZ	**Waiheke Island**	**3.19**	**276**	P	**Pn**	**02 23 25.7**	**+0.3**
KRHZ	**Kereru**	**3.24**	**220**	P	**Pn**	**02 23 26.4**	**+0.4**
TMVZ	**Te Maari**	**3.28**	**233**	P	**Pn**	**02 23 28.0**	**+1.3**
NTVZ	**North Tongarir**	**3.29**	**234**	P	**Pn**	**02 23 28.2**	**+1.4**
PXZ	**Pawanui**	**3.31**	**211**	P	**Pn**	**02 23 26.9**	**-0.2**
OTVZ	**Oturere**	**3.33**	**233**	P	**Pn**	**02 23 28.0**	**+0.6**
MBAZ	**Motutapu North**	**3.38**	**276**	P	**Pn**	**02 23 29.8**	**+1.9**
MOVZ	**Moawhango**	**3.42**	**229**	P	**Pn**	**02 23 29.6**	**+1.0**
TWVZ	**Taurewa**	**3.43**	**236**	P	**Pn**	**02 23 31.1**	**+2.4**
WHVZ	**Whangaehu Hut**	**3.45**	**232**	P	**Pn**	**02 23 29.4**	**+0.3**
FWVZ	**Far West T-bar**	**3.45**	**233**	P	**Pn**	**02 23 31.0**	**+1.7**
ABAZ	**Army Bay**	**3.46**	**279**	P	**Pn**	**02 23 31.0**	**+2.0**
WNVZ	**Wahianoa**	**3.47**	**231**	P	**Pn**	**02 23 30.6**	**+1.3**
PNHZ	**Pukenui**	**3.52**	**219**	P	**Pn**	**02 23 29.9**	**-0.1**
WPHZ	**Waipukurau**	**3.53**	**215**	P	**Pn**	**02 23 30.1**	**+0.1**
AWAZ	**Awhitu Peninsu**	**3.55**	**271**	P	**Pn**	**02 23 32.4**	**+2.0**
HIZ	**Hauiti**	**3.59**	**247**	P	**Pn**	**02 23 33.7**	**+2.8**
HIZ	**Hauiti**	**3.59**	**247**	P	**Pn**	**02 23 33.5**	**+2.6**
PKVZ	**Pokaka**	**3.60**	**234**	P	**Pn**	**02 23 32.9**	**+1.8**
PRHZ	**Porangahau**	**3.61**	**211**	P	**Pn**	**02 23 30.7**	**-0.4**
WTAZ	**Waiatarua**	**3.62**	**273**	P	**Pn**	**02 23 33.4**	**+2.1**
RVAZ	**Riverhead Bore**	**3.63**	**276**	P	**Pn**	**02 23 33.6**	**+2.1**
DVHZ	**Dannevirke**	**3.84**	**216**	P	**Pn**	**02 23 34.5**	**+0.2**
VRZ	**Vera Road**	**3.91**	**239**	P	**Pn**	**02 23 37.6**	**+2.3**
WCZ	**Waipu Caves**	**4.02**	**287**	P	**Pn**	**02 23 39.2**	**+2.4**
WAZ	**Wanganui**	**4.10**	**230**	P	**Pn**	**02 23 39.1**	**+1.2**
BFZ	**Birch Farm**	**4.12**	**212**	P	**Pn**	**02 23 37.3**	**-0.8**
MRZ	**Mangatainoka R**	**4.40**	**217**	P	**Pn**	**02 23 41.5**	**-0.6**
NEZ	**North Egmont**	**4.44**	**241**	P	**Pn**	**02 23 46.2**	**+3.6**
KHEZ	**Kahui Hut**	**4.50**	**241**	P	**Pn**	**02 23 46.9**	**+3.4**
	191nm,1.6s						
KHEZ	**Kahui Hut**	**4.50**	**241**	P	**Pn**	**02 23 47.2**	**+3.7**
HOWZ	**Holdsworth Sta**	**4.62**	**216**	P	**Pn**	**02 23 44.2**	**-0.8**
OUZ	**Omahuta**	**4.86**	**292**	P	**Pn**	**02 23 51.0**	**+2.7**
OUZ	**Omahuta**	**4.86**	**292**	P	**Pn**	**02 23 51.3**	**+2.9**
TUWZ	**Tuamarina**	**5.80**	**222**	P	**Pn**	**02 24 00.5**	**-0.7**
TKNZ	**Takaka Hill**	**6.11**	**229**	P	**Pn**	**02 24 04.4**	**-1.0**
QRZ	**Quartz Range**	**6.25**	**233**	P	**Pn**	**02 24 08.0**	**+0.5**
QRZ	**Quartz Range**	**6.25**	**233**	P	**Pn**	**02 24 06.5**	**-1.0**
KHZ	**Kahutara**	**6.73**	**218**	P	**Pn**	**02 24 14.2**	**+0.3**
KHZ	**Kahutara**	**6.73**	**218**	P	**Pn**	**02 24 14.3**	**+0.3**
CTZ	**Chatham Island**	**7.30**	**155**	P	**Pn**	**02 24 25.6**	**+3.8**
ODZ	**Otahua Downs**	**10.09**	**216**	P	**Pn**	**02 24 59.7**	**-0.3**
ASAR	**Alice Springs**	**40.86**	**276**	P	**P**	**02 30 14.7**	**-1.8**
	0.7nm,0.8s,baz=125,slow=7.8,SNR=4.3						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**42.47**	**281**	P	**P**	**02 30 30.4**	**+0.7**
	0.6nm,0.5s,baz=121,slow=8.3,SNR=7.9						
	0.6nm,0.5s						
JAY	**Jayapura**	**49.34**	**305**	LR	LR	02 51 22.4	
	comp=Z,527nm,21.6s,baz=242,slow=34						
FINES	**FINESS Array B**	**150.44**	**334**	PKPbc	**PKPbc**	**02 42 24.6**	**-0.2**
	1.0nm,0.7s,baz=29,slow=3.2,SNR=4.5						

SNET ***02*** *02:26:33.0±0.9, 13˚.00N×89˚.10W, h44km±6km, ML2.8*

CATAC 02 02:26:32.8±0.6, 13˚N±4˚×89˚W±˚, h30km±5km, M2.7/11, MLv2.7/11, Error ellipse: s-maj=9.2km s-min=3.9km az=15.4, confirmed, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.61**	**32**	*e*P	Pn	02 26 45.5	0.0
TECO				*e*S	Sn	02 26 55.1	+0.8
TECO	**Alcaldia de Te**	**0.61**	**32**	P	Pn	02 26 45.4	0.0
LOMA	**Loma Larga**	**0.63**	**355**	*e*P	Pn	02 26 46.0	+0.2
LOMA	**Loma Larga**	**0.63**	**355**	S	Sn	02 26 55.9	+0.9
LOMA	**Loma Larga**	**0.63**	**355**	P	Pn	02 26 46.1	+0.2
UESV	**Universidad de**	**0.69**	**27**	S	Sn	02 26 57.3	+0.9
UESV	**Universidad de**	**0.69**	**27**	P	Pb	02 26 46.6	0.0
PAVA	**Las Pavas**	**0.72**	**14**	*e*P	Pn	02 26 47.2	+0.2
PAVA	**Las Pavas**	**0.72**	**14**	S	Sn	02 26 58.0	+1.0
PAVA	**Las Pavas**	**0.72**	**14**	P	Pn	02 26 47.1	+0.1
JAYA	**Jayaque - finc**	**0.72**	**333**	*e*P	Pn	02 26 47.3	+0.2
JAYA				*e*S	Sn	02 26 57.7	+0.6
JAYA	**Jayaque - finc**	**0.72**	**333**	P	Pn	02 26 47.2	+0.2
PMON	**Piamonte**	**0.72**	**344**	*e*P	Pn	02 26 47.4	+0.3
PMON	**Piamonte**	**0.72**	**344**	P	Pn	02 26 47.4	+0.3
PMON	**Piamonte**	**0.72**	**344**	S	Sn	02 26 58.3	+1.1
BOQS	**Boqueron**	**0.74**	**347**	*e*P	Pn	02 26 47.7	+0.4
TECA	**Tecapa**	**0.76**	**51**	*e*P	Pb	02 26 48.3	+0.6
TECA				*e*S	Sn	02 26 59.2	+1.0
SCLA	**Alcaldia de Sa**	**0.78**	**28**	*e*P	Pb	02 26 48.0	+0.1
SCLA	**Alcaldia de Sa**	**0.78**	**28**	P	Pb	02 26 48.0	+0.1
SCLA	**Alcaldia de Sa**	**0.78**	**28**	S	Sn	02 26 59.5	+1.0
PACA	**Pacayal**	**0.89**	**59**	*e*P	Pb	02 26 50.5	+0.6
PACA	**Pacayal**	**0.89**	**59**	P	Pb	02 26 50.1	+0.2
PACA	**Pacayal**	**0.89**	**59**	S	Sb	02 27 02.4	+0.9
RANC	**El Ranchito**	**0.90**	**62**	*e*P	Pb	02 26 49.9	-0.2
NUBE	**Las Nubes**	**1.10**	**324**	*e*P	Pn	02 26 52.5	+0.2
NUBE	**Las Nubes**	**1.10**	**324**	P	Pn	02 26 52.4	+0.1
NUBE	**Las Nubes**	**1.10**	**324**	S	Sb	02 27 07.0	-0.4
FAME	**Alcaldia de Sa**	**1.21**	**313**	P	Pn	02 26 53.6	0.0
FAME	**Alcaldia de Sa**	**1.21**	**313**	S	Sn	02 27 09.0	0.0
LCND	**La Caada**	**1.22**	**76**	*e*P	Pn	02 26 53.6	-0.2
LCND	**La Caada**	**1.22**	**76**	P	Pn	02 26 53.7	-0.2
CNCH	**Conchagua**	**1.27**	**78**	*e*P	Pn	02 26 54.5	-0.1
CNCH	**Conchagua**	**1.27**	**78**	P	Pn	02 26 54.2	-0.4
CNCH	**Conchagua**	**1.27**	**78**	S	Sn	02 27 10.8	+0.1
CSGN	**Cosiguina Volc**	**1.51**	**91**	P	Pn	02 26 58.0	+0.1
CSGN				S	Sn	02 27 16.7	+0.1
MARCA	**Marcala la Paz**	**1.55**	**42**	S	Sn	02 27 18.0	+0.4

ATH ***02*** *02:33:10.1, 40.˚46N×20.˚71E, h6km±1km, ML3.3/12, Manual Solution by A.Moschou First location: 2019/11/02 02:34:24, This location: 2020/10/22 06:45:55 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

PDG ***02*** *02:33:10.6±0.4, 40.˚50N×20.˚78E, h5km±1km, ML3.2/13, Error ellipse: s-maj=0.8km s-min=1.9km az=0.0*

THE ***02*** *02:33:11.5, 40˚N±1˚×2˚1E±˚, h2km±1km, M3.0/24, MLh3.0/24*

BEO ***02*** *02:33:22.2±0.7, 41.˚14N×21.˚03E, h25km±5km, ML2.6/12*

ISC 02 02:33:11.3±0.8, 40˚49N±0.˚02×20˚84E±0.˚02, h15km±5km, n110, σ2°12/168, 12C-11D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.14**	**345**	P	**Pg**	**02 33 14.6**	**-0.7**
KBN				S	**Sg**	**02 33 16.5**	**-1.3**
NEST	**Nestorio**	**0.18**	**113**	P	**Pg**	**02 33 16.0**	**+0.3**
NEST				S	**Sg**	**02 33 18.7**	**+0.1**
NEST	**Nestorio**	**0.18**	**113**	P	**Pg**	**02 33 18.0**	**+0.3**
NEST				S	**Sg**	**02 33 19.2**	**+0.6**
PENT	**Pentalofos**	**0.37**	**141**	P	**Pg**	**02 33 18.8**	**-0.1**
PENT				S	**Sg**	**02 33 24.2**	**+0.1**
PENT	**Pentalofos**	**0.37**	**141**	P	**Pg**	**02 33 18.5**	**-0.4**
PENT				S	**Sg**	**02 33 24.4**	**+0.3**
LMS2	**Laimos Florina**	**0.42**	**33**	P	**Pg**	**02 33 19.7**	**-0.1**
LMS2				S	**Sg**	**02 33 26.7**	**+1.1**
OHR	**Ohrid**	**0.63**	**357**	*i* Pg	**Pb**	**02 33 24.4**	**+0.4**
OHR				*i* Sg	**Sb**	**02 33 34.1**	**+1.4**
KZN	**Kozani**	**0.73**	**104**	P	**Pg**	**02 33 25.9**	**+0.2**
KZN				S	**Sb**	**02 33 36.4**	**+0.6**
KZN	**Kozani**	**0.73**	**104**	P	**Pg**	**02 33 26.0**	**+0.3**
KZN				S	**Sn**	**02 33 37.9**	**-0.3**
MSVA	**Metsovo**	**0.76**	**160**	P	**Pg**	**02 33 25.3**	**-0.9**
MSVA				S	**Sg**	**02 33 35.2**	**-1.0**
JAN	**Janina**	**0.83**	**179**	P	**Pg**	**02 33 25.9**	**-1.5**
JAN				S	**Sb**	**02 33 38.7**	**+0.3**
JAN	**Janina**	**0.83**	**179**	P	**Pg**	**02 33 25.9**	**-1.5**
JAN				S	**Sg**	**02 33 36.2**	**-2.0**
NASA	**Naoussa**	**0.95**	**81**	P	**Pg**	**02 33 30.2**	**+0.5**
PRMD	**Pramanda**	**0.97**	**168**	P	**Pb**	**02 33 29.3**	**-0.6**
PRMD	**Pramanda**	**0.97**	**168**	P	**Pb**	**02 33 29.8**	**-0.1**
PRMD				S	**Sg**	**02 33 41.3**	**-1.7**
VLO	**Vlora**	**1.02**	**270**	P	**Pb**	**02 33 30.3**	**-0.4**
VLO				S	**Sn**	**02 33 46.3**	**+1.1**
IGT	**Igoumenitsa**	**1.03**	**202**	P	**Pb**	**02 33 30.2**	**-0.6**
KEK	**Kerkira**	**1.11**	**226**	P	**Pg**	**02 33 35.1**	**+2.4**
KRK1	**kERKiRA**	**1.12**	**220**	P	**Pb**	**02 33 29.8**	**-2.5**
KRK1				S	**Sb**	**02 33 44.0**	**-2.6**
TETR	**Tetrakomo, Epi**	**1.19**	**163**	P	**Pn**	**02 33 33.5**	**0.0**
TETR				S	**Sb**	**02 33 49.0**	**+0.2**
THL	**Klokotos Trika**	**1.29**	**135**	P	**Pn**	**02 33 34.9**	**+0.1**
THL				S	**Sg**	**02 33 53.6**	**+0.7**
THL	**Klokotos Trika**	**1.29**	**135**	P	**Pb**	**02 33 35.6**	**+0.3**
THL				S	**Sn**	**02 33 52.5**	**+0.7**
LIT	**Litokhoron**	**1.32**	**106**	P	**Pb**	**02 33 36.5**	**+0.6**
LIT	**Litokhoron**	**1.32**	**106**	P	**Pn**	**02 33 36.2**	**+0.9**
LIT				S	**Sg**	**02 33 54.9**	**+0.9**
SKO	**Skopje**	**1.55**	**17**	*i* Pn	**Pg**	**02 33 41.5**	**+0.3**
VAY	**Valandovo**	**1.56**	**57**	*i* Pn	**Pb**	**02 33 40.2**	**+0.3**
VAY				*i* Sn	**Sg**	**02 34 04.0**	**+2.5**
AMPL	**Ampelaki**	**1.59**	**169**	P	**Pn**	**02 33 39.9**	**+1.0**
THE	**Thessaloniki**	**1.63**	**84**	P	**Pn**	**02 33 40.3**	**+0.9**
TSLK	**Tsoukalades, L**	**1.66**	**185**	P	**Pg**	**02 33 42.9**	**-0.4**
LKD2	**Lefkada island**	**1.70**	**185**	P	**Pg**	**02 33 43.3**	**-0.7**
KNT	**Kendrikon**	**1.70**	**66**	P	**Pn**	**02 33 41.7**	**+1.2**
KNT	**Kendrikon**	**1.70**	**66**	P	**Pn**	**02 33 41.9**	**+1.4**
KNT				S	**Sb**	**02 34 04.8**	**+1.2**
EVR	**Evrytania**	**1.74**	**154**	P	**Pn**	**02 33 42.2**	**+1.2**
EVR	**Evrytania**	**1.74**	**154**	P	**Pn**	**02 33 42.0**	**+0.9**
EVR				S	**Sn**	**02 34 03.9**	**+0.9**
NYDR	**Nydri-Lefkada**	**1.77**	**184**	P	**Pb**	**02 33 44.0**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.78**	**145**	P	**Pb**	**02 33 43.5**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.78**	**145**	P	**Pb**	**02 33 43.1**	**-0.5**
MAKR				S	**Sb**	**02 34 06.2**	**+0.5**
AGG	**Agios Georgios**	**1.86**	**141**	P	**Pn**	**02 33 44.0**	**+1.3**
EVGI	**Lefkada island**	**1.87**	**184**	P	**Pb**	**02 33 45.3**	**+0.2**
ULC	**Ulcinj**	**1.90**	**321**	*i* Pn	**Pn**	**02 33 44.6**	**+1.3**
ULC				*i* Sn	**Sg**	**02 34 11.2**	**-1.4**
PVO	**Paravola**	**1.94**	**164**	P	**Pb**	**02 33 47.0**	**+0.6**
SOH	**Sokhos**	**1.94**	**79**	P	**Pn**	**02 33 45.4**	**+1.5**
FSK	**Fiskardo**	**2.03**	**186**	P	**Pb**	**02 33 46.8**	**-1.1**
ANX	**Ano Chora**	**2.07**	**156**	P	**Pb**	**02 33 49.0**	**+0.4**
DRME	**Dracevica, Mon**	**2.11**	**324**	*e*Pn	**Pb**	**02 33 48.9**	**-0.3**
DRME				*e*Sg	**Sg**	**02 34 17.4**	**-1.7**
DRME	**Dracevica, Mon**	**2.11**	**324**	*i* Pn	**Pn**	**02 33 47.7**	**+1.7**
DRME				*i* Sn	**Sb**	**02 34 16.4**	**+1.2**
KKB	**Krupnik**	**2.20**	**51**	P	**Pn**	**02 33 48.6**	**+1.3**
PVY	**Plav**	**2.21**	**343**	*i* Pn	**Pb**	**02 33 51.4**	**+0.4**
PVY				*i* Sn	**Sb**	**02 34 19.8**	**+1.6**
PDG	**Podgorica**	**2.28**	**329**	*e*Pn	**Pb**	**02 33 50.9**	**+2.2**
PDG	**Podgorica**	**2.28**	**329**	*e*Pn	**Pn**	**02 33 50.6**	**+2.2**
PDG				*e*Sg	**Sb**	**02 34 22.4**	**+2.3**
PDG	**Podgorica**	**2.28**	**329**	*i* Pn	**Pn**	**02 33 50.3**	**+1.9**
PDG				*i* Sn	**Sb**	**02 34 21.0**	**+0.9**
BUM	**Brajici-Budva**	**2.33**	**322**	*i* Pn	**Pn**	**02 33 50.4**	**+1.2**
BUM				*i* Sn	**Sb**	**02 34 21.5**	**-0.2**
BOSS	**Bosilegrad**	**2.36**	**31**	*e*Pn	**Pn**	**02 33 50.7**	**+1.2**
IVA	**Berane**	**2.49**	**344**	*e*Pn	**Pn**	**02 33 53.8**	**+2.4**
IVA				*i* Sn	**Sb**	**02 34 26.5**	**+0.3**
CEME	**Cevo**	**2.51**	**326**	*i* Pn	**Pn**	**02 33 53.3**	**+1.6**
CEME				*i* Sn	**Sb**	**02 34 25.7**	**-1.3**
KOME	**Kolasin**	**2.56**	**338**	*e*Pn	**Pb**	**02 33 55.5**	**-1.5**
KOME	**Kolasin**	**2.56**	**338**	*i* Pn	**Pn**	**02 33 54.8**	**+2.4**
KOME				*i* Sn	**Sb**	**02 34 28.3**	**-0.1**
HCY	**Herceg Novi**	**2.63**	**319**	*i* Pn	**Pn**	**02 33 54.8**	**+1.5**
HCY				*i* Sn	**Sb**	**02 34 28.4**	**-2.0**
NKME	**Niksic**	**2.68**	**329**	*i* Pn	**Pn**	**02 33 56.1**	**+2.1**
NKME				*i* Sn	**Sb**	**02 34 30.4**	**-1.4**
SELS	**Selova**	**2.74**	**4**	*e*Pn	**Pn**	**02 33 55.5**	**+0.7**
SELS				*e*Sn	**Sn**	**02 34 20.2**	**-7.4**
VTS	**Vitosha**	**2.79**	**39**	*e*Pn	**Pn**	**02 33 57.3**	**+1.7**
VTS				*e*Sn	**Sn**	**02 34 23.7**	**-5.3**
GUR	**Goura**	**2.80**	**155**	P	**Pb**	**02 33 59.3**	**-1.8**
SJES	**Sjenica**	**2.85**	**347**	*e*Pn	**Pn**	**02 33 59.2**	**+2.9**
TREB	**Trebinje**	**2.91**	**321**	*e*Pn	**Pn**	**02 33 58.0**	**+1.0**
BRY	**Bratogost**	**2.96**	**325**	*i* Pn	**Pn**	**02 34 00.0**	**+2.0**
BRY				*i* Sn	**Sb**	**02 34 37.4**	**-2.6**
PLE	**Pljevlja**	**3.04**	**340**	*i* Pn	**Pn**	**02 34 01.6**	**+2.6**
PLE				*i* Sn	**Sb**	**02 34 40.2**	**-2.0**
GOCS	**Kraljevo Serbi**	**3.08**	**0**	*e*Pn	**Pn**	**02 34 01.2**	**+1.8**
GOCS				*e*Sn	**Sn**	**02 34 29.2**	**-6.8**
UPM	**Unac-Piva**	**3.08**	**333**	*i* Pn	**Pn**	**02 34 01.4**	**+1.9**
UPM				*i* Sn	**Sn**	**02 34 40.0**	**+3.9**
ZAPS	**Zavoj**	**3.09**	**25**	*e*Pn	**Pn**	**02 34 01.7**	**+2.1**
ZAPS				*e*Sn	**Sn**	**02 34 28.8**	**-7.5**
IVAS	**Ivanjica**	**3.13**	**351**	*e*Pn	**Pn**	**02 34 01.8**	**+1.6**
MATE	**Matera**	**3.15**	**274**	*i* P	**Pb**	**02 34 08.3**	**+1.3**
KLINJ	**Klinje**	**3.17**	**329**	*e*Pn	**Pn**	**02 34 02.0**	**+1.3**
BOVS	**Bovan**	**3.21**	**11**	*i* P	**Pn**	**02 34 02.4**	**+1.1**
BOVS	**Bovan**	**3.21**	**11**	*e*Pn	**Pn**	**02 34 02.2**	**+1.0**
BOVS				*e*Sg	**Sn**	**02 34 41.9**	**+2.7**
RUDO	**Rudo**	**3.32**	**341**	*e*Pn	**Pn**	**02 34 04.8**	**+2.1**
GRUS	**Gruza**	**3.40**	**359**	*e*Pn	**Pn**	**02 34 04.9**	**+1.1**
GRUS				*e*Sn	**Sn**	**02 34 36.2**	**-7.7**
BLKB	**Belogradchik**	**3.42**	**23**	*e*Pn	**Pn**	**02 34 05.8**	**+1.7**
BLKB				*e*Sn	**Sn**	**02 34 38.6**	**-5.8**
ZAGS

	comp=Z,17nm,0.8s						
BSSI	**Bau Bau, Buton**	**10.51 255**	P		**Pn**	**02 44 26.2**	**+3.6**
	comp=Z,1μmcomp=Z,121nm,1.1s						
BNSI	**Bone**	**10.59 264**	P		**Pn**	**02 44 25.4**	**+1.7**
	comp=Z,619nmcomp=Z,49nm,0.9s						
BKSI	**Bulukumba**	**10.70 259**	P		**Pn**	**02 44 27.7**	**+2.6**
	comp=Z,952nmcomp=Z,60nm,1.2s						
TOLI2	**Tolitoli**	**10.87 294**			**Pn**	**02 44 25.9**	**-1.6**
SPSI	**Sidrap Palu**	**10.90 267**	P		**Pn**	**02 44 30.2**	**+2.3**
	comp=Z,37nm,1.5s						
KAPI	**Kappang**	**11.01 261**			**Pn**	**02 44 31.3**	**+1.8**
KAPI	**Kappang**	**11.01 261**	Pn		**Pn**	**02 44 30.4**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=130,slow=6.5,SNR=4.5						
KAPI			LR		LR	02 49 45.9	
	comp=Z,1μm,20.1s,baz=74,slow=44						
KAPI	**Kappang**	**11.01 261**	P		**Pn**	**02 44 32.5**	**+3.0**
KNRA	**Kununurra**	**12.33 189**	P		**Pn**	**02 44 45.0**	**-2.5**
	comp=Z,41nm,0.6s						
KNRA	**Kununurra**	**12.33 189**			**Pn**	**02 44 44.5**	**-3.1**
WBSI	**Waikabubak, Su**	**12.80 241**	P		**Pn**	**02 44 57.8**	**+3.8**
	comp=Z,67nm,0.9s						
PLAI	**Plampang**	**13.91 247**	P		**Pn**	**02 45 11.3**	**+2.2**
PLAI	**Plampang**	**13.91 247**	P		**P**	**02 45 13.5**	**-3.4**
	comp=Z,1μmcomp=Z,90nm,0.7s						
TWSI	**Taliwang, Sumb**	**14.70 248**	P		**P**	**02 45 25.7**	**0.0**
	comp=Z,44nm,1.2s						
FITZ	**Fitzroy Crossi**	**15.41 198**	Pn		**Pn**	**02 45 24.6**	**-4.7**
	comp=Z,0.8nm,0.3s,baz=34,slow=10.0,SNR=16						
FITZ			Sn		**Sn**	**02 48 13.8**	**-5.3**
	comp=Z,0.7nm,0.3s,baz=94,slow=8.8,SNR=3.5						
BBKI	**Banjar Baru**	**15.81 269**	P		**P**	**02 45 40.2**	**+2.2**
COEN	**Coen**	**16.19 131**	P		**Pn**	**02 45 37.7**	**-1.6**
	comp=Z,84nm,0.7s						
COEN	**Coen**	**16.19 131**			**Pn**	**02 45 36.5**	**-2.7**
COEN			IAmb		IAmb	02 45 44.6	
	comp=Z,153nm,1.4s						
COEN	**Coen**	**16.19 131**	P		**Pn**	**02 45 37.7**	**-1.6**
WB0	**Warramunga Arr**	**16.66 168**			**Pn**	**02 45 41.3**	**-4.0**
WB5	**Warramunga Arr**	**16.76 168**	P		**Pn**	**02 45 43.0**	**-3.5**
WRAB	**Tennant Creek**	**16.81 168**	P		**Pn**	**02 45 44.9**	**-2.3**
WRA	**Warramunga Arr**	**16.82 168**	P		**Pn**	**02 45 43.1**	**-4.2**
	comp=Z,2.4nm,0.3s,baz=354,slow=13,SNR=17						
WRA			Sn		Sn	02 48 37.9	-15
	comp=Z,1.6nm,0.3s,baz=346,slow=22,SNR=6.7						
KMMI	**Kalianget**	**17.03 257**	P		**P**	**02 45 51.2**	**-0.3**
JAGI	**Jajag, Banyuwa**	**17.18 252**	P		**Pn**	**02 45 52.2**	**+0.2**
JAGI	**Jajag, Banyuwa**	**17.18 252**	P		**Pn**	**02 45 52.4**	**+0.5**
PMG	**Port Moresby**	**17.42 111**	P		**P**	**02 45 56.7**	**+0.9**
PMG			IAmb		IAmb	02 45 58.3	
	comp=Z,117nm,1.0s						
PMG	**Port Moresby**	**17.42 111**	P		**Pn**	**02 45 55.2**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=316,slow=9.8,SNR=14						
PMG			LR		LR	02 55 41.8	
	comp=Z,593nm,18.2s,baz=302,slow=47						
	comp=Z,84nm,0.9s						
BLJI	**Banyuglugur**	**17.54 255**	P		**P**	**02 45 58.7**	**+1.6**
QIS	**Mount Isa**	**19.13 154**	P		**Pn**	**02 46 15.4**	**-0.4**
	comp=Z,54nm,0.9s						
QIS	**Mount Isa**	**19.13 154**	P		**Pn**	**02 46 16.0**	**+0.3**
SBUM	**Sibu**	**19.35 287**			**Pn**	**02 46 18.8**	**+0.4**
MTSU	**Mount Surprise**	**19.81 139**	P		**Pn**	**02 46 24.0**	**+0.1**
	comp=Z,83nm,0.7s						
MTSU	**Mount Surprise**	**19.81 139**	P		**Pn**	**02 46 23.8**	**-0.1**
AS31	**Alice Springs**	**20.38 171**	P		**P**	**02 46 29.2**	**+0.9**
AS31			IAmb		IAmb	02 46 33.7	
	comp=Z,48nm,0.9s						
ASAR	**Alice Springs**	**20.38 171**	P		**P**	**02 46 29.0**	**+0.7**
ASAR	**Alice Springs**	**20.38 171**	P		**P**	**02 46 28.6**	**+0.3**
	comp=Z,74nm,0.6s,baz=350,slow=10,SNR=698						
ASAR			S		**S**	**02 50 14.5**	**-0.6**
	comp=Z,6.8nm,0.9s,baz=347,slow=25,SNR=6.7						
	comp=Z,74nm,0.6s						
MBWA	**Marble Bar**	**20.61 210**	P		**P**	**02 46 30.2**	**-0.5**
	comp=Z,29nm,1.0s						
MBWA	**Marble Bar**	**20.61 210**	P		**P**	**02 46 31.1**	**+0.3**
PSA00	**Pilbara Seismi**	**20.90 209**	P		**P**	**02 46 32.2**	**-1.8**
PSA00			IAmb		IAmb	02 46 35.3	
	comp=Z,157nm,1.9s						
KSM	**Kuching**	**20.93 283**	P		**P**	**02 46 34.1**	**-0.3**
KSM			IAmb		IAmb	02 46 37.5	
	comp=Z,42nm,0.8s						
WRKA	**Warakurna**	**21.62 186**	P		**P**	**02 46 40.8**	**-0.9**
	comp=Z,20nm,1.1s						
TV1H	**Townsville Har**	**22.27 136**	P		**P**	**02 46 48.1**	**-0.6**
LEM	**Lembang**	**23.21 261**	LR		LR	02 58 24.9	
	comp=Z,406nm,18.1s,baz=174,slow=43						
BBJI	**Bungbulang**	**23.27 259**	P		**P**	**02 46 55.4**	**-3.9**
MEEK	**Meekatharra**	**25.83 205**	P		**P**	**02 47 21.0**	**-1.7**
INKA	**Innaminka**	**26.03 159**	P		**P**	**02 47 25.3**	**+0.8**
QLP	**Quilpie**	**26.45 152**	P		**P**	**02 47 29.3**	**+1.0**
	comp=Z,84nm,1.3s						
MYKOM	**Kota Tinggi**	**27.31 281**	P		**P**	**02 47 37.3**	**+1.1**
MYKOM			IAmb		IAmb	02 47 45.1	
	comp=Z,40nm,1.3s						
FORT	**Forrest**	**27.33 185**	P		**P**	**02 47 37.0**	**+0.8**
	comp=Z,16nm,1.3s						
KMBL	**Kambalda**	**29.02 196**	P		**P**	**02 47 49.9**	**-1.4**
	comp=Z,13nm,2.0s						
MORW	**Morawa**	**29.06 207**	P		**P**	**02 47 49.9**	**-1.8**
EIDS	**Eidsvold**	**29.35 140**	P		**P**	**02 47 55.1**	**+0.8**
	comp=Z,21nm,1.2s						
EIDS	**Eidsvold**	**29.35 140**	P		**P**	**02 47 55.5**	**+1.3**
EIDS			IAmb		IAmb	02 47 56.5	
	comp=Z,24nm,1.2s						
HNR	**Honiara**	**29.68 103**	LR		LR	03 01 49.2	
	comp=Z,144nm,18.7s,baz=322,slow=40						
BBOO	**Buckleboo**	**29.68 171**	P		**P**	**02 47 57.2**	**+0.1**
	comp=Z,17nm,0.8s						
BBOO	**Buckleboo**	**29.68 171**	P		**P**	**02 47 57.4**	**+0.3**
BLDU	**Ballidu**	**30.11 205**	P		**P**	**02 47 59.9**	**-1.0**
STKA	**Stephens Creek**	**30.12 161**	P		**P**	**02 48 01.7**	**+0.7**
	comp=Z,76nm,1.6s						
STKA	**Stephens Creek**	**30.12 161**	P		**P**	**02 48 00.9**	**-0.1**
	comp=Z,4.9nm,0.4s,baz=340,slow=7.9,SNR=25						
STKA			S		**S**	**02 52 54.0**	**-4.0**
	comp=Z,2.8nm,1.0s,baz=336,slow=20,SNR=1.1						
	comp=Z,4.9nm,0.4s						
STKA	**Stephens Creek**	**30.12 161**	P		**P**	**02 48 00.8**	**-0.2**
JOW	**Kunigami**	**30.16 356**	LR		LR	02 58 04.3	
	comp=Z,250nm,22.0s,baz=182,slow=32						
KLBR	**Kellerberrin**	**30.56 202**	P		**P**	**02 48 03.2**	**-1.7**
	comp=Z,36nm,0.8s						
KLBR	**Kellerberrin**	**30.56 202**	P		**P**	**02 48 03.7**	**-1.2**
IPM	**Ipoh**	**30.65 285**	P		**P**	**02 48 06.0**	**+0.1**
KULM	**Kulim**	**31.22 286**	P		**P**	**02 48 10.2**	**-0.7**
KULM			IAmb		IAmb	02 48 21.3	
	comp=Z,14nm,0.8s						
CMSA	**Cobar Meteorol**	**31.35 155**	P		**P**	**02 48 12.8**	**+1.0**
	comp=Z,28nm,1.4s						
CMSA	**Cobar Meteorol**	**31.35 155**	P		**P**	**02 48 13.0**	**+1.2**
NWAO	**Narrogin (SRO)**	**31.95 202**	P		**P**	**02 48 16.1**	**-1.1**
NWAO	**Narrogin (SRO)**	**31.95 202**	P		**P**	**02 48 15.7**	**-1.4**
	comp=Z,5.6nm,0.5s,baz=30,slow=7.5,SNR=7.3						
NWAO			LR		LR	03 02 43.6	
	comp=Z,202nm,18.8s,baz=71,slow=39						
	comp=Z,5.6nm,0.5s						
JCJ	**Chichijima**	**32.30 19**	LR		LR	02 59 42.6	
	comp=Z,178nm,20.9s,baz=124,slow=33						
RPSI	**Rantau Prapat**	**32.31 280**	IAmb		IAmb	02 48 20.9	
	comp=Z,12nm,0.7s						
PSI	**Prapat**	**32.33 281**	LR		LR	03 03 56.1	
	comp=Z,286nm,18.1s,baz=104,slow=41						
ARMA	**Armidale**	**33.38 146**	P		**P**	**02 48 30.8**	**+1.0**
	comp=Z,28nm,1.2s						
ARMA	**Armidale**	**33.38 146**	P		**P**	**02 48 32.3**	**+2.5**
ARMA			IAmb		IAmb	02 48 32.8	
	comp=Z,21nm,0.8s						
ARPS	**Mount Arapiles**	**34.75 164**	P		**P**	**02 48 42.4**	**+0.9**
	comp=Z,15nm,1.2s						
CAN	**Canberra**	**36.01 154**	P		**P**	**02 48 53.5**	**+1.2**
	comp=Z,39nm,2.6s						
CAN	**Canberra**	**36.01 154**	P		**P**	**02 48 54.3**	**+1.9**
JNU	**Nakatsue**	**36.33 0**	LR		LR	03 01 33.0	
	comp=Z,96nm,21.6s,baz=170,slow=33						
TOO	**Toolangi**	**36.61 160**	P		**P**	**02 48 59.0**	**+1.5**
	comp=Z,7.1nm,1.8s						
NJ2	**Nanjing**	**37.01 343**	*e*P		**P**	**02 49 02.5**	**+1.6**
NJ2			pmax		pmax		
	comp=Z,8.0nm,0.5s						
WHN	**Wuhan**	**37.19 336**	P		**P**	**02 49 04.9**	**+2.5**
JHJ	**Hachijo jima 2**	**37.34 13**	LR		LR	03 01 43.8	
	comp=Z,121nm,20.8s,baz=116,slow=32						
CMAR	**Chiang Mai Arr**	**38.07 306**	P		**P**	**02 49 09.5**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=134,slow=6.7,SNR=7.6						
	comp=Z,1.0nm,0.3s						
CHTO	**Chiang Mai**	**38.26 306**	P		**P**	**02 49 12.3**	**+0.7**

MJAR	**Matsushiro Arr**	**40.36 9**	P		**P**	**02 49 28.9**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=185,slow=10,SNR=5.9						
	comp=Z,2.4nm,0.7s						
KSRS	**Korea Array**	**40.74 357**	P		**P**	**02 49 31.3**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=176,slow=10,SNR=9.3						
KSRS			LR		LR	03 05 47.4	
	comp=Z,54μm,21.4s,baz=115,slow=35						
	comp=Z,2.5nm,0.6s						
KSRS	**Korea Array**	**40.74 357**	P		**P**	**02 49 31.3**	**-0.7**
PZH	**PanZhiHua**	**40.83 318**	P		**P**	**02 49 35.4**	**+2.2**
PZH			pmax		pmax		
	comp=Z,20nm,0.5s						
XAN	**Xi'an**	**42.53 333**	*e*P		**P**	**02 49 50.4**	**+3.6**
HNS	**HongShan**	**43.23 341**	⇓P		**P**	**02 49 54.6**	**+2.2**
HNS			pmax		pmax		
	comp=Z,7.0nm,0.9s						
BRDH	**Bariadhala**	**46.09 306**	LR		LR	03 14 45.0	
	comp=Z,51nm,18.2s,baz=170,slow=43						
LZH	**Lanzhou**	**46.62 330**	*e*P		**P**	**02 50 22.7**	**+3.1**
LZH			sP		sP	02 50 33.6	+1.0
LZH			pmax		pmax		
	comp=Z,22nm,1.0s						
CN2	**Changchun**	**47.23 355**	P		**P**	**02 50 27.0**	**+2.9**
CN2			pmax		pmax		
	comp=Z,10.0nm,0.5s						
SHL	**Shillong**	**47.36 310**	P		**P**	**02 50 24.0**	**-1.6**
SHL			IAmb		IAmb	02 50 25.9	
	comp=Z,7.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**47.39 340**	*e*P		**P**	**02 50 28.1**	**+2.6**
HHC			pmax		pmax		
	comp=Z,20nm,0.6s						
HHC			pmax		pmax		
	comp=Z,60nm,5.1s						
USRK	**Ussuriysk Ar.**	**47.41 1**	P		**P**	**02 50 24.9**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=184,slow=6.8,SNR=5.7						
	comp=Z,2.1nm,0.6s						
BNX	**BinXian**	**49.02 357**	⇓P		**P**	**02 50 39.0**	**+1.1**
BNX			pmax		pmax		
	comp=Z,7.0nm,1.2s						
PALK	**Pallekele**	**50.99 282**	LR		LR	03 14 44.6	
	comp=Z,83nm,18.6s,baz=102,slow=39						
GTA	**Gaotai**	**51.21 329**	*e*P		**P**	**02 50 55.4**	**+0.6**
GTA			pmax		pmax		
	comp=Z,4.0nm,0.9s						
GTA			LR		LR		
	comp=Z,110nm,18.2s						
GTA			LR		LR		
	comp=Z,100nm,19.6s						
GTA			LR		LR		
	comp=Z,110nm,20.0s						
EVN	**Everest**	**52.47 309**	P		**P**	**02 51 04.2**	**-0.8**
EVN			IAmb		IAmb	02 51 17.6	
	comp=Z,15nm,1.0s						
HEH	**HeiHe**	**53.53 357**	*e*P		**P**	**02 51 10.3**	**-1.2**
HEH			pmax		pmax		
	comp=Z,7.0nm,1.0s						
HILR	**Hailar Array B**	**53.60 351**	P		**P**	**02 51 12.0**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=163,slow=11,SNR=4.4						
	comp=Z,2.0nm,0.5s						
TUWZ	**Tuamarina**	**54.16 141**	P		**P**	**02 51 17.4**	**+1.0**
URZ	**Urewera**	**54.69 136**	LR		LR	03 14 07.8	
	comp=Z,77nm,21.6s,baz=301,slow=35						
ULN	**Ulaanbaatar**	**55.10 341**	P		**P**	**02 51 22.5**	**-0.8**
SONM	**Songino Array**	**55.29 340**	P		**P**	**02 51 23.9**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=157,slow=8.6,SNR=8.9						
SONM			LR		LR	03 17 40.2	
	comp=Z,68nm,19.3s,baz=150,slow=39						
	comp=Z,2.8nm,0.8s						
PETK	**Petropavlovsk-**	**60.73 18**	LR		LR	03 15 42.2	
	comp=Z,54nm,21.8s,baz=233,slow=34						
WMQ	**Urumqi**	**60.80 326**	*e*P		**P**	**02 52 05.3**	**+2.0**
WMQ			LR		LR		
	comp=Z,160nm,24.1s						
CASY	**Casey**	**64.33 189**	P		**P**	**02 52 26.6**	**+0.3**
CASY			IAmb		IAmb	02 52 28.4	
	comp=Z,14nm,1.4s						
CASY	**Casey**	**64.33 189**	P		**P**	**02 52 26.6**	**+0.3**
YAK	**Yakutsk**	**65.26 359**	LR		LR	03 21 13.6	
	comp=Z,44nm,20.8s,baz=166,slow=36						
MKAR	**Makanchi Array**	**65.64 326**	P		**P**	**02 52 35.1**	**-0.1**
MKAR	**Makanchi Array**	**65.64 326**	P		**P**	**02 52 34.2**	**-1.0**
	comp=Z,8.9nm,0.6s,baz=120,slow=7.9,SNR=55						
MKAR			LR		LR	03 23 46.7	
	comp=Z,39nm,19.4s,baz=116,slow=38						
	comp=Z,8.9nm,0.6s						
MAKZ	**Makanchi**	**65.82 326**	P		**P**	**02 52 35.9**	**-0.5**
MAKZ	**Makanchi**	**65.82 326**	P		**P**	**02 52 36.2**	**-0.2**
MAKZ			pP		**pP**	**02 52 47.4**	**+1.4**
SHEM	**Shemya Is, Ala**	**66.79 27**	LR		LR	03 19 43.4	
	comp=Z,55nm,19.3s,baz=252,slow=34						
SEY	**Seymchan**	**68.18 10**	P		**P**	**02 52 51.1**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=217,slow=19,SNR=5.6						
SEY			LR		LR	03 25 50.5	
	comp=Z,23nm,18.0s,baz=190,slow=39						
	comp=Z,4.9nm,0.9s						
AAK	**Ala-Archa**	**68.28 319**	LR		LR	03 26 33.0	
	comp=Z,39nm,20.5s,baz=100,slow=39						
ZALV	**Zalesovo Baam**	**68.70 333**	P		**P**	**02 52 53.4**	**-1.0**
	comp=Z,4.9nm,0.9s,baz=107,slow=5.1,SNR=14						
	comp=Z,4.9nm,0.9s						
ARSB	**Arslanbob**	**68.72 317**			**P**	**02 52 54.7**	**-0.3**
ARSB			IAmb		IAmb	02 53 00.3	
	comp=Z,8.6nm,0.9s						
KURBB	**Kurchatov Arra**	**69.84 328**	P		**P**	**02 53 01.2**	**-0.4**
	comp=Z,8.4nm,0.9s,baz=128,slow=5.5,SNR=44						
	comp=Z,8.4nm,0.9s						
KURK	**Kurchatov**	**69.84 328**	P		**P**	**02 53 01.1**	**-0.4**
KURK			IAmb		IAmb	02 53 07.3	
	comp=Z,16nm,0.9s						
KKAR	**Karatay Array**	**71.13 318**	P		**P**	**02 53 09.3**	**-0.3**
TIXI	**Tiksi**	**74.93 359**	P		**P**	**02 53 29.9**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=324,slow=9.3,SNR=4.3						
TIXI			LR		LR	03 26 21.4	
	comp=Z,48nm,21.4s,baz=195,slow=36						
	comp=Z,1.7nm,0.3s						
BVAR	**Borovoye Array**	**75.42 327**	P		**P**	**02 53 34.2**	**-0.6**
	comp=Z,8.4nm,0.8s,baz=122,slow=7.2,SNR=28						
	comp=Z,8.4nm,0.8s						
BORK	**Borovoye**	**75.47 327**	P		**P**	**02 53 34.5**	**-0.5**
VNDA	**Vanda**	**75.91 173**	P		**P**	**02 53 37.4**	**+0.3**
VNDA	**Vanda**	**75.91 173**	P		**P**	**02 53 37.2**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=316,slow=6.0,SNR=12						
VNDA			LR		LR	03 26 31.3	
	comp=Z,60nm,19.8s,baz=334,slow=35						
	comp=Z,1.5nm,0.7s						
VNDA	**Vanda**	**75.91 173**	P		**P**	**02 53 37.6**	**+0.5**
MAW	**Mawson**	**78.52 201**	P		**P**	**02 53 51.7**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=93,slow=4.5,SNR=8.8						
	comp=Z,3.4nm,0.7s						
PPT	**Papeete**	**79.21 107**	LR		LR	03 28 30.2	
	comp=Z,50nm,19.6s,baz=162,slow=35						
PPT2	**Papeete2**	**79.21 107**	*e*LR		LR	03 18 31.6	
	comp=Z,74nm,21.8s						
PPT2			*e*LR		LR	03 18 39.3	
	comp=Z,109nm,30.0s						
TBI	**Tubuai**	**79.35 113**	*e*LR		LR	03 18 41.5	
	comp=Z,1μm,25.5s						
AB31	**Akbulak array**	**80.15 321**			**P**	**02 54 00.6**	**-0.5**
ABKAR	**Akbulak array**	**80.15 321**	P		**P**	**02 54 00.7**	**-0.4**
VOI	**Vohitsoka**	**83.07 248**			**P**	**02 54 17.6**	**+0.3**
ARTI	**Arti**	**83.12 328**	P		**P**	**02 54 16.1**	**-0.6**
ARTI			IAmb		IAmb	02 54 19.2	
	comp=Z,5.5nm,0.6s						
ARTI	**Arti**	**83.12 328**	LR		LR	03 34 06.0	
	comp=Z,46nm,18.2s,baz=104,slow=38						
L18K	**Granite Mounta**	**84.99 27**			**P**	**02 54 23.8**	**-2.3**
J18K	**Innoko River**	**85.34 25**	IAmb		IAmb	02 54 29.2	
	comp=Z,7.1nm,1.1s						
N19K	**Bonanza Creek**	**85.61 28**			**P**	**02 54 30.0**	**+0.6**
L19K	**White Mountain**	**85.80 27**	P		**P**	**02 54 31.2**	**+1.1**
L19K			IAmb		IAmb	02 54 34.2	
	comp=Z,8.8nm,1.0s						
KDAK	**Kodiak Island**	**85.83 32**	LR		LR	03 27 11.9	
	comp=Z,49nm,21.9s,baz=237,slow=32						
QSPA	**South Pole Qui**	**86.54 180**	P		**P**	**02 54 36.6**	**+2.7**
QSPA			IAmb		IAmb	02 54 37.1	
	comp=Z,16nm,1.6s						
QSPA	**South Pole Qui**	**86.54 180**	P		**P**	**02 54 35.8**	**+1.9**
	comp=Z,2.3nm,0.5s,baz=288,slow=1.1,SNR=12						
	comp=Z,2.3nm,0.5s						
RAYN	**Ar Rayn**	**86.93 294**	P		**P**	**02 54 36.9**	**+0.3**
RAYN			IAmb		IAmb	02 54 42.0	
	comp=Z,8.7nm,0.8s						
RAYN	**Ar Rayn**	**86.93 294**	P		**P**	**02 54 36.9**	**+0.3**
RAYN			sP		**sP**	**02 54 52.7**	**+2.5**
SYO	**Syowa Base**	**87.23 201**⇑	*e*P		**P**	**02 54 38.4**	**+1.4**
SYO	**Syowa Base**	**87.23 201**⇓	*e*PcP		**PcP**	**02 54 41.2**	**+2.1**

I21K	**Tanana**	**87.78 24**	IAmb		IAmb	02 54 47.3	
	comp=Z,6.1nm,0.9s						
GNI	**Garni**	**89.07 310**	LR		LR	03 41 06.9	
	comp=Z,13nm,20.1s,baz=94,slow=40						
ILAR	**Eielson Array**	**89.83 25**	P		**P**	**02 54 48.4**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=255,slow=4.6,SNR=9.8						
ILAR			LR		LR	03 34 02.8	
	comp=Z,28nm,18.4s,baz=264,slow=35						
	comp=Z,0.7nm,0.8s						
FURI	**Furi**	**92.49 279**	LR		LR	03 36 39.3	
	comp=Z,45nm,19.6s,baz=148,slow=36						
ASF	**Jabal al Asfar**	**95.00 302**	LR		LR	03 44 20.5	
	comp=Z,25nm,19.8s,baz=145,slow=40						
MMAI	**Mount Meron Ar**	**96.27 303**	LR		LR	03 45 18.4	
	comp=Z,25nm,19.6s,baz=92,slow=40						
DLBC	**Dease Lake**	**97.76 32**	LR		LR	03 35 33.0	
	comp=Z,37nm,19.6s,baz=229,slow=33						
BELA	**Belgrano 2**	**98.42 183**	P		**P**	**02 55 28.5**	**-0.1**
BELA			IAmb		IAmb	02 55 49.5	
	comp=Z,10nm,1.7s						
ARCES	**ARCESS Array B**	**98.47 340**	LR		LR	03 44 02.9	
	comp=Z,33nm,20.7s,baz=226,slow=38						
SNAA	**Sanae**	**99.29 193**	P		**Pdif**	**02 55 32.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=107,slow=19,SNR=5.1						
SNAA			LR		LR	03 39 23.8	
	comp=Z,78nm,21.6s,baz=184,slow=35						
	comp=Z,0.7nm,0.8s						
BBB	**Bella Bella**	**99.56 38**	LR		LR	03 32 14.6	
	comp=Z,45nm,21.2s,baz=230,slow=30						
BOSA	**Boshof**	**101.84 240**	P		**Pdif**	**02 55 44.4**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=118,slow=2.4,SNR=6.8						
TXAR	**Lajitas Array**	**122.47 57**	PKP		**PKiKP**	**03 00 47.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=232,slow=1.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**128.69 284**	PKP		**PKPdf**	**03 00 58.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=66,slow=2.9,SNR=12						
PLCA	**Paso Flores**	**131.97 158**	PKP		**PKiKP**	**03 01 06.6**	**+0.6**
	comp=Z,3.3nm,1.0s,baz=135,slow=4.0						
CPUP	**Villa Florida**	**149.44 166**			**PKiKP**	**03 01 41.5**	**-0.4**
CPUP	**Villa Florida**	**149.44 166**	PKPbc		**PKiKP**	**03 01 41.8**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=106,slow=2.1,SNR=11						
LPAZ	**La Paz**	**153.00 137**	PKPbc		**PKiKP**	**03 01 51.7**	**+1.4**
	comp=Z,1.2nm,0.4s,baz=190,slow=3.2,SNR=11						
LPAZ	**La Paz**	**153.00 137**	PKHKP		PKPpre	03 01 51.7	

KRSC ***02*** *02:43:35.6±0.7, 55.62N×160.97E, h141km±7km, Ml4.5*
MOS ***02*** *02:43:35.8±0.8, 55.65N×160.92E, h140km, mb4.2/10, Error ellipse: s-maj=12.3km s-min=4.4km az=77.4*
NEIC ***02*** *02:43:37.5±1.3, 55.73N±0.09×160.6E±0.2, h138km±7km, mb4.4/18, Error ellipse: s-maj=16.4km s-min=12.5km az=114.0*
IDC ***02*** *02:43:38.5±1.5, 55.71N×160.69E, h148km±15km, mb3.5/14, mbtmp4.0/17, MS2.5/1, Error ellipse: s-maj=15.3km s-min=13.1km az=98.0*

ISC 02 02:43:36.9±0.6, 55.63N±0.03×160.96E±0.04, h135km±4km, n145, σ1$06/174, mb4.1/29, 1C, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
					Op	ISC	h	m	s ISC
BZGR	**Bezymyannyi-Gr**	**0.35**	**335**	PN	**Pn**	**02 43 55.6**			**-0.3**
BZGR				S	**Sn**	**02 44 11.3**			**+1.0**
BZGR	**Bezymyannyi-Gr**	**0.35**	**335**	*e*P	**Pn**	**02 43 55.6**			**-0.3**
BZGR				*e*S	**Sn**	**02 44 11.4**			**+1.0**
ZLN	**Zelenaya**	**0.40**	**347**	PN	**Pn**	**02 43 56.3**			**+0.2**
ZLN	**Zelenaya**	**0.40**	**347**	*i* P	**Pn**	**02 43 56.4**			**+0.2**
KMNR	**Kamenistaya**	**0.43**	**288**	PN	**Pn**	**02 43 56.4**			**+0.2**
KMNR				S	**Sn**	**02 44 12.0**			**+1.1**
KMNR	**Kamenistaya**	**0.43**	**288**	*i* P	**Pn**	**02 43 56.5**			**+0.2**
KMNR				*e*S	**Sn**	**02 44 12.0**			**+1.1**
KIRR	**Kirishev**	**0.48**	**313**	PN	**Pn**	**02 43 56.2**			**-0.3**
KIRR				S	**Sn**	**02 44 11.4**			**-0.1**
KIRR	**Kirishev**	**0.48**	**313**	*e*P	**Pn**	**02 43 56.3**			**-0.3**
KIRR				*e*S	**Sn**

MTVR	**Mutnovka**	**3.55**	**209**	PN	**Pn**	**02 44 30.9**	**0.0**
MTVR	**Mutnovka**	**3.55**	**209**	*e*P	**Pn**	**02 44 30.9**	**0.0**
ASAK	**Asacha**	**3.72**	**210**	PN	**Pn**	**02 44 32.8**	**-0.3**
ASAK	**Asacha**	**3.72**	**210**	*e*P	**Pn**	**02 44 32.9**	**-0.3**
OSSR	**Ossora**	**3.80**	**16**	PN	**Pn**	**02 44 34.5**	**+0.5**
OSSR	**Ossora**	**3.80**	**16**	*e*P	**Pn**	**02 44 34.6**	**+0.5**
MIPR	**Malaya Ipel'ka**	**4.18**	**218**	PN	**Pn**	**02 44 39.3**	**+0.3**
MIPR	**Malaya Ipel'ka**	**4.18**	**218**	*e*P	**Pn**	**02 44 39.4**	**+0.3**
PAU	**Pauzhetka**	**4.85**	**212**	PN	**Pn**	**02 44 49.0**	**+1.1**
PAU	**Pauzhetka**	**4.85**	**212**	*e*P	**Pn**	**02 44 49.1**	**+1.1**
TILK	**Tilichiki**	**5.56**	**28**	*e*S	**Sn**	**02 45 59.3**	**-0.8**
SKR	**Severo-Kuril's**	**5.75**	**212**	*e*PN	**Pn**	**02 44 57.3**	**-2.6**
SKR				*e*S	**Sn**	**02 46 03.2**	**-1.5**
SKR				pmax	pmax		
	comp=Z,143nm,0.9s						
SKR				smax	smax		
	comp=N,120nm,0.6s						
SKR				smax	smax		
	comp=E,253nm,0.8s						
MA2	**Magadan**	**6.75**	**310**		**Pn**	**02 45 13.2**	**-0.2**
MA2	**Magadan**	**6.75**	**310**	P	**Pn**	**02 45 14.2**	**+0.8**
	comp=E,21nm,0.6s,baz=104,slow=13,SNR=5.1						
SHEM	**Shemya Is, Ala**	**8.24**	**105**	LR	LR	02 48 05.7	
	comp=E,37nm,21.5s,baz=260,slow=32						
BILL	**Bilibino**	**12.70**	**9**	*i* PN	**Pn**	**02 46 33.5**	**+1.2**
ASAJ	**Asahikawa**	**16.46**	**233**	P	**P**	**02 47 21.2**	**+1.2**
	comp=E,9.7nm,0.4s,baz=34,slow=14,SNR=6.7						
ERM	**Erimo**	**17.90**	**228**	P	**P**	**02 47 35.1**	**-0.7**
ERM	**Erimo**	**17.90**	**228**	P	**P**	**02 47 35.1**	**-0.7**
ERM				pmax	pmax		
	comp=Z,68nm,1.1s						
HEH	**HeiHe**	**20.78**	**269**	*e*P	**P**	**02 48 06.1**	**-0.8**
HEH				pmax	pmax		
	comp=Z,13nm,0.7s						
TIXI	**Tiksi**	**21.03**	**332**	P	**P**	**02 48 11.5**	**+2.1**
TIXI				lAmb	lAmb	02 48 12.4	
	comp=Z,11nm,0.8s						
TIXI	**Tiksi**	**21.03**	**332**	P	**P**	**02 48 10.4**	**+1.0**
	comp=Z,7.0nm,0.5s,baz=125,slow=7.3,SNR=13						
	comp=Z,7.0nm,0.5s						
TIXI	**Tiksi**	**21.03**	**332**	*i* P	**P**	**02 48 10.1**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,12nm,0.8s						
C19K	**Lookout Ridge**	**22.20**	**37**	P	**P**	**02 48 22.0**	**+0.3**
C19K				lAmb	lAmb	02 48 30.4	
	comp=Z,21nm,1.4s						
D20K	**Etivluk River**	**23.13**	**39**	P	**P**	**02 48 31.6**	**+0.9**
D20K				lAmb	lAmb	02 48 60.0	
	comp=Z,18nm,1.4s						
BNX	**BinXian**	**23.23**	**259**	P	**P**	**02 48 29.2**	**-2.6**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.8s						
MJA0	**Matsu Arr-Jizo**	**24.55**	**228**	*e*P	**P**	**02 48 47.4**	**+3.5**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	**Matsushiro Arr**	**24.57**	**229**	P	**P**	**02 48 43.5**	**-0.6**
	comp=Z,2.4nm,0.3s,baz=32,slow=7.4,SNR=4.1						
	comp=Z,2.4nm,0.3s						
E24K	**Your Creek**	**26.02**	**41**	P	**P**	**02 48 57.6**	**+0.7**
ILAR	**Eielson Array**	**26.71**	**49**	P	**P**	**02 49 03.8**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=264,slow=8.0,SNR=7.7						
	comp=Z,0.3nm,0.7s						
D25K	**Kavik River**	**26.86**	**39**	P	**P**	**02 49 04.5**	**+0.1**
D25K				lAmb	lAmb	02 49 46.2	
	comp=Z,12nm,1.4s						
BCAR	**Beaver Creek A**	**29.20**	**52**	P	**P**	**02 49 27.3**	**+2.0**
YKAW1	**Yellowknife Wh**	**41.03**	**45**	P	**P**	**02 51 07.7**	**+1.5**
YKAW1				lAmb	lAmb	02 51 47.0	
	comp=Z,7.2nm,1.1s						
DGZ	**Jazzator, Alta**	**43.05**	**294**	*i* P	**P**	**02 51 22.8**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SPITS	**Spitsbergen Ar**	**44.72**	**350**	P	**P**	**02 51 35.7**	**-0.1**
SPITS				pmax	pmax		
	comp=Z,56nm,1.5s						
SPB2	**Spitsbergen Ar**	**44.72**	**350**	P	**P**	**02 51 36.1**	**+0.4**
KURK	**Kurchatov**	**46.86**	**300**	*i* P	**P**	**02 51 51.2**	**-1.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURBB	**Kurchatov Arra**	**46.96**	**300**	P	**P**	**02 51 52.3**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=56,slow=7.9,SNR=12						
	comp=Z,1.1nm,0.4s						
MK31	**Makanchi Array**	**47.55**	**294**	*i* P	**P**	**02 51 58.6**	**+0.3**
MKAR	**Makanchi Array**	**47.55**	**294**	P	**P**	**02 51 57.1**	**-1.2**
MKAR	**Makanchi Array**	**47.55**	**294**	P	**P**	**02 51 56.8**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=54,slow=7.7,SNR=10						
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**47.55**	**294**	*e*P	**P**	**02 51 58.9**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**49.23**	**307**	P	**P**	**02 52 09.8**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=60,slow=8.8,SNR=5.8						
	comp=Z,1.6nm,0.6s						
PLID	**Pearl Lake**	**50.95**	**65**	P	**P**	**02 52 24.9**	**+0.5**
ARTI	**Arti**	**51.99**	**316**	P	**P**	**02 52 29.9**	**-1.8**
ARTI				lAmb	lAmb	02 52 31.2	
	comp=Z,4.3nm,0.5s						
ARTI	**Arti**	**51.99**	**316**	*c iP*	**P**	**02 52 30.3**	**-1.4**
ARTI						02 53 36.3	
ARTI						02 54 26.1	
ARTI				S	**S**	**02 59 46.3**	**+2.2**
ARTI				SS	**SS**	**03 03 19.0**	**-3.0**
ARTI				pmax	pmax		
	comp=Z,8.0nm,1.9s						
KDJ	**Kajisay**	**53.40**	**293**	P	**P**	**02 52 40.8**	**-1.7**
KDJ				lAmb	lAmb	02 52 41.0	
	comp=Z,8.9nm,0.8s						
KDJ	**Kajisay**	**53.40**	**293**	P	**P**	**02 52 40.8**	**-1.7**
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BOOM	**Boomskoye usch**	**53.79**	**294**	P	**P**	**02 52 45.5**	**+0.1**
BOOM				lAmb	lAmb	02 53 01.3	
	comp=Z,6.9nm,1.0s						
BOOM	**Boomskoye usch**	**53.79**	**294**	P	**P**	**02 52 45.5**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	**Ala-Archa**	**54.43**	**295**	*i* P	**P**	**02 52 52.0**	**+2.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVAR	**Mina Array Bea**	**54.44**	**72**	P	**P**	**02 52 51.1**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=314,slow=8.5,SNR=5.1						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**55.88**	**63**	P	**P**	**02 53 01.2**	**+0.8**
ABKAR	**Akbulak array**	**56.55**	**310**	P	**P**	**02 53 03.3**	**-1.5**
FIA1	**FINESS Array S**	**57.99**	**336**	P	**P**	**02 53 13.4**	**-1.2**
FINES	**FINESS Array B**	**57.99**	**336**	P	**P**	**02 53 13.7**	**-0.9**
FINES	**FINESS Array B**	**57.99**	**336**	P	**P**	**02 53 14.0**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=36,slow=6.3,SNR=10						
	comp=Z,1.4nm,0.6s						
OBN	**Obninsk**	**60.65**	**327**	*e*P	**P**	**02 53 33.2**	**+0.2**
OBN				*e**PP	**pP**	**02 54 05.3**	**0.0**
OBN				*e*		02 54 14.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NOA	**NORSAR Array B**	**61.24**	**344**	P	**P**	**02 53 36.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=21,slow=6.7,SNR=1.7						
	comp=Z,0.3nm,0.4s						
HFS	**Hagfors**	**61.69**	**342**	P	**P**	**02 53 38.1**	**-1.9**
	comp=Z,3.4nm,1.0s,baz=46,slow=9.1,SNR=5.5						
	comp=Z,3.4nm,1.0s						
TXAR	**Lajitas Array**	**69.20**	**68**	P	**P**	**02 54 30.5**	**+1.7**
TXAR	**Lajitas Array**	**69.20**	**68**	P	**P**	**02 54 30.1**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=299,slow=4.6,SNR=10.0						
	comp=Z,0.5nm,0.5s						
CLL	**Collm**	**70.16**	**339**	*i* P	**P**	**02 54 30.1**	**-4.1**
CLL	**Collm**	**70.16**	**339**	*i* P	**P**	**02 54 30.1**	**-4.1**
Z38A	**Mt. Pleasant**	**70.48**	**60**	P	**P**	**02 54 37.5**	**+1.0**
Z38A				lAmb	lAmb	02 55 04.5	
	comp=Z,13nm,1.2s						
BURAR	**Bucovina Array**	**70.63**	**330**	P	**P**	**02 54 36.5**	**-0.8**
BURAR	**Bucovina Array**	**70.63**	**330**	P	**P**	**02 54 36.5**	**-0.8**
BURAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
FDMO	**Fiordimonte**	**78.00**	**337**	P	**P**	**02 55 19.9**	**0.0**
FDMO				lAmb	lAmb	02 55 21.4	
	comp=Z,12nm,1.5s						
NRCA	**Norcia**	**78.19**	**336**	P	**P**	**02 55 21.7**	**+0.6**
NRCA				lAmb	lAmb	02 55 39.3	
	comp=Z,9.6nm,1.5s						
WRA	**Warramunga Arr**	**78.60**	**205**	P	**P**	**02 55 23.2**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=17,slow=5.8,SNR=2.4						
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**82.28**	**205**	P	**P**	**02 55 43.3**	**+0.4**
ASAR	**Alice Springs**	**82.28**	**205**	P	**P**	**02 55 43.5**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=11,slow=4.9,SNR=7.6						
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**82.28**	**205**	P	**P**	**02 55 43.3**	**+0.4**
ESDC	**Sonseca Array**	**84.20**	**348**	P	**P**	**02 55 52.4**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=8.9,slow=4.0,SNR=12						
	comp=Z,1.4nm,0.7s						
QSPA	**South Pole Qui**	**145.38**	**180**		**PKiKP**	**03 02 59.7**	**-1.4**
QSPA	**South Pole Qui**	**145.38**	**180**	PKPbc	**PKPab**	**03 02 58.1**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=315,slow=1.8,SNR=23						

KRSC 02 03:00:58.8±2.2, 51°48N×159°79E, h50km±24km, MI3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**1.12**	**288**	*e*P	Pn	03 01 18.8	+0.7
KDTR				*e*S	Sn	03 01 33.6	+1.2
RUS	**Russkaya**	**1.24**	**321**	*e*P	Pn	03 01 20.6	+0.9
RUS				*e*S	Sn	03 01 36.5	+1.1
MTVR	**Mutnovka**	**1.42**	**316**	*e*P	Pn	03 01 23.7	+1.4
ASAK	**Asacha**	**1.48**	**308**	*e*P	Pn	03 01 24.8	+1.6
GRL	**Gorelyy**	**1.51**	**316**	*e*P	Pn	03 01 25.6	+2.0
DALK	**Dalny**	**1.68**	**338**	*e*P	Pn	03 01 27.6	+1.8
KRMR	**Karymshinskiy**	**1.70**	**324**	*e*P	Pn	03 01 27.2	+1.2
PET	**Petropavlovsk**	**1.70**	**336**	*e*P	Pn	03 01 27.5	+1.5
PAU	**Pauzhetka**	**1.86**	**271**	*e*P	Pn	03 01 30.4	+2.1
AVH	**Avacha**	**1.90**	**341**	*e*P	Pn	03 01 32.7	+3.8
KRER	**Koryakskii**	**1.94**	**341**	*e*P	Pn	03 01 32.5	+3.1
KOK	**Koryaka**	**1.95**	**339**	*e*P	Pn	03 01 33.3	+3.8
MIPR	**Malaya Ipel'ka**	**2.04**	**294**	*e*P	Pn	03 01 32.9	+2.2
APC	**Apacha**	**2.17**	**313**	*e*P	Pn	03 01 34.8	+2.3
KBTR	**Krutoberegovo**	**5.07**	**20**	*e*P	Pn	03 02 14.4	+2.3

*IDC **02** 03:06:40.8±3.7, 35°.66N×140°.55E, h34km±28km, mb3.5/11, mbtmp3.8/14, ML3.6/3, Error ellipse: s-maj=23.1km s-min=15.2km az=81.0*
*JMA **02** 03:06:41.3±0.2, 35°.7N±0°.5×140°.7E±0°.8, h50km±1km, MV3.4/40, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .
*NEIC **02** 03:06:41.5±1.9, 35°.67N±0°.06×140°.8E±0°.1, h43km±8km, mb4.5/7, Error ellipse: s-maj=13.1km s-min=8.7km az=103.0*
*NIED **02** 03:06:41.3, 35°.71N×140°.69E, h50km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.56; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-6.11; $M_{r\theta}$2.69; $M_{\theta\phi}$-1.97; $M_{\phi r}$5.48; Fault plane solution: $M_0$9.02000×10^{14} NP1: ϕ_s191.00000°, δ24.00000°, λ79.00000°. NP2:ϕ_s23.00000°, δ66.00000°, λ95.00000°.*

ISC 02 03:06:42.2±0.8, 35.66N±0°.04×140°.67E±0°.06, h47km±6km, n50, σ1s03/50, mb4.0/16, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSMT	**Sammumatsuo**	**0.18**	**265**	P	**Pn**	**03 06 50.0**	**-0.1**
JSMT				*e*S	**Sn**	**03 06 56.8**	**+1.2**
JIHU	**Itakohorinouch**	**0.33**	**339**	⇓*i*P	**Pn**	**03 06 51.0**	**-0.3**
JIHU				⇓*e*S	**Sn**	**03 06 58.3**	**+0.5**
JYT	**Yasato**	**0.69**	**326**	⇓P	**Pn**	**03 06 54.5**	**-1.2**
JYT				⇓*e*S	**Sn**	**03 07 03.8**	**-1.6**
BSO4	**Boso 4**	**0.72**	**202**	P	**Pn**	**03 06 56.1**	**+0.1**
BSO3	**Boso 3**	**0.86**	**189**	*e*P	**Pn**	**03 06 57.8**	**0.0**
JHO	**Hitachi**	**0.95**	**355**	⇓*i*P	**Pn**	**03 06 58.2**	**-1.1**
BSO1	**Boso 1**	**1.03**	**166**	*e*P	**Pn**	**03 06 59.6**	**-0.2**
JAG	**Ashikaga**	**1.25**	**308**	*i* P	**Pn**	**03 07 02.1**	**-1.2**
JOD2	**Odawara 2**	**1.35**	**254**	*e*P	**Pn**	**03 07 04.4**	**-0.3**
JOD2				*e*S	**Sn**	**03 07 22.1**	**+0.6**
JIM2	**Oshima 3**	**1.38**	**228**	*e*P	**Pn**	**03 07 04.1**	**-1.0**
JIM2				*e*S	**Sn**	**03 07 20.8**	**-1.4**
MJAR	**Matsushiro Arr**	**2.18**	**295**	Pn	**Pn**	**03 07 14.5**	**-1.6**
	3.1nm,0.3s,baz=128,slow=11,SNR=76						
MJAR				Lg	Lg	03 07 46.2	
	2.6nm,0.3s,baz=123,slow=27,SNR=3.7						
	6.1nm,0.3s						
MAJO	**Matsushiro**	**2.18**	**295**		**Pn**	**03 07 17.2**	**+1.1**
JMM	**Marumori**	**2.21**	**2**		**Pn**	**03 07 16.5**	**+0.2**
JHJ2	**Mitsune**	**2.64**	**196**	Pn	**Pn**	**03 07 22.6**	**+0.3**
JHJ	**Hachijo jima 2**	**2.64**	**196**	Pn	**Pn**	**03 07 22.3**	**+0.1**
	41nm,0.3s,baz=35,slow=16,SNR=7.9						
JHJ				Sn	**Sn**	**03 07 52.6**	**-0.4**
	71nm,0.3s,baz=248,slow=23,SNR=6.2						
	97nm,0.3s						
JGF	**Kuroka**	**2.70**	**270**		**Pn**	**03 07 24.9**	**+1.7**
INU	**Inuyama**	**3.00**	**265**		**Pn**	**03 07 28.7**	**+1.5**
JSD	**Sado**	**3.06**	**322**		**Pn**	**03 07 29.4**	**+1.3**
JTM	**Tenmabayashi**	**5.13**	**3**	Pn	**Pn**	**03 07 56.8**	**+0.4**
ERM	**Erimo**	**6.64**	**16**	Pn	**Pn**	**03 08 15.6**	**-1.6**
ASAJ	**Asahikawa**	**8.58**	**9**	Pn	**Pn**	**03 08 42.7**	**-1.0**
	1.3nm,0.3s,baz=208,slow=10,SNR=6.4						
ASAJ				Sn	Sn	03 10 08.5	-11
	0.4nm,0.3s,baz=241,slow=30,SNR=1.8						
	4.3nm,0.3s						
JKA	**Kamikawa-asahi**	**8.58**	**9**		**Pn**	**03 08 41.1**	**-2.6**
H11N2	**WAKE ISLAND Hy**	**28.00**	**118**	T	T	03 41 59.1	
	baz=309,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**28.01**	**118**	T	T	03 41 49.5	
	baz=309,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**28.02**	**118**	T	T	03 42 06.7	
	baz=309,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**28.66**	**120**	T	T	03 42 29.2	
	baz=312,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	**28.66**	**120**	T	T	03 42 19.2	
	baz=312,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**28.67**	**120**	T	T	03 42 31.8	
	baz=312,slow=75,SNR=17						
MKAR	**Makanchi Array**	**44.35**	**303**	P	**P**	**03 14 46.7**	**-1.1**
MKAR	**Makanchi Array**	**44.35**	**303**	P	**P**	**03 14 46.5**	**-1.4**
	0.8nm,0.5s,baz=86,slow=9.2,SNR=7.0						
	0.8nm,0.5s						
KURK	**Kurchatov**	**46.32**	**309**		**P**	**03 15 02.4**	**-0.9**
KURK				lAmb	lAmb	03 15 03.2	
	comp=Z,2.9nm,0.9s						
KURBB	**Kurchatov Arra**	**46.39**	**309**	P	**P**	**03 15 03.2**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=81,slow=7.6,SNR=13						
	comp=Z,0.9nm,0.3s						
ILAR	**Eielson Array**	**50.98**	**32**	P	**P**	**03 15 38.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=265,slow=6.3,SNR=11						
	comp=Z,0.4nm,0.6s						
I28M	**Miner Creek**	**53.85**	**31**	P	**P**	**03 16 01.2**	**+1.0**
I28M				lAmb	lAmb	03 16 08.8	
	comp=Z,4.3nm,1.3s						
WB0	**Warramunga Arr**	**55.44**	**187**	P	**P**	**03 16 11.3**	**-0.8**
WB0				lAmb	lAmb	03 16 55.1	
	comp=Z,7.5nm,1.3s						
WR8	**Warramunga Arr**	**55.62**	**187**	P	**P**	**03 16 12.6**	**-0.8**
WR8				lAmb	lAmb	03 16 53.3	
	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**55.62**	**187**	P	**P**	**03 16 12.5**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=1.9,slow=7.5,SNR=6.6						
	comp=Z,0.4nm,0.4s						
ARTI	**Arti**	**57.10**	**319**	P	**P**	**03 16 23.2**	**-0.4**
AB31	**Akbulak array**	**58.37**	**311**	P	**P**	**03 16 31.9**	**-0.7**
ABKAR	**Akbulak array**	**58.37**	**311**	P	**P**	**03 16 32.0**	**-0.6**
ASAR	**Alice Springs**	**59.35**	**187**	P	**P**	**03 16 39.0**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=8.1,slow=6.9,SNR=5.1						
	comp=Z,0.3nm,0.8s						
FINES	**FINESS Array B**	**69.75**	**332**	P	**P**	**03 17 46.6**	**-0.4**
	comp=Z,5.9nm,1.1s,baz=55,slow=6.2,SNR=6.2						
	comp=Z,5.9nm,1.1s						
HFS	**Hagfors**	**75.09**	**336**	P	**P**	**03 18 18.9**	**0.0**
	comp=Z,3.6nm,0.9s,baz=75,slow=3.4,SNR=4.8						
	comp=Z,3.6nm,0.9s						
NC204	**NORSAR Array S**	**75.18**	**337**	P	**P**	**03 18 19.0**	**-0.4**
NC204				lAmb	lAmb	03 18 20.8	
	comp=Z,7.1nm,1.1s						
NB2	**NORSAR Subarra**	**75.22**	**337**	P	**P**	**03 18 19.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=41,slow=6.2						
NOA	**NORSAR Array B**	**75.22**	**337**	P	**P**	**03 18 19.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=43,slow=4.5,SNR=2.1						
	comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**76.30**	**53**	P	**P**	**03 18 27.6**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=292,slow=5.5,SNR=2.5						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**79.06**	**45**	P	**P**	**03 18 42.1**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=312,slow=3.8,SNR=2.4						
	comp=Z,0.2nm,0.6s						
BRTR	**Keskin Array B**	**79.31**	**311**	P	**P**	**03 18 45.0**	**+1.8**
TXAR	**Lajitas Array**	**91.44**	**52**	P	**P**	**03 19 45.1**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=299,slow=2.5,SNR=1.4						
	comp=Z,0.1nm,0.4s						

*TRN **02** 03:10:49.4, 11°.01N×62°.24W, h115km, MD3.4, North of the Paria peninsula.*
*FUNV **02** 03:10:50.6, 11°.18N×62°.39W, h27km, MW3.5*

ISC 02 03:10:47.0±2.3, 11°00N±0°.07×62°30W±0°.09, h130km±22km, n16, σ1s81/30, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMG	**Mucurapo Girls**	**0.82**	**113**	*e*P	**Pn**	**03 11 09.7**	**+1.4**
PSMG				*e*S	**Sn**	**03 11 22.9**	**-1.5**
PSKH	**Kent House, Po**	**0.83**	**113**	*e*P	**Pn**	**03 11 09.7**	**+1.4**
PSKH				*e*S	**Sn**	**03 11 22.7**	**-1.8**
PSWS	**West Secondary**	**0.84**	**114**	*e*P	**Pn**	**03 11 09.6**	**+1.2**
PSWS				*e*S	**Sn**	**03 11 23.1**	**-1.6**
TRN	**Trinidad (W)**	**0.95**	**112**	*e*P	**Pn**	**03 11 10.6**	**+1.2**
TRN				*e*S	**Sn**	**03 11 24.8**	**-1.6**
GRFF	**Grenada Fort F**	**1.18**	**28**	*e*P	**Pn**	**03 11 12.2**	**+0.6**
GRFF				*e*S	**Sn**	**03 11 29.6**	**-0.9**
GRW	**Mount Saint Ca**	**1.31**	**28**	*e*P	**Pn**	**03 11 14.0**	**+0.9**
GRW				*e*S	**Sn**	**03 11 32.9**	**-0.1**
GRSS	**Sisters**	**1.46**	**28**	*e*P	**Pn**	**03 11 15.6**	**+1.0**
GRSS				*e*S	**Sn**	**03 11 35.2**	**-0.5**
GCMP	**Grenada, Carri**	**1.71**	**30**	*e*P	**Pn**	**03 11 18.1**	**+0.6**
GCMP				*e*S	**Sn**	**03 11 39.7**	**-1.0**
PCRV	**Puerto La Cruz**	**2.44**	**251**	*e*P	**Pn**	**03 11 28.2**	**+1.7**
PCRV				*e*S	**Sn**	**03 11 54.3**	**-2.5**
PCRV	**Puerto La Cruz**	**2.44**	**251**	*e*P	**Pn**	**03 11 29.3**	**+2.8**
PCRV				*e*S	**Sn**	**03 11 58.2**	**+1.4**
SVB	**Belmont**	**2.48**	**24**	*e*P	**Pn**	**03 11 27.3**	**+0.3**
SVB				*e*S	**Sn**	**03 11 57.6**	**-0.1**
TACV	**Tcata**	**4.72**	**260**	*e*P	**Pn**	**03 11 58.4**	**+1.9**
TACV				*e*S	**Sn**	**03 12 47.8**	**-2.7**
BENV	**Beln**	**5.31**	**259**	*e*P	**Pn**	**03 12 05.9**	**+1.6**
BENV				*e*S	**Sn**	**03 13 02.0**	**-2.7**
CACV	**CAICARA DEL OR**	**5.40**	**231**	⇑*e*P	Pn	03 12 02.5	-3.0
CACV				*e*S	Sn	03 12 57.2	-9.4
BAUV	**El Baul**	**6.01**	**251**	*e*P	**Pn**	**03 12 15.6**	**+1.9**
BAUV				*e*S	**Sn**	**03 13 18.4**	**-3.0**
MAPV	**Macapo**	**6.17**	**260**	*e*P	**Pn**	**03 12 17.4**	**+1.5**
MAPV				*e*S	**Sn**	**03 13 22.1**	**-3.1**

*DJA **02** 03:33:11.8±0.2, 7°.5S×3°×12°.9E±°, h164km±6km, M4.5/13, mB5.1/6, mb4.4/10, MLv4.6/13, Mw(mB)4.5/6*
*IDC **02** 03:33:11.8±5.5, 7°.57S×129°.07E, h170km±56km, mb3.4/2, mbtmp4.2/6, Error ellipse: s-maj=53.2km s-min=20.7km az=46.0*

ISC 02 03:33:09.7±0.8, 7°53S±0°.06×129°04E±0°.06, h131km, n17, σ2s66/22, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.29**	**102**	P	**Pn**	**03 33 51.5**	**+4.2**
SAUI				S	**Sn**	**03 34 20.4**	**+4.2**
BNDI	**Bandanaira**	**3.11**	**16**	P	**Pn**	**03 33 58.9**	**+1.1**
AAI	**Ambon**	**3.91**	**348**	P	**Pn**	**03 34 09.6**	**+1.3**
MSAI	**Masohi**	**4.15**	**359**	P	**Pn**	**03 34 14.0**	**+2.4**
SOEI	**Soe**	**5.21**	**244**	P	**Pn**	**03 34 29.6**	**+3.8**
	1.1nm107nm,0.9s						
BATI	**Baumata**	**5.94**	**243**	P	**Pn**	**03 34 38.9**	**+3.4**
	80nm,0.3s,baz=108,slow=6.4,SNR=17						
BATI				S	**Sn**	**03 35 45.5**	**+3.1**
	151nm,0.3s,baz=237,slow=22,SNR=15						
BATI	**Baumata**	**5.94**	**243**	P	**Pn**	**03 34 38.7**	**+3.2**
	0.9nm2µm138nm,0.6s						
KMPI	**Kaimana, Papua**	**6.03**	**51**	P	**Pn**	**03 34 36.9**	**+0.2**
	5µm200nm,0.7s						
SWI	**Sorong**	**6.98**	**19**	P	**Pn**	**03 34 49.7**	**+0.2**
	0.2nm1µm22nm,0.8s						
RKPI	**Ransiki, Papua**	**7.87**	**41**	P	**Pn**	**03 35 01.0**	**-0.5**
FITZ	**Fitzroy Crossi**	**11.02**	**197**	P	**Pn**	**03 35 44.1**	**+0.5**
	12nm,0.5s,baz=32,slow=11,SNR=46						
FITZ				S	**Sn**	**03 37

PB03	**IPOC Station P**	**1.62**	**198**	*e*P	**Pn**	**03 36 44.9**	**+0.7**
PB03				*e*S	**Sn**	**03 37 06.4**	**+0.1**
PB03				IAML		03 37 07.0	
	comp=E,458nm,0.2s						
PB03	**IPOC Station P**	**1.62**	**198**	*e*P	**Pn**	**03 36 44.9**	**+0.7**
PB03				*e*S	**Sn**	**03 37 06.9**	**+0.7**
PB03				IAML		03 37 10.1	
	comp=Z,410nm,0.1s						
PB12	**IPOC Station P**	**2.15**	**331**⇑	*e*P	**Pn**	**03 36 50.2**	**-0.5**
PB12				*e*S	**Sn**	**03 37 17.0**	**-0.8**
PB12				IAML		03 37 19.0	
	comp=E,135nm,0.2s						
PB12	**IPOC Station P**	**2.15**	**331**	*e*P	**Pn**	**03 36 50.1**	**-0.5**
PB12				*e*S	**Sn**	**03 37 17.0**	**-0.8**
PB16	**IPOC Station P**	**2.17**	**353**	*e*P	**Pn**	**03 36 52.2**	**+0.8**
PB16				*e*S	**Sn**	**03 37 19.5**	**+0.5**
PB16	**IPOC Station P**	**2.17**	**353**	*e*P	**Pn**	**03 36 51.9**	**+0.4**
PB06	**IPOC Station P**	**2.22**	**188**⇓	*e*P	**Pn**	**03 36 52.0**	**+0.5**
PB06				*e*S	**Sn**	**03 37 19.5**	**+0.1**
PB06				IAML		03 37 24.4	
	comp=E,183nm,0.1s						
PB06	**IPOC Station P**	**2.22**	**188**	*e*P	**Pn**	**03 36 52.1**	**+0.5**
PB06				*e*S	**Sn**	**03 37 20.1**	**+0.6**
PB06				IAML		03 37 25.1	
	comp=Z,129nm,0.4s						
AP01	**Chacalluta**	**2.37**	**333**	*e*P	**Pn**	**03 36 54.2**	**+0.9**
AP01				*e*S	**Sn**	**03 37 21.2**	**-1.4**
AP01				IAML		03 37 28.6	
	comp=Z,107nm,0.1s						
PB05	**IPOC Station P**	**2.51**	**201**	*e*P	**Pn**	**03 36 55.7**	**+0.4**
PB05				*e*S	**Sn**	**03 37 25.1**	**-1.0**
PB05				IAML		03 37 26.0	
	comp=E,129nm,0.5s						
PB05	**IPOC Station P**	**2.51**	**201**	*e*P	**Pn**	**03 36 55.6**	**+0.4**
PB05				*e*S	**Sn**	**03 37 22.8**	**-3.2**
PB05				IAML		03 37 25.4	
	comp=Z,80nm,0.4s						
AF01	**San Pedro de A**	**2.62**	**159**	*e*P	Pn	03 36 42.4	-14
AF01				*e*P		03 37 05.2	
AF01				*e*S	Sn	03 37 44.5	+16
PB10	**IPOC Station P**	**3.25**	**202**	*e*P	**Pn**	**03 37 04.3**	**-0.4**
PB10				*e*S	**Sn**	**03 37 41.2**	**-1.8**
PB14	**IPOC Station P**	**4.25**	**195**	*e*P	**Pn**	**03 37 17.7**	**-0.7**
PB14				*e*S	**Sn**	**03 38 05.2**	**-2.2**
PB14				IAML		03 38 20.6	
	comp=Z,22nm,1.3s						
LPAZ	**La Paz**	**4.32**	**14**	*e*P	**Pn**	**03 37 21.6**	**+2.0**
GO02	**Mina Guanaco**	**4.65**	**184**	*e*P	**Pn**	**03 37 23.8**	**0.0**
GO02				*e*S	**Sn**	**03 38 17.4**	**+0.4**
GO02				IAML		03 38 18.8	
	comp=Z,33nm,0.1s						

AUST 02 03:41:44.0±0.6,33°S±5″×12°0E±″,h10km,mb4.0/1,
ML3.0/5,Error ellipse: s-maj=10.4km s-min=6.0km
az=158.1,confirmed,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBL	**Kambalda**	**2.12**	**42**	P	Pn	03 42 20.8	+1.3
KMBL				S	Sn	03 42 46.1	+0.3
KLBR	**Kellerberrin**	**2.51**	**302**	P	Pb	03 42 27.8	-1.5
KLBR	**Kellerberrin**	**2.51**	**302**	S	Sg	03 43 05.0	+0.2
NWAO	**Narrogin (SRO)**	**2.53**	**270**	P	Pn	03 42 20.4	-4.8
NWAO	**Narrogin (SRO)**	**2.53**	**270**	S	Sb	03 42 59.1	-1.6
RKGY	**Rocky Gully**	**3.17**	**238**	P	Pn	03 42 34.0	0.0
BLDU	**Ballidu**	**3.81**	**307**	P	Pn	03 42 41.8	-1.0
BLDU	**Ballidu**	**3.81**	**307**	S	Sn	03 43 27.6	-0.2
AUBUS	**Georgiana Moll**	**4.13**	**259**	P	Pn	03 42 43.8	-3.3
MORW	**Morawa**	**5.30**	**316**	P	Pn	03 43 02.9	-0.4
	comp=Z,28nm,1.8s,comp=Z,0.1nm						
MORW	**Morawa**	**5.30**	**316**	S	Sn	03 44 05.0	+0.6

*MOS **02** 03:45:35.8,42°.13N×45°.93E,h17km,MPVA3.8*
*TIF **02** 03:45:36.6,42°.13N×45°.89E,h15km*
*DRS **02** 03:45:37.8,42°.18N×46°.09E,h6km*
*NORS **02** 03:45:38.7,42°.15N×45°.96E,h5km,MPVA3.6*
ISC 02 03:45:37.7±0.9,42°.14N±0°.02×45°.94E±0°.01,h13km±7km,
n88,σ1°25/164,1D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLTR	**Tlyarata**	**0.31**	**95**	*i* PG	**Pg**	**03 45 44.2**	**0.0**
TLTR				*e*S	**Sg**	**03 45 48.8**	**+0.2**
LGD	**Lagodekhi**	**0.38**	**143**	P	**Pg**	**03 45 45.4**	**+0.1**
LGD				S	**Sg**	**03 45 51.2**	**+0.7**
LGD	**Lagodekhi**	**0.38**	**143**	*e*Pg	**Pg**	**03 45 45.4**	**+0.1**
LGD				*e*Sg	**Sg**	**03 45 51.2**	**+0.7**
LGD	**Lagodekhi**	**0.38**	**143**	*e*PG	**Pg**	**03 45 45.4**	**+0.1**
LGD				*e*S	**Sg**	**03 45 51.2**	**+0.7**
BTLR	**Botlikh**	**0.57**	**22**	*e*Pg	**Pb**	**03 45 48.9**	**0.0**
BTLR				*e*Sg	**Sb**	**03 45 56.9**	**-0.7**
BTLR	**Botlikh**	**0.57**	**22**	*e*PG	**Pb**	**03 45 49.1**	**-0.5**
BTLR				*e*S	**Sb**	**03 45 57.0**	**-0.7**
XNZR	**Khunzakh**	**0.70**	**54**	*e*Pg	**Pb**	**03 45 52.0**	**+0.1**
XNZR				*e*Sg	**Sb**	**03 46 01.7**	**+0.2**
DDFL	**Dedoflistskaro**	**0.70**	**169**	PG	**Pb**	**03 45 52.1**	**+0.2**
HNZR	**Khunzah**	**0.72**	**54**	*e*PG	**Pb**	**03 45 52.1**	**0.0**
HNZR				*e*S	**Sb**	**03 46 01.9**	**-0.1**
SHTL	**Shatili**	**0.78**	**312**	P	**Pg**	**03 45 50.9**	**-1.9**
SHTL				S	**Sg**	**03 46 00.3**	**-2.8**
SHTL	**Shatili**	**0.78**	**312**	PG	**Pg**	**03 45 50.9**	**-1.9**
SHTL				S	**Sg**	**03 46 00.3**	**-2.8**
DGRG	**David-gareji**	**0.80**	**212**	P	**Pg**	**03 45 53.6**	**+0.3**
DGRG				S	**Sn**	**03 46 06.5**	**-0.1**
DVE	**Vedeno**	**0.83**	**10**	*e*Pg	**Pg**	**03 45 53.5**	**-0.3**
DVE				*e*Sg	**Sb**	**03 46 05.4**	**+0.2**
DVE	**Vedeno**	**0.83**	**10**	*e*PG	**Pb**	**03 45 53.7**	**-0.1**
DVE				*e*S	**Sb**	**03 46 05.4**	**+0.2**
UNCR	**Uncukul**	**0.86**	**48**	*e*Pg	**Pg**	**03 45 54.0**	**-0.3**
UNCR				*e*Sg	**Sb**	**03 46 06.0**	**+0.1**
UNCR	**Uncukul**	**0.86**	**48**	*e*PG	**Pb**	**03 45 54.3**	**-0.2**
UNCR				*e*S	**Sn**	**03 46 06.7**	**-1.3**
UNCR				pmax	pmax		
	comp=Z,50nm,0.3s						
KMKR	**Kumukh**	**0.86**	**90**	*e*Pg	**Pb**	**03 45 54.4**	**-0.3**
KMKR				*e*Sg	**Sn**	**03 46 07.0**	**-1.4**
KMKR	**Kumukh**	**0.86**	**90**	*e*PG	**Pb**	**03 45 54.4**	**-0.3**
KMKR				*e*S	**Sn**	**03 46 07.0**	**-1.4**
ARKR	**Arakani**	**0.91**	**59**	*e*Pg	**Pg**	**03 45 55.1**	**-0.2**
ARKR				*e*Sg	**Sn**	**03 46 08.3**	**-1.0**
ARKR	**Arakani**	**0.91**	**59**	*e*PG	**Pg**	**03 45 55.2**	**-0.2**
ARKR				*e*S	**Sn**	**03 46 08.3**	**-1.0**
SEAG	**Tbilisi Sea**	**0.92**	**247**	P	**Pg**	**03 45 54.9**	**-0.6**
SEAG				S	**Sg**	**03 46 08.6**	**+1.0**
SEAG	**Tbilisi Sea**	**0.92**	**247**	*e*Pg	**Pb**	**03 45 54.9**	**-0.6**
SEAG				*e*Sg	**Sg**	**03 46 08.6**	**+1.0**
SEAG	**Tbilisi Sea**	**0.92**	**247**	*e*PG	**Pb**	**03 45 54.9**	**-0.6**
SEAG				*e*S	**Sg**	**03 46 08.6**	**+1.0**
BTNK	**Botanikuri**	**0.96**	**242**	PG	**Pb**	**03 45 55.0**	**-1.2**
VSHL	**Vashlovani**	**0.97**	**159**	P	**Pn**	**03 45 57.1**	**0.0**
VSHL				S	**Sn**	**03 46 13.2**	**+2.6**
VSHL	**Vashlovani**	**0.97**	**159**	*e*Pg	**Pn**	**03 45 57.1**	**0.0**
VSHL				*e*Sg	**Sn**	**03 46 13.2**	**+2.6**
TBLG	**Delisi**	**0.98**	**246**	P	**Pb**	**03 45 55.7**	**-0.8**
TBLG	**Delisi**	**0.98**	**246**	PG	**Pb**	**03 45 55.7**	**-0.8**
KRNR	**Karanay**	**1.00**	**46**	*e*Pg	**Pb**	**03 45 56.4**	**-0.4**
KRNR				*e*Sg	**Sg**	**03 46 09.8**	**-0.2**
KRNR	**Karanay**	**1.00**	**46**	*e*PG	**Pb**	**03 45 56.5**	**-0.4**
KRNR				*e*S	**Sn**	**03 46 10.6**	**-0.9**
KRNR				pmax	pmax		
	comp=Z,25nm,0.4s						
DLMR	**Dylym**	**1.06**	**29**	*e*Pg	**Pg**	**03 45 58.0**	**-0.2**
DLMR				*e*Sg	**Sn**	**03 46 13.2**	**+0.2**
DLMR	**Dylym**	**1.06**	**29**	*e*PG	**Pg**	**03 45 58.0**	**-0.2**
DLMR				*e*S	**Sn**	**03 46 13.2**	**+0.2**
GROC	**Groznyy**	**1.07**	**355**	*e*Pg	**Pg**	**03 45 58.3**	**-0.1**
GROC				*e*Sg	**Sn**	**03 46 14.2**	**+1.1**
GROC	**Groznyy**	**1.07**	**355**	*e*PG	**Pg**	**03 45 58.8**	**+0.5**
GROC				pmax	pmax		
	comp=Z,63nm,0.4s						
BUJR	**Buynaksk**	**1.11**	**51**	*e*Pg	**Pg**	**03 45 58.9**	**-0.2**
BUJR				*e*Sg	**Sn**	**03 46 14.6**	**+0.5**
BUJR	**Buynaksk**	**1.11**	**51**	*e*PG	**Pg**	**03 45 58.9**	**-0.2**
BUJR				*e*S	**Sn**	**03 46 14.6**	**+0.5**
GUDG	**Gudauri**	**1.13**	**287**	P	**Pb**	**03 45 57.7**	**-1.5**
GUDG				S	**Sb**	**03 46 13.3**	**-0.6**
GUDG	**Gudauri**	**1.13**	**287**	*e*PG	**Pb**	**03 45 57.0**	**-2.2**
GUDG				*e*S	**Sb**	**03 46 12.6**	**-1.3**
KMGR	**Komgaron**	**1.21**	**320**	*e*Pg	**Pb**	**03 46 00.6**	**0.0**
KMGR				*e*Sg	**Sg**	**03 46 18.9**	**+2.1**
KMGR	**Komgaron**	**1.21**	**320**	*e*PG	**Pg**	**03 46 02.9**	**+1.8**
KMGR				*e*S	**Sg**	**03 46 19.8**	**+3.0**
URKR	**Urkarakh**	**1.26**	**88**	*e*Pg	**Pg**	**03 46 01.4**	**-0.6**
URKR				*e*Sg	**Sg**	**03 46 18.7**	**+0.2**
URKR	**Urkarakh**	**1.26**	**88**	*e*PG	**Pg**	**03 46 01.4**	**-0.6**
URKR				*e*S	**Sg**	**03 46 18.7**	**+0.2**
VLKR	**Vladikavkaz**	**1.30**	**315**	*e*Pg	**Pb**	**03 46 02.2**	**+0.1**
VLKR				*e*Sg	**Sg**	**03 46 20.4**	**+0.8**
VLKR	**Vladikavkaz**	**1.30**	**315**	*e*PG	**Pg**	**03 46 04.6**	**+1.9**
VLKR				*e*S	**Sg**	**03 46 21.3**	**+1.7**
SGKR	**Sergokala**	**1.32**	**75**	*e*Pg	**Pg**	**03 46 02.7**	**-0.4**
SGKR				*e*Sg	**Sg**	**03 46 21.1**	**+0.9**
SGKR	**Sergokala**	**1.32**	**75**	*e*PG	**Pg**	**03 46 02.7**	**-0.4**
SGKR				*e*S	**Sg**	**03 46 21.1**	**+0.9**
SEKA	**Sheki**	**1.32**	**134**	PG	**Pn**	**03 46 01.5**	**-0.4**
KZR	**Kazreti**	**1.36**	**237**	P	**Pn**	**03 45 58.9**	**-3.6**
KZR				S	**Sn**	**03 46 17.2**	**-3.2**
KZRT	**Kazreti**	**1.37**	**237**	PG	**Pn**	**03 45 58.9**	**-3.7**
KZRT				S	**Sn**	**03 46 17.3**	**-3.3**
LACR	**Lac**	**1.39**	**300**	*e*Pg	**Pn**	**03 46 02.5**	**-0.5**
LACR				*e*Sg	**Sn**	**03 46 20.4**	**-0.9**
LACR	**Lac**	**1.39**	**300**	*e*PG	**Pn**	**03 46 02.5**	**-0.5**
LACR				*e*S	**Sn**	**03 46 21.0**	**-0.3**
MAK	**Makhachkala**	**1.42**	**54**	*e*Pg	**Pn**	**03 46 01.9**	**-1.3**
MAK				*e*Sg	**Sg**	**03 46 26.3**	**+2.8**
MAK	**Makhachkala**	**1.42**	**54**⇓	*i* PG	**Pb**	**03 46 03.8**	**-0.3**
MAK				*e*S	**Sg**	**03 46 23.3**	**-0.2**
MAK				pmax	pmax		
	comp=Z,117nm,0.3s						
MAK				smax	smax		
	comp=N,597nm,0.7s						
MAK				smax	smax		
	comp=N,690nm,2.5s						
AKT	**Akhty**	**1.49**	**115**	*e*Pg	**Pn**	**03 46 04.5**	**+0.2**
AKT				*e*Sg	**Sg**	**03 46 25.3**	**-0.5**
AKT	**Akhty**	**1.49**	**115**	*e*PG	**Pb**	**03 46 04.8**	**-0.6**
AKT				*e*S	**Sg**	**03 46 25.3**	**-0.5**
AKT				pmax	pmax		
	comp=Z,28nm,0.3s						
TRLG	**Trialeti**	**1.50**	**247**	P	**Pn**	**03 46 04.0**	**-0.4**
TRLG				S	**Sn**	**03 46 24.0**	**+0.2**
TRLG	**Trialeti**	**1.50**	**247**	PG	**Pn**	**03 46 04.0**	**-0.4**
TRLG				S	**Sn**	**03 46 24.0**	**+0.2**
GANJ	**Ganja**	**1.52**	**169**	PG	**Pn**	**03 46 03.9**	**-0.7**
ARNR	**Ardon**	**1.60**	**311**	*e*Pg	**Pb**	**03 46 07.1**	**-0.1**
ARNR				*e*Sg	**Sg**	**03 46 29.0**	**-0.3**
ARNR	**Ardon**	**1.60**	**311**	*e*PN	**Pg**	**03 46 08.2**	**-0.3**
ARNR				*e*S	**Sg**	**03 46 30.1**	**+0.8**
BTKR	**Batakoyurt**	**1.60**	**321**	*e*PN	**Pb**	**03 46 06.7**	**-0.5**
BTKR				*e*S	**Sg**	**03 46 29.5**	**+0.1**
MNGR	**Mingechevir, A**	**1.61**	**147**	PG	**Pb**	**03 46 07.8**	**+0.5**
KSMR	**Kasumkent**	**1.72**	**107**	*e*Pg	**Pb**	**03 46 08.7**	**-0.6**
KSMR				*e*Sg	**Sg**	**03 46 31.8**	**-1.3**
KSMR	**Kasumkent**	**1.72**	**107**	*e*PN	**Pb**	**03 46 08.6**	**-0.6**
KSMR				*e*S	**Sg**	**03 46 31.8**	**-1.3**
DRN	**Derbent**	**1.79**	**93**	*e*PN	**Pb**	**03 46 09.6**	**-0.6**
DRN				*e*S	**Sg**	**03 46 34.1**	**-1.0**
DRN				pmax	pmax		
	comp=Z,111nm,1.7s						
TRKR	**Terskaya**	**1.81**	**331**	*e*Pg	**Pn**	**03 46 09.0**	**+0.4**
TRKR				*e*Sg	**Sg**	**03 46 35.0**	**-1.1**
TRKR	**Terskaya**	**1.81**	**331**	*e*PN	**Pb**	**03 46 11.0**	**+0.2**
TRKR				*e*S	**Sg**	**03 46 35.8**	**-0.3**
STDR	**Stavd-Durt**	**1.85**	**312**	*e*Pg	**Pb**	**03 46 11.5**	**+0.1**
STDR				*e*Sg	**Sg**	**03 46 37.1**	**-0.1**
STDR	**Stavd-Durt**	**1.85**	**312**	*e*PN	**Pg**	**03 46 13.3**	**+0.1**
STDR				*e*S	**Sg**	**03 46 37.4**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.90**	**294**	*e*Pg	**Pb**	**03 46 11.6**	**-0.7**
DIGR				*e*Sg	**Sb**	**03 46 35.2**	**-0.8**
DIGR	**Digorskoe uzhe**	**1.90**	**294**	*e*PN	**Pb**	**03 46 12.1**	**-0.2**
DIGR				*e*S	**Sb**	**03 46 37.2**	**+1.1**
LSNR	**Lesken**	**1.93**	**307**	*e*Pg	**Pb**	**03 46 12.1**	**-0.6**
LSNR				*e*Sg	**Sb**	**03 46 37.5**	**+0.8**
LSNR	**Lesken**	**1.93**	**307**	*e*PN	**Pb**	**03 46 13.9**	**+1.2**
LSNR				*e*S	**Sg**	**03 46 38.5**	**-1.2**
AKH	**Akhalkalaki**	**1.97**	**249**	P	**Pn**	**03 46 11.1**	**+0.2**
AKH				S	**Sn**	**03 46 36.9**	**+1.4**
AKH	**Akhalkalaki**	**1.97**	**249**	*e*Pg	**Pn**	**03 46 10.8**	**-0.1**
AKH				*e*Sg	**Sn**	**03 46 36.6**	**+1.1**
AKH	**Akhalkalaki**	**1.97**	**249**	PN	**Pn**	**03 46 11.1**	**+0.2**
GNI	**Garni**	**2.18**	**205**	*e*Pn	**Pn**	**03 46 15.6**	**+1.8**
GNI				*e*Sn	**Sb**	**03 46 44.4**	**+0.3**
GNI	**Garni**	**2.18**	**205**	*e*PN	**Pn**	**03 46 15.6**	**+1.8**
GNI				*e*S	**Sb**	**03 46 44.4**	**+0.3**
NCK	**Nalchik**	**2.19**	**309**	*e*PN	**Pn**	**03 46 13.9**	**+0.1**
TKB	**Tkibuli**	**2.19**	**277**	P	**Pn**	**03 46 15.7**	**+1.8**
TKB				S	**Sb**	**03 46 44.0**	**-0.3**
TKB	**Tkibuli**	**2.19**	**277**	PN	**Pn**	**03 46 15.7**	**+1.8**
TKB				S	**Sb**	**03 46 44.0**	**-0.3**
KBZ	**Khabaz**	**2.74**	**307**	*i* PN	**Pb**	**03 46 24.2**	**-2.3**
SHA1	**Shidzhatmaz**	**2.89**	**305**	*e*Pn	**Pb**	**03 46 26.6**	**-2.7**
SHA1				*e*Sn	**Sn**	**03 47 01.5**	**+3.1**
SHA1	**Shidzhatmaz**	**2.89**	**305**	*e*PN	**Pb**	**03 46 26.6**	**-2.7**
SHA1				*e*S	**Sn**	**03 47 01.5**	**+3.1**
KIV0	**Kislovodsk Arr**	**2.99**	**309**	*e*Pn	**Pn**	**03 46 26.9**	**+2.0**
KIV0				*e*Sn	**Sn**	**03 47 03.2**	**+2.6**
KIV	**Kislovodsk**	**3.00**	**308**	*e*Pn	**Pn**	**03 46 27.7**	**+2.8**
KIV				*e*Sn	**Sn**	**03 47 00.0**	**-0.7**
KIV	**Kislovodsk**	**3.00**	**308**	*e*PN	**Pn**	**03 46 27.7**	**+2.8**
KIV				*e*S	**Sn**	**03 47 00.0**	**-0.7**
OBN	**Obninsk**	**14.37**	**338**	*e*P	**Pn**	**03 49 00.9**	**+0.3**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.3s						
OBN				MLR	MLR		
	comp=Z,146nm,5.0s						

*NNC **02** 04:08:09.1±3.5,38°.84N×67°.53E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=35.2km s-min=22.1km az=165.0
*ISU **02** 04:08:09,38°.83N×67°.55E,h10km*
ISC 02 04:08:09.3±0.9,38°.85N±0°.04×67°.53E±0°.04,h10km,n18,
σ1°77/26,5C-2D,Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTAB	**Kitab**	**0.58**	**300**	S	**Sg**	**04 08 26.5**	**-1.7**
KTAB				S	**Sn**	**04 08 35.3**	**+2.1**
BAYS	**Baysun**	**0.68**	**202**	P	**Pg**	**04 08 21.2**	**-1.3**
BAYS				S	**Sg**	**04 08 31.2**	**-0.3**
AGL	**Agalyk**	**0.84**	**323**	P	**Pn**	**04 08 27.7**	**+0.5**
AGL				S	**Sn**	**04 08 40.5**	**+0.8**
SAM	**Samarkand**	**0.93**	**331**	P	**Pn**	**04 08 28.4**	**-0.1**
SAM				S	**Sn**	**04 08 42.2**	**+0.3**
PKMR	**Pachkamar**	**0.94**	**252**	P	**Pn**	**04 08 29.3**	**+0.7**
PKMR				S	**Sn**	**04 08 43.7**	**+1.6**
ZRB	**Zarabog**	**1.23**	**233**	P	**Pn**	**04 08 32.1**	**-0.5**
ZRB				S	**Sn**	**04 08 49.1**	**-0.2**
DZI	**Dzhizak**	**1.29**	**10**	P	**Pg**	**04 08 33.7**	**-0.3**
DZI				S	**Sn**	**04 08 51.9**	**+1.2**
NZBK	**Nazarbek**	**2.67**	**27**	S	**Sg**	**04 09 33.3**	**-1.7**
TGS	**TashGRES**	**2.99**	**30**	S	**Sg**	**04 09 42.0**	**-3.4**
MINT	**Mingtut**	**3.11**	**58**	S	**Sb**	**04 09 39.9**	**-2.9**
CHDK	**Chadak**	**3.27**	**48**	P	**Pn**	**04 09 01.3**	**+0.7**
CHMG	**Chimgan**	**3.30**	**34**	S	Sn	04 09 21.4	-19
CHRV	**Charvak**	**3.35**	**33**	S	Sn	04 09 15.1	-27
FRG	**Fergana**	**3.62**	**64**	S	**Sb**	**04 09 59.3**	**+1.8**
TMD	**Tamdy-Bulak**	**3.65**	**324**	P	**Pn**	**04 09 09.2**	**+3.4**
KK31	**Karatay Array**	**4.82**	**27**	⇑Pn	**Pn**	**04 09 23.2**	**+1.4**
	0.5nm,0.3s,baz=186,slow=6.3,SNR=15						
KK31				⇑Pg	**Pg**	**04 09 39.3**	**-2.2**
	1.9nm,0.3s,baz=210,slow=19,SNR=11						
KK31				⇓Sn	**Sn**	**04 10 19.7**	**+2.0**
	2.4nm,0.3s,baz=35,slow=37,SNR=5.6						
KK31				⇓Lg	Lg	04 10 41.7	
	11nm,0.3s,baz=206,slow=31,SNR=13						
AAK	**Ala-Archa**	**6.50**	**52**	⇑Pn	**Pn**	**04 09 46.0**	**+0.8**
	0.6nm,0.4s						
AAK				⇑Sn	**Sn**	**04 11 02.2**	**+2.7**
	0.9nm,0.4s						
AB31	**Akbulak array**	**11.74**	**335**	⇑P	**Pn**	**04 10 56.9**	**+0.1**
	0.5nm,0.4s,baz=169,slow=11,SNR=13						

*ISU **02** 04:11:00,38°.90N×67°.85E,h6km*
*NNC **02** 04:11:01.1±5.0,38°.90N×67°.40E,h0km,mb3.8,mpv3.3,*
Error ellipse: s-maj=45.0km s-min=32.8km az=155.0
ISC 02 04:11:01.5±1.1,38°.83N±0°.06×67°.49E±0°.06,h10km,n9,
σ2°24/14,4C-1D,Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZRB	**Zarabog**	**1.19**	**232**	P	**Pg**	**04 11 23.3**	**-1.1**
ZRB				S	**Sn**	**04 11 43.1**	**+2.5**
NUT	**Nurota**	**2.21**	**322**	P	**Pg**	**04 11 44.0**	**+0.1**
NUT				S	**Sg**	**04 12 12.7**	**+0.1**
NZBK	**Nazarbek**	**2.70**	**27**	S	**Sg**	**04 12 30.5**	**+2.4**
TGS	**TashGRES**	**3.02**	**30**	S	**Pg**	**04 12 00.2**	**+0.8**
CHDK	**Chadak**	**3.30**	**49**	P	**Pn**	**04 11 53.2**	**-0.1**
CHRV	**Charvak**	**3.38**	**33**	S	**Sb**	**04 12 38.4**	**-4.4**
KK31	**Karatay Array**	**4.84**	**27**	Pn	**Pn**	**04 12 15.2**	**+0.7**
	0.9nm,0.3s,baz=194,slow=6.8,SNR=9.8						
KK31				⇑Pg	**Pg**	**04 12 31.9**	**-2.3**
	3.2nm,0.3s,baz=208,slow=18,SNR=10						
KK31				⇑Sn	**Sn**	**04 13 11.6**	**+1.0**
	5.6nm,0.3s						
KK31				⇑Lg	Lg	04 13 32.8	
	12nm,0.4s,baz=207,slow=35,SNR=11						
AAK	**Ala-Archa**	**6.54**	**52**	⇓Pn	**Pn**	**04 12 37.2**	**-0.7**
	1.4nm,0.5s						
AAK				⇑Sn	**Sn**	**04 13 56.4**	**+3.8**
	2.3nm,0.5s						
AB31	**Akbulak array**	**11.74**	**335**	P	**Pn**	**04 13 48.7**	**-0.2**
	2.2nm,0.7s,baz=162,slow=12,SNR=13						

Gll 02 04:13:52.4±0.0,32°.871N±0°.002×35°.588E±0°.001,
h4km,Mws1.6,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNHM	**Kefar Nahum**	**0.01**	**332**	P	Pg	04 13 53.1	-0.1
KNHM	**Kefar Nahum**	**0.01**	**332**	S	Sg	04 13 54.2	+0.4
SPIR	**Sapir Facility**	**0.04**	**262**	P	Pg	04 13 53.7	+0.3
SPIR	**Sapir Facility**	**0.04**	**262**	S	Sg	04 13 54.8	+0.6
RMOT	**Ramot**	**0.07**	**106**	P	Pg	04 13 54.0	+0.2
RMOT	**Ramot**	**0.07**	**106**	S	Sg	04 13 55.5	+0.7
HDNS	**Had-Ness**	**0.07**	**38**	P	Pg	04 13 54.4	+0.4
HDNS	**Had-Ness**	**0.07**	**38**	S	Sg	04 13 55.8	+0.8
MGDL	**Migdal**	**0.07**	**246**	P	Pg	04 13 54.2	+0.2
MGDL	**Migdal**	**0.07**	**246**	S	Sg	04 13 55.7	+0.7
MMA0B	**Mount Meron ar**	**0.21**	**313**	P	Pg	04 13 57.6	+1.0
MMA0B	**Mount Meron ar**	**0.21**	**313**	S	Sg	04 14 01.0	+1.6
KSHT	**Keshet**	**0.22**	**59**	P	Pg	04 13 57.0	+0.3
KSHT	**Keshet**	**0.22**	**59**	S	Sg	04 14 01.2	+1.7
MMC7	**Mount Meron ar**	**0.22**	**313**	P	Pg	04 13 57.3	+0.5
GEM	**Giv'at Ha'Em**	**0.34**	**11**	P	Pg	04 13 59.8	+0.8
GEM	**Giv'at Ha'Em**	**0.34**	**11**	S	Sb	04 14 05.4	-1.5
BLGI	**Bet Lehem HaGe**	**0.36**	**248**	P	Pg	04 14 00.1	+0.8
BLGI	**Bet Lehem HaGe**	**0.36**	**248**	S	Sg	04 14 05.5	+1.5
HNTI	**Hanita**	**0.41**	**301**	P	Pg	04 14 01.2	+0.9
HNTI	**Hanita**	**0.41**	**301**	S	Sb	04 14 07.8	-0.9
NATI	**Neve Ativ**	**0.41**	**18**	P	Pb	04 14 01.4	-0.8
NATI	**Neve Ativ**	**0.41**	**18**	S	Sb	04 14 07.9	-0.9
MMLI	**Mount Malkishu**	**0.45**	**198**	P	Pb	04 14 02.1	-0.9
MMLI	**Mount Malkishu**	**0.45**	**198**	S	Sb	04 14 09.6	-0.5
OFRI	**`Ofer**	**0.56**	**244**	P	Pb	04 14 04.2	-0.7
OFRI	**`Ofer**	**0.56**	**244**	S	Sb	04 14 12.7	-0.6
HMDT	**Nahal Hemdat**	**0.62**	**185**	P	Pb	04 14 05.4	-0.4
HMDT	**Nahal Hemdat**	**0.62**	**185**	S	Sb	04 14 14.3	-0.4

*LDG **02** 04:28:58.6±0.2,43°.13N×10°.

MCIV	**Monte Civitell**	**0.70**	**121**	P	Pb	04 29 12.6	-0.5		
MCIV				AML	AML				
	comp=N,192μm,0.9s								
MCIV				AML	AML				
	comp=E,242μm,1.1s								
MCIV				AML	AML				
	comp=N,192μm,1.1s								
MAIM	**Mastiano**	**0.82**	**341**	P	Pb	04 29 14.8	-0.3		
SACS	**San Casciano d**	**0.82**	**110**	P	Pb	04 29 15.4	+0.2		
SACS				AML	AML				
	comp=N,71μm,0.9s								
SACS				AML	AML				
	comp=E,73μm,0.7s								
MPPT	**Montemurlo**	**0.83**	**11**	P	Pb	04 29 15.1	-0.3		
MPPT				AML	AML				
	comp=N,102μm,1.0s								
MPPT				AML	AML				
	comp=N,93μm,0.5s								
MPPT				AML	AML				
	comp=E,94μm,1.0s								
RUFI	**Rufina**	**0.84**	**34**	P	Pb	04 29 15.3	-0.2		
RUFI				S	Sb	04 29 26.4	-0.7		
RUFI	**Rufina**	**0.84**	**34**	P	Pb	04 29 15.3	-0.2		
MOCL	**Monte Cuccoli**	**0.89**	**15**	P	Pb	04 29 16.7	+0.3		
MOCL				AML	AML				
	comp=E,102μm,0.8s								
MOCL				AML	AML				
	comp=N,128μm,0.7s								
POPM	**Popiglio**	**0.91**	**355**	P	Pb	04 29 16.5	-0.1		
POPM	**Popiglio**	**0.91**	**355**	P	Pb	04 29 16.5	-0.2		
POPM				AML	AML				
	comp=N,134μm,0.3s								
POPM				AML	AML				
	comp=E,105μm,0.5s								
CRE	**Caprese Michel**	**0.93**	**58**	P	Pb	04 29 17.0	0.0		
CRE				AML	AML				
	comp=E,97μm,1.0s								
CRE				AML	AML				
	comp=N,88μm,0.8s								
CRE				AML	AML				
	comp=E,97μm,0.9s								
CRE				AML	AML				
	comp=N,88μm,1.2s								
CARD	**Cardoso**	**0.93**	**343**	P	Pb	04 29 17.1	+0.1		
CARD				S	Sg	04 29 28.7	+0.4		
CARD	**Cardoso**	**0.93**	**343**	P	Pb	04 29 16.7	-0.3		
CARD				AML	AML				
	comp=E,123μm,0.5s								
CARD				AML	AML				
	comp=N,115μm,0.6s								
CARD				AML	AML				
	comp=N,115μm,0.6s								
CARD				AML	AML				
	comp=E,123μm,0.5s								
CARD				AML	AML				
	comp=N,115μm,1.4s								
BDI	**Bagni Di Lucca**	**0.94**	**348**	P	Pg	04 29 16.9	+0.3		
BDI	**Bagni Di Lucca**	**0.94**	**348**	P	Pg	04 29 16.7	+0.2		
BDI				AML	AML				
	comp=E,102μm,1.0s								
BDI				AML	AML				
	comp=N,72μm,1.6s								
BDI				AML	AML				
	comp=N,72μm,0.4s								
ASSB	**Assisi San Ben**	**1.32**	**94**	P	Pn	04 29 23.5	+0.1		
PGF	**Pioggiola**	**1.50**	**247**	*e*Pn	Pn	04 29 25.4	-0.6		
PGF				*e*Sn	Sn	04 29 41.6	-4.2		
	comp=N,2.8nm,0.2s								
SRES	**S.Oreste - Sor**	**1.51**	**126**	P	Pn	04 29 25.7	-0.4		
SRES				AML	AML				
	comp=E,26μm,1.4s								
SRES				AML	AML				
	comp=N,22μm,1.1s								
SRES				AML	AML				
	comp=E,26μm,0.6s								
SRES				AML	AML				
	comp=N,22μm,0.9s								
MSSA	**Maissana**	**1.53**	**321**	P	Pn	04 29 26.5	+0.1		
SBF	**Sospel**	**2.60**	**287**	*e*P	Pn	04 29 40.9	-0.2		
SBF				*e*Sn	Sn	04 30 06.9	-6.1		
	comp=N,3.0nm,0.3s								
LMR	**La Mourre**	**3.19**	**275**	*e*Pn	Pn	04 29 47.2	-1.9		
LMR	**La Mourre**	**3.19**	**275**	*e*P	Pn	04 29 49.0	-0.1		
LMR				*e*Sg	Sb	04 30 37.0	+2.4		
	comp=N,0.4nm,0.2s								
MBDF	**Montbardon**	**3.36**	**300**	*e*P	Pn	04 29 52.5	+0.9		
ABTA	**Abfaltersbach**	**3.79**	**17**	*e*Pn	Pn	04 29 59.0	+1.5		
	comp=N,1.3nm,0.4s								
FETA	**Feichten**	**3.88**	**359**	*i* Pn	Pn	04 30 02.9	+4.1		
	comp=N,4.7nm,1.0s								
SMRF	**Simiane la Rot**	**3.94**	**284**	*e*P	Pn	04 30 00.0	+0.6		
SQTA	**Sankt Quirin**	**4.09**	**3**	*e*Pn	Pn	04 30 04.2	+2.6		
	comp=N,4.2nm,0.5s								
WTTA	**Wattenberg**	**4.16**	**7**	*e*Pn	Pn	04 30 05.5	+2.9		
	comp=N,2.4nm,0.4s								
DAVA	**Damuels**	**4.20**	**351**	*i* Pn	Pn	04 30 07.5	+4.2		
	comp=N,0.7nm,0.2s								
RETA	**Reutte**	**4.35**	**359**	*e*Pn	Pn	04 30 07.4	+2.3		
	comp=N,0.7nm,0.3s								
LESA	**Schwarzleotal**	**4.47**	**16**	*e*Pn	Pn	04 30 10.1	+3.3		
	comp=N,2.1nm,0.5s								

ROM 02 04:29:14.8±0.1, 43°.157N±0°.005×10°.870E±0°.009, h6km, ML2.1/48, Error ellipse: s-maj=0.7km s-min=0.5km az=225.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIF	**Trifonti**	**0.05**	**151**	P	Pg	04 29 16.3	+0.1
TRIF				S	Sg	04 29 17.3	0.0
MAGO	**Bibbona**	**0.19**	**307**	P	Pg	04 29 19.4	+0.8
MAGO				S	Sg	04 29 22.3	+1.0
MAGO				AML	AML		
	comp=N,1825μm,0.6s						
MAGO				AML	AML		
	comp=E,2125μm,0.8s						
MAGO				AML	AML		
	comp=N,2471μm,0.1s						
MAGO				AML	AML		
	comp=E,2820μm,0.2s						
FROS	**Frosini**	**0.22**	**76**	P	Pg	04 29 20.3	+1.3
FROS				S	Sg	04 29 23.2	+1.2
FROS				AML	AML		
	comp=N,2850μm,0.5s						
FROS				AML	AML		
	comp=E,3585μm,0.5s						
FROS				AML	AML		
	comp=N,2754μm,0.3s						
RIBO	**Ribolla Roccas**	**0.24**	**148**	P	Pg	04 29 20.8	+1.3
RIBO				S	Sg	04 29 24.4	+1.7
RIBO	**Ribolla Roccas**	**0.24**	**148**	AML	AML		
	comp=E,3123μm,1.1s						
CASP	**Castiglione de**	**0.37**	**181**	P	Pg	04 29 22.6	+0.7
CASP				S	Sb	04 29 28.3	-1.4
CASP				AML	AML		
	comp=E,563μm,0.5s						
CASP				AML	AML		
	comp=N,632μm,1.0s						
CASP				AML	AML		
	comp=E,563μm,1.5s						
CASP				AML	AML		
	comp=N,632μm,1.0s						
CASP				AML	AML		
	comp=E,476μm,0.4s						
CSNT	**Castellina Chi**	**0.44**	**44**	P	Pb	04 29 24.3	-0.7
CSNT				S	Sb	04 29 30.9	-1.0
CSNT				AML	AML		
	comp=N,244μm,0.5s						
CSNT				AML	AML		
	comp=E,323μm,0.5s						
CSNT				AML	AML		
	comp=N,222μm,0.5s						
CSNT				AML	AML		
	comp=E,228μm,0.3s						
OSSC	**Osservatorio P**	**0.46**	**37**	P	Pb	04 29 24.6	-0.7
OSSC				S	Sb	04 29 31.9	-0.5
OSSC				AML	AML		
	comp=E,347μm,0.5s						
OSSC				AML	AML		
	comp=N,281μm,0.8s						
OSSC				AML	AML		
	comp=N,297μm,0.4s						
OSSC				AML	AML		
	comp=N,298μm,0.4s						
OSSC				AML	AML		
	comp=E,348μm,0.5s						
OSSC				AML	AML		
	comp=N,282μm,0.8s						
OSSC				AML	AML		
	comp=E,256μm,0.8s						
OSSC				AML	AML		
	comp=N,271μm,0.9s						
OSSC				AML	AML		
	comp=E,274μm,0.6s						
OSSC				AML	AML		
	comp=N,388μm,0.5s						
OSSC				AML	AML		
	comp=E,407μm,0.5s						
ARCI	**Arcidosso**	**0.54**	**124**	P	Pb	04 29 26.3	-0.4
ARCI				S	Sb	04 29 33.7	-1.0
ARCI				AML	AML		
	comp=E,258μm,1.0s						
ARCI				AML	AML		
	comp=N,303μm,0.9s						
ARCI				AML	AML		
	comp=N,293μm,0.3s						
ARCI				AML	AML		
	comp=E,258μm,1.0s						
ARCI				AML	AML		
	comp=E,270μm,0.4s						
ARCI				AML	AML		
	comp=N,274μm,0.3s						
PII	**Pisa**	**0.62**	**336**	P	Pb	04 29 27.4	-0.6
PII				AML	AML		
	comp=E,284μm,0.5s						
PII				AML	AML		
	comp=N,288μm,0.3s						
PII				AML	AML		
	comp=N,288μm,0.3s						
PII				AML	AML		
	comp=E,284μm,0.5s						
CELB	**S.Piero in Cam**	**0.64**	**230**	P	Pb	04 29 28.0	-0.3
CELB				AML	AML		
	comp=N,274μm,0.4s						
CELB				AML	AML		
	comp=E,300μm,0.8s						
CELB				AML	AML		
	comp=N,258μm,0.1s						
CELB				AML	AML		
	comp=E,224μm,0.2s						
CRMI	**Carmignano**	**0.64**	**7**	P	Pb	04 29 28.2	-0.2
CRMI				AML	AML		
	comp=N,150μm,1.4s						
CRMI				AML	AML		
	comp=E,52μm,0.9s						
CRMI				AML	AML		
	comp=N,58μm,0.5s						
CRMI				AML	AML		
	comp=E,128μm,1.0s						
CRMI				AML	AML		
	comp=N,116μm,0.6s						
CRMI				AML	AML		
	comp=E,128μm,1.0s						
CRMI				AML	AML		
	comp=N,56μm,0.6s						
CRMI				AML	AML		
	comp=E,47μm,0.6s						
SF04	**Casetta**	**0.66**	**119**	P	Pb	04 29 28.4	-0.3
SF04				S	Sb	04 29 38.4	+0.1
SF04				AML	AML		
	comp=E,1145μm,0.3s						
SF04				AML	AML		
	comp=N,973μm,0.3s						
SF04				AML	AML		
	comp=E,1141μm,0.3s						
SF04				AML	AML		
	comp=N,973μm,0.3s						
MCIV	**Monte Civitell**	**0.70**	**122**	P	Pb	04 29 29.2	-0.2
MCIV				AML	AML		
	comp=N,192μm,1.0s						
MCIV				AML	AML		
	comp=E,242μm,1.0s						
MCIV				AML	AML		
	comp=E,208μm,0.2s						
MCIV				AML	AML		
	comp=N,174μm,0.2s						
MPPT	**Montemurlo**	**0.82**	**11**	P	Pg	04 29 30.1	-0.3
MPPT				AML	AML		
	comp=E,94μm,1.0s						
MPPT				AML	AML		
	comp=N,102μm,1.0s						
MPPT				AML	AML		
	comp=N,93μm,0.5s						
MPPT				AML	AML		
	comp=E,94μm,0.8s						
SACS	**San Casciano d**	**0.82**	**112**	P	Pb	04 29 31.7	+0.2
SACS				AML	AML		
	comp=E,73μm,0.7s						
SACS				AML	AML		
	comp=N,71μm,0.9s						
SACS				AML	AML		
	comp=N,71μm,0.9s						
SACS				AML	AML		
	comp=N,157μm,0.8s						
SACS				AML	AML		
	comp=E,73μm,0.7s						
SACS				AML	AML		
	comp=E,128μm,0.9s						
RUFI	**Rufina**	**0.83**	**34**	P	Pg	04 29 29.7	-0.9
RUFI				AML	AML		
	comp=N,85μm,0.6s						
RUFI				AML	AML		
	comp=E,119μm,0.9s						
MOCL	**Monte Cuccoli**	**0.88**	**15**	AML	AML		
	comp=N,128μm,0.7s						
MOCL				AML	AML		
	comp=E,102μm,0.8s						
POPM	**Popiglio**	**0.89**	**355**	P	Pb	04 29 32.4	-0.3
POPM				AML	AML		
	comp=E,105μm,0.5s						
POPM				AML	AML		
	comp=N,134μm,0.3s						
POPM				AML	AML		
	comp=E,83μm,0.3s						
POPM				AML	AML		
	comp=N,133μm,0.3s						
CARD	**Cardoso**	**0.91**	**342**	P	Pg	04 29 31.4	-0.9
CARD				AML	AML		
	comp=N,115μm,0.6s						
CARD				AML	AML		
	comp=N,115μm,1.4s						
CARD				AML	AML		
	comp=E,123μm,0.5s						
CARD				AML	AML		
	comp=E,100μm,0.5s						
CARD				AML	AML		
	comp=N,93μm,0.2s						
CRE	**Caprese Michel**	**0.91**	**59**	P	Pg	04 29 32.0	-0.3
CRE				AML	AML		
	comp=E,97μm,1.0s						
CRE				AML	AML		
	comp=N,88μm,0.8s						
CRE				AML	AML		
	comp=E,97μm,0.9s						
CRE				AML	AML		
	comp=N,83μm,0.5s						
BDI	**Bagni Di Lucca**	**0.93**	**348**	P	Pb	04 29 33.0	-0.4
BDI				AML	AML		
	comp=N,72μm,1.6s						
BDI				AML	AML		
	comp=E,102μm,1.0s						
BDI				AML	AML		
	comp=N,72μm,0.4s						
BDI				AML	AML		
	comp=E,162μm,1.0s						
BDI				AML	AML		
	comp=N,83μm,1.0s						
BDI				AML	AML		
	comp=N,159μm,1.0s						
BDI				AML	AML		
	comp=E,85μm,0.4s						
MURB	**Monte Urbino**	**1.21**	**84**	AML	AML		
	comp=N,158μm,1.0s						
MURB				AML	AML		
	comp=E,122μm,1.0s						
MSSA	**Maissana**	**1.52**	**320**	P	Pg	04 29 43.7	-0.2
SRES	**S.Oreste - Sor**	**1.52**	**127**	P	Pn	04 29 42.1	-0.4
SRES				AML	AML		
	comp=E,26μm,1.4s						
SRES				AML	AML		
	comp=N,22μm,1.1s						
SRES				AML	AML		
	comp=E,25μm,1.0s						
SRES				AML	AML		
	comp=N,21μm,1.1s						

ROM 02 04:29:37.1±0.1, 42°.950N±0°.003×13°.156E±0°.004, h9km, ML1.4/14, 4C-4D, Error ellipse: s-maj=0.3km s-min=0.2km az=234.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MC2	**Monte Cornacci**	**0.04**	**146**	⇓P	Pg	04 29 39.0	-0.1
MC2				S	Sg	04 29 40.4	-0.2
FEMA	**Monte Fema**	**0.08**	**279**	P	Pg	04 29 39.7	+0.3
FEMA				S	Sg	04 29 41.4	+0.3
FDMO	**Fiordimonte**	**0.10**	**330**	⇓P	Pg	04 29 39.8	+0.2
FDMO				S	Sg	04 29 41.8	+0.5
FDMO				AML	AML		
	comp=N,343μm,0.2s						
FDMO				AML	AML		
	comp=E,215μm,0.1s						
NRCA	**Norcia**	**0.12**	**195**	⇑P	Pg	04 29 40.4	+0.4
NRCA				S	Sg	04 29 42.9	+1.0
NRCA				AML	AML		
	comp=E,422μm,1.3s						
NRCA				AML	AML		
	comp=E,402μm,0.3s						
NRCA				AML	AML		
	comp=N,326μm,0.1s						
NRCA				AML	AML		
	comp=N,350μm,0.8s						
MTCL	**Monte Cavallo**	**0.12**	**291**	P	Pg	04 29 40.3	+0.4
MTCL				S	Sg	04 29 42.7	+0.8
CSP1	**Cessapalombo**	**0.15**	**14**	⇓P	Pg	04 29 41.0	+0.6
CSP1				AML	AML		
	comp=N,164μm,0.4s						
CSP1				AML	AML		
	comp=E,152μm,0.4s						
GUMA	**Gualdo di Mace**	**0.17**	**49**	⇑P	Pg	04 29 41.8	+1.0
GUMA				AML	AML		
	comp=E,170μm,0.5s						
GUMA				AML	AML		
	comp=N,244μm,0.5s						
CESI	**CESI - Serrava**	**0.19**	**287**	⇑P	Pg	04 29 41.8	+0.7
CESI				AML	AML		
	comp=N,140μm,0.2s						
CESI				AML	AML		
	comp=E,120μm,0.4s						
PF6	**Pievefavera**	**0.20**	**8**	P	Pg	04 29 41.6	+0.4
MML1	**Montelago di S**	**0.21**	**321**	P	Pg	04 29 41.9	+0.5
MF5	**Montefalcone A**	**0.23**	**80**	P	Pg	04 29 42.5	+0.8
SAP2	**Sant'Angelo in**	**0.23**	**51**	P	Pg	04 29 42.8	+1.0
MTRA	**Matera**	**0.26**	**137**	P	Pg	04 29 43.0	+0.7
MNTT	**Montottone**	**0.34**	**71**	P	Pb	04 29 44.8	-0.6
SMA1	**SAN MARTINO**	**0.35**	**157**	⇑P	Pg	04 29 44.5	+0.6
ELE6	**Elcito**	**0.38**	**354**	⇓P	Pg	04 29 45.2	+0.6
TERO	**Teramo**	**0.47**	**135**	P	Pg	04 29 46.6	+0.4
ARVD	**Arcevia**	**0.57**	**344**	P	Pg	04 29 48.5	+0.3
ARVD				AML	AML		
	comp=E,30μm,1.1s						
ARVD				AML	AML		
	comp=N,31μm,0.9s						
ARVD				AML	AML		
	comp=E,30μm,0.9s						

ROM 02 04:30:13.3±0.1, 42°.637N±0°.004×13°.165E±0°.004, h13km, ML1.1/18, 1C-2D, Error ellipse: s-maj=0.3km s-min=0.3km az=17.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.10**	**250**	⇑P	Pg	04 30 16.7	+0.3
LNSS				S	Sg	04 30 18.9	+0.4
LNSS				AML	AML		
	comp=E,172μm,0.2s						
LNSS				AML	AML		
	comp=N,108μm,0.3s						
LNSS				AML	AML		
	comp=E,172μm,0.2s						
LNSS				AML	AML		
	comp=N,97μm,0.2s						
LNSS				AML	AML		
	comp=E,172μm,0.2s						
LNSS				AML	AML		
	comp=N,102μm,0.8s						
SMA1	**SAN MARTINO**	**0.13**	**93**	⇓P	Pb	04 30 17.2	-0.5
SMA1				S	Sg	04 30 19.8	+0.6
SMA1				AML	AML		
	comp=E,248μm,0.3s						
SMA1				AML	AML		
	comp=N,96μm,0.3s						
SMA1				AML	AML		
	comp=E,248μm,0.3s						
SMA1				AML	AML		
	comp=N,96μm,0.2s						
RM33	**Pellescritta (**	**0.13**	**164**	⇓P	Pg	04 30 17.1	+0.3
RM33				S	Sg	04 30 19.6	+0.4
RM33				AML	AML		
	comp=E,54μm,0.2s						
RM33				AML	AML		
	comp=N,35μm,0.1s						
RM33				AML	AML		
	comp=E,121μm,0.6s						
RM33				AML	AML		
	comp=N,42μm,0.8s						
NRCA	**Norcia**	**0.20**	**349**	P	Pg	04 30 18.2	+0.3
NRCA				S	Sg	04 30 21.6	+0.6
NRCA				AML	AML		
	comp=E,138μm,0.1s						
NRCA				AML	AML		
	comp=N,79μm,0.1s						
NRCA				AML	AML		
	comp=E,134μm,0.1s						
NRCA				AML	AML		
	comp=N,180μm,0.7s						
NRCA				AML	AML		
	comp=E,137μm,0.1s						
NRCA				AML	AML		
	comp=N,79μm,0.1s						
CAMP	**Campotosto**	**0.21**	**119**	P	Pg	04 30 18.4	+0.5
MTRA	**Matera**	**0.21**	**55**	P	Pg	04 30 18.3	+0.3
TERO	**Teramo**	**0.32**	**92**	P	Pg	04 30 20.2	+0.2
TERO				AML	AML		
	comp=E,17μm,0.3s						
TERO				AML	AML		
	comp=N,14μm,0.1s						
TERO				AML	AML		
	comp=E,59μm,0.6s						
TERO				AML	AML		
	comp=N,81μm,0.7s						
FDMO	**Fiordimonte**	**0.40**	**352**	P	Pg	04 30 21.6	+0.2
MF5	**Montefalcone A**	**0.41**	**32**	P	Pg	04 30 21.9	+0.3

*IDC **02** 04:35:51.5±0.9, 12°.13N×144°.34E, h0km, mb3.8/10, mbtmp3.8/10, MS3.1/11, Error ellipse: s-maj=33.1km s-min=16.5km az=105.0*

ISC 02 04:35:55.9±0.9, 12°.2N±0°.1×144°.4E±0°.2, h29km, n25, σ1s 04/12, mb3.8/10, MS3.1/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.51**	**18**	Pn	**Pn**	**04 36 20.7**	**-0.2**
	114nm,0.3s,baz=187,slow=9.7,SNR=17						
GUMO				Sn	**Sb**	**04 36 41.5**	**-0.5**
	114nm,0.3s,baz=78,slow=24,SNR=7.8						
JAY	**Jayapura**	**15.02**	**194**	LR	LR	04 44 41.3	
	comp=Z,85nm,18.1s,baz=317,slow=35						
JHJ	**Hachijo jima 2**	**21.29**	**349**	LR	LR	04 48 02.5	
	comp=Z,46nm,19.6s,baz=91,slow=34						
H11S3	**WAKE ISLAND Hy**	**22.41**	**71**	T	T	05 05 01.8	
	baz=270						
H11S1	**WAKE ISLAND Hy**	**22.43**	**71**	T	T	05 05 19.6	
	baz=270						
H11S2	**WAKE ISLAND Hy**	**22.43**	**71**	T	T	05 05 32.2	
	baz=270						
H11N1	**WAKE ISLAND Hy**	**22.90**	**68**	T	T	05 05 54.2	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**22.91**	**68**	T	T	05 06 04.0	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**22.92**	**68**	T	T	05 06 07.4	
	baz=255						
JNU	**Nakatsue**	**24.26**	**332**	LR	LR	04 49 47.3	
	comp=Z,90nm,18.5s,baz=8.5,slow=34						
MJAR	**Matsushiro Arr**	**24.91**	**348**	LR	LR	04 50 16.2	
	comp=Z,42nm,18.6s,baz=174,slow=35						

WRA	**Warramunga Arr**	**33.39**	**197**	P	**P**	**04 42 30.3**	**-1.7**
	1.2nm,0.8s,baz=20,slow=9.7,SNR=5.6						
WRA				LR	LR	04 56 43.9	
	comp=Z,39nm,18.2s,baz=301,slow=38						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**37.04**	**196**	P	**P**	**04 43 03.9**	**+0.4**
	1.2nm,0.7s,baz=17,slow=10,SNR=14						
ASAR				LR	LR	04 57 14.9	
	comp=Z,42nm,21.2s,baz=72,slow=35						
	1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**44.18**	**284**	LR	LR	05 01 56.8	
SONM	**Songino Array**	**47.64**	**326**	P	**P**	**04 44 29.7**	**+0.2**
	0.5nm,0.6s,baz=122,slow=7.0,SNR=2.5						
	0.5nm,0.6s						
YAK	**Yakutsk**	**50.92**	**351**	LR	LR	05 05 15.2	
	comp=Z,17nm,21.5s,baz=86,slow=35						
SEY	**Seymchan**	**51.03**	**5**	LR	LR	05 05 32.0	
	comp=Z,14nm,20.5s,baz=184,slow=35						
MKAR	**Makanchi Array**	**62.19**	**317**	P	**P**	**04 46 15.8**	**+0.9**
	0.5nm,0.6s,baz=99,slow=8.9,SNR=3.6						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**62.51**	**325**	LR	LR	05 12 53.5	
	comp=Z,14nm,20.3s,baz=71,slow=36						
KURBB	**Kurchatov Arra**	**65.41**	**320**	P	**P**	**04 46 35.8**	**-0.1**
	1.2nm,0.7s,baz=102,slow=6.3,SNR=9.0						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**70.07**	**25**	P	**P**	**04 47 04.2**	**-0.7**
	0.2nm,0.5s,baz=252,slow=5.8,SNR=6.8						
ILAR				LR	LR	05 17 37.4	
	comp=Z,14nm,19.2s,baz=27,slow=36						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**70.76**	**322**	P	**P**	**04 47 09.7**	**+0.2**
	0.7nm,0.3s,baz=102,slow=8.6,SNR=4.7						
	0.7nm,0.3s						
NVAR	**Mina Array Bea**	**88.19**	**51**	P	**P**	**04 48 46.9**	**+2.1**
	0.1nm,0.3s,baz=294,slow=4.7,SNR=4.2						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**92.26**	**335**	P	**P**	**04 49 02.5**	**-0.5**
	4.7nm,1.1s,baz=71,slow=6.4,SNR=2.4						
	4.7nm,1.1s						
PDAR	**Pinedale Array**	**93.31**	**45**	P	**P**	**04 49 08.9**	**+0.2**
	0.2nm,0.6s,baz=260,slow=4.1,SNR=2.2						
	0.2nm,0.6s						

*CATAC **02** 04:39:48.5±0.4, 14°N±3°×9°2W±°, h33km±4km, M4.1/24, mb4.1/1, MLv4.1/24, Error ellipse: s-maj=6.7km s-min=2.7km az=35.7, confirmed*
*SNET **02** 04:39:49.0±2.7, 14°.14N×91°.61W, h47km±23km, ML4.0*
*GCG **02** 04:39:49.1±1.3, 14°.16N×91°.52W, h50km±9km, MD4.1, ML4.5*

ISC 02 04:39:50.0±1.6, **14°.15N**±0°.06×**91°.48W**±0°.05, **h29**km±13km, **n59**, σ1s**52**/70, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RTAL	**Retalhuleu**	**0.43**	**330**	*eP*		**Pn**	**04 39 59.6**	**-0.6**
RTAL				*eS*		**Sn**	**04 40 07.8**	**+0.7**
RTAL	**Retalhuleu**	**0.43**	**330**	P		**Pn**	**04 39 59.6**	**-0.6**
RTAL				S		**Sn**	**04 40 08.3**	**+1.2**
ESSG	**Sabana Grande**	**0.67**	**70**	*eP*		**Pn**	**04 40 03.1**	**-0.5**
SOKI	**Kika Raxquin**	**0.67**	**6**	*i* P		**Pn**	**04 40 03.2**	**-0.7**
SOKI				*eS*		**Sb**	**04 40 13.7**	**+1.1**
QUEO	**Labor Ovalle**	**0.72**	**357**	*eP*		**Pb**	**04 40 04.0**	**-0.2**
QUEO				*eS*		**Sb**	**04 40 15.6**	**+1.8**
FG16	**Alotenango, Sa**	**0.94**	**83**	*i* P		**Pn**	**04 40 03.5**	**-4.0**
FG16				*i* S		**Sn**	**04 40 15.2**	**-5.0**
FG16				IAML			04 40 17.2	
	comp=N,62μm,0.3s							
GCG4	**OSOP**	**1.01**	**65**	*eP*		**Pn**	**04 40 08.6**	**+0.2**
PCG5	**San Vicente Pa**	**1.07**	**86**	*eP*		**Pn**	**04 40 05.8**	**-3.4**
PCG5				*eS*		**Sn**	**04 40 18.8**	**-4.4**
THIG		**1.07**	**315**	*eP*		**Pn**	**04 40 07.0**	**-2.0**
THIG				*eS*		**Sb**	**04 40 21.3**	**-2.3**
ESSJ	**San Jos, E**	**1.11**	**122**	*eP*		Pn	04 40 04.0	-5.6
HUEH	**Huehuetenango**	**1.16**	**359**	*eP*		**Pn**	**04 40 09.9**	**-0.6**
HUEH				*eS*		**Sb**	**04 40 26.6**	**+0.2**
HUEH	**Huehuetenango**	**1.16**	**359**	*eP*		**Pn**	**04 40 09.9**	**-0.6**
HUEH	**Huehuetenango**	**1.16**	**359**	P		**Pn**	**04 40 10.0**	**-0.5**
QUIS	**Sacapulas**	**1.19**	**18**	*eP*		**Pn**	**04 40 10.5**	**-0.3**
QUIS				*eS*		**Sn**	**04 40 27.8**	**+1.6**
QUIS				IAML			04 40 30.1	
	comp=E,4μm,0.4s							
APG	**El Apazote**	**1.30**	**49**	*eP*		**Pn**	**04 40 11.9**	**-0.4**
FAME	**Alcaldia de Sa**	**1.45**	**102**	P		**Pn**	**04 40 13.2**	**-1.1**
SLOZ	**Alcaldia de Sa**	**1.65**	**94**	*e*P9			04 40 12.4	
SLOZ				*eS*		**Sn**	**04 40 34.7**	**-2.6**
LOAL	**Lomas de Alarc**	**1.65**	**95**	*eP*		**Pn**	**04 40 16.8**	**-0.4**
LOAL	**Lomas de Alarc**	**1.65**	**95**	P		**Pn**	**04 40 17.1**	**-0.1**
LOAL	**Lomas de Alarc**	**1.65**	**95**	S		**Sn**	**04 40 38.9**	**+1.5**
NUBE	**Las Nubes**	**1.67**	**98**	*eP*		**Pn**	**04 40 16.8**	**-0.6**
NUBE	**Las Nubes**	**1.67**	**98**	*eP*		**Pn**	**04 40 16.7**	**-0.7**
NUBE				*eS*		**Sn**	**04 40 37.0**	**-0.9**
NUBE	**Las Nubes**	**1.67**	**98**	P		**Pn**	**04 40 16.8**	**-0.6**
JUAM	**Asuncion Mita**	**1.73**	**84**	IAML			04 40 45.1	
	comp=N,986nm,0.3s							
RBDL	**Robledal**	**1.74**	**91**	*eP*		**Pn**	**04 40 17.9**	**-0.5**
SBLS	**San Blas**	**1.83**	**100**	*eP*		**Pn**	**04 40 19.8**	**+0.1**
CEVE	**Cerro Verde**	**1.83**	**100**	*eP*		**Pn**	**04 40 19.8**	**0.0**
CEVE	**Cerro Verde**	**1.83**	**100**	P		**Pn**	**04 40 19.7**	**0.0**
CEVE	**Cerro Verde**	**1.83**	**100**	S		**Sn**	**04 40 43.3**	**+1.2**
UNIC	**Universidad Ca**	**1.88**	**95**	P		**Pn**	**04 40 19.7**	**-0.5**
UNIC	**Universidad Ca**	**1.88**	**95**	S		**Sn**	**04 40 44.4**	**+1.4**
JAYA	**Jayaque - finc**	**2.03**	**104**	*eP*		**Pn**	**04 40 22.4**	**0.0**
JAYA	**Jayaque - finc**	**2.03**	**104**	*eP*		**Pn**	**04 40 22.2**	**-0.3**
JAYA				*eS*		**Sn**	**04 40 46.2**	**-0.7**
JAYA	**Jayaque - finc**	**2.03**	**104**	P		**Pn**	**04 40 22.1**	**-0.3**
ZAFR2	**Estanzuela, Za**	**2.10**	**78**	*i* P		**Pn**	**04 40 21.1**	**-2.2**
ESQI	**Esquipulas**	**2.11**	**79**	P		**Pn**	**04 40 22.7**	**-0.8**
PMON	**Piamonte**	**2.15**	**101**	*eP*		**Pn**	**04 40 24.4**	**+0.4**
PMON	**Piamonte**	**2.15**	**101**	S		**Sn**	**04 40 51.5**	**+1.8**
PMON	**Piamonte**	**2.15**	**101**	P		**Pn**	**04 40 23.9**	**0.0**
LALI	**Alcalda de L**	**2.20**	**107**	S		**Sn**	**04 40 51.0**	**+0.2**
LALI	**Alcalda de L**	**2.20**	**107**	P		**Pn**	**04 40 23.8**	**-0.8**
CCIG	**Comitan**	**2.21**	**343**	*eP*		**Pn**	**04 40 24.6**	**-0.3**
CCIG	**Comitan**	**2.21**	**343**	P		**Pn**	**04 40 24.6**	**-0.3**
UEES	**Universidad Ev**	**2.22**	**101**	S		**Sn**	**04 40 53.0**	**+1.6**
PANCS	**Alcalda de**	**2.29**	**103**	P		**Pn**	**04 40 26.3**	**+0.3**
LOMA	**Loma Larga**	**2.30**	**102**	*eP*		**Pn**	**04 40 26.1**	**0.0**
LOMA	**Loma Larga**	**2.30**	**102**	S		**Sn**	**04 40 53.9**	**+0.5**
LOMA	**Loma Larga**	**2.30**	**102**	P		**Pn**	**04 40 26.3**	**+0.3**
PAVA	**Las Pavas**	**2.50**	**100**	P		**Pn**	**04 40 28.4**	**-0.5**
TECO	**Alcaldia de Te**	**2.69**	**103**	S		**Sn**	**04 41 03.5**	**+0.5**
SCLA	**Alcaldia de Sa**	**2.71**	**99**	P		**Pn**	**04 40 31.1**	**-0.5**
PACA	**Pacayal**	**3.14**	**102**	P		**Pn**	**04 40 38.5**	**+0.9**
PACA	**Pacayal**	**3.14**	**102**	S		**Sn**	**04 41 16.3**	**+2.0**
PETF	**Flores**	**3.16**	**29**	P		**Pn**	**04 40 37.4**	**-0.4**
LCND	**La Caada**	**3.58**	**103**	P		**Pn**	**04 40 43.2**	**-0.4**
CNCH	**Conchagua**	**3.65**	**103**	P		**Pn**	**04 40 44.2**	**-0.4**
CNCH	**Conchagua**	**3.65**	**103**	S		**Sn**	**04 41 28.7**	**+1.9**
POTN	**Potosi Cosigui**	**4.03**	**106**	P		**Pn**	**04 40 51.8**	**+2.1**
POTN				S		**Sn**	**04 41 35.8**	**-0.1**
LIMN	**Finca el Limon**	**5.09**	**102**	P		**Pn**	**04 41 05.1**	**+0.7**
LIMN				S		**Sn**	**04 42 06.1**	**+3.8**

*IDC **02** 04:42:28.5±1.6, 28°.11S×177°.43W, h0km, mb3.8/3, mbtmp3.9/4, ML3.6/1, Error ellipse: s-maj=43.2km s-min=26.6km az=87.0*

ISC 02 04:42:31.1±1.5, **28°.2S**±0°.1×**177°.6W**±0°.3, **h10**km, **n17**, σ0s**97**/8, **mb3.8**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**1.08**	**196**	Pn		**Pn**	**04 42 52.1**	**-0.3**
	398nm,0.3s,baz=224,slow=22,SNR=12							
RAO				Sn		**Sg**	**04 43 05.1**	**-1.0**
	2μm,0.3s,baz=122,slow=22,SNR=27							
URZ	**Urewera**	**10.97**	**203**	Pn		**Pn**	**04 45 09.5**	**+1.5**
	0.4nm,0.3s,baz=15,slow=16,SNR=2.0							
URZ				Sn		Sn	04 46 57.5	-13
	1.1nm,0.3s,baz=176,slow=22,SNR=7.9							
	8.7nm,1.0s							
ASAR	**Alice Springs**	**43.65**	**264**	P		**P**	**04 50 36.3**	**+0.1**
	0.5nm,0.6s,baz=97,slow=7.1,SNR=6.6							
	0.5nm,0.6s							
WRA	**Warramunga Arr**	**44.44**	**270**	P		**P**	**04 50 42.5**	**-0.1**
	1.1nm,0.7s,baz=108,slow=8.0,SNR=5.0							
	1.1nm,0.7s							
QSPA	**South Pole Qui**	**61.89**	**180**	P		**P**	**04 52 50.8**	**+0.1**
	1.6nm,0.9s,baz=22,slow=5.4,SNR=7.0							
	1.6nm,0.9s							
H03S2	**Juan Fernandez**	**81.36**	**124**	T		T	06 24 29.9	
	baz=239,slow=74							
H03S1	**Juan Fernandez**	**81.37**	**124**	T		T	06 24 32.5	
	baz=239,slow=74							
H03S3	**Juan Fernandez**	**81.38**	**124**	T		T	06 24 36.1	
	baz=239,slow=74							
H03N3	**Juan Fernandez**	**81.54**	**123**	T		T	06 24 41.8	
	baz=245							
H03N2	**Juan Fernandez**	**81.54**	**123**	T		T	06 24 39.0	
	baz=245							
H03N1	**Juan Fernandez**	**81.56**	**123**	T		T	06 24 41.9	
	baz=245							
H10N3	**ASCENSION HYDR**	**140.60**	**153**	T		T	07 39 13.4	
	baz=204,slow=75							
H10N1	**ASCENSION HYDR**	**140.61**	**153**	T		T	07 39 15.7	
	baz=204,slow=75							
H10N2	**ASCENSION HYDR**	**140.62**	**153**	T		T	07 39 11.3	
	baz=204,slow=75							
FINES	**FINESS Array B**	**143.21**	**341**	PKhKP		PKPpre	05 01 59.9	
	2.0nm,0.9s,baz=7.6,slow=4.2,SNR=1.7							
HFS	**Hagfors**	**147.17**	**350**	PKPbc		**PKPdf**	**05 02 11.8**	**0.0**
	2.2nm,0.9s,baz=31,slow=3.4,SNR=4.1							
BRTR	**Keskin Array B**	**151.82**	**302**	PKPbc		**PKPbc**	**05 02 25.2**	**-1.2**
	0.9nm,0.8s,baz=67,slow=4.8,SNR=2.7							

*ISN **02** 04:42:49.4±1.3, 34°.89N×46°.24E, h7km±12km, ML3.5*
*TEH **02** 04:42:51.1, 34°.92N×46°.23E, h7km±47km*

ISC 02 04:42:52.4±1.4, **34°.89N**±0°.04×**46°.19E**±0°.04, **h3**km±12km, **n20**, σ0s**81**/27, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IDHR	**Dehrash**	**0.25**	**140**	Pg		**Pg**	**04 42 56.6**	**-0.6**
IDHR				Sg		**Sg**	**04 43 01.1**	**+0.7**
KGS1	**Ghasr-e-Shirin**	**0.63**	**233**	Pg		**Pg**	**04 43 04.4**	**-0.1**
KGS1				Sg		**Sg**	**04 43 14.6**	**+2.0**
IGHG	**Ghaleghazi**	**0.64**	**151**	Pg		**Pg**	**04 43 03.8**	**-0.9**
IGHG				Sg		**Sg**	**04 43 14.0**	**+1.0**
GLG1	**Gilan-e-Gharb**	**0.81**	**197**	Pg		**Pg**	**04 43 07.2**	**-0.7**
IBDR	**Badra**	**1.79**	**187**	*e*Pn		**Pn**	**04 43 26.0**	**-1.2**
IBDR				*e*Sn		**Sb**	**04 43 48.0**	**-0.7**
IBDR				AML		AML	04 43 54.7	
	comp=E,570nm,0.7s							
IBDR				AML		AML	04 43 55.5	
	comp=N,528nm,0.6s							
MAHB	**Mahabad**	**1.92**	**348**	Pn		**Pn**	**04 43 25.9**	**-0.3**
BHD	**Baghdad**	**2.21**	**224**	*e*Pn		**Pn**	**04 43 29.0**	**-1.0**
BHD				*e*Sn		**Sn**	**04 43 59.0**	**+1.2**
HGHA	**Hamedan- Ghaye**	**2.26**	**74**	Pn		**Pn**	**04 43 30.6**	**-0.4**
HAGD	**Aghdareh**	**2.42**	**91**	Pn		**Pn**	**04 43 32.8**	**-0.5**
IHSH	**Hashtrud**	**2.56**	**19**	Pn		**Pn**	**04 43 35.2**	**-0.1**
IAZR	**Azarshahr**	**2.79**	**357**	Pn		**Pn**	**04 43 37.9**	**-0.4**
MSL	**Mosul**	**2.93**	**302**	*e*Pn		**Pn**	**04 43 39.0**	**-1.0**
MSL				*e*Sn		**Sn**	**04 44 16.0**	**+0.3**
RAFI	**Al-Rafai**	**3.16**	**181**	*e*Pn		**Pn**	**04 43 43.0**	**-0.1**
RAFI				*e*Sn		**Sn**	**04 44 22.0**	**+0.7**
ISHB	**Shabestar**	**3.42**	**352**	Pn		**Pn**	**04 43 46.0**	**-1.0**
GRMI	**Germi**	**4.14**	**19**	Pn		**Pn**	**04 43 56.5**	**-0.3**
IPIR	**Pirpir**	**4.49**	**118**	Pn		**Pn**	**04 44 01.4**	**-0.3**
JHBN	**Jahan bin**	**4.58**	**124**	Pn		**Pn**	**04 44 03.0**	**+0.1**
IDMV	**Damavand**	**4.83**	**80**	Pn		**Pn**	**04 44 06.2**	**-0.1**
IFIR	**Firoozkooh**	**5.42**	**80**	Pn		**Pn**	**04 44 14.9**	**+0.4**
KLNJ	**Kolanjah**	**5.96**	**129**	Pn		**Pn**	**04 44 21.7**	**-0.3**

*TRN **02** 04:44:59.8, 18°.73N×63°.67W, h29km, MD3.6, North-west of Anguilla.*
*NEIC **02** 04:45:03.0±1.0, 18°.7N±0°.1×63°.71W±0°.06, h35km±2km, ML3.1/17, Md3.8/13(RSPR), Error ellipse: s-maj=23.2km s-min=6.2km az=21.0*
*RSPR **02** 04:45:03.2, 18°.77N×63°.69W, h32km±18km, MD3.8/13*

ISC 02 04:45:02.1±1.9, **18°.8N**±0°.1×**63°.67W**±0°.06, **h51**km, **n56**, σ0s**55**/69, **13C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SABA	**Saba**	**1.19**	**160**			**Pn**	**04 45 22.2**	**-0.2**
SABA						**Sn**	**04 45 37.6**	**0.0**
SABA	**Saba**	**1.19**	**160**	IAML			04 45 45.4	
	comp=N,592nm,0.4s							
SABA				IAML			04 45 46.3	
	comp=E,676nm,0.6s							
SABA	**Saba**	**1.19**	**160**	*e*P		**Pn**	**04 45 22.2**	**-0.2**
SABA	**Saba**	**1.19**	**160**	*e*S		**Sn**	**04 45 37.6**	**0.0**
SKI	**Saint Kitts**	**1.66**	**148**	*e*P		**Pn**	**04 45 28.5**	**-0.3**
SKI				*e*S		**Sn**	**04 45 48.1**	**-0.9**
SKOC	**St. Kitts, UWI**	**1.70**	**148**	*e*P		**Pn**	**04 45 28.0**	**-1.2**
SKOC				*e*S		**Sn**	**04 45 49.4**	**-0.5**
ANWB	**Willy Bob**	**2.09**	**121**	*e*P		**Pn**	**04 45 34.3**	**-0.4**
ANWB				*e*S		**Sn**	**04 45 59.9**	**+0.4**
HUMP	**Col San Antoni**	**2.15**	**254**			**Sn**	**04 46 01.0**	**-0.1**
HUMP	**Col San Antoni**	**2.15**	**254**			**Pn**	**04 45 35.2**	**-0.3**
HUMP				IAML			04 46 02.2	
	comp=E,138nm,0.2s							
HUMP				IAML			04 46 03.6	
	comp=N,168nm,0.2s							
HUMP	**Col San Antoni**	**2.15**	**254**	*e*P		**Pn**	**04 45 35.4**	**-0.1**
HUMP	**Col San Antoni**	**2.15**	**254**	*e*S		**Sn**	**04 46 01.0**	**-0.1**
GCPR	**Guaynabo City**	**2.33**	**260**	Pn		**Pn**	**04 45 37.2**	**-0.8**
GCPR	**Guaynabo City**	**2.33**	**260**			**Sn**	**04 46 04.7**	**-0.8**
GCPR	**Guaynabo City**	**2.33**	**260**	*e*P		**Pn**	**04 45 37.7**	**-0.2**
GCPR	**Guaynabo City**	**2.33**	**260**	*e*S		**Sn**	**04 46 04.7**	**-0.8**
MBFL	**Flemmings, Mon**	**2.42**	**145**	*e*P		**Pn**	**04 45 39.5**	**+0.2**
MBFL				*e*S		**Sn**	**04 46 08.4**	**+0.6**
SJG	**San Juan**	**2.44**	**255**			**Pn**	**04 45 39.9**	**+0.5**
SJG				IAML			04 46 11.6	
	comp=N,67nm,0.2s							
SJG				IAML			04 46 12.9	
	comp=N,59nm,0.3s							
SJG	**San Juan**	**2.44**	**255**	*e*P		**Pn**	**04 45 40.0**	**+0.5**
SJG	**San Juan**	**2.44**	**255**	*e*P		**Pn**	**04 45 40.4**	**+0.9**
SJG				*e*S		**Sn**	**04 46 07.8**	**-0.3**
MBWH	**Windy Hill**	**2.44**	**145**	*e*P		**Pn**	**04 45 39.6**	**+0.1**
MBWH				*e*S		**Sn**	**04 46 07.3**	**-0.9**
MLYT	**Lee's Yard**	**2.46**	**145**	*e*P		**Pn**	**04 45 40.4**	**+0.6**
MLYT				*e*S		**Sn**	**04 46 08.7**	**+0.1**
ECPR	**Experimental S**	**2.59**	**261**	*e*P		**Pn**	**04 45 41.7**	**+0.1**
ECPR	**Experimental S**	**2.59**	**261**	*e*S		**Sn**	**04 46 11.7**	**-0.2**
OBIP	**Obispado Ponce**	**2.88**	**256**			**Sn**	**04 46 18.8**	**0.0**
OBIP	**Obispado Ponce**	**2.88**	**256**	Pn		**Pn**	**04 45 45.7**	**+0.3**
OBIP	**Obispado Ponce**	**2.88**	**256**	*e*P		**Pn**	**04 45 46.0**	**+0.6**
OBIP	**Obispado Ponce**	**2.88**	**256**	*e*S		**Sn**	**04 46 18.8**	**0.0**
UUPR	**Utuado, UPR, P**	**2.94**	**261**			**Pn**	**04 45 46.3**	**0.0**
UUPR						**Sn**	**04 46 20.0**	**-0.4**
UUPR	**Utuado, UPR, P**	**2.94**	**261**	*e*P		**Pn**	**04 45 46.3**	**0.0**
UUPR	**Utuado, UPR, P**	**2.94**	**261**	*e*S		**Sn**	**04 46 20.0**	**-0.4**
AOPR	**Arecibo Observ**	**2.95**	**263**			**Sn**	**04 46 20.2**	**-0.6**
AOPR	**Arecibo Observ**	**2.95**	**263**	Pn		**Pn**	**04 45 47.2**	**+0.7**
AOPR				IAML			04 46 22.1	
	comp=N,87nm,0.3s							
AOPR	**Arecibo Observ**	**2.95**	**263**	*e*P		**Pn**	**04 45 46.7**	**+0.2**
AOPR	**Arecibo Observ**	**2.95**	**263**	*e*S		**Sn**	**04 46 20.2**	**-0.6**
DHSZ	**Broadband at M**	**3.06**	**143**	*e*P		**Pn**	**04 45 47.2**	**-0.7**
ATGZ	**Broadband at L**	**3.22**	**145**	*e*P		**Pn**	**04 45 50.5**	**+0.3**
ATGZ				*e*S		**Sn**	**04 46 27.9**	**+0.6**
LSP	**Las Mesas**	**3.29**	**261**			**Pn**	**04 45 52.0**	**+0.8**
LSP	**Las Mesas**	**3.29**	**261**	*e*P		**Pn**	**04 45 52.0**	**+0.8**
MMLZ	**Guadeloupe Bro**	**3.30**	**144**	*e*P		**Pn**	**04 45 50.4**	**-0.8**
MMLZ				*e*S		**Sn**	**04 46 29.4**	**+0.2**
MLPR	**Magueyes Islan**	**3.30**	**257**	*e*P		**Pn**	**04 45 51.3**	**+0.1**
MLPR	**Magueyes Islan**	**3.30**	**257**	*e*S		**Sn**	**04 46 29.6**	**+0.4**
CBE	**Ff, Capester**	**3.31**	**143**			**Sn**	**04 46 31.1**	**+1.5**
CBE	**Ff, Capester**	**3.31**	**143**			**Pn**	**04 45 51.8**	**+0.3**
CBE	**Ff, Capester**	**3.31**	**143**	*e*P		**Pn**	**04 45 52.0**	**+0.6**
CBE	**Ff, Capester**	**3.31**	**143**	*e*S		**Sn**	**04 46 31.1**	**+1.5**
PRSN	**Puerto Rico Se**	**3.34**	**261**			**Pn**	**04 45 52.2**	**+0.4**
PRSN						**Sn**	**04 46 29.9**	**-0.3**
PRSN	**Puerto Rico Se**	**3.34**	**261**	*e*P		**Pn**	**04 45 52.2**	**+0.4**
PRSN	**Puerto Rico Se**	**3.34**	**261**	*e*S		**Sn**	**04 46 29.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**3.35**	**258**			**Sn**	**04 46 30.9**	**+0.5**
CRPR	**Cabo Rojo, PR**	**3.35**	**258**	Pn		**Pn**	**04 45 52.0**	**0.0**
CRPR				IAML			04 46 19.1	
	comp=E,47nm,2.6s							
CRPR				IAML			04 46 42.8	
	comp=N,37nm,1.9s							
CRPR	**Cabo Rojo, PR**	**3.35**	**258**	*e*P		**Pn**	**04 45 52.1**	**+0.2**
CRPR	**Cabo Rojo, PR**	**3.35**	**258**	*e*S		**Sn**	**04 46 30.9**	**+0.5**
TBG	**Guadaloupe-3**	**3.47**	**146**	*e*P		**Pn**	**04 45 53.1**	**-0.5**
TBG				*e*S		**Sn**	**04 46 33.5**	**+0.1**
DSDZ	**La Diserade, G**	**3.47**	**134**	*e*P		**Pn**	**04 45 53.0**	**-0.5**
TDBA	**Terre de Bas,**	**3.48**	**146**	Pn		**Pn**	**04 45 53.9**	**+0.2**
DSLB	**Salisbury**	**3.93**	**146**	*e*P		**Pn**	**04 46 00.1**	**+0.1**
DSLB				*e*S		**Sn**	**04 46 44.4**	**-0.5**

*NEIC **02** 05:03:41.1±1.5, 4°.23N±0°.07×124°.63E±0°.09, h305km±3km, mb4.5/26, Error ellipse: s-maj=13.3km s-min=10.2km az=66.0*
*DJA **02** 05:03:42.7±0.6, 4°.N±6°×12°.5E±°, h303km±4km, M4.4/14, mB5.0/6, mb4.4/14, MLv4.5/13, Mw(mB)4.3/6*
*IDC **02** 05:03:44.7±5.2, 4°.16N×124°.58E, h348km±56km, mb3.6/12, mbtmp4.3/12, Error ellipse: s-maj=47.9km s-min=11.6km az=60.0*

ISC 02 05:03:40.7±0.5, **4°.23N**±0°.06×**124°.63E**±0°.07, **h300**km, **n79**, σ1s**25**/81, **mb4.3**/25, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGSI	**Sangihe**	**1.05**	**121**	P		**Pn**	**04 04 23.9**	**+2.6**
SGSI				S		**S**	**04 04 56.6**	**+3.0**
DAV	**Davao City (W)**	**2.98**	**19**	Pn		**Pn**	**04 05 40.0**	**+3.8**
KMSI	**Cibinong**	**3.69**	**190**	P		**Pn**	**04 04 45.2**	**+1.6**
TNTI	**Ternate**	**4.39**	**141**			**Pn**	**04 05 51.4**	**+0.1**
TNTI	**Ternate**	**4.39**	**141**	P		**Pn**	**04 04 52.5**	**+1.2**
TNTI	**Ternate**	**4.39**	**141**	S		**S**	**04 05 47.3**	**-0.7**
TNTI	**Ternate**	**4.39**	**141**	P		**Pn**	**04 04 52.3**	**+1.0**
MRSI	**Marisa**	**4.59**	**216**	P		**Pn**	**04 04 55.3**	**+1.7**
TOLI2	**Tolitoli**	**4.93**	**231**			**Pn**	**04 04 57.7**	**+0.2**
TOLI2	**Tolitoli**	**4.93**	**231**	P		**Pn**	**04 04 58.6**	**+1.1**
LUWI	**Luwuk**	**5.55**	**200**	Pn		**Pn**	**04 05 05.4**	**+0.6**
LUWI	**Luwuk**	**5.55**	**200**	P		**Pn**	**04 05 06.1**	**+1.4**
	0.6nm3μm53nm,1.1s							
MYLDM	**Lahad Datu**	**6.18**	**279**			**Pn**	**04 05 12.9**	**+0.7**
SANI	**Sanana**	**6.38**	**168**	P		**Pn**	**04 05 13.2**	**-1.5**
SANI	**Sanana**	**6.38**	**168**	P		**Pn**	**04 05 13.0**	**-1.7**
	4μm43nm,0.6s							
NLAI	**Namla**	**7.82**	**162**	P		**Pn**	**04 05 32.5**	**+0.4**
	2μm27nm,0.6s							
MSAI	**Masohi**	**8.67**	**150**	P		**Pn**	**04 05 42.8**	**+0.3**
	33nm,1.0s							
FAKI	**Fak Fak**	**10.41**	**133**	Pn		**Pn**	**04 06 04.4**	**+0.4**
FAKI	**Fak Fak**	**10.41**	**133**	P		**Pn**	**04 06 05.0**	**+1.0**
	17nm,0.5s							
BKSI	**Bulukumba**	**10.50**	**205**	P		**Pn**	**04 06 05.4**	**+0.4**
SBUM	**Sibu**	**12.51**	**262**			**P**	**04 05 36.0**	**+0.2**
SBUM	**Sibu**	**12.51**	**262**	P		**P**	**04 05 32.2**	**+1.8**
SOEI	**Soe**	**13.90**	**181**			**P**	**04 05 46.4**	**+0.5**
SOEI	**Soe**	**13.90**	**181**	P		**P**	**04 05 46.0**	**+0.2**
BATI	**Baumata**	**14.37**	**184**	P		**Pn**	**04 05 53.8**	**+1.9**
	127nm,0.4s,baz=17,slow=2.3,SNR

comp=Z,2.0nm,0.7s,baz=68,slow=5.1,SNR=9.9
comp=Z,2.0nm,0.7s

NIED ***02*** *05:13:03.5,38.85N×142.04E,h45km,MW3.5,Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}1.26; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-1.31; $M_{r\theta}$-0.12; $M_{\theta\phi}$0.39; $M_{r\phi}$1.09; Fault plane solution: $M_0$1.73000×10^{14} NP1: ϕ_s158.00000°,δ26.00000°,λ79.00000°. NP2: ϕ_s351.00000°,δ65.00000°,λ95.00000°.*

JMA 02 05:13:03.5±0.1,38.9N±0.3×142.0E±0.6,h45km,MV3.6/39, **15D,KINKAZAN REGION,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.37**	**308**	⇓*i*P	Pn	05 13 13.0	+0.1
OFUJ				⇓S	Sn	05 13 19.6	0.0
JKMT	**Kesennumamotoy**	**0.45**	**265**	⇓*i*P	Pn	05 13 13.8	0.0
JKMT				⇓S	Sn	05 13 20.9	-0.2
JMK	**Ichinoseki**	**0.65**	**279**	⇓*i*P	Pn	05 13 16.4	+0.1
JMK				⇓S	Sn	05 13 25.5	-0.1
JIO	**Ouri**	**0.67**	**234**	⇓*i*P	Pn	05 13 16.5	-0.2
JIO				⇓S	Sn	05 13 25.3	-0.8
JOM	**Ohasama**	**0.85**	**317**	⇓*i*P	Pn	05 13 19.2	+0.1
JOM				⇓S	Sn	05 13 30.0	-0.4
JOU	**Okura**	**1.19**	**246**	⇓*i*P	Pn	05 13 23.7	0.0
JOU				⇓S	Sn	05 13 38.9	+0.3
JRG	**Rokugo**	**1.22**	**297**	⇓*i*P	Pn	05 13 24.3	+0.2
JYK	**Kaneyama**	**1.32**	**273**	⇓*i*P	Pn	05 13 25.6	+0.2
JYK				⇓*e*S	Sn	05 13 37.6	-4.2
JMM	**Marumori**	**1.39**	**225**	P	Pn	05 13 26.2	-0.3
JMM				*e*S	Sn	05 13 42.6	-1.0
JANG	**Nango**	**1.57**	**345**	*e*P	Pn	05 13 28.9	-0.1

BJI ***02*** *05:16:03.7,6.91S×142.76E,h30km,mB5.0/9,mb4.6/41, Ms4.7/1,Ms7 4.5/1*

IDC ***02*** *05:16:04.1±0.6,6.21S×142.46E,h0km,mb4.4/16, mbtmp4.4/19,ML3.6/3,MS3.7/29,Error ellipse: s-maj=22.0km s-min=13.0km az=78.0*

NEIC ***02*** *05:16:06.7±2.1,6.28S±0.06×142.44E±0.08,h10km±1km, mb4.9/41,Error ellipse: s-maj=12.9km s-min=10.5km az=79.0*

DJA ***02*** *05:16:10.1±0.4,6.3S±3°×14.3E±°,h87km±5km,M4.8/13, mb4.6/13,mB5.0/6,MLv5.3/7,Mw(mB)4.4/6*

ISC 02 05:16:06.2±0.4,6.30S±0.04×142.53E±0.05,h10km,n133, σ1§60/114**,mb4.8**/46**,MS3.7**/24**,1C-2D,New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**3.03**	**224**	P	**Pg**	**05 17 03.3**	**-1.0**
MMPI				S	**Sg**	**05 17 44.5**	**+0.9**
JAY	**Jayapura**	**4.17**	**334**	Pn	**Pn**	**05 17 09.6**	**-0.5**
	8.4nm,0.3s,baz=170,slow=9.4,SNR=28						
JAY				Sn	**Sn**	**05 17 55.4**	**-3.6**
	10nm,0.3s,baz=302,slow=16,SNR=3.8						
JAY				LR	LR	05 19 01.6	
	comp=Z,990nm,18.2s,baz=74,slow=44						
	21nm,0.3s						
JAY	**Jayapura**	**4.17**	**334**	P	**Pn**	**05 17 09.8**	**-0.3**
GENI	**Genyem**	**4.37**	**327**	P	**Pn**	**05 17 13.7**	**+1.0**
GENI	**Genyem**	**4.37**	**327**	P	**Pn**	**05 17 13.7**	**+1.0**
GENI				S	**Sn**	**05 18 02.0**	**-1.7**
PMG	**Port Moresby**	**5.53**	**124**		**Pn**	**05 17 29.6**	**+0.9**
PMG	**Port Moresby**	**5.53**	**124**	Pn	**Pn**	**05 17 29.4**	**+0.7**
	16nm,0.3s,baz=330,slow=2.0,SNR=35						
PMG				Sn	**Sn**	**05 18 25.5**	**-6.9**
	5.6nm,0.3s,baz=72,slow=4.8,SNR=3.9						
PMG				LR	LR	05 19 52.4	
	comp=Z,221nm,19.2s,baz=190,slow=40						
	100nm,0.5s						
PMG	**Port Moresby**	**5.53**	**124**	P	**Pn**	**05 17 29.8**	**+1.1**
SMPI	**Sarmi**	**5.73**	**318**	P	**Pn**	**05 17 29.7**	**-1.7**
	0.8nm133nm,1.4s						
MANU	**Manus Island**	**6.41**	**49**	Pn	**Pn**	**05 17 42.6**	**+1.7**
COEN	**Coen**	**7.64**	**175**	Pn	**Pn**	**05 17 59.5**	**+1.8**
FAKI	**Fak Fak**	**10.78**	**288**	Pn	**Pn**	**05 18 38.6**	**-2.2**
SAUI	**Saumlaki**	**11.27**	**261**	Pn	**Pn**	**05 18 47.9**	**+0.4**
MTN	**Manton Dam**	**12.98**	**239**	Pn	**Pn**	**05 19 09.5**	**-1.4**
AUDHS	**Darwin High Sc**	**13.05**	**241**	P	**Pn**	**05 19 13.6**	**+1.7**
QIS	**Mount Isa**	**14.46**	**191**	P	**Pn**	**05 19 31.6**	**+0.5**
WB0	**Warramunga Arr**	**15.55**	**210**		**Pn**	**05 19 44.3**	**-1.4**
WRA	**Warramunga Arr**	**15.72**	**210**		**Pn**	**05 19 44.9**	**-3.1**
WRA	**Warramunga Arr**	**15.72**	**210**	Pn	**Pn**	**05 19 45.0**	**-3.0**
	1.9nm,0.3s,baz=30,slow=13,SNR=23						
WRA				Sn	Sn	05 22 30.2	-12
	1.7nm,0.3s,baz=20,slow=22,SNR=5.5						
WRA				Lg	Lg	05 24 17.0	
	0.9nm,0.3s,baz=29,slow=25,SNR=4.9						
WRA				LR	LR	05 26 43.2	
	comp=Z,365nm,21.1s,baz=25,slow=40						
KNRA	**Kununurra**	**16.40**	**234**		**Pn**	**05 19 54.0**	**-2.7**
SOEI	**Soe**	**18.40**	**258**		**Pn**	**05 20 22.5**	**+0.6**
SOEI				IAmb	IAmb	05 20 27.9	
	comp=Z,79nm,1.0s						
SOEI	**Soe**	**18.40**	**258**	P	**Pn**	**05 20 23.8**	**+1.9**
SOEI	**Soe**	**18.40**	**258**	P	**Pn**	**05 20 23.3**	**+1.4**
	comp=Z,116nm,1.1s						
BATI	**Baumata**	**19.07**	**257**	LR	LR	05 29 02.7	
	comp=Z,388nm,20.2s,baz=98,slow=41						
AS31	**Alice Springs**	**19.16**	**205**	P	**P**	**05 20 30.2**	**+0.2**
ASAR	**Alice Springs**	**19.16**	**205**	P	**P**	**05 20 30.5**	**+0.5**
ASAR	**Alice Springs**	**19.16**	**205**	P	**P**	**05 20 29.6**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=31,slow=9.8,SNR=135						
ASAR				S	Sn	05 23 54.6	-11
	comp=Z,6.0nm,0.9s,baz=24,slow=26,SNR=4.6						
ASAR				Lg	Lg	05 26 06.0	
	comp=Z,0.2nm,0.3s,baz=34,slow=24,SNR=5.3						
ASAR				LR	LR	05 28 33.0	
	comp=Z,1μm,18.9s,baz=20,slow=39						
	comp=Z,21nm,0.9s						
AUALC	**St Philip's Co**	**19.19**	**205**	P	**Pn**	**05 20 32.9**	**+1.7**
GUMO	**Guam**	**19.89**	**7**	LR	LR	05 28 06.7	
	comp=Z,74nm,18.8s,baz=176,slow=36						
FITZ	**Fitzroy Crossi**	**20.22**	**233**	P	**P**	**05 20 41.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**20.22**	**233**	P	**P**	**05 20 40.6**	**-1.1**
	comp=Z,6.9nm,0.4s,baz=58,slow=11,SNR=24						
FITZ				S	S	05 24 17.9	-11
	comp=Z,6.4nm,0.6s,baz=34,slow=18,SNR=2.8						
FITZ				Lg	Lg	05 26 42.0	
	comp=Z,1.0nm,0.3s,baz=153,slow=20,SNR=3.7						
FITZ				LR	LR	05 29 01.7	
	comp=Z,572nm,18.2s,baz=52,slow=38						
	comp=Z,6.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.22**	**233**	P	**P**	**05 20 42.9**	**+1.3**
QLP	**Quilpie**	**20.24**	**176**	P	Pn	05 20 44.8	+1.1
MMRI	**Maumere**	**20.25**	**262**	P	**P**	**05 20 41.9**	**-0.1**
EIDS	**Eidsvold**	**20.66**	**158**	P	**P**	**05 20 46.9**	**+0.6**
EIDS				IAmb	IAmb	05 20 53.4	
	comp=Z,49nm,1.1s						
EIDS	**Eidsvold**	**20.66**	**158**	P	Pn	05 20 49.7	+1.1
EDFI	**Ende, Flores**	**20.80**	**262**	P	**P**	**05 20 46.5**	**-1.6**
	comp=Z,20nm,0.8s						
INKA	**Innaminka**	**21.39**	**184**		**P**	**05 20 53.8**	**-0.4**
BSSI	**Bau Bau, Buton**	**21.91**	**269**	P	P	05 21 08.3	+8.4
BKSI	**Bulukumba**	**22.31**	**271**	P	**P**	**05 21 03.1**	**-1.1**
	comp=Z,35nm,1.0s						
BNSI	**Bone**	**22.40**	**274**	P	**P**	**05 21 03.9**	**-1.3**
	comp=Z,771nmcomp=Z,56nm,1.0s						
KAPI	**Kappang**	**22.70**	**272**	P	**P**	**05 21 07.5**	**-0.9**
KAPI				IAmb	IAmb	05 21 13.2	
	comp=Z,113nm,1.9s						
KAPI	**Kappang**	**22.70**	**272**	P	**P**	**05 21 07.9**	**-0.5**
	comp=Z,9.8nm,0.5s,baz=95,slow=11,SNR=9.9						
KAPI				LR	LR	05 32 20.8	
	comp=Z,104nm,18.5s,baz=92,slow=43						
	comp=Z,9.8nm,0.5s						
KAPI	**Kappang**	**22.70**	**272**	P	**P**	**05 21 11.0**	**+2.6**
SPSI	**Sidrap Palu**	**22.78**	**275**	P	**P**	**05 21 08.1**	**-1.1**
TOLI2	**Tolitoli**	**22.92**	**288**	P	**P**	**05 21 10.2**	**-0.5**
TOLI2	**Tolitoli**	**22.92**	**288**	P	**P**	**05 21 14.5**	**+3.8**
TW1H	**Toowoomba 1 Ha**	**22.96**	**158**	P	**P**	**05 21 13.3**	**+2.3**
AULRC	**Lightning Ridg**	**23.58**	**168**	P	**P**	**05 21 19.3**	**+2.1**
STKA	**Stephens Creek**	**25.46**	**182**	P	**P**	**05 21 34.2**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=3.5,slow=7.9,SNR=6.5						
STKA				LR	LR	05 32 10.4	
	comp=Z,214nm,20.1s,baz=1.2,slow=38						
	comp=Z,4.3nm,0.8s						
BBOO	**Buckleboo**	**27.06**	**192**	P	**P**	**05 21 49.2**	**+0.2**
BBOO				IAmb	IAmb	05 22 23.5	
	comp=Z,55nm,1.5s						
FORT	**Forrest**	**27.89**	**207**	P	**P**	**05 21 55.5**	**-0.9**
FORT				IAmb	IAmb	05 22 22.6	
	comp=Z,13nm,0.9s						
JCJ	**Chichijima**	**33.20**	**359**	LR	LR	05 35 04.3	
	comp=Z,66nm,20.4s,baz=114,slow=34						
NWAO	**Narrogin (SRO)**	**35.43**	**218**	LR	LR	05 38 16.6	
	comp=Z,381nm,18.6s,baz=94,slow=38						
JOW	**Kunigami**	**35.71**	**338**	LR	LR	05 34 52.2	
	comp=Z,78nm,19.8s,baz=138,slow=32						
TPUB	**Ta-pu**	**36.38**	**325**	P	**P**	**05 23 11.2**	**+0.2**
FUNA	**Funafuti**	**36.42**	**96**	P	**P**	**05 23 12.8**	**+1.3**
JNU	**Nakatsue**	**40.73**	**345**	P	**P**	**05 23 48.3**	**+0.8**
JNU	**Nakatsue**	**40.73**	**345**	LR	LR	05 39 33.2	
	comp=Z,79nm,19.2s,baz=129,slow=35						
JGF	**Kuroka**	**41.96**	**354**	P	**P**	**05 23 59.5**	**+2.0**
JGF				IAmb	IAmb	05 23 59.9	
	comp=Z,19nm,1.2s						
IPM	**Ipoh**	**42.80**	**283**	P	**P**	**05 24 03.7**	**-1.0**
MJAR	**Matsushiro Arr**	**42.80**	**355**	P	**P**	**05 24 02.9**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=181,slow=8.1,SNR=5.7						
MJAR				LR	LR	05 40 09.1	
	comp=Z,64nm,21.6s,baz=152,slow=34						
	comp=Z,2.0nm,0.7s						
NJ2	**Nanjing**	**44.31**	**331**	*e*P	**P**	**05 24 20.4**	**+3.9**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
RPSI	**Rantau Prapat**	**44.44**	**280**	P	**P**	**05 24 17.2**	**-0.7**
RPSI				IAmb	IAmb	05 24 21.1	
	comp=Z,14nm,1.1s						
BKZ	**Black Stump Fm**	**44.81**	**142**	P	**P**	**05 24 21.0**	**+0.5**
WHN	**Wuhan**	**45.50**	**325**	P	P	05 24 31.4	+5.4
KSAR	**Wonju Array Be**	**45.61**	**344**	P	**P**	**05 24 27.3**	**+0.5**
KSRS	**Korea Array**	**45.61**	**344**	P	**P**	**05 24 26.1**	**-0.7**
	comp=Z,7.6nm,1.0s,baz=163,slow=9.5,SNR=19						
KSRS				LR	LR	05 43 31.2	
	comp=Z,7μm,19.0s,baz=155,slow=36						
	comp=Z,7.6nm,1.0s						
KS19	**Wonju Array Si**	**45.67**	**344**	P	**P**	**05 24 28.2**	**+0.9**
KS19				IAmb	IAmb	05 25 15.9	
	comp=Z,33nm,1.5s						
CMAR	**Chiang Mai Arr**	**49.52**	**301**	P	**P**	**05 24 56.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**49.52**	**301**	P	**P**	**05 24 55.1**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=131,slow=6.3,SNR=7.6						
	comp=Z,0.4nm,0.3s						
LYN	**LuoYang**	**49.56**	**327**	P	**P**	**05 24 57.8**	**+0.2**
LYN				pmax	pmax		
	comp=Z,21nm,0.9s						
HNS	**HongShan**	**50.64**	**331**	⇓P	**P**	**05 25 05.4**	**-0.2**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.16**	**350**	P	**P**	**05 25 08.7**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=170,slow=9.0,SNR=6.6						
	comp=Z,4.1nm,0.6s						
XAN	**Xi'an**	**51.19**	**324**	P	**P**	**05 25 09.6**	**-0.4**
XAN				pP	sP	05 25 19.5	+4.9
XAN				pmax	pmax		
	comp=Z,18nm,1.7s						
PZH	**PanZhiHua**	**51.24**	**311**	P	**P**	**05 25 12.4**	**+1.8**
CN2	**Changchun**	**52.20**	**344**	P	**P**	**05 25 20.7**	**+3.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	**Chengdu**	**52.38**	**317**	P	**P**	**05 25 19.1**	**+0.2**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
BNX	**BinXian**	**53.54**	**347**	⇑P	**P**	**05 25 28.1**	**+1.0**
BNX				pmax	pmax		
	comp=Z,17nm,1.6s						
HHC	**Hu-ho-hao-te**	**54.86**	**331**	*e*P	**P**	**05 25 39.9**	**+2.9**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC				pmax	pmax		
	comp=Z,72nm,4.6s						
LZH	**Lanzhou**	**55.62**	**322**	*e*P	**P**	**05 25 45.7**	**+3.0**
LZH				sP	sP	05 26 00.4	+13
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
SHL	**Shillong**	**58.49**	**305**	P	**P**	**05 26 02.8**	**-0.5**
SHL				IAmb	IAmb	05 26 07.6	
	comp=Z,20nm,1.3s						
GTA	**Gaotai**	**60.20**	**323**	*e*P	P	05 26 19.5	+4.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
PETK	**Petropavlovsk-**	**60.56**	**10**	P	**P**	**05 26 15.8**	**-0.9**
	comp=Z,4.4nm,0.8s,baz=202,slow=11,SNR=4.3						
	comp=Z,6.4nm,0.8s						
GOMU	**GeErMu**	**61.52**	**317**	P	**P**	**05 26 26.0**	**+1.9**
GOMU				pP	sP	05 26 34.5	+5.8
GOMU				PcP	**PcP**	**05 27 05.3**	**-0.6**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**62.59**	**333**	P	**P**	**05 26 29.8**	**-1.0**
	comp=Z,2.3nm,1.1s,baz=156,slow=5.6,SNR=5.6						
SONM				LR	LR	05 54 29.7	
	comp=Z,43nm,18.9s,baz=113,slow=37						
	comp=Z,2.3nm,1.1s						
EVN	**Everest**	**63.60**	**305**	P	**P**	**05 26 38.2**	**-0.3**
EVN				IAmb	IAmb	05 26 41.3	
	comp=Z,9.6nm,0.9s						
CASY	**Casey**	**63.85**	**194**	P	**P**	**05 26 39.1**	**+0.4**
CASY				IAmb	IAmb	05 26 39.6	
	comp=Z,6.4nm,0.8s						
SHEM	**Shemya Is, Ala**	**64.62**	**21**	LR	LR	05 49 16.3	
	comp=Z,66nm,20.2s,baz=224,slow=31						
AMKA	**Amchitka**	**65.54**	**24**	P	**P**	**05 26 51.8**	**+1.9**
MA2	**Magadan**	**65.99**	**5**	LR	LR	05 53 05.1	
	comp=Z,26nm,20.8s,baz=144,slow=34						
PPT2	**Papeete2**	**67.08**	**106**	*e*LR	LR	05 47 15.2	
	comp=Z,37nm,22.5s						
YAK	**Yakutsk**	**68.85**	**354**	LR	LR	05 55 39.9	
	comp=Z,20nm,21.5s,baz=167,slow=35						
SEY	**Seymchan**	**69.44**	**5**	LR	LR	05 55 06.2	
	comp=Z,29nm,21.8s,baz=174,slow=34						
WMQ	**Urumqi**	**70.17**	**321**	*e*P	P	05 27 23.6	+4.3
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
VNDA	**Vanda**	**71.92**	**176**	IAmb	IAmb	05 29 19.5	
	comp=Z,10.0nm,1.6s						
VNDA	**Vanda**	**71.92**	**176**	P	**P**	**05 27 29.6**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=324,slow=5.8,SNR=4.9						
VNDA				LR	LR	05 58 22.8	
	comp=Z,76nm,18.4s,baz=349,slow=35						
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**74.94**	**322**		**P**	**05 27 46.9**	**-0.8**
MKAR	**Makanchi Array**	**74.94**	**322**	P	**P**	**05 27 46.3**	**-1.3**
	comp=Z,3.2nm,0.9s,baz=118,slow=7.3,SNR=16						
	comp=Z,3.2nm,0.9s						
MAKZ	**Makanchi**	**75.14**	**322**		**P**	**05 27 48.4**	**-0.4**
MAKZ				IAmb	IAmb	05 27 53.3	
	comp=Z,22nm,1.6s						
ZALV	**Zalesovo Beam**	**76.94**	**329**	P	**P**	**05 27 56.6**	**-2.3**
	comp=Z,1.2nm,0.5s,baz=106,slow=5.3,SNR=6.2						
ZALV				LR	LR	06 00 30.3	
	comp=Z,21nm,22.0s,baz=114,slow=35						
	comp=Z,1.2nm,0.5s						
TIXI	**Tiksi**	**78.31**	**356**	LR	LR	06 04 08.0	
	comp=Z,13nm,18.1s,baz=249,slow=37						
KURK	**Kurchatov**	**78.82**	**324**	P	**P**	**05 28 08.9**	**-0.5**
KURBB	**Kurchatov Arra**	**78.84**	**324**	P	**P**	**05 28 08.2**	**-1.2**
	comp=Z,0.9nm,0.2s,baz=116,slow=5.3,SNR=10						
	comp=Z,0.9nm,0.2s						
MAW	**Mawson**	**80.27**	**202**	LR	LR	06 02 44.7	
	comp=Z,42nm,18.4s,baz=86,slow=35						
GAR	**Garm**	**80.31**	**311**	P	**P**	**05 28 17.0**	**-0.9**
GAR				IAmb	IAmb	05 28 21.4	
	comp=Z,17nm,1.2s						
CHGR	**Chuyangaron**	**81.08**	**311**		**P**	**05 28 21.2**	**-0.9**
CHGR				IAmb	IAmb	05 28 23.3	
	comp=Z,12nm,1.0s						
SIMJ	**Simiganj**	**81.20**	**311**	P	**P**	**05 28 22.1**	**-0.7**
KKAR	**Karatay Array**	**81.34**	**315**	P	**P**	**05 28 22.2**	**-1.1**
KDAK	**Kodiak Island**	**82.30**	**29**	LR	LR	05 58 02.0	
	comp=Z,33nm,20.4s,baz=229,slow=31						
QSPA	**South Pole Qui**	**83.67**	**180**	P	**P**	**05 28 35.9**	**+0.8**
	comp=Z,6.9nm,1.0s,baz=334,slow=0.8,SNR=25						
QSPA				LR	LR	06 05 47.5	
	comp=Z,134nm,19.6s,baz=18,slow=36						
	comp=Z,6.9nm,1.0s						
BVAR	**Borovoye Array**	**84.42**	**325**	P	**P**	**05 28 37.5**	**-1.5**
	comp=Z,7.5nm,0.8s,baz=104,slow=6.3,SNR=21						
	comp=Z,7.5nm,0.8s						
PPLA	**Purkeypile**	**84.63**	**25**	P	**P**	**05 28 39.3**	**-0.8**
SML	**Sawmill**	**85.86**	**26**	P	**P**	**05 28 45.6**	**-0.5**
RND	**Reindeer**	**86.23**	**25**	P	**P**	**05 28 46.6**	**-1.3**
RND				IAmb	IAmb	05 28 47.2	
	comp=Z,11nm,0.8s						
MCK	**McKinley**	**86.32**	**25**		**P**	**05 28 47.4**	**-0.9**
MCK				IAmb	IAmb	05 28 47.7	
	comp=Z,8.3nm,0.8s						
DHY	**Denali Highway**	**86.73**	**25**	P	**P**	**05 28 50.0**	**-0.4**
DHY				IAmb	IAmb	05 28 50.6	
	comp=Z,9.5nm,0.9s						
CCB	**Clear Creek Bu**	**87.11**	**24**		**P**	**05 28 50.5**	**-1.6**
CCB				IAmb	IAmb	05 28 51.2	
	comp=Z,7.7nm,0.8s						
IL31		**87.53**	**24**	P	**P**	**05 28 52.0**	**-2.0**
IL31				IAmb	IAmb	05 28 52.8	
	comp=Z,5.8nm,0.8s						
ILAR	**Eielson Array**	**87.53**	**24**	P	**P**	**05 28 52.1**	**-2.0**
	comp=Z,4.5nm,0.8s,baz=258,slow=5.3,SNR=47						
ILAR				LR	LR	06 04 06.5	
	comp=Z,43nm,21.1s,baz=242,slow=33						
	comp=Z,4.5nm,0.8s						
J25K	**Salcha River,**	**88.09**	**24**	P	**P**	**05 28 55.9**	**-0.9**
DOT	**Dot Lake**	**88.33**	**25**	P	**P**	**05 28 57.5**	**-0.5**
DOT				IAmb	IAmb	05 28 58.3	
	comp=Z,8.6nm,0.9s						
SYO	**Syowa Base**	**88.77**	**201**	⇓*e*P	**P**	**05 29 01.0**	**+1.1**
BMAR	**Burnt Mountain**	**89.29**	**22**	P	**P**	**05 29 02.8**	**+0.3**
DAWY	**Dawson**	**90.44**	**25**		**P**	**05 29 07.9**	**0.0**
DLBC	**Dease Lake**	**93.98**	**32**	LR	LR	06 03 53.3	
	comp=Z,32nm,21.8s,baz=267,slow=30						
BBB	**Bella Bella**	**94.53**	**38**	LR	LR	06 10 15.3	
	comp=Z,34nm,18.2s,baz=214,slow=34						
SNAA	**Sanae**	**98.94**	**190**	LR	LR	06 15 36.2	
	comp=Z,48nm,18.7s,baz=189,slow=36						
PLCA	**Paso Flores**	**124.20**	**150**	PKP	**PKPdf**	**05 35 06.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=225,slow=2.9,SNR=7.0						
SDV	**Santo Domingo**	**147.04**	**83**	PKPbc	**PKPbc**	**05 35 49.9**	**-0.8**
	comp=Z,3.6nm,0.4s,baz=282,slow=2.6,SNR=2.8						
DBIC	**Dimbokro**	**147.59**	**273**	PKPbc	**PKPbc**	**05 35 50.9**	**-1.1**
	comp=Z,8.7nm,1.1s,baz=101,slow=5.2,SNR=3.9						
SIV	**San Ignacio**	**147.81**	**134**	PKPbc	**PKPdf**	**05 35 50.8**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=225,slow=4.3,SNR=9.2						
BDFB	**Brasilia**	**155.83**	**155**	PKP	**PKPdf**	**05 36 01.7**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=267,slow=17,SNR=2.0						

MDD ***02*** *05:22:27.7±0.2,43.21N×0.73W,h0km±1km,mb_Lg3.3/85, Error ellipse: s-maj=1.2km s-min=0.9km az=168.0*

STR ***02*** *05:22:27.4±0.0,43.20N±0.10×0.74W±0.06,h20km, MLv3.6/35,LOCSAT earthModelID pyrenees_taup-2.11 preliminary*

INMG ***02*** *05:22:27.8±1.3,43.20N×0.73W,h2km,ML2.7,Error ellipse: s-maj=2.8km s-min=1.9km az=45.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Pirineus (ESP)*

LDG ***02*** *05:22:28.0±0.1,43.25N×0.70W,h2km,Md3.2/2,Ml3.6/43, Error ellipse: s-maj=1.5km s-min=1.1km az=129.0*

SFS ***02*** *05:22:29.4,43.20N×0.75W,h14km,mb3.7/6,ML4.0/12, ML3.6/15,MLv3.3/15*

ISC 02 05:22:25.6±0.6,43.28N±0.02×0.71W±0.01,h16km±4km, n206,σ1§**98**/338**,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORDF	**Ordiarp**	**0.18**	**249**	Pg	**Pg**	**05 22 31.5**	**+1.4**
ORDF				Sg	**Sg**	**05 22 34.2**	**+1.2**
ATE	**Arette**	**0.19**	**179**	Pg	**Pg**	**05 22 30.6**	**+0.3**
ATE				Sg	**Sg**	**05 22 32.6**	**-0.8**
REYF	**Montagne du Re**	**0.31**	**132**	Pg	**Pb**	**05 22 33.2**	**+0.3**
REYF				Sg	**Sg**	**05 22 37.5**	**+0.8**
IRAF	**Chalets d'Irat**	**0.34**	**225**	Pg	**Pb**	**05 22 33.4**	**0.0**
IRAF				Sg	**Sg**	**05 22 37.8**	**0.0**
ETSF	**Etsaut**	**0.40**	**164**	*e*Pg	**Pg**	**05 22 34.0**	**+0.3**
ETSF				*e*Sg	**Sg**	**05 22 38.6**	**-0.6**
	3μm,0.2s						
OSSF	**Osses**	**0.41**	**267**	Pg	**Pb**	**05 22 34.8**	**+0.4**
OSSF				Sg	**Sg**	**05 22 39.9**	**+0.5**
SJPF	**Ste Jean**	**0.41**	**247**	*e*Pg	**Pb**	**05 22 34.8**	**+0.3**
SJPF				*e*Sg	**Sb**	**05 22 40.4**	**-0.2**
	2μm,0.2s						
TERF	**Tercis-les-Bai**	**0.50**	**324**	Pg	**Pn**	**05 22 39.4**	**+1.4**
PYLO	**Lourdes**	**0.52**	**110**	Pg	**Pb**	**05 22 37.3**	**+1.0**
CANF	**Canfranc**	**0.53**	**165**	Pg	**Pg**	**05 22 36.3**	**+0.1**
EORO	**Oroz-Betelu**	**0.59**	**229**	Pg	**Pb**	**05 22 37.6**	**+0.1**
EORO				Sg	**Sg**	**05 22 44.4**	**-0.7**
EORO				*i* lVmb_Lg		05 22 48.9	
LABF	**Labassere**	**0.62**	**112**	Pg	**Pg**	**05 22 38.3**	**+0.6**
LABF				Sg	**Sb**	**05 22 48.1**	**+1.7**
VIEF	**Viey**	**0.67**	**126**	Pg	**Pg**	**05 22 39.0**	**+0.3**
VIEF				Sg	**Sg**	**05 22 48.4**	**+0.9**
MLZA	**Monlezun-d-Arm**	**0.69**	**37**	Pg	**

YEBES					Sn	Sn	05 23 55.7	+0.7	
YEBES					Sg	Sg	05 24 10.2	-0.6	
YEBES					*i* IVmb_Lg		05 24 22.6		
EARI	**Arriondas**	**3.29**	**272**		Pn	Pn	**05 23 18.8**	**+2.4**	
EARI					Sn	Sn	**05 23 57.2**	**+2.0**	
EARI					*i* IVmb_Lg		05 24 25.5		
MFF	**Saint Martin d**	**3.35**	**7**	*e*Pn	Pn	Pn	**05 23 19.1**	**+1.9**	
	baz=186								
MFF	**Saint Martin d**	**3.35**	**7**	*e*Pn	Pn	Pn	**05 23 19.2**	**+2.0**	
MFF	**Saint Martin d**	**3.35**	**7**	*e*Pg	Pg	Pg	**05 23 30.9**	**+1.2**	
MFF				*e*Sg	Sg	Sg	**05 24 13.5**	**+0.4**	
	56nm,0.2s								
MFF				*e*Sg	Sg	Sg	**05 24 13.5**	**+0.4**	
	55nm,0.2s								
LASF	**Ste Croix**	**3.41**	**75**	*e*Pn	Pn	Pn	**05 23 19.7**	**+1.7**	
LASF	**Ste Croix**	**3.41**	**75**	*e*Pg	Pg	Pg	**05 23 31.4**	**+0.6**	
LASF				*e*Sg	Sg	Sg	**05 24 14.6**	**-0.4**	
	69nm,0.3s								
LBL	**Lubilhac**	**3.45**	**54**	Pn	Pn	Pn	**05 23 20.4**	**+1.7**	
UCM	**Universidad Co**	**3.52**	**213**	Pn	Pn	Pn	**05 23 21.8**	**+2.2**	
UCM				Sn	Sn	Sn	**05 24 00.2**	**-0.8**	
TCF	**Toulx Ste Croi**	**3.66**	**34**	*e*Pn	Pn	Pn	**05 23 22.7**	**+1.2**	
TCF	**Toulx Ste Croi**	**3.66**	**34**	*e*Pg	Pg	Pg	**05 23 36.4**	**+0.8**	
TCF				*e*Sn	Sn	Sn	**05 24 04.8**	**+0.5**	
TCF				*e*Sg	Sg	Sg	**05 24 23.1**	**+0.1**	
	22nm,0.2s								
GUD	**Guadarrama**	**3.68**	**225**	Pn	Pn	Pn	**05 23 24.1**	**+2.1**	
GUD				Sn	Sn	Sn	**05 24 05.2**	**+0.2**	
ECHE	**Chera**	**3.69**	**183**	Pn	Pn	Pn	**05 23 23.5**	**+1.6**	
ECHE				Sn	Sn	Sn	**05 24 03.9**	**-1.2**	
ECHE	**Chera**	**3.69**	**183**	Pn	Pn	Pn	**05 23 23.4**	**+1.4**	
ECHE				Sn	Sn	Sn	**05 24 05.5**	**+0.3**	
ECHE				*i* IVmb_Lg			05 24 30.0		
COLF	**Collangettes**	**3.87**	**53**	Pn	Pn	Pn	**05 23 25.8**	**+1.4**	
EVIV	**Cofrentes, Val**	**4.02**	**185**	Pn	Pn	Pn	**05 23 28.0**	**+1.5**	
EVIV				Pg	Pb	Pb	**05 23 39.5**	**+3.5**	
EVIV				Sn	Sn	Sn	**05 24 12.1**	**-1.2**	
EVIV				Sg	Sg	Sg	**05 24 33.6**	**-1.1**	
EVIV				*i* IVmb_Lg			05 24 44.4		
PLDF	**La Plantade**	**4.10**	**47**	Pn	Pn	Pn	**05 23 29.3**	**+1.7**	
BGF	**Bois d'Agland**	**4.14**	**36**	*e*Pn	Pn	Pn	**05 23 29.7**	**+1.6**	
BGF	**Bois d'Agland**	**4.14**	**36**	*e*Pg	Pg	Pg	**05 23 45.5**	**+0.7**	
BGF				*e*Sn	Sn	Sn	**05 24 17.0**	**+0.9**	
BGF				*e*Sg	Sg	Sg	**05 24 38.9**	**+0.5**	
	170nm,0.3s								
VIVF	**Saint-Julien-l**	**4.18**	**66**	*e*Pn	Pn	Pn	**05 23 30.9**	**+2.1**	
VIVF	**Saint-Julien-l**	**4.18**	**66**	*e*Pg	Pg	Pg	**05 23 45.8**	**+0.1**	
VIVF				*e*Sg	Sg	Sg	**05 24 39.4**	**-0.5**	
	41nm,0.3s								
SSB	**Saint Sauveur**	**4.27**	**60**	Pn	Pn	Pn	**05 23 31.8**	**+1.9**	
ESBB	**Sonseca Array**	**4.35**	**215**	Pn	Pn	Pn	**05 23 33.3**	**+2.2**	
ESBB				Sn	Sn	Sn	**05 24 20.9**	**-0.6**	
ESDC	**Sonseca Array**	**4.35**	**215**	Pn	Pn	Pn	**05 23 32.4**	**+1.3**	
ESDC				Sn	Sn	Sn	**05 24 21.3**	**-0.2**	
ESDC				*i* IVmb_Lg			05 24 49.6		
ETOS	**Mallorca**	**4.39**	**142**	Pn	Pn	Pn	**05 23 34.0**	**+2.4**	
ETOS				Sn	Sn	Sn	**05 24 21.1**	**-1.3**	
ETOS	**Mallorca**	**4.39**	**142**	Pn	Pn	Pn	**05 23 33.4**	**+1.8**	
ETOS				Sn	Sn	Sn	**05 24 22.3**	**-0.1**	
ETOS				*i* IVmb_Lg			05 24 22.7		
EJUZ	**Juzbado, Salam**	**4.43**	**242**	Pn	Pn	Pn	**05 23 33.9**	**+1.8**	
EJUZ				Sn	Sn	Sn	**05 24 22.4**	**-1.0**	
EIBI	**Ibiza**	**4.52**	**159**	Sn	Sn	Sn	**05 24 23.5**	**-2.1**	
EIBI	**Ibiza**	**4.52**	**159**	Pn	Pn	Pn	**05 23 35.1**	**+1.7**	
EIBI				Sn	Sn	Sn	**05 24 24.3**	**-1.2**	
EIBI				*i* IVmb_Lg			05 24 30.9		
AVF	**Avril sur Loir**	**4.54**	**38**	*e*Pn	Pn	Pn	**05 23 35.2**	**+1.6**	
AVF	**Avril sur Loir**	**4.54**	**38**	*e*Pg	Pg	Pg	**05 23 52.5**	**0.0**	
AVF				*e*Sn	Sn	Sn	**05 24 26.3**	**+0.3**	
AVF				*e*Sg	Sg	Sg	**05 24 50.9**	**-0.4**	
	46nm,0.5s								
RUSF	**Rustrel**	**4.54**	**80**	Pn	Pn	Pn	**05 23 35.5**	**+1.8**	
TSDF	**Thoir-sur-Di**	**4.54**	**10**	Pn	Pn	Pn	**05 23 35.5**	**+1.8**	
EBEN2	**Beniarda presa**	**4.61**	**175**	Pn	Pn	Pn	**05 23 36.6**	**+2.0**	
EBEN2				Sn	Sn	Sn	**05 24 27.5**	**-0.4**	
SMRF	**Simiane la Rot**	**4.61**	**79**	*e*Pn	Pn	Pn	**05 23 36.5**	**+1.8**	
SMRF				*e*Sg	Sg	Sg	**05 24 53.1**	**-0.6**	
	17nm,0.4s								
PAB	**San Pablo**	**4.63**	**218**	Pn	Pn	Pn	**05 23 36.6**	**+1.7**	
PAB				Sn	Sn	Sn	**05 24 27.6**	**-0.7**	
PAB				*i* IVmb_Lg			05 24 42.0		
HYF	**Humbligny**	**4.64**	**29**	*e*P	Pn	Pn	05 23 40.6	+5.7	
HYF	**Humbligny**	**4.64**	**29**	*e*Pg	Pg	Pg	**05 23 53.6**	**-0.7**	
HYF				*e*Sg	Sg	Sg	**05 24 56.1**	**+1.7**	
ECAL	**Calabor**	**4.65**	**255**	Pn	Pn	Pn	**05 23 37.0**	**+1.9**	
ECAL				Sn	Sn	Sn	**05 24 28.0**	**-0.8**	
ECAL	**Calabor**	**4.65**	**255**	Pn	Pn	Pn	**05 23 37.1**	**+1.9**	
ECAL				Sn	Sn	Sn	**05 24 28.8**	**0.0**	
ECAL				*i* IVmb_Lg			05 24 49.1		
BSTF	**la Bastide-des**	**4.65**	**80**	Pn	Pn	Pn	**05 23 36.7**	**+1.5**	
SMF	**Signal de Mont**	**4.66**	**42**	*e*Pn	Pn	Pn	**05 23 37.0**	**+1.7**	
SMF	**Signal de Mont**	**4.66**	**42**	*e*Pg	Pg	Pg	**05 23 55.0**	**+0.1**	
SMF				*e*Sg	Sg	Sg	**05 24 56.3**	**+1.1**	
	11nm,0.2s								
ETOB	**Tobarra**	**4.67**	**188**	Pn	Pn	Pn	**05 23 37.2**	**+1.7**	
ETOB				Sn	Sn	Sn	**05 24 27.3**	**-2.1**	
ETOB	**Tobarra**	**4.67**	**188**	Pn	Pn	Pn	**05 23 37.2**	**+1.7**	
ETOB				Sn	Sn	Sn	**05 24 28.8**	**-0.6**	
ETOB				*i* IVmb_Lg			05 24 41.3		
PBRG	**Braganca**	**4.70**	**254**	*e*Pn	Pn	Pn	**05 23 37.6**	**+1.9**	
PBRG				*e*Sn	Sn	Sn	**05 24 28.5**	**-1.4**	
PBRG				*i* IAML			05 25 00.3		
PBRG				*i* IAML			05 25 02.2		
PBRG				*i* IAML			05 25 06.2		
EPON	**Pontenova**	**4.70**	**273**	Pn	Pn	Pn	**05 23 38.6**	**+2.7**	
EPON				Sn	Sn	Sn	**05 24 30.6**	**+0.5**	
EPON				*i* IVmb_Lg			05 24 42.3		
ARTF	**Artigues**	**4.75**	**84**	Pn	Pn	Pn	**05 23 38.2**	**+1.7**	
MLYF	**Mely**	**4.75**	**79**	Pn	Pn	Pn	**05 23 38.4**	**+1.8**	
GUEF	**Guhenno - 56**	**4.80**	**344**	Pn	Pn	Pn	**05 23 39.6**	**+2.4**	
SSF	**Saint Saulge**	**4.81**	**37**	*e*Pn	Pn	Pn	**05 23 38.1**	**+0.7**	
SSF	**Saint Saulge**	**4.81**	**37**	*e*Pg	Pg	Pg	**05 23 57.4**	**-0.4**	
SSF				*e*Sg	Sg	Sg	**05 24 59.2**	**-0.9**	
	37nm,0.4s								
QUIF	**Quistinic**	**4.95**	**340**	*e*Pn	Pn	Pn	**05 23 41.4**	**+2.2**	
QUIF	**Quistinic**	**4.95**	**340**	*e*Pg	Pg	Pg	**05 24 00.6**	**+0.3**	
QUIF				*e*Sg	Sg	Sg	**05 25 04.4**	**0.0**	
	12nm,0.3s								
PSIM	**Granatula de C**	**5.01**	**208**	Pn	Pn	Pn	**05 23 41.3**	**+1.1**	
PSIM				Sn	Sn	Sn	**05 24 36.3**	**-1.5**	
ORIF	**Oris-en-Rattie**	**5.02**	**69**	*e*Pn	Pn	Pn	**05 23 43.2**	**+2.9**	
ORIF				*e*Sn	Sn	Sn	**05 24 37.6**	**-0.4**	
ORIF				*e*Sg	Sg	Sg	**05 25 06.6**	**-0.1**	
	4.9nm,0.3s								
GRR	**Gorron**	**5.11**	**359**	*e*Pn	Pn	Pn	**05 23 42.9**	**+1.5**	
GRR				*e*Sn	Sn	Sn	**05 24 38.0**	**-2.1**	
GRR				*e*Sg	Sg	Sg	**05 25 09.9**	**+0.3**	
	19nm,0.3s								
LOR	**Lormes**	**5.13**	**37**	*e*Pn	Pn	Pn	**05 23 44.3**	**+2.6**	
	baz=222								
LOR	**Lormes**	**5.13**	**37**	*e*Pg	Pg	Pg	**05 24 03.5**	**-0.2**	
LOR				*e*Sg	Sg	Sg	**05 25 11.0**	**+0.9**	
	23nm,0.3s								
SGMF	**Saint Gilles**	**5.14**	**346**	*e*Pn	Pn	Pn	**05 23 44.0**	**+2.2**	
SGMF	**Saint Gilles**	**5.14**	**346**	*e*Pg	Pg	Pg	**05 24 03.7**	**-0.3**	
SGMF				*e*Sn	Sn	Sn	**05 24 39.7**	**-1.1**	
SGMF				*e*Sg	Sg	Sg	**05 25 10.8**	**+0.3**	
	16nm,0.3s								
OGSM	**Saint Maurice**	**5.14**	**61**	Pn	Pn	Pn	**05 23 43.9**	**+2.0**	
MVO	**Moncorvo**	**5.15**	**248**	*e*Pn	Pn	Pn	**05 23 43.7**	**+1.6**	
MVO				*e*Sn	Sn	Sn	**05 24 39.0**	**-1.2**	
MVO				*i* IAML			05 25 22.2		
MVO				*i* IAML			05 25 22.4		
MVO				*i* IAML			05 25 22.8		
EPLA	**Plasencia**	**5.15**	**233**	Pn	Pn	Pn	**05 23 43.6**	**+1.6**	
EPLA				Sn	Sn	Sn	**05 24 39.4**	**-1.7**	
EPLA				*i* IVmb_Lg			05 25 00.6		
OGDI	**Digne**	**5.15**	**78**	Pn	Pn	Pn	**05 23 43.8**	**+1.7**	
CLF	**Chambon-Foret**	**5.18**	**23**	Pg	Pg	Pg	**05 24 03.8**	**-1.0**	
CLF				Sn	Sn	Sn	**05 24 44.4**	**+2.6**	
CLF				Sg	Sg	Sg	**05 25 14.8**	**+3.0**	
TRIGF	**Trigance**	**5.20**	**82**	Pn	Pn	Pn	**05 23 44.1**	**+1.4**	
OLIV	**Plomelin**	**5.23**	**334**	Pn	Pn	Pn	**05 23 45.2**	**+2.2**	
ETRV	**Los Montesinos**	**5.25**	**180**	Pn	Pn	Pn	**05 23 45.5**	**+2.1**	
ETRV				Sn	Sn	Sn	**05 24 42.6**	**-1.0**	
ETRV				*i* IVmb_Lg			05 25 36.2		
LMR	**La Mourre**	**5.27**	**87**	*e*Pn	Pn	Pn	**05 23 45.2**	**+1.6**	
LMR				*e*Sg	Sg	Sg	**05 25 10.7**	**-3.9**	
	5.3nm,0.3s								
LDF	**La Druitiere**	**5.33**	**4**	*e*Pn	Pn	Pn	**05 23 45.6**	**+1.1**	
LDF	**La Druitiere**	**5.33**	**4**	*e*Pg	Pg	Pg	**05 24 07.4**	**-0.2**	
LDF				*e*Sn	Sn	Sn	**05 24 44.0**	**-1.5**	
LDF				*e*Sg	Sg	Sg	**05 25 16.9**	**+0.3**	
	7.9nm,0.2s								
ROSF	**Rostrenen**	**5.37**	**341**	*e*Pn	Pn	Pn	**05 23 47.0**	**+2.1**	
SALSA	**La sagne**	**5.41**	**81**	Pn	Pn	Pn	**05 23 48.6**	**+3.0**	
EAGO	**Agolada(Pontev**	**5.43**	**267**	Pn	Pn	Pn	**05 23 48.4**	**+2.5**	
EAGO				*i* IVmb_Lg			05 25 14.8		
CREF	**Crivoux**	**5.45**	**74**	Pn	Pn	Pn	**05 23 49.3**	**+3.1**	
EMUR	**La Murta**	**5.45**	**184**	Pn	Pn	Pn	**05 23 48.0**	**+1.9**	
EMUR				Sn	Sn	Sn	**05 24 46.5**	**-1.9**	
EMUR	**La Murta**	**5.45**	**184**	Pn	Pn	Pn	**05 23 47.8**	**+1.7**	
EMUR				Sn	Sn	Sn	**05 24 47.2**	**-1.2**	
EMUR				*i* IVmb_Lg			05 25 27.5		
FLN	**La Foliniere**	**5.49**	**2**	*e*Pn	Pn	Pn	**05 23 48.1**	**+1.5**	
	baz=180								
FLN				*e*Sn	Sn	Sn	**05 24 46.9**	**-2.4**	
FLN				*e*Sg	Sg	Sg	**05 25 21.5**	**-0.1**	
	18nm,0.3s								
JAUF	**Jausiers**	**5.51**	**75**	Pn	Pn	Pn	**05 23 50.0**	**+2.9**	
SURF	**Saint Ours**	**5.57**	**75**	Pn	Pn	Pn	**05 23 51.2**	**+3.3**	
CALF	**Calern**	**5.57**	**83**	Pn	Pn	Pn	**05 23 50.0**	**+2.2**	
PVRL	**Vila Real**	**5.57**	**251**	*e*Pn	Pn	Pn	**05 23 49.3**	**+1.5**	
PVRL				*e*Sn	Sn	Sn	**05 24 50.7**	**-0.8**	
PVRL				*i* IAML			05 25 27.0		
PVRL				*i* IAML			05 25 28.7		
PVRL				*i* IAML			05 25 30.9		
MBDF	**Montbardon**	**5.58**	**72**	*e*Pn	Pn	Pn	**05 23 50.6**	**+2.5**	
MBDF				*e*Sn	Sn	Sn	**05 24 49.3**	**-2.7**	
MBDF				*e*Sg	Sg	Sg	**05 25 23.5**	**-1.3**	
	2.5nm,0.3s								
POLO	**Lamas de Olo**	**5.59**	**252**	*e*Pn	Pn	Pn	**05 23 51.3**	**+3.2**	
POLO				*e*Sn	Sn	Sn	**05 24 49.8**	**-2.2**	
POLO				*i* IAML			05 25 28.6		
POLO				*i* IAML			05 25 33.5		
POLO				*i* IAML			05 25 44.9		
BNI	**Bardonecchia**	**5.60**	**69**	Pn	Pn	Pn	**05 23 51.8**	**+3.5**	
ELOB	**Lobios**	**5.61**	**258**	Pn	Pn	Pn	**05 23 50.4**	**+2.1**	
ELOB				Sn	Sn	Sn	**05 24 51.8**	**-0.8**	
ELOB				*i* IVmb_Lg			05 25 18.1		
PCAB	**Cabril**	**5.63**	**256**	*e*Pn	Pn	Pn	**05 23 50.6**	**+2.0**	
PCAB				*e*Sn	Sn	Sn	**05 24 51.9**	**-1.2**	
PGAV	**Gavieira, Arco**	**5.73**	**259**	*e*Pn	Pn	Pn	**05 23 50.6**	**+0.6**	
EQES	**Quesada**	**5.76**	**199**	Pn	Pn	Pn	**05 23 52.5**	**+2.1**	
EQES				Sn	Sn	Sn	**05 24 53.4**	**-2.8**	
EQES				*i* IVmb_Lg			05 25 53.8		
LPL	**La Plagne**	**5.78**	**65**	*e*Pn	Pn	Pn	**05 23 53.2**	**+2.4**	
LPL				*e*Sg	Sg	Sg	**05 25 29.6**	**-1.5**	
	3.1nm,0.3s								
LPG	**La Plagne**	**5.79**	**65**	*e*P	Pn		05 23 56.9	+5.9	
LPG				*e*Sg	Sg	Sg	**05 25 28.6**	**-2.7**	
	6.5nm,0.4s								
MTE	**Manteigas**	**5.86**	**243**	*e*Pn	Pn	Pn	**05 23 53.8**	**+2.0**	
MTE				*e*Sn	Sn	Sn	**05 24 56.6**	**-2.1**	
MTE				*e*Sg	Sg	Sg	**05 25 26.8**	**-6.8**	
MTE				*i* IAML			05 25 43.7		
MTE				*i* IAML			05 25 48.7		
MTE				*i* IAML			05 25 50.3		
CABF	**La Chapelle**	**5.86**	**53**	*e*Pn	Pn	Pn	**05 23 53.9**	**+2.1**	
CABF	**La Chapelle**	**5.86**	**53**	*e*Pg	Pg	Pg	**05 24 17.2**	**-0.6**	
CABF				*e*Sg	Sg	Sg	**05 25 32.0**	**-1.6**	
	10nm,0.4s								
EADA	**Adamuz**	**5.89**	**211**	Pn	Pn	Pn	**05 23 53.7**	**+1.4**	
EADA				Sn	Sn	Sn	**05 24 56.1**	**-3.3**	
EADA	**Adamuz**	**5.89**	**211**	Pn	Pn	Pn	**05 23 54.0**	**+1.7**	
EADA				Sn	Sn	Sn	**05 24 57.3**	**-2.1**	
EADA				*i* IVmb_Lg			05 25 09.5		
PVIS	**Viseu**	**5.94**	**247**	*e*Pn	Pn	Pn	**05 23 54.6**	**+1.8**	
PVIS				*e*Sn	Sn	Sn	**05 24 57.8**	**-2.7**	
SBF	**Sospel**	**5.94**	**82**	*e*Sg	Sg	Sg	**05 25 33.9**	**-2.4**	
	3.9nm,0.3s								
EZAM	**Zamans**	**5.99**	**262**	Pn	Pn	Pn	**05 23 56.0**	**+2.4**	
EZAM				*i* IVmb_Lg			05 25 58.8		
EMAZ	**Mazaricos**	**6.06**	**270**	Pn	Pn	Pn	**05 23 57.1**	**+2.6**	
EMAZ				*i* IVmb_Lg			05 25 46.7		
PCBR	**Castelo Branco**	**6.13**	**238**	*e*Pn	Pn	Pn	**05 23 56.5**	**+1.1**	
PCBR				*e*Sn	Sn	Sn	**05 25 02.1**	**-3.1**	
PCBR				*e*Sg	Sg	Sb	**05 25 32.6**	**+7.6**	
PCBR				*i* IAML			05 25 44.2		
PCBR				*i* IAML			05 25 51.3		
PCBR				*i* IAML			05 25 59.2		
BRANT	**Les Verrieres**	**6.26**	**52**	Pn	Pn	Pn	**05 24 01.1**	**+3.8**	
BRANT				Pg	Pg	Pg	**05 24 23.4**	**-2.0**	
BRANT				Sg	Sg	Sg	**05 25 49.0**	**+2.6**	
ECAB	**El Cabril**	**6.31**	**216**	Pn	Pn	Pn	**05 23 59.6**	**+1.6**	
ECAB				Sn	Sn	Sn	**05 25 05.7**	**-4.0**	
ECAB	**El Cabril**	**6.31**	**216**	Pn	Pn	Pn	**05 23 59.5**	**+1.6**	
ECAB				Sn	Sn	Sn	**05 25 06.7**	**-3.0**	
ECAB				*i* IVmb_Lg			05 26 12.8		
PMRV	**Marv??o**	**6.33**	**235**	*e*Pn	Pn	Pn	**05 23 59.3**	**+1.1**	
PMRV				*e*Sn	Sn	Sn	**05 25 08.4**	**-1.8**	
PMRV				*i* IAML			05 25 08.8		
PMRV				*i* IAML			05 25 53.9		
PMRV				*i* IAML			05 25 55.5		
EQTA	**Presa de Quent**	**6.42**	**200**	Pn	Pn	Pn	**05 24 02.3**	**+2.8**	
EQUE	**Quentar**	**6.42**	**200**	Pn	Pn	Pn	**05 24 01.1**	**+1.6**	
EQUE				*i* IVmb_Lg			05 25 43.5		
SENIN	**Lac Senin/Sane**	**6.47**	**59**	Pn	Pn	Pn	**05 24 03.7**	**+3.4**	
SENIN				Sg	Sg	Sg	**05 25 55.7**	**+2.4**	
EBAD	**Badajoz**	**6.57**	**229**	Pn	Pn	Pn	**05 24 02.7**	**+1.2**	
EBAD				Sn	Sn	Sn	**05 25 13.4**	**-2.6**	
EBAD	**Badajoz**	**6.57**	**229**	Pn	Pn	Pn	**05 24 03.3**	**+1.9**	
EBAD				Sn	Sn	Sn	**05 25 14.0**	**-2.0**	
EBAD				*i* IVmb_Lg			05 25 23.0		
MEZF	**Maizieres J'vi**	**6.59**	**36**	*e*Pg	Pg	Pg	**05 24 30.5**	**-1.2**	
MEZF				*e*Sn	Sn	Sn	**05 25 15.7**	**-0.8**	
MEZF				*e*Sg	Sg	Sg	**05 25 55.9**	**-1.0**	
	17nm,0.5s								
PSARD	**Sardoal**	**6.70**	**239**	*e*Pn	Pn	Pn	**05 24 04.5**	**+1.3**	
PSARD				*e*Sn	Sn	Sn	**05 25 16.3**	**-3.0**	
PSARD				*e*Sg	Sg	Sb	05 25 51.4	+10	
PSARD				*i* IAML			05 26 08.9		
PSARD				*i* IAML			05 26 10.5		
PSARD				*i* IAML			05 26 12.3		
SAVF	**Savonnieres en**	**6.71**	**35**	*e*Sg	Sg		**05 26 00.3**	**-0.4**	
	13nm,0.3s								
ELGU	**Los Guajares,**	**6.78**	**200**	Pn	Pn	Pn	**05 24 07.9**	**+3.4**	
ELGU	**Los Guajares,**	**6.78**	**200**	Pn	Pn	Pn	**05 24 06.4**	**+1.9**	
ELGU				*i* IVmb_Lg			05 25 51.4		
PCP	**Piancastagn**	**6.80**	**76**	Pn	Pn	Pn	**05 24 07.1**	**+3.1**	
PESTR	**Estremoz**	**6.81**	**232**	Pn	Pn	Pn	**05 24 05.9**	**+1.0**	
PESTR				Sn	Sn	Sn	**05 25 17.7**	**-4.4**	
PESTR	**Estremoz**	**6.81**	**232**	*e*Pn	Pn	Pn	**05 24 06.6**	**+1.7**	
PESTR				*e*Sn	Sn	Sn	**05 25 19.1**	**-3.0**	
PESTR	**Estremoz**	**6.81**	**232**	P	Pn	Pn	**05 24 03.2**	**-1.7**	
PESTR	**Estremoz**	**6.81**	**232**	S	Sn	Sn	05 25 07.3	-15	
HAU	**Haudompre**	**6.84**	**44**	*e*Sg	Sg	Sg	**05 26 04.6**	**-0.3**	
	7.6nm,0.3s								
HINF	**Hinteralfeld**	**6.98**	**47**	*e*Sg	Sg	Sg	**05 26 04.0**	**-5.5**	
	2.4nm,0.2s								
PBAR	**Barrancos**	**7.01**	**225**	Pn	Pn	Pn	**05 24 09.0**	**+1.5**	
PBAR				Sn	Sn	Sn	**05 25 22.7**	**-4.1**	
PBAR	**Barrancos**	**7.01**	**225**	*e*Pn	Pn	Pn	**05 24 09.7**	**+2.2**	
PBAR				*e*Sn	Sn	Sn	**05 25 23.8**	**-3.0**	
PBAR				*i* IAML			05 26 16.9		
PBAR				*i* IAML			05 26 26.6		
PBAR				*i* IAML			05 26 27.0		
FIESA	**Fiescheralp**	**7.01**	**60**	Pn	Pn	Pn	**05 24 10.9**	**+3.1**	
FIESA				Sg	Sg	Sg	**05 26 13.8**	**+3.2**	
PMTG	**Montargil**	**7.06**	**236**	*e*Pn	Pn	Pn	**05 24 09.6**	**+1.4**	
PMTG				*e*Sn	Sn	Sn	**05 25 25.9**	**-2.2**	
PMTG				*i* IAML			05 26 24.3		
PMTG				*i* IAML			05 26 24.4		
PMTG				*i* IAML			05 26 34.6		
PARRA	**Arraiolos**	**7.11**	**234**	*e*Pn	Pn	Pn	05 24 10.5	-6.7	
PARRA				*e*Sn	Sn	Sn	05 25 25.6	-19	
PARRA				*i* IAML			05 26 17.8		
PARRA				*i* IAML			05 26 19.3		
PARRA				*i* IAML			05 26 23.5		
EMIN	**Mina Concepcio**	**7.14**	**222**	Pn	Pn	Pn	**05 24 11.5**	**+2.3**	
EMIN				Sn	Sn	Sn	**05 25 26.3**	**-3.7**	
EMIN				*i* IVmb_Lg			05 26 14.7		
PGF	**Pioggiola**	**7.16**	**93**	*e*Pn	Pn	Pn	**05 24 09.9**	**+0.2**	
PGF				*e*Sn	Sn	Sn	**05 25 27.1**	**-3.7**	
	0.7nm,0.2s								
EVO	**Evora**	**7.29**	**232**	*e*Pn	Pn	Pn	**05 24 13.1**	**+1.8**	
CDF	**Champ du Feu**	**7.58**	**45**	*e*Sg			05 26 27.4		
	0.2nm,0.2s								
BAIF	**Baives**	**7.58**	**25**	*e*Pn	Pn	Pn	**05 24 16.4**	**+1.1**	
BAIF				*e*Sn	Sn	Sn	**05 25 37.0**	**-3.7**	
	1.4nm,0.2s								
EGRO	**El Granado**	**7.72**	**224**	Sn	Sn	Sn	**05 25 40.9**	**-3.5**	
EGRO				*i* IVmb_Lg			05 26 28.7		
GIVF	**Givet**	**7.81**	**27**	*e*Pn	Pn	Pn	**05 24 20.9**	**+2.4**	
GIVF				*e*Sn	Sn	Sn	**05 25 45.2**	**-1.3**	
	3.3nm,0.2s								
PCVE	**Castro Verde**	**7.94**	**227**	*e*Pn	Pn	Pn	**05 24 21.2**	**+0.9**	
PVAQ	**Vaqueiros**	**7.94**	**225**	*e*Pn	Pn	Pn	**05 24 21.4**	**+1.1**	
PVAQ				*e*Sn	Sn	Sn	**05 25 44.8**	**-5.0**	
PVAQ	**Vaqueiros**	**7.94**	**225**	P	Pn	Pn	**05 24 17.9**	**-2.4**	
PVAQ	**Vaqueiros**	**7.94**	**225**	S	Sn	Sn	05 25 34.7	-15	
ELSH	**Elham, Standar**	**7.97**	**8**	Pn	Pn	Pn	**05 24 22.4**	**+1.8**	
ELSH				Sn	Sn	Sn	**05 25 49.0**	**-1.5**	
PBDV	**Barranco-do-Ve**	**8.17**	**225**	*e*Sn	Sn	Sn	**05 25 52.2**	**-3.3**	
MORF	**Marmelete**	**8.51**	**228**	*e*Pn	Pn	Pn	**05 24 29.6**	**+1.4**	
MCH1	**Michaelchurch**	**8.86**	**351**	Pn	Pn	Pn	**05 24 33.8**	**+1.0**	
MCH1				Sn	Sn	Sn	**05 26 10.1**	**-2.2**	
AKLM	**AKL**	**9.09**	**197**	P	Pn	Pn	**05 24 36.3**	**+0.1**	
AKLM	**AKL**	**9.09**	**197**	S	Sn	Sn	05 26 06.5	-12	
WACR	**West Acre**	**9.49**	**5**	Pn	Pn	Pn	**05 24 43.0**	**+1.5**	
WACR				Sn	Sn	Sn	**05 26 23.6**	**-4.1**	
FOEL	**Foel Wylfa**	**9.76**	**351**	Pn	Pn	Pn	**05 24 48.4**	**+3.2**	
FOEL				Sn	Sn	Sn	**05 26 32.9**	**-1.5**	
LBWR	**Ladybower, Pea**	**10.15**	**357**	Sn	Sn	Sn	**05 26 42.7**	**-1.3**	
WLF1	**Llynfaes**	**10.31**	**348**	Pn	Pn	Pn	**05 24 55.1**	**+2.3**	
WLF1				Sn	Sn	Sn	**05 26 47.8**	**-0.1**	
MD31	**MD31**	**10.87**	**198**	P	Pn	Pn	**05 25 00.2**	**-0.3**	
MD31	**MD31**	**10.87**	**198**	S	Sn	Sn	05 26 51.3	-11	
MDT	**Midelt**	**10.89**	**198**	P	Pn	Pn	**05 25 00.9**	**+0.1**	
MDT	**Midelt**	**10.89**	**198**	S	Sn	Sn	05 26 52.0	-10	
IOMK	**Kirk Michael**	**11.28**	**348**	Pn	Pn	Pn	**05 25 07.5**	**+

UPA ***02*** *05:52:54.8±0.6,9.°08N×83.°01W,h9km±3km,MW2.9,Fault plane solution: NP1:ϕs158.00000°,δ48.00000°, λ,93.00000°.*

CATAC ***02*** *05:52:55.9±0.3,9.°N±3.°×8.°3W±.°, h29km±3km,M2.5/6, MLv2.5/6,Error ellipse: s-maj=5.7km s-min=5.5km az=178.5,confirmed*

ISC 02 05:52:56.0±1.4,8.°83N±0.°05×83.°04W±0.°03,h46km±11km, n22,σ0°89/27,2C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCLRA	**Santa Clara, W**	**0.26**	**90**	*eP*	**Pn**	**05 53 05.1**	**+0.5**
SCLRA				*eS*	**Sn**	**05 53 08.5**	**-2.1**
CDITO	**Canoas**	**0.31**	**146**	P	**Pn**	**05 53 04.4**	**-0.5**
CDITO	**Canoas**	**0.31**	**146**	S	**Sn**	**05 53 12.0**	**+0.9**
BRU2	**Volcan**	**0.35**	**96**	*iP*	**Pn**	**05 53 05.6**	**+0.1**
BRU2				*eS*	**Sn**	**05 53 13.1**	**+0.9**
BRU2	**Volcan**	**0.35**	**96**	P	**Pn**	**05 53 05.5**	**+0.1**
PTJ1	**Puerto Jimnez**	**0.39**	**221**	P	**Pn**	**05 53 05.4**	**-0.3**
PTJ1	**Puerto Jimnez**	**0.39**	**221**	S	**Sn**	**05 53 14.2**	**+1.6**
CLLRA	**Cordillera,**	**0.43**	**101**	*eS*	**Sn**	**05 53 12.2**	**-1.6**
DRK0	**Durika**	**0.47**	**335**	P	**Pn**	**05 53 06.6**	**-0.3**
DRK0	**Durika**	**0.47**	**335**	S	**Sn**	**05 53 15.5**	**+0.8**
PIRO	**Carate, Puerto**	**0.51**	**214**	S	**Sn**	**05 53 15.3**	**+0.1**
PIRO	**Carate, Puerto**	**0.51**	**214**	P	**Pn**	**05 53 06.5**	**-0.7**
BQTLY	**Boquete Panama**	**0.58**	**97**	*eP*	**Pn**	**05 53 08.0**	**-0.2**
BQTLY				*eS*	**Sn**	**05 53 17.9**	**+0.9**
OCHAL	**Ojochal**	**0.65**	**294**	S	**Sn**	**05 53 18.3**	**0.0**
OCHAL	**Ojochal**	**0.65**	**294**	P	**Pn**	**05 53 08.0**	**-1.0**
DVD	**David**	**0.71**	**124**	*eS*	**Sn**	**05 53 20.1**	**+0.5**
LMNES	**Limones**	**0.75**	**166**	*eP*	**Pn**	**05 53 09.9**	**-0.4**
RBALA	**Bur**	**0.88**	**87**	*eP*	**Pn**	**05 53 11.5**	**-0.5**
RBALA				*eS*	**Sn**	**05 53 24.4**	**+0.6**
KKNTU	**Kakintº**	**1.22**	**89**	*iP*	**Pn**	**05 53 16.4**	**-0.3**
LCR2	**La Lucha 2**	**1.31**	**314**	P	**Pn**	**05 53 17.2**	**-0.9**
LCR2	**La Lucha 2**	**1.31**	**314**	S	**Sn**	**05 53 34.5**	**0.0**
JTS	**Las Juntas de**	**2.38**	**308**	P	**Pn**	**05 53 33.4**	**+0.9**
JTS				S	**Sn**	**05 54 00.9**	**+0.4**

IDC ***02*** *06:57:55.3±2.9,2.°86N×98.°15E,h95km±18km,mb3.8/8, mbtmp4.1/8,Error ellipse: s-maj=78.4km s-min=24.2km az=54.0*

DJA ***02*** *06:57:56.1±0.3,3.°N±3.°×9.°8E±.°, h70km±4km,M3.7/12, mb4.0/1,MLv3.6/12*

ISC 02 06:57:55.2±0.8,2.°81N±0.°06×98.°05E±0.°07,h100km,n16, σ0°90/18,mb4.1/8,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCSI	**Kotacane, Aceh**	**0.76**	**338**	P	**Pn**	**06 58 11.9**	**-1.3**
KCSI				S	**Sn**	**06 58 24.3**	**-2.4**
PSI	**Prapat**	**0.87**	**91**	P	**Pn**	**06 58 14.1**	**-0.3**
	196nm,0.3s,baz=305,slow=8.9,SNR=154						
PSI				S	**Sn**	**06 58 27.5**	**-1.3**
	102nm,0.4s,baz=130,slow=20,SNR=4.2						
PSI				LR	LR	06 58 44.2	
	comp=Z,68nm,18.1s,baz=288,slow=62						
GSI	**Gunungsitoli**	**1.57**	**198**	P	**Pn**	**06 58 21.7**	**-0.7**
SNSI	**Sinabang, Aceh**	**1.77**	**257**	P	**Pn**	**06 58 24.7**	**-0.5**
MLSI	**Meulaboh, Aceh**	**2.19**	**311**	P	**Pn**	**06 58 30.8**	**+0.5**
MNSI	**Mandailing Nat**	**2.52**	**143**	P	**Pn**	**06 58 34.9**	**+0.3**
LHMI	**Lhok Sumawe**	**2.64**	**335**	P	**Pn**	**06 58 36.4**	**+0.2**
PBSI	**Pulau Batu**	**2.86**	**175**	P	**Pn**	**06 58 38.7**	**-0.4**
WRA	**Warramunga Arr**	**42.19**	**124**	P	**P**	**07 05 38.5**	**0.0**
	0.4nm,0.6s,baz=301,slow=9.3,SNR=4.8 0.4nm,0.6s						
SONM	**Songino Array**	**45.42**	**8**	P	**P**	**07 06 04.8**	**+0.7**
	0.4nm,0.4s,baz=190,slow=8.8,SNR=2.4 0.4nm,0.4s						
MKAR	**Makanchi Array**	**45.90**	**345**	P	**P**	**07 06 08.0**	**+0.2**
	0.7nm,0.3s,baz=159,slow=8.4,SNR=9.3 0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**50.41**	**344**	P	**P**	**07 06 42.7**	**+0.3**
	1.6nm,0.6s,baz=158,slow=7.0,SNR=14 1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**52.12**	**350**	P	**P**	**07 06 55.1**	**+0.1**
	1.9nm,0.3s,baz=164,slow=5.9,SNR=13 1.9nm,0.3s						
BVAR	**Borovoye Array**	**55.03**	**340**	P	**P**	**07 07 16.4**	**+0.1**
	1.6nm,0.4s,baz=142,slow=7.3,SNR=9.3 1.6nm,0.4s						
FINES	**FINESS Array B**	**78.97**	**332**	P	**P**	**07 09 48.1**	**+0.4**
	2.9nm,1.0s,baz=111,slow=7.7,SNR=3.7 2.9nm,1.0s						
ARCES	**ARCESS Array B**	**81.31**	**340**	P	**P**	**07 10 01.3**	**+1.0**
	7.1nm,1.1s,baz=108,slow=7.8,SNR=4.6 7.1nm,1.1s						

IDC ***02*** *07:02:40.2±0.6,13.°96N×144.°92E,h118km±4km,mb3.3/8, mbtmp3.7/8,Error ellipse: s-maj=31.5km s-min=15.7km az=91.0*

NEIC ***02*** *07:02:42.1±1.2,13.°88N±0.°07×144.°8E±0.°2,h123km±7km, mb4.3/15,Error ellipse: s-maj=22.0km s-min=9.2km az=103.0*

ISC 02 07:02:41.2±0.6,13.°87N±0.°09×144.°9E±0.°2,h125km,n35, σ1°03/29,mb4.0/16,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.28**	**176**	P	**Pn**	**07 02 59.1**	**+0.4**
	642nm,0.4s,baz=240,slow=4.2,SNR=196						
GUMO				S	**Sn**	**07 03 11.5**	**-0.4**
	2µm,0.3s,baz=15,slow=20,SNR=21						
PATS	**Pohnpei**	**14.97**	**116**	Pn	**P**	**07 06 08.2**	**-0.7**
FAKI	**Fak Fak**	**20.84**	**218**	P	Pn	07 07 16.1	-1.0
FAKI				IAmb	IAmb	07 07 17.7	
	comp=Z,13nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**21.46**	**75**	T	T	07 29 02.8	
	baz=255,slow=75,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**21.48**	**75**	T	T	07 30 14.3	
	baz=255,slow=75						
H11S2	**WAKE ISLAND Hy**	**21.48**	**75**	T	T	07 30 14.7	
	baz=255,slow=75						
H11N1	**WAKE ISLAND Hy**	**21.88**	**72**	T	T	07 30 55.4	
	baz=257,slow=75						
H11N2	**WAKE ISLAND Hy**	**21.89**	**72**	T	T	07 30 34.0	
	baz=257,slow=75						
H11N3	**WAKE ISLAND Hy**	**21.89**	**72**	T	T	07 30 41.3	
	baz=257,slow=75						
JYT	**Yasato**	**22.65**	**350**	P	**P**	**07 07 33.2**	**+1.4**
COEN	**Coen**	**27.70**	**184**	P	**P**	**07 08 17.7**	**-0.1**
COEN				IAmb	IAmb	07 08 23.0	
	comp=Z,4.1nm,0.8s						
KNRA	**Kununurra**	**33.39**	**209**	P	**P**	**07 09 07.9**	**0.0**
KNRA				IAmb	IAmb	07 09 08.7	
	comp=Z,7.5nm,0.8s						
WRA	**Warramunga Arr**	**35.16**	**197**		**P**	**07 09 22.8**	**-0.4**
WRA	**Warramunga Arr**	**35.16**	**197**	P	**P**	**07 09 23.2**	**0.0**
	comp=Z,7.7nm,0.6s,baz=17,slow=8.9,SNR=54						
FITZ	**Fitzroy Crossi**	**36.99**	**211**	P	**P**	**07 09 39.0**	**+0.2**
AS31	**Alice Springs**	**38.81**	**196**		**P**	**07 09 53.4**	**-0.7**
AS31				IAmb	IAmb	07 09 55.7	
	comp=Z,3.2nm,0.5s						
ASAR	**Alice Springs**	**38.81**	**196**	P	**P**	**07 09 53.7**	**-0.4**
ASAR	**Alice Springs**	**38.81**	**196**	P	**P**	**07 09 54.2**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=17,slow=12,SNR=73 comp=Z,2.5nm,0.6s						
EIDS	**Eidsvold**	**39.47**	**171**	P	**P**	**07 09 60.0**	**+0.5**
EIDS				IAmb	IAmb	07 10 38.5	
	comp=Z,8.9nm,1.1s						
STKA	**Stephens Creek**	**45.59**	**184**	P	**P**	**07 10 48.3**	**-0.6**
STKA	**Stephens Creek**	**45.59**	**184**	P	**P**	**07 10 48.9**	**0.0**
	comp=Z,1.2nm,0.4s,baz=347,slow=9.4,SNR=4.3 comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**46.49**	**325**	P	**P**	**07 10 54.6**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=107,slow=7.7,SNR=2.5 comp=Z,0.5nm,0.4s						
BBOO	**Buckleboo**	**47.17**	**190**	P	**P**	**07 11 01.6**	**+0.3**
TOO	**Toolangi**	**51.17**	**179**	P	**P**	**07 11 33.1**	**+1.4**
TOO				IAmb	IAmb	07 11 34.1	
	comp=Z,2.4nm,0.8s						
TKNZ	**Takaka Hill**	**60.51**	**156**	P	**P**	**07 12 38.7**	**+0.6**
MKAR	**Makanchi Array**	**61.28**	**316**	P	**P**	**07 12 43.4**	**0.0**
MKAR	**Makanchi Array**	**61.28**	**316**	P	**P**	**07 12 44.1**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=98,slow=6.6,SNR=2.1 comp=Z,0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**64.40**	**320**	P	**P**	**07 13 03.3**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=102,slow=7.4,SNR=4.9 comp=Z,0.2nm,0.4s						
PWL	**Port Wells**	**66.74**	**29**	P	**P**	**07 13 19.4**	**+0.6**
PWL				IAmb	IAmb	07 13 51.6	
	comp=Z,5.3nm,1.0s						
E22K	**Anaktuvuk Pass**	**67.41**	**21**	P	**P**	**07 13 24.7**	**+1.7**
G23K	**Bananza Creek**	**67.61**	**23**	P	**P**	**07 13 26.8**	**+2.6**
G23K				IAmb	IAmb	07 14 07.1	
	comp=Z,2.2nm,1.1s						
ILAR	**Eielson Array**	**68.32**	**25**	P	**P**	**07 13 25.9**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=253,slow=5.9,SNR=6.7 comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**69.70**	**322**	P	**P**	**07 13 37.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=79,slow=7.5,SNR=1.8 comp=Z,0.4nm,0.5s						
NVAR	**Mina Array Bea**	**86.76**	**51**	P	**P**	**07 15 11.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=283,slow=5.3,SNR=4.2 comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**148.08**	**99**	PKPbc	**PKiKP**	**07 22 15.1**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=270,slow=2.0,SNR=4.1						

ISK ***02*** *07:04:51.7,36.°48N×28.°69E,h5km,ML2.8/16*

AFAD ***02*** *07:04:51.9,36.°44N×28.°67E,h7km±2km,ML2.5*

ATH ***02*** *07:04:51.9,36.°53N×28.°71E,h20km±2km,ML2.5/3, Manual Solution by A.Moschou First location: 2019/11/02 07:06:30, This location: 2019/11/02 10:04:21 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*

THE ***02*** *07:04:54.8,36.°N±29.°×29.°E±5.°7,h12km±47km,MLh2.6/3*

ISC 02 07:04:51.3±1.2,36.°48N±0.°02×28.°69E±0.°02,h3km±11km, n41,σ1°62/62,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.34**	**355**	Pg	**Pg**	**07 04 59.2**	**+1.3**
DALY				Sg	**Sb**	**07 05 05.2**	**-0.7**
FETY	**Fethiye**	**0.35**	**63**	P	Pg	07 04 50.8	-7.3
FETY				S	**Sg**	**07 04 58.9**	**-3.9**
FETY	**Fethiye**	**0.35**	**63**	P	Pg	07 04 49.9	-8.2
FETY				S	**Sg**	**07 04 55.6**	**-7.2**
RDI1	**Rhodes Town Ha**	**0.38**	**266**	P	**Pb**	**07 05 00.5**	**-0.2**
RDI1				S	**Sb**	**07 05 05.9**	**-1.0**
RODB	**Rodos**	**0.38**	**266**	P	**Pb**	**07 05 00.3**	**-0.3**
RODB				S	**Sb**	**07 05 05.9**	**-1.0**
SABU	**Mula-Dalaman**	**0.41**	**33**	P	**Pb**	**07 05 00.9**	**-0.3**
SABU				S	**Sb**	**07 05 07.5**	**-0.4**
IZZE	**Mula-Seydike**	**0.43**	**95**	P	**Pg**	**07 05 00.6**	**+1.0**
IZZE				S	**Sb**	**07 05 07.4**	**-1.1**
IZZE				*i*	IAML	07 05 12.0	
	comp=E,508nm,0.4s						
TURN	**Turunc**	**0.47**	**310**	P	**Pb**	**07 05 01.5**	**-0.7**
TURN				S	**Sb**	**07 05 08.8**	**-0.7**
TURN	**Turunc**	**0.47**	**310**	Pg	**Pb**	**07 05 01.5**	**-0.7**
TURN				Sg	**Sb**	**07 05 09.3**	**-0.2**
ARG	**Arkhangelos**	**0.52**	**241**	Pg	**Pb**	**07 05 02.9**	**-0.2**
ARG				Sg	**Sb**	**07 05 11.6**	**+0.5**
ARG	**Arkhangelos**	**0.52**	**241**	P	**Pg**	**07 05 02.2**	**+0.8**
ARG				S	**Sb**	**07 05 11.0**	**-0.1**
ARG	**Arkhangelos**	**0.52**	**241**	P	**Pb**	**07 05 02.7**	**-0.5**
ARG				S	**Sb**	**07 05 11.1**	**-0.1**
CAME	**Cameli-Denizli**	**0.68**	**46**	Pg	**Pb**	**07 05 09.9**	**0.0**
CAME				Sg	**Sb**	**07 05 16.3**	**+0.6**
YER	**Yerkesik**	**0.73**	**334**	Pg	**Pb**	**07 05 07.1**	**+0.3**
YER	**Yerkesik**	**0.73**	**334**	P	**Pn**	**07 05 08.8**	**+0.1**
RGE1	**Gennadi, Rhode**	**0.76**	**234**	P	**Pb**	**07 05 07.1**	**0.0**
RGE1				S	**Sb**	**07 05 17.7**	**-0.2**
AKAS	**Kas**	**0.78**	**108**	P	**Pg**	**07 05 07.3**	**+1.1**
AKAS				S	**Sb**	**07 05 18.4**	**-0.2**
AKAS				*i*	IAML	07 05 25.0	
	comp=E,166nm,0.7s						
AKAS				*i*	IAML	07 05 27.0	
	comp=N,325nm,0.9s						
AKAS	**Kas**	**0.78**	**108**	Pg	**Pb**	**07 05 08.1**	**+0.6**
KSL	**Kastellorizon**	**0.79**	**114**	P	**Pg**	**07 05 07.1**	**+0.6**
KSL				S	**Sb**	**07 05 18.1**	**-0.7**
KNIK	**Mula-Seydike**	**0.80**	**62**	P	**Pb**	**07 05 07.7**	**-0.2**
KNIK				S	**Sb**	**07 05 19.9**	**+0.7**
KNIK				*i*	IAML	07 05 21.0	
	comp=N,149nm,0.8s						
KNIK				*i*	IAML	07 05 24.0	
	comp=E,124nm,0.5s						
MULA	**Mugla, Merkez-**	**0.83**	**339**	P	**Pn**	**07 05 09.0**	**-1.0**
MULA				S	**Sb**	**07 05 20.1**	**-0.1**
DNZT	**Denizli-Tavas-**	**0.84**	**18**	P	**Pg**	**07 05 08.1**	**+0.6**
DAT	**Datca**	**0.93**	**286**	Pg	**Pn**	**07 05 10.9**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.00**	**10**	P	**Pn**	**07 05 11.7**	**-0.7**
ELL	**Elmali**	**1.02**	**74**	Pg	**Pn**	**07 05 12.4**	**-0.2**
GOLH	**Golhisar**	**1.03**	**42**	P	**Pn**	**07 05 12.1**	**-0.6**
GOLH				S	**Sn**	**07 05 28.2**	**+0.4**
GOLH				*i*	IAML	07 05 31.0	
	comp=N,96nm,0.5s						
MLSB	**Milas**	**1.10**	**318**	Pn	**Pn**	**07 05 13.8**	**+0.2**
APMY	**Acipayam-Deniz**	**1.11**	**26**	Pn	**Pn**	**07 05 14.2**	**+0.4**
DNIZ	**Denizli-Tavas-**	**1.18**	**14**	P	**Pg**	**07 05 15.9**	**+1.9**
BODT	**Bodrum**	**1.25**	**298**	Pn	**Pg**	**07 05 16.8**	**+1.5**
BODT	**Bodrum**	**1.25**	**298**	P	**Pg**	**07 05 18.0**	**+2.6**
BODT				S	**Sg**	**07 05 34.2**	**+2.6**
KORT	**Korkueli**	**1.43**	**68**	P	**Pg**	**07 05 20.8**	**+2.0**
KORT				S	**Sg**	**07 05 43.8**	**+6.4**
KORT				*i*	IAML	07 05 46.0	
	comp=N,82nm,0.5s						
KORT	**Korkueli**	**1.43**	**68**	Pn	**Pg**	**07 05 20.3**	**+1.5**
NAZL	**Nazilli-Aydin**	**1.52**	**348**	Pn	**Pg**	**07 05 21.2**	**+0.8**
KARP	**Karpathos**	**1.55**	**234**	Pn	**Pg**	**07 05 21.3**	**+0.3**
KARP	**Karpathos**	**1.55**	**234**	P	**Pb**	**07 05 21.0**	**+0.4**
KARP				S	**Sb**	**07 05 40.4**	**-0.3**
KARP	**Karpathos**	**1.55**	**234**	P	**Pn**	**07 05 19.3**	**-0.5**
KARP				S	**Sn**	**07 05 39.7**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.60**	**337**	Pn	**Pg**	**07 05 22.3**	**+0.3**
GCAM	**G?zelcaml?**	**1.69**	**317**	Pn	**Pg**	**07 05 23.9**	**+0.2**
SMG	**Samos**	**1.93**	**310**	P	**Pb**	**07 05 25.9**	**-1.2**
KULA	**Kula-Manisa**	**2.04**	**359**	Pn	**Pb**	**07 05 28.3**	**-0.7**

NOU ***02*** *07:19:49.7,39.°81S×176.°93E,h33km,MLv3.7/18,North Island, New Zealand*

WEL ***02*** *07:19:51.3±0.6,40.°S±2.°×17.°7E±.°,h38km±5km,M3.4/13, ML3.7/13,MLv3.4/13,Error ellipse: s-maj=5.2km s-min=3.2km az=90.2,confirmed*

ISC 02 07:19:50.2±1.3,39.°80S±0.°03×176.°95E±0.°04,h55km±5km, n165,σ1°14/181,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAHZ	**Kahuranaki**	**0.05**	**274**	P	**Pn**	**07 19 58.9**	**+0.3**
KAHZ				S	**Sn**	**07 20 04.6**	**-0.1**
HCDS	**Hastings Civil**	**0.17**	**332**	P	**Pn**	**07 19 58.9**	**-0.1**
HCDS				S	**Sn**	**07 20 04.6**	**-0.5**
CKHZ	**Cape Kidnapper**	**0.17**	**36**	P	**Pn**	**07 19 59.5**	**+0.5**
CKHZ				S	**Sn**	**07 20 05.6**	**+0.4**
PWZ	**Pawanui**	**0.24**	**195**	P	**Pn**	**07 20 00.4**	**+1.0**
PXZ	**Pawanui**	**0.24**	**195**	P	**Pn**	**07 20 00.4**	**+1.0**
PXZ				S	**Sn**	**07 20 07.2**	**+1.3**
NCHS	**Napier Colenso**	**0.29**	**353**	P	**Pn**	**07 19 59.9**	**+0.2**
NCHS				S	**Sn**	**07 20 06.8**	**+0.2**
NCDS	**Napier Civil D**	**0.30**	**350**	P	**Pn**	**07 19 60.0**	**+0.1**
NCDS				S	**Sn**	**07 20 06.7**	**-0.1**
NSPS	**Napier St Paul**	**0.31**	**356**	P	**Pn**	**07 20 00.1**	**+0.2**
NSPS				S	**Sn**	**07 20 06.9**	**+0.1**
NGHS	**Napier Girls H**	**0.31**	**356**	P	**Pn**	**07 20 00.2**	**+0.3**
WPWS	**Waipawa Distri**	**0.31**	**242**	P	**Pn**	**07 20 00.5**	**+0.6**
NAAS	**Napier Airport**	**0.33**	**350**	P	**Pn**	**07 20 00.3**	**+0.2**
NAAS				S	**Sn**	**07 20 07.3**	**+0.1**
MCHZ	**McNeill Hill**	**0.40**	**331**	P	**Pn**	**07 20 01.0**	**+0.2**
MCHZ				S	**Sn**	**07 20 08.1**	**-0.3**
KRHZ	**Kereru**	**0.47**	**289**	P	**Pn**	**07 20 01.3**	**-0.2**
KRHZ				S	**Sn**	**07 20 08.3**	**-1.3**
WPHZ	**Waipukurau**	**0.47**	**235**	P	**Pn**	**07 20 02.5**	**+1.0**
PRHZ	**Porangahau**	**0.53**	**207**	P	**Pn**	**07 20 03.5**	**+1.4**
PRHZ				S	**Sn**	**07 20 12.7**	**+2.0**
ARHZ	**Aropaoanui**	**0.54**	**4**	P	**Pn**	**07 20 03.0**	**+0.8**
WAKS	**Wakarara Rangi**	**0.54**	**272**	P	**Pn**	**07 20 02.4**	**+0.2**
KWHZ	**Kaweka Forest**	**0.55**	**313**	P	**Pn**	**07 20 02.3**	**-0.2**
KWHZ				S	**Sn**	**07 20 10.2**	**-1.1**
PGFS	**Porangahau Fir**	**0.56**	**207**	P	**Pn**	**07 20 03.9**	**+1.4**
PNHZ	**Pukenui**	**0.58**	**258**	P	**Pn**	**07 20 03.1**	**+0.3**
PNHZ				S	**Sn**	**07 20 11.9**	**-0.1**
NMHZ	**Naumai**	**0.71**	**351**	P	**Pn**	**07 20 05.0**	**+0.7**
BKZ	**Black Stump Fm**	**0.72**	**331**	P	**Pn**	**07 20 04.5**	**0.0**
BKZ	**Black Stump Fm**	**0.72**	**331**	S	**Sn**	**07 20 14.3**	**-0.6**
BKZ	**Black Stump Fm**	**0.72**	**331**	P	**Pn**	**07 20 04.6**	**+0.1**
BKZ				S	**Sn**	**07 20 14.1**	**-0.9**
ANWZ	**Angora Road**	**0.75**	**208**	P	**Pn**	**07 20 06.2**	**+1.3**
ANWZ				S	**Sn**	**07 20 18.3**	**+2.8**
WHHZ	**Waihua**	**0.75**	**17**	P	**Pn**	**07 20 05.8**	**+0.9**
DVHS	**Dannevirke Hig**	**0.76**	**238**	P	**Pn**	**07 20 06.0**	**+1.0**
DVHZ	**Dannevirke**	**0.78**	**230**	P	**Pn**	**07 20 06.2**	**+0.9**
DVHZ				S	**Sn**	**07 20 17.4**	**+1.2**
TSZ	**Takapari Road**	**0.80**	**251**	P	**Pn**	**07 20 06.0**	**+0.5**
RAHZ	**Arahi**	**0.89**	**7**	P	**Pn**	**07 20 07.5**	**+0.8**
MNGS	**Mangaweka Scho**	**0.89**	**269**	P	**Pn**	**07 20 07.4**	**+0.7**
MTHZ	**Maungataniwha**	**0.95**	**355**	P	**Pn**	**07 20 07.9**	**+0.4**
KNZ	**Kokohu**	**0.96**	**36**	P	**Pn**	**07 20 08.3**	**+0.8**
MHGZ	**Mahia Peninsul**	**0.98**	**49**	P	**Pn**	**07 20 09.1**	**+1.2**
MOVZ	**Moawhango**	**1.00**	**293**	P	**Pn**	**07 20 08.9**	**+0.8**
BFZ	**Birch Farm**	**1.03**	**211**	P	**Pn**	**07 20 09.5**	**+1.0**
BFZ	**Birch Farm**	**1.03**	**211**	P	**Pn**	**07 20 09.6**	**+1.1**
MRHZ	**Matea Rd**	**1.05**	**337**	P	**Pn**	**07 20 09.5**	**+0.7**
SNGZ	**Shannon Statio**	**1.06**	**17**	P	**Pn**	**07 20 09.8**	**+0.9**
PRWZ	**Pori Road**	**1.06**	**224**	P	**Pn**	**07 20 10.3**	**+1.4**
POWZ	**Post Office Ro**	**1.08**	**236**	P	**Pn**	**07 20 10.2**	**+1.0**
HATZ	**Hinemaiaia**	**1.12**	**324**	P	**Pn**	**07 20 10.6**	**+0.9**
TUVZ	**Tukino**	**1.13**	**298**	P	**Pn**	**07 20 11.5**	**+1.5**
PRGZ	**Paritu Road**	**1.14**	**40**	P	**Pn**	**07 20 10.8**	**+0.9**
WNVZ	**Wahianoa**	**1.14**	**294**	P	**Pn**	**07 20 11.4**	**+1.2**
ETVZ	**East Tongariro**	**1.16**	**304**	P	**Pn**	**07 20 12.0**	**+1.6**
WHVZ	**Whangaehu Hut**	**1.17**	**296**	P	**Pn**	**07 20 12.1**	**+1.5**
RITZ	**Rihia Road**	**1.18**	**314**	P	**Pn**	**07 20 11.7**	**+1.3**
OTVZ	**Oturere**	**1.18**	**302**	P	**Pn**	**07 20 11.8**	**+1.2**
TMVZ	**Te Maari**	**1.18**	**305**	P	**Pn**	**07 20 11.7**	**+1.1**
SNVZ	**South Ngauruho**	**1.18**	**301**	P	**Pn**	**07 20 11.8**	**+1.1**
RTZ	**Ruatahuna**	**1.18**	**1**	P	**Pn**	**07 20 11.2**	**+0.6**
TRVZ	**Turoa**	**1.19**	**294**	P	**Pn**	**07 20 12.1**	**+1.3**
MAVZ	**Matarangi**	**1.19**	**296**	P	**Pn**	**07 20 12.3**	**+1.4**
FWVZ	**Far West T-bar**	**1.21**	**296**	P	**Pn**	**07 20 12.0**	**+0.9**
NTVZ	**North Tongarir**	**1.21**	**305**	P	**Pn**	**07 20 12.2**	**+1.2**
MTVZ	**Mangateitei**	**1.21**	**289**	P	**Pn**	**07 20 12.5**	**+1.5**
NGZ	**Ngauruhoe**	**1.21**	**300**	P	**Pn**	**07 20 12.1**	**+1.1**
NNVZ	**North Ngauruho**	**1.23**	**302**	P	**Pn**	**07 20 12.8**	**+1.6**
KRVZ	**Karewarewa**	**1.23**	**304**	P	**Pn**	**07 20 12.7**	**+1.5**
COVZ	**Chateau Observ**	**1.24**	**298**	P	**Pn**	**07 20 12.4**	**+1.0**
CPWZ	**Castlepoint**	**1.25**	**207**	P	**Pn**	**07 20 12.8**	**+1.4**
WTVZ	**West Tongariro**	**1.25**	**303**	P	**Pn**	**07 20 13.4**	**+1.8**
RIGZ	**Rimuhau**	**1.26**	**30**	P	**Pn**	**07 20 12.4**	**+0.8**
TIWZ	**Tintock**	**1.27**	**219**	P	**Pn**	**07 20 12.9**	**+1.2**
RATZ	**Rangitukua**	**1.30**	**315**	P	**Pn**	**07 20 13.4**	**+1.3**
OHWZ	**Ohakea**	**1.32**	**251**	P	**Pn**	**07 20 14.2**	**+1.9**
ALRZ	**Allen Road**	**1.32**	**339**	P	**Pn**	**07 20 13.1**	**+0.7**
MUGZ	**Murupara**	**1.33**	**354**	P	**Pn**	**07 20 12.9**	**+0.5**
PKVZ	**Pokaka**	**1.34**	**292**	P	**Pn**	**07 20 13.8**	**+1.2**
RAGZ	**Rawiri**	**1.35**	**16**	P	**Pn**	**07 20 13.6**	**+0.7**
MRZ	**Mangatainoka R**	**1.36**	**230**	P	**Pn**	**07 20 13.4**	**+0.6**
PRRZ	**Plateau Road**	**1.37**	**341**	P	**Pn**	**07 20 13.6**	**+0.6**
TWVZ	**Taurewa**	**1.38**	**301**	P	**Pn**	**07 20 13.0**	**-0.2**
WPRZ	**Whakapapatarin**	**1.41**	**334**	P	**Pn**	**07 20 14.1**	**+0.5**
RRRZ	**Republican Roa**	**1.50**	**347**	P	**Pn**	**07 20 15.5**	**+0.7**
HRRZ	**Handcock Road**	**1.50**	**340**	P	**Pn**	**07 20 15.9**	**+1.1**
WAZ	**Wanganui**	**1.51**	**271**	P	**Pn**	**07 20 17.1**	**+2.1**
TKGZ	**Te Karaka**	**1.53**	**28**	P	**Pn**	**07 20 15.6**	**+0.4**
MWZ	**Matawai**	**1.53**	**17**	P	**Pn**	**07 20 15.5**	**+0.3**
TMWZ	**Te Maipa**	**1.54**	**211**	P	**Pn**	**07 20 15.8**	**+0.5**
URZ	**Urewera**	**1.54**	**5**	P	**Pn**	**07 20 15.6**	**

ASAR	**Alice Springs**	**21.28**	**192**	P		P	07 53 46.8	-0.4
	0.6nm,0.7s,baz=21,slow=11,SNR=6.4							
	0.6nm,0.7s							
MKAR	**Makanchi Array**	**69.68**	**322**	P		P	08 00 10.6	+0.1
	0.3nm,0.6s,baz=128,slow=6.4,SNR=4.6							
	0.3nm,0.6s							

IDC 02 07:52:33.4±1.7,2°46S×138°19E,h0km,mb3.2/2, mbtmp3.2/4,ML3.2/2,Error ellipse: s-maj=31.9km s-min=28.5km az=169.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.51**	**91**	Pn	Pn	07 53 16.5	+1.0
	2.0nm,0.3s,baz=238,slow=8.8,SNR=4.7						
JAY				Sn	Sn	07 53 46.2	-0.7
	1.0nm,0.3s,baz=107,slow=17,SNR=2.2						
	6.1nm,0.5s						
WRA	**Warramunga Arr**	**17.78**	**192**	P	Pn	07 56 42.5	0.0
	0.1nm,0.3s,baz=17,slow=12,SNR=4.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**21.49**	**191**	P	P	07 57 23.9	0.0
	0.4nm,0.7s,baz=20,slow=9.4,SNR=5.3						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**69.27**	**323**	P	P	08 03 42.3	-0.2
	0.5nm,0.9s,baz=114,slow=6.5,SNR=3.1						
	0.5nm,0.9s						

*JMA **02** 08:39:29.3±0.1,23°.8N±0°.4×121°.8E±0°.7,h47km±1km, MV3.3/15,TAIWAN REGION*
*TAP **02** 08:39:29.6,23°.86N×121°.76E,h50km,ML3.6,C*
ISC 02 08:39:30.0±1.3,23°.83N±0°.02×121°.81E±0°.02,h36km±1km, n155,σ1°17/272,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.20**	**281**	*i* P	**Pn**	**08 39 37.9**	**-0.3**
TEYL				*i* S	**Sn**	**08 39 44.2**	**-1.1**
SHUL	**Shoufeng**	**0.23**	**259**	*i* P	**Pn**	**08 39 38.0**	**+0.1**
SHUL				*i* S	**Sn**	**08 39 44.7**	**0.0**
HWA	**Hwalien**	**0.24**	**307**	*i* P	**Pn**	**08 39 38.1**	**+0.1**
HWA				S	**Sn**	**08 39 44.3**	**-0.3**
TEGC	**Jichi Village**	**0.28**	**244**	*i* P	**Pn**	**08 39 38.5**	**+0.6**
TEGC				*i* S	**Sn**	**08 39 45.3**	**+0.9**
TWD	**Chiawan**	**0.32**	**321**	*i* P	**Pn**	**08 39 38.3**	**+0.2**
TWD				*i* S	**Sn**	**08 39 44.8**	**+0.3**
ETM	**Tongmen**	**0.32**	**295**	*eP*	**Pn**	**08 39 38.1**	**-0.1**
ETM				S	**Sn**	**08 39 44.8**	**+0.2**
ESL	**Shilin**	**0.35**	**267**	P	**Pn**	**08 39 38.9**	**+0.4**
ESL				*i* S	**Sn**	**08 39 45.1**	**+0.3**
ETL	**Fush Village**	**0.37**	**332**	*i* P	**Pn**	**08 39 39.0**	**+0.2**
ETL				*eS*	**Sn**	**08 39 45.5**	**+0.2**
EGFH	**Guangfu**	**0.39**	**245**	*eP*	**Pn**	**08 39 39.2**	**+0.3**
EGFH				S	**Sn**	**08 39 47.0**	**+1.6**
NACB	**Ninganchiao**	**0.40**	**330**	P	**Pn**	**08 39 39.1**	**0.0**
NACB	**Ninganchiao**	**0.40**	**330**	S	**Sn**	**08 39 46.7**	**+1.1**
NACB	**Ninganchiao**	**0.40**	**330**	P	**Pn**	**08 39 39.0**	**0.0**
NACB				S	**Sn**	**08 39 45.9**	**+0.3**
WARBT	**Fenglin Townsh**	**0.41**	**254**	*i* P	**Pn**	**08 39 39.1**	**-0.1**
WARBT				S	**Sn**	**08 39 46.2**	**+0.3**
LXIB	**Xiulin Townshi**	**0.41**	**297**	*i* P	**Pn**	**08 39 39.3**	**-0.1**
LXIB				*i* S	**Sn**	**08 39 46.4**	**+0.2**
EHP	**Heping Village**	**0.48**	**352**	P	**Pn**	**08 39 40.3**	**-0.1**
EHP				S	**Sn**	**08 39 48.6**	**+1.0**
ETLH	**Xiulin Townshi**	**0.48**	**321**	P	**Pn**	**08 39 40.1**	**-0.3**
ETLH				S	**Sn**	**08 39 47.5**	**+0.2**
HGSD	**Ruisui**	**0.49**	**227**	*eP*	**Pn**	**08 39 40.8**	**+0.3**
HGSD				*eS*	**Sn**	**08 39 49.9**	**+2.1**
EAHA	**Aohua**	**0.50**	**352**	*i* P	**Pn**	**08 39 40.3**	**-0.4**
EAHA				*eS*	**Sn**	**08 39 48.4**	**+0.4**
EHYH	**Wanrong**	**0.54**	**232**	*eP*	**Pn**	**08 39 41.0**	**-0.4**
EHYH				*eS*	**Sn**	**08 39 49.2**	**0.0**
EOS4	**EOS4**	**0.55**	**58**	*i* P	**Pn**	**08 39 41.4**	**+0.4**
EOS4				*eS*	**Sn**	**08 39 49.4**	**+0.7**
EHY	**Hungye**	**0.55**	**234**	P	**Pn**	**08 39 40.9**	**-0.6**
EHY				S	**Sn**	**08 39 48.7**	**-0.8**
WHF	**Hehuan Shan**	**0.59**	**302**	*i* P	**Pn**	**08 39 41.7**	**-0.7**
WHF				S	**Sn**	**08 39 50.1**	**-0.8**
OWD	**Renai**	**0.59**	**282**	*i* P	**Pn**	**08 39 41.8**	**-0.4**
OWD				S	**Sn**	**08 39 50.2**	**-0.5**
ENA	**Nanau**	**0.60**	**354**	*eP*	**Pn**	**08 39 41.6**	**-0.5**
ENA				*eS*	**Sn**	**08 39 50.6**	**0.0**
ECBN	**Changbin**	**0.61**	**213**	P	**Pn**	**08 39 42.3**	**+0.1**
ECBN				S	**Sn**	**08 39 51.6**	**+0.7**
VWDT	**VWDT**	**0.62**	**263**	*i* P	**Pn**	**08 39 42.4**	**0.0**
VWDT				*i* S	**Sn**	**08 39 51.6**	**+0.5**
YULB	**Yu-li**	**0.64**	**227**	P	**Pn**	**08 39 42.0**	**-0.7**
YULB	**Yu-li**	**0.64**	**227**	S	**Sn**	**08 39 51.2**	**-0.5**
YULB	**Yu-li**	**0.64**	**227**	*i* P	**Pn**	**08 39 42.1**	**-0.7**
YULB				*i* S	**Sn**	**08 39 51.2**	**-0.5**
EOS3	**EOS3**	**0.65**	**45**	*eP*	**Pn**	**08 39 43.2**	**+0.6**
EOS3				*eS*	**Sn**	**08 39 53.3**	**+1.8**
WUSB	**Renai**	**0.66**	**284**	*i* P	**Pn**	**08 39 42.8**	**-0.2**
WUSB				*eS*	**Sn**	**08 39 52.0**	**-0.1**
TWF1	**Yuli**	**0.67**	**225**	*i* P	**Pn**	**08 39 42.6**	**-0.5**
EOS2	**EOS2**	**0.70**	**33**	*eP*	**Pn**	**08 39 44.1**	**+0.8**
EOS2				*eS*	**Sn**	**08 39 53.8**	**+1.0**
NNSB	**Datong**	**0.71**	**327**	*i* P	**Pn**	**08 39 43.3**	**-0.4**
NNSB				S	**Sn**	**08 39 52.7**	**-0.8**
TWT	**Tachien**	**0.72**	**306**	*eP*	**Pn**	**08 39 44.0**	**+0.1**
TWT				S	**Sn**	**08 39 53.7**	**0.0**
NNS	**Nan Shan**	**0.73**	**327**	P	**Pn**	**08 39 43.5**	**-0.4**
NNS				S	**Sn**	**08 39 53.5**	**-0.4**
TDCB	**Techi**	**0.73**	**305**	*i* P	**Pn**	**08 39 43.8**	**-0.1**
TDCB				S	**Sn**	**08 39 53.5**	**-0.5**
ESAO	**Su ao**	**0.74**	**2**	P	**Pn**	**08 39 43.9**	**-0.1**
ESAO				S	**Sn**	**08 39 54.2**	**+0.2**
CHKH	**Chenggong**	**0.74**	**211**	*eP*	**Pn**	**08 39 44.8**	**+0.8**
CHKH				*eS*	**Sn**	**08 39 54.2**	**+0.2**
LATG	**Datong**	**0.75**	**340**	*i* P	**Pn**	**08 39 43.7**	**-0.5**
LATG				*i* S	**Sn**	**08 39 53.7**	**-0.7**
TWC	**Suao**	**0.78**	**2**	P	**Pn**	**08 39 44.5**	**0.0**
TWC				*eS*	**Sn**	**08 39 55.3**	**+0.5**
SSLB	**Suanglung**	**0.79**	**267**	P	**Pn**	**08 39 44.3**	**-0.3**
SSLB	**Suanglung**	**0.79**	**267**	S	**Sn**	**08 39 55.5**	**+0.2**
SSLB	**Suanglung**	**0.79**	**267**	P	**Pn**	**08 39 44.4**	**-0.2**
SSLB				S	**Sn**	**08 39 55.4**	**+0.2**
FULB	**Fuli**	**0.79**	**217**	*eP*	**Pn**	**08 39 44.8**	**+0.2**
FULB				*eS*	**Sn**	**08 39 55.6**	**+1.3**
NDS	**Dongshan**	**0.80**	**354**	P	**Pn**	**08 39 45.0**	**+0.1**
NDS				S	**Sn**	**08 39 56.9**	**+1.3**
CHKT	**Chengkung**	**0.84**	**209**	*eP*	**Pn**	**08 39 44.6**	**-0.6**
CHKT				*eS*	**Sn**	**08 39 55.5**	**-0.9**
ENTT	**Nioudou**	**0.84**	**344**	*i* P	**Pn**	**08 39 45.1**	**-0.2**
ENTT				*i* S	**Sn**	**08 39 56.4**	**-0.1**
SMLT	**Sun Moon Lake**	**0.84**	**274**	P	**Pn**	**08 39 45.4**	**0.0**
SMLT				*eS*	**Sn**	**08 39 57.3**	**+0.7**
WCS	**Beigang Elemen**	**0.85**	**285**	P	**Pn**	**08 39 45.5**	**0.0**
EHD	**Haiduan**	**0.88**	**219**	*i* P	**Pn**	**08 39 45.0**	**-0.9**
EHD				S	**Sn**	**08 39 56.6**	**-0.9**
TYC	**Yuchr**	**0.88**	**275**	P	**Pn**	**08 39 45.9**	**+0.1**
TYC				*eS*	**Sn**	**08 39 57.5**	**+0.1**
WHYT	**Xinyi Township**	**0.89**	**262**	*eP*	**Pn**	**08 39 46.4**	**+0.4**
WHYT				*eS*	**Sn**	**08 39 58.9**	**+1.1**
WHP	**Taichung City**	**0.91**	**299**	*eP*	**Pn**	**08 39 46.6**	**+0.3**
WHP				*eS*	**Sn**	**08 39 58.3**	**0.0**
ECS	**Chishang**	**0.91**	**217**	*eP*	**Pn**	**08 39 46.0**	**-0.3**
ECS				S	**Sn**	**08 39 59.0**	**+0.7**
YHNB	**Yeheng**	**0.93**	**335**	P	**Pn**	**08 39 46.3**	**-0.3**
YHNB	**Yeheng**	**0.93**	**335**	S	**Sn**	**08 39 58.2**	**-0.5**
YHNB	**Yeheng**	**0.93**	**335**	*i* P	**Pn**	**08 39 46.4**	**-0.2**
YHNB				S	**Sn**	**08 39 57.7**	**-1.0**
NSK	**Sanguang**	**0.94**	**334**	*i* P	**Pn**	**08 39 46.6**	**-0.2**
NSK				S	**Sn**	**08 39 58.2**	**-0.8**
FUSB	**Fushanzhiwuyua**	**0.95**	**348**	P	**Pn**	**08 39 46.7**	**-0.2**
ELDTW	**Lidau**	**0.97**	**229**	*i* P	**Pn**	**08 39 46.6**	**-0.7**
ELDTW				*eS*	**Sn**	**08 39 58.8**	**-1.0**
EDH	**Donghe**	**0.97**	**209**	*eP*	**Pn**	**08 39 46.8**	**-0.4**
EDH				S	**Sn**	**08 39 59.3**	**-0.4**
ALS	**Alishan**	**0.98**	**251**	P	**Pn**	**08 39 48.0**	**+0.5**
ALS				*eS*	**Sn**	**08 40 00.6**	**+0.4**
NWLT	**Wulai**	**0.98**	**343**	P	**Pn**	**08 39 47.2**	**-0.1**
NWLT				S	**Sn**	**08 39 59.4**	**-0.6**
WJS	**Zhushan**	**0.99**	**270**	P	**Pn**	**08 39 48.4**	**+1.0**
EGS		**1.01**	**6**	*eP*	**Pn**	**08 39 49.1**	**+1.4**
EGS				*eS*	**Sn**	**08 40 02.2**	**+1.4**
NFF	**Wufeng Townshi**	**1.02**	**322**	*eP*	**Pn**	**08 39 48.2**	**+0.3**
NFF				*eS*	**Sn**	**08 40 01.4**	**+0.4**
WNT	**Mingjian**	**1.03**	**273**	P	**Pn**	**08 39 48.8**	**+0.8**
WNT				*eS*	**Sn**	**08 40 03.1**	**+1.8**
CHN5	**Tsauling**	**1.07**	**258**	P	**Pn**	**08 39 49.0**	**+0.4**
CHN5				*eS*	**Sn**	**08 40 03.7**	**+1.5**
TWQ1	**Liyutan**	**1.08**	**299**	P	**Pn**	**08 39 49.2**	**+0.6**
TWQ1				S	**Sn**	**08 40 03.5**	**+1.1**
TCU	**Taichung**	**1.09**	**287**	*eP*	**Pn**	**08 39 49.7**	**+1.0**
TCU				*eS*	**Sn**	**08 40 04.8**	**+2.3**
NSTT	**Nanjuang**	**1.09**	**317**	P	**Pn**	**08 39 49.6**	**+0.9**
NSTT				S	**Sn**	**08 40 03.3**	**+0.8**
LIOB	**Emei**	**1.09**	**318**	*eP*	**Pn**	**08 39 49.7**	**+0.9**
LIOB				*eS*	**Sn**	**08 40 03.9**	**+1.2**
KSHI	**Guanxi Townshi**	**1.11**	**328**	P	**Pn**	**08 39 50.0**	**+1.0**
KSHI				S	**Sn**	**08 40 04.5**	**+1.4**
LONT	**Longtian**	**1.11**	**214**	*eP*	**Pn**	**08 39 48.0**	**-1.1**
LONT				*eS*	**Sn**	**08 40 02.5**	**-0.7**
NSY	**Sanyi**	**1.12**	**301**	*eP*	**Pn**	**08 39 50.5**	**+1.2**
NSY				*eS*	**Sn**	**08 40 04.9**	**+1.5**
TIPB	**Shuangxi**	**1.14**	**1**	P	**Pn**	**08 39 50.0**	**+0.5**
TIPB				*eS*	**Sn**	**08 40 04.7**	**+0.9**
WGK	**Gukeng**	**1.16**	**263**	*eP*	**Pn**	**08 39 50.5**	**+0.8**
NHDH	**Xindian Distri**	**1.16**	**347**	S	**Sn**	**08 40 04.6**	**+0.3**
STYH	**Taoyuan**	**1.16**	**236**	P	**Pn**	**08 39 50.1**	**+0.4**
STYH				S	**Sn**	**08 40 04.9**	**+0.7**
TWA	**Mucha**	**1.16**	**350**	*eP*	**Pn**	**08 39 50.2**	**+0.4**
TWA				*eS*	**Sn**	**08 40 05.0**	**+0.6**
NMLH	**Miaoli**	**1.17**	**307**	*eP*	**Pn**	**08 39 50.5**	**+0.6**
NMLH				*eS*	**Sn**	**08 40 05.2**	**+0.6**
WDL	**Douliou City**	**1.17**	**265**	*eS*	**Sn**	**08 40 09.0**	**+4.4**
WCHH	**Zhanghua**	**1.17**	**282**	P	**Pn**	**08 39 50.6**	**+0.7**
WCHH				S	**Sn**	**08 40 06.4**	**+1.8**
WCKO	**Fanlu**	**1.18**	**251**	*eP*	**Pn**	**08 39 51.2**	**+1.3**
WCKO				*eS*	**Sn**	**08 40 07.3**	**+2.6**
WDLH	**Douliu**	**1.18**	**263**	*eP*	**Pn**	**08 39 50.7**	**+0.8**
WDLH				*eS*	**Sn**	**08 40 06.4**	**+1.7**
TATO	**Taipei**	**1.18**	**346**	P	**Pn**	**08 39 50.8**	**+0.8**
TATO	**Taipei**	**1.18**	**346**	S	**Sn**	**08 40 05.3**	**+0.5**
WCH1	**Changhua City**	**1.18**	**282**	*eP*	**Pn**	**08 39 50.2**	**+0.2**
WCH1				*eS*	**Sn**	**08 40 07.2**	**+2.4**
TWB1	**Santiao Chiao**	**1.18**	**8**	*eP*	**Pn**	**08 39 51.6**	**+1.6**
TWB1				*eS*	**Sn**	**08 40 06.8**	**+1.9**
WDJ	**Dajia District**	**1.19**	**296**	P	**Pn**	**08 39 50.7**	**+0.6**
WDJ				*eS*	**Sn**	**08 40 07.2**	**+2.2**
LDUT	**Ludao**	**1.20**	**195**	*eP*	**Pn**	**08 39 48.9**	**-1.3**
LDUT				*eS*	**Sn**	**08 40 03.8**	**-1.4**
JYNG	**Yonagunijimaku**	**1.21**	**59**	P	**Pn**	**08 39 50.4**	**+0.1**
JYNG				S	**Sn**	**08 40 05.8**	**+0.3**
TPUB	**Ta-pu**	**1.21**	**244**	P	**Pn**	**08 39 51.2**	**+0.8**
TPUB	**Ta-pu**	**1.21**	**244**	S	**Sn**	**08 40 07.8**	**+2.3**
TPUB	**Ta-pu**	**1.21**	**244**	*eP*	**Pn**	**08 39 51.1**	**+0.8**
TPUB				*eS*	**Sn**	**08 40 07.1**	**+1.6**
TWGBT	**Beinan**	**1.21**	**214**	P	**Pn**	**08 39 52.3**	**+1.8**
TWGBT	**Beinan**	**1.21**	**214**	*eP*	**Pn**	**08 39 49.2**	**-1.3**
TWGBT				*eS*	**Sn**	**08 40 04.5**	**-1.1**
TWG	**Pinlang**	**1.21**	**214**	*eP*	**Pn**	**08 39 49.4**	**-1.1**
TWG				*eS*	**Sn**	**08 40 04.5**	**-1.2**
SBCB	**Hsinchu**	**1.22**	**322**	*eP*	**Pn**	**08 39 51.4**	**+0.9**
SBCB				*eS*	**Sn**	**08 40 07.2**	**+1.4**
NHY	**Taipei**	**1.22**	**350**	*eP*	**Pn**	**08 39 51.8**	**+1.2**
NWF	**Wu-fen Shan**	**1.23**	**359**	*eP*	**Pn**	**08 39 51.7**	**+0.8**
NWF				*eS*	**Sn**	**08 40 07.4**	**+1.1**
WFSB	**Wu-fen Shan**	**1.23**	**359**	*eP*	**Pn**	**08 39 51.3**	**+0.5**
WFSB				*eS*	**Sn**	**08 40 07.4**	**+1.2**
SXI1	**Grass Mountain**	**1.26**	**3**	*eP*	**Pn**	**08 39 51.8**	**+0.6**
SXI1				*eS*	**Sn**	**08 40 08.7**	**+1.8**
CHN2	**Minshiung**	**1.26**	**257**	*eS*	**Sn**	**08 40 09.6**	**+2.8**
YOJ	**Yonaguni jima**	**1.26**	**60**	P	**Pn**	**08 39 51.7**	**+0.6**
YOJ	**Yonaguni jima**	**1.26**	**60**	*eP*	**Pn**	**08 39 51.5**	**+0.3**
YOJ				S	**Sn**	**08 40 07.0**	**+0.1**
YOJ	**Yonaguni jima**	**1.26**	**60**	*eP*	**Pn**	**08 39 51.3**	**+0.2**
YOJ				*eS*	**Sn**	**08 40 06.4**	**-0.5**
NCUH	**Zhongli**	**1.27**	**333**	*eP*	**Pn**	**08 39 51.8**	**+0.5**
NCUH				*eS*	**Sn**	**08 40 08.3**	**+1.3**
WTK	**Tuku**	**1.31**	**264**	*eS*	**Sn**	**08 40 10.5**	**+2.4**
TNOU	**National Taiwa**	**1.31**	**358**	*eP*	**Pn**	**08 39 50.7**	**-1.2**
TNOU				*eS*	**Sn**	**08 40 08.5**	**+0.4**
TWS1	**Kuangyinshan**	**1.31**	**344**	*eP*	**Pn**	**08 39 52.4**	**+0.5**
TWS1				*eS*	**Sn**	**08 40 08.6**	**+0.5**
CHY	**Chiayi**	**1.32**	**256**	*eP*	**Pn**	**08 39 52.5**	**+0.6**
CHY				*eS*	**Sn**	**08 40 10.1**	**+1.9**
YM01	**YM01**	**1.33**	**350**	*eS*	**Sn**	**08 40 08.2**	**-0.4**
TWK	**Hsinying**	**1.34**	**245**	*eP*	**Pn**	**08 39 53.1**	**+0.9**
TWK				*eS*	**Sn**	**08 40 11.1**	**+2.2**
CHN1	**Nanshi**	**1.34**	**242**	*eP*	**Pn**	**08 39 53.3**	**+1.0**
CHN1				*eS*	**Sn**	**08 40 11.2**	**+2.3**
ZUZH	**Zhuzihu**	**1.35**	**350**	*eP*	**Pn**	**08 39 52.2**	**-0.1**
ZUZH				*eS*	**Sn**	**08 40 08.6**	**-0.5**
YM08	**YM08**	**1.37**	**351**	*eP*	**Pn**	**08 39 52.4**	**-0.2**
YM08				*eS*	**Sn**	**08 40 08.8**	**-0.7**
NTST	**Danshui**	**1.37**	**346**	*eS*	**Sn**	**08 40 08.8**	**-0.6**
WTCT	**Ta-ch'eng**	**1.40**	**272**	*eS*	**Sn**	**08 40 12.6**	**+2.3**
ECL	**Taimali**	**1.46**	**213**	*eS*	**Sn**	**08 40 10.2**	**-1.5**
WSF	**Szhu**	**1.47**	**263**	*eS*	**Sn**	**08 40 14.3**	**+2.3**
WSL	**Shuilin Townsh**	**1.48**	**258**	*eP*	**Pn**	**08 39 54.5**	**+0.3**
WSL				*eS*	**Sn**	**08 40 13.5**	**+1.2**
SSD	**Sandimen**	**1.53**	**225**	*eP*	**Pn**	**08 39 55.4**	**+0.5**
SSD				*eS*	**Sn**	**08 40 15.3**	**+1.8**
SCST	**Cishan**	**1.53**	**232**	*eP*	**Pn**	**08 39 57.0**	**+2.1**
SCST				*eS*	**Sn**	**08 40 17.4**	**+3.9**
CHN8	**Yiju**	**1.55**	**252**	*eS*	**Sn**	**08 40 15.7**	**+1.8**
TSMG	**Majia**	**1.55**	**224**	P	**Pn**	**08 39 56.8**	**+1.7**
SCLT	**Jiali**	**1.62**	**247**	*eS*	**Sn**	**08 40 18.2**	**+2.5**
TWM1	**Shoushan**	**1.62**	**232**	*eP*	**Pn**	**08 39 59.8**	**+3.6**
MASBT	**Mashibuluo**	**1.63**	**222**	*eP*	**Pn**	**08 39 57.6**	**+1.4**
MASBT				*eS*	**Sn**	**08 40 18.4**	**+2.5**
TSCK	**Chigu Township**	**1.73**	**247**	*eP*	**Pn**	**08 39 58.1**	**+0.6**
TSCK				*eS*	**Sn**	**08 40 19.3**	**+1.1**
SCZT	**Fangliau**	**1.82**	**217**	*eP*	**Pn**	**08 40 00.5**	**+1.7**
SCZT				*eS*	**Sn**	**08 40 23.9**	**+3.2**
IRIF	**Iriomote-Funau**	**1.82**	**74**	P	**Pn**	**08 39 59.2**	**+0.4**
IRIF				S	**Sn**	**08 40 21.1**	**+0.4**
LYUB	**Lan-yu**	**1.83**	**187**	*eP*	**Pn**	**08 39 58.5**	**-0.5**
LYUB				*eS*	**Sn**	**08 40 18.5**	**-2.4**
HATJ	**Hateruma jima**	**1.84**	**83**	P	**Pn**	**08 39 59.4**	**+0.4**
HATJ				S	**Sn**	**08 40 21.5**	**+0.5**
JKRS	**Kuro-shima**	**2.05**	**78**	P	**Pn**	**08 40 02.5**	**+0.6**
JKRS				*eS*	**Sn**	**08 40 27.1**	**+0.8**
WDGT	**Dungji**	**2.06**	**254**	*eP*	**Pn**	**08 40 01.9**	**-0.2**
WDGT				*eS*	**Sn**	**08 40 24.7**	**-1.8**
PHUB	**P'eng-hu**	**2.08**	**262**	P	**Pn**	**08 40 02.1**	**-0.3**
PHUB				*eS*	**Sn**	**08 40 25.1**	**-0.7**
PNG	**Penghu**	**2.09**	**263**	P	**Pn**	**08 40 02.1**	**-0.3**
PNG				*eS*	**Sn**	**08 40 26.7**	**-0.4**
TWKBT	**Hengchun**	**2.10**	**206**	*eP*	**Pn**	**08 40 03.8**	**+1.2**
TWKBT				*eS*	**Sn**	**08 40 27.6**	**+0.2**
JIJ	**Ishigaki jima**	**2.19**	**76**	P	**Pn**	**08 40 03.9**	**0.0**
JIJ				S	**Sn**	**08 40 29.3**	**-0.6**
VCHM	**Qimei**	**2.27**	**255**	*eP*	**Pn**	**08 40 04.1**	**-0.9**
VCHM				*eS*	**Sn**	**08 40 30.9**	**-1.0**
JISG	**Ishigakijimahi**	**2.40**	**71**	P	**Pn**	**08 40 06.7**	**-0.1**
JISG				S	**Sn**	**08 40 33.8**	**-1.2**
PTMZ	**Houxiangcun**	**2.73**	**297**	*eP*	**Pn**	**08 40 10.1**	**-1.3**
PTMZ				*eS*	**Sn**	**08 40 39.9**	**-3.3**
JTJ	**Tarama**	**2.76**	**72**	P	**Pn**	**08 40 11.9**	**+0.2**
MATB	**Ma-tsu**	**2.87**	**324**	*eP*	**Pn**	**08 40 11.4**	**-1.8**
KNM	**Kinmen**	**3.14**	**281**	*eP*	**Pn**	**08 40 17.7**	**+0.8**
KNM				*eS*	**Sn**	**08 40 52.8**	**-0.5**
KNMB	**Chin-men Tao**	**3.19**	**282**	*eP*	**Pn**	**08 40 16.5**	**-1.2**
KNMB				*eS*	**Sn**	**08 40 56.6**	**-3.8**
JIRB	**Irabujima**	**3.22**	**71**	P	**Pn**	**08 40 18.3**	**+0.2**
JIRB				*eS*	**Sn**	**08 40 56.0**	**+0.8**
JMJ2	**Miyako jima3**	**3.33**	**74**	*eP*	**Pn**	**08 40 20.0**	**+0.4**
JMJ2				*eS*	**Sn**	**08 40 58.8**	**+0.9**
MHZQ	**Yeshan**	**3.39**	**312**	*eP*	**Pn**	**08 40 18.5**	**-1.8**
MHZQ				*eS*	**Sn**	**08 40 56.1**	**-3.2**
AXDP	**Jialang**	**3.66**	**288**	*eP*	**Pn**	**08 40 22.8**	**-1.3**
ZPLA	**Ao Xicun**	**3.72**	**272**	*eP*	**Pn**	**08 40 24.1**	**-0.8**
DSXP	**Dongshan**	**4.02**	**269**	*eP*	**Pn**	**08 40 28.2**	**-0.9**
DSXP				*eS*	**Sn**	**08 41 11.4**	**-3.5**
SXFK	**Yanhouchang**	**4.56**	**305**	*eP*	**Pn**	**08 40 35.1**	**-1.5**

*IDC **02** 08:45:25.5±3.1,4°.14S×127°.80E,h274km±31km,mb3.4/3, mbtmp4.1/5,Error ellipse: s-maj=76.5km s-min=14.2km az=68.0*
*DJA **02** 08:45:26.1±0.3,4°.5S×127°.8E±°,h245km±5km,M4.1/12, mB4.7/2,mb4.3/6,MLv4.0/12,Mw(mB)4.0/2*
ISC 02 08:45:24.2±0.8,4°.23S±0°.07×127°.54E±0°.07,h250km,n16, σ2°15/21,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.85**	**50**	P	**Pn**	**08 46 01.1**	**+2.6**
AAI				S	**S**	**08 46 27.0**	**+1.6**
NLAI	**Namlea**	**1.08**	**336**	P	**Pn**	**08 46 02.3**	**+2.5**
MSAI	**Masohi**	**1.64**	**58**	P	**Pn**	**08 46 05.4**	**+1.7**
MSAI				S	**S**	**08 46 34.2**	**-0.5**
BNDI	**Bandanaira**	**2.37**	**97**	P	**Pn**	**08 46 12.3**	**+2.1**
SANI	**Sanana**	**2.67**	**324**	P	**Pn**	**08 46 13.6**	**+0.4**
SANI				S	**S**	**08 46 50.2**	**-1.7**
FAKI	**Fak Fak**	**4.88**	**75**	P	**Pn**	**08 46 39.6**	**+1.0**
SWI	**Sorong**	**5.00**	**48**	P	**Pn**	**08 46 41.1**	**+1.0**
BBSI	**Bau Bau**	**5.11**	**256**	P	**Pn**	**08 46 44.4**	**+3.0**
LUWI	**Luwuk**	**5.72**	**303**	P	**Pn**	**08 46 51.0**	**+2.0**
	0.3nm4µm72nm,0.8s						
SOEI	**Soe**	**6.38**	**210**	P	**Pn**	**08 47 00.3**	**+3.0**
	0.1nm19nm,0.5s						
EDFI	**Ende, Flores**	**7.34**	**232**	P	**Pn**	**08 47 12.0**	**+2.6**
FITZ	**Fitzroy Crossi**	**13.91**	**188**	P	**P**	**08 48 31.5**	**-0.5**
	3.5nm,0.5s,baz=14,slow=11,SNR=18						
WRA	**Warramunga Arr**	**16.96**	**158**	P	**P**	**08 49 05.6**	**-0.1**
	1.8nm,0.4s,baz=338,slow=11,SNR=15						
WRA				S	**S**	**08 52 05.0**	**-4.7**
	0.3nm,0.4s,baz=340,slow=21,SNR=2.1						
ASAR	**Alice Springs**	**20.27**	**163**	P	**P**	**08 49 41.0**	**-0.4**
	3.5nm,0.4s,baz=344,slow=11,SNR=64						
ASAR				S	**S**	**08 53 13.2**	**-1.1**
	1.4nm,0.7s,baz=350,slow=22,SNR=10						
	3.5nm,0.4s						
STKA	**Stephens Creek**	**30.50**	**156**	P	**P**	**08 51 14.4**	**+0.1**
	1.9nm,0.5s,baz=329,slow=8.5,SNR=8.4						
	1.9nm,0.5s						
MKAR	**Makanchi Array**	**64.59**	**327**	P	**P**	**08 55 34.0**	**-1.1**
	0.5nm,0.5s,baz=127,slow=7.7,SNR=7.0						
	0.5nm,0.5s						

IDC 02 08:51:27.6±5.7,6°.09S×147°.10E,h121km±78km,mb3.1/3, mbtmp3.6/5,Error ellipse: s-maj=104.3km s-min=40.0km az=115.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.29**	**179**	P	Pn	08 52 16.9	-0.9
	6.6nm,0.3s,baz=215,slow=20,SNR=5.6						
PMG				S	Sn	08 52 57.5	+1.0
	24nm,0.6s,baz=231,slow=18,SNR=5.7						
WRA	**Warramunga Arr**	**18.53**	**221**	P	P	08 55 35.3	+0.4
	1.5nm,0.5s,baz=46,slow=11,SNR=16					

QSPA	**South Pole Qui**	**78.78**	**180**	P	**P**	**09 51 05.7**	**+0.4**
QSPA	**South Pole Qui**	**78.78**	**180**	P	**P**	**09 51 09.2**	**+3.9**
	comp=Z,4.4nm,1.0s,baz=351,slow=1.2,SNR=17						
	comp=Z,4.4nm,1.0s						
M19K	**Big River Lodg**	**79.59**	**18**	P	**P**	**09 51 09.3**	**-0.2**
M19K				IAmb	IAmb	09 51 29.3	
	comp=Z,4.5nm,1.2s						
L19K	**White Mountain**	**79.66**	**18**	P	**P**	**09 51 09.1**	**-0.8**
L19K				IAmb	IAmb	09 51 21.8	
	comp=Z,3.5nm,1.0s						
ILAR	**Eielson Array**	**84.01**	**19**	P	**P**	**09 51 30.8**	**-1.9**
	comp=Z,0.3nm,0.7s,baz=232,slow=4.4,SNR=4.4						
	comp=Z,0.3nm,0.7s						
BBB	**Bella Bella**	**85.31**	**35**	LR	LR	10 25 25.4	
	comp=Z,18nm,18.4s,baz=190,slow=33						
NVAR	**Mina Array Bea**	**86.93**	**50**	LR	LR	10 23 20.3	
	comp=Z,24nm,19.5s,baz=271,slow=31						
PFO	**Pinyon Flats O**	**87.03**	**55**	LR	LR	10 28 24.9	
	comp=Z,22nm,18.2s,baz=288,slow=34						
BELA	**Belgrano 2**	**90.39**	**176**	P	**P**	**09 52 03.6**	**+0.1**
BELA				IAmb	IAmb	09 52 04.6	
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	**92.94**	**317**	P	**P**	**09 52 17.3**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=94,slow=5.9,SNR=2.7						
	comp=Z,0.3nm,0.6s						

IDC 02 09:49:17.4±1.5, 3°.85S×140°.20E, h0km, mb3.5/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=102.9km s-min=13.2km az=108.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.42**	**21**	Pg	Pn	09 49 42.9	-1.6
	5.5nm,0.3s,baz=237,slow=12,SNR=21						
JAY				Lg	Lg	09 50 03.7	
	10.0nm,0.3s,baz=124,slow=20,SNR=10						
WRA	**Warramunga Arr**	**16.98**	**199**	Pn	Pn	09 53 17.4	+0.9
	0.2nm,0.3s,baz=23,slow=8.7,SNR=5.1						
WRA				Sn	Sn	09 56 23.4	-2.7
	0.1nm,0.3s,baz=9.5,slow=22,SNR=2.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**20.62**	**197**	P	Pn	09 53 59.9	-0.8
	0.5nm,0.8s,baz=18,slow=9.1,SNR=12						
	0.5nm,0.8s						
VNDA	**Vanda**	**74.52**	**175**	P	P	10 00 56.9	-0.6
	0.3nm,0.5s,baz=332,slow=7.5,SNR=5.3						
	0.3nm,0.5s						
QSPA	**South Pole Qui**	**86.10**	**180**	P	P	10 02 00.0	-0.1
	1.2nm,1.1s,baz=48,slow=2.0,SNR=3.0						
	1.2nm,1.1s						

*SNET **02** 10:12:31.6±0.9, 12°.90N×88°.83W, h32km±6km, ML3.1*
CATAC 02 10:12:33.0±0.3, 13°N±3°×8°.9W±°, h40km±5km, M3.0/19, MLv3.0/19, 1D, Error ellipse: s-maj=6.5km s-min=2.4km az=21.5, confirmed, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.53**	**3**	*e*P	Pn	10 12 44.4	+0.2
TECO				*e*S	Sn	10 12 53.9	+1.7
TECO	**Alcaldia de Te**	**0.53**	**3**	P	Pn	10 12 44.5	+0.3
TECA	**Tecapa**	**0.57**	**31**	*e*P	Pn	10 12 45.5	+0.6
TECA				*e*S	Sn	10 12 55.2	+1.9
UESV	**Universidad de**	**0.63**	**2**	P	Pn	10 12 46.0	+0.4
UESV	**Universidad de**	**0.63**	**2**	S	Sn	10 12 56.5	+2.0
LCY	**Lacayo**	**0.65**	**50**	*e*P	Pn	10 12 46.4	+0.5
PACA	**Pacayal**	**0.66**	**45**	*e*P	Pn	10 12 46.8	+0.7
PACA	**Pacayal**	**0.66**	**45**	P	Pn	10 12 46.8	+0.8
PACA	**Pacayal**	**0.66**	**45**	S	Sn	10 12 57.9	+2.6
RANC	**El Ranchito**	**0.66**	**49**	*e*P	Pn	10 12 46.5	+0.4
PQSS	**Presa 15 de Se**	**0.66**	**21**	P	Pn	10 12 46.9	+1.0
PQSS	**Presa 15 de Se**	**0.66**	**21**	S	Sn	10 12 58.0	+2.8
LFRS	**El Faro**	**0.67**	**338**	*e*P	Pn	10 12 46.0	-0.1
LFRS				*e*S	Sn	10 12 56.9	+1.4
LALI	**Alcalda de L**	**0.70**	**314**	S	Sn	10 12 57.5	+1.4
LALI	**Alcalda de L**	**0.70**	**314**	P	Pn	10 12 47.4	+1.0
SCLA	**Alcaldia de Sa**	**0.70**	**6**	*e*P	Pn	10 12 47.0	+0.5
SCLA	**Alcaldia de Sa**	**0.70**	**6**	P	Pn	10 12 47.1	+0.6
SCLA	**Alcaldia de Sa**	**0.70**	**6**	S	Sn	10 12 58.5	+2.3
BLLM	**Bellamira**	**0.71**	**51**	*e*P	Pn	10 12 47.0	+0.4
PAVA	**Las Pavas**	**0.72**	**350**	*e*P	Pn	10 12 47.0	+0.2
PAVA	**Las Pavas**	**0.72**	**350**	P	Pn	10 12 47.2	+0.3
PAVA	**Las Pavas**	**0.72**	**350**	S	Sn	10 12 58.7	+2.0
LOMA	**Loma Larga**	**0.73**	**331**	*e*P	Pn	10 12 46.8	-0.2
LOMA	**Loma Larga**	**0.73**	**331**	P	Pn	10 12 46.8	-0.2
LOMA	**Loma Larga**	**0.73**	**331**	S	Sn	10 12 58.3	+1.2
LBRS	**Las Brisas**	**0.77**	**342**	*e*P	Pn	10 12 47.9	+0.5
UDBS	**Universidad Do**	**0.79**	**334**	P	Pn	10 12 48.1	+0.4
UDBS	**Universidad Do**	**0.79**	**334**	S	Sn	10 12 59.6	+1.3
IGN	**Direccin Gen**	**0.79**	**333**	S	Sn	10 12 59.4	+0.9
IGN	**Direccin Gen**	**0.79**	**333**	P	Pn	10 12 48.4	+0.7
UTEC	**Universidad Te**	**0.80**	**331**	P	Pn	10 12 48.2	+0.4
UTEC	**Universidad Te**	**0.80**	**331**	S	Sn	10 12 59.8	+1.2
LFU	**La Fuente**	**0.80**	**338**	*e*P	Pn	10 12 48.2	+0.3
UEES	**Universidad Ev**	**0.83**	**329**	S	Sn	10 13 00.2	+0.8
UEES	**Universidad Ev**	**0.83**	**329**	P	Pn	10 12 48.9	+0.6
PMON	**Piamonte**	**0.86**	**325**	*e*P	Pn	10 12 49.2	+0.4
PMON	**Piamonte**	**0.86**	**325**	P	Pn	10 12 49.5	+0.7
PMON	**Piamonte**	**0.86**	**325**	S	Sn	10 13 00.9	+0.6
JAYA	**Jayaque - finc**	**0.90**	**316**	*e*P	Pn	10 12 49.7	+0.3
JAYA	**Jayaque - finc**	**0.90**	**316**	P	Pn	10 12 50.0	+0.6
JAYA	**Jayaque - finc**	**0.90**	**316**	S	Sn	10 13 02.0	+0.7
LCND	**La Caada**	**0.94**	**71**	*e*P	Pn	10 12 50.3	+0.5
LCND	**La Caada**	**0.94**	**71**	S	Sn	10 13 02.3	+0.2
LCND	**La Caada**	**0.94**	**71**	P	Pn	10 12 50.3	+0.6
CEDA	**San Andres**	**0.98**	**324**	S	Sn	10 13 03.5	+0.4
CNCH	**Conchagua**	**0.98**	**74**	*e*P	Pn	10 12 50.3	-0.1
CNCH	**Conchagua**	**0.98**	**74**	P	Pn	10 12 50.4	-0.1
CNCH	**Conchagua**	**0.98**	**74**	S	Sn	10 13 04.4	+1.2
LLGN	**La Laguna**	**1.16**	**353**	P	Pn	10 12 52.9	0.0
LLGN	**La Laguna**	**1.16**	**353**	S	Sn	10 13 07.2	-0.4
CSGN	**Cosiguina Volc**	**1.22**	**91**	P	Pn	10 12 53.8	+0.2
CSGN				S	Sn	10 13 09.6	+0.7
POTN	**Potosi Cosigui**	**1.27**	**90**	P	Pn	10 12 54.4	+0.3
POTN				S	Sn	10 13 10.5	+0.5
NUBE	**Las Nubes**	**1.30**	**313**	*e*P	Pn	10 12 54.7	-0.2
NUBE	**Las Nubes**	**1.30**	**313**	P	Pn	10 12 54.6	-0.2
NUBE	**Las Nubes**	**1.30**	**313**	S	Sn	10 13 11.2	0.0
MARCA	**Marcala la Paz**	**1.37**	**33**	P	Pn	10 12 56.1	+0.3
MARCA	**Marcala la Paz**	**1.37**	**33**	S	Sn	10 13 12.3	-0.5
FAME	**Alcaldia de Sa**	**1.45**	**306**	S	Sn	10 13 14.1	-0.3
MTO3	**Montecristo**	**1.49**	**339**	S	Sn	10 13 16.5	+0.7
MTO3	**Montecristo**	**1.49**	**339**	P	Pn	10 12 57.5	0.0
SARH	**Santa Rosa de**	**1.77**	**1**	P	Pn	10 13 02.0	+0.9
PKGN	**Cerro Pekin**	**1.81**	**100**	P	Pn	10 13 02.4	+0.7
PKGN				S	Sn	10 13 23.9	+0.4
TGUH	**Tegucigalpa,Un**	**1.82**	**55**	P	Pn	10 13 02.2	+0.2
TGUH				S	Sn	10 13 23.7	-0.2
POLN	**Al Sur del Vol**	**1.97**	**100**	P	Pn	10 13 04.3	+0.4
POLN				S	Sn	10 13 25.3	-2.2
CNGN	**Cerro Negro**	**2.12**	**103**	S	Sn	10 13 31.6	+0.6
YUSH	**Yuscaran**	**2.13**	**63**	P	Pn	10 13 06.2	0.0
YUSH	**Yuscaran**	**2.13**	**63**	S	Sn	10 13 31.5	0.0

*CATAC **02** 10:41:01.8±0.7, 16°N±3°×9°.5W±°, h8km±4km, M4.1/6, MLv4.1/6, Error ellipse: s-maj=6.1km s-min=4.4km az=29.3, confirmed*
*MEX **02** 10:41:02.5±1.0, 16°.01N×95°.21W, h17km±92km, MD4.3*
ISC 02 10:41:00.2±2.7, 15°.90N±0°.04×95°.20W±0°.02, h21km±20km, n60, σ2°.47/103, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.88**	**262**	*e*P	**Pb**	**10 41 16.0**	**-0.8**
HUIG				*e*S	**Sb**	**10 41 27.7**	**-0.4**
UXUV	**UXUV**	**1.74**	**36**	*e*P	**Pn**	**10 41 28.4**	**-0.8**
UXUV				*e*S	**Sn**	**10 41 49.7**	**-1.0**
OXLC	**Oaxaca**	**1.85**	**309**	*e*P	**Pn**	**10 41 31.2**	**+0.4**
OXLC				*e*S	**Sn**	**10 41 53.6**	**-0.1**
OXBJ	**Oaxaca**	**1.86**	**309**	*e*P	**Pb**	**10 41 33.1**	**-0.6**
OXBJ				*e*S	**Sn**	**10 41 55.3**	**+1.2**
PEIG	**Puerto Escondi**	**1.87**	**273**	*e*P	**Pn**	**10 41 30.1**	**-0.9**
PEIG				*e*S	**Sn**	**10 41 52.7**	**-1.4**
VHO	**Vista Hermosa**	**1.87**	**309**	*e*P	**Pn**	**10 41 30.8**	**-0.4**
VHO				*e*S	**Sn**	**10 41 53.9**	**-0.5**
NEUV	**Arroyo Zacate**	**1.89**	**342**	*e*P	**Pn**	**10 41 29.1**	**-2.1**
NEUV				*e*S	**Sn**	**10 41 52.4**	**-2.1**
PCIG		**1.92**	**96**	*e*P	**Pn**	**10 41 30.6**	**-1.0**
PCIG				*e*S	**Sn**	**10 41 55.5**	**+0.3**
TGIG		**2.18**	**66**	*e*P	**Pn**	**10 41 35.3**	**-0.1**
TGIG				*e*S	**Sn**	**10 42 02.6**	**+0.8**
TGBT	**Tuxtla Gutierr**	**2.21**	**66**	*e*P	**Pb**	**10 41 39.3**	**-0.2**
TGBT				*e*S	**Sn**	**10 42 02.4**	**0.0**
TUIG	**Tuzandepetl**	**2.25**	**19**	*e*P	**Pn**	**10 41 36.5**	**+0.3**
TUIG				*e*S	**Sn**	**10 42 03.5**	**+0.2**
YOIG	**Yosondua**	**2.44**	**293**	*e*P	**Pn**	**10 41 39.6**	**+0.6**
YOIG				*e*S	**Sn**	**10 42 06.2**	**-2.2**
PMUV	**Sontecomapan**	**2.63**	**2**	*e*P	**Pn**	**10 41 39.5**	**-2.0**
PMUV				*e*S	**Sn**	**10 42 11.6**	**-1.3**
TXIG	**Tlaxiaco**	**2.80**	**299**	*e*P	**Pn**	**10 41 45.0**	**+0.9**
TXIG				*e*S	**Sn**	**10 42 19.6**	**+2.2**
TOIG	**Toxpalan**	**2.82**	**321**	*e*P	**Pn**	**10 41 46.2**	**+2.0**
TOIG				*e*S	**Sn**	**10 42 16.6**	**-1.0**
PNIG	**Pinotepa**	**2.85**	**280**	*e*P	**Pn**	**10 41 43.5**	**-1.0**
PNIG				*e*S	**Sn**	**10 42 16.4**	**-1.9**
PATR	**El Naranjo**	**2.97**	**105**	*e*P	**Pn**	**10 41 46.8**	**+0.5**
PATR				*e*S	**Sn**	**10 42 19.8**	**-1.6**
CCIG	**Comitan**	**2.97**	**82**	*e*P	**Pn**	**10 41 45.8**	**-0.5**
CCIG				*e*S	**Sn**	**10 42 22.2**	**+0.7**
CCIG	**Comitan**	**2.97**	**82**	IAML		10 42 34.0	
	comp=N,372nm,0.6s						
CCIG	**Comitan**	**2.97**	**82**	P	**Pn**	**10 41 46.9**	**+0.6**
CCIG	**Comitan**	**2.97**	**82**	S	**Sn**	**10 42 19.4**	**-2.1**
CCIG	**Comitan**	**2.97**	**82**	*e*S	**Sn**	**10 42 22.5**	**+1.0**
CCIG	**Comitan**	**2.97**	**82**	*e*P	**Pn**	**10 41 46.8**	**+0.6**
PAVE	**Pavencul**	**3.00**	**103**	*e*P	**Pn**	**10 41 48.0**	**+1.2**
PAVE				*e*S	**Sn**	**10 42 22.3**	**+0.1**
THIG		**3.00**	**109**	*e*P	**Pn**	**10 41 47.3**	**+0.8**
THIG				*e*S	**Sn**	**10 42 20.6**	**-1.2**
CHUJ	**Union Juarez**	**3.09**	**105**	*e*P	**Pn**	**10 41 48.4**	**+0.4**
CHUJ				*e*S	**Sn**	**10 42 24.4**	**-0.1**
HLIG	**Huajuapan de L**	**3.14**	**308**	*e*P	**Pn**	**10 41 51.4**	**+2.7**
HLIG				*e*S	**Sn**	**10 42 29.6**	**+3.8**
TPIG	**Tehuac#an**	**3.25**	**321**	*e*P	**Pn**	**10 41 50.8**	**+0.7**
TPIG				*e*S	**Sn**	**10 42 24.6**	**-3.5**
FTIG	**Fresnillo de T**	**3.44**	**306**	*e*P	**Pn**	**10 41 55.3**	**+2.6**
FTIG				*e*S	**Sb**	**10 42 38.6**	**-3.4**
HUEH	**Huehuetenango**	**3.61**	**99**	*e*P	**Pb**	**10 42 02.8**	**-0.8**
HUEH				*e*S	**Sn**	**10 42 39.0**	**+1.6**
TLIG	**Tlapa**	**3.62**	**298**	*e*P	**Pn**	**10 41 57.9**	**+2.7**
TLIG				*e*S	**Sb**	**10 42 44.4**	**-2.8**
TLIG	**Tlapa**	**3.62**	**298**	S	**Sb**	**10 42 45.7**	**-1.5**
TLIG	**Tlapa**	**3.62**	**298**	P	**Pb**	**10 42 01.2**	**-2.4**
RTAL	**Retalhuleu**	**3.65**	**112**	*e*P	**Pn**	**10 41 58.6**	**+3.1**
RTAL				*e*S	**Sn**	**10 42 35.6**	**-2.4**
RTAL	**Retalhuleu**	**3.65**	**112**	S	**Sn**	**10 42 38.4**	**+0.4**
JAUV	**Jalcomulco**	**3.77**	**336**	*e*P	**Pn**	**10 41 55.4**	**-1.8**
JAUV				*e*S	**Sn**	**10 42 40.5**	**-0.5**
CRIG	**Cruz Grande**	**3.86**	**283**	*e*P	**Pn**	**10 41 57.6**	**-0.8**
CRIG				*i* S	**Sn**	**10 42 37.3**	**-5.9**
LVIG	**Laguna Verde**	**3.97**	**343**	*e*P	**Pb**	**10 42 07.4**	**-2.2**
LVIG				*i* S	**Sn**	**10 42 47.0**	**+1.1**
DAIG	**Los Arroyos**	**4.41**	**285**	*e*P	**Pn**	**10 42 06.2**	**+0.3**
DAIG				*e*S	**Sn**	**10 42 53.7**	**-3.0**
PPCL	**Tochimilco**	**4.43**	**313**	*e*P	Pn	10 42 11.4	+5.0
PPCL				*e*S	**Sn**	**10 43 00.4**	**+2.9**
PPPT	**Popocatepetl**	**4.47**	**314**	*e*P	Pn	10 42 12.6	+5.3
PPPT				*e*S	**Sn**	**10 42 58.0**	**-1.0**
MEIG	**Mezcala**	**4.68**	**296**	*e*P	Pn	10 42 14.7	+5.0
MEIG				*e*S	**Sn**	**10 43 04.8**	**+1.3**
YAIG	**Yautepec**	**4.72**	**309**	*e*P	**Pn**	**10 42 14.5**	**+4.2**
YAIG				*e*S	**Sn**	**10 43 03.0**	**-1.5**
CXUV	**Coxquihui**	**4.82**	**332**	*e*P	Pn	10 42 03.7	-7.9
CXUV				*e*S	**Sn**	**10 42 58.1**	**-8.7**
MPVM	**San Francisco**	**4.89**	**313**	*e*P	**Pb**	**10 42 27.4**	**+2.0**
MPVM				*e*S	**Sb**	**10 43 26.2**	**+2.2**
SCIG	**Sabancuy**	**4.90**	**51**	S	**Sn**	**10 43 05.1**	**-3.6**
SCIG	**Sabancuy**	**4.90**	**51**	P	**Pn**	**10 42 12.5**	**-0.2**
CAIG	**El Cayaco**	**4.99**	**284**	*e*P	**Pn**	**10 42 14.6**	**+0.6**
CAIG				*e*S	**Sn**	**10 43 08.4**	**-2.6**
TLVM	**San Miguel Top**	**5.00**	**312**	*e*P	**Pb**	**10 42 27.4**	**+0.1**
TLVM				*i* S	**Sb**	**10 43 30.7**	**+3.5**
XCVM	**Xochimilco**	**5.00**	**312**	*e*P	Pn	10 42 08.4	-5.9
XCVM				*e*S	**Sb**	**10 43 22.4**	**-4.7**
MZVM		**5.04**	**311**	*e*P	**Pb**	**10 42 29.1**	**+1.3**
MZVM				*e*S	**Sb**	**10 43 27.9**	**-0.1**
UNM	**Universidad Na**	**5.10**	**313**	*e*P	**Pn**	**10 42 19.9**	**+4.3**
UNM				*e*S	**Sn**	**10 43 15.1**	**+1.1**
MAVM	**Malinalco, Edo**	**5.10**	**307**	*e*P	**Pb**	**10 42 27.2**	**-1.7**
MAVM				*e*S	**Sn**	**10 43 21.4**	**+7.4**
VTVM	**Tizayuca**	**5.14**	**319**	*e*P	**Pb**	**10 42 29.8**	**+0.3**
VTVM				*e*S	**Sb**	**10 43 34.8**	**+3.8**
AOVM	**Tlapan**	**5.16**	**311**	*e*P	**Pb**	**10 42 29.4**	**-0.7**
AOVM				*e*S	**Sb**	**10 43 34.3**	**+2.4**
CJVM	**Cuajimalpa**	**5.20**	**312**	*e*P	**Sn**	**10 43 12.5**	**-3.9**
CJVM				*i* S	**Sb**	**10 43 37.9**	**+5.3**
INVM	**La Marquesa**	**5.22**	**311**	*e*P	**Pb**	**10 42 29.2**	**-1.8**
INVM				*e*S	**Sb**	**10 43 35.5**	**+2.0**
PETF	**Flores**	**5.22**	**78**	*e*P	**Pn**	**10 42 16.3**	**-0.8**
PETF				*e*S	**Sn**	**10 43 13.5**	**-3.2**
ARIG	**Puente Sto Nin**	**5.46**	**296**	*e*P	**Pn**	**10 42 22.0**	**+1.6**
ARIG				*e*S	**Sn**	**10 43 30.3**	**+7.7**
MYIG	**Merida**	**7.22**	**45**	S	**Sn**	**10 44 04.2**	**-1.9**

GCG 02 10:41:06.8±1.8, 13°.84N×91°.07W, h88km±21km, MD3.4, ML3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.58**	**23**	*e*P	Pn	10 41 22.4	+0.3
ESSJ	**San Jos, E**	**0.61**	**117**	*i* P	Pn	10 41 19.4	-2.9
STG2	**El Palmar, Qui**	**0.66**	**333**	*e*P	Pn	10 41 27.8	+4.9
FG16	**Alotenango, Sa**	**0.69**	**51**	*e*P	Pn	10 41 23.5	+0.3
SOKI	**Kika Raxquin**	**1.03**	**341**	*e*P	Pn	10 41 28.4	+1.3
SOKI				*e*S	Sn	10 41 43.6	+1.4
NUBE	**Las Nubes**	**1.25**	**87**	*e*P	Pn	10 41 30.5	+1.0
NUBE				*e*S	Sn	10 41 47.3	+0.8

*DJA **02** 11:13:44.0±0.2, 3°.S±2°×12°.8E±°, h10km, M4.2/14, mB5.2/2, mb4.5/6, MLv4.0/14, Mw(mB)4.6/2*
*IDC **02** 11:13:49.1±3.9, 3°.13S×127°.99E, h71km±33km, mb3.5/5, mbtmp3.9/8, ML3.8/3, MS2.8/2, Error ellipse: s-maj=56.1km s-min=11.6km az=66.0*
ISC 02 11:13:46.1±0.8, 3°.03S±0°.06×127°.86E±0°.05, h38km, n18, σ1°.62/23, mb3.8/5, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.73**	**153**	P	**Pn**	**11 13 59.2**	**-0.7**
NLAI	**Namlea**	**0.79**	**255**	P	**Pn**	**11 14 00.4**	**-0.3**
NLAI				S	**Sn**	**11 14 10.6**	**-0.7**
MSAI	**Masohi**	**1.11**	**107**	P	**Pn**	**11 14 05.7**	**+0.6**
MSAI				S	**Sn**	**11 14 21.1**	**+2.0**
SANI	**Sanana**	**2.11**	**297**	P	**Pn**	**11 14 17.4**	**-1.4**
LBMI	**Labuha**	**2.40**	**351**	P	**Pn**	**11 14 22.4**	**-0.5**
BNDI	**Bandanaira**	**2.52**	**126**	P	**Pn**	**11 14 27.3**	**+2.8**
SWI	**Sorong**	**4.02**	**58**	P	**Pn**	**11 14 45.3**	**+0.2**
SWI				S	**Sn**	**11 15 31.4**	**+0.5**
FAKI	**Fak Fak**	**4.38**	**89**	P	**Pn**	**11 14 49.6**	**-0.5**
LUWI	**Luwuk**	**5.46**	**291**	P	**Pn**	**11 15 05.1**	**+0.2**
	3µm96nm,0.7s						
APSI	**Ampana**	**6.56**	**289**	P	**Pn**	**11 15 21.7**	**+1.7**
KAPI	**Kappang**	**8.33**	**256**	P	**Pn**	**11 15 48.2**	**+3.9**
	1.3nm,0.3s,baz=74,slow=15,SNR=4.3						
KAPI				LR	LR	11 19 19.0	
	comp=Z,88nm,19.1s,baz=76,slow=39						
	7.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.13**	**188**	P	**Pn**	**11 17 19.0**	**+1.8**
	0.1nm,0.3s,baz=340,slow=15,SNR=2.4						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**17.96**	**160**	P	**Pn**	**11 17 52.6**	**-0.3**
	0.6nm,0.3s,baz=334,slow=13,SNR=15						
WRA				S	**Sn**	**11 21 11.1**	**-1.2**
	0.3nm,0.5s,baz=338,slow=22,SNR=1.8						
	1.3nm,0.4s						
ASAR	**Alice Springs**	**21.33**	**165**	P	**P**	**11 18 29.8**	**-0.2**
	3.5nm,0.5s,baz=346,slow=12,SNR=67						
ASAR				S	**S**	**11 22 21.5**	**-3.5**
	0.5nm,0.6s,baz=349,slow=24,SNR=5.0						
ASAR				LR	LR	11 28 24.0	
	comp=Z,14nm,18.4s,baz=252,slow=41						
	3.5nm,0.5s						
MKAR	**Makanchi Array**	**63.76**	**327**	P	**P**	**11 24 14.8**	**+0.6**
	0.6nm,0.8s,baz=142,slow=7.2,SNR=5.7						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**68.03**	**329**	P	**P**	**11 24 41.9**	**+0.3**
	0.8nm,0.7s,baz=130,slow=5.8,SNR=10						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**73.59**	**328**	P	**P**	**11 25 14.8**	**-0.5**
	0.5nm,0.5s,baz=99,slow=7.4,SNR=2.2						
	0.5nm,0.5s						
QSPA	**South Pole Qui**	**86.92**	**180**	P	**P**	**11 26 26.5**	**-0.4**
	0.5nm,1.0s,baz=331,slow=2.9,SNR=1.2						
	0.5nm,1.0s						

*SKO **02** 11:16:44.7, 41°.82N×20°.96E, h13km, ML3.3*
*THE **02** 11:16:44.1, 42°N±11°×2°.1E±1°.4, h2km±35km, M2.8/7, MLh2.8/7*
*BEO **02** 11:16:44.6±0.4, 41°.91N×20°.95E, h9km±4km, ML2.9/10*
*PDG **02** 11:16:45.0±0.3, 41°.97N×20°.94E, h7km, MD3.2/2, ML3.1/13, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*
*SOF **02** 11:16:55.1, 41°.99N±0°.06×21°.8E±0°.2, h20km±9km, MD2.6/6*
ISC 02 11:16:45.0±1.0, 41°.88N±0°.02×20°.96E±0°.02, h13km±9km, n106, σ1°.03/155, 14C-20D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.37**	**75**	*i* Pg	**Pg**	**11 16 52.5**	**0.0**
SKO				*i* Sg	**Sg**	**11 16 58.1**	**+0.5**
OHR	**Ohrid**	**0.78**	**189**	*i* Pg	**Pg**	**11 16 59.0**	**-1.1**
OHR				*i* Sg	**Sb**	**11 17 11.2**	**+0.3**
OHR				*e*Lg	Lg	11 17 11.6	
	comp=E,2µm,0.5s						
OHR				*e*Lg	Lg	11 17 12.5	
	comp=N,776nm,0.4s						
TIR	**Tirane**	**0.98**	**237**	*i* Pg	**Pb**	**11 17 03.1**	**-0.6**
TIR				*i* Sg	**Sg**	**11 17 13.3**	**+0.7**
PVY	**Plav**	**1.03**	**314**	⇓*i* Pg	**Pb**	**11 17 01.8**	**-3.0**
PVY				*i* Sg	**Sb**	**11 17 15.7**	**-2.5**
KBN	**Korca**	**1.26**	**186**	P	**Pn**	**11 17 08.2**	**-0.2**
KBN				S	**Sg**	**11 17 26.3**	**+0.7**
IVA	**Berane**	**1.27**	**322**	⇓*i* Pg	**Pn**	**11 17 06.1**	**-2.4**
IVA				*i* Sg	**Sb**	**11 17 24.0**	**-1.0**
ULC	**Ulcinj**	**1.28**	**274**	⇑*i* Pg	**Pn**	**11 17 06.8**	**-1.8**
ULC				*i* Sg	**Sg**	**11 17 26.7**	**+0.4**
BOSS	**Bosilegrad**	**1.29**	**61**	*e*Pg	**Pn**	**11 17 08.5**	**-0.3**
BOSS				*e*Sg	**Sb**	**11 17 25.1**	**-0.5**
VAY	**Valandovo**	**1.33**	**114**	*i* Pg	**Pb**	**11 17 09.6**	**-0.2**
VAY				*i* Sg	**Sg**	**11 17 27.6**	**-0.3**
VAY				*e*Lg	Lg	11 17 28.4	
	comp=E,212nm,0.6s						
VAY				*e*Lg	Lg	11 17 28.7	
	comp=N,470nm,0.7s						
SELS	**Selova**	**1.34**	**5**	*e*Pg	**Pn**	**11 17 08.6**	**-0.9**
SELS				*e*Sg	**Sb**	**11 17 26.2**	**-1.0**
DRME	**Dracevica, Mon**	**1.35**	**284**	*e*Pg	**Pn**	**11 17 08.2**	**-1.4**
DRME				*e*Sg	**Sb**	**11 17 28.0**	**+0.5**
DRME	**Dracevica, Mon**	**1.35**	**284**	⇓*i* Pg	**Pn**	**11 17 08.9**	**-0.7**
DRME				*i* Sg	**Sb**	**11 17 28.0**	**+0.5**
PDG	**Podgorica**	**1.38**	**294**	⇑P	**Pn**	**11 17 08.6**	**-1.3**
PDG				⇑S	**Sn**	**11 17 26.8**	**-1.2**
PDG	**Podgorica**	**1.38**	**294**	*e*Pg	**Pn**	**11 17 08.5**	**-1.4**
PDG				*e*Sg	**Sn**	**11 17 28.3**	**+0.2**
PDG	**Podgorica**	**1.38**	**294**	⇑*i* Pg	**Pn**	**11 17 08.3**	**-1.6**
PDG		

	comp=N,1.8nm,0.3s								
CADS	**Cadrg**	**6.78**	**312**	*i* Pn	**Pn**	**11**	**18**	**25.6**	**+1.4**
ROBS	**Robic**	**6.91**	**312**	*i* Pn	**Pn**	**11**	**18**	**26.3**	**+0.3**
MODS	**Modra-Piesok**	**6.99**	**339**	*e*PN	**Pn**	**11**	**18**	**27.4**	**+0.3**
MODS				*e*SN	**Sn**	**11**	**19**	**44.3**	**-2.2**
CONA	**Conrad Observa**	**7.04**	**331**	*e*Pn	**Pn**	**11**	**18**	**27.5**	**-0.4**
	comp=N,0.5nm,0.3s								
CONA				*e*Sn	**Sn**	**11**	**19**	**49.8**	**+1.9**
	comp=N,1.8nm,0.6s								
MYKA	**Terra Mystica**	**7.08**	**315**	*i* Pn	**Pn**	**11**	**18**	**28.2**	**-0.1**
	comp=N,1.3nm,0.3s								
MYKA				*e*Sn	**Sn**	**11**	**19**	**50.1**	**+1.4**
	comp=N,1.7nm,0.4s								
KBA	**Koelnbreinsper**	**7.52**	**316**	*i* Pn	**Pn**	**11**	**18**	**35.8**	**+1.2**
	comp=N,1.6nm,0.4s								
KBA				*i* Sn	**Sn**	**11**	**19**	**59.3**	**-0.5**
	comp=N,1.4nm,0.5s								
MOA	**Molln**	**7.63**	**324**	*e*Pn	**Pn**	**11**	**18**	**36.8**	**+1.0**
	comp=N,0.5nm,0.2s								
MOA				*i* Sn	**Sn**	**11**	**20**	**03.7**	**+1.6**
	comp=N,1.1nm,0.3s								
ABTA	**Abfaltersbach**	**7.77**	**312**	*e*Pn	**Pn**	**11**	**18**	**38.5**	**+0.7**
	comp=N,1.7nm,0.2s								
ABTA				*e*Sn	**Sn**	**11**	**20**	**05.1**	**-0.5**
	comp=N,2.8nm,0.5s								
LESA	**Schwarzleotal**	**8.09**	**316**	*i* Pn	**Pn**	**11**	**18**	**43.7**	**+1.4**
	comp=N,5.2nm,0.5s								
WTTA	**Wattenberg**	**8.55**	**312**	*i* Pn	**Pn**	**11**	**18**	**50.0**	**+1.4**
	comp=N,4.1nm,0.6s								
WTTA				*i* Sn	**Sn**	**11**	**20**	**26.6**	**+1.5**
	comp=N,4.2nm,0.6s								
WATA	**Walderalm**	**8.63**	**312**	*e*Pn	**Pn**	**11**	**18**	**51.4**	**+1.7**
	comp=N,4.2nm,0.5s								
WATA				*i* Sn	**Sn**	**11**	**20**	**28.1**	**+1.2**
	comp=N,4.8nm,0.5s								
SQTA	**Sankt Quirin**	**8.77**	**311**	*i* Pn	**Pn**	**11**	**18**	**52.2**	**+0.6**
	comp=N,1.6nm,0.2s								
SQTA				*i* Sn	**Sn**	**11**	**20**	**30.5**	**+0.2**
	comp=N,2.6nm,0.5s								
MOTA	**Moosalm**	**8.90**	**311**	*i* Pn	**Pn**	**11**	**18**	**54.2**	**+0.8**
	comp=N,2.1nm,0.3s								
MOTA				*i* Sn	**Sn**	**11**	**20**	**33.2**	**-0.3**
	comp=N,3.4nm,0.5s								
FETA	**Feichten**	**8.94**	**309**	*i* Pn	**Pn**	**11**	**18**	**52.7**	**-1.2**
	comp=N,1.1nm,0.5s								
FETA				*i* Sn	**Sn**	**11**	**20**	**34.5**	**0.0**
	comp=N,1.0nm,0.5s								
DAVA	**Damuels**	**9.57**	**308**	*e*Pn	**Pn**	**11**	**19**	**04.5**	**+1.9**
	comp=N,2.1nm,0.5s								

SOME ***02*** *11:27:55.4, 40˚.93N×80˚.07E, h10km*
NNC ***02*** *11:27:56.6±6.1, 40˚.89N×80˚.02E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=49.6km s-min=38.4km az=51.0*
KRNET ***02*** *11:27:59.0±0.1, 41˚.05N×79˚.91E, mb3.1*
ISC 02 11:28:01.1±2.3, **41˚.06N**±0˚.10×**79˚.89E**±0˚.08, **h10**km, **n16**, σ1**s51**/27, **7C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.70**	**294**	⇓*e*P	**Pb**	**11**	**28**	**31.1**	**-1.7**
TARG				⇓*e*S	**Sb**	**11**	**28**	**54.3**	**-0.1**
PRZ	**Przheval'sk**	**1.80**	**322**	⇓*e*P	**Pb**	**11**	**28**	**32.9**	**-1.5**
PRZ				⇓*e*S	**Sb**	**11**	**28**	**57.5**	**+0.4**
SHLS	**Shalkode**	**2.12**	**352**	Pg	**Pb**	**11**	**28**	**38.1**	**-1.6**
	24nm,0.5s								
SHLS				Lg	Lg	11	29	08.9	
	24nm,0.4s								
SHLS	**Shalkode**	**2.12**	**352**	*e*P	**Pb**	**11**	**28**	**38.1**	**-1.6**
	24nm,0.5s								
SHLS				*e*S	**Sg**	**11**	**29**	**08.9**	**-0.3**
	24nm,0.4s								
UZB	**Uzynbulak**	**2.18**	**343**	Pg	**Pb**	**11**	**28**	**38.9**	**-1.9**
	8.9nm,0.5s								
UZB				Lg	Lg	11	29	10.3	
	9.4nm,0.7s								
UZB	**Uzynbulak**	**2.18**	**343**	*e*P	**Pb**	**11**	**28**	**38.9**	**-1.9**
	8.9nm,0.5s								
UZB				*e*S	**Sg**	**11**	**29**	**10.3**	**-1.0**
	9.4nm,0.7s								
SATY	**Saty**	**2.28**	**332**	Pg	**Pb**	**11**	**28**	**41.0**	**-1.4**
	7.3nm,0.5s								
SATY				Lg	Lg	11	29	13.8	
	7.7nm,0.3s								
PDGK	**Podgornoye**	**2.29**	**353**	⇓Pn	**Pb**	**11**	**28**	**40.1**	**-2.5**
	2.4nm,0.5s								
PDGK				⇓Sn	**Sb**	**11**	**29**	**13.0**	**+2.1**
	6.4nm,0.6s								
KDJ	**Kajisay**	**2.29**	**299**	⇓*e*P	**Pn**	**11**	**28**	**39.8**	**+0.6**
KDJ				⇓*e*S	**Sb**	**11**	**29**	**09.5**	**-1.7**
KPKS	**Kokpek**	**2.56**	**340**	Pg	**Pb**	**11**	**28**	**45.7**	**-1.6**
	0.3nm,0.3s								
KPKS				Lg	Lg	11	29	21.5	
	14nm,0.5s								
KURS	**Kuram**	**2.74**	**333**	Pg	**Pb**	**11**	**28**	**49.3**	**-0.9**
	4.2nm,0.9s								
KURS				Lg	Lg	11	29	27.8	
	8.2nm,0.8s								
ULHL	**Ulahol**	**2.98**	**295**	⇑*e*P	**Pn**	**11**	**28**	**49.4**	**+0.8**
ULHL				⇑*e*S	**Sn**	**11**	**29**	**26.1**	**+1.6**
JNKS	**Jany-Kuch**	**3.20**	**271**	⇑*e*P	**Pn**	**11**	**28**	**52.5**	**+0.8**
JNKS				⇑*e*S	**Sn**	**11**	**29**	**31.5**	**+1.4**
BOOM	**Boomskoye usch**	**3.28**	**297**	⇓*e*P	**Pn**	**11**	**28**	**53.6**	**+0.9**
BOOM				⇓*e*S	**Sn**	**11**	**29**	**33.9**	**+2.0**
ARLS	**Aral**	**4.26**	**283**	⇑*e*P	**Pn**	**11**	**29**	**06.9**	**+0.7**
ARLS				⇑*e*S	**Sn**	**11**	**29**	**56.5**	**+0.5**
MK31	**Makanchi Array**	**5.99**	**16**	⇑Pn	**Pn**	**11**	**29**	**29.7**	**-0.1**
	0.5nm,0.2s,baz=185,slow=13,SNR=17								
MK31				⇓Sn	**Sn**	**11**	**30**	**40.9**	**+2.5**
	0.2nm,0.2s,baz=187,slow=27								

KOLA 02 11:35:47.7, 67˚.49N×30˚.51E, h0km, ML1.5, Error ellipse: s-maj=6.3km s-min=3.2km az=50.0, Murmansk region, Kovdor district, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.96**	**82**	P		Pg	11 36 03.3	-2.8
APA0				S		Sg	11 36 17.2	-1.3
KVDA	**Kovda**	**1.22**	**130**	P		Pg	11 36 08.8	-2.4
KVDA				S		Sg	11 36 26.1	-0.9
LVZ	**Lovozero**	**1.63**	**74**	S		Sn	11 36 39.1	-0.4
TERR	**Teriberka**	**2.42**	**43**	S		Sn	11 36 58.0	-0.8

BER ***02*** *11:36:17.7±1.3, 67˚.28N×31˚.55E, h0km, ML1.7, Suspected explosion*
KOLA ***02*** *11:36:23.5, 67˚.53N×30˚.53E, h0km, ML2.2, Error ellipse: s-maj=4.5km s-min=2.7km az=20.0, Kovdor City, Mines*
HEL 02 11:36:22.7±0.3, **67˚.58N×30˚.37E, h0**km, **ML1.8, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.34**	**301**	PG		Pg	11 36 28.4	-0.7
	baz=122							
VRF				SG		Sg	11 36 33.0	-0.5
APA0	**Apatity Array**	**1.01**	**87**	P		Pg	11 36 40.6	-1.3
APA0				S		Sg	11 36 52.6	-2.4
APA	**Apatity**	**1.17**	**89**	S		Sg	11 36 57.5	-2.6
RAJF	**Raja-Jooseppi**	**1.19**	**320**	PG		Pg	11 36 44.1	-1.3
RAJF				SN		Sb	11 37 02.2	+0.2
OLKF	**Oulanka, Finla**	**1.32**	**197**	smax		smax	11 37 02.4	
	comp=Z,7.1nm,0.2s							
OLKF				SN		Sn	11 37 06.9	+0.3
KVDA	**Kovda**	**1.32**	**131**	P		Pg	11 36 45.1	-2.9
KVDA				S		Sg	11 37 03.0	-2.0
KU6	**Riekki**	**1.57**	**187**	PG		Pn	11 36 50.5	-1.3
KU6				smax		smax	11 37 09.6	
	comp=Z,4.4nm,0.2s							
KU6				SN		Sn	11 37 12.0	-0.7
LVZ	**Lovozero**	**1.66**	**77**	S		Sn	11 37 12.0	-3.2
MSF	**Maaselka**	**1.75**	**198**	PG		Pn	11 36 54.6	+0.3
MSF				SN		Sn	11 37 17.1	-0.2
RNF	**Rovaniemi**	**1.96**	**242**	PG		Pn	11 36 57.4	+0.2
RNF				SG		Sg	11 37 25.0	-0.6
KU1	**Kurvinen**	**2.05**	**189**	PG		Pn	11 36 58.9	+0.5
KU2	**Taivalkoski**	**2.06**	**205**	PG		Pn	11 36 59.4	+0.9
	baz=28							
RANF	**Ranua**	**2.12**	**224**	PG		Pn	11 36 60.0	+0.7
RANF				SG		Sb	11 37 27.8	-0.8
TERR	**Teriberka**	**2.40**	**45**	S		Sn	11 37 33.5	+0.4
KEV	**Kevo**	**2.51**	**332**	*e*P		Pn	11 37 03.6	-1.1
KEV	**Kevo**	**2.51**	**332**	PN		Pn	11 37 02.6	-2.1
KEV				SB		Sn	11 37 37.9	+2.0
VADS	**Vadso**	**2.58**	**352**	S		Pn	11 37 04.1	-1.6
VADS	**Vadso**	**2.58**	**352**	S		Sb	11 37 40.3	-1.7
VADS	**Vadso**	**2.58**	**352**	*e*P		Pn	11 37 04.3	-1.4
VADS				IAML			11 37 44.2	
	comp=Z,10.0nm,0.3s							
ARA0	**ARCESS Array S**	**2.66**	**320**	*e*P		Pn	11 37 07.4	+0.6
ARA0				IAML			11 37 45.7	
	comp=Z,4.4nm,0.2s							
ARA0	**ARCESS Array S**	**2.66**	**320**	PB		Pn	11 37 08.0	+1.3
ARA0				SG		Sb	11 37 45.6	+1.4
ARCES	**ARCESS Array B**	**2.66**	**320**	P		Pn	11 37 08.0	+1.3
ARCES				S		Sn	11 37 40.9	+1.3
HEF	**Hetta**	**2.66**	**291**	*e*P		Pn	11 37 07.6	+0.8
HEF	**Hetta**	**2.66**	**291**	PB		Pn	11 37 08.9	+2.1
HEF				smax		smax	11 37 41.0	
	comp=Z,5.9nm,0.2s							
HEF				SB		Sb	11 37 43.0	-1.3
TOF	**Tornio**	**2.82**	**241**	smax		smax	11 37 45.6	
	comp=Z,1.9nm,0.2s							
TOF				SG		Sb	11 37 49.2	+0.3
KTK1	**Kautokeino**	**3.02**	**302**	*e*P		Pn	11 37 11.7	+0.1
KTK1				IAML			11 37 57.6	
	comp=Z,4.2nm,0.3s							
KTK1	**Kautokeino**	**3.02**	**302**	PB		Pn	11 37 13.6	+2.0
KTK1				SG		Sb	11 37 55.9	+1.4
OUL	**Oulu**	**3.08**	**218**	PG		Pb	11 37 18.9	+0.5
	baz=30							
OUL				SG		Sg	11 37 59.1	-2.6
LANU	**Lannavaara**	**3.21**	**282**	*e*P		Pn	11 37 14.7	+0.3
LANU	**Lannavaara**	**3.21**	**282**	PN		Pn	11 37 15.1	+0.8
LANU				SB		Sb	11 37 59.4	-0.8
KALU	**Kalix**	**3.27**	**241**	SG		Sb	11 38 03.1	+1.2
ERTU	**Ertsjaerv**	**3.36**	**256**	PN		Pn	11 37 16.7	+0.3
RMF	**Romuvaara**	**3.38**	**183**	PN		Pn	11 37 16.2	-0.4
OBF4	**Vikkela, Lumij**	**3.50**	**220**	PN		Pn	11 37 18.4	+0.2
KIF	**Kilpisjarvi**	**3.83**	**296**	*e*P		Pn	11 37 23.0	+0.2
KIF	**Kilpisjarvi**	**3.83**	**296**	PN		Pn	11 37 23.6	+0.8
KIF				SN		Sn	11 38 09.7	+1.3
KOVU	**Salmi**	**3.91**	**284**	*e*P		Pn	11 37 23.7	-0.3
OBF0	**Syolatti, Pyha**	**3.98**	**222**	PN		Pn	11 37 24.4	-0.4
	baz=37							
JETT	**Jettan, Norway**	**4.16**	**303**	*e*P		Pn	11 37 28.9	+1.6
SALU	**Saltoluokta**	**4.57**	**273**	*e*P		Pn	11 37 32.4	-0.6
FAUS	**Fauske**	**5.80**	**275**	P		Pn	11 37 49.4	-0.4
FAUS				S		Sn	11 38 55.2	-1.6

CATAC ***02*** *11:46:19.4±0.5, 14˚.N×3˚×9˚2W±˚, h30km±3km, M3.6/14, MLv3.6/14, Error ellipse: s-maj=6.8km s-min=3.0km az=38.2, confirmed*
GCG ***02*** *11:46:20.2±1.4, 14˚.20N×91˚.94W, h43km±22km, MD4.0, ML4.0*
SNET ***02*** *11:46:23.9±0.9, 14˚.46N×91˚.41W, h2km±5km, ML3.5*
ISC 02 11:46:19.7±1.9, **14˚.15N**±0˚.06×**91˚.94W**±0˚.07, **h27**km±12km, **n41**, σ1**s83**/53, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.44**	**33**	*e*P		**Pn**	**11**	**46**	**30.8**	**+0.4**
RTAL				*e*S		**Sb**	**11**	**46**	**35.2**	**-0.3**
RTAL	**Retalhuleu**	**0.44**	**33**	P		**Pn**	**11**	**46**	**30.9**	**+0.5**
RTAL				S		**Sn**	**11**	**46**	**39.6**	**+2.1**
STG2	**El Palmar, Qui**	**0.62**	**63**	*i* P		**Pb**	**11**	**46**	**32.5**	**+0.4**
SMCA	**Catarina**	**0.71**	**350**	*i* P		**Pb**	**11**	**46**	**33.0**	**-0.6**
SMCA				*e*S		**Sb**	**11**	**46**	**42.7**	**-0.4**
QUEO	**Labor Ovalle**	**0.83**	**30**	*i* P		**Pn**	**11**	**46**	**35.7**	**-0.2**
QUEO				*e*S		**Sn**	**11**	**46**	**47.8**	**+0.3**
QUEO				IAML			11	46	48.2	
	comp=N,6µm,0.4s									
SOKI	**Kika Raxquin**	**0.85**	**38**	*i* P		**Pn**	**11**	**46**	**36.0**	**-0.3**
SOKI				*e*S		**Sb**	**11**	**46**	**48.1**	**+0.9**
SOKI				IAML			11	46	53.5	
	comp=E,2µm,0.6s									
ESSG	**Sabana Grande**	**1.10**	**78**	*e*P		**Pn**	**11**	**46**	**39.1**	**-0.4**
HUEH	**Huehuetenango**	**1.24**	**20**	*e*P		**Pn**	**11**	**46**	**41.2**	**-0.3**
HUEH				*e*S		**Sn**	**11**	**46**	**54.9**	**-2.5**
HUEH	**Huehuetenango**	**1.24**	**20**	*e*P		**Pn**	**11**	**46**	**41.3**	**-0.1**
HUEH				*e*S		**Sb**	**11**	**46**	**58.4**	**+0.2**
HUEH				IAML			11	47	05.1	
	comp=E,2µm,0.8s									
HUEH	**Huehuetenango**	**1.24**	**20**	P		**Pn**	**11**	**46**	**41.4**	**-0.1**
HUEH	**Huehuetenango**	**1.24**	**20**	S		**Sn**	**11**	**46**	**57.5**	**+0.1**
FG16	**Alotenango, Sa**	**1.40**	**85**	*e*P		**Pn**	**11**	**46**	**39.4**	**-4.2**
FG16				*e*S		**Sn**	**11**	**46**	**54.3**	**-7.0**
FG16				IAML			11	46	58.9	
	comp=E,11µm,0.2s									
PCG5	**San Vicente Pa**	**1.52**	**87**	*e*P		**Pn**	**11**	**46**	**41.8**	**-3.5**
PCG5				*e*S		**Sn**	**11**	**46**	**58.8**	**-5.6**
APG	**El Apazote**	**1.67**	**59**	*e*P		**Pn**	**11**	**46**	**48.2**	**+0.8**
APG				*e*S		**Sn**	**11**	**47**	**09.9**	**+1.9**
FAME	**Alcaldia de Sa**	**1.90**	**99**	P		**Pn**	**11**	**46**	**50.2**	**-0.1**
FAME	**Alcaldia de Sa**	**1.90**	**99**	S		**Sn**	**11**	**47**	**13.1**	**-0.3**
AVCB	**Coban**	**1.98**	**48**	*e*S		**Sb**	**11**	**47**	**20.2**	**+0.6**
AVCB				IAML			11	47	21.9	
	comp=E,2µm,0.6s									
LOAL	**Lomas de Alarc**	**2.10**	**94**	S		**Sn**	**11**	**47**	**20.1**	**+1.5**
NUBE	**Las Nubes**	**2.11**	**96**	*e*P		**Pn**	**11**	**46**	**53.7**	**+0.3**
NUBE				*e*S		**Sn**	**11**	**47**	**16.6**	**-2.4**
NUBE	**Las Nubes**	**2.11**	**96**	*e*P		**Pn**	**11**	**46**	**53.8**	**+0.3**
NUBE	**Las Nubes**	**2.11**	**96**	P		**Pn**	**11**	**46**	**54.1**	**+0.6**
NUBE	**Las Nubes**	**2.11**	**96**	S		**Sn**	**11**	**47**	**19.6**	**+0.6**
CCIG	**Comitan**	**2.13**	**355**	*e*P		**Pn**	**11**	**46**	**53.0**	**-0.7**
CCIG				IAML			11	47	29.3	
	comp=N,221nm,0.3s									
CCIG	**Comitan**	**2.13**	**355**	S		**Sn**	**11**	**47**	**18.6**	**-0.8**
CCIG	**Comitan**	**2.13**	**355**	P		**Pn**	**11**	**46**	**55.0**	**+1.3**
RTR	**El Retiro**	**2.24**	**96**	*e*P		**Pn**	**11**	**46**	**56.7**	**+1.4**
CEVE	**Cerro Verde**	**2.27**	**98**	S		**Sn**	**11**	**47**	**25.3**	**+2.2**
UNIC	**Universidad Ca**	**2.33**	**94**	S		**Sn**	**11**	**47**	**25.2**	**+1.0**
JAYA	**Jayaque - finc**	**2.47**	**101**	*e*P		**Pn**	**11**	**46**	**58.7**	**+0.4**
JAYA				*e*S		**Sn**	**11**	**47**	**27.1**	**-0.7**
JAYA				IAML			11	47	30.1	
	comp=Z,318nm,0.2s									
JAYA	**Jayaque - finc**	**2.47**	**101**	*e*P		**Pn**	**11**	**46**	**58.8**	**+0.4**
JAYA	**Jayaque - finc**	**2.47**	**101**	P		**Pn**	**11**	**46**	**59.0**	**+0.6**
JAYA	**Jayaque - finc**	**2.47**	**101**	S		**Sn**	**11**	**47**	**28.9**	**+1.0**
MTO3	**Montecristo**	**2.52**	**84**	P		**Pn**	**11**	**46**	**59.3**	**+0.3**
ESQI	**Esquipulas**	**2.55**	**81**	P		**Pn**	**11**	**47**	**00.0**	**+0.5**
PMON	**Piamonte**	**2.59**	**99**	*e*P		**Pn**	**11**	**47**	**00.8**	**+0.8**
PMON	**Piamonte**	**2.59**	**99**	S		**Sn**	**11**	**47**	**32.5**	**+1.9**
PMON	**Piamonte**	**2.59**	**99**	P		**Pn**	**11**	**47**	**01.2**	**+1.2**
LALI	**Alcalda de L**	**2.63**	**104**	P		**Pn**	**11**	**47**	**00.8**	**+0.3**
LALI	**Alcalda de L**	**2.63**	**104**	S		**Sn**	**11**	**47**	**33.1**	**+1.6**
UEES	**Universidad Ev**	**2.66**	**99**	S		**Sn**	**11**	**47**	**34.1**	**+1.7**
LOMA	**Loma Larga**	**2.74**	**100**	S		**Sn**	**11**	**47**	**36.1**	**+1.7**

IDC ***02*** *12:20:01.4±0.7, 2˚.38S×80˚.93W, h0km, mb4.0/8, mbtmp4.0/11, ML3.6/3, MS3.5/4, Error ellipse: s-maj=39.3km s-min=15.9km az=59.0*
IGQ ***02*** *12:20:04.5±0.4, 3˚S±1˚×8˚1W±˚, h9km±1km, MLv4.2/27*
NEIC ***02*** *12:20:09.1±1.4, 2˚.51S±0˚.06×80˚.81W±0˚.08, h37km±6km, mb4.4/44, Error ellipse: s-maj=11.8km s-min=8.0km az=103.0*
ISC 02 12:20:03.2±1.7, **2˚.48S**±0˚.03×**80˚.98W**±0˚.05, **h6**km±10km, **n160**, σ1**s88**/163, **mb4.3**/20, **20C-6D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ALIBE	**La Libertad**	**0.27**	**29**	S		**Sb**	**12**	**20**	**16.9**	**+1.5**
ALIBE				⇑P		**Pb**	**12**	**20**	**11.4**	**+1.0**
SALI	**Salinas**	**0.29**	**358**	S		**Sb**	**12**	**20**	**17.3**	**+1.3**
SALI				⇑P		**Pb**	**12**	**20**	**11.8**	**+0.9**
APLA	**Playas - Guaya**	**0.61**	**105**	P		**Pb**	**12**	**20**	**16.1**	**-0.1**
APLA				S		**Sb**	**12**	**20**	**25.3**	**+0.3**
MORR	**Playas El Morr**	**0.66**	**104**	⇓P		**Pb**	**12**	**20**	**18.0**	**+1.0**
MORR				⇓S		**Sn**	**12**	**20**	**28.2**	**-1.5**
PU01	**PU01**	**0.81**	**113**	⇓P		**Pn**	**12**	**20**	**23.3**	**+2.2**
ISPG	**Isla Puna-Puer**	**0.94**	**121**	S		**Sn**	**12**	**20**	**40.5**	**+3.8**
ISPG				⇓P		**Pn**	**12**	**20**	**23.6**	**+0.7**
PU02	**PU02**	**0.98**	**110**	⇓P		**Pn**	**12**	**20**	**23.6**	**+0.1**
AC07	**Ecuador-Guayaq**	**1.05**	**72**	P		**Pb**	**12**	**20**	**24.2**	**+0.5**
GYE1	**Ecuador-Trinit**	**1.09**	**78**	P		**Pg**	**12**	**20**	**24.3**	**+0.1**
AGUAY	**Guayaquil**	**1.11**	**67**	P		**Pg**	**12**	**20**	**24.1**	**-0.5**
PU03	**PU03**	**1.25**	**110**	P		**Pn**	**12**	**20**	**27.4**	**+0.3**
PU06	**PU06**	**1.35**	**87**	P		**Pg**	**12**	**20**	**29.9**	**+0.8**
ARNL	**Arenillas**	**1.40**	**139**	P		**Pn**	**12**	**20**	**28.9**	**-0.2**
ACH2	**Ecuador-Machal**	**1.40**	**124**	P		**Pb**	**12**	**20**	**29.8**	**0.0**
PU07	**PU07**	**1.54**	**85**	⇑P		**Pb**	**12**	**20**	**32.3**	**+0.2**
AMNT	**Manta-Manabi**	**1.55**	**9**	P		**Pn**	**12**	**20**	**31.2**	**-0.1**
PCRA	**Pucara 2**	**1.64**	**116**	S		**Sg**	**12**	**20**	**55.5**	**-0.5**
PCRA				⇓P		**Pn**	**12**	**20**	**32.2**	**-0.8**
COHC	**Cochancay**	**1.72**	**89**			**Pn**	**12**	**20**	**32.9**	**-0.8**
COHC				Sn		**Sn**	**12**	**20**	**53.7**	**-2.3**
COHC	**Cochancay**	**1.72**	**89**	P		**Pn**	**12**	**20**	**33.7**	**+0.1**
COHC	**Cochancay**	**1.72**	**89**	P		**Pn**	**12**	**20**	**32.7**	**-1.0**
ABH2	**Ecuador-Univer**	**1.90**	**18**	P		**Pn**	**12**	**20**	**38.0**	**+1.9**
AMCR	**Ecuador-Macara**	**2.13**	**151**	P		**Pn**	**12**	**20**	**39.7**	**+0.4**
MCRA	**Macar, Loja**	**2.13**	**151**	P		**Pn**	**12**	**20**	**39.8**	**+0.4**
MCRA	**Macar, Loja**	**2.13**	**151**	P		**Pn**	**12**	**20**	**39.1**	**-0.3**
JSCH	**Cashca Tororas**	**2.14**	**69**	P		**Pn**	**12**	**20**	**39.0**	**-0.7**
CAB1	**Cabo Pasado-Ma**	**2.15**	**15**	S		**Sn**	**12**	**21**	**06.3**	**-0.4**
CAB1				P		**Pn**	**12**	**20**	**39.7**	**+0.1**
CHSH	**Refugio Sur-Vo**	**2.33**	**65**	⇑P		**Pn**	**12**	**20**	**42.8**	**+0.3**
GONZ	**Gonzanam**	**2.35**	**138**	P		**Pn**	**12**	**20**	**44.3**	**+1.6**
TAMH	**Tambohuasha Ch**	**2.39**	**67**	⇑P		**Pn**	**12**	**20**	**43.6**	**+0.3**
FLF1	**Flavio Alfaro-**	**2.40**	**28**	⇑P		**Pn**	**12**	**20**	**44.0**	**+1.0**
FLF1	**Flavio Alfaro-**	**2.40**	**28**	P		**Pn**	**12**	**20**	**43.5**	**+0.5**
IGUA	**Igualata**	**2.54**	**67**	⇑P		**Pn**	**12**	**20**	**46.1**	**+0.7**
BOSC	**San Juan Bosco**	**2.57**	**105**	P		**Pb**	**12**	**20**	**50.2**	**+0.4**
BIL2	**Estacion Bilba**	**2.68**	**68**	P		**Pn**	**12**	**20**	**47.5**	**+0.4**
BBIL	**Ulba Tungurahu**	**2.69**	**68**	P		**Pn**	**12**	**20**	**48.9**	**+1.5**
JUI6	**Juive**	**2.72**	**67**	P		**Pn**	**12**	**20**	**49.0**	**+1.3**
BPAT	**Tungurahua Vol**	**2.73**	**69**	P		**Pn**	**12**	**20**	**48.7**	**+0.8**
ILLI	**Illinizas Sur**	**2.86**	**52**	P		**Pn**	**12**	**20**	**50.9**	**+1.2**
PIS1	**Pisayambo**	**2.95**	**61**	⇑P		**Pn**	**12**	**20**	**53.2**	**+2.1**
ZUMB	**Zumba**	**2.99**	**142**	S		**Sn**	**12**	**21**	**28.5**	**+1.0**
ZUMB				⇓P		**Pn**	**12**	**20**	**53.6**	**+2.3**
SLOR	**San Lorenzo -**	**3.03**	**55**			**Pn**	**12**	**20**	**52.4**	**+0.2**
SLOR	**San Lorenzo -**	**3.03**	**55**	P		**Pn**	**12**	**20**	**54.6**	**+2.5**
CAMI	**Rancho Maria**	**3.06**	**54**	P		**Pn**	**12**	**20**	**55.1**	**+2.6**
BMOR	**Cotopaxi Volca**	**3.06**	**55**	P		**Pn**	**12**	**20**	**54.8**	**+2.2**
VCES	**Cotopaxi**	**3.08**	**57**	S		**Sb**	**12**	**21**	**35.4**	**-1.2**
BREF	**Cotopaxi Volca**	**3.11**	**55**	⇑P		**Pn**	**12**	**20**	**56.7**	**+3.3**
PUYO	**Puyo, Santa Ro**	**3.11**	**72**	P		**Pn**	**12**	**20**	**56.0**	**+3.1**
BVC2	**Cotopaxi Volca**	**3.14**	**55**	⇑P		**Pn**	**12**	**20**	**56.6**	**+2.8**
BTAM	**Cotopaxi Volca**	**3.15**	**55**	⇑P		**Pn**	**12**	**20**	**56.0**	**+2.3**
TAMB	**Tambo**	**3.16**	**56**	P		**Pn**	**12**	**20**	**56.6**	**+2.7**
VC1	**Cotopaxi 1**	**3.16**	**55**	P		**Pn**	**12**	**20**	**57.1**	**+3.1**
PITA	**Cotopaxi Volc**	**3.18**	**53**	P		**Pn**	**12**	**20**	**57.5**	**+3.3**
TOMA

ABQ	**Albuquerque**	**44.24**	**330**	P	**P**	**12**	**28**	**15.8 +2.1**
ABQ				IAmb	IAmb	12	28	16.3
	comp=Z,5.0nm,1.0s							
ANMO	**Albuquerque**	**44.24**	**330**		**P**	**12**	**28**	**15.8 +2.1**
ANMO				IAmb	IAmb	12	28	16.2
	comp=Z,5.4nm,1.0s							
WUAZ	**Wupatki**	**47.30**	**326**		**P**	**12**	**28**	**40.0 +2.1**
RDMU	**Red Mountain**	**50.18**	**332**	IAmb	IAmb	12	29	02.2
	comp=Z,3.6nm,0.9s							
BSUT	**Blindstream Ca**	**50.73**	**331**	IAmb	IAmb	12	29	06.6
	comp=Z,6.8nm,1.3s							
WSHM	**Spangler Hills**	**50.99**	**321**	IAmb	IAmb	12	29	08.7
	comp=Z,5.7nm,1.3s							
PD31	**Pinedale Array**	**51.91**	**333**	P	**P**	**12**	**29**	**13.5 +0.5**
PD31				IAmb	IAmb	12	29	14.6
	comp=Z,5.3nm,1.4s							
PDAR	**Pinedale Array**	**51.91**	**333**	P	**P**	**12**	**29**	**13.7 +0.7**
PDAR					**PcP**	**12**	**30**	**25.2 -0.5**
PDAR	**Pinedale Array**	**51.91**	**333**	P	**P**	**12**	**29**	**11.6 -1.3**
	comp=Z,1.4nm,0.9s,baz=130,slow=9.2,SNR=10							
PDAR				PcP	**PcP**	**12**	**30**	**24.4 -1.3**
	comp=Z,0.1nm,0.4s,baz=121,slow=7.1,SNR=3.9							
	comp=Z,1.4nm,0.9s							
HWUT	**Hardware Ranch**	**51.94**	**331**	IAmb	IAmb	12	29	14.9
	comp=Z,5.5nm,1.0s							
NVAR	**Mina Array Bea**	**53.32**	**324**	P	**P**	**12**	**29**	**22.0 -1.5**
	comp=Z,1.2nm,0.8s,baz=142,slow=7.8,SNR=8.7							
NVAR				PcP	**PcP**	**12**	**30**	**30.4 -0.7**
	comp=Z,0.6nm,0.7s,baz=131,slow=5.1,SNR=4.4							
	comp=Z,1.2nm,0.8s							
HLID	**Hailey**	**54.79**	**331**	IAmb	IAmb	12	29	36.8
	comp=Z,3.0nm,0.9s							
MFID	**Camas Ranch**	**55.39**	**330**	IAmb	IAmb	12	29	40.7
	comp=Z,3.8nm,1.1s							
J05D	**Fort Rock, OR**	**58.17**	**326**	IAmb	IAmb	12	30	00.5
	comp=Z,3.6nm,0.9s							
MXC	**Moxie City**	**59.86**	**330**	P	**P**	**12**	**30**	**11.9 +2.2**
BELA	**Belgrano 2**	**79.17**	**171**	P	**P**	**12**	**32**	**08.8 +0.3**
BMAR	**Burnt Mountain**	**82.43**	**340**	P	**P**	**12**	**32**	**26.4 +0.4**
TORD	**Torodi Ar. Bea**	**83.43**	**77**	IAmb	IAmb	12	33	04.2
	comp=Z,3.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.43**	**77**	P	**P**	**12**	**32**	**31.3 -1.0**
	comp=Z,2.0nm,0.3s,baz=284,slow=5.8,SNR=1.1							
	comp=Z,2.0nm,0.3s							
SNAA	**Sanae**	**83.93**	**162**	P	**P**	**12**	**32**	**33.9 +0.1**
SNAA				IAmb	IAmb	12	32	49.1
	comp=Z,5.3nm,1.4s							
SNAA	**Sanae**	**83.93**	**162**	P	**P**	**12**	**32**	**32.8 -0.9**
	comp=Z,1.2nm,0.8s,baz=272,slow=7.0,SNR=6.6							
	comp=Z,1.2nm,0.8s							
QSPA	**South Pole Qui**	**87.58**	**180**	P	**P**	**12**	**32**	**52.4 +0.4**
QSPA	**South Pole Qui**	**87.58**	**180**	P	**P**	**12**	**32**	**51.9 -0.2**
	comp=Z,1.3nm,0.8s,baz=150,slow=2.7,SNR=6.4							
	comp=Z,1.3nm,0.8s							
ZALV	**Zalesovo Beam**	**127.39**	**11**	PKP	**PKPdf**	**12**	**39**	**08.3 -0.6**
	comp=Z,1.9nm,0.3s,baz=321,slow=3.7,SNR=8.6							
KURK	**Kurchatov**	**128.94**	**17**	PKP	**PKPdf**	**12**	**39**	**09.6 -2.3**
KURBB	**Kurchatov Arra**	**129.00**	**17**	PKP	**PKPdf**	**12**	**39**	**09.6 -2.4**
	comp=Z,0.4nm,0.7s,baz=320,slow=2.8,SNR=5.5							
ASAR	**Alice Springs**	**137.24**	**231**	PKP	**PKPdf**	**12**	**39**	**27.0 -1.5**
	comp=Z,0.6nm,0.8s,baz=112,slow=1.5,SNR=4.8							
WRA	**Warramunga Arr**	**138.79**	**236**	PKP	**PKPdf**	**12**	**39**	**30.5 -0.8**
	comp=Z,0.7nm,0.8s,baz=116,slow=2.0,SNR=4.9							
MTN	**Manton Dam**	**144.67**	**244**	PKPdf	**PKPab**	**12**	**39**	**41.6 +1.0**
KNRA	**Kununurra**	**145.49**	**238**	PKPab	**PKPdf**	**12**	**39**	**43.8 +0.5**

*KOLA **02** 12:30:53.7, 76.98N×19.03E, h0km, ML2.8, Error ellipse: s-maj=15.0km s-min=7.5km az=130.0, Storfjorden zone*
*FCIAR **02** 12:30:55.0, 76.83N×18.56E, h10km, station ZFI2 has station magnitude of 4.90 station OMEGA has station magnitude of 3.50*
*NAO **02** 12:30:56.0±0.7, 76.97N×18.87E, h10km, ML2.7*
*BER **02** 12:30:57.0±3.1, 76.89N×18.75E, h15km±15km, ML2.4, ML2.7(NAO), Confirmed Earthquake*

ISC 02 12:30:54.3±0.8, 76.85N±0.05×18.76E±0.05, h10km, n26, σ2.906/47, 1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HSPB	**Hornsund (broa**	**0.75**	**284**	Pg		**Pg**	**12 31 10.2**	**+1.4**
HSPB	**Hornsund (broa**	**0.75**	**284**	P		**Pg**	**12 31 09.9**	**+1.2**
HSPB				*S*		**Sg**	**12 31 20.3**	**+1.8**
HSPB	**Hornsund (broa**	**0.75**	**284**	*eP*		**Pg**	**12 31 10.0**	**+1.2**
HSPB				*eS*		**Sg**	**12 31 19.5**	**+1.0**
HSPB	**Hornsund (broa**	**0.75**	**284**	*eP*		**Pg**	**12 31 10.1**	**+1.3**
HSPB				*eS*		**Sg**	**12 31 19.6**	**+1.0**
HSPB				IAML			12 31 24.3	
	comp=Z,67nm,0.2s							
SPA0	**Spitsbergen Ar**	**1.44**	**340**	Pn		**Pn**	**12 31 18.9**	**-1.5**
	baz=149,slow=18							
SPA0				Sb		**Sn**	**12 31 37.2**	**-2.1**
	baz=153,slow=37							
SPA0	**Spitsbergen Ar**	**1.44**	**340**	*iP*		**Pn**	**12 31 18.7**	**-1.6**
SPA0				*eS*		**Sn**	**12 31 36.9**	**-2.3**
SPA0	**Spitsbergen Ar**	**1.44**	**340**	Pn		**Pn**	**12 31 18.9**	**-1.5**
	baz=149,slow=18							
SPA0				Sb		**Sn**	**12 31 37.2**	**-2.1**
	baz=153,slow=37							
SPA0				IAML			12 31 41.3	
	comp=Z,59nm,0.5s							
SPITS	**Spitsbergen Ar**	**1.44**	**340**	P		**Pn**	**12 31 18.4**	**-2.0**
SPITS				S		**Sn**	**12 31 37.3**	**-2.1**
HOPEN	**Hopen**	**1.49**	**100**	Pb		**Pn**	**12 31 22.8**	**+1.7**
HOPEN				Sb		**Sn**	**12 31 41.6**	**+1.1**
HOPEN	**Hopen**	**1.49**	**100**	*eP*		**Pn**	**12 31 22.0**	**+1.0**
HOPEN				*i S*		**Sn**	**12 31 41.4**	**+0.9**
HOPEN	**Hopen**	**1.49**	**100**	*eP*		**Pn**	**12 31 22.3**	**+1.3**
HOPEN				*eS*		**Sn**	**12 31 40.5**	**0.0**
BRBA	**Barentsburg A**	**1.57**	**323**	Pb		**Pn**	**12 31 21.4**	**-0.8**
BRBA				Sb		**Sn**	**12 31 42.3**	**-0.2**
BRBA	**Barentsburg A**	**1.57**	**323**	*eP*		**Pn**	**12 31 22.5**	**+0.3**
BRBA				*eS*		**Sn**	**12 31 41.5**	**-1.1**
BRBA				IAML			12 31 45.8	
	comp=Z,116nm,0.3s							
BRBB	**Barentsburg B**	**1.60**	**324**	Pb		**Pn**	**12 31 21.7**	**-0.9**
BRBB				Sb		**Sn**	**12 31 43.3**	**0.0**
BRBB	**Barentsburg B**	**1.60**	**324**	P		**Pn**	**12 31 21.5**	**-1.1**
BRBB				S		**Sn**	**12 31 42.4**	**-0.9**
BRBB	**Barentsburg B**	**1.60**	**324**	*eP*		**Pn**	**12 31 21.5**	**-1.1**
BRBB				*eS*		**Sn**	**12 31 42.6**	**-0.6**
BJO1	**Bjornoya**	**2.36**	**178**	*eS*		**Sg**	**12 32 12.0**	**+2.0**
KBS	**Kingsbay**	**2.54**	**329**	Pn		**Pn**	**12 31 33.4**	**-2.1**
KBS				Pg		**Pb**	**12 31 39.6**	**-0.2**
KBS				Sb		**Sn**	**12 32 09.9**	**+3.6**
KBS	**Kingsbay**	**2.54**	**329**	P		**Pn**	**12 31 33.5**	**-2.0**
KBS				S		**Sn**	**12 32 07.0**	**+0.7**
KBS	**Kingsbay**	**2.54**	**329**	*eP*		**Pn**	**12 31 33.5**	**-2.0**
KBS				*eSg*		**Sb**	**12 32 11.5**	**+0.5**
KBS				IAML			12 32 17.9	
	comp=Z,78nm,0.4s							
ZFI2	**Zemlya Franca-**	**6.79**	**41**	*eP*		Pn	12 32 30.3	-3.4
ZFI2				*eS*		Sn	12 33 41.9	-8.9
	comp=Z,328nm,3.2s							
OMEGA	**Omega**	**6.79**	**41**	*eP*		Pn	12 32 30.5	-3.3
OMEGA				*eS*		Sn	12 33 42.5	-8.4
	comp=Z,15nm,3.2s							
VADS	**Vadso**	**7.39**	**151**	P		**Pn**	**12 32 42.7**	**+0.7**
VADS				S		**Sn**	**12 34 01.6**	**-4.2**
ARA0	**ARCESS Array S**	**7.60**	**162**	Pn		**Pn**	**12 32 47.5**	**+2.5**
	baz=354,slow=11							
ARA0				Sn		**Sn**	**12 34 06.3**	**-4.7**
	baz=0.8,slow=22							
ARA0	**ARCESS Array S**	**7.60**	**162**	Pn		**Pn**	**12 32 47.5**	**+2.5**
	baz=354,slow=11							
ARA0				Sn		**Sn**	**12 34 06.3**	**-4.7**
	baz=0.8,slow=22							
ARCES	**ARCESS Array B**	**7.60**	**162**	P		**Pn**	**12 32 47.2**	**+2.3**
ARCES				S		**Sn**	**12 34 06.1**	**-4.9**

*CATAC **02** 12:40:34.1±0.8, 7.1N×7.3W, h164km±6km, M3.7/6, mB6.1/1, MLv3.7/6, Mw(mB)5.7/1, Error ellipse: s-maj=12.4km s-min=8.4km az=90.0, confirmed*
*RSNC **02** 12:40:36.3±0.0, 7.1N×7.3W, h147km±1km, M3.2, ML2.9*

ISC 02 12:40:35.3±1.4, 6.85N±0.03×73.12W±0.04, h150km±8km, n29, σ0.86/56, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	**Barichara**	**0.27**	**194**	P		**Pn**	**12 40 56.3**	**+0.2**
BARC				S		**Sn**	**12 41 11.3**	**-0.6**
BRJC	**Barrancabermej**	**0.64**	**281**	P		**Pn**	**12 40 58.1**	**+0.7**
BRJC				S		**Sn**	**12 41 15.2**	**+1.0**

RUSC	**La Rusia**	**0.95**	**178**	P		**Pn**	**12 41 00.2**	**-0.1**
RUSC				S		**Sn**	**12 41 18.5**	**-0.8**
RUSC	**La Rusia**	**0.95**	**178**	P		**Pn**	**12 41 00.3**	**0.0**
RUSC				S		**Sn**	**12 41 18.9**	**-0.4**
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	P		**Pn**	**12 41 03.0**	**-0.5**
PTBC				S		**Sn**	**12 41 23.9**	**-1.2**
OCAC	**Ocana**	**1.39**	**352**	P		**Pn**	**12 41 04.5**	**+0.5**
OCAC				S		**Sn**	**12 41 26.4**	**+0.5**
SPBC	**San Pablo de B**	**1.52**	**219**	P		**Pn**	**12 41 05.3**	**+0.1**
SPBC				S		**Sn**	**12 41 26.9**	**-1.3**
CHIC	**Chingaza**	**2.29**	**196**	P		**Pn**	**12 41 14.4**	**+0.1**
CHIC				S		**Sn**	**12 41 43.8**	**-0.5**
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**12 41 16.1**	**+1.3**
ROSC				S		**Sn**	**12 41 47.0**	**+1.9**
HELC	**Santa Helena**	**2.48**	**255**	P		**Pn**	**12 41 18.4**	**+1.8**
HELC				S		**Sn**	**12 41 48.5**	**+0.1**
HELC	**Santa Helena**	**2.48**	**255**	P		**Pn**	**12 41 17.8**	**+1.2**
HELC				S		**Sn**	**12 41 47.0**	**-1.4**
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P		**Pn**	**12 41 17.7**	**+0.7**
CVER				S		**Sn**	**12 41 49.1**	**+0.1**
UREC	**San Jos de Ur**	**2.56**	**291**	P		**Pn**	**12 41 16.6**	**-0.6**
UREC				S		**Sn**	**12 41 48.6**	**-0.9**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P		**Pn**	**12 41 20.7**	**+0.6**
GUY2C				S		**Sn**	**12 41 54.2**	**-0.4**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P		**Pn**	**12 41 25.2**	**+1.8**
CBOC				S		**Sn**	**12 41 59.9**	**-0.6**
DBBC	**Dabeiba**	**3.08**	**273**	P		**Pn**	**12 41 24.4**	**+0.7**
DBBC				S		**Sn**	**12 42 00.7**	**-0.5**
SDV	**Santo Domingo**	**3.18**	**50**	P		**Pn**	**12 41 25.9**	**+0.7**
SDV				S		**Sn**	**12 42 03.6**	**-0.2**
ARGC	**Ariguani, Magd**	**3.19**	**340**	P		**Pn**	**12 41 26.6**	**+1.5**
ARGC				S		**Sn**	**12 42 04.3**	**+0.6**
ANIL	**Santa Ana**	**3.27**	**224**	P		**Pn**	**12 41 27.7**	**+1.3**
ANIL				S		**Sn**	**12 42 05.9**	**0.0**
PRAC	**Prado**	**3.58**	**210**	P		**Pn**	**12 41 30.4**	**+0.2**
PRAC	**Prado**	**3.58**	**210**	P		**Pn**	**12 41 29.8**	**-0.4**
PRAC				S		**Sn**	**12 42 12.5**	**-0.3**
APAC	**Apartado, Choc**	**3.59**	**287**	P		**Pn**	**12 41 30.7**	**+0.5**
APAC				S		**Sn**	**12 42 12.4**	**-0.5**
SJCC	**San Jacinto, C**	**3.65**	**326**	P		**Pn**	**12 41 30.4**	**-0.7**
SJCC				S		**Sn**	**12 42 12.3**	**-2.1**
PLMC	**San Jos del P**	**3.70**	**239**	P		**Pn**	**12 41 32.3**	**+0.6**
PLMC				S		**Sn**	**12 42 15.0**	**-0.4**
LCBC	**Los crdobas,**	**3.79**	**302**	P		**Pn**	**12 41 33.4**	**+0.6**
LCBC				S		**Sn**	**12 42 18.4**	**+0.9**
URMC	**La Uribe, Meta**	**3.79**	**199**	P		**Pn**	**12 41 33.2**	**+0.2**
URMC				S		**Sn**	**12 42 17.2**	**-0.6**
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	P		**Pn**	**12 41 37.0**	**-0.6**
CRJC				S		**Sn**	**12 42 25.8**	**-0.3**
YOTC	**Yotoco, Valle**	**4.29**	**229**	P		**Pn**	**12 41 39.3**	**-0.3**
YOTC				S		**Sn**	**12 42 28.8**	**-0.8**
PTAC	**Punta Ardita,**	**4.67**	**274**	P		**Pn**	**12 41 44.0**	**-0.3**

*KRSC **02** 12:59:34.8±0.7, 52.23N×158.22E, h105km±6km, Ml3.6*
*IDC **02** 12:59:36.2±1.6, 52.49N×157.72E, h120km±9km, mb3.1/5, mbtmp3.5/5, MS2.7/1, Error ellipse: s-maj=40.6km s-min=21.8km az=161.0*

ISC 02 12:59:35.1±0.8, 52.26N±0.06×158.12E±0.08, h109km±6km, n27, σ1.918/35, mb3.3/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAK	**Asacha**	**0.18**	**312**	*eP*		**Pn**	**12 59 51.0**	**+0.6**
MTVR	**Mutnovka**	**0.23**	**10**	*eP*		**Pn**	**12 59 50.6**	**-0.1**
GRIL	**Gorelyy**	**0.29**	**354**	*eP*		**Pn**	**12 59 51.5**	**+0.6**
RUS	**Russkaya**	**0.30**	**54**	*eP*		**Pn**	**12 59 50.7**	**0.0**
RUS				*eS*		**Sn**	**13 00 02.4**	**0.0**
KDTR	**Khodutka, Kamc**	**0.45**	**184**	*eP*		**Pn**	**12 59 51.4**	**-0.1**
KDTR				*eS*		**Sn**	**13 00 03.6**	**-0.2**
KRMR	**Karymshinskiy**	**0.57**	**0**	*eP*		**Pn**	**12 59 52.5**	**+0.2**
KRMR				*eS*		**Sn**	**13 00 06.5**	**+1.3**
PET	**Petropavlovsk**	**0.83**	**23**	*eP*		**Pn**	**12 59 54.6**	**+0.1**
PET				*eS*		**Sn**	**13 00 09.1**	**0.0**
MIPR	**Malaya Ipel'ka**	**0.84**	**272**	*eP*		**Pn**	**12 59 55.1**	**+0.6**
DALK	**Dalny**	**0.86**	**26**	*eP*		**Pn**	**12 59 55.1**	**+0.3**
DALK				*eS*		**Sn**	**13 00 09.9**	**+0.3**
APC	**Apacha**	**0.89**	**319**	*eP*		**Pn**	**12 59 55.6**	**+0.6**
PETK	**Petropavlovsk-**	**0.89**	**343**	P		**Pn**	**12 59 55.0**	**0.0**
	279nm,0.5s,baz=137,slow=12,SNR=1143							
PETK				S		**Sn**	**13 00 11.0**	**+0.8**
	30nm,0.6s,baz=143,slow=22,SNR=3.7							
PETK				LR		LR	13 00 11.0	
	comp=Z,19nm,18.1s,baz=161,slow=56							
UGLR	**Uglovaya**	**1.04**	**24**	*eP*		**Pn**	**12 59 57.9**	**+1.2**
UGLR				*eS*		**Sn**	**13 00 14.6**	**+1.5**
AVH	**Avacha**	**1.07**	**20**	*eP*		**Pn**	**12 59 58.0**	**+1.0**
KOK	**Koryaka**	**1.08**	**17**	*eP*		**Pn**	**12 59 58.3**	**+1.2**
SMAR	**Somma**	**1.09**	**22**	*eP*		**Pn**	**12 59 58.2**	**+0.9**
KRER	**Koryakskii**	**1.11**	**20**	*eP*		**Pn**	**12 59 58.4**	**+0.8**
PAU	**Pauzhetka**	**1.14**	**226**	*eP*		**Pn**	**12 59 58.7**	**+1.1**
KRX	**Arik**	**1.15**	**16**	*eP*		**Pn**	**12 59 58.6**	**+0.7**
NLC	**Nalytchevo**	**1.18**	**39**	*eP*		**Pn**	**12 59 57.4**	**-0.6**
NLC				*eS*		**Sn**	**13 00 14.1**	**-1.4**
SKR	**Severo-Kuril's**	**2.02**	**219**	*eP*		**Pn**	**13 00 08.9**	**+0.7**
SKR				*eS*		**Sn**	**13 00 35.6**	**+2.1**
KBTR	**Krutoberegovo**	**4.82**	**33**	*eP*		**Pn**	**13 00 47.8**	**+2.5**
ASAJ	**Asahikawa**	**13.16**	**238**	LR		LR	13 07 23.7	
	comp=Z,33nm,20.2s,baz=152,slow=36							
MJAR	**Matsushiro Arr**	**21.09**	**230**	P		**P**	**13 04 11.1**	**+0.5**
	0.6nm,0.8s,baz=18,slow=10,SNR=2.8							
	0.6nm,0.8s							
ILAR	**Eielson Array**	**30.25**	**44**	P		**P**	**13 05 35.6**	**+0.5**
	0.3nm,0.8s,baz=277,slow=9.0,SNR=2.3							
	0.3nm,0.8s							
KURBB	**Kurchatov Arra**	**47.25**	**301**	P		**P**	**13 07 54.2**	**-2.6**
	0.9nm,0.2s,baz=51,slow=8.9,SNR=4.6							
	0.9nm,0.2s							
MKAR	**Makanchi Array**	**47.43**	**295**	P		**P**	**13 07 55.3**	**-3.0**
	0.3nm,0.6s,baz=61,slow=8.1,SNR=4.7							
	0.3nm,0.6s							
NVAR	**Mina Array Bea**	**57.16**	**68**	P		**P**	**13 09 11.3**	**+0.8**
	0.3nm,0.6s,baz=306,slow=7.0,SNR=4.4							
	0.3nm,0.6s							

*IDC **02** 13:00:37.4±1.1, 52.61N×30.26W, h0km, mb3.8/13, mbtmp3.9/15, ML4.1/2, MS3.3/33, Error ellipse: s-maj=38.2km s-min=15.6km az=175.0*

ISC 02 13:00:39.2±1.0, 52.6N±0.2×30.3W±0.1, h10km, n47, σ1.900/17, mb3.9/13, MS3.3/31, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BORG	**Borgarnes**	**13.00**	**17**	Pn		**Pn**	**13 03 44.1**	**+0.4**
	0.8nm,0.3s,baz=288,slow=9.6,SNR=6.5							
BORG				LR		LR	13 07 08.5	
	comp=Z,42nm,20.7s,baz=215,slow=30							
	13nm,0.9s							
EKA	**Eskdalemuir Ar**	**16.13**	**70**	Pn		**Pn**	**13 04 26.9**	**+1.1**
	baz=280,slow=10							
	6.5nm,0.8s							
SFJD	**Kangerlussuaq**	**17.54**	**333**	LR		LR	13 10 07.3	
	comp=Z,115nm,21.9s,baz=155,slow=32							
SUMG	**Summit**	**20.34**	**353**	*i* P		Pn	13 05 21.0	+3.3
SCHQ	**Schefferville**	**21.60**	**291**	P		**P**	**13 05 29.6**	**+0.7**
	7.2nm,0.7s,baz=63,slow=6.7,SNR=8.0							
	7.2nm,0.7s							
ESDC	**Sonseca Array**	**22.20**	**115**	P		**P**	**13 05 36.7**	**+1.1**
	2.2nm,1.1s,baz=313,slow=10.0,SNR=5.7							
ESDC				LR		LR	13 11 18.0	
	comp=Z,65nm,19.6s,baz=308,slow=29							
	2.2nm,1.1s							
FRB	**Frobisher Bay**	**22.66**	**314**	LR		LR	13 12 32.6	
	comp=Z,64nm,19.0s,baz=168,slow=32							
NOA	**NORSAR Array B**	**23.83**	**53**	P		**P**	**13 05 51.9**	**-0.2**
	1.0nm,0.9s,baz=270,slow=9.3,SNR=2.9							
NOA				LR		LR	13 13 31.0	
	comp=Z,59nm,21.1s,baz=270,slow=32							
	1.0nm,0.9s							
HFS	**Hagfors**	**25.05**	**55**	LR		LR	13 14 32.0	
	comp=Z,90nm,19.5s,baz=252,slow=33							
VRAC	**Vranov**	**29.29**	**77**	LR		LR	13 16 38.0	
	comp=Z,67nm,19.6s,baz=298,slow=33							
ARCES	**ARCESS Array B**	**30.38**	**35**	LR		LR	13 16 23.7	
	comp=Z,75nm,18.1s,baz=262,slow=31							
FINES	**FINESS Array B**	**30.96**	**51**	P		**P**	**13 06 55.0**	**-1.0**
	2.3nm,0.9s,baz=288,slow=7.8,SNR=4.1							
FINES				LR		LR	13 17 47.0	
	comp=Z,84nm,20.9s,baz=249,slow=33							
	2.3nm,0.9s							

AKASG	**Malin Array Be**	**36.04**	**69**	P		**P**	**13 07 38.4**	**-2.0**
	0.3nm,0.4s,baz=297,slow=8.2,SNR=1.5							
AKASG				LR		LR	13 21 06.2	
	comp=Z,62nm,20.5s,baz=241,slow=34							
	0.3nm,0.4s							
MLR	**Muntele Rosu**	**36.68**	**78**	LR		LR	13 21 46.7	
	comp=Z,48nm,18.1s,baz=290,slow=35							
KIRV	**Kirov**	**42.91**	**49**	LR		LR	13 25 19.5	
	comp=Z,53nm,18.3s,baz=292,slow=35							
SJG	**San Juan**	**44.39**	**233**	LR		LR	13 27 22.1	
	comp=Z,34nm,18.6s,baz=318,slow=36							
BRTR	**Keskin Array B**	**44.65**	**80**	LR		LR	13 28 40.6	
	comp=Z,20nm,18.0s,baz=306,slow=38							
KBZ	**Khabaz**	**47.62**	**70**	LR		LR	13 29 37.7	
	comp=Z,53nm,18.0s,baz=300,slow=36							
ARTI	**Arti**	**48.18**	**48**	P		**P**	**13 09 18.9**	**-0.3**
	6.0nm,0.7s,baz=296,slow=6.3,SNR=9.1							
ARTI				LR		LR	13 28 42.3	
	comp=Z,50nm,19.6s,baz=232,slow=35							
	6.0nm,0.7s							
GNI	**Garni**	**50.95**	**72**	LR		LR	13 32 10.7	
	comp=Z,26nm,19.5s,baz=339,slow=37							
AKTO	**Aktyubinsk**	**51.60**	**55**	LR		LR	13 31 32.6	
	comp=Z,51nm,18.4s,baz=59,slow=36							
ASF	**Jabal al Asfar**	**51.63**	**85**	LR		LR	13 31 34.6	
	comp=Z,19nm,18.5s,baz=335,slow=36							
DLBC	**Dease Lake**	**51.70**	**319**	LR		LR	13 30 28.5	
	comp=Z,42nm,20.1s,baz=20,slow=35							
PDAR	**Pinedale Array**	**51.71**	**293**	P		**P**	**13 09 46.2**	**-0.4**
	0.8nm,0.6s,baz=59,slow=8.8,SNR=10							
PDAR				LR		LR	13 28 48.3	
	comp=Z,14nm,18.1s,baz=44,slow=33							
	0.8nm,0.6s							
NEW	**Newport**	**52.26**	**302**	LR		LR	13 30 34.2	
	comp=Z,22nm,18.7s,baz=49,slow=34							
ILAR	**Eielson Array**	**53.20**	**331**	LR		LR	13 31 40.8	
	comp=Z,58nm,18.2s,baz=87,slow=35							
SDV	**Santo Domingo**	**54.51**	**232**	LR		LR	13 33 30.5	
	comp=Z,16nm,18.6s,baz=314,slow=36							
BVAR	**Borovoye Array**	**55.69**	**46**	P		**P**	**13 10 15.9**	**+0.7**
	1.1nm,0.7s,baz=319,slow=6.3,SNR=4.6							
BVAR				LR		LR	13 34 53.1	
	comp=Z,25nm,18.2s,baz=311,slow=37							
	1.1nm,0.7s							
TXAR	**Lajitas Array**	**57.43**	**277**	P		**P**	**13 10 27.3**	**-0.8**
	0.3nm,0.4s,baz=51,slow=7.6,SNR=5.6							
	0.3nm,0.4s							
NVAR	**Mina Array Bea**	**59.54**	**294**	P		**P**	**13 10 43.1**	**+0.3**
	0.2nm,0.7s,baz=31,slow=7.0,SNR=2.3							
	0.2nm,0.7s							
ROSC	**El Rosal**	**59.80**	**233**	LR		LR	13 37 08.8	
	comp=Z,34nm,18.7s,baz=136,slow=37							
KDAK	**Kodiak Island**	**60.35**	**329**	LR		LR	13 34 17.6	
	comp=Z,36nm,18.1s,baz=58,slow=34							
KURBB	**Kurchatov Arra**	**60.92**	**44**	P		**P**	**13 10 51.0**	**-0.9**
	0.9nm,0.2s,baz=322,slow=7.4,SNR=2.2							
	0.9nm,0.2s							
H10N2	**ASCENSION HYDR**	**61.70**	**162**	T		T	14 16 54.5	
	baz=350							
H10N3	**ASCENSION HYDR**	**61.71**	**162**	T		T	14 16 53.8	
	baz=350							
H10N1	**ASCENSION HYDR**	**61.72**	**162**	T		T	14 16 58.4	
	baz=350							
H10S3	**ASCENSION HYDR**	**62.77**	**163**	T		T	14 18 19.2	
	baz=350,slow=74,SNR=6.7							
H10S2	**ASCENSION HYDR**	**62.78**	**163**	T		T	14 18 20.8	
	baz=230,slow=74,SNR=7.2			

PB02 eS Sn 13 21 30.9 -0.2
PB02 IPOC Station P 1.06 256 eP Pn 13 21 14.8 +0.1
PB02 eS Sn 13 21 31.6 +0.5
PB02 IAML 13 21 32.0
comp=Z,11µm,0.3s
HMBC Humberstone 1.29 307 Pn 13 21 17.0 -0.2
HMBC Humberstone 1.29 307⇑ eP Pn 13 21 17.6 +0.4
HMBC eS Sn 13 21 35.7 +0.1
HMBC Humberstone 1.29 307 eP Pn 13 21 17.6 +0.4
HMBC eS Sn 13 21 36.3 +0.7
HMBC IAML 13 21 39.5
comp=Z,9µm,0.3s
PATCX Punta Patache 1.30 280 Pn 13 21 17.4 +0.2
PATCX Punta Patache 1.30 280⇑ eP Pn 13 21 17.6 +0.4
PATCX eS Sn 13 21 35.7 0.0
PATCX IAML 13 21 38.5
comp=N,9µm,0.3s
PATCX Punta Patache 1.30 280 eP Pn 13 21 17.6 +0.4
PATCX eS Sn 13 21 36.8 +1.1
PATCX IAML 13 21 38.4
comp=Z,5µm,0.4s
PB03 IPOC Station P 1.33 222 Pn 13 21 17.8 +0.1
PB03 IPOC Station P 1.33 222⇑ eP Pn 13 21 17.8 +0.1
PB03 eS Sn 13 21 35.7 -0.8
PB03 IAML 13 21 37.4
comp=E,5µm,0.3s
PB03 IPOC Station P 1.33 222 eP Pn 13 21 17.1 -0.6
PB03 eS Sn 13 21 37.0 +0.5
PB03 IAML 13 21 39.5
comp=Z,6µm,0.3s
TA01 Diego Aracena 1.39 291 Pn 13 21 18.6 +0.3
TA01 Diego Aracena 1.39 291⇑ eP Pn 13 21 18.5 +0.2
TA01 eS Sn 13 21 37.2 -0.3
TA01 Diego Aracena 1.39 291 eP Pn 13 21 18.5 +0.2
TA01 eS Sn 13 21 38.0 +0.6
TA01 IAML 13 21 41.3
comp=Z,5µm,0.6s
GO01 Chusmiza 1.44 345 Pn 13 21 20.8 +1.5
GO01 Chusmiza 1.44 345⇓ eP Pn 13 21 20.8 +1.5
GO01 eS Sn 13 21 41.9 +2.6
GO01 Chusmiza 1.44 345 eP Pn 13 21 20.8 +1.5
GO01 eS Sn 13 21 41.6 +2.4
GO01 IAML 13 21 43.4
comp=Z,3µm,0.2s
TA02 Huaiquique 1.48 302 eP Pn 13 21 19.8 +0.4
TA02 eS Sn 13 21 39.4 -0.1
TA02 IAML 13 21 40.7
comp=N,10µm,0.2s
TA02 Huaiquique 1.48 302 eP Pn 13 21 19.9 +0.5
TA02 eS Sn 13 21 41.2 +1.8
TA02 IAML 13 21 42.3
comp=Z,3µm,0.1s
PB11 IPOC Station P 1.53 328 Pn 13 21 21.0 +0.9
PB11 IPOC Station P 1.53 328⇑ eP Pn 13 21 20.9 +0.8
PB11 eS Sn 13 21 41.9 +1.2
PB11 IAML 13 21 43.2
comp=N,8µm,0.2s
PB11 IPOC Station P 1.53 328 eP Pn 13 21 20.9 +0.8
PB11 eS Sn 13 21 41.6 +0.9
PB11 IAML 13 21 47.7
comp=Z,3µm,0.5s
PB06 IPOC Station P 1.79 204 Pn 13 21 23.9 +0.6
PB06 IPOC Station P 1.79 204 eP Pn 13 21 23.8 +0.6
PB06 eS Sn 13 21 46.5 0.0
PB06 IAML 13 21 48.3
comp=E,5µm,0.3s
PB06 IPOC Station P 1.79 204 eP Pn 13 21 23.9 +0.6
PB06 eS Sn 13 21 47.3 +0.9
PB06 IAML 13 21 52.2
comp=Z,3µm,0.3s
AF01 San Pedro de A 1.96 163 Pn 13 21 27.3 +1.6
AF01 San Pedro de A 1.96 163 eP Pn 13 21 28.0 +2.4
AF01 IAML 13 22 10.4
comp=E,2µm,0.7s
AF01 San Pedro de A 1.96 163 eP Pn 13 21 25.5 -0.1
AF01 eS Sn 13 21 36.8 -14
AF01 IAML 13 22 25.9
comp=Z,1µm,0.5s
PB05 IPOC Station P 2.21 216 Pn 13 21 28.5 -0.2
PB05 IPOC Station P 2.21 216 eP Pn 13 21 28.1 -0.5
PB05 eS Sn 13 21 54.3 -1.7
PB05 IAML 13 22 05.6
comp=E,1µm,0.5s
PB05 IPOC Station P 2.21 216 eP Pn 13 21 28.0 -0.7
PB05 eS Sn 13 21 55.2 -0.7
PB16 IPOC Station P 2.80 346 Pn 13 21 39.1 +2.4
PB16 IPOC Station P 2.80 346 eP Pn 13 21 39.1 +2.4
PB16 IAML 13 22 22.7
comp=N,480nm,0.2s
PB16 IPOC Station P 2.80 346 eP Pn 13 21 33.6 -3.1
PB16 eS Sn 13 22 08.2 -2.1
PB12 IPOC Station P 2.83 329 Pn 13 21 37.1 +0.3
PB12 IPOC Station P 2.83 329 eP Pn 13 21 36.6 -0.1
PB12 eS Sn 13 22 11.1 +0.6
PB12 IAML 13 22 24.4
comp=E,1µm,0.5s
PB12 IPOC Station P 2.83 329 eP Pn 13 21 36.7 -0.1
PB12 eS Sn 13 22 10.7 +0.2
PB12 IAML 13 22 30.6
comp=Z,813nm,0.4s
PB10 IPOC Station P 2.94 213 Pn 13 21 39.6 +1.6
PB10 IPOC Station P 2.94 213 eP Pn 13 21 37.9 -0.2
PB10 IAML 13 22 25.2
comp=N,552nm,0.6s
PB10 IPOC Station P 2.94 213 eP Pn 13 21 37.8 -0.2
PB10 eS Sn 13 22 13.6 +0.9
PB10 IAML 13 22 22.7
comp=Z,411nm,0.5s
AP01 Chacalluta 3.05 331 Pn 13 21 40.7 +1.2
AP01 Chacalluta 3.05 331 eP Pn 13 21 40.6 +1.1
AP01 Chacalluta 3.05 331 eP Pn 13 21 40.8 +1.2
AP01 eS Sn 13 22 02.1 -13
AP01 IAML 13 22 36.5
comp=Z,1µm,0.3s
YJA Yavi 3.24 111⇑ eP Pn 13 21 45.8 +3.4
YJA Yavi 3.24 111 eP Pn 13 21 46.2 +3.7
HJA Humahuaca 3.79 125 eP Pn 13 21 53.3 +3.5
PB14 IPOC Station P 3.85 202 Pn 13 21 51.0 +0.5
PB14 IPOC Station P 3.85 202 eP Pn 13 21 50.6 +0.1
PB14 eS Sn 13 22 37.4 +2.4
PB14 IAML 13 22 46.6
comp=Z,377nm,1.3s
SALTA 3.88 145 eP Pn 13 21 50.4 -0.6
SALTA eP 13 21 51.2
SALTA eP 13 21 54.2
GO02 Mina Guanaco 4.15 190 Pn 13 21 54.5 +0.1
GO02 Mina Guanaco 4.15 190 eP Pn 13 21 39.2 -15
GO02 eS Sn 13 22 59.2 +17
GO02 IAML 13 23 10.2
comp=Z,451nm,0.9s
SLA San Lorenzo 4.74 141 eP Pn 13 22 05.3 +3.0
LPAZ La Paz 4.79 8 Pn 13 22 06.5 +3.0
LPAZ La Paz 4.79 8 P Pn 13 22 07.0 +3.5
comp=Z,14nm,0.3s,baz=190,slow=3.6,SNR=84
LPAZ S Sn 13 22 54.8 -3.4
comp=Z,25nm,0.6s,baz=186,slow=6.7,SNR=5.7
LPAZ LR LR 13 24 39.5
comp=Z,107nm,20.8s,baz=214,slow=47
LPAZ La Paz 4.79 8 eP Pn 13 21 51.8 -12
LPAZ La Paz 4.79 8 eP Pn 13 22 04.8 +1.3
AC02 Maricunga 5.76 183 Pn 13 22 16.0 -0.4
SIV San Ignacio 8.89 57 P Pn 13 22 57.2 -1.4
comp=Z,24nm,0.4s,baz=235,slow=9.7,SNR=218
MURT Porto Murtinho 10.44 95 eP Pn 13 23 17.4 -2.1
CFA Coronel Fontan 10.51 177 P Pn 13 23 16.6 -4.0
comp=Z,1.1nm,0.3s,baz=17,slow=11,SNR=6.4
CFA S Sn 13 25 07.0 -9.3
comp=Z,1.3nm,0.3s,baz=90,slow=20,SNR=1.7
PTLB Pontes e Lacer 10.73 60 Pn 13 23 21.6 -1.9
PTLB Pontes e Lacer 10.73 60 eP Pn 13 23 21.8 -1.7
BDQN Bodoquena, MS 11.28 89 eP Pn 13 23 28.3 -2.6
VILB Vilhena 11.51 47 Pn 13 23 33.6 -0.4
VILB Vilhena 11.51 47 eP Pn 13 23 33.3 -0.7
CPUP Villa Florida 11.73 119 P Pn 13 23 34.1 -2.8
comp=Z,0.9nm,0.6s,baz=291,slow=14,SNR=4.9
NNA Nana 11.87 318 P Pn 13 23 42.3 +3.5
comp=Z,5.1nm,0.3s,baz=211,slow=9.4,SNR=4.1
SALV Santo Antonio 13.44 70 eP Pn 13 23 58.4 -1.0
PP1B Ponte de Pedra 13.57 78 eP Pn 13 23 60.0 -1.2
PDRB Porto dos Gac 14.90 53 eP Pn 13 24 16.7 -1.5
BI02 San Fabin de 15.70 187 Pn 13 24 26.5 -1.6
PTGB Pitanga 15.83 106 eP Pn 13 24 29.2 -0.7
CLDB Colider 16.07 53 eP Pn 13 24 32.4 -0.5

ITAB Concordia 16.39 115 eP Pn 13 24 35.1 -1.6
ARAG Araguaiana, MT 16.97 75 eP P 13 24 43.9 -0.2
FRTB Fartura 17.95 101 eP Pn 13 24 55.3 -0.4
BB19B Bebedouro 18.91 94 eP P 13 25 05.4 0.0
SNDB Serra Nova Dou 19.04 64 eP P 13 25 06.8 0.0
NPGB Novo Progresso 19.05 45 eP P 13 25 06.3 -0.6
MACA Manacapuru-AM 19.46 25 P P 13 25 11.0 -0.4
MACA Manacapuru-AM 19.46 25 eP P 13 25 10.9 -0.4
IPMB Ipameri, GO 19.64 85 eP P 13 25 14.0 +0.7
PLCA Paso Flores 19.67 184 P 13 25 13.3 -0.1
PLCA Paso Flores 19.67 184 P Pn 13 25 14.8 -1.1
comp=Z,7.3nm,0.7s,baz=354,slow=12,SNR=12
RCLB Rio Claro- Sao 19.79 98 eP P 13 25 14.7 -0.3
VAO Valinhos 20.32 99 P P 13 25 19.1 -1.6
VAO IAmb IAmb 13 25 21.2
comp=Z,16nm,0.7s
BDFB Brasilia 20.44 78 P P 13 25 21.8 -0.2
comp=Z,5.3nm,0.5s,baz=258,slow=10,SNR=7.5
BDFB pP pP 13 25 40.2 -3.0
comp=Z,4.0nm,0.9s,baz=171,slow=27,SNR=2.4
comp=Z,5.3nm,0.5s
ITTB Itaituba 20.89 39 eP P 13 25 25.8 -0.9
MAL2 Monte Alegre, 23.69 39 P P 13 25 53.5 -1.6
SMTB Santa Maria do 23.77 62 eP P 13 25 55.9 +0.1
JANB Januaria 24.01 80 eP P 13 25 57.5 -0.5
SDBA SAO DESIDERIO 24.41 73 eP P 13 26 02.6 +1.0
DUB01 Friburgo-RJ 24.58 97 eP P 13 26 03.2 +0.1
BOAV Boa Vista 24.68 20 P P 13 26 04.8 +0.8
BOAV IAmb IAmb 13 26 06.9
comp=Z,8.4nm,0.6s
BOAV Boa Vista 24.68 20 eP P 13 26 03.1 -0.9
BAUV El Baul 29.83 1 P P 13 26 49.2 -0.9
BAUV IAmb IAmb 13 26 51.5
comp=Z,7.8nm,0.8s
SNAA Sanae 62.66 161 P P 13 31 06.8 +1.0
SNAA IAmb IAmb 13 31 08.4
comp=Z,2.2nm,0.7s
SNAA Sanae 62.66 161 P P 13 31 07.1 +1.3
comp=Z,2.0nm,0.7s,baz=265,slow=8.4,SNR=16
SNAA pP pP 13 31 33.9 +0.5
comp=Z,1.0nm,1.0s,baz=330,slow=20,SNR=1.1
comp=Z,2.0nm,0.7s
DBIC Dimbokro 68.50 74 P P 13 31 45.1 +0.9
comp=Z,6.6nm,0.7s,baz=248,slow=6.0,SNR=8.3
comp=Z,6.6nm,0.7s
QSPA South Pole Qui 69.13 180 P P 13 31 50.5 +3.1
comp=Z,2.5nm,0.5s,baz=154,slow=0.7,SNR=35
QSPA pP pP 13 32 17.1 +1.5
comp=Z,1.1nm,0.7s,baz=226,slow=1.2,SNR=2.8
comp=Z,2.5nm,0.5s
TORD Torodi Ar. Bea 77.10 70 P P 13 32 35.7 +0.7
comp=Z,2.9nm,0.4s,baz=258,slow=4.1,SNR=4.3
comp=Z,2.9nm,0.4s
ASAR Alice Springs 130.35 208 PKP **PKiKP** 13 39 52.9 +0.5
comp=Z,0.5nm,0.8s,baz=113,slow=1.4,SNR=3.4
WRA Warramunga Arr 133.39 211 PKP **PKiKP** 13 39 58.4 -0.1
comp=Z,0.4nm,0.5s,baz=157,slow=1.6,SNR=4.9
ZALV Zalesovo Beam 141.51 25 PKP **PKiKP** 13 40 13.5 -0.5
comp=Z,0.5nm,0.5s,baz=310,slow=5.4,SNR=1.7
ZALV pPKP **pPKPdf** 13 40 41.3 -0.7
comp=Z,0.3nm,0.4s,baz=298,slow=3.1,SNR=1.5
MKAR Makanchi Array 145.21 36 PKPbc **PKiKP** 13 40 19.9 -2.0
comp=Z,0.7nm,0.8s,baz=328,slow=2.6,SNR=7.0
MKAR pPKPbc pPKPab 13 40 46.3 -1.6
comp=Z,1.8nm,0.9s,baz=325,slow=3.6,SNR=5.4
MJAR Matsushiro Arr 151.89 309 PKPbc **PKiKP** 13 40 37.0 +1.0
comp=Z,0.6nm,0.6s,baz=113,slow=1.6,SNR=4.8

*NEIC **02** 13:41:31.9±1.8, 35°.119N±0°.009×95°.34W±0°.02, h7km±2km, Error ellipse: s-maj=2.7km s-min=1.1km az=108.0*
NEIC 02 13:41:31.6±1.6, 35°.11N±0°.02×95°.328W±0°.009, h5km±1km, mb_Lg2.2/7, ML2.5/14, ML2.4/5, Error ellipse: s-maj=3.3km s-min=2.7km az=341.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUL3	**Leonard**	**0.89**	**335**		Pg	13 41 47.9	-0.7
TUL3					Sg	13 42 00.1	0.0
RLO	**Rose Lookout**	**1.08**	**13**		Pg	13 41 51.9	-0.5
RLO					Sg	13 42 06.4	0.0
RLO				IAML		13 42 09.1	
	comp=E,121nm,0.2s						
RLO				IAML		13 42 11.9	
	comp=N,147nm,0.2s						
DEOK	**Depew**	**1.20**	**308**		Pg	13 41 54.3	-0.4
DEOK					Sg	13 42 09.9	-0.4
DEOK				IAML		13 42 10.3	
	comp=N,111nm,0.1s						
DEOK				IAML		13 42 12.2	
	comp=E,94nm,0.2s						
OK052	**Battle Ridge R**	**1.49**	**307**		Pn	13 41 58.2	-0.9
OK052					Sn	13 42 18.9	0.0
U38A	**Gravette**	**1.53**	**30**		Pn	13 41 59.3	-0.3
U38A					Sn	13 42 20.0	0.0
QUOK	**Quay**	**1.54**	**314**		Pn	13 41 60.0	+0.2
QUOK					Sb	13 42 20.7	+0.1
MIAR	**Mount Ida**	**1.55**	**111**		Pn	13 41 59.4	-0.4
MIAR					Sg	13 42 21.0	-0.3
HHAR	**Hobbs**	**1.63**	**44**		Pn	13 42 01.2	+0.3
HHAR					Sb	13 42 23.2	+0.2
FNO	**Franklin**	**1.70**	**276**		Pn	13 42 02.1	+0.1
FNO					Sg	13 42 25.8	-0.6
OK048	**Pawnee Station**	**1.85**	**315**	IAmb_Lg		13 42 31.9	
	comp=Z,12nm,1.2s						
T35A	**Sooner Cattle**	**2.04**	**332**		Pn	13 42 07.3	+0.6
X40A	**Basin Creek Fa**	**2.14**	**106**		Pb	13 42 09.7	-1.2
X40A				IAmb_Lg		13 42 39.9	
	comp=Z,5.0nm,0.9s						
WHAR	**Wooly Hollow**	**2.50**	**85**		Pn	13 42 13.3	+0.5
FCAR	**Ozark Folk Cen**	**2.73**	**72**		Pn	13 42 16.9	+0.9
R40A	**Maddies Statio**	**4.02**	**37**	IAmb_Lg		13 43 45.1	
	comp=Z,5.2nm,0.8s						
P38A	**Dawn**	**4.73**	**17**	IAmb_Lg		13 44 04.6	
	comp=Z,5.1nm,1.2s						

*NEIC **02** 13:42:58.5±1.1, 35°.99N±0°.05×140°.44E±0°.09, h70km±9km, mb4.3/8, Error ellipse: s-maj=10.6km s-min=7.3km az=112.0*
*JMA **02** 13:42:58.6±0.1, 36°.0N±0°.3×140°.4E±0°.5, h55km±1km, MV3.2/40, SOUTHERN IBARAKI PREF*
JMA Felt I J1 at SOUTHERN IBARAKI PREF .
*IDC **02** 13:42:59.3±1.7, 35°.96N×140°.42E, h74km±15km, mb3.5/12, mbtmp3.8/16, Error ellipse: s-maj=19.1km s-min=8.5km az=66.0*
ISC 02 13:42:57.7±0.7, 35°.98N±0°.04×140°.47E±0°.05, h60km±6km, n68, σ1°32/69, mb4.0/16, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.05**	**103**	*i* P	**Pn**	**13 43 07.4**	**+0.9**
JIHU				eS	**Sn**	**13 43 13.3**	**+0.3**
JYT	**Yasato**	**0.33**	**319**	⇓*i* P	**Pn**	**13 43 08.0**	**-0.1**
JYT				⇓S	**Sn**	**13 43 15.2**	**-0.4**
JHYU	**Hitachinakayam**	**0.38**	**15**	*i* P	**Pn**	**13 43 08.6**	**+0.2**
JHYU				S	**Sn**	**13 43 16.1**	**-0.1**
JHO	**Hitachi**	**0.64**	**7**	*i* P	**Pn**	**13 43 11.4**	**+0.1**
JHO				S	**Sn**	**13 43 20.6**	**-0.4**
JAG	**Ashikaga**	**0.93**	**299**	⇓*i* P	**Pn**	**13 43 14.9**	**0.0**
BSO3	**Boso 3**	**1.17**	**178**	P	**Pn**	**13 43 19.3**	**+1.5**
JKT	**Katashina**	**1.26**	**309**	⇓*i* P	**Pn**	**13 43 19.6**	**+0.4**
JRY	**Ryogami san**	**1.27**	**272**	⇓*i* P	**Pn**	**13 43 19.6**	**+0.3**
JOD2	**Odawara 2**	**1.33**	**238**	*i* P	**Pn**	**13 43 20.6**	**+0.5**
BSO1	**Boso 1**	**1.39**	**162**	P	**Pn**	**13 43 21.7**	**+1.3**
JFK	**Kawauchi**	**1.43**	**13**	P	**Pn**	**13 43 22.0**	**+0.6**
JMM	**Marumori**	**1.90**	**8**		**Pn**	**13 43 29.1**	**+1.2**
JMM					Sn	**13 43 51.5**	**+0.8**
JMM	**Marumori**	**1.90**	**8**	P	**Pn**	**13 43 29.6**	**+1.8**
JMM	**Marumori**	**1.90**	**8**	S	**Sn**	**13 43 53.4**	**+2.7**
MJAR	**Matsushiro Arr**	**1.91**	**288**	P	**Pn**	**13 43 28.6**	**+0.6**
	148nm,0.4s,baz=87,slow=9.6,SNR=1203						
MJAR				S	**Sn**	**13 43 51.8**	**+0.8**
	12nm,0.3s,baz=83,slow=18,SNR=5.7						
MJAR				LR	LR	13 44 22.1	
	comp=Z,124nm,19.2s,baz=139,slow=44						
MAJO	**Matsushiro**	**1.91**	**288**		**Pn**	**13 43 28.2**	**+0.2**
MAJO	**Matsushiro**	**1.91**	**288**	P	**Pn**	**13 43 29.4**	**+1.4**
MJB9	**Matsu-Tunnel**	**1.91**	**288**	Pn	**Pn**	**13 43 28.1**	**+0.1**
JSG	**Sagara**	**2.27**	**236**		**Pn**	**13 43 33.1**	**+0.3**
JSG	**Sagara**	**2.27**	**236**	P	**Pn**	**13 43 34.8**	**+1.9**
JGF	**Kuroka**	**2.56**	**262**		**Pn**	**13 43 38.7**	**+1.9**

JGF Sn Sn 13 44 07.1 +0.3
JGF Kuroka 2.56 262 P Pn 13 43 39.2 +2.4
JSD Sado 2.71 320 Pn 13 43 40.1 +1.3
JSD Sado 2.71 320 P Pn 13 43 40.1 +1.3
INU Inuyama 2.88 258 Pn 13 43 42.5 +1.4
INU Inuyama 2.88 258 P Pn 13 43 42.6 +1.4
INU Inuyama 2.88 258 S Sn 13 44 17.1 +2.6
JHJ Hachijo jima 2 2.91 191 P Pn 13 43 43.0 +1.5
187nm,0.8s,baz=86,slow=23,SNR=9.1
JHJ S Sn 13 44 16.9 +1.6
175nm,0.5s,baz=51,slow=23,SNR=6.3
JHJ2 Mitsune 2.91 191 Pn Pn 13 43 42.4 +0.9
JHJ2 Mitsune 2.91 191 P Pn 13 43 45.2 +3.6
JTM Tenmabayashi 4.83 5 Pn Pn 13 44 08.8 +1.1
JTM Tenmabayashi 4.83 5 P Pn 13 44 09.6 +1.8
JTM Tenmabayashi 4.83 5 S Sn 13 45 05.0 +2.7
JMN Monobe 5.86 249 Pn Pn 13 44 22.2 +0.2
JMN Monobe 5.86 249 P Pn 13 44 24.6 +2.6
ERM Erimo 6.38 18 Pn Pn 13 44 28.6 -0.5
ASAJ Asahikawa 8.29 11 P Pn 13 44 55.9 +0.6
10nm,0.8s,baz=205,slow=13,SNR=8.0
JKA Kamikawa-asahi 8.29 11 Pn 13 44 55.3 +0.1
JNU Nakatsue 8.41 253 P Pn 13 44 59.4 +2.6
3.2nm,0.8s,baz=357,slow=14,SNR=1.8
JCJ Chichijima 8.97 170 P Pn 13 44 54.6 -10
14nm,0.4s,baz=31,slow=18,SNR=1.4
JCJ S Sn 13 46 27.5 -17
31nm,0.6s,baz=288,slow=21,SNR=5.0
KSRS Korea Array 10.18 282 P Pn 13 45 23.4 +2.4
1.0nm,0.8s,baz=99,slow=13,SNR=4.6
NACB Ninganchiao 20.09 239 P P 13 47 24.6 -1.8
SONM Songino Array 27.76 306 P P 13 48 41.2 +0.4
0.8nm,0.6s,baz=114,slow=11,SNR=3.7
0.8nm,0.6s
H11N2 WAKE ISLAND Hy 28.30 118 T T 14 18 11.5
baz=312,slow=75,SNR=6.7
H11N1 WAKE ISLAND Hy 28.30 118 T T 14 18 16.6
baz=312,SNR=6.6
H11N3 WAKE ISLAND Hy 28.32 118 T T 14 18 07.6
baz=312,slow=75,SNR=5.8
H11S1 WAKE ISLAND Hy 28.96 120 T T 14 19 01.4
baz=313,slow=74
H11S3 WAKE ISLAND Hy 28.96 120 T T 14 19 00.3
baz=313,slow=74
H11S2 WAKE ISLAND Hy 28.98 120 T T 14 19 01.3
baz=313
FAKI Fak Fak 39.45 193 P P 13 50 21.4 -0.8
ZALV Zalesovo Beam 42.07 313 P P 13 50 43.5 +0.1
0.5nm,0.3s,baz=92,slow=8.5,SNR=3.7
0.5nm,0.3s
MKAR Makanchi Array 44.04 303 P P 13 50 58.5 -1.0
MKAR Makanchi Array 44.04 303 P P 13 50 59.0 -0.5
0.6nm,0.5s,baz=88,slow=9.6,SNR=9.2
0.6nm,0.6s
KURK Kurchatov 45.99 309 P P 13 51 14.0 -0.8
KURK IAmb IAmb 13 51 18.1
comp=Z,4.4nm,0.9s
KURBB Kurchatov Arra 46.06 309 P P 13 51 15.3 -0.1
comp=Z,1.3nm,0.4s,baz=84,slow=8.4,SNR=11
comp=Z,1.3nm,0.4s
H19K Roundabout Mou 46.79 31 P P 13 51 20.3 -0.5
TARG Taragay, Kyrgy 48.19 297 P P 13 51 31.9 -0.7
TARG IAmb IAmb 13 51 36.3
comp=Z,2.0nm,0.6s
E22K Anaktuvuk Pass 48.89 27 P P 13 51 38.3 +1.1
COLD Coldfoot 49.44 29 P P 13 51 41.5 +0.2
COLD IAmb IAmb 13 52 11.5
comp=Z,7.3nm,1.4s
BVAR Borovoye Array 50.72 313 P P 13 51 50.1 -1.1
comp=Z,0.4nm,0.3s,baz=99,slow=7.4,SNR=2.1
comp=Z,0.4nm,0.3s
ILAR Eielson Array 50.79 32 P P 13 51 53.1 +1.6
comp=Z,0.8nm,0.8s,baz=267,slow=6.1,SNR=11
comp=Z,0.8nm,0.8s
WRA Warramunga Arr 55.92 187 P P 13 52 29.6 0.0
comp=Z,0.9nm,0.5s,baz=2.2,slow=7.5,SNR=14
comp=Z,0.9nm,0.5s
AB31 Akbulak array 58.04 310 P P 13 52 43.9 -0.5
AB31 IAmb IAmb 13 52 46.7
comp=Z,2.7nm,1.2s
ASAR Alice Springs 59.64 187 P P 13 52 55.5 -0.3
comp=Z,0.2nm,0.4s,baz=16,slow=11,SNR=7.5
comp=Z,0.2nm,0.4s
FINES FINESS Array B 69.39 332 P P 13 53 58.4 -0.4
comp=Z,2.1nm,0.8s,baz=87,slow=7.1,SNR=3.3
comp=Z,2.1nm,0.8s
AKASG Malin Array Be 74.66 322 P P 13 54 30.0 -0.5
comp=Z,0.8nm,0.4s,baz=48,slow=5.7,SNR=4.3
comp=Z,0.8nm,0.4s
NOA NORSAR Array B 74.86 337 P P 13 54 31.8 +0.1
comp=Z,0.7nm,0.7s,baz=40,slow=6.1,SNR=3.6
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 76.23 52 P P 13 54 39.2 -0.9
comp=Z,0.5nm,0.6s,baz=344,slow=6.6,SNR=2.3
comp=Z,0.5nm,0.6s

*IDC **02** 14:05:47.6±1.7, 38°.59N×122°.92W, h0km, mb3.0/1, mbtmp3.2/6, ML3.3/4, MS3.0/6, Error ellipse: s-maj=20.7km s-min=10.5km az=56.0*
*NEIC **02** 14:05:50.3±1.3, 38°.801N±0°.006×122°.78W±0°.01, h5km±1km, Error ellipse: s-maj=2.4km s-min=1.6km az=265.0*
*NCEDC **02** 14:05:50.4±1.1, 38°.820N±0°.009×122°.792W±0°.009, h4km±2km, Mwr3.7/6, ML3.3/85(NEIC), Error ellipse: s-maj=1.4km s-min=1.0km az=214.0*
ISC 02 14:05:50.3±0.8, 38°.79N±0°.02×122°.77W±0°.02, h6km±6km, n125, σ0°92/114, Northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDXM	**Geysers**	**0.02**	**310**		**Pg**	**14 05 49.9**	**-1.7**
GBGM	**Boggs Mountain**	**0.07**	**74**		**Pg**	**14 05 52.6**	**+0.4**
GAXM	**Alexander Vall**	**0.08**	**171**		**Pg**	**14 05 52.8**	**+0.6**
GAXM					**Sg**	**14 05 54.6**	**+1.1**
GPMM	**Pine Mountain**	**0.15**	**292**		**Pg**	**14 05 53.3**	**0.0**
GPMM					**Sg**	**14 05 55.6**	**+0.2**
GRTM	**Round Top Moun**	**0.17**	**29**		**Pg**	**14 05 53.6**	**-0.1**
GRTM					**Sg**	**14 05 56.4**	**+0.4**
GCVM	**Cloverdale**	**0.19**	**263**		**Pg**	**14 05 54.6**	**+0.5**
NMTM	**Middletown**	**0.26**	**87**		**Pg**	**14 05 56.1**	**+0.8**
MNRC	**McLaughlin Min**	**0.27**	**71**		**Pg**	**14 05 55.8**	**+0.2**
MNRC	**McLaughlin Min**	**0.27**	**71**		**Sb**	**14 06 01.7**	**-0.8**
HOPS	**Hopland Field**	**0.31**	**311**		**Pg**	**14 05 56.3**	**0.0**
HOPS	**Hopland Field**	**0.31**	**311**		**Sg**	**14 06 01.3**	**+0.9**
GHGM	**Hogback Ridge**	**0.34**	**353**		**Pg**	**14 05 56.7**	**-0.2**
GSNM	**Snow Mountain**	**0.36**	**294**		**Pg**	**14 05 57.5**	**+0.2**
GALB	**Galbreath Wild**	**0.39**	**281**		**Pg**	**14 05 58.0**	**+0.2**
FTR	**Fort Ross**	**0.41**	**229**		**Pb**	**14 05 59.2**	**-0.7**
NTYM	**Taylor**	**0.41**	**168**		**Pg**	**14 05 59.3**	**+1.1**
OAKV	**Oakville Exper**	**0.46**	**142**		**Pg**	**14 06 00.2**	**+1.1**
BONV	**Boonville, CA**	**0.49**	**294**		**Pg**	**14 06 00.2**	**+0.5**
CVS	**Carmenet Viney**	**0.51**	**151**		**Pg**	**14 06 01.0**	**+0.9**
CVS				Sg	**Sb**	**14 06 08.6**	**-0.7**
NAPC	**Atlas Peak**	**0.54**	**131**		**Pg**	**14 06 01.6**	**+0.9**
GWRM	**Wonder Ranch**	**0.58**	**315**		**Pg**	**14 06 01.5**	**-0.1**
GHOM	**Hamilton Openi**	**0.65**	**293**		**Pg**	**14 06 03.2**	**+0.4**
GFC	**Funks Creek**	**0.65**	**35**		**Pb**	**14 06 04.9**	**+0.8**
MCCM	**Marconi Confer**	**0.65**	**188**		**Pb**	**14 06 04.3**	**+0.2**
MCCM				IAML		14 06 21.5	
	comp=E,2µm,0.9s						
MCCM				IAML		14 06 24.9	
	comp=N,1µm,1.1s						
SNT	**Sears Point**	**0.66**	**158**		**Pg**	**14 06 03.3**	**+0.3**
NGVM		**0.67**	**139**		**Pb**	**14 06 04.4**	**0.0**
NADM	**Allendale**	**0.71**	**118**		**Pb**	**14 06 06.3**	**+1.2**
RUSS	**Russell Ranch**	**0.75**	**109**		**Pb**	**14 06 06.9**	**+1.1**
NOLM	**Olema**	**0.75**	**181**		**Pb**	**14 06 05.8**	**0.0**
GCK	**Clark Valley**	**0.79**	**19**		**Pb**	**14 06 07.3**	**+0.8**
DCMP	**DeCamp, Califo**	**0.81**	**327**		**Pg**	**14 06 05.8**	**0.0**
NPRM	**Point Reyes**	**0.82**	**194**		**Pb**	**14 06 07.0**	**+0.1**
NLHM	**Lake Herman**	**0.83**	**144**		**Pg**	**14 06 06.9**	**+0.6**
KRKM	**Rackout Spring**	**0.83**	**338**		**Pb**	**14 06 06.8**	**-0.5**
PINL	**Point Pinole R**	**0.84**	**158**		**Pg**	**14 06 07.2**	**+0.7**
GTC	**Three Chop Rid**	**0.86**	**315**		**Pg**	**14 06 07.0**	**+0.1**
OSUM	**Sutter Buttes**	**0.86**	**56**		**Pg**	**14 06 07.0**	**+0.1**
SUTB	**Sutter Butte**	**0.88**	**60**		**Pg**	**14 06 06.7**	**-0.5**
SUTB				IAML		14 06 26.2	
	comp=E,945nm,0.6s						
SUTB				IAML		14 06 27.9	
	comp=N,847nm,0.5s						
CPMM	**Point Molate**	**0.89**	**161**		**Pb**	**14 06 08.1**	**0.0**
CSPM	**San Pablo Ridg**	**0.91**	**156**		**Pb**	**14 06 08.5**	**0.0**
CPIM	**Pinole Ridge**	**0.91**	**151**		**Pb**	**14 06 08.7**	**+0.1**

JEPS	**Jepson Natural**	**0.91**	**125**			**Pn**	**14 06 09.8**	**+0.1**
MNDO	**Woodland Fire**	**0.92**	**305**			**Pb**	**14 06 08.4**	**-0.3**
CTAM	**Taylor**	**0.97**	**142**			**Pn**	**14 06 10.7**	**+0.3**
GVV	**Valley View**	**0.98**	**4**			**Pb**	**14 06 09.8**	**-0.1**
HMR	**Hamilton Ranch**	**0.99**	**130**			**Pn**	**14 06 11.0**	**+0.2**
BRIB	**Briones**	**1.00**	**151**			**Pg**	**14 06 09.6**	**+0.1**
BRK	**Berkeley--Havi**	**1.00**	**156**			**Pb**	**14 06 10.2**	**+0.1**
VAK	**Adit at Lawren**	**1.00**	**156**			**Pb**	**14 06 10.6**	**+0.5**
BL67	**Building 67, L**	**1.00**	**156**			**Pb**	**14 06 10.6**	**+0.5**
BKS	**Berkeley--Byer**	**1.01**	**155**			**Pg**	**14 06 09.8**	**+0.1**
JPRM	**Presidio of Sa**	**1.02**	**167**			**Pg**	**14 06 10.0**	**+0.1**
INGLE	**Inglenook, Smi**	**1.03**	**316**			**Pb**	**14 06 10.6**	**0.0**
CYBM	**Yerba Buena Is**	**1.03**	**162**			**Pg**	**14 06 10.3**	**+0.2**
OSTM	**Stimpson Lane**	**1.08**	**57**			**Pg**	**14 06 10.8**	**-0.3**
KCPM	**Cahto Peak**	**1.09**	**325**			**Pn**	**14 06 12.0**	**-0.3**
KCPM	**Cahto Peak**	**1.09**	**325**	IAML			14 06 33.6	
	comp=E,1μm,1.1s							
KCPM				IAML			14 06 35.6	
	comp=N,985nm,0.9s							
BDM	**Black Diamond**	**1.10**	**139**			**Pg**	**14 06 10.9**	**-0.5**
TWIT	**Twitchell Isla**	**1.10**	**129**			**Pn**	**14 06 12.5**	**+0.3**
FARB	**Farallon Islan**	**1.11**	**189**			**Pg**	**14 06 11.3**	**-0.3**
FARB				IAML			14 06 32.6	
	comp=E,458nm,0.9s							
CRHM	**Round Hill Res**	**1.12**	**146**			**Pg**	**14 06 11.9**	**+0.2**
BGC	**Bolinger Road**	**1.12**	**150**			**Pb**	**14 06 12.6**	**+0.4**
GROM	**Round Mountain**	**1.12**	**4**			**Pb**	**14 06 12.4**	**+0.2**
OHCM	**Honcut**	**1.14**	**61**			**Pg**	**14 06 10.9**	**-1.2**
JSBM	**San Bruno Moun**	**1.15**	**165**			**Pg**	**14 06 12.4**	**+0.1**
PAM	**Palermo**	**1.17**	**56**			**Pg**	**14 06 11.2**	**-1.6**
JMGM	**Milagra Ridge**	**1.18**	**168**			**Pg**	**14 06 12.2**	**-0.7**
CSLM	**San Leandro Hi**	**1.18**	**154**			**Pg**	**14 06 12.5**	**-0.5**
SFRE	**Sierra Foothil**	**1.22**	**67**			**Pg**	**14 06 11.8**	**-1.9**
SAC	**San Andreas**	**1.24**	**167**			**Pg**	**14 06 13.2**	**-0.9**
CMOB	**Morgan Territo**	**1.24**	**142**			**Pg**	**14 06 13.7**	**-0.5**
OGOM	**Van Goodin Ran**	**1.25**	**46**			**Pg**	**14 06 12.8**	**-1.4**
ORV	**Oroville**	**1.25**	**52**			**Pg**	**14 06 12.1**	**-2.2**
JCHM	**Cahill Ridge**	**1.31**	**166**			**Pn**	**14 06 14.1**	**-1.1**
CBSNC	**Byron Hot Spri**	**1.32**	**137**			**Pn**	**14 06 14.5**	**-0.7**
CNIC	**Niles Canyon**	**1.34**	**151**			**Pn**	**14 06 15.1**	**-0.5**
CBZL	**Buffer Zone**	**1.38**	**143**			**Pn**	**14 06 15.8**	**-0.2**
CVLM	**Vallecito**	**1.38**	**147**			**Pn**	**14 06 15.7**	**-0.4**
O02D	**Mt. Diablo Mer**	**1.38**	**359**			**Pn**	**14 06 16.3**	**+0.1**
O02D				IAML			14 06 22.1	
	comp=N,284nm,1.0s							
KPK	**Kanaka Peak**	**1.39**	**55**			**Pn**	**14 06 14.8**	**-1.5**
WENL	**Wente Vineyard**	**1.42**	**145**			**Pn**	**14 06 14.8**	**-1.8**
JRSC	**Jasper Ridge**	**1.45**	**163**			**Pn**	**14 06 15.5**	**-1.5**
JRSC				IAML			14 06 41.6	
	comp=N,557nm,0.7s							
JSFB	**Stanford Teles**	**1.46**	**161**			**Pn**	**14 06 16.7**	**-0.6**
JFP	**Foothills Park**	**1.50**	**162**			**Pn**	**14 06 17.1**	**-0.7**
CSTL	**Corral Hollow**	**1.53**	**139**			**Pn**	**14 06 17.5**	**-0.7**
CALM	**Calaveras Res.**	**1.54**	**150**			**Pn**	**14 06 17.3**	**-1.1**
JBMM	**Black Mountain**	**1.55**	**161**			**Pn**	**14 06 17.7**	**-0.8**
BRIC	**Briceland Vine**	**1.58**	**327**			**Pb**	**14 06 20.0**	**+0.1**
BRIC	**Briceland Vine**	**1.58**	**327**	IAML			14 06 59.4	
	comp=N,287nm,0.8s							
BRIC				IAML			14 07 09.5	
	comp=E,280nm,1.3s							
KMRM	**Mail Ridge**	**1.60**	**333**			**Pg**	**14 06 21.4**	**+0.4**
KMRM	**Mail Ridge**	**1.60**	**333**	IAML			14 06 59.5	
	comp=E,458nm,1.2s							
KMRM				IAML			14 07 10.3	
	comp=N,376nm,1.3s							
WELL	**Weller Preserv**	**1.64**	**102**			**Pn**	**14 06 19.0**	**-0.8**
O03E	**Paynes Creek**	**1.68**	**26**			**Pn**	**14 06 19.2**	**-1.0**
MHC	**Mount Hamilton**	**1.70**	**148**			**Pn**	**14 06 19.9**	**-0.8**
MHC				IAML			14 06 53.1	
	comp=N,332nm,0.7s							
MHC				IAML			14 06 57.3	
	comp=E,270nm,0.7s							
KHBM	**Hayfork Bally**	**1.90**	**350**			**Pn**	**14 06 23.9**	**+0.5**
DONR	**Donner Summit**	**1.99**	**73**			**Pn**	**14 06 25.1**	**+0.3**
CMB	**Columbia Colle**	**2.02**	**111**			**Pn**	**14 06 24.8**	**-0.2**
CMB				IAML			14 06 54.5	
	comp=N,138nm,0.6s							
N02D	**Trinity Center**	**2.18**	**1**			**Pn**	**14 06 28.3**	**+1.1**
N02D				IAML			14 06 47.4	
	comp=N,157nm,0.7s							
MPK	**Martis Peak**	**2.19**	**76**			**Pn**	**14 06 28.3**	**+0.7**
HATC	**Hat Creek Radi**	**2.26**	**26**			**Pn**	**14 06 29.7**	**+1.4**
HATC				IAML			14 07 37.7	
	comp=N,124nm,2.3s							
HATC				IAML			14 07 37.7	
	comp=E,171nm,1.9s							
SAO	**San Andreas Ge**	**2.28**	**152**			**Pn**	**14 06 27.5**	**-1.0**
LBCM	**Butte Creek Ri**	**2.32**	**28**			**Pn**	**14 06 30.0**	**+0.8**
PNTR	**Pine Nut**	**2.49**	**82**			**Pn**	**14 06 32.6**	**+1.0**
WAKR	**Walker**	**2.63**	**95**			**Pn**	**14 06 34.8**	**+1.4**
WAKR				IAML			14 07 23.5	
	comp=E,135nm,1.1s							
WAKR				IAML			14 07 36.7	
	comp=N,96nm,1.3s							
YBH	**Yreka Blue Hor**	**2.94**	**1**	Pn		**Pn**	**14 06 39.3**	**+1.7**
	comp=N,0.1nm,0.3s,baz=179,slow=12,SNR=24							
YBH				Lg	Lg		14 07 26.8	
	baz=163,slow=20,SNR=3.7							
YBH				LR	LR		14 08 06.4	
	comp=N,11nm,19.2s,baz=224,slow=44							
HULI	**Fort Hunter Li**	**3.02**	**156**			**Pn**	**14 06 38.0**	**-0.8**
HULI				IAML			14 07 42.7	
	comp=E,72nm,1.1s							
HULI				IAML			14 07 49.5	
	comp=N,106nm,1.1s							
MDPB	**Devils Postpil**	**3.13**	**111**	IAML			14 07 27.3	
	comp=N,121nm,0.7s							
MDPB				IAML			14 07 40.7	
	comp=E,96nm,1.1s							
RYN	**Ryan**	**3.33**	**92**			**Pn**	**14 06 43.5**	**+0.5**
RYN				IAML			14 07 38.6	
	comp=E,63nm,1.2s							
RYN				IAML			14 07 54.4	
	comp=N,61nm,1.1s							
PKD	**Bear Valley Ra**	**3.35**	**147**	IAML			14 07 57.0	
	comp=E,41nm,1.2s							
PKD				IAML			14 08 12.6	
	comp=N,42nm,1.1s							
NVAR	**Mina Array Bea**	**3.52**	**95**	Pn		**Pn**	**14 06 47.2**	**+1.5**
	comp=N,1.3nm,0.3s,baz=269,slow=15,SNR=22							
NVAR				Lg	Lg		14 07 40.1	
	comp=N,1.9nm,0.3s,baz=273,slow=31,SNR=1.8							
NVAR				LR	LR		14 08 32.6	
	comp=N,219nm,19.0s,baz=292,slow=44							
	comp=N,5.6nm,0.6s							
K05A	**Summer Lake**	**4.18**	**19**	IAML			14 08 44.5	
	comp=E,23nm,2.2s							
K05A				IAML			14 09 26.2	
	comp=N,50nm,2.1s							
J04A	**Umpqua Nationa**	**4.47**	**6**	IAML			14 08 48.0	
	comp=N,37nm,1.3s							
J04A				IAML			14 09 19.4	
	comp=E,40nm,3.2s							
GMN	**Gold Mountain**	**4.60**	**107**	IAML			14 08 18.4	
	comp=N,17nm,1.3s							
GRAC	**Grapevine Rang**	**4.64**	**111**	IAML			14 08 23.5	
	comp=N,34nm,1.4s							
ISA	**Isabella, Lake**	**4.64**	**131**	IAML			14 08 31.4	
	comp=E,19nm,1.1s							
I03D	**Drain, OR**	**4.92**	**355**	IAML			14 09 28.8	
	comp=E,13nm,3.5s							
I03D				IAML			14 09 31.6	
	comp=N,15nm,2.5s							
TPO	**Tropico Hills**	**5.34**	**136**	IAML			14 08 43.6	
	comp=N,15nm,1.1s							
TPO				IAML			14 08 58.6	
	comp=E,19nm,1.2s							
ELK	**Elko**	**6.12**	**69**	Pn		**Pn**	**14 07 23.7**	**+2.2**
	comp=E,0.1nm,0.3s,baz=255,slow=12,SNR=14							
ELK				Lg	Lg		14 09 01.0	
	comp=E,0.1nm,0.3s,baz=158,slow=11,SNR=1.2							
ELK				LR	LR		14 10 10.4	
	comp=E,103nm,18.3s,baz=248,slow=42							
	comp=E,2.5nm,0.9s							
PFO	**Pinyon Flats O**	**7.26**	**133**	Pn		**Pn**	**14 07 34.0**	**-3.1**
	comp=E,0.2nm,0.3s,baz=297,slow=8.0,SNR=5.3							
PFO				Lg	Lg		14 09 26.4	
	comp=E,0.2nm,0.3s,baz=270,slow=16,SNR=1.0							
PFO				LR	LR		14 10 45.6	
	comp=E,101nm,19.9s,baz=338,slow=41							
	comp=E,1.9nm,0.6s							
NEW	**Newport**	**10.31**	**22**	LR	LR		14 11 44.9	
	comp=E,49nm,18.7s,baz=230,slow=34							
PDAR	**Pinedale Array**	**10.78**	**64**	Pn		**Pn**	**14 08 27.6**	**+2.3**
	comp=E,0.1nm,0.3s,baz=260,slow=17,SNR=13							
	comp=E,1.0nm,0.8s							
ANMO	**Albuquerque**	**13.61**	**101**	LR	LR		14 14 36.8	
	comp=E,108nm,18.6s,baz=35,slow=39							
BBB	**Bella Bella**	**13.90**	**346**	LR	LR		14 14 20.9	
	comp=E,55nm,20.8s,baz=202,slow=36							
TXAR	**Lajitas Array**	**18.40**	**115**	P		**Pn**	**14 10 03.4**	**-2.7**
	comp=E,0.1nm,0.4s,baz=297,slow=11,SNR=5.0							
ILAR	**Eielson Array**	**29.61**	**339**	P		**P**	**14 11 56.5**	**+0.6**
	comp=E,0.1nm,0.4s,baz=128,slow=9.7,SNR=1.9							
	comp=E,0.1nm,0.4s							

Gll 02 14:07:10.3±0.0, 32.872N±0.001×35.592E±0.001, h6km, Mws1.8, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KNHM	**Kefar Nahum**	**0.02**	**318**	P		Pg	14 07 11.2	-0.3
KNHM	**Kefar Nahum**	**0.02**	**318**	S		Sg	14 07 12.4	+0.1
SPIR	**Sapir Facility**	**0.04**	**261**	P		Pg	14 07 11.6	0.0
SPIR	**Sapir Facility**	**0.04**	**261**	S		Sg	14 07 13.1	+0.5
RMOT	**Ramot**	**0.07**	**109**	P		Pg	14 07 12.3	+0.3
RMOT	**Ramot**	**0.07**	**109**	S		Sg	14 07 13.9	+0.8
HDNS	**Had-Ness**	**0.07**	**37**	P		Pg	14 07 12.2	+0.2
HDNS	**Had-Ness**	**0.07**	**37**	S		Sg	14 07 14.0	+0.8
MGDL	**Migdal**	**0.08**	**246**	P		Pg	14 07 12.3	+0.1
MGDL	**Migdal**	**0.08**	**246**	S		Sg	14 07 14.1	+0.7
MMA0B	**Mount Meron ar**	**0.21**	**312**	P		Pg	14 07 15.3	+0.7
MMA0B	**Mount Meron ar**	**0.21**	**312**	S		Sg	14 07 19.2	+1.7
KSHT	**Keshet**	**0.21**	**59**	P		Pg	14 07 15.1	+0.5
KSHT	**Keshet**	**0.21**	**59**	S		Sg	14 07 19.2	+1.7
MMC7	**Mount Meron ar**	**0.23**	**312**	P		Pg	14 07 15.7	+0.9
GEM	**Giv'at Ha'Em**	**0.34**	**10**	P		Pg	14 07 17.8	+0.7
GEM	**Giv'at Ha'Em**	**0.34**	**10**	S		Sb	14 07 23.5	-1.1
IZRL	**Izrael**	**0.38**	**216**	P		Pb	14 07 18.6	-0.9
IZRL	**Izrael**	**0.38**	**216**	S		Sb	14 07 24.8	-0.9
NATI	**Neve Ativ**	**0.41**	**17**	P		Pb	14 07 19.2	-0.7
NATI	**Neve Ativ**	**0.41**	**17**	S		Sb	14 07 25.7	-0.7
HNTI	**Hanita**	**0.41**	**301**	P		Pg	14 07 19.0	+0.7
HNTI	**Hanita**	**0.41**	**301**	S		Sb	14 07 25.7	-0.8
MMLI	**Mount Malkishu**	**0.46**	**198**	P		Pb	14 07 20.1	-0.7
MMLI	**Mount Malkishu**	**0.46**	**198**	S		Sb	14 07 27.4	-0.5
HMDT	**Nahal Hemdat**	**0.62**	**185**	P		Pg	14 07 22.3	+0.1
HMDT	**Nahal Hemdat**	**0.62**	**185**	S		Sb	14 07 32.2	-0.3

BEO ***02*** *14:11:32.7±0.2, 44.34N×17.48E, h8km±2km, ML4.7/16*
IDC ***02*** *14:11:33.2±0.5, 44.32N×17.53E, h0km, mb4.3/23, mbtmp4.4/40, ML4.3/12, MS4.3/69, Error ellipse: s-maj=8.3km s-min=7.7km az=52.0*
PRU ***02*** *14:11:33.5, 44.19N×17.70E, h10km, M4.7*
MOS ***02*** *14:11:33.8±0.9, 44.38N×17.59E, h13km, mb5.0/27, MS4.4/19, Error ellipse: s-maj=3.3km s-min=2.4km az=102.4*
NAO ***02*** *14:11:33.1, 44.32N×17.53E, h10km, MB4.2*
MED_RC ***02*** *14:11:33.0±0.1, 44.26N×17.61E, h10km, MW4.9/68, Moment Tensor Solution. Mantle waves: s68,c124; Duration: 1#1 Moment tensor: Scale 10^16 Nm; Mrr2.42±.05; Mθθ-2.45±.04; Mϕϕ0.03±.05; Mrθ-1.38±.15; Mθϕ0.51±.04; Mϕr1.32±.17; Best double couple: Ms3.13000×10^16 NP1:ϕs84.00000°, δ31.00000°, λ59.00000°. NP2:ϕs300.00000°, δ64.00000°, λ107.00000°. Principal axes: T 3.2100, Plg66.0000°, Azm241.0000°; N -0.1600, Plg15.0000°, Azm112.0000°; P -3.0500, Plg17.0000°, Azm17.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
RHSSO ***02*** *14:11:33.3±0.3, 44.31N×17.56E, h6km±2km, ML4.7/5*
PDG ***02*** *14:11:33.8±0.3, 44.31N×17.53E, h2km, MD4.9/13, ML4.8/13, Error ellipse: s-maj=0.5km s-min=1.0km az=0.0*
NEIC ***02*** *14:11:34.5±2.5, 44.39N±0.04×17.54E±0.07, h10km±1km, mb4.7/123, Error ellipse: s-maj=9.3km s-min=4.8km az=239.0*
GCMT ***02*** *14:11:34.5±0.2, 44.19N±0.01×17.57E±0.02, h12km, MW4.9/116, Moment Tensor Solution. s58,c73; s116,c197; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.89±.05; Mθθ-2.68±.05; Mϕϕ-0.21±.05; Mrθ-0.41±.17; Mθϕ0.73±.04; Mϕr0.87±.20; Best double couple: Ms3.03900×10^16 NP1:ϕs93.00000°, δ40.00000°, λ70.00000°. NP2:ϕs298.00000°, δ53.00000°, λ106.00000°. Principal axes: T 3.1260, Plg76.0000°, Azm261.0000°; N -0.1780, Plg13.0000°, Azm108.0000°; P -2.9510, Plg6.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MCSM ***02*** *14:11:35.8±0.4, 44°N±2°×17°7E±°, h15km±3km, mb4.6, mB5.0, MLv5.1, Mw(mB)4.3*
LDG ***02*** *14:11:36.3±0.3, 44.30N×17.58E, h10km, Ml4.5/29, Error ellipse: s-maj=5.8km s-min=4.7km az=104.0*

ISC 02 14:11:34.6±0.7, 44.33N±0.02×17.55E±0.02, h12km±4km, n834, σ1°971/929, mb4.7/123, MS4.4/70, 48C-66D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.50**	**328**	i Pg		**Pg**	**14 11 42.6**	**-1.8**
BLY				eSg		**Sg**	**14 11 50.7**	**-0.4**
BLY	**Banja Luka**	**0.50**	**328**	⇓P		**Pg**	**14 11 43.3**	**-1.1**
BLY				⇑S		**Sg**	**14 11 50.2**	**-0.9**
BLY	**Banja Luka**	**0.50**	**328**	ePg		**Pg**	**14 11 43.2**	**-1.2**
BLY				eSg		**Sg**	**14 11 51.1**	**0.0**
SLATY	**Slatina**	**0.53**	**340**	⇓iPg		**Pg**	**14 11 42.7**	**-2.4**
SLATY				eSg		**Sg**	**14 11 51.7**	**-0.5**
RICI	**Ricice**	**0.89**	**200**	i Pg		**Pg**	**14 11 51.0**	**-0.7**
RICI				Sg		**Sb**	**14 12 03.4**	**-0.2**
KIJV	**Kijevo**	**0.89**	**249**	ePg		**Pg**	**14 11 50.9**	**-0.9**
KIJV				Sg		**Sg**	**14 12 03.2**	**-0.1**
MAKA	**Makarska**	**1.11**	**201**	i Pg		**Pb**	**14 11 54.2**	**-1.4**
MAKA				Sg		**Sn**	**14 12 11.0**	**0.0**
UDBI	**Udbina**	**1.30**	**280**	ePg		**Pg**	**14 11 59.4**	**-0.1**
UDBI				Sg		**Sg**	**14 12 18.5**	**+2.1**
KLINJ	**Klinje**	**1.38**	**147**	ePg		**Pn**	**14 11 57.8**	**-1.9**
KLINJ				eSg		**Sb**	**14 12 16.8**	**-1.1**
HVAR	**Hvar**	**1.40**	**215**	ePg		**Pg**	**14 12 01.2**	**-0.3**
HVAR				Sg		**Sg**	**14 12 21.4**	**+1.8**
MOSL	**Moslavina**	**1.41**	**336**	i Pn		**Pn**	**14 11 59.8**	**-0.2**
MOSL				Sg		**Sg**	**14 12 20.3**	**+0.4**
MORI	**Morici**	**1.41**	**252**	i Pn		**Pb**	**14 12 00.3**	**+0.1**
MORI				Sg		**Sg**	**14 12 20.3**	**+0.4**
BBLS	**Lazi&#263i**	**1.41**	**108**	ePg		**Pb**	**14 12 00.4**	**-0.5**
BBLS				eSg		**Sg**	**14 12 20.7**	**+0.7**
TEKS	**Tekeris**	**1.43**	**80**	ePg		**Pn**	**14 11 59.6**	**-0.8**
TEKS				eSg		**Sb**	**14 12 19.3**	**-0.1**
STON	**Ston**	**1.46**	**176**	ePn		**Pn**	**14 12 00.0**	**-0.6**
STON				Sn		**Sg**	**14 12 21.3**	**-0.2**
STON	**Ston**	**1.46**	**176**	ePg		**Pn**	**14 11 59.4**	**-1.3**
STON				eSg		**Sb**	**14 12 20.3**	**+0.2**
PLIT	**Plitvice**	**1.49**	**292**	ePn		**Pb**	**14 12 02.2**	**+0.1**
PLIT				Sn		**Sg**	**14 12 23.4**	**+1.0**
UPM	**Unac-Piva**	**1.49**	**138**	⇓iPg		**Pn**	**14 12 00.7**	**-0.6**
UPM				i Sg		**Sg**	**14 12 24.3**	**+1.7**
RUDO	**Rudo**	**1.49**	**118**	ePg		**Pn**	**14 11 59.4**	**-1.8**
RUDO				eSg		**Sn**	**14 12 20.3**	**-0.2**
ZIRJ	**Zirje**	**1.53**	**245**	ePn		**Pb**	**14 12 02.7**	**-0.2**
ZIRJ				Sn		**Sg**	**14 12 26.0**	**+2.1**
BRY	**Bratogost**	**1.59**	**153**	⇑iPn		**Pn**	**14 12 02.4**	**-0.3**
BRY				i Sn		**Sg**	**14 12 27.2**	**+1.3**
LSTV	**Lastovo**	**1.63**	**197**	i Pn		**Pn**	**14 12 03.3**	**+0.3**
LSTV				Sn		**Sg**	**14 12 27.0**	**0.0**
PLE	**Pljevlja**	**1.66**	**126**	⇓iPn		**Pn**	**14 12 03.7**	**+0.1**
PLE				i Sn		**Sg**	**14 12 29.1**	**+1.1**
TREB	**Trebinje**	**1.71**	**160**	⇑iPn		**Pn**	**14 12 03.4**	**-0.8**
TREB				eSn		**Sn**	**14 12 25.7**	**-0.2**
DBRK	**Dubrovnik**	**1.71**	**165**	i Pn		**Pb**	**14 12 05.1**	**-0.8**
DBRK				Sn		**Sb**	**14 12 28.1**	**+0.7**
DIVS	**Divibare**	**1.77**	**97**	ePg		**Pn**	**14 12 05.1**	**+0.1**
DIVS				eSg		**Sg**	**14 12 32.1**	**+0.7**
VIRC	**Vir**	**1.79**	**270**	i Pn		**Pb**	**14 12 07.3**	**-0.1**
VIRC				Sn		**Sg**	**14 12 31.9**	**-0.5**
FRGS	**Fruska Gora**	**1.81**	**62**	ePg		**Pn**	**14 12 04.9**	**-0.7**
FRGS				eSg		**Sg**	**14 12 32.8**	**0.0**
DUGI	**Dugi Otok**	**1.83**	**260**	i Pn		**Pb**	**14 12 07.5**	**-0.4**
DUGI				Sn		**Sg**	**14 12 32.9**	**-0.4**
NKME	**Niksic**	**1.86**	**146**	⇓iPn		**Pn**	**14 12 06.8**	**+0.5**
NKME				i Sn		**Sg**	**14 12 33.8**	**-0.6**
ZAG	**Zagreb**	**1.87**	**324**	i Pn		**Pn**	**14 12 06.6**	**+0.3**
ZAG				Sn		**Sb**	**14 12 32.6**	**+0.8**
ZAG	**Zagreb**	**1.87**	**324**	P		**Pn**	**14 12 07.3**	**+1.0**
NVLJ	**Novalja**	**1.94**	**278**	i Pn		**Pb**	**14 12 08.6**	**-1.2**
NVLJ				Sn		**Sg**	**14 12 36.4**	**-0.5**
PTJ	**Puntijarka**	**1.94**	**325**	i Pn		**Pn**	**14 12 07.5**	**+0.1**
PTJ				Sn		**Sg**	**14 12 35.7**	**-1.3**
PTJ	**Puntijarka**	**1.94**	**325**	P		**Pn**	**14 12 06.6**	**-0.8**
OZLJ	**Ozalj**	**1.96**	**312**	i Pn		**Pn**	**14 12 08.4**	**+0.8**
OZLJ				Sn		**Sb**	**14 12 34.3**	**-0.3**
KALN	**Kalnik**	**1.96**	**337**	i Pn		**Pn**	**14 12 07.5**	**-0.2**
KALN				Sn		**Sb**	**14 12 34.3**	**-0.4**
HCY	**Herceg Novi**	**2.00**	**160**	⇑iPn		**Pn**	**14 12 08.8**	**+0.7**
HCY				i Sn		**Sb**	**14 12 37.0**	**+1.3**
BOJS	**Bojanci**	**2.02**	**307**	i Pn		**Pn**	**14 12 08.8**	**+0.5**
BOJS				i Sn		**Sb**	**14 12 35.0**	**-1.1**
IVAS	**Ivanjica**	**2.02**	**111**	ePg		**Pn**	**14 12 08.4**	**-0.1**
IVAS				eSg		**Sg**	**14 12 39.6**	**+0.1**
RABC	**Rab**	**2.03**	**283**	i Pn		**Pb**	**14 12 10.1**	**-1.2**
RABC				Sn		**Sg**	**14 12 38.5**	**-1.2**
CEME	**Cevo**	**2.04**	**150**	⇑iPn		**Pn**	**14 12 09.7**	**+1.0**
CEME				i Sn		**Sb**	**14 12 37.9**	**+1.1**
MORH	**Mrgy, Hungar**	**2.04**	**22**	⇓iPn		**Pn**	**14 12 07.8**	**-0.8**
MORH				eSn		**Sn**	**14 12 34.3**	**+0.3**
MORH	**Mrgy, Hungar**	**2.04**	**22**	⇓P		**Pn**	**14 12 07.9**	**-0.8**
SJES	**Sjenica**	**2.05**	**120**	ePg		**Pn**	**14 12 09.9**	**+1.0**
SJES				eSg		**Sg**	**14 12 39.1**	**-1.4**
KOME	**Kolasin**	**2.05**	**135**	ePg		**Pn**	**14 12 10.0**	**+1.1**
KOME				eSg		**Sg**	**14 12 39.1**	**-1.4**
KOME	**Kolasin**	**2.05**	**135**	⇑iPn		**Pn**	**14 12 09.5**	**+0.6**
KOME				i Sn		**Sb**	**14 12 38.2**	**+0.9**
TRUS	**Trudelj**	**2.05**	**92**	ePg		**Pn**	**14 12 09.6**	**+0.7**
TRUS				eSg		**Sg**	**14 12 40.8**	**+0.3**
GCIS	**Gornji Cirnik**	**2.06**	**319**	ePn		**Pn**	**14 12 08.7**	**-0.2**
LOBO	**Lobor**	**2.11**	**331**	i Pn		**Pn**	**14 12 09.8**	**+0.2**
LOBO				Sn		**Sb**	**14 12 38.3**	**-0.6**
BEO	**Beograd**	**2.14**	**76**	ePg		**Pn**	**14 12 10.1**	**0.0**
BEO				eSg		**Sb**	**14 12 40.5**	**+0.8**
BEO	**Beograd**	**2.14**	**76**	P		**Pn**	**14 12 10.2**	**+0.1**
BEO				eS		**Sb**	**14 12 40.5**	**+0.8**
AVAS	**Avala Beograd**	**2.15**	**79**	ePg		**Pn**	**14 12 09.6**	**-0.6**
AVAS				eSg		**Sb**	**14 12 41.3**	**+1.3**
BEHE	**Becsehely**	**2.21**	**346**			**Pn**	**14 12 11.4**	**+0.3**
BEHE				Sn		**Sn**	**14 12 34.4**	**-4.0**
BEHE	**Becsehely**	**2.21**	**346**	⇓iPn		**Pn**	**14 12 11.5**	**+0.4**
BEHE				eSn		**Sn**	**14 12 38.6**	**+0.3**
IVA	**Berane**	**2.24**	**130**	⇑iPn		**Pn**	**14 12 11.9**	**+0.4**
IVA				i Sn		**Sb**	**14 12 43.3**	**+0.7**
BUM	**Brajici-Budva**	**2.25**	**154**	⇓iPn		**Pn**	**14 12 12.4**	**+0.8**
BUM				i Sn		**Sb**	**14 12 42.9**	**0.0**
PDG	**Podgorica**	**2.27**	**146**			**Pn**	**14 12 13.1**	**+1.3**
PDG				Sg		**Sg**	**14 12 45.5**	**-1.9**
PDG	**Podgorica**	**2.27**	**146**	⇑P		**Pn**	**14 12 13.4**	**+1.6**
PDG				⇑S		**Sb**	**14 12 43.2**	**-0.1**
PDG	**Podgorica**	**2.27**	**146**	ePg		**Pb**	**14 12 14.5**	**-0.9**
PDG				eSg		**Sg**	**14 12 45.9**	**-1.5**
PDG	**Podgorica**	**2.27**	**146**	⇓iPn		**Pn**	**14 12 12.7**	**+0.9**
PDG				i Sn		**Sb**	**14 12 43.4**	**+0.1**
KOGS	**Kog**	**2.31**	**337**	i Pn		**Pn**	**14 12 12.3**	**-0.1**
KOGS				eSn		**Sn**	**14 12 40.8**	**0.0**
GRUS	**Gruza**	**2.32**	**100**	ePn		**Pn**	**14 12 13.2**	**+0.7**
SUBS	**Subotica**	**2.32**	**39**	ePn		**Pn**	**14 12 11.9**	**-0.6**
RIY	**Rijeka**	**2.40**	**296**	ePg		**Pn**	**14 12 15.1**	**+1.4**

ZAPS Zavoj 3.83 104 *e*Pn **Pn 14 12 33.3 0.0**
PUNG Punghina 3.86 89 ⇓P **Pn 14 12 34.3 +0.6**
GZR Gura Zlata 3.86 72 ⇑P **Pn 14 12 33.4 -0.5**
GZR Gura Zlata 3.86 72 P **Pn 14 12 33.3 -0.5**
ZST Bratislava 3.88 356 *e*P **Pn 14 12 34.1 0.0**
ZST *e* 14 13 18.3
ZST Bratislava 3.88 356 *e*PN **Pn 14 12 34.0 0.0**
ZST *e*SN **Sn 14 13 18.3 -1.2**
STAL STALIGIAL 3.93 301 Pn 14 12 34.9 +0.2
PSZ Piszkesteto 3.94 24 Pn 14 12 34.0 -0.9
PSZ Piszkesteto 3.94 24 ⇑P **Pn 14 12 34.3 -0.7**
PSZ Piszkesteto 3.94 24 *e*P **Pn 14 12 33.3 -1.6**
PSZ Piszkesteto 3.94 24 P **Pn 14 12 34.2 -0.7**
PAOL Paolisi 3.96 215 Pn 14 12 36.3 +1.1
TRAN Tran 3.99 110 *i*P **Pn 14 12 36.7 +1.1**
OHR Ohrid 4.00 142 *i*Pn **Pn 14 12 39.0 +3.3**
OHR *i*Sn **Sg 14 13 44.6 +1.5**
BOSS Bosilegrad 4.03 115 *e*Pn **Pn 14 12 35.7 -0.3**
KBA Koelnbreinsper 4.03 315 Pn 14 12 37.5 +1.3
KBA **Sn 14 13 23.6 +0.1**
KBA Koelnbreinsper 4.03 315 *i*Pn **Pn 14 12 37.5 +1.3**
113nm,0.7s,SNR=65
KBA *e*Sn **Sn 14 13 23.6 +0.1**
338nm,0.4s
KBA Koelnbreinsper 4.03 315 P **Pn 14 12 37.8 +1.5**
BORR Bors 4.05 46 ⇑P **Pn 14 12 36.1 -0.2**
MODS Modra-Piesok 4.05 357 *e*P **Pn 14 12 36.1 -0.3**
MODS *e* 14 13 36.0
MODS Modra-Piesok 4.05 357 *e*PN **Pn 14 12 36.1 -0.3**
MODS *e*SN **Sn 14 13 22.9 -0.8**
SRE Strehaia 4.06 83 ⇑P **Pn 14 12 37.1 +0.7**
SRE Strehaia 4.06 83 P **Pn 14 12 37.1 +0.7**
DEV Deva 4.09 66 ⇑P **Pn 14 12 36.6 -0.4**
DEV Deva 4.09 66 P **Pn 14 12 36.5 -0.4**
SMOL Smolenice 4.19 359 *e*P **Pn 14 12 38.0 -0.3**
SMOL *e* 14 13 26.8
MOA Molln 4.20 328 Pn 14 12 39.6 +1.2
MOA **Sn 14 13 27.7 +0.3**
MOA Molln 4.20 328 *i*Pn **Pn 14 12 39.6 +1.2**
566nm,0.4s,SNR=368
MOA *i*Sn **Sn 14 13 27.7 +0.3**
493nm,0.4s
VALD Valchedram 4.29 96 *i*P **Pn 14 12 39.8 +0.2**
ABTA Abfaltersbach 4.29 306 Pn 14 12 41.0 +1.2
ABTA **Sn 14 13 29.9 +0.2**
ABTA Abfaltersbach 4.29 306 *i*Pn **Pn 14 12 40.9 +1.2**
131nm,0.7s,SNR=48
ABTA *e*Sn **Sn 14 13 29.9 +0.2**
297nm,0.6s
BIOA Bad Ischl, Aus 4.33 322 Pn 14 12 41.1 +0.9
BIOA **Sn 14 13 31.9 +1.3**
BIOA Bad Ischl, Aus 4.33 322 *i*Pn **Pn 14 12 41.1 +0.9**
202nm,0.3s,SNR=127
BIOA *i*Sn **Sn 14 13 31.9 +1.3**
624nm,0.4s
DRGR 4.38 54 ⇓P **Pn 14 12 40.4 -0.5**
DRGR 4.38 54 P **Pn 14 12 40.4 -0.5**
KBN Korca 4.41 146 P **Pn 14 12 43.0 +1.7**
KBN Korca 4.41 146 P **Pn 14 12 43.7 +2.4**
VTS Vitosha 4.47 110 P **Pn 14 12 43.1 +0.9**
VTS Vitosha 4.47 110 *i*P **Pg 14 12 57.7 -2.6**
CUC Castrocucco 4.52 197 Pn 14 12 43.4 +0.6
JAVC Velka Javorina 4.54 1 *e*PN **Pn 14 12 42.7 -0.3**
JAVC *e*SG **Sn 14 13 37.3 +1.6**
LOT Lotru 4.56 74 ⇑P **Pn 14 12 44.4 +1.0**
MPEP Malo Peshtene 4.58 100 *i*P **Pn 14 12 43.7 +0.1**
LESA Schwarzleotal 4.60 314 Pn 14 12 45.5 +1.5
LESA **Sn 14 13 38.9 +1.5**
LESA Schwarzleotal 4.60 314 *i*Pn **Pn 14 12 45.5 +1.5**
192nm,0.5s,SNR=126
LESA *i*Sn **Sn 14 13 38.9 +1.5**
172nm,0.3s
KECS Kecovo 4.63 25 *e*P **Pn 14 12 44.1 -0.1**
KECS *e* 14 13 37.1
KECS Kecovo 4.63 25 *e*PN **Pn 14 12 44.1 -0.1**
KECS *e*SN **Sn 14 13 37.1 -0.7**
NEST Nestorio 4.69 145 P **Pn 14 12 46.7 +1.5**
MESR Meseseni 4.71 51 ⇑P **Pn 14 12 45.0 -0.5**
RJOB Jochberg 4.75 318 *e*Pn **Pn 14 12 47.8 +1.8**
VAY Valandovo 4.76 127 *i*Pn **Pn 14 12 47.0 +1.0**
KKB Krupnik 4.78 119 P **Pn 14 12 45.9 -0.5**
KKB Krupnik 4.78 119 *i*P **Pn 14 12 47.0 +0.6**
KRUC Moravsky 4.80 351 *e*PN **Pn 14 12 46.0 -0.7**
KRUC *e*SN **Sn 14 13 43.3 +1.1**
CJR Cluj-Napoca 4.87 59 P **Pn 14 12 49.5 +1.8**
KEK Kerkira 4.90 159 Pn 14 12 52.8 +4.7
KEK Kerkira 4.90 159 P Pn 14 12 52.9 +4.9
PENT Pentalofos 4.91 146 P **Pn 14 12 49.9 +1.7**
VLAD Vladila 4.94 91 ⇓P **Pn 14 12 49.2 +0.7**
VRAC Vranov 5.03 353 Pn **Pn 14 12 49.6 -0.2**
85nm,0.4s,baz=187,slow=13,SNR=103
VRAC Sn **Sn 14 13 48.4 +0.7**
56nm,0.3s,baz=140,slow=7.7,SNR=9.4
VRAC LR LR 14 14 58.5
comp=Z,4µm,18.1s,baz=180,slow=41
VRAC Vranov 5.03 353 ⇑P **Pn 14 12 49.0 -0.8**
VRAC Vranov 5.03 353 *e*PN **Pn 14 12 49.0 -0.8**
VRAC *e*SN **Sn 14 13 48.3 +0.6**
MAUC Maruska 5.04 2 *e*PN **Pn 14 12 50.3 +0.3**
MAUC *e*SN **Sn 14 13 47.9 -0.3**
KNT Kendrikon 5.05 127 P **Pn 14 12 49.5 -0.5**
KNT Kendrikon 5.05 127 P **Pn 14 12 50.6 +0.5**
KNT pmax pmax
comp=Z,186nm,1.5s
WTTA Wattenberg 5.08 307 Pn 14 12 52.8 +2.3
WTTA **Sn 14 13 51.7 +2.5**
WTTA Wattenberg 5.08 307 *i*Pn **Pn 14 12 52.8 +2.3**
comp=Z,139nm,0.4s,SNR=86
WTTA *i*Sn **Sn 14 13 51.7 +2.5**
comp=Z,189nm,0.5s
WTTA Wattenberg 5.08 307 P **Pn 14 12 52.8 +2.3**
WTTA 14 13 51.7
KZN Kozani 5.09 141 P **Pn 14 12 51.5 +0.9**
CASP Castiglione de 5.10 255 Pn **Pn 14 12 51.3 +0.6**
PII Pisa 5.11 266 P **Pn 14 12 52.9 +2.1**
ARR Arges 5.14 76 ⇓P **Pn 14 12 52.9 +1.5**
ARR ⇑S **Sn 14 13 52.6 +1.9**
WATA Walderalm 5.15 308 Pn 14 12 53.7 +2.2
WATA **Sn 14 13 53.8 +2.8**
WATA Walderalm 5.15 308 *i*Pn **Pn 14 12 53.7 +2.2**
comp=Z,79nm,0.4s,SNR=66
WATA *i*Sn **Sn 14 13 53.7 +2.8**
comp=Z,152nm,0.6s
WATA Walderalm 5.15 308 P **Pn 14 12 53.7 +2.2**
WATA 14 13 53.8
PGB Panagyurishte 5.15 108 *i*P **Pn 14 12 54.0 +2.5**
TREC Trest 5.17 345 *e*P **Pn 14 12 52.1 +0.4**
TREC *e* 14 13 52.0
TREC MLR MLR
comp=Z,4µm,17.7s
TREC Trest 5.17 345 *e*PN **Pn 14 12 52.1 +0.4**
TREC *e*SN **Sn 14 13 52.0 +0.8**
TIP Timpagrande 5.18 187 Pn 14 12 52.7 +0.7
TIP Timpagrande 5.18 187 ⇓P **Pn 14 12 52.6 +0.7**
TIP Timpagrande 5.18 187 Pn **Pn 14 12 52.6 +0.7**
comp=Z,1.6nmcomp=Z,2µmcomp=Z,175nm,0.7s
PLVB Pleven 5.20 98 ⇓P **Pn 14 12 51.9 -0.2**
IGT Igoumenitsa 5.22 156 P **Pn 14 12 52.7 +0.3**
IGT Igoumenitsa 5.22 156 P **Pn 14 12 52.2 -0.2**
IGT pmax pmax
comp=Z,169nm,0.8s
LFKM Lefkimmi 5.22 158 P **Pn 14 12 51.8 -0.6**
GEC2 GERESS Array S 5.24 331 P **Pn 14 12 53.5 +0.7**
GEC2 pmax pmax
comp=Z,236nm,0.5s
GEC2 GERESS Array S 5.24 331 *e*Pn **Pn 14 12 53.3 +0.5**
GERES GERESS Array B 5.24 331 Pn **Pn 14 12 53.3 +0.5**
comp=Z,7.2nm,0.3s,baz=149,slow=13,SNR=683
GERES Sn **Sn 14 13 51.5 -1.6**
comp=Z,6.4nm,0.3s,baz=144,slow=24,SNR=9.3
GERES Lg Lg 14 14 16.8
baz=160,slow=30
GERES LR LR 14 14 34.8
comp=Z,1µm,18.8s,baz=150,slow=35
comp=Z,124nm,0.5s
BERU Beregovo 5.26 40 Pn **Pn 14 12 54.1 +1.1**
JAN Janina 5.27 151 P **Pn 14 12 53.7 +0.5**
SQTA Sankt Quirin 5.30 305 Pn 14 12 56.0 +2.4
SQTA **Sn 14 13 57.1 +2.5**
SQTA Sankt Quirin 5.30 305 *i*Pn **Pn 14 12 56.0 +2.4**
comp=Z,86nm,0.3s,SNR=55
SQTA *i*Sn **Sn 14 13 57.1 +2.5**
comp=Z,117nm,0.4s
SQTA Sankt Quirin 5.30 305 P **Pn 14 12 56.0 +2.4**
SQTA 14 13 57.1
TRSU Trosnyk 5.32 43 Pn **Pn 14 12 53.7 0.0**
MMB Musomishta 5.33 119 P **Pn 14 12 53.9 0.0**
MMB Musomishta 5.33 119 *i*P **Pn 14 12 54.9 +1.0**
HOLU Holmets 5.37 37 Pn **Pn 14 12 54.9 +0.5**
MOTA Moosalm 5.42 306 Pn 14 12 57.3 +1.9
MOTA **Sn 14 13 59.1 +1.4**
MOTA Moosalm 5.42 306 *i*Pn **Pn 14 12 57.3 +1.9**
comp=Z,78nm,0.3s,SNR=52
MOTA *i*Sn **Sn 14 13 59.1 +1.4**
comp=Z,203nm,0.7s
NIE Niedzica 5.43 19 *e*P **Pn 14 12 56.9 +1.6**
NIE Niedzica 5.43 19 P **Pn 14 12 56.6 +1.3**
NIE Niedzica 5.43 19 Pn **Pn 14 12 56.3 +1.0**
comp=Z,0.6nmcomp=Z,875nmcomp=Z,58nm,1.0s
THE Thessaloniki 5.44 131 P **Pn 14 12 56.1 +0.6**
THE Thessaloniki 5.44 131 P **Pn 14 12 56.7 +1.3**
THE pmax pmax
comp=Z,126nm,1.7s
MUKU Mukachevo 5.44 39 Pn **Pn 14 12 57.1 +1.7**
KORU Korolevo 5.45 43 Pn **Pn 14 12 56.4 +0.9**
MORC Moravsky Berou 5.45 360 Pn 14 12 55.5 -0.2
MORC Moravsky Berou 5.45 360 ⇑P **Pn 14 12 56.0 +0.4**
MORC ⇑S **Sn 14 13 58.9 +0.6**
MORC Moravsky Berou 5.45 360 *e*PN **Pn 14 12 55.6 0.0**
MORC *e*SN **Sn 14 13 59.3 +1.0**
MORC Moravsky Berou 5.45 360 P **Pn 14 12 56.0 +0.4**
PRMD Pramanda 5.47 150 P **Pn 14 12 57.4 +1.5**
FETA Feichten 5.49 302 Pn 14 12 57.7 +1.5
FETA Lg 14 14 30.2
FETA Feichten 5.49 302 *i*Pn **Pn 14 12 57.7 +1.5**
comp=Z,23nm,0.3s,SNR=23
FETA Sg **Sg 14 14 30.2 -0.5**
comp=Z,162nm,1.0s
BRIU Brid 5.51 41 Pn **Pn 14 12 57.8 +1.4**
KHC Kasperske Hory 5.53 332 *e*P **Pn 14 12 57.2 +0.5**
KHC *e* 14 13 59.5
KHC MLR MLR
comp=Z,7µm,8.4s
KHC Kasperske Hory 5.53 332 *e*PN **Pn 14 12 57.2 +0.5**
KHC *ex* x 14 13 05.0
KHC *e*SN **Sn 14 13 59.5 -0.6**
KHC *ex* x 14 14 11.0
KHC AMS AMS 14 15 20.0
comp=Z,7µm,8.4s
KHC Kasperske Hory 5.53 332 Pn **Pn 14 12 57.2 +0.5**
comp=Z,1.3nmcomp=Z,3µmcomp=Z,381nm,0.7s
OKC Ostrava-Krasne 5.53 4 *e*P **Pn 14 12 57.4 +0.8**
OKC *e* 14 13 59.7
OKC Ostrava-Krasne 5.53 4 *e*PN **Pn 14 12 57.4 +0.8**
OKC *e*SN **Sn 14 13 59.7 -0.3**
SOH Sokhos 5.53 127 P **Pn 14 12 57.3 +0.6**
SOH Sokhos 5.53 127 P **Pn 14 12 57.7 +1.0**
SOH pmax pmax
comp=Z,94nm,0.6s
LIT Litokhoron 5.59 137 Pn 14 12 58.4 +0.9
LIT Litokhoron 5.59 137 P **Pn 14 12 58.4 +0.9**
LIT Litokhoron 5.59 137 P **Pn 14 12 58.4 +0.9**
ZVC Zvikov 5.61 337 *e*PN **Pn 14 12 58.4 +0.7**
STEB Steborice 5.61 1 *e*SN **Sn 14 14 03.0 +0.9**
PVL Pavlikeni 5.65 100 *i*P **Pn 14 12 59.6 +1.3**
STHS Stebnicka Huta 5.69 25 *e*P **Pn 14 13 00.0 +1.2**
STHS *e* 14 14 02.6
STHS Stebnicka Huta 5.69 25 *e*PN **Pn 14 13 00.0 +1.2**
STHS *e*SN **Sn 14 14 02.6 -1.3**
PLD Plovdiv 5.69 110 P **Pn 14 13 01.5 +2.7**
PLD pmax pmax
comp=Z,71nm,0.7s
RETA Reutte 5.70 306 Pn 14 13 00.6 +1.6
RETA **Sn 14 14 06.1 +1.8**
RETA Reutte 5.70 306 *i*Pn **Pn 14 13 00.6 +1.6**
comp=Z,40nm,0.5s,SNR=12
RETA *i*Sn **Sn 14 14 06.1 +1.8**
comp=Z,79nm,0.4s
TETR Tetrakomo, Epi 5.70 150 P **Pn 14 13 01.0 +1.9**
KRLC Kraliky 5.78 355 *e*P **Pn 14 13 00.6 +0.5**
KRLC MLR MLR
comp=Z,7µm,10.4s
KRLC Kraliky 5.78 355 *e*PN **Pn 14 13 00.6 +0.5**
KRLC AMS AMS 14 15 50.0
comp=Z,7µm,10.4s
WET Wettzell 5.79 328 P **Pn 14 13 00.6 +0.3**
WET pmax pmax
comp=Z,301nm,0.7s
WET Wettzell 5.79 328 *e*Pn **Pn 14 13 00.4 +0.1**
FUR Furstenfeldbru 5.80 314 P **Pn 14 13 01.5 +1.1**
FUR pmax pmax
comp=Z,383nm,0.6s
FUR Furstenfeldbru 5.80 314 *e*Pn **Pn 14 13 01.6 +1.2**
THL Klokotos Trika 5.80 144 P **Pn 14 13 00.8 +0.4**
BOB Bobbio (Coli) 5.81 277 P **Pn 14 13 01.7 +1.1**
BOB pmax pmax
comp=Z,113nm,0.5s
MEZ Mezhgor'ye 5.87 42 Pn **Pn 14 13 03.2 +1.8**
PLG Polygyros 5.89 130 P **Pn 14 13 01.6 0.0**
RZN Rozhen 5.89 114 *i*P **Pn 14 13 03.6 +1.9**
TSLK Tsoukalades, L 5.97 156 P **Pn 14 13 01.3 -1.3**
LKD2 Lefkada island 6.00 156 P **Pn 14 13 02.3 -0.8**
PRU Pruhonice 6.03 341 *e*P **Pn 14 13 03.6 +0.2**
PRU *e* 14 14 13.8
PRU Pruhonice 6.03 341 *e*PN **Pn 14 13 03.6 +0.2**
PRU *e*SN **Sn 14 14 13.8 +1.5**
SGRR Singureni 6.05 88 ⇓P **Pn 14 13 04.3 +0.6**
AMPL Ampelaki 6.05 152 P **Pn 14 13 03.8 0.0**
MLR Muntele Rosu 6.07 76 Pn 14 13 06.0 +1.8
MLR Muntele Rosu 6.07 76 Pn **Pn 14 13 05.5 +1.3**
comp=Z,2.3nm,0.3s,baz=280,slow=6.1,SNR=15
MLR Pg **Pb 14 13 19.8 -0.5**
comp=Z,4.1nm,0.3s,baz=270,slow=20,SNR=9.0
MLR Sn **Sn 14 14 09.2 -4.4**
comp=Z,3.2nm,0.3s,baz=225,slow=11,SNR=6.7
MLR Lg Lg 14 14 43.3
comp=Z,7.7nm,0.3s,baz=165,slow=20,SNR=3.8
MLR LR LR 14 15 56.0
comp=Z,3µm,19.5s,baz=277,slow=43
comp=Z,6.9nm,0.5s
MLR Muntele Rosu 6.07 76 ⇑P **Pn 14 13 05.2 +1.0**
MLR Muntele Rosu 6.07 76 P **Pn 14 13 06.0 +1.8**
MLR Muntele Rosu 6.07 76 Pn **Pn 14 13 06.5 +2.3**
comp=Z,1.6nmcomp=Z,2µmcomp=Z,60nm,0.9s
OZUR 6.08 70 ⇑P **Pn 14 13 04.8 +0.5**
NYDR Nydri-Lefkada 6.08 156 P **Pn 14 13 02.8 -1.4**
DPC Dobruska-Polom 6.08 353 *e*P **Pn 14 13 04.9 +0.6**
DPC MLR MLR
comp=Z,5µm,9.7s
DPC Dobruska-Polom 6.08 353 *e*PN **Pn 14 13 04.9 +0.6**
DPC AMS AMS 14 16 00.0
comp=Z,5µm,9.7s
DPC Dobruska-Polom 6.08 353 Pn **Pn 14 13 04.2 -0.1**
comp=Z,1.0nmcomp=Z,1µmcomp=Z,70nm,0.8s
OJC Ojcow 6.09 14 *e*P **Pn 14 13 04.9 +0.6**
OJC Ojcow 6.09 14 Pn 14 13 04.2 -0.1
OJC Ojcow 6.09 14 P **Pn 14 13 04.2 -0.1**
OJC Ojcow 6.09 14 Pn **Pn 14 13 04.7 +0.4**
comp=Z,0.7nmcomp=Z,48nm,0.6s
KAVA Kavala 6.11 121 P **Pn 14 13 05.1 +0.4**
DAVA Damuels 6.13 302 Pn 14 13 07.0 +2.1
DAVA **Sn 14 14 17.2 +2.2**
DAVA Damuels 6.13 302 *e*Pn **Pn 14 13 07.0 +2.1**
comp=Z,14nm,0.3s,SNR=7.0
DAVA *e*Sn **Sn 14 14 17.2 +2.2**
comp=Z,111nm,0.4s
PRA Prague 6.13 341 *e*P **Pn 14 13 06.2 +1.4**
PRA Prague 6.13 341 *e*PN **Pn 14 13 06.2 +1.4**
EVGI Lefkada island 6.16 157 P **Pn 14 13 04.7 -0.6**
TUE Stuetta 6.16 293 Pn **Pn 14 13 07.0 +1.4**
comp=Z,4.9nmcomp=Z,7µmcomp=Z,551nm,0.7s
UBR Ueberruh 6.18 306 *e*Pn **Pn 14 13 06.8 +1.2**
SZH Strazhitsa 6.19 97 *i*P **Pn 14 13 05.3 -0.4**
CEL Celeste 6.19 192 Pn **Pn 14 13 05.0 -0.8**
comp=Z,0.7nmcomp=Z,1µmcomp=Z,96nm,0.6s
ELND Elena 6.20 100 ⇑P **Pn 14 13 06.3 +0.4**
OUR Ouranopolis 6.21 128 P **Pn 14 13 05.8 -0.2**
TURR Turia 6.22 71 ⇓P **Pn 14 13 06.4 +0.2**
SULR 6.23 84 ⇑P **Pn 14 13 06.9 +0.6**
GRC1 Grafenberg Arr 6.25 321 P **Pn 14 13 06.6 +0.1**
GRC1 pmax pmax
comp=Z,314nm,0.7s
UPC Upice 6.27 351 *e*P **Pn 14 13 07.5 +0.7**
UPC Upice 6.27 351 *e*PN **Pn 14 13 07.5 +0.7**
FSK Fiskardo 6.28 158 P **Pn 14 13 05.3 -1.6**

OSTC Ostas 6.30 352 *e*P **Pn 14 13 07.7 +0.5**
OSTC MLR MLR
comp=Z,6µm,9.2s
OSTC Ostas 6.30 352 *e*PN **Pn 14 13 07.7 +0.5**
OSTC AMS AMS 14 16 10.0
comp=Z,6µm,9.2s
NEHR Nehoiu 6.31 77 ⇑P **Pn 14 13 08.1 +0.8**
SHIU Shidnytsya 6.32 37 Pn **Pn 14 13 08.5 +1.0**
VSK1 VASILIKIADES 6.33 158 P **Pn 14 13 07.6 -0.1**
CHVC Chvalec 6.35 351 *e*P **Pn 14 13 08.3 +0.4**
CHVC Chvalec 6.35 351 *e*PN **Pn 14 13 08.3 +0.4**
AST1 Astakos 6.36 154 P **Pn 14 13 08.4 +0.3**
KWP Kalwaria Pacla 6.37 32 *e*P **Pn 14 13 11.6 +3.5**
AGG Agios Georgios 6.39 144 P **Pn 14 13 08.6 +0.1**
AGG Agios Georgios 6.39 144 P **Pn 14 13 10.0 +1.5**
AGG pmax pmax
comp=Z,184nm,0.5s
PVO Paravola 6.44 151 P **Pn 14 13 09.7 +0.6**
PCP Piancastagn 6.45 275 P **Pn 14 13 10.2 +0.8**
PCP pmax pmax
comp=Z,74nm,0.4s
PGF Pioggiola 6.48 257 *e*Pn **Pn 14 13 11.3 +1.5**
PGF *e*Sn **Sn 14 14 20.6 -3.0**
comp=Z,48nm,0.6s
PGF Pioggiola 6.48 257 P **Pn 14 13 12.1 +2.3**
PGF pmax pmax
comp=Z,45nm,0.6s
GRB1 Grafenberg Arr 6.48 323 P **Pn 14 13 09.6 -0.1**
GRB1 pmax pmax
comp=Z,265nm,0.7s
LLS Linth-Limmern 6.50 296 P **Pn 14 13 13.3 +3.1**
LLS pmax pmax
comp=Z,60nm,1.2s
RAZG Razgrad 6.51 94 ⇓P **Pn 14 13 10.9 +0.8**
PVCC Panska Ves 6.53 343 P **Pn 14 13 10.3 0.0**
PVCC pmax pmax
comp=Z,116nm,0.5s
ONER Baraj Valea Uz 6.55 69 ⇑P **Pn 14 13 10.9 +0.3**
ROTZ Rotzenmuhle 6.55 328 *e*Pn **Pn 14 13 10.9 +0.2**
VLS Valsamata 6.55 159 P **Pn 14 13 09.6 -1.1**
VLS Valsamata 6.55 159 P **Pn 14 13 09.8 -1.0**
NEO Neokhori 6.56 138 P **Pn 14 13 10.6 -0.3**
KSP Ksiaz 6.58 353 *e*P **Pn 14 13 11.2 +0.2**
KSP Ksiaz 6.58 353 P **Pn 14 13 10.9 0.0**
KSP S **Sn 14 14 23.9 -1.9**
KSP Ksiaz 6.58 353 Pn **Pn 14 13 11.0 0.0**
comp=Z,0.6nmcomp=Z,1µmcomp=Z,74nm,0.6s
LOZB Loznitsa 6.61 95 ⇓P **Pn 14 13 11.4 -0.1**
PSDA Pessada-Kefalo 6.61 159 P **Pn 14 13 11.0 -0.5**
PLOR Plostina 6.62 73 ⇑P **Pn 14 13 12.7 +1.1**
PLOR Plostina 6.62 73 P **Pn 14 13 12.7 +1.1**
PLOR5 Plostina Array 6.63 74 Pn **Pn 14 13 12.6 +0.9**
comp=Z,0.9nmcomp=Z,1µmcomp=Z,34nm,1.2s
RICC Richard 6.65 341 *e*PN **Pn 14 13 13.1 +1.1**
VRI Vrincioaia 6.67 73 ⇓P **Pn 14 13 11.1 -1.3**
VRI Vrincioaia 6.67 73 P **Pn 14 13 11.1 -1.3**
RDO Rodhopi 6.68 116 Pn 14 13 12.7 +0.2
EFP Efpalio 6.74 149 P **Pn 14 13 14.6 +1.3**
AXAR Agios Charalam 6.75 144 P **Pn 14 13 13.9 +0.5**
MANZ Manzenberg 6.77 329 *e*Pn **Pn 14 13 13.8 +0.1**
SERG Sergoula 6.81 149 P **Pn 14 13 15.3 +1.0**
HSKC Hora Svate Kat 6.88 338 *e*PN **Pn 14 13 14.9 -0.2**
HSKC AMS AMS 14 16 00.0
comp=Z,5µm,14.4s
GRF Grafenberg Arr 6.89 323 P **Pn 14 13 16.5 +1.1**
GRF pmax pmax
comp=Z,151nm,0.8s
GRF Grafenberg Arr 6.89 323 *e*Pn **Pn 14 13 15.0 -0.4**
GRFO Grafenberg 6.89 323 Pn 14 13 14.3 -1.1
GRFO Grafenberg 6.89 323 P **Pn 14 13 14.3 -1.1**
RLS Riolos of Patr 6.92 153 P **Pn 14 13 15.3 -0.5**
ZUR Degenried 6.97 299 P **Pn 14 13 20.3 +3.9**
ZUR pmax pmax
comp=Z,72nm,1.0s
LKR Lokris 6.99 142 P **Pn 14 13 17.0 +0.3**
BRG Berggiesshubel 6.99 341 P **Pn 14 13 18.1 +1.4**
BRG pmax pmax
comp=Z,39nm,0.7s
AOS Alonnisos 6.99 135 P **Pn 14 13 17.8 +1.0**
MMK Mattmark 6.99 288 P **Pn 14 13 21.1 +4.1**
MMK pmax pmax
comp=Z,11nm,0.6s
LTHK Lithakia 7.06 158 P **Pn 14 13 15.6 -2.0**
ALN Alexandroupoli 7.14 116 Pn 14 13 19.8 +1.1
ALN Alexandroupoli 7.14 116 P **Pn 14 13 19.8 +1.1**
PLN Plauen 7.17 331 *e*Pn **Pn 14 13 19.5 +0.4**
KLV Kalavryta, Ach 7.17 150 P **Pn 14 13 19.6 +0.4**
SLE Schleitheim 7.18 302 P **Pn 14 13 19.9 +0.5**
SLE pmax pmax
comp=Z,79nm,0.5s
LIA Limnos Island 7.19 125 P **Pn 14 13 18.6 -0.8**
SAOF Saorge 7.20 271 P **Pn 14 13 23.8 +4.2**
SAOF pmax pmax
comp=Z,132nm,0.8s
VAE Valguarnera 7.24 200 Pn **Pn 14 13 21.5 +1.2**
comp=Z,8.9nm,0.7s,baz=356,slow=13,SNR=7.5
VAE Sn **Sn 14 14 38.5 -3.9**
comp=Z,1.9nm,0.3s,baz=320,slow=9.6,SNR=1.3
VAE Lg Lg 14 15 06.6
comp=Z,2.9nm,0.3s,baz=360,slow=18,SNR=6.3
STU Stuttgart 7.28 311 *e*P **Pn 14 13 21.1 +0.4**
STU Stuttgart 7.28 311 P **Pn 14 13 21.9 +1.3**
STU pmax pmax
comp=Z,135nm,0.6s
SBF Sospel 7.30 270 *e*Pn **Pn 14 13 20.9 -0.1**
SBF *e*Sn **Sn 14 14 40.8 -3.0**
comp=Z,150nm,0.5s
RSP Reno Superiore 7.37 280 P Pn 14 13 28.0 +5.9
RSP pmax pmax
comp=Z,35nm,0.5s
PZZ Stroppo 7.48 275 P **Pn 14 13 23.5 0.0**
PZZ pmax pmax
comp=Z,55nm,0.5s
MOX Moxa 7.49 330 P **Pn 14 13 24.3 +0.7**
MOX pmax pmax
comp=Z,68nm,0.7s
MOX Moxa 7.49 330 *e*Pn **Pn 14 13 23.8 +0.2**
RAFF Raffo Rosso 7.50 200 Pn 14 13 25.1 +1.4
KYMI Kymi, Euboea I 7.51 137 P **Pn 14 13 24.8 +0.9**
BFO Black Forest 7.54 305 Pn 14 13 24.1 -0.1
BFO Black Forest 7.54 305 P **Pn 14 13 24.1 -0.1**
BFO Black Forest 7.54 305 *e*Pn **Pn 14 13 24.0 -0.2**
ISO Isola 7.54 273 P **Pn 14 13 27.2 +2.8**
ISO pmax pmax
comp=Z,41nm,0.8s
SKY Skiros Island 7.55 134 P **Pn 14 13 25.2 +0.7**
CFR Carcaliu 7.58 80 ⇑P **Pn 14 13 25.4 +0.6**
CFR Carcaliu 7.58 80 P **Pn 14 13 25.4 +0.6**
STFN Stefani 7.62 142 P **Pn 14 13 25.4 0.0**
CLL Collm 7.63 338 *i*P **Pn 14 13 26.2 +0.8**
CLL pmax pmax
comp=Z,28nm,0.6s
CLL MLR MLR
comp=Z,4µm,17.0s
CLL Collm 7.63 338 Pn **Pn 14 13 25.9 +0.5**
comp=Z,0.9nmcomp=Z,38nm,0.5s
CLL Collm 7.63 338 *i*Pn **Pn 14 13 26.2 +0.8**
comp=Z,28nm,0.6s
CLL *e*Pg **Pg 14 13 59.0 -1.5**
CLL *e*Sn Sn 14 14 32.0 -20
CLL *e*Sb **Sb 14 15 17.0 -0.4**
comp=Z,161nm,0.7s
CLL *e*Sg **Sg 14 15 39.0 -0.1**
RRL Rocca Remolon 7.70 278 P Pn 14 13 31.7 +5.0
RRL pmax pmax
comp=Z,51nm,0.8s
MBDF Montbardon 7.72 277 *e*Pn **Pn 14 13 24.8 -2.0**
MBDF *e*Sn **Sn 14 14 50.1 -4.1**
comp=Z,128nm,0.6s
TPGR Topolog 7.78 82 ⇓P **Pn 14 13 27.6 +0.1**
BNI Bardonecchia 7.79 279 P **Pn 14 13 29.7 +2.0**
BNI pmax pmax
comp=Z,43nm,0.5s
BEL Belsk 7.82 15 *e*P Pn 14 13 38.3 +10
BEL Belsk 7.82 15 P **Pn 14 13 31.4 +3.4**
RSL Roselend 7.87 284 P **Pn 14 13 29.8 +0.9**
RSL pmax pmax
comp=Z,69nm,0.7s
VLY Voula,Athens 8.00 142 P **Pn 14 13 30.3 -0.3**
LMR La Mourre 8.05 267 *e*Pn **Pn 14 13 30.8 -0.4**
LMR *e*Sn **Sn 14 14 57.2 -4.9**
comp=Z,28nm,0.5s
WLS Welschbruch 8.15 304 P **Pn 14 13 36.0 +3.3**

ECH Echery 8.18 302 P Pn 14 13 33.4 +0.3
CDF Champ du Feu 8.20 304 *e*Pn Pn 14 13 32.7 -0.6
CDF Champ du Feu 8.20 304 *e*Pn Pn 14 13 33.3 0.0
CDF *e*Sn Sn 14 14 59.1 -6.8
HINF Hinteralfeld 8.22 299 *e*Pn Pn 14 13 32.9 -0.7
HINF *e*Sn Sn 14 15 00.9 -5.4
comp=Z,79nm,0.6s
R9F13 Warsaw-Wawer 8.25 16 *e*P Pn 14 13 33.6 -0.4
R9F13 *e*S Sn 14 15 08.9 +1.9
UBBA Unterbreizbach 8.26 325 *e*Pn Pn 14 13 34.4 +0.4
MILM Milestii Mici 8.31 68 *e*P Pn 14 13 36.0 +1.3
comp=Z,55nm,2.4s
MILM *e*S Sn 14 15 04.0 -4.4
MILM *e*L L 14 15 45.0
MILM LQM 14 16 46.0
comp=Z,6µm,14.0s
MILM LRM MLR 14 17 18.0
comp=Z,4µm,12.5s
ORIF Oris-en-Rattie 8.35 278 *e*Pn Pn 14 13 35.6 +0.1
ORIF *e*Sn Sn 14 15 04.5 -5.2
comp=Z,114nm,0.5s
ORIF Oris-en-Rattie 8.35 278 P Pn 14 13 36.9 +1.4
ORIF pmax pmax
comp=Z,91nm,0.6s
CABF La Chapelle 8.38 290 *e*Pn Pn 14 13 36.0 +0.2
CABF *e*Sn Sn 14 15 05.5 -4.8
comp=Z,66nm,0.7s
GRN Grenoble 8.45 280 P Pn 14 13 38.6 +1.8
TNS Taunus Mts 8.55 317 P Pn 14 13 39.7 +1.6
TNS pmax pmax
comp=Z,159nm,0.6s
TNS Taunus Mts 8.55 317 *e*Pn Pn 14 13 39.2 +1.1
HAU Haudompre 8.60 299 *e*Pn Pn 14 13 38.7 -0.1
HAU *e*Sn Sn 14 15 09.2 -6.5
comp=Z,84nm,0.6s
SMRF Simiane la Rot 8.62 272 *e*Pn Pn 14 13 38.9 -0.2
SMRF *e*Sn Sn 14 15 11.3 -5.0
comp=Z,43nm,0.7s
RNPP5 Staryi Chortor 8.89 36 Pn Pn 14 13 44.5 +1.8
LUBAR Lubar, Ukraine 8.92 48 Pn Pn 14 13 44.5 +1.3
RNPP8 Varash 8.96 36 Pn Pn 14 13 46.7 +3.0
RNPP9 Sopachiv 9.03 35 Pn Pn 14 13 46.7 +2.1
PAGF Fort de Pagny 9.20 302 *e*Pn Pn 14 13 46.4 -0.5
VIVF Saint-Julien-l' 9.21 278 *e*Pn Pn 14 13 46.0 -1.2
VIVF *e*Sn Sn 14 15 25.5 -5.2
comp=Z,62nm,0.8s
WLF Walferdange 9.44 308 *d*P Pn 14 13 52.4 +2.1
WLF *d*S Sn 14 15 37.8 +1.5
APE Apeiranthos 9.44 137 *d i*P Pn 14 13 51.7 +1.3
SFTF Sexfontaines 9.49 299 *e*Pn Pn 14 13 49.6 -1.4
SAVF Savonnieres en 9.59 301 *e*Pn Pn 14 13 52.5 +0.2
MEZF Maizieres J'vi 9.59 300 *e*Pn Pn 14 13 52.0 -0.3
baz=109
LASF Ste Croix 9.84 273 *e*Pn Pn 14 13 54.3 -1.5
LASF *e*Sn Sn 14 15 40.4 -5.8
comp=Z,25nm,0.6s
BHOU Houvegnez 9.88 312 *d*P Pn 14 13 57.6 +1.2
BHOU *d*S Sn 14 15 46.4 -0.7
SMF Signal de Mont 9.91 288 *e*Pn Pn 14 13 56.0 -0.7
SMF *e*Sn Sn 14 15 42.7 -5.1
comp=Z,74nm,0.6s
BUG Bochum--Univer 9.91 320 P Pn 14 13 58.7 +2.0
BUG pmax pmax
comp=Z,59nm,0.8s
BTNL Ternell 9.95 313 *d*P Pn 14 13 58.8 +1.6
comp=Z,30nm,0.7s
LOR Lormes 10.01 292 *e*Pn Pn 14 13 56.6 -1.5
LOR Lormes 10.01 292 *e*Pn Pn 14 13 57.3 -0.8
LOR *e*Sn Sn 14 15 42.7 -7.5
comp=Z,70nm,0.7s
LOR Lormes 10.01 292 P Pn 14 13 58.4 +0.3
MEM Membach 10.02 313 *d*P Pn 14 13 59.2 +0.9
comp=Z,36nm,0.7s
MEM Membach 10.02 313 P Pn 14 14 00.8 +2.6
MEM pmax pmax
comp=Z,35nm,0.5s
AK14 Malin Array Si 10.04 47 Pn Pn 14 13 59.6 +1.1
AK19 Malin Array Si 10.04 46 Pn Pn 14 14 00.6 +2.1
AK16 Malin Array Si 10.06 47 Pn Pn 14 14 01.0 +2.2
AK15 Malin Array Si 10.09 47 Pn Pn 14 13 59.6 +0.5
AK10 Malin Array Si 10.10 47 Pn Pn 14 14 01.9 +2.6
AK11 Malin Array Si 10.10 47 Pn Pn 14 14 00.5 +1.2
MANT Manisa 10.11 121 Pn 14 14 00.7 +1.0
AK04 Malin Array Si 10.12 47 Pn Pn 14 14 00.9 +1.3
KIEV Kiev 10.13 47 P Pn 14 14 03.1 +3.4
KIEV pmax pmax
comp=Z,14nm,2.4s
KIEV Kiev 10.13 47 Pn Pn 14 14 01.7 +2.0
comp=Z,55nm,2.4s
AKASG Malin Array Be 10.14 47 Pn Pn 14 14 01.0 +1.1
comp=Z,1.2nm,0.3s,baz=239,slow=12,SNR=10.0
AKASG Sn Sn 14 15 50.6 -2.8
comp=Z,1.3nm,0.3s,baz=234,slow=18,SNR=4.0
AKASG LR LR 14 18 21.0
comp=Z,3µm,18.8s,baz=229,slow=40
comp=Z,1.4nm,0.5s
AKASG Malin Array Be 10.14 47 *i* P Pn 14 14 01.0 +1.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 10.14 47 ǁ *e*P Pn 14 14 02.1 +2.2
SSF Saint Saulge 10.20 290 *e*Pn Pn 14 13 58.8 -1.9
SSF *e*Sn Sn 14 15 48.4 -6.6
comp=Z,38nm,0.7s
RCHB Rochefort 10.21 309 *d*P Pn 14 14 00.3 -0.5
comp=Z,27nm,0.6s
BSTI Sart Tilman 10.24 312 *d*P Pn 14 14 03.3 +2.0
AVF Avril sur Loir 10.26 289 *e*Pn Pn 14 14 01.2 -0.3
AVF *e*Sn Sn 14 15 50.2 -6.2
comp=Z,50nm,0.9s
BCLA Clavier 10.30 311 *d*P Pn 14 14 04.0 +2.0
BCLA *d*S Sn 14 15 54.6 -2.7
SUW Suwalki 10.37 19 *e*P Pn 14 14 03.9 +1.0
SUW Suwalki 10.37 19 Pn 14 14 03.5 +0.6
SUW Suwalki 10.37 19 *e*P Pn 14 14 03.7 +0.8
SUW Suwalki 10.37 19 P Pn 14 14 03.5 +0.6
BGES Gesves 10.40 310 *d*P Pn 14 14 05.7 +2.3
GIVF Givet 10.40 308 *e*Pn Pn 14 14 03.8 +0.3
GIVF *e*Sn Sn 14 15 52.5 -7.4
comp=Z,44nm,0.8s
DOU Dourbes 10.53 308 *d*P Pn 14 14 07.0 +1.8
DOU *d*S Sn 14 15 57.5 -5.5
BMRD Maredsous 10.53 309 *d*P Pn 14 14 07.2 +2.0
comp=Z,28nm,0.5s
BGF Bois d'Agland 10.58 287 *e*Pn Pn 14 14 06.4 +0.6
BGF *e*Sn Sn 14 15 57.6 -6.5
comp=Z,75nm,0.6s
KEST Kesra 10.64 219 Pn Pn 14 14 08.0 +1.1
comp=Z,2.0nm,0.3s,baz=4.2,slow=6.9,SNR=28
KEST LR LR 14 18 44.3
comp=Z,2µm,19.5s,baz=35,slow=41
comp=Z,8.5nm,0.6s
IDI Anoyia 10.64 146 Pn Pn 14 14 06.3 -0.5
comp=Z,9.7nm,0.4s,baz=346,slow=12,SNR=16
IDI Sn Sn 14 15 59.1 -6.7
comp=Z,3.8nm,0.3s,baz=63,slow=16,SNR=5.5
IDI LR LR 14 19 09.3
comp=Z,1µm,20.6s,baz=327,slow=43
BSEG Bad Segeberg 10.72 336 P Pn 14 14 11.8 +4.1
BSEG pmax pmax
comp=Z,18nm,2.2s
BAIF Baives 10.73 307 *e*Pn Pn 14 14 08.0 0.0
BAIF *e*Sn Sn 14 16 00.1 -7.9
comp=Z,19nm,0.7s
HYF Humbligny 10.82 291 *e*Pn Pn 14 14 07.6 -1.6
HYF *e*Sn Sn 14 16 03.9 -6.3
TCF Toulx Ste Croi 10.99 286 *e*Pn Pn 14 14 11.3 -0.2
TCF *e*Sn Sn 14 16 07.4 -6.8
comp=Z,24nm,0.5s
CAF Calviac 11.06 279 *e*Pn Pn 14 14 11.1 -1.4
CAF *e*Sn Sn 14 16 09.1 -7.0
comp=Z,10nm,0.6s
MTLF Montolieu 11.13 270 *e*Pn Pn 14 14 12.4 -1.0
ARG Arkhangelos 11.43 132 P Pn 14 14 19.7 +2.1
RJF Les Rejaudoux 11.44 281 *e*Pn Pn 14 14 16.8 -0.8
RJF *e*Sn Sn 14 16 18.5 -6.8
comp=Z,6.5nm,0.4s
KARP Karpathos 11.45 137 *e*P Pn 14 14 18.5 +0.7
LUNU Lund 11.62 348 *i* P Pn 14 14 21.7 +1.7
ISP Isparta 11.74 119 ⇑ *i*P Pn 14 14 25.5 +3.6
SIM Simferopol' 11.82 81 *e*P Pn 14 14 27.6 +4.7
SIM *e*S Sn 14 16 30.9 -3.7
SIM pmax pmax
comp=Z,9.0nm,0.5s
SIM smax smax
comp=N,103µm,1.0s
SIM MLR MLR
comp=Z,383nm,14.4s
PABE Paberze 11.92 18 Pn 14 14 24.7 +0.5
PABE Paberze 11.92 18 *e*P Pn 14 14 23.2 -0.9
LFF La Frestale 12.00 279 *e*Pn Pn 14 14 25.9 +0.6
ELL Elmali 12.06 125 Pn 14 14 30.4 +4.1
ELL Elmali 12.06 125 P Pn 14 14 30.4 +4.1
BJUU Bjuv 12.11 348 *e*P Pn 14 14 27.5 +0.8
NACGM Naroch 12.15 26 *e*P Pn 14 14 26.2 -1.1
comp=Z,14nm,0.8s,baz=213
MNK Minsk 12.19 30 *i* P Pn 14 14 26.7 -1.1
comp=E,13nm,0.7s
MNK *i* P Pn 14 14 26.7 -1.1
comp=N,19nm,0.8s
MNK *i* P Pn 14 14 26.7 -1.1
comp=Z,16nm,0.7s,baz=217
MNK *i* PP PnPn 14 14 34.7 -0.8
MNK *i* S Sn 14 16 41.6 -2.0
MNK *i* SS SnSn 14 16 55.4 0.0
MNK *i* LQ LQ 14 17 56.5
MNK *i* LR LR 14 18 51.2
MNK *i* LRM MLR 14 19 24.0
comp=N,1µm,14.3s
MNK *i* LRM MLR 14 19 46.8
comp=Z,2µm,13.9s
MNK *i* LRM MLR 14 19 50.7
comp=E,2µm,13.2s
MNK Minsk 12.19 30 *i* P Pn 14 14 26.7 -1.1
MNK *i* S Sn 14 16 41.5 -2.0
MNK pmax pmax
comp=E,13nm,0.7s
MNK pmax pmax
comp=Z,16nm,0.7s
MNK pmax pmax
comp=N,19nm,0.8s
MNK MLR MLR
comp=N,1µm,14.0s
MNK MLR MLR
comp=Z,2µm,14.0s
MNK MLR MLR
comp=E,2µm,13.0s
VSVD Vaisvydziai 12.36 17 *e*P Pn 14 14 29.0 -1.1
DEL Delary 12.38 350 *i* P Pn 14 14 31.4 +1.0
EPF Esparros 12.53 270 *e*Pn Pn 14 14 31.0 -1.7
MFF Saint Martin d 12.63 287 *e*Pn Pn 14 14 32.3 -1.7
MFF Saint Martin d 12.63 287 *e*Pn Pn 14 14 32.8 -1.2
MFF *e*Sn Sn 14 16 46.5 -8.0
comp=E,9.9nm,0.5s
MFF *e*Sn Sn 14 16 47.0 -7.5
comp=E,8.8nm,0.5s
BR106 Keskin Array S 12.79 105 Pn Pn 14 14 38.2 +1.9
comp=E,78nmcomp=E,7.1nm,1.5s
BR105 Keskin Array S 12.80 106 Pn Pn 14 14 38.8 +2.4
comp=E,105nmcomp=E,7.7nm,1.1s
BR131 Keskin Array S 12.81 105 *d i*P Pn 14 14 39.3 +2.8
BRTR Keskin Array B 12.81 105 Pn 14 14 35.3 -1.2
BRTR Keskin Array B 12.81 105 Pn Pn 14 14 36.9 +0.4
comp=E,4.0nm,1.0s,baz=294,slow=9.0,SNR=15
BRTR LR LR 14 19 59.4
comp=E,697nm,19.5s,baz=286,slow=40
BRTR Keskin Array B 12.81 105 *i* P Pn 14 14 38.7 +2.2
BRTR pmax pmax
comp=Z,4.0nm,1.0s
BR104 Keskin Array S 12.82 106 Pn Pn 14 14 38.3 +1.6
comp=Z,98nmcomp=Z,7.6nm,1.2s
LDF La Druitiere 12.91 296 *e*Pn Pn 14 14 38.2 +0.5
FABU Falkenberg 13.05 348 *i* P Pn 14 14 42.6 +3.0
FLN La Foliniere 13.18 296 *e*Pn Pn 14 14 39.7 -1.7
ETSF Etsaut 13.21 270 *e*Pn Pn 14 14 43.5 +1.6
BORU Boraas 13.66 349 *i* P Pn 14 14 50.5 +2.6
ANN Anapa 14.18 81 *e*P Pn 14 14 52.6 -2.5
ANN *e*S Sn 14 17 29.5 -2.7
ANN pmax pmax
comp=Z,26nm,1.0s
ANN MLR MLR
comp=N,929nm,13.0s
ANN MLR MLR
comp=Z,1µm,14.0s
BNN Bunyan 14.73 105 Pn 14 15 02.5 -0.2
QUIF Quistinic 14.80 291 *e*Pn Pn 14 15 05.3 +1.7
VSU Vasula 15.25 19 *e*P Pn 14 15 08.4 -1.0
VSU Vasula 15.25 19 ǁ *e*P Pn 14 15 10.1 +0.7
AAL Aland 15.95 4 *e*P Pn 14 15 19.5 +1.1
SOC Sochi 15.97 85 *e*P Pn 14 15 18.3 -0.7
SOC *e* 14 18 16.4
SOC MLR MLR
comp=Z,547nm,15.0s
HFS Hagfors 16.00 353 Pn Pn 14 15 19.4 +0.1
comp=Z,0.6nm,0.3s,baz=148,slow=8.7,SNR=14
HFS LR LR 14 21 26.4
comp=Z,1µm,21.4s,baz=175,slow=37
comp=Z,9.1nm,0.6s
VSR Storozhevoye 16.05 57 *e*P Pn 14 15 19.0 -0.9
VSR pmax pmax
comp=Z,20nm,1.0s
VORD Divnogorie 16.05 58 *e*P Pn 14 15 21.0 +1.1
VORD pmax pmax
comp=Z,10.0nm,0.8s
ERBR Yeremizino-Bor 16.27 77 *e*P P 14 15 24.4 -1.3
ERBR *e*S Sn 14 18 27.5 +4.6
ERBR pmax pmax
comp=Z,69nm,1.0s
ERBR MLR MLR
comp=Z,1µm,13.0s
ERBR MLR MLR
comp=N,2µm,11.0s
ERBR MLR MLR
comp=E,4µm,11.0s
OBN Obninsk 16.30 42 Pn Pn 14 15 20.3 -2.8
comp=E,4.7nm,0.3s,baz=322,slow=6.9,SNR=6.0
OBN LR LR 14 22 07.1
comp=E,2µm,20.1s,baz=178,slow=39
comp=E,16nm,0.4s
OBN Obninsk 16.30 42 *e*P Pn 14 15 22.1 -1.0
OBN pmax pmax
comp=Z,59nm,1.2s
OBN MLR MLR
comp=Z,2µm,15.0s
LPSR Galich'ya Gora 16.37 52 *e*P Pn 14 15 24.6 +0.6
LPSR pmax pmax
comp=Z,17nm,0.9s
MEF Metsahovi 16.44 12 *e*P P 14 15 26.4 -1.2
LABN Labinsk 16.53 81 *e*P Pn 14 15 25.3 -0.8
LABN *e*S Sn 14 18 29.2 -0.2
LABN pmax pmax
comp=Z,23nm,0.6s
LABN MLR MLR
comp=Z,969nm,13.0s
LABN MLR MLR
comp=E,1µm,12.0s
ESDC Sonseca Array 16.64 261 Pn P 14 15 29.3 -0.7
comp=E,0.6nm,0.3s,baz=65,slow=12,SNR=52
ESDC LR LR 14 21 59.1
comp=E,382nm,19.7s,baz=74,slow=38
comp=E,16nm,0.8s
NORES NORESS Array B 16.82 350 P P 14 15 34.4 +2.6
NORES pmax pmax
comp=Z,1.0nm,0.7s
RAF Rauma 16.91 7 *e*P Pn 14 15 31.7 +0.9
PAB San Pablo 16.97 261 Pn 14 15 31.6 -0.1
PAB San Pablo 16.97 261 P Pn 14 15 31.7 -0.1
PAB pmax pmax
comp=Z,46nm,1.5s
MOS Moscow 17.15 41 *e*P Pn 14 15 29.9 -3.9
MOS *e*S Sn 14 18 35.1 -9.1
MOS pmax pmax
comp=Z,37nm,0.6s
MOS MLR MLR
comp=Z,2µm,11.0s
NB2 NORSAR Subarra 17.16 350 P Pn 14 15 34.7 +0.7
comp=Z,13nm,1.0s,baz=164,slow=11
NOA NORSAR Array B 17.16 350 P Pn 14 15 33.6 -0.4
comp=Z,1.4nm,0.6s,baz=164,slow=11,SNR=8.4
NOA LR LR 14 22 42.0
comp=Z,972nm,18.5s,baz=170,slow=39
EKA Eskdalemuir Ar 17.24 317 P P 14 15 35.8 -0.7
baz=126,slow=13
comp=Z,2.3nm,0.4s
PUL Pulkovo 17.30 22 ǁ *e*P Pn 14 15 36.2 +0.6
PUL pmax pmax
comp=Z,107nm,0.6s
VRH Novokhopyorsk 17.59 58 *e*P P 14 15 39.9 -0.5
VRH pmax pmax
comp=Z,23nm,1.1s
FINES FINESS Array B 17.87 13 P Pn 14 15 42.1 -0.6
FINES FINESS Array B 17.87 13 P P 14 15 43.1 -0.3
comp=Z,1.5nm,0.3s,baz=153,slow=13,SNR=36
comp=Z,7.3nm,0.5s
MMAI Mount Meron Ar 17.90 123 P P 14 15 43.8 -0.2
comp=Z,2.4nm,0.3s,baz=312,slow=11,SNR=13
MMAI LR LR 14 23 17.3
comp=Z,479nm,20.4s,baz=303,slow=39
comp=Z,6.9nm,0.6s
PBRG Braganca 17.92 270 *e*P Pn 14 15 43.2 -0.3
PBRG *i* IAmb IAmb 14 15 43.6
comp=Z,45nm,1.6s
KIV Kislovodsk 18.03 82 P P 14 15 47.1 +1.8
KIV Kislovodsk 18.03 82 *e*P P 14 15 46.0 +0.7
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,276nm,14.0s
KIV Kislovodsk 18.03 82 P P 14 15 46.0 +0.7
comp=Z,20nm,0.8s
KVAR Kislovodsk Arr 18.03 82 LR LR 14 23 13.7
comp=Z,696nm,18.0s,baz=12,slow=39
SHA1 Shidzhatmaz 18.05 83 ǁ *e*P P 14 15 45.6 -0.1
KBZ Khabaz 18.22 83 P P 14 15 48.9 +1.6
comp=Z,0.3nm,0.3s,baz=280,slow=11,SNR=7.2
KBZ LR LR 14 24 02.4
comp=Z,800nm,19.2s,baz=296,slow=41
comp=Z,4.3nm,1.2s
KBZ Khabaz 18.22 83 ǁ *e*P Pn 14 15 46.3 -0.8
KBZ pmax pmax
comp=Z,32nm,2.0s
MVO Moncorvo 18.31 269 *e*P P 14 15 51.7 +3.2
MVO *e*LR LR 14 22 19.6
MVO *i* IAMs_20 IAMs_20 14 23 04.8
comp=Z,216nm,18.0s
KEF Keuruu 18.38 11 *e*P Pn 14 15 48.9 0.0
NCK Nalchik 18.76 83 ǁ *e*P Pn 14 15 56.0 +2.2
NCK pmax pmax
comp=Z,76nm,2.0s
MTE Manteigas 18.93 267 *e*LR LR 14 21 31.6
MTE *i* IAMs_20 IAMs_20 14 24 33.0
comp=Z,289nm,18.0s
PGAV Gavieira, Arco 18.97 272 *e*LR LR 14 21 36.3
PGAV *i* IAMs_20 IAMs_20 14 23 28.4
comp=Z,246nm,20.0s
VAF Ylistaro 18.98 7 *e*P P 14 15 55.5 -0.1
PCBR Castelo Branco 19.09 265 *e*P Pn 14 15 58.5 +0.8
PMRV Marv??o 19.18 264 *e*P Pn 14 16 01.6 +2.7
PMRV *i* IAmb IAmb 14 16 11.7
comp=Z,48nm,1.5s
PMRV *e*LR LR 14 23 06.0
PMRV *i* IAMs_20 IAMs_20 14 24 37.7
comp=Z,236nm,16.0s
ASF Jabal al Asfar 19.39 122 P Pn 14 16 01.8 +0.4
comp=Z,0.3nm,0.3s,baz=321,slow=2.1,SNR=22
ASF LR LR 14 24 25.5
comp=Z,260nm,20.0s,baz=331,slow=40
comp=Z,14nm,1.0s
PBAR Barrancos 19.45 260 *e*P P 14 16 01.1 +0.2
PBAR *i* IAmb IAmb 14 16 04.6
comp=Z,46nm,1.9s
PESTR Estremoz 19.55 263 *e*P Pn 14 16 03.0 -0.2
PESTR *i* IAmb IAmb 14 16 09.2
comp=Z,52nm,1.7s
PSARD Sardoal 19.66 265 *e*P Pn 14 16 07.3 +2.6
PSARD *i* IAmb IAmb 14 16 11.2
comp=Z,65nm,1.7s
PARRA Arraiolos 19.89 263 *e*P P 14 16 06.8 -6.6
PARRA *i* IAmb IAmb 14 16 35.6
comp=Z,69nm,1.7s
EIL Elat 20.11 131 P P 14 16 08.6 +0.4
comp=Z,19nm,0.6s,baz=334,slow=13,SNR=24
comp=Z,19nm,0.6s
JOF Joensuu 20.25 18 *e*P P 14 16 08.9 -0.5
PVAQ Vaqueiros 20.28 259 P P 14 16 08.9 -1.0
PVAQ IAmb IAmb 14 16 16.3
comp=Z,71nm,1.5s
PVAQ Vaqueiros 20.28 259 *e*P P 14 16 10.6 +0.6
PVAQ *i* IAmb IAmb 14 16 14.1
comp=Z,87nm,2.1s
PVAQ *e*LR LR 14 19 58.3
PVAQ *i* IAMs_20 IAMs_20 14 23 53.7
comp=Z,474nm,18.0s
PCVE Castro Verde 20.40 260 *e*P P 14 16 11.1 -0.1
PCVE *i* IAmb IAmb 14 16 15.9
comp=Z,99nm,1.6s
PBDV Barranco-do-Ve 20.50 259 *e*P P 14 16 12.8 +0.4
PBDV *i* IAmb IAmb 14 16 18.1
comp=Z,102nm,1.6s
GNI Garni 20.52 92 P 14 16 09.8 -2.9
GNI IAmb IAmb 14 16 21.4
comp=Z,52nm,1.1s
GNI Garni 20.52 92 P 14 16 13.0 +0.4
comp=Z,26nm,0.9s,baz=235,slow=6.7,SNR=8.0
GNI LR LR 14 26 47.6
comp=Z,434nm,18.4s,baz=306,slow=44
comp=Z,26nm,0.9s
GNI Garni 20.52 92 P Pn 14 16 15.5 +0.6
GNI P Pn 14 16 15.5 +0.6
GNI Garni 20.52 92 *d i*P Pn 14 16 15.3 +0.4
GNI pmax pmax
comp=Z,87nm,1.5s
GNI Garni 20.52 92 P Pn 14 16 15.1 +0.2
comp=Z,48nm,1.5s
MDT Midelt 20.72 244 P P 14 16 14.8 -0.1
comp=Z,3.4nm,0.6s,baz=63,slow=8.8,SNR=5.5
comp=Z,3.4nm,0.6s
MD01 Midelt array s 20.79 244 P 14 16 14.0 -1.6
MORF Marmelete 20.98 260 *e*P Pn 14 16 19.1 -1.1
MORF *i* IAmb IAmb 14 16 27.1
comp=Z,96nm,2.1s
KLMR Klimovskoe 21.09 31 *e*P P 14 16 17.4 -1.1
KLMR pmax pmax
comp=Z,69nm,1.6s
KLMR MLR MLR
comp=Z,3µm,12.0s
PFVI Vila Bisbo 21.19 259 *e*P P 14 16 21.5 +1.8
BELG Belogornoye 21.43 57 P P 14 16 22.5 +0.3
comp=Z,9.9nm,0.5s,baz=197,slow=19,SNR=12
comp=Z,9.9nm,0.5s
BELG Belogornoye 21.43 57 *c e*P P 14 16 22.4 +0.3
BELG pmax pmax
comp=Z,18nm,1.6s
MAK Makhachkala 21.66 83 *c i*P P 14 16 20.0 -4.8
MAK *e*S S 14 20 18.9 -5.5
MAK pmax pmax
comp=Z,352nm,1.2s
MAK MLR MLR
comp=Z,1µm,11.0s
AKT Akhty 22.23 87 *e*P P 14 16 31.3 +0.3
AKT *e* 14 20 28.5
AKT pmax pmax
comp=Z,216nm,2.3s
AKT MLR MLR
comp=Z,189nm,4.0s
TAM Tamanrasset 23.65 209 P P 14 16 46.7 +0.8
TAM pmax pmax
comp=Z,12nm,1.8s
KIRV Kirov 24.15 43 LR LR 14 26 60.0
comp=Z,2µm,18.2s,baz=246,slow=38
KIRV Kirov 24.15 43 *d i*P P 14 16 50.8 +0.6
APA Apatity 24.77 14 ǁ *e*P P 14 16 57.3 +1.6
APA MLR MLR
comp=Z,2µm,11.6s
LVZ Lovozero 25.29 15 ⇑ *e*P P 14 17 01.6 +1.1
LVZ pmax pmax
comp=Z,60nm,1.2s
ARCES ARCESS Array B 25.60 6 P P 14 17 00.2 -3.0
ARCES ARCESS Array B 25.60 6 P P 14 17 04.5 +1.3
comp=Z,3.6nm,0.6s,baz=182,slow=8.4,SNR=13
ARCES LR LR 14 27 57.7
comp=Z,1µm,21.6s,baz=199,slow=38
comp=Z,3.6nm,0.6s
AKTO Aktyubinsk 27.80 63 LR LR 14 30 03.5
comp=Z,411nm,18.0s,baz=304,slow=40
ARTI Arti 28.27 50 LR LR 14 29 23.6
comp=Z,1µm,18.7s,baz=260,slow=38
ARTI Arti 28.27 50 *d i*P P 14 17 27.9 +0.5
ARTI 14 18 16.9
ARTI S S 14 22 16.9 +3.9
ARTI SS SnSn 14 23 30.0 +0.4
ARTI pmax pmax
comp=Z,32nm,1.5s
ARTI MLR MLR
comp=Z,1µm,17.0s
AB31 Akbulak array 29.15 65 *i* P P 14 17 35.4 +0.1
ABKAR Akbulak array 29.15 65 P P 14 17 33.4 -1.9

SVE Sverdlovsk 29.56 50 eP P 14 17 39.7 +0.9
SVE pmax pmax
comp=Z,31nm,1.8s
SVE MLR MLR
comp=Z,1μm,16.0s
JMIC Jan Mayen 29.64 343 LR LR 14 29 45.3
comp=Z,184nm,18.5s,baz=134,slow=37
BORG Borgarnes 29.69 327 LR LR 14 30 42.7
comp=Z,328nm,18.6s,baz=125,slow=39
RAYN Ar Rayn 30.88 123 P P **14 17 51.4 +0.5**
RAYN Ar Rayn 30.88 123 P P **14 17 51.0 +0.2**
TORD Torodi Ar. Bea 33.91 209 P P **14 18 19.2 +1.9**
comp=Z,2.8nm,0.4s,baz=34,slow=8.9,SNR=3.2
TORD LR LR 14 33 45.2
comp=Z,599nm,19.7s,baz=18,slow=39
comp=Z,2.8nm,0.4s
SPITS Spitsbergen Ar 33.97 360 LR LR 14 32 46.9
comp=Z,415nm,21.9s,baz=180,slow=38
BORK Borovoye 35.18 57 ⇓*i*P P **14 18 29.3 +1.2**
BORK pmax pmax
comp=Z,11nm,0.9s
BVAR Borovoye Array 35.23 57 P P **14 18 29.3 +0.8**
comp=Z,3.6nm,0.7s,baz=271,slow=7.4,SNR=16
BVAR LR LR 14 33 47.7
comp=Z,579nm,18.5s,baz=278,slow=38
comp=Z,3.6nm,0.7s
SHME Shamm 36.02 107 P P **14 18 35.1 -0.4**
BANOM Banah 36.21 107 P P **14 18 36.9 -0.3**
BANOM P P **14 18 36.9 -0.3**
NAZ Nazwa, Dubai 36.39 109 P P **14 18 39.2 +0.5**
NAZ P P **14 18 39.2 +0.5**
NAZ P P **14 18 39.2 +0.5**
NAZ P P **14 18 39.2 +0.5**
ASUD Al Ashush, Dub 36.40 110 P P **14 18 40.4 +1.6**
MASF Masafi 36.47 108 P P **14 18 39.4 -0.1**
MASF P P **14 18 39.4 -0.1**
MDH Madha 36.62 108 P P **14 18 41.1 +0.5**
MDH P P **14 18 41.1 +0.5**
UOSS Minazif 36.78 109 P P **14 18 39.6 -2.5**
UOSS IAmb IAmb 14 18 42.3
comp=Z,14nm,1.1s
UOSS Minazif 36.78 109 P P **14 18 42.3 +0.2**
UOSS P P **14 18 42.3 +0.2**
HATD Hatta, Dubai 36.81 109 P P **14 18 42.4 +0.1**
HATD P P **14 18 42.4 +0.1**
ASHO Ashiyiah 36.86 109 P P **14 18 42.8 0.0**
ASHO P P **14 18 42.8 0.0**
ASHO P P **14 18 42.8 0.0**
ASHO P P **14 18 42.8 0.0**
ALNE Al Ain 37.07 110 P P **14 18 44.7 +0.2**
ALNE P P **14 18 44.7 +0.2**
ALNE P P **14 18 44.7 +0.2**
ALNE P P **14 18 44.7 +0.2**
BRLS Boroldaу 37.30 73 *e*P P **14 18 47.2 +0.7**
BRLS Boroldaу 37.30 73 *e*P P **14 18 47.1 +0.7**
CHM Chimkent 37.40 74 *e*P P **14 18 48.1 +0.9**
CHM Chimkent 37.40 74 *e*P P **14 18 48.0 +0.9**
SOHO SOHO 37.55 109 P P **14 18 49.4 +0.8**
SOHO P P **14 18 49.4 +0.8**
SOHO P P **14 18 49.4 +0.8**
SOHO P P **14 18 49.4 +0.8**
UMZA Um Al Zommool 37.59 113 P P **14 18 50.6 +1.6**
KK31 Karatay Array 37.74 73 *i*P P **14 18 50.5 +0.4**
KKAR Karatay Array 37.74 73 P P **14 18 50.8 +0.7**
KKAR Karatay Array 37.74 73 P P **14 18 50.8 +0.7**
IUG Iuzhnay 37.76 74 *e*P P **14 18 51.1 +0.8**
comp=Z,30nm,1.3s
IUG Iuzhnay 37.76 74 *e*P P **14 18 51.1 +0.8**
IUG pmax pmax
comp=Z,30nm,1.3s
ARQ Araqi 38.08 110 P P **14 18 52.7 -0.4**
SNR=6.2
ARQ P P **14 18 52.7 -0.4**
SNR=6.2
SUMG Summit 38.29 336 *e*P P 14 18 45.4 -9.4
SUMG IAmb IAmb 14 19 00.4
comp=Z,8.9nm,1.2s
DZA Taraz 38.38 73 *e*P P **14 18 56.5 +1.0**
DZA Taraz 38.38 73 *e*P P **14 18 56.5 +1.0**
HOQ Hoqain 38.44 109 P P **14 18 55.9 -0.3**
HOQ P P **14 18 55.9 -0.3**
CHGR Chuyangaron 38.54 80 P P **14 18 58.5 +1.6**
TRKS Terek-Say 38.76 75 P P **14 19 00.0 +1.2**
NOR Nord 39.10 352 P P **14 19 00.5 -0.5**
NOR Nord 39.10 352 *i*P P **14 19 00.6 -0.5**
NOR IAmb IAmb 14 19 05.5
comp=Z,26nm,1.6s
ATD Arta Tunnel 39.26 139 LR LR 14 35 29.9
comp=Z,5.1nm,19.4s,baz=57,slow=37
SMDO Samad 39.30 109 P P **14 19 03.3 -0.1**
SNR=7.1
SMDO P P **14 19 03.3 -0.1**
SNR=7.1
WSAR Wadi Sarin 39.57 108 P P **14 19 05.8 +0.2**
SNR=5.4
WSAR P P **14 19 05.8 +0.2**
SNR=5.4
FURI Furi 39.78 146 LR LR 14 37 43.5
comp=Z,390nm,21.5s,baz=18,slow=40
JMDO Jabal Madar 39.80 110 P P **14 19 07.3 -0.2**
SNR=9.4
DOK Doka 39.86 118 P P **14 19 07.7 -0.3**
SGDS Sogindy 40.42 71 *e*P P **14 19 13.5 +1.0**
AAK Ala-Archa 40.64 72 LR LR 14 39 16.3
comp=Z,371nm,19.5s,baz=304,slow=41
AAK Ala-Archa 40.64 72 P P **14 19 15.8 +1.4**
AAK P P **14 19 15.8 +1.4**
AAK Ala-Archa 40.64 72*d i*P P **14 19 16.4 +1.9**
AAK pmax pmax
comp=Z,28nm,1.6s
KURBB Kurchatov Arra 40.66 59 P P **14 19 15.0 +0.7**
comp=Z,0.8nm,0.2s,baz=290,slow=8.3,SNR=14
KURBB LR LR 14 37 09.5
comp=Z,236nm,19.0s,baz=181,slow=38
comp=Z,0.8nm,0.2s
MHTO MHTO 40.66 112 P P **14 19 15.3 +0.7**
SNR=5.3
KURK Kurchatov 40.69 59 P P **14 19 13.5 -1.0**
KURK Kurchatov 40.69 59 P P **14 19 14.0 -0.6**
KURK Kurchatov 40.69 59 ⇓*i*P P **14 19 14.9 +0.3**
KURK pmax pmax
comp=Z,13nm,1.5s
RBK Rabkut 40.74 119 P P **14 19 17.2 +1.8**
JLN Jalan Bani Buh 40.83 109 P P **14 19 16.6 +0.6**
SNR=7.3
JLN P P **14 19 16.6 +0.6**
SNR=7.3
DQM DQM 41.12 113 P P **14 19 18.9 +0.4**
DQM P P **14 19 18.9 +0.4**
DQM P P **14 19 18.9 +0.4**
DQM P P **14 19 18.9 +0.4**
BBTS Babate 41.37 235 LR LR 14 36 30.2
comp=Z,299nm,21.1s,baz=268,slow=36
SFJD Kangerlussuaq 41.83 327 LR LR 14 36 33.0
comp=Z,301nm,21.5s,baz=85,slow=36
AAA Alma-Ata 42.06 70 *e*P P **14 19 26.9 +0.8**
comp=Z,8.8nm,0.6s
AAA Alma-Ata 42.06 70 *e*P P **14 19 26.8 +0.8**
AAA pmax pmax
comp=Z,9.0nm,0.6s
TNSS Tian-Shan 42.15 70 *e*P P **14 19 27.6 +0.4**
TNSS Tian-Shan 42.15 70 *e*P P **14 19 27.5 +0.4**
MDOK Medeo 42.16 70 *e*P P **14 19 27.8 +0.7**
MDOK Medeo 42.16 70 *e*P P **14 19 27.7 +0.7**
DBIC Dimbokro 42.32 214 P P **14 19 26.9 -1.4**
DBIC Dimbokro 42.32 214 P P **14 19 28.0 -0.3**
comp=Z,6.8nm,0.6s,baz=52,slow=8.9,SNR=18
DBIC LR LR 14 38 43.8
comp=Z,355nm,19.1s,baz=38,slow=38
comp=Z,6.8nm,0.6s
DBIC Dimbokro 42.32 214 P P **14 19 28.0 -0.3**
TDK Taldyqorghan 42.38 67 *e*P P **14 19 29.5 +0.9**
comp=Z,15nm,1.3s
TDK Taldyqorghan 42.38 67 *e*P P **14 19 29.4 +0.9**
TDK pmax pmax
comp=Z,15nm,1.3s
NEEM North Greenlan 42.55 342 *i*P P **14 19 28.3 -1.5**
NEEM IAmb IAmb 14 19 36.5
comp=Z,7.0nm,0.8s
KSH Kashi 42.94 75 P P **14 19 34.3 +1.0**
KSH pmax pmax
comp=Z,10.0nm,1.7s
KSH LR LR
comp=N,330nm,16.5s
KSH LR LR
comp=E,330nm,15.3s
KSH LR LR
comp=Z,290nm,19.1s
SATY Saty 43.12 69 *e*P P **14 19 35.6 +0.9**
comp=Z,16nm,1.7s
SATY Saty 43.12 69 *e*P P **14 19 35.6 +0.9**
SATY pmax pmax
comp=Z,16nm,1.7s
TARG Taragay, Kyrgy 43.25 72 P P **14 19 38.3 +2.1**
ZALV Zalesovo Beam 43.48 52 P P **14 19 37.6 +0.3**
comp=Z,2.6nm,0.8s,baz=284,slow=9.0,SNR=11
ZALV LR LR 14 39 24.4
comp=Z,966nm,18.6s,baz=287,slow=38
comp=Z,2.6nm,0.8s
ZALV Zalesovo Beam 43.48 52 *i*P P **14 19 38.9 +1.6**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
UZB Uzynbulak 43.50 69 *e*P P **14 19 38.7 +0.8**
comp=Z,14nm,1.4s
UZB Uzynbulak 43.50 69 *e*P P **14 19 38.6 +0.8**
UZB pmax pmax
comp=Z,14nm,1.4s
LODK Lodwar 43.66 154 P P **14 19 41.0 +1.8**
SNR=5.9
PDGK Podgornoye 43.74 69 P P **14 19 39.3 -0.4**
SHLS Shalkode 43.79 69 *e*P P **14 19 43.3 +3.1**
comp=Z,7.4nm,0.7s
SHLS Shalkode 43.79 69 *e*P P **14 19 43.2 +3.1**
SHLS pmax pmax
comp=Z,7.0nm,0.7s
MAKZ Makanchi 44.03 63 P P **14 19 40.6 -1.3**
MAKZ Makanchi 44.03 63 P P **14 19 40.6 -1.3**
MAKZ pmax pmax
comp=Z,7.0nm,1.4s
MK31 Makanchi Array 44.24 63*ce*P P **14 19 43.7 +0.1**
MKAR Makanchi Array 44.24 63 P P **14 19 42.8 -0.8**
MKAR Makanchi Array 44.24 63 P P **14 19 44.1 +0.5**
comp=Z,3.5nm,0.6s,baz=284,slow=7.0,SNR=36
comp=Z,3.5nm,0.6s
ZSN Zaisan 45.63 61 *e*P P **14 19 55.7 +1.0**
comp=Z,15nm,1.4s
ZSN Zaisan 45.63 61 *e*P P **14 19 55.6 +1.0**
ZSN pmax pmax
comp=Z,15nm,1.4s
DGZ Jazzator, Alta 46.38 57 ⇑*e*P P **14 20 01.5 +0.9**
DGZ pmax pmax
comp=Z,19nm,1.7s
WMQ Urumqi 48.93 65 *e*P P **14 20 23.2 +2.8**
WMQ sP sP 14 20 29.9 +3.6
WMQ pmax pmax
comp=Z,21nm,0.7s
WMQ LR LR
comp=N,870nm,16.1s
WMQ LR LR
comp=E,540nm,13.9s
WMQ LR LR
comp=Z,230nm,23.5s
FRB Frobisher Bay 49.80 324 LR LR 14 41 39.0
comp=Z,305nm,18.1s,baz=68,slow=36
KNGR Kungurtug, Tuv 51.95 53 ⇑*i*P P **14 20 45.7 +2.5**
SCHQ Schefferville 52.51 313 P P **14 20 47.3 +0.1**
comp=Z,5.0nm,0.7s,baz=100,slow=4.9,SNR=4.1
SCHQ LR LR 14 40 53.1
comp=Z,158nm,21.9s,baz=86,slow=34
comp=Z,5.0nm,0.7s
MOY Mondy 53.42 50 *e*P P **14 20 55.9 +1.8**
MOY pmax pmax
comp=Z,29nm,2.4s
TIXI Tiksi 54.70 21 LR LR 14 48 24.9
comp=Z,563nm,20.7s,baz=1.0,slow=40
TIXI Tiksi 54.70 21 ⇑*e*P P **14 21 04.8 +1.9**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
EVN Everest 56.66 82 P P **14 21 16.7 -1.8**
EVN IAmb IAmb 14 21 29.5
comp=Z,13nm,1.5s
SONM Songino Array 58.38 52 P P **14 21 30.3 +0.7**
comp=Z,4.3nm,0.7s,baz=292,slow=7.6,SNR=20
SONM LR LR 14 48 28.4
comp=Z,882nm,19.1s,baz=295,slow=38
comp=Z,4.3nm,0.7s
ULN Ulaanbaatar 58.73 52 P P **14 21 33.2 +1.0**
ULN P P **14 21 33.2 +1.0**
ULN Ulaanbaatar 58.73 52 ⇓*e*P P **14 21 33.7 +1.5**
ULN pmax pmax
comp=Z,19nm,1.8s
GTA Gaotai 58.99 64 P P **14 21 34.2 +0.1**
GTA pmax pmax
comp=Z,10.0nm,1.7s
GTA LR LR
comp=N,330nm,17.4s
GTA LR LR
comp=E,340nm,17.8s
GTA LR LR
comp=Z,290nm,20.0s
LSZ Lusaka 60.10 168 LR LR 14 49 46.5
comp=Z,218nm,21.1s,baz=351,slow=38
YAK Yakutsk 60.88 30 LR LR 14 51 22.0
comp=Z,445nm,18.4s,baz=306,slow=39
YAK Yakutsk 60.88 30 *e*P P **14 21 45.8 -0.7**
YAK *e**PP **pP** **14 21 48.0 -2.8**
YAK *e*S **S** **14 30 03.7 +0.1**
YAK pmax pmax
comp=Z,7.0nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK smax smax
comp=E,781nm,3.8s
YAK smax smax
comp=N,802nm,3.9s
YAK MLR MLR
comp=Z,481nm,14.0s
YAK MLR MLR
comp=N,175nm,13.0s
YAK MLR MLR
comp=E,144nm,13.0s
SHL Shillong 61.71 81 P P **14 21 52.8 -0.1**
SNR=6.8
SHL P P **14 21 52.8 -0.1**
SNR=6.8
SHL Shillong 61.71 81 P P **14 21 51.9 -1.0**
TSUM Tsumeb 63.22 180 LR LR 14 53 48.7
comp=E,171nm,19.0s,baz=336,slow=40
BRDH Bariadhala 63.34 84 LR LR 14 56 36.9
comp=E,184nm,18.7s,baz=316,slow=43
LZH Lanzhou 63.52 65 *e*P P **14 22 06.1 +1.3**
LZH sP sP 14 22 16.1 +5.3
LZH ScS **ScS** **14 31 49.6 -8.5**
LZH pmax pmax
comp=Z,34nm,1.1s
LZH LR LR
comp=N,310nm,16.3s
LZH LR LR
comp=E,230nm,16.0s
LZH LR LR
comp=Z,340nm,15.8s
HILR Hailar Array B 64.55 45 LR LR 14 53 12.6
comp=Z,751nm,18.4s,baz=300,slow=39
SADO Sadowa 64.59 308 LR LR 14 48 05.3
comp=Z,2μm,19.2s,baz=122,slow=34
HHC Hu-ho-hao-te 65.44 56 *e*P P **14 22 17.4 +0.1**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,6.3s
HHC LR LR
comp=N,250nm,15.5s
HHC LR LR
comp=E,400nm,15.4s
HHC LR LR
comp=Z,520nm,17.0s
BILL Bilibino 65.51 12 ⇓*e*P P **14 22 18.3 +1.2**
BILL pmax pmax
comp=Z,18nm,4.0s
INK Inuvik 65.61 349 LR LR 14 53 22.4
comp=Z,133nm,19.8s,baz=24,slow=38
PALK Pallekele 65.85 104 LR LR 14 52 59.9
comp=Z,67nm,18.2s,baz=344,slow=38
CD2 Chengdu 66.62 69 P P **14 22 26.3 +1.4**
CD2 pmax pmax
comp=Z,20nm,0.8s
YKAW3 Yellowknife Wh 66.80 338 P P **14 22 24.7 -0.8**
YKAW3 IAmb IAmb 14 22 28.7
comp=Z,3.9nm,0.7s
YKA Yellowknife Ar 66.85 338 P P **14 22 27.4 +1.6**
comp=Z,1.1nm,0.8s,baz=27,slow=5.5,SNR=4.3
YKA LR LR 14 53 04.0
comp=Z,220nm,18.1s,baz=42,slow=37
comp=Z,1.1nm,0.8s
YKA Yellowknife Ar 66.85 338 *i*P P **14 22 29.5 +3.7**
YKA pmax pmax
comp=Z,1.0nm,0.8s
SEY Seymchan 67.19 21 LR LR 14 55 29.1
comp=Z,587nm,19.5s,baz=328,slow=39
SEY Seymchan 67.19 21 ⇓*e*P P **14 22 30.5 +2.6**
SEY pmax pmax
comp=Z,28nm,1.8s
F26K Sheenjek River 67.45 353 IAmb IAmb 14 22 36.8
comp=Z,6.9nm,1.2s
BMAR Burnt Mountain 67.75 353 P P **14 22 32.3 +0.8**
HEH HeiHe 67.83 41 *e*P P **14 22 32.1 -0.1**
HEH pmax pmax
comp=Z,12nm,1.4s
PZH PanZhiHua 68.03 74 P P **14 22 34.6 +0.6**
XAN Xi'an 68.05 64 P P **14 22 34.9 +1.0**
XAN pmax pmax
comp=Z,30nm,1.8s
XAN LR LR
comp=N,340nm,17.9s
XAN LR LR
comp=E,290nm,14.7s
XAN LR LR
comp=Z,290nm,17.2s
H29M Whitestone 68.23 350 IAmb IAmb 14 23 03.3
comp=Z,4.5nm,0.8s
BJI Beijing 68.68 55 P P **14 22 39.3 +1.6**
BJI pmax pmax
comp=Z,5.0nm,1.7s
BJI LR LR
comp=N,190nm,17.9s
BJI LR LR
comp=E,180nm,20.1s
BJI LR LR
comp=Z,350nm,17.3s
G23K Bananza Creek 68.89 355 IAmb IAmb 14 22 57.9
comp=Z,5.5nm,1.2s
I30M Mount Dempster 68.91 349 IAmb IAmb 14 22 40.9
comp=Z,8.7nm,1.1s
G21K Allakaket 69.28 356 IAmb IAmb 14 22 44.9
comp=Z,7.9nm,1.2s
LBTB Lobatse 69.39 172 LR LR 14 55 57.9
comp=Z,361nm,19.3s,baz=356,slow=38
ULM Lac du Bonnet 69.47 321 LR LR 14 52 48.3
comp=Z,272nm,18.0s,baz=19,slow=36
HNS HongShan 69.52 58 ⇑P P **14 22 43.3 +0.4**
HNS pmax pmax
comp=Z,12nm,1.8s
HNS LR LR
comp=N,410nm,17.5s
HNS LR LR
comp=E,200nm,18.8s
HNS LR LR
comp=Z,270nm,16.5s
MA2 Magadan 69.56 23 LR LR 14 57 30.9
comp=Z,649nm,18.1s,baz=2.5,slow=40
KMI Kunming 69.60 75 ⇓P P **14 22 44.9 +1.0**
KMI pmax pmax
comp=Z,15nm,1.2s
KMI LR LR
comp=N,140nm,16.9s
KMI LR LR
comp=E,130nm,11.5s
KMI LR LR
comp=Z,220nm,21.9s
IMAR Indian Mountai 69.82 356 P P **14 22 45.7 +1.3**
LYN LuoYang 69.98 61 P P **14 22 47.6 +1.8**
G18K Tagagawik 70.08 358 IAmb IAmb 14 23 07.3
comp=Z,6.1nm,1.1s
DAWY Dawson 70.43 349 IAmb IAmb 14 22 50.8
comp=Z,5.7nm,0.9s
J26L Joseph Creek 70.50 351 IAmb IAmb 14 22 53.1
comp=Z,4.1nm,0.8s
COLA College 70.54 353 ⇓*e*P P **14 22 49.8 +1.1**
COLA pmax pmax
comp=Z,16nm,2.1s
ILAR Eielson Array 70.56 353 P P **14 22 48.2 -0.7**
ILAR Eielson Array 70.56 353 P P **14 22 49.2 +0.3**
comp=Z,0.8nm,0.6s,baz=9.1,slow=5.4,SNR=20
ILAR LR LR 14 53 44.7
comp=Z,95nm,21.7s,baz=358,slow=36
comp=Z,0.8nm,0.6s
J25K Salcha River, 70.58 352 IAmb IAmb 14 23 13.0
comp=Z,6.7nm,1.3s
HDA Harding Lake 70.92 353 IAmb IAmb 14 22 55.3
comp=Z,6.4nm,0.8s
BNX BinXian 70.95 44 ⇑P P **14 22 51.2 -0.4**
BNX pmax pmax
comp=Z,14nm,1.9s
CHTO Chiang Mai 71.03 82 P P **14 22 52.1 -0.4**
CHTO P P **14 22 52.1 -0.4**
CM31 Chiang Mai Arr 71.27 82 P P **14 22 54.4 +0.5**
CMAR Chiang Mai Arr 71.27 82 P P **14 22 53.9 0.0**
comp=Z,1.4nm,0.6s,baz=308,slow=7.2,SNR=14
CMAR LR LR 15 01 31.7
comp=Z,70nm,18.5s,baz=315,slow=42
comp=Z,1.4nm,0.6s
CN2 Changchun 71.30 47 P P **14 22 53.8 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
PBA Port Blair 71.37 92 P P **14 22 53.3 -1.2**
RIDG Independent Ri 71.38 352 IAmb IAmb 14 23 10.7
comp=Z,5.3nm,1.0s
DOT Dot Lake 71.39 351 IAmb IAmb 14 22 57.0
comp=Z,6.6nm,1.1s
BPAW Bear Paw Mtn. 71.54 355 P P **14 22 55.2 +0.4**
BPAW IAmb IAmb 14 22 57.0
comp=Z,8.5nm,1.2s
J20K Nowinta River 71.64 356 IAmb IAmb 14 23 00.6
comp=Z,4.7nm,1.0s
BCAR Beaver Creek A 71.69 350 P P **14 22 56.8 +1.0**
L26K Log Cabin Wild 71.91 351 IAmb IAmb 14 23 02.4
comp=Z,5.3nm,0.9s
RND Reindeer 72.07 354 IAmb IAmb 14 23 01.8
comp=Z,4.7nm,0.8s
MDP Montagnes des 72.32 260 LR LR 14 52 17.1
comp=Z,35nm,18.8s,baz=138,slow=34
M27K Edge Creek, AK 72.39 350 IAmb IAmb 14 23 08.3
comp=Z,6.1nm,1.2s
J18K Innoko River 72.46 357 IAmb IAmb 14 23 05.5
comp=Z,10nm,1.2s
M26K Nabesna, AK 72.48 351 IAmb IAmb 14 23 26.6
comp=Z,8.0nm,1.4s
BOSA Boshof 72.93 173 P P **14 23 02.1 -1.5**
BOSA IAmb IAmb 14 23 19.8
comp=Z,10nm,1.2s
BOSA Boshof 72.93 173 P P **14 23 03.3 -0.3**
comp=Z,2.4nm,0.7s,baz=348,slow=6.4,SNR=8.6
BOSA LR LR 14 58 05.3
comp=Z,286nm,19.4s,baz=11,slow=38
comp=Z,2.4nm,0.7s
P33M Teslin, Yukon 73.03 345 IAmb IAmb 14 23 32.5
comp=Z,8.5nm,1.4s
HYT Haines Junctio 73.25 348 IAmb IAmb 14 23 10.1
comp=Z,4.5nm,0.9s
R33M Jennings River 73.44 344 IAmb IAmb 14 23 09.9
comp=Z,12nm,1.4s
L19K White Mountain 73.67 356 IAmb IAmb 14 23 38.6
comp=Z,6.8nm,1.1s
SKT Skwentna 73.68 355 IAmb IAmb 14 23 10.7
comp=Z,4.3nm,0.7s
KLU Klutina 73.69 352 IAmb IAmb 14 23 12.4
comp=Z,5.6nm,0.9s
LOGN Logan Glacier 73.76 349 IAmb IAmb 14 23 11.2
comp=Z,11nm,1.2s
WHN Wuhan 73.81 63 P P **14 23 10.1 +1.2**
WHN pmax pmax
comp=Z,180nm,1.7s
DLBC Dease Lake 74.12 343 LR LR 14 56 23.0
comp=Z,133nm,20.5s,baz=346,slow=36
SUA Susitna One 74.14 354 IAmb IAmb 14 23 13.0
comp=Z,12nm,1.2s
T47A Sharon Grove 74.23 306 IAmb IAmb 14 23 14.8
comp=Z,8.6nm,0.9s
P29M Windy Craggy 74.43 347 IAmb IAmb 14 23 16.0
comp=Z,6.2nm,0.8s
RC01 Rabbit Creek A 74.43 354 IAmb IAmb 14 23 15.5
comp=Z,6.9nm,0.8s
ECSD EROS Data Cent 74.53 317 IAmb IAmb 14 23 17.4
comp=Z,5.1nm,0.8s
MSHR Mys Shultsa 75.10 44 ⇑*e*P P **14 23 18.8 +2.6**
MSHR pmax pmax

comp=Z,143nm,2.7s
NJ2 Nanjing 75.62 59 *e*P **P 14 23 20.5 +1.1**
NJ2 pmax pmax
comp=Z,17nm,0.6s
LRAL Lakeview Retre 76.92 303 IAmb IAmb 14 23 52.9
comp=Z,12nm,1.3s
YSS Yuzhno-Sakhali 77.06 35 *e*P **P 14 23 28.4 +1.1**
YSS pmax pmax
comp=Z,30nm,1.3s
PETK Petropavlovsk- 77.09 23 LR LR 15 01 28.9
comp=Z,414nm,20.1s,baz=313,slow=39
KSRS Korea Array 77.12 50 P **P 14 23 28.5 +0.8**
comp=Z,2.0nm,0.7s,baz=317,slow=5.4,SNR=11
comp=Z,2.0nm,0.7s
KDAK Kodiak Island 77.92 355 LR LR 15 00 54.3
comp=Z,84nm,18.6s,baz=14,slow=38
ASAJ Asahikawa 79.27 37 LR LR 15 02 40.6
comp=Z,385nm,18.4s,baz=344,slow=39
BBB Bella Bella 79.41 339 LR LR 15 01 02.6
comp=Z,76nm,19.2s,baz=30,slow=37
NEW Newport 79.58 331 LR LR 14 59 14.3
comp=Z,140nm,20.3s,baz=36,slow=36
SHEM Shemya Is, Ala 81.24 14 LR LR 15 03 25.2
comp=Z,99nm,21.3s,baz=294,slow=38
PD31 Pinedale Array 81.25 324 **P 14 23 49.1 -1.5**
PDAR Pinedale Array 81.25 324 P P **14 23 50.8 +0.2**
PDAR Pinedale Array 81.25 324 P P **14 23 51.5 +1.0**
comp=Z,1.2nm,0.6s,baz=66,slow=4.8,SNR=11
PDAR LR LR 14 59 17.6
comp=Z,116nm,21.9s,baz=23,slow=35
comp=Z,1.2nm,0.6s
JNU Nakatsue 81.94 51 LR LR 15 05 29.9
comp=Z,264nm,18.0s,baz=320,slow=40
WMOK Wichita Mounta 82.37 312 **P 14 23 54.8 -1.6**
WMOK IAmb IAmb 14 23 59.2
comp=Z,13nm,1.4s
WMOK Wichita Mounta 82.37 312 P P **14 23 54.8 -1.6**
WMOK pmax pmax
comp=Z,13nm,1.4s
HWUT Hardware Ranch 83.05 324 **P 14 24 01.0 +1.0**
MAJO Matsushiro 83.22 44 ⇓*i*P P **14 24 01.1 +0.4**
MAJO pmax pmax
comp=Z,27nm,2.0s
MJAR Matsushiro Arr 83.22 44 P P **14 24 01.5 +0.8**
comp=Z,1.5nm,0.7s,baz=340,slow=5.6,SNR=5.9
MJAR LR LR 15 04 26.6
comp=Z,540nm,18.7s,baz=328,slow=38
comp=Z,1.5nm,0.7s
BDFB Brasilia 84.29 242 P P **14 24 08.2 +1.8**
comp=Z,2.1nm,0.6s,baz=32,slow=7.7,SNR=3.2
comp=Z,2.1nm,0.6s
PV04 Paradox Valley 84.52 321 IAmb IAmb 14 24 34.1
comp=Z,8.5nm,1.3s
PV12 Saucer Basin, 84.53 320 IAmb IAmb 14 24 12.9
comp=Z,3.9nm,0.9s
PV16 Nyswonger Mesa 84.59 321 IAmb IAmb 14 24 21.8
comp=Z,3.4nm,0.8s
PV02 Paradox Valley 84.59 320 IAmb IAmb 14 24 16.9
comp=Z,5.4nm,0.9s
PV03 Paradox Valley 84.61 320 IAmb IAmb 14 24 13.8
comp=Z,8.3nm,1.3s
PV19 Morning Glory 84.62 321 IAmb IAmb 14 24 13.5
comp=Z,5.5nm,1.0s
SRU San Rafael Swe 84.66 322 IAmb IAmb 14 24 28.1
comp=Z,3.7nm,1.0s
PV13 Radium Mtn., P 84.67 320 IAmb IAmb 14 24 12.8
comp=Z,9.6nm,1.4s
DUG Dugway, Tooele 84.75 324 IAmb IAmb 14 24 24.1
comp=Z,5.4nm,1.3s
MSTX Muleshoe 85.06 314 IAmb IAmb 14 24 14.8
comp=Z,4.7nm,0.8s
JOW Kunigami 85.08 57 LR LR 15 05 08.8
comp=Z,311nm,19.9s,baz=358,slow=38
POST Post 85.10 313 IAmb IAmb 14 24 14.7
comp=Z,5.1nm,0.8s
ELK Elko 85.28 326 IAmb IAmb 14 24 14.7
comp=Z,9.7nm,1.5s
ELK Elko 85.28 326 LR LR 15 02 06.5
comp=Z,218nm,20.4s,baz=30,slow=36
J05D Fort Rock, OR 85.33 331 IAmb IAmb 14 24 40.7
comp=Z,7.2nm,1.3s
K05A Summer Lake 85.70 331 IAmb IAmb 14 24 40.0
comp=Z,9.9nm,1.4s
HMU Henry Mountain 85.72 322 IAmb IAmb 14 24 18.3
comp=Z,4.3nm,0.8s
ANMO Albuquerque 86.14 317 P **P 14 24 16.7 +0.9**
ANMO Albuquerque 86.14 317 LR LR 15 01 08.2
comp=Z,205nm,21.6s,baz=137,slow=34
ANMO Albuquerque 86.14 317 ⇓*i*P **P 14 24 17.4 +1.6**
ANMO pmax pmax
comp=Z,7.0nm,1.9s
TASM ASL Pad, Albuq 86.14 317 IAmb IAmb 14 24 20.8
comp=Z,1.5nm,0.7s
TASM ASL Pad, Albuq 86.14 317 IAmb IAmb 14 24 20.8
comp=Z,1.6nm,0.7s
SPR3 Spring Creek 3 86.39 324 IAmb IAmb 14 24 22.5
comp=Z,6.0nm,1.2s
L04D Klamath Falls 86.64 331 IAmb IAmb 14 24 36.1
comp=Z,7.4nm,1.0s
JHJ Hachijo jima 2 86.71 45 LR LR 15 07 14.7
comp=Z,221nm,18.2s,baz=350,slow=38
YBH Yreka Blue Hor 87.21 331 LR LR 15 04 43.4
comp=Z,3.3nm,18.6s,baz=65,slow=37
U15A North Rim 87.66 322 IAmb IAmb 14 24 49.1
comp=Z,5.5nm,1.5s
PAHR Pah Rah Range 87.79 328 IAmb IAmb 14 24 28.6
comp=Z,4.0nm,0.9s
MNTX Cornudas Mount 88.20 314 IAmb IAmb 14 24 29.6
comp=Z,3.3nm,0.8s
NVAR Mina Array Bea 88.48 327 P **P 14 24 27.4 +0.4**
comp=Z,0.9nm,0.8s,baz=54,slow=7.5,SNR=5.0
NVAR LR LR 15 05 08.2
comp=Z,290nm,19.2s,baz=31,slow=36
comp=Z,0.9nm,0.8s
VHRN Van Horn 88.72 313 P **P 14 24 28.1 -0.1**
VHRN IAmb IAmb 14 24 31.7
comp=Z,2.8nm,0.8s
TX31 Lajitas Ar. Si 89.17 312 IAmb IAmb 14 24 35.4
comp=Z,5.2nm,0.8s
TXAR Lajitas Array 89.17 312 P **P 14 24 30.7 +0.5**
comp=Z,3.4nm,0.7s,baz=59,slow=3.8,SNR=13
comp=Z,3.4nm,0.7s
PFO Pinyon Flats O 91.86 323 LR LR 15 07 39.0
comp=Z,148nm,18.1s,baz=31,slow=37
LPIG La Paz 96.88 313 LR LR 15 08 42.1
comp=Z,91nm,20.6s,baz=40,slow=35
NVL N'lazarevskaya 114.86 182 *i* PKIKP **PKiKP 14 30 18.0 +4.3**
NVL *e* 14 31 11.7
NVL *e*SS SS 14 47 13.3 +5.7
NVL *e*SSS SSS 14 51 28.9
NVL pmax pmax
comp=Z,7.0nm,0.8s
WRA Warramunga Arr 122.71 86 PKP **PKPdf 14 30 30.0 -0.4**
comp=Z,0.3nm,0.5s,baz=343,slow=1.6,SNR=4.6
WRA Warramunga Arr 122.71 86 PKIKP **PKPdf 14 30 30.0 -0.4**
ASAR Alice Springs 124.75 90 PKPdf **PKPdf 14 30 32.7 -1.5**
ASAR Alice Springs 124.75 90 PKP **PKPdf 14 30 33.2 -1.0**
comp=Z,0.7nm,0.7s,baz=325,slow=1.8,SNR=14
QSPA South Pole Qui 134.18 180 PKP **PKiKP 14 30 52.9 +0.7**
comp=Z,0.6nm,0.7s,baz=226,slow=1.3,SNR=6.3
STKA Stephens Creek 135.05 94 PKP **PKPdf 14 30 53.5 0.0**
comp=Z,1.5nm,0.7s,baz=304,slow=2.5,SNR=3.0
TAOE Nuku Hiva Isla 139.71 325 *e*LR LR 15 16 11.4
comp=Z,164nm,29.2s
RKT Rikitea 149.10 304 *e*LR LR 15 20 32.1
comp=Z,11μm,40.2s
PPT2 Papeete2 151.23 334 *e*LR LR 15 21 30.9
comp=Z,118nm,23.5s
PPT2 *e*LR LR 15 21 32.9
comp=Z,141nm,33.5s
TBI Tubuai 156.52 329 *e*LR LR 15 24 05.5
comp=Z,614nm,27.2s

IDC 02** 14:27:25.9±8.3, 18°00S×177°03W, h0km, **mb3.6**/3, **mbtmp3.6**/3, **Error ellipse: s-maj=365.0km s-min=38.9km az=142.0. Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.90**	**259**	P	P	14 35 49.5	-1.2
	0.1nm,0.3s,baz=97,slow=7.6,SNR=5.0						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**46.03**	**254**	P	P	14 35 52.2	+0.7
	0.6nm,0.5s,baz=90,slow=8.7,SNR=17						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**85.69**	**12**	P	P	14 40 06.1	-0.1
	0.7nm,1.1s,baz=201,slow=4.7,SNR=4.5						
	0.7nm,1.1s						

***IDC 02** 14:44:07.9±1.3, 1°20N×97°05E, h0km, mb3.8/8, mbtmp3.8/10, ML3.6/2, MS3.0/2, Error ellipse: s-maj=32.9km s-min=19.6km az=54.0*
DJA 02 14:44:13.9±0.7, 1°N±3°×9°7E±°, h26km±4km, M3.9/12, mb4.2/2, MLv3.8/12
ISC 02 14:44:12.9±0.9, 1°31N±0°07×97°20E±0°08, h28km, n32, σ0s66/21, mb3.9/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.38**	**91**	P	Pn	**14 44 22.6**	**+0.1**
GSI				S	Sn	**14 44 28.8**	**0.0**
SNSI	**Sinabang, Aceh**	**1.40**	**321**	P	Pb	**14 44 39.5**	**+1.2**
PBSI	**Pulau Batu**	**1.74**	**142**	P	Pn	**14 44 41.1**	**-0.1**
KCSI	**Kotacane, Aceh**	**2.27**	**15**	P	Pn	**14 44 48.5**	**0.0**
PSI	**Prapat**	**2.27**	**49**	Pn	Pn	**14 44 48.9**	**+0.2**
	3.7nm,0.3s,baz=138,slow=22,SNR=6.3						
PSI				Sn	**Sb**	**14 45 21.2**	**+0.3**
	6.4nm,0.3s,baz=168,slow=19,SNR=8.1						
PSI				LR	LR	14 45 37.7	
	comp=Z,89nm,21.0s,baz=249,slow=38						
	11nm,0.3s						
MNSI	**Mandailing Nat**	**2.44**	**102**	P	Pn	**14 44 51.8**	**+1.0**
SISI	**Saibi**	**3.23**	**144**	P	Pn	**14 45 02.3**	**+0.5**
PDSI	**Padang**	**3.94**	**124**	P	Pn	**14 45 12.1**	**+0.6**
PPSI	**Pulau Pagai**	**4.93**	**145**	P	Pn	**14 45 25.3**	**+0.2**
KASI	**Kota Agung**	**9.96**	**133**	P	Pn	**14 46 35.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**17.12**	**6**	P	Pn	**14 48 08.7**	**-1.6**
	0.2nm,0.3s,baz=158,slow=9.5,SNR=5.1						
	0.8nm,0.6s						
H08S2	**Diego Garcia H**	**26.20**	**250**	T	T	15 16 40.5	
	baz=74,slow=75						
H08S3	**Diego Garcia H**	**26.20**	**250**	T	T	15 16 41.5	
	baz=74,slow=75						
H08S1	**Diego Garcia H**	**26.22**	**250**	T	T	15 16 41.0	
	baz=74,slow=75						
LZDM	**Lanzhou Array**	**34.99**	**9**	LR	LR	15 07 00.2	
	comp=Z,82nm,18.9s,baz=190,slow=39						
H01W3	**Cape Leeuwin H**	**39.35**	**158**	T	T	15 33 05.6	
	baz=333,slow=76,SNR=8.1						
H01W2	**Cape Leeuwin H**	**39.36**	**158**	T	T	15 33 12.2	
	baz=333,slow=76,SNR=9.8						
H01W1	**Cape Leeuwin H**	**39.37**	**158**	T	T	15 33 09.1	
	baz=333,slow=76,SNR=7.4						
WRA	**Warramunga Arr**	**42.09**	**122**	P	P	**14 52 02.1**	**-0.7**
	0.4nm,0.6s,baz=301,slow=9.2,SNR=5.1						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**43.46**	**127**	P	P	**14 52 13.8**	**-0.1**
	0.2nm,0.4s,baz=300,slow=7.6,SNR=7.7						
	0.2nm,0.4s						
KSRS	**Korea Array**	**45.76**	**35**	P	P	**14 52 31.5**	**-0.4**
	1.2nm,0.8s,baz=224,slow=9.2,SNR=6.3						
	1.2nm,0.8s						
SONM	**Songino Array**	**47.02**	**8**	P	P	**14 52 42.0**	**+0.1**
	0.6nm,0.4s,baz=198,slow=7.8,SNR=4.2						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**47.13**	**346**	P	P	**14 52 43.0**	**+0.4**
	0.6nm,0.4s,baz=162,slow=8.7,SNR=11						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**51.62**	**345**	P	P	**14 53 16.6**	**-0.2**
	0.9nm,0.6s,baz=164,slow=6.8,SNR=11						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**53.45**	**351**	P	P	**14 53 30.3**	**0.0**
	1.7nm,0.3s,baz=178,slow=6.6,SNR=11						
	1.7nm,0.3s						
BVAR	**Borovoye Array**	**56.14**	**341**	P	P	**14 53 49.3**	**-0.5**
	1.5nm,0.7s,baz=145,slow=9.0,SNR=5.9						
	1.5nm,0.7s						
H04N2	**CROZET ISLANDS**	**61.87**	**214**	T	T	16 01 29.4	
	baz=54,slow=75,SNR=296						
H04N1	**CROZET ISLANDS**	**61.88**	**214**	T	T	16 01 25.1	
	baz=54,slow=75,SNR=312						
H04N3	**CROZET ISLANDS**	**61.88**	**214**	T	T	16 01 25.3	
	baz=54,slow=75,SNR=254						
H04S1	**CROZET ISLANDS**	**62.21**	**213**	T	T	16 01 48.0	
	baz=53,slow=76,SNR=12						
H04S3	**CROZET ISLANDS**	**62.22**	**213**	T	T	16 01 47.3	
	baz=53,slow=76,SNR=16						
H04S2	**CROZET ISLANDS**	**62.23**	**213**	T	T	16 01 48.6	
	baz=53,slow=76,SNR=14						

SJA 02 14:50:17.4±0.8, 31°80S×72°05W, h11km±2km, ML3.8, MW3.7
IDC 02 14:50:17.6±2.5, 31°73S×71°72W, h0km, mb4.2/3, mbtmp3.9/5, ML3.7/2, MS3.7/1, Error ellipse: s-maj=99.2km s-min=29.1km az=95.0
GUC 02 14:50:20.9±0.8, 31°80S×71°92W, h32km±2km, ML3.8
NEIC 02 14:50:21.9±1.2, 31°75S±0°04×72°1W±0°2, h35km±2km, mb4.2/3, ML3.8(GUC), Error ellipse: s-maj=26.9km s-min=6.2km az=93.0
ISC 02 14:50:17.5±1.3, 31°75S±0°02×71°94W±0°04, h0km±9km, n93, σ1s27/122, mb4.2/3, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.87**	**110**	⇓*i*P	Pb	**14 50 36.7**	**+1.0**
CO04				*e*S	**Sb**	**14 50 48.0**	**0.0**
CO04				IAML		14 50 48.6	
	comp=N,7μm,0.4s						
CO02	**Combarbal**	**0.97**	**56**		Pn	**14 50 38.6**	**0.0**
CO02	**Combarbal**	**0.97**	**56**	⇓*i*P	Pn	**14 50 38.7**	**+0.2**
CO02				*e*S	Sn	**14 50 51.7**	**-1.4**
CO02				IAML		14 50 53.7	
	comp=E,7μm,0.4s						
CO02	**Combarbal**	**0.97**	**56**	*e*P	Pg	14 50 29.3	-6.9
CO02				*e*S	**Sn**	**14 50 53.2**	**+0.1**
CO02				IAML		14 50 54.5	
	comp=Z,4μm,0.5s						
VA06	**Catapilco**	**0.97**	**146**		Pb	**14 50 37.9**	**+0.7**
VA06	**Catapilco**	**0.97**	**146**	⇓*i*P	Pb	**14 50 37.9**	**+0.7**
VA06				*e*S	**Sg**	**14 50 50.1**	**+1.3**
VA06				IAML		14 50 53.1	
	comp=E,8μm,0.4s						
CO06	**Fray Jorge**	**1.11**	**14**		Pn	**14 50 40.4**	**+0.1**
CO06	**Fray Jorge**	**1.11**	**14**	⇑*i*P	Pn	**14 50 40.5**	**+0.2**
CO06				*e*S	Sn	**14 50 56.0**	**-0.2**
VA01	**Torpederas**	**1.29**	**169**		Pg	**14 50 42.7**	**+0.4**
VA01	**Torpederas**	**1.29**	**169**	*e*P	Pg	**14 50 39.4**	**-2.9**
VA01				*e*S	**Sg**	**14 50 58.8**	**-0.2**
ROCH	**El Roble**	**1.45**	**147**	⇑*i*P	Pn	**14 50 45.6**	**+0.4**
ROCH				*e*S	**Sg**	**14 51 03.8**	**-0.3**
ROCH				IAML		14 51 05.7	
	comp=N,3μm,0.3s						
ROC1	**El Roble**	**1.45**	**147**	*e*P	Pn	**14 50 45.5**	**+0.3**
ROC1				*e*S	**Sg**	**14 51 04.5**	**+0.4**
VA03	**San Esteban**	**1.55**	**131**		Pn	**14 50 47.1**	**+0.7**
VA03	**San Esteban**	**1.55**	**131**	*e*P	Pn	**14 50 47.2**	**+0.7**
VA03				*e*S	**Sn**	**14 51 07.1**	**-0.3**
VA03				IAML		14 51 11.0	
	comp=N,2μm,0.6s						
VA03	**San Esteban**	**1.55**	**131**	*e*P	Pn	**14 50 47.2**	**+0.7**
VA03				*e*S	**Sg**	**14 51 08.1**	**+0.7**
VA03				IAML		14 51 13.3	
	comp=Z,1μm,0.5s						
MT02	**Curacav**	**1.65**	**156**		Pn	**14 50 48.4**	**+0.7**
MT02	**Curacav**	**1.65**	**156**	*e*P	Pn	**14 50 48.1**	**+0.4**
MT02				*e*S	**Sn**	**14 51 08.6**	**-1.0**
MT02	**Curacav**	**1.65**	**156**	*e*P	Pn	**14 50 47.3**	**-0.4**
MT02				*e*S	**Sn**	**14 51 04.0**	**-5.6**
MT02				IAML		14 51 15.9	
	comp=Z,582nm,0.7s						
PEL	**Peldehue**	**1.75**	**143**		Pn	**14 50 49.9**	**+0.8**
PEL	**Peldehue**	**1.75**	**143**	*e*P	Pn	**14 50 49.9**	**+0.8**
PEL				*e*S	**Sn**	**14 51 11.6**	**-0.5**
PEL				IAML		14 51 16.8	
	comp=E,1μm,0.5s						
PEL	**Peldehue**	**1.75**	**143**	*e*P	Pn	**14 50 50.0**	**+0.8**
PEL				*e*S	**Sg**	**14 51 16.0**	**+2.3**
PEL				IAML		14 51 17.4	
	comp=Z,703nm,0.3s						
GO04	**Tololo Observa**	**1.86**	**32**		Pn	**14 50 51.6**	**+0.8**
GO04	**Tololo Observa**	**1.86**	**32**	*e*P	Pn	**14 50 51.6**	**+0.8**
GO04				*e*S	**Sb**	**14 51 15.9**	**-0.4**
GO04	**Tololo Observa**	**1.86**	**32**	*e*P	Pn	**14 50 51.8**	**+0.9**
GO04				*e*S	**Sg**	**14 51 18.8**	**+1.5**
GO04				IAML		14 51 23.1	
	comp=Z,2μm,0.4s						
MT05	**Renca**	**1.92**	**148**		Pn	**14 50 52.5**	**+0.9**
MT05	**Renca**	**1.92**	**148**	*e*P	Pn	**14 50 52.3**	**+0.7**
MT05				*e*S	**Sn**	**14 51 17.1**	**+0.6**
MT05				IAML		14 51 24.6	
	comp=E,2μm,0.3s						
MT05	**Renca**	**1.92**	**148**	*e*P	Pn	**14 50 52.5**	**+0.9**
MT05				*e*S	**Sn**	**14 51 15.5**	**-1.0**
MT05				IAML		14 51 24.7	
	comp=Z,531nm,0.7s						
MT10	**Hacienda Santa**	**1.93**	**142**	⇑*i*P	Pn	**14 50 52.6**	**+1.0**
MT10				*e*S	**Sn**	**14 51 16.6**	**-0.1**
MT10				IAML		14 51 27.0	
	comp=E,2μm,0.5s						
CO05	**La Serena**	**1.93**	**19**		Pn	**14 50 52.6**	**+1.1**
CO05	**La Serena**	**1.93**	**19**	*e*P	Pg	**14 50 54.6**	**+0.1**
CO05				*e*S	**Sg**	**14 51 18.9**	**-0.6**
CO05				IAML		14 51 24.0	
	comp=N,821nm,0.3s						
MT14	**Cerro Cal¡n**	**2.02**	**144**	*e*P	Pn	**14 50 54.0**	**+1.1**
MT14				*e*S	**Sn**	**14 51 19.0**	**+0.1**
MT14				IAML		14 51 27.4	
	comp=E,2μm,0.5s						
MT16	**CCHEN**	**2.06**	**145**		Pn	**14 50 54.6**	**+1.2**
MT16	**CCHEN**	**2.06**	**145**	*e*P	Pb	**14 50 55.4**	**-0.4**
MT16				*e*S	**Sn**	**14 51 19.4**	**-0.3**
MT03	**Universidad Ad**	**2.12**	**146**		Pn	**14 50 55.5**	**+1.2**
MT03	**Universidad Ad**	**2.12**	**146**	*e*P	Pn	**14 50 55.3**	**+1.0**
MT03				IAML		14 51 29.5	
	comp=E,2μm,0.1s						
MT03	**Universidad Ad**	**2.12**	**146**	*e*P	Pn	**14 50 55.6**	**+1.4**
MT03				*e*S	**Sb**	**14 51 23.5**	**-0.1**
MT03				IAML		14 51 30.8	
	comp=Z,880nm,0.6s						
MT09	**Talagante**	**2.17**	**159**		Pn	**14 50 56.2**	**+1.2**
MT09	**Talagante**	**2.17**	**159**	*e*P	Pn	**14 50 56.2**	**+1.2**
MT09				IAML		14 51 33.1	
	comp=N,669nm,0.2s						
MT01	**Popeta**	**2.18**	**165**		Pn	**14 50 55.5**	**+0.4**
MT01	**Popeta**	**2.18**	**165**	*e*P	Pn	**14 50 55.5**	**+0.4**
MT01	**Popeta**	**2.18**	**165**	*e*P	Pn	**14 50 55.5**	**+0.4**
MT01				*e*S	**Sn**	**14 51 22.6**	**-0.2**
MT01				IAML		14 51 32.0	
	comp=Z,395nm,0.5s						
MT15	**Las Vizcachas**	**2.20**	**147**	*e*P	Pn	**14 50 56.6**	**+1.2**
MT15				IAML		14 51 35.5	
	comp=E,1μm,0.3s						
MT04	**Ro Olivares**	**2.24**	**138**	*e*P	Pn	**14 50 57.4**	**+1.3**
MT04				IAML		14 51 28.3	
	comp=E,602nm,0.6s						
MT04	**Ro Olivares**	**2.24**	**138**	*e*P	Pn	**14 50 57.9**	**+1.7**
MT04				*e*S	**Sb**	**14 51 26.7**	**-0.8**
MT04				IAML		14 51 31.9	
	comp=Z,309nm,0.8s						
RTLS	**Leoncito**	**2.25**	**92**	*e*P	Pb	**14 50 59.9**	**+0.6**
RTLS				*e*S	**Sg**	**14 51 30.2**	**+0.2**
RTLS				IAML		14 51 30.5	
	comp=Z,1μm,1.0s						
MT12	**Pirque**	**2.30**	**150**	*e*P	Pn	**14 50 57.8**	**+1.1**
MT12				IAML		14 51 34.4	
	comp=N,1μm,0.4s						
MT08	**Bocatoma Ro**	**2.34**	**137**		Pn	**14 50 59.7**	**+2.2**
MT08	**Bocatoma Ro**	**2.34**	**137**	*e*P	Pn	**14 50 59.4**	**+1.9**
MT08				IAML		14 51 39.1	
	comp=E,604nm,0.4s						
MT08	**Bocatoma Ro**	**2.34**	**137**	*e*P	Pn	**14 50 59.7**	**+2.2**
MT08				*e*S	**Sn**	**14 51 26.4**	**-0.7**
MT08				IAML		14 51 40.1	
	comp=Z,350nm,0.6s						
CO01	**Juntas del Tor**	**2.38**	**42**		Pb	**14 51 00.1**	**-1.3**
CO01	**Juntas del Tor**	**2.38**	**42**	*e*P	Pb	**14 51 00.0**	**-1.3**
CO01				IAML		14 51 38.1	
	comp=E,561nm,0.7s						
CO01	**Juntas del Tor**	**2.38**	**42**	*e*P	Pb	**14 51 00.2**	**-1.1**
CO01				*e*S	**Sg**	**14 51 33.1**	**-0.9**
CO01				IAML		14 51 35.8	
	comp=Z,474nm,0.3s						
BO04	**La Punta**	**2.50**	**154**		Pn	**14 51 00.5**	**+1.1**
BO04	**La Punta**	**2.50**	**154**	*e*P	Pn	**14 51 00.7**	**+1.3**
BO04				IAML		14 51 41.7	
	comp=E,525nm,0.4s						
LMEL	**Las Melosas**	**2.55**	**145**	*e*P	Pn	**14 51 01.2**	**+1.0**
LMEL				IAML		14 51 43.1	
	comp=N,591nm,0.3s						
LMEL	**Las Melosas**	**2.55**	**145**	*e*P	Pn	**14 51 01.3**	**+1.0**
LMEL				*e*S	**Sn**	**14 51 29.0**	**-3.1**
LMEL				IAML		14 51 41.1	
	comp=Z,370nm,0.4s						
AROD	**Rodeo**	**2.65**	**54**	*e*P	Pb	**14 51 06.1**	**+0.1**
AROD				*e*S	**Sb**	**14 51 37.8**	**-1.3**
ACCO	**Cerro Coronel**	**2.73**	**66**	*e*P	Pb	**14 51 07.1**	**-0.3**
ACCO				*e*S	**Sb**	**14 51 41.9**	**+0.4**
BO01	**Tunca**	**2.73**	**165**		Pn	**14 51 03.5**	**+1.0**
BO01	**Tunca**	**2.73**	**165**	*e*P	Pn	**14 51 03.3**	**+0.7**
BO01				*e*S	**Sn**	**14 51 34.8**	**-1.4**
BO01				IAML		14 51 48.7	
	comp=Z,206nm,0.6s						
ASAL	**Salagasta**	**2.77**	**108**	*e*P	Pb	**14 51 08.2**	**+0.3**
ASAL				*e*S	**Sb**	**14 51 40.2**	**-2.1**
ARCO	**CERRO ARCO**	**2.77**	**114**	*e*P	Pn	**14 51 04.7**	**+1.3**
ARCO				*e*S	**Sb**	**14 51 42.6**	**+0.1**
ARCO				IAML		14 51 49.7	
	comp=Z,324nm,1.2s						
ZON	**Zonda**	**2.79**	**87**	*e*P	Pn	**14 51 03.2**	**-0.3**
ZON				*e*S	**Sb**	**14 51 42.0**	**-1.0**
ZON				IAML		14 51 52.5	
	comp=Z,174nm,0.9s						
SJA	**San Juan**	**2.89**	**86**	*e*P	Pn	14 50 55.4	-9.5
SJA				IAML		14 51 57.0	
	comp=Z,133nm,0.6s						
LCO	**Las Campanas**	**2.94**	**22**		Pn	**14 51 06.8**	**+1.1**
LCO	**Las Campanas**	**2.94**	**22**	*e*S	Sn	**14 51 43.1**	**+1.3**
LCO				IAML		14 51 54.2	
	comp=Z,454nm,0.4s						
AAGR	**Agrelo**	**2.95**	**118**	*e*P	Pn	**14 51 06.8**	**+1.1**
AAGR				*e*S	**Sg**	**14 51 53.8**	**+1.4**
AAGR				IAML		14 52 04.5	
	comp=Z,236nm,0.9s						
CFA	**Coronel Fontan**	**3.16**	**88**	*e*P	Pn	**14 51 07.0**	**-1.6**
BO02	**Sierra Bellavi**	**3.18**	**163**		Pn	**14 51 09.8**	**+0.9**
BO02	**Sierra Bellavi**	**3.18**	**163**	*e*S	Sn	**14 51 50.9**	**+3.4**
BO02				*e*S	**Sn**	**14 51 50.9**	**+3.4**
BO02				IAML		14 52 01.3	
	comp=Z,302nm,0.8s						
AC06	**Mina Casimiro**	**4.59**	**18**		Pn	**14 51 29.4**	**+1.1**
BI02	**San Fabin de**	**4.93**	**174**		Pn	**14 51 34.7**	**+1.8**
AC02	**Maricunga**	**5.48**	**27**		Pn	**14 51 41.8**	**+0.9**
H03N1	**Juan Fernandez**	**6.12**	**252**	Pn	Pn	**14 51 48.5**	**-0.4**
	baz=118,slow=20						
H03N1				T	T	14 58 31.1	
	baz=81,slow=72,SNR=1072						
H03N3	**Juan Fernandez**	**6.13**	**252**	Pn	Pn	**14 51 48.3**	**-0.8**
	baz=118,slow=20						
H03N3				T	T	14 58 32.8	
	baz=81,slow=72,SNR=1056						
H03N2	**Juan Fernandez**	**6.13**	**252**	Pn	Pn	**14 51 48.6**	**-0.5**
	baz=118,slow=20						
H03N2				T	T	14 58 19.4	
	baz=81,slow=72,SNR=1248						
H03S3	**Juan Fernandez**	**6.22**	**249**	T	T	14 58 47.5	
	baz=75,slow=75,SNR=9.2						
H03S1	**Juan Fernandez**	**6.22**	**249**	T	T	14 58 46.1	
	baz=75,slow=75,SNR=7.5						
H03S2	**Juan Fernandez**	**6.24**	**249**	T	T	14 58 44.2	
	baz=75,slow=75,SNR=9.0						
PLCA	**Paso Flores**	**9.03**	**173**		Pn	**14 52 27.4**	**-1.8**
PLCA	**Paso Flores**	**9.03**	**173**	Pn	Pn	**14 52 29.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=328,slow=12,SNR=9.4						
	comp=Z,0.6nm,0.3s						
**L

comp=Z,0.9nm,0.6s,baz=138,slow=8.5,SNR=11
DBIC Dimbokro 74.39 72 P **P 15 01 56.8 -0.9**
comp=Z,2.3nm,0.7s,baz=233,slow=5.1,SNR=1.8
comp=Z,2.3nm,0.7s
TORD Torodi Ar. Bea 83.37 70 P **P 15 02 46.1 -0.8**
comp=Z,1.7nm,0.4s,baz=247,slow=5.9,SNR=2.9
comp=Z,1.7nm,0.4s
H11S2 WAKE ISLAND Hy 25.87 271 T T 17 28 19.7
baz=117,slow=75,SNR=8.8
H11S1 WAKE ISLAND Hy 25.87 271 T T 17 28 09.8
baz=117,slow=75,SNR=8.3
H11S3 WAKE ISLAND Hy 25.87 271 T T 17 28 13.4
baz=117,slow=75,SNR=6.7
ZALV Zalesovo Beam 152.27 30 PKPbc **PKPbc 15 10 14.5 -0.2**
comp=Z,1.8nm,0.5s,baz=307,slow=2.3,SNR=8.0

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*NEIC **02** 14:54:19.3±1.8,2˝.25N±0˝.09×84˚.4W±0˝.1,h10km±1km, mb4.6/132, Error ellipse: s-maj=22.0km s-min=12.4km az=240.0*
*GCMT **02** 14:54:22.3±0.4,2˚.24N±0˝.03×84˚.56W±0˝.05,h22km±1km, MW4.7/64, Moment Tensor Solution. s18,c19; s64,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.48±.13; $M_{\theta\theta}$1.57±.09; $M_{\phi\phi}$-0.08±.10; $M_{r\theta}$0.48±.13; $M_{\theta\phi}$-0.02±.05; $M_{\phi r}$0.33±.20; Best double couple: $M_0$1.63300×10^{16} NP1:ϕ_s103.00000°,δ38.00000°,λ-71.00000°. NP2: ϕ_s259.00000°,δ55.00000°,λ-104.00000°. Principal axes: T 1.6440, Plg9.0000°, Azm359.0000°; N -0.0210, Plg12.0000°, Azm267.0000°; P -1.6220, Plg75.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **02** 14:54:23.9±2.8,2˚.23N×84˚.46W, h42km±24km, mb4.0/15, mbtmp4.3/20, ML3.0/4, MS3.6/18 Error ellipse: s-maj=25.4km s-min=13.9km az=58.0*
ISC 02 14:54:22.3±0.4,2˚.16N±0˝.06×84˚.45W±0˝.07,h35km,n166, σ1s56/108,mb4.6/73,MS3.7/17,3C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FLF1	**Flavio Alfaro-**	**5.25**	**118**	P	**Pn**	**14 55 37.2**	**-1.1**
	135nm,0.9s						
TUMC	**Tumaco**	**5.73**	**93**	Pn	**Pn**	**14 55 41.9**	**-3.1**
TUMC	**Tumaco**	**5.73**	**93**	P	**Pn**	**14 55 45.8**	**+0.8**
	322nm,1.1s						
PAC1	**Pacto, Paraso**	**5.96**	**108**	P	**Pn**	**14 55 47.2**	**-1.1**
	2µm93nm,0.6s						
OTAV	**Otavalo**	**6.30**	**108**		**Pn**	**14 55 52.9**	**-0.3**
OTAV	**Otavalo**	**6.30**	**108**	*e*P	**Pn**	**14 55 52.1**	**-1.0**
OTAV	**Otavalo**	**6.30**	**108**	P	**Pn**	**14 55 52.9**	**-0.3**
	28nm,1.3s						
CUSE	**Cuicocha Este**	**6.33**	**107**	P	**Pn**	**14 55 50.0**	**-3.5**
SLOR	**San Lorenzo -**	**6.61**	**116**		**Pn**	**14 55 59.6**	**+2.2**
TULM	**Tulcn-Chalpat**	**6.82**	**102**	P	**Pn**	**14 56 00.2**	**-0.1**
	73nm,1.0s						
COHC	**Cochancay**	**6.94**	**131**		**Pn**	**14 56 01.5**	**0.0**
COHC	**Cochancay**	**6.94**	**131**	P	**Pn**	**14 56 00.5**	**-1.1**
	25nm,1.3s						
PIAT	**Ana Tenorio**	**6.94**	**117**	P	**Pn**	**14 56 01.4**	**-0.5**
	14nm,0.6s						
BONI	**La Bonita**	**7.13**	**104**	P	**Pn**	**14 56 03.2**	**-1.2**
	50nm,0.9s						
GCUF	**Volcan Galeras**	**7.17**	**97**	P	**Pn**	**14 56 05.8**	**+0.7**
	32nm,0.9s						
POPC	**Popayan, Colom**	**7.78**	**87**	P	**Pn**	**14 56 14.4**	**+1.1**
	26nm,0.6s						
POPC				S	**Sn**	**14 57 38.9**	**-1.5**
	26nm,0.6s						
MCRA	**Macar, Loja**	**7.89**	**145**	P	**Pn**	**14 56 14.3**	**-0.4**
	1µm8.0nm,0.9s						
MCRA				S	**Sn**	**14 57 37.8**	**-5.1**
	1µm8.0nm,0.9s						
JUD3	**Juan Diaz 3**	**8.02**	**352**		**Pn**	**14 56 14.6**	**-1.9**
JTS	**Las Juntas de**	**8.09**	**357**		**Pn**	**14 56 16.5**	**-0.9**
JTS	**Las Juntas de**	**8.09**	**357**	P	**Pn**	**14 56 16.7**	**-0.7**
	68nm,0.5s,baz=182,slow=5.3,SNR=40						
JTS				S	**Sn**	**14 57 43.4**	**-4.4**
	3.6nm,0.6s,baz=227,slow=18,SNR=0.7						
JTS				LR	LR	14 58 50.6	
	comp=Z,1µm,21.4s,baz=159,slow=33						
JTS	**Las Juntas de**	**8.09**	**357**	P	**Pn**	**14 56 16.3**	**-1.1**
YOTC	**Yotoco, Valle**	**8.29**	**77**	P	**Pn**	**14 56 20.7**	**+0.4**
	14nm,1.0s						
BCIP	**Isla Barro Col**	**8.34**	**33**	P	**Pn**	**14 56 20.5**	**-0.2**
PLMC	**San Jos del P**	**8.60**	**71**	P	**Pn**	**14 56 24.9**	**+0.5**
	30nm,1.1s						
FLOC	**Florencia**	**8.81**	**94**		**Pn**	**14 56 28.4**	**+1.0**
FLOC	**Florencia**	**8.81**	**94**	P	**Pn**	**14 56 29.2**	**+1.9**
	588nm57nm,1.1s						
BETC	**Betania**	**9.02**	**87**	P	**Pn**	**14 56 32.2**	**+2.0**
ANIL	**Santa Ana**	**9.32**	**75**	P	**Pn**	**14 56 38.3**	**+3.7**
	1µm41nm,1.2s						
ORTC	**Ortega, Tolima**	**9.36**	**79**	P	**Pn**	**14 56 37.4**	**+2.6**
	857nm61nm,1.1s						
DBBC	**Dabeiba**	**9.53**	**59**	P	**Pn**	**14 56 40.1**	**+2.9**
GUY2C	**Guyana, Caldas**	**9.56**	**71**	P	**Pn**	**14 56 40.7**	**+2.7**
	547nm60nm,1.0s						
ROSC	**El Rosal**	**10.46**	**75**	P	**Pn**	**14 56 52.6**	**+2.5**
	2.1nm,0.3s,baz=297,slow=11,SNR=7.4						
	9.7nm,0.4s						
MACC	**Macarena, Meta**	**10.60**	**90**	P	**Pn**	**14 56 54.0**	**+2.2**
HERN	**Volcan Telica**	**10.64**	**347**		**Pn**	**14 56 52.4**	**-0.1**
TGUH	**Tegucigalpa,Un**	**12.14**	**347**		**Pn**	**14 57 15.1**	**+2.0**
APG	**El Apazote**	**14.07**	**335**	P	**Pn**	**14 57 40.8**	**+1.3**
	0.1nm,0.3s,baz=179,slow=8.6,SNR=6.3						
APG				LR	LR	15 02 09.2	
	comp=Z,46nm,19.9s,baz=257,slow=33						
	1.2nm,1.0s						
SDV	**Santo Domingo**	**15.28**	**64**	P	**P**	**14 57 58.4**	**-1.8**
	0.4nm,0.3s,baz=242,slow=8.5,SNR=12						
	4.9nm,0.4s						
SDV	**Santo Domingo**	**15.28**	**64**	*e*P	**P**	**14 58 02.3**	**+2.1**
SDV	**Santo Domingo**	**15.28**	**64**	P	**P**	**14 58 01.8**	**+1.5**
CZSB	**Cruzeiro do Su**	**15.29**	**130**	*e*P	**Pn**	**14 57 55.0**	**-0.8**
BAUV	**El Baul**	**17.66**	**67**		**Pn**	**14 58 25.0**	**-0.8**
CMIG	**Matias Romero**	**18.03**	**326**	P	**P**	**14 58 30.6**	**+0.1**
	baz=141,slow=7.4,SNR=5.6						
	9.4nm,0.9s						
CHIV	**Chivirico**	**19.37**	**23**	P	**P**	**14 58 43.0**	**-2.1**
CHIV				IAmb	IAmb	14 58 48.6	
	comp=Z,43nm,1.2s						
TEFE	**Tefe**	**20.59**	**106**	*e*P	**P**	**14 58 59.6**	**+1.0**
BOAV	**Boa Vista**	**23.91**	**89**	*e*P	**P**	**14 59 35.4**	**+2.2**
SJG	**San Juan**	**23.95**	**47**	P	**P**	**14 59 34.1**	**+0.7**
	comp=Z,8.4nm,0.4s,baz=208,slow=4.3,SNR=6.7						
SJG				LR	LR	15 08 17.6	
	comp=Z,92nm,20.4s,baz=150,slow=35						
	comp=Z,8.4nm,0.4s						
MACA	**Manacapuru-AM**	**24.34**	**102**	*e*P	**P**	**14 59 39.7**	**+2.6**
LPAZ	**La Paz**	**24.42**	**139**	P	**P**	**14 59 39.9**	**+1.4**
	comp=Z,9.3nm,0.9s,baz=320,slow=8.4,SNR=20						
LPAZ				LR	LR	15 10 28.4	
	comp=Z,302nm,18.1s,baz=302,slow=39						
	comp=Z,9.3nm,0.9s						
LPAZ	**La Paz**	**24.42**	**139**	*e*P	**P**	**14 59 40.2**	**+1.7**
PB16	**IPOC Station P**	**25.13**	**145**		**P**	**14 59 44.5**	**-0.4**
PB11	**IPOC Station P**	**26.19**	**147**	P	**P**	**14 59 55.0**	**+1.0**
PB11				IAmb	IAmb	14 59 59.1	
	comp=Z,16nm,1.0s						
H06E1	**SOCORRO T-PHAS**	**30.74**	**304**	T	T	15 32 50.1	
	SNR=6.2						
HODGE	**Hodges**	**31.97**	**3**	P	**P**	**15 00 44.4**	**-0.7**
JSC	**Jenkinsville**	**32.09**	**5**	P	**P**	**15 00 44.9**	**-1.2**
TXAR	**Lajitas Array**	**32.62**	**328**	P	**P**	**15 00 50.0**	**-1.1**
TXAR	**Lajitas Array**	**32.62**	**328**	P	**P**	**15 00 51.3**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=146,slow=9.1,SNR=4.7						
TXAR				LR	LR	15 13 13.2	
	comp=Z,62nm,19.4s,baz=76,slow=35						
	comp=Z,0.5nm,0.5s						
TKL	**Tuckaleechee C**	**33.33**	**1**	P	**P**	**15 00 56.9**	**-0.2**
	comp=Z,8.7nm,1.1s,baz=195,slow=12,SNR=5.3						
	comp=Z,8.7nm,1.1s						
V53A	**Saluda**	**33.37**	**2**	P	**P**	**15 00 57.3**	**-0.1**
V53A				IAmb	IAmb	15 01 05.8	
	comp=Z,7.8nm,0.8s						
U49A	**Red Boiling Sp**	**34.20**	**358**	P	**P**	**15 01 03.3**	**-1.2**
PECS	**Pecos**	**34.35**	**330**	IAmb	IAmb	15 01 07.9	
	comp=Z,8.1nm,1.0s						
VHRN	**Van Horn**	**34.47**	**328**	IAmb	IAmb	15 01 16.0	
	comp=Z,11nm,0.9s						
T47A	**Sharon Grove**	**34.74**	**356**	IAmb	IAmb	15 01 10.2	
	comp=Z,13nm,1.1s						
T57A	**Hurt**	**35.00**	**7**	IAmb	IAmb	15 01 19.3	
	comp=Z,12nm,1.0s						
CGM3	**Cape Girardeau**	**35.29**	**353**	IAmb	IAmb	15 01 14.7	
	comp=Z,15nm,1.3s						
MNTX	**Cornudas Mount**	**35.39**	**328**	IAmb	IAmb	15 01 16.4	
	comp=Z,8.4nm,1.2s						
MGMO	**Mountain Grove**	**35.56**	**349**	IAmb	IAmb	15 01 17.1	
	comp=Z,12nm,0.9s						
SIUC	**Southern Illin**	**35.65**	**354**	IAmb	IAmb	15 01 17.8	
	comp=Z,12nm,0.8s						
H03N2	**Juan Fernandez**	**35.79**	**172**	T	T	15 39 19.7	
	baz=351,slow=76,SNR=42						
H03N1	**Juan Fernandez**	**35.80**	**172**	T	T	15 39 20.7	
	baz=351,slow=76,SNR=51						
H03N3	**Juan Fernandez**	**35.81**	**172**	T	T	15 39 19.5	
	baz=351,slow=76,SNR=47						
SMWD	**Samnorwood**	**35.92**	**338**	IAmb	IAmb	15 01 20.9	
	comp=Z,11nm,0.8s						
R55A	**Marlinton**	**36.17**	**6**	P	**P**	**15 01 20.5**	**-1.1**
P48A	**Milroy**	**37.13**	**359**	IAmb	IAmb	15 01 34.4	
	comp=Z,17nm,1.3s						
P57A	**Homestead Farm**	**37.61**	**8**	IAmb	IAmb	15 01 35.2	
	comp=Z,14nm,1.0s						
P40A	**Paris**	**37.83**	**350**	IAmb	IAmb	15 01 36.0	
	comp=Z,12nm,0.9s						
BNM	**Barren Site**	**37.97**	**329**	P	**P**	**15 01 34.6**	**-2.5**
RTBA	**Rita Blanca**	**38.06**	**336**	IAmb	IAmb	15 01 41.9	
	comp=Z,15nm,1.4s						
P38A	**Dawn**	**38.19**	**349**	P	**P**	**15 01 38.6**	**-0.1**
P38A				IAmb	IAmb	15 01 39.2	
	comp=Z,21nm,1.3s						
ANMO	**Albuquerque**	**38.51**	**330**		**P**	**15 01 42.3**	**+0.6**
ANMO	**Albuquerque**	**38.51**	**330**	LR	LR	15 16 47.1	
	comp=Z,106nm,19.1s,baz=162,slow=35						
TASM	**ASL Pad, Albuq**	**38.51**	**330**	IAmb	IAmb	15 01 43.8	
	comp=Z,7.4nm,1.1s						
Y14A	**Wickenburg**	**41.36**	**323**	P	**P**	**15 02 04.6**	**-0.6**
PV02	**Paradox Valley**	**42.21**	**331**	IAmb	IAmb	15 02 21.4	
	comp=Z,10nm,1.1s						
PV18	**Skein Mesa, Pa**	**42.33**	**331**	IAmb	IAmb	15 02 21.6	
	comp=Z,12nm,1.1s						
PV12	**Saucer Basin,**	**42.33**	**331**	IAmb	IAmb	15 02 15.1	
	comp=Z,21nm,1.4s						
SADO	**Sadowa**	**42.69**	**6**	LR	LR	15 19 35.3	
	comp=Z,2µm,18.4s,baz=172,slow=36						
ECSD	**EROS Data Cent**	**42.78**	**347**	IAmb	IAmb	15 02 24.1	
	comp=Z,9.9nm,1.0s						
PFO	**Pinyon Flats O**	**43.30**	**320**	LR	LR	15 20 18.4	
	comp=Z,81nm,18.0s,baz=40,slow=36						
PLCA	**Paso Flores**	**44.54**	**165**	P	**P**	**15 02 30.9**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=328,slow=8.1,SNR=4.7						
PLCA				LR	LR	15 18 44.2	
	comp=Z,99nm,18.1s,baz=56,slow=33						
	comp=Z,2.0nm,0.8s						
SHOC	**Shoshone, Teco**	**44.66**	**322**	IAmb	IAmb	15 02 41.0	
	comp=Z,13nm,1.1s						
QSM	**Queen of Sheba**	**45.07**	**322**	IAmb	IAmb	15 02 44.0	
	comp=Z,5.2nm,0.9s						
CCCA	**Chr Cany lake**	**45.09**	**321**	IAmb	IAmb	15 02 44.2	
	comp=Z,8.2nm,1.0s						
WSHM	**Spangler Hills**	**45.22**	**321**	IAmb	IAmb	15 02 45.5	
	comp=Z,6.1nm,1.0s						
RSSD	**Black Hills**	**45.25**	**340**		**P**	**15 02 37.0**	**+0.4**
SPR3	**Spring Creek 3**	**45.68**	**327**	IAmb	IAmb	15 02 48.8	
	comp=Z,6.1nm,1.0s						
HWUT	**Hardware Ranch**	**46.22**	**332**	IAmb	IAmb	15 02 45.3	
	comp=Z,2.2nm,0.8s						
PDAR	**Pinedale Array**	**46.23**	**334**	P	**P**	**15 02 43.5**	**-0.9**
PDAR				PcP	**PcP**	**15 04 19.4**	**-0.3**
PDAR	**Pinedale Array**	**46.23**	**334**	P	**P**	**15 02 44.1**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=130,slow=8.7,SNR=8.8						
PDAR				PcP	**PcP**	**15 04 20.7**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=130,slow=0.5,SNR=6.4						
PDAR				LR	LR	15 23 25.2	
	comp=Z,81nm,18.4s,baz=117,slow=38						
	comp=Z,1.5nm,0.9s						
NVAR	**Mina Array Bea**	**47.55**	**324**	P	**P**	**15 02 56.1**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=137,slow=8.1,SNR=9.0						
NVAR				PcP	**PcP**	**15 04 25.7**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=146,slow=4.7,SNR=6.2						
	comp=Z,1.9nm,0.8s						
YNE	**Yellowstone No**	**48.24**	**336**	IAmb	IAmb	15 03 08.8	
	comp=Z,4.3nm,0.9s						
YHL	**Hebgen Lake**	**48.61**	**335**	IAmb	IAmb	15 03 06.6	
	comp=Z,1.4nm,1.4s						
ULM	**Lac du Bonnet**	**48.89**	**350**	P	**P**	**15 03 04.4**	**-0.1**
	comp=Z,17nm,1.1s,baz=147,slow=7.3,SNR=5.4						
	comp=Z,17nm,1.1s						
ORV	**Oroville**	**50.18**	**323**	IAmb	IAmb	15 03 23.8	
	comp=Z,6.0nm,1.1s						
MSO	**Missoula**	**51.35**	**334**	IAmb	IAmb	15 03 31.3	
	comp=Z,7.7nm,1.1s						
J05D	**Fort Rock, OR**	**52.41**	**327**		**P**	**15 03 30.3**	**-1.2**
J05D				IAmb	IAmb	15 03 40.0	
	comp=Z,5.7nm,0.9s						
E09A	**Wood Farm, Sta**	**53.04**	**331**	IAmb	IAmb	15 03 37.4	
	comp=Z,7.4nm,1.1s						
YKA	**Yellowknife Ar**	**64.25**	**345**	P	**P**	**15 04 53.4**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=151,slow=5.7,SNR=6.7						
YKA				LR	LR	15 33 26.8	
	comp=Z,37nm,20.0s,baz=260,slow=36						
	comp=Z,4.0nm,0.9s						
SFJD	**Kangerlussuaq**	**68.86**	**14**	LR	LR	15 34 45.2	
	comp=Z,71nm,21.1s,baz=222,slow=35						
M29M	**Somme Creek**	**72.16**	**337**	IAmb	IAmb	15 05 52.7	
	comp=Z,6.7nm,0.8s						
LOGN	**Logan Glacier**	**72.39**	**335**	IAmb	IAmb	15 05 47.5	
	comp=Z,10nm,1.2s						
L29M	**L29M**	**72.39**	**337**	IAmb	IAmb	15 05 53.6	
	comp=Z,5.0nm,0.9s						
K29M	**Barlow Dome**	**72.56**	**338**	IAmb	IAmb	15 06 00.5	
	comp=Z,4.0nm,1.1s						
RES	**Resolute Bay**	**72.70**	**357**	LR	LR	15 38 29.9	
	comp=Z,45nm,18.4s,baz=330,slow=36						
I30M	**Mount Dempster**	**72.92**	**340**	IAmb	IAmb	15 05 57.0	
	comp=Z,5.0nm,1.0s						
BCAR	**Beaver Creek A**	**73.80**	**336**		**P**	**15 05 53.7**	**+0.7**
L27K	**Beaver Creek,**	**73.81**	**336**	IAmb	IAmb	15 06 02.5	
	comp=Z,7.3nm,1.2s						
INK	**Inuvik**	**73.85**	**343**	LR	LR	15 41 59.8	
	comp=Z,60nm,18.1s,baz=24,slow=39						
K27K	**Chicken**	**74.38**	**337**	IAmb	IAmb	15 06 06.8	
	comp=Z,5.7nm,1.1s						
G29M	**Pine Creek**	**74.43**	**341**	IAmb	IAmb	15 06 05.6	
	comp=Z,8.4nm,0.8s						
DOT	**Dot Lake**	**74.98**	**337**	IAmb	IAmb	15 06 08.8	
	comp=Z,7.8nm,1.0s						
SCRK	**Sand Creek**	**75.10**	**337**	IAmb	IAmb	15 06 09.5	
	comp=Z,5.0nm,1.0s						
H27K	**Steamboat Moun**	**75.26**	**339**	IAmb	IAmb	15 06 11.1	
	comp=Z,10nm,1.4s						
RIDG	**Independent Ri**	**75.33**	**336**	P	**P**	**15 06 02.6**	**+0.8**
RIDG				IAmb	IAmb	15 06 11.2	
	comp=Z,8.7nm,1.0s						
SUMG	**Summit**	**75.83**	**13**	P	**P**	**15 06 04.0**	**-1.0**
SUMG	**Summit**	**75.83**	**13**	*i* P	**P**	**15 06 00.7**	**-4.3**
SUMG				IAmb	IAmb	15 06 12.9	
	comp=Z,8.9nm,0.8s						
ILAR	**Eielson Array**	**76.58**	**337**	P	**P**	**15 06 09.0**	**+0.1**
ILAR	**Eielson Array**	**76.58**	**337**	P	**P**	**15 06 09.7**	**+0.7**
	comp=Z,1.9nm,1.0s,baz=124,slow=3.2,SNR=16						
ILAR				LR	LR	15 42 12.8	
	comp=Z,85nm,18.1s,baz=178,slow=38						
	comp=Z,1.9nm,1.0s						
F26K	**Sheenjek River**	**76.87**	**340**	IAmb	IAmb	15 06 19.6	
	comp=Z,5.4nm,0.9s						
CCB	**Clear Creek Bu**	**76.89**	**337**	IAmb	IAmb	15 06 14.2	
	comp=Z,6.7nm,1.3s						
BMAR	**Burnt Mountain**	**76.90**	**340**	P	**P**	**15 06 10.7**	**0.0**
NEEM	**North Greenlan**	**77.34**	**7**	*i* P	**P**	**15 06 13.4**	**+0.1**
NEEM				IAmb	IAmb	15 06 17.9	
	comp=Z,8.6nm,1.1s						
NEA2	**Nenana**	**77.37**	**336**	IAmb	IAmb	15 06 21.7	
	comp=Z,9.1nm,1.1s						
H24K	**Noodor Dome**	**77.40**	**338**	IAmb	IAmb	15 06 21.9	
	comp=Z,6.6nm,1.0s						
SKT	**Skwentna**	**77.48**	**334**	IAmb	IAmb	15 06 22.1	
	comp=Z,6.5nm,1.0s						
E25K	**Arctic Village**	**77.55**	**340**	IAmb	IAmb	15 06 23.6	
	comp=Z,7.2nm,0.9s						
BPAW	**Bear Paw Mtn.**	**77.97**	**336**	IAmb	IAmb	15 06 25.0	
	comp=Z,7.5nm,1.0s						
G23K	**Bananza Creek**	**78.54**	**338**	IAmb	IAmb	15 06 29.0	
	comp=Z,5.1nm,0.9s						
I21K	**Tanana**	**78.74**	**337**	IAmb	IAmb	15 06 29.2	
	comp=Z,7.8nm,0.9s						
G21K	**Allakaket**	**79.78**	**338**	IAmb	IAmb	15 06 35.4	
	comp=Z,6.2nm,1.0s						
ESDC	**Sonseca Array**	**81.30**	**50**	P	**P**	**15 06 36.7**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=269,slow=4.2,SNR=4.9						
	comp=Z,1.2nm,0.8s						
DAG	**Danmarks Havn**	**82.48**	**12**	*i* P	**P**	**15 06 41.0**	**+0.2**
DAG				IAmb	IAmb	15 06 48.0	
	comp=Z,6.3nm,1.0s						
EKA	**Eskdalemuir Ar**	**83.27**	**35**	P	**P**	**15 06 45.1**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=235,slow=8.0,SNR=5.1						
	comp=Z,2.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**85.76**	**77**	P	**P**	**15 06 58.8**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=285,slow=3.8,SNR=2.4						
	comp=Z,1.4nm,0.3s						
VNA3	**Neumayer Olymp**	**87.17**	**162**	⇑P	**P**	**15 07 04.9**	**+0.4**
	comp=Z,2.6nm,1.0s						
VNA1	**Neumayer--Stat**	**87.47**	**161**	⇑P	**P**	**15 07 06.9**	**+1.0**
	comp=Z,2.3nm,0.9s						
SNAA	**Sanae**	**89.40**	**162**	⇑P	**P**	**15 07 15.7**	**+0.6**
	comp=Z,7.9nm,0.6s						
SNAA	**Sanae**	**89.40**	**162**	P	**P**	**15 07 14.4**	**-0.7**
SNAA				IAmb	IAmb	15 07 40.1	
	comp=Z,3.8nm,1.2s						
SNAA	**Sanae**	**89.40**	**162**	P	**P**	**15 07 15.5**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=267,slow=8.7,SNR=2.1						
SNAA				LR	LR	15 40 03.6	
	comp=Z,27nm,19.8s,baz=198,slow=31						
	comp=Z,0.7nm,1.0s						
SPITS	**Spitsbergen Ar**	**90.11**	**12**	LR	LR	15 49 11.3	
	comp=Z,61nm,19.1s,baz=280,slow=36						
NOA	**NORSAR Array B**	**90.88**	**29**	LR	LR	15 43 38.2	
	comp=Z,12nm,21.1s,baz=260,slow=32						
QSPA	**South Pole Qui**	**92.19**	**180**	P	**P**	**15 07 30.9**	**+2.6**
QSPA				IAmb	IAmb	15 07 33.1	
	comp=Z,3.0nm,1.0s						
QSPA	**South Pole Qui**	**92.19**	**180**	P	**P**	**15 07 31.1**	**+2.8**
	comp=Z,2.7nm,1.1s,baz=190,slow=1.3,SNR=8.6						
	comp=Z,2.7nm,1.1s						
HFS	**Hagfors**	**92.20**	**30**	LR	LR	15 47 55.0	
	comp=Z,21nm,20.5s,baz=256,slow=35						
ZALV	**Zalesovo Beam**	**123.38**	**8**	PKP	**PKiKP**	**15 13 17.1**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=323,slow=3.6,SNR=1.8						
KURBB	**Kurchatov Arra**	**125.43**	**13**	PKP	**PKiKP**	**15 13 21.7**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=334,slow=2.5,SNR=4.7						
STKA	**Stephens Creek**	**127.57**	**231**	PKP	**PKPdf**	**15 13 24.3**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=17,slow=11,SNR=2.1						
SONM	**Songino Array**	**129.31**	**351**	PKP	**PKPdf**	**15 13 26.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=49,slow=2.7,SNR=3.5						
MKAR	**Makanchi Array**	**129.87**	**12**	PKP	**PKPdf**	**15 13 27.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=19,slow=4.1,SNR=4.4						
KSRS	**Korea Array**	**130.46**	**326**	PKP	**PKPdf**	**15 13 28.2**	**-1.5**
	comp=Z,1.7nm,1.0s,baz=14,slow=0.5,SNR=6.5						
HHC	**Hu-ho-hao-te**	**134.77**	**343**	*e*P	**PKPdf**	**15 13 36.5**	**-1.4**
ASAR	**Alice Springs**	**137.18**	**237**	PKP	**PKPdf**	**15 13 42.8**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=108,slow=2.2,SNR=5.3						
WRA	**Warramunga Arr**	**138.20**	**242**	PKP	**PKPdf**	**15 13 45.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=102,slow=1.7,SNR=4.8						
NJ2	**Nanjing**	**139.42**	**329**	*e*P	**PKPdf**	**15 13 45.9**	**-0.7**
NJ2	**Nanjing**	**139.42**	**329**	pmax	pmax		
	comp=Z,6.0nm,0.5s						
PZH	**PanZhiHua**	**150.88**	**349**	PKPbc	**PKPdf**	**15 14 05.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**159.24**	**351**	PKPab	**PKPab**	**15 14 55.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=35,slow=4.3,SNR=4.2						

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*CATAC **02** 14:57:59.9±0.5,13˚N±2˚×8˚9W±˚,h18km±3km,M4.1/25, MLv4.1/25,Error ellipse: s-maj=5.3km s-min=2.2km az=34.2,confirmed*
*SNET **02** 14:58:00.2±1.6, 12˚.76N×89˚.01W,h13km,ML3.9*
*GCG **02** 14:58:02.2±0.9, 12˚.84N×89˚.03W,h30km±5km,MD4.1*
ISC 02 14:57:59.4±1.7,12˚.71N±0˝.06×89˚.00W±0˝.04,h20km±8km, n72,σ0s55/89,1C-12D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.83**	**338**	*e*P	**Pg**	**14 58 15.7**	**0.0**
LALI				*e*S	**Sb**	**14 58 25.8**	**-0.2**
LALI	**Alcalda de L**	**0.83**	**338**	*e*P	**Pg**	**14 58 15.7**	**0.0**
LALI				*e*S	**Sb**	**14 58 25.6**	**-0.4**
LALI	**Alcalda de L**	**0.83**	**338**	⇓P	**Pg**	**14 58 15.7**	**0.0**
TECO	**Alcaldia de Te**	**0.84**	**14**	S	**Sg**	**14 58 26.9**	**-0.3**
TECO	**Alc

PRE ***02*** *15:01:18.2±0.9,26°.92S×26°.7E,h2km,ML2.5*
BGS| ***02*** *15:01:22.3±1.6,26°.83S×26°.81E, h0km±57km,ML2.8*

ISC 02 15:01:19.2±1.2,26°.91S±0°.03×26°.72E±0°.03,h15km±9km, n29,σ1§38/57,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PRYS	**Parys**	**0.57**	**92**	*eP*		**Pg**	**15 01 29.6**	**-0.8**
PRYS				*eS*		**Sg**	**15 01 36.9**	**-1.2**
PRYS				IAML			15 01 37.4	
	comp=Z,251nm,0.2s							
SWZ	**Schweizer**	**1.27**	**257**	*eP*		**Pb**	**15 01 43.1**	**+0.2**
SWZ				*eS*		**Sg**	**15 02 00.6**	**+0.3**
SWZ				IAML			15 02 04.9	
	comp=Z,217nm,0.3s							
HRAO	**HartRAO**	**1.33**	**41**	*eP*		**Pn**	**15 01 44.0**	**+0.6**
HRAO				*eS*		**Sg**	**15 02 02.7**	**+0.6**
HRAO				IAML			15 02 04.5	
	comp=Z,109nm,0.4s							
SNKL	**Senekal, Frees**	**1.65**	**146**	*eP*		**Pb**	**15 01 49.5**	**0.0**
SNKL				*eS*		**Sb**	**15 02 11.2**	**+1.1**
SNKL				IAML			15 02 14.9	
	comp=Z,115nm,0.2s							
MAKGR	**Makgori**	**2.04**	**302**	*i* P		**Pb**	**15 01 57.4**	**+1.3**
MAKGR				IAML			15 02 25.2	
	comp=N,602nm,0.6s							
BOSA	**Boshof**	**2.14**	**217**	*eP*		**Pn**	**15 01 55.8**	**+1.3**
BOSA				*eS*		**Sb**	**15 02 23.5**	**-0.7**
BOSA				IAML			15 02 36.9	
	comp=Z,30nm,0.6s							
LBTB	**Lobatse**	**2.14**	**331**	*eP*		**Pb**	**15 01 56.5**	**-1.3**
LBTB				*eS*		**Sb**	**15 02 23.4**	**-0.8**
LBTB				IAML			15 02 26.8	
	comp=Z,102nm,0.5s							
NWCL	**Newcastle**	**2.94**	**107**	*eP*		**Pn**	**15 02 07.6**	**+2.1**
NWCL				*eS*		**Sn**	**15 02 42.6**	**+2.0**
NWCL				IAML			15 02 50.0	
	comp=Z,26nm,0.3s							
LEPH	**Lephalale, Lim**	**3.19**	**18**	*eP*		**Pn**	**15 02 09.7**	**+0.9**
LEPH				*eS*		**Sn**	**15 02 48.4**	**+1.6**
LEPH				IAML			15 02 59.7	
	comp=Z,22nm,0.3s							
SKOMA	**Sekoma**	**3.46**	**313**	*i* P		**Pn**	**15 02 14.8**	**+2.1**
SKOMA				*i* S		**Sn**	**15 02 55.3**	**+1.8**
SKOMA				IAML			15 03 11.2	
	comp=E,36nm,0.1s							
LPHEP	**Lephephe**	**3.61**	**347**	*i* P		**Pn**	**15 02 17.2**	**+2.4**
LPHEP				*i* S		**Sn**	**15 02 58.0**	**+0.7**
LPHEP				IAML			15 03 14.1	
	comp=N,22nm,0.3s							
HVD	**Gariep Dam**	**3.84**	**196**	*eP*		**Pn**	**15 02 19.1**	**+1.2**
HVD				*eS*		**Sn**	**15 03 03.6**	**+0.8**
KDWAN	**Kaudwane**	**3.98**	**332**	*i* P		**Pn**	**15 02 22.3**	**+2.5**
KDWAN				*i* S		**Sn**	**15 03 05.9**	**-0.3**
KDWAN				IAML			15 03 26.6	
	comp=N,88nm,0.7s							
PILG	**Pilgrimsrest,**	**4.09**	**62**	*eP*		**Pn**	**15 02 23.2**	**+1.8**
PILG				*eS*		**Sn**	**15 03 09.8**	**+0.5**
PILG				IAML			15 03 30.0	
	comp=Z,21nm,0.6s							
PMBG	**Pietermaritzbu**	**4.23**	**129**	*eP*		**Pn**	**15 02 24.7**	**+1.6**
PMBG				*eS*		**Sn**	**15 03 13.2**	**+0.8**
PMBG				IAML			15 03 35.1	
	comp=Z,10nm,0.4s							
KSTD	**Kokstad**	**4.34**	**149**	*eP*		**Pn**	**15 02 26.0**	**+1.2**
KSTD				*eS*		**Sn**	**15 03 16.3**	**+1.1**
KSTD				IAML			15 03 37.4	
	comp=Z,10nm,0.4s							
POGA	**Pongola**	**4.46**	**97**	*eP*		**Pn**	**15 02 28.1**	**+1.8**
POGA				*eS*		**Sn**	**15 03 18.1**	**0.0**
POGA				IAML			15 03 39.6	
	comp=Z,26nm,0.4s							
MUSN	**Musina, Limpop**	**5.41**	**33**	*eP*		**Pn**	**15 02 40.8**	**+1.3**
MUSN				*eS*		**Sn**	**15 03 41.0**	**-0.6**
MUSN				IAML			15 04 13.2	
	comp=Z,6.5nm,0.4s							
MOPA	**Mopani**	**5.41**	**52**	*eP*		**Pn**	**15 02 40.4**	**+0.9**
MOPA				*eS*		**Sn**	**15 03 40.9**	**-0.6**
MOPA				IAML			15 04 13.7	
	comp=Z,20nm,0.5s							
GRAF	**Camdeboo Natio**	**5.70**	**199**	*eP*		**Pn**	**15 02 44.0**	**+0.7**
GRAF				*eS*		**Sn**	**15 03 48.1**	**-0.4**
GRAF				IAML			15 04 20.9	
	comp=Z,9.8nm,0.6s							
BROLN	**Tlhalogang**	**5.81**	**6**	*i* P		**Pn**	**15 02 45.8**	**+0.8**
BROLN				*i* S		**Sn**	**15 03 48.6**	**-2.8**
BROLN				IAML			15 04 23.0	
	comp=E,12nm,0.8s							
BRAK	**Brakfontein**	**5.89**	**214**	*eP*		**Pn**	**15 02 46.8**	**+0.7**
BRAK				*eS*		**Sn**	**15 03 52.6**	**-0.8**
BRAK				IAML			15 04 26.9	
	comp=Z,5.8nm,0.8s							
ROOI	**Rooidraai Farm**	**6.21**	**206**	*eP*		**Pn**	**15 02 51.8**	**+1.3**
ROOI				*eS*		**Sn**	**15 03 60.0**	**-1.3**
ROOI				IAML			15 04 38.2	
	comp=Z,7.7nm,0.5s							
ARMS	**Ukamas**	**6.30**	**258**	*eP*		**Pn**	**15 02 53.3**	**+1.6**
ARMS				*eS*		**Sn**	**15 04 02.6**	**-0.9**
GRHM	**Grahamstown, E**	**6.36**	**183**	*eP*		**Pn**	**15 02 53.3**	**+0.9**
GRHM				*eS*		**Sn**	**15 04 03.5**	**-1.3**
GRHM				IAML			15 04 34.5	
	comp=Z,3.2nm,0.8s							
GRAN	**Grantham**	**6.68**	**215**	*eP*		**Pn**	**15 02 58.4**	**+1.5**
GRAN				*eS*		**Sn**	**15 04 10.7**	**-2.1**
GRAN				IAML			15 05 01.6	
	comp=Z,5.7nm,0.3s							
FRAZ	**Fraserburg**	**6.82**	**222**	*eP*		**Pn**	**15 03 00.2**	**+1.4**
FRAZ				*eS*		**Sn**	**15 04 15.1**	**-1.2**
FRAZ				IAML			15 05 05.3	
	comp=Z,4.3nm,0.5s							
SUR	**Sutherland**	**7.50**	**222**	*eP*		**Pn**	**15 03 09.2**	**+1.0**
SUR				*eS*		**Sn**	**15 04 31.0**	**-2.0**
SUR				IAML			15 05 24.7	
	comp=Z,5.0nm,0.6s							
CVNA	**Calvinia**	**7.60**	**232**	*eP*		**Pn**	**15 03 10.4**	**+0.9**
CVNA				*eS*		**Sn**	**15 04 33.4**	**-2.1**
CVNA				IAML			15 05 24.7	
	comp=Z,6.7nm,0.4s							

IDC 02 15:31:48.0±3.4,6°.63S×147°.70E,h94km±38km,mb3.5/1, mbtmp3.8/3,Error ellipse: s-maj=99.8km s-min=24.6km az=111.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**2.81**	**191**	P		Pn	15 32 29.7	-1.3
	27nm,0.3s,baz=331,slow=6.6,SNR=25							
PMG				S		Sn	15 33 05.4	+1.3
	52nm,0.4s,baz=351,slow=9.2,SNR=3.8							
WRA	**Warramunga Arr**	**18.53**	**223**	P		P	15 35 56.5	-0.7
	0.7nm,0.3s,baz=50,slow=11,SNR=19							
ASAR	**Alice Springs**	**21.51**	**217**	P		P	15 36 29.8	+0.3
	2.0nm,0.5s,baz=52,slow=8.9,SNR=120							
ASAR				S		S	15 40 23.4	+0.6
	0.6nm,1.1s,baz=32,slow=20,SNR=2.4							
	2.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**145.92**	**284**	PKPbc		PKPdf	15 51 17.3	+0.4
	0.7nm,0.6s,baz=72,slow=6.0,SNR=3.6							

IDC ***02*** *15:33:36.8±0.7,38°.40N×142°.41E,h0km,mb4.0/15, mbtmp4.0/22,ML3.8/7,MS3.6/4, Error ellipse: s-maj=19.6km s-min=14.4km az=96.0*
MOS ***02*** *15:33:38.1±0.8,38°.40N×142°.42E,h23km,mb4.6/5, Error ellipse: s-maj=12.1km s-min=6.7km az=83.2*
NEIC ***02*** *15:33:40.7±1.5,38°.36N±0°.06×142°.28E±0°.08,h26km±6km, mb4.5/11, Error ellipse: s-maj=9.8km s-min=7.2km az=129.0*
JMA ***02*** *15:33:40.5±0.1,38°.5N±0°.4×142°.2E±0°.7,h28km±1km, MD4.3/36,MV4.6/36,E OFF MIYAGI PREF*
JMA Felt II J1 at E OFF MIYAGI PREF .
NIED ***02*** *15:33:40.5,38°.46N×142°.24E,h28km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.76; Mθθ0.70; Mφφ0.06; Mrθ1.35; Mθφ-0.32; Mφr-0.18; Fault plane solution: M₀1.58000×10¹⁵ NP1: φs127.00000°,δ17.00000°,λ-64.00000°. NP2: φs279.00000°,δ75.00000°,λ-97.00000°.*

ISC 02 15:33:37.9±1.7,38°.39N±0°.04×142°.32E±0°.05,h10km±10km, n129,σ1§52/116,mb4.5/29,12D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**0.68**	**264**	⇓P		**Pn**	**15 33 52.4**	**-1.1**
JIKH				⇓S		**Sb**	**15 34 00.6**	**-0.6**
JIKH	**Ishinomakikobu**	**0.68**	**264**	A		A	15 33 52.4	
	comp=N,14nm,0.5s,comp=E,9.0nm,0.6s							
JIO	**Ouri**	**0.77**	**275**	⇓P		**Pn**	**15 33 53.9**	**-0.8**
JIO				⇓S		**Sb**	**15 34 03.0**	**-0.8**
JIO	**Ouri**	**0.77**	**275**	A		A	15 33 53.9	
	comp=N,37nm,0.3s,comp=E,23nm,0.3s							
JKMT	**Kesennumamotoy**	**0.79**	**303**	P		**Pn**	**15 33 53.8**	**-1.2**
JKMT				S		**Sb**	**15 34 03.0**	**-1.4**
JKMT	**Kesennumamotoy**	**0.79**	**303**	A		A	15 33 53.8	
	comp=N,9.0nm,1.1s,comp=E,7.0nm,0.8s							
OFUJ	**Ofunato**	**0.86**	**324**	P		**Pb**	**15 33 54.6**	**-0.3**
OFUJ	**Ofunato**	**0.86**	**324**	A		A	15 33 54.6	
	comp=N,5.0nm,0.6s,comp=E,8.0nm,0.6s							
JMK	**Ichinoseki**	**1.03**	**304**	P		**Pn**	**15 33 57.5**	**-0.9**
JMK				S		**Sb**	**15 34 09.9**	**-1.5**
JMK	**Ichinoseki**	**1.03**	**304**	A		A	15 33 57.5	
	comp=N,5.0nm,0.3s,comp=E,6.0nm,1.0s							
JOFO	**Osakifurukawao**	**1.13**	**282**	A		A	15 33 59.3	
	comp=N,31nm,0.9s,comp=E,40nm,0.3s							
JOU	**Okura**	**1.30**	**270**	⇓P		**Pg**	**15 34 02.2**	**-0.7**
JOU				⇓S		**Sn**	**15 34 18.7**	**-1.0**
JOU	**Okura**	**1.30**	**270**	A		A	15 34 02.2	
	comp=N,23nm,0.5s,comp=E,20nm,0.6s							
JMST	**Minamisoumatoc**	**1.31**	**240**	A		A	15 34 03.1	
	comp=N,11nm,0.4s,comp=E,6.0nm,0.3s							
JMM	**Marumori**	**1.31**	**247**			**Pn**	**15 34 01.9**	**-0.3**
JMM					Sn	**Sg**	**15 34 18.7**	**-1.4**
JMM	**Marumori**	**1.31**	**247**	P		**Pb**	**15 34 02.2**	**-0.4**
JMM	**Marumori**	**1.31**	**247**	S		**Sn**	**15 34 18.4**	**-1.4**
JMM	**Marumori**	**1.31**	**247**	⇓P		**Pn**	**15 34 02.0**	**-0.3**
JMM				⇓eS		**Sb**	**15 34 18.1**	**-1.3**
JMM	**Marumori**	**1.31**	**247**	A		A	15 34 02.0	
	comp=N,9.0nm,1.1s,comp=E,9.0nm,0.7s							
JOM	**Ohasama**	**1.35**	**324**	P		**Pn**	**15 34 02.3**	**-0.5**
JOM				S		**Sb**	**15 34 18.6**	**-2.1**
JOM	**Ohasama**	**1.35**	**324**	A		A	15 34 02.3	
	comp=N,15nm,0.4s,comp=E,19nm,0.7s							
JFK	**Kawauchi**	**1.53**	**229**	⇓P		**Pn**	**15 34 04.9**	**-0.4**
JFK				⇓S		**Sn**	**15 34 23.0**	**-2.3**
JFK	**Kawauchi**	**1.53**	**229**	A		A	15 34 04.9	
	comp=N,3.0nm,1.4s,comp=E,3.0nm,5.3s							
JYK	**Kaneyama**	**1.63**	**290**	P		**Pb**	**15 34 06.8**	**-1.2**
JYK	**Kaneyama**	**1.63**	**290**	A		A	15 34 06.8	
	comp=N,4.0nm,1.0s,comp=E,3.0nm,0.7s							
JRG	**Rokugo**	**1.66**	**308**	*i* P		**Pb**	**15 34 07.5**	**-1.1**
JRG	**Rokugo**	**1.66**	**308**	A		A	15 34 07.5	
	comp=N,8.0nm,2.5s,comp=E,8.0nm,0.6s							
JSZI	**Iwateshizukuis**	**1.72**	**322**	A		A	15 34 08.0	
	comp=N,13nm,1.3s,comp=E,9.0nm,1.0s							
ONAJ	**Iwakimizuishiy**	**1.76**	**224**	A		A	15 34 10.1	
	comp=N,6.0nm,0.3s,comp=E,9.0nm,0.3s							
JOTO	**OTAMA OYAMA**	**1.77**	**243**	A		A	15 34 09.9	
	comp=N,15nm,1.3s,comp=E,11nm,0.7s							
JYAR	**Yonezawaarcadi**	**1.78**	**255**	A		A	15 34 09.7	
	comp=N,32nm,0.8s,comp=E,26nm,0.9s							
JYS	**Shirataka**	**1.78**	**265**	A		A	15 34 09.5	
	comp=N,9.0nm,3.3s,comp=E,12nm,1.7s							
JKEN	**Kujiedanarisaw**	**1.88**	**346**	A		A	15 34 10.4	
	comp=N,10.0nm,1.0s,comp=E,8.0nm,0.7s							
JYYZ	**Yamagatayuza**	**1.97**	**289**	A		A	15 34 11.9	
	comp=N,11nm,4.9s,comp=E,6.0nm,2.9s							
JYW	**Yuwa**	**2.01**	**306**	A		A	15 34 12.3	
	comp=N,10.0nm,3.3s,comp=E,11nm,0.6s							
JYA	**Atsumi**	**2.06**	**277**	A		A	15 34 13.3	
	comp=N,8.0nm,0.6s,comp=E,6.0nm,1.8s							
JSB	**Shiboa**	**2.37**	**234**	A		A	15 34 18.7	
	comp=N,4.0nm,2.6s,comp=E,5.0nm,1.1s							
JTM	**Tenmabayashi**	**2.59**	**338**			**Pn**	**15 34 21.0**	**+1.2**
JTM	**Tenmabayashi**	**2.59**	**338**	P		**Pn**	**15 34 21.4**	**+1.6**
JTM	**Tenmabayashi**	**2.59**	**338**	S		**Sb**	**15 34 54.0**	**-2.2**
JYT	**Yasato**	**2.74**	**219**	Pn		**Pn**	**15 34 21.8**	**-0.1**
JSD	**Sado**	**3.22**	**265**			**Pn**	**15 34 28.7**	**+0.2**
JSD	**Sado**	**3.22**	**265**	P		**Pn**	**15 34 28.6**	**+0.2**
ERM	**Erimo**	**3.68**	**10**	Pn		**Pn**	**15 34 36.2**	**+1.4**
ERM	**Erimo**	**3.68**	**10**	P		**Pn**	**15 34 36.6**	**+1.8**
ERM	**Erimo**	**3.68**	**10**	P		**Pn**	**15 34 36.2**	**+1.4**
JEM	**Erimo**	**3.68**	**10**	P		**Pn**	**15 34 37.1**	**+2.3**
MJAR	**Matsushiro Arr**	**3.75**	**242**	Pn		**Pn**	**15 34 37.6**	**+1.7**
	comp=E,0.7nm,0.3s,baz=58,slow=10.0,SNR=64							
MJAR					Sn	**Sb**	**15 35 27.5**	**-2.3**
	comp=E,1.6nm,0.3s,baz=72,slow=16,SNR=5.6							
MJAR					LR	LR	15 36 08.9	
	comp=E,303nm,21.2s,baz=60,slow=40							
	comp=E,25nm,0.7s							
MAJO	**Matsushiro**	**3.75**	**242**			**Pn**	**15 34 37.5**	**+1.6**
MAJO	**Matsushiro**	**3.75**	**242**	P		**Pn**	**15 34 37.8**	**+1.9**
MAJO	**Matsushiro**	**3.75**	**242**	P		**Pn**	**15 34 37.5**	**+1.6**
MJB9	**Matsu-Tunnel**	**3.75**	**242**	Pn		**Pn**	**15 34 37.7**	**+1.8**
JGF	**Kuroka**	**4.85**	**237**			**Pn**	**15 34 53.9**	**+2.9**
JGF	**Kuroka**	**4.85**	**237**	P		**Pn**	**15 34 53.3**	**+2.4**
JSG	**Sagara**	**4.98**	**223**	Pn		**Pn**	**15 34 55.1**	**+2.4**
JSG	**Sagara**	**4.98**	**223**	P		**Pn**	**15 34 56.1**	**+3.4**
INU	**Inuyama**	**5.22**	**236**			**Pn**	**15 34 59.0**	**+2.9**
INU	**Inuyama**	**5.22**	**236**	P		**Pn**	**15 34 59.2**	**+3.2**
NMR	**Nemuro--Hokkai**	**5.61**	**26**	⇓*i*P		**Pn**	**15 35 00.3**	**-1.0**
NMR				*i* S		**Sn**	**15 36 00.3**	**-5.4**
JHJ2	**Mitsune**	**5.64**	**202**	Pn		**Pn**	**15 35 03.1**	**+1.3**
JHJ2	**Mitsune**	**5.64**	**202**	P		**Pn**	**15 35 03.5**	**+1.7**
JHJ	**Hachijo jima 2**	**5.64**	**202**	Pn		**Pn**	**15 35 02.8**	**+0.9**
	comp=E,27nm,0.3s,baz=38,slow=18,SNR=7.8							
JHJ					Sn	**Sn**	**15 36 03.7**	**-3.0**
	comp=E,46nm,0.3s,baz=220,slow=21,SNR=6.3							
	comp=E,71nm,0.3s							
JKA	**Kamikawa-asahi**	**5.73**	**2**			**Pn**	**15 35 04.7**	**+1.7**
ASAJ	**Asahikawa**	**5.73**	**2**	Pn		**Pn**	**15 35 04.7**	**+1.7**
	comp=E,4.6nm,0.3s,baz=213,slow=14,SNR=25							
ASAJ					Sn	**Sn**	**15 36 10.8**	**+2.0**
	comp=E,1.7nm,0.3s,baz=62,slow=28,SNR=1.2							
	comp=E,18nm,0.5s							
GLVR	**Golovnino**	**5.87**	**23**	P		**Pn**	**15 35 05.0**	**+0.1**
GLVR				S		**Sn**	**15 36 09.8**	**-2.3**
GLVR				smax		smax		
	comp=E,89nm,0.2s							
GLVR				smax		smax		
	comp=N,109nm,0.4s							
RUSJ	**Misakicho**	**6.12**	**20**	⇓*i*P		**Pn**	**15 35 08.4**	**0.0**
RUSJ				*i* S		**Sn**	**15 36 16.6**	**-1.9**
YUK	**Yuzh-Kuril'sk**	**6.24**	**24**	*eP*		**Pn**	**15 35 09.8**	**-0.2**
YUK				*eS*		**Sn**	**15 36 18.7**	**-2.7**
YUK				pmax		pmax		
	comp=N,23nm,0.2s							
YUK				pmax		pmax		
	comp=Z,66nm,0.2s							
YUK				smax		smax		
	comp=N,65nm,0.3s							
YUK				smax		smax		
	comp=E,205nm,0.6s							
JMN	**Monobe**	**8.26**	**238**			**Pn**	**15 35 38.1**	**+0.3**
JMN	**Monobe**	**8.26**	**238**	P		**Pn**	**15 35 41.1**	**+3.2**
YSS	**Yuzhno-Sakhali**	**8.57**	**2**	Pn		**Pn**	**15 35 42.8**	**+0.9**
YSS	**Yuzhno-Sakhali**	**8.57**	**2**	*eP*		**Pn**	**15 35 43.1**	**+1.2**
YSS				pmax		pmax		
	comp=Z,20nm,1.3s							
YSS				MLR		MLR		
	comp=Z,300nm,14.0s							
USRK	**Ussuriysk Ar.**	**9.70**	**310**	Pn		**Pn**	**15 35 58.9**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=112,slow=14,SNR=5.4							
	comp=Z,1.3nm,0.4s							
JNU	**Nakatsue**	**10.68**	**244**			**Pn**	**15 36 09.6**	**-1.3**
JNU	**Nakatsue**	**10.68**	**244**	Pn		**Pn**	**15 36 14.0**	**+3.1**
	comp=Z,0.4nm,0.3s,baz=119,slow=9.8,SNR=9.6							
	comp=Z,9.7nm,0.7s							
JCJ	**Chichijima**	**11.26**	**181**	Pn		Pn	15 36 10.8	-8.1
	comp=Z,4.5nm,0.3s,baz=3.5,slow=21,SNR=8.2							
JCJ					Sn	Sn	15 38 07.2	-18
	comp=Z,4.0nm,0.3s,baz=218,slow=22,SNR=1.7							
JCJ					LR	LR	15 41 32.7	
	comp=Z,388nm,20.9s,baz=134,slow=42							
KSRS	**Korea Array**	**11.41**	**270**	Pn		**Pn**	**15 36 24.4**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=78,slow=14,SNR=4.9							
	comp=Z,0.7nm,0.4s							
HILR	**Hailar Array B**	**19.63**	**312**	P		**Pn**	**15 38 08.7**	**+0.8**
	baz=105,slow=10							
	comp=Z,1.3nm,0.4s							
HHC	**Hu-ho-hao-te**	**23.76**	**286**	*eP*		**P**	**15 38 50.8**	**+0.3**
HHC				pmax		pmax		
	comp=Z,14nm,0.6s							
HHC				pmax		pmax		
	comp=Z,220nm,4.7s							
WHN	**Wuhan**	**24.29**	**260**	P		**P**	**15 38 55.3**	**-0.1**
GUMO	**Guam**	**24.80**	**174**	LR		LR	15 47 05.3	
	comp=Z,371nm,21.9s,baz=4.0,slow=33							
YAK	**Yakutsk**	**24.92**	**346**	*eP*		**P**	**15 39 00.1**	**-0.7**
YAK				pmax		pmax		
	comp=Z,13nm,1.0s							
YAK				pmax		pmax		
	comp=N,7.0nm,1.5s							
YAK				pmax		pmax		
	comp=E,6.0nm,1.3s							
SEY	**Seymchan**	**25.33**	**11**	*eP*		**P**	**15 39 05.0**	**+0.5**
SEY				pmax		pmax		
	comp=Z,15nm,1.2s							
H11N2	**WAKE ISLAND Hy**	**28.27**	**124**	T		T	16 09 22.5	
	baz=316,slow=75,SNR=365							
H11N1	**WAKE ISLAND Hy**	**28.27**	**124**	T		T	16 09 32.2	
	baz=316,slow=75,SNR=414							
H11N3	**WAKE ISLAND Hy**	**28.28**	**124**	T		T	16 09 23.8	
	baz=316,slow=75,SNR=406							
H11S1	**WAKE ISLAND Hy**	**29.03**	**126**	T		T	16 10 15.7	
	baz=317,slow=76,SNR=134							
H11S3	**WAKE ISLAND Hy**	**29.03**	**126**	T		T	16 10 43.3	
	baz=317,slow=76,SNR=166							
H11S2	**WAKE ISLAND Hy**	**29.05**	**126**	T		T	16 10 43.5	
	baz=317,slow=76,SNR=138							
LZH	**Lanzhou**	**30.57**	**278**	*eP*		**P**	**15 39 53.4**	**+1.5**
LZH				sP		sP	15 40 03.6	+7.7
LZH				pmax		pmax		
	comp=Z,15nm,1.1s							
PZH	**PanZhiHua**	**35.97**	**263**	P		**P**	**15 40 40.1**	**+1.1**
GOMU	**GeErMu**	**37.53**	**282**	P		**P**	**15 40 52.4**	**-0.1**
GOMU				pP		sP	15 40 58.4	+1.9
GOMU				S		**S**	**15 46 40.7**	**-1.2**
GOMU				pmax		pmax		
	comp=Z,3.0nm,0.7s							
ZALV	**Zalesovo Beam**	**41.55**	**311**	P		**P**	**15 41 25.9**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=87,slow=8.4,SNR=8.5							
ZALV				PcP		**PcP**	**15 43 22.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=86,slow=2.0,SNR=3.8							
	comp=Z,1.9nm,0.5s							
CMAR	**Chiang Mai Arr**	**42.54**	**255**	P		**P**	**15 41 33.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**42.54**	**255**	P		**P**	**15 41 34.5**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=46,slow=7.8,SNR=10							
	comp=Z,0.9nm,0.7s							
MKAR	**Makanchi Array**	**44.02**	**301**			**P**	**15 41 43.8**	**-1.8**
MKAR	**Makanchi Array**	**44.02**	**301**	P		**P**	**15 41 45.9**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=90,slow=8.5,SNR=9.1							
	comp=Z,0.8nm,0.6s							
MAKZ	**Makanchi**	**44.23**	**301**			**P**	**15 41 47.5**	**+0.3**
MAKZ				IAmb		IAmb	15 42 03.1	
	comp=Z,4.7nm,1.1s							
MAKZ	**Makanchi**	**44.23**	**301**	P		**P**	**15 41 47.6**	**+0.3**
MAKZ				pmax		pmax		
	comp=Z,5.0nm,1.1s							
KURK	**Kurchatov**	**45.68**	**307**			**P**	**15 41 58.1**	**-0.5**
KURK				IAmb		IAmb	15 42 07.3	
	comp=Z,7.6nm,0.7s							
KURK	**Kurchatov**	**45.68**	**307**	P		**P**	**15 41 59.5**	**+0.9**
KURBB	**Kurchatov Arra**	**45.75**	**307**	P		**P**	**15 41 59.5**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=81,slow=8.1,SNR=24							
	comp=Z,4.0nm,0.6s							
EVN	**Everest**	**46.99**	**274**	P		**P**	**15 42 08.6**	**-1.4**
EVN				IAmb		IAmb	15 42 32.7	
	comp=Z,3.1nm,0.8s							
PMG	**Port Moresby**	**47.76**	**174**	LR		LR	16 01 31.3	
	comp=Z,59nm,21.2s,baz=326,slow=35							
ILAR	**Eielson Array**	**47.97**	**33**	P		**P**	**15 42 17.7**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=257,slow=6.4,SNR=5.1							
	comp=Z,0.5nm,0.8s							
BVAR	**Borovoye Array**	**50.20**	**312**	P		**P**	**15 42 34.2**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=70,slow=8.7,SNR=4.4							
BVAR				PcP		**PcP**	**15 43 53.5**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=78,slow=3.5,SNR=5.5							
	comp=Z,0.8nm,0.4s							
O29M	**Mount Kennedy**	**52.39**	**38**	P		**P**	**15 42 50.5**	**+0.3**
O29M				IAmb		IAmb	15 42 56.6	
	comp=Z,7.0nm,0.7s							
AB31	**Akbulak array**	**57.62**	**310**			**P**	**15 43 28.6**	**+0.6**
AB31				IAmb		IAmb	15 43 41.6	
	comp=Z,2.1nm,0.8s							
ABKAR	**Akbulak array**	**57.62**	**310**	P		**P**	**15 43 27.5**	**-0.5**
WB0	**Warramunga Arr**	**58.32**	**189**	P		**P**	**15 43 33.0**	**-0.1**
WRAB	**Tennant Creek**	**58.49**	**189**	P		**P**	**15 43 34.2**	**0.0**

ISC 02 15:38:56.8±0.7, 27°47'N±0'.04×142°.80E±0'.04, h13km,3km, n608,σ1°23/569, mb4.9/170, MS4.2/74, 34C-13D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.67**	**236**	P		**Pn**	**15 39 13.4**	**+1.4**
CBIJ				*e*S		**Sn**	**15 39 25.5**	**+3.2**
CBIJ	**Chichi jima**	**0.67**	**236**	A		A	15 39 13.4	
	comp=N,82nm,4.1s,comp=E,74nm,5.6s							
JCJ	**Chichijima**	**0.67**	**236**			**Pb**	**15 39 10.6**	**+0.3**
JCJ				Sg		**Sb**	**15 39 19.9**	**+0.4**
JCJ	**Chichijima**	**0.67**	**236**	Pn		**Pg**	**15 39 05.6**	**-4.2**
	comp=E,351nm,0.3s,baz=353,slow=13,SNR=207							
JCJ				Sn		**Sg**	**15 39 18.9**	**+0.3**
	comp=E,2μm,0.3s,baz=278,slow=23,SNR=13							
JCJ	**Chichijima**	**0.67**	**236**	P		**Pn**	**15 39 14.1**	**+2.1**
JHH2	**Haha-jima-NKT2**	**1.01**	**214**	*e*P		**Pn**	**15 39 17.7**	**+1.1**
JHH2				*e*S		**Sn**	**15 39 32.6**	**+1.9**
JHH2	**Haha-jima-NKT2**	**1.01**	**214**	A		A	15 39 17.7	
	comp=N,38nm,6.5s,comp=E,44nm,5.0s							
JHCJ	**Hachijojimakas**	**6.16**	**336**	*e*P		**Pn**	**15 40 27.9**	**+0.5**
JHCJ				*e*S		**Sn**	**15 41 36.3**	**-1.4**
JHJ	**Hachijo jima 2**	**6.20**	**336**	Pn		**Pn**	**15 40 29.1**	**+1.1**
	comp=E,7.3nm,0.3s,baz=51,slow=12,SNR=1.6							
JHJ				Sn		**Sn**	**15 41 36.8**	**-2.1**
	comp=E,13nm,0.3s,baz=245,slow=21,SNR=1.6							
JHJ				LR		LR	15 42 40.4	
	comp=E,1μm,18.6s,baz=160,slow=36							
	comp=E,46nm,0.4s							
JMKN	**Mikurajimanish**	**6.97**	**337**	*e*P		**Pn**	**15 40 39.0**	**+0.3**
JMKN				*e*S		**Sn**	**15 41 57.4**	**-0.4**
BSO1	**Boso 1**	**7.33**	**348**	*e*P		**Pn**	**15 40 42.2**	**-0.9**
BSO3	**Boso 3**	**7.56**	**346**	P		**Pn**	**15 40 46.2**	**-0.3**
JOD2	**Odawara 2**	**8.39**	**339**	*e*P		**Pn**	**15 40 57.7**	**-0.4**
JTNC	**Tanabenakahech**	**8.85**	**317**	*e*P		**Pn**	**15 41 05.9**	**+1.4**
JNY	**Yasuok**	**8.92**	**333**	*e*P		**Pn**	**15 41 08.2**	**+2.7**
JRY	**Ryogami san**	**9.14**	**340**	*e*P		**Pn**	**15 41 09.5**	**+1.0**
INU	**Inuyama**	**9.28**	**329**			**Pn**	**15 41 07.9**	**-2.4**
JGF	**Kuroka**	**9.34**	**332**			**Pn**	**15 41 09.3**	**-1.9**
MJAR	**Matsushiro Arr**	**9.85**	**338**	Pn		**Pn**	**15 41 17.1**	**-0.9**
	comp=E,0.6nm,0.3s,baz=162,slow=12,SNR=52							
	comp=E,12nm,0.6s							
MAJO	**Matsushiro**	**9.85**	**338**			**Pn**	**15 41 16.8**	**-1.3**
MAJO	**Matsushiro**	**9.85**	**338**	P		**Pn**	**15 41 19.7**	**+1.6**
MAJO	**Matsushiro**	**9.85**	**338**	P		**Pn**	**15 41 19.2**	**+1.1**
MAJO				S		**Sn**	**15 43 12.6**	**+4.0**
JFK	**Kawauchi**	**10.00**	**351**	*e*P		**Pn**	**15 41 17.3**	**-2.9**
JFK				*e*S		Sn	15 43 03.0	-9.4
JMM	**Marumori**	**10.50**	**351**	P		**Pn**	**15 41 25.9**	**-1.1**
JMK	**Ichinoseki**	**11.52**	**354**	*e*P		**Pn**	**15 41 38.1**	**-2.9**
JNU	**Nakatsue**	**11.74**	**302**			**Pn**	**15 41 43.9**	**-0.2**
JNU	**Nakatsue**	**11.74**	**302**	Pn		**Pn**	**15 41 43.5**	**-0.6**
	comp=E,0.1nm,0.3s,baz=99,slow=12,SNR=4.0							
	comp=E,5.9nm,1.0s							
JOW	**Kunigami**	**12.96**	**271**	LR		LR	15 46 58.3	
	comp=E,504nm,18.9s,baz=112,slow=37							
JTM	**Tenmabayashi**	**13.36**	**354**	Pn		**Pn**	**15 42 02.7**	**-3.4**
JTM	**Tenmabayashi**	**13.36**	**354**	P		**Pn**	**15 42 04.6**	**-1.5**
JTU	**Tsushima**	**13.47**	**305**	P		**P**	**15 42 12.7**	**-4.2**
ERM	**Erimo**	**14.51**	**1**	P		**Pn**	**15 42 18.7**	**-3.1**
JEM	**Erimo**	**14.51**	**1**	P		**Pn**	**15 42 18.4**	**-3.4**
TJN	**Taejon**	**15.82**	**308**			**Pn**	**15 42 40.4**	**+1.2**
TJN				IAmb		IAmb	15 42 46.0	
	comp=Z,138nm,1.2s							
TJN	**Taejon**	**15.82**	**308**	P		**Pn**	**15 42 40.4**	**+1.2**
TJN				pmax		pmax		
	comp=Z,138nm,1.2s							
KSRS	**Korea Array**	**16.00**	**312**	Pn		**Pn**	**15 42 42.6**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=119,slow=12,SNR=41							
	comp=Z,6.5nm,0.6s							
KSAR	**Wonju Array Be**	**16.02**	**312**			**Pn**	**15 42 42.6**	**+0.7**
KSAR	**Wonju Array Be**	**16.02**	**312**	P		**Pn**	**15 42 42.6**	**+0.7**
KS19	**Wonju Array Si**	**16.07**	**312**	P		**P**	**15 42 44.2**	**-1.7**
ASAJ	**Asahikawa**	**16.61**	**359**	Pn		**Pn**	**15 42 46.9**	**-2.4**
	comp=Z,1.2nm,0.3s,baz=206,slow=7.2,SNR=11							
ASAJ				LR		LR	15 50 27.7	
	comp=Z,445nm,21.2s,baz=192,slow=42							
ASAJ	**Asahikawa**	**16.61**	**359**	P		**Pn**	**15 42 46.8**	**-2.5**
ASAJ				pmax		pmax		
	comp=Z,168nm,1.9s							
JKA	**Kamikawa-asahi**	**16.61**	**359**			**Pn**	**15 42 46.8**	**-2.5**
JKA				IAmb		IAmb	15 42 48.1	
	comp=Z,168nm,1.9s							
INCN	**Inchon**	**16.88**	**310**	P		**P**	**15 42 57.0**	**+2.1**
INCN				pmax		pmax		
	comp=Z,44nm,0.7s							
MSHR	**Mys Shultsa**	**17.81**	**331**⇑	*e*P		**P**	**15 43 05.5**	**+0.5**
VLA	**Vladivostok**	**17.95**	**333**	*c i*P		**P**	**15 43 09.4**	**+2.8**
VLA				pmax		pmax		
	comp=Z,155nm,1.0s							
PSTR	**Posyet**	**18.02**	**330**⇓	*e*P		**P**	**15 43 09.0**	**+1.6**
YOJ	**Yonaguni jima**	**18.05**	**265**	P		**P**	**15 43 11.6**	**+3.8**
KUR	**Kuril'sk**	**18.18**	**12**⇓	*e*P		**Pn**	**15 43 07.8**	**-1.1**
KUR				pmax		pmax		
	comp=Z,248nm,0.9s							
TEY	**Ternei**	**18.22**	**346**	*e*P		**Pn**	**15 43 07.4**	**-1.9**
USRK	**Ussuriysk Ar.**	**18.82**	**335**	P		**P**	**15 43 16.3**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=150,slow=10,SNR=12							
	comp=Z,9.5nm,0.6s							
SSE	**Sheshan**	**19.20**	**286**	P		**P**	**15 43 19.9**	**-0.5**
SSE				S		**S**	**15 46 57.1**	**-0.6**
SSE				pmax		pmax		
	comp=Z,8.0nm,0.8s							
SSE				pmax		pmax		
	comp=Z,80nm,8.4s							
SSE				LR		LR		
	comp=Z,190nm,13.9s							
SSE				LR		LR		
	comp=Z,130nm,15.0s							
NACB	**Ninganchiao**	**19.37**	**265**	P		**Pn**	**15 43 25.6**	**+2.1**
YSS	**Yuzhno-Sakhali**	**19.45**	**360**	*e*P		**Pn**	**15 43 25.2**	**+1.0**
YSS				pmax		pmax		
	comp=Z,1μm,5.4s							
YSS				pmax		pmax		
	comp=Z,30nm,0.9s							
YSS				MLR		MLR		
	comp=Z,700nm,15.0s							
YHNB	**Yeheng**	**19.45**	**267**	P		**P**	**15 43 23.4**	**+0.1**
YHNB				IAmb		IAmb	15 43 26.0	
	comp=Z,39nm,0.7s							
YHNB	**Yeheng**	**19.45**	**267**	P		**Pn**	**15 43 25.2**	**+0.7**
YULB	**Yu-li**	**19.84**	**263**	P		**P**	**15 43 26.5**	**-1.0**
YULB	**Yu-li**	**19.84**	**263**	P		**Pn**	**15 43 29.4**	**+0.3**
SSLB	**Suanglung**	**20.04**	**264**	P		Pn	15 43 31.8	+0.3
SSLB				IAmb		IAmb	15 43 45.4	
	comp=Z,46nm,0.8s							
SSLB	**Suanglung**	**20.04**	**264**	P		Pn	15 43 32.4	+0.9
MDJ	**Mudanjiang**	**20.12**	**332**	P		Pn	15 43 32.7	+0.4
MDJ				pmax		pmax		
	comp=Z,46nm,0.9s							
TPUB	**Ta-pu**	**20.45**	**263**	P		Pn	15 43 36.1	-0.3
TPUB				IAmb		IAmb	15 43 47.8	
	comp=Z,143nm,1.5s							
TPUB	**Ta-pu**	**20.45**	**263**	P		Pn	15 43 36.9	+0.5
SNY	**Shenyang**	**21.27**	**317**	⇑P		**P**	**15 43 42.2**	**-0.6**
SNY				S		**S**	**15 47 34.5**	**-4.4**
SNY				pmax		pmax		
	comp=Z,8.0nm,2.1s							
SNY				pmax		pmax		
	comp=Z,190nm,5.5s							
SNY				LR		LR		
	comp=Z,620nm,15.0s							
SNY				LR		LR		
	comp=Z,480nm,16.6s							
SNY				LR		LR		
	comp=Z,470nm,15.6s							
NJ2	**Nanjing**	**21.27**	**288**	*e*P		**P**	**15 43 43.3**	**+0.3**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
NJ2				LR		LR		
	comp=Z,280nm,11.4s							
NJ2				LR		LR		
	comp=Z,290nm,11.4s							
NJ2				LR		LR		
	comp=Z,440nm,17.7s							
CN2	**Changchun**	**21.48**	**324**	P		**P**	**15 43 48.9**	**+3.8**
CN2				pmax		pmax		
	comp=Z,20nm,0.8s							
CN2				LR		LR		
	comp=Z,900nm,16.0s							
CN2				LR		LR		
	comp=Z,1μm,16.0s							
CN2				LR		LR		
	comp=Z,2μm,16.0s							
BNX	**BinXian**	**21.96**	**330**	⇓P		**P**	**15 43 51.0**	**+0.8**
BNX				pmax		pmax		
	comp=Z,42nm,0.8s							
TIA	**Tai'an**	**23.44**	**298**	P		**P**	**15 44 04.1**	**-1.8**
TIA				S		**S**	**15 48 13.6**	**-5.4**
TIA				pmax		pmax		
	comp=Z,19nm,1.0s							
TIA				LR		LR		
	comp=Z,350nm,12.0s							
TIA				LR		LR		
	comp=Z,510nm,15.5s							
TIA				LR		LR		
	comp=Z,820nm,17.3s							
GRNR	**Gornyy**	**23.77**	**350**⇑	*i*P		**P**	**15 44 09.9**	**+1.0**
GRNR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
TGY	**Tagaytay City**	**24.34**	**241**	P		**P**	**15 44 16.2**	**+1.6**
	comp=Z,75nm,0.4s,baz=307,slow=3.6,SNR=7.9							
	comp=Z,75nm,0.4s							
BJI	**Beijing**	**25.34**	**306**	P		**P**	**15 44 24.4**	**+1.0**
BJI				pmax		pmax		
	comp=Z,4.0nm,1.2s							
HEH	**HeiHe**	**25.61**	**337**	*e*P		**P**	**15 44 27.1**	**+1.4**
HEH				pmax		pmax		
	comp=Z,34nm,1.2s							
HNS	**HongShan**	**25.61**	**300**	⇑P		**P**	**15 44 24.6**	**-1.3**
HNS				pmax		pmax		
	comp=Z,8.0nm,1.3s							
HNS				LR		LR		
	comp=Z,700nm,15.6s							
HNS				LR		LR		
	comp=Z,490nm,16.5s							
HNS				LR		LR		
	comp=Z,620nm,17.1s							
LYN	**LuoYang**	**26.87**	**293**	*e*P		**P**	**15 44 37.1**	**-0.3**
LYN				S		**S**	**15 49 19.4**	**+5.7**
LYN				pmax		pmax		
	comp=Z,17nm,0.5s							
LYN				LR		LR		
	comp=Z,510nm,15.3s							
LYN				LR		LR		
	comp=Z,700nm,18.1s							
LYN				LR		LR		
	comp=Z,1μm,17.1s							
XLT	**XiLinHaoTe**	**27.03**	**314**	*e*P		**P**	**15 44 37.6**	**-1.2**
XLT				pmax		pmax		
	comp=Z,11nm,0.6s							
XLT				LR		LR		
	comp=Z,59nm,12.9s							
XLT				LR		LR		
	comp=Z,520nm,16.6s							
XLT				LR		LR		
	comp=Z,370nm,11.3s							
PETK	**Petropavlovsk-**	**27.90**	**19**	P		**P**	**15 44 48.7**	**+2.4**
	comp=Z,4.6nm,0.9s,baz=216,slow=7.4,SNR=2.4							
PETK				LR		LR	16 00 25.9	
	comp=Z,138nm,18.2s,baz=192,slow=46							
	comp=Z,4.6nm,0.9s							
HILR	**Hailar Array B**	**28.28**	**327**	P		**P**	**15 44 51.1**	**+1.3**
	comp=Z,26nm,0.6s,baz=128,slow=10,SNR=19							
HILR				LR		LR	15 56 29.8	
	comp=Z,402nm,18.6s,baz=265,slow=37							
	comp=Z,26nm,0.6s							
ZEA	**Zeya**	**28.64**	**341**	*e*P		**P**	**15 44 54.5**	**+1.5**
ZEA				pmax		pmax		
	comp=E,20nm,0.6s							
ZEA				pmax		pmax		
	comp=N,20nm,0.9s							
ZEA				pmax		pmax		
	comp=Z,40nm,0.9s							
HHC	**Hu-ho-hao-te**	**28.92**	**306**	*e*P		**P**	**15 44 55.5**	**-0.3**
HHC				pmax		pmax		
	comp=Z,12nm,0.6s							
HHC				pmax		pmax		
	comp=Z,130nm,5.3s							
HHC				LR		LR		
	comp=Z,260nm,15.6s							
HHC				LR		LR		
	comp=Z,560nm,15.4s							
HHC				LR		LR		
	comp=Z,560nm,15.5s							
XAN	**Xi'an**	**29.75**	**291**	P		**P**	**15 45 03.1**	**0.0**
XAN				S		**S**	**15 49 59.3**	**+0.1**
XAN				pmax		pmax		
	comp=Z,20nm,1.1s							
XAN				LR		LR		
	comp=Z,350nm,17.9s							
XAN				LR		LR		
	comp=Z,290nm,20.6s							
XAN				LR		LR		
	comp=Z,660nm,15.2s							
QIZ	**Qiongzhong**	**31.35**	**262**	P		**P**	**15 45 14.7**	**-2.7**
QIZ				S		**S**	**15 50 24.8**	**+0.3**
QIZ				LR		LR		
	comp=Z,330nm,18.1s							
MA2	**Magadan**	**32.56**	**8**	LR		LR	15 59 26.0	
	comp=Z,119nm,19.7s,baz=172,slow=38							
MA2	**Magadan**	**32.56**	**8**⇓	*e*P		**P**	**15 45 30.1**	**+2.6**
MA2				pmax		pmax		
	comp=Z,89nm,1.5s							
CIT	**Chita**	**32.88**	**326**	*e*P		**P**	**15 45 31.8**	**+1.3**
CIT				*e*			15 45 40.8	
CIT				*e*			15 46 37.0	
CIT				*e*			15 47 04.6	
CIT				*e*			15 52 41.2	
CIT				*e*			15 53 16.0	
CIT				pmax		pmax		
	comp=Z,152nm,1.4s							
LZH	**Lanzhou**	**34.03**	**294**	*e*P		P	15 45 35.6	-5.3
LZH				sP		pP	15 45 40.8	-3.1
LZH				pmax		pmax		
	comp=Z,14nm,1.1s							
LZH				LR		LR		
	comp=N,310nm,15.6s							
LZH				LR		LR		
	comp=E,540nm,16.5s							
LZH				LR		LR		
	comp=Z,640nm,17.2s							
CD2	**Chengdu**	**34.14**	**285**	P		**P**	**15 45 40.7**	**-1.0**
CD2				pmax		pmax		
	comp=Z,90nm,1.0s							
LZDM	**Lanzhou Array**	**34.15**	**294**	P		**P**	**15 45 42.3**	**+0.3**
	comp=Z,2.8nm,0.3s,baz=110,slow=7.8,SNR=1.9							
LZDM				LR		LR	16 01 02.9	
	comp=Z,379nm,18.1s,baz=15,slow=39							
	comp=Z,2.8nm,0.3s							
SHEM	**Shemya Is, Ala**	**34.31**	**34**	LR		LR	15 57 40.6	
	comp=Z,200nm,19.9s,baz=269,slow=33							
ULN	**Ulaanbaatar**	**34.43**	**316**	P		**P**	**15 45 43.0**	**-1.2**
ULN				IAmb		IAmb	15 45 47.7	
	comp=Z,12nm,0.7s							
ULN	**Ulaanbaatar**	**34.43**	**316**⇑	*e*P		**P**	**15 45 44.9**	**+0.7**
ULN				pmax		pmax		
	comp=Z,13nm,0.7s							
SONM	**Songino Array**	**34.83**	**316**	P		**P**	**15 45 48.3**	**+0.8**
	comp=Z,7.0nm,0.6s,baz=118,slow=7.4,SNR=25							
SONM				PcP		**PcP**	**15 48 21.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=64,slow=3.4,SNR=2.4							
SONM				LR		LR	16 00 32.3	
	comp=Z,300nm,19.3s,baz=92,slow=37							
	comp=Z,7.0nm,0.6s							
YAK	**Yakutsk**	**35.65**	**349**	P		**P**	**15 45 52.8**	**-1.4**
YAK	**Yakutsk**	**35.65**	**349**	LR		LR	16 00 40.1	
	comp=Z,180nm,20.8s,baz=152,slow=36							
YAK	**Yakutsk**	**35.65**	**349**	*e*P		**P**	**15 45 52.9**	**-1.3**
YAK				*e**PP		**pP**	**15 45 57.1**	**+0.1**
YAK				*e*PPP		PPP	15 47 31.4	
YAK				*e*S		**S**	**15 51 31.7**	**+1.7**
YAK				*e**SS		**sS**	**15 51 37.4**	**+2.8**
YAK				*e*SS		**SnSn**	**15 53 51.5**	**+0.4**
YAK				*e*SSS		SSS	15 54 21.0	
YAK				pmax		pmax		
	comp=Z,37nm,0.9s							
YAK				pmax		pmax		
	comp=N,14nm,1.1s							
YAK				pmax		pmax		
	comp=E,5.0nm,0.9s							
YAK				smax		smax		
	comp=N,403nm,3.3s							
YAK				smax		smax		
	comp=E,277nm,3.6s							
YAK				MLR		MLR		
	comp=Z,245nm,16.0s							
YAK				MLR		MLR		
	comp=N,126nm,13.0s							
YAK				MLR		MLR		
	comp=E,179nm,13.0s							
SLVN	**Son La**	**35.84**	**269**	P		**P**	**15 45 55.7**	**-0.8**
KMI	**Kunming**	**35.89**	**276**	P		**P**	**15 45 58.0**	**+0.9**
KMI				S		**S**	**15 51 33.4**	**-1.7**
KMI				pmax		pmax		
	comp=E,16nm,1.1s							
KMI				LR		LR		
	comp=E,250nm,12.0s							
KMI				LR		LR		
	comp=E,220nm,15.3s							
KMI				LR		LR		
	comp=E,130nm,18.5s							
SEY	**Seymchan**	**36.02**	**7**	LR		LR	15 59 26.2	
	comp=E,149nm,21.2s,baz=178,slow=34							
SEY	**Seymchan**	**36.02**	**7**⇓	*e*P		**P**	**15 45 58.3**	**+0.9**
SEY				pmax		pmax		
	comp=Z,30nm,1.8s							
PZH	**PanZhiHua**	**36.49**	**278**	P		**P**	**15 46 02.0**	**0.0**
PZH				S		**S**	**15 51 40.9**	**-3.1**
PZH				pmax		pmax		
	comp=Z,20nm,1.1s							
PZH				LR		LR		
	comp=Z,170nm,17.5s							
PZH				LR		LR		
	comp=Z,310nm,17.3s							
PZH				LR		LR		
	comp=Z,370nm,18.1s							
GTA	**Gaotai**	**37.47**	**300**	*e*P		**P**	**15 46 10.0**	**-0.3**
GTA				pP		sP	15 46 15.4	+1.1
GTA				pmax		pmax		
	comp=Z,12nm,0.9s							
GTA				LR		LR		
	comp=Z,340nm,16.0s							
GTA				LR		LR		
	comp=Z,290nm,18.5s							
GTA				LR		LR		
	comp=Z,310nm,17.8s							
ZAK	**Zakamensk**	**37.69**	**318**	*e*P		**P**	**15 46 12.7**	**+0.7**
ZAK				pmax		pmax		
	comp=Z,21nm,1.2s							
IRK	**Irkutsk**	**37.88**	**321**	*e*P		**P**	**15 46 14.8**	**+1.3**
IRK				pmax		pmax		
	comp=Z,83nm,1.4s							
TLY	**Talaya**	**38.00**	**320**	P		**P**	**15 46 14.7**	**+0.3**
TLY				IAmb		IAmb	15 46 18.4	
	comp=Z,28nm,0.8s							
TLY	**Talaya**	**38.00**	**320**	*ce*P		**P**	**15 46 17.6**	**+3.1**
TLY				pmax		pmax		
	comp=Z,50nm,1.3s							
MOY	**Mondy**	**39.51**	**319**	*e*P		**P**	**15 46 28.2**	**+0.9**
MOY				pmax		pmax		
	comp=Z,26nm,1.8s							
TNCH	**TengChong**	**39.64**	**277**	P		**P**	**15 46 29.1**	**+0.4**
TNCH				S		**S**	**15 52 32.2**	**+0.3**
TNCH				pmax		pmax		
	comp=Z,23nm,0.7s							
TNCH				pmax		pmax		
	comp=Z,160nm,4.5s							
TNCH				LR		LR		
	comp=Z,200nm,14.2s							
TNCH				LR		LR		
	comp=Z,350nm,17.1s							
TNCH				LR		LR		
	comp=Z,630nm,18.0s							
CHTO	**Chiang Mai**	**41.07**	**268**	P		**P**	**15 46 38.5**	**-1.9**
CHTO	**Chiang Mai**	**41.07**	**268**	P		**P**	**15 46 38.5**	**-1.9**
CHTO				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CM31	**Chiang Mai Arr**	**41.19**	**267**	P		**P**	**15 46 39.6**	**-1.8**
CMAR	**Chiang Mai Arr**	**41.19**	**267**	P		**P**	**15 46 41.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**41.19**	**267**	P		**P**	**15 46 41.6**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=78,slow=7.4,SNR=22							
CMAR				PcP		**PcP**	**15 48 42.0**	**+1.5**
	comp=Z,1.4nm,1.0s,baz=62,slow=3.4,SNR=5.7							
CMAR				LR		LR	16 05 32.5	
	comp=Z,74nm,18.1s,baz=85,slow=39							
	comp=Z,2.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**41.19**	**267**	*ce*P		**P**	**15 46 40.9**	**-0.6**
CMAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
KNGR	**Kungurtug, Tuv**	**41.24**	**317**⇓	*i*P		**P**	**15 46 43.1**	**+1.5**
KNGR				pmax		pmax		
	comp=Z,8.0nm,0.8s							
GOMU	**GeErMu**	**41.34**	**295**	P		**P**	**15 46 41.8**	**-1.1**
GOMU				sP		sP	15 46 47.2	+0.3
GOMU				S		**S**	**15 52 56.8**	**-0.7**
GOMU				pmax		pmax		
	comp=Z,11nm,1.0s							
GOMU				LR		LR		
	comp=Z,110nm,12.3s							
GOMU				LR		LR		
	comp=Z,110nm,13.0s							
MTN	**Manton Dam**	**41.65**	**197**	P		**P**	**15 46 43.0**	**-2.1**
	comp=Z,23nm,0.9s							
BATI	**Baumata**	**41.80**	**209**	LR		LR	16 02 16.3	
	comp=Z,134nm,20.9s,baz=64,slow=34							
BILL	**Bilibino**	**42.97**	**13**⇑	*i*P		**P**	**15 46 56.1**	**+0.8**
BILL				pmax		pmax		
	comp=Z,17nm,1.4s							
NIKH	**Nikolski High**	**43.73**	**41**	P		**P**	**15 47 00.9**	**-0.7**
	baz=254							
SPIA	**Saint Paul Isl**	**44.34**	**35**	P		**P**	**15 47 05.3**	**-1.1**
	baz=248							
TIXI	**Tiksi**	**44.90**	**354**	P		**P**	**15 47 09.7**	**-1.0**
TIXI	**Tiksi**	**44.90**	**354**	LR		LR	16 12 44.8	
	comp=Z,87nm,18.7s,baz=199,slow=45							
TIXI	**Tiksi**	**44.90**	**354**⇑	*i*P		**P**	**15 47 11.6**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,25nm,1.3s							
KNRA	**Kununurra**	**45.00**	**199**	P		**P**	**15 47 08.9**	**-3.2**
UNV	**Unalaska Valle**	**45.32**	**40**	P		**P**	**15 47 14.2**	**-0.1**
	baz=255							
SHL	**Shillong**	**45.34**	**280**	P		**P**	**15 47 15.6**	**+0.4**
BRDH	**Bariadhala**	**46.33**	**276**	LR		LR	16 06 59.2	
	comp=Z,54nm,19.3s,baz=116,slow=36							
GAMB	**Gambell**	**46.54**	**26**	P		**P**	**15 47 22.8**	**-1.0**
	baz=241							
WMQ	**Urumqi**	**46.80**	**305**	*e*P		**P**	**15 47 28.4**	**+2.1**
WMQ				LR		LR		
	comp=Z,210nm,24.2s							
DGZ	**Jazzator, Alta**	**47.41**	**313**	*c i*P		**P**	**15 47 32.3**	**+1.3**
DGZ				pmax		pmax		
	comp=Z,27nm,0.8s							
KPJI	**Karang Pucung**	**47.66**	**228**	P		**P**	**15 47 33.1**	**0.0**
	comp=Z,65nm,1.6s							
WB0	**Warramunga Arr**	**47.66**	**191**	P		**P**	**15 47 30.0**	**-3.0**
WR8	**Warramunga Arr**	**47.83**	**191**	P		**P**	**15 47 31.6**	**-2.7**
WRAB	**Tennant Creek**	**47.83**	**191**	*ce*P		**P**	**15 47 34.2**	**-0.1**
WRAB				pmax		pmax		
	comp=Z,21nm,0.7s							
WRA	**Warramunga Arr**	**47.84**	**191**	P		**P**	**15 47 32.2**	**-2.3**
WRA				PcP		**PcP**	**15 49 03.9**	**+0.8**
WRA	**Warramunga Arr**	**47.84**	**191**	P		**P**	**15 47 33.9**	**-0.5**
	comp=Z,17nm,0.7s,baz=11,slow=8.4,SNR=67							
WRA				PcP		**PcP**	**15 49 03.2**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=360,slow=3.3,SNR=0.9							
	comp=Z,17nm,0.7s							
WRA	**Warramunga Arr**	**47.84**	**191**	*i* P		**P**	**15 47 34.2**	**-0.2**
WRA				pmax		pmax		
	comp=Z,18nm,0.7s							
QIS	**

L14K Kuka Creek 49.41 31 P P 15 47 44.8 -1.2
baz=252
J14K Nanvaranak Lak 49.47 29 P P 15 47 45.3 -1.2
baz=250
N14K Kuskokwak Cree 49.47 33 P P 15 47 45.7 -0.8
baz=254
CHNA Chernabura Isl 49.48 40 P P 15 47 45.3 -1.3
baz=261
O14K Tigyukauivet M 49.50 34 P P 15 47 45.4 -1.4
baz=255
ZALV Zalesovo Beam 49.57 319 P P 15 47 48.3 +0.9
comp=Z,16nm,0.8s,baz=98,slow=6.9,SNR=60
ZALV PcP PcP 15 49 09.4 +0.5
comp=Z,4.8nm,0.7s,baz=115,slow=3.8,SNR=4.5
ZALV LR LR 16 09 41.5
comp=Z,493nm,18.4s,baz=106,slow=37
comp=Z,16nm,0.8s
ZALV Zalesovo Beam 49.57 319 *i* P P 15 47 48.7 +1.3
ZALV pmax pmax
comp=Z,16nm,0.8s
M14K Bethel 49.57 32 P P 15 47 46.3 -0.9
baz=253
S14K Fog Glacier 49.75 38 P P 15 47 47.7 -1.1
baz=259
G15K Niukluk 50.07 26 P P 15 47 50.2 -0.8
baz=248
F15K North Star Dit 50.11 25 P P 15 47 50.5 -0.8
baz=247
M15K Kasigluk River 50.15 32 P P 15 47 50.9 -0.9
baz=255
O15K Ungalikthiuk R 50.20 34 P P 15 47 51.6 -0.5
baz=257
K15K Wolf Creek Mou 50.22 30 P P 15 47 50.8 -1.4
baz=253
N15K Kwethluk River 50.31 33 P P 15 47 51.9 -1.0
baz=256
GSI Gunungsitoli 50.51 247 P P 15 47 54.6 -0.4
MK31 Makanchi Array 50.66 309 *ce* P P 15 47 56.2 +0.3
MKAR Makanchi Array 50.66 309 P P 15 47 55.2 -0.6
MKAR Makanchi Array 50.66 309 P P 15 47 56.2 +0.4
comp=Z,2.5nm,0.5s,baz=91,slow=8.8,SNR=32
MKAR PcP PcP 15 49 13.1 -0.1
comp=Z,2.5nm,0.8s,baz=78,slow=7.0,SNR=2.1
MKAR LR LR 16 10 36.4
comp=Z,343nm,18.0s,baz=92,slow=38
comp=Z,2.5nm,0.5s
H16K Elim 50.66 27 P P 15 47 54.8 -0.7
baz=250
MAKZ Makanchi 50.88 309 P 15 47 56.7 -0.8
MAKZ IAmb IAmb 15 47 59.4
comp=Z,21nm,1.6s
MAKZ Makanchi 50.88 309 P P 15 47 56.7 -0.8
MAKZ pmax pmax
comp=Z,21nm,1.6s
G16K Koyuk River 50.88 26 P P 15 47 56.2 -0.9
baz=249
J16K Anvik River 50.92 29 P P 15 47 56.2 -1.2
baz=253
C16K Lisburne Hills 50.93 22 P P 15 47 56.7 -0.7
baz=244
L16K Owhat River 50.98 31 P P 15 47 57.4 -0.6
baz=255
N16K Nishlik Lake 51.02 33 P P 15 47 57.6 -0.8
baz=257
M16K Timber Creek 51.06 32 P P 15 47 58.6 0.0
baz=256
I17K Unalakleet 51.06 28 P P 15 47 57.8 -0.7
baz=252
P16K Nushagak River 51.10 35 P P 15 47 58.6 -0.2
baz=259
O16K Kokwok River B 51.16 34 P P 15 47 57.9 -1.4
baz=258
D17K Noatak River 51.47 23 P P 15 48 01.1 -0.5
baz=247
AS31 Alice Springs 51.56 190 P P 15 48 00.1 -2.6
ASAR Alice Springs 51.56 190 P P 15 48 01.8 -0.9
ASAR Alice Springs 51.56 190 P P 15 48 02.1 -0.6
comp=Z,1.2nm,0.5s,baz=7.1,slow=7.6,SNR=45
ASAR PcP PcP 15 49 17.1 +0.5
comp=Z,1.7nm,0.7s,baz=16,slow=4.5,SNR=4.6
comp=Z,1.2nm,0.5s
G17K Kiwalik Mounta 51.59 26 P P 15 48 02.3 -0.2
baz=251
J17K VABM Dome 51.61 29 IAmb IAmb 15 48 13.9
comp=Z,19nm,1.3s
J17K VABM Dome 51.61 29 P P 15 48 02.5 -0.1
baz=254
L17K Donlin 51.63 31 P P 15 48 02.1 -0.8
baz=256
RDOG Red Dog Mine 51.67 23 P P 15 48 03.4 +0.3
baz=247
F17K Baldwin Pennin 51.67 25 P P 15 48 02.8 -0.2
baz=250
E17K Hotham Inlet 51.69 24 P P 15 48 01.9 -1.2
baz=249
O17K Koliganek Bris 51.69 34 P P 15 48 02.8 -0.5
baz=259
H17K Granite Mounta 51.70 27 P P 15 48 02.5 -0.8
baz=252
Q16K King Salmon 51.72 35 P P 15 48 02.7 -0.7
baz=260
C17K DeLong Mountai 51.75 22 P P 15 48 02.8 -0.8
baz=246
K17K Iditarod 51.77 30 P P 15 48 02.4 -1.5
K17K IAmb IAmb 15 48 21.1
comp=Z,15nm,0.9s
K17K Iditarod 51.77 30 P P 15 48 03.3 -0.6
baz=256
N17K Nushagak Hills 51.80 33 P P 15 48 04.1 0.0
baz=258
M17K Holitna River 51.86 32 P P 15 48 04.5 -0.1
baz=257
P17K Kvichak River 51.91 35 P P 15 48 04.8 -0.1
baz=260
E18K Tukpahlearik C 52.25 24 P P 15 48 07.5 +0.1
baz=250
F18K Selawik 52.33 25 P P 15 48 08.0 +0.1
baz=251
L18K Granite Mounta 52.38 31 P P 15 48 07.2 -1.2
baz=257
H18K Honhosa River 52.40 27 P P 15 48 08.0 -0.5
baz=254
N18K Kilae Creek 52.45 33 P P 15 48 08.1 -0.9
baz=259
C18K Utukok River 52.49 23 P P 15 48 09.0 -0.2
baz=248
G18K Tagagawik 52.49 26 P P 15 48 09.1 -0.1
baz=253
B18K Kokolik River 52.56 22 P P 15 48 08.8 -0.8
baz=247
P18K Big Mountain, 52.56 35 P P 15 48 09.7 -0.1
baz=261
Q18K Katmai Hardscr 52.56 36 P P 15 48 09.7 -0.2
baz=262
M18K Stony River 52.64 32 P P 15 48 10.3 0.0
baz=259
O18K Koktuh Hills 52.64 34 P P 15 48 09.5 -0.9
baz=261
J18K Innoko River 52.65 29 P P 15 48 09.9 -0.6
baz=256
R18K Karluk 52.71 37 P P 15 48 10.7 -0.2
baz=263
SHLS Shalkode 52.81 305 *eP* P 15 48 10.3 -1.9
SHLS Shalkode 52.81 305 *eP* P 15 48 10.2 -1.9
GCSA Galena City Sc 52.90 28 P P 15 48 11.6 -0.6
baz=255
F19K Shaleruckik Mo 53.11 25 P P 15 48 13.8 +0.1
baz=253
KURK Kurchatov 53.12 314 P 15 48 14.1 +0.1
KURK IAmb IAmb 15 48 16.8
comp=Z,15nm,0.6s
KURK Kurchatov 53.12 314 *c i* P P 15 48 14.8 +0.8
KURK pmax pmax
comp=Z,14nm,0.6s
A19K Wainwright 53.12 21 P P 15 48 13.5 -0.3
baz=247
UZB Uzynbulak 53.13 305 *eP* P 15 48 14.9 +0.4
UZB Uzynbulak 53.13 305 *eP* P 15 48 14.9 +0.4
O19K Port Alsworth 53.14 34 P P 15 48 13.6 -0.4
baz=261
N19K Bonanza Creek 53.16 33 P P 15 48 13.9 -0.4
baz=261
KURBB Kurchatov Arra 53.17 314 P P 15 48 15.2 +0.7
comp=Z,14nm,0.6s,baz=90,slow=7.8,SNR=81
KURBB LR LR 16 12 03.9
comp=Z,332nm,19.0s,baz=161,slow=37
comp=Z,14nm,0.6s
C19K Lookout Ridge 53.20 22 P P 15 48 14.3 -0.1
baz=250
L19K White Mountain 53.22 31 P P 15 48 13.4 -1.3
baz=259
J19K Poorman 53.25 29 P P 15 48 13.9 -0.9
baz=257
H19K Roundabout Mou 53.27 27 P P 15 48 14.4 -0.5
baz=255,SNR=5.6
OHAK Old Harbor 53.30 38 P P 15 48 14.7 -0.5
baz=264
M19K Big River Lodg 53.38 32 P P 15 48 15.6 -0.2
baz=260
TDK Taldyqorghan 53.43 307 *eP* P 15 48 16.9 +0.3
TDK Taldyqorghan 53.43 307 *eP* P 15 48 16.8 +0.3
D19K Kuna River 53.49 23 P P 15 48 15.8 -0.8
baz=251
E19K Redstone River 53.50 25 P P 15 48 15.8 -0.8
baz=253
SATY Saty 53.59 305 *eP* P 15 48 18.1 +0.3
comp=Z,9.8nm,1.5s
SATY Saty 53.59 305 *eP* P 15 48 18.1 +0.3
SATY pmax pmax
comp=Z,10.0nm,1.5s
P19K Oil Pt 53.60 35 P P 15 48 16.1 -1.5
baz=263
L20K Farewell, AK 53.72 31 P P 15 48 17.6 -0.8
baz=260
KDAK Kodiak Island 53.73 37 LR LR 16 11 38.8
comp=Z,117nm,19.7s,baz=240,slow=36
KDAK Kodiak Island 53.73 37 ⇓ *eP* P 15 48 18.0 -0.4
KDAK pmax pmax
comp=Z,66nm,2.8s
KDAK Kodiak Island 53.73 37 P P 15 48 18.1 -0.3
baz=264
K20K Telida 53.80 30 IAmb IAmb 15 48 33.8
comp=Z,12nm,0.9s
K20K Telida 53.80 30 P P 15 48 19.1 +0.2
baz=259,SNR=9.9
H20K Anotleneega Mo 53.90 27 P P 15 48 19.2 -0.4
baz=257
I20K Naaghedeneel 53.91 28 P P 15 48 19.0 -0.6
baz=258
Q20K Shuyak Island 53.91 36 P P 15 48 19.1 -0.6
baz=264
J20K Nowinta River 53.92 29 P 15 48 18.7 -1.0
J20K IAmb IAmb 15 48 22.2
comp=Z,12nm,0.8s
J20K Nowinta River 53.92 29 P P 15 48 19.6 -0.2
baz=258,SNR=9.9
F20K Avaraart Lake 53.95 25 P P 15 48 20.2 +0.4
baz=255
O20K Slope Mountain 53.96 34 P P 15 48 19.7 -0.5
baz=263
M20K Styx River 53.97 32 P P 15 48 19.9 -0.3
baz=261
D20K Etivluk River 54.09 23 IAmb IAmb 15 48 35.2
comp=Z,22nm,1.1s
D20K Etivluk River 54.09 23 P P 15 48 20.9 -0.1
baz=253
E20K Nigu River 54.10 24 P P 15 48 20.1 -1.0
baz=254
TARG Taragay, Kyrgy 54.17 303 P P 15 48 24.1 +1.6
TARG pmax pmax
comp=Z,9.0nm,1.1s
B20K Meade River 54.30 22 P P 15 48 22.2 -0.2
baz=251
N20K Mcnt Spurr 54.31 33 P P 15 48 22.4 -0.4
baz=262
SPCR Spurr Chakacha 54.31 33 P P 15 48 22.3 -0.5
baz=262
HOM Homer 54.41 35 P P 15 48 22.6 -0.7
baz=264
PPLA Purkeypile 54.56 31 P P 15 48 23.8 -0.8
baz=261
MDOK Medeo 54.57 305 *eP* P 15 48 25.3 +0.3
MDOK Medeo 54.57 305 *eP* P 15 48 25.3 +0.3
TNSS Tian-Shan 54.66 305 *eP* P 15 48 25.1 -0.8
TNSS Tian-Shan 54.66 305 *eP* P 15 48 25.9 0.0
AAA Alma-Ata 54.66 305 *eP* P 15 48 26.1 +0.5
AAA Alma-Ata 54.66 305 *eP* P 15 48 26.0 +0.5
CHUM Lake Minchumin 54.66 29 P P 15 48 24.4 -0.7
baz=260
G21K Allakaket 54.67 26 P P 15 48 24.5 -0.7
baz=257
SKT Skwentna 54.73 32 P P 15 48 24.3 -1.4
SKT IAmb IAmb 15 48 56.8
comp=Z,11nm,1.1s
SKT Skwentna 54.73 32 P P 15 48 24.9 -0.8
baz=262
H21K Melozitna Rive 54.77 27 P P 15 48 25.4 -0.6
baz=259
F21K Alatna River 54.84 25 P P 15 48 26.1 -0.3
baz=257
C21K Knifeblade Rid 54.85 23 P P 15 48 26.1 -0.4
baz=254
BRSE Bradley Lake S 54.87 35 P P 15 48 26.2 -0.5
baz=265
A21K Barrow 54.90 20 P P 15 48 26.0 -0.7
baz=251
E21K Killik River 54.95 24 P P 15 48 26.9 -0.3
baz=256
I21K Tanana 55.02 28 P P 15 48 27.5 -0.2
baz=260
B21K Ikpikpuk River 55.03 22 P P 15 48 26.6 -1.1
baz=254
SUA Susitna One 55.04 32 P P 15 48 27.0 -1.0
baz=264
KTH Kantishna Hill 55.22 30 P 15 48 28.1 -1.2
KTH IAmb IAmb 15 48 33.9
comp=Z,20nm,1.4s
BPAW Bear Paw Mtn. 55.27 29 P P 15 48 29.2 -0.4
baz=262,SNR=7.0
M22K Willow 55.37 32 P P 15 48 28.9 -1.3
baz=264
F22K John River 55.39 25 P P 15 48 30.1 -0.3
baz=258
H22K Ishtalitna Cre 55.40 27 P P 15 48 29.8 -0.7
baz=260,SNR=7.0
O22K Cooper Landing 55.44 34 P P 15 48 30.5 -0.3
baz=265
RC01 Rabbit Creek A 55.49 33 P P 15 48 30.0 -1.2
baz=265
TRF Thorofare Moun 55.49 30 IAmb IAmb 15 48 34.7
comp=Z,12nm,1.2s
TRF Thorofare Moun 55.49 30 P P 15 48 30.9 -0.4
baz=263
D22K Ayikyak River 55.51 23 P P 15 48 31.1 -0.1
baz=257
MLY Manley 55.52 28 P P 15 48 31.5 +0.2
baz=261,SNR=6.0
G22K Bettles 55.53 26 P P 15 48 31.4 0.0
baz=259
SEW Seward 55.55 34 P P 15 48 31.8 +0.3
baz=266
B22K Teshekpuk Lake 55.62 22 P P 15 48 31.2 -0.7
baz=255
E22K Anaktuvuk Pass 55.66 24 IAmb IAmb 15 48 34.8
comp=Z,17nm,1.3s
E22K Anaktuvuk Pass 55.66 24 P P 15 48 31.3 -1.1
baz=258
PMR Palmer 55.82 32 P P 15 48 32.8 -0.7
baz=265
KSH Kashi 55.86 301 P P 15 48 38.0 +3.7
KSH pmax pmax
comp=Z,7.0nm,0.8s
G23K Bananza Creek 56.07 26 P P 15 48 35.2 -0.1
baz=261
COLD Coldfoot 56.09 26 P P 15 48 35.2 -0.2
baz=260
I23K Minto, Yukon-K 56.11 28 P P 15 48 35.2 -0.4
baz=262
MCK McKinley 56.12 30 P P 15 48 35.5 -0.3
baz=264,SNR=6.8
RND Reindeer 56.13 30 P P 15 48 33.9 -1.9
RND Reindeer 56.13 30 P P 15 48 33.9 -1.9
RND pmax pmax
comp=Z,7.0nm,0.8s
H23K Yukon River 56.13 27 P P 15 48 35.2 -0.5
baz=262,SNR=6.9
KNK Knik Glacier 56.13 33 P P 15 48 35.5 -0.3
baz=266
PWL Port Wells 56.15 33 P P 15 48 35.0 -0.9
baz=266
NEA2 Nenana 56.17 29 P P 15 48 35.7 -0.3
baz=263
WAT1 Susitna Watana 56.21 31 P P 15 48 36.2 -0.1
baz=265
SML Sawmill 56.22 32 P P 15 48 36.6 +0.2
baz=266
D23K Nanushuk River 56.24 23 P P 15 48 36.9 +0.5
baz=258
SGDS Sogindy 56.29 306 *eP* P 15 48 37.8 +0.5
C23K Itkillik River 56.44 22 P P 15 48 38.4 +0.6
baz=258
E23K Chandalar 56.45 25 P P 15 48 38.6 +0.5
baz=260
AAK Ala-Archa 56.49 305 P P 15 48 38.9 0.0
AAK Ala-Archa 56.49 305 LR LR 16 14 42.2
comp=Z,125nm,18.8s,baz=68,slow=38
AAK Ala-Archa 56.49 305 ⇓ *i* P P 15 48 39.9 +1.0
AAK pmax pmax
comp=Z,4.0nm,0.7s
M23K Glacier View 56.51 32 P P 15 48 37.7 -0.7
baz=266
WAT6 Susitna Watana 56.56 31 P P 15 48 38.5 -0.5
baz=266,SNR=6.5
P23K Montague Islan 56.57 34 P P 15 48 38.4 -0.5
baz=268
TOLK Toolik Lake Re 56.57 24 P P 15 48 38.6 -0.3
baz=260
SCM Sheep Creek Mo 56.70 32 P P 15 48 39.6 -0.3
baz=266
COLA College 56.72 29 ⇑ *eP* P 15 48 40.3 +0.5
COLA pmax pmax
comp=Z,7.0nm,0.8s
GLI Glacier Island 56.76 33 P P 15 48 40.0 -0.2
baz=267
DHY Denali Highway 56.76 31 P P 15 48 40.5 +0.1
baz=266
H24K Noodor Dome 56.81 27 IAmb IAmb 15 48 57.8
comp=Z,17nm,1.4s
H24K Noodor Dome 56.81 27 P P 15 48 40.9 +0.3
baz=263
E24K Your Creek 56.88 25 P P 15 48 41.6 +0.5
baz=261
POKR Poker Plat Res 56.92 28 P P 15 48 41.7 +0.4
baz=264
D24K Happy Valley 56.93 23 IAmb IAmb 15 49 00.4
comp=Z,14nm,0.9s
D24K Happy Valley 56.93 23 P P 15 48 41.6 +0.3
baz=260
F24K Squaw Lake 57.02 25 P P 15 48 42.3 +0.2
baz=262
HDA Harding Lake 57.06 29 P 15 48 41.3 -1.0
HDA IAmb IAmb 15 48 43.0
comp=Z,18nm,1.4s
HDA Harding Lake 57.06 29 P P 15 48 42.3 0.0
baz=265,SNR=6.8
C24K Franklin Bluff 57.07 23 P P 15 48 42.2 0.0
baz=260
G24K Hadweenzic Riv 57.08 26 P P 15 48 42.7 +0.2
baz=263,SNR=8.3
ILAR Eielson Array 57.12 29 P P 15 48 41.6 -1.1
ILAR Eielson Array 57.12 29 P P 15 48 42.3 -0.4
comp=Z,8.3nm,1.1s,baz=261,slow=5.7,SNR=41
ILAR LR LR 16 13 11.2
comp=Z,91nm,19.6s,baz=262,slow=36
comp=Z,8.3nm,1.1s
M24K Tolsona, Glenn 57.26 32 P P 15 48 43.4 -0.5
baz=267
KLU Klutina 57.35 33 P P 15 48 44.0 -0.5
baz=268
EYAK Cordova Ski Ar 57.41 34 P P 15 48 44.2 -0.6
baz=269
K24K Donnelly Dome 57.53 30 P P 15 48 44.9 -0.8
baz=266
PAX Paxson 57.62 31 P P 15 48 45.7 -0.7
baz=267
G25K Bearman Lake 57.63 26 P P 15 48 45.6 -0.7
baz=264
H25L Birch Creek 57.69 27 P P 15 48 47.1 +0.4
baz=265
HARP HAARP 57.74 32 P P 15 48 46.6 -0.6
baz=268
J25K Salcha River, 57.76 29 P P 15 48 45.2 -2.1
J25K Salcha River, 57.76 29 P P 15 48 46.7 -0.6
baz=266
D25K Kavik River 57.82 23 P P 15 48 47.4 -0.3
baz=262
F25K Christian River 57.88 25 P P 15 48 48.3 +0.1
baz=264,SNR=9.7
RIDG Independent Ri 57.94 30 IAmb IAmb 15 49 05.5
comp=Z,17nm,1.2s
RIDG Independent Ri 57.94 30 P P 15 48 48.3 -0.3
baz=267
E25K Arctic Village 57.97 25 P P 15 48 48.9 +0.2
baz=264
BMRM Bremner River 57.98 33 P P 15 48 48.8 -0.1
baz=269
N25K Chitina, Valde 57.99 33 P P 15 48 48.6 -0.4
baz=269
BVAR Borovoye Array 58.14 317 P P 15 48 51.2 +1.1
comp=Z,61nm,0.8s,baz=93,slow=8.3,SNR=214
BVAR LR LR 16 15 00.2
comp=Z,300nm,18.3s,baz=79,slow=37
comp=Z,61nm,0.8s
BORK Borovoye 58.18 317 *c i* P P 15 48 51.9 +1.5
BORK pmax pmax
comp=Z,68nm,1.0s
BMAR Burnt Mountain 58.28 26 P 15 48 50.7 -0.2
SCRK Sand Creek 58.33 30 IAmb IAmb 15 49 04.6
comp=Z,15nm,1.0s
SCRK Sand Creek 58.33 30 P P 15 48 51.0 -0.4
baz=268,SNR=15
F26K Sheenjek River 58.47 25 P P 15 48 51.8 -0.4
baz=266
J26L Joseph Creek 58.53 29 IAmb IAmb 15 48 53.8
comp=Z,12nm,0.8s
J26L Joseph Creek 58.53 29 P P 15 48 52.9 +0.2
baz=268
G26K Porcupine Rive 58.55 26 P P 15 48 53.3 +0.6
baz=266
L26K Log Cabin Wild 58.59 31 P P 15 48 53.6 +0.4
baz=269
CRQM Cirque 58.70 34 P P 15 48 52.3 -1.8
CRQM IAmb IAmb 15 49 18.6
comp=Z,18nm,1.0s
CRQE Cirque 58.72 34 P P 15 48 54.2 0.0
baz=271
I26K Coal Creek Min 58.73 28 P P 15 48 54.3 +0.3
baz=268
MCARA McCarthy VSAT 58.74 33 P P 15 48 53.7 -0.5
MCARA IAmb IAmb 15 48 57.9
comp=Z,19nm,1.2s
MCARA McCarthy VSAT 58.74 33 P P 15 48 54.4 +0.2
baz=270
M26K Nabesna, AK 58.75 32 P P 15 48 54.4 +0.1
baz=270
DZA Taraz 58.76 305 *eP* P 15 48 55.3 +0.7
comp=Z,3.4nm,0.7s
DZA Taraz 58.76 305 *eP* P 15 48 55.3 +0.7
DZA pmax pmax
comp=Z,3.0nm,0.7s
C27K Jago River 58.78 23 IAmb IAmb 15 48 56.9
comp=Z,20nm,1.2s
C27K Jago River 58.78 23 P P 15 48 54.9 +0.6
baz=265
STKA Stephens Creek 59.03 181 P P 15 48 55.2 -1.2
STKA Stephens Creek 59.03 181 P P 15 48 55.7 -0.8
comp=Z,5.4nm,0.7s,baz=355,slow=8.5,SNR=9.8
comp=Z,5.4nm,0.7s
STKA Stephens Creek 59.03 181 ⇑ *i* P P 15 48 55.9 -0.5
K27K Chicken 59.17 30 P P 15 48 56.3 -0.8
K27K Chicken 59.17 30 P P 15 48 57.0 -0.2
baz=270
M27K Edge Creek, AK 59.27 32 P P 15 48 57.4 -0.6
baz=271
L27K Beaver Creek, 59.29 31 P P 15 48 56.6 -1.4
L27K Beaver Creek, 59.29 31 P P 15 48 58.7 +0.7
baz=270
MESA MESA 59.30 34 P P 15 48 57.7 -0.6
baz=272
KK31 Karatay Array 59.31 306 P P 15 48 59.2 +0.7
KKAR Karatay Array 59.31 306 P 15 48 59.0 +0.6
KKAR Karatay Array 59.31 306 P P 15 48 59.1 +0.6
I27K Kandik River 59.38 28 P P 15 48 58.9 +0.3
baz=269
G27K Doyon Strip 59.39 26 P P 15 48 59.2 +0.6
baz=268
H27K Steamboat Moun 59.43 27 P P 15 48 59.1 +0.2
baz=269
E27K Coleen River 59.45 25 P P 15 48 59.1 0.0
baz=268
CTG Chitna Glacier 59.57 33 P P 15 48 59.9 -0.2
baz=272
CTGM Chitina Glacie 59.57 33 IAmb IAmb 15 49 43.5
comp=Z,14nm,1.3s

D27M Malcolm River 59.73 24 P P 15 49 01.0 +0.1
baz=268
IUG luzhnay 59.84 305 eP P 15 49 02.7 +0.4
comp=Z,11nm,1.1s
IUG luzhnay 59.84 305 eP P 15 49 02.6 +0.4
IUG pmax pmax
comp=Z,11nm,1.1s
I28M Miner Creek 60.08 28 P P 15 49 03.3 -0.2
baz=271
F28M Old Crow 60.09 26 P P 15 49 03.4 0.0
baz=270
CHM Chimkent 60.12 305 eP P 15 49 04.6 +0.6
comp=Z,7.6nm,0.8s
CHM Chimkent 60.12 305 eP P 15 49 04.6 +0.6
CHM pmax pmax
comp=Z,8.0nm,0.8s
O28M Mount Upton 60.14 33 P P 15 49 04.1 -0.1
baz=273
E28M Babbage River 60.23 24 P P 15 49 04.9 +0.5
baz=269
YUK8 Steele Glacier 60.32 33 P P 15 49 05.3 -0.1
baz=273
DAWY Dawson 60.35 30 P P 15 49 05.7 +0.4
DAWY IAmb IAmb 15 49 19.3
comp=Z,7.3nm,0.9s
DAWY Dawson 60.35 30 P P 15 49 05.2 -0.1
baz=272,SNR=7.5
D28M Stokes Point 60.52 24 P P 15 49 06.3 0.0
baz=270
PNL Peninsula 60.61 35 P P 15 49 07.3 +0.2
baz=275
H29M Whitestone 60.71 27 P P 15 49 08.3 +0.7
baz=272
G29M Pine Creek 60.82 26 P P 15 49 09.3 +0.9
baz=272
E29M Blow River 60.83 25 P P 15 49 09.9 +1.5
baz=271
YUK4 Talbot Arm 60.85 33 P P 15 49 09.2 +0.3
baz=274,SNR=8.6
M29M Somme Creek 60.86 31 P P 15 49 08.2 -0.7
baz=274
L29M L29M 60.97 31 P P 15 49 08.9 -0.6
L29M IAmb IAmb 15 49 24.2
comp=Z,15nm,0.9s
L29M L29M 60.97 31 P P 15 49 09.2 -0.3
baz=274
O29M Mount Kennedy 60.97 34 P P 15 49 09.6 -0.1
baz=275
YUK6 Outpost Mounta 61.02 33 P P 15 49 09.5 -0.7
baz=275
K29M Barlow Dome 61.19 30 P P 15 49 10.9 -0.2
baz=274
EPYK Eagle Plains 61.37 27 P P 15 49 12.2 0.0
baz=273,SNR=7.2
HYT Haines Junctio 61.45 33 P P 15 49 12.2 -0.8
baz=276
P29M Windy Craggy 61.46 35 P P 15 49 11.4 -1.5
baz=276
G30M tAoh Zraii Nji 61.53 26 P P 15 49 12.4 -0.8
baz=273
I30M Mount Dempster 61.58 28 P P 15 49 13.6 -0.1
I30M IAmb IAmb 15 49 29.1
comp=Z,18nm,1.4s
I30M Mount Dempster 61.58 28 P P 15 49 13.6 -0.1
baz=274
N30M Aishikik Lake 61.59 33 P P 15 49 13.9 +0.2
baz=276
M30M Minto, Yukon 61.62 31 P 15 49 14.4 +0.4
M30M Minto, Yukon 61.62 31 P P 15 49 14.3 +0.3
baz=275,SNR=6.1
J30M Hart River 61.65 29 IAmb IAmb 15 49 38.7
comp=Z,19nm,1.7s
J30M Hart River 61.65 29 P P 15 49 14.2 0.0
baz=275
F30M Barrier River 61.66 25 P P 15 49 14.4 +0.3
baz=273,SNR=5.6
P30M Million Dollar 61.79 34 P P 15 49 14.8 -0.4
baz=276
MAYO Mayo, Yukon 61.93 30 P P 15 49 16.4 +0.4
baz=276
PALK Pallekele 61.96 263 LR LR 16 16 36.1
comp=Z,37nm,20.8s,baz=58,slow=36
PALK Pallekele 61.96 263 deP P 15 49 15.3 -1.6
PALK pmax pmax
comp=Z,15nm,1.0s
O30N Mendenhall 62.14 33 P P 15 49 17.2 -0.3
baz=277
PLBC Pleasant Camp 62.17 35 P P 15 49 17.7 +0.1
baz=277,SNR=6.2
N31M Braeburn, Yuko 62.21 32 IAmb IAmb 15 49 32.3
comp=Z,10nm,0.9s
N31M Braeburn, Yuko 62.21 32 P P 15 49 17.9 0.0
baz=277
G31M Satah River 62.30 26 P P 15 49 18.3 0.0
baz=275,SNR=6.1
KBL Kabul 62.35 297 P P 15 49 20.2 +0.7
KBL pmax pmax
comp=Z,24nm,1.0s
H31M Peel River 62.38 27 P P 15 49 18.6 -0.3
baz=276
F31M Tsiigehtchic 62.45 26 P P 15 49 19.6 +0.2
baz=275
INK Inuvik 62.46 25 P P 15 49 20.3 +0.9
INK pmax pmax
comp=Z,17nm,1.1s
INK Inuvik 62.46 25 P P 15 49 19.5 +0.2
baz=275,SNR=8.9
WHY Whitehorse 62.75 33 P 15 49 20.8 -0.9
WHY Whitehorse 62.75 33 P P 15 49 21.4 -0.2
baz=278
M31M Drury Creek, Y 62.77 32 IAmb IAmb 15 49 44.4
comp=Z,8.8nm,1.0s
M31M Drury Creek, Y 62.77 32 P P 15 49 21.5 -0.2
baz=278,SNR=5.7
SIT Sitka 63.06 37 P P 15 49 23.5 -0.1
baz=279
SVE Sverdlovsk 63.26 322 eP P 15 49 26.2 +1.3
SVE pmax pmax
comp=Z,21nm,0.9s
S32K Killisnoo 63.40 37 P P 15 49 25.9 +0.1
baz=280
P32M Atlin 63.49 34 P P 15 49 26.5 0.0
baz=279
N32M Quiet Lake 63.55 33 P P 15 49 26.4 -0.4
baz=279
P33M Teslin, Yukon 63.83 34 IAmb IAmb 15 49 42.9
comp=Z,7.1nm,0.9s
P33M Teslin, Yukon 63.83 34 P P 15 49 28.5 -0.3
baz=280
Q32M Nakina River 64.33 35 P P 15 49 31.6 -0.6
baz=281
ARTI Arti 64.57 322 P 15 49 34.0 +0.5
ARTI Arti 64.57 322 LR LR 16 19 59.0
comp=Z,180nm,18.0s,baz=72,slow=38
ARTI Arti 64.57 322 c iP P 15 49 34.5 +0.9
ARTI 15 50 10.0
ARTI S S 15 58 16.5 +3.9
ARTI SS SS 16 02 20.3 -2.3
ARTI pmax pmax
comp=Z,33nm,0.9s
A36M Sachs Harbour 64.74 20 P P 15 49 34.5 +0.1
baz=281
S34M Telegraph Cree 65.13 36 P P 15 49 37.1 0.0
baz=282
AB31 Akbulak array 65.23 314 P 15 49 38.2 +0.2
AB31 Akbulak array 65.23 314 i P P 15 49 39.1 +1.1
ABKAR Akbulak array 65.23 314 P 15 49 38.3 +0.4
DLBC Dease Lake 65.58 35 LR LR 16 16 10.6
comp=Z,161nm,21.4s,baz=258,slow=34
DLBC Dease Lake 65.58 35 P P 15 49 40.4 +0.2
baz=283
C36M Paulatuk 65.68 23 P P 15 49 41.1 +0.6
baz=283
T35M Bob Quinn 65.80 37 P P 15 49 41.4 -0.2
baz=283
WTLY Watson Lake, Y 65.82 33 P P 15 49 41.6 0.0
baz=283
AKTO Aktyubinsk 66.15 316 LR LR 16 19 58.4
comp=Z,320nm,18.2s,baz=74,slow=37
WRGLY Wrigley 67.49 29 P P 15 49 52.6 +0.4
baz=286
TOAD Toad River Com 67.90 34 P P 15 49 55.1 +0.1
baz=287
KOTAN Kotaneelee Air 68.11 33 P P 15 49 55.4 -0.7
baz=287
KIRV Kirov 68.69 326 LR LR 16 22 47.0
comp=Z,276nm,18.5s,baz=68,slow=38

KIRV Kirov 68.69 326 ceP P 15 50 01.0 +1.2
SPITS Spitsbergen Ar 70.11 350 P P 15 50 09.6 +1.2
comp=Z,3.6nm,0.6s,baz=76,slow=12,SNR=4.5
SPITS LR LR 16 22 55.7
comp=Z,58nm,21.1s,baz=39,slow=38
comp=Z,3.6nm,0.6s
YKA Yellowknife Ar 71.55 29 P P 15 50 17.7 +0.4
comp=Z,4.8nm,0.9s,baz=294,slow=6.6,SNR=8.3
comp=Z,4.8nm,0.9s
YKA Yellowknife Ar 71.55 29 ceP P 15 50 17.7 +0.4
YKA pmax pmax
comp=Z,2.0nm,0.6s
RES Resolute Bay 71.56 14 LR LR 16 27 38.5
comp=Z,46nm,18.4s,baz=351,slow=41
BELG Belogornoye 71.73 320 c iP P 15 50 19.7 +1.2
BELG pmax pmax
comp=Z,6.0nm,0.7s
APA Apatity 71.91 338⇓ eP P 15 50 18.2 -1.2
APA MLR MLR
comp=Z,728nm,4.1s
KLMR Klimovskoe 72.53 330 eP P 15 50 22.7 -0.5
KLMR e 15 53 02.5
KLMR pmax pmax
comp=Z,18nm,0.9s
ARCES ARCESS Array B 73.37 341 P P 15 50 26.1 -1.9
ARCES ARCESS Array B 73.37 341 P P 15 50 29.1 +1.0
comp=Z,8.9nm,0.9s,baz=77,slow=5.3,SNR=8.6
ARCES LR LR 16 27 49.8
comp=Z,178nm,19.2s,baz=60,slow=40
comp=Z,8.9nm,0.9s
NEEM North Greenlan 74.98 3 i P P 15 50 38.4 +0.7
NEEM IAmb IAmb 15 50 39.6
comp=Z,15nm,0.5s
JOF Joensuu 74.99 334 eP P 15 50 38.5 +0.9
DAG Danmarks Havn 75.37 356 i P P 15 50 40.0 +0.4
DAG IAmb IAmb 15 50 41.4
comp=Z,24nm,1.3s
YBH Yreka Blue Hor 75.39 50 LR LR 16 20 36.0
comp=Z,7.0nm,18.6s,baz=278,slow=33
MAK Makhachkala 75.44 311 eP P 15 50 35.3 -5.3
MAK eS S 16 00 13.2 -7.3
MAK MLR MLR
comp=Z,643nm,14.0s
VRH Novokhopyorsk 75.57 320 eP P 15 50 40.7 -0.4
VRH pmax pmax
comp=Z,18nm,0.8s
MOS Moscow 75.71 326 eP P 15 50 42.4 +0.6
MOS e 15 53 31.5
MOS MLR MLR
comp=Z,600nm,17.0s
PINE Pine Mountain 75.74 48 IAmb IAmb 15 50 57.1
comp=Z,17nm,1.0s
AKT Akhty 75.89 309 eP P 15 50 44.7 +1.3
AKT pmax pmax
comp=Z,94nm,1.7s
O02D Mt. Diablo Mer 75.96 52 IAmb IAmb 15 50 49.9
comp=Z,16nm,1.4s
NEW Newport 76.26 43 LR LR 16 23 15.2
comp=Z,85nm,18.4s,baz=307,slow=35
E09A Wood Farm, Sta 76.39 45 IAmb IAmb 15 50 59.9
comp=Z,9.5nm,1.0s
LPSR Galich'ya Gora 76.49 322 eP P 15 50 46.2 -0.1
LPSR pmax pmax
comp=Z,19nm,1.0s
OBN Obninsk 76.53 325⇑ eP P 15 50 46.5 0.0
OBN e 15 50 58.7
OBN ePPP PPP 15 55 26.5
OBN pmax pmax
comp=Z,28nm,1.1s
OBN MLR MLR
comp=Z,493nm,17.0s
O03E Paynes Creek 76.60 52 IAmb IAmb 15 51 18.4
comp=Z,14nm,1.1s
VSR Storozhevoye 77.00 321 eP P 15 50 47.3 -1.9
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 77.04 321 eP P 15 50 48.3 -1.2
VORD pmax pmax
comp=Z,10.0nm,0.9s
ORV Oroville 77.12 52 IAmb IAmb 15 51 03.1
comp=Z,13nm,1.2s
KULLO Kullorsuaq 77.36 5 i P P 15 50 51.7 +0.8
KULLO IAmb IAmb 15 50 52.6
comp=Z,27nm,1.0s
BMO Blue Mountains 77.64 46 IAmb IAmb 15 51 06.7
comp=Z,7.8nm,0.9s
BEKR Beckworth 77.78 51 IAmb IAmb 15 51 07.7
comp=Z,8.7nm,1.0s
NCK Nalchik 77.80 313⇓ eP P 15 50 53.4 -0.6
NCK pmax pmax
comp=Z,8.0nm,0.2s
FINES FINESS Array B 77.85 334 P P 15 50 54.6 +0.8
comp=Z,7.1nm,0.5s,baz=72,slow=5.1,SNR=7.2
FINES LR LR 16 28 27.4
comp=Z,105nm,18.1s,baz=44,slow=38
comp=Z,7.1nm,0.5s
FINES FINESS Array B 77.85 334 i P P 15 50 54.5 +0.7
FINES pmax pmax
comp=Z,7.0nm,0.5s
DBG Daneborg 77.86 355 i P P 15 50 54.0 +0.3
DBG IAmb IAmb 15 50 55.3
comp=Z,6.1nm,0.8s
KEF Keuruu 77.89 335 eP P 15 50 54.5 +0.5
KBZ Khabaz 78.15 313 P P 15 50 57.3 +1.5
comp=Z,21nm,0.8s,baz=96,slow=4.0,SNR=2.9
KBZ LR LR 16 27 41.7
comp=Z,100nm,18.9s,baz=68,slow=37
comp=Z,21nm,0.8s
KBZ Khabaz 78.15 313 c iP P 15 50 57.6 +1.8
KBZ pmax pmax
comp=Z,26nm,0.9s
VAF Ylistaro 78.16 336 eP P 15 50 55.9 +0.4
KIV Kislovodsk 78.19 313 eP P 15 50 56.7 +0.5
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,121nm,19.0s
SHA1 Shidzhatmaz 78.31 313⇑ eP P 15 50 58.6 +1.6
NEUR Neytrino 78.49 313⇑ eP P 15 51 00.1 +2.1
NEUR pmax pmax
comp=Z,15nm,1.5s
GNI Garni 78.51 309 LR LR 16 29 09.1
comp=Z,165nm,18.3s,baz=80,slow=38
GNI Garni 78.51 309⇑ eP P 15 51 00.0 +1.9
GNI pmax pmax
comp=Z,28nm,1.4s
VSU Vasula 79.33 331⇑ eP P 15 51 02.0 0.0
VSU pmax pmax
comp=Z,48nm,1.0s
PPT2 Papeete2 79.35 116 eLR LR 16 15 34.0
comp=Z,134nm,22.5s
PPT2 eLR LR 16 15 34.4
comp=Z,119nm,23.5s
PKD Bear Valley Ra 79.36 55 IAmb IAmb 15 51 16.7
comp=Z,15nm,1.1s
RAF Rauma 79.76 335 eP P 15 51 05.0 +0.7
NVAR Mina Array Bea 79.85 52 P P 15 51 06.1 +0.5
comp=Z,2.5nm,0.6s,baz=292,slow=5.8,SNR=18
NVAR LR LR 16 23 51.1
comp=Z,75nm,18.5s,baz=270,slow=34
comp=Z,2.5nm,0.6s
VSLR Vesyoloye 80.12 314⇓ eP P 15 51 06.3 -0.4
VSLR pmax pmax
comp=Z,54nm,0.8s
SUMG Summit 80.22 0 IAmb IAmb 15 51 09.9
comp=Z,13nm,1.0s
SUMG Summit 80.22 0 i P P 15 51 08.0 +0.9
SUMG IAmb IAmb 15 51 09.2
comp=Z,12nm,0.9s
SOC Sochi 80.27 314 eP P 15 51 06.9 -0.5
SOC e 15 54 05.4
SOC eS S 16 01 12.7 +0.1
SOC eSS SS 16 06 19.7 -3.2
SOC eSSS SSS 16 09 52.2
SOC MLR MLR
comp=Z,178nm,17.0s
ELK Elko 80.88 49 LR LR 16 26 02.2
comp=Z,124nm,18.1s,baz=294,slow=35
ANN Anapa 81.11 316 eP P 15 51 10.3 -1.6
ANN e*PP pP 15 51 13.6 -1.3
ANN eS S 16 01 19.8 -1.5
ANN pmax pmax
comp=Z,44nm,1.1s
MNK Minsk 81.12 328 i P P 15 51 12.3 +0.5
MNK i 15 54 17.7
MNK i PPP PPP 15 56 07.8

MNK i S S 16 01 21.2 +0.1
MNK i SS SS 16 06 40.5 +5.5
MNK pmax pmax
comp=N,10.0nm,0.7s
MNK pmax pmax
comp=E,15nm,0.9s
MNK pmax pmax
comp=Z,23nm,0.7s
MNK MLR MLR
comp=Z,177nm,16.0s
FFC Flin Flon 81.13 32 P 15 51 10.7 -1.1
FFC IAmb IAmb 15 51 25.6
comp=Z,17nm,1.1s
FFC Flin Flon 81.13 32 P P 15 51 10.7 -1.1
FFC pmax pmax
comp=Z,17nm,1.1s
TPNV Topopah Spring 81.98 53 IAmb IAmb 15 51 31.3
comp=Z,8.0nm,0.8s
QSM Queen of Sheba 82.00 54 IAmb IAmb 15 51 30.5
comp=Z,12nm,1.0s
GWY Greenwater Val 82.04 53 P 15 51 15.5 -1.8
GWY IAmb IAmb 15 51 30.8
comp=Z,17nm,1.1s
PABE Paberze 82.32 330 eP P 15 51 19.0 +0.9
RLMT Red Lodge 82.50 43 P 15 51 18.9 -0.7
RLMT IAmb IAmb 15 51 33.6
comp=Z,7.2nm,0.8s
TBI Tubuai 82.61 121 eLR LR 16 17 05.7
comp=Z,685nm,27.5s
AKASG Malin Array Be 82.64 324 P P 15 51 19.9 +0.1
comp=Z,3.3nm,0.7s,baz=53,slow=5.3,SNR=10.0
AKASG LR LR 16 30 43.6
comp=Z,387nm,18.7s,baz=60,slow=38
comp=Z,3.3nm,0.7s
AKASG Malin Array Be 82.64 324 i P P 15 51 19.8 0.0
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 82.64 324⇑ eP P 15 51 19.9 +0.1
AKBB pmax pmax
comp=Z,22nm,2.0s
KIEV Kiev 82.65 324 P P 15 51 18.6 -1.3
KIEV Kiev 82.65 324 P P 15 51 18.6 -1.3
KIEV pmax pmax
comp=Z,44nm,2.0s
TAOE Nuku Hiva Isla 82.72 104 eLR LR 16 17 16.6
comp=Z,353nm,29.0s
DUG Dugway, Tooele 82.76 48 IAmb IAmb 15 51 34.8
comp=Z,10nm,0.9s
SIM Simferopol' 83.05 317 eP P 15 51 22.1 0.0
SIM eS S 16 01 39.3 -2.1
SIM pmax pmax
comp=Z,27nm,0.9s
SIM smax smax
comp=E,18nm,15.7s
SIM MLR MLR
comp=Z,28nm,16.0s
HFS Hagfors 83.29 337 P P 15 51 23.1 0.0
comp=Z,7.1nm,0.7s,baz=90,slow=3.2,SNR=22
HFS LR LR 16 31 44.6
comp=Z,98nm,18.3s,baz=62,slow=38
comp=Z,7.1nm,0.7s
PFO Pinyon Flats O 83.41 56 LR LR 16 29 11.1
comp=Z,125nm,18.4s,baz=255,slow=36
NB2 NORSAR Subarra 83.46 339 P P 15 51 24.2 +0.3
comp=Z,21nm,1.1s,baz=40,slow=5.3
NB2 NORSAR Subarra 83.46 339 P P 15 51 25.0 +1.0
NOA NORSAR Array B 83.46 339 P P 15 51 24.3 +0.3
comp=Z,4.7nm,0.8s,baz=40,slow=5.2,SNR=14
NOA LR LR 16 34 02.8
comp=Z,120nm,19.0s,baz=30,slow=40
comp=Z,4.7nm,0.8s
PDAR Pinedale Array 83.56 45 P P 15 51 24.3 -0.8
PDAR Pinedale Array 83.56 45 P P 15 51 25.3 +0.2
comp=Z,1.0nm,0.6s,baz=262,slow=3.0,SNR=12
PDAR LR LR 16 27 52.1
comp=Z,90nm,18.0s,baz=310,slow=35
comp=Z,1.0nm,0.6s
BELC Belle Mtn. Jos 83.56 55 P 15 51 23.6 -1.5
BELC IAmb IAmb 15 51 38.4
comp=Z,6.6nm,0.9s
SUW Suwalki 83.61 329 eP P 15 51 24.9 +0.1
P18A Preston Nutter 84.75 48 IAmb IAmb 15 51 44.7
comp=Z,19nm,1.7s
SRU San Rafael Swe 84.84 48 IAmb IAmb 15 51 45.1
comp=Z,9.5nm,1.0s
SFJD Kangerlussuaq 85.28 5 LR LR 16 30 43.4
comp=Z,42nm,20.7s,baz=353,slow=36
HMU Henry Mountain 85.30 50 P P 15 51 33.1 -1.0
HMU IAmb IAmb 15 51 47.4
comp=Z,8.4nm,0.8s
FRB Frobisher Bay 85.78 13 LR LR 16 34 43.7
comp=Z,51nm,19.3s,baz=348,slow=39
BR131 Keskin Array S 86.15 313 IAmb IAmb 15 51 42.3
comp=Z,8.8nm,0.9s
BR131 Keskin Array S 86.15 313⇑ iP P 15 51 38.4 +0.3
BRTR Keskin Array B 86.15 313 P 15 51 37.8 -0.3
BRTR Keskin Array B 86.15 313 P P 15 51 38.5 +0.5
comp=Z,3.2nm,0.7s,baz=100,slow=2.7,SNR=9.7
BRTR LR LR 16 33 16.5
comp=Z,46nm,19.9s,baz=53,slow=38
comp=Z,3.2nm,0.7s
RSSD Black Hills 86.18 42 P P 15 51 38.5 +0.3
RSSD IAmb IAmb 15 51 43.3
comp=Z,21nm,1.7s
RSSD Black Hills 86.18 42 P P 15 51 38.5 +0.3
RSSD pmax pmax
comp=Z,21nm,1.7s
PV16 Nyswonger Mesa 86.33 48 IAmb IAmb 15 51 52.7
comp=Z,9.5nm,0.9s
PV11 David Mesa, Pa 86.36 48 IAmb IAmb 15 51 52.4
comp=Z,13nm,0.9s
PV03 Paradox Valley 86.40 48 IAmb IAmb 15 51 53.0
comp=Z,8.8nm,1.0s
ULM Lac du Bonnet 86.83 33 LR LR 16 28 03.5
comp=Z,58nm,21.9s,baz=314,slow=34
214A Organ Pipe Nat 86.90 56 IAmb IAmb 15 51 55.8
comp=Z,11nm,1.1s
BORG Borgarnes 87.25 353 LR LR 16 37 34.8
comp=Z,28nm,18.1s,baz=358,slow=40
ASF Jabal al Asfar 87.90 305 LR LR 16 35 47.9
comp=Z,49nm,18.1s,baz=352,slow=39
MMAI Mount Meron Ar 88.53 307 P P 15 51 50.2 +0.6
comp=Z,8.2nm,0.9s,baz=56,slow=6.1,SNR=6.5
comp=Z,8.2nm,0.9s
PSZ Piszkesteto 89.15 326 IAmb IAmb 15 51 54.0
comp=Z,7.9nm,1.1s
VRAC Vranov 89.81 328 LR LR 16 35 52.4
comp=Z,122nm,18.5s,baz=46,slow=38
ANMO Albuquerque 89.82 50 LR LR 16 34 37.0
comp=Z,87nm,18.1s,baz=38,slow=37
ANMO Albuquerque 89.82 50⇓ eP P 15 51 56.4 +0.6
MODS Modra-Piesok 90.13 327 eP P 15 51 58.4 +1.7
MODS Modra-Piesok 90.13 327 eP P 15 51 58.3 +1.6
RONA Rosalia, Austr 91.07 327 i pP P 15 52 01.9 +0.8
comp=Z,6.5nm,1.0s
CONA Conrad Observa 91.12 327 i pP P 15 52 02.2 +0.7
comp=Z,7.3nm,1.0s
KHC Kasperske Hory 91.32 329⇑ eP P 15 52 02.4 +0.1
KHC pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 91.47 329 P P 15 52 03.0 -0.1
comp=Z,1.8nm,0.7s,baz=35,slow=4.9,SNR=14
GERES LR LR 16 36 34.7
comp=Z,117nm,18.9s,baz=66,slow=38
comp=Z,1.8nm,0.7s
MOA Molln 91.93 328 i pP P 15 52 06.2 +1.1
comp=Z,13nm,1.5s
OBKA Obir 92.76 327 i pP P 15 52 10.0 +1.0
comp=Z,16nm,1.8s
LPIG La Paz 92.84 61 LR LR 16 31 06.2
comp=Z,108nm,18.4s,baz=246,slow=34
KBA Koelnbreinsper 92.92 328 i PcP P 15 52 09.4 -0.5
comp=Z,5.0nm,1.1s
LESA Schwarzleotal 92.98 329 ePcP P 15 52 08.9 -1.1
comp=Z,6.0nm,1.0s
ABTA Abfaltersbach 93.55 328 i PcP P 15 52 12.5 -0.2
comp=Z,7.9nm,1.3s
SQTA Sankt Quirin 93.80 329 i P P 15 52 11.9 -2.0
comp=Z,11nm,2.1s
RETA Reutte 93.80 330 epP P 15 52 14.6 +0.8
comp=Z,7.9nm,1.5s
SCHQ Schefferville 94.16 17 LR LR 16 37 20.5
comp=Z,44nm,20.8s,baz=298,slow=37
DAVA Damuels 94.35 330 i pP P 15 52 17.2 +0.7
comp=Z,14nm,1.5s
TXAR Lajitas Array 94.94 53 P P 15 52 20.0 +0.6
comp=Z,1.4nm,0.8s,baz=321,slow=5.4,SNR=4.1

	comp=Z,1.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**124.75**	**312**	PKP	**PKPdf**	**15 57 56.9**	**-0.3**	
	comp=Z,0.6nm,0.6s,baz=33,slow=3,3,SNR=2.9							
TROLL	**Troll, Antarti**	**130.43**	**195**	⇑PKPdf	**PKPdf**	**15 58 04.6**	**-1.8**	
	comp=Z,43nm,0.5s							
SNAA	**Sanae**	**131.87**	**194**	PKP	**PKiKP**	**15 58 09.5**	**-0.6**	
	comp=Z,0.7nm,0.7s,baz=13,slow=5,5,SNR=4.4							
VNA2	**Neumayer--Watz**	**133.38**	**193**	⇑PKPdf	**PKiKP**	**15 58 12.2**	**-0.9**	
	comp=Z,2.8nm,0.6s,baz=122,slow=1.3							
VNA3	**Neumayer Olymp**	**133.56**	**192**	⇑PKPdf	**PKPdf**	**15 58 12.5**	**+0.3**	
	comp=Z,1.6nm,0.8s							
VNA1	**Neumayer--Stat**	**133.78**	**193**	⇑PKPdf	**PKPdf**	**15 58 11.1**	**-1.5**	
	comp=Z,2.7nm,1.0s							
DBIC	**Dimbokro**	**133.85**	**313**	PKP	**PKiKP**	**15 58 15.1**	**-0.7**	
	comp=Z,1.7nm,0.7s,baz=4.0,slow=5.8,SNR=1.8							
LPAZ	**La Paz**	**149.29**	**75**		**PKPdf**	**15 58 44.1**	**+1.6**	
LPAZ	**La Paz**	**149.29**	**75**	PKPbc	**PKiKP**	**15 58 47.4**	**-0.6**	
	comp=Z,4.3nm,0.7s,baz=269,slow=3.4,SNR=3.9							
LPAZ	**La Paz**	**149.29**	**75**	PKIKP	**PKPdf**	**15 58 44.1**	**+1.6**	
PLCA	**Paso Flores**	**149.57**	**124**	PKPbc	**PKPbc**	**15 58 46.0**	**-0.2**	
	comp=Z,2.5nm,0.9s,baz=38,slow=3.0,SNR=5.5							
PLCA	**Paso Flores**	**149.57**	**124**	PKP2	**PKPbc**	**15 58 46.0**	**-0.2**	

*ISK **02** 15:45:39.8, 36˚.48N×28˚.69E, h5km, ML3.0/20*
*ATH **02** 15:45:39.7, 36˚.43N×28˚.80E, h6km±1km, ML2.9/6, Manual Solution by G.Panopoulou First location: 2019/11/02 15:47:15, This location: 2019/11/02 20:32:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*AFAD **02** 15:45:40.5, 36˚.44N×28˚.69E, h7km±2km, ML2.5*
*THE **02** 15:45:42.6, 36˚.N±9˚×2˚.9E±˚, h2km±9km, M2.6/6, MLh2.6/6*
ISC 02 15:45:40.6±1.0, 36˚.45N±0˚.02×28˚.72E±0˚.02, h7km±9km, n60, σ1§44/88, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FETY	**Fethiye**	**0.35**	**57**	P		Pg	15 45 39.8	-7.6
FETY				S		**Sg**	**15 45 45.4**	**-6.6**
DALY	**Dalyan (Mula)**	**0.37**	**352**	Pg		Pg	**15 45 47.4**	**-0.5**
DALY				Sg		**Sg**	**15 45 53.3**	**+0.5**
RDI1	**Rhodes Town Ha**	**0.40**	**271**	P		**Pg**	**15 45 48.7**	**+0.3**
RDI1				S		**Sb**	**15 45 55.5**	**-0.8**
RODB	**Rodos**	**0.40**	**270**	P		**Pg**	**15 45 48.4**	**0.0**
RODB				S		**Sb**	**15 45 55.6**	**-0.7**
IZZE	**Mula-Seydike**	**0.41**	**91**	P		**Pg**	**15 45 48.7**	**+0.2**
IZZE				S		**Sb**	**15 45 55.9**	**-0.6**
IZZE				*i*	IAML		15 45 56.0	
	comp=N,1μm,0.3s							
IZZE				*i*	IAML		15 45 58.0	
	comp=E,699nm,0.5s							
SABU	**Mula-Dalaman**	**0.42**	**28**	P		**Pg**	**15 45 48.9**	**0.0**
SABU				S		**Sb**	**15 45 55.6**	**-1.4**
SABU				*i*	IAML		15 45 57.0	
	comp=N,765nm,0.3s							
SABU				*i*	IAML		15 45 58.0	
	comp=E,385nm,0.9s							
TURN	**Turunc**	**0.50**	**310**	P		**Pg**	**15 45 49.8**	**-0.6**
TURN				S		**Sg**	**15 45 57.7**	**+0.8**
TURN				*i*	IAML		15 45 58.0	
	comp=N,396nm,0.2s							
TURN				*i*	IAML		15 46 01.0	
	comp=E,278nm,0.2s							
TURN	**Turunc**	**0.50**	**310**	Pg		**Pg**	**15 45 49.7**	**-0.6**
TURN				Sg		**Sg**	**15 45 57.6**	**+0.7**
ARG	**Arkhangelos**	**0.53**	**244**	Pg		**Pg**	**15 45 50.9**	**0.0**
ARG				Sg		**Sb**	**15 45 59.7**	**-0.4**
ARG	**Arkhangelos**	**0.53**	**244**	P		**Pg**	**15 45 50.6**	**-0.3**
ARG				S		**Sb**	**15 45 59.3**	**-0.8**
ARG	**Arkhangelos**	**0.53**	**244**	P		**Pg**	**15 45 50.7**	**-0.2**
ARG				S		**Sg**	**15 45 58.8**	**+0.9**
CAME	**Cameli-Denizli**	**0.68**	**43**	Pg		**Pg**	**15 45 53.6**	**-0.1**
CAME				Sg		**Sb**	**15 46 04.5**	**0.0**
AKAS	**Kas**	**0.74**	**107**	P		**Pb**	**15 45 55.6**	**-0.3**
AKAS				*i*	IAML		15 46 13.0	
	comp=E,400nm,0.7s							
AKAS				*i*	IAML		15 46 17.0	
	comp=N,486nm,0.9s							
AKAS	**Kas**	**0.74**	**107**	Pg		**Pb**	**15 45 55.9**	**0.0**
KSL	**Kastellorizon**	**0.76**	**113**	P		**Pb**	**15 45 55.7**	**-0.4**
KSL				S		**Sn**	**15 46 09.8**	**+0.5**
KSL	**Kastellorizon**	**0.76**	**113**	P		**Pg**	**15 45 53.5**	**-1.6**
RGE1	**Gennadi, Rhode**	**0.77**	**237**	P		**Pg**	**15 45 55.4**	**+0.1**
RGE1				S		**Sg**	**15 46 05.2**	**-0.1**
YER	**Yerkesik**	**0.77**	**333**	Pg		**Pg**	**15 45 55.4**	**0.0**
YER	**Yerkesik**	**0.77**	**333**	P		**Pb**	**15 45 56.6**	**+0.2**
YER				S		**Sb**	**15 46 07.7**	**+0.7**
KNIK	**Mula-Seydike**	**0.79**	**60**	P		**Pb**	**15 45 56.0**	**-0.7**
KNIK				S		**Sn**	**15 46 08.9**	**-1.5**
KNIK				*i*	IAML		15 46 09.0	
	comp=N,179nm,0.9s							
KNIK				*i*	IAML		15 46 12.0	
	comp=E,150nm,0.6s							
DNZT	**Denizli-Tavas-**	**0.86**	**16**	P		**Pg**	**15 45 57.1**	**-0.1**
DNZT				S		**Sb**	**15 46 09.4**	**-0.4**
DNZT				*i*	IAML		15 46 13.0	
	comp=N,64nm,1.0s							
DNZT				*i*	IAML		15 46 13.0	
	comp=E,97nm,0.8s							
MULA	**Mugla, Merkez-**	**0.87**	**338**	P		**Pb**	**15 45 57.5**	**-0.6**
MULA				S		**Sb**	**15 46 10.0**	**+0.1**
MULA				*i*	IAML		15 46 12.0	
	comp=N,108nm,0.7s							
MULA				*i*	IAML		15 46 14.0	
	comp=E,218nm,0.4s							
DAT	**Datca**	**0.96**	**287**	Pg		**Pg**	**15 45 58.9**	**-0.2**
ELL	**Elmali**	**1.00**	**72**	Pg		**Pn**	**15 46 00.6**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.03**	**9**	P		**Pg**	**15 46 00.1**	**-0.2**
TAVA				*i*	IAML		15 46 19.0	
	comp=E,83nm,0.4s							
TAVA				*i*	IAML		15 46 20.0	
	comp=N,100nm,0.7s							
GOLH	**Golhisar**	**1.04**	**40**	P		**Pg**	**15 46 00.2**	**-0.3**
GOLH				S		**Sn**	**15 46 17.8**	**+1.4**
GOLH				*i*	IAML		15 46 21.0	
	comp=N,135nm,0.4s							
GOLH				*i*	IAML		15 46 24.0	
	comp=E,138nm,0.8s							
MLSB	**Milas**	**1.14**	**318**	Pn		**Pb**	**15 46 01.5**	**-1.1**
DNIZ	**Denizli-Tavas-**	**1.20**	**12**	P		**Pn**	**15 46 03.3**	**-0.5**
DNIZ				S		**Sn**	**15 46 19.4**	**-1.1**
DNIZ				*i*	IAML		15 46 24.0	
	comp=N,508nm,0.4s							
BODT	**Bodrum**	**1.29**	**299**	Pn		**Pg**	**15 46 05.7**	**+0.4**
BODT	**Bodrum**	**1.29**	**299**	P		**Pg**	**15 46 06.5**	**+1.2**
BODT				S		**Sg**	**15 46 23.9**	**+1.9**
NISR	**Nisiros**	**1.29**	**278**	P		**Pg**	**15 46 05.3**	**-0.1**
NISR				S		**Sg**	**15 46 23.7**	**+1.5**
AKUM	**Antalya-Kumluc**	**1.31**	**95**	P		**Pg**	**15 46 06.7**	**+0.9**
AKUM				S		**Sg**	**15 46 28.8**	**+6.0**
AKUM				*i*	IAML		15 46 30.0	
	comp=E,65nm,1.2s							
AKUM				*i*	IAML		15 46 40.0	
	comp=N,65nm,0.7s							
YKAV	**Yalikavak-Bodr**	**1.34**	**301**	Pn		**Pb**	**15 46 05.8**	**-0.2**
KORT	**Korkueli**	**1.42**	**67**	P		**Pg**	**15 46 09.2**	**+1.4**
KORT				S		**Sg**	**15 46 31.9**	**+5.7**
KORT				*i*	IAML		15 46 34.0	
	comp=N,104nm,0.7s							
KORT				*i*	IAML		15 46 38.0	
	comp=E,134nm,0.5s							
KORT	**Korkueli**	**1.42**	**67**	Pn		**Pg**	**15 46 08.8**	**+1.0**
INCE	**Denizli-Bozkur**	**1.43**	**28**	P		**Pg**	**15 46 07.7**	**-0.4**
INCE				*i*	IAML		15 46 30.0	
	comp=N,173nm,0.5s							
INCE				S		**Sg**	**15 46 30.2**	**+3.6**
INCE				*i*	IAML		15 46 31.0	
	comp=E,155nm,0.6s							
NAZL	**Nazilli-Aydin**	**1.55**	**347**	Pn		**Pb**	**15 46 09.4**	**-0.2**
KARP	**Karpathos**	**1.55**	**235**	Pn		**Pb**	**15 46 09.5**	**-0.2**
KARP	**Karpathos**	**1.55**	**235**	P		**Pg**	**15 46 10.0**	**-0.3**
KARP				S		**Sg**	**15 46 30.7**	**+0.2**
KARP	**Karpathos**	**1.55**	**235**	P		**Pb**	**15 46 09.2**	**-0.5**
KARP				S		**Sb**	**15 46 29.4**	**-0.1**
ANTB	**Antalya**	**1.62**	**73**	Pn		**Pg**	**15 46 10.7**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.64**	**336**	Pn		**Pb**	**15 46 10.6**	**-0.6**
GCAM	**G?zelcaml?**	**1.73**	**317**	Pn		**Pb**	**15 46 11.6**	**-1.0**
BASM	**Basmaki-Afyon**	**1.81**	**35**	Pn		**Pb**	**15 46 13.8**	**-0.3**
ODEM	**Odemis-Izmir**	**1.90**	**344**	Pn		**Pb**	**15 46 14.2**	**-1.3**
SMG	**Samos**	**1.96**	**310**	P		**Pn**	**15 46 14.1**	**-0.2**
SMG				S		**Sb**	**15 46 41.6**	**+0.2**
SMG	**Samos**	**1.96**	**310**	P		**Pn**	**15 46 14.1**	**-0.2**
SMG				S		**Sb**	**15 46 39.7**	**-1.6**
KULA	**Kula-Manisa**	**2.06**	**359**	Pn		**Pb**	**15 46 16.8**	**-1.6**
ZKR	**Zakros**	**2.43**	**238**	P		**Pn**	**15 46 20.9**	**+0.2**
GORD	**Gordes-Manisa**	**2.49**	**350**	Pn		**Pn**	**15 46 22.2**	**+0.6**
URLA	**Izmir**	**2.55**	**319**	Pn		**Pn**	**15 46 23.5**	**+1.1**
APE	**Apeiranthos**	**2.64**	**285**	P		**Pn**	**15 46 23.8**	**+0.2**
NPS	**Neapolis**	**2.79**	**246**	P		**Pn**	**15 46 26.2**	**+0.6**
CHOS	**Chios island**	**2.87**	**313**	P		**Pn**	**15 46 26.8**	**0.0**
AKMS	**Akamas**	**3.27**	**115**	P		**Pn**	**15 46 31.0**	**-1.2**
IDI	**Anoyia**	**3.32**	**251**	P		**Pn**	**15 46 33.7**	**+0.7**
ALFC	**Alefka**	**3.41**	**111**	P		**Pn**	**15 46 32.0**	**-2.1**
KARY	**Karystos**	**3.77**	**296**	P		**Pn**	**15 46 39.3**	**+0.2**
DION	**Dionisos Attik**	**4.15**	**294**	P		**Pn**	**15 46 44.4**	**0.0**
LIA	**Limnos Island**	**4.43**	**322**	P		**Pn**	**15 46 48.8**	**+0.6**

*IDC **02** 15:47:13.2±3.4, 27˚.25N×55˚.04E, h0km, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=91.8km s-min=31.1km az=150.0*
*DSN **02** 15:47:13.4±1.2, 27˚.58N×55˚.40E, h15km, Error ellipse: s-maj=35.7km s-min=7.8km az=56.0*
*OMAN **02** 15:47:15.4±1.6, 27˚.22N×54˚.99E, h10km, ml3.0/10, Error ellipse: s-maj=19.4km s-min=10.2km az=13.0*
*TEH **02** 15:47:16.7, 27˚.23N×55˚.13E, h19km±26km*
ISC 02 15:47:16.0±1.3, 27˚.26N±0˚.04×55˚.15E±0˚.04, h16km±9km, n39, σ1§43/49, mb3.8/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAR1	**LAR**	**0.80**	**301**	Pg		**Pb**	**15 47 31.9**	**+0.3**
GENO	**Geno**	**0.92**	**81**	Pg		**Pn**	**15 47 34.5**	**+0.1**
IBND	**Bandar-abas**	**1.25**	**81**	Pg		**Pg**	**15 47 40.9**	**+0.8**
SHME	**Shamm**	**1.50**	**144**	P		**Pn**	**15 47 42.5**	**+0.2**
SHME				S		**Sg**	**15 48 04.5**	**+0.3**
SHME	**Shamm**	**1.50**	**144**	P		**Pn**	**15 47 41.6**	**-0.7**
SHME				S		**Sg**	**15 48 04.6**	**+0.4**
BANOM	**Banah**	**1.68**	**142**	P		**Pn**	**15 47 45.4**	**+0.6**
BANOM				S		**Sb**	**15 48 08.4**	**+0.8**
BANOM	**Banah**	**1.68**	**142**	P		**Pn**	**15 47 44.8**	**-0.1**
BANOM				S		**Sb**	**15 48 07.8**	**+0.2**
LMD1	**Lamerd**	**1.77**	**273**	Pg		**Pg**	**15 47 49.7**	**-0.4**
MASF	**Masafi**	**2.09**	**154**	P		**Pn**	**15 47 51.7**	**+1.3**
MASF				S		**Sn**	**15 48 17.9**	**+1.8**
MSFE	**Esma-Masafi**	**2.10**	**154**	P		**Pn**	**15 47 51.2**	**+0.6**
MDH	**Madha**	**2.21**	**152**	P		**Pn**	**15 47 53.0**	**+1.0**
MDH				S		**Sn**	**15 48 18.8**	**-0.3**
MDH	**Madha**	**2.21**	**152**	P		**Pn**	**15 47 53.1**	**+1.0**
NAZ	**Nazwa, Dubai**	**2.31**	**168**	P		**Pn**	**15 47 55.0**	**+1.6**
NAZ				S		**Sb**	**15 48 25.4**	**-0.2**
KHNJ	**Kahnooj**	**2.37**	**73**	Pn		**Pn**	**15 47 56.0**	**+1.8**
UOSS	**Minazif**	**2.49**	**157**	P		**Pn**	**15 47 57.9**	**+1.9**
UOSS				S		**Sb**	**15 48 29.8**	**-1.1**
HATD	**Hatta, Dubai**	**2.58**	**160**	P		**Pn**	**15 47 58.5**	**+1.3**
HATD	**Hatta, Dubai**	**2.58**	**160**	P		**Pn**	**15 47 58.0**	**+0.8**
ASHO	**Ashiyiah**	**2.69**	**162**	P		**Pn**	**15 47 60.0**	**+1.2**
	SNR=20							
ASHO				S		**Sb**	**15 48 36.1**	**-0.7**
ASHO	**Ashiyiah**	**2.69**	**162**	P		**Pn**	**15 47 59.5**	**+0.7**
NGRK	**Negar Kerman**	**2.75**	**30**	Pn		**Pn**	**15 48 02.2**	**+2.4**
KRBR	**Kerman**	**3.06**	**27**	Pn		**Pb**	**15 48 07.0**	**-3.2**
KHGB	**Koh Gabri**	**3.31**	**20**	Pn		**Pn**	**15 48 10.2**	**+2.8**
SOHO	**SOHO**	**3.35**	**158**	P		**Pn**	**15 48 08.2**	**+0.4**
KBAM	**BAM**	**3.46**	**57**	Pn		**Pn**	**15 48 12.4**	**+3.1**
ARQ	**Araqi**	**4.10**	**162**	P		**Pn**	**15 48 19.5**	**+1.4**
	SNR=8.3							
ARQ				S		**Sn**	**15 49 07.2**	**+1.4**
IMEH	**Mehriz**	**4.14**	**354**	Pn		**Pn**	**15 48 21.6**	**+2.8**
IBAF	**Bafgh**	**4.33**	**5**	Pn		**Pn**	**15 48 23.8**	**+2.4**
KLNJ	**Kolanjah**	**4.86**	**321**	Pn		**Pn**	**15 48 30.4**	**+1.5**
WSAR	**Wadi Sarin**	**5.09**	**141**	P		**Pn**	**15 48 32.1**	**+0.4**
IRAM	**Ramesheh**	**5.13**	**333**	Pn		**Pn**	**15 48 34.8**	**+2.4**
SRVN	**Saravan**	**6.45**	**87**	Pn		**Pn**	**15 48 52.5**	**+2.0**
MHTO	**MHTO**	**6.75**	**157**	P		**Pn**	**15 48 54.7**	**+0.1**
DOK	**Doka**	**8.65**	**186**	P		**Pn**	**15 49 19.2**	**-1.5**
WHFO	**Wadi Hawf**	**9.39**	**188**	P		**Pn**	**15 49 30.1**	**-0.7**
	SNR=18							
BVAR	**Borovoye Array**	**28.12**	**20**	P		**P**	**15 53 07.5**	**+0.3**
	0.8nm,0.4s,baz=225,slow=7.3,SNR=4.3 0.8nm,0.4s							
MKAR	**Makanchi Array**	**28.91**	**40**	P		**P**	**15 53 14.5**	**+0.2**
	0.3nm,0.6s,baz=230,slow=9.0,SNR=1.7 0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**34.44**	**31**	P		**P**	**15 54 02.6**	**0.0**
	0.8nm,0.4s,baz=242,slow=9.6,SNR=5.4 0.8nm,0.4s							
FINES	**FINESS Array B**	**39.34**	**338**	P		**P**	**15 54 43.5**	**-0.7**
	1.5nm,0.7s,baz=149,slow=9.3,SNR=1.2 1.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**51.74**	**265**	P		**P**	**15 56 22.0**	**-1.1**
	11nm,0.5s,baz=60,slow=8.5,SNR=2.5 11nm,0.5s							

IDC 02 15:55:50.3±1.4, 6˚.68N×124˚.92E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=27.1km s-min=10.3km az=139.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DAV	**Davao City (W)**	**0.77**	**59**	Pg		Pg	15 56 04.3	-0.6
	761nm,0.3s,baz=258,slow=3.8,SNR=39							
DAV				Lg		Lg	15 56 16.1	
	674nm,0.3s,baz=52,slow=23,SNR=16							
DAV				LR		LR	15 56 27.2	
	comp=Z,711nm,20.4s,baz=344,slow=48							
FITZ	**Fitzroy Crossi**	**24.63**	**179**	P		P	16 01 11.8	-0.9
	1.3nm,0.6s,baz=350,slow=11,SNR=6.3 1.3nm,0.6s							
WRA	**Warramunga Arr**	**28.03**	**161**	P		P	16 01 45.2	+1.9
	0.5nm,0.8s,baz=331,slow=10,SNR=2.4 0.5nm,0.8s							
ASAR	**Alice Springs**	**31.41**	**164**	P		P	16 02 12.9	-0.4
	0.3nm,0.9s,baz=339,slow=8.6,SNR=8.4 0.3nm,0.9s							
MKAR	**Makanchi Array**	**54.12**	**325**	P		P	16 05 17.4	+0.3
	0.4nm,0.6s,baz=116,slow=8.1,SNR=5.0 0.4nm,0.6s							

*NNC **02** 16:22:44.0±9.3, 37˚.76N×71˚.96E, h0km, mb4.0, mpv4.2, Error ellipse: s-maj=93.1km s-min=61.0km az=144.0*
*IDC **02** 16:22:44.1±4.4, 37˚.50N×72˚.18E, h184km±38km, mb3.3/8, mbtmp3.9/13, Error ellipse: s-maj=37.0km s-min=24.3km az=21.0*
*NEIC **02** 16:22:45.0±0.8, 37˚.56N±0˚.03×72˚.2E±0˚.1, h201km±8km, mb4.3/5, Error ellipse: s-maj=12.5km s-min=2.6km az=75.0*
ISC 02 16:22:43.8±0.6, 37˚.46N±0˚.05×72˚.35E±0˚.07, h200km, n58, σ1§51/66, mb3.6/10, 3C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRK	**Karamyk**	**2.07**	**348**			**Pn**	**16 23 23.8**	**+0.5**
GAR	**Garm**	**2.22**	**315**			**Pn**	**16 23 24.4**	**-0.4**
CHGR	**Chuyangaron**	**2.79**	**296**			**Pn**	**16 23 30.3**	**-0.7**
SIMJ	**Simiganj**	**2.90**	**296**			**Pn**	**16 23 31.8**	**-0.6**
NIL	**Nilore**	**3.87**	**169**			**Pn**	**16 23 46.5**	**+2.4**
ARSB	**Arslanbob**	**3.89**	**7**			**Pn**	**16 23 44.4**	**0.0**
KBL	**Kabul**	**3.95**	**224**			**Pn**	**16 23 46.1**	**+0.8**
UCH	**Uchtor**	**5.05**	**19**	P		**Pn**	**16 23 59.8**	**+0.6**
	SNR=47							
ALCI	**Alchi Leh**	**5.09**	**128**	*e*P		**Pn**	**16 24 01.7**	**+2.0**
ALCI				*e*S		Sn	16 24 53.1	-6.4
JMU	**Jammu**	**5.17**	**155**	*e*P		**Pn**	**16 24 01.9**	**+1.5**
JMU				*e*S		**Sn**	**16 24 59.5**	**-1.3**
JMU				IAML			16 25 02.4	
	comp=N,222nm,0.3s							
JMU				IAML			16 25 03.4	
	comp=E,165nm,0.4s							
EKS2	**Erkin-Say**	**5.31**	**11**	P		**Pn**	**16 24 02.9**	**+0.6**
	SNR=131							
AAK	**Ala-Archa**	**5.43**	**17**	P		**Pn**	**16 24 04.8**	**+1.0**
	comp=E,32nm,0.3s,baz=191,slow=5.3,SNR=166							
AAK				S		**Sn**	**16 25 05.5**	**-1.6**
	comp=E,8.5nm,0.3s,baz=93,slow=17,SNR=9.8							
AAK	**Ala-Archa**	**5.43**	**17**	P		**Pn**	**16 24 04.6**	**+0.8**
	SNR=76							
AAK	**Ala-Archa**	**5.43**	**17**	⇓P		**Pn**	**16 24 04.6**	**+0.8**
	comp=E,13nm,0.5s							
AAK				⇑S		**Sn**	**16 25 06.0**	**-1.1**
	comp=E,2.8nm,0.4s							
TSSA	**Tissa**	**5.56**	**145**	*e*P		**Pn**	**16 24 06.7**	**+1.0**
TSSA				*e*S		**Sn**	**16 25 07.6**	**-2.6**
TSSA				IAML			16 25 10.4	
	comp=N,396nm,0.4s							
TSSA				IAML			16 25 11.7	
	comp=E,274nm,0.4s							
KBK	**Karagaybulak**	**5.56**	**20**	P		**Pn**	**16 24 07.1**	**+1.5**
	SNR=18							
ULHL	**Ulahol**	**5.64**	**31**	P		**Pn**	**16 24 07.2**	**+0.6**
	SNR=12							
BOOM	**Boomskoye usch**	**5.74**	**28**			**Pn**	**16 24 08.4**	**+0.7**
KK31	**Karatay Array**	**5.81**	**347**			**Pn**	**16 24 08.3**	**-0.3**
KK31	**Karatay Array**	**5.81**	**347**	P		**Pn**	**16 24 08.2**	**-0.3**
	comp=E,5.5nm,0.1s,baz=155,slow=11,SNR=178							
KK31				⇑S		**Sn**	**16 25 10.2**	**-5.5**
	comp=E,12nm,0.4s,baz=161,slow=20,SNR=5.7							
KKAR	**Karatay Array**	**5.81**	**347**			**Pn**	**16 24 08.3**	**-0.3**
CHMS	**Chumysh**	**5.83**	**18**	P		**Pn**	**16 24 09.6**	**+0.7**
	SNR=27							
KDJ	**Kajisay**	**5.97**	**37**	Pn		**Pn**	**16 24 11.5**	**+0.7**
TARG	**Taragay, Kyrgy**	**6.00**	**43**	Pn		**Pn**	**16 24 12.0**	**+0.6**
TKM2	**Tokmak 2**	**6.00**	**23**	P		**Pn**	**16 24 11.7**	**+0.5**
	SNR=36							
USP	**Ospenovka**	**6.03**	**15**	P		**Pn**	**16 24 11.4**	**-0.1**
	SNR=26							
DHRM	**DHARAMSHALA**	**6.13**	**147**	*e*P		**Pn**	**16 24 14.1**	**+1.1**
DHRM				*e*S		**Sn**	**16 25 21.4**	**-2.1**
DHRM				IAML			16 25 23.6	
	comp=E,465nm,0.4s							
DHRM				IAML			16 25 25.7	
	comp=N,320nm,0.5s							
BHK	**Bhakra**	**6.90**	**150**	*e*P		**Pn**	**16 24 24.0**	**+1.2**
BHK				*e*S		**Sn**	**16 25 39.1**	**-2.2**
BHK				IAML			16 25 42.2	
	comp=N,199nm,0.3s							
BHK				IAML			16 25 42.4	
	comp=E,161nm,0.3s							
SMLA	**Simla**	**7.46**	**146**	*e*P		**Pn**	**16 24 30.8**	**+0.7**
SMLA				*e*S		**Sn**	**16 25 50.4**	**-4.2**
SMLA				IAML			16 25 53.4	
	comp=N,131nm,0.3s							
SMLA				IAML			16 25 55.8	
	comp=E,134nm,0.4s							
DDI	**Dehra Dun**	**8.55**	**145**	*e*S		**Sn**	**16 26 16.4**	**-4.0**
DDI				IAML			16 26 22.1	
	comp=E,123nm,0.3s							
DDI				IAML			16 26 23.4	
	comp=N,134nm,0.5s							
JOSI	**Joshimath**	**9.12**	**137**	*e*P		**Pn**	**16 24 52.8**	**+0.9**
JOSI				*e*S		Sn	16 26 26.2	-8.0
JOSI				IAML			16 26 33.8	
	comp=E,143nm,0.5s							
JOSI				IAML			16 26 35.5	
	comp=N,158nm,0.3s							
LGTI	**Lohaghat**	**10.35**	**138**	*e*P		**Pn**	**16 25 06.5**	**-1.1**
LGTI				*e*S		Sn	16 26 54.8	-8.4
LGTI				IAML			16 26 58.2	
	comp=N,113nm,0.3s							
LGTI				IAML			16 26 58.8	
	comp=E,117nm,0.3s							
MAKZ	**Makanchi**	**11.76**	**34**	Pn		**Pn**	**16 25 23.9**	**-1.6**
MK31	**Makanchi Array**	**11.89**	**35**	⇑P		**Pn**	**16 25 28.9**	**+1.7**
	comp=E,0.2nm,0.3s,baz=221,slow=16,SNR=4.4							
MKAR	**Makanchi Array**	**11.89**	**35**	Pn		**Pn**	**16 25 25.9**	**-1.3**
MKAR	**Makanchi Array**	**11.89**	**35**	P		**Pn**	**16 25 28.9**	**+1.7**
	comp=E,0.4nm,0.5s,baz=206,slow=11,SNR=4.7							
KURBB	**Kurchatov Array**	**13.89**	**17**	P		**P**	**16 25 55.0**	**+0.8**
	comp=E,1.6nm,0.3s,baz=200,slow=10,SNR=9.1							
KURK	**Kurchatov**	**13.99**	**17**	P		**Pn**	**16 25 54.2**	**+0.8**
AB31	**Akbulak array**	**14.82**	**327**			**Pn**	**16 26 02.5**	**-1.2**
AB31	**Akbulak array**	**14.82**	**327**	⇓P		**P**	**16 26 05.1**	**+0.5**
	comp=E,1.7nm,0.5s,baz=139,slow=12,SNR=49							
ABKAR	**Akbulak array**	**14.82**	**327**			**Pn**	**16 26 02.3**	**-1.4**
EVN	**Everest**	**15.41**	**124**			**Pn**	**16 26 12.4**	**+0.7**
BVAR	**Borovoye Array**	**15.63**	**356**	P		**Pn**	**16 26 13.0**	**-0.4**
	comp=E,1.7nm,0.4s,baz=168,slow=12,SNR=13							
ZAA0	**Zalesovo Array**	**18.60**	**24**	P		**P**	**16 26 46.3**	**+0.4**
ZAA0				IAmb		IAmb	16 26 48.0	
	comp=Z,5.8nm,0.7s							
ZALV	**Zalesovo Be

NDS	Dongshan	0.09	169⇑	*i* P	Pn	16 28 16.9	-0.1	**VWDT**	**VWDT**	1.09	208	*i* P	Pn	16 28 28.2	+0.2
NDS				*e*S	Sn	16 28 22.6	0.0	VWDT				S	Sn	16 28 43.6	+1.5
FUSB	Fushanzhiwuyua	0.11	291⇓	*i* P	Pn	16 28 17.2	0.0	**TCU**	Taichung	1.09	239	*i* P	Pn	16 28 28.9	+0.8
FUSB				*i* S	Sn	16 28 22.5	-0.3	TCU				*i* S	Sn	16 28 42.7	+0.6
ENTT	Nioudou	0.14	236⇑	*i* P	Pn	16 28 17.3	+0.1	**SMLT**	Sun Moon Lake	1.11	221	*i* P	Pn	16 28 29.8	+1.4
ENTT				*i* S	Sn	16 28 22.8	-0.2	SMLT				S	Sn	16 28 44.4	+1.7
TWC	Suao	0.18	129⇑	*i* P	Pn	16 28 17.2	-0.1	**WWF**	Wufeng	1.13	234	*i* P	Pn	16 28 29.4	+0.8
TWC				*i* S	Sn	16 28 23.2	0.0	WWF				*e*S	Sn	16 28 45.2	+2.0
NTC	Toucheng	0.18	42	*i* P	Pn	16 28 17.7	+0.3	**SSLB**	Suanglung	1.15	216	P	Pn	16 28 30.3	+1.4
NTC				*i* S	Sn	16 28 23.8	+0.6	**SSLB**	Suanglung	1.15	216	S	Sn	16 28 46.2	+2.6
NWLT	Wulai	0.18	288⇓	*i* P	Pn	16 28 17.4	-0.1	**SSLB**	Suanglung	1.15	216	*i* P	Pn	16 28 29.8	+0.9
NWLT				*i* S	Sn	16 28 22.8	-0.6	SSLB				*i* S	Sn	16 28 45.1	+1.5
ESAO	Su ao	0.20	137	*i* P	Pn	16 28 17.1	-0.3	**JYNG**	Yonagunijimaku	1.17	103	P	Pn	16 29 20.0	-0.1
ESAO				*i* S	Sn	16 28 23.2	-0.2	JYNG				*e*S	Sn	16 28 43.7	-0.3
LATG	Datong	0.24	220⇑	*i* P	Pn	16 28 18.0	0.0	**WCHH**	Zhanghua	1.22	239	*i* P	Pn	16 28 30.2	+0.4
LATG				*i* S	Sn	16 28 24.0	-0.2	WCHH				*i* S	Sn	16 28 46.0	+0.8
EGS		0.25	60	*i* P	Pn	16 28 18.5	+0.7	**YOJ**	Yonaguni jima	1.22	102	P	Pn	16 28 29.7	-0.2
EGS				*i* S	Sn	16 28 25.8	+1.7	YOJ				*e*S	Sn	16 28 45.0	-0.4
TIPB	Shuangxi	0.28	25⇑	*i* P	Pn	16 28 18.4	+0.2	**YOJ**	Yonaguni jima	1.22	102	*i* P	Pn	16 28 29.6	-0.2
TIPB				*i* S	Sn	16 28 24.6	0.0	YOJ				*i* S	Sn	16 28 44.9	-0.4
TWA	Mucha	0.28	338⇓	*i* P	Pn	16 28 18.4	+0.2	**WCH1**	Changhua City	1.23	239	*e*P	Pn	16 28 28.6	-1.4
TWA				*i* S	Sn	16 28 24.7	+0.2	WCH1				*i* S	Sn	16 28 46.3	+0.8
EWUT	Wuta	0.28	165⇑	*i* P	Pn	16 28 17.6	-0.5	**WNT1**	Nantou City	1.23	229	*e*P	Pn	16 28 29.6	-0.4
EWUT				S	Sn	16 28 25.3	+0.7	WNT1				*e*S	Sn	16 28 47.7	+2.2
NHDH	Xindian Distri	0.29	327	*i* P	Pn	16 28 18.4	+0.2	**HGSD**	Ruisui	1.25	192	*i* P	Pn	16 28 29.7	-0.5
NHDH				*i* S	Sn	16 28 24.8	+0.2	HGSD				*e*S	Sn	16 28 45.7	-0.2
ENA	Nanau	0.29	172⇑	*i* P	Pn	16 28 17.7	-0.6	**WNT**	Mingjian	1.25	228	*i* P	Pn	16 28 30.8	+0.5
ENA				*e*S	Sn	16 28 24.2	-0.6	WNT				*i* S	Sn	16 28 47.2	+1.3
YHNB	Yeheng	0.30	260 P		Pn	16 28 18.3	-0.1	**EHY**	Hungye	1.26	196	*i* P	Pn	16 28 29.4	-1.0
YHNB	Yeheng	0.30	260 S		Sn	16 28 24.9	-0.1	EHY				*e*S	Sn	16 28 45.0	-1.2
YHNB	Yeheng	0.30	260⇓	*i* P	Pn	16 28 18.3	-0.1	**WJS**	Zhushan	1.26	225	*i* P	Pn	16 28 31.8	+1.4
YHNB				*i* S	Sn	16 28 24.8	-0.2	WJS				S	Sn	16 28 46.8	+2.2
NSK	Sanguang	0.31	262⇓	*i* P	Pn	16 28 17.4	-0.1	**EHYH**	Wanrong	1.26	195	*i* P	Pn	16 28 29.9	-0.6
NSK				*i* S	Sn	16 28 24.8	-0.4	EHYH				S	Sn	16 28 46.0	-0.3
TATO	Taipei	0.32	323 P		Pn	16 28 18.6	+0.1	**WHYT**	Xinyi Township	1.28	217	P	Pn	16 28 33.1	+2.4
TATO	Taipei	0.32	323 S		Sn	16 28 25.2	+0.1	WHYT				*i* S	Sn	16 28 49.4	+2.7
TATO	Taipei	0.32	323	*i* P	Pn	16 28 18.5	0.0	**YULB**	Yu-li	1.37	196	P	Pn	16 28 31.7	-0.2
TATO				*i* S	Sn	16 28 25.0	-0.1	**YULB**	Yu-li	1.37	196	S	Sn	16 28 51.0	+2.0
NHY	Taipei	0.34	340	*i* P	Pn	16 28 19.0	+0.4	**YULB**	Yu-li	1.37	196	*i* P	Pn	16 28 31.3	-0.6
NHY				*i* S	Sn	16 28 26.2	+0.7	YULB				*e*S	Sn	16 28 47.1	-1.9
NWF	Wu-fen Shan	0.36	12	*i* P	Pn	16 28 19.1	+0.1	**YUS**	Yu-Shan	1.40	209	*i* P	Pn	16 28 33.5	+0.7
NWF				*i* S	Sn	16 28 26.2	+0.2	YUS				S	Sn	16 28 52.3	+1.9
WFSB	Wu-fen Shan	0.36	12	*i* P	Pn	16 28 19.2	+0.4	**EYUL**	Yuli	1.41	194	*e*P	Pn	16 28 32.0	-0.5
WFSB				*i* S	Sn	16 28 26.1	+0.3	EYUL				*e*S	Sn	16 28 48.2	-1.7
BACT	New Taipei Cit	0.36	320 P		Pn	16 28 19.0	+0.1	**TWF1**	Yuli	1.41	195	*i* P	Pn	16 28 32.1	-0.3
BACT				*e*S	Sn	16 28 27.1	+1.3	TWF1				*e*S	Sn	16 28 47.6	-2.3
TWB1	Santiao Chiao	0.39	43	*i* P	Pn	16 28 19.5	+0.3	**ECBN**	Changbin	1.42	189	*e*P	Pn	16 28 32.2	-0.3
TWB1				*i* S	Sn	16 28 26.4	+0.1	ECBN				*e*S	Sn	16 28 49.5	-0.5
EAHA	Aohua	0.39	174	*i* P	Pn	16 28 18.2	-1.0	**ALS**	Alishan	1.45	214	*i* P	Pn	16 28 34.4	+1.1
EAHA				*i* S	Sn	16 28 26.3	-0.1	ALS				*i* S	Sn	16 28 53.9	+2.5
NNS	Nan Shan	0.41	227⇑	*i* P	Pn	16 28 19.6	+0.1	**CHN5**	Tsauling	1.46	220	*i* P	Pn	16 28 34.1	+1.0
NNS				*i* S	Sn	16 28 26.5	-0.4	CHN5				*i* S	Sn	16 28 53.1	+2.0
SXI1	Grass Mountain	0.41	24	*i* P	Pn	16 28 19.6	+0.2	**WGK**	Gukeng	1.46	225	*i* P	Pn	16 28 33.2	+0.1
SXI1				S	Sn	16 28 28.0	+1.2	WGK				*i* S	Sn	16 28 52.9	+1.8
NNSB	Datong	0.41	225⇑	*i* P	Pn	16 28 19.6	0.0	**WDLH**	Douliu	1.48	226	*i* P	Pn	16 28 34.0	+0.7
NNSB				S	Sn	16 28 25.9	-1.0	WDLH				*i* S	Sn	16 28 53.1	+1.6
NNSH	Datong	0.41	225	*i* P	Pn	16 28 19.6	0.0	**CHKH**	Chenggong	1.55	190	*e*P	Pn	16 28 34.7	+0.4
NNSH				*i* S	Sn	16 28 26.3	-0.6	CHKH				*e*S	Sn	16 28 52.4	-0.8
TNOU	National Taiwa	0.43	9	*i* P	Pn	16 28 19.8	+0.2	**WTCT**	Ta-ch'eng	1.55	237	P	Pn	16 28 34.6	+0.4
TNOU				*i* S	Sn	16 28 27.4	+0.2	WTCT				*i* S	Sn	16 28 53.7	+0.5
YM01	YM01	0.44	345⇓	*i* P	Pn	16 28 19.9	+0.1	**FULB**	Fuli	1.56	194	*i* P	Pn	16 28 34.4	-0.1
YM01				*i* S	Sn	16 28 27.7	+0.3	FULB				*e*S	Sn	16 28 53.3	-0.3
TWS1	Kuangyinshan	0.46	326⇓	*i* P	Pn	16 28 20.4	+0.5	**WTK**	Tuku	1.58	230	*e*P	Pn	16 28 34.8	+0.2
TWS1				*i* S	Sn	16 28 28.7	+1.1	WTK				S	Sn	16 28 54.5	+0.6
NTY	Taoyuan	0.46	308	*i* P	Pn	16 28 20.4	+0.5	**WCKO**	Fanlu	1.62	218	*i* P	Pn	16 28 36.8	+1.4
NTY				*i* S	Sn	16 28 28.9	+1.3	WCKO				*i* S	Sn	16 28 57.6	+2.5
ZUZH	Zhuzihu	0.46	343	*i* P	Pn	16 28 20.2	+0.1	**CHN2**	Minshiung	1.63	224	*e*P	Pn	16 28 36.9	+1.5
ZUZH				*i* S	Sn	16 28 27.8	0.0	CHN2				*i* S	Sn	16 28 56.5	+1.4
YM08	YM08	0.47	348	*i* P	Pn	16 28 20.0	-0.2	**EHD**	Haiduan	1.63	196	*i* P	Pn	16 28 34.1	-1.3
YM08				*i* S	Sn	16 28 27.6	-0.4	EHD				*e*S	Sn	16 28 53.9	-1.3
KSHI	Guanxi Townshi	0.48	277⇓	*i* P	Pn	16 28 20.7	+0.6	**CHKT**	Chengkung	1.64	191	*i* P	Pn	16 28 35.5	-0.1
KSHI				*i* S	Sn	16 28 29.3	+1.3	CHKT				S	Sn	16 28 55.5	0.0
NWRT	Kuosheng	0.48	356	*e*P	Pn	16 28 20.2	0.0	**ELDTW**	Lidau	1.65	202	*i* P	Pn	16 28 35.3	-0.5
NWRT				*i* S	Sn	16 28 28.3	+0.2	ELDTW				*e*S	Sn	16 28 55.5	-0.4
ANP	Anpu	0.49	341	*i* P	Pn	16 28 20.3	-0.1	**ECS**	Chishang	1.68	195	*e*P	Pn	16 28 36.9	+0.8
ANP				*i* S	Sn	16 28 28.4	-0.1	ECS				*e*S	Sn	16 28 56.5	+0.1
NTST	Danshui	0.50	333	*i* P	Pn	16 28 20.7	+0.4	**CHY**	Chiayi	1.68	224	*i* P	Pn	16 28 36.1	-0.1
NTST				*i* S	Sn	16 28 29.3	+0.9	CHY				*i* S	Sn	16 28 58.1	+1.5
NCU	National Centr	0.53	298⇓	*e*P	Pn	16 28 16.1	-4.6	**CHN4**	Tsaushan	1.70	217	*i* P	Pn	16 28 37.3	+1.0
NCU				*e*S	Sn	16 28 25.1	-3.9	CHN4				*i* S	Sn	16 28 59.7	+2.8
NCUH	Zhongli	0.53	298⇓	*i* P	Pn	16 28 21.1	+0.4	**TPUB**	Ta-pu	1.72	215	P	Pn	16 28 38.0	+1.3
NCUH				*i* S	Sn	16 28 29.8	+0.7	**TPUB**	Ta-pu	1.72	215	S	Sn	16 29 00.7	+3.2
NFF	Wufeng Townshi	0.53	261⇓	*i* P	Pn	16 28 21.1	+0.2	**TPUB**	Ta-pu	1.72	215	*i* P	Pn	16 28 37.9	+1.3
NFF				*i* S	Sn	16 28 29.3	0.0	TPUB				*i* S	Sn	16 29 00.2	+2.8
NACB	Ninganchiao	0.55	190 P		Pn	16 28 20.8	-1.1	**WSF**	Szhu	1.73	232	*i* P	Pn	16 28 36.7	+0.2
NACB	Ninganchiao	0.55	190	*i* P	Pn	16 28 19.6	-1.4	WSF				*i* S	Sn	16 28 58.2	+0.6
NACB				*i* S	Sn	16 28 28.4	-1.3	**STYH**	Taoyuan	1.76	209	*i* P	Pn	16 28 38.5	+1.3
NJD	Zhudong	0.55	272	*i* P	Pn	16 28 21.6	+0.5	STYH				*i* S	Sn	16 29 00.7	+2.3
NJD				S	Sn	16 28 31.1	+1.5	**EDH**	Donghe	1.78	192	*i* P	Pn	16 28 36.8	-0.7
TWY	Chenhua	0.56	351	*i* P	Pn	16 28 21.8	+0.6	EDH				*i* S	Sn	16 28 58.4	-0.5
TWY				*i* S	Sn	16 28 31.0	+1.2	**WSL**	Shuilin Townsh	1.79	229	*i* P	Pn	16 28 37.9	+0.2
ETL	Fush Village	0.56	187	*i* P	Pn	16 28 19.9	-1.3	WSL				*i* S	Sn	16 29 00.6	+1.3
ETL				S	Sn	16 28 31.2	+1.3	**TWK**	Hsinying	1.82	218	*i* P	Pn	16 28 39.1	+1.0
EOS2	EOS2	0.57	122	*e*P	Pn	16 28 22.4	+1.2	TWK				S	Sn	16 29 02.4	+2.4
EOS2				*e*S	Sn	16 28 33.0	+3.2	**CHN1**	Nanshi	1.87	215	*i* P	Pn	16 28 39.9	+1.3
NSM	Shimen	0.57	350	*e*P	Pn	16 28 22.2	+0.9	CHN1				*i* S	Sn	16 29 04.0	+2.9
NSM				*e*S	Sn	16 28 31.7	+1.6	**LONT**	Longtian	1.88	196	*i* P	Pn	16 28 38.9	+0.1
LIOB	Emei	0.62	263⇓	*i* P	Pn	16 28 22.2	+0.3	LONT				*e*S	Sn	16 28 59.8	-1.6
LIOB				*i* S	Sn	16 28 31.8	+0.6	**IRIF**	Iriomote-Funau	1.89	101	P	Pn	16 28 38.6	-0.4
FUSS	Fushou	0.63	221⇑	*i* P	Pn	16 28 22.6	+0.4	IRIF				*e*S	Sn	16 29 01.0	-0.7
FUSS				*i* S	Sn	16 28 31.4	-0.2	**CHN8**	Yiju	1.93	225	P	Pn	16 28 40.0	+0.6
NSTT	Nanjuang	0.64	262⇓	*i* P	Pn	16 28 22.3	+0.1	CHN8				*i* S	Sn	16 29 04.2	+1.6
NSTT				*i* S	Sn	16 28 31.8	+0.3	**TWGB**	Pinlang	1.98	197	*i* P	Pn	16 28 40.5	+0.3
TWD	Chiawan	0.64	188	*i* P	Pn	16 28 20.8	-1.4	TWG				*e*S	Sn	16 29 03.0	-0.8
TWD				S	Sn	16 28 30.3	-1.3	**TWGBT**	Beinan	1.98	197	P	Pn	16 28 41.8	+1.6
SBCB	Hsinchu	0.65	276	*i* P	Pn	16 28 22.7	+0.4	**TWGBT**	Beinan	1.98	197	*i* P	Pn	16 28 40.5	+0.3
SBCB				*i* S	Sn	16 28 32.5	+0.7	TWGBT				*e*S	Sn	16 29 02.4	-1.4
NHW	Xinwu Township	0.66	296	*i* P	Pn	16 28 22.7	+0.4	**LDUT**	Ludao	2.05	186	*e*P	Pn	16 28 38.4	-2.8
NHW				*e*S	Sn	16 28 33.4	+1.5	LDUT				S	Sn	16 29 04.2	-1.3
TWT	Tachien	0.67	226	*i* P	Pn	16 28 23.5	+0.9	**MATB**	Ma-tsu	2.13	312	*i* P	Pn	16 28 41.9	-0.4
TWT				*i* S	Sn	16 28 32.8	+0.4	MATB				*i* S	Sn	16 29 06.2	-1.3
HSN	Hsinchu	0.67	277	*i* P	Pn	16 28 22.4	0.0	**SCST**	Cishan	2.13	211	*i* P	Pn	16 28 43.5	+1.1
HSN				*i* S	Sn	16 28 32.2	+0.1	SCST				*e*S	Sn	16 29 10.5	+2.9
TDCB	Techi	0.68	227	*i* P	Pn	16 28 23.3	+0.6	**TSCK**	Chigu Township	2.15	224	P	Pn	16 28 44.7	+2.2
TDCB				*i* S	Sn	16 28 32.6	0.0	TSCK				*e*S	Sn	16 29 10.1	+2.1
WHF	Hehuan Shan	0.69	215	*i* P	Pn	16 28 23.2	-0.1	**JKRS**	Kuro-shima	2.16	102	P	Pn	16 28 42.7	0.0
WHF				*i* S	Sn	16 28 33.4	-0.1	JKRS				*e*S	Sn	16 29 07.6	-0.7
EOS3	EOS3	0.71	127	*e*P	Pn	16 28 24.1	+1.2	**SSD**	Sandimen	2.19	207	*i* P	Pn	16 28 44.9	+1.8
EOS3				*e*S	Sn	16 28 35.9	+3.0	SSD				*e*S	Sn	16 29 11.0	+1.9
LXIB	Xiulin Townshi	0.74	200	*i* P	Pn	16 28 25.5	-1.1	**TWM1**	Shoushan	2.22	212	*e*P	Pn	16 28 47.1	+3.6
LXIB				S	Sn	16 28 34.1	0.0	TWM1				*e*S	Sn	16 29 13.0	+3.2
HWA	Hwalien	0.74	186	*i* P	Pn	16 28 22.7	-0.8	**ECL**	Taimali	2.22	198	*i* P	Pn	16 28 44.0	+0.5
HWA				*e*S	Sn	16 28 35.0	+1.1	ECL				*e*S	Sn	16 29 08.8	-1.0
NJN	Zhunan	0.75	267	*i* P	Pn	16 28 24.1	+0.5	**TSMG**	Majia	2.23	206	P	Pn	16 28 44.5	+0.9
NJN				S	Sn	16 28 35.1	+1.0	TSMG				*e*S	Sn	16 29 12.8	+2.9
ETM	Tongmen	0.77	194	*i* P	Pn	16 28 22.5	-1.4	**JIJ**	Ishigaki jima	2.26	99	P	Pn	16 28 43.6	-0.3
ETM				*e*S	Sn	16 28 33.6	-1.1	JIJ				*e*S	Sn	16 29 09.9	-0.7
WHP	Taichung City	0.81	237	*i* P	Pn	16 28 25.4	+1.0	**PNG**	Penghu	2.27	240	*i* P	Pn	16 28 43.5	-0.6
WHP				*i* S	Sn	16 28 36.9	+1.3	PNG				*i* S	Sn	16 29 09.7	-1.2
EOS4	EOS4	0.82	136	*e*P	Pn	16 28 25.0	+0.9	**PHUB**	P'eng-hu	2.28	239	*i* P	Pn	16 28 43.6	-0.7
EOS4				*e*S	Sn	16 28 37.5	+2.3	PHUB				*i* S	Sn	16 29 09.0	-2.3
NMLH	Miaoli	0.84	258	*i* P	Pn	16 28 25.1	+0.3	**MASBT**	Mashibuluo	2.31	205	*i* P	Pn	16 28 45.8	+1.0
NMLH				*i* S	Sn	16 28 36.8	+0.5	MASBT				*e*S	Sn	16 29 14.1	+2.0
TEYL	Yanliau Villag	0.85	186	*i* P	Pn	16 28 24.2	-0.7	**PTMZ**	Houxiangcun	2.36	278	*i* P	Pn	16 28 45.0	-0.5
TEYL				*e*S	Sn	16 28 35.6	-0.8	PTMZ				*e*S	Sn	16 29 12.0	-1.2
WUSB	Renai	0.90	216⇑	*i* P	Pn	16 28 26.1	+0.5	**WDGT**	Dungji	2.36	232	*e*P	Pn	16 28 44.6	-0.9
WUSB				*i* S	Sn	16 28 38.2	+0.5	WDGT				*i* S	Sn	16 29 11.4	-1.9
OWD	Renai	0.90	212	*i* P	Pn	16 28 25.9	+0.2	**JISG**	Ishigakijimahi	2.38	93	P	Pn	16 28 45.7	0.0
OWD				*i* S	Sn	16 28 37.7	0.0	JISG				*e*S	Sn	16 29 13.7	-0.1
NSY	Sanyi	0.90	251⇓	*i* P	Pn	16 28 26.8	+1.2	**EAST**	Anshuo	2.45	199	*i* P	Pn	16 28 48.6	+1.8
NSY				*i* S	Sn	16 28 39.9	+2.2	EAST				*e*S	Sn	16 29 15.7	+0.1
TWQ1	Liyutan	0.92	246	*i* P	Pn	16 28 26.2	+0.4	**TAWH**	Dawu Township	2.48	198	*e*P	Pn	16 28 48.2	+1.1
TWQ1				*i* S	Sn	16 28 39.1	+1.1	TAWH				*e*S	Sn	16 29 15.7	-0.5
ESL	Shilin	0.93	195	*i* P	Pn	16 28 24.3	-1.7	**SCZT**	Fangliau	2.54	203	*i* P	Pn	16 28 48.8	+0.9
ESL				*e*S	Sn	16 28 36.9	-1.5	SCZT				*e*S	Sn	16 29 20.4	+2.9
SHUL	Shoufeng	0.94	188	*i* P	Pn	16 28 24.7	-1.3	**VCHM**	Qimei	2.56	234	P	Pn	16 28 47.3	-0.9
SHUL				*e*S	Sn	16 28 38.2	-0.2	VCHM				*i* S	Sn	16 29 17.4	-0.7
PCYT	Pengchaiyu	0.97	20	*i* P	Pn	16 28 26.6	+0.2	**XPSS**	Dashiqiu	2.58	329	*i* P	Pn	16 28 48.2	-0.3
PCYT				*i* S	Sn	16 28 39.8	+0.7	XPSS				*i* S	Sn	16 29 17.4	-1.4
WPL	Puli Township	0.98	224	*i* P	Pn	16 28 28.2	+1.6	**LYUB**	Lan-yu	2.71	182	*e*P	Pn	16 28 48.3	-1.9
WPL				*e*S	Sn	16 28 41.0	+1.7	LYUB				*e*S	Sn	16 29 19.6	-2.1
DPDB	Guoxing	0.98	226	*i* P	Pn	16 28 27.9	+1.2	**JTJ**	Tarama	2.73	91	*e*P	Pn	16 28 51.6	+1.1
DPDB				*e*S	Sn	16 28 41.8	+2.3	**MHZQ**	Yeshan	2.77	300	*i* P	Pn	16 28 50.1	-0.9
WDJ	Dajia District	1.03	249	*i* P	Pn	16 28 27.8	+0.6	MHZQ				*i* S	Sn	16 29 22.0	-1.3
WDJ				S	Sn	16 28 42.1	+1.4	**KNM**	Kinmen	2.99	265	*i* P	Pn	16 28 55.4	+1.4
WARBT	Fenglin Townsh	1.04	196	*i* P	Pn	16 28 25.6	-1.8	KNM				*e*S	Sn	16 29 30.2	+1.6
WARBT				*e*S	Sn	16 28 39.2	-1.7	**KNMB**	Chin-men Tao	3.02	266	*i* P	Pn	16 28 54.0	-0.4
EGFH	Guangfu	1.08	193 P		Pn	16 28 26.6	-1.3	KNMB				*i* S	Sn	16 29 27.2	-2.3
EGFH				*e*S	Sn	16 28 40.0	-1.8	**JIRB**	Irabujima	3.16	87	*e*P	Pn	16 28 57.6	+1.2
AXDP	Jialang	3.39	274	*i* P	Pn	16 28 59.6	0.0								
AXDP				*e*S	Sn	16 29 36.1	-2.4								
ZPLA	Ao Xicun	3.69	258	*i* P	Pn	16 29 03.2	-0.4								
ZPLA				S	Sn	16 29 43.1	-2.7								
DSXP	Dongshan	4.03	256	P	Pn	16 29 07.7	-0.5								
DSXP				*e*S	Sn	16 29 53.0	-1.2								

*IDC **02** 16:40:24.7±4.9, 6°11S×154°84E, h86km±39km, mb3.8/8, mbtmp4.2/10, MS2.9/4, Error ellipse: s-maj=32.4km s-min=20.4km azz=57.0*

ISC 02 16:40:24.9±1.0, 6°1S±0°2×154°9E±0°1, h89km, n19, σ1§03/13, mb3.9/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.30**	**246**	P	**Pn**	**16 42 22.4**	**-0.2**
	75nm,0.7s,baz=56,slow=6.9,SNR=31						
PMG				S	**Sn**	**16 43 54.9**	**+0.2**
	8.8nm,0.7s,baz=140,slow=16,SNR=1.9						
PMG				LR	LR	16 46 08.8	
	comp=Z,36nm,18.8s,baz=360,slow=42						
DZM	**Mont Dzumac**	**19.43**	**146**	P	**P**	**16 44 44.4**	**0.0**
	6.7nm,0.6s,baz=306,slow=17,SNR=7.2						
WRA	**Warramunga Arr**	**24.22**	**233**	P	**P**	**16 45 33.3**	**-0.3**
	2.7nm,0.5s,baz=57,slow=9.5,SNR=19						
	2.7nm,0.5s						
ASAR	**Alice Springs**	**26.67**	**227**	P	**P**	**16 45 54.9**	**-0.9**
	1.4nm,0.6s,baz=57,slow=8.9,SNR=39						
ASAR				PcP	**PcP**	**16 49 17.1**	**-0.4**
	0.3nm,0.6s,baz=82,slow=2.8,SNR=4.4						
ASAR				LR	LR	16 55 43.8	
	comp=Z,42nm,19.3s,baz=12,slow=34						
	1.4nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**27.08**	**25**	T	T	17 14 23.3	
	baz=204,slow=75,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**27.09**	**25**	T	T	17 14 37.1	
	baz=204,slow=75,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**27.10**	**25**	T	T	17 14 11.6	
	baz=204,slow=75,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**28.26**	**25**	T	T	17 15 50.9	
	baz=204						
H11N3	**WAKE ISLAND Hy**	**28.27**	**25**	T	T	17 15 41.9	
	baz=204						
H11N2	**WAKE ISLAND Hy**	**28.27**	**25**	T	T	17 15 55.3	
	baz=204						
KAPI	**Kappang**	**34.95**	**270**	LR	LR	17 03 05.0	
	comp=Z,15nm,18.5s,baz=303,slow=39						
CMAR	**Chiang Mai Arr**	**60.28**	**295**	P	**P**	**16 50 26.1**	**+1.5**
	2.4nm,0.7s,baz=120,slow=5.3,SNR=24						
	2.4nm,0.7s						
SHEM	**Shemya Is, Ala**	**60.85**	**13**	LR	LR	17 11 51.9	
	comp=Z,14nm,20.0s,baz=265,slow=31						
MKAR	**Makanchi Array**	**82.65**	**319**	P	**P**	**16 52 38.8**	**+0.1**
	0.8nm,0.6s,baz=104,slow=5.2,SNR=11						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**83.37**	**326**	P	**P**	**16 52 41.5**	**-0.6**
	0.8nm,0.5s,baz=125,slow=7.8,SNR=3.8						
	0.8nm,0.5s						
QSPA	**South Pole Qui**	**83.87**	**180**	P	**P**	**16 52 46.5**	**+1.8**
	2.8nm,0.7s,baz=101,slow=1.7,SNR=29						
	2.8nm,0.7s						
MAW	**Mawson**	**85.16**	**203**	P	**P**	**16 52 50.2**	**-0.7**
	2.3nm,0.6s,baz=90,slow=4.0,SNR=11						
	2.3nm,0.6s						
KURBB	**Kurchatov Arra**	**86.08**	**322**	P	**P**	**16 52 55.3**	**-0.5**
	0.3nm,0.6s,baz=101,slow=4.9,SNR=5.3						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**152.65**	**287**	PKPbc	**PKPbc**	**17 00 10.6**	**-1.7**
	2.1nm,0.4s,baz=74,slow=5.1,SNR=2.1						

*SNET **02** 16:46:05.6±0.9, 12°.44N×87°.78W, h56km, ML3.7*
*CATAC **02** 16:46:05.4±0.4, 12°N±3°×8°8W±°, h35km±3km, M4.0/

*IDC **02** 16:51:27.1±0.8, 13°.20N×143°.43E, h200km±11km, mb3.4/10, mbtmp3.9/11, Error ellipse: s-maj=23.6km s-min=12.4km az=75.0*

*NEIC **02** 16:51:27.8±2.1, 13°.2N±0°.1×143°.3E±0°.2, h199km±10km, mb4.3/15, Error ellipse: s-maj=22.9km s-min=15.2km az=85.0*

ISC 02 16:51:27.0±0.6, **13°.26N**±0°.09×**143°.39E**±0°.10, **h200**km, **n32**, σ1§**18**/33, **mb4.0**/17, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.48**	**77**		**Pn**	**16 52 01.4**	**+0.9**
GUMO	**Guam**	**1.48**	**77**	P	**Pn**	**16 52 00.8**	**+0.3**
	159nm,0.3s,baz=220,slow=7.9,SNR=120						
GUMO				S	**Sn**	**16 52 26.1**	**-0.3**
	650nm,0.2s,baz=36,slow=22,SNR=15						
FAKI	**Fak Fak**	**19.51**	**215**	P	**P**	**16 55 40.1**	**+0.9**
FAKI				IAmb	IAmb	16 55 42.8	
	comp=Z,13nm,0.7s						
JOW	**Kunigami**	**19.57**	**316**	P	**P**	**16 55 39.3**	**-0.4**
JOW				IAmb	IAmb	16 55 43.4	
	comp=Z,13nm,0.8s						
JOW	**Kunigami**	**19.57**	**316**	P	**P**	**16 55 39.0**	**-0.8**
	comp=Z,6.2nm,0.4s,baz=117,slow=13,SNR=8.4						
JNU	**Nakatsue**	**22.83**	**332**	P	**P**	**16 56 14.3**	**+1.4**
JNU				IAmb	IAmb	16 56 22.6	
	comp=Z,9.6nm,1.1s						
YULB	**Yu-li**	**23.23**	**299**	P	**P**	**16 56 15.9**	**-0.6**
NACB	**Ninganchiao**	**23.29**	**301**	P	**P**	**16 56 16.5**	**-0.5**
MJAR	**Matsushiro Arr**	**23.65**	**350**	P	**P**	**16 56 21.6**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=164,slow=10,SNR=2.2						
	comp=Z,0.6nm,0.6s						
SSLB	**Suanglung**	**23.67**	**299**	P	**P**	**16 56 21.3**	**+0.7**
SSLB				IAmb	IAmb	16 56 33.2	
	comp=Z,9.0nm,0.9s						
LUWI	**Luwuk**	**24.89**	**237**	P	**P**	**16 56 31.4**	**-0.3**
KSAR	**Wonju Array Be**	**27.78**	**333**	P	**P**	**16 56 57.8**	**+0.6**
WB0	**Warramunga Arr**	**33.99**	**195**	P	**P**	**16 57 50.3**	**-1.6**
WB0				IAmb	IAmb	16 57 55.7	
	comp=Z,2.8nm,0.7s						
WR8	**Warramunga Arr**	**34.14**	**195**	P	**P**	**16 57 51.2**	**-2.0**
WR8				IAmb	IAmb	16 57 58.7	
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**34.17**	**195**	P	**P**	**16 57 52.5**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=15,slow=9.4,SNR=28						
	comp=Z,2.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**35.74**	**210**	P	**P**	**16 58 06.4**	**-0.4**
AS31	**Alice Springs**	**37.85**	**194**	P	**P**	**16 58 24.7**	**0.0**
ASAR	**Alice Springs**	**37.85**	**194**	P	**P**	**16 58 22.7**	**-2.0**
ASAR	**Alice Springs**	**37.85**	**194**	P	**P**	**16 58 24.0**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=19,slow=10,SNR=8.3						
	comp=Z,0.6nm,0.7s						
MBWA	**Marble Bar**	**41.35**	**215**	P	**P**	**16 58 51.8**	**-1.7**
MBWA				IAmb	IAmb	16 59 05.7	
	comp=Z,14nm,1.1s						
DZM	**Mont Dzumac**	**41.76**	**147**	P	**P**	**16 58 57.3**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=302,slow=15,SNR=6.7						
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.98**	**283**	P	**P**	**16 59 08.5**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=82,slow=6.8,SNR=8.7						
	comp=Z,0.6nm,0.4s						
FORT	**Forrest**	**46.20**	**198**	P	**P**	**16 59 31.6**	**-0.3**
FORT				IAmb	IAmb	16 59 35.3	
	comp=Z,13nm,1.1s						
TOO	**Toolangi**	**50.59**	**178**	P	**P**	**17 00 07.2**	**+1.7**
MKAR	**Makanchi Array**	**60.73**	**316**	P	**P**	**17 01 16.4**	**-1.1**
MKAR	**Makanchi Array**	**60.73**	**316**	P	**P**	**17 01 19.0**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=94,slow=7.4,SNR=6.7						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**63.91**	**320**	P	**P**	**17 01 37.9**	**-0.6**
KURK				IAmb	IAmb	17 01 56.0	
	comp=Z,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**63.95**	**320**	P	**P**	**17 01 39.5**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=105,slow=6.7,SNR=9.7						
	comp=Z,0.5nm,0.4s						
BVAR	**Borovoye Array**	**69.29**	**322**	P	**P**	**17 02 13.1**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=99,slow=8.9,SNR=4.1						
	comp=Z,1.2nm,0.4s						
ILAR	**Eielson Array**	**69.48**	**25**	P	**P**	**17 02 12.4**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=259,slow=5.5,SNR=1.9						
	comp=Z,0.1nm,0.4s						
FINES	**FINESS Array B**	**90.85**	**335**	P	**P**	**17 04 05.1**	**-2.4**
FINES	**FINESS Array B**	**90.85**	**335**	P	**P**	**17 04 06.3**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=54,slow=3.6,SNR=5.8						
	comp=Z,1.8nm,0.8s						

*CATAC **02** 16:53:13.7±0.9, 12°.7N×8°.7W±°, h35km±9km, M3.8/7, MLv3.8/7, Error ellipse: s-maj=16.8km s-min=7.2km az=23.1, confirmed*

*SNET **02** 16:53:15.0±0.8, 12°.29N×87°.78W, h15km±5km, ML2.8*

ISC 02 16:53:13.6±2.2, **12°.3N**±0°.3×**87°.4W**±0°.2, **h70**km±37km, **n20**, σ0§**65**/31, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.50**	**44**	P	**Pn**	**16 53 26.8**	**+0.2**
CRIN	**San Cristobal**	**0.50**	**44**	S	**Sn**	**16 53 36.6**	**+0.6**
PKGN	**Cerro Pekin**	**0.53**	**52**	P	**Pn**	**16 53 26.6**	**-0.2**
PKGN				S	**Sn**	**16 53 36.6**	**+0.2**
CSGN	**Cosiguina Volc**	**0.65**	**347**	P	**Pn**	**16 53 28.0**	**-0.1**
CSGN				S	**Sn**	**16 53 38.7**	**-0.1**
POLN	**Al Sur del Vol**	**0.65**	**62**	P	**Pn**	**16 53 26.0**	**-2.1**
POTN	**Potosi Cosigui**	**0.66**	**351**	P	**Pn**	**16 53 28.0**	**-0.1**
POTN				S	**Sn**	**16 53 39.1**	**+0.3**
CNGA	**Al SSO del Vol**	**0.70**	**77**	P	**Pn**	**16 53 29.0**	**+0.3**
CNGA				S	**Sn**	**16 53 39.2**	**-0.5**
CNGN	**Cerro Negro**	**0.71**	**77**	P	**Pn**	**16 53 28.5**	**-0.2**
CNGN	**Cerro Negro**	**0.71**	**77**	S	**Sn**	**16 53 40.6**	**+0.8**
MOM3	**MOM3**	**0.88**	**79**	P	**Pn**	**16 53 30.8**	**+0.1**
MOM3				S	**Sn**	**16 53 43.9**	**+0.6**
CNCH	**Conchagua**	**1.02**	**336**	*e*P	**Pn**	**16 53 32.5**	**-0.1**
CNCH				*e*S	**Sn**	**16 53 47.1**	**+0.5**
LCND	**La Caada**	**1.07**	**334**	*e*P	**Pn**	**16 53 32.9**	**-0.2**
LCND				*e*S	**Sn**	**16 53 47.6**	**0.0**
LCND				IAML		16 53 52.5	
	comp=Z,552nm,0.3s						
BLLM	**Bellamira**	**1.36**	**323**	*e*P	**Pn**	**16 53 37.1**	**+0.2**
VSM	**San Miguel**	**1.38**	**322**	*e*P	**Pn**	**16 53 38.1**	**+0.9**
LCY	**Lacayo**	**1.38**	**321**	*e*P	**Pn**	**16 53 37.3**	**+0.1**
RANC	**El Ranchito**	**1.39**	**322**	*e*P	**Pn**	**16 53 37.5**	**+0.2**
RANC				*e*S	**Sn**	**16 53 54.6**	**-0.5**
PACA	**Pacayal**	**1.44**	**321**	*e*P	**Pn**	**16 53 37.7**	**-0.2**
TECA	**Tecapa**	**1.57**	**317**	*e*P	**Pn**	**16 53 40.2**	**+0.5**
TECA				*e*S	**Sn**	**16 53 59.1**	**-0.3**
TECO	**Alcaldia de Te**	**1.79**	**312**	*e*P	**Pn**	**16 53 42.1**	**-0.5**
TECO				*e*S	**Sn**	**16 54 03.1**	**-1.4**
SCLA	**Alcaldia de Sa**	**1.87**	**316**	*e*P	**Pn**	**16 53 44.1**	**+0.5**
SCLA				*e*S	**Sn**	**16 54 07.2**	**+0.8**
SCLA				IAML		16 54 09.6	
	comp=Z,48nm,0.2s						

*AEIC **02** 16:57:23.8±0.6, 51°.8N±0°.2×175°.9E±0°.1, h38km±10km, Error ellipse: s-maj=30.5km s-min=5.9km az=201.0*

NEIC 02 16:57:22.8±0.5, **51°.78N**±0°.07×**175°.83E**±0°.02, **h35**km±2km, **ML3.7**/8, **ML3.5**(AEIC), **Error ellipse: s-maj=12.0km s-min=3.1km az=173.0, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**1.43**	**313**	Pn	Pn	16 57 46.0	-0.2
SMY	**Shemya**	**1.43**	**313**		Pn	16 57 45.9	-0.2
SMY					Sn	16 58 03.7	+0.1
SMY				IAML		16 58 07.7	
	comp=E,1μm,0.4s						
LSNW	**Little Sitkin**	**1.68**	**82**		Pn	16 57 49.4	-0.2
LSNW					Sn	16 58 08.7	-1.2
LSSE	**Little Sitkin**	**1.71**	**84**		Pn	16 57 50.0	-0.1
LSSE					Sn	16 58 11.3	+0.7
LSPA	**Little Sitkin**	**1.71**	**83**		Pn	16 57 50.3	+0.3
LSPA					Sn	16 58 10.8	+0.1
AMKA	**Amchitka**	**2.21**	**99**		Pn	16 57 56.5	-0.3
AMKA	**Amchitka**	**2.21**	**99**		Sn	16 58 23.4	+0.6
CETU	**Semis' Tuman**	**2.28**	**84**		Pn	16 57 58.1	+0.2
CETU					Sn	16 58 24.3	-0.4
CEAP	**Semis' Anvil P**	**2.33**	**83**		Pn	16 57 58.5	-0.1
CEAP					Sn	16 58 26.2	+0.1
GASW	**Gareloi Southw**	**3.30**	**88**		Pn	16 58 11.7	-0.2
GASW					Sn	16 58 49.4	-0.6
GANO	**Gareloi North**	**3.33**	**87**		Pn	16 58 12.2	-0.1
GANO					Sn	16 58 49.6	-1.1
GAKI	**Gareloi-Kavalg**	**3.34**	**92**		Pn	16 58 12.5	0.0
GANE	**Gareloi Northe**	**3.35**	**87**		Pn	16 58 12.5	-0.1
GANE					Sn	16 58 49.5	-1.6
GALAA	**Gareloi Lava P**	**3.35**	**88**		Pn	16 58 12.5	-0.2
TASE	**Tanaga Southea**	**3.81**	**87**		Pn	16 58 19.0	+0.1
TASE					Sn	16 59 03.7	+1.2
TAFP	**Tanaga Falls P**	**3.84**	**86**		Pn	16 58 19.1	-0.2
TAFL	**Tanaga Flats**	**3.90**	**88**		Pn	16 58 19.9	-0.2
TAFL					Sn	16 59 04.0	-0.5
TAPA	**Tanaga Point A**	**3.95**	**87**		Pn	16 58 20.9	+0.1
KIMD	**Kanaga Island**	**4.31**	**88**		Pn	16 58 25.7	0.0
KIMD					Sn	16 59 14.3	-0.4
KIKV	**Kanaga Island**	**4.34**	**86**		Pn	16 58 26.1	-0.2
KIKV					Sn	16 59 15.9	+0.2
KIWB	**Kanaga Island**	**4.36**	**86**	Pn	Pn	16 58 26.4	0.0
KIWB				IAML		16 59 27.8	
	comp=N,82nm,0.7s						
ADK	**Adak**	**4.65**	**86**	Pn	Pn	16 58 30.4	0.0
ADK				IAML		16 59 38.6	
	comp=N,52nm,1.3s						
ADK				IAML		16 59 40.2	
	comp=N,66nm,0.7s						
ETKA	**Kagalaska Isla**	**4.82**	**86**		Pn	16 58 33.7	+1.0
GSTD	**Great Sitkin T**	**4.98**	**84**		Pn	16 58 35.9	+0.9
GSIG	**Igitkin Island**	**5.11**	**84**		Pn	16 58 36.8	0.0
ATKA	**Atka Island**	**6.18**	**82**	Pn	Pn	16 58 50.7	-0.7
NIKH	**Nikolski High**	**9.45**	**77**	Pn	Pn	16 59 37.0	+0.8

IDC 02 17:07:58.9±12.0, **6°.05S**×**128°.86E**, **h201**km±138km, **mb2.7**/1, **mbtmp3.7**/4, **Error ellipse: s-maj=99.5km s-min=46.5km az=47.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.38**	**194**	P	Pn	17 10 50.2	+1.6
	2.3nm,0.8s,baz=34,slow=11,SNR=1.8						
WRA	**Warramunga Arr**	**14.80**	**159**	P	Pn	17 11 18.1	-0.7
	0.8nm,0.5s,baz=337,slow=13,SNR=6.1						
WRA				S	S	17 14 06.2	+3.0
	0.4nm,0.8s,baz=334,slow=21,SNR=2.2						
ASAR	**Alice Springs**	**18.17**	**165**	P	P	17 11 56.4	-0.3
	2.5nm,0.7s,baz=344,slow=11,SNR=36						
MKAR	**Makanchi Array**	**66.82**	**327**	P	P	17 18 29.0	-0.1
	0.2nm,0.7s,baz=142,slow=5.4,SNR=2.3						
	0.2nm,0.7s						

SCB 02 17:35:09.2±0.4, **15°.81S**×**60°.23W**, **h50**km, **MB5.4, ML2.8**/2, **Error ellipse: s-maj=1.8km s-min=0.6km az=0.0, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIV	**San Ignacio**	**0.83**	**258**	Pg	Pn	17 35 26.6	+1.9
SIV				Sg	Sn	17 35 39.2	+3.3
PTLB	**Pontes e Lacer**	**1.12**	**71**	Pg	Pn	17 35 31.3	+2.8
PTLB				Sg	Sn	17 35 47.6	+4.8
SOET	**ToroToro**	**5.81**	**246**	Pn	Pn	17 36 36.9	+3.8
SOET				Sn	Sn	17 37 42.2	+3.5
SOET				IAML		17 38 00.0	
	3.7nm,0.4s						

*BEO **02** 17:39:07.2±0.4, 44°.63N×15°.59E, h0km, ML2.2/3*

*VIE **02** 17:39:08.3±0.7, 44°.81N×15°.66E, h4km±3km, mb2.6/11, ml2.4/15, Error ellipse: s-maj=4.2km s-min=3.3km az=160.0 76 km S of Karlovac*

*PRU **02** 17:39:11.9, 45°.05N×15°.86E, h1km*

*RHSSO **02** 17:39:13.6±0.9, 44°.83N×15°.99E, h5km±3km, ML2.3/6*

ISC 02 17:39:07.1±1.0, **44°.73N**±0°.02×**15°.71E**±0°.02, **h5**km±8km, **n50**, σ1§**35**/100, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLIT	**Plitvice**	**0.16**	**338**	*e*Pg	**Pg**	**17 39 09.8**	**-0.6**
PLIT				Sg	**Sg**	**17 39 12.3**	**-0.3**
UDBI	**Udbina**	**0.20**	**169**	*i* Pg	**Pg**	**17 39 11.8**	**+0.6**
UDBI				Sg	**Sg**	**17 39 15.6**	**+1.8**
NVLJ	**Novalja**	**0.62**	**255**	*e*Pg	**Pg**	**17 39 18.3**	**-0.7**
NVLJ				Sg	**Sg**	**17 39 27.2**	**+0.2**
VIRC	**Vir**	**0.64**	**227**	*e*Pg	**Pg**	**17 39 19.2**	**-0.2**
VIRC				Sg	**Sb**	**17 39 28.4**	**-1.6**
RABC	**Rab**	**0.66**	**272**	*i* Pg	**Pg**	**17 39 19.2**	**-0.6**
RABC				Sg	**Sg**	**17 39 28.1**	**-0.3**
MORI	**Morici**	**0.86**	**180**	*e*Pg	**Pb**	**17 39 23.9**	**-0.6**
MORI				Sg	**Sn**	**17 39 37.2**	**-1.6**
DUGI	**Dugi Otok**	**0.87**	**213**	*i* Pg	**Pg**	**17 39 23.4**	**-0.5**
DUGI				Sg	**Sb**	**17 39 36.1**	**-0.6**
KIJV	**Kijevo**	**0.88**	**145**	*i* Pg	**Pb**	**17 39 24.3**	**-0.6**
KIJV				Sg	**Sb**	**17 39 36.8**	**-0.1**
OZLJ	**Ozalj**	**0.90**	**349**	*i* Pg	**Pg**	**17 39 23.9**	**-0.6**
OZLJ				Sg	**Sg**	**17 39 36.5**	**+0.3**
BLY	**Banja Luka**	**1.05**	**88**	*e*Pg	**Pn**	**17 39 28.0**	**-0.5**
BLY				*e*Sg	**Sg**	**17 39 40.8**	**-0.2**
BLY	**Banja Luka**	**1.05**	**88**	*e*Pg	**Pb**	**17 39 27.6**	**-0.2**
BLY				*e*Sg	**Sn**	**17 39 43.4**	**-0.2**
RIY	**Rijeka**	**1.05**	**305**	*e*Pg	**Pg**	**17 39 26.0**	**-1.4**
RIY				*e*Sg	**Sg**	**17 39 39.8**	**-1.2**
ZIRJ	**Zirje**	**1.07**	**182**	*e*Pg	**Pn**	**17 39 27.7**	**-1.1**
ZIRJ				Sg	**Sn**	**17 39 43.7**	**-0.4**
ZAG	**Zagreb**	**1.12**	**10**	*e*Pg	**Pn**	**17 39 29.3**	**-0.1**
ZAG				Sg	**Sn**	**17 39 44.8**	**-0.4**
SLATY	**Slatina**	**1.14**	**84**	*e*Pg	**Pn**	**17 39 30.0**	**+0.3**
SLATY				*e*Sg	**Sb**	**17 39 43.9**	**-0.5**
MOSL	**Moslavina**	**1.16**	**40**	*i* Pg	**Pn**	**17 39 29.9**	**-0.1**
MOSL				Sg	**Sb**	**17 39 45.2**	**+0.3**
PTJ	**Puntijarka**	**1.19**	**9**	*e*Pg	**Pn**	**17 39 31.3**	**+0.7**
PTJ				Sg	**Sb**	**17 39 46.4**	**+0.3**
BRJN	**Brijuni**	**1.40**	**278**	*i* Pn	**Pg**	**17 39 34.1**	**+0.1**
BRJN				Sg	**Sg**	**17 39 53.1**	**+0.8**
LOBO	**Lobor**	**1.45**	**10**	*i* Pn	**Pb**	**17 39 34.5**	**-0.1**
LOBO				Sg	**Sg**	**17 39 54.1**	**+0.3**
KALN	**Kalnik**	**1.50**	**20**	*i* Pg	**Pb**	**17 39 35.4**	**-0.1**
KALN				Sn	**Sg**	**17 39 57.0**	**+1.7**
RICI	**Ricice**	**1.60**	**140**	*e*Pn	**Pg**	**17 39 38.0**	**+0.2**
RICI				Sn	**Sg**	**17 40 02.7**	**+4.0**
HVAR	**Hvar**	**1.64**	**161**	*e*Pn	**Pg**	**17 39 38.6**	**0.0**
HVAR				Sn	**Sg**	**17 40 02.0**	**+2.2**
MAKA	**Makarska**	**1.72**	**146**	*e*Pn	**Pg**	**17 39 39.8**	**-0.3**
MAKA				Sn	**Sg**	**17 40 05.3**	**+2.8**
BEHE	**Becsehely**	**1.90**	**23**	*e*Pn	**Pg**	**17 39 44.4**	**+0.9**
BEHE				*e*Sn	**Sb**	**17 40 06.8**	**+0.6**
OBKA	**Obir**	**1.96**	**336**	*e*Pn	**Pb**	**17 39 42.2**	**-1.2**
	0.3nm,0.1s,SNR=27						
OBKA				*e*Pg	**Pg**	**17 39 43.6**	**-1.0**
	5.1nm,0.2s						
OBKA				Sn	**Sb**	**17 40 07.0**	**-1.1**
	44nm,0.6s						
SOKA	**Soboth**	**2.01**	**347**	*e*Pn	**Pn**	**17 39 42.2**	**+0.5**
	2.1nm,0.2s,SNR=12						
SOKA				*e*Sn	**Sn**	**17 40 06.4**	**-0.9**
	4.6nm,0.4s						
LSTV	**Lastovo**	**2.14**	**156**	*e*Pn	**Pg**	**17 39 46.6**	**-1.5**
LSTV				Sn	**Sg**	**17 40 15.3**	**-0.5**
STON	**Ston**	**2.35**	**141**	*e*Pn	**Pb**	**17 39 49.6**	**-0.3**
STON				Sn	**Sg**	**17 40 20.4**	**-2.2**
STON	**Ston**	**2.35**	**141**	*e*Pg	**Pg**	**17 39 50.6**	**-1.6**
STON				*e*Sg	**Sb**	**17 40 19.7**	**+0.5**
ARSA	**Arzberg**	**2.53**	**357**	*i* Pn	**Pn**	**17 39 48.7**	**-0.1**
	0.5nm,0.2s						
ARSA				*e*Sn	**Sn**	**17 40 18.3**	**-1.7**
	2.5nm,0.5s						
MORH	**Mrgy, Hungar**	**2.54**	**53**	*e*Pn	**Pb**	**17 39 52.9**	**-0.4**
MORH				*e*Sn	**Sn**	**17 40 21.6**	**+1.2**
KLINJ	**Klinje**	**2.60**	**126**	*e*Pn	**Pg**	**17 39 55.0**	**-1.9**
KLINJ				*e*Sn	**Sb**	**17 40 26.4**	**-0.1**
DBRK	**Dubrovnik**	**2.71**	**138**	*e*Pn	**Pb**	**17 39 54.9**	**-1.3**
DBRK				Sn	**Sb**	**17 40 29.5**	**-0.2**
TEKS	**Tekeris**	**2.73**	**92**	*e*Pn	**Pn**	**17 39 53.2**	**+1.5**
TREB	**Trebinje**	**2.78**	**135**	*e*Pn	**Pg**	**17 39 58.4**	**-1.9**
TREB				*e*Sn	**Sb**	**17 40 31.1**	**-0.4**
BBLS	**Lazi&#263i**	**2.79**	**107**	*e*Pn	**Pn**	**17 39 53.8**	**+1.3**
RUDO	**Rudo**	**2.86**	**112**	*e*Pn	**Pb**	**17 39 58.4**	**-0.2**
RUDO				*e*Sn	**Sb**	**17 40 30.4**	**-3.5**
KBA	**Koelnbreinsper**	**2.87**	**326**	*e*Pn	**Pn**	**17 39 55.5**	**+1.8**
	1.4nm,0.4s						
KBA				*e*Sn	**Sn**	**17 40 30.5**	**+1.8**
	2.6nm,0.4s						
RONA	**Rosalia, Austr**	**3.00**	**8**	*i* Pn	**Pn**	**17 39 56.3**	**+0.9**
	4.2nm,0.2s,SNR=16						
RONA				*e*Sn	**Sn**	**17 40 31.2**	**-0.5**
	0.8nm,0.2s						
ABTA	**Abfaltersbach**	**3.01**	**313**	*e*Pn	**Pn**	**17 39 56.4**	**+0.8**
	1.0nm,0.3s						
ABTA				*e*Pg	**Pg**	**17 40 03.5**	**-1.4**
	1.6nm,0.2s						
ABTA				*e*Sn	**Sn**	**17 40 33.2**	**+1.0**
	2.4nm,0.5s						
CONA	**Conrad Observa**	**3.20**	**2**	*i* Pn	**Pn**	**17 39 59.2**	**+1.0**
	3.2nm,0.2s,SNR=14						
CONA				*i* Sn	**Sn**	**17 40 35.8**	**-1.0**
	2.5nm,0.4s						
MOA	**Molln**	**3.28**	**343**	*i* Pn	**Pn**	**17 40 01.3**	**+2.2**
	3.4nm,0.4s,SNR=5.3						
MOA				*i* Sn	**Sn**	**17 40 38.8**	**+0.2**
	2.5nm,0.4s						
LESA	**Schwarzleotal**	**3.42**	**323**	*e*Pn	**Pn**	**17 40 02.8**	**+1.6**
	2.5nm,0.4s						
LESA				*i* Sn	**Sn**	**17 40 43.3**	**+1.1**
	1.7nm,0.3s						
WTTA	**Wattenberg**	**3.81**	**313**	*i* Pn	**Pn**	**17 40 09.2**	**+2.7**
	1.8nm,0.3s						
WTTA				*i* Sn	**Sn**	**17 40 52.5**	**+0.7**
	2.5nm,0.3s						
WATA	**Walderalm**	**3.88**	**314**	*i* Pn	**Pn**	**17 40 10.3**	**+2.7**
	0.8nm,0.2s						
WATA				*e*Sn	**Sn**	**17 40 55.4**	**+1.8**
	3.3nm,0.5s						
SQTA	**Sankt Quirin**	**4.01**	**310**	*i* Pn	**Pn**	**17 40 10.7**	**+1.4**
	1.7nm,0.3s						
SQTA				*e*Sn	**Sn**	**17 40 57.1**	**+0.5**
	2.4nm,0.4s						
MOTA	**Moosalm**	**4.14**	**311**	*i* Pn	**Pn**	**17 40 14.3**	**+3.1**
	0.5nm,0.2s						
MOTA				*e*Sn	**Sn**	**17 41 00.6**	**+0.7**
	1.5nm,0.4s						
FETA	**Feichten**	**4.17**	**305**	*i* Pn	**Pn**	**17 40 14.4**	**+3.0**
	2.3nm,0.4s						
FETA				*e*Pg	**Pg**	**17 40 25.5**	**-1.4**
	2.3nm,0.4s						
FETA				*i* Sn	**Sn**	**17 41 02.6**	**+2.0**
	1.8nm,0.6s						
SELS	**Selova**	**4.19**	**109**	*e*Pn	**Pn**	**17 40 13.6**	**+1.9**
KHC	**Kasperske Hory**	**4.64**	**342**	*e*PN	**Pn**	**17 40 18.8**	**+0.9**
KHC				*e*SN	**Sn**	**17 41 09.3**	**-2.8**

*NEIC **02** 17:39:28.6±2.4, 35°.88N±0°.04×140°.15E±0°.08, h98km±7km, mb4.6/23, Error ellipse: s-maj=9.1km s-min=6.2km az=104.0*

*NIED **02** 17:39:29.5, 35°.87N×140°.02E, h104km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=4.52; $M_{\theta\theta}$=0.67; $M_{\phi\phi}$=3.85; $M_{r\theta}$=-1.42; $M_{\theta\phi}$=2.91; $M_{r\phi}$=4.16; Fault plane solution: M_0=6.74000×10^{14} NP1:ϕ_s=56.00000°, δ=36.00000°, λ=-43.00000°. NP2:ϕ_s=183.00000°, δ=66.00000°, λ=-118.00000°.*

*IDC **02** 17:39:29.1±1.1, 35°.77N×140°.00E, h112km±9km, mb3.6/14, mbtmp4.0/18 Error ellipse: s-maj=17.1km s-min=7.0km az=66.0*

*JMA **02** 17:39:29.5±0.2, 35°.9N±0°.5×140°.0E±0°.8, h104km±1km, MV3.9/38, SOUTHERN IBARAKI PREF*

JMA Felt I J1 at SOUTHERN IBARAKI PREF .

ISC 02 17:39:28.6±0.7, **35°.93N**±0°.04×**140°.06E**±0°.04, **h102**km±6km, **n101**, σ1§**50**/111, **mb4.2**/26, **11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.31**	**21**	⇓P	**Pn**	**17 39 45.2**	**+1.7**
JYT				⇓S	**Sn**	**17 39 56.9**	**+2.3**
TOK	**Tokyo**	**0.34**	**225**	⇓P	**Pn**	**17 39 45.7**	**+2.1**
JAG	**Ashikaga**	**0.69**	**315**	P	**Pn**	**17 39 47.8**	**+1.7**
JRY	**Ryogami san**	**0.94**	**275**	⇓P	**Pn**	**17 39 50.2**	**+1.6**
JOD2	**Odawara 2**	**1.03**	**230**	⇓P	**Pn**	**17 39 49.5**	**-0.1**
JOD2				⇓*e*S	**Sn**	**17 40 04.7**	**-0.6**
JKT	**Katashina**	**1.06**	**322**	P	**Pn**	**17 39 51.5**	**+1.6**
BSO3	**Boso 3**	**1.19**	**162**	P	**Pn**	**17 39 51.5**	**+0.5**
JYN	**Shimob**	**1.30**	**251**	⇓P	**Pn**	**17 39 53.1**	**+0.5**
JYN				⇓*e*S	**Sn**	**17 40 11.4**	**+0.5**
JIM2	**Oshima 3**	**1.32**	**203**	⇓P	**Pn**	**17 39 52.2**	**-0.6**
BSO1	**Boso 1**	**1.48**	**149**	P	**Pn**	**17 39 54.7**	**+0.5**
BSO1				*e*S	**Sn**	**17 40 14.8**	**+1.2**
MJAR	**Matsushiro Arr**	**1.61**	**293**	P	**Pn**	**17 39 57.1**	**+0.8**
	101nm,0.5s,baz=128,slow=10,SNR=909						
MJAR				S	**Sn**	**17 40 18.8**

HHC pmax pmax
comp=Z,7.0nm,0.5s
HHC pmax pmax
comp=Z,140nm,4.7s
SONM Songino Array 27.52 306 P P 17 45 04.9 -0.7
comp=Z,1.3nm,0.6s,baz=107,slow=9.4,SNR=7.1
comp=Z,1.3nm,0.6s
H11N2 WAKE ISLAND Hy 28.57 117 T T 18 15 01.3
baz=308,slow=75,SNR=25
H11N1 WAKE ISLAND Hy 28.58 117 T T 18 15 03.8
baz=308,slow=75,SNR=16
H11N3 WAKE ISLAND Hy 28.59 117 T T 18 15 02.7
baz=308,slow=75,SNR=18
H11S1 WAKE ISLAND Hy 29.23 119 T T 18 15 44.7
baz=311,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 29.23 119 T T 18 15 45.4
baz=311,slow=76,SNR=8.4
H11S2 WAKE ISLAND Hy 29.24 119 T T 18 15 56.7
baz=311,slow=76,SNR=6.8
PZH PanZhiHua 33.91 265 P P **17 46 03.1 +1.1**
CMAR Chiang Mai Arr 40.16 255 P P **17 46 53.8 -1.1**
comp=Z,0.2nm,0.5s,baz=43,slow=7.8,SNR=2.1
comp=Z,0.2nm,0.5s
ZALV Zalesovo Beam 41.86 313 P P **17 47 08.2 -0.1**
comp=Z,1.5nm,0.4s,baz=97,slow=7.8,SNR=9.6
comp=Z,1.5nm,0.4s
MKAR Makanchi Array 43.79 303 P P **17 47 23.4 -0.6**
MKAR Makanchi Array 43.79 303 P P **17 47 23.9 -0.1**
comp=Z,1.7nm,0.5s,baz=86,slow=9.2,SNR=22
comp=Z,1.7nm,0.5s
MAKZ Makanchi 44.00 303 P 17 47 25.4 -0.3
EVN Everest 45.40 276 P P **17 47 37.9 0.0**
KURK Kurchatov 45.76 309 P 17 47 39.2 -0.3
KURK IAmb IAmb 17 47 41.9
comp=Z,8.4nm,0.6s
KURBB Kurchatov Arra 45.83 309 P P **17 47 39.9 -0.2**
comp=Z,5.4nm,0.4s,baz=78,slow=7.3,SNR=55
comp=Z,5.4nm,0.4s
D19K Kuna River 46.81 26 P P **17 47 47.8 +0.2**
D19K IAmb IAmb 17 48 33.5
comp=Z,12nm,1.4s
D20K Etivluk River 47.40 26 P P **17 47 52.8 +0.7**
D20K IAmb IAmb 17 48 05.5
comp=Z,7.7nm,1.2s
TARG Taragay, Kyrgy 47.91 297 P 17 47 57.6 +0.6
TARG IAmb IAmb 17 48 00.4
comp=Z,4.9nm,0.8s
KDJ Kajisay 48.26 297 P P **17 48 00.3 +0.9**
KDAK Kodiak Island 48.65 41 P P **17 48 02.7 +0.9**
HNR Honiara 48.86 154 P P **17 48 04.3 +0.4**
E22K Anaktuvuk Pass 49.08 27 P P **17 48 06.3 +1.2**
E22K IAmb IAmb 17 48 07.8
comp=Z,8.3nm,1.2s
BVAR Borovoye Array 50.51 313 P P **17 48 15.7 -0.5**
comp=Z,2.1nm,0.3s,baz=86,slow=7.3,SNR=11
comp=Z,2.1nm,0.3s
IL31 51.01 32 P P **17 48 20.2 +0.6**
ILAR Eielson Array 51.01 32 P P **17 48 20.4 +0.8**
comp=Z,1.0nm,0.8s,baz=274,slow=5.6,SNR=13
comp=Z,1.0nm,0.8s
BMAR Burnt Mountain 51.82 28 P P **17 48 26.9 +1.2**
SCRK Sand Creek 52.32 33 P P **17 48 30.3 +0.7**
WAX Waxell Ridge 53.32 37 P P **17 48 38.6 +1.7**
I28M Miner Creek 53.87 31 P P **17 48 42.2 +1.3**
SIMJ Simiganj 55.26 296 P 17 48 52.0 +0.6
SIMJ IAmb IAmb 17 48 56.2
comp=Z,2.7nm,1.0s
I30M Mount Dempster 55.38 31 P P **17 48 53.1 +1.2**
I30M IAmb IAmb 17 48 54.9
comp=Z,2.3nm,0.8s
WB0 Warramunga Arr 55.66 186 P P **17 48 52.1 -2.0**
WB0 IAmb IAmb 17 49 30.4
comp=Z,14nm,1.5s
WR8 Warramunga Arr 55.83 186 P P **17 48 53.4 -2.0**
WR8 IAmb IAmb 17 49 23.8
comp=Z,15nm,1.4s
WRA Warramunga Arr 55.83 187 P P **17 48 53.4 -2.1**
comp=Z,0.8nm,0.6s,baz=3.2,slow=7.3,SNR=10.0
comp=Z,0.8nm,0.6s
G31M Satah River 55.87 28 P P **17 48 55.7 +0.6**
G31M IAmb IAmb 17 49 06.6
comp=Z,13nm,1.4s
ARTI Arti 56.57 319 P P **17 49 00.0 -0.3**
AB31 Akbulak array 57.81 310 P 17 49 08.8 -0.3
AB31 IAmb IAmb 17 49 13.4
comp=Z,1.4nm,0.5s
ABKAR Akbulak array 57.81 310 P P **17 49 08.8 -0.3**
ASAR Alice Springs 59.56 187 P P **17 49 20.9 -0.6**
ASAR Alice Springs 59.56 187 P P **17 49 19.1 -2.4**
comp=Z,0.4nm,0.9s,baz=349,slow=7.7,SNR=4.5
comp=Z,0.4nm,0.9s
FINES FINESS Array B 69.27 332 P P **17 50 24.4 +0.1**
comp=Z,3.4nm,0.9s,baz=62,slow=5.5,SNR=4.9
comp=Z,3.4nm,0.9s
NVAR Mina Array Bea 76.52 52 P P **17 51 09.0 +1.1**
comp=Z,0.8nm,0.6s,baz=313,slow=4.8,SNR=3.0
comp=Z,0.8nm,0.6s
BRTR Keskin Array B 78.75 311 P P **17 51 21.8 +1.6**
comp=Z,0.9nm,0.9s,baz=27,slow=9.7,SNR=3.8
comp=Z,0.9nm,0.9s
TXAR Lajitas Array 91.66 52 P P **17 52 25.2 +0.5**
comp=Z,0.3nm,0.5s,baz=296,slow=5.1,SNR=3.5
comp=Z,0.3nm,0.5s
LPAZ La Paz 148.19 59 PKPbc **PKPdf 17 59 01.1 +0.6**
comp=Z,0.8nm,0.6s,baz=270,slow=1.0,SNR=1.7

*CATAC **02** 17:40:02.6±0.4, 11°N±2°×8°7W±°, h10km±3km, M4.5/29, MLv4.5/29, Error ellipse: s-maj=5.5km s-min=3.5km az=20.8, confirmed*
*UCR **02** 17:40:04.8±0.5, 11°.16N×87°.08W, h20km, MW4.9*
*NEIC **02** 17:40:06.9±1.3, 11°.26N±0°.06×86°.86W±0°.03, h41km±10km, mb4.5/91, Error ellipse: s-maj=9.4km s-min=2.5km az=207.0*
*SNET **02** 17:40:06.7±5.0, 11°.52N×86°.69W, h94km, ML4.2*
*IDC **02** 17:40:08.5±1.8, 11°.54N×86°.62W, h52km±19km, mb3.7/6, mbtmp3.9/8, ML3.6/2, MS3.3/9, Error ellipse: s-maj=55.5km s-min=11.5km az=44.0*
ISC 02 17:40:04.6±1.3, 11°.18N±0°.03×87°.03W±0°.04, h27km±10km, n170, σ1°36/160, mb4.5/42, MS3.4/6, 15C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NADN	**Granada**	**1.13**	**60**	⇑P	**Pb**	**17 40 24.4**	**-1.0**
NADN				S	**Sn**	**17 40 42.4**	**+3.2**
SABN	**Sabanita**	**1.15**	**47**	P	**Pn**	**17 40 24.5**	**-0.5**
NANN	**Nandasmo**	**1.17**	**49**	⇑P	**Pb**	**17 40 26.7**	**+0.6**
ABCN	**Banco Central**	**1.17**	**37**	P	**Pb**	**17 40 26.5**	**+0.3**
MASN	**Masaya**	**1.18**	**47**	S	**Sn**	**17 40 43.5**	**+2.9**
MAS3	**Al N del Volca**	**1.18**	**45**	P	**Pb**	**17 40 25.9**	**-0.5**
MAS3				S	**Sn**	**17 40 43.9**	**+3.2**
UNAN	**Cigeo UNAN**	**1.19**	**38**	⇑P	**Pb**	**17 40 26.1**	**-0.3**
UNAN				S	**Sn**	**17 40 44.4**	**+3.7**
USIM	**UNAN**	**1.19**	**38**		**Pb**	**17 40 25.5**	**-1.0**
USIM				Sn	**Sb**	**17 40 38.4**	**-3.0**
ARIN	**Rivas**	**1.20**	**77**	S	**Sn**	**17 40 43.7**	**+2.6**
TISN	**Laguna Tiscapa**	**1.21**	**38**	⇑P	**Pb**	**17 40 26.6**	**-0.3**
APQ2	**Apoyeque**	**1.22**	**34**	P	**Pb**	**17 40 26.6**	**-0.5**
APQ2				S	**Sb**	**17 40 44.0**	**+1.5**
APQ2	**Apoyeque**	**1.22**	**34**	⇑P	**Pb**	**17 40 26.6**	**-0.5**
APQ2				S	**Sb**	**17 40 44.1**	**+1.6**
APYN	**Apoyeque**	**1.24**	**32**	P	**Pb**	**17 40 26.8**	**-0.5**
APYN				S	**Sb**	**17 40 45.4**	**+2.4**
APQN	**BB Volcan Apoy**	**1.26**	**34**	S	**Sb**	**17 40 46.0**	**+2.5**
APQN	**BB Volcan Apoy**	**1.26**	**34**	P	**Pn**	**17 40 26.1**	**-0.4**
WILN	**Americas 2**	**1.28**	**40**	⇑P	**Pb**	**17 40 27.3**	**-0.7**
WILN				S	**Sb**	**17 40 46.3**	**+2.3**
CNGA	**Al SSO del Vol**	**1.35**	**14**	⇑P	**Pb**	**17 40 28.5**	**-0.7**
CNGN	**Cerro Negro**	**1.35**	**14**		**Pn**	**17 40 28.1**	**+0.3**
CNGN				Sn	**Sn**	**17 40 42.3**	**-2.6**
CNGN	**Cerro Negro**	**1.35**	**14**	⇑P	**Pb**	**17 40 28.3**	**-1.0**
CNGN	**Cerro Negro**	**1.35**	**14**	S	**Sb**	**17 40 48.1**	**+1.9**
CNGN	**Cerro Negro**	**1.35**	**14**	*e*P	**Pb**	**17 40 28.5**	**-0.9**
MORN	**Al O del Volca**	**1.40**	**75**	⇑P	**Pb**	**17 40 29.1**	**-1.0**
MOM3	**MOM3**	**1.42**	**20**	⇑P	**Pb**	**17 40 29.4**	**-1.0**
MOM3				S	**Sb**	**17 40 50.5**	**+2.5**
CONN	**Concepcion**	**1.43**	**74**	⇑P	**Pb**	**17 40 29.0**	**-1.5**
CONN				S	**Sb**	**17 40 50.0**	**+1.8**
HERN	**Volcan Telica**	**1.44**	**8**	Pn	**Pn**	**17 40 28.4**	**-0.6**
CARN	**Rivas**	**1.48**	**89**	P	**Pb**	**17 40 30.2**	**-1.1**
CARN				S	**Sb**	**17 40 51.0**	**+1.3**
CARN	**Rivas**	**1.48**	**89**	*e*P	**Pb**	**17 40 31.2**	**-0.2**
POLN	**Al Sur del Vol**	**1.48**	**8**	S	**Sb**	**17 40 51.4**	**+1.6**
PKGN	**Cerro Pekin**	**1.48**	**2**	⇑P	**Pb**	**17 40 30.4**	**-1.1**
PKGN				S	**Sb**	**17 40 51.5**	**+1.5**
CRIN	**San Cristobal**	**1.51**	**359**		**Pn**	**17 40 30.7**	**+0.7**
CRIN	**San Cristobal**	**1.51**	**359**	⇑P	**Pb**	**17 40 30.9**	**-1.2**
CRIN	**San Cristobal**	**1.51**	**359**	S	**Sb**	**17 40 52.0**	**+1.1**
CRIN	**San Cristobal**	**1.51**	**359**	*e*P	**Pb**	**17 40 30.9**	**-1.2**
ELI1	**Hacienda Flor**	**1.54**	**110**	*e*P	**Pb**	**17 40 31.5**	**-0.9**
ALIBA	**Liberia Airpor**	**1.56**	**112**	*e*P	**Pb**	**17 40 31.7**	**-1.2**
LAPC	**Finca la Perla**	**1.62**	**104**	*e*P	**Pb**	**17 40 31.8**	**-1.9**
VRLE	**La Escondida,**	**1.68**	**103**	*e*P	**Pb**	**17 40 32.9**	**-1.9**
BUAI	**Buenos Aires**	**1.69**	**100**	*e*P	**Pb**	**17 40 33.4**	**-1.6**
GPS2	**Hotel Rincn d**	**1.70**	**104**	*e*P	**Pb**	**17 40 33.3**	**-1.8**
SAJU	**San Juanillo,**	**1.70**	**130**	*e*P	**Pn**	**17 40 32.0**	**-0.5**
JUD3	**Juan Diaz 3**	**1.77**	**124**		**Pn**	**17 40 33.3**	**-0.3**
CSGN	**Cosiguina Volc**	**1.86**	**344**	⇑P	**Pn**	**17 40 35.8**	**+0.9**
CSGN				S	**Sb**	**17 41 00.3**	**-0.6**
CSGN	**Cosiguina Volc**	**1.86**	**344**	*e*P	**Pn**	**17 40 35.6**	**+0.7**
POTN	**Potosi Cosigui**	**1.87**	**345**	⇑P	**Pn**	**17 40 35.8**	**+0.8**
POTN				S	**Sb**	**17 41 00.9**	**-0.2**
POTN	**Potosi Cosigui**	**1.87**	**345**	*e*P	**Pn**	**17 40 35.7**	**+0.8**
CUI	**Cuipilapa**	**1.90**	**106**	*e*P	**Pb**	**17 40 36.1**	**-2.5**
VMAR	**Armenia, Volca**	**1.91**	**101**	*e*P	**Pb**	**17 40 36.6**	**-2.2**
LIMN	**Finca el Limon**	**1.98**	**19**	P	**Pn**	**17 40 37.2**	**+0.7**
LIMN				S	**Sb**	**17 41 04.4**	**0.0**
MATN	**Matagalpa**	**2.05**	**32**	S	**Sb**	**17 41 06.5**	**+0.3**
INVE	**Universidad In**	**2.05**	**110**	*e*P	**Pb**	**17 40 42.4**	**+1.3**
TILA	**Tilaran**	**2.14**	**109**	*e*P	**Pb**	**17 40 42.9**	**+0.3**
JTS	**Las Juntas de**	**2.22**	**113**		**Pn**	**17 40 39.5**	**-0.2**
JUD3	**Las Juntas de**	**2.22**	**113**	P	**Pn**	**17 40 40.3**	**+0.7**
	11nm,0.3s,baz=302,slow=8.0,SNR=61						
JTS				S	**Sn**	**17 41 06.0**	**-0.3**
	206nm,0.7s,baz=256,slow=14,SNR=6.2						
JTS				LR	LR	17 41 12.6	
	comp=Z,146nm,19.3s,baz=292,slow=31						
	64nm,0.5s						
JTS	**Las Juntas de**	**2.22**	**113**	*e*P	**Pb**	**17 40 44.1**	**0.0**
CNCH	**Conchagua**	**2.23**	**339**	*e*P	**Pn**	**17 40 41.1**	**+1.1**
CNCH				*e*S	**Sb**	**17 41 10.9**	**-0.6**
LCND	**La Caada**	**2.28**	**338**	*e*P	**Pn**	**17 40 41.9**	**+1.3**
LCND	**La Caada**	**2.28**	**338**	⇓P	**Pn**	**17 40 41.8**	**+1.3**
TABAC	**Tabacon**	**2.32**	**107**	*e*P	**Pb**	**17 40 46.7**	**+1.0**
ARE1	**Arenal 1**	**2.38**	**107**	*e*P	**Pb**	**17 40 47.1**	**+0.4**
VARE2	**V. Arenal**	**2.38**	**107**	*e*P	**Pb**	**17 40 47.1**	**+0.3**
CEDE	**Laguna Cedeo**	**2.38**	**107**	*e*P	**Pb**	**17 40 47.0**	**+0.2**
RCON	**San Juan de Ri**	**2.44**	**20**	P	**Pn**	**17 40 44.3**	**+1.4**
RCON	**San Juan de Ri**	**2.44**	**20**	S	**Sb**	**17 41 16.0**	**-1.8**
SOCE	**Pocosol**	**2.49**	**108**		**Pn**	**17 40 41.9**	**-1.6**
RCPN	**Sur Rio San Ju**	**2.51**	**21**	P	**Pn**	**17 40 45.1**	**+1.4**
RCVN	**Varillal2**	**2.53**	**19**	P	**Pn**	**17 40 45.3**	**+1.2**
RCVN	**Varillal2**	**2.53**	**19**	S	**Sb**	**17 41 17.7**	**-2.3**
PACA	**Pacayal**	**2.61**	**331**	P	**Pn**	**17 40 46.4**	**+1.3**
PACA	**Pacayal**	**2.61**	**331**	S	**Sn**	**17 41 17.9**	**+1.9**
YUSH	**Yuscaran**	**2.77**	**4**	P	**Pn**	**17 40 48.9**	**+1.6**
TGUH	**Tegucigalpa,Un**	**2.87**	**355**		**Pn**	**17 40 48.8**	**0.0**
SCLA	**Alcaldia de Sa**	**3.01**	**327**	*e*P	**Pn**	**17 40 52.4**	**+1.8**
HDC	**Heredia**	**3.09**	**112**		**Pn**	**17 40 52.0**	**+0.2**
SIUN	**Universidad Ur**	**3.35**	**41**		**Pn**	**17 40 54.5**	**-0.7**
JAYA	**Jayaque - finc**	**3.42**	**316**	*e*P	**Pn**	**17 40 57.8**	**+1.5**
JAYA				*e*S	**Sn**	**17 41 34.2**	**-1.8**
MTO3	**Montecristo**	**3.93**	**325**		**Pn**	**17 41 04.4**	**+1.0**
ESQI	**Esquipulas**	**4.05**	**326**	Pn	**Pn**	**17 41 06.2**	**+1.2**
PIRO	**Carate, Puerto**	**4.56**	**127**		**Pn**	**17 41 12.9**	**+1.0**
BILN	**Bilwi Airport**	**4.56**	**51**	Pn	**Pn**	**17 41 10.9**	**-1.1**
BRU2	**Volcan**	**4.88**	**119**		**Pn**	**17 41 17.1**	**+0.6**
APG	**El Apazote**	**5.07**	**319**	P	**Pn**	**17 41 21.3**	**+2.2**
	0.1nm,0.4s,baz=97,slow=17,SNR=1.4						
PETF	**Flores**	**6.34**	**335**	Pn	**Pn**	**17 41 37.4**	**+1.1**
CMIG	**Matias Romero**	**9.62**	**309**	P	**Pn**	**17 42 23.8**	**+2.3**
	0.9nm,0.3s,baz=143,slow=5.5,SNR=7.1						
	1.6nm,0.3s						
SOR	**Soroa**	**12.17**	**18**	Pn	**Pn**	**17 42 55.7**	**-0.6**
TLIG	**Tlapa**	**12.85**	**301**		**Pn**	**17 43 07.5**	**+1.7**
ROSC	**El Rosal**	**14.06**	**116**	LR	LR	17 48 54.7	
	comp=Z,218nm,18.1s,baz=304,slow=38						
SLOR	**San Lorenzo -**	**14.55**	**144**	Pn	**Pn**	**17 43 30.4**	**+1.1**
RUSC	**La Rusia**	**14.75**	**110**		**Pn**	**17 43 31.5**	**-0.5**
FLOC	**Florencia**	**14.78**	**129**		**Pn**	**17 43 32.1**	**+0.1**
NMDO	**Nuevo Mundo**	**14.86**	**50**		**Pn**	**17 43 31.0**	**-2.0**
SDV	**Santo Domingo**	**16.30**	**97**	LR	LR	17 52 10.6	
	comp=Z,82nm,19.0s,baz=244,slow=45						
BAUV	**El Baul**	**18.82**	**95**	P	**P**	**17 44 19.7**	**-2.8**
HBVL	**Hebbronville**	**19.23**	**327**	P	**P**	**17 44 26.1**	**-0.8**
HBVL				IAmb	IAmb	17 44 33.2	
	comp=Z,45nm,1.4s						
441A	**DeRidder**	**20.30**	**345**	P	**P**	**17 44 38.2**	**-0.3**
HKT	**Hockley**	**20.40**	**338**	P	**P**	**17 44 40.1**	**+0.6**
TIGA	**Tifton**	**20.41**	**8**	P	**P**	**17 44 38.6**	**-1.0**
CRPR	**Cabo Rojo, PR**	**20.42**	**68**	P	**P**	**17 44 37.2**	**-2.7**
CRPR				IAmb	IAmb	17 44 50.1	
	comp=Z,27nm,1.1s						
833A	**Chaparral WMA,**	**20.62**	**328**	P	**P**	**17 44 42.9**	**+0.9**
250A	**Grady**	**20.71**	**2**	P	**P**	**17 44 42.5**	**-0.4**
250A				IAmb	IAmb	17 44 59.1	
	comp=Z,37nm,1.4s						
AOPR	**Arecibo Observ**	**20.84**	**68**	P	**P**	**17 44 42.7**	**-1.8**
HNVL	**Huntsville, TX**	**21.00**	**339**	P	**P**	**17 44 45.9**	**-0.2**
HNVL				IAmb	IAmb	17 44 55.2	
	comp=Z,22nm,0.8s						
VBMS	**Vicksburg**	**21.19**	**352**	P	**P**	**17 44 47.4**	**-0.6**
VBMS				IAmb	IAmb	17 44 52.5	
	comp=Z,21nm,0.7s						
152A	**Waverly Hall**	**21.50**	**5**	P	**P**	**17 44 51.3**	**-0.1**
152A				IAmb	IAmb	17 44 56.4	
	comp=Z,20nm,0.9s						
HNDO	**Hondo**	**21.54**	**330**	P	**P**	**17 44 52.3**	**+0.4**
NATX	**Nacogdoches**	**21.66**	**342**	P	**P**	**17 44 53.2**	**0.0**
NATX				IAmb	IAmb	17 44 57.5	
	comp=Z,24nm,0.9s						
LRAL	**Lakeview Retre**	**21.75**	**0**		**P**	**17 44 53.4**	**-0.8**
LRAL				IAmb	IAmb	17 44 58.1	
	comp=Z,10nm,0.8s						
Z47A	**Carrollton**	**21.94**	**358**	P	**P**	**17 44 54.9**	**-1.2**
Z47A				IAmb	IAmb	17 45 25.6	
	comp=Z,18nm,1.2s						
DRIO	**Del Rio**	**22.14**	**327**	P	**P**	**17 44 58.4**	**0.0**
DRIO				IAmb	IAmb	17 45 18.2	
	comp=Z,16nm,1.1s						
GOGA	**Godfrey**	**22.37**	**8**	P	**P**	**17 45 00.3**	**-0.4**
Y49A	**Blount Mountai**	**22.58**	**1**		**P**	**17 45 02.1**	**-0.9**
Y49A				IAmb	IAmb	17 45 04.8	
	comp=Z,9.3nm,0.6s						
Y52A	**Lilburn**	**22.75**	**6**	P	**P**	**17 45 02.9**	**-1.8**
Y52A				IAmb	IAmb	17 45 07.2	
	comp=Z,15nm,1.0s						
BRDY	**Brady**	**22.88**	**333**		**P**	**17 45 06.2**	**0.0**
TXAR	**Lajitas Array**	**23.82**	**322**		**P**	**17 45 16.2**	**+0.6**
TXAR	**Lajitas Array**	**23.82**	**322**	P	**P**	**17 45 17.6**	**+1.9**
	comp=Z,2.8nm,0.7s,baz=131,slow=9.3,SNR=25						
	comp=Z,2.8nm,0.7s						
TX31	**Lajitas Ar. Si**	**23.82**	**322**		**P**	**17 45 16.5**	**+0.8**
PLPT	**Palo Pinto**	**23.91**	**336**	IAmb	IAmb	17 45 31.0	
	comp=Z,8.6nm,0.9s						
MIAR	**Mount Ida**	**24.02**	**347**	IAmb	IAmb	17 45 19.7	
	comp=Z,8.0nm,0.7s						
CPCT	**Cooper Cave**	**24.27**	**5**	P	**P**	**17 45 19.2**	**-0.4**
CPCT				IAmb	IAmb	17 45 22.4	
	comp=Z,12nm,0.8s						
V48A	**Smith Brothers**	**24.45**	**0**	P	**P**	**17 45 21.1**	**-0.2**
MNHN	**Monahans**	**24.79**	**326**	IAmb	IAmb	17 45 32.0	
	comp=Z,12nm,0.9s						
CLTN	**Cedars of Leba**	**24.81**	**1**	P	**P**	**17 45 24.5**	**0.0**
FCAR	**Ozark Folk Cen**	**25.03**	**350**	P	**P**	**17 45 25.6**	**-1.0**
FCAR				IAmb	IAmb	17 45 26.6	
	comp=Z,7.0nm,0.8s						
LCAR	**Lake Charles**	**25.06**	**352**	IAmb	IAmb	17 45 26.9	
	comp=Z,8.4nm,0.8s						
X34A	**Smith Ranch, M**	**25.32**	**339**	P	**P**	**17 45 29.9**	**+0.7**
X34A				IAmb	IAmb	17 45 43.9	
	comp=Z,18nm,1.0s						
LPIG	**La Paz**	**25.59**	**303**	LR	LR	17 56 15.0	
	comp=Z,39nm,22.0s,baz=28,slow=38						
T47A	**Sharon Grove**	**25.70**	**360**	IAmb	IAmb	17 45 33.0	
	comp=Z,8.0nm,0.7s						
DKNS	**Dickens**	**25.75**	**333**	P	**P**	**17 45 33.2**	**0.0**
WMOK	**Wichita Mounta**	**25.79**	**337**		**P**	**17 45 34.7**	**+1.2**
WMOK				IAmb	IAmb	17 45 37.0	
	comp=Z,18nm,1.3s						
OK048	**Pawnee Station**	**26.68**	**342**		**P**	**17 45 41.7**	**+0.3**
SMWD	**Samnorwood**	**26.68**	**335**	IAmb	IAmb	17 45 52.8	
	comp=Z,9.0nm,0.9s						
MSTX	**Muleshoe**	**26.87**	**330**	IAmb	IAmb	17 45 54.6	
	comp=Z,9.1nm,0.8s						
CCM	**Cathedral Cave**	**27.03**	**353**		**P**	**17 45 43.8**	**-0.8**
CCM				IAmb	IAmb	17 45 44.7	
	comp=Z,7.7nm,1.0s						
P38A	**Dawn**	**28.92**	**350**	IAmb	IAmb	17 46 01.3	
	comp=Z,12nm,0.8s						
N49A	**Columbus Grove**	**29.73**	**4**	P	**P**	**17 46 07.7**	**-1.0**
MVCO	**Mesa Verde**	**32.33**	**327**	IAmb	IAmb	17 46 35.3	
	comp=Z,4.3nm,0.9s						
LPAZ	**La Paz**	**33.08**	**145**	P	**P**	**17 46 41.2**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=351,slow=8.4,SNR=5.1						
LPAZ				LR	LR	18 00 43.0	
	comp=Z,65nm,18.2s,baz=336,slow=37						
	comp=Z,0.6nm,0.3s						
PV03	**Paradox Valley**	**33.29**	**328**	IAmb	IAmb	17 46 43.6	
	comp=Z,4.5nm,0.8s						
PV11	**David Mesa, Pa**	**33.33**	**328**	IAmb	IAmb	17 46 43.9	
	comp=Z,6.2nm,0.7s						
PV17	**East Wray Mesa**	**33.36**	**328**	P	**P**	**17 46 41.7**	**+0.8**
PV17				IAmb	IAmb	17 46 44.1	
	comp=Z,5.3nm,0.6s						
PV20	**West Nyswonger**	**33.41**	**328**	IAmb	IAmb	17 47 05.0	
	comp=Z,6.8nm,1.1s						
PV10	**Paradox Valley**	**33.48**	**328**	IAmb	IAmb	17 46 43.8	
	comp=Z,7.4nm,0.8s						
PV23	**Carpenter Ridg**	**33.52**	**328**	IAmb	IAmb	17 46 45.4	
	comp=Z,8.3nm,0.9s						
SADO	**Sadowa**	**34.15**	**10**	LR	LR	17 59 31.7	
	comp=Z,246nm,18.5s,baz=205,slow=34						
P17A	**Butcher Ranch,**	**35.18**	**327**	IAmb	IAmb	17 47 00.4	
	comp=Z,4.6nm,0.9s						
F33A	**5 Mile Ranch,**	**35.44**	**349**	P	**P**	**17 46 56.6**	**-1.9**
BSUT	**Blindstream Ca**	**35.97**	**329**	IAmb	IAmb	17 47 12.6	
	comp=Z,5.4nm,1.2s						
PD31	**Pinedale Array**	**37.09**	**332**	IAmb	IAmb	17 47 27.2	
	comp=Z,6.4nm,1.4s						
PDAR	**Pinedale Array**	**37.09**	**332**	P	**P**	**17 47 13.0**	**+0.1**
PDAR	**Pinedale Array**	**37.09**	**332**	P	**P**	**17 47 13.5**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=125,slow=11,SNR=14						
	comp=Z,1.1nm,0.5s						
HWUT	**Hardware Ranch**	**37.17**	**329**		**P**	**17 47 13.4**	**-0.2**
HWUT				IAmb	IAmb	17 47 21.0	
	comp=Z,5.2nm,0.8s						
SIV	**San Ignacio**	**37.26**	**136**	LR	LR	18 03 36.5	
	comp=Z,57nm,19.6s,baz=280,slow=38						
AGMN	**Agassiz Nation**	**37.74**	**350**	IAmb	IAmb	17 47 18.6	
	comp=Z,6.5nm,0.8s						
TPAW	**Teton Pass**	**38.29**	**332**	IAmb	IAmb	17 47 25.8	
	comp=Z,3.5nm,0.8s						
NVAR	**Mina Array Bea**	**38.93**	**320**	P	**P**	**17 47 31.3**	**+2.8**
	comp=Z,0.5nm,0.5s,baz=120,slow=5.2,SNR=4.1						
	comp=Z,0.5nm,0.5s						
ULM	**Lac du Bonnet**	**39.63**	**351**	IAmb	IAmb	17 47 33.0	
	comp=Z,8.0nm,0.8s						
ULM	**Lac du Bonnet**	**39.63**	**351**	P	**P**	**17 47 32.4**	**-1.6**
	comp=Z,5.7nm,0.6s,baz=172,slow=8.9,SNR=4.9						
ULM				LR	LR	18 05 25.9	
	comp=Z,36nm,18.5s,baz=203,slow=39						
	comp=Z,5.7nm,0.6s						
E07A	**Sunnyside**	**44.90**	**328**	P	**P**	**17 48 16.5**	**-0.4**
E07A				IAmb	IAmb	17 48 19.1	
	comp=Z,5.5nm,0.8s						
H03N2	**Juan Fernandez**	**45.03**	**170**	T	T	18 36 24.5	
	baz=349						
H03N1	**Juan Fernandez**	**45.04**	**170**	T	T	18 36 29.0	
	baz=349						
H03N3	**Juan Fernandez**	**45.05**	**170**	T	T	18 36 27.6	
	baz=349						
HOOD	**Mount Hood Mea**	**45.08**	**326**	P	**P**	**17 48 19.2**	**+0.7**
HOOD				IAmb	IAmb	17 48 24.9	
	comp=Z,8.4nm,0.9s						
MXC	**Moxie City**	**45.14**	**328**		**P**	**17 48 18.9**	**0.0**
MXC				IAmb	IAmb	17 48 22.1	
	comp=Z,4.8nm,0.9s						
SCHQ	**Schefferville**	**46.38**	**16**	LR	LR	18 06 49.9	
	comp=Z,59nm,21.6s,baz=178,slow=35						
ILAR	**Eielson Array**	**67.35**	**336**	P	**P**	**17 50 56.9**	**-0.2**
ILAR	**Eielson Array**	**67.35**	**336**	P	**P**	**17 50 56.5**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=136,slow=5.3,SNR=7.2						
	comp=Z,0.6nm,0.7s						
KSRS	**Korea Array**	**121.56**	**328**	PKP	**PKiKP**	**17 58 56.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=0.5,slow=1.1,SNR=6.4						
ASAR	**Alice Springs**	**139.17**	**247**	PKP	**PKPdf**	**17 59 30.1**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=134,slow=2.7,SNR=4.2						
WRA	**Warramunga Arr**	**139.30**	**252**	PKP	**PKiKP**	**17 59 32.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=95,slow=1.1,SNR=1.4						
CMAR	**Chiang Mai Arr**	**149.97**	**349**	PKPbc	**PKPdf**	**17 59 49.2**

*IDC **02** 18:08:23.6±0.8, 2°.65S×138°.69E, h0km, mb3.9/10, mbtmp3.9/13, ML4.3/4, MS2.9/1, Error ellipse: s-maj=19.7km s-min=14.4km az=174.0*

*DJA **02** 18:08:27.9±0.6, 2°.5S×13°.9E±°, h13km±6km, M4.3/9, mb4.4/4, MLv4.2/9*

*NEIC **02** 18:08:28.9±1.8, 2°.8S±0°.1×138°.63E±0°.07, h37km±9km, mb4.1/16, Error ellipse: s-maj=15.0km s-min=10.8km az=175.0*

ISC 02 18:08:28.1±0.5, **2°.70S**±0°.06×**138°.65E**±0°.06, **h32**km, **n44,** σ1**9**22/43, **mb4.0**/14, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.71**	**5**	P	**Pb**	**18 08 38.8**	**-3.3**
GENI	**Genyem**	**1.52**	**86**	P	**Pn**	**18 08 53.2**	**+0.1**
JAY	**Jayapura**	**2.06**	**85**	Pn	**Pn**	**18 09 00.5**	**-0.1**
	25nm,0.3s,baz=236,slow=9.5,SNR=94						
JAY				Lg	Lg	18 09 27.3	
	22nm,0.3s,baz=164,slow=18,SNR=5.0						
	51nm,0.3s						
JAY	**Jayapura**	**2.06**	**85**	P	**Pn**	**18 09 00.7**	**+0.1**
JAY				S	**Sn**	**18 09 27.3**	**+2.1**
BAKI	**Biak**	**2.95**	**301**	P	**Pn**	**18 09 15.0**	**+2.2**
RKPI	**Ransiki, Papua**	**4.62**	**285**	P	**Pn**	**18 09 36.5**	**+0.7**
MMPI	**Merauke**	**5.98**	**163**	P	Pn	18 10 00.8	+6.4
	233nm,0.8s						
FAKI	**Fak Fak**	**6.40**	**268**		**Pn**	**18 10 00.3**	**+0.1**
FAKI	**Fak Fak**	**6.40**	**268**	P	**Pn**	**18 10 03.0**	**+2.8**
	0.1nm10nm,1.1s						
SWI	**Sorong**	**7.61**	**284**	P	**Pn**	**18 10 17.8**	**+0.9**
COEN	**Coen**	**12.04**	**158**	Pn	Pn	18 11 13.3	-4.4
MTN	**Manton Dam**	**12.52**	**216**	Pn	**Pn**	**18 11 22.2**	**-2.0**
SOEI	**Soe**	**15.91**	**243**		**Pn**	**18 12 09.5**	**-0.5**
KNRA	**Kununurra**	**16.16**	**216**		**Pn**	**18 12 11.9**	**-1.1**
KNRA				IAmb	IAmb	18 12 23.8	
	comp=Z,20nm,1.1s						
BATI	**Baumata**	**16.64**	**243**	Pn	**Pn**	**18 12 19.7**	**+0.5**
	comp=Z,8.5nm,0.3s,baz=128,slow=1.9,SNR=21						
GUMO	**Guam**	**17.32**	**21**	LR	LR	18 18 47.9	
	comp=Z,46nm,20.8s,baz=142,slow=36						
WR8	**Warramunga Arr**	**17.62**	**193**	P	**Pn**	**18 12 31.4**	**+0.1**
WR8				IAmb	IAmb	18 12 39.9	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**17.64**	**193**	P	**Pn**	**18 12 29.1**	**-2.6**
WRA	**Warramunga Arr**	**17.64**	**193**	P	**Pn**	**18 12 30.8**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=15,slow=12,SNR=7.9						
WRA				Sn	Sn	18 15 38.3	-9.0
	comp=Z,0.1nm,0.3s,baz=15,slow=22,SNR=5.6						
	comp=Z,3.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.92**	**219**	P	**P**	**18 12 56.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.92**	**219**	P	**P**	**18 12 59.0**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=39,slow=14,SNR=2.6						
FITZ				Sn	S	18 16 31.3	-8.7
	comp=Z,0.1nm,0.3s,baz=128,slow=17,SNR=1.5						
	comp=Z,3.0nm,0.7s						
AS31	**Alice Springs**	**21.34**	**192**		**P**	**18 13 12.5**	**-0.2**
AS31				IAmb	IAmb	18 13 20.7	
	comp=Z,6.5nm,0.8s						
ASAR	**Alice Springs**	**21.34**	**192**		**P**	**18 13 12.4**	**-0.3**
ASAR	**Alice Springs**	**21.34**	**192**	P	**P**	**18 13 12.7**	**0.0**
	comp=Z,3.2nm,0.6s,baz=13,slow=9.1,SNR=27						
ASAR				S	**S**	**18 17 06.4**	**-1.8**
	comp=Z,1.2nm,0.8s,baz=12,slow=24,SNR=4.9						
	comp=Z,3.2nm,0.6s						
INKA	**Innaminka**	**24.98**	**176**	P	**P**	**18 13 47.6**	**-1.4**
CMAR	**Chiang Mai Arr**	**44.38**	**300**	P	**P**	**18 16 35.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=98,slow=11,SNR=1.7						
	comp=Z,0.3nm,0.5s						
RTZ	**Ruatahuna**	**49.99**	**141**	P	**P**	**18 17 20.5**	**+1.0**
HILR	**Hailar Array B**	**54.56**	**345**	P	**P**	**18 17 52.6**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=142,slow=13,SNR=2.2						
	comp=Z,2.2nm,0.5s						
SONM	**Songino Array**	**57.69**	**335**	P	**P**	**18 18 16.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=142,slow=5.6,SNR=2.4						
	comp=Z,0.4nm,0.5s						
PETK	**Petropavlovsk-**	**57.87**	**13**	P	**P**	**18 18 17.4**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=180,slow=5.9,SNR=5.5						
	comp=Z,3.2nm,0.9s						
YAK	**Yakutsk**	**64.92**	**355**	P	**P**	**18 19 04.7**	**+0.5**
MKAR	**Makanchi Array**	**69.75**	**322**	P	**P**	**18 19 34.6**	**-0.6**
MKAR	**Makanchi Array**	**69.75**	**322**	P	**P**	**18 19 35.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=106,slow=8.9,SNR=7.6						
	comp=Z,0.7nm,0.7s						
MAKZ	**Makanchi**	**69.94**	**322**	P	**P**	**18 19 36.4**	**0.0**
MAKZ				IAmb	IAmb	18 19 40.7	
	comp=Z,3.4nm,1.1s						
ZALV	**Zalesovo Beam**	**71.90**	**330**	P	**P**	**18 19 48.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=122,slow=4.0,SNR=2.7						
	comp=Z,0.4nm,0.3s						
KURK	**Kurchatov**	**73.68**	**325**	P	**P**	**18 19 58.6**	**0.0**
KURK				IAmb	IAmb	18 20 02.0	
	comp=Z,2.0nm,1.1s						
KURBB	**Kurchatov Arra**	**73.69**	**325**	P	**P**	**18 19 59.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=115,slow=5.4,SNR=4.1						
	comp=Z,0.5nm,0.4s						
BVAR	**Borovoye Array**	**79.27**	**325**	P	**P**	**18 20 31.0**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=111,slow=7.8,SNR=7.6						
	comp=Z,0.8nm,0.5s						
OHAK	**Old Harbor**	**80.58**	**31**	P	**P**	**18 20 38.2**	**+1.0**
L18K	**Granite Mounta**	**80.86**	**25**	P	**P**	**18 20 40.0**	**+1.3**
L18K				IAmb	IAmb	18 21 23.0	
	comp=Z,4.5nm,1.2s						
KDAK	**Kodiak Island**	**81.13**	**30**	P	**P**	**18 20 41.3**	**+1.1**
M20K	**Styx River**	**82.28**	**26**	P	**P**	**18 20 46.5**	**+0.2**
D19K	**Kuna River**	**82.97**	**19**	P	**P**	**18 20 50.2**	**+0.5**
ILAR	**Eielson Array**	**85.85**	**24**	P	**P**	**18 21 03.4**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=263,slow=4.3,SNR=17						
	comp=Z,0.6nm,0.6s						

*MOS **02** 18:08:40.7±0.9, 55°.72S×26°.26W, h9km, mb6.5/17, MS5.9/41, Error ellipse: s-maj=15.8km s-min=8.8km az=102.2*

*IDC **02** 18:08:40.4±0.3, 55°.69S×26°.16W, h0km, mb5.6/27, mbtmp5.6/28, ML5.2/1, MS6.0/36, Error ellipse: s-maj=11.4km s-min=9.8km az=26.0*

*NEIC **02** 18:08:41.1±2.6, 55.74S±0°.08×26°.2W±0°.1, h8km±1km, mb6.3/205, Ms_20 6.1/785, Mwb6.0/125, Mww6.1/38, Error ellipse: s-maj=14.7km s-min=12.1km az=206.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr~0.13; Mθθ0.69; Mϕϕ~0.56; Mrθ~1.18; Mθϕ~0.59; Mϕr~0.03; Fault plane solution: M₀1.47000×10¹⁸ NP1: ϕs341.39000°, δ34.11000°, λ~6.33000°. NP2:ϕs76.63000°, δ86.46000°, λ~123.95000°. Principal axes: T 1.6322, Plg33.0000°, Azm195.0000°; N -0.4210, Plg34.0000°, Azm79.0000°; P -1.2112, Plg39.0000°, Azm316.0000°;*

*IPGP **02** 18:08:41.0, 55°.69S×26°.30W, h26km, Mw6.1, Fault plane solution: NP1:ϕs345.00000°, δ37.00000°, λ~20.00000°. NP2:ϕs91.00000°, δ78.00000°, λ~126.00000°.*

*ISC-PP **02** 18:08:41, 55°.74S×26°.24W, h8km, Mwppsm6.5, Moment Tensor Solution. s32 Moment tensor: Scale 10¹⁸Nm; Mrr~0.04±.06; Mθθ0.60±.14; Mϕϕ~0.57±.15; Mrθ~0.21±.19; Mθϕ~0.16±.12; Mϕr0.29±.13; Fault plane solution: M₀6.31000×10¹⁸ NP1:ϕs211.50000°, δ85.40000°, λ160.10000°. NP2:ϕs303.10000°, δ70.20000°, λ4.90000°.*

*NEIC **02** 18:08:42, 55°.50S×26°.14W, h20km, Moment Tensor Solution. Duration: 5²6 Moment tensor: Scale 10¹⁸Nm; Mrr~0.41; Mθθ0.69; Mϕϕ~0.28; Mrθ~0.79; Mθϕ~1.23; Mϕr~0.29; Fault plane solution: M₀1.61000×10¹⁸ NP1: ϕs345.70000°, δ56.06000°, λ~14.27000°. NP2:ϕs83.78000°, δ78.20000°, λ~145.23000°. Principal axes: T 1.6528, Plg14.0000°, Azm211.0000°; N -0.0936, Plg54.0000°, Azm100.0000°; P -1.5592, Plg33.0000°, Azm310.0000°;*

*NEIC **02** 18:08:42, 55°.70S×26°.32W, h20km*

*NEIC **02** 18:08:42, 55°.70S×26°.32W, h10km*

*OSUNB **02** 18:08:47.0±0.3, 55°.79S×26°.08W, h49km±2km, mB6.7/66, Error ellipse: s-maj=2.7km s-min=2.7km az=0.0*

*BJI **02** 18:08:46.7, 55°.55S×26°.25W, h40km, mB6.0/52, Ms6.2/79, Ms7 6.0/78*

*GCMT **02** 18:08:47.1±0.1, 55°.66S×25°.80W, h21km, MW6.1/163, Moment Tensor Solution. s161,c333; s163,c588; Duration: 2²8 Moment tensor: Scale 10¹⁸Nm; Mrr~0.59±.01; Mθθ0.99±.01; Mϕϕ~0.39±.01; Mrθ~1.07±.02; Mθϕ~1.24±.01; Mϕr~0.29±.02; Best double couple: M₀1.86400×10¹⁸ NP1:ϕs341.00000°, δ49.00000°, λ~17.00000°. NP2:ϕs82.00000°, δ78.00000°, λ~138.00000°. Principal axes: T 1.9700, Plg18.0000°, Azm206.0000°; N -0.2110, Plg46.0000°, Azm96.0000°; P -1.7590, Plg38.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 18:08:42.0±0.3, **55.74S**±0°.03×**26°.39W**±0°.03, **h12**km±1km, **h13**km:**pP-F, n1686,** σ1**97**/1463, **mb6.2**/176, **MS6.1**/498, **32C-30D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.99**	**280**		**Pn**	**18 10 13.1**	**+2.8**
HOPE				Sn	**Sn**	**18 11 13.8**	**-4.9**
HOPE	**Hope Point**	**5.99**	**280**	P	**Pn**	**18 10 13.5**	**+3.2**
HOPE				pmax	pmax		
	comp=Z,3μm,1.0s						
VNA1	**Neumayer--Stat**	**16.93**	**159**	⇑P	**P**	**18 12 38.7**	**-1.5**
	comp=Z,2μm,1.0s						
VNA1				⇑ScP	**ScP**	**18 20 56.9**	**-1.3**
	comp=E,55nm,1.0s						
I27DE	**GEORG VON NEUM**	**16.96**	**159**	Pn	**P**	**18 12 40.0**	**-0.5**
	baz=334,slow=13						
VNA3	**Neumayer Olymp**	**17.14**	**162**	⇑P	**Pn**	**18 12 40.4**	**-0.6**
	comp=Z,769nm,0.7s						
VNA3				⇓S	Sn	18 15 37.8	-13
	comp=N,157nm,0.7s						
VNA3				⇑ScP	**ScP**	**18 20 59.2**	**+0.5**
	comp=Z,22nm,0.8s						
ESPZ	**Base Esperanza**	**17.15**	**231**	P	**P**	**18 12 43.2**	**+0.5**
VNA2	**Neumayer--Watz**	**17.32**	**159**	⇑P	**Pn**	**18 12 42.9**	**-0.3**
	comp=Z,291nm,0.5s,baz=314,slow=14						
VNA2				⇑S	Sn	18 15 40.2	-15
	comp=E,176nm,1.1s,baz=130,slow=1.1						
VNA2				⇑ScP	**ScP**	**18 21 01.1**	**+2.0**
	comp=Z,25nm,0.7s,baz=321,slow=4.5						
SNAA	**Sanae**	**18.85**	**157**	⇑P	**Pn**	**18 13 02.6**	**+0.5**
	comp=Z,5μm,0.5s						
SNAA				⇑S	**Sn**	**18 16 24.5**	**-8.1**
	comp=E,1μm,0.6s						
SNAA				⇑ScP	**ScP**	**18 21 04.0**	**+1.6**
	comp=Z,346nm,0.8s						
SNAA	**Sanae**	**18.85**	**157**		**Pn**	**18 13 01.4**	**-0.6**
SNAA				IAmb	IAmb	18 13 12.5	
	comp=Z,4μm,2.0s						
SNAA	**Sanae**	**18.85**	**157**		**ScP**	**18 21 00.6**	**-1.9**
SNAA	**Sanae**	**18.85**	**157**	P	**Pn**	**18 13 02.0**	**0.0**
	comp=Z,8.0nm,0.3s,baz=314,slow=9.5,SNR=434						
SNAA				S	Sn	18 16 21.4	-11
	comp=Z,30nm,0.7s,baz=343,slow=20,SNR=1.9						
SNAA				LR	LR	18 18 56.2	
	comp=Z,60μm,21.9s,baz=320,slow=33						
SNAA				ScP	**ScP**	**18 21 03.8**	**+1.3**
	comp=Z,18nm,1.0s,baz=231,slow=4.1,SNR=6.0						
SNAA				P3KPbc		18 47 27.7	
	comp=Z,5.7nm,1.2s,baz=97,slow=5.1,SNR=6.6						
	comp=Z,348nm,0.9s						
SNAA	**Sanae**	**18.85**	**157**	*c iP*	**Pn**	**18 13 02.3**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,2μm,1.5s						
SNAA				MLR	MLR		
	comp=Z,18μm,14.0s						
EFI	**East Falkland**	**19.09**	**269**	P	**Pn**	**18 13 05.6**	**+0.7**
EFI	**East Falkland**	**19.09**	**269**	P	**Pn**	**18 13 05.6**	**+0.7**
EFI				pmax	pmax		
	comp=Z,295nm,1.0s						
TROLL	**Troll, Antarti**	**20.33**	**154**	⇑P	Pn	18 13 18.8	-1.0
	comp=Z,42μm,1.1s						
TROLL				⇑ScP	**ScP**	**18 21 06.9**	**+0.9**
	comp=Z,734nm,0.9s						
PMSA	**Palmer Station**	**20.45**	**229**	P	Pn	18 13 22.0	+1.1
PMSA				IAmb	IAmb	18 13 26.9	
	comp=Z,5μm,1.8s						
PMSA	**Palmer Station**	**20.45**	**229**	P	Pn	18 13 20.9	-0.1
	comp=Z,512nm,1.0s,baz=77,slow=8.7,SNR=58						
PMSA				S	Sn	18 17 12.6	+1.7
	comp=Z,32nm,1.0s,baz=73,slow=19,SNR=1.0						
PMSA				LR	LR	18 20 19.4	
	comp=Z,39μm,22.0s,baz=84,slow=34						
PMSA				ScP	**ScP**	**18 21 07.3**	**+1.2**
	comp=Z,12nm,0.7s,baz=49,slow=2.4,SNR=4.2						
	comp=Z,512nm,1.0s						
PMSA	**Palmer Station**	**20.45**	**229**	*e*P	Pn	18 13 22.7	+1.7
NVL	**N'lazarevskaya**	**22.28**	**147**	*e*P	**P**	**18 13 37.5**	**-1.0**
NVL				*e*PPP	PPP	18 14 10.0	
NVL				*e*S	**S**	**18 17 41.1**	**-1.9**
NVL				*e*SSS	SSS	18 18 24.5	
NVL				pmax	pmax		
	comp=Z,61nm,0.6s						
NVL				smax	smax		
	comp=N,14μm,11.8s						
SMAI	**San Martin Ant**	**22.30**	**220**	P	**P**	**18 13 40.6**	**+1.9**
SMAI				IAmb	IAmb	18 13 43.5	
	comp=Z,3μm,1.5s						
BELA	**Belgrano 2**	**22.43**	**185**	P	**P**	**18 13 39.5**	**-0.5**
MG01	**Puerto William**	**23.23**	**255**	P	**P**	**18 13 50.1**	**+1.5**
MG01				IAmb	IAmb	18 13 56.0	
	comp=Z,574nm,1.0s						
USHA	**Ushuaia**	**23.70**	**255**	LR	LR	18 21 27.7	
	comp=Z,20μm,21.8s,baz=100,slow=32						
MG02	**Cerro Sombrero**	**24.90**	**259**	P	**P**	**18 14 04.5**	**+0.1**
MG02				IAmb	IAmb	18 14 23.6	
	comp=Z,1μm,1.1s						
MG05	**Puerto Natales**	**27.20**	**259**	P	**P**	**18 14 25.6**	**+0.5**
AY03	**Cochrane**	**29.49**	**267**	P	**P**	**18 14 46.6**	**+1.0**
TRQA	**Tornquist**	**29.62**	**292**		**P**	**18 14 48.2**	**+1.3**
TRQA				IAmb	IAmb	18 14 50.6	
	comp=Z,2μm,1.7s						
TRQA	**Tornquist**	**29.62**	**292**	P	**P**	**18 14 48.2**	**+1.3**
TRQA				pmax	pmax		
	comp=Z,2μm,1.7s						
TRQA				MLR	MLR		
	comp=Z,19μm,22.0s						
TRQA	**Tornquist**	**29.62**	**292**	P	**P**	**18 14 49.2**	**+2.4**
TRQA				S	**S**	**18 19 40.9**	**-0.8**
COYC	**Coyhaique**	**30.18**	**270**		**P**	**18 14 52.5**	**+0.8**
FIUBA	**FACULTAD INGEN**	**30.53**	**300**	*e*P	**P**	**18 14 55.8**	**+1.0**
PLTB	**Pedras Altas**	**30.63**	**310**		**P**	**18 14 57.0**	**+1.1**
PLTB				IAmb	IAmb	18 14 59.6	
	comp=Z,2μm,1.7s						
PLTB	**Pedras Altas**	**30.63**	**310**	P	**P**	**18 14 57.3**	**+1.5**
PLTB				S	**S**	**18 19 58.0**	**+0.4**
PLTB	**Pedras Altas**	**30.63**	**310**	*e*P	**P**	**18 14 57.9**	**+2.1**
PLTB				*e*pP	pwP	18 15 15.9	+9.1
MGBA	**MARTIN GARCIA**	**30.75**	**301**	*e*P	**P**	**18 14 59.7**	**+3.0**
LL02	**Futaleuf**	**31.51**	**274**		**P**	**18 15 03.3**	**-0.2**
SYO	**Syowa Base**	**31.55**	**141**	⇑*i*sP	sP	18 15 03.8	-2.2
SYO	**Syowa Base**	**31.55**	**141**	⇓*i*PnPn	**PnPn**	**18 15 59.0**	**-7.5**
SYO	**Syowa Base**	**31.55**	**141**	⇑*i*PnPn	**PnPn**	**18 16 02.1**	**-4.4**
CNLB	**Canela**	**31.64**	**316**	P	**P**	**18 15 07.0**	**+2.2**
CNLB				S	**S**	**18 20 14.6**	**+1.0**
CNLB	**Canela**	**31.64**	**316**	*e*P	**P**	**18 15 07.1**	**+2.2**
CPSB	**Cacapava Do Su**	**31.73**	**312**	P	**P**	**18 15 07.8**	**+2.3**
CPSB				S	**S**	**18 20 15.5**	**+0.6**
CPSB	**Cacapava Do Su**	**31.73**	**312**	*e*P	**P**	**18 15 07.7**	**+2.2**
LL01	**San Ignacio de**	**32.35**	**275**	P	**P**	**18 15 10.2**	**-0.6**
PLCA	**Paso Flores**	**32.39**	**279**	P	**P**	**18 15 11.4**	**+0.1**
PLCA				ScP	**ScP**	**18 21 41.2**	**-0.5**
PLCA	**Paso Flores**	**32.39**	**279**	P	**P**	**18 15 11.7**	**+0.3**
	comp=Z,57nm,1.2s,baz=136,slow=8.4,SNR=31						
PLCA				ScP	**ScP**	**18 21 42.4**	**+0.7**
	comp=Z,16nm,1.0s,baz=112,slow=4.2,SNR=7.7						
	comp=Z,57nm,1.2s						
PLCA	**Paso Flores**	**32.39**	**279**	P	**P**	**18 15 11.5**	**+0.1**
PLCA				S	**S**	**18 20 19.8**	**-5.4**
PLCA	**Paso Flores**	**32.39**	**279**	*e*P	**P**	**18 15 11.7**	**+0.3**
GO07	**Milladeo Hill,**	**32.58**	**273**	P	**P**	**18 15 11.9**	**-1.0**
MAJ01	**Sao Joao Batis**	**32.68**	**321**	P	**P**	**18 15 15.7**	**+1.8**
MAJ01				S	**S**	**18 20 32.8**	**+3.1**
MAJ01	**Sao Joao Batis**	**32.68**	**321**	*e*P	**P**	**18 15 16.4**	**+2.4**
PSAL	**Palomas, Salto**	**33.00**	**305**	*e*P	**P**	**18 15 18.3**	**+1.7**
LL03	**Petrohue**	**33.16**	**276**	P	**P**	**18 15 16.9**	**-1.0**
LR05	**Currie**	**33.55**	**278**		**P**	**18 15 20.9**	**-0.4**
LL05	**Los Muermos**	**33.58**	**275**	P	**P**	**18 15 21.8**	**+0.2**
ITAB	**Concordia**	**34.00**	**316**		**P**	**18 15 26.9**	**+1.6**
ITAB	**Concordia**	**34.00**	**316**	P	**P**	**18 15 27.8**	**+2.4**
ITAB				S	**S**	**18 20 49.5**	**-0.7**
ITAB	**Concordia**	**34.00**	**316**	*e*P	**P**	**18 15 27.8**	**+2.4**
LR03	**Panguipulli**	**34.15**	**279**	P	**P**	**18 15 25.3**	**-1.3**
QSPA	**South Pole Qui**	**34.52**	**180**	P	**P**	**18 15 33.2**	**+3.5**
QSPA				S	**S**	**18 20 56.2**	**-1.6**
QSPA					**ScP**	**18 21 47.6**	**-1.2**
QSPA	**South Pole Qui**	**34.52**	**180**	IAMs_20	IAMs_20	18 28 47.7	
	comp=Z,48μm,21.0s						
QSPA	**South Pole Qui**	**34.52**	**180**	P	**P**	**18 15 33.9**	**+4.2**
	comp=Z,428nm,0.8s,baz=202,slow=2.9,SNR=1695						
QSPA				S	**S**	**18 21 01.0**	**+3.1**
	comp=Z,13nm,1.0s,baz=254,slow=22,SNR=1.7						
QSPA				ScP	**ScP**	**18 21 49.9**	**+1.1**
	comp=Z,43nm,1.1s,baz=167,slow=5.9,SNR=6.4						
QSPA				LR	LR	18 28 58.3	
	comp=Z,50μm,21.9s,baz=192,slow=35						
QSPA				P3KPbc		18 46 28.3	
	comp=Z,1.4nm,1.0s,baz=190,slow=2.7,SNR=2.3						
TIJ01	**Guaruva-PR**	**34.58**	**322**	P	**P**	**18 15 28.2**	**-2.3**
TIJ01				S	**S**	**18 20 56.3**	**-3.1**
LR04	**Corral**	**34.58**	**277**	P	**P**	**18 15 29.6**	**-0.6**
LR04				IAmb	IAmb	18 15 32.8	
	comp=Z,576nm,1.7s						
PET01	**Itanhaem-SP**	**34.96**	**325**	P	**P**	**18 15 35.6**	**+1.9**
PET01				S	**S**	**18 21 07.2**	**+2.3**
PET01	**Itanhaem-SP**	**34.96**	**325**	*e*P	**P**	**18 15 35.5**	**+1.9**
PARB	**Paraibuna**	**35.34**	**328**	P	**P**	**18 15 39.2**	**+2.1**
PARB	**Paraibuna**	**35.34**	**328**	*e*P	**P**	**18 15 39.4**	**+2.3**
DUB01	**Friburgo-RJ**	**35.65**	**334**	P	**P**	**18 15 41.8**	**+2.1**
DUB01	**Friburgo-RJ**	**35.65**	**334**	*e*P	**P**	**18 15 41.9**	**+2.2**
BI02	**San Fabin de**	**35.66**	**283**	P	**P**	**18 15 39.2**	**-0.5**
SPB	**Sao Paulo**	**35.66**	**326**	P	**P**	**18 15 39.9**	**+0.2**
SPB				IAMs_20	IAMs_20	18 29 21.7	
	comp=Z,31μm,19.0s						
SPB	**Sao Paulo**	**35.66**	**326**	*e*P	**P**	**18 15 42.3**	**+2.6**
CAM01	**Campos-RJ**	**35.73**	**335**	P	**P**	**18 15 42.3**	**+2.0**
CAM01	**Campos-RJ**	**35.73**	**335**	*e*P	**P**	**18 15 42.4**	**+2.2**
MRA	**San Martin**	**35.90**	**294**	*e*P	**P**	**18 15 42.6**	**+0.8**
SIM2	**UHE Simplicio**	**35.92**	**333**	P	**P**	**18 15 44.1**	**+2.1**
VAO	**Valinhos**	**36.07**	**327**	P	**P**	**18 15 43.8**	**+0.5**
VAO	**Valinhos**	**36.07**	**327**	*e*P	**P**	**18 15 45.7**	**+2.4**
VABB	**Valinhos**	**36.07**	**327**	P	**P**	**18 15 45.8**	**+2.4**
VABB				S	**S**	**18 21 24.5**	**+2.4**
TCA	**Tanti**	**36.19**	**296**	*e*P	**P**	**18 15 44.4**	**+0.1**
PTGB	**Pitanga**	**36.24**	**318**	P	**P**	**18 15 46.5**	**+1.6**
PTGB				S	**S**	**18 21 25.0**	**+0.1**
PTGB	**Pitanga**	**36.24**	**318**	*e*P	**P**	**18 15 46.6**	**+1.8**
ML02	**Panimavida**	**36.40**	**284**	P	**P**	**18 15 46.0**	**+0.1**
FRTB	**Fartura**	**36.60**	**323**	P	**P**	**18 15 50.0**	**+2.2**
FRTB	**Fartura**	**36.60**	**323**	*e*P	**P**	**18 15 50.2**	**+2.5**
BI05	**Punta Hualpn**	**36.66**	**281**	P	**P**	**18 15 48.4**	**+0.3**
BO02	**Sierra Bellavi**	**36.77**	**286**	P	**P**	**18 15 49.2**	**0.0**
ACAN	**Cantantal**	**36.78**	**292**	*e*P	**P**	**18 15 49.2**	**-0.1**
RCLB	**Rio Claro- Sao**	**36.79**	**326**	P	**P**	**18 15 51.8**	**+2.4**
RCLB	**Rio Claro- Sao**	**36.79**	**326**	*e*P	**P**	**18 15 51.8**	**+2.4**
CPUP	**Villa Florida**	**36.95**	**310**	P	**P**	**18 15 51.4**	**+0.7**
CPUP	**Villa Florida**	**36.95**	**310**	P	**P**	**18 15 51.8**	**+1.1**
	comp=Z,53nm,0.8s,baz=22,slow=9.0,SNR=280						
CPUP				ScP	**ScP**	**18 21 59.0**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=135,slow=1.4,SNR=3.7						
CPUP				LR	LR	18 31 18.1	
	comp=Z,11μm,20.1s,baz=16,slow=37						
	comp=Z,53nm,0.8s						
CPUP	**Villa Florida**	**36.95**	**310**	P	**P**	**18 15 51.7**	**+1.1**
CPUP				S	**S**	**18 21 33.7**	**-1.7**
AAGR	**Agrelo**	**37.01**	**290**	*e*P	**P**	**18 15 52.6**	**+1.3**
LMEL	**Las Melosas**	**37.17**	**288**	P	**P**	**18 15 53.0**	**+0.2**
BO01	**Tunca**	**37.23**	**286**	P	**P**	**18 15 52.0**	**-1.1**
ARCO	**CERRO ARCO**	**37.26**	**290**	*e*P	**P**	**18 15 54.4**	**+0.9**
BO04	**La Punta**	**37.28**	**287**	P	**P**	**18 15 52.2**	**-1.3**
BSCB	**Bom Sucesso**	**37.32**	**331**	P	**P**	**18 15 55.5**	**+1.6**
BSCB	**Bom Sucesso**	**37.32**	**331**	*e*P	**P**	**18 15 55.9**	**+1.9**
ACHE	**Chepes**	**37.39**	**294**	*e*P	**P**	**18 15 57.0**	**+2.4**
ASAL	**Salagasta**	**37.40**	**290**	*e*P	**P**	**18 15 54.8**	**+0.2**
MT03	**Universidad Ad**	**37.60**	**288**	P	**P**	**18 15 56.6**	**+0.3**
MT01	**Popeta**	**37.72**	**286**	P	**P**	**18 15 57.3**	**0.0**
MT05	**Renca**	**37.80**	**287**	IAmb	IAmb	18 16 03.5	
	comp=Z,822nm,1.6s						
CFA	**Coronel Fontan**	**37.85**	**292**	P	**P**	**18 15 59.3**	**+0.9**
	comp=Z,168nm,0.7s,baz=143,slow=9.1,SNR=505						
CFA				PcP	**PcP**	**18 18 16.1**	**+1.5**
	comp=Z,20nm,0.9s,baz=131,slow=2.4,SNR=2.3						
CFA				S	**S**	**18 21 44.0**	**-5.3**
	comp=Z,12nm,0.9s,baz=150,slow=20,SNR=7.2						
CFA				LR	LR	18 32 32.7	
	comp=Z,8μm,19.9s,baz=154,slow=38						
	comp=Z,168nm,0.7s						
RIB01	**Linhares ES**	**37.87**

FSA Cafayete 41.16 299 *e*P **P** **18 16 25.6 -0.6**
IPMB Ipameri, GO 41.17 327 P **P** **18 16 27.7 +1.6**
IPMB S **S** **18 22 41.2 +2.1**
IPMB Ipameri, GO 41.17 327 *e*P **P** **18 16 27.9 +1.8**
MC01 Montes Claros 41.20 334 P **P** **18 16 27.1 +0.7**
LCO Las Campanas 41.20 292 P **P** **18 16 28.0 +1.4**
LCO IAmb IAmb 18 16 29.6
comp=Z,1µm,1.4s
LCO Las Campanas 41.20 292 P **P** **18 16 28.0 +1.4**
LCO pmax pmax
comp=Z,1µm,1.5s
LCO MLR MLR
comp=Z,13µm,18.0s
AQDB Aquidauana 41.48 316 P **P** **18 16 29.3 +0.7**
AQDB S **S** **18 22 41.3 -2.3**
BAT3 Ipameri 41.52 329 P **P** **18 16 30.1 +1.1**
BAT2 UHE Batalha 41.54 329 P **P** **18 16 30.6 +1.4**
CMC01 Camacan, BA 41.54 341 P **P** **18 16 30.0 +0.9**
CMC01 Camacan, BA 41.54 341 *e*P **P** **18 16 30.0 +0.9**
BDQN Bodoquena, MS 41.92 315 *e*P **P** **18 16 32.7 +0.5**
NBIT Itapeh - BA 41.95 341 P **P** **18 16 33.3 +0.9**
C2SB Chapadao do Su 41.97 321 P **P** **18 16 34.7 +2.1**
C2SB Chapadao do Su 41.97 321 *e*P **P** **18 16 34.7 +2.1**
SLA San Lorenzo 42.09 301 *e*P **P** **18 16 34.7 +0.9**
GO03 Copiapo 42.10 293 *e*P **P** **18 16 34.7 +1.0**
AC02 Maricunga 42.14 295 *e*P **P** **18 16 36.4 +1.8**
AZAP Zapla 42.30 302 *e*P **P** **18 16 36.4 +0.8**
AC06 Mina Casimiro 42.35 294 IAmb IAmb 18 16 38.8
comp=Z,2µm,1.6s
ANA01 Lindo Horizont 42.59 339 P **P** **18 16 38.4 +0.7**
ANA01 S **S** **18 22 59.1 -1.1**
SHEL Horse Pasture 42.74 30 P **P** **18 16 39.1 +0.2**
SHEL IAmb IAmb 18 16 57.5
comp=Z,1µm,1.1s
SHEL Horse Pasture 42.74 30 IAMs_20 IAMs_20 18 29 34.0
comp=Z,17µm,19.0s
SHEL Horse Pasture 42.74 30 P **P** **18 16 39.1 +0.2**
SHEL pmax pmax
comp=Z,1µm,1.1s
SHEL MLR MLR
comp=Z,17µm,19.0s
SALTA 42.92 301 *e*P **P** **18 16 39.9 -1.0**
BDFB Brasilia 43.32 329 IAmb IAmb 18 16 47.4
comp=Z,751nm,1.5s
BDFB Brasilia 43.32 329 P **P** **18 16 44.9 +1.1**
comp=Z,87nm,1.0s,baz=148,slow=5.3,SNR=81
BDFB LR LR 18 34 05.9
comp=Z,41µm,19.2s,baz=161,slow=35
comp=Z,87nm,1.0s
BDFB Brasilia 43.32 329 P **P** **18 16 45.5 +1.8**
HJA Humahuaca 43.33 302 *e*P **P** **18 16 43.3 -0.8**
AC01 Pan de Azucar 43.46 294 IAmb IAmb 18 16 48.0
comp=Z,1µm,1.4s
GO02 Mina Guanaco 43.75 296 IAMs_20 IAMs_20 18 35 38.5
comp=Z,17µm,20.0s
GO02 Mina Guanaco 43.75 296 *e*P **P** **18 16 49.8 +2.4**
PP1B Ponte de Pedra 43.78 319 *e*P **P** **18 16 48.7 +1.4**
ARAG Araguaiana, MT 44.45 324 *e*P **P** **18 16 54.6 +1.9**
PB14 IPOC Station P 44.61 296 P **P** **18 16 55.3 +1.1**
BOSA Boshof 45.45 75 P **P** **18 16 59.7 -1.0**
BOSA IAmb IAmb 18 17 07.5
comp=Z,263nm,1.1s
BOSA Boshof 45.45 75 P **P** **18 16 59.9 -0.9**
comp=Z,60nm,0.7s,baz=217,slow=6.7,SNR=85
BOSA LR LR 18 33 35.9
comp=Z,21µm,18.1s,baz=224,slow=33
comp=Z,60nm,0.7s
BOSA Boshof 45.45 75 P **P** **18 16 59.9 -0.9**
BOSA S **S** **18 23 37.1 -4.9**
NBLA Lagarto - SE 45.52 344 P **P** **18 17 01.3 0.0**
NBLA S **S** **18 23 39.2 -3.6**
SDBA SAO DESIDERIO 45.57 334 P **P** **18 17 02.6 +0.9**
SDBA S **S** **18 23 45.1 +1.5**
SDBA SAO DESIDERIO 45.57 334 *e*P **P** **18 17 02.7 +1.1**
PB10 IPOC Station P 45.60 296 IAmb IAmb 18 17 05.4
comp=Z,1µm,1.8s
SALV Santo Antonio 45.64 319 P **P** **18 17 03.8 +1.6**
SALV S **S** **18 23 44.4 -0.1**
SALV Santo Antonio 45.64 319 *e*P **P** **18 17 03.9 +1.8**
PB06 IPOC Station P 45.78 298 IAmb IAmb 18 17 06.3
comp=Z,234nm,1.0s
CAN3 Cana Brava 45.81 330 P **P** **18 17 05.1 +1.6**
PB05 IPOC Station P 45.98 297 IAmb IAmb 18 17 08.2
comp=Z,1µm,1.5s
WIN Windhoek 46.05 62 IAMs_20 IAMs_20 18 33 31.4
comp=Z,15µm,18.0s
WIN Windhoek 46.05 62 P **P** **18 17 05.1 -0.5**
SBA Scott Base 46.43 184 P **P** **18 17 08.8 +1.1**
SBA IAmb IAmb 18 17 14.8
comp=Z,700nm,1.8s
SBA Scott Base 46.43 184 P **P** **18 17 08.8 +1.1**
SBA pmax pmax
comp=Z,700nm,1.8s
SBA MLR MLR
comp=Z,11µm,20.0s
PB03 IPOC Station P 46.43 298 IAmb IAmb 18 17 12.2
comp=Z,1µm,1.7s
NBAN Anadia - AL 46.61 347 P **P** **18 17 09.7 -0.1**
NBAN S **S** **18 23 56.3 -2.1**
NBAN Anadia - AL 46.61 347 *e*P **P** **18 17 09.9 +0.1**
MAS01 UHE Manso 46.62 319 P **P** **18 17 11.9 +2.0**
VNDA Vanda 46.91 182 P **P** **18 17 12.7 +1.3**
VNDA IAmb IAmb 18 17 14.0
comp=Z,155nm,0.8s
VNDA Vanda 46.91 182 P **P** **18 17 12.8 +1.3**
comp=Z,130nm,0.8s,baz=187,slow=6.6,SNR=524
VNDA ScP **ScP** **18 22 38.2 +1.2**
comp=Z,10nm,0.8s,baz=159,slow=4.0,SNR=5.0
VNDA LR LR 18 36 02.1
comp=Z,14µm,21.6s,baz=166,slow=35
comp=Z,130nm,0.8s
PB01 IPOC Station P 47.14 299 IAMs_20 IAMs_20 18 38 58.3
comp=Z,13µm,18.0s
H04S2 CROZET ISLANDS 47.26 114 T T 19 08 32.7
baz=233,slow=75,SNR=17
H04S3 CROZET ISLANDS 47.27 114 T T 19 08 27.1
baz=233,slow=75,SNR=15
KOOLE Kule 47.27 66 *i*P **P** **18 17 14.0 -1.1**
H04S1 CROZET ISLANDS 47.28 114 T T 19 08 26.6
baz=233,slow=75,SNR=32
PTLB Pontes e Lacer 47.39 315 P **P** **18 17 16.3 +0.5**
PTLB Pontes e Lacer 47.39 315 P **P** **18 17 17.1 +1.2**
PTLB Pontes e Lacer 47.39 315 *e*P **P** **18 17 17.2 +1.4**
MAKGR Makgori 47.42 73 *i*P **P** **18 17 15.7 -0.5**
H10S2 ASCENSION HYDR 47.57 16 T T 19 08 57.6
baz=31,slow=74,SNR=44
H10S3 ASCENSION HYDR 47.57 16 T T 19 08 57.2
baz=189,slow=74,SNR=46
SIV San Ignacio 47.69 312 P **P** **18 17 19.2 +1.0**
comp=Z,45nm,0.8s,baz=158,slow=9.5,SNR=226
SIV PcP **PcP** **18 18 49.3 +1.8**
comp=Z,51nm,0.9s,baz=128,slow=7.1,SNR=4.2
SIV ScP **ScP** **18 22 42.6 +1.4**
comp=Z,11nm,0.9s,baz=132,slow=7.5,SNR=3.4
SIV LR LR 18 36 45.0
comp=Z,23µm,21.7s,baz=160,slow=35
comp=Z,45nm,0.8s
PB08 IPOC Station P 47.74 300 P **P** **18 17 21.5 +2.4**
PB08 IPOC Station P 47.74 300 IAmb IAmb 18 17 42.1
comp=Z,599nm,1.1s
SNDB Serra Nova Dou 47.78 326 P **P** **18 17 20.8 +1.8**
SNDB S **S** **18 24 15.4 +0.2**
SNDB Serra Nova Dou 47.78 326 *e*P **P** **18 17 20.9 +1.9**
TA01 Diego Aracena 47.89 299 IAmb IAmb 18 17 42.0
comp=Z,497nm,1.4s
SKOMA Sekoma 47.99 71 *i*P **P** **18 17 19.6 -1.0**
KGCAE Kacgae 48.43 68 *i*P **P** **18 17 23.4 -0.7**
LBTB Lobatse 48.48 73 IAmb IAmb 18 17 31.2
comp=Z,301nm,1.1s
LBTB Lobatse 48.48 73 LR LR 18 35 25.9
comp=Z,13µm,18.4s,baz=218,slow=33
ASCN Ascension 48.62 16 P **P** **18 17 25.0 -0.5**
ASCN IAmb IAmb 18 17 27.2
comp=Z,714nm,1.6s
H10N1 ASCENSION HYDR 48.69 16 T T 19 10 58.8
baz=197,slow=74
H10N3 ASCENSION HYDR 48.69 16 T T 19 10 29.2
baz=197
H10N2 ASCENSION HYDR 48.70 16 T T 19 11 16.1
baz=197,slow=74
LAJE UHE Lajeado 48.79 331 P **P** **18 17 28.0 +1.3**
TSUM Tsumeb 49.13 60 P **P** **18 17 27.9 -1.6**
TSUM IAmb IAmb 18 17 45.7
comp=Z,241nm,1.4s
TSUM Tsumeb 49.13 60 LR LR 18 35 04.6
comp=Z,8µm,18.8s,baz=224,slow=32
GRTLG Ghanzi 49.15 66 *i*P **P** **18 17 28.5 -1.1**
NBMA Muriti-CE 49.23 344 P **P** **18 17 30.8 +0.6**
KDWAN Kaudwane 49.30 70 *i*P **P** **18 17 29.8 -0.9**
PB16 IPOC Station P 49.46 301 P **P** **18 17 33.6 +1.1**
PB16 IAmb IAmb 18 17 36.6
comp=Z,608nm,1.8s
PB16 IAMs_20 IAMs_20 18 39 36.6
comp=Z,15µm,20.0s
SMTB Santa Maria do 49.66 332 P **P** **18 17 34.9 +1.5**
SMTB Santa Maria do 49.66 332 *e*P **P** **18 17 34.9 +1.5**
NBPV Pedro Velho 49.69 348 P **P** **18 17 34.1 +0.5**
NBPV S **S** **18 24 40.4 -1.7**
AP01 Chacalluta 49.83 300 IAmb IAmb 18 18 01.0
comp=Z,330nm,1.1s
LPHEP Lephephe 49.95 72 *i*P **P** **18 17 35.3 -0.4**
PDRB Porto dos Gac 49.97 320 P **P** **18 17 36.6 +0.9**
PDRB S **S** **18 24 43.6 -2.4**
PDRB Porto dos Gac 49.97 320 *e*P **P** **18 17 36.9 +1.1**
VILB Vilhena 50.07 315 P **P** **18 17 37.0 +0.4**
VILB Vilhena 50.07 315 P **P** **18 17 37.5 +1.0**
VILB Vilhena 50.07 315 *e*P **P** **18 17 37.6 +1.1**
PB18 Visviri 50.08 302 IAMs_20 IAMs_20 18 38 13.2
comp=Z,15µm,21.0s
CLDB Colider 50.32 321 P **P** **18 17 39.3 +0.9**
CLDB S **S** **18 24 51.9 +1.0**
CLDB Colider 50.32 321 *e*P **P** **18 17 39.4 +1.0**
RCBR Riachuelo 50.34 348 P **P** **18 17 38.4 -0.2**
RCBR IAmb IAmb 18 17 40.8
comp=Z,1µm,1.9s
RCBR Riachuelo 50.34 348 IAMs_20 IAMs_20 18 33 38.5
comp=Z,14µm,22.0s
RCBR Riachuelo 50.34 348 P **P** **18 17 38.4 -0.2**
RCBR pmax pmax
comp=Z,1µm,2.0s
RCBR MLR MLR
comp=Z,14µm,22.0s
RCBR Riachuelo 50.34 348 P **P** **18 17 38.9 +0.3**
RCBR Riachuelo 50.34 348 *e*P **P** **18 17 38.9 +0.3**
LPAZ La Paz 50.57 304 P **P** **18 17 42.6 +1.6**
comp=Z,287nm,0.7s,baz=141,slow=5.2,SNR=1156
LPAZ LR LR 18 41 13.7
comp=Z,7µm,19.6s,baz=136,slow=39
LPAZ PKPPKP **P'P'df** **18 48 28.2 +2.9**
comp=Z,3.5nm,1.2s,baz=223,slow=3.9,SNR=4.3
comp=Z,287nm,0.7s
LPAZ La Paz 50.57 304 P **P** **18 17 43.3 +2.3**
LPAZ S **S** **18 24 56.1 +0.7**
LPAZ La Paz 50.57 304 *e*P **P** **18 17 43.1 +2.1**
NBPA Parau_RN 50.58 346 P **P** **18 17 40.9 +0.6**
NBPA S **S** **18 24 54.3 -0.1**
QNGWA Qangwa 50.65 64 *i*P **P** **18 17 40.2 -0.9**
KHWEE KHWEE 50.88 70 *i*P **P** **18 17 42.9 +0.2**
NBPB Pedra_Branca-C 51.15 343 P **P** **18 17 45.5 +0.8**
GMARE Gumare 51.28 65 *i*P **P** **18 17 46.0 +0.3**
MREMI Moremi 51.45 73 *i*P **P** **18 17 46.5 -0.5**
XAUDM Khaudum 51.57 64 *i*P **P** **18 17 48.5 +0.6**
PAL2 UHE Estreito - 51.62 333 P **P** **18 17 50.0 +1.9**
PAL01 Palmeiras do T 51.78 333 P **P** **18 17 50.9 +1.5**
PAL01 S **S** **18 25 09.8 -1.3**
PHDHD Phuduhudu 51.84 68 *i*P **P** **18 17 49.4 -0.5**
BRDLN Tlhalogang 52.58 71 *i*P **P** **18 17 54.3 -1.2**
NBPS Pedro II - PI 52.60 341 P **P** **18 17 56.1 +0.6**
NBPS S **S** **18 25 21.9 -0.6**
PRPB Parauapebas 52.84 330 P **P** **18 17 58.8 +1.6**
PRPB Parauapebas 52.84 330 *e*P **P** **18 17 58.9 +1.7**
SBBR Sobral 53.03 343 P **P** **18 17 59.1 +0.5**
NPGB Novo Progresso 53.73 323 P **P** **18 18 04.6 +0.9**
NPGB Novo Progresso 53.73 323 *e*P **P** **18 18 04.8 +1.0**
CASY Casey 54.05 160 P **P** **18 18 06.9 +1.3**
CASY IAmb IAmb 18 18 08.8
comp=Z,695nm,1.2s
KSANE Kasane 54.15 67 *i*P **P** **18 18 07.0 0.0**
TUC4 UHE Tucurui 54.59 331 P **P** **18 18 11.5 +1.5**
LABB Lɹbrea 55.62 311 P **P** **18 18 19.0 +1.5**
LABB S **S** **18 26 02.5 -0.6**
TMAB Tom-Au,PA,Br 56.02 334 P **P** **18 18 21.9 +1.6**
TMAB Tom-Au,PA,Br 56.02 334 *e*P **P** **18 18 22.0 +1.6**
BMO2 UHE Belo Monte 56.15 329 P **P** **18 18 22.9 +1.6**
BMO1 UHE Belo Monte 56.26 329 P **P** **18 18 23.5 +1.4**
ITTB Itaituba 56.36 324 P **P** **18 18 23.8 +1.0**
ITTB Itaituba 56.36 324 *e*P **P** **18 18 23.9 +1.1**
LSZ Lusaka 57.84 68 P **P** **18 18 31.9 -1.5**
LSZ IAmb IAmb 18 18 50.6
comp=Z,514nm,1.5s
LSZ Lusaka 57.84 68 IAMs_20 IAMs_20 18 42 29.3
comp=Z,14µm,18.0s
LSZ Lusaka 57.84 68 P **P** **18 18 32.5 -0.9**
comp=Z,82nm,1.1s,baz=210,slow=7.5,SNR=66
LSZ LR LR 18 42 13.7
comp=Z,14µm,18.0s,baz=216,slow=35
comp=Z,82nm,1.1s
LSZ Lusaka 57.84 68 P **P** **18 18 31.9 -1.5**
LSZ P **P** **18 18 31.9 -1.5**
LSZ S **S** **18 26 27.6 -5.1**
LSZ S **S** **18 26 27.6 -5.1**
MAL2 Monte Alegre, 58.07 327 P **P** **18 18 36.2 +1.3**
MAL2 Monte Alegre, 58.07 327 P **P** **18 18 36.5 +1.6**
NNA Nana 58.50 298 P **P** **18 18 39.2 +1.2**
NNA Nana 58.50 298 P **P** **18 18 39.1 +1.2**
comp=Z,120nm,1.0s,baz=160,slow=4.8,SNR=43
comp=Z,120nm,1.0s
NNA Nana 58.50 298*d* P **P** **18 18 39.8 +1.9**
NNA pmax pmax
comp=Z,1µm,1.8s
NNA MLR MLR
comp=Z,6µm,15.0s
MACA Manacapuru-AM 59.22 319 P **P** **18 18 43.0 +0.1**
MACA Manacapuru-AM 59.22 319 *e*P **P** **18 18 43.1 +0.2**
CN01 Coaracy Nunes 60.01 331 S **S** **18 26 58.4 -2.2**
CZSB Cruzeiro do Su 60.18 304 P **P** **18 18 49.2 -0.2**
CZSB Cruzeiro do Su 60.18 304 P **P** **18 18 49.3 -0.2**
CZSB S **S** **18 27 01.5 -1.3**
CZSB Cruzeiro do Su 60.18 304 *e*P **P** **18 18 50.2 +0.7**
CZSB Cruzeiro do Su 60.18 304 P **P** **18 18 50.1 +0.6**
comp=Z,7µmcomp=Z,7µmcomp=Z,404nm,1.8s
TEFE Tefe 60.43 315 P **P** **18 18 51.7 +0.5**
TEFE Tefe 60.43 315 *e*P **P** **18 18 51.9 +0.7**
VOI Vohitsoka 62.75 89 P **P** **18 19 07.5 +0.5**
VOI IAmb IAmb 18 19 26.7
comp=Z,502nm,1.6s
VOI IAMs_20 IAMs_20 18 41 56.5
comp=Z,9µm,19.0s
VOI Vohitsoka 62.75 89 P **P** **18 19 08.9 +1.9**
SNR=5.6
RPN Rapa Nui 64.16 259 LR LR 18 41 34.2
comp=Z,7µm,21.6s,baz=139,slow=31
VA02 Isla de Pascua 64.19 259 IAMs_20 IAMs_20 18 41 13.4
comp=Z,9µm,21.0s
BOAV Boa Vista 64.31 322 P **P** **18 19 16.9 -0.2**
BOAV Boa Vista 64.31 322 P **P** **18 19 17.6 +0.5**
BOAV S **S** **18 27 55.1 +0.4**
BOAV Boa Vista 64.31 322 *e*P **P** **18 19 17.6 +0.5**
BOAV Boa Vista 64.31 322 P **P** **18 19 17.7 +0.6**
comp=Z,8µmcomp=Z,8µmcomp=Z,422nm,1.4s
MDP Montagnes des 64.38 331 LR LR 18 46 36.7
comp=Z,13µm,19.1s,baz=156,slow=35
SGC2 Sao Gabriel da 64.42 314 P **P** **18 19 17.4 -0.5**
SGC2 Sao Gabriel da 64.42 314 P **P** **18 19 17.6 -0.3**
comp=Z,6µmcomp=Z,5µmcomp=Z,375nm,1.2s
DBIC Dimbokro 64.69 24 P **P** **18 19 18.5 -1.1**
DBIC IAmb IAmb 18 19 20.8
comp=Z,531nm,1.6s
DBIC **P'P'bc** **18 48 08.7 +3.4**
DBIC Dimbokro 64.69 24 P **P** **18 19 19.1 -0.5**
comp=Z,98nm,1.0s,baz=210,slow=7.0,SNR=56
DBIC LR LR 18 40 28.0
comp=Z,23µm,21.6s,baz=212,slow=30
DBIC PKPPKP P'P'df 18 48 07.2 +7.3
comp=Z,4.4nm,0.9s,baz=7.4,slow=3.1,SNR=6.2
comp=Z,98nm,1.0s
DBIC Dimbokro 64.69 24 P **P** **18 19 19.1 -0.5**
DBIC S **S** **18 27 56.3 -3.2**
ACRG Accra 64.87 29 P **P** **18 19 19.4 -1.4**
ACRG IAmb IAmb 18 19 21.9
comp=Z,447nm,1.4s
ABPO Ambohimpanom 65.29 88 P **P** **18 19 24.3 +0.5**
ABPO IAmb IAmb 18 19 43.9
comp=Z,281nm,1.5s
ABPO Ambohimpanom 65.29 88 IAMs_20 IAMs_20 18 43 57.7
comp=Z,16µm,19.0s
ABPO Ambohimpanom 65.29 88 P **P** **18 19 24.3 +0.5**
ABPO pmax pmax
comp=Z,281nm,1.5s
ABPO MLR MLR
comp=Z,16µm,19.0s
OPO Ambohidratompo 65.62 87 P **P** **18 19 25.8 -0.2**
comp=Z,11nm,1.1s,baz=224,slow=8.5,SNR=6.4
comp=Z,11nm,1.1s
EDA Edea 66.46 40 P **P** **18 19 29.9 -1.2**
EDA IAmb IAmb 18 19 48.7
comp=Z,322nm,1.4s
MCRA Macar, Loja 66.59 299 P **P** **18 19 33.5 +1.5**
comp=Z,5µmcomp=Z,244nm,0.9s
AIS Amsterdam Isla 66.72 123 P **P** **18 19 33.0 +0.5**
COHC Cochancay 67.89 301 IAmb IAmb 18 19 44.3
comp=Z,288nm,1.8s
COHC Cochancay 67.89 301 P **P** **18 19 42.6 +2.4**
comp=Z,5µmcomp=Z,7µmcomp=Z,254nm,1.0s
PTLC Puerto Leguiza 68.10 306 P **P** **18 19 40.3 -1.2**
comp=Z,8µmcomp=Z,6µmcomp=Z,405nm,1.7s
PIAT Ana Tenorio 68.69 302 P **P** **18 19 48.4 +2.7**
comp=Z,6µmcomp=Z,310nm,1.5s
SLOR San Lorenzo - 69.03 302 IAmb IAmb 18 20 35.5
comp=Z,217nm,1.2s
MACC Macarena, Meta 69.42 308 P **P** **18 19 51.0 +1.2**
comp=Z,7µmcomp=Z,10µmcomp=Z,465nm,1.6s
BONI La Bonita 69.61 304 P **P** **18 19 52.9 +1.7**
comp=Z,6µmcomp=Z,3µmcomp=Z,97nm,1.7s
FLOC Florencia 69.74 306 P **P** **18 19 52.8 +1.1**
comp=Z,6µmcomp=Z,6µmcomp=Z,310nm,1.5s
OTAV Otavalo 69.86 303 P **P** **18 19 54.8 +1.8**
OTAV Otavalo 69.86 303 IAMs_20 IAMs_20 18 54 14.3
comp=Z,10µm,20.0s
OTAV Otavalo 69.86 303 P **P** **18 19 54.8 +1.8**
OTAV pmax pmax
comp=Z,908nm,1.6s
OTAV MLR MLR
comp=Z,10µm,20.0s
OTAV Otavalo 69.86 303 P **P** **18 19 55.1 +2.1**
OTAV S **S** **18 29 04.9 +2.2**
OTAV Otavalo 69.86 303 *e*P **P** **18 19 54.9 +1.8**
OTAV Otavalo 69.86 303 P **P** **18 19 55.1 +2.1**
comp=Z,6µmcomp=Z,6µmcomp=Z,325nm,1.6s
CUSE Cuicocha Este 69.89 303 P **P** **18 19 55.5 +2.3**
comp=Z,14µmcomp=Z,196nm,1.9s
TULM Tulcn-Chalpat 69.96 304 P **P** **18 19 56.4 +2.7**
comp=Z,8µmcomp=Z,456nm,1.6s
PAC1 Pacto, Paraso 70.05 303 P **P** **18 19 55.9 +2.1**
comp=Z,7µmcomp=Z,248nm,1.6s
CMBC Cumbal 70.18 304 P **P** **18 19 58.7 +3.8**
MBO M'Bour 70.31 10 P **P** **18 19 55.0 0.0**
MBO M'Bour 70.31 10 IAMs_20 IAMs_20 18 43 26.1
comp=Z,14µm,21.0s
CRUC La Cruz 70.32 305 P **P** **18 19 59.7 +4.0**
comp=Z,16µmcomp=Z,3µm,2.6s
SACV Santiago Islan 70.47 3 IAMs_20 IAMs_20 18 43 15.6
comp=Z,8µm,21.0s
PTGC Puerto Gaitan, 70.51 311 P **P** **18 19 57.3 +0.9**
comp=Z,6µmcomp=Z,141nm,1.9s
BBTS Babate 70.61 10 LR LR 18 44 10.6
comp=Z,10µm,20.5s,baz=88,slow=30
POPC Popayan, Colom 71.05 306 P **P** **18 20 01.7 +1.7**
comp=Z,8µmcomp=Z,6µmcomp=Z,284nm,2.0s
PRAC Prado 71.28 308 P **P** **18 20 02.6 +1.5**
comp=Z,6µmcomp=Z,10µmcomp=Z,571nm,1.8s
SBV Sambava 71.28 86 P **P** **18 20 03.0 +1.9**
SNR=12
CHIC Chingaza 71.58 309 P **P** **18 20 05.2 +1.8**
comp=Z,8µmcomp=Z,6µmcomp=Z,162nm,1.4s
ORTC Ortega, Tolima 71.61 308 P **P** **18 20 04.6 +1.4**
comp=Z,7µmcomp=Z,11µmcomp=Z,803nm,1.7s
TPP Pointe-a-Pierr 72.01 324 *e*P **P** **18 20 09.0 +3.6**
ROSC El Rosal 72.03 309 IAmb IAmb 18 20 27.9
comp=Z,786nm,1.6s
ROSC El Rosal 72.03 309 P **P** **18 20 07.2 +1.1**
comp=Z,98nm,0.9s,baz=155,slow=3.1,SNR=84
ROSC LR LR 18 52 32.2
comp=Z,12µm,20.8s,baz=164,slow=36
comp=Z,98nm,0.9s
ROSC El Rosal 72.03 309 P **P** **18 20 08.4 +2.3**
comp=Z,7µmcomp=Z,8µmcomp=Z,355nm,1.8s
YOTC Yotoco, Valle 72.17 307 P **P** **18 20 07.2 +0.6**
comp=Z,6µmcomp=Z,4µmcomp=Z,173nm,1.1s
TRN Trinidad (W) 72.30 324 *e*P **P** **18 20 07.1 -0.1**
RUSC La Rusia 72.43 311 P **P** **18 20 09.7 +1.1**
comp=Z,7µmcomp=Z,8µmcomp=Z,536nm,1.6s
TOA0 Torodi Ar. Sit 72.56 29 P **P** **18 20 08.8 +0.1**
SNR=71
TOA0 S **S** **18 29 27.5 -5.4**
TORD Torodi Ar. Bea 72.56 29 IAmb IAmb 18 20 10.0
comp=Z,257nm,1.1s
TORD Torodi Ar. Bea 72.56 29 P **P** **18 20 08.4 -0.2**
comp=Z,118nm,0.9s,baz=187,slow=4.7,SNR=66
TORD LR LR 18 46 03.0
comp=Z,8µm,19.2s,baz=191,slow=31
comp=Z,118nm,0.9s
SPBC San Pablo de B 72.65 310 P **P** **18 20 09.8 +0.4**
comp=Z,7µmcomp=Z,165nm,1.6s
GUY2C Guyana, Caldas 72.83 308 P **P** **18 20 11.8 +0.8**
comp=Z,5µmcomp=Z,4µmcomp=Z,191nm,1.8s
PLMC San Jos del P 72.96 307 P **P** **18 20 12.0 +0.8**
comp=Z,9µmcomp=Z,534nm,1.5s
BARC Barichara 73.10 311 P **P** **18 20 12.3 0.0**
PTBC PUERTO BERRIO, 73.61 310 P **P** **18 20 14.4 -0.6**
comp=Z,2µmcomp=Z,183nm,1.1s
CBOC Ciudad Bolivar 73.69 308 P **P** **18 20 15.7 0.0**
comp=Z,4µmcomp=Z,169nm,1.4s
GRFF Grenada Fort F 73.72 324 *e*P **P** **18 20 15.9 +0.3**
HELC Santa Helena 73.77 308 P **P** **18 20 16.3 0.0**
comp=Z,5µmcomp=Z,3µmcomp=Z,114nm,1.5s
GRGR Grenville 73.78 324 *e*P **P** **18 20 16.1 +0.2**
GRGR Grenville 73.78 324 P **P** **18 20 17.5 +1.6**
comp=Z,8µmcomp=Z,12µmcomp=Z,876nm,1.4s
GRW Mount Saint Ca 73.80 324 *e*P **P** **18 20 17.9 +1.7**
GRHS Sauteurs 73.86 324 *e*P **P** **18 20 15.3 -1.0**
KIBK Kibwezi 73.90 70 P **P** **18 20 19.6 +2.7**
KIBK Kibwezi 73.90 70 P **P** **18 20 18.3 +1.4**
KIBK IAMs_20 IAMs_20 18 49 01.6
comp=Z,11µm,21.0s
KIBK Kibwezi 73.90 70 P **P** **18 20 19.8 +3.0**
SNR=44
GRSS Sisters 73.92 324 *e*P **P** **18 20 16.9 +0.3**
GCMP Grenada, Carri 74.03 324 *e*P **P** **18 20 16.9 -0.4**
BBGH Gun Hill 74.05 326 *e*P **P** **18 20 21.5 +4.1**
SDV Santo Domingo 74.11 314 P **P** **18 20 18.9 +0.8**
SDV IAmb IAmb 18 20 20.1
comp=Z,317nm,1.1s
SDV Santo Domingo 74.11 314 P **P** **18 20 19.2 +1.1**
comp=Z,166nm,0.8s,baz=160,slow=4.2,SNR=155
SDV LR LR 18 55 29.5
comp=Z,14µm,19.2s,baz=154,slow=38
comp=Z,166nm,0.8s
SDV Santo Domingo 74.11 314 P **P** **18 20 19.3 +1.2**
SDV S **S** **18 29 49.4 -1.5**
SDV Santo Domingo 74.11 314 *e*P **P** **18 20 19.4 +1.3**
SDV Santo Domingo 74.11 314 P **P** **18 20 19.4 +1.3**
comp=Z,8µmcomp=Z,7µmcomp=Z,378nm,1.5s
OCAC Ocana 74.64 311 P **P** **18 20 20.4 -0.7**
comp=Z,4µmcomp=Z,4µmcomp=Z,292nm,1.2s
SVB Belmont 74.71 325 *e*P **P** **18 20 19.3 -2.0**
DBBC Dabeiba 74.80 308 P **P** **18 20 23.1 +1.1**
PAYG Puerto Ayora 75.02 292 P **P** **18 20 23.9 +0.7**
PAYG IAmb IAmb 18 20 27.9
comp=Z,513nm,1.6s
PAYG Puerto Ayora 75.02 292 P **P** **18 20 26.5 +3.2**
comp=Z,3µmcomp=Z,3µmcomp=Z,109nm,1.4s
UREC San Jos de Ur 75.16 309 P **P** **18 20 24.1 +0.1**
comp=Z,5µmcomp=Z,4µmcomp=Z,224nm,1.7s
SLBI Saint Lucia, B 75.32 325 *e*P **P** **18 20 25.8 +1.0**
PTAC Punta Ardita, 75.64 307 P **P** **18 20 29.0 +2.3**
comp=Z,11µmcomp=Z,742nm,1.4s
MPOM Morne Pois Mar 75.68 326 IAmb IAmb 18 20 47.5
comp=Z,957nm,1.7s
APAC Apartado, Choc 75.75 308 P **P** **18 20 29.6 +2.2**
comp=Z,7µmcomp=Z,6µmcomp=Z,395nm,1.3s
BIM Bigot 75.82 325 P **P** **18 20 28.4 +0.7**
BIM IAMs_20 IAMs_20 18 55 35.9
comp=Z,7µm,20.0s
BIM Bigot 75.82 325 *e*P **P** **18 20 28.6 +0.9**
ILAM Ilet Lapin Mar 76.00 326 IAMs_20 IAMs_20 18 55 53.7
comp=Z,7µm,20.0s
SVN Savane Anatole 76.15 325 IAMs_20 IAMs_20 18 56 04.8
comp=Z,7µm,20.0s
ARGC Ariguani, Magd 76.48 311 P **P** **18 20 33.5 +2.0**
comp=Z,11µmcomp=Z,11µmcomp=Z,570nm,1.6s
DLPL La Plaine 76.64 325 *e*P **P** **18 20 33.1 +0.7**
DSLB Salisbury 76.79 325 *e*P **P** **18 20 33.8 +0.6**
DWS Wesley 76.88 325 *e*P **P** **18 20 34.7 +1.0**
SJCC San Jacinto, C 76.92 310 P **P** **18 20 36.0 +2.0**
comp=Z,9µmcomp=Z,8µmcomp=Z,511nm,1.3s

CRJC Cerrejon, Guaj 76.96 313 P **P** **18 20 34.2 -0.1**
comp=Z,5µmcomp=Z,4µmcomp=Z,163nm,1.0s
URIC Uribia, Colomb 77.21 314 P **P** **18 20 35.4 -0.2**
comp=Z,5µmcomp=Z,2µmcomp=Z,75nm,1.4s
MAGL Barre de l'ile 77.23 326 IAMs_20 IAMs_20 18 58 04.4
comp=Z,7µm,19.0s
TBG Guadaloupe-3 77.25 325 *e*P **P** **18 20 37.3 +1.6**
LODK Lodwar 77.39 64 P **P** **18 20 36.2 -0.6**
LODK IAMs_20 IAMs_20 18 57 08.8
comp=Z,7µm,18.0s
LODK Lodwar 77.39 64 P **P** **18 20 39.4 +2.6**
SNR=29
MMLZ Guadeloupe Bro 77.44 325 *e*P **P** **18 20 38.7 +1.9**
CBE Ff, Capester 77.44 325 P **P** **18 20 36.9 0.0**
CBE IAMs_20 IAMs_20 18 56 43.1
comp=Z,10µm,20.0s
DSDZ La Diserade, G 77.50 326 *e*P **P** **18 20 36.5 -0.6**
GDSD La Dsirade Is 77.50 326 IAmb IAmb 18 20 58.6
comp=Z,596nm,1.3s
SMRC Santa Marta, M 77.65 312 IAmb IAmb 18 20 40.9
comp=Z,277nm,1.0s
SMRC Santa Marta, M 77.65 312 P **P** **18 20 39.7 +1.7**
comp=Z,6µmcomp=Z,7µmcomp=Z,329nm,1.7s
DHSZ Broadband at M 77.69 325 *e*P **P** **18 20 39.2 +1.1**
GDHS Morne Mazeau, 77.69 325 IAMs_20 IAMs_20 18 56 30.9
comp=Z,10µm,20.0s
CTZ Chatham Island 77.75 202 IAMs_20 IAMs_20 18 49 15.2
comp=Z,10µm,21.0s
ABD La Joyeuse, An 77.79 326 IAMs_20 IAMs_20 18 58 28.1
comp=Z,11µm,20.0s
TUZ Tuapeka 77.79 191 P **P** **18 20 38.6 +0.1**
PYZ Puysegur Point 77.87 189 IAMs_20 IAMs_20 18 51 47.2
comp=Z,8µm,20.0s
WHZ Wether Hill Ro 78.03 190 P **P** **18 20 40.1 +0.2**
WHZ IAmb IAmb 18 20 47.2
comp=Z,204nm,1.3s
WHZ Wether Hill Ro 78.03 190 P **P** **18 20 41.3 +1.4**
MBWH Windy Hill 78.26 325 *e*P **P** **18 20 41.5 +0.1**
MBFL Flemmings, Mon 78.28 325 *e*P **P** **18 20 42.0 +0.6**
BCIP Isla Barro Col 78.34 306 IAMs_20 IAMs_20 18 59 22.1
comp=Z,6µm,20.0s
BCIP Isla Barro Col 78.34 306 P **P** **18 20 43.8 +1.9**
comp=Z,5µmcomp=Z,215nm,1.9s
DCZ Deep Cove 78.53 190 P **P** **18 20 42.8 +0.1**
DCZ IAMs_20 IAMs_20 18 53 09.5
comp=Z,8µm,21.0s
MLZ Mavora Lakes 78.53 190 P **P** **18 20 42.9 +0.2**
MLZ IAmb IAmb 18 21 05.2
comp=Z,304nm,1.4s
MLZ IAMs_20 IAMs_20 19 00 02.5
comp=Z,9µm,18.0s
MLZ Mavora Lakes 78.53 190 P **P** **18 20 43.8 +1.1**
EAZ Earnscleugh 78.53 191 P **P** **18 20 43.7 +1.0**
ODZ Otahua Downs 78.57 192 P **P** **18 20 42.6 -0.3**
ODZ IAMs_20 IAMs_20 18 56 04.6
comp=Z,11µm,20.0s
ODZ Otahua Downs 78.57 192 P **P** **18 20 43.5 +0.6**
WKZ Wanaka 78.97 191 IAmb IAmb 18 21 20.9
comp=Z,211nm,1.2s
WKZ Wanaka 78.97 191 P **P** **18 20 45.7 +0.6**
SKI Saint Kitts 78.99 325 *e*P **P** **18 20 46.7 +1.3**
ANWB Willy Bob 79.00 326 IAMs_20 IAMs_20 18 57 02.3
comp=Z,7µm,20.0s
ANWB Willy Bob 79.00 326 *e*P **P** **18 20 44.3 -1.1**
TMZ Timaru 79.17 193 P **P** **18 20 47.5 +1.3**
SEUS St. Eustatius 79.22 325 IAMs_20 IAMs_20 18 59 21.2
comp=Z,10µm,20.0s
LBZ Lake Benmore 79.27 192 P **P** **18 20 47.1 +0.3**
LBZ IAmb IAmb 18 21 09.6
comp=Z,293nm,1.5s
LBZ IAMs_20 IAMs_20 18 57 13.2
comp=Z,10µm,19.0s
LBZ Lake Benmore 79.27 192 P **P** **18 20 48.0 +1.2**
PIRO Carate, Puerto 79.31 302 IAmb IAmb 18 20 51.2
comp=Z,965nm,1.7s
BRU2 Volcan 79.34 303 IAmb IAmb 18 20 51.2
comp=Z,422nm,1.6s
SABA Saba 79.43 324 IAMs_20 IAMs_20 18 54 04.6
comp=Z,10µm,22.0s
MQZ McQueen's Vall 79.62 194 P **P** **18 20 48.9 +0.2**
MQZ McQueen's Vall 79.62 194 P **P** **18 20 49.3 +0.7**
JCZ Jackson Bay 79.74 191 P **P** **18 20 51.6 +2.2**
JCZ Jackson Bay 79.74 191 P **P** **18 20 50.9 +1.5**
RPZ Rata Peaks 79.83 193 IAMs_20 IAMs_20 18 55 51.0
comp=Z,8µm,19.0s
RPZ Rata Peaks 79.83 193 LR LR 18 54 00.8
comp=Z,6µm,20.1s,baz=174,slow=34
RPZ Rata Peaks 79.83 193 P **P** **18 20 50.4 +0.6**
OXZ Oxford 80.08 194 P **P** **18 20 50.2 -1.0**
OXZ IAMs_20 IAMs_20 19 00 41.8
comp=Z,7µm,18.0s
FOZ Fox Glacier 80.16 192 IAMs_20 IAMs_20 18 56 29.7
comp=Z,8µm,19.0s
FOZ Fox Glacier 80.16 192 P **P** **18 20 51.4 -0.1**
GVZ Greta Valley S 80.30 194 IAmb IAmb 18 21 14.9
comp=Z,447nm,1.3s
GVZ IAMs_20 IAMs_20 18 56 09.5
comp=Z,6µm,19.0s
GVZ Greta Valley S 80.30 194 P **P** **18 20 52.8 +0.4**
WVZ Waitaha Valley 80.50 193 P **P** **18 20 54.3 +0.9**
LTZ Lake Taylor 80.58 194 IAmb IAmb 18 21 17.6
comp=Z,264nm,1.2s
LTZ IAMs_20 IAMs_20 18 52 40.1
comp=Z,7µm,20.0s
LTZ Lake Taylor 80.58 194 P **P** **18 20 54.7 +0.7**
INZ Inchbonnie 80.75 193 P **P** **18 20 53.7 -1.1**
INZ IAMs_20 IAMs_20 19 00 12.5
comp=Z,8µm,18.0s
INZ Inchbonnie 80.75 193 P **P** **18 20 54.5 -0.3**
KHZ Kahutara 80.77 195 IAMs_20 IAMs_20 18 51 27.9
comp=Z,7µm,22.0s
KHZ Kahutara 80.77 195 P **P** **18 20 57.6 +2.7**
HUMP Col San Antoni 80.79 322 IAmb IAmb 18 21 17.0
comp=Z,230nm,1.0s
SJG San Juan 80.87 322 P **P** **18 20 54.6 -0.9**
SJG IAmb IAmb 18 21 15.5
comp=Z,371nm,1.1s
SJG San Juan 80.87 322 IAMs_20 IAMs_20 19 00 48.8
comp=Z,9µm,19.0s
SJG San Juan 80.87 322 P **P** **18 20 55.6 +0.1**
comp=Z,63nm,1.0s,baz=133,slow=0.7,SNR=15
SJG LR LR 18 56 53.8
comp=Z,7µm,21.6s,baz=162,slow=36
comp=Z,63nm,1.0s
SJG San Juan 80.87 322 P **P** **18 20 55.7 +0.2**
comp=Z,2µmcomp=Z,3µmcomp=Z,134nm,1.3s
OBIP Obispado Ponce 80.97 322 IAmb IAmb 18 21 15.2
comp=Z,371nm,1.4s
RKT Rikitea 81.02 242 *e*P P 18 20 46.6 -10
comp=Z,11µm,37.2s
RKT Rikitea 81.02 242 *e*S S 18 30 55.9 -10
comp=Z,11µm,28.2s
RKT Rikitea 81.02 242 *e*LQ LQ 18 42 44.0
comp=Z,21µm,30.5s
RKT *e*LR LR 18 46 17.2
comp=Z,26µm,23.2s
GCPR Guaynabo City 81.03 322 IAmb IAmb 18 21 16.5
comp=Z,305nm,1.2s
HDC Heredia 81.07 303 IAmb IAmb 18 21 01.1
comp=Z,841nm,1.5s
HDC Heredia 81.07 303 *e*P **P** **18 20 59.6 +2.7**
CRPR Cabo Rojo, PR 81.11 321 P **P** **18 20 56.1 -0.7**
THZ Tophouse 81.50 194 IAMs_20 IAMs_20 18 52 14.3
comp=Z,7µm,22.0s
THZ Tophouse 81.50 194 P **P** **18 21 00.8 +2.0**
AUTAR Taroona High S 81.55 175 P **P** **18 21 00.2 +1.2**
BHW Baring Head 81.55 196 IAMs_20 IAMs_20 18 51 34.8
comp=Z,9µm,22.0s
MSEY Mahe Island 81.58 86 IAMs_20 IAMs_20 18 52 25.4
comp=Z,10µm,19.0s
TAU Tasmania Unive 81.58 175 P **P** **18 20 58.1 -1.1**
TAU IAmb IAmb 18 21 20.4
comp=Z,788nm,1.3s
TAU Tasmania Unive 81.58 175 P **P** **18 20 59.8 +0.6**
TAU Tasmania Unive 81.58 175 P **P** **18 20 58.1 -1.1**
TAU pmax pmax
comp=Z,788nm,1.3s
TAU MLR MLR
comp=Z,18µm,21.0s
DSZ Denniston Nort 81.67 194 IAmb IAmb 18 21 20.6
comp=Z,294nm,1.1s
DSZ IAMs_20 IAMs_20 19 01 47.7
comp=Z,6µm,18.0s
DSZ Denniston Nort 81.67 194 P **P** **18 20 59.2 -0.5**
SNZO South Karori 81.67 196 P **P** **18 20 59.5 -0.2**
SNZO IAmb IAmb 18 21 31.2
comp=Z,253nm,1.1s
SNZO South Karori 81.67 196 IAMs_20 IAMs_20 18 51 51.0
comp=Z,15µm,22.0s
SNZO South Karori 81.67 196 P **P** **18 21 03.0 +3.3**
SNZO South Karori 81.67 196 S **S** **18 31 09.0 -2.6**
JTS Las Juntas de 81.72 302 P **P** **18 21 00.9 +0.7**
JTS IAmb IAmb 18 21 03.9
comp=Z,507nm,1.4s
JTS Las Juntas de 81.72 302 P **P** **18 21 01.2 +1.0**
comp=Z,124nm,1.1s,baz=108,slow=1.7,SNR=70
JTS LR LR 18 59 54.8
comp=Z,3µm,20.4s,baz=121,slow=38
comp=Z,124nm,1.1s
JTS Las Juntas de 81.72 302 *d i*P **P** **18 21 02.2 +2.0**
JTS pmax pmax
comp=Z,684nm,1.6s
JTS MLR MLR
comp=Z,5µm,20.0s
NNZ Nelson 81.97 195 IAmb IAmb 18 21 23.6
comp=Z,528nm,1.5s
NNZ IAMs_20 IAMs_20 18 51 41.7
comp=Z,12µm,22.0s
NNZ Nelson 81.97 195 P **P** **18 21 01.6 +0.3**
BFZ Birch Farm 82.04 197 IAMs_20 IAMs_20 18 51 35.8
comp=Z,10µm,22.0s
BFZ Birch Farm 82.04 197 P **P** **18 21 04.9 +3.2**
BFZ Birch Farm 82.04 197 P **P** **18 21 01.2 -0.5**
MOO Moorlands 82.04 175 P **P** **18 21 01.6 0.0**
comp=Z,417nm,1.7s
MOO Moorlands 82.04 175 P **P** **18 21 02.5 +0.8**
MOO Moorlands 82.04 175 P **P** **18 21 02.1 +0.5**
SAIC Isla e San And 82.16 306 P **P** **18 21 04.4 +1.9**
comp=Z,8µmcomp=Z,401nm,1.8s
MRZ Mangatainoka R 82.17 197 IAmb IAmb 18 21 53.8
comp=Z,216nm,1.4s
MRZ IAMs_20 IAMs_20 18 52 13.2
comp=Z,10µm,21.0s
MRZ Mangatainoka R 82.17 197 P **P** **18 21 02.7 +0.3**
TKNZ Takaka Hill 82.21 195 P **P** **18 21 00.8 -1.7**
QRZ Quartz Range 82.47 194 IAmb IAmb 18 21 23.5
comp=Z,485nm,1.9s
QRZ IAMs_20 IAMs_20 18 52 56.0
comp=Z,7µm,21.0s
QRZ Quartz Range 82.47 194 P **P** **18 21 05.5 +1.6**
QRZ Quartz Range 82.47 194 P **P** **18 21 03.9 0.0**
BANI BANI 82.65 318 P **P** **18 21 04.3 -0.7**
TAM Tamanrasset 82.80 29 IAmb IAmb 18 21 25.4
comp=Z,374nm,1.5s
TAM IAMs_20 IAMs_20 18 53 14.7
comp=Z,7µm,19.0s
CORO Coronation Par 83.03 175 P **P** **18 21 07.8 +1.0**
WAZ Wanganui 83.15 196 P **P** **18 21 09.8 +2.3**
AUBRN Burnie High Sc 83.37 174 P **P** **18 21 09.4 +0.9**
BKZ Black Stump Fm 83.47 198 IAMs_20 IAMs_20 18 57 59.7
comp=Z,7µm,20.0s
BKZ Black Stump Fm 83.47 198 P **P** **18 21 12.6 +3.4**
BKZ Black Stump Fm 83.47 198 P **P** **18 21 10.1 +0.8**
GLAD Gladstone 83.53 176 P **P** **18 21 10.4 +1.0**
SDDR Presa de Saban 83.54 318 IAmb IAmb 18 21 29.7
comp=Z,479nm,1.6s
SDDR IAMs_20 IAMs_20 18 58 29.8
comp=Z,6µm,20.0s
SDDR Presa de Saban 83.54 318 *e*P **P** **18 21 10.1 +0.5**
NGZ Ngauruhoe 83.62 197 P **P** **18 21 10.6 +0.5**
SC01 Santiago de lo 83.73 318 IAmb IAmb 18 21 39.8
comp=Z,470nm,1.2s
FURI Furi 83.75 64 IAMs_20 IAMs_20 18 58 02.4
comp=Z,10µm,18.0s
FURI Furi 83.75 64 LR LR 18 56 03.6
comp=Z,8µm,18.7s,baz=210,slow=34
KHEZ Kahui Hut 83.75 196 P **P** **18 21 13.8 +3.1**
NEZ North Egmont 83.77 196 P **P** **18 21 11.8 +1.0**
VRZ Vera Road 83.80 196 P **P** **18 21 11.5 +0.7**
RTZ Ruatahuna 83.93 198 IAmb IAmb 18 21 33.6
comp=Z,146nm,1.1s
RTZ IAMs_20 IAMs_20 18 53 32.7
comp=Z,9µm,22.0s
MGAN Managua 83.95 302 P **P** **18 21 12.4 +0.6**
comp=Z,248nm,1.0s
EOSO Osorio 83.98 10 P **P** **18 21 11.5 -0.1**
MWZ Matawai 84.10 199 P **P** **18 21 12.3 -0.1**
URZ Urewera 84.25 198 P **P** **18 21 14.0 +0.9**
comp=Z,16nm,0.9s,baz=102,slow=6.2,SNR=6.5
URZ LR LR 18 54 05.4
comp=Z,7µm,21.9s,baz=168,slow=32
comp=Z,16nm,0.9s
BILN Bilwi Airport 84.25 305 IAmb IAmb 18 21 16.6
comp=Z,739nm,1.4s
HIZ Hauiti 84.39 197 P **P** **18 21 13.4 -0.4**
HIZ IAmb IAmb 18 22 04.2
comp=Z,373nm,1.6s
HIZ IAMs_20 IAMs_20 18 53 02.8
comp=Z,9µm,22.0s
HIZ Hauiti 84.39 197 P **P** **18 21 14.0 +0.2**
SIUN Universidad Ur 84.61 304 IAmb IAmb 18 21 17.9
comp=Z,569nm,1.6s
MXZ Matakaoa Point 84.71 199 IAMs_20 IAMs_20 18 58 36.4
comp=Z,6µm,19.0s
HOJ Hope 84.83 313 *i*P **P** **18 21 17.9 +1.8**
GWJ Greenwich 84.89 313 ||*i*P **P** **18 21 18.9 +2.3**
STH Stony Hill 84.92 313 *i*P **P** **18 21 19.2 +2.6**
TOZ Tahuroa Road 85.04 197 P **P** **18 21 15.6 -1.5**
MCJ Malvern 85.16 312 ||*i*P **P** **18 21 20.5 +2.6**
MTDJ Mount Denham 85.36 312 IAmb IAmb 18 21 22.9
comp=Z,716nm,1.6s
MTDJ Mount Denham 85.36 312 ||*i*P **P** **18 21 21.0 +2.1**
MTDJ Mount Denham 85.36 312 *e*P **P** **18 21 20.9 +2.1**
MASC Masc 85.76 316 *e*P **P** **18 21 22.6 +1.9**
GRTK Grand Turk 85.79 319 IAMs_20 IAMs_20 19 02 52.3
comp=Z,6µm,18.0s
GRTK Grand Turk 85.79 319 *e*P **P** **18 21 21.3 +0.5**
GTBY Guantanamo Bay 85.89 315 *e*P **P** **18 21 20.6 -0.7**
QMBU Quimbuelo 86.02 315 *e*P **P** **18 21 23.1 +1.1**
RCC Rio Carpintero 86.19 314 *e*P **P** **18 21 23.6 +0.8**
MARVS Santiago de Cu 86.27 314 *e*P **P** **18 21 24.7 +1.4**
SABCS La Quijada 86.36 315 *e*P **P** **18 21 25.1 +1.4**
AUSSC Sale College, 86.36 175 P **P** **18 21 25.0 +1.3**
NWAO Narrogin (SRO) 86.38 150 P **P** **18 21 23.6 -0.3**
comp=Z,0.0nmcomp=Z,75nm,1.5s
NWAO Narrogin (SRO) 86.38 150 P **P** **18 21 23.6 -0.3**
NWAO Narrogin (SRO) 86.38 150 LR LR 18 56 40.1
comp=Z,4µm,20.8s,baz=186,slow=33
NWAO Narrogin (SRO) 86.38 150 P **P** **18 21 24.5 +0.6**
NWAO Narrogin (SRO) 86.38 150 P **P** **18 21 24.4 +0.6**
NWAO Narrogin (SRO) 86.38 150 P **P** **18 21 23.6 -0.3**
NWAO pmax pmax
comp=Z,184nm,1.6s
NWAO MLR MLR
comp=Z,5µm,21.0s
NMDO Nuevo Mundo 86.41 315 IAmb IAmb 18 21 27.6
comp=Z,407nm,1.5s
NMDO Nuevo Mundo 86.41 315 *e*P **P** **18 21 25.2 +1.4**
CHIV Chivirico 86.46 314 IAmb IAmb 18 21 27.6
comp=Z,581nm,1.4s
CHIV Chivirico 86.46 314 *e*P **P** **18 21 24.0 -0.2**
MOAC Moa 86.49 315 *e*P **P** **18 21 25.8 +1.5**
AUMTC Mt Clear Colle 86.65 172 P **P** **18 21 26.0 +0.9**
PINC Pinares de May 86.67 315 *e*P **P** **18 21 26.2 +1.1**
BRAT Ballarat 86.71 172 P **P** **18 21 26.5 +1.1**
LMGC Las Mercedes 86.78 313 *e*P **P** **18 21 27.6 +1.9**
YAR Yar 86.79 314 *e*P **P** **18 21 27.8 +2.0**
TOO Toolangi 86.80 174 P **P** **18 21 25.8 -0.1**
comp=Z,0.0nmcomp=Z,42nm,1.6s
AUMAZ Mazenod Senior 86.89 149 P **P** **18 21 27.0 +0.6**
MUN Mundaring 86.97 149 P **P** **18 21 27.2 +0.5**
MUN Mundaring 86.97 149 P **P** **18 21 27.3 +0.5**
WCZ Waipu Caves 86.98 197 P **P** **18 21 25.7 -1.1**
ARPS Mount Arapiles 87.31 171 P **P** **18 21 28.3 -0.1**
comp=Z,96nm,2.0s
MTO3 Montecristo 87.41 300 IAmb IAmb 18 21 51.0
comp=Z,251nm,1.0s
MILA Mila 87.50 176 P **P** **18 21 29.9 +0.6**
comp=Z,98nm,1.5s
TBI Tubuai 87.63 230 *e*P P 18 21 21.9 -8.2
comp=Z,2µm,37.0s
TBI Tubuai 87.63 230 *e*S **S** **18 32 06.4 -5.1**
comp=Z,8µm,29.2s
TBI *e*SS **SS** **18 37 47.4 -8.9**
comp=Z,5µm,30.8s
TBI *e*LQ LQ 18 45 30.1
comp=Z,14µm,25.8s
TBI *e*LR LR 18 49 06.9
comp=Z,59µm,29.2s
TBI *e*LR LR 18 49 11.9
comp=Z,13µm,28.8s
KLBR Kellerberrin 87.78 150 P **P** **18 21 31.7 +1.0**
OUZ Omahuta 87.81 196 IAMs_20 IAMs_20 18 54 59.4
comp=Z,8µm,22.0s
OUZ Omahuta 87.81 196 P **P** **18 21 31.7 +0.9**
TIO Tiouine 87.85 16 P **P** **18 21 32.5 +1.6**
AUSMG Snowy Mountain 88.11 176 P **P** **18 21 33.6 +1.3**
CCCC Cccc 88.11 313 *e*P **P** **18 21 33.0 +0.9**
ATD Arta Tunnel 88.12 66 IAmb IAmb 18 21 37.0
comp=Z,190nm,1.6s
ATD IAMs_20 IAMs_20 19 01 44.3
comp=Z,6µm,18.0s
ATD Arta Tunnel 88.12 66 P **P** **18 21 32.6 +0.2**
comp=Z,0.4nm,0.6s,baz=241,slow=2.3,SNR=24
ATD LR LR 19 00 00.2
comp=Z,214nm,19.0s,baz=198,slow=35
ATD Arta Tunnel 88.12 66 P **P** **18 21 35.6 +3.2**
SNR=18
ATD S **SKSac** **18 32 04.6 +3.8**
AUMAG Moama Anglican 88.21 173 P **P** **18 21 34.2 +1.5**
BLDU Ballidu 88.40 149 P **P** **18 21 34.7 +1.1**
APG El Apazote 88.47 300 P **P** **18 21 35.2 +1.0**
comp=Z,7.9nm,1.0s,baz=170,slow=10,SNR=50
APG LR LR 19 01 35.6
comp=Z,280nm,20.9s,baz=72,slow=36
comp=Z,7.9nm,1.0s
PMAR Madeira 88.48 8 *e*P **P** **18 21 35.0 +1.2**
PMAR *i* IAmb IAmb 18 22 10.1
comp=Z,390nm,1.7s
PMOZ Porto Moniz, M 88.55 8 P **P** **18 21 34.6 +0.5**
PMOZ Porto Moniz, M 88.55 8 *e*P **P** **18 21 35.5 +1.4**
PMOZ *i* IAmb IAmb 18 21 55.6
comp=Z,240nm,1.6s
PMOZ *e*PP **PP** **18 25 01.9 -1.1**
PMOZ *e*S **S** **18 32 15.7 -3.9**
PMOZ *e*LR LR 18 49 04.4
PMOZ *i* IAMs_20 IAMs_20 18 52 37.2
comp=Z,5µm,20.0s
AUMBR Murray Bridge 88.67 168 P **P** **18 21 36.3 +1.5**
AUMAR Marden Senior 88.83 168 P **P** **18 21 37.2 +1.6**
PMPS Porto Santo 88.86 8 *e*P **P** **18 21 37.8 +2.5**
PMPS *i* IAmb IAmb 18 22 10.6
comp=Z,385nm,1.5s
PMPST Porto Santo, M 88.88 8 *e*P **P** **18 21 37.2 +1.7**
PMPST *i* IAmb IAmb 18 21 56.8
comp=Z,678nm,1.5s
DGAR Diego Garcia 88.89 101 IAMs_20 IAMs_20 18 53 19.9
comp=Z,8µm,19.0s
AUCAS Cummins Area S 89.06 165 P **P** **18 21 38.0 +1.3**
KMBL Kambalda 89.10 153 P **P** **18 21 37.2 +0.3**
comp=Z,58nm,1.4s
AUMHS Melrose High S 89.18 176 P **P** **18 21 39.2 +1.9**
CAN Canberra 89.22 176 IAmb IAmb 18 21 59.4
comp=Z,441nm,1.4s
CAN Canberra 89.22 176 P **P** **18 21 39.4 +1.9**
CAN Canberra 89.22 176 P **P** **18 21 36.0 -1.5**
AUMTS Mt Stromlo 89.22 176 P **P** **18 21 39.4 +1.9**
CNB Canberra Magne 89.24 177 P **P** **18 21 39.2 +1.6**
AUSIS Research Schoo 89.26 176 P **P** **18 21 39.7 +2.0**
AUDAR Daramalan Coll 89.30 176 P **P** **18 21 39.5 +1.7**
MORW Morawa 89.65 148 P **P** **18 21 39.0 -0.5**
MORW IAmb IAmb 18 21 41.5
comp=Z,216nm,1.9s
MORW Morawa 89.65 148 P **P** **18 21 40.4 +0.9**
PETF Flores 89.81 301 IAmb IAmb 18 21 43.3
comp=Z,187nm,1.3s
CAIB Caibarien 89.97 312 *e*P **P** **18 21 42.5 +1.7**
MDT Midelt 90.14 18 P **P** **18 21 42.7 +1.2**
comp=Z,63nm,1.1s,baz=208,slow=3.8,SNR=62
MDT LR LR 18 56 51.1
comp=Z,13µm,19.6s,baz=208,slow=32
comp=Z,63nm,1.1s
AVE Averroes 90.15 16 P **P** **18 21 42.7 +1.3**
AVE Averroes 90.15 16 IAmb IAmb 18 22 02.7
comp=Z,339nm,1.5s
MD31 MD31 90.17 18 IAmb IAmb 18 22 02.6
comp=Z,358nm,1.4s
MD01 Midelt array s 90.17 18 P **P** **18 21 42.8 +1.1**
HTT Hallett 90.31 168 P **P** **18 21 43.2 +0.6**
CCIG Comitan 90.38 299 IAmb IAmb 18 22 29.8
comp=Z,134nm,1.2s
BBOO Buckleboo 90.54 165 IAmb IAmb 18 21 50.3
comp=Z,105nm,1.1s
IFR Ifrane 90.74 18 P **P** **18 21 46.3 +1.9**
SYDH Sydney Hard Ro 90.83 178 P **P** **18 21 47.1 +2.2**
RTC Rabat Centre 90.92 16 P **P** **18 21 46.3 +1.4**
AUKHS Kincumber High 91.14 178 P **P** **18 21 48.5 +2.1**
CAMR Camarioca 91.28 311 P **P** **18 21 46.8 -0.1**
CAMR IAmb IAmb 18 21 50.9
comp=Z,2µm,1.9s
CAMR Camarioca 91.28 311 *e*P **P** **18 21 46.4 -0.5**
SOR Soroa 91.75 310 IAmb IAmb 18 21 52.7
comp=Z,538nm,1.7s
SOR Soroa 91.75 310 *e*P **P** **18 21 50.5 +1.4**
TEIG Tepich 91.90 304 P **P** **18 21 50.7 +0.8**
TEIG IAMs_20 IAMs_20 19 02 40.4
comp=Z,6µm,21.0s
TEIG Tepich 91.90 304 P **P** **18 21 52.2 +2.4**
STKA Stephens Creek 92.14 170 P **P** **18 21 51.6 +0.6**
comp=Z,34nm,1.2s,baz=174,slow=4.9,SNR=26
STKA PP **PP** **18 25 30.7 +0.7**
comp=Z,14nm,1.0s,baz=182,slow=7.4,SNR=3.4
STKA LR LR 19 02 45.2
comp=Z,12µm,18.9s,baz=184,slow=35
comp=Z,34nm,1.2s
TVO Taravao 92.41 233 *e*P P 18 21 46.5 -6.1
comp=Z,75nm,1.5s
TVO Taravao 92.41 233 *e*LR LR 18 51 24.9
comp=Z,2µm,26.4s
TIAR Tiarei 92.65 233 *e*LR LR 18 51 29.2
comp=Z,7µm,26.0s
PAE Paea 92.67 233 *e*LR LR 18 51 31.6
comp=Z,2µm,27.2s
MEEK Meekatharra 92.69 149 P **P** **18 21 54.5 +0.8**
PPT2 Papeete2 92.73 233 *e*P P 18 21 49.0 -5.1
comp=Z,149nm,23.2s
PPT2 Papeete2 92.73 233 *e*PP **PP** **18 25 30.1 -5.3**
comp=Z,190nm,27.5s
PPT2 *e*S S 18 32 48.0 -11
comp=Z,3µm,28.0s
PPT2 *e*SS **SS** **18 39 12.9 +2.5**
comp=Z,1µm,23.5s
PPT2 *e*LQ LQ 18 47 35.8
comp=Z,4µm,30.2s
PPT2 *e*LR LR 18 51 31.9
comp=Z,10µm,30.8s
PPT2 *e*LR LR 18 51 38.1
comp=Z,16µm,29.5s
CMSA Cobar Meteorol 92.81 173 P **P** **18 21 55.4 +1.2**
CEU Ceuta 93.02 17 P **P** **18 21 56.5 +1.9**
CMLA Cha da Macela 93.14 1 IAMs_20 IAMs_20 19 09 06.9
comp=Z,5µm,18.0s
SFS San Fernando 93.44 16 IAMs_20 IAMs_20 18 59 23.8
comp=Z,11µm,20.0s
AUPHS Peel High Scho 93.48 178 P **P** **18 21 58.7 +1.4**
BBSR BB Station 93.66 328 IAMs_20 IAMs_20 19 06 01.6
comp=Z,6µm,19.0s
PFVI Vila Bisbo 93.71 14 P **P** **18 21 59.0 +1.2**
PFVI Vila Bisbo 93.71 14 *e*P **P** **18 21 59.3 +1.5**
PFVI *i* IAmb IAmb 18 22 19.7
comp=Z,388nm,1.8s
EMIJ Mijas 93.77 17 P **P** **18 21 58.5 +0.3**
RAR Rarotonga 93.78 223 LR LR 18 57 52.6
comp=Z,3µm,19.5s,baz=198,slow=31
ESPR Espera 93.89 16 P **P** **18 21 59.6 +1.0**
MORF Marmelete 93.91 14 *e*P **P** **18 21 57.8 -1.0**
MORF *e*PP **PP** **18 25 44.1 -1.1**
MORF *e*SKSac **SKSac** **18 32 33.6 +0.9**
MORF IAMs_20 IAMs_20 18 57 05.3
comp=Z,12µm,24.9s
MORF Marmelete 93.91 14 P **P** **18 21 59.2 +0.4**
MORF IAmb IAmb 18 22 19.8
comp=Z,204nm,1.2s
MORF Marmelete 93.91 14 *e*P **P** **18 22 00.5 +1.8**
MORF *i* IAmb IAmb 18 22 20.6
comp=Z,306nm,1.7s
MORF *e*PP **PP** **18 25 46.1 +0.9**
MORF Marmelete 93.91 14 P **P** **18 21 59.2 +0.4**
MORF pmax pmax
comp=Z,204nm,1.2s
PBDV Barranco-do-Ve 93.95 15 P **P** **18 21 59.9 +1.0**
PBDV Barranco-do-Ve 93.95 15 *e*P **P** **18 22 00.5 +1.6**
PBDV *i* IAmb IAmb 18 22 20.3
comp=Z,302nm,1.5s
PBDV *e*PP **PP** **18 25 52.2 +6.7**
EMAL Malaga-Limoner 94.02 18 P **P** **18 21 59.5 +0.2**

PTEO Sao Teotonio 94.13 14 *e*P **P** **18 22 01.2 +1.5**
PTEO *i* IAmb IAmb 18 22 21.7
comp=Z,427nm,1.6s
PTEO *e*PP **PP** **18 25 53.1 +6.3**
PVAQ Vaqueiros 94.14 15 *e*P **P** **18 22 01.6 +1.9**
PVAQ *i* IAmb IAmb 18 22 21.1
comp=Z,323nm,1.5s
PVAQ *e*PP **PP** **18 25 50.2 +3.3**
PVAQ *e*S **SKSac** **18 32 37.7 +3.9**
PVAQ *e*LR LR 18 52 01.7
PVAQ *i* IAMs_20 IAMs_20 18 58 09.8
comp=Z,6µm,22.0s
ARMA Armidale 94.18 178 IAmb IAmb 18 22 21.9
comp=Z,225nm,1.9s
ARMA Armidale 94.18 178 P **P** **18 22 02.8 +2.2**
PMOR Pomariorio Ree 94.21 236 *e*LR LR 18 52 10.3
comp=Z,4µm,22.6s
ELGU Los Guajares, 94.27 18 P **P** **18 22 00.4 0.0**
PCVE Castro Verde 94.31 15 *e*P **P** **18 22 02.6 +2.0**
PCVE *i* IAmb IAmb 18 22 21.9
comp=Z,230nm,1.4s
PCVE *e*PP PP 18 25 56.0 +7.7
MESJ Messejana 94.49 14 *e*P **P** **18 22 00.4 -1.0**
MESJ *e*PP **PP** **18 25 48.6 -1.1**
MESJ *e*SKSac **SKSac** **18 32 36.7 +1.0**
MESJ IAMs_20 IAMs_20 18 59 00.8
comp=Z,9µm,19.1s
MESJ Messejana 94.49 14 IAmb IAmb 18 22 22.6
comp=Z,201nm,1.2s
MESJ Messejana 94.49 14 *e*P **P** **18 22 02.9 +1.5**
MESJ *i* IAmb IAmb 18 22 22.8
comp=Z,304nm,1.4s
MESJ *e*PP **PP** **18 25 51.8 +2.1**
TLIG Tlapa 94.71 294 IAmb IAmb 18 22 26.6
comp=Z,120nm,1.2s
PBEJ Beja 94.72 15 *e*P **P** **18 22 04.7 +2.2**
PBEJ *i* IAmb IAmb 18 22 23.7
comp=Z,214nm,1.4s
PBAR Barrancos 94.99 15 *e*P **P** **18 22 05.1 +1.4**
PBAR *i* IAmb IAmb 18 22 24.9
comp=Z,283nm,1.4s
PBAR *e*PP **PP** **18 25 58.7 +5.1**
AULRC Lightning Ridg 95.04 175 P **P** **18 22 05.2 +0.8**
LIS Lisbon 95.23 13 *e*P **P** **18 22 03.9 -0.8**
LIS *e*PP **PP** **18 25 54.4 -1.0**
LIS IAMs_20 IAMs_20 18 57 18.7
comp=Z,9µm,21.7s
LIS Lisbon 95.23 13 *e*P P 18 22 10.8 +6.1
LIS *e*PP **PP** **18 25 58.4 +3.0**
PMAFR Mafra 95.44 13 *e*P P 18 22 11.8 +6.0
PMAFR *e*PP **PP** **18 25 54.6 -2.5**
CART Cartagena 95.45 20 IAMs_20 IAMs_20 18 58 40.9
comp=Z,8µm,22.0s
PARRA Arraiolos 95.47 14 *e*P **P** **18 22 07.8 +2.5**
PARRA *i* IAmb IAmb 18 22 27.9
comp=Z,360nm,1.7s
PARRA *e*PP **PP** **18 25 56.8 +0.5**
PESTR Estremoz 95.59 15 *e*P **P** **18 22 08.1 +1.7**
PESTR *i* IAmb IAmb 18 22 27.8
comp=Z,233nm,1.6s
PESTR *e*PP **PP** **18 25 59.2 +1.0**
TAOE Nuku Hiva Isla 95.69 245 *e*S **S** **18 33 17.9 -7.0**
comp=Z,756nm,28.1s
TAOE *e*SS **SS** **18 39 46.2 -6.9**
comp=Z,645nm,28.0s
TAOE *e*LQ LQ 18 48 49.3
comp=Z,5µm,29.3s
TAOE *e*LR LR 18 52 53.4
comp=Z,5µm,22.5s
KAAM Kaadhehdhoo 95.70 97 IAMs_20 IAMs_20 18 57 48.5
comp=Z,4µm,20.0s
PMTG Montargil 95.70 14 *e*P **P** **18 22 08.2 +1.4**
PMTG *i* IAmb IAmb 18 22 29.1
comp=Z,215nm,1.6s
PMTG *e*PP **PP** **18 26 00.3 +1.3**
KEST Kesra 96.08 29 IAmb IAmb 18 22 41.7
comp=Z,96nm,1.4s
KEST Kesra 96.08 29 P **P** **18 22 09.2 +0.4**
comp=Z,16nm,1.1s,baz=215,slow=5.3,SNR=8.5
KEST PP **PP** **18 26 02.0 -0.2**
comp=Z,30nm,1.2s,baz=134,slow=5.6,SNR=4.1
KEST LR LR 19 00 45.0
comp=Z,9µm,20.6s,baz=208,slow=33
comp=Z,16nm,1.1s
KEST Kesra 96.08 29 P **P** **18 22 10.6 +1.7**
SNR=6.8
KEST P **P** **18 22 10.6 +1.7**
SNR=6.8
INKA Innaminka 96.14 169 P **P** **18 22 09.9 +0.5**
PMRV Marv??o 96.17 15 *e*P **P** **18 22 10.5 +1.5**
PMRV *i* IAmb IAmb 18 22 30.1
comp=Z,121nm,1.7s
PMRV *e*PP **PP** **18 26 03.2 +0.5**
PMRV *e*S **SKSac** **18 32 51.3 +6.6**
PMRV *e*LR LR 18 53 26.0
PMRV *i* IAMs_20 IAMs_20 18 59 28.0
comp=Z,7µm,22.0s
PSARD Sardoal 96.23 14 *e*P P 18 22 14.7 +5.4
PSARD *e*PP **PP** **18 26 03.2 +0.1**
UNM Universidad Na 96.50 295 IAMs_20 IAMs_20 19 01 35.5
comp=Z,6µm,21.0s
PCAS Casmilo, Conde 96.63 14 *e*P P 18 22 16.6 +5.5
PCAS *e*PP **PP** **18 26 09.9 +3.7**
PAB San Pablo 96.75 17 P **P** **18 22 12.1 +0.3**
PAB IAmb IAmb 18 22 31.9
comp=Z,99nm,1.6s
PAB San Pablo 96.75 17 IAMs_20 IAMs_20 19 00 16.4
comp=Z,4µm,20.0s
PAB San Pablo 96.75 17 P **P** **18 22 12.1 +0.3**
PAB pmax pmax
comp=Z,99nm,1.6s
PAB MLR MLR
comp=Z,4µm,20.0s
ESDC Sonseca Array 96.94 17 P **P** **18 22 13.8 +1.2**
comp=Z,4.1nm,0.9s,baz=190,slow=3.5,SNR=11
ESDC LR LR 19 01 16.8
comp=Z,5µm,21.4s,baz=203,slow=33
comp=Z,4.1nm,0.9s
TW1H Toowoomba 1 Ha 97.05 179 P Pdif 18 22 15.5 +1.7
MTE Manteigas 97.10 14 IAMs_20 IAMs_20 18 59 21.6
comp=Z,8µm,22.0s
MTE Manteigas 97.10 14 *e*P Pdif 18 22 14.2 +0.8
MTE *e*S **SKSac** **18 32 57.3 +7.7**
MTE *e*LR LR 18 53 58.6
MTE *i* IAMs_20 IAMs_20 18 59 32.1
comp=Z,8µm,24.0s
PVIS Viseu 97.36 14 *e*P Pdif 18 22 21.3 +6.7
PVIS *e*PP **PP** **18 26 11.4 -0.6**
COCO West Island 97.47 124 IAMs_20 IAMs_20 18 57 45.3
comp=Z,6µm,20.0s
QLP Quilpie 97.62 172 P Pdif 18 22 17.1 +0.8
AUBSH Beerwah State 97.74 179 P Pdif 18 22 17.9 +1.2
MVO Moncorvo 97.92 15 *e*P Pdif 18 22 22.4 +5.3
MVO *e*PP **PP** **18 26 17.4 +1.1**
MVO *e*S **SKSac** **18 32 58.9 +5.1**
MVO *e*LR LR 18 54 23.8
MVO *i* IAMs_20 IAMs_20 18 59 56.7
comp=Z,7µm,22.0s
POLO Lamas de Olo 98.02 14 *e*P Pdif 18 22 22.8 +5.3
POLO *e*PP **PP** **18 26 20.1 +3.0**
MBWA Marble Bar 98.18 148 IAMs_20 IAMs_20 19 02 04.9
comp=Z,6µm,20.0s
MBWA Marble Bar 98.18 148 P Pdif 18 22 19.9 +1.1
456A Hilliard 98.30 314 IAMs_20 IAMs_20 19 10 52.7
comp=Z,8µm,19.0s
PCAB Cabril 98.32 14 *e*P Pdif 18 22 24.3 +5.5
ABTO Aybut 98.50 72 P Pdif 18 22 20.1 0.0
PGAV Gavieira, Arco 98.54 14 *e*P Pdif 18 22 29.9 +10
PGAV *e*S **SKSac** **18 33 02.1 +5.2**
PGAV *e*LR LR 18 54 00.7
PGAV *i* IAMs_20 IAMs_20 18 58 46.0
comp=Z,5µm,24.0s
PBRG Braganca 98.59 15 *e*P Pdif 18 22 27.8 +7.9
257A Skidaway Islan 99.00 315 IAMs_20 IAMs_20 19 11 01.2
comp=Z,8µm,19.0s
RBK Rabkut 99.11 72 P **Pdif** **18 22 22.1 -0.7**
AUALC St Philip's Co 99.12 162 P **Pdif** **18 22 24.0 +0.9**
VAE Valguarnera 99.15 32 PP **PP** **18 26 24.8 -1.0**
comp=Z,2.9nm,0.3s,baz=227,slow=3.3,SNR=3.9
VAE LR LR 19 01 20.5
comp=Z,7µm,20.6s,baz=210,slow=32
ASAR Alice Springs 99.15 162 P **Pdif** **18 22 22.3 -0.8**
ASAR Alice Springs 99.15 162 P **Pdif** **18 22 23.6 +0.4**
comp=Z,5.9nm,0.7s,baz=191,slow=3.6,SNR=30
ASAR PP **PP** **18 26 23.7 -0.9**
comp=Z,25nm,1.0s,baz=187,slow=7.0,SNR=7.2
ASAR S **SKSac** **18 32 59.8 -1.6**
comp=Z,2.0nm,1.0s,baz=171,slow=7.9,SNR=5.6
ASAR PKKP **PKKPdf** **18 38 47.7 0.0**
comp=Z,1.4nm,0.7s,baz=17,slow=2.1,SNR=10.0
ASAR PKPPKP **P'P'df** **18 47 04.0 -5.5**
comp=Z,1.2nm,0.9s,baz=7.5,slow=2.4,SNR=4.8
ASAR LR LR 19 06 33.3
comp=Z,6µm,18.1s,baz=183,slow=35
comp=Z,5.9nm,0.7s
EIDS Eidsvold 99.19 178 IAmb IAmb 18 22 24.9
comp=Z,68nm,1.4s
EIDS Eidsvold 99.19 178 P **Pdif** **18 22 23.4 +0.1**
RAYN Ar Rayn 99.55 62 P **Pdif** **18 22 24.7 0.0**
RAYN Ar Rayn 99.55 62 IAMs_20 IAMs_20 19 06 22.1
comp=Z,5µm,19.0s
RAYN Ar Rayn 99.55 62 P **Pdif** **18 22 24.7 0.0**
RAYN pmax pmax
comp=Z,8.0nm,1.0s
RAYN MLR MLR
comp=Z,5µm,19.0s
VSL Villasalto 99.63 27 IAMs_20 IAMs_20 19 04 05.4
comp=Z,7µm,19.0s
NHSC New Hope 99.66 317 IAMs_20 IAMs_20 19 07 27.8
comp=Z,7µm,22.0s
Y60A Bolivia 99.71 319 IAMs_20 IAMs_20 19 09 20.0
comp=Z,5µm,20.0s
451A Vernon 99.75 311 IAMs_20 IAMs_20 19 11 47.3
comp=Z,8µm,19.0s
EIL Elat 99.79 51 P **Pdif** **18 22 26.2 +0.6**
comp=Z,2.3nm,0.7s,baz=229,slow=5.5,SNR=4.5
EIL PP **PP** **18 26 30.6 0.0**
comp=Z,8.5nm,1.1s,baz=152,slow=1.8,SNR=5.1
EIL LR LR 19 02 32.5
comp=Z,9µm,21.8s,baz=222,slow=32
comp=Z,2.3nm,0.7s
Y58A Scranton 100.17 317 IAMs_20 IAMs_20 19 09 00.3
comp=Z,6µm,22.0s
154A Montrose 100.39 314 IAMs_20 IAMs_20 19 12 07.2
comp=Z,9µm,19.0s
X58A Rowland 100.62 318 IAMs_20 IAMs_20 19 08 43.2
comp=Z,7µm,21.0s
BRAL Brewton 100.79 310 IAMs_20 IAMs_20 19 09 21.7
comp=Z,9µm,21.0s
W59A Clinton 100.83 319 IAMs_20 IAMs_20 19 10 51.6
comp=Z,5µm,20.0s
HMDM Hanimaadhoo 100.95 94 IAMs_20 IAMs_20 19 01 02.9
comp=Z,5µm,19.0s
250A Grady 101.15 311 IAMs_20 IAMs_20 19 13 05.4
comp=Z,9µm,19.0s
AUNRC North Rockhamp 101.19 177 P **Pdif** **18 22 33.7 +1.5**
GOGA Godfrey 101.24 314 IAMs_20 IAMs_20 19 11 03.5
comp=Z,8µm,20.0s
W57A Gilead 101.40 318 IAMs_20 IAMs_20 19 09 46.8
comp=Z,7µm,20.0s
GHAJ Ghor Haditha 101.46 50 IAMs_20 IAMs_20 19 06 00.8
comp=Z,9µm,19.0s
ONTNC Ouen Toro 101.50 192 IAMs_20 IAMs_20 19 02 50.0
comp=Z,4µm,20.0s
V58A Windy Hill, Pi 101.64 319 IAMs_20 IAMs_20 19 11 18.0
comp=Z,5µm,20.0s
KARP Karpathos 101.73 42 IAMs_20 IAMs_20 19 08 31.9
comp=Z,4µm,20.0s
Y52A Lilburn 101.87 314 IAMs_20 IAMs_20 19 13 01.4
comp=Z,9µm,19.0s
KMSC Kings Mountain 101.91 317 IAMs_20 IAMs_20 19 11 19.2
comp=Z,6µm,20.0s
346A Big Creek Wild 102.03 309 IAMs_20 IAMs_20 19 09 41.6
comp=Z,6µm,22.0s
S61A Accomac 102.08 322 IAMs_20 IAMs_20 19 09 56.6
comp=Z,7µm,20.0s
V55A Taylorsville 102.48 317 IAMs_20 IAMs_20 19 10 53.5
comp=Z,6µm,21.0s
R61A Willards 102.55 323 IAMs_20 IAMs_20 19 09 28.9
comp=Z,5µm,20.0s
U56A King 102.60 318 IAMs_20 IAMs_20 19 09 50.6
comp=Z,8µm,21.0s
FITZ Fitzroy Crossi 102.74 153 P **Pdif** **18 22 40.2 +1.1**
comp=Z,4.1nm,1.1s,baz=223,slow=5.3,SNR=2.5
T57A Hurt 102.75 319 IAMs_20 IAMs_20 19 10 41.6
comp=Z,6µm,20.0s
ASF Jabal al Asfar 102.79 51 PP **PP** **18 26 51.6 -1.7**
comp=Z,7.4nm,1.0s,baz=266,slow=6.6,SNR=4.0
X51A Calhoun 102.81 314 IAMs_20 IAMs_20 19 12 14.1
comp=Z,5µm,20.0s
WRA Warramunga Arr 102.87 161 P **Pdif** **18 22 39.9 +0.2**
comp=Z,6.9nm,1.0s,baz=194,slow=3.3,SNR=20
WRA PP **PP** **18 26 50.5 -2.1**
comp=Z,23nm,1.1s,baz=191,slow=5.9,SNR=10
WRA S **SKSac** **18 33 17.7 -1.6**
comp=Z,1.4nm,1.1s,baz=177,slow=7.5,SNR=2.9
WRA PKKPbc **PKKPbc** **18 38 36.9 +2.0**
comp=Z,3.2nm,1.0s,baz=352,slow=2.9,SNR=7.5
WRA PKPPKP **P'P'df** **18 46 55.5 -6.8**
comp=Z,1.0nm,0.9s,baz=355,slow=2.6,SNR=6.7
WRAB Tennant Creek 102.88 161 IAMs_20 IAMs_20 19 06 32.3
comp=Z,9µm,22.0s
WRAB Tennant Creek 102.88 161 P **Pdif** **18 22 41.3 +1.5**
WRAB Tennant Creek 102.88 161⇓ *e*P **Pdif** **18 22 36.0 -3.8**
WRAB pmax pmax
comp=Z,31nm,1.4s
WRAB MLR MLR
comp=Z,8µm,18.0s
W52A Murphy 102.89 315 IAMs_20 IAMs_20 19 13 07.2
comp=Z,6µm,20.0s
DQM DQM 102.89 74 P **Pdif** **18 22 38.8 -0.8**
V53A Saluda 102.95 316 IAMs_20 IAMs_20 19 12 10.8
comp=Z,7µm,20.0s
Z47A Carrollton 102.97 311 IAMs_20 IAMs_20 19 14 13.5
comp=Z,9µm,19.0s
QIS Mount Isa 103.08 167 P **Pdif** **18 22 41.6 +0.9**
CBN Corbin Frederi 103.14 321 IAMs_20 IAMs_20 19 04 25.8
comp=Z,4µm,22.0s
441A DeRidder 103.16 306 IAMs_20 IAMs_20 19 17 06.8
comp=Z,4µm,20.0s
VBMS Vicksburg 103.20 308 IAMs_20 IAMs_20 19 10 07.7
comp=Z,6µm,21.0s
U54A Nelsons Funny 103.31 317 IAMs_20 IAMs_20 19 11 18.2
comp=Z,6µm,20.0s
TKL Tuckaleechee C 103.32 315 PP **PP** **18 26 55.3 -1.8**
comp=Z,22nm,1.2s,baz=148,slow=8.5,SNR=6.9
S57A Dark Hollow, R 103.32 320 IAMs_20 IAMs_20 19 09 54.5
comp=Z,6µm,21.0s
BLA Blacksburg 103.38 318 IAMs_20 IAMs_20 19 09 41.1
comp=Z,5µm,22.0s
W50A Signal Mountai 103.54 314 IAMs_20 IAMs_20 19 12 26.5
comp=Z,7µm,21.0s
P61A Hammonton 103.57 324 IAMs_20 IAMs_20 19 06 51.9
comp=Z,7µm,21.0s
CSS Mathatis 103.66 47 IAMs_20 IAMs_20 19 08 50.0
comp=Z,5µm,20.0s
MSVF Nonsavu 103.95 204 IAMs_20 IAMs_20 19 08 49.1
comp=Z,4µm,20.0s
TZTN Tazewell 104.00 316 IAMs_20 IAMs_20 19 14 05.6
comp=Z,6µm,19.0s
143A Socs Landing, 104.01 308 IAMs_20 IAMs_20 19 10 57.0
comp=Z,5µm,21.0s
Y45A Yeager Farm, C 104.17 310 IAMs_20 IAMs_20 19 10 44.4
comp=Z,9µm,21.0s
R55A Marlinton 104.21 319 IAMs_20 IAMs_20 19 12 26.1
comp=Z,4µm,20.0s
S54A Dingess, Beckl 104.23 318 IAMs_20 IAMs_20 19 10 16.7
comp=Z,5µm,22.0s
M63A Gales Ferry 104.24 326 IAMs_20 IAMs_20 19 10 08.6
comp=Z,7µm,20.0s
N62A Caumsett State 104.26 325 IAMs_20 IAMs_20 19 08 27.3
comp=Z,8µm,21.0s
WSPT Westport, CT 104.44 325 IAMs_20 IAMs_20 19 08 30.9
comp=Z,4µm,21.0s
PAL Palisades 104.47 325 IAMs_20 IAMs_20 19 08 44.9
comp=Z,7µm,20.0s
P57A Homestead Farm 104.51 321 IAMs_20 IAMs_20 19 10 50.0
comp=Z,4µm,20.0s
Q56A Snyder Ridge, 104.54 320 IAMs_20 IAMs_20 19 04 38.7
comp=Z,5µm,21.0s
V48A Smith Brothers 104.63 313 IAMs_20 IAMs_20 19 09 56.3
comp=Z,10µm,22.0s
OXF Oxford 104.67 310 IAMs_20 IAMs_20 19 17 11.5
comp=Z,6µm,18.0s
AFI Afiamalu 104.78 215 IAMs_20 IAMs_20 19 03 40.8
comp=Z,5µm,19.0s
U49A Red Boiling Sp 104.86 314 IAMs_20 IAMs_20 19 13 48.6
comp=Z,6µm,20.0s
T50A Nancy 104.92 315 IAMs_20 IAMs_20 19 11 06.1
comp=Z,7µm,21.0s
S51A Beattyville 104.97 316 IAMs_20 IAMs_20 19 15 59.3
comp=Z,6µm,18.0s
Q54A Coxs Mills 105.09 319 IAMs_20 IAMs_20 19 04 48.4
comp=Z,6µm,22.0s
N58A Sunbury 105.26 323 IAMs_20 IAMs_20 19 08 39.9
comp=Z,6µm,22.0s
MCWV Mont Chateau 105.32 320 IAMs_20 IAMs_20 19 05 14.5
comp=Z,5µm,22.0s
L61B Northampton 105.39 326 IAMs_20 IAMs_20 19 09 14.0
comp=Z,8µm,20.0s
SSPA Standing Stone 105.49 322 IAMs_20 IAMs_20 19 10 43.8
comp=Z,5µm,20.0s
PALK Pallekele 105.58 100 IAMs_20 IAMs_20 19 02 36.5
comp=Z,5µm,19.0s
Q52A Bidwell 105.61 318 IAMs_20 IAMs_20 19 12 29.2
comp=Z,4µm,21.0s
P53A Whipple 105.74 319 IAMs_20 IAMs_20 19 11 14.6
comp=Z,6µm,21.0s
R50A Paris 105.81 316 IAMs_20 IAMs_20 19 15 32.6
comp=Z,5µm,19.0s
T47A Sharon Grove 105.81 313 IAMs_20 IAMs_20 19 12 30.7
comp=Z,6µm,21.0s
M57A Sunshine Farm, 105.85 323 IAMs_20 IAMs_20 19 13 30.3
comp=Z,6µm,20.0s
EMMW East Machias 105.91 331 IAMs_20 IAMs_20 19 13 09.7
comp=Z,7µm,20.0s
L59A Walton 105.91 325 IAMs_20 IAMs_20 19 09 59.9
comp=Z,7µm,20.0s
TRY Troy 105.95 326 IAMs_20 IAMs_20 19 09 52.0
comp=Z,7µm,20.0s
O54A Avella 105.98 320 IAMs_20 IAMs_20 19 05 34.8
comp=Z,5µm,22.0s
Q51A Peebles 106.08 317 IAMs_20 IAMs_20 19 10 37.6
comp=Z,5µm,22.0s
CLF Chambon-Foret 106.14 20 IAMs_20 IAMs_20 19 05 34.8
comp=Z,9µm,21.0s
R49A Shelbyville 106.16 316 IAMs_20 IAMs_20 19 15 29.7
comp=Z,8µm,19.0s
TUE Stuetta 106.18 25 IAMs_20 IAMs_20 19 05 58.8
comp=Z,7µm,20.0s
I63A Otisfield 106.20 328 IAMs_20 IAMs_20 19 07 38.5
comp=Z,5µm,21.0s
BINY Binghamton 106.23 324 IAMs_20 IAMs_20 19 07 25.4
comp=Z,8µm,22.0s
UOSS Minazif 106.24 70 IAMs_20 IAMs_20 19 07 46.3
comp=Z,5µm,20.0s
I62A Tamworth 106.26 328 IAMs_20 IAMs_20 19 08 23.2
comp=Z,8µm,20.0s
G65A Princeton 106.39 331 IAMs_20 IAMs_20 19 13 35.5
comp=Z,6µm,20.0s
WVL Waterville 106.40 329 IAMs_20 IAMs_20 19 11 05.7
comp=Z,7µm,20.0s
O52A Adamsville 106.45 319 IAMs_20 IAMs_20 19 11 37.5
comp=Z,5µm,21.0s
FUORN Ofenpass-Fuorn 106.54 25 IAMs_20 IAMs_20 19 08 24.3
comp=Z,7µm,19.0s
WCI Wyandotte Cave 106.55 315 IAMs_20 IAMs_20 19 14 44.2
comp=Z,7µm,19.0s
N53A Lisbon 106.69 320 IAMs_20 IAMs_20 19 05 55.8
comp=Z,6µm,22.0s
L56A Greenwood 106.70 323 IAMs_20 IAMs_20 19 09 46.0
comp=Z,7µm,21.0s
H62A Milan 106.85 328 IAMs_20 IAMs_20 19 08 08.6
comp=Z,6µm,22.0s
J59A Piesco 106.88 325 IAMs_20 IAMs_20 19 07 03.1
comp=Z,7µm,22.0s
K57A Scipio Center 106.88 324 IAMs_20 IAMs_20 19 08 29.7
comp=Z,7µm,22.0s
PKME Peaks-Kenny Pk 106.93 330 IAMs_20 IAMs_20 19 11 00.9
comp=Z,6µm,20.0s
ACSO Alum Creek Sta 106.99 318 IAMs_20 IAMs_20 19 12 36.6
comp=Z,5µm,20.0s
BOVS Bovan 107.03 34⇓ P **PKiKP** **18 27 14.0 +7.3**
FETA Feichten 107.03 26 pPKiKP PKiKP 18 27 14.8 +8.0
comp=Z,16nm,1.7s
FETA *e*PKKP **PKKPdf** **18 38 43.8 +6.9**
comp=Z,12nm,1.4s
TXAR Lajitas Array 107.05 297 **Pdif** **18 23 00.2 +2.2**
TXAR Lajitas Array 107.05 297 Pdiff **Pdif** **18 22 58.6 +0.6**
comp=Z,1.3nm,1.0s,baz=142,slow=4.7,SNR=11
TXAR PKiKP **PKiKP** **18 27 08.1 +0.8**
comp=Z,2.8nm,1.0s,baz=145,slow=4.6,SNR=4.6
TXAR PP **PP** **18 27 26.1 +1.1**
comp=Z,8.8nm,1.2s,baz=142,slow=6.3,SNR=6.3
TXAR PKKP **PKKPab** **18 38 37.4 +0.3**
comp=Z,2.2nm,0.9s,baz=272,slow=3.4,SNR=5.7
TXAR Lajitas Array 107.05 297 P **Pdif** **18 23 00.2 +2.2**
DAVA Damuels 107.07 25 *e*pPdiff **pPdif** **18 23 05.8 +6.3**
comp=Z,11nm,1.2s
DAVA *e*pPKiKP pPKiKP 18 27 10.5 +1.8
comp=Z,19nm,1.2s
DAVA *i* PKKP PKKPdf 18 38 45.6 +8.8
comp=Z,30nm,1.6s
F64A Sherman 107.22 331 IAMs_20 IAMs_20 19 14 18.4
comp=Z,7µm,20.0s
ABTA Abfaltersbach 107.22 27 *e*pPdiff **pPdif** **18 23 03.4 +3.4**
comp=Z,13nm,1.3s
ABTA *e*pPKiKP pPKiKP 18 27 11.6 +2.7
comp=Z,27nm,1.5s
ABTA *i* PKKP **PKKPdf** **18 38 43.0 +6.5**
comp=Z,11nm,1.5s
G62A West of Eustis 107.25 329 IAMs_20 IAMs_20 19 09 34.2
comp=Z,7µm,21.0s
P48A Milroy 107.26 316 IAMs_20 IAMs_20 19 16 34.0
comp=Z,7µm,19.0s
J57A Williamstown 107.31 324 IAMs_20 IAMs_20 19 11 56.1
comp=Z,6µm,21.0s
ECH Echery 107.33 23 IAMs_20 IAMs_20 19 07 54.1
comp=Z,8µm,19.0s
SQTA Sankt Quirin 107.33 26 *e*pPdiff **pPdif** **18 23 04.1 +3.5**
comp=Z,9.6nm,1.3s
SQTA *e*pPKiKP pPKiKP 18 27 13.2 +4.1
comp=Z,44nm,1.5s
SQTA *e*PKKP **PKKPdf** **18 38 43.0 +6.7**
comp=Z,19nm,1.5s
N51A Ashland 107.36 319 IAMs_20 IAMs_20 19 11 53.4
comp=Z,6µm,21.0s
MYKA Terra Mystica 107.41 28 *e*PKKP 18 38 35.2
comp=Z,16nm,1.6s
MOTA Moosalm 107.42 26 *e*pPKiKP **PKiKP** **18 27 11.3 +3.8**
comp=Z,25nm,1.2s
MOTA *i* PKKP **PKKPdf** **18 38 42.7 +6.5**
comp=Z,16nm,1.4s
O49A Covington 107.47 317 IAMs_20 IAMs_20 19 13 48.3
comp=Z,5µm,20.0s
RETA Reutte 107.47 25 *e*pPKiKP **PKiKP** **18 27 13.4 +5.9**
comp=Z,32nm,1.5s
RETA *i* PKKP PKKPdf 18 38 44.3 +8.3
comp=Z,17nm,1.5s
WTTA Wattenberg 107.48 26 *e*pPdiff **pPdif** **18 23 05.4 +4.1**
comp=Z,14nm,1.5s
WTTA *e*PKiKP **PKiKP** **18 27 10.6 +3.0**
comp=Z,46nm,1.8s
WTTA *e*PKKP PKKPdf 18 38 44.4 +8.3
comp=Z,20nm,1.6s
KIRS Kirsehir-Merke 107.48 45⇑ P PKiKP 18 27 17.3 +9.5
M52A Chesterland 107.52 320 IAMs_20 IAMs_20 19 06 07.8
comp=Z,5µm,22.0s
WATA Walderalm 107.53 26 *e*pPdiff **pPdif** **18 23 04.6 +3.1**
comp=Z,14nm,1.6s
WATA pPKiKP pPKiKP 18 27 13.5 +4.0
comp=Z,38nm,2.0s
WATA *i* PKKP PKKPdf 18 38 44.0 +8.1
comp=Z,11nm,1.5s
OBKA Obir 107.53 28 *e*pPdiff **pPdif** **18 23 06.0 +4.6**
comp=Z,8.1nm,1.3s
OBKA *e*pPKiKP pPKiKP 18 27 12.7 +3.2
comp=Z,21nm,1.5s
ERPA Erie 107.54 321 IAMs_20 IAMs_20 19 12 20.1
comp=Z,6µm,22.0s
BFO Black Forest 107.69 24 IAMs_20 IAMs_20 19 08 41.8
comp=Z,8µm,19.0s
KBA Koelnbreinsper 107.74 27 *e*pPdiff **pPdif** **18 23 06.4 +4.0**
comp=Z,4.9nm,1.1s
KBA *e*pPKiKP pPKiKP 18 27 12.2 +2.3
comp=Z,21nm,1.6s
KBA *e*PKKP **PKKPdf** **18 38 43.0 +7.4**
comp=Z,11nm,1.5s
J55A Hilton 107.79 323 IAMs_20 IAMs_20 19 09 43.8
comp=Z,8µm,22.0s
SOKA Soboth 107.82 29 *e*pPdiff **pPdif** **18 23 06.1 +3.4**
comp=Z,8.8nm,1.4s
SOKA *e*pPKiKP pPKiKP 18 27 14.4 +4.5
comp=Z,32nm,1.5s
SOKA *i* PKKP **PKKPdf** **18 38 42.8 +7.5**
comp=Z,9.5nm,1.3s
O48B Farmland 107.84 317 IAMs_20 IAMs_20 19 15 27.3
comp=Z,7µm,20.0s
BRTR Keskin Array B 107.88 45 Pdiff **Pdif** **18 23 01.4 -0.1**
comp=Z,0.8nm,0.8s,baz=264,slow=3.6,SNR=5.1
BRTR PKiKP **PKiKP** **18 27 09.1 +0.5**

comp=Z,2.7nm,1.2s,baz=226,slow=3.9,SNR=3.9
LESA Schwarzleotal 107.89 27 pDdiff **pDdif 18 23 07.9 +4.9**
comp=Z,10.0nm,1.7s
LESA ep PKiKP pPKiKP 18 27 14.7 +4.6
comp=Z,17nm,1.3s
LESA ePKKP PKKPdf 18 38 42.8 +7.7
comp=Z,6.3nm,1.3s
SMRI Semarang 107.99 134 IAMs_20 IAMs_20 19 06 15.0
comp=Z,5µm,20.0s
M50A Fremont 108.03 319 IAMs_20 IAMs_20 19 12 24.1
comp=Z,7µm,21.0s
N49A Columbus Grove 108.04 318 IAMs_20 IAMs_20 19 13 41.5
comp=Z,6µm,20.0s
P46A Rosedale 108.10 315 IAMs_20 IAMs_20 19 15 01.3
comp=Z,8µm,20.0s
Q44A Meyer Farm, Va 108.23 313 IAMs_20 IAMs_20 19 12 53.8
comp=Z,8µm,20.0s
E62A Clayton Lake 108.24 330 IAMs_20 IAMs_20 19 11 20.4
comp=Z,6µm,20.0s
STU Stuttgart 108.31 24 IAMs_20 IAMs_20 19 07 48.0
comp=Z,7µm,21.0s
HERR Herculane 108.37 34 ⇓P **PKiKP 18 27 13.9 +4.7**
BIOA Bad Ischl, Aus 108.39 27 epPdiff **pPdif 18 23 10.3 +5.2**
comp=Z,14nm,1.9s
BIOA ep PKiKP pPKiKP 18 27 16.9 +5.9
comp=Z,20nm,1.4s
MORH Mrgy, Hungar 108.42 31 ⇑P **PKiKP 18 27 12.4 +3.2**
U38A Gravette 108.47 308 IAMs_20 IAMs_20 19 13 36.2
comp=Z,5µm,22.0s
ARSA Arzberg 108.48 29 ePdiff **Pdif 18 23 07.2 +3.4**
comp=Z,4.7nm,1.2s
ARSA ep PKiKP **pPKiKP 18 27 14.0 +2.9**
comp=Z,12nm,1.5s
ARSA ePKKP **PKKPdf 18 38 41.0 +7.1**
comp=Z,7.7nm,1.6s
WLF Walferdange 108.48 22 IAMs_20 IAMs_20 19 09 29.7
comp=Z,6µm,18.0s
N47A Urbana 108.59 317 IAMs_20 IAMs_20 19 16 59.0
comp=Z,6µm,19.0s
MOA Molln 108.69 28 epPdiff **pPdif 18 23 09.2 +2.7**
comp=Z,11nm,1.7s
MOA pPKiKP pPKiKP 18 27 16.7 +5.2
comp=Z,20nm,1.1s
MOA ePKKP **PKKPdf 18 38 39.1 +5.5**
comp=Z,10nm,1.5s
SFIN Lafayette 108.71 315 IAMs_20 IAMs_20 19 13 35.3
comp=Z,8µm,21.0s
GZR Gura Zlata 108.94 34 ⇓P **PKiKP 18 27 05.4 -5.0**
AAM Ann Arbor 109.03 319 IAMs_20 IAMs_20 19 12 51.8
comp=Z,6µm,21.0s
K50A Casco 109.06 320 IAMs_20 IAMs_20 19 12 32.5
comp=Z,5µm,21.0s
P43A Skaggs, Pawnee 109.06 313 IAMs_20 IAMs_20 19 12 44.8
comp=Z,9µm,22.0s
RONA Rosalia, Austr 109.10 29 epPdiff **pPdif 18 23 12.9 +4.6**
comp=Z,6.0nm,1.3s
RONA ep PKiKP pPKiKP 18 27 17.2 +4.9
comp=Z,41nm,1.8s
RONA ePKKP **PKKPdf 18 38 38.0 +5.2**
comp=Z,8.8nm,1.5s
CONA Conrad Observa 109.19 29 epPdiff **pPdif 18 23 11.9 +3.1**
comp=Z,5.7nm,1.4s
CONA ep PKiKP pPKiKP 18 27 17.1 +4.6
comp=Z,34nm,1.8s
CONA ePKKP **PKKPdf 18 38 37.9 +5.2**
comp=Z,11nm,1.2s
OK029 Liberty Lake 109.33 305 IAMs_20 IAMs_20 19 18 59.1
comp=Z,4µm,19.0s
MEM Membach 109.35 21 dPP **PP 18 27 39.3 -2.0**
GERES GERESS Array B 109.47 27 PKiKP **PKiKP 18 27 08.7 -2.5**
comp=Z,1.5nm,0.9s,baz=201,slow=7.1,SNR=5.0
GERES PKKP **PKKPdf 18 38 29.4 -2.9**
comp=Z,0.3nm,0.3s,baz=356,slow=2.9,SNR=3.6
GSI Gunungsitoli 109.55 118 IAMs_20 IAMs_20 19 09 46.6
comp=Z,7µm,18.0s
SADO Sadowa 109.57 323 PP **PP 18 27 42.0 -1.1**
comp=Z,165nm,1.1s,baz=174,slow=6.4,SNR=5.6
KHC Kasperske Hory 109.70 27 IAMs_20 IAMs_20 19 08 10.1
comp=Z,6µm,21.0s
KHC Kasperske Hory 109.70 27 ePP PP 18 27 31.8 -12
KHC eSP SP 18 37 12.5 +2.7
KHC ePKKP **PKKPab 18 38 24.5 +0.9**
KHC AMS AMS 19 07 50.0
comp=Z,6µm,19.9s
EFOR EFORIE 109.76 39 ⇑P **PKiKP 18 27 14.5 +2.8**
L46A Eue Claire 109.79 317 IAMs_20 IAMs_20 19 17 15.8
comp=Z,5µm,20.0s
MNTX Cornudas Mount 109.83 297 IAMs_20 IAMs_20 19 09 06.3
comp=Z,4µm,21.0s
BZK Bozkurt 109.93 44 ⇑P **PKiKP 18 27 14.9 +2.8**
MLR Muntele Rosu 110.06 36 Pdiff **Pdif 18 23 10.9 -0.1**
comp=Z,0.7nm,0.4s,baz=221,slow=15,SNR=1.7
MLR PKiKP **PKiKP 18 27 12.6 +0.1**
comp=Z,3.7nm,1.0s,baz=181,slow=9.0,SNR=3.2
ZVC Zvikov 110.14 27 ePP **PP 18 27 44.3 -2.8**
ZVC eSKS **SKSac 18 33 53.3 +3.8**
ZVC AMS AMS 19 09 50.0
comp=Z,4µm,18.8s
I49A Point Hope 110.14 320 IAMs_20 IAMs_20 19 15 07.1
comp=Z,4µm,19.0s
HQIL Hanson Quary C 110.22 316 IAMs_20 IAMs_20 19 17 57.2
comp=Z,7µm,19.0s
J47A Sunmer 110.28 318 IAMs_20 IAMs_20 19 16 53.7
comp=Z,6µm,20.0s
TREC Trest 110.34 28 ePP **PP 18 27 43.6 -5.0**
TREC AMS AMS 19 13 20.0
comp=Z,4µm,17.7s
KRUC Moravsky 110.37 28 ePP **PP 18 27 48.7 -0.1**
BKNI Bangkinang 110.39 122 IAMs_20 IAMs_20 19 06 28.9
comp=Z,4µm,19.0s
EPT El Paso 110.45 296 IAMs_20 IAMs_20 19 12 18.9
comp=Z,3µm,19.0s
OK038 West end E0370 110.48 305 IAMs_20 IAMs_20 19 13 14.6
comp=Z,4µm,22.0s
JAVC Velka Javorina 110.54 29 ePP **PP 18 27 50.1 0.0**
L44A Lake County Fo 110.56 316 IAMs_20 IAMs_20 19 18 37.3
comp=Z,6µm,19.0s
VRAC Vranov 110.65 28 PKiKP **PKiKP 18 27 13.5 +0.2**
comp=Z,1.2nm,0.4s,baz=153,slow=2.3,SNR=1.6
VRAC Vranov 110.65 28 ePP **PP 18 27 52.1 +1.3**
PRU Pruhonice 110.73 27 ePP **PP 18 27 47.0 -4.4**
PRU eSKS **SKSac 18 33 53.6 +1.7**
PRU AMS AMS 19 10 20.0
comp=Z,6µm,18.6s
PRA Prague 110.78 27 ePP **PP 18 27 46.7 -5.0**
PRA AMS AMS 19 10 30.0
comp=Z,6µm,18.8s
HSKC Hora Svate Kat 111.03 26 eSKS **SKSac 18 33 50.9 -2.3**
HSKC eSP **SP 18 37 25.9 +3.7**
HSKC AMS AMS 19 11 10.0
comp=Z,4µm,18.5s
L42A Oliver, Polo 111.11 314 IAMs_20 IAMs_20 19 15 22.0
comp=Z,5µm,20.0s
RICC Richard 111.13 26 AMS AMS 19 08 20.0
comp=Z,6µm,22.1s
K43A Burlington 111.17 316 IAMs_20 IAMs_20 19 19 04.5
comp=Z,8µm,19.0s
PVCC Panska Ves 111.24 27 AMS AMS 19 10 00.0
comp=Z,6µm,19.3s
MORC Moravsky Berou 111.34 29 ePP **PP 18 27 51.3 -4.5**
KRLC Kraliky 111.40 28 AMS AMS 19 09 10.0
comp=Z,4µm,19.9s
RPSI Rantau Prapat 111.41 119 IAMs_20 IAMs_20 19 02 58.1
comp=Z,7µm,21.0s
I45A Fountain 111.49 318 IAMs_20 IAMs_20 19 15 34.8
comp=Z,7µm,20.0s
DPC Dobruska-Polom 111.53 28 ePP **PP 18 27 50.2 -7.0**
DPC AMS AMS 19 10 10.0
comp=Z,3µm,20.6s
OKC Ostrava-Krasne 111.56 29 eSKS SKSdf 18 34 08.9 -17
OKC AMS AMS 19 09 10.0
comp=Z,4µm,20.0s
UPC Upice 111.59 28 AMS AMS 19 10 10.0
comp=Z,4µm,20.3s
KSU1 Kansas State U 111.66 308 IAMs_20 IAMs_20 19 14 36.6
comp=Z,8µm,22.0s
CHVC Chvalec 111.68 28 AMS AMS 19 10 10.0
comp=Z,4µm,22.9s
OSTC Ostas 111.69 28 AMS AMS 19 09 00.0
comp=Z,4µm,23.0s
L40A Anamosa 111.80 313 IAMs_20 IAMs_20 19 15 55.1
comp=Z,5µm,20.0s
R32A Long Quarter, 112.05 306 IAMs_20 IAMs_20 19 23 05.1
comp=Z,3µm,19.0s
JFWS Jewell Farm 112.11 315 IAMs_20 IAMs_20 19 15 40.4
comp=Z,6µm,20.0s
MILM Milestii Mici 112.28 37 ePP **PP 18 27 57.0 -5.5**
MILM Milestii Mici 112.28 37 ePS PS 18 37 34.0 -1.2
MILM eL L 19 01 51.0
MILM LRM MLR 19 15 28.0
comp=Z,2µm,19.0s
ESK Eskdalemuir 112.30 14 IAMs_20 IAMs_20 19 15 46.7
comp=Z,6µm,19.0s
EKA Eskdalemuir Ar 112.32 14 PKiKP **PKiKP 18 27 16.4 +0.2**
comp=Z,1.6nm,0.8s,baz=219,slow=2.1,SNR=3.5
EKA PKKPbc **PKKPbc 18 38 06.8 +0.4**
comp=Z,1.3nm,0.7s,baz=341,slow=2.4,SNR=4.9
H43A Windswept, Lux 112.44 317 IAMs_20 IAMs_20 19 16 47.1
comp=Z,6µm,20.0s
LHMI Lhok Sumawe 112.59 116 IAMs_20 IAMs_20 19 03 44.5
comp=Z,4µm,21.0s
HYBB Hyderabad (bro 112.62 92 ePKiKP **PKiKP 18 27 18.0 -0.1**
HYBB ePP **PP 18 28 05.8 +0.7**
HYBB eSKSac **SKSac 18 34 01.2 -0.1**
HYBB IVMs_BB IVMs_BB 19 08 44.8
comp=Z,946nm,17.8s
N35A Tabor 112.67 310 IAMs_20 IAMs_20 19 18 42.4
comp=Z,7µm,19.0s
E46A Sault Ste Mari 112.76 320 IAMs_20 IAMs_20 19 11 15.4
comp=Z,6µm,22.0s
KMPD K-Podol'skiy 112.92 35 P **Pdif 18 23 24.7 +1.3**
ANMO Albuquerque 112.96 299 ⇑iPKiKP **PKiKP 18 27 18.9 +0.4**
ANMO MLR MLR
comp=Z,2µm,17.0s
TUC Tucson 113.07 294 IAMs_20 IAMs_20 19 18 24.4
comp=Z,5µm,20.0s
I40A Norwalk 113.08 315 IAMs_20 IAMs_20 19 15 24.9
comp=Z,6µm,21.0s
SOC Sochi 113.58 46 *i* PKiKP **PKiKP 18 27 19.8 +0.7**
SOC *e* 18 28 10.4
SOC ePPP PPP 18 30 35.1
SOC ePS **PS 18 37 44.9 -2.3**
F42A Maple Grove Fa 113.67 318 IAMs_20 IAMs_20 19 16 51.4
comp=Z,5µm,20.0s
ANN Anapa 113.67 44 *i* PKiKP **PKiKP 18 27 17.2 -2.0**
ANN *e* 18 27 20.6
ANN *e* 18 33 59.4
ANN pmax pmax
comp=Z,17nm,0.9s
IPM Ipoh 113.99 120 IAMs_20 IAMs_20 19 06 38.4
comp=Z,4µm,20.0s
G40A Rib Lake 114.06 316 IAMs_20 IAMs_20 19 19 26.8
comp=Z,8µm,20.0s
BGNE Belgrade 114.22 308 IAMs_20 IAMs_20 19 19 13.4
comp=Z,7µm,20.0s
I37A Lemond, Waseca 114.31 313 IAMs_20 IAMs_20 19 15 57.6
comp=Z,7µm,22.0s
KULM Kulim 114.51 119 IAMs_20 IAMs_20 19 04 34.1
comp=Z,4µm,22.0s
NEUR Neytrino 114.56 49 *i* PKiKP **PKiKP 18 27 21.0 -0.2**
NEUR MLR MLR
comp=Z,5µm,19.4s
RGN Rugen 114.63 24 IAMs_20 IAMs_20 19 11 32.3
comp=Z,5µm,21.0s
HNR Honiara 114.86 187 IAMs_20 IAMs_20 19 12 25.8
comp=Z,6µm,20.0s
LABN Labinsk 114.86 46 *i* PKiKP **PKiKP 18 27 22.0 +0.5**
LABN *e* 18 27 25.2
LABN *e* 18 34 09.1
LABN pmax pmax
comp=Z,14nm,0.8s
PMG Port Moresby 114.88 173 **PKiKP 18 27 20.3 -2.3**
PMG Port Moresby 114.88 173 PKP PKPdf 18 27 22.5 0.0
comp=Z,10nm,0.9s,baz=207,slow=12,SNR=1.8
KBZ Khabaz 115.03 48 PKP **PKiKP 18 27 21.4 -0.4**
comp=Z,2.6nm,0.8s,baz=97,slow=19,SNR=2.7
KBZ Khabaz 115.03 48 *d* iPKiKP **PKiKP 18 27 21.4 -0.4**
KBZ MLR MLR
comp=Z,2µm,18.0s
SPMN Marine on St. 115.06 314 IAMs_20 IAMs_20 19 16 26.3
comp=Z,7µm,22.0s
SCHQ Schefferville 115.06 336 PKP **PKiKP 18 27 21.4 -0.2**
comp=Z,4.1nm,0.6s,baz=92,slow=3.0,SNR=7.6
KIV Kislovodsk 115.12 48 *i* P **Pdif 18 23 33.5 0.0**
KIV *i* 18 27 21.5
KIV *e* 18 28 20.1
KIV *e* 18 34 09.5
KIV ePS **PKKPab 18 38 01.6 +1.0**
KIV eSS SS 18 44 14.5 -4.8
KIV eSSS SSS 18 48 36.8
KIV pmax pmax
comp=Z,13nm,1.1s
S22A 4UR Ranch, Cre 115.36 300 IAMs_20 IAMs_20 19 25 06.7
comp=Z,3µm,19.0s
ECSD EROS Data Cent 115.43 311 **PKPdf 18 27 21.5 -1.1**
VIS Vishakhapatnam 115.56 96 eP **PKiKP 18 27 24.2 +0.6**
OGNE Ogallala 115.60 306 IAMs_20 IAMs_20 19 18 11.1
comp=Z,5µm,22.0s
ERBR Yeremizino-Bor 115.64 46 *i* PKiKP **PKiKP 18 27 23.7 +0.7**
ERBR *e* 18 27 27.1
ERBR *e* 18 34 11.9
ERBR pmax pmax
comp=Z,11nm,0.9s
KIEV Kiev 115.67 36 ⇑P **PKPdf 18 27 20.3 -2.5**
KIEV Kiev 115.67 36 ⇑PKiKP **PKPdf 18 27 20.3 -2.5**
AKBB Malin Array Si 115.68 36 ⇑iPKiKP **PKPdf 18 27 22.3 -0.5**
AKBB MLR MLR
comp=Z,2µm,19.0s
AKASG Malin Array Be 115.68 36 PKP **PKPdf 18 27 21.5 -1.4**
comp=Z,2.2nm,0.7s,baz=242,slow=2.3,SNR=8.3
AKASG PP **PP 18 28 23.4 -3.1**
comp=Z,0.3nm,0.3s,baz=216,slow=6.6,SNR=5.8
MVCO Mesa Verde 115.76 299 **PKPdf 18 27 22.5 -1.3**
MVCO IAMs_20 IAMs_20 19 21 41.1
comp=Z,4µm,19.0s
BKB Balikpapan 115.80 138 IAMs_20 IAMs_20 19 09 39.7
comp=Z,4µm,20.0s
PBA Port Blair 115.80 108 eP **PKiKP 18 27 25.1 +0.8**
WUAZ Wupatki 115.89 295 PP **PP 18 28 25.9 -2.6**
WUAZ IAMs_20 IAMs_20 19 13 43.9
comp=Z,4µm,21.0s
NRDN NARMADA NAGAR 116.05 88 eP **PKPdf 18 27 23.1 -1.4**
BLYC Blythe 116.15 292 **PKPdf 18 27 23.2 -1.1**
BLYC PP **PP 18 28 28.0 -2.1**
ISCO Idaho Springs 116.38 302 IAMs_20 IAMs_20 19 16 04.5
comp=Z,4µm,22.0s
MAK Makhachkala 116.41 52 *i* P **Pdif 18 23 33.4 -5.7**
MAK *i* 18 27 22.4
MAK *e* 18 34 08.3
MAK ePS **PS 18 38 14.0 +0.9**
MAK eSS SS 18 44 37.9 +1.9
MAK eSSS SSS 18 48 59.3
PV01 Paradox Valley 116.52 299 PP PP 18 28 25.1 -7.9
BC3 Big Chuckawall 116.56 291 **PKPdf 18 27 24.1 -1.2**
BC3 PP **PP 18 28 25.8 -7.4**
BHPL Bhopal 116.60 87 eP **PKiKP 18 27 27.9 +2.4**
PV02 Paradox Valley 116.66 299 **PKPdf 18 27 25.4 -0.1**
PV02 PP **PP 18 28 29.1 -4.8**
SUW Suwalki 116.69 30 IAMs_20 IAMs_20 19 13 52.8
comp=Z,3µm,21.0s
PV05 Paradox Valley 116.73 299 **PKPdf 18 27 25.1 -0.5**
PV05 PP **PP 18 28 31.4 -3.1**
EYMN Ely 116.77 317 IAMs_20 IAMs_20 19 18 36.6
comp=Z,7µm,20.0s
RAGD RAYAGADA 116.85 95 eP **PKiKP 18 27 26.7 +0.6**
PV19 Morning Glory 116.86 299 **PKPdf 18 27 24.6 -1.3**
PV19 PP **PP 18 28 34.2 -1.1**
HOMB Homborsund 117.06 20 eP **PP 18 28 34.3 -1.8**
PFO Pinyon Flats O 117.06 290 **PKPdf 18 27 25.6 -0.7**
PFO PP **PP 18 28 35.9 -0.8**
PFO Pinyon Flats O 117.06 290 *d* iPKiKP **PKPdf 18 27 26.0 -0.3**
PFO MLR MLR
comp=Z,3µm,18.0s
DGPR DIGLIPUR 117.17 107 eP **PKiKP 18 27 28.6 +1.7**
KMY Karmoy 117.35 18 ePP **PP 18 28 37.3 -0.8**
KMY *e* 18 38 22.9
KMY eSS SS 18 44 47.6 -0.2
BLS5 Blasjo 117.76 18 ePKPdf **PKiKP 18 27 26.3 -0.3**
BLS5 ePP **PP 18 28 42.3 +1.3**
BLS5 eSP SP 18 38 25.1 +1.8
IVI Ivigtut 117.86 348 IAMs_20 IAMs_20 19 06 35.2
comp=Z,6µm,20.0s
O20A White River Ci 117.91 301 IAMs_20 IAMs_20 19 17 59.2
comp=Z,6µm,21.0s
LUWI Luwuk 118.08 144 PKP **PKiKP 18 27 28.5 -0.3**
SANI Sanana 118.13 148 PKP **PKiKP 18 27 28.8 -0.1**
SANI Sanana 118.13 148 PKP **PKiKP 18 27 30.9 +2.0**
BFSC Mount Baldy Ra 118.18 290 **PKPdf 18 27 27.5 -0.9**
BFSC PP **PP 18 28 40.4 -4.0**
PABE Paberze 118.22 30 IAMs_20 IAMs_20 19 13 20.3
comp=Z,7µm,22.0s
ODD1 Odda 118.25 18 ePP **PP 18 28 45.3 +0.9**
ODD1 *e* 18 38 28.9
BLSP Bilaspur 118.39 92 eP **PKPdf 18 27 28.5 -0.6**
BER Bergen 118.48 17 ePP **PP 18 28 45.3 -0.5**
BER *e* 18 38 30.3
MNK Minsk 118.50 33 *i* PKiKP **PKiKP 18 27 27.9 -0.3**
MNK *i* 18 28 43.1
MNK *i* PPP PPP 18 31 14.5
MNK *i* 18 34 40.0
MNK *i* PS **PS 18 38 31.0 -0.8**
MNK *i* SSS SSS 18 49 25.3
MNK pmax pmax
comp=E,21nm,0.9s
MNK pmax pmax
comp=N,22nm,1.4s
MNK pmax pmax
comp=Z,18nm,0.8s
MNK MLR MLR
comp=Z,4µm,19.0s
MNK MLR MLR
comp=E,2µm,19.0s
MNK MLR MLR
comp=N,2µm,16.0s
ASK Askoy 118.55 17 ePP **PP 18 28 45.3 -1.0**
ASK *e* 18 38 34.0
KONO Kongsberg 118.56 20 IAMs_20 IAMs_20 19 13 19.1
comp=Z,4µm,21.0s
KONO Kongsberg 118.56 20 ePP **PP 18 28 47.4 +0.9**
KONO eSP SP 18 38 32.0 +1.6
KONO eSS **SS 18 45 03.6 +0.2**
SHOC Shoshone, Teco 118.72 292 IAMs_20 IAMs_20 19 21 52.9
comp=Z,3µm,20.0s
AGMN Agassiz Nation 118.78 314 IAMs_20 IAMs_20 19 18 51.8
comp=Z,7µm,21.0s
FAKI Fak Fak 118.97 155 IAMs_20 IAMs_20 19 23 44.7
comp=Z,4µm,21.0s
JHNI Jhansi 118.97 87 eP **PKPdf 18 27 28.4 -1.6**
SUE Sulen 119.02 17 ePP **PP 18 28 49.4 -0.2**
SUE *e* 18 38 34.3
JHSG JHARSUGUGA 119.03 94 eP **PKiKP 18 27 30.9 +0.6**
EPLO Experimental L 119.03 317 **PKPdf 18 27 29.1 -0.3**
EPLO PP **PP 18 28 44.4 -5.6**
OSL Oslo 119.04 20 *e* 18 38 34.3
LRMC Laurel Mtn Rad 119.14 291 **PKPdf 18 27 29.3 -0.9**
LRMC PP **PP 18 28 46.6 -4.5**
SKAR Skarslia 119.27 19 ePP **PP 18 28 52.4 +0.9**
SKAR eSKSac **SKSac 18 34 25.9 +1.7**
SKAR eSP **SP 18 38 38.1 +1.2**
SKAR eSS **SS 18 45 15.3 +2.5**
SKAR IVMs_BB IVMs_BB 19 12 12.6
comp=Z,4µm,4.7s
HYA Hoyanger 119.36 17 ePP **PP 18 28 52.4 +0.4**
HYA *e* 18 38 37.4
VORD Divnogorie 119.45 41 ePKiKP **PKPdf 18 27 28.5 -1.6**
VORD *e* 18 28 56.0
VORD pmax pmax
comp=Z,8.0nm,1.0s
BSUT Blindstream Ca 119.45 299 **PKPdf 18 27 29.4 -1.6**
FURC Furnace Creek, 119.46 292 IAMs_20 IAMs_20 19 20 12.5
comp=Z,3µm,21.0s
FOO Floro 119.58 17 ePP **PP 18 28 52.4 -1.1**
VSR Storozhevoye 119.60 41 ePKiKP **PKPdf 18 27 27.5 -2.9**
VSR *e* 18 28 54.0
VSR pmax pmax
comp=Z,8.0nm,1.1s
SRGN SRI GANGA NAGA 119.79 80 eP **PKPdf 18 27 30.1 -1.4**
HFS Hagfors 119.83 22 PKP **PKPdf 18 27 29.0 -1.5**
comp=Z,5.3nm,0.7s,baz=169,slow=1.5,SNR=7.7
HFS PP **PP 18 28 50.4 -4.8**
comp=Z,7.9nm,0.9s,baz=232,slow=7.2,SNR=3.9
HFS PKKPbc **PKKPbc 18 37 39.9 -0.2**
comp=Z,3.4nm,0.8s,baz=251,slow=4.5,SNR=3.7
HFS Hagfors 119.83 22 PKiKP **PKPdf 18 27 29.0 -1.5**
KUDL Kundal 119.89 83 eP **PKPdf 18 27 31.1 -0.6**
NC602 NORSAR Array S 119.94 20 ePKPdf **PKiKP 18 27 31.4 +0.6**
NC602 ePP **PP 18 28 55.4 -0.6**
NC602 eSKSac **SKSac 18 34 28.3 +2.0**
NC602 ePS **PS 18 38 51.3 +6.7**
NC602 IVMs_BB IVMs_BB 19 15 23.7
comp=Z,3µm,24.4s
SPR3 Spring Creek 3 120.07 296 **PKPdf 18 27 31.9 -0.2**
SPR3 PP **PP 18 28 50.4 -7.3**
CWC Cottonwood Cre 120.08 291 IAMs_20 IAMs_20 19 25 48.8
comp=Z,3µm,20.0s
NB2 NORSAR Subarra 120.15 20 PKPdf **PKPdf 18 27 30.4 -0.8**
comp=Z,93nm,2.0s,baz=202,slow=1.9
NB2 PKKP **PKKPbc 18 37 41.3 +2.4**
comp=Z,71nm,2.5s,baz=23,slow=3.4
NOA NORSAR Array B 120.15 20 PKP **PKiKP 18 27 31.1 -0.2**
comp=Z,3.6nm,0.8s,baz=203,slow=1.9,SNR=12
NOA PKKPbc **PKKPbc 18 37 38.8 -0.1**
comp=Z,1.9nm,0.8s,baz=25,slow=3.4,SNR=5.1
DUG Dugway, Tooele 120.21 298 IAMs_20 IAMs_20 19 17 34.1
comp=Z,5µm,21.0s
RABL Rabaul 120.27 178 **PKPdf 18 27 31.2 -1.8**
ULM Lac du Bonnet 120.33 316 PKP **PKPdf 18 27 31.5 -0.4**
comp=Z,7.1nm,0.6s,baz=21,slow=1.4,SNR=6.6
ULM PP **PP 18 28 58.7 -0.2**
comp=Z,21nm,1.0s,baz=143,slow=7.0,SNR=8.8
ULM PKKPbc **PKKPbc 18 37 37.8 -0.2**
comp=Z,4.3nm,0.6s,baz=8.5,slow=4.4,SNR=3.7
AKN Aaknes 120.44 17 ePP **PP 18 28 59.4 -0.1**
VRH Novokhopyorsk 120.56 43 ePKiKP **PKPdf 18 27 31.5 -0.7**
VRH pmax pmax
comp=Z,16nm,0.9s
BW06 Boulder Array 120.56 302 IAMs_20 IAMs_20 19 19 42.3
comp=Z,3µm,20.0s
PDAR Pinedale Array 120.56 302 **PKPdf 18 27 31.8 -1.1**
PDAR Pinedale Array 120.56 302 PKP **PKPdf 18 27 32.6 -0.2**
comp=Z,1.8nm,0.5s,baz=142,slow=5.6,SNR=3.6
PDAR PP **PP 18 29 01.3 +0.4**
comp=Z,1.6nm,0.7s,baz=85,slow=17,SNR=4.2
PDAR PKPbab **PKKPab 18 37 37.5 -0.2**
comp=Z,1.1nm,0.7s,baz=83,slow=1.1,SNR=3.7
LPSR Galich'ya Gora 120.63 40 ePKiKP **PKiKP 18 27 32.6 +0.2**
LPSR pmax pmax
comp=Z,14nm,1.1s
HWUT Hardware Ranch 120.66 300 IAMs_20 IAMs_20 19 23 08.9
comp=Z,4µm,20.0s
JMIU JAMIA UNIVERSI 120.66 83 eP **PKiKP 18 27 33.5 +0.2**
KBU Kabul Universi 120.67 73 PKP **PKiKP 18 27 33.3 -0.1**
DOMB Dombas 120.68 19 ePP **PP 18 29 01.4 +0.3**
ALBI Allahabad 120.70 90 eP **PKPdf 18 27 31.9 -1.4**
NDI New Delhi 120.71 83 eP **PKPdf 18 27 32.1 -1.1**
BISR Bishrakh 120.75 84 eP **PKPdf 18 27 32.3 -1.0**
UGON Onchagaon 120.81 84 ⇑eP **PKPdf 18 27 31.0 -2.5**
MOL Molde 120.90 18 ePP **PP 18 29 02.4 -0.1**
AHID Auburn Hatcher 121.30 301 IAMs_20 IAMs_20 19 23 30.0
comp=Z,3µm,20.0s
VSU Vasula 121.55 30 *d* iPKiKP **PKPdf 18 27 32.3 -1.5**
VSU MLR MLR
comp=Z,3µm,15.0s
SNOW Snow King Moun 121.66 302 IAMs_20 IAMs_20 19 19 54.3
comp=Z,3µm,22.0s
LHV Little Huntoon 121.66 292 **PKiKP 18 27 35.5 +0.6**
NVAR Mina Array Bea 121.69 293 PKP **PKiKP 18 27 36.6 +1.3**
comp=Z,6.6nm,0.9s,baz=141,slow=3.0,SNR=23
NVAR PP **PP 18 29 10.2 +1.5**
comp=Z,0.8nm,0.7s,baz=268,slow=34,SNR=1.9
NVAR PKKPbc **PKKPab 18 37 33.1 -0.1**
comp=Z,2.0nm,0.8s,baz=268,slow=2.4,SNR=5.9
LOHW Long Hollow 121.70 302 IAMs_20 IAMs_20 19 20 16.4
comp=Z,3µm,21.0s
BOK Bokaro 121.82 94 eP **PKiKP 18 27 36.5 +0.8**
OBN Obninsk 121.82 37 ⇑iPKiKP **PKPdf 18 27 33.8 -0.7**
OBN *e* 18 27 37.2
OBN ePPP PPP 18 31 41.1
OBN *e* 18 34 31.2
OBN SS SS 18 45 39.3 -6.2
OBN SSS SSS 18 50 12.1
OBN pmax pmax
comp=Z,25nm,1.0s
OBN MLR MLR
comp=Z,3µm,19.0s
ELK Elko 121.84 297 **PKPdf 18 27 34.6 -0.8**
ELK IAMs_20 IAMs_20 19 21 08.4
comp=Z,6µm,22.0s
ELK Elko 121.84 297 PKP **PKiKP 18 27 36.6 +1.1**
comp=Z,10nm,1.0s,baz=134,slow=2.5,SNR=20
ELK PP **PP 18 29 09.6 -0.1**
comp=Z,6.5nm,1.1s,baz=153,slow=3.9,SNR=3.3
ELK Elko 121.84 297 PKiKP **PKPdf 18 27 34.6 -0.8**

ELK MLR MLR
comp=Z,6µm,22.0s
MOOW Moose Ponds 121.87 302 IAMs_20 IAMs_20 19 20 20.9
comp=Z,3µm,22.0s
FXWY Fox Creek 121.92 302 IAMs_20 IAMs_20 19 20 05.4
comp=Z,4µm,21.0s
LAO LASA Array 121.97 307 IAMs_20 IAMs_20 19 20 49.0
comp=Z,5µm,22.0s
FLWY Flagg Ranch 122.09 302 IAMs_20 IAMs_20 19 20 09.9
comp=Z,4µm,21.0s
RLMT Red Lodge 122.19 304 **PKPdf** **18 27 35.3 -0.6**
RLMT PP **PP** **18 29 06.4 -5.6**
RLMT IAMs_20 IAMs_20 19 24 14.5
comp=Z,7µm,20.0s
GAYA Gaya 122.24 93 *e*P **PKPdf** **18 27 34.7 -1.6**
NIL Nilore 122.27 77 **PKPdf** **18 27 35.0 -1.2**
NIL Nilore 122.27 77 PKIKP **PKPdf** **18 27 35.0 -1.2**
NIL MLR MLR
comp=Z,2µm,20.0s
LKWY Lake 122.31 303 IAMs_20 IAMs_20 19 18 54.7
comp=Z,7µm,22.0s
MYLDM Lahad Datu 122.33 137 IAMs_20 IAMs_20 19 29 59.8
comp=Z,3µm,19.0s
DGMT Dagmar 122.41 310 IAMs_20 IAMs_20 19 24 35.1
comp=Z,5µm,20.0s
DDI Dehra Dun 122.43 83 *e*P **PKPdf** **18 27 35.8 -0.8**
YNE Yellowstone No 122.46 303 **PKPdf** **18 27 36.0 -0.4**
YNE PP **PP** **18 29 06.4 -7.4**
JMU Jammu 122.48 79 *e*P **PKPdf** **18 27 33.7 -2.8**
SMLA Simla 122.54 81 *e*P **PKPdf** **18 27 35.9 -0.8**
MOS Moscow 122.68 37 *i* PKIKP **PKPdf** **18 27 34.8 -1.3**
MOS *e* 18 29 15.3
MOS *e*PPP PPP 18 31 58.8
MOS *e* 18 34 30.7
MOS *e*SSS SSS 18 50 33.9
MOS pmax pmax
comp=Z,37nm,0.9s
DHRM DHARAMSHALA 122.90 80 *e*P **PKiKP** **18 27 37.5 -0.4**
LGTI Lohaghat 123.00 85 *e*P **PKPdf** **18 27 36.1 -1.5**
TSSA Tissa 123.26 79 *e*P **PKPdf** **18 27 37.6 -0.8**
JOSI Joshimath 123.45 84 *e*P **PKPdf** **18 27 36.5 -2.2**
NSS Namsos 123.49 19 *e*PP **PP** **18 29 19.5 -0.6**
FRB Frobisher Bay 123.52 339 PKP **PKiKP** **18 27 37.9 +0.2**
comp=Z,23nm,0.7s,baz=125,slow=3.8,SNR=9.5
BOZ Bozeman (W) 123.66 303 IAMs_20 IAMs_20 19 25 38.4
comp=Z,5µm,20.0s
SIMJ Simiganj 123.69 70 **PKPdf** **18 27 38.4 -0.5**
SFJD Kangerlussuaq 123.75 349 **PKPdf** **18 27 37.3 -0.5**
SFJD Kangerlussuaq 123.75 349 PKIKP **PKPdf** **18 27 37.3 -0.5**
SFJD MLR MLR
comp=Z,8µm,20.0s
SFJD Kangerlussuaq 123.75 349 *i* P **PKPdf** **18 27 35.3 -2.6**
SFJD IAMs_20 IAMs_20 19 16 41.5
comp=Z,8µm,18.0s
BELG Belogornoye 123.80 45*d* *i*PKIKP **PKPdf** **18 27 37.8 -0.6**
BELG MLR MLR
comp=Z,368nm,21.0s
FINES FINESS Array B 123.89 27 **PKPdf** **18 27 37.2 -1.1**
FINES FINESS Array B 123.89 27 PKP **PKiKP** **18 27 38.2 -0.3**
comp=Z,18nm,0.7s,baz=170,slow=2.0,SNR=57
DLMT Dillon 123.95 302 IAMs_20 IAMs_20 19 26 56.1
comp=Z,5µm,20.0s
DLV Lat 124.06 123 IAMs_20 IAMs_20 19 20 34.4
comp=Z,3µm,18.0s
MFID Camas Ranch 124.11 298 IAMs_20 IAMs_20 19 30 45.3
comp=Z,4µm,19.0s
BELO BELONIA 124.51 99 *e*P **PKPdf** **18 27 38.1 -2.6**
EGMT Eagleton 124.57 306 IAMs_20 IAMs_20 19 24 15.2
comp=Z,6µm,20.0s
CMAR Chiang Mai Arr 124.75 110 **PKPdf** **18 27 39.8 -1.6**
CMAR Chiang Mai Arr 124.75 110 PKP **PKiKP** **18 27 41.3 -0.4**
comp=Z,7.5nm,1.0s,baz=236,slow=3.6,SNR=22
CMAR PKKPab **PKKPab** **18 37 22.1 -0.3**
comp=Z,1.1nm,0.8s,baz=13,slow=4.0,SNR=5.8
CMAR SKKPbc SKKPbc 18 41 09.7 +1.0
comp=Z,2.0nm,1.0s,baz=21,slow=4.8,SNR=4.3
WVOR Wild Horse Val 124.81 296 IAMs_20 IAMs_20 19 21 09.9
comp=Z,3µm,22.0s
ALCI Alchi Leh 124.86 79 *e*P **PKiKP** **18 27 41.9 0.0**
O03E Paynes Creek 124.89 292 IAMs_20 IAMs_20 19 24 05.3
comp=Z,4µm,22.0s
AGT Agartala 124.90 99 *e*P **PKiKP** **18 27 42.2 +0.4**
CHTO Chiang Mai 125.04 109 **PKPdf** **18 27 41.0 -0.9**
CHTO Chiang Mai 125.04 109 PKIKP **PKPdf** **18 27 41.0 -0.9**
CHTO MLR MLR
comp=Z,2µm,19.0s
CHTO Chiang Mai 125.04 109 PKP **PKiKP** **18 27 42.3 +0.1**
HATC Hat Creek Radi 125.09 292 IAMs_20 IAMs_20 19 23 46.6
comp=Z,4µm,21.0s
LEIR Leirfjorden 125.13 18 *e*PKPdf **PKPdf** **18 27 39.8 -0.7**
LEIR *e*PP **PP** **18 29 30.6 -0.5**
LEIR *e*SKPdf **SKPdf** **18 31 05.6 -10**
LEIR *e*SKSac **SKSac** **18 34 45.0 +1.7**
LEIR *e*SP **SP** **18 39 27.8 -0.9**
LEIR *e*SS **SS** **18 46 24.1 -2.9**
LEIR IVMs_BB IVMs_BB 19 15 18.9
comp=Z,2µm,4.5s
STOK Stokkvaagen 125.31 18 *e*PP **PP** **18 29 31.6 -0.7**
PLID Pearl Lake 125.41 300 IAMs_20 IAMs_20 19 28 04.6
comp=Z,3µm,20.0s
RAUS Rausandaksla 125.59 19 *e*PP **PP** **18 29 34.6 +0.4**
MSO Missoula 125.66 302 **PKPdf** **18 27 42.2 -0.2**
MSO **PP** **18 29 30.7 -4.5**
MSO IAMs_20 IAMs_20 19 26 30.2
comp=Z,6µm,20.0s
VAGH Vaagaholmen 125.72 18 *e*PP **PP** **18 29 34.6 -0.4**
KMRM Mail Ridge 125.85 290 IAMs_20 IAMs_20 19 29 51.2
comp=Z,3µm,22.0s
KHBM Hayfork Bally 125.90 291 IAMs_20 IAMs_20 19 25 15.1
comp=Z,4µm,22.0s
ILULI Ilulissat 125.94 349 *i* P **PKiKP** **18 27 42.3 -0.1**
ILULI IAMs_20 IAMs_20 19 11 00.1
comp=Z,11µm,23.2s
SCO Scoresbysund 125.96 2 *i* P **PKiKP** **18 27 43.9 +1.5**
FFC Flin Flon 126.16 316 **PKPdf** **18 27 42.7 -0.2**
FFC **PP** **18 29 32.8 -5.4**
FFC Flin Flon 126.16 316 IAMs_20 IAMs_20 19 25 03.0
comp=Z,5µm,20.0s
FFC Flin Flon 126.16 316 PKIKP **PKPdf** **18 27 42.7 -0.2**
FFC MLR MLR
comp=Z,5µm,20.0s
GDH Godhavn 126.24 348 *i* P **PKPdf** **18 27 42.5 0.0**
GDH IAMs_20 IAMs_20 19 11 54.6
comp=Z,7µm,19.3s
KHMM Horse Mountain 126.33 291 IAMs_20 IAMs_20 19 25 27.3
comp=Z,4µm,22.0s
SILR SILCHAR 126.48 99 *e*P **PKiKP** **18 27 44.9 0.0**
SHL Shillong 126.58 98 *e*P **PKPdf** **18 27 44.0 -0.9**
DAV Davao City (W) 126.61 144 PKP **PKPdf** **18 27 44.3 -0.8**
comp=Z,44nm,0.3s,baz=286,slow=5.9,SNR=1.0
CHM Chimkent 126.65 67 *e*PKP **PKiKP** **18 27 44.6 -0.2**
CHM LR LR 19 23 10.4
comp=Z,1µm,22.0s
CHM Chimkent 126.65 67 *e*PKIKP **PKiKP** **18 27 44.5 -0.2**
CHM MLR MLR
comp=Z,1µm,22.0s
FAUS Fauske 126.66 19 *e*PP **PP** **18 29 38.6 -2.6**
IUG luznay 126.75 67 *e*PKP **PKiKP** **18 27 44.8 -0.3**
IUG *e*PP **PP** **18 29 42.1 -0.3**
IUG luznay 126.75 67 *e*PKIKP **PKiKP** **18 27 44.7 -0.3**
IUG *e* 18 29 42.1
AB31 Akbulak array 126.82 55 *i* PKIKP **PKPdf** **18 27 43.1 -1.2**
ABKAR Akbulak array 126.82 55 **PKPdf** **18 27 42.8 -1.5**
ABKAR PP **PP** **18 29 39.6 -3.0**
LOF Lofoten 127.02 18 *e* 18 39 48.1
KSXB Camp Six Broad 127.09 292 IAMs_20 IAMs_20 19 25 36.4
comp=Z,4µm,22.0s
STEI Steigen 127.14 18 *e*PP **PP** **18 29 43.9 -0.4**
IMP Imphal 127.16 100 *e*P **PKPdf** **18 27 44.9 -0.9**
IMP IAmb IAmb 18 28 05.2
comp=Z,133nm,1.7s
BRLS Borolday 127.28 66 *e*PKP **PKPdf** **18 27 45.1 -0.4**
BRLS *e*PP **PP** **18 29 43.1 -2.7**
BRLS Borolday 127.28 66 *e*PKIKP **PKPdf** **18 27 45.0 -0.4**
BRLS *e* 18 29 43.9
KLMR Klimovskoe 127.31 34 *e*PKIKP **PKiKP** **18 27 46.7 +1.3**
KLMR *e* 18 29 46.6
KLMR SS SS 18 46 50.7 -3.8
KLMR SSS SSS 18 51 37.4
KLMR pmax pmax
comp=Z,182nm,1.5s
KLMR MLR MLR
comp=Z,4µm,18.0s
SAATT Saattut 127.53 350 *i* P **PKPdf** **18 27 42.3 -2.7**
SAATT IAMs_20 IAMs_20 19 11 47.9
comp=Z,9µm,22.9s
KK31 Karatay Array 127.68 67 *i* PKIKP **PKPdf** **18 27 45.1 -1.1**
KKAR Karatay Array 127.68 67 **PKPdf** **18 27 45.2 -1.0**
KKAR Karatay Array 127.68 67 PKIKP **PKPdf** **18 27 45.2 -1.0**
TEZP TEZPUR 127.91 98 *e*P **PKPdf** **18 27 46.1 -1.1**
TEZP IAmb IAmb 18 28 05.8
comp=Z,145nm,1.4s
KOHI KOHIMA 127.94 100 *e*P **PKiKP** **18 27 47.8 -0.3**
KOHI IAmb IAmb 18 28 06.8
comp=Z,128nm,1.4s
DZA Taraz 127.96 67 *e*PKP **PKiKP** **18 27 47.1 -0.2**
DZA Taraz 127.96 67 *e*PKIKP **PKiKP** **18 27 47.1 -0.2**
KSH Kashi 128.05 74 PKP **PKiKP** **18 27 47.5 -0.3**
KSH PP **PP** **18 29 56.4 +5.4**
KSH AMB AMB
comp=Z,540nm,7.5s
KSH LR LR
comp=Z,2µm,19.2s
KSH LR LR
comp=Z,1µm,18.6s
KSH LR LR
comp=Z,3µm,23.4s
HAWA Hanford 128.07 299 IAMs_20 IAMs_20 19 23 30.3
comp=Z,4µm,22.0s
TAWA Tawang 128.14 96 *e*P **PKiKP** **18 27 48.7 +0.1**
NEW Newport 128.20 302 PKP **PKPdf** **18 27 47.2 +0.1**
comp=Z,12nm,1.1s,baz=169,slow=0.9,SNR=21
NEW PP **PP** **18 29 50.5 -1.3**
comp=Z,1.7nm,0.7s,baz=59,slow=1.9,SNR=3.3
SUMG Summit 128.30 355 PKP **PKPdf** **18 27 46.2 -0.8**
SUMG Summit 128.30 355 *i* P **PKPdf** **18 27 46.7 -0.3**
SUMG IAMs_20 IAMs_20 19 19 40.7
comp=Z,7µm,15.1s
NUUG Nuugaatsiaq 128.38 349 *i* P **PKiKP** **18 27 46.8 -0.4**
NUUG IAMs_20 IAMs_20 19 12 46.6
comp=Z,9µm,20.0s
C09A Chrisman Ranch 128.43 301 **PKPdf** **18 27 46.4 -1.1**
JORH JORHAT 128.82 99 *e*P **PKiKP** **18 27 45.7 -3.2**
ITAN ITANAGAR 128.84 98 *e*P **PKiKP** **18 27 48.8 -0.8**
KIRV Kirov 129.04 41*d* *i*PKIKP **PKPdf** **18 27 47.6 -0.6**
EKS2 Erkin-Say 129.08 69 P **PKiKP** **18 27 49.2 -0.6**
SNR=12
ZIRO ZIRO 129.20 98 *e*P **PKiKP** **18 27 50.3 -0.2**
TRO Tromso 129.29 19 *e*PP **PP** **18 29 58.6 +0.2**
LSA Lhasa 129.35 94 P **PKiKP** **18 27 50.5 -0.6**
LSA Lhasa 129.35 94 PKP **PKPdf** **18 27 47.2 -3.2**
LSA LR LR
comp=Z,1µm,20.6s
LSA LR LR
comp=Z,1µm,20.6s
LSA LR LR
comp=Z,1µm,21.3s
AAK Ala-Archa 129.45 70 **PKPdf** **18 27 49.1 -0.7**
AAK Ala-Archa 129.45 70 P **PKiKP** **18 27 51.3 +0.7**
AAK Ala-Archa 129.45 70 P **PKiKP** **18 27 50.1 -0.5**
SNR=17
AAK Ala-Archa 129.45 70*d* *i*PKIKP **PKiKP** **18 27 49.8 -0.7**
AAK MLR MLR
comp=Z,2µm,19.0s
AAK Ala-Archa 129.45 70 PKP **PKiKP** **18 27 50.0 -0.5**
JETT Jettan, Norway 129.50 19 *e*PP **PP** **18 29 57.4 -2.5**
KTK1 Kautokeino 129.59 21 *e*PKPdf **PKiKP** **18 27 50.5 +0.8**
KTK1 *e*PP **PP** **18 30 00.4 -0.1**
KTK1 *e*SP SP 18 40 07.1 -0.5
KTK1 *e*SS **SS** **18 47 18.8 -3.8**
KTK1 IVMs_BB IVMs_BB 19 15 26.4
comp=Z,2µm,3.8s
KBK Karagaybulak 129.70 70 P **PKiKP** **18 27 50.9 -0.1**
SNR=11
SLVN Son La 129.74 112 IAMs_20 IAMs_20 19 22 18.4
comp=Z,3µm,19.0s
DIBR DIBRUGARH 129.75 99 *e*P **PKiKP** **18 27 55.2 +3.8**
DBG Daneborg 129.83 2 *i* P **PKiKP** **18 27 49.4 -0.6**
DBG IAMs_20 IAMs_20 19 22 31.8
comp=Z,3µm,16.4s
CHMS Chumysh 129.83 70 P **PKiKP** **18 27 50.8 -0.3**
SNR=8.8
TNCH TengChong 129.84 104 PKP **PKiKP** **18 27 52.0 +0.1**
TNCH PP **PP** **18 30 04.5 +1.8**
TNCH PKS **PKSdf** **18 31 25.0 -2.9**
TNCH SS SS 18 47 30.8 +4.1
TNCH AMB AMB
comp=Z,590nm,6.0s
TNCH LR LR
comp=Z,1µm,16.7s
TNCH LR LR
comp=Z,1µm,18.6s
TNCH LR LR
comp=Z,3µm,19.8s
USP Ospenovka 129.89 69 P **PKPdf** **18 27 50.2 -0.2**
SNR=17
SGDS Sogindy 130.08 69 *e*PKP **PKiKP** **18 27 51.1 -0.5**
LKP Lekhapani 130.17 100 *e*P **PKPdf** **18 27 49.8 -1.6**
LKP IAmb IAmb 18 28 04.4
comp=Z,736nm,2.2s
TKM2 Tokmak 2 130.23 70 P **PKiKP** **18 27 51.6 -0.5**
SNR=12
ARA0 ARCESS Array S 130.48 21 *e*PKPdf **PKiKP** **18 27 52.0 +0.4**
ARA0 *e*PP **PP** **18 30 05.8 -0.5**
ARA0 *e*SP SP 18 40 16.2 +0.9
ARA0 *e*SS **SS** **18 47 32.1 -1.4**
ARCES ARCESS Array B 130.48 21 **PKPdf** **18 27 50.2 -0.5**
ARCES ARCESS Array B 130.48 21 PKhKP PKPpre 18 27 42.0
comp=Z,2.2nm,0.8s,baz=250,slow=2.5,SNR=6.2
ARCES PKP pPKPdf 18 27 50.7 -1.7
comp=Z,34nm,0.8s,baz=196,slow=1.5,SNR=53
ARCES PP **PP** **18 30 03.2 -3.1**
comp=Z,32nm,1.1s,baz=190,slow=6.2,SNR=5.3
APA Apatity 130.72 26 ⇓*i*PKIKP **PKPdf** **18 27 50.4 -0.7**
APA *i* 18 30 06.6
APA *i*PS **PS** **18 40 23.2 +3.9**
APA *i*SS SS 18 47 34.3 -2.1
QIZ Qiongzhong 130.82 120 IAMs_20 IAMs_20 19 18 44.4
comp=Z,3µm,20.0s
QIZ Qiongzhong 130.82 120 PKP **PKPdf** **18 27 52.4 -0.5**
QIZ PP **PP** **18 30 09.3 +0.6**
QIZ SS SS 18 47 38.7 +0.7
QIZ AMB AMB
comp=Z,730nm,9.3s
QIZ LR LR
comp=Z,1µm,22.9s
QIZ LR LR
comp=Z,2µm,21.1s
QIZ LR LR
comp=Z,3µm,19.7s
NLWA Neilton Lookou 130.93 297 IAMs_20 IAMs_20 19 31 09.9
comp=Z,4µm,20.0s
KEV Kevo 130.97 22 IAMs_20 IAMs_20 19 19 19.3
comp=Z,5µm,22.0s
ARTI Arti 131.05 47 **PKPdf** **18 27 51.4 -0.7**
ARTI IAMs_20 IAMs_20 19 28 01.7
comp=Z,4µm,20.0s
ARTI Arti 131.05 47 *i* PKIKP **PKiKP** **18 27 52.4 -0.6**
ARTI 18 30 09.9
ARTI PPP PPP 18 32 59.7
ARTI SSS SSS 18 52 31.0
MDOK Medeo 131.17 71 *e*PKP **PKiKP** **18 27 53.1 -0.9**
MDOK *e*PP **PP** **18 30 11.3 -0.1**
MDOK LR LR 19 25 22.9
MDOK Medeo 131.17 71 *e*PKIKP **PKiKP** **18 27 53.0 -0.9**
MDOK *e* 18 30 11.3
LVZ Lovozero 131.28 26 **PKPdf** **18 27 52.2 -0.1**
LVZ IAMs_20 IAMs_20 19 22 00.3
comp=Z,5µm,20.0s
LVZ Lovozero 131.28 26*d* *i*PKIKP **PKPdf** **18 27 51.7 -0.6**
LVZ MLR MLR
comp=Z,2µm,19.0s
TGY Tagaytay City 131.42 136 PKP **PKiKP** **18 27 55.1 0.0**
comp=Z,38nm,0.3s,baz=254,slow=9.6,SNR=1.8
SATY Saty 131.83 72 *e*PKP **PKiKP** **18 27 54.5 -0.8**
SATY *e*PP **PP** **18 30 15.4 -0.2**
SATY Saty 131.83 72 *e*PKIKP **PKiKP** **18 27 54.4 -0.8**
SATY *e* 18 30 15.3
KMI Kunming 132.20 108 ⇓PKP **PKiKP** **18 27 59.6 +2.9**
KMI PP **PP** **18 30 20.3 +2.3**
KMI AMB AMB
comp=Z,600nm,6.7s
KMI LR LR
comp=Z,840nm,17.4s
KMI LR LR
comp=Z,1µm,17.5s
KMI LR LR
comp=Z,2µm,19.5s
UZB Uzynbulak 132.22 72 *e*PKP **PKPdf** **18 27 55.0 0.0**
UZB *e*PP **PP** **18 30 17.8 -0.4**
UZB Uzynbulak 132.22 72 *e*PKIKP **PKPdf** **18 27 55.0 0.0**
UZB *e* 18 30 17.7
SVE Sverdlovsk 132.28 48*c* *i*PKIKP **PKiKP** **18 27 54.9 -0.6**
SVE pmax pmax
comp=Z,260nm,1.6s
SVE MLR MLR
comp=E,3µm,24.0s
SVE MLR MLR
comp=Z,3µm,25.0s
DAG Danmarks Havn 132.33 2 *i* P **PKPdf** **18 27 52.2 -1.8**
DAG IAMs_20 IAMs_20 19 21 00.9
comp=Z,3µm,18.6s
SHLS Shalkode 132.46 73 *e*PKP **PKiKP** **18 27 56.1 -0.4**
SHLS Shalkode 132.46 73 *e*PKIKP **PKiKP** **18 27 56.1 -0.4**
PDGK Podgornoye 132.59 72 PKIKP **PKPdf** **18 27 53.7 -2.0**
PZH PanZhiHua 132.76 106 PKP **PKPdf** **18 27 55.6 -0.9**
PZH PP **PP** **18 30 24.4 +2.9**
PZH PKS **PKSdf** **18 31 32.8 -0.3**
PZH SS SS 18 47 58.7 -3.6
PZH LR LR
comp=Z,870nm,19.0s
PZH LR LR
comp=Z,910nm,19.6s
PZH LR LR
comp=Z,1µm,19.6s
TDK Taldyqorghan 133.13 70 *e*PKP **PKiKP** **18 27 56.7 -1.0**
TDK LR LR 19 26 02.2
comp=Z,1µm,17.9s
TDK Taldyqorghan 133.13 70 *e*PKIKP **PKiKP** **18 27 56.7 -1.0**
TDK MLR MLR
comp=Z,1µm,18.0s
NEEM North Greenlan 133.81 353 *i* P **PKPdf** **18 27 51.6 -5.6**
NEEM IAMs_20 IAMs_20 19 22 07.3
comp=Z,6µm,19.4s
BORK Borovoye 134.21 57*d* *i*PKIKP **PKPdf** **18 27 58.2 0.0**
BORK MLR MLR
comp=Z,3µm,20.0s
BVAR Borovoye Array 134.23 57 PKhKP PKPpre 18 27 45.4
comp=Z,2.2nm,0.9s,baz=252,slow=2.8,SNR=5.2
BVAR PKP **PKiKP** **18 27 59.0 -0.6**
comp=Z,3.9nm,0.9s,baz=268,slow=3.7,SNR=9.7
BVAR SKP **SKPdf** **18 31 32.5 -0.3**
comp=Z,7.6nm,0.8s,baz=245,slow=3.1,SNR=4.0
BVAR SKKPbc **SKKPbc** **18 40 39.6 +1.4**
comp=Z,5.4nm,1.0s,baz=64,slow=3.4,SNR=4.2
HKPS Hong Kong Po S 135.66 123 IAMs_20 IAMs_20 19 17 04.6
comp=Z,4µm,22.0s
BBB Bella Bella 136.10 300 PKP **PKiKP** **18 28 02.5 -0.8**
comp=Z,13nm,0.9s,baz=238,slow=2.4,SNR=3.7
BBB SKP **SKPdf** **18 31 37.8 +1.6**
comp=Z,10nm,0.8s,baz=186,slow=5.6,SNR=4.6
SPITS Spitsbergen Ar 136.16 12 PKP **PKPdf** **18 28 01.5 +0.3**
comp=Z,29nm,0.9s,baz=152,slow=3.7,SNR=6.4
MAKZ Makanchi 136.20 70 PKPpre 18 27 49.7
MAKZ IAMs_20 IAMs_20 19 30 20.4
comp=Z,3µm,22.0s
MAKZ Makanchi 136.20 70 PKIKP **PKPdf** **18 27 57.8 -4.4**
GOMU GeErMu 136.21 91 PKP **PKPdf** **18 27 58.1 -4.9**
GOMU PP **PP** **18 30 44.8 +1.0**
GOMU SS SS 18 48 44.5 0.0
GOMU AMB AMB
comp=Z,430nm,5.7s
GOMU LR LR
comp=Z,2µm,19.6s
GOMU LR LR
comp=Z,2µm,19.2s
GOMU LR LR
comp=Z,2µm,19.3s
YKA Yellowknife Ar 136.24 318 PKhKP PKPpre 18 27 48.6
comp=Z,2.5nm,0.8s,baz=116,slow=2.2,SNR=4.1
YKA PKP sPKPdf 18 28 02.1 -1.9
comp=Z,1.6nm,0.5s,baz=110,slow=28,SNR=8.2
YKA PP **PP** **18 30 42.2 -0.9**
comp=Z,27nm,1.1s,baz=125,slow=5.9,SNR=20
YKA SKPbc **SKPbc** **18 31 34.6 +1.5**
comp=Z,6.1nm,0.8s,baz=135,slow=2.6,SNR=6.8
KBS Kingsbay 136.33 10 IAMs_20 IAMs_20 19 25 15.6
comp=Z,5µm,18.0s
KBS Kingsbay 136.33 10 *e*PKPdf **PKiKP** **18 28 02.3 -0.9**
KBS *e*PP **PP** **18 30 44.2 +0.8**
KBS *e*SP SP 18 41 00.6 -4.4
KBS *e*SS **SS** **18 48 47.5 +3.6**
KBS IVMs_BB IVMs_BB 19 15 23.3
comp=Z,2µm,3.8s
KBS Kingsbay 136.33 10*de* PKIKP **PKPdf** **18 28 00.9 -0.6**
KBS Kingsbay 136.33 10 *i* P **PKiKP** **18 28 03.7 +0.5**
GULI GuiLin 136.33 116 ⇓PKP **PKiKP** **18 28 10.5 +5.7**
GULI PP **PP** **18 30 47.6 +3.7**
MK31 Makanchi Array 136.36 71*d* *i*PKIKP **PKPdf** **18 28 01.3 -1.2**
MKAR Makanchi Array 136.36 71 **PKPdf** **18 27 59.2 -3.3**
MKAR Makanchi Array 136.36 71 PKhKP PKPpre 18 27 51.1
comp=Z,1.5nm,0.8s,baz=248,slow=0.9,SNR=8.8
MKAR PKP **PKiKP** **18 28 03.3 -0.9**
comp=Z,2.5nm,0.6s,baz=219,slow=1.6,SNR=14
MKAR SKP **SKPdf** **18 31 37.8 +0.9**
comp=Z,4.2nm,0.9s,baz=235,slow=2.2,SNR=4.7
KURBB Kurchatov Arra 136.76 64 PKhKP PKPpre 18 27 52.4
comp=Z,0.8nm,0.7s,baz=245,slow=3.2,SNR=6.7
KURBB PKP **PKPdf** **18 28 01.1 -1.9**
comp=Z,1.5nm,0.5s,baz=247,slow=3.1,SNR=8.5
KURBB PP **PP** **18 30 46.2 -0.4**
comp=Z,4.5nm,1.0s,baz=241,slow=5.5,SNR=4.1
KURBB SKPbc **SKPbc** **18 31 37.1 +2.0**
comp=Z,5.0nm,1.0s,baz=238,slow=4.9,SNR=4.1
KURBB SKKPbc **SKKPbc** **18 40 29.3 +0.9**
comp=Z,1.3nm,0.8s,baz=59,slow=3.2,SNR=4.3
KURK Kurchatov 136.86 64 **PKPdf** **18 28 00.6 -2.6**
KURK Kurchatov 136.86 64 IAMs_20 IAMs_20 19 29 16.8
comp=Z,3µm,20.0s
KURK Kurchatov 136.86 64 P **PKiKP** **18 28 03.7 -1.3**
KURK Kurchatov 136.86 64*d* *i*PKIKP **PKPdf** **18 28 02.8 -0.4**
KURK MLR MLR
comp=Z,2µm,19.0s
NOR Nord 137.20 2 *i* P **PKPdf** **18 28 02.8 -0.2**
NOR IAMs_20 IAMs_20 19 14 16.5
comp=Z,4µm,25.9s
CD2 Chengdu 137.31 104 PKP **PKiKP** **18 28 06.1 -0.6**
CD2 PP **PP** **18 30 53.3 +3.1**
CD2 SS SS 18 49 00.5 +3.8
CD2 AMB AMB
comp=Z,820nm,5.3s
CD2 LR LR
comp=Z,2µm,16.5s
CD2 LR LR
comp=Z,2µm,15.9s
CD2 LR LR
comp=Z,2µm,19.0s
WMQ Urumqi 137.40 77 PKP **PKPdf** **18 28 04.8 +0.2**
WMQ PKS **PKSdf** **18 31 40.7 0.0**
WMQ AMB AMB
comp=Z,240nm,11.8s
WMQ LR LR
comp=Z,2µm,17.9s
WMQ LR LR
comp=Z,2µm,24.2s
WMQ LR LR
comp=Z,2µm,23.7s
GUMO Guam 137.40 167 PKP **PKPdf** **18 28 05.3 0.0**
comp=Z,45nm,0.7s,baz=226,slow=18,SNR=2.1
RES Resolute Bay 137.73 338 PKhKP PKPpre 18 27 56.5
comp=Z,5.2nm,0.8s,baz=141,slow=8.4,SNR=4.6
RES PKP pPKPdf 18 28 04.1 -1.8
comp=Z,35nm,1.0s,baz=125,slow=1.4,SNR=17
RES SKP **SKPdf** **18 31 41.0 +2.6**
comp=Z,7.3nm,0.9s,baz=100,slow=2.7,SNR=2.6
ZSN Zaisan 138.14 71 *e*PKP **PKPdf** **18 28 06.2 +0.4**
ZSN Zaisan 138.14 71 *e*PKIKP **PKPdf** **18 28 06.1 +0.4**
TOAD Toad River Com 138.56 309 P **PKPdf** **18 28 06.7 +0.6**
baz=122,SNR=13
KOTAN Kotaneelee Air 138.74 311 P **PKiKP** **18 28 07.5 -1.1**
baz=122
U35K Hyder 139.17 303 P **PKPdf** **18 28 07.8 +0.6**
baz=123
LIRD Liard River Hi 139.24 309 P **PKPdf** **18 28 08.1 +0.8**
baz=121,SNR=6.1
TPUB Ta-pu 139.51 130 IAMs_20 IAMs_20 19 35 26.5
comp=Z,2µm,19.0s
KNMB Chin-men Tao 139.52 126 IAMs_20 IAMs_20 19 30 27.8
comp=Z,2µm,18.0s
V35K Ketchikan 139.61 302 P **PKiKP** **18 28 09.2 -1.2**
baz=122
T35M Bob Quinn 139.84 304 P **PKiKP** **18 28 09.9 -1.0**
baz=122
CNSH ChangSha 140.00 116 PKP **PKPdf** **18 28 10.3 +0.6**

CNSH SS SS 18 49 29.8 +1.6
CNSH AMB AMB
comp=Z,880nm,5.0s
CNSH LR LR
comp=Z,990nm,16.8s
CNSH LR LR
comp=Z,1μm,21.9s
CNSH LR LR
comp=Z,3μm,18.8s
QZH Quanzhou 140.03 126 PKP **PKiKP 18 28 11.5 -0.8**
QZH PP PP 18 31 14.0 +7.3
QZH PKS **PKSdf 18 31 45.6 -0.3**
QZH LR LR
comp=Z,1μm,18.2s
QZH LR LR
comp=Z,2μm,19.2s
QZH LR LR
comp=Z,2μm,18.9s
WRGLY Wrigley 140.07 316 P **PKPdf 18 28 09.5 +0.8**
baz=119
SSLB Suanglung 140.08 130 IAMs_20 IAMs_20 19 36 50.5
comp=Z,2μm,20.0s
CRAG Craig 140.41 301 P **PKiKP 18 28 10.9 -1.1**
baz=122
DLBC Dease Lake 140.49 307 PKhKP PKPpre 18 28 04.4
comp=Z,6.2nm,0.8s,baz=120,slow=1.8,SNR=10
DLBC SKPbc **SKiKP 18 31 47.5 -0.4**
comp=Z,13nm,1.0s,baz=353,slow=1.0,SNR=4.4
DLBC Dease Lake 140.49 307 P **PKiKP 18 28 11.0 -1.3**
baz=120,SNR=7.9
WRAK Wrangell Islan 140.54 303 P **PKPdf 18 28 10.6 +0.9**
baz=121
NACB Ninganchiao 140.70 130 IAMs_20 IAMs_20 19 35 03.8
comp=Z,3μm,21.0s
S34M Telegraph Cree 140.73 305 P **PKPdf 18 28 11.1 +1.0**
baz=120,SNR=6.9
U33K Whale Pass 140.75 302 **PKPdf 18 28 09.4 -0.7**
U33K IAMs_20 IAMs_20 19 31 55.4
comp=Z,5μm,22.0s
U33K Whale Pass 140.75 302 P **PKiKP 18 28 11.3 -1.4**
baz=121
WTLY Watson Lake, Y 140.78 309 P **PKiKP 18 28 11.4 -1.3**
baz=119
DGZ Jazzator, Alta 140.85 70⇑*i*PKIKP **PKiKP 18 28 13.1 -0.3**
YHNB Yeheng 141.04 129 IAMs_20 IAMs_20 19 38 39.8
comp=Z,3μm,20.0s
LZDM Lanzhou Array 141.04 99 PKP **PKPdf 18 28 11.7 -0.1**
comp=Z,3.7nm,0.4s,baz=256,slow=6.0,SNR=4.0
LZH Lanzhou 141.22 99 PKP **PKPdf 18 28 11.0 -0.9**
LZH sPKP 18 28 26.3
LZH PP **PP 18 31 20.0 +5.5**
LZH SS SS 18 49 44.0 +0.9
LZH AMB AMB
comp=Z,680nm,6.2s
LZH LR LR
comp=Z,2μm,19.2s
LZH LR LR
comp=Z,700nm,18.0s
LZH LR LR
comp=Z,2μm,19.8s
TGTN Hyland Airport 141.23 312 P **PKPdf 18 28 12.1 +1.2**
baz=118
GTA Gaotai 141.29 92 PKP **PKPdf 18 28 09.2 -2.7**
GTA PP **PP 18 31 16.0 +1.1**
GTA PKS **PKSdf 18 31 46.6 -1.2**
GTA AMB AMB
comp=Z,600nm,13.5s
GTA LR LR
comp=Z,1μm,22.9s
GTA LR LR
comp=Z,1μm,22.2s
GTA LR LR
comp=Z,2μm,22.2s
TATO Taipei 141.35 129 IAMs_20 IAMs_20 19 36 01.3
comp=Z,3μm,21.0s
R33M Jennings River 141.39 307 IAMs_20 IAMs_20 19 38 01.0
comp=Z,4μm,20.0s
R33M Jennings River 141.39 307 P **PKPdf 18 28 12.2 +0.8**
baz=119
Q32M Nakina River 141.77 306 IAMs_20 IAMs_20 19 37 25.1
comp=Z,4μm,20.0s
Q32M Nakina River 141.77 306 P **PKPdf 18 28 12.8 +0.6**
baz=118
ZALV Zalesovo Beam 141.82 63 PKhKP PKPpre 18 28 06.7
comp=Z,3.3nm,0.5s,baz=250,slow=3.5,SNR=14
ZALV PKP **PKPdf 18 28 11.8 -0.4**
comp=Z,3.3nm,0.5s,baz=250,slow=3.6,SNR=14
ZALV PP **PP 18 31 20.8 +2.9**
comp=Z,6.4nm,1.1s,baz=351,slow=7.5,SNR=2.1
ZALV SKPbc **SKiKP 18 31 51.1 +0.5**
comp=Z,12nm,1.0s,baz=267,slow=3.0,SNR=4.0
S32K Killisnoo 142.12 303 P **PKPdf 18 28 13.0 +0.5**
baz=119
SIT Sitka 142.28 302 P **PKPdf 18 28 13.3 +0.5**
baz=119
WAKE Wake Island 142.30 200 IAMs_20 IAMs_20 19 30 04.5
comp=Z,4μm,22.0s
R32K Eaglecrest 142.48 304 P **PKPdf 18 28 13.3 +0.1**
baz=118
XAN Xi'an 142.50 106 PKP **PKPdf 18 28 13.6 -0.5**
XAN PP **PP 18 31 24.0 +1.9**
XAN SS SS 18 49 57.8 +0.1
XAN LR LR
comp=Z,2μm,21.4s
XAN LR LR
comp=Z,1μm,19.2s
XAN LR LR
comp=Z,2μm,20.4s
P33M Teslin, Yukon 142.60 308 IAMs_20 IAMs_20 19 30 11.0
comp=Z,5μm,22.0s
WHN Wuhan 142.64 116 PKP **PKiKP 18 28 16.5 -1.0**
WHN pPKP sPKPdf 18 28 26.8 +10
WHN PP **PP 18 31 29.4 +6.7**
WHN LR LR
comp=Z,5μm,20.2s
WHN LR LR
comp=Z,2μm,15.7s
WHN LR LR
comp=Z,8μm,21.5s
P32M Atlin 142.72 307 IAMs_20 IAMs_20 19 36 53.2
comp=Z,4μm,20.0s
N32M Quiet Lake 143.13 309 IAMs_20 IAMs_20 19 31 32.9
comp=Z,5μm,22.0s
SKAG Skagway 143.40 306 PKPbc 18 28 12.6 +0.5
O30N Mendenhall 144.30 308 IAMs_20 IAMs_20 19 32 20.0
comp=Z,3μm,20.0s
O30N Mendenhall 144.30 308 P **PKPdf 18 28 16.5 +0.1**
baz=114,SNR=124
P30M Million Dollar 144.43 306 P **PKPdf 18 28 17.0 +0.3**
baz=114
N31M Braeburn, Yuko 144.45 309 P **PKPdf 18 28 16.3 -0.3**
baz=113,SNR=6.0
P29M Windy Craggy 144.58 305 IAMs_20 IAMs_20 19 36 58.4
comp=Z,4μm,20.0s
P29M Windy Craggy 144.58 305 P **PKPdf 18 28 17.0 +0.1**
baz=114
LYN LuoYang 144.80 110⇓PKP PKPbc 18 28 17.1 0.0
LYN PKPab **PKiKP 18 28 21.9 +0.1**
LYN sPKP 18 28 32.9
LYN SS SS 18 50 24.1 +0.2
LYN LR LR
comp=Z,2μm,19.8s
LYN LR LR
comp=Z,2μm,18.2s
LYN LR LR
comp=Z,3μm,20.6s
HYT Haines Junctio 144.96 307 P **PKPdf 18 28 18.9 +1.3**
baz=113,SNR=194
N30M Aishikik Lake 145.02 308 P **PKPdf 18 28 19.0 +1.4**
baz=112,SNR=550
O29M Mount Kennedy 145.24 306 IAMs_20 IAMs_20 19 38 31.8
comp=Z,4μm,20.0s
O29M Mount Kennedy 145.24 306 P **PKPab 18 28 19.1 +1.1**
baz=113,SNR=74
MAYO Mayo, Yukon 145.29 312 P **PKPab 18 28 19.4 +1.4**
baz=110,SNR=19
M30M Minto, Yukon 145.31 310 P **PKPab 18 28 19.4 +1.2**
baz=111,SNR=585
PNL Peninsula 145.36 305 P **PKPab 18 28 19.9 +1.5**
baz=114,SNR=48
YUK6 Outpost Mounta 145.39 307 P **PKPab 18 28 20.0 +1.3**
baz=112,SNR=111
H31M Peel River 145.41 316 P **PKPab 18 28 19.2 +0.8**
baz=108
BCPM Bancas Point 145.59 305 IAMs_20 IAMs_20 19 37 38.2
comp=Z,4μm,20.0s
YUK4 Talbot Arm 145.67 308 P **PKPab 18 28 20.9 +1.2**
baz=112,SNR=112
F31M Tsiigehtchic 145.68 319 P **PKPab 18 28 20.1 +0.8**
baz=107,SNR=69
G31M Satah River 145.73 318 **PKPdf 18 28 18.4 -0.2**
G31M Satah River 145.73 318 P **PKPab 18 28 20.1 +0.7**
baz=107,SNR=183
JOW Kunigami 145.79 137 PKPbc **PKPdf 18 28 19.4 -0.6**
comp=Z,98nm,1.0s,baz=226,slow=3.9,SNR=9.4
JOW Kunigami 145.79 137 P **PKPab 18 28 22.0 +1.1**
J30M Hart River 145.81 314 P **PKPab 18 28 20.8 +0.8**
baz=109,SNR=126
INK Inuvik 145.84 321 P **PKPab 18 28 20.6 +0.7**
baz=106
PINM Pinnacle 145.93 305 P **PKPab 18 28 21.6 +1.1**
baz=112,SNR=52
PCA Pinnacle 145.93 305 IAMs_20 IAMs_20 19 37 47.2
comp=Z,4μm,20.0s
M29M Somme Creek 145.99 310 P **PKPab 18 28 21.6 +0.9**
baz=110
I30M Mount Dempster 146.03 315 P **PKPab 18 28 21.2 +0.4**
baz=108,SNR=275
K29M Barlow Dome 146.06 312 P **PKPab 18 28 21.4 +0.4**
baz=109,SNR=161
L29M L29M 146.07 311 **PKPdf 18 28 18.0 -1.4**
L29M L29M 146.07 311 P **PKPab 18 28 21.6 +0.7**
baz=110
NJ2 Nanjing 146.11 120⇑PKPbc **PKPab 18 28 22.2 +0.2**
NJ2 sPKP 18 28 38.0
NJ2 PP **PP 18 31 44.0 +0.6**
NJ2 SKKS 18 38 32.6
NJ2 AMB AMB
comp=Z,730nm,5.3s
NJ2 LR LR
comp=Z,1μm,17.1s
NJ2 LR LR
comp=Z,1μm,17.6s
NJ2 LR LR
comp=Z,2μm,20.1s
YUK8 Steele Glacier 146.15 307 P **PKPab 18 28 22.4 +0.8**
baz=111,SNR=192
O28M Mount Upton 146.16 306 IAMs_20 IAMs_20 19 32 18.1
comp=Z,4μm,22.0s
O28M Mount Upton 146.16 306 P **PKPab 18 28 22.4 +0.8**
baz=112
SSE Sheshan 146.45 124 PKPbc **PKPdf 18 28 20.8 -0.2**
SSE PP **PP 18 31 50.1 +4.7**
SSE SS SS 18 50 39.5 -2.8
SSE AMB AMB
comp=Z,260nm,10.6s
SSE LR LR
comp=Z,830nm,16.9s
SSE LR LR
comp=Z,650nm,18.0s
TABL Table Mountain 146.47 305 IAMs_20 IAMs_20 19 33 53.5
comp=Z,4μm,21.0s
G30M tAoh Zraii Nji 146.48 318 P **PKPab 18 28 22.3 -0.2**
baz=105
F30M Barrier River 146.48 319 P **PKPab 18 28 22.4 0.0**
baz=105
EPYK Eagle Plains 146.50 317 P **PKPab 18 28 22.5 0.0**
baz=106,SNR=28
LOGN Logan Glacier 146.54 306 IAMs_20 IAMs_20 19 32 30.5
comp=Z,5μm,21.0s
YAH Yahtse 146.72 305 IAMs_20 IAMs_20 19 31 11.0
comp=Z,5μm,22.0s
CTGM Chitina Glacie 146.75 306 **PKPdf 18 28 19.5 -1.2**
CTGM IAMs_20 IAMs_20 19 39 18.8
comp=Z,5μm,20.0s
MESA MESA 146.75 305 P **PKPab 18 28 24.2 +0.4**
baz=111,SNR=29
CTG Chitna Glacier 146.75 306 P **PKPab 18 28 23.9 +0.1**
baz=111,SNR=80
KNGR Kungurtug, Tuv 146.78 75*d i*PKP2 **PKPbc 18 28 22.5 -0.4**
KNGR MLR MLR
comp=Z,2μm,20.0s
GRNC Granite Creek 146.86 306 IAMs_20 IAMs_20 19 37 43.7
comp=Z,5μm,20.0s
DAWY Dawson 146.91 312 P **PKPab 18 28 23.6 -0.6**
baz=107,SNR=194
BARN Barnard Glacie 146.93 306 IAMs_20 IAMs_20 19 39 32.6
comp=Z,4μm,19.0s
ISLE Juniper Island 147.08 305 IAMs_20 IAMs_20 19 38 12.6
comp=Z,4μm,20.0s
H29M Whitestone 147.10 316 P **PKPab 18 28 24.3 -0.6**
baz=105
TIY Taiyuan 147.14 106 PKPbc **PKPab 18 28 25.2 -0.7**
TIY PP **PP 18 31 50.6 +0.8**
TIY SS SS 18 50 54.1 +3.4
TIY AMB AMB
comp=Z,860nm,9.2s
TIY LR LR
comp=Z,2μm,20.6s
TIY LR LR
comp=Z,980nm,17.9s
TIY LR LR
comp=Z,2μm,20.6s
G29M Pine Creek 147.15 317 P **PKPab 18 28 24.3 -0.7**
baz=104
SNH Sunshine Point 147.16 304 IAMs_20 IAMs_20 19 34 32.8
comp=Z,3μm,20.0s
WAX Waxell Ridge 147.26 305 IAMs_20 IAMs_20 19 32 50.5
comp=Z,4μm,21.0s
BGLC Bering Glacier 147.35 304 P **PKPab 18 28 25.9 0.0**
baz=111
E29M Blow River 147.44 320 P **PKPbc 18 28 24.8 +0.7**
baz=102
M27K Edge Creek, AK 147.46 308 P **PKiKP 18 28 25.6 -1.0**
baz=108
CRQE Cirque 147.48 305 P **PKiKP 18 28 25.7 -1.0**
baz=110,SNR=65
CRQM Cirque 147.50 305 IAMs_20 IAMs_20 19 39 56.2
comp=Z,5μm,20.0s
I28M Miner Creek 147.53 314 P **PKPbc 18 28 25.2 +0.7**
baz=105
BCAR Beaver Creek A 147.64 310 **PKPdf 18 28 20.2 -1.8**
BERG Berg Lake 147.64 304 IAMs_20 IAMs_20 19 38 16.4
comp=Z,4μm,20.0s
L27K Beaver Creek, 147.65 310 P **PKiKP 18 28 26.0 -0.8**
baz=107
MCARA McCarthy VSAT 147.66 306 IAMs_20 IAMs_20 19 32 49.9
comp=Z,5μm,22.0s
MCARA McCarthy VSAT 147.66 306 P **PKiKP 18 28 26.1 -0.7**
baz=109,SNR=54
JAM Amami Oshima 147.72 138 P **PKiKP 18 28 27.6 -0.4**
VRDI Verde Repeater 147.80 306 **PKPdf 18 28 20.9 -1.6**
VRDI PKPbc **PKiKP 18 28 26.6 -0.8**
VRDI IAMs_20 IAMs_20 19 37 42.7
comp=Z,4μm,19.0s
KAIM Kayak Island 147.81 303 P **PKiKP 18 28 27.1 -0.1**
baz=110,SNR=10
BTO Baotou 147.84 100 *e*PKPbc **PKPbc 18 28 25.8 -0.3**
BTO PP PP 18 32 02.3 +8.3
BTO SS SS 18 51 00.8 +2.0
BTO AMB AMB
comp=Z,4μm,5.0s
BTO LR LR
comp=Z,5μm,20.1s
BTO LR LR
comp=Z,5μm,20.2s
BTO LR LR
comp=Z,8μm,21.2s
D28M Stokes Point 147.92 322 P **PKiKP 18 28 26.7 -0.4**
baz=100
M26K Nabesna, AK 147.97 308 P **PKPbc 18 28 26.5 +0.8**
baz=107,SNR=81
F28M Old Crow 148.01 318 IAMs_20 IAMs_20 19 36 16.3
comp=Z,5μm,21.0s
F28M Old Crow 148.01 318 P **PKiKP 18 28 26.5 -0.9**
baz=102,SNR=120
K27K Chicken 148.04 311 P **PKiKP 18 28 27.3 -0.3**
baz=106
E28M Babbage River 148.07 320 IAMs_20 IAMs_20 19 37 17.9
comp=Z,4μm,20.0s
E28M Babbage River 148.07 320 P **PKPbc 18 28 26.3 +0.5**
baz=100
HNS HongShan 148.13 109⇑PKPbc **PKPbc 18 28 26.2 -0.6**
HNS PKPab **sPKPab 18 28 31.6 -0.5**
HNS PP **PP 18 31 59.5 +4.0**
HNS SKKS 18 38 46.4
HNS SS **SS 18 50 59.5 -2.2**
HNS LR LR
comp=Z,2μm,20.0s
HNS LR LR
comp=Z,1μm,22.6s
HNS LR LR
comp=Z,3μm,21.2s
I27K Kandik River 148.24 314 P **PKiKP 18 28 27.7 -0.3**
baz=103
BMRM Bremner River 148.25 305 P **PKiKP 18 28 28.0 -0.2**
baz=108,SNR=50
L26K Log Cabin Wild 148.31 309 IAMs_20 IAMs_20 19 36 34.8
comp=Z,4μm,20.0s
L26K Log Cabin Wild 148.31 309 P **PKiKP 18 28 28.0 -0.2**
baz=106,SNR=80
H27K Steamboat Moun 148.35 316 P **PKiKP 18 28 27.9 -0.3**
baz=102
N25K Chitina, Valde 148.45 306 IAMs_20 IAMs_20 19 36 30.7
comp=Z,4μm,21.0s
N25K Chitina, Valde 148.45 306 P **PKiKP 18 28 28.6 0.0**
baz=108,SNR=51
TIA Tai'an 148.52 113 PKPbc **PKPdf 18 28 23.6 -0.7**
TIA SKKS 18 38 40.7
TIA SS **SS 18 51 08.3 +2.2**
TIA LR LR
comp=Z,2μm,19.6s
TIA LR LR
comp=Z,1μm,18.6s
TIA LR LR
comp=Z,2μm,19.4s
G27K Doyon Strip 148.52 317 **PKPdf 18 28 21.7 -1.6**
G27K PKPbc **sPKPbc 18 28 27.5 -1.9**
G27K Doyon Strip 148.52 317 P **PKiKP 18 28 28.2 -0.3**
baz=101,SNR=62
MID Middleton Isla 148.55 302 IAMs_20 IAMs_20 19 40 43.8
comp=Z,3μm,20.0s
Q23K Middleton Isla 148.56 302 P **PKiKP 18 28 28.7 0.0**
baz=110
EYAK Cordova Ski Ar 148.65 304 P **PKiKP 18 28 29.1 +0.2**
baz=108,SNR=28
D27M Malcolm River 148.69 321 IAMs_20 IAMs_20 19 28 33.8
comp=Z,5μm,22.0s
D27M Malcolm River 148.69 321 P **PKiKP 18 28 29.1 +0.2**
baz=98
E27K Coleen River 148.75 319 IAMs_20 IAMs_20 19 38 10.0
comp=Z,5μm,20.0s
E27K Coleen River 148.75 319 P **PKiKP 18 28 28.8 -0.2**
baz=99
J26L Joseph Creek 148.78 312 P **PKiKP 18 28 29.1 -0.1**
baz=104,SNR=102
I26K Coal Creek Min 148.80 314 P **PKiKP 18 28 29.0 -0.1**
baz=103
SCRK Sand Creek 148.84 311 P **PKiKP 18 28 29.3 0.0**
baz=104,SNR=190
DIV Divide 148.84 305 IAMs_20 IAMs_20 19 38 37.2
comp=Z,4μm,19.0s
HHC Hu-ho-hao-te 148.87 101 *e*PKPbc **PKPdf 18 28 20.9 -3.9**
HHC SS SS 18 51 05.2 -5.1
HHC AMB AMB
comp=Z,480nm,5.4s
HHC LR LR
comp=Z,880nm,18.4s
HHC LR LR
comp=Z,1μm,18.6s
HHC LR LR
comp=Z,2μm,17.1s
HARP HAARP 148.93 308 P **PKiKP 18 28 29.6 +0.1**
baz=106,SNR=28
HIN Hinchinbrook I 148.95 304 **PKPdf 18 28 22.0 -2.2**
HIN **sPKPbc 18 28 28.9 -1.7**
KLU Klutina 149.02 306 IAMs_20 IAMs_20 19 36 38.8
comp=Z,5μm,20.0s
KLU Klutina 149.02 306 P **PKiKP 18 28 30.2 +0.4**
baz=107,SNR=12
RIDG Independent Ri 149.15 310 P **PKiKP 18 28 30.4 +0.5**
baz=104,SNR=14
MOY Mondy 149.21 75 *e*PKIKP **PKPdf 18 28 25.4 +0.4**
MOY pmax pmax
comp=Z,528nm,2.5s
PAX Paxson 149.22 309 P **PKiKP 18 28 30.1 -0.1**
baz=105,SNR=41
P23K Montague Islan 149.25 303 P **PKiKP 18 28 30.4 +0.3**
baz=108,SNR=25
M24K Tolsona, Glenn 149.31 307 IAMs_20 IAMs_20 19 37 29.4
comp=Z,4μm,22.0s
M24K Tolsona, Glenn 149.31 307 P **PKiKP 18 28 31.2 +0.9**
baz=106,SNR=7.6
G26K Porcupine Rive 149.38 317 IAMs_20 IAMs_20 19 36 26.6
comp=Z,5μm,20.0s
G26K Porcupine Rive 149.38 317 P **PKiKP 18 28 30.2 +0.1**
baz=100,SNR=12
GLI Glacier Island 149.38 304 P **PKiKP 18 28 30.6 +0.2**
baz=107
K24K Donnelly Dome 149.56 310 P **PKiKP 18 28 30.9 +0.1**
baz=103
J25K Salcha River, 149.57 312 IAMs_20 IAMs_20 19 40 26.0
comp=Z,5μm,20.0s
J25K Salcha River, 149.57 312 P **PKiKP 18 28 30.8 +0.1**
baz=102,SNR=9.4
F26K Sheenjek River 149.63 318 P **PKiKP 18 28 31.3 +0.6**
baz=98,SNR=12
C27K Jago River 149.70 322 P **PKiKP 18 28 31.3 +0.5**
baz=95
BMAR Burnt Mountain 149.76 318 **PKPdf 18 28 23.5 -1.8**
SCM Sheep Creek Mo 149.76 306 P **PKiKP 18 28 31.9 +0.7**
baz=105,SNR=8.9
ZAK Zakamensk 149.84 79 *e*PKHKP PKPpre 18 28 26.0
ZAK pmax pmax
comp=Z,476nm,1.7s
M23K Glacier View 149.93 306 P **PKiKP 18 28 32.1 +0.6**
baz=105,SNR=6.7
PWL Port Wells 149.95 304 P **PKiKP 18 28 32.2 +0.6**
baz=106,SNR=8.5
H25L Birch Creek 150.06 315 P **PKiKP 18 28 32.5 +0.8**
baz=99,SNR=11
DHY Denali Highway 150.09 308 P **PKiKP 18 28 32.6 +0.6**
baz=103,SNR=14
C26K Camden Bay 150.14 322 P **PKiKP 18 28 32.5 +0.8**
baz=93
WAT6 Susitna Watana 150.14 307 P **PKiKP 18 28 32.6 +0.5**
baz=104,SNR=190
KNK Knik Glacier 150.16 305 P **PKiKP 18 28 32.5 +0.5**
baz=105,SNR=20
F25K Christian Rive 150.18 318 P **PKiKP 18 28 32.6 +0.6**
baz=97
HDA Harding Lake 150.20 311 IAMs_20 IAMs_20 19 37 42.6
comp=Z,5μm,20.0s
HDA Harding Lake 150.20 311 P **PKiKP 18 28 32.1 +0.1**
baz=101,SNR=14
JCJ Chichijima 150.21 159 PKP **PKPdf 18 28 25.0 -2.2**
comp=Z,160nm,1.0s,baz=243,slow=6.3,SNR=11
SML Sawmill 150.21 306 **PKPdf 18 28 24.0 -2.2**
SML PKPbc **PKiKP 18 28 32.2 +0.1**
SML IAMs_20 IAMs_20 19 40 39.3
comp=Z,5μm,19.0s
SML Sawmill 150.21 306 P **PKiKP 18 28 32.6 +0.4**
baz=105,SNR=22
E25K Arctic Village 150.22 319 P **PKiKP 18 28 32.5 +0.6**
baz=96,SNR=8.3
ILAR Eielson Array 150.24 312 **PKPdf 18 28 23.9 -2.2**
ILAR **PKPbc 18 28 30.8 -0.5**
ILAR Eielson Array 150.24 312 PKP **PKPdf 18 28 24.9 -1.3**
comp=Z,6.0nm,1.1s,baz=318,slow=1.7,SNR=24
ILAR PKPbc **sPKPbc 18 28 31.5 -2.1**
comp=Z,221nm,1.1s,baz=308,slow=0.3,SNR=167
G25K Bearman Lake 150.25 316 P **PKiKP 18 28 33.2 +1.2**
baz=98,SNR=9.5
SONM Songino Array 150.25 85 PKP **PKPdf 18 28 26.7 -0.2**
comp=Z,6.0nm,1.0s,baz=210,slow=1.6,SNR=15
SONM PKPbc **sPKPbc 18 28 32.1 -2.3**
comp=Z,12nm,0.5s,baz=224,slow=3.2,SNR=43
SEW Seward 150.26 302 P **PKiKP 18 28 32.7 +0.5**
baz=107,SNR=19
GHO Glory Hole Cre 150.47 306 IAMs_20 IAMs_20 19 43 45.3
comp=Z,4μm,20.0s
O22K Cooper Landing 150.50 303 P **PKiKP 18 28 33.2 +0.5**
baz=106,SNR=9.5
PMR Palmer 150.52 305 P **PKiKP 18 28 33.4 +0.7**
baz=105,SNR=11
POKR Poker Plat Res 150.53 313 P **PKiKP 18 28 32.8 +0.1**
baz=100,SNR=18
WAT1 Susitna Watana 150.56 308 P **PKiKP 18 28 33.5 +0.6**
baz=103
CCB Clear Creek Bu 150.60 312 IAMs_20 IAMs_20 19 38 04.4
comp=Z,5μm,22.0s
D25K Kavik River 150.61 321 P **PKiKP 18 28 33.0 +0.2**
baz=93
ULN Ulaanbaatar 150.64 86 **PKPdf 18 28 25.8 -1.7**
ULN Ulaanbaatar 150.64 86 IAMs_20 IAMs_20 19 47 34.7
comp=Z,3μm,20.0s
ULN Ulaanbaatar 150.64 86 P **PKPdf 18 28 29.3 +1.8**
ULN Ulaanbaatar 150.64 86⇑*e*PKIKP **PKPdf 18 28 27.4 -0.1**
COLA College 150.66 312 **PKPdf 18 28 25.4 -1.3**
COLA College 150.66 312 PKIKP **PKPdf 18 28 25.4 -1.3**
COLA MLR MLR

comp=Z,7µm,22.0s
COLA College 150.66 312 P **PKiKP** 18 28 32.7 -0.1
baz=100
COLA College 150.66 312 PKP **PKPdf** 18 28 24.5 -2.2
RC01 Rabbit Creek A 150.67 304 IAMs_20 IAMs_20 19 35 06.7
comp=Z,4µm,22.0s
RC01 Rabbit Creek A 150.67 304 P **PKiKP** 18 28 33.8 +0.7
baz=105,SNR=18
TLY Talaya 150.68 77 PKPdf **PKPdf** 18 28 25.9 -1.3
TLY **PKPbc** 18 28 31.5 -1.3
TLY Talaya 150.68 77 P **PKPbc** 18 28 31.0 -1.8
WRH Wood River Hil 150.69 311 IAMs_20 IAMs_20 19 38 07.8
comp=Z,5µm,21.0s
BRSE Bradley Lake S 150.78 301 P **PKiKP** 18 28 34.1 +0.7
baz=107,SNR=18
G24K Hadweenzic Riv 150.78 316 IAMs_20 IAMs_20 19 37 22.9
comp=Z,5µm,20.0s
G24K Hadweenzic Riv 150.78 316 P **PKiKP** 18 28 33.9 +0.8
baz=97
JSU Suzuyama 150.81 136 P **PKiKP** 18 28 34.2 -0.1
H24K Noodor Dome 150.83 314 P **PKiKP** 18 28 33.7 +0.4
baz=98
BJI Beijing 150.84 107 ⇓PKPbc **PKPbc** 18 28 32.6 -0.8
BJI LR LR
comp=Z,770nm,19.8s
BJI LR LR
comp=Z,770nm,18.0s
BJI LR LR
comp=Z,2µm,19.4s
FIS Fire Island 150.91 304 IAMs_20 IAMs_20 19 35 14.0
comp=Z,4µm,22.0s
MCK McKinley 150.92 309 P **PKiKP** 18 28 34.2 +0.7
baz=101,SNR=14
CNPM China Poot 150.96 301 **PKPdf** 18 28 25.3 -2.1
CNPM PKPbc **PKiKP** 18 28 33.5 -0.2
CNPM IAMs_20 IAMs_20 19 42 07.3
comp=Z,5µm,20.0s
M22K Willow 151.02 305 IAMs_20 IAMs_20 19 44 54.8
comp=Z,4µm,19.0s
M22K Willow 151.02 305 P **PKiKP** 18 28 34.6 +0.9
baz=104,SNR=40
F24K Squaw Lake 151.03 317 IAMs_20 IAMs_20 19 38 52.3
comp=Z,5µm,21.0s
F24K Squaw Lake 151.03 317 P **PKiKP** 18 28 34.4 +0.7
baz=95,SNR=9.5
KDAK Kodiak Island 151.08 297 PKPdf **PKPdf** 18 28 25.3 -2.2
KDAK **PKiKP** 18 28 33.8 -0.1
KDAK Kodiak Island 151.08 297 PKIKP **PKPdf** 18 28 25.3 -2.2
KDAK MLR MLR
comp=Z,6µm,20.0s
KDAK Kodiak Island 151.08 297 P **PKiKP** 18 28 34.7 +0.8
baz=109
NEA2 Nenana 151.13 311 IAMs_20 IAMs_20 19 41 25.4
comp=Z,4µm,20.0s
NEA2 Nenana 151.13 311 P **PKiKP** 18 28 34.0 +0.1
baz=99,SNR=7.9
JFU Fukue jima 2 151.14 133 P **PKPdf** 18 28 30.0 +1.5
HOM Homer 151.19 301 IAMs_20 IAMs_20 19 41 44.7
comp=Z,4µm,20.0s
HOM Homer 151.19 301 P **PKiKP** 18 28 35.1 +1.0
baz=106,SNR=9.6
BWN Browne 151.23 310 IAMs_20 IAMs_20 19 38 34.1
comp=Z,5µm,20.0s
CUT Chulitna 151.24 307 P **PKiKP** 18 28 35.1 +0.9
baz=102,SNR=44
SUA Susitna One 151.24 305 P **PKiKP** 18 28 35.2 +0.8
baz=104,SNR=16
SYI Shuyak Island 151.25 298 IAMs_20 IAMs_20 19 38 35.2
comp=Z,5µm,21.0s
OHAK Old Harbor 151.25 295 P **PKiKP** 18 28 35.3 +1.0
baz=110,SNR=39
Q20K Shuyak Island 151.25 298 P **PKiKP** 18 28 35.2 +0.9
baz=108
CAPN Captain Cook N 151.26 303 P **PKiKP** 18 28 35.6 +1.3
baz=105
IRK Irkutsk 151.28 76 *e*PKIKP **PKPbc** 18 28 33.2 -0.9
IRK pmax pmax
comp=Z,248nm,1.5s
E24K Your Creek 151.30 319 IAMs_20 IAMs_20 19 37 14.2
comp=Z,4µm,21.0s
E24K Your Creek 151.30 319 P **PKiKP** 18 28 34.9 +0.7
baz=94
I23K Minto, Yukon-K 151.34 312 P **PKiKP** 18 28 34.3 0.0
baz=98,SNR=19
C24K Franklin Bluff 151.44 322 IAMs_20 IAMs_20 19 39 07.9
comp=Z,5µm,21.0s
C24K Franklin Bluff 151.44 322 P **PKiKP** 18 28 34.9 +0.6
baz=90
TRF Thorofare Moun 151.46 309 P **PKiKP** 18 28 35.5 +0.6
baz=100,SNR=17
D24K Happy Valley 151.48 321 **PKPdf** 18 28 25.8 -2.1
D24K **sPKPbc** 18 28 34.3 -2.1
D24K Happy Valley 151.48 321 P **PKiKP** 18 28 34.9 +0.4
baz=91
H23K Yukon River 151.51 314 P **PKiKP** 18 28 35.1 +0.4
baz=97
SKT Skwentna 151.72 305 IAMs_20 IAMs_20 19 43 47.4
comp=Z,5µm,19.0s
SKT Skwentna 151.72 305 P **PKiKP** 18 28 35.9 +0.7
baz=102,SNR=14
E23K Chandalar 151.73 318 IAMs_20 IAMs_20 19 43 43.6
comp=Z,4µm,20.0s
E23K Chandalar 151.73 318 P **PKiKP** 18 28 35.6 +0.4
baz=92,SNR=11
TOLK Toolik Lake Re 151.73 320 IAMs_20 IAMs_20 19 37 42.7
comp=Z,5µm,21.0s
TOLK Toolik Lake Re 151.73 320 P **PKiKP** 18 28 35.9 +0.8
baz=92,SNR=12
O20K Slope Mountain 151.78 301 P **PKiKP** 18 28 35.7 +0.2
baz=105,SNR=8.6
G23K Bananza Creek 151.79 316 IAMs_20 IAMs_20 19 38 03.5
comp=Z,5µm,21.0s
G23K Bananza Creek 151.79 316 P **PKiKP** 18 28 36.4 +1.2
baz=95,SNR=11
N20K Mount Spurr 151.86 304 P **PKiKP** 18 28 35.9 +0.3
baz=103
SPCR Spurr Chakacha 151.86 304 P **PKiKP** 18 28 36.0 +0.4
baz=103,SNR=7.8
BPAW Bear Paw Mtn. 151.88 310 IAMs_20 IAMs_20 19 38 26.1
comp=Z,4µm,20.0s
BPAW Bear Paw Mtn. 151.88 310 P **PKiKP** 18 28 35.9 +0.4
baz=99,SNR=16
COLD Coldfoot 151.90 317 IAMs_20 IAMs_20 19 38 41.5
comp=Z,5µm,21.0s
COLD Coldfoot 151.90 317 P **PKiKP** 18 28 36.8 +1.3
baz=94,SNR=8.3
MLY Manley 151.90 312 P **PKiKP** 18 28 35.5 0.0
baz=97,SNR=16
R18K Karluk 151.96 296 P **PKiKP** 18 28 36.4 +0.6
baz=108
P19K Oil Pt 151.97 300 IAMs_20 IAMs_20 19 38 10.0
comp=Z,4µm,20.0s
P19K Oil Pt 151.97 300 P **PKiKP** 18 28 36.3 +0.5
baz=105,SNR=12
C23K Itkillik River 152.11 322 IAMs_20 IAMs_20 19 39 08.4
comp=Z,5µm,21.0s
C23K Itkillik River 152.11 322 P **PKiKP** 18 28 36.6 +0.9
baz=88
D23K Nanushuk River 152.14 320 P **PKiKP** 18 28 37.0 +1.1
baz=90
PPLA Purkeypile 152.21 307 P **PKiKP** 18 28 37.2 +0.8
baz=100,SNR=16
H22K Ishtalitna Cre 152.26 314 P **PKiKP** 18 28 37.2 +1.0
baz=95
G22K Bettles 152.39 316 P **PKiKP** 18 28 37.6 +1.2
baz=93
JNU Nakatsue 152.41 136 PKPbc **PKiKP** 18 28 38.1 +0.5
comp=Z,25nm,0.8s,baz=173,slow=5.7,SNR=7.4
JNU Nakatsue 152.41 136 P **PKPbc** 18 28 33.8 -3.5
CHUM Lake Minchumin 152.42 309 P **PKiKP** 18 28 36.9 +0.3
baz=98,SNR=9.5
M20K Styx River 152.44 305 **PKPdf** 18 28 26.8 -2.9
M20K PKPbc **PKPbc** 18 28 36.0 -0.6
M20K PKPab **PKPab** 18 28 46.5 -0.4
M20K Styx River 152.44 305 P **PKiKP** 18 28 37.0 +0.2
baz=101,SNR=7.4
I21K Tanana 152.44 312 P **PKiKP** 18 28 37.2 +0.6
baz=96
E22K Anaktuvuk Pass 152.55 319 IAMs_20 IAMs_20 19 38 30.5
comp=Z,5µm,21.0s
E22K Anaktuvuk Pass 152.55 319 P **PKiKP** 18 28 37.7 +0.8
baz=90,SNR=8.7
Q18K Katmai Hardscr 152.57 298 P **PKiKP** 18 28 37.6 +0.4
baz=106,SNR=7.8
O19K Port Alsworth 152.63 301 P **PKiKP** 18 28 37.3 +0.2
baz=104,SNR=11
F22K John River 152.68 317 P **PKiKP** 18 28 38.3 +1.3
baz=91
H21K Melozitna Rive 152.83 313 P **PKiKP** 18 28 38.3 +0.9
baz=94
N19K Bonanza Creek 152.86 302 IAMs_20 IAMs_20 19 42 54.5
comp=Z,4µm,20.0s
N19K Bonanza Creek 152.86 302 P **PKiKP** 18 28 37.8 +0.1
baz=102
D22K Aniak River 152.87 320 P **PKiKP** 18 28 38.4 +1.0
baz=88
P18K Big Mountain, 152.88 299 IAMs_20 IAMs_20 19 42 32.3
comp=Z,4µm,19.0s
P18K Big Mountain, 152.88 299 P **PKiKP** 18 28 38.0 +0.2
baz=105,SNR=7.2
DL2 Dalian 152.89 115 PKPbc **PKiKP** 18 28 41.5 +3.2
DL2 PP PP 18 32 30.2 +7.4
L20K Farewell, AK 152.90 306 P **PKiKP** 18 28 38.0 +0.3
baz=100
Q17K Contact Creek 152.90 296 P **PKiKP** 18 28 38.5 +0.6
baz=106
R17L Mt. Peulik Vol 152.95 295 P **PKiKP** 18 28 38.7 +0.8
baz=107
O18K Koktuh Hills 152.98 300 P **PKiKP** 18 28 38.4 +0.5
baz=104,SNR=17
B22K Teshekpuk Lake 153.04 323 P **PKiKP** 18 28 38.7 +1.1
baz=84
K20K Telida 153.12 308 IAMs_20 IAMs_20 19 41 23.2
comp=Z,5µm,20.0s
K20K Telida 153.12 308 P **PKiKP** 18 28 38.9 +0.8
baz=98
G21K Allakaket 153.17 315 IAMs_20 IAMs_20 19 38 48.0
comp=Z,4µm,21.0s
G21K Allakaket 153.17 315 P **PKiKP** 18 28 39.1 +1.0
baz=92
F21K Alatna River 153.18 317 IAMs_20 IAMs_20 19 38 47.1
comp=Z,5µm,21.0s
F21K Alatna River 153.18 317 P **PKiKP** 18 28 39.2 +1.1
baz=91,SNR=17
IMAR Indian Mountai 153.24 314 **PKPdf** 18 28 27.7 -2.9
J20K Nowinta River 153.26 310 **PKPdf** 18 28 28.2 -2.4
J20K PKPbc **PKiKP** 18 28 38.1 -0.2
J20K IAMs_20 IAMs_20 19 38 33.7
comp=Z,5µm,20.0s
J20K Nowinta River 153.26 310 P **PKiKP** 18 28 39.1 +0.8
baz=96
L19K White Mountain 153.30 305 P **PKiKP** 18 28 39.1 +0.6
baz=100,SNR=5.2
E21K Killik River 153.35 319 P **PKiKP** 18 28 39.3 +0.9
baz=88
XLT XiLinHaoTe 153.39 101 *e*PKPbc **PKPbc** 18 28 36.9 -2.3
XLT pPKP PKPab 18 28 47.9 -3.6
XLT SS SS 18 52 02.6 +2.2
XLT AMB AMB
comp=Z,790nm,7.2s
XLT LR LR
comp=Z,160nm,17.4s
XLT LR LR
comp=Z,1µm,16.5s
XLT LR LR
comp=Z,950nm,18.4s
Q16K King Salmon 153.40 297 P **PKiKP** 18 28 39.6 +0.9
baz=105,SNR=8.0
P17K Kvichak River 153.43 298 P **PKiKP** 18 28 39.5 +0.7
baz=104
I20K Naaghedeneel 153.46 311 IAMs_20 IAMs_20 19 38 23.0
comp=Z,5µm,20.0s
I20K Naaghedeneel 153.46 311 P **PKiKP** 18 28 40.1 +1.5
baz=95
A22K Sinclair Lake 153.47 325 P **PKiKP** 18 28 39.7 +1.2
baz=82
N18K Kilae Creek 153.50 302 IAMs_20 IAMs_20 19 46 44.5
comp=Z,4µm,19.0s
N18K Kilae Creek 153.50 302 P **PKiKP** 18 28 39.7 +0.8
baz=102,SNR=6.6
B21K Ikpikpuk River 153.51 322 IAMs_20 IAMs_20 19 33 52.5
comp=Z,5µm,22.0s
B21K Ikpikpuk River 153.51 322 P **PKiKP** 18 28 39.9 +1.2
baz=85
R16K Pilot Point 153.56 294 P **PKiKP** 18 28 40.3 +1.3
baz=107
C21K Knifeblade Rid 153.61 321 P **PKiKP** 18 28 40.4 +1.5
baz=86
M18K Stony River 153.63 303 P **PKiKP** 18 28 40.0 +0.9
baz=100
H20K Anotleneega Mo 153.68 313 P **PKiKP** 18 28 40.5 +1.3
baz=93
CHNA Chernabura Isl 153.72 288 P **PKiKP** 18 28 39.9 +0.4
baz=111
J19K Poorman 153.89 309 IAMs_20 IAMs_20 19 39 14.2
comp=Z,4µm,21.0s
J19K Poorman 153.89 309 P **PKiKP** 18 28 40.9 +1.3
baz=95
O17K Koliganek Bris 153.89 299 P **PKiKP** 18 28 41.4 +1.7
baz=103
A21K Barrow 153.95 326 P **PKiKP** 18 28 40.7 +1.2
baz=79
F20K Avaraart Lake 154.06 316 IAMs_20 IAMs_20 19 38 47.0
comp=Z,4µm,21.0s
F20K Avaraart Lake 154.06 316 P **PKiKP** 18 28 40.9 +1.0
baz=89
JMN Monobe 154.09 140 P **PKPbc** 18 28 37.2 -3.8
N17K Nushagak Hills 154.10 301 IAMs_20 IAMs_20 19 37 58.4
comp=Z,5µm,22.0s
N17K Nushagak Hills 154.10 301 P **PKiKP** 18 28 42.0 +1.8
baz=101
L18K Granite Mounta 154.15 305 P **PKiKP** 18 28 42.2 +2.0
baz=98
P16K Nushagak River 154.16 297 P **PKiKP** 18 28 40.8 +0.5
baz=104
E20K Nigu River 154.18 319 P **PKiKP** 18 28 41.6 +1.4
baz=86
S14K Fog Glacier 154.20 291 P **PKiKP** 18 28 41.7 +1.1
baz=108
INCN Incon 154.25 124 IAMs_20 IAMs_20 19 35 45.6
comp=Z,3µm,19.0s
D20K Etivluk River 154.30 320 P **PKiKP** 18 28 41.7 +1.3
baz=85
J18K Innoko River 154.32 308 IAMs_20 IAMs_20 19 45 14.8
comp=Z,4µm,19.0s
J18K Innoko River 154.32 308 P **PKiKP** 18 28 42.2 +1.7
baz=96
H19K Roundabout Mou 154.34 313 **PKPdf** 18 28 29.7 -2.4
H19K PKPbc **sPKPbc** 18 28 41.6 -1.2
H19K PKPab **sPKPab** 18 28 56.6 -0.5
H19K Roundabout Mou 154.34 313 P **PKiKP** 18 28 41.9 +1.4
baz=91
B20K Meade River 154.34 323 IAMs_20 IAMs_20 19 32 52.1
comp=Z,5µm,22.0s
B20K Meade River 154.34 323 P **PKiKP** 18 28 41.7 +1.4
baz=81
O16K Kokwok River B 154.35 299 IAMs_20 IAMs_20 19 35 01.0
comp=Z,5µm,22.0s
O16K Kokwok River B 154.35 299 P **PKiKP** 18 28 42.4 +1.8
baz=102
M17K Holitna River 154.38 303 P **PKiKP** 18 28 42.5 +1.8
baz=99
SDPT Sand Point 154.38 288 P **PKiKP** 18 28 42.7 +1.9
baz=110
GCSA Galena City Sc 154.49 311 P **PKiKP** 18 28 42.7 +1.9
baz=93
E19K Redstone River 154.63 317 IAMs_20 IAMs_20 19 42 13.3
comp=Z,3µm,20.0s
E19K Redstone River 154.63 317 P **PKiKP** 18 28 42.2 +1.2
baz=87
KSAR Wonju Array Be 154.80 126 **PKPdf** 18 28 31.5 -2.2
KSAR Wonju Array Be 154.80 126 PKIKP **PKPdf** 18 28 31.5 -2.2
KSRS Korea Array 154.82 126 PKP **PKPdf** 18 28 33.8 +0.1
comp=Z,1.9nm,1.1s,baz=158,slow=1.3,SNR=4.6
KSRS PKPbc **sPKPbc** 18 28 43.2 -1.5
comp=Z,3.3nm,0.8s,baz=226,slow=2.1,SNR=7.8
KSRS PKPab **sPKPab** 18 28 57.7 -2.2
comp=Z,20nm,1.0s,baz=234,slow=2.1,SNR=13
N16K Nishlik Lake 154.86 301 P **PKiKP** 18 28 43.6 +1.9
baz=100
F19K Shaleruckik Mo 154.87 316 IAMs_20 IAMs_20 19 41 06.8
comp=Z,4µm,21.0s
F19K Shaleruckik Mo 154.87 316 P **PKiKP** 18 28 42.6 +1.1
baz=87
D19K Kuna River 154.87 320 P **PKiKP** 18 28 42.9 +1.3
baz=84
L17K Donlin 154.89 305 P **PKiKP** 18 28 43.5 +1.8
baz=97
JHS Saijyo 154.93 137 P **PKPdf** 18 28 27.8 -6.3
K17K Iditarod 154.96 306 P PKPdf 18 28 43.6 +10
baz=96
M16K Timber Creek 155.04 302 P PKPdf 18 28 43.9 +11
baz=99
O15K Ungalikthiuk R 155.12 297 IAMs_20 IAMs_20 19 35 41.6
comp=Z,5µm,22.0s
O15K Ungalikthiuk R 155.12 297 P PKPdf 18 28 43.9 +11
baz=102
H18K Honhosa River 155.13 312 P PKPdf 18 28 43.7 +10
baz=90
G18K Tagagawik 155.25 313 P PKPdf 18 28 44.0 +11
baz=89
C19K Lookout Ridge 155.32 321 P PKPdf 18 28 44.2 +11
baz=81
S12K Black Hills 155.35 288 IAMs_20 IAMs_20 19 40 51.1
comp=Z,5µm,22.0s
S12K Black Hills 155.35 288 P PKPdf 18 28 44.6 +11
baz=108
J17K VABM Dome 155.37 307 IAMs_20 IAMs_20 19 45 27.6
comp=Z,3µm,19.0s
J17K VABM Dome 155.37 307 P **PKPab** 18 29 01.8 +2.6
baz=94
L16K Owhat River 155.39 303 **PKPdf** 18 28 31.7 -2.0
L16K PKPab **sPKPab** 18 29 01.4 -0.3
L16K IAMs_20 IAMs_20 19 42 16.3
comp=Z,4µm,20.0s
L16K Owhat River 155.39 303 P **PKPab** 18 29 01.9 +2.6
baz=97
N15K Kwethluk River 155.45 300 P **PKPab** 18 29 01.9 +2.2
baz=100
A19K Wainwright 155.62 324 P **PKPab** 18 29 01.9 +1.8
baz=77
F18K Selawik 155.62 315 P **PKPab** 18 29 01.9 +1.7
baz=86,SNR=6.2
H17K Granite Mounta 155.79 311 P **PKPab** 18 29 02.6 +1.6
baz=90
FALS False Pass 155.80 286 IAMs_20 IAMs_20 19 39 14.2
comp=Z,5µm,22.0s
FALS False Pass 155.80 286 P **PKPab** 18 29 02.4 +1.1
baz=110
M15K Kasigluk River 155.83 301 P **PKPab** 18 29 02.8 +1.5
baz=98
O14K Tigyukauivet M 155.86 297 PKPdf **PKPdf** 18 28 33.3 -1.1
O14K **sPKPab** 18 29 03.3 -0.4
O14K Tigyukauivet M 155.86 297 P **PKPab** 18 29 03.0 +1.6
baz=101
E18K Tukpahlearik C 155.93 317 P **PKPab** 18 29 02.9 +1.4
baz=83,SNR=5.3
C18K Utukok River 155.97 320 P **PKPab** 18 29 03.2 +1.4
baz=80
JWT Wachi 156.03 141 P **PKPdf** 18 28 41.3 +5.9
SNY Shenyang 156.05 113 ⇑PKP **PKPdf** 18 28 36.7 +1.5
SNY PP **PP** 18 32 44.1 +3.6
SNY SS SS 18 52 27.8 -1.0
SNY AMB AMB
comp=Z,380nm,8.3s
SNY LR LR
comp=Z,930nm,23.5s
SNY LR LR
comp=Z,2µm,19.5s
SNY LR LR
comp=Z,3µm,20.6s
J16K Anvik River 156.05 307 P **PKPab** 18 29 04.5 +2.3
baz=93
B18K Kokolik River 156.05 322 P **PKPab** 18 29 03.8 +1.8
baz=78
G17K Kiwalik Mounta 156.09 313 P **PKPab** 18 29 04.4 +2.1
baz=88,SNR=5.7
I17K Unalakleet 156.12 309 IAMs_20 IAMs_20 19 46 20.3
comp=Z,4µm,20.0s
I17K Unalakleet 156.12 309 P **PKPab** 18 29 04.8 +2.4
baz=91,SNR=6.4
N14K Kuskokwak Cree 156.19 299 P **PKPab** 18 29 05.0 +2.1
baz=100,SNR=9.1
F17K Baldwin Pennin 156.28 315 P **PKPab** 18 29 04.6 +1.6
baz=85
CIT Chita 156.33 82 *e*PKIKP **PKPdf** 18 28 34.0 -1.4
CIT *e* 18 28 41.8
CIT *e* 18 29 02.0
CIT pmax pmax
comp=Z,594nm,1.6s
L15K Ungalak Mounta 156.34 303 P **PKPab** 18 29 05.4 +1.9
baz=96
K15K Wolf Creek Mou 156.41 305 P **PKPab** 18 29 04.8 +1.1
baz=94
E17K Hotham Inlet 156.44 317 P **PKPab** 18 29 05.4 +1.7
baz=83,SNR=26
M14K Bethel 156.45 301 P **PKPab** 18 29 06.1 +2.2
baz=97,SNR=16
RDOG Red Dog Mine 156.70 319 IAMs_20 IAMs_20 19 40 56.1
comp=Z,4µm,21.0s
RDOG Red Dog Mine 156.70 319 P **PKPab** 18 29 06.4 +1.6
baz=80,SNR=9.3
C17K DeLong Mountai 156.72 320 P **PKPab** 18 29 06.7 +1.7
baz=78,SNR=8.2
H16K Elim 156.79 310 P **PKPab** 18 29 07.3 +2.0
baz=88,SNR=6.6
G16K Koyuk River 156.80 312 IAMs_20 IAMs_20 19 46 05.2
comp=Z,5µm,20.0s
G16K Koyuk River 156.80 312 P **PKPab** 18 29 07.2 +1.9
baz=86
D17K Noatak River 156.83 318 P **PKPab** 18 29 07.0 +1.6
baz=80,SNR=19
L14K Kuka Creek 156.87 302 P **PKPab** 18 29 07.2 +1.5
baz=96
M13K Dall Lake 157.09 300 P **PKPab** 18 29 09.2 +2.5
baz=97,SNR=5.3
UNV Unalaska Valle 157.14 282 IAMs_20 IAMs_20 19 52 56.8
comp=Z,4µm,19.0s
UNV Unalaska Valle 157.14 282 P **PKPab** 18 29 09.6 +2.5
baz=111
J14K Nanvaranak Lak 157.37 306 P **PKPab** 18 29 10.4 +2.6
baz=91
G15K Niukluk 157.54 311 P **PKPab** 18 29 10.7 +2.2
baz=86
C16K Lisburne Hills 157.55 320 P **PKPab** 18 29 09.8 +1.3
baz=76,SNR=5.8
F15K North Star Dit 157.73 313 P **PKPab** 18 29 11.2 +1.9
baz=83
K13K Kusilvak Mount 157.85 303 P **PKPab** 18 29 11.9 +1.9
baz=92,SNR=5.3
NIKH Nikolski High 158.13 278 P **PKPab** 18 29 13.2 +1.8
baz=112
MAJO Matsushiro 158.13 145 IAMs_20 IAMs_20 19 39 51.3
comp=Z,2µm,22.0s
MAJO Matsushiro 158.13 145 ⇓PKIKP **PKPdf** 18 28 40.5 +2.4
MAT Matsushiro 158.13 145 P **PKPdf** 18 28 42.7 +4.6
MJAR Matsushiro Arr 158.13 145 PKP **PKPdf** 18 28 37.9 -0.3
comp=Z,2.6nm,1.0s,baz=169,slow=1.7,SNR=9.2
MJAR PKPab **sPKPab** 18 29 11.7 -2.5
comp=Z,20nm,0.9s,baz=206,slow=4.5,SNR=16
MJAR PP **PP** 18 32 54.2 +2.6
comp=Z,12nm,1.4s,baz=197,slow=3.9,SNR=3.1
MJAR PKKP 18 37 00.6
comp=Z,1.0nm,0.8s,baz=300,slow=2.5,SNR=4.0
ANM Nome 158.14 310 P **PKPab** 18 29 12.7 +1.6
baz=85
CN2 Changchun 158.41 112 PKP **PKPdf** 18 28 42.8 +4.6
CN2 PP **PP** 18 32 56.0 +2.4
CN2 SKKS 18 39 36.2
CN2 AMB AMB
comp=Z,1µm,10.0s
CN2 LR LR
comp=Z,1µm,18.0s
CN2 LR LR
comp=Z,2µm,18.0s
CN2 LR LR
comp=Z,2µm,19.0s
F14K Arctic Creek 158.45 313 P **PKPab** 18 29 14.7 +2.2
baz=82
M11K Mekoryuk 158.49 299 P **PKPab** 18 29 15.7 +3.0
baz=95
HIA Hailar 158.55 93 IAMs_20 IAMs_20 19 37 26.2
comp=Z,3µm,21.0s
HILR Hailar Array B 158.70 93 PKP **PKPdf** 18 28 39.2 +0.8
comp=Z,3.3nm,0.7s,baz=93,slow=3.0,SNR=5.6
HILR PKPab **sPKPab** 18 29 13.8 -2.6
comp=Z,40nm,1.0s,baz=246,slow=2.9,SNR=7.1
TNA Tin City 159.09 314 IAMs_20 IAMs_20 19 44 42.7
comp=Z,4µm,21.0s
TNA Tin City 159.09 314 P **PKPab** 18 29 17.2 +2.0
baz=80,SNR=5.0
JSD Sado 159.50 143 PKPdf **PKPdf** 18 28 37.9 -1.7
JSD **PKPab** 18 29 17.0 -0.7
SPIA Saint Paul Isl 160.12 289 P **PKPab** 18 29 18.6 -1.3
baz=101
BNX BinXian 160.75 110 PKP **PKPdf** 18 28 40.9 +0.1
TIXI Tiksi 160.90 24 **PKPdf** 18 28 37.3 -2.8
TIXI PKPab **sPKPab** 18 29 22.9 -2.3
TIXI Tiksi 160.90 24 PKIKP **PKPdf** 18 28 37.3 -2.8
TIXI 18 29 22.9
GAMB Gambell 160.99 309 P **PKPab** 18 29 25.5 +1.9
baz=81

MDJ	**Mudanjiang**	**161.12 116**			**PKPdf**	**18 28 38.5**	**-2.7**
MDJ	**Mudanjiang**	**161.12 116**		PKP	**PKPdf**	**18 28 41.1**	**-0.1**
MDJ				AMB	AMB		
	comp=Z,1μm,8.2s						
USRK	**Ussuriysk Ar.**	**162.01 121**		PKP	**PKPdf**	**18 28 42.9**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=329,slow=3.3,SNR=4.7						
USRK				PKPab	**PKPab**	**18 29 27.9**	**-0.7**
	comp=Z,26nm,1.1s,baz=222,slow=2.6,SNR=7.6						
USRK				PP	**PP**	**18 33 17.4**	**+4.5**
	comp=Z,3.6nm,0.8s,baz=252,slow=3.6,SNR=4.5						
HEH	**HeiHe**	**163.36 98**		PKP	**PKPdf**	**18 28 42.9**	**-0.4**
HEH				pPKP	sPKPdf	18 28 55.0	+9.4
HEH				PP	**PP**	**18 33 22.0**	**+1.8**
HEH				AMB	AMB		
	comp=Z,1μm,8.3s						
HEH				LR	LR		
	comp=Z,2μm,20.6s						
HEH				LR	LR		
	comp=Z,960nm,21.9s						
HEH				LR	LR		
	comp=Z,5μm,21.9s						
ZEA	**Zeya**	**164.68 87**	*i*	PKIKP	**PKPdf**	**18 28 49.0**	**+4.7**
ZEA			*e*			18 54 06.0	
ZEA				pmax	pmax		
	comp=Z,600nm,14.5s						
YAK	**Yakutsk**	**166.17 53**			**PKPdf**	**18 28 43.9**	**-1.4**
YAK					**PKPab**	**18 29 45.0**	**-1.4**
YAK	**Yakutsk**	**166.17 53**		PKP	**PKPdf**	**18 28 44.5**	**-0.8**
	comp=Z,2.8nm,0.5s,baz=241,slow=0.7,SNR=4.1						
YAK				PKPab	**sPKPab**	**18 29 46.4**	**-2.3**
	comp=Z,15nm,0.8s,baz=219,slow=2.1,SNR=4.7						
YAK	**Yakutsk**	**166.17 53**	*e*	PKIKP	**PKPdf**	**18 28 43.5**	**-1.8**
YAK			*e*			18 33 31.7	
YAK			*e*	PPP	PPP	18 37 36.7	
YAK				pmax	pmax		
	comp=Z,12nm,1.3s						
YAK				pmax	pmax		
	comp=N,14nm,1.5s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,870nm,3.9s						
YAK				pmax	pmax		
	comp=E,502nm,3.3s						
YAK				pmax	pmax		
	comp=N,221nm,2.9s						
BILL	**Bilibino**	**166.33 340**	⇑	PKIKP	**PKPdf**	**18 28 41.8**	**-3.5**
ASAJ	**Asahikawa**	**166.40 144**		PKP	**PKPdf**	**18 28 46.5**	**+0.4**
	comp=N,23nm,1.1s,baz=252,slow=3.2,SNR=3.2						
GRNR	**Gornyy**	**168.58 109**	*e*	PKP2	**PKPab**	**18 30 01.3**	**+3.9**
YSS	**Yuzhno-Sakhali**	**168.91 138**	*i*	PKIKP	**PKPdf**	**18 28 50.8**	**+3.0**
YSS			*e*			18 28 58.5	
YSS			*e*			18 33 57.5	
YSS			*e*			18 37 53.3	
YSS			*e*	SS	SS	18 54 44.1	+2.4
SEY	**Seymchan**	**172.75 4**		PKPab	**PKPab**	**18 30 15.4**	**0.0**
	comp=N,8.2nm,1.0s,baz=0.0,slow=8.1,SNR=2.1						
SEY	**Seymchan**	**172.75 4**	*i*	PKIKP	**PKPdf**	**18 28 45.8**	**-3.5**
SEY				pmax	pmax		
	comp=Z,28nm,1.3s						
SKR	**Severo-Kuril's**	**174.72 198**	*i*	PKIKP	**PKPdf**	**18 28 47.9**	**-2.4**
SKR			*e*			18 34 14.2	
SKR				pmax	pmax		
	comp=Z,500nm,5.9s						
PETK	**Petropavlovsk-**	**176.45 224**		PKP	**PKPdf**	**18 28 50.9**	**+0.1**
	comp=Z,20nm,1.0s,baz=103,slow=6.4,SNR=4.5						
PETK				PKPab	**sPKPab**	**18 30 33.5**	**-1.0**
	comp=Z,11nm,0.9s,baz=99,slow=4.9,SNR=4.2						
PETK				PP	**PP**	**18 34 32.8**	**+7.2**
	comp=Z,20nm,1.1s,baz=103,slow=3.2,SNR=5.1						

*TAP **02** 18:21:37.9, 24°.39N×121°.97E, h24km, ML3.7, B*
*JMA **02** 18:21:38.1±0.0, 24°.3N±0°.2×122°.0E±0°.2, h36km, MV2.7/12, TAIWAN REGION*
ISC 02 18:21:38.6±0.9, 24°.37N±0°.02×122°.00E±0°.01, h22km±5km, n159, σ0s98/283, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.22**	**76**	*eP*	**Pb**	**18 21 44.9**	**+0.8**
EOS2				*eS*	**Sb**	**18 21 50.5**	**+2.5**
EAHA	**Aohua**	**0.24**	**261**	*i* P	**Pb**	**18 21 43.9**	**-0.6**
EAHA				*i* S	**Sb**	**18 21 48.5**	**0.0**
EHP	**Heping Village**	**0.24**	**257**	*eP*	**Pb**	**18 21 44.5**	**0.0**
EHP				*eS*	**Sb**	**18 21 48.8**	**+0.2**
ENA	**Nanau**	**0.24**	**285**	*i* P	**Pb**	**18 21 43.7**	**-0.9**
ENA				*i* S	**Sb**	**18 21 47.9**	**-0.7**
ESAO	**Su ao**	**0.25**	**327**	*i* P	**Pb**	**18 21 43.8**	**-0.9**
ESAO				*i* S	**Sb**	**18 21 47.7**	**-1.2**
TWC	**Suao**	**0.28**	**331**	*i* P	**Pb**	**18 21 44.2**	**-0.9**
TWC				*i* S	**Sb**	**18 21 48.5**	**-1.0**
EOS3	**EOS3**	**0.30**	**105**	*eP*	**Pb**	**18 21 46.0**	**+0.7**
EOS3				*eS*	**Sb**	**18 21 51.0**	**+1.0**
NDS	**Dongshan**	**0.37**	**316**	*i* P	**Pb**	**18 21 45.8**	**-0.8**
NDS				S	**Sb**	**18 21 50.4**	**-1.6**
EOS4	**EOS4**	**0.38**	**130**	*eP*	**Pb**	**18 21 46.8**	**+0.3**
EOS4				*eS*	**Sn**	**18 21 55.3**	**+0.4**
ETL	**Fush Village**	**0.40**	**239**	*i* P	**Pb**	**18 21 46.6**	**-0.4**
ETL				S	**Sb**	**18 21 53.9**	**+1.1**
NACB	**Ninganchiao**	**0.41**	**242**	P	**Pb**	**18 21 46.8**	**-0.5**
NACB	**Ninganchiao**	**0.41**	**242**	P	**Pb**	**18 21 46.7**	**-0.6**
NACB				*eS*	**Sb**	**18 21 53.5**	**+0.4**
ILA	**Ilan**	**0.46**	**331**	*i* P	**Pb**	**18 21 47.5**	**-0.5**
ILA				S	**Sb**	**18 21 54.6**	**+0.2**
LATG	**Datong**	**0.46**	**292**	*i* P	**Pb**	**18 21 47.4**	**-0.8**
LATG				S	**Sb**	**18 21 53.8**	**-0.8**
TWD	**Chiawan**	**0.46**	**232**	P	**Pb**	**18 21 47.5**	**-0.6**
TWD				S	**Sb**	**18 21 54.8**	**+0.2**
ENTT	**Nioudou**	**0.48**	**305**	*i* P	**Pb**	**18 21 47.5**	**-0.9**
ENTT				S	**Sb**	**18 21 54.1**	**-0.9**
EGS		**0.48**	**353**	*i* P	**Pb**	**18 21 48.0**	**-0.5**
EGS				*eS*	**Sb**	**18 21 54.6**	**-0.5**
ETLH	**Xiulin Townshi**	**0.49**	**251**	*i* P	**Pb**	**18 21 48.4**	**-0.4**
ETLH				*i* S	**Sb**	**18 21 55.8**	**+0.2**
HWA	**Hwalien**	**0.53**	**223**	*eP*	**Pb**	**18 21 49.5**	**+0.3**
HWA				*eS*	**Sn**	**18 21 59.1**	**+0.2**
FUSB	**Fushanzhiwuyua**	**0.54**	**317**	*i* P	**Pb**	**18 21 48.7**	**-0.8**
FUSB				S	**Sb**	**18 21 55.7**	**-1.2**
NNSB	**Datong**	**0.56**	**276**	*i* P	**Pb**	**18 21 49.2**	**-0.7**
NNSB				*i* S	**Sb**	**18 21 56.2**	**-1.4**
NNSH	**Datong**	**0.56**	**276**	*i* P	**Pb**	**18 21 49.2**	**-0.7**
NNSH				S	**Sb**	**18 21 57.0**	**-0.6**
NNS	**Nan Shan**	**0.57**	**278**	*i* P	**Pb**	**18 21 49.2**	**-0.8**
NNS				*eS*	**Sb**	**18 21 56.9**	**-1.0**
NWLT	**Wulai**	**0.61**	**312**	*i* P	**Pb**	**18 21 49.7**	**-0.9**
NWLT				S	**Sb**	**18 21 57.9**	**-0.9**
ETM	**Tongmen**	**0.61**	**229**	P	**Pb**	**18 21 49.9**	**-0.7**
ETM				*eS*	**Sn**	**18 21 60.0**	**-1.1**
TEYL	**Yanliau Villag**	**0.61**	**216**	*eP*	**Pb**	**18 21 50.4**	**-0.3**
TEYL				*eS*	**Sb**	**18 21 59.4**	**+0.5**
TIPB	**Shuangxi**	**0.62**	**346**	*i* P	**Pb**	**18 21 50.2**	**-0.6**
TIPB				*i* S	**Sb**	**18 21 58.4**	**-0.8**
LXIB	**Xiulin Townshi**	**0.63**	**237**	*eP*	**Pb**	**18 21 50.3**	**-0.8**
LXIB				*eS*	**Sn**	**18 22 01.1**	**-0.8**
TWB1	**Santiao Chiao**	**0.64**	**359**	*i* P	**Pb**	**18 21 50.7**	**-0.5**
TWB1				*i* S	**Sb**	**18 21 59.4**	**-0.3**
YHNB	**Yeheng**	**0.64**	**298**	P	**Pb**	**18 21 50.5**	**-0.7**
YHNB	**Yeheng**	**0.64**	**298**	S	**Sb**	**18 21 59.5**	**-0.3**
YHNB	**Yeheng**	**0.64**	**298**	*i* P	**Pb**	**18 21 50.3**	**-0.9**
YHNB				*eS*	**Sb**	**18 21 58.2**	**-1.6**
NSK	**Sanguang**	**0.66**	**298**	*i* P	**Pb**	**18 21 50.6**	**-0.9**
NSK				*eS*	**Sb**	**18 21 58.5**	**-1.8**
FUSS	**Fushou**	**0.70**	**260**	P	**Pb**	**18 21 51.9**	**-0.3**
FUSS				S	**Sb**	**18 22 01.5**	**0.0**
SHUL	**Shoufeng**	**0.70**	**215**	*eP*	**Pb**	**18 21 51.7**	**-0.4**
SHUL				*eS*	**Sn**	**18 22 03.8**	**+0.6**
WHF	**Hehuan Shan**	**0.70**	**252**	*i* P	**Pb**	**18 21 51.8**	**-0.6**
WHF				S	**Sb**	**18 22 02.1**	**+0.3**
TWA	**Mucha**	**0.72**	**329**	P	**Pb**	**18 21 51.9**	**-0.5**
TWA				*eS*	**Sb**	**18 22 02.2**	**+0.3**
NWF	**Wu-fen Shan**	**0.73**	**345**	*i* P	**Pb**	**18 21 52.4**	**-0.3**
NWF				S	**Sb**	**18 22 02.7**	**+0.4**
WFSB	**Wu-fen Shan**	**0.73**	**345**	*i* P	**Pb**	**18 21 52.3**	**-0.4**
WFSB				*eS*	**Sb**	**18 22 02.6**	**+0.4**
NHDH	**Xindian Distri**	**0.73**	**324**	*eP*	**Pb**	**18 21 52.2**	**-0.5**
SXI1	**Grass Mountain**	**0.73**	**351**	P	**Pb**	**18 21 52.4**	**-0.4**
SXI1				*eS*	**Sb**	**18 22 03.5**	**+1.0**
ESL	**Shilin**	**0.75**	**223**	*eP*	**Pb**	**18 21 52.1**	**-0.9**
TWT	**Tachien**	**0.76**	**262**	*eP*	**Pb**	**18 21 53.2**	**0.0**
TWT				*eS*	**Sb**	**18 22 03.7**	**+0.5**
TATO	**Taipei**	**0.76**	**323**	P	**Pb**	**18 21 53.0**	**-0.2**
TATO	**Taipei**	**0.76**	**323**	*i* P	**Pb**	**18 21 52.5**	**-0.7**
TATO				*i* S	**Sb**	**18 22 03.2**	**0.0**
TDCB	**Techi**	**0.77**	**262**	*eP*	**Pb**	**18 21 53.1**	**-0.4**
TDCB				*eS*	**Sb**	**18 22 03.3**	**-0.2**
NHY	**Taipei**	**0.77**	**330**	P	**Pb**	**18 21 53.3**	**-0.1**
NHY				*eS*	**Sb**	**18 22 03.3**	**-0.2**
TEGC	**Jichi Village**	**0.78**	**213**	*eP*	**Pn**	**18 21 54.0**	**-0.2**
TEGC				*eS*	**Sn**	**18 22 05.8**	**+0.7**
TAP	**Taipei**	**0.81**	**327**	P	**Pb**	**18 21 54.2**	**+0.3**
TAP				S	**Sb**	**18 22 04.9**	**+0.5**
BACT	**New Taipei Cit**	**0.81**	**321**	*eP*	**Pn**	**18 21 55.0**	**+0.4**
BACT				*eS*	**Sb**	**18 22 05.8**	**+1.4**
TNOU	**National Taiwa**	**0.81**	**346**	*eP*	**Pb**	**18 21 53.6**	**-0.4**
TNOU				*eS*	**Sb**	**18 22 03.8**	**-0.7**
NFF	**Wufeng Townshi**	**0.84**	**288**	*i* P	**Pb**	**18 21 54.3**	**-0.3**
NFF				*eS*	**Sb**	**18 22 04.9**	**-0.6**
KSHI	**Guanxi Townshi**	**0.85**	**299**	*eP*	**Pb**	**18 21 55.1**	**+0.4**
KSHI				*eS*	**Sn**	**18 22 08.3**	**+1.3**
WARBT	**Fenglin Townsh**	**0.85**	**221**	*i* P	**Pb**	**18 21 53.5**	**-1.3**
WARBT				*eS*	**Sb**	**18 22 05.6**	**-0.2**
OWD	**Renai**	**0.85**	**241**	*i* P	**Pb**	**18 21 53.8**	**-1.0**
OWD				*i* S	**Sb**	**18 22 05.8**	**-0.1**
YM01	**YM01**	**0.87**	**334**	*i* P	**Pb**	**18 21 54.9**	**-0.1**
YM01				*eS*	**Sb**	**18 22 06.1**	**-0.1**
JYNG	**Yonagunijimaku**	**0.87**	**84**	*eP*	**Pb**	**18 21 54.8**	**-0.2**
JYNG				*eS*	**Sb**	**18 22 06.6**	**+0.4**
WUSB	**Renai**	**0.88**	**245**	*i* P	**Pb**	**18 21 54.8**	**-0.6**
WUSB				S	**Sb**	**18 22 06.9**	**+0.1**
ZUZH	**Zhuzihu**	**0.89**	**333**	*eP*	**Pb**	**18 21 55.2**	**-0.3**
ZUZH				*eS*	**Sb**	**18 22 06.9**	**-0.1**
NTY	**Taoyuan**	**0.90**	**315**	*eP*	**Pb**	**18 21 55.8**	**+0.3**
NTY				*eS*	**Sb**	**18 22 06.8**	**-0.2**
YM08	**YM08**	**0.90**	**336**	*eP*	**Pb**	**18 21 55.1**	**-0.5**
TWS1	**Kuangyinshan**	**0.90**	**324**	*eP*	**Pb**	**18 21 55.7**	**+0.2**
TWS1				*eS*	**Sb**	**18 22 07.9**	**+0.8**
NJD	**Zhudong**	**0.91**	**294**	*eP*	**Pb**	**18 21 56.0**	**+0.4**
NJD				*eS*	**Sb**	**18 22 07.1**	**-0.2**
ANP	**Anpu**	**0.92**	**332**	*eP*	**Pb**	**18 21 55.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.93**	**84**	P	**Pb**	**18 21 55.7**	**-0.4**
YOJ	**Yonaguni jima**	**0.93**	**84**	S	**Sn**	**18 22 08.7**	**-0.3**
YOJ	**Yonaguni jima**	**0.93**	**84**	*eP*	**Pb**	**18 21 55.8**	**-0.4**
YOJ				*eS*	**Sb**	**18 22 08.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.93**	**84**	P	**Pb**	**18 21 55.6**	**-0.4**
LIOB	**Emei**	**0.94**	**288**	P	**Pb**	**18 21 56.2**	**+0.1**
LIOB				*eS*	**Sb**	**18 22 08.9**	**+0.8**
NTST	**Danshui**	**0.94**	**328**	P	**Pb**	**18 21 56.4**	**+0.2**
NTST				*eS*	**Sb**	**18 22 08.8**	**+0.6**
NSTT	**Nanjuang**	**0.94**	**286**	*eP*	**Pb**	**18 21 56.2**	**0.0**
NSTT				*eS*	**Sb**	**18 22 08.4**	**0.0**
NCUH	**Zhongli**	**0.95**	**309**	*eP*	**Pb**	**18 21 56.5**	**+0.1**
NCUH				*eS*	**Sn**	**18 22 10.4**	**+0.9**
WHP	**Taichung City**	**0.96**	**265**	*i* P	**Pb**	**18 21 56.4**	**-0.2**
WHP				S	**Sb**	**18 22 08.9**	**-0.1**
TWY	**Chenhua**	**0.97**	**338**	P	**Pb**	**18 21 56.8**	**0.0**
TWY				*eS*	**Sb**	**18 22 08.9**	**-0.3**
HSN1	**Hsinchu**	**0.98**	**295**	*eP*	**Pb**	**18 21 56.9**	**0.0**
HSN1				*eS*	**Sb**	**18 22 09.2**	**-0.2**
VWDT	**VWDT**	**0.99**	**232**	P	**Pb**	**18 21 56.6**	**-0.4**
VWDT				*eS*	**Sn**	**18 22 10.2**	**-0.2**
SBCB	**Hsinchu**	**1.01**	**295**	*eP*	**Pb**	**18 21 57.4**	**-0.1**
SBCB				*eS*	**Sn**	**18 22 12.3**	**+1.2**
HGSD	**Ruisui**	**1.01**	**211**	*eP*	**Pb**	**18 21 56.1**	**-1.4**
HSN	**Hsinchu**	**1.03**	**295**	*eP*	**Pb**	**18 21 57.2**	**-0.5**
HSN				*eS*	**Sb**	**18 22 10.9**	**+0.1**
DPDB	**Guoxing**	**1.03**	**251**	*eP*	**Pb**	**18 21 57.5**	**-0.3**
WCS	**Beigang Elemen**	**1.04**	**253**	*eP*	**Pb**	**18 21 57.5**	**-0.3**
EHY	**Hungye**	**1.05**	**216**	*eP*	**Pb**	**18 21 56.1**	**-2.1**
NJN	**Zhunan**	**1.07**	**287**	*eP*	**Pn**	**18 21 57.6**	**-0.7**
NJN				*eS*	**Sn**	**18 22 15.5**	**+3.0**
NHW	**Xinwu Township**	**1.07**	**307**	*eP*	**Pn**	**18 21 54.4**	**-3.9**
NHW				*eS*	**Sn**	**18 22 14.4**	**+1.9**
SMLT	**Sun Moon Lake**	**1.11**	**245**	*eP*	**Pn**	**18 21 58.4**	**-0.5**
SMLT				*eS*	**Sn**	**18 22 14.0**	**+0.4**
NMLH	**Miaoli**	**1.11**	**279**	*eP*	**Pn**	**18 21 58.8**	**0.0**
NMLH				*eS*	**Sn**	**18 22 14.9**	**+1.4**
SSLB	**Suanglung**	**1.11**	**239**	P	**Pn**	**18 21 57.8**	**-1.1**
SSLB	**Suanglung**	**1.11**	**239**	S	**Sb**	**18 22 12.9**	**-0.4**
SSLB	**Suanglung**	**1.11**	**239**	*i* P	**Pn**	**18 21 58.1**	**-0.7**
SSLB				*eS*	**Sb**	**18 22 13.2**	**-0.1**
TWQ1	**Liyutan**	**1.11**	**269**	*eP*	**Pb**	**18 21 59.5**	**+0.3**
NSY	**Sanyi**	**1.13**	**273**	*eP*	**Pb**	**18 22 00.3**	**+0.9**
NSY				*eS*	**Sn**	**18 22 16.0**	**+2.2**
TYC	**Yuchr**	**1.14**	**246**	*eP*	**Pn**	**18 21 58.9**	**-0.3**
TYC				*eS*	**Sn**	**18 22 15.6**	**+1.2**
YULB	**Yu-li**	**1.16**	**214**	P	**Pn**	**18 21 57.4**	**-2.1**
YULB	**Yu-li**	**1.16**	**214**	*eP*	**Pn**	**18 21 57.5**	**-2.1**
YULB				*eS*	**Sn**	**18 22 15.1**	**+0.4**
TWF1	**Yuli**	**1.20**	**212**	*eP*	**Pn**	**18 21 57.8**	**-2.2**
TCU	**Taichung**	**1.22**	**260**	*eP*	**Pn**	**18 22 00.3**	**0.0**
TCU				*eS*	**Sn**	**18 22 18.0**	**+1.8**
WWF	**Wufeng**	**1.23**	**255**	*eP*	**Pb**	**18 22 01.2**	**+0.1**
WWF				*eS*	**Sn**	**18 22 19.7**	**+3.4**
WDJ	**Dajia District**	**1.24**	**269**	*eP*	**Pb**	**18 22 01.3**	**0.0**
WDJ				*eS*	**Sn**	**18 22 18.6**	**+2.1**
WHYT	**Xinyi Township**	**1.24**	**238**	P	**Pn**	**18 22 00.6**	**-0.1**
WHYT				*eS*	**Sn**	**18 22 18.0**	**+1.4**
PCYT	**Pengchaiyu**	**1.26**	**3**	*eP*	**Pn**	**18 22 00.0**	**-0.9**
WJS	**Zhushan**	**1.28**	**245**	*eP*	**Pb**	**18 22 02.2**	**+0.2**
WJS				*eS*	**Sb**	**18 22 21.2**	**+3.2**
WNT1	**Nantou City**	**1.29**	**249**	*eP*	**Pb**	**18 22 02.5**	**+0.3**
WNT1				*eS*	**Sb**	**18 22 21.2**	**+3.0**
CHKH	**Chenggong**	**1.29**	**205**	*eP*	**Pn**	**18 22 01.4**	**+0.2**
CHKH				*eS*	**Sb**	**18 22 18.4**	**+1.1**
WNT	**Mingjian**	**1.29**	**248**	P	**Pb**	**18 22 02.5**	**+0.2**
WNT				*eS*	**Sb**	**18 22 21.1**	**+2.7**
YUS	**Yu-Shan**	**1.29**	**228**	P	**Pn**	**18 22 01.4**	**-0.4**
YUS				*eS*	**Sn**	**18 22 19.0**	**+0.4**
FULB	**Fuli**	**1.33**	**209**	*eP*	**Pn**	**18 22 00.6**	**-1.3**
FULB				*eS*	**Sb**	**18 22 19.3**	**-0.2**
WCHH	**Zhanghua**	**1.34**	**258**	*eP*	**Pn**	**18 22 02.3**	**+0.3**
WCHH				*eS*	**Sb**	**18 22 21.2**	**+1.4**
WCH1	**Changhua City**	**1.35**	**258**	*eP*	**Pb**	**18 22 03.7**	**+0.4**
WCH1				*eS*	**Sb**	**18 22 22.5**	**+2.3**
ALS	**Alishan**	**1.38**	**232**	*i* P	**Pn**	**18 22 03.0**	**+0.2**
ALS				S	**Sb**	**18 22 22.3**	**+1.0**
EHD	**Haiduan**	**1.41**	**211**	*eP*	**Pn**	**18 22 02.9**	**-0.1**
EHD				*eS*	**Sb**	**18 22 21.2**	**-0.6**
CHN5	**Tsauling**	**1.43**	**238**	*eP*	**Pb**	**18 22 04.3**	**-0.3**
CHN5				*eS*	**Sb**	**18 22 23.9**	**+1.5**
ELDTW	**Lidau**	**1.48**	**218**	*eP*	**Pn**	**18 22 02.9**	**-1.0**
ELDTW				*eS*	**Sn**	**18 22 21.6**	**-1.0**
WGK	**Gukeng**	**1.48**	**243**	*eP*	**Pb**	**18 22 05.3**	**0.0**
WGK				*eS*	**Sb**	**18 22 25.4**	**+1.8**
WDL	**Douliou City**	**1.48**	**244**	*eS*	**Sb**	**18 22 25.5**	**+1.7**
WDLH	**Douliu**	**1.49**	**243**	*i* P	**Pb**	**18 22 05.6**	**-0.1**
WDLH				S	**Sb**	**18 22 25.6**	**+1.4**
EDH	**Donghe**	**1.52**	**205**	*eP*	**Pn**	**18 22 02.5**	**-2.0**
EDH				*eS*	**Sn**	**18 22 22.4**	**-1.3**
RLNB	**Erlin**	**1.57**	**253**	P	**Pn**	**18 22 05.7**	**+0.6**
RLNB				*eS*	**Sb**	**18 22 26.9**	**+0.6**
WCKO	**Fanlu**	**1.57**	**234**	P	**Pb**	**18 22 06.6**	**-0.4**
WCKO				*eS*	**Sb**	**18 22 27.0**	**+0.5**
IRIF	**Iriomote-Funau**	**1.58**	**91**	*eP*	**Pn**	**18 22 04.9**	**-0.4**
IRIF				*eS*	**Sn**	**18 22 24.7**	**-0.3**
WTK	**Tuku**	**1.62**	**246**	*eP**	**Pb**	**18 22 07.2**	**-0.6**
WTK				*eS*	**Sb**	**18 22 28.7**	**+0.9**
CHN2	**Minshiung**	**1.62**	**239**	*eS*	**Sn**	**18 22 30.5**	**+2.7**
STYH	**Taoyuan**	**1.63**	**223**	*eP*	**Pb**	**18 22 06.2**	**+0.2**
CHN4	**Tsaushan**	**1.63**	**232**	P	**Pb**	**18 22 07.3**	**-0.7**
CHN4				*eS*	**Sb**	**18 22 30.0**	**+1.7**
TPUB	**Ta-pu**	**1.64**	**230**	P	**Pn**	**18 22 06.3**	**+0.2**
TPUB	**Ta-pu**	**1.64**	**230**	P	**Pb**	**18 22 07.0**	**-1.1**
TPUB				S	**Sb**	**18 22 29.0**	**+0.6**
WTCT	**Ta-ch'eng**	**1.64**	**253**	*eS*	**Sb**	**18 22 29.3**	**+0.7**
STYT	**Tauyuan**	**1.65**	**224**	P	**Pn**	**18 22 06.5**	**+0.2**
STYT				*eS*	**Sb**	**18 22 29.2**	**+0.5**
LONT	**Longtian**	**1.66**	**209**	*eP*	**Pn**	**18 22 05.6**	**-0.7**
CHY	**Chiayi**	**1.68**	**239**	*eP*	**Pb**	**18 22 08.5**	**-0.3**
CHY				*eS*	**Sb**	**18 22 30.6**	**+1.1**
LDUT	**Ludao**	**1.75**	**196**	*eP*	**Pn**	**18 22 05.1**	**-2.5**
TWGBT	**Beinan**	**1.75**	**209**	P	**Pn**	**18 22 06.5**	**-1.2**
TWGBT	**Beinan**	**1.75**	**209**	*eP*	**Pn**	**18 22 06.6**	**-1.1**
TWGBT				*eS*	**Sn**	**18 22 29.6**	**+0.2**
TWG	**Pinlang**	**1.76**	**209**	*eP*	**Pn**	**18 22 06.7**	**-1.0**
TWG				*eS*	**Sn**	**18 22 29.5**	**+0.1**
TWK	**Hsinying**	**1.76**	**232**	*eP*	**Pn**	**18 22 08.9**	**+1.1**
TWK				*eS*	**Sb**	**18 22 32.6**	**+0.7**
WSF	**Szhu**	**1.78**	**246**	*eP*	**Pn**	**18 22 08.5**	**+0.6**
WSF				*eS*	**Sb**	**18 22 32.9**	**+0.6**
SNST	**Tainan City**	**1.79**	**231**	*eP*	**Pn**	**18 22 09.2**	**+1.1**
SNST				*i* S	**Sb**	**18 22 33.5**	**+0.9**
CHN1	**Nanshi**	**1.79**	**229**	P	**Pn**	**18 22 09.1**	**+1.0**
CHN1				S	**Sb**	**18 22 33.3**	**+0.7**
SGST	**Jiashian**	**1.82**	**226**	*eP*	**Pn**	**18 22 08.5**	**-0.1**
SGST				*eS*	**Sb**	**18 22 33.8**	**+0.2**
WSL	**Shuilin Townsh**	**1.82**	**243**	*eP*	**Pb**	**18 22 09.9**	**-1.3**
WSL				*eS*	**Sb**	**18 22 34.6**	**+1.0**
JKRS	**Kuro-shima**	**1.84**	**94**	*eP*	**Pn**	**18 22 09.1**	**+0.3**
JKRS				*eS*	**Sn**	**18 22 32.0**	**+0.6**
CHN8	**Yiju**	**1.92**	**238**	*eS*	**Sb**	**18 22 37.0**	**+0.4**
JIJ	**Ishigaki jima**	**1.96**	**90**	*eP*	**Pn**	**18 22 10.3**	**-0.2**
JIJ				*eS*	**Sn**	**18 22 33.3**	**-1.0**
SSHA	**Shanhua**	**1.99**	**232**	*eS*	**Sb**	**18 22 38.5**	**+0.1**
ECL	**Taimali**	**2.00**	**209**	*eP*	**Pn**	**18 22 11.0**	**-0.1**
SCST	**Cishan**	**2.02**	**223**	*eP*	**Pb**	**18 22 13.2**	**-1.4**
SCST				*eS*	**Sb**	**18 22 40.3**	**+1.0**
SCLT	**Jiali**	**2.03**	**235**	*eS*	**Sb**	**18 22 39.8**	**+0.1**
SSD	**Sandimen**	**2.04**	**218**	*eP*	**Pb**	**18 22 13.3**	**-1.7**
SSD				*eS*	**Sb**	**18 22 39.6**	**-0.3**
TSMG	**Majia**	**2.07**	**217**	*eP*	**Pn**	**18 22 13.3**	**+1.4**
TSMG				*eS*	**Sb**	**18 22 40.3**	**-0.3**
TWM1	**Shoushan**	**2.11**	**224**	*eP*	**Pb**	**18 22 15.5**	**-0.6**
TWM1				*eS*	**Sb**	**18 22 42.9**	**+1.0**
JISG	**Ishigakijimahi**	**2.12**	**84**	*eP*	**Pn**	**18 22 12.5**	**-0.2**
JISG				*eS*	**Sn**	**18 22 37.8**	**-0.6**
TSCK	**Chigu Township**	**2.13**	**236**	*eP*	**Pn**	**18 22 14.1**	**+1.3**
TSCK				*eS*	**Sb**	**18 22 42.1**	**-0.4**
MASBT	**Mashibuluo**	**2.15**	**216**	*eP*	**Pn**	**18 22 14.7**	**+1.6**
MASBT				*eS*	**Sb**	**18 22 42.3**	**-0.7**
EAST	**Anshuo**	**2.24**	**208**	*eP*	**Pn**	**18 22 15.2**	**-1.2**
SCZT	**Fangliau**	**2.35**	**213**	P	**Pn**	**18 22 17.5**	**+1.6**
SCZT				*i* S	**Sb**	**18 22 47.2**	**-1.8**
PNG	**Penghu**	**2.37**	**251**	*eP*	**Pn**	**18 22 15.4**	**-0.7**
PNG				*eS*	**Sn**	**18 22 44.6**	**+0.1**
PHUB	**P'eng-hu**	**2.37**	**250**	*eP*	**Pn**	**18 22 15.2**	**-1.0**
PHUB				*eS*	**Sn**	**18 22 44.1**	**-0.5**
WDGT	**Dungji**	**2.41**	**243**	*eP*	**Pn**	**18 22 16.6**	**0.0**
WDGT				*eS*	**Sn**	**18 22 46.8**	**+1.4**
JTJ	**Tarama**	**2.48**	**83**	*eP*	**Pn**	**18 22 18.1**	**+0.4**
JTJ				*eS*	**Sn**	**18 22 47.9**	**+0.6**

*THE

0.5nm,0.5s,baz=45,slow=5.7,SNR=1.3
0.5nm,0.5s
FINES FINESS Array B 144.47 339 PKP PKPab 18 49 41.5 -1.6
5.7nm,1.1s,baz=65,slow=3.7,SNR=6.4

PRE ***02*** *18:40:33.2±1.1,26˚.25S×27˚.63E, h2km, ML2.2*
BGSI ***02*** *18:40:33.9±2.2,26˚.33S×27˚.77E, h0km±46km, ML2.6*

ISC 02 18:40:33.3±1.2,26˚.25S±0˚.03×27˚.62E±0˚.04,h6km±9km, n29,σ1§52/57,South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
HRAO	**HartRAO**	**0.37**	**10**	*eP*		**Pg**	**18 40 39.6**	**-0.8**
HRAO				*eS*		**Sg**	**18 40 45.2**	**-0.1**
HRAO				IAML			18 40 49.0	
	comp=Z,212nm,1.0s							
PRYS	**Parys**	**0.71**	**199**	*eP*		**Pg**	**18 40 47.0**	**+0.1**
PRYS				*eS*		**Sg**	**18 40 56.9**	**+0.7**
PRYS				IAML			18 41 05.3	
	comp=Z,50nm,1.1s							
SNKL	**Senekal, Frees**	**2.02**	**176**	*eP*		**Pb**	**18 41 09.8**	**-0.7**
SNKL				*eS*		**Sb**	**18 41 35.8**	**-0.2**
SNKL				IAML			18 41 39.6	
	comp=Z,52nm,0.3s							
LBTB	**Lobatse**	**2.20**	**304**	*eP*		**Pb**	**18 41 12.6**	**-1.0**
LBTB				*eS*		**Sn**	**18 41 40.2**	**+2.1**
LBTB				IAML			18 41 45.1	
	comp=Z,58nm,0.3s							
SWZ	**Schweizer**	**2.25**	**245**	*eP*		**Pn**	**18 41 13.2**	**+2.1**
SWZ				*eS*		**Sn**	**18 41 40.9**	**+1.7**
SWZ				IAML			18 41 46.5	
	comp=Z,34nm,0.2s							
LEPH	**Lephalale, Lim**	**2.39**	**4**	*eP*		**Pn**	**18 41 14.0**	**+0.9**
LEPH				*eS*		**Sn**	**18 41 44.3**	**+1.6**
LEPH				IAML			18 41 47.8	
	comp=Z,17nm,0.2s							
NWCL	**Newcastle**	**2.51**	**127**	*eP*		**Pn**	**18 41 15.2**	**+0.5**
NWCL				*eS*		**Sn**	**18 41 46.8**	**+1.1**
NWCL				IAML			18 41 50.0	
	comp=Z,17nm,0.3s							
MAKGR	**Makgori**	**2.57**	**279**	*i P*		**Pn**	**18 41 17.3**	**+1.7**
MAKGR				*i S*		**Sn**	**18 41 49.5**	**+2.2**
MAKGR				IAML			18 42 04.9	
	comp=N,149nm,0.4s							
PILG	**Pilgrimsrest,**	**3.08**	**65**	*eP*		**Pn**	**18 41 23.8**	**+1.0**
PILG				*eS*		**Sn**	**18 42 01.4**	**+1.4**
PILG				IAML			18 42 14.8	
	comp=Z,10nm,0.2s							
BOSA	**Boshof**	**3.15**	**221**	*eP*		**Pn**	**18 41 24.7**	**+1.1**
BOSA				*eS*		**Sn**	**18 42 03.3**	**+1.7**
BOSA				IAML			18 42 18.8	
	comp=Z,10nm,0.3s							
LPHEP	**Lephephe**	**3.29**	**331**	*i P*		**Pn**	**18 41 27.4**	**+1.9**
LPHEP				*i S*		**Sn**	**18 42 05.0**	**0.0**
LPHEP				IAML			18 42 21.5	
	comp=E,13nm,0.5s							
MREMI	**Moremi**	**3.67**	**358**	*i P*		**Pn**	**18 41 29.9**	**-0.7**
MREMI				*i S*		**Sn**	**18 42 15.7**	**+1.3**
MREMI				IAML			18 42 31.5	
	comp=E,51nm,0.4s							
SKOMA	**Sekoma**	**3.76**	**297**	*i P*		**Pn**	**18 41 33.4**	**+1.6**
SKOMA				IAML			18 42 38.0	
	comp=N,29nm,0.2s							
POGA	**Pongola**	**3.81**	**107**	*eP*		**Pn**	**18 41 34.5**	**+1.9**
POGA				*eS*		**Sn**	**18 42 17.2**	**-0.5**
POGA				IAML			18 42 32.3	
	comp=Z,14nm,0.5s							
KDWAN	**Kaudwane**	**3.92**	**316**	*i P*		**Pn**	**18 41 36.1**	**+1.9**
KDWAN				*i S*		**Sn**	**18 42 21.8**	**+1.2**
KDWAN				IAML			18 42 39.5	
	comp=E,33nm,0.3s							
PMBG	**Pietermaritzbu**	**4.13**	**142**	*eP*		**Pn**	**18 41 37.4**	**+0.4**
PMBG				*eS*		**Sn**	**18 42 26.1**	**+0.5**
PMBG				IAML			18 42 40.1	
	comp=Z,7.7nm,0.5s							
MOPA	**Mopani**	**4.38**	**52**	*eP*		**Pn**	**18 41 40.9**	**+0.5**
MOPA				*eS*		**Sn**	**18 42 31.9**	**+0.2**
MOPA				IAML			18 42 48.0	
	comp=Z,16nm,0.3s							
MUSN	**Musina, Limpop**	**4.45**	**28**	*eP*		**Pn**	**18 41 41.8**	**+0.5**
MUSN				*eS*		**Sn**	**18 42 33.2**	**-0.2**
MUSN				IAML			18 42 51.0	
	comp=Z,6.6nm,0.5s							
KSTD	**Kokstad**	**4.60**	**161**	*eP*		**Pn**	**18 41 44.5**	**+1.1**
KSTD				*eS*		**Sn**	**18 42 37.6**	**+0.3**
KSTD				IAML			18 42 59.5	
	comp=Z,3.2nm,0.4s							
BROLN	**Tlhalogang**	**5.14**	**357**	*i P*		**Pn**	**18 41 50.8**	**-0.1**
BROLN				*i S*		**Sn**	**18 42 48.2**	**-2.3**
BROLN				IAML			18 43 13.6	
	comp=E,6.7nm,1.1s							
KGCAE	**Kacgae**	**5.98**	**303**	*i P*		**Pn**	**18 42 03.6**	**+1.2**
KGCAE				*i S*		**Sn**	**18 43 08.6**	**-2.7**
KGCAE				IAML			18 43 46.7	
	comp=N,16nm,0.3s							
BFON	**Badsfontein, M**	**6.51**	**211**	*eP*		**Pn**	**18 42 10.8**	**+1.1**
BFON				*eS*		**Sn**	**18 43 22.2**	**-2.2**
BFON				IAML			18 44 22.5	
	comp=Z,2.5nm,1.0s							
GRAF	**Camdeboo Natio**	**6.60**	**204**	*eP*		**Pn**	**18 42 11.6**	**+0.7**
GRAF				*eS*		**Sn**	**18 43 25.1**	**-1.4**
GRAF				IAML			18 44 24.6	
	comp=Z,2.5nm,1.0s							
BRAK	**Brakfontein**	**6.89**	**216**	*eP*		**Pn**	**18 42 16.3**	**+1.5**
BRAK				*eS*		**Sn**	**18 43 31.6**	**-2.0**
BRAK				IAML			18 43 54.8	
	comp=Z,1.9nm,0.6s							
ROOI	**Rooidraai Farm**	**7.16**	**209**	*eP*		**Pn**	**18 42 19.7**	**+1.1**
ROOI				*eS*		**Sn**	**18 43 37.5**	**-2.8**
ROOI				IAML			18 43 55.4	
	comp=Z,1.6nm,0.6s							
ARMS	**Ukamas**	**7.24**	**254**	*eP*		**Pn**	**18 42 21.1**	**+1.4**
ARMS				*eS*		**Sn**	**18 43 39.6**	**-2.8**
GRAN	**Grantham**	**7.68**	**217**	*eP*		**Pn**	**18 42 26.6**	**+0.9**
GRAN				*eS*		**Sn**	**18 43 51.3**	**-1.8**
GRAN				IAML			18 44 40.6	
	comp=Z,3.6nm,0.5s							
FRAZ	**Fraserburg**	**7.84**	**222**	*eP*		**Pn**	**18 42 29.6**	**+1.5**
FRAZ				*eS*		**Sn**	**18 43 55.5**	**-1.6**
FRAZ				IAML			18 44 16.8	
	comp=Z,1.8nm,0.9s							
SUR	**Sutherland**	**8.52**	**223**	*eP*		**Pn**	**18 42 39.0**	**+1.6**
SUR				*eS*		**Sn**	**18 44 10.6**	**-3.3**
SUR				IAML			18 44 37.2	
	comp=Z,1.8nm,0.7s							

IDC 02 18:47:57.4±1.6,12˚.23N×121˚.60E,h0km,mb3.3/3, mbtmp3.4/3,Error ellipse: s-maj=60.1km s-min=20.0km az=62.0,Mindoro

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
TGY	**Tagaytay City**	**1.97**	**341**	Pn		Pn	18 48 32.3	+0.1
	38nm,0.3s,baz=203,slow=15,SNR=2.1							
TGY				Sn		Sn	18 48 58.2	+0.6
	49nm,0.3s,baz=107,slow=13,SNR=3.6							
CMAR	**Chiang Mai Arr**	**22.70**	**289**	P		P	18 53 00.9	0.0
	0.7nm,0.7s,baz=94,slow=8.4,SNR=9.1							
	0.7nm,0.7s							
WRA	**Warramunga Arr**	**34.34**	**158**	P		P	18 54 45.2	-0.9
	0.5nm,1.0s,baz=332,slow=11,SNR=2.5							
	0.5nm,1.0s							
ASAR	**Alice Springs**	**37.65**	**161**	P		P	18 55 14.9	+0.5
	0.2nm,0.4s,baz=339,slow=7.2,SNR=5.6							
	0.2nm,0.4s							

IDC ***02*** *19:05:07.5±1.2,36˚.42N×28˚.77E, h0km, mb3.6/5, mbtmp3.6/12, ML3.1/5,Error ellipse: s-maj=22.1km s-min=17.5km az=23.0*
ISK ***02*** *19:05:08.1,36˚.46N×28˚.68E, h5km, ML3.4/20*
AFAD ***02*** *19:05:08.6,36˚.41N×28˚.66E, h7km±5km, ML2.9*
ATH ***02*** *19:05:09.7,36˚.41N×28˚.73E, h8km±2km, ML3.3/13, Manual Solution by G.Panopoulou First location: 2019/11/02 19:06:35, This location: 2020/11/09 13:38:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
THE ***02*** *19:05:10.8,36˚N±5˚×2˚.9E±˚, h8km±16km, M3.2/8, MLh3.2/8*

ISC 02 19:05:08.2±1.1,36˚.41N±0˚.02×28˚.70E±0˚.02,h3km±8km, n85,σ1§73/118,mb3.3/5,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
FETY	**Fethiye**	**0.38**	**54**	P		Pg	19 05 07.2	-8.3
FETY				S		**Sg**	**19 05 14.4**	**-6.1**
FETY	**Fethiye**	**0.38**	**54**	P		Pg	19 05 06.9	-8.6
FETY				S		**Sg**	**19 05 12.5**	**-8.0**
RDI1	**Rhodes Town Ha**	**0.39**	**276**	P		**Pb**	**19 05 17.2**	**-0.4**
RDI1				S		**Sb**	**19 05 23.2**	**-0.9**
RODB	**Rodos**	**0.39**	**276**	P		**Pb**	**19 05 17.4**	**-0.3**
RODB				S		**Sb**	**19 05 23.3**	**-0.8**
DALY	**Dalyan (Mula)**	**0.41**	**355**	Pg		**Pg**	**19 05 16.0**	**0.0**
DALY				Sg		**Sg**	**19 05 22.5**	**+1.1**
IZZE	**Mula-Seydike**	**0.42**	**86**	P		**Pg**	**19 05 17.4**	**+1.1**
IZZE				S		**Sb**	**19 05 24.8**	**-0.3**
IZZE				*i* IAML			19 05 28.0	
	comp=N,4μm,0.5s							
IZZE				*i* IAML			19 05 33.0	
	comp=E,2μm,0.4s							
SABU	**Mula-Dalaman**	**0.47**	**27**	P		**Pg**	**19 05 17.4**	**+0.3**
SABU				S		**Sg**	**19 05 24.5**	**+1.3**
SABU				*i* IAML			19 05 32.0	
	comp=N,830nm,0.9s							
SABU				*i* IAML			19 05 33.0	
	comp=E,857nm,0.8s							
ARG	**Arkhangelos**	**0.50**	**248**	Pg		**Pb**	**19 05 19.1**	**-0.5**
ARG				Sg		**Sb**	**19 05 27.6**	**+0.2**
ARG	**Arkhangelos**	**0.50**	**248**	P		**Pb**	**19 05 19.1**	**-0.5**
ARG				S		**Sb**	**19 05 27.6**	**+0.2**
ARG	**Arkhangelos**	**0.50**	**248**	P		**Pb**	**19 05 19.2**	**-0.5**
ARG				S		**Sb**	**19 05 27.3**	**-0.1**
TURN	**Turunc**	**0.52**	**315**	P		**Pg**	**19 05 18.4**	**+0.2**
TURN				*i* IAML			19 05 26.0	
	comp=N,741nm,0.8s							
TURN				S		**Sb**	**19 05 26.6**	**-1.3**
TURN				*i* IAML			19 05 28.0	
	comp=E,562nm,0.2s							
TURN	**Turunc**	**0.52**	**315**	Pg		**Pg**	**19 05 18.3**	**+0.2**
TURN				Sg		**Sg**	**19 05 26.1**	**+1.2**
CAME	**Cameli-Denizli**	**0.72**	**42**	Pg		**Pg**	**19 05 22.1**	**+0.1**
RGE1	**Gennadi, Rhode**	**0.73**	**239**	P		**Pb**	**19 05 23.4**	**-0.1**
RGE1				S		**Sb**	**19 05 34.0**	**+0.1**
AKAS	**Kas**	**0.75**	**103**	P		**Pb**	**19 05 24.3**	**+0.4**
AKAS				S		**Sn**	**19 05 39.5**	**+1.8**
AKAS				*i* IAML			19 05 41.0	
	comp=E,1μm,0.5s							
AKAS				*i* IAML			19 05 44.0	
	comp=N,2μm,0.9s							
AKAS	**Kas**	**0.75**	**103**	Pg		**Pg**	**19 05 23.8**	**+1.2**
KSL	**Kastellorizon**	**0.76**	**110**	P		**Pb**	**19 05 24.5**	**+0.6**
KSL				S		**Sn**	**19 05 37.0**	**-0.7**
YER	**Yerkesik**	**0.80**	**335**	Pg		**Pb**	**19 05 25.1**	**+0.4**
YER	**Yerkesik**	**0.80**	**335**	P		**Pn**	**19 05 25.8**	**-0.6**
KNIK	**Mula-Seydike**	**0.82**	**58**	P		**Pg**	**19 05 24.5**	**+0.5**
KNIK				S		**Sb**	**19 05 37.9**	**+1.1**
KNIK				*i* IAML			19 05 38.0	
	comp=N,455nm,0.8s							
KNIK				*i* IAML			19 05 41.0	
	comp=E,395nm,0.5s							
CAEL	**Denizli, Camel**	**0.87**	**35**	P		**Pg**	**19 05 24.9**	**+0.1**
CAEL				S		**Sb**	**19 05 38.8**	**+0.8**
CAEL				*i* IAML			19 05 47.0	
	comp=E,908nm,1.0s							
CAEL				*i* IAML			19 05 54.0	
	comp=N,1μm,1.0s							
MULA	**Mugla, Merkez-**	**0.90**	**340**	P		**Pb**	**19 05 26.3**	**-0.2**
MULA				*i* IAML			19 05 43.0	
	comp=N,144nm,0.8s							
MULA				*i* IAML			19 05 44.0	
	comp=E,280nm,1.2s							
DNZT	**Denizli-Tavas-**	**0.91**	**17**	P		**Pg**	**19 05 25.8**	**+0.2**
DNZT				S		**Sn**	**19 05 40.7**	**-0.8**
DNZT				*i* IAML			19 05 47.0	
	comp=E,154nm,0.6s							
DNZT				*i* IAML			19 05 48.0	
	comp=N,129nm,0.5s							
DATC	**Datca-Mugla**	**0.91**	**293**	Pg		**Pb**	**19 05 26.2**	**-0.3**
DAT	**Datca**	**0.96**	**290**	Pg		**Pb**	**19 05 27.3**	**-0.2**
ELL	**Elmali**	**1.03**	**70**	Pg		**Pb**	**19 05 29.1**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.07**	**9**	P		**Pg**	**19 05 28.6**	**0.0**
TAVA				S		**Sn**	**19 05 46.5**	**+1.0**
TAVA				*i* IAML			19 05 48.0	
	comp=N,142nm,0.7s							
TAVA				*i* IAML			19 05 49.0	
	comp=E,222nm,0.5s							
GOLH	**Golhisar**	**1.08**	**40**	P		**Pg**	**19 05 28.6**	**-0.2**
GOLH				S		**Sn**	**19 05 45.9**	**+0.1**
GOLH				*i* IAML			19 05 54.0	
	comp=N,323nm,1.0s							
GOLH				*i* IAML			19 05 59.0	
	comp=E,264nm,0.8s							
MLSB	**Milas**	**1.15**	**320**	Pn		**Pg**	**19 05 30.0**	**-0.3**
APMY	**Acipayam-Deniz**	**1.16**	**24**	Pn		**Pb**	**19 05 31.1**	**+0.1**
DNIZ	**Denizli-Tavas-**	**1.24**	**12**	P		**Pb**	**19 05 31.8**	**-0.5**
DNIZ				S		**Sn**	**19 05 51.2**	**+1.3**
DNIZ				*i* IAML			19 05 52.0	
	comp=N,699nm,1.0s							
DNIZ				*i* IAML			19 05 56.0	
	comp=E,848nm,0.3s							
NISR	**Nisiros**	**1.28**	**280**	P		**Pg**	**19 05 33.6**	**+0.8**
NISR				S		**Sn**	**19 05 50.9**	**+0.2**
NISR	**Nisiros**	**1.28**	**280**	P		**Pg**	**19 05 33.6**	**+0.8**
BODT	**Bodrum**	**1.29**	**301**	P		**Pg**	**19 05 35.1**	**+2.1**
BODT				S		**Sn**	**19 05 52.8**	**+1.8**
AKUM	**Antalya-Kumluc**	**1.33**	**93**	P		**Pg**	**19 05 34.4**	**+0.8**
AKUM				S		**Sn**	**19 05 57.1**	**+5.4**
AKUM				*i* IAML			19 05 58.0	
	comp=N,208nm,0.4s							
AKUM				*i* IAML			19 06 09.0	
	comp=E,222nm,0.6s							
YKAV	**Yalikavak-Bodr**	**1.35**	**302**	Pn		**Pg**	**19 05 34.3**	**+0.3**
KORT	**Korkueli**	**1.45**	**66**	P		**Pg**	**19 05 37.4**	**+1.4**
KORT				S		**Sg**	**19 06 01.8**	**+7.0**
KORT				*i* IAML			19 06 04.0	
	comp=N,556nm,0.6s							
KORT				*i* IAML			19 06 04.0	
	comp=E,1μm,0.6s							
KORT	**Korkueli**	**1.45**	**66**	Pn		**Pg**	**19 05 37.0**	**+1.0**
INCE	**Denizli-Bozkur**	**1.47**	**28**	P		**Pg**	**19 05 37.4**	**+0.9**
INCE				S		**Sg**	**19 05 59.0**	**+3.5**
INCE				*i* IAML			19 06 02.0	
	comp=N,249nm,0.9s							
INCE				*i* IAML			19 06 03.0	
	comp=E,182nm,0.6s							
KARP	**Karpathos**	**1.52**	**236**	Pn		**Pg**	**19 05 37.8**	**+0.5**
KARP	**Karpathos**	**1.52**	**236**	P		**Pg**	**19 05 37.5**	**+0.2**
KARP	**Karpathos**	**1.52**	**236**	P		**Pg**	**19 05 37.5**	**+0.2**
KARP				S		**Sg**	**19 05 57.0**	**+0.1**
NAZL	**Nazilli-Aydin**	**1.59**	**348**	Pn		**Pb**	**19 05 38.1**	**0.0**
ANTB	**Antalya**	**1.64**	**72**	Pn		**Pb**	**19 05 39.5**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**337**	Pn		**Pb**	**19 05 38.9**	**-0.7**
GCAM	**G?zelcaml?**	**1.74**	**318**	Pn		**Pn**	**19 05 39.8**	**+0.5**
BASM	**Basmaki-Afyon**	**1.85**	**35**	Pn		**Pn**	**19 05 41.9**	**+1.0**
ODEM	**Odemis-Izmir**	**1.93**	**345**	Pn		**Pn**	**19 05 42.6**	**+0.7**
SMG	**Samos**	**1.98**	**312**	P		**Pn**	**19 05 42.5**	**0.0**
SMG	**Samos**	**1.98**	**312**	P		**Pn**	**19 05 42.7**	**+0.2**
ISP	**Isparta**	**2.03**	**45**	P		**Pb**	**19 05 44.9**	**-0.8**
KULA	**Kula-Manisa**	**2.10**	**359**	Pn		**Pn**	**19 05 45.2**	**+0.9**
KRL1	**Karlovasi Samo**	**2.11**	**312**	P		**Pn**	**19 05 45.5**	**+1.1**
ZKR	**Zakros**	**2.40**	**238**	P		**Pn**	**19 05 49.8**	**+1.4**
STIA	**Sitia Lasithi**	**2.44**	**241**	P		**Pn**	**19 05 50.4**	**+1.5**
APE	**Apeiranthos**	**2.63**	**285**	P		**Pn**	**19 05 52.3**	**+0.8**
APE	**Apeiranthos**	**2.63**	**285**	P		**Pn**	**19 05 52.3**	**+0.8**
SNT5	**Nea Kammeni, S**	**2.67**	**271**	P		**Pn**	**19 05 53.3**	**+1.3**
NPS	**Neapolis**	**2.76**	**246**	P		**Pn**	**19 05 54.7**	**+1.4**
NPS	**Neapolis**	**2.76**	**246**	P		**Pn**	**19 05 54.1**	**+0.8**
NPS				S		**Sn**	**19 06 28.8**	**+1.7**
CHOS	**Chios island**	**2.89**	**314**	P		**Pn**	**19 05 55.6**	**+0.5**
CHOS	**Chios island**	**2.89**	**314**	P		**Pn**	**19 05 55.7**	**+0.5**
CHOS				S		**Sn**	**19 06 32.5**	**+2.1**
AKMS	**Akamas**	**3.27**	**114**	P		**Pn**	**19 06 00.0**	**-0.3**
AKMS				S		**Sn**	**19 06 40.2**	**+0.6**
IDI	**Anoyia**	**3.29**	**251**	Pn		**Pn**	**19 06 01.7**	**+1.0**
	17nm,0.5s,baz=62,slow=16,SNR=44							
IDI				Sn		**Sn**	**19 06 40.3**	**-0.1**
	8.9nm,0.3s,baz=114,slow=3.9,SNR=13							
IDI	**Anoyia**	**3.29**	**251**	P		**Pn**	**19 06 02.0**	**+1.3**
ALFC	**Alefka**	**3.41**	**110**	P		**Pn**	**19 06 02.8**	**+0.6**
KARY	**Karystos**	**3.77**	**297**	P		**Pn**	**19 06 08.7**	**+1.5**
CSS	**Mathiatis**	**4.04**	**110**	P		**Pn**	**19 06 11.5**	**+0.7**
GVD	**Gavdhos**	**4.07**	**249**	P		**Pn**	**19 06 12.4**	**+1.1**
DION	**Dionisos Attik**	**4.15**	**295**	P		**Pn**	**19 06 13.8**	**+1.4**
MVOU	**Mavrovouni**	**4.25**	**108**	P		**Pn**	**19 06 15.0**	**+1.2**
LIA	**Limnos Island**	**4.45**	**323**	P		**Pn**	**19 06 17.8**	**+1.3**
VLI	**Veliai**	**4.65**	**276**	P		**Pn**	**19 06 20.6**	**+1.3**
SMTH	**Samothraki Isl**	**4.76**	**329**	P		**Pn**	**19 06 21.8**	**+1.0**
BRTR	**Keskin Array B**	**5.11**	**48**	Pn		**Pn**	**19 06 27.1**	**+1.3**
	0.3nm,0.3s,baz=220,slow=15,SNR=14							
BRTR				Sn		**Sn**	**19 07 26.6**	**+1.3**
	0.3nm,0.3s,baz=219,slow=23,SNR=4.2							
	2.7nm,0.7s							
MMAI	**Mount Meron Ar**	**6.47**	**120**	Pn		**Pn**	**19 06 42.8**	**-1.6**
	2.4nm,0.4s,baz=304,slow=12,SNR=22							
MMAI				Sn		**Sn**	**19 07 55.2**	**-3.7**
	2.4nm,0.3s,baz=296,slow=25,SNR=5.9							
ASF	**Jabal al Asfar**	**7.99**	**120**	Pn		**Pn**	**19 07 05.7**	**+0.4**
	0.1nm,0.3s,baz=315,slow=17,SNR=1.2							
ASF				Sn		**Sn**	**19 08 31.4**	**-4.8**
	0.2nm,0.3s,baz=248,slow=6.2,SNR=1.6							
	0.6nm,0.3s							
EIL	**Elat**	**8.52**	**140**	Pn		**Pn**	**19 07 12.2**	**-0.2**
	1.0nm,0.3s,baz=344,slow=12,SNR=6.6							
EIL				Sn		**Sn**	**19 08 44.3**	**-4.9**
	2.4nm,0.3s,baz=17,slow=8.5,SNR=10							
	2.7nm,0.4s							
MLR	**Muntele Rosu**	**9.31**	**348**	Pn		**Pn**	**19 07 24.7**	**+1.4**
	0.1nm,0.3s,baz=158,slow=16,SNR=4.3							
	2.6nm,0.7s							
GERES	**GERESS Array B**	**16.58**	**323**	Pn		**P**	**19 09 03.8**	**-0.5**
	baz=146,slow=14,SNR=4.2							
	1.0nm,0.9s							
FINES	**FINESS Array B**	**25.11**	**357**	P		**P**	**19 10 33.9**	**+0.1**
	2.5nm,0.7s,baz=148,slow=11,SNR=6.4							
	2.5nm,0.7s							
ESDC	**Sonseca Array**	**25.85**	**287**	P		**P**	**19 10 40.4**	**-0.6**
	0.6nm,0.8s,baz=95,slow=8.4,SNR=2.1							
	0.6nm,0.8s							
NOA	**NORSAR Array B**	**27.04**	**341**	P		**P**	**19 10 49.7**	**-1.7**
	0.5nm,0.7s,baz=139,slow=7.1,SNR=2.9							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**40.68**	**58**	P		**P**	**19 12 47.9**	**-1.9**
	0.3nm,0.6s,baz=273,slow=7.0,SNR=4.6							
	0.3nm,0.6s							
PDAR	**Pinedale Array**	**92.49**	**331**	P		**P**	**19 18 22.4**	**+1.5**
	0.2nm,0.7s,baz=35,slow=8.5,SNR=1.9							
	0.2nm,0.7s							

JMA ***02*** *19:06:25.1±0.1,24˚.3N±0˚.7×121˚.9E±0˚.6,h44km±2km, MV2.9/12,TAIWAN REGION*
TAP ***02*** *19:06:25.9,24˚.41N×121˚.91E,h25km,ML3.5,B*

ISC 02 19:06:25.7±0.9,24˚.39N±0˚.02×121˚.96E±0˚.02,h27km±3km, n132,σ1§26/191,2C-7D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
EWUT	**Wuta**	**0.17**	**290**	*i P*		**Pn**	**19 06 30.6**	**-1.9**
EWUT				*i S*		**Sn**	**19 06 34.0**	**-0.9**
ENA	**Nanau**	**0.20**	**282**	*i P*		**Pn**	**19 06 31.0**	**-2.0**
ENA				*i S*		**Sn**	**19 06 35.1**	**-0.4**
EAHA	**Aohua**	**0.20**	**254**	*i P*		**Pn**	**19 06 31.1**	**-1.9**
EAHA				S		**Sb**	**19 06 35.6**	**+0.1**
EHP	**Heping Village**	**0.21**	**249**	*eP*		**Pn**	**19 06 31.2**	**-1.9**
EHP				S		**Sb**	**19 06 36.0**	**+0.3**
ESAO	**Su ao**	**0.21**	**332**	*i P*		**Pn**	**19 06 31.1**	**-2.1**
ESAO				*i S*		**Sn**	**19 06 34.8**	**-1.0**
TWC	**Suao**	**0.24**	**336**	*i P*		**Pn**	**19 06 31.5**	**-2.0**
TWC				*i S*		**Sn**	**19 06 35.8**	**-0.6**
EOS2	**EOS2**	**0.25**	**83**	*i P*		**Pn**	**19 06 32.2**	**-1.4**
EOS2				*i S*		**Sn**	**19 06 37.7**	**-0.8**
NDS	**Dongshan**	**0.33**	**318**	*i P*		**Pb**	**19 06 33.0**	**-0.2**
NDS				S		**Sn**	**19 06 39.2**	**-1.5**
EOS3	**EOS3**	**0.34**	**107**	*i P*		**Pb**	**19 06 33.3**	**-0.1**
EOS3				*i S*		**Sn**	**19 06 39.5**	**-1.3**
ETL	**Fush Village**	**0.38**	**233**	P		**Pn**	**19 06 34.0**	**-1.4**
ETL				S		**Sb**	**19 06 41.7**	**+2.0**
NACB	**Ninganchiao**	**0.39**	**237**	P		**Pb**	**19 06 34.1**	**-0.1**
NACB	**Ninganchiao**	**0.39**	**237**	S		**Sb**	**19 06 41.7**	**+1.7**
NACB	**Ninganchiao**	**0.39**	**237**	*i P*		**Pb**	**19 06 34.0**	**-0.1**
NACB				S		**Sb**	**19 06 41.4**	**+1.4**
LATG	**Datong**	**0.42**	**291**	*i P*		**Pb**	**19 06 34.5**	**-0.2**
LATG				*i S*		**Sb**	**19 06 40.8**	**0.0**
ILA	**Ilan**	**0.42**	**333**	*i P*		**Pb**	**19 06 34.8**	**+0.1**
ILA				*i S*		**Sb**	**19 06 41.7**	**+0.9**
ENTT	**Nioudou**	**0.43**	**305**	*i P*		**Pb**	**19 06 34.9**	**0.0**
ENTT				*i S*		**Sn**	**19 06 42.0**	**-1.2**
TWD	**Chiawan**	**0.45**	**227**	*i P*		**Pb**	**19 06 34.9**	**-0.2**
TWD				*i S*		**Sn**	**19 06 43.4**	**-0.1**
EGS		**0.46**	**357**	*i P*		**Pb**	**19 06 35.2**	**-0.1**
EGS				*i S*		**Sb**	**19 06 42.3**	**+0.6**
ETLH	**Xiulin Townshi**	**0.47**	**248**	P		**Pn**	**19 06 35.3**	**-1.4**
ETLH		

ANP	Anpu	0.89	334	eP	Pb	19 06 43.1 +0.5
LIOB	Emei	0.89	287	*i* P	Pb	19 06 43.6 +1.1
NTST	Danshui	0.90	329	P	Pb	19 06 43.6 +1.0
NSTT	Nanjuang	0.90	286	eP	Pb	19 06 43.6 +1.0
JYNG	Yonagunijimaku	0.91	86	P	Pn	19 06 42.0 -0.7
JYNG				eS	Sn	19 06 54.3 -0.5
NCUH	Zhongli	0.91	310	eP	Pb	19 06 43.6 +0.8
WHP	Taichung City	0.93	263	eP	Pb	19 06 44.0 +0.9
YOJ	Yonaguni jima	0.96	85	P	Pn	19 06 42.9 -0.5
YOJ	Yonaguni jima	0.96	85	S	Sn	19 06 55.5 -0.8
YOJ	Yonaguni jima	0.96	85	P	Pn	19 06 43.0 -0.5
YOJ				S	Sn	19 06 55.5 -0.8
YOJ	Yonaguni jima	0.96	85	eP	Pn	19 06 43.1 -0.4
SBCB	Hsinchu	0.97	295	eP	Pb	19 06 44.9 +1.0
VWDT	VWDT	0.97	230	*i* P	Pb	19 06 43.5 -0.5
HSN	Hsinchu	0.99	295	eP	Pb	19 06 44.3 +0.2
HGSD	Ruisui	1.01	209	eP	Pb	19 06 44.9 +0.3
EHYH	Wanrong	1.05	212	eP	Pb	19 06 43.8 -0.9
EHY	Hungye	1.05	214	eP	Pn	19 06 43.5 -1.2
NMLH	Miaoli	1.07	278	eP	Pb	19 06 46.2 +0.6
TWQ1	Liyutan	1.08	268	eP	Pb	19 06 47.2 +1.5
SMLT	Sun Moon Lake	1.09	243	eP	Pb	19 06 45.8 -0.1
NSY	Sanyi	1.09	272	P	Pb	19 06 47.9 +2.1
SSLB	Suanglung	1.09	237	P	Pb	19 06 45.1 -0.8
SSLB	Suanglung	1.09	237	S	Sb	19 07 01.1 +1.3
SSLB	Suanglung	1.09	237	P	Pb	19 06 45.2 -0.7
TYC	Yuchr	1.11	245	eP	Pb	19 06 46.1 -0.1
YULB	Yu-li	1.16	211	P	Pn	19 06 45.0 -1.2
YULB	Yu-li	1.16	211	eP	Pn	19 06 44.9 -1.3
EYUL	Yuli	1.19	209	eP	Pb	19 06 47.2 -0.4
TCU	Taichung	1.19	259	eP	Pb	19 06 49.0 +1.5
TWF1	Yuli	1.19	210	eP	Pn	19 06 45.1 -1.6
WHYT	Xinyi Township	1.22	236	P	Pn	19 06 47.7 -0.4
PCYT	Pengchaiyu	1.24	5	eP	Pn	19 06 47.4 +0.1
WJS	Zhushan	1.25	244	eP	Pb	19 06 49.5 +0.9
WJS				S	Sb	19 07 08.4 +4.0
WNT	Mingjian	1.27	247	eP	Pb	19 06 49.3 +0.5
WNT				S	Sb	19 07 08.3 +3.5
YUS	Yu-Shan	1.28	226	eP	Pb	19 06 48.5 -0.9
CHKH	Chenggong	1.30	203	eP	Pb	19 06 48.7 -0.7
WCHH	Zhanghua	1.31	257	eP	Pb	19 06 50.6 +1.0
WCHH				eS	Sb	19 07 09.3 +3.2
FULB	Fuli	1.33	207	eP	Pb	19 06 49.1 -0.8
ALS	Alishan	1.37	231	eP	Pb	19 06 49.9 -0.8
CHN5	Tsauling	1.41	236	*i* P	Pb	19 06 51.4 +0.1
EHD	Haiduan	1.41	209	eP	Pn	19 06 49.3 -0.4
ECS	Chishang	1.45	208	eP	Pb	19 06 50.3 -1.7
WGK	Gukeng	1.45	242	eP	Pb	19 06 52.9 +0.9
WDL	Douliou City	1.46	243	eP	Pb	19 06 52.1 0.0
ELDTW	Lidau	1.47	216	eP	Pn	19 06 49.9 -0.6
WDLH	Douliu	1.47	242	eP	Pb	19 06 52.6 +0.3
WCKO	Fanlu	1.56	233	P	Pb	19 06 54.0 +0.2
WTK	Tuku	1.59	244	eP	Pb	19 06 54.4 -0.1
CHN2	Minshiung	1.60	238	eP	Pb	19 06 55.6 +1.1
IRIF	Iriomote-Funau	1.62	91	P	Pn	19 06 52.0 -0.4
IRIF				S	Sn	19 07 12.3 -0.2
STYH	Taoyuan	1.62	222	eP	Pb	19 06 53.4 -1.5
TPUB	Ta-pu	1.63	229	P	Pb	19 06 54.4 -0.6
TPUB	Ta-pu	1.63	229	eP	Pb	19 06 55.8 +0.8
CHY	Chiayi	1.66	238	eP	Pb	19 06 55.6 +0.1
LONT	Longtian	1.66	207	eP	Pn	19 06 52.4 -0.6
TWG	Pinlang	1.76	208	eP	Pn	19 06 53.9 -0.5
TWGBT	Beinan	1.76	207	eP	Pn	19 06 53.8 -0.6
SNST	Tainan City	1.77	229	eP	Pb	19 06 56.5 -1.0
CHN1	Nanshi	1.77	228	eP	Pb	19 06 56.6 -0.9
WSL	Shuilin Townsh	1.80	242	eP	Pb	19 06 57.2 -0.7
WSL				S	Sb	19 07 21.9 +1.9
JKRS	Kuro-shima	1.88	94	P	Pb	19 06 56.5 +0.4
JKRS				S	Sn	19 07 19.3 +0.4
CHN8	Yiju	1.90	237	eP	Pb	19 06 58.2 -1.5
JIJ	Ishigaki jima	2.00	90	eP	Pn	19 06 57.6 -0.1
JIJ				eS	Sn	19 07 21.0 -0.8
SCST	Cishan	2.01	222	P	Pb	19 07 00.3 -1.2
SSD	Sandimen	2.04	217	P	Pb	19 07 00.2 -1.7
TSMG	Majia	2.06	216	eP	Pb	19 06 59.9 -2.6
TWM1	Shoushan	2.10	222	eP	Pb	19 07 01.6 -1.4
TSCK	Chigu Township	2.11	235	P	Pb	19 07 01.1 -2.1
MASBT	Mashibuluo	2.14	215	eP	Pb	19 07 01.0 -2.8
JISG	Ishigakijimahi	2.15	84	eP	Pn	19 06 59.6 -0.2
JISG				eS	Sn	19 07 25.0 -0.7
EAST	Anshuo	2.24	207	eP	Pb	19 07 03.4 -2.0
PHUB	P'eng-hu	2.35	249	eP	Pn	19 07 03.3 +0.8
PHUB				S	Sb	19 07 31.9 -3.9
JIRB	Irabujima	2.96	81	eP	Pn	19 07 11.5 +0.6

*DSN **02** 19:08:45.1±1.2,27.˚50N×55.˚17E, h15km, ML2.5/5, Error ellipse: s-maj=34.2km s-min=8.0km az=49.0*
*TEH **02** 19:08:48.6, 27.˚21N×55.˚17E, h10km±990km*
ISC 02 19:08:49.6±1.2,**27.˚28N**±0.˚07×**55.˚18E**±0.˚05,**h20km, n10,** σ1ş**23**/12,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.81	299	Pg	Pn	19 09 05.0	-1.0
BNDS	Bandar-Abbas	0.89	82	Pg	Pn	19 09 06.0	-1.2
GENO	Geno	0.90	82	Pg	Pn	19 09 06.4	-0.8
IBND	Bandar-abas	1.23	82	Pg	Pb	19 09 13.0	+1.0
SHME	Shamm	1.50	144	P	Pn	19 09 13.8	-1.5
SHME				S	Sb	19 09 36.1	+0.8
BANOM	Banah	1.68	143	P	Pn	19 09 17.3	-0.6
BANOM				S	Sb	19 09 41.0	+0.4
LMD1	Lamerd	1.79	273	Pg	Pb	19 09 22.6	+0.9
MSFE	Esma-Masafi	2.10	155	P	Pn	19 09 22.2	-1.5
MDH	Madha	2.21	153	P	Pn	19 09 23.5	-1.7
ASHO	Ashiyiah	2.70	163	P	Pn	19 09 31.8	-0.1

*NEIC **02** 19:13:05.8±0.5, 19.˚37N±0.˚01×155.˚104W±0.˚008, h9km±1km, Error ellipse: s-maj=2.2km s-min=0.7km az=158.0*
HVO 02 19:13:05.7±0.8,**19.˚35N**±0.˚02×**155.˚105W**±0.˚009, **h6**km±2km,**ML2.3**/38,**ML2.5**/41(NEIC),**Error ellipse: s-maj=2.3km s-min=0.8km az=155.0,Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCUZ	Jacuzzi	0.03	5		Pg	19 13 07.5	+0.4
JCUZ					Sg	19 13 08.3	+0.2
STCH	Steam Cracks	0.04	331		Pg	19 13 07.6	+0.4
STCH					Sg	19 13 08.9	+0.7
NPOC	North of Pu'u	0.04	354		Pg	19 13 07.6	+0.4
NPOC					Sg	19 13 08.9	+0.7
KNHH	Kane Nui o Ham	0.07	295		Pg	19 13 08.0	+0.5
PUH	Pauahi	0.11	283		Pg	19 13 08.5	+0.4
PUH					Sg	19 13 10.5	+0.7
PUH				IAML		19 13 11.5	
	comp=N,2μm,0.7s						
JOKA	Jonika Flow	0.13	49		Pg	19 13 08.6	+0.1
JOKA					Sg	19 13 10.7	+0.5
BYL	Byron's Ledge	0.16	293		Pg	19 13 09.3	+0.3
BYL					Sg	19 13 12.0	+0.8
BYL				IAML		19 13 12.6	
	comp=E,1μm,0.3s						
KKO	Keanakako'i	0.16	287		Pg	19 13 09.4	+0.4
HATHI	Halema'uma'u T	0.16	296		Pg	19 13 09.4	+0.3
RIM	Rim	0.17	286		Pg	19 13 09.5	+0.3
SBLHI	Steaming Bluff	0.17	296		Pg	19 13 09.4	+0.2
UWB	Uwekahuna Bluf	0.18	294		Pg	19 13 09.6	+0.2
OBL	Observatory Le	0.18	292		Pg	19 13 09.7	+0.3
OBL					Sg	19 13 12.9	+1.0
SDHHI	Sand Hill	0.18	282		Pg	19 13 09.7	+0.3
SDHHI					Sg	19 13 12.9	+1.0
UWE	Uwekahuna	0.19	292		Pg	19 13 09.9	+0.3
UWE					Sg	19 13 12.1	-0.1
UWE				IAML		19 13 16.0	
	comp=E,806nm,0.3s						
UWE				IAML		19 13 16.0	
	comp=N,702nm,0.4s						
WRMHI	West Rim	0.19	287		Pg	19 13 09.8	+0.2
WRMHI					Sg	19 13 13.3	+1.0
RSD	Rainshed	0.20	304		Pg	19 13 10.1	+0.4
RSD					Sg	19 13 13.1	+0.7
RSD				IAML		19 13 15.6	
	comp=N,712nm,0.3s						
HLP	Hilina Pali	0.20	254		Pg	19 13 10.2	+0.5
HLP				IAML		19 13 15.7	
	comp=E,824nm,0.5s						
HLP				IAML		19 13 16.3	
	comp=N,1μm,0.4s						
MLH	Mauna Loa	0.30	298		Pg	19 13 11.9	+0.2
MLH					Sg	19 13 17.2	+1.4
MLH				IAML		19 13 17.9	
	comp=N,640nm,0.3s						
MLH				IAML		19 13 18.6	
	comp=E,434nm,0.2s						
AIN	Ainahou	0.33	274		Pg	19 13 12.5	+0.2
HMH	Humu'ula Sheep	0.44	305		Pg	19 13 14.3	+0.1
HMH					Sg	19 13 21.1	+1.1
MWH	Mokuaweoweo	0.48	286		Pg	19 13 15.1	-0.1
MWH					Sg	19 13 21.9	+0.3
MWH				IAML		19 13 23.4	
	comp=N,492nm,0.4s						
MWH				IAML		19 13 23.6	
	comp=E,581nm,1.1s						
KHU	Kahuku	0.49	258		Pg	19 13 14.9	-0.3
KHU					Sg	19 13 22.0	+0.2
ALEP	Alea Permanent	0.54	291		Pg	19 13 15.8	-0.4
ALEP					Sg	19 13 23.5	+0.1
POHA	Pohakuloa	0.57	315		Pg	19 13 16.2	-0.6
POHA					Sg	19 13 23.8	-0.5
POHA	Pohakuloa	0.57	315	IAML		19 13 25.1	
	comp=E,260nm,0.4s						
POHA				IAML		19 13 25.3	
	comp=E,283nm,0.4s						
HUH	Hualalai	0.77	296		Pg	19 13 20.2	-0.2

*NOU **02** 19:20:59.2, 39.˚84S×173.˚68E, h253km, MLv3.5/9, Off W. Coast of N. Island, N.Z.*
*WEL **02** 19:21:07.4±0.9, 40.˚5S±5.˚×17.˚4E±.˚, h191km±7km, M3.0/39, ML2.8/8, MLv3.0/39, Error ellipse: s-maj=8.1km s-min=6.0km az=121.9, confirmed*
ISC 02 19:21:03.0±1.7,**40.˚19S**±0.˚05×**173.˚57E**±0.˚05,**h223**km±9km, **n95**,σ1ş**44**/110,**Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.67	156	P	Pn	19 21 34.8	+1.5
DUWZ				S	S	19 21 55.7	-1.6
KHLK	Kaihoka Lakes	0.82	243	P	Pn	19 21 35.2	+1.2
KHLK				S	S	19 21 57.2	-1.1
TSFS	Takaka Scotts	0.87	221	P	Pn	19 21 35.5	+1.2
NBEZ	Newall Road No	0.95	14	P	Pn	19 21 36.4	+1.5
KHEZ	Kahui Hut	0.96	21	P	Pn	19 21 36.4	+1.3
PREZ	Palmer Road	0.96	28	P	Pn	19 21 36.3	+1.3
TKNZ	Takaka Hill	0.96	209	P	Pn	19 21 36.2	+1.3
TKNZ				S	S	19 21 58.0	-1.8
LREZ	Lake Rotokare	0.97	42	P	Pn	19 21 36.5	+1.5
LREZ				S	S	19 21 59.2	-0.7
NEZ	North Egmont	1.00	24	P	Pn	19 21 36.6	+1.3
QRZ	Quartz Range	1.02	231	P	Pn	19 21 36.4	+1.3
QRZ	Quartz Range	1.02	231	P	Pn	19 21 36.5	+1.3
QRZ				S	S	19 21 58.4	-2.0
NNZ	Nelson	1.04	188	P	Pn	19 21 36.7	+1.4
PKE	Pukeiti	1.05	18	P	Pn	19 21 36.9	+1.4
DREZ	Durham Road	1.11	26	P	Pn	19 21 37.2	+1.3
TCW	Tory Channel	1.15	152	P	Pn	19 21 37.9	+1.9
TCW				S	S	19 22 00.8	-1.1
WAZ	Wanganui	1.17	69	P	Pn	19 21 38.3	+2.1
WAZ				S	S	19 22 02.1	0.0
KIW	Kapiti Island	1.22	124	P	Pn	19 21 38.1	+1.6
KIW				S	S	19 22 00.7	-2.1
TUWZ	Tuamarina	1.27	167	P	Pn	19 21 39.1	+2.3
TUWZ				S	S	19 22 02.8	-0.6
FXBS	Foxton Beach S	1.29	103	P	Pn	19 21 39.1	+2.1
OHWZ	Ohakea	1.34	91	P	Pn	19 21 39.4	+2.0
MRNZ	Matariki Terra	1.36	207	P	Pn	19 21 38.9	+1.4
MRNZ				S	S	19 22 02.9	-1.7
OGWZ	Otaki Gorge	1.37	118	P	Pn	19 21 39.3	+1.6
OGWZ				S	S	19 22 03.1	-1.6
VRZ	Vera Road	1.41	41	P	Pn	19 21 38.8	+0.8
SNZO	South Karori	1.41	143	P	Pn	19 21 39.4	+1.5
WEL	Wellington	1.42	141	P	Pn	19 21 39.6	+1.6
WEL				S	S	19 22 03.9	-1.6
CAW	Cannon Point	1.46	129	P	Pn	19 21 39.9	+1.6
CAW				S	S	19 22 05.0	-1.0
BSWZ	Blackbirch Sta	1.54	171	P	Pn	19 21 40.8	+1.8
BHW	Baring Head	1.57	141	P	Pn	19 21 40.5	+1.3
PKVZ	Pokaka	1.64	57	P	Pn	19 21 41.0	+1.0
HOWZ	Holdsworth Sta	1.64	116	P	Pn	19 21 41.3	+1.4
HOWZ				S	S	19 22 07.0	-1.7
THZ	Tophouse	1.65	198	P	Pn	19 21 41.6	+1.6
MTVZ	Mangateitei	1.67	62	P	Pn	19 21 41.4	+1.2
MTW	Mount Morrison	1.76	124	P	Pn	19 21 42.3	+1.4
MSWZ	Moikau Station	1.77	134	P	Pn	19 21 42.3	+1.3
WNVZ	Wahianoa	1.79	62	P	Pn	19 21 42.7	+1.3
FWVZ	Far West T-bar	1.79	59	P	Pn	19 21 42.6	+1.1
TWVZ	Taurewa	1.82	53	P	Pn	19 21 42.5	+0.8
TSZ	Takapari Road	1.84	87	P	Pn	19 21 43.3	+1.6
PAWZ	Paruwai Farm	1.84	131	P	Pn	19 21 43.1	+1.3
PAWZ				S	S	19 22 10.5	-1.5
TUVZ	Tukino	1.85	61	P	Pn	19 21 43.4	+1.4
MOVZ	Moawhango	1.85	66	P	Pn	19 21 42.8	+0.9
MOVZ				S	S	19 22 09.5	-2.7
NGZ	Ngauruhoe	1.87	58	P	Pn	19 21 43.2	+1.1
PRWZ	Pori Road	1.87	102	P	Pn	19 21 43.7	+1.8
PLWZ	Palliser	1.88	138	P	Pn	19 21 43.3	+1.2
SNVZ	South Ngauruho	1.89	59	P	Pn	19 21 43.6	+1.2
WTVZ	West Tongariro	1.89	56	P	Pn	19 21 43.4	+1.1
NNVZ	North Ngauruho	1.90	57	P	Pn	19 21 43.6	+1.1
OTVZ	Oturere	1.92	58	P	Pn	19 21 43.8	+1.2
KRVZ	Karewarewa	1.94	56	P	Pn	19 21 43.8	+1.0
NTVZ	North Tongariro	1.96	57	P	Pn	19 21 44.1	+1.1
ETVZ	East Tongariro	1.96	58	P	Pn	19 21 44.8	+1.8
TMVZ	Te Maari	1.97	58	P	Pn	19 21 44.5	+1.4
TMWZ	Te Maipa	1.99	118	P	Pn	19 21 44.7	+1.6
DVHZ	Dannevirke	1.99	94	P	Pn	19 21 44.5	+1.4
TRWZ	Traveller	2.01	128	P	Pn	19 21 44.9	+1.6
DSZ	Denniston Nort	2.05	220	P	Pn	19 21 45.2	+1.3
BFZ	Birch Farm	2.10	104	P	Pn	19 21 43.7	-0.5
BFZ	Birch Farm	2.10	104	P	Pn	19 21 45.8	+1.6
WPHZ	Waipukurau	2.20	88	P	Pn	19 21 46.9	+1.7
KHZ	Kahutara	2.22	181	P	Pn	19 21 46.5	+1.2
KHZ	Kahutara	2.22	181	P	Pn	19 21 46.7	+1.3
PRHZ	Porangahau	2.35	93	P	Pn	19 21 48.7	+2.0
BKZ	Black Stump Fm	2.48	67	P	Pn	19 21 43.5	-4.6
BKZ	Black Stump Fm	2.48	67	S	S	19 22 21.3	-2.0
PXZ	Pawanui	2.53	87	P	Pn	19 21 50.3	+1.7
LTZ	Lake Taylor	2.77	200	P	Pn	19 21 52.5	+1.3
GVZ	Greta Valley S	2.80	188	P	Pn	19 21 52.6	+1.0
INZ	Inchbonnie	2.99	212	P	Pn	19 21 54.9	+1.3
AMCZ	Amberley	3.06	193	P	Pn	19 21 55.6	+1.1
RTZ	Ruatahuna	3.08	60	P	Pn	19 21 55.6	+0.8
SNGZ	Shannon Statio	3.24	65	P	Pn	19 21 58.1	+1.5
OXZ	Oxford	3.34	200	P	Pn	19 21 57.2	-0.4
URZ	Urewera	3.36	56	P	Pn	19 21 59.7	+0.7
OKCZ	Okains Bay	3.55	186	P	Pn	19 22 00.7	+0.6
PRGZ	Paritu Road	3.57	71	P	Pn	19 22 02.0	+1.6
RIGZ	Rimuhau	3.57	67	P	Pn	19 22 01.1	+0.7
MQZ	McQueen's Vall	3.58	191	P	Pn	19 22 00.4	0.0
WVZ	Waitaha Valley	3.58	215	P	Pn	19 22 01.6	+1.1
MWZ	Matawai	3.59	60	P	Pn	19 22 02.1	+1.4
MHCZ	Mount Hutt	3.66	203	P	Pn	19 22 02.3	+0.9
RACZ	Rakaia	3.69	196	P	Pn	19 22 02.7	+0.9
RUGZ	Raukumara Rang	3.89	56	P	Pn	19 22 05.6	+1.2
WACZ	Wakanui South	3.96	198	P	Pn	19 22 06.8	+1.8
RPZ	Rata Peaks	3.99	207	P	Pn	19 22 06.4	+1.0
RPZ	Rata Peaks	3.99	207	P	Pn	19 22 06.3	+1.0
HAZ	Te Kaha	4.08	55	P	Pn	19 22 07.6	+1.0
ARCZ	Arundel	4.16	205	P	Pn	19 22 08.3	+0.9
PKGZ	Pakihiroa	4.21	58	P	Pn	19 22 10.2	+2.0
FOZ	Fox Glacier	4.36	219	P	Pn	19 22 11.1	+1.2
WMGZ	Waiomatatini S	4.46	59	P	Pn	19 22 12.0	+0.8
TMZ	Timaru	4.60	204	P	Pn	19 22 14.2	+1.3
JCZ	Jackson Bay	5.26	221	P	Pn	19 22 23.4	+2.2
JCZ	Jackson Bay	5.26	221	P	Pn	19 22 22.3	+1.0
ODZ	Otahua Downs	5.31	203	P	Pn	19 22 23.3	+1.6
ODZ	Otahua Downs	5.31	203	P	Pn	19 22 23.4	+1.7

*BJI **02** 19:26:33.4, 24.˚39N×122.˚06E, h22km, mB4.5/1, mb4.1/23, ML4.1/6*
*NEIC **02** 19:26:34.8±1.0, 24.˚37N±0.˚04×121.˚97E±0.˚02, h33km±5km, mb4.4/25, Error ellipse: s-maj=5.8km s-min=2.2km az=160.0*
*JMA **02** 19:26:34.1±0.1, 24.˚3N±0.˚6×121.˚9E±0.˚6, h42km±2km, MD4.3/18, MV4.1/18, TAIWAN REGION*
*TAP **02** 19:26:34.8, 24.˚41N×121.˚91E, h27km, ML4.5, C*

*IDC **02** 19:26:38.0±3.1, 24.˚45N×122.˚33E, h75km±31km, mb3.6/14, mbtmp3.9/16, Error ellipse: s-maj=20.8km s-min=15.7km az=65.0*
ISC 02 19:26:34.1±0.5,**24.˚39N**±0.˚01×**121.˚98E**±0.˚01,**h27**km±3km, **n253**,σ1ş**41**/378,**mb4.2**/30,**20C-55D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.19	287	⇓*i*P	Pn	19 26 39.7	-1.5
EWUT				*i* S	Sn	19 26 43.4	-0.3
ENA	Nanau	0.22	280	⇓*i*P	Pb	19 26 40.0	-0.2
ENA				S	Sn	19 26 44.1	-0.2
ESAO	Su ao	0.22	327	⇓*i*P	Pb	19 26 40.1	-0.1
ESAO				S	Sn	19 26 43.9	-0.6
EAHA	Aohua	0.22	255	⇑*i*P	Pb	19 26 40.1	-0.2
EAHA				S	Sn	19 26 44.6	+0.2
EHP	Heping Village	0.23	250	P	Pb	19 26 40.3	-0.1
EHP				S	Sn	19 26 44.8	+0.2
EOS2	EOS2	0.24	83	⇑*i*P	Pb	19 26 41.2	+0.9
EOS2				S	Sn	19 26 46.8	+2.3
TWC	Suao	0.25	332	⇓*i*P	Pb	19 26 40.5	-0.1
TWC				S	Sn	19 26 44.7	-0.4
EOS3	EOS3	0.33	108	⇑*i*P	Pb	19 26 42.4	+0.8
EOS3				S	Sn	19 26 48.2	0.0
NDS	Dongshan	0.34	316	⇓*i*P	Pb	19 26 42.0	+0.1
NDS				S	Sb	19 26 47.5	+0.3
ETL	Fush Village	0.40	235	⇓*i*P	Pb	19 26 42.9	+0.1
ETL				S	Sn	19 26 50.5	-0.2
NACB	Ninganchiao	0.41	238		Pb	19 26 43.0	+0.1
NACB				Sg	Sb	19 26 50.3	+1.4
NACB	Ninganchiao	0.41	238	P	Pb	19 26 43.1	+0.1
NACB	Ninganchiao	0.41	238	S	Sn	19 26 51.0	0.0
NACB	Ninganchiao	0.41	238	⇓*i*P	Pb	19 26 42.9	-0.1
NACB				S	Sb	19 26 50.0	+1.1
EOS4	EOS4	0.41	130	⇑*i*P	Pb	19 26 43.1	+0.4
EOS4				S	Sb	19 26 50.0	+1.5
ILA	Ilan	0.43	331	⇓*i*P	Pb	19 26 43.8	+0.5
ILA				S	Sb	19 26 50.7	+1.2
LATG	Datong	0.43	290	⇓*i*P	Pb	19 26 43.5	+0.1
LATG				S	Sb	19 26 49.9	+0.1
ENTT	Nioudou	0.45	304	⇓*i*P	Pb	19 26 43.8	+0.1
EGS		0.46	355	⇓*i*P	Pb	19 26 44.2	+0.5
EGS				S	Sb	19 26 50.7	+0.5
TWD	Chiawan	0.46	228	⇓*i*P	Pb	19 26 43.9	0.0
TWD				S	Sn	19 26 52.4	+0.1
NTC	Toucheng	0.48	344	P	Pb	19 26 44.7	+0.5
NTC				S	Sb	19 26 51.8	+0.9
ETLH	Xiulin Townshi	0.49	248	eP	Pb	19 26 44.6	+0.3
ETLH				S	Sb	19 26 52.3	+1.2
FUSB	Fushanzhiwuyua	0.51	316	⇓*i*P	Pb	19 26 45.0	+0.3
FUSB				S	Sb	19 26 52.3	+0.4
HWA	Hwalien	0.53	220	P	Pb	19 26 45.6	+0.7
NNSB	Datong	0.54	274	⇓*i*P	Pb	19 26 45.4	+0.2
NNSB				S	Sb	19 26 52.6	-0.1
NNS	Nan Shan	0.55	275	⇓*i*P	Pb	19 26 45.5	+0.1
NNS				S	Sb	19 26 53.8	+0.8
NWLT	Wulai	0.58	312	⇓*i*P	Pb	19 26 46.0	+0.2
NWLT				S	Sb	19 26 53.1	-0.6
TIPB	Shuangxi	0.60	347	⇓*i*P	Pb	19 26 46.4	+0.3
TIPB				S	Sb	19 26 54.7	+0.5
ETM	Tongmen	0.61	226	⇓P	Pb	19 26 46.0	-0.2
ETM				eS	Sn	19 26 56.1	+0.1
YHNB	Yeheng	0.61	297		Pb	19 26 46.7	+0.3
YHNB					Sb	19 26 55.3	+0.6
YHNB	Yeheng	0.61	297	P	Pb	19 26 46.8	+0.4
YHNB	Yeheng	0.61	297	S	Sn	19 26 56.5	+0.3
YHNB	Yeheng	0.61	297	⇓*i*P	Pb	19 26 46.7	+0.3
YHNB				eS	Sb	19 26 53.7	-1.0
TWB1	Santiao Chiao	0.62	1	⇓*i*P	Pb	19 26 46.7	+0.4
TWB1				S	Sb	19 26 55.3	+0.6
TEYL	Yanliau Villag	0.62	214	⇓*i*P	Pb	19 26 46.5	0.0
TEYL				S	Sn	19 26 57.5	+1.2
LXIB	Xiulin Townshi	0.63	235	⇓*i*P	Pb	19 26 46.5	-0.3
LXIB				S	Sn	19 26 57.4	+0.7
NSK	Sanguang	0.63	297	⇓*i*P	Pb	19 26 46.8	+0.1
NSK				S	Sb	19 26 54.9	-0.3
FUSS	Fushou	0.68	258	⇓*i*P	Pb	19 26 48.2	0.0
FUSS				eS	Sn	19 26 58.1	0.0
TWA	Mucha	0.69	329	⇓*i*P	Pn	19 26 48.1	0.0
TWA				eS	Sb	19 26 57.5	+0.7
WHF	Hehuan Shan	0.69	250	⇓*i*P	Pn	19 26 48.0	-0.5
WHF				eS	Sn	19 26 59.5	+0.9
NWF	Wu-fen Shan	0.70	345	⇓*i*P	Pn	19 26 48.5	+0.1
NWF

SMLT	Sun Moon Lake	1.10	243	⇓	*i*	P	Pn	19 26 54.4	+0.5
SMLT						S	Sb	19 27 11.5	+2.8
NSY	Sanyi	1.11	272	⇑	*i*	P	Pb	19 26 56.4	+1.8
NSY						S	Sb	19 27 12.8	+4.1
SSLB	Suanglung	1.11	238				Pn	19 26 54.0	+0.1
SSLB	Suanglung	1.11	238			P	Pn	19 26 54.4	+0.5
SSLB	Suanglung	1.11	238			S	Sb	19 27 09.6	+0.8
SSLB	Suanglung	1.11	238	⇓	*i*	P	Pn	19 26 54.1	+0.1
SSLB						S	Sb	19 27 09.2	+0.5
TYC	Yuchr	1.13	245	⇓	*i*	P	Pn	19 26 54.7	+0.6
TYC						S	Sb	19 27 14.7	+5.3
YULB	Yu-li	1.17	212				Pn	19 26 53.9	-0.9
YULB	Yu-li	1.17	212			P	Pn	19 26 54.1	-0.7
YULB	Yu-li	1.17	212	⇓	*i*	P	Pn	19 26 53.9	-0.9
ECBN	Changbin	1.17	204			P	Pn	19 26 54.0	-0.7
EYUL	Yuli	1.20	210		*e*	P	Pn	19 26 55.7	+0.6
TWF1	Yuli	1.21	211	⇓		P	Pn	19 26 54.1	-1.1
TCU	Taichung	1.21	259			P	Pb	19 26 57.4	+1.0
TCU						S	Sb	19 27 14.6	+3.0
WDJ	Dajia District	1.22	268	⇓		P	Pb	19 26 57.5	+1.0
WDJ						S	Sb	19 27 14.6	+2.7
WHYT	Xinyi Township	1.24	236			P	Pb	19 26 56.9	0.0
WHYT						S	Sb	19 27 12.9	+0.4
PCYT	Pengchaiyu	1.24	4	⇓	*i*	P	Pn	19 26 55.7	0.0
PCYT						S	Sb	19 27 13.0	+0.5
WJS	Zhushan	1.27	244		*e*	P	Pb	19 26 58.3	+0.8
WJS						*e*S	Sb	19 27 17.3	+3.9
WNT	Mingjian	1.28	247			P	Pb	19 26 58.5	+0.9
WNT						S	Sb	19 27 17.9	+4.1
YUS	Yu-Shan	1.30	226		*e*	P	Pn	19 26 57.5	+0.6
YUS						*e*S	Sb	19 27 14.4	-0.1
CHKH	Chenggong	1.30	204		*e*	P	Pn	19 26 55.4	-1.2
WCHH	Zhanghua	1.33	257		*e*	P	Pb	19 26 58.9	+0.4
WCHH						*e*S	Sb	19 27 17.8	+2.7
FULB	Fuli	1.34	208			P	Pn	19 26 56.5	-0.6
WCH1	Changhua City	1.34	257			P	Pn	19 26 59.0	+0.4
WCH1						S	Sb	19 27 17.5	+2.1
ALS	Alishan	1.38	231	⇓		P	Pb	19 26 59.1	-0.4
ALS						*e*S	Sb	19 27 20.3	+3.5
CHKT	Chengkung	1.40	204			P	Pn	19 26 56.4	-1.4
EHD	Haiduan	1.42	210			P	Pn	19 26 58.6	+0.4
CHN5	Tsauling	1.43	237	⇑	*i*	P	Pb	19 27 00.7	+0.6
ECS	Chishang	1.46	208		*e*	P	Pn	19 26 59.2	+0.4
ECS						*e*S	Sb	19 27 21.4	+2.6
WGK	Gukeng	1.47	242		*e*	P	Pb	19 27 01.3	+0.5
WGK						*e*S	Sb	19 27 22.0	+2.9
WDL	Douliou City	1.48	243		*e*	P	Pb	19 27 01.6	+0.7
WDL						*e*S	Sb	19 27 21.8	+2.6
ELDTW	Lidau	1.48	217	⇓	*i*	P	Pn	19 26 58.5	-0.6
WDLH	Douliu	1.49	242		*e*	P	Pb	19 27 01.7	+0.6
WDLH						*e*S	Sb	19 27 22.6	+3.0
EDH	Donghe	1.54	204		*e*	P	Pn	19 26 58.7	-1.1
WCKO	Fanlu	1.57	233		*e*	P	Pb	19 27 02.9	+0.3
WCKO						*e*S	Sb	19 27 25.6	+3.5
IRIF	Iriomote-Funau	1.60	92		*i*	P	Pn	19 27 01.1	+0.5
IRIF						S	Sn	19 27 20.9	+0.5
IRIF	Iriomote-Funau	1.60	92			A	A	19 27 01.1	
	comp=N,8.0nm,1.0s,comp=E,6.0nm,1.0s								
WTK	Tuku	1.61	245		*e*	P	Pb	19 27 03.5	+0.3
WTK						*e*S	Sb	19 27 25.3	+2.2
CHN2	Minshiung	1.62	238		*e*	P	Pb	19 27 04.0	+0.8
CHN2						*e*S	Sb	19 27 26.2	+2.9
WTCT	Ta-ch'eng	1.63	252		*e*	P	Pb	19 27 03.4	-0.2
WTCT						*e*S	Sb	19 27 25.4	+1.6
STYH	Taoyuan	1.64	222		*e*	P	Pn	19 27 02.5	+1.4
STYH						*e*S	Sb	19 27 24.8	+0.9
TPUB	Ta-pu	1.64	229				Pn	19 27 02.6	+1.4
TPUB	Ta-pu	1.64	229			P	Pn	19 27 02.6	+1.4
TPUB	Ta-pu	1.64	229	⇓		P	Pb	19 27 02.9	-0.8
TPUB						*e*S	Sb	19 27 26.1	+2.0
LONT	Longtian	1.67	208		*e*	P	Pn	19 27 00.8	-0.8
CHY	Chiayi	1.67	238		*e*	P	Pb	19 27 04.5	+0.2
CHY						*e*S	Sb	19 27 27.2	+2.2
HATJ	Hateruma jima	1.70	101		*e*	P	Pn	19 27 03.3	+1.2
HATJ	Hateruma jima	1.70	101			A	A	19 27 03.3	
	comp=N,7.0nm,1.5s,comp=E,7.0nm,2.0s								
TWK	Hsinying	1.76	231	⇑	*i*	P	Pb	19 27 05.3	-0.5
TWK						*e*S	Sb	19 27 28.9	+1.3
TWG	Pinlang	1.77	208				Pn	19 27 01.9	-1.1
TWG	Pinlang	1.77	208		*e*	P	Pn	19 27 02.3	-0.7
TWGBT	Beinan	1.77	208			P	Pb	19 27 02.5	-0.4
TWGBT	Beinan	1.77	208		*e*	P	Pb	19 27 01.6	-1.3
WSF	Szhu	1.77	245		*e*	P	Pb	19 27 04.9	-1.0
WSF						*e*S	Sb	19 27 29.0	+1.3
LDUT	Ludao	1.77	195		*e*	P	Pn	19 27 01.3	-1.7
SNST	Tainan City	1.79	230		*e*	P	Pb	19 27 05.4	-0.8
SNST						*e*S	Sb	19 27 28.1	-0.1
CHN1	Nanshi	1.79	228		*e*	P	Pb	19 27 05.2	-1.0
CHN1						*e*S	Sb	19 27 30.4	+2.2
TTN	Taitung	1.80	205		*e*	P	Pn	19 27 04.9	+1.6
WSL	Shuilin Townsh	1.82	242		*e*	P	Pb	19 27 06.6	-0.1
WSL						*e*S	Sb	19 27 30.7	+1.7
JKRS	Kuro-shima	1.86	94			P	Pn	19 27 05.3	+1.1
JKRS						S	Sn	19 27 28.6	+1.7
JKRS	Kuro-shima	1.86	94			A	A	19 27 05.3	
	comp=N,8.0nm,1.8s,comp=E,9.0nm,2.7s								
CHN8	Yiju	1.92	238		*e*	P	Pb	19 27 07.3	-1.1
CHN8						*e*S	Sb	19 27 33.3	+1.3
CHN3	Shinhua	1.97	229		*e*	P	Pb	19 27 09.1	-0.2
CHN3						*e*S	Sb	19 27 35.3	+1.8
JIJ	Ishigaki jima	1.98	90			P	Pn	19 27 06.2	+0.4
JIJ						S	Sn	19 27 29.9	+0.2
SSHA	Shanhua	1.99	231		*e*	P	Pb	19 27 08.7	-0.9
SSHA						*e*S	Sb	19 27 35.0	+1.1
ECL	Taimali	2.02	208		*e*	P	Pn	19 27 05.3	-1.1
SCST	Cishan	2.02	223		*e*	P	Pb	19 27 09.4	-0.8
SCST						*e*S	Sb	19 27 35.8	+0.9
SCLT	Jiali	2.03	234	⇓		P	Pn	19 27 08.8	+2.3
SCLT						*e*S	Sb	19 27 35.7	+0.5
SSD	Sandimen	2.05	217		*e*	P	Pn	19 27 08.5	+1.7
SSD						*e*S	Sb	19 27 35.0	-0.7
TSMG	Majia	2.07	216			P	Pn	19 27 09.2	+2.1
TWM1	Shoushan	2.11	223	⇑	*i*	P	Pb	19 27 11.2	-0.5
TSCK	Chigu Township	2.13	235	⇓		P	Pn	19 27 10.4	+2.1
TSCK						S	Sb	19 27 37.3	-0.7
JISG	Ishigakijimahi	2.14	84			P	Pn	19 27 08.4	+0.4
JISG						S	Sn	19 27 34.2	+0.6
SGLT	Jiouru	2.15	220		*e*	P	Pb	19 27 12.7	+0.4
MASBT	Mashibuluo	2.16	215	⇑	*i*	P	Pn	19 27 09.4	+1.1
MASBT						S	Sb	19 27 37.6	-1.2
EAST	Anshuo	2.25	208			P	Pn	19 27 08.4	-1.3
TAWH	Dawu Township	2.27	206			P	Pn	19 27 09.9	0.0
WSSB	Gushan	2.34	222			P	Pn	19 27 13.3	+2.4
PNG	Penghu	2.36	250			P	Pn	19 27 11.8	+0.7
PNG						S	Sn	19 27 40.1	+0.9
SCZT	Fangliau	2.36	212			P	Pn	19 27 12.1	+1.0
SCZT						S	Sb	19 27 43.8	-1.0
PHUB	P'eng-hu	2.37	249			P	Pn	19 27 12.0	+0.8
PHUB						S	Sn	19 27 40.3	+1.0
LAY	Lan-yu	2.37	190			P	Pn	19 27 09.4	-1.9
LAY						S	Sn	19 27 37.6	-1.9
WDGT	Dungji	2.40	243			P	Pn	19 27 13.4	+1.8
WDGT						S	Sn	19 27 42.6	+2.5
LYUB	Lan-yu	2.40	189			P	Pn	19 27 09.3	-2.4
JTJ	Tarama	2.50	84			P	Pn	19 27 14.2	+1.3
JTJ						*e*S	Sn	19 27 43.7	+1.1
MATB	Ma-tsu	2.54	314			P	Pn	19 27 14.0	+0.4
MATB						S	Sn	19 27 45.1	+1.5
VCHM	Qimei	2.61	244		*e*	P	Pn	19 27 16.0	+1.5
VCHM						*e*S	Sn	19 27 47.4	+2.0
HEN	Hengchun	2.63	206		*e*	P	Pn	19 27 17.6	+2.8
TWK1	Hengchun	2.66	204		*e*	P	Pn	19 27 15.3	+0.1
TWK1						*e*S	Sn	19 27 47.7	+1.1
TWKBT	Hengchun	2.66	204		*e*	P	Pn	19 27 15.2	-0.1
TSEB	Hengchuen, Pin	2.67	202		*e*	P	Pn	19 27 17.7	+2.4
TSEB						*e*S	Sn	19 27 49.5	+2.7
PTMZ	Houxiangcun	2.68	285			P	Pn	19 27 15.9	+0.4
PTMZ						S	Sn	19 27 46.7	-0.3
JIRB	Irabujima	2.94	81		*e*	P	Pn	19 27 20.5	+1.4
JIRB						*e*S	Sn	19 27 54.6	+1.0
XPSS	Dashiqiu	3.00	328	⇑	*i*	P	Pn	19 27 20.0	+0.1
XPSS						S	Sn	19 27 55.8	+0.9
JIKM	Ikemajima	3.02	79		*e*	P	Pn	19 27 21.9	+1.7
JIKM						*e*S	Sn	19 27 57.5	+1.9
JMJ	Miyako jima 2	3.05	81			P	Pn	19 27 22.8	+2.2
JMJ2	Miyako jima3	3.07	83			P	Pn	19 27 22.5	+1.6
JMJ2						*e*S	Sn	19 27 58.8	+2.1
QZH	Quanzhou	3.13	281	⇑	*i*Pn		Pn	19 27 21.8	+0.2
QZH						S	Sn	19 27 57.8	-0.3
QZH						*s*max	*s*max		
	comp=E,640nm,0.9s								
QZH						*s*max	*s*max		
	comp=E,360nm,0.7s								
JOGS	Gusukube	3.15	83		*e*S		Sn	19 28 00.6	+2.0
MHZQ	Yeshan	3.17	303		P		Pn	19 27 21.9	-0.3
MHZQ					S		Sn	19 27 58.3	-0.7
KNM	Kinmen	3.23	271		P		Pn	19 27 24.8	+1.7
KNM					S		Sn	19 28 03.1	+2.5
KNMB	Chin-men Tao	3.27	272				Pn	19 27 23.0	0.0
KNMB	Chin-men Tao	3.27	272	⇑	*i*	P	Pn	19 27 23.7	+0.1
KNMB						S	Sn	19 28 01.7	+0.1
AXDP	Jialang	3.68	279	⇑	*i*	P	Pn	19 27 29.6	+0.3
AXDP						*e*S	Sn	19 28 10.9	-0.8
ZPLA	Ao Xicun	3.89	264			P	Pn	19 27 32.8	+0.7
ZPLA						S	Sn	19 28 16.5	-0.4
DSXP	Dongshan	4.21	262			P	Pn	19 27 37.1	+0.5
DSXP						S	Sn	19 28 23.9	-1.0
SXFK	Yanhouchang	4.40	298			P	Pn	19 27 39.3	+0.1
JOW	Kunigami	6.18	66		Pn		Pn	19 28 04.0	+0.3
JOW	Kunigami	6.18	66		P		Pn	19 28 04.2	+0.5
	comp=E,9.4nm,0.3s,baz=160,slow=12,SNR=21								
JOW						S	Sn	19 29 06.4	-7.2
	comp=E,11nm,0.8s,baz=255,slow=22,SNR=0.9								
JOW	Kunigami	6.18	66		P		Pn	19 28 04.5	+0.8
KSRS	Korea Array	13.98	20		P		Pn	19 29 51.4	+0.9
	comp=E,0.6nm,0.4s,baz=206,slow=14,SNR=5.3								
KS19	Wonju Array Si	14.01	20				Pn	19 29 51.0	+0.1
XAN	Xi'an	14.90	313		P		P	19 30 10.6	+2.2
BJT	Baijiatuau	16.33	344				Pn	19 30 22.7	+1.2
BJI	Beijing	16.35	344		P		P	19 30 25.0	+0.6
BJI					pmax	pmax			
	comp=E,6.0nm,1.6s								
PZH	PanZhiHua	18.39	281		P		Pn	19 30 47.8	+0.4
HHC	Hu-ho-hao-te	18.59	335		*e*P		Pn	19 30 50.3	+0.7
HHC					pmax	pmax			
	comp=E,5.0nm,0.6s								
HHC					pmax	pmax			
	comp=E,140nm,5.9s								
LZH	Lanzhou	19.49	311		*e*P		P	19 30 54.9	-4.4
LZH					pP		Pn	19 31 02.8	+2.2
LZH					pmax	pmax			
	comp=E,21nm,1.4s								
TNCH	TengChong	21.32	277		P		P	19 31 22.5	+3.3
TNCH					pP		sP	19 31 31.3	+2.1
TNCH					pmax	pmax			
	comp=Z,13nm,1.8s								
CMAR	Chiang Mai Arr	22.23	259		P		P	19 31 32.0	+3.2
	comp=Z,0.4nm,0.8s,baz=64,slow=7.4,SNR=4.8								
	comp=Z,0.4nm,0.8s								
SBUM	Sibu	23.76	205				P	19 31 42.2	-2.2
GTA	Gaotai	23.96	314		*e*P		P	19 31 48.0	+1.7
GTA					sP		sP	19 31 59.6	+2.0
GTA					pmax	pmax			
	comp=Z,5.0nm,1.5s								
HILR	Hailar Array B	25.18	357		P		P	19 31 56.9	-0.4
	comp=Z,2.6nm,0.6s,baz=195,slow=9.9,SNR=2.0								
	comp=Z,2.6nm,0.6s								
GOMU	GeErMu	26.15	303		P		P	19 32 08.2	+1.6
GOMU					sP		pP	19 32 16.6	+2.4
GOMU					pmax	pmax			
	comp=Z,3.0nm,0.8s								
HEH	HeiHe	26.16	8		*e*P		P	19 32 07.7	+1.6
HEH					pmax	pmax			
	comp=Z,9.0nm,1.9s								
ULN	Ulaanbaatar	26.25	337				P	19 32 06.6	-0.5
SONM	Songino Array	26.47	336		P		P	19 32 09.1	0.0
	comp=Z,7.0nm,1.0s,baz=152,slow=9.3,SNR=17								
	comp=Z,7.0nm,1.0s								
SHL	Shillong	27.28	279				P	19 32 15.6	-1.1
SHL					IAmb		IAmb	19 32 37.5	
	comp=Z,7.0nm,1.1s								
LSA	Lhasa	27.91	288		P		P	19 32 21.6	-1.0
LSA					IAmb		IAmb	19 32 44.1	
	comp=Z,3.8nm,0.5s								
WMQ	Urumqi	34.04	313		*e*P		P	19 33 17.6	+1.6
MKAR	Makanchi Array	38.70	315		P		P	19 33 55.5	-0.2
MKAR	Makanchi Array	38.70	315		P		P	19 33 56.2	+0.5
	comp=Z,1.3nm,0.5s,baz=102,slow=9.8,SNR=18								
	comp=Z,1.3nm,0.5s								
MAKZ	Makanchi	38.90	315		P		P	19 33 57.3	-0.1
ZAA0	Zalesovo Array	40.47	327		P		P	19 34 09.9	-0.4
ZALV	Zalesovo Beam	40.47	327		P		P	19 34 09.5	-0.8
	comp=Z,2.3nm,0.6s,baz=105,slow=9.3,SNR=11								
	comp=Z,2.3nm,0.6s								
KURBB	Kurchatov Arra	42.42	320		P		P	19 34 25.7	-0.6
	comp=Z,0.8nm,0.2s,baz=116,slow=8.3,SNR=4.6								
	comp=Z,0.8nm,0.2s								
COEN	Coen	43.37	149		P		P	19 34 34.1	-0.3
COEN					IAmb		IAmb	19 34 58.1	
	comp=Z,14nm,1.1s								
ARSB	Arslanbob	43.89	305		P		P	19 34 39.9	+1.3
WB0	Warramunga Arr	45.53	164		P		P	19 34 50.8	-0.7
WB0					IAmb		IAmb	19 35 02.7	
	comp=Z,9.3nm,1.4s								
WRA	Warramunga Arr	45.68	164		P		P	19 34 50.6	-2.2
	comp=Z,0.6nm,0.8s,baz=346,slow=8.8,SNR=4.7								
	comp=Z,0.6nm,0.8s								
KK31	Karatay Array	45.92	307				P	19 34 54.4	-0.2
KK31					IAmb		IAmb	19 34 55.9	
	comp=Z,5.2nm,1.5s								
KKAR	Karatay Array	45.92	307		P		P	19 34 55.2	+0.6
TIXI	Tiksi	47.45	3				P	19 35 04.4	-1.6
TIXI					IAmb		IAmb	19 35 05.2	
	comp=Z,3.6nm,0.8s								
BVAR	Borovoye Array	47.98	320		P		P	19 35 10.1	-0.4
	comp=Z,1.3nm,0.6s,baz=100,slow=7.8,SNR=9.5								
BVAR					PcP		PcP	19 36 37.4	-0.9
	comp=Z,0.9nm,0.7s,baz=90,slow=3.5,SNR=3.7								
	comp=Z,1.3nm,0.6s								
ASAR	Alice Springs	49.15	165		P		P	19 35 18.6	-1.2
	comp=Z,0.3nm,0.5s,baz=346,slow=11,SNR=7.6								
	comp=Z,0.3nm,0.5s								
AB31	Akbulak array	53.82	314				P	19 35 54.5	+0.1
AB31					IAmb		IAmb	19 35 55.2	
	comp=Z,2.3nm,0.6s								
ABKAR	Akbulak array	53.82	314				P	19 35 54.5	+0.1
ARTI	Arti	55.47	323				P	19 36 05.0	-1.4
D20K	Etivluk River	64.41	24		P		P	19 37 07.3	-0.2
H19K	Roundabout Mou	64.60	27		P		P	19 37 08.6	-0.1
H19K					IAmb		IAmb	19 37 43.9	
	comp=Z,4.2nm,1.1s								
PPLA	Purkeypile	66.71	30		P		P	19 37 22.1	-0.6
MLY	Manley	67.04	27		P		P	19 37 24.1	-0.5
MLY					IAmb		IAmb	19 37 47.6	
	comp=Z,3.4nm,1.2s								
BPAW	Bear Paw Mtn.	67.07	28		P		P	19 37 24.2	-0.5
BPAW					IAmb		IAmb	19 37 42.7	
	comp=Z,4.4nm,1.3s								
SKT	Skwentna	67.15	31		P		P	19 37 24.4	-0.9
SKT					IAmb		IAmb	19 37 50.4	
	comp=Z,4.5nm,1.2s								
F24K	Squaw Lake	67.78	25		P		P	19 37 29.1	-0.1
F24K					IAmb		IAmb	19 37 33.6	
	comp=Z,4.4nm,1.1s								
ILAR	Eielson Array	68.70	27		P		P	19 37 32.5	-2.5
	comp=Z,0.2nm,0.5s,baz=307,slow=8.6,SNR=4.4								
	comp=Z,0.2nm,0.5s								
PWL	Port Wells	68.87	32		P		P	19 37 34.7	-1.4
BMAR	Burnt Mountain	69.04	24		P		P	19 37 37.3	+0.1
SPB2	Spitsbergen Ar	69.44	348		P		P	19 37 39.5	+0.1
SPITS	Spitsbergen Ar	69.44	348		P		P	19 37 38.3	-1.1
	comp=Z,3.0nm,0.7s,baz=69,slow=7.9,SNR=9.8								
	comp=Z,3.0nm,0.7s								
ARCES	ARCESS Array B	69.62	338		P		P	19 37 40.0	-0.6
ARCES	ARCESS Array B	69.62	338		P		P	19 37 38.5	-2.1
	comp=Z,3.3nm,1.0s,baz=58,slow=6.4,SNR=1.8								
	comp=Z,3.3nm,1.0s								
FINES	FINESS Array B	71.63	330		P		P	19 37 52.2	-0.8
FINES	FINESS Array B	71.63	330		P		P	19 37 51.5	-1.4
	comp=Z,8.9nm,0.9s,baz=66,slow=4.8,SNR=8.0								
	comp=Z,2.8nm,0.9s								
AKASG	Malin Array Be	73.20	318		P		P	19 38 00.2	-2.3
	comp=Z,0.4nm,0.5s,baz=62,slow=4.9,SNR=1.8								
	comp=Z,0.4nm,0.5s								

*JMA **02** 19:37:14.6±0.6, 44°N±2°×14°0E±°, h257km±4km, MV3.4/27, NW OFF SHAKOTAN PEN*
*IDC **02** 19:37:15.6±1.1, 44°32N×139°84E, h248km±12km, mb3.2/15, mbtmp3.8/17, Error ellipse: s-maj=15.5km s-min=13.0km az=176.0*
*NEIC **02** 19:37:15.5±1.6, 44°2N±0°1×139°8E±0°1, h250km±10km, mb4.0/12, Error ellipse: s-maj=17.6km s-min=12.8km az=169.0*

ISC 02 19:37:15.2±0.6, 44°20N±0°06×139°91E±0°06, h250km, n58, σ1905/65, mb3.6/20, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JSK	Shakotan	0.94	154	P		Pn	19 37 50.2	+0.3
JHR	Hokuryu	1.39	109	*e*P		Pn	19 37 53.4	+0.7
JSH	Shimam	1.56	176	P		Pn	19 37 54.4	+0.4
JEW	Eniwo	1.76	140	*e*P		Pn	19 37 56.5	+0.9
JEW				*e*S		S	19 38 29.3	+1.9
ASAJ	Asahikawa	1.94	92	P		Pn	19 37 57.8	+0.8
	22nm,0.4s,baz=263,slow=9.1,SNR=66							
JKA	Kamikawa-asahi	1.94	92			Pn	19 37 57.7	+0.6
JSE	Soyaes	2.06	67	*e*P		Pn	19 37 58.7	+0.6
JKK2	Kamakawa 2	2.07	98	P		Pn	19 37 58.9	+0.6
JKK2				*e*S		S	19 38 32.8	+0.5
JOSM	Okushiri--Mats	2.14	189	*e*P		Pn	19 37 59.9	+0.9
JNBK	Urakawa-nobuka	2.83	132	*e*P		Pn	19 38 06.5	+0.7
JTKR	Abashiri--Toko	2.89	93	*e*P		Pn	19 38 06.8	+0.3
JOT	Ohata	2.94	163	*e*P		Pn	19 38 08.9	+1.8
JOT				*e*S		S	19 38 49.8	+1.8
JAR	Ashorobuto	2.94	107	*e*P		Pn	19 38 07.4	+0.4
JAR				*e*S		S	19 38 49.8	+1.8
JCH	Churui	2.97	121	*e*P		Pn	19 38 07.0	-0.4
JCH				*e*S		S	19 38 45.6	-3.0
ERM	Erimo	3.23	131	Pn		Pn	19 38 10.8	+0.6
JTM	Tenmabayashi	3.52	166	Pn		Pn	19 38 13.0	-0.4
JIW	Iwasaki	3.60	179	*e*P		Pn	19 38 14.6	+0.1
JAK	Akkeshi	3.68	107	*e*P		Pn	19 38 14.4	-0.8
JAK				*e*S		S	19 39 01.0	-1.8
JANG	Nango	4.00	162	*e*P		Pn	19 38 18.8	-0.3
JANG				*e*S		S	19 39 06.1	-3.7
USRK	Ussuriysk Ar.	5.70	273	P		Pn	19 38 38.9	-0.6
	5.1nm,0.5s,baz=79,slow=15,SNR=13							
JSD	Sado	6.28	192	Pn		Pn	19 38 47.0	+0.1
JMM	Marumori	6.36	174	Pn		Pn	19 38 47.3	-0.6
MJB9	Matsu-Tunnel	7.75	190	Pn		Pn	19 39 07.3	+1.9
MAJO	Matsushiro	7.76	190	Pn		Pn	19 39 06.5	+0.9
MJAR	Matsushiro Arr	7.76	190	P		Pn	19 39 07.0	+1.5
	0.5nm,0.3s,baz=350,slow=15,SNR=10							
JGF	Kuroka	8.81	194	Pn		Pn	19 39 18.9	+0.1
ZALV	Zalesovo Beam	36.52	305	P		P	19 43 56.4	-0.2
	0.4nm,0.3s,baz=89,slow=7.8,SNR=2.8							
	0.4nm,0.3s							
MKAR	Makanchi Array	39.70	295	P		P	19 44 22.8	-0.5
MKAR	Makanchi Array	39.70	295	P		P	19 44 23.3	+0.1
	0.3nm,0.5s,baz=86,slow=9.4,SNR=6.8							
	0.3nm,0.5s							
MAKZ	Makanchi	39.90	295	P		P	19 44 24.9	+0.1
KURK	Kurchatov	40.89	302	P		P	19 44 32.4	-0.5
KURK				IAmb		IAmb	19 45 02.4	
	comp=Z,5.2nm,1.5s							
KURBB	Kurchatov Arra	40.97	301	P		P	19 44 33.7	+0.1
	comp=Z,1.3nm,0.4s,baz=73,slow=8.9,SNR=10							
	comp=Z,1.3nm,0.4s							
PPLA	Purkeypile	42.14	39	P		P	19 44 43.1	+0.1
PPLA				IAmb		IAmb	19 44 45.2	
	comp=Z,12nm,1.4s							
OHAK	Old Harbor	42.52	48	P		P	19 44 46.0	+0.1
KDAK	Kodiak Island	42.77	47	P		P	19 44 48.0	+0.1
KDAK				IAmb		IAmb	19 44 50.0	
	comp=Z,23nm,1.5s							
CNPM	China Poot	43.12	44	P		P	19 44 50.5	-0.2
GHO	Glory Hole

*NEIC **02** 20:10:56.2±0.8,36°.306N×0°.008×98°.15W±0°.01,h5km±1km, Error ellipse: s-maj=2.3km s-min=1.6km az=130.0*

NEIC 02 20:10:56.4±0.7,36°.298N±0°.009×98°.16W±0°.01,h7km±3km, mb_Lg2.3/17,ML2.5/72,ML2.4/34,Error ellipse: s-maj=1.4km s-min=1.2km az=49.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.25**	**34**	Pg	Pg	20 11 01.7	+0.3
CROK				Sg	Sg	20 11 05.3	+0.6
CROK				IAML		20 11 07.8	
	comp=E,1μm,0.3s						
CROK				IAML		20 11 08.3	
	comp=N,1μm,0.2s						
OK038	**West end E0370**	**0.51**	**291**	Pg	Pg	20 11 06.5	+0.4
OK038				Sg	Sg	20 11 13.8	+1.0
OK038				IAML		20 11 16.4	
	comp=N,495nm,0.3s						
GC02	**Grant County #**	**0.60**	**23**		Pg	20 11 08.0	0.0
GC02				Sg	Sg	20 11 16.0	+0.1
KAN14	**Manchester OK**	**0.68**	**13**		Pg	20 11 09.3	-0.1
KAN14				Sg	Sg	20 11 18.4	+0.2
NOKA	**Waynoka**	**0.71**	**299**		Pg	20 11 09.9	-0.1
NOKA				Sg	Sg	20 11 19.8	+0.5
NOKA				IAML		20 11 25.3	
	comp=E,193nm,0.2s						
NOKA				IAML		20 11 28.1	
	comp=N,167nm,0.3s						
OK029	**Liberty Lake**	**0.76**	**131**		Pg	20 11 10.7	-0.2
OK029					Sg	20 11 21.2	+0.4
CSTR	**Hydro, Custer**	**0.78**	**214**		Pg	20 11 11.7	+0.3
CSTR					Sg	20 11 22.9	-0.3
BLOK	**Blackwell**	**0.89**	**58**		Pg	20 11 13.2	-0.2
BLOK					Sg	20 11 24.8	-0.2
KAN13	**South Haven SW**	**0.90**	**37**		Pg	20 11 13.4	-0.3
KAN13					Sg	20 11 25.2	-0.2
KAN01	**Argonia South**	**0.91**	**20**		Pg	20 11 13.4	-0.5
KAN01					Sg	20 11 25.6	-0.2
KAN01				IAML		20 11 27.5	
	comp=E,118nm,0.1s						
KAN08	**Anthony NE Sta**	**0.94**	**9**		Pg	20 11 14.2	-0.2
KAN08					Sg	20 11 26.4	-0.2
KAN08				IAML		20 11 26.9	
	comp=N,191nm,0.2s						
OK048	**Pawnee Station**	**0.99**	**83**		Pg	20 11 14.9	-0.4
OK048				IAML		20 11 30.3	
	comp=N,104nm,0.1s						
OK048				IAML		20 11 30.7	
	comp=N,96nm,0.1s						
OKCFA	**Oklahoma City**	**1.05**	**147**		Pb	20 11 16.8	-0.2
OKCFA					Sg	20 11 30.4	+0.2
OK051	**E0350 and S346**	**1.08**	**79**		Pg	20 11 16.7	-0.5
OK052	**Battle Ridge R**	**1.14**	**105**		Pg	20 11 17.5	-0.7
OK052					Sg	20 11 32.4	-0.5
OK052				IAML		20 11 37.4	
	comp=N,116nm,0.2s						
OK052				IAML		20 11 37.6	
	comp=N,114nm,0.2s						
QUOK	**Quay**	**1.18**	**96**		Pg	20 11 18.3	-0.7
QUOK					Sg	20 11 33.9	-0.3
FNO	**Franklin**	**1.21**	**149**		Pg	20 11 18.6	-0.9
FNO				IAML		20 11 40.3	
	comp=N,113nm,0.4s						
DEOK	**Depew**	**1.42**	**108**		Pn	20 11 22.0	-0.6
T35A	**Sooner Cattle**	**1.46**	**65**		Pn	20 11 23.3	0.0
WMOK	**Wichita Mounta**	**1.64**	**198**		Pn	20 11 25.7	0.0
WMOK	**Wichita Mounta**	**1.64**	**198**	IAmb_Lg		20 11 48.3	
	comp=Z,21nm,0.8s						
X34A	**Smith Ranch, M**	**1.71**	**171**		Pb	20 11 27.6	-0.6
TUL3	**Leonard**	**1.95**	**101**		Pn	20 11 30.5	+0.4
SMWD	**Samnorwood**	**2.07**	**236**		Pn	20 11 32.6	+0.9
SMWD				IAmb_Lg		20 12 05.1	
	comp=Z,23nm,1.0s						
R32A	**Long Quarter,**	**2.17**	**348**		Pn	20 11 34.4	+1.4
RLO	**Rose Lookout**	**2.54**	**92**		Pn	20 11 38.8	+0.7
U38A	**Gravette**	**3.05**	**86**	Pn	Pn	20 11 45.0	0.0
U38A				IAmb_Lg		20 12 32.3	
	comp=Z,5.5nm,1.0s						
AMTX	**Amarillo**	**3.20**	**245**	IAmb_Lg		20 12 42.1	
	comp=Z,10nm,0.8s						
HHAR	**Hobbs**	**3.41**	**89**	IAmb_Lg		20 12 53.8	
	comp=Z,4.5nm,0.8s						
DKNS	**Dickens**	**3.47**	**222**	IAmb_Lg		20 12 48.7	
	comp=Z,11nm,0.7s						
ABTX	**Abilene, Hawle**	**3.87**	**199**		Pn	20 11 55.9	-0.4
MIAR	**Mount Ida**	**4.13**	**114**	Pn	Pn	20 12 00.7	+0.8
P38A	**Dawn**	**4.94**	**46**	Pn	Pn	20 12 11.8	+0.7
UALR	**University of**	**4.98**	**106**	IAmb_Lg		20 13 45.0	
	comp=Z,5.9nm,0.9s						
P40A	**Paris**	**5.81**	**54**	IAmb_Lg		20 14 01.4	
	comp=Z,8.5nm,0.7s						

*KRNET **02** 20:33:49.2±0.1,42°.16N×79°.57E,h14km,mb3.0*
*SOME **02** 20:33:49.9,42°.27N×79°.50E,h5km*
*NNC **02** 20:33:50.5±0.7,42°.28N×79°.54E,h0km,mb2.7,mpv2.6, Error ellipse: s-maj=4.7km s-min=2.7km az=149.0*

ISC 02 20:33:49.6±2.0,42°.23N±0°.06×79°.59E±0°.06,h3km±11km, n29,σ1ᵖ33/50,14C-5D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.92**	**286**	⇓*i*P	**Pg**	**20 34 07.2**	**0.0**
PRZ				⇓*i*S	**Sg**	**20 34 20.2**	**+1.1**
SHLS	**Shalkode**	**0.93**	**354**	P	**Pb**	**20 34 08.3**	**-0.1**
	13nm,0.1s						
SHLS				S	**Sn**	**20 34 21.7**	**-1.9**
	27nm,0.2s						
SHLS	**Shalkode**	**0.93**	**354**	*e*P	**Pb**	**20 34 08.3**	**-0.1**
	13nm,0.1s						
SHLS				*e*S	**Sn**	**20 34 21.7**	**-1.9**
	27nm,0.2s						
UZB	**Uzynbulak**	**1.01**	**335**	P	**Pg**	**20 34 08.9**	**+0.1**
	1.6nm,0.1s						
UZB				S	**Sg**	**20 34 22.4**	**+0.5**
	18nm,0.2s						
UZB	**Uzynbulak**	**1.01**	**335**	*e*P	**Pg**	**20 34 08.9**	**+0.1**
	1.6nm,0.1s						
UZB				*e*S	**Sg**	**20 34 22.4**	**+0.5**
	18nm,0.2s						
PDGK	**Podgornoye**	**1.10**	**356**	⇓P	**Pg**	**20 34 10.1**	**-0.6**
	1.0nm,0.3s						
PDGK				⇑S	**Sg**	**20 34 24.9**	**0.0**
	6.0nm,0.3s						
SATY	**Saty**	**1.21**	**314**	P	**Pn**	**20 34 12.2**	**-1.2**
	1.5nm,0.2s						
SATY				S	**Sb**	**20 34 27.9**	**-1.2**
	13nm,0.2s						
KPKS	**Kokpek**	**1.40**	**332**	P	**Pb**	**20 34 16.0**	**-0.5**
	0.3nm,0.3s						
KPKS				S	**Sn**	**20 34 34.4**	**-0.8**
	8.5nm,0.5s						
KPKS	**Kokpek**	**1.40**	**332**	*e*P	**Pb**	**20 34 16.0**	**-0.5**
	0.3nm,0.3s						
KPKS				*e*S	**Sn**	**20 34 34.4**	**-0.8**
	8.5nm,0.5s						
TARG	**Taragay, Kyrgy**	**1.43**	**250**	⇑*i*P	**Pn**	**20 34 15.5**	**-1.2**
TARG				⇑*i*S	**Sn**	**20 34 34.9**	**-1.3**
KDJ	**Kajisay**	**1.80**	**268**	⇑*i*P	**Pb**	**20 34 22.3**	**-0.9**
KDJ				⇑*i*S	**Sb**	**20 34 46.4**	**+0.2**
MDOK	**Medeo**	**2.10**	**297**	Pg	**Pb**	**20 34 27.7**	**-0.5**
	2.3nm,0.6s						
MDOK				Lg	Lg	20 34 55.1	
	1.8nm,0.6s						
TNSS	**Tian-Shan**	**2.11**	**293**	Pg	**Pb**	**20 34 28.6**	**-0.1**
	1.0nm,0.2s						
TNSS				Lg	Lg	20 34 56.7	
	1.8nm,0.5s						
TNSS	**Tian-Shan**	**2.11**	**293**	*e*P	**Pb**	**20 34 28.6**	**-0.1**
	1.0nm,0.2s						
TNSS				*e*S	**Sb**	**20 34 56.7**	**+1.2**
	1.8nm,0.5s						
ARXS	**Arharly**	**2.36**	**327**	Pg	**Pb**	**20 34 33.5**	**+0.7**
	3.4nm,0.7s						
ARXS				Lg	Lg	20 35 04.4	
	50nm,0.5s						
ARXS	**Arharly**	**2.36**	**327**	*e*P	**Pb**	**20 34 33.5**	**+0.7**
	3.4nm,0.7s						
ARXS				*e*S	**Sg**	**20 35 04.4**	**-1.1**
	50nm,0.5s						
ULHL	**Ulahol**	**2.49**	**271**	*e*P	**Pb**	**20 34 32.9**	**-2.1**
ULHL				*i* S	**Sb**	**20 35 04.9**	**-1.3**
MTBS	**Maitube**	**2.50**	**292**	Pg	**Pb**	**20 34 35.8**	**+0.7**
	1.7nm,0.4s						
MTBS				Lg	Lg	20 35 08.4	
	9.6nm,0.5s						
MTBS	**Maitube**	**2.50**	**292**	*e*P	**Pb**	**20 34 35.8**	**+0.7**
	1.7nm,0.4s						
MTBS				*e*S	**Sb**	**20 35 08.4**	**+2.0**
	9.6nm,0.5s						
KTBS	**Karatobe**	**2.60**	**306**	Pg	**Pb**	**20 34 36.5**	**-0.3**
	3.0nm,0.5s						
KTBS				Lg	Lg	20 35 09.7	
	8.0nm,0.5s						
BOOM	**Boomskoye usch**	**2.72**	**277**	⇑*e*P	**Pn**	**20 34 36.1**	**+1.8**
BOOM				⇑*i*S	**Sb**	**20 35 10.4**	**-2.4**
KST	**Kastek**	**2.80**	**288**	Pg	**Pb**	**20 34 41.1**	**+0.9**
	2.8nm,0.7s						
KST				Lg	Lg	20 35 17.8	
	5.7nm,0.6s						
KST	**Kastek**	**2.80**	**288**	*e*P	**Pb**	**20 34 41.1**	**+0.9**
	2.8nm,0.7s						
KST				*e*S	**Sg**	**20 35 17.8**	**-1.7**
	5.7nm,0.6s						
DGS	**Degeres**	**2.99**	**291**	Pg	**Pb**	**20 34 44.0**	**+0.4**
	1.2nm,0.4s						
DGS				Lg	Lg	20 35 22.8	
	4.1nm,0.4s						
TKM2	**Tokmak 2**	**3.03**	**284**	⇑*i*P	**Pn**	**20 34 40.8**	**+2.2**
TKM2				⇑*i*S	**Sb**	**20 35 18.4**	**-3.4**
JNKS	**Jany-Kuch**	**3.18**	**250**	⇓*e*P	**Pn**	**20 34 42.3**	**+1.6**
JNKS				⇓*e*S	**Sn**	**20 35 20.6**	**+1.4**
KRBS	**Karabastau**	**3.23**	**298**	Pg	**Pb**	**20 34 48.5**	**+1.0**
	1.2nm,0.7s						
KRBS				Lg	Lg	20 35 30.1	
	1.2nm,0.5s						
USP	**Ospenovka**	**3.89**	**287**	⇑*i*P	**Pn**	**20 34 52.6**	**+2.3**
USP				⇑*i*S	**Sn**	**20 35 38.7**	**+2.2**
MK31	**Makanchi Array**	**4.95**	**22**	⇑Pn	**Pn**	**20 35 06.5**	**+1.7**
	0.1nm,0.2s,baz=202,slow=13,SNR=9.2						
MK31				⇑Sn	**Sn**	**20 36 02.6**	**0.0**
	0.2nm,0.5s						
MK31				⇑Lg	Lg	20 36 24.3	
	0.4nm,0.6s,baz=207,slow=27,SNR=4.2						

GII 02 20:36:15.1±0.0,32°.168N±0°.002×35°.395E±0°.001, h4km,Mws1.7,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMRA	**Hamra**	**0.05**	**47**	P	Pg	20 36 16.4	+0.2
HMRA	**Hamra**	**0.05**	**47**	S	Sg	20 36 17.7	+0.7
MEFR	**Maale Efrayim**	**0.10**	**176**	P	Pg	20 36 17.3	+0.2
MEFR	**Maale Efrayim**	**0.10**	**176**	S	Sg	20 36 19.4	+1.0
SLMZ	**Shlomzion**	**0.11**	**128**	P	Pg	20 36 17.5	+0.3
SLMZ	**Shlomzion**	**0.11**	**128**	S	Sg	20 36 19.6	+1.0
RGMN	**Argaman**	**0.11**	**89**	P	Pg	20 36 17.6	+0.4
RGMN	**Argaman**	**0.11**	**89**	S	Sg	20 36 19.9	+1.2
ROII	**Roi**	**0.11**	**44**	P	Pg	20 36 17.7	+0.4
ROII	**Roi**	**0.11**	**44**	S	Sg	20 36 20.0	+1.1
HMDT	**Nahal Hemdat**	**0.14**	**53**	P	Pg	20 36 18.4	+0.5
HMDT	**Nahal Hemdat**	**0.14**	**53**	S	Sg	20 36 20.4	+0.6
ARIL	**Ariel Universi**	**0.17**	**248**	P	Pg	20 36 18.5	+0.1
ARIL	**Ariel Universi**	**0.17**	**248**	S	Sg	20 36 21.9	+1.3
SALP	**Salfit**	**0.20**	**240**	P	Pg	20 36 19.0	0.0
SALP	**Salfit**	**0.20**	**240**	S	Sg	20 36 23.0	+1.5
YITV	**Yitav**	**0.22**	**174**	P	Pg	20 36 20.3	+0.9
YITV	**Yitav**	**0.22**	**174**	S	Sg	20 36 24.1	+1.8
MEHL	**Mehola**	**0.22**	**27**	P	Pg	20 36 19.8	+0.3
UJAP	**Al Uja**	**0.22**	**165**	P	Pg	20 36 20.0	+0.6
UJAP	**Al Uja**	**0.22**	**165**	S	Sg	20 36 23.5	+1.2
MMLI	**Mount Malkishu**	**0.27**	**5**	P	Pg	20 36 20.7	+0.3
MMLI	**Mount Malkishu**	**0.27**	**5**	S	Sg	20 36 25.6	+1.7
SLTI	**Sal'it**	**0.31**	**284**	P	Pg	20 36 21.5	+0.4
SLTI	**Sal'it**	**0.31**	**284**	S	Sb	20 36 27.2	-1.4
VJRH	**Vered Jericho**	**0.34**	**174**	P	Pg	20 36 22.6	+1.0
VJRH	**Vered Jericho**	**0.34**	**174**	S	Sb	20 36 27.8	-1.6
IZRL	**Izrael**	**0.40**	**351**	P	Pg	20 36 23.1	+0.3
IZRL	**Izrael**	**0.40**	**351**	S	Sb	20 36 30.2	-1.0
DSI	**Dead Sea**	**0.60**	**181**	P	Pg	20 36 26.9	+0.4
DSI	**Dead Sea**	**0.60**	**181**	S	Sb	20 36 35.8	-1.1
MMA0B	**Mount Meron ar**	**0.84**	**0**	P	Pg	20 36 31.4	+0.1
MMA0B	**Mount Meron ar**	**0.84**	**0**	S	Sb	20 36 44.3	+0.2
MMC7	**Mount Meron ar**	**0.85**	**360**	P	Pg	20 36 31.7	+0.2
MSBI	**Mazada**	**0.85**	**182**	P	Pg	20 36 31.9	+0.4
MSBI	**Mazada**	**0.85**	**182**	S	Sb	20 36 43.6	-0.6
NATI	**Neve Ativ**	**1.13**	**15**	P	Pg	20 36 36.2	-0.5
NATI	**Neve Ativ**	**1.13**	**15**	S	Sn	20 36 53.0	-0.6
PRNI	**Paran**	**1.84**	**191**	P	Pn	20 36 48.1	+0.6
PRNI	**Paran**	**1.84**	**191**	S	Sb	20 37 12.1	-0.7

AUST 02 20:50:56.2±0.9,25°.S±4°×11°.4E±1°.4,h10km,mb3.9/3, ML2.8/3,Error ellipse: s-maj=29.5km s-min=7.8km az=90.9,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVQOZ	**Cooralya Stati**	**0.76**	**32**	P	Pb	20 51 11.3	-0.3
CVQOZ				S	Sg	20 51 20.3	-0.6
GIRL	**Giralia**	**2.50**	**13**	P	Pn	20 51 37.0	0.0
MORW	**Morawa**	**4.50**	**152**	P	Pn	20 52 06.1	+1.6
MORW	**Morawa**	**4.50**	**152**	S	Sn	20 52 53.8	-3.2
MEEK	**Meekatharra**	**4.74**	**110**	P	Pn	20 52 07.3	-0.5
MEEK	**Meekatharra**	**4.74**	**110**	S	Sn	20 52 57.0	-6.0
BLDU	**Ballidu**	**6.14**	**154**	P	Pn	20 52 26.1	-0.9
	comp=Z,0.1nmcomp=Z,24nm,2.9s						
MUN	**Mundaring**	**7.22**	**162**	P	Pn	20 52 40.9	-1.0
	comp=Z,0.1nmcomp=Z,23nm,2.4s						
MUN	**Mundaring**	**7.22**	**162**	S	Sn	20 53 59.5	-4.5
KLBR	**Kellerberrin**	**7.42**	**152**	P	Pn	20 52 45.2	+0.6
	comp=Z,0.1nmcomp=Z,22nm,1.2s						

*NNC **02** 21:10:05.3±2.8,37°.67N×71°.73E,h146km±55km,mb2.7, mpv3.5,Error ellipse: s-maj=29.8km s-min=24.4km az=166.0*

ISC 02 21:10:02.2±3.6,37°.5N±0°.2×71°.7E±0°.1,h109km,n10, σ0ᵖ87/12,2C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**5.43**	**16**	P	**Pn**	**21 11 22.1**	**+1.2**
	SNR=52						
AAK	**Ala-Archa**	**5.59**	**22**	P	**Pn**	**21 11 24.2**	**+1.0**
	SNR=30						
AAK	**Ala-Archa**	**5.59**	**22**	⇓P	**Pn**	**21 11 23.7**	**+0.6**
	3.1nm,0.4s						
AAK				⇑S	**Sn**	**21 12 25.9**	**-0.3**
	5.8nm,0.6s						
KK31	**Karatay Array**	**5.71**	**351**	P	**Pn**	**21 11 25.5**	**+1.0**
	1.8nm,0.3s,baz=179,slow=12,SNR=56						
KK31				⇑S	**Sn**	**21 12 28.0**	**-0.7**
	12nm,0.3s,baz=171,slow=24,SNR=3.9						
KBK	**Karagaybulak**	**5.75**	**25**	P	**Pn**	**21 11 26.2**	**+1.0**
	SNR=11						
ULHL	**Ulahol**	**5.91**	**35**	P	**Pn**	**21 11 27.2**	**-0.3**
	SNR=18						
CHMS	**Chumysh**	**6.00**	**22**	P	**Pn**	**21 11 29.2**	**+0.7**
	SNR=8.0						
USP	**Ospenovka**	**6.18**	**19**	P	**Pn**	**21 11 31.5**	**+0.5**
	SNR=5.1						
TKM2	**Tokmak 2**	**6.21**	**27**	P	**Pn**	**21 11 31.9**	**+0.4**
	SNR=7.0						
AB31	**Akbulak array**	**14.54**	**328**	P	**Pn**	**21 13 21.9**	**-0.7**
	0.3nm,0.4s,baz=166,slow=9.2,SNR=17						

WEL 02 21:17:41.4±1.0,31°.S±17°×18°.0E±4°.6,h421km±31km, M4.0/9,mB4.2/6,MLv4.4/9,Mw(mB)3.3/6,Error ellipse: s-maj=62.6km s-min=11.4km az=108.3,confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.27**	**189**	P	P	21 19 18.6	+1.3
MXZ				S	S	21 20 35.4	-0.6
WCZ	**Waipu Caves**	**6.28**	**222**	P	P	21 19 20.9	+3.4
WMGZ	**Waiomatatini S**	**6.51**	**188**	P	P	21 19 20.9	+0.6
HAZ	**Te Kaha**	**6.54**	**192**	P	P	21 19 21.0	+0.3
HAZ				S	S	21 20 41.3	0.0
PKGZ	**Pakihiroa**	**6.60**	**190**	P	P	21 19 21.9	+0.6
PKGZ				S	S	21 20 44.2	+1.6
RUGZ	**Raukumara Rang**	**6.76**	**192**	P	P	21 19 23.4	+0.2
RUGZ				S	S	21 20 45.3	-0.7
TWGZ	**Tauwhareparae**	**6.92**	**190**	P	P	21 19 25.1	+0.2
TWGZ				S	S	21 20 48.9	0.0
MWZ	**Matawai**	**7.15**	**193**	P	P	21 19 28.5	+1.2
MWZ				S	S	21 20 54.0	+0.4
URZ	**Urewera**	**7.16**	**195**	P	P	21 19 27.1	-0.3
URZ				S	S	21 20 54.0	+0.2
CNGZ	**Carnagh Statio**	**7.19**	**188**	P	P	21 19 25.3	-2.4
CNGZ				S	S	21 20 57.4	+3.1
TKGZ	**Te Karaka**	**7.20**	**190**	P	P	21 19 25.6	-2.2
TKGZ				S	S	21 20 52.8	-1.6
RAGZ	**Rawiri**	**7.33**	**193**	P	P	21 19 28.9	-0.4
MUGZ	**Murupara**	**7.45**	**197**	P	P	21 19 30.8	+0.2
MUGZ				S	S	21 21 00.6	+1.0
RIGZ	**Rimuhau**	**7.47**	**191**	P	P	21 19 31.0	+0.2
RIGZ				S	S	21 20 59.7	-0.3
RTZ	**Ruatahuna**	**7.53**	**195**	P	P	21 19 31.1	-0.5
RAHZ	**Arahi**	**7.80**	**194**	P	P	21 19 34.9	+0.5
MRHZ	**Matea Rd**	**7.88**	**198**	P	P	21 19 35.2	-0.1
BKZ	**Black Stump Fm**	**8.17**	**197**	P	P	21 19 37.8	-0.7
BKZ				S	S	21 21 15.8	+1.4
KWHZ	**Kaweka Forest**	**8.44**	**197**	P	P	21 19 41.0	-0.3
KWHZ				S	S	21 21 19.8	0.0
KAHZ	**Kahuranaki**	**8.69**	**194**	P	P	21 19 43.9	-0.2
KAHZ				S	S	21 21 26.5	+1.5
PXZ	**Pawanui**	**8.92**	**193**	P	P	21 19 46.0	-0.6

*SJA **02** 21:29:01.1±0.7,21°.51S×68°.54W,h137km±4km,ML3.7, MW3.7*
*NEIC **02** 21:29:02.0±1.0,21°.54S±0°.05×68°.51W±0°.09,h132km±6km, mb4.1/5,ML3.8(GUC),Error ellipse: s-maj=12.9km s-min=7.2km az=85.0*
*GUC **02** 21:29:02.8±0.6,21°.51S×68°.49W,h125km±3km,ML3.8*

ISC 02 21:29:01.4±0.8,21°.54S±0°.03×68°.58W±0°.04,h138km±7km, n73,σ1ᵖ11/107,10C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.67**	**247**		**Pn**	**21 29 23.1**	**+0.6**
PB09				Sn	**Sn**	**21 29 38.9**	**+0.3**
PB09	**IPOC Station P**	**0.67**	**247**	⇑*e*P	**Pn**	**21 29 23.1**	**+0.6**
PB09				*e*S	**Sn**	**21 29 39.1**	**+0.4**
PB09				IAML		21 29 39.8	
	comp=N,2μm,0.5s						
PB09	**IPOC Station P**	**0.67**	**247**	*e*P	**Pn**	**21 29 23.1**	**+0.6**
PB09				*e*S	**Sn**	**21 29 39.1**	**+0.4**
PB09				IAML		21 29 40.0	
	comp=Z,1μm,0.5s						
PB01	**IPOC Station P**	**0.98**	**300**		**Pn**	**21 29 25.1**	**+0.2**
PB01				Sn	**Sn**	**21 29 42.0**	**-0.8**
PB01	**IPOC Station P**	**0.98**	**300**	⇑*e*P	**Pn**	**21 29 25.0**	**0.0**
PB01				*e*S	**Sn**	**21 29 42.1**	**-0.6**
PB01				IAML		21 29 44.2	
	comp=E,3μm,0.3s						
PB01	**IPOC Station P**	**0.98**	**300**	*e*P	**Pn**	**21 29 24.9**	**0.0**
PB01				IAML		21 29 45.0	
	comp=Z,880nm,0.2s						
PB03	**IPOC Station P**	**1.20**	**245**		**Pn**	**21 29 27.8**	**+0.7**
PB03				Sn	**Sn**	**21 29 47.0**	**+0.3**
PB03	**IPOC Station P**	**1.20**	**245**	⇑*i*P	**Pn**	**21 29 27.8**	**+0.7**
PB03				*e*S	**Sn**	**21 29 47.1**	**+0.4**
PB03				IAML		21 29 50.0	
	comp=N,2μm,0.1s						
PB03	**IPOC Station P**	**1.20**	**245**	*e*P	**Pn**	**21 29 27.8**	**+0.7**
PB03				*e*S	**Sn**	**21 29 47.5**	**+0.8**
PB03				IAML		21 29 48.9	
	comp=Z,1μm,0.3s						
PB02	**IPOC Station P**	**1.24**	**280**		**Pn**	**21 29 28.2**	**+0.7**
PB02				Sn	**Sn**	**21 29 47.8**	**+0.5**
PB02	**IPOC Station P**	**1.24**	**280**	⇑*e*P	**Pn**	**21 29 28.0**	**+0.6**
PB02				*e*S	**Sn**	**21 29 48.1**	**+0.8**
PB02				IAML		21 29 48.9	
	comp=N,4μm,0.2s						
PB02	**IPOC Station P**	**1.24**	**280**	*e*P	**Pn**	**21 29 28.0**	**+0.6**
PB02				*e*S	**Sn**	**21 29 48.4**	**+1.1**
PB02				IAML		21 29 52.3	
	comp=Z,2μm,0.2s						
AF01	**San Pedro de A**	**1.46**	**165**		**Pn**	**21 29 29.4**	**-0.5**
AF01	**San Pedro de A**	**1.46**	**165**	*e*P	**Pn**	**21 29 31.4**	**+1.5**
AF01				IAML		21 30 08.9	
	comp=Z,400nm,0.8s						
PB06	**IPOC Station P**	**1.48**	**218**		**Pn**	**21 29 31.1**	**+1.1**
PB06	**IPOC Station P**	**1.48**	**218**	⇑*e*P	**Pn**	**21 29 31.0**	**+1.0**
PB06				*e*S	**Sn**	**21 29 53.1**	**+1.2**
PB06				IAML		21 29 53.9	
	comp=E,2μm,0.4s						
PB06	**IPOC Station P**	**1.48**	**218**	*e*P	**Pn**	**21 29 31.0**	**+1.0**
PB06				*e*S	**Sn**	**21 29 53.3**	**+1.4**
PB06				IAML		21 29 53.6	
	comp=Z,862nm,0.4s						
PB08	**IPOC Station P**	**1.49**	**339**		**Pn**	**21 29 31.0**	**+0.6**
PB08	**IPOC Station P**	**1.49**	**339**	⇓*e*P	**Pn**	**21 29 31.0**	**+0.6**
PB08				*e*S	**Sn**	**21 29 52.0**	**-0.4**
PB08				IAML		21 29 54.9	
	comp=E,752nm,0.3s						
PB08	**IPOC Station P**	**1.49**	**339**	*e*P	**Pn**	**21 29 30.9**	**+0.5**
PB08				*e*S	**Sn**	**21 29 52.6**	**+0.2**
PB08				IAML		21 29 55.2	
	comp=Z,415nm,0.3s						
PATCX	**Punta Patache**	**1.63**	**296**		**Pn**	**21 29 32.5**	**+1.0**
PATCX	**Punta Patache**	**1.63**	**296**	⇑*e*P	**Pn**	**21 29 32.5**	**+0.9**
PATCX				*e*S	**Sn**	**21 29 55.2**	**+0.6**
PATCX	**Punta Patache**	**1.63**	**296**	*e*P	**Pn**	**21 29 32.5**	**+0.9**
PATCX				*e*S	**Sn**	**21 29 55.8**	**+1.2**
PATCX				IAML		21 29 57.2	
	comp=Z,999nm,0.2s						
HMBC	**Humberstone**	**1.75**	**315**		**Pn**	**21 29 33.3**	**+0.3**
HMBC	**Humberstone**	**1.75**	**315**	⇑*e*P	**Pn**	**21 29 33.2**	**+0.3**
HMBC				*e*S	**Sn**	**21 29 56.8**	**-0.3**
HMBC				IAML	

YJA				eS		Sn	21 30 23.5	+0.2
PX02	**IPOC Station P**	**2.98**	**329**	*eP*		**Pn**	**21 29 47.8**	**-0.3**
PB16	**IPOC Station P**	**3.30**	**345**			**Pn**	**21 29 53.5**	**+0.8**
PB16	**IPOC Station P**	**3.30**	**345**⇑	*eP*		**Pn**	**21 29 53.7**	**+1.0**
PB16				eS		Sn	21 30 33.2	+0.8
PB16				IAML			21 30 39.2	
	comp=N,67nm,0.3s							
PB16	**IPOC Station P**	**3.30**	**345**	*eP*		**Pn**	**21 29 53.8**	**+1.0**
PB16				eS		Sn	21 30 36.0	+3.6
PB16				IAML			21 30 44.3	
	comp=Z,46nm,0.4s							
PB12	**IPOC Station P**	**3.34**	**330**			**Pn**	**21 29 52.2**	**-0.5**
PB12	**IPOC Station P**	**3.34**	**330**	*eP*		**Pn**	**21 29 51.8**	**-1.0**
PB12				eS		Sn	21 30 31.5	-1.0
PB12				IAML			21 30 36.5	
	comp=Z,103nm,0.3s							
HJA	**Humahuaca**	**3.37**	**120**	*eP*		**Pn**	**21 29 54.9**	**+1.4**
SALTA		**3.38**	**143**	*eP*		**Pn**	**21 29 55.1**	**+1.4**
SALTA				IAML			21 31 01.3	
	comp=Z,57nm,0.1s							
PB14	**IPOC Station P**	**3.50**	**208**			**Pn**	**21 29 55.6**	**+0.5**
PB14	**IPOC Station P**	**3.50**	**208**	*eP*		**Pn**	**21 29 56.5**	**+1.4**
PB14	**IPOC Station P**	**3.50**	**208**	*eP*		**Pn**	**21 29 55.6**	**+0.5**
PB14				eS		Sn	21 30 23.2	-13
PB14				IAML			21 30 48.0	
	comp=Z,86nm,0.4s							
AP01	**Chacalluta**	**3.56**	**332**	Pn		**Pn**	**21 29 56.8**	**+1.3**
AP01	**Chacalluta**	**3.56**	**332**	*eP*		**Pn**	**21 29 59.0**	**+3.5**
AP01				IAML			21 30 53.4	
	comp=Z,229nm,0.1s							
GO02	**Mina Guanaco**	**3.73**	**194**			**Pn**	**21 29 58.5**	**+0.5**
GO02	**Mina Guanaco**	**3.73**	**194**	*eP*		**Pn**	**21 29 58.9**	**+0.8**
GO02				eS		Sn	21 30 29.1	-13
GO02				IAML			21 30 56.0	
	comp=Z,77nm,0.5s							
AC01	**Pan de Azucar**	**4.95**	**202**	Pn		**Pn**	**21 30 13.3**	**-0.5**
AC01	**Pan de Azucar**	**4.95**	**202**	*eP*		**Pn**	**21 30 13.1**	**-0.8**
AC01				eS		**Sn**	**21 31 08.6**	**-1.8**
AC01				IAML			21 31 28.9	
	comp=Z,39nm,0.5s							
LPAZ	**La Paz**	**5.24**	**5**			**Pn**	**21 30 19.4**	**+1.0**
LPAZ	**La Paz**	**5.24**	**5**	*eP*		**Pn**	**21 30 14.3**	**-4.1**
AC02	**Maricunga**	**5.30**	**185**			**Pn**	**21 30 18.9**	**-0.2**
AC02	**Maricunga**	**5.30**	**185**	*eP*		**Pn**	**21 30 19.9**	**+0.9**
AC02				IAML			21 32 00.3	
	comp=Z,19nm,0.6s							
LCO	**Las Campanas**	**7.69**	**194**	Pn		**Pn**	**21 30 47.8**	**-3.0**
GO04	**Tololo Observa**	**8.83**	**193**	Pn		**Pn**	**21 31 03.5**	**-2.6**
BO02	**Sierra Bellavi**	**13.35**	**188**	Pn		**Pn**	**21 32 05.5**	**0.0**
PLCA	**Paso Flores**	**19.21**	**185**	P		**Pn**	**21 33 16.9**	**-0.2**
PLCA				IAmb	IAmb		21 33 39.9	
	comp=Z,7.2nm,1.4s							
VAO	**Valinhos**	**20.06**	**98**	P		**P**	**21 33 22.2**	**-1.7**
MAL2	**Monte Alegre,**	**23.94**	**38**	P		**P**	**21 34 02.8**	**-0.1**
MAL2				IAmb	IAmb		21 34 05.2	
	comp=Z,4.8nm,0.7s							
BOAV	**Boa Vista**	**25.06**	**19**	P		**P**	**21 34 14.1**	**+1.0**
DBIC	**Dimbokro**	**68.45**	**73**	P		**P**	**21 39 49.5**	**+0.5**
DBIC				IAmb	IAmb		21 39 50.8	
	comp=Z,6.8nm,0.9s							

NEIC ***02*** *21:29:55.9±2.2,8°.23S±0°.06×118°.53E±0°.06,h169km±2km, mb4.4/28, Error ellipse: s-maj=9.5km s-min=7.9km az=197.0*

DJA ***02*** *21:29:56.5±0.1,8°.3S±2°×11°.9E±°,h171km±2km,M4.8/47, mB5.3/11,mb4.7/47,MLv4.9/30,Mw(mB)4.7/11, MwMwp6.4/1,Mwp6.3/1*

IDC ***02*** *21:29:57.2±1.2,8°.03S×118°.80E,h186km±11km,mb3.8/15, mbtmp4.4/18,MS2.3/1,Error ellipse: s-maj=17.0km s-min=6.7km az=60.0*

ISC 02 21:29:55.6±0.3,8°.23S±0°.04×118°.55E±0°.04,h171km,n157, σ1ş44/168,mb4.3/28,4C,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.97**	**232**	P	**Pn**	**21 30 23.3**	**+1.1**
PLAI	**Plampang**	**0.97**	**232**	P	**Pn**	**21 30 23.3**	**+1.1**
PLAI				S	**Sn**	**21 30 43.6**	**+0.9**
WBSI	**Waikabubak, Su**	**1.63**	**149**	P	**Pn**	**21 30 28.8**	**+0.6**
WBSI				S	**Sn**	**21 30 54.5**	**+1.0**
TWSI	**Taliwang, Sumb**	**1.73**	**253**	P	**Pn**	**21 30 29.7**	**+0.6**
WSI	**Waingapu**	**2.24**	**130**	P	**Pn**	**21 30 35.2**	**+0.4**
BASI	**Baing, Sumba**	**2.81**	**135**	P	**Pn**	**21 30 42.4**	**+0.8**
BSSI	**Bau Bau, Buton**	**2.83**	**43**	P	**Pn**	**21 30 43.1**	**+1.3**
EDFI	**Ende, Flores**	**3.15**	**100**	P	**Pn**	**21 30 46.4**	**+0.6**
BKSI	**Bulukumba**	**3.28**	**28**	P	**Pn**	**21 30 49.1**	**+1.7**
SRBI	**Singaraja**	**3.31**	**272**	P	**Pn**	**21 30 48.4**	**+0.7**
DNP	**Denpasar**	**3.33**	**262**	P	**Pn**	**21 30 49.8**	**+1.8**
KAPI	**Kappang**	**3.41**	**21**		**Pn**	**21 30 50.6**	**+1.6**
KAPI				Sn	**Sn**	**21 31 31.1**	**+0.5**
KAPI	**Kappang**	**3.41**	**21**	P	**Pn**	**21 30 49.3**	**+0.3**
	156nm,0.6s,baz=195,slow=8.2,SNR=132						
KAPI				S	**Sn**	**21 31 28.0**	**-2.6**
	76nm,0.8s,baz=298,slow=23,SNR=5.5						
KAPI				LR	LR	21 32 16.1	
	comp=Z,44nm,18.5s,baz=190,slow=44						
KAPI	**Kappang**	**3.41**	**21**	P	**Pn**	**21 30 50.7**	**+1.7**
KAPI	**Kappang**	**3.41**	**21**	S	**Sn**	**21 31 32.1**	**+1.5**
MMRI	**Maumere**	**3.67**	**97**		**Pn**	**21 30 52.8**	**+0.5**
MMRI				Sn	**Sn**	**21 31 36.4**	**-0.1**
MMRI	**Maumere**	**3.67**	**97**	P	**Pn**	**21 30 53.2**	**+0.9**
MMRI	**Maumere**	**3.67**	**97**	P	**Pn**	**21 30 52.9**	**+0.6**
BNSI	**Bone**	**4.11**	**22**	P	**Pn**	**21 31 00.5**	**+2.6**
ABJI	**Asem Bagus**	**4.30**	**275**	P	**Pn**	**21 31 02.9**	**+2.6**
JAGI	**Jajag, Banyuwa**	**4.36**	**267**		**Pn**	**21 31 00.7**	**-0.5**
JAGI				Sn	**Sn**	**21 31 50.8**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.36**	**267**	P	**Pn**	**21 31 00.3**	**-0.8**
JAGI	**Jajag, Banyuwa**	**4.36**	**267**	S	**Sn**	**21 31 51.6**	**-0.7**
JAGI	**Jajag, Banyuwa**	**4.36**	**267**	P	**Pn**	**21 31 00.5**	**-0.6**
SPSI	**Sidrap Palu**	**4.41**	**16**	P	**Pn**	**21 31 03.3**	**+1.6**
KMMI	**Kalianget**	**4.69**	**284**	P	**Pn**	**21 31 08.1**	**+2.7**
BBSI	**Bau Bau**	**4.83**	**56**	P	**Pn**	**21 31 09.3**	**+2.0**
BLJI	**Banyuglugur**	**4.93**	**275**	P	**Pn**	**21 31 10.4**	**+1.9**
BATI	**Baumata**	**5.42**	**112**	P	**Pn**	**21 31 15.6**	**+0.6**
	459nm,0.4s,baz=306,slow=2.1,SNR=154						
BATI				S	**Sn**	**21 32 13.7**	**-3.4**
	828nm,0.5s,baz=345,slow=23,SNR=13						
BATI	**Baumata**	**5.42**	**112**	P	**Pn**	**21 31 15.4**	**+0.5**
SOEI	**Soe**	**5.85**	**105**		**Pn**	**21 31 21.2**	**+0.5**
SOEI	**Soe**	**5.85**	**105**	P	**Pn**	**21 31 21.3**	**+0.6**
SOEI	**Soe**	**5.85**	**105**	S	**Sn**	**21 32 27.8**	**+0.3**
SOEI	**Soe**	**5.85**	**105**	P	**Pn**	**21 31 21.1**	**+0.5**
BBKI	**Banjar Baru**	**6.00**	**322**	P	**Pn**	**21 31 24.2**	**+1.6**
	0.9nm68nm,1.1s						
GRJI	**Gresik**	**6.16**	**282**	P	**Pn**	**21 31 27.1**	**+2.4**
TBJI	**Tambak Boyo**	**6.79**	**281**	P	**Pn**	**21 31 34.1**	**+1.1**
	0.8nm241nm,0.8s						
NGJI	**Ngawi**	**7.08**	**276**	P	**Pn**	**21 31 39.4**	**+2.6**
	0.3nm87nm,0.8s						
PCJI	**Pacitan**	**7.30**	**270**	P	**Pn**	**21 31 40.4**	**+0.7**
UGM	**Wanagama**	**7.96**	**272**		**Pn**	**21 31 46.7**	**-1.7**
UGM	**Wanagama**	**7.96**	**272**	P	**Pn**	**21 31 48.2**	**-0.3**
UGM	**Wanagama**	**7.96**	**272**	S	**Sn**	**21 33 14.9**	**-2.7**
UGM	**Wanagama**	**7.96**	**272**	P	**Pn**	**21 31 48.7**	**+0.2**
	220nm,0.8s						
SMRI	**Semarang**	**8.12**	**278**		**Pn**	**21 31 51.4**	**+0.7**
SMRI	**Semarang**	**8.12**	**278**	P	**Pn**	**21 31 52.8**	**+2.1**
	118nm,0.9s						
YOGI	**Yogyakarta**	**8.19**	**272**	P	**Pn**	**21 31 53.1**	**+1.6**
LUWI	**Luwuk**	**8.29**	**31**	P	**Pn**	**21 31 54.3**	**+1.5**
	5µm35nm,1.0s						
KPJI	**Karang Pucung**	**9.57**	**275**	P	**Pn**	**21 32 09.8**	**0.0**
	69nm,0.5s						
SANI	**Sanana**	**9.62**	**51**	P	**Pn**	**21 32 12.4**	**+2.0**
	51nm,1.2s						
NLAI	**Namlea**	**9.84**	**60**	P	**Pn**	**21 32 15.0**	**+1.7**
	41nm,0.6s						
AAI	**Ambon**	**10.60**	**65**	P	**Pn**	**21 32 24.7**	**+1.5**
	73nm,1.2s						
BBJI	**Bungbulang**	**10.83**	**273**	P	**Pn**	**21 32 24.6**	**-1.7**
BBJI	**Bungbulang**	**10.83**	**273**	S	**Sn**	**21 34 24.0**	**-2.5**
LEM	**Lembang**	**10.93**	**277**	P	**Pn**	**21 32 28.5**	**+0.8**
	23nm,0.6s,baz=44,slow=14,SNR=5.7						
CNJI	**Cibinong**	**11.35**	**274**	P	**Pn**	**21 32 31.2**	**-1.9**
	40nm,1.4s						
MSAI	**Masohi**	**11.40**	**65**	P	**Pn**	**21 32 37.0**	**+3.3**
	49nm,0.7s						
BNDI	**Bandanaira**	**11.87**	**73**	P	**Pn**	**21 32 43.9**	**+4.2**
FITZ	**Fitzroy Crossi**	**11.99**	**146**	Pn	**Pn**	**21 32 41.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**11.99**	**146**	P	**Pn**	**21 32 41.9**	**+0.6**
	18nm,0.6s,baz=331,slow=8.5,SNR=90						
FITZ				S	**Sn**	**21 34 50.0**	**-4.3**
	49nm,0.7s,baz=191,slow=19,SNR=17						
KNRA	**Kununurra**	**12.43**	**127**	P	**Pn**	**21 32 45.6**	**-1.3**
	comp=Z,62nm,0.5s						
KNRA	**Kununurra**	**12.43**	**127**		**Pn**	**21 32 45.9**	**-1.0**
TNTI	**Ternate**	**12.54**	**45**	Pn	**Pn**	**21 32 47.4**	**-0.9**
TNTI	**Ternate**	**12.54**	**45**	P	**Pn**	**21 32 49.3**	**+1.0**
	comp=Z,836nmcomp=Z,23nm,0.9s						
SAUI	**Saumlaki**	**12.63**	**90**	Pn	**Pn**	**21 32 47.7**	**-1.7**
SAUI	**Saumlaki**	**12.63**	**90**	P	**Pn**	**21 32 49.3**	**-0.1**
DRS	**Darwin Rock St**	**12.85**	**110**	P	**Pn**	**21 32 53.4**	**+1.2**
MBWA	**Marble Bar**	**12.91**	**175**		**Pn**	**21 32 52.9**	**-0.1**
MBWA	**Marble Bar**	**12.91**	**175**	P	**Pn**	**21 32 55.1**	**+2.1**
MTN	**Manton Dam**	**13.19**	**111**	P	**Pn**	**21 32 55.8**	**-0.8**
MTN	**Manton Dam**	**13.19**	**111**		**Pn**	**21 32 56.2**	**-0.5**
KASI	**Kota Agung**	**14.21**	**280**	P	**Pn**	**21 33 11.0**	**+1.6**
	comp=Z,38nm,0.5s						
FAKI	**Fak Fak**	**14.61**	**70**		**Pn**	**21 33 12.7**	**-1.8**
FAKI	**Fak Fak**	**14.61**	**70**	P	**Pn**	**21 33 12.7**	**-1.8**
	comp=Z,103nm,0.5s						
SWI	**Sorong**	**14.62**	**61**	P	**Pn**	**21 33 15.0**	**+0.4**
	comp=Z,97nm,0.8s						
LWLI	**Liwa**	**14.74**	**282**	P	**P**	**21 33 19.7**	**+1.9**
	comp=Z,77nm,0.8s						
GIRL	**Giralia**	**14.92**	**196**		**Pn**	**21 33 18.4**	**+0.3**
KSI	**Kapahiang**	**16.51**	**285**	P	**P**	**21 33 38.1**	**+0.8**
	comp=Z,40nm,0.5s						
RKPI	**Ransiki, Papua**	**16.93**	**68**	P	**P**	**21 33 42.5**	**+0.6**
	comp=Z,2µmcomp=Z,95nm,0.7s						
MASI	**Maura Aman, Be**	**16.99**	**286**	P	**P**	**21 33 44.9**	**+2.3**
	comp=Z,36nm,0.5s						
MEEK	**Meekatharra**	**18.31**	**180**	P	**P**	**21 33 58.3**	**+1.4**
BAKI	**Biak**	**18.83**	**69**	P	**P**	**21 34 04.5**	**+1.9**
	comp=Z,56nm,0.8s						
WB0	**Warramunga Arr**	**19.16**	**128**	P	**P**	**21 34 06.1**	**-0.1**
WB0				IAmb	IAmb	21 34 07.1	
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**19.22**	**129**	P	**P**	**21 34 06.2**	**-0.6**
WRA	**Warramunga Arr**	**19.22**	**129**	P	**P**	**21 34 06.8**	**+0.1**
	comp=Z,6.0nm,0.3s,baz=302,slow=12,SNR=93						
WRA				S	**S**	**21 37 33.0**	**-2.4**
	comp=Z,7.8nm,0.7s,baz=304,slow=21,SNR=8.0						
WRAB	**Tennant Creek**	**19.22**	**129**	P	**P**	**21 34 06.8**	**0.0**
PPSI	**Pulau Pagai**	**19.23**	**285**	P	**P**	**21 34 08.5**	**+1.5**
	comp=Z,94nm,1.0s						
MORW	**Morawa**	**20.86**	**186**	P	**P**	**21 34 24.7**	**+0.4**
SMPI	**Sarmi**	**21.00**	**74**	P	**P**	**21 34 25.7**	**-0.3**
AS31	**Alice Springs**	**21.26**	**138**	P	**P**	**21 34 28.9**	**+0.2**
ASAR	**Alice Springs**	**21.26**	**138**	P	**P**	**21 34 29.1**	**+0.4**
	comp=Z,38nm,0.5s,baz=316,slow=9.1,SNR=342						
ASAR				S	**S**	**21 38 15.3**	**+0.5**
	comp=Z,8.9nm,0.8s,baz=323,slow=23,SNR=22						
ASAR				ScP	**ScP**	**21 41 46.2**	**-1.4**
	comp=Z,1.8nm,0.6s,baz=360,slow=1.5,SNR=5.5						
	comp=Z,38nm,0.5s						
GENI	**Genyem**	**22.23**	**77**	P	**P**	**21 34 37.9**	**-0.7**
	comp=Z,70nm,0.9s						
BLDU	**Ballidu**	**22.34**	**184**	P	**P**	**21 34 39.5**	**0.0**
JAY	**Jayapura**	**22.77**	**77**	P	**P**	**21 34 42.2**	**-1.4**
	comp=Z,10nm,0.9s,baz=187,slow=2.7,SNR=2.5						
	comp=Z,10nm,0.9s						
KLBR	**Kellerberrin**	**23.26**	**182**	P	**P**	**21 34 48.3**	**+0.4**
MUN	**Mundaring**	**23.73**	**185**	P	**P**	**21 34 52.6**	**+0.4**
QIS	**Mount Isa**	**23.75**	**123**	P	**P**	**21 34 53.4**	**+0.8**
FORT	**Forrest**	**24.13**	**160**		**P**	**21 34 55.6**	**-0.2**
FORT				IAmb	IAmb	21 34 58.2	
	comp=Z,13nm,0.7s						
NWAO	**Narrogin (SRO)**	**24.61**	**183**	P	**P**	**21 35 01.0**	**+0.9**
NWAO	**Narrogin (SRO)**	**24.61**	**183**	P	**P**	**21 35 00.8**	**+0.7**
COEN	**Coen**	**24.81**	**105**	P	**P**	**21 35 02.2**	**-0.1**
COEN				IAmb	IAmb	21 35 08.9	
	comp=Z,14nm,0.6s						
COEN	**Coen**	**24.81**	**105**	P	**P**	**21 35 03.6**	**+1.4**
BBOO	**Buckleboo**	**29.35**	**149**	P	**P**	**21 35 42.9**	**+0.3**
BBOO	**Buckleboo**	**29.35**	**149**	P	**P**	**21 35 43.4**	**+0.8**
HTT	**Hallett**	**31.36**	**146**	P	**P**	**21 36 01.7**	**+1.4**
STKA	**Stephens Creek**	**31.83**	**141**	P	**P**	**21 36 05.2**	**+0.9**
STKA	**Stephens Creek**	**31.83**	**141**	P	**P**	**21 36 04.8**	**+0.5**
	comp=Z,8.2nm,0.6s,baz=312,slow=8.1,SNR=16						
	comp=Z,8.2nm,0.6s						
STKA	**Stephens Creek**	**31.83**	**141**	P	**P**	**21 36 05.0**	**+0.6**
CM31	**Chiang Mai Arr**	**32.83**	**324**	P	**P**	**21 36 13.7**	**+0.5**
CM31				IAmb	IAmb	21 36 35.2	
	comp=Z,7.6nm,1.5s						
CMAR	**Chiang Mai Arr**	**32.83**	**324**	P	**P**	**21 36 13.8**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=159,slow=7.6,SNR=9.5						
	comp=Z,0.5nm,0.5s						
CMSA	**Cobar Meteorol**	**34.30**	**136**	P	**P**	**21 36 27.9**	**+2.1**
PZH	**PanZhiHua**	**38.19**	**335**	P	**P**	**21 36 59.7**	**+0.8**
CAN	**Canberra**	**38.77**	**139**	P	**P**	**21 37 05.0**	**+1.3**
CAN	**Canberra**	**38.77**	**139**	P	**P**	**21 37 05.1**	**+1.4**
CNB	**Canberra Magne**	**39.01**	**138**	P	**P**	**21 37 07.7**	**+2.0**
SHL	**Shillong**	**42.45**	**323**	P	**P**	**21 37 33.1**	**-1.0**
JNU	**Nakatsue**	**42.76**	**15**	P	**P**	**21 37 35.3**	**-1.0**
JNU				IAmb	IAmb	21 37 43.5	
	comp=Z,10.0nm,1.1s						
JTU	**Tsushima**	**43.74**	**13**	P	**P**	**21 37 44.6**	**+0.6**
KSRS	**Korea Array**	**46.28**	**10**	P	**P**	**21 38 04.0**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=187,slow=7.9,SNR=5.5						
	comp=Z,2.1nm,0.9s						
EVN	**Everest**	**47.28**	**321**	P	**P**	**21 38 11.8**	**-1.0**
EVN				IAmb	IAmb	21 38 13.2	
	comp=Z,10nm,1.5s						
MJAR	**Matsushiro Arr**	**48.21**	**21**	P	**P**	**21 38 17.0**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=187,slow=9.8,SNR=5.6						
	comp=Z,1.1nm,0.7s						
HHC	**Hu-ho-hao-te**	**49.26**	**353**	*eP*	**P**	**21 38 27.9**	**+0.9**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,6.3s						
USRK	**Ussuriysk Ar.**	**53.58**	**12**	P	**P**	**21 38 57.7**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=195,slow=5.4,SNR=6.0						
	comp=Z,0.8nm,0.3s						
JCZ	**Jackson Bay**	**56.30**	**138**	P	**P**	**21 39 19.8**	**+1.1**
FOZ	**Fox Glacier**	**56.77**	**137**	P	**P**	**21 39 22.1**	**+0.2**
SONM	**Songino Array**	**56.85**	**350**	P	**P**	**21 39 21.8**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=172,slow=8.1,SNR=8.2						
	comp=Z,1.4nm,0.5s						
LBZ	**Lake Benmore**	**57.34**	**138**	P	**P**	**21 39 26.1**	**+0.2**
RPZ	**Rata Peaks**	**57.67**	**137**	P	**P**	**21 39 29.1**	**+0.9**
CASY	**Casey**	**58.23**	**184**	P	**P**	**21 39 31.1**	**-0.6**
CASY				IAmb	IAmb	21 39 33.1	
	comp=Z,4.3nm,0.8s						
BKZ	**Black Stump Fm**	**60.14**	**131**	P	**P**	**21 39 46.3**	**+0.9**
MKAR	**Makanchi Array**	**63.57**	**333**	P	**P**	**21 40 06.4**	**-1.6**
MKAR	**Makanchi Array**	**63.57**	**333**	P	**P**	**21 40 06.7**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=154,slow=6.5,SNR=20						
	comp=Z,0.9nm,0.4s						
MAKZ	**Makanchi**	**63.72**	**333**	P	**P**	**21 40 06.8**	**-2.2**
ARSB	**Arslanbob**	**64.64**	**323**	P	**P**	**21 40 13.6**	**-1.6**
ARSB				IAmb	IAmb	21 40 15.5	
	comp=Z,3.5nm,0.7s						
GAR	**Garm**	**64.87**	**320**	P	**P**	**21 40 15.5**	**-1.3**
GAR				IAmb	IAmb	21 40 16.8	
	comp=Z,12nm,1.2s						
KKAR	**Karatay Array**	**67.17**	**324**	P	**P**	**21 40 28.8**	**-2.5**
KURBB	**Kurchatov Arra**	**68.08**	**334**	P	**P**	**21 40 34.9**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=142,slow=5.4,SNR=5.8						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**68.11**	**334**	P	**P**	**21 40 34.9**	**-2.0**
ZAA0	**Zalesovo Array**	**68.17**	**339**	P	**P**	**21 40 35.3**	**-1.8**
ZALV	**Zalesovo Beam**	**68.17**	**339**	P	**P**	**21 40 35.0**	**-2.2**
	comp=Z,2.7nm,0.4s,baz=139,slow=5.0,SNR=14						
	comp=Z,2.7nm,0.4s						
MAW	**Mawson**	**69.81**	**200**	P	**P**	**21 40 48.3**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=95,slow=10,SNR=6.2						
	comp=Z,2.3nm,0.6s						
VOI	**Vohitsoka**	**70.09**	**250**	P	**P**	**21 40 49.7**	**-0.2**
VNDA	**Vanda**	**72.81**	**171**	P	**P**	**21 41 06.0**	**+0.9**
VNDA	**Vanda**	**72.81**	**171**	P	**P**	**21 41 06.0**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=313,slow=8.0,SNR=25						
	comp=Z,1.6nm,0.5s						
AB31	**Akbulak array**	**76.68**	**325**	P	**P**	**21 41 25.7**	**-1.9**
ABKAR	**Akbulak array**	**76.68**	**325**	P	**P**	**21 41 25.7**	**-2.0**
QSPA	**South Pole Qui**	**81.76**	**180**	P	**P**	**21 41 58.3**	**+3.2**
QSPA				IAmb	IAmb	21 42 12.0	
	comp=Z,7.3nm,1.4s						
QSPA	**South Pole Qui**	**81.76**	**180**	P	**P**	**21 41 57.8**	**+2.7**
	comp=Z,2.9nm,0.8s,baz=165,slow=0.4,SNR=30						
	comp=Z,2.9nm,0.8s						
TROLL	**Troll, Antarti**	**89.99**	**196**	⇑P	**P**	**21 42 36.4**	**+0.9**
	comp=Z,138nm,0.6s						
SNAA	**Sanae**	**91.62**	**196**	⇑P	**P**	**21 42 44.2**	**+1.2**
	comp=Z,66nm,0.6s						
SNAA	**Sanae**	**91.62**	**196**	P	**P**	**21 42 43.7**	**+0.8**
SNAA				IAmb	IAmb	21 42 44.9	
	comp=Z,2.8nm,0.7s						
SNAA	**Sanae**	**91.62**	**196**	P	**P**	**21 42 44.2**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=183,slow=5.4,SNR=35						
	comp=Z,3.0nm,0.7s						
BELA	**Belgrano 2**	**92.74**	**185**	P	**P**	**21 42 48.1**	**+0.1**
BELA				IAmb	IAmb	21 42 49.2	
	comp=Z,2.7nm,0.6s						
VNA2	**Neumayer--Watz**	**93.25**	**195**	⇑P	**P**	**21 42 51.4**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=114,slow=4.3						
VNA3	**Neumayer Olymp**	**93.64**	**195**	⇑P	**P**	**21 42 52.9**	**+0.6**
	comp=Z,1.3nm,0.8s						
CPUP	**Villa Florida**	**145.42**	**187**	PKPbc	**PKPdf**	**21 49 13.3**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=72,slow=1.4,SNR=5.8						
Y49A	**Blount Mountai**	**145.65**	**38**	PKPdf	**PKPdf**	**21 49 13.2**	**-1.0**
LRAL	**Lakeview Retre**	**145.82**	**40**	PKPdf	**PKPdf**	**21 49 14.2**	**-0.3**

SGS ***02*** *21:36:35.3,29°.73N×34°.84E,h12km,Ml2.1*

JSO ***02*** *21:36:36.5±0.5,30°.N±2°×3°.5E±°,h11km±3km,M2.6/8, Md3.5/8,ML2.5/8,MLv2.6/8,MLv2.6/8*

GII ***02*** *21:36:37.7±0.0,29°.665N±0°.002×35°.084E±0°.001,h17km, Mws2.4,confirmed*

ISC 02 21:36:37.2±0.9,29°.64N±0°.02×34°.96E±0°.06,h25km±4km, n58,σ0ş50/62,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**0.03**	**349**	P	**Pb**	**21 36 41.5**	**0.0**
EIL	**Elat**	**0.03**	**349**	S	**Sb**	**21 36 44.6**	**+0.2**
ELOT	**Eilot**	**0.06**	**175**	P	**Pb**	**21 36 41.6**	**0.0**
ELOT	**Eilot**	**0.06**	**175**	S	**Sb**	**21 36 44.9**	**+0.4**
BEOR	**Beer Ora**	**0.08**	**18**	P	**Pb**	**21 36 41.6**	**-0.1**
BEOR	**Beer Ora**	**0.08**	**18**	S	**Sb**	**21 36 44.6**	**-0.1**
MBRI	**Mt Berech**	**0.16**	**346**	P	**Pb**	**21 36 42.4**	**-0.2**
ELFZ	**Elifaz**	**0.17**	**17**	P	**Pb**	**21 36 42.4**	**-0.1**
ELFZ	**Elifaz**	**0.17**	**17**	S	**Sb**	**21 36 45.7**	**-0.4**
SAMR	**Samar**	**0.20**	**16**	P	**Pb**	**21 36 42.6**	**-0.3**
SAMR	**Samar**	**0.20**	**16**	S	**Sb**	**21 36 46.4**	**-0.3**
YTVT	**Yotvata**	**0.27**	**19**	P	**Pb**	**21 36 43.4**	**-0.3**
HQLS		**0.35**	**165**	S	**Sb**	**21 36 50.8**	**+0.5**
HQLS		**0.35**	**165**	P	**Pb**	**21 36 45.0**	**0.0**
LOTA	**Lotan**	**0.37**	**18**	P	**Pb**	**21 36 44.7**	**-0.5**
LOTA	**Lotan**	**0.37**	**18**	S	**Sb**	**21 36 50.3**	**-0.4**
HRFI	**Mount Harif**	**0.40**	**10**	P	**Pb**	**21 36 45.2**	**-0.7**
HRFI				S	**Sb**	**21 36 51.4**	**-0.4**
HRFI	**Mount Harif**	**0.40**	**10**	P	**Pb**	**21 36 45.5**	**-0.4**
YAHL	**Yahel**	**0.47**	**18**	P	**Pb**	**21 36 46.3**	**-0.6**
JMOS	**Jabal al Moall**	**0.49**	**164**	P	**Pb**	**21 36 47.1**	**0.0**
JMOS	**Jabal al Moall**	**0.49**	**164**	S	**Sb**	**21 36 54.6**	**+0

WRA	**Warramunga Arr**	**13.35**	**100**		**Pn**	**22 06 28.1**	**-0.6**	
WRA	**Warramunga Arr**	**13.35**	**100**	Pn	**Pn**	**22 06 25.4**	**-3.2**	
	comp=Z,1.0nm,0.3s,baz=282,slow=14,SNR=23							
WRA				Sn	Sn	22 08 48.8	-8.4	
	comp=Z,2.7nm,0.3s,baz=279,slow=25,SNR=10.0							
	comp=Z,1.1nm,0.5s							
WB0	**Warramunga Arr**	**13.38**	**99**		**Pn**	**22 06 28.1**	**-1.0**	
KLBR	**Kellerberrin**	**13.60**	**189**	P	**Pn**	**22 06 30.5**	**-1.4**	
AS31	**Alice Springs**	**13.80**	**116**		**Pn**	**22 06 34.3**	**-0.5**	
ASAR	**Alice Springs**	**13.80**	**116**		**Pn**	**22 06 33.1**	**-1.8**	
ASAR	**Alice Springs**	**13.80**	**116**	Pn	**Pn**	**22 06 32.4**	**-2.5**	
	comp=Z,0.4nm,0.3s,baz=296,slow=12,SNR=20							
ASAR				Sn	Sn	22 08 59.3	-9.1	
	comp=Z,2.6nm,0.3s,baz=306,slow=24,SNR=21							
	comp=Z,1.3nm,0.5s							
UGM	**Wanagama**	**13.96**	**315**	Pn	**Pn**	**22 06 37.9**	**+0.9**	
MUN	**Mundaring**	**14.28**	**194**	P	**Pn**	**22 06 39.1**	**-2.1**	
FORT	**Forrest**	**14.40**	**152**	Pn	**Pn**	**22 06 41.0**	**-1.9**	
NWAO	**Narrogin (SRO)**	**14.99**	**190**	P	**Pn**	**22 06 48.0**	**-3.0**	
NWAO	**Narrogin (SRO)**	**14.99**	**190**	Pn	**Pn**	**22 06 48.0**	**-3.0**	
	comp=Z,6.2nm,0.3s,baz=13,slow=12,SNR=36							
NWAO				Sn	Sn	22 09 23.1	-14	
	comp=Z,4.1nm,0.3s,baz=271,slow=11,SNR=4.0							
	comp=Z,14nm,0.4s							
FAKI	**Fak Fak**	**19.10**	**39**	P	**P**	**22 07 42.4**	**+0.3**	
BBOO	**Buckleboo**	**20.32**	**139**	P	**P**	**22 07 56.0**	**+0.7**	
BBOO				IAmb	IAmb	22 08 03.7		
	comp=Z,14nm,0.9s							
COEN	**Coen**	**22.32**	**83**	P	**P**	**22 08 16.9**	**-0.1**	
COEN				IAmb	IAmb	22 08 36.4		
	comp=Z,19nm,1.2s							
STKA	**Stephens Creek**	**23.56**	**130**	P	**P**	**22 08 28.6**	**-1.0**	
STKA	**Stephens Creek**	**23.56**	**130**	P	**P**	**22 08 28.4**	**-1.3**	
	comp=Z,0.9nm,0.5s,baz=320,slow=14,SNR=3.4							
STKA				S	**S**	**22 12 38.2**	**-5.7**	
	comp=Z,1.5nm,0.6s,baz=308,slow=16,SNR=1.7							
	comp=Z,0.9nm,0.5s							
H08S2	**Diego Garcia H**	**47.67**	**276**	T	T	23 02 07.3		
	baz=107,slow=75,SNR=7.0							
H08S3	**Diego Garcia H**	**47.69**	**276**	T	T	23 02 11.4		
	baz=107,slow=75,SNR=9.4							
H08S1	**Diego Carcia H**	**47.69**	**276**	T	T	23 02 09.8		
	baz=107,slow=75,SNR=4.5							
MKAR	**Makanchi Array**	**73.17**	**334**	P	**P**	**22 14 50.8**	**+1.0**	
MKAR	**Makanchi Array**	**73.17**	**334**	P	**P**	**22 14 51.8**	**+1.9**	
	comp=Z,0.3nm,0.5s,baz=126,slow=6.2,SNR=4.8							
	comp=Z,0.3nm,0.5s							
ABKAR	**Akbulak array**	**85.76**	**325**	P	**P**	**22 15 58.6**	**+0.3**	
LPAZ	**La Paz**	**144.78**	**166**	PKP	**PKPdf**	**22 22 59.3**	**+1.4**	
	comp=Z,2.1nm,0.5s,baz=175,slow=2.9,SNR=9.7							

*NEIC **02** 22:25:44.3±1.0, 36.313N±0.009×98.158W±0.008, h6km±2km, mb_Lg2.5/38,ML2.8/76,ML2.6, Error ellipse: s-maj=1.4km s-min=0.9km az=167.0*

NEIC 02 22:25:44±0.9, 36.310N±0.008×98.153W±0.004, h4km±2km, Error ellipse: s-maj=1.2km s-min=0.5km az=188.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.24**	**35**	Pg	Pg	22 25 49.5	+0.9
CROK				Sg	Sg	22 25 53.3	+1.5
CROK				IAML		22 25 55.7	
	comp=E,1μm,0.3s						
CROK				IAML		22 25 56.1	
	comp=N,2μm,0.2s						
OK038	**West end E0370**	**0.50**	**290**		Pg	22 25 54.1	+0.5
OK038				Sg	Sg	22 26 01.2	+1.0
GC02	**Grant County #**	**0.59**	**24**		Pg	22 25 55.9	+0.5
GC02					Sg	22 26 04.1	+1.1
KAN14	**Manchester OK**	**0.66**	**13**		Pg	22 25 57.2	+0.5
KAN14					Sg	22 26 06.3	+0.9
KAN14				IAML		22 26 06.8	
	comp=E,736nm,0.1s						
NOKA	**Waynoka**	**0.71**	**298**		Pg	22 25 57.9	+0.3
NOKA					Sg	22 26 07.6	+0.9
NOKA				IAML		22 26 11.0	
	comp=N,455nm,0.2s						
NOKA				IAML		22 26 13.1	
	comp=E,574nm,0.2s						
OK029	**Liberty Lake**	**0.76**	**132**		Pg	22 25 58.8	+0.1
OK029					Sg	22 26 09.1	+0.6
BCOK	**Bluff Creek, N**	**0.79**	**146**		Pg	22 25 59.1	+0.1
BCOK					Sg	22 26 09.9	+0.6
CSTR	**Hydro, Custer**	**0.79**	**213**		Pg	22 25 59.6	+0.4
CSTR					Sb	22 26 10.5	-1.0
BLOK	**Blackwell**	**0.88**	**59**		Pg	22 26 01.1	+0.2
BLOK					Sg	22 26 12.8	+0.5
KAN13	**South Haven SW**	**0.89**	**38**		Pg	22 26 01.2	+0.1
KAN13					Sg	22 26 13.1	+0.5
KAN01	**Argonia South**	**0.90**	**20**		Pg	22 26 01.3	+0.1
KAN01					Sg	22 26 13.5	+0.6
KAN01				IAML		22 26 13.9	
	comp=N,357nm,0.2s						
KAN01				IAML		22 26 16.8	
	comp=E,223nm,0.1s						
ADOK	**Arcadia Dam**	**0.91**	**136**		Pg	22 26 01.2	-0.3
KAN08	**Anthony NE Sta**	**0.93**	**9**		Pg	22 26 02.0	+0.2
KAN08					Sg	22 26 14.5	+0.7
KAN08				IAML		22 26 14.7	
	comp=N,398nm,0.4s						
OK048	**Pawnee Station**	**0.98**	**83**		Pg	22 26 02.7	-0.2
OK048				IAML		22 26 21.4	
	comp=N,257nm,0.4s						
ELIS	**Ellis County**	**1.05**	**257**		Pg	22 26 04.2	0.0
ELIS				IAML		22 26 23.9	
	comp=E,306nm,0.2s						
OKCFA	**Oklahoma City**	**1.06**	**147**		Pg	22 26 03.9	-0.4
OKCFA					Sg	22 26 18.3	+0.3
OKCSW	**OKLAHOMA CITY**	**1.07**	**147**		Pg	22 26 04.0	-0.6
OKCSW					Sg	22 26 18.3	-0.2
OKCSW				IAML		22 26 26.8	
	comp=E,232nm,0.2s						
OK051	**E0350 and S346**	**1.08**	**79**		Pg	22 26 04.7	0.0
OK052	**Battle Ridge R**	**1.14**	**106**		Pg	22 26 05.5	-0.4
OK052				IAML		22 26 23.5	
	comp=E,204nm,0.2s						
OK052				IAML		22 26 26.7	
	comp=E,214nm,0.2s						
QUOK	**Quay**	**1.18**	**96**		Pg	22 26 06.3	-0.3
QUOK					Sb	22 26 22.2	-0.3
QUOK				IAML		22 26 28.6	
	comp=E,236nm,0.2s						
FNO	**Franklin**	**1.22**	**150**		Pg	22 26 06.6	-0.7
FNO					Sg	22 26 23.2	+0.1
FNO				IAML		22 26 28.4	
	comp=E,285nm,0.3s						
FNO				IAML		22 26 28.6	
	comp=N,202nm,0.3s						
DEOK	**Depew**	**1.42**	**109**		Pn	22 26 10.2	-0.4
T35A	**Sooner Cattle**	**1.45**	**65**		Pn	22 26 11.2	+0.2
WMOK	**Wichita Mounta**	**1.65**	**198**		Pn	22 26 13.4	-0.4
WMOK				IAmb_Lg		22 26 36.1	
	comp=Z,29nm,0.8s						
X34A	**Smith Ranch, M**	**1.73**	**171**		Pn	22 26 15.5	+0.7
X34A				IAmb_Lg		22 26 39.6	
	comp=Z,33nm,0.7s						
TUL3	**Leonard**	**1.95**	**101**		Pn	22 26 18.0	0.0
SMWD	**Samnorwood**	**2.08**	**235**		Pn	22 26 19.1	-0.6
SMWD				IAmb_Lg		22 26 49.3	
	comp=Z,24nm,0.8s						
R32A	**Long Quarter,**	**2.15**	**348**		Pn	22 26 21.1	+0.4
R32A				IAmb_Lg		22 26 58.3	
	comp=Z,26nm,0.7s						
LOOK	**Love County**	**2.45**	**161**	IAmb_Lg		22 27 01.2	
	comp=Z,22nm,0.8s						
RLO	**Rose Lookout**	**2.54**	**92**		Pn	22 26 26.9	+0.9
WTFS	**Witchita Falls**	**2.55**	**186**		Pn	22 26 27.1	+0.9
AMTX	**Amarillo**	**3.21**	**245**		Pn	22 26 36.0	+0.7
FW06	**Azle**	**3.37**	**171**	IAmb_Lg		22 27 34.5	
	comp=Z,7.5nm,0.8s						
DKNS	**Dickens**	**3.48**	**222**		Pn	22 26 40.3	+1.2
DKNS				IAmb_Lg		22 27 40.1	
	comp=Z,16nm,0.8s						
PLPT	**Palo Pinto**	**3.49**	**182**		Pn	22 26 39.6	+0.5
ABTX	**Abilene, Hawle**	**3.88**	**199**		Pn	22 26 44.5	+0.1
SN07	**Snyder 07**	**3.92**	**216**		Pn	22 26 45.3	+0.2
SN07				IAmb_Lg		22 27 59.4	
	comp=Z,15nm,0.7s						
FW13	**Cleburne**	**3.99**	**171**	IAmb_Lg		22 27 59.0	
	comp=Z,6.4nm,0.7s						
Z38A	**Mt. Pleasant**	**4.01**	**138**	IAmb_Lg		22 27 53.6	
	comp=Z,16nm,0.9s						
MIAR	**Mount Ida**	**4.13**	**114**		Pn	22 26 48.8	+0.9
MIAR				IAmb_Lg		22 27 58.1	
	comp=Z,9.9nm,0.8s						
POST	**Post**	**4.25**	**221**	IAmb_Lg		22 27 58.7	
	comp=Z,10nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.46**	**309**	IAmb_Lg		22 28 07.6	
	comp=Z,8.6nm,0.7s						
WHAR	**Wooly Hollow**	**4.87**	**100**	Pn	Pn	22 26 58.7	+0.6
WLAR	**White Oak Lake**	**4.89**	**121**	IAmb_Lg		22 28 31.0	
	comp=Z,9.9nm,0.8s						
P38A	**Dawn**	**4.93**	**46**		Pn	22 26 58.5	-0.3
SGCY	**Sterling City**	**5.03**	**210**	IAmb_Lg		22 28 30.6	
	comp=Z,12nm,0.8s						
BRDY	**Brady**	**5.06**	**188**	IAmb_Lg		22 28 35.1	
	comp=Z,7.5nm,0.8s						
T25A	**Trinidad**	**5.09**	**281**		Pn	22 27 00.9	-0.4
ISCO	**Idaho Springs**	**6.84**	**303**	IAmb_Lg		22 29 28.6	
	comp=Z,3.7nm,0.8s						
Y22A	**Socorro**	**7.60**	**254**	IAmb_Lg		22 29 58.4	
	comp=Z,4.5nm,0.9s						
121A	**Cookes Peak, D**	**8.80**	**247**	IAmb_Lg		22 30 34.4	
	comp=Z,6.7nm,1.1s						

*NEIC **02** 22:26:13.0±1.0, 61.49N±0.03×149.90W±0.05, h44km±3km, Error ellipse: s-maj=4.3km s-min=3.2km az=166.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=3.08; $M_{\theta\theta}$=0.45; $M_{\phi\phi}$=3.54; $M_{r\theta}$=2.56; $M_{r\phi}$=1.55; $M_{\theta\phi}$=0.19; Fault plane solution: M_0=4.48000×10^{14} NP1: ϕ_s=228.14000°, δ61.20000°, λ=-53.75000°. NP2: ϕ_s=351.44000°, δ45.03000°, λ=-137.08000°. Principal axes: T 4.2313, Plg9.0000°, Azm293.0000°; N 0.4647, Plg31.0000°, Azm29.0000°; P -4.6960, Plg57.0000°, Azm189.0000°;*

*NEIC **02** 22:26:13.1, 61.46N×149.91W, h42km*

AEIC 02 22:26:13.5±1.0, 61.49N±0.03×149.85W±0.03, h42km±4km, ML3.5, ML3.7/234(NEIC), Mwr3.7/70(NEIC), Error ellipse: s-maj=4.2km s-min=2.3km az=171.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M22K	**Willow**	**0.30**	**335**		Pn	22 26 20.8	-1.1
M22K				Sn	Sn	22 26 27.4	-0.4
PMR	**Palmer**	**0.36**	**73**		Pn	22 26 21.8	-0.8
PMR				Sn	Sn	22 26 28.7	-0.3
PMR				IAML		22 26 29.7	
	comp=E,8μm,0.3s						
FIS	**Fire Island**	**0.39**	**207**		Pn	22 26 22.8	-0.1
FIS				IAML		22 26 31.8	
	comp=E,7μm,0.4s						
FIS				IAML		22 26 32.1	
	comp=N,6μm,0.2s						
RC01	**Rabbit Creek A**	**0.40**	**172**		Pn	22 26 22.4	-0.7
RC01				Sn	Sn	22 26 29.9	+0.1
RC01				IAML		22 26 30.8	
	comp=E,9μm,0.2s						
RC01				IAML		22 26 31.7	
	comp=N,8μm,0.3s						
SUA	**Susitna One**	**0.43**	**267**		Pn	22 26 22.7	-0.9
SUA					Sn	22 26 30.5	-0.2
SUA	**Susitna One**	**0.43**	**267**	IAML		22 26 31.1	
	comp=E,18μm,0.8s						
SUA				IAML		22 26 31.2	
	comp=N,21μm,0.7s						
GHO	**Glory Hole Cre**	**0.53**	**57**		Pn	22 26 24.0	-0.8
GHO				IAML		22 26 33.4	
	comp=E,6μm,0.4s						
GHO	**Glory Hole Cre**	**0.53**	**57**		Sn	22 26 32.9	+0.1
KNK	**Knik Glacier**	**0.67**	**96**		Pn	22 26 26.4	-0.3
KNK				IAML		22 26 38.9	
	comp=E,5μm,0.3s						
KNK	**Knik Glacier**	**0.67**	**96**		Sn	22 26 37.0	+0.8
SML	**Sawmill**	**0.80**	**65**		Pn	22 26 27.5	-0.8
SML				IAML		22 26 40.4	
	comp=E,3μm,0.7s						
SML				IAML		22 26 41.8	
	comp=N,3μm,0.7s						
SML	**Sawmill**	**0.80**	**65**		Sn	22 26 38.9	-0.1
SKT	**Skwentna**	**0.94**	**303**		Pn	22 26 29.0	-1.3
SKT	**Skwentna**	**0.94**	**303**		Sn	22 26 41.6	-1.0
CUT	**Chulitna**	**0.94**	**348**		Pn	22 26 29.1	-1.2
CUT	**Chulitna**	**0.94**	**348**		Sn	22 26 42.0	-0.6
STLK	**Strandline Lak**	**0.95**	**272**		Pn	22 26 29.6	-0.9
STLK				IAML		22 26 43.1	
	comp=N,3μm,0.2s						
STLK				IAML		22 26 45.1	
	comp=E,2μm,0.4s						
STLK	**Strandline Lak**	**0.95**	**272**		Sn	22 26 42.6	-0.3
CAPN	**Captain Cook N**	**0.96**	**222**		Pn	22 26 31.2	+0.8
PWL	**Port Wells**	**0.97**	**130**		Pn	22 26 30.3	-0.4
PWL	**Port Wells**	**0.97**	**130**		Sn	22 26 44.1	+0.9
SLKM	**Skilak Lake**	**1.00**	**191**		Pn	22 26 30.3	-0.8
SLKM				IAML		22 26 47.3	
	comp=N,3μm,0.2s						
SLKM	**Skilak Lake**	**1.00**	**191**		Sn	22 26 43.9	-0.1
O22K	**Cooper Landing**	**1.01**	**176**		Pn	22 26 30.2	-1.0
O22K	**Cooper Landing**	**1.01**	**176**		Sn	22 26 45.0	+0.8
M23K	**Glacier View**	**1.06**	**72**		Sn	22 26 46.3	+0.8
SPCG	**Spurr Capps Gl**	**1.06**	**260**		Sn	22 26 45.9	+0.2
SPU	**Mount Spurr**	**1.10**	**255**		Pn	22 26 31.7	-0.9
L22K	**Petersville**	**1.13**	**338**		Pn	22 26 31.9	-1.0
L22K					Sn	22 26 46.3	-1.0
SCM	**Sheep Creek Mo**	**1.25**	**73**		Pn	22 26 34.6	0.0
SCM				IAML		22 26 56.6	
	comp=N,2μm,0.6s						
SCM	**Sheep Creek Mo**	**1.25**	**73**		Sn	22 26 51.0	+0.7
SEW	**Seward**	**1.40**	**172**		Pn	22 26 35.4	-1.1
SEW				IAML		22 26 58.1	
	comp=N,843nm,0.5s						
SEW				IAML		22 27 00.0	
	comp=E,835nm,0.4s						
WAT7	**Susitna Watana**	**1.43**	**19**		Pn	22 26 36.9	-0.2
WAT7					Sn	22 26 54.9	+0.1
GLI	**Glacier Island**	**1.47**	**113**		Pn	22 26 37.4	-0.1
WAT1	**Susitna Watana**	**1.48**	**24**		Pn	22 26 37.5	-0.2
WAT1					Sn	22 26 56.6	+0.8
WAT6	**Susitna Watana**	**1.48**	**41**		Pn	22 26 37.6	-0.3
WAT6					Sn	22 26 56.7	+0.6
M20K	**Styx River**	**1.61**	**286**		Pn	22 26 39.0	-0.5
M20K				IAML		22 27 02.3	
	comp=N,1μm,0.7s						
M20K				IAML		22 27 02.8	
	comp=E,938nm,1.0s						
DFR	**Drift River**	**1.65**	**238**		Sn	22 27 00.4	+0.4
NCT	**North Crescent**	**1.76**	**240**		Pn	22 26 41.3	-0.3
RED	**Redoubt Volcan**	**1.78**	**234**		Pn	22 26 41.4	-0.5
RED				IAML		22 27 06.1	
	comp=N,874nm,0.5s						
RED				IAML		22 27 06.5	
	comp=E,1μm,0.7s						
PPLA	**Purkeypile**	**1.79**	**323**		Pn	22 26 41.4	-0.7
PPLA				IAML		22 27 07.1	
	comp=E,626nm,0.5s						
PPLA				IAML		22 27 21.2	
	comp=N,649nm,0.9s						
FID	**Port Fidalgo**	**1.80**	**113**		Pn	22 26 41.0	-1.0
FID				IAML		22 27 05.4	
	comp=N,1μm,0.4s						
BRLK	**Bradley Lake**	**1.80**	**197**		Pn	22 26 41.4	-0.7
BRLK				IAML		22 27 08.3	
	comp=N,893nm,0.7s						
M24K	**Tolsona, Glenn**	**1.85**	**69**		Pn	22 26 43.5	+0.7
KLU	**Klutina**	**1.89**	**88**		Pn	22 26 43.0	-0.3
KLU				IAML		22 27 13.2	
	comp=E,565nm,0.6s						
KLU				IAML		22 27 14.0	
	comp=N,1μm,0.7s						
P23K	**Montague Islan**	**1.92**	**140**		Pn	22 26 42.6	-1.0
HIN	**Hinchinbrook I**	**1.97**	**122**		Pn	22 26 44.1	-0.3
HIN				IAML		22 27 18.0	
	comp=E,1μm,0.6s						
HIN				IAML		22 27 22.6	
	comp=N,642nm,0.8s						
DHY	**Denali Highway**	**1.97**	**35**		Pn	22 26 44.6	+0.1
DHY				IAML		22 27 14.4	
	comp=E,404nm,0.4s						
TRF	**Thorofare Moun**	**1.98**	**354**		Pn	22 26 44.5	-0.2
TRF				IAML		22 27 13.6	
	comp=N,592nm,0.6s						
TRF				IAML		22 27 21.4	
	comp=E,491nm,0.7s						
RND	**Reindeer**	**1.98**	**13**		Pn	22 26 44.6	0.0
DIV	**Divide**	**2.00**	**99**		Pn	22 26 44.3	-0.6
DIV				IAML		22 27 15.8	
	comp=E,505nm,0.5s						
HOM	**Homer**	**2.04**	**207**		Pn	22 26 45.0	-0.3
CNPM	**China Poot**	**2.08**	**200**		Pn	22 26 45.3	-0.7
CNPM				IAML		22 27 14.9	
	comp=E,703nm,0.5s						
CNPM				IAML		22 27 17.0	
	comp=N,710nm,0.4s						
KTH	**Kantishna Hill**	**2.13**	**347**		Pn	22 26 46.5	-0.2
KTH				IAML		22 27 16.0	
	comp=N,616nm,0.6s						
IVE	**Iliamna Volcan**	**2.14**	**228**		Pn	22 26 46.4	-0.4
L20K	**Farewell, AK**	**2.15**	**299**		Pn	22 26 46.4	-0.5
EYAK	**Cordova Ski Ar**	**2.21**	**113**		Pn	22 26 47.0	-0.6
ILSW	**Iliamna Southw**	**2.21**	**228**		Pn	22 26 47.5	-0.3
MCK	**McKinley**	**2.29**	**10**		Pn	22 26 49.4	+0.5
MCK				IAML		22 27 28.6	
	comp=N,310nm,1.0s						
N19K	**Bonanza Creek**	**2.34**	**255**		Pn	22 26 49.3	-0.3
N19K				IAML		22 27 22.1	
	comp=E,300nm,0.9s						
HARP	**HAARP**	**2.40**	**66**		Pn	22 26 51.0	+0.7
L19K	**White Mountain**	**2.47**	**289**		Pn	22 26 51.1	-0.2
L19K				IAML		22 27 39.5	
	comp=E,268nm,0.7s						
P19K	**Oil Pt**	**2.48**	**224**		Pn	22 26 51.0	-0.4
P19K				IAML		22 27 31.5	
	comp=E,640nm,0.5s						
P19K				IAML		22 27 42.4	
	comp=N,607nm,0.6s						
N25K	**Chitina, Valde**	**2.52**	**85**		Pn	22 26 51.7	-0.3
N25K				IAML		22 27 30.3	
	comp=E,325nm,0.4s						
PAX	**Paxson**	**2.54**	**52**		Pn	22 26 53.2	+1.0
O19K	**Port Alsworth**	**2.54**	**241**		Pn	22 26 51.1	-1.1
BMRM	**Bremner River**	**2.59**	**99**		Pn	22 26 52.2	-0.8
BMRM				IAML		22 27 32.9	
	comp=N,550nm,0.4s						
BMRM				IAML		22 27 44.4	
	comp=E,397nm,0.5s						
CHUM	**Lake Minchumin**	**2.66**	**336**		Pn	22 26 53.1	-0.7
BPAW	**Bear Paw Mtn.**	**2.67**	**349**		Pn	22 26 53.3	-0.8
BPAW				IAML		22 27 30.8	
	comp=E,240nm,0.5s						
WACK	**Wrangell Chich**	**2.68**	**77**		Pn	22 26 54.4	+0.1
MID	**Middleton Isla**	**2.70**	**138**	Pn	Pn	22 26 55.2	+0.9
MID				IAML		22 27 46.5	
	comp=N,253nm,1.2s						
MID				IAML		22 27 47.3	
	comp=E,333nm,1.1s						
K20K	**Telida**	**2.71**	**316**		Pn	22 26 54.0	-0.7
K20K				IAML		22 27 41.0	
	comp=E,238nm,0.6s						
RAGM	**Ragged Mountai**	**2.76**	**111**		Pn	22 26 54.4	-0.8
WAZA	**Wrangell Mount**	**2.77**	**75**		Pn	22 26 56.0	+0.4
M18K	**Stony River**	**2.86**	**273**		Pn	22 26 56.2	-0.5
GLB	**Gilahina Butte**	**2.90**	**88**		Pn	22 26 56.6	-0.6
GLB				IAML		22 27 43.1	
	comp=N,331nm,0.8s						
GLB				IAML		22 27 43.9	
	comp=E,277nm,0.7s						
HMT	**Hamilton**	**2.96**	**110**		Pn	22 26 57.0	-1.1
K24K	**Donnelly Dome**	**2.99**	**37**		Pn	22 27 00.1	+1.7
K24K				IAML		22 27 44.8	
	comp=N,390nm,0.5s						
N18K	**Kilae Creek**	**3.04**	**257**		Pn	22 26 58.4	-0.7
VRDI	**Verde Repeater**	**3.09**	**92**		Pn	22 26 59.1	-0.9
VRDI				IAML		22 27 47.0	
	comp=N,175nm,0.8s						
VRDI				IAML		22 27 53.1	
	comp=E,153nm,0.9s						
KAIM	**Kayak Island**	**3.10**	**118**	Pn	Pn	22 26 58.3	-1.5
WRH	**Wood River Hil**	**3.10**	**14**		Pn	22 26 60.0	+0.1
WRH				IAML		22 27 53.6	
	comp=E,142nm,0.7s						
NEA2	**Nenana**	**3.14**	**6**		Pn	22 26 59.6	-0.8
NICHA	**Nichawak Mount**	**3.14**	**111**		Pn	22 26 59.1	-1.3
SYI	**Shuyak Island**	**3.15**	**205**		Pn	22 26 59.9	-0.7
SYI				IAML		22 27 48.2	
	comp=E,163nm,0.8s						
SYI				IAML		22 27 49.3	
	comp=N,138nm,0.5s						
Q19K	**Cape Douglas,**	**3.19**	**218**		Pn	22 27 00.7	-0.4
BERG	**Berg Lake**	**3.20**	**107**		Pn	22 26 60.0	-1.2
RIDG	**Independent Ri**	**3.24**	**43**		Pn	22 27 03.6	+1.8
RIDG				IAML		22 27 49.7	
	comp=E,312nm,0.7s						
RIDG				IAML		22 27 55.5	
	comp=N,301nm,0.9s						
MCARA	**McCarthy VSAT**	**3.28**	**89**		Pn	22 27 02.5	+0.1
CCB	**Clear Creek Bu**	**3.31**	**15**		Pn	22 27 02.4	-0.2
L18K	**Granite Mounta**	**3.32**	**286**		Pn	22 27 02.3	-0.6
CRQM	**Cirque**	**3.34**	**100**		Pn	22 27 02.8	-0.5
J20K	**Nowinta River**	**3.34**	**326**		Pn	22 27 02.4	-0.8
J20K				IAML		22 28 05.8	
	comp=E,205nm,0.7s						
J20K				IAML		22 28 06.7	
	comp=N,239nm,0.9s						
M26K	**Nabesna, AK**	**3.37**	**71**		Pn	22 27 03.4	-0.2
M26K				IAML		22 28 01.6	
	comp=N,149nm,0.6s						
M26K				IAML		22 28 09.6	
	comp=E,126nm,0.8s						
KHIT	**Khitrov Hills**	**3.39**	**105**		Pn	22 27 03.0	-0.9
P18K	**Big Mountain,**	**3.39**	**234**		Pn	22 27 02.6	-1.3
L26K	**Log Cabin Wild**	**3.41**	**60**		Pn	22 27 05.6	+1.4
L26K				IAML		22 28 01.2	
	comp=E,283nm,0.6s						
L26K				IAML		22 28 04.6	
	comp=N,245nm,0.5s						
GRIN	**Grindle Hills**	**3.42**	**108**		Pn	22 27 03.3	-0.9
DOT	**Dot Lake**	**3.45**	**48**		Pn	22 27 06.0	+1.3
DOT				IAML		22 28 06.7	
	comp=N,211nm,0.7s						
DOT				IAML		22 28 07.7	
	comp=E,158nm,0.7s						
TGL	**Tana Glacier**	**3.48**	**99**		Pn	22 27 04.8	-0.5
TGL				IAML		22 28 04.1	
	comp=E,264nm,0.6s						
COLA	**College**	**3.52**	**14**		Pn	22 27 05.1	-0.5
IL31		**3.56**	**21**	

I21K				IAML		22 28 10.9		
	comp=E,79nm,0.9s							
KAHC	**Katmai Hardscr**	**3.84**	**224**		Pn	22 27 09.2	-1.0	
KARR	**Katmai Rainbow**	**3.86**	**221**		Pn	22 27 10.2	-0.2	
M27K	**Edge Creek, AK**	**3.87**	**73**		Pn	22 27 11.2	+0.6	
BAGL	**Bagley Icefiel**	**3.91**	**101**		Pn	22 27 10.3	-0.6	
I20K	**Naaghedeneel**	**3.93**	**330**		Pn	22 27 10.5	-0.7	
O17K	**Koliganek Bris**	**3.96**	**247**		Pn	22 27 11.2	-0.4	
KDAK	**Kodiak Island**	**3.96**	**202**		Pn	22 27 09.6	-2.1	
BARN	**Barnard Glacie**	**3.98**	**93**		Pn	22 27 11.6	-0.5	
BARN	**Barnard Glacie**	**3.98**	**93**	IAML		22 28 16.6		
	comp=E,164nm,0.5s							
BARN				IAML		22 28 18.4		
	comp=N,184nm,0.6s							
KAWH	**Katmai**	**3.98**	**221**		Pn	22 27 11.3	-0.8	
GRNC	**Granite Creek**	**4.00**	**97**		Pn	22 27 12.1	-0.3	
GRNC				IAML		22 28 20.4		
	comp=N,126nm,0.7s							
L27K	**Beaver Creek,**	**4.07**	**64**		Pn	22 27 13.1	-0.1	
MESA	**MESA**	**4.08**	**105**		Pn	22 27 12.7	-0.8	
MESA				IAML		22 28 21.1		
	comp=E,148nm,0.9s							
BCAR	**Beaver Creek A**	**4.09**	**64**		Pn	22 27 14.0	+0.5	
YAH	**Yahtse**	**4.12**	**102**		Pn	22 27 13.7	-0.3	
YAH				IAML		22 28 23.0		
	comp=N,100nm,0.5s							
YAH				IAML		22 28 23.5		
	comp=E,79nm,0.8s							
CTGM	**Chitina Glacie**	**4.15**	**93**		Pn	22 27 14.1	-0.3	
CTGM				IAML		22 28 22.0		
	comp=N,91nm,0.7s							
CTGM				IAML		22 28 23.6		
	comp=E,66nm,0.7s							
K17K	**Iditarod**	**4.16**	**291**		Pn	22 27 13.8	-0.6	
K17K				IAML		22 28 26.7		
	comp=N,87nm,0.7s							
K17K				IAML		22 28 33.8		
	comp=E,140nm,0.9s							
J26L	**Joseph Creek**	**4.17**	**41**		Pn	22 27 16.3	+1.7	
J26L				IAML		22 28 10.7		
	comp=N,101nm,0.5s							
J26L				IAML		22 28 15.8		
	comp=E,85nm,0.5s							
ACHA	**Angle Creek He**	**4.29**	**222**	Pn	Pn	22 27 15.3	-1.0	
RKAV	**Rock Avalanche**	**4.32**	**102**		Pn	22 27 16.4	-0.4	
LOGN	**Logan Glacier**	**4.34**	**95**		Pn	22 27 16.4	-0.6	
LOGN				IAML		22 28 30.8		
	comp=N,68nm,0.7s							
LOGN				IAML		22 28 34.6		
	comp=E,77nm,0.7s							
ANCK	**Angle Creek**	**4.35**	**223**		Pn	22 27 16.8	-0.4	
H23K	**Yukon River**	**4.36**	**2**		Pn	22 27 17.0	-0.1	
TABL	**Table Mountain**	**4.37**	**100**	Pn	Pn	22 27 16.8	-0.8	
TABL				IAML		22 28 28.5		
	comp=N,106nm,0.8s							
TABL				IAML		22 28 32.7		
	comp=E,64nm,1.1s							
H21K	**Melozitna River**	**4.39**	**344**		Pn	22 27 17.0	-0.6	
H21K				IAML		22 28 38.3		
	comp=E,58nm,1.0s							
K27K	**Chicken**	**4.39**	**51**		Pn	22 27 19.7	+2.2	
CAHL	**Cahill**	**4.41**	**221**		Pn	22 27 17.6	-0.3	
M16K	**Timber Creek**	**4.42**	**268**		Pn	22 27 17.4	-0.7	
M16K				IAML		22 28 36.8		
	comp=N,50nm,1.4s							
CNTC	**Contact Creek**	**4.43**	**226**		Pn	22 27 17.6	-0.7	
H24K	**Noodor Dome**	**4.46**	**11**		Pn	22 27 18.9	+0.4	
H24K				IAML		22 28 37.2		
	comp=E,50nm,0.9s							
N16K	**Nishlik Lake**	**4.46**	**261**		Pn	22 27 18.1	-0.5	
O16K	**Kokwok River B**	**4.49**	**249**		Pn	22 27 18.4	-0.5	
O16K				IAML		22 28 37.8		
	comp=N,61nm,1.1s							
GCSA	**Galena City Sc**	**4.57**	**319**		Pn	22 27 19.7	-0.3	
L16K	**Owhat River**	**4.60**	**277**		Pn	22 27 19.9	-0.6	
L16K				IAML		22 28 12.4		
	comp=E,55nm,0.4s							
L16K				IAML		22 28 12.7		
	comp=N,50nm,0.5s							
H20K	**Anotleneega Mo**	**4.61**	**333**		Pn	22 27 19.7	-0.8	
OHAK	**Old Harbor**	**4.62**	**204**	Pn	Pn	22 27 19.8	-0.9	
J17K	**VABM Dome**	**4.69**	**298**		Pn	22 27 20.9	-0.8	
J17K				IAML		22 29 00.2		
	comp=N,44nm,1.0s							
O28M	**Mount Upton**	**4.74**	**94**		Pn	22 27 22.5	-0.2	
O28M				IAML		22 28 41.0		
	comp=E,47nm,0.5s							
O28M				IAML		22 28 47.0		
	comp=N,64nm,0.8s							
IMAR	**Indian Mountai**	**4.83**	**341**		Pn	22 27 22.9	-0.7	
I26K	**Coal Creek Min**	**4.87**	**35**		Pn	22 27 26.4	+2.2	
I26K				IAML		22 28 49.1		
	comp=E,75nm,0.9s							
I26K				IAML		22 28 53.2		
	comp=N,63nm,0.7s							
PCA	**Pinnacle**	**4.90**	**102**		Pn	22 27 23.6	-1.1	
H19K	**Roundabout Mou**	**5.02**	**327**		Pn	22 27 25.1	-1.0	
H19K				IAML		22 28 58.7		
	comp=N,82nm,1.4s							
H19K				IAML		22 29 07.4		
	comp=E,53nm,1.7s							
PLK4	**Peulik 4**	**5.09**	**223**		Pn	22 27 26.6	-0.7	
PLK4				IAML		22 29 06.5		
	comp=E,48nm,1.2s							
PLK4				IAML		22 29 09.5		
	comp=N,50nm,1.2s							
N15K	**Kwethluk River**	**5.18**	**260**		Pn	22 27 28.1	-0.3	
N15K				IAML		22 28 56.6		
	comp=N,58nm,1.4s							
G23K	**Bananza Creek**	**5.25**	**359**		Pn	22 27 29.8	+0.5	
G21K	**Allakaket**	**5.30**	**344**		Pn	22 27 30.0	-0.1	
G21K				IAML		22 28 31.1		
	comp=N,52nm,0.8s							
G21K				IAML		22 28 32.1		
	comp=E,47nm,0.8s							
H18K	**Honhosa River**	**5.31**	**318**		Pn	22 27 29.8	-0.4	
H18K				IAML		22 28 30.8		
	comp=E,48nm,0.9s							
H18K				IAML		22 29 15.6		
	comp=N,32nm,0.9s							
J16K	**Anvik River**	**5.32**	**295**		Pn	22 27 29.5	-0.8	
J16K				IAML		22 29 04.9		
	comp=N,31nm,1.2s							
M15K	**Kasigluk River**	**5.32**	**266**		Pn	22 27 29.6	-0.7	
G24K	**Hadweenzic Riv**	**5.34**	**10**		Pn	22 27 31.3	+0.7	
G24K				IAML		22 29 20.2		
	comp=N,30nm,1.4s							
DAWY	**Dawson**	**5.46**	**57**	Pn	Pn	22 27 32.6	+0.4	
M29M	**Somme Creek**	**5.46**	**75**		Pn	22 27 32.2	-0.1	
O15K	**Ungalikthiuk R**	**5.47**	**249**		Pn	22 27 32.0	-0.4	
I17K	**Unalakleet**	**5.54**	**300**		Pn	22 27 33.4	0.0	
L15K	**Ungalak Mounta**	**5.56**	**277**		Pn	22 27 32.9	-0.7	
K15K	**Wolf Creek Mou**	**5.58**	**283**		Pn	22 27 33.2	-0.7	
L29M	**L29M**	**5.71**	**68**		Pn	22 27 35.9	+0.2	
H17K	**Granite Mounta**	**5.71**	**312**		Pn	22 27 35.4	-0.4	
COLD	**Coldfoot**	**5.77**	**359**		Pn	22 27 36.5	0.0	
G18K	**Tagagawik**	**5.90**	**322**		Pn	22 27 37.8	-0.5	
I28M	**Miner Creek**	**5.96**	**44**		Pn	22 27 40.4	+1.2	
F21K	**Alatna River**	**5.97**	**346**		Pn	22 27 39.9	+0.6	
HYT	**Haines Junctio**	**6.02**	**91**		Pn	22 27 39.9	-0.1	
N14K	**Kuskokwak Cree**	**6.02**	**260**	Pn	Pn	22 27 39.1	-0.7	
G26K	**Porcupine Rive**	**6.09**	**23**		Pn	22 27 41.4	+0.6	
F24K	**Squaw Lake**	**6.12**	**7**		Pn	22 27 41.1	-0.2	
L14K	**Kuka Creek**	**6.16**	**274**		Pn	22 27 42.1	+0.3	
P29M	**Windy Craggy**	**6.26**	**102**		Pn	22 27 43.2	0.0	
BMAR	**Burnt Mountain**	**6.39**	**19**		Pn	22 27 45.9	+1.0	
M13K	**Dall Lake**	**6.66**	**267**	Pn	Pn	22 27 48.9	+0.2	
E22K	**Anaktuvuk Pass**	**6.73**	**354**		Pn	22 27 51.0	+1.4	
H29M	**Whitestone**	**6.94**	**42**		Pn	22 27 54.2	+1.6	
TOLK	**Toolik Lake Re**	**7.19**	**1**		Pn	22 27 57.5	+1.5	
WHY	**Whitehorse**	**7.31**	**90**	Pn	Pn	22 27 56.8	-0.9	
F28M	**Old Crow**	**7.50**	**31**		Pn	22 28 01.1	+1.0	
F15K	**North Star Dit**	**7.83**	**309**		Pn	22 28 05.0	+0.3	
TNA	**Tin City**	**9.03**	**305**		Pn	22 28 21.3	+0.2	

NEIC ***02*** *22:26:49.5±1.2, 37°.762N±0°.007×113°.15W±0°.02, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.7km az=238.0*

UUSS 02 22:26:49.7±1.5, 37°.76N±0°.01×113°.15W±0°.02, h0km, ML2.5/9, ML2.5/78(NEIC), Error ellipse: s-maj=2.3km s-min=2.1km az=83.0, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVH	**Cedar City**	**0.08**	**120**		Pg	22 26 51.8	+0.4
CCPU	**Cedar City Par**	**0.10**	**150**		Pg	22 26 52.2	+0.5
SZCU	**Shurtz Canyon**	**0.17**	**162**		Pg	22 26 53.0	0.0
SZCU				Sg	Sg	22 26 55.2	0.0
SZCU				IAML		22 26 57.0	
	comp=E,2μm,0.3s						
SZCU				IAML		22 26 57.3	
	comp=N,3μm,0.3s						
ARUT	**Antelope Range**	**0.23**	**278**		Pg	22 26 54.8	+0.7
CCUT	**Cedar City**	**0.26**	**219**		Pg	22 26 55.2	+0.4
DWU	**Dry Willow Pea**	**0.37**	**20**		Pg	22 26 56.6	-0.2
PKCU	**Pink Cliffs**	**0.74**	**115**		Pg	22 27 03.9	0.0
LCMT	**Little Creek M**	**0.75**	**186**		Pg	22 27 03.8	-0.2
LCMT				Sg	Sg	22 27 14.0	+0.3
LCMT				IAML		22 27 18.8	
	comp=E,281nm,0.2s						
LCMT				IAML		22 27 20.0	
	comp=N,238nm,0.1s						
KNB	**Kanab**	**0.79**	**160**		Pg	22 27 04.5	-0.3
NMUT	**North Mineral**	**0.80**	**17**		Pg	22 27 04.9	-0.1
MTPU	**Mount Pierson**	**0.82**	**69**		Pg	22 27 05.5	+0.1
EKU	**East Kanab**	**0.86**	**142**		Pg	22 27 06.0	-0.1
IMU	**Iron Mountain**	**0.88**	**360**		Pg	22 27 06.7	+0.2
PSUT	**Pine Spring**	**0.95**	**325**		Pg	22 27 08.1	+0.1
BTU	**Barney Top**	**1.01**	**90**		Pg	22 27 09.3	+0.2
TCRU	**Three Creeks R**	**1.02**	**33**		Pg	22 27 09.0	-0.2
WCU	**Willow Creek**	**1.47**	**34**		Pn	22 27 17.4	-0.4
U15A	**North Rim**	**1.50**	**152**		Pn	22 27 17.3	-0.8
U15A				IAML		22 27 44.8	
	comp=N,61nm,0.9s						
U15A				IAML		22 27 47.0	
	comp=E,70nm,0.6s						
PRN	**Pahroc Range**	**1.55**	**258**		Pn	22 27 18.7	+0.1
SPR3	**Spring Creek 3**	**1.55**	**324**		Pn	22 27 17.5	-1.3
SPR3				IAML		22 27 40.2	
	comp=N,131nm,0.5s						
SPR3				IAML		22 27 40.5	
	comp=E,132nm,0.5s						
HMU	**Henry Mountain**	**1.92**	**84**		Pn	22 27 24.0	+0.1
Q16A	**Castle Valley**	**1.94**	**53**		Pn	22 27 23.2	-0.9
FSU	**Fish Springs**	**1.97**	**355**		Pn	22 27 23.5	-1.0
R11B	**Troy Canyon, C**	**2.01**	**288**		Pn	22 27 24.6	-0.5
R11B				IAML		22 27 56.4	
	comp=E,45nm,0.3s						
R11B				IAML		22 27 58.1	
	comp=N,30nm,0.4s						
SHPR	**Sheep Range**	**2.03**	**233**		Pn	22 27 25.6	+0.3
TMUT	**Trail Mountain**	**2.17**	**44**		Pn	22 27 27.0	-0.3
TMUT				IAML		22 28 01.6	
	comp=N,24nm,0.4s						
TMUT				IAML		22 28 03.4	
	comp=E,21nm,0.8s						
V12A	**Nelson**	**2.44**	**214**		Pn	22 27 31.3	+0.4
DUG	**Dugway, Tooele**	**2.45**	**6**		Pn	22 27 30.3	-0.8
DUG				IAML		22 28 12.2	
	comp=E,17nm,1.1s						
DUG				IAML		22 28 16.1	
	comp=E,15nm,0.9s						
SRU	**San Rafael Swe**	**2.47**	**56**		Pn	22 27 30.7	-0.7
SRU				IAML		22 28 11.3	
	comp=E,19nm,0.6s						
SRU				IAML		22 28 12.7	
	comp=N,14nm,0.6s						
TPNV	**Topopah Spring**	**2.59**	**253**		Pn	22 27 33.1	0.0
TPNV				IAML		22 28 16.8	
	comp=N,35nm,0.5s						
TPNV				IAML		22 28 19.4	
	comp=N,22nm,0.6s						
WUAZ	**Wupatki**	**2.66**	**147**		Pn	22 27 34.6	+0.7
WCT	**Wildcat Mounta**	**2.93**	**252**		Pn	22 27 37.8	+0.2
WCT				IAML		22 28 33.0	
	comp=E,10nm,0.8s						
SHOC	**Shoshone, Teco**	**3.12**	**234**		Pn	22 27 40.8	+0.7
SHOC				IAML		22 28 53.3	
	comp=E,13nm,1.1s						
SHOC				IAML		22 28 53.3	
	comp=N,16nm,1.3s						
GWY	**Greenwater Val**	**3.22**	**242**		Pn	22 27 42.0	+0.3
GWY				IAML		22 28 40.3	
	comp=N,9.0nm,0.6s						
GWY				IAML		22 28 43.7	
	comp=E,10nm,0.9s						
PV19	**Morning Glory**	**3.34**	**79**		Pn	22 27 44.8	+1.4
BSUT	**Blindstream Ca**	**3.34**	**33**	Pn	Pn	22 27 44.2	+0.7
BSUT				IAML		22 28 15.9	
	comp=E,6.9nm,3.7s						
PV23	**Carpenter Ridg**	**3.34**	**77**		Pn	22 27 44.1	+0.6
PV18	**Skein Mesa, Pa**	**3.39**	**80**		Pn	22 27 45.3	+1.2
ELK	**Elko**	**3.39**	**332**		Pn	22 27 43.5	-0.7
ELK				IAML		22 28 42.5	
	comp=E,7.4nm,0.3s						
QSM	**Queen of Sheba**	**3.47**	**240**		Pn	22 27 45.3	+0.3
DSP	**Deep Springs**	**3.85**	**266**		Pn	22 27 50.4	+0.3
DSP				IAML		22 28 58.0	
	comp=N,7.3nm,2.8s						
DSP				IAML		22 29 04.7	
	comp=E,5.7nm,2.5s						
CLC	**China Lake**	**4.06**	**243**		Pn	22 27 54.5	+1.4
CLC				IAML		22 29 28.6	
	comp=E,5.9nm,4.6s						
CLC				IAML		22 29 39.4	
	comp=N,3.7nm,4.7s						
X18A	**Snowflake**	**4.13**	**140**		Pn	22 27 55.8	+1.5
LHV	**Little Huntoon**	**4.25**	**278**		Pn	22 27 56.0	+0.3
LHV				IAML		22 29 09.9	
	comp=N,9.9nm,1.4s						
LHV				IAML		22 29 15.2	
	comp=E,12nm,0.9s						

NEIC ***02*** *22:27:08.0±0.7, 36°.305N±0°.009×98°.16W±0°.01, h7km±3km, Error ellipse: s-maj=1.4km s-min=1.2km az=86.0*

NEIC 02 22:27:08.1±0.7, 36°.304N±0°.009×98°.16W±0°.01, h7km±3km, mb_Lg2.5/5, ML2.5, ML2.5/62, Error ellipse: s-maj=1.5km s-min=1.2km az=86.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.25**	**35**		Pg	22 27 13.4	+0.4
CROK					Sg	22 27 17.1	+0.8
CROK				IAML		22 27 19.6	
	comp=E,1μm,0.3s						
CROK				IAML		22 27 20.7	
	comp=N,861nm,0.3s						
OK038	**West end E0370**	**0.50**	**291**		Pg	22 27 18.2	+0.4
OK038					Sg	22 27 25.2	+0.8
GC02	**Grant County #**	**0.60**	**24**		Pg	22 27 19.6	-0.1
GC02					Sg	22 27 27.8	+0.4
KAN14	**Manchester OK**	**0.67**	**14**		Pg	22 27 20.6	-0.4
KAN14					Sg	22 27 30.2	+0.4
NOKA	**Waynoka**	**0.70**	**298**		Pg	22 27 21.5	-0.1
NOKA					Sg	22 27 31.6	+0.7
NOKA				IAML		22 27 38.5	
	comp=N,208nm,0.3s						
NOKA				IAML		22 27 39.1	
	comp=E,223nm,0.3s						
OK029	**Liberty Lake**	**0.76**	**131**		Pg	22 27 22.2	-0.5
OK029					Sg	22 27 33.0	+0.3
BCOK	**Bluff Creek, N**	**0.79**	**145**		Pg	22 27 23.0	-0.1
BCOK					Sg	22 27 33.9	+0.5
CSTR	**Hydro, Custer**	**0.79**	**213**		Pg	22 27 23.0	-0.1
CSTR					Sg	22 27 33.8	+0.5
BLOK	**Blackwell**	**0.89**	**59**		Pg	22 27 24.7	-0.4
BLOK					Sg	22 27 36.6	0.0
KAN13	**South Haven SW**	**0.90**	**38**		Pg	22 27 25.0	-0.3
KAN13					Sg	22 27 36.9	0.0
KAN01	**Argonia South**	**0.91**	**21**		Pg	22 27 24.9	-0.6
KAN01					Sg	22 27 37.2	-0.2
KAN01				IAML		22 27 45.2	
	comp=E,103nm,0.1s						
KAN08	**Anthony NE Sta**	**0.93**	**9**		Pg	22 27 25.7	-0.3
OK048	**Pawnee Station**	**0.99**	**83**	Pg	Pg	22 27 26.5	-0.5
OK048				IAML		22 27 45.2	
	comp=E,97nm,0.4s						
OK051	**E0350 and S346**	**1.09**	**79**	Pg	Pg	22 27 28.7	-0.2
QUOK	**Quay**	**1.18**	**96**	Pg	Pg	22 27 30.1	-0.7
QUOK				IAML		22 27 49.5	
	comp=E,125nm,0.3s						
T35A	**Sooner Cattle**	**1.46**	**65**		Pn	22 27 34.6	-0.2
WMOK	**Wichita Mounta**	**1.64**	**198**		Pn	22 27 37.2	-0.2
TUL3	**Leonard**	**1.96**	**101**	IAmb_Lg		22 28 13.2	
	comp=Z,22nm,0.9s						
SMWD	**Samnorwood**	**2.08**	**235**	IAmb_Lg		22 28 13.2	
	comp=Z,17nm,0.8s						
R32A	**Long Quarter,**	**2.16**	**348**	IAmb_Lg		22 28 17.5	
	comp=Z,23nm,0.8s						

SSNC ***02*** *22:34:24.4±2.9, 19°.66N×70°.77W, h108km±20km, MD3.6, ML4.0*

SDD ***02*** *22:34:25.9±2.2, 19°.99N×70°.84W, h23km±33km, MD3.4, ML3.9, MW4.1*

ISC 02 22:34:27.8±1.2, 19°.91N±0°.03×70°.94W±0°.03, h28km±12km, n32, σ1°67/49, 27C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SC01	**Santiago de lo**	**0.52**	**158**	↑*e*P	Pg	**22 34 36.2**	**-2.2**
SC01				↑*e*S	Sb	**22 34 44.8**	**-0.8**
SC01				IAML		22 34 48.5	
	comp=N,9μm,0.5s						
MCDR	**Montecristi**	**0.68**	**269**	↑*e*P	Pb	**22 34 41.6**	**+0.5**
MCDR				IAML		22 35 07.7	
	comp=N,2μm,0.8s						
REDR	**Restauracion**	**0.86**	**210**	↑*e*P	Pn	**22 34 45.0**	**+1.0**
REDR				↑*e*Sg	Sb	**22 34 59.0**	**+3.8**
REDR				IAML		22 34 59.5	
	comp=N,7μm,0.6s						
SFDR	**San Fco. de Ma**	**0.90**	**133**	↑*e*P	Pn	**22 34 42.4**	**-2.2**
SFDR				IAML		22 34 56.7	
	comp=N,11μm,0.2s						
SDDR	**Presa de Saban**	**0.98**	**200**	↑*e*Pg	Pn	**22 34 44.0**	**-1.8**
SDDR				↓*e*Sg	Sn	**22 34 58.6**	**-0.2**
SDDR				IAML		22 34 59.1	
	comp=N,6μm,0.5s						
SDDR	**Presa de Saban**	**0.98**	**200**	*e*P	Pn	**22 34 44.0**	**-1.8**
SDDR				*e*S	Sn	**22 34 56.6**	**-2.2**
SDDR				IAML		22 34 59.1	
	comp=N,7μm,0.4s						
SDDR				IAML		22 34 59.1	
	comp=N,6μm,0.5s						
ABDR	**Alto Bandera**	**1.13**	**165**	↑*e*Pg	Pn	**22 34 46.1**	**-2.0**
ABDR				↑*e*Sg	Sn	**22 35 01.0**	**-1.9**
ABDR				IAML		22 35 44.7	
	comp=N,0.2nm,0.7s						
NADR	**Nagua**	**1.16**	**118**	↑*e*Pg	Pn	**22 34 47.0**	**-1.1**
NADR				IAML		22 35 07.6	
	comp=N,14μm,0.3s						
DR08	**Loma La Naviza**	**1.28**	**137**	↑*e*Pg	Pn	**22 34 48.3**	**-1.6**
DR08				↓*e*Sg	Sn	**22 35 05.0**	**-1.1**
DR08				IAML		22 35 08.5	
	comp=N,38μm,0.2s						
NEDR	**Neiba UASD**	**1.49**	**198**	↑*e*Pg	Pn	**22 34 53.7**	**+1.0**
NEDR				↑*e*Sg	Sb	**22 35 15.2**	**+1.9**
NEDR				IAML		22 35 20.4	
	comp=N,1μm,0.5s						
GRTK	**Grand Turk**	**1.60**	**353**	*e*P	Pn	**22 34 55.3**	**+1.0**
GRTK				*e*S	Sb	**22 35 17.4**	**+0.9**
GRTK				IAML		22 35 20.1	
	comp=N,636nm,0.3s						
GRTK				IAML		22 35 20.5	
	comp=N,344nm,0.2s						
BANI	**BANI**	**1.60**	**160**	↑*e*Pg	Pn	**22 34 54.1**	**-0.3**
BANI				↑*e*Sg	Sn	**22 35 16.6**	**+2.3**
BANI				IAML		22 35 19.0	
	comp=N,4μm,0.5s						
JIDR	**Jimani**	**1.66**	**212**	↑*e*Pg	Pn	**22 34 56.2**	**+1.2**
JIDR				↑*e*Sg	Sb	**22 35 19.9**	**+1.9**
JIDR				IAML		22 35 22.4	
	comp=N,4μm,0.4s						
BRH1	**Barahona**	**1.70**	**185**	↑*e*Pg	Pn	**22 34 57.1**	**+1.5**
BRH1				↓*e*Sg	Sb	**22 35 20.9**	**+1.6**
SDD	**Santo Domingo**	**1.74**	**146**	↑*e*Pg	Pn	**22 34 55.3**	**-0.8**
SDD				↑*e*Sg	Sn	**22 35 17.7**	**+0.3**
SDD				IAML		22 35 22.7	
	comp=N,341nm,0.2s						
SMDR	**Samana, DR**	**1.76**	**110**	↑*e*Pg	Pn	**22 34 55.8**	**-0.7**
SMDR				IAML		22 35 22.3	
	comp=N,2μm,0.9s						
PODR	**Polo**	**1.77**	**191**	↑*e*Pg	Pn	**22 34 57.7**	**+1.0**
PODR				↑*e*Sg	Sb	**22 35 23.2**	**+1.8**
PODR				IAML		22 35 27.5	
	comp=N,4μm,0.5s						
HATOM	**Hato Mayor del**	**1.84**	**127**	↓*e*Pg	Pn	**22 34 57.2**	**-0.4**
HATOM				↑*e*Sg	Sn	**22 35 20.9**	**+0.8**
HATOM				IAML		22 35 23.2	
	comp=N,2μm,0.2s						
MIDR	**Miches**	**2.00**	**117**	↑*e*Pg	Pn	**22 34 59.5**	**-0.3**
MIDR				↑*e*Sg	Sn	**22 35 25.6**	**+1.6**
MIDR				IAML		22 35 26.1	
	comp=N,616nm,0.6s						
HIDR	**Higuey Centro**	**2.47**	**122**	↑*e*Pg	Pn	**22 35 07.2**	**+1.0**
HIDR				↓*e*Sg	Sn	**22 35 39.1**	**+3.6**
HIDR				IAML		22 35 39.8	
	comp=N,3μm,0.2s						
MASC	**Masc**	**3.11**	**275**	*e*P	Pn	**22 35 14.3**	**-0.7**
MASC				IAML		22 36 10.5	
	comp=N,128nm,0.6s						
MASC				IAML		22 36 12.1	
	comp=E,136nm,0.6s						
QMBU	**Quimbuelo**	**3.66**	**275**	*e*P	Pn	**22 35 19.7**	**-2.8**
QMBU				*e*S	Sn	**22 36 02.8**	**-2.0**
MOAC	**Moa**	**3.85**	**282**	*e*P	Pn	**22 35 23.5**	**-1.6**
MOAC				*e*S	Sn	**22 36 09.5**	**-0.1**
NMDO	**Nuevo Mundo**	**3.85**	**280**	*e*P	Pn	**22 35 24.4**	**-0.9**
GTBY	**Guantanamo Bay**	**3.93**	**271**	*e*P	Pn	**22 35 26.1**	**-0.2**
SABCS	**La Quijada**	**4.14**	**277**	*e*P	Pn	**22 35 29.5**	**+0.3**
PINC	**Pinares de May**	**4.60**	**278**	*e*P	Pn	**22 35 33.2**	**-2.3**
MARVS	**Santiago de Cu**	**4.67**	**272**	*e*P	Pn	**22 35 34.8**	**-1.7**
HLGC	**Holguin**	**4.91**	**282**	*e*P	Pn	**22 35 40.1**	**+0.4**
YAR	**Yar**	**5.12**	**276**	*e*P	Pn	**22 35 41.0**	**-1.7**
MTDJ	**Mount Denham**	**6.46**	**256**	*e*P	Pn	**22 35 59.3**	**-1.9**
CCCC	**Cccc**	**6.53**	**283**	*e*P	Pn	22 35 55.5	-6.5
CCCC				IAML		22 37 08.9	
	comp=N,5.0nm,0.3s						
CCCC				IAML		22 37 09.7	
	comp=E,3.3nm,0.2s						

IDC ***02*** *22:41:38.7±0.6, 17°.65N×148°.15E, h0km, mb4.5/27, mbtmp4.6/28, ML4.7/1, MS3.6/42, Error ellipse: s-maj=17.7km s-min=13.0km az=87.0*

BJI ***02*** *22:41:39.1, 17°.

comp=Z,48nm,0.8s
JOW Kunigami 20.43 300 P P 22 46 18.9 +0.9
comp=Z,46nm,0.8s,baz=143,slow=11,SNR=11
JOW LR LR 22 53 23.0
comp=Z,200nm,19.6s,baz=138,slow=34
comp=Z,46nm,0.8s
JOW Kunigami 20.43 300 P P 22 46 19.4 +1.4
JMN Monobe 20.48 325 P P 22 46 19.0 +0.5
MJAR Matsushiro Arr 20.79 337 P P 22 46 21.2 -0.7
comp=Z,8.6nm,0.9s,baz=170,slow=10,SNR=27
MJAR S S 22 50 15.2 +2.1
comp=Z,2.2nm,0.9s,baz=132,slow=20,SNR=4.6
comp=Z,8.6nm,0.9s
MAJO Matsushiro 20.80 337 P P 22 46 21.0 -0.9
MAJO Matsushiro 20.80 337 P P 22 46 22.6 +0.7
JAY Jayapura 21.20 200 P P 22 46 27.5 +1.2
comp=Z,3.4nm,0.6s,baz=21,slow=8.3,SNR=5.1
comp=Z,3.4nm,0.6s
JAY Jayapura 21.20 200 P P 22 46 27.9 +1.5
JMM Marumori 21.20 344 P P 22 46 25.2 -1.0
JMM Marumori 21.20 344 P P 22 46 27.2 +1.0
GENI Genyem 21.45 202 P P 22 46 30.8 +1.7
comp=Z,47nm,1.4s
SMPI Sarmi 21.46 206 P P 22 46 30.6 +1.4
JNU Nakatsue 21.84 318 P P 22 46 32.3 -0.9
JNU IAmb IAmb 22 46 40.0
comp=Z,54nm,1.3s
JNU Nakatsue 21.84 318 P P 22 46 33.6 +0.4
comp=Z,11nm,0.7s,baz=86,slow=6.9,SNR=9.2
comp=Z,11nm,0.7s
JNU Nakatsue 21.84 318 P P 22 46 34.0 +0.8
BAKI Biak 22.00 213 P P 22 46 35.5 +0.5
comp=Z,60nm,0.8s
RABL Rabaul 22.00 169 P P 22 46 34.2 -0.7
RABL IAmb IAmb 22 46 39.1
comp=Z,88nm,1.1s
JSD Sado 22.11 339 P 22 46 35.6 -0.4
JTM Tenmabayashi 23.91 347 P P 22 46 53.7 -0.7
DAV Davao City (W) 24.21 247 LR LR 22 55 00.3
comp=Z,110nm,21.6s,baz=94,slow=33
YOJ Yonaguni jima 24.28 291 P P 22 46 57.1 -0.9
SWI Sorong 24.62 224 P P 22 47 00.8 -0.3
comp=Z,40nm,1.2s
ERM Erimo 24.73 351 P P 22 47 02.5 +0.7
NACB Ninganchiao 25.50 289 P P 22 47 08.4 -0.6
NACB IAmb IAmb 22 47 30.2
comp=Z,21nm,0.9s
FAKI Fak Fak 25.59 219 P 22 47 09.7 -0.2
YULB Yu-li 25.64 288 P P 22 47 09.4 -1.0
YULB IAmb IAmb 22 47 30.5
comp=Z,60nm,1.5s
YULB Yu-li 25.64 288 P P 22 47 10.6 +0.2
YHNB Yeheng 25.78 290 P P 22 47 11.2 -0.5
SSLB Suanglung 26.01 288 P P 22 47 13.1 -0.6
SSLB Suanglung 26.01 288 P P 22 47 13.7 -0.1
TPUB Ta-pu 26.24 287 P P 22 47 15.1 -0.7
KSRS Korea Array 26.53 322 P P 22 47 19.1 +0.9
comp=Z,7.0nm,0.7s,baz=146,slow=8.7,SNR=27
KSRS LR LR 22 56 55.2
comp=Z,69µm,21.1s,baz=135,slow=34
comp=Z,7.0nm,0.7s
KSAR Wonju Array Be 26.55 322 P P 22 47 17.6 -0.7
KS19 Wonju Array Si 26.60 322 P P 22 47 17.7 -1.2
KS19 IAmb IAmb 22 47 21.2
comp=Z,17nm,0.8s
PMG Port Moresby 26.80 182 P P 22 47 21.9 +1.0
PMG IAmb IAmb 22 47 43.5
comp=Z,33nm,1.2s
PMG Port Moresby 26.80 182 P P 22 47 23.6 +2.8
comp=Z,15nm,0.8s,baz=359,slow=10,SNR=4.3
comp=Z,15nm,0.8s
JKA Kamikawa-asahi 26.87 351 P P 22 47 21.3 +0.1
HNR Honiara 29.30 155 LR LR 22 58 14.8
comp=Z,216nm,21.2s,baz=330,slow=34
USRK Ussuriysk Ar. 29.79 336 P P 22 47 48.1 +0.9
comp=Z,8.1nm,0.7s,baz=175,slow=8.7,SNR=4.9
comp=Z,8.1nm,0.7s
LUWI Luwuk 30.95 236 P P 22 47 56.3 -1.5
BNX BinXian 32.91 333 ⇓P P 22 48 18.9 +4.1
BNX pmax pmax
comp=Z,10.0nm,0.7s
SPSI Sidrap Palu 35.11 235 P P 22 48 32.8 -1.3
comp=Z,1µmcomp=Z,18nm,0.9s
BNSI Bone 35.12 234 P P 22 48 33.6 -0.6
comp=Z,18nm,1.1s
HNS HongShan 35.26 311 ⇓P P 22 48 35.5 +0.2
HNS pmax pmax
comp=Z,12nm,1.1s
BJT Baijiatuan 35.45 316 P P 22 48 36.7 -0.2
BJT IAmb IAmb 22 48 38.8
comp=Z,45nm,1.8s
BJI Beijing 35.46 316 P P 22 48 37.5 +0.6
BJI pmax pmax
comp=Z,5.0nm,1.4s
KAPI Kappang 35.77 234 P P 22 48 39.0 -0.9
KAPI IAmb IAmb 22 48 40.8
comp=Z,26nm,1.2s
BSSI Bau Bau, Buton 35.94 231 P P 22 48 40.2 -1.1
comp=Z,19nm,1.0s
PETK Petropavlovsk- 36.28 10 LR LR 23 00 50.9
comp=Z,94nm,19.8s,baz=195,slow=32
HEH HeiHe 36.56 338 eP P 22 48 46.7 +0.5
HEH pmax pmax
comp=Z,30nm,1.1s
KNRA Kununurra 38.07 211 P P 22 48 59.5 +0.2
KNRA IAmb IAmb 22 49 36.2
comp=Z,25nm,1.4s
SBUM Sibu 38.17 251 P P 22 49 00.6 +0.3
SBUM IAmb IAmb 22 49 01.7
comp=Z,10nm,0.6s
XAN Xi'an 38.54 303 P P 22 49 03.3 0.0
XAN pmax pmax
comp=Z,9.0nm,1.3s
HHC Hu-ho-hao-te 38.95 314 eP P 22 49 08.3 +1.6
HHC pmax pmax
comp=Z,12nm,0.5s
HHC pmax pmax
comp=Z,84nm,4.7s
HIA Hailar 39.01 330 P P 22 49 06.8 -0.2
HILR Hailar Array B 39.21 331 P P 22 49 08.4 -0.2
comp=Z,6.5nm,0.6s,baz=129,slow=12,SNR=4.9
comp=Z,6.5nm,0.6s
WB0 Warramunga Arr 39.42 200 P P 22 49 10.8 +0.1
WRA Warramunga Arr 39.60 200 P P 22 49 11.6 -0.6
WRA Warramunga Arr 39.60 200 P P 22 49 12.4 +0.3
comp=Z,3.8nm,0.6s,baz=23,slow=9.0,SNR=23
WRA LR LR 23 08 03.2
comp=Z,50nm,18.5s,baz=26,slow=40
comp=Z,3.8nm,0.6s
KSM Kuching 40.31 251 P 22 49 17.6 -0.6
KSM IAmb IAmb 22 49 18.8
comp=Z,24nm,0.8s
SHEM Shemya Is, Ala 40.63 24 LR LR 23 01 57.1
comp=Z,107nm,21.1s,baz=84,slow=30
FITZ Fitzroy Crossi 41.69 213 P P 22 49 29.9 +0.5
CD2 Chengdu 42.20 297 P P 22 49 33.8 +0.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 42.65 288 P P 22 49 38.4 +0.8
KMI pmax pmax
comp=Z,6.0nm,1.3s
LZH Lanzhou 43.08 304 eP P 22 49 42.6 +1.7
LZH pP sP 22 49 50.9 +4.4
LZH pmax pmax
comp=Z,18nm,1.3s
LZDM Lanzhou Array 43.17 304 P P 22 49 42.7 +1.0
comp=Z,8.7nm,0.6s,baz=138,slow=6.9,SNR=17
comp=Z,8.7nm,0.6s
AS31 Alice Springs 43.21 199 P P 22 49 42.1 +0.3
ASAR Alice Springs 43.22 199 P P 22 49 42.0 +0.2
ASAR Alice Springs 43.22 199 P P 22 49 42.5 +0.7
comp=Z,1.2nm,0.9s,baz=21,slow=7.2,SNR=11
comp=Z,1.2nm,0.9s
PZH PanZhiHua 43.59 290 P P 22 49 47.3 +2.3
PZH pmax pmax
comp=Z,10.0nm,0.7s
TPI Tanjungpandan 44.59 247 P P 22 49 52.5 -0.5
comp=Z,37nm,0.8s
ULN Ulaanbaatar 45.01 321 P P 22 49 55.8 -0.4
SONM Songino Array 45.39 321 P P 22 49 59.7 +0.5
comp=Z,5.3nm,0.7s,baz=140,slow=7.9,SNR=30
SONM LR LR 23 08 49.4
comp=Z,74nm,22.0s,baz=98,slow=36
comp=Z,5.3nm,0.7s
SEY Seymchan 45.44 3 LR LR 23 12 42.8
comp=Z,74nm,18.2s,baz=172,slow=41

YAK Yakutsk 46.26 348 P P 22 50 05.0 -0.6
YAK Yakutsk 46.26 348 LR LR 23 10 26.8
comp=Z,36nm,20.2s,baz=138,slow=37
CHTO Chiang Mai 46.49 279 P P 22 50 07.9 -0.1
CM31 Chiang Mai Arr 46.53 279 P P 22 50 08.6 +0.2
CM31 IAmb IAmb 22 50 23.7
comp=Z,18nm,1.1s
CMAR Chiang Mai Arr 46.53 279 P P 22 50 08.4 -0.1
CMAR Chiang Mai Arr 46.53 279 P P 22 50 09.2 +0.8
comp=Z,7.1nm,0.7s,baz=68,slow=7.0,SNR=41
CMAR LR LR 23 11 27.2
comp=Z,28nm,18.1s,baz=90,slow=38
comp=Z,7.1nm,0.7s
GTA Gaotai 46.96 308 P P 22 50 13.6 +1.9
GTA sP sP 22 50 19.7 +2.4
GTA pmax pmax
comp=Z,8.0nm,1.0s
MBWA Marble Bar 47.41 217 P P 22 50 15.5 +0.5
IPM Ipoh 47.74 260 P P 22 50 18.4 +0.5
IPM IAmb IAmb 22 50 20.1
comp=Z,14nm,1.0s
KULM Kulim 47.83 261 P P 22 50 19.7 +1.1
KULM IAmb IAmb 22 50 21.2
comp=Z,16nm,0.9s
MDSI Maura Dua 48.46 247 P P 22 50 21.7 -1.7
comp=Z,14nm,1.4s
NIKH Nikolski High 48.73 33 P P 22 50 24.1 -0.9
baz=240
STKA Stephens Creek 49.53 187 LR LR 23 10 28.0
comp=Z,77nm,21.8s,baz=23,slow=35
PSI Prapat 50.29 259 LR LR 23 10 32.3
comp=Z,50nm,21.9s,baz=53,slow=34
RPSI Rantau Prapat 50.32 259 P P 22 50 37.9 +0.3
RPSI IAmb IAmb 22 50 39.7
comp=Z,11nm,1.0s
BBOO Buckleboo 51.36 193 P P 22 50 45.1 0.0
BBOO IAmb IAmb 22 50 51.5
comp=Z,16nm,0.7s
BILL Bilibino 51.79 9 P P 22 50 47.6 -0.4
BILL IAmb IAmb 22 50 49.1
comp=Z,17nm,1.1s
GSI Gunungsitoli 52.08 258 P 22 50 50.9 0.0
GSI Gunungsitoli 52.08 258 P P 22 50 51.3 +0.5
SHL Shillong 52.46 289 P 22 50 52.9 -1.0
SHL IAmb IAmb 22 50 57.2
comp=Z,5.7nm,0.5s
LSA Lhasa 52.99 294 P P 22 50 58.5 +0.4
LSA Lhasa 52.99 294 P P 22 50 56.3 -1.8
LSA pmax pmax
comp=Z,10.0nm,0.7s
S12K Black Hills 53.52 33 P P 22 51 00.3 -0.6
baz=245
GAMB Gambell 53.72 21 P P 22 51 01.6 -0.6
baz=230
M11K Mekoryuk 53.81 26 P P 22 51 02.4 -0.5
baz=238
SDPT Sand Point 54.20 33 P P 22 51 05.5 -0.3
baz=247
S14K Fog Glacier 55.04 33 P P 22 51 11.7 -0.4
baz=247
M13K Dail Lake 55.05 27 P P 22 51 11.5 -0.3
baz=241
TIXI Tiksi 55.26 353 P 22 51 12.3 -0.9
TIXI Tiksi 55.26 353 LR LR 23 14 54.8
comp=Z,35nm,20.4s,baz=197,slow=36
K13K Kusilvak Mount 55.27 25 P P 22 51 13.4 -0.1
baz=239
O14K Tigyukauivet M 55.44 29 P P 22 51 14.2 -0.5
baz=244
N14K Kuskokwak Cree 55.55 28 P P 22 51 14.8 -0.7
baz=243
MORW Morawa 55.68 214 P P 22 51 17.1 +0.2
L14K Kuka Creek 55.78 26 P P 22 51 16.9 -0.2
baz=241
M14K Bethel 55.81 27 P P 22 51 17.2 -0.1
baz=242
O15K Ungalikthiuk R 56.07 29 P P 22 51 19.1 -0.3
TNA Tin City 56.10 20 P P 22 51 18.8 -0.6
baz=233
J14K Nanvaranak Lak 56.13 25 P P 22 51 19.3 -0.3
baz=239
M15K Kasigluk River 56.34 27 P P 22 51 20.7 -0.5
baz=244
N15K Kwethluk River 56.37 28 P P 22 51 21.6 +0.1
N15K Kwethluk River 56.37 28 P P 22 51 21.3 -0.2
baz=244
ANM Nome 56.41 22 P P 22 51 21.2 -0.5
baz=236
L15K Ungalak Mounta 56.45 26 P P 22 51 21.5 -0.5
baz=242
R16K Pilot Point 56.53 32 P P 22 51 22.5 -0.1
baz=248
F14K Arctic Creek 56.59 21 P P 22 51 23.2 +0.3
baz=235
WMQ Urumqi 56.69 311 eP P 22 51 26.5 +2.4
K15K Wolf Creek Mou 56.72 26 P P 22 51 24.0 +0.1
baz=242
EVN Everest 56.85 292 P 22 51 26.0 -0.2
P16K Nushagak River 56.88 30 P P 22 51 24.9 -0.2
baz=247
O16K Kokwok River B 57.05 29 P P 22 51 26.1 -0.2
baz=247
N16K Nishlik Lake 57.10 28 P P 22 51 26.4 -0.2
baz=246
G15K Niukluk 57.13 22 P P 22 51 26.6 -0.1
baz=238
R17L Mt. Peulik Vol 57.16 32 P P 22 51 26.6 -0.5
baz=250
M16K Timber Creek 57.24 28 P P 22 51 27.7 +0.1
M16K Timber Creek 57.24 28 P P 22 51 27.5 -0.1
baz=245
F15K North Star Dit 57.30 21 P P 22 51 27.9 -0.1
baz=236
L16K Owhat River 57.32 27 P P 22 51 27.5 -0.6
baz=244
J16K Anvik River 57.56 25 P P 22 51 29.2 -0.6
baz=242
O17K Koliganek Bris 57.59 29 P P 22 51 29.6 -0.4
baz=248
H16K Elim 57.60 23 P P 22 51 30.1 +0.1
baz=240
Q17K Contact Creek 57.62 31 P P 22 51 30.4 -0.1
baz=250
P17K Kvichak River 57.69 30 P P 22 51 31.0 +0.2
baz=249
I17K Unalakleet 57.81 24 P P 22 51 31.3 -0.2
baz=242
N17K Nushagak Hills 57.84 29 P P 22 51 32.2 +0.4
N17K IAmb IAmb 22 51 43.6
comp=Z,40nm,1.8s
N17K Nushagak Hills 57.84 29 P P 22 51 32.2 +0.4
baz=247
G16K Koyuk River 57.94 22 P P 22 51 32.8 +0.4
baz=239
L17K Donlin 58.00 27 P P 22 51 33.7 +0.7
baz=245
M17K Holitna River 58.07 28 P P 22 51 34.0 +0.6
baz=246
NWAO Narrogin (SRO) 58.17 210 P P 22 51 35.9 +1.4
Q18K Katmai Hardscr 58.19 31 P P 22 51 33.4 -1.1
baz=250
J17K VABM Dome 58.23 25 P P 22 51 34.0 -0.5
baz=244
K17K Iditarod 58.25 26 P P 22 51 35.1 +0.5
K17K IAmb IAmb 22 51 36.5
comp=Z,20nm,1.1s
K17K Iditarod 58.25 26 P P 22 51 34.6 -0.1
baz=245
P18K Big Mountain, 58.34 30 P P 22 51 34.3 -1.1
baz=250
N18K Kilae Creek 58.49 29 P P 22 51 36.3 -0.2
baz=248
O18K Koktuh Hills 58.51 30 P P 22 51 36.8 +0.3
baz=249
C16K Lisburne Hills 58.54 19 P P 22 51 37.0 +0.4
baz=234
OHAK Old Harbor 58.61 33 P P 22 51 37.3 +0.1
baz=253
G17K Kiwalik Mounta 58.61 22 P P 22 51 37.2 +0.1
baz=241
H17K Granite Mounta 58.61 23 P P 22 51 37.6 +0.4
H17K IAmb IAmb 22 51 38.7
comp=Z,9.6nm,0.8s
H17K Granite Mounta 58.61 23 P P 22 51 36.8 -0.4
baz=242
L18K Granite Mounta 58.73 27 P P 22 51 38.3 +0.2
baz=247

M18K Stony River 58.82 28 P P 22 51 38.8 +0.1
baz=248
F17K Baldwin Pennin 58.87 21 P P 22 51 39.2 +0.4
baz=240,SNR=5.2
D17K Noatak River 58.92 20 P P 22 51 39.5 +0.3
baz=237
E17K Hotham Inlet 59.00 21 P P 22 51 40.0 +0.2
baz=239
KDAK Kodiak Island 59.13 33 P P 22 51 40.8 -0.1
KDAK Kodiak Island 59.13 33 LR LR 23 16 14.7
comp=Z,46nm,19.3s,baz=230,slow=35
ZSN Zaisan 59.14 315 eP P 22 51 42.0 +0.8
comp=Z,12nm,1.5s
RDOG Red Dog Mine 59.17 19 P P 22 51 41.0 0.0
baz=237
N19K Bonanza Creek 59.18 29 P P 22 51 41.5 +0.2
baz=250
J18K Innoko River 59.22 25 P P 22 51 41.7 +0.2
baz=246
H18K Honhosa River 59.30 23 P P 22 51 41.6 -0.3
baz=243
C17K DeLong Mountai 59.31 19 P P 22 51 41.5 -0.5
baz=237
P19K Oil Pt 59.38 30 P P 22 51 41.9 -0.8
baz=252
F18K Selawik 59.50 22 P P 22 51 42.9 -0.3
baz=241
L19K White Mountain 59.51 27 P P 22 51 43.4 0.0
baz=248
G18K Tagagawik 59.53 22 P P 22 51 43.1 -0.4
baz=243,SNR=7.6
E18K Tukpahlearik C 59.58 20 P P 22 51 43.5 -0.3
baz=240
GCSA Galena City Sc 59.69 24 P P 22 51 44.2 -0.4
baz=245
O20K Slope Mountain 59.81 30 P P 22 51 44.1 -1.5
baz=252
J19K Poorman 59.88 25 P P 22 51 45.3 -0.7
baz=247,SNR=6.1
C18K Utukok River 60.02 19 P P 22 51 46.2 -0.8
baz=239
L20K Farewell, AK 60.04 27 P P 22 51 46.4 -0.7
baz=249
M20K Styx River 60.16 28 P P 22 51 47.6 -0.5
baz=250
H19K Roundabout Mou 60.18 23 P P 22 51 47.1 -0.8
baz=245
B18K Kokolik River 60.22 18 P P 22 51 47.5 -0.7
baz=238
ZAA0 Zalesovo Array 60.24 323 P P 22 51 48.3 -0.2
ZAA0 IAmb IAmb 22 51 49.5
comp=Z,9.4nm,0.9s
ZALV Zalesovo Beam 60.24 323 P P 22 51 48.8 +0.2
comp=Z,7.3nm,0.7s,baz=102,slow=6.8,SNR=30
ZALV LR LR 23 17 52.9
comp=Z,50nm,19.9s,baz=90,slow=36
comp=Z,7.3nm,0.7s
F19K Shaleruckik Mo 60.27 22 P P 22 51 47.4 -1.1
baz=243
K20K Telida 60.27 26 P P 22 51 48.1 -0.6
baz=249,SNR=6.9
CNPM China Poot 60.31 31 P P 22 51 48.1 -0.9
J20K Nowinta River 60.55 25 P P 22 51 49.3 -1.2
baz=248
BRSE Bradley Lake S 60.61 31 P P 22 51 49.4 -1.7
baz=254
I20K Naaghedeneel 60.65 24 P P 22 51 49.9 -1.3
baz=247
E19K Redstone River 60.74 21 P P 22 51 51.1 -0.7
baz=243
C19K Lookout Ridge 60.76 19 P P 22 51 51.3 -0.6
baz=240
H20K Anotlenvegga Mo 60.77 24 P P 22 51 50.9 -1.1
baz=247,SNR=10
MKAR Makanchi Array 60.81 314 P 22 51 52.9 +0.2
MKAR Makanchi Array 60.81 314 P P 22 51 53.6 +0.9
comp=Z,2.2nm,0.7s,baz=94,slow=8.4,SNR=25
MKAR LR LR 23 19 06.5
comp=Z,48nm,18.7s,baz=72,slow=37
comp=Z,2.2nm,0.7s
A19K Wainwright 60.88 18 P P 22 51 52.1 -0.5
baz=238
SKT Skwentna 60.91 28 P P 22 51 52.0 -1.1
baz=252
PPLA Purkeypile 60.91 27 P P 22 51 52.7 -0.5
baz=251
D19K Kuna River 60.93 20 P P 22 51 52.8 -0.3
baz=242
MAKZ Makanchi 61.03 314 P 22 51 52.8 -1.4
MAKZ IAmb IAmb 22 51 58.1
comp=Z,12nm,1.2s
F20K Avaraart Lake 61.09 22 P P 22 51 53.2 -0.9
baz=245
SUA Susitna One 61.11 29 P P 22 51 53.9 -0.6
baz=253
CHUM Lake Minchumin 61.19 26 P P 22 51 54.8 -0.1
baz=250,SNR=6.8
SEW Seward 61.34 30 P P 22 51 55.2 -0.7
baz=255
IMAR Indian Mountai 61.39 23 P P 22 51 55.6 -0.6
E20K Nigu River 61.45 21 P P 22 51 56.0 -0.7
baz=244,SNR=8.2
RC01 Rabbit Creek A 61.47 29 P P 22 51 56.3 -0.5
baz=254
D20K Etivluk River 61.52 20 P P 22 51 56.9 -0.2
baz=243
CUT Chulitna 61.60 28 P P 22 51 57.3 -0.4
baz=253
H21K Melozitna Rive 61.63 24 P P 22 51 57.0 -0.8
baz=249
G21K Allakaket 61.68 23 P P 22 51 57.8 -0.4
baz=248
I21K Tanana 61.78 25 P P 22 51 59.0 +0.1
baz=250
BPAW Bear Paw Mtn. 61.82 26 22 51 58.9 -0.3
BPAW Bear Paw Mtn. 61.82 26 P P 22 51 58.9 -0.3
baz=251,SNR=14
PMR Palmer 61.89 29 P P 22 51 59.4 -0.2
baz=254
URZ Urenewa 61.89 154 LR LR 23 18 09.0
comp=Z,7.7nm,18.7s,baz=314,slow=35
TRF Thorofare Moun 61.91 27 P P 22 51 59.4 -0.6
baz=252,SNR=8.7
B20K Meade River 61.94 19 P P 22 52 00.3 +0.5
baz=242
F21K Alatna River 61.96 22 P P 22 52 00.0 -0.1
baz=247
PWL Port Wells 62.07 30 P P 22 52 00.2 -0.7
baz=256,SNR=7.2
KNK Knik Glacier 62.15 29 P P 22 52 01.0 -0.4
baz=255
MLY Manley 62.22 25 P P 22 52 01.6 -0.3
baz=251,SNR=16
H22K Ishtalitna Cre 62.26 24 P P 22 52 02.2 +0.1
baz=250,SNR=6.3
E21K Killik River 62.28 21 P P 22 52 01.9 -0.3
baz=246
C21K Knifeblade Rid 62.31 20 P P 22 52 01.7 -0.6
baz=245
P23K Montague Islan 62.31 31 P P 22 52 02.5 0.0
baz=257
SML Sawmill 62.31 29 P P 22 52 02.3 -0.2
baz=255,SNR=8.6
WAT1 Susitna Watana 62.48 28 P P 22 52 02.5 -1.2
baz=254
SEM Semipalatinsk 62.50 318 eP P 22 52 04.6 +0.3
RND Reindeer 62.51 27 P P 22 52 02.9 -1.0
RND IAmb IAmb 22 52 04.0
comp=Z,20nm,1.4s
F22K John River 62.54 22 P P 22 52 04.1 +0.1
baz=248
B21K Ikpikpuk River 62.56 19 P P 22 52 04.1 +0.1
baz=245
G22K Bettles 62.57 23 P P 22 52 03.6 -0.5
baz=249
MCK McKinley 62.57 27 P P 22 52 03.9 -0.3
baz=253
M23K Glacier View 62.59 29 P P 22 52 04.4 0.0
baz=256,SNR=5.0
SHLS Shalkode 62.62 310 eP P 22 52 03.4 -1.7
comp=Z,7.5nm,1.3s
GLI Glacier Island 62.66 30 P P 22 52 04.3 -0.5
baz=257
A21K Barrow 62.72 17 P P 22 52 04.9 -0.1
baz=242
TKNZ Takaka Hill 62.73 159 P P 22 52 06.9 +1.4
NEA2 Nenana 62.77 26 P P 22 52 05.4 -0.1
baz=253

SCM	**Sheep Creek Mo**	62.78	29	P		P	22 52 05.4	-0.3
SCM	**Sheep Creek Mo**	62.78	29	P		P	22 52 05.2	-0.5
	baz=256,SNR=9.8							
WAT6	**Susitna Watana**	62.78	28	P		P	22 52 05.4	-0.4
	baz=255,SNR=8.8							
I23K	**Minto, Yukon-K**	62.81	25	P		P	22 52 05.7	-0.1
	baz=252,SNR=11							
D22K	**Ayikyak River**	62.89	21	P		P	22 52 06.2	-0.1
	baz=247							
E22K	**Anaktuvuk Pass**	62.90	21	P		P	22 52 06.0	-0.4
	baz=248,SNR=9.2							
UZB	**Uzynbulak**	62.94	310	*e*P		P	22 52 07.9	+0.7
	comp=Z,6.8nm,1.5s							
H23K	**Yukon River**	62.95	24	P		P	22 52 06.5	-0.3
	baz=252							
G23K	**Bananza Creek**	63.05	23	P		P	22 52 07.0	-0.4
	baz=251,SNR=8.0							
DHY	**Denali Highway**	63.07	27	P		P	22 52 06.3	-1.4
	baz=255,SNR=6.0							
COLD	**Coldfoot**	63.16	23	P		P	22 52 06.6	-1.5
	baz=250							
EYAK	**Cordova Ski Ar**	63.23	30	P		P	22 52 08.0	-0.6
	baz=258							
B22K	**Teshekpuk Lake**	63.23	19	P		P	22 52 08.1	-0.3
	baz=246							
COLA	**College**	63.35	25	P		P	22 52 09.7	+0.5
	baz=254							
KLU	**Klutina**	63.35	29	P		P	22 52 09.7	+0.2
KLU				IAmb		IAmb	22 52 10.7	
	comp=Z,9.6nm,0.8s							
KLU	**Klutina**	63.35	29	P		P	22 52 09.8	+0.2
	baz=257,SNR=5.9							
M24K	**Tolsona, Glenn**	63.37	29	P		P	22 52 09.4	-0.3
	baz=257							
SATY	**Saty**	63.39	310	*e*P		P	22 52 10.7	+0.5
	comp=Z,8.5nm,1.4s							
TDK	**Taldygorghan**	63.42	312	*e*P		P	22 52 11.0	+0.8
	comp=Z,8.3nm,0.9s							
KURK	**Kurchatov**	63.57	318	P		P	22 52 11.0	0.0
KURK				IAmb		IAmb	22 52 27.5	
	comp=Z,14nm,1.1s							
POKR	**Poker Plat Res**	63.59	25	P		P	22 52 09.6	-1.3
	baz=254							
D23K	**Nanushuk River**	63.59	21	P		P	22 52 10.7	-0.2
	baz=249							
HDA	**Harding Lake**	63.60	26	P		P	22 52 10.3	-0.7
	baz=255,SNR=9.0							
H24K	**Noodor Dome**	63.61	24	P		P	22 52 11.5	+0.4
	baz=253							
KURBB	**Kurchatov Arra**	63.62	318	P		P	22 52 11.8	+0.5
	comp=Z,12nm,0.8s,baz=95,slow=6.9,SNR=90							
	comp=Z,12nm,0.8s							
E23K	**Chandalar**	63.65	22	P		P	22 52 11.0	-0.4
	baz=251,SNR=11							
ILAR	**Eielson Array**	63.72	26	P		P	22 52 10.1	-1.7
ILAR	**Eielson Array**	63.72	26	P		P	22 52 10.2	-1.5
	comp=Z,7.4nm,0.9s,baz=256,slow=5.4,SNR=63							
ILAR				LR		LR	23 17 11.2	
	comp=Z,75nm,21.2s,baz=243,slow=34							
	comp=Z,7.4nm,0.9s							
KAIM	**Kayak Island**	63.76	31	P		P	22 52 12.2	0.0
	baz=260							
TOLK	**Toolik Lake Re**	63.86	21	P		P	22 52 12.9	+0.2
	baz=250							
BMRM	**Bremner River**	63.87	30	P		P	22 52 12.9	-0.1
	baz=259							
PAX	**Paxson**	63.89	28	P		P	22 52 12.6	-0.4
	baz=257,SNR=8.3							
HARP	**HAARP**	63.90	28	P		P	22 52 13.3	+0.2
	baz=258,SNR=6.8							
C23K	**Itkillik River**	63.93	20	P		P	22 52 12.9	-0.1
	baz=249							
K24K	**Donnelly Dome**	63.94	27	P		P	22 52 13.0	-0.3
	baz=256,SNR=5.3							
N25K	**Chitina, Valde**	64.00	29	P		P	22 52 13.6	-0.2
	baz=259,SNR=6.4							
G24K	**Hadweenzic Riv**	64.01	24	P		P	22 52 13.0	-0.7
	baz=253							
E24K	**Your Creek**	64.05	22	P		P	22 52 13.7	-0.3
	baz=252							
F24K	**Squaw Lake**	64.10	23	P		P	22 52 14.5	+0.2
	baz=253							
D24K	**Happy Valley**	64.28	21	P		P	22 52 15.2	-0.2
	baz=251							
J25K	**Salcha River,**	64.31	26	P		P	22 52 15.1	-0.7
	baz=256							
RIDG	**Independent Ri**	64.33	27	P		P	22 52 15.1	-0.8
RIDG	**Independent Ri**	64.33	27	P		P	22 52 15.1	-0.8
	baz=257,SNR=11							
BGLC	**Bering Glacier**	64.36	31	P		P	22 52 15.6	-0.4
	baz=260							
MDOK	**Medeo**	64.38	310	*e*P		P	22 52 17.4	+0.7
AAA	**Alma-Ata**	64.48	310	*e*P		P	22 52 18.0	+0.7
	comp=Z,5.2nm,0.7s							
C24K	**Franklin Bluff**	64.51	20	P		P	22 52 16.6	-0.3
	baz=251							
H25L	**Birch Creek**	64.53	24	P		P	22 52 17.2	+0.1
	baz=255,SNR=12							
G25K	**Bearman Lake**	64.56	24	P		P	22 52 17.0	-0.2
	baz=255							
CRQE	**Cirque**	64.56	30	P		P	22 52 17.0	-0.5
	baz=260,SNR=6.1							
MCARA	**McCarthy VSAT**	64.70	30	P		P	22 52 17.6	-0.7
MCARA	**McCarthy VSAT**	64.70	30	P		P	22 52 18.4	+0.1
	baz=260,SNR=7.9							
SCRK	**Sand Creek**	64.76	27	P		P	22 52 18.2	-0.6
	baz=258,SNR=12							
L26K	**Log Cabin Wild**	64.85	28	P		P	22 52 18.7	-0.6
	baz=259,SNR=8.0							
M26K	**Nabesna, AK**	64.89	29	P		P	22 52 19.1	-0.5
	baz=260							
F25K	**Christian Rive**	64.95	23	P		P	22 52 20.0	+0.1
	baz=255							
MESA	**MESA**	65.03	31	P		P	22 52 20.6	0.0
	baz=262							
J26L	**Joseph Creek**	65.05	26	P		P	22 52 20.3	-0.3
	baz=258							
E25K	**Arctic Village**	65.11	22	P		P	22 52 20.9	0.0
	baz=255,SNR=5.2							
D25K	**Kavik River**	65.17	21	P		P	22 52 20.8	-0.5
	baz=253							
BOOM	**Boomskoye usch**	65.21	309	P		P	22 52 22.8	+0.6
BOOM				IAmb		IAmb	22 52 26.1	
	comp=Z,7.6nm,0.9s							
KSH	**Kashi**	65.30	306	P		P	22 52 26.0	+3.2
KSH				pmax		pmax		
	comp=Z,5.0nm,0.9s							
BMAR	**Burnt Mountain**	65.30	23	P		P	22 52 22.9	+0.7
I26K	**Coal Creek Min**	65.38	26	P		P	22 52 22.2	-0.5
	baz=258							
M27K	**Edge Creek, AK**	65.40	29	P		P	22 52 23.3	+0.3
	baz=261							
CTG	**Chitna Glacier**	65.44	30	P		P	22 52 23.9	+0.6
	baz=262,SNR=7.1							
CTGM	**Chitina Glacie**	65.44	30	P		P	22 52 23.1	-0.2
G26K	**Porcupine Rive**	65.49	24	P		P	22 52 23.4	+0.1
	baz=257,SNR=20							
F26K	**Sheenjek River**	65.53	23	P		P	22 52 23.8	+0.2
	baz=256,SNR=11							
L27K	**Beaver Creek,**	65.53	28	P		P	22 52 23.8	+0.1
	baz=260							
BCAR	**Beaver Creek A**	65.55	28			P	22 52 23.5	-0.4
K27K	**Chicken**	65.59	27	P		P	22 52 24.0	-0.1
	baz=260							
PINM	**Pinnacle**	65.86	31	P		P	22 52 25.4	-0.5
	baz=263							
O28M	**Mount Upton**	65.97	31	P		P	22 52 26.3	-0.6
	baz=263,SNR=12							
I27K	**Kandik River**	66.07	25	P		P	22 52 26.9	-0.2
	baz=260							
C27K	**Jago River**	66.15	21	P		P	22 52 27.7	+0.1
	baz=256							
PALK	**Pallekele**	66.22	270	LR		LR	23 18 23.9	
	comp=Z,29nm,22.0s,baz=82,slow=33							
H27K	**Steamboat Moun**	66.22	25	P		P	22 52 28.4	+0.2
	baz=259							
YUK8	**Steele Glacier**	66.24	30	P		P	22 52 28.3	-0.2
	baz=263,SNR=8.6							
PNL	**Peninsula**	66.24	32	P		P	22 52 28.0	-0.3
	baz=264							
AAK	**Ala-Archa**	66.27	309			P	22 52 29.5	+0.5
G27K	**Doyon Strip**	66.28	24	P		P	22 52 28.8	+0.4
	baz=259							
E27K	**Coleen River**	66.58	23	P		P	22 52 30.9	+0.6
	baz=258							
O29M	**Mount Kennedy**	66.71	31	P		P	22 52 31.9	+0.5
	baz=265,SNR=8.2							
DAWY	**Dawson**	66.77	27			P	22 52 31.7	+0.1
DAWY				IAmb		IAmb	22 52 33.0	
	comp=Z,11nm,0.9s							
DAWY	**Dawson**	66.77	27	P		P	22 52 31.7	+0.1
	baz=262,SNR=12							
YUK4	**Talbot Arm**	66.78	30	P		P	22 52 32.5	+0.5
	baz=264,SNR=16							
YUK6	**Outpost Mounta**	66.88	31	P		P	22 52 32.6	0.0
	baz=264							
M29M	**Somme Creek**	66.98	29	P		P	22 52 33.5	+0.4
	baz=264							
D27M	**Malcolm River**	67.01	21	P		P	22 52 33.2	0.0
	baz=259							
P29M	**Windy Craggy**	67.07	32	P		P	22 52 33.6	-0.1
	baz=266							
F28M	**Old Crow**	67.11	23	P		P	22 52 34.0	+0.3
	baz=260,SNR=8.0							
L29M	**L29M**	67.21	28	P		P	22 52 35.3	+0.8
	baz=264,SNR=18							
HYT	**Haines Junctio**	67.28	31			P	22 52 35.9	+0.8
HYT	**Haines Junctio**	67.28	31	P		P	22 52 35.8	+0.8
	baz=265,SNR=27							
E28M	**Babbage River**	67.40	22	P		P	22 52 36.3	+0.7
	baz=260							
ARSB	**Arslanbob**	67.47	308	P		P	22 52 37.3	+0.6
ARSB				IAmb		IAmb	22 52 40.7	
	comp=Z,7.1nm,1.0s							
H29M	**Whitestone**	67.48	25	P		P	22 52 36.0	-0.1
	baz=262,SNR=6.7							
P30M	**Million Dollar**	67.50	32	P		P	22 52 36.9	+0.6
	baz=266							
N30M	**Aishikik Lake**	67.54	30	P		P	22 52 36.9	+0.3
	baz=266,SNR=12							
K29M	**Barlow Dome**	67.56	28	P		P	22 52 36.4	-0.4
	baz=264,SNR=24							
G29M	**Pine Creek**	67.71	24	P		P	22 52 37.6	0.0
	baz=262,SNR=7.6							
S31K	**Pelican**	67.76	34	P		P	22 52 38.2	+0.3
	baz=268							
PLBC	**Pleasant Camp**	67.76	32	P		P	22 52 37.9	0.0
	baz=267,SNR=9.2							
M30M	**Minto, Yukon**	67.77	29	P		P	22 52 38.2	+0.1
	baz=265,SNR=9.6							
D28M	**Stokes Point**	67.81	22	P		P	22 52 38.1	0.0
	baz=261							
E29M	**Blow River**	67.97	23	P		P	22 52 39.5	+0.4
	baz=262							
O30N	**Mendenhall**	67.97	31	P		P	22 52 39.6	+0.2
	baz=267							
NIL	**Nilore**	67.98	300			P	22 52 40.5	+0.6
J30M	**Hart River**	68.15	27	P		P	22 52 40.6	+0.2
	baz=265,SNR=14							
EPYK	**Eagle Plains**	68.16	25	P		P	22 52 40.8	+0.3
	baz=264,SNR=10							
N31M	**Braeburn, Yuko**	68.17	30	P		P	22 52 40.4	-0.1
	baz=267,SNR=16							
I30M	**Mount Dempster**	68.19	26	P		P	22 52 40.4	-0.3
	baz=265							
SKAG	**Skagway**	68.29	32	P		P	22 52 41.4	+0.2
	baz=268							
G30M	**tAoh Zraii Nji**	68.43	24	P		P	22 52 41.7	-0.4
	baz=264							
WHY	**Whitehorse**	68.56	31	P		P	22 52 42.8	-0.3
	baz=268							
S32K	**Killisnoo**	68.63	34	P		P	22 52 42.9	-0.5
	baz=269							
F30M	**Barrier River**	68.66	24	P		P	22 52 42.9	-0.5
	baz=264							
R32K	**Eaglecrest**	68.68	34	P		P	22 52 43.6	-0.1
	baz=269							
BVAR	**Borovoye Array**	68.73	321	P		P	22 52 44.5	+0.3
	comp=Z,12nm,0.7s,baz=91,slow=7.5,SNR=56							
BVAR				LR		LR	23 23 23.0	
	comp=Z,72nm,21.3s,baz=71,slow=36							
	comp=Z,12nm,0.7s							
M31M	**Drury Creek, Y**	68.86	29	P		P	22 52 44.9	0.0
	baz=268,SNR=8.4							
H31M	**Peel River**	69.08	26	P		P	22 52 46.1	0.0
	baz=266,SNR=12							
P32M	**Atlin**	69.11	32	P		P	22 52 46.2	-0.3
	baz=269,SNR=5.2							
KK31	**Karatay Array**	69.16	310			P	22 52 47.1	0.0
KK31				IAmb		IAmb	22 52 51.5	
	comp=Z,7.0nm,0.9s							
KKAR	**Karatay Array**	69.16	310			P	22 52 47.5	+0.4
G31M	**Satah River**	69.19	24	P		P	22 52 46.9	+0.2
	baz=266							
F31M	**Tsiigehtchic**	69.43	24	P		P	22 52 47.8	-0.4
	baz=266							
U33K	**Whale Pass**	69.44	36	P		P	22 52 48.6	+0.2
	baz=271							
CRAG	**Craig**	69.45	37	P		P	22 52 48.3	-0.2
	baz=271							
N32M	**Quiet Lake**	69.45	31	P		P	22 52 48.1	-0.5
	baz=269							
INK	**Inuvik**	69.57	23			P	22 52 48.7	-0.4
INK				IAmb		IAmb	22 52 49.6	
	comp=Z,12nm,0.8s							
INK	**Inuvik**	69.57	23	P		P	22 52 48.8	-0.2
	baz=266							
P33M	**Teslin, Yukon**	69.57	32	P		P	22 52 49.4	0.0
	baz=270,SNR=5.2							
IUG	**Iuzhnay**	69.60	309	*e*P		P	22 52 50.8	+0.8
	comp=Z,18nm,1.1s							
BRLS	**Borolday**	69.66	310	*e*P		P	22 52 51.7	+1.5
GAR	**Garm**	69.72	306	P		P	22 52 50.6	-0.1
GAR				IAmb		IAmb	22 52 54.3	
	comp=Z,7.0nm,0.8s							
Q32M	**Nakina River**	69.86	33	P		P	22 52 50.9	-0.3
	baz=271							
WRAK	**Wrangell Islan**	69.86	36	P		P	22 52 50.5	-0.5
	baz=272							
CHM	**Chimkent**	69.90	309	*e*P		P	22 52 52.4	+0.7
V35K	**Ketchikan**	70.31	37	P		P	22 52 53.6	-0.2
	baz=272							
MMPY	**Sheldon Lake,**	70.33	29	P		P	22 52 53.8	-0.1
	baz=270,SNR=5.7							
S34M	**Telegraph Cree**	70.48	34	P		P	22 52 54.8	0.0
	baz=272,SNR=5.2							
R33M	**Jennings River**	70.52	32	P		P	22 52 54.7	-0.5
	baz=272,SNR=9.8							
CHGR	**Chuyangaron**	70.66	306			P	22 52 56.7	+0.3
PPT2	**Papeete2**	70.67	116	*e*LR		LR	23 14 24.1	
	comp=Z,91nm,21.5s							
PPT2				*e*LR		LR	23 14 29.1	
	comp=Z,109nm,24.2s							
SIMJ	**Simiganj**	70.77	306	P		P	22 52 57.4	+0.2
SIMJ				IAmb		IAmb	22 53 00.9	
	comp=Z,6.1nm,0.8s							
T35M	**Bob Quinn**	71.00	35	P		P	22 52 57.9	-0.2
	baz=273,SNR=6.0							
DLBC	**Dease Lake**	71.04	33	LR		LR	23 24 09.9	
	comp=Z,30nm,18.6s,baz=248,slow=36							
DLBC	**Dease Lake**	71.04	33	P		P	22 52 58.5	+0.1
	baz=273,SNR=9.4							
KBL	**Kabul**	71.32	301			P	22 53 00.7	0.0
KBL				IAmb		IAmb	22 53 16.7	
	comp=Z,11nm,1.1s							
WTLY	**Watson Lake, Y**	71.59	32	P		P	22 53 02.0	+0.4
	baz=273							
TGTN	**Hyland Airport**	71.76	30	P		P	22 53 01.9	-0.7
	baz=273							
A36M	**Sachs Harbour**	72.44	19	P		P	22 53 05.8	-0.6
	baz=273							
BBB	**Bella Bella**	72.63	40	LR		LR	23 22 06.2	
	comp=Z,116nm,18.9s,baz=230,slow=34							
C36M	**Paulatuk**	73.00	22	P		P	22 53 09.8	+0.1
	baz=274							
LIRD	**Liard River Hi**	73.00	32	P		P	22 53 10.2	+0.2
	baz=276,SNR=5.7							
TOAD	**Toad River Com**	73.51	33	P		P	22 53 13.1	+0.1
	baz=277,SNR=9.5							
WRGLY	**Wrigley**	73.85	28	P		P	22 53 15.1	+0.2
	baz=277							
KOTAN	**Kotaneelee Air**	73.95	31	P		P	22 53 15.8	+0.2
	baz=277							
ARTI	**Arti**	75.35	325			P	22 53 23.6	-0.1
ARTI				IAmb		IAmb	22 53 29.5	
	comp=Z,8.7nm,0.6s							
AB31	**Akbulak array**	75.65	317			P	22 53 25.5	-0.1
ABKAR	**Akbulak array**	75.65	317			P	22 53 25.5	-0.1
NLWA	**Neilton Lookou**	76.06	44	P		P	22 53 27.9	-0.2
NLWA				IAmb		IAmb	22 53 30.1	
	comp=Z,12nm,1.2s							
AKTO	**Aktyubinsk**	76.65	319	LR		LR	23 29 12.9	
	comp=Z,69nm,19.2s,baz=166,slow=37							
LLLB	**Lillooet**	76.73	41			P	22 53 31.7	-0.1
LLLB				IAmb		IAmb	22 53 33.4	
	comp=Z,9.8nm,1.0s							
HRA	**Herat**	76.87	302			P	22 53 33.3	+0.2
KHMM	**Horse Mountain**	77.46	51	P		P	22 53 37.1	+0.8
KHMM				IAmb		IAmb	22 53 41.1	
	comp=Z,30nm,1.6s							
BBOR	**Butler Butte**	77.80	49	P		P	22 53 38.0	-0.1
YKA	**Yellowknife Ar**	77.97	28	P		P	22 53 38.0	-0.4
	comp=Z,5.3nm,0.9s,baz=287,slow=6.3,SNR=6.1							
YKA				LR		LR	23 28 36.7	
	comp=Z,64nm,19.1s,baz=301,slow=36							
	comp=Z,5.3nm,0.9s							
M02C	**Callahan**	78.00	50	P		P	22 53 39.5	+0.4
WIFE	**Three Sisters-**	78.15	47	P		P	22 53 40.2	+0.1
WIFE				IAmb		IAmb	22 53 41.6	
	comp=Z,11nm,0.9s							
O02D	**Mt. Diablo Mer**	78.32	51	P		P	22 53 41.5	+0.6
J05D	**Fort Rock, OR**	78.74	48			P	22 53 43.7	+0.4
J05D				IAmb		IAmb	22 53 44.9	
	comp=Z,12nm,0.9s							
HAWA	**Hanford**	79.18	45	P		P	22 53 45.5	+0.1
KIRV	**Kirov**	79.58	328	LR		LR	23 30 34.3	
	comp=Z,36nm,20.1s,baz=76,slow=37							
RES	**Resolute Bay**	80.01	14	P		P	22 53 49.7	+0.3
BEKR	**Beckworth**	80.20	51			P	22 53 51.3	0.0
BEKR				IAmb		IAmb	22 53 52.4	
	comp=Z,9.1nm,0.9s							
NEW	**Newport**	80.29	42			P	22 53 51.4	-0.1
NEW				IAmb		IAmb	22 53 52.5	
	comp=Z,10nm,0.8s							
NEW	**Newport**	80.29	42	LR		LR	23 26 20.7	
	comp=Z,75nm,19.1s,baz=306,slow=34							
SPITS	**Spitsbergen Ar**	80.64	351	LR		LR	23 29 38.8	
	comp=Z,33nm,21.0s,baz=15,slow=36							
WVOR	**Wild Horse Val**	80.80	48	P		P	22 53 54.5	+0.1
BMO	**Blue Mountains**	81.08	46			P	22 53 55.6	-0.3
RYN	**Ryan**	81.90	52	P		P	22 54 00.7	+0.3
NVAR	**Mina Array Bea**	82.12	52	P		P	22 54 02.1	+0.4
	comp=Z,5.1nm,0.7s,baz=265,slow=6.1,SNR=25							
NVAR				LR		LR	23 25 09.5	
	comp=Z,31nm,19.1s,baz=286,slow=32							
	comp=Z,5.1nm,0.7s							
HLID	**Hailey**	83.45	46			P	22 54 08.2	-0.2
ELK	**Elko**	83.72	49			P	22 54 10.1	+0.2
ELK				IAmb		IAmb	22 54 11.2	
	comp=Z,11nm,1.1s							
ELK	**Elko**	83.72	49	LR		LR	23 24 52.8	
	comp=Z,47nm,19.8s,baz=286,slow=31							
LRM	**Limekiln Ridge**	84.06	44	P		P	22 54 11.5	-0.1
DLMT	**Dillon**	84.12	44	P		P	22 54 11.7	0.0
DLMT				IAmb		IAmb	22 54 11.9	
	comp=Z,21nm,1.9s							
ARCES	**ARCESS Array B**	84.23	343	P		P	22 54 11.2	-0.5
ARCES	**ARCESS Array B**	84.23	343	P		P	22 54 10.9	-0.8
	comp=Z,4.3nm,0.8s,baz=56,slow=6.7,SNR=9.4							
	comp=Z,4.3nm,0.8s							
PFO	**Pinyon Flats O**	84.95	56			P	22 54 15.8	-0.3
PFO				IAmb		IAmb	22 54 17.0	
	comp=Z,6.8nm,1.1s							
YHL	**Hebgen Lake**	85.23	45			P	22 54 18.1	+0.5
YHL				IAmb		IAmb	22 54 19.4	
	comp=Z,10nm,0.9s							
DUG	**Dugway, Tooele**	85.65	49			P	22 54 19.3	-0.3
HWUT	**Hardware Ranch**	86.07	48			P	22 54 21.6	-0.1
HWUT				IAmb		IAmb	22 54 22.8	
	comp=Z,6.5nm,0.9s							
RLMT	**Red Lodge**	86.41	44			P	22 54 23.9	+0.6
RLMT				IAmb		IAmb	22 54 25.3	
	comp=Z,6.9nm,0.8s							
KNB	**Kanab**	86.69	52			P	22 54 25.2	+0.4
KNB				IAmb		IAmb	22 54 26.6	
	comp=Z,9.0nm,1.1s							
FFC	**Flin Flon**	86.87	33			P	22 54 25.0	0.0
FFC				IAmb		IAmb	22 54 26.4	
	comp=Z,8.9nm,1.0s							
PDAR	**Pinedale Array**	87.06	46	P		P	22 54 25.6	-1.0
PDAR	**Pinedale Array**	87.06	46	P		P	22 54 25.9	-0.7
	comp=Z,0.9nm,0.7s,baz=225,slow=1.8,SNR=10.0							
PDAR				LR		LR	23 29 05.3	
	comp=Z,18nm,20.0s,baz=305,slow=33							
	comp=Z,0.9nm,0.7s							
U15A	**North Rim**	87.29	53	P		P	22 54 27.6	-0.3
U15A				IAmb		IAmb	22 54 29.4	
	comp=Z,5.1nm,0.8s							
KBZ	**Khabaz**	88.48	316	P		P	22 54 31.9	-1.1
	comp=Z,3.3nm,0.9s,baz=90,slow=6.1,SNR=3.7							
	comp=Z,3.3nm,0.9s							
GNI	**Garni**	88.56	312	LR		LR	23 37 59.6	
	comp=Z,14nm,18.8s,baz=107,slow=38							
FINES	**FINESS Array B**	88.82	336	P		P	22 54 32.7	-1.5
FINES	**FINESS Array B**	88.82	336	P		P	22 54 32.9	-1.3
	comp=Z,2.8nm,0.6s,baz=72,slow=4.0,SNR=24							
FINES				LR		LR	23 36 50.1	
	comp=Z,20nm,20.4s,baz=63,slow=37							
	comp=Z,2.8nm,0.6s							
ANMO	**Albuquerque**	92.25	52	LR		LR	23 32 48.7	
	comp=Z,27nm,19.1s,baz=18,slow=33							
LPIG	**La Paz**	93.16	64	LR		LR	23 27 31.9	
	comp=Z,45nm,21.2s,baz=242,slow=30							
AKASG	**Malin Array Be**	93.47	326	LR		LR	23 37 56.1	
	comp=Z,40nm,21.5s,baz=70,slow=36							
FRB	**Frobisher Bay**	94.15	15	LR		LR	23 38 49.0	
	comp=Z,23nm,18.4s,baz=298,slow=36							
HFS	**Hagfors**	94.24	339	P		P	22 54 59.1	-0.3
	comp=Z,1.6nm,0.7s,baz=67,slow=5.2,SNR=1.5							
HFS				LR		LR	23 39 46.0	
	comp=Z,30nm,21.8s,baz=67,slow=37							
	comp=Z,1.6nm,0.7s							
NOA	**NORSAR Array B**	94.38	340	LR		LR	23 41 52.1	
	comp=Z,23nm,21.6s,baz=20,slow=38							
SFJD	**Kangerlussuaq**	94.57	7	LR		LR	23 44 18.2	
	comp=Z,17nm,18.1s,baz=342,slow=40							
BRTR	**Keskin Array B**	96.46	315	P		P	22 55 10.3	+0.2
	comp=Z,0.7nm,0.8s,baz=99,slow=4.0,SNR=4.1							
BRTR				LR		LR	23 42 34.9	
	comp=Z,13nm,19.1s,baz=292,slow=38							
	comp=Z,0.7nm,0.8s							
TXAR	**Lajitas Array**	96.67

SOEI Sn Sn 23 14 44.0 +0.1
SOEI Soe 3.89 236 P Pn 23 14 00.3 +2.6
SOEI Soe 3.89 236 P Pn 23 14 00.0 +2.3
AAI Ambon 3.94 9 P Pn 23 14 02.2 +4.0
NLAI Namlea 4.35 354 P Pn 23 14 08.7 +5.1
MSAI Masohi 4.44 18 P Pn 23 14 08.8 +4.1
BATI Baumata 4.64 236 P Pn 23 14 08.3 +1.1
2µm,0.6s,baz=118,slow=1.8,SNR=329
BATI S Sn 23 14 59.9 -1.2
2µm,0.3s,baz=107,slow=1.6,SNR=18
BATI Baumata 4.64 236 P Pn 23 14 09.4 +2.1
MMRI Maumere 5.36 259 Pn 23 14 18.6 +1.8
MMRI Sn Sn 23 15 18.7 +0.5
MMRI Maumere 5.36 259 P Pn 23 14 20.2 +3.4
MMRI Maumere 5.36 259 P Pn 23 14 19.4 +2.6
2.6nm4µm218nm,0.5s
BBSI Bau Bau 5.38 293 P Pn 23 14 20.9 +3.9
116nm,0.8s
SANI Sanana 5.73 344 P Pn 23 14 25.8 +4.1
SANI Sanana 5.73 344 P Pn 23 14 25.8 +4.1
0.4nm1µm118nm,0.7s
AUDHS Darwin High Sc 5.79 146 P Pn 23 14 23.0 +0.5
DRS Darwin Rock St 5.82 146 P Pn 23 14 24.0 +1.1
EDFI Ende, Flores 5.92 258 P Pn 23 14 26.5 +2.3
1.2nm2µm148nm,0.7s
KDI Kendari 6.10 306 P Pn 23 14 29.1 +2.6
MTN Manton Dam 6.29 146 Pn 23 14 29.6 +0.5
FAKI Fak Fak 6.59 45 Pn 23 14 33.1 0.0
FAKI Fak Fak 6.59 45 P Pn 23 14 34.3 +1.2
FAKI Fak Fak 6.59 45 P Pn 23 14 33.4 +0.3
0.8nm2µm47nm,0.7s
BSSI Bau Bau, Buton 7.16 281 P Pn 23 14 43.4 +2.8
0.5nm1µm125nm,1.1s
KMPI Kaimana, Papua 7.26 58 P Pn 23 14 42.7 +0.7
BASI Baing, Sumba 7.37 249 P Pn 23 14 44.1 +0.7
WSI Waingapu 7.46 253 P Pn 23 14 45.0 +0.3
SWI Sorong 7.64 29 P Pn 23 14 49.3 +2.2
BKSI Bulukumba 7.72 287 P Pn 23 14 50.7 +2.6
BNSI Bone 8.06 293 P Pn 23 14 55.6 +3.0
59nm,0.8s
LUWI Luwuk 8.07 324 P Pn 23 14 56.0 +3.3
42nm,0.5s
KNRA Kununurra 8.12 172 Pn 23 14 53.1 -0.2
KAPI Kappang 8.17 288 Pn 23 14 54.8 +0.8
KAPI Kappang 8.17 288 P Pn 23 14 53.8 -0.2
4.6nm,0.4s,baz=126,slow=7.5,SNR=12
KAPI S Sn 23 16 24.6 -0.7
4.5nm,0.7s,baz=235,slow=20,SNR=0.7
KAPI Kappang 8.17 288 P Pn 23 14 55.8 +1.8
KAPI Kappang 8.17 288 P Pn 23 14 58.0 +4.0
TNTI Ternate 8.32 359 Pn 23 14 58.5 +2.5
TNTI Ternate 8.32 359 P Pn 23 15 00.7 +4.7
TNTI Ternate 8.32 359 P Pn 23 14 59.5 +3.5
1µm57nm,1.1s
WBSI Waikabubak, Su 8.32 255 P Pn 23 14 55.6 -0.5
SPSI Sidrap Palu 8.54 295 P Pn 23 15 01.6 +2.6
RKPI Ransiki, Papua 8.95 48 P Pn 23 15 05.1 +0.7
148nm,0.6s
PLAI Plampang 9.75 262 P Pn 23 15 15.7 +0.7
PLAI Plampang 9.75 262 P Pn 23 15 14.0 -1.0
3µm112nm,0.8s
FITZ Fitzroy Crossi 10.60 190 P Pn 23 15 24.2 -1.9
147nm,0.4s,baz=8.1,slow=10.0,SNR=269
FITZ S Sn 23 17 15.6 -8.1
66nm,0.5s,baz=46,slow=15,SNR=5.0
FITZ LR LR 23 20 45.5
comp=Z,141nm,18.6s,baz=357,slow=44
TWSI Taliwang, Sumb 10.62 263 P Pn 23 15 24.9 -1.6
1µm49nm,0.6s
BAKI Biak 10.64 54 P Pn 23 15 28.0 +1.3
114nm,0.8s
TOLI2 Tolitoli 10.98 322 Pn 23 15 32.0 +0.9
TOLI2 Tolitoli 10.98 322 P Pn 23 15 34.4 +3.3
JAGI Jajag, Banyuwa 13.30 265 Pn Pn 23 15 56.9 -4.2
GENI Genyem 13.51 69 P P 23 16 06.9 -0.4
WB0 Warramunga Arr 13.80 152 Pn Pn 23 16 05.4 -2.0
WRAB Tennant Creek 13.92 152 P Pn 23 16 08.4 -0.5
WRA Warramunga Arr 13.92 152 Pn Pn 23 16 07.1 -1.8
WRA Warramunga Arr 13.92 152 P Pn 23 16 07.0 -2.0
30nm,0.5s,baz=322,slow=14,SNR=223
WRA S Sn 23 18 33.2 -10
107nm,0.8s,baz=324,slow=24,SNR=15
WRA LR LR 23 22 13.9
comp=Z,104nm,18.8s,baz=18,slow=40
JAY Jayapura 14.04 70 P Pn 23 16 08.5 -2.0
7.1nm,0.7s,baz=236,slow=10,SNR=8.8
JAY S Sn 23 18 31.0 -15
7.9nm,0.8s,baz=273,slow=21,SNR=1.6
DAV Davao City (W) 14.70 352 LR LR 23 23 16.3
comp=Z,49nm,19.5s,baz=274,slow=42
MBWA Marble Bar 15.46 208 Pn 23 16 28.8 +0.8
MBWA IAmb IAmb 23 16 58.4
comp=Z,44nm,1.1s
MBWA Marble Bar 15.46 208 P Pn 23 16 28.6 +0.7
PSA00 Pilbara Seismi 15.76 207 P Pn 23 16 31.9 +0.2
PCJI Pacitan 16.23 267 P P 23 16 35.3 -2.2
comp=Z,109nm,0.7s
COEN Coen 16.59 114 Pn 23 16 41.6 -0.2
COEN IAmb IAmb 23 17 22.6
comp=Z,16nm,0.7s
COEN Coen 16.59 114 P Pn 23 16 43.6 +1.8
UGM Wanagama 16.88 268 P P 23 16 44.3 -0.4
UGM Wanagama 16.88 268 P P 23 16 44.3 -0.4
comp=Z,88nm,1.6s
AS31 Alice Springs 17.10 160 P Pn 23 16 48.0 +0.1
AS31 IAmb IAmb 23 17 16.9
comp=Z,18nm,0.5s
ASAR Alice Springs 17.10 160 Pn 23 16 47.9 0.0
ASAR Alice Springs 17.10 160 P Pn 23 16 48.5 +0.6
comp=Z,31nm,0.6s,baz=330,slow=9.9,SNR=183
ASAR S S 23 19 47.3 -10
comp=Z,17nm,0.6s,baz=341,slow=21,SNR=7.6
ASAR LR LR 23 23 48.1
comp=Z,107nm,19.6s,baz=296,slow=38
AUALC St Philip's Co 17.11 160 P Pn 23 16 49.0 +0.9
QIS Mount Isa 17.38 139 P Pn 23 16 52.1 +0.8
SBUM Sibu 18.27 303 Pn 23 17 02.7 +0.9
SBUM IAmb IAmb 23 17 04.5
comp=Z,47nm,0.9s
SBUM Sibu 18.27 303 P Pn 23 17 03.5 +1.7
KPJI Karang Pucung 18.47 270 P P 23 17 01.2 -0.8
comp=Z,55nm,0.7s
MTSU Mount Surprise 19.39 124 P Pn 23 17 14.1 -0.9
KSM Kuching 19.42 297 P P 23 17 14.0 +1.6
KSM Kuching 19.42 297 P Pn 23 17 14.2 -1.1
PMG Port Moresby 19.47 97 P Pn 23 17 16.4 +0.4
PMG IAmb IAmb 23 17 31.9
comp=Z,27nm,1.1s
PMG Port Moresby 19.47 97 P P 23 17 13.3 +0.4
comp=Z,17nm,0.5s,baz=252,slow=3.2,SNR=7.2
PMG S S 23 20 41.6 -2.8
comp=Z,3.4nm,0.3s,baz=196,slow=18,SNR=1.2
GIRL Giralia 19.70 219 P P 23 17 17.2 +1.9
BBJI Bungbulang 19.73 269 P P 23 17 14.6 -1.2
LEM Lembang 19.79 271 P Pn 23 17 18.9 -1.0
comp=Z,39nm,0.6s,baz=142,slow=19,SNR=8.2
CNJI Cibinong 20.25 269 P P 23 17 18.3 -3.0
comp=Z,83nm,0.8s
TPI Tanjungpandan 20.39 283 P P 23 17 24.2 +1.4
comp=Z,594nmcomp=Z,38nm,0.7s
MEEK Meekatharra 20.75 203 P P 23 17 27.7 +1.1
FORT Forrest 23.07 179 P 23 17 50.5 +0.8
FORT IAmb IAmb 23 18 25.2
comp=Z,26nm,0.6s
INKA Innaminka 23.61 150 P P 23 17 55.6 +0.9
MORW Morawa 23.95 205 P P 23 17 58.6 +0.8
MORW Morawa 23.95 205 P P 23 17 58.4 +0.6
BLDU Balliduu 25.05 203 P P 23 18 08.2 +0.5
MYKOM Kota Tinggi 25.42 291 P P 23 18 11.8 +0.6
MYKOM IAmb IAmb 23 18 14.0
comp=Z,42nm,1.1s
KLBR Kellerberrin 25.56 200 P P 23 18 12.8 +0.4
NWAO Narrogin (SO) 26.96 199 P P 23 18 25.5 +0.6
comp=Z,19nm,0.6s,baz=33,slow=7.5,SNR=30
comp=Z,19nm,0.6s
NWAO Narrogin (SO) 26.96 199 P P 23 18 24.4 -0.5
PTPS Port Pirie 27.23 161 P P 23 18 27.5 +0.3
STKA Stephens Creek 27.47 153 P P 23 18 30.1 +0.7
STKA Stephens Creek 27.47 153 P P 23 18 30.2 +0.7
comp=Z,3.9nm,0.5s,baz=324,slow=8.2,SNR=13
STKA LR LR 23 30 37.3
comp=Z,59nm,20.1s,baz=27,slow=39
comp=Z,3.9nm,0.5s
BKNI Bangkinang 27.59 285 P P 23 18 30.2 -0.5
IPM Ipoh 29.06 294 P P 23 18 43.9 +0.1
IPM Ipoh 29.06 294 P P 23 18 44.3 +0.5
CMSA Cobar Meteorol 29.22 147 P P 23 18 46.6 +1.6
KULM Kulim 29.74 295 P P 23 18 49.8 0.0
KULM Kulim 29.74 295 P P 23 18 50.0 +0.2
RPSI Rantau Prapat 30.34 289 P P 23 18 55.3 +0.2
PSI Prapat 30.38 289 P P 23 18 55.7 +0.2
GSI Gunungsitoli 31.18 285 P P 23 19 01.3 -1.2
GSI IAmb IAmb 23 19 08.8
comp=Z,21nm,0.9s
TPUB Ta-pu 31.45 348 P P 23 19 03.7 -1.0
UBPT Khong Chiam 31.55 316 P P 23 19 05.5 -0.2
UBPT IAmb IAmb 23 19 42.1
comp=Z,30nm,1.5s
LHMI Lhok Sumawe 33.09 292 P P 23 19 18.4 -0.7
LHMI Lhok Sumawe 33.09 292 P P 23 19 19.5 +0.4
CAN Canberra 33.89 148 P P 23 19 26.9 +1.1
CAN IAmb IAmb 23 19 55.0
comp=Z,33nm,1.3s
TOO Toolangi 33.99 154 P P 23 19 28.6 +1.9
CMAR Chiang Mai Arr 38.30 313 P P 23 20 03.2 -0.3
CMAR PcP PcP 23 22 14.4 +0.2
CMAR Chiang Mai Arr 38.30 313 P P 23 20 04.0 +0.4
comp=Z,5.4nm,0.6s,baz=142,slow=6.9,SNR=55
CMAR PcP PcP 23 22 15.1 +0.9
comp=Z,2.0nm,0.7s,baz=170,slow=2.7,SNR=6.5
CMAR ScP S 23 25 44.9 -1.0
comp=Z,2.0nm,1.0s,baz=171,slow=3.4,SNR=6.8
comp=Z,5.4nm,0.6s
CM31 Chiang Mai Arr 38.30 313 P P 23 20 03.1 -0.4
CHTO Chiang Mai 38.53 313 P P 23 20 05.2 -0.2
CHTO Chiang Mai 38.53 313 P P 23 20 05.8 +0.4
CHTO Chiang Mai 38.53 313 P P 23 20 06.0 +0.6
WHN Wuhan 39.98 342 P P 23 20 09.1 -8.1
KMI Kunming 40.52 324 P P 23 20 23.3 +1.3
KMI pmax pmax
comp=Z,7.0nm,0.9s
PZH PanZhiHua 42.15 324 P P 23 20 35.8 +0.6
CD2 Chengdu 44.56 330 P P 23 20 54.2 -0.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KSRS Korea Array 44.82 0 P P 23 20 55.9 -0.3
comp=Z,1.7nm,0.6s,baz=181,slow=9.7,SNR=5.4
comp=Z,1.7nm,0.6s
XAN Xi'an 45.02 338 *e*P P 23 20 58.6 +0.7
MJAR Matsushiro Arr 45.03 12 P P 23 20 56.6 -1.4
comp=Z,0.5nm,0.4s,baz=193,slow=8.5,SNR=4.1
comp=Z,0.5nm,0.4s
HNS HongShan 46.35 346 ⇑P P 23 21 08.3 +0.1
HNS pmax pmax
comp=Z,8.0nm,0.7s
SHL Shillong 47.85 315 P P 23 21 19.2 -1.1
SHL IAmb IAmb 23 21 23.5
comp=Z,16nm,0.5s
BJI Beijing 48.55 348 P P 23 21 26.1 +1.0
BJI pmax pmax
comp=Z,5.0nm,1.3s
LZDM Lanzhou Array 48.79 334 P P 23 21 27.8 +0.3
comp=Z,2.4nm,0.4s,baz=171,slow=10,SNR=4.4
comp=Z,2.4nm,0.4s
PALK Pallekele 49.00 286 P P 23 21 28.5 -0.7
PALK Pallekele 49.00 286 LR LR 23 41 53.6
comp=Z,17nm,19.4s,baz=48,slow=35
PALK Pallekele 49.00 286 P P 23 21 27.5 -1.6
HHC Hu-ho-hao-te 50.41 344 *e*P P 23 21 40.6 +1.3
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,180nm,4.9s
LSA Lhasa 50.99 318 P P 23 21 43.7 -0.7
LSA IAmb IAmb 23 21 45.9
comp=Z,12nm,0.6s
LSA Lhasa 50.99 318 P P 23 21 45.4 +1.0
LSA Lhasa 50.99 318 P P 23 21 41.4 -3.0
LSA pmax pmax
comp=Z,16nm,0.8s
FOZ Fox Glacier 51.41 141 P P 23 21 47.3 +0.6
FOZ IAmb IAmb 23 22 14.3
comp=Z,18nm,1.3s
USRK Ussuriysk Ar. 51.71 4 P P 23 21 49.6 +0.7
comp=Z,1.9nm,0.5s,baz=172,slow=8.4,SNR=4.1
comp=Z,1.9nm,0.5s
QRZ Quartz Range 51.85 137 P P 23 21 52.1 +2.0
QRZ IAmb IAmb 23 22 13.9
comp=Z,45nm,1.4s
EVN Everest 52.90 314 P 23 21 58.3 -0.4
TUWZ Tuamarina 53.08 137 P P 23 22 00.2 +1.2
GTA Gaotai 53.37 333 P P 23 22 02.9 +1.6
GTA pmax pmax
comp=Z,15nm,0.7s
HILR Hailar Array B 57.32 354 P P 23 22 28.8 -0.5
comp=Z,0.8nm,0.3s,baz=212,slow=5.1,SNR=1.7
comp=Z,0.8nm,0.3s
SONM Songino Array 58.28 343 P P 23 22 35.7 -0.4
comp=Z,0.9nm,0.5s,baz=163,slow=7.0,SNR=6.4
comp=Z,0.9nm,0.5s
CASY Casey 59.76 188 P P 23 22 46.7 +0.8
CASY IAmb IAmb 23 22 47.8
comp=Z,10nm,0.9s
PETK Petropavlovsk- 65.67 19 P P 23 23 24.5 -0.6
comp=Z,3.2nm,0.8s,baz=217,slow=7.2,SNR=2.3
comp=Z,3.2nm,0.8s
NIL Nilore 65.79 312 P 23 23 26.1 -0.3
NIL Nilore 65.79 312 P P 23 23 25.9 -0.5
KSH Kashi 66.84 319 P P 23 23 33.6 +0.5
KSH pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 67.42 328 P P 23 23 36.3 -0.1
comp=Z,5.9nm,0.8s,baz=129,slow=7.8,SNR=77
comp=Z,5.9nm,0.6s
KDJ Kajisay 67.51 322 P 23 23 36.9 -0.4
KDJ IAmb IAmb 23 23 38.6
comp=Z,8.6nm,0.7s
MAKZ Makanchi 67.59 328 P P 23 23 37.3 -0.2
BOOM Boomskoye usch 68.47 321 P 23 23 43.5 +0.2
BOOM IAmb IAmb 23 23 44.8
comp=Z,7.8nm,0.6s
KBL Kabul 69.31 311 P P 23 23 48.1 -0.6
AAK Ala-Archa 69.45 321 P P 23 23 49.5 +0.2
AAK Ala-Archa 69.45 321 P P 23 23 50.0 +0.6
GAR Garm 70.39 316 P P 23 23 55.0 -0.1
GAR IAmb IAmb 23 23 57.3
comp=Z,10nm,0.7s
CHGR Chuyangaron 71.03 315 P 23 23 58.7 -0.3
CHGR IAmb IAmb 23 24 02.9
comp=Z,8.2nm,0.6s
ZAA0 Zalesovo Array 71.07 335 P P 23 23 58.0 -0.6
ZAA0 IAmb IAmb 23 23 59.6
comp=Z,7.8nm,0.8s
ZALV Zalesovo Beam 71.07 335 P P 23 23 57.9 -0.7
comp=Z,7.8nm,0.4s,baz=136,slow=5.3,SNR=40
comp=Z,7.8nm,0.4s
SIMJ Simiganj 71.14 315 P P 23 23 59.2 -0.4
KURBB Kurchatov Arra 71.77 330 P P 23 24 02.7 -0.2
comp=Z,6.2nm,0.5s,baz=135,slow=5.1,SNR=122
comp=Z,6.2nm,0.5s
KURK Kurchatov 71.78 330 P 23 24 02.9 -0.1
KURK IAmb IAmb 23 24 03.9
comp=Z,10nm,0.6s
KURK Kurchatov 71.78 330 P P 23 24 02.9 -0.1
VNDA Vanda 72.16 173 P P 23 24 05.6 +0.8
VNDA Vanda 72.16 173 P P 23 24 05.7 +0.8
comp=Z,4.7nm,0.6s,baz=319,slow=6.4,SNR=49
VNDA LR LR 23 55 27.6
comp=Z,42nm,18.5s,baz=354,slow=35
comp=Z,4.7nm,0.6s
KKAR Karatay Array 72.21 320 P P 23 24 05.0 -0.8
SEY Seymchan 72.86 12 P P 23 24 09.0 -0.1
comp=Z,2.4nm,1.0s,baz=163,slow=5.6,SNR=4.7
comp=Z,2.4nm,1.0s
JLN Jalan Bani Buh 72.97 296 P P 23 24 10.2 -0.5
SBA Scott Base 73.08 172 P P 23 24 11.0 +0.7
MAW Mawson 73.51 201 P P 23 24 14.2 +1.2
comp=Z,4.1nm,0.6s,baz=85,slow=4.4,SNR=13
MAW LR LR 23 55 06.4
comp=Z,26nm,18.3s,baz=64,slow=34
comp=Z,4.1nm,0.6s
WSAR Wadi Sarin 73.95 297 P P 23 24 16.4 -0.1
SNR=7.6
MHTO MHTO 73.96 294 P P 23 24 15.8 -0.7
JMDO Jabal Madar 74.19 296 P P 23 24 17.4 -0.4
HRA Herat 74.42 309 P 23 24 18.9 -0.3
SMDO Samad 74.42 296 P P 23 24 19.0 -0.3
SNR=9.6
HOQ Hoqain 75.21 297 P P 23 24 23.6 -0.1
SHAO Shalim 75.39 291 P P 23 24 24.2 -0.6
ARQ Araqi 75.85 296 P P 23 24 26.7 -0.6
DMTO DMTO 75.95 290 P P 23 24 26.4 -1.5
SOHO SOHO 76.05 297 P P 23 24 28.2 -0.2
UOSS Minazif 76.54 298 P P 23 24 29.6 -1.6
ASHO Ashiyiah 76.60 298 P P 23 24 31.5 -0.1
MASF Masafi 76.69 298 P P 23 24 32.4 +0.3
BANOM Banah 76.72 299 P P 23 24 32.4 +0.2
ALNE Al Ain 76.72 297 P P 23 24 32.0 -0.2
SHME Shamm 76.89 299 P P 23 24 32.9 -0.2
DOK Doka 76.91 291 P P 23 24 32.4 -0.9
SNR=7.7
WHFO Wadi Hawf 77.09 290 P P 23 24 33.1 -1.4
SNR=7.5
ASUD Al Ashush, Dub 77.23 297 P P 23 24 35.0 0.0
BVAR Borovoye Array 77.29 329 P P 23 24 35.3 +0.5
comp=Z,2.7nm,0.5s,baz=122,slow=9.1,SNR=16
comp=Z,2.7nm,0.5s
ABTO Aybut 77.41 290 P P 23 24 35.5 -0.8
SNR=9.4
ABPO Ambohimpanom 78.45 252 P P 23 24 42.0 -0.2
ABPO IAmb IAmb 23 24 47.5
comp=Z,20nm,1.3s
MZR Muzera 78.49 295 P P 23 24 41.8 -0.2
VOI Vohitsoka 78.67 249 P P 23 24 43.2 0.0
TIXI Tiksi 79.09 0 P P 23 24 43.7 -0.5
SMRA Abu-Samra 81.24 296 P P 23 24 56.4 -0.4
AB31 Akbulak array 81.48 322 P P 23 24 56.9 -0.6
ABKAR Akbulak array 81.48 322 P P 23 24 56.5 -1.0
SYO Syowa Base 82.23 201⇑ *e*P P 23 25 01.2 +0.1
QSPA South Pole Qui 82.38 180 P P 23 25 05.2 +3.0
QSPA IAmb IAmb 23 25 06.2
comp=Z,9.3nm,0.8s
QSPA South Pole Qui 82.38 180 P P 23 25 04.9 +2.8
comp=Z,8.6nm,0.5s,baz=283,slow=0.6,SNR=83
comp=Z,8.6nm,0.7s
AKTO Aktyubinsk 83.07 323 P P 23 25 05.8 +0.1
comp=Z,4.3nm,0.7s,baz=113,slow=6.5,SNR=17
comp=Z,4.3nm,0.7s
ARTI Arti 85.02 329 P P 23 25 14.7 -0.8
ARTI IAmb IAmb 23 25 16.4
comp=Z,5.3nm,0.6s
ARTI Arti 85.02 329 P P 23 25 14.9 -0.5
comp=Z,3.5nm,0.7s,baz=149,slow=3.3,SNR=8.4
comp=Z,3.5nm,0.7s
RAYN Ar Rayn 85.77 294 P 23 25 19.1 -0.9
RAYN IAmb IAmb 23 25 20.2
comp=Z,12nm,1.1s
GURO Guroymak-BITLI 91.19 309 P 23 25 45.4 -0.1
GURO IAmb IAmb 23 25 46.8
comp=Z,5.6nm,1.0s
TROLL Troll, Antarti 92.98 195 ⇑P P 23 25 54.2 +1.1
comp=Z,364nm,0.7s
BELA Belgrano 2 94.08 184 P P 23 25 58.1 +0.2
BELA IAmb IAmb 23 25 58.9
comp=Z,4.4nm,0.7s
SNAA Sanae 94.51 194 ⇑P P 23 26 01.1 +1.0
comp=Z,102nm,0.7s
SNAA Sanae 94.51 194 P P 23 26 00.6 +0.6
SNAA IAmb IAmb 23 26 01.9
comp=Z,4.8nm,0.8s
SNAA Sanae 94.51 194 P P 23 26 01.0 +1.0
comp=Z,4.0nm,0.7s,baz=164,slow=4.5,SNR=11
comp=Z,4.0nm,0.7s
VNA2 Neumayer--Watz 96.10 194 ⇑P P 23 26 08.1 +0.9
comp=Z,1.8nm,0.6s,baz=133,slow=5.0
BMAR Burnt Mountain 96.14 23 P 23 26 06.7 -0.7
VNA3 Neumayer Olymp 96.38 193 ⇑P P 23 26 09.1 +0.6
comp=Z,1.3nm,0.8s
VNA1 Neumayer--Stat 96.50 194 ⇑P P 23 26 07.4 -1.5
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 97.81 309 P P 23 26 14.2 -1.5
BRTR Keskin Array B 97.81 309 P P 23 26 13.8 -2.0
comp=Z,0.5nm,0.6s,baz=157,slow=4.0,SNR=4.4
WTTA Wattenberg 113.03 318 *i* PKiKP PKiKP 23 31 16.0 -0.7
comp=Z,5.0nm,0.5s
WATA Walderalm 113.06 318 *i* PKiKP PKiKP 23 31 16.0 -0.7
comp=Z,1.6nm,0.5s
SQTA Sankt Quirin 113.33 318 *i* PKiKP PKiKP 23 31 16.5 -0.7
comp=Z,0.6nm,0.3s
MOTA Moosalm 113.36 318 *i* PKiKP PKiKP 23 31 16.4 -0.9
comp=Z,2.4nm,0.6s
RETA Reutte 113.55 319 *i* PKiKP PKiKP 23 31 16.8 -0.8
comp=Z,0.7nm,0.4s
DAVA Damuels 114.18 319 *i* PKP PKPdf 23 31 18.2 -0.7
comp=Z,2.4nm,0.4s
KEST Kesra 117.23 306 PKPdf 23 31 24.8 -0.2
KEST Kesra 117.23 306 PKP PKPdf 23 31 24.6 -0.4
comp=Z,2.6nm,0.7s,baz=330,slow=2.5,SNR=5.1
EKA Eskdalemuir Ar 118.51 330 PKP PKPdf 23 31 26.0 -0.7
comp=Z,0.8nm,0.5s,baz=20,slow=3.6,SNR=7.7
ESDC Sonseca Array 126.20 314 PKP PKiKP 23 31 42.5 -0.1
comp=Z,0.4nm,0.8s,baz=37,slow=3.0,SNR=3.2
TXAR Lajitas Array 127.31 59 PKiKP PKiKP 23 31 45.1 0.0
TXAR Lajitas Array 127.31 59 PKP PKiKP 23 31 45.4 +0.3
comp=Z,0.4nm,0.6s,baz=315,slow=0.7,SNR=3.4
DBIC Dimbokro 132.79 272 PKPdf 23 31 54.9 -0.3
DBIC Dimbokro 132.79 272 PKP PKiKP 23 31 55.8 -0.6
comp=Z,2.5nm,0.5s,baz=87,slow=4.2,SNR=5.1
CPUP Villa Florida 145.94 172 PKPbc PKPbc 23 32 19.6 0.0
comp=Z,1.5nm,0.5s,baz=82,slow=1.2,SNR=19
LPAZ La Paz 151.64 147 PKPbc PKiKP 23 32 36.1 +0.4
comp=Z,3.1nm,0.5s,baz=16,slow=0.8,SNR=13

MOS ***02*** *23:18:08.2±1.3, 46.58N×152.73E, h130km, mb4.3/1, Error ellipse: s-maj=20.7km s-min=10.5km az=70.2*
SKHL ***02*** *23:18:08.3±0.7, 46.80N×152.10E, h130km±5km, mb5.1/5, msha5.5/4*
NEIC ***02*** *23:18:09.4±1.4, 47.0N±0.2×151.6E±0.3, h117km±12km, mb4.3/6, Error ellipse: s-maj=32.8km s-min=14.9km az=126.0*
IDC ***02*** *23:18:10.1±7.0, 47.05N×151.78E, h125km±46km, mb3.4/12, mbtmp3.8/14, Error ellipse: s-maj=70.0km s-min=22.8km az=0.0*

ISC 02 23:18:07.5±0.8, 46.9N±0.1×151.9E±0.1, h106km, n54, σ1s70/52, mb3.8/16, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.34**	**241**	*e*PN	**Pn**	**23 19 01.1**	**+3.3**
KUR				*e*S	**Sn**	**23 19 41.2**	**+4.5**
KUR				pmax	pmax		
	comp=Z,86nm,0.4s						
KUR				smax	smax		
	comp=N,136nm,0.3s						
KUR				smax	smax		
	comp=E,133nm,0.3s						
KUR	**Kuril'sk**	**3.34**	**241**	*e*P	**Pn**	**23 19 00.5**	**+2.7**
KUR				AMB	AMB	23 19 01.7	
	comp=E,110nm,0.6s						
KUR				*e*S	**Sn**	**23 19 39.8**	**+3.1**
KUR				A	A	23 19 43.7	
	comp=E,160nm,0.3s						
KUR				A	A	23 19 43.7	
	comp=E,80nm,0.3s						
SKR	**Severo-Kuril's**	**4.64**	**34**	*e*PN	**Pn**	**23 19 17.8**	**+2.6**
SKR				*e*S	**Sn**	**23 20 09.1**	**+1.2**
SKR				pmax	pmax		
	comp=Z,78nm,0.6s						
SKR				smax	smax		
	comp=N,59nm,0.7s						
SKR				smax	smax		
	comp=E,98nm,0.9s						
SKR	**Severo-Kuril's**	**4.64**	**34**	*e*P	**Pn**	**23 19 17.8**	**+2.6**
SKR				AMB	AMB	23 19 19.5	
	comp=E,50nm,0.4s						
SKR				*e*S	**Sn**	**23 20 09.4**	**+1.5**
SKR				A	A	23 20 14.7	
	comp=E,40nm,0.3s						
SKR				A	A	23 20 14.7	
	comp=E,90nm,0.3s						
SHO	**Shikotan**	**4.75**	**232**	*e*P	Pn	23 19 23.4	+6.5
SHO				AMB	AMB	23 19 27.5	
	comp=E,50nm,0.5s						
SHO				*e*S	**Sn**	**23 20 12.7**	**+1.8**
SHO				A	A	23 20 17.6	
	comp=E,30nm,0.5s						
SHO				A	A	23 20 17.6	
	comp=E,90nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.20**	**238**	*e*P	**Pn**	**23 19 24.0**	**+1.1**
YUK				AMB	AMB	23 19 26.9	
	comp=E,240nm,0.3s						
YUK				*e*S	**Sn**	**23 20 21.6**	**+0.1**
PAU	**Pauzhetka**	**5.53**	**33**	*e*P	**Pn**	**23 19 29.2**	**+1.9**
PAU				AMB	AMB	23 19 32.0	
	comp=E,30nm,0.2s						

PAU					*e*S		**Sn**	**23 20 29.6**	**+0.1**
PAU					A		A	23 20 32.5	
	comp=E,90nm,0.2s								
PAU					A		A	23 20 32.5	
	comp=E,70nm,0.2s								
NMR	**Nemuro--Hokkai**	**5.69**	**233**		*e*P		**Pn**	**23 19 30.3**	**+0.8**
NMR					*e*S		**Sn**	**23 20 31.5**	**-1.9**
YSS	**Yuzhno-Sakhali**	**6.33**	**274**		*e*P		**Pn**	**23 19 40.1**	**+1.9**
AKK	**Akkeshi**	**6.41**	**235**		*e*P		**Pn**	**23 19 39.8**	**+0.5**
PEA0B	**Petropavlovsk-**	**7.19**	**29**	Pn			**Pn**	**23 19 51.8**	**+2.0**
PEA0B	**Petropavlovsk-**	**7.19**	**29**	PN			**Pn**	**23 19 51.8**	**+2.0**
PETK	**Petropavlovsk-**	**7.19**	**29**	P			**Pn**	**23 19 52.0**	**+2.2**
	comp=E,3.6nm,0.6s,baz=199,slow=11,SNR=7.6								
PET	**Petropavlovsk**	**7.45**	**33**	*e*P			**Pn**	**23 19 52.1**	**-1.3**
ERM	**Erimo**	**8.01**	**235**	Pn			**Pn**	**23 19 59.6**	**-1.4**
ERM	**Erimo**	**8.01**	**235**	PN			**Pn**	**23 19 59.6**	**-1.4**
JTM	**Tenmabayashi**	**9.99**	**236**	Pn			**Pn**	**23 20 26.6**	**-1.4**
PSTR	**Posyet**	**15.63**	**262⇑**	*e*P			**Pn**	**23 21 38.5**	**-3.2**
PSTR	**Posyet**	**15.63**	**262**	*e*P			**Pn**	**23 21 38.5**	**-3.2**
SEY	**Seymchan**	**16.04**	**1**	P			**P**	**23 21 48.3**	**+0.4**
	comp=E,1.9nm,0.5s,baz=184,slow=15,SNR=7.1								
H11N2	**WAKE ISLAND Hy**	**29.75**	**151**	T			T	23 55 38.3	
	baz=340,slow=76,SNR=38								
H11N1	**WAKE ISLAND Hy**	**29.76**	**151**	T			T	23 55 45.6	
	baz=340,slow=76,SNR=12								
H11N3	**WAKE ISLAND Hy**	**29.76**	**151**	T			T	23 55 42.9	
	baz=340,slow=76,SNR=22								
H11S1	**WAKE ISLAND Hy**	**30.82**	**152**	T			T	23 57 08.3	
	baz=340,slow=76,SNR=17								
H11S3	**WAKE ISLAND Hy**	**30.83**	**152**	T			T	23 57 06.9	
	baz=340,slow=76,SNR=14								
H11S2	**WAKE ISLAND Hy**	**30.84**	**152**	T			T	23 57 09.4	
	baz=340,slow=76,SNR=12								
B20K	**Meade River**	**33.63**	**29**	P			**P**	**23 24 38.2**	**+0.9**
B20K				IAmb			IAmb	23 24 52.6	
	comp=Z,19nm,1.1s								
B21K	**Ikpikpuk River**	**34.38**	**30**	P			**P**	**23 24 45.1**	**+1.3**
B21K				IAmb			IAmb	23 24 47.6	
	comp=Z,6.6nm,0.8s								
ILAR	**Eielson Array**	**36.88**	**39**	P			**P**	**23 25 05.5**	**+0.2**
	comp=Z,0.4nm,1.1s,baz=264,slow=7.4,SNR=5.7								
	comp=Z,0.4nm,1.1s								
MKAR	**Makanchi Array**	**46.17**	**297**	P			**P**	**23 26 20.1**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=74,slow=6.1,SNR=1.6								
	comp=Z,0.4nm,0.5s								
KURK	**Kurchatov**	**46.62**	**303**	P			**P**	**23 26 23.5**	**-1.2**
KURK	**Kurchatov**	**46.62**	**303**	P			**P**	**23 26 23.5**	**-1.2**
KURK	**Kurchatov**	**46.62**	**303**	*e*P			**P**	**23 26 23.5**	**-1.2**
KURBB	**Kurchatov Arra**	**46.71**	**303**	P			**P**	**23 26 23.9**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=67,slow=8.4,SNR=3.2								
	comp=Z,0.4nm,0.6s								
TNTI	**Ternate**	**50.76**	**213**	P			**P**	**23 26 57.0**	**+0.2**
BLKN	**Baker Lake**	**57.07**	**29**	P			**P**	**23 27 42.4**	**+0.4**
BLKN				IAmb			IAmb	23 28 07.6	
	comp=Z,2.4nm,0.9s								
AB31	**Akbulak array**	**57.71**	**309**	P			**P**	**23 27 46.1**	**-0.7**
AB31				IAmb			IAmb	23 28 13.4	
	comp=Z,1.4nm,1.1s								
ABKAR	**Akbulak array**	**57.71**	**309**	P			**P**	**23 27 45.9**	**-0.9**
FINES	**FINESS Array B**	**63.54**	**334**	P			**P**	**23 28 25.1**	**-1.0**
FINES	**FINESS Array B**	**63.54**	**334**	P			**P**	**23 28 25.0**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=32,slow=6.4,SNR=9.6								
	comp=Z,1.2nm,0.4s								
FINES	**FINESS Array B**	**63.54**	**334**	P			**P**	**23 28 25.1**	**-1.0**
PDAR	**Pinedale Array**	**65.25**	**53**	P			**P**	**23 28 38.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=233,slow=1.5,SNR=1.6								
	comp=Z,0.1nm,0.3s								
NB2	**NORSAR Subarra**	**67.80**	**341**	P			**P**	**23 28 53.2**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5								
NOA	**NORSAR Array B**	**67.80**	**341**	P			**P**	**23 28 53.4**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=29,slow=6.6,SNR=7.2								
	comp=Z,0.6nm,0.4s								
HFS	**Hagfors**	**68.01**	**339**	P			**P**	**23 28 54.0**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=59,slow=5.7,SNR=18								
	comp=Z,1.0nm,0.4s								
HFS	**Hagfors**	**68.01**	**339**	P			**P**	**23 28 54.0**	**-0.8**
AKASG	**Malin Array Be**	**70.96**	**326**	P			**P**	**23 29 11.6**	**-1.5**
	comp=Z,0.8nm,0.4s,baz=38,slow=6.0,SNR=4.2								
	comp=Z,0.8nm,0.4s								
EKA	**Eskdalemuir Ar**	**75.97**	**346**	P			**P**	**23 29 42.5**	**0.0**
	comp=Z,0.4nm,0.3s,baz=20,slow=5.2,SNR=7.5								
	comp=Z,0.4nm,0.3s								
GERES	**GERESS Array B**	**77.95**	**333**	P			**P**	**23 29 53.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=35,slow=4.9,SNR=5.1								
	comp=Z,0.4nm,0.6s								
TXAR	**Lajitas Array**	**78.07**	**60**	P			**P**	**23 29 55.2**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=306,slow=2.8,SNR=1.7								
	comp=Z,0.2nm,0.5s								
MMAI	**Mount Meron Ar**	**82.11**	**311**	P			**P**	**23 30 17.3**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=41,slow=7.7,SNR=6.1								
	comp=Z,1.3nm,0.5s								
H03N2	**Juan Fernandez**	**139.52**	**89**	T			T	02 13 27.1	
	baz=307,slow=77,SNR=20								
H03N1	**Juan Fernandez**	**139.53**	**89**	T			T	02 13 28.8	
	baz=307,slow=77,SNR=24								
H03N3	**Juan Fernandez**	**139.53**	**89**	T			T	02 13 28.0	
	baz=307,slow=77,SNR=15								

*IDC **02** 23:23:10.8±1.2, 1°.67N×127°.74E, h0km, mb4.0/6, mbtmp4.0/6, Error ellipse: s-maj=118.8km s-min=17.2km az=68.0*
*NEIC **02** 23:23:22.5±0.9, 1°.80N±0°.07×128°.2E±0°.1, h100km±5km, mb4.1/5, Error ellipse: s-maj=18.5km s-min=9.5km az=91.0*

ISC 02 23:23:22.0±0.9,**1°.81N**±0°.09×**128°.2E**±0°.1,**h100**km,**n15,** σ0§**48**/16,**mb4.1**/8,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**219**		**Pn**	**23 23 46.1**	**-0.1**
TNTI				Sn	**Sn**	**23 24 05.0**	**+0.6**
FAKI	**Fak Fak**	**6.19**	**139**	Pn	**Pn**	**23 24 51.3**	**+0.3**
KNRA	**Kununurra**	**17.38**	**178**		**Pn**	**23 27 18.5**	**+0.2**
KNRA				IAmb	IAmb	23 27 19.2	
	comp=Z,8.9nm,0.7s						
WB0	**Warramunga Arr**	**22.28**	**164**	P	**P**	**23 28 10.7**	**-0.5**
WB0				IAmb	IAmb	23 28 13.9	
	comp=Z,6.3nm,0.9s						
WRA	**Warramunga Arr**	**22.44**	**165**	P	**P**	**23 28 11.8**	**-1.0**
	comp=Z,1.5nm,0.4s,baz=344,slow=11,SNR=7.2						
	comp=Z,1.5nm,0.4s						
AS31	**Alice Springs**	**25.92**	**168**	P	**P**	**23 28 45.1**	**+0.1**
ASAR	**Alice Springs**	**25.92**	**168**	P	**P**	**23 28 44.7**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=340,slow=7.2,SNR=8.0						
	comp=Z,0.8nm,0.5s						
STKA	**Stephens Creek**	**35.83**	**160**	P	**P**	**23 30 11.9**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=330,slow=8.7,SNR=4.5						
	comp=Z,1.7nm,0.4s						
SONM	**Songino Array**	**49.58**	**341**	P	**P**	**23 32 03.7**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=151,slow=8.2,SNR=9.0						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**59.97**	**325**	P	**P**	**23 33 18.2**	**+0.2**
MKAR	**Makanchi Array**	**59.97**	**325**	P	**P**	**23 33 18.4**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=115,slow=8.2,SNR=21						
	comp=Z,1.3nm,0.5s						
MAKZ	**Makanchi**	**60.15**	**325**	P	**P**	**23 33 19.3**	**+0.1**
KURBB	**Kurchatov Arra**	**64.14**	**327**	P	**P**	**23 33 45.8**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=126,slow=6.3,SNR=15						
	comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**64.14**	**327**	P	**P**	**23 33 45.5**	**-0.2**
KURK				IAmb	IAmb	23 33 46.7	
	comp=Z,2.8nm,0.7s						
ABKAR	**Akbulak array**	**74.56**	**321**	P	**P**	**23 34 49.2**	**-0.7**

*IDC **02** 23:27:18.1±1.6, 53°.68N×163°.73W, h0km, mb3.9/15, mbtmp3.9/17, ML3.5/2, MS3.2/5, Error ellipse: s-maj=39.2km s-min=17.1km az=160.0*
*NEIC **02** 23:27:18.2±1.8, 53°.35N±0°.04×163°.59W±0°.07, h10km±1km, mb3.9/18, ML3.6/20, ML3.4(AEIC), Error ellipse: s-maj=8.1km s-min=6.5km az=143.0*
*AEIC **02** 23:27:19.9±1.8, 53°.37N±0°.03×163°.51W±0°.07, h26km±5km, Error ellipse: s-maj=6.0km s-min=4.7km az=81.0*

ISC 02 23:27:17.5±2.3,**53°.35N**±0°.06×**163°.50W**±0°.04,**h8**km±13km,**n115,** σ1§**23**/114,**mb4.1**/14,**MS3.2**/5,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLS	**Shishaldin Sou**	**1.39**	**348**		**Pb**	**23 27 43.7**	**-0.1**
SSLS					**Sg**	**23 28 02.2**	**-0.1**
WEBT	**Westdahl Beart**	**1.45**	**330**		**Pb**	**23 27 44.2**	**-0.5**
WEBT					**Sg**	**23 28 04.1**	**+0.2**
SSBA	**Shishaldin**	**1.47**	**346**		**Pn**	**23 27 44.7**	**+0.3**
SSBA					**Sn**	**23 28 03.5**	**-0.4**
SSBA					**Sb**	**23 28 03.6**	**-0.4**
SSLN	**Shishaldin Nor**	**1.49**	**349**		**Pb**	**23 27 45.4**	**-0.1**
ISNN	**Isanotski Nort**	**1.49**	**354**		**Pb**	**23 27 45.4**	**0.0**
ISNN					**Sb**	**23 28 04.5**	**0.0**
ISNN					**Sg**	**23 28 05.4**	**0.0**
FALS	**False Pass**	**1.51**	**2**	Pn	**Pn**	**23 27 45.2**	**+0.4**
FALS				Sn	**Sb**	**23 28 05.0**	**0.0**
AKSA	**Akutan Strait**	**1.52**	**302**		**Pn**	**23 27 45.1**	**+0.1**
AKSA					**Sn**	**23 28 03.5**	**-1.5**
AKUT	**Akutan**	**1.56**	**301**		**Pb**	**23 27 45.9**	**-0.7**
AKUT				Sn	**Sn**	**23 28 04.8**	**-1.1**
AHB	**Akutan Harbor**	**1.57**	**300**		**Pb**	**23 27 46.0**	**-0.8**
AHB					**Sn**	**23 28 05.5**	**-0.8**
AKV	**Akutan Volcano**	**1.66**	**299**		**Pn**	**23 27 47.1**	**+0.1**
AKV					**Pb**	**23 27 47.2**	**-1.0**
LVA	**Lava Point**	**1.71**	**299**		**Pn**	**23 27 47.7**	**+0.1**
LVA				IAML		23 28 22.8	
	comp=E,539nm,1.0s						
LVA				IAML		23 28 27.0	
	comp=N,864nm,0.7s						
UNV	**Unalaska Valle**	**1.86**	**287**		**Pn**	**23 27 49.8**	**+0.2**
DT1	**Dutton Round H**	**1.90**	**22**		**Pn**	**23 27 50.6**	**+0.4**
DT1					**Sn**	**23 28 12.7**	**-1.6**
MNAT	**Makushin Natee**	**1.97**	**287**		**Pn**	**23 27 51.5**	**+0.3**
MREP	**Makushin Rep't**	**1.99**	**285**		**Pn**	**23 27 52.0**	**+0.5**
MSW	**Makushin Switc**	**2.03**	**287**		**Pn**	**23 27 52.3**	**+0.3**
DOL	**Dolgoi Island**	**2.04**	**27**		**Pn**	**23 27 52.6**	**+0.5**
MGOD	**Makushin Geo Gods**	**2.06**	**284**		**Pn**	**23 27 52.8**	**+0.4**
PN7A	**Pavlof North-7**	**2.26**	**22**		**Pn**	**23 27 57.3**	**+2.1**
PS1A	**Pavlof South-1**	**2.31**	**26**		**Sn**	**23 28 25.3**	**+0.8**
S12K	**Black Hills**	**2.50**	**19**		**Pn**	**23 27 59.5**	**+1.0**
S12K				IAML		23 28 43.2	
	comp=E,206nm,0.5s						
S12K				IAML		23 28 43.7	
	comp=N,204nm,0.5s						
SDPT	**Sand Point**	**2.67**	**40**		**Pn**	**23 28 02.1**	**+1.3**
SDPT				IAML		23 28 34.5	
	comp=N,322nm,0.5s						
SDPT				IAML		23 28 34.7	
	comp=E,263nm,0.5s						
SDPT	**Sand Point**	**2.67**	**40**		**Sn**	**23 28 32.2**	**-1.1**
OKTU	**Okmok Mt. Tuli**	**2.72**	**272**		**Pn**	**23 28 02.6**	**+1.0**
CNBA	**Chernabura Isl**	**2.73**	**56**		**Pn**	**23 28 01.2**	**-0.4**
CNBA				IAML		23 28 35.7	
	comp=E,215nm,0.4s						
NIKH	**Nikolski High**	**3.25**	**265**		**Pn**	**23 28 08.6**	**-0.1**
NIKH				IAML		23 29 13.6	
	comp=E,148nm,1.2s						
NIKH				IAML		23 29 16.6	
	comp=N,128nm,0.8s						
VNFG	**Fog Glacier, M**	**3.72**	**36**		**Pn**	**23 28 17.6**	**+2.3**
VNFG	**Fog Glacier, M**	**3.72**	**36**	IAML		23 29 23.3	
	comp=E,237nm,0.9s						
VNHG	**Veniaminof 1**	**3.82**	**39**		**Pn**	**23 28 18.9**	**+2.3**
CLES	**Cleveland East**	**3.89**	**265**	Pn	**Pn**	**23 28 17.3**	**-0.3**
PLBL	**Peulik Blue Cr**	**5.78**	**38**		**Pn**	**23 28 45.2**	**+1.7**
PLK4	**Peulik 4**	**5.90**	**41**		**Pn**	**23 28 47.1**	**+1.8**
O14K	**Tigyukauivet M**	**6.04**	**11**	Pn	**Pn**	**23 28 48.6**	**+1.5**
O15K	**Ungalikthiuk R**	**6.19**	**18**		**Pn**	**23 28 50.2**	**+1.1**
ANCK	**Angle Creek**	**6.63**	**40**		**Pn**	**23 28 56.8**	**+1.6**
ACHA	**Angle Creek He**	**6.70**	**40**	Pn	**Pn**	**23 28 56.9**	**+0.6**
OHAK	**Old Harbor**	**7.00**	**52**	Pn	**Pn**	**23 28 59.5**	**-0.7**
M14K	**Bethel**	**7.47**	**6**	Pn	**Pn**	**23 29 08.9**	**+2.4**
KDAK	**Kodiak Island**	**7.61**	**50**	Pn	**Pn**	**23 29 08.3**	**-0.3**
KDAK	**Kodiak Island**	**7.61**	**50**	Pn	**Pn**	**23 29 07.8**	**-0.8**
	comp=E,1.3nm,0.3s,baz=218,slow=5.1,SNR=14						
KDAK				Sn	**Sn**	**23 30 28.4**	**-6.5**
	comp=E,0.6nm,0.3s,baz=355,slow=23,SNR=6.2						
	comp=E,3.0nm,0.3s						
M16K	**Timber Creek**	**8.07**	**16**	Pn	**Pn**	**23 29 16.7**	**+1.7**
ADK	**Adak**	**8.16**	**265**	Pn	**Pn**	**23 29 16.6**	**+0.5**
SUA	**Susitna One**	**10.63**	**35**	Pn	**Pn**	**23 29 50.8**	**+0.7**
AMKA	**Amchitka**	**10.70**	**266**	Pn	**Pn**	**23 29 50.3**	**-0.6**
KLU	**Klutina**	**12.46**	**42**		**Pn**	**23 30 14.0**	**-1.0**
HMT	**Hamilton**	**12.61**	**49**	Pn	**Pn**	**23 30 17.3**	**+0.3**
BMRM	**Bremner River**	**12.74**	**46**	Pn	**Pn**	**23 30 18.3**	**-0.6**
N25K	**Chitina, Valde**	**13.06**	**43**	Pn	**Pn**	**23 30 22.2**	**-1.0**
WAX	**Waxell Ridge**	**13.29**	**49**	Pn	**Pn**	**23 30 26.4**	**0.0**
GLB	**Gilahina Butte**	**13.31**	**45**	Pn	**Pn**	**23 30 25.9**	**-0.6**
MLY	**Manley**	**13.37**	**24**		**Pn**	**23 30 28.6**	**+1.2**
ISLE	**Juniper Island**	**13.59**	**49**	Pn	**Pn**	**23 30 30.2**	**-0.2**
WRH	**Wood River Hil**	**13.65**	**29**	Pn	**Pn**	**23 30 29.2**	**-1.8**
CCB	**Clear Creek Bu**	**13.86**	**29**	Pn	**Pn**	**23 30 33.2**	**-0.7**
GRNC	**Granite Creek**	**13.90**	**49**	Pn	**Pn**	**23 30 34.9**	**0.0**
HDA	**Harding Lake**	**13.94**	**31**	Pn	**Pn**	**23 30 32.6**	**-2.6**
TABL	**Table Mountain**	**14.08**	**51**	Pn	**Pn**	**23 30 37.0**	**-0.2**
ILAR	**Eielson Array**	**14.22**	**30**	Pn	**Pn**	**23 30 37.3**	**-1.6**
ILAR	**Eielson Array**	**14.22**	**30**	Pn	**Pn**	**23 30 36.5**	**-2.5**
	comp=E,0.1nm,0.3s,baz=216,slow=14,SNR=7.1						
	comp=E,0.2nm,0.5s						
SCRK	**Sand Creek**	**14.63**	**36**		**Pn**	**23 30 43.0**	**-1.7**
H24K	**Noodor Dome**	**14.74**	**26**	Pn	**Pn**	**23 30 44.2**	**-1.9**
BCAR	**Beaver Creek A**	**14.94**	**41**	Pn	**Pn**	**23 30 47.5**	**-1.3**
J26L	**Joseph Creek**	**15.10**	**35**		**Pn**	**23 30 49.7**	**-1.3**
J26L				IAmb	IAmb	23 30 56.9	
	comp=Z,2.8nm,0.6s						
COLD	**Coldfoot**	**15.34**	**20**		**Pn**	**23 30 52.9**	**-1.2**
COLD				IAmb	IAmb	23 31 00.6	
	comp=Z,4.9nm,0.9s						
HYT	**Haines Junctio**	**15.90**	**52**		**Pn**	**23 31 02.6**	**+1.1**
E24K	**Your Creek**	**16.41**	**20**		**Pn**	**23 31 08.6**	**+0.7**
E24K				IAmb	IAmb	23 31 23.1	
	comp=Z,5.3nm,0.8s						
F25K	**Christian Rive**	**16.67**	**24**	Pn	**Pn**	**23 31 11.6**	**+0.4**
TOLK	**Toolik Lake Re**	**16.68**	**18**	Pn	**Pn**	**23 31 12.2**	**+0.8**
TOLK				IAmb	IAmb	23 31 32.8	
	comp=Z,9.1nm,1.2s						
BMAR	**Burnt Mountain**	**16.81**	**26**	Pn	**Pn**	**23 31 13.9**	**+0.9**
H27K	**Steamboat Moun**	**16.86**	**32**	Pn	**Pn**	**23 31 13.6**	**0.0**
N31M	**Braeburn, Yuko**	**16.89**	**50**	P	**P**	**23 31 15.8**	**-0.3**
N31M				IAmb	IAmb	23 31 37.7	
	comp=Z,5.8nm,0.8s						
WHY	**Whitehorse**	**17.11**	**53**	Pn	**Pn**	**23 31 17.7**	**+0.9**
WHY				IAmb	IAmb	23 31 21.4	
	comp=Z,10nm,1.1s						
M31M	**Drury Creek, Y**	**17.73**	**49**		**P**	**23 31 26.7**	**+1.4**
M31M				IAmb	IAmb	23 31 45.3	
	comp=Z,8.0nm,1.1s						
G29M	**Pine Creek**	**18.39**	**33**	P	**P**	**23 31 31.9**	**-0.7**
H31M	**Peel River**	**19.09**	**38**	P	**P**	**23 31 40.5**	**+0.2**
H31M				IAmb	IAmb	23 32 01.6	
	comp=Z,15nm,1.2s						
MMPY	**Sheldon Lake,**	**19.24**	**48**	P	**Pn**	**23 31 43.6**	**+0.7**
MMPY				IAmb	IAmb	23 31 46.8	
	comp=Z,15nm,1.3s						
G31M	**Satah River**	**19.64**	**35**	P	**P**	**23 31 45.1**	**-1.1**
G31M				IAmb	IAmb	23 32 05.3	
	comp=Z,10nm,1.4s						
INK	**Inuvik**	**20.60**	**32**	P	**P**	**23 31 56.6**	**0.0**
	comp=Z,2.9nm,0.8s,baz=258,slow=9.3,SNR=4.8						
	comp=Z,2.9nm,0.8s						
PETK	**Petropavlovsk-**	**23.04**	**285**	P	**P**	**23 32 23.2**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=81,slow=13,SNR=5.7						
	comp=Z,2.0nm,0.5s						
SEY	**Seymchan**	**24.68**	**310**	LR	LR	23 43 43.9	
	comp=Z,30nm,18.8s,baz=96,slow=40						
YKA	**Yellowknife Ar**	**26.89**	**51**	LR	LR	23 44 57.7	
	comp=Z,29nm,21.7s,baz=327,slow=40						
TIXI	**Tiksi**	**33.75**	**328**	LR	LR	23 49 26.6	
	comp=Z,42nm,19.9s,baz=24,slow=40						
H11N2	**WAKE ISLAND Hy**	**40.57**	**226**	T	T	00 18 35.8	
	baz=26,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy**	**40.58**	**226**	T	T	00 18 36.2	
	baz=26,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**40.59**	**226**	T	T	00 18 34.8	
	baz=26,slow=76,SNR=51						
H11S1	**WAKE ISLAND Hy**	**41.74**	**225**	T	T	00 20 03.9	
	baz=26,slow=76,SNR=71						
H11S2	**WAKE ISLAND Hy**	**41.75**	**225**	T	T	00 20 06.2	
	baz=26,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**41.76**	**225**	T	T	00 20 05.1	
	baz=26,slow=76,SNR=46						
SUMG	**Summit**	**48.74**	**19**	P	**P**	**23 36 02.1**	**-0.4**
KSRS	**Korea Array**	**48.78**	**280**	P	**P**	**23 36 03.6**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=45,slow=8.2,SNR=5.6						
	comp=Z,1.8nm,0.7s						
TXAR	**Lajitas Array**	**49.22**	**94**	P	**P**	**23 36 06.6**	**+0.3**
TXAR	**Lajitas Array**	**49.22**	**94**	P	**P**	**23 36 09.3**	**+3.0**
	comp=Z,0.2nm,0.6s,baz=300,slow=2.6,SNR=2.6						
	comp=Z,0.2nm,0.6s						
SONM	**Songino Array**	**53.79**	**303**	P	**P**	**23 36 40.0**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=58,slow=5.9,SNR=9.5						
	comp=Z,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**57.25**	**356**	P	**P**	**23 37 02.7**	**-2.0**
	comp=Z,1.7nm,0.8s,baz=15,slow=7.3,SNR=1.5						
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**59.02**	**320**	P	**P**	**23 37 16.3**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=46,slow=8.3,SNR=2.4						
ZALV				LR	LR	00 05 31.1	
	comp=Z,25nm,21.0s,baz=77,slow=39						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**64.03**	**321**	P	**P**	**23 37 51.3**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=39,slow=7.0,SNR=5.3						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**65.30**	**355**	P	**P**	**23 37 58.5**	**-0.8**
FINES	**FINESS Array B**	**65.30**	**355**	P	**P**	**23 37 58.1**	**-1.2**
	comp=Z,4.4nm,0.9s,baz=359,slow=7.6,SNR=7.1						
	comp=Z,4.4nm,0.9s						
ARTI	**Arti**	**65.36**	**336**	P	**P**	**23 37 59.6**	**-0.2**
MKAR	**Makanchi Array**	**65.63**	**317**	P	**P**	**23 38 01.5**	**-0.3**
MKAR	**Makanchi Array**	**65.63**	**317**	P	**P**	**23 38 00.8**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=41,slow=6.7,SNR=4.2						
	comp=Z,0.7nm,0.8s						
NOA	**NORSAR Array B**	**65.88**	**3**	P	**P**	**23 38 03.1**	**0.0**
	comp=Z,1.1nm,0.9s,baz=335,slow=5.3,SNR=2.2						
	comp=Z,1.1nm,0.9s						
HFS	**Hagfors**	**66.84**	**2**	P	**P**	**23 38 09.0**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=46,slow=4.7,SNR=12						
	comp=Z,1.9nm,0.6s						
EKA	**Eskdalemuir Ar**	**70.47**	**12**	P	**P**	**23 38 33.4**	**+1.4**
	comp=Z,2.3nm,1.0s,baz=331,slow=4.4,SNR=4.3						
	comp=Z,2.3nm,1.0s						
AB31	**Akbulak array**	**71.37**	**332**	P	**P**	**23 38 38.1**	**+0.6**
ABKAR	**Akbulak array**	**71.37**	**332**	P	**P**	**23 38 37.8**	**+0.3**
AAK	**Ala-Archa**	**72.20**	**319**	LR	LR	00 14 45.4	
	comp=Z,27nm,18.4s,baz=266,slow=40						
KKAR	**Karatay Array**	**73.32**	**322**	P	**P**	**23 38 48.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**79.80**	**287**	P	**P**	**23 39 26.8**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=42,slow=5.9,SNR=2.0						
	comp=Z,0.4nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**80.26**	**4**	P	**P**	**23 39 30.2**	**+1.4**
BRTR	**Keskin Array B**	**86.12**	**347**	P	**P**	**23 39 59.1**	**+0.1**
BRTR	**Keskin Array B**	**86.12**	**347**	P	**P**	**23 39 59.2**	**+0.3**
	comp=Z,1.5nm,1.0s,baz=97,slow=2.9,SNR=5.3						
	comp=Z,1.5nm,1.0s						
H03N2	**Juan Fernandez**	**113.05**	**115**	T	T	01 49 33.5	
	baz=324						
H03N1	**Juan Fernandez**	**113.06**	**115**	T	T	01 49 35.8	
	baz=324						
H03N3	**Juan Fernandez**	**113.07**	**115**	T	T	01 49 35.5	
	baz=324						

*SOME **02** 23:33:05.5, 43°.45N×82°.68E, h15km*
*NNC **02** 23:33:10.4±4.1, 43°.38N×82°.45E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=43.0km s-min=15.9km az=147.0*

ISC 02 23:33:03.8±2.4,**43°.1N**±0°.1×**82°.62E**±0°.09,**h10**km,**n17,** σ1§**33**/24,**3C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**2.30**	**278**	⇑Pn	**Pg**	**23 33 48.3**	**+0.4**
	7.1n

MCNB				Trac			23 51 22.0		
	comp=E,1.7nm,0.1s								
WES	**Weston**	**3.08**	**269**	Pn	**Pn**		**23 50 15.1**	**+1.4**	
WES				IAML			23 50 38.5		
	comp=E,12nm,1.4s								
PKME	**Peaks-Kenny Pk**	**3.13**	**331**	Pn	**Pg**		**23 50 22.7**	**-2.3**	
HRV	**Adam Dziewonsk**	**3.25**	**271**	Pn	**Pn**		**23 50 18.9**	**+2.9**	
HRV				IAML			23 51 15.3		
	comp=E,12nm,1.2s								
I62A	**Tamworth**	**3.33**	**295**	Pn	**Pb**		**23 50 22.6**	**-1.6**	
I62A				IAML			23 51 12.6		
	comp=E,14nm,1.3s								
I62A				IAML			23 51 18.0		
	comp=E,11nm,0.5s								
WCNB	**Wards Creek**	**3.33**	**20**	PN	**Pg**		**23 50 28.6**	**-0.2**	
WCNB				SN	**Sb**		**23 51 06.2**	**+1.5**	
WCNB				LG	Lg		23 51 19.8		
WCNB				Trac			23 51 33.4		
	comp=E,2.0nm,0.1s								
HAL	**Halifax**	**3.34**	**50**	PN	**Pg**		**23 50 30.2**	**+1.2**	
HAL				SN	**Sb**		**23 51 07.3**	**+2.3**	
HAL				Trac			23 51 30.1		
	comp=E,1.9nm,0.0s								
F64A	**Sherman**	**3.44**	**346**		**Pb**		**23 50 26.5**	**+0.6**	
F64A				IAML			23 51 37.7		
	comp=E,7.8nm,1.5s								
SRNB	**Snider Mountai**	**3.48**	**18**	PN	**Pg**		**23 50 31.6**	**+0.1**	
SRNB				SN	**Sb**		**23 51 09.5**	**+0.7**	
SRNB				Trac			23 51 37.5		
	comp=E,0.4nm,0.0s								
H62A	**Milan**	**3.55**	**306**	Pn	**Pb**		**23 50 25.2**	**-2.6**	
ELNB	**Elgin, New Bru**	**3.62**	**23**	PN	**Pg**		**23 50 32.6**	**-1.7**	
ELNB				SN	**Sb**		**23 51 13.1**	**0.0**	
ELNB				Trac			23 51 38.7		
	comp=E,13nm,0.6s								
G62A	**West of Eustis**	**3.62**	**319**	Pn	**Pb**		**23 50 29.1**	**0.0**	
G62A				IAML			23 51 17.4		
	comp=E,7.8nm,1.4s								
G62A				IAML			23 51 33.4		
	comp=E,8.3nm,1.5s								
HKNB	**Havelock Quarr**	**3.67**	**20**	PN	**Pb**		**23 50 30.4**	**+0.4**	
HKNB				SN	**Sn**		**23 51 06.4**	**+1.2**	
HKNB				Trac			23 51 42.7		
	comp=E,20nm,0.6s								
LMN	**Caledonia Moun**	**3.73**	**26**	Pn	**Pb**		**23 50 32.6**	**+1.8**	
LMN				IAML			23 51 45.1		
	comp=N,6.9nm,1.5s								
LMN	**Caledonia Moun**	**3.73**	**26**	PN	**Pg**		**23 50 33.8**	**-2.5**	
LMN				SN	**Sb**		**23 51 15.3**	**-0.7**	
LMN				Trac			23 51 50.4		
	comp=N,28nm,0.7s								
K62A	**Royalston**	**3.75**	**274**	Pn	**Pn**		**23 50 25.9**	**+3.1**	
K62A				IAML			23 51 12.4		
	comp=N,11nm,1.4s								
K62A				IAML			23 51 19.0		
	comp=N,11nm,1.4s								
M63A	**Gales Ferry**	**3.81**	**254**	Pn	**Pn**		**23 50 23.5**	**-0.2**	
M63A				IAML			23 51 27.1		
	comp=N,9.6nm,1.2s								
M63A				IAML			23 51 28.1		
	comp=N,10.0nm,1.4s								
UCCT	**U. Connecticut**	**3.83**	**261**	Pn	**Pn**		**23 50 26.1**	**+2.0**	
J61A	**Chester**	**4.04**	**283**	Pn	**Pn**		**23 50 31.3**	**+4.4**	
L61B	**Northampton**	**4.08**	**271**	Pn	**Pn**		**23 50 30.5**	**+3.0**	
L61B				IAML			23 50 59.4		
	comp=N,5.5nm,1.4s								
E62A	**Clayton Lake**	**4.42**	**338**	Pn	**Pb**		**23 50 40.2**	**-2.5**	
E62A				IAML			23 52 14.0		
	comp=N,3.2nm,1.5s								
BATG	**Bathurst New B**	**4.81**	**9**	Pn	**Pb**		**23 50 46.3**	**-3.0**	
BATG				IAML			23 53 09.4		
	comp=N,3.5nm,1.1s								
HSNB	**Heath Steele M**	**4.81**	**9**	PN	**Pb**		**23 50 48.8**	**-0.5**	
HSNB				SN	**Sb**		**23 51 41.5**	**-5.6**	
HSNB				LG	Lg		23 52 06.7		
HSNB				Trac			23 52 27.6		
	comp=N,688nm,3.0s								
GBN	**Guysborough**	**4.99**	**53**	Pn	**Pb**		**23 50 48.4**	**-3.9**	

*IDC **03** 00:04:44.0±1.5,31°.24S×178°.41W,h96km±13km,mb3.8/4, mbtmp4.1/6,Error ellipse: s-maj=29.8km s-min=12.3km az=113.0*
*WEL **03** 00:04:44.1±0.5,31°S±6°×17°8W±1°.5,h33km,M4.6/7, mB4.6/4,ML4.7/7,MLv4.8/7,Mw(mB)3.8/4,Error ellipse: s-maj=21.2km s-min=2.8km az=108.8,confirmed*

ISC 03 00:04:43.0±0.8,31°.38S±0°.06×178°.1W±0°.1,h100km,n46, σ1ᵍ61/55,mb4.1/7,4D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**2.12**	**4**	P		**Pn**	**00 05 17.7**	**+0.6**
GLKZ				S		**Sn**	**00 05 41.4**	**-1.7**
RAO	**Raoul Island**	**2.12**	**4**	P		**Pn**	**00 05 18.2**	**+0.9**
	282nm,0.3s,baz=108,slow=20,SNR=2.2							
RAO				S		**Sn**	**00 05 42.0**	**-1.3**
	1μm,0.3s,baz=186,slow=23,SNR=11							
RAO	**Raoul Island**	**2.12**	**4**	P		**Pn**	**00 05 18.1**	**+0.9**
RIZ	**Raoul Island**	**2.13**	**4**	P		**Pn**	**00 05 18.3**	**+1.0**
RIZ				S		**Sn**	**00 05 43.4**	**-0.1**
MXZ	**Matakaoa Point**	**6.85**	**205**	P		**Pn**	**00 06 22.3**	**+1.6**
MXZ				S		**Sn**	**00 07 38.6**	**+1.4**
PKGZ	**Pakihiroa**	**7.20**	**205**	P		**Pn**	**00 06 26.6**	**+1.0**
PKGZ				S		**Sn**	**00 07 46.8**	**+1.0**
HAZ	**Te Kaha**	**7.21**	**207**	P		**Pn**	**00 06 26.3**	**+0.6**
HAZ				S		**Sn**	**00 07 48.8**	**+2.7**
RUGZ	**Raukumara Rang**	**7.44**	**207**	P		**Pn**	**00 06 30.0**	**+1.1**
RUGZ				S		**Sn**	**00 07 53.1**	**+1.4**
MWZ	**Matawai**	**7.82**	**206**	P		**Pn**	**00 06 34.9**	**+0.9**
MWZ				S		**Sn**	**00 07 59.6**	**-1.3**
URZ	**Urewera**	**7.92**	**209**	P		**Pn**	**00 06 34.8**	**-0.5**
	2.1nm,0.3s,baz=24,slow=18,SNR=10							
URZ				S		**Sn**	**00 08 04.3**	**+1.1**
	16nm,0.3s,baz=52,slow=19,SNR=15							
URZ	**Urewera**	**7.92**	**209**	P		**Pn**	**00 06 35.2**	**-0.1**
URZ				S		**Sn**	**00 08 02.5**	**-0.7**
OUZ	**Omahuta**	**7.94**	**239**	P		Pn	00 06 39.0	+3.3
RTZ	**Ruatahuna**	**8.27**	**208**	P		**Pn**	**00 06 39.5**	**-0.8**
RTZ				S		**Sn**	**00 08 10.6**	**-1.4**
RAHZ	**Arahi**	**8.49**	**206**	P		**Pn**	**00 06 44.1**	**+1.0**
RAHZ				S		**Sn**	**00 08 17.2**	**-0.1**
MTHZ	**Maungataniwha**	**8.53**	**208**	P		**Pn**	**00 06 43.6**	**-0.1**
MTHZ				S		**Sn**	**00 08 18.4**	**+0.2**
WHHZ	**Waihua**	**8.58**	**205**	P		**Pn**	**00 06 46.0**	**+1.7**
WHHZ				S		**Sn**	**00 08 19.6**	**+0.3**
NMHZ	**Naumai**	**8.76**	**207**	P		**Pn**	**00 06 46.6**	**-0.2**
NMHZ				S		**Sn**	**00 08 24.2**	**+0.5**
ARHZ	**Aropaoanui**	**8.83**	**206**	P		**Pn**	**00 06 48.0**	**+0.3**
ARHZ				S		**Sn**	**00 08 24.7**	**-0.8**
MCHZ	**McNeill Hill**	**9.10**	**206**	P		**Pn**	**00 06 49.6**	**-1.8**
MCHZ				S		**Sn**	**00 08 31.4**	**-0.6**
KWHZ	**Kaweka Forest**	**9.19**	**208**	P		**Pn**	**00 06 53.5**	**+0.8**
KWHZ				S		**Sn**	**00 08 32.6**	**-1.7**
KAHZ	**Kahuranaki**	**9.34**	**205**	P		**Pn**	**00 06 52.5**	**-2.2**
KAHZ				S		**Sn**	**00 08 37.0**	**-1.0**
KRHZ	**Kereru**	**9.40**	**207**	P		**Pn**	**00 06 55.5**	**0.0**
KRHZ				S		**Sn**	**00 08 35.3**	**-4.0**
CTZ	**Chatham Island**	**12.39**	**175**	P		**P**	**00 07 40.5**	**-3.2**
CTZ				S		**Sn**	**00 09 50.5**	**-1.4**
STKA	**Stephens Creek**	**34.19**	**258**	P		**P**	**00 11 19.8**	**+0.9**
	2.9nm,0.8s,baz=86,slow=13,SNR=4.8 2.9nm,0.8s							
ASAR	**Alice Springs**	**42.99**	**268**	P		**P**	**00 12 31.4**	**-1.2**
	1.5nm,0.3s,baz=106,slow=7.3,SNR=32 1.5nm,0.3s							
WRA	**Warramunga Arr**	**44.06**	**273**	P		**P**	**00 12 39.6**	**-1.7**
	2.0nm,0.3s,baz=111,slow=8.1,SNR=17 2.0nm,0.3s							
QSPA	**South Pole Qui**	**58.73**	**180**	P		P	00 14 36.2	+6.0
	1.2nm,0.8s,baz=353,slow=12,SNR=7.7							
TROLL	**Troll, Antarti**	**76.90**	**180**	⇓P		**P**	**00 16 27.4**	**+3.4**
	comp=Z,69nm,0.7s							
SNAA	**Sanae**	**77.18**	**178**	⇓P		**P**	**00 16 28.2**	**+2.7**
	comp=Z,16nm,1.0s							
SNAA	**Sanae**	**77.18**	**178**	P		**P**	**00 16 28.2**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=188,slow=13,SNR=5.8 comp=Z,0.4nm,0.7s							
VNA3	**Neumayer Olymp**	**77.34**	**176**	⇓P		**P**	**00 16 29.4**	**+3.1**
	comp=Z,2.2nm,0.7s							
VNA2	**Neumayer--Watz**	**77.77**	**177**	⇓P		**P**	**00 16 32.1**	**+3.4**
	comp=Z,1.3nm,0.6s,baz=164,slow=4.0							
H03S2	**Juan Fernandez**	**79.99**	**123**	T		T	01 46 11.3	
	baz=237,slow=74,SNR=29							
H03S1	**Juan Fernandez**	**80.00**	**123**	T		T	01 46 12.5	
	baz=237,slow=74,SNR=28							
H03S3	**Juan Fernandez**	**80.01**	**123**	T		T	01 46 11.4	
	baz=237,slow=74,SNR=31							
H03N3	**Juan Fernandez**	**80.19**	**123**	T		T	01 46 16.4	
	baz=241,slow=72,SNR=11							
H03N2	**Juan Fernandez**	**80.19**	**123**	T		T	01 46 24.4	
	baz=241,slow=72,SNR=14							
H03N1	**Juan Fernandez**	**80.20**	**123**	T		T	01 46 05.4	
	baz=241,slow=72,SNR=26							
H10S2	**ASCENSION HYDR**	**136.87**	**156**	T		T	02 57 51.6	
	baz=204							
H10S3	**ASCENSION HYDR**	**136.87**	**156**	T		T	02 58 21.1	
	baz=16							
H10N3	**ASCENSION HYDR**	**137.96**	**155**	T		T	02 59 34.8	
	baz=204,slow=75,SNR=5.5							
H10N1	**ASCENSION HYDR**	**137.96**	**155**	T		T	02 59 30.2	
	baz=204,slow=75,SNR=5.2							
H10N2	**ASCENSION HYDR**	**137.97**	**155**	T		T	02 59 34.8	
	baz=204,slow=75,SNR=6.2							
FINES	**FINESS Array B**	**146.03**	**339**	PKPbc		**PKPab**	**00 24 09.9**	**-1.4**
	comp=Z,3.2nm,0.5s,baz=52,slow=4.0,SNR=36							
HFS	**Hagfors**	**150.18**	**348**	PKPbc		**PKiKP**	**00 24 21.4**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=338,slow=3.1,SNR=6.1							
MMAI	**Mount Meron Ar**	**151.68**	**282**	PKP		**PKPdf**	**00 24 20.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=97,slow=6.8,SNR=4.9							
MMAI				PKPbc		**PKiKP**	**00 24 26.7**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=104,slow=6.1,SNR=2.2							

*IDC **03** 00:13:47.6±3.0,19°.70S×178°.01W,h510km±33km, mb3.2/10,mbtmp4.2/12,Error ellipse: s-maj=20.4km s-min=15.3km az=162.0*
*NEIC **03** 00:13:49.0±2.4,19°.7S±0°.1×178°.0W±0°.1,h525km±3km, mb4.3/12,Error ellipse: s-maj=19.9km s-min=17.7km az=182.0*

ISC 03 00:13:46.4±0.5,19°.9S±0°.1×177°.92W±0°.10,h500km,n63, σ1ᵍ39/58,mb3.9/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.39**	**299**	P		**P**	**00 15 09.9**	**+1.7**
NIUE	**Niue**	**7.59**	**85**	P		P	00 15 34.0	-4.6
AFI	**Afiamalu**	**8.39**	**45**	P		P	00 15 40.9	-6.1
DZM	**Mont Dzumac**	**14.75**	**259**	P		**P**	**00 16 56.5**	**+2.3**
	5.3nm,0.8s,baz=135,slow=21,SNR=1.6							
RAR	**Rarotonga**	**17.05**	**97**	P		**P**	**00 17 20.4**	**+2.6**
RAR	**Rarotonga**	**17.05**	**97**	P		**P**	**00 17 20.5**	**+2.6**
	9.7nm,0.3s,baz=204,slow=20,SNR=5.7							
URZ	**Urewera**	**18.77**	**192**	P		**P**	**00 17 30.2**	**-3.4**
	11nm,0.4s,baz=302,slow=1.9,SNR=19							
RTZ	**Ruatahuna**	**19.14**	**192**	P		**P**	**00 17 34.1**	**-3.0**
RTZ				IAmb		IAmb	00 17 36.5	
	comp=Z,9.6nm,0.7s							
RPZ	**Rata Peaks**	**25.45**	**199**	P		**P**	**00 18 31.4**	**-2.3**
	comp=Z,4.9nm,0.7s,baz=43,slow=14,SNR=2.5							
TOO	**Toolangi**	**36.29**	**233**	P		**P**	**00 20 07.4**	**+0.4**
STKA	**Stephens Creek**	**38.10**	**244**	P		**P**	**00 20 20.9**	**-1.0**
STKA	**Stephens Creek**	**38.10**	**244**	P		**P**	**00 20 20.9**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=40,slow=13,SNR=3.7 comp=Z,1.2nm,0.5s							
BBOO	**Buckleboo**	**42.87**	**243**	P		**P**	**00 20 59.5**	**-0.6**
ASAR	**Alice Springs**	**44.72**	**256**	P		**P**	**00 21 14.3**	**-0.4**
ASAR	**Alice Springs**	**44.72**	**256**	P		**P**	**00 21 15.3**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=95,slow=8.1,SNR=13 comp=Z,1.4nm,0.7s							
WRA	**Warramunga Arr**	**44.75**	**261**	P		**P**	**00 21 13.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=95,slow=8.0,SNR=4.8 comp=Z,0.3nm,0.3s							
MJAR	**Matsushiro Ar**	**69.79**	**324**	P		**P**	**00 24 05.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=170,slow=5.9,SNR=6.0 comp=Z,1.3nm,0.6s							
QSPA	**South Pole Qui**	**70.14**	**180**	P		**P**	**00 24 09.6**	**+1.8**
QSPA	**South Pole Qui**	**70.14**	**180**	P		**P**	**00 24 10.0**	**+2.2**
	comp=Z,3.0nm,0.7s,baz=352,slow=0.5,SNR=20 comp=Z,3.0nm,0.7s							
PETK	**Petropavlovsk-**	**75.74**	**345**	P		**P**	**00 24 39.8**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=140,slow=9.5,SNR=4.3 comp=Z,6.1nm,0.8s							
NVAR	**Mina Array Bea**	**80.56**	**43**	P		**P**	**00 25 05.9**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=231,slow=8.4,SNR=6.3 comp=Z,0.7nm,0.7s							
J05D	**Fort Rock, OR**	**81.61**	**38**	P		**P**	**00 25 11.5**	**-0.3**
J05D				IAmb		IAmb	00 25 12.6	
	comp=Z,6.8nm,1.0s							
U15A	**North Rim**	**83.53**	**48**	P		**P**	**00 25 21.6**	**-0.2**
STLK	**Strandline Lak**	**83.80**	**12**	P		**P**	**00 25 20.3**	**-2.0**
STLK				IAmb		IAmb	00 25 21.1	
	comp=Z,4.2nm,0.8s							
GHO	**Glory Hole Cre**	**84.66**	**13**	P		**P**	**00 25 25.5**	**-1.0**
GHO				IAmb		IAmb	00 25 26.2	
	comp=Z,8.0nm,0.5s							
TXAR	**Lajitas Array**	**86.69**	**57**	P		**P**	**00 25 36.4**	**-0.7**
TXAR	**Lajitas Array**	**86.69**	**57**	P		**P**	**00 25 36.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=219,slow=6.7,SNR=7.6 comp=Z,0.6nm,0.7s							
IMAR	**Indian Mountai**	**87.58**	**10**	P		**P**	**00 25 39.1**	**-1.2**
ILAR	**Eielson Array**	**87.74**	**13**	P		**P**	**00 25 39.5**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=225,slow=5.7,SNR=20 comp=Z,1.1nm,0.6s							
J25K	**Salcha River,**	**87.93**	**13**	P		**P**	**00 25 41.0**	**-1.0**
J25K				IAmb		IAmb	00 25 41.8	
	comp=Z,2.2nm,0.7s							
PDAR	**Pinedale Array**	**88.50**	**43**	P		**P**	**00 25 43.7**	**-1.8**
PDAR	**Pinedale Array**	**88.50**	**43**	P		**P**	**00 25 44.1**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=206,slow=2.2,SNR=7.0 comp=Z,0.6nm,0.7s							
DAWY	**Dawson**	**88.89**	**16**	P		**P**	**00 25 45.5**	**-1.0**
DAWY				IAmb		IAmb	00 25 46.8	
	comp=Z,2.5nm,0.6s							
BVAR	**Borovoye Array**	**118.69**	**320**	PKP		**PKPdf**	**00 31 35.9**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=99,slow=1.1,SNR=8.3							
KKAR	**Karatay Array**	**118.94**	**309**	PKPdf		**PKPdf**	**00 31 36.5**	**-1.3**
ARCES	**ARCESS Array B**	**128.37**	**350**	PKP		**PKPdf**	**00 31 54.2**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=355,slow=2.8,SNR=7.0							
FINES	**FINESS Array B**	**135.25**	**344**	PKhKP		PKPpre	00 32 03.7	
	comp=Z,4.9nm,1.1s,baz=99,slow=6.0,SNR=3.4							
FINES				PKP		**PKPdf**	**00 32 08.5**	**+0.3**
	comp=Z,6.7nm,1.0s,baz=106,slow=3.0,SNR=4.2							
HFS	**Hagfors**	**138.99**	**351**	PKhKP		PKPpre	00 32 04.8	
	comp=Z,0.7nm,0.4s,baz=11,slow=1.5,SNR=8.2							
AKASG	**Main Array Ba**	**142.55**	**331**	PKhKP		PKPpre	00 32 17.6	
	comp=Z,1.3nm,0.4s,baz=43,slow=4.4,SNR=6.8							
EKA	**Eskdalemuir Ar**	**144.43**	**5**	PKP		PKPbc	00 32 23.9	-0.9
	comp=Z,1.7nm,0.5s,baz=314,slow=2.5,SNR=10							
BRTR	**Keskin Array B**	**146.51**	**313**			**PKPdf**	**00 32 30.1**	**+0.9**
BRTR	**Keskin Array B**	**146.51**	**313**	PKPbc		**PKPdf**	**00 32 31.1**	**+1.9**
	comp=Z,1.6nm,0.7s,baz=137,slow=4.9,SNR=8.6							
OSTC	**Ostas**	**147.45**	**343**	*e*PKP		**PKPbc**	**00 32 33.6**	**0.0**
CLL	**Collm**	**147.52**	**347**			**PKPdf**	**00 32 32.6**	**+2.3**
STEB	**Steborice**	**147.55**	**341**	*e*PKP		**PKPbc**	**00 32 33.7**	**-0.2**
STEB				*ex*		x	00 32 38.2	
MMAI	**Mount Meron Ar**	**147.59**	**301**	PKPbc		**PKPbc**	**00 32 34.7**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=79,slow=4.3,SNR=7.3							
DPC	**Dobruska-Polom**	**147.60**	**343**	*e*PKP		**PKPbc**	**00 32 33.8**	**-0.3**
MAUC	**Maruska**	**148.03**	**340**	*e*PKP		**PKPbc**	**00 32 35.4**	**+0.2**
BORA	**Eskisehir**	**148.58**	**315**	PKPbc		**PKPdf**	**00 32 35.6**	**+3.1**
ZVC	**Zvikov**	**149.00**	**345**	*e*PKP		**PKPbc**	**00 32 37.0**	**-0.5**
ZVC				*ex*		x	00 32 43.6	
KHC	**Kasperske Hory**	**149.44**	**345**	PKPbc		**PKPbc**	**00 32 37.9**	**-0.7**
KHC	**Kasperske Hory**	**149.44**	**345**	*e*PKP		**PKPbc**	**00 32 38.3**	**-0.3**
KHC				*ex*		x	00 32 45.6	
GERES	**GERESS Array B**	**149.67**	**345**	PKPbc		**PKPbc**	**00 32 39.0**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=32,slow=3.8,SNR=16							
CONA	**Conrad Observa**	**149.91**	**341**	*i* PKP		**PKPbc**	**00 32 39.8**	**-0.1**
	comp=Z,1.5nm,0.4s							
RONA	**Rosalia, Austr**	**149.99**	**341**	*i* PKP		**PKPbc**	**00 32 39.9**	**-0.1**
	comp=Z,1.7nm,0.3s							
MOA	**Molln**	**150.44**	**343**	*i* PKP		**PKPbc**	**00 32 40.5**	**-0.6**
	comp=Z,0.9nm,0.5s							
LESA	**Schwarzleotal**	**151.25**	**345**	*i* PKP		**PKPbc**	**00 32 42.3**	**-0.7**
	comp=Z,1.6nm,0.5s							
KBA	**Koelnbreinsper**	**151.40**	**344**	*i* PKP		**PKPbc**	**00 32 42.9**	**-0.6**
	comp=Z,0.7nm,0.3s							
WATA	**Walderalm**	**151.59**	**346**	*i* PKP		**PKPbc**	**00 32 43.1**	**-0.7**
	comp=Z,1.0nm,0.2s							
WTTA	**Wattenberg**	**151.64**	**346**	*i* PKP		**PKPbc**	**00 32 43.3**	**-0.6**
	comp=Z,1.3nm,0.4s							
MOTA	**Moosalm**	**151.68**	**347**	*i* PKP		**PKPbc**	**00 32 43.0**	**-1.0**
	comp=Z,0.6nm,0.4s							
ABTA	**Abfaltersbach**	**151.92**	**345**	*i* PKP		**PKPbc**	**00 32 43.3**	**-1.1**
	comp=Z,1.3nm,0.4s							
FETA	**Feichten**	**152.07**	**347**	*i* PKP		**PKPbc**	**00 32 44.3**	**-0.6**
	comp=Z,0.5nm,0.4s							

*PLV **03** 00:16:26.9±0.7,23°.15N×103°.88E,h17km±35km,ML3.3*

*BKK **03** 00:16:29.7±0.8,23°N±5°×10°4E±°,h10km,M4.0/11, mb4.2/7,mB8.2/1,Mjma4.0/11,ML4.6/7,MLv3.7/9, Mw(mB)8.5/1*

ISC 03 00:16:27.1±2.2,23°.1N±0°.2×103°.89E±0°.07,h10km,n13, σ1ᵍ57/14,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HGVB	**Ha Giang**	**1.05**	**106**	*e*Pg		**Pg**	**00 16 47.3**	**-0.1**
HGVB				*e*Sg		**Sb**	**00 17 02.0**	**+0.8**
HGVB				IAML			00 17 04.8	
	comp=N,1μm,0.5s							
HGVB				IAML			00 17 06.5	
	comp=E,561nm,0.3s							
VTVB	**Vinh Tuy**	**1.27**	**133**	*e*Pg		**Pb**	**00 16 51.7**	**+0.5**
MLVB	**It Ong**	**1.62**	**175**	*e*Pg		**Pn**	**00 16 51.6**	**-4.1**
MLVB				IAML			00 17 14.7	
	comp=E,398nm,0.5s							
MLVB				IAML			00 17 14.7	
	comp=N,332nm,1.3s							
SLVN	**Son La**	**1.78**	**180**	*e*Pg		**Pg**	**00 17 01.6**	**+0.3**
BGV	**Bac-Giang**	**2.83**	**130**	*e*Pg		**Pg**	**00 17 20.7**	**-0.7**
PANO	**Nakornpanom**	**5.99**	**173**	P		**Pn**	**00 17 58.5**	**+2.7**
	comp=N,0.1nmcomp=N,0.1nmcomp=N,0.1nmcomp=N,11nm,0.9s							
LAMP	**Lampang**	**6.07**	**222**	P		**Pn**	**00 17 55.8**	**-1.2**
LOEI	**Loei**	**6.11**	**204**	P		**Pn**	**00 17 57.7**	**+0.2**
	comp=N,0.2nmcomp=N,477nmcomp=N,11μm,1.2s							
CHTO	**Chiang Mai**	**6.31**	**228**	P		**Pn**	**00 17 59.9**	**-0.4**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,0.2nmcomp=N,4.6nm,0.7s							
CM02	**Chiang Mai Arr**	**6.57**	**226**	P		**Pn**	**00 18 03.9**	**0.0**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,7.0nm,0.8s							
CM01	**Chiang Mai Arr**	**6.58**	**226**	P		**Pn**	**00 18 04.1**	**+0.2**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,6.9nm,0.8s							
CM04	**Chiang Mai Arr**	**6.58**	**225**	P		**Pn**	**00 18 03.7**	**-0.3**
	comp=N,0.0nmcomp=N,0.0nmcomp=N,7.4nm,0.7s							
CM05	**Chiang Mai Arr**	**6.60**	**225**	P		**Pn**	**00 18 04.5**	**+0.3**

IDC 03 00:19:58.7±2.2,6°.90N×125°.71E,h0km,mb3.7/5, mbtmp3.7/5,MS3.2/2,Error ellipse: s-maj=170.7km s-min=21.5km az=68.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**24.84**	**180**	P		P	00 25 23.7	+0.7
	1.7nm,0.5s,baz=6.3,slow=9.2,SNR=2.5 1.7nm,0.5s							
WRA	**Warramunga Arr**	**28.00**	**162**	P		P	00 25 50.8	-0.7
	0.8nm,0.8s,baz=340,slow=9.1,SNR=2.7 0.8nm,0.8s							
ASAR	**Alice Springs**	**31.42**	**165**	P		P	00 26 21.9	0.0
	0.6nm,0.9s,baz=339,slow=7.0,SNR=6.2 0.6nm,0.9s							
MKAR	**Makanchi Array**	**54.39**	**324**	P		P	00 29 27.3	-0.3
	0.6nm,0.7s,baz=120,slow=7.4,SNR=6.8							
MKAR				LR		LR	00 52 36.9	
	comp=Z,16nm,18.0s,baz=328,slow=36 0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**58.54**	**327**	P		P	00 29 57.1	+0.1
	0.7nm,0.9s,baz=120,slow=6.5,SNR=4.1 0.7nm,0.9s							
RAR	**Rarotonga**	**78.21**	**113**	LR		LR	01 05 04.5	
	comp=Z,15nm,18.3s,baz=253,slow=35							

*HEL **03** 00:23:45.1±0.1,67°.83N×20°.18E,h0km,ML1.9,Explosion*

UPP 03 00:23:45.4±0.1,67°.87N×20°.22E,h0km,ML2.3, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.10**	**27**	P		Pg	00 23 47.1	-0.1
	baz=232

0.2nm,0.4s
KURBB Kurchatov Arra 63.52 328 P P 00 35 45.5 -0.3
0.5nm,0.5s,baz=129,slow=5.9,SNR=4.1
0.5nm,0.5s
TIXI Tiksi 69.97 1 LR LR 01 08 22.4
comp=Z,8.1nm,20.2s,baz=22,slow=37

*IDC **03** 00:46:08.6±1.2,34˚.30N×25˚.60E, h0km, mb3.6/5, mbtmp3.5/11, ML3.3/6, MS3.4/2, Error ellipse: s-maj=22.0km s-min=11.1km az=40.0*
*AFAD **03** 00:46:12.1,34˚.54N×25˚.56E, h7km±3km, ML2.9*
*ISK **03** 00:46:12.1,34˚.36N×25˚.23E, h85km, ML3.3/20*
*THE **03** 00:46:13.7,34˚N±30˚×2˚5E±1˚8, h64km±23km, M3.1/6, MLh3.1/6*
*ATH **03** 00:46:13.3±0.9,34˚.32N×25˚.21E, h24km±8km, ML3.1/6, Manual Solution by I.Dede First location: 2019/11/03 00:47:28, This location: 2019/11/03 04:20:50 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 2 km*
*GII **03** 00:46:14.1±0.0,34˚.23N±0˚.02×25˚.756E±0˚.006, h20km, Mws3.6, confirmed*

ISC 03 00:46:10.0±1.6,**34˚29N**±0˚.05×**25˚54E**±0˚.03,**h13**km±10km, **n82**,σ2≧**85**/109,**mb3.5**/5,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.97**	**4**	P	**Pn**	**00 46 30.8**	**+1.5**
NPS				S	**Sn**	**00 46 44.2**	**+1.2**
NPS	**Neapolis**	**0.97**	**4**	P	**Pn**	**00 46 31.5**	**+2.1**
NPS				S	**Sn**	**00 46 46.0**	**+3.0**
ZKR	**Zakros**	**0.99**	**34**	Pn	**Pn**	**00 46 33.7**	**+4.1**
ZKR				Sn	**Sn**	**00 46 49.2**	**+5.7**
ZKR	**Zakros**	**0.99**	**34**	P	**Pn**	**00 46 33.5**	**+3.9**
ZKR				S	**Sn**	**00 46 49.0**	**+5.5**
STIA	**Sitia Lasithi**	**1.01**	**26**	P	**Pn**	**00 46 33.4**	**+3.5**
STIA				S	**Sn**	**00 46 49.5**	**+5.4**
SIT2	**Siteia**	**1.02**	**27**	P	**Pn**	**00 46 34.1**	**+4.0**
SIT2				S	**Sn**	**00 46 50.0**	**+5.7**
IDI	**Anoyia**	**1.13**	**332**	Pg	**Pb**	**00 46 31.1**	**-0.3**
	6.5nm,0.3s,baz=166,slow=15,SNR=58						
IDI				Lg	Lg	00 46 46.0	
	42nm,0.3s,baz=89,slow=24,SNR=15						
IDI	**Anoyia**	**1.13**	**332**	Pg	**Pb**	**00 46 31.1**	**-0.3**
IDI				Sg	**Sn**	**00 46 46.3**	**-0.7**
IDI	**Anoyia**	**1.13**	**332**	P	**Pb**	**00 46 30.6**	**-0.8**
IDI				S	**Sn**	**00 46 45.0**	**-2.0**
IDI	**Anoyia**	**1.13**	**332**	P	**Pb**	**00 46 31.2**	**-0.3**
IDI				S	**Sn**	**00 46 45.9**	**-1.1**
GVD	**Gavdhos**	**1.32**	**295**	Pg	**Pn**	**00 46 32.9**	**-1.2**
GVD				Sg	**Sb**	**00 46 48.4**	**-3.0**
GVD	**Gavdhos**	**1.32**	**295**	P	**Pn**	**00 46 31.8**	**-2.2**
GVD	**Gavdhos**	**1.32**	**295**	P	**Pn**	**00 46 32.3**	**-1.8**
GVD				S	**Sb**	**00 46 46.8**	**-4.6**
KARP	**Karpathos**	**1.83**	**46**	Pn	**Pg**	**00 46 45.2**	**+0.1**
KARP	**Karpathos**	**1.83**	**46**	P	**Pg**	**00 46 45.9**	**+0.8**
KARP	**Karpathos**	**1.83**	**46**	P	**Pg**	**00 46 45.8**	**+0.8**
KARP				S	**Sg**	**00 47 11.5**	**+2.7**
SNT5	**Nea Kammeni, S**	**2.11**	**357**	P	**Pb**	**00 46 45.6**	**-2.5**
ANKY	**Antikythira Is**	**2.42**	**311**	P	**Pn**	**00 46 48.3**	**-0.9**
ANKY				S	**Sn**	**00 47 17.2**	**-1.4**
APE	**Apeiranthos**	**2.77**	**360**	Pn	**Pn**	**00 46 55.6**	**+1.5**
APE	**Apeiranthos**	**2.77**	**360**	P	**Pn**	**00 46 54.7**	**+0.5**
APE	**Apeiranthos**	**2.77**	**360**	P	**Pb**	**00 46 56.0**	**-3.3**
APE	**Apeiranthos**	**2.77**	**360**	P	**Pb**	**00 46 55.8**	**-3.6**
APE				S	**Sn**	**00 47 26.7**	**-0.7**
KTHA	**Kythira Island**	**2.82**	**315**	Pn	**Pn**	**00 46 53.8**	**-1.0**
YAZI	**Mula-Dat§a-**	**2.85**	**33**	P	**Pb**	**00 46 57.8**	**-2.9**
YAZI				S	**Sb**	**00 47 31.5**	**-3.9**
ARG	**Arkhangelos**	**2.86**	**47**	Pn	**Pb**	**00 46 59.2**	**-1.6**
ARG	**Arkhangelos**	**2.86**	**47**	P	**Pb**	**00 46 59.4**	**-1.4**
DAT	**Datca**	**2.94**	**34**	Pn	**Pb**	**00 46 59.7**	**-2.7**
BODT	**Bodrum**	**3.12**	**27**	Pn	**Pb**	**00 47 01.8**	**-3.5**
TURN	**Turunc**	**3.32**	**41**	P	**Pn**	**00 47 04.7**	**+3.1**
TURN				S	**Sb**	**00 47 43.2**	**-5.8**
TURN				*i*	IAML	00 47 55.0	
	comp=E,17nm,0.6s						
TURN				*i*	IAML	00 47 58.0	
	comp=N,21nm,0.5s						
TURN	**Turunc**	**3.32**	**41**	Pn	**Pn**	**00 47 04.5**	**+2.9**
MLSB	**Milas**	**3.50**	**31**	Pn	**Pn**	**00 47 06.1**	**+1.9**
DALY	**Dalyan (Mula)**	**3.58**	**44**	Pn	**Pn**	**00 47 08.8**	**+3.7**
YER	**Yerkesik**	**3.61**	**37**	Pn	**Pn**	**00 47 08.9**	**+3.2**
IZZE	**Mula-Seydike**	**3.69**	**54**	P	**Pn**	**00 47 10.1**	**+3.3**
IZZE				S	**Sn**	**00 47 53.1**	**+2.9**
IZZE				*i*	IAML	00 47 56.0	
	comp=N,100nm,0.4s						
IZZE				*i*	IAML	00 47 57.0	
	comp=E,110nm,0.4s						
MULA	**Mugla, Merkez-**	**3.72**	**37**	P	**Pn**	**00 47 10.9**	**+3.6**
MULA				S	**Sb**	**00 47 54.9**	**-5.8**
MULA				*i*	IAML	00 47 58.0	
	comp=E,31nm,0.5s						
SABU	**Mula-Dalaman**	**3.77**	**47**	P	**Pn**	**00 47 11.3**	**+3.5**
SABU				S	**Sb**	**00 47 55.5**	**-6.4**
SABU				*i*	IAML	00 48 04.0	
	comp=E,18nm,0.5s						
SABU				*i*	IAML	00 49 14.0	
	comp=N,29nm,2.7s						
AKAS	**Kas**	**3.85**	**59**	P	**Pn**	**00 47 12.4**	**+3.3**
AKAS				S	**Sn**	**00 47 56.3**	**+2.1**
AKAS				*i*	IAML	00 48 07.0	
	comp=E,48nm,0.4s						
AKAS				*i*	IAML	00 48 08.0	
	comp=N,48nm,0.3s						
AKAS	**Kas**	**3.85**	**59**	Pn	**Pn**	**00 47 12.6**	**+3.6**
DION	**Dionisos Attik**	**3.99**	**341**	P	**Pn**	**00 47 10.3**	**-0.7**
CAME	**Cameli-Denizli**	**4.05**	**48**	Pn	**Pn**	**00 47 15.1**	**+3.3**
DNZT	**Denizli-Tavas-**	**4.11**	**43**	P	**Pn**	**00 47 16.1**	**+3.5**
DNZT				S	**Sn**	**00 48 04.3**	**+3.6**
DNZT				*i*	IAML	00 48 08.0	
	comp=N,15nm,0.6s						
DNZT				*i*	IAML	00 48 12.0	
	comp=E,16nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**4.11**	**27**	Pn	**Pn**	**00 47 14.9**	**+2.3**
KNIK	**Mula-Seydike**	**4.16**	**51**	P	**Pn**	**00 47 16.7**	**+3.4**
KNIK				S	**Sn**	**00 48 05.2**	**+3.3**
KNIK				*i*	IAML	00 48 07.0	
	comp=E,15nm,0.5s						
KNIK				*i*	IAML	00 48 08.0	
	comp=N,12nm,0.6s						
CAEL	**Denizli, Camel**	**4.18**	**46**	P	**Pn**	**00 47 16.9**	**+3.4**
CAEL				*i*	IAML	00 48 14.0	
	comp=E,57nm,0.7s						
CAEL				*i*	IAML	00 48 42.0	
	comp=N,42nm,1.3s						
TAVA	**DENIZLI_Tavas**	**4.19**	**40**	P	**Pn**	**00 47 17.1**	**+3.5**
TAVA				*i*	IAML	00 48 19.0	
	comp=N,12nm,0.6s						
TAVA				*i*	IAML	00 48 19.0	
	comp=E,9.4nm,1.0s						
ELL	**Elmali**	**4.32**	**54**	Pn	**Pn**	**00 47 19.6**	**+4.0**
GOLH	**Golhisar**	**4.39**	**47**	P	**Pn**	**00 47 20.2**	**+3.7**
GOLH				S	**Sn**	**00 48 11.1**	**+3.4**
GOLH				*i*	IAML	00 48 19.0	
	comp=E,19nm,0.5s						
GOLH				*i*	IAML	00 48 22.0	
	comp=N,22nm,0.4s						
APMY	**Acipayam-Deniz**	**4.40**	**43**	Pn	**Pn**	**00 47 19.9**	**+3.3**
AKUM	**Antalya-Kumluc**	**4.42**	**61**	P	**Pn**	**00 47 19.9**	**+3.2**
AKUM				S	**Sn**	**00 48 10.6**	**+2.5**
AKUM				*i*	IAML	00 48 13.0	
	comp=N,28nm,0.6s						
AKUM				*i*	IAML	00 48 13.0	
	comp=E,20nm,0.6s						
INCE	**Denizli-Bozkur**	**4.72**	**43**	P	**Pn**	**00 47 24.4**	**+3.3**
INCE				S	**Sn**	**00 48 16.0**	**+0.2**
INCE				*i*	IAML	00 48 18.0	
	comp=E,12nm,0.5s						
INCE				*i*	IAML	00 48 24.0	
	comp=N,9.9nm,0.6s						
KORT	**Korkueli**	**4.76**	**54**	P	**Pn**	**00 47 26.2**	**+4.7**
KORT				S	**Sn**	**00 48 21.3**	**+4.7**
KORT				*i*	IAML	00 48 25.0	
	comp=E,43nm,0.5s						
KORT				*i*	IAML	00 48 29.0	
	comp=N,24nm,0.5s						
KORT	**Korkueli**	**4.76**	**54**	Pn	**Pn**	**00 47 25.2**	**+3.7**
KULA	**Kula-Manisa**	**4.91**	**30**	Pn	**Pn**	**00 47 25.9**	**+2.4**
CSS	**Mathiatis**	**6.46**	**82**	P	**Pn**	**00 47 46.2**	**+1.4**
KZIT	**Kziot**	**8.20**	**112**	P	**Pn**	**00 48 10.9**	**+2.2**
KZIT	**Kziot**	**8.20**	**112**	S	**Sn**	**00 49 39.2**	**-2.0**
MMAI	**Mount Meron Ar**	**8.32**	**96**	Pn	**Pn**	**00 48 11.2**	**+0.8**
	0.9nm,0.3s,baz=286,slow=9.5,SNR=8.8						
MMAI				Sn	**Sn**	**00 49 43.3**	**-1.0**
	6.0nm,0.3s,baz=268,slow=25,SNR=16						
	0.8nm,0.6s						
AMAZ	**Amatzia**	**8.35**	**107**	P	**Pn**	**00 48 11.7**	**+1.0**
AMAZ	**Amatzia**	**8.35**	**107**	S	**Sn**	**00 49 43.7**	**-1.2**
BRTR	**Keskin Array B**	**8.45**	**48**	Pn	**Pn**	**00 48 13.8**	**+1.6**
	baz=221,slow=15,SNR=2.3						
	0.3nm,0.7s						
MMLI	**Mount Malkishu**	**8.47**	**100**	P	**Pn**	**00 48 14.0**	**+1.5**
MMLI	**Mount Malkishu**	**8.47**	**100**	S	**Sn**	**00 49 46.2**	**-1.7**
GEM	**Giv'at Ha'Em**	**8.50**	**94**	P	**Pn**	**00 48 14.4**	**+1.6**
GEM	**Giv'at Ha'Em**	**8.50**	**94**	S	**Sn**	**00 49 48.4**	**-0.1**
NATI	**Neve Ativ**	**8.55**	**94**	P	**Pn**	**00 48 15.6**	**+2.2**
NATI	**Neve Ativ**	**8.55**	**94**	S	**Sn**	**00 49 50.0**	**+0.1**
PRNI	**Paran**	**8.92**	**114**	P	**Pn**	**00 48 20.5**	**+1.9**
PRNI	**Paran**	**8.92**	**114**	S	**Sn**	**00 49 57.0**	**-2.0**
HRFI	**Mount Harif**	**9.10**	**115**	P	**Pn**	**00 48 23.1**	**+2.1**
HRFI	**Mount Harif**	**9.10**	**115**	S	**Sn**	**00 50 01.5**	**-1.9**
EIL	**Elat**	**9.22**	**117**	Pn	**Pn**	**00 48 24.0**	**+1.3**
EIL	0.8nm,0.3s,baz=306,slow=2.6,SNR=16						
				Sn	**Sn**	**00 50 05.2**	**-1.3**
	2.2nm,0.3s,baz=313,slow=20,SNR=8.3						
	2.6nm,0.4s						
ASF	**Jabal al Asfar**	**9.75**	**99**	Pn	**Pn**	**00 48 30.3**	**+0.3**
	0.4nm,0.3s,baz=247,slow=3.5,SNR=2.7						
ASF				Sn	**Sn**	**00 50 17.2**	**-2.1**
	0.6nm,0.3s,baz=288,slow=2.1,SNR=3.0						
	0.9nm,0.4s						
AKASG	**Malin Array Be**	**16.62**	**8**	Pn	**Pn**	**00 50 02.4**	**-0.1**
	0.8nm,0.3s,baz=202,slow=10,SNR=4.1						
	0.2nm,0.3s						
GERES	**GERESS Array B**	**16.99**	**332**	Pn	**P**	**00 50 08.8**	**-0.4**
	baz=144,slow=12,SNR=4.1						
	0.5nm,0.7s						
ESDC	**Sonseca Array**	**24.11**	**292**	P	**P**	**00 51 27.0**	**+1.5**
	0.8nm,1.0s,baz=104,slow=15,SNR=2.1						
	0.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**30.18**	**232**	P	**P**	**00 52 20.5**	**+0.4**
	3.7nm,0.5s,baz=37,slow=11,SNR=2.6						
KURBB	**Kurchatov Arra**	**41.43**	**50**	P	**P**	**00 53 56.0**	**0.0**
	0.5nm,0.6s,baz=278,slow=8.5,SNR=4.6						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**44.00**	**56**	P	**P**	**00 54 17.1**	**+0.1**
	0.5nm,0.6s,baz=270,slow=7.5,SNR=6.8						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**45.38**	**46**	P	**P**	**00 54 27.4**	**-0.5**
	0.8nm,0.5s,baz=271,slow=7.8,SNR=4.9						
	0.8nm,0.5s						
LBTB	**Lobatse**	**58.98**	**180**	LR	LR	01 24 52.5	
	comp=Z,27nm,18.7s,baz=328,slow=39						
SONM	**Songino Array**	**59.80**	**50**	P	**P**	**00 56 15.6**	**+0.7**
	0.4nm,0.5s,baz=283,slow=7.2,SNR=2.3						
	0.4nm,0.5s						
INK	**Inuvik**	**76.52**	**352**	LR	LR	01 34 12.7	
	comp=Z,24nm,18.0s,baz=350,slow=38						

*IDC **03** 00:53:53.6±0.9,22˚.16S×175˚.81W, h0km, mb3.9/6, mbtmp3.9/7, ML4.1/1, MS3.3/3, Error ellipse: s-maj=36.2km s-min=23.9km az=147.0*

ISC 03 00:54:06.6±0.9,**22˚6S**±0˚2×**175˚6W**±0˚2,**h100**km,**n18**, σ2≧**65**/9,**mb3.8**/6,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.60**	**269**	Pn	**Pn**	**00 57 55.8**	**+2.3**
	0.4nm,0.3s,baz=90,slow=13,SNR=5.1						
URZ	**Urewera**	**16.77**	**200**	P	**Pn**	**00 57 53.1**	**-2.2**
	0.7nm,0.3s,baz=350,slow=13,SNR=1.9						
	2.5nm,0.4s						
STKA	**Stephens Creek**	**38.92**	**247**	P	**P**	**01 01 21.5**	**-1.3**
	1.1nm,0.5s,baz=38,slow=12,SNR=3.2						
STKA				LR	LR	01 15 03.4	
	comp=Z,50nm,19.0s,baz=38,slow=33						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**46.22**	**258**	P	**P**	**01 02 19.9**	**-2.0**
	0.9nm,0.5s,baz=96,slow=6.6,SNR=12						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**46.52**	**264**	P	P	01 02 22.4	-2.0
	0.7nm,0.4s,baz=102,slow=8.5,SNR=8.7						
	0.7nm,0.4s						
GUMO	**Guam**	**52.86**	**309**	LR	LR	01 23 36.3	
	comp=Z,8.7nm,18.9s,baz=58,slow=34						
QSPA	**South Pole Qui**	**67.44**	**180**	P	**P**	**01 04 54.5**	**+3.1**
	1.2nm,0.7s,baz=334,slow=0.8,SNR=11						
	1.2nm,0.7s						
NVAR	**Mina Array Bea**	**81.09**	**42**	P	**P**	**01 06 10.0**	**-1.1**
	0.4nm,0.7s,baz=226,slow=9.0,SNR=6.3						
	0.4nm,0.7s						
H03S2	**Juan Fernandez**	**82.97**	**124**	T	T	02 37 56.5	
	baz=246,slow=74,SNR=326						
H03S1	**Juan Fernandez**	**82.98**	**124**	T	T	02 37 57.1	
	baz=246,slow=74,SNR=308						
H03S3	**Juan Fernandez**	**82.99**	**124**	T	T	02 37 51.7	
	baz=246,slow=74,SNR=336						
H03N2	**Juan Fernandez**	**83.12**	**123**	T	T	02 38 00.1	
	baz=255,slow=78,SNR=145						
H03N3	**Juan Fernandez**	**83.12**	**123**	T	T	02 38 02.1	
	baz=255,slow=78,SNR=82						
H03N1	**Juan Fernandez**	**83.13**	**123**	T	T	02 38 01.3	
	baz=255,slow=78,SNR=112						
ELK	**Elko**	**84.37**	**42**	LR	LR	01 40 40.0	
	comp=Z,27nm,18.3s,baz=328,slow=33						
TXAR	**Lajitas Array**	**86.37**	**56**	P	**P**	**01 06 36.8**	**-1.3**
	0.6nm,1.0s,baz=180,slow=3.3,SNR=3.4						
	0.6nm,1.0s						
BRTR	**Keskin Array B**	**149.90**	**311**	PKPbc	**PKPdf**	**01 13 44.3**	**+3.7**
	0.5nm,0.8s,baz=134,slow=11,SNR=4.3						
MMAI	**Mount Meron Ar**	**150.77**	**298**	PKPbc	**PKPbc**	**01 13 47.9**	**+0.2**
	0.8nm,0.5s,baz=74,slow=6.2,SNR=5.3						

*IDC **03** 01:08:51.5±2.4,3˚.18S×101˚.25E, h0km, mb3.8/7, mbtmp3.8/7, MS2.8/1, Error ellipse: s-maj=118.4km s-min=19.9km az=55.0*
*DJA **03** 01:09:08.7±0.3,3˚S±5˚×10˚2E±˚, h139km±4km, M4.2/16, mB4.5/1, mb4.3/6, MLv4.1/16, Mw(mB)3.7/1*
*NEIC **03** 01:09:11.7±1.8,2˚.6S±0˚.2×102˚.0E±0˚.1, h154km±5km, mb4.3/9, Error ellipse: s-maj=24.7km s-min=15.0km az=212.0*

ISC 03 01:09:09.6±0.7,**2˚82S**±0˚09×**102˚05E**±0˚08,**h150**km,**n51**, σ1≧**60**/43,**mb4.0**/12,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASI	**Maura Aman, Be**	**0.37**	**149**	P	**Pn**	**01 09 28.7**	**-1.7**
MASI				S	**Sn**	**01 09 43.6**	**-2.7**
KRJI	**Kerinci**	**0.93**	**321**	S	**Sn**	**01 09 50.3**	**-2.2**
KSI	**Kapahiang**	**0.99**	**146**	S	**Sn**	**01 09 51.4**	**-1.9**
LHSI	**Lahat**	**1.78**	**124**	P	**Pn**	**01 09 41.7**	**-0.5**
PPSI	**Pulau Pagai**	**2.03**	**272**	P	**Pn**	**01 09 44.9**	**-0.2**
PDSI	**Padang**	**2.47**	**320**	P	**Pn**	**01 09 49.5**	**-0.9**
MDSI	**Maura Dua**	**2.70**	**128**	P	**Pn**	**01 09 52.9**	**-0.2**
PPI	**Padang Panjang**	**2.87**	**325**	P	**Pn**	**01 09 54.7**	**-0.6**
LWLI	**Liwa**	**2.97**	**137**	P	**Pn**	**01 09 56.4**	**-0.2**
BKNI	**Bangkinang**	**3.28**	**342**	Pn	**Pn**	**01 10 00.2**	**-0.4**
BKNI	**Bangkinang**	**3.28**	**342**	P	**Pn**	**01 10 00.0**	**-0.6**
SISI	**Saibi**	**3.31**	**297**	P	**Pn**	**01 10 00.6**	**-0.2**
KASI	**Kota Agung**	**3.63**	**138**	P	**Pn**	**01 10 05.0**	**0.0**
PBSI	**Pulau Batu**	**4.66**	**306**	P	**Pn**	**01 10 17.0**	**-1.5**
GSI	**Gunungsitoli**	**6.06**	**312**		**Pn**	**01 10 35.7**	**-1.4**
GSI	**Gunungsitoli**	**6.06**	**312**	P	**Pn**	**01 10 36.0**	**-1.2**
	0.4nm80nm,0.9s						
CNJI	**Cibinong**	**6.75**	**132**	P	**Pn**	**01 10 44.0**	**-2.3**
	0.1nm26nm,1.3s						
KCSI	**Kotacane, Aceh**	**7.61**	**326**	P	**Pn**	**01 10 55.9**	**-2.0**
SNSI	**Sinabang, Aceh**	**7.72**	**312**	P	**Pn**	**01 10 58.1**	**-1.3**
	134nm,1.0s						
KSM	**Kuching**	**9.30**	**63**	Pn	**Pn**	**01 11 22.8**	**+2.4**
PCJI	**Pacitan**	**10.54**	**121**	P	**Pn**	**01 11 34.4**	**-2.4**
DAV	**Davao City (W)**	**25.46**	**67**	P	**P**	**01 14 21.8**	**-2.1**
FITZ	**Fitzroy Crossi**	**27.66**	**125**	LR	LR	01 27 35.5	
	comp=Z,21nm,20.3s,baz=158,slow=40						
H08S2	**Diego Garcia H**	**29.81**	**260**	T	T	01 44 56.2	
	baz=83						
H08S3	**Diego Garcia H**	**29.81**	**260**	T	T	01 44 54.5	
	baz=83						
H08S1	**Diego Garcia H**	**29.82**	**260**	T	T	01 44 54.7	
	baz=83						
WB0	**Warramunga Arr**	**35.79**	**121**	P	**P**	**01 15 56.4**	**+1.6**
WB0					IAmb	IAmb	01 16 30.6
	comp=Z,4.5nm,1.1s						
WRA	**Warramunga Arr**	**35.82**	**121**	P	**P**	**01 15 56.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=278,slow=7.9,SNR=2.0						
	comp=Z,0.2nm,0.3s						
WR8	**Warramunga Arr**	**35.96**	**121**	P	**P**	**01 15 58.4**	**+2.3**
WR8					IAmb	IAmb	01 16 16.1
	comp=Z,10nm,1.5s						
ASAR	**Alice Springs**	**37.12**	**127**	P	**P**	**01 16 09.1**	**+3.1**
ASAR	**Alice Springs**	**37.12**	**127**	P	**P**	**01 16 08.6**	**+2.6**
	comp=Z,0.5nm,0.4s,baz=301,slow=8.4,SNR=18						
ASAR				PcP	**PcP**	**01 18 25.2**	**+1.9**
	comp=Z,0.5nm,1.0s,baz=296,slow=3.0,SNR=2.5						
	comp=Z,0.5nm,0.4s						
SONM	**Songino Array**	**50.59**	**4**	P	**P**	**01 17 54.7**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=188,slow=7.6,SNR=5.8						
	comp=Z,0.6nm,0.4s						
MAJO	**Matsushiro**	**51.65**	**37**	P	**P**	**01 17 59.8**	**-1.3**
MAJO					IAmb	IAmb	01 18 30.7
	comp=Z,12nm,1.5s						
MJB9	**Matsu-Tunnel**	**51.65**	**37**	P	**P**	**01 18 00.8**	**-0.4**
MJB9					IAmb	IAmb	01 18 20.4
	comp=Z,4.2nm,1.0s						
MKAR	**Makanchi Array**	**52.39**	**343**	P	**P**	**01 18 07.0**	**+0.6**
MKAR	**Makanchi Array**	**52.39**	**343**	P	**P**	**01 18 07.2**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=155,slow=8.9,SNR=5.6						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**56.93**	**342**	P	**P**	**01 18 39.8**	**+0.8**
	comp=Z,0.6nm,0.2s,baz=160,slow=6.8,SNR=1.7						
	comp=Z,0.6nm,0.2s						
KURK	**Kurchatov**	**56.98**	**342**	P	**P**	**01 18 40.5**	**+1.2**
ZALV	**Zalesovo Beam**	**58.37**	**348**	P	**P**	**01 18 49.6**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=166,slow=5.4,SNR=3.7						
	comp=Z,0.6nm,0.4s						
H04N2	**CROZET ISLANDS**	**61.37**	**217**	T	T	02 24 37.7	
	baz=61						
H04N1	**CROZET ISLANDS**	**61.38**	**218**	T	T	02 24 37.7	
	baz=61,SNR=2.9						
H04N3	**CROZET ISLANDS**	**61.39**	**217**	T	T	02 24 27.6	
	baz=61						
H04S1	**CROZET ISLANDS**	**61.64**	**217**	T	T	02 24 56.2	
	baz=61						
H04S3	**CROZET ISLANDS**	**61.65**	**217**	T	T	02 24 55.2	
	baz=61						
H04S2	**CROZET ISLANDS**	**61.65**	**217**	T	T	02 24 57.5	
	baz=61						
BVAR	**Borovoye Array**	**61.67**	**339**	P	**P**	**01 19 11.0**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=131,slow=7.9,SNR=2.0						
	comp=Z,0.2nm,0.4s						
AB31	**Akbulak array**	**63.35**	**331**	P	**P**	**01 19 22.7**	**+0.1**
ABKAR	**Akbulak array**	**63.35**	**331**	P	**P**	**01 19 23.3**	**+0.6**
BKZ	**Black Stump Fm**	**76.18**	**130**	P	**P**	**01 20 42.8**	**+1.3**
BKZ					IAmb	IAmb	01 20 47.4
	comp=Z,12nm,1.3s						
KARP	**Karpathos**	**79.39**	**307**	P	**P**	**01 20 59.7**	**+0.4**
TXAR	**Lajitas Array**	**144.06**	**40**	PKP	**PKiKP**	**01 28 29.2**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=319,slow=3.3,SNR=2.9						

*IDC **03** 01:37:53.9±0.6,36˚.41N×142˚.50E, h0km, mb4.2/21, mbtmp4.2/28, ML3.7/6, MS3.5/3, Error ellipse: s-maj=15.3km s-min=13.5km az=160.0*
*MOS **03** 01:37:54.2±1.4,36˚.57N×142˚.55E, h10km, mb4.8/27, Error ellipse: s-maj=8.6km s-min=5.4km az=104.4*
*BJI **03** 01:37:55.7,36˚.35N×142˚.25E, h10km, mB5.0/19, mb4.6/45, Ms4.7/36, Ms7 4.5/38*
*NEIC **03** 01:37:56.5±2.3,36˚.51N±0˚.05×142˚.51E±0˚.08, h10km±1km, mb4.6/103, Error ellipse: s-maj=10.8km s-min=8.9km az=92.0*
*JMA **03** 01:37:57.4±0.3,36˚.5N±0˚.6×14˚3E±˚, h59km, MD4.5/36, MV3.9/36, FAR E OFF KANTO*
*NIED **03** 01:37:57.4,36˚.47N×142˚.51E, h59km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}7.29; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-6.56; $M_{r\theta}$0.88; $M_{\theta\phi}$-2.89; $M_{\phi r}$-0.45; Fault plane solution: $M_0$7.59000×10¹⁵ NP1:φs30.00000°, δ45.00000°, λ101.00000°. NP2:φs194.00000°, δ46.00000°, λ79.00000°.*

ISC 03 01:37:55.9±0.7,**36˚47N**±0˚05×**142˚67E**±0˚05,**h14**km±3km, **h15**km:**pP-P**,**n230**,σ2≧**01**/184,**mb4.6**/106,**MS4.4**/17, **9C-19D**,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.63**	**293**	P	**Pn**	**01 38 22.6**	**-1.6**
JHYU	**Hitachinakayam**	**1.69**	**266**	*eP*	**Pn**	**01 38 23.5**	**-1.5**
JHYU				*eS*	**Sn**	**01 38 42.4**	**-4.0**
JHYU	**Hitachinakayam**	**1.69**	**266**	A	A	01 38 23.5	
	comp=N,13nm,9.1s,comp=E,10.0nm,3.5s						
JFK	**Kawauchi**	**1.70**	**302**	*eP*	**Pn**	**01 38 23.5**	**-1.7**
JHO	**Hitachi**	**1.70**	**275**	P	**Pn**	**01 38 23.4**	**-1.7**
JHO	**Hitachi**	**1.70**	**275**	A	A	01 38 23.4	

comp=E,4.6nm,0.3s,baz=15,slow=20,SNR=1.4
JCJ LR LR 01 46 44.7
comp=E,90nm,19.3s,baz=54,slow=57
JNU Nakatsue 10.26 254 Pn **Pn 01 40 21.7 -0.9**
comp=E,0.2nm,0.3s,baz=66,slow=8.4,SNR=4.4
JNU LR LR 01 44 21.3
comp=E,501nm,19.7s,baz=74,slow=38
comp=E,13nm,1.0s
YSS Yuzhno-Sakhali 10.48 0 *e*P **Pn 01 40 25.3 -0.3**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,1μm,14.0s
USRK Ussuriysk Ar. 11.22 317 Pn **Pn 01 40 36.2 +0.3**
comp=Z,0.2nm,0.3s,baz=125,slow=14,SNR=1.7
comp=Z,1.9nm,0.6s
KSRS Korea Array 11.84 279 Pn **Pn 01 40 43.4 -0.9**
comp=Z,0.1nm,0.3s,baz=90,slow=14,SNR=11
comp=Z,6.1nm,1.0s
KSAR Wonju Array Be 11.87 279 **Pn 01 40 43.3 -1.5**
KSAR Wonju Array Be 11.87 279 P **Pn 01 40 43.3 -1.5**
OKH Okha 17.09 1*de*P **Pn 01 41 52.4 -1.7**
OKH *e*S **Sn 01 44 56.7 -7.0**
OKH pmax pmax
comp=Z,100nm,13.2s
OKH MLR MLR
comp=Z,300nm,15.0s
HEH HeiHe 17.64 326 *e*P **P 01 42 05.5 +3.5**
PETK Petropavlovsk- 19.70 28 P **Pn 01 42 27.3 +1.2**
comp=Z,4.5nm,0.9s,baz=234,slow=12,SNR=1.7
NJ2 Nanjing 20.16 264 *e*P **P 01 42 29.7 -0.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 pmax pmax
comp=Z,130nm,4.0s
NJ2 LR LR
comp=Z,830nm,12.8s
NJ2 LR LR
comp=Z,1μm,11.8s
NJ2 LR LR
comp=Z,940nm,16.1s
ZEA Zeya 20.34 333 *e*P **P 01 42 32.0 +0.4**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=N,400nm,15.0s
ZEA MLR MLR
comp=Z,700nm,12.0s
TIA Tai'an 20.57 277 P Pn 01 42 38.1 +1.6
TIA pmax pmax
comp=Z,6.0nm,0.7s
TIA LR LR
comp=Z,820nm,13.7s
TIA LR LR
comp=Z,180nm,12.7s
TIA LR LR
comp=Z,910nm,13.4s
HILR Hailar Array B 21.16 315 P **P 01 42 37.4 -3.2**
comp=Z,4.7nm,0.6s,baz=116,slow=13,SNR=6.4
XLT XiLinHaoTe 21.57 298 *e*P **P 01 42 43.0 -2.1**
XLT pP pwP 01 42 52.1 -1.5
XLT sP sP 01 42 54.0 +5.5
XLT PP **PnPn 01 43 05.3 -0.2**
XLT pmax pmax
comp=Z,25nm,1.3s
XLT LR LR
comp=Z,1μm,14.0s
XLT LR LR
comp=Z,1μm,14.9s
HNS HongShan 22.34 281 ⇑P **P 01 42 51.1 -2.2**
HNS S **S 01 46 58.0 -0.5**
HNS pmax pmax
comp=Z,17nm,1.0s
HNS LR LR
comp=Z,870nm,15.4s
HNS LR LR
comp=Z,470nm,11.3s
HNS LR LR
comp=Z,1μm,15.5s
WHN Wuhan 24.30 264 P **P 01 43 12.5 -0.4**
WHN sP **pwP 01 43 23.1 0.0**
WHN LR LR
comp=Z,3μm,15.0s
HHC Hu-ho-hao-te 24.61 290⇓*i*P **P 01 43 16.9 +1.0**
HHC sP pwP 01 43 24.1 -2.0
HHC pmax pmax
comp=Z,15nm,1.2s
HHC pmax pmax
comp=Z,190nm,6.7s
HHC LR LR
comp=Z,470nm,14.5s
HHC LR LR
comp=Z,340nm,13.5s
HHC LR LR
comp=Z,390nm,16.0s
LYN LuoYang 24.62 275 P **P 01 43 15.7 -0.1**
LYN sP pwP 01 43 26.4 +0.3
LYN S **S 01 47 36.7 +0.1**
LYN pmax pmax
comp=Z,330nm,5.4s
LYN LR LR
comp=Z,940nm,15.1s
LYN LR LR
comp=Z,500nm,11.7s
LYN LR LR
comp=Z,980nm,16.5s
BTO Baotou 25.79 289 *e*P **P 01 43 25.9 -0.6**
BTO pP **sP 01 43 30.1 0.0**
BTO sP **pwP 01 43 33.1 -3.7**
BTO PP **PnPn 01 44 05.5 +2.3**
BTO S **S 01 47 54.2 -1.2**
BTO sS **pS 01 47 57.8 -0.8**
BTO SS **SnSn 01 48 56.7 +6.0**
BTO pmax pmax
comp=Z,10.0nm,0.7s
BTO pmax pmax
comp=Z,500nm,6.3s
BTO LR LR
comp=Z,3μm,14.8s
BTO LR LR
comp=Z,2μm,15.0s
BTO LR LR
comp=Z,2μm,14.0s
CNSH ChangSha 26.38 260 P **P 01 43 31.5 -0.3**
CNSH S **S 01 48 03.9 -0.7**
CNSH pmax pmax
comp=Z,24nm,1.3s
CNSH LR LR
comp=Z,790nm,16.9s
CNSH LR LR
comp=Z,350nm,10.0s
CNSH LR LR
comp=Z,1μm,12.9s
YAK Yakutsk 26.85 346 *e*P **P 01 43 35.9 +0.2**
YAK *e**PP **sP 01 43 39.6 +0.1**
YAK *e* 01 44 16.9
YAK *e*PPP PPP 01 44 25.5
YAK *e* 01 46 52.9
YAK *e*S **S 01 48 13.1 +1.7**
YAK *e**SS **sS 01 48 19.4 +3.6**
YAK *e*SS 01 49 20.4
YAK *e*SSS SSS 01 49 35.9
YAK pmax pmax
comp=Z,29nm,1.4s
YAK pmax pmax
comp=E,9.0nm,1.5s
YAK pmax pmax
comp=N,20nm,1.1s
YAK pmax pmax
comp=Z,713nm,4.8s
YAK pmax pmax
comp=E,710nm,4.7s
YAK pmax pmax
comp=N,371nm,3.8s
YAK smax smax
comp=E,497nm,4.8s
YAK smax smax
comp=N,429nm,4.3s
YAK MLR MLR
comp=E,425nm,19.0s
YAK MLR MLR
comp=Z,1μm,20.0s
YAK MLR MLR
comp=N,521nm,17.0s
H11N2 WAKE ISLAND Hy 26.99 122 T T 02 11 44.8
baz=313,slow=75,SNR=18
H11N1 WAKE ISLAND Hy 27.00 122 T T 02 11 46.4
baz=313,slow=75,SNR=15
H11N3 WAKE ISLAND Hy 27.01 122 T T 02 11 46.1
baz=313,slow=75,SNR=15
SEY Seymchan 27.16 10 *e*P **P 01 43 39.4 +0.9**
SEY pmax pmax
comp=Z,14nm,1.3s
XAN Xi'an 27.59 275 P **P 01 43 42.6 -0.1**
XAN S **S 01 48 25.9 +2.1**
XAN pmax pmax
comp=Z,39nm,1.4s
XAN LR LR
comp=Z,670nm,17.2s
XAN LR LR
comp=Z,340nm,16.5s
XAN LR LR
comp=Z,690nm,13.1s
H11S1 WAKE ISLAND Hy 27.70 124 T T 02 12 49.0
baz=315,slow=75,SNR=15
H11S3 WAKE ISLAND Hy 27.70 124 T T 02 12 44.9
baz=315,slow=75,SNR=13
H11S2 WAKE ISLAND Hy 27.72 124 T T 02 12 46.6
baz=315,slow=75,SNR=10
ULN Ulaanbaatar 28.51 305 P **P 01 43 51.8 +0.9**
ULN Ulaanbaatar 28.51 305⇓*i*P **P 01 43 52.1 +1.2**
ULN pmax pmax
comp=Z,30nm,1.3s
SONM Songino Array 28.94 305 P **P 01 43 54.7 0.0**
comp=Z,3.9nm,0.8s,baz=97,slow=7.1,SNR=26
comp=Z,3.9nm,0.8s
LZH Lanzhou 31.16 281 *e*P **P 01 44 15.7 +1.1**
LZH pP pwP 01 44 25.0 +0.1
LZH S **S 01 49 24.7 +4.5**
LZH pmax pmax
comp=Z,21nm,1.2s
LZH LR LR
comp=Z,490nm,18.2s
LZH LR LR
comp=Z,580nm,19.4s
LZH LR LR
comp=Z,1μm,17.8s
LZDM Lanzhou Array 31.31 281 P **P 01 44 15.8 -0.3**
comp=Z,1.3nm,0.3s,baz=81,slow=9.5,SNR=4.2
comp=Z,1.3nm,0.3s
ZAK Zakamensk 31.41 309 *e*P **P 01 44 16.7 +0.2**
ZAK pmax pmax
comp=Z,23nm,1.7s
CD2 Chengdu 32.69 272 P **P 01 44 26.9 -1.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
MOY Mondy 33.08 311 *e*P **P 01 44 33.9 +2.8**
QIZ Qiongzhong 33.63 248 P **P 01 44 35.6 -0.6**
QIZ S **S 01 49 59.7 +1.2**
QIZ LR LR
comp=Z,340nm,12.9s
QIZ LR LR
comp=Z,390nm,14.8s
QIZ LR LR
comp=Z,370nm,12.4s
GTA Gaotai 33.70 288 *e*P **P 01 44 37.7 +1.0**
GTA sP pwP 01 44 47.7 +0.7
GTA S **S 01 50 04.2 +4.7**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA LR LR
comp=Z,330nm,16.7s
GTA LR LR
comp=Z,490nm,15.6s
GTA LR LR
comp=Z,390nm,14.5s
BILL Bilibino 34.29 16⇓*e*P **P 01 44 41.8 +0.4**
BILL pmax pmax
comp=Z,12nm,1.6s
KNGR Kungurtug, Tuv 35.09 308⇑*e*P **P 01 44 50.2 +1.6**
TIXI Tiksi 35.98 353⇓*e*P **P 01 44 57.6 +1.8**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
GOMU GeErMu 38.24 284 P **P 01 45 14.8 -1.1**
GOMU S **S 01 51 08.1 -1.5**
GOMU pmax pmax
comp=Z,26nm,1.3s
GOMU pmax pmax
comp=Z,190nm,3.8s
DGZ Jazzator, Alta 41.54 306⇑*e*P **P 01 45 44.0 +1.0**
DGZ pmax pmax
comp=Z,17nm,1.4s
WMQ Urumqi 42.00 298 *e*P **P 01 45 49.0 +2.3**
WMQ LR LR
comp=Z,180nm,15.9s
CMAR Chiang Mai Arr 42.34 257 P **P 01 45 47.5 -2.2**
comp=Z,1.3nm,0.3s,baz=55,slow=9.1,SNR=1.2
comp=Z,1.3nm,0.3s
ZALV Zalesovo Beam 43.04 313 P **P 01 45 54.7 -0.2**
comp=Z,1.5nm,0.5s,baz=91,slow=7.2,SNR=8.5
ZALV PcP **PcP 01 47 45.1 +0.3**
comp=Z,2.1nm,0.6s,baz=85,slow=2.8,SNR=3.6
comp=Z,1.5nm,0.5s
ZALV Zalesovo Beam 43.04 313 *i*P **P 01 45 55.4 +0.5**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
F17K Baldwin Pennin 43.72 29 **P 01 46 02.7 +2.5**
F17K IAmb IAmb 01 46 20.1
comp=Z,20nm,1.2s
G18K Tagagawik 44.63 30 P **P 01 46 09.2 +1.7**
G18K IAmb IAmb 01 46 11.2
comp=Z,8.6nm,0.8s
MK31 Makanchi Array 45.27 303*d*i*P* **P 01 46 12.9 -0.1**
MKAR Makanchi Array 45.27 303 **P 01 46 12.4 -0.6**
MKAR Makanchi Array 45.27 303 P **P 01 46 12.8 -0.2**
comp=Z,4.7nm,0.9s,baz=81,slow=9.1,SNR=18
comp=Z,4.7nm,0.9s
MAKZ Makanchi 45.48 303 **P 01 46 14.3 -0.3**
MAKZ Makanchi 45.48 303 P **P 01 46 14.3 -0.3**
MAKZ pmax pmax
comp=Z,27nm,1.3s
E19K Redstone River 45.50 28 **P 01 46 16.6 +2.2**
J19K Poorman 45.60 33 IAmb IAmb 01 46 18.5
comp=Z,7.0nm,1.0s
K20K Telida 46.23 34 IAmb IAmb 01 46 24.0
comp=Z,5.6nm,1.0s
J20K Nowinta River 46.27 33 P **P 01 46 22.9 +2.4**
J20K IAmb IAmb 01 46 24.1
comp=Z,6.8nm,1.0s
G21K Allakaket 46.79 30 IAmb IAmb 01 46 28.0
comp=Z,6.6nm,0.9s
H21K Melozitna Rive 46.98 31 P **P 01 46 28.7 +2.6**
H21K IAmb IAmb 01 46 30.0
comp=Z,4.9nm,0.8s
KURK Kurchatov 47.08 309 **P 01 46 26.0 -1.0**
KURK Kurchatov 47.08 309*c*i*P* **P 01 46 26.7 -0.3**
KURK pmax pmax
comp=Z,11nm,0.9s
KURBB Kurchatov Arra 47.15 309 P **P 01 46 27.6 0.0**
comp=Z,2.0nm,0.4s,baz=84,slow=7.8,SNR=20
comp=Z,2.0nm,0.4s
E22K Anaktuvuk Pass 47.64 27 **P 01 46 33.0 +1.7**
E22K IAmb IAmb 01 46 35.0
comp=Z,6.6nm,0.7s
MLY Manley 47.80 32 IAmb IAmb 01 46 36.5
comp=Z,5.8nm,0.8s
NEA2 Nenana 48.49 32 IAmb IAmb 01 46 41.2
comp=Z,5.6nm,0.9s
TOLK Toolik Lake Re 48.52 27 IAmb IAmb 01 46 41.9
comp=Z,9.4nm,0.9s
E24K Your Creek 48.87 28 IAmb IAmb 01 46 45.1
comp=Z,5.6nm,0.9s
COLA College 49.02 32⇑*e*P **P 01 46 44.2 +2.4**
COLA pmax pmax
comp=Z,5.0nm,0.9s
H24K Noodor Dome 49.02 31 IAmb IAmb 01 46 46.1
comp=Z,3.5nm,0.8s
G24K Hadweenzic Riv 49.20 30 IAmb IAmb 01 47 04.1
comp=Z,9.3nm,1.1s
HDA Harding Lake 49.41 33 IAmb IAmb 01 46 47.1
comp=Z,4.7nm,0.9s
IL31 49.43 32 IAmb IAmb 01 46 48.5
comp=Z,7.4nm,1.0s
ILAR Eielson Array 49.43 32 P **P 01 46 46.2 +1.1**
comp=Z,4.1nm,0.8s,baz=272,slow=7.7,SNR=46
comp=Z,4.1nm,0.8s
D25K Kavik River 49.71 26 IAmb IAmb 01 46 50.8
comp=Z,7.6nm,0.8s
F26K Sheenjek River 50.51 28 IAmb IAmb 01 46 57.5
comp=Z,7.4nm,0.9s
G26K Porcupine Rive 50.66 29 IAmb IAmb 01 47 14.6
comp=Z,10nm,1.3s
L26K Log Cabin Wild 51.09 34 IAmb IAmb 01 47 00.8
comp=Z,6.9nm,1.1s
KSH Kashi 51.56 295 P P 01 47 06.5 +4.9
KSH pmax pmax
comp=Z,6.0nm,1.1s
H27K Steamboat Moun 51.60 30 IAmb IAmb 01 47 08.0
comp=Z,7.3nm,1.4s
AAK Ala-Archa 51.65 299⇓*e*P **P 01 47 02.2 -0.1**
AAK pmax pmax
comp=Z,6.0nm,1.1s
BVAR Borovoye Array 51.70 313 P **P 01 47 00.8 -1.6**
comp=Z,0.6nm,0.6s,baz=83,slow=8.4,SNR=3.2
comp=Z,0.6nm,0.6s
BORK Borovoye 51.74 313⇑*e*P **P 01 47 02.5 -0.1**
BORK pmax pmax
comp=Z,14nm,2.3s
L27K Beaver Creek, 51.77 34 IAmb IAmb 01 47 05.9
comp=Z,7.1nm,1.3s
BCAR Beaver Creek A 51.79 34 P **P 01 47 04.9 +2.0**
I28M Miner Creek 52.33 31 IAmb IAmb 01 47 11.4
comp=Z,4.6nm,0.8s
E29M Blow River 52.81 27 IAmb IAmb 01 47 16.1
comp=Z,9.2nm,1.0s
G29M Pine Creek 52.93 29 IAmb IAmb 01 47 15.4
comp=Z,12nm,0.9s
L29M L29M 53.44 34 IAmb IAmb 01 47 19.3
comp=Z,4.4nm,0.8s
K29M Barlow Dome 53.58 33 IAmb IAmb 01 47 20.0
comp=Z,5.2nm,1.1s
G30M tAoh Zraii Nji 53.62 29 IAmb IAmb 01 47 22.3
comp=Z,10nm,1.1s
I30M Mount Dempster 53.84 31 IAmb IAmb 01 47 22.1
comp=Z,6.1nm,0.8s
HYT Haines Junctio 54.15 37 IAmb IAmb 01 47 26.6
comp=Z,9.2nm,1.1s
KKAR Karatay Array 54.28 301 P **P 01 47 21.4 -0.2**
KKAR Karatay Array 54.28 301 P **P 01 47 21.4 -0.2**
H31M Peel River 54.57 30 IAmb IAmb 01 47 26.8
comp=Z,9.3nm,0.9s
SVE Sverdlovsk 56.24 319 *e*P **P 01 47 36.5 +1.1**
SVE pmax pmax
comp=Z,15nm,1.4s
P33M Teslin, Yukon 56.55 37 IAmb IAmb 01 48 17.1
comp=Z,9.0nm,1.3s
WRAB Tennant Creek 56.64 189⇓*i*P **P 01 47 39.3 +0.7**
WRAB pmax pmax
comp=Z,15nm,1.0s
WRA Warramunga Arr 56.65 189 P **P 01 47 38.4 -0.3**
WRA Warramunga Arr 56.65 189 P **P 01 47 37.5 -1.2**
comp=Z,3.6nm,0.9s,baz=7.9,slow=7.1,SNR=14
comp=Z,3.6nm,0.9s
WRA Warramunga Arr 56.65 189 *i*P **P 01 47 38.4 -0.3**
WRA pmax pmax
comp=Z,4.0nm,0.9s
SIMJ Simiganj 56.93 296 P **P 01 47 40.7 -0.1**
ARTI Arti 57.56 319 P **P 01 47 43.5 -1.3**
ARTI Arti 57.56 319*c*i*P* **P 01 47 44.5 -0.3**
ARTI S **S 01 55 43.5 +1.6**
ARTI pmax pmax
comp=Z,14nm,1.0s
AB31 Akbulak array 59.08 311 IAmb IAmb 01 47 56.5
comp=Z,5.6nm,1.0s
ABKAR Akbulak array 59.08 311 P **P 01 47 55.1 -0.3**
ASAR Alice Springs 60.38 189 P **P 01 48 04.3 -0.4**
comp=Z,1.7nm,0.9s,baz=12,slow=6.2,SNR=12
comp=Z,1.7nm,0.9s
KIRV Kirov 61.31 323⇑*e*P **P 01 48 11.1 +0.5**
YKA Yellowknife Ar 63.79 30 P **P 01 48 28.0 +0.9**
comp=Z,1.9nm,0.7s,baz=300,slow=7.7,SNR=3.1
comp=Z,1.9nm,0.7s
YKA Yellowknife Ar 63.79 30 P **P 01 48 28.0 +0.9**
KLMR Klimovskoe 64.77 328 *e*P **P 01 48 32.8 -0.8**
KLMR *e* 01 50 54.7
KLMR pmax pmax
comp=Z,16nm,1.4s
MOS Moscow 68.30 324 *e*P P 01 49 02.3 +6.1
MOS *e* 01 57 55.1
OBN Obninsk 69.15 324*de*P **P 01 49 02.4 +0.9**
OBN *e* 01 51 32.7
OBN *e*S S 01 58 25.8 +19
OBN pmax pmax
comp=Z,26nm,1.5s
OBN MLR MLR
comp=Z,142nm,14.0s
FINES FINESS Array B 69.78 333 P **P 01 49 03.9 -1.4**
comp=Z,2.0nm,0.7s,baz=46,slow=8.3,SNR=7.4
comp=Z,2.0nm,0.7s
KBZ Khabaz 72.04 311 P **P 01 49 20.2 +0.9**
comp=Z,3.6nm,0.9s,baz=63,slow=4.5,SNR=5.7
comp=Z,3.6nm,0.9s
KBZ Khabaz 72.04 311⇓*i*P **P 01 49 20.0 +0.7**
KBZ pmax pmax
comp=Z,9.0nm,1.1s
KIV Kislovodsk 72.04 312 **P 01 49 20.2 +0.7**
KIV Kislovodsk 72.04 312 *e*P **P 01 49 18.2 -1.3**
KIV pmax pmax
comp=Z,13nm,1.1s
BEKR Beckworth 72.39 53 P **P 01 49 24.0 +2.2**
CMB Columbia Colle 73.37 55 **P 01 49 28.7 +1.2**
CMB Columbia Colle 73.37 55 P **P 01 49 28.7 +1.2**
CMB pmax pmax
comp=Z,5.0nm,1.3s
NVAR Mina Array Bea 74.52 54 P **P 01 49 36.7 +2.3**
comp=Z,1.9nm,0.7s,baz=303,slow=6.3,SNR=24
comp=Z,1.9nm,0.7s
NOA NORSAR Array B 75.10 338 P **P 01 49 37.9 +0.8**
comp=Z,1.3nm,0.8s,baz=38,slow=5.7,SNR=4.1
comp=Z,1.3nm,0.8s
AKASG Malin Array Be 75.36 323 P **P 01 49 38.1 -0.6**
comp=Z,1.1nm,0.6s,baz=49,slow=5.8,SNR=7.1
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 75.36 323 *i*P **P 01 49 39.0 +0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKBB Malin Array Si 75.36 323⇓*i*P **P 01 49 38.8 +0.1**
AKBB pmax pmax
comp=Z,23nm,2.3s
R11B Troy Canyon, C 76.31 52 **P 01 49 46.5 +1.9**
TPNV Topopah Spring 76.70 54 IAmb IAmb 01 50 05.4
comp=Z,11nm,1.4s
QSM Queen of Sheba 76.86 55 IAmb IAmb 01 50 04.0
comp=Z,9.2nm,1.3s
DUG Dugway, Tooele 76.96 50 IAmb IAmb 01 50 17.1
comp=Z,5.2nm,1.2s
MARD Mardin 77.01 307 P **P 01 49 48.7 +0.2**
MARD IAmb IAmb 01 49 50.6
comp=Z,12nm,1.3s
PDAR Pinedale Array 77.34 46 P **P 01 49 51.3 +0.8**
comp=Z,0.4nm,0.6s,baz=306,slow=7.3,SNR=5.6
comp=Z,0.4nm,0.6s
P17A Butcher Ranch, 78.66 49 IAmb IAmb 01 50 29.7
comp=Z,5.8nm,1.1s
RDMU Red Mountain 78.69 48 IAmb IAmb 01 50 30.4
comp=Z,7.0nm,1.0s
KNB Kanab 78.86 52 IAmb IAmb 01 50 04.4
comp=Z,6.9nm,1.1s
KNB Kanab 78.86 52 P **P 01 50 02.3 +3.4**
KNB pmax pmax
comp=Z,7.0nm,1.1s
SRU San Rafael Swe 79.02 49 IAmb IAmb 01 50 15.5
comp=Z,10.0nm,1.4s
HMU Henry Mountain 79.61 50 IAmb IAmb 01 50 07.9
comp=Z,4.6nm,0.9s
BR131 Keskin Array S 79.98 312⇓*e*P **P 01 50 03.3 -1.6**
BRTR Keskin Array B 79.98 312 P **P 01 50 04.5 -0.4**
comp=Z,1.5nm,1.0s,baz=65,slow=3.6,SNR=4.4
comp=Z,1.5nm,1.0s
BRTR Keskin Array B 79.98 312 *i*P **P 01 50 07.0 +2.1**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
STHS Stebnicka Huta 80.00 326 *e*P **P 01 50 03.5 -1.2**
STHS Stebnicka Huta 80.00 326 *e*P **P 01 50 03.5 -1.2**
STHS *e* 01 59 30.3
PV23 Carpenter Ridg 80.35 49 IAmb IAmb 01 50 39.0
comp=Z,9.0nm,0.9s
PV20 West Nyswonger 80.45 49 IAmb IAmb 01 50 10.7
comp=Z,8.9nm,0.9s
PV16 Nyswonger Mesa 80.50 49 IAmb IAmb 01 50 26.6
comp=Z,6.8nm,1.2s
PV03 Paradox Valley 80.58 49 IAmb IAmb 01 50 14.0
comp=Z,11nm,1.4s
PV01 Paradox Valley 80.82 49 IAmb IAmb 01 50 23.6
comp=Z,6.8nm,1.2s
LANS Liptovska Anna 81.00 326 *e*P **P 01 50 12.0 +1.9**
LANS Liptovska Anna 81.00 326 *e*P **P 01 50 12.0 +1.9**
RAYN Ar Rayn 81.81 293 P **P 01 50 13.7 -1.1**
RAYN IAmb IAmb 01 50 16.0
comp=Z,5.7nm,1.2s

RAYN	**Ar Rayn**	**81.81**	**293**		P	**P**	**01 50 13.7**	**-1.1**
RAYN					pmax	pmax		
	comp=Z,6.0nm,1.3s							
S22A	**4UR Ranch, Cre**	**82.13**	**49**		P	**P**	**01 50 12.7**	**-3.9**
S22A					IAmb	IAmb	01 50 36.3	
	comp=Z,6.4nm,1.4s							
MMAI	**Mount Meron Ar**	**83.12**	**306**		P	**P**	**01 50 20.3**	**-1.3**
	comp=Z,3.2nm,0.9s,baz=64,slow=6.6,SNR=4.4							
	comp=Z,3.2nm,0.9s							
PPT2	**Papeete2**	**83.49**	**117**	*e*	LR	LR	02 16 08.6	
	comp=Z,151nm,30.5s							
GERES	**GERESS Array B**	**83.72**	**329**		P	**P**	**01 50 23.0**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=22,slow=4.8,SNR=4.0							
	comp=Z,0.5nm,0.7s							
GERES	**GERESS Array B**	**83.72**	**329**		P	**P**	**01 50 23.0**	**-1.4**
TASM	**ASL Pad, Albuq**	**84.17**	**50**		IAmb	IAmb	01 50 30.9	
	comp=Z,3.4nm,1.2s							
TASM	**ASL Pad, Albuq**	**84.17**	**50**		IAmb	IAmb	01 50 38.6	
	comp=Z,7.3nm,1.5s							
TASM	**ASL Pad, Albuq**	**84.17**	**50**		IAmb	IAmb	01 50 30.9	
	comp=Z,3.1nm,1.2s							
ANMO	**Albuquerque**	**84.17**	**50**	⇓*e*	P	**P**	**01 50 28.9**	**+1.8**
ANMO					pmax	pmax		
	comp=Z,5.0nm,1.5s							
ABQ	**Albuquerque**	**84.18**	**50**		IAmb	IAmb	01 51 00.8	
	comp=Z,5.5nm,1.4s							
TAOE	**Nuku Hiva Isla**	**85.05**	**105**	*e*	LR	LR	02 16 53.1	
	comp=Z,130nm,29.2s							
MEM	**Membach**	**85.27**	**334**	*d*	P	**P**	**01 50 33.2**	**+1.2**
	comp=Z,8.5nm,1.3s							
DOU	**Dourbes**	**86.19**	**334**	*d*	P	**P**	**01 50 37.5**	**+0.9**
	comp=Z,7.1nm,1.7s							
TBI	**Tubuai**	**87.37**	**122**	*e*	LR	LR	02 18 16.3	
	comp=Z,806nm,26.2s							
TBI				*e*	LR	LR	02 18 16.4	
	comp=Z,930nm,31.2s							
TXAR	**Lajitas Array**	**89.66**	**53**		P	**P**	**01 50 54.6**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=312,slow=5.7,SNR=12							
	comp=Z,1.0nm,0.7s							
QSPA	**South Pole Qui**	**126.21**	**180**		PKP	**PKiKP**	**01 56 58.7**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=358,slow=1.8,SNR=9.7							
SNAA	**Sanae**	**140.50**	**196**	⇓	P	PKPpre	01 57 16.0	
	comp=Z,21nm,0.8s							
SNAA	**Sanae**	**140.50**	**196**		PKhKP	PKPpre	01 57 16.3	
	comp=Z,1.1nm,0.9s,baz=140,slow=3.8,SNR=7.4							
VNA2	**Neumayer--Watz**	**142.05**	**195**	⇓	P	PKPpre	01 57 21.6	
	comp=Z,2.5nm,0.7s,baz=97,slow=2.5							
VNA3	**Neumayer Olymp**	**142.27**	**194**	⇓	P	PKPpre	01 57 20.0	
	comp=Z,2.1nm,0.7s							
VNA1	**Neumayer--Stat**	**142.45**	**195**	⇓	P	PKPpre	01 57 23.2	
	comp=Z,3.0nm,0.8s							
H03N2	**Juan Fernandez**	**145.95**	**97**		T	T	04 40 43.2	
	baz=291							
H03N3	**Juan Fernandez**	**145.97**	**97**		T	T	04 40 46.2	
	baz=291							
H03N1	**Juan Fernandez**	**145.97**	**97**		T	T	04 40 44.0	
	baz=291							
LPAZ	**La Paz**	**146.09**	**62**			**PKPab**	**01 57 37.5**	**+0.2**
LPAZ	**La Paz**	**146.09**	**62**		PKPbc	**PKPbc**	**01 57 36.9**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=289,slow=4.4,SNR=9.3							

*IDC **03** 01:39:49.0± 1.0, 67.°16N× 21.°03E, h0km, mbtmp2.9/4, ML1.7/4, Error ellipse: s-maj=17.7km s-min=8.2km az=112.0*
*UPP **03** 01:39:48.2± 0.0, 67.°19N× 20.°67E, h0km, ML2.0, Confirmed Induced event*
*HEL **03** 01:39:48.0± 0.3, 67.°17N× 20.°50E, h0km, ML1.6, Suspected explosion*

ISC 03 01:39:48.2± 0.7, **67°20N**± 0°.02× **20°.67E**± 0°.03, **h0km, n33, σ 0s 88/54, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.08**	**207**	P	**Pg**	**01 39 50.0**	**+0.3**
DUNU				S	**Sg**	**01 39 51.2**	**+0.4**
MASU	**Masugnsbyn**	**0.58**	**62**	P	**Pg**	**01 39 59.4**	**+0.2**
MASU				S	**Sg**	**01 40 07.0**	**+0.3**
KUA	**Kuravaara**	**0.77**	**351**	P	**Pg**	**01 40 02.8**	**-0.1**
KUA				S	**Sg**	**01 40 13.3**	**+0.4**
SALU	**Saltoluokta**	**0.86**	**283**	P	**Pg**	**01 40 04.4**	**-0.2**
SALU				S	**Sg**	**01 40 16.3**	**+0.6**
ERTU	**Ertsjaerv**	**0.88**	**136**	P	**Pg**	**01 40 04.3**	**-0.7**
ERTU	**Ertsjaerv**	**0.88**	**136**	PG	**Pg**	**01 40 04.1**	**-0.9**
ERTU				SB	**Sg**	**01 40 16.4**	**0.0**
NIKU	**Nikkaluokta**	**0.92**	**318**	P	**Pg**	**01 40 05.5**	**-0.3**
PAJU	**Pajala**	**0.97**	**99**	P	**Pg**	**01 40 06.2**	**-0.6**
PAJU				S	**Sg**	**01 40 19.4**	**+0.1**
PAJU	**Pajala**	**0.97**	**99**	PG	**Pg**	**01 40 06.2**	**-0.6**
	baz=282						
PAJU				SB	**Sb**	**01 40 21.0**	**-0.3**
LANU	**Lannavaara**	**1.00**	**30**	P	**Pg**	**01 40 06.9**	**-0.4**
LANU	**Lannavaara**	**1.00**	**30**	PG	**Pg**	**01 40 06.8**	**-0.4**
LANU				SB	**Sb**	**01 40 21.5**	**-0.4**
HARU	**Harads**	**1.04**	**173**	P	**Pg**	**01 40 07.2**	**-0.9**
KOVU	**Salmi**	**1.05**	**350**	P	**Pg**	**01 40 08.0**	**-0.3**
	baz=188						
HEF	**Hetta**	**1.67**	**42**	*e*P	**Pn**	**01 40 18.4**	**-0.2**
HEF	**Hetta**	**1.67**	**42**	PG	**Pn**	**01 40 18.4**	**-0.2**
	baz=229						
HEF				smax	smax	01 40 39.8	
	comp=Z,3.2nm,0.2s						
HEF				SG	**Sn**	**01 40 40.1**	**-0.6**
KALU	**Kalix**	**1.72**	**140**	P	**Pn**	**01 40 19.4**	**+0.1**
KALU	**Kalix**	**1.72**	**140**	PG	**Pn**	**01 40 19.4**	**+0.1**
KALU				SN	**Sg**	**01 40 43.2**	**-0.1**
SJUU	**Sjulsmark**	**1.74**	**167**	P	**Pn**	**01 40 19.4**	**-0.1**
KIF	**Kilpisjarvi**	**1.82**	**2**	*e*P	**Pn**	**01 40 21.3**	**+0.7**
KIF	**Kilpisjarvi**	**1.82**	**2**	PG	**Pb**	**01 40 21.7**	**-0.5**
	baz=180						
KIF				smax	smax	01 40 44.2	
	comp=Z,4.2nm,0.2s						
KIF				SG	**Sg**	**01 40 46.8**	**+0.3**
TOF	**Tornio**	**1.84**	**126**	PG	**Pn**	**01 40 21.2**	**+0.3**
TOF				smax	smax	01 40 44.0	
	comp=Z,3.1nm,0.2s						
TOF				SG	**Sb**	**01 40 46.3**	**+0.2**
RNF	**Rovaniemi**	**2.19**	**103**	PB	**Pn**	**01 40 26.8**	**+1.1**
	baz=291						
RNF				SG	**Sb**	**01 40 56.6**	**+0.4**
TRO	**Tromso**	**2.53**	**346**	PG	**Pb**	**01 40 33.9**	**-0.5**
TRO				SG	**Sg**	**01 41 07.7**	**-1.7**
BURU	**Burvik**	**2.64**	**173**	PB	**Pn**	**01 40 32.7**	**+0.8**
BURU				SB	**Sn**	**01 41 06.6**	**+2.0**
ARA0	**ARCESS Array S**	**2.96**	**35**	PN	**Pn**	**01 40 37.3**	**+1.0**
	baz=220						
ARA0				SN	**Sn**	**01 41 14.0**	**+1.6**
ARCES	**ARCESS Array B**	**2.96**	**35**	Pn	**Pn**	**01 40 36.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=213,slow=14,SNR=20						
ARCES				Sn	**Sn**	**01 41 12.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=214,slow=24,SNR=9.4						
	comp=Z,1.0nm,0.4s						
RAJF	**Raja-Jooseppi**	**3.17**	**63**	PG	**Pg**	**01 40 47.2**	**-1.6**
UMAU	**Umeaa**	**3.33**	**180**	PN	**Pn**	**01 40 41.8**	**+0.4**
UMAU				SN	**Sn**	**01 41 21.7**	**+0.2**
KEV	**Kevo**	**3.47**	**39**	PG	**Pb**	**01 40 52.1**	**+1.7**
KEV				SN	**Sn**	**01 41 25.4**	**+0.3**
OLKF	**Oulanka, Finla**	**3.57**	**100**	PG	**Pb**	**01 40 53.7**	**+1.5**
FINES	**FINESS Array B**	**6.23**	**155**	Pn	**Pn**	**01 41 22.1**	**+0.8**
	baz=343,slow=14,SNR=1.5						
FINES				Sn	**Sn**	**01 42 31.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=343,slow=22,SNR=1.2						
FINES				Lg	Lg	01 43 00.6	
	comp=Z,0.1nm,0.3s,baz=344,slow=28,SNR=2.2						
	comp=Z,1.9nm,0.9s						
NOA	**NORSAR Array B**	**7.43**	**218**	Pn	**Pn**	**01 41 38.3**	**+0.7**
	baz=27,slow=12,SNR=1.2						
NOA				Lg	Lg	01 43 43.4	
	baz=43,slow=23,SNR=2.4						
	comp=Z,1.1nm,0.9s						
HFS	**Hagfors**	**7.73**	**207**	Pn	**Pn**	**01 41 39.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=24,slow=22,SNR=1.4						
HFS				Sn	**Sn**	**01 43 07.7**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=25,slow=24,SNR=3.1						
	comp=Z,1.1nm,0.8s						

*IDC **03** 01:47:06.8± 0.5, 36.°43N× 142.°56E, h0km, mb4.4/23, mbtmp4.4/31, ML3.8/6, MS4.1/58, Error ellipse: s-maj=13.8km s-min=12.9km az=18.0*
*BJI **03** 01:47:07.0, 36.°50N× 142.°70E, h10km, mB5.2/26, mb4.8/63, Ms4.8/58, Ms7 4.6/57*
*MOS **03** 01:47:07.3± 1.1, 36.°53N× 142.°54E, h12km, mb5.0/56, MS4.6/11, Error ellipse: s-maj=8.5km s-min=4.9km az=125.7*
*NEIC **03** 01:47:08.6± 1.9, 36.°47N± 0.°05× 142.°65E± 0.°09, h10km± 1km, mb4.9/101, Mww4.7/17, Error ellipse: s-maj=12.0km s-min=8.5km az=100.0*
*NEIC **03** 01:47:09, 36.°56N× 142.°63E, h12km*
*NIED **03** 01:47:10.0, 36.°45N× 142.°50E, h60km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr1.28; Mθθ-0.16; Mφφ-1.13; Mrθ0.07; Mθφ-0.50; Mφr0.08; Fault plane solution: M0 1.31000×10^16 NP1: φs 201.00000°, δ 43.00000°, λ 87.00000°. NP2: φs 25.00000°, δ 47.00000°, λ 92.00000°.*
*NEIC **03** 01:47:09, 36.°56N× 142.°88E, h12km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^16Nm; Mrr0.99; Mθθ-0.33; Mφφ-0.65; Mrθ0.06; Mθφ-0.43; Mφr1.35; Fault plane solution: M0 1.67000×10^16 NP1: φs 229.80000°, δ 21.52000°, λ 127.42000°. NP2: φs 10.36000°, δ 73.06000°, λ 76.52000°. Principal axes: T 1.7599, Plg60.0000°, Azm261.0000°; N -0.2086, Plg13.0000°, Azm14.0000°; P -1.5513, Plg27.0000°, Azm111.0000°;*
*JMA **03** 01:47:10.0± 0.3, 36.°5N± 0.°6× 14.°2E±°, h60km, MD4.7/37, MV4.2/37, FAR E OFF KANTO*
*GCMT **03** 01:47:11.6± 0.4, 36.°33N± 0.°04× 142.°75E± 0.°04, h19km± 1km, MW4.8/92, Moment Tensor Solution. s24, c24; s92, c126; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.94±.14; Mθθ-0.70±.09; Mφφ-1.24±.08; Mrθ0.38±.20; Mθφ-0.61±.05; Mφr1.04±.17; Best double couple: M0 2.10400×10^16 NP1: φs 217.00000°, δ 30.00000°, λ 99.00000°. NP2: φs 27.00000°, δ 61.00000°, λ 85.00000°. Principal axes: T 2.2630, Plg74.0000°, Azm284.0000°; N -0.3160, Plg4.0000°, Azm29.0000°; P -1.9440, Plg16.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 01:47:09.2± 0.6, **36°49N**± 0°.04× **142°.63E**± 0°.04, **h14**km± 2km, **h13**km: **pP-P, n391, σ 1s 82/317, mb4.8**/140, **MS4.4**/78, **20C-19D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.59**	**293**	P	**Pn**	**01 47 35.4**	**-1.6**
ONAJ				*e*S	**Sn**	**01 47 53.5**	**-3.8**
ONAJ	**Iwakimizuishiy**	**1.59**	**293**	A	A	01 47 35.4	
	comp=N,11nm,3.4s,comp=E,11nm,3.5s						
JFK	**Kawauchi**	**1.65**	**302**	*e*P	**Pn**	**01 47 36.0**	**-1.8**
JFK	**Kawauchi**	**1.65**	**302**	A	A	01 47 36.0	
	comp=N,11nm,5.5s,comp=E,8.0nm,5.0s						
JHYU	**Hitachinakayam**	**1.65**	**265**	P	**Pn**	**01 47 36.1**	**-1.7**
JHYU				*e*S	**Sn**	**01 47 55.0**	**-3.8**
JHYU	**Hitachinakayam**	**1.65**	**265**	A	A	01 47 36.1	
	comp=N,26nm,6.5s,comp=E,20nm,4.4s						
JHO	**Hitachi**	**1.66**	**275**	P	**Pn**	**01 47 36.0**	**-1.9**
JHO				*e*S	**Sn**	**01 47 54.4**	**-4.7**
JHO	**Hitachi**	**1.66**	**275**	A	A	01 47 36.0	
	comp=N,11nm,4.0s,comp=E,13nm,10.2s						
JFFD	**Fukushimafurud**	**1.76**	**290**	A	A	01 47 37.7	
	comp=N,10.0nm,3.3s,comp=E,7.0nm,10.0s						
JIHU	**Itakohorinouch**	**1.78**	**253**	A	A	01 47 37.5	
	comp=N,60nm,4.9s,comp=E,68nm,5.0s						
JMST	**Minamisoumatoc**	**1.85**	**312**	A	A	01 47 39.5	
	comp=N,8.0nm,2.3s,comp=E,8.0nm,2.9s						
JSMT	**Sammumatsuo**	**1.96**	**245**	A	A	01 47 40.0	
	comp=N,64nm,5.8s,comp=E,50nm,7.4s						
JYT	**Yasato**	**1.98**	**263**	A	A	01 47 40.4	
	comp=N,12nm,3.2s,comp=E,12nm,8.5s						
JMM	**Marumori**	**2.00**	**314**		**Pn**	**01 47 41.6**	**-1.0**
JMM	**Marumori**	**2.00**	**314**	P	**Pn**	**01 47 41.8**	**-0.8**
JMM	**Marumori**	**2.00**	**314**	P	**Pn**	**01 47 41.1**	**-1.5**
JMM	**Marumori**	**2.00**	**314**	A	A	01 47 41.1	
	comp=N,8.0nm,3.8s,comp=E,7.0nm,8.6s						
JOTO	**OTAMA OYAMA**	**2.12**	**301**	*e*P	**Pn**	**01 47 43.6**	**-0.6**
JOTO				*e*S	**Sn**	**01 48 08.1**	**-2.4**
JOTO	**OTAMA OYAMA**	**2.12**	**301**	A	A	01 47 43.6	
	comp=N,16nm,1.9s,comp=E,14nm,9.2s						
JSB	**Shiboa**	**2.23**	**283**	A	A	01 47 44.1	
	comp=N,29nm,3.3s,comp=E,30nm,1.7s						
BSO1	**Boso 1**	**2.28**	**217**	*e*P	**Pn**	**01 47 44.2**	**-1.7**
JKUC	**kamogawauchiur**	**2.38**	**237**	A	A	01 47 46.0	
	comp=N,13nm,8.7s,comp=E,12nm,10.2s						
JOU	**Okura**	**2.44**	**321**	A	A	01 47 47.9	
	comp=N,16nm,3.3s,comp=E,18nm,4.0s						
JYAR	**Yonezawaarcadi**	**2.44**	**306**	A	A	01 47 47.5	
	comp=N,21nm,1.3s,comp=E,21nm,1.2s						
TOK	**Tokyo**	**2.46**	**252**	A	A	01 47 47.1	
	comp=N,45nm,8.8s,comp=E,35nm,5.2s						
JOFO	**Osakifurukawao**	**2.51**	**328**	A	A	01 47 49.1	
	comp=N,58nm,2.9s,comp=E,58nm,2.3s						
JFY	**Yanaizu**	**2.51**	**292**	A	A	01 47 48.3	
	comp=N,6.0nm,4.2s,comp=E,6.0nm,5.3s						
JAG	**Ashikaga**	**2.56**	**269**	P	**Pn**	**01 47 48.6**	**-1.6**
JAG				*e*S	**Sn**	**01 48 18.0**	**-3.2**
JMK	**Ichinoseki**	**2.69**	**336**	P	**Pn**	**01 47 51.0**	**-1.1**
JNS	**Sasagawa**	**2.96**	**298**	*e*P	**Pn**	**01 47 54.8**	**-0.9**
JYK	**Kaneyama**	**3.02**	**324**	P	**Pn**	**01 47 56.0**	**-0.5**
JRY	**Ryogami san**	**3.05**	**262**	*e*P	**Pn**	**01 47 55.2**	**-1.8**
JOD2	**Odawara 2**	**3.13**	**248**	*e*P	**Pn**	**01 47 56.5**	**-1.5**
JOM	**Ohasama**	**3.15**	**341**	*e*P	**Pn**	**01 47 57.3**	**-1.1**
JYN	**Shimodate**	**3.46**	**254**	*e*P	**Pn**	**01 48 01.5**	**-1.1**
MJAR	**Matsushiro Arr**	**3.56**	**272**	Pn	**Pn**	**01 48 03.6**	**-0.5**
	comp=E,3.0nm,0.3s,baz=89,slow=14,SNR=96						
MJAR				Sn	**Sn**	**01 48 47.1**	**+1.2**
	comp=E,1.5nm,0.3s,baz=88,slow=15,SNR=5.6						
MJAR				LR	LR	01 49 46.2	
	comp=E,2μm,19.3s,baz=110,slow=45						
	comp=E,47nm,0.6s						
MAJO	**Matsushiro**	**3.56**	**272**		**Pn**	**01 48 04.3**	**+0.2**
MAJO	**Matsushiro**	**3.56**	**272**	P	**Pn**	**01 48 04.4**	**+0.4**
MAJO	**Matsushiro**	**3.56**	**272**	*c* i P	**Pn**	**01 48 04.0**	**0.0**
MAT	**Matsushiro**	**3.56**	**272**	*e*P	**Pn**	**01 48 03.9**	**-0.2**
JSD	**Sado**	**3.81**	**295**		**Pn**	**01 48 07.6**	**+0.2**
JSD	**Sado**	**3.81**	**295**	P	**Pn**	**01 48 07.9**	**+0.5**
JSD	**Sado**	**3.81**	**295**	*e*P	**Pn**	**01 48 06.0**	**-1.5**
JANG	**Nango**	**3.97**	**348**	*e*P	**Pn**	**01 48 08.3**	**-1.3**
JSG	**Sagara**	**4.05**	**245**		**Pn**	**01 48 11.5**	**+0.8**
JHJ2	**Mitsue**	**4.09**	**215**	P	**Pn**	**01 48 08.7**	**-2.6**
JHJ	**Hachijo jima 2**	**4.10**	**216**	Pn	**Pn**	**01 48 08.4**	**-3.1**
	comp=E,64nm,0.3s,baz=36,slow=18,SNR=18						
JHJ				Sn	**Sn**	**01 48 52.5**	**-6.7**
	comp=E,71nm,0.3s,baz=52,slow=19,SNR=7.5						
	comp=E,46nm,0.3s						
JGF	**Kuroka**	**4.36**	**260**		**Pn**	**01 48 15.8**	**+0.7**
JGF	**Kuroka**	**4.36**	**260**	P	**Pn**	**01 48 16.0**	**+0.9**
JTM	**Tenmabayashi**	**4.46**	**345**		**Pn**	**01 48 15.4**	**-0.9**
JTM	**Tenmabayashi**	**4.46**	**345**	P	**Pn**	**01 48 16.5**	**+0.2**
INU	**Inuyama**	**4.69**	**258**		**Pn**	**01 48 19.6**	**0.0**
INU	**Inuyama**	**4.69**	**258**	P	**Pn**	**01 48 19.9**	**+0.3**
ERM	**Erimo**	**5.53**	**4**		**Pn**	**01 48 29.6**	**-1.5**
ERM	**Erimo**	**5.53**	**4**	P	**Pn**	**01 48 29.5**	**-1.5**
ERM	**Erimo**	**5.53**	**4**	P	**Pn**	**01 48 29.6**	**-1.5**
JEM	**Erimo**	**5.53**	**4**	P	**Pn**	**01 48 29.5**	**-1.5**
NMR	**Nemuro--Hokkai**	**7.27**	**18**	*e*P	**Pn**	**01 48 51.1**	**-3.8**
JKA	**Kamikawa-asahi**	**7.61**	**360**		**Pn**	**01 48 59.1**	**-0.6**
JKA	**Kamikawa-asahi**	**7.61**	**360**		**Sn**	**01 50 20.4**	**-5.4**
ASAJ	**Asahikawa**	**7.61**	**360**	Pn	**Pn**	**01 48 59.2**	**-0.4**
	comp=E,5.8nm,0.3s,baz=190,slow=7.7,SNR=27						
ASAJ				Sn	**Sn**	**01 50 20.4**	**-5.4**
	comp=E,1.1nm,0.3s,baz=163,slow=20,SNR=1.2						
ASAJ				LR	LR	01 52 33.1	
	comp=E,1μm,18.7s,baz=145,slow=42						
	comp=E,50nm,0.6s						
JMN	**Monobe**	**7.68**	**252**		**Pn**	**01 49 01.6**	**+1.0**
RUSJ	**Misakicho**	**7.86**	**14**	*e*P	**Pn**	**01 48 58.7**	**-4.3**
RUSJ				*e*S	**Sn**	**01 50 26.6**	**-5.2**
YUK	**Yuzh-Kuril'sk**	**7.93**	**17**	P	**Pn**	**01 48 59.9**	**-4.0**
YUK				*e*S	**Sn**	**01 50 26.2**	**-7.2**
YUK				pmax	pmax		
	comp=Z,146nm,0.2s						
JCJ	**Chichijima**	**9.38**	**182**	Pn	Pn	01 49 09.4	-15
	comp=Z,10.0nm,0.3s,baz=348,slow=19,SNR=14						
JCJ				Sn	Sn	01 50 47.6	-22
	comp=Z,17nm,0.3s,baz=330,slow=20,SNR=5.5						
JCJ				LR	LR	01 56 07.4	
	comp=Z,155nm,19.2s,baz=20,slow=58						
TEY	**Ternei**	**9.68**	**334**	*e*P	Pn	01 49 33.1	+5.2
JNU	**Nakatsue**	**10.23**	**254**		**Pn**	**01 49 35.9**	**+0.3**
JNU	**Nakatsue**	**10.23**	**254**	Pn	**Pn**	**01 49 32.0**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=54,slow=8.7,SNR=5.8						
JNU				LR	LR	01 54 23.8	
	comp=Z,1μm,18.5s,baz=74,slow=43						
	comp=Z,16nm,1.1s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzhno-Sakhali**	**10.45**	**0**		**Pn**	**01 49 37.5**	**-1.0**
YSS	**Yuzhno-Sakhali**	**10.45**	**0**	*e*P	**Pn**	**01 49 37.9**	**-0.6**
YSS				*e*S	**Sn**	**01 51 37.0**	**+1.6**
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
PSTR	**Posyet**	**11.00**	**308**	⇓*e*P	**Pn**	**01 49 46.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**11.18**	**317**	Pn	**Pn**	**01 49 48.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=130,slow=13,SNR=5.6						
	comp=Z,4.5nm,0.7s						
KSRS	**Korea Array**	**11.80**	**279**	Pn	**Pn**	**01 49 56.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=94,slow=13,SNR=17						
	comp=Z,12nm,1.1s						
KSAR	**Wonju Array Be**	**11.83**	**279**		**Pn**	**01 49 57.9**	**+0.4**
KSAR	**Wonju Array Be**	**11.83**	**279**	P	**Pn**	**01 49 57.9**	**+0.4**
TJN	**Taejon**	**12.30**	**274**		**Pn**	**01 50 04.8**	**+1.0**
TJN	**Taejon**	**12.30**	**274**	⇓*e*P	**Pn**	**01 50 03.0**	**-0.8**
MDJ	**Mudanjiang**	**12.80**	**313**	P	**Pn**	**01 50 11.2**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,20nm,2.0s						
BNX	**BinXian**	**14.71**	**314**	⇓P	**Pn**	**01 50 34.3**	**-2.4**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GRNR	**Gornyy**	**14.95**	**345**	⇓*i*P	**P**	**01 50 46.6**	**+1.1**
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR				MLR	MLR		
	comp=E,1μm,14.0s						
GRNR				MLR	MLR		
	comp=Z,1μm,14.0s						
GRNR				MLR	MLR		
	comp=N,1μm,13.0s						
CN2	**Changchun**	**15.01**	**304**	*e*P	**Pn**	**01 50 41.4**	**+0.5**
CN2				*es*P	pP	01 50 48.0	-0.8
CN2				*e*S	**Sn**	**01 53 28.3**	**+1.4**
CN2				pmax	pmax		
	comp=N,20nm,0.6s						
CN2				pmax	pmax		
	comp=N,700nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,11.0s						
CN2				LR	LR		
	comp=N,1μm,11.0s						
CN2				LR	LR		
	comp=N,900nm,12.0s						
JOW	**Kunigami**	**15.54**	**236**	IAmb	IAmb	01 51 06.5	
	comp=Z,76nm,1.3s						
JOW	**Kunigami**	**15.54**	**236**	Pn	**Pn**	**01 50 46.0**	**-1.9**
	comp=Z,19nm,0.9s,baz=41,slow=9.3,SNR=2.1						
SNY	**Shenyang**	**15.70**	**296**	⇑P	**P**	**01 50 52.2**	**-1.6**
SNY				S	**S**	**01 53 55.2**	**-3.3**
SNY				pmax	pmax		
	comp=Z,25nm,1.0s						
SNY				pmax	pmax		
	comp=Z,240nm,3.9s						
SNY				LR	LR		
	comp=Z,910nm,13.0s						
SNY				LR	LR		
	comp=Z,2μm,14.0s						
SNY				LR	LR		
	comp=Z,3μm,14.3s						
HEH	**HeiHe**	**17.60**	**326**	*e*P	**Pn**	**01 51 12.9**	**-1.0**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HEH				LR	LR		
	comp=Z,1μm,12.6s						
HEH				LR	LR		
	comp=Z,770nm,13.3s						
HEH				LR	LR		
	comp=Z,2μm,12.7s						
PETK	**Petropavlovsk-**	**19.69**	**28**	P	**Pn**	**01 51 39.3**	**0.0**
	comp=Z,4.1nm,0.8s,baz=212,slow=10,SNR=2.4						
NJ2	**Nanjing**	**20.12**	**264**	*e*P	**P**	**01 51 42.4**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,740nm,8.3s						
NJ2				LR	LR		
	comp=Z,1μm,15.2s						
NJ2				LR	LR		
	comp=Z,2μm,14.2s						
NJ2				LR	LR		
	comp=Z,1μm,14.2s						
TIA	**Tai'an**	**20.53**	**277**	P	**P**	**01 51 45.3**	**-1.8**
TIA				pmax	pmax		
	comp=Z,17nm,1.0s						
TIA				LR	LR		
	comp=Z,1μm,12.4s						
TIA				LR	LR		
	comp=Z,290nm,13.1s						
TIA				LR	LR		
	comp=Z,1μm,14.4s						
HILR	**Hailar Array B**	**21.11**	**315**	P	**P**	**01 51 50.4**	**-2.9**
	comp=Z,7.1nm,0.6s,baz=116,slow=12,SNR=12						
HILR				S	**S**	**01 55 46.4**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=123,slow=10,SNR=1.5						
HILR				LR	LR	01 59 31.3	
	comp=Z,644n

BTO pmax pmax
comp=Z,25nm,0.5s
BTO pmax pmax
comp=Z,440nm,7.0s
BTO LR LR
comp=Z,3µm,15.1s
BTO LR LR
comp=Z,2µm,14.0s
BTO LR LR
comp=Z,2µm,14.6s
CNSH ChangSha 26.35 260 P P 01 52 44.3 -0.5
CNSH S S **01 57 17.5 0.0**
CNSH pmax pmax
comp=Z,35nm,1.6s
CNSH LR LR
comp=Z,1µm,17.8s
CNSH LR LR
comp=Z,630nm,12.3s
CNSH LR LR
comp=Z,2µm,13.0s
YAK Yakutsk 26.82 346 P P 01 52 49.1 +0.5
YAK Yakutsk 26.82 346 LR LR 02 03 39.0
comp=Z,621nm,19.5s,baz=150,slow=37
YAK Yakutsk 26.82 346 *e*P **P 01 52 49.0 +0.3**
YAK *e**PP **sP 01 52 52.1 -0.1**
YAK *e* 01 53 30.4
YAK *e* 01 56 11.9
YAK *e*S **S 01 57 26.0 +1.8**
YAK *e**SS **sS 01 57 31.5 +3.3**
YAK *e*SSS SSS 01 58 46.8
YAK pmax pmax
comp=Z,35nm,1.0s
YAK pmax pmax
comp=N,21nm,1.2s
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=N,936nm,3.5s
YAK pmax pmax
comp=Z,368nm,4.2s
YAK pmax pmax
comp=E,540nm,3.5s
YAK smax smax
comp=E,319nm,3.2s
YAK smax smax
comp=N,213nm,2.3s
YAK MLR MLR
comp=E,665nm,17.0s
YAK MLR MLR
comp=Z,2µm,18.0s
YAK MLR MLR
comp=N,791nm,16.0s
H11N2 WAKE ISLAND Hy 27.04 122 T T 02 21 05.3
baz=313,slow=75,SNR=15
H11N1 WAKE ISLAND Hy 27.04 122 T T 02 21 02.1
baz=313,slow=75,SNR=15
H11N3 WAKE ISLAND Hy 27.05 122 T T 02 21 06.7
baz=313,slow=75,SNR=17
SEY Seymchan 27.14 10 LR LR 02 03 21.4
comp=N,494nm,18.7s,baz=214,slow=36
SEY Seymchan 27.14 10 *e*P **P 01 52 52.3 +0.7**
SEY pmax pmax
comp=Z,22nm,1.8s
SHEM Shemya Is, Ala 27.37 44 LR LR 02 03 15.7
comp=Z,230nm,18.6s,baz=122,slow=35
XAN Xi'an 27.55 275 P P 01 52 54.7 -1.0
XAN pmax pmax
comp=Z,65nm,1.7s
XAN LR LR
comp=Z,720nm,12.3s
XAN LR LR
comp=Z,980nm,13.1s
XAN LR LR
comp=Z,1µm,14.4s
H11S1 WAKE ISLAND Hy 27.75 124 T T 02 22 06.8
baz=315,slow=75,SNR=13
H11S3 WAKE ISLAND Hy 27.75 124 T T 02 21 54.9
baz=315,slow=75,SNR=11
H11S2 WAKE ISLAND Hy 27.77 124 T T 02 22 00.0
baz=315,slow=75,SNR=9.5
ENH Enshi 28.27 267 P 01 53 00.6 -1.6
ULN Ulaanbaatar 28.46 305 P 01 53 04.5 +0.7
ULN Ulaanbaatar 28.46 305*c i*P **P 01 53 03.6 -0.2**
ULN pmax pmax
comp=Z,25nm,1.3s
SONM Songino Array 28.89 304 P **P 01 53 08.2 +0.6**
comp=Z,12nm,0.9s,baz=100,slow=6.6,SNR=44
comp=Z,12nm,0.9s
LZH Lanzhou 31.12 281 *e*P **P 01 53 27.0 -0.5**
LZH pP pwP 01 53 37.5 +1.0
LZH pmax pmax
comp=Z,30nm,1.4s
LZH LR LR
comp=Z,1µm,16.3s
LZH LR LR
comp=Z,980nm,15.1s
LZH LR LR
comp=Z,2µm,15.5s
LZDM Lanzhou Array 31.27 281 P **P 01 53 28.1 -0.8**
comp=Z,1.3nm,0.3s,baz=79,slow=17,SNR=6.5
comp=Z,1.3nm,0.3s
ZAK Zakamensk 31.37 309 *e*P **P 01 53 29.5 +0.1**
ZAK pmax pmax
comp=Z,39nm,1.6s
CD2 Chengdu 32.66 272 P **P 01 53 39.6 -1.3**
CD2 pmax pmax
comp=Z,20nm,0.4s
MOY Mondy 33.03 311 *e*P **P 01 53 45.7 +1.7**
MOY pmax pmax
comp=Z,38nm,2.4s
QIZ Qiongzhong 33.61 248 P **P 01 53 48.8 -0.5**
QIZ S **S 01 59 12.8 +1.3**
QIZ LR LR
comp=Z,320nm,14.3s
QIZ LR LR
comp=Z,720nm,13.9s
QIZ LR LR
comp=Z,730nm,16.0s
GTA Gaotai 33.66 288 P **P 01 53 49.9 +0.3**
GTA sP pwP 01 54 00.6 +2.0
GTA pmax pmax
comp=Z,17nm,1.8s
GTA LR LR
comp=Z,470nm,16.0s
GTA LR LR
comp=Z,700nm,14.9s
GTA LR LR
comp=Z,580nm,13.8s
BILL Bilibino 34.28 16↓ *e*P **P 01 53 54.9 +0.4**
BILL pmax pmax
comp=Z,18nm,1.5s
KNGR Kungurtug, Tuv 35.04 308↑ *e*P **P 01 54 02.6 +1.1**
KMI Kunming 35.85 263 P **P 01 54 09.7 +0.8**
KMI pmax pmax
comp=Z,13nm,1.0s
KMI LR LR
comp=Z,570nm,15.2s
KMI LR LR
comp=Z,680nm,14.5s
KMI LR LR
comp=Z,880nm,13.7s
TIXI Tiksi 35.95 353 LR LR 02 09 53.7
comp=Z,462nm,18.9s,baz=188,slow=38
TIXI Tiksi 35.95 353↑ *e*P **P 01 54 07.1 -1.7**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
PZH PanZhiHua 36.03 266 P P 01 54 10.9 +0.7
SGSI Sangihe 36.25 210 P P 01 54 12.7 +0.7
SMPI Sarmi 38.46 186 P P 01 54 32.1 +1.4
comp=Z,2µmcomp=Z,29nm,1.6s
GENI Genyem 38.95 184 P P 01 54 36.9 +2.0
comp=Z,23nm,0.9s
MRSI Marisa 40.65 213 P P 01 54 53.5 +4.5
comp=Z,32nm,1.2s
DGZ Jazzator, Alta 41.50 306*c i*P **P 01 54 56.6 +0.7**
DGZ pmax pmax
comp=Z,22nm,1.1s
WMQ Urumqi 41.95 298 *e*P **P 01 55 03.1 +3.5**
WMQ sP pwP 01 55 14.1 +5.6
WMQ pmax pmax
comp=Z,30nm,0.9s
WMQ LR LR
comp=Z,690nm,13.7s
WMQ LR LR
comp=Z,730nm,12.9s
WMQ LR LR
comp=Z,230nm,12.9s

NLAI Namlea 42.10 203 P **P 01 55 03.5 +2.6**
comp=Z,18nm,0.9s
AAI Ambon 42.19 202 P **P 01 55 04.4 +2.8**
comp=Z,37nm,0.9s
CMAR Chiang Mai Arr 42.31 257 P **P 01 55 02.2 -0.5**
comp=Z,1.7nm,0.3s,baz=52,slow=7.9,SNR=6.1
CMAR LR LR 02 13 51.7
comp=Z,184nm,18.8s,baz=35,slow=38
comp=Z,1.7nm,0.3s
CMAR Chiang Mai Arr 42.31 257*i* P **P 01 55 05.4 +2.7**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
BNDI Bandanaira 42.50 199 P **P 01 55 07.0 +2.8**
ZAA0 Zalesovo Array 43.00 313 P **P 01 55 07.8 0.0**
ZAA0 IAmb IAmb 01 55 20.2
comp=Z,42nm,1.5s
ZALV Zalesovo Beam 43.00 313 P **P 01 55 07.4 -0.5**
comp=Z,6.1nm,0.7s,baz=95,slow=7.2,SNR=27
ZALV PcP **PcP 01 56 57.5 -0.4**
comp=Z,2.3nm,0.8s,baz=101,slow=4.6,SNR=2.6
ZALV ScP **ScP 02 00 51.4 +2.7**
comp=Z,0.4nm,0.3s,baz=112,slow=4.9,SNR=2.3
ZALV LR LR 02 12 50.1
comp=Z,218nm,18.1s,baz=84,slow=36
comp=Z,6.1nm,0.7s
ZALV Zalesovo Beam 43.00 313*i* P **P 01 55 07.9 +0.1**
ZALV pmax pmax
comp=Z,6.0nm,0.7s
ZSN Zaisan 43.40 303 *e*P **P 01 55 11.4 +0.1**
comp=Z,11nm,0.8s
ZSN Zaisan 43.40 303 *e*P **P 01 55 11.3 +0.1**
ZSN pmax pmax
comp=Z,11nm,0.8s
SBUM Sibu 43.99 227 P 01 55 15.4 -0.8
J17K VABM Dome 43.99 33 IAmb IAmb 01 55 30.6
comp=Z,18nm,1.4s
SHL Shillong 44.38 271 P 01 55 21.4 +1.8
SHL Shillong 44.38 271 P **P 01 55 21.4 +1.8**
SHL pmax pmax
comp=Z,8.0nm,0.9s
G18K Tagagawik 44.62 30 IAmb IAmb 01 55 23.5
comp=Z,17nm,1.4s
MK31 Makanchi Array 45.23 303*c i*P **P 01 55 25.4 -0.5**
MKAR Makanchi Array 45.23 303 P **P 01 55 25.3 -0.6**
comp=Z,8.1nm,0.7s,baz=86,slow=8.5,SNR=25
MKAR S **S 02 02 07.1 +1.6**
comp=Z,0.1nm,0.4s,baz=60,slow=15,SNR=1.3
MKAR LR LR 02 13 20.3
comp=Z,240nm,19.8s,baz=94,slow=35
comp=Z,8.1nm,0.7s
MAKZ Makanchi 45.44 303 P 01 55 26.7 -0.9
MAKZ Makanchi 45.44 303 P **P 01 55 26.7 -0.9**
MAKZ pmax pmax
comp=Z,66nm,1.5s
H19K Roundabout Mou 45.45 31 IAmb IAmb 01 55 40.2
comp=Z,15nm,1.1s
PMG Port Moresby 45.85 174↓ *e*P **P 01 55 30.8 -0.2**
PMG pmax pmax
comp=Z,20nm,1.1s
KSM Kuching 45.90 228 P **P 01 55 30.1 -1.4**
KSM IAmb IAmb 01 55 44.9
comp=Z,8.3nm,0.7s
BRDH Bariadhala 45.93 267 LR LR 02 16 15.9
comp=Z,254nm,18.3s,baz=89,slow=38
KAPI Kappang 46.51 212 P 01 55 35.4 -0.8
KAPI Kappang 46.51 212 P **P 01 55 35.4 -0.8**
KAPI pmax pmax
comp=Z,30nm,1.3s
KURK Kurchatov 47.03 309 P 01 55 39.2 -0.8
KURK Kurchatov 47.03 309*c i*P **P 01 55 39.3 -0.7**
KURK pmax pmax
comp=Z,21nm,0.9s
KURBB Kurchatov Arra 47.10 309 P **P 01 55 40.1 -0.4**
comp=Z,10nm,0.8s,baz=82,slow=7.7,SNR=36
KURBB LR LR 02 14 53.9
comp=Z,209nm,18.7s,baz=168,slow=35
comp=Z,10nm,0.8s
EVN Everest 47.41 276 P P 01 55 43.8 -0.3
BPAW Bear Paw Mtn. 47.64 33 P P 01 55 43.5 -1.1
MLY Manley 47.79 32 P P 01 55 46.7 +0.9
SHLS Shalkode 47.95 298 *e*P **P 01 55 44.7 -2.8**
comp=Z,4.2nm,0.8s
SHLS Shalkode 47.95 298 *e*P **P 01 55 44.6 -2.8**
SHLS pmax pmax
comp=Z,4.0nm,0.8s
TDK Taldyqorghan 48.24 301 *e*P **P 01 55 49.2 -0.4**
comp=Z,11nm,1.2s
TDK Taldyqorghan 48.24 301 *e*P **P 01 55 49.1 -0.4**
TDK pmax pmax
comp=Z,11nm,1.2s
UZB Uzynbulak 48.26 299 *e*P **P 01 55 49.4 -0.5**
comp=Z,5.0nm,0.8s
UZB Uzynbulak 48.26 299 *e*P **P 01 55 49.4 -0.5**
UZB pmax pmax
comp=Z,5.0nm,0.8s
H23K Yukon River 48.33 31 IAmb IAmb 01 56 08.7
comp=Z,11nm,1.0s
E23K Chandalar 48.44 28 IAmb IAmb 01 56 08.8
comp=Z,11nm,1.1s
HNR Honiara 48.50 157 LR LR 02 16 14.9
comp=Z,269nm,19.1s,baz=352,slow=36
SATY Saty 48.72 299 *e*P **P 01 55 52.9 -0.5**
comp=Z,11nm,1.5s
SATY Saty 48.72 299 *e*P **P 01 55 52.8 -0.5**
SATY pmax pmax
comp=Z,11nm,1.5s
COLA College 49.02 32↑ *e*P **P 01 55 52.6 -2.5**
COLA pmax pmax
comp=Z,7.0nm,1.0s
SOEI Soe 49.14 204 P **P 01 55 59.5 +2.8**
comp=Z,38nm,1.1s
IL31 49.43 32 P **P 01 55 57.8 -0.4**
ILAR Eielson Array 49.43 32 P **P 01 55 58.8 +0.5**
ILAR Eielson Array 49.43 32 P **P 01 55 58.6 +0.3**
comp=Z,1.4nm,0.7s,baz=272,slow=7.5,SNR=22
comp=Z,1.4nm,0.7s
ILAR Eielson Array 49.43 32 P **P 01 55 58.8 +0.5**
TARG Taragay, Kyrgy 49.51 297 IAmb IAmb 01 56 12.9
comp=Z,21nm,1.0s
MDOK Medeo 49.65 299 *e*P **P 01 56 00.1 -0.4**
MDOK Medeo 49.65 299 *e*P **P 01 56 00.1 -0.4**
AAA Alma-Ata 49.73 299 *e*P **P 01 56 00.7 -0.3**
comp=Z,12nm,0.7s
AAA Alma-Ata 49.73 299 *e*P **P 01 56 00.7 -0.3**
AAA pmax pmax
comp=Z,12nm,0.7s
TNSS Tian-Shan 49.76 299 *e*P **P 01 56 00.8 -0.8**
TNSS Tian-Shan 49.76 299 *e*P **P 01 56 00.8 -0.8**
BMAR Burnt Mountain 50.34 29 P 01 56 06.5 +1.3
F26K Sheenjek River 50.50 28 IAmb IAmb 01 56 24.6
comp=Z,15nm,1.5s
BRZS Berezniki 50.91 309 *e*P **P 01 56 09.2 -0.6**
BRZS Berezniki 50.91 309 *e*P **P 01 56 09.1 -0.6**
KMMI Kalianget 50.98 218 P **P 01 56 12.6 +2.0**
comp=Z,38nm,1.0s
PPBI Pangkal Pinang 51.30 230 P P 01 56 15.6 +2.5
KSH Kashi 51.52 295 P P 01 56 19.0 +4.4
KSH sP pwP 01 56 24.0 +0.6
KSH pmax pmax
comp=Z,13nm,1.3s
KSH LR LR
comp=Z,390nm,16.7s
KSH LR LR
comp=Z,580nm,13.4s
KSH LR LR
comp=Z,750nm,14.0s
AAK Ala-Archa 51.60 299 P 01 56 14.8 -0.5
AAK IAmb IAmb 01 56 27.1
comp=Z,13nm,1.1s
AAK Ala-Archa 51.60 299 LR LR 02 20 31.5
comp=Z,291nm,18.1s,baz=76,slow=39
AAK Ala-Archa 51.60 299*ce* P **01 56 15.1 -0.2**
AAK pmax pmax
comp=Z,12nm,1.1s
BVAR Borovoye Array 51.65 313 P **P 01 56 15.3 0.0**
comp=Z,2.4nm,0.8s,baz=86,slow=6.2,SNR=9.9
BVAR LR LR 02 18 15.9
comp=Z,183nm,18.7s,baz=69,slow=36
comp=Z,2.4nm,0.8s
BORK Borovoye 51.69 313↓ *i*P **P 01 56 15.9 +0.4**
BORK pmax pmax
comp=Z,5.0nm,0.8s
PSI Prapat 52.37 241 LR LR 02 18 56.5
comp=Z,121nm,20.6s,baz=46,slow=36
E29M Blow River 52.80 27 IAmb IAmb 01 56 27.2
comp=Z,16nm,1.4s

G29M Pine Creek 52.92 29 IAmb IAmb 01 56 39.6
comp=Z,22nm,1.2s
L29M L29M 53.43 34 IAmb IAmb 01 56 58.3
comp=Z,21nm,1.4s
EPYK Eagle Plains 53.51 30 IAmb IAmb 01 56 45.1
comp=Z,13nm,0.9s
G30M tAoh Zraii Nji 53.62 29 IAmb IAmb 01 56 50.7
comp=Z,24nm,1.4s
DZA Taraz 53.74 300 *e*P **P 01 56 30.6 -0.3**
comp=Z,6.6nm,0.7s
DZA Taraz 53.74 300 *e*P **P 01 56 30.6 -0.3**
DZA pmax pmax
comp=Z,7.0nm,0.7s
I30M Mount Dempster 53.83 31 IAmb IAmb 01 56 45.8
comp=Z,10nm,1.1s
HYT Haines Junctio 54.15 37 IAmb IAmb 01 56 49.1
comp=Z,29nm,1.5s
KKAR Karatay Array 54.24 301 P 01 56 34.3 -0.2
KKAR Karatay Array 54.24 301 P **P 01 56 34.3 -0.2**
MDSI Maura Dua 54.33 230 P **P 01 56 34.2 -1.2**
comp=Z,25nm,1.1s
INK Inuvik 54.42 27 LR LR 02 23 35.8
comp=Z,133nm,18.9s,baz=294,slow=40
H31M Peel River 54.56 30 IAmb IAmb 01 56 50.9
comp=Z,13nm,1.1s
IUG luzhnay 54.89 300 *e*P **P 01 56 39.2 -0.2**
comp=Z,19nm,1.5s
IUG luzhnay 54.89 300 *e*P **P 01 56 39.2 -0.2**
IUG pmax pmax
comp=Z,19nm,1.5s
CHM Chimkent 55.13 300 *e*P **P 01 56 41.0 -0.1**
comp=Z,11nm,1.1s
CHM Chimkent 55.13 300 *e*P **P 01 56 40.9 -0.1**
CHM pmax pmax
comp=Z,11nm,1.1s
NIL Nilore 55.71 289 P **P 01 56 45.5 +0.2**
NIL Nilore 55.71 289 P **P 01 56 45.6 +0.2**
NIL pmax pmax
comp=Z,30nm,1.3s
SVE Sverdlovsk 56.19 319 *e*P **P 01 56 49.1 +0.7**
SVE pmax pmax
comp=Z,27nm,1.4s
SVE MLR MLR
comp=Z,552nm,16.0s
WB0 Warramunga Arr 56.49 189 P 01 56 47.9 -3.0
WB0 IAmb IAmb 01 57 01.7
comp=Z,15nm,1.1s
P33M Teslin, Yukon 56.55 37 IAmb IAmb 01 57 05.7
comp=Z,10nm,1.1s
WRAB Tennant Creek 56.66 189*i* P **P 01 56 53.4 +1.3**
WR8 Warramunga Arr 56.67 189 P 01 56 49.9 -2.2
WR8 IAmb IAmb 01 57 03.2
comp=Z,15nm,1.2s
WRA Warramunga Arr 56.67 189 P **P 01 56 50.8 -1.4**
comp=Z,3.8nm,0.9s,baz=9.9,slow=7.3,SNR=16
WRA LR LR 02 20 36.6
comp=Z,67nm,20.4s,baz=58,slow=36
comp=Z,3.8nm,0.9s
WRA Warramunga Arr 56.67 189*i* P **P 01 56 51.2 -0.9**
WRA pmax pmax
comp=Z,4.0nm,0.9s
CHGR Chuyangaron 56.78 296 P **P 01 56 52.8 -0.2**
CHGR pmax pmax
comp=Z,111nm,1.1s
SIMJ Simiganj 56.88 296 P **P 01 56 53.7 -0.1**
ARTI Arti 57.51 319 P 01 56 56.5 -1.2
ARTI Arti 57.51 319 LR LR 02 24 43.4
comp=Z,255nm,18.6s,baz=64,slow=39
ARTI Arti 57.51 319*c i*P **P 01 56 57.4 -0.4**
ARTI 01 57 48.3
ARTI 01 59 01.7
ARTI S **S 02 04 57.9 +3.3**
ARTI SS **SS 02 08 45.3 +1.4**
ARTI pmax pmax
comp=Z,24nm,1.0s
KBL Kabul 58.52 292 P **P 01 57 04.6 -0.8**
KBL pmax pmax
comp=Z,9.0nm,1.0s
AB31 Akbulak array 59.03 311 IAmb IAmb 01 57 20.6
comp=Z,16nm,1.1s
ABKAR Akbulak array 59.03 311 P 01 57 08.0 -0.5
ASAR Alice Springs 60.40 189 P **P 01 57 17.3 -0.8**
ASAR Alice Springs 60.40 189 P **P 01 57 17.8 -0.3**
comp=Z,1.3nm,0.9s,baz=8.8,slow=7.9,SNR=7.4
ASAR LR LR 02 21 15.3
comp=Z,46nm,21.9s,baz=51,slow=34
comp=Z,1.3nm,0.9s
SPITS Spitsbergen Ar 61.24 349 LR LR 02 27 09.0
comp=Z,266nm,19.0s,baz=26,slow=39
KIRV Kirov 61.26 323 LR LR 02 28 16.8
comp=Z,302nm,18.9s,baz=63,slow=40
KIRV Kirov 61.26 323*ce* P **01 57 24.1 +0.5**
DZM Mont Dzumac 62.45 155 P **P 01 57 30.8 -1.2**
comp=Z,6.3nm,0.9s,baz=338,slow=19,SNR=1.7
comp=Z,6.3nm,0.9s
RES Resolute Bay 62.88 15 LR LR 02 29 17.4
comp=Z,138nm,18.1s,baz=14,slow=40
PALK Pallekele 63.21 259 LR LR 02 27 36.7
comp=Z,80nm,19.0s,baz=46,slow=38
APA Apatity 63.58 336↓ *e*P P 01 57 44.2 +5.3
APA *e* 01 58 18.8
APA MLR MLR
comp=Z,875nm,17.3s
HRA Herat 63.63 294 P 01 57 39.7 -0.4
HRA IAmb IAmb 01 57 53.9
comp=Z,5.7nm,0.8s
YKA Yellowknife Ar 63.78 30 P **P 01 57 44.5 +4.1**
comp=Z,1.1nm,0.7s,baz=302,slow=7.7,SNR=1.7
KLMR Klimovskoe 64.73 328 *e*P **P 01 57 44.6 -2.0**
KLMR *e* 02 00 06.2
KLMR pmax pmax
comp=Z,49nm,1.5s
KLMR MLR MLR
comp=Z,650nm,16.0s
ARCES ARCESS Array B 64.84 340 P **P 01 57 48.6 +1.3**
comp=Z,3.5nm,0.8s,baz=57,slow=7.1,SNR=2.4
ARCES LR LR 02 29 31.6
comp=Z,142nm,18.6s,baz=42,slow=39
comp=Z,3.5nm,0.8s
BELG Belogornoye 64.86 318 LR LR 02 27 07.3
comp=Z,632nm,21.0s,baz=95,slow=37
BELG Belogornoye 64.86 318↓ *e*P **P 01 57 47.7 +0.2**
BELG pmax pmax
comp=Z,5.0nm,1.1s
MOS Moscow 68.26 324 *e*P P 01 58 19.2 +10
MOS pmax pmax
comp=Z,66nm,1.7s
MOS pmax pmax
comp=N,22nm,0.9s
MOS MLR MLR
comp=Z,300nm,16.0s
VRH Novokhopyorsk 68.63 318 *e*P **P 01 58 11.3 -0.3**
VRH pmax pmax
comp=Z,12nm,0.9s
OBN Obninsk 69.11 324↑ *e*P **P 01 58 13.9 -0.6**
OBN *e* 02 00 46.2
OBN *e*S **S 02 07 23.2 +3.9**
OBN pmax pmax
comp=Z,46nm,1.6s
OBN MLR MLR
comp=Z,238nm,15.0s
LPSR Galich'ya Gora 69.34 321 *e*P **P 01 58 15.4 -0.6**
LPSR pmax pmax
comp=Z,13nm,0.9s
MAK Makhachkala 69.56 309*d i*P **P 01 58 13.6 -3.9**
MAK *e* 02 00 50.2
MAK *e*S **S 02 07 20.3 -4.7**
MAK MLR MLR
comp=Z,362nm,17.0s
FINES FINESS Array B 69.74 333 P P 01 58 18.3 -0.1
FINES FINESS Array B 69.74 333 P **P 01 58 18.1 -0.3**
comp=Z,6.3nm,0.7s,baz=45,slow=6.9,SNR=13
FINES LR LR 02 31 44.9
comp=Z,322nm,18.1s,baz=46,slow=38
comp=Z,6.3nm,0.7s
FINES FINESS Array B 69.74 333 *i* P **P 01 58 19.2 +0.8**
FINES pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 69.98 319 *e*P **P 01 58 17.3 -2.7**
VSR pmax pmax
comp=Z,9.0nm,0.9s
VORD Divnogorie 70.05 319 *e*P **P 01 58 17.2 -3.2**
VORD pmax pmax
comp=Z,9.0nm,1.1s
AKT Akhty 70.18 307 *e*P **P 01 58 23.1 +1.5**
AKT *e* 02 01 00.9

AKT pmax pmax
comp=Z,26nm,1.2s
AKT MLR MLR
comp=Z,345nm,11.0s
GOF Gofitskoye 71.18 312 *ceP* **P 01 58 28.1 +0.6**
NCK Nalchik 71.69 311⇓ *eP* **P 01 58 30.6 0.0**
NCK pmax pmax
comp=Z,18nm,1.2s
KBZ Khabaz 71.99 311 P **P 01 58 33.0 +0.6**
comp=Z,8.0nm,0.9s,baz=46,slow=5.7,SNR=12
comp=Z,8.0nm,0.9s
KBZ Khabaz 71.99 311 *c iP* **P 01 58 32.4 +0.1**
KBZ pmax pmax
comp=Z,14nm,1.0s
KIV Kislovodsk 71.99 312 P 01 58 32.7 +0.2
KIV Kislovodsk 71.99 312 *eP* **P 01 58 30.0 -2.5**
KIV pmax pmax
comp=Z,20nm,1.1s
SHA1 Shidzhatmaz 72.13 311⇑ *eP* **P 01 58 32.0 -1.5**
NEUR Neytrino 72.37 311⇓ *eP* **P 01 58 35.1 +0.2**
NEUR pmax pmax
comp=Z,7.0nm,1.3s
GNI Garni 72.81 307 LR LR 02 35 37.8
comp=Z,68nm,19.9s,baz=72,slow=40
NWAO Narrogin (SRO) 73.03 202 LR LR 02 32 01.8
comp=Z,26nm,19.2s,baz=344,slow=37
SOC Sochi 73.98 313 *eP* **P 01 58 43.3 -0.9**
SOC *e* 02 01 35.7
SOC *eS* **S 02 08 17.3 +1.3**
SOC *eSS* **SS 02 13 01.5 +1.8**
SOC *eSSS* SSS 02 16 19.2
SOC MLR MLR
comp=Z,220nm,17.0s
DLMT Dillon 74.03 45 IAmb IAmb 01 59 05.9
comp=Z,15nm,1.4s
LHV Little Huntoon 74.50 54 IAmb IAmb 01 59 02.1
comp=Z,10nm,1.2s
NVAR Mina Array Bea 74.53 54 P **P 01 58 48.4 +0.7**
comp=Z,1.0nm,0.7s,baz=306,slow=6.7,SNR=13
NVAR LR LR 02 28 38.2
comp=Z,57nm,18.9s,baz=300,slow=33
comp=Z,1.0nm,0.7s
HFS Hagfors 74.98 336 P **P 01 58 48.1 -1.5**
comp=Z,6.3nm,1.0s,baz=46,slow=8.3,SNR=4.0
HFS LR LR 02 35 11.3
comp=Z,354nm,18.5s,baz=55,slow=38
comp=Z,6.3nm,1.0s
NB2 NORSAR Subarra 75.06 338 P **P 01 58 50.0 -0.2**
comp=Z,1.2nm,0.8s,baz=38,slow=5.6
NOA NORSAR Array B 75.06 338 P **P 01 58 49.1 -1.0**
comp=Z,2.0nm,0.8s,baz=38,slow=5.9,SNR=6.3
NOA LR LR 02 36 05.6
comp=Z,290nm,19.4s,baz=35,slow=39
comp=Z,2.0nm,0.8s
AK03 Malin Array Si 75.30 323 P **P 01 58 50.4 -1.3**
AKASG Malin Array Be 75.32 323 P **P 01 58 50.8 -1.0**
comp=Z,3.7nm,0.7s,baz=48,slow=5.8,SNR=14
AKASG LR LR 02 32 14.6
comp=Z,92nm,21.7s,baz=55,slow=36
comp=Z,3.7nm,0.7s
AKASG Malin Array Be 75.32 323 *i* P **P 01 58 51.7 -0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 75.32 323⇓ *iP* **P 01 58 51.6 -0.2**
AKBB pmax pmax
comp=Z,14nm,1.0s
AKBB Malin Array Si 75.32 323 P **P 01 58 51.1 -0.7**
AK01 Malin Array Si 75.33 323 P **P 01 58 51.6 -0.2**
AK01 pP **pwP 01 59 02.6 +0.5**
KIEV Kiev 75.33 323 P **P 01 58 51.2 -0.7**
KIEV IAmb IAmb 01 59 04.0
comp=Z,20nm,1.1s
KIEV Kiev 75.33 323 P **P 01 58 51.2 -0.7**
KIEV pmax pmax
comp=Z,20nm,1.1s
KIEV Kiev 75.33 323 P **P 01 58 51.1 -0.7**
comp=Z,72nm,1.4s
AK09 Malin Array Si 75.34 323 P **P 01 58 51.3 -0.6**
AK08 Malin Array Si 75.35 323 P **P 01 58 51.6 -0.3**
AK22 Malin Array Si 75.35 323 P **P 01 58 51.7 -0.3**
AK02 Malin Array Si 75.35 323 P **P 01 58 51.7 -0.3**
GURO Guroymak-BITLI 75.44 307 IAmb IAmb 01 59 06.3
comp=Z,18nm,1.2s
R11B Troy Canyon, C 76.32 52 P 01 58 59.5 +1.5
SFJD Kangerlussuaq 76.34 5 LR LR 02 35 54.8
comp=Z,103nm,18.3s,baz=342,slow=38
RNPP8 Varash 76.50 325 P **P 01 58 58.7 +0.2**
LUBAR Lubar, Ukraine 76.54 323 P **P 01 58 59.3 +0.5**
RNPP5 Staryi Chortor 76.56 325 P **P 01 58 58.3 -0.5**
TPNV Topopah Spring 76.71 54 IAmb IAmb 01 59 13.5
comp=Z,14nm,1.4s
QSM Queen of Sheba 76.88 55 IAmb IAmb 01 59 14.8
comp=Z,9.9nm,1.1s
GWY Greenwater Val 76.88 55 P **P 01 59 02.4 +1.2**
GWY IAmb IAmb 01 59 14.9
comp=Z,7.0nm,1.0s
FRB Frobisher Bay 77.07 14 LR LR 02 37 46.5
comp=Z,227nm,18.5s,baz=338,slow=39
PDAR Pinedale Array 77.34 46 P **P 01 59 02.8 -1.0**
PDAR Pinedale Array 77.34 46 P **P 01 59 04.2 +0.4**
comp=Z,0.3nm,0.6s,baz=287,slow=2.9,SNR=4.3
comp=Z,0.3nm,0.6s
KMPD K-Podol'skiy 78.08 322 P **P 01 59 07.0 -0.4**
PFO Pinyon Flats O 78.52 57 LR LR 02 34 52.2
comp=Z,177nm,18.1s,baz=284,slow=36
P17A Butcher Ranch, 78.67 49 IAmb IAmb 01 59 25.4
comp=Z,15nm,1.2s
RDMU Red Mountain 78.70 48 IAmb IAmb 01 59 25.5
comp=Z,28nm,1.5s
KNB Kanab 78.88 52 IAmb IAmb 01 59 26.1
comp=Z,23nm,1.5s
SRU San Rafael Swe 79.03 49 IAmb IAmb 01 59 26.4
comp=Z,13nm,1.3s
RAR Rarotonga 79.06 127 LR LR 02 29 59.9
comp=Z,195nm,19.0s,baz=276,slow=32
BUR08 Bucovina Ar. S 79.32 322 IAmb IAmb 01 59 55.6
comp=Z,11nm,1.3s
U15A North Rim 79.57 52 IAmb IAmb 01 59 30.0
comp=Z,12nm,1.4s
ESJX Sierra Juarez 79.82 58 IAmb IAmb 01 59 30.8
comp=Z,21nm,1.4s
BR131 Keskin Array S 79.94 312 IAmb IAmb 01 59 30.8
comp=Z,13nm,1.2s
BR131 Keskin Array S 79.94 312⇓ *eP* **P 01 59 17.1 -0.9**
BRTR Keskin Array B 79.94 312 P **P 01 59 18.0 0.0**
BRTR Keskin Array B 79.94 312 P **P 01 59 18.5 +0.5**
comp=Z,2.2nm,0.8s,baz=85,slow=5.2,SNR=10
BRTR LR LR 02 39 18.9
comp=Z,113nm,18.6s,baz=42,slow=39
comp=Z,2.2nm,0.8s
BRTR Keskin Array B 79.94 312 *i* P **P 01 59 18.3 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
OJC Ojcow 80.03 327 *eP* **P 01 59 19.4 +1.3**
OJC Ojcow 80.03 327 P **P 01 59 17.9 -0.2**
OJC Ojcow 80.03 327 P **P 01 59 17.9 -0.2**
ANTO Ankara 80.35 313 P **P 01 59 21.1 +1.0**
ANTO pmax pmax
comp=Z,11nm,1.3s
NIE Niedzica 80.38 326 *eP* **P 01 59 20.1 0.0**
MLR Muntele Rosu 80.42 320 LR LR 02 40 15.1
comp=Z,326nm,18.1s,baz=38,slow=40
PV16 Nyswonger Mesa 80.51 49 IAmb IAmb 01 59 35.3
comp=Z,16nm,1.2s
PV18 Skein Mesa, Pa 80.55 49 P **P 01 59 22.5 +1.0**
PV03 Paradox Valley 80.59 49 IAmb IAmb 01 59 35.1
comp=Z,17nm,1.4s
PV13 Radium Mtn., P 80.66 49 IAmb IAmb 01 59 36.1
comp=Z,19nm,1.2s
PV01 Paradox Valley 80.83 49 IAmb IAmb 01 59 37.0
comp=Z,10.0nm,1.2s
URZ Urewera 80.92 153 LR LR 02 31 51.2
comp=Z,68nm,18.6s,baz=310,slow=33
LANS Liptovska Anna 80.95 326 *eP* **P 01 59 25.1 +2.0**
LANS Liptovska Anna 80.95 326 *eP* **P 01 59 25.1 +2.0**
LANS *e* 01 59 35.8
STEB Steborice 81.12 328 *eP* **P 01 59 24.5 +0.5**
STEB *ex* x 01 59 34.9
MORC Moravsky Berou 81.34 328 *eP* **P 01 59 26.2 +1.0**
MORC *e* 01 59 36.7
DPC Dobruska-Polom 81.43 329 *eP* **P 01 59 26.6 +0.9**
DPC *ex* x 01 59 38.4
PSZ Piszkesteto 81.66 325 P **P 01 59 26.6 -0.3**
PSZ IAmb IAmb 01 59 39.6
comp=Z,24nm,1.4s
PSZ Piszkesteto 81.66 325 P **P 01 59 26.6 -0.3**
PSZ pmax pmax
comp=Z,24nm,1.4s
RAYN Ar Rayn 81.76 293 P **P 01 59 27.7 -0.2**
RAYN IAmb IAmb 01 59 40.0
comp=Z,14nm,1.2s
RAYN Ar Rayn 81.76 293 P **P 01 59 27.7 -0.2**
RAYN pmax pmax
comp=Z,14nm,1.2s
JAVC Velka Javorina 81.97 327 *eP* **P 01 59 29.5 +1.0**
JAVC *e* 01 59 39.7
CLL Collm 82.05 331 *i* P P 01 59 39.3 +11
CLL pmax pmax
comp=Z,42nm,1.8s
CLL MLR MLR
comp=Z,200nm,17.8s
CLL Collm 82.05 331 *eP* **P 01 59 29.0 +0.2**
CLL *i* x x 01 59 39.3
comp=Z,42nm,1.8s
CLL AMS AMS 02 35 00.0
comp=N,300nm,19.3s
CLL AMS AMS 02 35 00.0
comp=E,300nm,20.8s
VRAC Vranov 82.10 328 LR LR 02 38 21.4
comp=E,160nm,19.1s,baz=8.5,slow=37
VRAC Vranov 82.10 328 *eP* **P 01 59 30.4 +1.2**
VRAC *e* 01 59 40.7
KRUC Moravsky 82.37 328 *eP* **P 01 59 31.7 +1.1**
KRUC *e* 01 59 41.6
SRO Srobarova 82.46 326 *eP* **P 01 59 31.9 +0.9**
SRO pmax pmax
comp=Z,45nm,2.1s
SRO Srobarova 82.46 326 *eP* **P 01 59 31.9 +0.9**
MODS Modra-Piesok 82.50 327 *eP* **P 01 59 32.9 +1.6**
MODS Modra-Piesok 82.50 327 *eP* **P 01 59 32.8 +1.5**
MODS *e* 01 59 47.0
ASF Jabal al Asfar 82.62 305 LR LR 02 40 45.1
comp=Z,81nm,18.0s,baz=143,slow=39
ZVC Zvikov 83.02 329 *eP* **P 01 59 35.0 +1.1**
MMAI Mount Meron Ar 83.07 306 P **P 01 59 34.5 -0.1**
comp=Z,8.3nm,1.1s,baz=40,slow=11,SNR=6.7
MMAI LR LR 02 39 54.8
comp=Z,72nm,18.6s,baz=36,slow=38
comp=Z,8.3nm,1.1s
KHC Kasperske Hory 83.51 329⇑ *eP* **P 01 59 35.4 -1.1**
KHC pmax pmax
comp=Z,10.0nm,1.8s
KHC Kasperske Hory 83.51 329 *eP* **P 01 59 36.9 +0.4**
KHC *ex* x 01 59 47.5
PPT Papeete 83.52 117 LR LR 02 33 03.7
comp=Z,171nm,20.0s,baz=270,slow=33
PPT2 Papeete2 83.53 117 *e*LR LR 02 25 47.0
comp=Z,184nm,28.0s
PPT2 *e*LR LR 02 25 53.5
comp=Z,250nm,27.0s
GERES GERESS Array B 83.68 329 P **P 01 59 36.9 -0.6**
comp=Z,1.1nm,0.7s,baz=26,slow=6.0,SNR=9.2
GERES LR LR 02 40 46.5
comp=Z,188nm,19.1s,baz=9.5,slow=38
comp=Z,1.1nm,0.7s
RPZ Rata Peaks 83.91 160 LR LR 02 30 26.6
comp=Z,176nm,21.4s,baz=125,slow=31
TASM ASL Pad, Abuq 84.18 50 IAmb IAmb 01 59 54.6
comp=Z,7.2nm,1.3s
ANMO Albuquerque 84.18 50 LR LR 02 42 02.3
comp=Z,76nm,18.0s,baz=60,slow=39
ANMO Albuquerque 84.18 50⇑ *eP* **P 01 59 40.9 +0.5**
ANMO pmax pmax
comp=Z,7.0nm,1.9s
ABQ Albuquerque 84.19 50 IAmb IAmb 01 59 54.6
comp=Z,7.7nm,1.3s
TAOE Nuku Hiva Isla 85.09 105 *e*LR LR 02 26 25.7
comp=Z,212nm,26.2s
EIL Elat 85.49 304 LR LR 02 40 41.0
comp=Z,66nm,19.4s,baz=80,slow=38
SCHQ Schefferville 85.58 17 LR LR 02 43 19.4
comp=Z,96nm,18.2s,baz=316,slow=39
TBI Tubuai 87.41 122 *e*LR LR 02 27 44.2
comp=Z,1μm,29.0s
LPIG La Paz 88.60 61 LR LR 02 41 24.3
comp=Z,74nm,18.1s,baz=325,slow=37
TXAR Lajitas Array 89.67 53 P **P 02 00 07.1 0.0**
TXAR Lajitas Array 89.67 53 P **P 02 00 07.5 +0.3**
comp=Z,0.6nm,0.7s,baz=314,slow=5.6,SNR=7.2
comp=Z,0.6nm,0.7s
SADO Sadowa 90.72 28 LR LR 02 43 57.3
comp=Z,551nm,20.6s,baz=12,slow=38
VAE Valguarnera 92.17 321 LR LR 02 44 04.8
comp=Z,123nm,18.3s,baz=353,slow=37
FURI Furi 95.80 285 LR LR 02 50 40.3
comp=Z,54nm,18.3s,baz=58,slow=40
ESDC Sonseca Array 98.20 335 LR LR 02 49 22.8
comp=Z,219nm,18.4s,baz=14,slow=38
QSPA South Pole Qui 126.24 180 PKiKP PKiKP 02 06 12.1 +1.3
QSPA South Pole Qui 126.24 180 PKP **PKiKP 02 06 11.9 +1.2**
comp=Z,1.2nm,0.9s,baz=324,slow=3.3,SNR=6.6
NVL N'lazarevskaya 137.15 202 *e*PKIKP **PKPdf 02 06 30.9 +0.2**
NVL *e* 02 09 13.9
NVL *e*PPP PPP 02 12 14.0
NVL *e*SS SS 02 27 23.0 +2.3
NVL *e*SSS SSS 02 32 28.6
NVL pmax pmax
comp=Z,12nm,1.1s
SNAA Sanae 140.51 196⇓ P PKPpre 02 06 28.4
comp=Z,21nm,0.8s
SNAA Sanae 140.51 196 PKhKP PKPpre 02 06 29.3
comp=Z,1.5nm,1.1s,baz=119,slow=1.0,SNR=5.1
VNA2 Neumayer--Watz 142.07 196⇓ P **PKPdf 02 06 33.5 -6.2**
comp=Z,3.1nm,0.7s,baz=105,slow=2.5
VNA3 Neumayer Olymp 142.29 194⇑ P **PKPdf 02 06 35.4 -4.7**
comp=Z,1.1nm,0.7s
VNA1 Neumayer--Stat 142.46 195⇑ P **PKPdf 02 06 35.6 -4.8**
comp=Z,1.5nm,0.8s
H03N2 Juan Fernandez 145.99 97 T T 04 49 55.7
baz=291,slow=74,SNR=3.9
H03N3 Juan Fernandez 146.00 97 T T 04 50 00.3
baz=291,slow=74,SNR=3.5
H03N1 Juan Fernandez 146.01 97 T T 04 50 00.5
baz=291
LPAZ La Paz 146.11 62 PKPab 02 06 50.4 -0.3
LPAZ La Paz 146.11 62 PKPbc **PKPbc 02 06 49.9 -0.1**
comp=Z,2.9nm,0.8s,baz=296,slow=2.6,SNR=9.2

IDC ***03*** *01:59:14.3±7.9, 20°.69S×178°.11W, h536km±85km, mb3.0/3, mbtmp4.0/4, Error ellipse: s-maj=53.9km s-min=39.7km az=12.0*
ISC 03 01:59:14.0±1.4,**20°.7S**±0°.2×**178°.2W**±0°.3,**h534**km,**n9,**
σ0s**41/8,mb3.8/3,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.01**	**192**	P		P		**02 02 52.7**	**+0.1**
	8.5nm,1.0s,baz=0.0,slow=16,SNR=2.8								
ASAR	**Alice Springs**	**44.35**	**257**	P		P		**02 06 37.2**	**+0.1**
	1.8nm,0.6s,baz=98,slow=8.2,SNR=21								
ASAR				PcP		**PcP**		**02 08 09.4**	**-0.3**
	0.4nm,0.6s,baz=90,slow=3.1,SNR=2.0								
	1.8nm,0.6s								
WRA	**Warramunga Arr**	**44.44**	**262**	P		P		**02 06 37.8**	**0.0**
	0.9nm,0.3s,baz=98,slow=8.4,SNR=11								
	0.9nm,0.3s								
ILAR	**Eielson Array**	**88.50**	**13**	P		P		**02 11 09.3**	**+0.2**
	0.1nm,0.4s,baz=204,slow=5.0,SNR=4.9								
	0.1nm,0.4s								
BVAR	**Borovoye Array**	**119.11**	**320**	PKP		**PKPdf**		**02 17 01.4**	**-0.7**
	0.5nm,0.4s,baz=101,slow=2.9,SNR=3.3								
HFS	**Hagfors**	**139.67**	**351**	PKhKP		PKPpre		02 17 34.5	
	1.7nm,0.7s,baz=56,slow=2.6,SNR=1.6								
AKASG	**Malin Array Be**	**143.08**	**331**	PKP		PKPab		02 17 44.4	-0.2
	0.2nm,0.3s,baz=49,slow=3.8,SNR=5.1								
BRTR	**Keskin Array B**	**146.84**	**312**	PKPbc		**PKPbc**		**02 17 56.8**	**0.0**
	0.3nm,0.6s,baz=91,slow=4.4,SNR=1.8								
MMAI	**Mount Meron Ar**	**147.77**	**299**	PKPbc		**PKPbc**		**02 17 59.8**	**+0.5**
	0.5nm,0.4s,baz=83,slow=2.3,SNR=4.8								

JMA ***03*** *02:02:17.8±0.1, 24°.2N±0°.4×121°.5E±0°.8, h48km, MV3.6/16, TAIWAN REGION*
TAP ***03*** *02:02:18.4, 24°.23N×121°.57E, h44km, ML3.8, B*
ISC 03 02:02:19.2±0.9,**24°.22N**±0°.01×**121°.59E**±0°.02,**h33**km±1km,
n165,σ0s**98/277,7C-3D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.05**	**175**	P		**P**		**02 02 25.3**	**+0.5**
NACB	**Ninganchiao**	**0.05**	**175**	S		**Sb**		**02 02 29.9**	**+1.3**

NACB Ninganchiao 0.05 175⇑ *iP* **Pb 02 02 25.4 +0.5**
NACB *i* S **Sb 02 02 29.9 +1.3**
ETL Fush Village 0.07 154 *i* P **Pb 02 02 25.5 +0.6**
ETL *i* S **Sb 02 02 30.4 +1.5**
ETLH Xiulin Townshi 0.10 261 *i* P **Pb 02 02 25.9 +0.8**
ETLH *i* S **Sb 02 02 31.2 +2.0**
TWD Chiawan 0.14 178 *i* P **Pb 02 02 25.7 +0.4**
TWD *i* S **Sb 02 02 30.7 +1.3**
EHP Heping Village 0.16 58 P **Pb 02 02 25.8 +0.3**
EHP S **Sb 02 02 31.6 +1.8**
EAHA Aohua 0.17 52 *i* P **Pb 02 02 26.0 +0.4**
EAHA S **Sb 02 02 31.2 +1.3**
HWA Hwalien 0.24 177 P **Pn 02 02 26.8 +0.7**
HWA S **Sb 02 02 33.1 +2.0**
ENA Nanau 0.25 34 P **Pn 02 02 26.6 +0.5**
ENA S **Sb 02 02 32.6 +1.3**
LXIB Xiulin Townshi 0.26 219 *i* P **Pn 02 02 26.7 +0.3**
LXIB S **Sb 02 02 33.1 +1.4**
ETM Tongmen 0.27 199 *i* P **Pn 02 02 26.5 -0.1**
ETM S **Sb 02 02 32.2 +0.6**
NNSB Datong 0.28 317⇑ *iP* **Pn 02 02 27.1 +0.3**
NNSB *i* S **Sb 02 02 33.1 +1.0**
EWUT Wuta 0.28 38 P **Pn 02 02 26.8 0.0**
EWUT S **Sb 02 02 32.8 +0.9**
NNS Nan Shan 0.29 318 *i* P **Pn 02 02 27.2 +0.2**
NNS S **Sb 02 02 33.2 +0.8**
WHF Hehuan Shan 0.31 256 *i* P **Pn 02 02 27.8 +0.3**
WHF S **Sb 02 02 34.2 +1.1**
FUSS Fushou 0.32 275⇓ *iP* **Pb 02 02 27.9 +0.5**
FUSS *i* S **Sb 02 02 34.2 +1.1**
LATG Datong 0.32 349 *i* P **Pn 02 02 27.3 -0.2**
LATG S **Sb 02 02 33.3 +0.8**
TEYL Yanliau Villag 0.35 179 P **Pb 02 02 27.9 +0.2**
TWT Tachien 0.38 275 *i* P **Pb 02 02 28.7 +0.5**
TWT *i* S **Sb 02 02 35.6 +1.3**
TDCB Techi 0.40 275⇓ *iP* **Pb 02 02 28.6 +0.2**
TDCB *i* S **Sb 02 02 35.4 +0.7**
ENTT Nioudou 0.42 357⇑ *iP* **Pb 02 02 28.6 0.0**
ENTT *i* S **Sb 02 02 35.4 +0.3**
ESAO Su ao 0.42 33 P **Pb 02 02 28.4 -0.3**
ESAO S **Sb 02 02 35.7 +0.6**
NDS Dongshan 0.42 16⇑ *iP* **Pb 02 02 28.4 -0.3**
NDS *i* S **Sb 02 02 35.5 +0.2**
ESL Shilin 0.43 200 *i* P **Pb 02 02 27.8 -1.0**
ESL S **Sb 02 02 34.6 -0.7**
SHUL Shoufeng 0.43 183 *i* P **Pb 02 02 28.6 -0.2**
SHUL *i* S **Sn 02 02 36.6 +0.8**
TWC Suao 0.45 31 P **Pb 02 02 28.9 -0.2**
TWC *eS* **Sn 02 02 37.5 +1.2**
OWD Renai 0.46 235 *i* P **Pb 02 02 29.4 0.0**
OWD *i* S **Sb 02 02 36.4 0.0**
YHNB Yeheng 0.49 336 P **Pb 02 02 29.3 -0.4**
YHNB Yeheng 0.49 336 S **Sb 02 02 37.1 +0.2**
YHNB Yeheng 0.49 336 *i* P **Pb 02 02 29.4 -0.4**
YHNB S **Sb 02 02 36.6 -0.3**
WUSB Renai 0.49 242⇓ *iP* **Pb 02 02 29.8 +0.1**
WUSB S **Sb 02 02 37.4 +0.4**
NSK Sanguang 0.50 335 *i* P **Pb 02 02 29.3 -0.6**
NSK S **Sb 02 02 37.1 -0.1**
FUSB Fushanzhiwuyua 0.54 360⇑ *iP* **Pn 02 02 30.1 -0.5**
FUSB *i* S **Sb 02 02 38.2 0.0**
WARBT Fenglin Townsh 0.54 200⇑ *iP* **Pn 02 02 28.8 -1.7**
WARBT *i* S **Sb 02 02 36.6 -1.5**
NWLT Wulai 0.56 352 *i* P **Pn 02 02 30.3 -0.5**
NWLT *i* S **Sb 02 02 38.7 -0.1**
ILA Ilan 0.56 15 P **Pn 02 02 30.9 +0.1**
EGFH Guangfu 0.57 195 *eP* Pn 02 02 29.1 -1.8
EGFH S **Sn 02 02 37.7 -1.5**
WHP Taichung City 0.59 276 *i* P **Pn 02 02 31.4 +0.2**
WHP *i* S **Sn 02 02 40.2 +0.4**
NFF Wufeng Townshi 0.59 314 P **Pn 02 02 31.1 -0.1**
NFF *eS* **Sn 02 02 39.7 -0.1**
EOS2 EOS2 0.62 71 *eP* **Pb 02 02 32.8 +1.2**
VWDT VWDT 0.62 221 *i* P **Pn 02 02 31.6 0.0**
VWDT S **Sn 02 02 40.8 +0.4**
EOS3 EOS3 0.67 84 *eP* **Pb 02 02 33.1 +0.7**
KSHI Guanxi Townshi 0.67 326 *i* P **Pn 02 02 32.6 +0.3**
KSHI *eS* **Sb 02 02 43.4 +1.7**
EOS4 EOS4 0.67 98 *i* P **Pn 02 02 32.1 +0.2**
EOS4 *eS* **Sb 02 02 42.6 +1.3**
LIOB Emei 0.67 309 *i* P **Pn 02 02 32.8 +0.4**
LIOB S **Sn 02 02 42.0 +0.3**
NSTT Nanjuang 0.67 307 *eP* **Pn 02 02 32.7 +0.3**
NSTT S **Sn 02 02 41.5 -0.3**
EGS 0.69 27 *eP* **Sn 02 02 43.0 -0.8**
EGS *eS* **Sb 02 02 42.9 +0.5**
SMLT Sun Moon Lake 0.72 242 P **Pn 02 02 34.0 +0.9**
SMLT S **Sb 02 02 44.3 +1.3**
SSLB Suanglung 0.72 233 P **Pn 02 02 32.9 -0.2**
SSLB Suanglung 0.72 233 S **Sn 02 02 43.1 0.0**
SSLB Suanglung 0.72 233 *eP* **Pn 02 02 33.1 0.0**
SSLB *eS* **Sn 02 02 43.0 0.0**
NHDH Xindian Distri 0.74 355 P **Pn 02 02 33.1 -0.2**
NHDH S **Sn 02 02 43.4 0.0**
TYC Yuchr 0.74 245 P **Pn 02 02 33.5 +0.2**
TYC *eS* **Sn 02 02 44.4 +1.0**
HGSD Ruisui 0.74 192 *eP* **Pn 02 02 32.1 -1.2**
HGSD *eS* **Sn 02 02 43.5 +0.1**
EHY Hungye 0.75 199 *eP* Pn 02 02 31.4 -2.1
EHY *eS* **Sn 02 02 42.5 -1.2**
TWA Mucha 0.76 360 P **Pn 02 02 33.2 -0.4**
TWA *eS* **Sn 02 02 43.0 -0.8**
TAIO Taipei 0.76 353 P **Pn 02 02 33.0 -0.5**
TATO Taipei 0.76 353 S **Sn 02 02 43.7 -0.1**
TWQ1 Liyutan 0.76 280 *eP* **Pn 02 02 33.5 0.0**
TWQ1 S **Sb 02 02 45.1 +1.0**
EHYH Wanrong 0.76 197 *eP* **Pn 02 02 31.6 -1.9**
EHYH *eS* **Sn 02 02 43.8 -0.1**
TIPB Shuangxi 0.78 16 *i* P **Pn 02 02 33.6 -0.3**
TIPB S **Sn 02 02 43.7 -0.7**
NSY Sanyi 0.78 284 P **Pn 02 02 34.5 +0.6**
SBCB Hsinchu 0.79 316 P **Pn 02 02 34.2 +0.2**
SBCB S **Sb 02 02 45.8 +0.7**
NMLH Miaoli 0.79 293 *i* P **Pn 02 02 34.0 0.0**
NMLH S **Sb 02 02 45.9 +0.8**
HSN Hsinchu 0.81 316 P **Pn 02 02 34.0 -0.2**
HSN *eS* **Sn 02 02 45.7 +0.6**
TAP Taipei 0.82 355 P **Pn 02 02 34.0 -0.4**
TAP S **Sn 02 02 45.2 -0.1**
NCUH Zhongli 0.83 334 *i* P **Pn 02 02 34.3 -0.3**
NCUH S **Sn 02 02 46.2 +0.6**
TCU Taichung 0.84 265 P **Pn 02 02 34.7 0.0**
TCU *eS* **Sn 02 02 47.0 +1.2**
WHYT Xinyi Township 0.85 232 P **Pn 02 02 35.5 +0.6**
WHYT S **Sb 02 02 47.7 +0.8**
NWF Wu-fen Shan 0.86 12 *i* P **Pn 02 02 34.7 -0.4**
TWB1 Santiao Chiao 0.86 25 P **Pn 02 02 34.9 -0.1**
TWB1 S **Sn 02 02 46.1 -0.3**
WFSB Wu-fen Shan 0.86 12⇑ *iP* **Pn 02 02 34.7 -0.3**
WFSB *i* S **Sn 02 02 46.1 -0.3**
YULB Yu-li 0.87 198 P **Pn 02 02 33.2 -1.9**
YULB Yu-li 0.87 198 P Pn 02 02 32.8 -2.3
YULB *eS* **Sn 02 02 45.4 -1.1**
WDJ Dajia District 0.88 278 P **Pn 02 02 35.1 0.0**
WJS Zhushan 0.88 243 *eP* **Pn 02 02 36.3 +1.0**
WJS *i* S **Sb 02 02 49.3 +1.7**
TWS1 Kuangyinshan 0.89 350 P **Pn 02 02 34.8 -0.5**
TWS1 S **Sn 02 02 47.5 +0.4**
WNT Mingjian 0.90 248 *eP* **Pn 02 02 36.1 -0.7**
WNT S **Sb 02 02 49.2 +1.2**
SXI1 Grass Mountain 0.91 17 *i* P **Pn 02 02 35.1 -0.6**
SXI1 *i* S **Sn 02 02 47.5 -0.1**
TWF1 Yuli 0.91 197 *eP* **Pn 02 02 34.9 -0.7**
ECBN Changbin 0.91 188 P **Pn 02 02 34.7 -1.0**
ECBN S **Sn 02 02 47.1 -0.5**
YM01 YM01 0.92 359 P **Pn 02 02 34.9 -1.0**
YM01 *i* S **Sn 02 02 47.0 -1.0**
YUS Yu-Shan 0.94 219 *i* P **Pn 02 02 36.3 -0.1**
YUS S **Sn 02 02 49.2 +0.4**
ZUZH Zhuzihu 0.94 357 *i* P **Pn 02 02 35.1 -0.9**
ZUZH *eS* **Sn 02 02 46.9 -1.4**
TNOU National Taiwa 0.94 10 P **Pn 02 02 35.1 -0.9**
TNOU S **Sn 02 02 47.0 -1.2**
NTST Danshui 0.95 352 *eP* **Pn 02 02 35.7 -0.5**
NTST *eS* **Sn 02 02 48.1 -0.4**
WCHH Zhanghua 0.95 262 P **Pn 02 02 36.3 +0.1**
WCHH S **Sn 02 02 49.4 +0.7**
YM08 YM08 0.96 360 *i* P **Pn 02 02 35.1 -1.3**
YM08 *eS* **Sn 02 02 47.0 -1.9**

WCH1	**Changhua City**	**0.96**	**261**	*eP*	**Pn**	**02 02 36.7**	**+0.3**
WCH1				*eS*	**Sn**	**02 02 49.8**	**+0.9**
ALS	**Alishan**	**1.01**	**226**	*i* P	**Pn**	**02 02 37.9**	**+0.6**
ALS				S	**Sb**	**02 02 52.0**	**+0.5**
CHKH	**Chenggong**	**1.04**	**190**	*eP*	**Pn**	**02 02 36.0**	**-1.4**
CHKH				S	**Sn**	**02 02 50.3**	**-0.5**
CHN5	**Tsauling**	**1.04**	**233**	P	**Pn**	**02 02 38.2**	**+0.7**
CHN5				*i* S	**Sb**	**02 02 52.9**	**+0.7**
TWY	**Chenhua**	**1.05**	**0**	*eP*	**Pn**	**02 02 36.7**	**-0.8**
FULB	**Fuli**	**1.05**	**195**	*i* P	**Pn**	**02 02 36.4**	**-1.3**
FULB				*eS*	**Sn**	**02 02 52.5**	**+1.3**
WGK	**Gukeng**	**1.08**	**241**	P	**Pn**	**02 02 39.1**	**+1.1**
WGK				S	**Sb**	**02 02 54.2**	**+1.0**
WDL	**Douliou City**	**1.09**	**243**	*eP*	**Pn**	**02 02 40.0**	**+0.5**
WDL				*eS*	**Sb**	**02 02 54.8**	**+1.4**
WDLH	**Douliu**	**1.10**	**241**	*eP*	**Pn**	**02 02 39.1**	**+0.9**
WDLH				S	**Sb**	**02 02 55.4**	**+1.6**
EHD	**Haiduan**	**1.12**	**198**	*eP*	**Pn**	**02 02 37.3**	**-1.3**
CHKT	**Chengkung**	**1.14**	**190**	*eP*	**Pn**	**02 02 37.5**	**-1.3**
CHKT				*eS*	**Sn**	**02 02 52.5**	**-0.7**
ELDTW	**Lidau**	**1.16**	**207**	P	**Pn**	**02 02 38.7**	**-0.5**
ELDTW				S	**Sn**	**02 02 53.1**	**-0.7**
ECS	**Chishang**	**1.17**	**197**	P	**Pn**	**02 02 38.6**	**-0.7**
ECS				*eS*	**Sn**	**02 02 52.7**	**-1.4**
WCKO	**Fanlu**	**1.19**	**229**	*eP*	**Pn**	**02 02 40.9**	**+1.3**
WCKO				*eS*	**Sb**	**02 02 58.0**	**+1.6**
WTK	**Tuku**	**1.22**	**244**	*eP*	**Pn**	**02 02 40.5**	**+0.6**
WTK				S	**Sn**	**02 02 57.2**	**+1.9**
CHN2	**Minshiung**	**1.23**	**236**	P	**Pn**	**02 02 41.6**	**+1.6**
CHN2				*eS*	**Sb**	**02 02 58.8**	**+1.3**
WTCT	**Ta-ch'eng**	**1.25**	**254**	P	**Pn**	**02 02 40.9**	**+0.6**
WTCT				S	**Sn**	**02 02 58.0**	**+0.8**
JYNG	**Yonagunijimaku**	**1.26**	**79**	P	**Pn**	**02 02 40.3**	**-0.1**
JYNG				*eS*	**Sn**	**02 02 57.0**	**+0.9**
EDH	**Donghe**	**1.27**	**192**	*eP*	**Pn**	**02 02 38.8**	**-1.8**
EDH				S	**Sn**	**02 02 55.3**	**-1.2**
TPUB	**Ta-pu**	**1.27**	**224**	P	**Pn**	**02 02 41.0**	**+0.4**
TPUB	**Ta-pu**	**1.27**	**224**	P	**Pn**	**02 02 41.6**	**+0.9**
TPUB				S	**Sb**	**02 02 59.3**	**+0.6**
STYH	**Taoyuan**	**1.29**	**216**	*i* P	**Pn**	**02 02 41.3**	**+0.5**
STYH				*eS*	**Sn**	**02 02 58.0**	**+1.1**
CHY	**Chiayi**	**1.29**	**236**	*eP*	**Pn**	**02 02 41.9**	**+1.1**
CHY				*eS*	**Sb**	**02 02 59.7**	**+0.5**
YOJ	**Yonaguni jima**	**1.32**	**79**	P	**Pn**	**02 02 40.9**	**-0.3**
YOJ	**Yonaguni jima**	**1.32**	**79**	P	**Pn**	**02 02 41.2**	**-0.1**
YOJ				*eS*	**Sn**	**02 02 58.2**	**+0.5**
YOJ	**Yonaguni jima**	**1.32**	**79**	*i* P	**Pn**	**02 02 41.0**	**-0.3**
YOJ				S	**Sn**	**02 02 57.9**	**+0.2**
LONT	**Longtian**	**1.38**	**198**	*eP*	Pn	02 02 39.7	-2.4
WSF	**Szhu**	**1.38**	**245**	*eP*	**Pn**	**02 02 41.8**	**-0.3**
TWK	**Hsinying**	**1.39**	**227**	P	**Pn**	**02 02 43.2**	**+1.0**
TWK				*eS*	**Sb**	**02 03 02.1**	**+0.1**
SNST	**Tainan City**	**1.41**	**225**	P	**Pn**	**02 02 43.6**	**+1.0**
SNST				S	**Sb**	**02 03 02.5**	**-0.2**
CHN1	**Nanshi**	**1.42**	**224**	P	**Pn**	**02 02 43.6**	**+0.9**
CHN1				S	**Sb**	**02 03 02.8**	**-0.1**
WSL	**Shuilin Townsh**	**1.43**	**241**	P	**Pn**	**02 02 43.3**	**+0.5**
WSL				*i* S	**Sn**	**02 03 01.7**	**+1.3**
PCYT	**Pengchaiyu**	**1.47**	**17**	*eP*	**Pn**	**02 02 42.7**	**-0.6**
PCYT				S	**Sn**	**02 03 01.0**	**-0.4**
TWG	**Pinlang**	**1.47**	**199**	*eP*	Pn	02 02 41.1	-2.3
TWG				*eS*	**Sn**	**02 02 58.2**	**-3.4**
TWGBT	**Beinan**	**1.47**	**199**	P	Pn	02 02 41.0	-2.4
TWGBT	**Beinan**	**1.47**	**199**	*eP*	Pn	02 02 40.8	-2.6
TWGBT				*eS*	**Sn**	**02 02 58.3**	**-3.3**
ICHU	**Yijhu**	**1.48**	**235**	*eP*	**Pn**	**02 02 44.3**	**+0.9**
TTN	**Taitung**	**1.52**	**196**	*eP*	**Pn**	**02 02 42.3**	**-1.7**
TTN				*eS*	**Sn**	**02 03 01.6**	**-1.0**
CHN8	**Yiju**	**1.54**	**236**	*eP*	**Pn**	**02 02 45.4**	**+1.2**
CHN8				S	**Sb**	**02 03 05.8**	**-0.4**
LDUT	**Ludao**	**1.55**	**184**	*eP*	Pn	02 02 42.1	-2.3
LDUT				*eS*	**Sn**	**02 03 01.7**	**-1.6**
CHN3	**Shinhua**	**1.60**	**225**	*eP*	**Pn**	**02 02 47.2**	**+2.0**
CHN3				*eS*	**Sb**	**02 03 10.0**	**+1.9**
SCLT	**Jiali**	**1.65**	**231**	*eP*	**Pn**	**02 02 45.2**	**-0.6**
SCLT				S	**Sn**	**02 03 08.5**	**+2.6**
SCST	**Cishan**	**1.67**	**217**	*eP*	**Pn**	**02 02 47.1**	**+1.1**
SCST				*eS*	**Sb**	**02 03 09.7**	**-0.3**
SSD	**Sandimen**	**1.71**	**211**	*eP*	**Pn**	**02 02 47.7**	**+1.0**
SSD				*eS*	**Sb**	**02 03 10.3**	**-0.9**
ECL	**Taimali**	**1.72**	**200**	*eP*	**Pn**	**02 02 45.6**	**-1.2**
TSMG	**Majia**	**1.74**	**210**	*eP*	**Pn**	**02 02 48.0**	**+0.9**
TSCK	**Chigu Township**	**1.75**	**232**	*eP*	**Pn**	**02 02 46.5**	**-0.6**
TSCK				*eS*	**Sn**	**02 03 09.3**	**+1.1**
MASBT	**Mashibuluo**	**1.83**	**209**	*eP*	**Pn**	**02 02 46.7**	**-0.1**
MASBT				*eS*	**Sn**	**02 03 12.7**	**+2.4**
EAST	**Anshuo**	**1.95**	**201**	*eP*	**Pn**	**02 02 51.0**	**+1.0**
IRIF	**Iriomote-Funau**	**1.96**	**86**	*eP*	**Pn**	**02 02 49.6**	**-0.4**
IRIF				*eS*	**Sn**	**02 03 13.4**	**0.0**
TAW	**Tawu**	**1.96**	**199**	*eP*	**Pn**	**02 02 49.6**	**-0.5**
PNG	**Penghu**	**1.97**	**251**	*eP*	**Pn**	**02 02 49.1**	**-1.2**
PNG				*eS*	**Sn**	**02 03 12.2**	**-1.7**
PHUB	**P'eng-hu**	**1.98**	**250**	*eP*	**Pn**	**02 02 49.1**	**-1.2**
PHUB				*eS*	**Sn**	**02 03 11.4**	**-2.5**
TAWH	**Dawu Township**	**1.98**	**199**	*eP*	**Pn**	**02 02 51.0**	**+0.6**
WDGT	**Dungji**	**2.01**	**242**	P	**Pn**	**02 02 50.2**	**-0.5**
WDGT				*eS*	**Sn**	**02 03 14.4**	**-0.3**
HATJ	**Hateruma jima**	**2.03**	**94**	*eP*	**Pn**	**02 02 51.4**	**+0.3**
HATJ				*eS*	**Sn**	**02 03 16.2**	**+1.0**
SCZT	**Fangliau**	**2.05**	**206**	*eP*	**Pn**	**02 02 51.6**	**+0.4**
LAY	**Lan-yu**	**2.17**	**181**	*eP*	**Pn**	**02 02 51.3**	**-1.8**
JKRS	**Kuro-shima**	**2.21**	**89**	*i* P	**Pn**	**02 02 53.8**	**+0.3**
JKRS				*eS*	**Sn**	**02 03 20.3**	**+1.1**
LYUB	**Lan-yu**	**2.21**	**180**	*eP*	Pn	02 02 50.9	-2.7
LYUB				*eS*	**Sn**	**02 03 17.3**	**-2.4**
VCHM	**Qimei**	**2.22**	**243**	*eP*	**Pn**	**02 02 52.5**	**-1.2**
VCHM				*eS*	**Sn**	**02 03 18.4**	**-1.6**
JIJ	**Ishigaki jima**	**2.33**	**86**	P	**Pn**	**02 02 54.7**	**-0.5**
JIJ				S	**Sn**	**02 03 22.0**	**-0.7**
TWKBT	**Hengchun**	**2.38**	**198**	*eP*	**Pn**	**02 02 55.9**	**0.0**
PTMZ	**Houxiangcun**	**2.39**	**290**	*eP*	**Pn**	**02 02 54.6**	**-1.4**
MATB	**Ma-tsu**	**2.43**	**323**	*eP*	**Pn**	**02 02 54.8**	**-1.7**
JISG	**Ishigakijimahi**	**2.51**	**81**	P	**Pn**	**02 02 57.0**	**-0.6**
JISG				*eS*	**Sn**	**02 03 26.5**	**-0.5**
JTJ	**Tarama**	**2.87**	**81**	P	**Pn**	**02 03 02.7**	**+0.2**
JTJ				*eS*	**Sn**	**02 03 35.7**	**-0.2**
KNM	**Kinmen**	**2.89**	**274**	*eP*	**Pn**	**02 03 02.8**	**0.0**
KNMB	**Chin-men Tao**	**2.93**	**275**	*eP*	**Pn**	**02 03 01.6**	**-1.8**
XPSS	**Dashiqiu**	**2.98**	**335**	*eP*	**Pn**	**02 03 02.2**	**-1.9**
MHZQ	**Yeshan**	**2.98**	**309**	*eP*	Pn	02 03 01.9	-2.2
JIRB	**Irabujima**	**3.32**	**79**	*eP*	**Pn**	**02 03 08.9**	**+0.1**
JIRB				S	**Sn**	**02 03 47.8**	**+0.7**
AXDP	**Jialang**	**3.37**	**282**	*eP*	**Pn**	**02 03 07.8**	**-1.6**
JMJ2	**Miyako jima3**	**3.44**	**81**	*eP*	**Pn**	**02 03 11.1**	**+0.6**
ZPLA	**Ao Xicun**	**3.52**	**266**	*eP*	**Pn**	**02 03 10.1**	**-1.5**
SXFK	**Yanhouchang**	**4.18**	**302**	*eP*	**Pn**	**02 03 18.6**	**-2.0**

*NEIC **03** 02:08:57, 38.˚04N×97.˚98W, h2km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-0.11; $M_{\theta\theta}$3.13; $M_{\phi\phi}$-3.02; $M_{r\theta}$0.06; $M_{r\phi}$1.71; $M_{\theta\phi}$0.69; Fault plane solution: $M_0$3.59000×10^{13} NP1:ϕ_s211.00000°, δ85.00000°, λ-170.00000°. NP2:ϕ_s120.00000°, δ80.00000°, λ-5.00000°. Principal axes: T 3.5866, Plg4.0000°, Azm345.0000°; N -0.0007, Plg79.0000°, Azm237.0000°; P -3.5858, Plg11.0000°, Azm76.0000°;*

*NEIC **03** 02:08:58.6±0.4, 38.˚03N×0.˚02×97.˚98W±0.˚03, h2km±4km, mb_Lg3.3/143, ML3.4/8, Mwr3.0/3(SLM) Error ellipse: s-maj=3.4km s-min=2.2km az=58.0*

*IDC **03** 02:08:58.1±0.9, 38.˚14N×98.˚11W, h0km, mbtmp3.4/5, ML3.3/5, Error ellipse: s-maj=10.7km s-min=9.6km az=9.0*

ISC 03 02:08:58.3±0.8, 38˚01N±0.˚04×98˚04W±0.˚05, h10km, n89, σ1s21/36, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
R32A	**Long Quarter,**	**0.67**	**308**			**Pg**	**02 09 11.4**	**+0.2**
R32A				Sg		**Sg**	**02 09 20.7**	**+0.7**
R32A				IAML			02 09 23.9	
	3µm,0.6s							
R32A				IAML			02 09 25.9	
	3µm,0.4s							
KAN08	**Anthony NE Sta**	**0.78**	**176**			**Pg**	**02 09 13.2**	**-0.2**
KAN08				IAML			02 09 30.7	
	comp=N,980nm,0.5s							
KAN01	**Argonia South**	**0.88**	**165**			**Pg**	**02 09 14.9**	**-0.4**
KAN01						**Sg**	**02 09 26.9**	**+0.1**
KAN01				IAML			02 09 36.6	
	comp=N,630nm,0.4s							
KAN14	**Manchester OK**	**1.05**	**176**			**Pg**	**02 09 18.1**	**-0.5**
GC02	**Grant County #**	**1.17**	**173**			**Pb**	**02 09 20.0**	**-0.5**
GC02				Sg		**Sb**	**02 09 36.2**	**+0.5**
CROK	**Carrier**	**1.50**	**178**			**Pn**	**02 09 25.7**	**+0.4**
CROK				Sg		**Sn**	**02 09 46.3**	**+1.3**
NOKA	**Waynoka**	**1.54**	**208**			**Pn**	**02 09 27.1**	**+1.3**
CBKS	**Cedar Bluff**	**1.55**	**302**			**Pn**	**02 09 27.3**	**+1.2**
KSU1	**Kansas State U**	**1.57**	**45**			**Pn**	**02 09 26.1**	**-0.1**
KSU1				IAmb_Lg			02 09 48.7	
	comp=Z,152nm,0.8s							
OK038	**West end E0370**	**1.63**	**200**			**Pn**	**02 09 28.5**	**+1.5**
T35A	**Sooner Cattle**	**1.64**	**131**			**Pn**	**02 09 27.4**	**+0.3**
T35A				IAmb_Lg			02 09 49.9	
	comp=Z,130nm,0.7s							
OK051	**E0350 and S346**	**1.78**	**147**			**Pn**	**02 09 29.9**	**+0.8**
OK048	**Pawnee Station**	**1.82**	**151**			**Pn**	**02 09 30.3**	**+0.7**
QUOK	**Quay**	**2.12**	**149**			**Pn**	**02 09 34.5**	**+0.7**
OK052	**Battle Ridge R**	**2.24**	**153**			**Pn**	**02 09 35.9**	**+0.4**
OK029	**Liberty Lake**	**2.26**	**168**	Pn		**Pn**	**02 09 36.4**	**+0.7**
DEOK	**Depew**	**2.49**	**150**	Pn		**Pn**	**02 09 39.1**	**+0.2**
TUL3	**Leonard**	**2.76**	**139**			**Pn**	**02 09 42.9**	**+0.3**
TUL3				IAmb_Lg			02 10 32.4	
	comp=Z,110nm,0.8s							
RLO	**Rose Lookout**	**3.04**	**126**	IAmb_Lg			02 10 40.9	
	comp=Z,71nm,0.9s							
U38A	**Gravette**	**3.31**	**117**			**Pn**	**02 09 51.1**	**+0.9**
U38A				IAmb_Lg			02 10 44.9	
	comp=Z,103nm,0.9s							
WMOK	**Wichita Mounta**	**3.32**	**191**	Pn		**Pn**	**02 09 52.1**	**+1.8**
BGNE	**Belgrade**	**3.40**	**359**			**Pn**	**02 09 52.9**	**+1.6**
BGNE				IAmb_Lg			02 10 51.7	
	comp=Z,50nm,0.7s							
SMWD	**Samnorwood**	**3.40**	**212**	IAmb_Lg			02 10 51.3	
	comp=Z,84nm,0.8s							
HHAR	**Hobbs**	**3.70**	**116**			**Pn**	**02 09 56.2**	**+0.6**
KSCO	**Kaye Shedlock'**	**3.73**	**287**			**Pn**	**02 09 57.3**	**+1.2**
KSCO				IAmb_Lg			02 11 08.3	
	comp=Z,90nm,0.7s							
P38A	**Dawn**	**3.88**	**64**	Pn		**Pn**	**02 09 58.0**	**+0.1**
P38A				IAmb_Lg			02 11 00.3	
	comp=Z,68nm,0.8s							
RTBA	**Rita Blanca**	**4.06**	**249**	Pn		**Pn**	**02 10 02.3**	**+1.7**
LOOK	**Love County**	**4.07**	**170**	IAmb_Lg			02 11 12.5	
	comp=Z,84nm,0.9s							
MGMO	**Mountain Grove**	**4.67**	**99**	IAmb_Lg			02 11 30.1	
	comp=Z,52nm,0.7s							
Z35A	**Perchaven, San**	**4.71**	**172**	IAmb_Lg			02 11 36.8	
	comp=Z,36nm,1.0s							
K30B	**Basset**	**4.81**	**346**	IAmb_Lg			02 11 42.8	
	comp=Z,48nm,0.8s							
DKNS	**Dickens**	**4.92**	**209**	IAmb_Lg			02 11 37.1	
	comp=Z,63nm,0.8s							
P40A	**Paris**	**4.92**	**70**	IAmb_Lg			02 11 38.3	
	comp=Z,49nm,1.0s							
APMT	**Aspermont**	**4.97**	**201**	IAmb_Lg			02 11 50.8	
	comp=Z,34nm,0.8s							
FW06	**Azle**	**5.04**	**175**	IAmb_Lg			02 11 49.4	
	comp=Z,31nm,1.1s							
T25A	**Trinidad**	**5.13**	**262**	IAmb_Lg			02 11 49.3	
	comp=Z,46nm,0.7s							
FCAR	**Ozark Folk Cen**	**5.19**	**112**	IAmb_Lg			02 11 43.2	
	comp=Z,45nm,0.7s							
Z38A	**Mt. Pleasant**	**5.35**	**151**	IAmb_Lg			02 12 00.5	
	comp=Z,56nm,0.8s							
CCM	**Cathedral Cave**	**5.37**	**87**	IAmb_Lg			02 11 50.1	
	comp=Z,42nm,0.8s							
SN07	**Snyder 07**	**5.43**	**206**	IAmb_Lg			02 12 03.6	
	comp=Z,48nm,0.9s							
TREL	**Terrell**	**5.50**	**163**	IAmb_Lg			02 12 08.9	
	comp=Z,45nm,1.1s							
Q24A	**Divide**	**5.66**	**282**	IAmb_Lg			02 12 02.1	
	comp=Z,51nm,0.8s							
POST	**Post**	**5.68**	**211**	IAmb_Lg			02 12 10.2	
	comp=Z,45nm,0.8s							
ECSD	**EROS Data Cent**	**5.82**	**10**	IAmb_Lg			02 12 05.8	
	comp=Z,28nm,0.7s							
LCAR	**Lake Charles**	**5.84**	**107**	IAmb_Lg			02 12 05.3	
	comp=Z,50nm,0.8s							
WLAR	**White Oak Lake**	**5.88**	**136**	IAmb_Lg			02 12 03.5	
	comp=Z,50nm,0.7s							
FVM	**French Village**	**6.02**	**88**	IAmb_Lg			02 12 05.8	
	comp=Z,32nm,1.0s							
ISCO	**Idaho Springs**	**6.17**	**289**	IAmb_Lg			02 12 18.7	
	comp=Z,45nm,1.0s							
SLM	**Saint Louis**	**6.17**	**82**	IAmb_Lg			02 12 14.6	
	comp=Z,28nm,0.8s							
Z41A	**Richland Creek**	**6.38**	**136**	IAmb_Lg			02 12 23.0	
	comp=Z,39nm,0.7s							
SUSD	**Miller**	**6.46**	**354**	IAmb_Lg			02 12 24.9	
	comp=Z,46nm,1.1s							
L40A	**Anamosa**	**6.62**	**50**	IAmb_Lg			02 12 28.4	
	comp=Z,46nm,0.8s							
CGM3	**Cape Girardeau**	**6.69**	**94**	IAmb_Lg			02 12 29.1	
	comp=Z,27nm,0.9s							
NATX	**Nacogdoches**	**6.83**	**155**	IAmb_Lg			02 12 54.5	
	comp=Z,26nm,0.8s							
P43A	**Skaggs, Pawnee**	**6.85**	**74**	IAmb_Lg			02 12 35.9	
	comp=Z,40nm,0.8s							
ODSA	**Odessa**	**6.94**	**213**	IAmb_Lg			02 12 48.1	
	comp=Z,26nm,1.1s							
I37A	**Lemond, Waseca**	**6.95**	**29**	IAmb_Lg			02 12 56.1	
	comp=Z,34nm,0.9s							
S44A	**Carbondale**	**6.96**	**90**	IAmb_Lg			02 12 41.8	
	comp=Z,39nm,0.8s							
SIUC	**Southern Illin**	**6.99**	**90**	IAmb_Lg			02 12 39.8	
	comp=Z,36nm,0.8s							
Q44A	**Meyer Farm, Va**	**7.14**	**80**	IAmb_Lg			02 12 51.4	
	comp=Z,44nm,1.0s							
ANMO	**Albuquerque**	**7.43**	**248**	Pn		**Pn**	**02 10 47.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=53,slow=10,SNR=1.3							
ANMO				Pg		Pb	02 11 14.6	+7.1
	comp=Z,1.2nm,0.3s,baz=147,slow=16,SNR=22							
ANMO				Lg		Lg	02 12 49.2	
	comp=Z,2.4nm,0.3s,baz=50,slow=16,SNR=7.0							
	comp=Z,0.3nm,0.3s							
ABQ	**Albuquerque**	**7.44**	**248**	IAmb_Lg			02 12 59.6	
	comp=Z,19nm,1.3s							
TASM	**ASL Pad, Albuq**	**7.44**	**248**	IAmb_Lg			02 13 10.8	
	comp=Z,18nm,1.2s							
TASM	**ASL Pad, Albuq**	**7.44**	**248**	IAmb_Lg			02 13 10.1	
	comp=Z,19nm,1.2s							
OZNA	**Ozona**	**7.51**	**201**	IAmb_Lg			02 13 09.4	
	comp=Z,40nm,0.8s							
HAYD	**Hayden**	**7.58**	**292**	IAmb_Lg			02 13 16.4	
	comp=Z,19nm,0.8s							
143A	**Socs Landing,**	**7.58**	**132**	IAmb_Lg			02 13 11.2	
	comp=Z,40nm,0.9s							
RSSD	**Black Hills**	**7.60**	**325**	IAmb_Lg			02 13 13.6	
	comp=Z,29nm,0.8s							
JFWS	**Jewell Farm**	**7.70**	**48**	IAmb_Lg			02 13 02.4	
	comp=Z,36nm,0.7s							
OXF	**Oxford**	**7.80**	**114**	IAmb_Lg			02 13 15.2	
	comp=Z,42nm,0.8s							
OLIL	**Olney**	**7.85**	**82**	IAmb_Lg			02 13 25.6	
	comp=Z,31nm,1.0s							
F33A	**5 Mile Ranch,**	**7.93**	**9**	IAmb_Lg			02 13 18.6	
	comp=Z,18nm,0.7s							
I40A	**Norwalk**	**8.13**	**41**	IAmb_Lg			02 13 22.0	
	comp=Z,31nm,1.1s							
PECS	**Pecos**	**8.17**	**218**	IAmb_Lg			02 13 26.5	
	comp=Z,26nm,1.0s							
SPMN	**Marine on St.**	**8.21**	**27**	IAmb_Lg			02 13 20.3	
	comp=Z,21nm,0.9s							
441A	**DeRidder**	**8.28**	**150**	IAmb_Lg			02 13 36.3	
	comp=Z,36nm,1.2s							
Y22A	**Socorro**	**8.29**	**243**	IAmb_Lg			02 13 39.9	
	comp=Z,26nm,0.8s							
M44A	**Midwin, Midew**	**8.41**	**63**	IAmb_Lg			02 13 34.2	
	comp=Z,36nm,1.1s							
HNDO	**Hondo**	**8.52**	**187**	IAmb_Lg			02 13 35.0	
	comp=Z,25nm,0.8s							
SAND	**Sanderson**	**8.72**	**204**	IAmb_Lg			02 13 50.5	
	comp=Z,22nm,0.7s							
EF04	**Eagle Ford 04**	**8.78**	**179**	IAmb_Lg			02 13 44.6	
	comp=Z,17nm,0.7s							
DRIO	**Del Rio**	**8.83**	**195**	IAmb_Lg			02 13 48.0	
	comp=Z,33nm,1.1s							
VHRN	**Van Horn**	**9.21**	**221**	IAmb_Lg			02 14 18.1	
	comp=Z,26nm,0.9s							
121A	**Cookes Peak, D**	**9.65**	**238**	IAmb_Lg			02 14 25.8	
	comp=Z,16nm,1.2s							
833A	**Chaparral WMA,**	**9.72**	**187**	IAmb_Lg			02 14 17.2	
	comp=Z,13nm,0.9s							
TXAR	**Lajitas Array**	**9.84**	**210**	Pn		**Pn**	**02 11 19.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=28,slow=13,SNR=19							
TXAR				Sn		**Sn**	**02 13 07.2**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=25,slow=16,SNR=3.8							
TXAR				Lg		Lg	02 14 07.6	
	comp=Z,0.7nm,0.3s,baz=24,slow=28,SNR=8.8							
	comp=Z,0.6nm,0.4s							
PDAR	**Pinedale Array**	**9.98**	**302**	Pn		**Pn**	**02 11 22.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=114,slow=14,SNR=6.7							
PDAR				Sn		**Sn**	**02 13 10.6**	**-3.5**
	comp=Z,0.3nm,0.3s,baz=116,slow=24,SNR=3.6							
PDAR				Lg		Lg	02 14 09.4	
	comp=Z,0.8nm,0.3s,baz=110,slow=27,SNR=4.7							
	comp=Z,0.3nm,0.5s							
TKL	**Tuckaleechee C**	**11.67**	**97**	Pn		**Pn**	**02 11 45.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=285,slow=12,SNR=5.6							
TKL				Sn		**Sn**	**02 13 56.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=256,slow=2.0,SNR=2.4							
TKL				Lg		Lg	02 14 57.4	
	comp=Z,0.5nm,0.3s,baz=3.0,slow=18,SNR=5.1							
	comp=Z,1.3nm,0.4s							
ULM	**Lac du Bonnet**	**12.34**	**7**	Pn		Pn	02 11 49.8	-4.1
	comp=Z,0.3nm,0.3s,baz=187,slow=8.1,SNR=1.3							
ULM				Sn		Sn	02 13 55.2	-16
	comp=Z,0.2nm,0.3s,baz=143,slow=5.1,SNR=1.5							
ULM				Lg		Lg	02 15 15.6	
	comp=Z,0.4nm,0.3s,baz=326,slow=3.6,SNR=1.9							
	comp=Z,1.6nm,0.4s							

IDC 03 02:11:26.0±2.2, 27˚48N×100˚00E, h0km, mb3.3/3, mbtmp3.5/4, Error ellipse: s-maj=62.6km s-min=25.5km az=89, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.03**	**186**	Pn		Pn	02 13 38.2	+0.4
	2.4nm,0.4s,baz=1.5,slow=17,SNR=19							
CMAR				Sn		Sn	02 15 21.4	+1.2
	0.8nm,0.3s,baz=5.0,slow=31,SNR=7.4							
SONM	**Songino Array**	**20.93**	**12**	P		P	02 16 11.4	+1.1
	0.2nm,0.3s,baz=200,slow=12,SNR=1.4							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**23.80**	**329**	P		P	02 16 41.0	+0.6
	1.0nm,0.8s,baz=147,slow=10.0,SNR=9.0							
	1.0nm,0.8s							
KURBB	**Kurchatov Arra**	**28.30**	**331**	P		P	02 17 19.5	-1.6
	0.2nm,0.4s,baz=142,slow=7.7,SNR=2.2							
	0.2nm,0.4s							

*IGQ **03** 02:15:39.4±0.2, 2˚S±2˚×8˚0W±˚, h21km±1km, MLv3.7/28*

ISC 03 02:15:39.6±1.1, 2˚44S±0.˚02×80˚17W±0.˚03, h28km±10km, n96, σ1s67/105, 7C-10D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MORR	**Playas El Morr**	**0.27**	**220**	⇓P		**Pn**	**02 15 48.1**	**+0.5**
MORR				S		**Sn**	**02 15 56.1**	**+3.4**
APLA	**Playas - Guaya**	**0.30**	**229**	⇓P		**Pb**	**02 15 47.2**	**+0.3**
APLA				S		**Sn**	**02 15 54.9**	**+1.3**
GYE1	**Ecuador-Trinit**	**0.32**	**54**	⇑P		**Pn**	**02 15 47.8**	**-0.5**
GYE1				S		**Sn**	**02 15 54.5**	**+0.6**
AC07	**Ecuador-Guayaq**	**0.34**	**33**	⇓P		**Pb**	**02 15 47.8**	**+0.3**
AC07				S		**Sn**	**02 15 54.4**	**-0.2**
GYE3	**Ecuador-Guayaq**	**0.39**	**44**	P		**Pb**	**02 15 47.7**	**-0.5**
AGUAY	**Guayaquil

*NNC **03** 02:21:27.9±1.8,41.86N×81.41E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=13.6km s-min=9.6km az=173.0*

ISC 03 02:21:32.3±2.5,42.0N±0.1×81.25E±0.08,h10km,n24, σ1§20/32,4C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.75**	**311**	P	**Pn**	**02 22 00.2**	**-2.7**
	37nm,0.1s						
SHLS				S	**Sn**	**02 22 25.2**	**0.0**
	66nm,0.5s						
SHLS	**Shalkode**	**1.75**	**311**	*eP*	**Pn**	**02 22 00.2**	**-2.7**
	37nm,0.1s						
SHLS				*eS*	**Sn**	**02 22 25.2**	**0.0**
	66nm,0.5s						
PDGK	**Podgornoye**	**1.85**	**316**	⇑Pn	**Pn**	**02 22 04.5**	**+0.3**
	9.0nm,0.3s						
PDGK				⇑Lg	Lg	02 22 34.7	
	54nm,0.7s						
UZB	**Uzynbulak**	**2.00**	**305**	Pg	**Pn**	**02 22 07.6**	**+1.3**
	13nm,0.3s						
UZB				Lg	Lg	02 22 38.6	
	42nm,0.2s						
UZB	**Uzynbulak**	**2.00**	**305**	*eP*	**Pn**	**02 22 07.6**	**+1.3**
	13nm,0.3s						
UZB				*eS*	**Sg**	**02 22 38.6**	**+2.0**
	42nm,0.2s						
SATY	**Saty**	**2.35**	**297**	Pg	**Pb**	**02 22 14.0**	**-0.8**
	12nm,0.4s						
SATY				Lg	Lg	02 22 49.0	
	61nm,0.4s						
KPKS	**Kokpek**	**2.38**	**308**	Pg	**Pb**	**02 22 14.4**	**-1.0**
	14nm,0.3s						
KPKS				Lg	Lg	02 22 49.4	
	96nm,0.4s						
KURS	**Kuram**	**2.71**	**304**	Pg	**Pb**	**02 22 20.4**	**-0.5**
	7.7nm,0.6s						
KURS				Lg	Lg	02 22 59.8	
	11nm,0.5s						
KNOS	**Konyrlen**	**2.79**	**328**	Pg	**Pn**	**02 22 18.9**	**+1.7**
	3.8nm,0.2s						
KNOS				Lg	Lg	02 22 57.2	
	9.6nm,0.4s						
BLB	**Baldybastay**	**2.91**	**317**	Pg	**Pb**	**02 22 22.9**	**-1.4**
	2.0nm,0.2s						
BLB				Lg	Lg	02 23 04.5	
	17nm,0.2s						
MDOK	**Medeo**	**3.31**	**292**	Pg	**Pb**	**02 22 29.9**	**-1.3**
	2.7nm,0.3s						
MDOK				Lg	Lg	02 23 16.1	
	5.5nm,0.5s						
ARXS	**Arharly**	**3.33**	**312**	Pg	**Pb**	**02 22 32.1**	**+0.5**
	4.6nm,0.3s						
ARXS				Lg	Lg	02 23 19.6	
	16nm,0.4s						
ARXS	**Arharly**	**3.33**	**312**	*eP*	**Pb**	**02 22 32.1**	**+0.5**
ARXS				*eS*	**Sg**	**02 23 19.6**	**+0.2**
TNSS	**Tian-Shan**	**3.34**	**289**	Pg	**Pb**	**02 22 31.9**	**0.0**
	1.3nm,0.3s						
TNSS				Lg	Lg	02 23 19.8	
	2.9nm,0.7s						
TNSS	**Tian-Shan**	**3.34**	**289**	*eP*	**Pb**	**02 22 31.9**	**0.0**
	1.3nm,0.3s						
TNSS				*eS*	**Sg**	**02 23 19.8**	**+0.1**
	2.9nm,0.7s						
MTBS	**Maitube**	**3.73**	**289**	Pg	**Pb**	**02 22 39.0**	**+0.6**
	3.3nm,0.4s						
MTBS				Lg	Lg	02 23 31.6	
	6.2nm,0.4s						
MTBS	**Maitube**	**3.73**	**289**	*eP*	**Pb**	**02 22 39.0**	**+0.6**
	3.3nm,0.4s						
MTBS				*eS*	**Sg**	**02 23 31.6**	**-0.5**
	6.2nm,0.4s						
KTBS	**Karatobe**	**3.76**	**298**	Pg	**Pb**	**02 22 38.5**	**-0.4**
	2.5nm,0.4s						
KTBS				Lg	Lg	02 23 30.7	
	6.7nm,0.4s						
KST	**Kastek**	**4.04**	**287**	Pg	**Pb**	**02 22 44.0**	**+0.3**
	3.3nm,0.3s						
KST				Lg	Lg	02 23 40.2	
	6.4nm,0.6s						
KST	**Kastek**	**4.04**	**287**	*eP*	**Pb**	**02 22 44.0**	**+0.3**
	3.3nm,0.3s						
KST				*eS*	**Sg**	**02 23 40.2**	**-1.9**
	6.4nm,0.6s						
DGS	**Degeres**	**4.22**	**289**	Pg	**Pb**	**02 22 48.6**	**+1.9**
	3.1nm,0.3s						
DGS				Lg	Lg	02 23 47.9	
	8.1nm,0.6s						
KRBS	**Karabastau**	**4.43**	**294**	Pg	**Pb**	**02 22 50.5**	**+0.2**
	1.8nm,0.4s						
KRBS				Lg	Lg	02 23 51.4	
	3.3nm,0.5s						
MAKZ	**Makanchi**	**4.82**	**6**	⇑Pn	**Pn**	**02 22 45.9**	**+0.9**
	0.7nm,0.3s						
MAKZ				⇓Sn	**Sn**	**02 23 41.4**	**+0.5**
	0.9nm,0.5s						
MAKZ				⇓Lg	Lg	02 24 04.6	
	4.0nm,0.8s						
MK31	**Makanchi Array**	**4.84**	**9**	⇓Pn	**Pn**	**02 22 44.0**	**-1.2**
	0.2nm,0.2s,baz=189,slow=13,SNR=22						
MK31				⇑Lg	Lg	02 24 03.7	
	6.3nm,0.7s,baz=184,slow=32,SNR=7.5						

HEL 03 02:32:01.0±0.1,63.96N×29.03E,h0km,ML0.9, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.47**	**56**	PG	Pg	02 32 09.6	-0.5
	baz=232						
RMF				SG	Sg	02 32 15.6	-0.5
RMF				smax	smax	02 32 16.3	
	comp=Z,0.9nm,0.2s						
NIF	**Nilsia**	**0.79**	**224**	PG	Pg	02 32 15.0	-1.1
	baz=43						
NIF				SG	Sg	02 32 25.3	-1.1
NIF				smax	smax	02 32 25.6	
	comp=Z,0.7nm,0.2s						
JOF	**Joensuu**	**1.46**	**135**	PG	Pn	02 32 27.3	-1.3
	baz=326						
JOF				SN	Sn	02 32 48.8	+0.4
SUF	**Sumiainen**	**1.80**	**228**	PG	Pn	02 32 33.5	+0.2
	baz=36						
SUF				smax	smax	02 32 54.6	
	comp=Z,0.5nm,0.2s						
SUF				SN	Sb	02 32 57.4	-0.4
OBF4	**Vikkela, Lumij**	**1.91**	**298**	smax	smax	02 32 57.8	
	comp=Z,0.4nm,0.2s						
OBF4				SG	Sb	02 33 00.8	-0.2
OUF	**Merijarvi**	**1.93**	**284**	PG	Pn	02 32 35.7	+0.7
	baz=98						
OUF				smax	smax	02 32 58.3	
	comp=Z,0.7nm,0.2s						
OUF				SG	Sb	02 33 00.9	-0.7
KU6	**Riekki**	**2.11**	**10**	smax	smax	02 33 03.5	
	comp=Z,0.3nm,0.2s						
KU6				SG	Sb	02 33 05.9	-0.8
OBF0	**Syolatti, Pyha**	**2.17**	**287**	smax	smax	02 33 05.3	
	comp=Z,0.5nm,0.2s						
OBF0				SG	Sb	02 33 07.8	-0.6
KAF	**Kangasniemi**	**2.23**	**215**	PG	Pn	02 32 40.5	+1.4
	baz=45						
KAF				smax	smax	02 33 07.1	
	comp=Z,0.6nm,0.2s						
KAF				SG	Sb	02 33 09.8	-0.4
KEF	**Keuruu**	**2.61**	**228**	smax	smax	02 33 18.0	
	comp=Z,0.5nm,0.2s						
KEF				SB	Sb	02 33 19.8	-1.5
ERTU	**Ertsjaerv**	**3.88**	**315**	SN	Sn	02 33 42.3	-5.7

*KRSC **03** 02:33:58.5±1.7,54.82N×164.71E,h41km±26km,Ml4.0*
*IDC **03** 02:33:59.7±1.3,55.08N×164.34E,h0km,mb3.7/8, mbtmp3.7/9,ML2.3/1,MS3.4/2,Error ellipse: s-maj=43.8km s-min=18.6km az=172.0*
*MOS **03** 02:34:02.8±0.8,54.87N×164.43E,h44km,mb3.7/1,Error ellipse: s-maj=8.8km s-min=8.0km az=119.0*

ISC 03 02:34:03.3±0.9,54.90N±0.05×164.48E±0.07,h27km,n68, σ1§09/69,mb3.7/8,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.61**	**325**	PN	**Pn**	**02 34 28.1**	**-1.8**
KBTR				S	**Sn**	**02 34 47.8**	**-2.1**
KBTR	**Krutoberegovo**	**1.61**	**325**	*eP*	**Pn**	**02 34 28.2**	**-1.8**
KBTR				*eS*	**Sn**	**02 34 47.8**	**-2.1**
KBG	**Krutoberegovo**	**1.69**	**324**	*eS*	**Sn**	**02 34 50.0**	**-1.8**
TUMD	**Tumrok D**	**2.37**	**279**	PN	**Pn**	**02 34 39.8**	**-0.5**
TUMD				S	**Sn**	**02 35 09.9**	**+1.4**
TUMD	**Tumrok D**	**2.37**	**279**	*eP*	**Pn**	**02 34 39.9**	**-0.5**
TUMD				*eS*	**Sn**	**02 35 09.9**	**+1.4**
ZLN	**Zelenaya**	**2.37**	**300**	*eS*	**Sn**	**02 35 10.9**	**+2.1**
BZGR	**Bezymyannyi-Gr**	**2.40**	**297**	PN	**Pn**	**02 34 39.3**	**-1.5**
BZGR	**Bezymyannyi-Gr**	**2.40**	**297**	*eP*	**Pn**	**02 34 39.4**	**-1.5**
SMKR	**Semkarok**	**2.40**	**316**	PN	**Pn**	**02 34 40.4**	**-0.4**
SMKR				S	**Sn**	**02 35 11.1**	**+1.8**
SMKR	**Semkarok**	**2.40**	**316**	*eP*	**Pn**	**02 34 40.4**	**-0.4**
SMKR				*eS*	**Sn**	**02 35 11.1**	**+1.8**
KZV	**Kizimen**	**2.42**	**277**	PN	**Pn**	**02 34 40.7**	**-0.5**
KZV	**Kizimen**	**2.42**	**277**	*eP*	**Pn**	**02 34 40.7**	**-0.5**
BZMR	**Bezymyannaya**	**2.50**	**296**	PN	**Pn**	**02 34 40.7**	**-1.6**
BZMR	**Bezymyannaya**	**2.50**	**296**	*eP*	**Pn**	**02 34 40.8**	**-1.6**
BZWR	**Bezymyannyi-We**	**2.51**	**297**	PN	**Pn**	**02 34 43.8**	**+1.4**
BZWR	**Bezymyannyi-We**	**2.51**	**297**	*eP*	**Pn**	**02 34 43.8**	**+1.4**
SRKR	**Sorokina**	**2.57**	**315**	PN	**Pn**	**02 34 43.1**	**0.0**
SRKR				S	**Sn**	**02 35 15.8**	**+2.4**
SRKR	**Sorokina**	**2.57**	**315**	*eP*	**Pn**	**02 34 43.1**	**0.0**
SRKR				*eS*	**Sn**	**02 35 15.9**	**+2.4**
KMNR	**Kamenistaya**	**2.57**	**291**	PN	**Pn**	**02 34 43.0**	**-0.2**
KMNR	**Kamenistaya**	**2.57**	**291**	*eP*	**Pn**	**02 34 43.1**	**-0.2**
KIRR	**Kirishev**	**2.58**	**296**	PN	**Pn**	**02 34 43.5**	**+0.1**
KIRR	**Kirishev**	**2.58**	**296**	*eP*	**Pn**	**02 34 43.5**	**+0.1**
KLY	**Klyuchi**	**2.59**	**305**	PN	**Pn**	**02 34 41.8**	**-1.6**
KLY	**Klyuchi**	**2.59**	**305**	*eP*	**Pn**	**02 34 41.9**	**-1.6**
KOZ	**Kozyrevsk**	**2.87**	**296**	PN	**Pn**	**02 34 48.4**	**+1.2**
KOZ	**Kozyrevsk**	**2.87**	**296**	*eP*	**Pn**	**02 34 48.5**	**+1.2**
ESO	**Esso**	**3.45**	**290**	PN	**Pn**	**02 34 55.2**	**-0.1**
ESO	**Esso**	**3.45**	**290**	*eP*	**Pn**	**02 34 55.2**	**-0.1**
SMAR	**Somma**	**3.73**	**246**	PN	**Pn**	**02 34 59.0**	**-0.2**
SMAR	**Somma**	**3.73**	**246**	*eP*	**Pn**	**02 34 59.1**	**-0.2**
KRER	**Koryakskii**	**3.74**	**247**	PN	**Pn**	**02 34 58.9**	**-0.4**
KRER	**Koryakskii**	**3.74**	**247**	*eP*	**Pn**	**02 34 59.0**	**-0.4**
UGLR	**Uglovaya**	**3.74**	**245**	PN	**Pn**	**02 34 59.2**	**-0.1**
UGLR	**Uglovaya**	**3.74**	**245**	*eP*	**Pn**	**02 34 59.2**	**-0.1**
AVH	**Avacha**	**3.76**	**246**	PN	**Pn**	**02 34 59.6**	**+0.1**
AVH	**Avacha**	**3.76**	**246**	*eP*	**Pn**	**02 34 59.6**	**+0.1**
KRX	**Arik**	**3.76**	**248**	PN	**Pn**	**02 34 59.4**	**-0.3**
KRX	**Arik**	**3.76**	**248**	*eP*	**Pn**	**02 34 59.4**	**-0.3**
KOK	**Koryaka**	**3.80**	**247**	PN	**Pn**	**02 34 59.8**	**-0.3**
KOK	**Koryaka**	**3.80**	**247**	*eP*	**Pn**	**02 34 59.8**	**-0.3**
RUS	**Russkaya**	**4.33**	**238**	PN	**Pn**	**02 35 06.9**	**-0.3**
RUS	**Russkaya**	**4.33**	**238**	*eP*	**Pn**	**02 35 06.9**	**-0.3**
PETK	**Petropavlovsk-**	**4.39**	**249**	Pn	**Pn**	**02 35 07.3**	**-0.8**
	0.8nm,0.3s,baz=67,slow=17,SNR=21						
PETK				Sn	**Sn**	**02 35 58.0**	**-0.3**
	1.6nm,0.3s,baz=51,slow=43,SNR=8.7						
	2.7nm,0.6s						
OSSR	**Ossora**	**4.43**	**350**	PN	**Pn**	**02 35 09.8**	**+1.2**
OSSR	**Ossora**	**4.43**	**350**	*eP*	**Pn**	**02 35 09.8**	**+1.2**
MTVR	**Mutnovka**	**4.46**	**240**	PN	**Pn**	**02 35 08.5**	**-0.7**
MTVR	**Mutnovka**	**4.46**	**240**	*eP*	**Pn**	**02 35 08.6**	**-0.7**
GRL	**Gorelyy**	**4.47**	**241**	PN	**Pn**	**02 35 09.1**	**-0.3**
GRL	**Gorelyy**	**4.47**	**241**	*eP*	**Pn**	**02 35 09.2**	**-0.3**
ASAK	**Asacha**	**4.66**	**240**	PN	**Pn**	**02 35 11.4**	**-0.5**
ASAK	**Asacha**	**4.66**	**240**	*eP*	**Pn**	**02 35 11.4**	**-0.5**
MA2	**Magadan**	**8.78**	**308**	LR	LR	02 39 43.2	
	comp=Z,65nm,20.0s,baz=113,slow=40						
ILAR	**Eielson Array**	**25.69**	**48**	P	**P**	**02 39 30.1**	**-0.6**
	2.4nm,0.7s,baz=271,slow=9.5,SNR=35						
	2.4nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**35.16**	**176**	T	T	03 19 24.6	
	baz=359,slow=76,SNR=51						
H11N3	**WAKE ISLAND Hy**	**35.17**	**176**	T	T	03 19 22.7	
	baz=359,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**35.18**	**176**	T	T	03 19 37.5	
	baz=359,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**36.37**	**176**	T	T	03 20 58.7	
	baz=359						
H11S3	**WAKE ISLAND Hy**	**36.38**	**176**	T	T	03 21 04.4	
	baz=359						
H11S2	**WAKE ISLAND Hy**	**36.39**	**176**	T	T	03 20 58.7	
	baz=359						
LZDM	**Lanzhou Array**	**45.10**	**271**	LR	LR	03 02 00.3	
	comp=Z,171nm,19.5s,baz=80,slow=37						
KURK	**Kurchatov**	**48.95**	**303**	P	**P**	**02 42 47.1**	**+0.3**
KURBB	**Kurchatov Arra**	**49.06**	**303**	P	**P**	**02 42 47.1**	**-0.5**
	0.2nm,0.4s,baz=58,slow=7.8,SNR=2.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**49.68**	**297**	P	**P**	**02 42 52.1**	**-0.4**
	0.3nm,0.7s,baz=46,slow=8.3,SNR=2.2						
	0.3nm,0.7s						
NVAR	**Mina Array Bea**	**52.72**	**74**	P	**P**	**02 43 16.2**	**+0.6**
	0.4nm,0.7s,baz=318,slow=6.8,SNR=4.7						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**54.39**	**65**	P	**P**	**02 43 28.4**	**+0.6**
	0.1nm,0.3s,baz=295,slow=10,SNR=2.0						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**59.44**	**338**	P	**P**	**02 44 01.6**	**-1.4**
	3.1nm,1.1s,baz=28,slow=6.7,SNR=1.6						
	3.1nm,1.1s						
HFS	**Hagfors**	**62.97**	**344**	P	**P**	**02 44 26.1**	**-0.8**
	2.8nm,0.9s,baz=24,slow=11,SNR=2.2						
	2.8nm,0.9s						
TXAR	**Lajitas Array**	**67.57**	**71**	P	**P**	**02 44 58.2**	**+0.9**
	1.0nm,0.5s,baz=321,slow=6.2,SNR=17						
	1.0nm,0.5s						

CATAC 03 02:54:56.9±0.4,12.7°N±2.7°×8.7°W±.7°,h28km±2km,M3.6/36, MLv3.6/36,1C-15D,Error ellipse: s-maj=5.2km s-min=2.5km az=40.9,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMTN	**Mateare**	**0.71**	**38**	P	Pn	02 55 11.3	+0.2
ABCN	**Banco Central**	**0.71**	**51**	P	Pn	02 55 11.2	+0.1
ABCN	**Banco Central**	**0.71**	**51**	S	Sn	02 55 22.0	+0.8
UNAN	**Cigeo UNAN**	**0.74**	**54**	⇓P	Pn	02 55 11.4	0.0
UNAN				S	Sn	02 55 22.1	+0.3
APQ2	**Apoyeque**	**0.75**	**46**	P	Pn	02 55 11.7	+0.1
APQ2	**Apoyeque**	**0.75**	**46**	P	Pn	02 55 11.6	-0.1
TISN	**Laguna Tiscapa**	**0.76**	**52**	⇓P	Pn	02 55 11.8	0.0
APYN	**Apoyeque**	**0.76**	**43**	P	Pb	02 55 11.4	-0.2
APYN				S	Sn	02 55 23.6	+1.2
ALLN	**Telcor Managua**	**0.76**	**51**	P	Pn	02 55 11.8	0.0
MAS3	**Al N del Volca**	**0.77**	**63**	P	Pb	02 55 11.8	+0.1
MAS3				S	Sn	02 55 23.1	+0.4
MGAN	**Managua**	**0.78**	**53**	S	Sn	02 55 23.6	+0.9
MGAN	**Managua**	**0.78**	**53**	⇓P	Pn	02 55 12.1	+0.1
MASN	**Masaya**	**0.78**	**66**	P	Pn	02 55 12.2	+0.1
ALEN	**Leon**	**0.78**	**1**	P	Pb	02 55 11.3	-0.6
APQN	**BB Volcan Apoy**	**0.79**	**46**	P	Pb	02 55 11.3	-0.7
NANN	**Nandasmo**	**0.79**	**70**	⇓P	Pn	02 55 13.1	+1.0
NANN	**Nandasmo**	**0.79**	**70**	S	Sn	02 55 24.8	+1.8
WILN	**Americas 2**	**0.83**	**54**	P	Pn	02 55 12.7	-0.1
WILN				S	Sn	02 55 24.9	+0.8
NADN	**Granada**	**0.83**	**85**	P	Pn	02 55 12.3	-0.5
NADN				S	Sn	02 55 24.5	+0.4
CNGA	**Al SSO del Vol**	**0.83**	**12**	⇓P	Pb	02 55 12.6	-0.3
CNGA				S	Sn	02 55 24.4	+0.2
CNGN	**Cerro Negro**	**0.84**	**12**	S	Sn	02 55 24.6	+0.2
CNGN	**Cerro Negro**	**0.84**	**12**	⇓P	Pn	02 55 12.6	-0.3
MOM3	**MOM3**	**0.90**	**23**	⇓P	Pn	02 55 13.7	-0.1
MOM3				S	Sn	02 55 26.5	+0.5
POLN	**Al Sur del Vol**	**0.97**	**4**	⇓P	Pn	02 55 12.0	-2.8
PKGN	**Cerro Pekin**	**0.99**	**354**	⇓P	Pn	02 55 14.9	-0.2
PKGN				S	Sb	02 55 28.7	+0.4
CRIN	**San Cristobal**	**1.03**	**351**	⇓P	Pn	02 55 15.5	-0.2
CRIN	**San Cristobal**	**1.03**	**351**	S	Sb	02 55 31.6	+2.2
MORN	**Al O del Volca**	**1.21**	**96**	⇓P	Pn	02 55 17.9	-0.1
CONN	**Concepcion**	**1.23**	**95**	⇓P	Pn	02 55 18.0	-0.3
CONN				S	Sb	02 55 34.7	-0.4
AESN	**El Sauce Leon**	**1.25**	**15**	P	Pn	02 55 18.3	-0.3
CARN	**Rivas**	**1.42**	**110**	P	Pn	02 55 21.0	+0.2
CARN				S	Sb	02 55 40.2	-0.1
POTN	**Potosi Cosigui**	**1.45**	**335**	P	Pn	02 55 21.0	-0.3
POTN				S	Sn	02 55 39.6	+0.1
CSGN	**Cosiguina Volc**	**1.46**	**333**	P	Pn	02 55 21.0	-0.4
CSGN				S	Sn	02 55 39.4	-0.3
LIMN	**Finca el Limon**	**1.47**	**20**	⇑P	Pn	02 55 21.6	0.0
MATN	**Matagalpa**	**1.56**	**37**	⇓P	Pn	02 55 21.8	-1.1
MATN	**Matagalpa**	**1.56**	**37**	S	Sn	02 55 41.7	-0.5
ELI1	**Hacienda Flor**	**1.66**	**128**	P	Pb	02 55 26.8	+0.1
CNCH	**Conchagua**	**1.84**	**330**	P	Pn	02 55 26.8	0.0
CNCH	**Conchagua**	**1.84**	**330**	S	Sn	02 55 50.4	+1.0
LCND	**La Caada**	**1.90**	**329**	P	Pn	02 55 27.3	-0.2
RCON	**San Juan de Ri**	**1.93**	**21**	P	Pn	02 55 28.7	+0.6
RCPN	**Sur Rio San Ju**	**1.99**	**23**	P	Pn	02 55 29.7	+0.8
RCVN	**Varillal2**	**2.01**	**19**	P	Pn	02 55 29.7	+0.5
YUSH	**Yuscaran**	**2.27**	**1**	⇓P	Pn	02 55 33.3	+0.6
PACA	**Pacayal**	**2.27**	**322**	P	Pn	02 55 33.1	+0.4
PACA	**Pacayal**	**2.27**	**322**	S	Sn	02 56 00.9	+1.0
JTS	**Las Juntas de**	**2.34**	**126**	P	Pn	02 55 35.7	+2.2
TGUH	**Tegucigalpa,Un**	**2.40**	**351**	⇓P	Pn	02 55 35.1	+0.6
TGUH				S	Sn	02 56 04.0	+0.9
SCLA	**Alcaldia de Sa**	**2.71**	**318**	P	Pn	02 55 39.1	+0.5
SCLA	**Alcaldia de Sa**	**2.71**	**318**	S	Sn	02 56 11.0	+0.5

*RSPR **03** 03:16:24.8,19.64N×67.83W,h50km±11km,MD2.5/4*
*SDD **03** 03:16:28.7±1.4,19.14N×68.07W,h59km±45km,MD3.3, ML1.9,MW2.1*

ISC 03 03:16:29.5±2.2,19.1N±0.2×68.09W±0.07,h50km,n10, σ2§03/14,8C-3D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HIDR	**Higuey Centre**	**0.76**	**232**	⇑*e*Pg	**Pn**	**03 16 43.5**	**-0.5**
HIDR				⇓*e*Sg	**Sn**	**03 16 55.0**	**+0.4**
HIDR				IAML		03 17 07.8	
	comp=N,31nm,0.2s						
MIDR	**Miches**	**0.91**	**265**	⇑*e*Pg	**Pn**	**03 16 45.4**	**-0.7**
MIDR				⇑*e*Sg	**Sn**	**03 16 56.9**	**-1.3**
MIDR				IAML		03 17 31.5	
	comp=N,17nm,1.3s						
MIDR	**Miches**	**0.91**	**265**	⇑*e*P	**Pn**	**03 16 46.1**	**0.0**
MIDR	**Miches**	**0.91**	**265**	*e*S	**Sn**	**03 17 02.4**	**+4.2**
HATOM	**Hato Mayor del**	**1.25**	**258**	⇑*e*Pg	**Pn**	**03 16 50.6**	**-0.1**
HATOM				⇑*e*Sg	**Sn**	**03 17 04.6**	**-1.9**
HATOM				IAML		03 17 41.7	
	comp=N,14nm,1.6s						
LSP	**Las Mesas**	**1.30**	**133**	⇑*e*P	**Pn**	**03 16 49.8**	**-1.5**
LSP	**Las Mesas**	**1.30**	**133**	*e*S	**Sn**	**03 17 09.9**	**+2.4**
CRPR	**Cabo Rojo, PR**	**1.40**	**138**	⇓*e*Pg	**Pn**	**03 16 51.1**	**-1.6**
CRPR				⇓*e*Sg	**Sn**	**03 17 09.4**	**-0.7**
CRPR				IAML		03 17 43.4	
	comp=N,46nm,2.0s						
CRPR	**Cabo Rojo, PR**	**1.40**	**138**	⇑*e*P	**Pn**	**03 16 52.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.40**	**138**	*e*S	**Sn**	**03 17 13.2**	**+3.2**

*NEIC **03** 03:32:56.1±1.2,2.1N±0.1×121.7E±0.3,h549km±15km, mb4.4/8,Error ellipse: s-maj=40.7km s-min=3.2km az=65.0*
*IDC **03** 03:33:00.5±8.6,2.07N×121.97E,h625km±136km,mb3.0/7, mbtmp4.0/7,Error ellipse: s-maj=136.7km s-min=32.5km az=55.0*

ISC 03 03:32:55.0±0.8,2.2N±0.2×121.7E±0.2,h550km,n20, σ1§17/20,mb4.0/9,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**1.42**	**220**	P	**P**	**03 34 03.7**	**+1.2**
LUWI	**Luwuk**	**3.40**	**162**	P	**P**	**03 34 12.6**	**0.0**
FAKI	**Fak Fak**	**11.71**	**116**	P	**P**	**03 35 30.6**	**+0.1**
KNRA	**Kununurra**	**19.09**	**159**	P	**P**	**03 36 42.9**	**+0.1**
KNRA				IAmb	IAmb	03 36 44.9	
	comp=Z,8.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.54**	**169**	P	**P**	**03 36 55.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.54**	**169**	P	**P**	**03 36 55.4**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=346,slow=7.2,SNR=1.7						
	comp=Z,3.0nm,0.9s						
WB0	**Warramunga Arr**	**25.14**	**151**	P	**P**	**03 37 36.6**	**-0.5**
WB0				IAmb	IAmb	03 38 02.4	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**25.26**	**151**	P	**P**	**03 37 37.8**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=334,slow=9.5,SNR=16						
	comp=Z,1.1nm,0.4s						
WR8	**Warramunga Arr**	**25.35**	**151**	P	**P**	**03 37 38.4**	**-0.5**
WR8				IAmb	IAmb	03 37 50.1	
	comp=Z,12nm,1.5s						
ASAR	**Alice Springs**	**28.32**	**156**	P	**P**	**03 38 04.9**	**-0.1**
ASAR	**Alice Springs**	**28.32**	**156**	P	**P**	**03 38 05.3**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=334,slow=7.3,SNR=23						
	comp=Z,0.7nm,0.3s						
BBOO	**Buckleboo**	**37.38**	**160**	P	**P**	**03 39 22.1**	**+0.7**
STKA	**Stephens Creek**	**38.80**	**152**	P	**P**	**03 39 32.9**	**0.0**
STKA	**Stephens Creek**	**38.80**	**152**	P	**P**	**03 39 31.9**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=338,slow=11,SNR=3.6						
	comp=Z,1.3nm,0.3s						
CAN	**Canberra**	**45.24**	**148**	P	**P**	**03 40 25.4**	**+1.8**
CAN				IAmb	IAmb	03 40 55.1	
	comp=Z,27nm,1.4s						
MKAR	**Makanchi Array**	**56.07**	**328**	P	**P**	**03 41 43.7**	**+1.5**
MKAR	**Makanchi Array**	**56.07**	**328**	P	**P**	**03 41 44.1**	**+1.9**
	comp=Z,0.3nm,0.

AS31	**Alice Springs**	**16.62**	**163**	P	**P**	**03**	**54**	**57.9**	**+2.0**
ASAR	**Alice Springs**	**16.62**	**163**	P	**P**	**03**	**54**	**57.8**	**+1.8**
ASAR	**Alice Springs**	**16.62**	**163**	P	**P**	**03**	**54**	**57.5**	**+1.6**
	comp=Z,3.0nm,0.5s,baz=337,slow=10,SNR=56								
ASAR				S	**Sn**	**03**	**57**	**57.1**	**-3.8**
	comp=Z,1.7nm,0.5s,baz=323,slow=20,SNR=6.6								
MORW	**Morawa**	**24.30**	**208**	P	**P**	**03**	**56**	**16.6**	**+0.9**
MORW				IAmb	IAmb	03	56	38.2	
	comp=Z,29nm,1.4s								
BBOO	**Buckleboo**	**25.87**	**166**	P	**P**	**03**	**56**	**30.9**	**+0.9**
STKA	**Stephens Creek**	**26.88**	**155**	P	**P**	**03**	**56**	**39.5**	**+0.5**
STKA				IAmb	IAmb	03	56	48.8	
	comp=Z,35nm,1.4s								
STKA	**Stephens Creek**	**26.88**	**155**	P	**P**	**03**	**56**	**39.5**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=335,slow=8.5,SNR=8.8								
	comp=Z,2.0nm,0.5s								
JHJ	**Hachijo jima 2**	**42.01**	**14**	P	**P**	**03**	**58**	**50.1**	**+1.3**
	comp=Z,50nm,0.7s,baz=172,slow=13,SNR=4.1								
	comp=Z,50nm,0.7s								
WHZ	**Wether Hill Ro**	**50.85**	**145**	P	**P**	**03**	**59**	**58.0**	**+0.2**
QSPA	**South Pole Qui**	**82.23**	**180**	P	**P**	**04**	**03**	**17.8**	**+0.9**
QSPA	**South Pole Qui**	**82.23**	**180**	P	**P**	**04**	**03**	**17.8**	**+0.9**
	comp=Z,2.3nm,1.0s,baz=253,slow=0.4,SNR=10.0								
	comp=Z,2.3nm,1.0s								

*DJA **03** 03:54:01.7±1.9, 19°N±2°×12°1E±°, h12km±14km, M4.9/29, mb4.9/29, mB5.3/14, MLv5.2/3, Mw(mB)4.7/14, MwMwp5.0/6, Mwp5.2/6*

*GCMT **03** 03:54:03.2±0.1, 19°.27N±0°.01×120°.87E±0°.01, h38km, MW5.3/131, Moment Tensor Solution. s117,c187; s131,c220; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; Mrr0.91±.02; Mθθ-0.14±.01; Mϕϕ-0.77±.01; Mrθ-0.18±.01; Mθϕ-0.41±.01; Mϕr-0.36±.01; Best double couple: Mo1.02400×10^{17} NP1:ϕ=26.00000°, δ33.00000°, λ89.00000°. NP2:ϕ=206.00000°, δ57.00000°, λ90.00000°. Principal axes: T 0.9920, Plg78.0000°, Azm118.0000°; N 0.0640, Plg0.0000°, Azm26.0000°; P -1.0560, Plg12.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **03** 03:54:03.2±2.1, 19°.12N±0°.06×121°.16E±0°.09, h41km±5km, mb4.9/195 Error ellipse: s-maj=12.2km s-min=8.9km az=91.0*

*IDC **03** 03:54:03.6±1.9, 19°.09N×121°.31E, h56km±18km, mb4.3/34, mbtmp4.6/39, ML4.5/5, MS4.4/70, Error ellipse: s-maj=15.1km s-min=8.3km az=75.0*

*BJI **03** 03:54:06.3, 19°.47N×120°.77E, h40km, mB5.1/38, mb4.5/63, ML4.7/4, Ms4.8/69, Ms7 4.7/67*

ISC 03 03:54:03.1±0.5, 19°.05N±0°.03×121°.14E±0°.04, h49km±4km, n635, σ1§41/533, mb4.8/160, MS4.5/82, 15C-8D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWGBT	**Beinan**	**3.75**	**359**	P	**Pn**	**03 54 56.2**	**-2.2**
TWG	**Pinlang**	**3.75**	**359**		**Pn**	**03 54 55.7**	**-2.7**
TPUB	**Ta-pu**	**4.25**	**354**		**Pn**	**03 55 02.9**	**-2.5**
TPUB	**Ta-pu**	**4.25**	**354**	P	**Pn**	**03 55 02.7**	**-2.7**
YULB	**Yu-li**	**4.32**	**2**		**Pn**	**03 55 04.1**	**-2.2**
YULB	**Yu-li**	**4.32**	**2**	P	**Pn**	**03 55 04.6**	**-1.7**
YULB	**Yu-li**	**4.32**	**2**	S	**Sn**	**03 55 53.7**	**-1.7**
SSLB	**Suanglung**	**4.71**	**358**		**Pn**	**03 55 09.3**	**-2.4**
SSLB	**Suanglung**	**4.71**	**358**	P	**Pn**	**03 55 09.7**	**-2.0**
TGY	**Tagaytay City**	**4.93**	**182**	P	**Pn**	**03 55 17.3**	**+2.6**
	47nm,0.3s,baz=280,slow=4.0,SNR=12						
TGY				S	**Sn**	**03 56 07.6**	**-2.9**
	761nm,0.8s,baz=17,slow=20,SNR=3.0						
TGY				LR	LR	03 57 40.8	
	comp=Z,6μm,18.7s,baz=1.0,slow=44						
	166nm,0.4s						
NACB	**Ninganchiao**	**5.11**	**5**		**Pn**	**03 55 15.4**	**-1.8**
NACB	**Ninganchiao**	**5.11**	**5**	P	**Pn**	**03 55 15.2**	**-1.9**
NACB	**Ninganchiao**	**5.11**	**5**	S	**Sn**	**03 56 13.5**	**-1.4**
YHNB	**Yeheng**	**5.59**	**2**		**Pn**	**03 55 23.3**	**-0.5**
YHNB	**Yeheng**	**5.59**	**2**	P	**Pn**	**03 55 23.1**	**-0.7**
YOJ	**Yonaguni jima**	**5.66**	**18**		**Pn**	**03 55 24.1**	**-0.5**
YOJ	**Yonaguni jima**	**5.66**	**18**	P	**Pn**	**03 55 24.5**	**-0.1**
TATO	**Taipei**	**5.90**	**3**		**Pn**	**03 55 28.1**	**+0.1**
TATO	**Taipei**	**5.90**	**3**	P	**Pn**	**03 55 26.6**	**-1.4**
KNMB	**Chin-men Tao**	**5.96**	**335**		**Pn**	**03 55 24.7**	**-4.0**
QZH	**Quanzhou**	**6.32**	**338**	P	**Pn**	**03 55 29.7**	**-4.0**
QZH				S	**Sn**	**03 56 36.5**	**-8.1**
QZH				smax	smax		
	comp=N,180nm,0.9s						
QZH				smax	smax		
	comp=E,290nm,1.1s						
QZH				LR	LR		
	comp=N,5μm,16.8s						
QZH				LR	LR		
	comp=E,3μm,16.0s						
QZH				LR	LR		
	comp=Z,7μm,18.5s						
JMJ	**Miyako jima 2**	**6.91**	**33**	P	**Pn**	**03 55 41.8**	**0.0**
HKPS	**Hong Kong Po S**	**7.29**	**297**		**Pn**	**03 55 44.3**	**-2.8**
HKPS	**Hong Kong Po S**	**7.29**	**297**	P	**Pn**	**03 55 43.8**	**-3.3**
HKPS	**Hong Kong Po S**	**7.29**	**297**	S	**Sn**	**03 57 03.1**	**-5.5**
GZH	**Guangzhou**	**8.31**	**300**	P	**Pn**	**03 55 57.5**	**-3.5**
GZH				S	**Sn**	**03 57 32.4**	**-1.1**
GZH				smax	smax		
	comp=N,320nm,0.7s						
GZH				smax	smax		
	comp=E,310nm,0.6s						
JOW	**Kunigami**	**10.15**	**39**		**Pn**	**03 56 25.2**	**-1.1**
JOW	**Kunigami**	**10.15**	**39**	P	**Pn**	**03 56 26.0**	**-0.3**
	13nm,0.3s,baz=225,slow=12,SNR=6.2						
	35nm,0.4s						
JOW	**Kunigami**	**10.15**	**39**	P	**Pn**	**03 56 26.6**	**+0.4**
QIZ	**Qiongzhong**	**10.69**	**272**		**Pn**	**03 56 30.9**	**-2.6**
QIZ	**Qiongzhong**	**10.69**	**272**	P	**Pn**	**03 56 31.0**	**-2.6**
QIZ				S	**Sn**	**03 58 26.8**	**-5.0**
QIZ				pmax	pmax		
	comp=Z,50nm,1.2s						
QIZ				LR	LR		
	comp=N,3μm,14.8s						
QIZ				LR	LR		
	comp=E,3μm,19.8s						
QIZ				LR	LR		
	comp=Z,4μm,17.8s						
CNSH	**ChangSha**	**11.79**	**322**	P	**Pn**	**03 56 46.1**	**-2.5**
CNSH				S	**Sn**	**03 58 51.2**	**-7.6**
CNSH				pmax	pmax		
	comp=Z,17nm,0.5s						
CNSH				LR	LR		
	comp=N,3μm,15.7s						
CNSH				LR	LR		
	comp=E,2μm,21.1s						
CNSH				LR	LR		
	comp=Z,5μm,16.9s						
DAV	**Davao City (W)**	**12.67**	**160**	P	**Pn**	**03 57 02.0**	**+1.3**
	11nm,0.3s,baz=210,slow=11,SNR=1.2						
DAV				LR	LR	04 02 51.7	
	comp=Z,6μm,18.4s,baz=8.0,slow=42						
	81nm,0.4s						
DAV	**Davao City (W)**	**12.67**	**160**	P	**Pn**	**03 57 01.0**	**+0.3**
WHN	**Wuhan**	**12.99**	**333**	⇑P	**Pn**	**03 57 02.0**	**-3.0**
WHN				sP	**P**	**03 57 17.1**	**+2.9**
WHN				S	**Sn**	**03 59 29.2**	**+1.2**
WHN				pmax	pmax		
	comp=Z,46nm,0.7s						
WHN				LR	LR		
	comp=N,9μm,16.5s						
WHN				LR	LR		
	comp=E,3μm,12.0s						
WHN				LR	LR		
	comp=Z,12μm,19.0s						
NJ2	**Nanjing**	**13.11**	**351**	*e*P	**Pn**	**03 57 08.0**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,170nm,5.2s						
NJ2				LR	LR		
	comp=N,1μm,13.7s						
NJ2				LR	LR		
	comp=E,2μm,19.4s						
NJ2				LR	LR		
	comp=Z,2μm,16.1s						
MYLDM	**Lahad Datu**	**14.03**	**191**		**Pn**	**03 57 19.7**	**+0.5**
ENH	**Enshi**	**15.38**	**319**		**Pn**	**03 57 36.5**	**-0.5**
SLVN	**Son La**	**16.34**	**281**	Pn	**Pn**	**03 57 49.4**	**+0.1**
JNU	**Nakatsue**	**16.50**	**30**	P	**Pn**	**03 57 51.1**	**-0.1**
JNU	**Nakatsue**	**16.50**	**30**	P	**Pn**	**03 57 48.7**	**-2.5**
	0.5nm,0.3s,baz=171,slow=3.7,SNR=8.5						
JNU				LR	LR	04 04 29.1	
	comp=Z,906nm,21.1s,baz=188,slow=38						
	20nm,1.1s						
JNU	**Nakatsue**	**16.50**	**30**	P	**Pn**	**03 57 52.0**	**+0.8**
JTU	**Tsushima**	**17.07**	**24**	P	**P**	**03 57 59.2**	**-0.2**
LYN	**LuoYang**	**17.25**	**335**	P	**P**	**03 58 01.5**	**0.0**
LYN				pP	pP	03 58 12.4	+0.6
LYN				PP	**pwP**	**03 58 15.9**	**0.0**
LYN				pmax	pmax		
	comp=Z,38nm,1.8s						
LYN				pmax	pmax		
	comp=Z,820nm,7.9s						
LYN				LR	LR		
	comp=N,3μm,15.9s						
LYN				LR	LR		
	comp=E,930nm,15.7s						
LYN				LR	LR		
	comp=Z,3μm,21.0s						
TIA	**Tai'an**	**17.45**	**349**	P	**P**	**03 58 04.7**	**+1.0**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,540nm,4.1s						
TIA				LR	LR		
	comp=N,2μm,15.8s						
TIA				LR	LR		
	comp=E,740nm,15.8s						
TIA				LR	LR		
	comp=Z,3μm,15.1s						
TOLI2	**Tolitoli**	**17.84**	**181**	P	**P**	**03 58 08.8**	**+0.7**
TOLI2	**Tolitoli**	**17.84**	**181**	P	**P**	**03 58 08.2**	**+0.1**
KMI	**Kunming**	**18.08**	**293**	⇓P	**Pn**	**03 58 11.6**	**+0.5**
KMI				sP	sP	03 58 27.5	+0.4
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,620nm,7.9s						
KMI				LR	LR		
	comp=N,2μm,14.1s						
KMI				LR	LR		
	comp=E,3μm,15.1s						
KMI				LR	LR		
	comp=Z,4μm,14.4s						
XAN	**Xi'an**	**18.47**	**326**	⇓P	**Pn**	**03 58 15.5**	**-0.1**
XAN				pmax	pmax		
	comp=Z,30nm,1.5s						
XAN				LR	LR		
	comp=N,3μm,15.1s						
XAN				LR	LR		
	comp=E,2μm,16.5s						
XAN				LR	LR		
	comp=Z,3μm,16.7s						
JMN	**Monobe**	**18.52**	**35**	P	**Pn**	**03 58 15.9**	**-0.2**
JMN	**Monobe**	**18.52**	**35**	P	**Pn**	**03 58 16.9**	**+0.8**
KMSI	**Cibinong**	**18.57**	**171**	P	**Pn**	**03 58 20.1**	**+3.3**
SBUM	**Sibu**	**18.67**	**209**	P	**Pn**	**03 58 18.8**	**+0.8**
SBUM	**Sibu**	**18.67**	**209**	P	**P**	**03 58 17.2**	**0.0**
HNS	**HongShan**	**19.12**	**344**	⇑P	**Pn**	**03 58 23.7**	**+0.4**
HNS				pmax	pmax		
	comp=Z,25nm,1.2s						
HNS				LR	LR		
	comp=N,2μm,18.0s						
HNS				LR	LR		
	comp=E,860nm,17.3s						
HNS				LR	LR		
	comp=Z,3μm,17.8s						
KSRS	**Korea Array**	**19.27**	**17**	P	**P**	**03 58 22.2**	**-1.4**
	1.2nm,0.3s,baz=197,slow=11,SNR=26						
KSRS				PcP	**PcP**	**04 02 44.3**	**-0.7**
	1.7nm,0.8s,baz=179,slow=2.3,SNR=4.3						
	3.3nm,0.4s						
PZH	**PanZhiHua**	**19.35**	**296**	P	**Pn**	**03 58 28.9**	**+2.7**
PZH				pP	**sP**	**03 58 40.0**	**-0.8**
PZH				S	**S**	**04 01 58.0**	**-3.3**
PZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PZH				pmax	pmax		
	comp=Z,860nm,7.0s						
PZH				LR	LR		
	comp=N,1μm,15.7s						
PZH				LR	LR		
	comp=E,2μm,16.7s						
PZH				LR	LR		
	comp=Z,3μm,17.5s						
CD2	**Chengdu**	**19.66**	**310**	P	**P**	**03 58 28.2**	**+0.2**
CD2				pP	pP	03 58 39.3	+0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
CD2				pmax	pmax		
	comp=Z,1μm,5.0s						
CD2				LR	LR		
	comp=E,4μm,13.5s						
CD2				LR	LR		
	comp=Z,5μm,14.2s						
TIY	**Taiyuan**	**20.09**	**340**	P	Pn	03 58 34.8	0.0
TIY				pP	pwP	03 58 45.5	-1.6
TIY				S	**S**	**04 02 15.7**	**0.0**
TIY				pmax	pmax		
	comp=Z,210nm,4.0s						
TIY				LR	LR		
	comp=N,2μm,18.6s						
TIY				LR	LR		
	comp=E,1μm,16.5s						
TIY				LR	LR		
	comp=Z,2μm,16.5s						
KSM	**Kuching**	**20.44**	**213**		**P**	**03 58 36.1**	**-0.5**
KSM				IAmb	IAmb	03 58 47.7	
	comp=Z,72nm,1.4s						
JCJ	**Chichijima**	**20.93**	**64**	P	P	03 58 32.0	-10
	comp=Z,48nm,0.5s,baz=278,slow=20,SNR=5.5						
JCJ				LR	LR	04 05 01.2	
	comp=Z,1μm,21.5s,baz=241,slow=32						
CHTO	**Chiang Mai**	**21.00**	**273**	P	**P**	**03 58 43.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**21.03**	**272**	P	**P**	**03 58 43.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**21.03**	**272**	P	**P**	**03 58 44.4**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=80,slow=8.5,SNR=22						
CMAR				PcP	**PcP**	**04 02 49.0**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=22,slow=0.5,SNR=8.2						
CMAR				LR	LR	04 07 42.6	
	comp=Z,1μm,18.3s,baz=85,slow=39						
	comp=Z,1.9nm,0.3s						
BJT	**Baijiatuan**	**21.33**	**349**	P	**P**	**03 58 48.1**	**+2.2**
BJT				IAmb	IAmb	03 58 57.5	
	comp=Z,48nm,1.0s						
BJI	**Beijing**	**21.35**	**349**	P	**P**	**03 58 48.4**	**+2.3**
BJI				pmax	pmax		
	comp=Z,23nm,0.9s						
BJI				LR	LR		
	comp=Z,730nm,17.0s						
BJI				LR	LR		
	comp=Z,420nm,19.0s						
BJI				LR	LR		
	comp=Z,840nm,17.6s						
INU	**Inuyama**	**21.46**	**38**	P	**P**	**03 58 48.1**	**+0.7**
INU				IAmb	IAmb	03 58 54.7	
	comp=Z,62nm,0.9s						
INU	**Inuyama**	**21.46**	**38**	P	**P**	**03 58 48.2**	**+0.7**
SANI	**Sanana**	**21.51**	**167**	P	P	03 59 07.9	+20
JHJ	**Hachijo jima 2**	**21.78**	**46**	LR	LR	04 05 57.2	
	comp=Z,1μm,21.7s,baz=272,slow=33						
TNCH	**TengChong**	**21.78**	**290**	P	**P**	**03 58 52.3**	**+1.2**
TNCH				S	**S**	**04 02 48.6**	**-1.0**
TNCH				pmax	pmax		
	comp=Z,450nm,4.1s						
TNCH				LR	LR		
	comp=Z,2μm,11.0s						
TNCH				LR	LR		
	comp=Z,3μm,14.6s						
TNCH				LR	LR		
	comp=Z,5μm,16.4s						
JGF	**Kuroka**	**21.84**	**38**	P	**P**	**03 58 51.0**	**-0.5**
JGF				IAmb	IAmb	03 59 00.7	
	comp=Z,40nm,0.7s						
JGF	**Kuroka**	**21.84**	**38**	P	**P**	**03 58 50.7**	**-0.8**
SNY	**Shenyang**	**22.80**	**5**	⇓P	**P**	**03 59 00.8**	**-0.8**
SNY				S	**S**	**04 03 04.1**	**-3.0**
SNY				pmax	pmax		
	comp=Z,28nm,1.0s						
SNY				pmax	pmax		
	comp=Z,240nm,4.2s						
SNY				LR	LR		
	comp=Z,690nm,15.3s						
SNY				LR	LR		
	comp=Z,1μm,15.4s						
SNY				LR	LR		
	comp=Z,590nm,16.5s						
LZDM	**Lanzhou Array**	**22.80**	**321**	P	**P**	**03 59 03.1**	**+1.0**
	comp=Z,2.4nm,0.4s,baz=152,slow=10.0,SNR=8.2						
LZDM				LR	LR	04 08 24.8	
	comp=Z,2μm,18.4s,baz=160,slow=38						
	comp=Z,2.4nm,0.4s						
LZH	**Lanzhou**	**22.81**	**322**	*e*P	**P**	**03 59 02.3**	**+0.3**
LZH				pP	pP	03 59 10.7	-1.9
LZH				S	**S**	**04 03 07.9**	**+0.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				LR	LR		
	comp=Z,2μm,17.8s						
LZH				LR	LR		
	comp=Z,2μm,18.3s						
LZH				LR	LR		
	comp=Z,3μm,19.0s						
SPSI	**Sidrap Palu**	**22.91**	**184**	P	**P**	**03 59 05.6**	**+2.6**
MAJO	**Matsushiro**	**22.99**	**37**	P	**P**	**03 59 03.3**	**-0.3**
MAJO				IAmb	IAmb	03 59 25.2	
	comp=Z,59nm,1.5s						
MJAR	**Matsushiro Arr**	**22.99**	**37**	P	**P**	**03 59 02.7**	**-1.0**
	comp=Z,6.9nm,0.7s,baz=219,slow=9.0,SNR=16						
MJAR				LR	LR	04 06 47.9	
	comp=Z,318nm,20.7s,baz=216,slow=33						
	comp=Z,6.9nm,0.7s						
BBKI	**Banjar Baru**	**23.22**	**196**	P	**P**	**03 59 09.2**	**+3.1**
	comp=Z,73nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.22**	**341**	*e*P	**P**	**03 59 06.6**	**+0.6**
HHC				pP	pwP	03 59 19.1	-0.4
HHC				PP	**PnPn**	**03 59 38.5**	**+5.2**
HHC				S	**S**	**04 03 16.4**	**+1.9**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				LR	LR		
	comp=Z,2μm,17.5s						
HHC				LR	LR		
	comp=Z,1μm,17.7s						
HHC				LR	LR		
	comp=Z,3μm,16.5s						
GUMO	**Guam**	**23.40**	**100**	LR	LR	04 06 12.6	
	comp=Z,2μm,21.9s,baz=272,slow=31						
BTO	**Baotou**	**23.50**	**338**	*e*P	**P**	**03 59 10.9**	**+2.2**
BTO				pP	**pwP**	**03 59 22.4**	**-0.6**
BTO				sP	**sP**	**03 59 28.0**	**+2.1**
BTO				pmax	pmax		
	comp=Z,18nm,0.7s						
BTO				pmax	pmax		
	comp=Z,680nm,8.4s						
BTO				LR	LR		
	comp=Z,4μm,18.6s						
BTO				LR	LR		
	comp=Z,3μm,19.0s						
BTO				LR	LR		
	comp=Z,4μm,18.2s						
KAPI	**Kappang**	**23.96**	**183**	P	**P**	**03 59 13.5**	**+0.5**
	comp=Z,3.9nm,0.3s,baz=335,slow=7.9,SNR=7.5						
KAPI				LR	LR	04 09 23.2	
	comp=Z,888nm,19.5s,baz=5.0,slow=38						
	comp=Z,3.9nm,0.3s						
MYKOM	**Kota Tinggi**	**24.11**	**227**	P	**P**	**03 59 15.2**	**+0.8**
KULM	**Kulim**	**24.21**	**238**	P	**P**	**03 59 16.4**	**+1.0**
KULM				IAmb	IAmb	03 59 26.7	
	comp=Z,38nm,1.1s						
KULM	**Kulim**	**24.21**	**238**	P	**P**	**03 59 15.3**	**-0.1**
BKSI	**Bulukumba**	**24.24**	**182**	P	**P**	**03 59 20.2**	**+4.6**
	comp=Z,318nmcomp=Z,10nm,0.7s						
IPM	**Ipoh**	**24.40**	**236**	P	**P**	**03 59 17.1**	**0.0**
FAKI	**Fak Fak**	**24.42**	**152**	P	**P**	**03 59 18.4**	**+1.2**
XLT	**XiLinHaoTe**	**25.13**	**351**	*e*P	**P**	**03 59 24.2**	**+0.6**
XLT				pP	pP	03 59 34.9	-0.6
XLT				S	**S**	**04 03 45.5**	**+0.4**
XLT				sS	sS	04 04 04.2	-1.6
XLT				pmax	pmax		
	comp=Z,25nm,1.1s						
XLT				pmax	pmax		
	comp=Z,300nm,4.0s						
XLT				LR	LR		
	comp=Z,78nm,16.2s						
XLT				LR	LR		
	comp=Z,680nm,17.0s						
XLT				LR	LR		
	comp=Z,1μm,17.4s						
JMM	**Marumori**	**25.40**	**38**	P	**P**	**03 59 25.2**	**-0.7**
USRK	**Ussuriysk Ar.**	**26.67**	**18**	P	**P**	**03 59 37.2**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=217,slow=7.5,SNR=5.7						
USRK				PcP	**PcP**	**04 02 59.1**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=217,slow=1.7,SNR=3.2						
	comp=Z,2.1nm,0.6s						
PSI	**Prapat**	**27.08**	**236**	LR	LR	04 10 33.7	
	comp=Z,879nm,18.1s,baz=72,slow=36						
BNX	**BinXian**	**27.11**	**10**	⇓P	**P**	**03 59 40.6**	**-0.8**
BNX				pmax	pmax		
	comp=Z,13nm,0.9s						
SMPI	**Sarmi**	**27.12**	**139**	P	P	04 00 00.0	+18
GTA	**Gaotai**	**27.40**	**322**	*e*P	**P**	**03 59 51.4**	**+7.2**
GTA				S	**S**	**04 04 26.0**	**+4.8**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				LR	LR		
	comp=Z,1μm,17.1s						
GTA				LR	LR		
	comp=Z,920nm,18.9s						
GTA				LR	LR		
	comp=Z,1μm,20.7s						
MMRI	**Maumere**	**27.54**	**178**	P	**P**	**03 59 46.4**	**+1.0**
MMRI	**Maumere**	**27.54**	**178**	P	P	04 00 08.7	+23
KCSI	**Kotacane, Aceh**	**27.57**	**239**	P	**P**	**03 59 46.7**	**+0.9**
	comp=Z,10nm,1.1s						
JTM	**Tenmabayashi**	**27.58**	**34**	P	**P**	**03 59 47.7**	**+2.1**
EDFI	**Ende, Flores**	**27.63**	**179**	P	**P**	**03 59 47.7**	**+1.3**
	comp=Z,18nm,0.6s						
SHL	**Shillong**	**27.79**	**289**	P	**P**	**03 59 48.3**	**+0.4**
SHL				IAmb	IAmb	04 00 07.5	
	comp=Z,20nm,0.9s						
MNSI	**Mandailing Nat**	**27.86**	**232**	P	**P**	**03 59 54.6**	**+6.2**
	comp=Z,29nm,1.0s						
PPI	**Padang Panjang**	**28.12**	**229**	P	**P**	**03 59 53.3**	**+2.6**
	comp=Z,1μmcomp=Z,18nm,1.5s						
GOMU	**GeErMu**	**28.77**	**312**	P	**P**	**03 59 59.2**	**+2.5**
GOMU				PcP	**PcP**	**04 03 07.8**	**+1.9**
GOMU				S	**S**	**04 04 46.3**	**+3.0**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,75nm,6.3s						
GOMU				LR	LR		
	comp=Z,1μm,19.6s						
GOMU				LR	LR		
	comp=Z,2μm,18.0s						
JAY	**Jayapura**	**28.80**	**136**	LR	LR	04 09 20.2	
	comp=Z,1μm,21.4s,baz=10.0,slow=32						
BATI	**Baumata**	**29.18**	**175**	LR	LR	04 12 43.0	
	comp=Z,928nm,21.5s,baz=310,slow=38						
LSA	**Lhasa**	**29.22**	**297**	P	**P**	**03 59 59.7**	**-1.2**
LSA				LR	LR		
	comp=Z,370nm,17.9s						
LSA				LR	LR		
	comp=Z,670nm,18.5s						
LSA				LR	LR		
	comp=Z,850nm,19.9s						
ERM	**Erimo**	**29.56**	**34**	P	**P**	**04 00 04.3**	**+1.1**
HILR	**Hailar Array B**	**30.45**	**358**	P	**P**	**04 00 09.9**	**-1.1**
	comp=Z,5.0nm,0.6s,baz=179,slow=9.5,SNR=6.7						
	comp=Z,5.0nm,0.6s						
ASAJ	**Asahikawa**	**30.77**	**31**	LR	LR	04 13 09.1	
	comp=Z,694nm,21.4s,baz=204,slow=37						
ULN	**Ulaanbaatar**	**30.94**	**341**	P	**P**	**04 00 16.1**	**+0.6**
SONM	**Songino Array**	**31.12**	**341**	P	**P**	**04 00 16.6**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=158,slow=8.8,SNR=10.0						
SONM				LR	LR	04 14 04.6	
	comp=Z,2μm,18.2s,baz=162,slow=39						
	comp=Z,1.4nm,0.6s						
HEH	**HeiHe**	**31.53**	**8**	*e*P	P	04 00 25.4	+4.9
HEH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HEH				LR	LR		
	comp=Z,1μm,14.5s						
HEH				LR	LR		
	comp=Z,540nm,15.7s						
HEH				LR	LR		
	comp=Z,2μm,15.7s						
EVN	**Everest**	**32.61**	**292**	P	**P**	**04 00 32.3**	**+1.3**
EVN				IAmb	IAmb	04 00 49.5	
	comp=Z,23nm,0.9s						
FITZ	**Fitzroy Crossi**	**37.19**	**173**	P	**P**	**04 01

comp=Z,2.9nm,0.4s
WMQ Urumqi 37.33 319 *e*P **P** **04 01 10.4 -0.4**
WMQ S **S** **04 06 56.7 +1.5**
WMQ pmax pmax
comp=Z,37nm,0.7s
WMQ LR LR
comp=Z,1μm,12.9s
WMQ LR LR
comp=Z,1μm,11.7s
WMQ LR LR
comp=Z,890nm,14.9s
PMG Port Moresby 38.18 136 LR LR 04 17 24.1
comp=Z,294nm,19.9s,baz=236,slow=37
WB0 Warramunga Arr 40.71 161 P **P** **04 01 38.5 -0.8**
WRAB Tennant Creek 40.85 161 P **P** **04 01 42.1 +1.7**
WRA Warramunga Arr 40.86 161 P **P** **04 01 38.0 -2.4**
comp=Z,4.6nm,0.6s,baz=342,slow=8.9,SNR=18
WRA PcP **PcP** **04 03 41.1 +0.5**
comp=Z,2.2nm,0.5s,baz=346,slow=3.5,SNR=5.6
WRA LR LR 04 20 40.7
comp=Z,265nm,18.9s,baz=310,slow=39
comp=Z,4.6nm,0.6s
WR8 Warramunga Arr 40.92 161 P **P** **04 01 39.1 -1.8**
PALK Pallekele 40.97 259 LR LR 04 18 30.3
comp=Z,638nm,20.0s,baz=51,slow=36
MKAR Makanchi Array 42.10 320 P **P** **04 01 51.5 +1.1**
comp=Z,5.4nm,0.8s,baz=112,slow=9.3,SNR=29
MKAR PcP **PcP** **04 03 44.6 +0.3**
comp=Z,3.6nm,0.9s,baz=105,slow=3.3,SNR=2.7
MKAR LR LR 04 20 31.9
comp=Z,599nm,19.2s,baz=122,slow=38
comp=Z,5.4nm,0.8s
MAKZ Makanchi 42.30 320 P **P** **04 01 53.3 +1.3**
MAKZ IAmb IAmb 04 02 06.9
comp=Z,48nm,1.8s
H11S3 WAKE ISLAND Hy 43.03 83 T T 04 47 44.3
baz=279,slow=75,SNR=213
H11S1 WAKE ISLAND Hy 43.04 83 T T 04 47 34.5
baz=279,slow=75,SNR=335
H11S2 WAKE ISLAND Hy 43.05 83 T T 04 47 35.1
baz=279,slow=75,SNR=264
H11N1 WAKE ISLAND Hy 43.06 81 T T 04 47 42.9
baz=277,slow=75,SNR=1254
H11N2 WAKE ISLAND Hy 43.06 81 T T 04 47 43.1
baz=277,slow=75,SNR=997
H11N3 WAKE ISLAND Hy 43.08 81 T T 04 47 44.2
baz=277,slow=75,SNR=652
QIS Mount Isa 43.33 154 P **P** **04 01 59.9 -0.6**
YAK Yakutsk 43.35 6 LR LR 04 22 06.4
comp=Z,549nm,18.3s,baz=182,slow=39
KSH Kashi 43.82 308 P P 04 02 09.5 +5.0
KSH S **S** **04 08 37.0 +4.8**
KSH pmax pmax
comp=Z,16nm,1.0s
KSH LR LR
comp=Z,720nm,14.1s
KSH LR LR
comp=Z,1μm,17.9s
KSH LR LR
comp=Z,2μm,17.3s
PETK Petropavlovsk- 44.20 31 P **P** **04 02 06.3 -0.8**
comp=Z,5.6nm,0.8s,baz=220,slow=8.8,SNR=8.8
PETK LR LR 04 22 03.7
comp=Z,312nm,19.2s,baz=224,slow=38
comp=Z,5.6nm,0.8s
AS31 Alice Springs 44.25 163 P **P** **04 02 08.4 +0.5**
ASAR Alice Springs 44.25 163 P **P** **04 02 08.0 +0.1**
comp=Z,4.1nm,0.3s,baz=342,slow=6.9,SNR=29
ASAR PcP **PcP** **04 03 51.3 -0.5**
comp=Z,1.3nm,0.8s,baz=337,slow=3.9,SNR=1.7
comp=Z,4.1nm,0.3s
ZALV Zalesovo Beam 44.58 330 P **P** **04 02 10.9 +0.7**
comp=Z,3.4nm,0.6s,baz=118,slow=8.3,SNR=16
ZALV PcP **PcP** **04 03 50.9 -1.6**
comp=Z,1.3nm,0.6s,baz=124,slow=3.9,SNR=1.4
ZALV LR LR 04 21 53.9
comp=Z,1μm,19.0s,baz=126,slow=37
comp=Z,3.4nm,0.6s
NIL Nilore 44.92 299 **P** **04 02 14.0 +0.7**
AAK Ala-Archa 45.72 311 LR LR 04 23 39.3
comp=Z,1μm,20.1s,baz=102,slow=39
MA2 Magadan 45.75 21 LR LR 04 22 12.0
comp=Z,529nm,21.5s,baz=208,slow=37
KURK Kurchatov 46.08 323 P **P** **04 02 22.5 +0.4**
KURK IAmb IAmb 04 02 45.6
comp=Z,20nm,1.1s
KURK Kurchatov 46.08 323 **PcP** **04 03 57.5 -0.3**
KURBB Kurchatov Arra 46.09 323 P **P** **04 02 23.2 +1.0**
comp=Z,7.9nm,0.7s,baz=122,slow=7.8,SNR=12
KURBB PcP **PcP** **04 03 57.5 -0.3**
comp=Z,1.2nm,0.8s,baz=126,slow=4.7,SNR=0.8
KURBB LR LR 04 22 35.9
comp=Z,371nm,21.4s,baz=160,slow=37
comp=Z,7.9nm,0.7s
ARSB Arslanbob 46.47 309 IAmb IAmb 04 02 29.4
comp=Z,19nm,1.3s
HNR Honiara 47.59 123 LR LR 04 22 27.0
comp=Z,484nm,18.4s,baz=338,slow=36
MORW Morawa 48.09 186 P **P** **04 02 39.3 +1.3**
KBL Kabul 48.48 300 P **P** **04 02 41.6 +0.2**
KK31 Karatay Array 48.67 311 IAmb IAmb 04 02 45.8
comp=Z,12nm,1.0s
KKAR Karatay Array 48.67 311 P **P** **04 02 43.6 +1.1**
SEY Seymchan 48.81 18 PcP **PcP** **04 04 06.7 -0.6**
comp=Z,5.6nm,0.5s,baz=216,slow=4.2,SNR=3.7
SEY LR LR 04 24 52.4
comp=Z,233nm,19.0s,baz=217,slow=38
SIMJ Simiganj 48.97 305 P **P** **04 02 45.9 +0.9**
SIMJ IAmb IAmb 04 03 06.3
comp=Z,14nm,1.2s
BLDU Ballidu 49.57 185 P **P** **04 02 48.9 -0.4**
BVAR Borovoye Array 51.68 323 P **P** **04 03 06.0 +0.9**
comp=Z,2.5nm,0.5s,baz=111,slow=8.1,SNR=11
BVAR PcP **PcP** **04 04 17.8 -0.2**
comp=Z,3.1nm,0.5s,baz=120,slow=3.4,SNR=4.7
BVAR LR LR 04 26 38.1
comp=Z,567nm,18.2s,baz=110,slow=38
comp=Z,2.5nm,0.5s
BORK Borovoye 51.72 323 P **P** **04 03 07.2 +1.8**
NWAO Narrogin (SRO) 51.82 184 P **P** **04 03 06.1 -0.2**
comp=Z,9.4nm,0.6s,baz=1.3,slow=6.2,SNR=10
NWAO LR LR 04 27 48.4
comp=Z,117nm,19.9s,baz=348,slow=39
comp=Z,9.4nm,0.6s
NWAO Narrogin (SRO) 51.82 184 P **P** **04 03 06.4 +0.1**
TIXI Tiksi 52.79 3 P **P** **04 03 11.1 -1.9**
TIXI Tiksi 52.79 3 LR LR 04 28 32.5
comp=Z,598nm,18.4s,baz=199,slow=39
SHEM Shemya Is, Ala 52.83 38 LR LR 04 25 13.9
comp=Z,154nm,21.8s,baz=290,slow=36
STKA Stephens Creek 54.31 159 P **P** **04 03 23.8 -0.8**
comp=Z,2.5nm,0.6s,baz=333,slow=7.2,SNR=6.8
STKA LR LR 04 28 15.4
comp=Z,216nm,20.4s,baz=358,slow=38
comp=Z,2.5nm,0.6s
AB31 Akbulak array 57.06 317 IAmb IAmb 04 03 47.1
comp=Z,9.9nm,0.8s
ABKAR Akbulak array 57.06 317 P **P** **04 03 45.0 +0.8**
AKTO Aktyubinsk 58.47 318 LR LR 04 30 26.5
comp=Z,423nm,21.0s,baz=82,slow=37
ARTI Arti 59.30 325 P **P** **04 03 59.7 0.0**
ARTI Arti 59.30 325 P **P** **04 03 59.3 -0.5**
comp=Z,12nm,0.9s,baz=137,slow=4.6,SNR=11
ARTI LR LR 04 31 30.2
comp=Z,507nm,18.3s,baz=91,slow=38
comp=Z,12nm,0.9s
ARTI Arti 59.30 325 P **P** **04 03 59.6 -0.1**
TOO Toolangi 60.81 158 P **P** **04 04 09.2 -1.1**
TOO IAmb IAmb 04 04 27.7
comp=Z,10nm,1.4s
SPIA Saint Paul Isl 62.61 35 P **P** **04 04 21.3 -0.8**
baz=263
NIKH Nikolski High 63.00 40 P **P** **04 04 24.0 -0.9**
baz=266
GAMB Gambell 63.01 27 P **P** **04 04 24.2 -0.4**
baz=258
KIRV Kirov 64.42 327 P **P** **04 04 34.9 +0.8**
comp=Z,14nm,0.5s,baz=87,slow=16,SNR=5.2
KIRV LR LR 04 34 50.2
comp=Z,943nm,18.4s,baz=99,slow=38
comp=Z,14nm,0.5s
UNV Unalaska Valle 64.45 39 P **P** **04 04 33.1 -1.3**
baz=268
TNA Tin City 64.94 26 P **P** **04 04 37.0 -0.3**
baz=261
M11K Mekoryuk 65.06 32 P **P** **04 04 37.9 -0.3**
baz=265
BELG Belogornoye 65.11 320 P **P** **04 04 39.6 +1.0**
comp=Z,13nm,0.9s,baz=300,slow=1.5,SNR=4.8
comp=Z,13nm,0.9s
F14K Arctic Creek 65.58 26 P **P** **04 04 41.2 -0.4**
baz=262
ANM Nome 65.87 27 P **P** **04 04 43.2 -0.2**
baz=264
K13K Kusilvak Mount 65.94 30 P **P** **04 04 43.2 -0.7**
baz=265
FALS False Pass 66.28 38 P **P** **04 04 45.9 -0.2**
baz=270
F15K North Star Dit 66.30 26 P **P** **04 04 46.4 +0.2**
baz=264
C16K Lisburne Hills 66.35 23 P **P** **04 04 46.6 +0.2**
baz=262
M13K Dall Lake 66.47 32 P **P** **04 04 47.2 -0.1**
baz=267
G15K Niukluk 66.48 27 P **P** **04 04 47.4 +0.1**
baz=264
J14K Nanvaranak Lak 66.51 29 P **P** **04 04 47.7 +0.2**
baz=266
L14K Kuka Creek 66.84 31 P **P** **04 04 49.0 -0.7**
baz=267
S12K Black Hills 67.06 37 P **P** **04 04 50.8 -0.4**
baz=270
D17K Noatak River 67.13 24 P **P** **04 04 51.3 -0.1**
baz=264
M14K Bethel 67.17 31 P **P** **04 04 50.6 -1.1**
baz=268
C17K DeLong Mountai 67.17 23 P **P** **04 04 50.9 -0.8**
baz=264
H16K Elim 67.22 27 P **P** **04 04 51.9 -0.2**
baz=266
G16K Koyuk River 67.22 26 P **P** **04 04 52.0 0.0**
baz=266
RDOG Red Dog Mine 67.23 23 P **P** **04 04 51.8 -0.2**
baz=264
N14K Kuskokwak Cree 67.29 32 P **P** **04 04 52.3 -0.1**
baz=269
K15K Wolf Creek Mou 67.43 30 P **P** **04 04 53.2 -0.1**
baz=268
L15K Ungalak Mounta 67.43 30 P **P** **04 04 52.6 -0.8**
baz=268
O14K Tigyukauivet M 67.49 33 P **P** **04 04 53.4 -0.4**
baz=270
E17K Hotham Inlet 67.56 24 P **P** **04 04 54.4 +0.3**
baz=266
GNI Garni 67.73 306 LR LR 04 38 58.1
comp=Z,277nm,21.8s,baz=102,slow=40
F17K Baldwin Pennin 67.75 25 IAmb IAmb 04 05 05.8
comp=Z,9.2nm,0.6s
F17K Baldwin Pennin 67.75 25 P **P** **04 04 54.6 -0.7**
baz=266
B18K Kokolik River 67.76 22 P **P** **04 04 55.2 -0.1**
baz=265
M15K Kasigluk River 67.80 31 P **P** **04 04 55.8 +0.1**
baz=269
I17K Unalakleet 67.86 28 P **P** **04 04 55.4 -0.6**
baz=268
J16K Anvik River 67.88 29 P **P** **04 04 56.0 -0.2**
baz=268
C18K Utukok River 67.92 23 P **P** **04 04 56.5 0.0**
baz=266
G17K Kiwalik Mounta 67.94 26 P **P** **04 04 56.6 0.0**
baz=267
SDPT Sand Point 67.97 37 P **P** **04 04 56.1 -0.7**
baz=272
E18K Tukpahlearik C 68.06 24 IAmb IAmb 04 05 07.7
comp=Z,6.1nm,0.7s
E18K Tukpahlearik C 68.06 24 P **P** **04 04 57.6 +0.3**
baz=267
A19K Wainwright 68.08 21 P **P** **04 04 57.1 -0.3**
baz=265
N15K Kwethluk River 68.09 32 P **P** **04 04 57.3 -0.3**
baz=270
H17K Granite Mounta 68.23 27 IAmb IAmb 04 05 16.2
comp=Z,8.4nm,0.8s
H17K Granite Mounta 68.23 27 P **P** **04 04 58.2 -0.2**
baz=268
O15K Ungalikthiuk R 68.23 33 P **P** **04 04 57.9 -0.6**
baz=271
L16K Owhat River 68.39 30 IAmb IAmb 04 05 17.8
comp=Z,23nm,1.4s
L16K Owhat River 68.39 30 P **P** **04 04 59.0 -0.4**
baz=270
F18K Selawik 68.39 25 P **P** **04 04 58.6 -0.7**
baz=268
S14K Fog Glacier 68.45 36 P **P** **04 04 59.0 -1.1**
baz=272
CHNA Chernabura Isl 68.50 38 P **P** **04 04 59.8 -0.4**
baz=273
C19K Lookout Ridge 68.53 22 P **P** **04 05 00.0 -0.2**
baz=267
J17K VABM Dome 68.57 28 IAmb IAmb 04 05 15.5
comp=Z,14nm,1.0s
J17K VABM Dome 68.57 28 P **P** **04 05 00.1 -0.5**
baz=270
M16K Timber Creek 68.64 31 P **P** **04 05 00.8 -0.2**
baz=271
KBZ Khabaz 68.70 310 P **P** **04 05 02.7 +1.0**
comp=Z,5.6nm,0.9s,baz=135,slow=3.4,SNR=6.7
KBZ LR LR 04 39 08.9
comp=Z,667nm,18.2s,baz=70,slow=39
comp=Z,5.6nm,0.9s
N16K Nishlik Lake 68.74 32 P **P** **04 05 00.9 -0.8**
baz=271
G18K Tagagawik 68.78 26 P **P** **04 05 00.6 -1.2**
baz=269
KIV Kislovodsk 68.83 311 P **P** **04 05 02.9 +0.3**
KIV Kislovodsk 68.83 311 ||P **P** **04 05 04.2 +1.6**
H18K Honhosa River 68.89 27 P **P** **04 05 02.0 -0.6**
baz=270
K17K Iditarod 68.93 29 IAmb IAmb 04 05 28.9
comp=Z,11nm,0.9s
K17K Iditarod 68.93 29 P **P** **04 05 01.7 -1.1**
baz=271
L17K Donlin 68.94 30 P **P** **04 05 02.0 -0.8**
baz=271
D19K Ka River 69.04 23 P **P** **04 05 02.8 -0.6**
baz=269
O16K Kokwok River B 69.11 33 P **P** **04 05 03.4 -0.5**
baz=272
F19K Shaleruckik Mo 69.14 25 P **P** **04 05 03.4 -0.6**
baz=270
P16K Nushagak River 69.18 33 P **P** **04 05 03.6 -0.8**
baz=272
E19K Redstone River 69.36 24 P **P** **04 05 04.4 -1.0**
baz=270
M17K Holitna River 69.37 31 P **P** **04 05 05.0 -0.5**
baz=272
B20K Meade River 69.41 21 P **P** **04 05 05.1 -0.5**
baz=269
R16K Pilot Point 69.48 35 P **P** **04 05 05.2 -1.0**
baz=273
N17K Nushagak Hills 69.53 31 P **P** **04 05 05.6 -0.9**
baz=272
GCSA Galena City Sc 69.53 27 P **P** **04 05 05.9 -0.5**
baz=272
D20K Etivluk River 69.59 23 P **P** **04 05 06.3 -0.5**
baz=270
O17K Koliganek Bris 69.61 32 P **P** **04 05 06.8 -0.2**
baz=273
A21K Barrow 69.61 20 P **P** **04 05 06.3 -0.5**
baz=269
J18K Innoko River 69.64 28 P **P** **04 05 07.0 -0.2**
baz=272
H19K Roundabout Mou 69.69 26 P **P** **04 05 06.9 -0.5**
baz=271
L18K Granite Mounta 69.69 30 P **P** **04 05 06.5 -1.0**
baz=272
E20K Nigu River 69.75 23 P **P** **04 05 08.1 +0.2**
baz=270
RAYN Ar Rayn 69.87 289 P **P** **04 05 09.7 +0.3**
RAYN IAmb IAmb 04 05 11.6
comp=Z,15nm,1.1s
F20K Avanaart Lake 69.95 24 P **P** **04 05 09.2 +0.2**
baz=271
P17K Kvichak River 69.97 33 P **P** **04 05 09.5 +0.3**
baz=274
GURO Guroymak-BITLI 70.03 305 IAmb IAmb 04 05 13.4
comp=Z,9.6nm,0.9s
J19K Poorman 70.10 28 IAmb IAmb 04 05 12.5
comp=Z,18nm,1.5s
J19K Poorman 70.10 28 P **P** **04 05 10.1 +0.1**
baz=273
R17L Mt. Pgulik Vol 70.12 35 P **P** **04 05 09.2 -1.1**
baz=274
M18K Stony River 70.14 30 P **P** **04 05 09.4 -0.9**
baz=273
A22K Sinclair Lake 70.15 20 P **P** **04 05 10.4 +0.3**
baz=271
N18K Kilae Creek 70.16 31 P **P** **04 05 10.7 +0.3**
baz=274
C21K Knifeblade Rid 70.25 22 P **P** **04 05 11.4 +0.6**
baz=272
B21K Ikpikpuk River 70.30 22 P **P** **04 05 11.1 0.0**
baz=272
Q17K Contact Creek 70.33 34 P **P** **04 05 11.3 -0.3**
baz=274
H20K Anotleneega Mo 70.35 26 P **P** **04 05 11.6 +0.1**
baz=273
L19K White Mountain 70.55 30 IAmb IAmb 04 05 23.0
comp=Z,13nm,1.0s
L19K White Mountain 70.55 30 P **P** **04 05 12.9 +0.1**
baz=274
O18K Koktuh Hills 70.55 32 P **P** **04 05 12.8 0.0**
baz=274
I20K Naaghedeneel 70.55 27 P **P** **04 05 13.1 +0.4**
baz=273
E21K Killik River 70.57 23 IAmb IAmb 04 05 24.2
comp=Z,12nm,1.0s
E21K Killik River 70.57 23 P **P** **04 05 12.9 +0.1**
baz=272
P18K Big Mountain, 70.58 33 P **P** **04 05 13.4 +0.4**
baz=275
B22K Teshekpuk Lake 70.68 21 P **P** **04 05 13.3 -0.1**
baz=272
J20K Nowinta River 70.74 28 IAmb IAmb 04 05 23.6
comp=Z,9.2nm,0.8s
J20K Nowinta River 70.74 28 P **P** **04 05 14.3 +0.4**
baz=274
Q18K Katmai Hardscr 70.76 33 P **P** **04 05 14.3 0.0**
baz=275
M19K Big River Lodg 70.79 30 IAmb IAmb 04 05 39.9
comp=Z,8.6nm,0.8s
M19K Big River Lodg 70.79 30 P **P** **04 05 14.2 -0.1**
baz=274
F21K Alatna River 70.82 24 P **P** **04 05 14.4 +0.1**
baz=273
K20K Telida 70.83 28 P **P** **04 05 14.0 -0.4**
baz=274
N19K Bonanza Creek 70.83 31 P **P** **04 05 14.5 -0.1**
baz=275
G21K Allakaket 70.85 25 P **P** **04 05 14.3 -0.2**
baz=274
O19K Port Alsworth 70.97 32 IAmb IAmb 04 05 17.6
comp=Z,18nm,1.1s
O19K Port Alsworth 70.97 32 P **P** **04 05 16.2 +0.9**
baz=275
L20K Farewell, AK 70.98 29 P **P** **04 05 15.2 -0.2**
baz=275
D22K Ayikyak River 71.02 22 P **P** **04 05 16.6 +1.1**
baz=274
R18K Karluk 71.15 35 P **P** **04 05 16.2 -0.2**
baz=276
H21K Melozitna Rive 71.20 26 P **P** **04 05 17.8 +1.1**
baz=274
F22K John River 71.30 24 P **P** **04 05 17.5 +0.2**
baz=274
M20K Styx River 71.39 30 IAmb IAmb 04 05 47.9
comp=Z,12nm,1.2s
M20K Styx River 71.39 30 P **P** **04 05 18.2 +0.2**
baz=276
E22K Anaktuvuk Pass 71.39 23 IAmb IAmb 04 05 37.5
comp=Z,16nm,1.2s
E22K Anaktuvuk Pass 71.39 23 P **P** **04 05 17.6 -0.3**
baz=275
OBN Obninsk 71.52 323 LR LR 04 38 00.6
comp=Z,175nm,19.1s,baz=34,slow=37
CHUM Lake Minchumin 71.56 28 P **P** **04 05 18.7 -0.1**
baz=276
P19K Oil Pt 71.57 32 P **P** **04 05 19.1 0.0**
baz=276
I21K Tanana 71.58 26 IAmb IAmb 04 05 51.9
comp=Z,16nm,1.2s
I21K Tanana 71.58 26 P **P** **04 05 18.8 -0.1**
baz=275
G22K Bettles 71.61 25 P **P** **04 05 18.9 -0.2**
baz=275
C23K Itkillik River 71.67 21 P **P** **04 05 19.1 -0.4**
baz=275
RED Redoubt Volcan 71.71 31 IAmb IAmb 04 05 22.8
comp=Z,12nm,0.8s
PPLA Purkeypile 71.72 29 P **P** **04 05 19.5 -0.5**
baz=276
D23K Nanushuk River 71.73 22 IAmb IAmb 04 05 32.7
comp=Z,16nm,0.9s
D23K Nanushuk River 71.73 22 P **P** **04 05 19.6 -0.2**
baz=275
H22K Ishtalitna Cre 71.76 26 P **P** **04 05 20.0 0.0**
baz=276
OHAK Old Harbor 71.82 35 P **P** **04 05 20.3 -0.1**
baz=277
O20K Slope Mountain 71.83 32 P **P** **04 05 20.4 -0.2**
baz=277
SPCR Spurr Chakacha 71.90 31 P **P** **04 05 21.2 +0.1**
baz=276
SPU Mount Spurr 71.98 31 IAmb IAmb 04 05 23.0
comp=Z,26nm,1.8s
COLD Coldfoot 72.09 24 P **P** **04 05 22.2 +0.2**
baz=276
Q20K Shuyak Island 72.12 33 P **P** **04 05 22.0 -0.2**
baz=277
MLY Manley 72.12 26 P **P** **04 05 22.4 +0.1**
MLY IAmb IAmb 04 05 33.0
comp=Z,10nm,0.7s
MLY Manley 72.12 26 P **P** **04 05 22.2 -0.1**
baz=277,SNR=8.3
BPAW Bear Paw Mtn. 72.12 27 P **P** **04 05 21.3 -1.0**
baz=277
KDAK Kodiak Island 72.13 34 P **P** **04 05 21.9 -0.4**
baz=277
SKT Skwentna 72.13 30 IAmb IAmb 04 05 48.7
comp=Z,22nm,1.5s
SKT Skwentna 72.13 30 P **P** **04 05 21.9 -0.5**
baz=277
TOLK Toolik Lake Re 72.17 23 IAmb IAmb 04 05 30.6
comp=Z,14nm,1.1s
TOLK Toolik Lake Re 72.17 23 P **P** **04 05 21.9 -0.6**
baz=276
E23K Chandalar 72.22 23 IAmb IAmb 04 05 37.4
comp=Z,11nm,0.8s
E23K Chandalar 72.22 23 P **P** **04 05 22.4 -0.4**
baz=277
G23K Bananza Creek 72.22 25 P **P** **04 05 22.4 -0.4**
baz=277
KTH Kantishna Hill 72.22 28 IAmb IAmb 04 05 37.1
comp=Z,13nm,1.0s
C24K Franklin Bluff 72.35 21 P **P** **04 05 23.1 -0.4**
baz=277
HOM Homer 72.37 32 P **P** **04 05 23.7 0.0**
baz=278
D24K Happy Valley 72.38 22 P **P** **04 05 24.0 +0.4**
baz=277
TRF Thorofare Moun 72.51 28 IAmb IAmb 04 05 56.7
comp=Z,9.1nm,0.9s
TRF Thorofare Moun 72.51 28 P **P** **04 05 24.1 -0.6**
baz=278
H23K Yukon River 72.52 26 IAmb IAmb 04 05 27.7
comp=Z,22nm,1.3s
H23K Yukon River 72.52 26 P **P** **04 05 24.5 -0.1**
baz=277
SUA Susitna One 72.57 30 P **P** **04 05 25.0 0.0**
baz=278
E24K Your Creek 72.64 23 P **P** **04 05 25.1 -0.2**
baz=278
CUT Chulitna 72.66 29 IAmb IAmb 04 05 34.8
comp=Z,17nm,0.8s
CUT Chulitna 72.66 29 P **P** **04 05 25.2 -0.3**
baz=278
I23K Minto, Yukon-K 72.69 26 P **P** **04 05 25.6 +0.1**
baz=278
BRSE Bradley Lake S 72.81 32 P **P** **04 05 26.0 -0.4**
baz=278
M22K Willow 72.82 30 P **P** **04 05 26.3 -0.1**
baz=278
VADS Vadso 72.85 339 *e*P **P** **04 05 24.8 -1.6**
NEA2 Nenana 72.89 27 IAmb IAmb 04 05 36.2
comp=Z,13nm,0.8s
NEA2 Nenana 72.89 27 P **P** **04 05 26.8 0.0**
baz=278
F24K Squaw Lake 72.94 24 IAmb IAmb 04 05 40.0
comp=Z,7.9nm,0.8s
F24K Squaw Lake 72.94 24 P **P** **04 05 26.9 -0.2**
baz=278
MCK McKinley 73.07 28 P **P** **04 05 26.9 -1.0**
MCK IAmb IAmb 04 05 37.0

comp=Z,17nm,0.9s
MCK McKinley 73.07 28 P P 04 05 27.6 -0.3
baz=279
RC01 Rabbit Creek A 73.10 31 P P 04 05 28.4 +0.3
baz=279
H24K Noodor Dome 73.20 25 P P 04 05 28.8 +0.1
baz=279
O22K Cooper Landing 73.20 31 P P 04 05 28.8 +0.1
baz=279
D25K Kavik River 73.22 22 IAmb IAmb 04 05 53.9
comp=Z,11nm,1.0s
D25K Kavik River 73.22 22 P P 04 05 28.8 +0.1
baz=279
G24K Hadweenzic Riv 73.22 25 P P 04 05 29.3 +0.5
baz=279
PMR Palmer 73.31 30 IAmb IAmb 04 05 38.3
comp=Z,14nm,1.0s
PMR Palmer 73.31 30 P P 04 05 28.9 -0.4
baz=279
WRH Wood River Hil 73.32 27 IAmb IAmb 04 05 39.2
comp=Z,8.2nm,0.8s
COLA College 73.36 26 P P 04 05 30.0 +0.5
baz=279
GHO Glory Hole Cre 73.38 30 IAmb IAmb 04 05 42.1
comp=Z,11nm,0.7s
WAT1 Susitna Watana 73.38 29 P P 04 05 29.9 +0.1
baz=279
SEW Seward 73.40 32 P P 04 05 29.8 0.0
baz=279
CCB Clear Creek Bu 73.42 27 P P 04 05 29.5 -0.4
POKR Poker Plat Res 73.50 26 P P 04 05 30.3 -0.1
baz=280
C26K Camden Bay 73.62 21 P P 04 05 30.9 0.0
baz=280
SML Sawmill 73.65 30 IAmb IAmb 04 05 59.2
comp=Z,13nm,0.8s
SML Sawmill 73.65 30 P P 04 05 31.4 0.0
baz=280
KNK Knik Glacier 73.66 30 P P 04 05 31.1 -0.3
baz=280
E25K Arctic Village 73.71 23 P P 04 05 31.6 0.0
baz=280
KEV Kevo 73.71 339 P P 04 05 31.5 0.0
G25K Bearman Lake 73.75 24 P P 04 05 31.7 -0.1
baz=280
F25K Christian Rive 73.78 23 IAmb IAmb 04 05 35.1
comp=Z,20nm,1.6s
F25K Christian Rive 73.78 23 P P 04 05 31.3 -0.8
baz=280
ILAR Eielson Array 73.78 26 P P 04 05 30.6 -1.4
ILAR Eielson Array 73.78 26 P P 04 05 30.2 -1.8
comp=Z,1.9nm,0.6s,baz=267,slow=4.6,SNR=36
ILAR LR LR 04 41 06.1
comp=Z,71nm,20.1s,baz=262,slow=38
comp=Z,1.9nm,0.6s
WAT6 Susitna Watana 73.79 29 P P 04 05 31.5 -0.9
baz=280
PWL Port Wells 73.81 31 P P 04 05 31.7 -0.6
baz=280
HDA Harding Lake 73.82 27 P P 04 05 31.5 -0.8
baz=280,SNR=6.9
DHY Denali Highway 73.87 28 P P 04 05 32.0 -0.8
baz=280
M23K Glacier View 73.94 30 P P 04 05 32.4 -0.6
baz=280
H25L Birch Creek 73.95 25 P P 04 05 32.3 -0.7
baz=281
C27K Jago River 74.08 21 P P 04 05 33.1 -0.7
baz=282
SCM Sheep Creek Mo 74.12 30 P P 04 05 33.3 -0.8
baz=280
BMAR Burnt Mountain 74.21 24 P P 04 05 35.2 +0.7
ARA0 ARCESS Array S 74.27 339 eP P 04 05 34.9 +0.1
ARCES ARCESS Array B 74.27 339 P P 04 05 34.6 -0.2
comp=Z,3.4nm,0.5s,baz=72,slow=7.9,SNR=45
ARCES LR LR 04 42 12.7
comp=Z,443nm,18.9s,baz=80,slow=39
comp=Z,3.4nm,0.5s
F26K Sheenjek River 74.32 23 P P 04 05 34.4 -0.7
baz=282
GLI Glacier Island 74.41 31 P P 04 05 35.5 -0.3
baz=281
P23K Montague Islan 74.43 31 P P 04 05 35.8 0.0
baz=281
K24K Donnelly Dome 74.44 27 P P 04 05 35.6 -0.4
baz=281,SNR=10
J25K Salcha River, 74.45 27 IAmb IAmb 04 05 59.0
comp=Z,20nm,1.9s
J25K Salcha River, 74.45 27 P P 04 05 35.5 -0.5
baz=281
SPA0 Spitsbergen Ar 74.47 348 eP P 04 05 35.0 -0.8
SPITS Spitsbergen Ar 74.47 348 P P 04 05 35.7 -0.1
comp=Z,9.9nm,0.9s,baz=94,slow=10,SNR=7.0
SPITS LR LR 04 42 57.3
comp=Z,329nm,18.2s,baz=61,slow=39
comp=Z,9.9nm,0.9s
M24K Tolsona, Glenn 74.60 29 P P 04 05 36.1 -0.8
baz=281
G26K Porcupine Rive 74.61 24 P P 04 05 36.3 -0.5
baz=282
PAX Paxson 74.75 28 IAmb IAmb 04 06 07.4
comp=Z,18nm,1.7s
PAX Paxson 74.75 28 P P 04 05 37.0 -0.8
baz=282
KLU Klutina 74.84 30 IAmb IAmb 04 06 07.3
comp=Z,13nm,1.2s
KLU Klutina 74.84 30 P P 04 05 37.0 -1.4
baz=282
RIDG Independent Ri 74.86 27 IAmb IAmb 04 05 39.9
comp=Z,10m,0.9s
RIDG Independent Ri 74.86 27 P P 04 05 37.9 -0.5
baz=282,SNR=5.2
DIV Divide 74.99 30 IAmb IAmb 04 05 48.2
comp=Z,12nm,0.8s
HARP HAARP 75.01 29 P P 04 05 38.5 -0.7
baz=282
Q23K Middleton Isla 75.06 32 P P 04 05 39.1 -0.4
baz=282
D27M Malcolm River 75.11 21 IAmb IAmb 04 06 11.4
comp=Z,33nm,1.8s
D27M Malcolm River 75.11 21 P P 04 05 38.8 -1.0
baz=284
EYAK Cordova Ski Ar 75.12 31 P P 04 05 39.3 -0.6
baz=282
E27K Coleen River 75.15 23 IAmb IAmb 04 05 53.1
comp=Z,21nm,1.5s
E27K Coleen River 75.15 23 P P 04 05 39.6 -0.4
baz=284
KTK1 Kautokeino 75.17 338 eP P 04 05 40.1 +0.1
SCRK Sand Creek 75.18 27 IAmb IAmb 04 06 13.6
comp=Z,14nm,1.4s
SCRK Sand Creek 75.18 27 P P 04 05 39.7 -0.6
baz=283,SNR=7.6
I26K Coal Creek Min 75.23 26 IAmb IAmb 04 05 51.8
comp=Z,9.5nm,0.8s
I26K Coal Creek Min 75.23 26 P P 04 05 40.4 +0.1
baz=283
J26L Joseph Creek 75.24 26 P P 04 05 40.4 -0.2
baz=283,SNR=7.6
ATD Arta Tunnel 75.37 277 P P 04 05 43.9 +1.7
ATD IAmb IAmb 04 05 45.7
comp=Z,14nm,1.0s
ASF Jabal al Asfar 75.38 299 LR LR 04 42 48.1
comp=Z,187nm,19.1s,baz=127,slow=39
N25K Chitina, Valde 75.44 30 P P 04 05 41.3 -0.5
baz=283
G27K Doyon Strip 75.46 24 P P 04 05 41.2 -0.5
baz=284
BMRM Bremner River 75.58 30 P P 04 05 42.5 -0.1
baz=283
H27K Steamboat Moun 75.66 25 IAmb IAmb 04 06 14.9
comp=Z,20nm,1.6s
H27K Steamboat Moun 75.66 25 P P 04 05 42.3 -0.6
baz=284
L26K Log Cabin Wild 75.68 28 IAmb IAmb 04 06 02.5
comp=Z,35nm,1.9s
L26K Log Cabin Wild 75.68 28 P P 04 05 42.7 -0.4
baz=284
E28M Babbage River 75.78 22 IAmb IAmb 04 05 46.8
comp=Z,20nm,1.4s
E28M Babbage River 75.78 22 P P 04 05 43.4 -0.1
baz=286
I27K Kandik River 75.78 25 P P 04 05 43.4 -0.3
baz=284
GLB Gilahina Butte 75.84 30 P P 04 05 43.9 -0.2
GLB IAmb IAmb 04 05 58.7
comp=Z,12nm,1.0s
FINES FINESS Array B 75.85 330 P P 04 05 44.1 +0.1
comp=Z,4.3nm,0.9s,baz=34,slow=5.4,SNR=13
FINES LR LR 04 41 57.8
comp=Z,455nm,18.1s,baz=79,slow=38
comp=Z,4.3nm,0.9s
D28M Stokes Point 75.86 21 P P 04 05 44.2 +0.3
baz=286
KAIM Kayak Island 75.91 31 P P 04 05 44.1 -0.3
baz=284
F28M Old Crow 75.93 23 P P 04 05 44.0 -0.4
baz=286
K27K Chicken 75.98 27 P P 04 05 44.3 -0.4
baz=284
M26K Nabesna, AK 75.98 29 IAmb IAmb 04 05 54.5
comp=Z,12nm,0.8s
M26K Nabesna, AK 75.98 29 P P 04 05 44.5 -0.3
baz=284,SNR=13
JETT Jettan, Norway 76.00 339 eP P 04 05 45.0 +0.2
KIRS Kirsehir-Merke 76.14 307 ⇑P P 04 05 46.6 +0.4
BRTR Keskin Array B 76.21 307 P P 04 05 46.8 0.0
comp=Z,0.9nm,0.5s,baz=138,slow=3.2,SNR=13
comp=Z,0.9nm,0.5s
BR104 Keskin Array S 76.21 307 P P 04 05 47.0 +0.3
comp=Z,3.4nm,1.0s
MCARA McCarthy VSAT 76.22 30 IAmb IAmb 04 06 36.2
comp=Z,15nm,1.2s
MCARA McCarthy VSAT 76.22 30 P P 04 05 46.6 +0.4
baz=284
L27K Beaver Creek, 76.34 28 P P 04 05 46.7 -0.2
baz=285,SNR=9.9
CRQE Cirque 76.35 30 P P 04 05 47.3 +0.2
baz=284
BCAR Beaver Creek A 76.36 28 P P 04 05 47.4 +0.4
MMAI Mount Meron Ar 76.41 300 LR LR 04 43 41.5
comp=Z,170nm,19.8s,baz=66,slow=39
E29M Blow River 76.42 22 P P 04 05 47.3 +0.1
baz=287
TRO Tromso 76.47 339 eP P 04 05 46.3 -1.0
I28M Miner Creek 76.50 25 IAmb IAmb 04 05 57.4
comp=Z,7.9nm,0.8s
I28M Miner Creek 76.50 25 P P 04 05 47.9 +0.1
baz=286
M27K Edge Creek, AK 76.50 28 P P 04 05 46.9 -1.0
baz=285
AK09 Malin Array Si 76.67 319 P P 04 05 48.9 0.0
AKASG Malin Array Be 76.68 319 P P 04 05 48.0 -1.0
comp=Z,2.3nm,0.8s,baz=67,slow=5.3,SNR=5.6
AKASG LR LR 04 41 51.6
comp=Z,260nm,18.2s,baz=76,slow=37
comp=Z,2.3nm,0.8s
AK01 Malin Array Si 76.69 319 P P 04 05 49.8 +0.8
AK01 pP PcP 04 05 54.7 -5.5
AK06 Malin Array Si 76.73 319 P P 04 05 49.5 +0.3
AK07 Malin Array Si 76.73 319 P P 04 05 48.5 -0.7
AK16 Malin Array Si 76.76 319 P P 04 05 49.1 -0.3
AK22 Malin Array Si 76.76 319 P P 04 05 49.2 -0.2
AK14 Malin Array Si 76.77 319 P P 04 05 49.2 -0.3
G29M Pine Creek 76.82 23 IAmb IAmb 04 06 13.1
comp=Z,11nm,0.8s
G29M Pine Creek 76.82 23 P P 04 05 48.3 -1.1
baz=287
H29M Whitestone 76.89 24 IAmb IAmb 04 06 13.1
comp=Z,11nm,0.9s
H29M Whitestone 76.89 24 P P 04 05 49.3 -0.5
baz=287
BARN Barnard Glacie 76.94 30 IAmb IAmb 04 05 52.5
comp=Z,8.8nm,0.7s
MESA MESA 77.04 31 P P 04 05 50.5 -0.6
baz=286
BAL3X Bal3x, Balta 77.11 316 P P 04 05 51.7 +0.3
DAWY Dawson 77.11 26 P P 04 05 50.9 -0.3
baz=287,SNR=7.0
CTG Chitna Glacier 77.12 30 P P 04 05 51.4 0.0
baz=286,SNR=9.8
LOGN Logan Glacier 77.32 30 IAmb IAmb 04 06 23.6
comp=Z,12nm,0.8s
RPZ Rata Peaks 77.40 145 P P 04 05 52.2 -0.8
comp=Z,9.3nm,0.7s,baz=4.7,slow=4.2,SNR=5.9
RPZ LR LR 04 39 35.3
comp=Z,195nm,20.0s,baz=134,slow=35
comp=Z,9.3nm,0.7s
NOR Nord 77.41 354 i P P 04 05 52.4 -0.1
NOR IAmb IAmb 04 06 02.8
comp=Z,2.4nm,0.9s
F30M Barrier River 77.42 22 P P 04 05 53.0 +0.2
baz=289
G30M tAoh Zraii Nji 77.47 23 IAmb IAmb 04 06 16.0
comp=Z,15nm,1.1s
G30M tAoh Zraii Nji 77.47 23 P P 04 05 53.2 +0.1
baz=289
EPYK Eagle Plains 77.48 24 IAmb IAmb 04 06 15.8
comp=Z,9.6nm,0.8s
EPYK Eagle Plains 77.48 24 P P 04 05 52.7 -0.5
baz=289
URZ Urewera 77.49 138 LR LR 04 38 07.9
comp=Z,173nm,21.6s,baz=313,slow=34
EIL Elat 77.61 297 LR LR 04 45 16.6
comp=Z,305nm,19.5s,baz=16,slow=40
O28M Mount Upton 77.72 30 P P 04 05 54.0 -0.9
baz=287
YUK8 Steele Glacier 77.76 29 P P 04 05 54.6 -0.5
baz=287
LUBAR Lubar, Ukraine 77.79 319 P P 04 05 54.8 -0.4
PINM Pinnacle 77.88 30 P P 04 05 55.1 -0.5
baz=287
L29M L29M 77.94 27 IAmb IAmb 04 06 06.0
comp=Z,12nm,0.8s
L29M L29M 77.94 27 P P 04 05 55.4 -0.4
baz=288,SNR=10
K29M Barlow Dome 77.97 26 IAmb IAmb 04 05 58.7
comp=Z,21nm,1.6s
K29M Barlow Dome 77.97 26 P P 04 05 54.8 -1.3
baz=288
INK Inuvik 77.98 22 IAmb IAmb 04 05 58.2
comp=Z,12nm,1.2s
INK Inuvik 77.98 22 LR LR 04 42 07.6
comp=Z,174nm,21.6s,baz=331,slow=37
INK Inuvik 77.98 22 P P 04 05 55.7 -0.1
baz=291
I30M Mount Dempster 77.99 25 IAmb IAmb 04 06 26.4
comp=Z,28nm,1.7s
I30M Mount Dempster 77.99 25 P P 04 05 56.2 +0.1
baz=289
M29M Somme Creek 78.00 28 IAmb IAmb 04 06 06.8
comp=Z,12nm,0.8s
M29M Somme Creek 78.00 28 P P 04 05 56.0 -0.3
baz=288
G31M Satah River 78.21 23 P P 04 05 56.6 -0.6
baz=291
F31M Tsiigehtchic 78.22 22 P P 04 05 56.6 -0.6
baz=291
J30M Hart River 78.22 25 P P 04 05 56.3 -1.2
baz=289
YUK4 Talbot Arm 78.26 29 P P 04 05 57.3 -0.6
baz=288
STEI Steigen 78.31 338 eP P 04 05 57.5 -0.2
BFZ Birch Farm 78.42 140 P P 04 05 59.1 +0.4
PNL Peninsula 78.42 31 P P 04 05 58.5 0.0
baz=288
FAUS Fauske 78.50 338 eP P 04 05 57.0 -1.7
YUK6 Outpost Mounta 78.52 29 P P 04 05 58.8 -0.5
baz=288
RNPP9 Sopachiv 78.53 320 P P 04 05 59.1 -0.2
H31M Peel River 78.58 24 IAmb IAmb 04 06 00.9
comp=Z,11nm,1.0s
H31M Peel River 78.58 24 P P 04 05 59.2 -0.1
baz=291
O29M Mount Kennedy 78.62 30 P P 04 05 58.9 -0.8
baz=288
M30M Minto, Yukon 78.69 28 IAmb IAmb 04 06 09.9
comp=Z,9.2nm,0.8s
M30M Minto, Yukon 78.69 28 P P 04 05 59.7 -0.3
baz=289,SNR=8.9
N30M Aishikik Lake 78.93 29 IAmb IAmb 04 06 11.3
comp=Z,11nm,0.9s
N30M Aishikik Lake 78.93 29 P P 04 06 00.1 -1.3
baz=289
HYT Haines Junctio 78.95 29 IAmb IAmb 04 06 11.4
comp=Z,10nm,1.0s
HYT Haines Junctio 78.95 29 P P 04 05 59.9 -1.6
baz=289,SNR=6.8
A36M Sachs Harbour 79.02 17 P P 04 06 01.9 +0.4
baz=298
P29M Windy Craggy 79.23 30 IAmb IAmb 04 06 05.9
comp=Z,13nm,0.9s
P29M Windy Craggy 79.23 30 P P 04 06 03.2 +0.2
baz=289
RAUS Rausandaksla 79.32 337 eP P 04 06 02.3 -1.0
SUW Suwalki 79.36 324 eP P 04 06 04.5 +0.8
P30M Million Dollar 79.44 30 P P 04 06 03.9 -0.3
baz=290
N31M Braeburn, Yuko 79.51 28 IAmb IAmb 04 06 20.6
comp=Z,8.3nm,0.8s
N31M Braeburn, Yuko 79.51 28 P P 04 06 04.4 -0.1
baz=290
VRI Vrincioaia 79.56 315 ⇓P P 04 06 06.1 +1.1
O30N Mendenhall 79.62 29 P P 04 06 04.7 -0.4
baz=290,SNR=6.1
STOK Stokkvaagen 79.74 337 eP P 04 06 04.0 -1.5
LEIR Leirfjorden 79.79 337 eP P 04 06 04.9 -0.9
M31M Drury Creek, Y 79.87 27 P P 04 06 06.2 -0.2
baz=292,SNR=7.8
PLBC Pleasant Camp 79.95 30 P P 04 06 07.2 +0.3
baz=290
BURAR Bucovina Array 80.04 317 ⇑P P 04 06 07.1 -0.6
BUR08 Bucovina Ar. S 80.05 317 IAmb IAmb 04 06 10.0
comp=Z,15nm,1.2s
FURI Furi 80.07 276 LR LR 04 40 52.5
comp=Z,144nm,20.1s,baz=68,slow=35
MLR Muntele Rosu 80.19 315 IAmb IAmb 04 06 18.4
comp=Z,8.2nm,0.8s
MLR Muntele Rosu 80.19 315 LR LR 04 45 26.1
comp=Z,538nm,22.0s,baz=68,slow=38
MLR Muntele Rosu 80.19 315 ⇑P P 04 06 09.3 +0.7
WHY Whitehorse 80.22 29 IAmb IAmb 04 06 18.1
comp=Z,13nm,0.8s
WHY Whitehorse 80.22 29 P P 04 06 08.6 +0.2
baz=291,SNR=6.7
SKAG Skagway 80.44 30 P P 04 06 09.6 +0.1
baz=291
S31K Pelican 80.54 32 P P 04 06 09.9 -0.1
baz=291
C36M Paulatuk 80.64 19 P P 04 06 10.2 -0.1
baz=300
N32M Quiet Lake 80.85 28 IAmb IAmb 04 06 45.3
comp=Z,14nm,0.8s
N32M Quiet Lake 80.85 28 P P 04 06 11.9 +0.2
baz=293
NSS Namsos 80.89 336 eP P 04 06 11.0 -0.8
ARR Arges 81.11 315 ⇓P P 04 06 13.7 +0.2
P32M Atlin 81.16 30 P P 04 06 13.4 0.0
baz=292
R32K Eaglecrest 81.27 31 P P 04 06 14.5 +0.5
baz=292
SIT Sitka 81.33 33 P P 04 06 14.8 +0.6
baz=292
P33M Teslin, Yukon 81.34 29 IAmb IAmb 04 06 46.8
comp=Z,22nm,1.8s
P33M Teslin, Yukon 81.34 29 P P 04 06 14.5 +0.1
baz=293
CJR Cluj-Napoca 81.37 316 ⇑P P 04 06 12.9 -1.9
DAG Danmarks Havn 81.41 351 i P P 04 06 12.9 -1.4
DAG IAmb IAmb 04 06 43.6
comp=Z,5.4nm,0.8s
S32K Killisnoo 81.55 32 P P 04 06 16.2 +0.8
baz=292
MARR Marisel-Cluj 81.69 316 ⇑P P 04 06 17.8 +1.2
DRGR 81.92 317 ⇑P P 04 06 17.6 -0.1
STHS Stebnicka Huta 81.98 319 eP P 04 06 18.5 +0.6
HFS Hagfors 82.01 331 P P 04 06 16.9 -0.9
comp=Z,2.8nm,0.6s,baz=116,slow=3.4,SNR=8.1
HFS LR LR 04 45 31.7
comp=Z,560nm,18.8s,baz=63,slow=38
comp=Z,2.8nm,0.6s
Q32M Nakina River 82.09 30 P P 04 06 18.8 +0.3
baz=294
DEV Deva 82.09 316 ⇑P P 04 06 20.5 +1.9
R33M Jennings River 82.52 29 P P 04 06 21.0 +0.3
baz=295
OJC Ojcow 82.58 321 eP P 04 06 21.2 +0.2
OJC Ojcow 82.58 321 P P 04 06 20.6 -0.4
NB2 NORSAR Subarra 82.73 333 P P 04 06 20.5 -1.1
comp=Z,6.1nm,0.8s,baz=65,slow=4.8
NOA NORSAR Array B 82.73 333 P P 04 06 20.5 -1.1
comp=Z,2.1nm,0.8s,baz=63,slow=5.2,SNR=5.8
NOA LR LR 04 46 16.0
comp=Z,1µm,19.0s,baz=65,slow=38
comp=Z,2.1nm,0.8s
TGTN Hyland Airport 82.79 27 P P 04 06 22.3 +0.4
baz=297
U33K Whale Pass 82.81 33 P P 04 06 22.0 0.0
baz=293
CRAG Craig 83.07 34 P P 04 06 23.3 -0.1
baz=294
S34M Telegraph Cree 83.07 31 IAmb IAmb 04 06 27.7
comp=Z,24nm,1.6s
S34M Telegraph Cree 83.07 31 P P 04 06 23.2 -0.2
baz=295
WRAK Wrangell Islan 83.08 32 P P 04 06 23.7 +0.3
baz=294
WTLY Watson Lake, Y 83.20 28 IAmb IAmb 04 06 26.6
comp=Z,9.4nm,1.0s
WTLY Watson Lake, Y 83.20 28 P P 04 06 23.8 -0.2
baz=296
DLBC Dease Lake 83.37 30 LR LR 04 45 16.3
comp=Z,83nm,20.8s,baz=268,slow=37
DLBC Dease Lake 83.37 30 P P 04 06 24.8 -0.2
baz=296
NEEM North Greenlan 83.59 358 i P P 04 06 26.6 +0.5
NEEM IAmb IAmb 04 06 54.7
comp=Z,9.3nm,0.9s
DBG Daneborg 83.62 350 i P P 04 06 24.3 -1.6
DBG IAmb IAmb 04 06 35.2
comp=Z,3.6nm,1.0s
RES Resolute Bay 83.71 9 LR LR 04 49 12.2
comp=Z,129nm,18.6s,baz=342,slow=40
JMIC Jan Mayen 83.75 345 LR LR 04 48 11.4
comp=Z,265nm,19.4s,baz=69,slow=39
STEB Steborice 83.89 321 eP P 04 06 29.6 +1.8
T35M Bob Quinn 83.90 31 P P 04 06 27.5 -0.1
baz=296
V35K Ketchikan 83.91 33 P P 04 06 28.0 +0.3
baz=295
MORC Moravsky Berou 84.09 321 eP P 04 06 29.5 +0.6
JAVC Velka Javorina 84.37 320 eP P 04 06 32.7 +2.4
KSP Ksiaz 84.42 322 eP P 04 06 30.8 +0.4
KMBO Kilima Mbogo 84.59 267 LR LR 04 41 52.6
comp=Z,254nm,21.0s,baz=105,slow=34
DPC Dobruska-Polom 84.59 322 eP P 04 06 32.7 +1.3
DPC ex x 04 06 39.6
LIRD Liard River Hi 84.74 28 P P 04 06 32.3 +0.5
baz=299
MORH Mrgy, Hungar 84.76 317 ⇑P P 04 06 32.5 +0.4
MODS Modra-Piesok 84.79 319 eP P 04 06 28.2 -4.2
VRAC Vranov 84.84 320 P P 04 06 32.7 +0.1
comp=Z,11nm,1.1s,baz=49,slow=2.4,SNR=12
VRAC LR LR 04 47 15.2
comp=Z,265nm,19.7s,baz=58,slow=38
comp=Z,11nm,1.1s
VRAC Vranov 84.84 320 ⇓P P 04 06 32.4 -0.2
VRAC Vranov 84.84 320 eP P 04 06 34.4 +1.8
ZST Bratislava 84.97 319 eP P 04 06 35.5 +2.3
KRUC Moravsky 85.06 320 eP P 04 06 34.6 +0.9
KOTAN Kotaneelee Air 85.28 27 P P 04 06 35.3 +0.7
baz=300
TOAD Toad River Com 85.40 29 P P 04 06 35.5 +0.3
baz=300
TREC Trest 85.51 321 eP P 04 06 37.8 +1.8
CONA Conrad Observa 85.84 319 eP P 04 06 38.1 +0.4
comp=Z,0.7nm,0.4s
ZVC Zvikov 86.22 321 eP P 04 06 40.2 +0.7
ARSA Arzberg 86.33 319 eP P 04 06 40.3 +0.3
comp=Z,1.6nm,0.7s
GERES GERESS Array B 86.77 321 P P 04 06 42.1 -0.2
comp=Z,0.6nm,0.5s,baz=77,slow=8.4,SNR=5.9
GERES LR LR 04 48 25.0
comp=Z,212nm,19.0s,baz=68,slow=38
comp=Z,0.6nm,0.5s
MOA Molln 86.85 320 eP P 04 06 42.9 +0.3
comp=Z,1.6nm,0.6s
RAR Rarotonga 87.11 113 LR LR 04 38 13.7
comp=Z,108nm,21.2s,baz=290,slow=30
BBB Bella Bella 87.17 35 LR LR 04 43 20.9
comp=Z,64nm,21.9s,baz=244,slow=34
YKA Yellowknife Ar 87.69 23 P P 04 06 45.6 -0.7
comp=Z,8.2nm,0.8s,baz=315,slow=8.7,SNR=12
comp=Z,8.2nm,0.8s
WTTA Wattenberg 88.71 320 eP P 04 06 51.3 -0.4
comp=Z,0.6nm,0.4s
SQTA Sankt Quirin 88.99 320 eP P 04 06 53.0 0.0
comp=Z,1.2nm,0.5s
MOTA Moosalm 89.00 320 eP P 04 06 52.4 -0.6
comp=Z,0.8nm,0.5s
FETA Feichten 89.37 320 ePcP P 04 06 55.1 +0.3
comp=Z,2.9nm,0.7s
VAE Valguarnera 91.14 310 LR LR 04 53 24.6

comp=Z,126nm,21.6s,baz=104,slow=39
BORG Borgarnes 91.64 345 LR LR 04 49 49.0
comp=Z,144nm,22.0s,baz=28,slow=36
B08A Colville Reser 93.96 36 IAmb IAmb 04 07 53.5
comp=Z,3.9nm,0.6s
SFJD Kangerlussuaq 93.99 357 LR LR 04 50 30.1
comp=Z,62nm,21.3s,baz=2.0,slow=36
MXC Moxie City 94.42 37 IAmb IAmb 04 07 20.8
comp=Z,6.3nm,1.1s
C09A Chrisman Ranch 94.86 36 IAmb IAmb 04 07 21.2
comp=Z,3.1nm,0.6s
PPT Papeete 94.94 107 LR LR 04 40 26.2
comp=Z,194nm,21.2s,baz=296,slow=29
PPT2 Papeete2 94.94 107 *eP* P 04 07 15.2 -5.7
comp=Z,41nm,26.5s
PPT2 Papeete2 94.94 107 *eS* S 04 18 21.5 -10
comp=Z,121nm,26.2s
PPT2 *eSS* **SS 04 24 50.8 -7.5**
comp=Z,157nm,30.2s
PPT2 *eLQ* LQ 04 33 49.7
comp=Z,2µm,32.8s
PPT2 *eLR* LR 04 37 49.0
comp=Z,374nm,25.2s
PPT2 *eLR* LR 04 37 56.4
comp=Z,513nm,25.8s
J04A Umpqua Nationa 95.14 41 P **P 04 07 21.9 +0.3**
NEW Newport 95.22 35 LR LR 04 51 17.8
comp=Z,69nm,19.7s,baz=331,slow=36
YBH Yreka Blue Hor 95.56 42 LR LR 04 42 10.8
comp=Z,6.6nm,21.7s,baz=288,slow=30
J05D Fort Rock, OR 95.66 41 P **P 04 07 24.6 +0.7**
MAW Mawson 96.26 199 LR LR 04 48 00.6
comp=Z,60nm,19.0s,baz=59,slow=34
TBI Tubuai 96.82 112 *eS* **S 04 18 42.5 -5.4**
comp=Z,1µm,30.2s
TBI Tubuai 96.82 112 *eLR* LR 04 38 42.3
comp=Z,1µm,25.0s
FRB Frobisher Bay 97.12 4 LR LR 04 54 36.4
comp=Z,161nm,20.2s,baz=334,slow=37
LSZ Lusaka 97.58 256 LR LR 04 49 26.4
comp=Z,318nm,18.6s,baz=95,slow=34
BEKR Beckworth 98.06 43 P **P 04 07 34.6 -0.3**
BEKR IAmb IAmb 04 07 57.8
comp=Z,2.7nm,1.0s
VNDA Vanda 99.25 172 P **Pdif 04 07 39.3 +0.3**
comp=Z,2.3nm,0.9s,baz=354,slow=3.2,SNR=5.9
VNDA LR LR 04 56 16.1
comp=Z,125nm,18.4s,baz=344,slow=38
comp=Z,2.3nm,0.9s
HLID Hailey 99.56 37 IAmb IAmb 04 08 55.6
comp=Z,11nm,2.0s
NVAR Mina Array Bea 100.18 43 P **Pdif 04 07 44.5 +0.1**
comp=Z,0.7nm,0.9s,baz=272,slow=6.8,SNR=5.0
TAOE Nuku Hiva Isla 101.02 96 *eS* **Sdif 04 19 17.3 -6.6**
comp=Z,134nm,28.2s
TAOE *eSS* SS 04 26 05.6 -18
comp=Z,130nm,35.2s
TAOE Nuku Hiva Isla 101.02 96 *eLR* LR 04 40 43.7
comp=Z,617nm,23.0s
RKT Rikitea 109.61 108 *eLR* LR 04 44 40.4
comp=Z,1µm,30.5s
TXAR Lajitas Array 115.33 43 PKP **PKPdf 04 12 40.3 +0.2**
comp=Z,1.2nm,0.5s,baz=257,slow=0.7,SNR=20
TROLL Troll, Antarti 116.69 198 ⇑P **PKPdf 04 12 41.4 0.0**
comp=Z,169nm,0.5s
SNAA Sanae 118.36 197 ⇑P **PKPdf 04 12 43.9 -0.6**
comp=Z,22nm,0.6s
SNAA Sanae 118.36 197 PKP **PKPdf 04 12 44.4 -0.1**
comp=Z,0.7nm,0.5s,baz=135,slow=8.6,SNR=14
VNA2 Neumayer--Watz 120.01 197 ⇑P **PKPdf 04 12 47.6 -0.1**
comp=Z,12nm,0.6s,baz=105,slow=1.7
VNA1 Neumayer--Stat 120.40 197 ⇑P **PKPdf 04 12 48.3 -0.1**
comp=Z,3.1nm,0.8s
VNA3 Neumayer Olymp 120.47 197 ⇑P **PKPdf 04 12 47.9 -0.6**
comp=Z,4.4nm,0.7s
ROSC El Rosal 151.79 34 PKPbc **PKiKP 04 13 54.8 +0.5**
comp=Z,27nm,0.5s,baz=90,slow=9.1,SNR=18
PLCA Paso Flores 156.18 158 PKP **PKPdf 04 13 52.0 -0.6**
comp=Z,0.7nm,0.8s,baz=180,slow=1.0,SNR=1.3
LPAZ La Paz 170.75 74 PKP **PKPdf 04 14 07.9 +0.4**
comp=Z,0.9nm,0.8s,baz=335,slow=3.5,SNR=4.1

*IDC **03** 03:56:52.1±1.4,27.°31S×178.°16W,h316km±11km, mb3.3/5, mbtmp4.2/7, Error ellipse: s-maj=32.3km s-min=23.6km az=54.0*
ISC 03 03:56:52.2±0.8,**27.°45S**±0.°07×**177.°9W**±0.°1,**h350**km,**n48,** σ1**°81**/52,**mb3.5**/5,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**1.78**	**180**	P	**Pn**	**03 57 41.3**	**-0.6**
RIZ				S	**S**	**03 58 17.8**	**-4.1**
RAO	**Raoul Island**	**1.79**	**180**	P	**Pn**	**03 57 41.3**	**-0.7**
	888nm,0.3s,baz=108,slow=6.6,SNR=23						
RAO				S	**S**	**03 58 17.9**	**-4.1**
	805nm,0.3s,baz=77,slow=22,SNR=6.0						
RAO	**Raoul Island**	**1.79**	**180**	P	**Pn**	03 57 41.3	-0.7
GLKZ	**Green Lake**	**1.80**	**180**	P	**Pn**	03 57 41.3	-0.7
GLKZ				S	**S**	03 58 17.1	-5.0
MXZ	**Matakaoa Point**	**10.57**	**197**	P	**P**	03 59 18.8	+1.0
MXZ				S	**S**	04 01 15.2	-0.3
OUZ	**Omahuta**	**10.61**	**221**	P	P	03 59 22.8	+4.6
WCZ	**Waipu Caves**	**10.72**	**216**	P	P	03 59 24.5	+5.1
WMGZ	**Waiomatatini S**	**10.79**	**196**	P	**Pn**	03 59 18.1	-1.3
HAZ	**Te Kaha**	**10.89**	**198**	P	**Pn**	03 59 20.0	-0.6
PUZ	**Puketiti**	**11.07**	**196**	P	**Pn**	03 59 21.1	-1.6
NIUE	**Niue**	**11.10**	**43**	P	**Pn**	03 59 23.1	-0.2
RUGZ	**Raukumara Rang**	**11.12**	**198**	P	**Pn**	03 59 23.8	+0.4
TWGZ	**Tauwhareparae**	**11.23**	**197**	P	**P**	03 59 28.1	+2.9
MWZ	**Matawai**	**11.50**	**198**	P	**P**	03 59 29.0	+0.8
URZ	**Urewera**	**11.55**	**200**	P	**P**	03 59 30.8	+2.1
	9.5nm,0.4s,baz=267,slow=3.9,SNR=17						
URZ				S	**S**	04 01 35.9	-1.4
	10nm,0.5s,baz=78,slow=22,SNR=9.7						
URZ	**Urewera**	**11.55**	**200**	P	**P**	03 59 29.6	+0.9
URZ				S	**S**	04 01 37.0	-0.4
RAGZ	**Rawiri**	**11.69**	**198**	P	**P**	03 59 32.7	+2.4
RAGZ				S	**S**	04 01 40.4	0.0
RIGZ	**Rimuhau**	**11.79**	**197**	S	**S**	04 01 41.9	-0.7
RAHZ	**Arahi**	**12.17**	**199**	S	**S**	04 01 51.7	+0.9
MTHZ	**Maungataniwha**	**12.18**	**200**	P	**Pn**	03 59 38.3	+2.3
MRHZ	**Matea Rd**	**12.30**	**201**	P	**Pn**	03 59 39.0	+1.6
NMAZ	**Naumai**	**12.42**	**199**	P	**Pn**	03 59 41.1	+2.3
ARHZ	**Aropaoanui**	**12.52**	**199**	P	**Pn**	03 59 41.8	+1.9
BKZ	**Black Stump Fm**	**12.58**	**200**	P	**Pn**	03 59 42.5	+1.8
KWHZ	**Kaweka Forest**	**12.84**	**200**	P	**Pn**	03 59 45.5	+1.8
SNVZ	**South Ngauruho**	**12.88**	**203**	P	**Pn**	03 59 46.2	+1.9
WNVZ	**Wahianoa**	**13.02**	**203**	P	**Pn**	03 59 48.1	+2.1
MOVZ	**Moawhango**	**13.04**	**202**	P	**Pn**	03 59 47.1	+1.0
KAHZ	**Kahuranaki**	**13.05**	**198**	P	**P**	03 59 45.7	+0.4
KRHZ	**Kereru**	**13.05**	**200**	P	**Pn**	03 59 46.8	+0.6
PKVZ	**Pokaka**	**13.07**	**204**	P	**Pn**	03 59 48.0	+1.5
PXZ	**Pawanui**	**13.27**	**198**	P	**Pn**	03 59 49.8	+1.1
PNHZ	**Pukenui**	**13.35**	**200**	P	**Pn**	03 59 50.5	+0.8
PRHZ	**Porangahau**	**13.55**	**198**	P	**Pn**	03 59 53.6	+1.5
DVHZ	**Dannevirke**	**13.72**	**199**	P	**Pn**	03 59 54.9	+0.9
BFZ	**Birch Farm**	**14.05**	**199**	P	**Pn**	04 00 00.1	+2.3
MRZ	**Mangatainoka R**	**14.23**	**201**	P	**P**	03 59 58.4	+0.2
OGWZ	**Otaki Gorge**	**14.50**	**201**	P	**Pn**	04 00 02.3	-0.8
TMWZ	**Te Maipa**	**14.54**	**199**	P	**Pn**	04 00 05.1	+1.5
CAW	**Cannon Point**	**14.79**	**201**	P	**Pn**	04 00 05.9	-0.6
PAWZ	**Paruwai Farm**	**14.93**	**200**	P	**Pn**	04 00 08.5	+0.4
DZM	**Mont Dzumac**	**15.18**	**287**	P	**Pn**	04 00 08.4	-2.9
	15nm,0.8s,baz=124,slow=15,SNR=7.9						
ASAR	**Alice Springs**	**43.42**	**264**	P	**P**	**04 04 23.9**	**+1.9**
	1.8nm,0.8s,baz=112,slow=8.4,SNR=6.1						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**44.14**	**269**	P	**P**	**04 04 27.7**	**+0.1**
	3.0nm,0.7s,baz=106,slow=7.9,SNR=6.2						
	3.0nm,0.7s						
QSPA	**South Pole Qui**	**62.65**	**180**	P	**P**	**04 06 42.9**	**+2.7**
	1.6nm,1.1s,baz=28,slow=3.7,SNR=1.6						
	1.6nm,1.1s						
MJAR	**Matsushiro Arr**	**75.88**	**325**	P	**P**	**04 08 01.9**	**+1.1**
	1.2nm,0.6s,baz=153,slow=5.6,SNR=4.2						
	1.2nm,0.6s						
SNAA	**Sanae**	**81.09**	**178**	P	P	04 08 33.8	+5.2
	1.0nm,1.1s,baz=287,slow=12,SNR=3.1						
	1.0nm,1.1s						
HFS	**Hagfors**	**146.38**	**350**	PKPbc	**PKiKP**	**04 15 54.7**	**+0.5**
	1.3nm,0.8s,baz=356,slow=1.9,SNR=5.5						

*LDG **03** 03:57:06.8±0.4,42.°85N×2.°10W, h2km, Md2.6/1, Ml2.7/6,*

Error ellipse: s-maj=6.7km s-min=4.4km az=92.0
*MDD **03** 03:57:11.1±0.2,42.°81N×1.°78W, h0km, mb_Lg2.4/27, Error ellipse: s-maj=2.5km s-min=1.4km az=11.0*
ISC 03 03:57:09.1±2.0,**42.°82N**±0.°04×**1.°87W**±0.°09,**h9**km±9km,**n18,** σ1**°26**/33,**Pyrenees**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EARA	**Aranguren**	**0.22**	**102**	Pg	**Pg**	**03 57 12.7**	**-0.9**
EARA				Sg	**Sg**	**03 57 16.9**	**+0.3**
EARA				*i* lVmb_Lg		03 57 18.6	
SJPF	**Ste Jean**	**0.56**	**58**	*e*Pg	**Pg**	**03 57 19.5**	**-0.4**
SJPF				*e*Sg	**Sg**	**03 57 28.1**	**+0.8**
	56nm,0.3s						
ETSF	**Etsaut**	**0.97**	**85**	*e*Pg	**Pg**	**03 57 27.3**	**-0.4**
ETSF				*e*Sg	**Sn**	**03 57 43.3**	**+0.4**
	18nm,0.2s						
ESAC	**San Caprasio**	**1.51**	**136**	Pg	**Pb**	**03 57 37.4**	**+0.1**
ESAC				Sg	**Sb**	**03 57 57.2**	**+0.6**
ESAC				*i* lVmb_Lg		03 58 00.3	
EPF	**Esparros**	**1.64**	**82**	*e*Pg	**Pb**	**03 57 39.6**	**+0.1**
EPF				*e*Sg	**Sg**	**03 58 04.3**	**+2.6**
	40nm,0.3s						
ERTA	**Horta de San J**	**2.48**	**138**	Pn	**Pn**	**03 57 49.6**	**-0.1**
ERTA				Sn	**Sn**	**03 58 18.8**	**-1.4**
ERTA				Sg	**Sg**	**03 58 28.1**	**-0.7**
ERTA				*i* lVmb_Lg		03 58 35.6	
EPOB	**Poblet**	**2.64**	**123**	Pn	**Pn**	**03 57 51.9**	**0.0**
EPOB				Sn	**Sn**	**03 58 23.9**	**-0.2**
EPOB				Sg	**Sg**	**03 58 32.8**	**-1.0**
EPOB				*i* lVmb_Lg		03 58 38.4	
EMOS	**Mosqueruela**	**2.67**	**156**	Pn	**Pn**	**03 57 54.3**	**+1.9**
EMOS				Pg	**Pb**	**03 57 57.6**	**+0.5**
EMOS				Sg	**Sg**	**03 58 35.0**	**+0.3**
LFF	**La Frestale**	**2.84**	**41**	*e*P	**Pn**	**03 57 56.1**	**+1.5**
MTLF	**Montolieu**	**3.04**	**79**	*e*Pg	**Pb**	**03 58 02.6**	**-0.8**
MTLF				*e*Sn	**Sn**	**03 58 32.2**	**-1.7**
	6.4nm,0.5s						
RJF	**Les Rejaudoux**	**3.48**	**43**	*e*P	**Pn**	**03 58 04.5**	**+1.0**
RJF				*e*Sn	**Sn**	**03 58 44.5**	**-0.4**
	3.2nm,0.3s						
CAF	**Calviac**	**3.54**	**52**	*e*P	**Pn**	**03 58 05.8**	**+1.5**
CAF				*e*Sn	**Sn**	**03 58 45.7**	**-0.6**
	6.3nm,0.4s						
LASF	**Ste Croix**	**4.36**	**71**	*e*Pn	**Pn**	**03 58 16.2**	**+0.7**
LASF				*e*Sn	**Sn**	**03 59 05.6**	**-0.8**
	2.6nm,0.4s						
TCF	**Toulx Ste Croi**	**4.53**	**39**	*e*P	**Pn**	**03 58 17.9**	**0.0**
VIVF	**Saint-Julien-l**	**5.15**	**64**	*e*P	**Pn**	**03 58 28.5**	**+2.0**
AVF	**Avril sur Loir**	**5.44**	**41**	*e*Pn	**Pn**	**03 58 27.0**	**-3.3**
SMF	**Signal de Mont**	**5.59**	**45**	*e*P	**Pn**	**03 58 34.1**	**+1.7**
SSF	**Saint Saulge**	**5.71**	**40**	*e*P	**Pn**	**03 58 33.1**	**-0.9**

IDC 03 04:00:40.1±1.8,**1.°14N×124.°00E, h0**km,**mb3.7**/3, **mbtmp3.7**/3,**Error ellipse: s-maj=199.6km s-min=26.0km az=63.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.28**	**155**	P	P	04 05 49.9	+0.3
	3.2nm,0.6s,baz=333,slow=10,SNR=11						
	3.2nm,0.6s						
ASAR	**Alice Springs**	**26.47**	**159**	P	P	04 06 18.9	-0.4
	0.2nm,0.4s,baz=337,slow=8.5,SNR=1.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.18**	**327**	P	P	04 10 36.1	0.0
	0.3nm,0.3s,baz=129,slow=8.5,SNR=5.8						
	0.3nm,0.3s						

*TEH **03** 04:08:51.0,38.°41N×49.°34E, h22km±64km*
*AZER **03** 04:08:52.9,38.°32N×48.°97E, h5km, ml2.7*
ISC 03 04:08:54.4±1.5,**38.°31N**±0.°05×**49.°07E**±0.°08,**h31**km±9km, **n18,** σ1**°93**/28,**Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAS1	**Astara - Iran**	**0.20**	**292**	Pg	**Pb**	**04 08 59.4**	**-1.4**
ASTR	**Astara**	**0.33**	**318**	P	**Pb**	**04 09 01.9**	**-0.5**
ASTR				S	**Sn**	**04 09 08.8**	**-0.1**
LKRN	**Lenkeran, Azer**	**0.46**	**330**	P	**Pb**	**04 09 04.0**	**-0.3**
LKRN				S	**Sn**	**04 09 12.5**	**+0.5**
LRK	**Lerik**	**0.66**	**300**	P	**Pb**	**04 09 07.4**	**-0.3**
LRK				S	**Sn**	**04 09 18.7**	**+1.4**
YRD	**Yardimli**	**0.89**	**313**	P	**Pb**	**04 09 11.5**	**0.0**
YRD				S	**Sn**	**04 09 25.1**	**+2.2**
GRMI	**Germi**	**1.05**	**299**	Pg	**Pb**	**04 09 13.7**	**-0.4**
GLBA	**Cilalabad**	**1.07**	**330**	P	**Pb**	**04 09 15.2**	**+0.8**
GLBA				S	**Sb**	**04 09 31.4**	**+3.4**
IHRS	**Heris**	**1.60**	**271**	Pg	**Pb**	**04 09 22.9**	**-0.5**
ZNJK	**Zanjan**	**1.67**	**191**	Pn	**Pn**	**04 09 22.7**	**+0.9**
IHSH	**Hashtrud**	**1.75**	**236**	Pn	**Pb**	**04 09 25.2**	**-0.9**
QRD	**Qoradiz**	**1.79**	**311**	Pn	**Pb**	**04 09 25.5**	**-1.0**
QRD				Sn	**Sb**	**04 09 49.3**	**+0.8**
AGDM	**Agdam**	**2.36**	**320**	Pn	**Pb**	**04 09 33.9**	**-2.3**
AGDM				Sn	**Sb**	**04 10 06.5**	**+1.7**
ORD	**Ordubad**	**2.49**	**285**	Pn	**Pb**	**04 09 36.0**	**-2.6**
ORD				Sn	**Sb**	**04 10 07.3**	**-1.5**
PQL	**Pirkuli**	**2.50**	**352**	Pn	**Pb**	**04 09 36.0**	**-2.8**
PQL				Sn	**Sb**	**04 10 11.4**	**+2.2**
IML	**Ismayilli**	**2.57**	**345**	Sg	**Sb**	**04 10 13.5**	**+2.4**
XNQ	**Khinaliq**	**2.95**	**346**	Pn	**Pb**	**04 09 43.5**	**-2.9**
XNQ				Sn	**Sb**	**04 10 21.2**	**-0.8**
GANJ	**Ganja**	**3.16**	**318**	Sn	**Sb**	**04 10 24.5**	**-3.4**
SEKA	**Sheki**	**3.23**	**334**	Sn	**Sb**	**04 10 27.2**	**-2.9**

*NIC **03** 04:18:32.2,36.°72N×28.°80E, h11km±1km, Ml3.5/13*
*ISK **03** 04:18:33.9,36.°46N×28.°70E, h4km, ML4.0/23*
*NEIC **03** 04:18:33.9±2.2,36.°34N±0.°05×28.°75E±0.°05, h10km±1km, mb4.2/9, Error ellipse: s-maj=9.0km s-min=6.2km az=165.0*
*AFAD **03** 04:18:33.9,36.°43N×28.°68E, h7km±4km, MW3.7*
*ATH **03** 04:18:34.5,36.°47N×28.°71E, h10km±1km, ML3.7/6, Manual Solution by I.Dede First location: 2019/11/03 04:19:57, This location: 2019/11/03 04:28:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*GII **03** 04:18:36.0±0.0,36.°177N±0.°003×28.°768E±0.°001, h20km, Mws3.7, confirmed*
*THE **03** 04:18:36.2,36.°N±3.°×2.°9E±.°, h7km±7km, M3.6/17, MLh3.6/17*
*IDC **03** 04:18:37.6±1.1,36.°21N×28.°80E, h52km±15km, mb3.7/10, mbtmp4.0/20, ML3.2/9, MS3.9/2, Error ellipse: s-maj=14.2km s-min=7.9km az=171.0*
ISC 03 04:18:33.6±1.0,**36.°41N**±0.°02×**28.°73E**±0.°02,**h10**km±7km, **n181,** σ1**°63**/229,**mb3.9**/11,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.36**	**51**	P	Pg	04 18 32.2	-8.6
FETY				S	**Sg**	**04 18 39.0**	**-6.5**
IZZE	**Mula-Seydike**	**0.40**	**86**	SPECP		04 18 42.0	
IZZE				P	**Pb**	**04 18 42.3**	**-0.4**
IZZE				S	**Sb**	**04 18 49.8**	**+0.9**
IZZE				*i* IAML		04 18 53.0	
	comp=N,2µm,0.3s						
IZZE				*i* IAML		04 18 54.0	
	comp=E,8µm,0.4s						
DALY	**Dalyan (Mula)**	**0.41**	**351**	Pg	**Pg**	**04 18 41.1**	**-0.6**
DALY				Sg	**Sg**	**04 18 47.2**	**+0.1**
RDI1	**Rhodes Town Ha**	**0.41**	**276**	P	**Pb**	**04 18 42.3**	**-0.7**
RDI1				S	**Sg**	**04 18 48.1**	**+0.9**
RODB	**Rodos**	**0.41**	**275**	P	**Pb**	**04 18 42.3**	**-0.7**
RODB				S	**Sg**	**04 18 48.0**	**+0.8**
SABU	**Mula-Dalaman**	**0.45**	**25**	SPECP		04 18 42.0	
SABU				P	**Pg**	**04 18 42.6**	**+0.1**
SABU				S	**Sb**	**04 18 49.3**	**-1.2**
SABU				*i* IAML		04 18 50.0	
	comp=N,5µm,0.2s						
SABU				*i* IAML		04 18 50.0	
	comp=E,6µm,0.5s						
ARG	**Arkhangelos**	**0.53**	**249**		**Pg**	**04 18 44.1**	**+0.3**
ARG	**Arkhangelos**	**0.53**	**249**	Pg	**Pg**	**04 18 44.1**	**+0.3**
ARG				Sg	**Sb**	**04 18 52.6**	**0.0**
ARG	**Arkhangelos**	**0.53**	**249**	P	**Pg**	**04 18 44.1**	**+0.3**
ARG				S	**Sb**	**04 18 52.1**	**-0.4**
ARG	**Arkhangelos**	**0.53**	**249**	P	**Pg**	**04 18 44.1**	**+0.3**
ARG				S	**Sb**	**04 18 52.1**	**-0.4**
ARG	**Arkhangelos**	**0.53**	**249**	P	**Pg**	**04 18 44.1**	**+0.3**
ARG				S	**Sb**	**04 18 53.0**	**+0.5**
ARG				AML	AML	04 18 53.2	
	15nm,0.4s						
ARG				AML	AML	04 18 53.6	
	16nm,0.6s						
TURN	**Turunc**	**0.54**	**313**	SPECP		04 18 43.0	
TURN				P	**Pg**	**04 18 43.5**	**-0.5**
TURN				S	**Sg**	**04 18 51.3**	**+0.2**
TURN				*i* IAML		04 18 53.0	
	comp=N,3µm,0.3s						
TURN				*i* IAML		04 18 53.0	
	comp=E,4µm,0.3s						
TURN	**Turunc**	**0.54**	**313**	Pg	**Pg**	**04 18 43.9**	**-0.1**
TURN				Sg	**Sg**	**04 18 51.2**	**+0.1**
CAME	**Cameli-Denizli**	**0.70**	**41**	Pg	**Pg**	**04 18 46.7**	**-0.5**
CAME				Sg	**Sb**	**04 18 57.5**	**-0.3**
AKAS	**Kas**	**0.73**	**104**	SPECP		04 18 49.0	
AKAS				P	**Pb**	**04 18 49.3**	**+0.9**
AKAS				S	**Sn**	**04 19 02.9**	**+1.7**
AKAS				*i* IAML		04 19 07.0	
	comp=E,4µm,0.4s						
AKAS				*i* IAML		04 19 09.0	
	comp=N,8µm,0.6s						
AKAS	**Kas**	**0.73**	**104**		**Pn**	**04 18 49.5**	**-0.6**
AKAS	**Kas**	**0.73**	**104**	Pg	**Pb**	**04 18 48.9**	**+0.5**
KSL	**Kastellorizon**	**0.73**	**110**	P	**Pn**	**04 18 49.5**	**-0.5**
KSL				S	**Sn**	**04 19 04.2**	**+3.0**
KSL	**Kastellorizon**	**0.73**	**110**	P	**Pn**	**04 18 49.5**	**-0.5**
KSL				S	**Sb**	**04 18 59.8**	**+1.2**
KSL	**Kastellorizon**	**0.73**	**110**	P	**Pb**	**04 18 48.8**	**+0.3**
KSL				S	**Sn**	**04 19 00.9**	**-0.3**
KSL				AML	AML	04 19 05.1	
	9.6nm,0.5s						
KSL				AML	AML	04 19 06.9	
	5.6nm,0.7s						
RGE1	**Gennadi, Rhode**	**0.75**	**240**	P	**Pb**	**04 18 48.7**	**-0.1**
RGE1				S	**Sb**	**04 18 59.7**	**+0.6**
KNIK	**Mula-Seydike**	**0.80**	**57**	SPECP		04 18 49.0	
KNIK				P	**Pb**	**04 18 49.5**	**-0.2**
KNIK				S	**Sn**	**04 19 02.5**	**-0.6**
KNIK				*i* IAML		04 19 03.0	
	comp=N,2µm,0.8s						
KNIK				*i* IAML		04 19 05.0	
	comp=E,1µm,0.5s						
YER	**Yerkesik**	**0.81**	**334**	Pg	**Pb**	**04 18 49.4**	**-0.4**
YER	**Yerkesik**	**0.81**	**334**	P	**Pb**	**04 18 50.1**	**+0.4**
YER				S	**Sb**	**04 19 01.7**	**+0.9**
CAEL	**Denizli, Camel**	**0.85**	**33**	SPECP		04 18 49.0	
CAEL				P	**Pg**	**04 18 49.9**	**-0.2**
CAEL				S	**Sn**	**04 19 04.2**	**-0.2**
CAEL				*i* IAML		04 19 12.0	
	comp=E,4µm,1.0s						
CAEL				*i* IAML		04 19 19.0	
	comp=N,3µm,0.9s						
DNZT	**Denizli-Tavas-**	**0.90**	**15**	SPECP		04 18 50.0	
DNZT				P	**Pg**	**04 18 50.7**	**-0.2**
DNZT				S	**Sb**	**04 19 03.2**	**-0.2**
DNZT				*i* IAML		04 19 06.0	
	comp=E,688nm,0.9s						
DNZT				*i* IAML		04 19 11.0	
	comp=N,502nm,0.7s						
MULA	**Mugla, Merkez-**	**0.91**	**339**	SPECP		04 18 50.0	
MULA				P	**Pg**	**04 18 50.9**	**-0.2**
MULA				S	**Sb**	**04 19 04.5**	**+0.9**
MULA				*i* IAML		04 19 05.0	
	comp=N,774nm,0.6s						
MULA				*i* IAML		04 19 07.0	
	comp=E,864nm,0.4s						
DATC	**Datca-Mugla**	**0.93**	**292**	Pg	**Pb**	**04 18 51.7**	**-0.1**
DAT	**Datca**	**0.98**	**289**	Pg	**Pb**	**04 18 52.7**	**-0.1**
ELL	**Elmali**	**1.00**	**70**		**Pb**	**04 18 53.3**	**+0.1**
ELL	**Elmali**	**1.00**	**70**	Pg	**Pn**	**04 18 54.4**	**+0.6**
GOLH	**Golhisar**	**1.06**	**39**	SPECP		04 18 53.0	
GOLH				P	**Pg**	**04 18 53.6**	**-0.3**
GOLH				S	**Sn**	**04 19 11.0**	**+1.6**
GOLH				*i* IAML		04 19 18.0	
	comp=E,1µm,0.5s						
GOLH				*i* IAML		04 19 19.0	
	comp=N,2µm,0.5s						
TAVA	**DENIZLI_Tavas**	**1.06**	**8**	SPECP		04 18 53.0	
TAVA				P	**Pg**	**04 18 53.8**	**-0.3**
TAVA				S	**Sn**	**04 19 10.7**	**+1.2**
TAVA				*i* IAML		04 19 13.0	
	comp=E,801nm,0.3s						
TAVA				*i* IAML		04 19 14.0	
	comp=N,811nm,0.4s						
APMY	**Acipayam-Deniz**	**1.15**	**23**	Pn	**Pn**	**04 18 55.9**	**0.0**
MLSB	**Milas**	**1.17**	**319**	Pn	**Pg**	**04 18 55.5**	**-0.6**
DNIZ	**Denizli-Tavas-**	**1.24**	**11**	SPECP		04 18 57.0	
DNIZ				P	**Pn**	**04 18 57.0**	**0.0**
DNIZ				S	**Sn**	**04 19 14.5**	**+0.7**
DNIZ				*i* IAML		04 19 18.0	
	comp=N,4µm,0.6s						
DNIZ				*i* IAML		04 19 18.0	
	comp=E,6µm,0.4s						
AKUM	**Antalya-Kumluc**	**1.30**	**93**	SPECP		04 18 59.0	
AKUM				P	**Pg**	**04 18 59.6**	**+1.0**
AKUM				S	**Sn**	**04 19 22.6**	**+7.4**
AKUM				*i* IAML		04 19 28.0	
	comp=N,534nm,0.7s						
AKUM				*i* IAML		04 19 35.0	
	comp=E,909nm,1.4s						
NISR	**Nisiros**	**1.31**	**279**	P	**Pg**	**04 18 58.5**	**-0.2**
NISR				S	**Sb**	**04 19 14.8**	**-0.3**
NISR	**Nisiros**	**1.31**	**279**	P	**Pb**	**04 18 58.3**	**+0.1**
NISR				S	**Sb**	**04 19 15.0**	**0.0**
BODT	**Bodrum**	**1.31**	**300**	Pn	**Pg**	**04 18 58.9**	**+0.1**
BODT	**Bodrum**	**1.31**	**300**	P	**Pg**	**04 18 60.0**	**+1.1**
BODT				S	**Sn**	**04 19 16.2**	**+0.6**
YKAV	**Yalikavak-Bodr**	**1.37**	**302**	Pn	**Pg**	**04 18 59.7**	**-0.1**
KORT	**Korkueli**	**1.43**	**65**	Pn	**Pg**	**04 19 01.8**	**+0.8**
KLNA	**Kalymnos**	**1.52**	**292**	P

SAP3	**Santorini-Thir**	**2.73 272**	P	**Pn**	**04 19 19.3**	**+1.8**
NPS	**Neapolis**	**2.78 247**	P	**Pn**	**04 19 19.6**	**+1.4**
NPS	**Neapolis**	**2.78 247**	P	**Pn**	**04 19 20.0**	**+1.8**
CHOS	**Chios island**	**2.91 314**	P	**Pn**	**04 19 20.4**	**+0.5**
AKMS	**Akamas**	**3.24 114**	P	**Pn**	**04 19 24.8**	**+0.3**
AKMS	**Akamas**	**3.24 114**	P	**Pn**	**04 19 24.4**	**-0.1**
AKMS			S	**Sn**	**04 20 04.9**	**+1.7**
AKMS			AML	AML	04 20 07.7	
	0.4nm,0.4s					
AKMS			AML	AML	04 20 10.0	
	0.3nm,0.7s					
IDI	**Anoyia**	**3.32 251**		**Pn**	**04 19 27.0**	**+1.4**
IDI	**Anoyia**	**3.32 251**	P	**Pn**	**04 19 26.8**	**+1.2**
	20nm,0.3s,baz=60,slow=14,SNR=190					
IDI			S	**Sn**	**04 20 06.2**	**+1.1**
	314nm,0.7s,baz=16,slow=6.7,SNR=14					
	71nm,0.5s					
IDI	**Anoyia**	**3.32 251**	P	**Pn**	**04 19 26.7**	**+1.1**
IDI	**Anoyia**	**3.32 251**	P	**Pn**	**04 19 26.5**	**+0.9**
ALFC	**Alefka**	**3.38 111**	P	**Pn**	**04 19 26.1**	**-0.3**
ALFC	**Alefka**	**3.38 111**	P	**Pn**	**04 19 26.3**	**-0.1**
ALFC			S	**Sn**	**04 20 08.6**	**+1.9**
ALFC			AML	AML	04 20 11.7	
	0.2nm,0.5s					
ALFC			AML	AML	04 20 13.1	
	0.3nm,0.3s					
PRK	**Paraskevi**	**3.44 326**	P	**Pn**	**04 19 28.5**	**+1.4**
PRK	**Paraskevi**	**3.44 326**	P	**Pn**	**04 19 28.5**	**+1.4**
NATA	**Nata**	**3.52 116**	P	**Pn**	**04 19 28.6**	**+0.2**
NATA			S	**Sn**	**04 20 12.5**	**+2.3**
NATA			AML	AML	04 21 00.4	
	0.9nm,1.1s					
NATA			AML	AML	04 21 06.8	
	1.2nm,1.1s					
SIGR	**SIGRI**	**3.61 322**	P	**Pn**	**04 19 31.0**	**+1.5**
TROD	**Troodos**	**3.67 112**	P	**Pn**	**04 19 30.1**	**-0.4**
TROD			S	**Sn**	**04 20 16.3**	**+2.4**
TROD			AML	AML	04 21 06.9	
	0.2nm,1.1s					
TROD			AML	AML	04 21 07.7	
	0.2nm,1.0s					
BORA	**Eskisehir**	**3.72 21**		**Pn**	**04 19 32.1**	**+1.0**
XYLS	**Xyliatos**	**3.78 110**	P	**Pn**	**04 19 31.6**	**-0.4**
XYLS			S	**Sn**	**04 20 18.5**	**+2.0**
XYLS			AML	AML	04 20 23.6	
	0.2nm,0.5s					
XYLS			AML	AML	04 20 27.8	
	0.1nm,0.4s					
APOL	**The Sanctuary**	**3.79 116**	P	**Pn**	**04 19 32.0**	**0.0**
APOL			S	**Sn**	**04 20 18.9**	**+2.3**
APOL			AML	AML	04 21 08.9	
	0.1nm,0.8s					
APOL			AML	AML	04 21 09.2	
	0.2nm,1.4s					
CHAN	**Chania**	**3.91 258**	P	**Pn**	**04 19 35.1**	**+1.5**
CSS	**Mathiatis**	**4.01 110**		**Pn**	**04 19 35.3**	**+0.2**
CSS	**Mathiatis**	**4.01 110**	P	**Pn**	**04 19 35.3**	**+0.2**
CSS	**Mathiatis**	**4.01 110**	P	**Pn**	**04 19 35.0**	**-0.1**
CSS			S	**Sn**	**04 20 24.2**	**+2.0**
CSS			AML	AML	04 21 04.0	
	0.2nm,1.4s					
CSS			AML	AML	04 21 12.7	
	0.1nm,1.5s					
ASGA	**Asgata**	**4.02 112**	P	**Pn**	**04 19 35.5**	**+0.4**
ASGA			S	**Sn**	**04 20 24.1**	**+1.8**
ASGA			AML	AML	04 21 04.5	
	0.2nm,1.2s					
ASGA			AML	AML	04 21 09.4	
	0.3nm,1.1s					
DION	**Dionisos Attik**	**4.18 295**	P	**Pn**	**04 19 38.9**	**+1.5**
MVOU	**Mavrovouni**	**4.22 108**	P	**Pn**	**04 19 37.4**	**-0.6**
MVOU			S	**Sn**	**04 20 28.4**	**+1.1**
MVOU			AML	AML	04 21 07.7	
	0.1nm,1.5s					
MVOU			AML	AML	04 21 16.1	
	0.1nm,1.1s					
ANKY	**Antikythira Is**	**4.43 265**	P	**Pn**	**04 19 41.9**	**+1.1**
ANTO	**Ankara**	**4.71 42**		**Pn**	**04 19 46.6**	**+1.9**
AOS	**Alonnisos**	**4.73 307**	P	**Pn**	**04 19 47.8**	**+2.9**
SMTH	**Samothraki Isl**	**4.77 329**	P	**Pn**	**04 19 46.6**	**+1.1**
ALN	**Alexandroupoli**	**4.95 336**		**Pn**	**04 19 49.5**	**+1.5**
BR131	**Keskin Array S**	**5.09 48**		**Pn**	**04 19 52.7**	**+2.7**
BRTR	**Keskin Array B**	**5.09 48**		**Pn**	**04 19 51.7**	**+1.7**
BRTR	**Keskin Array B**	**5.09 48**	P	**Pn**	**04 19 53.0**	**+2.9**
	1.9nm,0.3s,baz=221,slow=16,SNR=36					
BRTR			S	**Sn**	**04 20 53.3**	**+4.4**
	6.9nm,0.6s,baz=222,slow=25,SNR=7.9					
	6.2nm,0.5s					
RDO	**Rodhopi**	**5.35 333**		**Pn**	**04 19 55.3**	**+1.9**
ITM	**Ithomi**	**5.52 280**		**Pn**	**04 19 59.9**	**+4.1**
BNN	**Bunyan**	**6.15 65**		**Pn**	**04 20 07.7**	**+3.2**
HNTI	**Hanita**	**6.25 120**	P	**Pn**	**04 20 05.6**	**-0.3**
HNTI	**Hanita**	**6.25 120**	S	**Sn**	**04 21 14.4**	**-3.1**
MMA0B	**Mount Meron ar**	**6.45 120**	P	**Pn**	**04 20 08.3**	**-0.4**
MMA0B	**Mount Meron ar**	**6.45 120**	S	**Sn**	**04 21 19.4**	**-3.0**
MMAI	**Mount Meron Ar**	**6.45 120**	P	**Pn**	**04 20 08.2**	**-0.5**
	5.3nm,0.3s,baz=306,slow=11,SNR=29					
MMAI			S	**Sn**	**04 21 18.2**	**-4.2**
	2.2nm,0.3s,baz=299,slow=21,SNR=5.3					
GEM	**Giv'at Ha'Em**	**6.53 117**	P	**Pn**	**04 20 09.5**	**-0.3**
GEM	**Giv'at Ha'Em**	**6.53 117**	S	**Sn**	**04 21 22.1**	**-2.2**
NATI	**Neve Ativ**	**6.56 117**	P	**Pn**	**04 20 10.3**	**+0.3**
NATI	**Neve Ativ**	**6.56 117**	S	**Sn**	**04 21 22.3**	**-2.6**
KSHT	**Keshet**	**6.76 118**	P	**Pn**	**04 20 13.1**	**+0.2**
KSHT	**Keshet**	**6.76 118**	S	**Sn**	**04 21 27.9**	**-2.1**
MMLI	**Mount Malkishu**	**6.80 124**	P	**Pn**	**04 20 12.8**	**-0.6**
MMLI	**Mount Malkishu**	**6.80 124**	S	**Sn**	**04 21 28.4**	**-2.5**
SALP	**Salfit**	**6.88 127**	P	**Pn**	**04 20 13.5**	**-1.0**
SALP	**Salfit**	**6.88 127**	S	**Sn**	**04 21 30.1**	**-2.8**
HMDT	**Nahal Hemdat**	**6.98 124**	P	**Pn**	**04 20 15.7**	**-0.2**
HMDT	**Nahal Hemdat**	**6.98 124**	S	**Sn**	**04 21 32.9**	**-2.5**
KZIT	**Kziot**	**7.24 138**	P	**Pn**	**04 20 19.2**	**-0.2**
KZIT	**Kziot**	**7.24 138**	S	**Sn**	**04 21 37.7**	**-4.0**
YTIR	**Yattir**	**7.31 132**	P	**Pn**	**04 20 19.6**	**-1.0**
DSI	**Dead Sea**	**7.33 129**	P	**Pn**	**04 20 19.8**	**-0.9**
DSI	**Dead Sea**	**7.33 129**	S	**Sn**	**04 21 41.4**	**-2.6**
GHAJ	**Ghor Haditha**	**7.63 130**	P	**Pn**	**04 20 24.3**	**-0.5**
ASF	**Jabal al Asfar**	**7.97 120**	P	**Pn**	**04 20 28.9**	**-0.6**
	0.7nm,0.3s,baz=348,slow=9.3,SNR=3.3					
ASF			S	**Sn**	**04 21 56.5**	**-3.3**
	2.6nm,0.6s,baz=2.2,slow=15,SNR=1.6					
	1.2nm,0.3s					
PRNI	**Paran**	**8.00 137**	P	**Pn**	**04 20 29.0**	**-0.9**
PRNI	**Paran**	**8.00 137**	S	**Sn**	**04 21 56.1**	**-4.3**
KRMI	**Paran Flat**	**8.03 140**	P	**Pn**	**04 20 29.1**	**-1.3**
KRMI	**Paran Flat**	**8.03 140**	S	**Sn**	**04 21 57.2**	**-4.1**
HRFI	**Mount Harif**	**8.26 138**	P	**Pn**	**04 20 32.9**	**-0.5**
MBRI	**Mt Berech**	**8.39 140**	P	**Pn**	**04 20 34.4**	**-0.9**
MBRI	**Mt Berech**	**8.39 140**	S	**Sn**	**04 22 06.1**	**-4.0**
EIL	**Elat**	**8.51 140**	P	**Pn**	**04 20 34.7**	**-2.2**
	1.7nm,0.3s,baz=348,slow=14,SNR=15					
EIL			S	**Sn**	**04 22 06.0**	**-6.9**
	10nm,0.4s,baz=13,slow=6.3,SNR=9.2					
	4.2nm,0.3s					
EIL	**Elat**	**8.51 140**	P	**Pn**	**04 20 36.2**	**-0.7**
EIL	**Elat**	**8.51 140**	S	**Sn**	**04 22 09.3**	**-3.6**
MLR	**Muntele Rosu**	**9.31 348**	P	**Pn**	**04 20 49.6**	**+1.6**
	8.2nm,0.8s,baz=144,slow=4.9,SNR=9.2					
CEL	**Celeste**	**10.39 284**	Pn	**Pn**	**04 21 04.0**	**+1.3**
BURAR	**Bucovina Array**	**11.49 348**	Pn	**Pn**	**04 21 20.4**	**+2.6**
VAE	**Valguarnera**	**11.51 280**	P	**Pn**	**04 21 19.5**	**+1.5**
	0.7nm,0.3s,baz=102,slow=16,SNR=2.5					
VAE			S	**Sn**	**04 23 24.6**	**-2.0**
	5.2nm,0.7s,baz=129,slow=20,SNR=2.2					
	5.6nm,0.6s					
KBZ	**Khabaz**	**13.07 52**	P	**Pn**	**04 21 41.8**	**+2.6**
	baz=225,slow=14,SNR=1.9					
	2.3nm,1.0s					
VRAC	**Vranov**	**15.64 329**	P	**P**	**04 22 18.1**	**0.0**
	0.1nm,0.3s,baz=112,slow=11,SNR=4.9					
	2.5nm,0.7s					
KEST	**Kesra**	**15.70 273**	P	**P**	**04 22 17.2**	**-1.6**
	0.1nm,0.3s,baz=58,slow=9.5,SNR=5.0					
	3.4nm,0.8s					
GERES	**GERESS Array B**	**16.60 323**	P	**P**	**04 22 30.1**	**+1.3**
	baz=136,slow=11,SNR=13					
	2.8nm,0.9s					
BNI	**Bardonecchia**	**18.77 304**	P	**P**	**04 22 53.0**	**+0.1**
BNI			IAmb	IAmb	04 23 31.5	
	comp=Z,20nm,1.4s					
SENIN	**Lac Senin/Sane**	**18.86 308**	P	**Pn**	**04 22 54.4**	**0.0**
SENIN			IAmb	IAmb	04 23 21.1	
	comp=Z,13nm,1.3s					
BELG	**Belogornoye**	**20.82 34**	P	**P**	**04 23 15.1**	**+0.1**
	comp=Z,8.8nm,0.8s,baz=133,slow=11,SNR=4.7					
	comp=Z,8.8nm,0.8s					
FINES	**FINESS Array B**	**25.11 357**	P	**P**	**04 23 58.1**	**-0.1**
FINES	**FINESS Array B**	**25.11 357**	P	**P**	**04 23 58.5**	**+0.3**
	comp=Z,11nm,0.8s,baz=160,slow=9.6,SNR=23					
FINES			PcP	**PcP**	**04 27 31.9**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=158,slow=4.1,SNR=3.8					
	comp=Z,11nm,0.8s					
FIA1	**FINESS Array S**	**25.11 357**	P	**P**	**04 23 58.0**	**-0.3**
HFS	**Hagfors**	**25.64 343**	P	**P**	**04 24 02.9**	**-0.1**
	comp=Z,3.7nm,1.0s,baz=146,slow=11,SNR=6.5					
	comp=Z,3.7nm,1.0s					
ESDC	**Sonseca Array**	**25.88 287**	P	**P**	**04 24 05.0**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=83,slow=9.2,SNR=8.6					
	comp=Z,0.9nm,0.7s					
ABKAR	**Akbulak array**	**26.04 51**	P	**P**	**04 24 08.6**	**+1.8**
NOA	**NORSAR Array B**	**27.04 341**	P	**P**	**04 24 14.8**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=167,slow=6.4,SNR=2.6					
	comp=Z,0.5nm,0.7s					
ARCES	**ARCESS Array B**	**33.23 358**	P	**P**	**04 25 10.4**	**0.0**
	comp=Z,1.6nm,0.9s,baz=183,slow=7.9,SNR=1.3					
	comp=Z,1.6nm,0.9s					
KURBB	**Kurchatov Arra**	**38.07 52**	P	**P**	**04 25 51.7**	**-0.4**
	comp=Z,0.4nm,0.2s,baz=276,slow=8.5,SNR=4.9					
	comp=Z,0.4nm,0.2s					
KURK	**Kurchatov**	**38.13 52**	P	**P**	**04 25 51.7**	**-0.9**
KURK	**Kurchatov**	**38.13 52**	IAmb	IAmb	04 26 23.4	
	comp=Z,3.5nm,1.2s					
MK31	**Makanchi Array**	**40.66 58**	P	**P**	**04 26 13.6**	**-0.3**
MKAR	**Makanchi Array**	**40.66 58**	P	**P**	**04 26 13.8**	**-0.1**
MKAR	**Makanchi Array**	**40.66 58**	P	**P**	**04 26 13.9**	**0.0**
	comp=Z,1.1nm,0.5s,baz=281,slow=6.7,SNR=12					
	comp=Z,1.1nm,0.5s					
ZALV	**Zalesovo Beam**	**42.03 47**	P	**P**	**04 26 24.3**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=279,slow=9.5,SNR=2.5					
ZALV			LR	LR	04 45 44.6	
	comp=Z,100nm,19.3s,baz=85,slow=39					
	comp=Z,0.5nm,0.4s					
DBIC	**Dimbokro**	**42.63 234**	IAmb	IAmb	04 26 44.3	
	comp=Z,8.0nm,1.1s					
DBIC	**Dimbokro**	**42.63 234**	P	**P**	**04 26 28.8**	**-1.5**
	comp=Z,2.6nm,0.8s,baz=49,slow=6.7,SNR=1.9					
	comp=Z,2.6nm,0.8s					
TSUM	**Tsumeb**	**56.31 193**	LR	LR	04 55 04.3	
	comp=Z,199nm,20.5s,baz=66,slow=39					
J30M	**Hart River**	**78.66 353**	P	**P**	**04 30 35.9**	**+0.3**
J30M			IAmb	IAmb	04 31 06.6	
	comp=Z,4.6nm,1.4s					

*UPA **03** 04:45:00.6±0.9, 8°.51N×83°.15W, h12km±2km, MD3.8, ML4.0, MW3.7*
*UCR **03** 04:45:00.7±1.2, 8°.45N×83°.16W, h10km±2km, MW4.1*
*CATAC **03** 04:45:01.4±0.3, 8°N±2°×8°3W±°, h5km±1km, M4.1/20, mb4.3/4, MLv4.0/20, Error ellipse: s-maj=5.1km s-min=2.8km az=9.8, confirmed*
ISC 03 04:45:01.0±0.8, 8°47N±0°03×83°16W±0°.02, h15km±5km, n126, σ1°11/148, 1C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITO	**Golfito**	**0.15**	**3**	*eP*		**Pg**	**04 45 04.2**	**-0.7**
FITO				*eS*		**Sg**	**04 45 07.2**	**-0.3**
PTJ1	**Puerto Jimnez**	**0.15**	**294**	*eP*		**Pg**	**04 45 04.6**	**-0.3**
PTJ1	**Puerto Jimnez**	**0.15**	**294**	*P*		**Pg**	**04 45 04.6**	**-0.3**
PTJ1	**Puerto Jimnez**	**0.15**	**294**	*S*		**Sg**	**04 45 08.6**	**+1.0**
JIME	**Puerto Jimenez**	**0.17**	**292**	*eP*		**Pg**	**04 45 04.7**	**-0.5**
JIME				*eS*		**Sg**	**04 45 08.9**	**+0.8**
EDAD	**Golfito**	**0.18**	**359**	*eP*		**Pg**	**04 45 04.6**	**-0.7**
EDAD				*eS*		**Sg**	**04 45 07.8**	**-0.4**
PIRO	**Carate, Puerto**	**0.19**	**248**	*iP*		**Pg**	**04 45 04.9**	**-0.6**
PIRO	**Carate, Puerto**	**0.19**	**248**	*P*		**Pg**	**04 45 04.8**	**-0.6**
PIRO	**Carate, Puerto**	**0.19**	**248**	*eP*		**Pg**	**04 45 04.8**	**-0.6**
NELY	**Ciudad Neily**	**0.28**	**50**	*eP*		**Pg**	**04 45 06.8**	**-0.1**
NELY				*eS*		**Sg**	**04 45 12.4**	**+0.2**
CDITO	**Canoas**	**0.30**	**71**	*P*		**Pg**	**04 45 07.1**	**-0.2**
CDITO	**Canoas**	**0.30**	**71**	*S*		**Sg**	**04 45 12.9**	**0.0**
LESP3	**La Esperanza,**	**0.37**	**100**	*eP*		**Pg**	**04 45 08.3**	**-0.3**
LESP3				*eS*		**Sg**	**04 45 15.3**	**+0.3**
DMCAL	**E. de Neily**	**0.41**	**62**	*eP*		**Pg**	**04 45 09.3**	**-0.1**
LMNES	**Limones**	**0.48**	**141**	*eP*		**Pg**	**04 45 10.7**	**-0.4**
SCLRA	**Santa Clara, W**	**0.52**	**46**	*eP*		**Pb**	**04 45 11.5**	**-0.4**
EDP2	**Potrero Grande**	**0.54**	**358**	*eP*		**Pg**	**04 45 11.5**	**-0.2**
FIMO	**Fila Mora**	**0.55**	**340**	*eP*		**Pg**	**04 45 11.3**	**-0.6**
FIMO				*eS*		**Sg**	**04 45 20.1**	**0.0**
BRU2	**Volcan**	**0.56**	**56**	*iP*		**Pg**	**04 45 12.1**	**-0.1**
BRU2				*eS*		**Sg**	**04 45 21.1**	**+0.4**
BRU2	**Volcan**	**0.56**	**56**	*P*		**Pg**	**04 45 12.1**	**-0.1**
BRU2	**Volcan**	**0.56**	**56**	*S*		**Sg**	**04 45 21.0**	**+0.4**
BRU2	**Volcan**	**0.56**	**56**	*eP*		**Pg**	**04 45 12.0**	**-0.1**
PANP	**Palmar Norte**	**0.57**	**329**	*eP*		**Pg**	**04 45 11.3**	**-0.9**
ALCO	**Alturas Coton,**	**0.57**	**34**	*eP*		**Pg**	**04 45 11.9**	**-0.5**
ALCO				*eS*		**Sg**	**04 45 20.8**	**-0.1**
TBS2		**0.59**	**57**	*eP*		**Pb**	**04 45 13.5**	**+0.3**
BAGA3	**Bagala, Chiriq**	**0.63**	**90**	*iP*		**Pg**	**04 45 13.2**	**-0.2**
BAGA3				*eS*		**Sb**	**04 45 22.0**	**-0.3**
BC3P	**Paso Ancho**	**0.64**	**58**	*iP*		**Pg**	**04 45 13.2**	**-0.5**
BC3P				AMP			04 45 13.6	
	comp=Z,9μm,0.3s							
BC3P				*eS*		**Sb**	**04 45 22.8**	**-0.2**
JEFFS	**S de V. Baru**	**0.65**	**73**	*eP*		**Pg**	**04 45 13.4**	**-0.4**
PTAR3	**Potrerillos Ar**	**0.69**	**72**	*iP*		**Pg**	**04 45 14.1**	**-0.5**
PTAR3				*eS*		**Sb**	**04 45 24.4**	**+0.1**
BURE	**Buenos Aires**	**0.72**	**346**	*eP*		**Pg**	**04 45 14.3**	**-0.7**
PEDE3	**Pedregal, Chir**	**0.74**	**97**	*eP*		**Pg**	**04 45 14.5**	**-0.9**
PEDE3				*eS*		**Sb**	**04 45 25.5**	**0.0**
LCOC3	**Loma Colorada,**	**0.74**	**95**	*eP*		**Pg**	**04 45 14.8**	**-0.6**
BQTLY	**Boquete Panama**	**0.75**	**68**	*eP*		**Pg**	**04 45 14.8**	**-0.8**
LOMA3	**Las Lomas, Chi**	**0.76**	**93**	*eP*		**Pg**	**04 45 15.0**	**-0.8**
LOMA3				*eS*		**Sg**	**04 45 25.4**	**-0.5**
BQSF3	**Alto Boquete,**	**0.77**	**70**	*iP*		**Pg**	**04 45 15.1**	**-0.9**
BQSF3				*eS*		**Sg**	**04 45 25.7**	**-0.5**
WILLF	**Boquete**	**0.77**	**69**	*eP*		**Pg**	**04 45 15.1**	**-0.9**
LNBQ3	**Los Naranjos,**	**0.78**	**66**	*iP*		**Pg**	**04 45 15.1**	**-1.1**
OCHAL	**Ojochal**	**0.78**	**322**	*P*		**Pg**	**04 45 14.8**	**-1.5**
DRK0	**Durika**	**0.79**	**354**	*iP*		**Pg**	**04 45 15.4**	**-1.0**
DRK0				*eS*		**Sg**	**04 45 26.5**	**-0.3**
DRK0	**Durika**	**0.79**	**354**	*P*		**Pg**	**04 45 15.4**	**-1.0**
DRK0	**Durika**	**0.79**	**354**	*eP*		**Pg**	**04 45 15.4**	**-1.0**
DRK0				*eS*		**Sg**	**04 45 26.3**	**-0.5**
EDPE	**Pejibaye, P**	**0.79**	**329**	*eP*		**Pg**	**04 45 15.0**	**-1.4**
DAP26	**falda E V. Bar**	**0.80**	**67**	*eP*		**Pg**	**04 45 15.2**	**-1.3**
PSOM3	**Paja de Sombre**	**0.86**	**76**	*eP*		**Pg**	**04 45 16.4**	**-1.3**
SAJE	**San Jernim**	**0.93**	**338**	*eP*		**Pg**	**04 45 17.5**	**-1.6**
ZEDO	**Perez Zeledon**	**1.02**	**330**	*eP*		**Pg**	**04 45 18.9**	**-1.7**
PBNVO	**Pueblo Nuevo,**	**1.04**	**67**	*eP*		**Pg**	**04 45 19.2**	**-2.0**
RBALA	**Bur**	**1.08**	**68**	*eP*		**Pb**	**04 45 19.9**	**-1.4**
CHGR2	**Aguacate**	**1.11**	**65**	*iP*		**Pb**	**04 45 20.3**	**-1.6**
CHGR2				*eS*		**Sg**	**04 45 36.0**	**-0.9**
CEUA	**Cerro Uatsi, L**	**1.16**	**11**	*eP*		**Pb**	**04 45 22.5**	**-0.3**
BRIBI	**Bribri**	**1.19**	**17**	*eP*		**Pb**	**04 45 23.2**	**-0.1**
BUS1	**Rivas**	**1.22**	**332**	*eP*		**Pb**	**04 45 22.2**	**-1.8**
RGM0	**Gandoca**	**1.24**	**26**	*iP*		**Pg**	**04 45 24.6**	**-0.3**
RGM0				*eS*		**Sb**	**04 45 38.2**	**-1.7**
RGM0	**Gandoca**	**1.24**	**26**	*P*		**Pg**	**04 45 24.5**	**-0.3**
RGM0	**Gandoca**	**1.24**	**26**	*S*		**Sn**	**04 45 42.7**	**+2.5**
LAES	**El Progreso Va**	**1.29**	**5**	*eP*		**Pn**	**04 45 24.0**	**-0.5**
LLNJ	**Naranjito**	**1.36**	**317**	*eP*		**Pn**	**04 45 23.8**	**-1.7**
QUEP	**Quepos**	**1.37**	**314**	*S*		**Sg**	**04 45 45.5**	**+0.2**
PIEC	**Cerro El Cedra**	**1.39**	**326**	*eP*		**Pn**	**04 45 24.7**	**-1.3**
KKNTU	**Kakint**	**1.39**	**75**	*eP*		**Pn**	**04 45 24.6**	**-1.2**
VERH	**Veragua Rainfo**	**1.45**	**99**	*eP*		**Pn**	**04 45 26.3**	**-0.4**
LCR2	**La Lucha 2**	**1.51**	**327**	*S*		**Sg**	**04 45 49.4**	**-0.4**
VINA	**Juan Vinas**	**1.53**	**338**	*eP*		**Pn**	**04 45 27.4**	**-0.4**
PICV	**PH. Pirrs**	**1.54**	**318**	*eP*		**Pn**	**04 45 27.5**	**-0.4**
PAR1A	**Puntarenas Pro**	**1.55**	**316**	*eP*		**Pn**	**04 45 28.2**	**+0.1**
VERB	**Verbena**	**1.55**	**340**	*eP*		**Pn**	**04 45 28.1**	**-0.2**
PCAYA	**Pacayas**	**1.57**	**336**	*eP*		**Pn**	**04 45 28.4**	**-0.1**
RESJ	**San Isidro (Tu**	**1.62**	**343**	*eP*		**Pn**	**04 45 29.7**	**+0.7**
ABRB	**Las Abras (San**	**1.62**	**340**	*eP*		**Pn**	**04 45 29.5**	**+0.2**
CVTV	**Tajo**	**1.63**	**339**	*eP*		**Pn**	**04 45 29.5**	**+0.1**
CVTQ	**Turrialba Volc**	**1.64**	**339**	*eP*		**Pn**	**04 45 29.6**	**+0.1**
VTR0	**Volcan Turrial**	**1.64**	**339**	*eP*		**Pn**	**04 45 29.5**	**-0.2**
ACOS	**Acosta**	**1.65**	**323**	*eP*		**Pn**	**04 45 28.9**	**-0.6**
VICA	**Volcano Irazu**	**1.65**	**336**	*eP*		**Pn**	**04 45 29.2**	**-0.5**
CVTR	**Volcan Turrial**	**1.65**	**339**	*eP*		**Pn**	**04 45 29.6**	**-0.1**
LCOCO	**El Coco**	**1.65**	**346**	*eP*		**Pn**	**04 45 29.9**	**+0.5**
IRES	**Siquirres**	**1.65**	**348**	*eP*		**Pn**	**04 45 29.9**	**+0.5**
RVLA	**Villa Bonita**	**1.68**	**346**	*eP*		**Pn**	**04 45 30.3**	**+0.5**
ECI	**Escuela Centro**	**1.70**	**329**	*eP*		**Pn**	**04 45 30.4**	**+0.1**
CVIMO	**Finca Echandi**	**1.72**	**333**	*eP*		**Pn**	**04 45 29.8**	**-0.9**
CVTG	**V. Turrialba,**	**1.77**	**340**	*eP*		**Pn**	**04 45 31.7**	**+0.6**
EGUB	**Earth Gu¡pi**	**1.78**	**346**	*eP*		**Pn**	**04 45 31.7**	**+0.5**
HDC	**Heredia**	**1.79**	**328**	*eP*		**Pn**	**04 45 32.4**	**+0.9**
HEME	**Heredia, Merce**	**1.79**	**328**	*eP*		**Pb**	**04 45 33.1**	**-0.5**
BELE	**Belen**	**1.81**	**326**	*eP*		**Pn**	**04 45 32.0**	**+0.3**
ATEO	**Atenas**	**1.92**	**321**	*eP*		**Pn**	**04 45 33.2**	**0.0**
TCS1	**Tacares**	**1.92**	**324**	*P*		**Pb**	**04 45 35.2**	**-0.6**
CARI	**Cariari**	**1.96**	**343**	*eP*		**Pn**	**04 45 34.9**	**+1.2**
GMAL	**Guarumal, Vera**	**2.04**	**110**	*eP*		**Pn**	**04 45 34.1**	**-0.6**
VPL2	**V. Platanar**	**2.18**	**327**	*eP*		**Pn**	**04 45 38.3**	**+1.4**
CBL1	**Cabuya**	**2.21**	**300**	*eP*		**Pn**	**04 45 35.9**	**-1.2**
ITAL	**Pital**	**2.25**	**331**	*eP*		**Pn**	**04 45 38.4**	**+0.7**
JCR1	**Jicaral**	**2.36**	**306**	*eP*		**Pn**	**04 45 39.6**	**+0.3**
SOCE	**Pocosol**	**2.38**	**323**	*P*		**Pn**	**04 45 40.5**	**+1.0**
SOCE	**Pocosol**	**2.38**	**323**	*S*		**Sb**	**04 46 13.1**	**+0.2**
SOCE	**Pocosol**	**2.38**	**323**	*eP*		**Pn**	**04 45 40.5**	**+1.0**
FORC	**Fortuna**	**2.48**	**323**	*eP*		**Pn**	**04 45 43.1**	**+2.3**
VACR	**Volcan Arenal**	**2.49**	**323**	*eP*		**Pn**	**04 45 43.2**	**+2.2**
CASO	**Castillo**	**2.49**	**322**	*eP*		**Pn**	**04 45 43.3**	**+2.2**
ARE1	**Arenal 1**	**2.50**	**322**	*eP*		**Pn**	**04 45 42.9**	**+1.7**
VARE2	**V. Arenal**	**2.50**	**322**	*eP*		**Pn**	**04 45 42.9**	**+1.7**
CEDE	**Laguna Cedeo**	**2.51**	**323**	*eP*		**Pn**	**04 45 42.8**	**+1.5**
JTS	**Las Juntas de**	**2.53**	**316**	*eP*		**Pn**	**04 45 41.4**	**-0.1**
JTS				*eS*		**Sn**	**04 46 11.5**	**-0.6**
JTS	**Las Juntas de**	**2.53**	**316**	*P*		**Pn**	**04 45 43.2**	**+1.7**
JTS				*S*		**Sn**	**04 46 13.8**	**+1.7**
JTS	**Las Juntas de**	**2.53**	**316**	*eP*		**Pn**	**04 45 41.7**	**+0.2**
CACAO	**El Cacao, Vera**	**2.54**	**116**	*eP*		**Pn**	**04 45 41.2**	**-0.4**
CACAO				*eS*		**Sn**	**04 46 12.7**	**+0.4**
COVE	**Coope Vega, Sa**	**2.54**	**331**	*P*		**Pn**	**04 45 44.0**	**+2.2**
NYURE	**Nandayure**	**2.56**	**306**	*eP*		**Pn**	**04 45 41.7**	**-0.3**
TABAC	**Tabacon**	**2.56**	**322**	*eP*		**Pn**	**04 45 44.4**	**+2.3**
INVE	**Universidad In**	**2.73**	**317**	*eP*		**Pb**	**04 45 47.3**	**-2.4**
CUI	**Cuipilapa**	**2.94**	**318**	*eP*		**Pn**	**04 45 48.3**	**+1.1**
AZU	**Azuero**	**2.94**	**103**	*eP*		**Pn**	**04 45 48.0**	**+0.8**
**

comp=N,43nm,4.0s,comp=E,33nm,1.7s
JRG Rokugo 2.33 336 A A 05 03 18.3
comp=N,17nm,3.5s,comp=E,18nm,5.2s
TOK Tokyo 2.33 228 A A 05 03 18.4
comp=N,22nm,1.6s,comp=E,25nm,2.1s
JAW Awa shima 2.39 300 A A 05 03 18.7
comp=N,10.0nm,4.3s,comp=E,7.0nm,2.8s
JKUC kamogawauchiur 2.51 213 A A 05 03 21.2
comp=N,10.0nm,4.4s,comp=E,9.0nm,2.3s
JIZZ Izumozaki 2.54 277 A A 05 03 20.8
comp=N,32nm,2.1s,comp=E,25nm,2.1s
JSZI Iwateshizukuis 2.56 344 A A 05 03 21.7
comp=N,29nm,1.3s,comp=E,26nm,2.9s
JYW Yuwa 2.61 330 A A 05 03 22.2
comp=N,30nm,1.4s,comp=E,34nm,0.9s
JTH Tanohata 2.66 360 A A 05 03 23.4
comp=N,7.0nm,0.6s,comp=E,13nm,2.8s
JGK Kuni 2.69 256 A A 05 03 23.1
comp=N,16nm,3.4s,comp=E,13nm,3.9s
JSGW Sagamiharawaka 2.73 233 A A 05 03 23.9
comp=N,8.0nm,5.1s,comp=E,5.0nm,0.8s
JKEN Kujiedanarisaw 2.93 357 A A 05 03 27.1
comp=N,34nm,0.6s,comp=E,33nm,0.8s
JSD Sado 2.97 286 **Pn** **05 03 26.6 -0.3**
JSD Sado 2.97 286 P **Pn** **05 03 27.5 +0.6**
JJN Nakama 2.97 268 A A 05 03 27.0
comp=N,17nm,4.5s,comp=E,8.0nm,0.7s
JOD2 Odawara 2 3.02 229 A A 05 03 28.1
comp=N,7.0nm,2.0s,comp=E,7.0nm,4.0s
MJAR Matsushiro Arr 3.03 257 Pn **Pn** **05 03 28.3 +0.5**
comp=E,9.0nm,0.3s,baz=79,slow=17,SNR=248
MJAR Sn **Sn** **05 04 05.3 +1.6**
comp=E,15nm,0.3s,baz=84,slow=27,SNR=5.7
MJAR LR LR 05 04 58.9
comp=E,2μm,18.2s,baz=84,slow=47
comp=E,71nm,0.4s
MAJO Matsushiro 3.03 257 **Pn** **05 03 28.6 +0.8**
MAJO Matsushiro 3.03 257 P **Pn** **05 03 29.0 +1.2**
MAJO Matsushiro 3.03 257*c iP* **Pn** **05 03 28.7 +0.9**
JAH Hinai 3.06 342 A A 05 03 28.8
comp=N,8.0nm,1.7s,comp=E,16nm,2.2s
JANG Nango 3.10 355 A A 05 03 29.6
comp=N,6.0nm,0.6s,comp=E,9.0nm,2.0s
JIM2 Oshima 3 3.24 219 A A 05 03 31.4
comp=N,9.0nm,2.4s,comp=E,10.0nm,1.7s
JNTW Noshirotokiwa 3.28 336 A A 05 03 31.7
comp=N,36nm,2.2s,comp=E,28nm,2.4s
JHTM Izuhatsuma 3.28 226 A A 05 03 31.9
comp=N,14nm,3.9s,comp=E,13nm,1.9s
JOG3 Oga3 3.43 321 A A 05 03 29.0
comp=N,13nm,1.9s,comp=E,16nm,5.0s
JTM Tenmabayashi 3.56 350 **Pn** **05 03 36.2 +1.2**
JTM Tenmabayashi 3.56 350 P **Pn** **05 03 36.2 +1.2**
JTM Tenmabayashi 3.56 350 A A 05 03 36.0
comp=N,7.0nm,3.0s,comp=E,9.0nm,3.0s
JHHS Hirosakihyakuz 3.57 341 A A 05 03 35.9
comp=N,27nm,3.3s,comp=E,25nm,3.5s
JIW Iwasaki 3.62 337 A A 05 03 36.6
comp=N,6.0nm,5.6s,comp=E,7.0nm,1.8s
JTT Ttatey 3.70 261 A A 05 03 37.4
comp=N,11nm,3.4s,comp=E,8.0nm,3.5s
JNY Yasuok 3.77 241 A A 05 03 38.5
comp=N,8.0nm,1.4s,comp=E,6.0nm,2.7s
JSI2 Shiura 2 3.94 344 A A 05 03 41.3
comp=N,7.0nm,3.0s,comp=E,9.0nm,4.7s
JSG Sagara 3.96 230 **Pn** **05 03 42.7 +2.1**
JSG Sagara 3.96 230 P **Pn** **05 03 43.6 +3.0**
JAHD Aomorihigashid 4.00 354 A A 05 03 42.3
comp=N,23nm,0.9s,comp=E,15nm,1.0s
JGF Kuroka 4.01 247 **Pn** **05 03 42.5 +1.2**
JGF Kuroka 4.01 247 P **Pn** **05 03 42.8 +1.5**
INU Inuyama 4.37 245 **Pn** **05 03 47.3 +1.0**
INU Inuyama 4.37 245 P **Pn** **05 03 47.9 +1.7**
JSR Shiriuchi 4.39 346 A A 05 03 47.6
comp=N,4.0nm,2.2s,comp=E,5.0nm,9.6s
JHJ2 Mitsune 4.49 203 **Pn** **05 03 47.9 +0.1**
JHJ2 Mitsune 4.49 203 P **Pn** **05 03 48.2 +0.4**
JHJ Hachijo jima 2 4.49 203 Pn **Pn** **05 03 48.2 +0.4**
comp=E,1μm,0.3s,baz=91,slow=22,SNR=218
JHJ Sn **Sn** **05 04 36.9 -2.7**
comp=E,609nm,0.3s,baz=210,slow=23,SNR=8.7
JHJ LR LR 05 05 47.6
comp=E,2μm,20.0s,baz=89,slow=42
ERM Erimo 4.83 11 **Pn** **05 03 52.6 +0.1**
ERM Erimo 4.83 11 P **Pn** **05 03 52.9 +0.4**
ERM Erimo 4.83 11 P **Pn** **05 03 52.6 +0.1**
JEM Erimo 4.83 11 P **Pn** **05 03 52.8 +0.3**
NMR Nemuro--Hokkai 6.76 25⇑*iP* **Pn** **05 04 17.0 -1.9**
NMR *eS* **Sn** **05 05 28.1 -7.3**
JKA Kamikawa-asahi 6.85 4 **Pn** **05 04 20.3 +0.1**
ASAJ Asahikawa 6.85 4 Pn **Pn** **05 04 20.9 +0.7**
comp=E,19nm,0.3s,baz=224,slow=11,SNR=41
ASAJ Sn **Sn** **05 05 38.0 +0.2**
comp=E,9.4nm,0.3s,baz=145,slow=32,SNR=3.9
comp=E,58nm,0.4s
ASAJ Asahikawa 6.85 4 P **Pn** **05 04 21.0 +0.7**
GLVR Golovnino 7.02 22 *eP* **Pn** **05 04 21.8 -0.8**
GLVR *eS* **Sn** **05 05 37.8 -4.1**
GLVR pmax pmax
comp=Z,439nm,0.8s
GLVR pmax pmax
comp=N,230nm,0.6s
GLVR pmax pmax
comp=E,277nm,0.3s
RUSJ Misakicho 7.28 20 *eP* **Pn** **05 04 24.8 -1.3**
RUSJ *eS* **Sn** **05 05 41.2 -7.1**
YUK Yuzh-Kuril'sk 7.39 23 *eP* **Pn** **05 04 26.3 -1.4**
YUK *eS* **Sn** **05 05 45.0 -6.1**
YUK pmax pmax
comp=N,479nm,0.3s
YUK pmax pmax
comp=E,305nm,0.3s
YUK pmax pmax
comp=Z,545nm,0.3s
JMN Monobe 7.42 244 **Pn** **05 04 28.9 +0.7**
JMN Monobe 7.42 244 P **Pn** **05 04 29.6 +1.4**
KUR Kuril'sk 9.13 28 *eP* **Pn** **05 04 51.1 -0.4**
KUR *eS* **Sn** **05 06 26.3 -7.5**
KUR pmax pmax
comp=Z,257nm,0.6s
KUR smax smax
comp=E,334nm,0.5s
KUR smax smax
comp=N,114nm,0.4s
YSS Yuzhno-Sakhali 9.69 4 **Pn** **05 04 59.5 +0.4**
YSS Yuzhno-Sakhali 9.69 4 P **Pn** **05 05 00.0 +0.9**
YSS Yuzhno-Sakhali 9.69 4⇖*iP* **Pn** **05 04 59.6 +0.4**
YSS *eS* **Sn** **05 06 47.9 +0.4**
YSS pmax pmax
comp=Z,110nm,0.7s
YSS pmax pmax
comp=Z,400nm,3.3s
YSS pmax pmax
comp=E,500nm,4.0s
YSS smax smax
comp=N,40nm,0.9s
YSS smax smax
comp=E,30nm,0.8s
YSS MLR MLR
comp=Z,600nm,14.0s
YSS MLR MLR
comp=N,900nm,12.0s
YSS MLR MLR
comp=E,700nm,11.0s
JNU Nakatsue 9.91 249 **Pn** **05 05 03.8 +1.5**
JNU Nakatsue 9.91 249 Pn **Pn** **05 05 03.5 +1.3**
comp=E,1.3nm,0.3s,baz=58,slow=12,SNR=14
JNU LR LR 05 09 11.5
comp=E,321nm,21.4s,baz=62,slow=40
comp=E,32nm,0.8s
JNU Nakatsue 9.91 249 P **Pn** **05 05 04.9 +2.6**
PSTR Posyet 10.05 306⇑*eP* **Pn** **05 05 05.6 +1.5**
JCJ Chichijima 10.16 178 Pn **Pn** **05 05 03.5 -2.2**
JCJ Chichijima 10.16 178 Pn Pn 05 04 56.0 -10
comp=E,28nm,0.3s,baz=74,slow=23,SNR=33
JCJ Sn Sn 05 06 41.5 -18
comp=E,33nm,0.3s,baz=14,slow=22,SNR=6.3
USRK Ussuriysk Ar. 10.20 316 Pn **Pn** **05 05 07.4 +1.3**
comp=E,0.8nm,0.3s,baz=125,slow=12,SNR=11
comp=E,20nm,0.9s
KSRS Korea Array 11.11 275 Pn **Pn** **05 05 20.5 +1.9**
comp=E,0.4nm,0.3s,baz=89,slow=13,SNR=14
comp=E,9.4nm,0.9s
KSAR Wonju Array Be 11.14 275 Pn **Pn** **05 05 16.1 -3.0**
KSAR Wonju Array Be 11.14 275 P **Pn** **05 05 16.1 -3.0**
KS19 Wonju Array Si 11.15 275 **Pn** **05 05 18.8 -0.5**

MDJ Mudanjiang 11.82 312 **Pn** **05 05 27.3 -1.1**
MDJ Mudanjiang 11.82 312 P Pn 05 05 33.1 +4.7
MDJ pmax pmax
comp=E,12nm,0.8s
TYV Tymovskoe 13.59 2 *eP* Pn 05 05 46.5 -6.0
TYV pmax pmax
comp=Z,30nm,1.5s
TYV pmax pmax
comp=Z,1μm,5.0s
BNX BinXian 13.73 313 ⇓P **Pn** **05 05 55.7 +1.2**
BNX pmax pmax
comp=Z,6.0nm,1.0s
JOW Kunigami 15.52 232 **Pn** **05 06 18.3 -0.4**
JOW IAmb IAmb 05 06 42.4
comp=Z,88nm,1.5s
JOW Kunigami 15.52 232 Pn **Pn** **05 06 19.6 +0.8**
comp=Z,2.2nm,0.3s,baz=44,slow=12,SNR=3.8
JOW LR LR 05 12 06.8
comp=Z,164nm,21.5s,baz=110,slow=37
comp=Z,14nm,0.7s
OKH Okha 16.29 2*de*P **P** **05 06 30.8 -0.5**
OKH *eS* Sn 05 09 17.3 -11
OKH MLR MLR
comp=Z,300nm,15.0s
OKH MLR MLR
comp=E,800nm,15.0s
HEH HeiHe 16.61 326 *eP* **P** **05 06 34.3 -0.6**
SKR Severo-Kuril's 16.83 33 *eP* Pn 05 06 24.0 -11
SKR pmax pmax
comp=Z,800nm,7.6s
PEA0B Petropavlovsk- 19.29 30 P **P** **05 07 03.7 -0.7**
PEA0B IAmb IAmb 05 07 21.0
comp=Z,81nm,1.1s
PEA0B Petropavlovsk- 19.29 30⇓*eP* **Pn** **05 07 05.8 +0.3**
PETK Petropavlovsk- 19.29 30 P **P** **05 07 04.9 +0.5**
comp=Z,0.6nm,0.3s,baz=210,slow=9.6,SNR=13
PETK LR LR 05 14 23.4
comp=Z,194nm,22.0s,baz=210,slow=36
comp=Z,24nm,0.9s
ZEA Zeya 19.33 333 *eP* **Pn** **05 07 05.1 -0.8**
ZEA pmax pmax
comp=Z,20nm,0.6s
PET Petropavlovsk 19.61 31 P **P** **05 07 07.3 -0.6**
PET IAmb IAmb 05 07 33.4
comp=Z,54nm,1.0s
NJ2 Nanjing 19.63 261 *eP* **Pn** **05 07 09.3 -0.3**
NJ2 pP **sP** **05 07 19.6 +4.4**
NJ2 pmax pmax
comp=Z,12nm,0.7s
NJ2 pmax pmax
comp=Z,170nm,4.3s
NJ2 LR LR
comp=Z,450nm,17.1s
NJ2 LR LR
comp=Z,390nm,17.1s
NJ2 LR LR
comp=Z,370nm,18.0s
TIA Tai'an 19.86 274 P **P** **05 07 09.4 -1.3**
TIA pmax pmax
comp=Z,18nm,0.8s
HIA Hailar 20.00 314 P **P** **05 07 11.9 -0.3**
HIA Hailar 20.00 314 P **P** **05 07 11.9 -0.3**
HIA pmax pmax
comp=Z,6.0nm,0.6s
HILR Hailar Array B 20.14 315 P **P** **05 07 13.1 -0.6**
comp=Z,7.1nm,0.6s,baz=117,slow=15,SNR=5.3
comp=Z,7.1nm,0.6s
BJT Baijiatuan 20.25 286 **P** **05 07 14.8 -0.2**
BJT Baijiatuan 20.25 286 P **P** **05 07 14.8 -0.2**
BJT pmax pmax
comp=Z,18nm,0.8s
XLT XiLinHaoTe 20.63 297 *eP* **P** **05 07 17.0 -2.2**
XLT pP sP 05 07 25.2 -1.0
XLT sP pP 05 07 29.3 +5.3
XLT PP **PnPn** **05 07 41.5 +4.6**
XLT pmax pmax
comp=Z,23nm,0.8s
XLT LR LR
comp=Z,360nm,11.1s
XLT LR LR
comp=Z,260nm,16.2s
YHNB Yeheng 21.56 240 P **P** **05 07 28.0 -1.3**
YHNB IAmb IAmb 05 08 03.9
comp=Z,35nm,1.0s
HNS HongShan 21.58 279 ⇓P **P** **05 07 27.8 -1.6**
HNS pmax pmax
comp=Z,28nm,0.9s
HNS LR LR
comp=Z,320nm,16.7s
HNS LR LR
comp=Z,270nm,16.3s
HNS LR LR
comp=Z,320nm,16.1s
YULB Yu-li 22.45 238 P **P** **05 07 35.5 -3.4**
YULB IAmb IAmb 05 08 05.1
comp=Z,43nm,1.3s
TPUB Ta-pu 22.97 239 **P** **05 07 41.3 -3.0**
MA2 Magadan 23.04 12 P **P** **05 07 45.1 +0.5**
MA2 IAmb IAmb 05 07 49.0
comp=Z,30nm,0.9s
MA2 Magadan 23.04 12 LR LR 05 18 10.3
comp=Z,189nm,18.0s,baz=239,slow=40
MA2 Magadan 23.04 12⇓*eP* **P** **05 07 46.0 +1.3**
MA2 pmax pmax
comp=Z,126nm,2.2s
HHC Hu-ho-hao-te 23.75 288 *eP* **P** **05 07 52.6 +0.5**
HHC pmax pmax
comp=Z,9.0nm,0.8s
WHN Wuhan 23.76 262 P **P** **05 07 51.8 -0.3**
WHN LR LR
comp=Z,1μm,15.1s
KNMB Chin-men Tao 23.79 244 P **P** **05 07 50.2 -2.2**
LYN LuoYang 23.93 272 P **P** **05 07 53.2 -0.5**
LYN pP sP 05 08 02.6 +1.6
LYN S **S** **05 12 12.1 +2.6**
LYN pmax pmax
comp=Z,40nm,0.8s
LYN LR LR
comp=Z,640nm,15.8s
LYN LR LR
comp=Z,500nm,15.5s
LYN LR LR
comp=Z,550nm,15.7s
BTO Baotou 24.93 288 *eP* **P** **05 08 04.1 +1.2**
BTO pP **sP** **05 08 13.5 +3.3**
BTO sP pP 05 08 17.5 +9.5
BTO PP **PnPn** **05 08 41.2 +5.4**
BTO pmax pmax
comp=Z,24nm,0.6s
BTO pmax pmax
comp=Z,180nm,3.8s
BTO LR LR
comp=Z,550nm,15.7s
BTO LR LR
comp=Z,370nm,12.3s
BTO LR LR
comp=Z,340nm,8.9s
CNSH ChangSha 25.91 258 P **P** **05 08 12.7 +1.0**
CNSH pmax pmax
comp=Z,46nm,1.0s
YAK Yakutsk 25.91 347 LR LR 05 18 29.7
comp=Z,228nm,20.9s,baz=152,slow=37
YAK Yakutsk 25.91 347 *eP* **P** **05 08 11.0 -0.5**
YAK *e**PP **sP** **05 08 15.1 -3.5**
YAK *e*PPP PPP 05 08 55.7
YAK *e* 05 11 39.9
YAK *eS* **S** **05 12 40.8 +0.2**
YAK *e*SS **SnSn** **05 13 38.2 +0.9**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK smax smax
comp=N,406nm,3.5s
YAK smax smax
comp=E,240nm,3.8s
YAK MLR MLR
comp=E,253nm,22.0s
YAK MLR MLR
comp=N,254nm,17.0s
YAK MLR MLR
comp=Z,472nm,21.0s
SEY Seymchan 26.48 11 LR LR 05 18 57.6
comp=Z,233nm,21.4s,baz=194,slow=37

SEY Seymchan 26.48 11 *eP* **P** **05 08 17.8 +1.2**
SEY pmax pmax
comp=Z,24nm,1.1s
XAN Xi'an 26.90 273 P **P** **05 08 18.3 -2.4**
XAN pP sP 05 08 26.8 -1.2
XAN pmax pmax
comp=Z,15nm,0.8s
XAN LR LR
comp=Z,440nm,15.8s
XAN LR LR
comp=Z,260nm,19.9s
XAN LR LR
comp=Z,250nm,20.6s
SHEM Shemya Is, Ala 27.23 45 LR LR 05 16 58.0
comp=Z,127nm,20.0s,baz=289,slow=32
ULN Ulaanbaatar 27.53 304 P **P** **05 08 27.0 +0.6**
ULN Ulaanbaatar 27.53 304 P **P** **05 08 27.0 +0.6**
ULN pmax pmax
comp=Z,8.0nm,0.9s
ENH Enshi 27.72 265 **P** **05 08 26.8 -1.4**
ENH IAmb IAmb 05 08 30.3
comp=Z,23nm,0.8s
H11N2 WAKE ISLAND Hy 27.96 122 T T 05 37 55.4
baz=314,slow=75
SONM Songino Array 27.96 303 P **P** **05 08 30.7 +0.5**
comp=Z,7.2nm,0.5s,baz=103,slow=9.0,SNR=36
SONM LR LR 05 20 07.9
comp=Z,132nm,19.0s,baz=111,slow=38
comp=Z,7.2nm,0.5s
H11N1 WAKE ISLAND Hy 27.96 122 T T 05 37 56.0
baz=314,slow=75
H11N3 WAKE ISLAND Hy 27.98 122 T T 05 37 56.9
baz=314,slow=75
H11S1 WAKE ISLAND Hy 28.68 124 T T 05 38 49.3
baz=316,slow=76
H11S3 WAKE ISLAND Hy 28.68 124 T T 05 38 49.0
baz=316,slow=76
H11S2 WAKE ISLAND Hy 28.70 124 T T 05 38 50.0
baz=316,slow=76
GULI GuiLin 29.33 255 P **P** **05 08 44.1 +1.7**
GULI pmax pmax
comp=Z,61nm,0.9s
LZH Lanzhou 30.39 279 *eP* P 05 08 58.3 +6.3
LZH pP sP 05 09 03.9 +4.6
LZH pmax pmax
comp=Z,22nm,1.4s
LZH LR LR
comp=N,350nm,17.1s
LZH LR LR
comp=E,340nm,17.4s
LZH LR LR
comp=Z,440nm,18.2s
ZAK Zakamensk 30.41 308 *eP* **P** **05 08 50.5 -1.4**
ZAK pmax pmax
comp=Z,7.0nm,1.7s
LZDM Lanzhou Array 30.54 279 P **P** **05 08 53.5 +0.1**
comp=Z,2.4nm,0.4s,baz=104,slow=6.3,SNR=4.0
comp=Z,2.4nm,0.4s
GTA Gaotai 32.85 287 *eP* P 05 09 18.9 +5.4
GTA pP sP 05 09 22.4 +1.6
GTA pmax pmax
comp=Z,6.0nm,0.6s
QIZ Qiongzhong 33.37 246 P **P** **05 09 18.2 +0.2**
QIZ S **S** **05 14 37.4 -0.9**
QIZ LR LR
comp=Z,370nm,19.0s
QIZ LR LR
comp=Z,370nm,20.2s
DAV Davao City (W) 33.53 210 LR LR 05 21 16.0
comp=Z,200nm,21.9s,baz=344,slow=33
BILL Bilibino 33.69 16 P **P** **05 09 21.0 +0.7**
BILL IAmb IAmb 05 09 22.1
comp=Z,7.1nm,0.9s
BILL Bilibino 33.69 16⇑*iP* **P** **05 09 21.3 +1.0**
BILL pmax pmax
comp=Z,11nm,1.1s
KNGR Kungurtug, Tuv 34.09 307⇓*eP* **P** **05 09 24.8 +0.7**
KNGR pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 35.09 353 LR LR 05 24 26.1
comp=Z,200nm,19.9s,baz=196,slow=37
TIXI Tiksi 35.09 353⇓*eP* **P** **05 09 32.3 -0.1**
TIXI pmax pmax
comp=Z,15nm,3.1s
KMI Kunming 35.37 261 P **P** **05 09 35.2 -0.4**
KMI pP sP 05 09 45.1 +2.2
KMI pmax pmax
comp=Z,19nm,0.8s
KMI LR LR
comp=Z,300nm,16.8s
KMI LR LR
comp=Z,200nm,16.4s
KMI LR LR
comp=Z,210nm,20.5s
PZH PanZhiHua 35.50 264 P **P** **05 09 36.0 -0.6**
PZH pmax pmax
comp=Z,20nm,0.6s
NIKH Nikolski High 37.33 49 P **P** **05 09 52.4 +0.6**
baz=266
GOMU GeErMu 37.43 283 P **P** **05 09 53.6 +0.3**
GOMU pmax pmax
comp=Z,6.0nm,0.5s
GAMB Gambell 38.31 31 P **P** **05 10 00.3 +0.4**
baz=249
UNV Unalaska Valle 38.80 48 P **P** **05 10 04.7 +0.6**
baz=266
JAY Jayapura 39.61 182 LR LR 05 24 27.1
comp=Z,80nm,20.8s,baz=337,slow=33
M11K Mekoryuk 39.84 38 P **P** **05 10 12.6 -0.1**
baz=259
TNA Tin City 40.46 30 P **P** **05 10 18.3 +0.5**
baz=251
DGZ Jazzator, Alta 40.55 306*d iP* **P** **05 10 19.9 +0.9**
DGZ pmax pmax
comp=Z,41nm,0.6s
K13K Kusilvak Mount 40.89 35 P **P** **05 10 21.5 +0.1**
baz=258
TOLI2 Tolitoli 40.92 213 P **P** **05 10 23.0 +0.9**
TOLI2 IAmb IAmb 05 10 24.5
comp=Z,9.4nm,0.8s
FAKI Fak Fak 40.98 195 P **P** **05 10 23.7 +1.0**
FAKI IAmb IAmb 05 11 05.0
comp=Z,18nm,0.9s
WMQ Urumqi 41.06 297 *eP* **P** **05 10 26.1 +2.9**
WMQ pP sP 05 10 33.9 +3.3
WMQ pmax pmax
comp=Z,14nm,0.7s
J14K Nanvaranak Lak 41.56 34 P **P** **05 10 27.1 +0.3**
baz=259
F15K North Star Dit 41.80 30 P **P** **05 10 29.3 +0.4**
baz=254
CMAR Chiang Mai Arr 41.92 255 P **P** **05 10 31.0 +0.6**
CMAR Chiang Mai Arr 41.92 255 P **P** **05 10 30.2 -0.2**
comp=Z,0.9nm,0.3s,baz=64,slow=4.7,SNR=7.8
CMAR LR LR 05 30 10.6
comp=Z,78nm,18.6s,baz=75,slow=39
comp=Z,0.9nm,0.3s
N14K Kuskokwak Cree 42.00 39 P **P** **05 10 30.7 +0.2**
baz=264
ZAA0 Zalesovo Array 42.02 312 P **P** **05 10 31.0 +0.1**
ZALV Zalesovo Beam 42.02 312 P **P** **05 10 31.0 +0.1**
comp=Z,2.5nm,0.4s,baz=85,slow=7.8,SNR=16
ZALV LR LR 05 27 47.7
comp=Z,52nm,19.8s,baz=71,slow=36
comp=Z,2.5nm,0.4s
ZALV Zalesovo Beam 42.02 312 *i* P **P** **05 10 31.0 +0.1**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
O14K Tigyukauivet M 42.14 40 P **P** **05 10 31.4 -0.3**
baz=265
C16K Lisburne Hills 42.32 26 P **P** **05 10 33.0 -0.1**
baz=251
SDPT Sand Point 42.36 46 P **P** **05 10 33.9 +0.3**
baz=270
K15K Wolf Creek Mou 42.40 35 P **P** **05 10 34.0 +0.2**
baz=261
H16K Elim 42.52 32 P **P** **05 10 34.9 +0.2**
baz=258
LSA Lhasa 42.56 275 P **P** **05 10 34.1 -2.0**
LSA Lhasa 42.56 275 P **P** **05 10 35.9 -0.2**
LSA pmax pmax
comp=Z,14nm,0.9s
M15K Kasigluk River 42.58 38 P **P** **05 10 35.0 -0.2**
baz=264
G16K Koyuk River 42.64 31 P **P** **05 10 35.3 -0.4**
baz=257
N15K Kwethluk River 42.82 39 P **P** **05 10 37.2 0.0**

baz=265
CHNA Chernabura Isl 42.88 46 P P 05 10 37.7 0.0
baz=271
S14K Fog Glacier 42.90 44 P P 05 10 37.8 -0.2
baz=269
D17K Noatak River 42.95 27 P P 05 10 38.1 -0.1
baz=254
I17K Unalakleet 43.04 33 P P 05 10 38.7 -0.3
baz=260
RDOG Red Dog Mine 43.12 27 P P 05 10 40.3 +0.8
baz=254
C17K DeLong Mountai 43.15 26 P P 05 10 40.2 +0.4
baz=253
E17K Hotham Inlet 43.26 28 P P 05 10 41.3 +0.6
baz=256
L16K Owhat River 43.28 36 P P 05 10 40.9 0.0
baz=264
F17K Baldwin Pennin 43.33 29 IAmb IAmb 05 10 58.5
comp=Z,8.9nm,0.8s
F17K Baldwin Pennin 43.33 29 P P 05 10 40.7 -0.5
baz=257
G17K Kiwalik Mounta 43.36 31 P P 05 10 41.4 -0.1
baz=259
M16K Timber Creek 43.46 37 P P 05 10 42.7 +0.3
baz=265
N16K Nishlik Lake 43.50 38 P P 05 10 42.2 -0.5
baz=266
H17K Granite Mounta 43.56 32 P P 05 10 43.3 +0.1
baz=260
J17K VABM Dome 43.68 34 P P 05 10 44.2 +0.1
baz=262
SHL Shillong 43.78 269 P 05 10 45.0 -0.7
SHL IAmb IAmb 05 10 59.7
comp=Z,7.8nm,0.8s
SHL Shillong 43.78 269 P P
SHL pmax pmax
comp=Z,8.0nm,0.8s
O16K Kokwok River B 43.78 40 P P 05 10 44.6 -0.4
baz=267
E18K Tukpahlearik C 43.80 28 P P 05 10 45.2 +0.1
baz=257
P16K Nushagak River 43.81 40 P P 05 10 46.7 +1.5
baz=268
L17K Donlin 43.88 36 P P 05 10 46.5 +0.7
baz=264
B18K Kokolik River 43.88 25 P P 05 10 45.9 +0.2
baz=253
C18K Utukok River 43.89 26 P P 05 10 46.4 +0.6
baz=255
F18K Selawik 43.98 29 P P 05 10 47.3 +0.8
baz=258
SBUM Sibu 44.10 225 P P 05 10 48.4 +0.4
M17K Holitna River 44.22 37 P P 05 10 49.5 +0.9
baz=266
H18K Honhosa River 44.24 32 P P 05 10 49.8 +1.1
baz=261
G18K Tagagawik 44.25 30 P P 05 10 50.3 +1.6
G18K Tagagawik 44.25 30 P P 05 10 50.0 +1.3
baz=260
N17K Nushagak Hills 44.29 38 P P 05 10 49.7 +0.6
baz=267
O17K Koliganek Bris 44.30 39 P P 05 10 49.6 +0.5
baz=268
MK31 Makanchi Array 44.30 302 *de*P P 05 10 49.3 -0.1
MKAR Makanchi Array 44.30 302 P 05 10 49.1 -0.3
MKAR Makanchi Array 44.30 302 P P 05 10 49.4 -0.1
comp=Z,9.5nm,0.6s,baz=87,slow=9.8,SNR=98
MKAR LR LR 05 30 12.6
comp=Z,67nm,18.9s,baz=3.0,slow=37
comp=Z,9.5nm,0.6s
Q16K King Salmon 44.49 41 P P 05 10 52.0 +1.4
baz=269
MAKZ Makanchi 44.51 302 P 05 10 50.8 -0.3
MAKZ Makanchi 44.51 302 P P 05 10 50.8 -0.3
MAKZ pmax pmax
comp=Z,30nm,1.0s
C19K Lookout Ridge 44.57 26 P P 05 10 52.6 +1.3
baz=256
P17K Kvichak River 44.62 40 P P 05 10 53.5 +1.8
baz=269
L18K Granite Mounta 44.64 36 P P 05 10 52.9 +1.0
baz=266
R17L Mt. Peulik Vol 44.65 42 P P 05 10 52.7 +0.7
baz=271
J18K Innoko River 44.74 34 P P 05 10 53.5 +0.9
baz=264
F19K Shaleruckik Mo 44.76 29 P P 05 10 54.2 +1.5
baz=260
Q17K Contact Creek 44.90 42 P P 05 10 55.1 +1.0
baz=270
N18K Kilae Creek 44.93 38 P P 05 10 55.8 +1.6
baz=268
D19K Kuna River 44.96 27 P P 05 10 55.7 +1.4
baz=258
M18K Stony River 45.00 37 P P 05 10 56.0 +1.3
baz=267
E19K Redstone River 45.08 28 IAmb IAmb 05 11 18.9
comp=Z,11nm,0.8s
E19K Redstone River 45.08 28 P P 05 10 56.5 +1.2
baz=260
H19K Roundabout Mou 45.09 31 P P 05 10 57.0 +1.6
baz=263
P18K Big Mountain, 45.24 40 P P 05 10 58.4 +1.7
baz=270
O18K Koktuh Hills 45.25 39 P P 05 10 58.1 +1.3
baz=269
J19K Poorman 45.27 33 P P 05 10 58.5 +1.7
J19K IAmb IAmb 05 11 17.0
comp=Z,11nm,1.2s
J19K Poorman 45.27 33 P P 05 10 58.5 +1.7
baz=265
Q18K Katmai Hardscr 45.35 41 P P 05 10 58.9 +1.2
baz=271
BRDH Bariadhala 45.38 266 LR LR 05 32 22.0
comp=Z,195nm,18.8s,baz=84,slow=39
L19K White Mountain 45.50 36 P P 05 11 00.2 +1.5
L19K IAmb IAmb 05 11 27.4
comp=Z,13nm,1.5s
L19K White Mountain 45.50 36 P P 05 11 00.3 +1.6
baz=267
D20K Etivluk River 45.54 27 P P 05 11 00.4 +1.5
baz=259
F20K Avaraart Lake 45.59 29 P P 05 10 58.8 -0.5
baz=262
E20K Nigu River 45.61 27 P P 05 11 00.5 +1.0
baz=260
B20K Meade River 45.61 25 P P 05 10 59.7 +0.3
baz=258
N19K Bonanza Creek 45.63 38 P P 05 11 01.0 +1.1
baz=269
O19K Port Alsworth 45.70 39 P P 05 11 01.9 +1.6
baz=270
H20K Anotleneega Mo 45.74 31 P P 05 11 01.5 +0.9
baz=264
I20K Naaghedeneel 45.84 32 P P 05 11 02.5 +1.2
baz=265
K20K Telida 45.92 34 P P 05 11 02.8 +0.8
baz=267
J20K Nowinta River 45.93 33 P P 05 11 03.5 +1.4
baz=266
L20K Farewell, AK 45.96 36 P P 05 11 02.9 +0.5
baz=268
KSM Kuching 45.99 227 P 05 11 03.4 +0.3
KSM IAmb IAmb 05 11 06.7
comp=Z,15nm,0.9s
KURK Kurchatov 46.08 308 P 05 11 03.0 -0.4
KURK Kurchatov 46.08 308 *d i*P P 05 11 03.0 -0.4
KURK pmax pmax
comp=Z,22nm,0.6s
KURBB Kurchatov Arra 46.15 308 P P 05 11 04.0 0.0
comp=Z,14nm,0.4s,baz=83,slow=7.9,SNR=114
KURBB LR LR 05 31 02.2
comp=Z,77nm,20.8s,baz=176,slow=37
comp=Z,14nm,0.4s
IMAR Indian Mountai 46.25 31 P P 05 11 06.5 +1.9
C21K Knifeblade Rid 46.27 26 P P 05 11 05.6 +0.9
baz=261
M20K Styx River 46.30 36 P P 05 11 05.5 +0.4
baz=269
OHAK Old Harbor 46.32 43 P P 05 11 06.4 +1.2
baz=274
B21K Ikpikpuk River 46.41 26 P P 05 11 06.6 +0.9
baz=260
E21K Killik River 46.45 27 IAmb IAmb 05 11 25.6
comp=Z,8.7nm,0.9s
E21K Killik River 46.45 27 P P 05 11 07.3 +1.1
baz=262
F21K Alatna River 46.48 29 P P 05 11 05.8 -0.6
baz=264
A22K Sinclair Lake 46.54 24 P P 05 11 07.5 +0.8
baz=259
O20K Slope Mountain 46.55 39 P P 05 11 07.9 +0.8
baz=271
H21K Melozitna Rive 46.61 31 IAmb IAmb 05 11 38.4
comp=Z,7.9nm,1.2s
H21K Melozitna Rive 46.61 31 P P 05 11 09.1 +1.7
baz=266
KDAK Kodiak Island 46.67 42 P P 05 11 09.0 +1.1
KDAK Kodiak Island 46.67 42 LR LR 05 30 35.1
comp=Z,106nm,20.8s,baz=232,slow=36
KDAK Kodiak Island 46.67 42 P P 05 11 09.0 +1.1
KDAK pmax pmax
comp=Z,24nm,1.1s
KDAK Kodiak Island 46.67 42 P P 05 11 08.7 +0.8
baz=274
Q20K Shuyak Island 46.72 41 P P 05 11 09.4 +1.0
baz=273
SYI Shuyak Island 46.72 41 P P 05 11 09.3 +0.9
EVN Everest 46.74 275 P 05 11 09.3 -0.3
EVN IAmb IAmb 05 11 24.1
comp=Z,13nm,0.9s
SPCR Spurr Chakacha 46.74 37 P P 05 11 09.5 +1.0
baz=271
PPLA Purkeypile 46.75 35 P P 05 11 09.6 +0.9
baz=269
KAPI Kappang 46.86 211 P 05 11 10.2 +0.3
KAPI Kappang 46.86 211⇑ *e*P P 05 11 11.4 +1.5
KAPI pmax pmax
comp=Z,25nm,1.4s
I21K Tanana 46.92 32 P P 05 11 11.0 +1.2
baz=267
D22K Ayikyak River 46.98 27 P P 05 11 11.7 +1.4
baz=263
PDGK Podgornoye 46.99 298 P P 05 11 10.2 -0.6
F22K John River 47.02 29 P P 05 11 11.5 +1.0
baz=265
SKT Skeentna 47.05 36 P P 05 11 12.1 +1.1
baz=271
HOM Homer 47.06 39 P P 05 11 12.2 +1.2
baz=273
E22K Anaktuvuk Pass 47.21 28 P 05 11 14.0 +1.9
E22K IAmb IAmb 05 11 29.0
comp=Z,14nm,1.1s
E22K Anaktuvuk Pass 47.21 28 P P 05 11 12.9 +0.8
baz=265
H22K Ishtalitna Cre 47.22 31 P P 05 11 13.3 +1.2
baz=267
BPAW Bear Paw Mtn. 47.31 33 P P 05 11 13.5 +0.5
baz=269
SUA Susitna One 47.44 37 P P 05 11 15.6 +1.6
SUA Susitna One 47.44 37 P P 05 11 14.7 +0.7
baz=272
MLY Manley 47.45 32 P P 05 11 15.1 +1.1
baz=268
BRSE Bradley Lake S 47.51 39 P P 05 11 14.8 +0.2
baz=273
TRF Thorofare Moun 47.62 34 P P 05 11 16.0 +0.5
baz=270
D23K Nanushuk River 47.71 27 P P 05 11 16.9 +1.0
baz=265
M22K Willow 47.73 37 P P 05 11 17.2 +1.1
baz=272
COLD Coldfoot 47.76 29 P P 05 11 17.0 +0.7
baz=267
G23K Bananza Creek 47.80 30 P P 05 11 17.2 +0.5
baz=268
C23K Itkillik River 47.82 26 P P 05 11 18.0 +1.3
baz=264
RC01 Rabbit Creek A 47.94 37 P P 05 11 19.0 +1.2
baz=273
H23K Yukon River 47.97 31 IAmb IAmb 05 11 42.6
comp=Z,5.6nm,0.8s
H23K Yukon River 47.97 31 P P 05 11 18.8 +0.8
baz=269
E23K Chandalar 48.03 28 P P 05 11 18.8 +0.3
baz=267
I23K Minto, Yukon-K 48.03 32 P P 05 11 19.0 +0.6
baz=270
TOLK Toolik Lake Re 48.08 27 P P 05 11 20.1 +1.2
baz=266
NEA2 Nenana 48.15 33 IAmb IAmb 05 11 45.5
comp=Z,6.2nm,1.0s
NEA2 Nenana 48.15 33 P P 05 11 20.5 +1.1
baz=270
PMR Palmer 48.21 37 P P 05 11 21.0 +1.2
PMR IAmb IAmb 05 11 28.1
comp=Z,17nm,1.3s
PMR Palmer 48.21 37 P P 05 11 21.0 +1.2
PMR pmax pmax
comp=Z,17nm,1.3s
PMR Palmer 48.21 37 P P 05 11 21.6 +1.8
baz=273
MCK McKinley 48.22 34 P P 05 11 21.5 +1.5
baz=271
RND Reindeer 48.27 34 IAmb IAmb 05 11 35.9
comp=Z,19nm,1.5s
GHO Glory Hole Cre 48.30 37 P P 05 11 22.0 +1.3
GHO IAmb IAmb 05 11 56.7
comp=Z,14nm,1.1s
D24K Happy Valley 48.39 27 P P 05 11 22.9 +1.8
baz=266
WAT1 Susitna Watana 48.42 35 P P 05 11 22.7 +1.1
baz=272
E24K Your Creek 48.45 28 IAmb IAmb 05 11 44.8
comp=Z,7.0nm,0.8s
E24K Your Creek 48.45 28 P P 05 11 23.2 +1.4
baz=268
C24K Franklin Bluff 48.47 26 P P 05 11 24.0 +2.2
baz=266
KNK Knik Glacier 48.54 37 P P 05 11 24.1 +1.7
baz=274
SML Sawmill 48.58 36 IAmb IAmb 05 11 58.7
comp=Z,10nm,0.8s
SML Sawmill 48.58 36 P P 05 11 24.1 +1.3
baz=274
WRH Wood River Hil 48.58 33 IAmb IAmb 05 11 49.1
comp=Z,6.3nm,0.8s
TARG Taragay, Kyrgy 48.63 296 P P 05 11 24.9 +1.0
TARG pmax pmax
comp=Z,24nm,0.9s
PWL Port Wells 48.64 38 P P 05 11 24.2 +1.0
baz=274
H24K Noodor Dome 48.65 31 IAmb IAmb 05 11 35.5
comp=Z,5.8nm,1.0s
H24K Noodor Dome 48.65 31 P P 05 11 24.4 +1.1
baz=270
F24K Squaw Lake 48.66 29 P P 05 11 23.3 0.0
baz=269
COLA College 48.67 32⇓ *e*P P 05 11 26.9 +3.5
COLA pmax pmax
comp=Z,6.0nm,0.9s
WAT6 Susitna Watana 48.81 35 P P 05 11 24.8 +0.1
baz=273
G24K Hadweenzic Riv 48.81 30 IAmb IAmb 05 11 41.4
comp=Z,11nm,1.2s
G24K Hadweenzic Riv 48.81 30 P P 05 11 25.1 +0.6
baz=270
POKR Poker Plat Res 48.85 32 P P 05 11 25.0 +0.3
baz=271
M23K Glacier View 48.86 36 P P 05 11 25.6 +0.6
baz=274
DHY Denali Highway 48.95 35 IAmb IAmb 05 12 10.5
comp=Z,16nm,1.5s
DHY Denali Highway 48.95 35 P P 05 11 26.1 +0.3
baz=273
SCM Sheep Creek Mo 49.05 36 P P 05 11 25.7 -0.7
baz=274
HDA Harding Lake 49.08 33 P 05 11 27.5 +1.0
HDA IAmb IAmb 05 11 29.1
comp=Z,7.1nm,1.0s
HDA Harding Lake 49.08 33 P P 05 11 27.2 +0.7
baz=272,SNR=5.5
IL31 49.09 32 P P 05 11 27.7 +1.1
IL31 IAmb IAmb 05 11 43.2
comp=Z,5.8nm,0.8s
ILAR Eielson Array 49.09 32 P P 05 11 26.6 0.0
ILAR Eielson Array 49.09 32 P P 05 11 27.7 +1.1
comp=Z,4.0nm,0.8s,baz=268,slow=6.3,SNR=40
ILAR LR LR 05 33 27.0
comp=Z,55nm,20.2s,baz=280,slow=38
comp=Z,4.0nm,0.8s
P23K Montague Islan 49.17 39 P P 05 11 28.0 +0.8
baz=278
D25K Kavik River 49.27 26 IAmb IAmb 05 11 40.8
comp=Z,8.2nm,0.8s
D25K Kavik River 49.27 26 P P 05 11 29.0 +1.1
baz=269
G25K Bearman Lake 49.36 30 P P 05 11 29.7 +1.1
baz=271
HNR Honiara 49.46 156 LR LR 05 30 47.3
comp=Z,64nm,20.3s,baz=335,slow=34
H25L Birch Creek 49.48 30 P P 05 11 30.8 +1.2
baz=272
F25K Christian Rive 49.53 29 P P 05 11 30.3 +0.3
baz=271
E25K Arctic Village 49.55 28 P P 05 11 31.6 +1.4
baz=270
M24K Tolsona, Glenn 49.57 36 P P 05 11 31.6 +1.2
baz=275
IPM Ipoh 49.59 239 P 05 11 30.9 -0.1
IPM IAmb IAmb 05 11 32.2
comp=Z,12nm,1.0s
K24K Donnelly Dome 49.62 34 P P 05 11 32.4 +1.7
baz=274
BOOM Boomskoye usch 49.73 298 P 05 11 32.0 0.0
BOOM Boomskoye usch 49.73 298 P P 05 11 32.0 0.0
BOOM pmax pmax
comp=Z,14nm,1.0s
J25K Salcha River, 49.75 33 P P 05 11 32.7 +1.0
baz=274
KLU Klutina 49.75 37 P P 05 11 33.0 +1.2
KLU IAmb IAmb 05 11 60.0
comp=Z,9.9nm,1.0s
KLU Klutina 49.75 37 P P 05 11 32.9 +1.1
baz=276
PAX Paxson 49.82 35 P P 05 11 33.8 +1.4
baz=275
EYAK Cordova Ski Ar 49.93 38 P P 05 11 33.3 +0.3
baz=277
RIDG Independent Ri 50.04 34 P P 05 11 35.4 +1.4
baz=275
F26K Sheenjek River 50.10 29 IAmb IAmb 05 11 59.4
comp=Z,9.3nm,0.9s
F26K Sheenjek River 50.10 29 P P 05 11 35.1 +0.9
baz=272,SNR=10
C27K Jago River 50.21 26 P P 05 11 34.9 -0.1
baz=271
G26K Porcupine Rive 50.27 30 IAmb IAmb 05 11 52.6
comp=Z,5.3nm,0.9s
G26K Porcupine Rive 50.27 30 P P 05 11 37.0 +1.5
baz=273
N25K Chitina, Valde 50.37 37 P P 05 11 37.3 +0.9
baz=277
SCRK Sand Creek 50.40 33 IAmb IAmb 05 12 02.8
comp=Z,6.7nm,0.8s
SCRK Sand Creek 50.40 33 P P 05 11 37.7 +1.0
baz=275,SNR=6.3
BMRM Bremner River 50.44 37 P P 05 11 37.8 +0.8
baz=277
J26L Joseph Creek 50.53 33 P P 05 11 38.9 +1.2
baz=275
I26K Coal Creek Min 50.64 32 P P 05 11 39.4 +1.0
baz=275
BVAR Borovoye Array 50.68 312 P P 05 11 39.0 +0.2
comp=Z,4.0nm,0.5s,baz=72,slow=7.5,SNR=28
BVAR LR LR 05 34 26.5
comp=Z,85nm,18.4s,baz=76,slow=38
comp=Z,4.0nm,0.5s
AAK Ala-Archa 50.70 298 P 05 11 39.7 +0.3
AAK IAmb IAmb 05 11 51.0
comp=Z,9.0nm,0.8s
AAK Ala-Archa 50.70 298 LR LR 05 34 11.2
comp=Z,152nm,18.9s,baz=78,slow=37
AAK Ala-Archa 50.70 298 *ce*P P 05 11 39.6 +0.2
AAK pmax pmax
comp=Z,6.0nm,1.1s
BORK Borovoye 50.72 312 *ce*P P 05 11 39.3 +0.1
BORK pmax pmax
comp=Z,6.0nm,0.9s
L26K Log Cabin Wild 50.78 35 IAmb IAmb 05 11 55.2
comp=Z,6.7nm,1.0s
L26K Log Cabin Wild 50.78 35 P P 05 11 40.9 +1.4
baz=277,SNR=8.0
M26K Nabesna, AK 51.02 35 IAmb IAmb 05 12 10.0
comp=Z,8.8nm,1.1s
M26K Nabesna, AK 51.02 35 P P 05 11 42.4 +1.1
baz=278
E27K Coleen River 51.03 28 P P 05 11 43.2 +1.9
baz=274
G27K Doyon Strip 51.12 30 P P 05 11 43.3 +1.3
baz=275
MCARA McCarthy VSAT 51.14 37 P P 05 11 44.1 +1.8
baz=278
D27M Malcolm River 51.19 26 P P 05 11 44.1 +1.6
baz=274
CRQE Cirque 51.20 37 P P 05 11 43.5 +0.7
baz=279
H27K Steamboat Moun 51.22 30 IAmb IAmb 05 12 26.5
comp=Z,6.5nm,1.0s
H27K Steamboat Moun 51.22 30 P P 05 11 42.5 -0.3
baz=276
K27K Chicken 51.23 33 IAmb IAmb 05 12 10.8
comp=Z,7.4nm,0.9s
K27K Chicken 51.23 33 P P 05 11 44.0 +1.1
baz=277
I27K Kandik River 51.25 31 P P 05 11 44.1 +1.0
baz=276
L27K Beaver Creek, 51.46 34 IAmb IAmb 05 12 12.2
comp=Z,5.3nm,0.9s
L27K Beaver Creek, 51.46 34 P P 05 11 45.3 +0.6
baz=278
BCAR Beaver Creek A 51.48 34 P 05 11 47.1 +2.3
M27K Edge Creek, AK 51.54 35 IAmb IAmb 05 12 04.7
comp=Z,9.6nm,1.1s
M27K Edge Creek, AK 51.54 35 P P 05 11 46.9 +1.5
baz=278
F28M Old Crow 51.73 29 P P 05 11 47.5 +0.9
baz=276
E28M Babbage River 51.76 27 P P 05 11 47.7 +1.0
baz=276
I28M Miner Creek 51.96 31 P P 05 11 49.5 +1.1
baz=278
D28M Stokes Point 51.98 26 P P 05 11 48.9 +0.7
baz=276
CTG Chitna Glacier 52.01 37 P P 05 11 49.4 +0.5
baz=280
E29M Blow River 52.38 27 IAmb IAmb 05 12 07.1
comp=Z,6.9nm,0.8s
E29M Blow River 52.38 27 P P 05 11 51.3 -0.1
baz=277
DAWY Dawson 52.39 33 P P 05 11 53.0 +1.4
baz=279
H29M Whitestone 52.49 30 P P 05 11 52.7 +0.5
baz=278
G29M Pine Creek 52.53 29 IAmb IAmb 05 12 09.2
comp=Z,12nm,1.1s
G29M Pine Creek 52.53 29 P P 05 11 52.4 -0.1
baz=278,SNR=5.7
O28M Mount Upton 52.60 37 P P 05 11 54.2 +0.7
baz=281
PINM Pinnacle 52.70 38 P P 05 11 54.9 +1.0
baz=282
ARK Arkit 52.75 298 P P 05 11 55.7 +1.1
ARK pmax pmax
comp=Z,17nm,0.9s
M29M Somme Creek 53.09 35 P P 05 11 57.2 +0.4
baz=281
L29M L29M 53.12 34 IAmb IAmb 05 12 34.5
comp=Z,11nm,1.1s
L29M L29M 53.12 34 P P 05 11 57.4 +0.5
baz=281
EPYK Eagle Plains 53.13 30 P P 05 11 58.3 +1.4
baz=280,SNR=11
PNL Peninsula 53.21 38 P P 05 11 58.7 +1.0
baz=283
G30M tAoh Zraii Nji 53.22 29 P P 05 11 58.8 +1.1
baz=280
YUK4 Talbot Arm 53.23 36 P P 05 11 58.8 +0.8
baz=282
K29M Barlow Dome 53.25 33 IAmb IAmb 05 12 15.8
comp=Z,7.2nm,0.8s
K29M Barlow Dome 53.25 33 P P 05 11 58.9 +0.9
baz=281,SNR=9.2
F30M Barrier River 53.28 28 P P 05 11 59.1 +1.0
baz=280
KK31 Karatay Array 53.32 300 P 05 11 58.6 -0.1
KK31 Karatay Array 53.32 300 *i* P P 05 11 58.4 -0.3
KKAR Karatay Array 53.32 300 P P 05 11 58.9 +0.2
KKAR Karatay Array 53.32 300 P P 05 11 58.9 +0.2
TRKS Terek-Say 53.42 298 P P 05 11 59.3 -0.4
TRKS pmax pmax
comp=Z,14nm,0.6s
YUK6 Outpost Mounta 53.44 37 P P 05 11 60.0 +0.4
baz=282

I30M	**Mount Dempster**	**53.47**	**31**	P		**P**	**05 12 00.2**	**+0.6**
	baz=281,SNR=23							
J30M	**Hart River**	**53.62**	**32**	P		**P**	**05 12 01.1**	**+0.4**
	baz=282							
M30M	**Minto, Yukon**	**53.82**	**35**	IAmb		IAmb	05 12 19.4	
	comp=Z,8.0nm,1.3s							
M30M	**Minto, Yukon**	**53.82**	**35**	P		**P**	**05 12 03.5**	**+1.4**
	baz=282							
HYT	**Haines Junctio**	**53.88**	**37**	IAmb		IAmb	05 12 37.9	
	comp=Z,13nm,1.0s							
HYT	**Haines Junctio**	**53.88**	**37**	P		**P**	**05 12 03.6**	**+0.9**
	baz=283							
G31M	**Satah River**	**53.99**	**29**	IAmb		IAmb	05 12 29.2	
	comp=Z,7.3nm,0.9s							
G31M	**Satah River**	**53.99**	**29**	P		**P**	**05 12 04.2**	**+1.1**
	baz=282							
INK	**Inuvik**	**54.00**	**27**	P		**P**	**05 12 04.3**	**+1.1**
	baz=281							
MAYO	**Mayo, Yukon**	**54.01**	**33**	P		**P**	**05 12 04.7**	**+1.3**
	baz=282							
P29M	**Windy Craggy**	**54.04**	**38**	IAmb		IAmb	05 12 38.3	
	comp=Z,11nm,1.0s							
P29M	**Windy Craggy**	**54.04**	**38**	P		**P**	**05 12 04.4**	**+0.6**
	baz=284							
F31M	**Tsiigehtchic**	**54.09**	**28**	P		**P**	**05 12 05.5**	**+1.7**
F31M				IAmb		IAmb	05 12 32.4	
	comp=Z,6.8nm,0.9s							
F31M	**Tsiigehtchic**	**54.09**	**28**	P		**P**	**05 12 04.4**	**+0.5**
	baz=282							
KNRA	**Kununurra**	**54.10**	**196**			**P**	**05 12 04.1**	**-0.4**
H31M	**Peel River**	**54.19**	**30**	P		**P**	**05 12 04.6**	**-0.1**
	baz=282,SNR=10							
P30M	**Million Dollar**	**54.31**	**38**	P		**P**	**05 12 06.5**	**+0.8**
	baz=284							
N31M	**Braeburn, Yuko**	**54.54**	**36**	IAmb		IAmb	05 12 30.2	
	comp=Z,7.7nm,0.9s							
N31M	**Braeburn, Yuko**	**54.54**	**36**	P		**P**	**05 12 08.1**	**+0.8**
	baz=284							
O30N	**Mendenhall**	**54.57**	**37**	P		**P**	**05 12 08.5**	**+0.9**
	baz=284							
PLBC	**Pleasant Camp**	**54.76**	**38**	P		**P**	**05 12 09.7**	**+0.8**
	baz=285							
NIL	**Nilore**	**54.89**	**288**	P		**P**	**05 12 10.2**	**-0.1**
NIL	**Nilore**	**54.89**	**288**	P		**P**	**05 12 10.2**	**-0.1**
NIL				pmax		pmax		
	comp=Z,16nm,0.7s							
M31M	**Drury Creek, Y**	**55.00**	**35**	IAmb		IAmb	05 12 40.0	
	comp=Z,5.7nm,1.1s							
M31M	**Drury Creek, Y**	**55.00**	**35**	P		**P**	**05 12 11.8**	**+1.1**
	baz=285							
WHY	**Whitehorse**	**55.17**	**37**	P		**P**	**05 12 13.3**	**+1.3**
	baz=285							
SVE	**Sverdlovsk**	**55.21**	**319**	*e*P		**P**	**05 12 13.0**	**+0.8**
SVE				pmax		pmax		
	comp=Z,15nm,0.9s							
S31K	**Pelican**	**55.23**	**40**	P		**P**	**05 12 13.7**	**+1.4**
	baz=286							
N32M	**Quiet Lake**	**55.88**	**36**	P		**P**	**05 12 17.7**	**+0.6**
	baz=286							
A36M	**Sachs Harbour**	**55.89**	**22**	P		**P**	**05 12 18.2**	**+1.3**
	baz=286							
CHGR	**Chuyangaron**	**55.90**	**295**			**P**	**05 12 18.0**	**+0.4**
CHGR	**Chuyangaron**	**55.90**	**295**	P		**P**	**05 12 18.0**	**+0.4**
CHGR				pmax		pmax		
	comp=Z,46nm,0.7s							
SIT	**Sitka**	**55.96**	**41**	P		**P**	**05 12 18.6**	**+1.0**
	baz=287							
SIMJ	**Simiganj**	**56.00**	**296**	P		**P**	**05 12 18.3**	**-0.1**
R32K	**Eaglecrest**	**56.01**	**39**	P		**P**	**05 12 18.8**	**+0.8**
	baz=287							
P32M	**Atlin**	**56.03**	**38**	P		**P**	**05 12 18.2**	**0.0**
	baz=287							
S32K	**Killisnoo**	**56.22**	**40**	P		**P**	**05 12 20.2**	**+0.8**
	baz=288							
P33M	**Teslin, Yukon**	**56.28**	**37**	IAmb		IAmb	05 12 37.2	
	comp=Z,5.5nm,1.0s							
P33M	**Teslin, Yukon**	**56.28**	**37**	P		**P**	**05 12 21.0**	**+1.0**
	baz=287							
HPAH	**Hawaii Prepara**	**56.46**	**89**	P		**P**	**05 12 23.3**	**+1.6**
ARTI	**Arti**	**56.53**	**319**			**P**	**05 12 21.6**	**-0.1**
ARTI	**Arti**	**56.53**	**319**	LR		LR	05 38 31.1	
	comp=Z,84nm,20.8s,baz=66,slow=38							
ARTI	**Arti**	**56.53**	**319**	*c i*P		**P**	**05 12 21.9**	**+0.2**
ARTI							05 13 13.7	
ARTI				S		**S**	**05 20 14.2**	**+2.0**
ARTI				SS		**SS**	**05 23 57.5**	**-1.5**
ARTI				pmax		pmax		
	comp=Z,10.0nm,0.6s							
Q32M	**Nakina River**	**56.93**	**38**	P		**P**	**05 12 25.4**	**+0.7**
	baz=288							
C36M	**Paulatuk**	**57.05**	**25**	P		**P**	**05 12 26.4**	**+1.3**
	baz=289							
FITZ	**Fitzroy Crossi**	**57.17**	**198**	LR		LR	05 36 20.2	
	comp=Z,37nm,20.2s,baz=12,slow=35							
WB0	**Warramunga Arr**	**57.18**	**188**			**P**	**05 12 26.3**	**-0.3**
WRAB	**Tennant Creek**	**57.34**	**188**	*e*P		**P**	**05 12 26.7**	**-1.1**
WRAB				pmax		pmax		
	comp=Z,11nm,1.0s							
WR8	**Warramunga Arr**	**57.35**	**188**			**P**	**05 12 27.6**	**-0.2**
WRA	**Warramunga Arr**	**57.35**	**188**			**P**	**05 12 27.6**	**-0.2**
WRA	**Warramunga Arr**	**57.35**	**188**	P		**P**	**05 12 27.4**	**-0.4**
	comp=Z,4.5nm,0.6s,baz=4.4,slow=7.3,SNR=57							
WRA				LR		LR	05 36 36.2	
	comp=Z,63nm,19.6s,baz=325,slow=36							
	comp=Z,4.5nm,0.6s							
U33K	**Whale Pass**	**57.41**	**41**	P		**P**	**05 12 28.6**	**+0.7**
	baz=290							
R33M	**Jennings River**	**57.42**	**37**	P		**P**	**05 12 28.3**	**+0.2**
	baz=289							
CRAG	**Craig**	**57.63**	**42**	P		**P**	**05 12 30.2**	**+0.8**
	baz=290							
WRAK	**Wrangell Islan**	**57.72**	**41**	P		**P**	**05 12 29.8**	**-0.3**
	baz=290							
S34M	**Telegraph Cree**	**57.83**	**39**	P		**P**	**05 12 31.5**	**+0.6**
	baz=290							
AB31	**Akbulak array**	**58.07**	**310**			**P**	**05 12 32.5**	**-0.1**
AB31	**Akbulak array**	**58.07**	**310**	*i* P		**P**	**05 12 32.1**	**-0.5**
ABKAR	**Akbulak array**	**58.07**	**310**			**P**	**05 12 32.4**	**-0.2**
DLBC	**Dease Lake**	**58.20**	**38**	P		**P**	**05 12 34.5**	**+0.9**
	baz=290,SNR=5.3							
WTLY	**Watson Lake, Y**	**58.21**	**36**	P		**P**	**05 12 34.3**	**+0.7**
	baz=290							
V35K	**Ketchikan**	**58.48**	**42**	P		**P**	**05 12 36.5**	**+1.1**
	baz=291							
T35M	**Bob Quinn**	**58.61**	**40**	IAmb		IAmb	05 12 53.4	
	comp=Z,4.7nm,0.8s							
T35M	**Bob Quinn**	**58.61**	**40**	P		**P**	**05 12 37.8**	**+1.4**
	baz=291							
WRGLY	**Wrigley**	**59.45**	**32**	P		**P**	**05 12 43.8**	**+1.9**
	baz=293							
KIRV	**Kirov**	**60.28**	**323**	*e*P		**P**	**05 12 48.5**	**+0.8**
SPITS	**Spitsbergen Ar**	**60.35**	**349**	P		**P**	**05 12 48.8**	**+0.8**
	comp=Z,9.2nm,1.1s,baz=30,slow=6.7,SNR=1.2							
SPITS				LR		LR	05 40 02.9	
	comp=Z,113nm,21.1s,baz=26,slow=37							
	comp=Z,9.2nm,1.1s							
TOAD	**Toad River Com**	**60.37**	**37**	P		**P**	**05 12 50.0**	**+1.5**
	baz=294							
KOTAN	**Kotaneelee Air**	**60.41**	**35**	P		**P**	**05 12 49.7**	**+1.1**
	baz=294							
NOR	**Nord**	**60.83**	**356**	*i* P		**P**	**05 12 52.6**	**+1.3**
NOR				IAmb		IAmb	05 12 58.7	
	comp=Z,6.2nm,1.3s							
AS31	**Alice Springs**	**61.08**	**188**	P		**P**	**05 12 53.7**	**+0.1**
ASAR	**Alice Springs**	**61.08**	**188**			**P**	**05 12 53.4**	**-0.2**
ASAR	**Alice Springs**	**61.08**	**188**	P		**P**	**05 12 53.8**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=13,slow=6.4,SNR=21							
ASAR				LR		LR	05 39 00.9	
	comp=Z,75nm,19.9s,baz=3.5,slow=36							
	comp=Z,2.1nm,0.6s							
BBB	**Bella Bella**	**61.63**	**44**	LR		LR	05 36 47.9	
	comp=Z,36nm,20.9s,baz=250,slow=33							
RES	**Resolute Bay**	**62.27**	**15**	LR		LR	05 44 04.8	
	comp=Z,34nm,18.2s,baz=18,slow=40							
PALK	**Pallekele**	**62.78**	**258**	LR		LR	05 43 02.5	
	comp=Z,56nm,18.5s,baz=54,slow=39							
YKA	**Yellowknife Ar**	**63.41**	**30**	P		**P**	**05 13 09.1**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=298,slow=6.6,SNR=2.8							
YKA				LR		LR	05 41 45.5	
	comp=Z,36nm,21.5s,baz=278,slow=37							
	comp=Z,2.0nm,0.8s							
BELG	**Belogornoye**	**63.88**	**317**	*e*P		**P**	**05 13 11.9**	**-0.1**
BELG				pmax		pmax		
	comp=Z,3.0nm,0.8s							
ARCES	**ARCESS Array B**	**63.90**	**339**	P		**P**	**05 13 11.4**	**-0.5**
ARCES	**ARCESS Array B**	**63.90**	**339**	P		**P**	**05 13 10.8**	**-1.1**
	comp=Z,2.8nm,0.9s,baz=45,slow=5.3,SNR=8.8							
	comp=Z,2.8nm,0.9s							
ARCES	**ARCESS Array B**	**63.90**	**339**	P		**P**	**05 13 11.4**	**-0.5**
ARCES				pmax		pmax		
	comp=Z,16nm,1.3s							
NEEM	**North Greenlan**	**65.26**	**3**	*i* P		**P**	**05 13 21.9**	**+0.8**
NEEM				IAmb		IAmb	05 13 50.3	
	comp=Z,6.6nm,1.0s							
DAG	**Danmarks Havn**	**65.56**	**355**	P		**P**	**05 13 22.5**	**-0.1**
DAG	**Danmarks Havn**	**65.56**	**355**	*i* P		**P**	**05 13 22.0**	**-0.6**
DAG				IAmb		IAmb	05 13 39.0	
	comp=Z,3.8nm,0.7s							
HOOD	**Mount Hood Mea**	**68.65**	**49**	P		**P**	**05 13 44.2**	**+1.2**
HOOD				IAmb		IAmb	05 13 45.8	
	comp=Z,14nm,1.1s							
FIA1	**FINESS Array S**	**68.77**	**332**			**P**	**05 13 43.6**	**+0.4**
FINES	**FINESS Array B**	**68.77**	**332**	P		**P**	**05 13 44.1**	**+0.9**
FINES	**FINESS Array B**	**68.77**	**332**	P		**P**	**05 13 43.9**	**+0.7**
	comp=Z,7.1nm,0.9s,baz=54,slow=5.8,SNR=9.0							
FINES				LR		LR	05 47 47.0	
	comp=Z,96nm,19.2s,baz=21,slow=39							
	comp=Z,7.1nm,0.9s							
STKA	**Stephens Creek**	**68.80**	**180**	IAmb		IAmb	05 13 43.9	
	comp=Z,42nm,1.4s							
STKA	**Stephens Creek**	**68.80**	**180**	P		**P**	**05 13 43.0**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=340,slow=8.2,SNR=3.5							
	comp=Z,1.9nm,0.7s							
STKA	**Stephens Creek**	**68.80**	**180**	P		**P**	**05 13 43.0**	**-0.7**
JCC	**Jacoby Creek,**	**69.54**	**54**	P		**P**	**05 13 51.4**	**+3.0**
L04D	**Klamath Falls**	**69.90**	**52**	IAmb		IAmb	05 14 03.3	
	comp=Z,14nm,1.2s							
J05D	**Fort Rock, OR**	**69.99**	**50**	IAmb		IAmb	05 14 14.1	
	comp=Z,5.8nm,0.9s							
M02C	**Callahan**	**69.99**	**53**	IAmb		IAmb	05 14 22.0	
	comp=Z,5.0nm,0.7s							
K05A	**Summer Lake**	**70.50**	**51**	IAmb		IAmb	05 14 32.4	
	comp=Z,14nm,1.1s							
M03C	**McCloud**	**70.52**	**53**	IAmb		IAmb	05 13 57.2	
	comp=Z,6.4nm,0.7s							
O02D	**Mt. Diablo Mer**	**70.68**	**54**	IAmb		IAmb	05 14 18.3	
	comp=Z,5.2nm,0.7s							
KBZ	**Khabaz**	**71.03**	**311**	P		**P**	**05 13 58.5**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=75,slow=7.8,SNR=5.2							
	comp=Z,2.4nm,0.8s							
KBZ	**Khabaz**	**71.03**	**311**	*e*P		**P**	**05 13 58.7**	**+1.3**
KBZ				pmax		pmax		
	comp=Z,11nm,1.0s							
KIV	**Kislovodsk**	**71.03**	**311**	*e*P		**P**	**05 13 58.8**	**+1.2**
KIV				pmax		pmax		
	comp=Z,11nm,1.0s							
SHA1	**Shidzhatmaz**	**71.17**	**311**	*e*P		**P**	**05 14 00.6**	**+2.0**
O03E	**Paynes Creek**	**71.25**	**53**	IAmb		IAmb	05 14 02.6	
	comp=Z,5.3nm,0.8s							
BMO	**Blue Mountains**	**71.49**	**47**	P		**P**	**05 14 01.1**	**+0.7**
MNRC	**McLaughlin Min**	**71.61**	**55**	IAmb		IAmb	05 14 04.2	
	comp=Z,7.7nm,0.9s							
SUTB	**Sutter Butte**	**71.85**	**54**	IAmb		IAmb	05 14 05.8	
	comp=Z,3.8nm,0.6s							
MNK	**Minsk**	**72.50**	**326**	*i* P		**P**	**05 14 05.3**	**-0.8**
MNK				*i*			05 14 22.6	
MNK				*i*			05 16 46.6	
MNK				*i* PPP		PPP	05 18 31.2	
MNK				*i* S		**S**	**05 23 28.1**	**-1.2**
MNK				*i*			05 24 04.7	
MNK				*i* SS		**SS**	**05 28 12.3**	**+5.2**
MNK				pmax		pmax		
	comp=E,13nm,0.8s							
MNK				pmax		pmax		
	comp=Z,7.0nm,0.6s							
MNK				pmax		pmax		
	comp=N,12nm,0.9s							
MNK				MLR		MLR		
	comp=E,399nm,19.0s							
MNK				MLR		MLR		
	comp=N,230nm,18.0s							
MNK				MLR		MLR		
	comp=Z,70nm,18.0s							
MPK	**Martis Peak**	**72.94**	**53**	IAmb		IAmb	05 14 11.8	
	comp=Z,17nm,1.5s							
CMB	**Columbia Colle**	**73.42**	**55**	IAmb		IAmb	05 14 14.3	
	comp=Z,10nm,1.4s							
ANN	**Anapa**	**73.63**	**314**	*e*P		**P**	**05 14 13.2**	**+0.3**
ANN				pmax		pmax		
	comp=Z,64nm,1.0s							
DLMT	**Dillon**	**73.91**	**45**	IAmb		IAmb	05 14 29.8	
	comp=Z,6.6nm,0.8s							
HFS	**Hagfors**	**74.02**	**336**	P		**P**	**05 14 15.5**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=66,slow=3.6,SNR=14							
HFS				LR		LR	05 47 53.6	
	comp=Z,78nm,20.7s,baz=28,slow=37							
	comp=Z,1.8nm,0.5s							
NB2	**NORSAR Subarra**	**74.10**	**337**	P		**P**	**05 14 16.7**	**+1.2**
	comp=Z,3.8nm,0.6s,baz=40,slow=6.2							
NOA	**NORSAR Array B**	**74.10**	**337**	P		**P**	**05 14 16.3**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=39,slow=6.0,SNR=4.5							
NOA				LR		LR	05 49 19.7	
	comp=Z,89nm,21.9s,baz=25,slow=38							
	comp=Z,1.1nm,0.7s							
BOZ	**Bozeman (W)**	**74.31**	**44**	P		**P**	**05 14 18.3**	**+1.2**
AKASG	**Malin Array Be**	**74.33**	**322**	P		**P**	**05 14 17.0**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=48,slow=6.1,SNR=7.8							
AKASG				LR		LR	05 50 07.3	
	comp=Z,44nm,20.2s,baz=50,slow=38							
	comp=Z,0.8nm,0.4s							
AKASG	**Malin Array Be**	**74.33**	**322**	*i* P		**P**	**05 14 16.2**	**-0.7**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
KIEV	**Kiev**	**74.34**	**322**			**P**	**05 14 17.5**	**+0.5**
KIEV	**Kiev**	**74.34**	**322**	⇑P		**P**	**05 14 16.3**	**-0.6**
KIEV	**Kiev**	**74.34**	**322**	P		**P**	**05 14 17.5**	**+0.5**
KIEV				pmax		pmax		
	comp=Z,10.0nm,0.6s							
LHV	**Little Huntoon**	**74.52**	**54**	IAmb		IAmb	05 14 21.5	
	comp=Z,8.6nm,1.0s							
NVAR	**Mina Array Bea**	**74.54**	**53**	P		**P**	**05 14 20.3**	**+1.6**
	comp=Z,2.8nm,0.7s,baz=287,slow=5.6,SNR=30							
	comp=Z,2.8nm,0.7s							
YHL	**Hebgen Lake**	**75.01**	**45**	IAmb		IAmb	05 14 35.7	
	comp=Z,7.5nm,1.2s							
YFT	**Old Faithful**	**75.45**	**45**	IAmb		IAmb	05 14 39.4	
	comp=Z,8.8nm,1.1s							
VES	**Vestal, Richgr**	**75.53**	**56**	IAmb		IAmb	05 14 25.9	
	comp=Z,14nm,1.0s							
SFJD	**Kangerlussuaq**	**75.61**	**5**	LR		LR	05 47 33.5	
	comp=Z,76nm,21.4s,baz=335,slow=36							
H17A	**Grant Village**	**75.63**	**45**	IAmb		IAmb	05 14 29.1	
	comp=Z,6.3nm,0.8s							
SORM	**Soroca**	**76.44**	**321**	⇓P		P	05 14 37.3	+8.2
SORM	**Soroca**	**76.44**	**321**	⇓P		P	05 14 37.3	+8.2
FURC	**Furnace Creek,**	**76.62**	**54**	IAmb		IAmb	05 14 32.9	
	comp=Z,8.3nm,1.0s							
S11A	**Rachel**	**76.64**	**53**	IAmb		IAmb	05 14 33.2	
	comp=Z,5.8nm,0.8s							
HWUT	**Hardware Ranch**	**76.79**	**48**	IAmb		IAmb	05 15 03.8	
	comp=Z,8.0nm,1.4s							
CCCA	**Chr Cany lake**	**76.85**	**55**	IAmb		IAmb	05 14 46.1	
	comp=Z,4.9nm,0.9s							
DUG	**Dugway, Tooele**	**76.91**	**49**	P		**P**	**05 14 31.7**	**-0.4**
DUG				pmax		pmax		
	comp=Z,7.0nm,1.4s							
GWY	**Greenwater Val**	**76.91**	**54**			**P**	**05 14 33.8**	**+1.6**
GWY				IAmb		IAmb	05 14 44.8	
	comp=Z,4.8nm,0.9s							
QSM	**Queen of Sheba**	**76.92**	**55**	IAmb		IAmb	05 14 34.3	
	comp=Z,9.6nm,1.1s							
PDAR	**Pinedale Array**	**77.23**	**46**	P		**P**	**05 14 34.4**	**+0.4**
PDAR	**Pinedale Array**	**77.23**	**46**	P		**P**	**05 14 34.8**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=272,slow=2.0,SNR=18							
	comp=Z,1.2nm,0.6s							
BUR08	**Bucovina Ar. S**	**78.34**	**322**	P		**P**	**05 14 40.3**	**+0.4**
BUR08				IAmb		IAmb	05 14 53.9	
	comp=Z,7.7nm,0.9s							
BURAR	**Bucovina Array**	**78.35**	**322**	P		**P**	**05 14 39.6**	**-0.4**
BURAR				IAmb		IAmb	05 14 52.0	
	comp=Z,4.5nm,0.8s							
BURAR	**Bucovina Array**	**78.35**	**322**	⇑P		**P**	**05 14 41.5**	**+1.5**
BURAR	**Bucovina Array**	**78.35**	**322**	⇑P		**P**	**05 14 41.5**	**+1.5**
PFO	**Pinyon Flats O**	**78.59**	**56**	P		**P**	**05 14 42.4**	**+0.8**
PFO	**Pinyon Flats O**	**78.59**	**56**	LR		LR	05 41 12.9	
	comp=Z,59nm,20.2s,baz=300,slow=29							
PFO	**Pinyon Flats O**	**78.59**	**56**	P		**P**	**05 14 42.4**	**+0.8**
PFO				pmax		pmax		
	comp=Z,5.0nm,1.2s							
P17A	**Butcher Ranch,**	**78.61**	**49**	IAmb		IAmb	05 14 43.7	
	comp=Z,6.0nm,1.0s							
RDMU	**Red Mountain**	**78.61**	**47**	IAmb		IAmb	05 14 55.1	
	comp=Z,6.8nm,0.8s							
VRI	**Vrincioaia**	**78.78**	**320**	⇑P		P	05 14 50.9	+8.7
VRI	**Vrincioaia**	**78.78**	**320**	⇑P		P	05 14 50.9	+8.6
KNB	**Kanab**	**78.87**	**52**	IAmb		IAmb	05 14 46.2	
	comp=Z,7.9nm,1.2s							
BRTR	**Keskin Array B**	**78.97**	**312**	P		**P**	**05 14 43.1**	**-0.5**
BRTR	**Keskin Array B**	**78.97**	**312**	P		**P**	**05 14 43.8**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=99,slow=3.9,SNR=3.5							
	comp=Z,0.6nm,0.6s							
BRTR	**Keskin Array B**	**78.97**	**312**	*i* P		**P**	**05 14 44.7**	**+1.1**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
SRU	**San Rafael Swe**	**78.97**	**49**	IAmb		IAmb	05 14 58.9	
	comp=Z,5.5nm,0.7s							
TURR	**Turia**	**79.02**	**320**	⇓P		P	05 14 53.9	+10
OJC	**Ojcow**	**79.04**	**326**	P		**P**	**05 14 43.8**	**+0.2**
OJC				pmax		pmax		
	comp=Z,11nm,0.8s							
ULM	**Lac du Bonnet**	**79.09**	**34**	IAmb		IAmb	05 14 56.4	
	comp=Z,12nm,1.3s							
ULM	**Lac du Bonnet**	**79.09**	**34**	P		**P**	**05 14 43.8**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=324,slow=11,SNR=3.1							
	comp=Z,3.6nm,0.6s							
OZUR		**79.11**	**320**	⇑P		**P**	**05 14 45.2**	**+1.2**
DOPR	**Dopca**	**79.39**	**321**	⇑P		P	05 14 53.7	+8.0
RSSD	**Black Hills**	**79.40**	**42**	P		**P**	**05 14 46.9**	**+1.0**
RSSD				pmax		pmax		
	comp=Z,7.0nm,0.8s							
MLR	**Muntele Rosu**	**79.44**	**320**	LR		LR	05 52 18.7	
	comp=Z,76nm,18.5s,baz=42,slow=38							
MLR	**Muntele Rosu**	**79.44**	**320**	⇓P		**P**	**05 14 47.4**	**+1.4**
MLR	**Muntele Rosu**	**79.44**	**320**	⇓P		**P**	**05 14 47.4**	**+1.4**
HMU	**Henry Mountain**	**79.58**	**50**	IAmb		IAmb	05 15 18.3	
	comp=Z,5.9nm,0.9s							
BLYC	**Blythe**	**79.79**	**55**	IAmb		IAmb	05 14 49.9	
	comp=Z,3.7nm,0.7s							
ESJX	**Sierra Juarez**	**79.91**	**58**	IAmb		IAmb	05 14 51.3	
	comp=Z,6.3nm,0.9s							
LANS	**Liptovska Anna**	**79.97**	**326**	*e*P		P	05 14 56.3	+7.6
LANS	**Liptovska Anna**	**79.97**	**326**	*e*P		P	05 14 56.2	+7.5
MARR	**Marisel-Cluj**	**80.03**	**322**	⇑P		P	05 14 58.7	+10
ARR	**Arges**	**80.19**	**321**	⇑P		**P**	**05 14 50.7**	**+0.7**
PV22	**Blue Mesa, Par**	**80.38**	**49**	IAmb		IAmb	05 15 34.2	
	comp=Z,5.9nm,0.9s							
VTX	**Valle De La Tr**	**80.39**	**58**	IAmb		IAmb	05 14 53.7	
	comp=Z,5.3nm,0.9s							
PV04	**Paradox Valley**	**80.40**	**49**	IAmb		IAmb	05 14 54.1	
	comp=Z,12nm,1.4s							
PV19	**Morning Glory**	**80.41**	**49**	IAmb		IAmb	05 14 53.9	
	comp=Z,13nm,0.9s							
PV16	**Nyswonger Mesa**	**80.45**	**49**	IAmb		IAmb	05 15 12.4	
	comp=Z,4.7nm,0.7s							
PV05	**Paradox Valley**	**80.49**	**49**	IAmb		IAmb	05 14 54.6	
	comp=Z,11nm,1.1s							
PV18	**Skein Mesa, Pa**	**80.50**	**49**	IAmb		IAmb	05 15 04.4	
	comp=Z,7.5nm,0.8s							
PV12	**Saucer Basin,**	**80.51**	**49**	IAmb		IAmb	05 15 28.1	
	comp=Z,20nm,1.5s							
PV13	**Radium Mtn., P**	**80.60**	**49**	IAmb		IAmb	05 15 06.5	
	comp=Z,10nm,1.1s							
PV02	**Paradox Valley**	**80.62**	**49**	IAmb		IAmb	05 15 06.7	
	comp=Z,8.2nm,0.8s							
PSZ	**Piszkesteto**	**80.67**	**325**	⇑P		P	05 15 00.1	+7.6
PSZ	**Piszkesteto**	**80.67**	**325**	⇑P		P	05 15 00.1	+7.5
WUAZ	**Wupatki**	**80.72**	**52**	IAmb		IAmb	05 14 55.8	
	comp=Z,6.5nm,1.0s							
RAYN	**Ar Rayn**	**80.91**	**293**	P		**P**	**05 14 54.1**	**-0.1**
RAYN				pmax		pmax		
	comp=Z,9.0nm,0.8s							
CLL	**Collm**	**81.07**	**330**	*i* P		**P**	**05 14 52.2**	**-2.3**
CLL				pmax		pmax		
	comp=Z,5.0nm,0.7s							
CLL	**Collm**	**81.07**	**330**	*i* Px		Px	05 14 52.2	
CLL				*i* pP		**PcP**	**05 15 04.2**	**+3.3**
	comp=Z,5.0nm,0.7s							
GZR	**Gura Zlata**	**81.11**	**321**	⇑P		**P**	**05 14 54.5**	**-0.4**
GZR	**Gura Zlata**	**81.11**	**321**	⇑P		**P**	**05 14 54.5**	**-0.4**
VRAC	**Vranov**	**81.12**	**327**	LR		LR	05 52 24.8	
	comp=Z,66nm,21.4s,baz=34,slow=37							
URZ	**Urewera**	**81.89**	**153**	LR		LR	05 47 16.9	
	comp=Z,63nm,21.2s,baz=307,slow=33							
S22A	**4UR Ranch, Cre**	**82.06**	**48**	IAmb		IAmb	05 15 38.7	
	comp=Z,7.4nm,1.5s							
MMAI	**Mount Meron Ar**	**82.13**	**306**	P		**P**	**05

s-min=2.2km az=51.7, confirmed, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AERN	**Aeropuerto Man**	**0.06**	**38**	S	Sg	05 13 49.7	+1.3
AERN	**Aeropuerto Man**	**0.06**	**38**	P	Pg	05 13 47.7	+0.9
MGAN	**Managua**	**0.06**	**321**	S	Sg	05 13 49.6	+1.2
MGAN	**Managua**	**0.06**	**321**	⇓P	Pg	05 13 47.7	+0.9
UNAN	**Cigeo UNAN**	**0.07**	**283**	⇑P	Pg	05 13 47.6	+0.8
UNAN				S	Sg	05 13 49.3	+0.8
WILN	**Americas 2**	**0.07**	**16**	⇓P	Pg	05 13 47.9	+1.1
WILN				S	Sg	05 13 50.0	+1.5
TISN	**Laguna Tiscapa**	**0.08**	**306**	P	Pg	05 13 47.9	+1.0
MAS3	**Al N del Volca**	**0.08**	**158**	⇓P	Pg	05 13 47.8	+0.9
MAS3				S	Sg	05 13 49.6	+0.9
ALLN	**Telcor Managua**	**0.09**	**311**	S	Sg	05 13 50.2	+1.3
ABCN	**Banco Central**	**0.10**	**284**	S	Sg	05 13 50.7	+1.4
ABCN	**Banco Central**	**0.10**	**284**	⇑P	Pb	05 13 48.4	-0.2
MASN	**Masaya**	**0.12**	**154**	P	Pg	05 13 48.2	+0.6
MASN				S	Sg	05 13 51.1	+1.4
APQ2	**Apoyeque**	**0.15**	**311**	P	Pb	05 13 49.2	-0.3
APQ2				S	Sg	05 13 52.2	+1.7
APQ2	**Apoyeque**	**0.15**	**311**	P	Pb	05 13 49.2	-0.2
APQ2				S	Sg	05 13 52.3	+1.8
NANN	**Nandasmo**	**0.18**	**152**	S	Sg	05 13 53.0	+1.9
NADN	**Granada**	**0.39**	**154**	S	Sb	05 13 59.2	-0.2
MOM3	**MOM3**	**0.51**	**324**	⇓P	Pb	05 13 55.4	-0.2
MOM3				S	Sb	05 14 02.7	-0.3
MATN	**Matagalpa**	**0.87**	**18**	P	Pg	05 14 00.7	-0.7
MATN				S	Sg	05 14 12.5	-0.2
LIMN	**Finca el Limon**	**0.97**	**351**	⇓P	Pg	05 14 03.1	-0.2
LIMN				S	Sb	05 14 16.5	+0.1

*CATAC **03** 05:25:23.4±0.5, 12°N±2°×8°8W±°, h26km±4km, M3.9/44, MLv3.9/44, Error ellipse: s-maj=4.6km s-min=2.1km az=31.7, confirmed*
*SNET **03** 05:25:25.1±2.4, 12°.25N×88°.07W, h8km, ML3.5*
*UCR **03** 05:25:25.8±0.9, 12°.02N×87°.94W, h32km±999km, MW3.9*

ISC 03 05:25:23.3±2.0, 12°.05N±0°.04×88°.04W±0°.03, h19km±5km, n99, σ1§02/118, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.03**	**27**	P	Pb	05 25 42.6	0.0
CSGN				S	Sb	05 25 56.1	+0.3
POTN	**Potosi Cosigui**	**1.08**	**29**	P	Pb	05 25 43.3	-0.1
CRIN	**San Cristobal**	**1.16**	**56**	P	Pn	05 25 44.4	-0.2
CRIN	**San Cristobal**	**1.16**	**56**	S	Sg	05 26 01.0	-0.2
PKGN	**Cerro Pekin**	**1.21**	**59**	P	Pn	05 25 44.8	-0.3
PKGN				S	Sb	05 26 00.6	-0.2
CNCH	**Conchagua**	**1.23**	**9**	S	Sn	05 25 45.4	-0.3
CNCH	**Conchagua**	**1.23**	**9**	S	Sn	05 26 02.4	+0.5
LCND	**La Caada**	**1.26**	**7**	*eP*	Pn	05 25 45.9	0.0
LCND	**La Caada**	**1.26**	**7**	P	Pn	05 25 45.9	0.0
LCND	**La Caada**	**1.26**	**7**	S	Sb	05 26 03.3	+1.0
POLN	**Al Sur del Vol**	**1.34**	**64**	P	Pn	05 25 43.6	-3.4
CNGA	**Al SSO del Vol**	**1.38**	**71**	P	Pn	05 25 46.9	-0.7
CNGN	**Cerro Negro**	**1.39**	**71**	P	Pn	05 25 47.1	-0.6
LCY	**Lacayo**	**1.39**	**350**	*eP*	Pn	05 25 47.5	-0.3
VSM	**San Miguel**	**1.39**	**351**	*eP*	Pn	05 25 47.7	-0.2
RANC	**El Ranchito**	**1.40**	**350**	*eP*	Pn	05 25 47.8	-0.1
RANC				*eS*	Sb	05 26 06.9	+0.5
BLLM	**Bellamira**	**1.40**	**352**	*eP*	Pn	05 25 47.6	-0.2
CNRM	**Centro Naciona**	**1.42**	**355**	P	Pn	05 25 47.8	-0.4
PACA	**Pacayal**	**1.44**	**349**	*eP*	Pn	05 25 48.5	0.0
PACA	**Pacayal**	**1.44**	**349**	P	Pn	05 25 48.3	-0.2
PACA	**Pacayal**	**1.44**	**349**	S	Sb	05 26 08.1	+0.5
TECA	**Tecapa**	**1.50**	**343**	*eP*	Pn	05 25 49.1	-0.4
MOM3	**MOM3**	**1.56**	**73**	P	Pn	05 25 49.2	-0.7
MOM3				S	Sn	05 26 09.5	-0.2
AMTN	**Mateare**	**1.59**	**83**	P	Pn	05 25 49.6	-0.7
TECO	**Alcaldia de Te**	**1.64**	**334**	*eP*	Pn	05 25 50.7	-0.6
TECO				*eS*	Sn	05 26 11.0	-0.8
TECO	**Alcaldia de Te**	**1.64**	**334**	S	Sb	05 26 13.5	+0.1
TECO	**Alcaldia de Te**	**1.64**	**334**	P	Pn	05 25 50.6	-0.6
APYN	**Apoyeque**	**1.66**	**84**	P	Pn	05 25 50.7	-0.7
APYN				S	Sn	05 26 12.7	+0.3
APQ2	**Apoyeque**	**1.69**	**85**	P	Pn	05 25 51.2	-0.5
APQ2				S	Sn	05 26 13.2	+0.4
ABCN	**Banco Central**	**1.69**	**87**	P	Pn	05 25 51.9	0.0
APQN	**BB Volcan Apoy**	**1.71**	**84**	P	Pn	05 25 50.5	-1.6
UNAN	**Cigeo UNAN**	**1.73**	**88**	P	Pn	05 25 51.9	-0.5
UNAN				S	Sn	05 26 13.3	-0.8
TISN	**Laguna Tiscapa**	**1.74**	**87**	P	Pn	05 25 52.1	-0.4
UESV	**Universidad de**	**1.74**	**335**	*eP*	Pn	05 25 52.4	-0.1
UESV				*eS*	Sn	05 26 11.1	-3.1
UESV	**Universidad de**	**1.74**	**335**	P	Pn	05 25 52.4	-0.1
MGAN	**Managua**	**1.76**	**87**	S	Sn	05 26 14.3	-0.3
MGAN	**Managua**	**1.76**	**87**	P	Pn	05 25 52.2	-0.5
SCLA	**Alcaldia de Sa**	**1.77**	**338**	*eP*	Pn	05 25 53.1	+0.1
SCLA				*eS*	Sn	05 26 15.1	0.0
SCLA	**Alcaldia de Sa**	**1.77**	**338**	P	Pn	05 25 53.1	+0.1
WILN	**Americas 2**	**1.82**	**86**	P	Pn	05 25 53.1	-0.4
WILN				S	Sn	05 26 16.0	-0.1
MAS3	**Al N del Volca**	**1.82**	**91**	P	Pn	05 25 52.8	-0.9
MAS3				S	Sn	05 26 15.3	-1.0
LFRS	**El Faro**	**1.85**	**328**	*eP*	Pn	05 25 53.8	-0.3
PAVA	**Las Pavas**	**1.87**	**332**	*eP*	Pn	05 25 54.1	-0.3
PAVA	**Las Pavas**	**1.87**	**332**	P	Pn	05 25 54.2	-0.1
PAVA	**Las Pavas**	**1.87**	**332**	S	Sb	05 26 19.8	-0.2
NANN	**Nandasmo**	**1.88**	**93**	P	Pn	05 25 54.4	-0.1
NANN	**Nandasmo**	**1.88**	**93**	S	Sn	05 26 17.8	+0.1
LALI	**Alcalda de L**	**1.90**	**319**	P	Pn	05 25 54.2	-0.4
LIMN	**Finca el Limon**	**1.92**	**58**	P	Pn	05 25 54.5	-0.6
LIMN				S	Sn	05 26 19.4	+0.6
LOMA	**Loma Larga**	**1.93**	**325**	P	Pn	05 25 55.1	-0.2
LOMA	**Loma Larga**	**1.93**	**325**	S	Sn	05 26 20.7	+1.6
LBRS	**Las Brisas**	**1.94**	**330**	*eP*	Pn	05 25 55.5	+0.2
IGN	**Direccin Gen**	**1.99**	**326**	P	Pn	05 25 56.1	+0.2
NADN	**Granada**	**1.99**	**98**	P	Pn	05 25 54.9	-1.1
NADN				S	Sn	05 26 18.5	-1.8
PMON	**Piamonte**	**2.07**	**323**	P	Pn	05 25 57.2	+0.1
JAYA	**Jayaque - finc**	**2.10**	**319**	*eP*	Pn	05 25 56.9	-0.7
JAYA				*eS*	Sn	05 26 22.6	-0.8
JAYA	**Jayaque - finc**	**2.10**	**319**	P	Pn	05 25 57.0	-0.7
TGUH	**Tegucigalpa,Un**	**2.13**	**20**	P	Pn	05 25 58.5	+0.5
OCON	**Estacion meteo**	**2.19**	**44**	P	Pn	05 25 59.1	+0.3
OCON				S	Sn	05 26 25.9	+0.5
YUSH	**Yuscaran**	**2.22**	**32**	P	Pn	05 25 59.3	+0.1
MATN	**Matagalpa**	**2.24**	**67**	P	Pn	05 25 57.8	-1.8
LLGN	**La Laguna**	**2.28**	**337**	P	Pn	05 26 00.3	+0.3
RCJN	**San Juan de Ri**	**2.33**	**52**	P	Pn	05 26 01.0	+0.3
RCVN	**Varilla#2**	**2.36**	**50**	P	Pn	05 26 01.4	+0.2
MORN	**Al O del Volca**	**2.40**	**102**	P	Pn	05 26 00.2	-1.4
RCPN	**Sur Rio San Ju**	**2.40**	**52**	P	Pn	05 26 01.7	0.0
CONN	**Concepcion**	**2.41**	**101**	P	Pn	05 26 00.4	-1.4
CONN				S	Sn	05 26 29.2	-1.6
OMEN	**Al SSO del Vol**	**2.42**	**103**	P	Pn	05 26 01.6	-0.3
NUBE	**Las Nubes**	**2.50**	**318**	*eP*	Pn	05 26 02.7	-0.4
NUBE				*eS*	Sn	05 26 32.3	-1.0
NUBE	**Las Nubes**	**2.50**	**318**	P	Pn	05 26 03.2	0.0
FAME	**Alcaldia de Sa**	**2.62**	**313**	P	Pn	05 26 05.3	+0.6
MTO3	**Montecristo**	**2.66**	**331**	*eP*	Pn	05 26 05.5	0.0
MTO3	**Montecristo**	**2.66**	**331**	P	Pn	05 26 05.7	+0.3
ESQI	**Esquipulas**	**2.80**	**333**	P	Pn	05 26 07.9	+0.8
ELI1	**Hacienda Flor**	**2.81**	**120**	P	Pn	05 26 07.3	+0.1
ELI1	**Hacienda Flor**	**2.81**	**120**	*eP*	Pn	05 26 07.3	+0.1
ALIBA	**Liberia Airpor**	**2.84**	**120**	*eP*	Pn	05 26 07.7	0.0
LAPC	**Finca la Perla**	**2.86**	**116**	*eP*	Pn	05 26 07.8	-0.1
LAPC				*eS*	Sn	05 26 40.8	-1.0
JUD3	**Juan Diaz 3**	**3.09**	**127**	*eP*	Pn	05 26 10.0	-1.1
VMAR	**Armenia, Volca**	**3.12**	**113**	*eP*	Pn	05 26 11.3	-0.3
CUI	**Cuipilapa**	**3.14**	**116**	*eP*	Pn	05 26 12.1	+0.2
NYURE	**Nandayure**	**3.42**	**126**	*eP*	Pn	05 26 14.9	-0.7
JTS	**Las Juntas de**	**3.50**	**120**	P	Pn	05 26 16.7	0.0
JTS	**Las Juntas de**	**3.50**	**120**	*eP*	Pn	05 26 16.6	-0.2
JCR1	**Jicaral**	**3.61**	**127**	*eP*	Pn	05 26 17.7	-0.7
ARE1	**Arenal 1**	**3.62**	**116**	*eP*	Pn	05 26 18.8	+0.3
VARE2	**V. Arenal**	**3.62**	**116**	*eP*	Pn	05 26 18.7	+0.2
ACOS	**Acosta**	**4.42**	**120**	*eP*	Pn	05 26 31.3	+1.8
PAR1A	**Puntarenas Pro**	**4.45**	**123**	*eP*	Pn	05 26 31.2	+1.4
PICV	**PH. Pirrs**	**4.48**	**122**	*eP*	Pn	05 26 30.8	+0.5
VICA	**Volcano Irazu**	**4.60**	**116**	*eP*	Pn	05 26 36.3	+4.0
ABRB	**Las Abras (San**	**4.71**	**115**	*eP*	Pn	05 26 37.6	+4.0
BUS1	**Rivas**	**4.89**	**120**	*eP*	Pn	05 26 37.3	+1.0
VERH	**Veragua Rainfo**	**5.21**	**113**	*eP*	Pn	05 26 43.1	+2.8
EDPE	**Pejibaye, P**	**5.25**	**123**	*eP*	Pn	05 26 41.6	+0.8
DRK0	**Durika**	**5.47**	**120**	*eP*	Pn	05 26 44.9	+0.9
CEUA	**Cerro Uatsi, L**	**5.56**	**115**	*eP*	Pn	05 26 48.0	+2.8
PIRO	**Carate, Puerto**	**5.88**	**128**	*eP*	Pn	05 26 50.6	+1.1
ALCO	**Alturas Coton,**	**5.98**	**121**	*eP*	Pn	05 26 51.7	+0.7

*IDC **03** 05:27:23.8±1.7, 40°.31N×145°.12E, h0km, mb3.8/6, mbtmp3.7/8, ML3.2/2, Error ellipse: s-maj=37.2km s-min=32.1km az=152.0*
*NIED **03** 05:27:27.1, 40°.32N×144°.94E, h44km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.41; Mθθ-2.20; Mφφ 1.78; Mrθ-1.65; Mθφ 1.51; Mφr-3.46; Fault plane solution: M0 4.15000×10¹⁴ NP1: φs138.00000°, δ37.00000°, λ173.00000°. NP2: φs233.00000°, δ86.00000°, λ54.00000°.*
*JMA **03** 05:27:27.1±0.3, 40°.3N±0°.9×144°.5E±°, h44km, MV4.2/28, FAR E OFF NORTH HONSHU*

ISC 03 05:27:29.1±1.0, 40°.34N±0°.05×144°.90E±0°.08, h36km, n27, σ1§14/39, mb3.8/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**2.13**	**322**	*eP*	Pn	05 28 02.1	0.0
JEM				S	Sn	05 28 26.6	-0.6
JTHR	**Tokachihiroo**	**2.29**	**329**	P	Pn	05 28 04.2	-0.1
JTHR				S	Sn	05 28 29.7	-1.6
JTH	**Tanohata**	**2.36**	**261**	*i* P	Pn	05 28 04.8	-0.5
JTH				*eS*	Sn	05 28 31.1	-1.9
JKEN	**Kujiedanarisaw**	**2.44**	**268**	*i* P	Pn	05 28 05.9	-0.5
JKEN				*eS*	Sn	05 28 32.2	-2.9
JNBK	**Urakawa-nobuka**	**2.52**	**321**	P	Pn	05 28 08.3	+0.8
JNBK				S	Sn	05 28 37.6	+0.7
JCH	**Churui**	**2.55**	**334**	P	Pn	05 28 07.8	-0.1
JCH				*eS*	Sn	05 28 35.8	-1.8
JANG	**Nango**	**2.59**	**272**	*i* P	Pn	05 28 08.0	-0.4
JANG				S	Sn	05 28 37.2	-1.4
JAK	**Akkeshi**	**2.66**	**357**	*eS*	Sn	05 28 38.8	-1.5
JOM	**Ohasama**	**2.91**	**254**	*i* P	Pn	05 28 13.4	+0.6
JAR	**Ashorobuto**	**3.07**	**344**	*i* P	Pn	05 28 14.7	-0.3
JAR				*eS*	Sn	05 28 48.6	-1.9
NEM2	**Nemuro 2**	**3.08**	**12**	P	Pn	05 28 14.2	-1.0
JOT	**Ohata**	**3.10**	**291**	*i* P	Pn	05 28 15.8	+0.4
JOT				S	Sn	05 28 49.7	-1.5
JMK	**Ichinoseki**	**3.16**	**245**	*i* P	Pn	05 28 16.6	+0.2
JMK				S	Sn	05 28 51.1	-1.7
JEW	**Eniwo**	**3.59**	**315**	*eS*	Sn	05 29 03.3	-0.1
JTKR	**Abashiri--Toko**	**3.70**	**349**	P	Pn	05 28 24.1	+0.4
JTKR				*eS*	Sn	05 29 04.4	-1.6
JYK	**Kaneyama**	**3.78**	**249**	P	Pn	05 28 25.6	+0.7
JKK2	**Kamakawa 2**	**3.87**	**336**	*eP*	Pn	05 28 26.7	+0.6
ASAJ	**Asahikawa**	**4.14**	**336**	Pn	Pn	05 28 30.4	+0.7
	1.7nm,0.3s,baz=217,slow=20,SNR=4.6						
ASAJ				Sn	Sn	05 29 17.4	+0.6
	3.5nm,0.3s,baz=167,slow=24,SNR=10.0 2.2nm,0.3s						
MJAR	**Matsushiro Arr**	**6.48**	**236**	Pn	Pn	05 29 03.1	+1.2
	0.1nm,0.3s,baz=36,slow=14,SNR=8.5 1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**41.80**	**310**	P	P	05 35 16.3	+1.4
	0.7nm,0.6s,baz=100,slow=7.7,SNR=3.6 0.7nm,0.6s						
MKAR	**Makanchi Array**	**44.75**	**300**	P	P	05 35 38.7	-0.2
	0.4nm,0.6s,baz=82,slow=10,SNR=3.5 0.4nm,0.6s						
ILAR	**Eielson Array**	**45.24**	**34**	P	P	05 35 41.7	-0.7
	0.4nm,1.0s,baz=270,slow=7.5,SNR=1.9 0.4nm,1.0s						
KURBB	**Kurchatov Arra**	**46.19**	**306**	P	P	05 35 50.7	+0.6
	1.5nm,0.2s,baz=80,slow=8.9,SNR=4.9 1.5nm,0.2s						
BVAR	**Borovoye Array**	**50.42**	**311**	P	P	05 36 24.1	+1.3
	0.6nm,0.4s,baz=67,slow=9.6,SNR=3.0 0.6nm,0.4s						
FINES	**FINESS Array B**	**67.14**	**333**	P	P	05 38 20.1	+1.4
	3.3nm,1.0s,baz=69,slow=10,SNR=5.6 3.3nm,1.0s						
SNAA	**Sanae**	**144.71**	**197**	PKP	PKPdf	05 47 00.6	-0.2
	0.9nm,0.9s,baz=180,slow=4.7,SNR=9.0						
PLCA	**Paso Flores**	**153.16**	**102**	PKP	PKPdf	05 47 14.7	-0.6
	0.9nm,0.7s,baz=263,slow=8.1,SNR=2.9						

IDC 03 05:31:27.7±2.3, 6°.82S×128°.89E, h0km, mb3.3/1, mbtmp3.4/4, ML3.6/3, Error ellipse: s-maj=91.0km s-min=30.3km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.65**	**195**	Pn	Pn	05 34 15.2	-0.1
	0.6nm,0.3s,baz=23,slow=11,SNR=14						
FITZ				Sn	Sn	05 36 10.9	-15
	0.2nm,0.3s,baz=100,slow=14,SNR=1.7 1.1nm,0.3s						
WRA	**Warramunga Arr**	**14.08**	**158**	Pn	Pn	05 34 47.9	-0.7
	0.2nm,0.3s,baz=341,slow=12,SNR=9.5						
WRA				Sn	Sn	05 37 08.3	-17
	0.3nm,0.3s,baz=331,slow=23,SNR=9.4 0.3nm,0.4s						
ASAR	**Alice Springs**	**17.43**	**164**	Pn	Pn	05 35 33.1	+0.7
	0.1nm,0.3s,baz=342,slow=9.7,SNR=7.5						
ASAR				Sn	Sn	05 38 30.5	-17
	0.1nm,0.3s,baz=349,slow=24,SNR=1.8 0.3nm,0.6s						
MKAR	**Makanchi Array**	**67.48**	**327**	P	P	05 42 25.5	0.0
	0.2nm,0.5s,baz=126,slow=7.3,SNR=1.9 0.2nm,0.5s						

*PRU **03** 05:32:38.9, 44°.17N×17°.52E, h10km*
*BEO **03** 05:32:39.9±0.3, 44°.41N×17°.66E, h8km±2km, ML3.2/14*
*PDG **03** 05:32:39.7±0.5, 44°.40N×17°.74E, h1km±11km, ML3.3/13, Error ellipse: s-maj=1.3km s-min=1.6km az=0.0*
*RHSSO **03** 05:32:39.1±0.3, 44°.32N×17°.58E, h4km±2km, ML3.2/5*

ISC 03 05:32:39.0±1.1, 44°.33N±0°.02×17°.63E±0°.01, h5km±9km, n118, σ1§02/207, 21C-21D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.53**	**323**	⇓*i* Pg	Pg	05 32 49.0	-0.1
BLY				*eSg*	Sg	05 32 56.4	+0.5
BLY	**Banja Luka**	**0.53**	**323**	⇑P	Pg	05 32 49.2	+0.1
BLY				⇓S	Sg	05 32 56.2	+0.2
BLY	**Banja Luka**	**0.53**	**323**	*eP*g	Pg	05 32 49.0	-0.1
BLY				*eS*g	Sg	05 32 55.9	0.0
SLATY	**Slatina**	**0.55**	**335**	*eP*g	Pg	05 32 49.0	-0.6
SLATY				*eS*g	Sg	05 32 56.5	-0.3
RICI	**Ricice**	**0.91**	**203**	*eP*g	Pb	05 32 56.8	-0.4
RICI				Sg	Sb	05 33 08.8	-0.8
KIJV	**Kijevo**	**0.94**	**250**	*i* Pg	Pg	05 32 56.3	-0.6
KIJV				Sg	Sg	05 33 08.8	-0.2
MAKA	**Makarska**	**1.13**	**203**	*i* Pg	Pg	05 33 00.2	-0.3
MAKA				Sg	Sn	05 33 16.6	-0.7
UDBI	**Udbina**	**1.35**	**279**	*i* Pg	Pn	05 33 03.8	-0.7
UDBI				Sg	Sn	05 33 23.4	+0.5
KLINJ	**Klinje**	**1.35**	**149**	*eP*g	Pn	05 33 03.6	-1.0
KLINJ				*eS*g	Sg	05 33 22.1	-0.3
BBLS	**Lazi&#263i**	**1.36**	**109**	*eP*g	Pg	05 33 05.2	+0.1
BBLS				*eS*g	Sn	05 33 24.0	+0.7
TEKS	**Tekeris**	**1.38**	**80**	*eP*g	Pn	05 33 05.1	+0.1
TEKS				*eS*g	Sg	05 33 23.6	+0.2
MOSL	**Moslavina**	**1.43**	**335**	*i* Pg	Pn	05 33 05.4	-0.2
MOSL				Sg	Sg	05 33 25.3	+0.4
HVAR	**Hvar**	**1.43**	**217**	*eP*g	Pg	05 33 06.1	-0.2
HVAR				Sg	Sg	05 33 25.4	+0.5
RUDO	**Rudo**	**1.45**	**119**	*eP*g	Pn	05 33 05.0	-0.8
RUDO				*eS*g	Sg	05 33 26.0	+0.6
MORI	**Morici**	**1.46**	**252**	*eP*g	Pn	05 33 05.4	-0.5
MORI				Sg	Sg	05 33 25.8	0.0
STON	**Ston**	**1.46**	**178**	*eP*g	Pg	05 33 06.7	-0.2
STON				Sg	Sg	05 33 26.6	+0.9
UPM	**Unac-Piva**	**1.46**	**140**	⇓*i* Pg	Pn	05 33 06.1	-0.1
UPM				*i* Sg	Sg	05 33 26.3	+0.5
PLIT	**Plitvice**	**1.53**	**292**	*i* Pg	Pb	05 33 07.9	0.0
PLIT				Sg	Sg	05 33 28.8	+0.6
BRY	**Bratogost**	**1.57**	**155**	⇓*i* Pn	Pg	05 33 30.3	+0.8
BRY				*i* Sn	Sg	05 33 30.3	+0.8
ZIRJ	**Zirje**	**1.58**	**245**	*i* Pg	Pb	05 33 08.0	-0.6
ZIRJ				Sg	Sg	05 33 29.8	+0.1
PLE	**Pljevlja**	**1.62**	**127**	⇑*i* Pn	Pg	05 33 08.8	+0.5
PLE				*i* Sn	Sg	05 33 31.6	+0.6
LSTV	**Lastovo**	**1.65**	**199**	*i* Pn	Pg	05 33 10.5	0.0
TREB	**Trebinje**	**1.69**	**162**	⇑*i* Pn	Pn	05 33 09.7	+0.5
TREB				*eS*n	Sb	05 33 31.7	-0.5
DBRK	**Dubrovnik**	**1.70**	**167**	*eP*n	Pb	05 33 10.8	+0.1
DBRK				Sn	Sg	05 33 35.2	+1.7
DIVS	**Divibare**	**1.72**	**97**	*eP*n	Pn	05 33 10.2	+0.6
DIVS				*eSg*	Sb	05 33 33.3	+0.3
FRGS	**Fruska Gora**	**1.77**	**61**	*eP*n	Pn	05 33 10.2	0.0
FRGS				*eSg*	Sb	05 33 34.0	-0.3
NKME	**Niksic**	**1.83**	**148**	⇑*i* Pn	Pb	05 33 12.8	-0.2
NKME				*i* Sn	Sg	05 33 39.8	+1.9
VIRC	**Vir**	**1.85**	**270**	*eP*n	Pb	05 33 12.6	-0.5
VIRC				Sn	Sg	05 33 37.4	-0.8
DUGI	**Dugi Otok**	**1.88**	**261**	*eP*n	Pb	05 33 13.2	-0.5
DUGI				Sn	Sg	05 33 38.9	-0.4
ZAG	**Zagreb**	**1.90**	**323**	*eP*n	Pn	05 33 12.3	+0.3
ZAG				Sn	Sb	05 33 38.2	+0.1
PTJ	**Puntijarka**	**1.97**	**324**	*eP*n	Pn	05 33 13.8	+0.7
PTJ				Sn	Sb	05 33 39.7	-0.5
IVAS	**Ivanjica**	**1.97**	**111**	*eP*g	Pb	05 33 15.1	-0.3
IVAS				*eS*n	Sn	05 33 38.0	-0.3
HCY	**Herceg Novi**	**1.98**	**161**	⇓*i* Pn	Pb	05 33 16.2	+0.6
HCY				*i* Sn	Sg	05 33 43.5	+0.8
KALN	**Kalnik**	**1.98**	**336**	*i* Pn	Pn	05 33 13.2	-0.1
KALN				Sn	Sb	05 33 41.4	+0.8
NVLJ	**Novalja**	**1.99**	**278**	*i* Pn	Pb	05 33 14.5	-1.1
NVLJ				Sn	Sb	05 33 41.0	+0.3
OZLJ	**Ozalj**	**2.00**	**311**	*i* Pn	Pn	05 33 13.8	+0.4
OZLJ				Sn	Sb	05 33 41.2	+0.2
TRUS	**Trudelj**	**2.00**	**92**	*eP*n	Pn	05 33 13.5	0.0
SJES	**Sjenica**	**2.01**	**121**	*eP*g	Pn	05 33 14.8	+1.2
SJES				*eSg*	Sg	05 33 43.3	-0.1
CEME	**Cevo**	**2.01**	**152**	⇓*i* Pn	Pb	05 33 15.8	-0.3
CEME				*i* Sn	Sg	05 33 45.1	+1.5
KOME	**Kolasin**	**2.02**	**136**	*eP*n	Pn	05 33 14.9	+1.1
KOME				*eS*n	Sb	05 33 41.4	-0.2
KOME	**Kolasin**	**2.02**	**136**	⇑*i* Pn	Pb	05 33 15.8	-0.4
KOME				*i* Sn	Sg	05 33 43.9	+0.2
MORH	**Mrgy, Hungar**	**2.02**	**21**	⇓*i* Pn	Pn	05 33 13.5	-0.2
MORH				*eS*n	Sn	05 33 40.0	+0.7
MORH	**Mrgy, Hungar**	**2.02**	**21**	⇓P	Pn	05 33 13.4	-0.3
RABC	**Rab**	**2.08**	**283**	*i* Pn	Pb	05 33 16.1	-1.0
RABC				Sn	Sb	05 33 42.5	-0.8
LOBO	**Lobor**	**2.13**	**330**	*i* Pn	Pn	05 33 15.3	0.0
LOBO				Sn	Sb	05 33 44.4	-0.5
IVA	**Berane**	**2.20**	**131**	⇓*i* Pn	Pn	05 33 17.4	+1.1
IVA				*i* Sn	Sb	05 33 47.9	+1.1
BEHE	**Becsehely**	**2.23**	**345**	⇓*i* Pn	Pn	05 33 17.2	+0.7
BEHE				*eS*n	Sn	05 33 44.4	0.0
BUM	**Brajici-Budva**	**2.23**	**155**	⇓*i* Pn	Pb	05 33 18.5	-1.3
BUM				*i* Sn	Sg	05 33 49.1	-1.4
PDG	**Podgorica**	**2.24**	**147**	⇓P	Pb	05 33 18.9	-1.0
PDG				⇑S	Sg	05 33 49.5	-1.4
PDG	**Podgorica**	**2.24**	**147**	*eP*n	Pb	05 33 19.6	-0.3
PDG				*eS*n	Sb	05 33 46.4	-1.5
PDG	**Podgorica**	**2.24**	**147**	⇑*i* Pn	Pb	05 33 19.3	-0.6
PDG				*i* Sn	Sg	05 33 49.9	-0.9
GRUS	**Gruza**	**2.27**	**100**	*eP*n	Pn	05 33 17.8	+0.7
GRUS				*eS*n	Sn	05 33 46.0	+0.5
SUBS	**Subotica**	**2.29**	**38**	*eP*n	Pn	05 33 16.8	-0.6

	comp=Z,2.1nm,0.2s							
WATA				*e*Sn		**Sn**	**05 34 59.6**	**+1.9**
	comp=Z,3.3nm,0.3s							
SQTA	**Sankt Quirin**	**5.34**	**305**	*i* Pn		**Pn**	**05 34 02.2**	**+2.7**
	comp=Z,5.4nm,0.4s,SNR=7.4							
SQTA				*e*Sn		**Sn**	**05 35 02.0**	**+0.7**
	comp=Z,3.6nm,0.3s							
MORC	**Moravsky Berou**	**5.45**	**359**	⇑P		**Pn**	**05 34 00.5**	**-0.4**
MORC	**Moravsky Berou**	**5.45**	**359**	*e*PN		**Pn**	**05 34 01.5**	**+0.6**
MORC				*e*SN		**Sn**	**05 35 04.7**	**+0.7**
MOTA	**Moosalm**	**5.46**	**306**	*e*Pn		**Pn**	**05 34 03.3**	**+2.1**
	comp=Z,3.6nm,0.4s,SNR=8.3							
MOTA				*e*Sn		**Sn**	**05 35 06.9**	**+2.4**
	comp=Z,15nm,0.8s							
OKC	**Ostrava-Krasne**	**5.52**	**4**	*e*SN		**Sn**	**05 35 06.7**	**+1.0**
FETA	**Feichten**	**5.53**	**302**	*e*Pn		**Pn**	**05 34 03.5**	**+1.4**
	comp=Z,0.8nm,0.4s							
KHC	**Kasperske Hory**	**5.55**	**331**	*e*PN		**Pn**	**05 34 02.6**	**+0.3**
KHC				*e*SN		**Sn**	**05 35 05.1**	**-1.4**
ZVC	**Zvikov**	**5.63**	**337**	*e*PN		**Pn**	**05 34 04.5**	**+1.2**
STHS	**Stebnicka Huta**	**5.66**	**25**	*e*PN		**Pn**	**05 34 05.5**	**+1.7**
STHS				*e*SN		**Sn**	**05 35 03.4**	**-5.8**
RETA	**Reutte**	**5.74**	**306**	*e*Pn		**Pn**	**05 34 05.8**	**+1.0**
	comp=Z,0.7nm,0.3s							
DPC	**Dobruska-Polom**	**6.09**	**352**	*e*PN		**Pn**	**05 34 10.7**	**+1.0**
DPC				*e*SN		**Sn**	**05 35 19.6**	**-0.1**
OSTC	**Ostas**	**6.30**	**352**	*e*PN		**Pn**	**05 34 13.9**	**+1.3**
HSKC	**Hora Svate Kat**	**6.89**	**337**	*e*PN		**Pn**	**05 34 19.9**	**-0.8**
CLL	**Collm**	**7.64**	**338**	*e*Pn		**Pn**	**05 34 32.0**	**+1.1**
CLL				*e*Sg		**Sb**	**05 36 23.0**	**-0.3**

NEIC ***03*** *05:39:42.7±0.9, 19°.219N±0°.010×155°.546W±0°.009, h5km±2km, Error ellipse: s-maj=3.0km s-min=1.6km az=201.0*

HVO 03 05:39:41.9±1.2, 19°.214N±0°.006×155°.541W±0°.009, h0km±9km, ML2.3/27, ML2.2/40(NEIC), Error ellipse: s-maj=1.4km s-min=0.9km az=106.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.08**	**295**		Pg	05 39 45.0	+1.5
KHU					Sg	05 39 47.0	+2.5
HPO	**Honuapo**	**0.12**	**186**		Pg	05 39 45.4	+1.1
HTC	**Hot Caves**	**0.14**	**80**		Pg	05 39 45.5	+1.0
AIN	**Ainahou**	**0.18**	**27**		Pg	05 39 46.3	+1.0
AIN				IAML		05 39 49.5	
	comp=E,509nm,0.3s						
AIN				IAML		05 39 49.8	
	comp=N,706nm,0.4s						
HLP	**Hilina Pali**	**0.23**	**70**		Pg	05 39 47.3	+0.9
HLP				IAML		05 39 53.9	
	comp=N,613nm,0.3s						
HLP				IAML		05 39 53.9	
	comp=E,367nm,0.3s						
MWH	**Mokuaweoweo**	**0.28**	**349**		Pg	05 39 47.5	+0.4
MWH				IAML		05 39 53.9	
	comp=N,292nm,0.5s						
MWH				IAML		05 39 55.6	
	comp=E,270nm,0.4s						
SDHHI	**Sand Hill**	**0.29**	**53**		Pg	05 39 48.4	+1.0
SDHHI					Sg	05 39 53.0	+1.7
WRMHI	**West Rim**	**0.30**	**50**		Pg	05 39 48.4	+0.9
WRMHI					Sg	05 39 53.2	+1.8
RIM	**Rim**	**0.31**	**54**		Pg	05 39 48.6	+0.8
RIM					Sg	05 39 53.6	+1.7
UWE	**Uwekahuna**	**0.31**	**49**		Pg	05 39 48.7	+0.8
MLH	**Mauna Loa**	**0.32**	**28**		Pg	05 39 49.0	+1.0
MLH				IAML		05 39 57.8	
	comp=E,237nm,0.3s						
MLH				IAML		05 39 57.9	
	comp=N,255nm,0.6s						
OBL	**Observatory Le**	**0.32**	**50**		Pg	05 39 48.8	+0.9
OBL					Sg	05 39 54.1	+2.0
KKO	**Keanakako'i**	**0.32**	**55**		Pg	05 39 48.7	+0.8
KKO					Sg	05 39 53.7	+1.6
UWB	**Uwekahuna Bluf**	**0.33**	**50**		Pg	05 39 48.8	+0.7
UWB					Sg	05 39 54.0	+1.6
BYL	**Byron's Ledge**	**0.33**	**53**		Pg	05 39 49.0	+0.8
BYL					Sg	05 39 54.4	+1.9
BYL				IAML		05 39 55.6	
	comp=E,254nm,0.4s						
SBLHI	**Steaming Bluff**	**0.33**	**51**		Pg	05 39 49.0	+0.7
SBLHI					Sg	05 39 54.0	+1.3
HATHI	**Halema'uma'u T**	**0.34**	**52**		Pg	05 39 49.0	+0.7
HATHI					Sg	05 39 54.4	+1.7
HATHI				IAML		05 39 54.8	
	comp=E,320nm,0.4s						
HATHI				IAML		05 39 56.5	
	comp=N,330nm,0.2s						
ALEP	**Alea Permanent**	**0.34**	**343**		Pg	05 39 48.7	+0.3
ALEP					Sg	05 39 54.6	+1.8
PUH	**Pauahi**	**0.35**	**63**		Pg	05 39 49.2	+0.7
PUH					Sg	05 39 54.4	+1.4
PUH				IAML		05 39 57.5	
	comp=E,253nm,0.4s						
RSD	**Rainshed**	**0.35**	**45**		Pg	05 39 49.4	+0.8
RSD					Sg	05 39 54.6	+1.5
RSD				IAML		05 39 57.9	
	comp=E,358nm,0.5s						
RSD				IAML		05 39 58.9	
	comp=N,359nm,0.6s						
KNHH	**Kane Nui o Ham**	**0.39**	**65**		Pg	05 39 49.8	+0.5
HMH	**Humu'ula Sheep**	**0.39**	**8**		Pg	05 39 49.9	+0.5
STCH	**Steam Cracks**	**0.43**	**66**		Pg	05 39 50.3	+0.2
NPOC	**North of Pu'u**	**0.45**	**66**		Pg	05 39 50.7	+0.3
NPOC					Sg	05 39 57.3	+1.1
JCUZ	**Jacuzzi**	**0.45**	**68**		Pg	05 39 50.8	+0.3
POHA	**Pohakuloa**	**0.54**	**1**		Pg	05 39 52.2	0.0
POHA					Sg	05 40 00.3	+1.0
POHA	**Pohakuloa**	**0.54**	**1**	IAML		05 40 04.2	
	comp=N,168nm,0.4s						
POHA				IAML		05 40 06.3	
	comp=N,162nm,0.7s						
HUH	**Hualalai**	**0.55**	**329**		Pg	05 39 52.8	+0.5
JOKA	**Jonika Flow**	**0.55**	**67**		Pg	05 39 52.0	-0.4
JOKA				IAML		05 40 05.8	
	comp=N,112nm,0.8s						

CATAC ***03*** *05:52:20.0±0.8, 14°.N±4°.×9°.3W±°., h9km±4km, M3.5/10, MLv3.5/10, Error ellipse: s-maj=8.6km s-min=7.2km az=35.6, confirmed*

GCG ***03*** *05:52:21.7±1.4, 14°.06N×92°.89W, h21km±10km, MD4.2, ML3.4*

ISC 03 05:52:21.9±3.2, 13°.9N±0°.1×93°.0W±0°.1, h37km, n17, σ1§43/19, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.18**	**35**	*e*P	**Pn**	**05 52 39.8**	**-2.0**
THIG				IAML		05 52 58.2	
	comp=N,522nm,0.5s						
SMCA	**Catarina**	**1.25**	**43**	*e*P	**Pn**	**05 52 41.2**	**-1.6**
RTAL	**Retalhuleu**	**1.36**	**64**	P	**Pn**	**05 52 43.9**	**-0.4**
RTAL	**Retalhuleu**	**1.36**	**64**	S	**Sn**	**05 53 01.0**	**0.0**
STG2	**El Palmar, Qui**	**1.61**	**72**	*e*P	**Pn**	**05 52 45.4**	**-2.5**
STG2				*e*S	**Sn**	**05 53 04.8**	**-2.8**
QUEO	**Labor Ovalle**	**1.68**	**56**	*e*P	**Pn**	**05 52 48.5**	**-0.5**
SOKI	**Kika Raxquin**	**1.74**	**60**	*e*P	**Pn**	**05 52 49.9**	**-0.1**
HUEH	**Huehuetenango**	**1.97**	**46**	*e*P	**Pn**	**05 52 52.9**	**0.0**
HUEH				*e*S	**Sn**	**05 53 18.6**	**+2.1**
HUEH				IAML		05 53 27.9	
	comp=E,672nm,0.6s						
HUEH	**Huehuetenango**	**1.97**	**46**	P	**Pn**	**05 52 53.6**	**+0.7**
QUIS	**Sacapulas**	**2.25**	**53**	*e*P	**Pn**	**05 52 57.3**	**+0.6**
CCIG	**Comitan**	**2.46**	**19**	*e*P	**Pn**	**05 53 00.2**	**+0.5**
CCIG				IAML		05 53 36.1	
	comp=N,169nm,0.4s						
CCIG	**Comitan**	**2.46**	**19**	P	**Pn**	**05 52 59.8**	**+0.1**
CCIG	**Comitan**	**2.46**	**19**	S	**Sn**	**05 53 30.3**	**+1.6**
APG	**El Apazote**	**2.64**	**66**	*i* P	**Pn**	**05 53 03.0**	**+0.9**
TGIG		**2.83**	**357**	*i* P	**Pn**	**05 53 03.7**	**-1.0**
TGIG				IAML		05 53 38.8	
	comp=E,98nm,0.5s						
FAME	**Alcaldia de Sa**	**2.86**	**91**	P	**Pn**	**05 53 05.9**	**+0.9**
NUBE	**Las Nubes**	**3.09**	**90**	P	**Pn**	**05 53 09.2**	**+1.0**

CATAC ***03*** *05:53:19.7±0.5, 13°.N±3°.×8°.9W±°., h30km±4km, M3.2/18, MLv3.2/18, Error ellipse: s-maj=7.5km s-min=3.1km az=25.0, confirmed*

SNET ***03*** *05:53:20.0±1.1, 12°.92N×88°.82W, h34km, ML3.5*

GCG ***03*** *05:53:21.2±0.4, 12°.98N×88°.98W, h52km±10km, MD3.7*

ISC 03 05:53:18.9±1.5, 12°.86N±0°.06×88°.88W±0°.03, h31km±11km, n59, σ0§44/74, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.68**	**8**	*i* P	**Pb**	**05 53 32.5**	**+0.1**
TECO				*e*S	**Sb**	**05 53 41.6**	**-0.1**
TECO	**Alcaldia de Te**	**0.68**	**8**	P	**Pb**	**05 53 32.5**	**+0.1**
TECO	**Alcaldia de Te**	**0.68**	**8**	S	**Sn**	**05 53 42.1**	**0.0**
TECA	**Tecapa**	**0.73**	**30**	*i* P	**Pn**	**05 53 33.4**	**+0.1**
SNVI	**San Vicente**	**0.75**	**3**	*e*P	**Pb**	**05 53 33.8**	**+0.2**
LALI	**Alcalda de L**	**0.76**	**326**	*e*P	**Pn**	**05 53 33.7**	**+0.2**
LALI	**Alcalda de L**	**0.76**	**326**	*e*S	**Sb**	**05 53 43.5**	**-0.3**
UESV	**Universidad de**	**0.78**	**6**	*e*P	**Pn**	**05 53 33.9**	**+0.1**
UESV				*e*S	**Sn**	**05 53 44.6**	**+0.1**
UESV	**Universidad de**	**0.78**	**6**	P	**Pn**	**05 53 33.9**	**+0.1**
LFRS	**El Faro**	**0.78**	**347**	*e*P	**Pn**	**05 53 33.9**	**-0.1**
RANC	**El Ranchito**	**0.81**	**45**	*e*P	**Pn**	**05 53 34.3**	**0.0**
RANC				*e*S	**Sb**	**05 53 45.4**	**0.0**
PACA	**Pacayal**	**0.81**	**41**	*e*P	**Pn**	**05 53 34.5**	**+0.2**
PACA				*e*S	**Sb**	**05 53 44.9**	**-0.5**
PACA				*e*S	**Sn**	**05 53 45.5**	**0.0**
PACA	**Pacayal**	**0.81**	**41**	P	**Pn**	**05 53 34.5**	**+0.2**
LOMA	**Loma Larga**	**0.83**	**340**	*e*S	**Sb**	**05 53 45.8**	**-0.2**
LOMA	**Loma Larga**	**0.83**	**340**	P	**Pb**	**05 53 35.2**	**+0.2**
LOMA	**Loma Larga**	**0.83**	**340**	S	**Sn**	**05 53 46.0**	**0.0**
SCLA	**Alcaldia de Sa**	**0.85**	**10**	*e*P	**Pn**	**05 53 35.1**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.85**	**10**	P	**Pn**	**05 53 35.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.85**	**10**	S	**Sn**	**05 53 46.7**	**+0.3**
PAVA	**Las Pavas**	**0.85**	**356**	*e*P	**Pn**	**05 53 35.0**	**+0.2**
PAVA				*e*S	**Sn**	**05 53 46.6**	**+0.2**
PAVA	**Las Pavas**	**0.85**	**356**	P	**Pn**	**05 53 35.1**	**+0.2**
LBRS	**Las Brisas**	**0.89**	**350**	*e*P	**Pb**	**05 53 36.1**	**+0.1**
UDBS	**Universidad Do**	**0.90**	**342**	*e*P	**Pn**	**05 53 35.7**	**+0.3**
UDBS				*e*S	**Sn**	**05 53 47.5**	**+0.1**
UDBS	**Universidad Do**	**0.90**	**342**	P	**Pn**	**05 53 35.6**	**+0.1**
CNRM	**Centro Naciona**	**0.92**	**48**	*e*P	**Pb**	**05 53 36.4**	**0.0**
CNRM	**Centro Naciona**	**0.92**	**48**	P	**Pn**	**05 53 35.9**	**+0.1**
CNRM	**Centro Naciona**	**0.92**	**48**	S	**Sb**	**05 53 48.3**	**-0.1**
UEES	**Universidad Ev**	**0.93**	**338**	P	**Pn**	**05 53 36.1**	**+0.3**
PMON	**Piamonte**	**0.95**	**333**	*e*P	**Pb**	**05 53 37.1**	**+0.2**
PMON	**Piamonte**	**0.95**	**333**	P	**Pb**	**05 53 37.0**	**+0.1**
PMON	**Piamonte**	**0.95**	**333**	S	**Sb**	**05 53 49.6**	**+0.4**
JAYA	**Jayaque - finc**	**0.97**	**325**	*e*P	**Pn**	**05 53 36.6**	**0.0**
JAYA	**Jayaque - finc**	**0.97**	**325**	*e*P	**Pn**	**05 53 36.6**	**0.0**
JAYA				*e*S	**Sn**	**05 53 48.6**	**-0.8**
JAYA	**Jayaque - finc**	**0.97**	**325**	P	**Pn**	**05 53 36.6**	**0.0**
JAYA	**Jayaque - finc**	**0.97**	**325**	S	**Sb**	**05 53 50.0**	**+0.1**
LCND	**La Caada**	**1.06**	**65**	*e*P	**Pn**	**05 53 37.6**	**0.0**
LCND				*e*P	**Pb**	**05 53 37.8**	**-0.9**
LCND				*e*S	**Sn**	**05 53 51.3**	**-0.1**
LCND	**La Caada**	**1.06**	**65**	P	**Pn**	**05 53 37.7**	**0.0**
CNCH	**Conchagua**	**1.10**	**68**	*e*P	**Pn**	**05 53 38.1**	**-0.2**
CNCH	**Conchagua**	**1.10**	**68**	P	**Pn**	**05 53 38.3**	**0.0**
CNCH	**Conchagua**	**1.10**	**68**	S	**Sb**	**05 53 53.2**	**-0.3**
CSGN	**Cosiguina Volc**	**1.29**	**85**	P	**Pn**	**05 53 41.6**	**+0.7**
CSGN				S	**Sb**	**05 53 59.1**	**+0.2**
UNIC	**Universidad Ca**	**1.30**	**330**	P	**Pn**	**05 53 41.6**	**+0.7**
UNIC	**Universidad Ca**	**1.30**	**330**	S	**Sn**	**05 53 57.6**	**+0.3**
LLGN	**La Laguna**	**1.30**	**357**	P	**Pn**	**05 53 41.0**	**0.0**
LLGN	**La Laguna**	**1.30**	**357**	S	**Sn**	**05 53 57.5**	**0.0**
POTN	**Potosi Cosigui**	**1.34**	**84**	P	**Pn**	**05 53 42.3**	**+0.8**
POTN				S	**Sn**	**05 53 58.1**	**-0.3**
NUBE	**Las Nubes**	**1.36**	**320**	*e*P	**Pn**	**05 53 42.6**	**+0.7**
NUBE				*e*S	**Sn**	**05 53 58.8**	**-0.2**
NUBE	**Las Nubes**	**1.36**	**320**	*e*P	**Pn**	**05 53 42.2**	**+0.3**
NUBE				*e*S	**Sn**	**05 53 58.7**	**-0.4**
NUBE	**Las Nubes**	**1.36**	**320**	P	**Pn**	**05 53 42.5**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.46**	**323**	S	**Sn**	**05 53 59.1**	**-2.2**
SLOZ	**Alcaldia de Sa**	**1.46**	**323**	P	**Pn**	**05 53 42.7**	**-0.5**
FAME	**Alcaldia de Sa**	**1.48**	**312**	P	**Pn**	**05 53 43.5**	**+0.1**
FAME	**Alcaldia de Sa**	**1.48**	**312**	S	**Sn**	**05 54 01.0**	**-0.7**
MTO3	**Montecristo**	**1.60**	**343**	*e*P	**Pn**	**05 53 45.5**	**+0.2**
ESQI	**Esquipulas**	**1.75**	**345**	P	**Pn**	**05 53 45.0**	**+0.7**
ESQI	**Esquipulas**	**1.75**	**345**	S	**Sn**	**05 54 09.0**	**+0.3**
PKGN	**Cerro Pekin**	**1.86**	**95**	P	**Pn**	**05 53 49.8**	**+1.1**
PKGN				S	**Sn**	**05 54 10.9**	**-0.3**
SARH	**Santa Rosa de**	**1.91**	**3**	*e*P	**Pn**	**05 53 50.2**	**+0.8**
YUSH	**Yuscaran**	**2.26**	**61**	P	**Pn**	**05 53 54.0**	**-0.2**

ATH ***03*** *05:58:24.9, 36°.40N×28°.88E, h6km±1km, ML2.9/4, Manual Solution by A.Moschou First location: 2019/11/03 05:59:15, This location: 2019/11/03 06:04:02 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

ISK ***03*** *05:58:26.8, 36°.46N×28°.74E, h6km, ML2.9/19*

AFAD ***03*** *05:58:27.1, 36°.44N×28°.68E, h7km±2km, ML2.6*

THE ***03*** *05:58:28.9, 36°.N±3°.×2°.9E±°., h0km±8km, M2.6/7, MLh2.6/7*

ISC 03 05:58:27.2±1.1, 36°.44N±0°.02×28°.72E±0°.02, h5km±9km, n53, σ1§12/79, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.35**	**57**	P	Pg	05 58 25.8	-8.2
FETY				S	**Sg**	**05 58 33.5**	**-5.1**
DALY	**Dalyan (Mula)**	**0.38**	**352**	Pg	**Pg**	**05 58 34.2**	**-0.3**
DALY				Sg	**Sg**	**05 58 40.0**	**+0.6**
RDI1	**Rhodes Town Ha**	**0.40**	**271**	P	**Pg**	**05 58 34.7**	**-0.1**
RDI1				S	**Sb**	**05 58 42.1**	**-0.9**
IZZE	**Mula-Seydike**	**0.41**	**91**	P	**Pg**	**05 58 35.5**	**+0.4**
IZZE				S	**Sb**	**05 58 42.3**	**-1.2**
IZZE				*i* IAML		05 58 43.0	
	comp=N,865nm,0.6s						
IZZE				*i* IAML		05 58 45.0	
	comp=E,663nm,0.5s						
SABU	**Mula-Dalaman**	**0.43**	**28**	P	**Pg**	**05 58 35.5**	**0.0**
SABU				S	**Sb**	**05 58 42.8**	**-1.3**
SABU				*i* IAML		05 58 43.0	
	comp=N,332nm,0.4s						
SABU				*i* IAML		05 58 45.0	
	comp=E,389nm,0.6s						
TURN	**Turunc**	**0.50**	**311**	P	**Pg**	**05 58 37.1**	**+0.3**
TURN				S	**Sg**	**05 58 43.7**	**+0.3**
TURN				*i* IAML		05 58 48.0	
	comp=E,262nm,0.4s						
TURN	**Turunc**	**0.50**	**311**	Pg	**Pg**	**05 58 37.2**	**+0.3**
TURN				Sg	**Sg**	**05 58 43.8**	**+0.3**
ARG	**Arkhangelos**	**0.53**	**245**	Pg	**Pg**	**05 58 37.3**	**0.0**
ARG				Sg	**Sb**	**05 58 46.3**	**-0.5**
ARG	**Arkhangelos**	**0.53**	**245**	P	**Pg**	**05 58 37.2**	**-0.1**
ARG				S	**Sg**	**05 58 45.3**	**+1.1**
ARG	**Arkhangelos**	**0.53**	**245**	P	**Pg**	**05 58 37.2**	**-0.1**
ARG				S	**Sg**	**05 58 45.4**	**+1.2**
CAME	**Cameli-Denizli**	**0.69**	**43**	Pg	**Pg**	**05 58 39.7**	**-0.2**
AKAS	**Kas**	**0.75**	**106**	P	**Pb**	**05 58 42.7**	**-0.1**
AKAS	**Kas**	**0.75**	**106**	Pg	**Pb**	**05 58 42.1**	**-0.7**
KSL	**Kastellorizon**	**0.76**	**112**	P	**Pn**	**05 58 43.9**	**-0.6**
KSL				S	**Sn**	**05 58 56.5**	**+0.1**
RGE1	**Gennadi, Rhode**	**0.76**	**237**	P	**Pg**	**05 58 41.3**	**-0.4**
RGE1				S	**Sg**	**05 58 52.3**	**+0.7**
YER	**Yerkesik**	**0.77**	**333**	Pg	**Pb**	**05 58 42.7**	**-0.5**
YER	**Yerkesik**	**0.77**	**333**	P	**Pn**	**05 58 44.1**	**-0.7**
YER				S	**Sb**	**05 58 54.7**	**+0.7**
KNIK	**Mula-Seydike**	**0.80**	**60**	P	**Pb**	**05 58 42.9**	**-0.7**
KNIK				*i* IAML		05 58 56.0	
	comp=N,133nm,0.8s						
KNIK				S	**Sn**	**05 58 56.6**	**-0.9**
KNIK				*i* IAML		05 58 58.0	
	comp=E,145nm,0.6s						
DNZT	**Denizli-Tavas-**	**0.87**	**16**	P	**Pg**	**05 58 44.0**	**+0.1**
MULA	**Mugla, Merkez-**	**0.87**	**339**	P	**Pg**	**05 58 44.0**	**+0.1**
MULA				S	**Sb**	**05 58 57.6**	**+0.7**
DATC	**Datca-Mugla**	**0.91**	**291**	Pg	**Pb**	**05 58 45.2**	**-0.2**
DAT	**Datca**	**0.96**	**288**	Pg	**Pg**	**05 58 46.0**	**+0.4**
ELL	**Elmali**	**1.01**	**72**	Pg	**Pg**	**05 58 45.9**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.03**	**9**	P	**Pb**	**05 58 47.5**	**-0.1**
TAVA				S	**Sn**	**05 59 02.7**	**-0.6**
GOLH	**Golhisar**	**1.04**	**40**	P	**Pb**	**05 58 47.3**	**-0.5**
YAZI	**Mula-Dat§a-**	**1.04**	**284**	P	**Pg**	**05 58 47.0**	**-0.3**
YAZI				S	**Sg**	**05 59 00.6**	**-0.1**
APMY	**Acipayam-Deniz**	**1.13**	**24**	Pn	**Pg**	**05 58 47.9**	**-0.9**
MLSB	**Milas**	**1.14**	**319**	Pn	**Pg**	**05 58 48.2**	**-0.8**
BDRM	**Kayabasi**	**1.20**	**302**	P	**Pg**	**05 58 49.6**	**-0.5**
BDRM				S	**Sg**	**05 59 05.8**	**+0.2**
BDRM				*i* IAML		05 59 11.0	
	comp=E,228nm,0.4s						
DNIZ	**Denizli-Tavas-**	**1.21**	**12**	P	**Pn**	**05 58 51.7**	**+0.9**
DNIZ				S	**Sn**	**05 59 07.3**	**-0.4**
DNIZ				*i* IAML		05 59 15.0	
	comp=E,437nm,0.4s						
BODT	**Bodrum**	**1.29**	**299**	Pn	**Pg**	**05 58 52.1**	**+0.2**
BODT	**Bodrum**	**1.29**	**299**	P	**Pg**	**05 58 52.9**	**+1.1**
BODT				S	**Sn**	**05 59 10.6**	**+1.1**
NISR	**Nisiros**	**1.29**	**278**	P	**Pn**	**05 58 51.9**	**0.0**
NISR				S	**Sn**	**05 59 09.6**	**+0.2**
NISR	**Nisiros**	**1.29**	**278**	P	**Pn**	**05 58 51.0**	**-0.8**
NISR				S	**Sn**	**05 59 09.9**	**+0.4**
AKUM	**Antalya-Kumluc**	**1.32**	**95**	P	**Pg**	**05 58 54.5**	**+2.0**
ESEN	**Aydn-Nazilli**	**1.38**	**348**	P	**Pg**	**05 58 53.7**	**0.0**
ESEN				S	**Sb**	**05 59 11.5**	**0.0**
KORT	**Korkueli**	**1.43**	**67**	P	**Pg**	**05 58 55.7**	**+1.2**
KORT				S	**Sg**	**05 59 18.6**	**+5.6**
KORT				*i* IAML		05 59 21.0	
	comp=E,310nm,0.6s						
INCE	**Denizli-Bozkur**	**1.44**	**28**	P	**Pg**	**05 58 55.3**	**+0.5**
INCE				S	**Sg**	**05 59 16.3**	**+2.9**
INCE				*i* IAML		05 59 19.0	
	comp=N,103nm,0.6s						
KARP	**Karpathos**	**1.55**	**235**	Pn	**Pb**	**05 58 55.9**	**-0.4**
KARP	**Karpathos**	**1.55**	**235**	P	**Pb**	**05 58 55.9**	**-0.4**
KARP				S	**Sg**	**05 59 17.4**	**+0.6**
KARP	**Karpathos**	**1.55**	**235**	P	**Pn**	**05 58 55.8**	**-0.4**
KARP				S	**Sn**	**05 59 15.6**	**-0.2**
NAZL	**Nazilli-Aydin**	**1.56**	**348**	Pn	**Pn**	**05 58 55.6**	**+0.1**
ANTB	**Antalya**	**1.62**	**73**	Pn	**Pn**	**05 58 56.3**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.64**	**337**	Pn	**Pn**	**05 58 56.8**	**0.0**
BUCA	**Burdur, Bucak-**	**1.72**	**59**	P	**Pg**	**05 58 59.6**	**-0.6**
GCAM	**G?zelcaml?**	**1.73**	**317**	Pn	**Pn**	**05 58 58.1**	**+0.3**
BCK	**Bucak**	**1.81**	**55**	Pn	**Pn**	**05 58 58.9**	**-0.2**
BASM	**Basmaki-Afyon**	**1.82**	**35**	Pn	**Pn**	**05 58 58.9**	**-0.3**
ODEM	**Odemis-Izmir**	**1.90**	**345**	Pn	**Pn**	**05 59 00.6**	**+0.3**
SMG	**Samos**	**1.96**	**311**	P	**Pn**	**05 59 01.0**	**-0.1**
SMG	**Samos**	**1.96**	**311**	P	**Pn**	**05 59 00.9**	**-0.1**
KULA	**Kula-Manisa**	**2.07**	**359**	Pn	**Pn**	**05 59 02.7**	**+0.1**
URLA	**Izmir**	**2.55**	**319**	Pn	**Pn**	**05 59 09.9**	**+0.7**

CATAC 03 05:59:38.7±0.9, 8°N±5°×8°3W±°, h13km±4km, M3.1/6, MLv3.1/6, Error ellipse: s-maj=10.0km s-min=4.3km az=0.9, confirmed, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTJ1	**Puerto Jimnez**	**0.18**	**306**	P	Pb	05 59 43.7	-0.1
PTJ1	**Puerto Jimnez**	**0.18**	**306**	S	Sb	05 59 47.4	+0.2
PIRO	**Carate, Puerto**	**0.18**	**261**	P	Pb	05 59 44.1	+0.3
CDITO	**Canoas**	**0.32**	**63**	P	Pb	05 59 46.3	+0.1
CDITO	**Canoas**	**0.32**	**63**	S	Sb	05 59 51.5	+0.2
BRU2	**Volcan**	**0.59**	**52**	P	Pb	05 59 51.3	+0.3
BRU2	**Volcan**	**0.59**	**52**	S	Sb	05 59 59.7	+0.3
OCHAL	**Ojochal**	**0.82**	**324**	P	Pg	05 59 53.7	-0.9
OCHAL	**Ojochal**	**0.82**	**324**	S	Sb	06 00 06.5	+0.8
DRK0	**Durika**	**0.83**	**354**	S	Sn	06 00 07.4	-1.1
DRK0	**Durika**	**0.83**	**354**	P	Pg	05 59 54.6	-0.2

CATAC ***03*** *06:00:13.7±0.3, 10°.N±3°.×8°.4W±°., h35km±3km, M3.0/7, MLv3.0/7, Error ellipse: s-maj=6.7km s-min=3.4km az=44.4, confirmed*

UCR ***03*** *06:00:13.3±0.8, 9°.88N×84°.28W, h54km±2km, MW3.6*

ISC 03 06:00:14.2±1.3, 9°.86N±0°.03×84°.28W±0°.03, h49km±6km, n102, σ0§61/107, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PURI	**Puriscal**	**0.04**	**245**	*e*P	**Pn**	**06 00 21.3**	**-0.6**
SANTA	**Santa Ana**	**0.12**	**53**	*e*P	**Pn**	**06 00 21.6**	**-0.6**
SANTA				*e*S	**Sn**	**06 00 28.4**	**+0.7**
ACOS	**Acosta**	**0.13**	**120**	*e*P	**Pn**	**06 00 21.6**	**-0.7**
ACOS				*e*S	**Sn**	**06 00 28.3**	**+0.3**
BELE	**Belen**	**0.14**	**

OCHAL	Ojochal	0.98	141	S	Sn	06 00 45.5 +0.8
INVE	Universidad In	0.98	308	eP	Pn	06 00 31.5 -0.3
EDPE	Pejibaye, P	0.99	135	eP	Pn	06 00 31.5 -0.3
TIMP	Tierras Morena	1.02	315	eP	Pn	06 00 31.9 -0.5
TENO	El Achiote	1.08	321	eP	Pn	06 00 32.8 -0.3
CUI	Cuipilapa	1.18	312	eP	Pn	06 00 34.0 -0.4
DRK0	Durika	1.18	120	S	Sn	06 00 49.7 0.0
NICO	Nicoya	1.18	283	eP	Pn	06 00 33.8 -0.6
HORNC	Hornillas	1.22	314	eP	Pn	06 00 34.7 -0.4
VMAR	Armenia, Volca	1.25	319	eP	Pn	06 00 34.8 -0.6
JUD3	Juan Diaz 3	1.28	284	eP	Pn	06 00 35.5 -0.3
ALIBA	Liberia Airpor	1.44	300	eP	Pn	06 00 38.2 +0.2
LAPC	Finca la Perla	1.45	308	eP	Pn	06 00 37.3 -0.8
ELI1	Hacienda Flor	1.48	302	S	Sn	06 00 57.5 +0.9
ALCO	Alturas Coton,	1.69	122	eP	Pn	06 00 41.2 -0.4
LCRUZ	La Cruz	1.80	312	eP	Pn	06 00 42.4 -0.5

*DJA **03** 06:20:45.9±0.9, 7°N±7°×12°5E±°, h48km±9km, M5.0/9, mb5.0/8, mb5.8/5, MLv4.8/9, Mw(mB)5.3/5*
*IDC **03** 06:20:46.9±1.3, 6°43N×125°76E, h0km, mb3.6/4, mbtmp3.6/4, MS3.2/1, Error ellipse: s-maj=115.0km s-min=8.7km az=75.0*
ISC 03 06:20:45.5±2.0, 6°8N±0°2×125°2E±0°2, h10km, n11, σ1°93/9, **mb3.6**/4, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.44**	**52**	Pg		**Pn**		**06 20 59.3**	**+1.4**
	638nm,0.3s,baz=238,slow=1.0,SNR=55								
DAV				Lg		Lg		06 21 08.8	
	1μm,0.3s,baz=328,slow=23,SNR=23								
DAV				LR		LR		06 21 32.1	
	comp=Z,866nm,19.5s,baz=26,slow=68								
SGSI	**Sangihe**	**3.10**	**174**	P		**Pn**		**06 21 35.7**	**+1.2**
KMSI	**Cibinong**	**6.30**	**191**	P		**Pn**		**06 22 21.8**	**+3.2**
	0.7nm164nm,0.6s								
MRSI	**Marisa**	**7.08**	**208**	P		**Pn**		**06 22 30.3**	**+1.1**
	0.6nm38nm,0.6s								
MRSI				S		**Sn**		**06 23 48.8**	**-1.1**
	0.6nm38nm,0.6s								
LUWI	**Luwuk**	**8.16**	**198**	P		**Pn**		**06 22 45.2**	**+1.1**
	59nm,1.1s								
FITZ	**Fitzroy Crossi**	**24.74**	**179**	P		**P**		**06 26 06.4**	**-0.9**
	1.3nm,0.5s,baz=358,slow=11,SNR=1.6 1.3nm,0.5s								
KRJI	**Kerinci**	**25.31**	**250**	P		P		06 26 00.9	-12
WRA	**Warramunga Arr**	**28.04**	**162**	P		**P**		**06 26 35.5**	**-1.6**
	0.3nm,0.5s,baz=343,slow=10,SNR=5.8 0.3nm,0.5s								
ASAR	**Alice Springs**	**31.44**	**165**	P		**P**		**06 27 06.0**	**-1.2**
	0.3nm,0.5s,baz=340,slow=6.8,SNR=9.5 0.3nm,0.5s								
MKAR	**Makanchi Array**	**54.20**	**325**	P		P		06 30 19.5	+8.2
	0.4nm,0.5s,baz=116,slow=7.1,SNR=3.6 0.4nm,0.5s								
ZALV	**Zalesovo Beam**	**57.20**	**333**	LR		LR		06 57 53.6	
	comp=Z,20nm,18.5s,baz=180,slow=39								

*IDC **03** 06:23:37.3±0.8, 29°42N×141°30E, h0km, mb3.7/7, mbtmp3.7/10, ML3.0/3, Error ellipse: s-maj=42.6km s-min=18.7km az=79.0*
ISC 03 06:23:42.1±0.8, 29°3N±0°1×141°4E±0°3, h35km, n11, σ1°68/11, **mb3.6**/7, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.31**	**161**	Pn		**Pn**		**06 24 16.3**	**-1.4**
	8.9nm,0.3s,baz=303,slow=21,SNR=11								
JCJ				Sn		**Sn**		**06 24 43.1**	**-1.7**
	27nm,0.3s,baz=282,slow=23,SNR=7.1 37nm,0.5s								
JHJ	**Hachijo jima 2**	**4.05**	**341**	Pn		Pn		06 24 37.1	-4.4
	1.9nm,0.3s,baz=261,slow=23,SNR=1.7								
JHJ				Sn		Sn		06 25 16.8	-11
	5.8nm,0.3s,baz=75,slow=21,SNR=2.2 42nm,0.7s								
MJAR	**Matsushiro Arr**	**7.70**	**341**	Pn		**Pn**		**06 25 30.1**	**-1.6**
	0.1nm,0.3s,baz=161,slow=11,SNR=8.0 0.8nm,0.4s								
WRA	**Warramunga Arr**	**49.41**	**189**	P		**P**		**06 32 29.6**	**+0.9**
	0.4nm,0.9s,baz=6.5,slow=7.8,SNR=7.1 0.4nm,0.9s								
ASAR	**Alice Springs**	**53.14**	**189**	P		**P**		**06 32 59.5**	**+2.9**
	0.7nm,1.1s,baz=4.9,slow=6.4,SNR=1.9 0.7nm,1.1s								
FINES	**FINESS Array B**	**75.66**	**333**	P		**P**		**06 35 22.7**	**-0.7**
	1.3nm,0.8s,baz=43,slow=6.4,SNR=4.5 1.3nm,0.8s								
NVAR	**Mina Array Bea**	**79.73**	**52**	P		**P**		**06 35 47.9**	**+1.0**
	0.3nm,0.5s,baz=283,slow=6.0,SNR=3.9 0.3nm,0.5s								
NOA	**NORSAR Array B**	**81.31**	**338**	P		**P**		**06 35 53.0**	**-1.7**
	0.5nm,0.8s,baz=68,slow=3.9,SNR=2.0 0.5nm,0.8s								
BRTR	**Keskin Array B**	**83.98**	**312**	P		**P**		**06 36 09.8**	**+0.7**
	0.9nm,0.7s,baz=75,slow=5.2,SNR=3.9 0.9nm,0.7s								
TXAR	**Lajitas Array**	**94.86**	**53**	P		**P**		**06 37 01.8**	**+0.8**
	0.2nm,0.8s,baz=314,slow=5.6,SNR=2.4 0.2nm,0.8s								
LPAZ	**La Paz**	**149.99**	**71**	PKPbc		**PKPbc**		**06 43 31.0**	**+0.7**
	0.6nm,0.8s,baz=280,slow=6.1,SNR=2.3								

*IDC **03** 06:26:42.4±0.8, 29°34N×141°26E, h0km, mb3.5/9, mbtmp3.5/12, ML3.0/3, Error ellipse: s-maj=32.9km s-min=16.8km az=79.0*
ISC 03 06:26:47.5±0.7, 29°34N±0°09×141°2E±0°2, h35km, n15, σ1°22/13, **mb3.4**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.40**	**159**	Pn		**Pn**		**06 27 23.1**	**-1.1**
	6.9nm,0.3s,baz=13,slow=16,SNR=1.5								
JCJ				Sn		**Sn**		**06 27 52.1**	**-0.3**
	55nm,0.3s,baz=294,slow=21,SNR=10.0 17nm,0.3s								
JHJ	**Hachijo jima 2**	**3.96**	**342**	Pn		**Pn**		**06 27 44.1**	**-1.7**
	3.8nm,0.3s,baz=68,slow=21,SNR=1.7								
JHJ				Sn		Sn		06 28 20.9	-10
	13nm,0.3s,baz=106,slow=16,SNR=4.1 38nm,0.8s								
MJAR	**Matsushiro Arr**	**7.61**	**341**	Pn		**Pn**		**06 28 35.0**	**-1.0**
	0.1nm,0.3s,baz=161,slow=12,SNR=6.8 0.9nm,0.4s								
H11N2	**WAKE ISLAND Hy**	**25.19**	**106**	T		T		06 58 27.9	
	baz=298,slow=75,SNR=6.5								
H11N1	**WAKE ISLAND Hy**	**25.20**	**107**	T		T		06 58 23.4	
	baz=298,slow=75,SNR=5.4								
H11N3	**WAKE ISLAND Hy**	**25.21**	**107**	T		T		06 58 31.9	
	baz=298,slow=75,SNR=4.5								
MKAR	**Makanchi Array**	**48.41**	**308**	P		**P**		**06 35 25.9**	**-0.2**
	0.3nm,0.4s,baz=94,slow=9.2,SNR=2.1 0.3nm,0.4s								
WRA	**Warramunga Arr**	**49.45**	**189**	P		**P**		**06 35 33.5**	**-0.8**
	0.4nm,0.9s,baz=4.7,slow=7.0,SNR=10 0.4nm,0.9s								
ASAR	**Alice Springs**	**53.17**	**188**	P		**P**		**06 36 03.2**	**+1.0**
	0.2nm,0.7s,baz=1.4,slow=6.1,SNR=2.5 0.2nm,0.7s								
ILAR	**Eielson Array**	**56.17**	**29**	P		**P**		**06 36 22.6**	**-0.8**
	0.2nm,0.6s,baz=273,slow=8.3,SNR=2.2 0.2nm,0.6s								
FINES	**FINESS Array B**	**75.56**	**333**	P		**P**		**06 38 28.2**	**0.0**
	1.9nm,0.9s,baz=57,slow=7.0,SNR=5.2 1.9nm,0.9s								
NVAR	**Mina Array Bea**	**79.80**	**52**	P		**P**		**06 38 53.4**	**+0.8**
	0.2nm,0.5s,baz=316,slow=6.8,SNR=2.4 0.2nm,0.5s								
PDAR	**Pinedale Array**	**83.21**	**44**	P		**P**		**06 39 10.2**	**-0.4**
	0.2nm,0.5s,baz=291,slow=7.3,SNR=1.9 0.2nm,0.5s								
BRTR	**Keskin Array B**	**83.86**	**312**	P		**P**		**06 39 15.8**	**+1.9**
	0.9nm,0.7s,baz=100,slow=6.0,SNR=3.9 0.9nm,0.7s								
TXAR	**Lajitas Array**	**94.93**	**53**	P		**P**		**06 40 08.4**	**+1.8**
	0.1nm,0.6s,baz=322,slow=3.7,SNR=1.5 0.1nm,0.6s								

*IDC **03** 06:27:02.1±0.7, 29°45N×141°47E, h0km, mb3.9/9, mbtmp3.9/12, ML3.4/3, MS2.4/1, Error ellipse: s-maj=32.2km s-min=16.9km az=86.0*
ISC 03 06:27:06.7±0.7, 29°36N±0°08×141°5E±0°2, h35km, n14, σ1°82/15, **mb3.9**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.35**	**164**	Pn		**Pn**		**06 27 40.9**	**-1.9**
	21nm,0.3s,baz=102,slow=23,SNR=5.7								
JCJ				Sn		**Sn**		**06 28 07.3**	**-3.0**
	84nm,0.3s,baz=260,slow=23,SNR=7.5								
JCJ				LR		LR		06 28 31.7	
	comp=Z,75nm,18.5s,baz=318,slow=37 66nm,0.3s								
JHJ	**Hachijo jima 2**	**4.01**	**339**	Pn		**Pn**		**06 28 02.6**	**-3.0**
	5.5nm,0.3s,baz=180,slow=19,SNR=2.1 20nm,0.3s								
MJAR	**Matsushiro Arr**	**7.66**	**340**	Pn		**Pn**		**06 28 55.0**	**-0.9**
	0.2nm,0.3s,baz=162,slow=12,SNR=11 2.3nm,0.5s								
WRA	**Warramunga Arr**	**49.49**	**189**	P		**P**		**06 35 56.1**	**+2.2**
	0.7nm,0.4s,baz=6.7,slow=8.1,SNR=10 0.7nm,0.4s								
ASAR	**Alice Springs**	**53.22**	**189**	P		**P**		**06 36 22.9**	**+1.2**
	0.2nm,0.5s,baz=2.3,slow=5.3,SNR=6.2 0.2nm,0.5s								
ILAR	**Eielson Array**	**56.05**	**29**	P		**P**		**06 36 40.1**	**-1.7**
	0.7nm,0.8s,baz=259,slow=6.3,SNR=7.0 0.7nm,0.8s								
ARCES	**ARCESS Array B**	**71.20**	**340**	P		**P**		**06 38 21.6**	**-0.1**
	3.1nm,0.8s,baz=22,slow=4.3,SNR=4.9 3.1nm,0.8s								
FINES	**FINESS Array B**	**75.64**	**333**	P		**P**		**06 38 48.0**	**+0.1**
	2.2nm,0.8s,baz=60,slow=5.5,SNR=8.0 2.2nm,0.8s								
NVAR	**Mina Array Bea**	**79.63**	**52**	P		**P**		**06 39 12.7**	**+1.8**
	0.7nm,0.6s,baz=298,slow=5.3,SNR=8.7 0.7nm,0.6s								
PDAR	**Pinedale Array**	**83.06**	**45**	P		**P**		**06 39 29.9**	**+0.9**
	0.5nm,0.8s,baz=298,slow=3.2,SNR=4.1 0.5nm,0.8s								
BRTR	**Keskin Array B**	**84.00**	**312**	P		**P**		**06 39 34.9**	**+1.0**
	1.2nm,0.6s,baz=115,slow=4.2,SNR=7.0 1.2nm,0.6s								
TXAR	**Lajitas Array**	**94.75**	**53**	P		**P**		**06 40 26.4**	**+1.3**
	0.2nm,0.7s,baz=188,slow=2.2,SNR=4.5 0.2nm,0.7s								
QSPA	**South Pole Qui**	**119.12**	**180**	PKP		**PKPdf**		**06 45 50.4**	**-0.8**
	1.5nm,1.1s,baz=315,slow=1.3,SNR=3.1								
LPAZ	**La Paz**	**149.88**	**71**	PKPbc		**PKPbc**		**06 46 55.2**	**+0.5**
	0.6nm,0.7s,baz=230,slow=11,SNR=4.0								

*NOU **03** 06:39:05.8, 42°44S×173°89E, h14km, MLv3.6/14, South Island, New Zealand*
*WEL **03** 06:39:08.0±0.3, 42°S±2°×17°4E±°, h11km±2km, M3.1/30, ML3.4/15, MLv3.1/30, Error ellipse: s-maj=4.3km s-min=2.2km az=115.4, confirmed*
ISC 03 06:39:07.1±1.0, 42°35S±0°03×173°83E±0°03, h18km±2km, n75, σ0°96/87, **South Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KIKS	**Kaikoura**	**0.14**	**236**	P		**Pg**		**06 39 12.0**	**+0.8**
KIKS				S		**Sg**		**06 39 15.4**	**+1.4**
KHZ	**Kahutara**	**0.23**	**253**	P		**Pb**		**06 39 12.5**	**+0.1**
KHZ	**Kahutara**	**0.23**	**253**	S		**Sg**		**06 39 16.8**	**+0.6**
KHZ	**Kahutara**	**0.23**	**253**	P		**Pb**		**06 39 12.5**	**+0.1**
KHZ				S		**Sb**		**06 39 16.0**	**+0.1**
KEKS	**Kekerengu Vall**	**0.41**	**16**	P		**Pg**		**06 39 15.9**	**+0.4**
LOKS	**Mount Lookout**	**0.43**	**322**	P		**Pg**		**06 39 14.8**	**-1.1**
LOKS				S		**Sg**		**06 39 20.2**	**-1.7**
GLOS	**29 km south-we**	**0.49**	**359**	P		**Pg**		**06 39 16.5**	**-0.5**
MOLW	**Molesworth Sta**	**0.50**	**301**	P		**Pg**		**06 39 15.0**	**-1.2**
MOLW				S		**Sg**		**06 39 22.1**	**-2.0**
CECS	**Cheviot Emerge**	**0.62**	**221**	P		**Pn**		**06 39 21.0**	**0.0**
CECS				S		**Sn**		**06 39 31.2**	**+0.8**
BSWZ	**Blackbirch Sta**	**0.64**	**3**	P		**Pb**		**06 39 19.5**	**-0.1**
WTMC	**Te Mara Farm W**	**0.64**	**245**	P		**Pg**		**06 39 20.4**	**+0.7**
WTMC				S		**Sn**		**06 39 30.3**	**-0.6**
CMWZ	**Cape Campbell**	**0.66**	**25**	P		**Pn**		**06 39 21.8**	**+0.2**
CMWZ				S		**Sn**		**06 39 32.6**	**+1.0**
SEDS	**Seddon Fire St**	**0.70**	**15**	P		**Pg**		**06 39 21.8**	**+0.9**
WIGC	**Waiau Gorge**	**0.84**	**245**	P		**Pg**		**06 39 24.1**	**+0.6**
GVZ	**Greta Valley S**	**0.85**	**223**	P		**Pn**		**06 39 24.5**	**+0.2**
GVZ				S		**Sn**		**06 39 37.1**	**+0.8**
THZ	**Tophouse**	**0.91**	**310**	P		**Pb**		**06 39 23.7**	**-0.6**
THZ				S		**Sb**		**06 39 35.1**	**-1.0**
BWRS	**Waikakaho Road**	**0.91**	**3**	P		**Pb**		**06 39 24.7**	**+0.4**
TUWZ	**Tuamarina**	**0.92**	**5**	P		**Pg**		**06 39 25.6**	**+0.5**
TUWZ				S		**Sn**		**06 39 38.4**	**+0.5**
WAKC	**Waikari**	**1.03**	**233**	P		**Pb**		**06 39 26.7**	**+0.2**
NNZ	**Nelson**	**1.18**	**343**	P		**Pn**		**06 39 28.3**	**-0.4**
NNZ				S		**Sn**		**06 39 44.8**	**+0.6**
TCW	**Tory Channel**	**1.19**	**16**	P		**Pn**		**06 39 28.5**	**-0.2**
AMCZ	**Amberley**	**1.20**	**226**	P		**Pb**		**06 39 29.5**	**+0.2**
BHW	**Baring Head**	**1.22**	**40**	P		**Pn**		**06 39 29.1**	**-0.1**
SNZO	**South Karori**	**1.23**	**32**	P		**Pn**		**06 39 29.1**	**-0.2**
SNZO	**South Karori**	**1.23**	**32**	S		**Sn**		**06 39 45.8**	**+0.5**
LTZ	**Lake Taylor**	**1.23**	**249**	P		**Pn**		**06 39 29.5**	**+0.1**
LTZ				S		**Sb**		**06 39 45.6**	**+0.2**
MRNZ	**Matariki Terra**	**1.24**	**319**	P		**Pn**		**06 39 29.7**	**+0.1**
WEL	**Wellington**	**1.27**	**34**	P		**Pn**		**06 39 30.1**	**+0.1**
PLWZ	**Palliser**	**1.32**	**54**	P		**Pn**		**06 39 30.2**	**-0.4**
MSWZ	**Moikau Station**	**1.41**	**49**	P		**Pn**		**06 39 31.5**	**-0.4**
TKNZ	**Takaka Hill**	**1.47**	**333**	P		**Pn**		**06 39 33.2**	**+0.5**
OKCZ	**Okains Bay**	**1.49**	**202**	P		**Pn**		**06 39 32.9**	**0.0**
PAWZ	**Paruwai Farm**	**1.53**	**51**	P		**Pn**		**06 39 32.9**	**-0.7**
CAW	**Cannon Point**	**1.55**	**37**	P		**Pn**		**06 39 33.5**	**-0.2**
DUWZ	**D'Urville Isla**	**1.55**	**2**	P		**Pn**		**06 39 33.7**	**0.0**
MQZ	**McQueen's Vall**	**1.61**	**212**	P		**Pn**		**06 39 33.6**	**-0.9**
DSZ	**Denniston Nort**	**1.63**	**291**	P		**Pn**		**06 39 35.2**	**+0.3**
OXZ	**Oxford**	**1.64**	**233**	P		**Pn**		**06 39 34.3**	**-0.7**
AKCZ	**Akaroa Harbour**	**1.67**	**204**	P		**Pn**		**06 39 35.4**	**0.0**
TRWZ	**Traveller**	**1.68**	**56**	P		**Pn**		**06 39 34.9**	**-0.7**
KIW	**Kapiti Island**	**1.69**	**29**	P		**Pn**		**06 39 35.8**	**+0.1**
MTW	**Mount Morrison**	**1.73**	**47**	P		**Pn**		**06 39 35.5**	**-0.7**
INZ	**Inchbonnie**	**1.81**	**257**	P		**Pn**		**06 39 37.4**	**+0.1**
QRZ	**Quartz Range**	**1.81**	**327**	P		**Pn**		**06 39 38.2**	**+0.9**
QRZ	**Quartz Range**	**1.81**	**327**	S		**Sb**		**06 40 02.4**	**+0.4**
QRZ	**Quartz Range**	**1.81**	**327**	P		**Pn**		**06 39 38.3**	**+0.9**
OGWZ	**Otaki Gorge**	**1.83**	**34**	P		**Pn**		**06 39 37.4**	**-0.2**
RACZ	**Rakaia**	**1.85**	**221**	P		**Pn**		**06 39 37.5**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.92**	**42**	P		**Pn**		**06 39 38.5**	**-0.4**
TMWZ	**Te Maipa**	**1.98**	**52**	P		**Pn**		**06 39 38.8**	**-0.9**
MHCZ	**Mount Hutt**	**2.04**	**234**	P		**Pn**		**06 39 39.7**	**-0.9**
MRZ	**Mangatainoka R**	**2.14**	**38**	P		**Pn**		**06 39 41.0**	**-0.7**
WAKZ	**Wakanui South**	**2.16**	**222**	P		**Pn**		**06 39 41.5**	**-0.6**
WVZ	**Waitaha Valley**	**2.39**	**251**	P		**Pn**		**06 39 45.6**	**+0.2**
RPZ	**Rata Peaks**	**2.45**	**235**	P		**Pn**		**06 39 45.7**	**-0.5**
RPZ	**Rata Peaks**	**2.45**	**235**	S		**Sn**		**06 40 14.0**	**-1.7**
RPZ	**Rata Peaks**	**2.45**	**235**	P		**Pn**		**06 39 45.6**	**-0.5**
BFZ	**Birch Farm**	**2.46**	**48**	P		**Pn**		**06 39 45.3**	**-1.0**
BFZ	**Birch Farm**	**2.46**	**48**	S		**Sn**		**06 40 15.5**	**-0.4**
BFZ	**Birch Farm**	**2.46**	**48**	P		**Pn**		**06 39 45.0**	**-1.3**
ARCZ	**Arundel**	**2.52**	**230**	P		**Pn**		**06 39 46.5**	**-0.6**
WAZ	**Wanganui**	**2.73**	**19**	P		**Pn**		**06 39 51.8**	**+1.7**
TMZ	**Timaru**	**2.90**	**224**	P		**Pn**		**06 39 52.1**	**-0.2**
KHEZ	**Kahui Hut**	**3.06**	**3**	P		**Pn**		**06 39 56.1**	**+1.5**
KHEZ	**Kahui Hut**	**3.06**	**3**	P		**Pn**		**06 39 58.1**	**+3.5**
FOZ	**Fox Glacier**	**3.18**	**247**	P		**Pn**		**06 39 56.6**	**+0.5**
VRZ	**Vera Road**	**3.30**	**13**	P		**Pn**		**06 39 59.5**	**+1.7**
TUVZ	**Tukino**	**3.38**	**25**	P		**Pn**		**06 40 01.8**	**+2.7**
NGZ	**Ngauruhoe**	**3.44**	**24**	P		**Pb**		**06 40 06.4**	**-1.2**
NNVZ	**North Ngauruho**	**3.49**	**23**	P		**Pn**		**06 40 03.0**	**+2.5**
ODZ	**Otahua Downs**	**3.55**	**220**	P		**Pn**		**06 40 00.8**	**-0.5**
ODZ	**Otahua Downs**	**3.55**	**220**	P		**Pn**		**06 40 00.5**	**-0.8**
BKZ	**Black Stump Fm**	**3.77**	**33**	P		**Pn**		**06 40 04.5**	**+0.2**
HIZ	**Hauiti**	**3.91**	**12**	P		**Pn**		**06 40 08.1**	**+1.9**
JCZ	**Jackson Bay**	**4.07**	**243**	P		**Pn**		**06 40 08.4**	**-0.1**

*IDC **03** 06:41:12.2±1.6, 6°38S×129°88E, h0km, mb4.5/3, mbtmp4.6/7, ML4.6/4, MS3.1/1, Error ellipse: s-maj=53.2km s-min=23.2km az=85.0*
*NEIC **03** 06:41:27.7±1.4, 7°06S±0°08×129°44E±0°04, h143km±8km, mb4.0/8, Error ellipse: s-maj=12.9km s-min=4.4km az=200.0*
*DJA **03** 06:41:30.0±0.2, 7°S±2°×12°9E±°, h144km±6km, M4.5/17, mb4.4/17, mB5.2/6, MLv4.6/16, Mw(mB)4.5/6*
ISC 03 06:41:27.4±0.7, 7°18S±0°06×129°33E±0°07, h139km, n45, σ2°18/47, **mb4.1**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.11**	**112**	Pn		**Pn**		**06 42 02.5**	**-0.6**
SAUI	**Saumlaki**	**2.11**	**112**	P		**Pn**		**06 42 07.0**	**+3.9**
BNDI	**Bandanaira**	**2.70**	**12**	P		**Pn**		**06 42 13.2**	**+2.6**
AAI	**Ambon**	**3.65**	**342**	P		**Pn**		**06 42 24.8**	**+2.0**
MSAI	**Masohi**	**3.83**	**354**	P		**Pn**		**06 42 27.8**	**+2.6**
FAKI	**Fak Fak**	**5.13**	**35**			**Pn**		**06 42 41.4**	**-1.1**
FAKI	**Fak Fak**	**5.13**	**35**	P		**Pn**		**06 42 41.8**	**-0.7**
	0.4nm2μm30nm,0.5s								
KMPI	**Kaimana, Papua**	**5.58**	**51**	P		**Pn**		**06 42 50.2**	**+1.8**
SOEI	**Soe**	**5.63**	**243**			**Pn**		**06 42 51.9**	**+2.8**
SOEI	**Soe**	**5.63**	**243**	P		**Pn**		**06 42 52.3**	**+3.2**
	0.5nm76nm,0.7s								
MTN	**Manton Dam**	**5.90**	**163**			**Pn**		**06 42 56.5**	**+3.8**
SANI	**Sanana**	**6.09**	**327**	P		**Pn**		**06 42 57.4**	**+2.1**
	0.1nm27nm,0.8s								
BATI	**Baumata**	**6.36**	**241**	Pn		**Pn**		**06 43 01.2**	**+2.3**
	36nm,0.3s,baz=233,slow=20,SNR=19								
BATI				Sn		**Sn**		**06 44 10.5**	**+0.1**
	22nm,0.3s,baz=310,slow=18,SNR=8.7 124nm,0.4s								
BATI	**Baumata**	**6.36**	**241**	P		**Pn**		**06 43 01.4**	**+2.5**
SWI	**Sorong**	**6.56**	**17**	P		Pn		06 43 04.3	+2.7
MMRI	**Maumere**	**7.18**	**258**	Pn		**Pn**		**06 43 11.9**	**+2.1**
RKPI	**Ransiki, Papua**	**7.42**	**41**	P		**Pn**		**06 43 14.4**	**+1.3**
	87nm,1.2s								
EDFI	**Ende, Flores**	**7.73**	**258**	P		**Pn**		**06 43 19.7**	**+2.4**
	0.0nm18nm,0.7s								
KNRA	**Kununurra**	**8.46**	**184**			**Pn**		**06 43 29.5**	**+2.4**
BSSI	**Bau Bau, Buton**	**8.84**	**276**	P		**Pn**		**06 43 34.3**	**+2.1**
	18nm,0.8s								
BAKI	**Biak**	**9.00**	**49**	P		Pn		06 43 37.0	+2.7
	63nm,0.6s								
WBSI	**Waikabubak, Su**	**10.13**	**255**	P		**Pn**		**06 43 50.3**	**+0.8**
	41nm,1.1s								
FITZ	**Fitzroy Crossi**	**11.43**	**198**			**Pn**		**06 44 07.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**11.43**	**198**	Pn		**Pn**		**06 44 07.6**	**+1.0**
	1.7nm,0.3s,baz=18,slow=9.2,SNR=35								
FITZ				Sn		**Sn**		**06 46 08.0**	**-4.8**
	3.8nm,0.3s,baz=307,slow=18,SNR=7.8 3.5nm,0.3s								
PLAI	**Plampang**	**11.56**	**261**	P		**Pn**		**06 44 07.2**	**-1.2**
	22nm,0.8s								
WB0	**Warramunga Arr**	**13.44**	**159**			**Pn**		**06 44 33.3**	**+0.6**
WRAB	**Tennant Creek**	**13.58**	**159**			**Pn**		**06 44 35.2**	**+0.7**
WRA	**Warramunga Arr**	**13.58**	**160**			**Pn**		**06 44 34.9**	**+0.4**
WRA	**Warramunga Arr**	**13.58**	**160**	Pn		**Pn**		**06 44 34.3**	**-0.2**
	3.3nm,0.3s,baz=330,slow=14,SNR=98								
WRA				Sn		**Sn**		**06 47 00.9**	**-3.9**
	1.5nm,0.3s,baz=332,slow=22,SNR=5.9 3.2nm,0.3s								
WR8	**Warramunga Arr**	**13.65**	**159**			**Pn**		**06 44 36.1**	**+0.6**
AS31	**Alice Springs**	**16.97**	**165**			**Pn**		**06 45 20.4**	**+3.8**
AS31				IAmb		IAmb		06 45 26.7	
	comp=Z,3.5nm,0.6s								
ASAR	**Alice Springs**	**16.97**	**166**			**Pn**		**06 45 20.9**	**+4.3**
ASAR	**Alice Springs**	**16.97**	**166**	P		**Pn**		**06 45 19.6**	**+3.0**
	comp=Z,1.1nm,0.3s,baz=348,slow=11,SNR=72								
ASAR				S		**S**		**06 48 26.0**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=355,slow=25,SNR=5.0								
ASAR				LR		LR		06 52 41.5	
	comp=Z,64nm,19.1s,baz=101,slow=39 comp=Z,7.1nm,0.7s								
PSA00	**Pilbara Seismi**	**16.99**	**212**	P		**P**		**06 45 17.4**	**+1.0**
PSA00				IAmb		IAmb		06 45 38.4	
	comp=Z,6.6nm,0.9s								
MORW	**Morawa**	**25.12**	**208**	P		**P**		**06 46 41.3**	**+1.8**
BBOO	**Buckleboo**	**26.26**	**167**	P		**P**		**06 46 49.8**	**+0.1**
EVN	**Everest**	**53.91**	**312**	P		**P**		**06 50 36.3**	**-1.2**
MKAR	**Makanchi Array**	**68.02**	**327**	P		**P**		**06 52 11.5**	**-0.2**
MKAR	**Makanchi Array**	**68.02**	**327**	P		**P**		**06 52 10.7**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=120,slow=7.2,SNR=17 comp=Z,1.0nm,0.3s								
MAKZ	**Makanchi**	**68.19**	**327**	P		**P**		**06 52 12.9**	**+0.1**
MAKZ				IAmb		IAmb		06 52 13.3	
	comp=Z,2.2nm,1.0s								
ZALV	**Zalesovo Beam**	**71.45**	**334**	P		**P**		**06 52 31.2**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=138,slow=6.2,SNR=4.2 comp=Z,1.0nm,

POAS				eS	Sn	06 56 32.9	+0.7
VPS8	**V Poas**	**0.09**	**53**	eP	Pn	06 56 24.6	-0.3
VPS8				eS	Sn	06 56 33.0	+0.4
ZARE	**Zarcero**	**0.09**	**310**	eP	Pn	06 56 24.5	-0.3
ZARE				eS	Sn	06 56 33.4	+1.0
PALD	**Palmares**	**0.13**	**240**	eP	Pn	06 56 23.8	-1.0
PALD				eS	Sn	06 56 32.3	0.0
VPL1	**V. Platanar**	**0.14**	**340**	eP	Pn	06 56 24.5	-0.4
VPL1				eS	Sn	06 56 33.3	+0.7
RAMO	**San Ramon**	**0.15**	**257**	eP	Pn	06 56 24.2	-0.6
RAMO				eS	Sn	06 56 32.8	+0.3
ATEO	**Atenas**	**0.16**	**204**	eP	Pn	06 56 24.0	-0.8
ATEO				eS	Sn	06 56 32.3	-0.1
BELE	**Belen**	**0.19**	**139**	eP	Pn	06 56 24.4	-0.6
BELE				eS	Sn	06 56 32.8	+0.1
VPL2	**V. Platanar**	**0.19**	**341**	eP	Pn	06 56 25.0	-0.1
VPL2				eS	Sn	06 56 34.0	+1.1
HEME	**Heredia, Merce**	**0.22**	**125**	eP	Pn	06 56 25.7	+0.5
SANTA	**Santa Ana**	**0.23**	**145**	eP	Pn	06 56 24.3	-0.8
QUEU	**Ciudad Quesada**	**0.23**	**330**	eP	Pn	06 56 25.1	0.0
HDC	**Heredia**	**0.23**	**121**	eP	Pn	06 56 24.7	-0.5
DOMI	**Santo Domingo**	**0.26**	**122**	eP	Pn	06 56 25.0	-0.4
PURI	**Puriscal**	**0.27**	**179**	eP	Pn	06 56 24.7	-0.8
TIBA	**Tibas**	**0.29**	**123**	eP	Pn	06 56 25.2	-0.3
OROT	**Orotina**	**0.29**	**225**	eP	Pn	06 56 24.7	-0.7
CENT	**San Jose**	**0.30**	**129**	eP	Pn	06 56 26.1	+0.5
LUJA	**Lujan**	**0.31**	**129**	eP	Pn	06 56 25.2	-0.5
LUPE	**Guadalupe**	**0.31**	**124**	eP	Pn	06 56 25.2	-0.5
SJS	**Escuela Geolog**	**0.32**	**125**	eP	Pn	06 56 25.2	-0.5
ECI	**Escuela Centro**	**0.32**	**125**	eP	Pn	06 56 25.2	-0.5
ECI				eS	Sn	06 56 34.6	+0.5
SJS3	**Mercedes San J**	**0.32**	**125**	eP	Pn	06 56 25.4	-0.3
ITAL	**Pital**	**0.33**	**8**	eP	Pn	06 56 25.3	-0.4
AMPA	**Desamparados**	**0.34**	**132**	eP	Pn	06 56 25.0	-0.9
CORON	**Coronado**	**0.34**	**116**	eP	Pn	06 56 25.6	-0.3
ACOS	**Acosta**	**0.36**	**155**	eP	Pn	06 56 25.2	-0.8
ARZA	**Esparza**	**0.37**	**249**	eP	Pn	06 56 25.4	-0.5
CVIMO	**Finca Echandi**	**0.38**	**105**	eP	Pn	06 56 25.8	-0.5
TRIO	**Tres Rios**	**0.39**	**124**	eP	Pn	06 56 25.6	-0.7
SOCE	**Pocosol**	**0.39**	**311**	P	Pn	06 56 26.1	-0.1
SOCE	**Pocosol**	**0.39**	**311**	S	Sn	06 56 35.7	+0.8
SOCE	**Pocosol**	**0.39**	**311**	eP	Pn	06 56 26.0	-0.2
ROBF	**Roble, Puntare**	**0.44**	**251**	eP	Pn	06 56 25.9	-0.5
TAGO	**Cartago**	**0.46**	**123**	eP	Pn	06 56 26.4	-0.6
VICA	**Volcano Irazu**	**0.48**	**106**	eP	Pn	06 56 26.8	-0.7
FORC	**Fortuna**	**0.49**	**315**	eP	Pn	06 56 26.8	-0.2
LCR2	**La Lucha 2**	**0.49**	**141**	S	Sn	06 56 37.1	+0.4
VACR	**Volcan Arenal**	**0.50**	**315**	eP	Pn	06 56 26.9	-0.2
PICV	**PH. Pirrs**	**0.51**	**166**	eP	Pn	06 56 26.2	-1.1
CASO	**Castillo**	**0.51**	**307**	eP	Pn	06 56 27.0	-0.3
ARE1	**Arenal 1**	**0.52**	**310**	eP	Pn	06 56 27.2	-0.2
VARE2	**V. Arenal**	**0.52**	**310**	eP	Pn	06 56 27.1	-0.2
CEDE	**Laguna Cedeo**	**0.53**	**314**	eP	Pn	06 56 27.2	-0.2
PAR1A	**Puntarenas Pro**	**0.53**	**173**	eP	Pn	06 56 26.9	-0.5
PILE	**Guapiles**	**0.53**	**80**	eP	Pn	06 56 27.0	-0.4
REPA	**Paraso**	**0.53**	**124**	eP	Pn	06 56 27.1	-0.5
CVTG	**V. Turrialba,**	**0.54**	**87**	eP	Pn	06 56 27.1	-0.4
MTEVE	**Monteverde**	**0.54**	**291**	eP	Pn	06 56 27.3	-0.4
PCAYA	**Pacayas**	**0.54**	**112**	eP	Pn	06 56 27.2	-0.5
PITB	**Pirrs, San**	**0.54**	**148**	eP	Pn	06 56 27.0	-0.7
RAZU	**San Marcos de**	**0.54**	**148**	eP	Pn	06 56 26.9	-0.8
REZ	**Monterrey de S**	**0.55**	**317**	eP	Pn	06 56 27.6	0.0
CVTQ	**Turrialba Volc**	**0.55**	**102**	eP	Pn	06 56 27.6	-0.4
CVTR	**Volcan Turrial**	**0.56**	**100**	eP	Pn	06 56 27.4	-0.7
VTR0	**Volcan Turrial**	**0.56**	**101**	eP	Pn	06 56 27.6	-0.5
CVTV	**Tajo**	**0.57**	**102**	eP	Pn	06 56 27.7	-0.5
TABAC	**Tabacon**	**0.58**	**310**	eP	Pn	06 56 27.9	-0.1
BITO	**Garabito Jaco**	**0.58**	**311**	eP	Pn	06 56 27.8	-0.2
COVE	**Coope Vega, Sa**	**0.60**	**352**	P	Pn	06 56 27.5	-0.6
COVE	**Coope Vega, Sa**	**0.60**	**352**	S	Sn	06 56 37.5	-0.7
ABRB	**Las Abras (San**	**0.60**	**101**	eP	Pn	06 56 28.1	-0.3
VINA	**Juan Vinas**	**0.61**	**112**	eP	Pn	06 56 28.0	-0.3
PIEC	**Cerro El Cedra**	**0.61**	**144**	eP	Pn	06 56 27.5	-1.1
CARI	**Cariari**	**0.62**	**67**	eP	Pn	06 56 28.0	-0.4
VERB	**Verbena**	**0.64**	**106**	eP	Pn	06 56 28.4	-0.2
JTS	**Las Juntas de**	**0.65**	**285**	P	Pn	06 56 28.0	-0.6
JTS				S	Sn	06 56 39.7	+0.5
JTS	**Las Juntas de**	**0.65**	**285**	eP	Pn	06 56 28.0	-0.6
JUNT	**Juntas**	**0.65**	**284**	eP	Pn	06 56 28.1	-0.5
TURIB	**Turrialba**	**0.66**	**109**	eP	Pn	06 56 28.2	-0.6
CHIK	**Chiripa**	**0.66**	**299**	eP	Pn	06 56 28.9	0.0
RESJ	**San Isidro (Tu**	**0.67**	**98**	eP	Pn	06 56 28.7	-0.2
LLNJ	**Naranjito**	**0.68**	**162**	eP	Pn	06 56 28.7	-0.3
QUEP	**Quepos**	**0.70**	**168**	S	Sn	06 56 40.4	+0.2
QUEP	**Quepos**	**0.70**	**168**	P	Pn	06 56 28.8	-0.3
RVLA	**Villa Bonita**	**0.72**	**91**	eP	Pn	06 56 29.2	-0.2
EGUB	**Earth Gu¡pi**	**0.72**	**83**	eP	Pn	06 56 29.2	-0.3
TILA	**Tilaran**	**0.73**	**298**	eP	Pn	06 56 29.3	-0.3
LCOCO	**El Coco**	**0.75**	**93**	eP	Pn	06 56 29.3	-0.4
QUEB	**Quebradon, Cot**	**0.76**	**311**	eP	Pn	06 56 29.2	-0.7
BUS1	**Rivas**	**0.80**	**135**	eP	Pn	06 56 29.6	-1.2
IRES	**Siquirres**	**0.80**	**92**	eP	Pn	06 56 30.2	-0.2
INVE	**Universidad In**	**0.81**	**296**	eP	Pn	06 56 30.2	-0.3
CNAS	**Canas**	**0.82**	**292**	eP	Pn	06 56 31.2	+0.6
JCR1	**Jicaral**	**0.83**	**251**	eP	Pn	06 56 30.3	-0.4
TIMP	**Tierras Morena**	**0.83**	**304**	eP	Pn	06 56 30.4	-0.4
TENO	**El Achiote**	**0.87**	**312**	eP	Pn	06 56 31.0	-0.3
CBL1	**Cabuya**	**0.93**	**235**	eP	Pn	06 56 31.1	-0.8
MOTZ	**Rio Naranjo**	**0.93**	**307**	eP	Pn	06 56 31.9	-0.1
NYURE	**Nandayure**	**0.93**	**262**	eP	Pn	06 56 31.7	-0.3
ZEDO	**Perez Zeledon**	**0.99**	**141**	eP	Pn	06 56 32.3	-0.4
CUI	**Cuipilapa**	**0.99**	**303**	eP	Pn	06 56 32.2	-0.4
LCHIL	**Los Chiles**	**0.99**	**337**	eP	Pn	06 56 32.2	-0.5
HORNC	**Hornillas**	**1.03**	**305**	eP	Pn	06 56 32.8	-0.5
VMAR	**Armenia, Volca**	**1.04**	**311**	eP	Pn	06 56 32.9	-0.5
PLVR	**Palo Verde**	**1.04**	**283**	eP	Pn	06 56 33.4	-0.1
SAJE	**San Jernim**	**1.11**	**134**	eP	Pn	06 56 33.3	-1.1
NICO	**Nicoya**	**1.11**	**271**	eP	Pn	06 56 34.3	+0.1
VERH	**Veragua Rainfo**	**1.13**	**100**	eP	Pn	06 56 33.8	-0.6
GPS2	**Hotel Rincn d**	**1.20**	**302**	eP	Pn	06 56 34.8	-0.6
JUD3	**Juan Diaz 3**	**1.20**	**272**	eP	Pn	06 56 35.2	-0.3
GPS1	**Guardaparques**	**1.21**	**303**	eP	Pn	06 56 35.3	-0.2
EDPE	**Pejibaye, P**	**1.21**	**142**	eP	Pn	06 56 35.4	-0.1
OCHAL	**Ojochal**	**1.22**	**147**	P	Pn	06 56 35.3	-0.2
OCHAL	**Ojochal**	**1.22**	**147**	S	Sn	06 56 51.9	+0.5
VRLE	**La Escondida,**	**1.23**	**303**	eP	Pn	06 56 35.4	-0.4
BUAI	**Buenos Aires**	**1.25**	**307**	eP	Pn	06 56 35.3	-0.7
SACU	**Santa Cruz**	**1.25**	**277**	eP	Pn	06 56 36.2	+0.2
DELF	**Filadelfia**	**1.26**	**285**	eP	Pn	06 56 36.0	-0.1
LAPC	**Finca la Perla**	**1.27**	**305**	eP	Pn	06 56 35.5	-0.8
ALIBA	**Liberia Airpor**	**1.30**	**291**	eP	Pn	06 56 36.9	-0.3
LAES	**El Progreso Va**	**1.30**	**106**	eP	Pn	06 56 36.5	-0.1
ELI1	**Hacienda Flor**	**1.32**	**293**	P	Pn	06 56 36.4	-0.5
ELI1	**Hacienda Flor**	**1.32**	**293**	eP	Pn	06 56 36.5	-0.5
DRK0	**Durika**	**1.36**	**129**	P	Pn	06 56 36.9	-0.7
DRK0	**Durika**	**1.36**	**129**	S	Sn	06 56 54.7	-0.3
DRK0	**Durika**	**1.36**	**129**	eP	Pn	06 56 36.9	-0.7
SAJU	**San Juanillo,**	**1.37**	**268**	eP	Pn	06 56 36.4	-1.2
CEUA	**Cerro Uatsi, L**	**1.45**	**110**	eP	Pn	06 56 39.2	+0.6
FIMO	**Fila Mora**	**1.47**	**140**	eP	Pn	06 56 39.2	+0.1
BRIBI	**Bribri**	**1.56**	**109**	eP	Pn	06 56 40.4	+0.3
EDP2	**Potrero Grande**	**1.57**	**134**	eP	Pn	06 56 39.9	-0.4
LCRUZ	**La Cruz**	**1.60**	**306**	eP	Pn	06 56 40.2	-0.5
PTJ1	**Puerto Jimnez**	**1.87**	**147**	S	Sn	06 57 07.6	+0.7
PTJ1	**Puerto Jimnez**	**1.87**	**147**	P	Pn	06 56 45.3	+1.1
ALCO	**Alturas Coton,**	**1.87**	**128**	eP	Pn	06 56 43.6	-0.9
PIRO	**Carate, Puerto**	**1.96**	**150**	S	Sn	06 57 10.1	+0.9
PIRO	**Carate, Puerto**	**1.96**	**150**	P	Pn	06 56 58.2	+1.3
BRU2	**Volcan**	**2.08**	**129**	S	Sn	06 57 12.2	0.0
BRU2	**Volcan**	**2.08**	**129**	P	Pn	06 56 46.8	-0.4
CDITO	**Canoas**	**2.10**	**137**	S	Sn	06 57 12.1	-0.4
CDITO	**Canoas**	**2.10**	**137**	P	Pn	06 56 47.1	-0.2
JEFFS	**S de V. Baru**	**2.28**	**129**	eP	Pn	06 56 49.5	-0.4
BQTLY	**Boquete Panama**	**2.28**	**126**	eP	Pn	06 56 50.1	+0.2
PBNVO	**Pueblo Nuevo,**	**2.43**	**120**	eP	Pn	06 56 51.2	-0.6
MATN	**Matagalpa**	**3.20**	**331**	P	Pn	06 57 01.8	-0.6

*IGQ **03** 06:56:22.3±0.1, 1°.0S±0°.9×7°.9W±°, h5km±1km, MLv3.4/33*
*RSNC **03** 06:56:24.8±0.3, 1°.S±2°.×7°.9W±°, h0km, M3.0, mb3.9, ML2.7*
ISC 03 06:56:21.6±0.9,**0°.97S**±0°.02×**78.76W**±0°.02,**h17**km±8km,
n97,σ1°**93**/107,**11C-19D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASLC	**Ecuador-Salced**	**0.18**	**112**	⇑P	**Pb**	**06 56 27.2**	**+0.5**
ASLC				S	**Sg**	**06 56 31.1**	**+1.3**
ILLI	**Illinizas Sur**	**0.26**	**8**	⇑P	**Pb**	**06 56 27.8**	**-0.2**
ILLI				S	**Sg**	**06 56 33.3**	**+1.4**

PAST	**Pastocalle**	**0.30**	**24**	P	**Pb**	**06 56 29.0**	**+0.3**
AAM2	**Ambato 2 (Merc**	**0.33**	**153**	P	**Pb**	**06 56 29.5**	**+0.3**
SLOR	**San Lorenzo -**	**0.36**	**48**	⇓P	**Pb**	**06 56 29.9**	**+0.2**
BMOR	**Cotopaxi Volca**	**0.39**	**52**	⇓P	**Pb**	**06 56 30.3**	**0.0**
BMOR				S	**Sb**	**06 56 36.3**	**+0.2**
PIS1	**Pisayambo**	**0.39**	**103**	⇓P	**Pb**	**06 56 30.3**	**0.0**
PIS1				S	**Sb**	**06 56 35.3**	**-0.8**
CAMI	**Rancho Maria**	**0.39**	**41**	⇓P	**Pb**	**06 56 30.7**	**+0.5**
VCES	**Cotopaxi**	**0.40**	**65**	⇓P	**Pb**	**06 56 30.5**	**0.0**
VCES				S	**Sb**	**06 56 36.9**	**+0.3**
SUCR	**Mariscal Sucre**	**0.42**	**39**	⇓P	**Pb**	**06 56 31.3**	**+0.4**
BREF	**Cotopaxi Volca**	**0.44**	**47**	⇓P	**Pb**	**06 56 31.6**	**+0.4**
BTAM	**Cotopaxi Volca**	**0.47**	**51**	⇓P	**Pb**	**06 56 31.8**	**+0.1**
BTAM				S	**Sb**	**06 56 38.8**	**+0.3**
BVC2	**Cotopaxi Volca**	**0.47**	**48**	⇓P	**Pb**	**06 56 31.9**	**+0.2**
TAMB	**Tambo**	**0.48**	**55**	⇓P	**Pb**	**06 56 32.0**	**+0.1**
VC1	**Cotopaxi 1**	**0.48**	**48**	⇓P	**Pb**	**06 56 32.3**	**+0.3**
PIAT	**Ana Tenorio**	**0.50**	**93**	⇓P	**Pb**	**06 56 31.8**	**-0.3**
PIAT	**Ana Tenorio**	**0.50**	**93**	P	**Pb**	**06 56 31.7**	**-0.4**
PIAT				S	**Sg**	**06 56 37.8**	**-0.9**
PITA	**Cotopaxi Volc**	**0.53**	**39**	⇑P	**Pn**	**06 56 33.1**	**-1.6**
IGUA	**Igualata**	**0.53**	**167**	P	**Pb**	**06 56 33.2**	**+0.4**
CHSH	**Refugio Sur-Vo**	**0.53**	**192**	⇓P	**Pb**	**06 56 33.2**	**+0.4**
JUI6	**Juive**	**0.54**	**147**	P	**Pb**	**06 56 32.6**	**-0.2**
BIL2	**Estacion Bilba**	**0.55**	**152**	P	**Pb**	**06 56 32.9**	**0.0**
BBIL	**Ulba Tungurahu**	**0.55**	**150**	⇑P	**Pb**	**06 56 33.0**	**+0.1**
TAMH	**Tambohuasha Ch**	**0.57**	**182**	P	**Pb**	**06 56 33.8**	**+0.4**
TOMA	**Boca Toma-Volc**	**0.57**	**35**	P	**Pb**	**06 56 33.7**	**+0.4**
ARRY	**Arrayan**	**0.61**	**150**	⇑P	**Pb**	**06 56 33.8**	**-0.2**
BPAT	**Tungurahua Vol**	**0.62**	**148**	P	**Pb**	**06 56 34.4**	**+0.1**
ARIO	**Riobamba**	**0.68**	**175**	P	**Pg**	**06 56 34.2**	**-0.9**
ANTG	**Antisana-Guama**	**0.69**	**45**	P	**Pb**	**06 56 34.5**	**+0.3**
ANTM	**Antisana-La Mi**	**0.69**	**51**	⇑P	**Pb**	**06 56 35.6**	**+0.1**
TING	**Casa Alexandra**	**0.75**	**25**	P	**Pn**	**06 56 37.1**	**-0.6**
GGPT	**Toaza - Volcan**	**0.75**	**11**	⇑P	**Pn**	**06 56 36.7**	**-1.1**
ANTS	**Antisana-Sarah**	**0.76**	**52**	P	**Pb**	**06 56 36.7**	**+0.1**
JUA2	**San Juan 2**	**0.77**	**12**	⇓P	**Pb**	**06 56 36.8**	**0.0**
JSCH	**Cashca Tororas**	**0.77**	**196**	P	**Pn**	**06 56 38.8**	**+0.8**
ASDO	**Santo Domingo**	**0.79**	**333**	P	**Pb**	**06 56 36.8**	**-0.1**
ANTI	**Antisana**	**0.79**	**49**	⇑P	**Pb**	**06 56 37.2**	**0.0**
GGPC	**Guagua Pichinc**	**0.80**	**12**	⇑P	**Pb**	**06 56 37.4**	**0.0**
TERV	**Terraza Guagua**	**0.81**	**11**	⇑P	**Pb**	**06 56 37.4**	**0.0**
PINO	**Pino**	**0.82**	**11**	⇓P	**Pn**	**06 56 37.8**	**-1.1**
FENY	**Casa Vinicio C**	**0.86**	**19**	P	**Pn**	**06 56 39.2**	**-0.1**
YANA	**Yana**	**0.87**	**13**	⇑P	**Pb**	**06 56 38.2**	**-0.2**
PUYO	**Puyo, Santa Ro**	**0.90**	**125**	P	**Pn**	**06 56 41.0**	**+1.4**
APUY	**Puyo**	**0.91**	**122**	P	**Pn**	**06 56 39.6**	**0.0**
ARDO	**Archidona, Ten**	**0.96**	**91**	⇓P	**Pn**	**06 56 40.2**	**-0.2**
PULU	**Pululahua**	**1.02**	**15**	P	**Pn**	**06 56 41.0**	**-0.5**
APR2	**Miler**	**1.06**	**349**	P	**Pn**	**06 56 42.1**	**+0.4**
BV15	**Puerto Quito-O**	**1.21**	**338**	P	**Pg**	**06 56 44.6**	**-0.5**
PAC1	**Pacto, Paraso**	**1.23**	**359**	P	**Pg**	**06 56 45.5**	**+0.2**
PAC1	**Pacto, Paraso**	**1.23**	**359**	P	**Pg**	**06 56 45.2**	**-0.2**
PAC1				S	**Sn**	**06 57 03.2**	**+2.9**
CAYR	**Refugio Cayamb**	**1.24**	**38**	P	**Pg**	**06 56 45.8**	**+0.2**
OTAV	**Otavalo**	**1.24**	**15**	P	**Pg**	**06 56 44.8**	**-0.9**
FLF1	**Flavio Alfaro-**	**1.24**	**299**	⇓P	**Pg**	**06 56 45.3**	**-0.2**
ANGU	**Angureal**	**1.26**	**37**	P	**Pg**	**06 56 45.9**	**-0.2**
CUSE	**Cuicocha Este**	**1.32**	**16**	P	**Pg**	**06 56 46.7**	**-0.4**
CUSE	**Cuicocha Este**	**1.32**	**16**	P	**Pg**	**06 56 46.1**	**-1.0**
CUIC	**Cuicocha-Domo**	**1.33**	**18**	P	**Pg**	**06 56 46.5**	**-0.8**
PKYU	**Pakayacu**	**1.35**	**120**	P	**Pg**	**06 56 47.8**	**+0.2**
IMBA	**Imbabura, San**	**1.36**	**24**	P	**Pg**	**06 56 48.1**	**+0.1**
COTA	**Cotacachi**	**1.36**	**18**	P	**Pg**	**06 56 47.6**	**-0.4**
LAV4	**Lava4-Reventad**	**1.43**	**52**	P	**Pg**	**06 56 49.6**	**+0.4**
REVN	**San Rafael**	**1.44**	**52**	P	**Pg**	**06 56 49.3**	**-0.1**
URCU	**Urcuqui**	**1.49**	**20**	P	**Pg**	**06 56 48.5**	**-0.8**
YAHU	**Yahuarcocha**	**1.50**	**27**	P	**Pg**	**06 56 50.7**	**+0.1**
MILO	**Milagro-Astudi**	**1.52**	**211**	⇓P	**Pn**	**06 56 48.7**	**+0.7**
COHC	**Cochancay**	**1.57**	**198**	P	**Pg**	**06 56 51.1**	**-0.7**
COHC	**Cochancay**	**1.57**	**198**	P	**Pb**	**06 56 50.5**	**+0.4**
COHC				S	**Sg**	**06 57 11.5**	**-0.7**
AC07	**Ecuador-Guayaq**	**1.69**	**226**	P	**Pb**	**06 56 52.0**	**-0.3**
CAB1	**Cabo Pasado-Ma**	**1.77**	**289**	⇓P	**Pn**	**06 56 52.1**	**+0.8**
CASC	**Dorado de Casc**	**1.80**	**52**	P	**Pg**	**06 56 56.4**	**+0.2**
LITE1	**Lita**	**1.80**	**13**	P	**Pg**	**06 56 54.3**	**-1.9**
LNGL	**El Angel-Carch**	**1.86**	**24**	P	**Pg**	**06 56 56.4**	**-1.1**
BONI	**La Bonita**	**1.88**	**41**	P	**Pg**	**06 56 57.8**	**+0.1**
BONI	**La Bonita**	**1.88**	**41**	P	**Pg**	**06 56 57.6**	**-0.1**
BONI				S	**Sg**	**06 57 23.6**	**+1.5**
TAIS	**Taisha**	**1.89**	**138**	P	**Pg**	**06 56 57.4**	**-0.5**
CHL1	**Volc¡n Chiles**	**1.93**	**25**	P	**Pg**	**06 56 57.4**	**-1.4**
TULM	**Tulcn-Chalpat**	**1.94**	**30**	P	**Pg**	**06 56 57.7**	**-1.2**
TULM	**Tulcn-Chalpat**	**1.94**	**30**	P	**Pg**	**06 56 57.5**	**-1.4**
ECEN	**Cerro Negro**	**1.95**	**24**	P	**Pg**	**06 56 58.5**	**-0.6**
CHMA	**Chilma**	**1.95**	**21**	P	**Pg**	**06 56 58.5**	**-0.6**
CHL2	**Volc¡n Chiles**	**1.95**	**26**	P	**Pg**	**06 56 57.9**	**-1.3**
CMBC	**Cumbal**	**2.12**	**26**	P	**Pg**	**06 57 03.1**	**+0.8**
RVRD	**Rio Verde**	**2.12**	**343**	P	**Pb**	**06 56 59.1**	**-0.5**
BOSC	**San Juan Bosco**	**2.18**	**173**	P	**Pg**	**06 57 03.0**	**-0.6**
SNLR	**San Lorenzo-Es**	**2.25**	**358**	P	**Pb**	**06 57 01.8**	**0.0**
MORR	**Playas El Morr**	**2.29**	**223**	P	**Pn**	**06 57 00.6**	**+2.1**
PCRA	**Pucara 2**	**2.34**	**198**	P	**Pb**	**06 57 03.0**	**-0.6**
ISPG	**Isla Puna-Puer**	**2.43**	**215**	P	**Pb**	**06 57 05.9**	**+1.0**
SALI	**Salinas**	**2.54**	**242**	P	**Pb**	**06 57 06.9**	**+0.3**
GCUF	**Volcan Galeras**	**2.60**	**33**	P	**Pg**	**06 57 09.9**	**-1.7**
ARNL	**Arenillas**	**2.87**	**207**	P	**Pb**	**06 57 10.1**	**-2.3**
CRUC	**La Cruz**	**3.10**	**36**	P	**Pg**	**06 57 20.3**	**-0.9**
MCRA	**Macar, Loja**	**3.58**	**199**	P	**Pb**	**06 57 21.2**	**-3.3**
MCRA				S	**Sb**	**06 58 05.0**	**-2.7**
FLOC	**Florencia**	**4.01**	**51**	P	**Pb**	**06 57 27.9**	**-3.9**
POPC	**Popayan, Colom**	**4.06**	**31**	P	**Pb**	**06 57 30.9**	**-1.9**
PTLC	**Puerto Leguiza**	**4.12**	**74**	P	**Pn**	**06 57 26.7**	**+2.9**
YOTC	**Yotoco, Valle**	**5.48**	**26**	P	**Pn**	**06 57 49.1**	**+6.5**

*NEIC **03** 07:00:21.1±0.9, 36°.460N×0°.010×98°.754W±0°.009, h5km±1km, mb_Lg2.6/72, ML3.0/28, ML3.1/44, Error ellipse: s-maj=1.9km s-min=1.7km az=131.0*
NEIC 03 07:00:21.0±0.8,**36°.47N**±0°.01×**98.76W**±0°.01,**h8**km±5km,
Error ellipse: s-maj=1.5km s-min=1.3km az=188.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK038	**West end E0370**	**0.02**	**42**		Pg	07 00 22.9	+0.3
NOKA	**Waynoka**	**0.22**	**320**		Pg	07 00 25.8	+0.3
CRCN	**Carrier**	**0.62**	**86**		Pg	07 00 33.1	0.0
CROK					Sg	07 00 41.8	+0.5
CROK				IAML		07 00 46.2	
	comp=E,780nm,0.3s						
CROK				IAML		07 00 46.4	
	comp=N,801nm,0.3s						
KAN14	**Manchester OK**	**0.81**	**52**		Pg	07 00 36.4	-0.1
KAN14					Sg	07 00 47.1	+0.1
KAN14				IAML		07 00 47.7	
	comp=E,684nm,0.2s						
KAN14				IAML		07 00 56.3	
	comp=N,555nm,0.1s						
GC02	**Grant County #**	**0.82**	**62**		Pg	07 00 36.5	-0.3
GC02					Sg	07 00 48.0	+0.5
CSTR	**Hydro, Custer**	**0.82**	**176**		Pg	07 00 36.7	-0.1
CSTR					Sb	07 00 48.2	-0.5
KAN08	**Anthony NE Sta**	**0.99**	**39**		Pg	07 00 39.6	-0.4
KAN08					Sg	07 00 52.9	0.0
KAN01	**Argonia South**	**1.05**	**49**		Pg	07 00 40.9	-0.4
KAN01					Sg	07 00 54.9	-0.1
KAN01				IAML		07 00 55.4	
	comp=N,432nm,0.2s						
KAN01				IAML		07 00 56.2	
	comp=E,422nm,0.2s						
KAN13	**South Haven SW**	**1.16**	**62**		Pg	07 00 42.6	-0.8
KAN13					Sg	07 00 58.1	-0.3
BCOK	**Bluff Creek, N**	**1.23**	**131**		Pb	07 00 44.2	-0.3
BCOK					Sb	07 01 00.4	-0.1
DRZT	**Darrouzett**	**1.24**	**269**		Pn	07 00 44.2	-0.5
DRZT					Sn	07 01 01.4	-0.3
OK029	**Liberty Lake**	**1.25**	**122**		Pn	07 00 44.1	-0.7
OK029					Sb	07 01 01.1	+0.1
BLOK	**Blackwell**	**1.27**	**76**		Pn	07 00 44.5	-0.6
BLOK				IAML		07 01 27.1	
	comp=N,294nm,0.2s						
ADOK	**Arcadia Dam**	**1.39**	**125**		Pn	07 00 46.2	-0.4
OK048	**Pawnee Station**	**1.46**	**91**		Pn	07 00 47.7	0.0
OKCSW	**OKLAHOMA CITY**	**1.50**	**134**		Pn	07 00 48.5	+0.2
OK051	**E0350 and S346**	**1.55**	**88**		Pb	07 00 49.4	-0.5
FNO	**Franklin**	**1.63**	**137**		Pn	07 00 50.7	+0.6
OK052	**Battle Ridge R**	**1.65**	**106**		Pn	07 00 50.5	+0.3
OK052					Sb	07 01 13.2	+0.6
QUOK	**Quay**	**1.68**	**99**		Pn	07 00 51.1	+0.4
QUOK					Sb	07 01 14.2	+0.7
WMOK	**Wichita Mounta**	**1.72**	**181**		Pn	07 00 51.3	0.0
SMWD	**Samnorwood**	**1.82**	**222**	IAmb_Lg		07 01 19.0	
	comp=Z,47nm,0.8s						
T35A	**Sooner Cattle**	**1.86**	**75**		Pb	07 00 54.3	-1.0
DEOK	**Depew**	**1.93**	**108**		Pn	07 00 54.9	+0.8
R32A	**Long Quarter,**	**1.96**	**1**		Pb	07 00 56.0	-0.9
X34A	**Smith Ranch, M**	**2.01**	**158**		Pb	07 00 56.7	-1.0
X34A				IAmb_Lg		07 01 24.0	
	comp=Z,30nm,0.8s						
TUL3	**Leonard**	**2.46**	**102**		Pn	07 01 01.3	-0.1
TUL3				IAmb_Lg		07 01 40.7	
	comp=Z,28nm,0.8s						
KSU1	**Kansas State U**	**3.13**	**32**	Pn	Pn	07 01 11.4	+0.7
KSU1				IAmb_Lg		07 02 01.0	
	comp=Z,14nm,0.7s						
APMT	**Aspermont**	**3.33**	**200**	IAmb_Lg		07 02 13.4	
	comp=Z,19nm,1.3s						
Z35A	**Perch

TIXI	Tiksi	25.57	340	LR	LR	07 29 11.2		
	comp=E,29nm,20.1s,baz=200,slow=38							
H11N2	WAKE ISLAND Hy	30.83	160	T	T	07 52 00.5		
	baz=346							
H11N1	WAKE ISLAND Hy	30.85	160	T	T	07 51 56.4		
	baz=346,slow=74							
H11N3	WAKE ISLAND Hy	30.85	160	T	T	07 52 02.4		
	baz=346,slow=74							
H11S1	WAKE ISLAND Hy	31.97	161	T	T	07 53 33.8		
	baz=347,slow=76,SNR=32							
H11S3	WAKE ISLAND Hy	31.98	161	T	T	07 53 22.2		
	baz=347,slow=76,SNR=39							
H11S2	WAKE ISLAND Hy	31.99	161	T	T	07 53 11.3		
	baz=347,slow=76,SNR=32							
MKAR	Makanchi Array	47.55	297	LR	LR	07 42 34.0		
	comp=E,43nm,20.9s,baz=89,slow=38							
KURK	Kurchatov	47.61	303	P	P	07 21 28.0	-1.3	
KURBB	Kurchatov Arra	47.71	303	P	P	07 21 28.0	-2.0	
	comp=E,0.2nm,0.3s,baz=64,slow=9.0,SNR=2.1							
	comp=E,0.2nm,0.3s							
AAK	Ala-Archa	54.48	296	LR	LR	07 46 44.0		
	comp=E,38nm,20.2s,baz=11,slow=37							
NVAR	Mina Array Bea	59.44	65	P	P	07 22 57.7	+1.4	
	comp=E,0.4nm,0.6s,baz=314,slow=8.9,SNR=4.4							
	comp=E,0.4nm,0.6s							
PDAR	Pinedale Array	61.56	57	P	P	07 23 09.3	-1.6	
	comp=E,0.3nm,0.8s,baz=313,slow=7.5,SNR=2.2							
	comp=E,0.3nm,0.8s							
FINES	FINESS Array B	62.49	336	P	P	07 23 14.2	-2.1	
	comp=E,2.8nm,1.1s,baz=49,slow=7.4,SNR=1.7							
	comp=E,2.8nm,1.1s							
TXAR	Lajitas Array	74.45	63	P	P	07 24 33.0	+1.3	
	comp=E,0.3nm,0.6s,baz=292,slow=5.4,SNR=7.2							
	comp=E,0.3nm,0.6s							
TXAR	Lajitas Array	74.45	63	P	P	07 24 33.0	+1.3	
ASAR	Alice Springs	75.39	201	P	P	07 24 36.6	-0.2	
	comp=E,0.5nm,0.8s,baz=21,slow=9.1,SNR=6.4							
	comp=E,0.5nm,0.8s							

NEIC ***03*** *07:15:51.5±1.0,56°31N±0.09×149°25W±0.09,h21km±8km, ML3.7/66,ML3.4(AEIC),Error ellipse: s-maj=14.0km s-min=6.5km az=160.0*

IDC ***03*** *07:15:55.0±1.9,56°46N×149°86W,h0km,mb3.2/2, mbtmp3.3/4,ML3.0/2,MS3.0/11,Error ellipse: s-maj=35.6km s-min=18.9km az=54.0*

AEIC ***03*** *07:15:55.2±1.1,56°40N±0°09×149°2W±0°1,h2km±7km, Error ellipse: s-maj=13.4km s-min=8.1km az=161.0*

ISC 03 07:15:52.4±1.2,56°31N±0°08×149°23W±0°06,h35km, n142,c0694/127,MS3.0/7,Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	2.35	310	Pn	Pn	07 16 28.7	+0.2
KDAK	Kodiak Island	2.35	310		Sn	07 16 55.8	-0.4
KDAK	Kodiak Island	2.35	310	Pn	Pn	07 16 28.7	+0.2
	1.7nm,0.3s,baz=128,slow=12,SNR=38						
KDAK				Sn	Sn	07 16 51.8	-4.3
	5.4nm,0.3s,baz=144,slow=17,SNR=12						
OHAK	Old Harbor	2.42	294	Pn	Pn	07 16 29.0	-0.3
OHAK	Old Harbor	2.42	294		Sn	07 16 56.7	-0.8
OHAK	Old Harbor	2.42	294	P	Pn	07 16 29.2	-0.1
SYI	Shuyak Island	2.87	325	Pn	Pn	07 16 35.9	+0.3
SYI	Shuyak Island	2.87	325		Sn	07 17 08.8	0.0
R18K	Karluk	3.13	296		Pn	07 16 40.0	+0.9
R18K					Sn	07 17 14.3	-0.8
R18K	Karluk	3.13	296	IAML		07 17 22.4	
	comp=E,138nm,0.5s						
CNPM	China Poot	3.40	342		Pn	07 16 43.2	+0.3
CNPM	China Poot	3.40	342		Sn	07 17 21.1	-0.8
MID	Middleton Isla	3.49	25	Pn	Pn	07 16 44.0	0.0
MID				IAML		07 17 26.7	
	comp=N,116nm,0.9s						
MID				IAML		07 17 37.5	
	comp=E,94nm,1.1s						
BRSE	Bradley Lake S	3.54	347		Pn	07 16 44.3	-0.4
BRSE					Sn	07 17 24.4	-0.9
Q19K	Cape Douglas,	3.54	320		Pn	07 16 46.0	+1.2
BRLK	Bradley Lake	3.58	346		Pn	07 16 44.4	-0.9
BRLK				IAML		07 17 37.5	
	comp=E,83nm,0.6s						
KAPH	Katmai Pasha	3.59	312		Pn	07 16 47.0	+1.4
KAPH					Sn	07 17 26.7	0.0
HOM	Homer	3.60	340	Pn	Pn	07 16 43.5	-2.0
HOM				IAML		07 17 39.1	
	comp=E,197nm,1.2s						
HOM				IAML		07 18 10.6	
	comp=N,262nm,1.0s						
HOM	Homer	3.60	340		Sn	07 17 26.5	-0.2
KAHG	Katmai Hook Gl	3.62	309		Pn	07 16 46.8	+0.9
KAHG						07 16 47.5	
KAWH	Katmai	3.67	307		Pn	07 16 48.0	+1.4
KARR	Katmai Rainbow	3.69	309		Pn	07 16 48.5	+1.7
MGLS	Mageik Landsli	3.71	302		Pn	07 16 47.6	+0.6
MGLS						07 16 48.4	
CAHL	Cahill	3.74	300		Pn	07 16 48.7	+1.1
KAKN	Katmai Knife C	3.74	305		Pn	07 16 49.2	+1.6
SEW	Seward	3.81	358		Pn	07 16 47.8	-0.6
ACHA	Angle Creek He	3.82	302	Pn	Pn	07 16 50.1	+1.4
P23K	Montague Islan	3.82	14	Pn	Pn	07 16 48.5	-0.2
P23K				IAML		07 17 33.7	
	comp=E,160nm,0.3s						
P23K				IAML		07 17 33.8	
	comp=N,124nm,0.3s						
P23K	Montague Islan	3.82	14		Sn	07 17 30.8	-1.5
KJL	Kejulik	3.87	300		Pn	07 16 50.4	+1.0
KAHC	Katmai Hardscr	3.90	309		Pn	07 16 50.3	+0.5
P19K	Oil Pt	3.97	329	Pn	Pn	07 16 51.6	+0.8
P19K				IAML		07 17 46.4	
	comp=E,89nm,0.5s						
P19K				IAML		07 17 55.4	
	comp=N,101nm,1.0s						
CNTC	Contact Creek	4.11	301		Pn	07 16 53.8	+1.1
PLK4	Peulik 4	4.12	292	IAML		07 18 00.4	
	comp=E,71nm,0.8s						
PLK4	Peulik 4	4.12	292		Pn	07 16 53.8	+0.9
PLK4						07 16 53.9	
ILS	Iliamna Low So	4.19	333		Pn	07 16 54.2	+0.4
ILS						07 16 54.6	
O20K	Slope Mountain	4.19	336		Pn	07 16 54.0	+0.2
O20K						07 16 54.5	
O22K	Cooper Landing	4.19	357		Pn	07 16 54.4	+0.7
IVE	Iliamna Volcan	4.22	333		Pn	07 16 54.5	+0.2
ILSW	Iliamna Southw	4.23	332		Pn	07 16 54.5	+0.2
ILSW				IAML		07 17 52.8	
	comp=N,50nm,0.8s						
ILSW				IAML		07 17 59.0	
	comp=E,58nm,0.7s						
SLKM	Skilak Lake	4.24	353		Pn	07 16 54.4	0.0
SLKM				IAML		07 17 53.4	
	comp=E,87nm,0.8s						
SLKM				IAML		07 17 56.8	
	comp=N,66nm,0.9s						
PLK1	Peulik 1	4.30	293		Pn	07 16 55.8	+0.7
HIN	Hinchinbrook I	4.34	18	Pn	Pn	07 16 56.0	+0.2
HIN				IAML		07 17 50.8	
	comp=E,114nm,0.9s						
HIN				IAML		07 17 52.4	
	comp=N,109nm,0.6s						
KAIM	Kayak Island	4.43	33	Pn	Pn	07 16 57.4	+0.3
KAIM				IAML		07 17 54.2	
	comp=E,147nm,1.0s						
KAIM				IAML		07 17 55.6	
	comp=N,121nm,0.8s						
PWL	Port Wells	4.59	5		Pn	07 16 59.5	+0.3
PWL				IAML		07 19 57.2	
	comp=E,136nm,0.3s						
PWL				IAML		07 19 57.7	
	comp=N,122nm,0.2s						
EYAK	Cordova Ski Ar	4.63	22		Pn	07 17 00.2	+0.5
EYAK				IAML		07 17 57.0	
	comp=E,65nm,1.1s						
EYAK				IAML		07 17 58.8	
	comp=N,79nm,0.8s						
EYAK	Cordova Ski Ar	4.63	22	P	Pn	07 17 00.2	+0.5
FID	Port Fidalgo	4.68	17	Pn	Pn	07 17 00.6	+0.1
FID				IAML		07 18 05.0	
	comp=E,67nm,0.9s						
FID				IAML		07 18 05.4	
	comp=N,48nm,0.6s						
RAGM	Ragged Mountai	4.74	28	Pn	Pn	07 17 02.3	+1.0
SUCK	Suckling Hills	4.75	35	Pn	Pn	07 17 03.5	+2.2
SUCK				IAML		07 18 02.9	
	comp=N,92nm,1.2s						
SUCK				IAML		07 18 07.8	
	comp=E,80nm,1.1s						
O18K	Koktuh Hills	4.76	321		Pn	07 17 02.1	+0.5
RC01	Rabbit Creek A	4.80	357	Pn	Pn	07 17 02.2	+0.1
GOAT	Goat Mountain	4.89	27		Pn	07 17 03.9	+0.5
GOAT						07 17 04.4	
BERG	Berg Lake	5.02	33		Pn	07 17 05.2	0.0
BERG	Berg Lake	5.02	33	IAML		07 18 05.8	
	comp=N,85nm,1.1s						
GRIN	Grindle Hills	5.06	36		Pn	07 17 06.2	+0.6
SPU	Mount Spurr	5.10	344		Pn	07 17 06.1	-0.2
KNK	Knik Glacier	5.14	4	Pn	Pn	07 17 07.4	+0.7
SNH	Sunshine Point	5.14	38	Pn	Pn	07 17 07.1	+0.3
SNH				IAML		07 18 23.0	
	comp=N,48nm,1.0s						
SNH				IAML		07 18 36.0	
	comp=E,33nm,1.2s						
DIV	Divide	5.16	19	Pn	Pn	07 17 07.4	+0.3
CKL	Chakachamna La	5.16	343		Pn	07 17 06.7	-0.4
KHIT	Khitrov Hills	5.20	35		Pn	07 17 07.8	+0.1
SUA	Susitna One	5.23	352	Pn	Pn	07 17 08.2	+0.1
BMRM	Bremner River	5.26	25		Pn	07 17 09.3	+0.9
BMRM				IAML		07 18 15.2	
	comp=N,54nm,1.0s						
BMRM				IAML		07 18 15.6	
	comp=E,43nm,0.8s						
PMR	Palmer	5.30	1		Pn	07 17 09.4	+0.5
PMR	Palmer	5.30	1	P	Pn	07 17 09.8	+0.9
WAX	Waxell Ridge	5.34	36		Pn	07 17 09.7	+0.1
WAX				IAML		07 18 15.2	
	comp=E,71nm,0.7s						
STLK	Strandline Lak	5.38	347		Pn	07 17 10.7	+0.6
SPNN	North Nagishla	5.38	342		Pn	07 17 10.4	+0.2
KLU	Klutina	5.47	17		Pn	07 17 12.3	+0.9
CRQM	Cirque	5.48	33		Pn	07 17 11.9	+0.3
GHO	Glory Hole Cre	5.48	2		Pn	07 17 12.8	+1.2
SML	Sawmill	5.54	4		Pn	07 17 13.6	+1.3
TGL	Tana Glacier	5.58	34		Pn	07 17 13.5	+0.7
N18K	Kilae Creek	5.60	324	Pn	Pn	07 17 13.2	+0.1
ISLE	Juniper Island	5.62	37		Pn	07 17 15.6	+2.2
BAGL	Bagley Icefiel	5.63	39		Pn	07 17 13.4	0.0
O16K	Kokwok River B	5.75	309	Pn	Pn	07 17 16.5	+1.4
RKAV	Rock Avalanche	5.77	43		Pn	07 17 15.7	+0.2
VRDI	Verde Repeater	5.78	29	Pn	Pn	07 17 15.8	+0.2
SKT	Skwentna	5.81	349	Pn	Pn	07 17 16.1	+0.2
N25K	Chitina, Valde	5.83	22		Pn	07 17 17.1	+0.8
GLB	Gilahina Butte	5.86	26		Pn	07 17 17.6	+0.9
GRNC	Granite Creek	5.92	38		Pn	07 17 17.6	0.0
TABL	Table Mountain	5.94	42	Pn	Pn	07 17 18.1	+0.2
BALM	Baldy	5.95	34		Pn	07 17 18.2	+0.4
MCARA	McCarthy VSAT	6.02	30		Pn	07 17 19.3	+0.5
PTPK	Patty Peak	6.03	33		Pn	07 17 19.9	+0.8
CHNA	Chernabura Isl	6.06	260	P	Pn	07 17 19.8	+0.4
CNBA	Chernabura Isl	6.07	260		Pn	07 17 20.0	+0.5
PCA	Pinnacle	6.07	48	Pn	Pn	07 17 20.6	+0.9
BARN	Barnard Glacie	6.18	36		Pn	07 17 21.6	+0.3
PNL	Peninsula	6.22	53		Pn	07 17 22.0	+0.5
CTGM	Chitina Glacie	6.23	38	Pn	Pn	07 17 21.9	+0.2
LOGN	Logan Glacier	6.24	40		Pn	07 17 22.2	+0.1
BCPM	Bancas Point	6.26	50		Pn	07 17 22.8	+0.7
SDPT	Sand Point	6.41	266	Pn	Pn	07 17 24.8	+0.6
SDPT	Sand Point	6.41	266	P	Pn	07 17 24.8	+0.6
HARP	HAARP	6.45	17		Pn	07 17 25.3	+0.5
P29M	Windy Craggy	6.96	57		Pn	07 17 32.2	+0.5
S12K	Black Hills	7.22	271	Pn	Pn	07 17 35.3	0.0
PN7A	Pavlof North-7	7.24	268		Pn	07 17 36.5	+0.9
YUK6	Outpost Mounta	7.33	46		Pn	07 17 37.3	+0.3
PLBC	Pleasant Camp	7.55	60		Pn	07 17 40.2	+0.5
YUK5	Granite Creek	7.64	46		Pn	07 17 41.4	+0.2
SIT	Sitka	7.70	79	P	Pn	07 17 39.1	-2.7
BCAR	Beaver Creek A	7.75	26	Pn	Pn	07 17 44.0	+1.4
RIDG	Independent Ri	7.77	15		Pn	07 17 44.7	+1.8
BPAW	Bear Paw Mtn.	7.87	354	Pn	Pn	07 17 44.5	+0.4
BESE	Bessie Mountai	8.08	68	Pn	Pn	07 17 46.6	-0.6
FALS	False Pass	8.17	266	Pn	Pn	07 17 48.6	+0.3
FALS	False Pass	8.17	266	P	Pn	07 17 49.1	+0.8
M29M	Somme Creek	8.24	37		Pn	07 17 51.7	+2.3
JIS	Juneau Island	8.28	70	P	Pn	07 17 49.3	-0.5
IL31		8.57	7	Pn	Pn	07 17 53.7	0.0
ILAR	Eielson Array	8.57	7	Pn	Pn	07 17 55.0	+1.2
	comp=E,0.2nm,0.3s,baz=194,slow=13,SNR=11						
ILAR				Sn	Sn	07 19 27.2	-1.8
	comp=E,0.3nm,0.3s,baz=187,slow=24,SNR=6.0						
ILAR				LR	LR	07 21 22.7	
	comp=E,87nm,19.4s,baz=105,slow=39						
	comp=E,0.3nm,0.4s						
COLA	College	8.62	4	P	Pn	07 17 54.8	+0.4
WHY	Whitehorse	8.68	54		Pn	07 17 55.8	+0.4
MLY	Manley	8.78	356	Pn	Pn	07 17 57.2	+0.5
P32M	Atlin	8.88	62		Pn	07 17 58.0	0.0
DAWY	Dawson	9.18	28	Pn	Pn	07 18 03.5	+1.4
P33M	Teslin, Yukon	9.48	59		Pn	07 18 06.9	+0.5
UNV	Unalaska Valle	10.21	263	Pn	Pn	07 18 15.1	-1.1
DLBC	Dease Lake	10.58	70	Pn	Pn	07 18 21.8	+0.5
	comp=E,0.2nm,0.3s,baz=231,slow=8.6,SNR=13						
DLBC				Sn	Sn	07 20 28.1	+10
	comp=E,0.3nm,0.3s,baz=219,slow=13,SNR=4.1						
DLBC				LR	LR	07 21 45.5	
	comp=E,108nm,21.1s,baz=246,slow=32						
BBB	Bella Bella	13.00	100	LR	LR	07 22 45.3	
	comp=E,64nm,18.2s,baz=231,slow=31						
INK	Inuvik	14.01	25	Pn	P	07 19 16.0	+0.6
	comp=E,0.1nm,0.3s,baz=202,slow=11,SNR=2.1						
	comp=E,1.6nm,0.9s						
YKA	Yellowknife Ar	18.50	56	LR	LR	07 26 12.8	
	comp=E,58nm,19.7s,baz=244,slow=33						
NEW	Newport	21.07	99	LR	LR	07 27 16.5	
	comp=E,34nm,18.7s,baz=296,slow=32						
NVAR	Mina Array Bea	27.20	118	P	P	07 21 44.6	+12
	comp=E,0.4nm,1.0s,baz=314,slow=8.0,SNR=3.9						
	comp=E,0.4nm,1.0s						
PETK	Petropavlovsk-	30.20	287	LR	LR	07 34 14.4	
	comp=E,19nm,19.9s,baz=59,slow=37						
ULM	Lac du Bonnet	31.77	78	LR	LR	07 34 42.2	
	comp=E,34nm,19.8s,baz=295,slow=35						
FRB	Frobisher Bay	38.39	45	LR	LR	07 39 09.9	
	comp=E,64nm,19.3s,baz=124,slow=36						
TXAR	Lajitas Array	41.81	111	P	P	07 23 48.5	+10
	comp=E,0.3nm,0.9s,baz=317,slow=7.7,SNR=2.5						
	comp=E,0.3nm,0.9s						
ASAJ	Asahikawa	43.51	284	LR	LR	07 41 53.1	
	comp=E,17nm,20.4s,baz=35,slow=36						
TKL	Tuckaleechee C	47.90	87	LR	LR	07 45 51.0	
	comp=E,17nm,20.4s,baz=350,slow=37						
H11N2	WAKE ISLAND Hy	48.92	240	T	T	08 17 52.6	
	baz=26						
H11N3	WAKE ISLAND Hy	48.93	240	T	T	08 17 46.0	
	baz=26						
H11N1	WAKE ISLAND Hy	48.94	240	T	T	08 17 59.3	
	baz=26						
H11S1	WAKE ISLAND Hy	50.06	239	T	T	08 19 14.4	
	baz=31						
H11S2	WAKE ISLAND Hy	50.08	239	T	T	08 19 10.9	
	baz=31						
H11S3	WAKE ISLAND Hy	50.08	239	T	T	08 19 20.0	
	baz=31						
MJAR	Matsushiro Arr	51.19	280	LR	LR	07 46 09.5	
	comp=E,10nm,20.3s,baz=352,slow=36						

NEIC ***03*** *07:19:38.9±1.7,61°31N±0°02×149°91W±0°02,h10km±1km, Error ellipse: s-maj=3.2km s-min=2.8km az=353.0*

AEIC 03 07:19:41.7±1.8,61°36N±0°02×149°91W±0°04,h19km±5km, ML2.5,ML2.6/144(NEIC),Error ellipse: s-maj=2.8km s-min=2.5km az=154.0,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIS	Fire Island	0.26	214		Pg	07 19 48.9	+1.2
FIS				IAML		07 19 56.7	
	comp=N,824nm,0.7s						
FIS				IAML		07 19 58.3	
	comp=E,756nm,0.4s						
RC01	Rabbit Creek A	0.29	163		Pb	07 19 48.3	+0.1
RC01				IAML		07 19 54.9	
	comp=E,1µm,0.1s						
M22K	Willow	0.41	346		Pg	07 19 49.8	-0.3
M22K					Sb	07 19 57.2	+1.1
M22K				IAML		07 19 58.0	
	comp=N,502nm,0.5s						
M22K				IAML		07 20 00.3	
	comp=E,380nm,0.3s						
SUA	Susitna One	0.41	285		Pg	07 19 50.3	0.0
SUA					Sn	07 19 58.2	-1.7
SUA				IAML		07 20 00.6	
	comp=N,456nm,0.5s						
PMR	Palmer	0.44	58		Pg	07 19 49.9	-0.8
PMR					Sb	07 19 57.6	+0.5
PMR				IAML		07 19 58.0	
	comp=N,524nm,0.3s						
PMR				IAML		07 19 58.2	
	comp=E,375nm,0.5s						
GHO	Glory Hole Cre	0.63	49	Pg	Pb	07 19 52.7	-1.3
GHO					Sb	07 20 02.2	-0.1
GHO				IAML		07 20 03.3	
	comp=E,412nm,0.4s						
GHO				IAML		07 20 03.3	
	comp=N,240nm,0.2s						
KNK	Knik Glacier	0.70	85		Pb	07 19 53.8	-1.4
KNK					Sb	07 20 04.0	-0.5
KNK				IAML		07 20 07.2	
	comp=E,291nm,0.3s						
KNK				IAML		07 20 07.9	
	comp=N,255nm,0.3s						
CAPN	Captain Cook N	0.85	226		Pb	07 19 57.3	-0.4
SLKM	Skilak Lake	0.87	190		Pb	07 19 56.0	-2.1
SLKM				IAML		07 20 09.7	
	comp=N,264nm,0.2s						
SML	Sawmill	0.88	59	Pg	Pb	07 19 56.2	-2.1
SML					Sg	07 20 08.5	-1.1
SML				IAML		07 20 10.9	
	comp=E,236nm,0.5s						
SML				IAML		07 20 11.8	
	comp=N,198nm,0.3s						
O22K	Cooper Landing	0.89	174		Pb	07 19 55.8	-2.6
O22K					Sb	07 20 09.4	-0.4
PWL	Port Wells	0.92	123		Pb	07 19 56.6	-2.4
PWL					Sb	07 20 09.9	-0.8
STLK	Strandline Lak	0.93	279		Pb	07 19 57.8	-1.5
STLK					Sb	07 20 10.5	-0.7
SKT	Skwentna	0.99	309		Pb	07 19 58.1	-2.0
SKT					Sb	07 20 12.4	-0.5
SPCG	Spurr Capps Gl	1.02	267		Pb	07 19 58.8	-1.9
SPCG					Sb	07 20 12.8	-0.9
SPU	Mount Spurr	1.05	261		Pb	07 19 58.9	-2.3
CUT	Chulitna	1.06	351		Pb	07 19 59.4	-2.0
CUT					Sb	07 20 14.7	-0.1
SPCN	Chakachatna No	1.10	264		Pn	07 20 00.1	-2.0
SPCR	Spurr Chakacha	1.12	263		Pn	07 20 00.0	-2.3
SPCR					Sb	07 20 15.2	-1.5
SPCR	Spurr Chakacha	1.12	263		Pn	07 20 00.0	-2.3
SPCR					Sb	07 20 15.4	-1.3
M23K	Glacier View	1.13	67		Pn	07 20 00.2	-2.2
M23K					Sb	07 20 16.0	-0.9
CKL	Chakachamna La	1.18	263		Pn	07 20 01.0	-2.3
L22K	Petersville	1.24	341		Pn	07 20 02.1	-1.9
L22K					Sb	07 20 18.4	-1.6
SPWE	Spurr West	1.28	267		Pn	07 20 02.6	-1.9
SEW	Seward	1.28	170	Pn	Pn	07 20 01.3	-3.1
SEW				IAML		07 20 21.9	
	comp=N,108nm,0.3s						
SEW				IAML		07 20 23.1	
	comp=E,100nm,0.3s						
SCM	Sheep Creek Mo	1.32	68		Pn	07 20 03.2	-2.0
SCM					Sn	07 20 21.1	-1.2
SPNN	North Nagishla	1.34	271		Pn	07 20 03.7	-1.8
DFR	Drift River	1.56	241		Pn	07 20 06.1	-2.2
DFR					Sn	07 20 26.3	-1.8
WAT7	Susitna Watana	1.56	18		Pn	07 20 07.0	-1.5
WAT7					Sn	07 20 27.6	-0.6
WAT6	Susitna Watana	1.60	39		Pn	07 20 07.2	-1.8
WAT1	Susitna Watana	1.61	23		Pn	07 20 07.8	-1.2
M20K	Styx River	1.62	290		Pn	07 20 08.0	-1.3
M20K					Sn	07 20 29.8	+0.1
M20K				IAML		07 20 30.9	
	comp=N,54nm,0.8s						
BRLK	Bradley Lake	1.67	197	Pn	Pn	07 20 07.4	-2.5
BRLK				IAML		07 20 32.1	
	comp=N,76nm,0.1s						
BRLK				IAML		07 20 33.2	
	comp=E,70nm,0.3s						
NCT	North Crescent	1.68	243		Pn	07 20 08.0	-2.0
BRSE	Bradley Lake S	1.68	194		Pn	07 20 07.5	-2.5
FID	Port Fidalgo	1.78	109		Pn	07 20 08.2	-3.2
FID				IAML		07 20 35.2	
	comp=N,99nm,0.3s						
PPLA	Purkeypile	1.88	326		Pn	07 20 11.8	-1.0
PPLA				IAML		07 20 39.2	
	comp=N,49nm,0.6s						
PPLA				IAML		07 20 39.6	
	comp=E,63nm,0.4s						
HOM	Homer	1.91	207	Pn	Pn	07 20 11.0	-2.1
KLU	Klutina	1.92	84		Pn	07 20 11.1	-2.3
KLU				IAML		07 20 44.8	
	comp=E,61nm,0.6s						
HIN	Hinchinbrook I	1.93	119		Pn	07 20 10.4	-3.0
HIN				IAML		07 20 40.7	
	comp=N,72nm,0.7s						
M24K	Tolsona, Glenn	1.93	66	Pn	Pn	07 20 12.2	-1.3
CNPM	China Poot	1.96	200	Pn	Pn	07 20 11.1	-2.7
CNPM				IAML		07 20 41.9	
	comp=E,39nm,0.6s						
CNPM				IAML		07 20 42.3	
	comp=N,39nm,0.3s						
DIV	Divide	2.02	95		Pn	07 20 12.2	-2.5
DIV				IAML		07 20 38.2	
	comp=E,61nm,0.3s						
IVE	Iliamna Volcan	2.04	230		Pn	07 20 13.1	-1.9
DHY	Denali Highway	2.09	34	Pn	Pn	07 20 14.4	-1.3
DHY				IAML		07 20 44.4	
	comp=E,29nm,0.5s						
ILS	Iliamna Low So	2.10	229		Pn	07 20 14.4	-1.4
TRF	Thorofare Moun	2.10	355		Pn	07 20 15.0	-1.0
TRF				IAML		07 20 46.8	
	comp=N,43nm,0.3s						
TRF				IAML		07 20 46.9	
	comp=E,28nm,0.8s						
ILSW	Iliamna Southw	2.11	230	Pn	Pn	07 20 14.2	-1.7
RND	Reindeer	2.11	13		Pn	07 20 15.2	-0.8
L20K	Farewell, AK	2.19	303		Pn	07 20 15.5	-1.5
EYAK	Cordova Ski Ar	2.19	110		Pn	07 20 13.8	-3.2
EYAK				IAML		07 20 50.9	
	comp=E,34nm,0.6s						
EYAK				IA

L18K	**Granite Mounta**	**3.33**	**288**	Pn	Pn	07 20 30.9	-1.7
L18K				IAML		07 21 28.3	
	comp=E,9.7nm,0.8s						
L18K				IAML		07 21 35.4	
	comp=N,10nm,0.7s						
CRQM	**Cirque**	**3.35**	**97**		Pn	07 20 30.6	-2.5
J20K	**Nowinta River**	**3.43**	**327**		Pn	07 20 32.5	-1.5
J20K				IAML		07 21 34.3	
	comp=E,16nm,1.0s						
J20K				IAML		07 21 37.4	
	comp=N,14nm,0.5s						
CCB	**Clear Creek Bu**	**3.44**	**15**	Pn	Pn	07 20 33.3	-0.7
M17K	**Holitna River**	**3.62**	**274**		Pn	07 20 34.8	-1.8
M17K				IAML		07 21 36.3	
	comp=N,17nm,0.7s						
N17K	**Nushagak Hills**	**3.65**	**260**	Pn	Pn	07 20 35.0	-2.0
IL31		**3.69**	**21**	Pn	Pn	07 20 37.1	-0.4
MLY	**Manley**	**3.70**	**355**		Pn	07 20 36.6	-1.2
J19K	**Poorman**	**3.73**	**318**	Pn	Pn	07 20 36.3	-1.8
J19K				IAML		07 21 36.9	
	comp=N,7.0nm,0.8s						
J19K				IAML		07 21 43.8	
	comp=E,7.6nm,0.4s						
SCRK	**Sand Creek**	**3.79**	**44**	Pn	Pn	07 20 38.0	-1.0
SCRK				IAML		07 21 42.2	
	comp=E,7.8nm,0.7s						
J18K	**Innoko River**	**3.80**	**307**	Pn	Pn	07 20 37.4	-1.7
I23K	**Minto, Yukon-K**	**3.81**	**4**	Pn	Pn	07 20 38.1	-1.1
I23K				IAML		07 21 38.8	
	comp=E,11nm,0.6s						
I23K				IAML		07 22 18.7	
	comp=N,9.6nm,0.3s						
J25K	**Salcha River,**	**3.87**	**30**	Pn	Pn	07 20 39.6	-0.4
J25K				IAML		07 21 34.4	
	comp=N,6.7nm,0.7s						
I21K	**Tanana**	**3.94**	**347**	Pn	Pn	07 20 40.1	-1.0
I21K				IAML		07 22 05.5	
	comp=N,9.6nm,0.8s						
I21K				IAML		07 22 06.4	
	comp=E,7.9nm,0.9s						
BARN	**Barnard Glacie**	**4.00**	**91**	Pn	Pn	07 20 39.8	-2.3
BARN				IAML		07 21 45.7	
	comp=N,10nm,0.8s						
BARN				IAML		07 21 46.1	
	comp=E,8.3nm,0.8s						
MESA	**MESA**	**4.08**	**103**	Pn	Pn	07 20 41.1	-2.1
CTGM	**Chitina Glacie**	**4.18**	**92**	Pn	Pn	07 20 42.4	-2.0
CTGM				IAML		07 22 22.2	
	comp=E,6.5nm,1.0s						
CTGM				IAML		07 22 23.1	
	comp=N,9.9nm,1.0s						
K17K	**Iditarod**	**4.18**	**293**	Pn	Pn	07 20 42.7	-1.6
K17K				IAML		07 21 33.5	
	comp=N,5.3nm,1.1s						
K17K				IAML		07 21 58.1	
	comp=E,6.6nm,0.9s						
LOGN	**Logan Glacier**	**4.36**	**93**	Pn	Pn	07 20 45.0	-2.0
LOGN				IAML		07 21 34.7	
	comp=N,7.7nm,0.7s						
LOGN				IAML		07 21 35.8	
	comp=E,7.8nm,0.6s						
M16K	**Timber Creek**	**4.39**	**270**	Pn	Pn	07 20 45.9	-1.3
H23K	**Yukon River**	**4.48**	**2**	Pn	Pn	07 20 47.6	-0.9
H21K	**Melozitna River**	**4.50**	**345**	Pn	Pn	07 20 47.8	-0.9
J17K	**VABM Dome**	**4.73**	**300**	Pn	Pn	07 20 50.4	-1.4
J17K				IAML		07 22 21.2	
	comp=N,4.2nm,0.7s						
J17K				IAML		07 22 24.8	
	comp=E,3.9nm,1.1s						
O28M	**Mount Upton**	**4.76**	**93**	Pn	Pn	07 20 50.7	-1.8
O28M				IAML		07 21 46.3	
	comp=N,7.1nm,0.6s						
O28M				IAML		07 22 18.8	
	comp=E,5.4nm,1.1s						
IMAR	**Indian Mountai**	**4.94**	**341**	Pn	Pn	07 20 53.6	-1.2
N15K	**Kwethluk River**	**5.13**	**261**	Pn	Pn	07 20 56.2	-1.2
H18K	**Honhosa River**	**5.39**	**319**	Pn	Pn	07 20 59.6	-1.3
H18K				IAML		07 22 43.8	
	comp=N,3.2nm,1.1s						
H18K				IAML		07 22 45.2	
	comp=E,3.1nm,1.2s						
DAWY	**Dawson**	**5.55**	**56**	Pn	Pn	07 21 02.0	-1.1
I17K	**Unalakleet**	**5.58**	**302**	Pn	Pn	07 21 02.6	-0.9
G18K	**Tagagawik**	**5.99**	**323**	Pn	Pn	07 21 07.8	-1.3
L14K	**Kuka Creek**	**6.14**	**275**	Pn	Pn	07 21 10.5	-0.7
F17K	**Baldwin Pennin**	**7.13**	**320**	Pn	Pn	07 21 24.5	-0.2
WHY	**Whitehorse**	**7.34**	**89**	Pn	Pn	07 21 25.9	-1.9

*AFAD **03** 07:26:27.7, 36˚.45N×28˚.67E, h7km±3km, ML2.5*
*ATH **03** 07:26:27.6, 36˚.41N×28˚.77E, h5km±1km, ML2.8/6, Manual Solution by A.Moschou First location: 2019/11/03 07:27:53, This location: 2020/10/22 06:38:47 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*ISK **03** 07:26:27.2, 36˚.47N×28˚.69E, h5km, ML3.0/14*
*THE **03** 07:26:28.9, 36˚N±32˚×2˚9E±2˚6, h0km±29km, M2.7/4, MLh2.7/4*

ISC 03 07:26:27.4±1.1, 36˚.45N±0˚.02×28˚.70E±0˚.02, h2km±10km, n45, σ1§23/64, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.36**	**59**	P	Pg	07 26 27.5	-6.9
FETY	**Fethiye**	**0.36**	**59**	P	Pg	07 26 26.1	-8.2
FETY				S	**Sg**	**07 26 31.9**	**-7.2**
DALY	**Dalyan (Mula)**	**0.37**	**354**	Pg	**Pg**	**07 26 35.0**	**+0.5**
DALY				Sg	**Sb**	**07 26 41.4**	**-1.5**
RDI1	**Rhodes Town Ha**	**0.38**	**271**	P	**Pb**	**07 26 36.3**	**-0.6**
RDI1				S	**Sb**	**07 26 41.8**	**-1.4**
RODB	**Rodos**	**0.39**	**270**	P	**Pb**	**07 26 36.0**	**-0.8**
RODB				S	**Sb**	**07 26 42.1**	**-1.2**
IZZE	**Mula-Seydike**	**0.42**	**91**	P	**Pg**	**07 26 35.9**	**+0.4**
IZZE				S	**Sg**	**07 26 43.1**	**+2.1**
IZZE				*i* IAML		07 26 46.0	
	comp=N,2μm,0.5s						
IZZE				*i* IAML		07 26 47.0	
	comp=E,497nm,0.2s						
SABU	**Mula-Dalaman**	**0.43**	**30**	P	**Pg**	**07 26 36.3**	**+0.6**
SABU				*i* IAML		07 26 43.0	
	comp=E,430nm,0.2s						
SABU				S	**Sg**	**07 26 43.1**	**+1.7**
SABU				*i* IAML		07 26 44.0	
	comp=N,636nm,0.3s						
TURN	**Turunc**	**0.49**	**312**	P	**Pg**	**07 26 37.1**	**+0.3**
TURN				S	**Sg**	**07 26 44.4**	**+1.2**
TURN	**Turunc**	**0.49**	**312**	Pg	**Pg**	**07 26 37.4**	**+0.6**
TURN				Sg	**Sb**	**07 26 44.9**	**-1.5**
ARG	**Arkhangelos**	**0.52**	**244**	Pg	**Pg**	**07 26 37.9**	**+0.6**
ARG				Sg	**Sb**	**07 26 47.1**	**0.0**
ARG	**Arkhangelos**	**0.52**	**244**	P	**Pg**	**07 26 37.9**	**+0.6**
ARG				S	**Sb**	**07 26 45.6**	**-1.4**
ARG	**Arkhangelos**	**0.52**	**244**	P	**Pg**	**07 26 38.2**	**+1.0**
ARG				S	**Sb**	**07 26 45.9**	**-1.2**
CAME	**Cameli-Denizli**	**0.69**	**44**	Pg	**Pg**	**07 26 41.2**	**+0.5**
RGE1	**Gennadi, Rhode**	**0.75**	**236**	P	**Pb**	**07 26 42.7**	**-0.4**
RGE1				S	**Sb**	**07 26 52.9**	**-0.8**
AKAS	**Kas**	**0.76**	**106**	P	**Pb**	**07 26 43.9**	**+0.5**
AKAS	**Kas**	**0.76**	**106**	Pg	**Pb**	**07 26 43.3**	**-0.1**
YER	**Yerkesik**	**0.76**	**334**	Pg	**Pb**	**07 26 43.3**	**-0.1**
YER	**Yerkesik**	**0.76**	**334**	P	**Pn**	**07 26 44.4**	**-0.8**
KSL	**Kastellorizon**	**0.77**	**112**	P	**Pb**	**07 26 43.6**	**+0.1**
KSL				S	**Sn**	**07 26 56.8**	**-0.6**
KNIK	**Mula-Seydike**	**0.81**	**60**	P	**Pg**	**07 26 43.6**	**+0.7**
KNIK				S	**Sb**	**07 26 55.6**	**0.0**
KNIK				*i* IAML		07 26 59.0	
	comp=E,142nm,0.6s						
KNIK				*i* IAML		07 27 01.0	
	comp=N,137nm,0.8s						
CAEL	**Denizli, Camel**	**0.84**	**36**	P	**Pn**	**07 26 46.2**	**-0.1**
MULA	**Mugla, Merkez-**	**0.86**	**340**	P	**Pb**	**07 26 45.8**	**+0.6**
DNZT	**Denizli-Tavas-**	**0.87**	**17**	P	**Pg**	**07 26 44.6**	**+0.6**
DAT	**Datca**	**0.95**	**288**	Pg	**Pb**	**07 26 46.2**	**-0.3**
ELL	**Elmali**	**1.02**	**72**	Pg	**Pb**	**07 26 47.8**	**0.0**
YAZI	**Mula-Dat§a-**	**1.03**	**284**	P	**Pg**	**07 26 47.3**	**+0.2**
YAZI				S	**Sb**	**07 27 01.4**	**-0.4**
YAZI				*i* IAML		07 27 05.0	
	comp=N,127nm,0.4s						
YAZI				*i* IAML		07 27 06.0	
	comp=E,95nm,0.8s						
TAVA	**DENIZLI_Tavas**	**1.03**	**9**	P	**Pn**	**07 26 48.6**	**-0.4**
GOLH	**Golhisar**	**1.05**	**41**	P	**Pg**	**07 26 47.3**	**-0.1**
GOLH				S	**Sb**	**07 27 03.2**	**+0.7**
GOLH				*i* IAML		07 27 14.0	
	comp=E,85nm,0.4s						
MLSB	**Milas**	**1.12**	**319**	Pn	**Pb**	**07 26 49.5**	**0.0**
APMY	**Acipayam-Deniz**	**1.13**	**25**	Pn	**Pb**	**07 26 49.8**	**+0.1**
BDRM	**Kayabasi**	**1.18**	**302**	P	**Pb**	**07 26 50.5**	**0.0**
DNIZ	**Denizli-Tavas-**	**1.21**	**13**	P	**Pn**	**07 26 51.8**	**+0.5**
DNIZ				S	**Sn**	**07 27 08.1**	**-0.3**
DNIZ				*i* IAML		07 27 12.0	
	comp=E,297nm,0.6s						
BODT	**Bodrum**	**1.27**	**299**	Pn	**Pn**	**07 26 52.7**	**+0.5**
BODT	**Bodrum**	**1.27**	**299**	P	**Pn**	**07 26 53.6**	**+1.4**
BODT				S	**Sn**	**07 27 11.1**	**+1.3**
ESEN	**Aydn-Nazilli**	**1.38**	**348**	P	**Pg**	**07 26 54.6**	**+0.8**
ESEN				S	**Sb**	**07 27 11.4**	**-0.5**
KORT	**Korkueli**	**1.44**	**67**	Pn	**Pg**	**07 26 55.8**	**+0.9**
INCE	**Denizli-Bozkur**	**1.44**	**29**	P	**Pn**	**07 26 54.6**	**0.0**
KARP	**Karpathos**	**1.54**	**235**	Pn	**Pg**	**07 26 57.4**	**+0.6**
KARP	**Karpathos**	**1.54**	**235**	P	**Pb**	**07 26 56.2**	**-0.4**
KARP	**Karpathos**	**1.54**	**235**	P	**Pb**	**07 26 56.3**	**-0.2**
KARP				S	**Sg**	**07 27 16.8**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.63**	**337**	Pn	**Pn**	**07 26 57.7**	**+0.5**
GCAM	**G?zelcaml?**	**1.71**	**317**	Pn	**Pb**	**07 26 58.9**	**-0.7**
BUCA	**Burdur, Bucak-**	**1.73**	**59**	P	**Pb**	**07 27 00.3**	**+0.4**
SMG	**Samos**	**1.95**	**311**	P	**Pb**	**07 27 03.3**	**-0.4**
SMG				S	**Sb**	**07 27 27.8**	**-0.6**
URLA	**Izmir**	**2.54**	**319**	Pn	**Pn**	**07 27 11.0**	**+1.4**

*GCG **03** 07:49:10.0±2.3, 15˚.76N×92˚.92W, h162km±20km, MD4.0, ML3.2, MW2.9*
*MEX **03** 07:49:11.8±1.0, 15˚.82N×92˚.81W, h168km±6km, MD4.1*

ISC 03 07:49:07.6±1.6, 15˚.80N±0˚.05×92˚.78W±0˚.04, h185km±9km, n23, σ2§62/45, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.43**	**257**	*e*P	**Pn**	**07 49 33.9**	**+1.2**
PCIG				*e*S	**Sn**	**07 49 50.7**	**-1.2**
CCIG	**Comitan**	**0.78**	**52**	*e*P	**Pn**	**07 49 35.6**	**+1.1**
CCIG				*e*S	**Sn**	**07 49 54.4**	**-1.0**
CCIG	**Comitan**	**0.78**	**52**	*i* P	**Pn**	**07 49 36.5**	**+1.9**
CCIG				*e*S	**Sn**	**07 49 54.3**	**-1.1**
CCIG				IAML		07 50 02.0	
	comp=N,143nm,0.4s						
PAVE	**Pavencul**	**0.84**	**136**	*e*P	**Pn**	**07 49 36.3**	**+1.3**
PAVE				*e*S	**Sn**	**07 49 55.4**	**-0.7**
PATR	**El Naranjo**	**0.86**	**142**	*e*P	**Pn**	**07 49 35.7**	**+0.5**
PATR				*e*S	**Sn**	**07 49 54.9**	**-1.5**
CHUJ	**Union Juarez**	**0.96**	**137**	*e*P	**Pn**	**07 49 37.0**	**+1.2**
CHUJ				*e*S	**Sn**	**07 49 56.1**	**-1.4**
THIG		**1.02**	**151**	*e*P	**Pn**	**07 49 37.1**	**+1.2**
THIG				*e*S	**Sn**	**07 49 57.7**	**-0.1**
THIG		**1.02**	**151**	*e*P	**Pn**	**07 49 37.8**	**+1.9**
THIG				*e*S	**Sn**	**07 49 57.9**	**+0.1**
THIG				IAML		07 49 59.7	
	comp=E,452nm,0.4s						
TGIG		**1.03**	**341**	*e*P	**Pn**	**07 49 37.8**	**+1.7**
TGIG				*e*S	**Sn**	**07 49 56.3**	**-1.9**
TGIG		**1.03**	**341**	*e*P	**Pn**	**07 49 37.7**	**+1.6**
TGIG				*i* S	**Sn**	**07 49 56.5**	**-1.7**
TGIG				IAML		07 49 57.2	
	comp=E,159nm,0.3s						
HUEH	**Huehuetenango**	**1.32**	**111**	*e*P	**Pn**	**07 49 40.6**	**+2.0**
HUEH				*e*S	**Sn**	**07 50 01.7**	**-0.9**
RTAL	**Retalhuleu**	**1.65**	**140**	*e*P	**Pn**	**07 49 43.9**	**+2.5**
RTAL				*e*S	**Sn**	**07 50 07.9**	**+0.3**
STG2	**El Palmar, Qui**	**1.92**	**135**	*e*P	**Pn**	**07 49 44.2**	**-0.1**
STG2				*e*S	**Sn**	**07 50 07.4**	**-5.4**
UXUV	**UXUV**	**2.00**	**319**	*e*P	**Pn**	**07 49 47.2**	**+2.3**
UXUV				*e*S	**Sn**	**07 50 12.6**	**-1.4**
APG	**El Apazote**	**2.37**	**109**	*e*P	**Pn**	**07 49 51.9**	**+2.5**
APG				*i* P		07 49 51.9	
PETF	**Flores**	**3.01**	**68**	*e*P	**Pn**	**07 49 58.6**	**+2.1**
PETF				*e*S	**Sn**	**07 50 29.2**	**-5.6**
HUIG	**Huatulco**	**3.20**	**270**	*e*P	**Pn**	**07 50 00.5**	**+1.6**
HUIG				*e*S	**Sn**	**07 50 35.4**	**-3.6**
HUIG	**Huatulco**	**3.20**	**270**	*e*P	**Pn**	**07 50 00.3**	**+1.4**
HUIG				*e*S	**Sn**	**07 50 36.4**	**-2.6**
NEUV	**Arroyo Zacate**	**3.46**	**304**	*e*P	**Pn**	**07 50 04.6**	**+2.5**
NEUV				*e*S	**Sn**	**07 50 42.2**	**-2.6**
VHO	**Vista Hermosa**	**4.00**	**289**	*e*P	**Pn**	**07 50 13.5**	**+4.5**
VHO				*e*S	**Sn**	**07 50 55.4**	**-1.6**
PEIG	**Puerto Escondi**	**4.21**	**273**	*e*P	**Pn**	**07 50 12.4**	**+1.0**
PEIG				*e*S	**Sn**	**07 50 55.4**	**-6.2**
TOIG	**Toxpalan**	**4.69**	**300**	*e*P	**Pn**	**07 50 21.3**	**+3.5**
TOIG				*e*S	**Sn**	**07 51 07.2**	**-5.7**
PNIG	**Pinotepa**	**5.17**	**277**	*e*P	**Pn**	**07 50 27.7**	**+3.7**
PNIG				*e*S	**Sn**	**07 51 23.9**	**0.0**

*SJA **03** 08:06:06.7±0.7, 30˚.63S×72˚.26W, h15km, ML5.2, MW5.1*
*IDC **03** 08:06:08.9±0.4, 30˚.63S×71˚.88W, h0km, mb4.7/14, mbtmp4.6/18, ML4.5/3, MS4.5/36, Error ellipse: s-maj=19.5km s-min=13.5km az=78.0*
*MOS **03** 08:06:10.9±1.2, 30˚.60S×71˚.94W, h20km, mb5.0/14, Error ellipse: s-maj=14.4km s-min=8.4km az=100.6*
*VAO **03** 08:06:10.3±0.4, 30˚.62S×72˚.05W, h10km, mb4.8*
*NEIC **03** 08:06:10.6, 30˚.65S×72˚.09W, h14km*
*NEIC **03** 08:06:10.6, 30˚.75S×72˚.21W, h14km, Moment Tensor Solution. Duration: 1§9 Moment tensor: Scale 10¹⁶Nm; Mrr2.82; Mθθ0.06; Mϕϕ-2.88; Mrθ0.04; Mθϕ0.27; Mϕr-6.12; Fault plane solution: M₀6.75000×10¹⁶ NP1: ϕs349.99000°, δ12.68000°, λ81.03000°. NP2: ϕs179.18000°, δ77.48000°, λ92.01000°. Principal axes: T 6.7175, Plg57.0000°, Azm92.0000°; N 0.0716, Plg2.0000°, Azm359.0000°; P -6.7891, Plg32.0000°, Azm267.0000°;*
*NEIC **03** 08:06:10.4±1.5, 30˚.64S±0˚.04×72˚.12W±0˚.05, h10km±1km, mb4.9/169, Ms_20 4.7/26, Mww5.2/27, Mww5.2(GUC) Error ellipse: s-maj=7.0km s-min=6.7km az=332.0*
*GUC **03** 08:06:10.3±0.7, 30˚.73S×72˚.11W, h14km±2km, ML5.3*
*GCMT **03** 08:06:15.4±0.2, 30˚.75S±0˚.01×72˚.13W±0˚.01, h20km, MW5.2/120, Moment Tensor Solution. s78,c110; s120,c190; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.12±.15; Mθθ-0.00±.08; Mϕϕ-5.12±.11; Mrθ0.14±.16; Mθϕ0.01±.06; Mϕr-5.16±.23; Best double couple: M₀7.27000×10¹⁶ NP1:ϕs1.00000°, δ22.00000°, λ92.00000°. NP2:ϕs179.00000°, δ68.00000°, λ89.00000°. Principal axes: T 7.2710, Plg67.0000°, Azm87.0000°; N -0.0050, Plg1.0000°, Azm179.0000°; P -7.2700, Plg23.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 08:06:08.9±0.8, 30˚.66S±0˚.03×72˚.14W±0˚.04, h3km±4km, n391, σ1§38/323, mb4.9/93, MS4.7/49, 36C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.44**	**92**		**Pg**	**08 06 18.9**	**+1.6**
CO06	**Fray Jorge**	**0.44**	**92**	*e*P	**Pb**	**08 06 19.2**	**-0.1**
CO06				*i* S	**Sg**	**08 06 24.3**	**+1.3**
CO05	**La Serena**	**1.08**	**47**		**Pg**	**08 06 30.2**	**+0.7**
CO05	**La Serena**	**1.08**	**47**	*i* P	**Pg**	**08 06 30.3**	**+0.7**
CO05				*e*S	**Sb**	**08 06 44.9**	**+0.3**
CO05				IAML		08 06 48.1	
	comp=N,88μm,0.3s						
CO02	**Combarbal**	**1.12**	**119**		**Pg**	**08 06 30.4**	**-0.1**
CO02					**Sg**	**08 06 44.8**	**-0.2**
CO02	**Combarbal**	**1.12**	**119**	*e*P	**Pg**	**08 06 30.3**	**-0.1**
CO02				*i* S	**Sg**	**08 06 44.1**	**-0.9**
CO02				IAML		08 06 48.8	
	comp=E,196μm,0.4s						
CO02	**Combarbal**	**1.12**	**119**	*e*P	**Pg**	**08 06 29.4**	**-1.0**
CO02				IAML		08 06 49.0	
	comp=E,60μm,0.7s						
GO04	**Tololo Observa**	**1.26**	**68**		**Pn**	**08 06 33.0**	**-0.6**
GO04	**Tololo Observa**	**1.26**	**68**	*i* P	**Pn**	**08 06 32.9**	**-0.7**
GO04				*i* S	**Sg**	**08 06 50.4**	**+0.9**
GO04				IAML		08 06 57.3	
	comp=N,243μm,0.4s						
GO04	**Tololo Observa**	**1.26**	**68**	*e*P	**Pn**	**08 06 32.1**	**-1.5**
GO04				IAML		08 06 56.5	
	comp=E,63μm,0.5s						
CO04	**Los Peladeros**	**1.70**	**144**	*i* P	**Pn**	**08 06 39.7**	**0.0**
CO04				*e*S	**Sn**	**08 07 00.9**	**-1.3**
CO04				IAML		08 07 10.2	
	comp=N,33μm,0.3s						
CO01	**Juntas del Tor**	**1.90**	**69**		**Pn**	**08 06 43.3**	**+0.9**
CO01	**Juntas del Tor**	**1.90**	**69**	*i*P	**Pn**	**08 06 43.3**	**+0.9**
CO01				*i* S	**Sb**	**08 07 08.6**	**0.0**
CO01	**Juntas del Tor**	**1.90**	**69**	*e*P	**Pn**	**08 06 42.5**	**+0.1**
CO01				IAML		08 07 12.6	
	comp=Z,10μm,0.7s						
VA06	**Catapilco**	**2.03**	**159**		**Pn**	**08 06 43.8**	**-0.1**
VA06	**Catapilco**	**2.03**	**159**	*i*P	**Pn**	**08 06 43.8**	**-0.1**
VA06				IAML		08 07 18.7	
	comp=E,31μm,0.6s						
LCO	**Las Campanas**	**2.07**	**38**		**Pn**	**08 06 45.0**	**+0.3**
LCO	**Las Campanas**	**2.07**	**38**	P	**Pn**	**08 06 45.0**	**+0.3**
LCO	**Las Campanas**	**2.07**	**38**	*i*P	**Pn**	**08 06 45.0**	**+0.3**
LCO				*e*S	**Sb**	**08 07 14.2**	**+0.7**
LCO	**Las Campanas**	**2.07**	**38**	*e*P	**Pn**	**08 06 44.3**	**-0.5**
LCO				IAML		08 07 22.2	
	comp=Z,16μm,0.6s						
AROD	**Rodeo**	**2.36**	**79**	*e*P	**Pb**	**08 06 51.6**	**-0.6**
VA01	**Torpederas**	**2.39**	**170**		**Pn**	**08 06 48.3**	**-0.6**
VA01	**Torpederas**	**2.39**	**170**	*e*P	**Pn**	**08 06 48.7**	**-0.2**
VA01	**Torpederas**	**2.39**	**170**	*e*P	**Pn**	**08 06 49.9**	**+1.0**
VA01				IAML		08 07 31.9	
	comp=Z,4μm,0.5s						
ROCH	**El Roble**	**2.50**	**158**	*i* P	**Pn**	**08 06 50.7**	**+0.1**
ROCH				IAML		08 07 33.5	
	comp=N,15μm,0.5s						
VA03	**San Esteban**	**2.50**	**147**		**Pn**	**08 06 51.5**	**+1.0**
VA03	**San Esteban**	**2.50**	**147**	*i*P	**Pn**	**08 06 51.4**	**+0.9**
VA03				*e*S	**Sn**	**08 07 22.4**	**+0.9**
VA03				IAML		08 07 30.9	
	comp=N,17μm,0.4s						
VA03	**San Esteban**	**2.50**	**147**	*e*P	**Pn**	**08 06 50.7**	**+0.2**
VA03				IAML		08 07 30.1	
	comp=Z,12μm,1.2s						
ROC1	**El Roble**	**2.50**	**158**	*e*P	**Pn**	**08 06 50.7**	**+0.1**
ROC1				*e*S	**Sg**	**08 07 29.0**	**-0.2**
AC04	**Llanos de Chal**	**2.62**	**21**		**Pn**	**08 06 51.7**	**-0.4**
AC04	**Llanos de Chal**	**2.62**	**21**	*i*P	**Pn**	**08 06 51.7**	**-0.4**
AC04	**Llanos de Chal**	**2.62**	**21**	*e*P	**Pn**	**08 06 50.9**	**-1.2**
ACCO	**Cerro Coronel**	**2.66**	**89**	*e*P	**Pb**	**08 06 56.4**	**-0.9**
ACDV	**Cuesta del Vie**	**2.66**	**80**	*e*P	**Pb**	**08 06 56.2**	**-1.0**
ACDV				IAML		08 07 51.2	
	comp=Z,3μm,1.2s						
RTLS	**Leoncito**	**2.69**	**116**	*e*P	**Pb**	**08 06 56.7**	**-1.2**
RTLS				IAML		08 07 38.5	
	comp=Z,24μm,1.7s						
MT02	**Curacav**	**2.73**	**162**	*i*P	**Pn**	**08 06 53.1**	**-0.4**
MT02				*i* S	**Sn**	**08 07 29.3**	**+2.3**
MT02	**Curacav**	**2.73**	**162**	*e*P	**Pn**	**08 06 52.5**	**-1.0**
MT02				IAML		08 07 44.7	
	comp=Z,5μm,1.1s						
PEL	**Peldehue**	**2.77**	**154**		**Pn**	**08 06 55.2**	**+1.1**
PEL	**Peldehue**	**2.77**	**154**	P	**Pn**	**08 06 55.3**	**+1.1**
PEL	**Peldehue**	**2.77**	**154**	*i*P	**Pn**	**08 06 54.8**	**+0.7**
PEL				*e*S	**Sn**	**08 07 28.8**	**+0.7**
MT10	**Hacienda Santa**	**2.94**	**153**	*i*P	**Pn**	**08 06 57.3**	**+0.7**
MT10				IAML		08 07 45.8	
	comp=E,20μm,0.5s						
MT05	**Renca**	**2.97**	**157**		**Pn**	**08 06 58.0**	**+1.0**
MT05	**Renca**	**2.97**	**157**	*i*P	**Pn**	**08 06 57.4**	**+0.4**
MT05				IAML		08 07 47.0	
	comp=E,18μm,0.3s						
MT05	**Renca**	**2.97**	**157**	*e*P	**Pn**	**08 06 57.0**	**+0.1**
MT05				IAML		08 07 49.3	
	comp=Z,7μm,0.8s						
MT14	**Cerro Cal¡n**	**3.05**	**154**	*i*P	**Pn**	**08 06 58.8**	**+0.7**
MT14				*e*S	**Sn**	**08 07 36.0**	**+0.9**
MT14				IAML		08 07 52.3	
	comp=E,18μm,0.6s						
MT16	**CCHEN**	**3.08**	**154**		**Pn**	**08 06 59.5**	**+1.0**
MT16	**CCHEN**	**3.08**	**154**	*i*P	**Pn**	**08 06 59.2**	**+0.7**
MT16				*e*S	**Sn**	**08 07 36.1**	**+0.2**
MT16				IAML		08 07 55.8	
	comp=E,5μm,0.6s						
ZON	**Zonda**	**3.10**	**107**	P	**Pb**	**08 07 02.6**	**-2.1**
ZON	**Zonda**	**3.10**	**107**	*e*P	**Pn**	**08 07 01.5**	**+2.7**
ZON				IAML		08 07 52.2	
	comp=Z,4μm,2.0s						
MT03	**Universidad Ad**	**3.15**	**154**		**Pn**	**08 07 00.7**	**+1.2**
MT03	**Universidad Ad**	**3.15**	**154**	*i*P	**Pn**	**08 07 00.1**	**+0.7**
MT03				IAML		08 07 56.9	
	comp=N,10μm,0.2s						
MT03	**Universidad Ad**	**3.15**	**154**	*e*P	**Pn**	**08 06 59.7**	**+0.3**
MT03				IAML		08 07 58.4	
	comp=Z,9μm,1.4s						
MT04	**Ro Olivares**	**3.22**	**149**	*e*P	**Pn**	**08 07 01.8**	**+1.2**
MT04	**Ro Olivares**	**3.22**	**149**	*e*P	**Pn**	**08 07 01.6**	**+1.0**
MT04				IAML		08 07 57.5	
	comp=Z,4μm,1.6s						
MT15	**Las Vizcachas**	**3.24**	**155**	*i*P	**Pn**	**08 07 01.2**	**+0.5**
MT15				*i* S	**Sn**	**08 07 40.7**	**+0.9**
MT09	**Talagante**	**3.26**	**163**		**Pn**	**08 07 02.0**	**+1.1**
MT09	**Talagante**	**3.26**	**163**	*i*P	**Pn**	**08 07 01.5**	**+0.6**
MT09				*e*S	**Sn**	**08 07 41.0**	**+0.8**
MT09				IAML		08 07 57.8	
	comp=E,6μm,0.5s						
**MT01

comp=Z,1µm,0.6s
AC01 Pan de Azucar 4.70 17 Pn 08 07 19.4 -1.3
AC01 Pan de Azucar 4.70 17 *e*P **Pn 08 07 18.3 -2.4**
AC01 *e*P **Pn 08 07 18.3 -2.4**
ML02 Panimavida 5.12 173 IAML 08 09 01.5
comp=Z,4µm,1.2s
GO02 Mina Guanaco 5.93 23 Pn 08 07 36.8 -1.1
BI02 San Fabin de 6.03 173 Pn 08 07 39.1 +0.1
H03N1 Juan Fernandez 6.38 242 T T 08 14 42.6
baz=72,slow=72,SNR=2777
H03N2 Juan Fernandez 6.39 243 T T 08 14 38.3
baz=72,slow=72,SNR=1951
H03N3 Juan Fernandez 6.39 242 T T 08 14 38.8
baz=72,slow=72,SNR=1429
VA04 Juan Fernndez 6.40 241 Pn 08 07 43.2 -0.9
VA04 Juan Fernndez 6.40 241⇑ *e*P **Pn 08 07 43.0 -1.1**
H03S3 Juan Fernandez 6.54 239 T T 08 14 50.2
baz=82,slow=73,SNR=40
H03S1 Juan Fernandez 6.55 239 T T 08 14 56.4
baz=82,slow=73,SNR=18
H03S2 Juan Fernandez 6.56 239 T T 08 14 55.6
baz=82,slow=73,SNR=34
PLCA Paso Flores 10.13 173 Pn 08 08 35.8 +0.5
PLCA Paso Flores 10.13 173 Pn **Pn 08 08 35.2 -0.1**
comp=Z,2.1nm,0.3s,baz=335,slow=13,SNR=60
PLCA Lg Lg 08 11 19.3
comp=Z,0.3nm,0.3s,baz=37,slow=17,SNR=2.9
PLCA LR LR 08 13 21.7
comp=Z,2µm,18.5s,baz=350,slow=43
comp=Z,8.2nm,0.4s
PLCA Paso Flores 10.13 173 *e*P **Pn 08 08 35.6 +0.3**
PLCA pmax pmax
comp=Z,2.0nm,0.3s
PLCA Paso Flores 10.13 173 *e*P **Pn 08 08 35.2 -0.1**
PB11 IPOC Station P 11.09 12 Pn 08 08 53.1 +4.7
TRQA Tornquist 11.17 134 Pn 08 08 49.4 -0.1
TRQA Tornquist 11.17 134 P **Pn 08 08 49.4 -0.1**
PB12 IPOC Station P 12.11 8 Pn 08 08 58.4 -4.0
PSAL Palomas, Salto 12.50 96 *e*P **Pn 08 09 05.7 -1.9**
CPUP Villa Florida 13.72 75 Pn 08 09 23.3 -1.1
CPUP Villa Florida 13.72 75 Pn **Pn 08 09 20.6 -3.7**
comp=Z,0.1nm,0.3s,baz=125,slow=13,SNR=10
CPUP Sn **Sn 08 11 53.0 -4.4**
comp=Z,0.4nm,0.3s,baz=64,slow=16,SNR=2.3
CPUP Lg Lg 08 13 00.4
comp=Z,0.6nm,0.3s,baz=14,slow=20,SNR=2.0
CPUP LR LR 08 14 59.7
comp=Z,934nm,20.1s,baz=113,slow=39
comp=Z,0.6nm,0.5s
CPUP Villa Florida 13.72 75 P **Pn 08 09 23.3 -1.1**
CPUP 08 11 53.0
LPAZ La Paz 14.77 15 Pn 08 09 36.1 -3.2
LPAZ La Paz 14.77 15 Pn **Pn 08 09 35.3 -4.1**
comp=Z,0.4nm,0.3s,baz=192,slow=6.5,SNR=26
LPAZ La Paz 14.77 15 P **Pn 08 09 36.1 -3.2**
LPAZ La Paz 14.77 15 *e*P **Pn 08 09 36.5 -2.9**
COYC Coyhaique 14.89 180 Pn 08 09 39.1 -1.1
PLTB Pedras Altas 15.90 99 P **Pn 08 09 52.9 -0.8**
PLTB Pedras Altas 15.90 99 *e*P **Pn 08 09 51.2 -2.5**
CPSB Cacapava Do Su 16.12 94 *e*P **Pn 08 09 56.3 -0.2**
AY03 Cochrane 16.57 181 Pn 08 10 02.0 -0.1
AMBA Amambai (Brazi 17.13 67 *e*P **Pn 08 10 09.8 +0.4**
SIV San Ignacio 17.77 37 P **Pn 08 10 14.4 -3.0**
comp=Z,0.3nm,0.3s,baz=229,slow=10,SNR=58
SIV LR LR 08 18 22.0
comp=Z,3µm,18.7s,baz=218,slow=42
comp=Z,14nm,0.5s
ITAB Concordia 17.84 84 Pn 08 10 17.4 -0.8
ITAB Concordia 17.84 84 *e*P **P 08 10 19.6 +0.6**
AQDB Aquidauana 17.95 59 Pn 08 10 19.2 -0.3
AQDB Aquidauana 17.95 59 *e*P **Pn 08 10 19.1 -0.5**
CNLB Canela 18.49 91 *e*P **Pn 08 10 27.4 +1.1**
PTGB Pitanga 18.73 76 *e*P **P 08 10 28.9 +0.1**
NNA Nana 19.09 346 P **P 08 10 32.3 -0.5**
NNA Nana 19.09 346 P **P 08 10 32.1 -0.6**
comp=Z,3.8nm,0.5s,baz=182,slow=12,SNR=1.6
NNA Nana 19.09 346 *i* P **P 08 10 32.7 -0.1**
NNA pmax pmax
comp=Z,113nm,2.7s
PTLB Pontes e Lacer 19.27 41 P **P 08 10 34.2 -0.6**
PTLB Pontes e Lacer 19.27 41 *e*P **P 08 10 33.0 -1.8**
PP1B Ponte de Pedra 20.39 54 *e*P **P 08 10 45.8 -1.2**
MAJ01 Sao Joao Batis 20.48 87 *e*P Pn 08 10 49.1 -1.0
VILB Vilhena 20.79 35 P **P 08 10 50.9 -0.5**
VILB IAmb IAmb 08 11 06.1
comp=Z,54nm,0.9s
VILB Vilhena 20.79 35 *e*P **P 08 10 51.0 -0.3**
SALV Santo Antonio 21.04 49 *e*P **P 08 10 52.6 -1.3**
C2SB Chapadao do Su 21.12 60 *e*P **P 08 10 55.3 +0.4**
FRTB Fartura 21.38 76 *e*P **P 08 10 56.8 -0.8**
ITRB Iturama 22.49 66 *e*P **P 08 11 08.2 -1.4**
SPB Sao Paulo 23.07 78 P **P 08 11 14.5 -1.1**
SPB IAmb IAmb 08 11 18.4
comp=Z,42nm,1.2s
SPB Sao Paulo 23.07 78 *e*P **P 08 11 16.1 +0.5**
BB19B Bebedouro 23.26 71 *e*P **P 08 11 17.8 +0.1**
EFI East Falkland 23.44 158 IAMs_20 IAMs_20 08 20 45.9
comp=Z,2µm,20.0s
EFI East Falkland 23.44 158 *i* P **P 08 11 18.9 -0.2**
EFI pmax pmax
comp=Z,58nm,1.0s
RCLB Rio Claro- Sao 23.46 75 *e*P **P 08 11 18.9 -0.9**
VAO Valinhos 23.69 77 P **P 08 11 21.1 -1.0**
VAO IAmb IAmb 08 11 22.4
comp=Z,28nm,0.6s
VAO Valinhos 23.69 77 *e*P **P 08 11 20.3 -1.7**
PDRB Porto dos Gac 23.74 40 *e*P **P 08 11 22.7 +0.2**
ARAG Araguaiana, MT 23.83 56 *e*P **P 08 11 23.0 -0.4**
USHA Ushuaia 24.30 175 P **P 08 11 28.4 +1.0**
comp=Z,56nm,0.5s,baz=305,slow=5.0,SNR=1.6
comp=Z,56nm,0.5s
CLDB Colider 24.86 41 *e*P **P 08 11 32.7 -0.1**
IPMB Ipameri, GO 25.13 65 *e*P **P 08 11 33.5 -1.8**
BSCB Bom Sucesso 26.39 75 *e*P **P 08 11 45.6 -1.1**
BDFB Brasilia 26.67 61 P **P 08 11 48.0 -1.4**
BDFB IAmb IAmb 08 12 08.4
comp=Z,22nm,0.8s
BDFB Brasilia 26.67 61 P **P 08 11 48.1 -1.2**
comp=Z,14nm,0.6s,baz=232,slow=8.4,SNR=46
BDFB LR LR 08 23 23.8
comp=Z,3µm,18.2s,baz=237,slow=39
comp=Z,14nm,0.6s
TEFE Tefe 27.92 16 *e*P **P 08 12 00.2 -0.2**
NPGB Novo Progresso 28.28 37 *e*P **P 08 12 02.4 -1.2**
COHC Cochancay 28.84 345 P 08 12 08.8 +0.2
MACA Manacapuru-AM 29.42 24 P **P 08 12 13.7 0.0**
MACA Manacapuru-AM 29.42 24 *e*P **P 08 12 13.4 -0.3**
ITTB Itaituba 30.39 34 *e*P **P 08 12 21.1 -1.2**
SJMB Sao Joao De Ma 30.44 74 *e*P **P 08 12 21.4 -1.4**
SDBA SAO DESIDERIO 31.04 60 *e*P **P 08 12 26.9 -1.2**
OTAV Otavalo 31.31 348 *e*P **P 08 12 31.7 +0.7**
SMTB Santa Maria do 31.55 52 *e*P **P 08 12 31.8 -0.8**
PRPB Parauapebas 32.14 45 *e*P **P 08 12 36.9 -1.0**
FLOC Florencia 32.24 353 P 08 12 41.7 +3.1
FLOC IAmb IAmb 08 12 52.1
comp=Z,13nm,1.0s
RPN Rapa Nui 32.66 267 LR LR 08 22 26.4
comp=Z,732nm,18.4s,baz=64,slow=30
MAL2 Monte Alegre, 33.18 34 IAmb IAmb 08 12 46.9
comp=Z,16nm,0.8s
CMC01 Camacan, BA 33.52 70 *e*P **P 08 12 49.4 -0.4**
PMSA Palmer Station 34.51 174 LR LR 08 27 33.7
comp=Z,838nm,18.8s,baz=346,slow=37
BOAV Boa Vista 34.69 21 P **P 08 12 59.4 -0.6**
BOAV IAmb IAmb 08 13 00.9
comp=Z,17nm,0.7s
BOAV Boa Vista 34.69 21 *e*P **P 08 12 60.0 0.0**
ROSC El Rosal 35.36 356 P **P 08 13 05.4 -0.8**
ROSC IAmb IAmb 08 13 29.3
comp=Z,21nm,1.1s
ROSC El Rosal 35.36 356 P **P 08 13 07.8 +1.6**
comp=Z,5.9nm,0.4s,baz=103,slow=18,SNR=7.3
ROSC LR LR 08 28 28.8
comp=Z,722nm,18.3s,baz=211,slow=38
comp=Z,5.9nm,0.4s
RUSC La Rusia 36.36 358 P 08 13 17.4 +2.5
SDV Santo Domingo 39.35 2 P **P 08 13 38.0 -1.8**
SDV Santo Domingo 39.35 2 *e*P **P 08 13 40.5 +0.7**
BAUV El Baul 39.58 6 P 08 13 40.9 -0.5
MDP Montagnes des 40.16 31 LR LR 08 32 29.7
comp=Z,2µm,18.9s,baz=202,slow=40
JTS Las Juntas de 42.54 341 *i* P **P 08 14 06.6 +0.7**
JTS pmax pmax
comp=Z,35nm,2.2s

CRPR Cabo Rojo, PR 48.63 6 P P 08 14 54.9 +0.9
OBIP Obispado Ponce 48.72 7 P P 08 14 55.5 +0.8
SJG San Juan 48.83 8 P **P 08 14 55.7 +0.1**
SJG San Juan 48.83 8 P **P 08 14 55.7 +0.1**
SJG pmax pmax
comp=Z,35nm,1.1s
BELA Belgrano 2 50.17 170 P **P 08 15 06.2 +1.0**
BELA IAmb IAmb 08 15 06.9
comp=Z,20nm,1.3s
CMIG Matias Romero 52.28 332 LR LR 08 32 45.8
comp=Z,208nm,19.6s,baz=178,slow=30
VNA3 Neumayer Olymp 52.48 159⇑P **P 08 15 22.8 +0.1**
comp=Z,7.9nm,0.8s
VNA1 Neumayer--Stat 52.78 158⇑P **P 08 15 25.6 +0.8**
comp=Z,13nm,1.0s
VNA2 Neumayer--Watz 53.12 158⇑P **P 08 15 27.6 +0.3**
comp=Z,18nm,1.3s,baz=290,slow=8.5
SNAA Sanae 54.71 159⇑P **P 08 15 39.4 +0.3**
comp=Z,335nm,0.6s
SNAA Sanae 54.71 159 P **P 08 15 39.5 +0.5**
SNAA IAMs_20 IAMs_20 08 36 46.6
comp=Z,529nm,20.0s
SNAA Sanae 54.71 159 P **P 08 15 39.4 +0.3**
comp=Z,11nm,0.5s,baz=276,slow=6.6,SNR=225
SNAA LR LR 08 36 58.1
comp=Z,508nm,21.2s,baz=290,slow=34
comp=Z,11nm,0.5s
SNAA Sanae 54.71 159 *i* P **P 08 15 39.0 0.0**
SNAA pmax pmax
comp=Z,52nm,1.2s
UNM Universidad Na 56.09 329 IAMs_20 IAMs_20 08 35 04.8
comp=Z,698nm,19.0s
TROLL Troll, Antarti 56.42 159⇑P **P 08 15 51.8 +0.4**
comp=Z,351nm,0.5s
NVL N'lazarevskaya 59.42 157 *e*P **P 08 16 14.8 +2.5**
NVL *e* 08 18 27.9
NVL *e*PPP PPP 08 19 48.2
NVL *e*S **S 08 24 26.2 +4.5**
NVL *e*SS **SS 08 28 22.6 +6.7**
NVL pmax pmax
comp=Z,10.0nm,0.9s
NVL MLR MLR
comp=Z,96nm,17.0s
QSPA South Pole Qui 59.56 180 P 08 16 17.1 +3.5
QSPA South Pole Qui 59.56 180 P **P 08 16 16.8 +3.3**
comp=Z,12nm,0.9s,baz=150,slow=6.4,SNR=51
QSPA LR LR 08 41 30.3
comp=Z,143nm,18.7s,baz=172,slow=36
HKT Hockley 64.36 337 *i* P **P 08 16 47.6 +1.8**
HKT pmax pmax
comp=Z,5.0nm,1.3s
LPIG La Paz 65.60 322 LR LR 08 40 26.0
comp=Z,71nm,18.3s,baz=130,slow=31
HPIG 65.63 327 IAmb IAmb 08 17 02.6
comp=Z,9.2nm,1.1s
JCT Junction City 66.25 334 P **P 08 16 58.8 +0.5**
JCT IAmb IAmb 08 17 10.0
comp=Z,7.5nm,0.8s
JCT Junction City 66.25 334 P **P 08 16 58.8 +0.5**
JCT pmax pmax
comp=Z,8.0nm,0.8s
WHTX Lake Whitney, 66.77 337 P **P 08 17 01.9 +0.4**
TXAR Lajitas Array 66.79 330 P 08 17 01.3 -0.5
TXAR Lajitas Array 66.79 330 P **P 08 17 03.5 +1.6**
comp=Z,2.1nm,0.8s,baz=151,slow=8.1,SNR=21
comp=Z,2.1nm,0.8s
TX31 Lajitas Ar. Si 66.79 330 IAmb IAmb 08 18 13.3
comp=Z,9.4nm,1.3s
SWET Sewanee 66.80 348 P 08 17 01.9 +0.2
SWET IAmb IAmb 08 17 19.7
comp=Z,11nm,0.9s
VNDA Vanda 67.35 191 P **P 08 17 05.6 +0.9**
VNDA IAmb IAmb 08 17 27.4
comp=Z,26nm,1.9s
VNDA Vanda 67.35 191 P **P 08 17 06.8 +2.1**
comp=Z,1.5nm,0.8s,baz=63,slow=2.0,SNR=4.4
comp=Z,1.5nm,0.8s
V48A Smith Brothers 67.48 347 P **P 08 17 05.9 0.0**
LCAR Lake Charles 68.74 344 P 08 17 14.6 +0.8
LCAR IAmb IAmb 08 17 15.1
comp=Z,5.9nm,0.7s
SYO Syowa Base 69.00 159⇑ *e*P **P 08 17 13.6 -1.5**
SYO Syowa Base 69.00 159⇑ *i*pP **P 08 17 15.0 -0.1**
SYO Syowa Base 69.00 159⇓ *e*sP sP 08 17 19.0 +3.6
MNTX Cornudas Mount 69.57 330 P 08 17 19.2 +0.1
MNTX IAMs_20 IAMs_20 08 44 13.8
comp=Z,467nm,18.0s
HHAR Hobbs 69.67 341 P 08 17 20.3 +0.7
HHAR IAmb IAmb 08 17 21.7
comp=Z,15nm,1.2s
TUL3 Leonard 69.85 340 IAmb IAmb 08 17 38.8
comp=Z,14nm,1.1s
BBTS Babate 69.92 58 LR LR 08 47 55.3
comp=Z,313nm,18.3s,baz=104,slow=36
EPT El Paso 70.13 329 IAMs_20 IAMs_20 08 44 11.5
comp=Z,542nm,20.0s
FVM French Village 70.40 345 IAmb IAmb 08 17 26.1
comp=Z,9.0nm,0.6s
MSTX Muleshoe 70.49 333 IAmb IAmb 08 17 43.7
comp=Z,12nm,0.9s
CCM Cathedral Cave 70.65 344 P 08 17 25.9 +0.3
CCM Cathedral Cave 70.65 344 P **P 08 17 25.9 +0.3**
CCM pmax pmax
comp=Z,18nm,1.1s
Y22A Socorro 72.17 330 IAmb IAmb 08 18 15.5
comp=Z,11nm,1.4s
P38A Dawn 72.70 343 IAmb IAmb 08 17 56.0
comp=Z,9.0nm,0.9s
ANMO Albuquerque 72.82 331 IAMs_20 IAMs_20 08 45 05.8
comp=Z,330nm,20.0s
ANMO Albuquerque 72.82 331 LR LR 08 45 26.9
comp=Z,346nm,19.6s,baz=238,slow=32
ANMO Albuquerque 72.82 331 *i* P **P 08 17 38.9 -0.1**
ANMO pmax pmax
comp=Z,6.0nm,1.4s
T25A Trinidad 73.91 334 IAmb IAmb 08 18 05.0
comp=Z,16nm,1.2s
DBIC Dimbokro 74.22 72 P 08 17 46.1 -1.4
DBIC Dimbokro 74.22 72 P **P 08 17 46.9 -0.6**
comp=Z,6.1nm,0.5s,baz=252,slow=7.0,SNR=18
DBIC LR LR 08 47 58.9
comp=Z,780nm,19.2s,baz=245,slow=34
comp=Z,6.1nm,0.5s
X16A Lo Mia Camp, P 74.59 327 IAmb IAmb 08 18 02.4
comp=Z,15nm,1.5s
SDCO Great Sand Dun 74.86 333 P **P 08 17 51.1 +0.1**
SDCO IAmb IAmb 08 18 20.4
comp=Z,12nm,1.5s
Y14A Wickenburg 74.94 326 IAmb IAmb 08 18 05.2
comp=Z,18nm,1.9s
SADO Sadowa 75.34 355 LR LR 08 53 06.2
comp=Z,1µm,21.0s,baz=176,slow=37
S22A 4UR Ranch, Cre 75.38 332 IAmb IAmb 08 17 57.8
comp=Z,25nm,2.0s
WUAZ Wupatki 75.46 328 IAmb IAmb 08 18 08.3
comp=Z,8.5nm,1.1s
MVCO Mesa Verde 75.61 331 IAmb IAmb 08 18 15.2
comp=Z,10nm,1.2s
BC3 Big Chuckawall 75.93 324 IAmb IAmb 08 18 10.0
comp=Z,12nm,1.4s
IRM Iron Mountain 76.17 324 IAmb IAmb 08 18 02.0
comp=Z,18nm,1.9s
W13A Hualapai Mount 76.31 326 IAmb IAmb 08 18 35.6
comp=Z,16nm,2.0s
MAW Mawson 76.40 164 P **P 08 17 59.9 +0.7**
comp=Z,7.7nm,0.5s,baz=220,slow=7.8,SNR=83
MAW LR LR 08 50 58.3
comp=Z,493nm,20.6s,baz=226,slow=35
comp=Z,7.7nm,0.5s
PFO Pinyon Flats O 76.41 323 *i* P **P 08 17 59.7 -0.1**
PFO pmax pmax
comp=Z,7.0nm,1.1s
PV01 Paradox Valley 76.43 331 P **P 08 17 59.8 -0.1**
PV01 IAmb IAmb 08 18 29.6
comp=Z,14nm,1.6s
PV13 Radium Mtn., P 76.55 331 IAmb IAmb 08 19 00.8
comp=Z,8.4nm,1.1s
PV02 Paradox Valley 76.56 331 IAmb IAmb 08 18 04.1
comp=Z,11nm,1.1s
PV05 Paradox Valley 76.60 331 IAmb IAmb 08 18 14.7
comp=Z,12nm,1.3s
PV19 Morning Glory 76.75 331 IAmb IAmb 08 18 04.1
comp=Z,16nm,1.4s
PV10 Paradox Valley 76.83 331 IAmb IAmb 08 18 30.9
comp=Z,15nm,1.0s

PV23 Carpenter Ridg 76.88 331 IAmb IAmb 08 18 53.3
comp=Z,9.1nm,1.0s
HMU Henry Mountain 77.19 330 IAmb IAmb 08 18 19.5
comp=Z,20nm,1.5s
ECSD EROS Data Cent 77.35 342 P 08 18 05.9 +1.1
ECSD IAmb IAmb 08 18 33.3
comp=Z,13nm,1.0s
KNB Kanab 77.36 328 IAmb IAmb 08 18 59.8
comp=Z,17nm,1.4s
RAR Rarotonga 77.54 253 LR LR 08 43 53.1
comp=Z,136nm,21.1s,baz=116,slow=29
HAYD Hayden 77.94 333 IAmb IAmb 08 18 24.5
comp=Z,10.0nm,1.2s
SZCU Shurtz Canyon 77.95 328 IAmb IAmb 08 18 39.0
comp=Z,16nm,1.8s
O20A White River Ci 78.00 332 IAmb IAmb 08 18 11.9
comp=Z,16nm,1.3s
Q16A Castle Valley 78.19 330 IAmb IAmb 08 18 23.3
comp=Z,6.5nm,0.8s
CCCA Chr Cany lake 78.37 324 IAmb IAmb 08 18 25.9
comp=Z,11nm,1.2s
P17A Butcher Ranch, 78.46 330 IAmb IAmb 08 18 25.6
comp=Z,16nm,1.5s
WSHM Spangler Hills 78.50 324 IAmb IAmb 08 18 25.5
comp=Z,22nm,2.0s
TMUT Trail Mountain 78.52 330 IAmb IAmb 08 18 52.0
comp=Z,21nm,1.9s
RDMU Red Mountain 78.90 332 IAmb IAmb 08 18 16.5
comp=Z,14nm,1.2s
BSUT Blindstream Ca 79.36 331 IAmb IAmb 08 18 30.2
comp=Z,8.6nm,1.1s
K22A Casper 79.51 335 IAmb IAmb 08 18 20.0
comp=Z,27nm,1.4s
DUG Dugway, Tooele 79.95 330 IAMs_20 IAMs_20 08 49 52.7
comp=Z,356nm,21.0s
TCUT Toone Canyon 80.12 331 IAmb IAmb 08 18 33.8
comp=Z,7.6nm,0.8s
TSUM Tsumeb 80.23 106 LR LR 08 50 01.1
comp=Z,538nm,18.4s,baz=335,slow=33
HWUT Hardware Ranch 80.59 331 IAmb IAmb 08 18 35.9
comp=Z,7.0nm,0.8s
HWUT IAMs_20 IAMs_20 08 51 05.4
comp=Z,334nm,19.0s
PD31 Pinedale Array 80.75 333 IAmb IAmb 08 18 47.6
comp=Z,14nm,1.6s
PDAR Pinedale Array 80.75 333 P **P 08 18 23.8 +0.1**
PDAR Pinedale Array 80.75 333 P **P 08 18 24.1 +0.5**
comp=Z,1.1nm,0.5s,baz=139,slow=8.1,SNR=17
PDAR LR LR 08 51 07.3
comp=Z,109nm,19.2s,baz=136,slow=33
comp=Z,1.1nm,0.5s
BW06 Boulder Array 80.75 333 IAmb IAmb 08 18 47.6
comp=Z,13nm,1.6s
LHV Little Huntoon 81.06 325 IAmb IAmb 08 18 52.2
comp=Z,12nm,1.4s
NVAR Mina Array Bea 81.10 325 P **P 08 18 27.5 +1.9**
comp=Z,1.3nm,0.8s,baz=150,slow=5.9,SNR=8.8
NVAR LR LR 08 48 22.9
comp=Z,75nm,18.8s,baz=139,slow=31
comp=Z,1.3nm,0.8s
AHID Auburn Hatcher 81.36 332 P **P 08 18 26.8 -0.1**
AHID IAmb IAmb 08 18 39.3
comp=Z,16nm,1.6s
AGMN Agassiz Nation 81.43 344 IAmb IAmb 08 18 28.0
comp=Z,5.8nm,0.7s
BOSA Boshof 81.71 118 P **P 08 18 28.9 -0.3**
BOSA IAmb IAmb 08 18 30.5
comp=Z,19nm,1.2s
BOSA Boshof 81.71 118 P **P 08 18 29.4 +0.2**
comp=Z,5.1nm,0.5s,baz=261,slow=2.9,SNR=31
BOSA LR LR 08 51 55.8
comp=Z,310nm,18.4s,baz=212,slow=34
comp=Z,5.1nm,0.5s
WAKR Walker 81.72 324 IAmb IAmb 08 19 34.4
comp=Z,14nm,1.7s
SNOW Snow King Moun 81.81 333 IAmb IAmb 08 18 45.0
comp=Z,9.1nm,1.2s
LOHW Long Hollow 81.88 333 IAmb IAmb 08 19 37.2
comp=Z,11nm,1.6s
PNTR Pine Nut 82.25 325 IAmb IAmb 08 18 35.3
comp=Z,10nm,1.0s
FLWY Flagg Ranch 82.31 333 IAMs_20 IAMs_20 08 51 41.9
comp=Z,329nm,19.0s
JRSC Jasper Ridge 82.34 322 IAMs_20 IAMs_20 08 47 42.1
comp=Z,308nm,21.0s
PAHR Pah Rah Range 82.62 325 IAmb IAmb 08 18 46.5
comp=Z,17nm,1.5s
MPK Martis Peak 82.63 325 IAmb IAmb 08 18 48.0
comp=Z,18nm,1.4s
YMR Madison River 82.91 333 IAmb IAmb 08 18 48.8
comp=Z,9.4nm,1.1s
TORD Torodi Ar. Bea 83.17 70 P **P 08 18 36.2 -0.6**
TORD IAmb IAmb 08 18 37.9
comp=Z,6.2nm,0.8s
TORD Torodi Ar. Bea 83.17 70 P **P 08 18 36.3 -0.4**
comp=Z,7.6nm,0.8s,baz=255,slow=4.0,SNR=5.8
TORD LR LR 08 53 42.5
comp=Z,690nm,18.9s,baz=231,slow=34
comp=Z,7.6nm,0.8s
ULM Lac du Bonnet 83.26 345 P **P 08 18 36.2 -0.2**
comp=Z,3.1nm,0.4s,baz=161,slow=7.3,SNR=3.0
comp=Z,3.1nm,0.4s
ULM Lac du Bonnet 83.26 345 *i* P **P 08 18 36.8 +0.4**
CASY Casey 83.35 181 P 08 18 36.7 -0.1
HLID Hailey 83.39 331 P 08 18 37.7 +0.2
HLID IAmb IAmb 08 18 53.8
comp=Z,11nm,1.4s
ORV Oroville 83.57 324 IAmb IAmb 08 18 52.3
comp=Z,9.7nm,1.2s
BCYI Bear Canyon 83.58 332 IAmb IAmb 08 18 52.3
comp=Z,7.5nm,1.3s
LBTB Lobatse 83.80 115 P 08 18 39.4 -0.7
LBTB Lobatse 83.80 115 LR LR 08 52 40.1
comp=Z,676nm,18.3s,baz=231,slow=33
LBTB Lobatse 83.80 115 P **P 08 18 39.4 -0.7**
LBTB pmax pmax
comp=Z,27nm,1.3s
DLMT Dillon 84.12 333 IAmb IAmb 08 19 14.6
comp=Z,17nm,1.6s
O03E Paynes Creek 84.27 324 IAmb IAmb 08 19 07.7
comp=Z,8.6nm,1.2s
SCHQ Schefferville 85.27 3 P **P 08 18 47.1 +0.6**
SCHQ Schefferville 85.27 3 P **P 08 18 46.7 +0.2**
comp=Z,4.7nm,0.9s,baz=160,slow=4.7,SNR=7.7
SCHQ LR LR 08 57 34.1
comp=Z,74nm,20.7s,baz=151,slow=36
comp=Z,4.7nm,0.9s
EDA Edea 85.30 83 IAMs_20 IAMs_20 08 50 50.6
comp=Z,192nm,18.0s
PLID Pearl Lake 85.30 330 IAmb IAmb 08 19 00.2
comp=Z,5.0nm,0.8s
BMO Blue Mountains 85.67 330 IAMs_20 IAMs_20 08 53 50.9
comp=Z,303nm,19.0s
YBH Yreka Blue Hor 85.81 325 LR LR 08 50 44.4
comp=Z,6.7nm,20.7s,baz=120,slow=31
URZ Urewera 85.83 228 LR LR 08 47 45.7
comp=Z,209nm,21.3s,baz=153,slow=29
J05D Fort Rock, OR 86.25 326 IAmb IAmb 08 19 05.5
comp=Z,14nm,1.4s
PINE Pine Mountain 86.50 327 IAmb IAmb 08 19 10.7
comp=Z,7.4nm,1.0s
RAO Raoul Island 87.59 237 LR LR 08 53 35.2
comp=Z,100nm,18.6s,baz=124,slow=32
NEW Newport 88.30 332 LR LR 08 56 02.0
comp=Z,240nm,18.1s,baz=141,slow=34
MDT Midelt 89.80 51 LR LR 08 59 28.3
comp=Z,194nm,19.9s,baz=230,slow=36
LSZ Lusaka 90.93 108 LR LR 08 57 16.6
comp=Z,460nm,18.3s,baz=228,slow=34
FRB Frobisher Bay 94.13 2 LR LR 09 07 03.3
comp=Z,102nm,18.4s,baz=138,slow=39
ESDC Sonseca Array 94.33 46 LR LR 09 00 57.9
comp=Z,222nm,18.4s,baz=209,slow=35
BBB Bella Bella 95.91 329 LR LR 08 58 08.1
comp=Z,50nm,20.1s,baz=156,slow=32
SFJD Kangerlussuaq 98.72 8 LR LR 09 04 49.3
comp=Z,63nm,20.0s,baz=174,slow=36
AKASG Malin Array Be 119.98 46 PKP **PKPdf 08 24 59.3 -1.1**
comp=Z,0.8nm,0.5s,baz=266,slow=2.9,SNR=2.5
MNK Minsk 119.98 42 *i* P **Pdif 08 21 22.8 -1.0**
MNK *i* 08 24 59.8
MNK *i* 08 26 23.6
MNK *i* PPP PPP 08 28 56.9
MNK *i* 08 32 11.9
MNK *i* SS SS 08 42 50.7 -1.1
MNK *i* SSS SSS 08 47 16.4
MNK pmax pmax
comp=E,14nm,0.7s

MNK					pmax	pmax			
	comp=N,14nm,0.8s								
MNK					pmax	pmax			
	comp=Z,14nm,0.7s								
MNK					MLR	MLR			
	comp=N,519nm,21.0s								
MNK					MLR	MLR			
	comp=E,553nm,20.0s								
MNK					MLR	MLR			
	comp=Z,229nm,17.0s								
BRTR	**Keskin Array B**	**120.25**	**59**		PKP	**PKiKP**	**08 25 02.1**	**+0.5**	
	comp=Z,0.6nm,0.7s,baz=281,slow=0.7,SNR=3.6								
FINES	**FINESS Array B**	**120.28**	**33**		PKP	**PKiKP**	**08 25 00.8**	**+0.1**	
	comp=Z,2.8nm,1.0s,baz=318,slow=1.9,SNR=5.2								
FINES	**FINESS Array B**	**120.28**	**33**	*e*	PKiKP	**PKPdf**	**08 24 59.8**	**-0.9**	
FINES					pmax	pmax			
	comp=Z,3.0nm,1.0s								
ASAR	**Alice Springs**	**120.48**	**208**		PKP	**PKPdf**	**08 25 01.5**	**-1.0**	
	comp=Z,0.3nm,0.4s,baz=126,slow=1.6,SNR=11								
ASAR					PKKPbc	**PKKPbc**	**08 35 07.0**	**-0.9**	
	comp=Z,0.7nm,0.9s,baz=331,slow=3.0,SNR=5.0								
ARCES	**ARCESS Array B**	**121.02**	**24**		PKP	**PKPdf**	**08 25 01.7**	**-0.2**	
	comp=Z,1.8nm,0.8s,baz=326,slow=4.6,SNR=1.4								
WRA	**Warramunga Arr**	**123.61**	**210**		PKP	**PKPdf**	**08 25 07.9**	**-0.6**	
	comp=Z,1.4nm,0.5s,baz=158,slow=1.6,SNR=20								
WRA	**Warramunga Arr**	**123.61**	**210**	*e*	PKiKP	**PKiKP**	**08 25 08.8**	**0.0**	
WRA					pmax	pmax			
	comp=Z,1.0nm,0.5s								
RAYN	**Ar Rayn**	**124.64**	**81**		IAMs_20	IAMs_20	09 28 19.2		
	comp=Z,164nm,18.0s								
OBN	**Obninsk**	**125.04**	**42**↑	*e*	PKiKP	**PKPdf**	**08 25 08.7**	**-1.3**	
OBN				*e*			08 26 59.0		
OBN				*e*	PPP	PPP	08 29 39.4		
OBN					pmax	pmax			
	comp=Z,6.0nm,1.0s								
OBN					MLR	MLR			
	comp=Z,210nm,19.0s								
H11S2	**WAKE ISLAND Hyd**	**125.66**	**272**		T	T	10 43 57.2		
	baz=116,slow=75,SNR=150								
H11S1	**WAKE ISLAND Hyd**	**125.67**	**272**		T	T	10 43 57.1		
	baz=116,slow=75,SNR=131								
H11S3	**WAKE ISLAND Hyd**	**125.68**	**272**		T	T	10 43 58.5		
	baz=116,slow=75,SNR=175								
KLMR	**Klimovskoe**	**126.74**	**35**	*e*	PKiKP	**PKPdf**	**08 25 12.2**	**-0.9**	
KLMR					pmax	pmax			
	comp=Z,28nm,1.9s								
KIV	**Kislovodsk**	**127.76**	**56**	*i*	PKiKP	**PKiKP**	**08 25 16.9**	**+0.6**	
KIV					pmax	pmax			
	comp=Z,7.0nm,1.1s								
KBZ	**Khabaz**	**127.88**	**56**	*i*	PKiKP	**PKPdf**	**08 25 15.0**	**-0.8**	
GNI	**Garni**	**128.65**	**61**	*i*	PKiKP	**PKPdf**	**08 25 17.3**	**-0.3**	
BILL	**Bilibino**	**129.79**	**335**	*i*	PKiKP	**PKPdf**	**08 25 17.6**	**-1.1**	
BILL					pmax	pmax			
	comp=Z,2.0nm,0.9s								
ARTI	**Arti**	**137.15**	**38**	*i*	PKiKP	**PKiKP**	**08 25 33.9**	**-0.8**	
ARTI							08 28 15.5		
TIXI	**Tiksi**	**137.40**	**350**	*i*	PKiKP	**PKPdf**	**08 25 33.0**	**+0.1**	
TIXI					pmax	pmax			
	comp=Z,16nm,2.7s								
PETK	**Petropavlovsk-**	**137.72**	**317**		PKP	**PKiKP**	**08 25 35.2**	**-0.8**	
	comp=Z,3.4nm,0.9s,baz=81,slow=4.8,SNR=2.0								
BVAR	**Borovoye Array**	**144.84**	**40**		PKP	**PKPdf**	**08 25 47.1**	**+0.2**	
	comp=Z,18nm,0.5s,baz=300,slow=2.8,SNR=125								
YAK	**Yakutsk**	**145.55**	**342**	*e*	PKiKP	**PKPab**	**08 25 48.1**	**0.0**	
YAK				*e*			08 25 58.0		
YAK				*e*			08 29 09.2		
YAK					pmax	pmax			
	comp=Z,34nm,1.3s								
YAK					pmax	pmax			
	comp=E,8.0nm,1.2s								
YAK					pmax	pmax			
	comp=N,6.0nm,1.4s								
YAK					pmax	pmax			
	comp=Z,418nm,5.6s								
YAK					pmax	pmax			
	comp=N,212nm,3.8s								
YAK					pmax	pmax			
	comp=E,538nm,4.1s								
PMBI	**Palembang**	**146.47**	**174**		IAMs_20	IAMs_20	09 14 23.7		
	comp=Z,125nm,19.0s								
SIMJ	**Simiganj**	**147.26**	**65**			**PKPbc**	**08 25 53.2**	**-0.7**	
CHGR	**Chuyangaron**	**147.38**	**65**			**PKPbc**	**08 25 53.2**	**-1.0**	
CHGR	**Chuyangaron**	**147.38**	**65**		PKP2	**PKPbc**	**08 25 53.2**	**-1.0**	
KK31	**Karatay Array**	**147.91**	**57**			**PKPbc**	**08 25 55.8**	**+0.4**	
KK31	**Karatay Array**	**147.91**	**57**		PKP2	**PKPbc**	**08 25 55.8**	**+0.4**	
KKAR	**Karatay Array**	**147.91**	**57**			**PKPdf**	**08 25 52.7**	**+0.3**	
KKAR					PKPbc	**sPKPdf**	**08 25 55.7**	**+3.1**	
KKAR	**Karatay Array**	**147.91**	**57**		PKiKP	**PKPdf**	**08 25 52.7**	**+0.3**	
KKAR							08 25 55.7		
TOLI2	**Tolitoli**	**148.15**	**205**			**PKPbc**	**08 25 56.8**	**-0.1**	
YSS	**Yuzhno-Sakhali**	**148.63**	**311**	*e*	PKP2	PKPab	08 26 13.3	+13	
YSS					pmax	pmax			
	comp=Z,20nm,1.0s								
KURBB	**Kurchatov Arra**	**150.43**	**39**		PKPbc	**PKiKP**	**08 26 01.8**	**-0.4**	
	comp=Z,7.4nm,0.4s,baz=302,slow=3.1,SNR=21								
KURK	**Kurchatov**	**150.43**	**39**			**PKPdf**	**08 25 56.6**	**+0.5**	
KURK					PKPbc	**PKiKP**	**08 26 02.3**	**+0.2**	
KURK	**Kurchatov**	**150.43**	**39**		PKiKP	**PKPdf**	**08 25 56.6**	**+0.5**	
KURK							08 26 02.3		
NIL	**Nilore**	**150.63**	**75**			**PKPbc**	**08 26 02.6**	**+0.1**	
NIL						**PKPab**	**08 26 10.1**	**+0.7**	
NIL	**Nilore**	**150.63**	**75**		PKiKP	**PKPbc**	**08 26 02.7**	**+0.1**	
NIL							08 26 10.1		
AAK	**Ala-Archa**	**150.87**	**56**			**PKiKP**	**08 26 04.6**	**+1.0**	
AAK	**Ala-Archa**	**150.87**	**56**		PKiKP	**PKiKP**	**08 26 04.6**	**+1.0**	
FRU1	**Bishkek**	**150.93**	**56**		PKPbc	**PKiKP**	**08 26 04.6**	**+1.0**	
FRU1	**Bishkek**	**150.93**	**56**		PKiKP	**PKiKP**	**08 26 04.6**	**+1.0**	
ZALV	**Zalesovo Beam**	**151.41**	**29**		PKP	**PKPdf**	**08 25 57.5**	**-0.1**	
	comp=Z,1.5nm,0.5s,baz=333,slow=2.3,SNR=6.2								
ZALV					PKPbc	**PKiKP**	**08 26 04.3**	**+0.2**	
	comp=Z,31nm,0.5s,baz=308,slow=3.3,SNR=118								
KSH	**Kashi**	**152.57**	**62**		PKPbc	**PKiKP**	**08 26 07.2**	**0.0**	
TARG	**Taragay, Kyrgy**	**153.48**	**57**			**PKPab**	**08 26 22.5**	**+1.0**	
TARG	**Taragay, Kyrgy**	**153.48**	**57**		PKP2	**PKPab**	**08 26 22.5**	**+1.0**	
PRZ	**Przheval'sk**	**153.70**	**55**			**PKPab**	**08 26 23.6**	**+1.5**	
PRZ	**Przheval'sk**	**153.70**	**55**		PKP2	**PKPab**	**08 26 23.6**	**+1.5**	
MJAR	**Matsushiro Arr**	**154.11**	**291**		PKPbc	**PKPbc**	**08 26 10.1**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=111,slow=4.0,SNR=2.3								
MJAR					PKPab	**pPKPab**	**08 26 25.2**	**+1.1**	
	comp=Z,2.3nm,0.8s,baz=105,slow=2.3,SNR=6.6								
MAKZ	**Makanchi**	**154.33**	**44**			**PKiKP**	**08 26 10.5**	**+0.1**	
MAKZ	**Makanchi**	**154.33**	**44**		PKiKP	**PKiKP**	**08 26 10.5**	**+0.1**	
MKAR	**Makanchi Array**	**154.53**	**44**			**PKPdf**	**08 26 01.6**	**-0.7**	
MKAR					PKPbc	**PKiKP**	**08 26 10.9**	**+0.1**	
MKAR	**Makanchi Array**	**154.53**	**44**		PKP	**PKPdf**	**08 26 02.2**	**-0.1**	
	comp=Z,0.7nm,0.8s,baz=297,slow=0.5,SNR=5.4								
MKAR					PKPbc	**PKiKP**	**08 26 10.9**	**+0.1**	
	comp=Z,2.4nm,0.8s,baz=286,slow=2.2,SNR=12								
MKAR					PKPab	**PKPab**	**08 26 23.7**	**-1.6**	
	comp=Z,3.8nm,0.9s,baz=270,slow=4.3,SNR=8.5								
WMQ	**Urumqi**	**159.33**	**45**	*e*	PKP	**PKPdf**	**08 26 08.4**	**-0.3**	
WMQ					LR	LR			
	comp=Z,160nm,20.5s								
CN2	**Changchun**	**160.86**	**318**	*e*	P	**PKPdf**	**08 26 06.4**	**-3.9**	
CN2					pmax	pmax			
	comp=Z,10.0nm,0.7s								
SONM	**Songino Array**	**162.81**	**3**		PKPab	**PKPab**	**08 27 02.1**	**+1.0**	
	comp=Z,1.7nm,0.9s,baz=346,slow=4.4,SNR=5.7								
CMAR	**Chiang Mai Arr**	**165.40**	**144**		PKPab	**PKPab**	**08 27 12.5**	**-0.7**	
	comp=Z,2.1nm,0.3s,baz=219,slow=8.4,SNR=7.0								
CHTO	**Chiang Mai**	**165.70**	**144**			**PKPab**	**08 27 14.0**	**-0.5**	
CHTO	**Chiang Mai**	**165.70**	**144**		PKP2	**PKPab**	**08 27 14.0**	**-0.5**	
GTA	**Gaotai**	**169.07**	**35**	*e*	PKP	**PKPdf**	**08 26 18.8**	**+1.2**	
GTA					PKPab	**PKPab**	**08 27 29.7**	**+0.6**	
HHC	**Hu-ho-hao-te**	**169.40**	**345**	*e*	P	**PKPdf**	**08 26 13.5**	**-4.3**	
NJ2	**Nanjing**	**170.49**	**281**	*e*	P	**PKPdf**	**08 26 18.8**	**+0.3**	
NJ2					pmax	pmax			
	comp=Z,12nm,0.5s								
PZH	**PanZhiHua**	**173.21**	**126**		PKP	**PKPdf**	**08 26 19.3**	**-0.8**	
CD2	**Chengdu**	**176.47**	**85**		PKP	**PKPdf**	**08 26 20.0**	**-0.9**	
XAN	**Xi'an**	**176.51**	**345**		PKP	**PKPdf**	**08 26 22.4**	**+1.6**	
XAN					LR	LR			
	comp=N,220nm,22.0s								
XAN					LR	LR			
	comp=E,160nm,17.2s								
XAN					LR	LR			
	comp=Z,190nm,17.9s								

SNET ***03*** *08:06:29.7±0.5, 12.99°N×89.05°W, h35km, ML3.0*
CATAC 03 08:06:28.7±0.5, 13.8°N×88.9°W, h24km±3km, M3.0/20, MLv3.0/20, Error ellipse: s-maj=6.9km s-min=3.0km az=24.5, confirmed, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.59**	**336**	S	Sn	08 06 50.4	0.0
LALI	**Alcalda de L**	**0.59**	**336**	P	Pn	08 06 41.4	-0.2
TECO	**Alcaldia de Te**	**0.65**	**26**	*e*P	Pb	08 06 41.7	+0.2
TECO				*e*S	Sn	08 06 51.2	-0.9
TECO	**Alcaldia de Te**	**0.65**	**26**	P	Pb	08 06 41.7	+0.2
LFRS	**El Faro**	**0.67**	**1**	*e*P	Pn	08 06 42.5	-0.3
LOMA	**Loma Larga**	**0.70**	**352**	*e*P	Pb	08 06 42.7	+0.3
LOMA	**Loma Larga**	**0.70**	**352**	P	Pb	08 06 42.7	+0.3
LOMA	**Loma Larga**	**0.70**	**352**	S	Sn	08 06 53.3	-0.1
UESV	**Universidad de**	**0.74**	**22**	P	Pb	08 06 43.2	+0.2
UESV	**Universidad de**	**0.74**	**22**	S	Sn	08 06 53.9	-0.3
UTEC	**Universidad Te**	**0.76**	**350**	P	Pn	08 06 44.6	+0.6
UTEC	**Universidad Te**	**0.76**	**350**	S	Sn	08 06 54.7	-0.1
IGN	**Direccin Gen**	**0.77**	**353**	P	Pb	08 06 43.8	+0.3
IGN	**Direccin Gen**	**0.77**	**353**	S	Sn	08 06 55.1	+0.1
UDBS	**Universidad Do**	**0.77**	**354**	*e*P	Pb	08 06 43.7	+0.2
UDBS	**Universidad Do**	**0.77**	**354**	P	Pb	08 06 43.8	+0.3
UDBS	**Universidad Do**	**0.77**	**354**	S	Sn	08 06 55.1	+0.1
PAVA	**Las Pavas**	**0.77**	**10**	*e*P	Pb	08 06 43.8	+0.1
PAVA				*e*S	Sn	08 06 55.0	-0.1
PAVA	**Las Pavas**	**0.77**	**10**	P	Pb	08 06 43.8	+0.2
TECA	**Tecapa**	**0.78**	**45**	*i* P	Pn	08 06 44.3	-0.1
UEES	**Universidad Ev**	**0.78**	**348**	P	Pb	08 06 44.0	+0.2
UEES	**Universidad Ev**	**0.78**	**348**	S	Sn	08 06 55.2	-0.1
LBRS	**Las Brisas**	**0.79**	**2**	*e*P	Pn	08 06 44.2	-0.2
JAYA	**Jayaque - finc**	**0.79**	**332**	*e*P	Pb	08 06 44.2	+0.2
JAYA				*e*S	Sb	08 06 54.7	+0.3
JAYA	**Jayaque - finc**	**0.79**	**332**	S	Sn	08 06 55.8	+0.1
JAYA	**Jayaque - finc**	**0.79**	**332**	P	Pb	08 06 44.2	+0.2
PMON	**Piamonte**	**0.80**	**343**	*e*P	Pn	08 06 44.4	-0.2
PMON				*e*S	Sn	08 06 55.8	+0.1
PMON	**Piamonte**	**0.80**	**343**	P	Pb	08 06 44.2	+0.2
SCLA	**Alcaldia de Sa**	**0.82**	**24**	*e*P	Pb	08 06 44.5	+0.1
SCLA	**Alcaldia de Sa**	**0.82**	**24**	P	Pn	08 06 44.7	-0.2
SCLA	**Alcaldia de Sa**	**0.82**	**24**	S	Sn	08 06 56.5	+0.3
PQSS	**Presa 15 de Se**	**0.84**	**36**	P	Pn	08 06 45.0	0.0
PQSS	**Presa 15 de Se**	**0.84**	**36**	S	Sn	08 06 57.1	+0.5
LCY	**Lacayo**	**0.89**	**58**	*e*P	Pb	08 06 45.4	-0.2
PACA	**Pacayal**	**0.89**	**54**	*e*P	Pn	08 06 45.9	-0.1
PACA				*e*S	Sn	08 06 57.8	-0.4
PACA				*e*S	Sb	08 06 57.8	+0.6
PACA	**Pacayal**	**0.89**	**54**	P	Pn	08 06 46.0	+0.1
PACA	**Pacayal**	**0.89**	**54**	S	Sn	08 06 58.5	+0.3
RANC	**El Ranchito**	**0.90**	**58**	*e*P	Pb	08 06 45.6	-0.2
CEDA	**San Andres**	**0.91**	**340**	P	Pb	08 06 45.8	0.0
CEDA	**San Andres**	**0.91**	**340**	S	Sn	08 06 58.6	+0.2
BLLM	**Bellamira**	**0.95**	**59**	*i* P	Pb	08 06 46.1	-0.4
UNIC	**Universidad Ca**	**1.13**	**336**	P	Pn	08 06 49.2	+0.1
UNIC	**Universidad Ca**	**1.13**	**336**	S	Sb	08 07 04.3	+0.4
NUBE	**Las Nubes**	**1.17**	**324**	*e*P	Pn	08 06 49.7	-0.1
NUBE				*e*S	Sn	08 07 04.4	-0.7
NUBE	**Las Nubes**	**1.17**	**324**	P	Pn	08 06 49.6	-0.2
LCND	**La Caada**	**1.21**	**73**	*e*P	Pn	08 06 49.6	-0.5
LCND				*e*P	Pb	08 06 49.9	-1.0
LCND	**La Caada**	**1.21**	**73**	P	Pn	08 06 49.7	-0.4
LLGN	**La Laguna**	**1.21**	**6**	P	Pn	08 06 50.0	-0.3
CNCH	**Conchagua**	**1.25**	**75**	*e*P	Pn	08 06 50.1	-0.7
CNCH				*e*S	Sn	08 07 07.0	+0.1
CNCH	**Conchagua**	**1.25**	**75**	P	Pn	08 06 50.1	-0.7
CNCH	**Conchagua**	**1.25**	**75**	S	Sn	08 07 06.8	-0.1
FAME	**Alcaldia de Sa**	**1.28**	**314**	S	Sn	08 07 06.5	-1.0
MTO3	**Montecristo**	**1.47**	**349**	*e*P	Pn	08 06 53.6	-0.3
MTO3	**Montecristo**	**1.47**	**349**	S	Sb	08 07 13.5	-0.4
MTO3	**Montecristo**	**1.47**	**349**	P	Pn	08 06 53.8	-0.1
CSGN	**Cosiguina Volc**	**1.47**	**89**	P	Pn	08 06 53.8	0.0
CSGN				S	Sb	08 07 13.8	-0.1
POTN	**Potosi Cosigui**	**1.53**	**88**	P	Pn	08 06 54.3	-0.2
ESQI	**Esquipulas**	**1.62**	**351**	P	Pn	08 06 56.2	+0.2
SARH	**Santa Rosa de**	**1.84**	**9**	P	Pn	08 06 59.3	+0.3
TGUH	**Tegucigalpa,Un**	**2.07**	**58**	P	Pn	08 07 01.8	-0.3
YUSH	**Yuscaran**	**2.39**	**65**	P	Pn	08 07 06.0	-0.5

NEIC 03 08:41:16.8±2.8, 40.88°N±0.02°×107.05°W±0.01, h5km±1km, ML1.5/24, Error ellipse: s-maj=4.0km s-min=2.9km az=358.0, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAYD	**Hayden**	**0.40**	**204**		Pb	08 41 25.6	-0.9
HAYD				Sg	Sb	08 41 31.4	-1.5
O20A	**White River Ci**	**1.18**	**231**	Pg	Pg	08 41 39.4	0.0
O20A				Sg	Sg	08 41 54.3	-0.4
O20A				IAML		08 42 01.7	
	8.5nm,1.4s						
ISCO	**Idaho Springs**	**1.54**	**134**		Pn	08 41 44.0	-1.2
ISCO					Sn	08 42 05.2	-0.6
K22A	**Casper**	**1.81**	**12**	Pn	Pn	08 41 47.8	-1.0
K22A					Sb	08 42 13.8	+0.2
K22A				IAML		08 42 15.2	
	8.2nm,0.2s						
RDMU	**Red Mountain**	**1.94**	**262**		Pn	08 41 50.1	-0.6
RDMU				IAML		08 42 22.6	
	comp=N,3.4nm,0.9s						
RDMU				IAML		08 42 25.4	
	comp=E,2.5nm,0.6s						
PD31	**Pinedale Array**	**2.66**	**316**	Pn	Pn	08 41 59.0	-1.5
PDAR	**Pinedale Array**	**2.66**	**316**	Pn	Pn	08 41 58.8	-1.7
PV22	**Blue Mesa, Par**	**2.70**	**210**	Pn	Pn	08 42 01.0	-0.1
P18A	**Preston Nutter**	**2.75**	**244**	Pn	Pn	08 42 01.0	-0.9
P18A				IAML		08 42 44.3	
	comp=N,3.1nm,1.3s						
P18A				IAML		08 42 46.4	
	comp=E,2.9nm,0.8s						
BSUT	**Blindstream Ca**	**2.84**	**264**	Pn	Pn	08 42 02.8	-0.4
BSUT				IAML		08 43 04.0	
	comp=E,1.3nm,1.5s						
PV04	**Paradox Valley**	**2.87**	**211**	Pn	Pn	08 42 03.7	+0.3
PV04				IAML		08 43 13.2	
	comp=E,2.0nm,1.3s						

IDC ***03*** *09:16:41.9±5.6, 24.19°S×179.72°W, h506km±62km, mb3.1/6, mbtmp3.9/7, Error ellipse: s-maj=33.2km s-min=25.1km az=27.0*
ISC 03 09:16:41.3±0.9, 24.2°S±0.1×179.8°W±0.2, h500km, n42, σ1°80/48, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WCZ	**Waipu Caves**	**12.74**	**202**	P	**P**	**09 19 30.6**	**+3.1**
HAZ	**Te Kaha**	**13.66**	**188**	P	**P**	**09 19 40.5**	**+3.3**
HAZ				S	**S**	**09 22 05.2**	**+2.9**
URZ	**Urewera**	**14.25**	**190**	P	**P**	**09 19 43.4**	**-0.1**
	1.7nm,0.3s,baz=14,slow=4.2,SNR=6.6						
URZ				S	**S**	**09 22 08.2**	**-5.5**
	2.8nm,0.5s,baz=242,slow=22,SNR=8.8						
URZ	**Urewera**	**14.25**	**190**	P	**P**	**09 19 44.4**	**+1.0**
URZ				S	**S**	**09 22 14.4**	**+0.7**
MWZ	**Matawai**	**14.26**	**189**	P	**P**	**09 19 45.3**	**+1.7**
RTZ	**Ruatahuna**	**14.62**	**190**	P	**P**	**09 19 48.8**	**+1.3**
BKZ	**Black Stump Fm**	**15.24**	**191**	P	**P**	**09 19 54.9**	**+1.0**
BKZ				S	**S**	**09 22 29.7**	**-3.0**
TWVZ	**Taurewa**	**15.36**	**194**	P	**P**	**09 19 57.5**	**+2.4**
OTVZ	**Oturere**	**15.40**	**193**	P	**P**	**09 19 58.6**	**+3.0**
SNVZ	**South Ngauruho**	**15.42**	**193**	P	**P**	**09 19 58.3**	**+2.4**
VRZ	**Vera Road**	**15.57**	**196**	P	**P**	**09 20 00.8**	**+3.6**
PXZ	**Pawanui**	**16.02**	**189**	P	**P**	**09 20 02.9**	**+0.9**
TSZ	**Takapari Road**	**16.20**	**192**	P	**P**	**09 20 05.1**	**+1.2**
BFZ	**Birch Farm**	**16.76**	**190**	P	**P**	**09 20 10.2**	**+0.5**
MRZ	**Mangatainoka R**	**16.86**	**192**	P	**P**	**09 20 07.8**	**-2.9**
OGWZ	**Otaki Gorge**	**17.09**	**193**	P	**P**	**09 20 11.9**	**-1.1**
OGWZ				S	**S**	**09 23 04.0**	**-2.2**
DUWZ	**D'Urville Isla**	**17.36**	**196**	P	**P**	**09 20 14.9**	**-0.8**
CAW	**Cannon Point**	**17.39**	**193**	P	**P**	**09 20 14.8**	**-1.0**
CAW				S	**S**	**09 23 09.4**	**-1.8**
TCW	**Tory Channel**	**17.66**	**195**	P	**P**	**09 20 18.9**	**+0.5**
QRZ	**Quartz Range**	**17.77**	**199**	P	**P**	**09 20 19.5**	**+0.1**
NNZ	**Nelson**	**17.89**	**197**	P	**P**	**09 20 19.5**	**-1.0**
TUWZ	**Tuamarina**	**17.95**	**195**	P	**P**	**09 20 21.7**	**+0.7**
MRNZ	**Matariki Terra**	**18.23**	**198**	P	**P**	**09 20 23.6**	**0.0**
THZ	**Tophouse**	**18.53**	**197**	P	**P**	**09 20 26.3**	**-0.1**
DSZ	**Denniston Nort**	**18.83**	**200**	P	**P**	**09 20 29.4**	**+0.2**
KHZ	**Kahutara**	**18.98**	**195**	P	**P**	**09 20 30.3**	**-0.1**
GVZ	**Greta Valley S**	**19.62**	**196**	P	**P**	**09 20 35.4**	**-1.0**
LTZ	**Lake Taylor**	**19.65**	**198**	P	**P**	**09 20 35.5**	**-1.1**
INZ	**Inchbonnie**	**19.84**	**199**	P	**P**	**09 20 37.7**	**-0.5**
OXZ	**Oxford**	**20.22**	**197**	P	**P**	**09 20 42.2**	**+0.5**
WVZ	**Waitaha Valley**	**20.37**	**200**	P	**P**	**09 20 42.6**	**-0.5**
RPZ	**Rata Peaks**	**20.86**	**199**	P	**P**	**09 20 48.2**	**+0.7**
FOZ	**Fox Glacier**	**21.08**	**201**	P	**P**	**09 20 49.2**	**-0.3**
TMZ	**Timaru**	**21.48**	**198**	P	**P**	**09 20 53.2**	**0.0**
JCZ	**Jackson Bay**	**21.91**	**202**	P	**P**	**09 20 57.0**	**-0.2**
ASAR	**Alice Springs**	**42.17**	**261**	P	**P**	**09 23 50.6**	**+0.9**
	0.9nm,0.5s,baz=96,slow=6.9,SNR=32						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**42.57**	**266**	P	**P**	**09 23 53.4**	**+0.5**
	2.6nm,0.5s,baz=103,slow=8.1,SNR=28						
	2.6nm,0.5s						
QSPA	**South Pole Qui**	**65.87**	**180**	P	**P**	**09 26 36.7**	**0.0**
	1.8nm,1.1s,baz=0.0,slow=0.0,SNR=5.5						
	1.8nm,1.1s						
MAW	**Mawson**	**77.53**	**200**	P	**P**	**09 27 45.3**	**+0.8**
	3.4nm,1.0s,baz=135,slow=5.7,SNR=2.4						
	3.4nm,1.0s						
NVAR	**Mina Array Bea**	**84.84**	**44**	P	**P**	**09 28 21.9**	**-1.1**
	0.1nm,0.3s,baz=240,slow=4.2,SNR=1.7						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**90.44**	**58**	P	**P**	**09 28 50.9**	**+1.5**
	0.2nm,0.7s,baz=241,slow=5.8,SNR=1.8						
	0.2nm,0.7s						
HFS	**Hagfors**	**142.89**	**349**	PKP	**PKPdf**	**09 35 14.7**	**-2.3**
	0.8nm,0.4s,baz=30,slow=7.0,SNR=5.8						

FCIAR ***03*** *09:18:43.0, 76.95°N×19.03°E, h10km, station OMEGA has station magnitude of 3.60 station ZFI2 has station magnitude of 3.60*
KOLA ***03*** *09:18:44.0, 76.77°N×19.03°E, h0km, ML2.2, Error ellipse: s-maj=63.7km s-min=39.1km az=80.0, Storfjorden zone*
BER 03 09:18:44.1±2.1, 76.90°N×18.59°E, h15km±11km, ML2.7, 1C, Confirmed Earthquake, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**0.70**	**280**	P	Pg	09 18 56.0	-1.8
HSPB				S	Sg	09 19 07.2	+0.2
HSPB	**Hornsund (broa**	**0.70**	**280**↑	*i* P	Pg	09 18 56.6	-1.2
HSPB				*i* S	Sg	09 19 06.4	-0.6
HSPB	**Hornsund (broa**	**0.70**	**280**	*e*P	Pg	09 18 56.5	-1.3
HSPB				*e*S	Sg	09 19 05.8	-1.2
HSPB				IAML		09 19 10.1	
	comp=Z,200nm,0.2s						
SPA0	**Spitsbergen Ar**	**1.37**	**341**	*e*P	Pn	09 19 06.0	-2.6
SPA0				*e*S	Sn	09 19 23.4	-3.2
SPA0	**Spitsbergen Ar**	**1.37**	**341**	*e*P	Pn	09 19 06.0	-2.7
SPA0				*e*S	Sn	09 19 24.4	-2.2
SPA0				IAML		09 19 27.6	
	comp=Z,136nm,0.5s						
SPITS	**Spitsbergen Ar**	**1.37**	**341**	P	Pn	09 19 05.8	-2.8
SPITS				S	Sn	09 19 23.6	-2.9
BRBA	**Barentsburg A**	**1.51**	**323**	*e*P	Pn	09 19 09.5	-1.0
BRBA				*e*S	Sn	09 19 28.4	-1.4
BRBA				IAML		09 19 32.7	
	comp=Z,270nm,0.4s						
BRBB	**Barentsburg B**	**1.53**	**324**	P	Pn	09 19 08.7	-2.1
BRBB				S	Sn	09 19 28.6	-1.9
BRBB	**Barentsburg B**	**1.53**	**324**	*e*P	Pn	09 19 08.9	-2.0
BRBB				*e*S	Sn	09 19 27.8	-2.7

0.5nm,0.6s,baz=336,slow=2.3,SNR=8.3
COEN Coen 18.57 114 P **P** **09 32 26.6 -0.4**
QIS Mount Isa 19.14 136 P **P** **09 32 32.8 +0.8**
KSRS Korea Array 44.19 3 P **P** **09 36 03.5 -1.4**
3.8nm,1.2s,baz=180,slow=9.2,SNR=2.5
3.8nm,1.2s
MJAR Matsushiro Arr 44.80 14 P **P** **09 36 08.3 -1.3**
3.8nm,0.7s,baz=193,slow=8.8,SNR=14
3.8nm,0.7s
USRK Ussuriysk Ar. 51.20 6 P **P** **09 36 56.8 -0.5**
2.1nm,0.6s,baz=198,slow=8.6,SNR=2.4
2.1nm,0.6s
HILR Hailar Array B 56.48 355 P **P** **09 37 34.4 -0.3**
1.1nm,0.4s,baz=163,slow=10,SNR=1.5
1.1nm,0.4s
SONM Songino Array 57.11 345 P **P** **09 37 38.9 -0.4**
0.9nm,0.5s,baz=169,slow=7.2,SNR=6.0
0.9nm,0.5s
PETK Petropavlovsk- 65.67 21 P **P** **09 38 34.6 -0.4**
1.9nm,0.6s,baz=193,slow=5.0,SNR=6.3
1.9nm,0.6s
MKAR Makanchi Array 65.87 329 P **P** **09 38 36.6 +0.2**
1.3nm,0.5s,baz=129,slow=7.7,SNR=14
1.3nm,0.5s
ZALV Zalesovo Beam 69.67 336 P **P** **09 38 58.8 -0.7**
3.5nm,0.4s,baz=138,slow=5.2,SNR=18
3.5nm,0.4s
KURBB Kurchatov Arra 70.25 330 P **P** **09 39 02.8 -0.2**
2.1nm,0.7s,baz=134,slow=5.1,SNR=24
2.1nm,0.7s
BVAR Borovoye Array 75.75 329 P **P** **09 39 34.5 -0.1**
1.5nm,0.5s,baz=120,slow=5.3,SNR=6.2
1.5nm,0.5s
QSPA South Pole Qui 83.06 180 P **P** **09 40 15.6 +2.4**
0.9nm,1.1s,baz=242,slow=3.0,SNR=1.5
0.9nm,1.1s

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*SOME **03** 09:29:48.8, 41.82N × 78.08E*
*KRNET **03** 09:29:48.1±0.1, 41.81N × 78.27E, h19km, mb3.0*
*NNC **03** 09:29:50.7±2.2, 41.79N × 78.07E, h0km, mb3.6, mpv2.9, Error ellipse: s-maj=15.6km s-min=9.3km az=170.0, Suspected Mining explosion.*

ISC 03 09:29:45.3±2.0, 41°63N±0.08 × 78°35E±0.07, h0km, n16, σ0$85/25, 12C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.42**	**284**	⇑*iP*			**Pb**	**09 29 55.2**	**-0.7**
TARG				⇑*iS*			**Sg**	**09 30 00.5**	**+1.7**
PRZ	**Przheval'sk**	**0.86**	**3**	⇑*iP*			**Pg**	**09 30 01.4**	**-0.4**
PRZ				⇑*iS*			**Sg**	**09 30 11.2**	**-1.7**
KDJ	**Kajisay**	**1.01**	**300**	⇑*iP*			**Pg**	**09 30 04.3**	**-0.3**
KDJ				⇑*iS*			**Sg**	**09 30 16.3**	**-1.3**
ULHL	**Ulahol**	**1.69**	**292**	⇑*iP*			**Pb**	**09 30 17.0**	**-0.4**
ULHL				⇑*iS*			**Sn**	**09 30 37.9**	**-0.8**
MDOK	**Medeo**	**1.81**	**328**	Pg			**Pg**	**09 30 21.3**	**+1.2**
MDOK	1.5nm,0.2s			Lg			Lg	09 30 44.5	
KPKS	**Kokpek**	**1.86**	**8**	P			**Pg**	**09 30 21.6**	**+0.7**
KPKS	0.2nm,0.1s			S			**Sg**	**09 30 45.2**	**+0.3**
IZV	**Izvestkoviy**	**1.91**	**318**	P			**Pb**	**09 30 20.6**	**-0.5**
IZV	2.9nm,0.3s 2.2nm,0.1s			S			**Sn**	**09 30 43.7**	**-0.4**
BOOM	**Boomskoye usch**	**1.99**	**297**	⇑*iP*			**Pb**	**09 30 21.8**	**-0.7**
BOOM				⇑*iS*			**Sn**	**09 30 46.5**	**+0.4**
JNKS	**Jany-Kuch**	**2.11**	**255**	⇓*eP*			**Pg**	**09 30 25.6**	**-0.1**
JNKS				⇓*eS*			**Sg**	**09 30 52.3**	**-0.7**
KST	**Kastek**	**2.26**	**309**	Pg			**Pg**	**09 30 28.3**	**-0.4**
KST	3.0nm,0.3s 5.8nm,0.3s			Lg			Lg	09 30 56.5	
TKM2	**Tokmak 2**	**2.42**	**303**	⇑*iP*			**Pn**	**09 30 27.5**	**+1.2**
TKM2				⇑*iS*			**Sn**	**09 30 56.5**	**-0.2**
KTBS	**Karatobe**	**2.42**	**330**	Pg			**Pb**	**09 30 29.1**	**-0.7**
KTBS	5.0nm,0.3s 9.1nm,0.5s			Lg			Lg	09 30 57.9	
CHKK	**Chushkaly**	**2.44**	**336**	Pg			**Pb**	**09 30 30.4**	**+0.3**
CHKK	11nm,0.3s 14nm,0.3s			Lg			Lg	09 31 00.2	
DGS	**Degeres**	**2.50**	**311**	Pg			**Pb**	**09 30 31.4**	**+0.3**
DGS	2.9nm,0.4s 2.7nm,0.4s			Lg			Lg	09 31 02.1	
KNOS	**Konyrlen**	**2.80**	**12**	Pg			**Pb**	**09 30 35.6**	**-0.7**
KNOS	2.4nm,0.3s 0.9nm,0.1s			Lg			Lg	09 31 09.7	
KRBS	**Karabastau**	**2.86**	**317**	Pg			**Pb**	**09 30 36.7**	**-0.5**
KRBS	1.8nm,0.4s 0.7nm,0.4s			Lg			Lg	09 31 11.0	

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*IDC **03** 09:31:45.4±1.1, 26.01N × 128.54E, h0km, mb3.9/11, mbtmp3.9/12, ML3.5/1, MS3.6/1, Error ellipse: s-maj=37.7km s-min=14.8km az=78.0*
*JMA **03** 09:31:49.8±0.5, 26°N±2.2 × 128°E±*, h45km±4km, MV3.3/19, NEAR OKINAWAJIMA ISLAND*

ISC 03 09:31:48.6±0.7, 25°94N±0.05 × 128°57E±0.05, h27km, n38, σ1$51/43, mb3.8/12, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.74**	**287**	*iP*			**Pb**	**09 32 02.1**	**-0.7**
JNTH	**Nagotoyohara**	**0.76**	**320**	*iP*			**Pb**	**09 32 01.9**	**-1.3**
JOW	**Kunigami**	**0.93**	**344**	Pn			**Pb**	**09 32 05.1**	**-1.1**
JOW	350nm,0.3s,baz=155,slow=17,SNR=1056 352nm,0.3s,baz=145,slow=26,SNR=9.0			Sn			**Sn**	**09 32 19.1**	**+0.7**
JOW	**Kunigami**	**0.93**	**344**	P			**Pb**	**09 32 05.0**	**-1.1**
JOW	**Kunigami**	**0.93**	**344**	P			**Pb**	**09 32 05.1**	**-1.1**
JYRO	**Yoronjima**	**1.09**	**354**	*iP*			**Pb**	**09 32 07.5**	**-1.3**
JIH	**Iheya**	**1.22**	**334**	*iP*			**Pn**	**09 32 09.4**	**-0.4**
JAGN	**Aguni-jima**	**1.36**	**299**	*iP*			**Pn**	**09 32 11.1**	**-0.6**
JOKE	**Okinoerabujima**	**1.42**	**0**	P			**Pb**	**09 32 12.4**	**-2.1**
JKE	**Kume jima 2**	**1.65**	**284**	*iP*			**Pn**	**09 32 14.5**	**-1.3**
JTK	**Tokunoshima**	**1.88**	**10**	*iP*			**Pn**	**09 32 18.8**	**-0.1**
JAMN	**Amaminishikomi**	**2.36**	**13**	P			**Pn**	**09 32 25.6**	**0.0**
JMZ	**Minamidaito 2**	**2.40**	**92**	P			**Pn**	**09 32 25.9**	**-0.1**
JMZ	**Minamidaito 2**	**2.40**	**92**	P			**Pn**	**09 32 25.5**	**-0.5**
JMZ				S			**Sn**	**09 32 52.6**	**-1.8**
JKDJ	**Kitadaitoujima**	**2.46**	**89**	P			**Pn**	**09 32 26.5**	**-0.3**
JKDJ				*eS*			**Sn**	**09 32 55.0**	**-1.0**
JZK	**Kikaishima**	**2.68**	**28**	*eP*			**Pn**	**09 32 31.1**	**+1.2**
JZK				*eS*			**Sn**	**09 33 02.0**	**+0.5**
JMJ	**Miyako jima 2**	**3.17**	**250**	P			**Pn**	**09 32 35.7**	**-0.9**
JYAK	**Yakushimahirau**	**4.62**	**21**	*eP*			**Pn**	**09 32 56.2**	**-0.4**
JYAK				*eS*			**Sn**	**09 33 46.6**	**-2.7**
JKC	**Kuchinoerabu**	**4.73**	**17**	*eP*			**Pn**	**09 32 58.3**	**+0.1**
NACB	**Ninganchiao**	**6.56**	**256**	P			**Pn**	**09 33 20.4**	**-2.9**
YHNB	**Yeheng**	**6.63**	**261**	P			**Pn**	**09 33 23.0**	**-1.3**
YULB	**Yu-li**	**7.08**	**251**	P			**Pn**	**09 33 26.0**	**-4.5**
SSLB	**Suanglung**	**7.24**	**254**	P			**Pn**	**09 33 29.5**	**-3.2**
JNU	**Nakatsue**	**7.44**	**15**	Pn			**Pn**	**09 33 36.3**	**+0.9**
JNU	0.8nm,0.3s,baz=203,slow=15,SNR=8.6 0.2nm,0.3s,baz=309,slow=14,SNR=0.9 5.9nm,0.7s			Sn			**Sn**	**09 34 56.9**	**-2.0**
JNU	**Nakatsue**	**7.44**	**15**	P			**Pn**	**09 33 36.8**	**+1.4**
LZDM	**Lanzhou Array**	**23.50**	**301**	P			**P**	**09 36 55.7**	**-1.0**
	2.0nm,0.3s,baz=147,slow=11,SNR=2.0 2.0nm,0.3s								
GTA	**Gaotai**	**27.55**	**306**	P			**P**	**09 37 33.1**	**-0.2**
GTA	comp=Z,15nm,0.6s			pmax		pmax			
CMAR	**Chiang Mai Arr**	**28.38**	**261**	P			**P**	**09 37 43.4**	**+2.6**
	comp=Z,0.4nm,0.4s,baz=56,slow=7.0,SNR=2.2 comp=Z,0.4nm,0.4s								
MKAR	**Makanchi Array**	**41.96**	**312**	P			**P**	**09 39 36.9**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=90,slow=10,SNR=7.8 comp=Z,0.6nm,0.5s								
KURBB	**Kurchatov Arra**	**45.28**	**317**	P			**P**	**09 40 03.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=106,slow=8.4,SNR=2.7 comp=Z,0.4nm,0.4s								
WRA	**Warramunga Arr**	**45.95**	**172**	P			**P**	**09 40 10.4**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=353,slow=8.5,SNR=6.1 comp=Z,0.7nm,0.7s								
ASAR	**Alice Springs**	**49.58**	**174**	P			**P**	**09 40 39.1**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=3.4,slow=15,SNR=6.3								
	comp=Z,0.5nm,0.6s								
BVAR	**Borovoye Array**	**50.70**	**318**	P			**P**	**09 40 45.4**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=29,slow=6.6,SNR=3.8 comp=Z,1.3nm,0.4s								
ARTI	**Arti**	**57.91**	**322**	LR		LR		10 09 41.2	
	comp=Z,51nm,20.3s,baz=150,slow=39								
FINES	**FINESS Array B**	**73.27**	**331**	P			**P**	**09 43 17.6**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=92,slow=8.3,SNR=5.3 comp=Z,0.6nm,0.5s								
AKASG	**Malin Array Be**	**75.95**	**320**	P			**P**	**09 43 33.2**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=65,slow=6.0,SNR=3.5 comp=Z,1.4nm,0.5s								
BRTR	**Keskin Array B**	**77.45**	**308**	P			**P**	**09 43 43.2**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=108,slow=4.0,SNR=5.9 comp=Z,1.4nm,0.8s								
NOA	**NORSAR Array B**	**79.71**	**334**	P			**P**	**09 43 53.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=53,slow=5.4,SNR=2.1 comp=Z,0.5nm,0.6s								

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*NEIC **03** 09:49:52.1±1.1, 2.86N±0.04 × 96.2E±0.1, h24km±6km, mb4.6/37, Error ellipse: s-maj=16.5km s-min=2.5km az=71.0*
*DJA **03** 09:49:53.9±0.5, 3.1N±3.9 × 96.6E±*, h30km±6km, M4.5/12, mB4.7/2, mb4.6/6, MLv4.4/12, Mw(mB)4.0/2*
*IDC **03** 09:49:55.2±4.5, 2.91N × 96.24E, h50km±38km, mb4.0/17, mbtmp4.2/19, ML4.2/2, MS3.4/13, Error ellipse: s-maj=38.2km s-min=13.7km az=52.0*

ISC 03 09:49:53.0±0.4, 2°90N±0.04 × 96°20E±0.06, h31km, n114, σ1$43/98, mb4.6/44, MS3.4/9, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.50**	**165**	P			**Pn**	**09 50 04.7**	**+0.7**
SNSI				S			**Sn**	**09 50 13.9**	**+2.3**
MLSI	**Meulaboh, Aceh**	**1.38**	**9**	P			**Pn**	**09 50 16.9**	**+0.8**
MLSI				S			**Sn**	**09 50 35.2**	**+2.0**
KCSI	**Kotacane, Aceh**	**1.69**	**68**	P			**Pn**	**09 50 20.7**	**+0.3**
GSI	**Gunungsitoli**	**2.10**	**139**				**Pn**	**09 50 25.6**	**-0.4**
GSI	**Gunungsitoli**	**2.10**	**139**	P			**Pn**	**09 50 26.5**	**+0.5**
LHMI	**Lhok Sumawe**	**2.43**	**18**				**Pn**	**09 50 30.8**	**+0.2**
LHMI	**Lhok Sumawe**	**2.43**	**18**	P			**Pn**	**09 50 32.3**	**+1.7**
PSI	**Prapat**	**2.72**	**92**	P			**Pn**	**09 50 35.5**	**+0.8**
PSI	11nm,0.3s,baz=307,slow=9.1,SNR=29 75nm,0.5s,baz=290,slow=15,SNR=6.3			S			**Sn**	**09 51 08.4**	**+1.7**
PSI	comp=Z,420nm,20.1s,baz=290,slow=48 26nm,0.2s			LR			LR	09 52 05.0	
RPSI	**Rantau Prapat**	**2.73**	**94**				**Pn**	**09 50 35.0**	**+0.4**
PBSI	**Pulau Batu**	**3.60**	**145**	P			**Pn**	**09 50 47.2**	**+0.6**
MNSI	**Mandailing Nat**	**3.97**	**122**	P			**Pn**	**09 50 54.0**	**+2.2**
KULM	**Kulim**	**5.04**	**62**				**Pn**	**09 51 07.3**	**+0.8**
IPM	**Ipoh**	**5.07**	**72**				**Pn**	**09 51 07.1**	**+0.3**
MYKOM	**Kota Tinggi**	**7.72**	**98**	Pn			**Pn**	**09 51 43.5**	**+0.2**
MNAI	**Manna**	**9.88**	**137**	Pn			**Pn**	**09 52 11.9**	**-1.1**
MDSI	**Maura Dua**	**10.83**	**133**	P			**Pn**	**09 52 25.7**	**-0.3**
LEM	**Lembang**	**14.94**	**130**	LR			LR	09 58 43.4	
	comp=Z,127nm,18.4s,baz=228,slow=35								
CMAR	**Chiang Mai Arr**	**15.70**	**10**	P			**Pn**	**09 53 34.8**	**+2.7**
CMAR	0.7nm,0.3s,baz=198,slow=11,SNR=16 comp=Z,146nm,21.2s,baz=195,slow=36 3.0nm,0.5s			LR			LR	09 59 27.8	
PALK	**Pallekele**	**16.03**	**286**	P			**P**	**09 53 44.0**	**+4.4**
PALK	2.9nm,0.7s,baz=100,slow=12,SNR=1.8 1.6nm,0.5s,baz=277,slow=21,SNR=1.4			S			Sn	09 56 21.0	-12
PALK	comp=Z,106nm,19.7s,baz=116,slow=34			LR			LR	09 59 09.8	
SLVN	**Son La**	**19.80**	**22**				**P**	**09 54 20.5**	**-0.6**
RAGD	**RAYAGADA**	**20.48**	**323**	*eP*			**P**	**09 54 25.4**	**-3.0**
RAGD	comp=Z,9.6nm,0.9s			IAmb			IAmb	09 54 46.1	
IMP	**Imphal**	**21.91**	**355**	*eP*			**P**	**09 54 40.1**	**-3.8**
MYLDM	**Lahad Datu**	**22.36**	**83**	P			**P**	**09 54 48.1**	**-0.6**
KOHI	**KOHIMA**	**22.78**	**355**	*eP*			**P**	**09 54 50.9**	**-2.4**
KOHI	comp=Z,11nm,0.8s			IAmb			IAmb	09 54 53.6	
SHL	**Shillong**	**22.92**	**350**	P			**P**	**09 54 51.7**	**-3.0**
SHL	comp=Z,13nm,0.7s			IAmb			IAmb	09 54 53.1	
SHL	**Shillong**	**22.92**	**350**	*eP*			**P**	**09 54 51.9**	**-2.8**
SHL	comp=Z,12nm,0.4s			IAmb			IAmb	09 54 55.9	
JORH	**JORHAT**	**23.78**	**356**	*eP*			**P**	**09 54 57.6**	**-5.4**
TEZP	**TEZPUR**	**23.81**	**352**	*eP*			**P**	**09 55 01.2**	**-2.0**
PZH	**PanZhiHua**	**24.07**	**12**	P			**P**	**09 55 08.8**	**+3.0**
DIBR	**DIBRUGARH**	**24.46**	**357**	*eP*			**P**	**09 55 09.0**	**-0.3**
TOLI2	**Tolitoli**	**24.63**	**94**	P			**P**	**09 55 10.4**	**-0.6**
TOLI2	comp=Z,12nm,0.9s			IAmb			IAmb	09 55 11.7	
H08S2	**Diego Garcia H**	**25.87**	**246**	T			T	10 21 38.7	
	baz=67,slow=76,SNR=474								
H08S3	**Diego Garcia H**	**25.87**	**246**	T			T	10 21 53.4	
	baz=67,slow=76,SNR=535								
H08S1	**Diego Carcia H**	**25.89**	**246**	T			T	10 21 40.0	
	baz=67,slow=76,SNR=269								
EVN	**Everest**	**26.48**	**341**	P			**P**	**09 55 26.4**	**-1.9**
BHPL	**Bhopal**	**27.19**	**320**	IAmb			IAmb	09 50 45.9	
	comp=Z,13nm,0.8s								
DAV	**Davao City (W)**	**29.55**	**81**	LR			LR	10 09 58.7	
	comp=Z,123nm,19.1s,baz=320,slow=41								
XAN	**Xi'an**	**33.18**	**20**	*eP*			**P**	**09 56 26.0**	**-1.0**
XAN				pP			pP	09 56 36.3	+0.6
XAN	comp=Z,8.0nm,0.7s			pmax			pmax		
SMLA	**Simla**	**33.34**	**329**	*eP*			**P**	**09 56 27.6**	**-0.7**
SMLA	comp=Z,15nm,1.1s			IAmb			IAmb	09 56 30.8	
LZH	**Lanzhou**	**33.77**	**11**	*eP*			**P**	**09 56 30.2**	**-2.1**
LZH				pP			sP	09 56 48.5	+3.9
LZH	comp=Z,50nm,1.1s			pmax			pmax		
FITZ	**Fitzroy Crossi**	**35.73**	**127**	P			**P**	**09 56 47.7**	**-1.5**
NJ2	**Nanjing**	**35.98**	**34**	*eP*			**P**	**09 56 54.2**	**+3.0**
NJ2	comp=Z,9.0nm,0.6s			pmax			pmax		
GTA	**Gaotai**	**36.49**	**5**	P			**P**	**09 56 55.6**	**0.0**
GTA	comp=Z,8.0nm,0.7s			pmax			pmax		
NIL	**Nilore**	**37.36**	**328**	P			**P**	**09 57 02.6**	**-0.4**
NIL	comp=Z,6.7nm,0.8s			IAmb			IAmb	09 57 18.1	
MTN	**Manton Dam**	**38.05**	**115**	P			**P**	**09 57 07.9**	**-1.1**
MTN	comp=Z,12nm,1.3s			IAmb			IAmb	09 57 28.3	
HNS	**HongShan**	**38.31**	**24**	⇑P			**P**	**09 57 10.5**	**-0.4**
HNS	comp=Z,14nm,0.8s			pmax			pmax		
HHC	**Hu-ho-hao-te**	**40.24**	**18**	*eP*			**P**	**09 57 30.5**	**+3.4**
HHC	comp=Z,8.0nm,0.7s			pmax			pmax		
KSH	**Kashi**	**40.82**	**336**	P			**P**	**09 57 30.7**	**-1.2**
KSH	comp=Z,8.0nm,0.8s			pmax			pmax		
BJT	**Baijiatuau**	**41.15**	**23**	P			**P**	**09 57 34.3**	**-0.1**
BJT	comp=Z,8.8nm,0.6s			IAmb			IAmb	09 57 35.9	
H01W3	**Cape Leeuwin H**	**41.19**	**157**	T			T	10 40 53.4	
	baz=333,slow=76,SNR=113								
H01W2	**Cape Leeuwin H**	**41.20**	**157**	T			T	10 40 54.3	
	baz=333,slow=76,SNR=92								
H01W1	**Cape Leeuwin H**	**41.20**	**157**	T			T	10 40 54.6	
	baz=333,slow=76,SNR=79								
TARG	**Taragay, Kyrgy**	**42.04**	**339**	P			**P**	**09 57 42.6**	**+0.4**
TARG	comp=Z,7.4nm,0.8s			IAmb			IAmb	09 57 44.5	
KDJ	**Kajisay**	**42.61**	**339**				**P**	**09 57 47.3**	**+0.6**
KDJ	comp=Z,13nm,0.8s			IAmb			IAmb	09 57 48.4	
CHGR	**Chuyangaron**	**43.30**	**329**	P			**P**	**09 57 51.6**	**-0.6**
CHGR	comp=Z,9.8nm,0.9s			IAmb			IAmb	09 58 07.1	
BOOM	**Boomskoye usch**	**43.38**	**338**				**P**	**09 57 52.8**	**0.0**
BOOM	comp=Z,7.1nm,0.7s			IAmb			IAmb	09 57 54.1	
SIMJ	**Simiganj**	**43.38**	**329**	P			**P**	**09 57 52.6**	**-0.3**
SIMJ	comp=Z,12nm,1.4s			IAmb			IAmb	09 58 06.3	
ARSB	**Arslanbob**	**43.59**	**334**				**P**	**09 57 54.6**	**+0.2**
ARSB	comp=Z,12nm,0.7s			IAmb			IAmb	09 57 56.4	
WRA	**Warramunga Arr**	**43.78**	**123**	P			**P**	**09 57 55.0**	**-1.2**
WRA	**Warramunga Arr**	**43.78**	**123**	P			**P**	**09 57 55.7**	**-0.5**
WRA	comp=Z,1.3nm,0.6s,baz=301,slow=9.2,SNR=18			LR			LR	10 17 22.0	
	comp=Z,41nm,18.4s,baz=120,slow=38 comp=Z,1.3nm,0.6s								
WB2	**Warramunga Arr**	**43.79**	**123**	P			**P**	**09 57 55.3**	**-1.0**
WB2	comp=Z,16nm,1.5s			IAmb			IAmb	09 58 33.7	
AAK	**Ala-Archa**	**44.06**	**337**				**P**	**09 57 59.8**	**+1.5**
JNU	**Nakatsue**	**44.23**	**43**	LR			LR	10 17 51.6	
	comp=Z,39nm,18.3s,baz=278,slow=38								
KSAR	**Wonju Array Be**	**45.02**	**36**	P			**P**	**09 58 06.6**	**+0.8**
AS31	**Alice Springs**	**45.22**	**128**	P			**P**	**09 58 06.9**	**-0.8**
ASAR	**Alice Springs**	**45.22**	**128**	P			**P**	**09 58 07.0**	**-0.6**
ASAR	**Alice Springs**	**45.22**	**128**	P			**P**	**09 58 07.2**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=298,slow=7.8,SNR=22 comp=Z,0.8nm,0.6s								
MKAR	**Makanchi Array**	**45.37**	**347**				**P**	**09 58 07.9**	**-0.5**
MKAR	**Makanchi Array**	**45.37**	**347**	P			**P**	**09 58 08.1**	**-0.3**
	comp=Z,6.2nm,0.3s,baz=160,slow=9.0,SNR=113								
MKAR	comp=Z,33nm,18.1s,baz=138,slow=40 comp=Z,6.2nm,0.3s			LR			LR	10 20 33.6	
MAKZ	**Makanchi**	**45.45**	**346**				**P**	**09 58 08.7**	**-0.5**
SONM	**Songino Array**	**45.62**	**10**	P			**P**	**09 58 10.0**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=192,slow=9.2,SNR=18								
SONM	comp=Z,1.9nm,0.6s,baz=201,slow=3.6,SNR=6.0 comp=Z,3.0nm,0.5s			PcP			**PcP**	**09 59 49.0**	**+0.4**
KK31	**Karatay Array**	**46.10**	**334**	P			**P**	**09 58 14.7**	**+0.3**
KKAR	**Karatay Array**	**46.10**	**334**	P			**P**	**09 58 14.9**	**+0.6**
COEN	**Coen**	**49.49**	**111**	P			**P**	**09 58 41.0**	**0.0**
KURBB	**Kurchatov Arra**	**49.84**	**345**	P			**P**	**09 58 43.0**	**-0.1**
	comp=Z,6.0nm,0.7s,baz=167,slow=7.1,SNR=53								
KURBB	comp=Z,0.4nm,0.5s,baz=134,slow=2.7,SNR=1.9 comp=Z,6.0nm,0.7s			PcP			**PcP**	**10 00 03.8**	**+0.4**
KURK	**Kurchatov**	**49.91**	**345**				**P**	**09 58 43.5**	**-0.1**
KURK	comp=Z,6.7nm,0.8s			IAmb			IAmb	09 58 44.4	
HILR	**Hailar Array B**	**50.63**	**20**	P			**P**	**09 58 49.0**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=216,slow=9.0,SNR=4.7 comp=Z,2.1nm,0.5s								
MJAR	**Matsushiro Arr**	**51.14**	**44**	LR			LR	10 22 42.0	
	comp=Z,23nm,18.3s,baz=219,slow=38								
ZAA0	**Zalesovo Array**	**51.74**	**351**	P			**P**	**09 58 56.8**	**-0.5**
ZAA0	comp=Z,6.8nm,0.8s			IAmb			IAmb	09 58 58.4	
ZALV	**Zalesovo Beam**	**51.74**	**351**	P			**P**	**09 58 56.8**	**-0.5**
	comp=Z,5.5nm,0.7s,baz=179,slow=7.0,SNR=24								
ZALV	comp=Z,31nm,19.2s,baz=110,slow=40 comp=Z,5.5nm,0.7s			LR			LR	10 24 50.8	
BVAR	**Borovoye Array**	**54.33**	**341**	P			**P**	**09 59 16.0**	**-0.5**
	comp=Z,4.3nm,0.6s,baz=139,slow=8.6,SNR=23 comp=Z,4.3nm,0.6s								
STKA	**Stephens Creek**	**55.23**	**132**	P			**P**	**09 59 22.9**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=355,slow=12,SNR=1.9 comp=Z,1.5nm,0.7s								
AB31	**Akbulak array**	**55.55**	**332**				**P**	**09 59 25.6**	**+0.2**
AB31	comp=Z,6.1nm,1.2s			IAmb			IAmb	09 59 40.3	
ABKAR	**Akbulak array**	**55.55**	**332**				**P**	**09 59 25.7**	**+0.4**
KBZ	**Khabaz**	**62.14**	**319**	P			**P**	**10 00 12.0**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=121,slow=7.0,SNR=4.2 comp=Z,2.0nm,0.8s								
H04N2	**CROZET ISLANDS**	**62.62**	**213**	T			T	11 07 46.6	
	baz=52,slow=75,SNR=940								
H04N1	**CROZET ISLANDS**	**62.63**	**213**	T			T	11 07 47.1	
	baz=52,slow=75,SNR=1071								
H04N3	**CROZET ISLANDS**	**62.64**	**213**	T			T	11 07 45.8	
	baz=52,slow=75,SNR=848								
H04S1	**CROZET ISLANDS**	**62.98**	**213**	T			T	11 08 14.2	
	baz=51,slow=75,SNR=264								
H04S3	**CROZET ISLANDS**	**62.99**	**213**	T			T	11 08 12.4	
	baz=51,slow=75,SNR=341								
H04S2	**CROZET ISLANDS**	**63.00**	**213**	T			T	11 08 13.7	
	baz=51,slow=75,SNR=210								
YAK	**Yakutsk**	**64.09**	**17**	LR			LR	10 31 14.0	
	comp=Z,36nm,18.7s,baz=258,slow=39								
BRTR	**Keskin Array B**	**67.24**	**312**	P			**P**	**10 00 43.5**	**-1.4**
BRTR	**Keskin Array B**	**67.24**	**312**	P			**P**	**10 00 44.8**	**0.0**
	comp=Z,0.5nm,0.4s,baz=129,slow=5.5,SNR=3.7 comp=Z,0.5nm,0.4s								
TIXI	**Tiksi**	**71.70**	**10**	LR			LR	10 35 50.5	
	comp=Z,50nm,18.7s,baz=186,slow=38								
AKASG	**Malin Array Be**	**73.31**	**322**	P			**P**	**10 01 21.3**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=95,slow=4.5,SNR=3.0 comp=Z,0.8nm,0.6s								
AKBB	**Malin Array Si**	**73.31**	**322**	P			**P**	**10 01 21.3**	**-0.3**
AKBB	comp=Z,12nm,1.5s			IAmb			IAmb	10 01 44.5	
LBTB	**Lobatse**	**73.75**	**243**	LR			LR	10 28 14.4	
	comp=Z,40nm,21.8s,baz=61,slow=31								
BURAR	**Bucovina Array**	**75.10**	**319**	P			**P**	**10 01 33.1**	**+1.0**
FIA1	**FINESS Array S**	**78.04**	**332**	P			**P**	**10 01 48.0**	**-0.4**
FINES	**FINESS Array B**	**78.04**	**332**	P			**P**	**10 01 48.4**	**+0.1**
FINES	**FINESS Array B**	**78.04**	**332**	P			**P**	**10 01 48.1**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=94,slow=5.5,SNR=17 comp=Z,2.4nm,0.6s

PCIG				eS		Sn	09 52 22.8	-0.8	
TXIG	**Tlaxiaco**	**2.56**	**313**			**Pn**	**09 51 57.7**	**+2.1**	
TXIG	**Tlaxiaco**	**2.56**	**313**	eP		**Pn**	**09 51 57.7**	**+2.1**	
TXIG				eS		Sn	09 52 26.9	+1.0	
TUIG	**Tuzandepetl**	**2.82**	**27**			**Pn**	**09 51 57.7**	**-1.1**	
TUIG	**Tuzandepetl**	**2.82**	**27**	eP		**Pn**	**09 51 57.7**	**-1.1**	
TUIG				eS		Sn	09 52 25.9	-6.1	
TOIG	**Toxpalan**	**2.84**	**335**			**Pn**	**09 52 00.1**	**+0.9**	
TOIG	**Toxpalan**	**2.84**	**335**	eP		**Pn**	**09 52 00.1**	**+0.9**	
TOIG				eS		Sn	09 52 29.9	-2.5	
TGIG		**2.85**	**64**			**Pn**	**09 52 01.4**	**+2.1**	
TGIG		**2.85**	**64**	eP		**Pn**	**09 52 01.4**	**+2.1**	
TGIG				eS		Sn	09 52 34.3	+1.5	
HLIG	**Huajuapan de L**	**3.00**	**320**			**Pn**	**09 52 04.0**	**+2.5**	
HLIG	**Huajuapan de L**	**3.00**	**320**	eP		**Pn**	**09 52 04.0**	**+2.5**	
HLIG				eS		Sn	09 52 38.4	+1.8	
PMUV	**Sontecomapan**	**3.07**	**12**			**Pn**	**09 52 01.9**	**-0.5**	
PMUV	**Sontecomapan**	**3.07**	**12**	eP		**Pn**	**09 52 01.9**	**-0.5**	
PMUV				eS		Sn	09 52 31.6	-6.7	
TPIG	**Tehuac#an**	**3.25**	**333**	eP		**Pb**	**09 52 09.6**	**-3.2**	
TPIG				eS		Sn	09 52 39.3	-3.5	
FTIG	**Fresnillo de T**	**3.27**	**317**			**Pn**	**09 52 07.2**	**+2.1**	
FTIG	**Fresnillo de T**	**3.27**	**317**	eP		**Pn**	**09 52 07.2**	**+2.1**	
FTIG				eS		Sn	09 52 38.6	-4.5	
TLIG	**Tlapa**	**3.35**	**308**			**Pn**	**09 52 07.5**	**+1.3**	
TLIG	**Tlapa**	**3.35**	**308**	eP		**Pn**	**09 52 08.3**	**+2.1**	
TLIG				eS		Sn	09 52 39.6	-5.5	
CRIG	**Cruz Grande**	**3.43**	**291**			**Pn**	**09 52 07.9**	**+0.7**	
CRIG	**Cruz Grande**	**3.43**	**291**	eP		**Pn**	**09 52 07.9**	**+0.7**	
CRIG				eS		Sn	09 52 42.1	-4.9	
PATR	**El Naranjo**	**3.46**	**96**			**Pn**	**09 52 10.9**	**+3.1**	
PATR	**El Naranjo**	**3.46**	**96**	eP		**Pn**	**09 52 10.9**	**+3.1**	
PATR				eS		Sn	09 52 49.1	+1.2	
THIG		**3.46**	**100**			**Pn**	**09 52 10.4**	**+2.8**	
THIG		**3.46**	**100**	eP		**Pn**	**09 52 10.4**	**+2.8**	
THIG				eS		Sn	09 52 47.5	-0.1	
HMTT	**Tlapaneco**	**3.49**	**311**			**Pn**	**09 52 09.8**	**+1.7**	
HMTT	**Tlapaneco**	**3.49**	**311**	eP		**Pn**	**09 52 09.8**	**+1.7**	
HMTT				eS		Sn	09 52 46.7	-1.9	
PAVE	**Pavencul**	**3.50**	**95**			**Pn**	**09 52 12.1**	**+3.6**	
PAVE	**Pavencul**	**3.50**	**95**	eP		**Pn**	**09 52 12.1**	**+3.6**	
PAVE				eS		Sn	09 52 48.0	-1.1	
CHUJ	**Union Juarez**	**3.58**	**96**	eP		**Pn**	**09 52 12.6**	**+3.1**	
CHUJ				eS		Sn	09 52 49.1	-1.9	
CCIG	**Comitan**	**3.60**	**77**			**Pn**	**09 52 12.2**	**+2.5**	
CCIG	**Comitan**	**3.60**	**77**	eP		**Pn**	**09 52 12.2**	**+2.5**	
CCIG				eS		Sn	09 52 49.7	-1.6	
JAUV	**Jalcomulco**	**3.94**	**346**			**Pn**	**09 52 15.1**	**+0.7**	
JAUV	**Jalcomulco**	**3.94**	**346**	eP		**Pn**	**09 52 15.1**	**+0.7**	
JAUV				eS		Sn	09 53 02.2	+2.5	
DAIG	**Los Arroyos**	**4.00**	**292**			**Pn**	**09 52 15.9**	**+0.9**	
DAIG	**Los Arroyos**	**4.00**	**292**	eP		**Pn**	**09 52 15.9**	**+0.9**	
DAIG				eS		Sn	09 52 55.4	-5.5	
RTAL	**Retalhuleu**	**4.08**	**104**		Pn	**Pn**	**09 52 19.7**	**+3.5**	
RTAL	**Retalhuleu**	**4.08**	**104**	eP		**Pn**	**09 52 18.7**	**+2.5**	
RTAL				eS		Sn	09 52 59.8	-3.2	
HUEH	**Huehuetenango**	**4.14**	**92**			**Pn**	**09 52 21.9**	**+4.7**	
PHPU	**Puebla**	**4.18**	**327**			**Pn**	**09 52 17.3**	**-0.4**	
PHPU	**Puebla**	**4.18**	**327**	eP		**Pn**	**09 52 17.3**	**-0.4**	
PHPU				eS		Sn	09 53 04.2	-1.6	
LVIG	**Laguna Verde**	**4.22**	**352**			**Pn**	**09 52 20.6**	**+2.5**	
LVIG	**Laguna Verde**	**4.22**	**352**	eP		**Pn**	**09 52 20.6**	**+2.5**	
LVIG				eS		Sn	09 53 05.4	-1.1	
PPCL	**Tochimilco**	**4.32**	**322**	eP		Pn	09 52 25.5	+5.8	
PPCL				eS		Sn	09 53 05.4	-4.0	
MEIG	**Mezcala**	**4.38**	**304**			**Pn**	**09 52 21.6**	**+1.3**	
MEIG	**Mezcala**	**4.38**	**304**	eP		**Pn**	**09 52 21.6**	**+1.3**	
MEIG				eS		Sn	09 53 07.5	-3.0	
CAIG	**El Cayaco**	**4.56**	**290**			**Pn**	**09 52 23.9**	**+1.2**	
CAIG	**El Cayaco**	**4.56**	**290**	eP		**Pn**	**09 52 23.9**	**+1.2**	
CAIG				eS		Sn	09 53 07.8	-7.0	
YAIG	**Yautepec**	**4.56**	**317**			**Pn**	**09 52 25.1**	**+2.1**	
YAIG	**Yautepec**	**4.56**	**317**	eP		**Pn**	**09 52 25.1**	**+2.1**	
YAIG				eS		Sn	09 53 09.8	-5.4	
AMVM	**AMECAMECA**	**4.59**	**322**	*e*		Pn	09 52 29.4	+5.9	
AMVM				*e*			09 53 03.2		
MPVM	**San Francisco**	**4.78**	**320**			**Pn**	**09 52 27.1**	**+1.1**	
MPVM	**San Francisco**	**4.78**	**320**	eP		**Pn**	**09 52 27.1**	**+1.1**	
MPVM				eS		Sn	09 53 22.3	+1.6	
THVM	**De Xico**	**4.84**	**322**	eP		Pn	09 52 32.6	+5.7	
THVM				eS		Sn	09 53 27.3	+5.2	
TLVM	**San Miguel Top**	**4.88**	**319**	eP		Pn	09 52 33.9	+6.5	
TLVM				eS		Sn	09 53 30.9	+7.7	
XCVM	**Xochimilco**	**4.88**	**320**	eP		Pn	09 52 34.1	+6.6	
XCVM				*e*			09 53 28.1		
TXVM	**Universitario**	**4.90**	**323**	*e*		**Sb**	**09 53 36.4**	**-3.2**	
MAVM	**Malinalco, Edo**	**4.92**	**315**	*e*		Pb	09 52 36.3	-4.9	
MAVM				*e*			09 53 31.6		
CXUV	**Coxquihui**	**4.93**	**340**			**Pn**	**09 52 28.9**	**+0.9**	
CXUV	**Coxquihui**	**4.93**	**340**	eP		**Pn**	**09 52 28.9**	**+0.9**	
CXUV				*e*			09 53 18.0		
UNM	**Universidad Na**	**4.98**	**320**		Pn	**Pn**	**09 52 30.1**	**+1.3**	
COVM	**Coyoacan**	**4.98**	**320**	eS		**Sn**	**09 53 27.6**	**+2.0**	
PBVM	**Pinon**	**5.01**	**322**	*e*		**Pb**	**09 52 42.6**	**+0.1**	
PBVM				*e*			09 53 30.3		
BJVM	**Benito Juarez**	**5.01**	**320**			**Pn**	**09 52 28.4**	**-0.8**	
BJVM	**Benito Juarez**	**5.01**	**320**	eP		**Pn**	**09 52 28.4**	**-0.8**	
BJVM				*e*			09 53 34.2		
MHVM	**Bosque de Chap**	**5.06**	**320**			**Pn**	**09 52 32.2**	**+2.3**	
MHVM	**Bosque de Chap**	**5.06**	**320**	eP		**Pn**	**09 52 32.2**	**+2.3**	
MHVM				eS		Sn	09 53 22.4	-5.2	
CJVM	**Cuajimalpa**	**5.07**	**319**	eP		Pn	09 52 35.7	+5.7	
CJVM				*e*			09 53 36.6		
INVM	**La Marquesa**	**5.08**	**318**	*e*		Pn	09 52 36.7	+6.5	
INVM				eS		Sn	09 53 29.5	+1.3	
VTVM	**Tizayuca**	**5.09**	**326**			**Pn**	**09 52 32.6**	**+2.2**	
VTVM	**Tizayuca**	**5.09**	**326**	eP		**Pn**	**09 52 32.6**	**+2.2**	
VTVM				*e*			09 53 40.7		
APVM	**Azcapotzalco**	**5.12**	**321**	*e*		Pn	09 52 36.4	+5.7	
APVM				eS		Sn	09 53 27.3	-1.7	
ARIG	**Puente Sto Nin**	**5.15**	**303**			**Pn**	**09 52 32.5**	**+1.6**	
ARIG	**Puente Sto Nin**	**5.15**	**303**	eP		**Pn**	**09 52 32.5**	**+1.6**	
ARIG				eS		Sn	09 53 23.9	-5.6	
ZUVM	**ZUMPANGO**	**5.31**	**324**	*e*		**Pb**	**09 52 46.0**	**-1.8**	
ZUVM				*e*			09 53 39.4		
ZIIG	**Zihuatanejo**	**5.82**	**292**			**Pn**	**09 52 41.8**	**+1.7**	
ZIIG	**Zihuatanejo**	**5.82**	**292**	eP		**Pn**	**09 52 41.8**	**+1.7**	
ZIIG				eS		Sn	09 53 41.8	-4.2	
PETF	**Flores**	**5.86**	**75**			**Pn**	**09 52 42.2**	**+1.6**	
PETF	**Flores**	**5.86**	**75**	eP		**Pn**	**09 52 42.2**	**+1.6**	
PETF				eS		Sn	09 53 43.9	-3.0	
ACIG	**Acambay**	**5.90**	**319**	eP		Pn	09 52 47.7	+6.3	
ACIG				eS		Sn	09 53 48.2	0.0	
MTO3	**Montecristo**	**6.31**	**99**		Pn	**Pn**	**09 52 47.7**	**+0.6**	
CTUV	**Llano Grande**	**6.40**	**338**			**Pn**	**09 52 48.1**	**+0.1**	
CTUV	**Llano Grande**	**6.40**	**338**	eP		**Pn**	**09 52 48.1**	**+0.1**	
CTUV				eS		Sn	09 54 01.7	+1.5	
MOIG	**Morelia**	**6.60**	**310**			**Pn**	**09 52 52.8**	**+1.8**	
MOIG	**Morelia**	**6.60**	**310**	eP		**Pn**	**09 52 53.7**	**+2.7**	
MOIG				eS		Sn	09 54 06.3	+0.7	
JRQG	**Juriquilla Cam**	**6.79**	**320**	eP		**Pn**	**09 52 55.1**	**+1.4**	
JRQG				eS		Sn	09 54 00.1	-10	
RPIG	**Rio Verde**	**7.47**	**329**	eP		Pn	09 53 07.9	+5.0	
RPIG				eS		Sn	09 54 32.5	+5.7	
MMIG	**Aquila**	**7.74**	**292**	eS		**Sn**	**09 54 37.5**	**+4.4**	
MNGA	**Volcan de Coli**	**8.44**	**299**	eP		**Pn**	**09 53 20.4**	**+4.1**	
MNGA				eS		Sn	09 54 53.8	+3.0	
INCO	**Volcan de Coli**	**8.45**	**299**	eP		Pn	09 53 26.4	+10	
INCO				eS		Sn	09 54 55.5	+4.2	
SOMAC	**Volcano de Col**	**8.47**	**299**	eP		**Pn**	**09 53 16.0**	**-0.8**	
SOMAC				eS		Sn	09 54 56.0	+4.3	
TEIG	**Tepich**	**8.55**	**56**		Pn	**Pn**	**09 53 16.8**	**-0.8**	
CDAR	**Ciudad de Arme**	**8.56**	**295**	eP		**Pn**	**09 53 22.1**	**+4.4**	
CDAR				eS		Sn	09 54 56.7	+3.3	
CEGR	**Campo Tres**	**8.61**	**298**	eP		**Pn**	**09 53 20.1**	**+1.6**	
CEGR				eS		Sn	09 54 56.2	+1.4	
JUD3	**Juan Diaz 3**	**11.32**	**117**		Pn	**Pn**	**09 53 56.7**	**+1.0**	
HNDO	**Hondo**	**14.31**	**348**		Pn	**Pn**	**09 54 33.6**	**-2.8**	
BRU2	**Volcan**	**14.44**	**116**		Pn	**Pn**	**09 54 41.2**	**+2.8**	
HPIG		**14.61**	**323**			**Pn**	**09 54 40.2**	**-0.5**	
ALPN	**Alpine**	**16.45**	**335**		Pn	**Pn**	**09 55 04.8**	**+0.2**	
ALPN					IAmb	IAmb	09 55 19.3		
	comp=Z,5.9nm,1.3s								
346A	**Big Creek Wild**	**16.82**	**19**		Pn	**Pn**	**09 55 09.7**	**+0.6**	
MNHN	**Monahans**	**16.99**	**339**		Pn	**Pn**	**09 55 11.2**	**-0.1**	
VBMS	**Vicksburg**	**17.30**	**15**		Pn	**Pn**	**09 55 15.1**	**0.0**	
VBMS					IAmb	IAmb	09 55 21.9		
	comp=Z,14nm,0.9s								
OK051	**E0350 and S346**	**20.92**	**358**		P	**P**	**09 55 57.4**	**+1.4**	
OK051					IAmb	IAmb	09 56 08.2		
	comp=Z,6.8nm,0.6s								
LENM	**Lemitar**	**21.13**	**334**		P	**P**	**09 55 57.8**	**-0.6**	

*KRNET **03** 09:59:12.1±0.1, 41.17N×78.58E, h18km, mb3.0*
*SOME **03** 09:59:13.0, 41.20N×78.40E, h10km*
*NNC **03** 09:59:13.9±1.3, 41.21N×78.42E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=8.7km s-min=7.7km az=164.0*

ISC 03 09:59:13.6±2.7, 41°24'N±0'09×78°48'E±0'07, h1km±14km, n24, σ0°83/36, 12C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.70**	**314**	⇑*iP*	**Pg**	**09 59 27.3**	**+0.1**
TARG				⇑*iS*	**Sb**	**09 59 38.8**	**-0.6**
PRZ	**Przheval'sk**	**1.24**	**357**	⇑*iP*	**Pn**	**09 59 36.8**	**-1.6**
PRZ				⇑*iS*	**Sb**	**09 59 54.7**	**+0.1**
KDJ	**Kajisay**	**1.32**	**313**	⇓*iP*	**Pn**	**09 59 38.0**	**-1.4**
KDJ				⇓*iS*	**Sg**	**09 59 56.8**	**+0.8**
SATY	**Saty**	**1.82**	**358**	Pg	**Pb**	**09 59 48.5**	**+0.7**
	2.8nm,0.2s						
SATY				Lg	Lg	10 00 14.1	
	16nm,0.2s						
ULHL	**Ulahol**	**1.95**	**302**	⇑*iP*	**Pn**	**09 59 48.4**	**+0.3**
ULHL				⇑*iS*	**Sb**	**10 00 15.0**	**-0.1**
JNKS	**Jany-Kuch**	**2.14**	**266**	⇑*iP*	**Pn**	**09 59 50.7**	**-0.1**
JNKS				⇑*iS*	**Sb**	**10 00 18.7**	**-1.9**
MDOK	**Medeo**	**2.20**	**331**	Pg	**Pb**	**09 59 54.4**	**+0.1**
	4.8nm,0.5s						
MDOK				Lg	Lg	10 00 25.0	
	10nm,0.6s						
KPKS	**Kokpek**	**2.23**	**4**	Pg	**Pb**	**09 59 55.5**	**+0.7**
	0.2nm,0.1s						
KPKS				Lg	Lg	10 00 26.1	
	20nm,0.5s						
KOTS	**Kotyrbulak**	**2.24**	**333**	Pg	**Pb**	**09 59 55.2**	**+0.3**
	3.5nm,0.2s						
KOTS				Lg	Lg	10 00 26.5	
	17nm,0.3s						
KOTS	**Kotyrbulak**	**2.24**	**333**	*eP*	**Pb**	**09 59 55.2**	**+0.3**
	3.5nm,0.2s						
KOTS				*eS*	**Sg**	**10 00 25.5**	**0.0**
	17nm,0.3s						
IZV	**Izvestkoviy**	**2.27**	**323**	Pg	**Pb**	**09 59 55.4**	**-0.1**
	2.8nm,0.3s						
IZV				Lg	Lg	10 00 25.9	
	9.4nm,0.3s						
IZV	**Izvestkoviy**	**2.27**	**323**	*eP*	**Pb**	**09 59 55.4**	**-0.1**
	2.8nm,0.3s						
IZV				*eS*	**Sg**	**10 00 25.9**	**-0.6**
	9.4nm,0.3s						
BOOM	**Boomskoye usch**	**2.27**	**304**	⇑*iP*	**Pn**	**09 59 52.9**	**+0.4**
BOOM				⇑*iS*	**Sb**	**10 00 22.5**	**-1.7**
TKM2	**Tokmak 2**	**2.73**	**309**	⇑*iP*	**Pn**	**09 59 59.2**	**+0.4**
TKM2				⇑*iS*	**Sn**	**10 00 33.6**	**+1.1**
KTBS	**Karatobe**	**2.81**	**332**	Pg	**Pb**	**10 00 05.0**	**+0.4**
	1.9nm,0.5s						
KTBS				Lg	Lg	10 00 42.6	
	7.2nm,0.3s						
CHKK	**Chushkaly**	**2.83**	**338**	Pg	**Pb**	**10 00 06.2**	**+1.1**
	15nm,0.4s						
CHKK				Lg	Lg	10 00 44.3	
	15nm,0.4s						
CHKK	**Chushkaly**	**2.83**	**338**	*eP*	**Pb**	**10 00 06.2**	**+1.1**
	15nm,0.4s						
CHKK				*eS*	**Sg**	**10 00 44.3**	**-0.4**
	15nm,0.4s						
DGS	**Degeres**	**2.84**	**316**	Pg	**Pb**	**10 00 05.3**	**+0.1**
	2.7nm,0.4s						
DGS				Lg	Lg	10 00 42.7	
	3.7nm,0.5s						
BLB	**Baldybastay**	**2.85**	**360**	Pg	**Pb**	**10 00 06.3**	**+0.8**
	15nm,0.4s						
BLB				Lg	Lg	10 00 44.5	
	9.6nm,0.7s						
ARXS	**Arharly**	**3.01**	**351**	Pg	**Pb**	**10 00 09.0**	**+0.9**
	2.8nm,0.4s						
ARXS				Lg	Lg	10 00 49.7	
	15nm,0.5s						
ARXS	**Arharly**	**3.01**	**351**	*eP*	**Pb**	**10 00 09.0**	**+0.9**
ARXS				*eS*	**Sg**	**10 00 49.7**	**-0.6**
KNOS	**Konyrlen**	**3.16**	**9**	Pg	**Pb**	**10 00 10.8**	**+0.1**
	1.0nm,0.3s						
KNOS				Lg	Lg	10 00 52.3	
	5.0nm,0.5s						
ARLS	**Aral**	**3.18**	**283**	⇓*eP*	**Pn**	**10 00 05.2**	**+0.2**
ARLS				⇓*eS*	**Sn**	**10 00 44.2**	**+0.6**
KRBS	**Karabastau**	**3.21**	**321**	Pg	**Pb**	**10 00 12.5**	**+1.0**
	1.3nm,0.6s						
KRBS				Lg	Lg	10 00 55.4	
	1.7nm,0.4s						

*DSN **03** 10:26:59.8±1.0, 28.02N×55.06E, h15km, ML3.0/5, Error ellipse: s-maj=29.0km s-min=7.5km az=56.0*
*TEH **03** 10:27:03.4, 27.48N×54.95E, h25km±14km*

ISC 03 10:27:04.2±0.9, 27°48'N±0'05×54°97'E±0'04, h10km, n21, σ1°26/23, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.56**	**290**	Pg	**Pb**	**10 27 15.2**	**-1.0**
BNDS	**Bandar-Abbas**	**1.07**	**94**	Pg	**Pn**	**10 27 25.0**	**-0.5**
GENO	**Geno**	**1.07**	**94**	Pg	**Pn**	**10 27 25.4**	**-0.1**
GENO				Sg	**Sn**	**10 27 42.5**	**+1.9**
IBND	**Bandar-abas**	**1.40**	**91**	Pg	**Pg**	**10 27 30.9**	**-0.1**
JHRM	**Jahrom**	**1.60**	**310**	Pg	**Pg**	**10 27 34.3**	**-0.6**
LMD1	**Lamerd**	**1.61**	**265**	Pg	**Pg**	**10 27 35.0**	**-0.1**
SHME	**Shamm**	**1.77**	**143**	P	**Pb**	**10 27 35.3**	**-1.5**
SHME				S	**Sg**	**10 28 03.3**	**+2.1**
BANOM	**Banah**	**1.96**	**142**	P	**Pb**	**10 27 38.4**	**-1.6**
MSFE	**Esma-Masafi**	**2.37**	**153**	P	**Pn**	**10 27 44.4**	**+1.2**
KHNJ	**Kahnooj**	**2.47**	**79**	Pn	**Pn**	**10 27 44.7**	**+0.1**
HATD	**Hatta, Dubai**	**2.85**	**158**	P	**Pb**	**10 27 51.9**	**-3.3**
KRBR	**Kerman**	**2.95**	**32**	Pn	**Pn**	**10 27 51.9**	**+0.5**
ASHO	**Ashiyiah**	**2.96**	**160**	P	**Pn**	**10 27 52.8**	**+1.5**
KHGB	**Koh Gabri**	**3.17**	**24**	Pn	**Pn**	**10 27 55.2**	**+0.8**
CHMN	**Cheshme madani**	**3.27**	**43**	Pn	**Pn**	**10 27 57.0**	**+1.1**
KBAM	**BAM**	**3.49**	**61**	Pn	**Pn**	**10 27 59.2**	**+0.6**
IMEH	**Mehriz**	**3.91**	**356**	Pn	**Pn**	**10 28 05.1**	**+0.6**
IBAF	**Bafgh**	**4.13**	**7**	Pn	**Pn**	**10 28 07.7**	**+0.3**
KLNJ	**Kolanjah**	**4.59**	**321**	Pn	**Pn**	**10 28 14.3**	**+0.3**
IRAM	**Ramesheh**	**4.86**	**333**	Pn	**Pn**	**10 28 18.0**	**+0.4**
CHBR	**Chabahar**	**5.29**	**110**	Pn	**Pn**	**10 28 23.4**	**+0.1**

*GUC **03** 10:33:38.6±0.5, 17.47S×70.12W, h154km±2km, ML3.5*
*IDC **03** 10:33:39.0±1.6, 17.19S×69.84W, h141km±15km, mb3.6/7, mbtmp4.0/8, Error ellipse: s-maj=22.0km s-min=16.4km az=49.0*
*NEIC **03** 10:33:38.6±1.9, 17.39S±0.07×70.0W±0.1, h139km±7km, mb4.2/9, ML3.5(GUC), Error ellipse: s-maj=14.6km s-min=8.8km az=108.0*

ISC 03 10:33:37.4±0.7, 17°30'S±0'05×69°93'W±0'07, h136km±6km, n57, σ1°31/62, mb3.8/7, 1C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.52**	**124**		**Pn**	**10 33 59.5**	**+1.6**
PB18	**Visviri**	**0.52**	**124**	⇓*eP*	**Pn**	**10 33 59.5**	**+1.6**
PB18				IAML		10 34 16.9	
	comp=N,544nm,0.7s						
PB16	**IPOC Station P**	**1.11**	**159**		**Pn**	**10 34 04.0**	**+1.6**
PB16	**IPOC Station P**	**1.11**	**159**	⇑*iP*	**Pn**	**10 34 04.1**	**+1.6**
PB16				*eS*	**Sn**	**10 34 23.5**	**+1.9**
PB16				IAML		10 34 24.7	
	comp=N,369nm,0.2s						
AP01	**Chacalluta**	**1.14**	**200**		**Pn**	**10 34 03.0**	**+0.8**
AP01	**Chacalluta**	**1.14**	**200**	*eP*	**Pn**	**10 34 02.7**	**+0.5**
AP01				IAML		10 34 23.1	
	comp=E,2μm,0.3s						
PB12	**IPOC Station P**	**1.36**	**196**		**Pn**	**10 34 04.9**	**+0.3**
PB12	**IPOC Station P**	**1.36**	**196**	*eP*	**Pn**	**10 34 04.9**	**+0.3**
PB12				*eS*	**Sn**	**10 34 24.9**	**-0.4**
LPAZ	**La Paz**	**2.00**	**60**		**Pn**	**10 34 13.8**	**+1.6**
LPAZ	**La Paz**	**2.00**	**60**	P	**Pn**	**10 34 13.4**	**+1.1**
	comp=E,72nm,0.3s,baz=245,slow=7.3,SNR=520						
LPAZ				S	**Sn**	**10 34 38.6**	**-0.2**
	comp=E,77nm,0.4s,baz=347,slow=22,SNR=26						
GO01	**Chusmiza**	**2.46**	**164**		**Pn**	**10 34 18.9**	**+1.0**
GO01	**Chusmiza**	**2.46**	**164**	*eP*	**Pn**	**10 34 19.2**	**+1.4**
GO01				*eS*	**Sn**	**10 34 50.1**	**+1.2**
PB11	**IPOC Station P**	**2.47**	**174**		**Pn**	**10 34 18.2**	**+0.5**
PB11	**IPOC Station P**	**2.47**	**174**	*eP*	**Pn**	**10 34 18.1**	**+0.5**
PB11				*eS*	**Sn**	**10 34 48.2**	**-0.4**
PB08	**IPOC Station P**	**2.92**	**166**		**Pn**	**10 34 23.8**	**+0.1**
PB08	**IPOC Station P**	**2.92**	**166**	*eP*	**Pn**	**10 34 24.8**	**+1.1**
TA02	**Huaiquique**	**2.97**	**184**	*eP*	**Pn**	**10 34 23.3**	**-0.5**
TA01	**Diego Aracena**	**3.26**	**184**		**Pn**	**10 34 27.0**	**-0.6**
TA01	**Diego Aracena**	**3.26**	**184**	*eP*	**Pn**	**10 34 27.2**	**-0.4**
TA01				IAML		10 35 05.5	
	comp=E,161nm,0.2s						
PATCX	**Punta Patache**	**3.51**	**183**	Pn	**Pn**	**10 34 30.1**	**-0.9**
PATCX	**Punta Patache**	**3.51**	**183**	*eP*	**Pn**	**10 34 30.8**	**-0.1**
PB01	**IPOC Station P**	**3.75**	**174**		**Pn**	**10 34 34.4**	**+0.3**
PB01	**IPOC Station P**	**3.75**	**174**	*eP*	**Pn**	**10 34 34.0**	**-0.1**
PB02	**IPOC Station P**	**4.00**	**180**		**Pn**	**10 34 37.2**	**-0.3**
PB02	**IPOC Station P**	**4.00**	**180**	*eP*	**Pn**	**10 34 37.3**	**-0.1**
PB09	**IPOC Station P**	**4.53**	**172**		**Pn**	**10 34 44.6**	**+0.2**
PB03	**IPOC Station P**	**4.73**	**178**		**Pn**	**10 34 46.4**	**-0.8**
PB06	**IPOC Station P**	**5.39**	**176**		**Pn**	**10 34 54.9**	**-1.1**
PB05	**IPOC Station P**	**5.54**	**183**		**Pn**	**10 34 56.6**	**-1.3**
GO02	**Mina Guanaco**	**7.83**	**178**		**Pn**	**10 35 27.3**	**-1.6**
NNA	**Nana**	**8.52**	**307**		**Pn**	**10 35 37.5**	**-0.4**
NNA	**Nana**	**8.52**	**307**	P	**Pn**	**10 35 38.4**	**+0.5**
	comp=E,12nm,0.4s,baz=128,slow=14,SNR=11						
NNA				S	**Sn**	**10 37 10.1**	**-2.4**
	comp=E,12nm,0.7s,baz=241,slow=11,SNR=4.4						
SIV	**San Ignacio**	**8.59**	**83**	P	**Pn**	**10 35 35.4**	**-3.5**
	comp=E,44nm,0.5s,baz=267,slow=8.7,SNR=209						
AC01	**Pan de Azucar**	**8.83**	**184**	Pn	**Pn**	**10 35 39.1**	**-3.0**
VILB	**Vilhena**	**10.34**	**67**		**Pn**	**10 35 59.8**	**-2.5**
PTLB	**Pontes e Lacer**	**10.52**	**81**		**Pn**	**10 36 03.0**	**-1.7**
CO05	**La Serena**	**12.62**	**185**	Pn	**Pn**	**10 36 29.4**	**-2.7**
CFA	**Coronel Fontan**	**14.33**	**174**	P	**Pn**	**10 36 52.0**	**-2.1**
	comp=E,1.8nm,0.6s,baz=329,slow=13,SNR=5.9						
CFA				S	Sn	10 39 21.1	-12
	comp=E,1.1nm,0.4s,baz=235,slow=16,SNR=4.9						
VA03	**San Esteban**	**15.41**	**182**	P	**Pn**	**10 37 07.8**	**+0.1**
VA03				IAmb	IAmb	10 37 12.6	
	comp=Z,21nm,1.1s						
MT02	**Curacav**	**15.93**	**184**	P	**Pn**	**10 37 13.8**	**-0.2**
MT09	**Talagante**	**16.44**	**183**	P	**Pn**	**10 37 19.8**	**-0.5**
MT01	**Popeta**	**16.54**	**184**	P	**Pn**	**10 37 21.1**	**-0.4**
MT01				IAmb	IAmb	10 38 01.6	
	comp=Z,23nm,1.2s						
BO01	**Tunca**	**17.06**	**183**	P	**P**	**10 37 27.4**	**+0.1**
BO01				IAmb	IAmb	10 37 28.9	
	comp=Z,17nm,1.4s						
BDFB	**Brasilia**	**21.08**	**89**	P	**P**	**10 38 11.2**	**-0.1**
BDFB	**Brasilia**	**21.08**	**89**	P	**P**	**10 38 09.9**	**-1.4**
	comp=Z,2.4nm,0.5s,baz=251,slow=10.0,SNR=5.2						
	comp=Z,2.4nm,0.5s						
TRQA	**Tornquist**	**21.83**	**163**	P	**P**	**10 38 19.2**	**+0.2**
**PLC

KCPM	**Cahto Peak**	**1.42 244**			Pn	10 38 35.3	+0.2	
KCPM			IAML			10 39 07.3		
	comp=N,78nm,0.9s							
KCPM			IAML			10 39 08.6		
	comp=E,122nm,0.7s							
YUBA	**Cisco Grove, Y**	**1.46 132**			Pn	10 38 35.6	-0.2	
M04C	**Macdoel**	**1.46 3**			Pn	10 38 36.0	+0.2	
KHMM	**Horse Mountain**	**1.48 293**			Pn	10 38 36.4	+0.4	
KHMM	**Horse Mountain**	**1.48 293**	IAML			10 39 03.5		
	comp=E,107nm,0.9s							
KHMM			IAML			10 39 06.3		
	comp=N,114nm,0.9s							
MNRC	**McLaughlin Min**	**1.49 195**			Pn	10 38 34.8	-1.3	
MNRC			IAML			10 39 18.2		
	comp=N,72nm,0.8s							
KOMM	**Orleans Mounta**	**1.50 310**			Pn	10 38 35.2	-1.0	
BRIC	**Briceland Vine**	**1.52 263**			Pn	10 38 36.9	+0.5	
BRIC	**Briceland Vine**	**1.52 263**	IAML			10 39 09.0		
	comp=E,65nm,0.7s							
BRIC			IAML			10 39 09.7		
	comp=N,72nm,0.9s							
YBH	**Yreka Blue Hor**	**1.53 338**	IAML			10 38 59.3		
	comp=N,73nm,0.3s							
YBH	**Yreka Blue Hor**	**1.53 338**			Pn	10 38 35.4	-1.2	
GWRM	**Wonder Ranch**	**1.53 224**			Pn	10 38 37.0	+0.4	
GTC	**Three Chop Rid**	**1.55 234**			Pn	10 38 36.9	0.0	
B040	**Montague**	**1.56 346**			Pn	10 38 37.2	+0.2	
B040	**Montague**	**1.56 346**			Pn	10 38 37.1	+0.2	
NMTM	**Middletown**	**1.56 195**			Pn	10 38 35.9	-1.1	
INGLE	**Inglenook, Smi**	**1.57 240**			Pn	10 38 36.8	-0.3	
DONR	**Donner Summit**	**1.57 127**			Pn	10 38 37.5	+0.1	
HOPS	**Hopland Field**	**1.59 214**			Pn	10 38 37.4	0.0	
GDXM	**Geysers**	**1.65 204**			Pn	10 38 38.5	+0.2	
JCC	**Jacoby Creek,**	**1.67 288**			Pn	10 38 38.6	+0.1	
JCC	**Jacoby Creek,**	**1.67 288**	IAML			10 39 11.2		
	comp=N,56nm,0.9s							
KMPM	**Mount Pierce**	**1.67 274**			Pn	10 38 39.1	+0.5	
KMPM			IAML			10 39 10.3		
	comp=N,75nm,0.7s							
KMPM			IAML			10 39 12.9		
	comp=E,84nm,0.9s							
TULE	**Intermountain**	**1.68 12**			Pb	10 38 39.8	-0.5	
BONV	**Boonville, CA**	**1.72 220**			Pn	10 38 39.0	-0.1	
RUSS	**Russell Ranch**	**1.77 178**			Pn	10 38 38.4	-1.5	
RUSS	**Russell Ranch**	**1.77 178**	IAML			10 39 24.3		
	comp=E,93nm,0.7s							
RUSS			IAML			10 39 38.3		
	comp=N,84nm,0.8s							
GALB	**Galbreath Wild**	**1.78 216**			Pn	10 38 39.4	-0.6	
KCTM	**Capetown**	**1.84 276**			Pn	10 38 41.4	+0.6	
PETL	**Petrolia**	**1.84 270**			Pn	10 38 40.8	0.0	
L04D	**Klamath Falls**	**1.92 352**			Pb	10 38 43.5	-0.9	
L04D			IAML			10 39 12.8		
	comp=N,88nm,0.8s							
L04D			IAML			10 39 22.4		
	comp=E,55nm,1.1s							
CVS	**Carmenet Viney**	**2.01 192**			Pn	10 38 41.7	-1.5	
PAHR	**Pah Rah Range**	**2.05 107**			Pn	10 38 42.2	-1.7	
PAHR			IAML			10 39 17.9		
	comp=E,51nm,0.5s							
PNTR	**Pine Nut**	**2.18 124**			Pb	10 38 47.8	-1.2	
L02F	**Cave Junction**	**2.18 326**			Pn	10 38 45.6	0.0	
L02F			IAML			10 39 24.2		
	comp=E,38nm,0.8s							
L02F			IAML			10 39 26.3		
	comp=N,33nm,0.6s							
LKVW	**Lakeview**	**2.24 31**			Pn	10 38 46.6	+0.1	
CMB	**Columbia Colle**	**2.58 152**			Pn	10 38 51.5	+0.5	
CMB			IAML			10 39 36.1		
	comp=E,31nm,1.0s							
CMB			IAML			10 39 37.6		
	comp=N,30nm,0.6s							
WAKR	**Walker**	**2.65 132**			Pn	10 38 53.7	+1.5	
WAKR			IAML			10 39 40.3		
	comp=E,37nm,0.9s							
JRSC	**Jasper Ridge**	**2.92 185**	Pn		Pn	10 38 56.6	+0.9	
JRSC			IAML			10 39 16.4		
	comp=E,19nm,1.9s							
JRSC			IAML			10 40 42.0		
	comp=N,16nm,1.9s							
MHC	**Mount Hamilton**	**2.98 176**			Pn	10 38 57.5	+0.9	
MHC			IAML			10 40 01.1		
	comp=N,16nm,1.6s							
WVOR	**Wild Horse Val**	**3.26 48**			Pn	10 38 59.9	-0.5	
PINE	**Pine Mountain**	**3.55 12**	Pn		Pn	10 39 05.2	+0.7	
BBGB	**Big Mountain B**	**3.80 169**			Pn	10 39 08.1	+0.2	
I07A	**Izee**	**4.17 25**			Pn	10 39 13.9	+1.0	

*IDC **03** 11:35:17.1±0.7,6°.68N×125°.02E,h0km,mb4.1/10, mbtmp4.1/10,MS3.2/6,Error ellipse: s-maj=16.6km s-min=8.9km az=139.0*

*NEIC **03** 11:35:19.2±1.6,6°.73N±0°.07×125°.17E±0°.07,h10km±1km, mb4.4/12,Error ellipse: s-maj=16.4km s-min=4.3km az=138.0*

*DJA **03** 11:35:19.3±1.4,7°.7N±11°×12°.5E±1°.0,h10km,M4.8/6, mB5.3/1,mb5.0/4,MLv4.7/6,Mw(mB)4.7/1*

ISC 03 11:35:19.0±0.6,6°.73N±0°.07×125°.10E±0°.08,h10km,n35, σ1s14/29,mb4.1/15,MS3.4/4,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DAV	**Davao City (W)**	**0.58**	**54**			**Pg**	**11 35 29.7**	**-0.7**
DAV	**Davao City (W)**	**0.58**	**54**	Pg		**Pg**	**11 35 29.8**	**-0.5**
	1μm,0.3s,baz=246,slow=4.7,SNR=51							
DAV				Lg		Lg	11 35 40.4	
	2μm,0.3s,baz=75,slow=20,SNR=16							
SGSI	**Sangihe**	**3.05**	**172**	P		**Pn**	**11 36 09.2**	**+1.8**
KMSI	**Cibinong**	**6.21**	**190**	P		Pn	11 36 59.3	+8.4
MYLDM	**Lahad Datu**	**6.74**	**257**	Pn		**Pn**	**11 36 58.8**	**+0.6**
MRSI	**Marisa**	**6.96**	**207**	P		**Pn**	**11 37 03.8**	**+2.6**
TOLI2	**Tolitoli**	**7.05**	**218**	Pn		**Pn**	**11 37 01.2**	**-1.1**
TGY	**Tagaytay City**	**8.39**	**331**	LR		LR	11 40 48.8	
	comp=Z,168nm,19.1s,baz=194,slow=40							
FAKI	**Fak Fak**	**11.95**	**143**	Pn		**Pn**	**11 38 10.5**	**+0.9**
SOEI	**Soe**	**16.40**	**183**	Pn		**Pn**	**11 39 08.0**	**-1.6**
SOEI				IAmb		IAmb	11 39 44.3	
	comp=Z,37nm,1.2s							
BATI	**Baumata**	**16.89**	**185**	LR		LR	11 46 01.2	
	comp=Z,51nm,21.5s,baz=236,slow=38							
MTN	**Manton Dam**	**20.35**	**163**	P		**P**	**11 39 55.3**	**-0.4**
MTN				IAmb		IAmb	11 40 17.2	
	comp=Z,9.3nm,0.9s							
GUMO	**Guam**	**20.61**	**69**	LR		LR	11 46 19.4	
	comp=Z,31nm,21.3s,baz=200,slow=32							
KNRA	**Kununurra**	**22.55**	**171**	P		**P**	**11 40 18.3**	**-1.2**
KNRA				IAmb		IAmb	11 40 52.5	
	comp=Z,31nm,1.4s							
FITZ	**Fitzroy Crossi**	**24.68**	**179**	P		**P**	**11 40 39.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**24.68**	**179**	P		**P**	**11 40 40.5**	**+0.2**
	comp=Z,5.9nm,0.5s,baz=2.6,slow=10,SNR=20							
	comp=Z,5.9nm,0.5s							
COEN	**Coen**	**27.28**	**139**	P		**P**	**11 41 03.4**	**-0.5**
WRA	**Warramunga Arr**	**28.02**	**161**	P		**P**	**11 41 09.1**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=332,slow=11,SNR=13							
	comp=Z,1.1nm,0.5s							
AS31	**Alice Springs**	**31.41**	**164**	P		**P**	**11 41 38.6**	**-1.9**
ASAR	**Alice Springs**	**31.41**	**164**	P		**P**	**11 41 39.4**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=342,slow=6.9,SNR=29							
	comp=Z,0.9nm,0.5s							
FORT	**Forrest**	**37.40**	**176**	P		**P**	**11 42 31.3**	**-1.0**
FORT				IAmb		IAmb	11 42 55.7	
	comp=Z,8.6nm,0.9s							
INKA	**Innaminka**	**37.46**	**157**	P		**P**	**11 42 32.5**	**-0.3**
INKA				IAmb		IAmb	11 42 56.1	
	comp=Z,5.4nm,1.5s							
GTA	**Gaotai**	**39.71**	**329**	*e*P		**P**	**11 42 53.7**	**+1.9**
GTA				pP		sP	11 42 57.0	+0.8
GTA				sP		pP	11 43 00.4	+5.4
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
STKA	**Stephens Creek**	**41.49**	**159**	P		**P**	**11 43 06.7**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=340,slow=12,SNR=3.0							
	comp=Z,1.6nm,0.6s							
HILR	**Hailar Array B**	**42.92**	**355**	LR		LR	12 03 41.7	
	comp=Z,55nm,18.1s,baz=220,slow=40							
SONM	**Songino Array**	**43.96**	**342**	LR		LR	12 03 15.4	
	comp=Z,51nm,18.8s,baz=170,slow=38							
PETK	**Petropavlovsk-**	**53.32**	**24**	P		**P**	**11 44 38.0**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=163,slow=6.2,SNR=2.5							
	comp=Z,4.3nm,0.9s							
MKAR	**Makanchi Array**	**54.18**	**325**	P		**P**	**11 44 44.0**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=116,slow=8.2,SNR=4.2							
MKAR				LR		LR	12 07 40.4	
	comp=Z,22nm,18.9s,baz=82,slow=36							
	comp=Z,0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**58.35**	**327**	P		**P**	**11 45 14.1**	**-0.3**
	comp=Z,2.1nm,0.2s,baz=131,slow=5.8,SNR=2.8							
	comp=Z,2.1nm,0.2s							
BVAR	**Borovoye Array**	**63.94**	**327**	P		**P**	**11 45 51.5**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=117,slow=5.2,SNR=2.3							
	comp=Z,0.5nm,0.5s							
M16K	**Timber Creek**	**77.34**	**29**	P		**P**	**11 47 15.2**	**+1.3**
F17K	**Baldwin Pennin**	**77.35**	**23**	P		**P**	**11 47 14.4**	**+0.7**
E18K	**Tukpahlearik C**	**77.81**	**22**	P		**P**	**11 47 15.9**	**-0.4**
E18K				IAmb		IAmb	11 47 43.2	
	comp=Z,6.5nm,1.1s							
KBZ	**Khabaz**	**79.75**	**313**	P		**P**	**11 47 28.1**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=129,slow=13,SNR=26							
	comp=Z,2.1nm,0.3s							
ILAR	**Eielson Array**	**83.11**	**26**	P		**P**	**11 47 44.3**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=248,slow=5.4,SNR=4.3							
	comp=Z,0.6nm,0.9s							

*SJA **03** 11:36:54.3±0.6,22°.92S×66°.38W,h280km,ML3.5, MW3.5*

*GUC **03** 11:36:59.7±0.5,23°.02S×66°.92W,h266km±11km,ML3.8*

ISC 03 11:36:59.3±1.4,23°.06S±0°.05×66°.60W±0°.06,h222km,n27, σ1s34/43,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HJA	**Humahuaca**	**1.11**	**98**	*e*P		**Pn**	**11 37 33.0**	**+0.4**
SALTA		**1.18**	**168**	*e*P		**Pn**	**11 37 29.7**	**-3.4**
SALTA				*e*P			11 37 35.2	
YJA	**Yavi**	**1.34**	**49**	*e*P		**Pn**	**11 37 34.2**	**-0.1**
SLA	**San Lorenzo**	**1.93**	**149**	*e*S		S	11 38 28.1	+18
PB09	**IPOC Station P**	**2.75**	**297**	*e*P		**Pn**	**11 37 48.4**	**+0.8**
PB09				*i* S		**S**	**11 38 25.4**	**+0.3**
PB09	**IPOC Station P**	**2.75**	**297**	*e*P		**Pn**	**11 37 48.0**	**+0.4**
PB09				*e*S		**S**	**11 38 27.7**	**+2.6**
PB06	**IPOC Station P**	**2.76**	**277**	*e*P		**Pn**	**11 37 48.2**	**+0.6**
PB06				*i* S		**S**	**11 38 24.9**	**-0.4**
PB06				IAML			11 38 29.4	
	comp=N,158nm,0.1s							
PB06	**IPOC Station P**	**2.76**	**277**	*e*P		**Pn**	**11 37 48.3**	**+0.6**
PB06				*e*S		**S**	**11 38 26.1**	**+0.8**
PB06				IAML			11 38 30.9	
	comp=Z,63nm,0.2s							
PB03	**IPOC Station P**	**3.08**	**289**	*e*P		**Pn**	**11 37 51.3**	**0.0**
PB03				*i* S		**S**	**11 38 30.2**	**-1.6**
PB03	**IPOC Station P**	**3.08**	**289**	*e*P		**Pn**	**11 37 50.8**	**-0.5**
PB03				*e*S		**S**	**11 38 30.9**	**-1.0**
PB03				IAML			11 38 35.3	
	comp=Z,56nm,0.2s							
FSA	**Cafayete**	**3.09**	**170**	*e*P		**Pn**	**11 37 52.5**	**+1.2**
PB05	**IPOC Station P**	**3.33**	**273**	*e*P		**Pn**	**11 37 54.3**	**+0.3**
PB05				*i* S		**S**	**11 38 34.8**	**-2.0**
PB05	**IPOC Station P**	**3.33**	**273**	*e*P		**Pn**	**11 37 53.6**	**-0.4**
PB05				*e*S		**S**	**11 38 36.9**	**+0.1**
PB05				IAML			11 38 38.4	
	comp=Z,34nm,0.6s							
PB01	**IPOC Station P**	**3.35**	**306**	*e*P		**Pn**	**11 37 54.1**	**-0.2**
PB01				*i* S		**S**	**11 38 36.0**	**-1.3**
PB01	**IPOC Station P**	**3.35**	**306**	*e*P		**Pn**	**11 37 53.7**	**-0.6**
PB01				*e*S		**S**	**11 38 37.9**	**+0.6**
PB01				IAML			11 38 37.9	
	comp=Z,40nm,0.2s							
GO02	**Mina Guanaco**	**3.44**	**232**	*e*P		**Pn**	**11 37 56.7**	**+1.2**
GO02				*i* S		**S**	**11 38 39.8**	**+0.3**
GO02	**Mina Guanaco**	**3.44**	**232**	*e*P		**Pn**	**11 37 57.0**	**+1.5**
GO02				IAML			11 38 46.4	
	comp=Z,80nm,0.1s							
PB02	**IPOC Station P**	**3.51**	**299**	*e*P		**Pn**	**11 37 55.9**	**-0.3**
PB02				*i* S		**S**	**11 38 38.6**	**-2.1**
PB02	**IPOC Station P**	**3.51**	**299**	*e*P		**Pn**	**11 37 55.5**	**-0.7**
PB02				*e*S		**S**	**11 38 40.3**	**-0.5**
PB02				IAML			11 38 45.7	
	comp=Z,51nm,0.3s							
PB10	**IPOC Station P**	**3.66**	**262**	*e*P		**Pn**	**11 37 58.1**	**+0.2**
PB10				*i* S		**S**	**11 38 41.6**	**-2.2**
PB10	**IPOC Station P**	**3.66**	**262**	*e*P		**Pn**	**11 37 58.3**	**+0.4**
PB10				*e*S		**S**	**11 38 42.5**	**-1.3**
PB10				IAML			11 38 46.1	
	comp=Z,36nm,0.3s							
PB08	**IPOC Station P**	**3.75**	**320**	*e*P		**Pn**	**11 37 60.0**	**+0.6**
PB08				*i* S		**S**	**11 38 46.1**	**-0.4**
PB08	**IPOC Station P**	**3.75**	**320**	*e*S		**S**	**11 38 46.9**	**+0.5**
PB08				IAML			11 38 49.4	
	comp=Z,30nm,0.3s							
GO01	**Chusmiza**	**4.15**	**324**	*e*P		**Pn**	**11 38 04.8**	**+0.4**
GO01	**Chusmiza**	**4.15**	**324**	*e*P		Pn	11 37 53.0	-11
GO01				*e*S		**S**	**11 38 57.4**	**+2.0**
GO01				IAML			11 38 59.5	
	comp=Z,26nm,0.1s							
AC02	**Maricunga**	**4.40**	**211**	*e*P		**Pn**	**11 38 11.0**	**+3.7**
AC02				*e*S		S	11 39 11.5	+11
AC02				IAML			11 39 30.6	
	comp=Z,12nm,3.0s							
AC01	**Pan de Azucar**	**4.76**	**229**	*e*P		**Pn**	**11 38 11.0**	**-0.3**
AC01				*e*S		**S**	**11 39 06.1**	**-2.0**
AC01				IAML			11 39 17.4	
	comp=Z,35nm,1.7s							

*NOU **03** 11:38:31.3,29°.88S×176°.24W,h186km,mb4.1/15, Kermadec Islands Region*

*NEIC **03** 11:38:41.9±2.0,29°.3S±0°.1×178°.7W±0°.2,h157km±7km, mb4.6/15,Error ellipse: s-maj=22.4km s-min=18.0km az=70.0*

*IDC **03** 11:38:41.4±0.7,29°.30S×178°.57W,h167km±6km,mb3.9/12, mbtmp4.4/12,Error ellipse: s-maj=18.5km s-min=14.8km az=93.0*

ISC 03 11:38:41.4±0.6,29°.53S±0°.08×178°.7W±0°.1,h150km,n106, σ2s43/55,mb4.4/23,5D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RIZ	**Raoul Island**	**0.76**	**68**	P		**Pn**	**11 39 05.3**	**+0.9**
GLKZ	**Green Lake**	**0.76**	**70**	P		**Pn**	**11 39 05.1**	**+0.7**
RAO	**Raoul Island**	**0.77**	**69**			**Pn**	**11 39 04.9**	**+0.6**
RAO	**Raoul Island**	**0.77**	**69**	P		**Pn**	**11 39 05.2**	**+0.9**
	10μm,0.3s,baz=99,slow=5.6,SNR=176							
RAO				S		**Sn**	**11 39 22.7**	**+0.9**
	4μm,0.5s,baz=272,slow=24,SNR=6.8							
RAO	**Raoul Island**	**0.77**	**69**	P		**Pn**	**11 39 05.3**	**+0.9**
RAO	**Raoul Island**	**0.77**	**69**	P		**Pn**	**11 39 05.3**	**+0.9**
MXZ	**Matakaoa Point**	**8.38**	**196**	Pn		**Pn**	**11 40 42.1**	**+2.2**
MXZ	**Matakaoa Point**	**8.38**	**196**	P		Pn	11 40 37.0	-2.8
MXZ	**Matakaoa Point**	**8.38**	**196**	P		Pn	11 40 35.6	-4.2
MXZ				S		**Sn**	**11 42 11.6**	**-1.5**
KUZ	**Kuaotunu**	**8.56**	**211**	P		**Pn**	**11 40 46.4**	**+4.1**
OUZ	**Omahuta**	**8.61**	**227**	P		Pn	11 40 51.0	+8.1
OUZ	**Omahuta**	**8.61**	**227**	P		Pn	11 40 50.5	+7.6
WCZ	**Waipu Caves**	**8.65**	**221**	P		Pn	11 40 49.2	+5.8
HAZ	**Te Kaha**	**8.70**	**199**	P		**Pn**	**11 40 42.1**	**-2.0**
HAZ				S		**Sn**	**11 42 23.2**	**+2.5**
PUZ	**Puketiti**	**8.88**	**196**	P		Pn	11 40 42.7	-3.8
MWZ	**Matawai**	**9.31**	**198**	P		Pn	11 40 49.2	-3.1
URZ	**Urewera**	**9.37**	**200**	P		Pn	11 40 49.8	-3.1
	3.9nm,0.3s,baz=248,slow=2.7,SNR=12							
URZ				S		**Sn**	**11 42 34.5**	**-2.2**
	30nm,0.4s,baz=156,slow=21,SNR=15							
URZ	**Urewera**	**9.37**	**200**	P		**Pn**	**11 40 50.9**	**-2.0**
URZ	**Urewera**	**9.37**	**200**	P		Pn	11 40 49.9	-3.0
TOZ	**Tahuroa Road**	**9.48**	**209**	P		**Pn**	**11 40 55.9**	**+1.4**
RTZ	**Ruatahuna**	**9.73**	**200**	P		Pn	11 40 54.2	-3.7
RTZ				S		**Sn**	**11 42 44.4**	**-1.3**
MTHZ	**Maungataniwha**	**9.99**	**200**	P		Pn	11 40 57.6	-3.7
BKZ	**Black Stump Fm**	**10.39**	**201**	P		Pn	11 41 03.7	-2.8
BKZ	**Black Stump Fm**	**10.39**	**201**	P		Pn	11 41 02.9	-3.6
HIZ	**Hauiti**	**10.42**	**209**	P		**Pn**	**11 41 07.9**	**+1.1**
HIZ	**Hauiti**	**10.42**	**209**	P		**Pn**	**11 41 07.7**	**+0.9**
OTVZ	**Oturere**	**10.66**	**204**	P		Pn	11 41 07.8	-2.5
SNVZ	**South Ngauruho**	**10.69**	**204**	P		Pn	11 41 07.5	-3.1
KAHZ	**Kahuranaki**	**10.86**	**198**	P		Pn	11 41 07.8	-4.9
KRHZ	**Kereru**	**10.86**	**200**	P		Pn	11 41 06.8	-5.9
PKVZ	**Pokaka**	**10.89**	**205**	P		**Pn**	**11 41 11.6**	**-1.6**
VRZ	**Vera Road**	**10.97**	**208**	P		**Pn**	**11 41 14.9**	**+0.7**
PXZ	**Pawanui**	**11.08**	**198**	P		Pn	11 41 12.3	-3.3
PNHZ	**Pukenui**	**11.16**	**201**	P		Pn	11 41 11.3	-5.4
TSZ	**Takapari Road**	**11.37**	**201**	P		Pn	11 41 14.8	-4.6
BFZ	**Birch Farm**	**11.86**	**199**	P		Pn	11 41 21.0	-4.8
BFZ	**Birch Farm**	**11.86**	**199**	P		Pn	11 41 20.8	-4.9
MRZ	**Mangatainoka R**	**12.04**	**201**	P		Pn	11 41 21.4	-6.7
MSVF	**Nonsavu**	**12.10**	**345**	P		Pn	11 41 29.9	+0.7
HOWZ	**Holdsworth Sta**	**12.27**	**201**	P		Pn	11 41 26.5	-4.7
OGWZ	**Otaki Gorge**	**12.31**	**202**	P		Pn	11 41 24.7	-7.0
TMWZ	**Te Maipa**	**12.35**	**199**	P		Pn	11 41 27.9	-4.3
CAW	**Cannon Point**	**12.61**	**202**	P		Pn	11 41 29.1	-6.3
MSWZ	**Moikau Station**	**12.83**	**201**	P		Pn	11 41 32.8	-5.5
TCW	**Tory Channel**	**12.97**	**204**	P		Pn	11 41 33.5	-6.6
NIUE	**Niue**	**13.14**	**40**	P		Pn	11 41 19.8	-23
NIUE	**Niue**	**13.14**	**40**	P		Pn	11 41 33.7	-8.7
NNZ	**Nelson**	**13.31**	**207**	P		Pn	11 41 38.9	-5.5
QRZ	**Quartz Range**	**13.33**	**210**	P		**Pn**	**11 41 43.7**	**-1.1**
CTZ	**Chatham Island**	**14.28**	**174**	P		**Pn**	**11 41 59.5**	**+2.8**
QUENC	**Quen Island, N**	**14.77**	**295**	P		P	11 42 17.3	+12
RPZ	**Rata Peaks**	**16.34**	**207**	P		Pn	11 42 16.6	-5.6
	3.4nm,0.5s,baz=26,slow=14,SNR=2.0							
RPZ				S		S	11 45 10.1	-13
	6.0nm,0.5s,baz=10,slow=19,SNR=9.7							
RPZ	**Rata Peaks**	**16.34**	**207**	P		**Pn**	**11 42 18.4**	**-3.8**
JCZ	**Jackson Bay**	**17.59**	**211**	P		**P**	**11 42 33.9**	**-2.3**
ODZ	**Otahua Downs**	**17.62**	**206**	P		P	11 42 31.8	-4.5
STKA	**Stephens Creek**	**34.06**	**256**	P		**P**	**11 45 11.3**	**-0.1**
	3.2nm,0.5s,baz=98,slow=11,SNR=10							
	3.2nm,0.5s							
AS31	**Alice Springs**	**42.52**	**266**	P		P	11 46 21.3	-1.0
ASAR	**Alice Springs**	**42.52**	**266**	P		P	11 46 21.4	-0.9
ASAR	**Alice Springs**	**42.52**	**266**	P		P	11 46 21.6	-0.7
	3.2nm,0.6s,baz=101,slow=7.0,SNR=47							
ASAR				PcP		**PP**	**11 48 09.9**	**+6.1**
	0.3nm,0.3s,baz=106,slow=3.9,SNR=5.2							
ASAR				ScP		**ScP**	**11 51 44.0**	**-5.0**
	0.4nm,0.7s,baz=116,slow=4.8,SNR=4.8							
	3.2nm,0.6s							
WR8	**Warramunga Arr**	**43.28**	**272**			P	11 46 27.7	-0.7
WR8				IAmb		IAmb	11 46 32.5	
	comp=Z,12nm,1.2s							
WRA	**Warramunga Arr**	**43.43**	**272**			P	11 46 28.8	-0.9
WRA	**Warramunga Arr**	**43.43**	**272**	P		P	11 46 28.6	-1.0
	comp=Z,3.0nm,0.5s,baz=109,slow=7.8,SNR=23							
WRA				ScP		**ScP**	**11 51 47.6**	**-5.0**
	comp=Z,0.3nm,0.9s,baz=114,slow=4.5,SNR=5.4							
	comp=Z,3.0nm,0.5s							
SBA	**Scott Base**	**48.86**	**184**			**P**	**11 47 14.5**	**+3.3**
SBA				IAmb		IAmb	11 47 15.5	
	comp=Z,12nm,0.7s							
VNDA	**Vanda**	**48.90**	**186**	P		**P**	**11 47 13.7**	**+2.2**
VNDA	**Vanda**	**48.90**	**186**	P		**P**	**11 47 12.4**	**+0.9**
	comp=Z,2.8nm,0.5s,baz=3.4,slow=8.3,SNR=26							
	comp=Z,2.8nm,0.5s							
KNRA	**Kununurra**	**50.00**	**274**	P		**P**	**11 47 20.9**	**+0.2**
KNRA				IAmb		IAmb	11 47 24.1	
	comp=Z,10nm,1.1s							
CASY	**Casey**	**55.61**	**208**	P		**P**	**11 48 00.5**	**-0.6**
CASY				IAmb		IAmb	11 48 01.6	
	comp=Z,4.4nm,0.5s							
QSPA	**South Pole Qui**	**60.58**	**180**	P		**P**	**11 48 39.2**	**+3.3**
QSPA				IAmb		IAmb	11 48 41.0	
	comp=Z,7.4nm,0.8s							
BELA	**Belgrano 2**	**70.73**	**172**	P		**P**	**11 49 39.8**	**-0.8**
MAW	**Mawson**	**72.90**	**201**	P		**P**	**11 49 53.1**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=132,slow=8.8,SNR=13							
	comp=Z,2.6nm,0.5s							
JGF	**Kuroka**	**76.85**	**325**	P		P	11 50 14.5	-2.3
JGF				IAmb		IAmb	11 50 33.8	
	comp=Z,14nm,1.4s							
MJAR	**Matsushiro Arr**	**77.16**	**326**	P		P	11 50 15.8	-2.6
	comp=Z,2.6nm,0.7s,baz=154,slow=6.1,SNR=9.7							
	comp=Z,2.6nm,0.7s							
JMN	**Monobe**	**77.24**	**321**	P		P	11 50 16.7	-2.4
JMN				IAmb		IAmb	11 50 45.6	
	comp=Z,19nm,1.0s							
JNU	**Nakatsue**	**78.48**	**319**	P		P	11 50 24.2	-1.7
JNU				IAmb		IAmb	11 50 30.3	
	comp=Z,12nm,1.2s							
JNU	**Nakatsue**	**78.48**	**319**	P		P	11 50 24.7	-1.2
	comp=Z,5.7nm,0.9

RAFI eSn **Sb** 12 16 24.0 -0.8
IKRK Kirkuk 2.37 313 ePn **Pn** 12 16 00.0 +0.5
IKRK eSn **Sn** 12 16 29.0 -0.2
HAGD Aghdareh 2.44 65 Pn **Pn** 12 16 01.4 +0.5

*IDC **03** 12:21:26.9±6.9, 17.°77S×177.°94W, h544km±73km, mb3.4/7, mbtmp4.3/7, Error ellipse: s-maj=38.1km s-min=21.5km az=90.0*
*NEIC **03** 12:21:33.6±1.5, 17.°9S±0.°1×178.°0W±0.°2, h614km±13km, mb4.2/15, Error ellipse: s-maj=25.1km s-min=16.8km az=124.0*
ISC 03 12:21:32.3±0.7, 17.°8S±0.°1×178.°1W±0.°1, h590km, n29, σ1°35/31, mb4.1/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.63**	**270**	P		**P**		**12 22 58.7**	**+4.1**
AFI	**Afiamalu**	**7.24**	**59**	P		**P**		**12 23 25.0**	**+0.8**
RAO	**Raoul Island**	**11.41**	**179**	P		**P**		**12 24 05.3**	**+0.4**
CAN	**Canberra**	**33.98**	**233**	P		**P**		**12 27 27.7**	**-0.5**
COEN	**Coen**	**37.36**	**270**	P		**P**		**12 27 57.4**	**+1.0**
COEN	comp=Z,11nm,0.7s				IAmb	IAmb		12 27 58.1	
STKA	**Stephens Creek**	**38.91**	**241**	P		**P**		**12 28 07.2**	**-1.5**
	comp=Z,6.8nm,0.8s,baz=88,slow=12,SNR=7.3 comp=Z,6.8nm,0.8s								
INKA	**Innaminka**	**39.03**	**248**	P		**P**		**12 28 09.5**	**-0.2**
INKA	comp=Z,3.8nm,0.7s				IAmb	IAmb		12 28 10.9	
BBOO	**Buckleboo**	**43.69**	**241**	P		**P**		**12 28 44.8**	**-1.5**
WB0	**Warramunga Arr**	**44.87**	**260**	P		**P**		**12 28 54.5**	**-1.1**
WB0	comp=Z,5.4nm,0.8s				IAmb	IAmb		12 28 55.4	
WRA	**Warramunga Arr**	**44.91**	**259**	P		**P**		**12 28 55.3**	**-0.5**
WRA	**Warramunga Arr**	**44.91**	**259**	P		**P**		**12 28 55.2**	**-0.7**
WRA	comp=Z,2.5nm,0.4s,baz=95,slow=7.2,SNR=51			PcP		**PcP**		**12 30 23.2**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=88,slow=3.3,SNR=1.4 comp=Z,2.5nm,0.4s								
AS31	**Alice Springs**	**45.07**	**254**	P		**P**		**12 28 56.0**	**-1.1**
ASAR	**Alice Springs**	**45.07**	**254**	P		**P**		**12 28 55.6**	**-1.6**
ASAR	**Alice Springs**	**45.07**	**254**	P		**P**		**12 28 56.5**	**-0.7**
ASAR	comp=Z,10nm,0.8s,baz=88,slow=8.0,SNR=108			PcP		**PcP**		**12 30 23.5**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=106,slow=3.7,SNR=9.9 comp=Z,10nm,0.8s								
MJAR	**Matsushiro Arr**	**67.97**	**323**	P		**P**		**12 31 32.7**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=160,slow=5.9,SNR=11 comp=Z,1.4nm,0.6s								
MAJO	**Matsushiro**	**67.97**	**323**	P		**P**		**12 31 33.3**	**-0.2**
MAJO	comp=Z,8.6nm,1.4s				IAmb	IAmb		12 31 58.5	
MJB9	**Matsu-Tunnel**	**67.97**	**323**	P		**P**		**12 31 34.1**	**+0.6**
MJB9	comp=Z,7.7nm,1.3s				IAmb	IAmb		12 31 59.5	
QSPA	**South Pole Qui**	**72.26**	**180**	P		**P**		**12 31 59.0**	**+0.4**
QSPA	**South Pole Qui**	**72.26**	**180**	P		**P**		**12 31 57.8**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=51,slow=4.6,SNR=7.5 comp=Z,0.8nm,0.7s								
PETK	**Petropavlovsk-**	**73.63**	**345**	P		**P**		**12 32 04.8**	**-1.6**
	comp=Z,4.8nm,0.9s,baz=152,slow=9.4,SNR=2.8 comp=Z,4.8nm,0.9s								
KDAK	**Kodiak Island**	**78.23**	**14**	P		**P**		**12 32 29.6**	**-1.9**
M16K	**Timber Creek**	**80.04**	**9**	P		**P**		**12 32 41.2**	**+0.3**
M16K	comp=Z,18nm,1.4s				IAmb	IAmb		12 33 24.9	
ILSW	**Iliamna Southw**	**80.12**	**12**	P		**P**		**12 32 41.2**	**-0.4**
ILSW	comp=Z,16nm,1.4s				IAmb	IAmb		12 33 22.3	
K15K	**Wolf Creek Mou**	**80.90**	**8**	P		**P**		**12 32 45.4**	**0.0**
K15K	comp=Z,18nm,1.5s				IAmb	IAmb		12 33 12.5	
L18K	**Granite Mounta**	**81.54**	**10**	P		**P**		**12 32 48.5**	**-0.1**
L18K	comp=Z,9.8nm,1.4s				IAmb	IAmb		12 33 25.7	
ILAR	**Eielson Array**	**85.72**	**13**	P		**P**		**12 33 07.5**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=218,slow=4.8,SNR=16 comp=Z,0.4nm,0.4s								
BRTR	**Keskin Array B**	**144.88**	**315**	PKPbc		**PKPdf**		**12 40 03.2**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=112,slow=1.6,SNR=6.4								
MMAI	**Mount Meron Ar**	**146.30**	**303**	PKPbc		**PKPdf**		**12 40 07.6**	**+1.8**
	comp=Z,1.3nm,0.4s,baz=157,slow=4.1,SNR=2.0								
GERES	**GERESS Array B**	**147.57**	**345**	PKPbc		**PKPdf**		**12 40 09.3**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=12,slow=3.9,SNR=9.0								

*IDC **03** 12:24:09.8±7.3, 41.°72N×80.°61E, h0km, mbtmp2.2/1, ML2.6/1, Error ellipse: s-maj=84.0km s-min=52.9km az=103.0*
*SOME **03** 12:24:11.9, 42.°00N×80.°32E, h10km*
ISC 03 12:24:18.1±3.9, 41.°8N±0.°2×80.°8E±0.°1, h35km, n7, σ1°37/10, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**3.08**	**295**	*e*P		**Pn**		**12 25 04.1**	**-0.6**
TNSS	1.3nm,0.5s				*e*S	**Sn**		**12 25 41.4**	**+1.0**
ARXS	**Arharly**	**3.23**	**319**	*e*P		**Pn**		**12 25 04.8**	**-1.6**
ARXS	2.0nm,0.8s				*e*S	**Sn**		**12 25 43.2**	**-0.5**
IZV	**Izvestkoviy**	**3.31**	**293**	*e*P		**Pn**		**12 25 06.6**	**-1.0**
IZV	1.6nm,0.2s				*e*S	**Sn**		**12 25 46.1**	**+0.4**
KST	**Kastek**	**3.76**	**291**	*e*P		**Pn**		**12 25 13.9**	**+0.1**
KST	4.9nm,0.0s 1.4nm,0.4s				*e*S	**Sn**		**12 25 58.6**	**+1.8**
MKAR	**Makanchi Array**	**5.11**	**12**	Pn		**Pn**		**12 25 31.4**	**-0.8**
MKAR	9.0nm,0.6s 0.2nm,0.3s,baz=194,slow=13,SNR=5.3					**Sn**		**12 26 32.0**	**+2.1**
MKAR	0.1nm,0.3s,baz=193,slow=25,SNR=2.9 0.2nm,0.3s,baz=194,slow=33,SNR=4.9				Lg	Lg		12 26 55.9	
I46RU	**ZALESOVO INFRA**	**12.45**	**11**	I		I		13 37 40.0	
I34MN	**SONGINO INFRAS**	**19.12**	**63**	I		I		14 20 50.0	
	0.2nm,0.4s baz=192,slow=331,SNR=4.4 baz=265,slow=319,SNR=1.6								

*IDC **03** 12:40:59.3±2.4, 36.°36N×70.°91E, h164km±22km, mb3.8/14, mbtmp4.4/19, MS4.4/1, Error ellipse: s-maj=18.8km s-min=10.5km az=41.0*
*MOS **03** 12:41:01.4±1.1, 36.°57N×70.°99E, h189km, mb4.3/19, Error ellipse: s-maj=8.2km s-min=4.5km az=85.6*
*NEIC **03** 12:41:02.1±1.4, 36.°56N±0.°05×70.°84E±0.°10, h190km±7km, mb4.3/16, Error ellipse: s-maj=11.1km s-min=7.4km az=89.0*
*NNC **03** 12:41:05.0±6.9, 36.°86N×70.°57E, h142km±105km, mb3.9, mpv4.4, Error ellipse: s-maj=57.9km s-min=40.0km az=29.0*
ISC 03 12:41:01.4±0.5, 36°53N±0'.04×70°98E±0'.04, h178km±5km, h178km:pP-P, n158, σ2°05/191, mb4.2/33, 16C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.52**	**348**			**Pn**		**12 41 45.0**	**+0.8**
KBL	**Kabul**	**2.54**	**219**			**Pn**		**12 41 45.1**	**+0.4**
KBL	**Kabul**	**2.54**	**219**	PN		**Pn**		**12 41 45.1**	**+0.4**
CHGR	**Chuyangaron**	**2.57**	**326**			**Pn**		**12 41 45.1**	**+0.3**
CHGR	**Chuyangaron**	**2.57**	**326**	PN		**Pn**		**12 41 45.1**	**+0.3**
SIMJ	**Simiganj**	**2.64**	**324**			**Pn**		**12 41 45.9**	**+0.2**
NIL	**Nilore**	**3.43**	**146**			**Pn**		**12 41 57.5**	**+2.2**
NIL	**Nilore**	**3.43**	**146**	PN		**Pn**		**12 41 57.5**	**+2.2**
SRNI	**Srinagar**	**3.99**	**126**	*e*S		**Sn**		**12 42 50.9**	**+0.9**
KSH	**Kashi**	**4.94**	**51**	Pn		**Pn**		**12 42 12.3**	**-2.4**
KSH	comp=N,460nm,0.6s				Sn	**Sn**		**12 43 05.1**	**-7.1**
KSH	comp=E,220nm,0.7s				smax	smax			
JMU	**Jammu**	**5.00**	**139**	*e*P		**Pn**		**12 42 15.4**	**+0.2**
JMU					*e*S	**Sn**		**12 43 11.5**	**-1.7**
JMU	comp=N,2μm,0.4s				IAML			12 43 14.0	
JMU	comp=E,2μm,0.4s				IAML			12 43 15.2	
ARSB	**Arslanbob**	**5.03**	**17**			**Pn**		**12 42 16.3**	**+0.5**
ARSB	**Arslanbob**	**5.03**	**17**	PN		**Pn**		**12 42 16.3**	**+0.5**
ALCI	**Alchi Leh**	**5.58**	**113**	*e*P		**Pn**		**12 42 23.8**	**+0.6**
ALCI					*e*S	**Sn**		**12 43 25.9**	**-1.4**
ALCI	comp=N,359nm,0.7s				IAML			12 43 28.9	
ALCI	comp=E,221nm,0.5s				IAML			12 43 34.3	
TSSA	**Tissa**	**5.63**	**129**	*e*P		**Pn**		**12 42 24.5**	**+0.7**
TSSA					*e*S	**Sn**		**12 43 25.8**	**-2.7**
TSSA	comp=N,1μm,0.5s				IAML			12 43 27.0	
TSSA	comp=E,2μm,0.7s				IAML			12 43 28.3	
IUG	**Iuzhnay**	**5.66**	**353**	*e*P		**Pn**		**12 42 24.6**	**+0.7**
IUG	**Iuzhnay**	**5.66**	**353**	*e*PN		**Pn**		**12 42 24.6**	**+0.7**
CHM	**Chimkent**	**5.88**	**350**	*e*P		**Pn**		**12 42 27.8**	**+1.1**
CHM	**Chimkent**	**5.88**	**350**	*e*PN		**Pn**		**12 42 27.7**	**+1.1**
DHRM	**DHARAMSHALA**	**6.13**	**133**	*e*P		**Pn**		**12 42 31.1**	**+0.7**
DHRM					*e*S	**Sn**		**12 43 37.8**	**-2.6**
DHRM	comp=E,2μm,0.5s				IAML			12 43 41.6	
DHRM	comp=N,850nm,0.4s				IAML			12 43 41.7	
TLWR	**Talawar**	**6.15**	**136**	*e*P		**Pn**		**12 42 32.2**	**+1.8**
TLWR					*e*S	**Sn**		**12 43 37.6**	**-2.9**
TLWR	comp=N,338nm,0.6s				IAML			12 43 40.4	
TLWR	comp=E,352nm,0.5s				IAML			12 43 45.2	
DZA	**Taraz**	**6.36**	**2**	*e*P		**Pn**		**12 42 33.6**	**+0.6**
DZA	**Taraz**	**6.36**	**2**	*e*PN		**Pn**		**12 42 33.6**	**+0.6**
EKS2	**Erkin-Say** SNR=19	**6.49**	**19**	P		**Pn**		**12 42 35.7**	**+0.8**
KK31	**Karatay Array**	**6.57**	**357**			**Pn**		**12 42 36.0**	**+0.1**
KK31	**Karatay Array**	**6.57**	**357**	⇑P		**Pn**		**12 42 35.8**	**0.0**
KK31	comp=E,26nm,0.3s,baz=175,slow=12,SNR=869			⇑S		**Sn**		**12 43 45.6**	**-4.8**
KK31	**Karatay Array**	**6.57**	**357**	PN		**Pn**		**12 42 36.0**	**+0.1**
KKAR	**Karatay Array**	**6.57**	**357**			**Pn**		**12 42 35.9**	**+0.1**
KKAR	**Karatay Array**	**6.57**	**357**	PN		**Pn**		**12 42 35.9**	**+0.1**
AAK	**Ala-Archa**	**6.67**	**23**			**Pn**		**12 42 38.2**	**+0.9**
AAK	**Ala-Archa**	**6.67**	**23**	P		**Pn**		**12 42 38.4**	**+1.1**
AAK	comp=E,21nm,0.3s,baz=157,slow=1.4,SNR=40 comp=E,26nm,0.4s,baz=4.3,slow=17,SNR=8.4				S	**Sn**		**12 43 50.4**	**-2.5**
AAK	**Ala-Archa** SNR=12	**6.67**	**23**	P		**Pn**		**12 42 38.5**	**+1.2**
AAK	**Ala-Archa** comp=E,4.4nm,0.4s	**6.67**	**23**	⇑P		**Pn**		**12 42 38.1**	**+0.9**
AAK	comp=E,56nm,1.0s			⇑S		**Sn**		**12 43 51.1**	**-1.8**
AAK	**Ala-Archa**	**6.67**	**23**	*ce*PN		**Pn**		**12 42 38.2**	**+0.9**
AAK	comp=Z,14nm,0.6s				pmax	pmax			
BHK	**Bhakra**	**6.81**	**137**	*e*P		**Pn**		**12 42 42.1**	**+3.0**
BHK	comp=E,492nm,0.6s				IAML			12 43 56.4	
BHK					*e*S	**Sn**		**12 43 57.8**	**+1.6**
BHK	comp=N,421nm,0.3s				IAML			12 43 59.4	
KBK	**Karagaybulak** SNR=10	**6.84**	**25**	P		**Pn**		**12 42 40.7**	**+1.2**
ULHL	**Ulahol** SNR=8.8	**7.01**	**34**	P		**Pn**		**12 42 43.8**	**+2.0**
BOOM	**Boomskoye usch**	**7.08**	**31**			**Pn**		**12 42 43.6**	**+0.9**
BOOM	**Boomskoye usch**	**7.08**	**31**	PN		**Pn**		**12 42 43.6**	**+0.9**
CHMS	**Chumysh** SNR=7.0	**7.08**	**23**	P		**Pn**		**12 42 43.2**	**+0.7**
USP	**Ospenovka** SNR=34	**7.25**	**21**	P		**Pn**		**12 42 44.6**	**-0.2**
TKM2	**Tokmak 2** SNR=39	**7.30**	**28**	P		**Pn**		**12 42 46.5**	**+0.8**
KDJ	**Kajisay**	**7.37**	**39**			**Pn**		**12 42 47.2**	**+0.7**
KDJ	**Kajisay**	**7.37**	**39**	PN		**Pn**		**12 42 47.2**	**+0.7**
TARG	**Taragay, Kyrgy**	**7.42**	**44**			**Pn**		**12 42 47.9**	**+0.5**
TARG	**Taragay, Kyrgy**	**7.42**	**44**	PN		**Pn**		**12 42 47.9**	**+0.5**
SMLA	**Simla**	**7.45**	**135**	*e*P		**Pn**		**12 42 47.5**	**0.0**
SMLA					*e*S	**Sn**		**12 44 08.0**	**-3.3**
SMLA	comp=E,509nm,0.5s				IAML			12 44 11.7	
SMLA	comp=N,495nm,0.6s				IAML			12 44 14.4	
SGDS	**Sogindy**	**7.46**	**21**	*e*P		**Pn**		**12 42 47.3**	**-0.3**
SGDS					*e*S	**Sn**		**12 44 11.3**	**-0.1**
TNSS	**Tian-Shan**	**7.96**	**33**	*e*P		**Pn**		**12 42 54.0**	**-0.4**
TNSS	**Tian-Shan**	**7.96**	**33**	*e*PN		**Pn**		**12 42 54.0**	**-0.4**
AAA	**Alma-Ata**	**8.08**	**33**	*e*P		**Pn**		**12 42 55.8**	**+0.1**
AAA	**Alma-Ata**	**8.08**	**33**	*e*PN		**Pn**		**12 42 55.8**	**+0.1**
MDOK	**Medeo**	**8.10**	**33**	*e*P		**Pn**		**12 42 56.1**	**-0.1**
MDOK	**Medeo**	**8.10**	**33**	*e*PN		**Pn**		**12 42 56.0**	**-0.1**
DDI	**Dehra Dun**	**8.56**	**134**	*e*S		**Sn**		**12 44 33.3**	**-4.7**
SATY	**Saty**	**8.67**	**39**	*e*P		**Pn**		**12 43 03.6**	**+0.1**
SATY	**Saty**	**8.67**	**39**	*e*PN		**Pn**		**12 43 03.6**	**+0.1**
BKNR	**BIKANER**	**8.71**	**166**	*e*P		**Pn**		**12 43 03.1**	**-0.9**
BKNR	comp=N,525nm,0.7s				IAML			12 44 37.2	
BKNR	comp=E,424nm,0.6s				IAML			12 44 38.6	
UZB	**Uzynbulak**	**9.05**	**41**	*e*P		**Pn**		**12 43 08.3**	**-0.3**
UZB	**Uzynbulak**	**9.05**	**41**	*e*P		**Pn**		**12 43 08.2**	**-0.3**
JHJR	**Jhajjar**	**9.23**	**147**	*e*S		**Sn**		**12 44 47.2**	**-6.7**
JOSI	**Joshimath**	**9.31**	**127**	*e*P		**Pn**		**12 43 13.3**	**+1.1**
JOSI					*e*S	**Sn**		**12 44 50.4**	**-5.8**
JOSI	comp=E,283nm,0.4s				IAML			12 44 54.0	
JOSI	comp=N,414nm,0.4s				IAML			12 44 54.4	
NDI	**New Delhi**	**9.43**	**144**	*e*P		**Pn**		**12 43 12.9**	**-0.6**
NDI					*e*S	Sn		12 44 50.1	-8.6
NDI	comp=E,128nm,0.9s				IAML			12 44 53.0	
NDI	comp=N,98nm,0.5s				IAML			12 44 54.1	
NPLP	**NPLP New Delhi**	**9.45**	**145**	*e*P		**Pn**		**12 43 13.0**	**-0.7**
NPLP					*e*S	**Sn**		**12 44 51.2**	**-7.8**
NPLP	comp=N,206nm,0.7s				IAML			12 44 54.1	
LDR	**Lodi Road**	**9.51**	**145**	*e*S		**Sn**		**12 44 52.8**	**-7.8**
LDR	comp=N,814nm,0.9s				IAML			12 44 59.3	
LDR	comp=E,914nm,0.9s				IAML			12 45 02.8	
AYAN	**Aya Nagar**	**9.56**	**145**	*e*S		**Sn**		**12 44 53.9**	**-7.8**
AYAN	comp=N,189nm,0.7s				IAML			12 44 56.0	
AYAN	comp=E,151nm,0.5s				IAML			12 44 58.8	
KUDL	**Kundal**	**9.57**	**149**	*e*P		**Pn**		**12 43 14.4**	**-1.0**
KUDL					*e*S	Sn		12 44 52.7	-9.3
KUDL	comp=E,242nm,0.4s				IAML			12 44 54.5	
KUDL	comp=N,157nm,0.5s				IAML			12 44 57.8	
BISR	**Bishrakh**	**9.63**	**144**	*e*S		Sn		12 44 54.8	-8.6
BISR	comp=E,576nm,0.7s				IAML			12 45 00.3	
BISR	comp=N,372nm,0.6s				IAML			12 45 00.4	
UGON	**Onchagaon**	**10.07**	**143**	*e*S		**Sn**		**12 45 08.0**	**-6.1**
PTH	**Pithoragarh**	**10.42**	**129**	*e*S		Sn		12 45 13.6	-9.0
LGTI	**Lohaghat**	**10.51**	**130**	*e*P		**Pn**		**12 43 25.9**	**-1.7**
LGTI	comp=E,65nm,1.1s				IAML			12 45 19.6	
LGTI	comp=N,94nm,1.1s				IAML			12 45 19.9	
JHNI	**Jhansi**	**12.79**	**147**	*e*S		Sn		12 46 08.6	-11
GUNA	**GUNA**	**13.04**	**153**	*e*P		**Pn**		**12 43 58.8**	**-1.4**
GUNA					*e*S	Sn		12 46 13.4	-12
MAKZ	**Makanchi**	**13.14**	**35**			**Pn**		**12 44 01.7**	**+0.5**
MAKZ	**Makanchi**	**13.14**	**35**	P		**Pn**		**12 44 01.7**	**+0.5**
MK31	**Makanchi Array**	**13.28**	**36**	*ce*P		**Pn**		**12 44 03.6**	**+0.6**
MKAR	**Makanchi Array**	**13.28**	**36**			**Pn**		**12 44 03.4**	**+0.4**
MKAR	**Makanchi Array**	**13.28**	**36**	P		**Pn**		**12 44 03.6**	**+0.6**
BHPL	**Bhopal**	**14.37**	**155**	*e*P		**P**		**12 44 20.7**	**+1.9**
BHPL	comp=Z,75nm,0.7s				IAmb	IAmb		12 44 21.4	
WMQ	**Urumqi**	**14.70**	**55**	*e*P		**P**		**12 44 23.2**	**+1.0**
NRDN	**NARMADA NAGARI** comp=Z,17nm,0.8s	**14.77**	**157**	IAmb		IAmb		12 44 28.1	
AB31	**Akbulak array**	**15.05**	**331**			**Pn**		**12 44 23.8**	**-1.2**
AB31	**Akbulak array**	**15.05**	**331**	⇑P		**Pn**		**12 44 23.2**	**-1.7**
AB31	comp=Z,8.3nm,0.6s,baz=144,slow=12,SNR=147			⇑S		**Sn**		**12 47 06.6**	**-6.1**
	comp=Z,8.3nm,0.5s,baz=144,slow=24,SNR=13								
AB31	**Akbulak array**	**15.05**	**331**	P		**Pn**		**12 44 23.2**	**-1.7**
AB31				S		**Sn**		**12 47 06.6**	**-6.1**
ABKAR	**Akbulak array**	**15.05**	**331**			**Pn**		**12 44 23.6**	**-1.3**
KURBB	**Kurchatov Arra**	**15.10**	**19**	P		**Pn**		**12 44 24.4**	**-1.1**
KURBB	comp=Z,5.5nm,0.6s,baz=210,slow=10,SNR=25 comp=Z,0.3nm,0.3s,baz=191,slow=18,SNR=1.2			S		**S**		**12 47 15.1**	**-0.2**
KURK	**Kurchatov**	**15.21**	**19**			**Pn**		**12 44 26.0**	**-0.8**
KURK	comp=Z,7.0nm,0.8s			IAmb		IAmb		12 44 29.9	
KURK	**Kurchatov**	**15.21**	**19**	*ce*P		**Pn**		**12 44 25.0**	**-1.8**
KURK	comp=Z,11nm,1.0s			pmax		pmax			
EVN	**Everest**	**15.88**	**118**			**Pn**		**12 44 35.8**	**-0.2**
BVAR	**Borovoye Array**	**16.50**	**359**	P		**P**		**12 44 42.0**	**0.0**
BVAR	comp=Z,10.0nm,0.6s,baz=177,slow=11,SNR=62 comp=Z,3.6nm,0.6s,baz=166,slow=25,SNR=5.9			S		**S**		**12 47 42.0**	**-2.5**
BVAR	**Borovoye Array**	**16.50**	**359**	P		**P**		**12 44 42.0**	**0.0**
AKTO	**Aktyubinsk**	**16.74**	**330**	P		**Pn**		**12 44 45.6**	**+0.1**
AKTO	comp=Z,39nm,0.6s,baz=144,slow=8.9,SNR=89 comp=Z,4.5nm,0.4s,baz=344,slow=19,SNR=3.7			S		**S**		**12 47 44.1**	**-5.9**
AKTO	**Aktyubinsk** comp=Z,26nm,0.7s	**16.74**	**330**	⇓P		**P**		**12 44 45.0**	**+0.3**
AKTO	comp=Z,9.7nm,0.8s			⇑S		**S**		**12 47 49.8**	**-0.1**
UOSS	**Minazif**	**17.14**	**232**	P		**P**		**12 44 47.0**	**-2.3**
DGZ	**Jazzator, Alta**	**17.77**	**37**	*i* P		**Pn**		**12 44 57.3**	**-0.5**
DGZ	comp=Z,6.0nm,0.6s			pmax		pmax			
LSA	**Lhasa**	**18.20**	**106**	P		**P**		**12 45 01.8**	**+0.4**
LSA	comp=Z,20nm,0.7s			pmax		pmax			
GOMU	**GeErMu**	**19.20**	**84**	P		**Pn**		**12 45 14.2**	**-0.7**
GOMU	comp=Z,3.0nm,0.9s			pmax		pmax			
ZALV	**Zalesovo Beam** comp=Z,15nm,0.6s,baz=222,slow=11,SNR=79	**19.89**	**25**	P		**P**		**12 45 19.7**	**+0.8**
ZALV	comp=Z,3.7nm,0.7s,baz=216,slow=19,SNR=6.5 comp=Z,15nm,0.6s			S		**S**		**12 48 49.7**	**-3.0**
GNI	**Garni** comp=Z,2.7nm,0.4s,baz=152,slow=6.4,SNR=4.9 comp=Z,2.7nm,0.4s	**20.86**	**288**	P		**P**		**12 45 27.4**	**-2.2**
GNI	**Garni**	**20.86**	**288**	*ce*P		**P**		**12 45 32.2**	**+2.6**
GNI	comp=Z,17nm,1.3s			pmax		pmax			
SHL	**Shillong**	**20.94**	**116**			**P**		**12 45 31.5**	**+1.0**
SHL	**Shillong**	**20.94**	**116**	P		**P**		**12 45 31.5**	**+1.0**
SHL	comp=Z,23nm,0.9s			pmax		pmax			
SVE	**Sverdlovsk**	**21.46**	**344**	*e*P		**P**		**12 45 36.1**	**+0.6**
SVE					*e*S	**S**		**12 49 19.3**	**-2.6**
SVE	comp=Z,24nm,1.2s			pmax		pmax			
ARTI	**Arti**	**21.61**	**341**			**P**		**12 45 37.0**	**0.0**
ARTI	**Arti**	**21.61**	**341**	P		**P**		**12 45 36.8**	**-0.3**
ARTI	comp=Z,9.5nm,0.6s,baz=146,slow=6.3,SNR=12 comp=Z,0.7nm,0.3s,baz=28,slow=22,SNR=1.1 comp=Z,9.5nm,0.6s			S		**S**		**12 49 28.5**	**+4.1**
ARTI	**Arti**	**21.61**	**341**	*c i* P		**P**		**12 45 38.1**	**+1.1**
ARTI				*PP		**pP**		**12 46 10.0**	**+1.5**
ARTI				S		**S**		**12 49 24.9**	**+0.5**
ARTI	comp=Z,22nm,0.9s			pmax		pmax			
NCK	**Nalchik**	**22.03**	**297**	*i* P		**P**		**12 45 42.7**	**+1.2**
NCK	comp=Z,11nm,1.0s			pmax		pmax			
KBZ	**Khabaz** comp=Z,1.3nm,0.6s,baz=94,slow=6.4,SNR=5.3 comp=Z,1.3nm,0.6s	**22.57**	**297**	P		**P**		**12 45 45.8**	**-0.7**
KBZ	**Khabaz**	**22.57**	**297**	*e*P		**P**		**12 45 47.2**	**+0.7**
KBZ	comp=Z,2.0nm,1.0s			pmax		pmax			
KIV	**Kislovodsk**	**22.75**	**298**	*e*P		**P**		**12 45 49.9**	**+1.5**
KIV	comp=Z,4.0nm,1.1s			pmax		pmax			
BELG	**Belogornoye**	**22.85**	**321**	*i* P		**P**		**12 45 49.2**	**+0.2**
BELG	comp=Z,5.0nm,0.8s			pmax		pmax			
GTA	**Gaotai**	**22.87**	**74**	*e*P		**P**		**12 45 53.0**	**+3.5**
GTA				sP		pP		12 46 28.4	+5.2
GTA	comp=Z,4.0nm,0.9s			pmax		pmax			
RAYN	**Ar Rayn**	**25.49**	**247**	P		**P**		**12 46 12.6**	**-0.7**
RAYN	**Ar Rayn**	**25.49**	**247**	P		**P**		**12 46 12.6**	**-0.7**
RAYN	comp=Z,4.0nm,1.1s			pmax		pmax			
KIRV	**Kirov**	**26.20**	**334**	*ce*P		**P**		**12 46 20.9**	**+1.7**
ANN	**Anapa**	**26.60**	**299**	*e*P		**P**		**12 46 24.9**	**+1.9**
ANN				*e*PP		**pP**		**12 47 01.4**	**+1.8**
ANN				*e*S		**S**		**12 50 45.4**	**+1.1**
ANN	comp=Z,31nm,0.7s			pmax		pmax			
SONM	**Songino Array** comp=Z,0.7nm,0.7s,baz=262,slow=10.0,SNR=2.6 comp=Z,0.7nm,0.7s	**28.33**	**55**	P		**P**		**12 46 39.2**	**+0.6**
OBN	**Obninsk**	**29.90**	**319**	⇑*e*P		**P**		**12 46 51.4**	**-0.7**
OBN				*i* *PP		**pP**		**12 47 31.5**	**+2.3**
OBN				*e*				12 48 02.9	
OBN	comp=Z,5.0nm,0.8s			pmax		pmax			
CMAR	**Chiang Mai Arr**	**30.49**	**119**	P		**P**		**12 46 59.6**	**+1.9**
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.8s,baz=303,slow=8.1,SNR=16 comp=Z,2.0nm,0.8s	**30.49**	**119**	P		**P**		**12 46 57.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**30.49**	**119**	*e*P		**P**		**12 46 59.9**	**+2.2**
CMAR	comp=Z,3.0nm,0.9s			pmax		pmax			
XAN	**Xi'an**	**30.95**	**83**	*e*P		**P**		**12 47 03.6**	**+2.0**
HHC	**Hu-ho-hao-te**	**31.77**	**70**	*e*P		**P**		**12 47 10.6**	**+1.7**
HHC	comp=Z,20nm,0.8s			pmax		pmax			
AKASG	**Malin Array Be** comp=Z,2.7nm,0.6s,baz=83,slow=7.0,SNR=12 comp=Z,2.7nm,0.6s	**32.91**	**309**	P		**P**		**12 47 18.9**	**+0.4**
AKASG	**Malin Array Be**	**32.91**	**309**	*e*P		**P**		**12

comp=Z,8.3nm,0.6s,baz=98,slow=9.1,SNR=20
comp=Z,8.3nm,0.6s
NB2 NORSAR Subarra 44.34 323 P **P** **12 48 53.2 -0.3**
comp=Z,7.1nm,0.7s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.34 323 P **P** **12 48 53.0 -0.5**
NOA NORSAR Array B 44.34 323 P **P** **12 48 53.6 +0.1**
comp=Z,4.3nm,0.6s,baz=96,slow=7.8,SNR=24
comp=Z,4.3nm,0.6s
TIXI Tiksi 45.75 22 P **P** **12 49 05.1 +0.7**
TIXI Tiksi 45.75 22*ce*P **P** **12 49 05.8 +1.5**
TIXI pmax pmax
comp=Z,8.0nm,2.5s
KMBO Kilima Mbogo 48.84 228*ce*P **P** **12 49 30.6 +1.4**
KMBO pmax pmax
comp=Z,17nm,0.4s
TGY Tagaytay City 49.74 103 LR LR 13 13 39.3
comp=Z,402nm,18.7s,baz=286,slow=39
BILL Bilibino 58.59 26 *i* P **P** **12 50 38.9 -0.1**
BILL pmax pmax
comp=Z,4.0nm,1.5s
D19K Kuna River 69.12 17 P **P** **12 51 47.8 +0.1**
E21K Killik River 70.12 16 P **P** **12 51 54.0 +0.1**
E21K IAmb IAmb 12 52 34.2
comp=Z,7.6nm,1.3s
TOLK Toolik Lake Re 70.90 15 **P** **12 51 58.9 +0.3**
TOLK IAmb IAmb 12 52 13.3
comp=Z,14nm,1.4s
IMAR Indian Mountai 72.15 18 P **P** **12 52 06.0 -0.1**
ILAR Eielson Array 74.75 16 P **P** **12 52 21.1 -0.1**
comp=Z,0.8nm,1.0s,baz=316,slow=5.8,SNR=6.6
comp=Z,0.8nm,1.0s
KNRA Kununurra 75.26 123 P **P** **12 52 25.0 +0.2**
KNRA IAmb IAmb 12 52 25.6
comp=Z,8.4nm,0.8s
RND Reindeer 75.47 17 P **P** **12 52 24.2 -1.3**
RND IAmb IAmb 12 52 25.2
comp=Z,3.2nm,0.7s
RND Reindeer 75.47 17 P **P** **12 52 24.2 -1.3**
RND pmax pmax
comp=Z,3.0nm,0.7s
WB0 Warramunga Arr 81.94 122 P **P** **12 53 00.6 -0.7**
WB0 IAmb IAmb 12 53 00.9
comp=Z,4.6nm,0.9s
WRA Warramunga Arr 82.02 122 P **P** **12 53 00.6 -1.2**
comp=Z,3.4nm,0.8s,baz=323,slow=4.8,SNR=30
comp=Z,3.4nm,0.8s
WR8 Warramunga Arr 82.14 122 P **P** **12 53 00.9 -1.4**
WR8 IAmb IAmb 12 53 01.9
comp=Z,3.4nm,0.8s
AS31 Alice Springs 84.29 125 P **P** **12 53 12.6 -0.7**
ASAR Alice Springs 84.29 125 P **P** **12 53 12.7 -0.6**
ASAR Alice Springs 84.29 125 P **P** **12 53 12.2 -1.1**
comp=Z,3.4nm,0.6s,baz=310,slow=5.0,SNR=65
comp=Z,3.4nm,0.6s
ASAR Alice Springs 84.29 125 P **P** **12 53 12.7 -0.6**

*CNRM **03** 12:42:02.3, 36.63N×7.21W, h7km*
*SFS **03** 12:42:04.8, 36.81N×7.11W, h30km, ML2.6/6, ML2.8/6, MLv2.6/6*
*IGIL **03** 12:42:05.9, 36.84N×7.15W, h28km, ML1.8*
*INMG **03** 12:42:05.3±1.4, 36.82N×7.17W, h21km±3km, ML1.9, Error ellipse: s-maj=2.8km s-min=2.4km az=27.0,*
#DIST_RANGE: LOCAL #IPMA_REGION: Golfo de Cadiz
*MDD **03** 12:42:05.4±0.5, 36.85N×7.11W, h27km±3km, mb_Lg2.5/11, Error ellipse: s-maj=4.6km s-min=2.1km az=23.0*
ISC 03 12:42:04.2±4.7, **36.83N**±0.03×**7.10W**±0.02, **h38**km±6km, **n62**,σ1≈**47**/97, **3D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EXAYA	**Ayamonte**	**0.46**	**329**		Pg		**Pn**	**12 42 15.0**	**+0.8**
EXAYA					Sg		**Sn**	**12 42 21.6**	**+0.3**
PVAQ	**Vaqueiros**	**0.76**	**320**	⇓*i*	P		**Pn**	**12 42 19.0**	**+0.7**
PVAQ				*e*	S		**Sn**	**12 42 28.6**	**+0.1**
PVAQ				*i*	IAML			12 42 29.7	
PVAQ				*i*	IAML			12 42 29.9	
PVAQ				*i*	IAML			12 42 30.2	
PVAQ	**Vaqueiros**	**0.76**	**320**		P		**Pn**	**12 42 19.1**	**+0.7**
PVAQ	**Vaqueiros**	**0.76**	**320**		S		**Sn**	**12 42 30.0**	**+1.5**
EGRO	**El Granado**	**0.77**	**337**		S		**Sn**	**12 42 29.1**	**+0.3**
EGRO	**El Granado**	**0.77**	**337**	⇓	Pg		**Pn**	**12 42 19.2**	**+0.8**
EGRO					Sg		**Sn**	**12 42 29.3**	**+0.5**
EGRO				*i*	IVmb_Lg			12 42 32.1	
PBDV	**Barranco-do-Ve**	**0.78**	**302**		S		**Sn**	**12 42 28.8**	**-0.4**
PBDV					P		**Pn**	**12 42 18.8**	**+0.1**
PBDV	**Barranco-do-Ve**	**0.78**	**302**	*e*	P		**Pn**	**12 42 19.3**	**+0.6**
PBDV				*e*	S		**Sn**	**12 42 29.1**	**-0.1**
PBDV				*i*	IAML			12 42 30.0	
PBDV				*i*	IAML			12 42 30.0	
PBDV				*i*	IAML			12 42 30.8	
SFS	**San Fernando**	**0.81**	**116**		Sg		**Sn**	**12 42 32.5**	**+2.6**
EMIN	**Mina Concepcio**	**1.00**	**20**		P		**Pn**	**12 42 21.7**	**0.0**
EMIN					S		**Sn**	**12 42 34.4**	**-0.1**
EMIN	**Mina Concepcio**	**1.00**	**20**		Pg		**Pn**	**12 42 22.2**	**+0.6**
EMIN					Sg		**Sn**	**12 42 34.2**	**-0.3**
EMIN				*i*	IVmb_Lg			12 42 37.0	
ESPR	**Espera**	**1.00**	**87**		P		**Pn**	**12 42 22.1**	**+0.5**
ESPR					S		**Sn**	**12 42 34.9**	**+0.4**
ESPR	**Espera**	**1.00**	**87**		Pg		**Pn**	**12 42 22.6**	**+0.9**
ESPR					Sg		**Sn**	**12 42 35.0**	**+0.4**
ESPR				*i*	IVmb_Lg			12 42 36.9	
PCVE	**Castro Verde**	**1.09**	**317**		S		**Sn**	**12 42 36.8**	**-0.1**
PCVE	**Castro Verde**	**1.09**	**317**	*e*	P		**Pn**	**12 42 23.6**	**+0.6**
PCVE				*e*	S		**Sn**	**12 42 37.6**	**+0.7**
PCVE				*i*	IAML			12 42 41.0	
PCVE				*i*	IAML			12 42 42.1	
PCVE				*i*	IAML			12 42 44.5	
MORF	**Marmelete**	**1.33**	**291**	*e*	P		**Pn**	**12 42 26.5**	**+0.4**
MORF				*e*	S		**Sn**	**12 42 41.8**	**-0.8**
MORF					IAML			12 42 42.8	
comp=E,20nm,0.1s									
MORF	**Marmelete**	**1.33**	**291**	*e*	P		**Pn**	**12 42 26.6**	**+0.4**
MORF				*e*	S		**Sn**	**12 42 42.4**	**-0.2**
MORF				*i*	IAML			12 42 42.7	
MORF				*i*	IAML			12 42 42.8	
MORF				*i*	IAML			12 42 43.4	
PBEJ	**Beja**	**1.34**	**333**	*e*	P		**Pn**	**12 42 27.1**	**+0.7**
PBEJ				*i*	IAML			12 42 48.8	
PBEJ				*i*	IAML			12 42 49.5	
PBEJ				*i*	IAML			12 42 51.2	
MESJ	**Messejana**	**1.34**	**319**	*e*	P		**Pn**	**12 42 27.1**	**+0.7**
MESJ				*e*	S		**Sn**	**12 42 42.5**	**-0.5**
MESJ					IAML			12 42 44.0	
comp=N,6.8nm,0.1s									
MESJ	**Messejana**	**1.34**	**319**	*e*	P		**Pn**	**12 42 27.1**	**+0.7**
MESJ				*e*	S		**Sn**	**12 42 42.7**	**-0.4**
MESJ				*i*	IAML			12 42 51.0	
MESJ				*i*	IAML			12 42 51.3	
MESJ				*i*	IAML			12 42 54.2	
PBAR	**Barrancos**	**1.34**	**2**		P		**Pn**	**12 42 27.2**	**+0.7**
PBAR					S		**Sn**	**12 42 43.2**	**+0.2**
PBAR	**Barrancos**	**1.34**	**2**	*e*	P		**Pn**	**12 42 27.3**	**+0.8**
PBAR				*e*	S		**Sn**	**12 42 43.2**	**+0.2**
PBAR				*i*	IAML			12 42 50.4	
PBAR				*i*	IAML			12 42 50.6	
PBAR				*i*	IAML			12 42 51.5	
EJIF	**Jimena Fronter**	**1.37**	**105**		Sg		**Sn**	**12 42 46.1**	**+2.5**
PFVI	**Vila Bisbo**	**1.41**	**283**	*e*	S		**Sn**	**12 42 43.7**	**-0.9**
PFVI				*i*	IAML			12 42 43.9	
PFVI				*i*	IAML			12 42 44.4	
PFVI				*i*	IAML			12 42 44.4	
PTEO	**Sao Teotonio**	**1.48**	**299**	*e*	P		**Pn**	**12 42 29.3**	**+1.1**
PTEO				*e*	S		**Sn**	**12 42 46.4**	**+0.1**
PTEO				*i*	IAML			12 42 47.8	
PTEO				*i*	IAML			12 42 49.6	
PTEO				*i*	IAML			12 42 51.9	
E1302	**La Puebla de C**	**1.52**	**78**		Sn		**Sn**	**12 42 48.4**	**+1.0**
ECAB	**El Cabril**	**1.83**	**47**		P		**Pn**	**12 42 34.0**	**+0.9**
ECAB					S		**Sn**	**12 42 53.7**	**-1.4**
ECAB	**El Cabril**	**1.83**	**47**		Pn		**Pn**	**12 42 33.8**	**+0.7**
ECAB					Sn		**Sn**	**12 42 53.8**	**-1.3**
ECAB				*i*	IVmb_Lg			12 43 04.6	
EVO	**Evora**	**1.85**	**337**		P		**Pn**	**12 42 34.0**	**+0.6**
EVO					S		**Sn**	**12 42 56.3**	**+0.9**
EBAD	**Badajoz**	**1.93**	**2**		P		**Pn**	**12 42 34.6**	**+0.2**
EBAD					S		**Sn**	**12 42 57.6**	**+0.3**
EBAD	**Badajoz**	**1.93**	**2**		Pn		**Pn**	**12 42 35.0**	**+0.6**
EBAD					Sn		**Sn**	**12 42 56.8**	**-0.6**
EBAD				*i*	IVmb_Lg			12 43 09.2	
PESTR	**Estremoz**	**2.07**	**349**		P		**Pn**	**12 42 39.6**	**+3.2**
PESTR	**Estremoz**	**2.07**	**349**		S		**Sn**	**12 43 09.9**	**+8.9**
PARRA	**Arraiolos**	**2.12**	**340**	*e*	P		**Pn**	**12 42 37.9**	**+0.8**
PARRA				*e*	S		**Sn**	**12 43 02.3**	**+0.2**
PARRA				*i*	IAML			12 43 17.2	
PARRA				*i*	IAML			12 43 17.8	
PARRA				*i*	IAML			12 43 17.8	
PMTG	**Montargil**	**2.41**	**339**	*e*	P		**Pn**	**12 42 41.7**	**+0.7**
PMTG				*e*	S		**Sn**	**12 43 09.6**	**+0.4**
PMTG				*i*	IAML			12 43 21.8	
PMTG				*i*	IAML			12 43 25.8	
PMTG				*i*	IAML			12 43 27.7	
EADA	**Adamuz**	**2.41**	**56**		Pn		**Pn**	**12 42 42.4**	**+1.2**
EADA					Sn		**Sn**	**12 43 08.9**	**-0.5**
EADA				*i*	IVmb_Lg			12 43 20.6	
PMRV	**Marv??o**	**2.61**	**355**	*e*	P		**Pn**	**12 42 44.6**	**+0.8**
PMRV				*e*	S		**Sn**	**12 43 14.4**	**+0.3**
PMRV				*i*	IAML			12 43 15.4	
PMRV				*i*	IAML			12 43 15.5	
PMRV				*i*	IAML			12 43 17.3	
PMAFR	**Mafra**	**2.73**	**322**	*e*	P		**Pn**	**12 42 47.0**	**+1.4**
PMAFR				*e*	S		**Sn**	**12 43 17.9**	**+0.5**
PSARD	**Sardoal**	**2.89**	**344**	*e*	P		**Pn**	**12 42 48.6**	**+0.9**
PSARD				*e*	S		**Sn**	**12 43 21.1**	**0.0**
PSARD				*i*	IAML			12 43 21.8	
PSARD				*i*	IAML			12 43 22.1	
PSARD				*i*	IAML			12 43 23.8	
PCBR	**Castelo Branco**	**3.02**	**355**	*e*	P		**Pn**	**12 42 50.4**	**+1.0**
PCBR				*e*	S		**Sn**	**12 43 23.6**	**-0.8**
PCBR				*i*	IAML			12 43 25.0	
PCBR				*i*	IAML			12 43 25.1	
PCBR				*i*	IAML			12 43 25.3	
E0803	**Jimena (Jaen)**	**3.06**	**70**		Sn		**Sn**	**12 43 26.5**	**+1.0**
PSIM	**Granatula de C**	**3.31**	**52**		Pn		**Pn**	**12 42 54.4**	**+0.8**
PSIM					Sn		**Sn**	**12 43 29.7**	**-2.0**
EPLA	**Plasencia**	**3.33**	**14**		Pn		**Pn**	**12 42 54.3**	**+0.5**
EPLA					Sn		**Sn**	**12 43 31.3**	**-0.7**
EPLA				*i*	IVmb_Lg			12 43 33.6	
EQES	**Quesada**	**3.36**	**72**		Sn		**Sn**	**12 43 32.7**	**-0.2**
PAB	**San Pablo**	**3.48**	**38**		Pn		**Pn**	**12 42 56.9**	**+1.2**
PAB					Sn		**Sn**	**12 43 32.3**	**-3.4**
PAB				*i*	IVmb_Lg			12 43 35.4	
ESDC	**Sonseca Array**	**3.77**	**40**		Sn		**Sn**	**12 43 41.2**	**-1.6**
ESDC				*i*	IVmb_Lg			12 43 41.7	
PVIS	**Viseu**	**3.93**	**351**	*e*	S		**Sn**	**12 43 45.7**	**-1.2**
MVO	**Moncorvo**	**4.33**	**1**	*e*	P		**Pn**	**12 43 08.5**	**+1.0**
MVO				*e*	S		**Sn**	**12 43 54.8**	**-2.0**
MVO				*i*	IAML			12 43 56.4	
MVO				*i*	IAML			12 43 56.8	
MVO				*i*	IAML			12 43 56.9	
MD31	**MD31**	**4.40**	**153**		P		**Pn**	**12 43 08.6**	**+0.2**
MD31	**MD31**	**4.40**	**153**		S		**Sn**	**12 43 58.9**	**+0.4**
MDT	**Midelt**	**4.50**	**152**		P		**Pn**	**12 43 10.0**	**+0.1**
MDT	**Midelt**	**4.50**	**152**		S		**Sn**	**12 44 01.2**	**+0.2**
ETOB	**Tobarra**	**4.76**	**66**		Pn		**Pn**	**12 43 13.6**	**+0.1**
ETOB					Sn		**Sn**	**12 44 05.4**	**-2.0**
ELOB	**Lobios**	**5.09**	**352**		Sn		**Sn**	**12 44 13.4**	**-2.0**
ECAL	**Calabor**	**5.11**	**3**		Sn		**Sn**	**12 44 14.7**	**-1.3**
ETRV	**Los Montesinos**	**5.19**	**75**		Pn		**Pn**	**12 43 20.5**	**+1.3**
EVIV	**Cofrentes, Val**	**5.32**	**61**		Sn		**Sn**	**12 44 19.4**	**-1.6**
OUK	**Oukaimeden**	**5.64**	**187**		P		**Pn**	**12 43 24.8**	**-1.0**
OUK	**Oukaimeden**	**5.64**	**187**		S		**Sn**	**12 44 28.5**	**-1.0**
PIO	**Tiouine**	**5.89**	**181**		P		**Pn**	**12 43 28.6**	**-0.4**
TIO					S		**Sn**	**12 44 30.7**	**-4.6**
OUZM	**OUZ**	**5.91**	**177**		P		**Pn**	**12 43 29.9**	**+0.6**
OUZM	**OUZ**	**5.91**	**177**		S		**Sn**	**12 44 36.5**	**+0.7**

*SJA **03** 13:23:16.5±0.7, 29.17S×67.76W, h131km, ML5.6, MW5.5*
*CATAC **03** 13:23:17.0±1.2, 29°S±6°×68°W±1°2, h115km±13km, M5.8/7, mb5.6/7, mB6.0/7, MLv6.1/3, Mw(mB)5.6/7, Error ellipse: s-maj=27.1km s-min=10.3km az=76.7, confirmed*
*GUC **03** 13:23:16.9±0.5, 29.20S×67.85W, h138km±13km, ML5.5*
*NEIC **03** 13:23:17.6, 29.17S×67.74W, h113km*
*IPGP **03** 13:23:17.0, 29.18S×67.70W, h120km, Mw5.6, Fault plane solution: NP1:ϕs178.00000°, δ37.00000°, λ-47.00000°. NP2:ϕs309.00000°, δ64.00000°, λ-118.00000°.*
*NEIC **03** 13:23:17.9, 29.15S×67.73W, h115km*
*NEIC **03** 13:23:18.4, 29.16S×67.68W, h120km*
*MOS **03** 13:23:18.4±1.0, 29.08S×67.90W, h124km, mb5.6/12, Error ellipse: s-maj=14.3km s-min=8.1km az=106.0*
*NEIC **03** 13:23:18.4, 29.26S×67.80W, h120km, Moment Tensor Solution. Duration: 3s5 Moment tensor: Scale 10¹⁷Nm; Mrr-2.10; Mθθ0.17; Mϕϕ 1.93; Mrθ1.65; Mθϕ-2.34; Mϕr-0.92; Fault plane solution: M₀3.62000×10¹⁷ NP1: ϕs175.06000°, δ37.03000°, λ-43.53000°. NP2: ϕs302.24000°, δ65.50000°, λ-118.67000°. Principal axes: T 4.0296, Plg16.0000°, Azm53.0000°; N -1.0366, Plg26.0000°, Azm315.0000°; P -2.9930, Plg59.0000°, Azm171.0000°;*
*VAO **03** 13:23:18.0±0.3, 29.17S×67.66W, h130km±1km, mb5.8*
*NEIC **03** 13:23:18.4±1.9, 29.16S±0.05×67.67W±0.04, h120km±1km, mb5.7/596, Mwb5.6/45, Mwr5.6/39, Mww5.6/60, Mww5.7(GUC), Error ellipse: s-maj=9.2km s-min=5.6km az=167.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-2.19; Mθθ0.87; Mϕϕ1.32; Mrθ1.68; Mθϕ-1.58; Mϕr-1.54; Fault plane solution: M₀3.37000×10¹⁷ NP1:ϕs146.02000°, δ23.86000°, λ-78.91000°. NP2: ϕs313.92000°, δ66.61000°, λ-94.86000°. Principal axes: T 3.5821, Plg21.0000°, Azm48.0000°; N -0.4813, Plg4.0000°, Azm316.0000°; P -3.1008, Plg68.0000°, Azm215.0000°; Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr-3.23; Mθθ1.97; Mϕϕ 1.26; Mrθ1.71; Mϕϕ-1.42; Mϕr-0.19; Fault plane solution: M₀3.60000×10¹⁷ NP1:ϕs139.57000°, δ33.68000°, λ-68.75000°. NP2:ϕs294.52000°, δ58.88000°, λ-103.58000°. Principal axes: T 3.4140, Plg13.0000°, Azm34.0000°; N 0.3409, Plg12.0000°, Azm302.0000°; P -3.7548, Plg73.0000°, Azm171.0000°;*
*IDC **03** 13:23:19.2±0.3, 29.06S×67.69W, h125km±2km, mb5.3/19, mbtmp5.6/20, MS4.5/33 Error ellipse: s-maj=11.4km s-min=9.8km az=66.0*
*GCMT **03** 13:23:21.4±0.1, 29.19S±0.01×67.71W±0.01, h136km, MW5.7/149, Moment Tensor Solution. s143, c276; s149, c308; Duration: 1s6 Moment tensor: Scale 10¹⁷ Nm; Mrr-2.35±.03; Mθθ0.35±.04; Mϕϕ2.00±.05; Mrθ1.81±.03; Mϕϕ-2.47±.04; Mϕr-1.13±.03; Best double couple: M₀3.81500×10¹⁷ NP1:ϕs171.00000°, δ34.00000°, λ-49.00000°. NP2:ϕs305.00000°, δ65.00000°, λ-114.00000°. Principal axes: T 4.3710, Plg17.0000°, Azm52.0000°; N -1.1070, Plg21.0000°, Azm315.0000°; P -3.2600, Plg62.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 13:23:18.0±0.2, **29.12S**±0.02×**67.77W**±0.03, **h122**km±1km, **h122km**:**pP-P**, **n1054**,σ1≈**86**/947, **mb5.7**/333, **58C-49D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACLC	**CERRO LA CRUZ**	**0.78**	**113**	*e*	P		**Pn**	**13 23 38.2**	**-0.1**
ACLC				*e*	S		**Sn**	**13 23 53.9**	**+0.1**
ACLC					IAML			13 23 55.8	
comp=Z,65μm,0.4s									
AANI	**Anillaco**	**0.79**	**68**	*e*	P		**Pn**	**13 23 38.7**	**+0.3**
AANI				*e*	S		**Sn**	**13 23 55.1**	**+1.2**
AANI					IAML			13 23 58.1	
comp=Z,333μm,0.7s									
AVFE	**Valle Fertil**	**1.56**	**170**	*e*	P		**Pn**	**13 23 45.8**	**-0.5**
AVFE				*e*	S		**Sn**	**13 24 07.5**	**-0.5**
AVFE					IAML			13 24 09.3	
comp=Z,50μm,0.5s									
ACDV	**Cuesta del Vie**	**1.57**	**228**	*e*	P		**Pn**	**13 23 46.2**	**-0.4**
ACDV					IAML			13 24 23.5	
comp=Z,28μm,1.3s									
APLL	**PUNTA DE LOS L**	**1.67**	**140**	*e*	P		**Pn**	**13 23 47.0**	**-0.6**
AROD	**Rodeo**	**1.81**	**234**	*e*	P		**Pn**	**13 23 49.3**	**-0.2**
ACCO	**Cerro Coronel**	**1.84**	**217**	*e*	P		**Pn**	**13 23 49.2**	**-0.8**
ACCO				*e*	S		**Sn**	**13 24 15.1**	**+0.7**
CO01	**Juntas del Tor**	**2.19**	**246**				**Pn**	**13 23 54.2**	**0.0**
CO01	**Juntas del Tor**	**2.19**	**246**	⇑*e*	P		**Pn**	**13 23 54.5**	**+0.3**
CO01				*i*	S		**Sn**	**13 24 22.1**	**+0.1**
CO01					IAML			13 24 23.9	
comp=E,46μm,0.5s									
CO01	**Juntas del Tor**	**2.19**	**246**	*e*	P		**Pn**	**13 23 54.4**	**+0.1**
CO01				*e*	S		**Sn**	**13 24 22.9**	**+1.0**
CO01				IAML				13 24 25.0	
comp=Z,13μm,0.5s									
ACHE	**Chepes**	**2.25**	**155**	*e*	P		**Pn**	**13 23 54.6**	**-0.3**
ACHE				*e*	S		Sn	13 24 11.7	-11
RTLL	**Cerro Villicun**	**2.29**	**195**	⇑*e*	P		**Pn**	**13 23 54.4**	**-0.7**
RTLL				*i*	S		**Sn**	**13 24 21.4**	**-2.3**
RTLL	**Cerro Villicun**	**2.29**	**195**	*e*	P		**Pn**	**13 23 54.5**	**-0.7**
RTLL				*e*	S		**Sn**	**13 24 23.1**	**-0.6**
RTLL					IAML			13 24 24.7	
comp=Z,27μm,1.0s									
SJA	**San Juan**	**2.50**	**196**	*e*	P		**Pn**	**13 23 57.6**	**-0.2**
SJA				*e*	S		**Sn**	**13 24 28.3**	**-0.2**
SJA					IAML			13 24 29.6	
comp=Z,16μm,0.3s									
CFA	**Coronel Fontan**	**2.51**	**189**	*e*	P		**Pn**	**13 23 56.4**	**-1.6**
comp=Z,4μm,0.9s,baz=308,slow=13,SNR=6889									
CFA					S		**Sn**	**13 24 27.6**	**-1.2**
comp=Z,853nm,0.3s,baz=349,slow=19,SNR=7.1									
CFA	**Coronel Fontan**	**2.51**	**189**	*e*	P		**Pn**	**13 23 57.3**	**-0.7**
CFA				*e*	S		**Sn**	**13 24 26.8**	**-2.0**
ZON	**Zonda**	**2.54**	**198**		P		**Pn**	**13 23 57.1**	**-1.3**
ZON	**Zonda**	**2.54**	**198**	P	P		**Pn**	**13 23 57.1**	**-1.3**
ZON	**Zonda**	**2.54**	**198**	*e*	P		**Pn**	**13 23 57.5**	**-0.9**
ZON				*e*	S		**Sn**	**13 24 28.2**	**-1.4**
ZON					IAML			13 24 30.5	
comp=Z,10μm,0.5s									
LCO	**Las Campanas**	**2.56**	**272**				**Pn**	**13 23 58.0**	**-0.9**
LCO	**Las Campanas**	**2.56**	**272**	P			**Pn**	**13 23 58.0**	**-0.9**
LCO	**Las Campanas**	**2.56**	**272**	*e*	P		**Pn**	**13 23 57.2**	**-1.7**
LCO				*i*	S		**Sn**	**13 24 28.1**	**-2.2**
LCO	**Las Campanas**	**2.56**	**272**	*e*	P		**Pn**	**13 23 58.0**	**-0.9**
LCO				*e*	S		**Sn**	**13 24 28.0**	**-2.4**
LCO					IAML			13 24 30.1	
comp=Z,47μm,1.1s									
LCO	**Las Campanas**	**2.56**	**272**	P			**Pn**	**13 23 58.2**	**-0.8**
LCO				S			**Sn**	**13 24 28.4**	**-2.0**
AC02	**Maricunga**	**2.57**	**332**				**Pn**	**13 24 00.4**	**+1.1**
AC02	**Maricunga**	**2.57**	**332**	⇓*e*	P		**Pn**	**13 24 00.3**	**+1.1**
AC02				*i*	S		**Sn**	**13 24 30.9**	**0.0**
AC02					IAML			13 24 42.2	
comp=E,5μm,0.5s									
AC02	**Maricunga**	**2.57**	**332**	*e*	P		**Pn**	**13 24 00.3**	**+1.0**
AC02				*e*	S		**Sn**	**13 24 33.3**	**+2.4**
GO03	**Copiapo**	**2.65**	**304**				**Pn**	**13 23 59.1**	**-0.7**
GO03	**Copiapo**	**2.65**	**304**	⇑*e*	P		**Pn**	**13 23 58.8**	**-1.1**
GO03				*i*	S		**Sn**	**13 24 29.9**	**-2.1**
GO03	**Copiapo**	**2.65**	**304**	*e*	P		**Pn**	**13 23 59.2**	**-0.6**
GO03				*e*	S		**Sn**	**13 24 30.4**	**-1.5**
GO03					IAML			13 24 32.8	
comp=Z,19μm,0.6s									
GO04	**Tololo Observa**	**2.83**	**248**				**Pn**	**13 24 01.1**	**-1.3**
GO04	**Tololo Observa**	**2.83**	**248**	⇑*e*	P		**Pn**	**13 24 00.5**	**-1.9**
GO04				*i*	S		**Sn**	**13 24 34.9**	**-1.7**
GO04	**Tololo Observa**	**2.83**	**248**	*e*	P		**Pn**	**13 24 01.3**	**-1.1**
GO04				*e*	S		**Sn**	**13 24 36.2**	**-0.4**
GO04					IAML			13 24 39.1	
comp=Z,42μm,0.5s									
AC06	**Mina Casimiro**	**2.87**	**307**				**Pn**	**13 24 01.6**	**-1.1**
AC06	**Mina Casimiro**	**2.87**	**307**	*e*	P		**Pn**	**13 24 01.7**	**-1.1**
AC06				*i*	S		**Sn**	**13 24 34.1**	**-3.1**
AC06					IAML			13 24 38.6	
comp=N,10μm,0.6s									
RTLS	**Leoncito**	**2.98**	**206**	*e*	P		**Pn**	**13 24 03.6**	**-0.7**
RTLS				*e*	S		**Sn**	**13 24 41.2**	**+1.2**
RTLS					IAML			13 24 46.3	
comp=Z,15μm,0.4s									
AC04	**Llanos de Chal**	**3.04**	**287**				**Pn**	**13 24 03.2**	**-1.7**
AC04	**Llanos de Chal**	**3.04**	**287**	⇑*e*	P		**Pn**	**13 24 03.2**	**-1.7**
AC04				*i*	S		**Sn**	**13 24 36.5**	**-4.6**
AC04					IAML			13 24 38.1	
comp=E,14μm,0.4s									
AC04	**Llanos de Chal**	**3.04**	**287**	*e*	P		**Pn**	**13 24 03.2**	**-1.7**
AC04				*e*	S		**Sn**	**13 24 36.4**	**-4.6**
AC04					IAML			13 24 38.1	
comp=Z,14μm,0.6s									
CO05	**La Serena**	**3.12**	**254**				**Pn**	**13 24 03.7**	**-2.2**
CO05	**La Serena**	**3.12**	**254**	⇑*e*	P		**Pn**	**13 24 03.7**	**-2.2**
CO05				*i*	S		**Sn**	**13 24 39.0**	**-4.0**
ACAN	**Cantantal**	**3.19**	**171**	*e*	P		**Pn**	**13 24 05.7**	**-1.1**
FSA	**Cafayete**	**3.39**	**28**	*e*	P		**Pn**	**13 24 11.4**	**+1.7**
CO02	**Combarbal**	**3.48**	**233**				**Pn**	**13 24 08.8**	**-2.0**
CO02	**Combarbal**	**3.48**	**233**	*e*	P		**Pn**	**13 24 08.3**	**-2.5**
CO02				*i*	S		**Sn**	**13 24 47.2**	**-4.4**
CO02	**Combarbal**	**3.48**	**233**	*e*	P		**Pn**	**13 24 08.8**	**-2.0**
CO02				*e*	S		**Sn**	**13 24 51.4**	**-0.3**
CO02					IAML			13 24 55.8	
comp=Z,13μm,0.7s									
TCA	**Tanti**	**3.53**	**130**	*e*	P		**Pn**	**13 24 10.6**	**-0.8**
TCA				*i*	S		**Sn**	**13 24 50.7**	**-2.0**
TCA	**Tanti**	**3.53**	**130**	*e*	P		**Pn**	**13 24 10.7**	**-0.6**
TCA				*e*	S		**Sn**	**13 24 46.2**	**-6.5**
TCA					IAML			13 24 52.2	
comp=Z,9μm,0.7s									
ASAL	**Salagasta**	**3.58**	**194**	*e*	P		**Pn**	**13 24 11.4**	**-0.6**
ASAL				*e*	S		**Sn**	**13 24 53.1**

MT05 IAML 13 26 22.0
comp=Z,8µm,1.9s
MT02 Curacav 5.03 214 Pn 13 24 27.7 -3.7
MT02 Curacav 5.03 214 *eP* **Pn 13 24 27.9 -3.5**
MT02 IAML 13 26 01.4
comp=Z,3µm,1.0s
SALTA 5.04 15 *eP* **Pn 13 24 33.8 +1.8**
SALTA *eP* 13 24 33.8
SALTA *eP* 13 24 33.9
SALTA IAML 13 26 24.2
comp=Z,4µm,1.5s
PB14 IPOC Station P 5.05 332 P **Pn 13 24 31.4 -0.6**
PB14 S **Sn 13 25 25.6 -3.9**
PB14 IPOC Station P 5.05 332 Pn 13 24 31.4 -0.6
PB14 IPOC Station P 5.05 332 *eP* **Pn 13 24 31.2 -0.8**
PB14 *eS* **Sn 13 25 27.0 -2.5**
PB14 IAML 13 25 35.5
comp=Z,5µm,0.5s
VA01 Torpederas 5.12 220 Pn 13 24 28.2 -4.2
VA01 Torpederas 5.12 220 *eP* **Pn 13 24 28.8 -3.7**
VA01 *i* S **Sn 13 25 24.5 -6.0**
VA01 Torpederas 5.12 220 *eP* **Pn 13 24 28.6 -3.9**
VA01 IAML 13 26 08.2
comp=Z,3µm,1.4s
LMEL Las Melosas 5.15 203 Pn 13 24 32.4 -0.8
LMEL Las Melosas 5.15 203 *eP* **Pn 13 24 32.6 -0.5**
LMEL *eS* **Sn 13 25 34.5 +2.9**
LMEL IAML 13 25 58.9
comp=Z,2µm,2.0s
MT09 Talagante 5.39 210 Pn 13 24 32.6 -3.7
BO04 La Punta 5.42 206 Pn 13 24 34.2 -2.5
MT01 Popeta 5.59 211 Pn 13 24 34.8 -4.0
BO01 Tunca 5.97 207 Pn 13 24 40.2 -3.7
PB10 IPOC Station P 6.11 335 Pn 13 24 44.0 -2.0
AF01 San Pedro de A 6.15 357 Pn 13 24 46.9 +0.1
BO02 Sierra Bellavi 6.21 204 Pn 13 24 44.3 -2.9
PB06 IPOC Station P 6.59 345 Pn 13 24 51.3 -1.2
PB05 IPOC Station P 6.61 340 Pn 13 24 50.6 -2.8
PB03 IPOC Station P 7.26 345 Pn 13 24 59.6 -2.1
ML02 Panimavida 7.30 204 Pn 13 24 57.7 -4.3
BI02 San Fabín de 8.08 200 Pn 13 25 08.3 -4.2
TA01 Diego Aracena 8.79 345 Pn 13 25 17.9 -4.3
PSAL Palomas, Salto 9.02 105 *eP* **Pn 13 25 23.8 -1.4**
PB08 IPOC Station P 9.03 352 S **Sn 13 26 58.9 -6.9**
PB08 P **Pn 13 25 22.9 -2.8**
CPUP Villa Florida 9.66 76 Pn 13 25 30.9 -3.0
CPUP Villa Florida 9.66 76 P **Pn 13 25 30.7 -3.2**
comp=Z,26nm,0.5s,baz=105,slow=11,SNR=160
CPUP S **Sn 13 27 13.1 -7.6**
comp=Z,94nm,0.9s,baz=221,slow=8.2,SNR=1.4
CPUP Villa Florida 9.66 76 P **Pn 13 25 30.9 -3.0**
TRQA Tornquist 10.14 153 Pn 13 25 37.9 -2.3
TRQA Tornquist 10.14 153 P **Pn 13 25 37.9 -2.3**
VA04 Juan Fernndez 10.47 242 Pn 13 25 40.2 -4.4
PB12 IPOC Station P 10.71 347 Pn 13 25 42.9 -5.3
PB16 IPOC Station P 10.85 351 Pn 13 25 47.6 -2.8
LR03 Panguipulli 11.14 199 Pn 13 25 48.9 -4.8
LR05 Currie 11.62 196 Pn 13 25 55.5 -4.5
LR04 Corral 11.70 202 Pn 13 25 53.2 -7.8
MURT Porto Murtinho 11.81 53 *eP* **Pn 13 26 00.6 -2.1**
PLCA Paso Flores 11.81 190 Pn 13 25 58.4 -4.2
PLCA Paso Flores 11.81 190 P **Pn 13 25 59.8 -2.8**
comp=Z,30nm,1.1s,baz=12,slow=12,SNR=26
PLCA S **Sn 13 28 08.8 -3.8**
comp=Z,54nm,0.9s,baz=344,slow=17,SNR=1.8
PLCA LR LR 13 31 20.3
comp=Z,3µm,21.7s,baz=12,slow=40
PLCA Paso Flores 11.81 190 *eP* **Pn 13 25 58.8 -3.8**
PLTB Pedras Altas 12.51 106 Pn 13 26 09.0 -2.8
PLTB Pedras Altas 12.51 106 *eP* **Pn 13 26 09.0 -2.8**
CPSB Cacapava Do Su 12.52 99 *eP* **Pn 13 26 10.4 -1.6**
LL03 Petrohue 12.57 196 Pn 13 26 07.5 -5.0
LPAZ La Paz 12.77 358 Pn 13 26 14.1 -1.8
LPAZ La Paz 12.77 358 P **Pn 13 26 14.2 -1.6**
comp=Z,31nm,0.3s,baz=168,slow=7.4,SNR=89
LPAZ S **Sn 13 28 32.0 -5.0**
comp=Z,39nm,0.9s,baz=302,slow=10,SNR=2.1
LPAZ LR LR 13 31 41.3
comp=Z,8µm,18.6s,baz=171,slow=40
LPAZ La Paz 12.77 358 *eP* **Pn 13 26 13.9 -1.9**
AMBA Amambai (Brazi 13.04 65 *eP* **Pn 13 26 18.2 -0.5**
BDQN Bodoquena, MS 13.21 52 *eP* **Pn 13 26 19.2 -1.7**
LL01 San Ignacio de 13.75 195 Pn 13 26 22.5 -5.2
ITAB Concordia 13.93 86 Pn 13 26 28.0 -2.1
ITAB Concordia 13.93 86 *eP* **Pn 13 26 28.1 -2.1**
AQDB Aquidauana 13.93 55 Pn 13 26 28.5 -1.7
AQDB Aquidauana 13.93 55 *eP* **Pn 13 26 28.8 -1.4**
SIV San Ignacio 14.45 27 P **Pn 13 26 34.1 -2.8**
comp=Z,110nm,0.9s,baz=211,slow=16,SNR=267
SIV LR LR 13 32 52.4
comp=Z,2µm,19.9s,baz=168,slow=40
PTGB Pitanga 14.68 76 *eP* **Pn 13 26 39.3 -0.5**
GO07 Milladeo Hill, 14.75 197 Pn 13 26 38.7 -1.7
CNLB Canela 14.78 95 *eP* **Pn 13 26 38.7 -2.3**
PTLB Pontes e Lacer 15.77 32 Pn 13 26 51.5 -1.8
PTLB Pontes e Lacer 15.77 32 *eP* **Pn 13 26 51.7 -1.6**
LDASE Londrina, Braz 15.99 73 *eP* **Pn 13 26 54.5 -1.6**
PP1B Ponte de Pedra 16.46 49 *eP* **Pn 13 27 00.5 -1.4**
MAJ01 Sao Joao Batis 16.62 89 *eP* **Pn 13 27 01.8 -2.0**
COYC Coyhaique 16.77 191 Pn 13 27 03.2 -2.3
SALV Santo Antonio 17.23 43 *eP* **P 13 27 09.7 -1.2**
FRTB Fartura 17.31 75 *eP* **P 13 27 10.3 -1.5**
VILB Vilhena 17.56 25 P **P 13 27 13.1 -1.4**
VILB Vilhena 17.56 25 *eP* **P 13 27 13.4 -1.1**
ITRB Iturama 18.40 63 *eP* **P 13 27 23.7 -0.1**
AY03 Cochrane 18.49 190 P **P 13 27 24.2 -0.2**
PET01 Itanhaem-SP 18.93 80 *eP* **P 13 27 29.2 -0.2**
NNA Nana 19.03 332 P **P 13 27 30.5 -0.1**
comp=Z,31nm,0.8s,baz=181,slow=7.0,SNR=14
NNA LR LR 13 34 01.3
comp=Z,495nm,20.8s,baz=160,slow=34
NNA Nana 19.03 332 *ceP* **Pn 13 27 31.8 -0.9**
NNA pmax pmax
comp=Z,79nm,0.9s
SPB Sao Paulo 19.03 78 P **P 13 27 30.2 -0.4**
SPB Sao Paulo 19.03 78 *eP* **P 13 27 30.6 0.0**
RCLB Rio Claro- Sao 19.40 75 *eP* **P 13 27 34.3 -0.4**
VAO Valinhos 19.65 77 P **P 13 27 37.2 -0.1**
VAO Valinhos 19.65 77 *eP* **P 13 27 37.2 -0.1**
ARAG Araguaiana, MT 19.87 51 *eP* **P 13 27 38.9 -0.8**
PDRB Porto dos Gac 20.24 33 *eP* **P 13 27 41.6 -2.1**
PARB Paraibuna 20.68 79 *eP* **P 13 27 47.6 -0.8**
IPMB Ipameri, GO 21.05 63 *eP* **P 13 27 51.1 -1.3**
CLDB Colider 21.33 34 *eP* **P 13 27 52.7 -2.7**
CZSB Cruzeiro do Su 21.78 347 P **P 13 28 00.6 +0.4**
CZSB Cruzeiro do Su 21.78 347 *eP* **P 13 28 00.7 +0.6**
CZSB Cruzeiro do Su 21.78 347 P **P 13 28 01.1 +1.0**
comp=Z,3µmcomp=Z,13µmcomp=Z,693nm,1.0s
BSCB Bom Sucesso 22.32 74 *eP* **P 13 28 02.7 -3.1**
BSCB *eS* **S 13 32 00.4 -2.5**
BDFB Brasilia 22.62 58 P **P 13 28 06.8 -2.1**
BDFB Brasilia 22.62 58 P **P 13 28 07.2 -1.6**
comp=Z,267nm,0.8s,baz=228,slow=10,SNR=234
BDFB LR LR 13 37 45.7
comp=Z,3µm,19.9s,baz=205,slow=38
comp=Z,267nm,0.8s
SNDB Serra Nova Dou 22.95 45 *eP* **P 13 28 09.8 -2.2**
EFI East Falkland 23.67 165 P **P 13 28 18.1 -0.2**
EFI East Falkland 23.67 165 *deP* **P 13 28 18.0 -0.2**
EFI pmax pmax
comp=Z,683nm,1.2s
EFI East Falkland 23.67 165 P **P 13 28 18.4 +0.2**
DUB01 Friburgo-RJ 23.93 79 *eP* **P 13 28 19.1 -1.8**
DIAM Diamantina, MG 24.51 69 *eP* **P 13 28 24.1 -2.2**
NPGB Novo Progresso 24.88 30 *eP* **P 13 28 27.3 -2.3**
TEFE Tefe 25.64 7 *eP* **P 13 28 36.8 +0.4**
SJMB Sao Joao De Ma 26.37 73 *eP* **P 13 28 42.1 -0.9**
MACA Manacapuru-AM 26.68 16 P **P 13 28 46.2 +0.5**
MACA Manacapuru-AM 26.68 16 *eP* **P 13 28 45.4 -0.3**
RIB01 Linhares ES 26.75 75 *eP* **P 13 28 44.9 -1.5**
SDBA SAO DESIDERIO 27.00 57 *eP* **P 13 28 45.7 -3.0**
ITTB Itaituba 27.14 27 *eP* **P 13 28 49.0 -0.8**
MCRA Macar, Loja 27.19 333 P **P 13 28 50.2 -0.2**
comp=Z,1µmcomp=Z,29nm,0.9s
SMTB Santa Maria do 27.66 47 *eP* **P 13 28 53.4 -1.2**
PRPB Parauapebas 28.44 40 *eP* **P 13 29 00.1 -1.4**
GUA01 Guaratinga, BA 28.55 70 *eP* **P 13 29 00.8 -1.6**
GUA01 *epP* **pP 13 29 28.9 -0.4**
COHC Cochancay 28.67 336 P **P 13 29 05.3 +1.8**
comp=Z,43nm,0.8s
SGC2 Sao Gabriel da 28.81 2 P **P 13 29 03.0 -1.7**
comp=Z,6µmcomp=Z,534nm,1.4s

CMC01 Camacan, BA 29.43 68 *eP* **P 13 29 08.7 -1.5**
PIAT Ana Tenorio 29.70 338 P **P 13 29 15.4 +2.4**
comp=Z,84nm,1.3s
PTLC Puerto Leguiza 29.89 346 P **P 13 29 12.2 -2.1**
comp=Z,1µmcomp=Z,125nm,1.3s
MAL2 Monte Alegre, 29.90 28 P **P 13 29 14.1 -0.3**
BONI La Bonita 30.85 341 P **P 13 29 25.0 +2.0**
comp=Z,74nm,2.0s
OTAV Otavalo 30.92 339 P **P 13 29 25.1 +1.2**
OTAV Otavalo 30.92 339 P **P 13 29 25.1 +1.2**
OTAV pmax pmax
comp=Z,154nm,1.8s
OTAV Otavalo 30.92 339 *eP* **P 13 29 23.9 0.0**
OTAV *epP* **pP 13 29 52.0 +0.6**
OTAV Otavalo 30.92 339 P **P 13 29 27.1 +3.2**
comp=Z,41nm,2.0s
TULM Tulcn-Chalpat 31.17 340 P **P 13 29 29.0 +2.9**
comp=Z,1µmcomp=Z,105nm,1.4s
FLOC Florencia 31.45 345 P **P 13 29 28.7 +0.7**
comp=Z,3µmcomp=Z,172nm,1.7s
GCUF Volcan Galeras 31.53 341 P **P 13 29 32.5 +3.2**
comp=Z,2µmcomp=Z,69nm,1.3s
BOAV Boa Vista 32.10 14 P **P 13 29 34.1 +0.4**
BOAV Boa Vista 32.10 14 *eP* **P 13 29 33.5 -0.2**
BOAV *epP* **pP 13 30 01.4 +0.7**
BOAV Boa Vista 32.10 14 P **P 13 29 34.3 +0.6**
comp=Z,3µmcomp=Z,302nm,1.1s
TMAB Tom-Au,PA,Br 32.53 39 *eP* **P 13 29 36.5 -0.9**
TMAB *epP* **pP 13 30 05.0 +0.5**
POPC Popayan, Colom 32.62 343 P **P 13 29 40.0 +1.5**
comp=Z,3µmcomp=Z,229nm,1.3s
URMC La Uribe, Meta 32.80 348 P **P 13 29 40.3 +0.4**
comp=Z,32nm,1.8s
PRAC Prado 33.35 347 P **P 13 29 45.8 +1.2**
comp=Z,2µmcomp=Z,48nm,1.8s
ORTC Ortega, Tolima 33.61 346 P **P 13 29 49.0 +2.1**
comp=Z,2µmcomp=Z,106nm,1.2s
HOPE Hope Point 33.84 147 P **P 13 29 49.3 +0.9**
HOPE Hope Point 33.84 147 P **P 13 29 49.3 +0.9**
HOPE pmax pmax
comp=Z,262nm,1.1s
HOPE Hope Point 33.84 147 P **P 13 29 50.1 +1.7**
HOPE PcP **PcP 13 32 25.2 +0.7**
YOTC Yotoco, Valle 33.93 345 P **P 13 29 51.8 +2.1**
comp=Z,1µmcomp=Z,44nm,0.7s
CHIC Chingaza 34.04 349 P **P 13 29 50.2 -0.8**
comp=Z,3µmcomp=Z,2µmcomp=Z,30nm,1.4s
ROSC El Rosal 34.34 348 P **P 13 29 53.9 +0.3**
comp=Z,6.6nm,0.3s,baz=355,slow=24,SNR=5.7
ROSC LR LR 13 45 53.7
comp=Z,962nm,19.2s,baz=187,slow=40
comp=Z,6.6nm,0.3s
GUY2C Guyana, Caldas 34.92 347 P **P 13 29 59.8 +1.2**
comp=Z,1µmcomp=Z,90nm,1.9s
SPBC San Pablo de B 35.10 349 P **P 13 29 59.5 -0.3**
comp=Z,46nm,1.8s
RUSC La Rusia 35.18 351 P **P 13 30 00.7 -0.3**
RUSC La Rusia 35.18 351 P **P 13 30 00.6 -0.3**
comp=Z,2µmcomp=Z,177nm,1.1s
NBAN Anadia - AL 35.27 63 *eP* **P 13 29 60.0 -1.3**
NBAN *epP* **pP 13 30 27.6 -1.3**
PAYG Puerto Ayora 35.52 319 P **P 13 30 04.7 +1.4**
PAYG IAmb IAmb 13 30 06.8
comp=Z,148nm,1.3s
CBOC Ciudad Bolivar 35.67 346 P **P 13 30 04.4 -0.4**
comp=Z,2µmcomp=Z,125nm,1.2s
PMSA Palmer Station 35.75 177 P **P 13 30 04.9 +0.2**
PMSA Palmer Station 35.75 177 LR LR 13 44 20.5
comp=Z,503nm,21.3s,baz=356,slow=35
PMSA Palmer Station 35.75 177 *eP* **P 13 30 04.3 -0.4**
PMSA *epP* **pP 13 30 33.0 +0.9**
BARC Barichara 35.88 351 P **P 13 30 00.0 -6.7**
HELC Santa Helena 35.89 347 P **P 13 30 05.6 -1.3**
HELC Santa Helena 35.89 347 P **P 13 30 07.5 +0.6**
comp=Z,2µmcomp=Z,140nm,1.1s
PTBC PUERTO BERRIO, 36.03 349 P **P 13 30 05.5 -2.2**
comp=Z,533nmcomp=Z,69nm,0.9s
RPN Rapa Nui 36.57 263 LR LR 13 40 46.1
comp=Z,468nm,20.1s,baz=85,slow=29
DBBC Dabeiba 36.83 346 P **P 13 30 16.4 +1.8**
comp=Z,6µmcomp=Z,88nm,1.6s
MDP Montagnes des 37.00 26 P **P 13 30 16.1 +0.2**
comp=Z,161nm,0.7s,baz=199,slow=8.9,SNR=214
MDP S **S 13 35 48.1 -4.5**
comp=Z,14nm,0.9s,baz=106,slow=23,SNR=2.7
MDP LR LR 13 46 28.2
comp=Z,958nm,18.5s,baz=210,slow=38
comp=Z,161nm,0.7s
MPGF Montagnes des 37.01 26 P **P 13 30 16.6 +0.6**
MPGF PcP **PcP 13 32 35.7 +1.2**
PTAC Punta Ardita, 37.33 343 P **P 13 30 21.2 +2.6**
comp=Z,3µmcomp=Z,220nm,1.3s
UREC San Jos de Ur 37.41 347 P **P 13 30 19.3 0.0**
comp=Z,1µmcomp=Z,73nm,1.7s
OCAC Ocana 37.52 351 P **P 13 30 16.6 -3.8**
comp=Z,63nm,1.2s
APAC Apartado, Choc 37.77 346 P **P 13 30 25.1 +2.8**
comp=Z,53nm,1.0s
BAUV El Baul 37.84 360 P **P 13 30 22.5 -0.4**
SDV Santo Domingo 37.88 355 P **P 13 30 22.8 -0.7**
SDV IAmb IAmb 13 30 24.2
comp=Z,131nm,1.1s
SDV Santo Domingo 37.88 355 LR LR 13 47 25.2
comp=Z,710nm,19.7s,baz=169,slow=38
SDV Santo Domingo 37.88 355 *eP* **P 13 30 22.9 -0.6**
SDV *epP* **pP 13 30 51.7 0.0**
SDV Santo Domingo 37.88 355 P **P 13 30 23.1 -0.4**
comp=Z,1µmcomp=Z,111nm,1.1s
RCBR Riachuelo 37.99 59 P **P 13 30 23.9 -0.4**
RCBR Riachuelo 37.99 59 P **P 13 30 23.9 -0.4**
RCBR pmax pmax
comp=Z,296nm,1.1s
RCBR Riachuelo 37.99 59 *eP* **P 13 30 22.8 -1.6**
RCBR Riachuelo 37.99 59 ⇑P **P 13 30 24.3 0.0**
RCBR PcP **PcP 13 32 38.1 +0.5**
SMAI San Martin Ant 39.04 180 P **P 13 30 32.7 +0.3**
SJCC San Jacinto, C 39.44 348 P **P 13 30 34.9 -1.5**
SJCC San Jacinto, C 39.44 348 P **P 13 30 37.0 +0.6**
comp=Z,2µmcomp=Z,145nm,1.2s
RBALA Bur 40.24 338 *eS* pP 13 31 13.4 +2.0
URI Uribia 40.78 354 P **P 13 30 44.4 -2.9**
URIC Uribia, Colomb 40.78 354 P **P 13 30 42.6 -4.8**
comp=Z,921nmcomp=Z,43nm,1.0s
GRGR Grenville 41.43 9 P **P 13 30 52.9 +0.2**
GRGR Grenville 41.43 9 P **P 13 30 52.8 +0.2**
comp=Z,15µmcomp=Z,2µm,0.9s
SOCE Pocosol 42.50 335 IAmb IAmb 13 31 34.9
comp=Z,187nm,1.0s
SOCE Pocosol 42.50 335 *eP* **P 13 31 03.6 +2.1**
JTS Las Juntas de 42.54 335 P **P 13 31 02.9 +1.1**
JTS Las Juntas de 42.54 335 *i* P **P 13 31 02.2 +0.4**
JTS pmax pmax
comp=Z,62nm,2.0s
JTS Las Juntas de 42.54 335 *eP* **P 13 31 03.7 +1.9**
JTS *eS* **pP 13 31 30.5 +0.4**
JTS Las Juntas de 42.54 335 P **P 13 31 04.4 +2.7**
JUD3 Juan Diaz 3 42.65 334 *eP* **P 13 31 04.7 +2.0**
CUI Cuipilapa 42.96 334 *eP* **P 13 31 07.5 +2.4**
HORNC Hornillo 43.02 334 *eP* **P 13 31 08.0 +2.4**
VMAR Armenia, Volca 43.08 335 *eP* **P 13 31 08.0 +1.9**
ELI1 Hacienda Flor 43.10 334 *eP* **P 13 31 09.1 +3.0**
LAPC Finca la Perla 43.16 334 *eP* **P 13 31 08.6 +1.8**
GDSD La Dsirade Is 45.63 9 P **P 13 31 24.0 -2.2**
GDSD IAmb IAmb 13 31 25.6
comp=Z,164nm,1.1s
SIUN Universidad Ur 45.64 337 IAmb IAmb 13 31 57.5
comp=Z,38nm,1.0s
CRPR Cabo Rojo, PR 46.85 1 P **P 13 31 34.8 -1.1**
CRPR IAmb IAmb 13 31 36.0
comp=Z,172nm,1.0s
CRPR Cabo Rojo, PR 46.85 1⇑*eP*g **P 13 31 35.0 -0.8**
ANWB Willy Bob 46.87 8 P **P 13 31 34.6 -1.3**
TGUH Tegucigalpa,Un 46.88 334 IAmb IAmb 13 31 38.2
comp=Z,133nm,0.8s
OBIP Obispado Ponce 46.90 2 P **P 13 31 34.9 -1.3**
OBIP IAmb IAmb 13 31 37.0
comp=Z,182nm,0.9s
SJG San Juan 46.98 2 P **P 13 31 35.1 -1.7**
SJG IAmb IAmb 13 31 36.7
comp=Z,157nm,1.1s
SJG San Juan 46.98 2 LR LR 13 54 59.7
comp=Z,572nm,18.6s,baz=190,slow=40
SJG San Juan 46.98 2 P **P 13 31 35.1 -1.7**
SJG pmax pmax
comp=Z,157nm,1.2s

SJG San Juan 46.98 2 P **P 13 31 35.6 -1.2**
BANI BANI 47.30 357 P **P 13 31 38.8 -0.6**
DR12 Loma Pena Alta 47.65 358 P **P 13 31 40.5 -1.6**
MTDJ Mount Denham 48.00 347 IAmb IAmb 13 32 16.9
comp=Z,206nm,1.3s
ESQI Esquipulas 48.16 331 IAmb IAmb 13 31 48.9
comp=Z,121nm,0.9s
SC01 Santiago de lo 48.35 356 IAmb IAmb 13 31 50.0
comp=Z,82nm,0.9s
PETF Flores 50.50 332 IAmb IAmb 13 32 05.7
comp=Z,100nm,0.8s
CCIG Comitan 50.90 329 IAmb IAmb 13 32 09.0
comp=Z,112nm,1.3s
BELA Belgrano 2 51.09 171 P **P 13 32 07.7 +0.1**
VNA3 Neumayer Olymp 52.58 160 ⇓P **P 13 32 19.3 +0.6**
comp=Z,194nm,0.7s
VNA1 Neumayer--Stat 52.81 159 ⇓P **P 13 32 21.5 +1.2**
comp=Z,154nm,1.0s
TEIG Tepich 52.90 336 P **P 13 32 21.7 +0.2**
TEIG Tepich 52.90 336 P **P 13 32 22.1 +0.6**
TEIG pP **pP 13 32 51.0 +0.1**
VNA2 Neumayer--Watz 53.17 159 ⇓P **P 13 32 23.7 +0.7**
comp=Z,301nm,0.7s,baz=282,slow=7.9
CAMR Camarioca 53.50 344 IAmb IAmb 13 32 57.9
comp=Z,422nm,1.0s
SNAA Sanae 54.79 159 ⇓P **P 13 32 35.3 +0.4**
comp=Z,2µm,0.5s
SNAA Sanae 54.79 159 P **P 13 32 35.0 +0.2**
SNAA Sanae 54.79 159 P **P 13 32 35.3 +0.4**
comp=Z,201nm,0.9s,baz=282,slow=6.2,SNR=750
SNAA PKPPKP 14 02 35.1
comp=Z,1.0nm,0.8s,baz=82,slow=6.4,SNR=3.9
comp=Z,201nm,0.9s
SNAA Sanae 54.79 159*de*P **P 13 32 35.2 +0.4**
SNAA pmax pmax
comp=Z,456nm,1.3s
TLIG Tlapa 55.12 323 IAmb IAmb 13 32 41.2
comp=Z,99nm,0.8s
TROLL Troll, Antarti 56.51 159 ⇓P **P 13 32 47.8 +0.7**
comp=Z,13µm,1.1s
NVL N'lazarevskaya 59.40 158 *eP* P 13 33 00.4 -6.7
NVL *eS* **S 13 41 01.8 -4.3**
NVL *eSS* **SS 13 44 59.4 -3.0**
NVL *eSSS* SSS 13 47 44.6
NVL pmax pmax
comp=Z,52nm,1.0s
NVL MLR MLR
comp=Z,74nm,18.0s
QSPA South Pole Qui 61.11 180 P **P 13 33 21.1 +2.0**
QSPA South Pole Qui 61.11 180 P **P 13 33 20.8 +1.8**
comp=Z,239nm,1.1s,baz=154,slow=2.4,SNR=587
QSPA LR LR 13 59 13.5
comp=Z,389nm,19.5s,baz=152,slow=35
QSPA PKPPKP 14 02 22.9
comp=Z,2.7nm,1.0s,baz=118,slow=3.0,SNR=3.6
comp=Z,239nm,1.1s
QSPA South Pole Qui 61.11 180 ⇓P **P 13 33 23.2 +4.2**
QSPA sP **sP 13 34 05.8 +3.2**
ZAIG Zacatecas 61.51 323 IAmb IAmb 13 33 26.2
comp=Z,109nm,1.3s
TIGA Tifton 62.08 345 IAmb IAmb 13 33 57.1
comp=Z,129nm,1.3s
352A Blakely 62.43 343 P **P 13 33 28.4 +0.4**
BRAL Brewton 62.70 341 P **P 13 33 30.4 +0.6**
Y58A Scranton 63.69 349 IAmb IAmb 13 33 38.6
comp=Z,99nm,0.8s
Y57A Sumter 63.92 348 IAmb IAmb 13 34 09.8
comp=Z,91nm,1.0s
GOGA Godfrey 63.94 345 P **P 13 33 38.1 +0.1**
441A DeRidder 64.27 336 IAmb IAmb 13 34 14.3
comp=Z,112nm,0.9s
Y52A Lilburn 64.51 345 IAmb IAmb 13 33 42.8
comp=Z,48nm,0.7s
BIRD Birdtown, Kers 64.54 348 IAmb IAmb 13 34 13.9
comp=Z,101nm,1.2s
HKT Hockley 64.55 333 P **P 13 33 43.0 +1.1**
HKT IAmb IAmb 13 34 15.2
comp=Z,112nm,1.3s
HKT Hockley 64.55 333*d i*P **P 13 33 42.9 +1.0**
HKT pmax pmax
comp=Z,37nm,1.1s
HKT Hockley 64.55 333 P **P 13 33 43.4 +1.5**
HKT pP **pP 13 34 13.1 +0.8**
146A Union 64.65 340 IAmb IAmb 13 34 14.8
comp=Z,157nm,1.3s
VBMS Vicksburg 64.71 339 IAmb IAmb 13 34 15.6
comp=Z,132nm,1.1s
Z47A Carrollton 64.90 341 IAmb IAmb 13 33 45.3
comp=Z,65nm,0.7s
W57A Gilead 64.96 349 IAmb IAmb 13 34 16.5
comp=Z,68nm,1.0s
PAULI Pauline 64.96 347 IAmb IAmb 13 34 17.3
comp=Z,130nm,1.4s
Y49A Blount Mountai 65.07 343 IAmb IAmb 13 33 46.8
comp=Z,50nm,0.7s
BG3 Lake Jocassee 65.35 346 IAmb IAmb 13 34 19.9
comp=Z,148nm,1.6s
V58A Windy Hill, Pi 65.44 350 IAmb IAmb 13 34 20.3
comp=Z,112nm,1.2s
X48A Hartselle 65.80 343 IAmb IAmb 13 33 51.3
comp=Z,77nm,0.7s
V55A Taylorsville 65.85 348 IAmb IAmb 13 34 22.6
comp=Z,102nm,1.0s
V53A Saluda 65.98 347 IAmb IAmb 13 34 23.6
comp=Z,92nm,1.1s
W50A Signal Mountai 66.08 344 IAmb IAmb 13 33 53.2
comp=Z,94nm,0.8s
CPCT Cooper Cave 66.14 345 IAmb IAmb 13 33 53.4
comp=Z,61nm,0.8s
TKL Tuckaleechee C 66.17 346 LR LR 14 04 37.4
comp=Z,203nm,21.6s,baz=156,slow=38
U56A King 66.19 349 IAmb IAmb 13 34 24.9
comp=Z,104nm,1.2s
SLBS Sierra La Lagu 66.35 318 P **P 13 33 55.4 +1.6**
OXF Oxford 66.51 341 IAmb IAmb 13 33 55.3
comp=Z,100nm,0.8s
HPIG 66.53 323 IAmb IAmb 13 33 57.7
comp=Z,90nm,0.8s
U54A Nelsons Funny 66.61 348 IAmb IAmb 13 34 27.7
comp=Z,122nm,1.0s
T57A Hurt 66.65 350 IAmb IAmb 13 34 28.4
comp=Z,140nm,1.5s
JCT Junction City 66.67 330 IAmb IAmb 13 34 28.9
comp=Z,145nm,1.0s
JCT Junction City 66.67 330 P **P 13 33 56.7 +1.0**
LPIG La Paz 66.88 318 LR LR 13 58 35.1
comp=Z,82nm,19.3s,baz=136,slow=32
WHTX Lake Whitney, 67.00 333 IAmb IAmb 13 34 30.6
comp=Z,162nm,1.3s
BRDY Brady 67.02 331 IAmb IAmb 13 33 59.7
comp=Z,92nm,0.8s
S57A Dark Hollow, R 67.35 350 IAmb IAmb 13 34 33.0
comp=Z,185nm,1.4s
R58B Mineral 67.40 351 IAmb IAmb 13 34 33.5
comp=Z,137nm,1.4s
U49A Red Boiling Sp 67.44 344 IAmb IAmb 13 34 31.9
comp=Z,73nm,1.0s
TX31 Lajitas Ar. Si 67.48 326 P **P 13 34 01.9 +1.0**
TX31 IAmb IAmb 13 34 34.7
comp=Z,114nm,1.5s
TXAR Lajitas Array 67.48 326 P **P 13 34 01.8 +0.9**
TXAR Lajitas Array 67.48 326 P **P 13 34 02.1 +1.1**
comp=Z,27nm,0.8s,baz=149,slow=8.1,SNR=213
TXAR PKP2bc **P'P'bc 14 02 21.8 -3.2**
comp=Z,0.3nm,0.5s,baz=316,slow=5.2,SNR=6.0
comp=Z,27nm,0.8s
UALR University of 67.65 338 IAmb IAmb 13 34 03.3
comp=Z,74nm,0.8s
S54A Dingess, Beckl 67.77 348 IAmb IAmb 13 34 34.4
comp=Z,72nm,0.9s
HBAR Harrisburg 67.85 340 IAmb IAmb 13 34 04.5
comp=Z,81nm,0.9s
MIAR Mount Ida 67.85 337 IAmb IAmb 13 34 04.9
comp=Z,113nm,1.2s
R55A Marlinton 68.04 350 IAmb IAmb 13 34 37.2
comp=Z,143nm,1.1s
WHAR Wooly Hollow 68.11 339 IAmb IAmb 13 34 06.2
comp=Z,72nm,0.8s
T47A Sharon Grove 68.22 343 IAmb IAmb 13 34 36.8
comp=Z,132nm,1.0s
ABTX Abilene, Hawle 68.45 331 IAmb IAmb 13 34 40.6
comp=Z,147nm,1.2s
SBA Scott Base 68.56 191 P **P 13 34 07.7 +0.8**
SBA IAmb IAmb 13 34 10.3
comp=Z,248nm,1.9s
SBA Scott Base 68.56 191 P **P 13 34 07.7 +0.8**
SBA pmax pmax

comp=Z,248nm,1.9s
Q56A Snyder Ridge, 68.64 350 IAmb IAmb 13 34 41.0
comp=Z,126nm,1.1s
P57A Homestead Farm 68.91 352 IAmb IAmb 13 34 43.4
comp=Z,133nm,1.1s
SYO Syowa Base 69.05 158⇓*i*P **P 13 34 10.3 +0.2**
SYO Syowa Base 69.05 158⇓*i*pP pP 13 34 40.0 -0.7
PSUB Penn St. - Bra 69.06 354 IAmb IAmb 13 34 43.1
comp=Z,168nm,1.4s
Q52A Bidwell 69.07 348 IAmb IAmb 13 34 42.3
comp=Z,80nm,0.9s
WUPA West Chester U 69.08 354 IAmb IAmb 13 34 44.1
comp=Z,152nm,1.6s
CGM3 Cape Girardeau 69.18 341 IAmb IAmb 13 34 12.3
comp=Z,54nm,0.6s
WCI Wyandotte Cave 69.20 344 P **P 13 34 10.8 -0.4**
WCI IAmb IAmb 13 34 42.7
comp=Z,82nm,0.9s
WCI Wyandotte Cave 69.20 344 P **P 13 34 10.9 -0.4**
WCI pmax pmax
comp=Z,82nm,1.0s
WCI Wyandotte Cave 69.20 344 P **P 13 34 11.1 -0.2**
WCI pP **pP 13 34 41.2 -1.0**
MVL Millersville 69.23 353 IAmb IAmb 13 34 45.0
comp=Z,104nm,1.2s
USIN University of 69.28 343 IAmb IAmb 13 34 43.1
comp=Z,96nm,1.1s
MCWV Mont Chateau 69.34 350 IAmb IAmb 13 34 44.9
comp=Z,116nm,1.0s
P53A Whipple 69.42 349 IAmb IAmb 13 34 45.6
comp=Z,154nm,1.2s
SIUC Southern Illin 69.45 342 IAmb IAmb 13 34 13.9
comp=Z,105nm,0.7s
PAGS Pennsylvania G 69.49 353 IAmb IAmb 13 34 46.4
comp=Z,167nm,1.2s
HHAR Hobbs 69.55 338 IAmb IAmb 13 34 15.2
comp=Z,68nm,0.8s
VNDA Vanda 69.56 190 P **P 13 34 13.6 +0.5**
VNDA Vanda 69.56 190 P **P 13 34 14.7 +1.5**
comp=Z,29nm,1.0s,baz=135,slow=5.4,SNR=52
VNDA PKP2bc **P'P'bc 14 02 16.8 -3.9**
comp=Z,1.5nm,0.9s,baz=286,slow=7.0,SNR=6.2
comp=Z,29nm,1.0s
VNDA Vanda 69.56 190 P **P 13 34 14.6 +1.5**
P52A Corning 69.69 348 IAmb IAmb 13 34 46.1
comp=Z,104nm,0.9s
BRNJ Basking Ridge 69.73 354 IAmb IAmb 13 34 47.5
comp=Z,128nm,1.4s
MGMO Mountain Grove 69.82 339 IAmb IAmb 13 34 16.9
comp=Z,144nm,1.1s
RLO Rose Lookout 69.82 337 IAmb IAmb 13 34 16.8
comp=Z,111nm,0.7s
U38A Gravette 69.85 337 IAmb IAmb 13 34 16.8
comp=Z,64nm,0.6s
TUL3 Leonard 69.86 336 IAmb IAmb 13 34 17.5
comp=Z,120nm,0.7s
FNO Franklin 69.86 334 IAmb IAmb 13 34 17.0
comp=Z,204nm,1.4s
SSPA Standing Stone 70.03 352 P **P 13 34 17.3 +0.9**
SSPA IAmb IAmb 13 34 49.2
comp=Z,103nm,1.2s
N58A Sunbury 70.10 353 IAmb IAmb 13 34 50.5
comp=Z,153nm,1.2s
O52A Adamsville 70.11 349 IAmb IAmb 13 34 48.8
comp=Z,83nm,0.9s
OLIL Olney 70.12 343 IAmb IAmb 13 34 48.3
comp=Z,84nm,1.1s
DBIC Dimbokro 70.13 70 P **P 13 34 18.5 +0.9**
DBIC IAmb IAmb 13 34 19.5
comp=Z,111nm,0.7s
DBIC Dimbokro 70.13 70 P **P 13 34 18.6 +1.0**
comp=Z,117nm,0.7s,baz=252,slow=6.3,SNR=198
DBIC PKP2bc **P'P'bc 14 02 16.6 -2.4**
comp=Z,3.0nm,0.9s,baz=104,slow=5.8,SNR=3.1
DBIC LR LR 14 03 17.2
comp=Z,321nm,20.0s,baz=236,slow=34
comp=Z,117nm,0.7s
DBIC Dimbokro 70.13 70⇑P **P 13 34 18.6 +1.0**
O53A New Philadelph 70.14 349 IAmb IAmb 13 34 49.2
comp=Z,90nm,1.1s
BLO Bloomington 70.15 345 IAmb IAmb 13 34 17.9
comp=Z,66nm,0.6s
CCM Cathedral Cave 70.34 340 P **P 13 34 18.6 +0.3**
CCM Cathedral Cave 70.34 340 P **P 13 34 18.6 +0.3**
CCM pmax pmax
comp=Z,170nm,0.8s
CCM Cathedral Cave 70.34 340⇓P **P 13 34 18.8 +0.5**
CCM pP **pP 13 34 48.8 -0.7**
TAOE Nuku Hiva Isla 70.38 271 P **P 13 34 19.7 +0.5**
QUOK Quay 70.42 335 IAmb IAmb 13 34 20.6
comp=Z,194nm,1.2s
ACSO Alum Creek Sta 70.43 348 IAmb IAmb 13 34 51.3
comp=Z,202nm,1.3s
SRIG Santa Rosalia 70.45 319 IAmb IAmb 13 34 22.1
comp=Z,267nm,1.8s
Q44A Meyer Farm, Va 70.52 343 IAmb IAmb 13 34 50.7
comp=Z,105nm,1.0s
SLM Saint Louis 70.59 342 IAmb IAmb 13 34 51.8
comp=Z,107nm,1.0s
PAMR Moraine State 70.63 350 IAmb IAmb 13 34 52.7
comp=Z,115nm,0.9s
O49A Covington 70.65 347 IAmb IAmb 13 34 52.6
comp=Z,206nm,1.3s
KSPA Keystone Colle 70.71 354 IAmb IAmb 13 34 54.1
comp=Z,107nm,1.3s
OK048 Pawnee Station 70.72 335 IAmb IAmb 13 34 22.5
comp=Z,118nm,0.8s
P46A Rosedale 70.74 344 IAmb IAmb 13 34 52.0
comp=Z,149nm,0.9s
OK051 E0350 and S346 70.76 336 IAmb IAmb 13 34 22.8
comp=Z,203nm,1.2s
EPT El Paso 70.87 326 IAmb IAmb 13 34 23.8
comp=Z,80nm,0.8s
O48B Farmland 70.89 346 IAmb IAmb 13 34 53.2
comp=Z,108nm,1.0s
T35A Sooner Cattle 71.01 336 IAmb IAmb 13 34 24.3
comp=Z,85nm,1.0s
HSIG 71.02 321 IAmb IAmb 13 34 25.4
comp=Z,139nm,1.1s
BLOK Blackwell 71.13 335 IAmb IAmb 13 34 25.2
comp=Z,114nm,0.9s
PAOC Oil Creek Stat 71.14 351 IAmb IAmb 13 34 56.0
comp=Z,143nm,1.1s
CROK Carrier 71.19 335 IAmb IAmb 13 34 25.2
comp=Z,100nm,0.8s
ELIS Ellis County 71.35 333 IAmb IAmb 13 34 26.9
comp=Z,171nm,1.1s
HRV Adam Dziewonsk 71.36 357 P **P 13 34 25.7 +1.4**
HRV Adam Dziewonsk 71.36 357 P **P 13 34 25.7 +1.4**
HRV pmax pmax
comp=Z,55nm,1.1s
HRV Adam Dziewonsk 71.36 357 P **P 13 34 26.1 +1.8**
HRV pP **pP 13 34 56.8 +1.3**
BINY Binghamton 71.37 354 IAmb IAmb 13 34 58.1
comp=Z,157nm,1.4s
SFIN Lafayette 71.44 345 IAmb IAmb 13 34 56.1
comp=Z,118nm,1.0s
OK038 West end E0370 71.45 334 IAmb IAmb 13 34 26.9
comp=Z,217nm,1.2s
M50A Fremont 71.58 348 IAmb IAmb 13 34 57.6
comp=Z,95nm,0.8s
KAN14 Manchester OK 71.58 335 IAmb IAmb 13 34 27.8
comp=Z,140nm,1.2s
TRY Troy 71.70 355 IAmb IAmb 13 35 00.3
comp=Z,222nm,1.4s
ERPA Erie 71.77 350 IAmb IAmb 13 34 59.3
comp=Z,158nm,0.9s
P40A Paris 71.94 340 IAmb IAmb 13 34 29.4
comp=Z,124nm,0.7s
MMNY Mt. Morris Dam 72.10 352 IAmb IAmb 13 35 02.0
comp=Z,248nm,1.4s
121A Cookes Peak, D 72.12 325 IAmb IAmb 13 34 32.6
comp=Z,133nm,0.8s
P38A Dawn 72.47 339 IAmb IAmb 13 34 32.4
comp=Z,102nm,1.1s
J59A Piesco 72.49 355 IAmb IAmb 13 35 04.6
comp=Z,141nm,1.3s
M44A Midewin, Midew 72.62 344 IAmb IAmb 13 35 03.6
comp=Z,114nm,1.0s
N41A Harden Midland 72.70 342 IAmb IAmb 13 35 04.4
comp=Z,175nm,1.0s
L46A Eue Claire 72.81 346 IAmb IAmb 13 35 04.5
comp=Z,168nm,1.0s
K50A Casco 72.83 349 IAmb IAmb 13 35 04.9
comp=Z,141nm,0.8s
HQIL Hanson Quary C 72.96 344 IAmb IAmb 13 35 05.7
comp=Z,148nm,1.0s

R32A Long Quarter, 73.15 335 IAmb IAmb 13 34 37.2
comp=Z,178nm,1.1s
ANMO Albuquerque 73.44 328 P **P 13 34 38.3 +1.2**
ANMO Albuquerque 73.44 328*de*P **P 13 34 38.5 +1.4**
ANMO pmax pmax
comp=Z,122nm,1.9s
ANMO Albuquerque 73.44 328⇓P **P 13 34 38.6 +1.5**
ANMO pP **pP 13 35 08.2 0.0**
ANMO sP **sP 13 35 21.6 0.0**
ACRG Accra 73.44 74 P **P 13 34 37.4 0.0**
N38A Joes South For 73.46 340 IAmb IAmb 13 34 38.1
comp=Z,75nm,0.7s
TUC Tucson 73.48 323 P **P 13 34 38.4 +1.0**
TUC IAmb IAmb 13 35 12.8
comp=Z,154nm,1.6s
TUC Tucson 73.48 323 P **P 13 34 38.4 +1.0**
TUC pmax pmax
comp=Z,154nm,1.7s
TUC Tucson 73.48 323 P **P 13 34 38.6 +1.3**
TUC pP **pP 13 35 09.3 +1.0**
HAL Halifax 73.50 3 P **P 13 34 38.1 +1.2**
HAL IAmb IAmb 13 35 09.9
comp=Z,129nm,1.3s
HAL Halifax 73.50 3 P **P 13 34 38.2 +1.2**
HAL pmax pmax
comp=Z,129nm,1.3s
L42A Oliver, Polo 73.60 343 IAmb IAmb 13 35 09.8
comp=Z,125nm,1.2s
CBKS Cedar Bluff 73.88 334 IAmb IAmb 13 34 41.7
comp=Z,174nm,0.9s
SUR Sutherland 73.96 118 P **P 13 34 41.8 +1.3**
SUR Sutherland 73.96 118 P **P 13 34 42.2 +1.8**
WBO Williamsburg 74.08 354 IAmb IAmb 13 34 42.4
comp=Z,72nm,0.8s
SADO Sadowa 74.26 352 LR LR 14 09 27.4
comp=Z,2µm,21.4s,baz=174,slow=37
T25A Trinidad 74.33 330 IAmb IAmb 13 34 45.2
comp=Z,100nm,0.8s
SCIA State Center 74.47 341 IAmb IAmb 13 35 15.4
comp=Z,128nm,1.1s
JFWS Jewell Farm 74.60 343 IAmb IAmb 13 35 16.0
comp=Z,151nm,1.2s
F64A Sherman 74.63 360 IAmb IAmb 13 34 46.3
comp=Z,69nm,0.7s
PPTF Pamatai, Papee 74.66 258 P **P 13 34 46.8 +2.2**
LMN Caledonia Moun 74.66 2 P **P 13 34 45.1 +1.4**
LMN IAmb IAmb 13 34 46.1
comp=Z,81nm,0.8s
PPT Papeete 74.68 258 P **P 13 34 45.8 +1.2**
comp=Z,239nm,0.9s,baz=256,slow=17,SNR=18
comp=Z,239nm,0.9s
BUKO Buck Lake 74.96 352 IAmb IAmb 13 35 18.8
comp=Z,146nm,1.2s
W18A Petrified Fore 75.16 325 IAmb IAmb 13 34 50.1
comp=Z,201nm,1.2s
I42A Draeger Farm, 75.19 344 IAmb IAmb 13 35 19.4
comp=Z,116nm,0.9s
TRQ Mont Tremblant 75.24 355 IAmb IAmb 13 34 48.9
comp=Z,68nm,0.7s
E62A Clayton Lake 75.40 359 IAmb IAmb 13 34 51.2
comp=Z,117nm,0.7s
H43A Windswept, Lux 75.48 345 IAmb IAmb 13 35 20.8
comp=Z,130nm,0.9s
VTX Valle De La Tr 75.54 319 P **P 13 34 50.4 +1.2**
VTX IAmb IAmb 13 35 25.0
comp=Z,176nm,1.5s
EOSO Osorio 75.70 46 P **P 13 34 51.8 +1.6**
CCD Concordia, Ant 75.79 183 P **P 13 34 50.9 +0.5**
BATG Bathurst New B 76.06 1 P **P 13 34 53.2 +1.6**
MVCO Mesa Verde 76.24 328 IAmb IAmb 13 34 56.1
comp=Z,110nm,0.7s
GLA Glamis 76.24 321 IAmb IAmb 13 35 28.0
comp=Z,228nm,1.8s
WUAZ Wupatki 76.30 325 IAmb IAmb 13 34 56.8
comp=Z,133nm,0.9s
CCX Cicese 76.40 319 P **P 13 34 55.1 +1.1**
CCX IAmb IAmb 13 35 28.7
comp=Z,224nm,1.9s
YUH Yuha Desert 76.55 320 IAmb IAmb 13 35 29.8
comp=Z,183nm,1.7s
OGNE Ogallala 76.60 334 IAmb IAmb 13 34 57.5
comp=Z,105nm,0.9s
E46A Sault Ste Mari 76.61 348 IAmb IAmb 13 35 27.7
comp=Z,192nm,1.2s
CBX Cerro Bola 76.72 319 IAmb IAmb 13 35 31.1
comp=Z,287nm,1.8s
MAW Mawson 76.78 163 P **P 13 34 56.4 +0.8**
comp=Z,132nm,0.9s,baz=220,slow=6.7,SNR=138
MAW LR LR 14 09 47.4
comp=Z,194nm,19.8s,baz=211,slow=36
comp=Z,132nm,0.9s
TSUM Tsumeb 76.98 105 P **P 13 34 58.4 +0.5**
TSUM IAmb IAmb 13 35 00.6
comp=Z,207nm,1.6s
TSUM Tsumeb 76.98 105 P **P 13 34 59.0 +1.1**
comp=Z,42nm,0.9s,baz=235,slow=5.5,SNR=54
TSUM LR LR 14 05 18.6
comp=Z,333nm,18.4s,baz=149,slow=33
comp=Z,42nm,0.9s
PV15 Paradox Valley 77.14 328 IAmb IAmb 13 35 34.1
comp=Z,151nm,1.2s
PV13 Radium Mtn., P 77.15 328 IAmb IAmb 13 35 01.1
comp=Z,130nm,0.8s
ECSD EROS Data Cent 77.17 339 IAmb IAmb 13 35 31.1
comp=Z,114nm,0.9s
PV05 Paradox Valley 77.22 328 IAmb IAmb 13 35 01.3
comp=Z,125nm,0.8s
DPP Dos Picos Cty 77.39 319 P **P 13 35 00.3 +0.8**
SPMN Marine on St. 77.42 342 IAmb IAmb 13 35 31.8
comp=Z,98nm,1.1s
PV23 Carpenter Ridg 77.48 328 IAmb IAmb 13 35 02.9
comp=Z,89nm,0.8s
KOOLE Kule 77.49 109*i* P **P 13 35 02.1 +1.5**
PV21 Cone Mtn., Par 77.55 328 IAmb IAmb 13 35 35.3
comp=Z,142nm,1.4s
PFO Pinyon Flats O 77.56 320 P **P 13 35 01.8 +1.1**
PFO Pinyon Flats O 77.56 320*d* iP **P 13 35 02.1 +1.4**
PFO pmax pmax
comp=Z,61nm,1.1s
PFO Pinyon Flats O 77.56 320 P **P 13 35 02.3 +1.6**
PFO pP **pP 13 35 35.0 +3.1**
DNR Dunn Ranch,Anz 77.63 320 IAmb IAmb 13 35 37.0
comp=Z,128nm,1.1s
HMU Henry Mountain 77.89 327 IAmb IAmb 13 35 37.7
comp=Z,135nm,1.1s
ELS Elsinore Mount 78.14 319 IAmb IAmb 13 35 38.7
comp=Z,200nm,1.6s
V12A Nelson 78.26 323 IAmb IAmb 13 35 39.8
comp=Z,114nm,1.2s
E38A The Farm, Brul 78.38 344 IAmb IAmb 13 35 37.3
comp=Z,95nm,1.0s
SUSD Miller 78.56 338 IAmb IAmb 13 35 07.2
comp=Z,120nm,0.8s
DRLN Deer Lake 78.56 7 IAmb IAmb 13 35 07.8
comp=Z,98nm,0.6s
PHPEN Phepeng 78.56 113*i* P **P 13 35 07.6 +1.1**
SRU San Rafael Swe 78.71 327 IAmb IAmb 13 35 09.3
comp=Z,111nm,0.7s
PMPS Porto Santo 78.74 42*e*P **P 13 35 08.5 +1.5**
PMPS *i* IAmb IAmb 13 35 42.1
comp=Z,151nm,1.6s
SZCU Shurtz Canyon 78.78 325 IAmb IAmb 13 35 43.3
comp=Z,216nm,1.5s
Q16A Castle Valley 78.87 327 IAmb IAmb 13 35 43.4
comp=Z,249nm,1.4s
CCUT Cedar City 78.88 325 IAmb IAmb 13 35 44.2
comp=Z,166nm,1.1s
MWC Mount Wilson 78.92 319 IAmb IAmb 13 35 43.0
comp=Z,202nm,1.6s
PASC Pasadena Art C 78.95 319 IAmb IAmb 13 35 43.8
comp=Z,118nm,1.3s
P18A Preston Nutter 78.99 328 IAmb IAmb 13 35 11.5
comp=Z,130nm,0.8s
BOSA Boshof 79.05 117 P **P 13 35 09.0 -0.1**
BOSA IAmb IAmb 13 35 10.9
comp=Z,93nm,0.8s
BOSA Boshof 79.05 117 P **P 13 35 09.8 +0.6**
comp=Z,71nm,0.8s,baz=248,slow=4.2,SNR=117
BOSA PKKPbc **PKKPbc 13 54 00.5 +1.1**
comp=Z,1.5nm,0.6s,baz=57,slow=3.2,SNR=5.9
BOSA LR LR 14 06 28.9
comp=Z,235nm,19.9s,baz=227,slow=33
comp=Z,71nm,0.8s
BOSA Boshof 79.05 117 P **P 13 35 09.1 -0.1**
BOSA pP **pP 13 35 39.6 -0.8**
GRTLG Ghanzi 79.06 108*i* P **P 13 35 10.5 +1.1**
TORD Torodi Ar. Bea 79.08 68 P **P 13 35 06.9 -2.3**

TORD IAmb IAmb 13 35 44.1
comp=Z,101nm,0.9s
TORD Torodi Ar. Bea 79.08 68 P **P 13 35 08.7 -0.6**
comp=Z,48nm,0.8s,baz=266,slow=3.3,SNR=18
TORD pP **pP 13 35 41.7 +1.0**
comp=Z,102nm,0.8s,baz=266,slow=2.4,SNR=16
TORD S **S 13 44 58.1 -0.7**
comp=Z,1.7nm,0.4s,baz=256,slow=6.0,SNR=7.6
TORD LR LR 14 09 51.0
comp=Z,516nm,18.9s,baz=234,slow=35
comp=Z,48nm,0.8s
P17A Butcher Ranch, 79.10 328 IAmb IAmb 13 35 44.3
comp=Z,195nm,1.1s
KGCAE Kacgae 79.21 110*i* P **P 13 35 11.1 +1.0**
EYMN Ely 79.62 344 IAmb IAmb 13 35 44.1
comp=Z,96nm,1.1s
PRN Pahroc Range 79.64 324 IAmb IAmb 13 35 48.0
comp=Z,163nm,1.2s
TBO Thunder Bay 79.80 346 IAmb IAmb 13 35 45.2
comp=Z,91nm,1.0s
K22A Casper 79.83 332 IAmb IAmb 13 35 15.6
comp=Z,100nm,0.8s
QNGWA Qangwa 79.86 107*i* P **P 13 35 15.2 +1.5**
SKOMA Sekoma 79.86 112*i* P **P 13 35 14.7 +1.1**
MPU Maple Canyon 79.95 327 IAmb IAmb 13 35 48.3
comp=Z,113nm,1.2s
BSUT Blindstream Ca 79.96 328 IAmb IAmb 13 35 49.4
comp=Z,143nm,1.1s
MAKGR Makgori 79.97 114*i* P **P 13 35 14.9 +0.8**
RSSD Black Hills 80.08 334 P **P 13 35 14.7 +0.4**
S11A Rachel 80.18 323 IAmb IAmb 13 35 50.4
comp=Z,224nm,1.5s
JLU Jordanelle 80.33 328 IAmb IAmb 13 35 50.3
comp=Z,191nm,1.4s
SPR3 Spring Creek 3 80.48 325 IAmb IAmb 13 35 51.9
comp=Z,180nm,1.4s
GRAC Grapevine Rang 80.56 322 IAmb IAmb 13 35 51.9
comp=Z,153nm,1.4s
DUG Dugway, Tooele 80.66 327 IAmb IAmb 13 35 52.1
comp=Z,111nm,1.2s
TCUT Toone Canyon 80.72 328 IAmb IAmb 13 35 53.1
comp=Z,255nm,1.5s
LBTB Lobatse 80.97 113 IAmb IAmb 13 35 21.4
comp=Z,102nm,0.9s
LBTB Lobatse 80.97 113 LR LR 14 07 32.6
comp=Z,187nm,21.0s,baz=235,slow=33
LBTB Lobatse 80.97 112 P **P 13 35 20.1 +0.5**
KDWAN Kaudwane 80.97 112*i* P **P 13 35 20.5 +1.0**
E28A Huff 81.01 338 IAmb IAmb 13 35 21.0
comp=Z,150nm,0.8s
TIN Tinemaha, Big 81.07 321 IAmb IAmb 13 35 55.3
comp=Z,216nm,1.2s
AGMN Agassiz Nation 81.08 341 IAmb IAmb 13 35 20.8
comp=Z,77nm,0.8s
HWUT Hardware Ranch 81.17 328 IAmb IAmb 13 35 22.2
comp=Z,114nm,0.7s
PDAR Pinedale Array 81.20 330 P **P 13 35 20.6 +0.3**
PDAR Pinedale Array 81.20 330 P **P 13 35 20.9 +0.6**
comp=Z,54nm,0.7s,baz=128,slow=7.4,SNR=449
PDAR pP **pP 13 35 53.2 +1.4**
comp=Z,25nm,0.9s,baz=153,slow=4.6,SNR=4.6
PDAR PKKPbc **PKKPbc 13 53 55.3 -1.9**
comp=Z,1.3nm,0.6s,baz=192,slow=0.6,SNR=16
PDAR PKPPKP **P'P'df 14 01 58.0 -0.2**
comp=Z,0.8nm,0.8s,baz=48,slow=2.2,SNR=5.7
comp=Z,54nm,0.7s
RAR Rarotonga 81.62 250 LR LR 14 01 35.6
comp=Z,114nm,20.1s,baz=126,slow=28
RAR Rarotonga 81.62 250 P **P 13 35 24.5 +1.7**
EPLO Experimental L 81.77 343 IAmb IAmb 13 35 55.8
comp=Z,137nm,1.3s
Q09A Carvers 81.82 323 IAmb IAmb 13 35 59.0
comp=Z,164nm,1.0s
AHID Auburn Hatcher 81.88 329 IAmb IAmb 13 35 58.8
comp=Z,196nm,1.1s
PMPB Monarch Peak 81.91 319 IAmb IAmb 13 36 00.0
comp=Z,209nm,1.4s
LPHEP Lephephe 81.96 112*i* P **P 13 35 25.7 +1.0**
HULI Fort Hunter Li 82.02 319 IAmb IAmb 13 35 59.9
comp=Z,168nm,1.3s
NVAR Mina Array Bea 82.11 322 P **P 13 35 26.2 +1.0**
comp=Z,19nm,0.8s,baz=156,slow=5.8,SNR=139
NVAR pP **pP 13 35 57.0 +0.2**
comp=Z,18nm,1.0s,baz=147,slow=6.6,SNR=5.6
NVAR PKKPbc **PKKPbc 13 53 55.0 +0.2**
comp=Z,2.5nm,0.7s,baz=268,slow=1.6,SNR=12
NVAR PKPPKP **P'P'df 14 01 54.5 -2.6**
comp=Z,0.2nm,0.7s,baz=234,slow=5.1,SNR=3.5
comp=Z,19nm,0.8s
DRV Dumont d'Urvil 82.20 191 P **P 13 35 25.1 +0.1**
ELK Elko 82.26 326 P **P 13 35 26.8 +0.9**
KHWEE KHWEE 82.28 111*i* P **P 13 35 27.9 +1.4**
BBGB Big Mountain B 82.30 319 IAmb IAmb 13 35 35.2
comp=Z,68nm,0.8s
LOHW Long Hollow 82.34 330 IAmb IAmb 13 36 00.5
comp=Z,196nm,1.6s
TPAW Teton Pass 82.39 330 IAmb IAmb 13 36 01.6
comp=Z,113nm,1.2s
CTZ Chatham Island 82.61 224 IAmb IAmb 13 35 30.0
comp=Z,99nm,1.0s
CTZ Chatham Island 82.61 224 P **P 13 35 29.4 +1.8**
WAKR Walker 82.78 322 IAmb IAmb 13 36 04.6
comp=Z,119nm,1.3s
ULM Lac du Bonnet 82.86 342 IAmb IAmb 13 35 29.9
comp=Z,105nm,1.0s
ULM Lac du Bonnet 82.86 342 P **P 13 35 28.8 +0.3**
comp=Z,69nm,0.9s,baz=149,slow=5.1,SNR=38
ULM pP **pP 13 35 59.2 -1.0**
comp=Z,72nm,1.1s,baz=160,slow=4.6,SNR=6.3
ULM LR LR 14 15 14.7
comp=Z,114nm,21.7s,baz=148,slow=38
comp=Z,69nm,0.9s
ULM Lac du Bonnet 82.86 342*d* iP **P 13 35 28.0 -0.5**
TIO Tioulne 82.96 49 P **P 13 35 30.8 +1.1**
CMB Columbia Colle 82.96 321 P **P 13 35 30.7 +1.3**
RLMT Red Lodge 82.99 332 IAmb IAmb 13 35 31.7
comp=Z,58nm,0.6s
YMP Mirror Lake Pl 83.05 331 IAmb IAmb 13 36 20.1
comp=Z,93nm,1.2s
MHC Mount Hamilton 83.18 320 IAmb IAmb 13 36 06.5
comp=Z,107nm,1.4s
YNE Yellowstone No 83.20 331 IAmb IAmb 13 35 32.8
comp=Z,54nm,0.6s
YNR Norris Junctio 83.25 331 IAmb IAmb 13 36 08.3
comp=Z,114nm,1.5s
PNTR Pine Nut 83.29 322 IAmb IAmb 13 35 34.0
comp=Z,84nm,0.8s
YMR Madison River 83.34 331 IAmb IAmb 13 35 34.2
comp=Z,110nm,0.9s
YHL Hebgen Lake 83.58 331 IAmb IAmb 13 36 07.6
comp=Z,87nm,1.2s
SCHQ Schefferville 83.61 1 P **P 13 35 33.1 +0.9**
comp=Z,43nm,0.9s,baz=193,slow=4.7,SNR=35
SCHQ pP **pP 13 36 03.4 -1.0**
comp=Z,90nm,1.2s,baz=166,slow=4.4,SNR=7.0
comp=Z,43nm,0.9s
MREMI Moremi 83.62 112*i* P **P 13 35 34.3 +1.0**
PAHR Pah Rah Range 83.62 323 IAmb IAmb 13 36 08.5
comp=Z,144nm,1.2s
MPK Martis Peak 83.67 322 IAmb IAmb 13 36 09.1
comp=Z,180nm,1.3s
KSANE Kasane 84.01 107*i* P **P 13 35 37.2 +1.8**
HLID Hailey 84.02 328 IAmb IAmb 13 36 10.4
comp=Z,89nm,1.1s
FARB Farallon Islan 84.20 319 IAmb IAmb 13 36 11.0
comp=Z,187nm,1.6s
BROLN Tlhalogang 84.23 111*i* P **P 13 35 37.2 +0.7**
BEKR Beckworth 84.26 322 IAmb IAmb 13 36 11.6
comp=Z,102nm,1.3s
CVS Carmenet Viney 84.34 320 IAmb IAmb 13 35 38.6
comp=Z,86nm,0.9s
BOZ Bozeman (W) 84.36 331 IAmb IAmb 13 36 10.6
comp=Z,193nm,1.9s
MCCM Maroni Confer 84.44 319 IAmb IAmb 13 36 11.5
comp=Z,103nm,1.2s
MFID Camas Ranch 84.57 327 IAmb IAmb 13 36 12.1
comp=Z,137nm,1.6s
SUTB Sutter Butte 84.58 321 IAmb IAmb 13 36 12.6
comp=Z,90nm,1.2s
DLMT Dillon 84.59 330 IAmb IAmb 13 36 13.1
comp=Z,177nm,1.4s
ORV Oroville 84.65 321 IAmb IAmb 13 36 13.5
comp=Z,197nm,1.4s
CASY Casey 84.90 179 P **P 13 35 39.3 +0.5**
CASY IAmb IAmb 13 35 40.9
comp=Z,126nm,1.0s
CASY Casey 84.90 179 P **P 13 35 39.6 +0.8**

CASY pP **pP** **13 36 11.0 +0.5**
HOPS Hopland Field 85.14 320 lAmb lAmb 13 36 15.5
comp=Z,124nm,1.6s
WVOR Wild Horse Val 85.22 325 P **P** **13 35 41.4 +0.6**
O03E Paynes Creek 85.34 322 lAmb lAmb 13 36 15.7
comp=Z,159nm,1.4s
EGMT Eagleton 85.54 333 lAmb lAmb 13 36 15.9
comp=Z,81nm,1.2s
MD31 MD31 85.83 49 P **P** **13 35 44.5 +0.5**
KCPM Cahto Peak 85.90 320 lAmb lAmb 13 36 19.6
comp=Z,139nm,1.4s
MDT Midelt 85.90 49 LR LR 14 14 40.5
comp=Z,190nm,19.2s,baz=232,slow=36
PLID Pearl Lake 85.92 328 lAmb lAmb 13 35 46.5
comp=Z,115nm,0.9s
IFR Ifrane 86.00 48 P **P** **13 35 45.7 +0.8**
M03C McCloud 86.20 322 lAmb lAmb 13 36 19.5
comp=Z,69nm,1.1s
MORF Marmelete 86.22 43 *e*P **P** **13 35 44.4 -1.3**
N02D Trinity Center 86.31 322 lAmb lAmb 13 36 20.9
comp=Z,155nm,1.6s
MSO Missoula 86.32 330 lAmb lAmb 13 36 20.8
comp=Z,170nm,1.8s
PTEO Sao Teotonio 86.34 43 *e*P **P** **13 35 48.7 +2.5**
KMRM Mail Ridge 86.34 321 lAmb lAmb 13 36 21.6
comp=Z,140nm,1.3s
BMO Blue Mountains 86.35 327 lAmb lAmb 13 36 20.5
comp=Z,97nm,1.6s
KHBM Hayfork Bally 86.37 321 lAmb lAmb 13 36 21.5
comp=Z,71nm,1.2s
PBDV Barranco-do-Ve 86.61 44 P **P** **13 35 48.2 +0.5**
PBDV Barranco-do-Ve 86.61 44 *e*P **P** **13 35 50.3 +2.6**
PBDV *ep*P **pP** **13 36 18.7 -0.8**
PBDV *es*P **sP** **13 36 35.7 +3.2**
PBDV *i* lAmb lAmb 13 36 39.4
comp=Z,156nm,1.9s
M02C Callahan 86.68 322 lAmb lAmb 13 36 23.1
comp=Z,114nm,1.4s
KMPM Mount Pierce 86.70 320 lAmb lAmb 13 35 50.8
comp=Z,146nm,1.3s
KHMM Horse Mountain 86.80 321 lAmb lAmb 13 35 51.3
comp=Z,67nm,1.0s
PCVE Castro Verde 86.80 43 P **P** **13 35 47.3 -1.2**
PCVE Castro Verde 86.80 43 *e*P **P** **13 35 51.3 +2.7**
PCVE *ep*P **pP** **13 36 21.3 +1.0**
PCVE *es*P **sP** **13 36 35.0 +1.6**
PCVE *i* lAmb lAmb 13 36 41.2
comp=Z,111nm,1.7s
MESJ Messejana 86.83 43 *e*P **P** **13 35 49.7 +1.0**
MESJ lAmb lAmb 13 35 51.2
comp=Z,64nm,1.5s
MESJ Messejana 86.83 43 *e*P **P** **13 35 51.4 +2.7**
MESJ *ep*P **pP** **13 36 22.3 +1.8**
MESJ *es*P **sP** **13 36 36.3 +2.8**
MESJ *i* lAmb lAmb 13 36 55.2
comp=Z,81nm,1.7s
MESJ Messejana 86.83 43 *e*P **P** **13 35 49.7 +1.0**
PVAQ Vaqueiros 86.85 44 *e*P **P** **13 35 50.8 +2.1**
PVAQ *es*P **sP** **13 36 36.8 +3.2**
PVAQ *i* lAmb lAmb 13 36 40.5
comp=Z,132nm,1.7s
I07A Izee 86.85 325 lAmb lAmb 13 35 51.2
comp=Z,67nm,1.1s
KUQ Kuujjuaa 86.89 360 lAmb lAmb 13 36 21.3
comp=Z,128nm,1.6s
EGRO El Granado 87.07 44 P **P** **13 35 49.9 +0.1**
J05D Fort Rock, OR 87.15 324 lAmb lAmb 13 36 25.8
comp=Z,126nm,1.2s
PBEJ Beja 87.16 43 *e*P **P** **13 35 52.6 +2.4**
PBEJ *ep*P **pP** **13 36 22.7 +0.6**
PBEJ *es*P **sP** **13 36 37.3 +2.2**
PBEJ *i* lAmb lAmb 13 36 38.0
comp=Z,89nm,1.5s
ECEU Ceuta 87.33 46 P **P** **13 35 49.6 -1.5**
CEU Ceuta 87.33 46 P **P** **13 35 52.9 +1.8**
TAM Tamanrasset 87.39 62 **P** **13 35 53.6 +1.7**
TAM Tamanrasset 87.39 62 P **P** **13 35 53.6 +1.7**
TAM pmax pmax
comp=Z,92nm,0.2s
L02F Cave Junction 87.57 322 lAmb lAmb 13 35 54.6
comp=Z,118nm,1.2s
PARRA Arraiolos 87.58 42 *e*P P 13 35 59.0 +6.8
PARRA *ep*P pP 13 36 26.2 +2.2
PARRA *i* lAmb lAmb 13 36 40.4
comp=Z,88nm,1.6s
PSBE So Bento 87.59 42 *e*P P 13 35 59.6 +7.3
PSBE *ep*P pP 13 36 26.3 +2.1
PSBE *es*P sP 13 36 39.4 +2.2
BBOR Butler Butte 87.62 323 P **P** **13 35 52.8 +0.2**
BBOR lAmb lAmb 13 35 53.9
comp=Z,65nm,1.0s
PMTG Montargil 87.63 42 *e*P P 13 35 59.4 +6.9
PMTG *ep*P pP 13 36 25.4 +1.1
PMTG *es*P sP 13 36 39.3 +2.0
PMTG *i* lAmb lAmb 13 36 40.5
comp=Z,130nm,1.4s
ESPR Espera 87.64 45 P **P** **13 35 53.5 +0.9**
EMIN Mina Concepcio 87.72 44 P **P** **13 35 51.6 -1.4**
PBAR Barrancos 87.76 43 P **P** **13 35 51.2 -1.9**
PBAR Barrancos 87.76 43 *e*P **P** **13 35 55.7 +2.6**
PBAR *es*P **sP** **13 36 39.2 +1.3**
PBAR *i* lAmb lAmb 13 36 44.5
comp=Z,58nm,1.7s
LSZ Lusaka 87.76 106 LR LR 14 10 43.9
comp=Z,350nm,21.6s,baz=245,slow=32
PESTR Estremoz 87.88 43 P **P** **13 35 52.9 -0.8**
PESTR Estremoz 87.88 43 *e*P P 13 36 00.7 +7.1
PESTR *ep*P pP 13 36 27.7 +2.3
PESTR *es*P sP 13 36 40.8 +2.4
PESTR *i* lAmb lAmb 13 36 46.2
comp=Z,86nm,2.1s
I05D Terrebonne, OR 87.95 325 lAmb lAmb 13 35 56.5
comp=Z,77nm,0.8s
PSARD Sardoal 88.02 42 *e*P P 13 36 01.3 +7.0
I04A Tendick Farm, 88.12 324 lAmb lAmb 13 35 56.5
comp=Z,102nm,1.3s
PCAS Casmilo, Conde 88.12 41 *e*P P 13 36 02.4 +7.6
PCAS *ep*P pP 13 36 29.1 +2.5
EMIJ Mijas 88.13 46 P **P** **13 35 57.1 +2.1**
EBAD Badajoz 88.15 43 P **P** **13 35 53.8 -1.1**
PMRV Marv??o 88.36 42 *e*P P 13 36 02.4 +6.4
PMRV *ep*P pP 13 36 29.8 +2.1
F07A Phinny Hill Vi 88.37 327 lAmb lAmb 13 36 31.6
comp=Z,94nm,1.5s
EMAL Malaga-Limoner 88.47 46 P **P** **13 35 55.8 -0.7**
HHSZ Highcliff Hill 88.52 217 P **P** **13 35 58.1 +1.3**
I03D Drain, OR 88.54 323 lAmb lAmb 13 36 32.1
comp=Z,106nm,1.2s
FFC Flin Flon 88.54 341 P **P** **13 35 56.3 -0.1**
FFC Flin Flon 88.54 341 P **P** **13 35 56.3 -0.1**
FFC pmax pmax
comp=Z,39nm,1.0s
FFC Flin Flon 88.54 341 P **P** **13 35 56.5 +0.2**
FFC pP **pP** **13 36 28.2 -0.9**
PCBR Castelo Branco 88.57 42 *e*P P 13 36 03.4 +6.5
PCBR *ep*P pP 13 36 30.8 +2.1
PCBR *es*P sP 13 36 43.5 +1.8
BFZ Birch Farm 88.69 223 P **P** **13 35 59.2 +1.5**
D08A Wollman Farm, 88.74 328 lAmb lAmb 13 36 31.8
comp=Z,168nm,2.0s
H04D Lebanon 88.80 324 lAmb lAmb 13 36 16.8
comp=Z,57nm,1.1s
NEW Newport 88.81 330 lAmb lAmb 13 36 31.4
comp=Z,80nm,1.7s
NEW Newport 88.81 330 LR LR 14 15 08.8
comp=Z,87nm,21.9s,baz=122,slow=35
SYZ Scrubby Hill 88.83 215 P **P** **13 35 59.3 +1.1**
MQZ McQueen's Vall 88.84 219 P **P** **13 35 59.5 +1.2**
MTE Manteigas 88.90 42 *e*P P 13 36 06.0 +7.4
MTE *ep*P pP 13 36 32.5 +2.2
PUZ Puketiti 89.04 226 P **P** **13 36 01.8 +2.3**
ODZ Otahua Downs 89.05 217 lAmb lAmb 13 36 01.1
comp=Z,48nm,0.8s
ODZ Otahua Downs 89.05 217 P **P** **13 36 00.4 +1.1**
MRZ Mangatainoka R 89.10 223 lAmb lAmb 13 36 02.5
comp=Z,89nm,1.1s
MRZ Mangatainoka R 89.10 223 P **P** **13 36 01.3 +1.6**
GVZ Greta Valley S 89.11 220 P **P** **13 36 00.6 +0.9**
COR Corvallis 89.13 324 P **P** **13 36 01.4 +2.0**
COR pP **pP** **13 36 32.7 +1.2**
KHZ Kahutara 89.18 221 P **P** **13 36 01.5 +1.6**
APZ The Paps 89.20 215 P **P** **13 36 00.9 +0.9**
TMZ Timaru 89.30 218 P **P** **13 36 01.1 +0.6**
MXZ Matakaoa Point 89.31 227 P **P** **13 36 03.0 +2.3**

MWZ Matawai 89.34 226 P **P** **13 36 03.2 +2.3**
PVRL Vila Real 89.37 41 *e*P P 13 36 08.6 +7.9
PVRL *ep*P pP 13 36 34.8 +2.2
PVRL *es*P sP 13 36 46.0 +0.5
POLO Lamas de Olo 89.39 41 *e*P P 13 36 06.2 +5.4
POLO *i* lAmb lAmb 13 36 12.1
comp=Z,62nm,1.5s
POLO *ep*P pP 13 36 35.9 +3.2
OXZ Oxford 89.43 219 P **P** **13 36 01.8 +0.7**
OXZ Oxford 89.43 219 P **P** **13 36 02.3 +1.2**
BKZ Black Stump Fm 89.47 224 lAmb lAmb 13 36 05.0
comp=Z,126nm,1.7s
BKZ Black Stump Fm 89.47 224 P **P** **13 36 03.8 +2.3**
HAZ Te Kaha 89.53 226 P **P** **13 36 04.2 +2.6**
EAZ Earnscleugh 89.62 216 P **P** **13 36 02.6 +0.6**
URZ Urewera 89.65 225 LR LR 14 06 21.4
comp=Z,300nm,21.6s,baz=138,slow=29
URZ Urewera 89.65 225 P **P** **13 36 03.8 +1.6**
LTZ Lake Taylor 89.66 220 P **P** **13 36 04.1 +1.8**
MVO Moncorvo 89.69 41 *e*P **P** **13 36 03.7 +1.5**
MVO *ep*P **pP** **13 36 36.0 +1.9**
MVO *es*P **sP** **13 36 48.9 +1.9**
LTY Liberty 89.71 327 lAmb lAmb 13 36 03.7
comp=Z,167nm,1.8s
RPZ Rata Peaks 89.72 218 P **P** **13 36 03.5 +1.0**
RPZ Rata Peaks 89.72 218 P **P** **13 36 03.7 +1.2**
LBZ Lake Benmore 89.73 217 lAmb lAmb 13 36 04.6
comp=Z,47nm,0.8s
LBZ Lake Benmore 89.73 217 P **P** **13 36 03.3 +0.7**
WHZ Wether Hill Ro 89.87 215 P **P** **13 36 03.5 +0.4**
B08A Colville Reser 89.88 329 lAmb lAmb 13 36 36.7
comp=Z,116nm,1.9s
THZ Tophouse 89.96 221 P **P** **13 36 05.5 +1.8**
ETVZ East Tongariro 89.97 224 P **P** **13 36 06.0 +2.0**
TMVZ Te Maari 89.99 224 P **P** **13 36 05.9 +2.0**
F04D Rainier, OR 90.02 325 lAmb lAmb 13 36 06.3
comp=Z,47nm,0.7s
NNZ Nelson 90.04 221 P **P** **13 36 05.4 +1.4**
WKZ Wanaka 90.05 217 P **P** **13 36 05.1 +1.1**
MLZ Mavora Lakes 90.14 216 lAmb lAmb 13 36 05.9
comp=Z,40nm,0.9s
MLZ Mavora Lakes 90.14 216 P **P** **13 36 05.1 +0.6**
INZ Inchbonnie 90.16 219 lAmb lAmb 13 36 06.7
comp=Z,62nm,0.8s
INZ Inchbonnie 90.16 219 P **P** **13 36 04.8 +0.2**
PBRG Braganca 90.27 41 *e*P P 13 36 14.1 +9.2
PBRG *ep*P pP 13 36 38.0 +1.3
D05A Enumclaw 90.29 326 lAmb lAmb 13 36 06.4
comp=Z,68nm,0.9s
WVZ Waitaha Valley 90.31 219 P **P** **13 36 05.8 +0.6**
FOZ Fox Glacier 90.51 218 lAmb lAmb 13 36 08.0
comp=Z,49nm,0.9s
FOZ Fox Glacier 90.51 218 P **P** **13 36 06.9 +0.8**
VRZ Vera Road 90.56 224 P **P** **13 36 07.7 +1.3**
ESDC Sonseca Array 90.56 44 P **P** **13 36 06.5 +0.1**
comp=Z,3.4nm,0.9s,baz=257,slow=3.8,SNR=10
ESDC pP **pP** **13 36 39.7 +1.5**
comp=Z,5.9nm,0.9s,baz=253,slow=4.2,SNR=5.0
ESDC LR LR 14 13 42.6
comp=Z,455nm,21.0s,baz=202,slow=33
comp=Z,3.4nm,0.9s
TLZ Tolley Road 90.58 225 P **P** **13 36 08.3 +1.6**
DSZ Denniston Nort 90.60 220 P **P** **13 36 06.9 +0.3**
E03A Lebam 90.62 325 lAmb lAmb 13 36 08.4
comp=Z,47nm,1.0s
JCZ Jackson Bay 90.69 217 P **P** **13 36 08.1 +1.0**
MSZ Milford Sound 90.72 216 P **P** **13 36 07.7 +0.6**
QRZ Quartz Range 90.78 221 P **P** **13 36 07.4 0.0**
QRZ Quartz Range 90.78 221 P **P** **13 36 07.5 0.0**
NEZ North Egmont 90.86 223 P **P** **13 36 09.3 +1.3**
HIZ Hauiti 90.88 224 P **P** **13 36 08.6 +0.6**
KHEZ Kahui Hut 90.89 223 P **P** **13 36 08.8 +0.6**
TOZ Tahuroa Road 90.97 225 lAmb lAmb 13 36 10.9
comp=Z,74nm,1.2s
TOZ Tahuroa Road 90.97 225 P **P** **13 36 09.7 +1.3**
NLWA Neilton Lookou 91.35 326 lAmb lAmb 13 36 44.4
comp=Z,84nm,1.6s
IVI Ivigtut 91.41 9 *i* P **P** **13 36 09.2 -0.3**
IVI lAmb lAmb 13 36 11.6
comp=Z,60nm,0.7s
KUZ Kuaotunu 91.45 226 P **P** **13 36 12.5 +1.8**
RAO Raoul Island 91.60 235 LR LR 14 15 39.5
comp=Z,35nm,18.2s,baz=154,slow=34
NRS Narsarsuaq 91.78 11 *i* P **P** **13 36 10.8 -0.5**
NRS lAmb lAmb 13 36 12.8
comp=Z,27nm,0.9s
PGC Sidney 92.02 327 lAmb lAmb 13 36 14.6
comp=Z,30nm,0.9s
FRB Frobisher Bay 92.55 360 LR LR 14 19 39.5
comp=Z,147nm,20.9s,baz=183,slow=36
WCZ Waipu Caves 92.82 226 P **P** **13 36 17.8 +0.8**
OUZ Omahuta 93.75 226 P **P** **13 36 22.5 +1.2**
SFJD Kangerlussuaq 96.69 7 LR LR 14 20 20.5
comp=Z,126nm,21.2s,baz=194,slow=35
SFJD Kangerlussuaq 96.69 7 *i* P **P** **13 36 32.0 -1.7**
KEST Kesra 97.05 53 LR LR 14 20 19.6
comp=Z,530nm,21.9s,baz=230,slow=35
YKA Yellowknife Ar 98.67 340 P Pdif 13 36 42.9 +0.2
comp=Z,11nm,0.8s,baz=146,slow=4.0,SNR=18
YKA pP pP 13 37 13.0 -2.6
comp=Z,6.9nm,0.9s,baz=149,slow=3.9,SNR=3.8
YKA LR LR 14 24 48.3
comp=Z,115nm,19.9s,baz=120,slow=37
comp=Z,111nm,0.8s
EKA Eskdalemuir Ar 100.54 32 P **Pdif** **13 36 50.8 -0.4**
comp=Z,2.0nm,0.8s,baz=239,slow=4.5,SNR=4.8
NUUG Nuugaatsiaq 100.90 5 *i* P **Pdif** **13 36 42.5 -10**
DOU Dourbes 101.52 39 *d*PP **PP** **13 41 05.2 -2.3**
UCC Uccle 101.76 38 *d*PP **PP** **13 41 07.5 -1.8**
BCLA Clavier 102.07 39 *d*PP **PP** **13 41 08.9 -2.8**
WLF Walferdange 102.16 40 *d*PP **PP** **13 41 07.9 -4.4**
BSTI San Tilman 102.30 39 *d*PP **PP** **13 41 11.2 -2.2**
BHOU Houvegnez 102.43 39 *d*PP **PP** **13 41 12.6 -1.8**
BEBN Eben Emael 102.47 39 *d*PP **PP** **13 41 12.4 -2.3**
MEM Membach 102.56 39 *d*PP **PP** **13 41 13.3 -2.0**
BTNL Ternell 102.61 39 *d*PP **PP** **13 41 14.1 -1.7**
BTNL *d*PKiKP **PKiKP** **13 41 21.8 +0.8**
DAVA Damuels 103.14 43 *e*PP **PP** **13 41 17.9 -2.0**
comp=Z,54nm,1.4s,SNR=5.6
FETA Feichten 103.52 44 *e*PKiKP **PKiKP** **13 41 20.0 -2.9**
comp=Z,34nm,1.5s
RETA Reutte 103.76 43 *e*PKiKP **PKiKP** **13 41 21.8 -1.4**
comp=Z,45nm,1.5s,SNR=7.2
MOTA Moosalm 103.90 43 *e*PKiKP **PKiKP** **13 41 22.0 -1.6**
comp=Z,42nm,1.4s,SNR=9.6
SQTA Sankt Quirin 103.90 44 *e*PKiKP **PKiKP** **13 41 22.9 -0.6**
comp=Z,37nm,1.3s,SNR=7.2
WATA Walderalm 104.18 44 *i* PKiKP **PKiKP** **13 41 24.2 +0.1**
comp=Z,36nm,1.3s,SNR=7.6
WTTA Wattenberg 104.18 44 *e*PKiKP **PKiKP** **13 41 24.7 +0.5**
comp=Z,34nm,1.3s,SNR=7.2
ABTA Abfaltersbach 104.48 44 *e*PKiKP **PKiKP** **13 41 27.0 +2.4**
comp=Z,52nm,1.3s,SNR=7.9
LESA Schwarzleotal 104.88 44 *e*PKiKP **PKiKP** **13 41 29.4 +4.1**
comp=Z,62nm,1.4s,SNR=15
CADS Cadrg 105.00 45 *i* PP **PKiKP** **13 41 31.2 +5.7**
MYKA Terra Mystica 105.12 45 *e*PP **PP** **13 41 31.9 -2.7**
comp=Z,66nm,1.3s,SNR=14
KBA Koelnbreinsper 105.13 44 *e*PKiKP **PKiKP** **13 41 31.4 +5.5**
comp=Z,52nm,1.5s,SNR=9.1
LJU Ljubljana 105.41 46 *e*PP PKiKP 13 41 34.3 +8.1
BIOA Bad Ischl, Aus 105.58 44 *e*PP **PP** **13 41 33.8 -4.1**
comp=Z,58nm,1.4s,SNR=11
OBKA Obir 105.63 45 *e*PP **PP** **13 41 35.1 -3.3**
comp=Z,108nm,1.4s,SNR=14
SOKA Soboth 106.00 45 *e*PP **PP** **13 41 37.6 -3.5**
comp=Z,88nm,1.3s,SNR=17
MOA Mollin 106.03 44 *e*PP **PP** **13 41 37.1 -4.2**
comp=Z,66nm,1.4s,SNR=10
GERES GERESS Array B 106.13 43 PKiKP **PKiKP** **13 41 28.2 +0.6**
comp=Z,2.4nm,0.8s,baz=201,slow=1.1,SNR=10
GERES PKKPbc **PKKPbc** **13 52 50.7 0.0**
comp=Z,0.9nm,0.8s,baz=25,slow=1.9,SNR=6.4
GERES PKKPab **PKKPab** **13 53 04.3 +0.3**
comp=Z,1.9nm,0.8s,baz=57,slow=4.9,SNR=9.9
KHC Kasperske Hory 106.18 43 *e*PP **PP** **13 41 37.5 -4.8**
KHC *e*SP SP 13 50 51.3 +4.1
ARSA Arzberg 106.55 45 *e*PP **PP** **13 41 41.0 -4.1**
comp=Z,20nm,1.3s,SNR=5.7
KOGS Kog 106.66 46 *i* PP **PP** **13 41 43.2 -2.7**
CLL Collm 106.79 40 *e*PKPdf **PKiKP** **13 41 29.0 +0.4**
comp=Z,23nm,1.5s
CLL *e*PP **PP** **13 41 48.0 +1.4**
CLL *e*SP SP 13 50 53.0 -0.2
CLL *e*SS **SS** **13 56 48.0 +5.3**

CLL L L 14 25 00.0
comp=Z,400nm,18.6s
CONA Conrad Observa 107.04 44 *e*PP **PP** **13 41 44.7 -4.0**
comp=Z,61nm,1.6s,SNR=11
PRA Prague 107.08 42 *e*SP SP 13 50 56.3 0.0
PRU Pruhonice 107.11 42 *e*SP SP 13 50 56.2 -0.4
RONA Rosalia, Austr 107.21 45 *e*PP **PP** **13 41 46.3 -3.7**
comp=Z,77nm,1.4s,SNR=15
KRUC Moravsky 107.83 43 *e*PP **PP** **13 41 50.0 -4.3**
ZST Bratislava 107.91 44 *e*PP **PP** **13 41 52.8 -2.1**
VRAC Vranov 108.05 43 *e*PP **PP** **13 41 51.9 -4.1**
MODS Modra-Piesok 108.09 44 *e*PP **PP** **13 41 52.8 -3.5**
INK Inuvik 108.41 339 PKKPbc PKKPbc 13 52 42.6 -1.4
comp=Z,4.7nm,0.8s,baz=353,slow=3.5,SNR=9.1
INK PKKPab **PKKPab** **13 52 54.6 +1.7**
comp=Z,4.6nm,0.9s,baz=304,slow=5.7,SNR=7.5
MORC Moravsky Berou 108.80 43 ⇓P **PKiKP** **13 41 33.6 +1.2**
BZS Buzias 109.77 48 ⇑P **PKiKP** **13 41 35.6 +1.2**
NB2 NORSAR Subarra 109.97 31 PKKP 13 52 35.9
comp=Z,6.5nm,1.1s,baz=66,slow=4.4
NOA NORSAR Array B 109.97 31 PKiKP **PKiKP** **13 41 34.7 +0.4**
comp=Z,0.8nm,0.8s,baz=237,slow=2.1,SNR=4.1
NOA PKKPab **PKKPab** **13 52 47.5 +1.1**
comp=Z,2.7nm,0.8s,baz=67,slow=4.5,SNR=7.9
SURR Surduc 110.16 48 ⇑P **PKiKP** **13 41 34.3 -0.8**
HFS Hagfors 110.74 32 PP **PP** **13 42 13.6 -1.5**
comp=Z,6.0nm,0.9s,baz=239,slow=10,SNR=4.6
HFS PKKPab **PKKPab** **13 52 44.5 +1.5**
comp=Z,4.6nm,0.6s,baz=115,slow=5.2,SNR=12
DRGR 110.91 47 ⇑P **PKiKP** **13 41 37.6 +1.0**
DRGR 110.91 47 ⇑PKiKP **PKiKP** **13 41 37.6 +1.0**
LOT Lotru 111.13 49 ⇓P **PKiKP** **13 41 37.5 +0.4**
MARR Marisel-Cluj 111.13 48 ⇑P **PKiKP** **13 41 38.9 +1.8**
ILAR Eielson Array 111.50 333 Pdiff **Pdif** **13 37 39.2 -0.6**
comp=Z,0.5nm,0.7s,baz=174,slow=3.1,SNR=5.8
ILAR PKiKP **PKiKP** **13 41 37.5 +0.4**
comp=Z,2.7nm,0.9s,baz=209,slow=0.9,SNR=18
ILAR PKKPbc **PKKPbc** **13 52 31.4 -2.4**
comp=Z,1.6nm,0.8s,baz=280,slow=3.4,SNR=11
ARR Arges 111.67 49 ⇑P **PKiKP** **13 41 38.7 +0.6**
KWP Kalwaria Pacla 111.88 44 *e*PKP **PKiKP** **13 41 39.5 +1.2**
COLA College 111.92 333 ⇓PKiKP **PKiKP** **13 41 38.5 +0.7**
LOZB Loznitsa 112.33 52 ⇓P **PKiKP** **13 41 33.3 -6.0**
MLR Muntele Rosu 112.58 49 ⇑P **PKiKP** **13 41 40.6 +0.7**
MLR Muntele Rosu 112.58 49 ⇑PKiKP **PKiKP** **13 41 40.6 +0.7**
BURAR Bucovina Array 112.79 47 ⇑P **PKiKP** **13 41 41.3 +1.1**
BURAR Bucovina Array 112.79 47 ⇑PKiKP **PKiKP** **13 41 41.3 +1.1**
ONER Baraj Valea Uz 113.15 49 ⇑P **PKiKP** **13 41 41.2 +0.5**
PLOR Plostina 113.17 49 ⇑P **PKiKP** **13 41 40.2 -0.6**
PLOR Plostina 113.17 49 ⇑PKiKP **PKiKP** **13 41 40.2 -0.6**
VRI Vrincioaia 113.22 49 ⇑P **PKiKP** **13 41 41.2 +0.3**
STKA Stephens Creek 113.22 207 PKiKP **PKiKP** **13 41 40.9 -0.6**
comp=Z,3.3nm,0.7s,baz=358,slow=5.8,SNR=5.8
SUW Suwalki 113.54 40 *e*PKP **PKiKP** **13 41 41.7 +0.5**
TIRR Tirgusor 113.92 51 ⇑P **PKiKP** **13 41 42.6 +0.4**
TIRR Tirgusor 113.92 51 ⇑PKiKP **PKiKP** **13 41 42.6 +0.4**
CFR Carcaliu 113.95 50 ⇑P **PKiKP** **13 41 42.1 -0.2**
CFR Carcaliu 113.95 50 ⇑PKiKP **PKiKP** **13 41 42.1 -0.2**
TLCR 114.41 50 ⇑P **PKiKP** **13 41 43.8 +0.6**
TLCR 114.41 50 ⇑PKiKP **PKiKP** **13 41 43.8 +0.6**
SAHE Sakarya_HENDEK 114.52 56 ⇑P **PKiKP** **13 41 44.1 +0.5**
MILM Milestii Mici 114.92 49 ⇓P PKPdf 13 41 42.9 -1.1
MILM Milestii Mici 114.92 49 ⇓PKiKP PKPdf 13 41 42.9 -1.2
SORM Soroca 114.96 47 ⇓P PKPdf 13 41 44.0 -0.2
SORM Soroca 114.96 47 ⇓PKiKP PKPdf 13 41 44.0 -0.1
MMAI Mount Meron Ar 115.47 65 PKP **PKiKP** **13 41 46.9 +1.2**
comp=Z,3.8nm,0.5s,baz=354,slow=0.8,SNR=6.4
MMAI PKKPbc **PKKPbc** **13 52 19.2 -0.2**
comp=Z,1.3nm,0.4s,baz=69,slow=9.3,SNR=5.1
ANTO Ankara 115.63 57 ⇑P **PKiKP** **13 41 47.2 +1.4**
ANTO Ankara 115.63 57 ⇑PKiKP **PKiKP** **13 41 47.2 +1.4**
KIEV Kiev 116.18 45 ⇑P **PKiKP** **13 41 46.7 +0.3**
KIEV Kiev 116.18 45 ⇑PKiKP **PKiKP** **13 41 46.7 +0.3**
AKASG Malin Array Be 116.19 45 PKP **PKPdf** **13 41 46.2 -0.2**
comp=Z,8.2nm,0.6s,baz=264,slow=2.7,SNR=28
AKASG pPKP pPKPdf 13 42 19.8 -0.1
comp=Z,2.2nm,0.6s,baz=273,slow=2.4,SNR=2.6
AKASG PP **PP** **13 42 49.4 -4.6**
comp=Z,1.8nm,0.7s,baz=255,slow=6.3,SNR=5.7
AKASG PKKPbc **PKKPbc** **13 52 16.9 -0.5**
comp=Z,2.9nm,0.8s,baz=58,slow=3.3,SNR=6.8
AKBB Malin Array Si 116.19 45 *c* iPKiKP **PKPdf** **13 41 45.6 -0.8**
BR131 Keskin Array S 116.21 57 *i* PKiKP **PKPdf** **13 41 47.0 0.0**
BRTR Keskin Array B 116.21 57 PKP **PKiKP** **13 41 47.5 +0.5**
comp=Z,9.3nm,0.7s,baz=186,slow=2.7,SNR=47
BRTR pPKP pPKPdf 13 42 20.2 -0.5
comp=Z,2.3nm,0.8s,baz=188,slow=2.6,SNR=3.1
BRTR PP **PP** **13 42 48.9 -5.8**
comp=Z,1.3nm,0.7s,baz=212,slow=4.4,SNR=3.8
BRTR PKKPab **PKKPab** **13 52 22.6 +2.4**
comp=Z,2.6nm,0.7s,baz=101,slow=4.3,SNR=10
KIRS Kirsehir-Merke 116.24 58 ⇑P **PKiKP** **13 41 48.0 +0.9**
MNK Minsk 116.33 40 *i* PKiKP **PKPdf** **13 41 46.3 -0.3**
MNK *i* 13 42 16.2
MNK *i* 13 42 53.6
MNK *i* PPP PPP 13 45 21.7
MNK *i* 13 48 48.1
MNK *i* SS SS 13 58 50.4 +1.0
MNK *i* SSS SSS 14 03 10.0
MNK pmax pmax
comp=N,20nm,1.0s
MNK pmax pmax
comp=Z,29nm,0.8s
MNK pmax pmax
comp=E,16nm,0.8s
MNK MLR MLR
comp=N,151nm,15.0s
MNK MLR MLR
comp=Z,214nm,19.0s
MNK MLR MLR
comp=E,154nm,17.0s
VSU Vasula 116.62 36 *c* iPKiKP **PKPdf** **13 41 46.2 -0.8**
VSU pmax pmax
comp=Z,64nm,2.5s
FINES FINESS Array B 116.92 33 PKP **PKiKP** **13 41 48.3 +0.8**
comp=Z,5.0nm,0.8s,baz=338,slow=3.3,SNR=11
FINES PKKPbc **PKKPbc** **13 52 14.8 -0.3**
comp=Z,4.5nm,0.7s,baz=57,slow=3.3,SNR=9.2
SPITS Spitsbergen Ar 117.08 13 PKP **PKiKP** **13 41 48.1 +0.6**
comp=Z,1.9nm,0.5s,baz=225,slow=0.2,SNR=6.3
SPITS PKKPbc **PKKPab** **13 52 13.7 -0.9**
comp=Z,20nm,1.1s,baz=84,slow=10,SNR=5.5
SPITS PKKP **PKKPdf** **13 52 39.6 -2.4**
comp=Z,7.2nm,0.9s,baz=327,slow=6.0,SNR=8.1
SIM Simferopol' 117.96 52 *i* PKiKP **PKiKP** **13 41 51.7 +1.6**
SIM pmax pmax
comp=Z,29nm,0.8s
ARCES ARCESS Array B 118.09 23 PKP **PKiKP** **13 41 50.0 +0.4**
comp=Z,4.1nm,0.7s,baz=239,slow=3.8,SNR=13
ARCES PKKPbc **PKKPab** **13 52 09.9 -0.5**
comp=Z,5.5nm,0.7s,baz=88,slow=2.9,SNR=9.4
ARCES PKKP **PKKPdf** **13 52 38.4 -1.6**
comp=Z,2.0nm,0.8s,baz=79,slow=2.3,SNR=6.4
ARCES ARCESS Array B 118.09 23 PKiKP **PKiKP** **13 41 50.0 +0.4**
ANN Anapa 120.22 53 *i* PKiKP **PKPdf** **13 41 54.4 0.0**
ANN *e* 13 42 24.6
ANN *e* 13 48 42.2
ANN pmax pmax
comp=Z,52nm,0.9s
RAYN Ar Rayn 120.63 78 ⇑PKiKP **PKiKP** **13 41 57.3 +1.3**
APA Apatity 120.81 26 ⇓*e* PKiKP **PKPdf** **13 41 51.2 -3.6**
APA *e* 13 42 22.0
LVZ Lovozero 121.29 26 *c* iPKiKP **PKiKP** **13 41 57.6 +1.7**
LVZ pmax pmax
comp=Z,26nm,1.3s
OBN Obninsk 121.38 41 *d* iPKiKP **PKiKP** **13 41 56.5 +0.1**
OBN *i* 13 42 29.5
OBN *e* 13 43 28.4
OBN *i* 13 49 01.0
OBN pmax pmax
comp=Z,71nm,1.7s
SOC Sochi 121.58 54 *e*PKiKP **PKiKP** **13 41 57.2 0.0**
SOC *e* 13 43 32.0
SOC *e*PPP PPP 13 46 08.8
SOC *e*PS **PS** **13 53 26.7 +1.0**
SOC *e*SSS SSS 14 04 35.5
SOC pmax pmax
comp=Z,40nm,0.7s
VSLR Vesyoloye 121.78 55 *i* PKiKP **PKiKP** **13 41 57.7 +0.1**
MOS Moscow 122.05 40 *i* PKiKP **PKPdf** **13 41 56.3 -1.2**
MOS *e* 13 42 26.2
MOS *e* 13 48 41.1
MOS pmax pmax
comp=Z,44nm,0.9s

VSR Storozhevoye 122.46 45 *e*PKIKP **PKPdf 13 41 56.3 -2.2**
VSR pmax pmax
comp=Z,20nm,1.0s
LPSR Galich'ya Gora 122.48 44 *e*PKIKP **PKPdf 13 41 58.3 -0.2**
LPSR pmax pmax
comp=Z,60nm,0.8s
LABN Labinsk 122.49 53 *i* PKIKP **PKiKP 13 41 59.7 +0.7**
LABN *e* 13 42 28.4
LABN *e* 13 48 48.9
LABN pmax pmax
comp=Z,54nm,0.8s
ERBR Yeremizino-Bor 122.51 52 *i* PKIKP **PKiKP 13 41 59.1 +0.1**
ERBR *e* 13 42 28.5
ERBR *e* 13 48 48.1
ERBR pmax pmax
comp=Z,46nm,0.8s
KLMR Klimovskoe 123.33 34 *e*PKIKP **PKPdf 13 41 59.7 -0.1**
KLMR *e* 13 42 30.1
KLMR PS **PS 13 53 39.2 -1.4**
KLMR pmax pmax
comp=Z,80nm,1.4s
ASAR Alice Springs 123.53 204 PKP **PKPdf 13 42 00.8 -0.8**
comp=Z,35nm,0.7s,baz=136,slow=1.6,SNR=86
ASAR PKKPbc **PKKPbc 13 51 51.1 +1.0**
comp=Z,4.1nm,0.7s,baz=333,slow=2.9,SNR=47
ASAR PKKP **PKKPdf 13 52 27.2 -0.3**
comp=Z,1.0nm,0.8s,baz=352,slow=3.3,SNR=4.0
SHA1 Shidzhatmaz 123.70 55 *i* PKIKP **PKPdf 13 42 01.4 0.0**
KIV Kislovodsk 123.76 54 ⇓P **PKiKP 13 42 02.4 +0.7**
KIV Kislovodsk 123.76 54 *i* PKIKP **PKiKP 13 42 02.1 +0.5**
KIV *e* 13 43 45.8
KIV *e*PS **PS 13 53 45.0 -0.3**
KIV *e*SS SS 14 00 27.1 +1.5
KIV pmax pmax
comp=Z,59nm,1.1s
KIV MLR MLR
comp=Z,85nm,22.0s
KBZ Khabaz 123.88 55 PKP **PKiKP 13 42 02.4 +0.7**
comp=Z,28nm,1.0s,baz=216,slow=2.5,SNR=42
KBZ pPKP **pPKPdf 13 42 34.8 -0.2**
comp=Z,10nm,1.0s,baz=297,slow=2.9,SNR=2.1
KBZ PKKPbc **PKKPbc 13 51 49.8 +1.2**
comp=Z,1.8nm,0.8s,baz=102,slow=5.8,SNR=4.5
KBZ Khabaz 123.88 55*c* PKIKP **PKiKP 13 42 02.6 +0.9**
VRH Novokhopyorsk 124.06 46 *e*PKIKP **PKPdf 13 42 01.2 -0.3**
VRH pmax pmax
comp=Z,47nm,0.8s
NCK Nalchik 124.34 55 *i* PKIKP **PKiKP 13 42 02.6 -0.1**
NCK pmax pmax
comp=Z,34nm,0.9s
GNI Garni 124.59 59*c i*PKIKP **PKiKP 13 42 04.8 +1.3**
GNI pmax pmax
comp=Z,35nm,0.8s
WRA Warramunga Arr 126.76 206 PKP **PKPdf 13 42 07.4 -0.4**
comp=Z,82nm,0.7s,baz=166,slow=1.6,SNR=565
WRA pPKP **pPKPdf 13 42 39.9 -2.0**
comp=Z,6.4nm,0.5s,baz=163,slow=1.4,SNR=2.0
WRA PP **PP 13 44 02.5 -2.4**
comp=Z,2.6nm,1.0s,baz=155,slow=6.3,SNR=6.5
WRAB Tennant Creek 126.77 206*c i*PKIKP **PKPdf 13 42 07.5 -0.3**
WRAB pmax pmax
comp=Z,168nm,1.3s
AKT Akhty 127.05 58 *i* PKIKP **PKiKP 13 42 08.6 +0.3**
AKT *e* 13 42 37.0
AKT *e* 13 44 06.0
AKT *e*PPP PPP 13 46 50.5
AKT *e*PS PS 13 54 11.6 -2.7
AKT pmax pmax
comp=Z,53nm,1.0s
BELG Belogornoye 127.77 44 *i* PKIKP **PKiKP 13 42 09.1 -0.1**
KIRV Kirov 128.45 37*c i*PKIKP **PKiKP 13 42 10.9 +0.6**
BILL Bilibino 129.93 337*c i*PKIKP **PKiKP 13 42 13.6 +0.5**
BILL pmax pmax
comp=Z,74nm,1.7s
ARTI Arti 133.59 38 *i* PKIKP **PKiKP 13 42 21.4 +0.6**
ARTI 13 44 49.0
ARTI SS SS 14 02 28.0 +2.3
SVE Sverdlovsk 134.69 37 *e*PKIKP **PKiKP 13 42 22.3 -0.7**
SVE pmax pmax
comp=Z,39nm,2.0s
AB31 Akbulak array 135.76 48 *i* PKHKP PKPpre 13 42 12.8
TIXI Tiksi 136.45 352 PKhKP PKPpre 13 42 13.0
comp=Z,2.7nm,0.5s,baz=53,slow=3.5,SNR=16
TIXI PKP **PKPdf 13 42 23.5 -0.9**
comp=Z,13nm,0.7s,baz=71,slow=2.0,SNR=11
TIXI pPKP pPKPdf 13 42 57.5 -1.3
comp=Z,5.5nm,0.5s,baz=47,slow=1.6,SNR=2.7
TIXI SKPbc **SKPbc 13 45 45.3 -0.2**
comp=Z,6.3nm,0.7s,baz=45,slow=2.7,SNR=5.9
TIXI Tiksi 136.45 352 *i* PKIKP **PKPdf 13 42 24.9 +0.5**
TIXI pmax pmax
comp=Z,14nm,0.8s
SEY Seymchan 137.43 334 PKhKP PKPpre 13 42 17.6
comp=Z,3.3nm,0.6s,baz=84,slow=10,SNR=5.3
SEY PKP **PKiKP 13 42 27.8 -0.6**
comp=Z,53nm,0.8s,baz=129,slow=3.1,SNR=12
SEY pPKP pPKPdf 13 43 00.9 +0.3
comp=Z,32nm,1.1s,baz=108,slow=3.0,SNR=4.0
SEY SKPbc **SKPbc 13 45 48.9 +0.2**
comp=Z,10nm,1.1s,baz=20,slow=4.0,SNR=3.9
SEY Seymchan 137.43 334 *i* PKIKP **PKPdf 13 42 27.3 +0.8**
SEY pmax pmax
comp=Z,65nm,0.9s
GENI Genyem 138.63 225 PKP **PKiKP 13 42 31.7 -0.7**
PEA0B Petropavlovsk- 139.13 319*c i*PKIKP **PKiKP 13 42 32.1 -0.1**
PETK Petropavlovsk- 139.13 319 PKhKP PKPpre 13 42 21.8
comp=Z,11nm,1.0s,baz=71,slow=8.6,SNR=10.0
PETK PKP **PKiKP 13 42 31.1 -1.0**
comp=Z,43nm,0.8s,baz=80,slow=3.6,SNR=18
PETK pPKP pPKPdf 13 43 04.2 -0.1
comp=Z,34nm,1.1s,baz=64,slow=7.2,SNR=3.8
PETK SKPbc **SKPbc 13 45 52.2 -1.6**
comp=Z,14nm,1.1s,baz=47,slow=2.8,SNR=4.3
BATI Baumata 139.38 197 PKP **PKiKP 13 42 33.3 -0.7**
SOEI Soe 139.65 199 PKP **PKPdf 13 42 31.1 -1.2**
SOEI Soe 139.65 199 PKP **PKPdf 13 42 30.5 -1.7**
SOEI PKP **PKPdf 13 42 30.5 -1.7**
MA2 Magadan 139.91 330 PKP **PKPdf 13 42 31.2 +0.1**
comp=Z,11nm,0.7s,baz=184,slow=8.4,SNR=4.7
WBSI Waikabubak, Su 140.85 191 PKP **PKiKP 13 42 37.7 +0.7**
BVAR Borovoye Array 141.22 40 PKhKP PKPpre 13 42 28.9
comp=Z,3.0nm,0.5s,baz=301,slow=3.5,SNR=19
BVAR PKP **PKPdf 13 42 34.0 +0.3**
comp=Z,19nm,0.7s,baz=293,slow=1.8,SNR=28
BVAR pPKP pPKPdf 13 43 08.3 +0.4
comp=Z,12nm,0.9s,baz=299,slow=1.5,SNR=3.2
MMRI Maumere 141.24 196 PKP **PKPdf 13 42 33.4 -1.6**
MMRI PKP **PKiKP 13 42 34.9 -2.9**
TWSI Taliwang, Sumb 142.10 188 PKP **PKPdf 13 42 34.5 -2.0**
KOD Kodaikanal 142.47 113 *e*P **PKPdf 13 42 35.4 -2.1**
FAKI Fak Fak 142.80 214 PKP **PKPdf 13 42 35.1 -2.7**
RKPI Ransiki, Papua 143.00 218 PKP **PKPdf 13 42 35.9 -2.2**
KAD Karad 143.27 100 *e*P **PKPdf 13 42 38.3 -0.2**
BLJI Banyuglugur 143.33 182 PKP **PKPdf 13 42 37.4 -1.3**
CNJI Cibinong 143.45 171 PKP PKPbc 13 42 37.0 +0.6
KPJI Karang Pucung 143.62 174 PKP PKPbc 13 42 36.9 0.0
BRZS Berezniki 143.64 44 *e*PKP **PKPdf 13 42 39.3 +1.2**
BRZS Berezniki 143.64 44 *e*PKIKP **PKPdf 13 42 39.3 +1.2**
SKJI Sukabumi 143.67 170 PKP PKPbc 13 42 38.0 +1.0
MALK Mahakanadarawa 143.80 118 PKP PKPbc 13 42 37.6 +0.1
SALM Salem 143.86 112 *e*P PKPbc 13 42 38.4 +0.9
KK31 Karatay Array 143.90 56 *i* PKHKP PKPab 13 42 36.3 0.0
AAI Ambon 143.96 208 PKP PKPab 13 42 36.6 -0.7
MSAI Masohi 143.96 209 PKP PKPab 13 42 36.4 -0.9
SMRI Semarang 144.00 177 PKP **PKPdf 13 42 39.1 -0.8**
KMMI Kalianget 144.00 183 PKP **PKPdf 13 42 40.2 +0.3**
BSSI Bau Bau, Buton 144.05 194 PKP **PKPab 13 42 37.4 -0.2**
DBJI Dramaga 144.15 171 PKP PKPbc 13 42 38.9 +0.4
GRJI Gresik 144.18 180 PKP **PKPdf 13 42 39.6 -0.6**
KASI Kota Agung 144.76 167 PKP **PKPdf 13 42 41.1 -0.1**
NLAI Namlea 144.80 206 PKP **PKPab 13 42 39.7 -0.7**
BKSI Bulukumba 144.93 194 PKP **PKPab 13 42 40.5 -0.4**
BLSI Bandar Lampung 145.06 168 PKP **PKPdf 13 42 42.1 +0.4**
SWI Sorong 145.07 215 PKP **PKPbc 13 42 41.2 -0.1**
YAK Yakutsk 145.13 346 PKPbc **PKPdf 13 42 40.6 +0.3**
comp=Z,361nm,0.8s,baz=25,slow=1.3,SNR=139
YAK pPKPbc pPKPab 13 43 13.0 -0.5
comp=Z,395nm,0.9s,baz=65,slow=1.5,SNR=15
YAK Yakutsk 145.13 346*d i*PKIKP **PKPdf 13 42 40.5 +0.3**
YAK *e* 13 43 12.2
YAK *e* 13 46 00.9
YAK pmax pmax
comp=Z,548nm,1.0s
YAK pmax pmax
comp=N,75nm,1.4s
YAK pmax pmax
comp=E,30nm,1.0s
YAK pmax pmax
comp=Z,243nm,3.5s
YAK pmax pmax
comp=N,612nm,4.2s
YAK pmax pmax
comp=E,334nm,4.8s
LWLI Liwa 145.16 166 PKP **PKPdf 13 42 42.5 +0.5**
KAPI Kappang 145.30 193 PKPbc **PKPab 13 42 42.6 +0.3**
comp=E,467nm,0.9s,baz=200,slow=3.3,SNR=149
UDPR Udaipur 145.45 88 *e*P **PKPab 13 42 42.8 +0.1**
KLI Kotabumi 145.48 167 PKP **PKPab 13 42 42.9 0.0**
MDSI Maura Dua 145.71 166 PKP **PKPdf 13 42 42.2 -0.6**
BNSI Bone 145.82 194 PKP **PKPbc 13 42 43.9 +0.2**
BKNR BIKANER 145.88 82 *e*P **PKPbc 13 42 43.3 -0.2**
GUMO Guam 146.04 250 PKPbc **PKPbc 13 42 44.2 -0.1**
comp=E,253nm,0.8s,baz=37,slow=5.1,SNR=14
KSI Kapahiang 146.13 163 PKP **PKPab 13 42 45.1 -0.4**
LHSI Lahat 146.19 164 PKP **PKPbc 13 42 45.0 +0.2**
PPSI Pulau Pagai 146.20 158 PKP **PKiKP 13 42 46.9 -1.0**
SPSI Sidrap Palu 146.32 194 PKP **PKPbc 13 42 44.6 -0.6**
SANI Sanana 146.32 205 PKP **PKPdf 13 42 44.1 +0.2**
SANI Sanana 146.32 205 PKP **PKPdf 13 42 44.1 +0.2**
EKS2 Erkin-Say 146.34 56 P **PKPab 13 42 45.2 -0.4**
SNR=142
MASI Maura Aman, Be 146.52 162 PKP **PKPbc 13 42 45.9 +0.1**
USP Ospenovka 146.74 55 P **PKPbc 13 42 45.2 -0.4**
SNR=82
SGDS Sogindy 146.79 54 *e*PKP **PKPdf 13 42 44.6 +0.7**
SGDS *e*PP **PP 13 46 11.9 +0.8**
KURBB Kurchatov Arra 146.82 40 PKPbc **PKPbc 13 42 45.6 +0.1**
comp=E,129nm,0.7s,baz=299,slow=3.2,SNR=163
KURBB pPKPbc pPKPab 13 43 19.4 -0.2
comp=E,40nm,0.9s,baz=291,slow=3.8,SNR=3.8
KURK Kurchatov 146.82 40 *i* PKIKP **PKPdf 13 42 43.6 +0.1**
AAK Ala-Archa 146.87 56 P **PKPbc 13 42 45.9 -0.2**
SNR=104
AAK Ala-Archa 146.87 56 *i* PKIKP **PKPdf 13 42 43.6 -0.5**
CHMS Chumysh 146.97 55 P **PKPab 13 42 48.2 +0.1**
SNR=17
HYBB Hyderabad (bro 147.06 103 *e*PKPab **pPKPbc 13 43 19.7 -0.5**
HYBB *e*pPKPab **pPKPbc 13 43 19.7 -0.5**
AKL Akola 147.08 97 *e*P **PKPbc 13 42 46.1 -1.1**
AKL IAmb IAmb 13 42 49.2
comp=Z,182nm,0.3s
KBK Karagaybulak 147.19 56 P **PKPbc 13 42 46.1 -1.0**
SNR=48
KRJI Kerinci 147.30 160 PKP **PKPdf 13 42 46.7 +1.1**
BBKI Banjar Baru 147.51 185 PKP **PKPbc 13 42 48.4 -0.1**
TKM2 Tokmak 2 147.60 55 P **PKPdf 13 42 46.8 +1.4**
SNR=107
KUR Kuril'sk 147.68 310*d i*PKIKP **PKPbc 13 42 47.2 -0.8**
KUR pmax pmax
comp=Z,470nm,1.1s
JMU Jammu 147.88 74⇑*e*P **PKPbc 13 42 47.8 -1.2**
NRDN NARMADA NAGAR 147.91 93 *e*P **PKPdf 13 42 46.1 -0.1**
NRDN IAmb IAmb 13 42 48.7
comp=Z,48nm,0.7s
TPI Tanjungpandan 148.00 171 PKP **PKPbc 13 42 49.8 -0.1**
PDSI Padang 148.09 157 PKP **PKPbc 13 42 49.8 -0.3**
ZALV Zalesovo Beam 148.17 31 PKPbc **PKiKP 13 42 50.2 -0.5**
comp=Z,220nm,0.5s,baz=310,slow=3.4,SNR=386
ZALV pPKPbc **pPKPbc 13 43 23.3 +0.8**
comp=Z,183nm,0.8s,baz=306,slow=3.5,SNR=8.7
ULHL Ulahol 148.21 56 P **PKPbc 13 42 48.2 -1.6**
SNR=149
BHPL Bhopal 148.30 92 *e*P **PKPdf 13 42 47.9 +1.0**
TNTI Ternate 148.32 210 PKP **PKPbc 13 42 49.4 -1.3**
LUWI Luwuk 148.36 200 PKP **PKPdf 13 42 47.9 +0.6**
LUWI Luwuk 148.36 200 PKP **PKPdf 13 42 48.6 +1.4**
VJD Vijayawada 148.41 106 *e*P **PKPdf 13 42 48.8 +1.6**
PPI Padang Panjang 148.49 157 PKP **PKPdf 13 42 48.6 +1.1**
KSH Kashi 148.50 61 PKPbc **PKPdf 13 42 48.3 +1.4**
KSH sPKP sPKPdf 13 43 24.7 -8.7
KNDC Almaty 148.50 54 PKIKP **PKPbc 13 42 49.0 -1.4**
TNSS Tian-Shan 148.53 54 *e*PKP **PKPdf 13 42 47.3 +0.1**
TNSS Tian-Shan 148.53 54 *e*PKIKP **PKPdf 13 42 47.3 +0.1**
MDOK Medeo 148.57 54 *e*PKP **PKPdf 13 42 47.4 +0.5**
MDOK Medeo 148.57 54 *e*PKIKP **PKPdf 13 42 47.4 +0.5**
GUNA GUNA 148.63 90 *e*P **PKPdf 13 42 49.0 +1.6**
GUNA IAmb IAmb 13 42 53.0
comp=Z,151nm,0.7s
KUDL Kundal 148.69 83 *e*P **PKPdf 13 42 48.6 +1.3**
RTK Rohtak 148.78 81 *e*P **PKPdf 13 42 48.4 +1.0**
TSSA Tissa 148.94 74 *e*P **PKPdf 13 42 48.9 +1.0**
TSSA IAmb IAmb 13 42 54.0
comp=Z,213nm,1.0s
GSI Gunungsitoli 149.01 151 PKP **PKPbc 13 42 50.6 -1.9**
DHRM DHARAMSHALA 149.03 75 *e*P **PKPdf 13 42 48.7 +0.6**
BHK Bhakra 149.07 77 *e*P **PKPdf 13 42 49.6 +1.7**
AYAN Aya Nagar 149.30 83 *e*P **PKPdf 13 42 50.5 +2.2**
CGRH CHANDIGARH 149.31 78⇑*e*P **PKPdf 13 42 50.0 +1.7**
MNSI Mandailing Nat 149.36 155 PKP **PKPdf 13 42 49.2 +0.1**
NPLP NPLP New Delhi 149.37 82 *e*P **PKPbc 13 42 50.7 -2.2**
NDI New Delhi 149.41 82 *e*P **PKPdf 13 42 50.2 +1.7**
JMIU JAMIA UNIVERSI 149.46 82 *e*P **PKPdf 13 42 48.9 +0.3**
SATY Saty 149.56 54 *e*PKP **PKPdf 13 42 49.0 +0.5**
SATY Saty 149.56 54 *e*PKHKP **PKPdf 13 42 48.9 +0.5**
DSRI Dabo 149.67 165 PKP **PKPdf 13 42 50.0 +0.6**
SMLA Simla 149.68 77 *e*P **PKPdf 13 42 49.9 +1.1**
SBSI Sibolga 149.78 153 PKP **PKPdf 13 42 50.0 +0.4**
ALCI Alchi Leh 149.84 71 *e*P **PKPdf 13 42 51.1 +1.6**
ALCI IAmb IAmb 13 42 56.9
comp=Z,114nm,0.7s
JHNI Jhansi 149.90 89 *e*P **PKPbc 13 42 52.2 -2.2**
JHNI IAmb IAmb 13 42 56.0
comp=Z,236nm,1.0s
UZB Uzynbulak 149.97 53 *e*PKP **PKPdf 13 42 49.6 +0.5**
UZB Uzynbulak 149.97 53 *e*PKIKP **PKPdf 13 42 49.6 +0.5**
MRSI Marisa 150.05 200 PKP **PKPbc 13 42 53.3 -1.7**
PDGK Podgornoye 150.24 53 PKIKP **PKPdf 13 42 50.3 +0.8**
SHLS Shalkode 150.27 53 *e*PKP **PKPdf 13 42 50.5 +0.9**
SHLS Shalkode 150.27 53 *e*PKIKP **PKPdf 13 42 50.4 +0.9**
YSS Yuzhno-Sakhali 150.34 315 *i* PKIKP **PKPdf 13 42 51.0 +1.7**
YSS *e* 13 43 27.6
YSS *e* 13 46 31.4
YSS *e*SS SS 14 05 41.0 +1.1
YSS pmax pmax
comp=Z,210nm,0.8s
DDI Dehra Dun 150.36 79 *e*P **PKPdf 13 42 51.1 +1.1**
MK31 Makanchi Array 150.78 45 *i* PKIKP **PKPdf 13 42 50.4 +0.3**
MKAR Makanchi Array 150.78 45 PKP **PKPdf 13 42 50.9 +0.8**
comp=Z,5.1nm,0.8s,baz=310,slow=1.0,SNR=30
MKAR PKPbc **PKiKP 13 42 56.3 -0.1**
comp=Z,148nm,0.7s,baz=296,slow=2.1,SNR=327
MKAR pPKPbc **pPKPbc 13 43 30.3 +0.9**
comp=Z,94nm,0.8s,baz=304,slow=2.6,SNR=8.3
KCSI Kotacane, Aceh 151.08 149 PKP **PKPdf 13 42 51.6 0.0**
VIS Vishakhapatnam 151.24 107 *e*P **PKPdf 13 42 52.2 +0.6**
ASAJ Asahikawa 151.59 310 PKP **PKPdf 13 42 52.0 +0.6**
comp=Z,35nm,1.1s,baz=45,slow=1.4,SNR=8.0
ASAJ PKPbc **PKiKP 13 42 58.9 +0.8**
comp=Z,76nm,0.9s,baz=297,slow=16,SNR=8.0
JOSI Joshimath 151.68 79 *e*P **PKPdf 13 42 53.6 +1.4**
GRNR Gornyy 151.74 327⇓*i* PKIKP **PKiKP 13 42 58.9 +0.7**
GRNR pmax pmax
comp=Z,50nm,0.7s
ZSN Zaisan 152.00 42 *e*PKP **PKPdf 13 42 52.7 +0.7**
ZSN Zaisan 152.00 42 *e*PKIKP **PKPdf 13 42 52.6 +0.7**
BLSP Bilaspur 152.04 97 *e*P **PKPdf 13 42 53.9 +1.2**
BLSP IAmb IAmb 13 43 01.3
comp=Z,208nm,0.8s
RAGD RAYAGADA 152.04 104 *e*P **PKPdf 13 42 53.5 +0.7**
CMBY CAMPBELL BAY 152.05 138 *e*P **PKPdf 13 42 54.6 +1.7**
PTH Pithoragarh 152.13 81 *e*P **PKPdf 13 42 54.0 +1.1**
LGTI Lohaghat 152.15 81 *e*P **PKPdf 13 42 54.5 +1.8**
BRCI Bahraich 153.02 86⇑*e*P **PKPdf 13 42 54.6 +0.6**
ZEA Zeya 153.06 340 *e*PKIKP **PKPdf 13 42 54.1 +0.9**
ZEA pmax pmax
comp=Z,30nm,1.6s
WMQ Urumqi 155.53 47 *e*PKP **PKPdf 13 42 57.4 +0.3**
WMQ PKPab **PKPab 13 43 26.0 +2.4**
WMQ LR LR
comp=Z,170nm,23.5s
GAYA Gaya 155.58 94⇑*e*P **PKPdf 13 42 57.1 -0.6**
BOK Bokaro 155.85 97 *e*P **PKPdf 13 42 57.8 -0.3**
HEH HeiHe 155.96 336 PKP **PKPdf 13 42 56.4 -1.0**
HEH pPKP **PKPab 13 43 25.0 0.0**
HEH PP **PP 13 47 01.4 -1.0**
HEH AMB AMB
comp=Z,240nm,4.9s
DGPR DIGLIPUR 156.07 127 *e*P **PKPdf 13 42 58.6 +0.1**
IRK Irkutsk 156.15 12 *e*PKIKP **PKPdf 13 42 58.6 +1.0**
IRK pmax pmax
comp=Z,119nm,2.2s
MJAR Matsushiro Arr 156.99 295 PKP **PKPdf 13 42 59.4 +0.2**
comp=Z,8.0nm,1.1s,baz=255,slow=2.1,SNR=18
MJAR PKPab **PKPab 13 43 30.9 +0.8**
comp=Z,27nm,0.8s,baz=102,slow=2.6,SNR=26
CIT Chita 157.10 358 *e*PKIKP **PKPdf 13 42 59.4 +0.5**
CIT *e* 13 43 31.2
CIT *e* 13 43 42.6
CIT pmax pmax
comp=Z,119nm,3.2s
ZAK Zakamensk 157.71 15 *e*PKIKP **PKPdf 13 43 00.6 +0.8**
ZAK *e* 13 47 11.3
ZAK pmax pmax
comp=Z,33nm,2.0s
ZAK pmax pmax
comp=Z,15nm,1.8s
USRK Ussuriysk Ar. 158.22 319 PKP **PKPdf 13 43 00.7 +0.2**
comp=Z,6.2nm,1.1s,baz=338,slow=2.1,SNR=8.8
USRK PKPab **PKPab 13 43 35.4 +0.4**
comp=Z,12nm,0.9s,baz=52,slow=3.5,SNR=9.6
HILR Hailar Array B 158.80 346 PKP **PKPdf 13 43 00.8 -0.2**
comp=Z,6.5nm,0.6s,baz=94,slow=2.2,SNR=9.7
HILR PKPab **PKPab 13 43 38.4 +1.0**
comp=Z,20nm,0.7s,baz=46,slow=3.8,SNR=12
HILR pPKPab **pPKPab 13 44 10.0 -0.3**
comp=Z,8.3nm,0.7s,baz=42,slow=4.8,SNR=2.5
MDJ Mudanjiang 159.28 323 PKP **PKPdf 13 43 01.4 -0.3**
MDJ PP **PP 13 47 22.8 +1.9**
MDJ SS SS 14 07 21.9 +5.7
MDJ AMB AMB
comp=Z,410nm,6.5s
BNX BinXian 159.55 328 PKP **PKPdf 13 43 01.2 -0.8**
BNX sPKP **sPKPdf 13 43 41.4 -8.0**
BNX PP **PP 13 47 22.5 +0.3**
COBR COOCHBEHAR 159.65 93⇑*e*P **PKPdf 13 43 02.3 -0.4**
BELO BELONIA 160.47 103 *e*P **PKPdf 13 43 05.2 +1.5**
AGT Agartala 160.53 101 *e*P **PKPdf 13 43 04.9 +1.2**
SONM Songino Array 160.77 12 PKP **PKPdf 13 43 04.2 +0.8**
comp=Z,12nm,0.9s,baz=288,slow=0.5,SNR=51
SONM PKPab **PKPab 13 43 47.6 +1.5**
comp=Z,17nm,0.7s,baz=324,slow=4.6,SNR=15
SONM pPKPab **pPKPab 13 44 19.1 +0.4**
comp=Z,12nm,0.9s,baz=323,slow=4.1,SNR=4.4
LSA Lhasa 161.63 83 PKP **PKPdf 13 43 02.7 -2.7**
CN2 Changchun 161.93 328 *e*PKP **PKPdf 13 43 05.2 +0.6**
TAWA Tawang 162.01 90 *e*P **PKPdf 13 43 05.8 +0.1**
SILR SILCHAR 162.16 99 *e*P **PKPdf 13 43 07.0 +1.6**
TEZP TEZPUR 162.64 94 *e*P **PKPdf 13 43 04.6 -1.2**
IMP Imphal 163.16 100 *e*P **PKPdf 13 43 06.1 -0.4**
JNU Nakatsue 163.54 289 PKP **PKPdf 13 43 06.5 -0.1**
comp=Z,9.1nm,1.0s,baz=72,slow=6.4,SNR=3.2
JNU PKPab **PKPab 13 43 59.3 +0.5**
comp=Z,17nm,0.9s,baz=60,slow=4.2,SNR=6.7
ITAN ITANAGAR 163.56 92 *e*P **PKPdf 13 43 06.1 -0.6**
KOHI KOHIMA 163.56 98 *e*P **PKPdf 13 43 06.1 -0.9**
GOMU GeErMu 163.74 60 PKP **PKPdf 13 43 08.3 +1.2**
GOMU PP **PP 13 47 47.1 +1.1**
GOMU SKKS 13 54 23.9
GOMU SS **SS 14 08 01.1 -3.8**
ZIRO ZIRO 163.74 91 *e*P **PKPdf 13 43 07.0 -0.2**
CMAR Chiang Mai Arr 163.88 128 PKP **PKPdf 13 43 08.1 +0.8**
comp=Z,11nm,0.9s,baz=256,slow=2.5,SNR=72
CMAR PKPab **PKPab 13 44 00.6 +0.2**
comp=Z,21nm,0.9s,baz=237,slow=4.2,SNR=28
CMAR pPKPab **pPKPab 13 44 32.8 +0.4**
comp=Z,0.7nm,0.4s,baz=47,slow=25,SNR=2.0
JORH JORHAT 163.94 94 *e*P **PKPdf 13 43 08.2 +1.2**
KSRS Korea Array 164.48 306 PKP **PKPdf 13 43 07.3 +0.2**
comp=Z,15nm,1.1s,baz=128,slow=0.7,SNR=23
KSRS PKPab **PKPab 13 44 04.2 +1.5**
comp=Z,14nm,0.8s,baz=63,slow=4.8,SNR=18
KSRS pPKPab **pPKPab 13 44 35.6 +0.8**
comp=Z,4.3nm,0.8s,baz=70,slow=4.3,SNR=3.1
DIBR DIBRUGARH 164.66 92 *e*P **PKPdf 13 43 12.0 +4.3**
XLT XiLinHaoTe 164.93 349 *e*PKP **PKPdf 13 43 08.3 +0.8**
XLT pPKP pPKPdf 13 43 40.3 -1.9
XLT sPKP sPKPdf 13 43 46.8 -8.5
XLT PKPab **PKPab 13 44 05.5 +1.1**
XLT SS SS 14 08 17.9 +4.0
XLT AMB AMB
comp=Z,250nm,5.0s
LKP Lekhapani 165.45 93 *e*P **PKPdf 13 43 09.1 +0.7**
GTA Gaotai 165.50 42 PKP **PKPdf 13 43 09.1 +0.9**
GTA PKPab **PKPab 13 44 08.7 +1.5**
GTA SKKS 13 54 29.5
GTA SS **SS 14 08 25.8 +4.5**
GTA AMB AMB
comp=Z,74nm,8.0s
GTA LR LR
comp=Z,260nm,20.7s
GTA LR LR
comp=Z,260nm,21.5s
GTA LR LR
comp=Z,340nm,21.1s
JOW Kunigami 165.64 265 PKP **PKPdf 13 43 08.6 +0.1**
comp=Z,19nm,0.9s,baz=195,slow=5.0,SNR=2.5
JOW PKPab **PKPab 13 44 08.7 +0.6**
comp=Z,39nm,1.1s,baz=150,slow=7.0,SNR=3.8
TNCH TengChong 167.13 105⇓*i* PKP **PKPdf 13 43 10.7 +0.7**
TNCH PP **PP 13 48 03.6 -0.1**
TNCH SS SS 14 08 41.0 +1.3
TNCH AMB AMB
comp=Z,390nm,4.7s
DL2 Dalian 167.51 324 PKP **PKPdf 13 43 09.7 +0.1**
DL2 pPKP **pPKPdf 13 43 35.6 -8.6**
DL2 PKPab **PKPab 13 44 16.5 +0.6**
DL2 *e*PP **PP 13 48 07.3 +3.1**
DL2 *e*SS SS 14 08 48.3 +7.4
DL2 AMB AMB
comp=Z,300nm,4.4s
HHC Hu-ho-hao-te 168.28 2⇑*i* PKP **PKPdf 13 43 11.9 +1.7**
HHC PP **PP 13 48 10.8 +3.2**
HHC SS SS 14 08 52.2 +4.5
HHC AMB AMB
comp=Z,330nm,6.5s
BTO Baotou 168.40 8 *e*PKP **PKPdf 13 43 11.5 +1.2**
BTO PP **PP 13 48 12.2 +4.0**
BTO SS SS 14 08 51.2 +2.3
BTO LR LR
comp=Z,530nm,17.8s
BTO LR LR
comp=Z,300nm,16.9s
BTO LR LR
comp=Z,560nm,17.0s
BJI Beijing 168.63 344 PKP **PKPdf 13 43 10.6 +0.3**
QIZ Qiongzhong 169.72 167 PKP **PKPdf 13 43 11.4 -0.2**
QIZ PP **PP 13 48 15.5 +0.7**
QIZ SS SS 14 09 04.5 +2.6
QIZ LR LR
comp=Z,440nm,12.9s
QIZ LR LR
comp=Z,410nm,14.2s
QIZ LR LR
comp=Z,440nm,21.7s
LZDM Lanzhou Array 170.09 44 PKP **PKPdf 13 43 12.8 +1.0**
comp=Z,3.9nm,0.5s,baz=77,slow=3.1,SNR=4.0
LZH Lanzhou 170.09 43 ⇓PKP **PKPdf 13 43 13.0 +1.4**
LZH pPKP pPKPdf 13 43 41.5 -3.9
LZH SKKS 13 54 51.2
LZH SS **SS 14 09 08.6 +1.1**
LZH AMB AMB
comp=Z,240nm,6.2s
PZH PanZhiHua 170.36 103 PKP **PKPdf 13 43 12.1 +0.1**
PZH PKPab **PKPab 13 44 29.9 +0.7**
PZH PP **PP 13 48 20.9 +0.9**
PZH SKKS 13 54 52.0
PZH SS **SS 14 09 13.9 +2.1**
PZH AMB AMB
comp=Z,310nm,4.8s
KMI Kunming 170.66 113 ⇓PKP **PKPdf 13 43 12.4 +0.1**
TIY Taiyuan 171.43 359 PKP **PKPdf 13 43 12.5 +0.4**
TIY SS SS 14 09 20.4 +1.7
HNS HongShan 171.48 347 ⇓PKP **PKPdf 13 43 13.0 +1.0**
HNS pPKP **pPKPdf 13 43 46.1 -0.7**
HNS PKPab **PKPab 13 44 34.2 +0.8**
HNS PP **PP 13 48 26.9 +3.3**
HNS SS SS 14 09 18.8 -0.4
HNS LR LR
comp=Z,220nm,15.1s
HNS LR LR
comp=Z,130nm,12.6s

HNS				LR	LR			
	comp=Z,320nm,21.8s							
TIA	**Tai'an**	**171.81**	**331**	PKP	**PKPdf**	**13 43 12.9**	**+0.7**	
TIA				pPKP	**pPKPdf**	**13 43 45.7**	**-0.8**	
CD2	**Chengdu**	**172.44**	**74**	PKP	**PKPdf**	**13 43 12.0**	**-0.8**	
NJ2	**Nanjing**	**173.58**	**299**	*e*PKP	**PKPdf**	**13 43 13.4**	**+0.3**	
XAN	**Xi'an**	**174.34**	**29**	⇓PKP	**PKPdf**	**13 43 14.2**	**+0.8**	
XAN				PKPab	**PKPab**	**13 44 47.8**	**+1.5**	
XAN				SKKS		13 55 15.0		
XAN				SS	**SS**	**14 09 52.8**	**+5.0**	
XAN				LR	LR			
	comp=Z,330nm,22.7s							
XAN				LR	LR			
	comp=Z,260nm,21.3s							
XAN				LR	LR			
	comp=Z,340nm,22.0s							
LYN	**LuoYang**	**174.58**	**358**	PKP	**PKPdf**	**13 43 14.0**	**+0.6**	
LYN				PP	**PP**	**13 48 42.9**	**+4.3**	
LYN				AMB	AMB			
	comp=Z,270nm,4.2s							
LYN				LR	LR			
	comp=Z,380nm,19.9s							
LYN				LR	LR			
	comp=Z,260nm,18.9s							
LYN				LR	LR			
	comp=Z,340nm,13.3s							
GULI	**GuiLin**	**175.84**	**156**	⇓PKP	**PKPdf**	**13 43 15.3**	**+1.3**	
GULI				SS	SS	14 10 03.8	+2.1	
GULI				LR	LR			
	comp=Z,330nm,23.9s							
WHN	**Wuhan**	**177.67**	**308**	⇓PKP	**PKPdf**	**13 43 14.7**	**+0.5**	
WHN				PKPab	PKPab	13 45 01.3	0.0	
WHN				PP	**PP**	**13 48 54.6**	**0.0**	
WHN				SS	SS	14 10 20.9	+0.1	

*ISN **03** 13:24:55.9±1.1, 33.°76N×46.°47E, h11km±5km, ML3.3*
*TEH **03** 13:24:56.4, 33.°77N×46.°48E, h8km±55km*
*IDC **03** 13:24:56.1±11.0, 33.°51N×46.°17E, h0km, mb3.8/7, mbtmp3.9/7, MS3.3/7, Error ellipse: s-maj=232.2km s-min=29.6km az=11.0*
*NEIC **03** 13:24:58.3±0.6, 33.°64N±0.°08×46.°39E±0.°05, h10km±2km, mb4.4/7, Error ellipse: s-maj=13.5km s-min=5.5km az=201.0*
*OMAN **03** 13:25:06.0±1.5, 33.°17N×46.°97E, h10km, Error ellipse: s-maj=13.7km s-min=9.9km az=13.0*

ISC 03 13:24:57.0±0.5, 33.°68N±0.°03×46.°54E±0.°03, h10km, n62, σ2§68/70, mb4.0/10, MS3.9/4, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.65**	**2**	Pg	**Pb**	**13 25 08.4**	**-2.3**
GLG1	**Gilan-e-Gharb**	**0.68**	**310**	Pg	**Pb**	**13 25 08.9**	**-2.2**
KCHF	**Cheshme Sefid,**	**0.72**	**35**	Pg	**Pg**	**13 25 09.9**	**-1.2**
IBDR	**Badra**	**0.77**	**222**	*e*Pg	**Pg**	**13 25 12.0**	**+0.2**
IBDR				*e*Sg	**Sg**	**13 25 22.0**	**+0.2**
IBDR				AML	AML	13 25 39.4	
	comp=E,975nm,1.6s						
IBDR				AML	AML	13 25 39.6	
	comp=N,1μm,0.6s						
IDHR	**Dehrash**	**1.02**	**353**	Pg	**Pn**	**13 25 15.3**	**-2.4**
IDOB	**Doab**	**1.37**	**85**	Pg	**Pg**	**13 25 25.2**	**+1.9**
SNQR	**Sonqor, Kerman**	**1.48**	**37**	Pg	**Pg**	**13 25 25.1**	**-0.4**
BHD	**Baghdad**	**1.85**	**258**	*e*Pn	**Pn**	**13 25 28.0**	**-0.8**
BHD				*e*Sn	**Sb**	**13 25 53.0**	**-1.2**
BDRS	**Dareh Seyedi**	**1.97**	**81**	Pn	**Pg**	**13 25 34.3**	**-0.5**
RAFI	**Al-Rafai**	**1.98**	**191**	*e*Pn	**Pn**	**13 25 32.0**	**+1.3**
RAFI				*e*Sn	**Sb**	**13 25 59.0**	**+1.0**
HAGD	**Aghdareh**	**2.44**	**61**	Pn	**Pb**	**13 25 39.8**	**-1.3**
IKRK	**Kirkuk**	**2.50**	**314**	*e*Pn	**Pn**	**13 25 37.0**	**-0.8**
IKRK				*e*Sn	**Sn**	**13 26 07.0**	**-1.3**
HGHA	**Hamedan- Ghaye**	**2.63**	**46**	Pn	**Pb**	**13 25 42.4**	**-1.9**
QABG	**Abgarm-Qazvin**	**3.22**	**50**	Pn	**Pb**	**13 25 50.8**	**-3.7**
ZNGN	**Zangian**	**3.95**	**112**	Pn	**Pn**	**13 26 01.4**	**+3.4**
IKLH	**Kolahrood**	**4.22**	**94**	Pn	**Pn**	**13 26 05.2**	**+3.5**
IGAR	**Gharneh**	**4.79**	**104**	Pn	**Pn**	**13 26 13.2**	**+3.7**
KLNJ	**Kolanjah**	**5.04**	**121**	Pn	**Pn**	**13 26 16.6**	**+3.6**
IRAM	**Ramesheh**	**5.26**	**109**	Pn	**Pn**	**13 26 19.9**	**+3.9**
MARD	**Mardin**	**5.94**	**309**		**Pn**	**13 26 24.5**	**-0.6**
GNI	**Garni**	**6.62**	**348**	Pn	**Pn**	**13 26 36.1**	**+1.6**
GNI	**Garni**	**6.62**	**348**	LR	LR	13 28 50.0	
	comp=N,14nm,18.6s,baz=150,slow=35						
ASF	**Jabal al Asfar**	**8.25**	**262**	LR	LR	13 31 00.6	
	comp=N,34nm,19.8s,baz=97,slow=46						
MMAI	**Mount Meron Ar**	**9.34**	**269**	LR	LR	13 31 36.0	
	comp=N,32nm,21.9s,baz=33,slow=44						
RAYN	**Ar Rayn**	**10.16**	**185**		**Pn**	**13 27 23.4**	**+0.3**
RAYN	**Ar Rayn**	**10.16**	**185**	P	**Pn**	**13 27 25.1**	**+2.0**
RAYN				S	**Sn**	**13 29 18.5**	**+1.3**
EIL	**Elat**	**10.65**	**251**	LR	LR	13 32 02.6	
	comp=N,39nm,18.7s,baz=348,slow=41						
SHME	**Shamm**	**11.28**	**130**	P	**Pn**	**13 27 40.6**	**+2.3**
SHME				S	**Sn**	**13 29 39.6**	**-4.8**
BANOM	**Banah**	**11.46**	**130**	P	**Pn**	**13 27 43.1**	**+2.2**
BANOM				S	**Sn**	**13 29 44.9**	**-4.2**
NAZ	**Nazwa, Dubai**	**11.76**	**135**	P	**Pn**	**13 27 47.8**	**+2.9**
MASF	**Masafi**	**11.77**	**132**	P	**Pn**	**13 27 47.3**	**+2.2**
	SNR=12						
MASF				S	**Sn**	**13 29 52.9**	**-3.7**
MDH	**Madha**	**11.91**	**132**	P	**Pn**	**13 27 48.1**	**+1.2**
	SNR=5.7						
MDH				S	**Sn**	**13 29 56.5**	**-3.4**
UOSS	**Minazif**	**12.11**	**133**		**Pn**	**13 27 49.8**	**+0.1**
UOSS	**Minazif**	**12.11**	**133**	P	**Pn**	**13 27 49.6**	**-0.1**
UOSS				S	**Sn**	**13 30 00.2**	**-4.7**
HATD	**Hatta, Dubai**	**12.16**	**134**	P	**Pn**	**13 27 51.1**	**+0.8**
ASHO	**Ashiyiah**	**12.22**	**135**	P	**Pn**	**13 27 52.4**	**+1.2**
	SNR=8.8						
ASHO				S	**Sn**	**13 30 03.4**	**-4.1**
MZR	**Muzera**	**12.26**	**148**	P	**Pn**	**13 27 52.8**	**+1.0**
MZR				S	**Sn**	**13 30 06.2**	**-2.4**
SOHO	**SOHO**	**12.92**	**135**	P	**Pn**	**13 28 02.2**	**+1.5**
SOHO				S	**Sn**	**13 30 20.5**	**-4.0**
SMDO	**Samad**	**14.64**	**133**	P	**Pn**	**13 28 24.3**	**0.0**
SMDO				S	**Sn**	**13 31 02.3**	**-4.4**
WSAR	**Wadi Sarin**	**14.86**	**131**	P	**Pn**	**13 28 26.2**	**-1.1**
WSAR				S	**Sn**	**13 31 07.0**	**-5.1**
MHTO	**MHTO**	**16.20**	**138**	P	**P**	**13 28 47.0**	**-1.0**
MHTO				S	**Sn**	**13 31 37.5**	**-7.0**
DOK	**Doka**	**16.46**	**154**	P	**Pn**	**13 28 47.2**	**-1.0**
DOK				S	**Sn**	**13 31 44.8**	**-6.2**
AB31	**Akbulak array**	**18.48**	**29**	P	**Pn**	**13 29 14.3**	**+1.2**
ABKAR	**Akbulak array**	**18.48**	**29**	P	**Pn**	**13 29 14.1**	**+1.0**
MLR	**Muntele Rosu**	**19.71**	**313**	P	**Pn**	**13 29 26.9**	**-1.2**
MLR				IAmb	IAmb	13 29 39.6	
	comp=Z,11nm,1.5s						
ITM	**Ithomi**	**20.34**	**287**	P	Pn	13 29 33.1	-2.5
ITM				IAmb	IAmb	13 29 44.9	
	comp=Z,77nm,1.9s						
KKAR	**Karatay Array**	**20.95**	**56**	P	Pn	13 29 42.1	-0.6
AKASG	**Malin Array Be**	**21.22**	**328**	P	**P**	**13 29 43.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=138,slow=9.9,SNR=1.7						
	comp=Z,0.3nm,0.3s						
BURAR	**Bucovina Array**	**21.25**	**317**	P	**P**	**13 29 43.8**	**+0.4**
BURAR				IAmb	IAmb	13 29 45.5	
	comp=Z,2.9nm,1.3s						
BVAR	**Borovoye Array**	**25.77**	**34**	P	**P**	**13 30 31.4**	**+3.6**
	comp=Z,1.7nm,0.8s,baz=238,slow=8.1,SNR=9.4						
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**28.84**	**44**	P	**P**	**13 30 59.1**	**+3.7**
	comp=Z,0.8nm,0.2s,baz=250,slow=8.4,SNR=4.2						
KURBB				LR	LR	13 43 42.1	
	comp=Z,246nm,22.0s,baz=196,slow=39						
	comp=Z,0.8nm,0.2s						
MKAR	**Makanchi Array**	**30.00**	**53**	P	**P**	**13 31 08.3**	**+2.5**
MKAR	**Makanchi Array**	**30.00**	**53**	P	**P**	**13 31 09.6**	**+3.8**
	comp=Z,0.5nm,0.6s,baz=250,slow=7.9,SNR=5.6						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**30.74**	**341**	P	**P**	**13 31 13.1**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=130,slow=4.1,SNR=3.9						
	comp=Z,2.1nm,0.9s						
SENIN	**Lac Senin/Sane**	**32.28**	**305**	P	**P**	**13 31 26.7**	**+0.5**
SENIN				IAmb	IAmb	13 32 21.7	
	comp=Z,17nm,1.4s						
ZALV	**Zalesovo Beam**	**33.68**	**41**	P	**P**	**13 31 41.0**	**+3.1**
	comp=Z,0.7nm,0.4s,baz=249,slow=10,SNR=4.7						
	comp=Z,0.7nm,0.4s						
HFS	**Hagfors**	**34.06**	**331**	P	**P**	**13 31 41.8**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=125,slow=9.3,SNR=5.1						
	comp=Z,1.8nm,0.8s						
ESDC	**Sonseca Array**	**40.51**	**294**	LR	LR	13 49 51.0	
	comp=Z,131nm,20.1s,baz=136,slow=37						
SPITS	**Spitsbergen Ar**	**46.47**	**352**	LR	LR	13 53 03.2	
	comp=Z,164nm,19.6s,baz=74,slow=36						
K29M	**Barlow Dome**	**82.75**	**2**	P	**P**	**13 37 22.5**	**+1.5**
K29M				IAmb	IAmb	13 37 25.4	
	comp=Z,15nm,1.9s						
M27K	**Edge Creek, AK**	**84.06**	**4**	P	**P**	**13 37 28.6**	**+0.8**
BBB	**Bella Bella**	**94.37**	**357**	LR	LR	14 24 32.0	
	comp=Z,56nm,21.4s,baz=116,slow=38						

SDD 03 13:31:19.5±2.3, 18.°39N×67.°89W, h0km±999km, MD2.7, ML1.7, MW2.6, 3C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIDR	**Higuey Centro**	**0.81**	**284**	*e*Sg	Sg	13 31 43.3	-2.2
CRPR	**Cabo Rojo, PR**	**0.83**	**117**	*e*Sg	Sg	13 31 46.0	-0.4
CRPR				IAML		13 31 53.2	
	comp=N,50nm,1.2s						
MLPR	**Magueyes Islan**	**0.91**	**117**	*e*Pg	Pg	13 31 36.6	-0.3
MLPR				*e*Sg	Sg	13 31 47.5	-1.1
MLPR				IAML		13 31 58.3	
	comp=N,9.6nm,1.9s						
AOPR	**Arecibo Observ**	**1.08**	**92**	*e*Sg	Sg	13 31 52.5	-1.8
MIDR	**Miches**	**1.25**	**298**	*e*Pg	Pg	13 31 43.3	-0.1
MIDR				IAML		13 32 34.6	
	comp=N,14nm,1.0s						

*MDD **03** 13:33:14.2±1.6, 35.°85N×2.°05W, h11km±11km, mb_Lg2.3/4, Error ellipse: s-maj=12.7km s-min=7.7km az=118.0*
*SFS **03** 13:33:18.7, 36.°06N×2.°94W, h33km, ML2.5/4, ML2.2/4, MLv2.1/4*
*CNRM **03** 13:33:19.2, 35.°48N×3.°78W, h17km, ML2.3*

ISC 03 13:33:18.1±1.2, 35.°55N±0.°04×3.°77W±0.°04, h14km±9km, n20, σ1§07/26, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.36**	**202**	P	**Pg**	**13 33 25.6**	**+0.2**
PALE	**Palemas**	**0.36**	**202**	S	**Sg**	**13 33 30.2**	**0.0**
WMELI	**Melilla**	**0.71**	**109**	Sn	**Sg**	**13 33 41.9**	**+0.7**
WMELI				Pn	**Pb**	**13 33 32.1**	**-0.1**
EMEL	**Melilla**	**0.71**	**110**	P	**Pb**	**13 33 30.9**	**-1.4**
EMEL				S	**Sg**	**13 33 41.9**	**+0.7**
GOG	**Mont Gurugu**	**0.71**	**117**	P	**Pg**	**13 33 32.0**	**+0.1**
GOG	**Mont Gurugu**	**0.71**	**117**	S	**Sb**	**13 33 42.8**	**+0.8**
EMLI	**Melilla**	**0.72**	**110**	Pn	**Pb**	**13 33 31.0**	**-0.5**
EMLI				Sn	**Sb**	**13 33 42.2**	**+0.2**
EALB	**Alboran**	**0.72**	**57**	P	Pb	13 33 28.1	-4.3
EALB				S	**Sb**	**13 33 40.4**	**-1.7**
EMIJ	**Mijas**	**1.30**	**322**	Pn	**Pn**	**13 33 43.2**	**+1.3**
EMIJ	**Mijas**	**1.30**	**322**	P	**Pn**	**13 33 42.1**	**+0.2**
EMIJ				S	**Sn**	**13 33 59.6**	**+0.5**
EMIJ				*i* IVmb_Lg		13 34 04.6	
ELGU	**Los Guajares,**	**1.32**	**5**	P	**Pn**	**13 33 42.4**	**+0.1**
ELGU				S	**Sn**	**13 34 01.2**	**+1.4**
ELGU				*i* IVmb_Lg		13 34 03.4	
EMAL	**Malaga-Limoner**	**1.32**	**337**	Pn	**Pn**	**13 33 41.0**	**-1.2**
EMAL				Sg	**Sn**	**13 33 58.7**	**-1.0**
TAF	**Taforalt**	**1.33**	**123**	P	**Pn**	**13 33 42.8**	**+0.5**
TAF	**Taforalt**	**1.33**	**123**	S	**Sg**	**13 34 00.6**	**-0.4**
ECEU	**Ceuta**	**1.35**	**285**	P	Pg	13 33 56.7	+13
ECEU				S	Sg	13 34 28.6	+27
EADA	**Adamuz**	**2.69**	**346**	P	**Pn**	**13 33 59.9**	**-1.2**
EADA				*i* IVmb_Lg		13 34 35.5	
EADA				S	**Sn**	**13 34 36.6**	**+3.0**
MD31	**MD31**	**2.80**	**197**	P	**Pn**	**13 34 03.0**	**+0.5**
MD31	**MD31**	**2.80**	**197**	S	**Sn**	**13 34 35.2**	**-1.0**
MDT	**Midelt**	**2.81**	**194**	P	**Pn**	**13 34 02.6**	**-0.2**
MDT	**Midelt**	**2.81**	**194**	S	**Sn**	**13 34 36.8**	**+0.2**

*DSN **03** 13:40:28.1±1.2, 27.°37N×55.°24E, h10km, ML2.8/5, Error ellipse: s-maj=27.3km s-min=7.4km az=45.0*
*TEH **03** 13:40:31.5, 27.°24N×55.°20E, h24km±80km*

ISC 03 13:40:31.2±1.0, 27.°18N±0.°05×55.°19E±0.°04, h10km, n16, σ0§90/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.88**	**304**	Pg	**Pg**	**13 40 47.8**	**-0.3**
BNDS	**Bandar-Abbas**	**0.90**	**75**	Pg	**Pg**	**13 40 48.0**	**-0.6**
GENO	**Geno**	**0.90**	**75**	Pg	**Pg**	**13 40 48.6**	**0.0**
IBND	**Bandar-abas**	**1.23**	**77**	Pg	**Pn**	**13 40 53.9**	**-0.5**
SHME	**Shamm**	**1.41**	**143**	P	**Pn**	**13 40 55.7**	**-1.1**
SHME				S	**Sb**	**13 41 17.1**	**+1.6**
BANOM	**Banah**	**1.59**	**141**	P	**Pn**	**13 40 58.2**	**-1.3**
BANOM				S	**Sn**	**13 41 20.8**	**+0.7**
LMD1	**Lamerd**	**1.81**	**276**	Pn	**Pb**	**13 41 04.5**	**+0.1**
MDH	**Madha**	**2.12**	**152**	P	**Pn**	**13 41 06.4**	**-0.2**
QIR1	**Qir**	**2.30**	**305**	Pn	**Pg**	**13 41 15.8**	**+0.5**
UOSS	**Minazif**	**2.40**	**157**	P	**Pn**	**13 41 09.1**	**-1.4**
HATD	**Hatta, Dubai**	**2.49**	**160**	P	**Pn**	**13 41 11.3**	**-0.4**
ASHO	**Ashiyiah**	**2.60**	**162**	P	**Pn**	**13 41 12.8**	**-0.5**
NGRK	**Negar Kerman**	**2.81**	**28**	Pn	**Pn**	**13 41 15.4**	**-1.1**
KRBR	**Kerman**	**3.12**	**26**	Pn	**Pn**	**13 41 21.9**	**+0.4**
KHGB	**Koh Gabri**	**3.38**	**19**	Pn	**Pn**	**13 41 24.2**	**+0.1**
IRAM	**Ramesheh**	**5.23**	**333**	Pn	**Pn**	**13 41 48.5**	**-1.1**

*SFS **03** 14:21:52.4, 35.°47N×3.°88W, h0km, ML2.9/10, ML2.9/10, MLv2.9/10*
*MDD **03** 14:21:53.4±0.7, 35.°48N×3.°78W, h9km±6km, mb_Lg2.7/16, Error ellipse: s-maj=4.4km s-min=2.9km az=170.0*
*CNRM **03** 14:21:53.2, 35.°53N×3.°74W, h30km, ML2.9*
*INMG **03** 14:21:54.4±1.4, 35.°50N×3.°75W, h17km±6km, ML2.3, Error ellipse: s-maj=3.4km s-min=3.0km az=113.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*

ISC 03 14:21:52.9±1.2, 35.°50N±0.°02×3.°78W±0.°03, h15km±10km, n57, σ1§22/88, 1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.31**	**205**	P	**Pb**	**14 22 01.6**	**+1.4**
PALE	**Palemas**	**0.31**	**205**	S	**Sb**	**14 22 07.1**	**+2.1**
GOG	**Mont Gurugu**	**0.69**	**113**	P	**Pg**	**14 22 06.4**	**-0.2**
GOG	**Mont Gurugu**	**0.69**	**113**	S	**Sb**	**14 22 16.4**	**+0.2**
EMEL	**Melilla**	**0.70**	**106**	⇓P	**Pb**	**14 22 06.8**	**0.0**
EMEL				S	**Sb**	**14 22 15.9**	**-0.3**
WMEL	**Melilla**	**0.70**	**105**	P	**Pg**	**14 22 06.4**	**-0.2**
WMELI				S	**Sb**	**14 22 16.4**	**+0.2**
EMLI	**Melilla**	**0.70**	**106**	S	**Sb**	**14 22 17.1**	**+0.8**
EMLI				P	**Pg**	**14 22 06.5**	**-0.2**
EALB	**Alboran**	**0.75**	**54**	P	**Pb**	**14 22 07.5**	**-0.1**
EALB				S	**Sg**	**14 22 17.8**	**+0.4**
AKLM	**AKL**	**0.99**	**184**	P	**Pb**	**14 22 10.3**	**-1.4**
AKLM	**AKL**	**0.99**	**184**	S	**Sb**	**14 22 23.3**	**-1.3**
TAF	**Taforalt**	**1.31**	**121**	P	**Pn**	**14 22 16.0**	**-0.7**
TAF	**Taforalt**	**1.31**	**121**	S	**Sb**	**14 22 32.1**	**-1.7**
EMIJ	**Mijas**	**1.34**	**323**	P	**Pn**	**14 22 16.2**	**-0.8**
EMIJ				S	**Sn**	**14 22 33.8**	**-0.7**
EMIJ	**Mijas**	**1.34**	**323**	P	**Pn**	**14 22 16.5**	**-0.5**
EMIJ				S	**Sn**	**14 22 33.1**	**-1.4**
EMIJ				*i* IVmb_Lg		14 22 38.7	
CEU	**Ceuta**	**1.36**	**288**	P	**Pn**	**14 22 15.0**	**-2.3**
ECEU	**Ceuta**	**1.36**	**288**	P	**Pn**	**14 22 16.3**	**-1.1**
ECEU				S	**Sn**	**14 22 32.2**	**-2.9**
EMAL	**Malaga-Limoner**	**1.37**	**337**	P	**Pn**	**14 22 16.8**	**-0.7**
EMAL				S	**Sn**	**14 22 34.0**	**-1.3**
ELGU	**Los Guajares,**	**1.37**	**5**	P	**Pn**	**14 22 17.1**	**-0.5**
ELGU				S	**Sg**	**14 22 37.0**	**-0.3**
ELGU	**Los Guajares,**	**1.37**	**5**	P	**Pn**	**14 22 17.4**	**-0.2**
ELGU				S	**Sn**	**14 22 34.5**	**-1.0**
ELGU				*i* IVmb_Lg		14 22 39.1	
EJIF	**Jimena Fronter**	**1.67**	**305**	P	**Pn**	**14 22 22.3**	**+0.7**
EQUE	**Quentar**	**1.73**	**9**	P	**Pb**	**14 22 23.8**	**-0.6**
EQUE				S	**Sn**	**14 22 43.3**	**-1.0**
EQUE				*i* IVmb_Lg		14 22 50.4	
EQTA	**Presa de Quent**	**1.73**	**9**	P	**Pn**	**14 22 23.1**	**+0.7**
EQTA				S	**Sb**	**14 22 47.1**	**+1.2**
RSA	**Sarsar**	**1.78**	**251**	P	**Pn**	**14 22 23.0**	**-0.2**
RSA	**Sarsar**	**1.78**	**251**	S	**Sn**	**14 22 45.5**	**0.0**
ENIJ	**Nijar**	**1.94**	**40**	P	**Pn**	**14 22 25.2**	**-0.1**
ENIJ				S	**Sn**	**14 22 49.0**	**-0.5**
ENIJ	**Nijar**	**1.94**	**40**	P	**Pn**	**14 22 24.7**	**-0.7**
ENIJ				S	**Sn**	**14 22 48.8**	**-0.7**
ENIJ				*i* IVmb_Lg		14 22 49.9	
IFR	**Ifrane**	**2.27**	**210**	P	**Pn**	**14 22 29.2**	**-0.8**
IFR				S	**Sn**	**14 22 56.9**	**-0.9**
EQES	**Quesada**	**2.37**	**14**	P	**Pn**	**14 22 31.9**	**+0.6**
EQES				S	**Sn**	**14 23 01.1**	**+0.9**
EQES				*i* IVmb_Lg		14 23 05.4	
EADA	**Adamuz**	**2.74**	**347**	P	**Pn**	**14 22 38.1**	**+1.7**
EADA				S	**Sn**	**14 23 10.5**	**+1.3**
EADA	**Adamuz**	**2.74**	**347**	P	**Pn**	**14 22 37.4**	**+1.1**
EADA				S	**Sn**	**14 23 09.7**	**+0.4**
EADA				*i* IVmb_Lg		14 23 21.0	
MD31	**MD31**	**2.75**	**198**	P	**Pn**	**14 22 36.1**	**-0.4**
MD31	**MD31**	**2.75**	**198**	S	**Sn**	**14 23 09.4**	**0.0**
MDT	**Midelt**	**2.76**	**195**	S	**Pn**	**14 22 36.5**	**-0.2**
MDT	**Midelt**	**2.76**	**195**	S	**Sn**	**14 23 09.7**	**-0.1**
ECAB	**El Cabril**	**2.89**	**333**	P	**Pn**	**14 22 38.5**	**+0.1**
ECAB				S	**Sn**	**14 23 13.9**	**+1.0**
ECAB				*i* IVmb_Lg		14 23 22.9	
EMUR	**La Murta**	**3.10**	**40**	P	**Pn**	**14 22 41.4**	**0.0**
EMUR				S	**Sn**	**14 23 16.5**	**-1.6**
EMUR				*i* IVmb_Lg		14 23 28.5	
ZHG	**ZHG**	**3.13**	**230**	P	**Pn**	**14 22 43.6**	**+1.9**
ZHG	**ZHG**	**3.13**	**230**	S	**Sn**	**14 23 23.1**	**+4.3**
EMIN	**Mina Concepcio**	**3.25**	**315**	P	**Pn**	**14 22 43.4**	**+0.1**
EMIN				S	**Sn**	**14 23 19.7**	**-2.0**
EMIN				*i* IVmb_Lg		14 23 33.6	
PSIM	**Granatula de C**	**3.32**	**0**	P	**Pn**	**14 22 44.2**	**-0.1**
PSIM				S	**Sn**	**14 23 23.8**	**+0.4**
EGRO	**El Granado**	**3.61**	**305**	P	**Pn**	**14 22 47.9**	**-0.4**
EGRO				S	**Sn**	**14 23 29.2**	**-1.4**
EGRO				*i* IVmb_Lg		14 23 35.6	
ETOB	**Tobarra**	**3.61**	**29**	P	**Pn**	**14 22 51.0**	**+2.6**
ETOB				S	**Sn**	**14 23 32.9**	**+2.2**
ETOB	**Tobarra**	**3.61**	**29**	P	**Pn**	**14 22 50.2**	**+1.9**
ETOB				S	**Sn**	**14 23 30.6**	**-0.1**
ETOB				*i* IVmb_Lg		14 23 34.1	
PVAQ	**Vaqueiros**	**3.70**	**302**	*e*P	**Pn**	**14 22 50.4**	**+0.9**
PVAQ				*e*S	**Sn**	**14 23 31.9**	**-1.0**
PVAQ				*i* IAML		14 23 34.3	
PVAQ				*i* IAML		14 23 35.1	
PVAQ				*i* IAML		14 23 39.4	
PVAQ	**Vaqueiros**	**3.70**	**302**	P	**Pn**	**14 22 49.0**	**-0.5**
PVAQ	**Vaqueiros**	**3.70**	**302**	S	**Sn**	**14 23 30.8**	**-2.1**
PBAR	**Barrancos**	**3.74**	**317**	*e*P	**Pn**	**14 22 51.1**	**+1.1**
PBAR				*e*S	**Sn**	**14 23 33.7**	**-0.1**
PBAR				*i* IAML		14 23 37.5	
PBAR				*i* IAML		14 23 38.3	
PBAR				*i* IAML		14 23 42.8	
PBDV	**Barranco-do-Ve**	**3.78**	**299**	*e*P	**Pn**	**14 22 51.2**	**+0.6**
PBDV				*e*S	**Sn**	**14 23 35.3**	**+0.5**
PBDV				*i* IAML		14 23 37.4	
PBDV				*i* IAML		14 23 37.9	
PCVE	**Castro Verde**	**4.04**	**303**	*e*P	**Pn**	**14 22 55.0**	**+0.9**
EBAD	**Badajoz**	**4.16**	**322**	P	**Pn**	**14 22 56.2**	**+0.5**
EBAD				S	**Sn**	**14 23 43.8**	**-0.3**
EBAD				*i* IVmb_Lg		14 23 52.6	
ESDC	**Sonseca Array**	**4.17**	**358**	P	**Pn**	**14 22 56.3**	**+0.2**
ESDC				*i* IVmb_Lg		14 23 53.1	
MESJ	**Messejana**	**4.27**	**305**	*e*P	**Pn**	**14 22 58.9**	**+1.6**
MESJ				*e*S	**Sn**	**14 23 46.1**	**-0.7**
MESJ				*i* IAML		14 23 51.7	
MESJ				*i* IAML		14 23 51.9	
MESJ				*i* IAML		14 23 53.1	
MORF	**Marmelete**	**4.33**	**296**	*e*S	**Sn**	**14 23 48.0**	**-0.4**
MORF				*i* IAML		14 23 52.9	
MORF				*i* IAML		14 23 54.6	
MORF				*i* IAML		14 23 55.2	
EVO	**Evora**	**4.55**	**313**	*e*S	**Sn**	**14 23 53.0**	**-0.6**
EVO				*i* IAML		14 23 53.7	
EVO				*i* IAML		14 23 54.0	
PARRA	**Arraiolos**	**4.75**	**315**	*e*P	Pn	14 23 05.5	-6.7
PARRA				*e*S	Sn	14 23 58.5	-15
PARRA				*i* IAML		14 23 59.4	
PARRA				*i* IAML		14 24 02.9	
PARRA				*i* IAML		14 24 03.8	
PMTG	**Montargil**	**5.03**	**316**	*e*P	**Pn**	**14 23 09.8**	**+2.0**
PMTG				*e*S	**Sn**	**14 24 03.6**	**-1.9**
PMTG				*i* IAML		14 24 07.0	
PMTG				*i* IAML		14 24 08.3	
PMTG				*i* IAML		14 24 09.5	
PSARD	**Sardoal**	**5.38**	**321**	*e*P	**Pn**	**14 23 14.5**	**+2.0**
PSARD				*e*S	**Sn**	**14 24 12.3**	**-

*PRE **03** 14:25:11.8±0.8,26˚36S×27˚33E,h2km,ML3.0*
*BGS! **03** 14:25:14.4±1.5,26˚61S×27˚53E,h31km±58km,ML3.5*
ISC 03 14:25:12.1±1.2,**26˚37S**±0˚03×**27˚32E**±0˚03,**h6**km±10km, **n31**,σ1°**34**/61,**South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.56**	**176**	*eP*	**Pg**	**14 25 22.9**	**0.0**
PRYS				*eS*	**Sg**	**14 25 30.7**	**+0.5**
PRYS				IAML		14 25 34.8	
	comp=Z,748nm,0.5s						
HRAO	**HartRAO**	**0.58**	**35**	*eP*	**Pg**	**14 25 22.6**	**-0.7**
HRAO				*eS*	**Sg**	**14 25 30.7**	**-0.1**
HRAO				IAML		14 25 30.9	
	comp=Z,598nm,0.4s						
SNKL	**Senekal, Frees**	**1.94**	**168**	*eP*	**Pn**	**14 25 46.6**	**+0.8**
SNKL				*eS*	**Sb**	**14 26 12.5**	**-0.1**
SNKL				IAML		14 26 13.8	
	comp=Z,564nm,0.2s						
SWZ	**Schweizer**	**1.95**	**245**	*eP*	**Pn**	**14 25 46.8**	**+0.9**
SWZ				*eS*	**Sb**	**14 26 12.6**	**-0.3**
SWZ				IAML		14 26 17.8	
	comp=Z,221nm,0.2s						
LBTB	**Lobatse**	**2.05**	**311**	*eP*	**Pn**	**14 25 47.5**	**+0.3**
LBTB				*eS*	**Sb**	**14 26 15.1**	**-0.6**
LBTB				IAML		14 26 21.2	
	comp=Z,408nm,0.2s						
MAKGR	**Makgori**	**2.33**	**283**	*iP*	**Pb**	**14 25 53.5**	**-1.1**
MAKGR				*iS*	**Sn**	**14 26 19.8**	**-0.3**
MAKGR				IAML		14 26 37.5	
	comp=N,838nm,0.6s						
CRLN	**Carolina, Mapu**	**2.46**	**82**	*eP*	**Pn**	**14 25 54.4**	**+1.5**
CRLN				*eS*	**Sn**	**14 26 24.4**	**+1.0**
CRLN				IAML		14 26 33.0	
	comp=Z,40nm,0.2s						
LEPH	**Lephalale, Lim**	**2.54**	**10**	*eP*	**Pn**	**14 25 54.6**	**+0.8**
LEPH				*eS*	**Sn**	**14 26 25.2**	**+0.1**
LEPH				IAML		14 26 37.5	
	comp=Z,92nm,0.3s						
NWCL	**Newcastle**	**2.67**	**121**	*eP*	**Pn**	**14 25 57.1**	**+1.3**
NWCL				*eS*	**Sn**	**14 26 29.7**	**+1.2**
NWCL				IAML		14 26 33.2	
	comp=Z,155nm,0.4s						
BOSA	**Boshof**	**2.89**	**219**	*eP*	**Pn**	**14 25 59.8**	**+1.0**
BOSA				*eS*	**Sn**	**14 26 34.5**	**+0.5**
BOSA				IAML		14 26 44.0	
	comp=Z,73nm,0.3s						
LPHEP	**Lephephe**	**3.27**	**336**	*iP*	**Pn**	**14 26 06.5**	**+2.5**
LPHEP				*iS*	**Sn**	**14 26 45.2**	**+1.9**
LPHEP				IAML		14 27 01.2	
	comp=E,244nm,0.3s						
SKOMA	**Sekoma**	**3.57**	**300**	*iP*	**Pn**	**14 26 10.1**	**+1.9**
SKOMA				*iS*	**Sn**	**14 26 52.8**	**+2.1**
SKOMA				IAML		14 27 10.2	
	comp=E,147nm,0.3s						
MREMI	**Moremi**	**3.78**	**2**	*iP*	**Pn**	**14 26 12.8**	**+1.8**
MREMI				*iS*	**Sn**	**14 26 55.1**	**-0.7**
MREMI				IAML		14 27 18.0	
	comp=N,272nm,0.2s						
KDWAN	**Kaudwane**	**3.83**	**320**	*iP*	**Pn**	**14 26 14.3**	**+2.7**
KDWAN				*iS*	**Sn**	**14 26 58.6**	**+1.5**
KDWAN				IAML		14 27 16.8	
	comp=N,223nm,0.9s						
POGA	**Pongola**	**4.04**	**105**	*eP*	**Pn**	**14 26 15.4**	**+0.9**
POGA				*eS*	**Sn**	**14 27 01.5**	**-0.7**
POGA				IAML		14 27 14.4	
	comp=Z,71nm,0.4s						
PMBG	**Pietermaritzbu**	**4.22**	**139**	*eP*	**Pn**	**14 26 17.8**	**+0.8**
PMBG				*eS*	**Sn**	**14 27 06.0**	**-0.5**
PMBG				IAML		14 27 20.4	
	comp=Z,87nm,0.4s						
HVD	**Gariep Dam**	**4.52**	**200**	*eP*	**Pn**	**14 26 22.6**	**+1.4**
HVD				*eS*	**Sn**	**14 27 14.0**	**-0.1**
KSTD	**Kokstad**	**4.58**	**158**	*eP*	**Pn**	**14 26 23.7**	**+1.6**
KSTD				*eS*	**Sn**	**14 27 14.5**	**-1.2**
KSTD				IAML		14 27 39.1	
	comp=Z,27nm,0.7s						
TEMBE	**Tembe Elephant**	**4.62**	**100**	*eP*	**Pn**	**14 26 23.5**	**+1.0**
TEMBE				*eS*	**Sn**	**14 27 15.6**	**-0.8**
TEMBE				IAML		14 27 37.9	
	comp=Z,56nm,0.5s						
MOPA	**Mopani**	**4.67**	**53**	*eP*	**Pn**	**14 26 24.1**	**+1.0**
MOPA				*eS*	**Sn**	**14 27 16.0**	**-1.6**
MOPA				IAML		14 27 39.1	
	comp=Z,61nm,0.9s						
MUSN	**Musina, Limpop**	**4.68**	**30**	*eP*	**Pn**	**14 26 24.5**	**+1.2**
MUSN				*eS*	**Sn**	**14 27 17.7**	**-0.2**
MUSN				IAML		14 27 37.3	
	comp=Z,31nm,0.4s						
BROLN	**Tlhalogang**	**5.24**	**0**	*iP*	**Pn**	**14 26 32.2**	**+1.1**
BROLN				*iS*	**Sn**	**14 27 30.6**	**-1.3**
BROLN				IAML		14 27 60.0	
	comp=E,49nm,0.7s						
ALKP	**Alkanpan, Nort**	**5.72**	**230**	*eP*	**Pn**	**14 26 39.3**	**+1.6**
ALKP				*eS*	**Sn**	**14 27 42.7**	**-1.0**
ALKP				IAML		14 28 17.3	
	comp=Z,56nm,0.4s						
UPI	**Upington**	**5.75**	**248**	*eP*	**Pn**	**14 26 39.8**	**+1.7**
UPI				*eS*	**Sn**	**14 27 43.8**	**-0.6**
UPI				IAML		14 28 17.1	
	comp=Z,28nm,0.5s						
KGCAE	**Kacgae**	**5.82**	**306**	*iP*	**Pn**	**14 26 41.2**	**+2.1**
KGCAE				*iS*	**Sn**	**14 27 45.2**	**-1.0**
KGCAE				IAML		14 28 29.6	
	comp=N,119nm,0.7s						
AUGR	**Augrabies**	**6.58**	**249**	*eP*	**Pn**	**14 26 50.9**	**+1.4**
AUGR				*eS*	**Sn**	**14 28 03.1**	**-1.9**
AUGR				IAML		14 28 46.8	
	comp=Z,20nm,0.5s						
BRAK	**Brakfontein**	**6.64**	**215**	*eP*	**Pn**	**14 26 51.9**	**+1.6**
BRAK				*eS*	**Sn**	**14 28 05.3**	**-1.0**
BRAK				IAML		14 28 51.1	
	comp=Z,18nm,0.4s						
ROOI	**Rooidraai Farm**	**6.93**	**207**	*eP*	**Pn**	**14 26 56.2**	**+1.9**
ROOI				*eS*	**Sn**	**14 28 11.6**	**-1.9**
ROOI				IAML		14 28 53.0	
	comp=Z,13nm,0.5s						
GRHM	**Grahamstown, E**	**6.94**	**187**	*eP*	**Pn**	**14 26 55.9**	**+1.6**
GRHM				*eS*	**Sn**	**14 28 11.5**	**-2.1**
GRHM				IAML		14 28 25.3	
	comp=Z,6.8nm,0.4s						
ARMS	**Ukamas**	**6.95**	**254**	*eP*	**Pn**	**14 26 56.2**	**+1.7**
ARMS				*eS*	**Sn**	**14 28 12.1**	**-1.9**
GMARE	**Gumare**	**8.41**	**325**	*iP*	**Pn**	**14 27 14.7**	**0.0**
GMARE				IAML		14 28 20.1	
	comp=N,126nm,0.3s						

*UCR **03** 14:29:26.8±0.5, 10˚83N×86˚40W,h14km±94km,MW3.6*
*CATAC **03** 14:29:27.1±0.8, 11˚N±4˚×8˚6W±˚, h18km±4km, M3.2/12, MLv3.2/12, Error ellipse: s-maj=9.7km s-min=4.5km az=39.6, confirmed*
ISC 03 14:29:27.3±1.6,**10˚93N**±0˚06×**86˚38W**±0˚07,**h31**km,**n29**, σ0°**81**/32,**Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIN	**Rivas**	**0.75**	**46**	S	**Sb**	**14 29 49.8**	**-2.0**
ELI1	**Hacienda Flor**	**0.86**	**109**	*eP*	**Pn**	**14 29 43.2**	**-0.1**
CARN	**Rivas**	**0.88**	**73**	P	**Pn**	**14 29 43.6**	**0.0**
LAPC	**Finca la Perla**	**0.95**	**99**	*eP*	**Pn**	**14 29 44.3**	**-0.2**
MORN	**Al O del Volca**	**0.95**	**49**	P	**Pn**	**14 29 44.0**	**-0.5**
CONN	**Concepcion**	**0.98**	**49**	P	**Pn**	**14 29 43.7**	**-1.2**
VRLE	**La Escondida,**	**1.01**	**98**	*eP*	**Pn**	**14 29 45.6**	**+0.2**
VRLE				*eS*	**Sn**	**14 29 59.2**	**+0.6**
GPS1	**Guardaparques**	**1.02**	**98**	*eP*	**Pn**	**14 29 46.3**	**+0.7**
GPS2	**Hotel Rincn d**	**1.03**	**100**	*eP*	**Pn**	**14 29 45.6**	**0.0**
BUAI	**Buenos Aires**	**1.03**	**93**	*eP*	**Pn**	**14 29 46.3**	**+0.6**
NANN	**Nandasmo**	**1.04**	**14**	P	**Pn**	**14 29 46.3**	**+0.5**
SABN	**Sabanita**	**1.05**	**12**	P	**Pn**	**14 29 45.8**	**-0.1**
SAJU	**San Juanillo,**	**1.08**	**142**	*eP*	**Pn**	**14 29 45.0**	**-1.3**
MAS3	**Al N del Volca**	**1.11**	**10**	P	**Pn**	**14 29 46.3**	**-0.5**
JUD3	**Juan Diaz 3**	**1.12**	**132**	*eP*	**Pn**	**14 29 46.0**	**-0.9**
CUI	**Cuipilapa**	**1.23**	**102**	*eP*	**Pn**	**14 29 48.8**	**+0.4**
VMAR	**Armenia, Volca**	**1.25**	**95**	*eP*	**Pn**	**14 29 49.5**	**+0.8**
APQ2	**Apoyeque**	**1.27**	**3**	P	**Pn**	**14 29 48.3**	**-0.6**
QUEB	**Quebradon, Cot**	**1.49**	**102**	*eP*	**Pn**	**14 29 53.7**	**+1.7**
JTS	**Las Juntas de**	**1.54**	**114**	P	**Pn**	**14 29 53.1**	**+0.4**
JTS				S	**Sb**	**14 30 14.3**	**-0.1**
JTS	**Las Juntas de**	**1.54**	**114**	*eP*	**Pn**	**14 29 52.8**	**+0.1**
MOM3	**MOM3**	**1.58**	**355**	P	**Pn**	**14 29 52.7**	**-0.6**
CNGA	**Al SSO del Vol**	**1.59**	**349**	P	**Pn**	**14 29 52.8**	**-0.5**
CNGN	**Cerro Negro**	**1.59**	**349**	P	**Pn**	**14 29 53.1**	**-0.4**
CNGN	**Cerro Negro**	**1.59**	**349**	S	**Sn**	**14 30 13.5**	**+0.5**
PKGN	**Cerro Pekin**	**1.83**	**341**	P	**Pn**	**14 29 57.0**	**+0.4**
PKGN				S	**Sn**	**14 30 20.2**	**+1.5**
LIMN	**Finca el Limon**	**2.12**	**0**	P	**Pn**	**14 30 00.3**	**-0.5**
RCVN	**Varillal2**	**2.65**	**4**	P	**Pn**	**14 30 08.1**	**+0.1**
YUSH	**Yuscaran**	**3.04**	**352**	P	**Pn**	**14 30 14.5**	**+1.1**

*CATAC **03** 14:42:10.6±0.2, 10˚N±2˚×8˚3W±˚, h3km±1km, M3.5/12, MLv3.5/12, Error ellipse: s-maj=4.5km s-min=2.3km az=47.3, confirmed*
*UCR **03** 14:42:11.9±0.8, 9˚99N×83˚48W, h7km±4km, MW3.6*
ISC 03 14:42:11.3±0.9,**10˚04N**±0˚03×**83˚46W**±0˚03,**h23**km±5km, **n71**,σ0°**97**/77,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRES	**Siquirres**	**0.07**	**319**	*eP*	**Pb**	**14 42 15.4**	**-0.1**
IRES				*eS*	**Sb**	**14 42 18.4**	**0.0**
LCOCO	**El Coco**	**0.11**	**294**	*eP*	**Pb**	**14 42 15.8**	**0.0**
LCOCO				*eS*	**Sb**	**14 42 18.8**	**0.0**
TAAN	**Batan**	**0.12**	**67**	*eP*	**Pb**	**14 42 16.1**	**+0.4**
TAAN				*eS*	**Sb**	**14 42 20.2**	**+1.4**
RVLA	**Villa Bonita**	**0.15**	**298**	*eP*	**Pb**	**14 42 16.1**	**-0.1**
RVLA				*eS*	**Sb**	**14 42 19.6**	**+0.2**
RESJ	**San Isidro (Tu**	**0.19**	**267**	*eP*	**Pb**	**14 42 16.4**	**-0.3**
EGUB	**Earth Gujpi**	**0.22**	**322**	*eP*	**Pn**	**14 42 17.5**	**-1.6**
ABRB	**Las Abras (San**	**0.26**	**263**	*eP*	**Pb**	**14 42 17.7**	**-0.1**
TURIB	**Turrialba**	**0.26**	**240**	*eP*	**Pb**	**14 42 17.3**	**-0.4**
TURIB				*eS*	**Sb**	**14 42 21.3**	**-0.7**
VERH	**Veragua Rainfo**	**0.28**	**113**	*eP*	**Pn**	**14 42 18.2**	**-1.9**
CVTV	**Tajo**	**0.29**	**263**	*eP*	**Pb**	**14 42 18.3**	**0.0**
CVTR	**Volcan Turrial**	**0.30**	**266**	*eP*	**Pb**	**14 42 18.1**	**-0.4**
VTR0	**Volcan Turrial**	**0.30**	**266**	*eP*	**Pb**	**14 42 18.2**	**-0.3**
CVTQ	**Turrialba Volc**	**0.31**	**264**	*eP*	**Pb**	**14 42 18.4**	**-0.2**
VINA	**Juan Vinas**	**0.32**	**244**	*eP*	**Pb**	**14 42 18.2**	**-0.3**
VICA	**Volcano Irazu**	**0.39**	**262**	*eP*	**Pb**	**14 42 19.5**	**-0.4**
CARI	**Cariari**	**0.43**	**319**	*eP*	**Pn**	**14 42 20.5**	**-1.5**
REPA	**Paraso**	**0.46**	**243**	*eP*	**Pb**	**14 42 20.4**	**-0.5**
LAES	**El Progreso Va**	**0.48**	**124**	*eP*	**Pn**	**14 42 21.6**	**-1.2**
BUS1	**Rivas**	**0.56**	**211**	*eP*	**Pb**	**14 42 22.0**	**-0.8**
LCR2	**La Lucha 2**	**0.62**	**241**	S	**Sb**	**14 42 30.7**	**-1.2**
PIEC	**Cerro El Cedra**	**0.65**	**230**	*eP*	**Pb**	**14 42 23.3**	**-0.7**
CEUA	**Cerro Uatsi, L**	**0.66**	**129**	*eP*	**Pn**	**14 42 25.3**	**+0.1**
PITB	**Pirrs, San**	**0.68**	**236**	*eP*	**Pb**	**14 42 23.9**	**-0.6**
RAZU	**San Marcos de**	**0.68**	**236**	*eP*	**Pb**	**14 42 24.0**	**-0.5**
ZEDO	**Perez Zeledon**	**0.72**	**198**	*eP*	**Pb**	**14 42 24.6**	**-0.5**
BELE	**Belen**	**0.72**	**265**	*eP*	**Pn**	**14 42 25.4**	**-0.8**
ACOS	**Acosta**	**0.74**	**251**	*eP*	**Pb**	**14 42 25.5**	**-0.1**
DRK0	**Durika**	**0.80**	**165**	P	**Pb**	**14 42 26.0**	**-0.6**
DRK0	**Durika**	**0.80**	**165**	S	**Sb**	**14 42 36.9**	**-0.2**
DRK0	**Durika**	**0.80**	**165**	*eP*	**Pb**	**14 42 26.1**	**-0.5**
PICV	**PH. Pirrs**	**0.84**	**241**	*eP*	**Pb**	**14 42 26.4**	**-0.8**
LLNJ	**Naranjito**	**0.85**	**229**	*eP*	**Pb**	**14 42 27.3**	**0.0**
BURE	**Buenos Aires**	**0.87**	**172**	*eP*	**Pn**	**14 42 27.0**	**-1.1**
EDPE	**Pejibaye, P**	**0.88**	**188**	*eP*	**Pn**	**14 42 27.5**	**-0.8**
PAR1A	**Puntarenas Pro**	**0.90**	**241**	*eP*	**Pb**	**14 42 28.1**	**-0.1**
QUEP	**Quepos**	**0.92**	**229**	P	**Pb**	**14 42 29.4**	**+0.7**
QUEP	**Quepos**	**0.92**	**229**	S	**Sn**	**14 42 41.6**	**+0.2**
RGM0	**Gandoca**	**0.95**	**118**	S	**Sn**	**14 42 42.6**	**+0.7**
RGM0	**Gandoca**	**0.95**	**118**	P	**Pb**	**14 42 29.8**	**+0.7**
OCHAL	**Ojochal**	**0.95**	**191**	P	**Pb**	**14 42 29.4**	**+0.3**
OCHAL	**Ojochal**	**0.95**	**191**	S	**Sn**	**14 42 43.6**	**+1.4**
FIMO	**Fila Mora**	**1.05**	**175**	*eP*	**Pb**	**14 42 31.1**	**+0.3**
EDP2	**Potrero, Grande**	**1.05**	**165**	*eP*	**Pb**	**14 42 30.9**	**0.0**
COVE	**Coope Vega, Sa**	**1.15**	**306**	P	**Pb**	**14 42 32.0**	**-0.5**
COVE	**Coope Vega, Sa**	**1.15**	**306**	S	**Sb**	**14 42 47.1**	**0.0**
SOCE	**Pocosol**	**1.20**	**287**	P	**Pb**	**14 42 33.9**	**+0.6**
SOCE	**Pocosol**	**1.20**	**287**	S	**Sb**	**14 42 48.5**	**+0.2**
SOCE	**Pocosol**	**1.20**	**287**	*eP*	**Pb**	**14 42 33.9**	**+0.6**
ALCO	**Alturas Coton,**	**1.24**	**150**	*eP*	**Pb**	**14 42 33.5**	**-0.7**
ARE1	**Arenal 1**	**1.31**	**289**	*eP*	**Pb**	**14 42 34.3**	**-1.0**
EDAD	**Golfito**	**1.41**	**168**	*eP*	**Pb**	**14 42 36.1**	**-0.8**
BRU2	**Volcan**	**1.45**	**149**	S	**Sb**	**14 42 56.4**	**+0.7**
BRU2	**Volcan**	**1.45**	**149**	P	**Pb**	**14 42 37.1**	**-0.6**
BRU2	**Volcan**	**1.45**	**149**	*eP*	**Pb**	**14 42 37.2**	**-0.4**
JTS	**Las Juntas de**	**1.50**	**280**	P	**Pb**	**14 42 37.6**	**-0.8**
JTS				S	**Sb**	**14 43 00.4**	**+3.4**
JTS	**Las Juntas de**	**1.50**	**280**	*eP*	**Pb**	**14 42 38.8**	**+0.4**
PTJ1	**Puerto Jimnez**	**1.50**	**174**	S	**Sb**	**14 42 58.9**	**+1.8**
PTJ1	**Puerto Jimnez**	**1.50**	**174**	P	**Pb**	**14 42 38.0**	**-0.5**
CDITO	**Canoas**	**1.57**	**158**	S	**Sb**	**14 43 00.4**	**+1.4**
CDITO	**Canoas**	**1.57**	**158**	P	**Pb**	**14 42 38.8**	**-0.8**
BQTLY	**Boquete Panama**	**1.61**	**142**	*eP*	**Pb**	**14 42 40.1**	**-0.3**
WILLF	**Boquete**	**1.63**	**142**	*eP*	**Pb**	**14 42 40.0**	**-0.7**
PIRO	**Carate, Puerto**	**1.63**	**176**	P	**Pb**	**14 42 40.0**	**-0.7**
PIRO	**Carate, Puerto**	**1.63**	**176**	S	**Sb**	**14 43 04.2**	**+3.4**
PIRO	**Carate, Puerto**	**1.63**	**176**	*eP*	**Pb**	**14 42 39.8**	**-0.8**
JEFFS	**S de V. Baru**	**1.64**	**146**	*eP*	**Pb**	**14 42 40.8**	**-0.1**
INVE	**Universidad In**	**1.64**	**285**	*eP*	**Pb**	**14 42 41.5**	**+0.7**
PBNVO	**Pueblo Nuevo,**	**1.69**	**132**	*eP*	**Pb**	**14 42 40.1**	**-1.5**
RBALA	**Bur**	**1.73**	**132**	*eP*	**Pb**	**14 42 40.5**	**-1.8**
CARN	**Rivas**	**2.33**	**299**	S	**Sb**	**14 43 22.7**	**+1.7**
CONN	**Concepcion**	**2.62**	**306**	P	**Pn**	**14 42 51.9**	**-0.3**

*DJA **03** 14:42:19.3±0.4,6˚N±3˚×12˚7E±˚, h10km,M4.7/13,mB5.2/9, mb4.9/13,MLv4.9/12,Mw(mB)4.5/9*
*IDC **03** 14:42:20.1±1.5,5.86N×127.20E,h56km±12km,mb4.1/23, mbtmp4.4/27,MS3.5/30,Error ellipse: s-maj=17.6km s-min=9.7km az=63.0*
*NEIC **03** 14:42:20.0±1.6,5.79N±0.06×127.07E±0.07, h48km±6km, mb4.7/80,Error ellipse: s-maj=9.5km s-min=8.1km az=78.0*
ISC 03 14:42:19.8±0.3,**5.83N**±0.04×**127.12E**±0.06,**h50**km,**n156**, σ1°**19**/137,**mb4.7**/68,**MS3.7**/34,**1C**,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.97**	**309**		**Pn**	**14 42 51.4**	**+0.7**
DAV				Sn	**Sn**	**14 43 16.6**	**+2.4**
DAV	**Davao City (W)**	**1.97**	**309**	P	**Pn**	**14 42 53.5**	**+2.8**
	3µm,0.5s,baz=86,slow=4.1,SNR=116						
DAV				S	**Sn**	**14 43 16.4**	**+2.2**
	3µm,0.7s,baz=285,slow=21,SNR=6.3						
SGSI	**Sangihe**	**2.65**	**217**	P	**Pn**	**14 43 00.2**	**0.0**
SGSI				S	**Sn**	**14 43 33.3**	**+2.1**
TNTI	**Ternate**	**5.03**	**177**		**Pn**	**14 43 32.0**	**-0.8**
TNTI	**Ternate**	**5.03**	**177**	P	**Pn**	**14 43 35.6**	**+2.8**
TNTI				S	**Sn**	**14 44 31.5**	**+1.9**
KMSI	**Cibinong**	**6.09**	**211**	P	**Pn**	**14 43 49.6**	**+2.3**
LBMI	**Labuha**	**6.43**	**177**	P	**Pn**	**14 43 52.0**	**-0.1**
MRSI	**Marisa**	**7.42**	**224**	P	**Pn**	**14 44 06.9**	**+1.4**
	0.4nm1µm89nm,0.7s						
SWI	**Sorong**	**7.83**	**148**	P	**Pn**	**14 44 10.8**	**-0.4**
	0.2nm701nm34nm,0.5s						
TOLI2	**Tolitoli**	**7.87**	**234**		**Pn**	**14 44 10.8**	**-1.0**
LUWI	**Luwuk**	**8.09**	**213**		**Pn**	**14 44 16.8**	**+2.0**
LUWI	**Luwuk**	**8.09**	**213**	P	**Pn**	**14 44 18.0**	**+3.2**
	2µm157nm,1.2s						
MYLDM	**Lahad Datu**	**8.61**	**266**		**Pn**	**14 44 21.4**	**-0.4**
APSI	**Ampana**	**8.64**	**219**	P	**Pn**	**14 44 23.2**	**+0.9**
	1µm129nm,1.0s						
NLAI	**Namlea**	**9.01**	**180**	P	**Pn**	**14 44 27.5**	**+0.2**
	1µm66nm,0.6s						
MSAI	**Masohi**	**9.29**	**169**	P	**Pn**	**14 44 34.0**	**+2.8**
AAI	**Ambon**	**9.51**	**174**	P	**Pn**	**14 44 35.2**	**+0.9**
FAKI	**Fak Fak**	**10.09**	**149**	Pn	**Pn**	**14 44 41.7**	**-0.5**
TGY	**Tagaytay City**	**10.23**	**324**	LR	LR	14 49 46.0	
	comp=Z,470nm,20.3s,baz=170,slow=44						
KAPI	**Kappang**	**13.04**	**214**	P	**Pn**	**14 45 22.0**	**-0.5**
	7.1nm,0.5s,baz=1.9,slow=7.6,SNR=6.3						
SBUM	**Sibu**	**15.23**	**258**		**P**	**14 45 55.8**	**-0.1**
SBUM				IAmb	IAmb	14 46 00.1	
	comp=Z,32nm,0.8s						
SOEI	**Soe**	**15.74**	**190**	Pn	**Pn**	**14 45 58.0**	**-0.5**
SOEI				IAmb	IAmb	14 46 30.8	
	comp=Z,48nm,0.8s						
JAY	**Jayapura**	**15.90**	**121**	P	**Pn**	**14 46 00.5**	**0.0**
	comp=Z,13nm,0.9s,baz=344,slow=15,SNR=2.1						
BATI	**Baumata**	**16.30**	**192**	P	**Pn**	**14 46 05.2**	**-0.3**
	comp=Z,5.5nm,0.4s,baz=48,slow=12,SNR=6.9						
BATI				LR	LR	14 54 35.4	
	comp=Z,82nm,18.4s,baz=29,slow=45						
KSM	**Kuching**	**17.32**	**256**		**Pn**	**14 46 17.8**	**-0.5**
GUMO	**Guam**	**19.11**	**65**	LR	LR	14 52 41.4	
	comp=Z,86nm,21.6s,baz=248,slow=33						
DLV	**Lat**	**19.38**	**290**	P	**P**	**14 46 41.4**	**-0.5**
DLV				IAmb	IAmb	14 46 45.1	
	comp=Z,44nm,0.8s						
JMZ	**Minamidaito 2**	**20.26**	**11**	Pn	Pn	14 46 54.3	+0.7
JOW	**Kunigami**	**20.92**	**3**	P	**P**	**14 46 59.2**	**+0.9**
JOW				IAmb	IAmb	14 47 03.1	
	comp=Z,74nm,1.4s						
JOW	**Kunigami**	**20.92**	**3**	P	**P**	**14 46 57.8**	**-0.5**
	comp=Z,9.0nm,0.5s,baz=166,slow=12,SNR=1.9						
	comp=Z,9.0nm,0.5s						
QIZ	**Qiongzhong**	**21.34**	**309**	P	**P**	**14 47 03.8**	**+0.9**
QIZ				S	**S**	**14 50 58.1**	**+0.7**
QIZ				LR	LR		
	comp=Z,430nm,20.0s						
KNRA	**Kununurra**	**21.43**	**176**		**P**	**14 47 03.8**	**0.0**
KNRA				IAmb	IAmb	14 47 30.0	
	comp=Z,29nm,0.9s						
LEM	**Lembang**	**23.17**	**237**	LR	LR	14 59 16.3	
	comp=Z,43nm,18.6s,baz=60,slow=44						
MYKOM	**Kota Tinggi**	**23.56**	**261**	P	**P**	**14 47 25.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.82**	**183**		**P**	**14 47 28.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**23.82**	**183**	LR	LR	14 59 02.8	
	comp=Z,62nm,18.1s,baz=30,slow=42						
PMG	**Port Moresby**	**25.06**	**127**	LR	LR	14 58 34.0	
	comp=Z,65nm,20.8s,baz=300,slow=39						
JCJ	**Chichijima**	**25.56**	**32**	P	**P**	**14 47 44.4**	**+0.2**
KULM	**Kulim**	**26.35**	**270**	P	**P**	**14 47 51.3**	**-0.2**
WB0	**Warramunga Arr**	**26.42**	**164**	P	**P**	**14 47 51.2**	**-0.8**
WB0				IAmb	IAmb	14 48 03.1	
	comp=Z,22nm,0.7s						
WRA	**Warramunga Arr**	**26.57**	**165**	P	**P**	**14 47 52.0**	**-1.4**
WRA	**Warramunga Arr**	**26.57**	**165**	P	**P**	**14 47 52.9**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=342,slow=10,SNR=25						
WRA				ScP	**ScP**	**14 54 51.7**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=342,slow=3.1,SNR=10						
WRA				LR	LR	15 00 34.2	
	comp=Z,139nm,19.7s,baz=12,slow=41						
	comp=Z,2.7nm,0.5s						
WR8	**Warramunga Arr**	**26.63**	**164**	P	**P**	**14 47 53.0**	**-1.0**
WR8				IAmb	IAmb	14 48 27.0	
	comp=Z,14nm,0.9s						
NJ2	**Nanjing**	**27.21**	**345**	*eP*	**P**	**14 48 00.8**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WHN	**Wuhan**	**27.36**	**335**	P	P	14 48 10.1	+10
JNU	**Nakatsue**	**27.38**	**7**	P	**P**	**14 47 59.1**	**-1.5**
JHJ	**Hachijo jima 2**	**29.60**	**22**	LR	LR	14 59 05.1	
	comp=Z,92nm,21.5s,baz=114,slow=34						
GSI	**Gunungsitoli**	**29.82**	**262**	P	**P**	**14 48 20.0**	**-2.5**
GSI				IAmb	IAmb	14 48 21.4	
	comp=Z,16nm,0.7s						
AS31	**Alice Springs**	**30.05**	**168**	P	**P**	**14 48 22.9**	**-1.5**
ASAR	**Alice Springs**	**30.05**	**168**	P	**P**	**14 48 23.8**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=345,slow=6.9,SNR=17						
ASAR				PcP	**PcP**	**14 51 26.0**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=349,slow=2.6,SNR=6.7						
ASAR				ScP	**ScP**	**14 55 03.4**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=344,slow=2.9,SNR=11						
ASAR				LR	LR	15 03 22.0	
	comp=Z,68nm,18.9s,baz=329,slow=42						
	comp=Z,0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.21**	**297**	P	**P**	**14 48 24.9**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=114,slow=7.5,SNR=6.6						
CMAR				PcP	**PcP**	**14 51 25.9**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=168,slow=1.6,SNR=4.4					

EVN	**Everest**	**44.09**	**305**	P	**P**	**14 50 22.3**	**-1.8**
EVN				IAmb	IAmb	14 50 28.0	
	comp=Z,16nm,1.4s						
HEH	**HeiHe**	**44.27**	**0**	*e*P	P	14 50 18.3	-6.1
SANVU	**Saraoutou**	**44.98**	**119**	P	**P**	**14 50 31.3**	**+0.7**
ULN	**Ulaanbaatar**	**45.27**	**341**	P	**P**	**14 50 32.6**	**0.0**
ULN				IAmb	IAmb	14 50 42.9	
	comp=Z,16nm,1.1s						
SONM	**Songino Array**	**45.45**	**340**	P	**P**	**14 50 33.7**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=159,slow=6.3,SNR=11						
	comp=Z,2.1nm,0.7s						
WMQ	**Urumqi**	**51.25**	**324**	*e*P	**P**	**14 51 21.8**	**+3.1**
WMQ				LR	LR		
	comp=Z,220nm,22.9s						
PETK	**Petropavlovsk-**	**53.35**	**22**	P	**P**	**14 51 33.9**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=184,slow=4.1,SNR=6.1						
	comp=Z,4.0nm,0.9s						
MSVF	**Nonsavu**	**55.45**	**116**	P	**P**	**14 51 50.2**	**+0.2**
MKAR	**Makanchi Array**	**56.08**	**324**	P	**P**	**14 51 53.8**	**-0.1**
MKAR	**Makanchi Array**	**56.08**	**324**	P	**P**	**14 51 54.0**	**+0.1**
	comp=Z,12nm,0.8s,baz=122,slow=7.7,SNR=78						
	comp=Z,12nm,0.8s						
YAK	**Yakutsk**	**56.11**	**1**	P	**P**	**14 51 52.3**	**-1.5**
MAKZ	**Makanchi**	**56.27**	**324**	P	**P**	**14 51 54.0**	**-1.3**
MAKZ				IAmb	IAmb	14 51 56.3	
	comp=Z,14nm,0.9s						
TARG	**Taragay, Kyrgy**	**56.47**	**317**	P	**P**	**14 51 56.2**	**-1.1**
TARG				IAmb	IAmb	14 52 17.0	
	comp=Z,6.8nm,1.0s						
KSH	**Kashi**	**56.86**	**314**	P	**P**	**14 52 00.8**	**+1.0**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	**Nilore**	**56.98**	**307**	P	**P**	**14 52 00.5**	**-0.1**
KDJ	**Kajisay**	**57.06**	**317**	P	**P**	**14 52 01.4**	**+0.2**
KDJ				IAmb	IAmb	14 52 02.5	
	comp=Z,7.0nm,0.8s						
BOOM	**Boomskoye usch**	**58.05**	**317**	P	**P**	**14 52 07.9**	**-0.2**
ZALV	**Zalesovo Beam**	**58.91**	**332**	P	**P**	**14 52 12.7**	**-1.0**
	comp=Z,6.1nm,0.7s,baz=118,slow=6.7,SNR=30						
	comp=Z,6.1nm,0.7s						
AAK	**Ala-Archa**	**59.09**	**317**	P	**P**	**14 52 15.2**	**-0.1**
AAK	**Ala-Archa**	**59.09**	**317**	LR	LR	15 20 35.6	
	comp=Z,77nm,21.1s,baz=80,slow=39						
KURK	**Kurchatov**	**60.20**	**327**	P	**P**	**14 52 22.5**	**-0.1**
KURBB	**Kurchatov Arra**	**60.20**	**327**	P	**P**	**14 52 22.5**	**-0.2**
	comp=Z,19nm,0.7s,baz=124,slow=6.8,SNR=201						
	comp=Z,19nm,0.7s						
SHEM	**Shemya Is, Ala**	**60.47**	**31**	LR	LR	15 16 29.8	
	comp=Z,18nm,19.8s,baz=125,slow=34						
CHGR	**Chuyangaron**	**61.58**	**311**	P	**P**	**14 52 32.0**	**-0.3**
SIMJ	**Simiganj**	**61.69**	**311**	P	**P**	**14 52 32.3**	**-0.9**
KK31	**Karatay Array**	**61.98**	**316**	P	**P**	**14 52 34.3**	**-0.7**
KK31				IAmb	IAmb	14 52 35.5	
	comp=Z,7.4nm,0.8s						
KKAR	**Karatay Array**	**61.98**	**316**	P	**P**	**14 52 34.4**	**-0.6**
WKZ	**Wanaka**	**62.86**	**148**	P	**P**	**14 52 41.0**	**+0.3**
TIXI	**Tiksi**	**65.75**	**1**	P	**P**	**14 52 58.8**	**-0.3**
TIXI				IAmb	IAmb	14 53 01.2	
	comp=Z,5.0nm,0.6s						
BVAR	**Borovoye Array**	**65.79**	**326**	P	**P**	**14 52 59.5**	**-0.2**
	comp=Z,11nm,0.6s,baz=125,slow=7.9,SNR=43						
BVAR				LR	LR	15 24 41.7	
	comp=Z,74nm,19.2s,baz=118,slow=39						
	comp=Z,11nm,0.6s						
ATKA	**Atka Island**	**66.56**	**35**	P	**P**	**14 53 04.7**	**0.0**
AB31	**Akbulak array**	**70.79**	**320**	P	**P**	**14 53 30.4**	**-0.6**
AB31				IAmb	IAmb	14 53 31.2	
	comp=Z,4.2nm,0.7s						
ABKAR	**Akbulak array**	**70.79**	**320**	P	**P**	**14 53 30.5**	**-0.6**
AKTO	**Aktyubinsk**	**72.27**	**321**	LR	LR	15 27 51.1	
	comp=Z,129nm,19.7s,baz=273,slow=38						
ARTI	**Arti**	**73.47**	**327**	P	**P**	**14 53 45.7**	**-1.3**
ARTI				IAmb	IAmb	14 53 56.9	
	comp=Z,14nm,1.1s						
JOKA	**Jonika Flow**	**76.67**	**71**	P	**P**	**14 54 05.4**	**-0.8**
I17K	**Unalakleet**	**76.99**	**26**	P	**P**	**14 54 08.2**	**+1.2**
I17K				IAmb	IAmb	14 54 25.8	
	comp=Z,18nm,1.1s						
L16K	**Owhat River**	**77.05**	**28**	P	**P**	**14 54 08.5**	**+1.1**
L16K				IAmb	IAmb	14 54 39.2	
	comp=Z,9.5nm,1.2s						
KIRV	**Kirov**	**78.64**	**329**	LR	LR	15 32 39.5	
	comp=Z,54nm,18.9s,baz=97,slow=38						
N19K	**Bonanza Creek**	**79.28**	**29**	P	**P**	**14 54 20.9**	**+1.0**
N19K				IAmb	IAmb	14 54 40.4	
	comp=Z,7.0nm,1.0s						
KDAK	**Kodiak Island**	**79.92**	**32**	P	**P**	**14 54 23.9**	**+0.6**
KDAK	**Kodiak Island**	**79.92**	**32**	LR	LR	15 27 23.5	
	comp=Z,18nm,19.8s,baz=267,slow=34						
RAYN	**Ar Rayn**	**80.03**	**293**	P	**P**	**14 54 24.0**	**-0.7**
RAYN				IAmb	IAmb	14 54 27.2	
	comp=Z,5.0nm,0.7s						
STLK	**Strandline Lak**	**80.63**	**29**	P	**P**	**14 54 27.6**	**+0.5**
SKT	**Skwentna**	**80.82**	**28**	P	**P**	**14 54 28.1**	**0.0**
BRLK	**Bradley Lake**	**80.96**	**30**	P	**P**	**14 54 28.8**	**-0.1**
BRLK				IAmb	IAmb	14 55 07.3	
	comp=Z,6.8nm,0.8s						
SUA	**Susitna One**	**81.15**	**29**	IAmb	IAmb	14 54 44.3	
	comp=Z,8.2nm,0.9s						
BPAW	**Bear Paw Mtn.**	**81.24**	**26**	IAmb	IAmb	14 54 43.1	
	comp=Z,16nm,1.4s						
TRF	**Thorofare Moun**	**81.50**	**27**	P	**P**	**14 54 32.4**	**+0.4**
KBZ	**Khabaz**	**81.83**	**313**	P	**P**	**14 54 33.6**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=107,slow=3.4,SNR=5.7						
	comp=Z,2.3nm,0.7s						
KVAR	**Kislovodsk Arr**	**81.98**	**313**	LR	LR	15 34 09.1	
	comp=Z,38nm,20.8s,baz=264,slow=38						
MCK	**McKinley**	**82.12**	**27**	IAmb	IAmb	14 54 37.8	
	comp=Z,5.8nm,0.7s						
PWL	**Port Wells**	**82.28**	**29**	IAmb	IAmb	14 55 13.2	
	comp=Z,9.9nm,1.0s						
GURO	**Guroymak-BITLI**	**82.56**	**308**	IAmb	IAmb	14 54 39.8	
	comp=Z,9.5nm,0.7s						
CCB	**Clear Creek Bu**	**82.66**	**26**	P	**P**	**14 54 37.5**	**-0.2**
SCM	**Sheep Creek Mo**	**82.80**	**28**	P	**P**	**14 54 38.7**	**+0.1**
SCM				IAmb	IAmb	14 55 05.3	
	comp=Z,8.1nm,1.0s						
HDA	**Harding Lake**	**83.02**	**26**	P	**P**	**14 54 39.5**	**-0.1**
ILAR	**Eielson Array**	**83.05**	**26**	P	**P**	**14 54 38.8**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=246,slow=4.8,SNR=17						
	comp=Z,0.9nm,0.5s						
RIDG	**Independent Ri**	**83.94**	**27**	P	**P**	**14 54 44.7**	**+0.3**
RIDG				IAmb	IAmb	14 55 09.1	
	comp=Z,14nm,1.4s						
N25K	**Chitina, Valde**	**84.10**	**29**	P	**P**	**14 54 46.4**	**+1.1**
N25K				IAmb	IAmb	14 54 57.1	
	comp=Z,9.6nm,1.4s						
GLB	**Gilahina Butte**	**84.48**	**29**	P	**P**	**14 54 47.6**	**+0.4**
GLB				IAmb	IAmb	14 55 07.0	
	comp=Z,4.4nm,0.8s						
VRDI	**Verde Repeater**	**84.66**	**29**	P	**P**	**14 54 48.5**	**+0.2**
VRDI				IAmb	IAmb	14 55 30.7	
	comp=Z,11nm,1.3s						
WAX	**Waxell Ridge**	**84.99**	**30**	P	**P**	**14 54 51.2**	**+1.4**
BCAR	**Beaver Creek A**	**85.34**	**27**	P	**P**	**14 54 52.2**	**+0.7**
PPT	**Papeete**	**85.39**	**108**	LR	LR	15 30 29.5	
	comp=Z,20nm,19.0s,baz=308,slow=34						
VNDA	**Vanda**	**85.44**	**173**	P	**P**	**14 54 52.8**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=333,slow=2.3,SNR=3.6						
VNDA				LR	LR	15 33 02.7	
	comp=Z,38nm,19.6s,baz=354,slow=36						
	comp=Z,1.0nm,0.9s						
F28M	**Old Crow**	**85.80**	**23**	P	**P**	**14 54 54.9**	**+1.2**
F28M				IAmb	IAmb	14 54 57.8	
	comp=Z,3.6nm,0.8s						
I28M	**Miner Creek**	**85.97**	**25**	IAmb	IAmb	14 55 11.0	
	comp=Z,3.8nm,0.8s						
DAWY	**Dawson**	**86.33**	**26**	P	**P**	**14 54 57.5**	**+1.1**
MMAI	**Mount Meron Ar**	**88.30**	**303**	P	**P**	**14 55 07.3**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=91,slow=5.8,SNR=1.7						
	comp=Z,0.7nm,0.4s						
SPITS	**Spitsbergen Ar**	**88.51**	**349**	LR	LR	15 40 26.1	
	comp=Z,33nm,21.3s,baz=82,slow=39						
ARCES	**ARCESS Array B**	**88.63**	**340**	P	**P**	**14 55 05.2**	**-2.0**
	comp=Z,2.8nm,0.8s,baz=72,slow=4.0,SNR=7.6						
	comp=Z,2.8nm,0.8s						
BRTR	**Keskin Array B**	**88.99**	**310**	P	**P**	**14 55 08.0**	**-1.8**
	comp=Z,1.6nm,0.8s,baz=124,slow=4.4,SNR=6.8						
BRTR				LR	LR	15 41 24.8	
	comp=Z,24nm,18.3s,baz=78,slow=40						
	comp=Z,1.6nm,0.8s						
EIL	**Elat**	**89.03**	**300**	LR	LR	15 40 40.9	
	comp=Z,15nm,20.1s,baz=157,slow=39						
FINES	**FINESS Array B**	**90.18**	**332**	P	**P**	**14 55 13.5**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=72,slow=5.6,SNR=11						
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**90.52**	**321**	P	**P**	**14 55 17.1**	**+0.7**
	comp=Z,0.2nm,0.2s,baz=68,slow=5.0,SNR=2.0						
	comp=Z,0.2nm,0.2s						
MLR	**Muntele Rosu**	**93.67**	**316**	LR	LR	15 42 47.3	
	comp=Z,101nm,19.7s,baz=64,slow=39						
RES	**Resolute Bay**	**95.69**	**10**	LR	LR	15 44 58.4	
	comp=Z,6.5nm,18.9s,baz=27,slow=39						
NOA	**NORSAR Array B**	**97.09**	**334**	P	**P**	**14 55 46.5**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=66,slow=4.8,SNR=4.0						
NOA				LR	LR	15 43 07.9	
	comp=Z,69nm,21.5s,baz=75,slow=38						
	comp=Z,1.3nm,0.9s						
YKA	**Yellowknife Ar**	**97.44**	**24**	LR	LR	15 41 43.6	
	comp=Z,8.7nm,20.8s,baz=298,slow=37						

NEIC ***03*** *14:55:45.8±1.0, 36.01N±0.05×139.93E±0.07, h50km±2km, mb4.6/24, Error ellipse: s-maj=8.1km s-min=7.2km az=85.0*

IDC ***03*** *14:55:45.6±1.6, 35.95N×139.86E, h50km±15km, mb3.6/7, mbtmp3.9/9, ML3.9/2, Error ellipse: s-maj=21.9km s-min=7.8km az=62.0*

NIED ***03*** *14:55:46.1, 36.04N×139.91E, h42km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr6.53; Mθθ-2.62; Mϕϕ-3.91; Mrθ2.29; Mrϕ-2.51; Mθϕ5.34; Fault plane solution: M₀8.48000×10¹⁴ NP1: ϕs225.00000°, δ24.00000°, λ105.00000°. NP2: ϕs28.00000°, δ67.00000°, λ83.00000°.*

JMA ***03*** *14:55:46.1±0.1, 36.04N±0.3×139.9E±0.4, h42km±1km, MV3.8/37, SW IBARAKI PREF*

JMA Felt II J1 at SW IBARAKI PREF .

ISC 03 14:55:45.5±0.8, 36.01N±0.04×139.90E±0.05, h49km±7km, n60, σ0.92/66, mb4.3/18, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
JYT	**Yasato**	**0.32**	**48**	*i* P		**Pn**	**14 55 54.5**	**-0.2**
JYT				S		**Sn**	**14 56 00.5**	**-0.9**
TOK	**Tokyo**	**0.34**	**199**	P		**Pn**	**14 55 56.2**	**+1.3**
JAG	**Ashikaga**	**0.55**	**319**	⇓*i* P		**Pn**	**14 55 57.4**	**+0.2**
JAG				⇓S		**Sn**	**14 56 05.4**	**-0.3**
JRY	**Ryogami san**	**0.81**	**271**	⇓*i* P		**Pn**	**14 56 00.9**	**+0.2**
JRY				⇓S		**Sn**	**14 56 11.5**	**-0.2**
JKT	**Katashina**	**0.92**	**325**	⇓*i* P		**Pn**	**14 56 02.2**	**0.0**
JOD2	**Odawara 2**	**0.99**	**222**	P		**Pn**	**14 56 03.6**	**+0.4**
JOD2				S		**Sn**	**14 56 16.8**	**+0.7**
MJAR	**Matsushiro Arr**	**1.46**	**292**	P		**Pn**	**14 56 09.1**	**-0.3**
	49nm,0.3s,baz=90,slow=21,SNR=693							
MJAR				S		**Sn**	**14 56 26.8**	**-0.7**
	30nm,0.4s,baz=125,slow=10,SNR=5.2							
MAJO	**Matsushiro**	**1.46**	**292**			**Pn**	**14 56 09.6**	**+0.1**
MAJO	**Matsushiro**	**1.46**	**292**	P		**Pn**	**14 56 10.4**	**+0.9**
MJB9	**Matsu-Tunnel**	**1.47**	**292**	Pn		**Pn**	**14 56 10.5**	**+0.9**
JSG	**Sagara**	**1.93**	**227**			**Pn**	**14 56 16.6**	**+0.7**
JSG	**Sagara**	**1.93**	**227**	P		**Pn**	**14 56 18.6**	**+2.7**
JMM	**Marumori**	**1.98**	**21**			**Pn**	**14 56 17.1**	**+0.4**
JMM	**Marumori**	**1.98**	**21**	P		**Pn**	**14 56 17.5**	**+0.9**
JGF	**Kuroka**	**2.10**	**259**			**Pn**	**14 56 19.9**	**+1.6**
JGF	**Kuroka**	**2.10**	**259**	P		**Pn**	**14 56 21.0**	**+2.7**
JSD	**Sado**	**2.41**	**328**			**Pn**	**14 56 22.5**	**+0.1**
JSD	**Sado**	**2.41**	**328**	P		**Pn**	**14 56 22.9**	**+0.5**
INU	**Inuyama**	**2.44**	**255**			**Pn**	**14 56 24.6**	**+1.8**
INU	**Inuyama**	**2.44**	**255**	P		**Pn**	**14 56 24.9**	**+2.1**
JHJ	**Hachijo jima 2**	**2.89**	**182**	P		**Pn**	**14 56 28.6**	**-0.3**
	119nm,0.3s,baz=324,slow=20,SNR=102							
JHJ				S		**Sn**	**14 57 01.3**	**-1.2**
	137nm,0.3s,baz=245,slow=23,SNR=7.6							
	195nm,0.3s							
JHJ2	**Mitsune**	**2.89**	**181**			**Pn**	**14 56 29.3**	**+0.2**
JHJ2	**Mitsune**	**2.89**	**181**	P		**Pn**	**14 56 29.2**	**+0.2**
JTM	**Tenmabayashi**	**4.86**	**11**	P		**Pn**	**14 56 58.0**	**+2.1**
ERM	**Erimo**	**6.51**	**22**	Pn		**Pn**	**14 57 19.1**	**+0.5**
ERM	**Erimo**	**6.51**	**22**	P		**Pn**	**14 57 20.0**	**+1.4**
ASAJ	**Asahikawa**	**8.36**	**14**	P		**Pn**	**14 57 46.4**	**+2.4**
	1.0nm,0.3s,baz=202,slow=18,SNR=11							
	2.5nm,0.4s							
YHNB	**Yeheng**	**19.54**	**240**	P		**P**	**15 00 09.1**	**0.0**
YHNB				IAmb		IAmb	15 00 32.9	
	comp=Z,53nm,1.2s							
DLV	**Lat**	**37.10**	**238**	P		**P**	**15 02 50.9**	**-0.6**
CM31	**Chiang Mai Arr**	**40.05**	**255**	P		**P**	**15 03 15.6**	**-0.4**
CM31				IAmb		IAmb	15 03 45.3	
	comp=Z,4.4nm,0.3s							
LSA	**Lhasa**	**41.09**	**276**	P		**P**	**15 03 24.4**	**-0.6**
LSA				IAmb		IAmb	15 03 25.0	
	comp=Z,3.7nm,0.5s							
AKUT	**Akutan**	**41.28**	**46**	P		**P**	**15 03 24.8**	**-0.9**
ZAA0	**Zalesovo Array**	**41.71**	**313**	P		**P**	**15 03 28.5**	**-0.7**
ZALV	**Zalesovo Beam**	**41.71**	**313**	P		**P**	**15 03 29.6**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=104,slow=7.2,SNR=11							
	comp=Z,2.9nm,0.6s							
K13K	**Kusilvak Mount**	**42.84**	**35**	P		**P**	**15 03 38.8**	**+0.4**
K13K				IAmb		IAmb	15 04 16.4	
	comp=Z,6.6nm,0.7s							
MKAR	**Makanchi Array**	**43.63**	**303**	P		**P**	**15 03 45.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=85,slow=9.5,SNR=5.9							
	comp=Z,0.5nm,0.5s							
KURK	**Kurchatov**	**45.61**	**309**	P		**P**	**15 04 00.6**	**0.0**
KURBB	**Kurchatov Arra**	**45.67**	**309**	P		**P**	**15 04 01.1**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=83,slow=7.7,SNR=38							
	comp=Z,2.4nm,0.5s							
H18K	**Honhosa River**	**46.15**	**31**	P		**P**	**15 04 04.8**	**0.0**
H18K				IAmb		IAmb	15 04 16.9	
	comp=Z,18nm,1.5s							
TARG	**Taragay, Kyrgy**	**47.76**	**297**	P		**P**	**15 04 18.3**	**+0.2**
KDJ	**Kajisay**	**48.11**	**297**	P		**P**	**15 04 20.8**	**+0.3**
KDJ				IAmb		IAmb	15 04 42.2	
	comp=Z,4.8nm,1.4s							
KDAK	**Kodiak Island**	**48.67**	**41**	P		**P**	**15 04 25.4**	**+1.0**
O22K	**Cooper Landing**	**49.96**	**38**	P		**P**	**15 04 34.1**	**0.0**
ILAR	**Eielson Array**	**51.01**	**32**	P		**P**	**15 04 42.0**	**0.0**
	comp=Z,0.5nm,0.8s,baz=254,slow=7.2,SNR=5.8							
	comp=Z,0.5nm,0.8s							
P23K	**Montague Islan**	**51.15**	**38**	P		**P**	**15 04 42.7**	**-0.5**
KKAR	**Karatay Array**	**52.58**	**300**	P		**P**	**15 04 54.0**	**-0.1**
CHGR	**Chuyangaron**	**55.00**	**296**	P		**P**	**15 05 11.9**	**0.0**
CHGR				IAmb		IAmb	15 05 13.1	
	comp=Z,13nm,1.3s							
FITZ	**Fitzroy Crossi**	**55.48**	**197**	P		**P**	**15 05 15.3**	**0.0**
G31M	**Satah River**	**55.86**	**28**	P		**P**	**15 05 18.4**	**+0.8**
G31M				IAmb		IAmb	15 05 57.9	
	comp=Z,7.3nm,1.2s							
WR8	**Warramunga Arr**	**55.90**	**186**	P		**P**	**15 05 18.3**	**0.0**
WR8				IAmb		IAmb	15 05 38.9	
	comp=Z,8.5nm,1.2s							
WRA	**Warramunga Arr**	**55.90**	**186**	P		**P**	**15 05 18.0**	**-0.3**
WRA	**Warramunga Arr**	**55.90**	**186**	P		**P**	**15 05 18.1**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=1.2,slow=7.5,SNR=13							
	comp=Z,0.5nm,0.4s							
ARTI	**Arti**	**56.42**	**319**	P		**P**	**15 05 21.7**	**0.0**
ARTI				IAmb		IAmb	15 05 22.8	
	comp=Z,6.4nm,0.5s							
AB31	**Akbulak array**	**57.66**	**310**	P		**P**	**15 05 30.3**	**-0.3**
AB31				IAmb		IAmb	15 05 32.0	
	comp=Z,3.7nm,1.2s							
ABKAR	**Akbulak array**	**57.66**	**310**	P		**P**	**15 05 30.3**	**-0.2**
ASAR	**Alice Springs**	**59.62**	**186**	P		**P**	**15 05 45.0**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=0.8,slow=6.5,SNR=6.0							
	comp=Z,0.3nm,0.8s							
FINES	**FINESS Array B**	**69.14**	**332**	P		**P**	**15 06 46.5**	**+0.3**
FINES	**FINESS Array B**	**69.14**	**332**	P		**P**	**15 06 45.9**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=61,slow=5.5,SNR=6.2							
	comp=Z,0.7nm,0.4s							
NC204	**NORSAR Array S**	**74.61**	**337**	P		**P**	**15 07 19.0**	**-0.1**
NC204				IAmb		IAmb	15 07 49.9	
	comp=Z,28nm,1.4s							
LTZ	**Lake Taylor**	**83.80**	**157**	P		**P**	**15 08 09.3**	**+0.1**

NEIC ***03*** *15:27:32.9±1.3, 20.2S±0.1×178.3W±0.2, h571km±8km, mb4.3/19, Error ellipse: s-maj=22.5km s-min=17.5km az=121.0*

IDC ***03*** *15:27:36.2±7.3, 20.38S×178.50W, h602km±72km, mb3.1/6, mbtmp4.0/6, Error ellipse: s-maj=73.7km s-min=33.4km az=137.0*

ISC 03 15:27:35.8±0.8, 20.3S±0.2×178.5W±0.1, h600km, n35, σ1.902/36, mb4.1/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
MSVF	**Nonsavu**	**4.12**	**307**	P		**P**	**15 29 04.4**	**+2.0**
PINNC	**Pines Island,**	**13.29**	**257**	P		**P**	**15 30 26.4**	**-1.3**
ARMA	**Armidale**	**28.75**	**243**	P		**P**	**15 32 46.4**	**-0.6**
ARMA				IAmb		IAmb	15 33 01.1	
	comp=Z,21nm,1.4s							
RABL	**Rabaul**	**32.72**	**295**	P		**P**	**15 33 20.1**	**-0.9**
PMG	**Port Moresby**	**34.83**	**283**	P		**P**	**15 33 38.5**	**0.0**
STKA	**Stephens Creek**	**37.47**	**244**	P		**P**	**15 33 59.8**	**-0.2**
INKA	**Innaminka**	**37.83**	**251**	P		**P**	**15 34 02.2**	**-0.7**
INKA				IAmb		IAmb	15 34 11.7	
	comp=Z,3.8nm,1.2s							
BBOO	**Buckleboo**	**42.23**	**243**	P		**P**	**15 34 37.2**	**-0.7**
WR8	**Warramunga Arr**	**44.02**	**262**	P		**P**	**15 34 51.5**	**-0.5**
WR8				IAmb		IAmb	15 35 06.6	
	comp=Z,11nm,1.5s							
AS31	**Alice Springs**	**44.11**	**257**	P		**P**	**15 34 52.7**	**0.0**
ASAR	**Alice Springs**	**44.12**	**257**	P		**P**	**15 34 52.2**	**-0.5**
ASAR	**Alice Springs**	**44.12**	**257**	P		**P**	**15 34 52.7**	**0.0**
	comp=Z,3.4nm,0.7s,baz=90,slow=7.8,SNR=84							
ASAR				PcP		**PcP**	**15 36 24.1**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=91,slow=3.0,SNR=5.7							
	comp=Z,3.4nm,0.7s							
WB0	**Warramunga Arr**	**44.14**	**262**	P		**P**	**15 34 52.8**	**-0.2**
WB0				IAmb		IAmb	15 34 53.3	
	comp=Z,3.7nm,0.4s							
WRA	**Warramunga Arr**	**44.17**	**262**	P		**P**	**15 34 52.8**	**-0.3**
WRA	**Warramunga Arr**	**44.17**	**262**	P		**P**	**15 34 53.0**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=98,slow=8.2,SNR=28							
WRA				PcP		**PcP**	**15 36 24.3**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=100,slow=3.1,SNR=1.5							
	comp=Z,1.3nm,0.4s							
MTN	**Manton Dam**	**48.69**	**271**	P		**P**	**15 35 27.3**	**+0.1**
MTN				IAmb		IAmb	15 35 30.6	
	comp=Z,14nm,1.3s							
FITZ	**Fitzroy Crossi**	**52.59**	**262**	P		**P**	**15 35 55.7**	**+0.3**
SOEI	**Soe**	**56.02**	**272**	P		**P**	**15 36 20.8**	**+1.1**
SOEI				IAmb		IAmb	15 36 22.1	
	comp=Z,10nm,0.8s							
MORW	**Morawa**	**59.48**	**248**	P		**P**	**15 36 42.5**	**-0.2**
MORW				IAmb		IAmb	15 37 01.9	
	comp=Z,15nm,1.1s							
MJAR	**Matsushiro Arr**	**69.75**	**324**	P		**P**	**15 37 47.1**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=158,slow=6.1,SNR=1.6							
	comp=Z,0.8nm,0.6s							
QSPA	**South Pole Qui**	**69.80**	**180**	P		**P**	**15 37 48.2**	**+1.3**
FARB	**Farallon Islan**	**77.75**	**42**	P		**P**	**15 38 31.5**	**-0.6**
FARB				IAmb		IAmb	15 39 08.8	
	comp=Z,29nm,1.2s							
CVS	**Carmenet Viney**	**78.49**	**42**	P		**P**	**15 38 34.5**	**-1.5**
CVS				IAmb		IAmb	15 38 55.0	
	comp=Z,16nm,1.4s							
MNRC	**McLaughlin Min**	**78.82**	**41**	P		**P**	**15 38 35.4**	**-2.5**
MNRC				IAmb		IAmb	15 38 51.0	
	comp=Z,10nm,1.4s							
K15K	**Wolf Creek Mou**	**83.38**	**8**	P		**P**	**15 38 59.6**	**-0.9**
K15K				IAmb		IAmb	15 39 00.1	
	comp=Z,17nm,1.4s							
ILAR	**Eielson Array**	**88.19**	**13**	P		**P**	**15 39 24.0**	**+0.5**
	comp=Z,0.7nm,1.0s,baz=204,slow=4.3,SNR=2.8							
	comp=Z,0.7nm,1.0s							
PDAR	**Pinedale Array**	**89.12**	**43**	P		**P**	**15 39 30.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=246,slow=3.9,SNR=2.3							
	comp=Z,0.2nm,0.5s							
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P		**P**	**15 39 33.2**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=114,slow=2.9,SNR=4.9							
	comp=Z,0.5nm,0.4s							
BVAR	**Borovoye Array**	**118.60**	**320**	PKP		**PKPdf**	**15 45 16.1**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=107,slow=3.2,SNR=4.3							
ARCES	**ARCESS Array B**	**128.61**	**349**	PKP		**PKiKP**	**15 45 35.9**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=32,slow=2.9,SNR=4.3							
HFS	**Hagfors**	**139.24**	**351**	PKhKP		PKPpre	15 45 48.6	
	comp=Z,3.1nm,1.0s,baz

SENIN					IAmb	IAmb	15 48 23.2		
	comp=Z,19nm,1.5s								
AMKA	**Amchitka**	**72.91**	**38**	P	**P**	**15 50 56.2**	**+0.8**		
M11K	**Mekoryuk**	**73.10**	**26**	P	**P**	**15 50 56.9**	**+0.6**		
L16K	**Owhat River**	**74.30**	**22**	P	**P**	**15 51 04.4**	**+1.1**		
L16K					IAmb	IAmb	15 51 12.2		
	comp=Z,15nm,1.4s								

NEIC ***03*** *15:45:55.1±0.5, 35°.622N±0°.008×117°.43W±0°.01, h7km±1km, Error ellipse: s-maj=1.5km s-min=1.0km az=123.0*

PAS 03 15:45:55.6±0.7, 35°.63N±0°.01×117°.44W±0°.01, h5km±1km, ML3.5/140, **ML3.2**/198(NEIC), **Error ellipse: s-maj=1.8km s-min=1.3km az=204.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSHM	**Spangler Hills**	**0.06**	**233**		Pg	15 45 57.1	0.0
CCCA	**Chr Cany lake**	**0.12**	**151**		Pg	15 45 58.5	+0.4
GPO	**China Lake**	**0.18**	**275**		Pg	15 45 59.5	+0.2
CLC	**China Lake**	**0.22**	**324**		Pg	15 45 60.0	-0.1
CLC					IAML	15 46 03.7	
	comp=N,5μm,0.4s						
CLC					IAML	15 46 03.7	
	comp=E,5μm,0.7s						
LRMC	**Laurel Mtn Rad**	**0.25**	**233**		Pg	15 46 00.6	0.0
SRTC	**Snort**	**0.26**	**283**		Pg	15 46 01.1	+0.4
SRTC					Sg	15 46 05.6	+1.4
TOW	**Tower One**	**0.32**	**303**		Pg	15 46 02.2	+0.4
TOW					Sb	15 46 07.7	-1.6
WVPM	**Volcano Peak E**	**0.44**	**316**		Pg	15 46 04.2	0.0
WVPM					Sg	15 46 10.6	+0.6
WCSM	**Coso Springs S**	**0.47**	**326**		Pg	15 46 04.5	-0.3
WCSM					Sg	15 46 11.3	+0.3
DTP	**Desert Tortois**	**0.49**	**223**		Pg	15 46 04.8	-0.3
DTP					Sg	15 46 11.7	+0.2
WRVM	**Rose V. Centra**	**0.53**	**316**		Pg	15 46 05.6	-0.2
WRVM					Sg	15 46 13.0	+0.5
QSM	**Queen of Sheba**	**0.57**	**54**		Sg	15 46 14.2	+0.2
QSM	**Queen of Sheba**	**0.57**	**54**		Pg	15 46 06.4	-0.2
QSM					IAML	15 46 14.9	
	comp=N,1μm,0.7s						
QSM					IAML	15 46 17.2	
	comp=E,1μm,0.7s						
WBSM	**Bird Springs**	**0.58**	**261**		Sg	15 46 14.5	+0.1
MFS	**McCloud Flat S**	**0.59**	**325**		Pg	15 46 06.8	-0.2
MFS					Sg	15 46 15.1	+0.4
GSC	**Goldstone, Bar**	**0.61**	**123**		Pg	15 46 07.2	-0.2
GSC	**Goldstone, Bar**	**0.61**	**123**		Sg	15 46 15.5	+0.2
WORM	**Onyx Ranch**	**0.66**	**276**		Pg	15 46 07.9	-0.4
WORM					Sg	15 46 16.6	-0.2
CCAC	**Calif City Air**	**0.67**	**225**		Pg	15 46 08.4	-0.2
CCAC					Sg	15 46 17.7	+0.3
WHFM	**Hanning Flat**	**0.74**	**275**		Pg	15 46 09.5	-0.4
WHFM					Sg	15 46 19.3	-0.3
HYS	**Haystack Butte**	**0.78**	**188**		Pg	15 46 09.9	-0.6
HYS					Sg	15 46 20.2	-0.4
GWY	**Greenwater Val**	**0.83**	**48**		Pg	15 46 11.1	-0.5
GWY					IAML	15 46 25.6	
	comp=N,770nm,0.9s						
GWY					IAML	15 46 27.2	
	comp=E,861nm,0.6s						
GWY	**Greenwater Val**	**0.83**	**48**		Sg	15 46 21.7	-0.7
RRX	**Edison Barstow**	**0.84**	**154**		Sg	15 46 22.3	-0.3
ISA	**Isabella, Lake**	**0.84**	**272**		Pg	15 46 11.3	-0.5
ISA					IAML	15 46 25.7	
	comp=E,591nm,0.6s						
ISA	**Isabella, Lake**	**0.84**	**272**		Sg	15 46 22.8	-0.1
EDW2	**Edwards Air Fo**	**0.88**	**211**		Sg	15 46 23.2	-0.7
WASM	**Alta Sierra Ca**	**0.92**	**277**		Pg	15 46 12.7	-0.6
WASM					Sg	15 46 24.8	-0.4
FURC	**Furnace Creek,**	**0.95**	**29**		Pg	15 46 13.6	-0.4
FURC					IAML	15 46 33.3	
	comp=N,948nm,0.8s						
FURC					IAML	15 46 35.2	
	comp=E,1μm,0.5s						
FURC	**Furnace Creek,**	**0.95**	**29**		Sg	15 46 26.8	+0.5
CWC	**Cottonwood Cre**	**0.96**	**327**		Pg	15 46 13.5	-0.5
CWC					IAML	15 46 28.4	
	comp=E,439nm,0.2s						
CWC					IAML	15 46 30.9	
	comp=N,398nm,0.5s						
SHOC	**Shoshone, Teco**	**0.98**	**74**		Pg	15 46 14.1	-0.4
TPO	**Tropico Hills**	**0.99**	**221**		Pg	15 46 14.3	-0.4
SPG2	**Springville 2**	**1.22**	**298**		Pg	15 46 17.9	-1.0
TUQ	**Turquoise Moun**	**1.25**	**99**		Pg	15 46 18.7	-0.9
WCT	**Wildcat Mounta**	**1.33**	**29**		Pn	15 46 19.6	-1.3
WCT					IAML	15 46 41.1	
	comp=E,283nm,0.5s						
VES	**Vestal, Richgr**	**1.36**	**279**		Pn	15 46 20.3	-0.9
VES					IAML	15 46 25.4	
	comp=E,498nm,0.8s						
VES					IAML	15 46 43.7	
	comp=N,482nm,0.5s						
GRAC	**Grapevine Rang**	**1.36**	**2**		Pn	15 46 20.5	-0.8
GRAC					IAML	15 46 44.3	
	comp=E,520nm,0.6s						
GRAC					IAML	15 46 45.0	
	comp=N,614nm,1.1s						
BFSC	**Mount Baldy Ra**	**1.40**	**188**		Pn	15 46 20.8	-1.2
BFSC					IAML	15 46 41.1	
	comp=E,447nm,0.6s						
BFSC					IAML	15 46 41.6	
	comp=N,465nm,0.6s						
OSI	**Osito Audit: C**	**1.47**	**226**		Pn	15 46 22.0	-0.8
MWC	**Mount Wilson**	**1.50**	**200**		Pn	15 46 22.4	-0.9
MTPC	**Mountain Pass**	**1.54**	**95**		Pn	15 46 22.6	-1.4
MTPC					IAML	15 46 47.9	
	comp=E,186nm,0.6s						
TIN	**Tinemaha, Big**	**1.56**	**336**		IAML	15 46 51.1	
	comp=E,347nm,0.7s						
TIN					IAML	15 46 51.9	
	comp=N,369nm,0.8s						
PASC	**Pasadena Art C**	**1.58**	**203**		IAML	15 46 47.8	
	comp=N,231nm,0.4s						
PASC					IAML	15 46 50.7	
	comp=E,242nm,0.6s						
TPNV	**Topopah Spring**	**1.63**	**36**		Pn	15 46 24.1	-1.0
TPNV					IAML	15 46 49.6	
	comp=E,256nm,0.7s						
TPNV					IAML	15 46 51.9	
	comp=E,264nm,0.7s						
GMN	**Gold Mountain**	**1.67**	**5**		Pn	15 46 25.1	-0.6
DSP	**Deep Springs**	**1.79**	**346**		Pn	15 46 26.6	-0.5
DANC	**Danby, Needles**	**1.96**	**120**		Pn	15 46 27.6	-1.9
ELS	**Elsinore Mount**	**1.98**	**180**		Pn	15 46 28.8	-1.0
ELS					IAML	15 47 06.8	
	comp=N,110nm,0.6s						
BELC	**Belle Mtn. Jos**	**2.01**	**144**		Pn	15 46 28.9	-1.5
BELC					IAML	15 47 01.9	
	comp=E,150nm,0.7s						
BELC					IAML	15 47 02.5	
	comp=N,192nm,0.7s						
SHPR	**Sheep Range**	**2.04**	**64**		Pn	15 46 30.1	-0.7
PMD	**Palm Desert**	**2.17**	**156**	IAML		15 47 10.9	
	comp=E,100nm,0.4s						
IRM	**Iron Mountain**	**2.39**	**127**	IAML		15 47 12.6	
	comp=E,180nm,0.4s						
IRM				IAML		15 47 16.4	
	comp=N,131nm,0.4s						
S11A	**Rachel**	**2.42**	**34**	IAML		15 47 20.6	
	comp=N,119nm,0.9s						
S11A				IAML		15 47 24.1	
	comp=E,191nm,1.0s						
NEE2	**Needles Airpor**	**2.46**	**110**	IAML		15 47 29.8	
	comp=E,181nm,0.6s						
BORC	**Borrego Spring**	**2.50**	**160**	IAML		15 47 23.3	
	comp=E,80nm,0.9s						
PKD	**Bear Valley Ra**	**2.54**	**278**	IAML		15 47 28.7	
	comp=E,60nm,1.3s						
BC3	**Big Chuckawall**	**2.56**	**140**	IAML		15 47 22.1	
	comp=N,118nm,0.8s						
BC3				IAML		15 47 22.6	
	comp=E,100nm,0.6s						
PRN	**Pahroc Range**	**2.61**	**47**	IAML		15 47 26.7	
	comp=E,99nm,0.8s						
PRN				IAML		15 47 26.7	
	comp=N,128nm,0.7s						
DPP	**Dos Picos Cty**	**2.66**	**171**	IAML		15 47 19.5	
	comp=E,65nm,0.8s						
LHV	**Little Huntoon**	**2.75**	**342**	IAML		15 47 29.9	
	comp=E,72nm,0.9s						
LHV					IAML	15 47 33.5	
	comp=N,57nm,0.8s						
CPE	**Camp Elliot**	**2.75**	**174**	IAML		15 47 23.1	
	comp=E,80nm,0.6s						
CPE					IAML	15 47 26.8	
	comp=N,64nm,0.6s						
PMPB	**Monarch Peak**	**2.79**	**283**	IAML		15 47 27.3	
	comp=N,110nm,0.8s						
PMPB					IAML	15 47 30.2	
	comp=E,106nm,1.0s						
W13A	**Hualapai Mount**	**2.95**	**99**	IAML		15 47 33.3	
	comp=N,42nm,0.8s						
BAR	**Barrett**	**3.01**	**168**	IAML		15 47 30.7	
	comp=E,60nm,0.6s						
BAR					IAML	15 47 33.3	
	comp=N,62nm,0.7s						
BLYC	**Blythe**	**3.05**	**127**	IAML		15 47 33.3	
	comp=E,73nm,0.5s						
BLYC					IAML	15 47 35.1	
	comp=N,100nm,0.7s						
HULI	**Fort Hunter Li**	**3.11**	**278**	IAML		15 47 34.7	
	comp=N,51nm,0.9s						
Q09A	**Carvers**	**3.20**	**4**	IAML		15 47 49.4	
	comp=E,89nm,0.9s						
Q09A					IAML	15 48 02.3	
	comp=N,93nm,1.1s						
CMB	**Columbia Colle**	**3.37**	**316**	IAML		15 47 46.8	
	comp=E,50nm,0.8s						
CMB					IAML	15 47 52.4	
	comp=N,43nm,0.8s						
MHC	**Mount Hamilton**	**3.79**	**298**	IAML		15 48 01.1	
	comp=N,38nm,0.8s						
MHC					IAML	15 48 03.3	
	comp=E,32nm,0.9s						
ESJX	**Sierra Juarez**	**3.83**	**161**	IAML		15 48 23.0	
	comp=N,33nm,0.1s						
PNTR	**Pine Nut**	**3.86**	**334**	IAML		15 48 24.1	
	comp=N,34nm,0.8s						
PNTR					IAML	15 48 24.5	
	comp=E,34nm,1.0s						
KNB	**Kanab**	**3.97**	**68**	IAML		15 48 08.7	
	comp=E,18nm,1.1s						
KNB					IAML	15 48 11.0	
	comp=N,28nm,1.5s						
Y14A	**Wickenburg**	**4.02**	**114**	IAML		15 48 10.3	
	comp=E,34nm,0.4s						
Y14A					IAML	15 48 11.1	
	comp=N,44nm,0.7s						
SPR3	**Spring Creek 3**	**4.17**	**35**	IAML		15 48 15.8	
	comp=E,18nm,0.9s						
MPK	**Martis Peak**	**4.20**	**331**	IAML		15 48 26.2	
	comp=E,43nm,0.9s						
U15A	**North Rim**	**4.25**	**78**	IAML		15 48 07.6	
	comp=E,22nm,0.7s						
U15A					IAML	15 48 12.4	
	comp=N,22nm,1.0s						
VTX	**Valle De La Tr**	**4.45**	**161**	IAML		15 48 18.9	
	comp=N,18nm,0.7s						
VTX					IAML	15 48 21.8	
	comp=E,20nm,1.0s						
BEKR	**Beckworth**	**4.82**	**332**	IAML		15 48 36.9	
	comp=N,14nm,1.3s						
BEKR					IAML	15 48 38.9	
	comp=E,22nm,0.6s						
WUAZ	**Wupatki**	**4.94**	**90**	IAML		15 48 39.2	
	comp=E,18nm,0.5s						
WUAZ					IAML	15 48 39.6	
	comp=E,17nm,1.0s						
X16A	**Lo Mia Camp, P**	**5.07**	**102**	IAML		15 48 45.3	
	comp=E,8.7nm,1.0s						
X16A					IAML	15 48 52.6	
	comp=N,8.5nm,1.4s						
SFX	**San Felipe**	**5.07**	**154**	IAML		15 48 44.9	
	comp=N,11nm,0.6s						
SFX					IAML	15 48 56.0	
	comp=E,11nm,1.0s						
ORV	**Oroville**	**5.07**	**322**	IAML		15 48 42.9	
	comp=E,13nm,1.3s						

UCR ***03*** *15:51:32.8±1.2, 13°.52N×89°.91W, h0km±160km, MW4.0*
GCG ***03*** *15:51:33.9±1.1, 13°.54N×90°.12W, h53km±9km, MD4.0, ML4.0*
CATAC ***03*** *15:51:33.8±0.5, 14°N±3°×9°.0W±°, h49km±4km, M4.1/17, MLv4.1/17, Error ellipse: s-maj=7.6km s-min=6.2km az=54.2, confirmed*
SNET ***03*** *15:51:34.5±1.3, 13°.61N×90°.01W, h67km, ML4.1*

ISC 03 15:51:36.6±1.3, 13°.62N±0°.04×89°.97W±0°.03, h58km±7km, n111, σ1§46/133, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.23**	**348**	P	**Pn**	**15 51 43.9**	**-2.1**
FAME	**Alcaldia de Sa**	**0.23**	**348**	S	**Sn**	**15 51 52.2**	**-0.6**
NUBE	**Las Nubes**	**0.34**	**33**	*eP*	**Pn**	**15 51 45.9**	**-1.1**
NUBE				*eS*	**Sn**	**15 51 54.4**	**0.0**
NUBE	**Las Nubes**	**0.34**	**33**	*i* P	**Pn**	**15 51 45.9**	**-1.1**
NUBE				*eS*	**Sn**	**15 51 55.2**	**+0.7**
NUBE	**Las Nubes**	**0.34**	**33**	P	**Pn**	**15 51 45.9**	**-1.1**
CEVE	**Cerro Verde**	**0.39**	**58**	*eP*	**Pn**	**15 51 46.8**	**-0.8**
CEVE				*eS*	**Sn**	**15 51 56.6**	**+1.1**
CEVE	**Cerro Verde**	**0.39**	**58**	P	**Pn**	**15 51 46.8**	**-0.8**
CEVE	**Cerro Verde**	**0.39**	**58**	S	**Sn**	**15 51 57.1**	**+1.6**
SBLS	**San Blas**	**0.40**	**56**	*eP*	**Pn**	**15 51 46.8**	**-0.9**
RTR	**El Retiro**	**0.42**	**48**	*eP*	**Pn**	**15 51 47.0**	**-0.8**
LOAL	**Lomas de Alarc**	**0.42**	**25**	*eP*	**Pn**	**15 51 46.5**	**-1.1**
LOAL				*eS*	**Sn**	**15 51 56.2**	**+0.6**
LOAL	**Lomas de Alarc**	**0.42**	**25**	P	**Pn**	**15 51 46.6**	**-1.1**
LOAL	**Lomas de Alarc**	**0.42**	**25**	S	**Sn**	**15 51 57.1**	**+1.6**
SNJE	**San Jose**	**0.43**	**55**	*eP*	**Pn**	**15 51 47.1**	**-0.8**
JAYA	**Jayaque - finc**	**0.50**	**86**	*eP*	**Pn**	**15 51 47.6**	**-1.0**
JAYA				*eS*	**Sn**	**15 51 58.0**	**+0.7**
JAYA	**Jayaque - finc**	**0.50**	**86**	*i* P	**Pn**	**15 51 47.5**	**-1.0**
JAYA				*eS*	**Sn**	**15 51 57.3**	**0.0**
JAYA	**Jayaque - finc**	**0.50**	**86**	P	**Pn**	**15 51 47.5**	**-1.0**
ESSJ	**San Jos, E**	**0.52**	**264**	*i* P	**Pn**	**15 51 49.8**	**+1.2**
UNIC	**Universidad Ca**	**0.54**	**48**	*eP*	**Pn**	**15 51 47.9**	**-1.1**
UNIC	**Universidad Ca**	**0.54**	**48**	P	**Pn**	**15 51 47.9**	**-1.1**
RBDL	**Robledal**	**0.56**	**29**	*eP*	**Pn**	**15 51 48.1**	**-1.2**
RBDL				*eS*	**Sn**	**15 51 59.0**	**+0.5**
CEDA	**San Andres**	**0.58**	**72**	*eP*	**Pn**	**15 51 48.5**	**-0.8**
CEDA	**San Andres**	**0.58**	**72**	P	**Pn**	**15 51 48.6**	**-0.8**
CEDA	**San Andres**	**0.58**	**72**	S	**Sn**	**15 52 00.4**	**+1.8**
LALI	**Alcalda de L**	**0.64**	**102**	*eP*	**Pn**	**15 51 48.4**	**-1.6**
LALI	**Alcalda de L**	**0.64**	**102**	*eP*	**Pn**	**15 51 48.5**	**-1.4**
LALI				*eS*	**Sn**	**15 51 59.9**	**+0.1**
LALI	**Alcalda de L**	**0.64**	**102**	P	**Pn**	**15 51 48.6**	**-1.4**
LALI	**Alcalda de L**	**0.64**	**102**	S	**Sn**	**15 52 00.1**	**+0.4**
PMON	**Piamonte**	**0.64**	**82**	*eP*	**Pn**	**15 51 49.4**	**-0.8**
PMON	**Piamonte**	**0.64**	**82**	P	**Pn**	**15 51 49.2**	**-0.9**
PMON	**Piamonte**	**0.64**	**82**	S	**Sn**	**15 52 01.4**	**+1.5**
MAGS	**Ministerio de**	**0.66**	**84**	*eP*	**Pn**	**15 51 49.6**	**-0.8**
MAGS				*eS*	**Sn**	**15 52 01.5**	**+1.1**
BOQS	**Boqueron**	**0.68**	**80**	*eP*	**Pn**	**15 51 49.7**	**-0.9**
PIC2	**El Picacho**	**0.70**	**80**	*eP*	**Pn**	**15 51 50.9**	**-0.1**
QUEZ	**Alcaldia de Qu**	**0.71**	**72**	*eP*	**Pn**	**15 51 50.1**	**-0.8**
QUEZ				*eS*	**Sn**	**15 52 03.0**	**+1.7**
UEES	**Universidad Ev**	**0.71**	**82**	*eP*	**Pn**	**15 51 50.5**	**-0.5**
UEES				*eS*	**Sn**	**15 52 03.1**	**+1.6**
UEES	**Universidad Ev**	**0.71**	**82**	P	**Pn**	**15 51 50.5**	**-0.5**
PCGS	**San Vicente Pa**	**0.72**	**326**	*i* P	**Pn**	**15 51 51.3**	**+0.2**
PCGS				*eS*	**Sn**	**15 52 05.6**	**+3.9**
UESS	**Universidad de**	**0.75**	**82**	*eP*	**Pn**	**15 51 51.1**	**-0.4**
UESS				*eS*	**Sn**	**15 52 03.7**	**+1.4**
JUAM	**Asuncion Mita**	**0.76**	**19**	*i* P	**Pn**	**15 51 50.2**	**-1.3**
JUAM				*eS*	**Sn**	**15 52 03.4**	**+1.1**
JUAM				IAML		15 52 04.4	
	comp=N,3μm,0.6s						
JUAM				IAML		15 52 05.1	
	comp=E,4μm,0.3s						
PANCS	**Alcalda de**	**0.76**	**90**	*eP*	**Pn**	**15 51 50.6**	**-1.0**
PANCS				*eS*	**Sn**	**15 52 03.9**	**+1.4**
PANCS	**Alcalda de**	**0.76**	**90**	P	**Pn**	**15 51 50.6**	**-1.0**
LOMA	**Loma Larga**	**0.77**	**88**	*eP*	**Pn**	**15 51 50.9**	**-0.9**
LOMA	**Loma Larga**	**0.77**	**88**	P	**Pn**	**15 51 51.0**	**-0.7**
LOMA	**Loma Larga**	**0.77**	**88**	S	**Sn**	**15 52 04.5**	**+1.6**
IGN	**Direccin Gen**	**0.78**	**83**	*eP*	**Pn**	**15 51 51.4**	**-0.4**
IGN	**Direccin Gen**	**0.78**	**83**	P	**Pn**	**15 51 51.4**	**-0.4**
IGN	**Direccin Gen**	**0.78**	**83**	S	**Sn**	**15 52 04.8**	**+1.9**
UDBS	**Universidad Do**	**0.79**	**83**	*eP*	**Pn**	**15 51 51.4**	**-0.5**
UDBS	**Universidad Do**	**0.79**	**83**	P	**Pn**	**15 51 51.6**	**-0.3**
UDBS	**Universidad Do**	**0.79**	**83**	S	**Sn**	**15 52 05.1**	**+1.8**
LFU	**La Fuente**	**0.84**	**81**	*eP*	**Pn**	**15 51 52.2**	**-0.4**
LFRS	**El Faro**	**0.88**	**90**	*eP*	**Pn**	**15 51 52.2**	**-0.8**
LBRS	**Las Brisas**	**0.90**	**82**	*eP*	**Pn**	**15 51 52.8**	**-0.6**
MTO3	**Montecristo**	**0.97**	**37**	*eP*	**Pn**	**15 51 53.4**	**-1.0**
MTO3	**Montecristo**	**0.97**	**37**	*i* P	**Pn**	**15 51 53.5**	**-1.0**
MTO3	**Montecristo**	**0.97**	**37**	P	**Pn**	**15 51 53.5**	**-1.0**
MTO3	**Montecristo**	**0.97**	**37**	S	**Sn**	**15 52 08.6**	**+1.0**
PAVA	**Las Pavas**	**1.00**	**84**	*eP*	**Pn**	**15 51 54.0**	**-0.7**
PAVA				*eS*	**Sn**	**15 52 09.8**	**+1.6**
PAVA	**Las Pavas**	**1.00**	**84**	P	**Pn**	**15 51 54.3**	**-0.4**
SNVI	**San Vicente**	**1.09**	**90**	*eP*	**Pn**	**15 51 55.2**	**-0.8**
GCG4	**OSOP**	**1.11**	**330**	*i* P	**Pn**	**15 51 53.9**	**-2.3**
ESQI	**Esquipulas**	**1.11**	**33**	*eP*	**Pn**	**15 51 55.4**	**-0.8**
ESQI				*eS*	**Sn**	**15 52 11.8**	**+1.1**
ESQI	**Esquipulas**	**1.11**	**33**	P	**Pn**	**15 51 55.4**	**-0.8**
ESQI	**Esquipulas**	**1.11**	**33**	S	**Sn**	**15 52 12.2**	**+1.5**
ZAFR2	**Estanzuela, Za**	**1.13**	**32**	*i* P	**Pn**	**15 51 58.9**	**+2.6**
LLGN	**La Laguna**	**1.13**	**61**	*eP*	**Pn**	**15 51 55.1**	**-1.3**
LLGN	**La Laguna**	**1.13**	**61**	P	**Pn**	**15 51 55.2**	**-1.2**
LLGN	**La Laguna**	**1.13**	**61**	S	**Sn**	**15 52 12.3**	**+1.3**
ESSG	**Sabana Grande**	**1.13**	**312**	*i* P	**Pn**	**15 51 52.6**	**-3.8**
UESV	**Universidad de**	**1.15**	**89**	*eP*	**Pn**	**15 51 56.0**	**-0.5**
UESV				*eS*	**Sn**	**15 52 13.1**	**+1.8**
UESV	**Universidad de**	**1.15**	**89**	S	**Sn**	**15 52 12.9**	**+1.6**
TECO	**Alcaldia de Te**	**1.16**	**94**	*eP*	**Pn**	**15 51 55.3**	**-1.4**
TECO				*eS*	**Sn**	**15 52 12.5**	**+0.9**
TECO	**Alcaldia de Te**	**1.16**	**94**	P	**Pn**	**15 51 55.5**	**-1.1**
SCLA	**Alcaldia de Sa**	**1.21**	**86**	*eP*	**Pn**	**15 51 56.7**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.21**	**86**	P	**Pn**	**15 51 56.9**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.21**	**86**	S	**Sn**	**15 52 15.9**	**+3.1**
TECA	**Tecapa**	**1.43**	**95**	*eP*	**Pn**	**15 51 59.5**	**-0.9**
APG	**El Apazote**	**1.46**	**341**	*i* P	**Pn**	**15 51 59.0**	**-2.0**
STG2	**El Palmar, Qui**	**1.59**	**301**	*i* P	**Pn**	**15 52 04.1**	**+1.4**
STG2				*eS*	**Sn**	**15 52 27.0**	**+4.7**
SARH	**Santa Rosa de**	**1.64**	**45**	*i* P	**Pn**	**15 52 03.0**	**-0.2**
SARH	**Santa Rosa de**	**1.64**	**45**	P	**Pn**	**15 52 02.8**	**-0.5**
SARH	**Santa Rosa de**	**1.64**	**45**	S	**Sn**	**15 52 19.0**	**-4.3**
SOKI	**Kika Raxquin**	**1.84**	**311**	*eP*	**Pn**	**15 52 03.7**	**-2.6**
QUEO	**Labor Ovalle**	**1.95**	**310**	*eP*	**Pn**	**15 52 04.7**	**-3.0**
QUEO				*eS*	**Sn**	**15 52 30.4**	**-0.9**
QUIS	**Sacapulas**	**1.99**	**327**	*eP*	**Pn**	**15 52 06.1**	**-2.0**
LCND	**La Caada**	**2.04**	**98**	*eP*	**Pn**	**15 52 07.5**	**-1.2**
CNCH	**Conchagua**	**2.10**	**99**	*eP*	**Pn**	**15 52 08.4**	**-1.1**
SMCA	**Catarina**	**2.39**	**301**	*eP*	**Pn**	**15 52 09.6**	**-3.8**
CSGN	**Cosiguina Volc**	**2.43**	**105**	*eP*	**Pn**	**15 52 12.9**	**-1.1**
POTN	**Potosi Cosigui**	**2.47**	**104**	*eP*	**Pn**	**15 52 13.9**	**-0.6**
POTN				*eS*	**Sn**	**15 52 44.7**	**+1.2**
THIG		**2.57**	**300**	*eP*	**Pn**	**15 52 12.9**	**-2.9**
CRIN	**San Cristobal**	**2.98**	**107**	*eP*	**Pn**	**15 52 19.7**	**-1.9**
PETF	**Flores**	**3.28**	**2**	*i* P	**Pn**	**15 52 25.1**	**-0.4**
PETF				IAML		15 52 53.6	
	comp=N,159nm,0.6s						
CNGN	**Cerro Negro**	**3.37**	**109**	*eP*	**Pn**	**15 52 25.3**	**-1.6**
MGAN	**Managua**	**3.91**	**112**	*eP*	**Pn**	**15 52 33.6**	**-0.6**
ELI1	**Hacienda Flor**	**5.23**	**124**	*eP*	**Pn**	**15 52 52.3**	**0.0**
LAPC	**Finca la Perla**	**5.26**	**122**	*eP*	**Pn**	**15 52 51.2**	**-1.5**
SAJU	**San Juanillo,**	**5.46**	**130**	*eP*	**Pn**	**15 52 54.1**	**-1.4**
VMAR	**Armenia, Volca**	**5.50**	**120**	*eP*	**Pn**	**15 52 54.8**	**-1.3**
JUD3	**Juan Diaz 3**	**5.53**	**128**	*eP*	**Pn**	**15 52 55.4**	**-1.1**
CUI	**Cuipilapa**	**5.54**	**122**	*eP*	**Pn**	**15 52 56.0**	**-0.6**
INVE	**Universidad In**	**5.72**	**123**	*eP*	**Pn**	**15 52 57.2**	**-1.8**
JTS	**Las Juntas de**	**5.92**	**123**	*eP*	**Pn**	**15 53 01.3**	**-0.5**
JCR1	**Jicaral**	**6.05**	**128**	*eP*	**Pn**	**15 53 02.7**	**-0.9**
PAR1A	**Puntarenas Pro**	**6.88**	**125**	*eP*	**Pn**	**15 53 15.4**	**+0.5**
PICV	**PH. Pirrs**	**6.91**	**124**	*eP*	**Pn**	**15 53 16.1**	**+0.8**
PIEC	**Cerro El Cedra**	**7.10**	**123**	*eP*	**Pn**	**15 53 16.7**	**-1.5**
BUS1	**Rivas**	**7.31**	**123**	*eP*	**Pn**	**15 53 21.0**	**-0.2**
EDPE	**Pejibaye, P**	**7.68**	**125**	*eP*	**Pn**	**15 53 26.2**	**+0.3**
PIRO	**Carate, Puerto**	**8.32**	**128**	*eP*	**Pn**	**15 53 35.6**	**+1.0**

HEL ***03*** *15:56:21.4±0.6, 67°.62N×34°.27E, h0km, ML2.0, Suspected explosion*
KOLA ***03*** *15:56:22.1, 67°.67N×34°.25E, h0km, ML2.4, Error ellipse: s-maj=4.2km s-min=1.8km az=120.0, Murmansk region, Kirovsk district*

ISC 03 15:56:20.7±1.0, 67°.69N±0°.04×34°.26E±0°.04, h0km, n26, σ1§45/43, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.26**	**35**	P	**Pg**	**15 56 26.6**	**+0.9**
LVZ	**Lovozero**	**0.26**	**35**	PG	**Pg**	**15 56 26.1**	**+0.5**
LVZ				SG	**Sb**	**15 56 33.0**	**-0.3**
APA	**Apatity**	**0.35**	**251**	P	**Pg**	**15 56 27.9**	**+0.5**
APA				S	**Sg**	**15 56 32.2**	**+0.3**
APA0	**Apatity Array**	**0.49**	**261**	P	**Pg**	**

SHLS	**Shalkode**	**2.40**	**13**	Pg		**Pg**	**16 03 15.1**	**+0.8**
	3.1nm,0.3s							
SHLS				Lg		Lg	16 03 46.5	
	11nm,0.6s							
SHLS	**Shalkode**	**2.40**	**13**	*eP*		**Pg**	**16 03 15.1**	**+0.8**
	3.1nm,0.3s							
SHLS				*eS*		**Sg**	**16 03 46.5**	**+1.1**
	11nm,0.6s							
TNSS	**Tian-Shan**	**2.58**	**330**	Pg		**Pg**	**16 03 17.1**	**-0.5**
	1.4nm,0.3s							
TNSS				Lg		Lg	16 03 50.0	
	1.9nm,0.5s							
TNSS	**Tian-Shan**	**2.58**	**330**	*eP*		**Pg**	**16 03 17.1**	**-0.5**
	1.4nm,0.3s							
TNSS				*eS*		**Sg**	**16 03 50.0**	**-1.1**
	1.9nm,0.5s							
KPKS	**Kokpek**	**2.65**	**360**	Pg		**Pb**	**16 03 15.2**	**-1.1**
	0.4nm,0.2s							
KPKS				Lg		Lg	16 03 47.4	
	7.4nm,0.3s							
MDOK	**Medeo**	**2.65**	**333**	Pg		**Pb**	**16 03 17.2**	**+0.8**
	2.8nm,0.5s							
MDOK				Lg		Lg	16 03 50.3	
	3.6nm,0.5s							
BOOM	**Boomskoye usch**	**2.67**	**310**	⇓*eP*		**Pb**	**16 03 16.8**	**+0.1**
BOOM				⇓*eS*		**Sb**	**16 03 49.0**	**-0.8**
KST	**Kastek**	**3.02**	**318**	Pg		**Pb**	**16 03 23.5**	**+0.8**
	1.7nm,0.8s							
KST				Lg		Lg	16 04 01.4	
	3.1nm,1.0s							
KST	**Kastek**	**3.02**	**318**	*eP*		**Pb**	**16 03 23.5**	**+0.8**
	1.7nm,0.8s							
KST				*eS*		**Sb**	**16 04 01.4**	**+1.3**
	3.1nm,1.0s							
KTBS	**Karatobe**	**3.26**	**333**	Pg		**Pb**	**16 03 27.9**	**+1.2**
	1.1nm,0.4s							
KTBS				Lg		Lg	16 04 08.6	
	2.8nm,0.3s							
BLB	**Baldybastay**	**3.28**	**357**	Pg		**Pb**	**16 03 26.5**	**-0.7**
	7.4nm,0.4s							
BLB				Lg		Lg	16 04 06.4	
	3.8nm,0.6s							
ARXS	**Arharly**	**3.45**	**349**	Pg		**Pb**	**16 03 29.9**	**-0.2**
	0.8nm,0.5s							
ARXS				Lg		Lg	16 04 12.4	
	4.0nm,0.4s							
ARXS	**Arharly**	**3.45**	**349**	*eP*		**Pb**	**16 03 29.9**	**-0.2**
ARXS				*eS*		**Sb**	**16 04 12.4**	**-0.1**
KNOS	**Konyrlen**	**3.55**	**5**	Pg		**Pb**	**16 03 31.8**	**0.0**
	0.5nm,0.3s							
KNOS				Lg		Lg	16 04 15.4	
	4.1nm,0.5s							

*NEIC **03** 16:06:23.9±1.5, 19°.22N±0°.04×67°.16W±0°.04, h10km±2km, ML3.6/17, Md3.6/14(RSPR), Error ellipse: s-maj=6.1km s-min=5.5km az=28.0*
*SDD **03** 16:06:23.5±2.2, 19°.31N×67°.19W, h19km±128km, MD3.8, ML3.6, MW3.7*
*RSPR **03** 16:06:28.4, 19°.16N×67°.25W, h13km±4km, MD3.6/14*
ISC 03 16:06:24.0±1.4,**19°.21N**±0°.05×**67°.20W**±0°.03,**h14**km±9km, **n65**,σ0°**91**/**77**,**16C-13D**,**Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.74**	**174**		**Pn**	**16 06 39.6**	**-0.5**
AGPR					**Sb**	**16 06 49.5**	**+0.8**
AGPR	**Aguadilla, PR**	**0.74**	**174**	⇓*eP*	**Pb**	**16 06 38.7**	**0.0**
AGPR				⇓*eS*	**Sb**	**16 06 50.0**	**+1.2**
AGPR				IAML		16 06 54.2	
	comp=N,2μm,0.5s						
AGPR	**Aguadilla, PR**	**0.74**	**174**	⇓*eP*	**Pn**	**16 06 39.6**	**-0.5**
AGPR	**Aguadilla, PR**	**0.74**	**174**	*eS*	**Sb**	**16 06 49.5**	**+0.8**
IDE	**Isla Desecheo**	**0.86**	**198**		**Pg**	**16 06 40.7**	**0.0**
IDE					**Sb**	**16 06 52.7**	**+0.6**
IDE	**Isla Desecheo**	**0.86**	**198**	⇑*iP*	**Pg**	**16 06 40.7**	**0.0**
IDE	**Isla Desecheo**	**0.86**	**198**	*eS*	**Sb**	**16 06 52.7**	**+0.6**
AOPR	**Arecibo Observ**	**0.96**	**154**		**Sn**	**16 06 56.1**	**-0.4**
AOPR	**Arecibo Observ**	**0.96**	**154**		**Pb**	**16 06 42.0**	**-0.4**
AOPR				IAML		16 07 01.0	
	comp=N,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.96**	**154**	⇑*eP*	**Pb**	**16 06 42.0**	**-0.4**
AOPR				IAML		16 07 01.0	
	comp=N,2μm,0.3s						
AOPR	**Arecibo Observ**	**0.96**	**154**	⇑*eP*	**Pn**	**16 06 43.8**	**+0.8**
AOPR	**Arecibo Observ**	**0.96**	**154**	*eS*	**Sn**	**16 06 56.1**	**-0.4**
EMPR	**Esperanza - Ma**	**0.97**	**139**		**Pn**	**16 06 45.1**	**+1.9**
EMPR					**Sn**	**16 06 56.8**	**+0.2**
EMPR	**Esperanza - Ma**	**0.97**	**139**	⇑*eP*	**Pn**	**16 06 45.1**	**+1.9**
EMPR	**Esperanza - Ma**	**0.97**	**139**	*eS*	**Sn**	**16 06 56.8**	**+0.2**
PRSN	**Puerto Rico Se**	**0.99**	**177**		**Pn**	**16 06 43.8**	**+0.3**
PRSN					**Sg**	**16 06 56.9**	**+0.7**
PRSN	**Puerto Rico Se**	**0.99**	**177**	⇑*eP*	**Pn**	**16 06 43.8**	**+0.3**
PRSN	**Puerto Rico Se**	**0.99**	**177**	*eS*	**Sg**	**16 06 56.9**	**+0.7**
LSP	**Las Mesas**	**1.03**	**174**		**Pn**	**16 06 45.5**	**+1.3**
LSP					**Sb**	**16 06 57.4**	**+0.2**
LSP	**Las Mesas**	**1.03**	**174**	⇑*eP*	**Pn**	**16 06 45.5**	**+1.3**
LSP	**Las Mesas**	**1.03**	**174**	*eS*	**Sb**	**16 06 57.4**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.05**	**154**		**Pn**	**16 06 45.4**	**+1.0**
UUPR					**Sg**	**16 06 58.0**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.05**	**154**	⇑*eP*	**Pn**	**16 06 45.4**	**+1.0**
UUPR	**Utuado, UPR, P**	**1.05**	**154**	*eS*	**Sg**	**16 06 58.0**	**-0.2**
ECPR	**Experimental S**	**1.19**	**138**	⇓*eP*	**Pg**	**16 06 47.5**	**+0.5**
ECPR	**Experimental S**	**1.19**	**138**	*eS*	**Sn**	**16 07 01.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.20**	**176**		**Sb**	**16 07 02.1**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.20**	**176**	Pn	**Pn**	**16 06 45.6**	**-0.7**
CRPR				IAML		16 07 05.9	
	comp=E,1μm,0.5s						
CRPR				IAML		16 07 06.3	
	comp=N,1μm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.20**	**176**	⇑*eP*	**Pn**	**16 06 45.7**	**-0.7**
CRPR				⇓*eS*	**Sn**	**16 07 02.6**	**+0.2**
CRPR				IAML		16 07 06.2	
	comp=N,1μm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.20**	**176**	⇓*eP*	**Pg**	**16 06 47.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.20**	**176**	*eS*	**Sb**	**16 07 02.1**	**+0.2**
OBIP	**Obispado Ponce**	**1.29**	**154**		**Sb**	**16 07 04.6**	**+0.1**
OBIP	**Obispado Ponce**	**1.29**	**154**	Pn	**Pn**	**16 06 47.2**	**-0.4**
OBIP				IAML		16 07 08.5	
	comp=E,893nm,0.6s						
OBIP				IAML		16 07 10.5	
	comp=N,1μm,0.5s						
OBIP	**Obispado Ponce**	**1.29**	**154**	⇑*eP*	**Pg**	**16 06 49.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.29**	**154**	*eS*	**Sb**	**16 07 04.6**	**+0.1**
PCDR	**Punta Cana, DR**	**1.32**	**238**	⇓*eP*	**Pn**	**16 06 47.9**	**-0.1**
PCDR				⇑*eS*	**Sb**	**16 07 05.2**	**-0.1**
PCDR				IAML		16 07 08.2	
	comp=N,1μm,0.6s						
GCPR	**Guaynabo City**	**1.39**	**130**		**Sb**	**16 07 07.7**	**+0.5**
GCPR	**Guaynabo City**	**1.39**	**130**	Pn	**Pn**	**16 06 48.5**	**-0.4**
GCPR	**Guaynabo City**	**1.39**	**130**	⇓*eP*	**Pb**	**16 06 49.7**	**0.0**
GCPR	**Guaynabo City**	**1.39**	**130**	*eS*	**Sb**	**16 07 07.7**	**+0.5**
SJG	**San Juan**	**1.48**	**138**	Pn	**Pn**	**16 06 49.7**	**-0.4**
SJG				IAML		16 07 18.6	
	comp=N,623nm,0.2s						
SJG				IAML		16 07 19.2	
	comp=N,561nm,0.4s						
SJG	**San Juan**	**1.48**	**138**	⇑*eP*	**Pg**	**16 06 51.8**	**-0.7**
SJG	**San Juan**	**1.48**	**138**	*eS*	**Sb**	**16 07 10.3**	**+0.5**
HIDR	**Higuey Centro**	**1.56**	**247**	⇓*eP*	**Pn**	**16 06 51.4**	**+0.1**
HIDR				⇓*eS*	**Sn**	**16 07 11.9**	**+0.5**
HIDR				IAML		16 07 17.3	
	comp=N,1μm,0.2s						
HIDR	**Higuey Centro**	**1.56**	**247**	⇓*eP*	**Pn**	**16 06 51.9**	**+0.5**
HUMP	**Col San Antoni**	**1.66**	**129**		**Sn**	**16 07 14.3**	**+0.5**
HUMP	**Col San Antoni**	**1.66**	**129**	Pn	**Pn**	**16 06 52.2**	**-0.5**
HUMP				IAML		16 07 25.2	
	comp=E,675nm,0.2s						
HUMP	**Col San Antoni**	**1.66**	**129**	⇑*eP*	**Pb**	**16 06 54.4**	**-0.1**
HUMP	**Col San Antoni**	**1.66**	**129**	*eS*	**Sn**	**16 07 14.3**	**+0.5**
MIDR	**Miches**	**1.77**	**263**	⇑*eP*	**Pn**	**16 06 54.5**	**+0.3**
MIDR				⇓*eS*	**Sb**	**16 07 19.6**	**+1.4**
MIDR				IAML		16 07 22.7	
	comp=N,303nm,0.6s						
MIDR	**Miches**	**1.77**	**263**	⇑*iP*	**Pn**	**16 06 54.5**	**+0.3**
SMDR	**Samana, DR**	**1.88**	**273**	⇓*eP*	**Pb**	**16 06 57.4**	**-0.8**
DR12	**Loma Pena Alta**	**2.11**	**259**		**Pn**	**16 06 59.4**	**+0.5**
HATOM	**Hato Mayor del**	**2.11**	**259**	⇓*eP*	**Pn**	**16 06 59.6**	**+0.8**
HATOM				⇑*eS*	**Sn**	**16 07 25.9**	**+1.0**
HATOM				IAML		16 07 31.8	
	comp=N,300nm,0.5s						
SDD	**Santo Domingo**	**2.68**	**254**		**Sn**	**16 07 39.8**	**+0.9**
SDD	**Santo Domingo**	**2.68**	**254**	Pn	**Pn**	**16 07 07.1**	**+0.4**
SDD				IAML		16 07 49.3	
	comp=E,197nm,1.1s						
SDD	**Santo Domingo**	**2.68**	**254**	⇑*eP*	**Pn**	**16 07 07.6**	**+0.9**
SDD	**Santo Domingo**	**2.68**	**254**	*eS*	**Sn**	**16 07 39.8**	**+0.9**
BANI	**BANI**	**3.10**	**255**		**Pn**	**16 07 14.0**	**+1.3**
SC01	**Santiago de lo**	**3.34**	**274**		**Sb**	**16 07 59.9**	**-3.7**
SC01	**Santiago de lo**	**3.34**	**274**	Pn	**Pn**	**16 07 17.2**	**+1.4**
SC01	**Santiago de lo**	**3.34**	**274**	⇑*eP*	**Pn**	**16 07 18.0**	**+2.2**
SDDR	**Presa de Saban**	**3.87**	**267**		**Pn**	**16 07 24.6**	**+1.4**
CAMR	**Camarioca**	**13.77**	**289**	Pn	**Pn**	**16 09 39.4**	**+0.6**
RUSC	**La Rusia**	**14.42**	**204**	Pn	**Pn**	**16 09 46.2**	**-2.2**

*WEL **03** 16:07:28.3±0.6, 35°.5S±5°.5×18°.0E±°, h74km±69km, M5.7/18, ML5.9/18, MLv5.7/18, Error ellipse: s-maj=10.2km s-min=6.2km az=112.0, confirmed*
*MOS **03** 16:07:28.2±1.1, 34°.87S×179°.41E, h71km, mb5.4/8, Error ellipse: s-maj=16.7km s-min=11.8km az=82.8*
*NEIC **03** 16:07:29, 35°.02S×179°.53E, h90km*
*NEIC **03** 16:07:29, 35°.12S×179°.53E, h90km, Moment Tensor Solution. Duration: 1ŝ8 Moment tensor: Scale 10^16^Nm; Mrr2.37; Mθθ-0.23; Mφφ-2.15; Mrθ-0.84; Mθφ-0.98; Mφr-3.96; Fault plane solution: Mo4.74000×10^16^ NP1: φs33.05000°, δ16.39000°, λ108.88000°. NP2: φs193.43000°, δ74.51000°, λ84.56000°. Principal axes: T 4.6856, Plg60.0000°, Azm96.0000°; N 0.1135, Plg5.0000°, Azm195.0000°; P -4.7992, Plg29.0000°, Azm288.0000°;*
*GCMT **03** 16:07:31.3±0.2, 34°.99S±0°.01×179°.63E±0°.01, h86km±2km, MW5.1/117, Moment Tensor Solution. s80,c109; s117,c179; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr1.78±.14; Mθθ-0.16±.14; Mφφ-1.61±.15; Mrθ-1.13±.08; Mθφ-0.01±.15; Mφr-5.09±.07; Best double couple: Mo5.48100×10^16^ NP1:φs353.00000°, δ9.00000°, λ71.00000°. NP2:φs192.00000°, δ81.00000°, λ93.00000°. Principal axes: T 5.5950, Plg54.0000°, Azm105.0000°; N -0.2210, Plg3.0000°, Azm11.0000°; P -5.3670, Plg36.0000°, Azm279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **03** 16:07:32.3±2.1, 35°.01S±0°.09×179°.4E±0°.1, h85km±4km, mb5.3/96, Mww5.1/24 Error ellipse: s-maj=13.2km s-min=11.8km az=223.0*
*NOU **03** 16:07:35.4, 35°.65S×179°.05E, h194km, MLv5.4/13, Off E. Coast of N. Island, N.Z.*
*IDC **03** 16:07:36.2±1.6, 34°.92S×179°.28E, h133km±13km, mb4.3/14, mbtmp4.7/15, MS3.9/43, Error ellipse: s-maj=14.5km s-min=11.2km az=8.0*
ISC 03 16:07:31.7±0.3,**35°.03S**±0°.03×**179°.67E**±0°.04,**h100**km, **n377**,σ2°**24**/292,**mb5.2**/83,**12C-3D**,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.76**	**203**	Pn	**Pn**	**16 08 10.8**	**-3.3**
MXZ	**Matakaoa Point**	**2.76**	**203**	P	**Pn**	**16 08 12.3**	**-1.9**
MXZ	**Matakaoa Point**	**2.76**	**203**	P	**Pn**	**16 08 11.8**	**-2.4**
MXZ				S	**Sn**	**16 08 45.7**	**-1.1**
WMGZ	**Waiomatatini S**	**2.96**	**200**	P	**Pn**	**16 08 15.5**	**-1.4**
WMGZ				S	**Sn**	**16 08 53.1**	**+1.4**
PKGZ	**Pakihiroa**	**3.11**	**204**	P	**Pn**	**16 08 17.4**	**-1.4**
HAZ	**Te Kaha**	**3.12**	**209**	P	**Pn**	**16 08 17.0**	**-2.0**
HAZ				S	**Sn**	**16 08 56.0**	**+0.6**
WSRZ	**White Island S**	**3.20**	**218**	P	**Pn**	**16 08 18.0**	**-2.0**
WIZ	**White Island**	**3.20**	**218**	P	**Pn**	**16 08 17.8**	**-2.2**
PUZ	**Puketiti**	**3.24**	**200**	P	**Pn**	**16 08 18.6**	**-2.1**
PUZ				S	**Sn**	**16 08 57.0**	**-1.5**
RUGZ	**Raukumara Rang**	**3.34**	**208**	P	**Pn**	**16 08 20.1**	**-2.0**
TWGZ	**Tauwhareparae**	**3.42**	**203**	P	**Pn**	**16 08 22.2**	**-1.9**
TBAS	**Tonga Bay Are**	**3.51**	**198**	P	**Pn**	**16 08 23.2**	**-1.1**
WHRZ	**Whale Island**	**3.56**	**217**	P	**Pn**	**16 08 23.8**	**-1.2**
MYRZ	**Mayor Island**	**3.57**	**230**	P	**Pn**	**16 08 24.8**	**-0.3**
KUZ	**Kuaotunu**	**3.63**	**241**	P	**Pn**	**16 08 24.5**	**-1.4**
KUZ	**Kuaotunu**	**3.63**	**241**	P	**Pn**	**16 08 24.8**	**-1.1**
WKHS	**Whakatane High**	**3.64**	**216**	P	**Pn**	**16 08 24.4**	**-1.6**
GRZ	**Great Barrier**	**3.64**	**249**	P	**Pn**	**16 08 24.5**	**-1.5**
CNGZ	**Carnagh Station**	**3.64**	**198**	P	**Pn**	**16 08 23.8**	**-2.2**
TKGZ	**Te Karaka**	**3.70**	**203**	P	**Pn**	**16 08 24.2**	**-2.7**
MWZ	**Matawai**	**3.72**	**207**	P	**Pn**	**16 08 24.6**	**-2.5**
OPRZ	**Ohinepanea**	**3.77**	**221**	P	**Pn**	**16 08 26.3**	**-1.4**
OPRZ				S	**Sn**	**16 09 10.0**	**-1.1**
MARZ	**Manawahe**	**3.81**	**218**	P	**Pn**	**16 08 26.9**	**-1.4**
URZ	**Urewera**	**3.82**	**212**	P	**Pn**	**16 08 26.6**	**-1.8**
	548nm,0.5s,baz=34,slow=7.2,SNR=688						
URZ				S	**Sn**	**16 09 11.3**	**-1.1**
	2μm,0.6s,baz=30,slow=20,SNR=8.6						
URZ	**Urewera**	**3.82**	**212**	P	**Pn**	**16 08 25.9**	**-2.6**
URZ	**Urewera**	**3.82**	**212**	P	**Pn**	**16 08 26.3**	**-2.1**
URZ				S	**Sn**	**16 09 14.0**	**+1.5**
TGRZ	**Tauranga**	**3.85**	**225**	P	**Pn**	**16 08 28.1**	**-0.8**
GWTS	**Gisborne Waipa**	**3.85**	**201**	P	**Pn**	**16 08 27.8**	**-1.0**
EDRZ	**Edgecumbe**	**3.87**	**217**	P	**Pn**	**16 08 27.7**	**-1.5**
GKBS	**Kaiti Beach**	**3.87**	**199**	P	**Pn**	**16 08 26.7**	**-2.4**
RAGZ	**Rawiri**	**3.90**	**207**	P	**Pn**	**16 08 27.0**	**-2.6**
RIGZ	**Rimuhau**	**3.97**	**202**	P	**Pn**	**16 08 27.4**	**-3.1**
LIRZ	**Lichensteins R**	**3.98**	**221**	P	**Pn**	**16 08 29.3**	**-1.3**
OMRZ	**Omania**	**4.06**	**220**	P	**Pn**	**16 08 30.7**	**-1.0**
KARZ	**Kaharoa**	**4.06**	**222**	P	**Pn**	**16 08 30.5**	**-1.2**
TARZ	**Mount Tarawera**	**4.09**	**218**	P	**Pn**	**16 08 30.9**	**-1.2**
KMRZ	**Kaimai**	**4.11**	**226**	P	**Pn**	**16 08 31.4**	**-1.0**
PRGZ	**Paritu Road**	**4.14**	**200**	P	**Pn**	**16 08 29.4**	**-3.4**
MUGZ	**Murupara**	**4.15**	**213**	P	**Pn**	**16 08 30.2**	**-2.7**
NGRZ	**Ngongotaha**	**4.15**	**221**	P	**Pn**	**16 08 32.0**	**-0.9**
RRRZ	**Republican Roa**	**4.16**	**217**	P	**Pn**	**16 08 31.5**	**-1.6**
HLRZ	**Highlands Stat**	**4.18**	**219**	P	**Pn**	**16 08 32.3**	**-1.0**
RTZ	**Ruatahuna**	**4.18**	**210**		**Pn**	**16 08 30.1**	**-3.3**
RTZ	**Ruatahuna**	**4.18**	**210**	P	**Pn**	**16 08 30.7**	**-2.6**
SNGZ	**Shannon Statio**	**4.18**	**206**	P	**Pn**	**16 08 30.4**	**-2.9**
UTU	**Utuhina**	**4.20**	**221**	P	**Pn**	**16 08 33.4**	**-0.3**
HSRZ	**Hossack Road**	**4.28**	**219**	P	**Pn**	**16 08 33.7**	**-1.0**
KNZ	**Kokohu**	**4.29**	**201**	P	**Pn**	**16 08 31.1**	**-3.6**
TOZ	**Tahuroa Road**	**4.31**	**230**	Pn	**Pn**	**16 08 34.0**	**-1.1**
TOZ	**Tahuroa Road**	**4.31**	**230**	P	**Pn**	**16 08 34.2**	**-0.8**
HRRZ	**Handcock Road**	**4.32**	**218**	P	**Pn**	**16 08 35.1**	**-0.1**
PRRZ	**Plateau Road**	**4.35**	**216**	P	**Pn**	**16 08 33.4**	**-2.1**
MHGZ	**Mahia Peninsul**	**4.35**	**198**	P	**Pn**	**16 08 31.9**	**-3.7**
GRRZ	**Galatos Road**	**4.38**	**220**	P	**Pn**	**16 08 34.8**	**-1.1**
RAHZ	**Arahi**	**4.39**	**207**	P	**Pn**	**16 08 33.3**	**-2.9**
ALRZ	**Allen Road**	**4.42**	**216**	P	**Pn**	**16 08 34.5**	**-2.1**
MTHZ	**Maungataniwha**	**4.44**	**210**	P	**Pn**	**16 08 33.9**	**-2.9**
WCZ	**Waipu Caves**	**4.44**	**257**	P	**Pn**	**16 08 35.6**	**-1.1**
WPRZ	**Whakapapataran**	**4.48**	**218**	P	**Pn**	**16 08 36.0**	**-1.3**
WHHZ	**Waihua**	**4.48**	**205**	P	**Pn**	**16 08 34.2**	**-3.2**
MRHZ	**Matea Rd**	**4.60**	**213**	P	**Pn**	**16 08 35.9**	**-3.2**
KUTZ	**Kaahu Road**	**4.63**	**221**	P	**Pn**	**16 08 38.1**	**-1.4**
NMHZ	**Naumai**	**4.66**	**209**	P	**Pn**	**16 08 36.9**	**-3.0**
TLZ	**Tolley Road**	**4.67**	**224**	P	**Pn**	**16 08 38.5**	**-1.6**
WHTZ	**Whakaora**	**4.69**	**218**	P	**Pn**	**16 08 39.1**	**-1.2**
ARHZ	**Aropaoanui**	**4.73**	**206**	P	**Pn**	**16 08 37.2**	**-3.6**
HATZ	**Hinemaiaia**	**4.80**	**216**	P	**Pn**	**16 08 39.1**	**-2.6**
WATZ	**Wairara**	**4.84**	**220**	P	**Pn**	**16 08 40.2**	**-2.1**
BKZ	**Black Stump Fm**	**4.85**	**211**		**Pn**	**16 08 38.8**	**-3.6**
BKZ	**Black Stump Fm**	**4.85**	**211**	P	**Pn**	**16 08 38.8**	**-3.6**
BKZ	**Black Stump Fm**	**4.85**	**211**	P	**Pn**	**16 08 39.5**	**-2.8**
RATZ	**Rangitukua**	**4.94**	**218**	P	**Pn**	**16 08 41.6**	**-2.0**
OUZ	**Omahuta**	**4.98**	**266**	P	**Pn**	**16 08 42.3**	**-1.8**
OUZ	**Omahuta**	**4.98**	**266**	P	**Pn**	**16 08 42.3**	**-1.8**
RITZ	**Rihia Road**	**4.98**	**217**	P	**Pn**	**16 08 41.4**	**-2.7**
MCHZ	**McNeill Hill**	**5.00**	**207**	P	**Pn**	**16 08 40.9**	**-3.5**
CKHZ	**Cape Kidnapper**	**5.06**	**203**	P	**Pn**	16 08 40.8	-4.4
KATZ	**Kakaramea**	**5.06**	**218**	P	**Pn**	**16 08 44.5**	**-0.8**
KWHZ	**Kaweka Forest**	**5.09**	**210**	P	**Pn**	**16 08 41.8**	**-3.9**
TMVZ	**Te Maari**	**5.16**	**217**	P	**Pn**	**16 08 43.7**	**-3.0**
NTVZ	**North Tongarir**	**5.17**	**217**	P	**Pn**	**16 08 44.5**	**-2.2**
ETVZ	**East Tongariro**	**5.18**	**217**	P	**Pn**	**16 08 43.7**	**-3.2**
KRVZ	**Karewarewa**	**5.18**	**217**	P	**Pn**	**16 08 44.9**	**-2.1**
HIZ	**Hauiti**	**5.20**	**227**		**Pn**	**16 08 45.4**	**-1.6**
HIZ	**Hauiti**	**5.20**	**227**	P	**Pn**	**16 08 46.2**	**-0.8**
OTVZ	**Oturere**	**5.22**	**217**	P	**Pn**	**16 08 44.9**	**-2.6**
NNVZ	**North Ngauruho**	**5.22**	**217**	P	**Pn**	**16 08 44.7**	**-2.8**
WTVZ	**West Tongariro**	**5.22**	**217**	P	**Pn**	**16 08 45.0**	**-2.5**
KAHZ	**Kahuranaki**	**5.25**	**204**	P	Pn	16 08 43.0	-4.8
SNVZ	**South Ngauruho**	**5.25**	**217**	P	**Pn**	**16 08 45.1**	**-2.8**
NGZ	**Ngauruhoe**	**5.26**	**217**	P	**Pn**	**16 08 45.3**	**-2.8**
TWVZ	**Taurewa**	**5.26**	**219**	P	**Pn**	**16 08 46.0**	**-2.1**
KRHZ	**Kereru**	**5.30**	**209**	P	Pn	16 08 43.7	-4.8
TUVZ	**Tukino**	**5.31**	**216**	P	**Pn**	**16 08 46.2**	**-2.5**
COVZ	**Chateau Observ**	**5.31**	**217**	P	**Pn**	**16 08 45.9**	**-2.8**
FWVZ	**Far West T-bar**	**5.35**	**217**	P	**Pn**	**16 08 46.2**	**-3.1**
WHVZ	**Whangaehu Hut**	**5.35**	**216**	P	**Pn**	**16 08 46.4**	**-2.9**
MAVZ	**Matarangi**	**5.35**	**217**	P	**Pn**	**16 08 46.5**	**-2.9**
MOVZ	**Moawhango**	**5.37**	**214**	P	**Pn**	**16 08 45.4**	**-4.1**
WNVZ	**Wahianoa**	**5.38**	**216**	P	**Pn**	**16 08 46.1**	**-3.6**
TRVZ	**Turoa**	**5.38**	**216**	P	**Pn**	**16 08 47.4**	**-2.4**
PXZ	**Pawanui**	**5.47**	**203**	P	Pn	16 08 45.0	-5.7
PKVZ	**Pokaka**	**5.47**	**218**	P	**Pn**	**16 08 47.5**	**-3.4**
MTVZ	**Mangateitei**	**5.49**	**216**	P	**Pn**	**16 08 47.3**	**-3.7**
WPHZ	**Waipukurau**	**5.64**	**206**	P	Pn	16 08 48.2	-4.9
VRZ	**Vera Road**	**5.67**	**222**	P	**Pn**	**16 08 51.0**	**-2.4**
PRHZ	**Porangahau**	**5.75**	**204**	P	Pn	16 08 49.3	-5.3
TSZ	**Takapari Road**	**5.82**	**209**	P	Pn	16 08 49.7	-5.8
DVHZ	**Dannevirke**	**5.95**	**207**	P	Pn	16 08 51.7	-5.6
ANWZ	**Angora Road**	**5.98**	**204**	P	Pn	16 08 52.7	-5.0
WAZ	**Wanganui**	**6.01**	**217**	P	**Pn**	**16 08 54.4**	**-3.7**
DREZ	**Durham Road**	**6.03**	**225**	P	**Pn**	**16 08 58.7**	**+0.4**
LREZ	**Lake Rotokare**	**6.10**	**222**	P	**Pn**	**16 08 56.6**	**-2.6**
GLKZ	**Green Lake**	**6.10**	**20**	P	Pn	16 08 54.3	-5.1
RAO	**Raoul Island**	**6.11**	**20**	Pn	Pn	16 08 52.2	-7.4
RAO	**Raoul Island**	**6.11**	**20**	P	**Pn**	**16 08 55.7**	**-3.8**
	177nm,0.3s,baz=233,slow=20,SNR=3.9						
RAO				S	**Sn**	**16 10 02.9**	**-5.2**
	773nm,0.3s,baz=150,slow=20,SNR=5.9						
RIZ	**Raoul Island**	**6.12**	**20**	S	**Sn**	**16 10 01.4**	**-6.8**
NEZ	**North Egmont**	**6.14**	**225**	P	**Pn**	**16 09 00.8**	**+0.9**
PREZ	**Palmer Road**	**6.15**	**224**	P	**Pn**	**16 09 01.4**	**+1.4**
PKE	**Pukeiti**	**6.15**	**226**	P	**Pn**	**16 09 02.4**	**+2.3**
POWZ	**Post Office Ro**	**6.18**	**209**	P	**Pn**	**16 08 56.3**	**-4.1**
KHEZ	**Kahui Hut**	**6.20**	**225**	P	**Pn**	**16 09 00.5**	**-0.2**
OHWZ	**Ohakea**	**6.21**	**212**	P	**Pn**	**16 08 56.9**	**-4.0**
PRWZ	**Pori Road**	**6.24**	**207**	P	Pn	16 08 55.9	-5.3
BFZ	**Birch Farm**	**6.26**	**205**		Pn	16 08 55.2	-6.3
BFZ	**Birch Farm**	**6.26**	**205**	P	Pn	16 08 55.0	-6.4
BFZ	**Birch Farm**	**6.26**	**205**	P	Pn	16 08 55.1	-6.4
NBEZ	**Newall Road No**	**6.27**	**226**	P	**Pn**	**16 09 02.7**	**+1.0**
TIWZ	**Tintock**	**6.47**	**206**	P	Pn	16 08 58.9	-5.5
CPWZ	**Castlepoint**	**6.48**	**204**	P	Pn	16 08 59.1	-5.3
MRZ	**Mangatainoka R**	**6.49**	**209**		Pn	16 08 58.1	-6.4
MSWZ	**Moikau Station**	**7.26**	**207**		Pn	16 09 08.2	-6.9
SNZO	**South Karori**	**7.39**	**210**	P	Pn	16 09 09.9	-6.9
**PLWZ

VNDA Vanda 43.31 186 P **P** **16 15 25.4 +2.3**
VNDA Vanda 43.31 186 P **P** **16 15 25.3 +2.2**
comp=Z,2.9nm,0.8s,baz=21,slow=9.0,SNR=11
VNDA LR LR 16 29 12.7
comp=Z,60nm,20.6s,baz=15,slow=30
comp=Z,2.9nm,0.8s
VNDA Vanda 43.31 186 P **P** **16 15 25.4 +2.3**
VNDA pmax pmax
comp=Z,4.0nm,0.9s
VNDA Vanda 43.31 186 P **P** **16 15 26.0 +3.0**
VNDA ScP **ScP** **16 20 52.4 +0.2**
MANU Manus Island 44.48 310 P **P** **16 15 33.9 +0.6**
CCD Concordia, Ant 47.97 197 P **P** **16 16 01.2 +0.9**
CCD PcP **PcP** **16 17 27.9 +1.0**
JAY Jayapura 48.52 303 LR LR 16 35 22.3
comp=Z,110nm,19.9s,baz=158,slow=35
JAY Jayapura 48.52 303 P **P** **16 16 07.7 +2.9**
comp=Z,31nm,0.9s
MTN Manton Dam 48.99 284 **P** **16 16 08.6 +0.2**
MTN IAmb IAmb 16 16 09.8
comp=Z,20nm,0.5s
KNRA Kununurra 49.31 280 IAmb IAmb 16 16 12.8
comp=Z,15nm,0.6s
CASY Casey 50.15 209 P **P** **16 16 15.3 -1.1**
FITZ Fitzroy Crossi 50.59 275 LR LR 16 37 08.4
comp=Z,425nm,20.6s,baz=126,slow=35
NWAO Narrogin (SRO) 51.06 253 LR LR 16 36 26.8
comp=Z,88nm,21.7s,baz=24,slow=34
SAUI Saumlaki 51.77 290 P **P** **16 16 30.1 +0.8**
BNDI Bandanaira 55.02 292 P **P** **16 16 53.6 +0.4**
comp=Z,89nm,0.7s
QSPA South Pole Qui 55.09 180 P P 16 16 58.5 +5.4
QSPA South Pole Qui 55.09 180 P P 16 16 58.7 +5.6
comp=Z,56nm,0.9s,baz=29,slow=4.8,SNR=280
QSPA LR LR 16 36 11.2
comp=Z,110nm,21.7s,baz=44,slow=31
SOEI Soe 56.25 283 P **P** **16 17 03.4 +1.3**
SOEI IAmb IAmb 16 17 05.3
comp=Z,24nm,0.8s
SOEI Soe 56.25 283 P **P** **16 17 04.6 +2.5**
comp=Z,35nm,0.9s
SWI Sorong 56.41 296 P **P** **16 17 04.3 +1.3**
comp=Z,34nm,0.8s
MMRI Maumere 58.53 282 P **P** **16 17 18.5 +0.5**
MMRI Maumere 58.53 282 P **P** **16 17 18.5 +0.5**
comp=Z,80nm,0.8s
GUMO Guam 58.54 319 LR LR 16 39 26.2
comp=Z,68nm,20.4s,baz=144,slow=33
EDFI Ende, Flores 58.90 282 P **P** **16 17 21.7 +1.0**
comp=Z,12nm,0.9s
HMH Humu'ula Sheep 59.24 27 **P** **16 17 25.0 +2.0**
SANI Sanana 59.60 291 P **P** **16 17 25.8 +0.5**
comp=Z,54nm,1.0s
RPN Rapa Nui 60.18 104 LR LR 16 38 46.9
comp=Z,197nm,20.1s,baz=344,slow=31
KAPI Kappang 62.65 284 LR LR 16 45 55.8
comp=Z,145nm,20.3s,baz=118,slow=37
LUWI Luwuk 62.71 290 P **P** **16 17 47.5 +1.1**
LUWI IAmb IAmb 16 17 48.7
comp=Z,33nm,1.0s
LUWI Luwuk 62.71 290 P **P** **16 17 48.4 +2.0**
comp=Z,36nm,1.0s
BELA Belgrano 2 65.47 172 P **P** **16 18 05.1 +1.6**
BELA IAmb IAmb 16 18 06.1
comp=Z,41nm,0.8s
DAV Davao City (W) 65.93 298 LR LR 16 45 07.2
comp=Z,34nm,21.5s,baz=152,slow=34
MAW Mawson 67.29 202 P **P** **16 18 15.7 +0.6**
comp=Z,17nm,0.9s,baz=129,slow=12,SNR=15
MAW LR LR 16 45 29.9
comp=Z,60nm,22.0s,baz=112,slow=34
comp=Z,17nm,0.9s
PMSA Palmer Station 68.86 156 LR LR 16 42 46.6
comp=Z,182nm,18.3s,baz=243,slow=30
JCJ Chichijima 71.24 325 LR LR 16 44 55.1
comp=Z,50nm,21.6s,baz=122,slow=32
LEM Lembang 71.42 275 LR LR 16 52 03.9
comp=Z,100nm,18.2s,baz=172,slow=38
SYO Syowa Base 72.17 194‖ *eP* **P** **16 18 45.2 +0.1**
SYO Syowa Base 72.17 194‖ pP pP 16 19 06.6 -3.0
SYO Syowa Base 72.17 194‖ esP sP 16 19 18.4 -1.7
TROLL Troll, Antarti 73.24 181 ⇑P **P** **16 18 52.7 +1.1**
comp=Z,690nm,0.8s
SNAA Sanae 73.58 179 ⇑P **P** **16 18 54.6 +1.1**
comp=Z,455nm,0.9s
SNAA Sanae 73.58 179 **P** **16 18 54.6 +1.1**
SNAA IAmb IAmb 16 18 55.9
comp=Z,41nm,1.1s
SNAA Sanae 73.58 179 P **P** **16 18 54.6 +1.1**
comp=Z,28nm,1.1s,baz=188,slow=5.8,SNR=124
SNAA S **S** **16 28 17.7 +2.5**
comp=Z,1.3nm,1.2s,baz=186,slow=19,SNR=1.6
SNAA LR LR 16 48 04.0
comp=Z,56nm,21.5s,baz=196,slow=33
comp=Z,28nm,1.1s
SNAA Sanae 73.58 179*c iP* **P** **16 18 54.4 +0.9**
SNAA pmax pmax
comp=Z,47nm,1.2s
VNA3 Neumayer Olymp 73.82 177 ⇑P **P** **16 18 56.0 +1.2**
comp=Z,78nm,0.8s
TGY Tagaytay City 74.04 300 LR LR 16 50 14.6
comp=Z,30nm,21.5s,baz=124,slow=35
NVL N'lazarevskaya 74.14 184 *eP* **P** **16 19 00.5 +3.8**
NVL *e* 16 21 47.9
NVL *e*PPP PPP 16 23 33.2
NVL *e*S S 16 28 31.0 +10
NVL *e*SS SS 16 33 17.9 +11
NVL pmax pmax
comp=Z,8.0nm,0.9s
NVL MLR MLR
comp=Z,170nm,17.3s
VNA2 Neumayer--Watz 74.22 178 ⇑P **P** **16 18 58.6 +1.4**
comp=Z,67nm,0.7s,baz=172,slow=5.4
VNA1 Neumayer--Stat 74.47 177 ⇑P **P** **16 19 00.2 +1.6**
comp=Z,78nm,1.1s
MDSI Maura Dua 75.56 275 P **P** **16 19 04.3 -1.5**
comp=Z,28nm,0.9s
AY03 Cochrane 75.64 138 IAmb IAmb 16 20 32.3
comp=Z,72nm,1.2s
JHJ Hachijo jima 2 77.42 327 LR LR 16 49 25.1
comp=Z,33nm,20.4s,baz=94,slow=32
MASI Maura Aman, Be 77.91 275 P **P** **16 19 19.4 +0.3**
comp=Z,70nm,1.0s
JOW Kunigami 78.40 315 LR LR 16 51 04.0
comp=Z,40nm,21.7s,baz=117,slow=33
LL02 Futaleuf 78.50 135 **P** **16 19 24.5 +2.6**
LL02 IAmb IAmb 16 19 26.1
comp=Z,54nm,1.1s
LL01 San Ignacio de 78.66 134 IAmb IAmb 16 19 28.4
comp=Z,29nm,0.7s
H03S2 Juan Fernandez 79.53 124 T T 17 47 32.0
baz=233,slow=74,SNR=108
H03S1 Juan Fernandez 79.55 124 T T 17 47 36.5
baz=233,slow=74,SNR=82
H03S3 Juan Fernandez 79.55 124 T T 17 47 35.4
baz=233,slow=74,SNR=88
H03N3 Juan Fernandez 79.76 124 T T 17 47 45.1
baz=237,slow=72,SNR=130
H03N2 Juan Fernandez 79.76 124 T T 17 47 49.9
baz=237,slow=72,SNR=136
H03N1 Juan Fernandez 79.77 124 T T 17 47 48.8
baz=237,slow=72,SNR=62
LR03 Panguipulli 80.37 132 IAmb IAmb 16 19 36.6
comp=Z,66nm,1.3s
SSLB Suanglung 80.72 308 S **S** **16 29 27.9 -5.8**
PLCA Paso Flores 80.77 134 P **P** **16 19 37.4 +3.1**
PLCA IAmb IAmb 16 19 38.8
comp=Z,38nm,1.2s
PLCA Paso Flores 80.77 134 P **P** **16 19 37.7 +3.4**
comp=Z,17nm,0.8s,baz=233,slow=8.1,SNR=27
PLCA LR LR 16 47 30.8
comp=Z,88nm,21.6s,baz=226,slow=30
comp=Z,17nm,0.8s
PLCA Paso Flores 80.77 134 P **P** **16 19 37.4 +3.1**
PLCA pmax pmax
comp=Z,38nm,1.3s
PLCA Paso Flores 80.77 134 P **P** **16 19 37.6 +3.4**
MJAR Matsushiro Arr 80.99 327 P **P** **16 19 33.6 -1.5**
comp=Z,1.4nm,1.0s,baz=165,slow=7.0,SNR=3.2
MJAR LR LR 16 51 50.9
comp=Z,27nm,20.5s,baz=143,slow=33
comp=Z,1.4nm,1.0s
JNU Nakatsue 81.78 320 LR LR 16 49 32.3
comp=Z,64nm,19.1s,baz=132,slow=31
BI02 San Fabin de 82.86 130 IAmb IAmb 16 19 49.5
comp=Z,41nm,1.1s
GSI Gunungsitoli 84.26 276 P **P** **16 19 52.5 -0.2**
GSI IAmb IAmb 16 19 54.5
comp=Z,38nm,0.9s
GSI Gunungsitoli 84.26 276 P **P** **16 19 54.2 +1.5**
comp=Z,47nm,0.9s
MT09 Talagante 84.85 128 IAmb IAmb 16 19 59.2
comp=Z,66nm,1.3s
MT05 Renca 85.25 128 IAmb IAmb 16 20 01.6
comp=Z,48nm,0.9s
LMEL Las Melosas 85.31 128 IAmb IAmb 16 22 40.9
comp=Z,21nm,0.7s
PEL Peldehue 85.44 128 IAmb IAmb 16 20 02.5
comp=Z,47nm,1.0s
ASAJ Asahikawa 85.69 334 LR LR 16 51 26.9
comp=Z,82nm,21.6s,baz=157,slow=31
CO02 Combarbal 86.46 126 IAmb IAmb 16 20 07.5
comp=Z,42nm,1.0s
KSRS Korea Array 86.66 321 P **P** **16 20 04.0 +0.1**
comp=Z,2.2nm,0.5s,baz=140,slow=5.6,SNR=18
comp=Z,2.2nm,0.5s
SHEM Shemya Is, Ala 87.53 357 LR LR 16 53 10.4
comp=Z,94nm,21.5s,baz=105,slow=31
TRQA Tornquist 87.53 136 P **P** **16 20 10.7 +2.2**
TRQA IAmb IAmb 16 20 12.0
comp=Z,36nm,1.4s
TRQA Tornquist 87.53 136 P **P** **16 20 10.7 +2.2**
TRQA pmax pmax
comp=Z,36nm,1.4s
ZON Zonda 87.77 127 IAmb IAmb 16 20 13.8
comp=Z,58nm,1.5s
NJ2 Nanjing 87.82 312 *eP* P 16 20 14.2 +4.5
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
YSS Yuzhno-Sakhali 88.10 336 *eP* P 16 20 16.6 +6.0
YSS *e* 16 30 46.0
YSS *e*PPS PPS 16 32 19.7
SLBS Sierra La Lagu 88.61 60 P **P** **16 20 17.1 +3.4**
SLBS IAmb IAmb 16 20 18.8
comp=Z,43nm,1.6s
LPIG La Paz 88.62 59 LR LR 16 50 59.2
comp=Z,68nm,21.4s,baz=216,slow=29
VTX Valle De La Tr 89.69 51 IAmb IAmb 16 20 23.3
comp=Z,25nm,1.5s
PETK Petropavlovsk- 89.83 347 P **P** **16 20 18.4 -0.2**
comp=Z,8.1nm,0.8s,baz=168,slow=5.8,SNR=16
PETK LR LR 16 54 27.3
comp=Z,21nm,21.2s,baz=138,slow=31
comp=Z,8.1nm,0.8s
USRK Ussuriysk Ar. 89.98 328 P **P** **16 20 19.4 -0.1**
comp=Z,1.7nm,0.8s,baz=164,slow=7.0,SNR=2.7
comp=Z,1.7nm,0.8s
ESJX Sierra Juarez 90.00 50 IAmb IAmb 16 20 25.2
comp=Z,18nm,1.3s
ELS Elsinore Mount 90.19 48 IAmb IAmb 16 20 25.5
comp=Z,35nm,1.9s
YUH Yuha Desert 90.44 50 IAmb IAmb 16 20 26.7
comp=Z,18nm,1.4s
BFSC Mount Baldy Ra 90.45 47 IAmb IAmb 16 20 26.3
comp=Z,20nm,1.5s
PFO Pinyon Flats O 90.76 49 P **P** **16 20 26.4 +2.8**
PFO IAmb IAmb 16 20 28.2
comp=Z,22nm,1.7s
PFO Pinyon Flats O 90.76 49 LR LR 16 52 46.3
comp=Z,63nm,21.5s,baz=226,slow=30
PFO Pinyon Flats O 90.76 49 P **P** **16 20 26.4 +2.8**
PFO pmax pmax
comp=Z,22nm,1.7s
MNRC McLaughlin Min 90.96 41 P **P** **16 20 27.2 +2.9**
MNRC IAmb IAmb 16 20 28.6
comp=Z,22nm,1.4s
HSIG 91.30 55 IAmb IAmb 16 20 30.4
comp=Z,19nm,1.3s
BC3 Big Chuckawall 91.41 49 IAmb IAmb 16 20 31.7
comp=Z,18nm,1.4s
CLC China Lake 91.57 46 IAmb IAmb 16 20 31.3
comp=Z,15nm,1.6s
O02D Mt. Diablo Mer 91.70 40 IAmb IAmb 16 20 32.1
comp=Z,18nm,1.4s
TIA Tai'an 91.72 314 P **P** **16 20 28.0 +0.1**
TIA pmax pmax
comp=Z,12nm,1.1s
113A Mohawk Valley, 91.88 51 IAmb IAmb 16 20 33.4
comp=Z,24nm,1.7s
IRM Iron Mountain 91.94 49 IAmb IAmb 16 20 34.0
comp=Z,17nm,1.3s
214A Organ Pipe Nat 91.96 52 IAmb IAmb 16 20 34.1
comp=Z,22nm,1.5s
WAKR Walker 92.36 43 IAmb IAmb 16 20 35.5
comp=Z,19nm,1.8s
M02C Callahan 92.55 39 P **P** **16 20 34.6 +2.9**
M02C IAmb IAmb 16 20 35.9
comp=Z,21nm,1.5s
CN2 Changchun 92.68 324 *eP* P 16 20 36.9 +4.8
CN2 pmax pmax
comp=Z,10.0nm,0.6s
NVAR Mina Array Bea 92.95 44 P **P** **16 20 36.2 +2.4**
comp=Z,1.6nm,0.9s,baz=239,slow=5.1,SNR=6.8
NVAR LR LR 16 55 31.2
comp=Z,62nm,19.6s,baz=236,slow=31
comp=Z,1.6nm,0.9s
CMAR Chiang Mai Arr 93.11 290 P **P** **16 20 34.2 -0.5**
comp=Z,1.2nm,0.7s,baz=124,slow=4.7,SNR=13
CMAR PP **PP** **16 24 14.9 -4.5**
comp=Z,2.3nm,0.9s,baz=127,slow=7.5,SNR=11
CMAR LR LR 17 05 56.2
comp=Z,20nm,20.1s,baz=145,slow=38
comp=Z,1.2nm,0.7s
CMAR Chiang Mai Arr 93.11 290*c e*P **P** **16 20 34.9 +0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
PB03 IPOC Station P 93.11 120 P **P** **16 20 37.4 +2.4**
PB03 IAmb IAmb 16 20 40.0
comp=Z,27nm,1.2s
NNA Nana 93.98 107 LR LR 16 55 09.9
comp=Z,139nm,19.9s,baz=204,slow=30
PINE Pine Mountain 95.25 39 P **P** **16 20 46.2 +2.1**
PINE IAmb IAmb 16 20 47.7
comp=Z,13nm,1.4s
KDAK Kodiak Island 95.36 15 LR LR 16 58 15.6
comp=Z,46nm,19.8s,baz=203,slow=32
XAN Xi'an 95.38 308 *eP* **P** **16 20 48.2 +3.4**
PZH PanZhiHua 95.73 298 P **P** **16 20 50.6 +3.9**
CMIG Matias Romero 96.00 73 LR LR 16 54 13.8
comp=Z,90nm,21.9s,baz=182,slow=29
TXAR Lajitas Array 96.50 59 P **P** **16 20 52.1 +2.1**
comp=Z,0.3nm,0.7s,baz=241,slow=4.9,SNR=3.9
TXAR LR LR 16 55 48.3
comp=Z,26nm,20.1s,baz=226,slow=30
comp=Z,0.3nm,0.7s
CD2 Chengdu 96.91 303 *eP* **P** **16 20 55.0 +3.2**
LPAZ La Paz 97.96 116 IAmb IAmb 16 21 46.5
comp=Z,14nm,1.9s
LPAZ La Paz 97.96 116 P Pdif 16 20 58.8 +1.1
comp=Z,1.8nm,0.8s,baz=233,slow=10,SNR=4.3
LPAZ LR LR 16 56 35.4
comp=Z,48nm,19.6s,baz=224,slow=30
comp=Z,1.8nm,0.8s
LPAZ La Paz 97.96 116 P Pdif 16 20 58.8 +1.1
LPAZ pmax pmax
comp=Z,14nm,1.9s
ANMO Albuquerque 97.97 53 LR LR 16 58 01.3
comp=Z,76nm,20.0s,baz=319,slow=31
ANMO Albuquerque 97.97 53 *i* P Pdif 16 20 56.8 +0.1
ANMO pmax pmax
comp=Z,3.0nm,1.6s
HHC Hu-ho-hao-te 98.06 315 *eP* Pdif 16 21 00.7 +3.8
HHC pmax pmax
comp=Z,24nm,0.8s
BBB Bella Bella 98.09 29 LR LR 16 55 12.3
comp=Z,31nm,21.5s,baz=212,slow=29
CPUP Villa Florida 98.57 130 LR LR 16 58 04.0
comp=Z,36nm,21.4s,baz=56,slow=31
SEY Seymchan 100.05 348 LR LR 17 01 17.0
comp=Z,50nm,21.8s,baz=153,slow=32
SONM Songino Array 105.25 318 PKKPbc PKKPbc 16 37 10.5 +1.2
comp=Z,0.5nm,0.3s,baz=302,slow=2.7,SNR=4.0
WMQ Urumqi 114.50 307 *e*PKP **PKiKP** **16 26 02.8 +3.0**
DGZ Jazzator, Alta 117.09 313 *i* PKiKP **PKiKP** **16 26 04.8 +0.1**
MKAR Makanchi Array 119.18 309 PKP **PKPdf** **16 26 06.8 -1.9**
comp=Z,1.4nm,0.7s,baz=117,slow=2.4,SNR=8.8
MKAR PKKPbc **PKKPab** **16 36 23.1 +0.5**
comp=Z,1.9nm,0.8s,baz=289,slow=4.4,SNR=8.8
ZALV Zalesovo Beam 120.13 317 PKP **PKPdf** **16 26 08.6 -1.5**
comp=Z,1.3nm,0.6s,baz=124,slow=2.7,SNR=7.3
KURK Kurchatov 122.76 312*c i*PKiKP **PKPdf** **16 26 13.7 -1.6**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURBB Kurchatov Arra 122.78 312 PKP **PKPdf** **16 26 13.9 -1.5**
comp=Z,3.9nm,0.6s,baz=111,slow=1.9,SNR=27
KURBB SKP **SKPdf** **16 29 38.1 -3.5**
comp=Z,0.9nm,0.5s,baz=102,slow=1.9,SNR=5.4
KURBB PKKPbc **PKKPbc** **16 36 10.1 +1.1**
comp=Z,0.5nm,0.2s,baz=294,slow=5.3,SNR=6.3
AAK Ala-Archa 122.97 302*c i*PKiKP **PKiKP** **16 26 16.2 -0.2**
AAK pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 128.25 313 PKP **PKPdf** **16 26 25.2 -0.6**
comp=Z,3.6nm,0.7s,baz=104,slow=1.8,SNR=14
SCHQ Schefferville 130.95 45 PKP **PKiKP** **16 26 32.0 +0.2**
comp=Z,2.4nm,0.8s,baz=251,slow=6.8,SNR=3.7
ARTI Arti 135.39 317 *i* PKiKP **PKiKP** **16 26 40.7 0.0**
ARTI 16 29 16.5
SPITS Spitsbergen Ar 136.16 355 SKP **SKPdf** **16 30 01.7 -4.1**
comp=Z,13nm,1.0s,baz=29,slow=3.3,SNR=4.3
SFJD Kangerlussuaq 137.01 26 PKP **PKiKP** **16 26 43.0 -0.7**
comp=Z,4.6nm,0.7s,baz=315,slow=1.4,SNR=2.0
SFJD Kangerlussuaq 137.01 26 PKiKP **PKiKP** **16 26 43.0 -0.7**
BELG Belogornoye 142.03 312 PKhKP PKPpre 16 26 45.1
comp=Z,12nm,0.7s,baz=90,slow=2.0,SNR=4.6
BELG SKPbc **SKPbc** **16 30 15.7 -4.0**
comp=Z,28nm,0.9s,baz=66,slow=0.8,SNR=7.3
BELG Belogornoye 142.03 312 *i* PKiKP **PKPdf** **16 26 50.7 -0.7**
ARCES ARCESS Array B 142.63 345 PKhKP PKPpre 16 26 48.3
comp=Z,3.6nm,0.7s,baz=30,slow=2.6,SNR=18
ARCES SKPbc **SKPbc** **16 30 19.3 -1.4**
comp=Z,8.7nm,0.9s,baz=18,slow=1.8,SNR=5.2
KLMR Klimovskoe 143.77 328 *e*PKiKP **PKPdf** **16 26 53.1 -1.1**
KLMR *e* 16 30 08.7
KLMR pmax pmax
comp=Z,33nm,1.5s
GNI Garni 144.22 292 *i* PKiKP **PKPdf** **16 26 55.3 -0.6**
GNI pmax pmax
comp=Z,7.0nm,1.0s
NCK Nalchik 145.29 298 *i* PKiKP **PKPab** **16 26 57.1 -0.6**
NCK pmax pmax
comp=Z,11nm,0.9s
KBZ Khabaz 145.80 298 PKPbc **PKPbc** **16 26 58.3 -0.6**
comp=Z,4.0nm,0.8s,baz=78,slow=3.9,SNR=12
KBZ Khabaz 145.80 298 *i* PKiKP **PKPbc** **16 26 58.0 -0.9**
KBZ pmax pmax
comp=Z,8.0nm,1.1s
VRH Novokhopyorsk 145.84 311 *e*PKiKP **PKPdf** **16 26 56.2 -1.9**
VRH pmax pmax
comp=Z,30nm,0.8s
NEUR Neytrino 145.94 297 *i* PKiKP **PKPdf** **16 26 58.3 -0.5**
NEUR pmax pmax
comp=Z,10.0nm,1.6s
KIV Kislovodsk 145.95 298 *i* PKiKP **PKPdf** **16 26 58.1 -0.6**
KIV pmax pmax
comp=Z,9.0nm,1.1s
MOS Moscow 146.85 321 *i* PKHKP **PKPdf** **16 26 57.3 -2.3**
LPSR Galich'ya Gora 147.18 315 *e*PKP2 **PKPbc** **16 27 02.0 -0.7**
LPSR pmax pmax
comp=Z,30nm,0.9s
LABN Labinsk 147.34 300 *i* PKHKP **PKPdf** **16 26 57.3 -3.6**
LABN pmax pmax
comp=Z,25nm,0.6s
VORD Divnogorie 147.39 312 *e*PKiKP **PKPdf** **16 27 01.2 +0.5**
VORD pmax pmax
comp=Z,8.0nm,1.0s
VSR Storozhevoye 147.41 312 *e*PKiKP **PKPdf** **16 26 59.7 -1.0**
VSR pmax pmax
comp=Z,9.0nm,1.0s
ERBR Yeremizino-Bor 147.44 302 *i* PKP2 **PKiKP** **16 27 04.4 -1.3**
ERBR pmax pmax
comp=Z,24nm,1.4s
OBN Obninsk 147.64 320 PKPbc **PKPbc** **16 27 02.5 -1.3**
comp=Z,24nm,0.5s,baz=96,slow=19,SNR=4.6
OBN Obninsk 147.64 320⇓ *i*PKiKP **PKPdf** **16 27 01.5 +0.5**
OBN *e* 16 30 26.8
OBN *e*PPP PPP 16 33 46.6
OBN pmax pmax
comp=Z,68nm,1.7s
FINES FINESS Array B 148.68 336 PKPbc **PKPbc** **16 27 05.4 -1.0**
comp=Z,20nm,0.8s,baz=48,slow=4.3,SNR=64
ANN Anapa 149.67 300 *i* PKHKP **PKPbc** **16 27 08.5 -0.9**
ANN pmax pmax
comp=Z,27nm,0.7s
EIL Elat 149.82 270 PKPbc **PKPbc** **16 27 09.7 -0.6**
comp=Z,9.9nm,0.9s,baz=66,slow=4.2,SNR=6.3
MMAI Mount Meron Ar 150.41 276 PKPbc **PKPbc** **16 27 11.1 -0.6**
comp=Z,3.3nm,0.4s,baz=88,slow=5.4,SNR=9.5
DBIC Dimbokro 151.47 171 PKP **PKPdf** **16 27 09.3 +0.9**
comp=Z,5.4nm,0.8s,baz=165,slow=2.9,SNR=6.3
DBIC PKPbc **PKiKP** **16 27 15.4 +0.4**
comp=Z,29nm,0.7s,baz=188,slow=2.2,SNR=36
MNK Minsk 152.37 324 *i* PKiKP **PKiKP** **16 27 14.9 -0.7**
comp=E,14nm,0.8s
MNK *i* PKiKP **PKiKP** **16 27 14.9 -0.7**
comp=N,15nm,1.0s
MNK *i* PKiKP **PKiKP** **16 27 14.9 -0.7**
comp=Z,34nm,0.8s,baz=57
MNK *i* PP **PP** **16 30 57.0 -1.7**
MNK *i* SKS **SKSdf** **16 34 11.8 +5.5**
MNK *i* PPP PPP 16 34 23.0
MNK *i* SS **SS** **16 50 25.2 +5.5**
MNK *i* SSS SSS 16 56 12.5
MNK *i* LR LR 17 40 05.1
MNK *i* LRM MLR 17 42 02.8
comp=Z,68nm,17.8s
MNK *i* LRM MLR 17 42 19.3
comp=E,330nm,19.7s
MNK *i* LRM MLR 17 42 19.3
comp=N,498nm,21.4s
MNK Minsk 152.37 324 *i* PKiKP **PKiKP** **16 27 14.9 -0.7**
MNK *i* 16 30 57.0
MNK *i* 16 34 11.8
MNK *i* PPP PPP 16 34 22.9
MNK *i* SS SS 16 50 25.2 +5.5
MNK *i* SSS SSS 16 56 12.5
MNK pmax pmax
comp=Z,34nm,0.8s
MNK pmax pmax
comp=E,14nm,0.8s
MNK pmax pmax
comp=N,15nm,1.0s
NACGM Naroch 152.67 325⇑ *i*PKiKP **PKiKP** **16 27 16.3 +0.1**
comp=Z,57nm,0.9s,baz=55
BRTR Keskin Array B 152.70 290 PKPbc **PKPbc** **16 27 14.6 -2.2**
comp=Z,4.5nm,0.6s,baz=127,slow=3.7,SNR=28
NB2 NORSAR Subarra 152.94 348 PKP **PKPbc** **16 27 15.7 -0.8**
comp=Z,5.8nm,0.9s,baz=20,slow=4.0
NOA NORSAR Array B 152.94 349 PKPbc **PKiKP** **16 27 16.0 -0.6**
comp=Z,1.2nm,0.5s,baz=28,slow=3.7,SNR=10
HFS Hagfors 153.28 344 PKPbc **PKiKP** **16 27 16.5 -0.8**
comp=Z,4.0nm,0.6s,baz=57,slow=5.3,SNR=15
AK03 Malin Array Si 153.49 315 PKP **PKPbc** **16 27 14.4 -3.5**
AKASG Malin Array Be 153.50 315 PKPbc **PKPbc** **16 27 17.0 -1.0**
comp=Z,4.6nm,0.6s,baz=62,slow=2.5,SNR=18
KIEV Kiev 153.51 315 PKP **PKPbc** **16 27 15.1 -2.9**
ESDC Sonseca Array 174.54 31 PKPab **PKPab** **16 29 04.5 +1.3**
comp=Z,1.0nm,1.1s,baz=318,slow=1.4,SNR=4.1

DJA 03 16:10:47.0±0.3, 10°S±4°×112°0E±°, h63km±4km, M3.8/13, mB5.1/1, mb4.3/4, MLv3.5/13, Mw(mB)4.5/1, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.10**	**43**	P		Pn	16 10 57.5	+1.1
WSI				S		Sn	16 11 04.9	+1.7
BASI	**Baing, Sumba**	**0.59**	**144**	P		Pn	16 11 01.0	+0.8
BASI				S		Sn	16 11 12.1	+2.4
WBSI	**Waikabubak, Su**	**0.83**	**277**	P		Pn	16 11 03.7	+0.6
WBSI				S		Sn	16 11 16.2	+1.2
EDFI	**Ende, Flores**	**1.75**	**56**	P		Pn	16 11 14.2	-1.0
MMRI	**Maumere**	**2.27**	**61**	P		Pn	16 11 22.0	-0.1
PLAI	**Plampang**	**2.59**	**290**	P		Pn	16 11 27.1	+0.6
BATI	**Baumata**	**3.41**	**98**	P		Pn	16 11 38.5	+0.7
TWSI	**Taliwang, Sumb**	**3.45**	**286**	P		Pn	16 11 39.4	+1.1
BSSI	**Bau Bau, Buton**	**3.58**	**4**	P		Pn	16 11 40.0	-0.2
SOEI	**Soe**	**3.98**	**91**	P		Pn	16 11 46.8	+1.1
BKSI	**Bulukumba**	**4.39**	**359**	P		Pn	16 11 50.7	-0.5
JAGI	**Jajag, Banyuwa** 31nm,1.6s	**6.13**	**281**	P		Pn	16 12 13.8	-1.3
PCJI	**Pacitan** 61nm,1.9s	**9.07**	**279**	P		Pn	16 12 55.9	+0.6
NLAI	**Namlea** 13nm,0.8s	**9.39**	**47**	P		Pn	16 12 59.2	-0.5

*IDC **03** 16:13:04.7±1.0, 36°.34N×28°.73E, h0km, mb3.9/5,*

mbtmp3.7/12,ML3.4/6,MS3.1/4,Error ellipse: s-maj=17.4km s-min=14.6km az=9.0
*ISK **03** 16:13:06.3,36˚.48N×28˚.68E,h5km,ML3.4/35*
*NEIC **03** 16:13:06.8±2.3,36˚.28N±0˚.05×28˚.75E±0˚.05,h10km±1km, mb4.2/6,Error ellipse: s-maj=8.9km s-min=6.8km az=150.0*
*NIC **03** 16:13:06.7,36˚.18N×28˚.73E,h0km,Ml3.1/14*
*ATH **03** 16:13:07.6,36˚.42N×28˚.71E,h6km±1km,ML3.4/10, Manual Solution by G.Panopoulou First location: 2019/11/03 16:14:31, This location: 2019/11/03 16:41:14 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*AFAD **03** 16:13:07.2,36˚.46N×28˚.70E,h11km±2km,ML3.2*
*GII **03** 16:13:08.8±0.0,36˚.11N±0˚.04×28˚.71E±0˚.02,h20km, Mws3.3,confirmed*
*THE **03** 16:13:08.2,36˚N±7˚×2˚9E±˚,h8km±21km,M3.2/7, MLh3.2/7*

ISC 03 16:13:07.0±0.9,**36˚41N**±0˚.02×**28˚71E**±0˚.01,**h14**km±6km, **n187**,σ1§52/227,**mb3.8**/5,**MS2.9**/3,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
FETY	**Fethiye**	**0.38**	**53**	P		Pg	16 13 05.5	-9.2
RDI1	**Rhodes Town Ha**	**0.39**	**276**	P		**Pg**	**16 13 14.9**	**0.0**
RDI1				S		**Sg**	**16 13 20.0**	**-0.2**
RODB	**Rodos**	**0.39**	**276**	P		**Pg**	**16 13 14.9**	**0.0**
RODB				S		**Sg**	**16 13 20.4**	**+0.2**
DALY	**Dalyan (Mula)**	**0.41**	**354**	Pg		**Pg**	**16 13 13.9**	**-1.3**
DALY				Sg		**Sg**	**16 13 19.9**	**-0.9**
IZZE	**Mula-Seydike**	**0.42**	**86**	P		**Pg**	**16 13 15.3**	**-0.1**
IZZE				S		**Sb**	**16 13 22.1**	**-0.4**
IZZE				*i*	IAML		16 13 25.0	
	comp=E,2μm,0.2s							
IZZE				*i*	IAML		16 13 26.0	
	comp=N,7μm,0.5s							
SABU	**Mula-Dalaman**	**0.46**	**27**	P		**Pg**	**16 13 15.4**	**-0.9**
SABU				S		**Sg**	**16 13 22.0**	**-0.5**
ARG	**Arkhangelos**	**0.51**	**248**			**Pg**	**16 13 16.7**	**-0.3**
ARG	**Arkhangelos**	**0.51**	**248**	Pg		**Pg**	**16 13 16.9**	**-0.1**
ARG				Sg		**Sb**	**16 13 25.3**	**+0.3**
ARG	**Arkhangelos**	**0.51**	**248**	P		**Pg**	**16 13 16.8**	**-0.3**
ARG				S		**Sb**	**16 13 25.7**	**+0.7**
ARG	**Arkhangelos**	**0.51**	**248**	P		**Pg**	**16 13 16.9**	**-0.1**
ARG				S		**Sg**	**16 13 24.7**	**+0.9**
ARG	**Arkhangelos**	**0.51**	**248**	P		**Pg**	**16 13 16.8**	**-0.1**
ARG				AML	AML		16 13 25.7	
	7.5nm,0.6s							
ARG				S		**Sb**	**16 13 25.9**	**+0.9**
ARG				AML	AML		16 13 26.1	
	8.7nm,0.4s							
TURN	**Turunc**	**0.52**	**315**	P		**Pg**	**16 13 16.8**	**-0.6**
TURN				S		**Sg**	**16 13 23.9**	**-0.4**
TURN	**Turunc**	**0.52**	**315**	Pg		**Pg**	**16 13 16.2**	**-1.1**
TURN				Sg		**Sg**	**16 13 24.0**	**-0.3**
CAME	**Cameli-Denizli**	**0.72**	**42**	Pg		**Pg**	**16 13 19.9**	**-1.1**
CAME				Sg		**Sg**	**16 13 30.7**	**+0.2**
RGE1	**Gennadi, Rhode**	**0.73**	**239**	P		**Pg**	**16 13 21.3**	**0.0**
RGE1				S		**Sg**	**16 13 31.5**	**+0.6**
AKAS	**Kas**	**0.75**	**103**	P		**Pb**	**16 13 22.4**	**+0.5**
AKAS	**Kas**	**0.75**	**103**			**Pg**	**16 13 21.7**	**+0.1**
AKAS	**Kas**	**0.75**	**103**	Pg		**Pb**	**16 13 22.5**	**+0.6**
AKAS				Sg		**Sn**	**16 13 34.8**	**+0.3**
KSL	**Kastellorizon**	**0.75**	**110**	P		**Pb**	**16 13 22.3**	**+0.4**
KSL				S		**Sn**	**16 13 34.5**	**0.0**
KSL	**Kastellorizon**	**0.75**	**110**	P		**Pb**	**16 13 22.4**	**+0.4**
KSL				S		**Sb**	**16 13 32.3**	**+0.2**
KSL	**Kastellorizon**	**0.75**	**110**	P		**Pg**	**16 13 21.2**	**-0.4**
KSL				S		**Sb**	**16 13 33.1**	**+1.0**
KSL				AML	AML		16 13 38.0	
	6.4nm,0.5s							
KSL				AML	AML		16 13 39.8	
	2.6nm,0.5s							
YER	**Yerkesik**	**0.80**	**335**	P		**Pg**	**16 13 22.8**	**+0.3**
YER				S		**Sb**	**16 13 34.5**	**+1.0**
KNIK	**Mula-Seydike**	**0.82**	**58**	P		**Pg**	**16 13 22.5**	**-0.5**
CAEL	**Denizli, Camel**	**0.87**	**34**	P		**Pg**	**16 13 23.8**	**0.0**
CAEL				S		**Sg**	**16 13 34.5**	**-0.8**
MULA	**Mugla, Merkez-**	**0.90**	**340**	P		**Pg**	**16 13 24.1**	**-0.3**
DNZT	**Denizli-Tavas-**	**0.90**	**16**	P		**Pg**	**16 13 23.6**	**-0.9**
DNZT				S		**Sb**	**16 13 36.8**	**+0.3**
DATC	**Datca-Mugla**	**0.91**	**293**	Pg		**Pg**	**16 13 24.3**	**-0.4**
DATC				Sg		**Sb**	**16 13 37.6**	**+1.0**
DAT	**Datca**	**0.96**	**290**	Pg		**Pg**	**16 13 25.3**	**-0.4**
DAT				Sg		**Sb**	**16 13 39.0**	**+0.7**
DEMR	**Demre-Antalya**	**0.98**	**100**	Pg		**Pn**	**16 13 27.4**	**+1.0**
ELL	**Elmali**	**1.02**	**70**			**Pg**	**16 13 26.1**	**-0.8**
ELL	**Elmali**	**1.02**	**70**	Pg		**Pb**	**16 13 27.3**	**+0.6**
ELL	**Elmali**	**1.02**	**70**	P		**Pn**	**16 13 28.3**	**+1.2**
ELL				S		**Sn**	**16 13 45.7**	**+4.3**
ELL				AML	AML		16 13 49.5	
	12nm,0.8s							
ELL				AML	AML		16 13 50.9	
	10nm,1.0s							
YAZI	**Mula-Dat§a-**	**1.04**	**285**	P		**Pg**	**16 13 26.9**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.07**	**9**	P		**Pg**	**16 13 26.7**	**-1.0**
TAVA				S		**Sn**	**16 13 43.0**	**+0.6**
GOLH	**Golhisar**	**1.07**	**39**	P		**Pg**	**16 13 26.9**	**-0.8**
GOLH				S		**Sg**	**16 13 40.2**	**-1.6**
GOLH				*i*	IAML		16 13 51.0	
	comp=E,415nm,0.4s							
GOLH				*i*	IAML		16 13 53.0	
	comp=N,435nm,0.4s							
MLSB	**Milas**	**1.16**	**320**	Pn		**Pg**	**16 13 28.3**	**-1.0**
APMY	**Acipayam-Deniz**	**1.16**	**24**	Pn		**Pg**	**16 13 28.6**	**-0.9**
BDRM	**Kayabasi**	**1.21**	**303**	P		**Pb**	**16 13 29.7**	**0.0**
DNIZ	**Denizli-Tavas-**	**1.24**	**12**	P		**Pb**	**16 13 30.5**	**+0.1**
DNIZ				S		**Sn**	**16 13 47.4**	**+0.7**
DNIZ				*i*	IAML		16 13 51.0	
	comp=N,1μm,0.3s							
DNIZ				*i*	IAML		16 13 58.0	
	comp=E,1μm,0.3s							
NISR	**Nisiros**	**1.29**	**279**	P		**Pb**	**16 13 31.7**	**+0.6**
NISR				S		**Sn**	**16 13 49.2**	**+1.5**
NISR	**Nisiros**	**1.29**	**279**	P		**Pb**	**16 13 31.6**	**+0.6**
NISR				S		**Sb**	**16 13 48.4**	**+0.9**
BODT	**Bodrum**	**1.30**	**301**	Pn		**Pn**	**16 13 31.5**	**+0.7**
BODT	**Bodrum**	**1.30**	**301**	P		**Pg**	**16 13 32.6**	**+0.6**
BODT				S		**Sb**	**16 13 48.6**	**+0.8**
AKUM	**Antalya-Kumluc**	**1.32**	**93**	P		**Pg**	**16 13 33.2**	**+0.7**
AKUM				S		**Sg**	**16 13 53.7**	**+3.9**
AKUM				*i*	IAML		16 14 07.0	
	comp=E,372nm,1.3s							
YKAV	**Yalikavak-Bodr**	**1.35**	**302**	Pn		**Pn**	**16 13 32.2**	**+0.7**
AYDN	**Tasoluk**	**1.41**	**332**	P		**Pb**	**16 13 33.8**	**+0.6**
ESEN	**Aydn-Nazilli**	**1.42**	**348**	P		**Pn**	**16 13 32.7**	**+0.3**
KORT	**Korkueli**	**1.45**	**65**	P		**Pg**	**16 13 35.9**	**+1.0**
KORT	**Korkueli**	**1.45**	**65**	Pn		**Pg**	**16 13 34.7**	**-0.2**
INCE	**Denizli-Bozkur**	**1.47**	**28**	P		**Pg**	**16 13 35.2**	**-0.1**
KLNA	**Kalymnos**	**1.50**	**292**	P		**Pb**	**16 13 35.4**	**+0.8**
KEMT	**Kemer-ANTALYA**	**1.50**	**82**	Pn		**Pg**	**16 13 36.4**	**+0.5**
DIDI	**Didim-Aydin**	**1.52**	**310**	Pn		**Pb**	**16 13 35.1**	**+0.1**
KARP	**Karpathos**	**1.52**	**236**			**Pn**	**16 13 33.3**	**-0.6**
KARP	**Karpathos**	**1.52**	**236**	Pn		**Pg**	**16 13 36.5**	**+0.2**
KARP	**Karpathos**	**1.52**	**236**	P		**Pg**	**16 13 36.4**	**+0.2**
KARP				S		**Sn**	**16 13 55.0**	**+1.5**
KARP	**Karpathos**	**1.52**	**236**	P		**Pn**	**16 13 33.6**	**-0.3**
KARP				S		**Sb**	**16 13 55.4**	**+1.1**
KARP				AML	AML		16 14 00.7	
	4.1nm,0.6s							
KARP				AML	AML		16 14 02.8	
	5.0nm,0.8s							
DDIM	**Aydin, Didim**	**1.57**	**312**	P		**Pb**	**16 13 36.3**	**+0.4**
NAZL	**Nazilli-Aydin**	**1.59**	**348**	Pn		**Pn**	**16 13 35.7**	**+0.9**
ANTB	**Antalya**	**1.64**	**72**	Pn		**Pb**	**16 13 37.7**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**337**	Pn		**Pn**	**16 13 37.1**	**+1.1**
GCAM	**G?zelcami?**	**1.75**	**318**	P		**Pb**	**16 13 38.7**	**-0.2**
GCAM	**G?zelcami?**	**1.75**	**318**	Pn		**Pb**	**16 13 38.1**	**+1.2**
KIRA	**zmir-Kiraz**	**1.80**	**352**	P		**Pn**	**16 13 39.3**	**+1.5**
BCK	**Bucak**	**1.84**	**55**	Pn		**Pb**	**16 13 40.0**	**-0.5**
BASM	**Basmaki-Afyon**	**1.85**	**35**	Pn		**Pn**	**16 13 39.8**	**+1.3**
ODEM	**Odemis-Izmir**	**1.93**	**345**	Pn		**Pn**	**16 13 40.4**	**+0.8**
SMG	**Samos**	**1.98**	**311**	P		**Pn**	**16 13 40.3**	**+0.2**
SMG	**Samos**	**1.98**	**311**	P		**Pn**	**16 13 40.6**	**+0.5**
ISP	**Isparta**	**2.02**	**45**			**Pn**	**16 13 42.2**	**+1.3**
ISP	**Isparta**	**2.02**	**45**	Pn		**Pn**	**16 13 42.1**	**+1.3**
ISP	**Isparta**	**2.02**	**45**	P		**Pb**	**16 13 44.6**	**+0.9**
ISP	**Isparta**	**2.02**	**45**	P		**Pn**	**16 13 42.6**	**+1.7**
PASA	**Karahalli, USA**	**2.03**	**18**	P		**Pb**	**16 13 43.5**	**-0.4**
MANT	**Manisa**	**2.08**	**357**	P		**Pn**	**16 13 43.7**	**+1.9**
MANT	**Manisa**	**2.08**	**357**			**Pn**	**16 13 42.8**	**+1.0**
KULA	**Kula-Manisa**	**2.10**	**359**	Pn		**Pn**	**16 13 43.2**	**+1.3**
KRL1	**Karlovasi Samo**	**2.11**	**311**	P		**Pn**	**16 13 43.5**	**+1.6**
KZIL	**AFYON_Kizioren**	**2.17**	**31**	P		**Pb**	**16 13 46.5**	**+0.3**
USAK	**Uak-Merkez**	**2.31**	**6**	P		**Pn**	**16 13 46.0**	**+1.2**
AFYN	**Afyon-Dinar-K**	**2.35**	**37**	P		**Pb**	**16 13 48.3**	**-0.9**
BLCB	**Balcova**	**2.38**	**327**	Pn		**Pn**	**16 13 47.0**	**+1.4**
ZKR	**Zakros**	**2.40**	**238**	Pn		**Pn**	**16 13 48.6**	**+2.6**
ZKR	**Zakros**	**2.40**	**238**	P		**Pn**	**16 13 47.8**	**+1.8**
ZKR	**Zakros**	**2.40**	**238**	P		**Pn**	**16 13 46.7**	**+0.7**
ZKR					AML	AML	16 14 25.5	
	1.2nm,0.5s							
ZKR					AML	AML	16 14 30.8	
	0.6nm,0.7s							
GORD	**Gordes-Manisa**	**2.53**	**351**	Pn		**Pn**	**16 13 48.8**	**+1.0**
SHUT	**Suhut-Afyon**	**2.59**	**34**	Pn		**Pn**	**16 13 50.5**	**+1.8**
THERA	**Ancient Thera,**	**2.61**	**270**	P		**Pn**	**16 13 50.5**	**+1.7**
THERA	**Ancient Thera,**	**2.61**	**270**	P		**Pn**	**16 13 50.1**	**+1.3**
APE	**Apeiranthos**	**2.63**	**285**	Pn		**Pn**	**16 13 50.3**	**+1.1**
APE	**Apeiranthos**	**2.63**	**285**	P		**Pn**	**16 13 50.0**	**+0.8**
APE	**Apeiranthos**	**2.63**	**285**	P		**Pn**	**16 13 50.1**	**+0.9**
APE	**Apeiranthos**	**2.63**	**285**	P		**Pn**	**16 13 50.0**	**+0.8**
THR3	**Thira Island,**	**2.67**	**271**	P		**Pn**	**16 13 51.7**	**+2.1**
THR3	**Thira Island,**	**2.67**	**271**	P		**Pn**	**16 13 51.5**	**+1.9**
SNT5	**Nea Kammeni, S**	**2.67**	**271**	P		**Pn**	**16 13 51.3**	**+1.6**
THR6	**Thira Island,**	**2.67**	**270**	P		**Pn**	**16 13 50.7**	**+1.1**
GEDZ	**Gediz**	**2.69**	**12**	Pn		**Pn**	**16 13 51.8**	**+1.8**
SEYD	**Seydisehir-KON**	**2.70**	**67**	Pn		**Pn**	**16 13 52.7**	**+2.5**
THR5	**Thira Island,**	**2.71**	**271**	P		**Pn**	**16 13 52.6**	**+2.4**
NPS	**Neapolis**	**2.76**	**246**	P		**Pn**	**16 13 52.9**	**+1.9**
NPS	**Neapolis**	**2.76**	**246**	P		**Pn**	**16 13 52.8**	**+1.8**
CHOS	**Chios island**	**2.89**	**314**	Pn		**Pn**	**16 13 54.4**	**+1.6**
CHOS	**Chios island**	**2.89**	**314**	P		**Pn**	**16 13 53.6**	**+0.9**
SOMA	**Soma-Manisa**	**2.90**	**342**	Pn		**Pn**	**16 13 54.4**	**+1.7**
DKL	**Dikili**	**3.02**	**332**	Pn		**Pn**	**16 13 56.1**	**+1.7**
AKMS	**Akamas**	**3.26**	**114**	S		**Sn**	**16 14 37.7**	**+1.2**
AKMS					AML	AML	16 14 39.8	
	0.2nm,0.6s							
AKMS					AML	AML	16 14 41.9	
	0.1nm,0.3s							
IDI	**Anoyia**	**3.30**	**251**			**Pn**	**16 13 59.3**	**+1.0**
IDI	**Anoyia**	**3.30**	**251**	Pn		**Pn**	**16 13 58.7**	**+0.4**
IDI	32nm,0.5s,baz=54,slow=17,SNR=85				Sn		**Sn**	**16 14 39.5**	**+2.2**
	17nm,0.3s,baz=90,slow=9.4,SNR=12							
IDI	**Anoyia**	**3.30**	**251**	P		**Pn**	**16 13 59.3**	**+1.0**
ALFC	**Alefka**	**3.40**	**110**	P		**Pn**	**16 13 59.4**	**-0.3**
ALFC	**Alefka**	**3.40**	**110**	P		**Pn**	**16 13 59.9**	**+0.1**
ALFC				S		**Sn**	**16 14 42.0**	**+2.1**
ALFC				AML	AML		16 14 44.0	
	0.2nm,0.5s							
ALFC				AML	AML		16 14 46.5	
	0.1nm,0.4s							
PRK	**Paraskevi**	**3.42**	**326**	P		**Pn**	**16 14 01.8**	**+1.8**
NATA	**Nata**	**3.54**	**116**	P		**Pn**	**16 14 02.0**	**+0.3**
NATA				S		**Sn**	**16 14 45.4**	**+2.0**
NATA				AML	AML		16 15 28.5	
	0.4nm,0.9s							
NATA				AML	AML		16 15 37.3	
	0.4nm,1.1s							
SIGR	**SIGRI**	**3.59**	**322**	P		**Pn**	**16 14 03.5**	**+1.2**
TROD	**Troodos**	**3.69**	**112**	P		**Pn**	**16 14 03.7**	**-0.1**
TROD				S		**Sn**	**16 14 49.3**	**+2.1**
TROD				AML	AML		16 14 59.7	
	0.1nm,0.5s							
TROD				AML	AML		16 15 25.2	
	0.1nm,1.6s							
KARY	**Karystos**	**3.77**	**297**	P		**Pn**	**16 14 05.8**	**+0.9**
XYLS	**Xyliatos**	**3.80**	**110**	P		**Pn**	**16 14 05.0**	**-0.2**
XYLS				S		**Sn**	**16 14 51.2**	**+1.5**
XYLS				AML	AML		16 14 57.4	
	0.1nm,0.3s							
XYLS				AML	AML		16 15 00.7	
	0.1nm,0.6s							
APOL	**The Sanctuary**	**3.81**	**116**	P		**Pn**	**16 14 05.4**	**+0.1**
APOL				S		**Sn**	**16 14 51.5**	**+1.6**
APOL				AML	AML		16 14 57.1	
	0.1nm,0.6s							
APOL				AML	AML		16 15 06.9	
	0.1nm,0.5s							
CSS	**Mathiatis**	**4.03**	**110**			**Pn**	**16 14 07.9**	**-0.5**
CSS	**Mathiatis**	**4.03**	**110**	P		**Pn**	**16 14 08.7**	**+0.3**
CSS	**Mathiatis**	**4.03**	**110**	P		**Pn**	**16 14 08.8**	**+0.4**
CSS	**Mathiatis**	**4.03**	**110**	P		**Pn**	**16 14 08.9**	**+0.5**
CSS				S		**Sn**	**16 14 58.1**	**+2.7**
CSS				AML	AML		16 15 08.5	
	0.1nm,0.6s							
CSS				AML	AML		16 15 14.3	
	0.1nm,0.6s							
ASGA	**Asgata**	**4.04**	**112**	P		**Pn**	**16 14 08.4**	**-0.1**
ASGA	**Asgata**	**4.04**	**112**	P		**Pn**	**16 14 08.8**	**+0.3**
ASGA				S		**Sn**	**16 14 57.3**	**+1.7**
ASGA				AML	AML		16 15 05.3	
	0.1nm,0.7s							
ASGA				AML	AML		16 15 07.4	
	0.1nm,0.7s							
DION	**Dionisos Attik**	**4.16**	**295**	P		**Pn**	**16 14 11.3**	**+1.2**
MVOU	**Mavrovouni**	**4.24**	**108**	P		**Pn**	**16 14 11.7**	**+0.4**
MVOU	**Mavrovouni**	**4.24**	**108**	P		**Pn**	**16 14 12.6**	**+1.3**
MVOU				S		**Sn**	**16 15 03.7**	**+3.1**
MVOU				AML	AML		16 15 05.8	
	0.1nm,0.5s							
MVOU				AML	AML		16 15 14.3	
	0.1nm,0.5s							
ANKY	**Antikythira Is**	**4.41**	**265**	P		**Pn**	**16 14 15.2**	**+1.7**
LIA	**Limnos Island**	**4.45**	**322**	P		**Pn**	**16 14 16.3**	**+2.1**
VLI	**Veliai**	**4.66**	**276**	P		**Pn**	**16 14 19.1**	**+2.2**
VIL2	**Platees**	**4.69**	**294**	P		**Pn**	**16 14 18.9**	**+1.4**
ANTO	**Ankara**	**4.72**	**42**			**Pn**	**16 14 20.1**	**+2.2**
SMTH	**Samothraki Isl**	**4.76**	**329**	P		**Pn**	**16 14 20.3**	**+1.9**
ALN	**Alexandroupoli**	**4.94**	**336**	Pn		**Pn**	**16 14 23.0**	**+2.2**
BRTR	**Keskin Array B**	**5.11**	**48**	Pn		**Pn**	**16 14 25.3**	**+2.0**
BRTR	0.5nm,0.3s,baz=230,slow=14,SNR=16				Sn		**Sn**	**16 15 25.2**	**+3.0**
	0.3nm,0.3s,baz=218,slow=23,SNR=5.9							
BRTR					LR	LR	16 16 18.7	
	comp=Z,12nm,18.1s,baz=168,slow=38							
	2.2nm,0.5s							
BR131	**Keskin Array S**	**5.11**	**48**			**Pn**	**16 14 24.9**	**+1.6**
KLV	**Kalavryta, Ach**	**5.48**	**289**	P		**Pn**	**16 14 30.1**	**+1.8**
ANX	**Ano Chora**	**5.82**	**294**	P		**Pn**	**16 14 35.1**	**+2.1**
LIT	**Litokhoron**	**6.12**	**309**	Pn		**Pn**	**16 14 39.9**	**+2.7**
MMA0B	**Mount Meron ar**	**6.47**	**120**	P		**Pn**	**16 14 41.5**	**-0.4**
MMA0B	**Mount Meron ar**	**6.47**	**120**	S		**Sn**	**16 15 52.9**	**-2.8**
MMAI	**Mount Meron Ar**	**6.47**	**120**	Pn		**Pn**	**16 14 41.1**	**-0.8**
MMAI	4.3nm,0.3s,baz=302,slow=12,SNR=17				Sn		**Sn**	**16 15 53.8**	**-1.9**
	3.9nm,0.3s,baz=306,slow=23,SNR=6.3							
	2.5nm,0.4s							
GEM	**Giv'at Ha'Em**	**6.55**	**117**	P		**Pn**	**16 14 42.8**	**-0.2**
GEM	**Giv'at Ha'Em**	**6.55**	**117**	S		**Sn**	**16 15 55.4**	**-2.2**
NATI	**Neve Ativ**	**6.58**	**116**	P		**Pn**	**16 14 43.1**	**-0.2**
KSHT	**Keshet**	**6.78**	**118**	P		**Pn**	**16 14 45.9**	**-0.3**
KSHT	**Keshet**	**6.78**	**118**	S		**Sn**	**16 16 00.2**	**-3.0**
HMDT	**Nahal Hemdat**	**7.00**	**124**	P		**Pn**	**16 14 48.4**	**-0.8**
HMDT	**Nahal Hemdat**	**7.00**	**124**	S		**Sn**	**16 16 06.0**	**-2.6**
KZIT	**Kziot**	**7.25**	**138**	P		**Pn**	**16 14 51.6**	**-1.0**
KZIT	**Kziot**	**7.25**	**138**	S		**Sn**	**16 16 10.6**	**-4.3**
MSBI	**Mazada**	**7.51**	**131**	P		**Pn**	**16 14 55.2**	**-0.9**
MSBI	**Mazada**	**7.51**	**131**	S		**Sn**	**16 16 17.1**	**-4.1**
GHAJ	**Ghor Haditha**	**7.65**	**130**	P		**Pn**	**16 14 56.3**	**-1.7**
GHAJ	**Ghor Haditha**	**7.65**	**130**	S		**Sn**	**16 16 20.6**	**-3.9**
ASF	**Jabal al Asfar**	**7.99**	**120**	Pn		**Pn**	**16 15 02.5**	**-0.3**
ASF	0.2nm,0.3s,baz=304,slow=11,SNR=1.3				Sn		**Sn**	**16 16 30.3**	**-2.7**
	0.2nm,0.3s,baz=262,slow=7.1,SNR=1.8							
	0.6nm,0.4s							
PRNI	**Paran**	**8.01**	**137**	P		**Pn**	**16 15 01.7**	**-1.4**
PRNI	**Paran**	**8.01**	**137**	S		**Sn**	**16 16 28.9**	**-4.6**
KRMI	**Paran Flat**	**8.05**	**140**	P		**Sn**	**16 15 02.9**	**-0.6**
KRMI	**Paran Flat**	**8.05**	**140**	S		**Sn**	**16 16 29.6**	**-4.8**
HRFI	**Mount Harif**	**8.28**	**138**	P		**Pn**	**16 15 05.8**	**-0.9**
HRFI	**Mount Harif**	**8.28**	**138**	S		**Sn**	**16 16 36.0**	**-4.0**
MBRI	**Mt Berech**	**8.40**	**140**	P		**Pn**	**16 15 07.7**	**-0.8**
MBRI	**Mt Berech**	**8.40**	**140**	S		**Sn**	**16 16 38.5**	**-4.7**
EIL	**Elat**	**8.52**	**140**	Pn		**Pn**	**16 15 09.6**	**-0.4**
EIL	1.5nm,0.3s,baz=333,slow=16,SNR=8.6				Sn		**Sn**	**16 16 42.8**	**-3.2**
	3.4nm,0.3s,baz=326,slow=15,SNR=10							
	3.2nm,0.4s							
EIL	**Elat**	**8.52**	**140**	P		**Pn**	**16 15 08.9**	**-1.1**
EIL	**Elat**	**8.52**	**140**	S		**Sn**	**16 16 41.5**	**-4.6**
MLR	**Muntele Rosu**	**9.31**	**348**	Pn		**Pn**	**16 15 22.0**	**+1.1**
	0.2nm,0.3s,baz=172,slow=15,SNR=4.8							
	1.8nm,0.7s							
TIP	**Timpagrande**	**9.85**	**290**	Pn		**Pn**	**16 15 30.5**	**+2.2**
GNI	**Garni**	**13.14**	**69**	LR		LR	16 22 05.9	
	comp=Z,29nm,20.0s,baz=257,slow=41							
GERES	**GERESS Array B**	**16.59**	**323**	Pn		**P**	**16 17 01.6**	**0.0**
	baz=127,slow=12,SNR=5.7							
	1.0nm,0.8s							
SENIN	**Lac Senin/Sane**	**18.84**	**308**	P		**P**	**16 17 27.6**	**+0.9**
SENIN				IAmb		IAmb	16 17 31.5	
	comp=Z,14nm,1.4s							
FINES	**FINESS Array B**	**25.11**	**357**	P		**P**	**16 18 31.8**	**+0.7**
FINES	**FINESS Array B**	**25.11**	**357**	P		**P**	**16 18 31.6**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=161,slow=8.8,SNR=9.9							
FINES				LR		LR	16 29 42.9	
	comp=Z,37nm,18.3s,baz=235,slow=40							
	comp=Z,4.5nm,0.8s							
AKTO	**Aktyubinsk**	**25.29**	**47**	LR		LR	16 30 28.4	
	comp=Z,25nm,20.7s,baz=172,slow=41							
ESDC	**Sonseca Array**	**25.86**	**287**	P		**P**	**16 18 36.7**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=90,slow=8.5,SNR=1.8							
	comp=Z,0.6nm,0.6s							
MD01	**Midelt array s**	**27.68**	**273**	P		**P**	**16 18 55.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**33.52**	**233**	IAmb		IAmb	16 20 01.0	
	comp=Z,6.6nm,1.3s							
TORD	**Torodi Ar. Bea**	**33.52**	**233**	P		**P**	**16 19 45.9**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=30,slow=10.0,SNR=4.5							
	comp=Z,1.3nm,0.3s							
KURBB	**Kurchatov Arra**	**38.09**	**52**	P		**P**	**16 20 24.7**	**-0.5**
	comp=Z,0.4nm,0.2s,baz=278,slow=8.3,SNR=1.6							
	comp=Z,0.4nm,0.2s							
KURK	**Kurchatov**	**38.15**	**52**	P		**P**	**16 20 24.7**	**-1.0**
MKAR	**Makanchi Array**	**40.67**	**58**	P		**P**	**16 20 46.8**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=279,slow=6.7,SNR=5.2							
	comp=Z,0.5nm,0.6s							
LBTB	**Lobatse**	**61.16**	**183**	P		**P**	**16 23 18.5**	**-2.7**
A36M	**Sachs Harbour**	**70.36**	**352**	P		**P**	**16 24 19.9**	**0.0**
G18K	**Tagagawik**	**77.86**	**3**	P		**P**	**16 25 04.3**	**+0.5**
SDV	**Santo Domingo**	**92.22**	**283**	LR		LR	17 06 05.2	
	comp=Z,64nm,18.9s,baz=254,slow=34							

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*ISK **03** 16:34:41.8,38˚.35N×38˚.97E,h3km,ML3.7/32*
*IDC **03** 16:34:42.4±0.8,38˚.44N×38˚.94E,h0km,mb3.5/8, mbtmp3.6/16,ML3.2/7,MS3.0/7,Error ellipse: s-maj=14.1km s-min=9.4km az=152.0*
*AFAD **03** 16:34:42.2,38˚.35N×38˚.93E,h11km±2km,MW3.9*

ISC 03 16:34:42.5±1.0,**38˚35N**±0˚.02×**38˚94E**±0˚.02,**h4**km±8km, **n91**,σ1§01/96,**mb3.6**/7,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
ELZG	**Elazig**	**0.15**	**14**	SPECP			16 34 46.0	
ELZG				P		**Pg**	**16 34 46.1**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.29**	**84**	Pg		**Pg**	**16 34 47.9**

BRTR				LR	LR	16 37 48.9	
	comp=Z,239nm,18.7s,baz=80,slow=43 4.1nm,0.5s						
BEIL	**Beino**	**4.40**	**211**	*e*P	**Pn**	**16 35 50.8**	**+0.6**
FKH	**Fakeheh**	**4.58**	**207**	*e*P	**Pn**	**16 35 52.8**	**+0.2**
HWQ	**Hawqa**	**4.73**	**212**	*e*P	**Pn**	**16 35 55.6**	**+0.8**
GNI	**Garni**	**4.85**	**66**	Pn	**Pn**	**16 35 57.4**	**+0.9**
	0.8nm,0.3s,baz=249,slow=17,SNR=1.7						
GNI				Lg	Lg	16 37 15.5	
	0.6nm,0.3s,baz=329,slow=19,SNR=0.9 2.9nm,0.4s						
ZAHL	**Zahle**	**5.12**	**210**	*e*P	**Pn**	**16 36 01.0**	**+0.9**
BHL	**Bhannes**	**5.17**	**212**	*e*P	**Pn**	**16 36 01.9**	**+1.0**
RCY	**Rachaya**	**5.46**	**208**	*e*P	**Pn**	**16 36 05.7**	**+0.9**
QRWL	**Qaraoun**	**5.47**	**210**	*e*P	**Pn**	**16 36 06.2**	**+1.3**
SHBL	**Chebaa**	**5.62**	**208**	*e*P	**Pn**	**16 36 08.5**	**+1.4**
MMAI	**Mount Meron Ar**	**6.05**	**209**	Pn	**Pn**	**16 36 13.7**	**+0.8**
	3.3nm,0.3s,baz=32,slow=14,SNR=13						
MMAI				Lg	Lg	16 37 56.4	
	3.6nm,0.3s,baz=26,slow=20,SNR=1.7						
MMAI				LR	LR	16 38 51.0	
	comp=Z,107nm,19.3s,baz=3.5,slow=41 4.0nm,0.5s						
KBZ	**Khabaz**	**6.15**	**28**	Pn	**Pn**	**16 36 15.4**	**+1.3**
	0.2nm,0.3s,baz=216,slow=7.6,SNR=5.1 0.6nm,0.4s						
KVAR	**Kislovodsk Arr**	**6.28**	**26**	Pn	**Pn**	**16 36 17.1**	**+1.1**
	baz=250,slow=18 3.6nm,0.8s						
ASF	**Jabal al Asfar**	**6.39**	**196**	Pn	**Pn**	**16 36 17.6**	**+0.1**
	0.6nm,0.3s,baz=27,slow=8.6,SNR=7.0						
ASF				Lg	Lg	16 38 08.4	
	3.2nm,0.3s,baz=72,slow=20,SNR=4.5						
ASF				LR	LR	16 39 01.0	
	comp=Z,60nm,20.0s,baz=357,slow=40 2.2nm,0.5s						
EIL	**Elat**	**9.27**	**202**	Pn	**Pn**	**16 36 59.2**	**+2.3**
	0.2nm,0.3s,baz=18,slow=17,SNR=1.2						
EIL				Lg	Lg	16 39 40.8	
	0.4nm,0.3s,baz=18,slow=9.6,SNR=3.8						
EIL				LR	LR	16 41 03.0	
	comp=Z,74nm,19.6s,baz=348,slow=41 1.9nm,0.7s						
IDI	**Anoyia**	**11.67**	**259**	Pn	**Pn**	**16 37 29.4**	**-0.4**
	4.7nm,0.9s,baz=90,slow=6.1,SNR=2.1						
VRAC	**Vranov**	**11.93**	**312**	LR	LR	16 48 41.8	
	comp=Z,21nm,20.8s,baz=150,slow=43						
GERES	**GERESS Array B**	**20.98**	**308**	P	Pn	16 39 27.3	-2.0
	0.9nm,0.9s,baz=113,slow=12,SNR=6.0 0.9nm,0.9s						
FINES	**FINESS Array B**	**24.46**	**345**	P	**P**	**16 40 03.1**	**+0.8**
	3.5nm,1.0s,baz=144,slow=12,SNR=6.7 3.5nm,1.0s						
BVAR	**Borovoye Array**	**26.16**	**46**	P	**P**	**16 40 17.8**	**+0.1**
	0.4nm,0.6s,baz=264,slow=9.0,SNR=1.6						
BVAR				LR	LR	16 52 29.6	
	comp=Z,39nm,18.8s,baz=295,slow=41 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**30.43**	**53**	P	**P**	**16 40 56.6**	**+0.7**
	0.9nm,0.7s,baz=266,slow=9.2,SNR=7.9 0.9nm,0.7s						
MKAR	**Makanchi Array**	**32.67**	**61**	P	**P**	**16 41 15.9**	**+0.2**
	0.8nm,0.8s,baz=270,slow=8.6,SNR=3.7 0.8nm,0.8s						
ESDC	**Sonseca Array**	**33.13**	**286**	P	**P**	**16 41 20.5**	**+0.7**
	0.6nm,0.9s,baz=92,slow=11,SNR=1.3 0.6nm,0.9s						
ZALV	**Zalesovo Beam**	**34.72**	**48**	P	**P**	**16 41 34.8**	**+1.4**
	0.4nm,0.4s,baz=260,slow=9.3,SNR=2.2 0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**55.42**	**93**	P	**P**	**16 44 19.1**	**+0.7**
	0.3nm,0.8s,baz=300,slow=8.2,SNR=2.6 0.3nm,0.8s						
SCHQ	**Schefferville**	**67.64**	**323**	LR	LR	17 16 03.0	
	comp=Z,70nm,21.2s,baz=268,slow=37						

*NOU **03** 16:38:23.6, 14.56S×171.97E, h625km, mb4.3/37, Vanuatu Islands Region*
*IDC **03** 16:38:24.9±2.4, 14.54S×171.69E, h608km±28km, mb3.4/17, mbtmp4.3/18, Error ellipse: s-maj=18.9km s-min=13.6km az=93.0*
*NEIC **03** 16:38:26.4±1.3, 14.7S±0.1×171.7E±0.1, h623km±7km, mb4.3/86, Error ellipse: s-maj=16.7km s-min=14.7km az=132.0*

ISC 03 16:38:25.9±0.4, 14.68S±0.06×171.62E±0.07, h623km, n208, σ1^{s}23/192, mb4.2/58, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.34**	**259**		**P**	**16 39 56.1**	**+0.6**
SANVU				S	**S**	**16 41 07.9**	**-0.5**
SANVU	**Saraoutou**	**4.34**	**259**	P	**P**	**16 39 56.0**	**+0.6**
SANVU	**Saraoutou**	**4.34**	**259**	S	**S**	**16 41 10.8**	**+2.4**
MSVF	**Nonsavu**	**6.88**	**117**		**P**	**16 40 15.8**	**-0.2**
MARNC	**Mare, Loyalty**	**7.58**	**206**	P	**P**	**16 40 21.2**	**-1.0**
MARNC	**Mare, Loyalty**	**7.58**	**206**	P	**P**	**16 40 21.3**	**-0.8**
YATNC	**Mamie plateau,**	**8.60**	**211**	P	**P**	**16 40 32.1**	**+0.4**
PINNC	**Pines Island,**	**8.82**	**206**	P	**P**	**16 40 34.6**	**+0.8**
PINNC	**Pines Island,**	**8.82**	**206**	P	**P**	**16 40 34.7**	**+0.9**
DZM	**Mont Dzumac**	**8.84**	**213**	P	**P**	**16 40 34.8**	**+0.7**
	9.9nm,0.4s,baz=30,slow=20,SNR=32						
OUENC	**Ouen Island, N**	**8.93**	**210**	P	**P**	**16 40 36.1**	**+1.3**
ONTNC	**Ouen Toro**	**9.03**	**212**	P	**P**	**16 40 36.5**	**+0.8**
ONTNC	**Ouen Toro**	**9.03**	**212**	P	**P**	**16 40 37.1**	**+1.3**
GLKZ	**Green Lake**	**17.44**	**148**	P	**P**	**16 41 56.2**	**+0.9**
EIDS	**Eidsvold**	**22.00**	**238**	P	**P**	**16 42 37.2**	**+0.6**
EIDS				IAmb	IAmb	16 43 15.2	
	comp=Z,8.5nm,1.1s						
EIDS	**Eidsvold**	**22.00**	**238**	P	**P**	**16 42 38.2**	**+1.6**
KUZ	**Kuaotunu**	**22.28**	**171**	P	**P**	**16 42 39.4**	**+0.6**
TOZ	**Tahuroa Road**	**23.21**	**172**	P	**P**	**16 42 47.4**	**+0.3**
TOZ	**Tahuroa Road**	**23.21**	**172**	P	**P**	**16 42 47.4**	**+0.3**
MXZ	**Matakaoa Point**	**23.55**	**167**	P	**P**	**16 42 47.8**	**-2.3**
MXZ	**Matakaoa Point**	**23.55**	**167**	P	**P**	**16 42 47.9**	**-2.1**
HAZ	**Te Kaha**	**23.62**	**168**	P	**P**	**16 42 49.3**	**-1.4**
RUGZ	**Raukumara Rang**	**23.80**	**168**	P	**P**	**16 42 50.3**	**-2.2**
TLZ	**Tolley Road**	**23.81**	**172**	P	**P**	**16 42 53.3**	**+0.9**
WMGZ	**Waiomatatini S**	**23.82**	**167**	P	**P**	**16 42 51.2**	**-1.3**
HIZ	**Hauiti**	**23.91**	**174**	P	**P**	**16 42 51.5**	**-1.7**
URZ	**Urewera**	**23.98**	**169**	P	**P**	**16 42 52.9**	**-1.0**
URZ	**Urewera**	**23.98**	**169**	P	**P**	**16 42 52.7**	**-1.2**
PUZ	**Puketiti**	**24.03**	**167**	P	**P**	**16 42 52.1**	**-2.2**
MWZ	**Matawai**	**24.13**	**169**	P	**P**	**16 42 53.3**	**-1.9**
ARMA	**Armidale**	**24.15**	**226**	P	**P**	**16 42 55.9**	**+0.3**
RTZ	**Ruatahuna**	**24.31**	**170**		**P**	**16 42 55.3**	**-1.5**
SNGZ	**Shannon Statio**	**24.53**	**169**	P	**P**	**16 42 57.0**	**-1.8**
RIGZ	**Rimuhau**	**24.54**	**168**	P	**P**	**16 42 57.6**	**-1.2**
ETVZ	**East Tongariro**	**24.62**	**172**	P	**P**	**16 43 00.9**	**+1.2**
NGZ	**Ngauruhoe**	**24.65**	**173**	P	**P**	**16 43 00.4**	**+0.5**
SNVZ	**South Ngauruho**	**24.67**	**173**	P	**P**	**16 43 00.7**	**+0.6**
PKVZ	**Pokaka**	**24.73**	**173**	P	**P**	**16 43 01.4**	**+0.8**
NMHZ	**Naumai**	**24.75**	**170**	P	**P**	**16 42 60.0**	**-0.7**
TUVZ	**Tukino**	**24.75**	**173**	P	**P**	**16 43 00.5**	**-0.3**
BKZ	**Black Stump Fm**	**24.76**	**171**		**P**	**16 42 59.3**	**-1.5**
BKZ	**Black Stump Fm**	**24.76**	**171**	P	**P**	**16 42 59.7**	**-1.1**
BKZ	**Black Stump Fm**	**24.76**	**171**	P	**P**	**16 42 59.4**	**-1.5**
MOVZ	**Moawhango**	**24.90**	**172**	P	**P**	**16 43 01.2**	**-0.8**
TSZ	**Takapari Road**	**25.57**	**172**	P	**P**	**16 43 06.0**	**-1.9**
PXZ	**Pawanui**	**25.67**	**171**	P	**P**	**16 43 05.9**	**-2.8**
QRZ	**Quartz Range**	**26.06**	**178**	P	**P**	**16 43 10.7**	**-1.4**
QRZ	**Quartz Range**	**26.06**	**178**	P	**P**	**16 43 13.7**	**+1.5**
MRZ	**Mangatainoka R**	**26.11**	**173**	P	**P**	**16 43 10.3**	**-2.3**
TKNZ	**Takaka Hill**	**26.28**	**178**	P	**P**	**16 43 14.0**	**-0.1**
NNZ	**Nelson**	**26.48**	**177**	P	**P**	**16 43 15.6**	**-0.2**
SNZO	**South Karori**	**26.67**	**175**	P	**P**	**16 43 16.0**	**-1.4**
TUWZ	**Tuamarina**	**26.73**	**176**	P	**P**	**16 43 17.6**	**-0.3**
DSZ	**Denniston Nort**	**26.97**	**180**	P	**P**	**16 43 20.3**	**+0.2**
THZ	**Tophouse**	**27.01**	**178**		**P**	**16 43 20.3**	**-0.1**
THZ	**Tophouse**	**27.01**	**178**	P	**P**	**16 43 20.2**	**-0.3**
COEN	**Coen**	**27.57**	**268**	P	**P**	**16 43 25.9**	**+0.2**
KHZ	**Kahutara**	**27.69**	**177**	P	**P**	**16 43 24.8**	**-1.5**
KHZ	**Kahutara**	**27.69**	**177**	P	**P**	**16 43 24.2**	**-2.1**
INZ	**Inchbonnie**	**27.95**	**180**	P	**P**	**16 43 27.8**	**-0.7**
INZ	**Inchbonnie**	**27.95**	**180**	P	**P**	**16 43 27.8**	**-0.7**
LTZ	**Lake Taylor**	**28.01**	**179**	P	**P**	**16 43 28.3**	**-0.8**
GVZ	**Greta Valley S**	**28.21**	**178**	P	**P**	**16 43 29.2**	**-1.7**
WVZ	**Waitaha Valley**	**28.30**	**181**	P	**P**	**16 43 31.5**	**-0.1**
CNB	**Canberra Magne**	**28.67**	**220**	P	**P**	**16 43 35.8**	**+0.8**
FOZ	**Fox Glacier**	**28.79**	**183**	P	**P**	**16 43 35.9**	**0.0**
CAN	**Canberra**	**28.90**	**221**	P	**P**	**16 43 38.0**	**+1.0**
CAN	**Canberra**	**28.90**	**221**	P	**P**	**16 43 37.7**	**+0.7**
MQZ	**McQueen's Vall**	**28.94**	**178**	P	**P**	**16 43 35.7**	**-1.4**
CMSA	**Cobar Meteorol**	**29.05**	**230**	P	**P**	**16 43 39.0**	**+0.7**
JCZ	**Jackson Bay**	**29.39**	**184**	P	**P**	**16 43 40.8**	**-0.3**
JCZ	**Jackson Bay**	**29.39**	**184**	P	**P**	**16 43 41.1**	**-0.1**
TMZ	**Timaru**	**29.61**	**181**	P	**P**	**16 43 41.1**	**-1.8**
LBZ	**Lake Benmore**	**29.63**	**182**	P	**P**	**16 43 42.3**	**-0.8**
ODZ	**Otahua Downs**	**30.28**	**181**	P	**P**	**16 43 47.3**	**-1.3**
ODZ	**Otahua Downs**	**30.28**	**181**	P	**P**	**16 43 47.7**	**-0.8**
MLZ	**Mavora Lakes**	**30.73**	**185**	P	**P**	**16 43 52.4**	**-0.1**
QIS	**Mount Isa**	**31.03**	**255**	P	**P**	**16 43 56.4**	**+0.9**
WHZ	**Wether Hill Ro**	**31.27**	**185**	P	**P**	**16 43 56.1**	**-0.9**
INKA	**Innaminka**	**31.48**	**241**	P	**P**	**16 44 00.1**	**+1.0**
SYZ	**Scrubby Hill**	**31.83**	**183**	P	**P**	**16 44 00.6**	**-1.1**
STKA	**Stephens Creek**	**32.31**	**233**	P	**P**	**16 44 06.7**	**+0.7**
	comp=Z,3.8nm,0.3s,baz=60,slow=9.7,SNR=30 comp=Z,3.8nm,0.3s						
STKA	**Stephens Creek**	**32.31**	**233**	P	**P**	**16 44 06.7**	**+0.7**
TOO	**Toolangi**	**32.51**	**221**	P	**P**	**16 44 08.9**	**+1.2**
TOO				IAmb	IAmb	16 44 48.0	
	comp=Z,5.4nm,1.2s						
HTT	**Hallett**	**35.00**	**232**	P	**P**	**16 44 28.7**	**+0.1**
WR8	**Warramunga Arr**	**35.77**	**256**	P	**P**	**16 44 34.5**	**-0.6**
WR8				IAmb	IAmb	16 45 10.2	
	comp=Z,8.1nm,1.4s						
WB0	**Warramunga Arr**	**35.87**	**257**	P	**P**	**16 44 35.5**	**-0.4**
WB0				IAmb	IAmb	16 44 36.2	
	comp=Z,7.2nm,0.9s						
WRAB	**Tennant Creek**	**35.91**	**256**	P	**P**	**16 44 36.4**	**+0.2**
WRA	**Warramunga Arr**	**35.92**	**256**	P	**P**	**16 44 35.6**	**-0.7**
WRA	**Warramunga Arr**	**35.92**	**256**	P	**P**	**16 44 36.2**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=86,slow=8.6,SNR=24						
WRA				PcP	**PcP**	**16 46 45.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=89,slow=3.0,SNR=3.2						
WRA				S	**S**	**16 49 27.0**	**-5.2**
	comp=Z,0.6nm,0.9s,baz=85,slow=14,SNR=3.1 comp=Z,2.3nm,0.5s						
AS31	**Alice Springs**	**36.64**	**250**		**P**	**16 44 42.2**	**+0.1**
ASAR	**Alice Springs**	**36.64**	**250**	P	**P**	**16 44 41.9**	**-0.3**
ASAR	**Alice Springs**	**36.64**	**250**	P	**P**	**16 44 42.2**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=84,slow=8.2,SNR=84						
ASAR				PcP	**PcP**	**16 46 47.4**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=80,slow=2.8,SNR=8.7						
ASAR				S	**S**	**16 49 37.7**	**-5.1**
	comp=Z,0.5nm,0.6s,baz=77,slow=18,SNR=4.6 comp=Z,1.7nm,0.5s						
BBOO	**Buckleboo**	**36.99**	**234**	P	**P**	**16 44 45.3**	**+0.5**
BBOO	**Buckleboo**	**36.99**	**234**	P	**P**	**16 44 44.6**	**-0.2**
MTN	**Manton Dam**	**39.33**	**268**	P	**P**	**16 45 04.5**	**+0.6**
MTN				IAmb	IAmb	16 45 05.0	
	comp=Z,9.0nm,0.6s						
SAUI	**Saumlaki**	**40.05**	**275**	P	**P**	**16 45 10.6**	**+1.0**
FAKI	**Fak Fak**	**40.55**	**283**	P	**P**	**16 45 13.8**	**+0.2**
FAKI				IAmb	IAmb	16 45 41.8	
	comp=Z,26nm,1.3s						
FAKI	**Fak Fak**	**40.55**	**283**	P	**P**	**16 45 13.4**	**-0.2**
KNRA	**Kununurra**	**41.33**	**263**	P	**P**	**16 45 19.7**	**0.0**
KNRA				IAmb	IAmb	16 45 28.3	
	comp=Z,10nm,1.1s						
FORT	**Forrest**	**42.96**	**240**	P	**P**	**16 45 32.3**	**0.0**
FORT				IAmb	IAmb	16 45 38.4	
	comp=Z,8.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**44.16**	**259**	P	**P**	**16 45 42.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**44.16**	**259**	P	**P**	**16 45 41.9**	**+0.2**
HMH	**Humu'ula Sheep**	**46.99**	**44**	P	**P**	**16 46 03.5**	**+0.1**
HMH				IAmb	IAmb	16 46 09.8	
	comp=Z,10nm,0.9s						
MMRI	**Maumere**	**48.66**	**271**	P	**P**	**16 46 16.1**	**+0.6**
MBWA	**Marble Bar**	**49.62**	**255**	P	**P**	**16 46 23.0**	**+0.5**
MBWA				IAmb	IAmb	16 46 54.3	
	comp=Z,23nm,1.3s						
DAV	**Davao City (W)**	**50.51**	**292**	P	**P**	**16 46 28.3**	**-0.8**
TOLI2	**Tolitoli**	**52.69**	**283**	P	**P**	**16 46 45.0**	**+0.4**
TOLI2				IAmb	IAmb	16 46 47.1	
	comp=Z,9.4nm,0.6s						
TOLI2	**Tolitoli**	**52.69**	**283**	P	**P**	**16 46 44.9**	**+0.2**
PLAI	**Plampang**	**52.94**	**270**	P	**P**	**16 46 46.0**	**-0.4**
MORW	**Morawa**	**53.09**	**245**	P	**P**	**16 46 47.8**	**+0.5**
MORW				IAmb	IAmb	16 47 28.3	
	comp=Z,28nm,1.4s						
JAGI	**Jajag, Banyuwa**	**56.52**	**269**	P	**P**	**16 47 10.5**	**-0.8**
JAGI	**Jajag, Banyuwa**	**56.52**	**269**	P	**P**	**16 47 11.4**	**+0.1**
JGF	**Kuroka**	**59.61**	**328**	P	**P**	**16 47 31.4**	**-0.3**
JGF				IAmb	IAmb	16 47 56.5	
	comp=Z,12nm,1.2s						
JGF	**Kuroka**	**59.61**	**328**	P	**P**	**16 47 30.4**	**-1.3**
JMM	**Marumori**	**59.75**	**332**	P	**P**	**16 47 30.5**	**-2.0**
MJAR	**Matsushiro Arr**	**59.92**	**329**	P	**P**	**16 47 33.4**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=157,slow=8.0,SNR=19 comp=Z,3.5nm,0.8s						
MAJO	**Matsushiro**	**59.92**	**329**	P	**P**	**16 47 33.8**	**+0.1**
UGM	**Wanagama**	**60.15**	**269**	P	**P**	**16 47 36.1**	**+0.4**
UGM	**Wanagama**	**60.15**	**269**	P	**P**	**16 47 35.9**	**+0.2**
JSD	**Sado**	**61.07**	**330**	P	**P**	**16 47 41.9**	**+0.7**
JSD				IAmb	IAmb	16 48 10.1	
	comp=Z,18nm,1.1s						
NACB	**Ninganchiao**	**62.27**	**308**	P	**P**	**16 47 49.4**	**+0.1**
TPUB	**Ta-pu**	**62.55**	**306**	P	**P**	**16 47 50.3**	**-0.8**
SSLB	**Suanglung**	**62.56**	**307**	P	**P**	**16 47 50.7**	**-0.5**
SSLB				IAmb	IAmb	16 47 51.3	
	comp=Z,25nm,1.0s						
SSLB	**Suanglung**	**62.56**	**307**	P	**P**	**16 47 49.9**	**-1.2**
VNDA	**Vanda**	**63.05**	**182**	P	**P**	**16 47 52.3**	**-1.0**
VNDA	**Vanda**	**63.05**	**182**	P	**P**	**16 47 52.6**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=20,slow=3.6,SNR=2.2 comp=Z,0.5nm,0.5s						
SBA	**Scott Base**	**63.23**	**181**	P	**P**	**16 47 55.1**	**+0.6**
SBA				IAmb	IAmb	16 47 57.1	
	comp=Z,16nm,1.2s						
CASY	**Casey**	**65.19**	**203**	P	**P**	**16 48 07.0**	**+0.1**
CASY				IAmb	IAmb	16 48 07.8	
	comp=Z,4.8nm,0.7s						
KSRS	**Korea Array**	**66.15**	**323**	P	**P**	**16 48 11.7**	**-1.7**
	comp=Z,1.4nm,0.8s,baz=141,slow=7.0,SNR=4.4 comp=Z,1.4nm,0.8s						
KIWB	**Kanaga Island**	**66.97**	**8**	P	**P**	**16 48 18.1**	**0.0**
KIWB				IAmb	IAmb	16 48 29.6	
	comp=Z,19nm,1.0s						
PETK	**Petropavlovsk-**	**68.57**	**351**	P	**P**	**16 48 27.3**	**-0.5**
	comp=Z,3.5nm,0.5s,baz=168,slow=5.3,SNR=22 comp=Z,3.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**68.83**	**331**	P	**P**	**16 48 30.0**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=150,slow=15,SNR=2.7 comp=Z,1.9nm,0.6s						
IPM	**Ipoh**	**72.48**	**280**		**P**	**16 48 51.8**	**+0.1**
IPM				IAmb	IAmb	16 48 52.6	
	comp=Z,7.9nm,0.5s						
KULM	**Kulim**	**73.07**	**280**	P	**P**	**16 48 55.1**	**+0.1**
KULM				IAmb	IAmb	16 49 01.2	
	comp=Z,9.1nm,1.2s						
QSPA	**South Pole Qui**	**75.35**	**180**	P	**P**	**16 49 08.2**	**+1.3**
QSPA	**South Pole Qui**	**75.35**	**180**	P	**P**	**16 49 09.2**	**+2.3**
	comp=Z,1.7nm,0.6s,baz=34,slow=3.6,SNR=18 comp=Z,1.7nm,0.6s						
XAN	**Xi'an**	**76.81**	**311**	*e*P	**P**	**16 49 16.9**	**+1.5**
N14K	**Kuskokwak Cree**	**77.41**	**13**	P	**P**	**16 49 18.1**	**+0.2**
M14K	**Bethel**	**78.10**	**13**	P	**P**	**16 49 22.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**78.33**	**318**	*e*P	**P**	**16 49 27.5**	**+4.0**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HILR	**Hailar Array B**	**78.58**	**328**	P	**P**	**16 49 25.2**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=140,slow=9.2,SNR=2.8 comp=Z,1.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**78.80**	**293**		**P**	**16 49 26.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**78.80**	**293**	P	**P**	**16 49 28.0**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=110,slow=5.6,SNR=32 comp=Z,4.4nm,0.8s						
CHTO	**Chiang Mai**	**78.92**	**293**		**P**	**16 49 27.7**	**+0.7**
PZH	**PanZhiHua**	**79.25**	**301**	P	**P**	**16 49 31.1**	**+2.4**
BRLK	**Bradley Lake**	**80.13**	**18**	P	**P**	**16 49 32.4**	**-0.1**
BRLK				IAmb	IAmb	16 49 33.2	
	comp=Z,12nm,0.8s						
L18K	**Granite Mounta**	**80.60**	**14**		**P**	**16 49 35.7**	**+0.9**
L18K				IAmb	IAmb	16 49 37.1	
	comp=Z,17nm,1.3s						
SLKM	**Skilak Lake**	**80.93**	**18**	P	**P**	**16 49 36.5**	**0.0**
L19K	**White Mountain**	**81.02**	**15**		**P**	**16 49 37.7**	**+0.8**
KHMM	**Horse Mountain**	**81.37**	**44**	P	**P**	**16 49 39.1**	**-0.3**
KHMM				IAmb	IAmb	16 50 04.0	
	comp=Z,14nm,1.4s						
J18K	**Innoko River**	**81.67**	**14**	IAmb	IAmb	16 49 41.4	
	comp=Z,9.9nm,0.8s						
HIN	**Hinchinbrook I**	**82.00**	**20**	P	**P**	**16 49 41.5**	**-0.5**
M02C	**Callahan**	**82.20**	**44**	P	**P**	**16 49 44.3**	**+0.8**
PPLA	**Purkeypile**	**82.31**	**16**	P	**P**	**16 49 43.1**	**-0.5**
PPLA				IAmb	IAmb	16 50 01.5	
	comp=Z,10nm,1.3s						
HMT	**Hamilton**	**82.70**	**20**	P	**P**	**16 49 45.0**	**-0.5**
SCM	**Sheep Creek Mo**	**82.84**	**18**	P	**P**	**16 49 45.9**	**-0.3**
SCM				IAmb	IAmb	16 49 46.5	
	comp=Z,7.0nm,0.6s						
BMRM	**Bremner River**	**83.05**	**20**	P	**P**	**16 49 46.7**	**-0.6**
BMRM				IAmb	IAmb	16 49 48.0	
	comp=Z,4.2nm,0.6s						
MDPB	**Devils Postpil**	**83.20**	**48**	P	**P**	**16 49 48.8**	**0.0**
BEKR	**Beckworth**	**83.22**	**46**		**P**	**16 49 49.0**	**+0.3**
WAKR	**Walker**	**83.30**	**47**		**P**	**16 49 49.6**	**+0.4**
F17K	**Baldwin Pennin**	**83.36**	**11**	IAmb	IAmb	16 49 50.5	
	comp=Z,9.9nm,0.8s						
WSHM	**Spangler Hills**	**83.55**	**51**	IAmb	IAmb	16 50 31.7	
	comp=Z,4.4nm,0.4s						
CLC	**China Lake**	**83.56**	**51**	IAmb	IAmb	16 49 51.7	
	comp=Z,4.2nm,0.9s						
MPMC	**Manual Prospec**	**83.73**	**50**	P	**P**	**16 49 51.4**	**0.0**
LHV	**Little Huntoon**	**83.86**	**48**	IAmb	IAmb	16 49 53.4	
	comp=Z,4.0nm,0.9s						
DSP	**Deep Springs**	**83.90**	**49**		**P**	**16 49 52.5**	**+0.6**
DSP				IAmb	IAmb	16 49 53.5	
	comp=Z,5.2nm,1.0s						
BELC	**Belle Mtn. Jos**	**84.08**	**53**		**P**	**16 49 53.3**	**+0.2**
BELC				IAmb	IAmb	16 49 54.4	
	comp=Z,5.1nm,0.8s						
NVAR	**Mina Array Bea**	**84.08**	**48**	P	**P**	**16 49 53.6**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=247,slow=7.6,SNR=14 comp=Z,2.1nm,0.8s						
B04A	**Port Angeles**	**84.90**	**38**	P	**P**	**16 49 56.5**	**0.0**
B04A				IAmb	IAmb	16 50 19.8	
	comp=Z,13nm,1.3s						
SONM	**Songino Array**	**85.00**	**322**	P	**P**	**16 49 57.9**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=116,slow=3.9,SNR=3.9 comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**85.23**	**17**	P	**P**	**16 49 55.9**	**-1.8**
	comp=Z,2.5nm,0.6s,baz=229,slow=5.5,SNR=42 comp=Z,2.5nm,0.6s						
GTA	**Gaotai**	**85.71**	**312**	P	**P**	**16 50 02.4**	**+1.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PRN	**Pahroc Range**	**86.06**	**50**	IAmb	IAmb	16 50 04.2	
	comp=Z,4.8nm,1.0s						
I26K	**Coal Creek Min**	**86.69**	**17**	P	**P**	**16 50 05.2**	**+0.6**
I26K				IAmb	IAmb	16 50 27.7	
	comp=Z,5.9nm,1.5s						
ELK	**Elko**	**87.16**	**47**		**P**	**16 50 07.5**	**-0.2**
U15A	**North Rim**	**87.78**	**52**	IAmb	IAmb	16 50 13.0	
	comp=Z,4.1nm,0.9s						
F10A	**Beach Ranch, E**	**87.85**	**41**	P	**P**	**16 50 10.6**	**0.0**
F10A				IAmb	IAmb	16 50 11.4	
	comp=Z,5.4nm,0.7s						
HLID	**Hailey**	**88.78**	**44**	IAmb	IAmb	16 50 17.0	
	comp=Z,3.1nm,1.1s						
BSUT	**Blindstream Ca**	**90.28**	**48**	P	**P**	**16 50 22.5**	**+0.1**
BSUT				IAmb	IAmb	16 50 23.6	
	comp=Z,1.7nm,0.8s						
PDAR	**Pinedale Array**	**91.85**	**46**	P	**P**	**16 50 27.9**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=236,slow=4.3,SNR=5.2 comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**92.57**	**60**	P	**P**	**16 50 32.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=252,slow=4.5,SNR=7.3 comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**99.86**	**323**	P	**Pdif**	**16 51 05.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=2.5 comp

PDGK ⇓Lg Lg 16 42 29.4
284nm,0.9s
TNSS Tian-Shan 2.58 330 Pg **Pb 16 41 56.0 +0.6**
25nm,0.4s
TNSS Lg Lg 16 42 31.8
50nm,0.4s
TNSS Tian-Shan 2.58 330 *e*P **Pb 16 41 56.0 +0.6**
25nm,0.4s
TNSS *e*S **Sg 16 42 31.8 +0.8**
50nm,0.4s
KPKS Kokpek 2.64 359 Pg **Pb 16 41 56.8 +0.5**
0.3nm,0.4s
KPKS Lg Lg 16 42 33.3
374nm,0.4s
MDOK Medeo 2.65 332 Pg **Pb 16 41 57.3 +0.8**
98nm,0.6s
MDOK Lg Lg 16 42 33.9
199nm,0.7s
BOOM Boomskoye usch 2.67 309⇑*e*P **Pn 16 41 53.8 +1.3**
BOOM ⇑*e*S **Sb 16 42 28.2 -2.0**
KOTS Kotyrbulak 2.69 334 Pg **Pb 16 41 57.6 +0.4**
145nm,0.5s
KOTS Lg Lg 16 42 35.2
456nm,0.7s
KOTS Kotyrbulak 2.69 334 *e*P **Pb 16 41 57.6 +0.4**
145nm,0.5s
KOTS *e*S **Sg 16 42 35.2 +0.7**
456nm,0.7s
KURS Kuram 2.69 351 Pg **Pb 16 41 57.7 +0.6**
52nm,0.7s
KURS Lg Lg 16 42 34.8
234nm,0.6s
KNDC Almaty 2.73 332 ⇑Pg **Pb 16 41 58.0 +0.2**
195nm,0.7s
KNDC ⇑Lg Lg 16 42 36.1
379nm,0.6s
AAA Alma-Ata 2.74 331 Pg **Pb 16 41 58.9 +0.9**
209nm,0.4s
AAA Lg Lg 16 42 37.3
29nm,0.4s
AAA Alma-Ata 2.74 331 *e*P **Pb 16 41 58.9 +0.9**
209nm,0.4s
AAA *e*S **Sg 16 42 37.3 +1.2**
29nm,0.4s
MTBS Maitube 2.87 324 Pg **Pb 16 42 00.5 +0.3**
15nm,0.4s
MTBS Lg Lg 16 42 39.5
64nm,0.4s
MTBS Maitube 2.87 324 *e*P **Pb 16 42 00.5 +0.3**
15nm,0.4s
MTBS *e*S **Sg 16 42 39.5 -0.9**
64nm,0.4s
KST Kastek 3.03 318 Pg **Pb 16 42 03.4 +0.5**
13nm,0.5s
KST Lg Lg 16 42 44.8
92nm,0.5s
KST Kastek 3.03 318 *e*P **Pb 16 42 03.4 +0.5**
13nm,0.5s
KST *e*S **Sg 16 42 44.8 -0.5**
92nm,0.5s
TKM2 Tokmak 2 3.14 313 P **Pb 16 42 05.6 +0.7**
SNR=8.1
TKM2 Tokmak 2 3.14 313⇑*e*P **Pn 16 42 00.4 +1.5**
TKM2 ⇑*e*S **Sn 16 42 39.6 +2.4**
KTBS Karatobe 3.26 333 Pg **Pb 16 42 07.6 +0.8**
58nm,0.6s
KTBS Lg Lg 16 42 51.8
129nm,0.5s
DGS Degeres 3.27 319 Pg **Pb 16 42 07.7 +0.7**
21nm,0.6s
DGS Lg Lg 16 42 52.9
41nm,0.5s
BLB Baldybastay 3.27 357 Pg **Pb 16 42 07.6 +0.5**
36nm,0.3s
BLB Lg Lg 16 42 52.1
67nm,0.4s
CHKK Chushkaly 3.29 337 Pg **Pb 16 42 08.0 +0.6**
35nm,0.5s
CHKK Lg Lg 16 42 52.5
168nm,0.5s
CHKK Chushkaly 3.29 337 *e*P **Pb 16 42 08.0 +0.6**
35nm,0.5s
CHKK *e*S **Sg 16 42 52.5 -1.2**
168nm,0.5s
KBK Karagaybulak 3.37 304 P **Pb 16 42 10.5 +1.8**
SNR=6.3
KBK Karagaybulak 3.37 304⇑*e*P **Pn 16 42 03.5 +1.4**
KBK ⇑*e*S **Sn 16 42 44.9 +2.1**
ARXS Arharly 3.45 349 Pg **Pb 16 42 10.6 +0.5**
17nm,0.5s
ARXS Lg Lg 16 42 57.4
139nm,0.5s
ARXS Arharly 3.45 349 *e*P **Pb 16 42 10.6 +0.5**
ARXS *e*S **Sg 16 42 57.4 -1.5**
ARLS Aral 3.47 289⇓*e*P **Pn 16 42 04.7 +1.2**
ARLS ⇓*e*S **Sn 16 42 47.0 +1.6**
KUU Kurty 3.54 331 Pg **Pb 16 42 12.1 +0.5**
10.0nm,0.6s
KUU Lg Lg 16 42 59.5
42nm,0.5s
KUU Kurty 3.54 331 *e*P **Pb 16 42 12.1 +0.5**
10.0nm,0.6s
KUU *e*S **Sg 16 42 59.5 -2.3**
42nm,0.5s
KNOS Konyrlen 3.54 5 Pg **Pb 16 42 12.5 +0.7**
12nm,0.5s
KNOS Lg Lg 16 43 00.2
73nm,0.5s
FRU1 Bishkek 3.65 304⇑*e*P **Pn 16 42 07.5 +1.7**
FRU1 ⇑*e*S **Sn 16 42 51.9 +2.4**
AAK Ala-Archa 3.65 301 P **Pb 16 42 15.2 +1.7**
SNR=9.9
AAK Ala-Archa 3.65 301 ⇓Pg **Pb 16 42 13.8 +0.2**
9.5nm,0.8s
AAK ⇑Lg Lg 16 43 04.0
20nm,0.9s
AAK Ala-Archa 3.65 301⇑*e*P **Pn 16 42 07.4 +1.5**
AAK ⇑*e*S **Sn 16 42 51.7 +2.0**
KRBS Karabastau 3.65 323 Pg **Pb 16 42 15.0 +1.4**
12nm,0.4s
KRBS Lg Lg 16 43 04.5
6.4nm,0.5s
CHMS Chumysh 3.68 307 P **Pb 16 42 13.8 -0.1**
SNR=6.5
CHMS Chumysh 3.68 307⇑*e*P **Pn 16 42 07.7 +1.5**
CHMS ⇑*e*S **Sn 16 42 52.2 +2.0**
SALK Salom-Alik 3.72 272⇑*e*P **Pn 16 42 08.1 +1.2**
SALK ⇑*e*S **Sn 16 42 52.8 +1.3**
USP Ospenovka 3.98 309 P **Pb 16 42 20.6 +1.5**
SNR=11
SFK Sufi-Kurgan 4.07 260⇓*e*P **Pn 16 42 12.6 +0.8**
SFK ⇓*e*S **Sn 16 43 01.2 +1.0**
EKS2 Erkin-Say 4.13 298 P **Pb 16 42 24.2 +2.5**
SNR=6.8
EKS2 Erkin-Say 4.13 298⇑*e*P **Pn 16 42 14.0 +1.5**
EKS2 ⇑*e*S **Sn 16 43 03.1 +1.5**
ARSB Arslanbob 4.37 278⇓*e*P **Pn 16 42 17.0 +1.2**
ARSB ⇓*e*S **Sn 16 43 08.6 +1.1**
KAPS Kapalarasan 4.48 6 Pg **Pb 16 42 29.2 +1.6**
6.2nm,0.4s
KAPS Lg Lg 16 43 28.9
56nm,0.7s
MRKS Merke 4.54 297 Pg **Pb 16 42 30.9 +2.2**
4.8nm,0.5s
MRKS Lg Lg 16 43 32.2
14nm,0.7s
MRKS Merke 4.54 297 *e*P **Pb 16 42 30.9 +2.2**
4.8nm,0.5s
MRKS *e*S **Sg 16 43 32.2 -1.7**
14nm,0.7s
MAKZ Makanchi 6.42 20 ⇓Pn **Pn 16 42 44.3 +0.4**
0.4nm,0.3s
MAKZ ⇑Sn **Sn 16 44 02.4 +4.6**
3.3nm,0.8s
MAKZ ⇓Lg Lg 16 44 36.5
4.8nm,1.0s
MK31 Makanchi Array 6.50 22 ⇓Pn **Pn 16 42 45.1 +0.2**
0.3nm,0.3s,baz=202,slow=12,SNR=29
MK31 ⇓Pg Pb 16 43 08.1 +6.1
1.8nm,0.6s,baz=203,slow=13,SNR=3.6
MK31 ⇑Lg Lg 16 44 38.8
4.8nm,0.7s,baz=198,slow=28,SNR=3.5
MKAR Makanchi Array 6.50 22 Pn **Pn 16 42 45.7 +0.8**
0.6nm,0.3s,baz=202,slow=14,SNR=27
MKAR Sn **Sn 16 43 59.4 -0.3**
0.4nm,0.3s,baz=204,slow=23,SNR=2.2
MKAR Lg Lg 16 44 33.8
0.9nm,0.3s,baz=204,slow=28,SNR=5.3
0.8nm,0.3s
KK31 Karatay Array 6.53 293 ⇓Pg **Pb 16 43 04.3 +1.7**
1.5nm,0.6s,baz=111,slow=16,SNR=11
KK31 ⇓Lg Lg 16 44 37.1
1.9nm,0.5s,baz=102,slow=24,SNR=5.6
KURBB Kurchatov Arra 9.80 359 Pn **Pn 16 43 30.1 0.0**
baz=184,slow=12,SNR=4.2
KURBB Lg Lg 16 46 16.6
0.1nm,0.3s,baz=183,slow=29,SNR=5.0
0.2nm,0.3s
KURBB Kurchatov Arra 9.80 359 ⇓Lg Lg 16 46 20.6
22nm,0.9s
KURK Kurchatov 9.89 360 ⇑Lg Lg 16 46 22.6
9.0nm,1.1s
BVAR Borovoye Array 13.45 338 Pn **Pn 16 44 18.4 -1.7**
baz=148,slow=12,SNR=1.5
BVAR Lg Lg 16 48 09.6
0.2nm,0.5s
SONM Songino Array 20.92 61 P **P 16 45 51.8 -0.4**
0.8nm,0.7s,baz=263,slow=10.0,SNR=4.3
0.8nm,0.7s
ARCES ARCESS Array B 39.70 334 P **P 16 48 40.3 -1.2**
4.1nm,0.9s,baz=107,slow=8.2,SNR=6.5
4.1nm,0.9s
NOA NORSAR Array B 44.75 320 P **P 16 49 20.8 -2.0**
0.4nm,0.8s,baz=86,slow=7.9,SNR=1.2
0.4nm,0.8s

IDC 03 16:46:35.7±3.1, 27.40S×177.08W, h0km, mb3.1/2, mbtmp3.1/2, Error ellipse: s-maj=71.4km s-min=31.3km az=97.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.99**	**202**	Pn	Pn	16 47 11.2	+0.6
	90nm,0.3s,baz=18,slow=20,SNR=8.8						
RAO				Sn	Sn	16 47 36.0	-0.3
	192nm,0.3s,baz=73,slow=20,SNR=6.0						
ASAR	**Alice Springs**	**44.17**	**263**	P	P	16 54 46.5	-0.1
	0.2nm,0.9s,baz=107,slow=7.5,SNR=5.2						
	0.2nm,0.9s						
WRA	**Warramunga Arr**	**44.88**	**269**	P	P	16 54 52.1	-0.2
	0.1nm,0.3s,baz=108,slow=7.6,SNR=2.0						
	0.1nm,0.3s						
AKASG	**Malin Array Be**	**149.33**	**326**	PKPbc	PKPbc	17 06 25.5	-0.7
	0.9nm,0.7s,baz=62,slow=2.9,SNR=1.8						

*IDC **03** 17:02:05.0±1.4, 23.19S×178.90E, h553km±15km, mb3.5/18, mbtmp4.4/19, Error ellipse: s-maj=13.7km s-min=10.9km az=139.0*
*NEIC **03** 17:02:05.3±2.0, 23.3S±0.1×179.0E±0.1, h564km±8km, mb4.6/43, Error ellipse: s-maj=20.3km s-min=16.0km az=112.0*
*NOU **03** 17:02:06.5, 23.22S×179.38E, h616km, mb4.8/28, South of Fiji Islands*

ISC 03 17:02:04.3±0.4, 23.40S±0.06×179.08E±0.07, h555km, n194, σ1$48/193, mb4.4/57, 8C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.72**	**350**	P	**P**	**17 03 40.5**	**-0.4**
MARNC	**Mare, Loyalty**	**10.40**	**278**	P	**P**	**17 04 26.7**	**+0.3**
PINNC	**Pines Island,**	**10.75**	**272**	P	**P**	**17 04 31.3**	**+1.4**
NIUE	**Niue**	**11.11**	**69**	P	**P**	**17 04 33.6**	**-0.2**
DZM	**Mont Dzumac**	**11.74**	**274**	P	**P**	**17 04 38.8**	**-1.5**
	7.0nm,0.9s,baz=89,slow=17,SNR=5.6						
OUZ	**Onuhuta**	**12.71**	**201**	P	**P**	**17 04 53.7**	**+3.7**
WCZ	**Waipu Caves**	**13.16**	**197**	P	**P**	**17 04 58.3**	**+3.7**
KUZ	**Kuaotunu**	**13.62**	**192**	P	**P**	**17 05 01.5**	**+2.2**
MKAZ	**Moumakai**	**14.07**	**193**	P	**P**	**17 05 06.7**	**+2.7**
MXZ	**Matakaoa Point**	**14.14**	**183**	P	**P**	**17 05 03.8**	**-0.9**
MXZ	**Matakaoa Point**	**14.14**	**183**	P	**P**	**17 05 04.2**	**-0.4**
MXZ				S	**S**	**17 07 27.6**	**-5.5**
HAZ	**Te Kaha**	**14.36**	**184**	P	**P**	**17 05 07.9**	**+1.0**
HAZ				S	**S**	**17 07 32.2**	**-5.0**
TOZ	**Tahuroa Road**	**14.62**	**191**		**P**	**17 05 12.0**	**+2.5**
TOZ	**Tahuroa Road**	**14.62**	**191**	P	**P**	**17 05 12.3**	**+2.8**
URZ	**Urewera**	**14.91**	**186**	P	**P**	**17 05 11.6**	**-1.0**
	15nm,0.6s,baz=6.0,slow=19,SNR=15						
URZ				S	**S**	**17 07 42.6**	**-4.9**
	10nm,0.6s,baz=75,slow=20,SNR=9.0						
MWZ	**Matawai**	**14.95**	**185**	P	**P**	**17 05 12.7**	**-0.3**
MTHZ	**Maungataniwha**	**15.53**	**187**	P	**P**	**17 05 19.5**	**+0.7**
RAHZ	**Arahi**	**15.56**	**186**	P	**P**	**17 05 21.0**	**+1.8**
RATZ	**Rangitukua**	**15.68**	**190**	P	**P**	**17 05 21.9**	**+1.5**
BKZ	**Black Stump Fm**	**15.88**	**187**		**P**	**17 05 20.1**	**-2.3**
BKZ				IAmb	IAmb	17 05 25.5	
	comp=Z,8.2nm,0.5s						
BKZ	**Black Stump Fm**	**15.88**	**187**	P	**P**	**17 05 21.7**	**-0.7**
NGZ	**Ngauruhoe**	**16.01**	**190**	P	**P**	**17 05 26.1**	**+2.3**
VRZ	**Vera Road**	**16.11**	**192**	P	**P**	**17 05 28.0**	**+3.5**
PKVZ	**Pokaka**	**16.16**	**190**	P	**P**	**17 05 26.0**	**+0.9**
KAHZ	**Kahuranaki**	**16.45**	**186**	P	**P**	**17 05 27.3**	**-0.4**
PXZ	**Pawanui**	**16.69**	**186**	P	**P**	**17 05 30.3**	**+0.6**
TSZ	**Takapari Road**	**16.82**	**188**	P	**P**	**17 05 32.1**	**+1.1**
MRZ	**Mangatainoka R**	**17.46**	**189**	P	**P**	**17 05 36.3**	**-0.5**
OGWZ	**Otaki Gorge**	**17.68**	**190**	P	**P**	**17 05 39.2**	**+0.4**
DUWZ	**D'Urville Isla**	**17.89**	**193**	P	**P**	**17 05 41.5**	**+0.7**
CAW	**Cannon Point**	**17.98**	**190**	P	**P**	**17 05 41.8**	**+0.3**
TRWZ	**Traveller**	**18.18**	**188**	P	**P**	**17 05 43.4**	**0.0**
PAWZ	**Paruwai Farm**	**18.20**	**189**	P	**P**	**17 05 44.4**	**+0.9**
TCW	**Tory Channel**	**18.22**	**192**	P	**P**	**17 05 44.8**	**+1.1**
QRZ	**Quartz Range**	**18.23**	**196**	P	**P**	**17 05 44.0**	**+0.2**
QRZ	**Quartz Range**	**18.23**	**196**	P	**P**	**17 05 46.2**	**+2.3**
QRZ	**Quartz Range**	**18.23**	**196**	P	**P**	**17 05 45.9**	**+2.1**
MSWZ	**Moikau Station**	**18.25**	**189**	P	**P**	**17 05 44.1**	**+0.1**
BHW	**Baring Head**	**18.30**	**190**	P	**P**	**17 05 44.9**	**+0.5**
NNZ	**Nelson**	**18.40**	**194**	P	**P**	**17 05 46.1**	**+0.7**
PLWZ	**Palliser**	**18.40**	**189**	P	**P**	**17 05 45.8**	**+0.3**
TUWZ	**Tuamarina**	**18.49**	**192**	P	**P**	**17 05 48.2**	**+2.0**
MRNZ	**Matariki Terra**	**18.72**	**195**	P	**P**	**17 05 49.0**	**+0.7**
MRNZ	**Matariki Terra**	**18.72**	**195**	P	**P**	**17 05 49.5**	**+1.2**
THZ	**Tophouse**	**19.03**	**194**	P	**P**	**17 05 52.4**	**+1.2**
DSZ	**Denniston Nort**	**19.28**	**197**	P	**P**	**17 05 55.4**	**+1.9**
KHZ	**Kahutara**	**19.52**	**192**	P	**P**	**17 05 56.6**	**+1.1**
KHZ	**Kahutara**	**19.52**	**192**	P	**P**	**17 05 55.5**	**0.0**
LTZ	**Lake Taylor**	**20.14**	**195**	P	**P**	**17 06 01.3**	**+0.1**
RPZ	**Rata Peaks**	**21.32**	**196**	P	**P**	**17 06 12.3**	**+0.5**
	comp=Z,5.5nm,0.6s,baz=23,slow=7.7,SNR=6.8						
	comp=Z,5.5nm,0.6s						
JCZ	**Jackson Bay**	**22.30**	**200**	P	**P**	**17 06 22.1**	**+1.4**
DCZ	**Deep Cove**	**24.06**	**201**	P	**P**	**17 06 36.1**	**-0.1**
ARMA	**Armidale**	**25.42**	**248**	P	**P**	**17 06 47.8**	**-0.8**
ARMA				IAmb	IAmb	17 06 51.5	
	comp=Z,19nm,0.8s						
ARMA	**Armidale**	**25.42**	**248**	P	**P**	**17 06 50.5**	**+1.9**
EIDS	**Eidsvold**	**25.56**	**260**	P	**P**	**17 06 49.9**	**+0.1**
EIDS				IAmb	IAmb	17 06 51.6	
	comp=Z,9.6nm,0.7s						
SYDH	**Sydney Hard Ro**	**26.87**	**241**	P	**P**	**17 07 03.2**	**+2.0**
CNB	**Canberra Magne**	**28.39**	**239**	P	**P**	**17 07 16.6**	**+2.0**
AULRC	**Lightning Ridg**	**28.44**	**251**	P	**P**	**17 07 16.8**	**+1.8**
AUDAR	**Daramalan Coll**	**28.54**	**239**	P	**P**	**17 07 18.1**	**+2.2**
AUSIS	**Research Schoo**	**28.58**	**239**	P	**P**	**17 07 18.7**	**+2.5**
AUMHS	**Melrose High S**	**28.61**	**239**	P	**P**	**17 07 18.7**	**+2.2**
AUMTS	**Mt Stromlo**	**28.67**	**239**	P	**P**	**17 07 19.0**	**+2.0**
CAN	**Canberra**	**28.67**	**239**	P	**P**	**17 07 18.0**	**+0.9**
CAN	**Canberra**	**28.67**	**239**	P	**P**	**17 07 18.9**	**+1.9**
TV1H	**Townsville Har**	**30.32**	**272**	P	**P**	**17 07 32.3**	**+0.9**
CMSA	**Cobar Meteorol**	**30.63**	**247**	P	**P**	**17 07 34.8**	**+0.9**
QLP	**Quilpie**	**31.69**	**257**	P	**P**	**17 07 43.9**	**+0.9**
TOO	**Toolangi**	**32.02**	**236**	P	**P**	**17 07 46.0**	**+0.2**
TOO				IAmb	IAmb	17 07 48.0	
	comp=Z,9.3nm,1.0s						
TAU	**Tasmania Unive**	**32.67**	**226**	P	**P**	**17 07 51.7**	**+0.6**
MTSU	**Mount Surprise**	**32.87**	**273**	P	**P**	**17 07 54.3**	**+1.1**
BRAT	**Ballarat**	**33.21**	**237**	P	**P**	**17 07 58.1**	**+2.4**
AUMTC	**Mt Clear Colle**	**33.27**	**237**	P	**P**	**17 07 58.6**	**+2.4**
PMG	**Port Moresby**	**33.53**	**289**	P	**P**	**17 07 58.9**	**+0.2**
PMG	**Port Moresby**	**33.53**	**289**	P	**P**	**17 07 59.6**	**+0.8**
STKA	**Stephens Creek**	**34.13**	**247**	P	**P**	**17 08 04.4**	**+0.8**
STKA	**Stephens Creek**	**34.13**	**247**	P	**P**	**17 08 04.6**	**+1.0**
	comp=Z,21nm,0.8s,baz=84,slow=11,SNR=26						
	comp=Z,21nm,0.8s						
STKA	**Stephens Creek**	**34.13**	**247**	P	**P**	**17 08 05.0**	**+1.4**
INKA	**Innaminka**	**34.76**	**255**	P	**P**	**17 08 10.0**	**+1.2**
INKA				IAmb	IAmb	17 08 11.5	
	comp=Z,20nm,1.2s						
COEN	**Coen**	**35.20**	**279**	P	**P**	**17 08 13.5**	**+0.8**
COEN				IAmb	IAmb	17 08 15.0	
	comp=Z,25nm,1.1s						
AUMBR	**Murray Bridge**	**36.41**	**242**	P	**P**	**17 08 23.7**	**+1.3**
HTT	**Hallett**	**36.52**	**245**	P	**P**	**17 08 24.6**	**+1.2**
QIS	**Mount Isa**	**36.64**	**267**	P	**P**	**17 08 25.3**	**+0.7**
BBOO	**Buckleboo**	**38.87**	**246**	P	**P**	**17 08 43.0**	**+0.4**
BBOO				IAmb	IAmb	17 09 11.3	
	comp=Z,30nm,1.4s						
AS31	**Alice Springs**	**41.29**	**260**	P	**P**	**17 09 02.0**	**0.0**
ASAR	**Alice Springs**	**41.29**	**260**		**P**	**17 08 59.7**	**-2.4**
ASAR	**Alice Springs**	**41.29**	**260**	P	**P**	**17 09 02.0**	**-0.1**
	comp=Z,17nm,0.7s,baz=96,slow=7.7,SNR=305						
ASAR				PcP	**PcP**	**17 10 46.9**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=100,slow=4.9,SNR=2.5						
ASAR				ScP	**ScP**	**17 13 45.9**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=98,slow=4.2,SNR=8.0						
ASAR				S	**S**	**17 14 34.4**	**-2.3**
	comp=Z,0.7nm,0.8s,baz=96,slow=15,SNR=5.6						
	comp=Z,17nm,0.7s						
AUALC	**St Philip's Co**	**41.30**	**260**	P	**P**	**17 09 02.9**	**+0.7**
WR8	**Warramunga Arr**	**41.45**	**266**	P	**P**	**17 09 02.9**	**-0.4**
WR8				IAmb	IAmb	17 09 03.8	
	comp=Z,19nm,0.9s						
WB0	**Warramunga Arr**	**41.59**	**266**	P	**P**	**17 09 03.7**	**-0.7**
WRAB	**Tennant Creek**	**41.59**	**266**	P	**P**	**17 09 04.2**	**-0.3**
WRA	**Warramunga Arr**	**41.60**	**266**	P	**P**	**17 09 03.0**	**-1.6**
WRA	**Warramunga Arr**	**41.60**	**266**	P	**P**	**17 09 03.8**	**-0.7**
	comp=Z,25nm,0.8s,baz=101,slow=7.9,SNR=94						
WRA				PcP	**pwP**	**17 10 47.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=101,slow=4.8,SNR=2.1						
WRA				ScP	**ScP**	**17 13 47.7**	**+1.6**
	comp=Z,1.8nm,0.9s,baz=106,slow=3.8,SNR=7.6						
WRA				S	**S**	**17 14 36.9**	**-4.3**
	comp=Z,0.8nm,0.7s,baz=100,slow=14,SNR=4.8						
	comp=Z,25nm,0.8s						
JAY	**Jayapura**	**42.54**	**293**	P	**P**	**17 09 11.4**	**-0.6**
	comp=Z,19nm,1.3s						
FORT	**Forrest**	**45.70**	**249**	P	**P**	**17 09 36.0**	**-0.1**
FORT				IAmb	IAmb	17 09 37.0	
	comp=Z,25nm,0.7s						
MTN	**Manton Dam**	**46.58**	**274**	P	**P**	**17 09 42.3**	**-0.7**
MTN				IAmb	IAmb	17 09 43.0	
	comp=Z,6.9nm,0.6s						
KNRA	**Kununurra**	**47.85**	**270**	P	**P**	**17 09 52.0**	**-0.4**
MLH	**Mauna Loa**	**49.37**	**32**	P	**P**	**17 10 02.4**	**-1.5**
MLH				IAmb	IAmb	17 10 05.6	
	comp=Z,27nm,0.9s						
FAKI	**Fak Fak**	**49.63**	**287**	P	**P**	**17 10 02.7**	**-3.0**
FAKI				IAmb	IAmb	17 10 36.5	
	comp=Z,13nm,1.0s						
FAKI	**Fak Fak**	**49.63**	**287**	P	**P**	**17 10 04.8**	**-0.9**
DHH	**Diamond Head**	**49.77**	**29**	P	**P**	**17 10 06.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**50.03**	**266**	P	**P**	**17 10 07.4**	**-1.2**
SWI	**Sorong**	**51.49**	**289**	P	**P**	**17 10 18.9**	**-0.3**
	comp=Z,33nm,0.8s						
SOEI	**Soe**	**53.96**	**275**	P	**P**	**17 10 38.5**	**+1.5**
	comp=Z,38nm,0.9s						
NLAI	**Namlea**	**54.05**	**284**	P	**P**	**17 10 36.8**	**-0.7**
	comp=Z,20nm,0.6s						
BATI	**Baumata**	**54.35**	**274**	P	**P**	**17 10 39.9**	**+0.2**
	comp=Z,23nm,0.6s						
MBWA	**Marble Bar**	**54.63**	**260**	P	**P**	**17 10 40.3**	**-1.2**
VNDA	**Vanda**	**54.81**	**185**	P	**P**	**17 10 43.7**	**+1.9**
VNDA	**Vanda**	**54.81**	**185**	P	**P**	**17 10 42.9**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=7.4,slow=8.2,SNR=2.4						
	comp=Z,0.7nm,0.6s						
SANI	**Sanana**	**55.57**	**284**	P	**P**	**17 10 47.4**	**-0.7**
	comp=Z,15nm,0.9s						
MORW	**Morawa**	**56.26**	**250**	P	**P**	**17 10 51.8**	**-0.9**
MORW				IAmb	IAmb	17 10 53.4	
	comp=Z,19nm,1.1s						
EDFI	**Ende, Flores**	**56.70**	**275**	P	**P**	**17 10 56.0**	**0.0**
	comp=Z,33nm,0.7s						
GIRL	**Giralia**	**59.21**	**257**	P	**P**	**17 11 12.2**	**-0.6**
BKSI	**Bulukumba**	**59.46**	**278**	P	**P**	**17 11 14.0**	**-0.6**
	comp=Z,18nm,0.7s						
BNSI	**Bone**	**59.85**	**279**	P	**P**	**17 11 17.0**	**-0.2**
	comp=Z,11nm,0.7s						
CASY	**Casey**	**60.20**	**206**	P	**P**	**17 11 18.4**	**-0.1**
TOLI2	**Tolitoli**	**61.64**	**285**	P	**P**	**17 11 28.0**	**-0.9**
TOLI2				IAmb	IAmb	17 11 30.3	
	comp=Z,11nm,0.7s						
QSPA	**South Pole Qui**	**66.68**	**180**	P	**P**	**17 12 02.3**	**+2.1**
QSPA	**South Pole Qui**	**66.68**	**180**	P	**P**	**17 12 04.2**	**+4.0**
	comp=Z,3.2nm,0.9s,baz=45,slow=1.4,SNR=18						
	comp=Z,3.2nm,0.9s						
MJAR	**Matsushiro Arr**	**71.01**	**326**	P	**P**	**17 12 26.1**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=159,slow=5.4,SNR=16						
	comp=Z,4.4nm,0.8s						
MAJO	**Matsushiro**	**71.01**	**326**	P	**P**	**17 12 24.6**	**-1.9**
KSRS	**Korea Array**	**77.32**	**321**	P	**P**	**17 13 02.3**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=136,slow=6.4,SNR=5.6						
	comp=Z,1.9nm,0.7s						
PETK	**Petropavlovsk-**	**78.42**	**347**	P	**P**	**17 13 06.8**	**-0.8**
	comp=Z,6.9nm,0.9s,baz=166,slow=6.1,SNR=7.1						
	comp=Z,6.9nm,0.9s						
NJ2	**Nanjing**	**79.70**	**311**	*e*P	**P**	**17 13 15.4**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**79.89**	**328**	P	**P**	**17 13 14.3**	**-1.3**
	comp=Z,3.9nm,0.7s,baz=143,slow=2.9,SNR=4.6						
	comp=Z,3.9nm,0.7s						
BNX	**BinXian**	**83.27**	**326**	⇓P	**P**	**17 13 33.2**	**+0.4**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PFO	**Pinyon Flats O**	**83.51**	**49**	P	**P**	**17 13 35.7**	**+1.3**
	comp=Z,2.5nm,1.0s,baz=261,slow=6.9,SNR=4.1						
	comp=Z,2.5nm,1.0s						
YBH	**Yreka Blue Hor**	**84.23**	**40**	P	**P**	**17 13 38.7**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=215,slow=3.3,SNR=7.8						
TROLL	**Troll, Antarti**	**84.82**	**181**	⇑P	**P**	**17 13 40.7**	**+0.4**
	comp=Z,68nm,0.7s						
TROLL				⇑pP	**pP**	**17 15 40.8**	**+1.8**
	comp=Z,27nm,0.3s						
NVAR	**Mina Array Bea**	**84.98**	**44**	P	**P**	**17 13 42.4**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=238,slow=4.9,SNR=11						
	comp=Z,1.7nm,0.7s						
SNAA	**Sanae**	**85.18**	**179**	⇑P	**P**	**17 13 41.1**	**-0.9**
	comp=Z,19nm,0.6s						
SNAA				⇑pP	**pP**	**17 15 38.9**	**-2.0**
	comp=Z,68nm,1.0s						
SNAA	**Sanae**	**85.18**	**179**	P	**P**	**17 13 41.6**	**-0.4**
SNAA	**Sanae**	**85.18**	**179**	P	**P**	**17 13 42.0**	**0.0**
	comp=Z,0.6nm,0.5s,baz=195,slow=13,SNR=20						
	comp=Z,0.6nm,0.5s						
VNA3	**Neumayer Olymp**	**85.42**	**177**	⇑P	**P**	**17 13 43.3**	**+0.2**
	comp=Z,2.0nm,0.7s						
VNA3				⇑pP	**pwP**	**17 15 48.8**	**+3.0**
	comp=Z,2.9nm,0.8s						
VNA2	**Neumayer--Watz**	**85.83**	**178**	⇑P	**P**	**17 13 45.4**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=179,slow=4.8						
VNA1	**Neumayer--Stat**	**86.07**	**178**	⇑pP	pP	17 15 51.6	+6.2
	comp=Z,2.9nm,0.8s						
SLKM	**Skilak Lake**	**87.26**	**15**	P	**P**	**17 13 50.0**	**-1.7**
SLKM				IAmb	IAmb	17 13 53.1	
	comp=Z,20nm,1.1s						
XAN	**Xi'an**	**87.77**	**309**	*e*P	**P**	**17 13 56.9**	**+2.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
L19K	**White Mountain**	**87.80**	**12**		**P**	**17 13 52.4**	**-1.8**
L19K				IAmb	IAmb	17 13 55.6	
	comp=Z,11nm,1.0s						
U15A	**North Rim**	**87.90**	**49**	P	**P**	**17 13 55.4**	**-0.3**

ILAR	**Eielson Array**	**91.74**	**14**	P		**P**	17 14 12.1	**-0.3**
	comp=Z,0.6nm,0.7s,baz=219,slow=6.9,SNR=12							
	comp=Z,0.6nm,0.7s							
M29M	**Somme Creek**	**91.97**	**18**			**P**	17 14 13.6	**0.0**
E19K	**Redstone River**	**92.29**	**9**	IAmb		IAmb	17 14 16.0	
	comp=Z,7.0nm,0.8s							
M30M	**Minto, Yukon**	**92.56**	**19**			**P**	17 14 16.4	**+0.1**
M30M				IAmb		IAmb	17 14 17.9	
	comp=Z,4.9nm,0.9s							
PDAR	**Pinedale Array**	**92.92**	**44**	P		**P**	17 14 19.0	**+0.4**
	comp=Z,0.6nm,0.7s,baz=242,slow=5.1,SNR=7.5							
	comp=Z,0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**111.03**	**321**	PKiKP		**PKiKP**	17 19 33.0	**-1.5**
	comp=Z,0.3nm,0.3s,baz=80,slow=1.8,SNR=2.4							
MKAR	**Makanchi Array**	**111.19**	**313**	PKiKP		**PKiKP**	17 19 34.0	**-1.2**
	comp=Z,0.5nm,0.6s,baz=109,slow=0.5,SNR=5.1							
KURBB	**Kurchatov Arra**	**114.30**	**317**	PKiKP		PKPdf	17 19 40.2	-0.7
	comp=Z,0.9nm,0.7s,baz=93,slow=2.0,SNR=8.8							
BVAR	**Borovoye Array**	**119.51**	**319**	PKP		**PKPdf**	17 19 50.3	**-0.6**
	comp=Z,1.7nm,0.5s,baz=152,slow=1.1,SNR=5.1							
ARCES	**ARCESS Array B**	**131.22**	**348**	PKP		**PKPdf**	17 20 13.2	**+0.3**
	comp=Z,3.1nm,0.9s,baz=39,slow=1.8,SNR=5.2							
FINES	**FINESS Array B**	**137.70**	**341**	PKhKP		PKPpre	17 20 15.3	
	comp=Z,3.5nm,1.1s,baz=168,slow=29,SNR=3.4							
FINES				PKP		**PKPdf**	**17 20 26.1**	**+1.1**
	comp=Z,3.1nm,0.9s,baz=48,slow=5.5,SNR=6.8							
FINES				SKPbc		**SKPbc**	**17 23 06.2**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=25,slow=4.6,SNR=4.9							
NB2	**NORSAR Subarra**	**141.45**	**351**	PKP		PKPpre	17 20 26.6	
	comp=Z,1.4nm,0.6s,baz=14,slow=3.1							
NOA	**NORSAR Array B**	**141.45**	**351**	PKhKP		PKPpre	17 20 26.8	
	comp=Z,2.5nm,0.8s,baz=16,slow=3.2,SNR=9.4							
HFS	**Hagfors**	**141.89**	**348**	PKhKP		PKPpre	17 20 28.1	
	comp=Z,3.8nm,0.6s,baz=23,slow=4.7,SNR=13							
AK03	**Malin Array Si**	**144.08**	**327**	PKP		PKPbc	17 20 35.5	-0.8
AKASG	**Malin Array Be**	**144.08**	**327**	PKP		PKPbc	17 20 35.8	-0.5
	comp=Z,17nm,1.0s,baz=44,slow=4.4,SNR=14							
AK04	**Malin Array Si**	**144.11**	**327**	PKP		PKPbc	17 20 35.6	-0.8
AK09	**Malin Array Si**	**144.12**	**327**	PKP		PKPbc	17 20 35.4	-1.1
AK02	**Malin Array Si**	**144.13**	**327**	PKP		PKPbc	17 20 35.3	-1.2
AK22	**Malin Array Si**	**144.13**	**327**	PKP		PKPbc	17 20 35.3	-1.2
AK11	**Malin Array Si**	**144.13**	**327**	PKP		PKPbc	17 20 35.3	-1.2
SUW	**Suwalki**	**144.46**	**336**	*e*PKP		**PKPdf**	**17 20 37.5**	**+0.1**
MI28	**Mi28,Pidlybu**	**144.71**	**328**	PKP		**PKPdf**	**17 20 37.7**	**-0.2**
LUBAR	**Lubar, Ukraine**	**145.32**	**327**	PKP		**PKPdf**	**17 20 39.7**	**+0.7**
RNPP5	**Staryi Chortor**	**145.35**	**330**	PKP		**PKPdf**	**17 20 39.0**	**0.0**
BRTR	**Keskin Array B**	**146.60**	**307**			**PKPbc**	**17 20 43.4**	**-0.9**
BRTR	**Keskin Array B**	**146.60**	**307**	PKPbc		**PKPbc**	**17 20 44.2**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=120,slow=4.1,SNR=11							
MMAI	**Mount Meron Ar**	**146.73**	**295**	PKPbc		**PKPbc**	**17 20 45.6**	**+0.8**
	comp=Z,4.5nm,0.6s,baz=83,slow=4.8,SNR=7.6							
KMPD	**K-Podol'skiy**	**146.84**	**326**	PKP		**PKPdf**	**17 20 42.8**	**+1.3**
KMPD				PKP		**PKPdf**	**17 20 42.8**	**+1.3**
BEL	**Belsk**	**147.06**	**335**	*e*PKP		**PKPbc**	**17 20 45.2**	**+0.3**
EKA	**Eskdalemuir Ar**	**148.06**	**2**	PKPbc		**PKPbc**	**17 20 47.0**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=359,slow=2.4,SNR=7.7							
OJC	**Ojcow**	**148.72**	**334**	*e*PKP		**PKPbc**	**17 20 49.2**	**0.0**
STHS	**Stebnicka Huta**	**148.73**	**332**	*e*PKP		**PKPbc**	**17 20 49.4**	**+0.2**
BORA	**Eskisehir**	**148.85**	**309**			**PKPbc**	**17 20 49.7**	**-0.3**
NIE	**Niedzica**	**149.13**	**333**	*e*PKP		**PKiKP**	**17 20 51.0**	**-0.1**
KSP	**Ksiaz**	**149.51**	**338**	*e*PKP		**PKiKP**	**17 20 51.6**	**-0.2**
LANS	**Liptovska Anna**	**149.69**	**333**	*e*PKP		**PKiKP**	**17 20 53.0**	**+0.7**
MORC	**Moravsky Berou**	**149.95**	**336**	*e*PKP		**PKiKP**	**17 20 53.0**	**+0.2**
CLL	**Collm**	**150.13**	**342**			**PKPbc**	**17 20 52.5**	**0.0**
CLL	**Collm**	**150.13**	**342**	*i* PKPbc		**PKiKP**	**17 20 53.0**	**0.0**
	comp=Z,25nm,0.8s							
JAVC	**Velka Javorina**	**150.64**	**335**	*e*PKP		**PKiKP**	**17 20 55.7**	**+1.4**
VRAC	**Vranov**	**150.69**	**336**	*e*PKP		**PKiKP**	**17 20 54.4**	**+0.1**
KRUC	**Moravsky**	**150.97**	**336**	*e*PKP		**PKiKP**	**17 20 54.9**	**0.0**
MODS	**Modra-Piesok**	**151.19**	**334**	*e*PKP		**PKiKP**	**17 20 55.6**	**+0.2**
GERES	**GERESS Array B**	**152.09**	**339**	PKPbc		**PKPbc**	**17 20 56.7**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=25,slow=2.9,SNR=13							
GERES				PKPab		**PKPab**	**17 21 09.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=24,slow=5.1,SNR=3.6							
ESDC	**Sonseca Array**	**163.57**	**8**	PKPab		**PKPab**	**17 21 58.1**	**-1.3**
	comp=Z,1.6nm,1.0s,baz=349,slow=3.4,SNR=3.8							

*VIE **03** 17:05:12.6±1.3,44.°13N×16.°84E,h8km,mb2.7/7,ml2.3/10, Error ellipse: s-maj=13.9km s-min=12.5km az=90.0 74 km NNE of Split*
*BEO **03** 17:05:12.9±0.3,44.°01N×16.°57E,h0km,ML2.2/14*
*RHSSO **03** 17:05:14.3±0.8,44.°03N×16.°81E,h5km±3km,ML2.3/6*
ISC 03 17:05:10.6±1.1,43.°96N±0.°02×16.°57E±0.°02,h3km±9km, n53,σ1°11/95,2C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIJV	**Kijevo**	**0.13**	**292**	*i* Pg	**Pg**	**17 05 13.1**	**0.0**
KIJV				Sg	**Sg**	**17 05 15.3**	**+0.4**
RICI	**Ricice**	**0.62**	**138**	*e*Pg	**Pg**	**17 05 21.3**	**-1.1**
RICI				Sg	**Sg**	**17 05 30.8**	**+0.4**
MORI	**Morici**	**0.63**	**262**	*i* Pg	**Pg**	**17 05 22.4**	**-1.3**
MORI				Sg	**Sb**	**17 05 32.6**	**-0.9**
ZIRJ	**Zirje**	**0.73**	**246**	*e*Pg	**Pg**	**17 05 24.0**	**-0.7**
ZIRJ				Sg	**Sg**	**17 05 35.3**	**+1.1**
MAKA	**Makarska**	**0.74**	**154**	*e*Pg	**Pg**	**17 05 24.0**	**-0.8**
MAKA				Sg	**Sg**	**17 05 34.9**	**+0.3**
HVAR	**Hvar**	**0.78**	**186**	*e*Pg	**Pg**	**17 05 24.3**	**-1.4**
HVAR				Sg	**Sg**	**17 05 36.2**	**+0.4**
UDBI	**Udbina**	**0.81**	**315**	Sg	**Sb**	**17 05 38.2**	**-0.6**
BLY	**Banja Luka**	**0.91**	**29**	↑*i* Pg	**Pg**	**17 05 28.2**	**+0.2**
BLY				*e*Sg	**Sg**	**17 05 39.3**	**-0.5**
BLY	**Banja Luka**	**0.91**	**29**	*e*Pg	**Pg**	**17 05 28.1**	**+0.1**
BLY				*e*Sg	**Sb**	**17 05 40.7**	**-0.8**
SLATY	**Slatina**	**1.02**	**31**	*e*Pg	**Pg**	**17 05 29.3**	**-0.8**
SLATY				*e*Sg	**Sg**	**17 05 42.4**	**-0.9**
DUGI	**Dugi Otok**	**1.09**	**272**	*i* Pg	**Pb**	**17 05 30.8**	**-1.4**
DUGI				Sg	**Sn**	**17 05 47.6**	**-0.8**
VIRC	**Vir**	**1.14**	**288**	*i* Pg	**Pb**	**17 05 31.8**	**-1.2**
VIRC				Sg	**Sn**	**17 05 49.9**	**+0.2**
PLIT	**Plitvice**	**1.15**	**324**	*i* Pg	**Pb**	**17 05 32.9**	**-0.2**
PLIT				Sg	**Sn**	**17 05 49.5**	**-0.4**
LSTV	**Lastovo**	**1.21**	**169**	*e*Pg	**Pn**	**17 05 33.0**	**-1.4**
LSTV				Sg	**Sg**	**17 05 50.2**	**+0.7**
STON	**Ston**	**1.36**	**142**	*i* Pg	**Pn**	**17 05 35.2**	**-1.3**
STON				Sg	**Sb**	**17 05 53.9**	**-0.6**
STON	**Ston**	**1.36**	**142**	*e*Pg	**Pg**	**17 05 37.8**	**+1.1**
STON				*e*Sg	**Sg**	**17 05 56.6**	**+2.3**
NVLJ	**Novalja**	**1.36**	**297**	*e*Pg	**Pn**	**17 05 35.9**	**-0.6**
NVLJ				Sn	**Sg**	**17 05 56.9**	**+2.4**
RABC	**Rab**	**1.51**	**302**	*e*Pn	**Pb**	**17 05 39.2**	**-0.1**
RABC				Sn	**Sg**	**17 06 01.7**	**+2.6**
KLINJ	**Klinje**	**1.66**	**118**	*e*Pn	**Pg**	**17 05 43.1**	**+0.6**
KLINJ				*e*Sn	**Sb**	**17 06 03.0**	**-0.3**
MOSL	**Moslavina**	**1.66**	**4**	*i* Pn	**Pn**	**17 05 40.8**	**+0.1**
MOSL				Sn	**Sg**	**17 06 04.8**	**+0.8**
TREB	**Trebinje**	**1.79**	**133**	↑*i* Pn	**Pb**	**17 05 44.3**	**+0.2**
TREB				*e*Sn	**Sb**	**17 06 07.5**	**+0.5**
TREB	**Trebinje**	**1.79**	**133**	*e*Pn	**Pb**	**17 05 44.5**	**+0.4**
TREB				*e*Sn	**Sg**	**17 06 09.1**	**+0.8**
OZLJ	**Ozalj**	**1.84**	**335**	*e*Pn	**Pb**	**17 05 44.7**	**-0.1**
OZLJ				Sn	**Sg**	**17 06 09.6**	**0.0**
RIY	**Rijeka**	**2.02**	**313**	*e*Pn	**Pb**	**17 05 47.6**	**-0.4**
RIY				*e*Sn	**Sb**	**17 06 14.0**	**+0.4**
BBLS	**Lazi&#263i**	**2.05**	**92**	*e*Pn	**Pb**	**17 05 48.4**	**-0.2**
BBLS				*e*Sn	**Sb**	**17 06 15.1**	**+0.6**
RUDO	**Rudo**	**2.06**	**98**	*e*Pn	**Pn**	**17 05 46.3**	**+0.2**
RUDO				*e*Sn	**Sn**	**17 06 11.5**	**-0.8**
RUDO	**Rudo**	**2.06**	**98**	*e*Pn	**Pb**	**17 05 47.2**	**-1.4**
RUDO				*e*Sn	**Sb**	**17 06 15.1**	**+0.5**
KALN	**Kalnik**	**2.18**	**358**	*e*Pn	**Pn**	**17 05 47.7**	**-0.1**
KALN				Sn	**Sb**	**17 06 16.4**	**-1.6**
TEKS	**Tekeris**	**2.21**	**73**	*e*Pn	**Pn**	**17 05 49.3**	**+1.1**
TEKS				*e*Sn	**Sb**	**17 06 18.2**	**-0.7**
BRJN	**Brijuni**	**2.23**	**296**	*i* Pn	**Pb**	**17 05 50.1**	**-1.4**
BRJN				Sn	**Sb**	**17 06 19.5**	**-0.1**
KOME	**Kolasin**	**2.41**	**116**	*e*Pn	**Pb**	**17 05 54.3**	**-0.5**
KOME				*e*Sn	**Sb**	**17 06 25.5**	**+0.5**
DIVS	**Divibare**	**2.47**	**86**	*e*Pn	**Pb**	**17 05 55.4**	**-0.3**
DIVS				*e*Sn	**Sb**	**17 06 25.8**	**-0.8**
PDG	**Podgorica**	**2.49**	**127**	*e*Pn	**Pb**	**17 05 56.2**	**+0.3**
PDG				*e*Sn	**Sb**	**17 06 27.5**	**+0.6**
BEHE	**Becsehely**	**2.52**	**3**	*e*Pn	**Pb**	**17 05 55.1**	**-1.4**
BEHE				*e*Sn	**Sn**	**17 06 25.1**	**+1.4**
SJES	**Sjenica**	**2.57**	**105**	*e*Pn	**Pb**	**17 05 56.7**	**-0.7**
SJES				*e*Sn	**Sb**	**17 06 28.7**	**-0.7**
DRME	**Dracevica, Mon**	**2.61**	**132**	*e*Pn	**Pb**	**17 05 57.6**	**-0.4**
DRME				*e*Sn	**Sb**	**17 06 29.8**	**-0.6**
FRGS	**Fruska Gora**	**2.61**	**61**	*e*Pn	**Pn**	**17 05 55.3**	**+1.6**
FRGS				*e*Sn	**Sb**	**17 06 29.2**	**-1.3**
IVAS	**Ivanjica**	**2.62**	**97**	*e*Pn	**Pb**	**17 05 56.1**	**-2.2**
IVAS				*e*Sn	**Sb**	**17 06 28.9**	**-2.0**
BEY	**Berane**	**2.65**	**113**	*e*Pn	**Pb**	**17 05 58.5**	**-0.3**
BEY				*e*Sn	**Sb**	**17 06 30.2**	**-1.6**
MORH	**Mrgy, Hungar**	**2.69**	**32**	*e*Pn	**Pn**	**17 05 56.6**	**+1.8**
MORH				*e*Sn	**Sn**	**17 06 27.5**	**-0.5**
TRUS	**Trudelj**	**2.78**	**83**	*e*Pn	**Pb**	**17 05 58.2**	**-2.7**
TRUS				*e*Sn	**Sb**	**17 06 33.3**	**-2.0**
OBKA	**Obir**	**2.92**	**331**	Pn	**Pn**	**17 05 58.1**	**-0.1**
	0.7nm,0.2s						
SOKA	**Soboth**	**2.93**	**339**	Pn	**Pn**	**17 05 58.6**	**+0.5**
	0.6nm,0.3s						
ARSA	**Arberg**	**3.38**	**348**	*e*Pn	**Pn**	**17 06 04.1**	**-0.1**
	0.8nm,0.2s						
SELS	**Selova**	**3.39**	**101**	*e*Pn	**Pn**	**17 06 04.8**	**+0.4**
SELS				*e*Sn	**Sn**	**17 06 47.3**	**+2.2**
RONA	**Rosalia, Austr**	**3.75**	**357**	*e*Pn	**Pn**	**17 06 09.5**	**+0.1**
	1.6nm,0.2s						
CONA	**Conrad Observa**	**4.00**	**353**	*e*Pn	**Pn**	**17 06 12.3**	**-0.6**
	0.6nm,0.4s						
MOA	**Molln**	**4.21**	**338**	*i* Pn	**Pn**	**17 06 15.7**	**-0.1**
	0.3nm,0.2s						
MOA				*e*Sn	**Sn**	**17 07 05.1**	**-0.3**
	0.8nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.26**	**332**	*e*Sn	**Sn**	**17 07 08.2**	**+1.5**
	1.5nm,0.3s						
LESA	**Schwarzleotal**	**4.41**	**323**	*e*Pn	**Pn**	**17 06 20.6**	**+2.1**
	0.7nm,0.2s						
ZAPS	**Zavoj**	**4.46**	**97**	*e*Pn	**Pn**	**17 06 21.4**	**+2.3**
WTTA	**Wattenberg**	**4.79**	**315**	*e*Pn	**Pn**	**17 06 24.9**	**+1.1**
	0.4nm,0.2s						
WATA	**Walderalm**	**4.87**	**316**	*e*Pn	**Pn**	**17 06 27.3**	**+2.4**
	0.5nm,0.2s						

*IDC **03** 17:26:56.9±2.6,55.°53S×25.°45W,h0km,mb4.0/3, mbtmp3.8/4,ML3.5/1,MS3.5/3,Error ellipse: s-maj=118.7km s-min=25.3km az=64.0*
ISC 03 17:26:58.5±2.3,55.°6S±0.°4×25.°6W±0.°6,h10km,n12, σ1°66/10,mb4.0/3,MS3.2/3,5C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.90**	**160**	↑P	**Pn**	**17 30 54.7**	**0.0**
	comp=Z,0.6nm,0.2s						
VNA3	**Neumayer Olymp**	**17.14**	**162**	↑P	**P**	**17 30 57.8**	**-1.6**
	comp=Z,0.8nm,0.2s						
VNA2	**Neumayer--Watz**	**17.29**	**160**	↑P	**Pn**	**17 30 57.7**	**-1.9**
	comp=Z,0.6nm,0.2s,baz=322,slow=14						
SNAA	**Sanae**	**18.81**	**158**	↑P	**Pn**	**17 31 21.3**	**+2.9**
	comp=Z,14nm,0.3s						
SNAA	**Sanae**	**18.81**	**158**	P	**P**	**17 31 16.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=323,slow=13,SNR=14						
	comp=Z,0.6nm,0.5s						
TROLL	**Troll, Antarti**	**20.27**	**155**	↑P	**P**	**17 31 33.2**	**-0.6**
	comp=Z,95nm,0.7s						
PMSA	**Palmer Station**	**20.88**	**228**	LR	LR	17 38 20.5	
	comp=Z,101nm,18.4s,baz=99,slow=33						
QSPA	**South Pole Qui**	**34.66**	**180**	P	**P**	**17 33 49.3**	**+1.5**
	comp=Z,2.5nm,0.6s,baz=199,slow=3.7,SNR=56						
	comp=Z,2.5nm,0.6s						
BOSA	**Boshof**	**44.98**	**75**	LR	LR	17 51 07.0	
	comp=Z,112nm,18.6s,baz=204,slow=32						
VNDA	**Vanda**	**47.07**	**182**	P	**P**	**17 35 29.2**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=187,slow=7.4,SNR=5.1						
	comp=Z,0.7nm,0.6s						
LPAZ	**La Paz**	**50.87**	**303**	P	**P**	**17 35 59.8**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=166,slow=8.3,SNR=5.9						
LPAZ				LR	LR	18 01 08.3	
	comp=Z,22nm,18.0s,baz=72,slow=40						
	comp=Z,1.1nm,0.5s						
ILAR	**Eielson Array**	**150.48**	**152**	PKPbc	**PKPbc**	**17 46 49.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=105,slow=2.1,SNR=6.5						

*IDC **03** 17:50:52.4±1.1,54.°97N×164.°36E,h0km,mb3.6/6, mbtmp3.6/8,ML4.2/1,MS2.5/4,Error ellipse: s-maj=36.4km s-min=19.9km az=161.0*
*KRSC **03** 17:50:55.7±1.8,54.°83N×164.°21E,h50km±22km,Ml3.9*
ISC 03 17:50:56.3±1.0,54.°87N±0.°05×164.°39E±0.°08,h27km,n39, σ1°13/39,mb3.7/6,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.58**	**259**	*e*P	**Pn**	**17 51 21.8**	**-0.6**
MKZ				*e*S	**Sn**	**17 51 40.5**	**-1.4**
KBTR	**Krutoberegovo**	**1.61**	**327**	*e*P	**Pn**	**17 51 21.7**	**-1.2**
KBTR				*e*S	**Sn**	**17 51 40.6**	**-2.1**
TUMD	**Tumrok D**	**2.32**	**280**	*e*P	**Pn**	**17 51 32.8**	**0.0**
BZGR	**Bezymyannyi-Gr**	**2.36**	**298**	*e*P	**Pn**	**17 51 34.2**	**+0.8**
SMKR	**Semkarok**	**2.38**	**317**	*e*P	**Pn**	**17 51 33.9**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.48**	**298**	*e*P	**Pn**	**17 51 36.7**	**+1.8**
KMNR	**Kamenistaya**	**2.54**	**292**	*e*S	**Sn**	**17 52 06.0**	**+0.3**
KIRR	**Kirishev**	**2.55**	**297**	*e*P	**Pn**	**17 51 37.5**	**+1.6**
SRKR	**Sorokina**	**2.55**	**316**	*e*P	**Pn**	**17 51 36.9**	**+1.0**
SRKR				*e*S	**Sn**	**17 52 06.6**	**+0.6**
KLY	**Klyuchi**	**2.57**	**306**	*e*P	**Pn**	**17 51 35.4**	**-0.6**
KOZ	**Kozyrevsk**	**2.83**	**297**	*e*P	**Pn**	**17 51 41.8**	**+2.0**
SRDR	**Sredinnyy**	**3.02**	**301**	*e*P	**Pn**	**17 51 45.2**	**+2.8**
ESO	**Esso**	**3.41**	**290**	*e*P	**Pn**	**17 51 48.0**	**+0.3**
SDLR	**Sedlovina**	**3.62**	**246**	*e*P	**Pn**	**17 51 51.2**	**+0.6**
SMAR	**Somma**	**3.67**	**246**	*e*P	**Pn**	**17 51 51.7**	**+0.3**
KRER	**Koryakskii**	**3.68**	**247**	*e*P	**Pn**	**17 51 52.4**	**+0.9**
UGLR	**Uglovaya**	**3.68**	**245**	*e*P	**Pn**	**17 51 52.4**	**+0.9**
AVH	**Avacha**	**3.70**	**246**	*e*P	**Pn**	**17 51 52.5**	**+0.8**
KRX	**Arik**	**3.71**	**248**	*e*P	**Pn**	**17 51 52.2**	**+0.4**
KOK	**Koryaka**	**3.74**	**247**	*e*P	**Pn**	**17 51 52.8**	**+0.5**
DALK	**Dalny**	**3.81**	**243**	*e*S	**Sn**	**17 52 35.5**	**-1.5**
PET	**Petropavlovsk**	**3.87**	**244**	*e*P	**Pn**	**17 51 54.5**	**+0.6**
PET				*e*S	**Sn**	**17 52 36.8**	**-1.5**
KRMR	**Karymshinskiy**	**4.24**	**244**	*e*P	**Pn**	**17 51 60.0**	**+1.0**
KRMR				*e*S	**Sn**	**17 52 46.5**	**-1.0**
PETK	**Petropavlovsk-**	**4.33**	**249**	Pn	**Pn**	**17 52 00.1**	**-0.1**
	1.8nm,0.4s,baz=69,slow=16,SNR=20						
PETK				Sn	**Sn**	**17 52 49.7**	**-0.1**
	1.6nm,0.3s,baz=70,slow=39,SNR=8.2						
PETK				LR	LR	17 53 13.0	
	comp=Z,16nm,20.5s,baz=346,slow=32						
MTVR	**Mutnovka**	**4.40**	**240**	*e*P	**Pn**	**17 52 01.5**	**+0.2**
ASAK	**Asacha**	**4.60**	**240**	*e*P	**Pn**	**17 52 05.4**	**+1.3**
SHEM	**Shemya Is, Ala**	**6.14**	**107**	LR	LR	17 54 28.1	
	comp=Z,46nm,21.9s,baz=285,slow=35						
ASAJ	**Asahikawa**	**17.71**	**242**	LR	LR	18 01 43.1	
	comp=Z,16nm,21.6s,baz=146,slow=37						
YAK	**Yakutsk**	**19.32**	**306**	P	**P**	**17 55 18.4**	**-0.6**
	0.5nm,0.3s,baz=90,slow=6.1,SNR=2.0						
	2.0nm,0.4s						
ILAR	**Eielson Array**	**25.75**	**48**	P	**P**	**17 56 23.4**	**-0.7**
	0.7nm,0.8s,baz=270,slow=9.2,SNR=7.1						
	0.7nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**35.13**	**176**	T	T	18 36 20.1	
	baz=359,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**35.15**	**176**	T	T	18 36 21.1	
	baz=359,slow=76,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	**35.15**	**176**	T	T	18 36 21.5	
	baz=359,slow=76,SNR=8.1						
YKA	**Yellowknife Ar**	**40.12**	**45**	LR	LR	18 16 44.7	
	comp=Z,23nm,18.1s,baz=272,slow=39						
KURBB	**Kurchatov Arra**	**49.03**	**303**	P	**P**	**17 59 40.4**	**+0.1**
	0.7nm,0.7s,baz=57,slow=7.4,SNR=4.2						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**49.65**	**297**	P	**P**	**17 59 43.6**	**-1.5**
	0.4nm,0.7s,baz=64,slow=6.6,SNR=1.7						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.01**	**261**	P	**P**	**18 01 08.2**	**+1.0**
	0.4nm,0.7s,baz=40,slow=5.7,SNR=2.9						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**67.62**	**71**	P	**P**	**18 01 51.1**	**+0.5**
	0.4nm,0.6s,baz=318,slow=6.6,SNR=5.1						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**82.48**	**208**	P	**P**	**18 03 16.7**	**+0.7**
	0.6nm,0.7s,baz=16,slow=4.0,SNR=8.2						
	0.6nm,0.7s						

IDC 03 18:07:19.2±5.4,16.°22S×176.°53W,h0km,mb4.0/3, mbtmp4.0/3,Error ellipse: s-maj=169.6km s-min=105.1km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.02**	**240**	P	P	18 15 05.0	+0.6
	2.2nm,0.6s,baz=87,slow=8.2,SNR=5.2						
	2.2nm,0.6s						
WRA	**Warramunga Arr**	**46.73**	**258**	P	P	18 15 49.9	-0.6
	0.3nm,0.5s,baz=95,slow=7.8,SNR=7.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**47.00**	**253**	P	P	18 15 52.4	-0.2
	3.8nm,0.7s,baz=91,slow=7.7,SNR=59						
ASAR				PcP	PcP	18 17 24.6	-0.5
	0.2nm,0.7s,baz=99,slow=3.6,SNR=1.4						
	3.8nm,0.7s						

*IDC **03** 18:29:16.4±2.3,17.°63S×69.°62W,h94km±20km,mb4.0/10, mbtmp4.4/12,MS3.7/1,Error ellipse: s-maj=19.9km s-min=12.9km az=39.0*
*NEIC **03** 18:29:18.9±2.4,17.°76S±0.°06×69.°85W±0.°07,h129km±5km, mb4.5/27,ML4.2(GUC),Error ellipse: s-maj=10.3km s-min=7.6km az=131.0*
*GUC **03** 18:29:20.2±0.9,17.°81S×69.°78W,h118km±5km,ML4.2*
*VAO **03** 18:29:21.0±1.1,17.°70S×69.°47W,h132km±6km,mb4.6*
ISC 03 18:29:18.4±0.6,17.°70S±0.°04×69.°68W±0.°05,h123km±5km, n122,σ1°55/132,mb4.3/20,2C-10D,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**0.22**	**61**		**Pn**	**18 29 38.1**	**+2.0**
PB18	**Visviri**	**0.22**	**61**	‖*e*P	**Pn**	**18 29 38.7**	**+2.5**
PB18				*e*S	**Sn**	**18 29 52.4**	**+2.9**
PB16	**IPOC Station P**	**0.66**	**166**		**Pn**	**18 29 39.1**	**+0.7**
PB16				Sn	**Sn**	**18 29 55.9**	**+2.3**
PB16	**IPOC Station P**	**0.66**	**166**	‖*e*P	**Pn**	**18 29 40.1**	**+1.7**
PB16				*e*S	**Sn**	**18 29 55.7**	**+2.1**
AP01	**Chacalluta**	**0.92**	**223**		**Pn**	**18 29 40.1**	**+0.2**
AP01	**Chacalluta**	**0.92**	**223**	‖*e*P	**Pn**	**18 29 40.6**	**+0.6**
AP01				*e*S	**Sn**	**18 29 56.3**	**0.0**
PB12	**IPOC Station P**	**1.10**	**214**		**Pn**	**18 29 41.5**	**-0.3**
PB12	**IPOC Station P**	**1.10**	**214**	‖*e*P	**Pn**	**18 29 42.1**	**+0.3**
PB12				*e*S	**Sn**	**18 29 58.9**	**-0.7**
PB12				IAML		18 29 59.9	
	comp=N,5μm,0.2s						
PX02	**IPOC Station P**	**1.35**	**201**	*e*P	**Pn**	**18 29 43.9**	**-0.6**
GO01	**Chusmiza**	**2.02**	**167**		**Pn**	**18 29 54.4**	**+1.7**
GO01	**Chusmiza**	**2.02**	**167**	*e*P	**Pn**	**18 29 54.5**	**+1.8**
GO01				*e*S	**Sn**	**18 30 20.8**	**+1.9**
GO01				IAML		18 30 26.0	
	comp=N,2μm,0.3s						

comp=Z,12nm,1.1s
CMC01 Camacan, BA 28.99 90 *e*P **P 18 35 07.0 +0.3**
PIRO Carate, Puerto 29.23 331 P **P 18 35 07.8 -1.0**
TXAR Lajitas Array 57.12 324 P **P 18 38 53.6 +1.3**
TXAR Lajitas Array 57.12 324 P **P 18 38 52.8 +0.5**
comp=Z,0.6nm,0.6s,baz=152,slow=8.5,SNR=8.3
comp=Z,0.6nm,0.6s
LCAR Lake Charles 57.21 339 P **P 18 38 52.6 0.0**
LCAR IAmb IAmb 18 38 54.0
comp=Z,4.8nm,0.6s
PLPT Palo Pinto 57.21 331 P **P 18 38 53.0 +0.3**
PLPT IAmb IAmb 18 39 03.8
comp=Z,4.9nm,0.7s
FCAR Ozark Folk Cen 57.38 338 P **P 18 38 52.3 -1.5**
FCAR IAmb IAmb 18 38 55.2
comp=Z,6.6nm,1.0s
PBMO Poplar Bluff 57.61 340 P **P 18 38 54.5 -1.0**
S44A Carbondale 58.09 342 P **P 18 38 58.4 -0.4**
SIUC Southern Illin 58.10 342 P **P 18 38 59.2 +0.4**
HHAR Hobbs 58.38 337 P **P 18 39 01.3 +0.4**
HHAR IAmb IAmb 18 39 04.6
comp=Z,3.4nm,0.9s
MGMO Mountain Grove 58.57 339 P **P 18 39 02.6 +0.5**
FVM French Village 58.72 341 P **P 18 39 04.2 +1.1**
VNA3 Neumayer Olymp 63.90 162 ⇓P **P 18 39 39.2 +1.6**
comp=Z,1.8nm,0.8s
VNA2 Neumayer--Watz 64.47 161 ⇓P **P 18 39 43.1 +1.7**
comp=Z,0.9nm,0.4s,baz=290,slow=2.1
ECSD EROS Data Cent 65.92 339 P **P 18 39 50.5 -0.6**
ECSD IAmb IAmb 18 39 54.1
comp=Z,3.6nm,0.8s
SNAA Sanae 66.10 161 ⇓P **P 18 39 53.5 +1.5**
comp=Z,32nm,0.7s
SNAA Sanae 66.10 161 P **P 18 39 53.0 +1.0**
SNAA Sanae 66.10 161 P **P 18 39 53.1 +1.2**
comp=Z,1.1nm,0.6s,baz=287,slow=7.5,SNR=16
comp=Z,1.1nm,0.6s
TROLL Troll, Antarti 67.81 161 ⇓P **P 18 40 04.7 +1.8**
comp=Z,109nm,0.7s
DBIC Dimbokro 68.41 75 P **P 18 40 07.9 +0.6**
DBIC IAmb IAmb 18 40 08.8
comp=Z,8.2nm,0.6s
DBIC Dimbokro 68.41 75 P **P 18 40 08.0 +0.6**
comp=Z,7.5nm,0.6s,baz=271,slow=7.1,SNR=14
comp=Z,7.5nm,0.6s
PDAR Pinedale Array 70.47 330 P **P 18 40 20.6 +0.9**
comp=Z,0.5nm,0.8s,baz=101,slow=7.7,SNR=3.9
comp=Z,0.5nm,0.8s
ULM Lac du Bonnet 71.49 343 P **P 18 40 25.4 0.0**
ULM IAmb IAmb 18 40 26.9
comp=Z,7.3nm,0.5s
ULM Lac du Bonnet 71.49 343 P **P 18 40 25.9 +0.5**
comp=Z,6.1nm,0.4s,baz=154,slow=6.0,SNR=5.4
comp=Z,6.1nm,0.4s
NVAR Mina Array Bea 72.07 322 P **P 18 40 32.0 +2.6**
comp=Z,0.7nm,0.8s,baz=164,slow=7.7,SNR=4.2
comp=Z,0.7nm,0.8s
QSPA South Pole Qui 72.48 180 P **P 18 40 35.1 +3.7**
QSPA IAmb IAmb 18 40 36.8
comp=Z,2.7nm,0.6s
QSPA South Pole Qui 72.48 180 P P 18 40 36.2 +4.8
comp=Z,2.6nm,0.6s,baz=149,slow=0.4,SNR=35
YKA Yellowknife Ar 87.37 341 P **P 18 41 52.9 +1.7**
comp=Z,3.3nm,0.7s,baz=159,slow=8.2,SNR=8.9
comp=Z,3.3nm,0.7s
MAW Mawson 88.17 164 P **P 18 41 57.1 +2.1**
comp=Z,2.4nm,0.5s,baz=219,slow=6.1,SNR=12
comp=Z,2.4nm,0.5s
GERES GERESS Array B 98.87 42 LR LR 19 26 35.5
comp=Z,34nm,18.6s,baz=3.0,slow=35
WRA Warramunga Arr 135.79 213 PKP **PKiKP 18 48 26.8 -0.1**
comp=Z,1.1nm,0.4s,baz=144,slow=1.4,SNR=6.1
KURBB Kurchatov Arra 138.50 30 PKP **PKiKP 18 48 31.4 -0.1**
comp=Z,0.4nm,0.6s,baz=301,slow=2.7,SNR=5.1
ZALV Zalesovo Beam 138.79 23 PKP **PKiKP 18 48 31.1 -0.8**
comp=Z,1.0nm,0.5s,baz=329,slow=0.9,SNR=6.2
HILR Hailar Array B 147.32 349 PKPbc **PKiKP 18 48 49.1 -0.6**
comp=Z,3.9nm,0.5s,baz=46,slow=4.3,SNR=6.0
MJAR Matsushiro Arr 149.05 313 PKPbc **PKiKP 18 48 54.0 +0.3**
comp=Z,1.6nm,0.5s,baz=100,slow=1.3,SNR=12
SONM Songino Array 149.77 5 PKPbc **PKiKP 18 48 54.3 -0.7**
comp=Z,1.8nm,0.5s,baz=298,slow=3.2,SNR=4.7

IDC ***03*** *18:32:30.9±0.9,26.04N×128.43E,h0km,mb4.0/16, mbtmp4.0/18,ML3.5/2,MS3.2/18,Error ellipse: s-maj=31.4km s-min=13.4km az=82.0*
NEIC ***03*** *18:32:33.7±1.6,26.08N±0.07×128.67E±0.05,h21km±6km, mb4.3/9,Error ellipse: s-maj=9.5km s-min=6.9km az=184.0*
NIED ***03*** *18:32:34.9,26.06N×128.50E,h45km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.57; Mθθ-0.68; Mφφ-0.89; Mrθ0.45; Mθφ-1.29; Mrφ0.24; Fault plane solution: M₀1.90000×10¹⁵ NP1: φs214.00000°,δ38.00000°,λ77.00000°. NP2:φs50.00000°, δ53.00000°,λ100.00000°.*
JMA ***03*** *18:32:34.9±0.3,26°N.1°×12°8E±°,h45km±3km,MV3.6/24, NEAR OKINAWAJIMA ISLAND*
ISC 03 18:32:32.6±0.6,25.95N±0.05×128.60E±0.04,h20km±3km, n83,σ1§46/86,mb4.2/21,MS3.3/15,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.76**	**285**	P		**Pn**	**18 32 47.9**	**-0.3**
JJT3				eS		**Sb**	**18 32 57.1**	**0.0**
JNTH	**Nagotoyohara**	**0.77**	**318**	*i* P		**Pb**	**18 32 47.2**	**-0.1**
JNTH				eS		**Sb**	**18 32 56.8**	**-0.6**
JOW	**Kunigami**	**0.93**	**342**			**Pb**	**18 32 49.9**	**-0.2**
JOW	**Kunigami**	**0.93**	**342**	Pn		**Pb**	**18 32 50.1**	**0.0**
	414nm,0.3s,baz=149,slow=18,SNR=910							
JOW				Sn		**Sb**	**18 33 01.4**	**-0.5**
	720nm,0.3s,baz=130,slow=24,SNR=11							
JOW	**Kunigami**	**0.93**	**342**	P		**Pb**	**18 32 49.9**	**-0.2**
JOW	**Kunigami**	**0.93**	**342**	P		**Pb**	**18 32 50.0**	**0.0**
JYRO	**Yoronjima**	**1.08**	**353**	*i* P		**Pb**	**18 32 52.3**	**-0.4**
JIH	**Iheya**	**1.22**	**333**	*i* P		**Pn**	**18 32 54.5**	**-0.1**
JAGN	**Aguni-jima**	**1.37**	**298**	*i* P		**Pn**	**18 32 56.7**	**0.0**
JOKE	**Okinoerabujima**	**1.41**	**359**	P		**Pn**	**18 32 57.2**	**0.0**
JOKE				eS		**Sn**	**18 33 14.0**	**-1.2**
JKE	**Kume jima 2**	**1.67**	**283**	*i* P		**Pn**	**18 33 00.3**	**-0.5**
JKE				eS		**Sn**	**18 33 19.2**	**-2.5**
JTK	**Tokunoshima**	**1.86**	**10**	P		**Pn**	**18 33 03.5**	**+0.1**
JTK				eS		**Sn**	**18 33 24.9**	**-1.4**
JAMN	**Amaminishikomi**	**2.34**	**13**	P		**Pn**	**18 33 10.1**	**0.0**
JMZ	**Minamidaito 2**	**2.37**	**93**			**Pn**	**18 33 10.3**	**-0.1**
JMZ				Sn		**Sn**	**18 33 37.5**	**-1.5**
JMZ	**Minamidaito 2**	**2.37**	**93**	P		**Pn**	**18 33 10.6**	**+0.2**
JMZ	**Minamidaito 2**	**2.37**	**93**	*i* P		**Pn**	**18 33 10.4**	**0.0**
JMZ				eS		**Sn**	**18 33 36.0**	**-3.0**
JKDJ	**Kitadaitoujima**	**2.43**	**89**	*i* P		**Pn**	**18 33 11.4**	**+0.1**
JKDJ				eS		**Sn**	**18 33 38.9**	**-1.6**
JAM	**Amami Oshima**	**2.61**	**20**	*e*P		**Pn**	**18 33 13.6**	**-0.1**
JAM				eS		**Sn**	**18 33 43.4**	**-1.5**
JZK	**Kikaishima**	**2.66**	**27**	P		**Pn**	**18 33 15.8**	**+1.5**
JZK				S		**Sn**	**18 33 46.6**	**+0.6**
JMJ	**Miyako jima 2**	**3.19**	**250**	P		**Pn**	**18 33 21.8**	**0.0**
JTAJ	**Takarajima**	**3.24**	**9**	*e*P		**Pn**	**18 33 22.4**	**+0.1**
JTAJ				eS		**Sn**	**18 33 57.3**	**-3.0**
JYAK	**Yakushimahirau**	**4.59**	**21**	*e*P		**Pn**	**18 33 40.8**	**-0.2**
JYAK				S		**Sn**	**18 34 30.4**	**-3.4**
JKC	**Kuchinoerabu**	**4.71**	**17**	*e*P		**Pn**	**18 33 43.0**	**+0.3**
JKC				eS		**Sn**	**18 34 33.7**	**-3.0**
JMTN	**Minamitane**	**4.88**	**24**	*e*P		**Pn**	**18 33 45.2**	**+0.3**
JMTN				eS		**Sn**	**18 34 38.1**	**-2.7**
JTN	**Tanegashima 3**	**5.14**	**24**	P		**Pn**	**18 33 48.9**	**+0.4**
JTN				eS		**Sn**	**18 34 43.9**	**-3.3**
YOJ	**Yonaguni jima**	**5.27**	**255**	Pn		**Pn**	**18 33 48.8**	**-1.6**
NACB	**Ninganchiao**	**6.59**	**256**	Pn		**Pn**	**18 34 06.4**	**-2.0**
NACB	**Ninganchiao**	**6.59**	**256**	P		**Pn**	**18 34 06.5**	**-2.0**
YHNB	**Yeheng**	**6.66**	**261**	P		**Pn**	**18 34 09.8**	**+0.3**
YULB	**Yu-li**	**7.11**	**251**	Pn		**Pn**	**18 34 11.1**	**-4.5**
YULB	**Yu-li**	**7.11**	**251**	P		**Pn**	**18 34 12.4**	**-3.2**
SSLB	**Suanglung**	**7.27**	**254**	Pn		**Pn**	**18 34 15.1**	**-2.7**
SSLB	**Suanglung**	**7.27**	**254**	P		**Pn**	**18 34 15.5**	**-2.3**
JNU	**Nakatsue**	**7.42**	**15**	Pn		**Pn**	**18 34 20.2**	**+0.4**
JNU	**Nakatsue**	**7.42**	**15**	Pn		**Pn**	**18 34 21.4**	**+1.5**
	1.2nm,0.3s,baz=206,slow=10,SNR=23 7.2nm,0.5s							
JNU	**Nakatsue**	**7.42**	**15**	P		**Pn**	**18 34 21.3**	**+1.5**
TPUB	**Ta-pu**	**7.71**	**252**	Pn		**Pn**	**18 34 22.4**	**-1.5**
TPUB	**Ta-pu**	**7.71**	**252**	P		**Pn**	**18 34 22.9**	**-1.0**
JMN	**Monobe**	**9.01**	**29**	P		**Pn**	**18 34 42.8**	**+1.2**
KSRS	**Korea Array**	**11.48**	**357**	Pn		**Pn**	**18 35 16.4**	**+0.9**
	0.1nm,0.3s,baz=176,slow=14,SNR=1.9 0.6nm,0.6s							
JCJ	**Chichijima**	**12.22**	**82**	LR		LR	18 39 22.5	
	comp=Z,41nm,20.7s,baz=136,slow=33							
MJAR	**Matsushiro Arr**	**13.37**	**36**	LR		LR	18 39 49.7	
	comp=Z,20nm,20.0s,baz=200,slow=33							
GUMO	**Guam**	**19.61**	**126**	LR		LR	18 44 41.5	
	comp=Z,13nm,18.1s,baz=306,slow=37							
LZDM	**Lanzhou Array**	**23.51**	**301**	P		**P**	**18 37 40.1**	**-1.6**
	5.5nm,0.4s,baz=161,slow=9.4,SNR=3.5 5.5nm,0.4s							
YSS	**Yuzhno-Sakhali**	**23.78**	**25**	P		**P**	**18 37 41.8**	**-2.1**
SONM	**Songino Array**	**27.97**	**327**	P		**P**	**18 38 23.5**	**+1.5**
	2.8nm,0.8s,baz=137,slow=11,SNR=5.2 2.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**28.40**	**261**	P		**P**	**18 38 27.0**	**+1.0**
	0.6nm,0.6s,baz=58,slow=7.0,SNR=7.6							
CMAR						LR	LR	18 50 44.8
	comp=Z,40nm,18.4s,baz=70,slow=39 0.6nm,0.6s							
KAPI	**Kappang**	**31.95**	**197**	LR		LR	18 52 21.7	
	comp=Z,16nm,18.7s,baz=322,slow=37							
MA2	**Magadan**	**36.97**	**19**	LR		LR	18 54 44.1	
	comp=Z,26nm,20.2s,baz=124,slow=36							
EVN	**Everest**	**37.17**	**283**	P		**P**	**18 39 43.6**	**+0.4**
PMG	**Port Moresby**	**39.51**	**150**	LR		LR	18 53 11.0	
	comp=Z,30nm,21.6s,baz=329,slow=31							
SEY	**Seymchan**	**40.19**	**17**	LR		LR	18 56 34.8	
	comp=Z,46nm,21.2s,baz=215,slow=36							
MKAR	**Makanchi Array**	**41.97**	**312**	P		**P**	**18 40 22.1**	**-0.2**
	1.1nm,0.5s,baz=98,slow=9.7,SNR=12 1.1nm,0.5s							
ZALV	**Zalesovo Beam**	**42.67**	**323**	P		**P**	**18 40 26.2**	**-1.6**
	0.7nm,0.5s,baz=116,slow=8.5,SNR=4.4 0.7nm,0.5s							
KURK	**Kurchatov**	**45.25**	**317**	P		**P**	**18 40 48.5**	**0.0**
KURK				IAmb		IAmb	18 41 02.3	
	comp=Z,6.2nm,1.3s							
KURBB	**Kurchatov Arra**	**45.28**	**317**	P		**P**	**18 40 48.0**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=103,slow=9.1,SNR=17							
KURBB						LR	LR	19 01 29.4
	comp=Z,40nm,20.4s,baz=178,slow=38 comp=Z,0.9nm,0.5s							
TIXI	**Tiksi**	**45.74**	**0**	P		**P**	**18 40 51.7**	**-0.4**
TIXI				IAmb		IAmb	18 41 13.5	
	comp=Z,4.9nm,1.4s							
TIXI	**Tiksi**	**45.74**	**0**	LR		LR	19 00 41.8	
	comp=Z,61nm,18.2s,baz=200,slow=37							
WB0	**Warramunga Arr**	**45.79**	**172**	P		**P**	**18 40 54.6**	**+1.4**
WRA	**Warramunga Arr**	**45.96**	**172**	P		**P**	**18 40 55.1**	**+0.6**
WRA	**Warramunga Arr**	**45.96**	**172**	P		**P**	**18 40 56.3**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=352,slow=8.4,SNR=12 comp=Z,1.6nm,0.7s							
WR8	**Warramunga Arr**	**45.99**	**172**	P		**P**	**18 40 54.2**	**-0.5**
WR8				IAmb		IAmb	18 41 12.0	
	comp=Z,3.8nm,1.1s							
AAK	**Ala-Archa**	**46.90**	**305**	LR		LR	19 04 23.4	
	comp=Z,25nm,19.2s,baz=78,slow=41							
ASAR	**Alice Springs**	**49.59**	**174**	P		**P**	**18 41 22.4**	**-0.2**
ASAR	**Alice Springs**	**49.59**	**174**	P		**P**	**18 41 24.6**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=356,slow=9.4,SNR=11 comp=Z,0.7nm,0.8s							
KK31	**Karatay Array**	**49.84**	**306**	P		**P**	**18 41 23.8**	**-0.6**
KK31				IAmb		IAmb	18 41 33.6	
	comp=Z,3.7nm,1.4s							
KKAR	**Karatay Array**	**49.84**	**306**	P		**P**	**18 41 24.7**	**+0.2**
BVAR	**Borovoye Array**	**50.70**	**318**	P		**P**	**18 41 31.5**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=85,slow=9.6,SNR=14							
BVAR						LR	LR	19 04 11.4
	comp=Z,40nm,21.0s,baz=81,slow=38 comp=Z,1.8nm,0.5s							
AB31	**Akbulak array**	**57.08**	**313**	P		**P**	**18 42 16.5**	**-1.0**
AB31				IAmb		IAmb	18 42 19.5	
	comp=Z,2.8nm,0.8s							
ABKAR	**Akbulak array**	**57.08**	**313**	P		**P**	**18 42 16.3**	**-1.1**
KBZ	**Khabaz**	**69.59**	**310**	P		**P**	**18 43 42.0**	**+1.6**
	comp=Z,2.6nm,0.9s,baz=154,slow=7.3,SNR=4.5 comp=Z,2.6nm,0.9s							
FINES	**FINESS Array B**	**73.27**	**331**	P		**P**	**18 44 01.6**	**-0.7**
FINES	**FINESS Array B**	**73.27**	**331**	P		**P**	**18 44 02.7**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=48,slow=5.7,SNR=8.4 comp=Z,1.9nm,0.7s							
AKASG	**Malin Array Be**	**75.96**	**320**	P		**P**	**18 44 18.2**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=60,slow=6.8,SNR=5.8							
AKASG						LR	LR	19 20 26.3
	comp=Z,43nm,18.2s,baz=59,slow=38 comp=Z,1.5nm,0.5s							
BRTR	**Keskin Array B**	**77.47**	**308**	P		**P**	**18 44 27.2**	**+0.1**
BRTR	**Keskin Array B**	**77.47**	**308**	P		**P**	**18 44 28.0**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=88,slow=5.8,SNR=11							
BRTR						LR	LR	19 21 32.2
	comp=Z,14nm,18.2s,baz=336,slow=38 comp=Z,1.8nm,0.8s							
ASF	**Jabal al Asfar**	**78.00**	**300**	LR		LR	19 23 16.7	
	comp=Z,18nm,18.6s,baz=135,slow=39							
HFS	**Hagfors**	**79.22**	**332**	P		**P**	**18 44 36.4**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=62,slow=3.4,SNR=5.5							
HFS						LR	LR	19 24 39.8
	comp=Z,57nm,18.0s,baz=66,slow=40 comp=Z,1.9nm,0.8s							
NOA	**NORSAR Array B**	**79.71**	**334**	P		**P**	**18 44 39.4**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=52,slow=5.5,SNR=3.6 comp=Z,0.9nm,0.6s							
SUMG	**Summit**	**81.34**	**356**	*i* P		P	18 44 53.0	+5.1
GERES	**GERESS Array B**	**85.62**	**323**	P		**P**	**18 45 10.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=31,slow=3.4,SNR=3.6 comp=Z,0.3nm,0.5s							
PFO	**Pinyon Flats O**	**94.42**	**49**	LR		LR	19 21 37.5	
	comp=Z,10nm,20.5s,baz=80,slow=31							
SCHQ	**Schefferville**	**98.46**	**9**	LR		LR	19 34 16.3	
	comp=Z,23nm,18.1s,baz=62,slow=38							

NEIC ***03*** *18:42:07.2±1.5,6.4N±0.1×124.2E±0.1,h537km±10km, mb4.4/30,Error ellipse: s-maj=19.6km s-min=13.9km az=56.0*
IDC ***03*** *18:42:08.4±1.3,6.34N×124.25E,h557km±15km,mb3.3/10, mbtmp4.4/13,Error ellipse: s-maj=25.4km s-min=8.2km az=65.0*
DJA ***03*** *18:42:08.2±0.3,6°N±4°×12°4E±°,h518km±3km,M4.1/24, mb4.2/24,mB4.6/11,MLv4.5/13,Mw(mB)3.8/11*
ISC 03 18:42:07.6±0.5,6.35N±0.06×124.17E±0.09,h550km,n78, σ1§25/86,mb4.3/27,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.97**	**153**	P		**P**	**18 43 21.0**	**-1.5**
SGSI				S		**S**	**18 44 20.7**	**-2.7**
KMSI	**Cibinong**	**5.74**	**182**	P		**P**	**18 43 44.6**	**+0.7**
	0.5nm93nm,0.9s							
KMSI				S		**S**	**18 45 02.9**	**+0.4**
	0.5nm93nm,0.9s							
MYLDM	**Lahad Datu**	**5.76**	**259**			**P**	**18 43 44.3**	**+0.2**
TOLI2	**Tolitoli**	**6.20**	**213**	P		**P**	**18 43 46.8**	**-1.3**
MRSI	**Marisa**	**6.24**	**201**	P		**P**	**18 43 48.7**	**+0.2**
TNTI	**Ternate**	**6.39**	**150**	P		**P**	**18 43 49.2**	**-0.7**
TNTI	**Ternate**	**6.39**	**150**	P		**P**	**18 43 49.7**	**-0.2**
LUWI	**Luwuk**	**7.47**	**191**	P		**P**	**18 43 58.5**	**-1.7**
LUWI	**Luwuk**	**7.47**	**191**	P		**P**	**18 44 00.6**	**+0.4**
	1µm37nm,1.1s							
APSI	**Ampana**	**7.64**	**199**	P		**P**	**18 44 01.7**	**-0.1**
	825nm85nm,0.7s							
NLAI	**Namlea**	**9.96**	**163**	P		**P**	**18 44 27.0**	**+1.8**
	654nm83nm,0.9s							
SWI	**Sorong**	**10.07**	**135**	P		**P**	**18 44 27.6**	**+1.3**
	28nm,1.0s							
MSAI	**Masohi**	**10.74**	**154**	P		**P**	**18 44 35.1**	**+1.9**
AAI	**Ambon**	**10.75**	**158**	P		**P**	**18 44 34.6**	**+1.3**
	805nm79nm,0.7s							
SPSI	**Sidrap Palu**	**11.15**	**203**	P		**P**	**18 44 38.2**	**+0.8**
	38nm,0.8s							
BNSI	**Bone**	**11.42**	**201**	P		**P**	**18 44 43.6**	**+3.4**
	38nm,0.7s							
MTKI	**Muara Teweh, K**	**11.75**	**232**	P		**P**	**18 44 43.5**	**-0.2**
KAPI	**Kappang**	**12.12**	**201**	P		**P**	**18 44 48.8**	**+1.4**
	6.3nm,0.6s,baz=34,slow=15,SNR=3.9							
FAKI	**Fak Fak**	**12.24**	**139**			**P**	**18 44 49.8**	**+1.1**
FAKI	**Fak Fak**	**12.24**	**139**	P		**P**	**18 44 50.0**	**+1.3**
	629nm74nm,0.7s							
SBUM	**Sibu**	**12.53**	**253**			**P**	**18 44 50.9**	**-0.7**
KSM	**Kuching**	**14.65**	**251**			**P**	**18 45 12.3**	**-1.3**
EDFI	**Ende, Flores**	**15.20**	**189**	P		**P**	**18 45 22.5**	**+3.2**
SOEI	**Soe**	**16.00**	**180**			**P**	**18 45 26.9**	**-0.5**
SOEI				IAmb		IAmb	18 45 37.1	
	comp=Z,17nm,0.8s							
SOEI	**Soe**	**16.00**	**180**	P		**P**	**18 45 27.3**	**0.0**
	comp=Z,21nm,0.7s							
PLAI	**Plampang**	**16.37**	**203**	P		**P**	**18 45 30.6**	**-0.1**
	comp=Z,33nm,1.4s							
BATI	**Baumata**	**16.45**	**182**	P		**P**	**18 45 31.0**	**-0.5**
	comp=Z,54nm,0.6s,baz=322,slow=1.5,SNR=14							
BATI	**Baumata**	**16.45**	**182**	P		**P**	**18 45 31.6**	**+0.1**
TPUB	**Ta-pu**	**17.20**	**349**	P		**P**	**18 45 37.0**	**-1.1**
JAY	**Jayapura**	**18.71**	**118**	P		**P**	**18 45 51.8**	**-0.4**
	comp=Z,9.9nm,0.7s,baz=220,slow=2.3,SNR=4.6							
MTN	**Manton Dam**	**20.28**	**160**			**P**	**18 46 06.3**	**0.0**
DSRI	**Dabo**	**20.70**	**252**	P		**P**	**18 46 10.8**	**+0.7**
MYKOM	**Kota Tinggi**	**20.76**	**258**	P		**P**	**18 46 10.4**	**-0.3**
MYKOM				IAmb		IAmb	18 46 11.4	
	comp=Z,7.5nm,0.8s							
KNRA	**Kununurra**	**22.35**	**168**	P		**P**	**18 46 24.0**	**-0.9**
KNRA				IAmb		IAmb	18 46 44.5	
	comp=Z,14nm,1.1s							
FITZ	**Fitzroy Crossi**	**24.34**	**177**	P		**P**	**18 46 42.4**	**-0.2**
NJ2	**Nanjing**	**26.05**	**350**	*e*P		**P**	**18 47 00.7**	**+3.2**
NJ2				pmax		pmax		
	comp=Z,11nm,1.2s							
GSI	**Gunungsitoli**	**27.00**	**260**			**P**	**18 47 04.1**	**-2.0**
CMAR	**Chiang Mai Arr**	**27.37**	**298**	P		**P**	**18 47 10.2**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=120,slow=7.1,SNR=9.3							
CMAR				ScP		**ScP**	**18 52 59.9**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=96,slow=3.4,SNR=4.0 comp=Z,0.8nm,0.6s							
COEN	**Coen**	**27.62**	**137**	P		**P**	**18 47 10.9**	**-0.6**
COEN				IAmb		IAmb	18 47 12.2	
	comp=Z,9.7nm,0.6s							
MBWA	**Marble Bar**	**27.68**	**189**	P		**P**	**18 47 10.6**	**-1.4**
WB0	**Warramunga Arr**	**27.83**	**159**	P		**P**	**18 47 13.2**	**-0.2**
WRA	**Warramunga Arr**	**27.98**	**159**	P		**P**	**18 47 13.4**	**-1.2**
WRA	**Warramunga Arr**	**27.98**	**159**	P		**P**	**18 47 14.6**	**0.0**
	comp=Z,8.1nm,0.5s,baz=341,slow=9.3,SNR=91							
WRA				S		**S**	**18 51 16.6**	**-3.9**
	comp=Z,0.8nm,0.8s,baz=338,slow=16,SNR=3.7							
WRA				ScP		**ScP**	**18 53 00.6**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=338,slow=3.1,SNR=6.1 comp=Z,8.1nm,0.5s							
WR8	**Warramunga Arr**	**28.05**	**159**	P		**P**	**18 47 15.1**	**-0.1**
WR8				IAmb		IAmb	18 47 16.5	
	comp=Z,5.3nm,0.7s							
JMN	**Monobe**	**28.69**	**17**	P		**P**	**18 47 19.9**	**-0.9**
PZH	**PanZhiHua**	**29.30**	**316**	P		**P**	**18 47 28.5**	**+2.3**
XAN	**Xi'an**	**30.96**	**335**	*e*P		**P**	**18 47 40.2**	**-0.1**
AS31	**Alice Springs**	**31.31**	**163**	P		**P**	**18 47 44.2**	**+0.8**
AS31				IAmb		IAmb	18 47 45.1	
	comp=Z,3.7nm,0.7s							
ASAR	**Alice Springs**	**31.31**	**163**			**P**	**18 47 44.2**	**+0.8**
ASAR						**PcP**	**18 50 20.2**	**-0.4**
ASAR	**Alice Springs**	**31.31**	**163**	P		**P**	**18 47 44.2**	**+0.8**
	comp=Z,10nm,0.6s,baz=342,slow=7.1,SNR=194							
ASAR				PcP		**PcP**	**18 50 20.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=334,slow=3.6,SNR=2.5							
ASAR				S		**S**	**18 52 12.1**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=348,slow=22,SNR=22							
ASAR				ScP		**ScP**	**18 53 11.9**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=338,slow=3.2,SNR=15 comp=Z,10nm,0.6s							
MJAR	**Matsushiro Arr**	**32.68**	**21**	P		**P**	**18 47 54.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=184,slow=11,SNR=5.4 comp=Z,0.8nm,0.5s							
MORW	**Morawa**	**36.07**	**192**	P		**P**	**18 48 23.0**	**-0.3**
MORW				IAmb		IAmb	18 49 01.9	
	comp=Z,18nm,1.2s							
FORT	**Forrest**	**37.10**	**174**	P		**P**	**18 48 32.0**	**+0.3**
FORT				IAmb		IAmb	18 48 49.3	
	comp=Z,8.2nm,0.9s							
INKA	**Innaminka**	**37.49**	**155**	P		**P**	**18 48 36.2**	**+1.4**
INKA				IAmb		IAmb	18 48 37.2	
	comp=Z,4.7nm,0.6s							
BBOO	**Buckleboo**	**40.55**	**165**	P		**P**	**18 49 00.3**	**+0.8**
BBOO				IAmb		IAmb	18 49 04.5	
	comp=Z,27nm,1.2s							
EIDS	**Eidsvold**	**40.97**	**141**	P		**P**	**18 49 03.9**	**+0.9**
EIDS				IAmb		IAmb	18 49 04.4	
	comp=Z,5.4nm,0.8s							
EVN	**Everest**	**41.40**	**306**	P		**P**	**18 49 07.1**	**0.0**
EVN				IAmb		IAmb	18 49 08.8	
	comp=Z,3.9nm,0.6s							
STKA	**Stephens Creek**	**41.49**	**157**	P		**P**	**18 49 08.1**	**+1.1**
STKA	**Stephens Creek**	**41.49**	**157**	P		**P**	**18 49 08.3**	**+1.3**
	comp=Z,4.6nm,0.5s,baz=334,slow=10,SNR=7.9 comp=Z,4.6nm,0.5s							
ARMA	**Armidale**	**45.05**	**146**	P		**P**	**18 49 36.6**	**+1.7**
ARMA				IAmb		IAmb	18 49 54.1	
	comp=Z,19nm,1.4s							
CAN	**Canberra**	**47.59**	**152**	P		**P**	**18 49

JEFFS	S de V. Baru	2.50	2	eP	Pn	18 54 10.3	-0.1		
DMCAL	E. de Neily	2.50	356	eP	Pn	18 54 10.0	-0.5		
PTAR3	Potrerillos Ar	2.52	3	eP	Pn	18 54 10.7	-0.1		
PSOM3	Paja de Sombre	2.53	7	eP	Pn	18 54 10.3	-0.5		
EDAD	Golfito	2.53	348	eP	Pn	18 54 09.0	-1.8		
STIA3	Santiago, Vera	2.54	40	eP	Pn	18 54 11.1	+0.2		
BQSF3	Alto Boquete,	2.57	4	eP	Pn	18 54 11.2	-0.3		
WILLF	Boquete	2.58	4	eP	Pn	18 54 10.9	-0.7		
BQTLY	Boquete Panama	2.59	4	eP	Pn	18 54 11.1	-0.6		
TBS2		2.62	360	eP	Pn	18 54 12.7	+0.6		
BRU2	Volcan	2.62	359	eP	Pn	18 54 11.9	-0.2		
BRU2				eS	Sg	18 54 54.2	+1.1		
BRU2	Volcan	2.62	359	S	Sn	18 54 43.2	-1.3		
BRU2	Volcan	2.62	359	P	Pn	18 54 11.7	-0.4		
BRU2	Volcan	2.62	359	eP	Pn	18 54 11.4	-0.8		
DAP26	falda E V. Bar	2.62	5	eP	Pn	18 54 13.8	-0.6		
LNBQ3	Los Naranjos,	2.62	4	eP	Pn	18 54 14.8	+0.3		
MLIR3	Monte Lirio, C	2.62	356	eP	Pn	18 54 12.5	+0.3		
BC3P	Paso Ancho	2.64	1	eP	Pn	18 54 12.1	-0.3		
SCLRA	Santa Clara, W	2.66	357	eP	Pn	18 54 12.7	0.0		
RBALA	Bur	2.74	10	eP	Pn	18 54 13.4	-0.3		
PBNVO	Pueblo Nuevo,	2.75	9	eP	Pn	18 54 13.1	-0.7		
ALCO	Alturas Coton,	2.78	356	eP	Pn	18 54 13.8	-0.6		
KKNTU	Kakint*	2.79	17	eP	Pn	18 54 14.0	-0.3		
CHGR2	Aguacate	2.80	10	eP	Pn	18 54 14.8	+0.3		
CHIT3	Chitre	2.83	51	eP	Pn	18 54 15.1	+0.2		
AZU	Azuero	2.85	55	eP	Pn	18 54 15.0	-0.1		
AZU				eS	Sn	18 54 49.1	-0.9		
AZU	Azuero	2.85	55	eP	Pn	18 54 15.0	-0.1		
EDP2	Potrero Grande	2.89	349	eP	Pn	18 54 15.7	0.0		
PANP	Palmar Norte	2.90	344	eP	Pn	18 54 15.4	-0.4		
FIMO	Fila Mora	2.90	346	eP	Pn	18 54 15.6	-0.5		
OCHAL	Ojochal	3.09	344	P	Pn	18 54 15.0	-0.4		
OCHAL	Ojochal	3.09	341	S	Sn	18 54 55.8	0.0		
EDPE	Pejibaye, P	3.12	343	eP	Pn	18 54 18.7	-0.2		
DRK0	Durika	3.14	349	eP	Pn	18 54 19.1	-0.3		
DRK0				eS	Sb	18 55 04.1	-0.2		
DRK0	Durika	3.14	349	P	Pn	18 54 19.6	+0.2		
DRK0	Durika	3.14	349	S	Sn	18 54 58.4	+1.0		
DRK0	Durika	3.14	349	eP	Pn	18 54 19.2	-0.2		
CNI2	El Empalme, Bo	3.25	3	eP	Pn	18 54 20.6	0.0		
SAJE	San Jernim	3.28	345	eP	Pn	18 54 20.8	-0.5		
RGM0	Gandoca	3.41	0	eP	Pn	18 54 22.9	0.0		
BRIBI	Bribri	3.44	357	eP	Pn	18 54 25.0	+1.6		
CEUA	Cerro Uatsi, L	3.45	355	eP	Pn	18 54 25.6	+2.0		
BUS1	Rivas	3.55	342	eP	Pn	18 54 25.1	-0.1		
LAES	El Progreso Va	3.60	353	eP	Pn	18 54 26.7	+1.1		
PICV	PH. Pirrs	3.78	336	eP	Pn	18 54 27.7	-0.3		
REPA	Paraso	3.84	342	eP	Pn	18 54 29.4	+0.4		
VERB	Verbena	3.91	344	eP	Pn	18 54 30.8	+1.0		
ZANG	Zanguenga, Cho	3.91	44	eP	Pn	18 54 30.7	+1.0		
ZANG				eS	Sb	18 55 26.1	0.0		
ZANG	Zanguenga, Cho	3.91	44	eP	Pn	18 54 31.0	+1.3		
PCAYA	Pacayas	3.91	343	eP	Pn	18 54 30.8	+0.8		
ACOS	Acosta	3.92	337	eP	Pn	18 54 30.0	-0.1		
CHOR3	La Chorrera	3.94	46	eP	Pn	18 54 32.3	+2.2		
CHOR3				eS	Sn	18 55 19.6	+2.7		
ABRB	Las Abras (San	3.97	344	eP	Pn	18 54 31.7	+0.9		
RESJ	San Isidro (Tu	3.97	346	eP	Pn	18 54 31.7	+1.0		
CVTV	Tajo	3.98	344	eP	Pn	18 54 31.5	+0.5		
CVTQ	Turrialba Volc	3.98	344	eP	Pn	18 54 31.8	+0.7		
VICA	Volcano Irazu	3.98	343	eP	Pn	18 54 31.8	+0.6		
VTR0	Volcan Turrial	3.99	344	eP	Pn	18 54 31.7	+0.4		
CVTR	Volcan Turrial	3.99	344	eP	Pn	18 54 31.8	+0.5		
LUJA	Lujan	4.00	339	eP	Pn	18 54 31.8	+0.6		
LCOCO	El Coco	4.00	347	eP	Pn	18 54 32.4	+1.3		
RVLA	Villa Bonita	4.04	347	eP	Pn	18 54 32.7	+1.2		
CVIMO	Finca Echandi	4.05	341	eP	Pn	18 54 32.8	+0.8		
BCIP	Isla Barro Col	4.08	43	eP	Pn	18 54 33.3	+1.2		
BCIP	Isla Barro Col	4.08	43	eP	Pn	18 54 32.7	+0.7		
BCIP	Isla Barro Col	4.08	43	P	Pn	18 54 33.0	+0.9		
BCIP				S	Sn	18 55 20.1	-0.1		
HDC	Heredia	4.09	339	eP	Pn	18 54 32.9	+0.6		
HEME	Heredia, Merce	4.09	339	eP	Pn	18 54 33.8	+1.4		
MLIR	Monte Lirio	4.12	42	eP	Pn	18 54 34.2	+1.6		
GAMB1	Gamboa	4.13	44	eP	Pn	18 54 33.8	+1.0		
UPA	Univ. de Panam	4.16	47	eP	Pn	18 54 33.9	+0.7		
FRIJ	El Hiral	4.19	43	eP	Pn	18 54 32.3	-1.3		
CAZU	Cerro Azul, Pa	4.42	46	eP	Pn	18 54 38.0	+1.1		
SOCE	Pocosol	4.63	335	P	Pn	18 54 41.7	+1.9		
SOCE	Pocosol	4.63	335	S	Sn	18 55 36.7	+2.6		
JTS	Las Juntas de	4.70	331	P	Pn	18 54 42.1	+1.4		
JTS	Las Juntas de	4.70	331	eP	Pn	18 54 41.5	+0.8		
JTS	Las Juntas de	4.70	331	P	Pn	18 54 40.0	-0.7		
ARE1	Arenal 1	4.75	334	eP	Pn	18 54 42.6	+1.2		
VARE2	V. Arenal	4.75	334	eP	Pn	18 54 42.6	+1.2		
CEDE	Laguna Cedeo	4.76	335	eP	Pn	18 54 42.9	+1.3		
TABAC	Tabacon	4.80	334	eP	Pn	18 54 43.2	+1.1		
NICO	Nicoya	4.83	325	eP	Pn	18 54 42.5	0.0		
PTAC	Punta Ardita,	4.89	78	P	Pn	18 54 45.3	+2.0		
PTAC				S	Sn	18 55 35.5	-4.9		
PLVR	Palo Verde	4.96	327	eP	Pn	18 54 44.5	+0.2		
CUI	Cuipilapa	5.12	331	eP	Pn	18 54 46.8	+0.2		
SOLC	Bahia Solano	5.20	89	P	Pn	18 54 47.7	+0.2		
GPS1	Guardaparques	5.31	330	eP	Pn	18 54 51.3	+2.1		
VRLE	La Escondida,	5.33	330	eP	Pn	18 54 51.2	+1.7		
LAPC	Finca la Perla	5.35	329	eP	Pn	18 54 50.6	+1.0		
APAC	Apartado, Choc	6.25	74	P	Pn	18 55 07.7	+5.7		
SAIC	Isla e San And 63nm,0.8s	6.40	8	P	Pn	18 55 04.5	+0.4		
CBOC	Ciudad Bolivar 5.1nm,0.7s	6.59	92	P	Pn	18 55 07.5	+0.7		
YOTC	Yotoco, Valle 38nm,0.7s	6.63	109	P	Pn	18 55 08.5	+1.2		
YOTC	 38nm,0.7s			S	Sn	18 56 22.2	-1.2		
POPC	Popayan, Colom 31nm,0.6s	6.94	121	P	Pn	18 55 12.2	+0.5		
FLF1	Flavio Alfaro-	7.05	157	P	Pn	18 55 14.2	+1.2		
HELC	Santa Helena 15nm,1.2s	7.07	89	P	Pn	18 55 15.0	+1.5		
GCUF	Volcan Galeras 57nm,0.4s	7.20	133	P	Pn	18 55 17.5	+2.0		
OTAV	Otavalo 3.9nm,0.9s	7.21	144	P	Pn	18 55 15.8	+0.2		
TULM	Tulcn-Chalpat 14nm,1.0s	7.25	138	P	Pn	18 55 20.1	+3.9		
CRUC	La Cruz 5µm1µm,2.0s	7.28	129	P	Pn	18 55 18.3	+1.9		
GUY2C	Guyana, Caldas	7.29	97	P	Pn	18 55 20.7	+4.0		
ORTC	Ortega, Tolima 128nm,0.7s	7.69	107	P	Pn	18 55 25.6	+3.8		
PRAC	Prado	8.09	107	P	Pn	18 55 30.7	+3.4		

IDC 03 19:43:28.3±2.2, 17°32S×177°40W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=131.7km s-min=34.9km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs 0.2nm,0.5s,baz=91,slow=7.9,SNR=6.3 0.2nm,0.5s	45.88	254	P	P	19 51 52.8	-0.1
TXAR	Lajitas Array 0.5nm,0.7s,baz=218,slow=5.9,SNR=7.1 0.5nm,0.7s	84.87	57	P	P	19 56 05.7	+0.1
ILAR	Eielson Array 0.4nm,0.8s,baz=223,slow=4.7,SNR=7.6 0.4nm,0.8s	85.11	13	P	P	19 56 05.6	-0.2

*JMA **03** 19:43:40.2±0.1, 23°.3N±0°.7×122°.4E±0°.5, h29km, MV2.4/12, NEAR ISHIGAKIJIMA ISLAND*
*TAP **03** 19:43:40.5, 23°.34N×122°.51E, h52km, ML3.0, D*
ISC 03 19:43:39.0±1.1, 23°33N±0°.03×122°48E±0°.02, h32km±11km, n103, σ0s89/163, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	EOS4	0.80	349	*i* P	Pb	19 43 55.0	+0.8
EOS4				*i* S	Sb	19 44 05.9	+1.3
ECBN	Changbin	0.94	269	eS	Sb	19 44 08.8	-0.3
SHUL	Shoufeng	0.95	299	eS	Sb	19 44 09.5	+0.1
EOS3	EOS3	0.96	351	eP	Pb	19 43 58.1	+1.0
EOS3				S	Sb	19 44 10.8	+1.4
HGSD	Ruisui	0.98	280	eP	Pb	19 43 57.2	-0.3
HGSD				S	Sn	19 44 08.8	-0.6
CHKH	Chenggong	1.00	262	eP	Pn	19 43 57.1	+0.2
CHKH				S	Sn	19 44 09.7	-0.2
EGFH	Guangfu	1.02	289	P	Pb	19 43 58.0	-0.2
EGFH				eS	Sb	19 44 10.7	-0.6
CHKT	Chengkung	1.05	257	P	Pn	19 43 57.9	+0.4
CHKT				eS	Sn	19 44 10.4	-0.6
EHYH	Wanrong	1.05	279	*i* P	Pb	19 43 59.0	+0.3
EHYH				eS	Sb	19 44 12.1	-0.1
EYUL	Yuli	1.07	271	eP	Pb	19 43 59.5	+0.6
EYUL				eS	Sb	19 44 12.8	+0.2
ESL	Shilin	1.07	297	eP	Pb	19 43 58.2	-0.9
ESL				eS	Sn	19 44 10.8	-0.8
WARBT	Fenglin Townsh	1.07	291	P	Pb	19 43 58.5	-0.6
WARBT				S	Sn	19 44 11.7	0.0
EHY	Hungye	1.08	279	eP	Pb	19 43 59.1	0.0
EHY				eS	Sb	19 44 12.5	-0.4
TWF1	Yuli	1.09	271	P	Pb	19 43 58.8	-0.5
TWF1				S	Sb	19 44 13.0	-0.1
YULB	Yu-li	1.09	273	P	Pb	19 43 59.0	-0.3
YULB	Yu-li	1.09	273	P	Pb	19 43 59.1	-0.3
YULB				S	Sb	19 44 13.2	0.0
FULB	Fuli	1.10	263	eP	Pb	19 43 58.7	-0.7
FULB				eS	Sn	19 44 11.9	-0.4
TWD	Chiawan	1.10	313	eP	Pb	19 43 58.9	-0.6
TWD				S	Sb	19 44 12.4	-1.1
ETM	Tongmen	1.10	305	eP	Pb	19 43 58.6	-0.9
ETM				eS	Sb	19 44 12.6	-1.0
EOS2	EOS2	1.10	348	eS	Sb	19 44 15.8	+2.2
ETL	Fush Village	1.14	317	P	Pb	19 43 59.6	-0.6
LDUT	Ludao	1.14	235	P	Pn	19 43 59.2	+0.5
LDUT				eS	Sn	19 44 12.3	-0.9
EDH	Donghe	1.14	252	eP	Pb	19 43 59.5	-0.7
EDH				*i* S	Sn	19 44 13.0	-0.2
NACB	Ninganchiao	1.17	316	P	Pb	19 43 59.7	-0.9
NACB	Ninganchiao	1.17	316	*i* P	Pb	19 43 59.9	-0.7
NACB				eS	Sb	19 44 13.5	-1.1
ECS	Chishang	1.18	259	eP	Pb	19 44 01.5	+0.6
ECS				eS	Sb	19 44 15.8	-0.1
EHD	Haiduan	1.18	261	eP	Pb	19 44 00.3	-0.6
EHD				*i* S	Sb	19 44 15.2	-0.7
JYNG	Yonagunijimaku	1.19	21	eP	Pb	19 44 01.5	+0.4
LXIB	Xiulin Townshi	1.19	305	P	Pb	19 44 00.3	-0.8
LXIB				S	Sb	19 44 15.7	-0.7
EAHA	Aohua	1.20	326	eP	Pb	19 44 00.7	-0.5
YOJ	Yonaguni jima	1.23	23	P	Pb	19 44 10.5	+8.9
YOJ	Yonaguni jima	1.23	23	P	Pn	19 43 59.8	-0.2
ETLH	Xiulin Townshi	1.26	314	eP	Pb	19 44 01.5	-0.8
ETLH				eS	Sb	19 44 16.9	-1.4
EWUT	Wuta	1.28	330	eP	Pb	19 44 02.4	-0.2
EWUT				eS	Sb	19 44 18.7	0.0
ENA	Nanau	1.28	328	eP	Pb	19 44 02.6	0.0
ENA				eS	Sb	19 44 18.3	-0.4
VWDT	VWDT	1.30	289	eP	Pb	19 44 02.6	-0.2
VWDT				eS	Sb	19 44 18.6	-0.5
LONT	Longtian	1.31	251	eP	Pb	19 44 02.5	-0.6
LONT				eS	Sb	19 44 18.7	-0.8
OWD	Renai	1.34	298	P	Pb	19 44 02.9	-0.8
OWD				S	Sb	19 44 19.2	-1.4
ELDTW	Lidau	1.35	264	P	Pn	19 44 02.5	+0.7
ELDTW				eS	Sn	19 44 19.1	+0.4
TTN	Taitung	1.35	245	eP	Pb	19 44 03.7	-0.1
TTN				eS	Sb	19 44 20.4	-0.3
ESAO	Su ao	1.37	335	eP	Pb	19 44 03.9	-0.1
WHF	Hehuan Shan	1.38	306	P	Pb	19 44 03.6	-0.8
WHF				S	Sb	19 44 20.6	-1.2
TWGBT	Beinan	1.39	249	eP	Pn	19 44 03.0	+0.8
TWGBT				S	Sb	19 44 20.6	-1.1
TWG	Pinlang	1.39	249	P	Pb	19 44 03.6	-0.8
TWG				S	Sn	19 44 20.4	+0.9
TWC	Suao	1.40	336	P	Pb	19 44 04.0	-0.5
TWC				eS	Sb	19 44 21.9	0.0
WUSB	Renai	1.41	298	P	Pb	19 44 04.4	-0.4
WUSB				S	Sb	19 44 21.2	-1.3
YUS	Yu-Shan	1.41	277	eP	Pb	19 44 04.6	-0.4
YUS				eS	Sb	19 44 21.8	-1.1
HATJ	Hateruma jima	1.41	59	eP	Pb	19 44 05.1	+0.3
HATJ				eS	Sb	19 44 23.1	+0.6
FUSS	Fushou	1.45	309	eP	Pb	19 44 05.0	-0.6
FUSS				eS	Sb	19 44 22.4	-1.4
SSLB	Suanglung	1.47	288	P	Pb	19 44 05.4	-0.4
SSLB	Suanglung	1.47	288	eP	Pb	19 44 05.3	-0.5
LATG	Datong	1.48	324	*i* P	Pb	19 44 05.3	-0.7
LATG				eS	Sb	19 44 22.9	-1.6
NNSB	Datong	1.48	318	eP	Pb	19 44 05.5	-0.5
NNSB				eS	Sb	19 44 23.1	-1.5
NNS	Nan Shan	1.50	318	eP	Pb	19 44 05.8	-0.5
NNS				S	Sb	19 44 23.7	-1.3
TWT	Tachien	1.50	308	eP	Pb	19 44 05.9	-0.5
TWT				eS	Sb	19 44 24.3	-1.1
TDCB	Techi	1.52	307	P	Pb	19 44 06.3	-0.4
TDCB				S	Sb	19 44 24.6	-1.0
IRIF	Iriomote-Funau	1.52	49	eP	Pb	19 44 06.9	+0.3
WHYT	Xinyi Township	1.54	284	eP	Pb	19 44 05.8	-1.1
ENTT	Nioudou	1.55	328	eP	Pb	19 44 06.7	-0.4
ALS	Alishan	1.55	277	eP	Pb	19 44 07.0	-0.2
ALS				*i* S	Sb	19 44 26.1	-0.5
SMLT	Sun Moon Lake	1.55	291	eP	Pb	19 44 06.0	-1.1
SMLT				eS	Sb	19 44 26.0	-0.4
LYUB	Lan-yu	1.56	212	eP	Pn	19 44 05.2	+0.6
STYH	Taoyuan	1.57	264	eP	Pb	19 44 06.8	-0.7
ECL	Taimali	1.58	243	eP	Pn	19 44 05.8	+0.9
ECL				eS	Sn	19 44 25.1	+0.9
TYC	Yuchr	1.59	291	eP	Pb	19 44 06.9	-0.9
WCS	Beigang Elemen	1.61	297	eP	Pb	19 44 07.4	-0.7
FUSB	Fushanzhiwuyua	1.64	330	eP	Pb	19 44 08.5	-0.1
JKRS	Kuro-shima	1.67	57	eP	Pb	19 44 08.6	-0.2
YHNB	Yeheng	1.67	323	P	Pb	19 44 08.8	-0.4
YHNB	Yeheng	1.67	323	eP	Pb	19 44 08.8	-0.4
CHN5	Tsauling	1.67	279	eP	Pb	19 44 09.2	0.0
NSK	Sanguang	1.69	323	eP	Pb	19 44 08.6	-0.8
NSK				eS	Sb	19 44 28.0	-2.3
WHP	Taichung City	1.69	304	eP	Pb	19 44 09.4	-0.1
WHP				eS	Sb	19 44 29.4	-1.1
NWLT	Wulai	1.69	328	eP	Pb	19 44 08.7	-0.8
TPUB	Ta-pu	1.70	269	P	Pb	19 44 09.6	-0.1
TPUB	Ta-pu	1.70	269	eP	Pb	19 44 09.2	-0.4
TPUB				eS	Sb	19 44 30.8	+0.1
WCKO	Fanlu	1.73	274	eP	Pb	19 44 10.7	+0.6
WCKO				eS	Sb	19 44 31.9	+0.6
WNT	Mingjian	1.73	289	eP	Pb	19 44 10.2	-0.1
TIPB	Shuangxi	1.74	340	eP	Pb	19 44 09.4	-0.9
TIPB				S	Sb	19 44 31.0	-0.8
TAWH	Dawu Township	1.77	236	eP	Pb	19 44 09.2	-1.6
TAWH				eS	Sn	19 44 29.8	+1.0
EAST	Anshuo	1.78	238	P	Pb	19 44 09.0	+1.4
EAST				eS	Sn	19 44 30.0	+0.9
NFF	Wufeng Townshi	1.79	316	eP	Pb	19 44 11.1	-0.3
SSD	Sandimen	1.80	251	eP	Pb	19 44 09.9	-1.4
CHN1	Nanshi	1.80	266	eP	Pb	19 44 11.4	+0.1
CHN1				eS	Sb	19 44 34.6	+1.0
TSMG	Majia	1.80	250	eP	Pn	19 44 09.4	+1.6
WDLH	Douliu	1.82	282	eP	Pb	19 44 11.5	-0.1
SNST	Tainan City	1.82	267	eP	Pb	19 44 12.2	+0.5
SNST				*i* S	Sb	19 44 35.8	+1.6
TWK	Hsinying	1.83	268	eP	Pb	19 44 12.7	+0.8
JIJ	Ishigaki jima	1.84	56	eP	Pb	19 44 10.8	-1.1
JIJ				eS	Sb	19 44 33.4	-1.2
SXI1	Grass Mountain	1.84	343	eP	Pb	19 44 10.2	-1.9
TCU	Taichung	1.84	297	eP	Pb	19 44 11.5	-0.5
MASBT	Mashibuluo	1.85	248	eP	Pb	19 44 10.5	-1.6
KSHI	Guanxi Townshi	1.87	321	P	Pb	19 44 12.9	+0.4
KSHI				S	Sb	19 44 35.8	+0.3
TATO	Taipei	1.87	331	P	Pb	19 44 13.2	+0.7
NSTT	Nanjuang	1.87	314	eP	Pb	19 44 12.5	-0.1
NSTT				eS	Sb	19 44 34.0	-1.5
LIOB	Emei	1.87	315	eP	Pb	19 44 12.5	-0.1
SCST	Cishan	1.88	257	eP	Pb	19 44 12.5	-0.2
SCZT	Fangliau	1.96	241	eP	Pb	19 44 12.8	-1.3
YM01	YM01	1.99	336	eP	Pb	19 44 13.8	-0.7
ZUZH	Zhuzihu	2.01	335	*i* P	Pb	19 44 13.7	-1.2
ZUZH				*i* S	Sb	19 44 37.6	-2.0
YM08	YM08	2.02	336	eP	Pb	19 44 13.2	-1.8
JISG	Ishigakijimahi	2.09	53	eP	Pb	19 44 14.6	-1.7
JISG				eS	Sb	19 44 40.4	-1.4
PTMZ	Houxiangcun	3.51	300	*i* P	Pn	19 44 34.1	+2.8
PTMZ				*i* S	Sn	19 45 12.2	+0.5

IDC 03 19:48:29.8±7.8, 23°48S×175°94W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=333.5km s-min=42.5km az=147.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs 0.2nm,0.5s,baz=93,slow=6.9,SNR=7.5 0.2nm,0.5s	45.77	259	P	P	19 56 53.4	-0.1
WRA	Warramunga Arr 0.4nm,0.3s,baz=104,slow=8.0,SNR=6.1 0.4nm,0.3s	46.15	264	P	P	19 56 56.2	-0.2
ILAR	Eielson Array 0.5nm,1.0s,baz=212,slow=6.4,SNR=4.3 0.5nm,1.0s	90.80	12	P	P	20 01 34.3	-0.1

*IDC **03** 20:14:27.2±1.1, 11°.52N×143°.21E, h0km, mb3.8/6, mbtmp3.8/7, ML3.8/1, MS3.2/5, Error ellipse: s-maj=37.0km s-min=19.5km az=114.0*
ISC 03 20:14:32.0±1.0, 11°4N±0°.2×143°2E±0°.2, h32km, n13, σ1s53/8, mb3.5/6, MS3.3/4, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam 19nm,0.3s,baz=166,slow=7.3,SNR=6.1	2.68	37	Pn	Pn	20 15 12.2	-0.7
GUMO				Sn	Sn	20 15 46.2	+1.8
GUMO	23nm,0.3s,baz=78,slow=19,SNR=5.3 comp=Z,158nm,19.1s,baz=172,slow=40 38nm,0.3s			LR	LR	20 16 10.7	
H11N1	WAKE ISLAND Hy baz=254	24.22	67	T	T	20 44 55.4	
H11N2	WAKE ISLAND Hy baz=254	24.23	67	T	T	20 44 55.7	
H11N3	WAKE ISLAND Hy baz=254	24.24	67	T	T	20 44 58.7	
MJAR	Matsushiro Arr comp=Z,22nm,19.1s,baz=8.0,slow=34	25.39	351	LR	LR	20 28 57.3	
WRA	Warramunga Arr 0.3nm,0.5s,baz=17,slow=8.8,SNR=4.9 0.3nm,0.5s	32.39	196	P	P	20 20 58.4	-0.6
ASAR	Alice Springs 0.2nm,0.6s,baz=19,slow=11,SNR=6.5 0.2nm,0.6s	36.06	195	P	P	20 21 32.1	+1.2
PETK	Petropavlovsk- comp=Z,18nm,18.5s,baz=94,slow=41	43.15	13	LR	LR	20 43 52.0	
CMAR	Chiang Mai Arr 0.3nm,0.3s,baz=87,slow=9.2,SNR=1.0 0.3nm,0.3s	43.25	285	P	P	20 22 32.3	+1.4
KURBB	Kurchatov Arra 0.9nm,0.2s,baz=103,slow=6.3,SNR=4.8 0.9nm,0.2s	65.23	321	P	P	20 25 08.8	-1.6
KDAK	Kodiak Island comp=Z,74nm,21.8s,baz=119,slow=31	66.73	32	LR	LR	20 49 22.0	
ILAR	Eielson Array 0.4nm,0.6s,baz=252,slow=5.6,SNR=6.9 0.4nm,0.6s	71.19	25	P	P	20 25 46.5	-1.0
ILAR	 comp=Z,43nm,21.9s,baz=113,slow=32			LR	LR	20 52 04.9	
ARCES	ARCESS Array B 3.2nm,0.9s,baz=52,slow=5.8,SNR=1.8 3.2nm,0.9s	88.61	342	P	P	20 27 22.1	+0.5

*SJA **03** 20:19:09.7±0.7, 21°.58S×68°.49W, h138km±5km, ML3.7, MW3.6*
*GUC **03** 20:19:11.9±0.9, 21°.58S×68°.46W, h124km±4km, ML3.8*
ISC 03 20:19:10.3±1.5, 21°60S±0°.03×68°51W±0°.05, h140km±12km, n33, σ0s74/59, 6C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.71	254	⇑*i* P	Pn	20 19 31.9	0.0
PB09				eS	Sn	20 19 47.7	-0.7
PB09	IPOC Station P	0.71	254	eP	Pn	20 19 31.9	0.0
PB09				eS	Sn	20 19 48.2	-0.2
PB09	comp=Z,775nm,0.5s			IAML		20 19 50.1	
PB01	IPOC Station P	1.07	301	⇑*i* P	Pn	20 19 34.5	-0.4
PB01				eS	Sn	20 19 52.3	-1.1
PB01	comp=E,2µm,0.2s			IAML		20 19 54.3	
PB01	IPOC Station P	1.07	301	eP	Pn	20 19 34.4	-0.4
PB01	comp=Z,652nm,0.2s			IAML		20 19 54.8	
PB01				eS	Sn	20 19 54.8	+1.4
PB02	IPOC Station P	1.32	282	⇑*i* P	Pn	20 19 37.3	0.0
PB02				eS	Sn	20 19 57.7	-0.1
PB02	comp=E,3µm,0.3s			IAML		20 19 59.0	
PB02	IPOC Station P	1.32	282	eP	Pn	20 19 37.1	-0.2
PB02				eS	Sn	20 19 57.8	-0.1
PB02	comp=Z,2µm,0.2s			IAML		20 19 59.0	
AF01	San Pedro de A	1.38	167	eP	Pn	20 19 38.5	+0.4
AF01	San Pedro de A	1.38	167	eP	Pn	20 19 39.3	+1.2
AF01				eS	Sn	20 19 48.2	-11
AF01	comp=Z,310nm,1.1s			IAML		20 20 17.2

PB10	**IPOC Station P**	**2.68**	**224**	*eP*		**Pn**	**20 19 54.3**	**+1.1**
PB10				*eS*		**Sn**	**20 20 25.4**	**-0.9**
YJA	**Yavi**	**2.84**	**102**	*eP*		**Pn**	**20 19 56.0**	**+0.3**
YJA	**Yavi**	**2.84**	**102**	*eP*		**Pn**	**20 19 56.7**	**+1.1**
YJA				*eS*		**Sn**	**20 20 30.9**	**+0.4**
SALTA		**3.29**	**143**	*eP*		**Pn**	**20 19 58.1**	**-3.3**
SALTA				*eP*			20 20 04.5	
SALTA				*eS*		Sn	20 20 59.3	+18
SALTA				IAML			20 21 17.1	
	comp=Z,53nm,0.1s							
PB16	**IPOC Station P**	**3.38**	**344**	*eP*		**Pn**	**20 20 03.5**	**+0.7**
PB16				IAML			20 20 50.1	
	comp=N,86nm,0.3s							
AZAP	**Zapla**	**4.11**	**130**	*eP*		**Pn**	**20 20 12.3**	**+0.4**
AZAP				*eS*		Sn	20 21 18.0	+18

RSNC 03 20:24:58.2±0.0,5°N±1′×7°4W±°,h151km±2km,M2.7,mb3.7, mB4.8,ML2.5,Mw(mB)4.1,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	**San Pablo de B**	**0.53**	**320**	P	Pn	20 25 19.3	-0.6
SPBC				S	Sn	20 25 35.7	-0.8
CHIC	**Chingaza**	**0.62**	**180**	P	Pn	20 25 20.5	-0.3
CHIC				S	Sn	20 25 37.0	-1.1
ROSC	**El Rosal**	**0.71**	**235**	P	Pn	20 25 22.1	+0.7
ROSC				S	Sn	20 25 39.6	+0.6
CVER	**Cruz Verde, Cu**	**0.80**	**205**	P	Pn	20 25 22.4	+0.3
CVER				S	Sn	20 25 39.8	-0.5
RUSC	**La Rusia**	**0.91**	**45**	P	Pn	20 25 22.7	-0.2
RUSC				S	Sn	20 25 40.9	-0.8
BARC	**Barichara**	**1.44**	**22**	P	Pn	20 25 26.7	-0.8
BARC				S	Sn	20 25 48.7	-1.3
PTBC	**PUERTO BERRIO,**	**1.47**	**331**	P	Pn	20 25 26.0	-1.6
PTBC				S	Sn	20 25 48.4	-1.7
GUY2C	**Guyana, Caldas**	**1.63**	**269**	P	Pn	20 25 29.1	-0.6
GUY2C				S	Sn	20 25 53.7	-0.1
BRJC	**Barrancabermej**	**1.71**	**360**	P	Pn	20 25 29.8	-0.4
BRJC				S	Sn	20 25 54.4	-0.3
PTGC	**Puerto Gaitan,**	**1.90**	**123**	P	Pn	20 25 31.5	-0.8
PTGC				S	Sn	20 25 56.9	-1.6
PRAC	**Prado**	**1.91**	**217**	P	Pn	20 25 32.2	-0.3
PRAC				S	Sn	20 25 58.2	-0.6
ORTC	**Ortega, Tolima**	**2.02**	**229**	P	Pn	20 25 33.1	-0.5
ORTC				S	Sn	20 26 00.0	-0.8
HELC	**Santa Helena**	**2.02**	**298**	P	Pn	20 25 33.6	-0.4
HELC				S	Sn	20 26 00.5	-0.9
URMC	**La Uribe, Meta**	**2.09**	**198**	P	Pn	20 25 35.0	+0.4
URMC				S	Sn	20 26 02.8	+0.2
PAMC	**Pamplona, Colo**	**2.31**	**26**	P	Pn	20 25 37.6	0.0
PAMC				S	Sn	20 26 08.0	0.0
CBOC	**Ciudad Bolivar**	**2.35**	**285**	P	Pn	20 25 37.5	-0.2
CBOC				S	Sn	20 26 07.6	-0.6
YOTC	**Yotoco, Valle**	**2.89**	**244**	P	Pn	20 25 45.0	+0.6
YOTC				S	Sn	20 26 20.9	+0.8
OCAC	**Ocana**	**3.00**	**8**	P	Pn	20 25 45.0	-0.8
OCAC				S	Sn	20 26 22.0	-0.6
DBBC	**Dabeiba**	**3.03**	**306**	P	Pn	20 25 45.6	-0.5
DBBC				S	Sn	20 26 23.6	+0.5
UREC	**San Jos de Ur**	**3.06**	**324**	P	Pn	20 25 43.5	-3.0
UREC				S	Sn	20 26 19.6	-4.2
MACC	**Macarena, Meta**	**3.09**	**182**	P	Pn	20 25 45.2	-1.6
MACC				S	Sn	20 26 21.4	-3.0
LCBC	**Los crdobas,**	**4.44**	**324**	P	Pn	20 26 03.2	-1.1
LCBC				S	Sn	20 26 52.9	-2.8
CRJC	**Cerrejon, Guaj**	**5.79**	**8**	P	Pn	20 26 20.9	-1.4
	1μm14nm,0.8s						
CRJC				S	Sn	20 27 23.1	-5.0
	1μm14nm,0.8s						
URIC	**Uribia, Colomb**	**6.64**	**15**	P	Pn	20 26 31.4	-2.0
URIC				S	Sn	20 27 44.1	-4.0

NEIC ***03*** *20:34:56.8±1.8,38.74N±0.01×122.774W±0.008, h5km±1km, Error ellipse: s-maj=2.7km s-min=2.2km az=330.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.18; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$2.16; $M_{r\theta}$1.68; $M_{\theta\phi}$1.02; $M_{r\phi}$-0.95; Fault plane solution: $M_0$2.88000×10^{15} NP1:ϕ_s339.41000°, δ67.24000°, λ-139.20000°. NP2: ϕ_s230.95000°, δ52.95000°, λ-29.00000°. Principal axes: T 2.5330, Plg9.0000°, Azm102.0000°; N 0.5980, Plg44.0000°, Azm4.0000°; P -3.1310, Plg44.0000°, Azm201.0000°;*

NEIC ***03*** *20:34:57,38.78N×122.77W,h2km*

NCEDC 03 20:34:57.0±1.1,38.78N±0.01×122.767W±0.008, h3km±3km,Mwr4.2/4,ML3.7/87(NEIC),Mwr4.2/114(NEIC), Error ellipse: s-maj=1.8km s-min=0.9km az=186.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.04**	**327**		Pg	20 34 57.7	-0.4
GDXM	**Geysers**	**0.04**	**327**	IAML		20 35 00.5	
	comp=E,329μm,0.5s						
GDXM				IAML		20 35 00.6	
	comp=N,241μm,0.5s						
GAXM	**Alexander Vall**	**0.07**	**172**		Pg	20 34 58.5	+0.1
GBGM	**Boggs Mountain**	**0.08**	**60**		Pg	20 34 59.0	+0.3
GBGM					Sg	20 35 00.8	+1.0
GSGM	**Seigler Mounta**	**0.10**	**26**		Pg	20 34 59.7	+0.6
GPMM	**Pine Mountain**	**0.16**	**297**		Pg	20 35 00.5	+0.3
GPMM					Sg	20 35 03.3	+1.1
GRTM	**Round Top Moun**	**0.18**	**25**		Pg	20 35 00.9	+0.3
GCVM	**Cloverdale**	**0.19**	**269**		Pg	20 35 01.7	+0.9
NMTM	**Middletown**	**0.25**	**83**		Pg	20 35 02.3	+0.4
MNRC	**McLaughlin Min**	**0.27**	**68**		Pg	20 35 03.0	+0.7
MNRC				IAML		20 35 09.3	
	comp=E,14μm,1.1s						
MNRC				IAML		20 35 11.2	
	comp=N,10μm,0.7s						
HOPS	**Hopland Field**	**0.32**	**313**		Pg	20 35 03.8	+0.5
HOPS				IAML		20 35 10.0	
	comp=N,11μm,0.9s						
HOPS				IAML		20 35 10.6	
	comp=E,8μm,1.0s						
HOPS	**Hopland Field**	**0.32**	**313**		Sg	20 35 09.0	+1.5
GHGM	**Hogback Ridge**	**0.36**	**353**		Pg	20 35 04.3	+0.4
GSNM	**Snow Mountain**	**0.37**	**297**		Pg	20 35 04.9	+0.7
GALB	**Galbreath Wild**	**0.39**	**283**		Pg	20 35 05.1	+0.5
NTYM	**Taylor**	**0.39**	**168**		Pg	20 35 05.2	+0.6
NTYM					Sb	20 35 12.1	-1.0
FTR	**Fort Ross**	**0.40**	**231**		Pg	20 35 05.5	+0.8
OAKV	**Oakville Exper**	**0.44**	**141**		Pg	20 35 05.9	+0.4
OAKV					Sb	20 35 13.1	-1.4
CVS	**Carmenet Viney**	**0.49**	**150**		Pg	20 35 06.8	+0.3
CVS				IAML		20 35 19.1	
	comp=E,7μm,1.0s						
CVS				IAML		20 35 20.1	
	comp=N,5μm,0.8s						
CVS	**Carmenet Viney**	**0.49**	**150**		Sb	20 35 14.6	-1.4
BONV	**Boonville, CA**	**0.50**	**295**		Pg	20 35 07.5	+0.8
NAPC	**Atlas Peak**	**0.52**	**130**		Pg	20 35 07.5	+0.4
GWRM	**Wonder Ranch**	**0.60**	**316**		Pg	20 35 09.0	+0.5
MCCM	**Marconi Confer**	**0.64**	**188**		Pg	20 35 09.9	+0.7
MCCM				IAML		20 35 22.8	
	comp=N,5μm,1.0s						
MCCM				IAML		20 35 27.6	
	comp=E,5μm,1.1s						
SNT	**Sears Point**	**0.64**	**157**		Pg	20 35 09.3	0.0
NGVM		**0.66**	**139**		Pg	20 35 10.1	+0.5
GHOM	**Hamilton Openi**	**0.66**	**294**		Pb	20 35 10.5	-0.7
NADM	**Allendale**	**0.70**	**117**		Pb	20 35 12.3	+0.5
NOLM	**Olema**	**0.73**	**182**		Pb	20 35 11.8	-0.6
RUSS	**Russell Ranch**	**0.74**	**108**		Pb	20 35 13.1	+0.6
NPRM	**Point Reyes**	**0.80**	**194**		Pg	20 35 12.2	-0.1
NLHM	**Lake Herman**	**0.81**	**143**		Pg	20 35 12.8	+0.2
DCMP	**DeCamp, Califo**	**0.82**	**328**		Pg	20 35 13.1	+0.3
PINL	**Point Pinole R**	**0.83**	**157**		Pg	20 35 13.1	+0.2
OSUM	**Sutter Buttes**	**0.87**	**55**		Pg	20 35 13.7	0.0
CPMM	**Point Molate**	**0.87**	**161**		Pg	20 35 13.9	+0.1
GTC	**Three Chop Rid**	**0.88**	**316**		Pg	20 35 14.3	+0.5
SUTB	**Sutter Butte**	**0.89**	**59**		Pg	20 35 13.5	-0.6
SUTB				IAML		20 35 26.1	
	comp=E,2μm,0.5s						
SUTB				IAML		20 35 30.0	
	comp=N,2μm,0.7s						
CSPM	**San Pablo Ridg**	**0.89**	**156**		Pg	20 35 14.3	+0.2
CPIM	**Pinole Ridge**	**0.90**	**151**		Pg	20 35 14.4	+0.2
JEPS	**Jepson Natural**	**0.90**	**125**		Pb	20 35 15.5	+0.2
MNDO	**Woodland Fire**	**0.93**	**306**		Pb	20 35 15.6	-0.2
CTAM	**Taylor**	**0.95**	**141**		Pb	20 35 15.8	-0.4
HMR	**Hamilton Ranch**	**0.98**	**129**		Pg	20 35 16.1	+0.3
BRIB	**Briones**	**0.98**	**150**		Pg	20 35 15.4	-0.4
BRK	**Berkeley--Havi**	**0.98**	**156**		Pg	20 35 15.4	-0.5
VAK	**Adit at Lawren**	**0.98**	**155**		Pg	20 35 15.4	-0.4
BL67	**Building 67, L**	**0.98**	**156**		Pg	20 35 15.6	-0.3
BKS	**Berkeley--Byer**	**0.99**	**155**		Pg	20 35 15.4	-0.6
GVV	**Valley View**	**1.00**	**4**		Pb	20 35 17.6	+0.5
JPRM	**Presidio of Sa**	**1.00**	**167**		Pg	20 35 15.5	-0.8
INGLE	**Inglenook, Smi**	**1.04**	**316**		Pg	20 35 16.9	-0.1
BDM	**Black Diamond**	**1.08**	**139**		Pg	20 35 17.0	-0.8
OSTM	**Stimpson Lane**	**1.09**	**57**		Pg	20 35 16.8	-1.0
TWIT	**Twitchell Isla**	**1.09**	**128**		Pb	20 35 18.2	-0.3
FARB	**Farallon Islan**	**1.09**	**190**		Pg	20 35 16.6	-1.4
FARB				IAML		20 35 39.7	
	comp=E,1μm,0.8s						
CRHM	**Round Hill Res**	**1.10**	**146**		Pg	20 35 17.5	-0.6
BGC	**Bolinger Road**	**1.11**	**150**		Pg	20 35 17.3	-1.0
KCPM	**Cahto Peak**	**1.11**	**325**		Pg	20 35 18.3	0.0
KCPM				IAML		20 35 42.9	
	comp=N,2μm,1.1s						
KCPM				IAML		20 35 54.3	
	comp=E,2μm,1.5s						
JSBM	**San Bruno Moun**	**1.13**	**165**		Pg	20 35 17.4	-1.3
GROM	**Round Mountain**	**1.14**	**4**		Pb	20 35 19.8	+0.2
OHCM	**Honcut**	**1.15**	**60**		Pg	20 35 17.3	-1.7
JMGM	**Milagra Ridge**	**1.16**	**168**		Pg	20 35 17.6	-1.6
KBNM	**Bluenose Ridge**	**1.16**	**344**		Pb	20 35 20.1	+0.2
CSLM	**San Leandro Hi**	**1.17**	**154**		Pg	20 35 18.1	-1.3
CLCB	**Lake Chabot**	**1.17**	**152**		Pg	20 35 18.5	-1.0
SAC	**San Andreas**	**1.22**	**167**		Pg	20 35 18.5	-1.9
SFRE	**Sierra Foothil**	**1.22**	**66**		Pg	20 35 18.4	-2.1
CMOB	**Morgan Territo**	**1.23**	**141**		Pg	20 35 18.9	-1.7
JCPM	**Coyote Point**	**1.24**	**163**		Pg	20 35 18.9	-1.8
OGOM	**Van Goodin Ran**	**1.25**	**45**		Pg	20 35 19.3	-1.8
ORV	**Oroville**	**1.25**	**51**		Pg	20 35 18.9	-2.2
JCHM	**Cahill Ridge**	**1.29**	**166**		Pg	20 35 19.5	-2.3
CBSNC	**Byron Hot Spri**	**1.30**	**137**		Pg	20 35 20.0	-2.0
CNIC	**Niles Canyon**	**1.33**	**151**		Pg	20 35 20.4	-2.0
CVLM	**Vallecito**	**1.36**	**147**		Pn	20 35 21.4	-1.5
CBZL	**Buffer Zone**	**1.36**	**142**		Pn	20 35 21.4	-1.5
KPK	**Kanaka Peak**	**1.39**	**54**		Pn	20 35 21.8	-1.7
WENL	**Wente Vineyard**	**1.40**	**145**		Pn	20 35 22.1	-1.3
O02D	**Mt. Diablo Mer**	**1.40**	**359**		Pn	20 35 23.6	+0.1
AFDM	**Forest Hills D**	**1.41**	**82**		Pn	20 35 21.8	-1.8
JRSC	**Jasper Ridge**	**1.43**	**163**		Pn	20 35 21.7	-2.1
JRSC				IAML		20 35 49.7	
	comp=N,847nm,1.0s						
JRSC				IAML		20 35 53.5	
	comp=E,947nm,0.7s						
JSFB	**Stanford Teles**	**1.45**	**161**		Pn	20 35 21.9	-2.2
JFP	**Foothills Park**	**1.48**	**162**		Pn	20 35 22.4	-2.2
CSTL	**Corral Hollow**	**1.51**	**138**		Pn	20 35 23.3	-1.7
CALM	**Calaveras Res.**	**1.53**	**150**		Pn	20 35 23.3	-1.9
JBMM	**Black Mountain**	**1.53**	**161**		Pn	20 35 23.2	-2.1
JSJM	**St Joseph**	**1.54**	**159**		Pn	20 35 23.6	-1.7
CMLM	**Mount Lewis**	**1.57**	**145**		Pn	20 35 24.0	-1.8
JPSM		**1.61**	**168**		Pn	20 35 24.2	-2.1
KMRM	**Mail Ridge**	**1.62**	**334**		Pb	20 35 27.2	-0.4
KMRM				IAML		20 36 08.9	
	comp=N,946nm,1.9s						
KMRM				IAML		20 36 17.9	
	comp=E,885nm,1.4s						
WELL	**Weller Preserv**	**1.64**	**101**		Pn	20 35 25.2	-1.5
MHC	**Mount Hamilton**	**1.68**	**148**		Pn	20 35 25.4	-2.1
CMB	**Columbia Colle**	**2.01**	**111**		Pn	20 35 31.0	-0.9
CMB				IAML		20 35 58.6	
	comp=N,450nm,1.3s						
CMB				IAML		20 35 59.3	
	comp=E,462nm,1.4s						
CDC	**Canada Road**	**2.02**	**149**		Pn	20 35 30.7	-1.2
HPCM	**Pacheco Lake**	**2.08**	**145**		Pn	20 35 31.6	-1.2
LSHM	**Sage Hen Hill**	**2.09**	**15**		Pb	20 35 34.6	-1.0
BEKR	**Beckworth**	**2.16**	**59**		Pn	20 35 34.4	+0.3
BEKR				IAML		20 36 09.1	
	comp=N,325nm,0.8s						
BEKR				IAML		20 36 09.2	
	comp=E,451nm,0.9s						
MPK	**Martis Peak**	**2.19**	**75**		Pn	20 35 35.1	+0.5
SAO	**San Andreas Ge**	**2.26**	**152**		Pn	20 35 33.4	-2.0
LBCM	**Butte Creek Ri**	**2.33**	**27**		Pn	20 35 37.3	+0.9
BUCR	**Buckhorn Ranch**	**2.34**	**117**		Pn	20 35 35.9	-0.6
PNTR	**Pine Nut**	**2.49**	**82**		Pn	20 35 39.3	+0.7
BSMM	**Soledad Missio**	**2.61**	**156**		Pn	20 35 38.6	-1.7
WAKR	**Walker**	**2.62**	**95**		Pn	20 35 41.6	+1.1
WAKR				IAML		20 36 20.1	
	comp=N,319nm,0.7s						
PAHR	**Pah Rah Range**	**2.79**	**69**		Pn	20 35 42.4	-0.3
PAHR				IAML		20 36 44.7	
	comp=N,241nm,2.4s						
HULI	**Fort Hunter Li**	**3.01**	**156**		Pn	20 35 43.7	-1.8
HULI				IAML		20 36 44.1	
	comp=E,202nm,1.5s						
MDPB	**Devils Postpil**	**3.12**	**110**	IAML		20 36 33.3	
	comp=E,245nm,0.8s						
RYN	**Ryan**	**3.32**	**91**	IAML		20 36 46.9	
	comp=N,135nm,0.7s						
RYN				IAML		20 36 47.5	
	comp=E,182nm,1.2s						
PKD	**Bear Valley Ra**	**3.33**	**147**	IAML		20 36 59.0	
	comp=E,125nm,1.4s						
PKD				IAML		20 37 06.1	
	comp=N,128nm,1.4s						
LHV	**Little Huntoon**	**3.38**	**98**		Pn	20 35 51.7	+1.0
DSP	**Deep Springs**	**4.04**	**109**	IAML		20 37 05.1	
	comp=E,95nm,1.2s						
DSP				IAML		20 37 09.0	
	comp=N,67nm,1.6s						
CWC	**Cottonwood Cre**	**4.39**	**121**	IAML		20 37 12.4	
	comp=E,89nm,1.9s						
CWC				IAML		20 37 19.9	
	comp=N,77nm,1.8s						
GMN	**Gold Mountain**	**4.59**	**107**		Pn	20 36 06.5	-1.1
ISA	**Isabella, Lake**	**4.62**	**131**	IAML		20 37 25.2	
	comp=E,78nm,1.2s						
ISA				IAML		20 37 48.7	
	comp=N,43nm,1.5s						
J05D	**Fort Rock, OR**	**4.65**	**14**	IAML		20 38 36.2	
	comp=E,43nm,2.4s						
J05D				IAML		20 39 06.2	
	comp=N,45nm,4.1s						
MPMC	**Manual Prospec**	**5.00**	**121**	IAML		20 37 52.0	
	comp=N,47nm,1.1s						
WCT	**Wildcat Mounta**	**5.25**	**110**	IAML		20 38 09.9	
	comp=E,35nm,2.2s						
WSHM	**Spangler Hills**	**5.27**	**125**	IAML		20 37 49.0	
	comp=E,37nm,0.6s						
WSHM				IAML		20 38 09.8	
	comp=E,36nm,1.7s						
PMD	**Palm Desert**	**7.27**	**133**		Pn	20 36 41.4	-2.7
BC3	**Big Chuckawall**	**7.81**	**129**		Pn	20 36 49.6	-2.0

IDC 03 20:42:34.2±1.7,50.31S×111.76E,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=59.3km s-min=29.1km az=95.0,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.50**	**7**	T	T	21 01 47.9	
	baz=186,slow=74,SNR=29						
H01W1	**Cape Leeuwin H**	**15.51**	**7**	T	T	21 01 48.2	
	baz=186,slow=74,SNR=32						
H01W3	**Cape Leeuwin H**	**15.52**	**7**	T	T	21 01 50.8	
	baz=186,slow=74,SNR=30						
ASAR	**Alice Springs**	**31.70**	**41**	P	P	20 48 59.3	-0.2
	0.7nm,0.6s,baz=210,slow=8.1,SNR=14 0.7nm,0.6s						
VNDA	**Vanda**	**33.02**	**162**	P	P	20 49 08.9	-1.6
	0.7nm,0.7s,baz=311,slow=3.8,SNR=2.4 0.7nm,0.7s						
WRA	**Warramunga Arr**	**35.20**	**39**	P	P	20 49 29.6	-0.4
	2.2nm,0.8s,baz=203,slow=10,SNR=8.5 2.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.39**	**347**	P	P	20 53 43.4	-0.4
	0.4nm,0.3s,baz=193,slow=5.9,SNR=4.4 0.4nm,0.3s						
TXAR	**Lajitas Array**	**146.12**	**115**	PKPbc	PKPab	21 02 17.5	+0.8
	0.6nm,0.9s,baz=202,slow=5.4,SNR=6.1						

NEIC ***03*** *20:45:01.5±2.5,49.7S±0.2×111.1E±0.2,h10km±2km, mb4.4/6,Error ellipse: s-maj=39.4km s-min=12.8km az=322.0*

IDC ***03*** *20:45:04.4±1.4,49.97S×111.64E,h0km,mb3.9/5, mbtmp3.9/5,MS3.2/5,Error ellipse: s-maj=54.3km s-min=22.2km az=99.0*

ISC 03 20:45:05.2±1.3,50.03S±0.1×111.9E±0.3,h10km,n18, σ1s60/12,mb4.0/7,MS3.2/5,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.18**	**7**	T	T	21 04 11.3	
	baz=186,slow=74,SNR=50						
H01W1	**Cape Leeuwin H**	**15.19**	**7**	T	T	21 04 15.6	
	baz=186,slow=74,SNR=52						
H01W3	**Cape Leeuwin H**	**15.20**	**7**	T	T	21 04 16.2	
	baz=186,slow=74,SNR=57						
MAW	**Mawson**	**29.81**	**216**	LR	LR	21 00 47.4	
	comp=Z,53nm,19.1s,baz=70,slow=32						
ASAR	**Alice Springs**	**31.40**	**41**	P	**P**	**20 51 26.0**	**-0.3**
ASAR	**Alice Springs**	**31.40**	**41**	P	**P**	**20 51 28.1**	**+1.8**
	1.4nm,0.7s,baz=207,slow=8.2,SNR=19 1.4nm,0.7s						
AS31	**Alice Springs**	**31.40**	**41**	P	**P**	**20 51 23.0**	**-3.4**
VNDA	**Vanda**	**33.28**	**162**	P	**P**	**20 51 42.1**	**-0.2**
VNDA				IAmb	IAmb	20 51 50.2	
	comp=Z,2.5nm,0.9s						
VNDA	**Vanda**	**33.28**	**162**	P	**P**	**20 51 43.2**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=288,slow=10,SNR=4.0						
VNDA				LR	LR	21 03 15.6	
	comp=Z,37nm,19.2s,baz=298,slow=33 comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**34.90**	**39**	P	**P**	**20 51 58.0**	**+1.1**
	comp=Z,3.1nm,0.8s,baz=206,slow=8.5,SNR=10 comp=Z,3.1nm,0.8s						
WR8	**Warramunga Arr**	**34.95**	**39**	P	P	20 51 51.4	-5.9
WB0	**Warramunga Arr**	**35.08**	**39**	P	**P**	**20 51 58.1**	**-0.3**
WB0				IAmb	IAmb	20 52 00.6	
	comp=Z,5.7nm,0.9s						
EIDS	**Eidsvold**	**38.91**	**65**	P	**P**	**20 52 30.9**	**0.0**
EIDS				IAmb	IAmb	20 52 41.0	
	comp=Z,16nm,1.5s						
QSPA	**South Pole Qui**	**40.13**	**180**	P	**P**	**20 52 38.8**	**-2.1**
QSPA				IAmb	IAmb	20 52 51.7	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**40.13**	**180**	P	**P**	**20 52 42.0**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=345,slow=1.2,SNR=3.8						
QSPA				LR	LR	21 08 14.9	
	comp=Z,41nm,19.6s,baz=283,slow=35 comp=Z,1.2nm,0.7s						
HNR	**Honiara**	**56.62**	**61**	LR	LR	21 17 35.6	
	comp=Z,25nm,18.1s,baz=126,slow=34						
CMAR	**Chiang Mai Arr**	**69.12**	**347**	P	**P**	**20 56 11.4**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=192,slow=5.5,SNR=4.8						
CMAR				LR	LR	21 24 44.8	
	comp=Z,9.0nm,19.6s,baz=120,slow=34 comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**146.16**	**114**	PKPbc	**PKPab**	**21 04 46.6**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=198,slow=6.1,SNR=8.5						

NEIC ***03*** *20:56:45.5±1.6,7.87S±0.08×159.00E±0.10,h56km±7km, mb4.7/36,Error ellipse: s-maj=15.3km s-min=10.4km az=55.0*

IDC ***03*** *20:56:46.0±0.6,7.91S×158.96E,h59km±5km,mb4.2/20, mbtmp4.5/22,MS3.4/20,Error ellipse: s-maj=14.6km s-min=6.4km az=55.0*

ISC 03 20:56:45.4±0.4,7.85S±0.05×159.03E±0.07,h55km,n110, σ1s39/102,mb4.6/47,MS3.4/20,1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAVO	**Savo Central**	**1.51**	**149**	P	**Pn**	**20 57 10.2**	**0.0**
HNR	**Honiara**	**1.82**	**150**		**Pn**	**20 57 14.2**	**-0.2**
HNR	**Honiara**	**1.82**	**150**	P	**Pn**	**20 57 14.8**	**+0.4**
	725nm,0.3s,baz=187,slow=5.0,SNR=37						
HNR				S	**Sn**	**20 57 37.0**	**+0.6**
	3μm,0.5s,baz=150,slow=24,SNR=22						
HNR				LR	LR	20 58 13.9	
	comp=Z,871nm,18.0s,baz=306,slow=49						
HNR	**Honiara**	**1.82**	**150**	P	**Pn**	**20 57 15.5**	**+1.1**
RABL	**Rabaul**	**7.73**	**298**	Pn	**Pn**	**20 58 37.8**	**+2.3**
SANVU	**Saraoutou**	**11.01**	**134**	Pn	**Pn**	**20 59 20.7**	**+0.4**
PATS	**Pohnpei**	**14.60**	**357**		**Pn**	**21 00 05.9**	**-3.1**
DZM	**Mont Dzumac**	**15.85**	**154**	P	**Pn**	**21 00 26.0**	**+0.8**
	2.0nm,0.4s,baz=305,slow=16,SNR=3.0						
TV1H	**Townsville Har**	**16.42**	**225**	P	**P**	**21 00 38.8**	**+4.5**
COEN	**Coen**	**16.70**	**247**	Pn	**Pn**	**21 00 32.6**	**-3.4**
AUNRC	**North Rockhamp**	**17.44**	**207**	P	**P**	**21 00 49.2**	**+3.6**
MTSU	**Mount Surprise**	**17.59**	**233**	P	**P**	**21 00 51.0**	**+3.7**
JAY	**Jayapura**	**18.99**	**285**	P	**P**	**21 01 02.8**	**0.0**
	24nm,0.8s,baz=70,slow=7.8,SNR=8.6						
EIDS	**Eidsvold**	**19.00**	**203**		**P**	**21 01 01.3**	**-1.4**
EIDS	**Eidsvold**	**19.00**	**203**	P	**Pn**	**21 01 04.8**	**+0.8**
QIS	**Mount Isa**	**22.64**	**234**	P	**P**	**21 01 43.0**	**+0.9**
QLP	**Quilpie**	**23.34**	**215**	P	**P**	**21 01 49.3**	**+0.2**
ARMA	**Armidale**	**23.50**	**196**	P	**P**	**21 01 50.7**	**0.0**
ARMA				IAmb	IAmb	21 01 52.0	
	comp=Z,15nm,0.7s						
AULRC	**Lightning Ridg**	**23.85**	**204**	P	**P**	**21 01 54.7**	**+0.9**
INKA	**Innaminka**	**26.28**	**219**		**P**	**21 02 15.1**	**-0.7**
INKA				IAmb	IAm

SSLB	Suanglung	48.69	311	P		P	21 05 22.7	-1.9
KSRS	Korea Array	53.63	329	P		P	21 06 02.6	+1.3
	comp=Z,2.3nm,0.7s,baz=141,slow=7.0,SNR=7.5							
	comp=Z,2.3nm,0.7s							
NJ2	Nanjing	55.16	318	*eP*		P	21 06 14.0	+1.4
NJ2				pmax	pmax			
	comp=Z,6.0nm,0.6s							
USRK	Ussuriysk Ar.	57.28	337	P		P	21 06 27.5	+0.1
	comp=Z,7.5nm,0.8s,baz=157,slow=5.1,SNR=7.1							
	comp=Z,7.5nm,0.8s							
TIA	Tai'an	58.90	321	P		P	21 06 39.3	+0.3
TIA				pmax	pmax			
	comp=Z,7.0nm,0.7s							
BNX	BinXian	60.39	335	⇑P		P	21 06 50.1	+1.1
BNX				pmax	pmax			
	comp=Z,11nm,0.8s							
PETK	Petropavlovsk-	60.73	359	P		P	21 06 51.3	+0.1
	comp=Z,6.1nm,0.6s,baz=162,slow=6.6,SNR=24							
PETK				LR	LR		21 29 26.1	
	comp=Z,26nm,21.7s,baz=146,slow=32							
	comp=Z,6.1nm,0.6s							
HNS	HongShan	61.15	321	⇓P		P	21 06 55.2	+0.8
HNS				pmax	pmax			
	comp=Z,10.0nm,1.2s							
SHEM	Shemya Is, Ala	61.69	10	LR	LR		21 28 50.1	
	comp=Z,17nm,20.7s,baz=240,slow=31							
XAN	Xi'an	63.12	314	*eP*		P	21 07 08.6	+0.9
KMI	Kunming	63.82	303	P		P	21 07 14.5	+1.8
KMI				pmax	pmax			
	comp=Z,18nm,0.9s							
HEH	HeiHe	64.05	338	*eP*		P	21 07 13.7	+0.3
HEH				pmax	pmax			
	comp=Z,9.0nm,0.9s							
CMAR	Chiang Mai Arr	64.76	295	P		P	21 07 19.9	+1.2
	comp=Z,1.1nm,0.3s,baz=117,slow=5.1,SNR=13							
CMAR				pP		pP	21 07 36.1	+2.1
	comp=Z,1.4nm,0.7s,baz=105,slow=4.8,SNR=1.9							
	comp=Z,1.1nm,0.3s							
HHC	Hu-ho-hao-te	65.18	322	*eP*		P	21 07 22.9	+1.7
HHC				pmax	pmax			
	comp=Z,13nm,0.9s							
PZH	PanZhiHua	65.19	304	P		P	21 07 22.4	+0.9
HILR	Hailar Array B	66.64	333	P		P	21 07 30.1	-0.2
	comp=Z,1.7nm,0.4s,baz=131,slow=7.6,SNR=2.8							
	comp=Z,1.7nm,0.4s							
MA2	Magadan	67.52	355	LR	LR		21 33 59.4	
	comp=Z,16nm,21.8s,baz=148,slow=33							
VNDA	Vanda	69.66	179	P		P	21 07 47.8	-0.9
VNDA	Vanda	69.66	179	P		P	21 07 48.4	-0.3
	comp=Z,1.2nm,0.7s,baz=12,slow=5.6,SNR=2.9							
VNDA				pP		pP	21 08 03.8	-0.2
	comp=Z,4.0nm,0.8s,baz=333,slow=6.8,SNR=8.6							
VNDA				LR	LR		21 33 05.4	
	comp=Z,40nm,20.9s,baz=0.0,slow=31							
	comp=Z,1.2nm,0.7s							
SEY	Seymchan	70.75	357	P		P	21 07 56.4	+0.9
	comp=Z,3.3nm,0.7s,baz=188,slow=7.8,SNR=6.9							
SEY				LR	LR		21 38 10.5	
	comp=Z,21nm,19.7s,baz=146,slow=35							
	comp=Z,3.3nm,0.7s							
ULN	Ulaanbaatar	71.90	326			P	21 08 02.3	-0.7
ULN				IAmb	IAmb		21 08 05.6	
	comp=Z,14nm,1.1s							
GTA	Gaotai	72.11	316	P		P	21 08 06.3	+1.9
GTA				pP	PcP		21 08 23.0	+0.4
GTA				pmax	pmax			
	comp=Z,7.0nm,1.0s							
SONM	Songino Array	72.25	326	P		P	21 08 06.5	+1.5
	comp=Z,7.9nm,0.7s,baz=139,slow=5.9,SNR=39							
SONM				pP		PcP	21 08 22.5	-0.5
	comp=Z,2.4nm,0.6s,baz=130,slow=4.8,SNR=4.7							
	comp=Z,7.9nm,0.7s							
SHL	Shillong	73.18	300			P	21 08 10.4	-0.7
YAK	Yakutsk	73.29	346			P	21 08 10.6	-0.1
YAK	Yakutsk	73.29	346	LR	LR		21 40 36.6	
	comp=Z,11nm,19.3s,baz=150,slow=36							
LSA	Lhasa	75.06	303	P		P	21 08 20.4	-2.0
LSA				pmax	pmax			
	comp=Z,5.0nm,1.1s							
KDAK	Kodiak Island	76.23	24	LR	LR		21 34 00.0	
	comp=Z,32nm,21.5s,baz=213,slow=29							
L19K	White Mountain	78.32	20	P		P	21 08 40.3	+0.8
L19K				IAmb	IAmb		21 08 41.6	
	comp=Z,6.3nm,0.9s							
TIXI	Tiksi	81.79	351	P		P	21 08 57.9	-0.1
	comp=Z,1.3nm,0.5s,baz=123,slow=11,SNR=14							
	comp=Z,1.3nm,0.5s							
CCB	Clear Creek Bu	82.34	20			P	21 08 59.9	-1.1
ILAR	Eielson Array	82.73	20			P	21 09 02.6	-0.5
ILAR	Eielson Array	82.73	20	P		P	21 09 02.8	-0.2
	comp=Z,1.3nm,0.7s,baz=246,slow=4.9,SNR=18							
ILAR				pP		pP	21 09 20.8	+2.4
	comp=Z,0.4nm,0.4s,baz=240,slow=5.3,SNR=2.1							
	comp=Z,1.3nm,0.7s							
DOT	Dot Lake	83.11	22	P		P	21 09 05.2	+0.2
DOT				IAmb	IAmb		21 09 06.8	
	comp=Z,7.9nm,0.8s							
J25K	Salcha River,	83.17	21	IAmb	IAmb		21 09 07.1	
	comp=Z,12nm,1.5s							
M27K	Edge Creek, AK	83.26	24	IAmb	IAmb		21 09 08.5	
	comp=Z,12nm,1.2s							
SCRK	Sand Creek	83.31	22			P	21 09 05.2	-1.0
SCRK				IAmb	IAmb		21 09 08.1	
	comp=Z,5.1nm,0.8s							
HYT	Haines Junctio	84.34	26			P	21 09 11.2	-0.3
HYT				IAmb	IAmb		21 09 13.6	
	comp=Z,4.4nm,0.8s							
G26K	Porcupine Rive	85.02	19	IAmb	IAmb		21 09 17.5	
	comp=Z,12nm,1.2s							
H27K	Steamboat Moun	85.40	20	P		P	21 09 17.5	+0.8
H27K				IAmb	IAmb		21 09 23.7	
	comp=Z,4.2nm,1.2s							
BBB	Bella Bella	85.82	36	LR	LR		21 39 25.7	
	comp=Z,20nm,20.3s,baz=206,slow=30							
O02D	Mt. Diablo Mer	86.08	49	P		P	21 09 19.6	-1.1
O02D				IAmb	IAmb		21 09 24.5	
	comp=Z,6.9nm,0.9s							
MKAR	Makanchi Array	86.69	318			P	21 09 23.6	+0.1
MKAR	Makanchi Array	86.69	318	P		P	21 09 23.8	+0.4
	comp=Z,4.0nm,0.6s,baz=92,slow=6.2,SNR=44							
MKAR				pP		pP	21 09 40.7	+1.6
	comp=Z,2.0nm,0.6s,baz=94,slow=5.9,SNR=6.2							
	comp=Z,4.0nm,0.6s							
I30M	Mount Dempster	86.78	22	IAmb	IAmb		21 09 25.7	
	comp=Z,4.3nm,0.9s							
DLBC	Dease Lake	86.86	30	LR	LR		21 42 11.4	
	comp=Z,23nm,19.9s,baz=204,slow=31							
ZALV	Zalesovo Beam	87.13	325	P		P	21 09 24.1	-1.3
	comp=Z,0.7nm,0.5s,baz=120,slow=6.3,SNR=4.4							
	comp=Z,0.7nm,0.5s							
NVAR	Mina Array Bea	89.12	51	P		P	21 09 36.9	+1.4
	comp=Z,2.2nm,0.8s,baz=244,slow=7.2,SNR=12							
	comp=Z,2.2nm,0.8s							
PFO	Pinyon Flats O	89.75	56	LR	LR		21 40 23.9	
	comp=Z,27nm,21.7s,baz=254,slow=29							
KURBB	Kurchatov Arra	90.02	321	P		P	21 09 38.3	-0.8
	comp=Z,0.5nm,0.4s,baz=102,slow=3.8,SNR=6.1							
	comp=Z,0.5nm,0.4s							
NEW	Newport	91.72	42	LR	LR		21 45 40.7	
	comp=Z,21nm,18.0s,baz=272,slow=32							
YKA	Yellowknife Ar	95.22	28	LR	LR		21 48 36.7	
	comp=Z,19nm,18.8s,baz=274,slow=33							
BVAR	Borovoye Array	95.39	323	P		P	21 10 03.2	-0.7
	comp=Z,3.1nm,0.7s,baz=94,slow=5.8,SNR=16							
	comp=Z,3.1nm,0.7s							
PDAR	Pinedale Array	96.30	48	P		P	21 10 08.8	+0.3
PDAR	Pinedale Array	96.30	48	P		P	21 10 08.9	+0.4
	comp=Z,0.4nm,0.6s,baz=198,slow=1.5,SNR=7.5							
	comp=Z,0.4nm,0.6s							
ANMO	Albuquerque	98.13	56	LR	LR		21 46 06.5	
	comp=Z,26nm,20.3s,baz=324,slow=30							
FINES	FINESS Array B	116.31	337	PKP		PKPdf	21 15 22.2	-0.3
	comp=Z,1.3nm,0.8s,baz=119,slow=4.9,SNR=3.9							
FINES				pPKP		pPKPdf	21 15 39.1	+0.2
	comp=Z,2.3nm,0.9s,baz=173,slow=1.5,SNR=1.7							
AKASG	Malin Array Be	120.53	325	PKP		PKPdf	21 15 30.4	-0.6
	comp=Z,0.6nm,0.4s,baz=46,slow=2.7,SNR=4.9							
NB2	NORSAR Subarra	121.77	342	PKPdf		pPKPdf	21 15 50.3	+0.8
	comp=Z,0.5nm,0.6s,baz=39,slow=1.9							
NOA	NORSAR Array B	121.77	342	pPKP		pPKPdf	21 15 49.8	+0.3
	comp=Z,0.4nm,0.6s,baz=11,slow=0.9,SNR=1.5							
LPAZ	La Paz	127.53	117	PKP		PKPdf	21 15 46.3	+0.2
	comp=Z,1.1nm,0.8s,baz=284,slow=4.2,SNR=4.1							
CLL	Collm	128.41	333	*i* PKPdf		PKiKP	21 15 47.4	+0.7
GERES	GERESS Array B	129.80	331	PKP		PKiKP	21 15 49.8	+0.1
	comp=Z,1.1nm,0.7s,baz=56,slow=3.4,SNR=8.6							
BDFB	Brasilia	144.47	131	PKP		PKPab	21 16 15.0	-0.2
	comp=Z,2.0nm,0.4s,baz=273,slow=1.4,SNR=5.1							
BDFB				pPKP		pPKPdf	21 16 31.4	-1.9
	comp=Z,6.6nm,0.7s,baz=256,slow=2.6,SNR=6.1							
ESDC	Sonseca Array	144.83	337	pPKP		pPKPdf	21 16 33.1	0.0
	comp=Z,2.4nm,1.0s,baz=25,slow=3.5,SNR=6.4							

*IDC **03** 21:00:22.7±6.2,5.15S×151.01E,h64km±56km, mb3.4/5, mbtmp3.7/6,ML1.6/1,MS3.3/2,Error ellipse: s-maj=88.1km s-min=34.3km az=126.0*
ISC 03 21:00:20.4±2.1,5.3S±0.4×151.3E±0.5, h50km, n8, σ1§06/7, mb3.6/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	Port Moresby	5.83	225	P		Pn	21 01 44.8	+0.5
	1.1nm,0.3s,baz=15,slow=12,SNR=2.1							
PMG				S		Sn	21 02 50.3	+0.4
	21nm,0.8s,baz=154,slow=14,SNR=3.7							
	11nm,0.6s							
WRA	Warramunga Arr	22.04	227	P		P	21 05 09.5	-1.6
	0.5nm,0.5s,baz=51,slow=10,SNR=2.3							
	0.5nm,0.5s							
ASAR	Alice Springs	24.83	221	P		P	21 05 38.2	0.0
	1.3nm,0.8s,baz=43,slow=10,SNR=4.3							
	1.3nm,0.8s							
FITZ	Fitzroy Crossi	28.14	241	P		P	21 06 07.0	-1.2
	1.3nm,0.6s,baz=58,slow=10,SNR=1.7							
	1.3nm,0.6s							
JCJ	Chichijima	33.36	345	LR		LR	21 18 52.1	
	comp=Z,32nm,21.9s,baz=30,slow=33							
NWAO	Narrogin (SRO)	42.02	225	LR		LR	21 23 59.9	
	comp=Z,55nm,20.7s,baz=304,slow=34							
ZALV	Zalesovo Beam	80.72	327	P		P	21 12 28.6	+0.3
	0.3nm,0.3s,baz=116,slow=6.6,SNR=1.7							
	0.3nm,0.3s							
ILAR	Eielson Array	83.14	22	P		P	21 12 40.9	+0.1
	0.4nm,0.7s,baz=250,slow=5.4,SNR=4.5							
	0.4nm,0.7s							

*NOU **03** 21:44:24.7,38.11S×176.66E,h166km, MLv4.1/21, North Island, New Zealand*
*WEL **03** 21:44:28.7±0.8,38.5S±5.1×17.7E±.7km, M3.5/37, ML3.1/9, MLv3.5/37, Error ellipse: s-maj=7.0km s-min=4.8km az=38.5, confirmed*
ISC 03 21:44:23.6±1.5,38.06S±0.05×176.65E±0.05, h174km±8km, n188, σ1§43/197, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARZ	Manawahe	0.07	19	P		Pn	21 44 46.9	+0.3
EDRZ	Edgecumbe	0.09	125	P		Pn	21 44 47.0	+0.3
MKRZ	Makatiti	0.16	239	P		Pn	21 44 47.9	+1.1
TARZ	Mount Tarawera	0.21	211	P		Pn	21 44 47.4	+0.6
LIRZ	Lichensteins R	0.21	284	P		Pn	21 44 43.9	-2.9
OMRZ	Omania	0.22	257	P		Pn	21 44 47.2	+0.4
OPRZ	Ohinepanea	0.22	341	P		Pn	21 44 46.6	-0.2
RRRZ	Republican Roa	0.30	200	P		Pn	21 44 47.5	+0.5
HLRZ	Highlands Stat	0.30	229	P		Pn	21 44 47.8	+0.8
KARZ	Kaharoa	0.32	276	P		Pn	21 44 47.2	+0.2
WHRZ	Whale Island	0.33	53	P		Pn	21 44 48.4	+1.3
NGRZ	Ngongotaha	0.36	262	P		Pn	21 44 47.8	+0.6
UTU	Utuhina	0.38	251	P		Pn	21 44 48.0	+0.8
HSRZ	Hossack Road	0.41	231	P		Pn	21 44 48.1	+0.8
URZ	Urewera	0.42	119	P		Pn	21 44 47.5	+0.2
URZ	Urewera	0.42	119	P		Pn	21 44 47.6	+0.3
MUGZ	Murupara	0.43	167	P		Pn	21 44 47.9	+0.5
HRRZ	Hamilcock Road	0.44	220	P		Pn	21 44 48.2	+0.7
TGRZ	Tauranga	0.45	317	P		Pn	21 44 47.6	+0.2
PRRZ	Plateau Road	0.49	204	P		Pn	21 44 48.3	+0.7
GRRZ	Galatos Road	0.51	235	P		Pn	21 44 48.6	+0.9
ALRZ	Allen Road	0.56	205	P		Pn	21 44 48.6	+0.6
KMRZ	Kaimai	0.59	290	P		Pn	21 44 48.5	+0.3
WPRZ	Whakapapatarin	0.60	219	P		Pn	21 44 49.1	+0.9
RTZ	Ruatahuna	0.62	155	P		Pn	21 44 49.3	+1.0
MWZ	Matawai	0.75	112	P		Pn	21 44 49.9	+0.9
MWZ				S		Sn	21 45 06.7	-1.8
RAGZ	Rawiri	0.75	126	P		Pn	21 44 50.4	+1.4
RAGZ				S		Sn	21 45 07.7	-1.0
KUTZ	Kaahu Road	0.78	236	P		Pn	21 44 50.3	+1.2
MRHZ	Matea Rd	0.80	193	P		Pn	21 44 50.4	+1.1
MRHZ				S		Sn	21 45 07.7	-1.6
MTHZ	Maungataniwha	0.81	169	P		Pn	21 44 50.7	+1.3
MTHZ				S		Sn	21 45 08.2	-1.2
WHTZ	Whakaora	0.81	221	P		Pn	21 44 51.0	+1.5
RUGZ	Raukumara Rang	0.82	84	P		Pn	21 44 49.4	-0.2
RUGZ				S		Sn	21 45 06.1	-3.4
MYRZ	Mayor Island	0.84	337	P		Pn	21 44 50.1	+0.5
SNGZ	Shannon Statio	0.91	143	P		Pn	21 44 51.9	+1.9
SNGZ				S		Sn	21 45 09.7	-0.8
TLZ	Tolley Road	0.91	252	P		Pn	21 44 51.1	+1.0
RAHZ	Arahi	0.93	158	P		Pn	21 44 52.1	+1.9
RAHZ				S		Sn	21 45 10.2	-0.5
HATZ	Hinemaiaia	0.94	207	P		Pn	21 44 51.5	+1.3
HAZ	Te Kaha	0.95	72	P		Pn	21 44 50.4	+0.2
HAZ				S		Sn	21 45 07.9	-2.8
TOZ	Tahuroa Road	0.96	289	P		Pn	21 44 51.0	+0.7
WATZ	Wairara	0.97	227	P		Pn	21 44 51.8	+1.3
TKGZ	Te Karaka	1.02	112	P		Pn	21 44 52.6	+1.8
TKGZ				S		Sn	21 45 11.0	-0.8
NMHZ	Naumai	1.05	173	P		Pn	21 44 53.4	+2.3
TWGZ	Tauwhareparae	1.06	97	P		Pn	21 44 53.0	+1.8
RATZ	Rangitukua	1.06	220	P		Pn	21 44 52.6	+1.4
RIGZ	Rimuhau	1.09	127	P		Pn	21 44 53.4	+2.2
RIGZ				S		Sn	21 45 12.7	-0.2
RITZ	Rihia Road	1.11	214	P		Pn	21 44 53.4	+1.8
BKZ	Black Stump Fm	1.11	186	P		Pn	21 44 52.8	+1.2
BKZ	Black Stump Fm	1.11	186	S		Sn	21 45 12.7	-0.7
BKZ	Black Stump Fm	1.11	186	P		Pn	21 44 53.0	+1.4
WHHZ	Waihua	1.12	156	P		Pn	21 44 53.8	+2.3
PKGZ	Pakihiroa	1.15	81	P		Pn	21 44 53.0	+1.2
KATZ	Kakaramea	1.18	219	P		Pn	21 44 53.8	+1.5
ARHZ	Aropaoanui	1.24	167	P		Pn	21 44 54.9	+2.4
KNZ	Kokohu	1.26	140	P		Pn	21 44 54.9	+2.1
PUZ	Puketiti	1.27	91	P		Pn	21 44 54.2	+1.3
NTVZ	North Tongarir	1.29	216	P		Pn	21 44 54.8	+1.7
TMVZ	Te Maari	1.29	215	P		Pn	21 44 54.7	+1.5
CNGZ	Carnagh Statio	1.30	110	P		Pn	21 44 55.6	+2.5
KRVZ	Karewarewa	1.30	217	P		Pn	21 44 55.1	+1.8
PRDZ	Paritu Road	1.33	157	P		Pn	21 44 55.6	+2.4
ETVZ	East Tongariro	1.30	214	P		Pn	21 44 55.1	+1.8
WTVZ	West Tongariro	1.34	218	P		Pn	21 44 55.3	+1.6
NNVZ	North Ngauruho	1.34	217	P		Pn	21 44 55.5	+1.7
OTVZ	Oturere	1.35	214	P		Pn	21 44 55.6	+1.9
SNVZ	South Ngauruho	1.38	215	P		Pn	21 44 55.8	+1.8
KWHZ	Kaweka Forest	1.38	187	P		Pn	21 44 56.0	+2.1
NGZ	Ngauruhoe	1.39	216	P		Pn	21 44 55.8	+1.7
TWVZ	Taurewa	1.39	223	P		Pn	21 44 55.5	+1.4
MCHZ	McNeill Hill	1.39	178	P		Pn	21 44 56.4	+2.5
MXZ	Matakaoa Point	1.41	70	P		Pn	21 44 55.5	+1.4
MXZ	Matakaoa Point	1.41	70	S		Sn	21 45 17.6	0.0
MXZ	Matakaoa Point	1.41	70	P		Pn	21 44 55.6	+1.4
WMGZ	Waiomatatini S	1.42	81	P		Pn	21 44 55.8	+1.5
COVZ	Chateau Observ	1.43	217	P		Pn	21 44 56.0	+1.5
TUVZ	Tukino	1.44	212	P		Pn	21 44 56.4	+1.8
FWVZ	Far West T-bar	1.47	215	P		Pn	21 44 56.5	+1.5
MHGZ	Mahia Peninsul	1.48	138	P		Pn	21 44 57.5	+2.7
MAVZ	Mataranga	1.48	215	P		Pn	21 44 56.8	+1.7
WHVZ	Whangaehu Hut	1.48	214	P		Pn	21 44 56.7	+1.6
HIZ	Hauiti	1.48	251	P		Pn	21 44 56.4	+1.6
HIZ	Hauiti	1.48	251	S		Sn	21 45 19.5	+0.6
HIZ	Hauiti	1.48	251	P		Pn	21 44 56.5	+1.7
KUZ	Kuaotunu	1.50	330	P		Pn	21 44 55.3	+0.3
KUZ	Kuaotunu	1.50	330	P		Pn	21 44 55.4	+0.4
TRVZ	Turoa	1.51	214	P		Pn	21 44 57.0	+1.6
WNVZ	Wahianoa	1.51	213	P		Pn	21 44 57.0	+1.7
MKAZ	Moumakai	1.51	308	P		Pn	21 44 56.0	+0.9
MOVZ	Moawhango	1.52	207	P		Pn	21 44 56.6	+1.3
PKVZ	Pokaka	1.60	219	P		Pn	21 44 57.8	+1.7
KRHZ	Kereru	1.60	188	P		Pn	21 44 57.8	+1.8
MTVZ	Mangateitei	1.61	214	P		Pn	21 44 58.0	+1.8
CKHZ	Cape Kidnapper	1.64	168	P		Pn	21 44 58.9	+2.6
KBAZ	Karaka Road Bo	1.69	304	P		Pn	21 44 58.2	+1.3
WIAZ	Waiheke Island	1.74	316	P		Pn	21 44 58.5	+1.0
KAHZ	Kahuranaki	1.75	174	P		Pn	21 44 58.0	+2.5
ETAZ	East Tamaki Re	1.75	308	P		Pn	21 44 58.8	+1.2
VRZ	Vera Road	1.82	234	P		Pn	21 45 00.3	+2.0
AWAZ	Awhitu Peninsu	1.87	301	P		Pn	21 44 59.9	+1.1
PNHZ	Pukenui	1.89	190	P		Pn	21 45 00.5	+1.5
MBAZ	Motutapu North	1.89	312	P		Pn	21 45 00.3	+1.3
EPAZ	Eden Park BICE	1.92	307	P		Pn	21 45 00.5	+1.2
HBAZ	Herne Bay Bore	1.94	308	P		Pn	21 45 00.8	+1.2
PXZ	Pawanui	1.98	175	P		Pn	21 45 02.1	+2.2
WTAZ	Waiatarua	1.99	304	P		Pn	21 45 01.4	+1.3
WPHZ	Waipukurau	2.01	184	P		Pn	21 45 02.2	+1.9
GRZ	Great Barrier	2.04	332	P		Pn	21 45 01.6	+0.9
ABAZ	Army Bay	2.05	315	P		Pn	21 45 02.2	+1.4
TSZ	Takapari Road	2.07	195	P		Pn	21 45 02.5	+1.5
RVAZ	Riverhead Bore	2.09	307	P		Pn	21 45 02.3	+1.1
WAZ	Wanganui	2.13	217	P		Pn	21 45 03.6	+1.9
PRHZ	Porangahau	2.21	180	P		Pn	21 45 04.5	+2.0
DREZ	Durham Road	2.22	239	P		Pn	21 45 05.8	+3.1
LREZ	Lake Rotokare	2.25	231	P		Pn	21 45 05.8	+2.9
DVHZ	Dannevirke	2.27	189	P		Pn	21 45 04.6	+1.3
PREZ	Palmer Road	2.33	236	P		Pn	21 45 07.0	+3.0
NEZ	North Egmont	2.34	238	P		Pn	21 45 06.9	+2.9
PKE	Pukeiti	2.37	241	P		Pn	21 45 07.2	+2.8
OHWZ	Ohakea	2.38	205	P		Pn	21 45 06.5	+2.0
KHEZ	Kahui Hut	2.40	238	P		Pn	21 45 06.8	+2.0
KHEZ	Kahui Hut	2.40	238	P		Pn	21 45 07.6	+2.7
ANWZ	Angora Road	2.41	183	P		Pn	21 45 06.8	+2.0
POWZ	Post Office Ro	2.43	196	P		Pn	21 45 06.5	+1.4
PRWZ	Pori Road	2.55	192	P		Pn	21 45 08.3	+1.8
BFZ	Birch Farm	2.64	187	P		Pn	21 45 08.9	+1.3
BFZ	Birch Farm	2.64	187	P		Sn	21 45 40.7	-1.2
BFZ	Birch Farm	2.64	187	P		Pn	21 45 09.0	+1.5
MRZ	Mangatainoka R	2.73	197	P		Pn	21 45 09.7	+1.0
TIWZ	Tintock	2.78	192	P		Pn	21 45 10.7	+1.5
WCZ	Waipu Caves	2.80	318	P		Pn	21 45 11.1	+1.6
CPWZ	Castlepoint	2.87	187	P		Pn	21 45 12.4	+2.1
HOWZ	Holdsworth Sta	2.97	197	P		Pn	21 45 12.4	+0.8
OGWZ	Otaki Gorge	2.98	202	P		Pn	21 45 12.6	+0.9
TMWZ	Te Maipa	3.10	191	P		Pn	21 45 14.3	+1.1
KIWZ	Kapiti Island	3.11	205	P		Pn	21 45 13.8	+0.5
MTW	Mount Morrison	3.22	196	P		Pn	21 45 15.3	+0.6
CAW	Cannon Point	3.28	201	P		Pn	21 45 16.0	+0.6
TRWZ	Traveller	3.42	192	P		Pn	21 45 17.8	+0.7
PAWZ	Paruwai Farm	3.45	195	P		Pn	21 45 18.0	+0.4
DUWZ	D'Urville Isla	3.46	217	P		Pn	21 45 18.0	+0.4
MSWZ	Moikau Station	3.52	197	P		Pn	21 45 18.7	+0.3
WEL	Wellington	3.54	204	P		Pn	21 45 19.0	+0.4
SNZO	South Karori	3.58	204	P		Pn	21 45 19.2	+0.1
SNZO	South Karori	3.58	204	S		Sn	21 46 01.3	-1.2
BHW	Baring Head	3.62	202	P		Pn	21 45 19.7	+0.1
TCW	Tory Channel	3.64	209	P		Pn	21 45 19.9	0.0
PLWZ	Palliser	3.67	197	P		Pn	21 45 20.5	+0.2
OUZ	Omahuta	3.74	318	P		Pn	21 45 23.4	+2.2
OUZ	Omahuta	3.74	318	S		Sn	21 46 07.5	+1.3
OUZ	Omahuta	3.74	318	P		Pn	21 45 23.5	+2.2
TUWZ	Tuamarina	3.96	211	P		Pn	21 45 24.6	+0.7
NNZ	Nelson	4.04	218	P		Pn	21 45 25.2	+0.3
TKNZ	Takaka Hill	4.12	223	P		Pn	21 45 26.1	+0.1
CMWZ	Cape Campbell	4.14	206	P		Pn	21 45 27.3	+1.1
QRZ	Quartz Range	4.22	228	P		Pn	21 45 27.5	+0.3
QRZ	Quartz Range	4.22	228	P		Pn	21 45 27.6	+0.3
BSWZ	Blackbirch Sta	4.23	209	P		Pn	21 45 27.4	0.0
MRNZ	Matariki Terra	4.49	221	P		Pn	21 45 30.6	-0.1
THZ	Tophouse	4.69	217	P		Pn	21 45 33.2	-0.2

CNGA	**Al SSO del Vol**	**3.55**	**115**	P	**Pn**	**22 03 23.8**	**-1.1**
CNGN	**Cerro Negro**	**3.56**	**115**	*e*P	**Pn**	**22 03 23.4**	**-1.5**
ELI1	**Hacienda Flor**	**5.49**	**127**	*e*P	**Pn**	**22 03 51.0**	**+0.3**
LAPC	**Finca la Perla**	**5.51**	**125**	*e*P	**Pn**	**22 03 50.1**	**-0.9**
ALIBA	**Liberia Airpor**	**5.53**	**127**	*e*P	**Pn**	**22 03 51.4**	**+0.2**
BUAI	**Buenos Aires**	**5.53**	**124**	*e*P	**Pn**	**22 03 50.2**	**-1.0**
VRLE	**La Escondida,**	**5.55**	**125**	*e*P	**Pn**	**22 03 50.4**	**-1.2**
VMAR	**Armenia, Volca**	**5.74**	**123**	*e*P	**Pn**	**22 03 53.2**	**-0.9**
HORNC	**Hornillas**	**5.75**	**124**	*e*P	**Pn**	**22 03 53.2**	**-1.0**
SAJU	**San Juanillo,**	**5.75**	**133**	*e*P	**Pn**	**22 03 53.3**	**-0.8**
CUI	**Cuipilapa**	**5.79**	**125**	*e*P	**Pn**	**22 03 54.1**	**-0.6**
JUD3	**Juan Diaz 3**	**5.80**	**131**	*e*P	**Pn**	**22 03 54.5**	**-0.5**
PLVR	**Palo Verde**	**5.83**	**128**	*e*P	**Pn**	**22 03 55.2**	**-0.2**
INVE	**Universidad In**	**5.97**	**125**	*e*P	**Pn**	**22 03 57.4**	**+0.2**
QUEB	**Quebradon, Cot**	**6.02**	**123**	*e*P	**Pn**	**22 03 57.1**	**-0.7**
NYURE	**Nandayure**	**6.13**	**130**	*e*P	**Pn**	**22 03 58.5**	**-0.8**
JTS	**Las Juntas de**	**6.17**	**126**	*e*P	**Pn**	**22 03 59.5**	**-0.4**
TABAC	**Tabacon**	**6.20**	**124**	*e*P	**Pn**	**22 03 59.9**	**-0.4**
ARE1	**Arenal 1**	**6.26**	**124**	*e*P	**Pn**	**22 04 00.8**	**-0.3**
VARE2	**V. Arenal**	**6.26**	**124**	*e*P	**Pn**	**22 04 00.7**	**-0.4**
JCR1	**Jicaral**	**6.33**	**130**	*e*P	**Pn**	**22 04 01.6**	**-0.4**
PICV	**PH. Pirrs**	**7.17**	**127**	*e*P	**Pn**	**22 04 12.2**	**-1.1**
PIEC	**Cerro El Cedra**	**7.35**	**126**	*e*P	**Pn**	**22 04 15.9**	**-0.1**
BUS1	**Rivas**	**7.56**	**125**	*e*P	**Pn**	**22 04 18.6**	**-0.4**
DRK0	**Durika**	**8.13**	**125**	*e*P	**Pn**	**22 04 26.3**	**-0.2**
PIRO	**Carate, Puerto**	**8.59**	**130**	*e*P	**Pn**	**22 04 33.9**	**+1.4**

IDC ***03*** *22:05:54.0±0.7,46°.11N×152°.84E,h0km,mb3.9/26, mbtmp3.9/29,ML2.9/3,MS3.5/25,Error ellipse: s-maj=18.4km s-min=14.9km az=157.0*

NEIC ***03*** *22:05:56.1±1.2,46°.2N±0°.1×152°.9E±0°.1,h10km±1km, mb4.5/13,Error ellipse: s-maj=20.9km s-min=13.8km az=139.0*

MOS ***03*** *22:05:57.6±1.1,46°.22N×152°.86E,h35km,mb4.5/15,Error ellipse: s-maj=9.7km s-min=7.5km az=72.9*

SKHL ***03*** *22:05:57.4±0.3,46°.10N×153°.00E,h40km±8km,mb4.9/4, mbv5.6/3,msh5.1/4*

ISC 03 22:05:58.9±0.7,**46°.21N**±0°.08×**152°.92E**±0°.07,**h31**km,**n125,** σ1**s16**/112,**mb4.1**/41,**MS3.6**/24,**4C-1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.67**	**256**	*e*PN	**Pn**	**22 06 53.9**	**+0.4**
KUR				*i* S	**Sn**	**22 07 37.3**	**+1.6**
KUR				pmax	pmax		
	comp=Z,141nm,0.4s						
KUR				pmax	pmax		
	comp=E,53nm,0.2s						
KUR				smax	smax		
	comp=N,251nm,0.7s						
KUR				smax	smax		
	comp=E,295nm,0.7s						
KUR	**Kuril'sk**	**3.67**	**256**	*e*P	**Pn**	**22 06 53.4**	**-0.1**
KUR				AMB	AMB	22 06 56.0	
	comp=E,150nm,0.4s						
KUR				*e*S	**Sn**	**22 07 35.7**	**0.0**
KUR				A	A	22 07 41.3	
	comp=E,1μm,3.0s						
KUR				A	A	22 07 41.3	
	comp=E,1μm,3.0s						
KUR				A	A	22 07 46.2	
	comp=E,560nm,0.5s						
KUR				A	A	22 07 46.2	
	comp=E,470nm,0.5s						
SKR	**Severo-Kuril's**	**4.96**	**24**	*e*PN	**Pn**	**22 07 09.7**	**-1.5**
SKR				pmax	pmax		
	comp=Z,16nm,0.3s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
SKR	**Severo-Kuril's**	**4.96**	**24**	*e*P	**Pn**	**22 07 11.1**	**-0.1**
SKR				AMB	AMB	22 07 13.3	
	comp=Z,350nm,3.0s						
SKR				AMB	AMB	22 07 15.5	
	comp=Z,80nm,0.4s						
SKR				*e*S	**Sn**	**22 08 05.2**	**-2.2**
SKR				A	A	22 08 05.7	
	comp=Z,30nm,0.2s						
SKR				A	A	22 08 05.7	
	comp=Z,30nm,0.2s						
SKR				A	A	22 08 09.9	
	comp=Z,950nm,3.0s						
SKR				A	A	22 08 09.9	
	comp=Z,970nm,3.0s						
YUK	**Yuzh-Kuril'sk**	**5.45**	**249**	*e*PN	**Pn**	**22 07 18.5**	**+0.6**
YUK				*e*S	**Sn**	**22 08 21.5**	**+2.0**
YUK				pmax	pmax		
	comp=Z,93nm,0.2s						
YUK				pmax	pmax		
	comp=N,44nm,0.1s						
YUK				smax	smax		
	comp=N,262nm,0.6s						
YUK				smax	smax		
	comp=E,180nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.45**	**249**	*e*P	**Pn**	**22 07 18.5**	**+0.6**
YUK				AMB	AMB	22 07 19.6	
	comp=E,110nm,0.4s						
YUK				AMB	AMB	22 07 20.0	
	comp=E,500nm,2.0s						
YUK				*e*S	**Sn**	**22 08 19.1**	**-0.4**
YUK				A	A	22 08 22.9	
	comp=E,220nm,0.4s						
YUK				A	A	22 08 22.9	
	comp=E,160nm,0.4s						
YUK				A	A	22 08 34.9	
	comp=E,2μm,2.5s						
YUK				A	A	22 08 34.9	
	comp=E,1μm,2.5s						
GLVR	**Golovnino**	**5.80**	**247**	*e*PN	**Pn**	**22 07 23.2**	**+0.4**
GLVR	**Golovnino**	**5.80**	**247**	*e*P	**Pn**	**22 07 23.2**	**+0.4**
GLVR				*e*S	**Sn**	**22 08 28.8**	**+0.6**
RUSJ	**Misakicho**	**5.82**	**252**	*e*PN	**Pn**	**22 07 26.0**	**+3.0**
RUSJ				*e*S	**Sn**	**22 08 31.7**	**+3.0**
NMR	**Nemuro--Hokkai**	**5.85**	**244**	*e*PN	**Pn**	**22 07 22.0**	**-1.5**
NMR	**Nemuro--Hokkai**	**5.85**	**244**	*e*P	**Pn**	**22 07 23.0**	**-0.5**
NMR				*e*S	**Sn**	**22 08 26.5**	**-3.0**
PAU	**Pauzhetka**	**5.86**	**25**	*e*P	**Pn**	**22 07 24.4**	**+0.9**
PAU				AMB	AMB	22 07 26.0	
	comp=E,20nm,0.2s						
PAU				AMB	AMB	22 07 27.3	
	comp=E,600nm,3.0s						
PAU				*e*S	**Sn**	**22 08 27.1**	**-2.4**
PAU				A	A	22 08 30.2	
	comp=E,70nm,0.3s						
PAU				A	A	22 08 30.2	
	comp=E,50nm,0.3s						
PAU				A	A	22 08 33.0	
	comp=E,640nm,2.0s						
PAU				A	A	22 08 33.0	
	comp=E,820nm,2.0s						
AKK	**Akkeshi**	**6.59**	**244**	*e*P	**Pn**	**22 07 33.4**	**-0.2**
PEA0B	**Petropavlovsk-**	**7.57**	**22**	*i* PN	**Pn**	**22 07 48.0**	**+0.9**
PETK	**Petropavlovsk-**	**7.57**	**22**	Pn	**Pn**	**22 07 46.4**	**-0.7**
	comp=E,0.4nm,0.3s,baz=169,slow=12,SNR=7.6 comp=E,11nm,1.0s						
JKA	**Kamikawa-asahi**	**7.59**	**258**		**Pn**	**22 07 46.8**	**-0.5**
JKA	**Kamikawa-asahi**	**7.59**	**258**	*e*P	**Pn**	**22 07 46.8**	**-0.5**
ASAJ	**Asahikawa**	**7.59**	**258**	Pn	**Pn**	**22 07 50.5**	**+3.1**
	comp=E,1.1nm,0.3s,baz=68,slow=17,SNR=7.9						
ASAJ				LR	LR	22 10 41.8	
	comp=E,165nm,18.4s,baz=1.0,slow=38						
ASAJ	**Asahikawa**	**7.59**	**258**	PN	**Pn**	**22 07 46.8**	**-0.6**
PET	**Petropavlovsk**	**7.77**	**26**	*e*P	**Pn**	**22 07 50.0**	**+0.2**
PET				*e*S	**Sn**	**22 09 14.8**	**-1.8**
TYV	**Tymovskoe**	**8.25**	**308**	*e*PN	Pn	22 07 50.3	-6.1
TYV				pmax	pmax		
	comp=Z,16nm,1.1s						
TYV				pmax	pmax		
	comp=Z,600nm,3.6s						
MA2	**Magadan**	**13.46**	**355**	LR	LR	22 14 28.6	
	comp=Z,129nm,19.1s,baz=156,slow=38						
MJAR	**Matsushiro Arr**	**14.65**	**234**	Pn	**Pn**	**22 09 21.9**	**-2.0**
	baz=51,slow=7.3,SNR=2.1 comp=Z,0.7nm,0.6s						
USRK	**Ussuriysk Ar.**	**14.89**	**270**	Pn	**Pn**	**22 09 23.4**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=102,slow=12,SNR=1.5 comp=Z,3.4nm,0.7s						
SEY	**Seymchan**	**16.77**	**359**	LR	LR	22 17 10.2	
	comp=Z,107nm,18.1s,baz=183,slow=40						
HEH	**HeiHe**	**17.44**	**293**	*e*P	**P**	**22 10 01.4**	**+0.8**
KSRS	**Korea Array**	**20.51**	**254**	P	**P**	**22 10 32.5**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=62,slow=14,SNR=2.0 comp=Z,0.8nm,0.5s						
YAK	**Yakutsk**	**20.71**	**328**	P	**P**	**22 10 36.4**	**0.0**
YAK				IAmb	IAmb	22 10 45.3	
	comp=Z,16nm,0.9s						
YAK	**Yakutsk**	**20.71**	**328**	P	**P**	**22 10 36.3**	**0.0**
	comp=Z,17nm,0.7s,baz=84,slow=18,SNR=4.2						
YAK				LR	LR	22 18 51.6	
	comp=Z,106nm,18.8s,baz=128,slow=37 comp=Z,17nm,0.7s						
YAK	**Yakutsk**	**20.71**	**328**	*e*P	Pn	22 10 36.9	-1.9
YAK				pmax	pmax		
	comp=Z,13nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
YAK	**Yakutsk**	**20.71**	**328**	*e*P	Pn	22 10 36.6	-2.2
HILR	**Hailar Array B**	**22.39**	**291**	P	**P**	**22 10 54.2**	**-0.5**
	comp=E,0.5nm,0.3s,baz=91,slow=8.6,SNR=1.7 comp=E,0.5nm,0.3s						
BILL	**Bilibino**	**22.95**	**13**	*i* P	**P**	**22 11 00.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**22.95**	**13**	*e*P	**P**	**22 11 00.4**	**+0.1**
TIXI	**Tiksi**	**27.95**	**344**	LR	LR	22 23 51.8	
	comp=Z,84nm,19.9s,baz=191,slow=38						
TIXI	**Tiksi**	**27.95**	**344**	*ce*P	**P**	**22 11 46.7**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
TIXI	**Tiksi**	**27.95**	**344**	*e*P	**P**	**22 11 46.7**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**28.80**	**152**	T	T	22 43 35.8	
	baz=340,slow=76,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**28.81**	**152**	T	T	22 43 36.8	
	baz=340,slow=76,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**28.82**	**152**	T	T	22 43 48.3	
	baz=340,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**29.88**	**153**	T	T	22 44 59.4	
	baz=341,slow=76,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	**29.89**	**153**	T	T	22 45 04.3	
	baz=341,slow=76,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**29.90**	**153**	T	T	22 44 56.9	
	baz=341,slow=76,SNR=6.2						
SONM	**Songino Array**	**31.39**	**290**	P	**P**	**22 12 17.2**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=79,slow=7.9,SNR=3.9						
SONM				LR	LR	22 25 04.6	
	comp=Z,62nm,19.7s,baz=48,slow=37 comp=Z,0.3nm,0.8s						
GUMO	**Guam**	**33.22**	**194**	LR	LR	22 28 43.2	
	comp=Z,15nm,18.1s,baz=320,slow=41						
ILAR	**Eielson Array**	**37.06**	**38**	P	**P**	**22 13 07.7**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=274,slow=8.9,SNR=4.5 comp=Z,0.3nm,0.6s						
LZDM	**Lanzhou Array**	**37.95**	**272**	P	**P**	**22 13 12.1**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=66,slow=13,SNR=1.4 comp=Z,0.8nm,0.3s						
GTA	**Gaotai**	**38.93**	**280**	*e*P	**P**	**22 13 23.5**	**+1.6**
GTA				pP	pP	22 13 29.9	-0.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DGZ	**Jazzator, Alta**	**42.76**	**300**	*i* P	**P**	**22 13 53.2**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZALV	**Zalesovo Beam**	**42.83**	**306**	P	**P**	**22 13 51.8**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=73,slow=16,SNR=2.2						
ZALV				LR	LR	22 33 01.5	
	comp=Z,156nm,18.3s,baz=60,slow=38 comp=Z,0.4nm,0.3s						
GOMU	**GeErMu**	**43.96**	**278**	P	**P**	**22 14 04.5**	**+1.0**
GOMU				pP	pP	22 14 07.6	-4.3
GOMU				sP	pwP	22 14 11.8	-3.4
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	**47.08**	**298**	*ce*P	**P**	**22 14 27.4**	**-0.2**
MKAR	**Makanchi Array**	**47.08**	**298**	P	**P**	**22 14 26.9**	**-0.7**
MKAR	**Makanchi Array**	**47.08**	**298**	P	**P**	**22 14 27.3**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=61,slow=9.9,SNR=12						
MKAR				LR	LR	22 35 25.4	
	comp=Z,118nm,18.4s,baz=62,slow=38 comp=Z,1.9nm,0.8s						
KURK	**Kurchatov**	**47.56**	**304**	P	**P**	**22 14 30.9**	**-0.3**
KURK	**Kurchatov**	**47.56**	**304**	*i* P	**P**	**22 14 29.5**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**47.56**	**304**	*e*P	**P**	**22 14 29.5**	**-1.7**
KURBB	**Kurchatov Arra**	**47.65**	**304**	P	**P**	**22 14 31.0**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=68,slow=8.3,SNR=9.5						
KURBB				LR	LR	22 35 37.8	
	comp=Z,52nm,18.1s,baz=172,slow=37 comp=Z,2.2nm,0.8s						
BVAR	**Borovoye Array**	**51.10**	**310**	P	**P**	**22 14 57.9**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=32,slow=8.7,SNR=7.4						
BVAR				LR	LR	22 38 31.2	
	comp=Z,73nm,18.8s,baz=46,slow=38 comp=Z,2.0nm,0.8s						
RES	**Resolute Bay**	**51.39**	**18**	LR	LR	22 38 29.1	
	comp=Z,22nm,19.4s,baz=27,slow=38						
CMAR	**Chiang Mai Arr**	**52.12**	**257**	P	**P**	**22 15 05.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**52.12**	**257**	P	**P**	**22 15 07.1**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=51,slow=8.6,SNR=1.7 comp=Z,0.7nm,0.3s						
BOOM	**Boomskoye usch**	**53.14**	**296**	P	**P**	**22 15 13.8**	**0.0**
BOOM	**Boomskoye usch**	**53.14**	**296**	P	**P**	**22 15 13.8**	**0.0**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**53.96**	**297**		**P**	**22 15 19.7**	**-0.1**
AAK				IAmb	IAmb	22 15 21.4	
	comp=Z,2.5nm,0.8s						
AAK	**Ala-Archa**	**53.96**	**297**	LR	LR	22 39 38.1	
	comp=Z,66nm,19.1s,baz=54,slow=38						
AAK	**Ala-Archa**	**53.96**	**297**	*ce*P	**P**	**22 15 19.9**	**+0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**53.96**	**297**	*e*P	**P**	**22 15 19.9**	**+0.1**
EVN	**Everest**	**54.24**	**275**	P	**P**	**22 15 22.2**	**-0.4**
EVN				IAmb	IAmb	22 15 40.8	
	comp=Z,6.8nm,1.3s						
ARTI	**Arti**	**55.43**	**318**	LR	LR	22 41 44.7	
	comp=Z,72nm,18.4s,baz=18,slow=39						
ARTI	**Arti**	**55.43**	**318**	*d* P	**P**	**22 15 29.8**	**-0.2**
ARTI						22 17 30.0	
ARTI				S	**S**	**22 23 13.5**	**+1.1**
ARTI				SS	**SS**	**22 26 53.5**	**-3.1**
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HNR	**Honiara**	**55.74**	**172**	LR	LR	22 40 50.1	
	comp=Z,12nm,18.0s,baz=32,slow=38						
KIRV	**Kirov**	**58.13**	**323**	LR	LR	22 43 32.2	
	comp=Z,74nm,18.2s,baz=359,slow=39						
ARCES	**ARCESS Array B**	**58.32**	**341**	P	**P**	**22 15 50.7**	**+0.3**
ARCES	**ARCESS Array B**	**58.32**	**341**	P	**P**	**22 15 50.2**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=32,slow=7.1,SNR=1.3						
ARCES				LR	LR	22 43 45.7	
	comp=Z,39nm,19.5s,baz=22,slow=39 comp=Z,2.5nm,0.8s						
ARCES	**ARCESS Array B**	**58.32**	**341**	P	**P**	**22 15 50.7**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,22nm,1.4s						
AB31	**Akbulak array**	**58.67**	**310**		**P**	**22 15 53.1**	**+0.1**
AB31				IAmb	IAmb	22 15 53.6	
	comp=Z,1.3nm,0.5s						
AKTO	**Aktyubinsk**	**58.99**	**312**	LR	LR	22 43 50.3	
	comp=Z,181nm,18.4s,baz=12,slow=39						
SIMJ	**Simiganj**	**59.65**	**296**		**P**	**22 16 00.5**	**+0.3**
NIL	**Nilore**	**59.95**	**289**		**P**	**22 16 01.8**	**-0.4**
NIL	**Nilore**	**59.95**	**289**	P	**P**	**22 16 01.8**	**-0.4**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NVAR	**Mina Array Bea**	**62.80**	**62**	P	**P**	**22 16 21.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=286,slow=5.5,SNR=4.2 comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**64.48**	**335**	P	**P**	**22 16 32.0**	**0.0**
FINES	**FINESS Array B**	**64.48**	**335**	P	**P**	**22 16 31.9**	**-0.1**
	comp=Z,2.6nm,0.9s,baz=35,slow=4.5,SNR=9.1						
FINES				LR	LR	22 46 13.8	
	comp=Z,37nm,20.7s,baz=12,slow=38 comp=Z,2.6nm,0.9s						
PDAR	**Pinedale Array**	**65.17**	**54**	P	**P**	**22 16 37.4**	**+0.2**
PDAR	**Pinedale Array**	**65.17**	**54**	P	**P**	**22 16 38.0**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=335,slow=6.6,SNR=3.8 comp=Z,0.6nm,1.0s						
OBN	**Obninsk**	**65.68**	**326**	*ce*P	**P**	**22 16 39.0**	**-0.9**
OBN				*e*		22 19 08.4	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,48nm,16.0s						
OBN	**Obninsk**	**65.68**	**326**	*e*P	**P**	**22 16 39.2**	**-0.7**
HRA	**Herat**	**66.57**	**296**	P	**P**	**22 16 45.7**	**-0.5**
HRA				IAmb	IAmb	22 16 48.0	
PFO	**Pinyon Flats O**	**67.03**	**65**	LR	LR	22 41 33.7	
	comp=Z,12nm,19.6s,baz=226,slow=32						
WRA	**Warramunga Arr**	**67.95**	**199**	P	**P**	**22 16 54.4**	**-0.3**
WRA	**Warramunga Arr**	**67.95**	**199**	P	**P**	**22 16 53.3**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=9.5,slow=6.4,SNR=3.3 comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**67.95**	**199**	P	**P**	**22 16 54.4**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
NB2	**NORSAR Subarra**	**68.70**	**341**	P	**P**	**22 16 59.1**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**68.70**	**341**	P	**P**	**22 16 59.4**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=28,slow=6.6,SNR=8.8						
NOA				LR	LR	22 51 23.7	
	comp=Z,34nm,19.0s,baz=35,slow=40 comp=Z,1.3nm,0.7s						
NOA	**NORSAR Array B**	**68.70**	**341**	*e*P	**P**	**22 16 59.3**	**+0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	**Hagfors**	**68.92**	**339**	P	**P**	**22 16 59.9**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=54,slow=2.6,SNR=11 comp=Z,3.0nm,0.7s						
NCK	**Nalchik**	**70.96**	**313**	*i* P	**P**	**22 17 13.7**	**+0.5**
NCK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV	**Kislovodsk**	**71.08**	**314**	*e*P	**P**	**22 17 13.7**	**-0.3**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,44nm,18.0s						
KIV	**Kislovodsk**	**71.08**	**314**	*e*P	**P**	**22 17 13.7**	**-0.3**
KBZ	**Khabaz**	**71.14**	**314**	P	**P**	**22 17 15.3**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=41,slow=6.3,SNR=6.8 comp=Z,2.8nm,0.8s						
KBZ	**Khabaz**	**71.14**	**314**	*i* P	**P**	**22 17 14.4**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**71.14**	**314**	*e*P	**P**	**22 17 14.3**	**+0.1**
ASAR	**Alice Springs**	**71.65**	**198**	P	**P**	**22 17 16.7**	**-0.7**
ASAR	**Alice Springs**	**71.65**	**198**	P	**P**	**22 17 17.3**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=11,slow=6.7,SNR=4.7						
ASAR				LR	LR	22 50 40.0	
	comp=Z,10nm,18.9s,baz=14,slow=38 comp=Z,0.5nm,0.7s						
AKASG	**Malin Array Be**	**71.93**	**326**	P	**P**	**22 17 18.4**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=36,slow=6.2,SNR=10						
AKASG				LR	LR	22 50 56.4	
	comp=Z,49nm,20.1s,baz=46,slow=38 comp=Z,1.7nm,0.4s						
AKASG	**Malin Array Be**	**71.93**	**326**	*e*P	**P**	**22 17 18.9**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GNI	**Garni**	**72.78**	**310**	LR	LR	22 53 15.2	
	comp=Z,60nm,18.2s,baz=36,slow=39						
BUR08	**Bucovina Ar. S**	**75.95**	**327**		**P**	**22 17 42.8**	**+0.2**
BUR08				IAmb	IAmb	22 17 47.8	
	comp=Z,5.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**76.84**	**346**	P	**P**	**22 17 49.0**	**+1.7**
EKA	**Eskdalemuir Ar**	**76.84**	**346**	P	**P**	**22 17 49.0**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=19,slow=5.1,SNR=5.5 comp=Z,0.5nm,0.5s						
EKA	**Eskdalemuir Ar**	**76.84**	**346**	P	**P**	**22 17 49.0**	**+1.7**
CLL	**Collm**	**76.91**	**335**	*e*P	**P**	**22 17 49.0**	**+1.2**
VRAC	**Vranov**	**77.57**	**332**	LR	LR	22 55 52.6	
	comp=Z,51nm,18.2s,baz=36,slow=39						
TXAR	**Lajitas Array**	**77.88**	**60**	P	**P**	**22 17 53.6**	**-0.1**
TXAR	**Lajitas Array**	**77.88**	**60**	P	**P**	**22 17 54.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=300,slow=2.4,SNR=6.5 comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**78.70**	**317**	P	**P**	**22 17 58.7**	**+0.5**
BRTR	**Keskin Array B**	**78.70**	**317**	P	**P**	**22 17 59.1**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=35,slow=4.5,SNR=7.5 comp=Z,1.5nm,0.9s						
BRTR	**Keskin Array B**	**78.70**	**317**	P	**P**	**22 17 58.7**	**+0.5**
GERES	**GERESS Array B**	**78.89**	**334**	P	**P**	**22 17 59.8**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=86,slow=6.0,SNR=3.5 comp=Z,0.8nm,0.7s						
MMAI	**Mount Meron Ar**	**83.08**	**311**	P	**P**	**22 18 23.1**	**+1.6**
	comp=Z,2.8nm,0.7s,baz=1.8,slow=7.9,SNR=4.4 comp=Z,2.8nm,0.7s						
H03N2	**Juan Fernandez**	**138.88**	**91**	T	T	01 01 15.8	
	baz=306,slow=74						
H03N1	**Juan Fernandez**	**138.89**	**91**	T	T	01 01 11.5	
	baz=306						
H03N3	**Juan Fernandez**	**138.89**	**91**	T	T	01 01 13.5	
	baz=306,slow=74						
SNAA	**Sanae**	**151.99**	**196**	PKPbc	**PKPbc**	**22 25 48.3**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=184,slow=14,SNR=6.6						

NEIC ***03*** *22:06:52.6±1.7,23°.8S±0°.1×179°.6E±0°.2,h448km±8km, mb4.2/20,Error ellipse: s-maj=23.3km s-min=17.1km az=112.0*

IDC ***03*** *22:06:59.8±6.8,23°.83S×179°.30E,h526km±71km,mb3.5/4, mbtmp4.4/5,Error ellipse: s-maj=53.4km s-min=40.5km az=15.0*

ISC 03 22:06:51.6±0.8,**23°.81S**±0°.09×**179°.7E**±0°.1,**h450**km,**n35,** σ1**s22**/35,**mb4.1**/14,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.24**	**345**	P	**P**	**22 08 27.8**	**-0.8**
URZ	**Urewera**	**14.57**	**188**	P	P	22 10 04.7	+6.7
	1.5nm,0.3s,baz=69,slow=15,SNR=1.8						
URZ				S	**S**	**22 12 29.0**	**-3.1**
	3.6nm,0.9s,baz=286,slow=18,SNR=3.6						
QRZ	**Quartz Range**	**18.01**	**198**	P	**P**	**22 10 36.4**	**

comp=Z,1.5nm,0.4s,baz=64,slow=3.4,SNR=17
AKASG Malin Array Be 144.75 327 PKP **PKPdf 22 25 35.2 -0.7**
comp=Z,0.9nm,0.4s,baz=47,slow=3.9,SNR=5.9
BR131 Keskin Array S 147.30 307 PKiKP 22 25 46.5 +0.7
BRTR Keskin Array B 147.30 307 PKiKP 22 25 46.3 +0.5
BRTR Keskin Array B 147.30 307 PKPbc **PKPdf 22 25 42.9 +2.0**
comp=Z,1.2nm,0.7s,baz=110,slow=3.8,SNR=6.9
MMAI Mount Meron Ar 147.41 294 PKPbc **PKPbc 22 25 45.1 +0.7**
comp=Z,1.1nm,0.5s,baz=77,slow=8.7,SNR=4.8

SFS ***03*** *22:08:18.0, 36°.78N× 3°.90W, h0km, ML2.6/9, ML2.6/9, MLv2.5/9*
INMG ***03*** *22:08:19.4± 1.4, 36°.84N× 3°.88W, h5km± 4km, ML1.9, Error ellipse: s-maj=3.9km s-min=2.1km az=173.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Granada (ESP)*
MDD ***03*** *22:08:19.4± 0.3, 36°.84N× 3°.88W, h0km, mb_Lg2.6/17, Error ellipse: s-maj=2.8km s-min=1.7km az=167.0*
CNRM ***03*** *22:08:21.1, 36°.35N× 4°.19W, h34km, ML3.8*
ISC 03 22:08:15.6±1.1, 36°.65N±0°.02× 3°.87W±0°.02, h7km±9km, n51, σ1§59/87, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
ELGU	**Los Guajares,**	**0.29**	**41**		Sg	**Sg**	**22 08 26.0**	**+0.7**
ELGU					Pg	**Pb**	**22 08 22.9**	**-0.4**
ELGU	**Los Guajares,**	**0.29**	**41**		Pg	**Pb**	**22 08 22.9**	**-0.4**
ELGU					Sg	**Sg**	**22 08 26.6**	**+1.3**
EMAL	**Malaga-Limoner**	**0.47**	**284**		Pg	**Pb**	**22 08 25.8**	**-0.4**
EMAL					Sg	**Sg**	**22 08 31.2**	**+0.4**
EGOR	**Sierra Gorda,**	**0.50**	**337**		Pg	**Pg**	**22 08 24.8**	**-0.6**
EGOR					Sg	**Sg**	**22 08 29.7**	**-2.3**
EGOR				*i*	lVmb_Lg		22 08 33.1	
EQUE	**Quentar**	**0.65**	**31**		Pg	**Pg**	**22 08 27.7**	**-0.5**
EQUE					Sg	**Sg**	**22 08 35.9**	**-0.8**
EQUE				*i*	lVmb_Lg		22 08 36.7	
EQTA	**Presa de Quent**	**0.65**	**31**		Pg	**Pg**	**22 08 27.6**	**-0.6**
EQTA					Sg	**Sg**	**22 08 35.7**	**-1.1**
EMIJ	**Mijas**	**0.73**	**264**		Pg	**Pg**	**22 08 29.8**	**+0.1**
EMIJ	**Mijas**	**0.73**	**264**		Pg	**Pg**	**22 08 29.9**	**+0.1**
EMIJ					Sg	**Sb**	**22 08 40.6**	**-0.5**
UMV12	**Villanueva de**	**1.13**	**291**		Pg	**Pn**	**22 08 39.2**	**+1.4**
UMV12					Sg	**Sb**	**22 08 53.2**	**+0.9**
E1302	**La Puebla de C**	**1.21**	**294**		Pg	**Pn**	**22 08 41.8**	**+2.8**
E1302					Sg	**Sn**	**22 08 59.1**	**+3.6**
E1302				*i*	lVmb_Lg		22 09 02.3	
E0803	**Jimena (Jaen)**	**1.23**	**15**		Pg	**Pg**	**22 08 38.4**	**-0.8**
E0803					Sg	**Sg**	**22 08 54.9**	**-0.3**
EQES	**Quesada**	**1.31**	**29**		Pg	**Pn**	**22 08 40.5**	**0.0**
EQES					Sg	**Sb**	**22 08 58.2**	**+0.4**
EQES				*i*	lVmb_Lg		22 09 00.7	
ENIJ	**Nijar**	**1.37**	**76**		Pn	**Pg**	**22 08 42.8**	**+0.8**
ENIJ					Sn	**Sn**	**22 09 01.5**	**+1.9**
ENIJ	**Nijar**	**1.37**	**76**		Pg	**Pg**	**22 08 42.6**	**+0.7**
ENIJ					Sg	**Sn**	**22 09 01.8**	**+2.2**
ENIJ				*i*	lVmb_Lg		22 09 09.5	
PALE	**Palemas**	**1.43**	**182**		P	**Pn**	**22 08 41.1**	**-0.9**
PALE	**Palemas**	**1.43**	**182**		S	**Sb**	**22 08 56.2**	**-4.8**
E0802	**Ubeda,Jaen**	**1.43**	**16**		Pg	**Pn**	**22 08 41.7**	**-0.4**
E0802					Sg	**Sb**	**22 08 59.1**	**-2.0**
GOG	**Mont Gurugu**	**1.59**	**153**		P	**Pb**	**22 08 45.0**	**-0.3**
GOG	**Mont Gurugu**	**1.59**	**153**		S	**Sn**	**22 09 04.8**	**-0.2**
ESPR	**Espera**	**1.61**	**278**		Pg	**Pg**	**22 08 47.6**	**+1.0**
ESPR	**Espera**	**1.61**	**278**		Pg	**Pg**	**22 08 49.0**	**+2.4**
ESPR					Sg	**Sg**	**22 09 09.2**	**+1.6**
ESPR				*i*	lVmb_Lg		22 09 15.0	
EADA	**Adamuz**	**1.62**	**340**		Pn	**Pn**	**22 08 43.2**	**-1.4**
EADA					Sn	**Sn**	**22 09 03.4**	**-2.4**
EADA	**Adamuz**	**1.62**	**340**		Pg	**Pn**	**22 08 43.3**	**-1.4**
EADA					Sg	**Sn**	**22 09 03.7**	**-2.0**
EADA				*i*	lVmb_Lg		22 09 06.5	
ECAB	**El Cabril**	**1.89**	**319**		Pn	**Pn**	**22 08 49.3**	**+1.0**
ECAB					Sn	**Sn**	**22 09 12.8**	**+0.4**
ECAB	**El Cabril**	**1.89**	**319**		Pn	**Pn**	**22 08 48.6**	**+0.3**
ECAB					Sn	**Sn**	**22 09 13.4**	**+1.1**
ECAB				*i*	lVmb_Lg		22 09 17.8	
TLOR	**Lorca, Murcia**	**2.01**	**59**		Sn	**Sn**	**22 09 14.6**	**-0.7**
PSIM	**Granatula de C**	**2.17**	**2**		Pn	**Pn**	**22 08 52.3**	**+0.1**
PSIM					Sn	**Sn**	**22 09 19.6**	**+0.2**
TAF	**Taforalt**	**2.18**	**147**		P	**Pn**	**22 08 53.6**	**+1.3**
TAF	**Taforalt**	**2.18**	**147**		S	**Sn**	**22 09 20.8**	**+1.3**
EMUR	**La Murta**	**2.41**	**60**		Pn	**Pn**	**22 08 56.6**	**+1.1**
EMUR					Sn	**Sn**	**22 09 27.6**	**+2.3**
EMUR	**La Murta**	**2.41**	**60**		Pn	**Pn**	**22 08 57.3**	**+1.8**
EMUR					Sn	**Sn**	**22 09 26.8**	**+1.5**
EMUR				*i*	lVmb_Lg		22 10 00.0	
EMIN	**Mina Concepcio**	**2.50**	**297**		Pn	**Pn**	**22 08 56.7**	**0.0**
EMIN					Sn	**Sn**	**22 09 27.1**	**-0.4**
ETOB	**Tobarra**	**2.71**	**42**		Pn	**Pn**	**22 08 60.0**	**+0.3**
ETOB					Pg	**Pb**	**22 09 06.2**	**+1.6**
ETOB					Sn	**Sn**	**22 09 32.5**	**-0.3**
ETOB					Sg	**Sg**	**22 09 40.7**	**-2.0**
PAB	**San Pablo**	**2.92**	**353**		Pn	**Pn**	**22 09 02.3**	**-0.2**
PAB					Sn	**Sn**	**22 09 36.6**	**-1.3**
PAB					Sg	**Sb**	**22 09 46.7**	**+2.7**
PAB				*i*	lVmb_Lg		22 10 28.7	
PBAR	**Barrancos**	**2.95**	**302**	*e*	Pn	**Pn**	**22 09 03.6**	**+0.7**
PBAR				*e*	Sn	**Sn**	**22 09 39.7**	**+1.1**
PBAR				*e*	Sg	**Sg**	**22 09 50.2**	**-0.2**
PBAR				*i*	IAML		22 09 51.5	
PBAR				*i*	IAML		22 09 55.5	
PBAR				*i*	IAML		22 09 57.5	
EGRO	**El Granado**	**3.02**	**288**		Pn	**Pn**	**22 09 04.6**	**+0.7**
EGRO					Sn	**Sn**	**22 09 42.5**	**+2.1**
EGRO				*i*	lVmb_Lg		22 11 17.9	
PVAQ	**Vaqueiros**	**3.17**	**285**	*e*	Pn	**Pn**	**22 09 06.4**	**+0.4**
PVAQ				*e*	Sn	**Sn**	**22 09 43.3**	**-0.8**
PVAQ				*i*	IAML		22 09 43.9	
PVAQ				*i*	IAML		22 09 44.0	
PVAQ				*i*	IAML		22 09 47.2	
PVAQ	**Vaqueiros**	**3.17**	**285**		P	**Pn**	**22 09 05.8**	**-0.1**
PVAQ	**Vaqueiros**	**3.17**	**285**		S	**Sn**	**22 09 41.4**	**-2.7**
EBAD	**Badajoz**	**3.27**	**311**		Pn	**Pn**	**22 09 08.1**	**+0.9**
EBAD					Sn	**Sn**	**22 09 46.1**	**-0.2**
EBAD				*i*	lVmb_Lg		22 09 59.0	
PCVE	**Castro Verde**	**3.48**	**288**	*e*	Pn	**Pn**	**22 09 12.3**	**+2.2**
PCVE				*e*	Sn	**Sn**	**22 09 51.6**	**+0.1**
MESJ	**Messejana**	**3.67**	**290**	*e*	Pn	**Pn**	**22 09 14.3**	**+1.5**
MESJ				*e*	Sn	**Sn**	**22 09 55.0**	**-1.3**
MORF	**Marmelete**	**3.89**	**281**	*e*	Pn	**Pn**	**22 09 17.9**	**+2.1**
ZHG	**ZHG**	**3.92**	**216**		P	**Pn**	**22 09 16.0**	**-0.3**
ZHG	**ZHG**	**3.92**	**216**		S	**Sn**	**22 09 59.0**	**-3.7**
PARRA	**Arraiolos**	**3.95**	**304**	*e*	Pn	Pn	22 09 17.8	-8.3
PARRA				*e*	Sg	**Sn**	**22 10 22.1**	**+1.9**
PARRA				*i*	IAML		22 10 26.1	
PARRA				*i*	IAML		22 10 28.0	
PARRA				*i*	IAML		22 10 28.2	
PFVI	**Vila Bisbo**	**4.01**	**278**	*e*	Pn	**Pn**	**22 09 18.4**	**+1.0**
PFVI	**Vila Bisbo**	**4.01**	**278**		P	**Pn**	**22 09 17.6**	**+0.2**
PCBR	**Castelo Branco**	**4.27**	**319**	*e*	Pn	**Pn**	**22 09 20.6**	**-0.5**
PSARD	**Sardoal**	**4.49**	**312**	*e*	Pn	**Pn**	**22 09 23.6**	**-0.5**
PSARD				*e*	Sn	**Sn**	**22 10 11.2**	**-5.4**
MVO	**Moncorvo**	**5.14**	**332**	*e*	Pn	**Pn**	**22 09 32.3**	**-0.7**

IDC ***03*** *22:25:23.8± 1.2, 3°.22N× 126°.80E, h0km, mb3.6/9, mbtmp3.7/10, ML4.3/1, Error ellipse: s-maj=68.2km s-min=16.1km az=69.0*
DJA ***03*** *22:25:29.0± 1.4, 3°.N± 5°× 12°.7E± °, h19km± 16km, M3.9/9, mb4.2/2, MLv3.8/9*
ISC 03 22:25:29.7±1.0, 3°.3N±0°.1× 127°.1E±0°.2, h48km, n13, σ1§05/12, mb3.6/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
SGSI	**Sangihe**	**1.61**	**283**		P	**Pn**	**22 25 56.7**	**+1.0**
TNTI	**Ternate**	**2.55**	**174**		P	**Pn**	**22 26 09.2**	**+0.6**
SANI	**Sanana**	**5.45**	**192**		P	**Pn**	**22 26 48.8**	**+0.3**
BATI	**Baumata**	**13.87**	**194**		Pn	Pn	22 28 38.0	-5.8
	1.5nm,0.3s,baz=82,slow=14,SNR=1.2							
	6.6nm,0.4s							
FITZ	**Fitzroy Crossi**	**21.34**	**184**		P	**P**	**22 30 11.4**	**-1.5**
	1.6nm,0.9s,baz=315,slow=16,SNR=1.3							
	1.6nm,0.9s							
WRA	**Warramunga Arr**	**24.19**	**163**		P	**P**	**22 30 41.6**	**-0.3**
	1.1nm,0.6s,baz=337,slow=10,SNR=5.6							
	1.1nm,0.6s							
ASAR	**Alice Springs**	**27.64**	**166**		P	**P**	**22 31 13.4**	**+0.4**
	0.3nm,0.5s,baz=342,slow=10,SNR=7.7							
	0.3nm,0.5s							
CMAR	**Chiang Mai Arr**	**31.39**	**301**		P	**P**	**22 31 45.0**	**-1.4**
	0.5nm,0.3s,baz=105,slow=8.6,SNR=1.6							
	0.5nm,0.3s							
STKA	**Stephens Creek**	**37.62**	**160**		P	**P**	**22 32 40.9**	**+0.8**
	1.1nm,0.3s,baz=321,slow=9.8,SNR=3.0							
	1.1nm,0.3s							
SONM	**Songino Array**	**47.80**	**341**		P	**P**	**22 34 01.7**	**-0.8**
	0.2nm,0.4s,baz=150,slow=10.0,SNR=1.3							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**58.10**	**325**		P	**P**	**22 35 18.6**	**+0.3**
	0.2nm,0.4s,baz=119,slow=7.1,SNR=5.5							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**62.28**	**327**		P	**P**	**22 35 47.0**	**+0.2**
	0.4nm,0.6s,baz=127,slow=6.1,SNR=4.4							
	0.4nm,0.6s							
BVAR	**Borovoye Array**	**67.86**	**327**		P	**P**	**22 36 24.6**	**+1.6**
	0.2nm,0.5s,baz=122,slow=11,SNR=2.7							
	0.2nm,0.5s							

NOU ***03*** *22:36:31.2, 29°.17S× 172°.00W, h19km, mb5.1/8, Kermadec Islands Region*
IDC ***03*** *22:38:03.5± 1.0, 33°.18S× 178°.99W, h0km, mb4.0/5, mbtmp4.0/6, ML4.3/1, MS3.2/6, Error ellipse: s-maj=33.6km s-min=25.1km az=74.0*
WEL ***03*** *22:38:08.8± 0.8, 33°.5S± 6°× 17°.9W± °, h33km, M4.6/12, mB5.2/9, ML5.0/16, MLv4.8/12, Mw(mB)4.5/9, Error ellipse: s-maj=11.9km s-min=7.5km az=109.8, confirmed*
NEIC ***03*** *22:38:12.4± 1.9, 33°.6S± 0°.1× 179°.4W± 0°.1, h35km± 2km, mb4.4/15, Error ellipse: s-maj=19.6km s-min=17.1km az=37.0*
ISC 03 22:38:11.4±0.7, 33°.50S±0°.08× 179°.26W±0°.09, h35km, n91, σ1§93/76, mb4.3/15, MS3.2/6, 5C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
GLKZ	**Green Lake**	**4.38**	**15**		P	Pn	22 39 09.3	-6.1
MXZ	**Matakaoa Point**	**4.51**	**205**			**Pn**	**22 39 16.3**	**-0.9**
MXZ	**Matakaoa Point**	**4.51**	**205**		P	**Pn**	**22 39 16.6**	**-0.6**
MXZ	**Matakaoa Point**	**4.51**	**205**		P	**Pn**	**22 39 16.6**	**-0.6**
WMGZ	**Waiomatatini S**	**4.71**	**203**		P	**Pn**	**22 39 19.9**	**0.0**
PKGZ	**Pakihiroa**	**4.86**	**206**		P	**Pn**	**22 39 22.5**	**+0.4**
PKGZ					S	**Sn**	**22 40 20.2**	**+3.0**
HAZ	**Te Kaha**	**4.88**	**209**		P	**Pn**	**22 39 23.0**	**+0.7**
PUZ	**Puketiti**	**4.99**	**203**		P	**Pn**	**22 39 24.5**	**+0.7**
RUGZ	**Raukumara Rang**	**5.10**	**208**		P	**Pn**	**22 39 25.3**	**-0.2**
TWGZ	**Tauwhareparae**	**5.18**	**205**		P	**Pn**	**22 39 26.3**	**-0.1**
KUZ	**Kuaotunu**	**5.24**	**230**		P	Pn	22 39 30.9	+3.7
KUZ	**Kuaotunu**	**5.24**	**230**		P	**Pn**	**22 39 30.2**	**+3.0**
WHRZ	**Whale Island**	**5.32**	**214**		P	Pn	22 39 31.6	+3.3
CNGZ	**Carnagh Statio**	**5.38**	**202**		P	**Pn**	**22 39 28.6**	**-0.5**
TKGZ	**Te Karaka**	**5.46**	**205**		P	**Pn**	**22 39 31.9**	**+1.7**
TKGZ					S	**Sn**	**22 40 32.6**	**+0.9**
MWZ	**Matawai**	**5.48**	**207**		P	**Pn**	**22 39 31.9**	**+1.3**
URZ	**Urewera**	**5.59**	**211**		Pn	**Pn**	**22 39 31.0**	**-1.0**
	7.0nm,0.3s,baz=103,slow=14,SNR=49							
URZ					Sn	**Sn**	**22 40 34.7**	**-0.2**
	11nm,0.3s,baz=343,slow=19,SNR=6.6							
	21nm,0.3s							
URZ	**Urewera**	**5.59**	**211**		P	**Pn**	**22 39 31.9**	**-0.1**
URZ	**Urewera**	**5.59**	**211**		P	**Pn**	**22 39 32.8**	**+0.8**
RAGZ	**Rawiri**	**5.67**	**207**		P	**Pn**	**22 39 33.3**	**+0.1**
RIGZ	**Rimuhau**	**5.73**	**204**		P	**Pn**	**22 39 34.9**	**+0.9**
WCZ	**Waipu Caves**	**5.80**	**243**		P	Pn	22 39 39.3	+4.3
RTZ	**Ruatahuna**	**5.94**	**210**			**Pn**	**22 39 35.4**	**-1.6**
SNGZ	**Shannon Statio**	**5.94**	**207**		P	**Pn**	**22 39 37.4**	**+0.4**
TOZ	**Tahuroa Road**	**6.00**	**224**			**Pn**	**22 39 34.9**	**-2.8**
MHGZ	**Mahia Peninsul**	**6.09**	**201**		P	**Pn**	**22 39 36.6**	**-2.2**
OUZ	**Omahuta**	**6.15**	**252**		P	Pn	22 39 43.6	+3.8
OUZ	**Omahuta**	**6.15**	**252**		P	Pn	22 39 43.5	+3.7
OUZ					S	**Sn**	**22 40 53.1**	**+4.2**
BKZ	**Black Stump Fm**	**6.61**	**210**			**Pn**	**22 39 44.6**	**-1.5**
BKZ	**Black Stump Fm**	**6.61**	**210**		P	**Pn**	**22 39 45.3**	**-0.8**
HIZ	**Hauiti**	**6.91**	**222**			**Pn**	**22 39 49.7**	**-0.5**
HIZ	**Hauiti**	**6.91**	**222**		P	Pn	22 39 54.3	+4.1
BFZ	**Birch Farm**	**8.02**	**205**		Pn	**Pn**	**22 40 01.4**	**-4.0**
BFZ	**Birch Farm**	**8.02**	**205**		P	**Pn**	**22 40 02.4**	**-2.9**
MRZ	**Mangatainoka R**	**8.25**	**209**		Pn	**Pn**	**22 40 06.8**	**-1.8**
PLWZ	**Palliser**	**9.15**	**207**		Pn	**Pn**	**22 40 17.6**	**-3.4**
TCW	**Tory Channel**	**9.25**	**212**		Pn	**Pn**	**22 40 18.9**	**-3.4**
QRZ	**Quartz Range**	**9.81**	**219**		Pn	**Pn**	**22 40 26.6**	**-3.4**
BSWZ	**Blackbirch Sta**	**9.84**	**212**		Pn	**Pn**	**22 40 29.2**	**-1.1**
CTZ	**Chatham Island**	**10.43**	**169**		Pn	**Pn**	**22 40 38.5**	**+0.2**
KHZ	**Kahutara**	**10.56**	**210**		P	**Pn**	**22 40 35.8**	**-4.3**
RPZ	**Rata Peaks**	**12.69**	**214**		Pn	Pn	22 41 02.7	-6.7
	0.8nm,0.3s,baz=70,slow=5.3,SNR=5.2							
RPZ					Sn	Sn	22 43 17.9	-12
	0.7nm,0.3s,baz=323,slow=20,SNR=3.0							
RAR	**Rarotonga**	**21.15**	**60**		LR	LR	22 49 37.7	
	comp=Z,40nm,20.9s,baz=164,slow=33							
EIDS	**Eidsvold**	**27.00**	**280**		P	**P**	**22 43 49.8**	**-0.4**
EIDS					IAmb	IAmb	22 43 52.5	
	comp=Z,11nm,1.2s							
PPT	**Papeete**	**30.98**	**67**		LR	LR	22 54 01.4	
	comp=Z,28nm,19.2s,baz=176,slow=31							
STKA	**Stephens Creek**	**32.86**	**262**		LR	LR	22 57 35.0	
	comp=Z,46nm,18.3s,baz=23,slow=35							
COEN	**Coen**	**39.22**	**291**		P	**P**	**22 45 36.6**	**0.0**
COEN					IAmb	IAmb	22 46 17.9	
	comp=Z,17nm,1.4s							
AS31	**Alice Springs**	**41.98**	**271**		P	**P**	**22 45 58.6**	**-0.7**
ASAR	**Alice Springs**	**41.98**	**271**		P	**P**	**22 45 58.3**	**-1.0**
ASAR	**Alice Springs**	**41.98**	**271**		P	**P**	**22 45 58.6**	**-0.7**
	comp=Z,2.5nm,0.5s,baz=113,slow=7.6,SNR=41							
ASAR					LR	LR	23 02 33.5	
	comp=Z,24nm,18.2s,baz=54,slow=35							
	comp=Z,2.5nm,0.5s							
WR8	**Warramunga Arr**	**43.11**	**276**		P	**P**	**22 46 07.5**	**-1.0**
WR8					IAmb	IAmb	22 46 10.3	
	comp=Z,10.0nm,1.4s							
WRA	**Warramunga Arr**	**43.25**	**276**		P	**P**	**22 46 08.8**	**-0.9**
WRA	**Warramunga Arr**	**43.25**	**276**		P	**P**	**22 46 08.6**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=118,slow=7.4,SNR=19							
	comp=Z,1.1nm,0.4s							
WB0	**Warramunga Arr**	**43.29**	**276**		P	**P**	**22 46 08.9**	**-1.1**
WB0					IAmb	IAmb	22 46 24.7	
	comp=Z,7.8nm,1.2s							
FORT	**Forrest**	**44.30**	**259**		P	**P**	**22 46 16.8**	**-1.1**
FORT					IAmb	IAmb	22 46 59.1	
	comp=Z,9.5nm,1.2s							
VNDA	**Vanda**	**44.91**	**186**		P	**P**	**22 46 22.1**	**0.0**
VNDA					IAmb	IAmb	22 46 29.7	
	comp=Z,3.6nm,1.4s							
VNDA	**Vanda**	**44.91**	**186**		P	**P**	**22 46 23.6**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=108,slow=16,SNR=1.7							
	comp=Z,0.5nm,0.9s							
KNRA	**Kununurra**	**49.96**	**278**		P	**P**	**22 47 01.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**51.37**	**273**		P	**P**	**22 47 11.8**	**-1.0**
MORW	**Morawa**	**54.68**	**256**		P	**P**	**22 47 34.5**	**-2.7**
QSPA	**South Pole Qui**	**56.62**	**180**		P	**P**	**22 47 53.7**	**+3.0**
QSPA					IAmb	IAmb	22 48 02.4	
	comp=Z,8.7nm,1.5s							
QSPA	**South Pole Qui**	**56.62**	**180**		P	**P**	**22 47 53.3**	**+2.6**
	comp=Z,2.3nm,0.7s,baz=344,slow=0.6,SNR=19							
BELA	**Belgrano 2**	**66.86**	**172**		P	**P**	**22 48 58.5**	**-0.8**
BELA					IAmb	IAmb	22 49 07.6	
	comp=Z,5.9nm,1.4s							
MAW	**Mawson**	**69.04**	**201**		P	**P**	**22 49 13.3**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=40,slow=14,SNR=2.2							
	comp=Z,1.2nm,0.4s							
ESPZ	**Base Esperanza**	**73.16**	**157**		P	**P**	**22 49 37.9**	**-0.1**
TROLL	**Troll, Antarti**	**74.77**	**181**	⇑	P	**P**	**22 49 46.8**	**-0.8**
	comp=Z,142nm,1.2s							
SNAA	**Sanae**	**75.09**	**179**	⇑	P	**P**	**22 49 48.6**	**-0.7**
	comp=Z,12nm,0.4s							
SNAA	**Sanae**	**75.09**	**179**		P	**P**	**22 49 48.4**	**-0.9**
SNAA					IAmb	IAmb	22 49 54.5	
	comp=Z,2.3nm,0.5s							
SNAA	**Sanae**	**75.09**	**179**		P	**P**	**22 49 48.7**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=182,slow=16,SNR=18							
	comp=Z,0.4nm,0.4s							
VNA3	**Neumayer Olymp**	**75.29**	**177**	⇑	P	**P**	**22 49 49.6**	**-0.8**
	comp=Z,3.2nm,0.7s							
VNA2	**Neumayer--Watz**	**75.71**	**177**	⇑	P	**P**	**22 49 52.3**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=168,slow=6.0							
VNA1	**Neumayer--Stat**	**75.94**	**177**	⇑	P	**P**	**22 49 53.7**	**-0.4**
	comp=Z,1.5nm,0.6s							
H03S2	**Juan Fernandez**	**79.64**	**124**		T	T	00 18 39.9	
	baz=233,slow=74							
H03S1	**Juan Fernandez**	**79.66**	**124**		T	T	00 18 57.1	
	baz=233,slow=74							
H03S3	**Juan Fernandez**	**79.66**	**124**		T	T	00 18 41.9	
	baz=233,slow=74							
H03N3	**Juan Fernandez**	**79.86**	**123**		T	T	00 18 46.4	
	baz=242							
H03N2	**Juan Fernandez**	**79.86**	**123**		T	T	00 18 50.2	
	baz=242							
H03N1	**Juan Fernandez**	**79.87**	**123**		T	T	00 18 41.6	
	baz=242							
PFO	**Pinyon Flats O**	**89.08**	**48**		LR	LR	23 23 45.0	
	comp=Z,15nm,18.8s,baz=190,slow=31							
NEW	**Newport**	**98.50**	**37**		LR	LR	23 27 01.6	
	comp=Z,15nm,20.8s,baz=82,slow=30							
KURBB	**Kurchatov Arra**	**122.42**	**312**		PKP	**PKPdf**	**22 56 59.0**	**-3.4**
	comp=Z,0.4nm,0.7s,baz=129,slow=1.3,SNR=3.0							
FINES	**FINESS Array B**	**147.64**	**337**			**PKPdf**	**22 57 49.3**	**+0.8**
FINES	**FINESS Array B**	**147.64**	**337**		PKPbc	**PKPdf**	**22 57 48.5**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=123,slow=3.2,SNR=6.5							
MMAI	**Mount Meron Ar**	**151.09**	**279**		PKPbc	**PKPdf**	**22 57 58.7**	**+3.6**
	comp=Z,1.0nm,0.5s,baz=98,slow=4.6,SNR=4.5							
NB2	**NORSAR Subarra**	**151.62**	**349**		PKP	**PKPdf**	**22 57 58.7**	**+3.7**
	comp=Z,0.5nm,0.5s,baz=17,slow=4.1							
NOA	**NORSAR Array B**	**151.62**	**349**		PKPbc	**PKPdf**	**22 57 58.3**	**+3.3**
	comp=Z,0.5nm,0.5s,baz=18,slow=4.2,SNR=4.1							
HFS	**Hagfors**	**152.03**	**346**		PKPbc	**PKPdf**	**22 57 59.3**	**+3.7**
	comp=Z,2.0nm,0.8s,baz=54,slow=3.8,SNR=5.2							
BRTR	**Keskin Array B**	**152.97**	**293**		PKPdf	**PKPdf**	**22 57 58.7**	**+0.9**
BRTR	**Keskin Array B**	**152.97**	**293**		PKPbc	**PKPdf**	**22 58 01.8**	**+4.0**
	comp=Z,0.3nm,0.5s,baz=120,slow=2.0,SNR=2.7							
TORD	**Torodi Ar. Bea**	**159.72**	**183**		PKPdf	**PKPdf**	**22 58 08.1**	**+1.0**
TORD	**Torodi Ar. Bea**	**159.72**	**183**		PKPab	**PKPab**	**22 58 43.7**	**-1.9**
	comp=Z,2.6nm,0.4s,baz=187,slow=1.8,SNR=1.7							

IDC ***03*** *22:56:39.7± 2.3, 34°.77N× 140°.52E, h79km± 17km, mb3.4/8, mbtmp3.8/10, MS3.1/1, Error ellipse: s-maj=31.9km s-min=7.6km az=75.0*
JMA ***03*** *22:56:39.3± 0.2, 34°.8N± 0°.7× 140°.4E± 0°.9, h95km± 1km, MV3.7/37, SE OFF BOSO PENINSULA*
NIED ***03*** *22:56:39.3, 34°.80N× 140°.37E, h95km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.35; $M_{\theta\theta}$1.18; $M_{\phi\phi}$3.17; $M_{r\theta}$1.24; $M_{\theta\phi}$0.16; $M_{\phi r}$-1.22; Fault plane solution: $M_0$4.09000×10^{14} NP1: ϕ_s193.00000°, δ37.00000°, λ-71.00000°. NP2: ϕ_s349.00000°, δ55.00000°, λ-104.00000°.*
NEIC ***03*** *22:56:40.1± 1.1, 34°.80N± 0°.05× 140°.51E± 0°.09, h82km± 8km, mb4.6/24 Error ellipse: s-maj=10.9km s-min=7.2km az=103.0*
ISC 03 22:56:40.2±0.7, 34°.80N±0°.03× 140°.44E±0°.05, h90km±5km, n85, σ1§00/91, mb4.4/20, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
BSO3	**Boso 3**	**0.06**	**86**	⇓	*i* P	**Pn**	**22 56 52.9**	**+0.4**
BSO3				⇓	X		22 57 04.0	
BSO4	**Boso 4**	**0.21**	**337**	⇓	*i* P	**Pn**	**22 56 53.3**	**+0.2**
BSO4				⇓	X		22 57 04.9	
KTR	**Katsuura**	**0.36**	**344**	⇓	*i* P	**Pn**	**22 56 53.9**	**-0.1**
KTR				⇓	*e* S	**Sn**	**22

comp=Z,7.0nm,1.5s
WB2 Warramunga Arr 54.74 187 P **P** **23 06 00.2 -0.3**
WB2 IAmb IAmb 23 06 22.0
comp=Z,10nm,1.5s
WRA Warramunga Arr 54.74 187 P **P** **23 05 59.1 -1.5**
WRA Warramunga Arr 54.74 187 P **P** **23 05 59.0 -1.5**
comp=Z,1.2nm,0.7s,baz=2.1,slow=7.6,SNR=14
comp=Z,1.2nm,0.7s
G29M Pine Creek 55.27 28 P **P** **23 06 05.9 +2.1**
G29M IAmb IAmb 23 06 06.3
comp=Z,14nm,1.5s
M29M Somme Creek 55.80 34 P **P** **23 06 08.4 +0.6**
G30M tAoh Zraii Nji 55.95 28 P **P** **23 06 10.1 +1.3**
G30M IAmb IAmb 23 06 34.8
comp=Z,6.8nm,1.2s
I30M Mount Dempster 56.20 30 P **P** **23 06 11.6 +0.9**
G31M Satah River 56.72 28 P **P** **23 06 14.8 +0.7**
G31M IAmb IAmb 23 06 49.4
comp=Z,6.8nm,1.4s
ASAR Alice Springs 58.47 187 P **P** **23 06 26.6 -0.3**
comp=Z,0.2nm,0.4s,baz=15,slow=10,SNR=6.9
comp=Z,0.2nm,0.4s
AB31 Akbulak array 58.79 311 P **P** **23 06 29.8 +0.9**
ABKAR Akbulak array 58.79 311 P **P** **23 06 28.7 -0.1**
C36M Paulatuk 59.79 24 P **P** **23 06 34.9 -0.5**
GIRL Giralia 62.31 207 P **P** **23 06 53.0 0.0**
RES Resolute Bay 64.96 14 P **P** **23 07 09.2 -0.6**
RES IAmb IAmb 23 07 32.8
comp=Z,10.0nm,1.3s
ARMA Armidale 65.72 169 P **P** **23 07 13.3 -2.0**
FORT Forrest 66.26 192 P **P** **23 07 16.2 -2.5**
FORT IAmb IAmb 23 07 17.0
comp=Z,4.4nm,0.8s
FINES FINESS Array B 70.42 332 P **P** **23 07 45.6 +1.2**
FINES FINESS Array B 70.42 332 P **P** **23 07 44.1 -0.2**
comp=Z,1.9nm,0.9s,baz=82,slow=10.0,SNR=1.6
comp=Z,1.9nm,0.9s
COR Corvallis 70.53 49 P **P** **23 07 45.2 -0.1**
KBO Bosley Butte 71.13 51 P **P** **23 07 49.3 +0.1**
ILON Igloolik, Nuna 71.62 15 P **P** **23 07 53.1 +1.7**
ILON IAmb IAmb 23 07 57.5
comp=Z,18nm,1.3s
BLKN Baker Lake 71.75 22 P **P** **23 07 52.9 +0.6**
BLKN IAmb IAmb 23 08 11.0
comp=Z,7.7nm,1.3s
LPAZ La Paz 148.48 61 PKPbc **PKPbc** **23 16 18.5 +0.8**
comp=Z,0.9nm,0.6s,baz=292,slow=3.7,SNR=4.4

*SNET **03** 23:00:34.9±1.3, 12.89N×88.77W, h40km, ML3.3*
*CATAC **03** 23:00:35.4±0.9, 13°N±7°×8°9W±°, h33km±9km, M3.5/6, MLv3.5/6, Error ellipse: s-maj=16.0km s-min=5.6km az=24.1, confirmed*
ISC 03 23:00:34.9±2.3, 12.9N±0.1×88.79W±0.05, h32km±13km, n27, σ0.28/37, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.65**	**0**	P	**Pb**	**23 00 47.8**	**-0.2**
TECO	**Alcaldia de Te**	**0.65**	**0**	S	**Sb**	**23 00 57.1**	**+0.2**
PACA	**Pacayal**	**0.74**	**37**	P	**Pn**	**23 00 49.3**	**0.0**
UESV	**Universidad de**	**0.75**	**360**	P	**Pn**	**23 00 49.2**	**-0.2**
UESV	**Universidad de**	**0.75**	**360**	S	**Sb**	**23 00 59.4**	**-0.3**
BLLM	**Bellamira**	**0.77**	**44**	*eP*	**Pn**	**23 00 49.4**	**-0.3**
PQSS	**Presa 15 de Se**	**0.77**	**16**	*eP*	**Pn**	**23 00 49.6**	**0.0**
PQSS				*eS*	**Sb**	**23 01 00.6**	**+0.4**
LFRS	**El Faro**	**0.79**	**340**	*eP*	**Pn**	**23 00 50.0**	**0.0**
SCLA	**Alcaldia de Sa**	**0.82**	**4**	*eP*	**Pn**	**23 00 50.4**	**0.0**
SCLA				*eS*	**Sb**	**23 01 02.0**	**+0.4**
SCLA	**Alcaldia de Sa**	**0.82**	**4**	P	**Pn**	**23 00 50.3**	**0.0**
SCLA	**Alcaldia de Sa**	**0.82**	**4**	S	**Sb**	**23 01 01.6**	**+0.1**
PAVA	**Las Pavas**	**0.84**	**350**	*eP*	**Pn**	**23 00 50.7**	**0.0**
PAVA				*eS*	**Sn**	**23 01 02.6**	**+0.6**
PAVA	**Las Pavas**	**0.84**	**350**	P	**Pn**	**23 00 50.7**	**0.0**
PAVA	**Las Pavas**	**0.84**	**350**	S	**Sn**	**23 01 01.7**	**-0.3**
LOMA	**Loma Larga**	**0.85**	**334**	*eP*	**Pn**	**23 00 50.6**	**-0.2**
LOMA				*eS*	**Sn**	**23 01 02.1**	**-0.2**
LOMA	**Loma Larga**	**0.85**	**334**	P	**Pn**	**23 00 50.5**	**-0.2**
LOMA	**Loma Larga**	**0.85**	**334**	S	**Sn**	**23 01 01.9**	**-0.3**
LFU	**La Fuente**	**0.92**	**340**	*eP*	**Pn**	**23 00 52.3**	**+0.5**
PMON	**Piamonte**	**0.97**	**328**	*eP*	**Pn**	**23 00 52.5**	**-0.1**
PMON				*eS*	**Sn**	**23 01 05.4**	**+0.1**
PMON	**Piamonte**	**0.97**	**328**	P	**Pn**	**23 00 52.4**	**-0.1**
BOQS	**Boqueron**	**0.98**	**331**	*eP*	**Pn**	**23 00 53.2**	**+0.6**
BOQS				*eS*	**Sn**	**23 01 05.7**	**+0.1**
JAYA	**Jayaque - finc**	**1.01**	**320**	*eP*	**Pn**	**23 00 52.8**	**-0.2**
JAYA				*eS*	**Sn**	**23 01 06.5**	**+0.3**
JAYA	**Jayaque - finc**	**1.01**	**320**	P	**Pn**	**23 00 52.7**	**-0.2**
JAYA	**Jayaque - finc**	**1.01**	**320**	S	**Sn**	**23 01 05.7**	**-0.4**
CNCH	**Conchagua**	**1.01**	**67**	*eP*	**Pn**	**23 00 52.9**	**-0.1**
CNCH				*eS*	**Sn**	**23 01 06.1**	**0.0**
CSGN	**Cosiguina Volc**	**1.20**	**85**	P	**Pn**	**23 00 55.7**	**+0.1**
CSGN				S	**Sn**	**23 01 10.9**	**+0.1**
NUBE	**Las Nubes**	**1.40**	**317**	*eP*	**Pn**	**23 00 58.9**	**+0.4**
NUBE				*eS*	**Sn**	**23 01 15.9**	**-0.1**

*IDC **03** 23:05:31.0±0.6, 30.12S×83.46E, h0km, mb3.9/14, mbtmp3.9/14, MS3.5/4, Error ellipse: s-maj=29.2km s-min=15.7km az=95.0*
ISC 03 23:05:32.6±0.7, 30.1S±0.1×83.5E±0.2, h10km, n30, σ0.90/18, mb4.1/16, MS3.3/4, 4D, Broken Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**24.65**	**333**	T	T	23 36 27.9	
	baz=157,slow=75,SNR=38						
H08S1	**Diego Carcia H**	**24.66**	**333**	T	T	23 36 28.5	
	baz=157,slow=75,SNR=35						
H08S3	**Diego Garcia H**	**24.67**	**333**	T	T	23 36 30.2	
	baz=157,slow=75,SNR=36						
H01W2	**Cape Leeuwin H**	**26.21**	**108**	T	T	23 38 19.0	
	baz=272,slow=74,SNR=3.1						
H01W3	**Cape Leeuwin H**	**26.21**	**108**	T	T	23 38 13.6	
	baz=272,slow=74,SNR=3.8						
H01W1	**Cape Leeuwin H**	**26.23**	**108**	T	T	23 38 15.0	
	baz=272,slow=74,SNR=3.7						
H04N2	**CROZET ISLANDS**	**29.37**	**228**	T	T	23 42 29.3	
	baz=68,slow=75,SNR=3.9						
H04N1	**CROZET ISLANDS**	**29.38**	**228**	T	T	23 42 25.7	
	baz=68,slow=75,SNR=3.9						
H04N3	**CROZET ISLANDS**	**29.39**	**228**	T	T	23 42 26.3	
	baz=68,slow=75,SNR=5.1						
PSI	**Prapat**	**35.92**	**27**	LR	LR	23 25 22.0	
	comp=Z,43nm,18.5s,baz=198,slow=33						
PALK	**Pallekele**	**37.30**	**355**	LR	LR	23 24 12.8	
	comp=Z,35nm,20.6s,baz=158,slow=30						
MAW	**Mawson**	**39.45**	**192**	P	**P**	**23 13 01.4**	**-1.2**
	3.6nm,0.8s,baz=14,slow=9.7,SNR=7.1						
MAW				LR	LR	23 25 34.9	
	comp=Z,49nm,18.6s,baz=274,slow=30						
	3.6nm,0.8s						
ASAR	**Alice Springs**	**45.12**	**94**	P	**P**	**23 13 50.0**	**+0.6**
	1.0nm,0.9s,baz=241,slow=6.7,SNR=6.3						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**46.84**	**90**	P	**P**	**23 14 02.3**	**-0.8**
	0.9nm,0.8s,baz=249,slow=8.6,SNR=4.0						
	0.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.56**	**19**	P	**P**	**23 14 30.2**	**-1.3**
	0.4nm,0.4s,baz=194,slow=5.1,SNR=4.9						
	0.4nm,0.4s						
VNDA	**Vanda**	**58.28**	**165**	P	**P**	**23 15 26.5**	**-0.5**
	1.8nm,1.1s,baz=270,slow=6.2,SNR=3.7						
	1.8nm,1.1s						
TROLL	**Troll, Antarti**	**58.86**	**201**	⇓P	**P**	**23 15 31.4**	**+0.2**
	comp=Z,158nm,0.8s						
QSPA	**South Pole Qui**	**59.99**	**180**	P	**P**	**23 15 40.9**	**+1.7**
	comp=Z,9nm,0.7s,baz=275,slow=1.7,SNR=21						
	comp=Z,2.9nm,0.7s						
SNAA	**Sanae**	**60.56**	**201**	⇓P	**P**	**23 15 42.9**	**0.0**
	comp=Z,33nm,0.6s						
SNAA	**Sanae**	**60.56**	**201**	P	**P**	**23 15 42.6**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=119,slow=8.6,SNR=17						
	comp=Z,1.7nm,0.8s						
VNA2	**Neumayer--Watz**	**62.13**	**202**	⇓P	**P**	**23 15 53.1**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=86,slow=6.0						
VNA3	**Neumayer Olymp**	**62.79**	**201**	⇓P	**P**	**23 15 57.9**	**0.0**
	comp=Z,2.0nm,0.7s						
LZDM	**Lanzhou Array**	**68.44**	**18**	P	**P**	**23 16 36.7**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=188,slow=7.3,SNR=1.3						
	comp=Z,0.9nm,0.3s						
MKAR	**Makanchi Array**	**76.59**	**359**	P	**P**	**23 17 22.1**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=193,slow=5.9,SNR=4.3						
	comp=Z,0.3nm,0.6s						
SONM	**Songino Array**	**80.30**	**15**	P	**P**	**23 17 44.0**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=172,slow=2.2,SNR=4.3						
	comp=Z,0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**80.53**	**357**	P	**P**	**23 17 43.8**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=183,slow=4.9,SNR=4.6						
	comp=Z,0.3nm,0.4s						
PMSA	**Palmer Station**	**82.06**	**193**	LR	LR	23 54 07.2	
	comp=Z,125nm,18.1s,baz=172,slow=36						
BRTR	**Keskin Array B**	**83.53**	**324**	P	**P**	**23 18 01.1**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=155,slow=7.0,SNR=9.6						
	comp=Z,1.2nm,0.7s						
BVAR	**Borovoye Array**	**83.60**	**352**	P	**P**	**23 18 01.2**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=141,slow=5.0,SNR=2.5						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**83.75**	**1**	P	**P**	**23 18 01.5**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=191,slow=5.2,SNR=7.4						
	comp=Z,1.6nm,0.8s						

*JMA **03** 23:11:02.3±0.2, 23.7N±0.9×122.5E±0.6, h36km, MV2.6/12, NEAR ISHIGAKIJIMA ISLAND*
*TAP **03** 23:11:02.8, 23.74N×122.58E, h36km, ML3.2, D*
ISC 03 23:10:59.5±1.1, 23.69N±0.02×122.57E±0.02, h10km±9km, n86, σ0.66/145, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.49**	**332**	P	**Pn**	**23 11 12.4**	**+0.3**
EOS4				*eS*	**Sb**	**23 11 19.6**	**+2.6**
EOS3	**EOS3**	**0.64**	**339**	P	**Pn**	**23 11 15.2**	**+0.8**
EOS3				S	**Sn**	**23 11 23.8**	**-0.7**
EOS2	**EOS2**	**0.79**	**337**	P	**Pn**	**23 11 17.7**	**+1.2**
EOS2				*eS*	**Sn**	**23 11 28.4**	**+0.1**
JYNG	**Yonagunijimaku**	**0.83**	**24**	P	**Pn**	**23 11 17.5**	**+0.2**
YOJ	**Yonaguni jima**	**0.87**	**28**	P	**Pn**	**23 11 18.2**	**+0.5**
YOJ	**Yonaguni jima**	**0.87**	**28**	P	**Pn**	**23 11 18.1**	**+0.4**
YOJ				S	**Sn**	**23 11 30.4**	**-0.1**
TEYL	**Yanliau Villag**	**0.91**	**282**	P	**Pn**	**23 11 18.4**	**+0.1**
TEYL				*eS*	**Sn**	**23 11 31.2**	**-0.1**
SHUL	**Shoufeng**	**0.93**	**276**	*i* P	**Pn**	**23 11 19.0**	**+0.5**
SHUL				*eS*	**Sn**	**23 11 31.8**	**-0.1**
TEGC	**Jichi Village**	**0.94**	**271**	*eP*	**Pn**	**23 11 19.0**	**+0.3**
TEGC				*eS*	**Sn**	**23 11 31.9**	**-0.3**
TWD	**Chiawan**	**0.97**	**294**	*eP*	**Pn**	**23 11 19.1**	**-0.1**
TWD				*eS*	**Sg**	**23 11 30.5**	**-0.4**
ETL	**Fush Village**	**0.98**	**299**	*eP*	**Pn**	**23 11 19.8**	**+0.4**
ETL				*eS*	**Sb**	**23 11 32.2**	**+0.5**
NACB	**Ninganchiao**	**1.01**	**299**	P	**Pn**	**23 11 19.6**	**-0.1**
NACB				S	**Sb**	**23 11 32.4**	**-0.1**
ETM	**Tongmen**	**1.02**	**286**	P	**Pn**	**23 11 19.6**	**-0.2**
ETM				S	**Sb**	**23 11 33.1**	**+0.4**
EWUT	**Wuta**	**1.04**	**316**	*eP*	**Pn**	**23 11 20.9**	**+0.8**
EGFH	**Guangfu**	**1.05**	**269**	*eP*	**Pn**	**23 11 20.6**	**+0.4**
EGFH				*eS*	**Sb**	**23 11 33.7**	**+0.3**
ESL	**Shilin**	**1.05**	**277**	*eP*	**Pn**	**23 11 20.0**	**-0.2**
ESL				*eS*	**Sg**	**23 11 32.7**	**-0.6**
ENA	**Nanau**	**1.06**	**314**	P	**Pn**	**23 11 21.1**	**+0.8**
ENA				S	**Sn**	**23 11 35.0**	**0.0**
HGSD	**Ruisui**	**1.07**	**260**	P	**Pn**	**23 11 20.6**	**+0.2**
HGSD				S	**Sg**	**23 11 33.8**	**-0.2**
WARBT	**Fenglin Townsh**	**1.08**	**272**	*i* P	**Pn**	**23 11 20.7**	**0.0**
WARBT				S	**Sg**	**23 11 34.0**	**-0.4**
ECBN	**Changbin**	**1.09**	**250**	*i* P	**Pn**	**23 11 21.5**	**+0.8**
ECBN				*i* S	**Sg**	**23 11 34.8**	**+0.1**
LXIB	**Xiulin Townshi**	**1.11**	**288**	*eP*	**Pn**	**23 11 21.4**	**+0.2**
LXIB				S	**Sb**	**23 11 35.3**	**-0.1**
ETLH	**Xiulin Townshi**	**1.12**	**298**	*eP*	**Pn**	**23 11 21.4**	**+0.2**
ETLH				*eS*	**Sb**	**23 11 35.6**	**-0.1**
TWC	**Suao**	**1.13**	**324**	*eP*	**Pn**	**23 11 22.7**	**+1.4**
EHYH	**Wanrong**	**1.14**	**260**	P	**Pn**	**23 11 22.3**	**+0.9**
EHYH				*i* S	**Sn**	**23 11 37.6**	**+0.5**
EHY	**Hungye**	**1.16**	**261**	*i* P	**Pg**	**23 11 22.5**	**+0.7**
EHY				*i* S	**Sg**	**23 11 37.0**	**+0.2**
CHKH	**Chenggong**	**1.19**	**246**	*eP*	**Pb**	**23 11 22.1**	**0.0**
CHKH				*eS*	**Sb**	**23 11 36.2**	**-1.2**
HATJ	**Hateruma jima**	**1.19**	**72**	*eS*	**Sn**	**23 11 37.9**	**-0.4**
YULB	**Yu-li**	**1.20**	**256**	*eP*	**Pg**	**23 11 23.0**	**+0.4**
YULB				S	**Sb**	**23 11 38.3**	**+0.3**
TWF1	**Yuli**	**1.22**	**254**	P	**Pg**	**23 11 23.3**	**+0.4**
TWF1				*eS*	**Sb**	**23 11 37.9**	**-0.4**
NDS	**Dongshan**	**1.22**	**321**	P	**Pg**	**23 11 24.0**	**+1.0**
NDS				S	**Sn**	**23 11 38.9**	**-0.2**
IRIF	**Iriomote-Funau**	**1.24**	**59**	P	**Pg**	**23 11 24.1**	**+0.8**
IRIF				*eS*	**Sn**	**23 11 39.7**	**+0.1**
CHKT	**Chengkung**	**1.25**	**242**	P	**Pn**	**23 11 23.2**	**+0.2**
CHKT				S	**Sb**	**23 11 37.8**	**-1.5**
FULB	**Fuli**	**1.27**	**248**	P	**Pn**	**23 11 23.3**	**+0.1**
FULB				*eS*	**Sb**	**23 11 38.7**	**-1.1**
LATG	**Datong**	**1.27**	**312**	*eP*	**Pg**	**23 11 24.2**	**+0.3**
LATG				*eS*	**Sn**	**23 11 40.6**	**0.0**
WHF	**Hehuan Shan**	**1.28**	**291**	*eP*	**Pg**	**23 11 23.9**	**-0.2**
OWD	**Renai**	**1.30**	**282**	P	**Pb**	**23 11 24.2**	**+0.1**
OWD				*eS*	**Sb**	**23 11 40.2**	**-0.7**
VWDT	**VWDT**	**1.31**	**273**	P	**Pg**	**23 11 24.8**	**+0.1**
VWDT				S	**Sb**	**23 11 40.7**	**-0.3**
NNSB	**Datong**	**1.31**	**304**	P	**Pg**	**23 11 24.7**	**0.0**
NNSB				S	**Sb**	**23 11 40.3**	**-0.8**
ENTT	**Nioudou**	**1.32**	**316**	*eP*	**Pg**	**23 11 25.0**	**+0.2**
ENTT				*eS*	**Sg**	**23 11 41.2**	**-0.8**
NNS	**Nan Shan**	**1.32**	**305**	P	**Pg**	**23 11 25.1**	**+0.1**
NNS				*eS*	**Sb**	**23 11 40.2**	**-1.4**
FUSS	**Fushou**	**1.33**	**295**	P	**Pg**	**23 11 25.2**	**+0.1**
FUSS				S	**Sb**	**23 11 41.6**	**-0.4**
EHD	**Haiduan**	**1.36**	**247**	*eP*	**Pg**	**23 11 26.0**	**+0.4**
EHD				*eS*	**Sb**	**23 11 42.7**	**+0.2**
WUSB	**Renai**	**1.36**	**283**	P	**Pb**	**23 11 25.3**	**+0.2**
EDH	**Donghe**	**1.36**	**239**	P	**Pn**	**23 11 24.7**	**+0.2**
EDH				S	**Sb**	**23 11 40.6**	**-1.9**
TWT	**Tachien**	**1.39**	**294**	*eP*	**Pg**	**23 11 26.2**	**0.0**
TWT				*eS*	**Sg**	**23 11 44.5**	**+0.1**
FUSB	**Fushanzhiwuyua**	**1.39**	**320**	*eP*	**Pg**	**23 11 26.2**	**-0.1**
TDCB	**Techi**	**1.41**	**294**	*eP*	**Pg**	**23 11 26.2**	**-0.3**
TDCB				*eS*	**Sb**	**23 11 43.3**	**-0.7**
JKRS	**Kuro-shima**	**1.43**	**67**	P	**Pg**	**23 11 26.5**	**-0.4**
JKRS				*eS*	**Sg**	**23 11 44.5**	**-0.9**
TIPB	**Shuangxi**	**1.45**	**332**	*eP*	**Pg**	**23 11 27.8**	**+0.5**
NWLT	**Wulai**	**1.46**	**318**	*eP*	**Pg**	**23 11 26.9**	**-0.5**
NWLT				*eS*	**Sn**	**23 11 44.2**	**-0.8**
YHNB	**Yeheng**	**1.46**	**312**	*eP*	**Pg**	**23 11 27.2**	**-0.5**
NSK	**Sanguang**	**1.48**	**312**	*eP*	**Pg**	**23 11 27.5**	**-0.4**
NSK				*eS*	**Sn**	**23 11 44.6**	**-1.0**
SSLB	**Suanglung**	**1.48**	**274**	*eP*	**Pb**	**23 11 26.9**	**-0.2**
SSLB				*eS*	**Sn**	**23 11 45.0**	**-0.7**
YUS	**Yu-Shan**	**1.50**	**263**	*eP*	**Pb**	**23 11 27.9**	**+0.2**
YUS				S	**Sn**	**23 11 46.0**	**-0.6**
ELDTW	**Lidau**	**1.51**	**251**	P	**Pb**	**23 11 27.4**	**-0.2**
ELDTW				S	**Sn**	**23 11 45.2**	**-1.2**
SXI1	**Grass Mountain**	**1.54**	**336**	*eP*	**Pb**	**23 11 27.8**	**-0.3**
SMLT	**Sun Moon Lake**	**1.54**	**278**	P	**Pb**	**23 11 28.4**	**+0.3**
SMLT				*eS*	**Sn**	**23 11 47.2**	**0.0**
WCS	**Beigang Elemen**	**1.56**	**284**	*eP*	**Pb**	**23 11 28.7**	**+0.3**
TYC	**Yuchr**	**1.58**	**278**	*eP*	**Pb**	**23 11 28.9**	**+0.1**
JIJ	**Ishigaki jima**	**1.59**	**65**	*eP*	**Pb**	**23 11 29.1**	**+0.2**
WHP	**Taichung City**	**1.60**	**292**	*eP*	**Pg**	**23 11 30.2**	**+0.1**
TWGBT	**Beinan**	**1.62**	**238**	*eP*	**Pb**	**23 11 29.1**	**-0.3**
TWGBT				*eS*	**Sn**	**23 11 48.4**	**-0.6**
NFF	**Wufeng Townshi**	**1.62**	**306**	*eP*	**Pg**	**23 11 30.2**	**-0.5**
TWG	**Pinlang**	**1.62**	**238**	*eP*	**Pn**	**23 11 29.1**	**+0.9**
TWG				*eS*	**Sn**	**23 11 48.4**	**-0.7**
ALS	**Alishan**	**1.63**	**264**	P	**Pb**	**23 11 30.4**	**+0.6**
ALS				*eS*	**Sn**	**23 11 49.8**	**+0.2**
KSHI	**Guanxi Townshi**	**1.67**	**311**	*eP*	**Pg**	**23 11 31.3**	**-0.3**
KSHI				*eS*	**Sg**	**23 11 52.7**	**-0.6**
LIOB	**Emei**	**1.71**	**304**	P	**Pg**	**23 11 32.0**	**-0.3**
LIOB				S	**Sb**	**23 11 52.4**	**-0.1**
NSTT	**Nanjuang**	**1.71**	**304**	P	**Pg**	**23 11 32.0**	**-0.3**
NSTT				S	**Sb**	**23 11 52.4**	**-0.2**
YM01	**YM01**	**1.71**	**328**	*eP*	**Pg**	**23 11 31.3**	**-1.1**
STYH	**Taoyuan**	**1.73**	**253**	P	**Pb**	**23 11 31.1**	**-0.2**
STYH				S	**Sn**	**23 11 52.0**	**+0.4**
CHN5	**Tsauling**	**1.74**	**267**	*eP*	**Pb**	**23 11 32.0**	**+0.6**
CHN5				*eS*	**Sb**	**23 11 54.2**	**+0.9**
WNT	**Mingjian**	**1.74**	**277**	*eP*	**Pg**	**23 11 32.8**	**-0.1**
ZUZH	**Zhuzihu**	**1.74**	**328**	*eP*	**Pb**	**23 11 31.3**	**-0.2**
ZUZH				*eS*	**Sb**	**23 11 52.1**	**-1.3**
TWQ1	**Liyutan**	**1.77**	**292**	*eP*	**Pg**	**23 11 33.0**	**-0.4**
WCKO	**Fanlu**	**1.82**	**263**	*eP*	**Pg**	**23 11 34.0**	**-0.4**
WCKO				*eS*	**Sb**	**23 11 56.6**	**+0.9**
TPUB	**Ta-pu**	**1.82**	**258**	P	**Pb**	**23 11 33.5**	**+0.6**
TPUB				*eS*	**Sb**	**23 11 55.8**	**0.0**
JISG	**Ishigakijimahi**	**1.83**	**60**	P	**Pn**	**23 11 31.4**	**+0.6**
LYUB	**Lan-yu**	**1.91**	**209**	*eP*	**Pn**	**23 11 31.8**	**-0.2**
CHN1	**Nanshi**	**1.94**	**255**	P	**Pb**	**23 11 35.8**	**+0.9**
CHN1				*eS*	**Sb**	**23 12 00.4**	**+1.2**
TWK	**Hsinying**	**1.96**	**258**	P	**Pb**	**23 11 36.0**	**+0.8**
TWK				*eS*	**Sb**	**23 12 00.1**	**+0.5**
SSD	**Sandimen**	**2.01**	**243**	*eP*	**Pb**	**23 11 35.8**	**-0.3**
TAWH	**Dawu Township**	**2.05**	**229**	*eP*	**Pn**	**23 11 35.0**	**+1.1**
MASBT	**Mashibuluo**	**2.08**	**239**	*eP*	**Pn**	**23 11 36.1**	**+1.7**
SLIU	**Shizi**	**2.19**	**228**	*eP*	**Pn**	**23 11 37.0**	**+1.0**
TSCK	**Chigu Township**	**2.34**	**257**	*eP*	**Pb**	**23 11 40.9**	**-0.9**
PHUB	**P'eng-hu**	**2.75**	**267**	*eP*	**Pn**	**23 11 45.7**	**+2.0**

*AZER **03** 23:29:09.6, 38.76N×48.53E, h17km, ml3.0*
*TIF **03** 23:29:09.6, 38.74N×48.55E, h31km±1km*
*TEH **03** 23:29:09.2, 38.71N×48.56E, h24km±23km*
ISC 03 23:29:10.7±0.9, 38.72N±0.03×48.56E±0.03, h29km±6km, n48, σ1.98/78, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	**Lenkeran, Azer**	**0.17**	**93**	P	**Pn**	**23 29 16.1**	**-1.2**
LKRN				S	**Sb**	**23 29 20.6**	**+0.4**
LRK	**Lerik**	**0.19**	**247**	P	**Pb**	**23 29 16.1**	**-0.7**
LRK				S	**Sb**	**23 29 20.6**	**-0.4**
ASTR	**Astara**	**0.24**	**131**	P	**Pb**	**23 29 16.9**	**-0.2**
ASTR				S	**Sn**	**23 29 22.0**	**+0.4**
YRD	**Yardimli**	**0.32**	**308**	P	**Pb**	**23 29 17.7**	**-0.8**
YRD				S	**Sn**	**23 29 23.1**	**-2.3**
GAS1	**Astara - Iran**	**0.40**	**147**	Pg	**Pb**	**23 29 17.9**	**-1.5**
GRMI	**Germi**	**0.53**	**280**	Pg	**Pb**	**23 29 19.7**	**-1.9**
GLBA	**Clilabad**	**0.54**	**346**	P	**Pn**	**23 29 21.3**	**-1.2**
GLBA				S	**Sn**	**23 29 29.9**	**-0.6**
SAAT	**Saatly**	**1.15**	**355**	P	**Pb**	**23 29 31.2**	**-0.6**
SAAT				S	**Sb**	**23 29 48.5**	**+2.1**
QRD	**Qoradiz**	**1.22**	**308**	P	**Pb**	**23 29 31.3**	**-1.8**
QRD				S	**Sb**	**23 29 47.0**	**-1.4**
CSN1	**Caspian**	**1.23**	**160**	Pg	**Pn**	**23 29 31.8**	**-0.1**
IHRS	**Heris**	**1.26**	**252**	Pg	**Pb**	**23 29 32.4**	**-1.5**
IHRS				Sg	**Sb**	**23 29 49.0**	**-0.8**
BLQ	**Beylaqan**	**1.27**	**322**	P	**Pb**	**23 29 32.1**	**-1.9**
BLQ				S	**Sb**	**23 29 50.0**	**+0.1**
ALIB	**&Aumlli-Bayram**	**1.28**	**15**	P	**Pb**	**23 29 35.0**	**+0.8**
ALIB				S	**Sb**	**23 29 51.7**	**+1.4**
KDMR	**Kurdemir**	**1.68**	**350**	Pn	**Pb**	**23 29 38.9**	**-2.1**
KDMR				Sn	**Sb**	**23 30 02.8**	**+1.1**
ZRD	**Zardab**	**1.70**	**337**	Pn	**Pb**	**23 29 39.1**	**-2.0**
ZRD				Sn	**Sb**	**23 30 03.6**	**+1.4**
IHSH	**Hashtrud**	**1.74**	**216**	Pg	**Pn**	**23 29 39.6**	**+0.3**
AGDM	**Agdam**	**1.79**	**321**	Pn	**Pb**	**23 29 40.2**	**-2.5**
AGDM				Sn	**Sb**	**23 30 03.7**	**-1.1**
GBS	**Qobustan**	**1.84**	**9**	Pn	**Pb**	**23 29 42.5**	**-1.1**
GBS				Sn	**Sb**	**23 30 07.1**	**+0.8**
BRDA	**Brd**	**1.88**	**326**	Pn	**Pb**	**23 29 42.3**	**-2.0**
BRDA				Sn	**Sb**	**23 30 08.0**	**+0.7**
GOBA	**Gobu**	**1.91**	**28**	Sg	**Sb**	**23 30 09.8**	**+1.6**
ITBZ	**Tabriz**	**1.96**	**256**	Pn	**Pb**	**23 29 42.5**	**+0.4**
ORD	**Ordubad**	**2.02**	**277**	Pn	**Pb**	**23 29 44.3**	**-2.4**
ORD				Sn	**Sb**	**23 30 10.9**	**-0.5**
ZNJK	**Zanjan**	**2.05**	**177**	Pn	**Pn**	**23 29 43.5**	**+0.1**
PQL	**Pirkuli**	**2.07**	**1**	Pn	**Pb**	**23 29 44.4**	**-3.2**
PQL				Sn	**Sb**	**23 30 13.6**	**+0.6**
IML	**Ismayilli**	**2.09**	**352**	Pn	**Pb**	**23 29 44.8**	**-3.2**
IML				Sn	**Sb**	**23 30 13.0**	**-0.

CO04 eS Sn 23 30 23.5 -0.3
CO02 Combarbal 1.59 283 Pn 23 30 02.3 -0.1
CO02 Sn Sn 23 30 25.1 +1.3
CO02 Combarbal 1.59 283 i/P Pn 23 30 02.3 -0.1
CO02 IAML 23 30 27.6
comp=N,7µm,0.2s
CO02 Combarbal 1.59 283 eP Pn 23 30 02.3 -0.1
CO02 eS Sn 23 30 25.4 +1.6
CO02 IAML 23 30 27.8
comp=Z,2µm,0.3s
VA03 San Esteban 1.64 224 Pn Pn 23 30 03.2 +0.3
VA03 Sn Sn 23 30 25.4 +0.5
VA03 San Esteban 1.64 224 eP Pn 23 30 03.1 +0.1
VA03 eS Sn 23 30 25.4 +0.5
VA03 IAML 23 30 26.5
comp=N,6µm,0.3s
VA03 San Esteban 1.64 224 eP Pn 23 30 02.7 -0.3
VA03 eS Sn 23 30 26.4 +1.6
VA03 IAML 23 30 28.1
comp=Z,2µm,0.6s
AVFE Valle Fertil 1.76 59 eP Pn 23 30 04.4 0.0
AVFE eS Sn 23 30 27.4 +0.1
AVFE IAML 23 30 29.6
comp=Z,1µm,0.2s
CO01 Juntas del Tor 1.78 334 Pn 23 30 05.8 +1.0
CO01 Sn Sn 23 30 30.0 +1.8
CO01 Juntas del Tor 1.78 334 eP Pn 23 30 06.3 +1.4
CO01 eS Sn 23 30 30.8 +2.6
CO01 IAML 23 30 32.6
comp=E,2µm,0.3s
CO01 Juntas del Tor 1.78 334 eP Pn 23 30 06.2 +1.4
CO01 eS Sn 23 30 31.0 +2.9
CO01 IAML 23 30 32.1
comp=Z,1µm,0.3s
ACAN Cantantal 1.84 112 eP Pn 23 30 04.9 -0.4
AVIZ Vizcacheras 1.97 163 eP Pn 23 30 01.8 -5.3
AVIZ eP 23 30 07.4
AVIZ eS Sn 23 30 25.2 -6.8
GO04 Tololo Observa 1.97 315 Pn 23 30 06.9 -0.3
GO04 Sn Sn 23 30 31.9 -0.5
GO04 Tololo Observa 1.97 315 eP Pn 23 30 07.0 -0.3
GO04 Tololo Observa 1.97 315 eP Pn 23 30 07.0 -0.3
GO04 eS Sn 23 30 32.8 +0.5
GO04 IAML 23 30 35.7
comp=Z,2µm,0.2s
MT08 Bocatoma Ro 1.98 200 Pn 23 30 07.6 +0.3
MT08 Bocatoma Ro 1.98 200 eP Pn 23 30 08.7 +1.4
MT08 Bocatoma Ro 1.98 200 eP Pn 23 30 08.8 +1.6
MT08 eS Sn 23 30 18.0 -14
MT08 IAML 23 30 42.0
comp=Z,470nm,0.4s
MT04 Ro Olivares 1.98 203 eP Pn 23 30 08.2 +0.9
MT04 IAML 23 30 44.5
comp=N,798nm,0.4s
MT04 Ro Olivares 1.98 203 eP Pn 23 30 08.0 +0.6
MT04 eS Sn 23 30 42.7 +10
MT04 IAML 23 30 44.1
comp=Z,371nm,0.3s
PEL Peldehue 2.00 219 Pn 23 30 07.0 -0.3
PEL Peldehue 2.00 219 eP Pn 23 30 07.1 -0.3
PEL eS Sn 23 30 32.7 0.0
PEL IAML 23 30 33.9
comp=N,1µm,0.3s
PEL Peldehue 2.00 219 eP Pn 23 30 01.8 -5.6
PEL eS Sn 23 30 32.8 0.0
PEL IAML 23 30 39.7
comp=Z,679nm,0.5s
MT10 Hacienda Santa 2.03 214 eP Pn 23 30 08.3 +0.5
MT10 eS Sn 23 30 34.2 +0.8
MT10 IAML 23 30 38.2
comp=E,3µm,0.4s
VA06 Catapilco 2.03 241 Pn 23 30 06.1 -1.6
VA06 Sn Sn 23 30 31.5 -1.8
VA06 Catapilco 2.03 241 eP Pn 23 30 06.2 -1.4
VA06 IAML 23 30 38.2
comp=N,2µm,0.4s
ROCH El Roble 2.07 228 eP Pn 23 30 07.6 -0.7
ROCH IAML 23 30 36.1
comp=N,2µm,0.3s
ROC1 El Roble 2.07 228 eP Pn 23 30 07.6 -0.9
ROC1 eS Sn 23 30 34.2 -0.4
MT14 Cerro Cal¡n 2.13 212 eP Pn 23 30 09.3 +0.2
MT14 IAML 23 30 40.9
comp=N,1µm,0.7s
MT16 CCHEN 2.15 211 Pn 23 30 09.4 +0.1
MT16 Sn Sn 23 30 37.0 +0.8
MT16 CCHEN 2.15 211 eP Pn 23 30 09.1 -0.2
AGUA GUANDACOL 2.18 16 eP Pn 23 30 10.8 +1.1
AGUA eS Sn 23 30 41.1 +4.2
AGUA IAML 23 30 41.8
comp=Z,1µm,0.2s
MT03 Universidad Ad 2.20 210 Pn 23 30 10.2 +0.2
MT03 Universidad Ad 2.20 210 eP Pn 23 30 10.5 +0.5
MT03 IAML 23 30 41.7
comp=E,1µm,0.2s
MT03 Universidad Ad 2.20 210 eP Pn 23 30 09.9 0.0
MT03 eS Sn 23 30 40.0 +2.6
MT03 IAML 23 30 43.5
comp=Z,642nm,0.6s
ACHE Chepes 2.21 80 eP Pn 23 30 10.4 +0.3
MT05 Renca 2.22 215 Pn 23 30 10.2 0.0
MT05 Sn Sn 23 30 36.8 -0.9
MT05 Renca 2.22 215 eP Pn 23 30 10.2 0.0
MT05 IAML 23 30 40.0
comp=N,2µm,0.4s
MT05 Renca 2.22 215 eP Pn 23 30 10.3 0.0
MT05 eS Sn 23 30 19.6 -18
MT05 IAML 23 30 40.0
comp=Z,958nm,0.6s
CO06 Fray Jorge 2.28 293 Pn 23 30 09.0 -1.9
CO06 Sn Sn 23 30 37.0 -2.1
CO06 Fray Jorge 2.28 293 eP Pn 23 30 09.3 -1.6
MT15 Las Vizcachas 2.29 209 eP Pn 23 30 11.4 +0.3
MT02 Curacav 2.34 224 Pn 23 30 10.7 -1.0
MT02 Sn Sn 23 30 38.8 -1.6
MT02 Curacav 2.34 224 eP Pn 23 30 10.7 -1.0
MT02 Curacav 2.34 224 eP Pn 23 29 57.4 -14
MT02 eS Sn 23 30 40.0 -0.4
MT02 IAML 23 30 43.5
comp=Z,576nm,0.6s
LMEL Las Melosas 2.41 200 Pn 23 30 12.6 -0.1
LMEL Las Melosas 2.41 200 eP Pn 23 30 13.5 +0.8
LMEL IAML 23 30 52.4
comp=N,450nm,0.2s
LMEL Las Melosas 2.41 200 eP Pn 23 30 13.4 +0.8
LMEL eS Sn 23 30 52.0 +10
LMEL IAML 23 30 57.4
comp=Z,268nm,0.2s
CO05 La Serena 2.42 313 Pn 23 30 11.9 -0.8
CO05 La Serena 2.42 313 eP Pn 23 30 11.9 -0.8
CO05 eS Sn 23 30 40.3 -1.9
MT12 Pirque 2.42 208 eP Pn 23 30 13.1 +0.3
MT12 IAML 23 30 48.5
comp=E,1µm,0.6s
VA01 Torpederas 2.52 235 Pn 23 30 12.5 -1.5
VA01 Sn Sn 23 30 41.7 -2.8
VA01 Torpederas 2.52 235 eP Pn 23 30 12.2 -1.8
VA01 Torpederas 2.52 235 eP Pn 23 30 12.5 -1.5
VA01 eS Sn 23 30 37.4 -7.1
VA01 IAML 23 30 47.5
comp=Z,336nm,0.3s
APLL PUNTA DE LOS L 2.58 63 eP Pn 23 30 14.9 +0.1
APLL eS Sn 23 30 32.8 -13
MT09 Talagante 2.66 214 Pn 23 30 14.8 -1.1
MT09 Sn Sn 23 30 43.3 -4.6
MT09 Talagante 2.66 214 eP Pn 23 30 14.8 -1.1
MT09 IAML 23 30 49.1
comp=E,554nm,0.3s
BO04 La Punta 2.67 206 Pn 23 30 15.8 -0.3
BO04 Sn Sn 23 30 43.9 -4.3
BO04 La Punta 2.67 206 eP Pn 23 30 16.0 -0.1
MT01 Popeta 2.86 217 Pn 23 30 17.3 -1.1
MT01 Sn Sn 23 30 46.4 -6.1
MT01 Popeta 2.86 217 eP Pn 23 30 16.8 -1.6
MT01 Popeta 2.86 217 eP Pn 23 30 16.9 -1.5
MT01 eS Sn 23 30 50.7 -1.7
MT01 IAML 23 30 58.6
comp=Z,258nm,0.3s
LCO Las Campanas 2.88 333 Pn 23 30 18.3 -0.6
LCO Sn Sn 23 30 47.3 -6.1
LCO Las Campanas 2.88 333 eP Pn 23 30 18.6 -0.4
LCO Las Campanas 2.88 333 eP Pn 23 30 18.7 -0.3

LCO eS Sn 23 30 43.8 -10
LCO IAML 23 30 55.5
comp=Z,1µm,0.3s
ACLC CERRO LA CRUZ 2.90 43 eP Pn 23 30 19.2 0.0
ACLC eS Sn 23 30 51.6 -2.0
ACLC IAML 23 31 22.1
comp=Z,369nm,0.8s
VCA Vinchina 2.97 17 eP Pn 23 30 20.8 +0.7
VCA Vinchina 2.97 17 eP Pn 23 30 21.4 +1.4
VCA eS Sn 23 30 48.0 -7.4
VCA IAML 23 31 00.6
comp=Z,946nm,0.3s
MRA San Martin 3.07 107 eP Pn 23 30 21.3 0.0
MRA eS Sn 23 30 57.0 -0.6
MRA IAML 23 30 58.9
comp=Z,1µm,0.4s
BO01 Tunca 3.22 209 Pn 23 30 21.9 -1.3
BO01 Sn Sn 23 30 51.8 -9.2
BO01 Tunca 3.22 209 eP Pn 23 30 21.6 -1.5
BO01 Tunca 3.22 209 eP Pn 23 30 21.7 -1.5
BO01 eS Sn 23 30 46.4 -15
BO01 IAML 23 30 53.7
comp=Z,190nm,0.6s
RFA San Rafael 3.23 169 eP Pn 23 30 22.5 -1.0
RFA eS Sn 23 30 48.1 -13
RFA IAML 23 31 00.7
comp=Z,632nm,0.5s
BO02 Sierra Bellavi 3.46 202 Pn 23 30 25.9 -0.6
BO02 Sierra Bellavi 3.46 202 eP Pn 23 30 25.9 -0.6
BO02 IAML 23 31 17.4
comp=N,363nm,0.3s
BO02 Sierra Bellavi 3.46 202 eP Pn 23 30 26.1 -0.4
BO02 eS Sn 23 30 53.9 -13
BO02 IAML 23 31 09.1
comp=Z,175nm,0.1s
BO03 Pichilemu 3.72 218 eP Pn 23 30 26.5 -3.2
AC04 Llanos de Chal 3.74 334 Pn 23 30 28.9 -1.3
AC04 Llanos de Chal 3.74 334 eP Pn 23 30 29.1 -1.1
AC04 Llanos de Chal 3.74 334 eP Pn 23 30 28.8 -1.4
AC04 eS Sn 23 31 07.0 -6.5
AC04 IAML 23 31 19.9
comp=Z,298nm,1.0s
TCA Tanti 3.94 88 eP Pn 23 30 32.1 -0.7
TCA Tanti 3.94 88 eP Pn 23 30 32.2 -0.7
TCA eS Sn 23 31 16.2 -2.2
TCA IAML 23 31 33.7
comp=Z,568nm,0.5s
GO03 Copiapo 4.08 347 Pn 23 30 34.3 -0.6
GO03 Copiapo 4.08 347 eP Pn 23 30 34.6 -0.2
GO03 eS Sn 23 31 20.6 -1.1
GO03 IAML 23 31 25.9
comp=Z,274nm,0.7s
GO05 Hualane 4.11 213 eP Pn 23 30 31.7 -3.4
AC06 Mina Casimiro 4.33 346 Pn 23 30 37.5 -0.7
ML02 Panimavida 4.56 203 Pn 23 30 39.0 -2.1
AC02 Maricunga 4.74 1 Pn 23 30 44.0 0.0
AC02 Maricunga 4.74 1 eP Pn 23 30 44.5 +0.5
AC02 eS Sn 23 31 37.7 -0.4
AC02 IAML 23 31 41.1
comp=Z,98nm,0.8s
BI02 San Fabin de 5.35 198 Pn 23 30 50.6 -1.2
BI02 San Fabin de 5.35 198 eP Pn 23 30 51.9 0.0
BI02 IAML 23 31 54.9
comp=Z,28nm,0.7s
AC01 Pan de Azucar 5.56 347 Pn 23 30 52.5 -2.1
BI05 Punta Hualpn 6.12 212 Pn Pn 23 30 58.5 -3.7
GO02 Mina Guanaco 6.41 357 Pn 23 31 04.9 -1.6
PB14 IPOC Station P 7.02 351 Pn 23 31 11.9 -2.8
H03N1 Juan Fernandez 8.41 255 P Pn 23 31 33.3 +0.3
baz=122,slow=20,SNR=4.0
H03N1 T T 23 39 02.8
baz=85
H03N3 Juan Fernandez 8.42 255 P Pn 23 31 33.5 +0.3
baz=122,slow=20,SNR=4.6
H03N3 T T 23 38 18.5
baz=85,slow=74
H03N2 Juan Fernandez 8.43 255 P Pn 23 31 33.7 +0.5
baz=122,slow=20,SNR=4.2
H03N2 T T 23 38 36.9
baz=85,slow=74
H03S3 Juan Fernandez 8.48 252 T T 23 38 23.7
baz=84,slow=75,SNR=3.8
H03S1 Juan Fernandez 8.48 252 T T 23 38 23.0
baz=84,slow=75,SNR=7.4
H03S2 Juan Fernandez 8.50 252 T T 23 38 27.0
baz=84,slow=75,SNR=9.6
PB05 IPOC Station P 8.75 354 Pn Pn 23 31 37.8 -0.2
TRQA Tornquist 8.76 139 Pn 23 31 37.2 -0.8
PB06 IPOC Station P 8.85 358 Pn Pn 23 31 38.8 -0.6
PLCA Paso Flores 9.19 186 Pn Pn 23 31 41.9 -2.0
PLCA Paso Flores 9.19 186 P Pn 23 31 43.5 -0.4
comp=Z,0.9nm,0.6s,baz=356,slow=14,SNR=3.3
PLCA S Sn 23 33 23.8 -1.7
comp=Z,2.6nm,0.8s,baz=292,slow=19,SNR=3.0
PB03 IPOC Station P 9.51 357 Pn 23 31 47.5 -0.9
PB09 IPOC Station P 9.75 360 Pn Pn 23 31 51.1 -0.5
PB02 IPOC Station P 10.24 356 Pn Pn 23 31 56.0 -2.3
PB01 IPOC Station P 10.50 359 Pn Pn 23 31 57.7 -4.1
LL01 San Ignacio de 11.07 193 Pn 23 32 07.9 -1.3
HMBC Humberstone 11.28 357 Pn Pn 23 32 11.2 -1.0
PB08 IPOC Station P 11.40 0 Pn Pn 23 32 15.8 +1.8
CPUP Villa Florida 11.63 66 Pn 23 32 13.2 -3.6
CPUP Villa Florida 11.63 66 P Pn 23 32 12.6 -4.2
comp=Z,1.1nm,0.8s,baz=336,slow=18,SNR=8.1
CPUP S Sn 23 34 14.4 -10
comp=Z,1.0nm,0.4s,baz=202,slow=19,SNR=1.4
PB11 IPOC Station P 11.78 358 Pn Pn 23 32 18.5 -0.5
PB16 IPOC Station P 13.20 359 Pn Pn 23 32 37.7 -0.2
LPAZ La Paz 15.26 4 P 23 33 06.1 -0.6
LPAZ La Paz 15.26 4 P Pn 23 33 04.8 +0.5
comp=Z,1.4nm,0.6s,baz=172,slow=6.5,SNR=6.8
ITAB Concordia 15.49 78 P 23 33 08.1 -0.4
SIV San Ignacio 17.20 27 P P 23 33 27.3 -0.3
comp=Z,2.2nm,0.5s,baz=210,slow=13,SNR=13
EFI East Falkland 21.68 161 P P 23 34 14.6 -1.1
EFI IAmb IAmb 23 34 33.3
comp=Z,34nm,1.1s
BDFB Brasilia 25.00 55 IAmb IAmb 23 34 48.6
comp=Z,1.6nm,0.7s
BDFB Brasilia 25.00 55 P P 23 34 47.4 -0.4
comp=Z,1.9nm,0.7s,baz=221,slow=10.0,SNR=2.0
comp=Z,1.9nm,0.7s
MACA Manacapuru-AM 29.39 18 P P 23 35 26.1 -0.8
MACA IAmb IAmb 23 35 27.0
comp=Z,18nm,1.2s
PMSA Palmer Station 33.36 176 P P 23 36 01.5 +0.2
PMSA IAmb IAmb 23 36 12.8
comp=Z,15nm,1.1s
BOAV Boa Vista 34.79 15 P P 23 36 14.1 -0.1
BOAV IAmb IAmb 23 36 14.8
comp=Z,5.4nm,0.8s
RUSC La Rusia 37.45 354 P 23 36 38.2 +0.8
BAUV El Baul 40.31 2 P P 23 37 00.1 -0.6
BELA Belgrano 2 48.85 171 P P 23 38 08.8 +1.0
CRPR Cabo Rojo, PR 49.35 3 P P 23 38 11.9 -0.3
OBIP Obispado Ponce 49.41 3 P P 23 38 12.6 0.0
VNA3 Neumayer Olymp 50.71 159 P P 23 38 22.7 +0.7
comp=Z,4.8nm,0.8s
VNA1 Neumayer--Stat 50.98 158 P P 23 38 24.6 +0.7
comp=Z,2.8nm,1.1s
VNA2 Neumayer--Wetz 51.33 158 P P 23 38 27.4 +0.8
comp=Z,2.7nm,0.5s,baz=285,slow=7.5
SNAA Sanae 52.93 159 P P 23 38 39.2 +0.7
comp=Z,22nm,0.4s
SNAA Sanae 52.93 159 IAmb IAmb 23 38 40.0
comp=Z,2.6nm,1.1s
SNAA Sanae 52.93 159 P P 23 38 39.0 +0.5
comp=Z,0.9nm,0.3s,baz=286,slow=6.1,SNR=33
comp=Z,0.9nm,0.3s
TROLL Troll, Antarti 54.65 159 P P 23 38 52.1 +1.0
comp=Z,62nm,0.5s
TEIG Tepich 54.67 338 P P 23 38 52.4 +0.7
SOR Soroa 55.66 345 P P 23 38 59.0 +0.2
QSPA South Pole Qui 58.65 180 P P 23 39 23.5 +4.1
QSPA IAmb IAmb 23 39 24.1
comp=Z,4.6nm,0.9s
QSPA South Pole Qui 58.65 180 P P 23 39 22.9 +3.5
comp=Z,4.1nm,0.8s,baz=184,slow=1.1,SNR=27
comp=Z,4.1nm,0.8s
833A Chaparral WMA, 66.16 331 P P 23 40 11.3 +1.7
VNDA Vanda 66.92 191 IAmb IAmb 23 40 21.0
comp=Z,0.8nm,1.0s
VNDA Vanda 66.92 191 P P 23 40 15.4 +1.5
comp=Z,1.0nm,0.8s,baz=152,slow=5.0,SNR=3.9
comp=Z,1.0nm,0.8s

HNDO Hondo 67.17 332 P P 23 40 17.6 +1.5
FPAL Fort Paine 67.57 345 P P 23 40 19.1 +0.6
DRIO Del Rio 67.63 331 P P 23 40 20.0 +1.0
DRIO IAmb IAmb 23 40 21.6
comp=Z,3.1nm,0.7s
V58A Windy Hill, Pi 67.67 351 P P 23 40 19.2 +0.1
V58A IAmb IAmb 23 40 19.9
comp=Z,6.1nm,0.6s
X48A Hartselle 67.81 344 P P 23 40 20.4 +0.5
X48A IAmb IAmb 23 40 20.8
comp=Z,6.7nm,0.7s
V55A Taylorsville 68.03 349 P P 23 40 22.2 +0.9
V55A IAmb IAmb 23 40 22.5
comp=Z,5.6nm,0.7s
V53A Saluda 68.11 348 P P 23 40 22.4 +0.4
V53A IAmb IAmb 23 40 22.8
comp=Z,3.9nm,0.7s
W50A Signal Mountai 68.14 346 P P 23 40 22.5 +0.4
JCT Junction City 68.22 332 P P 23 40 23.8 +1.1
CPCT Cooper Cave 68.22 347 P P 23 40 22.5 -0.1
CPCT IAmb IAmb 23 40 23.1
comp=Z,6.5nm,0.9s
SWET Sewanee 68.29 345 P 23 40 23.6 +0.6
BRDY Brady 68.61 333 P P 23 40 25.9 +0.8
BRDY IAmb IAmb 23 40 26.8
comp=Z,6.3nm,0.9s
SAND Sanderson 68.73 330 P 23 40 27.4 +1.4
WLAR White Oak Lake 68.73 339 P P 23 40 26.6 +0.8
WLAR IAmb IAmb 23 40 33.8
comp=Z,8.7nm,0.8s
U54A Nelsons Funny 68.78 349 P P 23 40 26.1 0.0
U54A IAmb IAmb 23 40 27.0
comp=Z,6.9nm,0.8s
T57A Hurt 68.88 351 P P 23 40 27.3 +0.7
T57A IAmb IAmb 23 40 34.5
comp=Z,5.5nm,1.0s
TXAR Lajitas Array 68.88 328 P P 23 40 28.2 +1.2
TXAR Lajitas Array 68.88 328 P P 23 40 28.1 +1.1
comp=Z,2.4nm,0.6s,baz=155,slow=8.6,SNR=48
comp=Z,2.4nm,0.6s
TX31 Lajitas Ar. Si 68.88 328 P 23 40 27.9 +1.0
TX31 IAmb IAmb 23 40 29.0
comp=Z,3.9nm,0.7s
V48A Smith Brothers 68.99 345 P P 23 40 27.7 +0.4
TZTN Tazewell 69.10 348 P P 23 40 28.1 +0.1
OZNA Ozona 69.15 331 P 23 40 29.5 +1.0
CLTN Cedars of Leba 69.22 345 P P 23 40 29.3 +0.6
CLTN IAmb IAmb 23 40 29.7
comp=Z,3.4nm,0.5s
U49A Red Boiling Sp 69.50 346 P P 23 40 30.4 -0.1
U49A IAmb IAmb 23 40 31.2
comp=Z,6.0nm,1.2s
PLPT Palo Pinto 69.71 334 P 23 40 32.6 +0.7
PLPT IAmb IAmb 23 40 33.4
comp=Z,8.9nm,0.7s
ALPN Alpine 69.76 329 P P 23 40 33.5 +1.1
ALPN IAmb IAmb 23 40 34.1
comp=Z,4.2nm,0.7s
S54A Dingess, Beckl 69.95 350 P P 23 40 33.5 +0.3
S54A IAmb IAmb 23 40 34.0
comp=Z,6.6nm,0.8s
S51A Beattyville 70.17 348 P P 23 40 34.4 -0.1
S51A IAmb IAmb 23 40 46.3
comp=Z,11nm,1.2s
MNHN Monahans 70.20 330 P 23 40 36.2 +1.3
R55A Marlinton 70.25 351 P P 23 40 36.2 +1.0
R55A IAmb IAmb 23 40 37.5
comp=Z,9.0nm,0.8s
LCAR Lake Charles 70.38 341 P P 23 40 36.4 +0.6
FCAR Ozark Folk Cen 70.49 340 P P 23 40 37.3 +0.8
PECS Pecos 70.71 329 P P 23 40 39.5 +1.4
PECS IAmb IAmb 23 40 40.3
comp=Z,5.5nm,0.5s
VHRN Van Horn 70.71 328 P 23 40 38.8 +0.6
ODSA Odessa 70.79 330 P P 23 40 39.5 +1.0
APMT Aspermont 70.86 333 P P 23 40 39.9 +1.1
PBMO Poplar Bluff 70.86 342 P P 23 40 39.0 +0.3
Q56A Snyder Ridge, 70.88 352 P P 23 40 39.5 +0.6
Q56A IAmb IAmb 23 40 41.8
comp=Z,9.8nm,1.0s
POST Post 71.18 332 P P 23 40 41.4 +0.5
POST IAmb IAmb 23 40 42.0
comp=Z,6.4nm,0.8s
P57A Homestead Farm 71.18 353 P P 23 40 42.2 +1.6
P57A IAmb IAmb 23 40 43.3
comp=Z,12nm,1.1s
S44A Carbondale 71.42 343 P P 23 40 42.5 +0.4
SIUC Southern Illin 71.44 343 P P 23 40 42.6 +0.4
CLN7 Carlsbad 7 71.58 330 P P 23 40 44.7 +1.4
MNTX Cornudas Mount 71.67 328 P 23 40 44.0 +0.3
MNTX IAmb IAmb 23 40 44.6
comp=Z,4.3nm,0.7s
MGMO Mountain Grove 71.71 341 P P 23 40 44.4 +0.5
MGMO IAmb IAmb 23 40 45.9
comp=Z,8.2nm,1.1s
P52A Corning 71.87 350 P P 23 40 44.9 +0.2
P52A IAmb IAmb 23 40 45.5
comp=Z,6.1nm,0.7s
FVM French Village 71.99 342 P P 23 40 46.1 +0.6
FVM IAmb IAmb 23 40 46.8
comp=Z,12nm,0.9s
DBIC Dimbokro 72.12 70 P P 23 40 46.8 0.0
DBIC Dimbokro 72.12 70 P P 23 40 46.9 0.0
comp=Z,1.5nm,0.6s,baz=278,slow=1.8,SNR=2.3
comp=Z,1.5nm,0.6s
CCM Cathedral Cave 72.27 342 P 23 40 47.6 +0.4
CCM IAmb IAmb 23 40 48.1
comp=Z,7.0nm,0.6s
O53A New Philadelph 72.34 350 P P 23 40 48.1 +0.6
O53A IAmb IAmb 23 40 51.0
comp=Z,7.7nm,1.1s
MSTX Muleshoe 72.48 331 P P 23 40 49.8 +1.2
R40A Maddies Statio 72.77 341 P 23 40 50.8 +0.7
O49A Covington 72.78 348 P P 23 40 49.6 -0.5
O49A IAmb IAmb 23 40 51.6
comp=Z,5.5nm,0.7s
PAOC Oil Creek Stat 73.38 352 P P 23 40 54.2 +0.6
N49A Columbus Grove 73.47 348 P P 23 40 54.3 +0.2
121A Cookes Peak, D 73.47 327 P P 23 40 56.2 +1.6
121A IAmb IAmb 23 40 57.4
comp=Z,6.2nm,0.9s
L61B Northampton 73.74 357 P P 23 40 56.5 +0.8
L61B IAmb IAmb 23 41 13.2
comp=Z,10.0nm,1.0s
P40A Paris 73.87 342 P P 23 40 57.0 +0.4
SBM South Baldy 74.39 328 P P 23 41 02.2 +2.0
N41A Harden Midland 74.67 343 P P 23 41 01.4 +0.2
ABQ Albuquerque 74.88 329 P P 23 41 04.4 +1.6
ANMO Albuquerque 74.89 329 P 23 41 04.5 +1.6
ANMO Albuquerque 74.89 329 P P 23 41 04.5 +1.6
ANMO IAmb IAmb 23 41 04.8
comp=Z,2.6nm,0.7s
ANMO Albuquerque 74.89 329 P P 23 41 04.4 +1.6
ANMO IAmb IAmb 23 41 04.8
comp=Z,2.4nm,0.7s
214A Organ Pipe Nat 75.48 323 P P 23 41 07.5 +1.4
214A IAmb IAmb 23 41 08.3
comp=Z,3.5nm,0.7s
PIX Pinacate 75.51 322 P P 23 41 07.1 +0.9
T25A Trinidad 75.89 332 P P 23 41 10.3 +1.8
T25A IAmb IAmb 23 41 11.1
comp=Z,6.5nm,0.8s
L40A Anamosa 76.04 343 P P 23 41 09.4 +0.4
SADO Sadowa 76.53 353 P P 23 41 11.7 0.0
X16A Lo Mia Camp, P 76.76 325 P P 23 41 15.5 +2.0
X16A IAmb IAmb 23 41 16.1
comp=Z,4.2nm,0.8s
SDCO Great Sand Dun 76.85 331 P P 23 41 14.9 +0.9
MVCO Mesa Verde 77.68 329 P P 23 41 18.6 0.0
MVCO IAmb IAmb 23 41 21.0
comp=Z,5.7nm,1.1s
BLYC Blythe 77.78 323 P P 23 41 19.2 +0.3
BLYC IAmb IAmb 23 41 21.6
comp=Z,3.4nm,0.7s
PV01 Paradox Valley 78.48 329 P P 23 41 24.2 +1.2
PV13 Radium Mtn., P 78.61 329 P P 23 41 24.5 +0.8
PV13 IAmb IAmb 23 41 25.9
comp=Z,5.5nm,0.9s
PV02 Paradox Valley 78.61 329 P P 23 41 24.8 +1.0
PV02 IAmb IAmb 23 41 26.0
comp=Z,7.2nm,1.1s
PV18 Skein Mesa, Pa 78.72 329 P 23 41 25.2 +0.9
PV18 IAmb IAmb 23 41 28.4
comp=Z,5.4nm,0.7s

PV12	**Saucer Basin,**	**78.73**	**329**	P		**P**	**23 41 25.6**	**+1.2**
PV12				IAmb		IAmb	23 41 26.4	
	comp=Z,6.3nm,1.0s							
U15A	**North Rim**	**78.79**	**326**	P		**P**	**23 41 25.7**	**+0.9**
PV10	**Paradox Valley**	**78.89**	**329**	P		**P**	**23 41 25.9**	**+0.7**
PV10				IAmb		IAmb	23 41 26.9	
	comp=Z,7.8nm,0.8s							
BOSA	**Boshof**	**79.04**	**117**	P		**P**	**23 41 26.4**	**+0.1**
BOSA				IAmb		IAmb	23 41 38.9	
	comp=Z,5.2nm,1.0s							
BOSA	**Boshof**	**79.04**	**117**	P		**P**	**23 41 26.3**	**-0.1**
	comp=Z,4.1nm,1.0s,baz=233,slow=8.6,SNR=2.9							
	comp=Z,4.1nm,1.0s							
ECSD	**EROS Data Cent**	**79.04**	**340**			**P**	**23 41 26.3**	**+0.6**
ECSD				IAmb		IAmb	23 41 26.8	
	comp=Z,7.9nm,0.9s							
HMU	**Henry Mountain**	**79.29**	**328**	P		**P**	**23 41 29.5**	**+2.0**
KNB	**Kanab**	**79.52**	**326**			**P**	**23 41 30.4**	**+1.8**
KNB				IAmb		IAmb	23 41 31.4	
	comp=Z,4.3nm,0.8s							
CCUT	**Cedar City**	**80.20**	**326**			**P**	**23 41 34.1**	**+1.7**
P18A	**Preston Nutter**	**80.45**	**329**	P		**P**	**23 41 35.1**	**+1.3**
PRN	**Pahroc Range**	**80.91**	**325**			**P**	**23 41 37.6**	**+1.6**
TORD	**Torodi Ar. Bea**	**81.12**	**69**	P		**P**	**23 41 36.8**	**-0.7**
	comp=Z,3.3nm,0.4s,baz=265,slow=4.1,SNR=2.1							
	comp=Z,3.3nm,0.4s							
TPNV	**Topopah Spring**	**81.15**	**324**	P		**P**	**23 41 39.1**	**+1.8**
RSSD	**Black Hills**	**81.79**	**335**			**P**	**23 41 41.4**	**+0.8**
RSSD				IAmb		IAmb	23 41 43.4	
	comp=Z,5.6nm,1.1s							
TBO	**Thunder Bay**	**81.89**	**347**	P		**P**	**23 41 40.6**	**-0.1**
TBO				IAmb		IAmb	23 41 42.7	
	comp=Z,7.5nm,1.2s							
R11B	**Troy Canyon, C**	**81.91**	**325**	P		**P**	**23 41 42.7**	**+1.4**
GMN	**Gold Mountain**	**81.94**	**323**	P		**P**	**23 41 42.8**	**+1.2**
DUG	**Dugway, Tooele**	**82.06**	**328**	P		**P**	**23 41 43.1**	**+1.1**
PDAR	**Pinedale Array**	**82.75**	**331**	P		**P**	**23 41 46.4**	**+0.7**
PDAR	**Pinedale Array**	**82.75**	**331**	P		**P**	**23 41 45.8**	**+0.1**
	baz=137,slow=6.9,SNR=9.3							
NVAR	**Mina Array Bea**	**83.33**	**323**	P		**P**	**23 41 49.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=148,slow=5.4,SNR=8.2							
	comp=Z,1.2nm,0.7s							
YHH	**Holmes Hill**	**84.95**	**332**	P		**P**	**23 41 57.9**	**+1.0**
HLID	**Hailey**	**85.47**	**329**			**P**	**23 42 00.6**	**+1.2**
BCYI	**Bear Canyon**	**85.62**	**330**	P		**P**	**23 42 01.3**	**+1.1**
MCMT	**McKenzie Canyo**	**85.80**	**330**	P		**P**	**23 42 02.7**	**+1.6**
PLID	**Pearl Lake**	**87.37**	**329**			**P**	**23 42 09.3**	**+0.6**
PLID				IAmb		IAmb	23 42 10.4	
	comp=Z,4.3nm,0.8s							
PINE	**Pine Mountain**	**88.67**	**325**			**P**	**23 42 16.2**	**+1.4**
PINE				IAmb		IAmb	23 42 17.2	
	comp=Z,4.2nm,0.8s							
JTMT	**Jette**	**88.74**	**331**	P		**P**	**23 42 15.9**	**+0.9**
WIFE	**Three Sisters-**	**89.30**	**325**	P		**P**	**23 42 18.7**	**+0.9**
WIFE				IAmb		IAmb	23 42 19.6	
	comp=Z,3.1nm,1.0s							
BRTR	**Keskin Array B**	**118.56**	**59**	PKP		**PKPdf**	**23 48 08.7**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=215,slow=4.8,SNR=2.2							
D19K	**Kuna River**	**118.59**	**335**	PKPdf		**PKiKP**	**23 48 08.9**	**+0.9**
FINES	**FINESS Array B**	**119.66**	**33**	PKP		**PKPdf**	**23 48 09.7**	**-0.4**
	comp=Z,3.7nm,1.1s,baz=207,slow=0.4,SNR=5.3							
WRA	**Warramunga Arr**	**124.01**	**207**	PKP		**PKPdf**	**23 48 18.6**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=150,slow=2.0,SNR=2.7							
WRA				pPKP		**pPKPdf**	**23 48 49.0**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=166,slow=1.6,SNR=2.3							
ARSB	**Arslanbob**	**148.28**	**61**			**PKPbc**	**23 49 08.1**	**+0.7**
AAK	**Ala-Archa**	**149.23**	**59**			**PKiKP**	**23 49 10.8**	**0.0**
KURBB	**Kurchatov Arra**	**149.48**	**42**	PKPbc		**PKPbc**	**23 49 10.3**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=299,slow=3.0,SNR=15							
KURK	**Kurchatov**	**149.49**	**42**			**PKPbc**	**23 49 10.3**	**+0.5**
ZALV	**Zalesovo Beam**	**150.91**	**32**	PKPbc		**PKPbc**	**23 49 13.4**	**+0.2**
	comp=Z,9.7nm,0.6s,baz=315,slow=3.1,SNR=39							
ZALV				pPKPbc		**pPKPbc**	**23 49 43.5**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=329,slow=2.7,SNR=2.8							
MKAR	**Makanchi Array**	**153.38**	**47**			**PKPab**	**23 49 31.3**	**-0.2**
MKAR	**Makanchi Array**	**153.38**	**47**	PKPbc		**PKPbc**	**23 49 19.3**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=290,slow=1.5,SNR=9.0							
MKAR				PKPab		**PKPab**	**23 49 31.1**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=301,slow=4.0,SNR=8.9							
SONM	**Songino Array**	**163.43**	**10**	PKPab		**PKPab**	**23 50 14.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=12,slow=7.4,SNR=2.7							

*DJA **03** 23:29:58.9±0.3,9°S±3°×11°0E±°, h10km,M4.6/25, mb4.6/11,mB5.4/5,MLv4.5/25,Mw(mB)4.9/5*
*IDC **03** 23:29:59.5±2.6,8.78S×110°51E,h55km±23km,mb3.9/17, mbtmp4.2/21,ML4.1/4,MS3.2/11,Error ellipse: s-maj=22.9km s-min=12.4km az=49.0*
*NEIC **03** 23:30:00.1±1.9,8.86S±0.08×110.49E±0.08, h57km±7km, mb4.4/25,Error ellipse: s-maj=13.2km s-min=9.6km az=218.0*

ISC 03 23:29:58.5±0.5,9°05S±0.06×110°39E±0.06,h51km,n97, σ1s89/91,mb4.3/30,MS3.2/10,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UGM	**Wanagama**	**1.14**	**7**			**Pn**	**23 30 17.8**	**-0.3**
UGM	**Wanagama**	**1.14**	**7**	P		**Pn**	**23 30 18.6**	**+0.5**
UGM	**Wanagama**	**1.14**	**7**	P		**Pn**	**23 30 18.0**	**-0.1**
UGM				S		**Sn**	**23 30 33.2**	**+0.5**
PCJI	**Pacitan**	**1.15**	**43**	P		**Pn**	**23 30 17.8**	**-0.5**
YOGI	**Yogyakarta**	**1.23**	**356**	P		**Pn**	**23 30 19.3**	**0.0**
YOGI				S		**Sn**	**23 30 36.2**	**+1.4**
NGJI	**Ngawi**	**1.98**	**33**	P		Pn	23 30 34.5	+4.9
SMRI	**Semarang**	**1.98**	**2**			**Pn**	**23 30 30.2**	**+0.5**
SMRI	**Semarang**	**1.98**	**2**	P		**Pn**	**23 30 32.9**	**+3.2**
SMRI	**Semarang**	**1.98**	**2**	P		**Pn**	**23 30 33.2**	**+3.5**
KPJI	**Karang Pucung**	**2.23**	**320**	P		**Pn**	**23 30 35.1**	**+2.1**
KPJI				S		**Sn**	**23 31 02.2**	**+2.8**
TBJI	**Tambak Boyo**	**2.65**	**33**	P		**Pn**	**23 30 41.1**	**+2.4**
GRJI	**Gresik**	**2.96**	**45**	P		**Pn**	**23 30 44.0**	**+0.9**
BBJI	**Bungbulang**	**3.13**	**300**	P		**Pn**	**23 30 44.7**	**-0.8**
BLJI	**Banyuglugur**	**3.43**	**68**	P		**Pn**	**23 30 51.4**	**+1.9**
LEM	**Lembang**	**3.52**	**309**	P		**Pn**	**23 30 52.5**	**+1.7**
	22nm,0.3s,baz=70,slow=12,SNR=16							
LEM				LR		LR	23 32 27.8	
	comp=Z,145nm,19.9s,baz=168,slow=43							
	111nm,0.7s							
LEM	**Lembang**	**3.52**	**309**	P		**Pn**	**23 30 52.3**	**+1.4**
CNJI	**Cibinong**	**3.66**	**298**	P		**Pn**	**23 30 55.4**	**+2.8**
JAGI	**Jajag, Banyuwa**	**3.77**	**82**			**Pn**	**23 30 54.4**	**+0.3**
JAGI	**Jajag, Banyuwa**	**3.77**	**82**	P		**Pn**	**23 30 56.0**	**+1.9**
JAGI	**Jajag, Banyuwa**	**3.77**	**82**	P		**Pn**	**23 30 56.1**	**+1.9**
ABJI	**Asem Bagus**	**4.00**	**72**	P		**Pn**	**23 31 00.2**	**+2.8**
KMMI	**Kalianget**	**4.06**	**61**	P		**Pn**	**23 30 59.7**	**+1.5**
SKJI	**Sukabumi**	**4.30**	**298**	P		**Pn**	**23 31 03.6**	**+2.2**
DBJI	**Dramaga**	**4.37**	**304**	P		**Pn**	**23 31 04.2**	**+1.8**
XMI	**Christmas Isla**	**4.83**	**253**	P		**Pn**	**23 31 05.6**	**-3.2**
SRBI	**Singaraja**	**4.87**	**79**	P		**Pn**	**23 31 11.9**	**+2.7**
TWSI	**Taliwang, Sumb**	**6.43**	**88**	P		**Pn**	**23 31 34.1**	**+3.5**
	0.2nm47nm,1.2s							
KASI	**Kota Agung**	**6.81**	**301**	P		**Pn**	**23 31 39.4**	**+3.5**
	0.3nm32nm,0.9s							
BBKI	**Banjar Baru**	**7.10**	**39**	P		**Pn**	**23 31 43.5**	**+3.7**
	59nm,0.9s							
PLAI	**Plampang**	**7.30**	**89**	P		**Pn**	**23 31 45.1**	**+2.4**
PLAI	**Plampang**	**7.30**	**89**	P		**Pn**	**23 31 46.2**	**+3.5**
MDSI	**Maura Dua**	**7.65**	**306**	P		**Pn**	**23 31 49.7**	**+2.3**
MNAI	**Manna**	**8.72**	**302**	Pn		**Pn**	**23 32 02.4**	**+0.3**
KAPI	**Kappang**	**10.12**	**67**	P		**Pn**	**23 32 19.2**	**-2.1**
	0.8nm,0.3s,baz=236,slow=15,SNR=4.0							
KAPI				LR		LR	23 36 41.9	
	comp=Z,115nm,21.2s,baz=274,slow=41							
	9.6nm,1.1s							
BKSI	**Bulukumba**	**10.34**	**70**	P		**Pn**	**23 32 27.7**	**+3.4**
	19nm,0.8s							
BSSI	**Bau Bau, Buton**	**10.42**	**75**	P		**Pn**	**23 32 30.2**	**+4.8**
SPSI	**Sidrap Palu**	**10.60**	**62**	P		**Pn**	**23 32 31.3**	**+3.5**
BNSI	**Bone**	**10.70**	**65**	P		**Pn**	**23 32 33.2**	**+4.0**
	14nm,1.0s							
BATI	**Baumata**	**13.14**	**96**	P		**Pn**	**23 33 00.8**	**-1.8**
	5.7nm,0.3s,baz=306,slow=3.8,SNR=4.2							
	13nm,0.4s							
LUWI	**Luwuk**	**14.67**	**58**	P		**P**	**23 33 27.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**17.33**	**123**	P		**Pn**	**23 33 57.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**17.33**	**123**	P		**Pn**	**23 33 57.6**	**+0.7**
	0.2nm,0.3s,baz=292,slow=9.7,SNR=3.5							
	2.4nm,0.6s							
KNRA	**Kununurra**	**19.11**	**112**	P		**P**	**23 34 18.1**	**+0.8**
MTN	**Manton Dam**	**20.71**	**102**	P		**P**	**23 34 36.3**	**+1.5**
MTN				IAmb		IAmb	23 34 44.0	
	comp=Z,10nm,0.8s							
DAV	**Davao City (W)**	**22.04**	**44**	P		**P**	**23 34 47.1**	**-1.9**
	comp=Z,121nm,0.3s,baz=242,slow=20,SNR=2.2							
DAV				LR		LR	23 44 06.7	
	comp=Z,54nm,20.5s,baz=188,slow=39							
FAKI	**Fak Fak**	**22.57**	**76**	P		**P**	**23 34 53.4**	**-1.4**
FAKI				IAmb		IAmb	23 35 04.7	
	comp=Z,18nm,1.0s							
WB0	**Warramunga Arr**	**25.54**	**117**	P		**P**	**23 35 24.1**	**+1.4**
WB0				IAmb		IAmb	23 35 36.3	
	comp=Z,8.2nm,1.1s							
WRA	**Warramunga Arr**	**25.56**	**118**	P		**P**	**23 35 23.4**	**+0.6**
WRA	**Warramunga Arr**	**25.56**	**118**	P		**P**	**23 35 23.8**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=292,slow=11,SNR=16							
WRA				PcP		**PcP**	**23 38 54.6**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=303,slow=2.3,SNR=3.0							
	comp=Z,1.7nm,0.8s							
WRAB	**Tennant Creek**	**25.56**	**118**	P		**P**	**23 35 25.0**	**+2.1**
WR8	**Warramunga Arr**	**25.70**	**118**	P		**P**	**23 35 25.8**	**+1.6**
ASAR	**Alice Springs**	**26.78**	**126**	P		**P**	**23 35 35.0**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=300,slow=8.5,SNR=16							
ASAR				PcP		**PcP**	**23 38 57.3**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=306,slow=1.3,SNR=9.1							
	comp=Z,1.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**29.57**	**338**	P		**P**	**23 35 57.2**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=151,slow=8.9,SNR=1.4							
CMAR				LR		LR	23 48 53.8	
	comp=Z,22nm,18.4s,baz=150,slow=39							
	comp=Z,0.5nm,0.3s							
COEN	**Coen**	**32.48**	**102**	P		**P**	**23 36 24.9**	**+0.4**
COEN				IAmb		IAmb	23 36 27.4	
	comp=Z,9.4nm,1.1s							
BBOO	**Buckleboo**	**33.50**	**139**	P		**P**	**23 36 34.4**	**+1.2**
BBOO				IAmb		IAmb	23 36 41.6	
	comp=Z,7.3nm,1.0s							
PALK	**Pallekele**	**33.73**	**298**	LR		LR	23 49 00.7	
	comp=Z,38nm,19.9s,baz=132,slow=34							
PMG	**Port Moresby**	**36.29**	**94**	LR		LR	23 55 18.5	
	comp=Z,27nm,20.6s,baz=120,slow=42							
STKA	**Stephens Creek**	**36.79**	**133**	P		**P**	**23 37 02.0**	**+0.4**
STKA	**Stephens Creek**	**36.79**	**133**	P		**P**	**23 37 01.7**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=295,slow=6.0,SNR=3.8							
STKA				LR		LR	23 54 43.4	
	comp=Z,31nm,18.0s,baz=13,slow=40							
	comp=Z,2.3nm,0.7s							
H08S2	**Diego Garcia H**	**37.51**	**269**	T		T	00 17 06.9	
	baz=94,slow=75,SNR=8.5							
H08S3	**Diego Garcia H**	**37.52**	**269**	T		T	00 16 50.6	
	baz=94,slow=75,SNR=14							
H08S1	**Diego Garcia H**	**37.52**	**269**	T		T	00 16 53.4	
	baz=94,slow=75,SNR=12							
KSRS	**Korea Array**	**49.09**	**19**	P		**P**	**23 38 38.8**	**-2.0**
	comp=Z,2.1nm,0.8s,baz=204,slow=11,SNR=5.0							
KSRS				LR		LR	00 00 35.3	
	comp=Z,4μm,20.5s,baz=185,slow=38							
	comp=Z,2.1nm,0.8s							
MJAR	**Matsushiro Arr**	**52.35**	**28**	P		**P**	**23 39 03.9**	**-1.6**
	comp=Z,6.9nm,0.8s,baz=203,slow=7.6,SNR=15							
MJAR				LR		LR	00 01 00.8	
	comp=Z,25nm,20.8s,baz=219,slow=36							
	comp=Z,6.9nm,0.8s							
NIL	**Nilore**	**55.20**	**322**	P		**P**	**23 39 24.9**	**-1.5**
NIL				IAmb		IAmb	23 39 25.1	
	comp=Z,3.9nm,0.8s							
USRK	**Ussuriysk Ar.**	**56.50**	**19**	P		**P**	**23 39 35.0**	**-0.4**
	comp=Z,7.8nm,0.8s,baz=212,slow=5.1,SNR=9.3							
	comp=Z,7.8nm,0.8s							
ULN	**Ulaanbaatar**	**56.74**	**357**	P		**P**	**23 39 36.5**	**-0.8**
ULN				IAmb		IAmb	23 39 37.6	
	comp=Z,1.9nm,0.6s							
SONM	**Songino Array**	**56.74**	**357**	P		**P**	**23 39 36.5**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=179,slow=7.2,SNR=9.6							
	comp=Z,1.1nm,0.5s							
HILR	**Hailar Array B**	**58.93**	**7**	P		**P**	**23 39 51.0**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=184,slow=8.7,SNR=1.7							
	comp=Z,1.3nm,0.3s							
GAR	**Garm**	**60.59**	**325**	P		**P**	**23 40 05.4**	**+1.2**
HEH	**HeiHe**	**60.89**	**12**	eP		**P**	**23 40 04.4**	**-1.4**
HEH				pmax		pmax		
	comp=Z,15nm,0.8s							
MKAR	**Makanchi Array**	**60.98**	**338**	P		**P**	**23 40 05.5**	**-1.0**
	comp=Z,2.4nm,0.5s,baz=148,slow=7.4,SNR=38							
	comp=Z,2.4nm,0.5s							
AAK	**Ala-Archa**	**60.98**	**330**	LR		LR	00 09 53.9	
	comp=Z,25nm,18.6s,baz=150,slow=39							
MAKZ	**Makanchi**	**61.10**	**338**	P		**P**	**23 40 07.2**	**-0.1**
H04N2	**CROZET ISLANDS**	**61.96**	**222**	T		T	00 47 57.4	
	baz=70,slow=75,SNR=3.7							
H04N1	**CROZET ISLANDS**	**61.97**	**222**	T		T	00 47 55.9	
	baz=70,slow=75,SNR=4.4							
H04N3	**CROZET ISLANDS**	**61.97**	**222**	T		T	00 47 54.2	
	baz=70,slow=75,SNR=3.9							
KURBB	**Kurchatov Arra**	**65.55**	**338**	P		**P**	**23 40 35.7**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=152,slow=5.5,SNR=8.8							
	comp=Z,0.8nm,0.4s							
KURK	**Kurchatov**	**65.59**	**338**	P		**P**	**23 40 36.0**	**-0.9**
KURK				IAmb		IAmb	23 40 36.7	
	comp=Z,2.1nm,0.8s							
BKZ	**Black Stump Fm**	**65.84**	**129**	P		**P**	**23 40 40.1**	**+1.2**
BKZ				IAmb		IAmb	23 40 51.5	
	comp=Z,7.9nm,1.2s							
ZAA0	**Zalesovo Array**	**66.38**	**344**	P		**P**	**23 40 40.6**	**-1.3**
ZAA0				IAmb		IAmb	23 40 42.0	
	comp=Z,3.0nm,1.1s							
ZALV	**Zalesovo Beam**	**66.38**	**344**	P		**P**	**23 40 40.4**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=154,slow=5.9,SNR=10							
	comp=Z,1.5nm,0.3s							
BVAR	**Borovoye Array**	**70.58**	**336**	P		**P**	**23 41 06.8**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=142,slow=9.6,SNR=12							
	comp=Z,2.5nm,0.6s							
AB31	**Akbulak array**	**72.89**	**328**	P		**P**	**23 41 21.6**	**-0.5**
ABKAR	**Akbulak array**	**72.89**	**328**	P		**P**	**23 41 21.9**	**-0.3**
PETK	**Petropavlovsk-**	**73.79**	**27**	P		**P**	**23 41 26.3**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=232,slow=7.4,SNR=2.2							
PETK				LR		LR	00 15 10.4	
	comp=Z,15nm,19.4s,baz=135,slow=37							
	comp=Z,1.6nm,0.5s							
ARTI	**Arti**	**77.97**	**333**	P		**P**	**23 41 50.7**	**-0.4**
KBZ	**Khabaz**	**80.41**	**317**	P		**P**	**23 42 04.1**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=40,slow=5.7,SNR=4.0							
	comp=Z,2.3nm,0.9s							
TIXI	**Tiksi**	**81.46**	**6**	P		**P**	**23 42 09.0**	**-0.7**
TIXI				IAmb		IAmb	23 42 09.9	
	comp=Z,6.2nm,0.9s							
BOSA	**Boshof**	**81.48**	**242**	LR		LR	00 13 07.6	
	comp=Z,38nm,18.6s,baz=183,slow=32							
BRTR	**Keskin Array B**	**85.69**	**311**	P		**P**	**23 42 32.1**	**-0.2**
BRTR	**Keskin Array B**	**85.69**	**311**	P		**P**	**23 42 32.5**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=133,slow=7.8,SNR=10							
	comp=Z,1.4nm,0.8s							
ELL	**Elmali**	**87.81**	**308**	P		**P**	**23 42 42.9**	**+0.1**
ELL				IAmb		IAmb	23 42 44.2	
	comp=Z,3.0nm,0.9s							
SNAA	**Sanae**	**88.57**	**197**	P		**P**	**23 42 48.0**	**+2.4**
SNAA				IAmb		IAmb	23 43 06.2	
	comp=Z,1.6nm,1.1s							
SNAA	**Sanae**	**88.57**	**197**	P		**P**	**23 42 48.3**	**+2.8**
	comp=Z,0.5nm,1.0s,baz=196,slow=18,SNR=1.2							
	comp=Z,0.5nm,1.0s							
BURAR	**Bucovina Array**	**93.37**	**318**	P		**P**	**23 43 08.2**	**-0.1**
TXAR	**Lajitas Array**	**142.25**	**53**	PKP		**PKPdf**	**23 49 23.7**	**-2.5**
	comp=Z,0.2nm,0.8s,baz=287,slow=4.2,SNR=2.1							

*IDC **03** 23:51:18.1±0.7,12°30S×167°30E,h0km,mb4.1/11, mbtmp4.0/11,MS3.2/1,Error ellipse: s-maj=31.1km s-min=22.7km az=130.0*
*NEIC **03** 23:51:45.5±1.2,12°5S±0°1×167°1E±0°2,h220km±6km, mb4.4/35,Error ellipse: s-maj=22.5km s-min=15.9km az=90.0*

ISC 03 23:51:44.9±0.5,12°44S±0°08×167°0E±0°1,h220km,n55, σ1s03/54,mb4.2/28,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SANVU	**Saraoutou**	**3.00**	**177**	Pn		**Pn**	**23 52 35.3**	**-0.2**
SANVU						**S**	**23 53 15.7**	**+0.5**
EIDS	**Eidsvold**	**19.79**	**227**	P		**P**	**23 55 59.5**	**+0.7**
EIDS				IAmb		IAmb	23 56 00.5	
	comp=Z,16nm,0.7s							
TUWZ	**Tuamarina**	**29.51**	**169**	P		**P**	**23 57 29.3**	**+0.7**
THZ	**Tophouse**	**29.66**	**171**	P		**P**	**23 57 30.0**	**-0.1**
THZ				IAmb		IAmb	23 58 01.4	
	comp=Z,12nm,1.1s							
WRA	**Warramunga Arr**	**32.22**	**252**	P		**P**	**23 57 51.5**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=85,slow=8.9,SNR=11							
	comp=Z,0.9nm,0.4s							
RAR	**Rarotonga**	**32.90**	**110**	LR		LR	00 08 10.0	
	comp=Z,41nm,19.9s,baz=116,slow=31							
ASAR	**Alice Springs**	**33.33**	**246**	P		**P**	**23 58 01.2**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=75,slow=9.6,SNR=8.4							
	comp=Z,0.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**73.81**	**294**	P		**P**	**00 02 56.9**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=112,slow=7.6,SNR=2.1							
	comp=Z,0.9nm,0.3s							
QSPA	**South Pole Qui**	**77.57**	**180**	IAmb		IAmb	00 03 20.5	
	comp=Z,3.5nm,1.1s							
QSPA	**South Pole Qui**	**77.57**	**180**	P		**P**	**00 03 18.7**	**+2.2**
	comp=Z,1.7nm,0.8s,baz=64,slow=4.0,SNR=8.6							
	comp=Z,1.7nm,0.8s							
SONM	**Songino Array**	**80.52**	**323**	P		**P**	**00 03 33.4**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=108,slow=4.7,SNR=2.3							
	comp=Z,0.4nm,0.8s							
J18K	**Innoko River**	**80.65**	**16**	P		**P**	**00 03 33.8**	**+0.9**
J18K				IAmb		IAmb	00 03 41.4	
	comp=Z,9.6nm,1.4s							
MAW	**Mawson**	**83.91**	**202**	P		**P**	**00 03 49.1**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=139,slow=9.1,SNR=1.9							
	comp=Z,1.0nm,0.5s							
C18K	**Utukok River**	**83.98**	**11**	P		**P**	**00 03 51.0**	**+1.0**
CCB	**Clear Creek Bu**	**84.07**	**18**	P		**P**	**00 03 50.5**	**0.0**
CCB				IAmb		IAmb	00 03 50.9	
	comp=Z,3.4nm,0.6s							
M26K	**Nabesna, AK**	**84.08**	**21**	P		**P**	**00 03 51.5**	**+0.8**
HDA	**Harding Lake**	**84.16**	**18**	P		**P**	**00 03 51.4**	**+0.4**
HDA				IAmb		IAmb	00 03 52.2	
	comp=Z,9.1nm,0.6s							
IL31		**84.44**	**18**	P		**P**	**00 03 52.6**	**+0.3**
IL31				IAmb		IAmb	00 03 53.1	
	comp=Z,4.5nm,0.7s							
ILAR	**Eielson Array**	**84.44**	**18**	P		**P**	**00 03 52.4**	**0.0**
ILAR	**Eielson Array**	**84.44**	**18**	P		**P**	**00 03 52.0**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=245,slow=5.1,SNR=55							
	comp=Z,3.0nm,0.6s							
M27K	**Edge Creek, AK**	**84.45**	**21**	P		**P**	**00 03 53.4**	**+0.8**
D19K	**Kuna River**	**84.46**	**12**	P		**P**	**00 03 52.8**	**+0.3**
D19K				IAmb		IAmb	00 04 15.3	
	comp=Z,16nm,1.4s							
DOT	**Dot Lake**	**84.55**	**20**	P		**P**	**00 03 53.3**	**+0.3**
J25K	**Salcha River,**	**84.79**	**19**	P		**P**	**00 03 54.9**	**+0.6**
J25K				IAmb		IAmb	00 03 55.6	
	comp=Z,4.5nm,0.6s							
SCRK	**Sand Creek**	**84.80**	**20**	P		**P**	**00 03 54.7**	**+0.4**
H24K	**Noodor Dome**	**84.91**	**17**	P		**P**	**00 03 54.2**	**-0.5**
L27K	**Beaver Creek,**	**84.92**	**21**	P		**P**	**00 03 55.9**	**+1.0**
D20K	**Etivluk River**	**84.95**	**13**	P		**P**	**00 03 55.7**	**+0.8**
G23K	**Bananza Creek**	**84.96**	**16**	P		**P**	**00 03 56.3**	**+1.3**
G23K				IAmb		IAmb	00 04 34.4	
	comp=Z,6.2nm,1.4s							
E22K	**Anaktuvuk Pass**	**85.58**	**14**	P		**P**	**00 03 58.7**	**+0.7**
E22K				IAmb		IAmb	00 04 05.5	
	comp=Z,13nm,1.5s							
CLC	**China Lake**	**85.66**	**52**	P		**P**	**00 03 58.7**	**-0.5**
WSHM	**Spangler Hills**	**85.67**	**52**	P		**P**	**00 03 56.3**	**-3.0**
CCCA	**

PUZ	**Puketiti**	**4.39**	**192**	P		Pn	00 06 35.4	+0.6
PUZ				S		S	00 07 32.9	-0.6
RUGZ	**Raukumara Rang**	**4.42**	**198**	P		Pn	00 06 35.0	-0.2
RUGZ				S		S	00 07 33.1	-1.0
TWGZ	**Tauwhareparae**	**4.55**	**195**	P		Pn	00 06 37.6	+1.1
TWGZ				S		S	00 07 38.8	+2.3
CNGZ	**Carnagh Statio**	**4.80**	**192**	P		Pn	00 06 39.9	+0.6
MWZ	**Matawai**	**4.80**	**198**	P		Pn	00 06 40.0	+0.6
MWZ				S		S	00 07 42.8	+1.2
TKGZ	**Te Karaka**	**4.83**	**195**	P		Pn	00 06 39.0	-0.5
TKGZ				S		S	00 07 42.6	+0.6
URZ	**Urewera**	**4.85**	**202**	P		Pn	00 06 39.6	-0.2
URZ				S		S	00 07 43.4	+0.9
ETAZ	**East Tamaki Re**	**4.86**	**228**	P		Pn	00 06 40.7	+0.8
RIGZ	**Rimuhau**	**5.10**	**195**	P		Pn	00 06 43.2	+0.5
RIGZ				S		S	00 07 46.6	-1.0
MUGZ	**Murupara**	**5.16**	**204**	P		Pn	00 06 44.1	+0.8
SNGZ	**Shannon Statio**	**5.27**	**198**	P		Pn	00 06 45.1	+0.6
SNGZ				S		S	00 07 53.2	+2.1
MTHZ	**Maungataniwha**	**5.48**	**202**	P		Pn	00 06 47.0	+0.1
MTHZ				S		S	00 07 58.9	+3.6
MHGZ	**Mahia Peninsul**	**5.50**	**192**	P		Pn	00 06 46.4	-0.7
MHGZ				S		S	00 07 58.4	+2.6
NMHZ	**Naumai**	**5.72**	**201**	P		Pn	00 06 50.2	+0.6
BKZ	**Black Stump Fm**	**5.88**	**203**	P		Pn	00 06 51.7	+0.3
BKZ				S		S	00 08 02.2	-1.4
CKHZ	**Cape Kidnapper**	**6.17**	**197**	P		Pn	00 06 53.4	-1.3
KAHZ	**Kahuranaki**	**6.35**	**198**	P		Pn	00 06 57.0	+0.2
KAHZ				S		S	00 08 16.9	+3.5
KRHZ	**Kereru**	**6.35**	**202**	P		Pn	00 06 56.3	-0.5
KRHZ				S		S	00 08 12.2	-1.3
PXZ	**Pawanui**	**6.57**	**197**	P		Pn	00 06 59.1	-0.2
PNHZ	**Pukenui**	**6.65**	**202**	P		Pn	00 06 59.4	-0.9
PNHZ				S		S	00 08 18.8	-1.1

SJA ***04*** *00:08:58.9±0.6, 32°.03S×71°.93W, h20km±23km, ML3.5, MW3.4*

GUC ***04*** *00:09:00.6±0.6, 32°.09S×71°.76W, h27km±4km, ML3.0*

ISC 04 00:08:58.2±1.7**, 32°.08S**±0°.03×**71°.88W**±0°.07**, h20**km±5km**, n24**, σ0.9**76/50, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VA06	**Catapilco**	**0.69**	**134**	⇓*iP*			**Pg**	**00 09 12.2**	**+0.4**
VA06				*i* S			**Sb**	**00 09 20.4**	**-0.1**
VA06				IAML				00 09 22.4	
	comp=E,2μm,0.3s								
CO04	**Los Peladeros**	**0.77**	**87**	⇓*iP*			**Pg**	**00 09 13.6**	**+0.2**
CO04				*i* S			**Sb**	**00 09 23.0**	**-0.2**
CO04				IAML				00 09 23.8	
	comp=N,3μm,0.1s								
VA01	**Torpederas**	**0.96**	**168**	*e*P			**Pg**	**00 09 17.2**	**+0.2**
VA01				*i* S			**Sg**	**00 09 29.8**	**+0.2**
VA01				IAML				00 09 34.5	
	comp=E,310nm,0.1s								
CO02	**Combarbal**	**1.15**	**41**	⇓*iP*			**Pb**	**00 09 19.9**	**+0.4**
CO02				*i* S			**Sb**	**00 09 34.1**	**0.0**
CO02				IAML				00 09 39.7	
	comp=E,1μm,0.3s								
ROCH	**El Roble**	**1.15**	**141**	*i* P			**Pb**	**00 09 19.9**	**+0.3**
ROCH				*e*P			**Pb**	**00 09 19.9**	**+0.3**
ROCH				*i* S			**Sb**	**00 09 33.7**	**-0.5**
ROCH				*i* S			**Sn**	**00 09 34.4**	**-0.4**
ROCH				IAML				00 09 39.2	
	comp=N,495nm,0.6s								
VA03	**San Esteban**	**1.31**	**122**	⇑*iP*			**Pn**	**00 09 22.1**	**+0.6**
VA03				*i* S			**Sn**	**00 09 38.5**	**-0.1**
VA03				IAML				00 09 43.1	
	comp=E,1μm,0.2s								
MT02	**Curacav**	**1.33**	**152**	*e*P			**Pb**	**00 09 22.7**	**+0.2**
MT02				*i* S			**Sn**	**00 09 39.3**	**+0.5**
MT02				IAML				00 09 42.1	
	comp=E,159nm,0.3s								
PEL	**Peldehue**	**1.46**	**137**	*i* P			**Pb**	**00 09 24.8**	**0.0**
PEL				*i* S			**Sn**	**00 09 42.6**	**+0.4**
PEL				IAML				00 09 45.2	
	comp=E,274nm,0.6s								
CO03	**El Pedregal**	**1.60**	**40**	*i* P			**Pb**	**00 09 27.1**	**-0.1**
CO03				*i* S			**Sb**	**00 09 47.2**	**+0.2**
CO03				IAML				00 09 50.7	
	comp=E,244nm,0.3s								
MT05	**Renca**	**1.62**	**144**	*e*P			**Pb**	**00 09 27.3**	**-0.2**
MT05				*i* S			**Sb**	**00 09 47.6**	**0.0**
MT05				IAML				00 09 52.4	
	comp=E,520nm,0.3s								
MT10	**Hacienda Santa**	**1.64**	**137**	*e*P			**Pb**	**00 09 27.6**	**-0.3**
MT10				*i* S			**Sn**	**00 09 47.9**	**+1.1**
MT10				IAML				00 09 50.7	
	comp=E,559nm,0.5s								
MT14	**Cerro Cal¡n**	**1.73**	**140**	*e*P			**Pb**	**00 09 29.0**	**-0.4**
MT14				*i* S			**Sb**	**00 09 50.5**	**-0.3**
MT14				IAML				00 09 55.3	
	comp=N,279nm,0.2s								
MT03	**Universidad Ad**	**1.82**	**141**	*e*P			**Pb**	**00 09 30.4**	**-0.6**
MT03				*i* S			**Sb**	**00 09 52.9**	**-0.4**
MT03				IAML				00 09 57.3	
	comp=E,434nm,0.2s								
MT09	**Talagante**	**1.85**	**156**	*e*P			**Pb**	**00 09 31.1**	**-0.3**
MT09				*i* S			**Sb**	**00 09 54.3**	**+0.1**
MT15	**Las Vizcachas**	**1.90**	**143**	*e*P			**Pb**	**00 09 31.7**	**-0.7**
MT15				*i* S			**Sb**	**00 09 55.4**	**-0.3**
MT04	**Ro Olivares**	**1.97**	**132**	*e*P			**Pb**	**00 09 32.9**	**-0.8**
MT04				*i* S			**Sb**	**00 09 57.2**	**-0.7**
MT08	**Bocatoma Ro**	**2.07**	**131**	*e*P			**Pb**	**00 09 34.5**	**-0.9**
MT08				*i* S			**Sb**	**00 10 00.1**	**-0.7**
AUSP	**Uspallata**	**2.12**	**95**	*i* P			**Pb**	**00 09 36.8**	**+0.7**
AUSP				*i* S			**Sg**	**00 10 05.2**	**-1.2**
RTLS	**Leoncito**	**2.21**	**83**	*i* P			**Pb**	**00 09 38.0**	**+0.3**
RTLS				*i* S			**Sb**	**00 10 07.5**	**+2.7**
RTLS				IAML				00 10 10.3	
	comp=Z,297nm,1.0s								
LMEL	**Las Melosas**	**2.25**	**142**	*e*P			**Pb**	**00 09 37.1**	**-1.3**
LMEL				*i* S			**Sb**	**00 10 04.8**	**-1.1**
ASAL	**Salagasta**	**2.62**	**102**	*i* P			**Pb**	**00 09 43.8**	**-0.8**
ASAL				*i* S			**Sb**	**00 10 16.9**	**+0.4**
AAGR	**Agrelo**	**2.76**	**112**	*i* P			**Pb**	**00 09 45.9**	**-1.1**
AAGR				*i* S			**Sb**	**00 10 20.9**	**+0.5**
AROD	**Rodeo**	**2.81**	**48**	*i* P			**Pb**	**00 09 46.6**	**-1.3**
AROD				*i* S			**Sb**	**00 10 20.8**	**-1.2**
ACCO	**Cerro Coronel**	**2.83**	**59**	*i* P			**Pb**	**00 09 46.9**	**-1.3**
ACCO				*i* S			**Sb**	**00 10 22.4**	**-0.2**

MOS ***04*** *00:18:39.7±1.1, 26°.03N×54°.70E, h16km, mb4.4/25, Error ellipse: s-maj=7.0km s-min=5.2km az=93.6*

TEH ***04*** *00:18:39.8, 26°.01N×54°.78E, h16km±45km*

DSN ***04*** *00:18:40.1±0.9, 26°.30N×54°.72E, h10km, ML4.0/16, Error ellipse: s-maj=11.3km s-min=3.1km az=167.0*

NEIC ***04*** *00:18:41.0±1.6, 26°.13N±0°.08×54°.70E±0°.08, h10km±1km, mb4.2/34, Error ellipse: s-maj=14.6km s-min=9.9km az=213.0*

THR ***04*** *00:18:40.9±0.0, 26°.06N×54°.85E, h14km±14km, ML4.6*

OMAN ***04*** *00:18:43.1±0.1, 26°.01N×54°.78E, h14km±1km, mb4.7/11, ml4.1/19, Error ellipse: s-maj=1.0km s-min=0.6km az=17.0*

IDC ***04*** *00:18:44.8±2.7, 26°.07N×54°.73E, h38km±22km, mb4.0/24, mbtmp4.2/28, ML3.9/4, MS3.1/12, Error ellipse: s-maj=15.5km s-min=11.3km az=8.0*

SGS ***04*** *00:18:47.2, 25°.74N×54°.57E, h7km, Ml3.8*

ISC 04 00:18:42.6±0.5**, 26°.10N**±0°.03×**54°.69E**±0°.03**, h22**km±5km**, n297**, σ1.9**39/321, mb4.2/62, MS2.9/11, 24C-11D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UMQ	**Umm Al-Quwin**	**1.04**	**123**	P			**Pb**	**00 19 02.5**	**+0.6**
	SNR=44								
UMQ	**Umm Al-Quwin**	**1.04**	**123**	*e*P			**Pb**	**00 19 02.6**	**+0.6**
	SNR=19								
SHME	**Shamm**	**1.30**	**92**	P			**Pn**	**00 19 05.0**	**-0.5**
	SNR=174								
SHME				S			**Sn**	**00 19 22.7**	**+0.5**
	SNR=9.5								
SHME	**Shamm**	**1.30**	**92**	*e*P			**Pn**	**00 19 05.0**	**-0.5**
	SNR=36								
SHME				S			**Sn**	**00 19 22.4**	**+0.2**
NAZ	**Nazwa, Dubai**	**1.41**	**141**	P			**Pb**	**00 19 08.4**	**+0.3**
	SNR=45								
NAZ	**Nazwa, Dubai**	**1.41**	**141**	*e*P			**Pb**	**00 19 08.4**	**+0.3**
	SNR=253								
BANOM	**Banah**	**1.46**	**96**	P			**Pn**	**00 19 07.6**	**0.0**
BANOM				S			**Sn**	**00 19 26.2**	**+0.2**
BANOM	**Banah**	**1.46**	**96**	*e*P			**Pn**	**00 19 07.5**	**0.0**
	SNR=291								
BANOM				S			**Sn**	**00 19 25.9**	**-0.2**
MASF	**Masafi**	**1.50**	**118**	P			**Pn**	**00 19 08.8**	**+0.5**
	SNR=184								
MASF				S			**Sn**	**00 19 27.1**	**-0.2**
	SNR=9.3								
MSFE	**Esma-Masafi**	**1.51**	**119**	*e*P			**Pn**	**00 19 08.7**	**+0.3**
	SNR=175								
AJN	**Ajban**	**1.55**	**170**	P			**Pn**	**00 19 10.1**	**+1.3**
	SNR=59								
AJN				S			**Sb**	**00 19 30.1**	**+0.4**
	SNR=10								
AJN	**Ajban**	**1.55**	**170**	*e*P			**Pb**	**00 19 11.0**	**+0.4**
	SNR=107								
FAQ	**Al Faqa, Dubai**	**1.57**	**149**	P			**Pn**	**00 19 10.6**	**+1.4**
	SNR=31								
FAQ				S			**Sn**	**00 19 30.0**	**+1.1**
FAQ	**Al Faqa, Dubai**	**1.57**	**149**	*e*P			**Pn**	**00 19 10.5**	**+1.3**
	SNR=31								
ASUD	**Al Ashush, Dub**	**1.57**	**158**	P			**Pb**	**00 19 11.3**	**+0.4**
	SNR=226								
ASUD	**Al Ashush, Dub**	**1.57**	**158**	*e*P			**Pb**	**00 19 11.3**	**+0.4**
	SNR=233								
LAR1	**LAR**	**1.59**	**350**	Pg			**Pb**	**00 19 11.3**	**0.0**
MDH	**Madha**	**1.65**	**118**	P			**Pn**	**00 19 10.5**	**+0.3**
	SNR=52								
MDH				S			**Sn**	**00 19 32.0**	**+1.2**
	SNR=8.9								
MDH	**Madha**	**1.65**	**118**	*e*P			**Pn**	**00 19 10.5**	**+0.3**
	SNR=52								
UOSS	**Minazif**	**1.78**	**130**				**Pn**	**00 19 12.1**	**0.0**
UOSS						Sn	**Sn**	**00 19 34.4**	**+0.3**
UOSS	**Minazif**	**1.78**	**130**	Pg			**Pn**	**00 19 12.2**	**+0.2**
UOSS	**Minazif**	**1.78**	**130**	P			**Pn**	**00 19 12.8**	**+0.8**
UOSS				S			**Sn**	**00 19 35.4**	**+1.4**
UOSS	**Minazif**	**1.78**	**130**	*e*P			**Pn**	**00 19 12.5**	**+0.5**
	SNR=51								
HATD	**Hatta, Dubai**	**1.81**	**134**	P			**Pn**	**00 19 13.7**	**+1.2**
	SNR=44								
HATD				S			**Sb**	**00 19 37.6**	**+0.2**
	SNR=5.7								
HATD	**Hatta, Dubai**	**1.81**	**134**	*e*P			**Pn**	**00 19 13.3**	**+0.8**
	SNR=188								
LMD1	**Lamerd**	**1.85**	**313**	Pn			**Pb**	**00 19 15.4**	**-0.3**
LMD1	**Lamerd**	**1.85**	**313**	*e*Pn			**Pb**	**00 19 16.1**	**+0.4**
LMD1				IAML				00 20 16.0	
	comp=Z,5μm,1.0s								
BNDS	**Bandar-Abbas**	**1.85**	**45**	*i* P			**Pn**	**00 19 13.1**	**-0.1**
BNDS				IAML				00 19 47.9	
	comp=Z,3μm,1.0s								
GENO	**Geno**	**1.85**	**45**	Pn			**Pn**	**00 19 13.4**	**+0.2**
ASHO	**Ashiyiah**	**1.87**	**138**	P			**Pn**	**00 19 14.2**	**+1.0**
	SNR=236								
ASHO				S			**Sn**	**00 19 37.9**	**+1.6**
ASHO	**Ashiyiah**	**1.87**	**138**	*e*P			**Pn**	**00 19 14.3**	**+1.0**
	SNR=369								
IBND	**Bandar-abas**	**2.13**	**50**	Pn			**Pn**	**00 19 17.4**	**+0.6**
ALNE	**Al Ain**	**2.25**	**155**	P			**Pn**	**00 19 19.9**	**+1.5**
	SNR=58								
ALNE	**Al Ain**	**2.25**	**155**	*e*P			**Pn**	**00 19 20.1**	**+1.6**
	SNR=59								
SOHO	**SOHO**	**2.57**	**139**	P			**Pn**	**00 19 23.5**	**+0.6**
SOHO	**SOHO**	**2.57**	**139**	*e*P			**Pn**	**00 19 23.4**	**+0.6**
	SNR=142								
ARQ	**Araqi**	**3.21**	**148**	P			**Pn**	**00 19 32.6**	**+0.8**
	SNR=138								
KHNJ	**Kahnooj**	**3.26**	**55**	Pn			**Pn**	**00 19 32.8**	**+0.4**
MZR	**Muzera**	**3.27**	**200**	P			**Pn**	**00 19 34.3**	**+1.7**
	SNR=8.1								
MZR	**Muzera**	**3.27**	**200**	P			**Pn**	**00 19 34.1**	**+1.6**
SHMA	**Al-Shehemyia**	**3.37**	**267**	P			**Pn**	**00 19 36.7**	**+2.9**
	SNR=54								
TRNA	**Turayna**	**3.43**	**247**	P			**Pn**	**00 19 36.3**	**+1.6**
	SNR=18								
TRNA				S			**Sn**	**00 20 18.1**	**+3.5**
HOQ	**Hoqain**	**3.45**	**136**	Pn			**Pn**	**00 19 34.0**	**-1.1**
HOQ	**Hoqain**	**3.45**	**136**	P			**Pn**	**00 19 34.8**	**-0.3**
	SNR=136								
HOQ				S			**Sn**	**00 20 15.4**	**+0.1**
SHBH2	**SHBH2**	**3.66**	**238**	P			**Pn**	**00 19 39.1**	**+1.2**
SMRA	**Abu-Samra**	**3.75**	**250**	P			**Pn**	**00 19 41.2**	**+2.1**
	SNR=7.7								
SMRA				S			**Sn**	**00 20 25.8**	**+3.3**
DSBU	**Dashti - Bushe**	**3.80**	**307**	Pn			**Pn**	**00 19 42.1**	**+2.3**
SHBH1	**SHBH1**	**3.82**	**229**	P			**Pn**	**00 19 40.5**	**+0.4**
SHBH1	**SHBH1**	**3.82**	**229**	S			**Sn**	**00 20 20.0**	**-4.4**
NGRK	**Negar Kerman**	**3.97**	**27**	Pn			**Pn**	**00 19 43.9**	**+1.4**
SHI	**Shiraz**	**4.03**	**332**	Pn			**Pn**	**00 19 45.5**	**+2.4**
BTHS		**4.04**	**241**	P			**Pn**	**00 19 44.1**	**+1.0**
KRBR	**Kerman**	**4.28**	**25**	*i* P			**Pn**	**00 19 49.6**	**+2.9**
KRBR				IAML				00 19 50.2	
	comp=Z,760nm,1.0s								
SMDO	**Samad**	**4.30**	**134**	P			**Pn**	**00 19 47.0**	**+0.3**
	SNR=116								
SMDO				S			**Sn**	**00 20 36.4**	**+0.1**
KAZ2	**Kazeron-Fars-I**	**4.41**	**323**	Pn			**Pn**	**00 19 50.6**	**+2.2**
KBAM	**BAM**	**4.50**	**47**	Pn			**Pn**	**00 19 50.8**	**+1.2**
CHMN	**Cheshme madani**	**4.52**	**33**	Pn			**Pn**	**00 19 52.3**	**+2.3**
KHGB	**Koh Gabri**	**4.54**	**20**	Pn			**Pn**	**00 19 53.0**	**+2.7**
WSAR	**Wadi Sarin**	**4.57**	**128**	P			**Pn**	**00 19 50.6**	**+0.1**
WSAR				S			**Sn**	**00 20 41.5**	**-1.4**
SHOFU	**Shofu**	**4.58**	**257**	P			**Pn**	**00 19 52.4**	**+1.8**
JMDO	**Jabal Madar**	**4.84**	**139**	P			**Pn**	**00 19 54.0**	**-0.2**
	SNR=35								
NHFOF	**Ain Dar Gosp**	**4.91**	**265**	P			**Pn**	**00 19 57.3**	**+2.2**
KRM1	**Kerman Provinc**	**4.94**	**27**	Pn			**Pn**	**00 19 57.9**	**+2.2**
ZRDN	**Zarand Kerman**	**5.12**	**18**	Pn			**Pn**	**00 20 00.1**	**+1.9**
ARIRA	**AirJ**	**5.22**	**273**	P			**Pn**	**00 20 01.5**	**+2.2**
CHBR	**Chabahar**	**5.24**	**94**	Pn			**Pn**	**00 19 58.7**	**-0.9**
CHBR	**Chabahar**	**5.24**	**94**	*e*Pn			**Pn**	**00 19 58.9**	**-0.7**
CHBR				IAML				00 20 00.0	
	comp=Z,210nm,1.0s								
IMEH	**Mehriz**	**5.28**	**359**	Pn			**Pn**	**00 20 02.7**	**+2.3**
NHRD	**Haradh**	**5.32**	**256**	P			**Pn**	**00 20 03.1**	**+2.4**
IBAF	**Bafgh**	**5.53**	**8**	Pn			**Pn**	**00 20 05.7**	**+2.0**
KLNJ	**Kolanjah**	**5.60**	**332**	Pn			**Pn**	**00 20 07.1**	**+2.2**
KLNJ	**Kolanjah**	**5.60**	**332**	*e*Pn			**Pn**	**00 20 07.1**	**+2.2**
KLNJ				IAML				00 21 19.2	
	comp=Z,210nm,1.0s								
WANAN	**Al Wanan**	**5.63**	**280**	P			**Pn**	**00 20 06.2**	**+1.3**
JLN	**Jalan Bani Buh**	**5.83**	**131**	P			**Pn**	**00 20 07.3**	**-0.5**
NGCH	**Negor - Chabah**	**5.86**	**96**	Pn			**Pn**	**00 20 08.0**	**-0.1**
NGCH	**Negor - Chabah**	**5.86**	**96**	P			**Pn**	**00 20 08.4**	**+0.4**
	SNR=33								
SMAN	**Sihmah**	**5.96**	**272**	P			Pb	00 20 41.8	+16
KFJS2	**Khafji**	**6.04**	**293**	P			**Pn**	**00 20 12.1**	**+1.5**
IRAM	**Ramesheh**	**6.04**	**341**	Pn			**Pn**	**00 20 13.1**	**+2.3**
ICHK	**Chekchek**	**6.13**	**358**	Pn			**Pn**	**00 20 13.9**	**+1.9**
KFJS1	**Al Wafrah**	**6.37**	**291**	P			**Pn**	**00 20 16.9**	**+1.8**
IBRJ	**Brojen**	**6.53**	**333**	Pn			**Pn**	**00 20 19.5**	**+2.0**
DQM	**DQM**	**6.67**	**156**	P			**Pn**	**00 20 19.0**	**-0.3**
	SNR=60								
IGAR	**Gharneh**	**6.70**	**340**	Pn			**Pn**	**00 20 21.7**	**+1.8**
KHRJ	**Al Kharj**	**6.75**	**252**	P			**Pn**	**00 20 20.9**	**+0.5**
ZNGN	**Zangian**	**6.88**	**332**	Pn			**Pn**	**00 20 24.0**	**+1.7**
NASN	**Na'in**	**6.88**	**347**	*i* P			**Pn**	**00 20 23.9**	**+1.5**
NASN				IAML				00 21 43.5	
	comp=Z,77nm,1.0s								
SRVN	**Saravan**	**7.01**	**78**	Pn			**Pn**	**00 20 24.5**	**+0.4**
SRVN	**Saravan**	**7.01**	**78**	*e*Pn			**Pn**	**00 20 24.5**	**+0.4**
SRVN				IAML				00 20 25.6	
	comp=Z,89nm,1.0s								
BSRN	**Basiran**	**7.02**	**33**	Pn			**Pn**	**00 20 24.3**	**+0.2**
BSRN	**Basiran**	**7.02**	**33**	*e*Pn			**Pn**	**00 20 24.5**	**+0.3**
BSRN				IAML				00 20 44.0	
	comp=Z,29nm,1.0s								
JHBN	**Jahan bin**	**7.05**	**331**	Pn			**Pn**	**00 20 26.5**	**+1.6**
RMAH	**Rumah**	**7.08**	**266**	P			**Pn**	**00 20 26.7**	**+1.6**
ANAR	**Anarak**	**7.12**	**353**	Pn			**Pn**	**00 20 27.0**	**+1.5**
TPRV	**Parvadeh(Tabas**	**7.12**	**14**	Pn			**Pn**	**00 20 27.1**	**+1.5**
IKOO	**Kooshah**	**7.34**	**30**	Pn			**Pn**	**00 20 29.4**	**+0.7**
IPIR	**Pirpir**	**7.36**	**334**	Pn			**Pn**	**00 20 30.6**	**+1.6**
DOK	**Doka**	**7.46**	**184**	P			**Pn**	**00 20 30.7**	**+0.5**
ITEG	**Tejag**	**7.64**	**27**	Pn			**Pn**	**00 20 33.8**	**+1.0**
IKLH	**Kolahrood**	**7.69**	**340**	Pn			**Pn**	**00 20 34.7**	**+1.2**
TKDS	**Koohdasht(Taba**	**7.78**	**15**	Pn			**Pn**	**00 20 35.8**	**+1.2**
TABS	**Tabas**	**7.82**	**15**	*e*Pn			**Pn**	**00 20 36.8**	**+1.7**
TABS				IAML				00 20 51.0	
	comp=Z,47nm,1.0s								
TNSJ	**Nastanj**	**8.02**	**11**	Pn			**Pn**	**00 20 38.6**	**+0.7**
SHAO	**Shalim**	**8.08**	**174**	P			**Pn**	**00 20 38.4**	**-0.3**
	SNR=37								
SHAO	**Shalim**	**8.08**	**174**	*i* P			**Pn**	**00 20 38.5**	**-0.2**
	SNR=7.3								
QAMS	**Qamsar**	**8.13**	**340**	Pn			**Pn**	**00 20 40.9**	**+1.3**
WHFO	**Wadi Hawf**	**8.18**	**186**	P			**Pn**	**00 20 40.0**	**-0.2**
	SNR=339								
DMTO	**DMTO**	**8.34**	**178**	P			**Pn**	**00 20 42.0**	**-0.2**
	SNR=14								
ISFB	**Sefidab**	**8.50**	**346**	Pn			**Pn**	**00 20 45.5**	**+1.1**
RBK	**Rabkut**	**8.56**	**183**	P			**Pn**	**00 20 45.7**	**+0.4**
	SNR=5.4								
KHMZ	**Khomeyn**	**8.65**	**333**	*e*Pn			**Pn**	**00 20 48.1**	**+1.4**
KHMZ				IAML_BB				00 20 50.4	
	comp=Z,750nm,1.0s								
RAYN	**Ar Rayn**	**8.73**	**255**				**Pn**	**00 20 46.3**	**-1.4**
RAYN	**Ar Rayn**	**8.73**	**255**	*i* P			**Pn**	**00 20 46.8**	**-0.9**
	SNR=25								
RAYN	**Ar Rayn**	**8.73**	**255**	P			**Pn**	**00 20 46.3**	**-1.4**
ABTO	**Aybut**	**8.80**	**189**	P			**Pn**	**00 20 47.9**	**-0.7**
	SNR=175								
GHVR	**GHOM**	**8.86**	**341**	*i* P			**Pn**	**00 20 51.4**	**+2.1**
GHVR				IAML_BB				00 21 35.5	
	comp=Z,640nm,1.0s								
SHRT	**Shahrakht**	**8.95**	**32**	*e*Pn			**Pn**	**00 20 52.3**	**+1.6**
SHRT				IAML				00 20 52.9	
	comp=Z,12nm,0.8s								
IVRN	**Varamin**	**9.23**	**345**	Pn			**Pn**	**00 20 55.6**	**+1.2**
IQOM	**Qom**	**9.26**	**341**	Pn			**Pn**	**00 20 56.5**	**+1.4**
IDOB	**Doab**	**9.52**	**325**	Pn			**Pn**	**00 21 00.8**	**+2.2**
IFIR	**Firoozkooh**	**9.66**	**351**	Pn			**Pn**	**00 21 02.7**	**+2.2**
KCHF	**Cheshme Sefid,**	**10.50**	**323**	Pn			**Pn**	**00 21 11.7**	**-0.2**
HRA	**Herat**	**10.53**	**36**				**Pn**	**00 21 10.8**	**-1.6**
SNQR	**Sonqor, Kerman**	**10.65**	**327**	Pn			**Pn**	**00 21 14.8**	**+0.8**
IGHG	**Ghaleghazi**	**10.80**	**321**	Pn			**Pn**	**00 21 16.9**	**+0.8**
IPAY	**Payeh**	**10.96**	**19**	Pn			**Pn**	**00 21 20.1**	**+1.8**
GLG1	**Gilan-e-Gharb**	**11.03**	**319**	Pn			**Pn**	**00 21 19.2**	**+0.1**
IDHR	**Dehrash**	**11.17**	**322**	Pn			**Pn**	**00 21 21.1**	**-0.1**
IKRD	**Kardeh**	**11.41**	**20**	Pn			**Pn**	**00 21 27.2**	**+2.7**
KGS1	**Ghasr-e-Shirin**	**11.49**	**319**	Pn			**Pn**	**00 21 25.8**	**+0.4**
KBL	**Kabul**	**14.97**	**52**				**Pn**	**00 22 13.1**	**+0.1**
KBL	**Kabul**	**14.97**	**52**	P			**Pn**	**00 22 13.1**	**+0.1**
MARD	**Mardin**	**16.27**	**317**				**Pn**	**00 22 28.3**	**-1.5**
MARD				IAmb			IAmb	00 22 41.8	
	comp=Z,16nm,0.4s								
GNI	**Garni**	**16.29**	**332**				**Pn**	**00 22 29.1**	**-1.0**
GNI				IAmb			IAmb	00 22 36.4	
	comp=Z,10nm,0.8s								
GNI	**Garni**	**16.29**	**332**	Pn			**Pn**	**00 22 32.0**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=181,slow=4.1,SNR=7.3								
GNI				LR			LR	00 29 41.8	
	comp=Z,72nm,18.5s,baz=153,slow=40								
	comp=Z,11nm,0.9s								
GNI	**Garni**	**16.29**	**332**	P			**P**	**00 22 33.2**	**+0.2**
GNI	**Garni**	**16.29**	**332**	*ce*P			**Pn**	**00 22 30.5**	**+0.4**
GNI				pmax			pmax		
	comp=Z,23nm,1.7s								
GURO	**Guroymak-BITLI**	**16.37**	**322**				**Pn**	**00 22 29.7**	**-1.5**
GURO				IAmb			IAmb	00 22 42.8	
	comp=Z,20nm,1.0s								
AKT	**Akhty**	**16.39**	**341

comp=Z,5.7nm,0.7s
AAK Ala-Archa 23.14 40 LR LR 00 34 34.8
comp=Z,38nm,19.1s,baz=239,slow=41
AAK Ala-Archa 23.14 40 *ce*P **P 00 23 47.4 0.0**
AAK pmax pmax
comp=Z,13nm,1.7s
AB31 Akbulak array 23.48 9 P P 00 23 50.3 -0.2
AB31 IAmb IAmb 00 23 52.6
comp=Z,13nm,1.1s
ABKAR Akbulak array 23.48 9 P P 00 23 50.0 -0.5
ELL Elmali 23.60 303 P P 00 23 51.4 -0.7
ELL IAmb IAmb 00 24 00.2
comp=Z,6.9nm,0.8s
ELL Elmali 23.60 303 P P 00 23 51.4 -0.7
ELL pmax pmax
comp=Z,7.0nm,0.8s
BOOM Boomskoye usch 23.89 41 P P 00 23 54.5 -0.3
BOOM Boomskoye usch 23.89 41 P P 00 23 54.5 -0.3
BOOM pmax pmax
comp=Z,2.0nm,0.8s
MDUB Mudurnu 24.22 312 P P 00 23 56.8 -1.0
KDJ Kajisay 24.43 43 P P 00 23 59.8 -0.1
KDJ IAmb IAmb 00 24 14.8
comp=Z,5.6nm,0.8s
KDJ Kajisay 24.43 43 P P 00 23 59.8 -0.1
KDJ pmax pmax
comp=Z,6.0nm,0.8s
AKTO Aktyubinsk 24.44 5 LR LR 00 35 08.4
comp=Z,28nm,19.1s,baz=67,slow=40
TARG Taragay, Kyrgy 24.61 45 P P 00 24 03.1 +1.4
TARG pmax pmax
comp=Z,8.0nm,1.0s
HARR Harsova 28.44 318 ⇑ **P P 00 24 36.8 +1.1**
HARR Harsova 28.44 318 ⇑ **P P 00 24 36.8 +1.1**
BVAR Borovoye Array 29.36 19 P P 00 24 44.3 +0.6
comp=Z,12nm,0.7s,baz=208,slow=7.2,SNR=55
BVAR LR LR 00 38 15.0
comp=Z,38nm,21.7s,baz=217,slow=40
comp=Z,12nm,0.7s
NEHR Nehoiu 29.81 318 ⇓ **P P 00 24 49.5 +1.6**
PLOR Plostina 29.82 319 ⇑ **P P 00 24 49.7 +1.7**
PLOR Plostina 29.82 319 ⇑ **P P 00 24 49.7 +1.7**
MAKZ Makanchi 29.90 39 P P 00 24 47.9 -0.8
MAKZ IAmb IAmb 00 24 50.1
comp=Z,5.8nm,0.8s
MAKZ Makanchi 29.90 39 P P 00 24 47.9 -0.8
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 30.06 318 ⇑ **P P 00 24 52.1 +1.9**
MLR Muntele Rosu 30.06 318 ⇑ **P P 00 24 52.1 +1.9**
MK31 Makanchi Array 30.07 39 *ce*P **P 00 24 50.8 +0.6**
MKAR Makanchi Array 30.07 39 P P 00 24 50.2 0.0
MKAR Makanchi Array 30.07 39 P P 00 24 50.9 +0.7
comp=Z,4.8nm,0.7s,baz=224,slow=8.3,SNR=32
comp=Z,4.8nm,0.7s
TESR Tescani 30.17 320 ⇓ **P P 00 24 52.6 +1.5**
LIT Litokhoron 30.20 306 P P 00 24 51.0 -0.4
LIT Litokhoron 30.20 306 P P 00 24 51.0 -0.4
LIT pmax pmax
comp=Z,9.0nm,1.0s
ONER Baraj Valea Uz 30.23 319 ⇓ **P P 00 24 52.9 +1.3**
TURR Turia 30.30 319 ⇑ **P P 00 24 53.3 +1.0**
ARTI Arti 30.38 4 LR LR 00 38 57.1
comp=Z,18nm,19.0s,baz=170,slow=40
ARTI Arti 30.38 4 *i* P **P 00 24 53.9 +1.1**
ARTI pmax pmax
comp=Z,2.0nm,1.2s
OZUR 30.46 318 ⇑ **P P 00 24 55.6 +1.9**
KURBB Kurchatov Arra 30.55 30 P P 00 24 54.5 +0.2
comp=Z,5.0nm,0.7s,baz=230,slow=8.6,SNR=38
KURBB PcP **PcP 00 27 52.5 -0.2**
comp=Z,0.2nm,0.3s,baz=204,slow=2.0,SNR=2.2
comp=Z,5.0nm,0.7s
DOPR Dopca 30.64 318 ⇓ **P P 00 24 56.8 +1.6**
KURK Kurchatov 30.66 30 P P 00 24 55.1 -0.2
KURK Kurchatov 30.66 30 *ce*P **P 00 24 55.9 +0.6**
KURK pmax pmax
comp=Z,4.0nm,0.7s
ARR Arges 30.80 316 ⇑ **P P 00 24 58.8 +2.1**
AKASG Malin Array Be 31.36 328 P P 00 25 01.4 -0.1
comp=Z,0.8nm,0.4s,baz=137,slow=8.1,SNR=5.6
AKASG LR LR 00 41 26.9
comp=Z,29nm,21.3s,baz=163,slow=43
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 31.36 328 *i* P **P 00 25 01.5 0.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 31.36 328 *ce*P **P 00 25 02.3 +0.8**
AKBB pmax pmax
comp=Z,14nm,1.6s
KIEV Kiev 31.37 328 P 00 25 00.5 -1.0
KIEV Kiev 31.37 328 P P 00 25 00.5 -1.0
KIEV pmax pmax
comp=Z,7.0nm,1.1s
LOT Lotru 31.38 316 ⇑ **P P 00 25 03.5 +1.7**
BURAR Bucovina Array 31.59 321 P P 00 25 03.4 -0.3
BURAR IAmb IAmb 00 25 10.3
comp=Z,2.3nm,0.8s
BUR08 Bucovina Ar. S 31.62 321 P P 00 25 03.3 -0.6
BUR08 IAmb IAmb 00 25 11.3
comp=Z,3.1nm,0.9s
ARCR ARCALIA 31.82 319 ⇓ **P P 00 25 07.6 +2.0**
OBN Obninsk 31.89 340 P P 00 25 05.6 -0.4
OBN Obninsk 31.89 340 ⇓ *i* P **P 00 25 07.2 +1.2**
OBN *e* 00 26 13.7
OBN *e*S **S 00 30 17.7 +2.2**
OBN pmax pmax
comp=Z,9.0nm,0.8s
GZR Gura Zlata 31.98 315 ⇓ **P P 00 25 09.5 +2.4**
GZR Gura Zlata 31.98 315 ⇑ **P P 00 25 09.5 +2.4**
HERR Herculane 31.99 314 ⇑ **P P 00 25 08.3 +1.2**
WMQ Urumqi 32.03 48 *e*P **P 00 25 08.9 +1.3**
WMQ pmax pmax
comp=Z,15nm,0.9s
MARR Marisel-Cluj 32.35 318 ⇑ **P P 00 25 12.0 +1.6**
DRGR 32.66 318 ⇓ **P P 00 25 14.9 +1.9**
DRGR 32.66 318 ⇓ **P P 00 25 14.9 +1.9**
KIRV Kirov 32.68 355 *ce*P **P 00 25 14.9 +2.0**
BZS Buzias 32.81 315 ⇑ **P P 00 25 16.1 +1.8**
BZS Buzias 32.81 315 ⇑ **P P 00 25 16.1 +1.8**
DGZ Jazzator, Alta 34.53 38 *i* P **P 00 25 30.6 +1.2**
DGZ pmax pmax
comp=Z,7.0nm,0.7s
ZALV Zalesovo Beam 35.65 31 P P 00 25 38.8 +0.1
comp=Z,13nm,0.6s,baz=240,slow=9.3,SNR=74
ZALV LR LR 00 42 25.2
comp=Z,38nm,18.0s,baz=84,slow=40
comp=Z,13nm,0.6s
ZALV Zalesovo Beam 35.65 31 *i* P **P 00 25 38.7 -0.1**
ZALV pmax pmax
comp=Z,13nm,0.6s
LANS Liptovska Anna 35.68 320 *e*P **P 00 25 40.7 +1.5**
LANS Liptovska Anna 35.68 320 *e*P **P 00 25 40.7 +1.5**
OJC Ojcow 35.99 321 P P 00 25 40.0 -1.8
OJC Ojcow 35.99 321 P P 00 25 40.0 -1.8
KLMR Klimovskoe 36.26 347 *e*P **P 00 25 42.5 -1.4**
KLMR pmax pmax
comp=Z,33nm,1.8s
PABE Paberze 36.91 331 P P 00 25 49.0 -0.5
CESX Cesi 38.04 307 P P 00 25 57.8 -1.6
PRED Cave del Predi 38.34 313 P P 00 26 01.6 -0.2
PRED IAmb IAmb 00 26 03.4
comp=Z,3.7nm,1.0s
MYKA Terra Mystica 38.34 313 *i* P **P 00 26 01.9 0.0**
comp=Z,1.8nm,0.6s
KBA Koelnbreinsper 38.67 314 *i* pP **P 00 26 06.0 +1.2**
comp=Z,1.1nm,0.8s
BIOA Bad Ischl, Aus 38.68 315 *i* P **P 00 26 05.2 +0.5**
comp=Z,0.2nm,0.3s
ZVC Zvikov 38.94 318 *e*P **P 00 26 07.6 +0.8**
ZVC *e*pP **pP 00 26 12.7 -0.8**
KHC Kasperske Hory 39.21 317 *e*P **P 00 26 09.9 +0.8**
KHC *e**PP **pP 00 26 14.0 -1.8**
KHC Kasperske Hory 39.21 317 *e*P **P 00 26 09.9 +0.8**
KHC *e*pP **pP 00 26 14.0 -1.8**
LESA Schwarzleotal 39.21 314 *i* P **P 00 26 08.5 -0.7**
comp=Z,1.9nm,0.6s
WTTA Wattenberg 39.84 313 *i* P **P 00 26 14.9 +0.4**
comp=Z,5.0nm,0.5s
WTTA *i* S **S 00 32 15.1 -2.9**
comp=Z,0.6nm,0.4s
WTTA Wattenberg 39.84 313 P **P 00 26 14.7 +0.2**
WTTA pmax pmax
comp=Z,18nm,0.7s
WATA Walderalm 39.90 314 *i* P **P 00 26 15.1 +0.1**
comp=Z,7.3nm,0.7s
WATA *i* S **S 00 32 18.3 -0.5**
comp=Z,0.1nm,0.1s
SQTA Sankt Quirin 40.11 313 *i* P **P 00 26 16.8 +0.1**
comp=Z,0.9nm,0.2s
SQTA *i* S **S 00 32 20.0 -1.9**
comp=Z,3.0nm,0.6s
MOTA Moosalm 40.21 313 *i* P **P 00 26 17.4 -0.2**
comp=Z,1.8nm,0.2s
MOTA *i* S **S 00 32 20.5 -3.0**
comp=Z,6.6nm,0.8s
FINES FINESS Array B 40.27 339 P **P 00 26 16.6 -1.0**
comp=Z,1.5nm,0.6s,baz=157,slow=11,SNR=9.8
comp=Z,1.5nm,0.6s
FINES FINESS Array B 40.27 339 *i* P **P 00 26 18.2 +0.5**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FETA Feichten 40.37 313 *i* P **P 00 26 19.2 +0.3**
comp=Z,1.8nm,0.6s
FETA *i* S **S 00 32 23.9 -2.0**
comp=Z,5.6nm,1.4s
RETA Reutte 40.47 314 *i* P **P 00 26 19.3 -0.3**
comp=Z,1.9nm,0.5s
DAVA Damuels 41.00 313 *i* P **P 00 26 24.0 -0.1**
comp=Z,1.7nm,0.4s
CMAR Chiang Mai Arr 41.49 91 P **P 00 26 29.1 +0.8**
comp=Z,1.5nm,0.4s,baz=284,slow=10,SNR=7.4
comp=Z,1.5nm,0.4s
CMAR Chiang Mai Arr 41.49 91 *i* P **P 00 26 29.7 +1.4**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
LUNU Lund 41.95 326 *i* P **P 00 26 32.4 +0.9**
PZH PanZhiHua 41.99 79 P **P 00 26 32.6 +0.1**
DEL Delary 42.13 327 *i* P **P 00 26 33.8 +0.8**
BORU Boraas 43.22 328 *i* P **P 00 26 42.2 +0.4**
ONAU Onsala 43.52 328 *i* P **P 00 26 44.5 +0.3**
HFS Hagfors 44.08 332 P **P 00 26 48.1 -0.6**
comp=Z,2.5nm,0.8s,baz=126,slow=8.6,SNR=8.5
HFS LR LR 00 48 04.9
comp=Z,50nm,19.3s,baz=265,slow=40
comp=Z,2.5nm,0.8s
ABPO Ambohimpanom 45.43 190 *i* P **P 00 26 59.6 -0.5**
NB2 NORSAR Subarra 45.59 332 P **P 00 27 00.2 -0.6**
comp=Z,2.1nm,0.7s,baz=122,slow=7.4
NOA NORSAR Array B 45.59 332 P **P 00 27 00.6 -0.2**
comp=Z,0.6nm,0.7s,baz=121,slow=7.5,SNR=5.8
NOA LR LR 00 48 15.8
comp=Z,10nm,19.6s,baz=225,slow=39
comp=Z,0.6nm,0.7s
SONM Songino Array 45.67 48 P **P 00 27 02.2 +0.5**
comp=Z,2.6nm,0.8s,baz=259,slow=7.8,SNR=16
comp=Z,2.6nm,0.8s
ULN Ulaanbaatar 46.11 48 *ce*P **P 00 27 06.0 +0.7**
ULN pmax pmax
comp=Z,6.0nm,1.7s
ARCES ARCESS Array B 46.71 346 LR LR 00 51 20.5
comp=Z,24nm,18.9s,baz=335,slow=42
HHC Hu-ho-hao-te 48.86 58 *e*P **P 00 27 26.5 -0.2**
HHC pmax pmax
comp=Z,16nm,0.8s
ESDC Sonseca Array 50.27 301 P **P 00 27 37.5 +0.1**
comp=Z,0.7nm,0.7s,baz=72,slow=6.9,SNR=6.4
comp=Z,0.7nm,0.7s
EKA Eskdalemuir Ar 50.77 321 P **P 00 27 40.6 -0.2**
comp=Z,1.5nm,0.8s,baz=44,slow=30,SNR=1.5
comp=Z,1.5nm,0.8s
TORD Torodi Ar. Bea 51.24 266 P **P 00 27 45.4 +0.5**
comp=Z,7.4nm,0.3s,baz=348,slow=24,SNR=22
TORD LR LR 00 49 46.0
comp=Z,57nm,18.9s,baz=285,slow=36
comp=Z,7.4nm,0.3s
HILR Hailar Array B 54.62 46 P **P 00 28 09.8 +0.3**
comp=Z,2.1nm,0.6s,baz=268,slow=25,SNR=2.3
comp=Z,2.1nm,0.6s
SPITS Spitsbergen Ar 55.00 351 P **P 00 28 12.9 +1.1**
comp=Z,12nm,1.0s,baz=132,slow=10,SNR=1.7
comp=Z,12nm,1.0s
DBIC Dimbokro 59.79 262 P **P 00 28 47.0 +0.6**
comp=Z,3.8nm,0.7s,baz=87,slow=7.0,SNR=7.9
comp=Z,3.8nm,0.7s
TIXI Tiksi 60.48 20 *i* P **P 00 28 51.8 +1.5**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
BOSA Boshof 61.31 210 P **P 00 28 56.8 +0.2**
comp=Z,2.7nm,0.8s,baz=12,slow=4.4,SNR=6.5
comp=Z,2.7nm,0.8s
KSRS Korea Array 61.87 60 P **P 00 28 59.6 -0.8**
comp=Z,1.5nm,0.5s,baz=287,slow=5.8,SNR=5.4
comp=Z,1.5nm,0.5s
BILL Bilibino 73.68 21 *i* P **P 00 30 15.3 +1.1**
BILL pmax pmax
comp=Z,3.0nm,1.0s
PEA0B Petropavlovsk- 76.88 37 *ce*P **P 00 30 33.1 +0.2**
SCHQ Schefferville 85.14 330 P **P 00 31 16.5 -0.3**
comp=Z,2.3nm,0.8s,baz=242,slow=19,SNR=1.6
comp=Z,2.3nm,0.8s
ILAR Eielson Array 87.89 9 P **P 00 31 29.4 -0.7**
comp=Z,0.6nm,0.7s,baz=322,slow=4.4,SNR=7.0
comp=Z,0.6nm,0.7s
WRA Warramunga Arr 89.79 112 P **P 00 31 39.0 -0.8**
comp=Z,0.6nm,0.6s,baz=309,slow=4.1,SNR=8.3
comp=Z,0.6nm,0.6s
ASAR Alice Springs 91.16 116 P **P 00 31 45.0 -1.2**
comp=Z,1.2nm,0.8s,baz=307,slow=5.2,SNR=11
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 121.11 338 PKP **PKPdf 00 37 33.6 -0.6**
comp=Z,0.2nm,0.6s,baz=41,slow=2.1,SNR=2.5

IDC 04 00:19:21.9±7.2, 14°39S×174°34W, h0km, mb3.5/3, mbtmp3.5/3, MS3.3/12, Error ellipse: s-maj=315.1km s-min=40.2km az=138.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPT	**Papeete**	**24.01**	**101**	LR	LR	00 30 56.3	
	comp=Z,37nm,21.4s,baz=276,slow=29						
HNR	**Honiara**	**25.62**	**278**	LR	LR	00 34 34.5	
	comp=Z,47nm,18.1s,baz=39,slow=36						
RPZ	**Rata Peaks**	**31.78**	**200**	LR	LR	00 36 42.4	
	comp=Z,74nm,21.5s,baz=72,slow=33						
PMG	**Port Moresby**	**37.96**	**273**	LR	LR	00 40 21.4	
	comp=Z,42nm,20.7s,baz=156,slow=33						
GUMO	**Guam**	**49.03**	**303**	LR	LR	00 45 45.5	
	comp=Z,17nm,19.5s,baz=30,slow=32						
WRA	**Warramunga Arr**	**49.19**	**256**	P	P	00 28 13.0	+0.7
	0.2nm,0.6s,baz=91,slow=7.4,SNR=1.4						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**49.56**	**251**	P	P	00 28 14.5	-0.6
	0.9nm,0.5s,baz=85,slow=8.2,SNR=18						
	0.9nm,0.5s						
DAV	**Davao City (W)**	**63.29**	**286**	LR	LR	00 56 33.0	
	comp=Z,32nm,18.1s,baz=12,slow=35						
MJAR	**Matsushiro Arr**	**67.59**	**320**	LR	LR	00 54 58.3	
	comp=Z,18nm,21.8s,baz=140,slow=32						
PFO	**Pinyon Flats O**	**72.92**	**48**	LR	LR	00 54 30.7	
	comp=Z,36nm,20.4s,baz=242,slow=29						
NVAR	**Mina Array Bea**	**74.20**	**43**	LR	LR	00 55 56.2	
	comp=Z,30nm,20.6s,baz=291,slow=30						
BBB	**Bella Bella**	**77.41**	**27**	LR	LR	01 00 40.0	
	comp=Z,22nm,19.1s,baz=169,slow=32						
MA2	**Magadan**	**78.94**	**343**	LR	LR	00 58 58.1	
	comp=Z,14nm,21.4s,baz=128,slow=30						
DLBC	**Dease Lake**	**81.11**	**22**	LR	LR	01 04 14.3	
	comp=Z,13nm,18.1s,baz=132,slow=33						
ILAR	**Eielson Array**	**81.64**	**12**	P	P	00 31 41.6	0.0
	0.3nm,0.9s,baz=219,slow=7.0,SNR=1.9						
	0.3nm,0.9s						

AEIC ***04*** *00:33:47.4±0.9, 53°.18N±0°.04×166°.68W±0°.05, h42km±9km, Error ellipse: s-maj=6.3km s-min=4.3km az=157.0*

NEIC 04 00:33:47.6±0.7, 53°.14N±0°.06×166°.64W±0°.08, h35km±2km, ML3.1 (AEIC), Error ellipse: s-maj=11.9km s-min=4.7km az=323.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGOD	**Makushin Gods**	**0.67**	**348**		Pn	00 34 00.3	-0.3
MREP	**Makushin Rep't**	**0.68**	**355**		Pn	00 34 00.6	-0.1
MAPS	**Pakushin South**	**0.69**	**345**		Pn	00 34 00.9	-0.1
UNV	**Unalaska Valle**	**0.71**	**6**		Pn	00 34 00.5	-0.7
UNV					Sn	00 34 10.8	0.0
MNAT	**Makushin Natee**	**0.75**	**358**		Pn	00 34 01.3	-0.4
MNAT					Sn	00 34 11.4	-0.3
MSW	**Makushin Switc**	**0.78**	**354**		Pn	00 34 02.0	-0.2
MSW					Sn	00 34 12.8	+0.2
OKFG	**Magazine Ridge**	**0.81**	**290**		Pn	00 34 02.3	-0.2
OKTU	**Okmok Mt. Tuli**	**0.88**	**287**		Pn	00 34 03.4	-0.1
OKNC	**Okmok New Cone**	**0.95**	**290**		Pn	00 34 04.4	0.0
OKNC					Sn	00 34 16.9	+0.2
OKCE	**Okmok Cone E**	**0.96**	**288**		Pn	00 34 04.8	+0.2
OKSP	**Okmok Steeple**	**1.00**	**277**		Pn	00 34 04.8	-0.3
ZRO	**Akutan Zero**	**1.03**	**22**		Pn	00 34 05.4	-0.2
ZRO					Sn	00 34 19.6	+0.8
AKBBA	**Akutan Broad B**	**1.05**	**23**		Pn	00 34 05.6	-0.2
LVA	**Lava Point**	**1.08**	**19**		Pn	00 34 06.5	+0.2
AKLV	**Akutan Long Va**	**1.10**	**21**		Pn	00 34 06.5	-0.1
AKUT	**Akutan**	**1.12**	**27**		Pn	00 34 06.6	-0.1
AKUT					Sn	00 34 21.4	+0.5
AKGG	**Akutan Green G**	**1.13**	**20**		Pn	00 34 07.1	+0.2
AKSA	**Akutan Strait**	**1.15**	**29**		Pn	00 34 06.7	-0.4
NIKH	**Nikolski High**	**1.35**	**264**		Pn	00 34 09.5	-0.3
NIKH					Sn	00 34 26.4	-0.2
WEBT	**Westdahl Beart**	**1.83**	**37**		Sn	00 34 40.7	+2.2
CLCO	**Concord Point,**	**1.90**	**261**		Pn	00 34 17.6	+0.2
CLES	**Cleveland East**	**2.00**	**262**	Pn	Pn	00 34 18.7	0.0
CLES					Sn	00 34 43.2	+0.7
FALS	**False Pass**	**2.56**	**47**		Pn	00 34 26.3	-0.3
DT1	**Dutton Round H**	**3.23**	**51**		Pn	00 34 37.0	+1.2
S12K	**Black Hills**	**3.71**	**44**	Pn	Pn	00 34 41.0	-1.3
SDPT	**Sand Point**	**4.24**	**56**	Pn	Pn	00 34 49.2	-0.3
CNBA	**Chernabura Isl**	**4.49**	**65**	Pn	Pn	00 34 53.7	+0.8
SPIA	**Saint Paul Isl**	**4.55**	**334**	Pn	Pn	00 34 53.7	-0.1
ATKA	**Atka Island**	**4.70**	**262**	Pn	Pn	00 34 56.7	+0.9
GSTD	**Great Sitkin T**	**5.90**	**263**		Pn	00 35 14.2	+1.8
GSCK	**Great Sitkin C**	**5.92**	**263**		Pn	00 35 14.5	+1.8
ADK	**Adak**	**6.26**	**262**		Pn	00 35 19.1	+1.8
KIWB	**Kanaga Island**	**6.55**	**263**		Pn	00 35 22.8	+1.5
O14K	**Tigyukauivet M**	**6.82**	**24**	Pn	Pn	00 35 26.1	+1.1
TASE	**Tanaga Southea**	**7.08**	**264**		Pn	00 35 31.3	+2.6
O15K	**Ungalikthiuk R**	**7.14**	**29**	Pn	Pn	00 35 28.0	-1.5
M11K	**Mekoryuk**	**7.27**	**2**	Pn	Pn	00 35 31.0	-0.1
N14K	**Kuskokwak Cree**	**7.33**	**20**	Pn	Pn	00 35 33.3	+1.4
GAKI	**Gareloi-Kavalg**	**7.63**	**263**		Pn	00 35 37.9	+1.8
N15K	**Kwethluk River**	**7.91**	**24**	Pn	Pn	00 35 41.7	+1.7
O16K	**Kokwok River B**	**8.02**	**33**	Pn	Pn	00 35 42.0	+0.6
M14K	**Bethel**	**8.05**	**17**	Pn	Pn	00 35 43.1	+1.3
OHAK	**Old Harbor**	**8.66**	**57**	Pn	Pn	00 35 50.3	+0.1
AMKA	**Amchitka**	**8.81**	**264**	Pn	Pn	00 35 52.8	+0.6
M16K	**Timber Creek**	**8.93**	**25**	Pn	Pn	00 35 55.0	+1.1
N17K	**Nushagak Hills**	**9.03**	**31**	Pn	Pn	00 35 56.6	+1.4
L16K	**Owhat River**	**9.42**	**21**	Pn	Pn	00 36 02.7	+2.2
N18K	**Kilae Creek**	**9.56**	**34**	Pn	Pn	00 36 01.6	-1.0
K15K	**Wolf Creek Mou**	**9.57**	**14**	Pn	Pn	00 36 05.4	+2.7
M17K	**Holitna River**	**9.65**	**27**	Pn	Pn	00 36 04.8	+1.0
ILSW	**Iliamna Southw**	**10.11**	**42**	Pn	Pn	00 36 11.5	+1.3
K17K	**Iditarod**	**10.56**	**21**	Pn	Pn	00 36 16.6	+0.4
GAMB	**Gambell**	**10.99**	**348**	Pn	Pn	00 36 21.4	-0.6

IDC ***04*** *00:45:19.2±0.9, 25°.91N×54°.81E, h0km, mb4.0/18, mbtmp4.0/21, ML3.8/3, MS3.0/8, Error ellipse: s-maj=22.4km s-min=14.9km az=0.0*

TEH ***04*** *00:45:20.2, 26°.02N×54°.77E, h8km±34km*

DSN ***04*** *00:45:20.8±0.9, 26°.27N×54°.73E, h10km, ML3.9/16, Error ellipse: s-maj=10.6km s-min=3.0km az=166.0*

THR ***04*** *00:45:21.2±0.0, 26°.03N×54°.87E, h14km±13km, ML4.4*

NEIC ***04*** *00:45:21.5±1.5, 26°.06N±0°.08×54°.73E±0°.07, h10km±2km, mb4.1/14, Error ellipse: s-maj=15.5km s-min=8.7km az=209.0*

OMAN ***04*** *00:45:23.4±1.1, 26°.14N×54°.82E, h13km±7km, mb4.8/5, ml4.0/19, Error ellipse: s-maj=7.6km s-min=4.0km az=14.0*

ISC 04 00:45:21.5±1.1, 26°.05N±0°.03×54°.74E±0°.03, h12km±7km, n162, σ1°75/171, mb4.1/36, MS3.0/5, 5C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMQ	**Umm Al-Quwin**	**0.99**	**122**	P	Pn	**00 45 42.9**	**+1.8**
	SNR=53						
UMQ				S	Sn	**00 45 57.2**	**+2.2**
UMQ	**Umm Al-Quwin**	**0.99**	**122**	*e*P	Pn	**00 45 42.9**	**+1.8**
	SNR=17						
SHME	**Shamm**	**1.27**	**90**	P	Pg	**00 45 45.3**	**-0.5**
	SNR=1142						
SHME	**Shamm**	**1.27**	**90**	*e*P	Pg	**00 45 45.3**	**-0.5**
	SNR=1144						
SHME				S	Sn	**00 46 02.8**	**+0.9**
NAZ	**Nazwa, Dubai**	**1.35**	**141**	P	Pg	**00 45 49.0**	**+1.6**
	SNR=68						
NAZ				S	Sn	**00 46 07.7**	**+3.8**
NAZ	**Nazwa, Dubai**	**1.35**	**141**	*e*P	Pg	**00 45 48.8**	**+1.4**
	SNR=68						
BANOM	**Banah**	**1.41**	**95**	P	Pg	**00 45 48.1**	**-0.6**
BANOM				S	Sg	**00 46 07.3**	**+0.2**
BANOM	**Banah**	**1.41**	**95**	*e*P	Pg	**00 45 47.9**	**-0.8**
	SNR=281						
BANOM				S	Sg	**00 46 06.4**	**-0.7**
MASF	**Masafi**	**1.45**	**117**	P	Pg	**00 45 49.4**	**0.0**
	SNR=194						
MASF				S	Sg	**00 46 08.5**	**+0.2**
	SNR=11						
MSFE	**Esma-Masafi**	**1.46**	**118**	*e*P	Pg	**00 45 49.1**	**-0.4**
	SNR=194						
AJN	**Ajban**	**1.50**	**171**	P	Pg	**00 45 51.4**	**+1.1**
	SNR=93						
AJN				S	Sg	**00 46 12.9**	**+3.1**
	SNR=8.8						
AJN	**Ajban**	**1.50**	**171**	*e*P	Pg	**00 45 51.4**	**+1.1**
	SNR=20						
FAQ	**Al Faqa, Dubai**	**1.51**	**149**	P	Pg	**00 45 51.1**	**+0.5**
	SNR=22						
FAQ				S	Sg	**00 46 12.1**	**+1.9**
FAQ	**Al Faqa, Dubai**	**1.51**	**149**	*e*P	Pg	**00 45 51.1**	**+0.5**
	SNR=22						
ASUD	**Al Ashush, Dub**	**1.52**	**159**	P	Pg	**00 45 51.7**	**+1.1**
	SNR=215						
ASUD				S	Sg	**00 46 12.9**	**+2.6**
ASUD	**Al Ashush, Dub**	**1.52**	**159**	*e*P	Pg	**00 45 51.8**	**+1.1**
	SNR=215						
MDH	**Madha**	**1.60**	**118**	P	Pg	**00 45 51.0**	**-1.2**
	SNR=46						
MDH				S	Sg	**00 46 11.9**	**-1.0**
MDH	**Madha**	**1.60**	**118**	*e*P	Pg	**00 45 51.0**	**-1.2**
	SNR=177						
LAR1	**LAR**	**1.65**	**349**	Pg	Pg	**00 45 52.2**	**-0.9**
UOSS	**Minazif**	**1.72**	**129**		Pg	**00 45 52.5**	**-2.1**
UOSS				Sg	Sg	**00 46 16.3**	**-0.6**
UOSS	**Minazif**	**1.72**	**129**	Pg	Pg	**00 45 52.4**	**-2.1**
UOSS	**Minazif**	**1.72**	**129**	P	Pg	**00 45 53.2**	**-1.3**
UOSS				S	Sg	**00 46 15.9**	**-1.0**
UOSS	**Minazif**	**1.72**	**129**	*e*P	Pg	**00 45 52.7**	**-1.9**
	SNR=120						
HATD	**Hatta, Dubai**	**1.75**	**134**	P	Pg	**00 45 54.0**	**-1.2**
	SNR=32						
HATD				S	Sg	**00 46 17.7**	**-0.3**
HATD	**Hatta, Dubai**	**1.75**	**134**	*e*P	Pg	**00 45 53.9**	**-1.3**
	SNR=135						
ASHO	**Ashiyiah**	**1.81**	**138**	P	Pg	**00 45 54.4**	**-1.8**
	SNR=194						
ASHO				S	Sg	**00 46 19.1**	**-0.7**
ASHO	**Ashiyiah**	**1.81**	**138**	*e*P	Pg	**00 45 54.7**	**-1.6**
	SNR=194						
BNDS	**Bandar-Abbas**	**1.86**	**43**	*e*Pn	Pn	**00 45 53.5**	**+0.2**
BNDS				IAML		00 46 28.2	
	comp=Z,2μm,1.0s						
GENO	**Geno**	**1.86**	**43**	Pn	Pb	**00 45 54.7**	**-0.9**
LMD1	**Lamerd**	**1.90**	**313**	Pn	Pb	**00 45 55.9**	**-0.3**
LMD1	**Lamerd**	**1.90**	**313**	*e*Pn	Pg	**00 45 56.9**	**-1.1**
LMD1				IAML		00 46 56.3	
	comp=Z,3μm,1.0s						
JRN	**Qarnain Island**	**2.03**	**238**	P	Pg	**00 45 59.7**	**-0.8**
IBND	**Bandar-abas**	**2.13**	**49**	Pn	Pb	**00 45 58.0**	**-2.0**
ALNE	**Al Ain**	**2.19**	**155**	P	Pg	**00 46 00.5**	**-3.0**
	SNR=29						
ALNE	**Al Ain**	**2.19**	**155**	*e*P	Pg	**00 46 00.5**	**-3.0**
	SNR=58						
SOHO	**SOHO**	**2.51**	**139**	P	Pb	**00 46 04.0**	**-2.5**
SOHO	**SOHO**	**2.51**	**139**	*e*P	Pb	**00 46 03.7**	**-2.8**
	SNR=105						
JHRM	**Jahrom**	**2.66**	**337**	Pn	Pn	**00 46 05.7**	**+1.5**
ARQ	**Araqi**	**3.15**	**149**	P	Pb	**00 46 13.0**	**-4.5**
	SNR=116						
MZR	**Muzera**	**3.24**	**201**	P	Pn	**00 46 14.3**	**+2.1**
KHNJ	**Kahnooj**	**3.26**	**54**	Pn	Pn	**00 46 13.2

SMRA	**Abu-Samra**	**3.77**	**251**	P	**Pb**	**00 46 23.3**	**-4.6**
SAKB	**Bahrain**	**3.78**	**270**	P	**Pn**	**00 46 23.1**	**+3.6**
DSBU	**Dashti - Bushe**	**3.86**	**307**	Pn	**Pn**	**00 46 22.1**	**+1.4**
NGRK	**Negar Kerman**	**3.99**	**26**	Pn	**Pn**	**00 46 24.1**	**+1.3**
SMDO	**Samad**	**4.24**	**134**	P	**Pn**	**00 46 27.2**	**+1.2**
	SNR=111						
KRBR	**Kerman**	**4.31**	**24**	*e*Pn	**Pn**	**00 46 30.1**	**+3.0**
KRBR				IAML		00 46 30.5	
	comp=Z,440nm,1.0s						
KBAM	**BAM**	**4.51**	**46**	Pn	**Pn**	**00 46 31.4**	**+1.7**
WSAR	**Wadi Sarin**	**4.52**	**127**	P	**Pn**	**00 46 31.2**	**+1.5**
WSAR				S	**Sn**	**00 47 21.6**	**-0.6**
CHMN	**Cheshme madani**	**4.54**	**33**	Pn	**Pn**	**00 46 32.1**	**+1.8**
KHGB	**Koh Gabri**	**4.58**	**19**	Pn	**Pn**	**00 46 32.5**	**+1.8**
JMDO	**Jabal Madar**	**4.78**	**139**	P	**Pn**	**00 46 34.2**	**+0.8**
	SNR=47						
KRM1	**Kerman Provinc**	**4.97**	**26**	Pn	**Pn**	**00 46 38.1**	**+2.0**
ZRDN	**Zarand Kerman**	**5.15**	**18**	Pn	**Pn**	**00 46 40.5**	**+1.8**
CHBR	**Chabahar**	**5.20**	**94**	Pn	**Pn**	**00 46 39.3**	**+0.3**
CHBR	**Chabahar**	**5.20**	**94**	*e*Pn	**Pn**	**00 46 39.0**	**-0.1**
CHBR				IAML		00 46 40.3	
	comp=Z,190nm,1.0s						
IMEH	**Mehriz**	**5.32**	**359**	Pn	**Pn**	**00 46 43.1**	**+2.1**
IBAF	**Bafgh**	**5.57**	**7**	Pn	**Pn**	**00 46 45.9**	**+1.5**
KLNJ	**Kolanjah**	**5.66**	**332**	Pn	**Pn**	**00 46 47.5**	**+1.8**
KLNJ	**Kolanjah**	**5.66**	**332**	*e*Pn	**Pn**	**00 46 47.7**	**+1.9**
KLNJ				IAML		00 47 58.4	
	comp=Z,110nm,1.0s						
NGCH	**Negor - Chabah**	**5.82**	**95**	Pn	**Pn**	**00 46 48.6**	**+1.1**
NGCH	**Negor - Chabah**	**5.82**	**95**	P	**Pn**	**00 46 49.0**	**+1.4**
	SNR=36						
IRAM	**Ramesheh**	**6.10**	**341**	Pn	**Pn**	**00 46 53.5**	**+1.9**
ICHK	**Chekchek**	**6.18**	**357**	Pn	**Pn**	**00 46 54.4**	**+1.6**
IBRJ	**Brojen**	**6.58**	**333**	Pn	**Pn**	**00 46 59.8**	**+1.5**
DQM	**DQM**	**6.62**	**156**	P	**Pn**	**00 46 59.7**	**+1.1**
IGAR	**Gharneh**	**6.75**	**340**	Pn	**Pn**	**00 47 02.5**	**+1.9**
NASN	**Na'in**	**6.93**	**346**	*e*Pn	**Pn**	**00 47 04.9**	**+1.7**
NASN				IAML		00 48 23.8	
	comp=Z,39nm,1.0s						
ZNGN	**Zangian**	**6.93**	**332**	Pn	**Pn**	**00 47 04.9**	**+1.7**
SRVN	**Saravan**	**6.98**	**77**	Pn	**Pn**	**00 47 05.0**	**+1.2**
SRVN	**Saravan**	**6.98**	**77**	*e*Pn	**Pn**	**00 47 05.0**	**+1.2**
SRVN				IAML		00 47 05.9	
	comp=Z,60nm,1.0s						
BSRN	**Basiran**	**7.04**	**32**	Pn	**Pn**	**00 47 05.8**	**+1.4**
BSRN	**Basiran**	**7.04**	**32**	*e*Pn	**Pn**	**00 47 05.6**	**+1.1**
BSRN				IAML		00 49 24.5	
	comp=Z,21nm,1.0s						
JHBN	**Jahan bin**	**7.11**	**331**	Pn	**Pn**	**00 47 07.4**	**+1.7**
TPRV	**Parvadeh(Tabas**	**7.16**	**13**	Pn	**Pn**	**00 47 07.8**	**+1.7**
ANAR	**Anarak**	**7.17**	**353**	Pn	**Pn**	**00 47 07.6**	**+1.4**
IKOO	**Kooshah**	**7.37**	**29**	Pn	**Pn**	**00 47 10.1**	**+1.0**
IPIR	**Pirpir**	**7.41**	**334**	Pn	**Pn**	**00 47 11.3**	**+1.5**
DOK	**Doka**	**7.42**	**184**	P	**Pn**	**00 47 11.1**	**+1.6**
ITEG	**Tejag**	**7.67**	**26**	Pn	**Pn**	**00 47 14.7**	**+1.5**
TKDS	**Koohdasht(Taba**	**7.82**	**15**	Pn	**Pn**	**00 47 17.0**	**+1.8**
TABS	**Tabas**	**7.85**	**15**	*e*Pn	**Pn**	**00 47 17.3**	**+1.7**
TABS				IAML		00 47 23.8	
	comp=Z,29nm,1.0s						
SHAO	**Shalim**	**8.03**	**174**	P	**Pn**	**00 47 19.0**	**+1.0**
	SNR=36						
SHAO	**Shalim**	**8.03**	**174**	*i* P	**Pn**	**00 47 18.9**	**+1.0**
	SNR=36						
WHFO	**Wadi Hawf**	**8.14**	**186**	P	**Pn**	**00 47 20.7**	**+1.1**
	SNR=207						
RBK	**Rabkut**	**8.52**	**183**	P	**Pn**	**00 47 27.9**	**+3.1**
	SNR=7.6						
ISFB	**Sefidab**	**8.55**	**346**	Pn	**Pn**	**00 47 26.5**	**+1.3**
KHMZ	**Khomeyn**	**8.71**	**333**	*i* P	**Pn**	**00 47 29.0**	**+1.5**
KHMZ				IAML_BB		00 47 32.2	
	comp=Z,500nm,1.0s						
RAYN	**Ar Rayn**	**8.76**	**255**		**Pn**	**00 47 28.0**	**-0.1**
RAYN				Sn	**Sn**	**00 49 03.5**	**-3.2**
RAYN	**Ar Rayn**	**8.76**	**255**	*i* P	**Pn**	**00 47 27.9**	**-0.1**
	SNR=14						
SHRT	**Shahrakht**	**8.97**	**31**	*i* P	**Pn**	**00 47 32.6**	**+1.6**
SHRT				IAML_BB		00 48 31.3	
	comp=Z,370nm,1.0s						
BDRS	**Dareh Seyedi**	**9.37**	**329**	Pn	**Pn**	**00 47 37.7**	**+1.1**
HRA	**Herat**	**10.54**	**36**	Pn	**Pn**	**00 47 53.1**	**+0.5**
KCHF	**Cheshme Sefid,**	**10.56**	**323**	Pn	**Pn**	**00 47 54.2**	**+1.4**
IGHG	**Ghaleghazi**	**10.86**	**321**	Pn	**Pn**	**00 47 58.4**	**+1.5**
GLG1	**Gilan-e-Gharb**	**11.09**	**319**	Pn	**Pn**	**00 48 01.6**	**+1.7**
KBL	**Kabul**	**14.97**	**52**		**Pn**	**00 48 51.6**	**-1.5**
MARD	**Mardin**	**16.33**	**317**		**Pn**	**00 49 09.9**	**-0.7**
GNI	**Garni**	**16.35**	**332**	Pn	**P**	**00 49 15.3**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=211,slow=23,SNR=3.6						
GNI				LR	LR	00 56 45.4	
	comp=Z,33nm,18.1s,baz=156,slow=42						
	comp=Z,6.5nm,0.9s						
GURO	**Guroymak-BITLI**	**16.43**	**322**		**Pn**	**00 49 12.1**	**+0.1**
GURO				IAmb	IAmb	00 49 23.1	
	comp=Z,12nm,0.9s						
ASF	**Jabal al Asfar**	**16.73**	**296**	Pn	**P**	**00 49 17.8**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=130,slow=15,SNR=3.5						
ASF				Sn	**Sn**	**00 52 13.3**	**-8.4**
	comp=Z,0.2nm,0.3s,baz=331,slow=18,SNR=2.8						
ASF				LR	LR	00 57 26.9	
	comp=Z,45nm,18.2s,baz=134,slow=43						
	comp=Z,0.8nm,0.3s						
EIL	**Elat**	**17.86**	**286**	LR	LR	00 58 47.5	
	comp=Z,26nm,19.8s,baz=340,slow=45						
MMAI	**Mount Meron Ar**	**18.18**	**297**	P	**P**	**00 49 35.7**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=98,slow=16,SNR=2.4						
MMAI				LR	LR	00 58 31.9	
	comp=Z,44nm,18.7s,baz=132,slow=43						
	comp=Z,0.6nm,0.5s						
GAZ	**Gaziantep**	**18.56**	**311**	P	**P**	**00 49 37.3**	**-0.9**
KBZ	**Khabaz**	**20.10**	**334**	P	Pn	00 49 57.5	+0.8
	comp=Z,4.4nm,1.1s,baz=140,slow=13,SNR=5.0						
	comp=Z,4.4nm,1.1s						
KIV	**Kislovodsk**	**20.37**	**334**		**P**	**00 49 58.7**	**+0.7**
KK31	**Karatay Array**	**21.34**	**33**		**P**	**00 50 08.3**	**-0.2**
KKAR	**Karatay Array**	**21.34**	**33**	P	**P**	**00 50 08.2**	**-0.3**
ARSB	**Arslanbob**	**21.44**	**40**	P	**P**	**00 50 09.5**	**-0.1**
ARSB				IAmb	IAmb	00 50 09.7	
	comp=Z,5.4nm,0.7s						
KSH	**Kashi**	**22.27**	**48**	P	**P**	**00 50 15.4**	**-3.2**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BR131	**Keskin Array S**	**22.29**	**313**	P	**P**	**00 50 18.5**	**-0.2**
BR131				IAmb	IAmb	00 50 25.1	
	comp=Z,6.7nm,1.1s						
BRTR	**Keskin Array B**	**22.29**	**313**	P	**P**	**00 50 18.3**	**-0.5**
BRTR	**Keskin Array B**	**22.29**	**313**	P	**P**	**00 50 20.2**	**+1.5**
	comp=Z,5.3nm,1.0s,baz=134,slow=9.7,SNR=16						
	comp=Z,5.3nm,1.0s						
AAK	**Ala-Archa**	**23.15**	**39**		**P**	**00 50 28.7**	**+0.9**
AB31	**Akbulak array**	**23.52**	**9**	P	**P**	**00 50 30.9**	**-0.4**
AB31				IAmb	IAmb	00 50 33.3	
	comp=Z,6.5nm,0.9s						
ABKAR	**Akbulak array**	**23.52**	**9**	P	**P**	**00 50 30.9**	**-0.4**
ELL	**Elmali**	**23.66**	**303**	P	**P**	**00 50 33.5**	**+0.6**
ELL				IAmb	IAmb	00 51 07.0	
	comp=Z,5.3nm,0.8s						
KDJ	**Kajisay**	**24.44**	**43**	P	**P**	**00 50 42.5**	**+2.2**
KDJ				IAmb	IAmb	00 50 45.0	
	comp=Z,4.8nm,0.8s						
AKTO	**Aktyubinsk**	**24.48**	**5**	LR	LR	01 02 43.0	
	comp=Z,30nm,18.4s,baz=18,slow=42						
BVAR	**Borovoye Array**	**29.39**	**19**	P	**P**	**00 51 24.8**	**+0.3**
	comp=Z,6.7nm,0.7s,baz=206,slow=7.1,SNR=37						
BVAR				PcP	**PcP**	**00 54 30.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=207,slow=1.3,SNR=2.4						
	comp=Z,6.7nm,0.7s						
NEHR	**Nehoiu**	**29.87**	**318**	⇑P	**P**	**00 51 30.6**	**+1.8**
MAKZ	**Makanchi**	**29.91**	**39**	P	**P**	**00 51 25.9**	**-3.2**
MAKZ				IAmb	IAmb	00 51 30.5	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**30.08**	**39**	P	**P**	**00 51 30.1**	**-0.5**
MKAR	**Makanchi Array**	**30.08**	**39**	P	**P**	**00 51 31.1**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=225,slow=8.5,SNR=26						
	comp=Z,2.5nm,0.6s						
MLR	**Muntele Rosu**	**30.12**	**318**	⇑P	**P**	**00 51 35.2**	**+4.1**
KURBB	**Kurchatov Arra**	**30.57**	**30**	P	**P**	**00 51 35.1**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=230,slow=8.5,SNR=28						
KURBB				PcP	**PcP**	**00 54 32.6**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=211,slow=1.6,SNR=1.8						
	comp=Z,1.5nm,0.5s						
KURK	**Kurchatov**	**30.68**	**30**	P	**P**	**00 51 35.1**	**-0.7**
AKASG	**Malin Array Be**	**31.42**	**328**	P	**P**	**00 51 44.8**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=251,slow=0.7,SNR=4.2						
AKASG				LR	LR	01 08 23.1	
	comp=Z,28nm,18.9s,baz=72,slow=44						
	comp=Z,0.4nm,0.3s						

GZR	**Gura Zlata**	**32.04**	**315**	⇑P	**P**	**00 51 50.9**	**+2.9**
WMQ	**Urumqi**	**32.04**	**48**	*e*P	**P**	**00 51 49.2**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				LR	LR		
	comp=Z,130nm,24.1s						
HERR	**Herculane**	**32.05**	**314**	⇑P	**P**	**00 51 47.3**	**-0.6**
DRGR		**32.71**	**318**	⇑P	**P**	**00 51 58.0**	**+4.1**
STHS	**Stebnicka Huta**	**34.84**	**321**	*e*P	P	00 52 18.4	+6.1
ZALV	**Zalesovo Beam**	**35.67**	**31**	P	**P**	**00 52 19.1**	**-0.2**
	comp=Z,7.5nm,0.6s,baz=239,slow=9.4,SNR=43						
ZALV				LR	LR	01 09 14.4	
	comp=Z,31nm,19.4s,baz=151,slow=40						
	comp=Z,7.5nm,0.6s						
LANS	**Liptovska Anna**	**35.74**	**320**	*e*P	P	00 52 25.9	+5.8
MYKA	**Terra Mystica**	**38.40**	**313**	*e*pP	pP	00 52 46.4	-0.1
	comp=Z,1.7nm,0.5s						
KBA	**Koelnbreinsper**	**38.73**	**314**	*e*pP	pP	00 52 48.3	-1.2
	comp=Z,4.4nm,0.7s						
BIOA	**Bad Ischl, Aus**	**38.74**	**315**	*e*pP	pP	00 52 49.2	-0.1
	comp=Z,1.5nm,0.5s						
GERES	**GERESS Array B**	**39.09**	**317**	P	**P**	**00 52 48.6**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=121,slow=7.1,SNR=1.7						
	comp=Z,0.1nm,0.4s						
LESA	**Schwarzleotal**	**39.27**	**314**	*e*pP	pP	00 52 51.9	-1.9
	comp=Z,2.4nm,0.6s						
WTTA	**Wattenberg**	**39.90**	**313**	*e*P	**P**	**00 52 55.4**	**0.0**
	comp=Z,1.6nm,0.4s						
WATA	**Walderalm**	**39.96**	**314**	*e*P	**P**	**00 52 55.1**	**-0.7**
	comp=Z,1.2nm,0.4s						
SQTA	**Sankt Quirin**	**40.17**	**313**	*e*P	**P**	**00 52 56.8**	**-0.7**
	comp=Z,0.4nm,0.3s						
MOTA	**Moosalm**	**40.27**	**313**	*e*P	**P**	**00 52 58.4**	**0.0**
	comp=Z,5.8nm,1.1s						
FINES	**FINESS Array B**	**40.33**	**339**	P	**P**	**00 52 58.8**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=143,slow=8.8,SNR=11						
	comp=Z,1.8nm,0.5s						
FETA	**Feichten**	**40.43**	**313**	*e*pP	pP	00 53 01.5	-2.0
	comp=Z,0.9nm,0.5s						
RETA	**Reutte**	**40.53**	**314**	*e*P	**P**	**00 53 00.3**	**-0.2**
	comp=Z,1.9nm,0.5s						
DAVA	**Damuels**	**41.06**	**313**	*e*P	**P**	**00 53 04.5**	**-0.5**
	comp=Z,2.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**41.45**	**91**	P	**P**	**00 53 09.2**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=284,slow=12,SNR=6.9						
	comp=Z,0.6nm,0.3s						
HFS	**Hagfors**	**44.13**	**332**	P	**P**	**00 53 29.3**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=145,slow=8.3,SNR=7.1						
	comp=Z,3.7nm,0.9s						
NOA	**NORSAR Array B**	**45.65**	**332**	P	**P**	**00 53 42.4**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=119,slow=7.5,SNR=4.3						
NOA				LR	LR	01 14 17.6	
	comp=Z,13nm,18.3s,baz=245,slow=38						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**45.68**	**48**	P	**P**	**00 53 43.0**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=259,slow=7.3,SNR=6.9						
	comp=Z,1.7nm,0.8s						
ARCES	**ARCESS Array B**	**46.77**	**346**	P	**P**	**00 53 51.0**	**+0.7**
	comp=Z,4.7nm,1.0s,baz=64,slow=17,SNR=1.7						
	comp=Z,4.7nm,1.0s						
HHC	**Hu-ho-hao-te**	**48.86**	**57**	*e*P	**P**	**00 54 07.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
EKA	**Eskdalemuir Ar**	**50.83**	**321**	P	**P**	**00 54 22.5**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=229,slow=44,SNR=1.5						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**51.27**	**266**	P	**P**	**00 54 26.0**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=65,slow=9.0,SNR=9.1						
DBIC	**Dimbokro**	**59.82**	**262**	P	**P**	**00 55 27.1**	**0.0**
	comp=Z,2.1nm,0.6s,baz=81,slow=5.2,SNR=9.0						
	comp=Z,2.1nm,0.6s						
ILAR	**Eielson Array**	**87.92**	**9**	P	**P**	**00 58 10.1**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=318,slow=4.8,SNR=4.5						
	comp=Z,0.2nm,0.6s						
WRA	**Warramunga Arr**	**89.73**	**112**	P	**P**	**00 58 17.7**	**-2.4**
	comp=Z,0.6nm,0.7s,baz=313,slow=3.7,SNR=4.9						
	comp=Z,0.6nm,0.7s						

VIE ***04*** *00:59:46.0±0.3, 48°.25N×9°.04E, h4km, mb3.1/22, ml4.0/22, Error ellipse: s-maj=2.9km s-min=1.8km az=16.0 3 km S of Albstadt*

LDG ***04*** *00:59:46.8±0.1, 48°.23N×9°.02E, h4km, Ml4.1/45, Error ellipse: s-maj=0.9km s-min=0.8km az=105.0*

ZUR ***04*** *00:59:46.4, 48°.24N×9°.00E, h7km±1km, MLh3.9/156, Error ellipse: s-maj=2825.3km s-min=694.8km az=245.0*

BGR ***04*** *00:59:46.8±0.1, 48°.25N×9°.00E, h11km±2km, ML3.9/39, Error ellipse: s-maj=1.1km s-min=1.1km az=123.0*

BNS ***04*** *00:59:47.5±1.1, 48°.22N×9°.00E, h10km, ML3.3*

PRU ***04*** *00:59:53.5, 48°.35N×9°.37E, h40km*

ISC 04 00:59:45.1±0.7, 48°24N±0°.01×8°99E±0°.01, h12km±3km, n301, σ1°44/521, 42C-57D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BHBD	**Braunhartsberg**	**0.01**	**57**		⇑Pg	**Pg**		**00 59 47.7**	**+0.3**
BHBD						Sg	**Sg**	**00 59 48.6**	**-0.4**
ONST	**Albstadt-Onstm**	**0.04**	**4**		⇓Pg	**Pg**		**00 59 48.0**	**+0.5**
ONST						Sg	**Sg**	**00 59 49.2**	**0.0**
EBIN	**Albstadt-Ebing**	**0.04**	**144**		*i* Pg	**Pg**		**00 59 47.9**	**+0.4**
EBIN						Sg	**Sg**	**00 59 48.9**	**-0.3**
MSS	**Messtetten**	**0.07**	**199**		*e*Pg	**Pg**		**00 59 48.5**	**+0.8**
MSS					*e*Sg	**Sg**		**00 59 49.9**	**+0.3**
MSS	**Messtetten**	**0.07**	**199**		⇑Pg	**Pg**		**00 59 48.5**	**+0.8**
MSS						Sg	**Sg**	**00 59 49.9**	**+0.3**
JUNG	**Jungingen**	**0.09**	**17**		⇓Pg	**Pg**		**00 59 48.8**	**+0.8**
JUNG						Sg	**Sg**	**00 59 50.5**	**+0.5**
FREU	**Neufra-Freuden**	**0.10**	**94**		⇑*i* Pg	**Pg**		**00 59 48.6**	**+0.6**
FREU						Sg	**Sg**	**00 59 50.2**	**+0.1**
BALG	**Balingen, Zoll**	**0.10**	**288**		⇑Pg	**Pg**		**00 59 49.1**	**+1.1**
BALG						Sg	**Sg**	**00 59 51.0**	**+0.9**
ERPF	**Erpfingen**	**0.16**	**50**		⇑Pg	**Pg**		**00 59 50.0**	**-0.1**
ERPF						Sg	**Sg**	**00 59 52.6**	**+1.1**
MSGN	**Moessingen, Su**	**0.17**	**14**		⇓Pg	**Pg**		**00 59 50.3**	**0.0**
MSGN						Sg	**Sg**	**00 59 53.1**	**+1.3**
A102A	**Sigmaringen, J**	**0.17**	**127**		⇓Pg	**Pg**		**00 59 50.1**	**-0.2**
A102A						Sg	**Sg**	**00 59 52.6**	**+0.8**
GUT	**Gutenstein**	**0.19**	**155**		⇓Pg	**Pg**		**00 59 50.5**	**-0.1**
GUT						Sg	**Sg**	**00 59 53.2**	**+0.9**
GUT	**Gutenstein**	**0.19**	**155**		*i* Pg	**Pg**		**00 59 50.5**	**-0.1**
GUT						Sg	**Sg**	**00 59 53.4**	**+1.1**
A100A	**Rottenburg, We**	**0.21**	**348**		⇓Pg	**Pg**		**00 59 51.2**	**+0.1**
A100A						Sg	**Sg**	**00 59 54.4**	**+1.4**
ROTE	**Rottweil**	**0.23**	**248**		⇑Pg	**Pg**		**00 59 51.6**	**+0.2**
ROTE						Sg	**Sg**	**00 59 55.1**	**+1.6**
ROTE	**Rottweil**	**0.23**	**248**		⇑Pg	**Pg**		**00 59 51.6**	**+0.2**
ROTE						Sg	**Sg**	**00 59 55.1**	**+1.6**
TUEB	**Tuebingen, Eug**	**0.28**	**9**		⇓Pg	**Pg**		**00 59 52.2**	**+0.1**
TUEB						Sg	**Sg**	**00 59 56.1**	**-0.6**
TUBL	**Tuebingen-Lenn**	**0.28**	**12**		⇓Pg	**Pg**		**00 59 52.3**	**+0.1**
TUBL						Sg	**Sg**	**00 59 56.3**	**-0.7**
REUL	**Reutlingen**	**0.29**	**31**		⇑Pg	**Pg**		**00 59 52.5**	**+0.2**
REUL						Sg	**Sg**	**00 59 56.8**	**-0.5**
ZWI	**Zwiefalten, Ha**	**0.30**	**87**		⇑Pg	**Pg**		**00 59 52.5**	**-0.1**
ZWI						Sg	**Sg**	**00 59 56.7**	**-0.8**
BUCH	**Bad Urach**	**0.32**	**49**		⇑Pg	**Pg**		**00 59 53.0**	**+0.2**
BUCH						Sg	**Sg**	**00 59 57.5**	**-0.4**
A101B	**Rottweil, Deis**	**0.32**	**247**		⇑Pg	**Pg**		**00 59 53.2**	**+0.3**
A101B						Sg	**Sg**	**00 59 57.7**	**-0.3**
EMING	**Emmingen-Lipti**	**0.36**	**196**		⇑Pg	**Pg**		**00 59 53.9**	**+0.3**
EMING						Sg	**Sg**	**00 59 58.9**	**-0.4**
EMING	**Emmingen-Lipti**	**0.36**	**196**		⇑Pg	**Pg**		**00 59 53.9**	**+0.3**
EMING						Sg	**Sg**	**00 59 58.8**	**-0.4**
SAUL	**Bad Saulgau**	**0.41**	**124**		⇓Pg	**Pg**		**00 59 54.7**	**+0.2**
SAUL						Sg	**Sg**	**01 00 00.5**	**-0.2**
BFO	**Black Forest**	**0.45**	**281**		⇑Pg	**Pg**		**00 59 55.7**	**+0.6**
BFO						Sg	**Sg**	**01 00 01.7**	**-0.1**
BFO	**Black Forest**	**0.45**	**281**		⇑Pg	**Pg**		**00 59 55.7**	**+0.6**
BFO						Sg	**Sg**	**01 00 01.7**	**-0.1**
BFO						SmS		01 00 06.3	
A104C	**Biberach, Ahle**	**0.46**	**104**		⇑Pg	**Pg**		**00 59 55.5**	**+0.3**
A104C						Sg	**Sg**	**01 00 02.0**	**0.0**
WALHA	**Wallhausen, DE**	**0.50**	**170**		⇓Pg	**Pg**		**00 59 56.3**	**+0.5**
WALHA						Sg	**Sg**	**01 00 03.3**	**+0.2**
WALHA	**Wallhausen, DE**	**0.50**	**170**		*e*Pg	**Pg**		**00 59 56.4**	**+0.5**
WALHA					*e*Sg	**Sg**		**01 00 03.0**	**-0.1**
STU	**Stuttgart**	**0.55**	**14**		⇓Pg	**Pg**		**00 59 57.2**	**+0.5**
STU					PmP			00 59 59.5	
STU					*e*Sg	**Sg**		**01 00 04.3**	**-0.2**
GALG	**Neuhausen (Enz**	**0.56**	**345**		⇓Pg	**Pg**		**00 59 57.6**	**+0.6**
GALG					PmP			00 59 59.8	
GALG					Sg	**Sg**		**01 00 05.1**	**+0.1**
A103D	**Ravensburg, Wa**	**0.58**	**140**		⇓Pg	**Pg**		**00 59 57.8**	**+0.6**
A103D					Sg	**Sg**		**01 00 05.8**	**+0.4**
A103D	**Ravensburg, Wa**	**0.58**	**140**		⇓Pg	**Pb**		**00 59 57.8**	**+0.6**
A103D					Sg	**Sb**		**01 00 05.8**	**+0.4**
STEIN	**Stein am Rhein**	**0.58**	**188**		⇓Pg	**Pb**		**00 59 58.0**	**+0.8**
STEIN					Sg	**Sb**		**01 00 05.9**	**+0.4**
STEIN	**Stein am Rhein**	**0.58**	**188**		⇓Pg	**Pb**		**00 59 58.0**	**+0.8**
STEIN					Sg	**Sb**		**01 00 05.8**	**+0.4**
SCHS	**Schaffhausen,**	**0.58**	**204**		⇑Pg	**Pb**		**00 59 57.9**	**+0.7**
SCHS					Sg	**Sb**		**01 00 05.6**	**+0.1**
SLE	**Schleitheim**	**0.58**	**215**		⇑Pg	**Pb**		**00 59 57.9**	**+0.6**
SLE	**Schleitheim**	**0.58**	**215**		⇑Pg	**Pb**		**00 59 57.9**	**+0.6**
SLE					PmP			01 00 00.1	
SLE					Sg	**Sb**		**01 00 05.7**	**+0.1**
KONZ	**Konstanz**	**0.59**	**169**		⇓Pg	**Pb**		**00 59 58.2**	**+0.8**
KONZ					Sg	**Sb**		**01 00 06.6**	**+0.9**
OPP	**Oppenau**	**0.60**	**296**		⇓Pg	**Pb**		**00 59 58.2**	**+0.7**
OPP					Sg	**Sb**		**01 00 06.0**	**+0.1**
DEGG	**Deggingen-Nord**	**0.60**	**52**		⇑Pg	**Pb**		**00 59 58.2**	**+0.5**
DEGG					Sg	**Sb**		**01 00 06.5**	**+0.4**
SKRK	**Kreuzlingen, K**	**0.61**	**168**		⇓Pg	**Pb**		**00 59 58.5**	**+0.8**
SKRK					Sg	**Sb**		**01 00 07.0**	**+0.8**
TRULL	**Truellikon**	**0.63**	**200**		⇑Pg	**Pb**		**00 59 58.9**	**+0.8**
TRULL					Sg	**Sb**		**01 00 07.2**	**+0.4**
NDTR1	**NAGRA Drilling**	**0.64**	**197**		⇑Pg	**Pb**		**00 59 59.0**	**+0.8**
NDTR1					Sg	**Sb**		**01 00 07.5**	**+0.3**
BERGE	**Lenzkirch (DE)**	**0.66**	**236**		⇑Pg	**Pb**		**00 59 59.4**	**+0.8**
BERGE	**Lenzkirch (DE)**	**0.66**	**236**		⇑Pg	**Pb**		**00 59 59.4**	**+0.8**
BERGE					PmP			01 00 01.3	
BERGE					*e*Sg	**Sb**		**01 00 09.0**	**+1.2**
BERGE					SmS			01 00 11.4	
QEG02	**Wil, Freihalte**	**0.70**	**207**		⇑Pg	**Pb**		**01 00 00.1**	**+0.8**
ULMD	**Ulm**	**0.70**	**76**		Pg	**Pn**		**01 00 00.4**	**+0.6**
URBA	**Urbach, Forsts**	**0.71**	**33**		⇑Pg	**Pb**		**01 00 00.2**	**+0.7**
URBA					Sg	**Sb**		**01 00 09.6**	**+0.3**
WEIN	**Weingarten**	**0.71**	**180**		⇓Pg	**Pn**		**01 00 00.5**	**-0.5**
BABA	**Baden-Baden-Ne**	**0.71**	**312**		⇓Pg	**Pn**		**01 00 00.5**	**-0.6**
BABA					PmP			01 00 01.9	
BABA					SmS			01 00 12.5	
OFFE	**Offenburg-Weie**	**0.72**	**289**		Pg	**Pn**		**01 00 00.8**	**-0

	2µm,0.3s							
SQTA	**Sankt Quirin**		**1.81**	**124**	*e*Pn	**Pb**	**01 00 17.9**	**-0.4**
	13nm,0.2s,SNR=104							
SQTA					*i* Sn	**Sb**	**01 00 41.3**	**+0.3**
	90nm,0.1s							
GWBO	**Ockenheim**		**1.82**	**339**	Pn	**Pb**	**01 00 17.4**	**-0.9**
GWBO					Pg	**Pg**	**01 00 21.4**	**+1.4**
GWBO					Sg	**Sg**	**01 00 46.4**	**+2.8**
GRC1	**Grafenberg Arr**		**1.84**	**65**	Pn	**Pn**	**01 00 17.1**	**+0.5**
GRC1					Pg	**Pg**	**01 00 20.9**	**+0.5**
CHMF	**Charmoille**		**1.87**	**239**	⇑Pn	**Pn**	**01 00 17.1**	**+0.1**
CHMF					Pg	**Pg**	**01 00 21.8**	**+0.9**
DUP	**Duppenweiler**		**1.87**	**310**	Pn	**Pb**	**01 00 18.8**	**-0.5**
ABH	**Alteburg**		**1.90**	**330**	⇓Pn	**Pb**	**01 00 18.7**	**-1.0**
ABH					*e*Pg	**Pg**	**01 00 22.6**	**+1.1**
ABH					*e*Sg	**Sg**	**01 00 46.8**	**+0.8**
FIESA	**Fiescheralp**		**1.91**	**199**	P	**Pb**	**01 00 19.0**	**-1.0**
GWBE	**Wiesbaden**		**1.94**	**344**	Pn	**Pn**	**01 00 19.0**	**+1.1**
WBG	**Bieber**		**1.94**	**7**	Pn	**Pn**	**01 00 18.6**	**+0.6**
WBG					Sg	**Sg**	**01 00 48.2**	**+0.6**
WATA	**Walderalm**		**1.96**	**117**	*e*Pn	**Pb**	**01 00 21.1**	**+0.2**
	1.8nm,0.1s							
WATA					Pg	**Pg**	**01 00 24.0**	**+1.2**
	4.8nm,0.1s,SNR=22							
WATA					*e*Sn	**Sn**	**01 00 44.0**	**+1.1**
	191nm,0.2s							
GWBD	**Espenschied/He**		**2.00**	**339**	Pn	**Pn**	**01 00 20.0**	**+1.2**
GWBD					Sg	**Sg**	**01 01 51.7**	**+2.1**
LAUCH	**Lauchernalp**		**2.01**	**205**	P	**Pn**	**01 00 20.1**	**+1.0**
TNS	**Taunus Mts**		**2.01**	**350**	Pn	**Pn**	**01 00 19.9**	**+0.9**
TNS					*e*Sg	**Sg**	**01 00 50.2**	**+0.3**
WTTA	**Wattenberg**		**2.03**	**118**	*e*Pn	**Pb**	**01 00 21.9**	**-0.2**
	1.1nm,0.1s,SNR=28							
WTTA					*e*Sn	**Sn**	**01 00 45.5**	**+0.7**
	258nm,0.3s							
WTTA					*e*Sg	**Sg**	**01 00 50.9**	**+0.4**
	381nm,0.3s							
GRB2	**Grafenberg Arr**		**2.05**	**59**	Pn	**Pn**	**01 00 19.8**	**+0.3**
GRFO	**Grafenberg**		**2.06**	**45**	*e*Pn	**Pn**	**01 00 19.9**	**+0.3**
GRFO					*e*Pg	**Pg**	**01 00 25.5**	**+0.8**
GRF	**Grafenberg Arr**		**2.06**	**45**	Pn	**Pn**	**01 00 19.9**	**+0.3**
GRF					*e*Pg	**Pg**	**01 00 25.5**	**+0.8**
GRF					*e*Sg	**Sg**	**01 00 51.1**	**-0.3**
NAST	**IGS Nastaetten**		**2.09**	**340**	*e*Pn	**Pb**	**01 00 21.6**	**-1.4**
SIMPL	**Simplonpass**		**2.11**	**199**	P	**Pn**	**01 00 21.8**	**+1.3**
EMBD	**Embd, Matterta**		**2.18**	**202**	P	**Pn**	**01 00 22.5**	**+1.3**
WMG	**Wormeldange-Ha**		**2.20**	**310**	Pg	**Pg**	**01 00 28.2**	**+1.0**
PAGF	**Fort de Pagny**		**2.20**	**279**	*e*Pn	**Pn**	**01 00 22.8**	**+1.3**
PAGF	**Fort de Pagny**		**2.20**	**279**	*e*Pg	**Pg**	**01 00 28.3**	**+1.0**
PAGF					*e*Sg	**Sg**	**01 00 55.8**	**0.0**
	535nm,0.3s							
GWBC	**Aumenau**		**2.21**	**348**	Pn	**Pn**	**01 00 23.1**	**+1.6**
SENIN	**Lac Senin/Sane**		**2.21**	**212**	P	**Pn**	**01 00 22.3**	**+0.5**
FACH	**Fachingen**		**2.21**	**343**	Pn	**Pn**	**01 00 22.8**	**+1.1**
BGG	**Burgeitz**		**2.25**	**332**	*e*Pn	**Pb**	**01 00 24.0**	**-1.7**
VANNI	**Vissoie, Val d**		**2.25**	**206**	P	**Pn**	**01 00 23.4**	**+1.1**
KOE	**Koeppel**		**2.34**	**340**	*e*Pn	**Pn**	**01 00 25.3**	**+1.9**
WLF	**Walferdange**		**2.35**	**308**	*d*P	**Pb**	**01 00 25.6**	**-1.8**
WLF					*d*S	**Sg**	**01 01 00.3**	**-0.4**
	comp=E,212nm,0.0s							
WLF	**Walferdange**		**2.35**	**308**	Pn	**Pb**	**01 00 25.6**	**-1.8**
WLF					*e*Pg	**Pg**	**01 00 31.1**	**+0.9**
WLF					*e*Sg	**Sg**	**01 01 00.3**	**-0.4**
OCHT	**Ochtendung**		**2.36**	**334**	Pn	**Pn**	**01 00 25.5**	**+1.9**
VARE	**Varese**		**2.38**	**184**	P	**Pn**	**01 00 26.7**	**-1.3**
KW1	**Garching a.d.**		**2.41**	**92**	*e*Sg	**Sg**	**01 01 03.5**	**+0.8**
HROE	**Hohe Rhon--Fla**		**2.42**	**18**	Pn	**Pn**	**01 00 24.2**	**-0.3**
HROE					*e*Pg	**Pg**	**01 00 32.3**	**+0.8**
HROE					*e*Sg	**Sg**	**01 01 02.9**	**0.0**
NICK	**Nickenich**		**2.45**	**334**	Pn	**Pn**	**01 00 26.6**	**+1.6**
LAGB	**Langenfeld Gru**		**2.46**	**330**	Pn	**Pn**	**01 00 26.5**	**+1.5**
SPAHL	**Spahl**		**2.48**	**14**	*e*Pn	**Pn**	**01 00 25.3**	**-0.2**
SPAHL					*e*Pg	**Pg**	**01 00 34.0**	**+1.2**
SPAHL					*e*Sg	**Sg**	**01 01 05.7**	**+0.7**
GWBF	**Romrod**		**2.49**	**3**	Pn	**Pn**	**01 00 26.7**	**+1.2**
GWBF					Sg	**Sg**	**01 01 06.6**	**+1.4**
LOH	**Wallersheim-Lo**		**2.52**	**321**	Pn	**Pn**	**01 00 27.8**	**+1.8**
HILG	**Hillesheim**		**2.55**	**324**	*e*Pn	**Pn**	**01 00 28.0**	**+1.7**
CABF	**La Chapelle**		**2.56**	**231**	*e*Pn	**Pn**	**01 00 26.5**	**0.0**
CABF	**La Chapelle**		**2.56**	**231**	*e*Pg	**Pg**	**01 00 34.7**	**+0.5**
CABF					*e*Sg	**Sg**	**01 01 07.2**	**-0.2**
	comp=E,127nm,0.3s							
BIW	**Bindweide**		**2.60**	**344**	Pn	**Pn**	**01 00 28.4**	**+1.4**
RJOB	**Jochberg**		**2.60**	**100**	*e*Pn	**Pb**	**01 00 29.8**	**-1.9**
RJOB					*e*Pg	**Pg**	**01 00 31.5**	**-3.6**
SAVF	**Savonnieres en**		**2.60**	**280**	*e*Pn	**Pn**	**01 00 29.2**	**+2.2**
	baz=96							
SAVF	**Savonnieres en**		**2.60**	**280**	*e*Pg	**Pg**	**01 00 35.5**	**+0.5**
	baz=96							
SAVF					*e*Sg	**Sg**	**01 01 08.2**	**-0.6**
	comp=E,308nm,0.3s							
ROTZ	**Rotzenmuhle**		**2.61**	**53**	*e*Pn	**Pn**	**01 00 27.8**	**+0.7**
ROTZ					*e*Pg	**Pg**	**01 00 35.6**	**+0.5**
LESA	**Schwarzleotal**		**2.61**	**107**	*i* Pn	**Pb**	**01 00 30.0**	**-1.9**
	comp=E,33nm,0.2s,SNR=108							
LESA					*e*Sn	**Sn**	**01 01 00.6**	**+1.7**
	comp=E,19nm,0.2s							
WILW	**Wilwerwiltz**		**2.63**	**313**	Pn	**Pn**	**01 00 28.3**	**+0.9**
CRUX	**Bergwerk Schwa**		**2.64**	**26**	Pn	**Pn**	**01 00 27.0**	**-0.6**
CRUX					Sg	**Sg**	**01 01 08.8**	**-1.1**
MEZF	**Maizieres J'vi**		**2.64**	**277**	*e*Pn	**Pn**	**01 00 29.9**	**+2.4**
MEZF	**Maizieres J'vi**		**2.64**	**277**	*e*Pg	**Pg**	**01 00 34.7**	**-1.0**
MEZF					*e*Sn	**Sn**	**01 00 59.7**	**+0.2**
MEZF					*e*Sg	**Sg**	**01 01 09.6**	**-0.3**
	comp=E,263nm,0.4s							
SFTF	**Sexfontaines**		**2.65**	**271**	*e*Pn	**Pn**	**01 00 28.1**	**+0.5**
	baz=88							
SFTF	**Sexfontaines**		**2.65**	**271**	*e*Pg	**Pg**	**01 00 36.4**	**+0.6**
	baz=91							
SFTF					*e*Sg	**Sg**	**01 01 11.4**	**+1.3**
	comp=E,320nm,0.3s							
UBBA	**Unterbreizbach**		**2.66**	**14**	*e*Pn	**Pn**	**01 00 27.7**	**0.0**
UBBA					*e*Pg	**Pg**	**01 00 36.4**	**+0.3**
UBBA					*e*Sg	**Sg**	**01 01 10.5**	**-0.1**
TDN	**Todenfeld**		**2.69**	**331**	Pn	**Pn**	**01 00 29.9**	**+1.7**
WET	**Wettzell**		**2.73**	**69**	*e*Pn	**Pn**	**01 00 30.1**	**+1.3**
WET					*e*Pg	**Pg**	**01 00 37.4**	**0.0**
WET					*e*Sg	**Sg**	**01 01 12.4**	**-0.3**
STB	**Steinbach**		**2.74**	**330**	*e*Pn	**Pn**	**01 00 30.6**	**+1.6**
VITZ	**Vitzeroda**		**2.74**	**15**	Pn	**Pn**	**01 00 28.8**	**-0.1**
VITZ					Sg	**Sg**	**01 01 12.5**	**-0.7**
MRGE	**Morge**		**2.81**	**209**	P	**Pn**	**01 00 31.1**	**+1.1**
ABTA	**Abfaltersbach**		**2.82**	**121**	*e*Pn	**Pb**	**01 00 33.9**	**-1.4**
	comp=E,3.7nm,0.2s							
ABTA					*e*Sn	**Sn**	**01 01 06.3**	**+2.4**
	comp=E,1.6nm,0.1s							
BHOU	**Houvegnez**		**2.88**	**318**	*d*P	**Pn**	**01 00 33.1**	**+2.3**
BHOU					*d*S	**Sn**	**01 01 07.7**	**+2.3**
	comp=E,112nm,0.0s							
HOBG	**Hohbusch**		**2.95**	**339**	*e*Pn	**Pn**	**01 00 33.6**	**+1.8**
MOX	**Moxa**		**2.95**	**34**	Pn	**Pn**	**01 00 31.4**	**-0.4**
MOX					Sg	**Sg**	**01 01 17.4**	**-2.5**
BNS	**Bensberg**		**2.97**	**337**	*e*Pn	**Pn**	**01 00 34.0**	**+1.9**
KLL	**Kalltalsperre**		**2.98**	**325**	*e*Pn	**Pn**	**01 00 33.8**	**+1.6**
KASTN	**Kahler Asten**		**2.99**	**353**	*e*Pn	**Pn**	**01 00 33.7**	**+1.3**
BTNL	**Ternell**		**3.00**	**323**	*d*P	**Pn**	**01 00 34.6**	**+2.1**
DREG	**Dreilaegerbach**		**3.02**	**324**	*e*Pn	**Pn**	**01 00 34.5**	**+1.7**
MEM	**Membach**		**3.07**	**322**	*d*P	**Pn**	**01 00 35.1**	**+1.7**
MEM					*d*S	**Sg**	**01 01 21.1**	**-2.5**
	comp=E,132nm,0.0s							
MEM	**Membach**		**3.07**	**322**	Pn	**Pn**	**01 00 35.1**	**+1.7**
RCHB	**Rochefort**		**3.12**	**309**	*d*P	**Pn**	**01 00 36.2**	**+2.0**
RCHB					*d*S	**Sn**	**01 01 12.7**	**+1.3**
	comp=E,105nm,0.0s							
LPL	**La Plagne**		**3.14**	**210**	*e*Pn	**Pn**	**01 00 35.7**	**+1.1**
LPL	**La Plagne**		**3.14**	**210**	*e*Pg	**Pg**	**01 00 45.3**	**0.0**
LPL					*e*Sg	**Sg**	**01 01 25.2**	**-0.7**
	comp=E,145nm,0.5s							
LPG	**La Plagne**		**3.15**	**210**	*e*Pn	**Pn**	**01 00 35.9**	**+1.1**
LPG	**La Plagne**		**3.15**	**210**	*e*Pg	**Pg**	**01 00 44.6**	**-0.8**
LPG					*e*Sg	**Sg**	**01 01 26.3**	**+0.1**
	comp=E,116nm,0.4s							
KBA	**Koelnbreinsper**		**3.16**	**110**	*i* Pn	**Pn**	**01 00 38.0**	**+3.1**
	comp=E,0.4nm,0.1s							
KBA					*e*Sn	**Sn**	**01 01 14.4**	**+1.8**
	comp=E,19nm,0.3s							
KHC	**Kasperske Hory**		**3.17**	**72**	*e*PN	**Pn**	**01 00 36.3**	**+1.5**
KHC					*e*PG	**Pg**	**01 00 45.3**	**-0.5**
KHC					*e*SN	**Sn**	**01 01 13.1**	**+0.6**
KHC					*e*SG	**Sg**	**01 01 26.2**	**-0.5**
	comp=E,143nm,0.3s							
BIOA	**Bad Ischl, Aus**		**3.17**	**98**	*i* Pn	**Pn**	**01 00 36.6**	**+1.8**
	comp=E,19nm,0.3s,SNR=14							
BIOA					*i* Sn	**Sn**	**01 01 13.7**	**+1.1**
	comp=E,80nm,0.5s							
GEC2	**GERESS Array S**		**3.19**	**77**	*e*Pg	**Pg**	**01 00 46.7**	**+0.5**
GEC2					*e*Sg	**Sg**	**01 01 27.4**	**0.0**
BSTI	**Sart Tilman**		**3.24**	**318**	*d*P	**Pn**	**01 00 37.9**	**+2.1**
BCLA	**Clavier**		**3.25**	**313**	*d*P	**Pn**	**01 00 38.2**	**+2.3**
	comp=Z,33nm,0.5s							
BCLA					*d*S	**Sn**	**01 01 15.2**	**+0.6**
	comp=E,64nm,0.0s							
GIVF	**Givet**		**3.31**	**306**	*e*Pn	**Pn**	**01 00 38.7**	**+2.0**
GIVF	**Givet**		**3.31**	**306**	*e*Pg	**Pg**	**01 00 48.5**	**0.0**
GIVF					*e*Sn	**Sn**	**01 01 15.4**	**-0.6**
GIVF					*e*Sg	**Sg**	**01 01 30.9**	**-0.5**
	comp=E,127nm,0.3s							
POSS	**Possen**		**3.32**	**21**	*e*Pn	**Pn**	**01 00 36.6**	**-0.3**
BGES	**Gesves**		**3.34**	**311**	*d*P	**Pn**	**01 00 39.4**	**+2.3**
BGES					*d*S	**Sn**	**01 01 15.8**	**-0.8**
	comp=E,91nm,0.0s							
BEBN	**Eben Emael**		**3.35**	**321**	*d*P	**Pn**	**01 00 39.7**	**+2.4**
GTTG	**Gottingen**		**3.37**	**10**	*e*Pn	**Pn**	**01 00 37.6**	**+0.2**
LAUG	**Laupendahl**		**3.38**	**338**	*e*Pn	**Pn**	**01 00 39.3**	**+1.5**
BUG	**Bochum--Univer**		**3.39**	**341**	*e*Pn	**Pn**	**01 00 39.7**	**+1.9**
DOU	**Dourbes**		**3.43**	**304**	*d*P	**Pn**	**01 00 40.7**	**+2.3**
DOU					*d*S	**Sn**	**01 01 21.9**	**+2.9**
	comp=E,142nm,0.0s							
BMRD	**Maredsous**		**3.45**	**308**	*d*P	**Pn**	**01 00 41.0**	**+2.3**
BMRD					*d*S	**Sn**	**01 01 20.9**	**+1.4**
	comp=E,124nm,0.0s							
NEUB	**Neuenburg**		**3.47**	**30**	*e*Pg	**Pg**	**01 00 52.6**	**+1.0**
NEUB					*e*Sg	**Sg**	**01 01 35.6**	**-1.0**
MYKA	**Terra Mystica**		**3.54**	**115**	*i* Pn	**Pn**	**01 00 43.2**	**+3.2**
	comp=E,11nm,0.2s							
MYKA					*i* Sn	**Sn**	**01 01 25.1**	**+3.2**
	comp=E,112nm,0.6s							
MOA	**Molln**		**3.56**	**94**	*i* Pn	**Pn**	**01 00 42.4**	**+2.2**
	comp=E,2.3nm,0.1s							
MOA					*e*Pg	**Pg**	**01 00 53.0**	**-0.2**
	comp=E,13nm,0.2s							
MOA					*e*Sn	**Sn**	**01 01 22.3**	**+0.2**
	comp=E,6.5nm,0.2s							
MOA					*e*Sg	**Sg**	**01 01 39.1**	**-0.2**
	comp=E,138nm,0.4s							
CHRS	**Christianenhau**		**3.57**	**19**	*e*Pn	**Pn**	**01 00 40.1**	**-0.2**
CHRS					*e*Pg	**Pg**	**01 00 55.0**	**+1.5**
LOR	**Lormes**		**3.60**	**256**	*e*Pn	**Pn**	**01 00 41.4**	**+0.7**
LOR	**Lormes**		**3.60**	**256**	*e*Pg	**Pg**	**01 00 53.9**	**-0.2**
LOR					*e*Sg	**Sg**	**01 01 40.0**	**-0.7**
	comp=E,170nm,0.3s							
BAIF	**Baives**		**3.63**	**302**	*e*Pn	**Pn**	**01 00 43.0**	**+1.9**
BAIF	**Baives**		**3.63**	**302**	*e*Pg	**Pg**	**01 00 53.2**	**-1.4**
BAIF					*e*Sg	**Sg**	**01 01 39.0**	**-2.6**
	comp=E,56nm,0.4s							
ZVC	**Zvikov**		**3.64**	**69**	*e*PN	**Pn**	**01 00 42.6**	**+1.4**
ZVC					*e*PG	**Pg**	**01 00 53.1**	**-1.7**
ZVC					*e*SG	**Sg**	**01 01 39.9**	**-1.9**
	comp=E,86nm,0.3s							
CLZ	**Clausthal**		**3.71**	**13**	*e*Pn	**Pn**	**01 00 41.9**	**-0.4**
CLZ					*e*Pg	**Pg**	**01 00 57.3**	**+1.1**
HSKC	**Hora Svate Kat**		**3.74**	**49**	*e*PN	**Pn**	**01 00 44.2**	**+1.5**
HSKC					*e*PG	**Pg**	**01 00 56.5**	**-0.3**
HSKC					*e*SG	**Sg**	**01 01 44.1**	**-1.1**
	comp=E,165nm,0.5s							
MBDF	**Montbardon**		**3.84**	**204**	*e*Pn	**Pn**	**01 00 45.9**	**+1.8**
MBDF	**Montbardon**		**3.84**	**204**	*e*Pg	**Pg**	**01 00 57.2**	**-1.4**
MBDF					*e*Sg	**Sg**	**01 01 47.7**	**-0.6**
	comp=E,198nm,0.5s							
SMF	**Signal de Mont**		**3.84**	**247**	*e*Pn	**Pn**	**01 00 43.9**	**-0.2**
SMF	**Signal de Mont**		**3.84**	**247**	*e*Pg	**Pg**	**01 00 58.3**	**-0.5**
SMF					*e*Sg	**Sg**	**01 01 47.4**	**-1.1**
	comp=E,106nm,0.3s							
SSF	**Saint Saulge**		**3.89**	**254**	*e*Pn	**Pn**	**01 00 44.6**	**-0.2**
SSF	**Saint Saulge**		**3.89**	**254**	*e*Pg	**Pg**	**01 00 59.7**	**0.0**
SSF					*e*Sg	**Sg**	**01 01 48.4**	**-1.7**
	comp=E,142nm,0.3s							
GORS	**Gorjuse**		**3.91**	**118**	*i* Pn	**Pn**	**01 00 49.3**	**+4.2**
UCC	**Uccle**		**3.96**	**312**	*d*P	**Pn**	**01 00 47.7**	**+2.1**
UCC					*d*S	**Sn**	**01 01 33.2**	**+1.3**
	comp=N,47nm,0.0s							
ORIF	**Oris-en-Rattie**		**3.96**	**214**	*e*Pn	**Pn**	**01 00 46.0**	**+0.3**
ORIF	**Oris-en-Rattie**		**3.96**	**214**	*e*Pg	**Pg**	**01 00 58.9**	**-2.0**
ORIF					*e*Sg	**Sg**	**01 01 51.0**	**-1.2**
	comp=N,108nm,0.4s							
PRA	**Prague**		**4.01**	**61**	*e*PN	**Pn**	**01 00 49.0**	**+2.6**
PRA					*e*PG	**Pg**	**01 01 01.4**	**-0.5**
PRA					*e*SG	**Sg**	**01 01 52.4**	**-1.5**
	comp=N,312nm,1.1s							
CLL	**Collm**		**4.02**	**39**	*e*Pn	**Pn**	**01 00 47.0**	**+0.5**
CLL	**Collm**		**4.02**	**39**	*i* Pn	**Pn**	**01 00 46.9**	**+0.5**
	comp=Z,10.0nm,0.5s							
CLL					*i* x	x	01 00 53.2	
CLL					*i* Pg	**Pg**	**01 01 01.4**	**-0.7**
CLL					*i* x	x	01 01 05.1	
CLL					*i* Sn	Sn	01 01 19.4	-14
CLL					*i* Sg	**Sg**	**01 01 54.1**	**0.0**
	comp=Z,151nm,0.5s							
ASSE	**Asse, Remlinge**		**4.04**	**15**	*e*Pn	**Pn**	**01 00 46.6**	**-0.1**
PRU	**Pruhonice**		**4.04**	**62**	*e*PN	**Pn**	**01 00 49.4**	**+2.6**
PRU					*e*PG	**Pg**	**01 01 01.5**	**-1.0**
PRU					*e*SG	**Sg**	**01 01 52.0**	**-2.8**
	comp=Z,164nm,0.7s							
RICC	**Richard**		**4.05**	**53**	*e*PG	**Pg**	**01 01 02.9**	**+0.2**
RICC					*e*SG	**Sg**	**01 01 54.9**	**-0.3**
	comp=Z,164nm,0.6s							
AVF	**Avril sur Loir**		**4.09**	**251**	*e*Pn	**Pn**	**01 00 47.2**	**-0.2**
AVF	**Avril sur Loir**		**4.09**	**251**	*e*Pg	**Pg**	**01 01 03.3**	**-0.1**
AVF					*e*Sg	**Sg**	**01 01 55.3**	**-1.1**
	comp=Z,38nm,0.3s							
OBKA	**Obir**		**4.15**	**113**	*i* Pn	**Pn**	**01 00 50.6**	**+2.2**
	comp=Z,1.0nm,0.2s							
OBKA					*i* Sn	**Sn**	**01 01 39.5**	**+2.5**
	comp=Z,21nm,0.4s							
BRG	**Berggiesshubel**		**4.16**	**49**	*e*Pg	**Pg**	**01 01 04.6**	**-0.2**
PVCC	**Panska Ves**		**4.30**	**56**	*e*PG	**Pg**	**01 01 05.9**	**-1.6**
PVCC					*e*SG	**Sg**	**01 02 01.2**	**-1.9**
	comp=Z,231nm,0.6s							
FLTG	**Flechtingen**		**4.34**	**19**	*e*Pn	**Pn**	**01 00 51.3**	**+0.4**
FLTG					*e*Pg	**Pg**	**01 01 08.8**	**+0.7**
SOKA	**Soboth**		**4.38**	**109**	*e*Pn	**Pn**	**01 00 53.7**	**+2.1**
	comp=Z,5.1nm,0.5s							
SOKA					*i* Sn	**Sn**	**01 01 43.6**	**+1.0**
	comp=Z,6.4nm,0.3s							
HYF	**Humbligny**		**4.40**	**260**	*e*Pn	**Pn**	**01 00 53.2**	**+1.5**
HYF	**Humbligny**		**4.40**	**260**	*e*Pg	**Pg**	**01 01 09.1**	**-0.2**
HYF					*e*Sg	**Sg**	**01 02 05.4**	**-0.8**
PERS	**Pernice**		**4.46**	**109**	*e*Pn	**Pn**	**01 00 54.5**	**+2.0**
BGF	**Bois d'Agland**		**4.50**	**250**	*e*Pn	**Pn**	**01 00 52.9**	**-0.2**
BGF	**Bois d'Agland**		**4.50**	**250**	*e*Pg	**Pg**	**01 01 10.9**	**-0.4**
BGF					*e*Sg	**Sg**	**01 02 07.9**	**-1.7**
	comp=Z,176nm,0.4s							
VIVF	**Saint-Julien-l**		**4.51**	**223**	*e*Pn	**Pn**	**01 00 52.0**	**-1.3**
VIVF	**Saint-Julien-l**		**4.51**	**223**	*e*Pg	**Pg**	**01 01 11.4**	**-0.1**
VIVF					*e*Sg	**Sg**	**01 02 08.6**	**-1.3**
	comp=Z,73nm,0.4s							
SBF	**Sospel**		**4.51**	**194**	*e*Pn	**Pn**	**01 00 55.4**	**+2.1**
SBF					*e*Sn	**Sn**	**01 01 44.6**	**-1.2**
	comp=Z,48nm,0.3s							
ARSA	**Arzberg**		**4.51**	**100**	*e*Pn	**Pn**	**01 00 55.6**	**+2.3**
	comp=Z,4.5nm,0.2s							
ARSA					*i* Sn	**Sn**	**01 01 46.9**	**+1.2**
	comp=Z,10.0nm,0.3s							
CONA	**Conrad Observa**		**4.61**	**91**	*i* Pn	**Pn**	**01 00 56.4**	**+1.7**
	comp=Z,9.2nm,0.3s							
CONA					*i* Sn	**Sn**	**01 01 49.5**	**+1.3**
	comp=Z,22nm,0.2s							
SMRF	**Simiane la Rot**		**4.88**	**210**	*e*Pn	**Pn**	**01 00 58.4**	**0.0**
SMRF	**Simiane la Rot**		**4.88**	**210**	*e*Pg	**Pg**	**01 01 17.2**	**-1.5**
SMRF					*e*Sn	**Sn**	**01 01 53.1**	**-1.8**
	comp=Z,23nm,0.5s							
RONA	**Rosalia, Austr**		**4.94**	**94**	*i* Pn	**Pn**	**01 01 00.6**	**+1.5**
	comp=Z,45nm,0.6s							
RONA					*i* Sn	**Sn**	**01 01 55.8**	**-0.4**
	comp=Z,62nm,0.4s							
KRUC	**Moravsky**		**4.97**	**78**	*e*PN	**Pn**	**01 01 01.5**	**+1.9**
KRUC					*e*PG	**Pg**	**01 01 19.8**	**-0.6**
KRUC					*e*SG	**Sg**	**01 02 23.7**	**-1.0**
TCF	**Toulx Ste Croi**		**5.01**	**250**	*e*Pn	**Pn**	**01 00 59.5**	**-0.7**
TCF	**Toulx Ste Croi**		**5.01**	**250**	*e*Pg	**Pg**	**01 01 20.1**	**-1.0**
TCF					*e*Sg	**Sg**	**01 02 24.6**	**-1.5**
	comp=Z,32nm,0.2s							
BOJS	**Bojanci**		**5.09**	**120**	*i* Pn	**Pn**	**01 01 04.4**	**+3.2**
UPC	**Upice**		**5.11**	**61**	*e*PG	**Pg**	**01 01 20.1**	**-2.9**
UPC					*e*SG	**Sg**	**01 02 26.8**	**-2.4**
	comp=Z,103nm,0.6s							
VRAC	**Vranov**		**5.14**	**75**	*e*PN	**Pn**	**01 01 03.9**	**+2.1**
VRAC					*e*PG	**Pg**	**01 01 22.3**	**-1.2**
VRAC					*e*SG	**Sg**	**01 02 27.3**	**-2.7**
CHVC	**Chvalec**		**5.17**	**60**	*e*PG	**Pg**	**01 01 22.0**	**-2.1**
CHVC					*e*SG	**Sg**	**01 02 30.7**	**-0.4**
	comp=Z,100nm,0.6s							
LMR	**La Mourre**		**5.21**	**200**	*e*Pn	**Pn**	**01 01 02.1**	**-0.7**
LMR	**La Mourre**		**5.21**	**200**	*e*Pg	**Pb**	**01 01 20.4**	**+4.3**
LMR					*e*Sn	**Sn**	**01 01 59.9**	**-2.9**
	comp=Z,12nm,0.3s							
DPC	**Dobruska-Polom**		**5.24**	**64**	*e*PG	**Pg**	**01 01 22.8**	**-2.6**
DPC					*e*SG	**Sg**	**01 02 30.1**	**-3.1**
	comp=Z,103nm,1.0s							
ZST	**Bratislava**		**5.42**	**87**	*e*PN	**Pn**	**01 01 07.4**	**+1.7**
ZST					*e*PG	**Pg**	**01 01 27.9**	**-1.0**
ZST					*e*SN	**Sn**	**01 02 08.6**	**+0.6**
ZST					*e*SG	**Sg**	**01 02 37.2**	**-1.8**
KRLC	**Kraliky**		**5.43**	**67**	*e*PG	**Pg**	**01 01 27.8**	**-1.2**
LASF	**Ste Croix**		**5.49**	**222**	*e*Pn	**Pn**	**01 01 05.6**	**-1.1**
LASF	**Ste Croix**		**5.49**	**222**	*e*Pg	**Pg**	**01 01 28.9**	**-1.2**
LASF					*e*Sn	**Sn**	**01 02 07.2**	**-2.5**
LASF					*e*Sg	**Sg**	**01 02 37.6**	**-3.6**
	comp=Z,52nm,0.4s							
MODS	**Modra-Piesok**		**5.53**	**86**	*e*PN	**Pn**	**01 01 09.0**	**+1.8**
MODS					*e*PG	**Pg**	**01 01 29.5**	**-1.5**
MODS					*e*SN	**Sn**	**01 02 11.1**	**+0.4**
MODS					*e*SG	**Sg**	**01 02 41.9**	**-0.6**
JAVC	**Velka Javorina**		**5.79**	**81**	*e*SG	**Sg**	**01 02 53.6**	**+2.5**
CAF	**Calviac**		**5.81**	**238**	*e*Pn	**Pn**	**01 01 10.8**	**-0.4**
CAF	**Calviac**		**5.81**	**238**	*e*Pg	**Pg**	**01 01 33.8**	**-2.6**
CAF					*e*Sg	**Sg**	**01 02 49.9**	**-1.8**
	comp=Z,26nm,0.5s							
MORC	**Moravsky Berou**		**5.83**	**72**	*e*PN	**Pn**	**01 01 13.3**	**+1.9**
MORC					*e*PG	**Pg**	**01 01 35.9**	**-0.8**
RJF	**Les Rejaudoux**		**5.92**	**243**	*e*Pn	**Pn**	**

CADM	**Anderson Res.**	**1.41**	**353**			Pn	01 03 13.2	-1.3
JLAB	**Laurel Hill**	**1.42**	**350**			Pn	01 03 12.9	-1.6
GATR	**Gnd/Air Tx Cnt**	**1.42**	**148**			Pn	01 03 12.2	-2.4
CRGC	**Crocker Grade**	**1.48**	**110**			Pn	01 03 13.9	-1.6
JBNB	**Ben Lomond Mou**	**1.49**	**337**			Pn	01 03 13.5	-2.0
CCOB	**Coe Ranch Numb**	**1.51**	**352**			Pn	01 03 14.9	-0.9
JJOM	**Saint Joseph's**	**1.51**	**343**			Pn	01 03 14.1	-1.8
FIGC	**Figueroa Mtn.**	**1.56**	**131**			Pn	01 03 14.4	-2.2
NJQ	**Nojoqui County**	**1.59**	**140**			Pn	01 03 15.0	-1.9
MHC	**Mount Hamilton**	**1.59**	**354**			Pn	01 03 15.7	-1.4
MHC					IAML		01 03 56.4	
	comp=N,110nm,0.7s							
ARN	**Arnold Ranch**	**1.59**	**357**			Pn	01 03 15.8	-1.1
CMPM	**Mikes Peak**	**1.60**	**3**			Pn	01 03 16.4	-0.7
JFP	**Foothills Park**	**1.72**	**339**			Pn	01 03 16.8	-1.8
MTOS	**Mt Oso, Westle**	**1.75**	**2**			Pn	01 03 18.2	-0.9
JSFB	**Stanford Teles**	**1.75**	**340**			Pn	01 03 17.4	-1.8
JRSC	**Jasper Ridge**	**1.77**	**338**	Pn	Pn	Pn	01 03 18.3	-1.1
JRSC					IAML		01 03 48.7	
	comp=N,80nm,0.8s							
LEGD	**La Grand CA**	**1.78**	**35**			Pn	01 03 18.4	-1.1
LEGD	**La Grand CA**	**1.78**	**35**	IAML			01 03 45.6	
	comp=N,97nm,0.8s							
LEGD					IAML		01 03 45.9	
	comp=E,97nm,0.5s							
MHDM	**Hidden Dam**	**1.83**	**42**			Pn	01 03 19.5	-0.8
BCW	**Bitter Crk WRg**	**1.83**	**116**			Pn	01 03 19.1	-1.2
CSTL	**Corral Hollow**	**1.88**	**358**			Pn	01 03 20.0	-0.9
CNIC	**Niles Canyon**	**1.90**	**347**			Pn	01 03 19.8	-1.3
VES	**Vestal, Richgr**	**1.90**	**87**	Pn	Pn	Pn	01 03 19.2	-2.0
VES				IAML			01 03 44.4	
	comp=N,79nm,0.7s							
VES					IAML		01 03 49.5	
	comp=E,86nm,0.7s							
BSM	**San Miguel Isl**	**1.93**	**153**			Pn	01 03 18.9	-2.7
CLCB	**Lake Chabot**	**2.04**	**346**			Pn	01 03 21.5	-1.7
MMIM	**Miami Mountain**	**2.14**	**39**			Pn	01 03 24.4	-0.2
SPG2	**Springville 2**	**2.20**	**78**			Pn	01 03 24.2	-1.1
ARVC	**Arvin**	**2.21**	**106**			Pn	01 03 24.0	-1.4
BKS	**Berkeley--Byer**	**2.21**	**343**			Pn	01 03 24.1	-1.4
BRIB	**Briones**	**2.24**	**345**			Pn	01 03 24.3	-1.5
TEJ	**El Tejon**	**2.29**	**102**			Pn	01 03 24.6	-2.0
ISA	**Isabella, Lake**	**2.40**	**91**	Pn	Pn	Pn	01 03 26.6	-1.6
CMB	**Columbia Colle**	**2.42**	**20**			Pn	01 03 27.9	-0.5
OSI	**Osito Audit: C**	**2.49**	**117**	Pn	Pn	Pn	01 03 27.8	-1.5
OSI				IAML			01 04 17.2	
	comp=E,58nm,0.9s							
OSI					IAML		01 04 25.9	
	comp=N,35nm,0.8s							
MCCM	**Marconi Confer**	**2.65**	**334**	Pn	Pn	Pn	01 03 29.8	-1.7
MCCM				IAML			01 04 17.4	
	comp=N,35nm,1.0s							
MCCM					IAML		01 04 20.6	
	comp=E,44nm,0.9s							
MDPB	**Devils Postpil**	**2.65**	**44**	Pn	Pn	Pn	01 03 31.7	-0.1
MDPB				IAML			01 04 12.5	
	comp=N,42nm,0.5s							
MDPB					IAML		01 04 18.7	
	comp=E,40nm,0.9s							
CVS	**Carmenet Viney**	**2.71**	**343**	Pn	Pn	Pn	01 03 30.6	-1.8
CVS				IAML			01 04 16.6	
	comp=N,27nm,0.8s							
CVS					IAML		01 04 24.0	
	comp=E,36nm,1.4s							
TPO	**Tropico Hills**	**2.75**	**108**	Pn	Pn	Pn	01 03 32.1	-0.9
TPO				IAML			01 04 21.9	
	comp=N,32nm,1.2s							
TPO					IAML		01 04 25.4	
	comp=E,38nm,1.4s							
LRMC	**Laurel Mtn Rad**	**3.06**	**94**	Pn	Pn	Pn	01 03 34.7	-2.6
PASC	**Pasadena Art C**	**3.09**	**120**	Pn	Pn	Pn	01 03 35.5	-2.1
CLC	**China Lake**	**3.11**	**88**	Pn	Pn	Pn	01 03 36.8	-1.1
MWC	**Mount Wilson**	**3.16**	**118**	Pn	Pn	Pn	01 03 36.7	-1.9
MWC				IAML			01 04 35.3	
	comp=N,16nm,1.4s							
MWC					IAML		01 04 41.5	
	comp=E,18nm,1.1s							
WAKR	**Walker**	**3.17**	**29**	Pn	Pn	Pn	01 03 39.6	+0.8
WAKR				IAML			01 04 41.0	
	comp=N,36nm,1.3s							
WSHM	**Spangler Hills**	**3.20**	**92**	Pn	Pn	Pn	01 03 37.8	-1.4
MPMC	**Manual Prospec**	**3.21**	**83**	Pn	Pn	Pn	01 03 39.8	+0.5
MPMC				IAML			01 05 35.6	
	comp=E,16nm,0.0s							
DSP	**Deep Springs**	**3.21**	**59**	Pn	Pn	Pn	01 03 40.1	+0.9
DSP				IAML			01 04 34.6	
	comp=N,25nm,0.8s							
DSP					IAML		01 04 35.7	
	comp=E,19nm,0.9s							
CCCA	**Chr Cany lake**	**3.31**	**93**	Pn	Pn	Pn	01 03 41.2	+0.6
BFSC	**Mount Baldy Ra**	**3.44**	**115**	Pn	Pn	Pn	01 03 40.7	-1.8
BFSC				IAML			01 04 19.2	
	comp=N,18nm,0.1s							
BFSC					IAML		01 05 22.3	
	comp=E,17nm,0.1s							
SUTB	**Sutter Butte**	**3.48**	**355**	Pn	Pn	Pn	01 03 42.2	-0.6
SUTB				IAML			01 05 06.1	
	comp=N,19nm,0.7s							
SUTB					IAML		01 05 10.2	
	comp=E,18nm,0.8s							
GRAC	**Grapevine Rang**	**3.50**	**68**	Pn	Pn	Pn	01 03 43.9	+0.7
GRAC				IAML			01 04 55.4	
	comp=N,27nm,0.9s							
PNTR	**Pine Nut**	**3.63**	**23**	Pn	Pn	Pn	01 03 45.3	+0.2
GMN	**Gold Mountain**	**3.69**	**64**	Pn	Pn	Pn	01 03 46.2	+0.2
MPK	**Martis Peak**	**3.70**	**17**	Pn	Pn	Pn	01 03 46.3	+0.1
QSM	**Queen of Sheba**	**3.70**	**85**	Pn	Pn	Pn	01 03 45.7	-0.3
QSM				IAML			01 04 54.6	
	comp=N,12nm,1.1s							
ORV	**Oroville**	**3.79**	**359**	Pn	Pn	Pn	01 03 45.9	-1.3
GSC	**Goldstone, Bar**	**3.79**	**96**	Pn	Pn	Pn	01 03 46.3	-1.0
GSC				IAML			01 05 09.8	
	comp=N,14nm,1.6s							
GSC					IAML		01 05 10.9	
	comp=E,11nm,1.4s							
GWY	**Greenwater Val**	**3.88**	**82**	Pn	Pn	Pn	01 03 48.0	-0.5
GWY				IAML			01 05 03.1	
	comp=E,11nm,1.8s							
ELS	**Elsinore Mount**	**3.91**	**121**	Pn	Pn	Pn	01 03 47.0	-1.9
BEKR	**Beckworth**	**4.19**	**11**	Pn	Pn	Pn	01 03 52.3	-0.5
BEKR				IAML			01 05 09.6	
	comp=N,8.5nm,1.1s							
BEKR					IAML		01 05 17.9	
	comp=E,11nm,1.0s							
TPNV	**Topopah Spring**	**4.34**	**73**	Pn	Pn	Pn	01 03 52.6	-2.3
TPNV				IAML			01 05 08.9	
	comp=E,9.2nm,1.2s							
TPNV					IAML		01 05 19.0	
	comp=E,8.5nm,1.2s							
O03E	**Paynes Creek**	**4.54**	**356**	Pn	Pn	Pn	01 03 55.9	-1.7
O03E				IAML			01 05 40.0	
	comp=E,13nm,3.9s							
O03E					IAML		01 05 42.5	
	comp=N,9.3nm,4.0s							
BELC	**Belle Mtn. Jos**	**4.79**	**110**	Pn	Pn	Pn	01 03 59.1	-2.0
SHPR	**Sheep Range**	**5.12**	**80**	Pn	Pn	Pn	01 04 05.1	-0.5
CBX	**Cerro Bola**	**5.23**	**130**	Pn	Pn	Pn	01 04 04.4	-2.8
ESJX	**Sierra Juarez**	**5.89**	**128**	Pn	Pn	Pn	01 04 14.4	-1.8

GCG 04 01:04:03.9±0.9, 14°40'N×91°56'W, h81km±7km, MD3.7, ML3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOKI	**Kika Raxquin**	**0.44**	**20**	*i* P	Pn	01 04 18.4	+0.7
SMCA	**Catarina**	**0.67**	**312**	*i* P	Pn	01 04 19.6	+0.2
SMCA				*e*S	Sn	01 04 31.1	+0.2
SMCA				IAML		01 04 32.1	
	comp=N,2µm,0.2s						
ESSG	**Sabana Grande**	**0.70**	**92**	*e*P	Pn	01 04 19.6	-0.1
THIG		**0.85**	**306**	*e*S	Sn	01 04 35.8	+1.6
APG	**El Apazote**	**1.21**	**60**	*i* P	Pn	01 04 26.6	+0.7

*BEO **04** 01:11:16.9±0.5, 43°34'N×17°45'E, h9km±6km, ML2.2/8*
*RHSSO **04** 01:11:16.8±0.6, 43°36'N×17°56'E, h7km±4km, ML2.2/5*
*PDG **04** 01:11:17.3±0.1, 43°31'N×17°56'E, h9km, ML2.8/11, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

ISC 04 01:11:17.2±1.0, 43°35'N±0'02×17°56'E±0'02, h9km±9km, n41, σ1°8/80, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RICI	**Ricice**	**0.34**	**296**	*i* Pg	**Pg**	**01 11 23.5**	**-0.5**
RICI				*e*Sg	**Sg**	**01 11 29.1**	**+0.6**
MAKA	**Makarska**	**0.40**	**262**	*e*Pg	**Pg**	**01 11 24.7**	**-0.2**
MAKA				*e*Sg	**Sb**	**01 11 31.5**	**-1.0**
STON	**Ston**	**0.48**	**167**	*e*Pg	**Pg**	**01 11 25.8**	**-0.8**
STON				*e*Sg	**Sg**	**01 11 33.1**	**+0.2**
STON	**Ston**	**0.48**	**167**	*e*Pg	**Pg**	**01 11 26.0**	**-0.6**
STON				*e*Sg	**Sb**	**01 11 34.1**	**-0.9**
LSTV	**Lastovo**	**0.75**	**220**	*e*Pg	**Pg**	**01 11 30.9**	**-0.8**
LSTV				*e*Sg	**Sb**	**01 11 43.3**	**+0.5**
KLINJ	**Klinje**	**0.77**	**103**	*e*Pg	**Pg**	**01 11 30.6**	**-1.4**
KLINJ				*e*Sg	**Sg**	**01 11 41.9**	**-0.2**
DBRK	**Dubrovnik**	**0.80**	**147**	*e*Pg	**Pg**	**01 11 31.7**	**-0.9**
DBRK				*e*Sg	**Sb**	**01 11 43.7**	**-0.5**
HVAR	**Hvar**	**0.83**	**259**	*i* Pg	**Pg**	**01 11 32.9**	**-0.2**
HVAR				*e*Sg	**Sb**	**01 11 45.6**	**+0.8**
BRY	**Bratogost**	**0.84**	**121**	*e*Pg	**Pg**	**01 11 32.9**	**-0.5**
BRY				*i* Sg	**Sb**	**01 11 45.2**	**-0.3**
TREB	**Trebinje**	**0.85**	**137**	*e*Pg	**Pg**	**01 11 32.1**	**-1.5**
TREB				*e*Sg	**Sb**	**01 11 45.2**	**-0.5**
UPM	**Unac-Piva**	**0.99**	**98**	*e*Pg	**Pg**	**01 11 35.4**	**-0.9**
UPM				*i* Sg	**Sn**	**01 11 51.3**	**-0.4**
KIJV	**Kijevo**	**1.06**	**309**	*e*Pg	**Pg**	**01 11 36.8**	**-0.8**
KIJV				Sg	**Sn**	**01 11 53.8**	**+0.7**
HCY	**Herceg Novi**	**1.13**	**142**	*e*Pg	**Pg**	**01 11 37.7**	**-1.2**
HCY				*i* Sg	**Sn**	**01 11 54.8**	**+0.1**
NKME	**Niksic**	**1.18**	**119**	*e*Pg	**Pb**	**01 11 38.5**	**-1.1**
NKME				*i* Sg	**Sn**	**01 11 56.3**	**+0.4**
CEME	**Cevo**	**1.28**	**128**	*e*Pg	**Pn**	**01 11 40.5**	**-0.7**
CEME				*i* Sg	**Sn**	**01 12 00.4**	**+1.9**
PLE	**Pljevlja**	**1.34**	**90**	*e*Pg	**Pn**	**01 11 41.6**	**-0.5**
PLE				*i* Sg	**Sg**	**01 12 02.6**	**+2.4**
RUDO	**Rudo**	**1.35**	**78**	*e*Pg	**Pn**	**01 11 40.9**	**-1.2**
RUDO				*e*Sg	**Sb**	**01 11 59.2**	**-0.7**
ZIRJ	**Zirje**	**1.43**	**283**	*i* Pn	**Pg**	**01 11 44.4**	**-0.1**
ZIRJ				Sn	**Sg**	**01 12 05.2**	**+2.2**
BLY	**Banja Luka**	**1.43**	**349**	*e*Pg	**Pn**	**01 11 42.1**	**-1.1**
BLY				*e*Sg	**Sn**	**01 12 01.9**	**-0.2**
BLY	**Banja Luka**	**1.43**	**349**	*e*Pg	**Pn**	**01 11 43.2**	**0.0**
BLY				*e*Sg	**Sg**	**01 12 03.3**	**+0.2**
BUM	**Brajici-Budva**	**1.43**	**136**	*e*Pg	**Pn**	**01 11 43.3**	**-0.1**
BUM				*i* Sg	**Sg**	**01 12 05.2**	**+1.9**
BBLS	**Lazi&#263i**	**1.44**	**68**	*e*Pg	**Pg**	**01 11 44.5**	**-0.3**
BBLS				*e*Sg	**Sg**	**01 12 07.1**	**+3.6**
MORI	**Morici**	**1.44**	**292**	*e*Pn	**Pg**	**01 11 44.6**	**-0.2**
MORI				Sn	**Sg**	**01 12 06.5**	**+3.0**
SLATY	**Slatina**	**1.50**	**353**	*e*Pg	**Pn**	**01 11 43.2**	**-0.9**
SLATY				*e*Sg	**Sb**	**01 12 04.2**	**+0.1**
KOME	**Kolasin**	**1.52**	**108**	*e*Pg	**Pg**	**01 11 46.9**	**+0.6**
KOME	**Kolasin**	**1.52**	**108**	*e*Pg	**Pb**	**01 11 44.9**	**-0.6**
KOME				*i* Sg	**Sg**	**01 12 08.2**	**+2.3**
PDG	**Podgorica**	**1.55**	**126**	*e*Pg	**Pb**	**01 11 46.0**	**+0.1**
PDG				*e*Sg	**Sg**	**01 12 08.7**	**+1.9**
PDG	**Podgorica**	**1.55**	**126**	*e*Pg	**Pb**	**01 11 45.4**	**-0.5**
PDG				*i* Sg	**Sg**	**01 12 08.8**	**+1.9**
DRME	**Dracevica, Mon**	**1.67**	**133**	*e*Pg	**Pb**	**01 11 48.1**	**+0.1**
DRME	**Dracevica, Mon**	**1.67**	**133**	*e*Pn	**Pb**	**01 11 47.2**	**-0.8**
DRME				*i* Sn	**Sg**	**01 12 11.6**	**+0.9**
SJES	**Sjenica**	**1.77**	**92**	*e*Pg	**Pb**	**01 11 49.9**	**+0.2**
SJES				*e*Sg	**Sg**	**01 12 14.6**	**+0.7**
IVA	**Berane**	**1.77**	**105**	*e*Pn	**Pn**	**01 11 48.5**	**+0.4**
IVA				*i* Sn	**Sg**	**01 12 14.3**	**+0.1**
TEKS	**Tekeris**	**1.86**	**49**	*e*Pg	**Pb**	**01 11 50.7**	**-0.7**
TEKS				*e*Sg	**Sg**	**01 12 18.5**	**+1.4**
IVAS	**Ivanjica**	**1.90**	**82**	*e*Pg	**Pb**	**01 11 51.6**	**-0.5**
IVAS				*e*Sg	**Sg**	**01 12 19.4**	**+1.1**
DIVS	**Divibare**	**1.92**	**66**	*e*Pg	**Pg**	**01 11 53.4**	**-0.5**
DIVS				*e*Sg	**Sg**	**01 12 20.0**	**+1.2**
DUGI	**Dugi Otok**	**1.93**	**290**	*e*Pn	**Pb**	**01 11 52.8**	**+0.4**
DUGI				Sn	**Sg**	**01 12 18.2**	**-0.8**
VIRC	**Vir**	**2.04**	**298**	*i* Pn	**Pb**	**01 11 54.2**	**-0.2**
VIRC				Sn	**Sg**	**01 12 21.6**	**-1.3**
PLIT	**Plitvice**	**2.07**	**318**	*e*Pn	**Pb**	**01 11 54.7**	**-0.3**
PLIT				Sn	**Sg**	**01 12 23.1**	**-0.6**
NVLJ	**Novalja**	**2.29**	**303**	*e*Pn	**Pb**	**01 11 58.3**	**-0.3**
NVLJ				Sn	**Sb**	**01 12 28.6**	**+1.6**
SELS	**Selova**	**2.60**	**92**	*e*Pn	**Pn**	**01 12 00.2**	**+0.8**
SELS				*e*Sg	**Sg**	**01 12 41.8**	**+1.0**
MORH	**Mrgy, Hungar**	**2.97**	**15**	*e*Pn	**Pn**	**01 12 04.1**	**-0.3**
MORH				*e*Sn	**Sn**	**01 12 40.0**	**-0.2**

*IDC **04** 01:51:56.4±1.8, 1°48'N×126°64'E, h0km, mb3.9/4, mbtmp4.0/4, Error ellipse: s-maj=173.8km s-min=21.6km az=66.0*
*DJA **04** 01:52:00.6±0.3, 1°N±3'×12°6E±°, h10km, M3.9/10, mb4.4/1, MLv3.6/10*

ISC 04 01:52:03.2±1.1, 1°27'N±0'08×126°43'E±0'07, h47km, n9, σ0°57/10, mb4.0/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.06**	**118**	P	**Pn**	**01 52 21.3**	**-0.3**
TNTI				S	**Sn**	**01 52 35.5**	**+0.3**
KMSI	**Cibinong**	**2.54**	**254**	P	**Pn**	**01 52 41.6**	**-0.4**
SGSI	**Sangihe**	**2.57**	**339**	P	**Pn**	**01 52 42.8**	**+0.5**
SANI	**Sanana**	**3.32**	**188**	P	**Pn**	**01 52 52.9**	**+0.2**
APSI	**Ampana**	**5.25**	**246**	P	**Pn**	**01 53 19.4**	**+0.3**
WRA	**Warramunga Arr**	**22.46**	**160**	P	**P**	**01 56 59.5**	**+0.9**
	5.8nm,0.7s,baz=340,slow=11,SNR=24 5.8nm,0.7s						
ASAR	**Alice Springs**	**25.83**	**164**	P	**P**	**01 57 30.3**	**0.0**
	0.7nm,0.4s,baz=334,slow=6.0,SNR=9.2 0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.41**	**326**	P	**P**	**02 02 00.2**	**-0.8**
	0.3nm,0.4s,baz=113,slow=8.2,SNR=5.2 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.65**	**328**	P	**P**	**02 02 29.1**	**-0.4**
	0.9nm,0.2s,baz=128,slow=6.4,SNR=4.4 0.9nm,0.2s						

*IDC **04** 02:00:29.9±1.6, 13°93'N×87°11'W, h0km, mb3.6/3, mbtmp3.6/3, MS3.3/4, Error ellipse: s-maj=196.0km s-min=27.7km az=55.0*
*SNET **04** 02:00:37.0±1.1, 12°79'N×88°70'W, h31km, ML4.1*
*CATAC **04** 02:00:37.5±0.2, 13°N±2°×8°9W±°, h42km±8km, M4.2/40, MLv4.2/40, Error ellipse: s-maj=5.5km s-min=1.6km az=28.2, confirmed*
*GCG **04** 02:00:38.3±1.2, 12°93'N×88°70'W, h27km±7km, MD4.4, ML3.4*
*UCR **04** 02:00:40.9±1.4, 12°88'N×88°36'W, h84km±28km, MW4.3*

ISC 04 02:00:36.5±1.1, 12°78'N±0'03×88°70'W±0'02, h32km±9km, n150, σ1°37/190, mb3.5/3, MS3.1/4, 4C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECA	**Tecapa**	**0.74**	**15**	i̲ j̲ *i*P	**Pn**	**02 00 51.4**	**+0.6**
TECO	**Alcaldia de Te**	**0.76**	**354**	*i* P	**Pn**	**02 00 51.6**	**+0.6**
TECO				*e*S	**Sn**	**02 01 02.5**	**+1.1**
RANC	**El Ranchito**	**0.76**	**31**	*i* P	**Pn**	**02 00 51.8**	**+0.6**
RANC				*e*S	**Sn**	**02 01 03.0**	**+1.3**
PACA	**Pacayal**	**0.78**	**28**	*i* P	**Pn**	**02 00 52.0**	**+0.6**
PACA				*e*S	**Sn**	**02 01 03.2**	**+1.2**
PACA	**Pacayal**	**0.78**	**28**	P	**Pn**	**02 00 52.0**	**+0.6**
BLLM	**Bellamira**	**0.80**	**34**	i̲ *i*P	**Pn**	**02 00 52.2**	**+0.6**
SNVI	**San Vicente**	**0.84**	**351**	*e*P	**Pb**	**02 00 52.9**	**+0.1**
PQSS	**Presa 15 de Se**	**0.85**	**9**	*e*P	**Pb**	**02 00 53.1**	**+0.2**
PQSS				*e*S	**Sn**	**02 01 04.9**	**+1.3**
PQSS	**Presa 15 de Se**	**0.85**	**9**	P	**Pb**	**02 00 52.9**	**0.0**
UESV	**Universidad de**	**0.86**	**354**	S	**Sn**	**02 01 05.0**	**+1.1**
UESV	**Universidad de**	**0.86**	**354**	P	**Pb**	**02 00 53.1**	**+0.1**
CNRM	**Centro Naciona**	**0.86**	**37**	*e*P	**Pb**	**02 00 53.2**	**+0.2**
CNRM				*e*S	**Sn**	**02 01 05.5**	**+1.6**
CNRM	**Centro Naciona**	**0.86**	**37**	P	**Pb**	**02 00 53.3**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.92**	**358**	*i* P	**Pb**	**02 00 54.0**	**0.0**
SCLA				*e*S	**Sn**	**02 01 07.0**	**+1.6**
SCLA	**Alcaldia de Sa**	**0.92**	**358**	S	**Sn**	**02 01 06.5**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.92**	**358**	P	**Pb**	**02 00 54.0**	**0.0**
LALI	**Alcalda de L**	**0.93**	**319**	*e*P	**Pn**	**02 00 53.1**	**-0.2**
LALI				*e*S	**Sn**	**02 01 05.4**	**-0.2**
LALI	**Alcalda de L**	**0.93**	**319**	*e*P	**Pn**	**02 00 52.9**	**-0.4**
LALI				*e*S	**Sn**	**02 01 05.1**	**-0.5**
LALI				IAML		02 01 07.1	
	comp=N,658nm,0.4s						
LALI	**Alcalda de L**	**0.93**	**319**	P	**Pn**	**02 00 54.0**	**+0.6**
LCND	**La Caada**	**0.95**	**56**	*i* P	**Pb**	**02 00 54.0**	**-0.5**
LCND				*e*P	**Pn**	**02 00 54.5**	**+0.9**
LCND					*e*S	**Sb**	**02 01 06.9**	**+0.2**
LCND	**La Caada**	**0.95**	**56**	P	**Pb**	**02 00 54.0**	**-0.5**
PANCS	**Alcalda de**	**0.95**	**331**	P	**Pb**	**02 00 55.1**	**+0.6**
PANCS	**Alcalda de**	**0.95**	**331**	S	**Sb**	**02 01 06.5**	**-0.4**
PAVA	**Las Pavas**	**0.96**	**346**	*e*P	**Pb**	**02 00 54.5**	**-0.3**
PAVA				*e*S	**Sb**	**02 01 08.2**	**+1.0**
PAVA	**Las Pavas**	**0.96**	**346**	S	**Sb**	**02 01 07.8**	**+0.7**
PAVA	**Las Pavas**	**0.96**	**346**	P	**Pb**	**02 00 54.6**	**-0.1**
LOMA	**Loma Larga**	**0.98**	**332**	P	**Pn**	**02 00 54.4**	**+0.3**
LOMA	**Loma Larga**	**0.98**	**332**	S	**Sb**	**02 01 07.9**	**+0.2**
CNCH	**Conchagua**	**0.98**	**59**	*e*P	**Pn**	**02 00 54.4**	**+0.3**
CNCH	**Conchagua**	**0.98**	**59**	S	**Sb**	**02 01 08.8**	**+1.2**
LBRS	**Las Brisas**	**1.01**	**341**	*e*P	**Pb**	**02 00 55.6**	**0.0**
UDBS	**Universidad Do**	**1.03**	**335**	S	**Sb**	**02 01 09.2**	**0.0**
UDBS	**Universidad Do**	**1.03**	**335**	P	**Pb**	**02 00 55.5**	**-0.5**
IGN	**Direccin Gen**	**1.04**	**334**	P	**Pn**	**02 00 55.3**	**+0.4**
IGN	**Direccin Gen**	**1.04**	**334**	S	**Sb**	**02 01 09.3**	**0.0**
UTEC	**Universidad Te**	**1.04**	**332**	P	**Pb**	**02 00 55.7**	**-0.4**
UTEC	**Universidad Te**	**1.04**	**332**	S	**Sb**	**02 01 09.3**	**-0.1**
UEES	**Universidad Ev**	**1.07**	**331**	S	**Sb**	**02 01 10.2**	**-0.1**
UEES	**Universidad Ev**	**1.07**	**331**	P	**Pn**	**02 00 56.0**	**+0.6**
CAHU	**Cacacuatique**	**1.09**	**26**	*e*P	**Pb**	**02 00 56.5**	**-0.6**
PIC2	**El Picacho**	**1.10**	**331**	*e*P	**Pb**	**02 00 56.9**	**-0.3**
PIC2				*e*S	**Sb**	**02 01 11.4**	**0.0**
PMON	**Piamonte**	**1.10**	**327**	*e*P	**Pn**	**02 00 56.5**	**+0.6**
PMON	**Piamonte**	**1.10**	**327**	P	**Pn**	**02 00 56.5**	**+0.6**
PMON	**Piamonte**	**1.10**	**327**	S	**Sb**	**02 01 10.9**	**-0.4**
BOQS	**Boqueron**	**1.11**	**329**	*e*P	**Pb**	**02 00 56.7**	**-0.5**
CSGN	**Cosiguina Volc**	**1.13**	**80**	P	**Pn**	**02 00 56.9**	**+0.7**
CSGN				S	**Sb**	**02 01 11.4**	**-0.5**
JAYA	**Jayaque - finc**	**1.14**	**320**	*e*P	**Pn**	**02 00 56.9**	**+0.6**
JAYA				*e*S	**Sb**	**02 01 11.8**	**-0.4**
JAYA	**Jayaque - finc**	**1.14**	**320**	*e*P	**Pn**	**02 00 56.8**	**+0.4**
JAYA				*e*S	**Sb**	**02 01 11.6**	**-0.7**
JAYA	**Jayaque - finc**	**1.14**	**320**	P	**Pb**	**02 00 57.4**	**-0.3**
POTN	**Potosi Cosigui**	**1.18**	**79**	P	**Pn**	**02 00 57.8**	**+1.0**
POTN				S	**Sn**	**02 01 12.3**	**+0.5**
CEDA	**San Andres**	**1.22**	**326**	S	**Sb**	**02 01 14.0**	**-0.6**
CEDA	**San Andres**	**1.22**	**326**	P	**Pn**	**02 00 58.1**	**+0.6**
CEVE	**Cerro Verde**	**1.38**	**319**	*e*P	**Pb**	**02 01 01.4**	**-0.4**
CEVE				*e*S	**Sb**	**02 01 19.6**	**+0.3**
CEVE	**Cerro Verde**	**1.38**	**319**	S	**Sb**	**02 01 18.7**	**-0.5**
CEVE	**Cerro Verde**	**1.38**	**319**	P	**Pn**	**02 01 00.8**	**+1.1**
LLGN	**La Laguna**	**1.40**	**350**	*e*P	**Pn**	**02 01 00.5**	**+0.6**
LLGN				*e*S	**Sb**	**02 01 17.8**	**-1.8**
LLGN	**La Laguna**	**1.40**	**350**	P	**Pn**	**02 01 00.2**	**+0.3**
UNIC	**Universidad Ca**	**1.45**	**325**	P	**Pn**	**02 01 01.4**	**+0.7**
UNIC	**Universidad Ca**	**1.45**	**325**	S	**Sb**	**02 01 19.4**	**-1.8**
MARCA	**Marcala la Paz**	**1.52**	**25**	*i* P	**Pn**	**02 01 01.8**	**+0.3**
MARCA				*e*S	**Sn**	**02 01 19.9**	**-0.4**
MARCA	**Marcala la Paz**	**1.52**	**25**	S	**Sb**	**02 01 20.2**	**-2.8**
MARCA	**Marcala la Paz**	**1.52**	**25**	P	**Pn**	**02 01 01.8**	**+0.3**
NUBE	**Las Nubes**	**1.54**	**317**	*e*P	**Pn**	**02 01 02.6**	**+0.8**
NUBE				*e*S	**Sn**	**02 01 21.8**	**+1.0**
NUBE	**Las Nubes**	**1.54**	**317**	*e*P	**Pn**	**02 01 02.5**	**+0.8**
NUBE				*e*S	**Sn**	**02 01 21.0**	**+0.3**
NUBE	**Las Nubes**	**1.54**	**317**	P	**Pn**	**02 01 02.7**	**+0.8**
LOAL	**Lomas de Alarc**	**1.61**	**319**	P	**Pb**	**02 01 04.6**	**-1.0**

ALCO				*e*S	**Sn**	**02 03 31.1**	**-2.1**
BRU2	**Volcan**	**7.11**	**123**	*e*P	**Pn**	**02 02 20.3**	**+1.9**
RBALA	**Bur**	**7.51**	**120**	*e*P	**Pn**	**02 02 26.3**	**+2.5**
TXAR	**Lajitas Array**	**21.56**	**322**	P	**P**	**02 05 22.6**	**-0.9**
	comp=N,1.3nm,0.7s,baz=136,slow=8.4,SNR=16						
	comp=N,1.3nm,0.7s						
ANMO	**Albuquerque**	**27.31**	**327**	LR	LR	02 19 48.2	
	comp=N,22nm,19.2s,baz=180,slow=42						
LPAZ	**La Paz**	**35.32**	**144**	P	**P**	**02 07 28.4**	**-1.3**
	comp=N,2.4nm,1.2s,baz=333,slow=6.8,SNR=3.8						
	comp=N,2.4nm,1.2s						
ULM	**Lac du Bonnet**	**37.83**	**352**	LR	LR	02 24 28.1	
	comp=N,24nm,18.9s,baz=97,slow=39						
BDFB	**Brasilia**	**49.17**	**124**	LR	LR	02 32 02.5	
	comp=N,181nm,21.3s,baz=129,slow=39						
FRB	**Frobisher Bay**	**52.83**	**11**	LR	LR	02 31 15.5	
	comp=N,21nm,19.4s,baz=112,slow=36						
ILAR	**Eielson Array**	**65.23**	**336**	P	P	02 11 10.3	-4.3
	comp=N,0.3nm,0.9s,baz=164,slow=5.0,SNR=5.2						
	comp=N,0.3nm,0.9s						

IDC 04 02:03:12.0±5.3, 4°92S×129°67E, h157km±46km, mb3.0/1, mbtmp3.4/4, Error ellipse: s-maj=107.2km s-min=15.6km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.68**	**196**	P	Pn	02 06 19.3	-0.3
	1.9nm,0.8s,baz=32,slow=9.5,SNR=2.1						
WRA	**Warramunga Arr**	**15.61**	**163**	P	Pn	02 06 44.0	+0.3
	0.1nm,0.2s,baz=331,slow=13,SNR=1.8						
WRA				S	Sn	02 09 24.6	-13
	0.7nm,0.4s,baz=333,slow=22,SNR=9.0						
ASAR	**Alice Springs**	**19.08**	**168**	P	P	02 07 23.1	+0.4
	0.5nm,0.6s,baz=349,slow=12,SNR=5.0						
ASAR				S	S	02 10 51.3	+0.4
	0.5nm,0.7s,baz=356,slow=28,SNR=4.2						
MKAR	**Makanchi Array**	**66.31**	**326**	P	P	02 13 43.6	0.0
	0.2nm,0.5s,baz=144,slow=8.2,SNR=2.7						
	0.2nm,0.5s						

*IDC **04** 02:19:56.6±2.0, 32°20S×69°71W, h0km, mb3.8/3, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=65.9km s-min=35.5km az=12.0*
*GUC **04** 02:20:12.8±0.8, 31°54S×69°79W, h131km±6km, ML4.1*
*SJA **04** 02:20:12.1±0.8, 31°57S×69°50W, h115km±3km, ML3.9, MW3.8*
*NEIC **04** 02:20:13.1±2.5, 31°57S±0°05×69°66W±0°08, h112km±7km, mb4.0/6, ML4.1(GUC), Error ellipse: s-maj=9.9km s-min=6.5km az=103.0*

ISC 04 02:20:12.8±0.7, 31°53S±0°03×69°52W±0°03, h116km±5km, n98, σ1s21/125, mb4.0/5, 9C-11D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.33**	**145**	*e*P	**Pn**	**02 20 29.5**	**-0.3**
RTLS				*e*S	**Sn**	**02 20 42.4**	**-0.2**
RTLS				IAML		02 20 43.6	
	comp=Z,8μm,0.3s						
AUSP	**Uspallata**	**0.70**	**171**	*e*P	**Pn**	**02 20 32.1**	**-0.1**
AUSP				*e*S	**Sn**	**02 20 45.5**	**-1.2**
ZON	**Zonda**	**0.72**	**92**		**Pn**	**02 20 31.6**	**-0.3**
ZON	**Zonda**	**0.72**	**92**	*e*P	**Pn**	**02 20 32.1**	**+0.2**
ZON				*e*S	**Sn**	**02 20 46.3**	**-0.1**
ZON				IAML		02 20 47.2	
	comp=Z,2μm,0.3s						
RTLL	**Cerro Villicun**	**0.91**	**78**	*e*P	**Pn**	**02 20 33.6**	**-0.1**
RTLL				*e*S	**Sn**	**02 20 49.5**	**0.0**
RTLL				IAML		02 20 51.3	
	comp=Z,2μm,0.3s						
ACCO	**Cerro Coronel**	**1.01**	**23**	*e*P	**Pn**	**02 20 35.5**	**+0.5**
ACCO				*e*S	**Sn**	**02 20 53.0**	**+1.3**
CO02	**Combarbal**	**1.31**	**284**	Pn	**Pn**	**02 20 37.6**	**-0.2**
CO02	**Combarbal**	**1.31**	**284**	⇑*i*P	**Pn**	**02 20 37.9**	**+0.1**
CO02				*e*S	**Sn**	**02 20 57.4**	**+0.4**
CO02				IAML		02 20 59.0	
	comp=E,8μm,0.2s						
CO02	**Combarbal**	**1.31**	**284**	*e*P	**Pn**	**02 20 38.0**	**+0.1**
CO02				*e*S	**Sn**	**02 20 58.0**	**+1.1**
CO02				IAML		02 20 59.1	
	comp=Z,3μm,0.4s						
CO04	**Los Peladeros**	**1.34**	**247**	⇓*i*P	**Pn**	**02 20 38.1**	**-0.3**
CO04				*i* S	**Sn**	**02 20 57.4**	**-0.5**
CO04				IAML		02 20 59.2	
	comp=N,5μm,0.3s						
AROD	**Rodeo**	**1.36**	**2**	*e*P	**Pn**	**02 20 39.8**	**+1.1**
AROD				*e*S	**Sn**	**02 21 00.1**	**+1.9**
ACDV	**Cuesta del Vie**	**1.39**	**14**	*e*P	**Pn**	**02 20 39.8**	**+0.9**
ACDV				*e*S	**Sn**	**02 21 00.3**	**+1.5**
ARCO	**CERRO ARCO**	**1.40**	**159**	*e*P	**Pn**	**02 20 39.5**	**+0.5**
ARCO				*e*S	**Sn**	**02 21 00.1**	**+1.2**
ARCO				IAML		02 21 01.3	
	comp=Z,3μm,0.2s						
VA03	**San Esteban**	**1.51**	**215**	Pn	**Pn**	**02 20 40.2**	**0.0**
VA03	**San Esteban**	**1.51**	**215**	⇓*i*P	**Pn**	**02 20 40.4**	**+0.2**
VA03				*i* S	**Sn**	**02 21 01.6**	**+0.5**
VA03				IAML		02 21 03.4	
	comp=E,1μm,0.3s						
VA03	**San Esteban**	**1.51**	**215**	*e*P	**Pn**	**02 20 40.5**	**+0.2**
VA03				*e*S	**Sn**	**02 21 02.4**	**+1.3**
VA03				IAML		02 21 04.2	
	comp=Z,743nm,0.3s						
CO01	**Juntas del Tor**	**1.62**	**342**	Pn	**Pn**	**02 20 43.1**	**+1.4**
CO01	**Juntas del Tor**	**1.62**	**342**	⇑*i*P	**Pn**	**02 20 43.6**	**+1.9**
CO01				*e*S	**Sn**	**02 21 06.3**	**+2.7**
AAGR	**Agrelo**	**1.66**	**160**	*e*P	**Pn**	**02 20 42.3**	**+0.3**
AAGR				*e*S	**Sn**	**02 21 04.9**	**+0.7**
AAGR				IAML		02 21 08.1	
	comp=Z,751nm,0.4s						
GO04	**Tololo Observa**	**1.74**	**320**	Pn	**Pn**	**02 20 43.0**	**-0.1**
GO04	**Tololo Observa**	**1.74**	**320**	⇑*i*P	**Pn**	**02 20 43.2**	**+0.1**
GO04				*i* S	**Sn**	**02 21 07.0**	**+0.7**
GO04				IAML		02 21 09.1	
	comp=E,4μm,0.4s						
VA06	**Catapilco**	**1.83**	**235**	Pn	**Pn**	**02 20 42.4**	**-1.5**
VA06	**Catapilco**	**1.83**	**235**	⇓*e*P	**Pn**	**02 20 42.8**	**-1.1**
VA06				IAML		02 21 09.4	
	comp=E,1μm,0.4s						
PEL	**Peldehue**	**1.89**	**211**	Pn	**Pn**	**02 20 44.0**	**-0.7**
PEL	**Peldehue**	**1.89**	**211**	⇓*e*P	**Pn**	**02 20 44.6**	**-0.2**
PEL	**Peldehue**	**1.89**	**211**	*e*P	**Pn**	**02 20 44.5**	**-0.2**
PEL				*e*S	**Sn**	**02 21 09.7**	**+0.5**
PEL				IAML		02 21 12.3	
	comp=Z,538nm,0.3s						
ROCH	**El Roble**	**1.92**	**221**	⇓*e*P	**Pn**	**02 20 44.7**	**-0.5**
ROC1	**El Roble**	**1.92**	**221**	*e*P	**Pn**	**02 20 45.0**	**-0.4**
ROC1				*e*S	**Sn**	**02 21 09.8**	**-0.3**
MT10	**Hacienda Santa**	**1.94**	**206**	⇓*e*P	**Pn**	**02 20 46.0**	**+0.5**
MT04	**Ro Olivares**	**1.94**	**195**	⇑*e*P	**Pn**	**02 20 46.8**	**+1.2**
MT04				*e*S	**Sn**	**02 21 12.7**	**+2.1**
MT08	**Bocatoma Ro**	**1.96**	**192**	Pn	**Pn**	**02 20 46.3**	**+0.5**
MT08	**Bocatoma Ro**	**1.96**	**192**	⇑*e*P	**Pn**	**02 20 46.8**	**+1.0**
MT08				*e*S	**Sn**	**02 21 13.0**	**+2.1**
AVFE	**Valle Fertil**	**1.97**	**64**	*e*P	**Pn**	**02 20 46.1**	**+0.3**
AVFE				*e*S	**Sn**	**02 21 11.2**	**+0.3**
CO06	**Fray Jorge**	**2.00**	**295**	Pn	**Pn**	**02 20 44.7**	**-1.5**
CO06	**Fray Jorge**	**2.00**	**295**	⇑*i*P	**Pn**	**02 20 45.0**	**-1.1**
CO06				*e*S	**Sn**	**02 21 09.5**	**-2.1**
CO06				IAML		02 21 19.1	
	comp=N,606nm,0.2s						
MT14	**Cerro Cal¡n**	**2.05**	**205**	⇓*e*P	**Pn**	**02 20 47.2**	**+0.4**
MT16	**CCHEN**	**2.08**	**204**	⇓*e*P	**Pn**	**02 20 47.5**	**+0.5**
MT05	**Renca**	**2.13**	**209**	Pn	**Pn**	**02 20 47.6**	**-0.1**
MT05	**Renca**	**2.13**	**209**	⇓*e*P	**Pn**	**02 20 47.8**	**+0.1**
MT05				*e*S	**Sn**	**02 21 14.7**	**+0.3**
MT05				IAML		02 21 17.1	
	comp=E,2μm,0.3s						
MT03	**Universidad Ad**	**2.13**	**203**	Pn	**Pn**	**02 20 48.0**	**+0.2**
MT03	**Universidad Ad**	**2.13**	**203**	⇓*e*P	**Pn**	**02 20 48.3**	**+0.5**
MT03				*e*S	**Sn**	**02 21 15.3**	**+0.7**
MT03				IAML		02 21 17.8	
	comp=N,2μm,0.4s						
CO05	**La Serena**	**2.18**	**317**	Pn	**Pn**	**02 20 47.8**	**-0.5**
CO05	**La Serena**	**2.18**	**317**	⇑*i*P	**Pn**	**02 20 48.0**	**-0.4**
CO05				*i* S	**Sn**	**02 21 14.4**	**-1.1**
CO05				IAML		02 21 15.5	
	comp=E,1μm,0.4s						
MT02	**Curacav**	**2.21**	**218**	Pn	**Pn**	**02 20 47.4**	**-1.2**
MT02	**Curacav**	**2.21**	**218**	*e*P	**Pn**	**02 20 47.7**	**-1.0**
AGUA	**GUANDACOL**	**2.22**	**24**	*e*P	**Pn**	**02 20 50.5**	**+1.5**
AGUA				*e*S	**Sn**	**02 21 10.6**	**-6.0**
AGUA				IAML		02 21 19.7	
	comp=Z,432nm,0.5s						
MT15	**Las Vizcachas**	**2.23**	**202**	⇓*e*P	**Pn**	**02 20 49.3**	**+0.3**
MT15				*e*S	**Sn**	**02 21 17.5**	**+0.8**
MT15				IAML		02 21 20.0	
	comp=N,2μm,0.3s						
VA01	**Torpederas**	**2.34**	**230**	Pn	**Pn**	**02 20 48.4**	**-1.9**
VA01	**Torpederas**	**2.34**	**230**	*e*P	**Pn**	**02 20 47.9**	**-2.5**
MT12	**Pirque**	**2.37**	**201**	*e*P	**Pn**	**02 20 50.8**	**0.0**
LMEL	**Las Melosas**	**2.38**	**194**	Pn	**Pn**	**02 20 51.1**	**0.6**
LMEL	**Las Melosas**	**2.38**	**194**	⇑*e*P	**Pn**	**02 20 51.7**	**+0.6**
LMEL				*e*S	**Sn**	**02 21 22.0**	**+1.5**
ACHE	**Chepes**	**2.47**	**82**	*e*P	**Pn**	**02 20 52.5**	**+0.4**
ACHE				*e*S	**Sn**	**02 21 21.7**	**-0.7**
MT09	**Talagante**	**2.56**	**209**	Pn	**Pn**	**02 20 52.8**	**-0.6**
MT09	**Talagante**	**2.56**	**209**	*e*P	**Pn**	**02 20 52.5**	**-0.9**
BO04	**La Punta**	**2.62**	**200**	Pn	**Pn**	**02 20 53.3**	**-0.7**
LCO	**Las Campanas**	**2.71**	**338**	Pn	**Pn**	**02 20 55.0**	**-0.4**
LCO	**Las Campanas**	**2.71**	**338**	*e*P	**Pn**	**02 20 55.3**	**-0.1**
MT01	**Popeta**	**2.75**	**212**	Pn	**Pn**	**02 20 54.1**	**-1.6**
MT01	**Popeta**	**2.75**	**212**	⇑*e*P	**Pn**	**02 20 54.4**	**-1.3**
APLL	**PUNTA DE LOS L**	**2.81**	**67**	*e*P	**Pn**	**02 20 56.5**	**+0.1**
APLL				*e*S	**Sn**	**02 21 30.2**	**+0.2**
VCA	**Vinchina**	**3.00**	**23**	*e*P	**Pn**	**02 21 00.4**	**+1.2**
VCA	**Vinchina**	**3.00**	**23**	*e*P	Pn	02 20 48.2	-11
VCA				IAML		02 21 39.9	
	comp=Z,270nm,0.6s						
ACLC	**CERRO LA CRUZ**	**3.05**	**47**	*e*P	**Pn**	**02 21 00.2**	**+0.4**
ACLC				*e*S	**Sn**	**02 21 35.0**	**-1.0**
BO01	**Tunca**	**3.15**	**204**	Pn	**Pn**	**02 20 59.3**	**-1.6**
MRA	**San Martin**	**3.35**	**106**	*e*P	**Pn**	**02 21 03.8**	**+0.1**
MRA				*e*S	**Sn**	**02 21 42.2**	**-0.8**
BO02	**Sierra Bellavi**	**3.42**	**198**	Pn	**Pn**	**02 21 04.1**	**-0.5**
AC04	**Llanos de Chal**	**3.58**	**337**	Pn	**Pn**	**02 21 05.9**	**-0.8**
GO03	**Copiapo**	**3.97**	**351**	Pn	**Pn**	**02 21 11.2**	**-0.7**
AC06	**Mina Casimiro**	**4.22**	**350**	Pn	**Pn**	**02 21 14.7**	**-0.6**
ML02	**Panimavida**	**4.51**	**200**	Pn	**Pn**	**02 21 16.7**	**-2.4**
AC02	**Maricunga**	**4.69**	**4**	Pn	**Pn**	**02 21 22.2**	**+0.2**
PIL	**Pilar**	**4.81**	**93**	*e*P	Pn	02 21 32.2	+9.1
BI02	**San Fabin de**	**5.33**	**195**	Pn	**Pn**	**02 21 28.0**	**-2.1**
AC01	**Pan de Azucar**	**5.44**	**350**	Pn	**Pn**	**02 21 29.4**	**-2.3**
PB14	**IPOC Station P**	**6.92**	**353**	Pn	**Pn**	**02 21 48.6**	**-3.4**
H03N1	**Juan Fernandez**	**8.16**	**254**	T	T	02 29 07.7	
	baz=82,slow=73,SNR=73						
H03N3	**Juan Fernandez**	**8.18**	**254**	T	T	02 29 08.9	
	baz=82,slow=73,SNR=100						
H03N2	**Juan Fernandez**	**8.18**	**254**	T	T	02 29 09.9	
	baz=82,slow=73,SNR=89						
TRQA	**Tornquist**	**8.99**	**138**	Pn	**Pn**	**02 22 17.8**	**-1.8**
PLTB	**Pedras Altas**	**13.56**	**95**	Pn	**Pn**	**02 23 17.2**	**-3.3**
LPAZ	**La Paz**	**15.22**	**5**	Pn	**Pn**	**02 23 41.6**	**-0.6**
LPAZ	**La Paz**	**15.22**	**5**	Pn	**P**	**02 23 43.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=141,slow=6.5,SNR=2.6						
	comp=Z,1.0nm,0.7s						
BDFB	**Brasilia**	**25.19**	**56**	P	**P**	**02 25 28.5**	**+0.7**
BDFB				IAmb	IAmb	02 25 41.5	
	comp=Z,2.6nm,0.9s						
BDFB	**Brasilia**	**25.19**	**56**	P	**P**	**02 25 28.0**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=198,slow=8.9,SNR=4.5						
	comp=Z,2.3nm,0.7s						
MACA	**Manacapuru-AM**	**29.42**	**18**	P	**P**	**02 26 05.2**	**-0.2**
MACA				IAmb	IAmb	02 26 17.6	
	comp=Z,3.7nm,1.1s						
TXAR	**Lajitas Array**	**68.69**	**328**	P	**P**	**02 31 05.4**	**+1.5**
TXAR	**Lajitas Array**	**68.69**	**328**	P	**P**	**02 31 05.5**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=144,slow=6.2,SNR=2.7						
	comp=Z,0.2nm,0.6s						
LCAR	**Lake Charles**	**70.24**	**341**	P	**P**	**02 31 14.0**	**+0.9**
LCAR				IAmb	IAmb	02 31 26.4	
	comp=Z,2.3nm,0.9s						
DBIC	**Dimbokro**	**72.36**	**70**	P	**P**	**02 31 26.7**	**+0.2**
DBIC				IAmb	IAmb	02 31 40.1	
	comp=Z,2.9nm,0.9s						
DBIC	**Dimbokro**	**72.36**	**70**	P	**P**	**02 31 27.4**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=256,slow=5.3,SNR=4.3						
	comp=Z,1.4nm,0.5s						
R40A	**Maddies Statio**	**72.63**	**341**	P	**P**	**02 31 28.0**	**+0.6**
PDAR	**Pinedale Array**	**82.56**	**331**	P	**P**	**02 32 24.1**	**+1.3**
PDAR	**Pinedale Array**	**82.56**	**331**	P	**P**	**02 32 22.8**	**-0.1**
	baz=138,slow=4.9,SNR=4.4						
ZAA0	**Zalesovo Array**	**151.01**	**32**	PKPbc	**PKiKP**	**02 39 52.8**	**+0.8**
ZALV	**Zalesovo Beam**	**151.01**	**32**	PKPbc	**PKiKP**	**02 39 52.9**	**+0.9**
	comp=Z,3.0nm,0.5s,baz=309,slow=3.4,SNR=10						
MKAR	**Makanchi Array**	**153.53**	**47**	PKPbc	**PKiKP**	**02 39 57.9**	**+0.3**
MKAR	**Makanchi Array**	**153.53**	**47**	PKPbc	**PKiKP**	**02 39 57.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=323,slow=0.7,SNR=3.0						

*ASRS **04** 02:22:50.1±0.4, 50°N×2°×8°E±°, h5km, MLh3.8/9, Error ellipse: s-maj=4.4km s-min=3.5km az=159.1, confirmed*
*NNC **04** 02:22:52.1±1.6, 49°94N×88°02E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=13.9km s-min=6.0km az=102.0*

ISC 04 02:22:52.8±0.9, 49°97N±0°03×88°03E±0°03, h10km, n18, σ2s07/39, 12C-8D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**0.24**	**58**	⇓Pg	**Pg**	**02 22 54.2**	**-3.7**
CUR				Sg	**Sg**	**02 22 57.8**	**-3.5**
AKAR	**Aktash**	**0.43**	**323**	Pg	**Pg**	**02 22 59.5**	**-1.9**
AKAR				Sg	**Sg**	**02 23 07.0**	**-0.1**
DGZ	**Jazzator, Alta**	**0.47**	**235**	⇓Pg	**Pg**	**02 22 58.3**	**-3.8**
DGZ				Sg	**Sg**	**02 23 04.4**	**-3.9**
CHBI	**Chibit, Altay**	**0.48**	**316**	Pg	**Pg**	**02 23 00.2**	**-2.0**
CHBI				Sg	**Sg**	**02 23 07.9**	**-0.7**
ULGR	**Ulagan, Altay**	**0.65**	**356**	⇓Pg	**Pg**	**02 23 02.9**	**-2.6**
ULGR				Sg	**Sg**	**02 23 13.4**	**-0.7**
TEL	**Teeli**	**1.74**	**52**	Pg	**Pg**	**02 23 27.2**	**+1.1**
TEL				Sg	**Sg**	**02 23 51.1**	**+2.4**
ELDR	**Elanda**	**1.75**	**316**	Pg	**Pn**	**02 23 23.0**	**-0.3**
ELDR				Sg	**Sg**	**02 23 49.5**	**+0.3**
YALR	**Yailyu, Altay**	**1.82**	**352**	Pg	**Pn**	**02 23 24.6**	**+0.5**
YALR				Sg	**Sg**	**02 23 50.0**	**-1.3**
ARTR	**Artybash**	**1.89**	**346**	Pg	**Pb**	**02 23 25.8**	**-1.6**
ARTR				Sg	**Sg**	**02 23 52.0**	**-1.5**
GALT	**Gorno-Altaysk,**	**2.38**	**327**	Pg	**Pb**	**02 23 35.7**	**-0.2**
GALT				Sg	**Sg**	**02 24 08.7**	**-0.7**
TASR	**Tashtagol**	**2.79**	**358**	Pg	**Pb**	**02 23 40.9**	**-1.9**
TASR				Sg	**Sg**	**02 24 20.0**	**-2.5**
DJO	**Djoy, Khakassi**	**3.45**	**34**	Pn	**Pn**	**02 23 46.8**	**+0.1**
DJO				Pg	**Pb**	**02 23 54.6**	**+0.6**
DJO				Sg	**Sg**	**02 24 41.1**	**-2.4**
ELT	**Eltsovka**	**3.48**	**342**	Pg	**Pn**	**02 23 49.4**	**+2.5**
ELT				Sg	**Sb**	**02 24 39.2**	**+2.5**
ZAA0	**Zalesovo Array**	**4.45**	**335**	⇑Pn	**Pn**	**02 24 00.5**	**+0.3**
	0.4nm,0.3s						
ZAA0				⇑Pg	**Pg**	**02 24 15.5**	**-2.5**
	0.6nm,0.4s						
ZAA0				⇑Sn	**Sn**	**02 24 54.7**	**+2.7**
	1.5nm,0.3s						
ZAA0				⇑Lg	Lg	02 25 12.2	
	8.8nm,0.9s						
MK31	**Makanchi Array**	**4.97**	**232**	⇓Pn	**Pn**	**02 24 08.4**	**+0.8**
	5.6nm,0.3s,baz=60,slow=11,SNR=267						
MK31				⇑Pg	**Pb**	**02 24 21.9**	**+2.0**
	9.5nm,0.5s,baz=54,slow=16,SNR=9.3						
MK31				⇑Sn	**Sn**	**02 25 06.7**	**+1.7**
	11nm,0.5s,baz=60,slow=27,SNR=3.5						
MK31				⇑Lg	Lg	02 25 28.2	
	15nm,0.5s,baz=53,slow=30,SNR=5.1						
MAKZ	**Makanchi**	**5.12**	**234**	⇑Pn	**Pn**	**02 24 10.8**	**+1.1**
	6.8nm,0.3s						
MAKZ				⇑Pg	**Pb**	**02 24 24.3**	**+1.8**
	15nm,0.7s						
MAKZ				⇓Lg	Lg	02 25 33.5	
	17nm,0.4s						
KURK	**Kurchatov**	**6.07**	**281**	⇓Pn	**Pn**	**02 24 22.6**	**+0.1**
	2.0nm,0.5s						
KURK				⇓Sn	**Sn**	**02 25 34.0**	**+2.0**
	7.9nm,0.8s						
KURK				⇑Lg	Lg	02 26 03.8	
	21nm,0.8s						
KURBB	**Kurchatov Arra**	**6.12**	**280**	⇓Pn	**Pn**	**02 24 22.6**	**-0.6**
	6.6nm,0.3s						
KURBB				⇑Sn	**Sn**	**02 25 36.7**	**+3.4**
	25nm,0.5s						
KURBB				⇑Lg	Lg	02 26 06.9	
	88nm,0.6s						

*IDC **04** 02:29:08.8±5.1, 8°17S×119°52E, h211km±64km, mb3.0/3, mbtmp3.4/4, Error ellipse: s-maj=163.5km s-min=13.1km az=48.0*
*DJA **04** 02:29:08.5±0.4, 8°S×4°×12°0E±°, h184km±5km, M3.7/8, mb4.3/1, MLv3.4/8*

ISC 04 02:29:07.8±1.0, 8°16S±0°07×119°70E±0°10, h200km, n12, σ1s45/15, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.51**	**192**	P	**Pn**	**02 29 40.9**	**-0.8**
WBSI				S	**Sn**	**02 30 05.9**	**-2.2**
WSI	**Waingapu**	**1.62**	**159**	P	**Pn**	**02 29 41.9**	**-0.7**
WSI				S	**Sn**	**02 30 07.8**	**-2.0**
PLAI	**Plampang**	**2.01**	**250**	P	**Pn**	**02 29 46.7**	**+0.2**
BSSI	**Bau Bau, Buton**	**2.15**	**22**	P	**Pn**	**02 29 47.0**	**-1.0**
BASI	**Baing, Sumba**	**2.23**	**157**	P	**Pn**	**02 29 48.5**	**-0.3**
TWSI	**Taliwang, Sumb**	**2.84**	**258**	P	**Pn**	**02 29 56.3**	**+0.6**
BKSI	**Bulukumba**	**2.85**	**9**	P	**Pn**	**02 29 55.7**	**0.0**
PCJI	**Pacitan**	**8.44**	**269**	P	**Pn**	**02 31 07.5**	**+0.7**
WRA	**Warramunga Arr**	**18.39**	**131**	P	**P**	**02 33 09.2**	**+1.1**
	0.1nm,0.3s,baz=304,slow=13,SNR=3.5						
WRA				S	**S**	**02 36 30.7**	**+2.9**
	0.4nm,0.6s,baz=304,slow=24,SNR=3.1						
ASAR	**Alice Springs**	**20.57**	**140**	P	**P**	**02 33 33.2**	**+1.7**
	0.1nm,0.3s,baz=327,slow=13,SNR=2.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**64.03**	**332**	P	**P**	**02 39 19.9**	**-0.3**
	0.6nm,0.6s,baz=128,slow=6.4,SNR=5.6						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**68.51**	**339**	P	**P**	**02 39 47.5**	**-0.9**
	0.8nm,0.4s,baz=136,slow=8.1,SNR=3.7						
	0.8nm,0.4s						

*IDC **04** 03:11:42.1±1.2, 2°55S×138°12E, h0km, mb3.8/4, mbtmp3.7/6, ML3.1/2, MS3.2/3, Error ellipse: s-maj=35.6km s-min=25.4km az=73.0*

ISC 04 03:11:47.2±1.1, 2°65S±0°2×138°2E±0°2, h35km, n8, σ0s85/6, mb4.0/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.48**	**88**	Pn	**Pn**	**03 12 25.2**	**0.0**
	1.4nm,0.3s,baz=267,slow=10.0,SNR=6.1						
JAY				LR	LR	03 13 48.8	
	comp=Z,189nm,18.5s,baz=279,slow=49						
	26nm,0.8s						
WRA	**Warramunga Arr**	**17.65**	**192**	P	**Pn**	**03 15 51.4**	**+0.9**
	0.1nm,0.3s,baz=12,slow=12,SNR=2.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**21.36**	**191**	P	**P**	**03 16 30.8**	**-1.0**
	0.4nm,0.5s,baz=13,slow=11,SNR=7.1						
	0.4nm,0.5s						
YAK	**Yakutsk**	**64.78**	**356**	LR	LR	03 48 48.9	
	comp=Z,12nm,19.0s,baz=52,slow=34						
MKAR	**Makanchi Array**	**69.40**	**323**	P	**P**	**03 22 51.8**	**0.0**
	0.8nm,0.6s,baz=114,slow=7.6,SNR=8.6						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**73.36**	**325**	P	**P**	**03 23 14.8**	**-0.7**
	0.6nm,0.2s,baz=115,slow=4.9,SNR=2.7						
	0.6nm,0.2s						
VNDA	**Vanda**	**75.94**	**175**	LR	LR	03 56 24.3	
	comp=Z,30nm,18.2s,baz=174,slow=35						
BVAR	**Borovoye Array**	**78.94**	**325**	P	**P**	**03 23 47.3**	**+0.1**
	1.0nm,0.5s,baz=93,slow=12,SNR=4.3						
	1.0nm,0.5s						

*BUT **04** 03:15:52.4±0.9, 46°89N±0°03×112°53W±0°03, h13km±5km, Error ellipse: s-maj=4.2km s-min=2.8km az=206.0*

NEIC 04 03:15:52.1±1.1, 46°90N±0°03×112°54W±0°03, h10km±6km, ML2.3/18, ML2.5/18(BUT), Error ellipse: s-maj=4.2km s-min=2.2km az=211.0, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYMT	**Lyon Mountain**	**0.19**	**66**		Pg	03 15 56.9	+0.6
LYMT				Sg	Sg	03 15 59.6	+0.6
BEMT	**Mount Belmont**	**0.20**	**136**		Pg	03 15 56.9	+0.4
BEMT					Sg	03 16 00.1	+0.6
OVMT	**Ovando**	**0.36**	**299**	Pg	Pg	03 15 59.7	+0.5
CHMT	**Chamberlain Mo**	**0.49**	**273**		Pg	03 16 02.1	+0.4
SLMT	**Seeley Lake**	**0.74**	**298**		Pg

mbtmp3.6/5,ML3.7/1,MS3.2/3,Error ellipse: s-maj=43.7km s-min=24.5km az=66.0
*JMA **04** 03:32:17.4±0.1,24°.0N±0°.4×12°.2E±°, h15km±1km, MV3.6/14,TAIWAN REGION*
*TAP **04** 03:32:17.9,24°.02N×121°.51E,h16km,ML4.0,B*
ISC 04 03:32:17.6±0.7,24°.01N±0°.01×121°.53E±0°.01,h18km±2km, n191,σ0§59/301,mb3.5/4,MS3.3/3,20C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETM	**Tongmen**	**0.06**	**222**	*i*P	**Pg**	**03 32 21.4**	**+0.4**
ETM				*i* S	**Sg**	**03 32 23.2**	**0.0**
HWA	**Hwalien**	**0.07**	**116**	*i*eP	**Pg**	**03 32 22.1**	**+1.0**
HWA				*i* S	**Sg**	**03 32 24.9**	**+1.6**
TWD	**Chiawan**	**0.09**	**38**	*i*P	**Pg**	**03 32 21.8**	**+0.6**
TWD				*i* S	**Sg**	**03 32 24.2**	**+0.6**
LXIB	**Xiulin Townshi**	**0.11**	**277**	*i*P	**Pg**	**03 32 21.6**	**0.0**
LXIB				*i* S	**Sg**	**03 32 24.2**	**-0.1**
TEYL	**Yanliau Villag**	**0.15**	**157**	*i*eP	**Pg**	**03 32 22.5**	**+0.6**
TEYL				eS	**Sg**	**03 32 26.3**	**+1.5**
ETL	**Fush Village**	**0.17**	**28**	P	**Pg**	**03 32 22.5**	**+0.3**
ETL				S	**Sg**	**03 32 25.7**	**+0.4**
NACB	**Ninganchiao**	**0.17**	**19**	P	**Pg**	**03 32 22.5**	**+0.2**
NACB	**Ninganchiao**	**0.17**	**19**	S	**Sg**	**03 32 25.5**	**+0.2**
NACB	**Ninganchiao**	**0.17**	**19**	*i*P	**Pg**	**03 32 22.4**	**+0.2**
NACB				S	**Sg**	**03 32 25.1**	**-0.2**
ETLH	**Xiulin Townshi**	**0.20**	**346**	*i*P	**Pg**	**03 32 22.9**	**+0.2**
ETLH				*i* S	**Sg**	**03 32 25.8**	**0.0**
ESL	**Shilin**	**0.21**	**206**	*i*P	**Pb**	**03 32 22.8**	**+0.1**
ESL				S	**Sg**	**03 32 26.4**	**+0.1**
SHUL	**Shoufeng**	**0.22**	**173**	P	**Pg**	**03 32 23.7**	**+0.8**
SHUL				S	**Sg**	**03 32 28.0**	**+1.6**
WHF	**Hehuan Shan**	**0.28**	**299**	*i*P	**Pg**	**03 32 24.1**	**0.0**
WHF				S	**Sg**	**03 32 28.3**	**-0.3**
TEGC	**Jichi Village**	**0.30**	**179**	eP	**Pb**	**03 32 25.1**	**+0.7**
TEGC				S	**Sb**	**03 32 30.8**	**+1.9**
WARBT	**Fenglin Townsh**	**0.32**	**205**	*i*P	**Pg**	**03 32 24.2**	**-0.3**
WARBT				eS	**Sg**	**03 32 28.7**	**-0.5**
OWD	**Renai**	**0.33**	**261**	P	**Pg**	**03 32 24.9**	**+0.1**
OWD				S	**Sg**	**03 32 29.2**	**-0.5**
EGFH	**Guangfu**	**0.35**	**196**	eP	**Pg**	**03 32 25.2**	**+0.2**
EGFH				S	**Sg**	**03 32 30.1**	**0.0**
EHP	**Heping Village**	**0.35**	**32**	P	**Pb**	**03 32 25.6**	**+0.1**
EHP				S	**Sb**	**03 32 30.7**	**-0.1**
FUSS	**Fushou**	**0.36**	**312**	*i*P	**Pg**	**03 32 25.6**	**+0.3**
FUSS				S	**Sg**	**03 32 30.5**	**0.0**
EAHA	**Aohua**	**0.37**	**30**	eP	**Pg**	**03 32 25.5**	**+0.1**
EAHA				S	**Sg**	**03 32 30.7**	**+0.1**
WUSB	**Renai**	**0.38**	**268**	*i*P	**Pg**	**03 32 25.9**	**+0.3**
WUSB				S	**Sg**	**03 32 30.9**	**-0.2**
TWT	**Tachien**	**0.41**	**307**	*i*P	**Pb**	**03 32 26.7**	**+0.2**
TWT				eS	**Sg**	**03 32 32.1**	**+0.2**
TDCB	**Techi**	**0.42**	**305**	*i*P	**Pg**	**03 32 26.7**	**+0.4**
TDCB				S	**Sg**	**03 32 32.1**	**-0.2**
VWDT	**VWDT**	**0.44**	**235**	*i*P	**Pg**	**03 32 26.8**	**+0.2**
VWDT				S	**Sg**	**03 32 33.0**	**+0.3**
NNSB	**Datong**	**0.44**	**342**	*i*P	**Pg**	**03 32 27.0**	**+0.3**
NNSB				S	**Sg**	**03 32 32.5**	**-0.3**
NNS	**Nan Shan**	**0.45**	**341**	*i*P	**Pg**	**03 32 27.2**	**+0.3**
NNS				S	**Sg**	**03 32 33.0**	**-0.3**
ENA	**Nanau**	**0.46**	**24**	P	**Pg**	**03 32 26.9**	**0.0**
ENA				eS	**Sg**	**03 32 33.2**	**-0.1**
EWUT	**Wuta**	**0.49**	**27**	eP	**Pb**	**03 32 27.8**	**+0.1**
EWUT				eS	**Sg**	**03 32 34.3**	**+0.1**
HGSD	**Ruisui**	**0.52**	**191**	eP	**Pg**	**03 32 28.2**	**+0.1**
HGSD				eS	**Sb**	**03 32 37.1**	**+1.6**
LATG	**Datong**	**0.53**	**359**	*i*P	**Pg**	**03 32 28.3**	**+0.1**
LATG				S	**Sg**	**03 32 35.1**	**-0.2**
WPL	**Puli Township**	**0.53**	**271**	eP	**Pg**	**03 32 28.4**	**+0.1**
WPL				eS	**Sg**	**03 32 35.2**	**-0.1**
EHY	**Hungye**	**0.54**	**201**	eP	**Pg**	**03 32 27.2**	**-1.2**
EHY				eS	**Sg**	**03 32 35.5**	**-0.1**
EHYH	**Wanrong**	**0.54**	**199**	eP	**Pg**	**03 32 28.2**	**-0.3**
EHYH				eS	**Sg**	**03 32 35.7**	**0.0**
DPDB	**Guoxing**	**0.56**	**273**	P	**Pb**	**03 32 28.8**	**-0.1**
WCS	**Beigang Elemen**	**0.57**	**275**	P	**Pb**	**03 32 29.1**	**0.0**
SSLB	**Suanglung**	**0.57**	**248**	P	**Pb**	**03 32 28.8**	**-0.3**
SSLB	**Suanglung**	**0.57**	**248**	S	**Sg**	**03 32 36.5**	**-0.3**
SSLB	**Suanglung**	**0.57**	**248**	*i*P	**Pb**	**03 32 29.0**	**-0.2**
SSLB				eS	**Sg**	**03 32 35.7**	**-1.1**
SMLT	**Sun Moon Lake**	**0.59**	**258**	*i*P	**Pb**	**03 32 29.3**	**-0.4**
SMLT				S	**Sb**	**03 32 37.1**	**-0.4**
WHP	**Taichung City**	**0.60**	**297**	‖P	**Pb**	**03 32 29.8**	**+0.2**
WHP				S	**Sb**	**03 32 37.9**	**+0.1**
TYC	**Yuchr**	**0.63**	**261**	‖P	**Pb**	**03 32 29.9**	**-0.1**
TYC				eS	**Sb**	**03 32 36.6**	**-1.8**
ENTT	**Nioudou**	**0.63**	**3**	P	**Pb**	**03 32 30.0**	**0.0**
ENTT				S	**Sb**	**03 32 38.5**	**0.0**
ESAO	**Su ao**	**0.63**	**27**	eP	**Pg**	**03 32 30.4**	**+0.2**
NDS	**Dongshan**	**0.64**	**15**	eP	**Pb**	**03 32 30.5**	**+0.2**
NDS				S	**Sb**	**03 32 39.0**	**0.0**
YULB	**Yu-li**	**0.65**	**200**	P	**Pb**	**03 32 30.3**	**-0.1**
YULB	**Yu-li**	**0.65**	**200**	S	**Sb**	**03 32 38.7**	**-0.4**
YULB	**Yu-li**	**0.65**	**200**	eP	**Pb**	**03 32 29.6**	**-0.8**
YULB				eS	**Sb**	**03 32 38.7**	**-0.4**
TWC	**Suao**	**0.66**	**26**	eP	**Pb**	**03 32 30.5**	**-0.2**
TWC				S	**Sb**	**03 32 39.4**	**-0.1**
YHNB	**Yeheng**	**0.67**	**348**	P	**Pg**	**03 32 31.3**	**+0.3**
YHNB	**Yeheng**	**0.67**	**348**	S	**Sb**	**03 32 40.0**	**+0.1**
YHNB	**Yeheng**	**0.67**	**348**	eP	**Pb**	**03 32 30.8**	**+0.1**
YHNB				S	**Sb**	**03 32 39.4**	**-0.5**
NSK	**Sanguang**	**0.68**	**346**	‖P	**Pb**	**03 32 31.1**	**0.0**
NSK				S	**Sb**	**03 32 39.7**	**-0.4**
EYUL	**Yuli**	**0.69**	**197**	eP	**Pb**	**03 32 31.3**	**+0.2**
TWF1	**Yuli**	**0.69**	**198**	eP	**Pb**	**03 32 30.0**	**-1.1**
TWF1				S	**Sb**	**03 32 40.2**	**-0.1**
ECBN	**Changbin**	**0.69**	**186**	eP	**Pg**	**03 32 31.5**	**+0.2**
ECBN				eS	**Sn**	**03 32 42.5**	**-0.3**
TWE	**Neicheng**	**0.72**	**10**	eP	**Pb**	**03 32 31.5**	**-0.2**
TWE				eS	**Sb**	**03 32 41.4**	**+0.2**
EOS4	**EOS4**	**0.72**	**81**	P	**Pg**	**03 32 32.2**	**+0.4**
EOS4				S	**Sn**	**03 32 43.1**	**+0.1**
NFF	**Wufeng Townshi**	**0.73**	**329**	‖eP	**Pb**	**03 32 32.0**	**+0.2**
YUS	**Yu-Shan**	**0.74**	**226**	*i*P	**Pb**	**03 32 32.3**	**0.0**
YUS				S	**Sb**	**03 32 42.0**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.75**	**4**	P	**Pb**	**03 32 32.0**	**-0.2**
FUSB				eS	**Sb**	**03 32 41.4**	**-0.7**
EOS2	**EOS2**	**0.76**	**57**	eP	**Pn**	**03 32 33.8**	**+0.5**
WWF	**Wufeng**	**0.77**	**273**	eP	**Pg**	**03 32 33.1**	**+0.5**
NWLT	**Wulai**	**0.77**	**358**	P	**Pb**	**03 32 32.3**	**-0.1**
NWLT				eS	**Sb**	**03 32 40.8**	**-1.8**
EOS3	**EOS3**	**0.77**	**69**	eP	**Pn**	**03 32 33.6**	**+0.2**
TWQ1	**Liyutan**	**0.77**	**296**	‖P	**Pg**	**03 32 33.4**	**+0.6**
NSTT	**Nanjuang**	**0.79**	**322**	‖*i*P	**Pg**	**03 32 33.3**	**+0.3**
NSTT				S	**Sb**	**03 32 43.3**	**+0.2**
WNT1	**Nantou City**	**0.79**	**263**	eP	**Pb**	**03 32 33.2**	**+0.4**
WNT	**Mingjian**	**0.79**	**261**	eP	**Pn**	**03 32 33.8**	**0.0**
WNT				eS	**Sn**	**03 32 44.9**	**-0.3**
LIOB	**Emei**	**0.79**	**323**	‖P	**Pg**	**03 32 33.6**	**+0.4**
LIOB				eS	**Sb**	**03 32 43.8**	**+0.5**
TCU	**Taichung**	**0.80**	**280**	eP	**Pn**	**03 32 33.9**	**0.0**
TCU				eS	**Sn**	**03 32 45.5**	**+0.1**
NSY	**Sanyi**	**0.81**	**300**	‖P	**Pn**	**03 32 34.9**	**+0.7**
CHKH	**Chenggong**	**0.82**	**189**	eP	**Pb**	**03 32 33.0**	**-0.4**
CHKH				eS	**Sn**	**03 32 45.8**	**-0.2**
NJD	**Zhudong**	**0.83**	**331**	eP	**Pg**	**03 32 34.1**	**+0.3**
ALS	**Alishan**	**0.83**	**234**	*i*P	**Pb**	**03 32 34.0**	**+0.3**
ALS				eS	**Sb**	**03 32 45.0**	**+0.4**
KSHI	**Guanxi Townshi**	**0.83**	**337**	eP	**Pn**	**03 32 34.6**	**+0.1**
KSHI				eS	**Sg**	**03 32 45.8**	**+0.8**
FULB	**Fuli**	**0.83**	**195**	eP	**Pg**	**03 32 34.2**	**+0.3**
NMLH	**Miaoli**	**0.86**	**308**	eP	**Pn**	**03 32 35.3**	**+0.5**
WYL	**Yuanlin Townsh**	**0.87**	**267**	eP	**Pn**	**03 32 35.3**	**+0.3**
CHN5	**Tsauling**	**0.88**	**243**	eP	**Pg**	**03 32 35.2**	**+0.4**
CHN5				eS	**Sn**	**03 32 47.7**	**0.0**
WCHH	**Zhanghua**	**0.90**	**275**	eP	**Pn**	**03 32 35.6**	**+0.4**
WCHH				eS	**Sn**	**03 32 48.8**	**+1.0**
HSN1	**Hsinchu**	**0.90**	**329**	eP	**Pg**	**03 32 35.5**	**+0.3**
WCH1	**Changhua City**	**0.91**	**274**	eP	**Pn**	**03 32 35.8**	**+0.4**
WCH1				eS	**Sn**	**03 32 48.4**	**+0.3**
EHD	**Haiduan**	**0.91**	**199**	eP	**Pn**	**03 32 36.8**	**+0.3**
EGS		**0.91**	**23**	eP	**Pg**	**03 32 35.5**	**+0.2**
CHKT	**Chengkung**	**0.92**	**190**	eP	**Pb**	**03 32 35.3**	**+0.3**
CHKT				eS	**Sb**	**03 32 47.2**	**+0.3**
SBCB	**Hsinchu**	**0.93**	**327**	eP	**Pg**	**03 32 36.2**	**+0.6**
SBCB				eS	**Sn**	**03 32 49.4**	**+0.8**
ELDTW	**Lidau**	**0.94**	**210**	eP	**Pb**	**03 32 35.5**	**0.0**
ELDTW				eS	**Sb**	**03 32 47.7**	**0.0**
HSN	**Hsinchu**	**0.94**	**327**	eP	**Pg**	**03 32 36.3**	**+0.3**
WGK	**Gukeng**	**0.95**	**250**	eP	**Pg**	**03 32 36.6**	**+0.6**
NHDH	**Xindian Distri**	**0.95**	**360**	eP	**Pn**	**03 32 36.1**	**0.0**
ECS	**Chishang**	**0.95**	**198**	eP	**Pn**	**03 32 36.3**	**+0.1**
WDL	**Douliou City**	**0.96**	**252**	eP	**Pb**	**03 32 36.1**	**+0.5**
WDL				eS	**Sn**	**03 32 50.7**	**+1.4**
TATO	**Taipei**	**0.96**	**358**	P	**Pn**	**03 32 36.4**	**+0.1**
TATO	**Taipei**	**0.96**	**358**	S	**Sg**	**03 32 49.0**	**-0.1**
TATO	**Taipei**	**0.96**	**358**	P	**Pn**	**03 32 36.4**	**+0.1**
TATO				S	**Sb**	**03 32 48.8**	**+0.6**
WDLH	**Douliu**	**0.97**	**251**	eP	**Pg**	**03 32 36.9**	**+0.4**
WDLH				eS	**Sn**	**03 32 50.4**	**+0.9**
TWA	**Mucha**	**0.97**	**3**	eP	**Pg**	**03 32 36.7**	**+0.2**
TWA				eS	**Sb**	**03 32 48.5**	**+0.2**
TIPB	**Shuangxi**	**1.00**	**15**	eP	**Pb**	**03 32 36.5**	**+0.2**
TIPB				eS	**Sb**	**03 32 49.5**	**+0.3**
NCUH	**Zhongli**	**1.01**	**342**	eP	**Pg**	**03 32 37.7**	**+0.5**
NCUH				eS	**Sn**	**03 32 51.8**	**+1.2**
NTY	**Taoyuan**	**1.01**	**348**	eP	**Pg**	**03 32 37.4**	**+0.1**
NTY				eS	**Sg**	**03 32 52.1**	**+1.6**
WCKO	**Fanlu**	**1.02**	**237**	eP	**Pg**	**03 32 37.6**	**+0.1**
WCKO				eS	**Sg**	**03 32 52.2**	**+1.2**
NHY	**Taipei**	**1.03**	**2**	eP	**Pb**	**03 32 36.8**	**-0.1**
TAP	**Taipei**	**1.03**	**359**	eP	**Pg**	**03 32 37.8**	**+0.2**
EDH	**Donghe**	**1.05**	**192**	eP	**Pb**	**03 32 36.7**	**-0.6**
EDH				eS	**Sb**	**03 32 50.9**	**+0.1**
TWB1	**Santiao Chiao**	**1.08**	**22**	eP	**Pb**	**03 32 37.9**	**+0.2**
TWB1				eS	**Sb**	**03 32 51.8**	**+0.3**
CHN2	**Minshiung**	**1.08**	**244**	eP	**Pg**	**03 32 39.1**	**+0.5**
CHN2				eS	**Sg**	**03 32 54.6**	**+1.8**
RLNB	**Erlin**	**1.08**	**264**	eP	**Pn**	**03 32 38.4**	**+0.6**
RLNB				eS	**Sg**	**03 32 53.2**	**+0.4**
WFSB	**Wu-fen Shan**	**1.08**	**12**	eP	**Pb**	**03 32 38.1**	**+0.1**
WFSB				eS	**Sb**	**03 32 52.1**	**+0.5**
CHN4	**Tsaushan**	**1.08**	**233**	eP	**Pg**	**03 32 38.9**	**+0.2**
CHN4				eS	**Sg**	**03 32 53.8**	**+1.0**
STYH	**Taoyuan**	**1.09**	**220**	eP	**Pg**	**03 32 38.6**	**-0.1**
STYH				eS	**Sn**	**03 32 52.9**	**+0.4**
TPUB	**Ta-pu**	**1.09**	**230**	P	**Pg**	**03 32 38.7**	**0.0**
TPUB	**Ta-pu**	**1.09**	**230**	S	**Sg**	**03 32 53.7**	**+0.7**
TPUB	**Ta-pu**	**1.09**	**230**	*i*P	**Pg**	**03 32 38.9**	**+0.2**
TPUB				S	**Sn**	**03 32 53.1**	**+0.5**
TWS1	**Kuangyinshan**	**1.09**	**354**	eP	**Pg**	**03 32 38.7**	**-0.1**
TWS1				eS	**Sg**	**03 32 54.4**	**+1.2**
WTK	**Tuku**	**1.10**	**253**	eP	**Pg**	**03 32 39.4**	**+0.5**
WTK				eS	**Sg**	**03 32 54.4**	**+1.2**
STYT	**Tauyuan**	**1.10**	**220**	eP	**Pb**	**03 32 38.6**	**+0.5**
STYT				eS	**Sn**	**03 32 53.1**	**+0.1**
SXI1	**Grass Mountain**	**1.12**	**16**	eP	**Pn**	**03 32 38.6**	**+0.1**
SXI1				eS	**Sg**	**03 32 54.2**	**0.0**
YM01	**YM01**	**1.13**	**2**	eP	**Pb**	**03 32 39.0**	**+0.2**
YM01				eS	**Sn**	**03 32 54.1**	**+0.3**
CHY	**Chiayi**	**1.14**	**244**	eP	**Pg**	**03 32 39.6**	**0.0**
CHY				eS	**Sg**	**03 32 55.5**	**+1.0**
ZUZH	**Zhuzihu**	**1.15**	**0**	eP	**Pb**	**03 32 39.6**	**+0.6**
ZUZH				eS	**Sn**	**03 32 54.6**	**+0.4**
NTST	**Danshui**	**1.15**	**356**	eP	**Pg**	**03 32 40.0**	**0.0**
NTST				eS	**Sg**	**03 32 56.4**	**+1.3**
WTCT	**Ta-ch'eng**	**1.16**	**263**	eP	**Pn**	**03 32 39.2**	**+0.3**
WTCT				eS	**Sg**	**03 32 55.8**	**+0.6**
TNOU	**National Taiwa**	**1.16**	**11**	eP	**Pg**	**03 32 39.8**	**-0.2**
TNOU				eS	**Sn**	**03 32 54.5**	**+0.3**
LONT	**Longtian**	**1.16**	**199**	eP	**Pb**	**03 32 39.2**	**+0.1**
ANP	**Anpu**	**1.17**	**359**	eP	**Pb**	**03 32 39.8**	**+0.4**
ANP				eS	**Sb**	**03 32 54.6**	**+0.3**
YM08	**YM08**	**1.18**	**2**	eP	**Pb**	**03 32 39.7**	**+0.3**
YM08				eS	**Sb**	**03 32 54.6**	**+0.3**
NWHT	**Kuosheng**	**1.20**	**5**	eP	**Pg**	**03 32 40.7**	**-0.1**
TWK	**Hsinying**	**1.21**	**233**	eP	**Pg**	**03 32 41.1**	**0.0**
TWK				eS	**Sg**	**03 32 57.4**	**+0.5**
WMLT	**Mailiao**	**1.22**	**261**	eP	**Pg**	**03 32 41.0**	**-0.1**
WMLT				eS	**Sg**	**03 32 57.0**	**-0.1**
SNST	**Tainan City**	**1.23**	**231**	eP	**Pg**	**03 32 41.7**	**+0.2**
SNST				eS	**Sg**	**03 32 57.3**	**-0.3**
CHN1	**Nanshi**	**1.23**	**229**	eP	**Pg**	**03 32 41.3**	**-0.2**
CHN1				eS	**Sg**	**03 32 58.4**	**+0.7**
TWG	**Pinlang**	**1.26**	**200**	eP	**Pb**	**03 32 40.7**	**-0.1**
TWGBT	**Beinan**	**1.26**	**199**	P	**Pn**	**03 32 40.5**	**+0.2**
TWGBT	**Beinan**	**1.26**	**199**	eP	**Pn**	**03 32 40.4**	**+0.1**
WSF	**Szhu**	**1.26**	**253**	eP	**Pb**	**03 32 41.2**	**+0.5**
WSF				eS	**Sg**	**03 32 58.5**	**+0.1**
TWY	**Chenhua**	**1.26**	**3**	eP	**Pb**	**03 32 41.4**	**+0.5**
SGST	**Jiashian**	**1.27**	**224**	eP	**Pb**	**03 32 41.6**	**+0.6**
SGST				eS	**Sg**	**03 32 58.8**	**0.0**
NSM	**Shimen**	**1.27**	**2**	eP	**Pn**	**03 32 40.6**	**+0.1**
WSL	**Shuilin Townsh**	**1.29**	**248**	eP	**Pg**	**03 32 41.5**	**+0.1**
WSL				eS	**Sg**	**03 33 00.5**	**+1.1**
LDUT	**Ludao**	**1.33**	**183**	eP	**Pn**	**03 32 41.2**	**-0.1**
JYNG	**Yonagunijimaku**	**1.36**	**71**	eP	**Pb**	**03 32 42.5**	**-0.1**
JYNG				eS	**Sb**	**03 32 59.8**	**+0.2**
CHN8	**Yiju**	**1.38**	**242**	eP	**Pb**	**03 32 43.5**	**+0.6**
CHN8				eS	**Sg**	**03 33 02.3**	**0.0**
YOJ	**Yonaguni jima**	**1.42**	**71**	P	**Pn**	**03 32 42.6**	**+0.1**
YOJ	**Yonaguni jima**	**1.42**	**71**	eP	**Pn**	**03 32 42.6**	**+0.1**
YOJ	**Yonaguni jima**	**1.42**	**71**	P	**Pn**	**03 32 42.6**	**+0.1**
YOJ				eS	**Sb**	**03 33 01.2**	**-0.1**
SCST	**Cishan**	**1.47**	**221**	eP	**Pg**	**03 32 45.5**	**-0.5**
SCST				eS	**Sg**	**03 33 05.2**	**+0.1**
SCLT	**Jiali**	**1.48**	**236**	eP	**Pb**	**03 32 44.7**	**+0.1**
SCLT				eS	**Sg**	**03 33 05.2**	**-0.3**
ECL	**Taimali**	**1.50**	**201**	eP	**Pb**	**03 32 44.9**	**-0.1**
SSD	**Sandimen**	**1.50**	**214**	eP	**Pb**	**03 32 45.1**	**+0.1**
SSD				eS	**Sb**	**03 33 05.0**	**+1.2**
TSMG	**Majia**	**1.53**	**212**	eP	**Pb**	**03 32 45.9**	**+0.4**
TWM1	**Shoushan**	**1.56**	**221**	eP	**Pg**	**03 32 47.8**	**+0.1**
TSCK	**Chigu Township**	**1.58**	**237**	eP	**Pb**	**03 32 46.1**	**-0.2**
TSCK				eS	**Sb**	**03 33 07.0**	**+1.1**
MASBT	**Mashibuluo**	**1.62**	**211**	eP	**Pb**	**03 32 47.2**	**+0.2**
MASBT				eS	**Sg**	**03 33 09.0**	**-0.9**
PCYT	**Pengchaiyu**	**1.69**	**17**	eP	**Pn**	**03 32 46.4**	**+0.2**
EAST	**Anshuo**	**1.74**	**201**	eP	**Pn**	**03 32 47.7**	**+0.7**
TAW	**Tawu**	**1.75**	**200**	eP	**Pb**	**03 32 49.4**	**+0.2**
TAWH	**Dawu Township**	**1.76**	**200**	eP	**Pb**	**03 32 49.0**	**-0.5**
SCZT	**Fangliau**	**1.83**	**207**	eP	**Pb**	**03 32 50.5**	**-0.2**
PHUB	**P'eng-hu**	**1.86**	**255**	eP	**Pn**	**03 32 49.3**	**+0.7**
PHUB				eS	**Sn**	**03 33 12.8**	**+1.1**
PNG	**Penghu**	**1.86**	**257**	eP	**Pn**	**03 32 49.3**	**+0.6**
PNG				eS	**Sn**	**03 33 13.0**	**+1.3**
WDGT	**Dungji**	**1.87**	**247**	eP	**Pn**	**03 32 49.8**	**+1.1**
WDGT				eS	**Sb**	**03 33 13.6**	**-0.8**
LYUB	**Lan-yu**	**2.00**	**179**	eP	**Pn**	**03 32 50.4**	**-1.1**
IRIF	**Iriomote-Funau**	**2.03**	**80**	P	**Pn**	**03 32 51.2**	**+0.3**
IRIF				eS	**Sn**	**03 33 15.8**	**0.0**
HATJ	**Hateruma jima**	**2.08**	**88**	eS	**Sn**	**03 33 17.3**	**+0.4**
VCHM	**Qimei**	**2.09**	**248**	P	**Pn**	**03 32 52.7**	**+1.0**
TWKBT	**Hengchun**	**2.16**	**198**	eP	**Pb**	**03 32 54.9**	**-1.4**
JKRS	**Kuro-shima**	**2.27**	**84**	P	**Pn**	**03 32 55.2**	**+1.0**
JKRS				eS	**Sn**	**03 33 23.0**	**+1.2**
JIJ	**Ishigaki jima**	**2.41**	**81**	eP	**Pn**	**03 32 56.2**	**+0.1**
JIJ				eS	**Sn**	**03 33 24.8**	**-0.3**
PTMZ	**Houxiangcun**	**2.43**	**296**	eP	**Pn**	**03 32 56.5**	**+0.1**
PTMZ				eS	**Sn**	**03 33 24.9**	**-0.7**
MATB	**Ma-tsu**	**2.58**	**326**	eP	**Pn**	**03 32 58.6**	**+0.2**
JISG	**Ishigakijimahi**	**2.60**	**77**	P	**Pn**	**03 32 58.9**	**+0.2**
JISG				S	**Sn**	**03 33 29.4**	**-0.4**
MSUT	**Lienchiang**	**2.60**	**326**	eP	**Pn**	**03 32 59.8**	**+1.0**
KNM	**Kinmen**	**2.86**	**279**	eP	**Pn**	**03 33 04.2**	**+1.8**
KNMB	**Chin-men Tao**	**2.91**	**280**	eP	**Pn**	**03 33 02.5**	**-0.4**
MHZO	**Yeshan**	**3.08**	**313**	eP	**Pn**	**03 32 59.9**	**+0.5**
MHZO				eS	**Sn**	**03 33 40.6**	**-1.1**
XPSS	**Dashiqiu**	**3.15**	**338**	eP	**Pn**	**03 33 06.0**	**-0.4**
AXDP	**Jialang**	**3.37**	**286**	eP	**Pn**	**03 33 09.2**	**-0.1**
JIRB	**Irabujima**	**3.42**	**75**	eP	**Pn**	**03 33 10.6**	**+0.7**
ZPLA	**Ao Xicun**	**3.46**	**269**	eP	**Pn**	**03 33 10.9**	**+0.2**
JMJ	**Miyako jima 2**	**3.52**	**76**	eP	**Pn**	**03 33 12.2**	**+0.8**
DSXP	**Dongshan**	**3.77**	**266**	eP	**Pn**	**03 33 15.0**	**+0.1**
SXFK	**Yanhouchang**	**4.25**	**305**	eP	**Pn**	**03 33 21.5**	**0.0**
JOW	**Kunigami** 3.7nm,0.3s,baz=126,slow=20,SNR=10 7.2nm,0.3s	**6.71**	**64**	Pn	**Pn**	**03 33 54.1**	**-1.2**
KSRS	**Korea Array** 0.3nm,0.3s,baz=204,slow=12,SNR=4.3	**14.48**	**21**	Pn	**P**	**03 35 48.0**	**-0.2**
CMAR	**Chiang Mai Arr** comp=Z,8.9nm,21.3s,baz=100,slow=36	**21.76**	**260**	LR	LR	03 45 07.1	
SONM	**Songino Array** 0.2nm,0.3s,baz=140,slow=9.1,SNR=1.8 0.2nm,0.3s	**26.65**	**337**	P	**P**	**03 37 56.7**	**+1.3**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=115,slow=10,SNR=3.1 0.3nm,0.6s	**38.69**	**316**	P	**P**	**03 39 40.3**	**-0.1**
WRA	**Warramunga Arr**	**45.43**	**163**	P	**P**	**03 40 33.9**	**-1.7**
	0.5nm,0.5s,baz=344,slow=7.9,SNR=1.8 0.5nm,0.5s						
ASAR	**Alice Springs** 0.3nm,0.4s,baz=338,slow=7.1,SNR=5.0 0.3nm,0.4s	**48.89**	**165**	P	**P**	**03 41 00.8**	**-1.8**
BRTR	**Keskin Array B** comp=Z,16nm,18.9s,baz=221,slow=42	**73.53**	**307**	LR	LR	04 23 54.5	
HFS	**Hagfors** comp=Z,65nm,19.4s,baz=208,slow=38	**77.88**	**331**	LR	LR	04 21 53.6	

*NEIC **04** 03:39:07.9±2.5,52°.20N±0°.05×168°.07W±0°.06,h10km±1km, mb3.9/35,ML3.3/16,ML3.3(AEIC),Error ellipse: s-maj=8.5km s-min=5.2km az=158.0*
*IDC **04** 03:39:08.4±1.4,52°.59N×168°.38W,h0km,mb3.9/11, mbtmp3.8/12,ML3.0/1,MS2.9/3,Error ellipse: s-maj=38.8km s-min=19.2km az=179.0*
*AEIC **04** 03:39:08.9±2.9,52°.12N±0°.04×168°.04W±0°.06,h26km±5km, Error ellipse: s-maj=7.4km s-min=1.6km az=132.0*
ISC 04 03:39:08.6±1.9,52°.22N±0°.07×168°.02W±0°.04, h14km±11km,n111,σ1§12/116,mb4.0/14,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.91**	**326**		**Pg**	**03 39 26.0**	**-0.2**
NIKH					**Sb**	**03 39 38.8**	**+0.7**
NIKH	comp=N,1μm,0.7s			IAML		03 39 41.5	
NIKH	comp=E,662nm,0.6s			IAML		03 39 42.6	
OKSP	**Okmok Steeple**	**1.05**	**351**		**Pb**	**03 39 28.4**	**-0.1**
OKTU	**Okmok Mt. Tuli**	**1.17**	**359**		**Pn**	**03 39 30.8**	**+0.3**
OKTU					**Sn**	**03 39 47.6**	**+1.3**
CLCO	**Concord Point,**	**1.19**	**299**		**Pn**	**03 39 30.0**	**-0.8**
CLCO					**Sb**	**03 39 44.6**	**-1.4**
OKCE	**Okmok Cone E**	**1.22**	**356**		**Pn**	**03 39 31.4**	**+0.2**
OKCE					**Sg**	**03 39 48.2**	**+0.5**
OKNC	**Okmok New Cone**	**1.24**	**357**		**Pb**	**03 39 32.3**	**+0.5**
OKNC					**Sg**	**03 39 51.2**	**+2.6**
CLES	**Cleveland East**	**1.30**	**299**	Pn	**Pn**	**03 39 31.7**	**-0.5**
CLES	comp=N,804nm,0.6s			IAML		03 39 54.0	
CLES	comp=E,855nm,0.7s			IAML		03 40 00.3	
MGOD	**Makushin Gods**	**1.73**	**23**		**Pn**	**03 39 38.3**	**+0.1**
MSW	**Mak

M31M	**Drury Creek, Y**	**20.53**	**48**	P	Pn	03 43 48.2	-0.2
M31M				IAmb	IAmb	03 43 54.5	
	comp=Z,6.0nm,1.1s						
F28M	**Old Crow**	**20.61**	**31**	P	**P**	**03 43 46.6**	**-0.4**
F28M				IAmb	IAmb	03 44 24.8	
	comp=Z,6.9nm,1.4s						
I30M	**Mount Dempster**	**20.67**	**39**	P	**P**	**03 43 47.3**	**-0.5**
PEA0B	**Petropavlovsk-**	**20.70**	**286**	P	**P**	**03 43 48.0**	**-0.1**
PETK	**Petropavlovsk-**	**20.70**	**286**	P	**P**	**03 43 46.8**	**-1.3**
	comp=Z,3.2nm,0.5s,baz=84,slow=13,SNR=14						
	comp=Z,3.2nm,0.5s						
C27K	**Jago River**	**20.81**	**24**	P	**P**	**03 43 49.4**	**+0.2**
G29M	**Pine Creek**	**20.84**	**34**	P	**P**	**03 43 48.4**	**-1.1**
G29M				IAmb	IAmb	03 43 50.7	
	comp=Z,8.0nm,0.9s						
G30M	**tAoh Zraii Nji**	**21.49**	**34**	P	**P**	**03 43 55.7**	**-0.9**
G30M				IAmb	IAmb	03 44 14.0	
	comp=Z,9.5nm,1.4s						
H31M	**Peel River**	**21.68**	**38**	P	**P**	**03 43 57.0**	**-1.5**
F30M	**Barrier River**	**21.94**	**33**	P	**P**	**03 44 00.6**	**-0.7**
F30M				IAmb	IAmb	03 44 01.6	
	comp=Z,13nm,1.3s						
G31M	**Satah River**	**22.16**	**36**	P	**P**	**03 44 01.9**	**-1.7**
G31M				IAmb	IAmb	03 44 40.5	
	comp=Z,9.6nm,1.2s						
INK	**Inuvik**	**23.02**	**33**	P	**P**	**03 44 11.3**	**-1.5**
INK				IAmb	IAmb	03 44 47.8	
	comp=Z,3.6nm,1.1s						
ASAJ	**Asahikawa**	**33.35**	**276**	LR	LR	03 59 40.5	
	comp=Z,15nm,20.7s,baz=4.5,slow=37						
H11N2	**WAKE ISLAND Hy**	**37.86**	**221**	T	T	04 27 06.8	
	baz=24,slow=76,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	**37.87**	**221**	T	T	04 27 06.3	
	baz=24,slow=76,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**37.88**	**221**	T	T	04 27 05.1	
	baz=24,slow=76,SNR=3.8						
PDAR	**Pinedale Array**	**39.62**	**80**	P	**P**	**03 46 40.6**	**+0.9**
PDAR	**Pinedale Array**	**39.62**	**80**	P	**P**	**03 46 41.9**	**+2.1**
	baz=305,slow=10						
KSRS	**Korea Array**	**46.24**	**278**	P	**P**	**03 47 33.5**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=61,slow=7.4,SNR=4.3						
	comp=Z,1.6nm,0.9s						
TXAR	**Lajitas Array**	**51.92**	**90**	P	**P**	**03 48 20.5**	**+3.6**
TXAR	**Lajitas Array**	**51.92**	**90**	P	P	03 48 21.6	+4.7
	comp=Z,0.2nm,0.6s,baz=326,slow=7.2,SNR=2.4						
	comp=Z,0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**63.14**	**319**	P	**P**	**03 49 34.9**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=56,slow=9.1,SNR=3.0						
	comp=Z,0.3nm,0.5s						
BVAR	**Borovoye Array**	**64.30**	**325**	P	**P**	**03 49 43.1**	**0.0**
	comp=Z,1.3nm,0.5s,baz=41,slow=5.0,SNR=6.7						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**64.51**	**314**	P	**P**	**03 49 43.4**	**-1.2**
MKAR	**Makanchi Array**	**64.51**	**314**	P	**P**	**03 49 42.6**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=28,slow=6.5,SNR=4.5						
	comp=Z,0.5nm,0.6s						
FINES	**FINESS Array B**	**66.13**	**353**	P	**P**	**03 49 53.7**	**-1.1**
FINES	**FINESS Array B**	**66.13**	**353**	P	**P**	**03 49 54.0**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=15,slow=8.1,SNR=11						
	comp=Z,2.1nm,0.6s						
NOA	**NORSAR Array B**	**67.09**	**0**	P	**P**	**03 50 01.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=0.5,slow=6.2,SNR=3.1						
	comp=Z,0.4nm,0.5s						
HFS	**Hagfors**	**67.99**	**359**	P	**P**	**03 50 05.9**	**-0.8**
	comp=Z,2.1nm,0.4s,baz=29,slow=3.4,SNR=21						
	comp=Z,2.1nm,0.4s						
AKASG	**Malin Array Be**	**76.42**	**349**	P	**P**	**03 50 56.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=18,slow=6.2,SNR=2.0						
	comp=Z,0.4nm,0.3s						
MLR	**Muntele Rosu**	**81.93**	**350**	LR	LR	04 31 42.7	
	comp=Z,13nm,18.4s,baz=40,slow=39						
BRTR	**Keskin Array B**	**86.51**	**343**	P	**P**	**03 51 51.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=11,slow=2.7,SNR=3.3						
	comp=Z,0.3nm,0.5s						

*SJA **04** 03:40:57.6±0.7, 31°.14S×68°.95W, h112km±2km, ML3.4, MW3.5*
*GUC **04** 03:40:58.0±0.6, 31°.13S×69°.25W, h141km±7km, ML3.5*
ISC 04 03:40:57.8±1.2,**31°.12S**±0°.02×**68°.98W**±0°.03,**h119**km±7km,
n72,σ1**§50**/111,**6C-2D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.48**	**116**	*e*P	**Pn**	**03 41 14.9**	**-0.7**
RTLL				*e*S	**Sn**	**03 41 26.9**	**-2.0**
RTLL				IAML		03 41 27.9	
	comp=Z,1μm,0.3s						
ZON	**Zonda**	**0.49**	**149**	*e*P	**Pn**	**03 41 15.1**	**-0.5**
ZON				*e*S	**Sn**	**03 41 28.1**	**-1.1**
ZON				IAML		03 41 29.3	
	comp=Z,1μm,0.6s						
ACCO	**Cerro Coronel**	**0.54**	**352**	*e*P	**Pn**	**03 41 16.4**	**+0.1**
SJA	**San Juan**	**0.54**	**139**	*e*P	**Pn**	**03 41 16.0**	**+0.1**
SJA				*e*S	**Sn**	**03 41 28.2**	**-1.4**
SJA				IAML		03 41 31.7	
	comp=Z,940nm,0.2s						
RTLS	**Leoncito**	**0.73**	**202**	*e*P	**Pn**	**03 41 17.7**	**+0.1**
RTLS				*e*S	**Sn**	**03 41 32.3**	**-0.3**
RTLS				IAML		03 41 32.7	
	comp=Z,1μm,0.3s						
CFA	**Coronel Fontan**	**0.80**	**128**	*e*P	**Pn**	**03 41 17.7**	**-0.2**
CFA				*e*S	**Sn**	**03 41 32.5**	**-0.5**
ACDV	**Cuesta del Vie**	**0.95**	**352**	*e*P	**Pn**	**03 41 20.0**	**+0.5**
ACDV				*e*S	**Sn**	**03 41 36.6**	**+0.7**
ACDV				IAML		03 41 37.4	
	comp=Z,688nm,0.1s						
AROD	**Rodeo**	**1.04**	**336**	*e*P	**Pn**	**03 41 21.2**	**+0.7**
AVFE	**Valle Fertil**	**1.39**	**71**	*e*P	**Pn**	**03 41 24.3**	**+0.4**
AVFE				IAML		03 41 45.1	
	comp=Z,774nm,0.5s						
ASAL	**Salagasta**	**1.47**	**175**	*e*P	**Pn**	**03 41 25.6**	**+0.7**
ASAL				*e*S	**Sn**	**03 41 46.6**	**+1.0**
CO01	**Juntas del Tor**	**1.49**	**319**	*e*P	**Pn**	**03 41 26.8**	**+1.5**
CO01				*e*S	**Sn**	**03 41 48.3**	**+2.1**
CO01				IAML		03 41 49.5	
	comp=E,644nm,0.1s						
CO01	**Juntas del Tor**	**1.49**	**319**	*e*P	**Pn**	**03 41 27.0**	**+1.7**
CO01				*e*S	**Sn**	**03 41 48.3**	**+2.1**
CO01				IAML		03 41 49.4	
	comp=Z,246nm,0.3s						
AGUA	**GUANDACOL**	**1.68**	**15**	*e*P	**Pn**	**03 41 28.7**	**+1.3**
AGUA				*e*S	**Sn**	**03 41 52.6**	**+2.7**
AGUA				IAML		03 41 55.6	
	comp=Z,375nm,0.2s						
ARCO	**CERRO ARCO**	**1.72**	**179**	*e*P	**Pn**	**03 41 28.5**	**+0.6**
ARCO				*e*S	**Sn**	**03 41 51.5**	**+0.7**
ARCO				IAML		03 41 52.9	
	comp=Z,163nm,0.2s						
CO02	**Combarbal**	**1.74**	**267**	*e*P	**Pn**	**03 41 28.1**	**0.0**
CO02				*e*S	**Sn**	**03 41 50.5**	**-0.6**
CO02				IAML		03 41 53.3	
	comp=N,1μm,0.3s						
CO02	**Combarbal**	**1.74**	**267**	*e*P	**Pn**	**03 41 28.5**	**+0.5**
CO02				*e*S	**Sn**	**03 41 51.9**	**+0.7**
CO02				IAML		03 41 52.3	
	comp=Z,248nm,0.4s						
GO04	**Tololo Observa**	**1.83**	**301**	*e*P	**Pn**	**03 41 29.3**	**-0.1**
GO04	**Tololo Observa**	**1.83**	**301**	*e*P	**Pn**	**03 41 29.7**	**+0.3**
GO04				*e*S	**Sn**	**03 41 48.3**	**-5.1**
GO04				*e*S		03 41 54.2	
GO04				IAML		03 41 56.8	
	comp=Z,634nm,0.2s						
CO04	**Los Peladeros**	**1.94**	**241**	*e*P	**Pn**	**03 41 30.8**	**+0.1**
CO04				*i* S	**Sn**	**03 41 55.8**	**0.0**
CO04				IAML		03 41 59.0	
	comp=N,294nm,0.3s						
AAGR	**Agrelo**	**1.96**	**176**	*e*P	**Pn**	**03 41 31.4**	**+0.6**
AAGR				*e*S	**Sn**	**03 41 57.2**	**+1.1**
AAGR				IAML		03 41 57.8	
	comp=Z,206nm,0.2s						
ACHE	**Chepes**	**1.98**	**92**	*e*P	**Pn**	**03 41 31.7**	**+0.6**
VA03	**San Esteban**	**2.12**	**219**	*e*P	**Pn**	**03 41 33.6**	**+0.9**
VA03				IAML		03 42 03.5	
	comp=E,342nm,0.3s						
VA03	**San Esteban**	**2.12**	**219**	*e*P	**Pn**	**03 41 33.7**	**+0.9**
VA03				*e*S	**Sn**	**03 42 02.0**	**+2.5**
VA03				IAML		03 42 07.4	
	comp=Z,165nm,0.4s						
APLL	**PUNTA DE LOS L**	**2.23**	**72**	*e*P	**Pn**	**03 41 34.3**	**+0.2**
APLL				*e*S	**Sn**	**03 42 01.8**	**-0.1**
CO05	**La Serena**	**2.29**	**301**	*e*P	**Pn**	**03 41 34.4**	**-0.4**
CO05				*i* S	**Sn**	**03 42 01.6**	**-1.6**
CO05				IAML		03 42 03.2	
	comp=N,557nm,0.1s						

CO06	**Fray Jorge**	**2.33**	**280**	*i*P	**Pn**	**03 41 34.2**	**-1.1**
AVIZ	**Vizcacheras**	**2.38**	**171**	*e*P	Pn	03 41 31.2	-4.8
AVIZ				*e*S	**Sn**	**03 42 04.7**	**-0.7**
ACLC	**CERRO LA CRUZ**	**2.43**	**47**	*e*P	Pn	03 41 31.6	-5.3
ACLC				*e*S	Sn	03 41 52.9	-14
ACLC				IAML		03 42 08.2	
	comp=Z,75nm,0.4s						
VA06	**Catapilco**	**2.44**	**233**	*e*P	**Pn**	**03 41 36.0**	**-0.8**
VA06				IAML		03 42 09.4	
	comp=N,125nm,0.1s						
VCA	**Vinchina**	**2.47**	**16**	*e*P	**Pn**	**03 41 38.4**	**+1.2**
VCA	**Vinchina**	**2.47**	**16**	*e*P	**Pn**	**03 41 38.5**	**+1.2**
VCA				*e*S	**Sn**	**03 42 10.0**	**+2.4**
VCA				IAML		03 42 12.2	
	comp=Z,421nm,0.2s						
MT08	**Bocatoma Ro**	**2.48**	**201**	*e*P	**Pn**	**03 41 39.9**	**+2.4**
MT08				*e*S	**Sn**	**03 42 06.9**	**-1.1**
MT04	**Ro Olivares**	**2.48**	**203**	*e*P	**Pn**	**03 41 39.3**	**+1.8**
MT04	**Ro Olivares**	**2.48**	**203**	*e*P	**Pn**	**03 41 39.5**	**+2.0**
MT04				*e*P		03 41 39.9	
MT04				*e*S	**Sn**	**03 42 12.0**	**+4.0**
PEL	**Peldehue**	**2.48**	**215**	*e*P	**Pn**	**03 41 37.7**	**+0.4**
PEL				IAML		03 42 11.0	
	comp=N,144nm,0.3s						
PEL	**Peldehue**	**2.48**	**215**	*e*P	**Pn**	**03 41 38.0**	**+0.6**
PEL				*e*S	**Sn**	**03 42 08.9**	**+1.1**
PEL				IAML		03 42 11.8	
	comp=Z,80nm,2.5s						
ROCH	**El Roble**	**2.53**	**223**	*e*P	**Pn**	**03 41 37.9**	**-0.2**
ROCH				*e*P	**Pn**	**03 41 37.9**	**-0.2**
ROCH				*e*S	**Sn**	**03 42 09.2**	**+0.1**
ROCH				IAML		03 42 11.0	
	comp=N,94nm,0.5s						
ROC1	**El Roble**	**2.54**	**223**	*e*P	**Pn**	**03 41 38.1**	**-0.1**
ROC1				*e*S	**Sn**	**03 42 09.6**	**+0.4**
LCO	**Las Campanas**	**2.58**	**324**	*e*P	**Pn**	**03 41 39.0**	**+0.2**
LCO	**Las Campanas**	**2.58**	**324**	*e*P	**Pn**	**03 41 39.1**	**+0.3**
LCO				*e*S	**Sn**	**03 42 11.1**	**+0.8**
LCO				IAML		03 42 12.4	
	comp=Z,291nm,0.2s						
MT14	**Cerro Cal¡n**	**2.63**	**210**	*e*P	**Pn**	**03 41 40.0**	**+0.8**
MT16	**CCHEN**	**2.65**	**209**	*e*P	**Pn**	**03 41 40.4**	**+0.9**
MT03	**Universidad Ad**	**2.70**	**208**	*e*P	**Pn**	**03 41 41.1**	**+0.9**
MT03	**Universidad Ad**	**2.70**	**208**	*e*P	**Pn**	**03 41 43.1**	**+1.1**
MT03				*e*S	**Sn**	**03 42 14.8**	**+1.9**
MT03				IAML		03 42 16.7	
	comp=Z,199nm,0.2s						
MT05	**Renca**	**2.71**	**213**	*e*P	**Pn**	**03 41 40.8**	**+0.5**
MT05	**Renca**	**2.71**	**213**	*e*P	**Pn**	**03 41 41.1**	**+0.8**
MT05				*e*S	**Sn**	**03 42 15.8**	**+2.7**
MT05				IAML		03 42 17.3	
	comp=Z,145nm,0.2s						
MT15	**Las Vizcachas**	**2.79**	**207**	*e*P	**Pn**	**03 41 42.3**	**+1.0**
MT02	**Curacav**	**2.81**	**220**	*e*P	**Pn**	**03 41 41.5**	**-0.1**
MT02				*e*S	**Sn**	**03 42 15.4**	**+0.1**
MT02				IAML		03 42 19.8	
	comp=Z,44nm,0.4s						
AANI	**Anillaco**	**2.90**	**38**	*e*P	**Pn**	**03 41 39.1**	**-3.8**
AANI				IAML		03 42 20.9	
	comp=Z,250nm,0.2s						
LMEL	**Las Melosas**	**2.91**	**201**	*e*P	**Pn**	**03 41 44.5**	**+1.5**
LMEL	**Las Melosas**	**2.91**	**201**	*e*P	**Pn**	**03 41 44.8**	**+1.8**
LMEL				*e*S	**Sn**	**03 42 23.0**	**+5.2**
LMEL				IAML		03 42 26.5	
	comp=Z,54nm,0.1s						
MT12	**Pirque**	**2.93**	**207**	*e*P	**Pn**	**03 41 43.9**	**+0.8**
VA01	**Torpederas**	**2.96**	**229**	*e*P	Pn	03 41 36.1	-7.3
VA01				*e*S	**Sn**	**03 42 13.1**	**-5.5**
VA01				IAML		03 42 43.2	
	comp=Z,41nm,2.0s						
MRA	**San Martin**	**3.06**	**116**	*e*P	**Pn**	**03 41 45.2**	**+0.3**
MRA				*e*S	**Sn**	**03 42 20.3**	**-1.0**
MRA				IAML		03 42 21.9	
	comp=Z,113nm,0.2s						
MT09	**Talagante**	**3.15**	**212**	*e*P	**Pn**	**03 41 45.6**	**-0.5**
MT09				IAML		03 42 25.1	
	comp=E,175nm,0.3s						
BO04	**La Punta**	**3.18**	**205**	*e*P	**Pn**	**03 41 46.7**	**+0.3**
MT01	**Popeta**	**3.34**	**214**	*e*P	**Pn**	**03 41 47.3**	**-1.2**
MT01	**Popeta**	**3.34**	**214**	*e*P	**Pn**	**03 41 47.5**	**-1.1**
MT01				*e*S	**Sn**	**03 42 26.8**	**-1.1**
MT01				IAML		03 42 27.6	
	comp=Z,59nm,0.2s						
AC04	**Llanos de Chal**	**3.43**	**327**	*e*P	**Pn**	**03 41 49.4**	**-0.4**
RFA	**San Rafael**	**3.67**	**173**	*e*P	**Pn**	**03 41 52.5**	**-0.4**
RFA				*e*S	**Sn**	**03 42 34.6**	**-0.9**
RFA				IAML		03 42 39.3	
	comp=Z,45nm,0.3s						
GO03	**Copiapo**	**3.68**	**342**	*e*P	**Pn**	**03 41 53.3**	**+0.2**
GO03	**Copiapo**	**3.68**	**342**	*e*P	**Pn**	**03 41 53.6**	**+0.4**
GO03				*e*S	**Sn**	**03 42 36.2**	**+0.2**
GO03				IAML		03 42 38.0	
	comp=Z,48nm,0.2s						
BO01	**Tunca**	**3.71**	**208**	*e*P	**Pn**	**03 41 52.3**	**-1.2**
BO01	**Tunca**	**3.71**	**208**	*e*P	**Pn**	**03 41 52.4**	**-1.0**
BO01				*e*S	**Sn**	**03 42 35.8**	**-0.8**
BO01				IAML		03 42 37.8	
	comp=Z,24nm,0.2s						
TCA	**Tanti**	**3.76**	**94**	*e*P	**Pn**	**03 41 54.0**	**-0.1**
TCA	**Tanti**	**3.76**	**94**	*e*P	**Pn**	**03 41 54.2**	**0.0**
TCA				*e*S	**Sn**	**03 42 36.9**	**-0.9**
TCA				IAML		03 42 37.1	
	comp=Z,57nm,0.5s						
AC06	**Mina Casimiro**	**3.94**	**342**	*e*P	**Pn**	**03 41 56.7**	**+0.2**
BO02	**Sierra Bellavi**	**3.96**	**202**	*e*P	**Pn**	**03 41 56.6**	**-0.2**
BO02	**Sierra Bellavi**	**3.96**	**202**	*e*P	**Pn**	**03 41 56.9**	**0.0**
BO02				*e*S	**Sn**	**03 42 43.7**	**+1.0**
BO02				IAML		03 42 46.5	
	comp=Z,66nm,0.1s						
BO03	**Pichilemu**	**4.20**	**216**	*e*P	**Pn**	**03 41 57.2**	**-2.7**
AC02	**Maricunga**	**4.27**	**358**	*e*P	**Pn**	**03 42 03.0**	**+1.6**
AC02				*e*S	**Sn**	**03 42 51.5**	**+0.8**
AC02				IAML		03 42 55.5	
	comp=Z,23nm,0.2s						
AC01	**Pan de Azucar**	**5.16**	**344**	*e*P	**Pn**	**03 42 12.4**	**-0.4**
AC01				*e*S	**Sn**	**03 43 08.8**	**-2.4**
AC01				IAML		03 43 53.7	
	comp=Z,27nm,3.0s						

*LDO **04** 03:51:08.5±1.2, 40°.36N±0°.01×76°.01W±0°.01, h5km±1km, Error ellipse: s-maj=2.3km s-min=1.9km az=350.0*
NEIC 04 03:51:08.6±1.0,**40°.357N**±0°.006×**75°.99W**±0°.01,**h5**km±1km,
ML1.6/18,**ML1.3**/9(LDO),**Error ellipse: s-maj=2.2km**
s-min=1.9km az=123.0,Pennsylvania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MVL	**Millersville**	**0.45**	**218**	Pg	Pg	03 51 16.9	-0.3
MVL				Sg	Sg	03 51 22.7	-0.4
WUPA	**West Chester U**	**0.52**	**145**	Pg	Pg	03 51 18.1	-0.4
WUPA	**West Chester U**	**0.52**	**145**		Sg	03 51 24.8	-0.4
PAGS	**Pennsylvania G**	**0.57**	**257**	Pg	Pg	03 51 18.9	-0.7
PAGS				Sg	Sg	03 51 27.1	+0.1
PAGS				IAML		03 51 28.1	
	comp=E,26nm,0.2s						
PAGS				IAML		03 51 31.0	
	comp=N,40nm,0.1s						
PSUB	**Penn St. - Bra**	**0.60**	**136**	Pg	Pg	03 51 19.5	-0.5
PSUB				Sg	Sg	03 51 26.7	-1.0
PSUB				IAML		03 51 31.7	
	comp=N,24nm,0.1s						
PSUB				IAML		03 51 31.8	
	comp=E,26nm,0.5s						
P60A	**Greenville**	**0.61**	**153**		Pg	03 51 19.3	-0.9
P60A					Sg	03 51 28.0	-0.1
TUPA	**Temple Univers**	**0.65**	**107**		Pg	03 51 20.8	-0.2
TUPA					Sg	03 51 29.0	-0.3
N58A	**Sunbury**	**0.73**	**311**	Pg	Pg	03 51 22.4	-0.3
N58A				Sg	Sg	03 51 31.5	-0.6
BRNJ	**Basking Ridge**	**1.13**	**73**	Pg	Pg	03 51 29.6	-0.7
P61A	**Hammonton**	**1.15**	**126**	Pg	Pg	03 51 30.0	-0.5
SDMD	**Soldier's Deli**	**1.15**	**215**	Pg	Pg	03 51 30.0	-0.6
SDMD				IAML		03 51 40.1	
	comp=E,7.4nm,4.2s						
SDMD				Sg	Sg	03 51 43.5	-1.9
SDMD				IAML		03 52 06.5	
	comp=N,6.7nm,3.7s						
KSPA	**Keystone Colle**	**1.21**	**8**	Pg	Pb	03 51 31.9	0.0
M57A	**Sunshine Farm,**	**1.30**	**319**		Pn	03 51 33.0	-0.5
M57A				IAML		03 51 44.6	
	comp=N,20nm,3.9s						
M57A				IAML		03 52 17.2	
	comp=N,18nm,4.5s						
SSPA	**Standing Stone**	**1.47**	**282**		Pn	03 51 35.5	-0.2
PAL	**Palisades**	**1.71**	**67**	Pn	Pn	03 51 39.4	+0.4
P57A	**Homestead Farm**	**1.78**	**241**	Pn	Pn	03 51 40.1	+0.1
L59A	**Walton**	**1.97**	**21**	Pn	Pn	03 51 43.5	+0.9
KSCT	**Kent School, K**	**2.34**	**53**	Pn	Pn	03 51 48.3	+0.7

*CATAC **04** 04:05:34.4±0.8, 7°.N±3°×8°.1W±°, h8km±5km, M3.9/12, MLv3.9/12, Error ellipse: s-maj=6.1km s-min=3.7km az=161.4, confirmed*
*UCR **04** 04:05:38.4±1.4, 7°.25N×81°.13W, h29km±43km, MW4.2*
ISC 04 04:05:29.2±2.5,**7°.2N**±0°.1×**81°.16W**±0°.04,**h1**km±17km,**n59,**
σ1**§03**/66,**6C-5D,Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKNTU	**Kakint²**	**1.80**	**339**	*e*P	**Pb**	**04 06 03.7**	**+0.7**
KKNTU				*e*S	**Sb**	**04 06 25.3**	**-0.8**
LMNES	**Limones**	**1.93**	**299**	*e*P	**Pg**	**04 06 07.7**	**+1.4**
RBALA	**Bur**	**1.98**	**330**	*e*P	**Pg**	**04 06 07.7**	**+0.4**
RBALA				*e*S	**Sg**	**04 06 32.8**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**2.01**	**330**	*e*P	**Pb**	**04 06 07.5**	**+0.9**
WILLF	**Boquete**	**2.03**	**322**	*e*P	**Pg**	**04 06 08.4**	**+0.2**
WILLF				*e*S	**Sg**	**04 06 34.6**	**-0.1**
JEFFS	**S de V. Baru**	**2.04**	**318**	*e*P	**Pg**	**04 06 09.1**	**+0.8**
BQTLY	**Boquete Panama**	**2.06**	**321**	*e*P	**Pg**	**04 06 08.8**	**+0.2**
BQTLY				*e*S	**Sg**	**04 06 35.0**	**-0.4**
DAP26	**falda E V. Bar**	**2.06**	**323**	*e*P	**Pb**	**04 06 08.2**	**+0.7**
DAP26				*e*S	**Sg**	**04 06 34.9**	**-0.5**
ZANG	**Zanguenga, Cho**	**2.21**	**35**	*e*P	**Pg**	**04 06 11.1**	**-0.5**
DMCAL	**E. de Neily**	**2.22**	**313**	*i*P	**Pg**	**04 06 12.2**	**+0.5**
BRU2	**Volcan**	**2.23**	**317**	P	**Pg**	**04 06 12.0**	**0.0**
BRU2	**Volcan**	**2.23**	**317**	*e*P	**Pg**	**04 06 12.1**	**0.0**
BRU2				*e*S	**Sg**	**04 06 41.1**	**+0.1**
NELY	**Ciudad Neily**	**2.32**	**310**	*e*P	**Pg**	**04 06 13.4**	**-0.3**
SCLRA	**Santa Clara, W**	**2.32**	**316**	*e*P	**Pg**	**04 06 13.9**	**+0.1**
BCIP	**Isla Barro Col**	**2.40**	**33**	P	**Pb**	**04 06 13.5**	**+0.3**
BCIP				S	**Sb**	**04 06 43.4**	**+0.1**
BCIP	**Isla Barro Col**	**2.40**	**33**	*i*P	**Pb**	**04 06 13.7**	**+0.5**
BCIP				*e*S	**Sb**	**04 06 43.0**	**-0.3**
ALCO	**Alturas Coton,**	**2.44**	**317**	*e*P	**Pb**	**04 06 14.8**	**+0.8**
ALCO				*e*S	**Sb**	**04 06 46.2**	**+1.4**
FITO	**Golfito**	**2.46**	**307**	*e*P	**Pb**	**04 06 15.7**	**+1.4**
EDAD	**Golfito**	**2.49**	**307**	*e*P	**Pb**	**04 06 15.1**	**+0.3**
PIRO	**Carate, Puerto**	**2.49**	**300**	P	**Pb**	**04 06 15.1**	**+0.3**
PIRO	**Carate, Puerto**	**2.49**	**300**	S	**Sb**	**04 06 46.7**	**+0.7**
PIRO	**Carate, Puerto**	**2.49**	**300**	*e*P	**Pb**	**04 06 14.9**	**+0.1**
PTJ1	**Puerto Jimnez**	**2.53**	**303**	P	**Pb**	**04 06 16.3**	**+0.8**
PTJ1	**Puerto Jimnez**	**2.53**	**303**	S	**Sb**	**04 06 48.1**	**+0.9**
CAZU	**Cerro Azul, Pa**	**2.71**	**40**	*e*P	**Pb**	**04 06 19.1**	**+0.6**
EDP2	**Potrero Grande**	**2.73**	**313**	*e*P	**Pb**	**04 06 18.8**	**0.0**
RGM0	**Gandoca**	**2.82**	**330**	*e*P	**Pb**	**04 06 22.1**	**+1.7**
FIMO	**Fila Mora**	**2.84**	**310**	*e*P	**Pb**	**04 06 22.2**	**+1.3**
PANP	**Palmar Norte**	**2.90**	**309**	*e*P	**Pb**	**04 06 22.0**	**+0.2**
DRK0	**Durika**	**2.95**	**316**	P	**Pb**	**04 06 22.4**	**-0.3**
DRK0	**Durika**	**2.95**	**316**	S	**Sb**	**04 06 58.7**	**-0.7**
DRK0	**Durika**	**2.95**	**316**	*e*P	**Pb**	**04 06 22.4**	**-0.3**
BRIBI	**Bribri**	**2.96**	**326**	*e*P	**Pb**	**04 06 24.4**	**+1.6**
EDPE	**Pejibaye, P**	**3.12**	**310**	*e*P	**Pb**	**04 06 26.2**	**+0.8**
OCHAL	**Ojochal**	**3.13**	**308**	P	**Pb**	**04 06 25.5**	**-0.3**
SAJE	**San Jernim**	**3.19**	**313**	*e*P	**Pb**	**04 06 26.5**	**-0.4**
LAES	**El Progreso Va**	**3.20**	**324**	*e*P	**Pb**	**04 06 27.1**	**+0.2**
VERH	**Veragua Rainfo**	**3.42**	**324**	*e*P	**Pb**	**04 06 30.1**	**-0.5**
BUS1	**Rivas**	**3.50**	**313**	*e*P	**Pb**	**04 06 31.6**	**-0.7**
PIEC	**Cerro El Cedra**	**3.70**	**312**	*e*P	**Pb**	**04 06 33.7**	**-2.0**
LLNJ	**Naranjito**	**3.72**	**309**	*e*P	**Pb**	**04 06 36.1**	**+0.4**
VERB	**Verbena**	**3.74**	**318**	*e*P	**Pb**	**04 06 36.2**	**-0.1**
RESJ	**San Isidro (Tu**	**3.77**	**320**	*e*P	**Pb**	**04 06 36.3**	**-0.4**
ABRB	**Las Abras (San**	**3.80**	**319**	*e*P	**Pb**	**04 06 36.8**	**-0.6**
CVTV	**Tajo**	**3.82**	**318**	*e*P	**Pb**	**04 06 36.8**	**-0.9**
CVTQ	**Turrialba

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.33**	**352**	Pg	**Pg**	**04 35 14.1**	**+1.1**
DALY				Sg	**Sb**	**04 35 20.0**	**-1.1**
FETY	**Fethiye**	**0.33**	**63**	P	Pg	04 35 08.0	-5.0
FETY				S	**Sg**	**04 35 11.5**	**-5.8**
RDI1	**Rhodes Town Ha**	**0.40**	**265**	P	**Pg**	**04 35 14.9**	**+0.8**
RDI1				S	**Sb**	**04 35 21.1**	**-1.7**
SABU	**Mula-Dalaman**	**0.40**	**31**	P	**Pg**	**04 35 15.6**	**+1.5**
SABU				S	**Sb**	**04 35 22.0**	**-1.0**
SABU	comp=E,334nm,0.2s			*i* IAML		04 35 23.0	
SABU	comp=N,344nm,0.2s			*i* IAML		04 35 24.0	
IZZE	**Mula-Seydike**	**0.42**	**97**	P	**Pg**	**04 35 15.5**	**+0.9**
TURN	**Turunc**	**0.47**	**308**	P	**Pg**	**04 35 16.4**	**+0.7**
TURN				S	**Sg**	**04 35 22.9**	**+1.1**
TURN	comp=N,253nm,0.7s			*i* IAML		04 35 24.0	
TURN	**Turunc**	**0.47**	**308**	Pg	**Pb**	**04 35 16.9**	**-0.8**
ARG	**Arkhangelos**	**0.54**	**241**	Pg	**Pg**	**04 35 17.9**	**+0.9**
ARG	**Arkhangelos**	**0.54**	**241**	P	**Pg**	**04 35 17.3**	**+0.3**
ARG				S	**Sb**	**04 35 25.8**	**-1.3**
ARG	**Arkhangelos**	**0.54**	**241**	P	**Pg**	**04 35 17.1**	**+0.1**
ARG				S	**Sg**	**04 35 25.2**	**+1.2**
CAME	**Cameli-Denizli**	**0.66**	**46**	Pg	**Pg**	**04 35 20.2**	**+1.0**
YER	**Yerkesik**	**0.73**	**332**	Pg	**Pb**	**04 35 22.8**	**-0.4**
YER	**Yerkesik**	**0.73**	**332**	P	**Pn**	**04 35 23.5**	**-0.7**
YER				S	**Sn**	**04 35 35.2**	**-0.7**
AKAS	**Kas**	**0.76**	**109**	P	**Pb**	**04 35 22.7**	**0.0**
AKAS	**Kas**	**0.76**	**109**	Pg	**Pb**	**04 35 23.0**	**+0.3**
KSL	**Kastellorizon**	**0.78**	**115**	P	**Pg**	**04 35 21.4**	**-0.1**
KNIK	**Mula-Seydike**	**0.78**	**62**	P	**Pg**	**04 35 22.7**	**+1.1**
RGE1	**Gennadi, Rhode**	**0.78**	**234**	P	**Pb**	**04 35 22.5**	**-0.4**
CAEL	**Denizli, Camel**	**0.80**	**37**	P	**Pb**	**04 35 24.5**	**+1.1**
DNZT	**Denizli-Tavas-**	**0.83**	**17**	P	**Pg**	**04 35 23.6**	**+1.1**
MULA	**Mugla, Merkez-**	**0.83**	**338**	P	**Pb**	**04 35 24.0**	**+0.1**
MULA				S	**Sb**	**04 35 35.8**	**+0.2**
DAT	**Datca**	**0.94**	**285**	Pg	**Pg**	**04 35 25.2**	**+0.5**
DAT	**Datca**	**0.94**	**285**	P	**Pb**	**04 35 25.7**	**-0.1**
TAVA	**DENIZLI_Tavas**	**0.99**	**9**	P	**Pb**	**04 35 26.7**	**+0.1**
ELL	**Elmali**	**1.00**	**74**	Pg	**Pb**	**04 35 27.4**	**+0.7**
GOLH	**Golhisar**	**1.01**	**42**	P	**Pg**	**04 35 26.8**	**+0.8**
YAZI	**Mula-Dat§a-**	**1.03**	**281**	P	**Pb**	**04 35 28.9**	**-0.3**
APMY	**Acipayam-Deniz**	**1.09**	**25**	Pn	**Pn**	**04 35 29.1**	**0.0**
MLSB	**Milas**	**1.10**	**317**	Pn	**Pg**	**04 35 28.1**	**+0.4**
DNIZ	**Denizli-Tavas-**	**1.17**	**13**	P	**Pn**	**04 35 30.3**	**+0.1**
BDRM	**Kayabasi**	**1.17**	**300**	P	**Pn**	**04 35 30.3**	**+0.2**
BODT	**Bodrum**	**1.26**	**297**	Pn	**Pn**	**04 35 31.4**	**0.0**
BODT	**Bodrum**	**1.26**	**297**	P	**Pn**	**04 35 33.1**	**+1.8**
NISR	**Nisiros**	**1.28**	**276**	P	**Pb**	**04 35 32.6**	**+1.1**
NISR				S	**Sn**	**04 35 50.5**	**+1.1**
NISR	**Nisiros**	**1.28**	**276**	P	**Pb**	**04 35 32.2**	**+0.8**
AKUM	**Antalya-Kumluc**	**1.33**	**97**	P	**Pg**	**04 35 34.1**	**+2.1**
ESEN	**Aydn-Nazilli**	**1.34**	**348**	P	**Pg**	**04 35 33.0**	**+0.7**
AYDN	**Tasoluk**	**1.35**	**331**	P	**Pg**	**04 35 33.3**	**+0.8**
INCE	**Denizli-Bozkur**	**1.40**	**29**	P	**Pg**	**04 35 35.4**	**+1.9**
KORT	**Korkueli**	**1.41**	**68**	P	**Pg**	**04 35 36.6**	**+2.9**
KORT	**Korkueli**	**1.41**	**68**	Pn	**Pg**	**04 35 34.9**	**+1.2**
NAZL	**Nazilli-Aydin**	**1.51**	**347**	Pn	**Pg**	**04 35 35.9**	**+0.3**
KARP	**Karpathos**	**1.57**	**234**	Pn	**Pb**	**04 35 36.4**	**0.0**
KARP	**Karpathos**	**1.57**	**234**	P	**Pb**	**04 35 36.2**	**-0.2**
KARP	**Karpathos**	**1.57**	**234**	P	**Pb**	**04 35 36.4**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.60**	**336**	Pn	**Pb**	**04 35 36.9**	**-0.1**
GCAM	**G?zelcaml?**	**1.69**	**316**	P	**Pg**	**04 35 39.6**	**+0.5**
GCAM	**G?zelcaml?**	**1.69**	**316**	Pn	**Pb**	**04 35 38.1**	**-0.4**
BUCA	**Burdur, Bucak-**	**1.70**	**60**	P	**Pg**	**04 35 40.4**	**+1.2**
KIRA	**zmir-Kiraz**	**1.73**	**352**	P	**Pb**	**04 35 39.0**	**-0.1**
BCK	**Bucak**	**1.79**	**57**	Pn	**Pb**	**04 35 40.3**	**+0.1**
ODEM	**Odemis-Izmir**	**1.86**	**344**	Pn	**Pb**	**04 35 40.7**	**-0.6**
SMG	**Samos**	**1.93**	**310**	P	**Pn**	**04 35 40.5**	**0.0**
PASA	**Karahalli, USA**	**1.96**	**18**	P	**Pb**	**04 35 43.1**	**+0.1**
KULA	**Kula-Manisa**	**2.02**	**359**	Pn	**Pn**	**04 35 43.1**	**+1.2**
USAK	**Uak-Merkez**	**2.24**	**6**	P	**Pn**	**04 35 45.9**	**+1.1**
AFYN	**Afyon-Dinar-K**	**2.28**	**38**	P	**Pb**	**04 35 47.6**	**-1.0**
ZKR	**Zakros**	**2.45**	**237**	P	**Pn**	**04 35 48.3**	**+0.7**
AKHS	**Akhisar**	**2.49**	**344**	P	**Pn**	**04 35 48.8**	**+0.6**
SEDI	**Konya, Seydise**	**2.62**	**68**	P	**Pb**	**04 35 53.2**	**-1.2**
NPS	**Neapolis**	**2.80**	**245**	P	**Pn**	**04 35 52.9**	**+0.4**
NPS	**Neapolis**	**2.80**	**245**	P	**Pn**	**04 35 52.8**	**+0.4**
IDI	**Anoyia**	**3.33**	**250**	P	**Pn**	**04 35 59.8**	**0.0**

DJA 04 04:48:05.7±0.5,**8°S**±5°×**12°0E**±°,**h177**km±7km,**M3.7**/10, **mB5.4**/1,**mb4.4**/3,**MLv3.3**/10,**Mw(mB)4.9**/1,**Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.38**	**199**	P	Pn	04 48 36.4	+0.1
WBSI				S	Sn	04 48 59.4	-0.7
WSI	**Waingapu**	**1.41**	**161**	P	Pn	04 48 37.3	+0.8
WSI				S	Sn	04 49 00.4	-0.1
EDFI	**Ende, Flores**	**1.88**	**103**	P	Pn	04 48 42.0	+0.7
BASI	**Baing, Sumba**	**2.01**	**159**	P	Pn	04 48 43.3	+0.6
PLAI	**Plampang**	**2.10**	**256**	P	Pn	04 48 43.9	+0.2
BSSI	**Bau Bau, Buton**	**2.27**	**17**	P	Pn	04 48 45.5	-0.1
MMRI	**Maumere**	**2.39**	**97**	P	Pn	04 48 47.0	0.0
TWSI	**Taliwang, Sumb**	**2.95**	**262**	P	Pn	04 48 54.2	+0.6
BKSI	**Bulukumba**	**3.00**	**5**	P	Pn	04 48 54.4	+0.1
PCJI	**Pacitan** 47nm,1.1s	**8.57**	**270**	P	Pn	04 50 06.3	-0.3
SANI	**Sanana** 18nm,0.7s	**8.74**	**45**	P	Pn	04 50 08.1	-0.7

*ISK **04** 04:55:44.8,36°.48N×28°.70E,h5km,ML3.0/17*
*ATH **04** 04:55:44.2,36°.48N×28°.80E,h2km±1km,ML2.9/5,Manual Solution by K.Orfanogiannaki First location: 2019/11/04 04:57:09, This location: 2019/11/04 05:43:03 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*AFAD **04** 04:55:45.7,36°.47N×28°.69E,h7km±3km,ML2.9*

ISC 04 04:55:44.1±1.1,**36°.47N**±0°.02×**28°.71E**±0°.02,**h6km**±10km, **n61**,σ1**§34**/75,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.34**	**61**	P	Pg	04 55 44.3	-6.4
FETY				S	**Sg**	**04 55 49.3**	**-5.9**
DALY	**Dalyan (Mula)**	**0.35**	**352**	Pg	**Pb**	**04 55 52.6**	**-0.1**
DALY				Sg	**Sb**	**04 55 58.4**	**0.0**
RDI1	**Rhodes Town Ha**	**0.40**	**267**	P	**Pg**	**04 55 52.5**	**+0.8**
RDI1				S	**Sb**	**04 55 59.6**	**-0.1**
SABU	**Mula-Dalaman**	**0.41**	**30**	P	**Pg**	**04 55 54.0**	**+0.3**
SABU				S	**Sb**	**04 56 00.5**	**+0.4**
IZZE	**Mula-Seydike**	**0.41**	**94**	P	**Pb**	**04 55 54.2**	**+0.5**
IZZE				S	**Sb**	**04 56 00.1**	**-0.2**
IZZE	comp=N,2µm,0.3s			*i* IAML		04 56 03.0	
IZZE	comp=E,1µm,0.6s			*i* IAML		04 56 05.0	
TURN	**Turunc**	**0.48**	**309**	P	**Pb**	**04 55 55.0**	**0.0**
TURN				S	**Sb**	**04 56 01.9**	**-0.4**
TURN	**Turunc**	**0.48**	**309**	Pg	**Pb**	**04 55 54.9**	**-0.1**
TURN				Sg	**Sb**	**04 56 02.9**	**+0.6**
ARG	**Arkhangelos**	**0.54**	**242**	Pg	**Pb**	**04 55 55.9**	**0.0**
ARG				Sg	**Sb**	**04 56 04.8**	**+1.0**
ARG	**Arkhangelos**	**0.54**	**242**	P	**Pb**	**04 55 55.2**	**-0.6**
ARG				S	**Sb**	**04 56 03.8**	**0.0**
CAME	**Cameli-Denizli**	**0.67**	**45**	Pg	**Pb**	**04 55 58.6**	**+0.4**
YER	**Yerkesik**	**0.75**	**333**	Pg	**Pn**	**04 56 00.7**	**-0.5**
AKAS	**Kas**	**0.76**	**108**	P	**Pn**	**04 56 00.9**	**-0.5**
AKAS	**Kas**	**0.76**	**108**	Pg	**Pn**	**04 56 01.0**	**-0.4**
KSL	**Kastellorizon**	**0.77**	**114**	P	**Pg**	**04 55 58.0**	**-0.9**
RGE1	**Gennadi, Rhode**	**0.77**	**235**	P	**Pb**	**04 55 59.8**	**0.0**
KNIK	**Mula-Seydike**	**0.79**	**61**	P	**Pn**	**04 56 01.2**	**-0.6**
KNIK				S	**Sn**	**04 56 12.3**	**-1.6**
CAEL	**Denizli, Camel**	**0.81**	**37**	P	**Pn**	**04 56 01.8**	**-0.4**
DNZT	**Denizli-Tavas-**	**0.84**	**17**	P	**Pn**	**04 56 02.4**	**-0.2**
MULA	**Mugla, Merkez-**	**0.84**	**338**	P	**Pn**	**04 56 02.6**	**0.0**
MULA				S	**Sb**	**04 56 13.4**	**+0.6**
DAT	**Datca**	**0.95**	**286**	P	**Pn**	**04 56 04.6**	**+0.6**
DAT	**Datca**	**0.95**	**286**	Pg	**Pn**	**04 56 04.3**	**+0.3**
ELL	**Elmali**	**1.00**	**74**	Pg	**Pn**	**04 56 05.7**	**+1.0**
TAVA	**DENIZLI_Tavas**	**1.01**	**9**	P	**Pn**	**04 56 05.4**	**+0.6**
GOLH	**Golhisar**	**1.02**	**41**	P	**Pn**	**04 56 05.5**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.04**	**282**	P	**Pn**	**04 56 05.5**	**+0.4**
YAZI				S	**Sn**	**04 56 18.9**	**-1.0**
APMY	**Acipayam-Deniz**	**1.10**	**25**	Pn	**Pn**	**04 56 06.5**	**+0.4**
MLSB	**Milas**	**1.11**	**318**	Pn	**Pn**	**04 56 06.4**	**+0.2**
BDRM	**Kayabasi**	**1.18**	**301**	P	**Pg**	**04 56 08.2**	**+1.6**
DNIZ	**Denizli-Tavas-**	**1.18**	**13**	P	**Pg**	**04 56 09.0**	**+2.2**
BODT	**Bodrum**	**1.27**	**298**	Pn	**Pg**	**04 56 10.4**	**+1.9**
NISR	**Nisiros**	**1.28**	**277**	P	**Pg**	**04 56 09.8**	**+1.2**
NISR				S	**Sg**	**04 56 27.5**	**+2.2**
AKUM	**Antalya-Kumluc**	**1.32**	**96**	P	**Pg**	**04 56 12.5**	**+3.0**
ESEN	**Aydn-Nazilli**	**1.36**	**348**	P	**Pg**	**04 56 11.9**	**+1.8**
AYDN	**Tasoluk**	**1.36**	**331**	P	**Pg**	**04 56 12.2**	**+2.0**
INCE	**Denizli-Bozkur**	**1.42**	**29**	P	**Pg**	**04 56 13.4**	**+2.2**
KORT	**Korkueli**	**1.42**	**68**	P	**Pg**	**04 56 14.5**	**+3.3**
KORT	**Korkueli**	**1.42**	**68**	Pn	**Pg**	**04 56 13.1**	**+1.8**
NAZL	**Nazilli-Aydin**	**1.53**	**347**	Pn	**Pg**	**04 56 14.4**	**+1.0**
KARP	**Karpathos**	**1.56**	**234**	Pn	**Pg**	**04 56 14.8**	**+0.9**
KARP	**Karpathos**	**1.56**	**234**	P	**Pg**	**04 56 13.6**	**-0.3**
KARP				S	**Sg**	**04 56 35.6**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**1.61**	**336**	Pn	**Pg**	**04 56 15.6**	**+0.6**
BRDR	**BURDUR-Merkez**	**1.63**	**41**	P	**Pg**	**04 56 17.0**	**+1.7**
GCAM	**G?zelcaml?**	**1.71**	**316**	P	**Pg**	**04 56 16.3**	**-0.4**
GCAM	**G?zelcaml?**	**1.71**	**316**	Pn	**Pg**	**04 56 16.8**	**+0.1**
BUCA	**Burdur, Bucak-**	**1.71**	**59**	P	**Pg**	**04 56 18.6**	**+1.8**
KIRA	**zmir-Kiraz**	**1.74**	**352**	P	**Pg**	**04 56 17.8**	**+0.3**
IZMR	**zmir-demi**	**1.77**	**340**	P	**Pg**	**04 56 18.4**	**+0.4**
ODEM	**Odemis-Izmir**	**1.87**	**344**	Pn	**Pg**	**04 56 19.4**	**-0.6**
SMG	**Samos**	**1.94**	**310**	P	**Pb**	**04 56 18.7**	**-1.1**
PASA	**Karahalli, USA**	**1.97**	**18**	P	**Pg**	**04 56 21.8**	**-0.1**
KZIL	**AFYON_Kizioren**	**2.12**	**32**	P	**Pb**	**04 56 22.6**	**-0.2**
DGB	**zmir**	**2.15**	**318**	P	**Pg**	**04 56 24.4**	**-0.9**
BAGO	**Egridir - ISPA**	**2.25**	**47**	P	**Pb**	**04 56 25.6**	**+0.6**
USAK	**Uak-Merkez**	**2.25**	**6**	P	**Pb**	**04 56 24.3**	**-0.9**
USAK				S	**Sn**	**04 56 50.1**	**+0.1**
AFYN	**Afyon-Dinar-K**	**2.29**	**38**	P	**Pb**	**04 56 26.4**	**+0.5**
ZKR	**Zakros**	**2.44**	**237**	P	**Pn**	**04 56 25.2**	**+0.8**
AKHS	**Akhisar**	**2.51**	**344**	P	**Pb**	**04 56 28.0**	**-1.4**
APE	**Apeiranthos**	**2.62**	**284**	P	**Pn**	**04 56 28.6**	**+1.7**
SEDI	**Konya, Seydise**	**2.63**	**67**	P	**Pb**	**04 56 31.5**	**0.0**
YVAC	**Isparta, Yalva**	**2.70**	**47**	P	**Pb**	**04 56 31.8**	**-1.0**
NPS	**Neapolis**	**2.79**	**245**	P	**Pb**	**04 56 31.6**	**-2.8**

*IDC **04** 04:56:39.5±3.0,7°.28S×129°.22E,h88km±27km,mb4.0/15, mbtmp4.3/16,MS3.2/2,Error ellipse: s-maj=26.7km s-min=11.2km az=77.0*
*NEIC **04** 04:56:44.6±2.4,7°.28S±0°.07×129°.15E±0°.06,h132km±5km, mb4.6/32,Error ellipse: s-maj=10.7km s-min=8.4km az=185.0*
*DJA **04** 04:56:44.6±0.2,7°S±2°×12°9E±°,h168km±5km,M4.8/24, mB5.2/7,mb4.7/24,MLv5.1/17,Mw(mB)4.6/7*

ISC 04 04:56:44.1±0.3,**7°.43S**±0°.04×**129°.07E**±0°.05,**h131**km,**n137**, σ1§**78**/139,**mb4.5**/35,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.28**	**104**	P	**Pn**	**04 57 23.3**	**+1.7**
SAUI	**Saumlaki**	**2.28**	**104**	P	**Pn**	**04 57 23.9**	**+2.3**
SAUI	**Saumlaki**	**2.28**	**104**	P	**Pn**	**04 57 24.1**	**+2.5**
SAUI				S	**Sn**	**04 57 53.4**	**+3.1**
BNDI	**Bandanaira**	**3.01**	**16**	P	**Pn**	**04 57 32.1**	**+1.2**
AAI	**Ambon**	**3.82**	**347**	P	**Pn**	**04 57 43.4**	**+1.8**
MSAI	**Masohi**	**4.06**	**358**	P	**Pn**	**04 57 46.6**	**+1.8**
NLAI	**Namlea**	**4.61**	**335**	P	**Pn**	**04 57 55.2**	**+3.2**
SOEI	**Soe**	**5.28**	**244**	Pn	**Pn**	**04 58 03.9**	**+2.8**
SOEI	**Soe**	**5.28**	**244**	P	**Pn**	**04 58 03.9**	**+2.8**
SOEI	**Soe**	**5.28**	**244**	S	**Sn**	**04 59 02.3**	**+1.3**
SOEI	**Soe**	**5.28**	**244**	P	**Pn**	**04 58 03.1**	**+2.0**
DRS	**Darwin Rock St**	**5.28**	**160**	P	**Pn**	**04 58 01.7**	**+0.7**
FAKI	**Fak Fak**	**5.49**	**35**	Pn	**Pn**	**04 58 02.0**	**-1.8**
FAKI	**Fak Fak** 1.2nm2µm87nm,0.7s	**5.49**	**35**	P	**Pn**	**04 58 01.7**	**-2.1**
MTN	**Manton Dam**	**5.75**	**159**	Pn	**Pn**	**04 58 08.3**	**+1.1**
KMPI	**Kaimana, Papua** 4µm283nm,0.6s	**5.94**	**51**	P	**Pn**	**04 58 09.7**	**-0.2**
BATI	**Baumata** 227nm,0.3s,baz=126,slow=0.6,SNR=26	**6.01**	**242**	P	**Pn**	**04 58 13.1**	**+2.3**
BATI	523nm,0.5s,baz=106,slow=22,SNR=14			S	**Sn**	**04 59 16.4**	**-2.2**
BATI	**Baumata**	**6.01**	**242**	P	**Pn**	**04 58 12.5**	**+1.7**
SANI	**Sanana**	**6.17**	**330**	P	Pn	04 58 22.2	+9.3
MMRI	**Maumere**	**6.87**	**260**	Pn	**Pn**	**04 58 24.6**	**+2.2**
SWI	**Sorong** 0.7nm1µm43nm,0.5s	**6.88**	**19**	P	**Pn**	**04 58 22.3**	**-0.3**
EDFI	**Ende, Flores** 0.2nm22nm,0.6s	**7.42**	**259**	P	**Pn**	**04 58 31.5**	**+1.6**
RKPI	**Ransiki, Papua** 227nm,0.6s	**7.78**	**41**	P	**Pn**	**04 58 33.5**	**-1.2**
KNRA	**Kununurra**	**8.20**	**182**	Pn	**Pn**	**04 58 40.0**	**-0.3**
WSI	**Waingapu**	**8.95**	**255**	P	**Pn**	**04 58 51.3**	**+0.9**
BKSI	**Bulukumba** 15nm,0.9s	**9.13**	**283**	P	**Pn**	**04 58 56.6**	**+3.7**
BAKI	**Biak** 199nm,0.9s	**9.36**	**49**	P	**Pn**	**04 58 57.3**	**+1.3**
BNSI	**Bone**	**9.41**	**288**	P	**Pn**	**04 58 58.9**	**+2.3**
WBSI	**Waikabubak, Su** 88nm,0.6s	**9.82**	**256**	P	**Pn**	**04 59 03.8**	**+1.7**
FITZ	**Fitzroy Crossi**	**11.11**	**197**	Pn	**Pn**	**04 59 16.8**	**-2.5**
FITZ	**Fitzroy Crossi** 73nm,0.5s,baz=28,slow=10,SNR=236	**11.11**	**197**	P	**Pn**	**04 59 17.6**	**-1.7**
FITZ	60nm,0.4s,baz=68,slow=19,SNR=9.7			S	**Sn**	**05 01 14.2**	**-7.7**
FITZ	**Fitzroy Crossi**	**11.11**	**197**	P	**Pn**	**04 59 17.6**	**-1.7**
PLAI	**Plampang** 38nm,0.8s	**11.26**	**262**	P	**Pn**	**04 59 21.1**	**-0.3**
TOLI2	**Tolitoli**	**11.85**	**315**	P	**P**	**04 59 38.5**	**+1.9**
WB0	**Warramunga Arr**	**13.30**	**158**	Pn	**Pn**	**04 59 45.1**	**-2.9**
WRAB	**Tennant Creek**	**13.44**	**158**	Pn	**Pn**	**04 59 45.6**	**-4.1**
WRAB	**Tennant Creek**	**13.44**	**158**	P	**Pn**	**04 59 47.1**	**-2.6**
WRA	**Warramunga Arr**	**13.44**	**158**	Pn	**Pn**	**04 59 46.7**	**-3.1**
WRA	**Warramunga Arr** 30nm,0.5s,baz=339,slow=13,SNR=116	**13.44**	**158**	P	**Pn**	**04 59 47.0**	**-2.8**
WRA	68nm,0.6s,baz=338,slow=22,SNR=12			S	Sn	05 02 08.0	-10
WR8	**Warramunga Arr**	**13.52**	**158**	Pn	**Pn**	**04 59 48.0**	**-2.7**
COEN	**Coen**	**15.30**	**116**	Pn	**Pn**	**05 00 11.8**	**-1.5**
COEN	**Coen**	**15.30**	**116**	P	**P**	**05 00 15.4**	**+0.3**
MBWA	**Marble Bar**	**16.36**	**213**	P	**Pn**	**05 00 26.9**	**+0.6**
MBWA	comp=Z,26nm,1.1s			IAmb	IAmb	05 00 29.7	
MBWA	**Marble Bar**	**16.36**	**213**	P	**P**	**05 00 27.1**	**+0.3**
QIS	**Mount Isa**	**16.56**	**143**	P	**Pn**	**05 00 29.0**	**+0.2**
PSA00	**Pilbara Seismi**	**16.64**	**211**	P	**P**	**05 00 30.9**	**+1.0**
PSA00	**Pilbara Seismi**	**16.64**	**211**	P	**Pn**	**05 00 30.0**	**+0.3**
PSA00	comp=Z,10nm,0.8s			IAmb	IAmb	05 00 33.3	
PSA00	**Pilbara Seismi**	**16.64**	**211**	P	**Pn**	**05 00 30.0**	**+0.3**
AS31	**Alice Springs**	**16.79**	**164**	P	**P**	**05 00 31.1**	**-0.5**
AS31	comp=Z,14nm,0.5s			IAmb	IAmb	05 00 35.5	
ASAR	**Alice Springs**	**16.80**	**164**	P	**P**	**05 00 31.6**	**0.0**
ASAR	**Alice Springs**	**16.80**	**164**	P	**P**	**05 00 30.5**	**-1.1**
ASAR	comp=Z,18nm,0.6s,baz=332,slow=9.0,SNR=147			S	Sn	05 03 22.1	-17
ASAR	comp=Z,5.9nm,0.8s,baz=328,slow=14,SNR=4.7			LR	LR	05 07 46.2	
PCJI	**Pacitan** comp=Z,49nm,2.1s	**17.74**	**266**	P	**P**	**05 00 41.2**	**-0.8**
SBUM	**Sibu**	**19.47**	**300**	P	**P**	**05 01 00.7**	**-0.2**
SBUM	comp=Z,26nm,0.8s			IAmb	IAmb	05 01 06.6	
KPJI	**Karang Pucung** comp=Z,23nm,0.9s	**19.97**	**269**	P	**P**	**05 01 05.5**	**-0.8**
KSM	**Kuching**	**20.70**	**295**	P	**P**	**05 01 15.7**	**+1.5**
KSM	comp=Z,33nm,0.8s			IAmb	IAmb	05 01 18.4	
GIRL	**Giralia**	**20.80**	**222**	P	Pn	05 01 17.8	-1.2
BBJI	**Bungbulang**	**21.24**	**269**	P	**P**	**05 01 23.9**	**+3.9**
MEEK	**Meekatharra**	**21.53**	**206**	P	**P**	**05 01 23.9**	**+0.9**
CNJI	**Cibinong**	**21.76**	**269**	P	**P**	**05 01 24.4**	**-1.1**
INKA	**Innaminka**	**23.03**	**153**	P	**P**	**05 01 37.3**	**-0.6**
INKA	comp=Z,24nm,0.8s			IAmb	IAmb	05 01 41.3	
FORT	**Forrest**	**23.24**	**182**	P	**P**	**05 01 40.8**	**+0.9**
FORT	comp=Z,21nm,0.7s			IAmb	IAmb	05 01 43.1	
QLP	**Quilpie**	**23.89**	**145**	P	**P**	**05 01 47.9**	**+2.1**
MORW	**Morawa**	**24.78**	**208**	P	**P**	**05 01 56.1**	**+2.3**
MORW	comp=Z,22nm,1.4s			IAmb	IAmb	05 02 16.9	
MORW	**Morawa**	**24.78**	**208**	P	**P**	**05 01 55.3**	**+1.5**
BLDU	**Ballidu**	**25.81**	**205**	P	**P**	**05 02 04.9**	**+1.8**
BBOO	**Buckleboo**	**26.07**	**167**	P	**P**	**05 02 06.3**	**+0.8**
BBOO	comp=Z,23nm,1.2s			IAmb	IAmb	05 02 43.4	
BBOO	**Buckleboo**	**26.07**	**167**	P	**P**	**05 02 06.5**	**+1.0**
KLBR	**Kellerberrin**	**26.25**	**202**	P	**P**	**05 02 09.4**	**+2.3**
STKA	**Stephens Creek**	**26.98**	**156**	P	**P**	**05 02 13.2**	**-0.4**
STKA	**Stephens Creek** comp=Z,3.9nm,0.5s,baz=340,slow=10,SNR=13	**26.98**	**156**	P	**P**	**05 02 13.7**	**+0.1**
STKA	comp=Z,73nm,18.1s,baz=26,slow=40			LR	LR	05 14 28.6	
STKA	**Stephens Creek** comp=Z,3.9nm,0.5s	**26.98**	**156**	P	**P**	**05 02 15.1**	**+1.5**
NWAO	**Narrogin (SRO)**	**27.64**	**202**	P	**P**	**05 02 20.9**	**+1.3**
CMSA	**Cobar Meteorol**	**28.56**	**149**	P	**P**	**05 02 29.6**	**+1.8**
RPSI	**Rantau Prapat**	**31.72**	**287**	P	**P**	**05 02 55.3**	**-0.5**
RPSI	comp=Z,6.9nm,0.7s			IAmb	IAmb	05 02 56.6	
CMAR	**Chiang Mai Arr**	**39.31**	**311**	P	**P**	**05 03 59.9**	**-0.7**
CMAR	**Chiang Mai Arr** comp=Z,2.7nm,0.6s,baz=140,slow=7.0,SNR=16	**39.31**	**311**	P	**P**	**05 04 00.7**	**0.0**
CMAR	comp=Z,0.5nm,0.3s,baz=120,slow=4.2,SNR=5.0 comp=Z,2.7nm,0.6s			PcP	**PcP**	**05 06 07.5**	**+0.6**
CHTO	**Chiang Mai**	**39.53**	**312**	P	**P**	**05 04 02.1**	**-0.3**
NJ2	**Nanjing**	**40.46**	**347**	*e*P	**P**	**05 04 12.5**	**+2.6**
NJ2	comp=Z,9.0nm,0.6s			pmax	pmax		
KMI	**Kunming**	**41.28**	**322**	P	**P**	**05 04 17.3**	**+0.2**
KMI	comp=Z,9.0nm,0.9s			pmax	pmax		
PZH	**PanZhiHua**	**42.91**	**323**	P	**P**	**05 04 31.3**	**+1.2**
MJAR	**Matsushiro Arr** comp=Z,3.2nm,0.6s,baz=190,slow=9.7,SNR=8.5 comp=Z,3.2nm,0.6s	**44.58**	**11**	P	**P**	**05 04 40.8**	**-2.4**
KSRS	**Korea Array** comp=Z,2.9nm,0.7s,baz=176,slow=9.9,SNR=11 comp=Z,2.9nm,0.7s	**44.67**	**359**	P	**P**	**05 04 43.6**	**-0.2**
XAN	**Xi'an**	**45.45**	**336**	P	**P**	**05 04 48.7**	**-1.5**
XAN	comp=Z,16nm,0.5s			pmax	pmax		
SHL	**Shillong**	**48.82**	**314**	P	**P**	**05 05 14.7**	**-1.9**
SHL	comp=Z,18nm,1.0s			IAmb	IAmb	05 05 16.9	
LZDM	**Lanzhou Array** comp=Z,1.3nm,0.4s,baz=128,slow=9.3,SNR=2.8 comp=Z,1.3nm,0.4s	**49.32**	**333**	P	**P**	**05 05 20.1**	**-0.3**
HHC	**Hu-ho-hao-te**	**50.67**	**343**	*e*P	**P**	**05 05 31.9**	**+1.6**
HHC	comp=Z,12nm,0.7s			pmax	pmax		
USRK	**Ussuriysk Ar.** comp=Z,3.6nm,0.6s,baz=183,slow=7.5,SNR=7.6 comp=Z,3.6nm,0.6s	**51.46**	**3**	P	**P**	**05 05 35.5**	**-0.4**
MDJ	**Mudanjiang**	**51.81**	**0**	P	**P**	**05 05 37.5**	**-1.0**
MDJ	comp=Z,14nm,1.2s			pmax	pmax		
LSA	**Lhasa**	**51.88**	**317**	P	**P**	**05 05 40.3**	**+0.4**
LSA	**Lhasa**	**51.88**	**317**	P	**P**	**05 05 35.8**	**-4.1**
EVN	**Everest**	**53.88**	**313**	P	**P**	**05 05 53.9**	**-0.9**
EVN	comp=Z,14nm,1.1s			IAmb	IAmb	05 05 55.4	
GTA	**Gaotai**	**53.91**	**332**	*e*P	**P**	**05 05 54.6**	**+0.4**
GTA	comp=Z,7.0nm,0.9s			pmax	pmax		
**H

CALO3				*e*S	Sb	05 09 26.3	+1.0
CRIS3	**El Cristo, Coc**	**0.72**	**26**	*e*P	Pb	05 09 14.4	-0.4
CRIS3			AMP			05 09 14.4	
	comp=Z,154nm,0.1s						
CRIS3				*e*S	Sb	05 09 26.6	+1.3
CRIS3	**El Cristo, Coc**	**0.72**	**26**	*e*P	Pb	05 09 14.4	-0.4
CRIS3				*e*S	Sb	05 09 26.6	+1.3

IDC 04 06:25:05.6±2.2, 16°.31S×177°.26W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=131.2km s-min=30.2km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.30**	**253**	P	P	06 33 33.4	-0.1
	1.3nm,0.5s,baz=88,slow=8.2,SNR=25						
	1.3nm,0.5s						
NVAR	**Mina Array Bea**	**77.52**	**44**	P	P	06 37 03.4	-0.2
	0.3nm,0.6s,baz=239,slow=8.3,SNR=2.5						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**84.10**	**13**	P	P	06 37 37.9	-0.1
	0.3nm,0.4s,baz=227,slow=4.9,SNR=10.0						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**84.21**	**57**	P	P	06 37 39.8	+0.4
	0.2nm,0.8s,baz=237,slow=4.7,SNR=2.6						
	0.2nm,0.8s						

IDC 04 06:29:08.8±2.3, 1°.52S×128°.42E, h0km, mb3.3/2, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=183.7km s-min=25.4km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.20**	**163**	P	P	06 33 33.6	-0.8
	0.2nm,0.3s,baz=342,slow=12,SNR=5.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**22.64**	**167**	P	P	06 34 12.3	+0.6
	0.6nm,0.6s,baz=341,slow=10.0,SNR=13						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**62.82**	**326**	P	P	06 39 36.4	-0.1
	0.2nm,0.5s,baz=123,slow=7.6,SNR=2.7						
	0.2nm,0.5s						

*JSN **04** 06:30:13.9±0.9, 18°.09N×76°.21W, h0km±29km, MD2.9*
*SSNC **04** 06:30:16.3±1.4, 18°.19N×76°.24W, h9km±11km, MD2.9, ML1.7, MW2.0*

ISC 04 06:30:12.2±1.6, 18°.31N±0°.07×76°.17W±0°.06, h0km±13km, n15, σ0§94/27, 2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJ	**Hope**	**0.63**	**241**	*i* P	**Pg**	**06 30 24.0**	**-0.3**
STH	**Stony Hill**	**0.65**	**249**	⇓*i* P	**Pg**	**06 30 24.7**	**0.0**
MTDJ	**Mount Denham**	**1.30**	**267**	*i* P	**Pb**	**06 30 37.3**	**-0.3**
MTDJ				*i* S	**Sg**	**06 30 53.9**	**-0.2**
MTDJ	**Mount Denham**	**1.30**	**267**	*i* P	**Pb**	**06 30 37.4**	**-0.2**
MTDJ				*i* S	**Sb**	**06 30 54.4**	**-0.5**
CHIV	**Chivirico**	**1.68**	**352**	*e*P	**Pb**	**06 30 43.7**	**-0.2**
CHIV				*i* S	**Sb**	**06 31 05.5**	**0.0**
CHIV				*e*Sg	**Sg**	**06 31 08.2**	**+2.2**
MARVS	**Santiago de Cu**	**1.70**	**8**	*i* P	**Pg**	**06 30 44.7**	**-0.1**
MARVS				*i* S	**Sg**	**06 31 07.1**	**+0.2**
RCC	**Rio Carpintero**	**1.73**	**15**	*e*P	**Pg**	**06 30 45.3**	**-0.1**
RCC				⇓*e*S	**Sg**	**06 31 08.0**	**+0.1**
RCC				IAML		06 31 10.2	
	comp=N,1.9nm,0.2s						
RCC				IAML		06 31 10.3	
	comp=E,2.4nm,0.2s						
GTBY	**Guantanamo Bay**	**1.89**	**32**	*i* P	**Pg**	**06 30 49.3**	**+0.8**
GTBY				*i* S	**Sg**	**06 31 14.1**	**+1.1**
LMGC	**Las Mercedes**	**1.92**	**336**	*e*P	**Pn**	**06 30 46.4**	**+0.4**
LMGC				*e*S	**Sn**	**06 31 11.1**	**+0.3**
PINC	**Pinares de May**	**2.19**	**9**	*e*P	**Pb**	**06 30 51.2**	**-1.5**
PINC				*i* S	**Sb**	**06 31 19.0**	**-1.5**
SABCS	**La Quijada**	**2.19**	**21**	*e*P	**Pb**	**06 30 51.6**	**-1.2**
SABCS				*e*S	**Sb**	**06 31 19.9**	**-0.7**
QMBU	**Quimbuelo**	**2.27**	**34**	*i* P	**Pb**	**06 30 53.4**	**-0.7**
QMBU				*i* S	**Sb**	**06 31 23.3**	**+0.5**
QMBU				IAML		06 31 27.0	
	comp=N,8.9nm,0.7s						
QMBU				IAML		06 31 28.1	
	comp=E,11nm,0.8s						
HLGC	**Holguin**	**2.57**	**2**	*i* P	**Pb**	**06 30 57.8**	**-1.3**
HLGC				*e*S	**Sg**	**06 31 33.3**	**-1.5**
MOAC	**Moa**	**2.60**	**26**	*i* S	**Sb**	**06 31 31.8**	**-0.3**
CCCC	**Cccc**	**3.25**	**333**	*e*P	**Pn**	**06 31 05.7**	**+1.4**

*JSN **04** 06:36:24.8±0.6, 18°.08N×76°.21W, h0km±20km, MD3.2*
*SSNC **04** 06:36:25.4±2.1, 18°.16N×76°.29W, h5km±10km, MD3.2, ML2.5, MW2.4*

ISC 04 06:36:25.8±1.8, 18°.32N±0°.08×76°.37W±0°.05, h5km±15km, n18, σ1§67/34, 1C-2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJ	**Hope**	**0.48**	**229**	*i* P	**Pg**	**06 36 34.9**	**-0.1**
STH	**Stony Hill**	**0.48**	**240**	⇓*i* P	**Pg**	**06 36 35.8**	**+0.6**
MTDJ	**Mount Denham**	**1.11**	**265**	⇑*i* P	**Pg**	**06 36 47.8**	**+0.5**
MTDJ				⇓*i* S	**Sn**	**06 37 05.2**	**+1.2**
MTDJ	**Mount Denham**	**1.11**	**265**	*e*P	**Pg**	**06 36 47.7**	**+0.5**
MTDJ				*e*S	**Sn**	**06 37 05.0**	**+1.0**
MTDJ				IAML		06 37 07.6	
	comp=Z,107nm,0.5s						
MTDJ				IAML		06 37 07.6	
	112nm,0.3s						
CHIV	**Chivirico**	**1.65**	**358**	*e*P	**Pn**	**06 36 54.5**	**-1.0**
CHIV				*e*S	**Sn**	**06 37 16.0**	**-1.1**
CHIV				IAML		06 37 17.8	
	comp=E,17nm,0.2s						
CHIV				IAML		06 37 19.4	
	comp=N,30nm,0.4s						
MARVS	**Santiago de Cu**	**1.73**	**15**	*e*P	**Pn**	**06 36 55.6**	**-1.0**
MARVS				*e*S	**Sn**	**06 37 19.0**	**-0.1**
MARVS				IAML		06 37 21.1	
	comp=N,17nm,0.2s						
MARVS				IAML		06 37 21.2	
	comp=E,13nm,0.3s						
RCC	**Rio Carpintero**	**1.78**	**21**	*e*P	**Pn**	**06 36 56.0**	**-1.3**
RCC				*e*S	**Sn**	**06 37 19.3**	**-1.1**
RCC				IAML		06 37 21.5	
	comp=E,8.7nm,0.3s						
RCC				IAML		06 37 24.9	
	comp=N,8.3nm,0.2s						
LMGC	**Las Mercedes**	**1.84**	**341**	*e*P	**Pn**	**06 36 56.9**	**-1.2**
LMGC				*e*S	**Sn**	**06 37 21.7**	**0.0**
LMGC				IAML		06 37 23.6	
	comp=N,45nm,0.1s						
LMGC				IAML		06 37 24.1	
	comp=E,20nm,0.2s						
GTBY	**Guantanamo Bay**	**1.99**	**36**	*e*P	**Pn**	**06 36 58.5**	**-1.7**
GTBY				*e*S	**Sn**	**06 37 25.5**	**0.0**
GTBY				IAML		06 37 28.5	
	comp=E,17nm,0.2s						
GTBY				IAML		06 37 29.1	
	comp=E,22nm,0.1s						
PINC	**Pinares de May**	**2.22**	**14**	*e*P	**Pn**	**06 37 02.3**	**-1.1**
PINC				*e*S	**Sn**	**06 37 29.5**	**-1.7**
PINC				IAML		06 37 32.8	
	comp=N,38nm,0.1s						
PINC				IAML		06 37 33.1	
	comp=E,40nm,0.1s						
SABCS	**La Quijada**	**2.26**	**26**	*e*P	**Pn**	**06 37 02.8**	**-1.2**
SABCS				*e*S	**Sn**	**06 37 31.2**	**-1.1**
SABCS				IAML		06 37 33.5	
	comp=E,20nm,0.2s						
SABCS				IAML		06 37 38.1	
	comp=N,23nm,0.3s						
QMBU	**Quimbuelo**	**2.38**	**38**	*e*P	**Pn**	**06 37 03.8**	**-1.7**
QMBU				*e*S	**Sn**	**06 37 33.7**	**-1.5**
QMBU				IAML		06 37 40.2	
	comp=E,27nm,0.4s						
QMBU				IAML		06 37 40.3	
	comp=N,35nm,0.3s						
HLGC	**Holguin**	**2.57**	**6**	*e*P	**Pn**	**06 37 09.0**	**+0.7**
HLGC				*e*S	**Sn**	**06 37 44.1**	**+4.2**
HLGC				IAML		06 37 48.5	
	comp=E,14nm,0.5s						
HLGC				IAML		06 37 52.1	
	comp=N,16nm,0.7s						
NMDO	**Nuevo Mundo**	**2.58**	**30**	*e*P	**Pn**	**06 37 06.8**	**-1.5**
NMDO				*e*S	**Sn**	**06 37 43.2**	**+3.0**
NMDO				IAML		06 37 44.9	
	comp=E,21nm,0.5s						
NMDO				IAML		06 37 46.8	
	comp=N,26nm,0.4s						
MOAC	**Moa**	**2.68**	**29**	*e*P	**Pn**	**06 37 10.9**	**+1.3**
MOAC				*e*S	**Sn**	**06 37 46.6**	**+4.0**
MOAC				IAML		06 37 47.9	
	comp=N,34nm,0.3s						
MOAC				IAML		06 37 48.1	
	comp=E,26nm,0.4s						
MASC	**Masc**	**2.73**	**47**	*e*P	**Pn**	**06 37 10.5**	**+0.1**
MASC				*e*S	**Sn**	**06 37 45.2**	**+1.3**
MASC				IAML		06 37 57.1	
	comp=N,27nm,1.0s						
MASC				IAML		06 37 57.2	
	comp=E,30nm,1.3s						
CCCC	**Cccc**	**3.15**	**336**	*e*P	**Pn**	**06 37 15.0**	**-1.2**
CCCC				*e*S	**Sn**	**06 37 56.4**	**+2.1**
CCCC				IAML		06 37 60.0	
	comp=N,3.1nm,0.5s						
CCCC				IAML		06 38 01.6	
	comp=E,4.0nm,0.5s						
CBCY	**The Bluff, Cay**	**3.50**	**294**	*e*P	**Pn**	**06 37 20.0**	**-1.1**
CBCY				*e*S	**Sn**	**06 38 01.8**	**-1.1**
CBCY				IAML		06 38 04.4	
	comp=E,33nm,1.0s						
CBCY				IAML		06 38 08.1	
	comp=N,14nm,1.0s						

*NIED **04** 06:39:03.4, 45°.50N×149°.91E, h30km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-2.62; Mθθ5.70; Mϕϕ-3.07; Mrθ-4.13; Mθϕ0.31; Mϕr5.00; Fault plane solution: M₀8.12000×10¹⁴ NP1: ϕs234.00000°, δ35.00000°, λ-160.00000°. NP2: ϕs127.00000°, δ79.00000°, λ-56.00000°.*
*SKHL **04** 06:39:03.0±0.3, 45°.10N×150°.30E, h63km±1km, mb4.8/2*
*JMA **04** 06:39:03.4±1.2, 46°.N±6°×15°.0E±°, h30km, MV4.5/14, KURILE ISLANDS REGION*

ISC 04 06:39:01.5±2.2, 45°.0N±0°.1×150°.4E±0°.1, h39km, n20, σ1§90/30, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.82**	**279**	*e*P	**Pn**	**06 39 29.6**	**-0.6**
KUR				AMB	AMB	06 39 30.4	
	350nm,0.4s						
KUR				*e*S	**Sn**	**06 39 49.3**	**-2.7**
KUR				A	A	06 39 50.9	
	2µm,0.6s						
KUR				A	A	06 39 50.9	
	640nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.39**	**255**	*e*P	**Pn**	**06 39 53.0**	**+1.2**
YUK				AMB	AMB	06 39 55.7	
	120nm,0.3s						
YUK				*e*S	**Sn**	**06 40 30.7**	**0.0**
YUK				A	A	06 40 37.5	
	540nm,0.7s						
YUK				A	A	06 40 37.5	
	300nm,0.7s						
GLVR	**Golovnino**	**3.72**	**252**	*e*P	**Pn**	**06 39 58.2**	**+1.9**
GLVR				*e*S	**Sn**	**06 40 41.7**	**+2.8**
GLVR				A	A	06 40 55.6	
	530nm,0.6s						
GLVR				A	A	06 40 55.6	
	270nm,0.6s						
NEM2	**Nemuro 2**	**3.73**	**246**	*e*P	**Pn**	**06 39 56.4**	**0.0**
NEM2				*e*S	**Sn**	**06 40 37.9**	**-1.1**
NMR	**Nemuro--Hokkai**	**3.74**	**246**	*e*P	**Pn**	**06 39 57.5**	**+1.0**
NMR				*e*S	**Sn**	**06 40 38.7**	**-0.5**
JRA	**Rausu**	**3.93**	**256**	*e*P	**Pn**	**06 40 00.6**	**+1.4**
JRA				*e*S	**Sn**	**06 40 42.8**	**-1.2**
JNK	**Nakash**	**4.32**	**253**	*e*P	**Pn**	**06 40 06.3**	**+1.7**
JNK				*e*S	**Sn**	**06 40 54.3**	**+0.6**
AKK	**Akkeshi**	**4.47**	**246**	*e*P	**Pn**	**06 40 07.8**	**+1.1**
JAK	**Akkeshi**	**4.58**	**246**	*e*P	**Pn**	**06 40 08.5**	**+0.4**
JTKR	**Abashiri--Toko**	**4.76**	**260**	*e*P	**Pn**	**06 40 12.9**	**+2.3**
JAR	**Ashorobuto**	**5.07**	**253**	*e*P	**Pn**	**06 40 17.2**	**+2.3**
JAR				*e*S	**Sn**	**06 41 13.6**	**+1.5**
JOB	**Onbets**	**5.18**	**249**	*e*P	**Pn**	**06 40 18.3**	**+1.9**
JOB				*e*S	**Sn**	**06 41 15.2**	**+0.3**
JKK2	**Kamakawa 2**	**5.60**	**261**	*e*P	**Pn**	**06 40 23.4**	**+1.2**
JCH	**Churui**	**5.62**	**248**	P	**Pn**	**06 40 24.7**	**+2.3**
JCH				*e*S	**Sn**	**06 41 24.7**	**-1.0**
YSS	**Yuzhno-Sakhali**	**5.69**	**293**	*e*P	**Pn**	**06 40 24.0**	**+0.6**
JNBK	**Urakawa-nobuka**	**6.18**	**247**	*e*P	**Pn**	**06 40 31.1**	**+1.0**
PAU	**Pauzhetka**	**7.77**	**31**	*e*P	**Pn**	**06 40 52.0**	**+0.2**
TYV	**Tymovskoe**	**7.86**	**321**	*e*P	**Pn**	**06 40 54.0**	**+0.9**
JANG	**Nango**	**8.01**	**238**	*e*S	**Sn**	**06 42 18.2**	**-6.3**
NKL	**Nikolayevsk**	**10.37**	**326**	*e*P	**Pn**	**06 41 26.6**	**-0.8**

*SNET **04** 06:41:53.5±1.3, 12°.10N×88°.24W, h15km, ML3.2*
*CATAC **04** 06:41:54.0±0.6, 12°.N±3°×8°.8W±°, h30km±6km, M3.5/30, MLv3.5/30, Error ellipse: s-maj=6.3km s-min=2.4km az=31.3, confirmed*
*UCR **04** 06:41:55.6±1.8, 12°.02N×88°.06W, h36km±999km, MW3.7*

ISC 04 06:41:53.1±2.7, 11°.99N±0°.04×88°.24W±0°.04, h25km±24km, n93, σ1§02/112, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.19**	**34**	P	**Pn**	**06 42 14.6**	**+0.3**
CSGN				*S*	**Sn**	**06 42 29.0**	**-0.7**
CSGN	**Cosiguina Volc**	**1.19**	**34**	*e*P	**Pn**	**06 42 13.7**	**-0.6**
POTN	**Potosi Cosigui**	**1.24**	**35**	P	**Pn**	**06 42 14.9**	**0.0**
POTN				S	**Sb**	**06 42 31.0**	**-0.4**
POTN	**Potosi Cosigui**	**1.24**	**35**	⇑*e*P	**Pn**	**06 42 14.9**	**0.0**
POTN				*e*S	**Sn**	**06 42 28.9**	**-1.9**
CNCH	**Conchagua**	**1.34**	**17**	*e*P	**Pn**	**06 42 16.0**	**-0.4**
CNCH				*e*S	**Sn**	**06 42 33.8**	**+0.2**
CNCH	**Conchagua**	**1.34**	**17**	P	**Pn**	**06 42 16.2**	**-0.2**
LCND	**La Caada**	**1.36**	**15**	*e*P	**Pn**	**06 42 16.2**	**-0.4**
LCND	**La Caada**	**1.36**	**15**	P	**Pn**	**06 42 15.8**	**-0.8**
CRIN	**San Cristobal**	**1.36**	**58**	P	**Pn**	**06 42 17.1**	**+0.4**
CRIN	**San Cristobal**	**1.36**	**58**	*e*P	**Pn**	**06 42 17.1**	**+0.4**
PKGN	**Cerro Pekin**	**1.41**	**61**	P	**Pn**	**06 42 17.5**	**+0.3**
PKGN				S	**Sn**	**06 42 35.5**	**+0.4**
RANC	**El Ranchito**	**1.44**	**358**	*e*P	**Pn**	**06 42 17.3**	**-0.5**
BLLM	**Bellamira**	**1.45**	**0**	*e*P	**Pn**	**06 42 17.6**	**-0.2**
PACA	**Pacayal**	**1.48**	**357**	*e*P	**Pn**	**06 42 18.0**	**-0.3**
PACA				*e*S	**Sn**	**06 42 37.3**	**+0.5**
PACA	**Pacayal**	**1.48**	**357**	P	**Pn**	**06 42 18.1**	**-0.1**
PACA	**Pacayal**	**1.48**	**357**	S	**Sn**	**06 42 37.0**	**+0.1**
CNRM	**Centro Naciona**	**1.48**	**3**	S	**Sn**	**06 42 37.1**	**+0.3**
TECA	**Tecapa**	**1.52**	**350**	*e*P	**Pn**	**06 42 18.4**	**-0.5**
POLN	**Al Sur del Vol**	**1.54**	**65**	S	**Sn**	**06 42 38.3**	**-0.1**
CNGN	**Cerro Negro**	**1.59**	**71**	P	**Pn**	**06 42 20.5**	**+0.7**
CNGN	**Cerro Negro**	**1.59**	**71**	S	**Sn**	**06 42 39.3**	**-0.3**
CNGN	**Cerro Negro**	**1.59**	**71**	*e*P	**Pn**	**06 42 19.4**	**-0.4**
TECO	**Alcaldia de Te**	**1.63**	**341**	*e*P	**Pn**	**06 42 18.7**	**-1.6**
TECO				*e*S	**Sn**	**06 42 39.8**	**-0.7**
TECO	**Alcaldia de Te**	**1.63**	**341**	P	**Pn**	**06 42 20.1**	**-0.1**
TECO	**Alcaldia de Te**	**1.63**	**341**	S	**Sn**	**06 42 40.2**	**-0.2**
UESV	**Universidad de**	**1.73**	**342**	S	**Sn**	**06 42 42.5**	**-0.4**
MOM3	**MOM3**	**1.77**	**73**	P	**Pn**	**06 42 21.6**	**-0.5**
MOM3				S	**Sn**	**06 42 43.7**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.77**	**345**	*e*P	**Pn**	**06 42 22.3**	**0.0**
SCLA				*e*S	**Sn**	**06 42 44.5**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.77**	**345**	P	**Pn**	**06 42 22.2**	**0.0**
LALI	**Alcalda de L**	**1.83**	**325**	P	**Pn**	**06 42 23.4**	**+0.5**
PAVA	**Las Pavas**	**1.85**	**339**	S	**Sn**	**06 42 45.6**	**-0.4**
PAVA	**Las Pavas**	**1.85**	**339**	P	**Pn**	**06 42 23.1**	**-0.3**
LOMA	**Loma Larga**	**1.88**	**331**	P	**Pn**	**06 42 23.4**	**-0.4**
LOMA	**Loma Larga**	**1.88**	**331**	S	**Sn**	**06 42 47.0**	**+0.1**
APQ2	**Apoyeque**	**1.89**	**83**	P	**Pn**	**06 42 23.6**	**-0.1**
APQ2	**Apoyeque**	**1.89**	**83**	*e*P	**Pn**	**06 42 23.4**	**-0.4**
APQ2				S	**Sn**	**06 42 48.1**	**+1.3**
UNAN	**Cigeo UNAN**	**1.93**	**86**	P	**Pn**	**06 42 24.4**	**0.0**
UNAN				S	**Sn**	**06 42 48.0**	**0.0**
TISN	**Laguna Tiscapa**	**1.94**	**85**	P	**Pn**	**06 42 24.4**	**0.0**
UDBS	**Universidad Do**	**1.94**	**333**	P	**Pn**	**06 42 25.2**	**+0.7**
UDBS	**Universidad Do**	**1.94**	**333**	S	**Sn**	**06 42 48.2**	**+0.1**
IGN	**Direccin Gen**	**1.94**	**332**	S	**Sn**	**06 42 48.3**	**+0.1**
MGAN	**Managua**	**1.96**	**85**	S	**Sn**	**06 42 48.5**	**-0.1**
MGAN	**Managua**	**1.96**	**85**	P	**Pn**	**06 42 24.4**	**-0.4**
MGAN	**Managua**	**1.96**	**85**	*e*P	**Pn**	**06 42 22.3**	**-2.4**
UEES	**Universidad Ev**	**1.98**	**331**	P	**Pn**	**06 42 25.6**	**+0.5**
UEES	**Universidad Ev**	**1.98**	**331**	S	**Sn**	**06 42 50.2**	**+1.0**
PMON	**Piamonte**	**2.01**	**329**	P	**Pn**	**06 42 25.4**	**-0.2**
PMON	**Piamonte**	**2.01**	**329**	S	**Sn**	**06 42 50.4**	**+0.4**
WILN	**Americas 2**	**2.02**	**85**	P	**Pn**	**06 42 24.8**	**-0.8**
WILN				S	**Sn**	**06 42 50.2**	**+0.2**
MAS3	**Al N del Volca**	**2.02**	**89**	P	**Pn**	**06 42 25.1**	**-0.6**
MAS3				S	**Sn**	**06 42 50.0**	**-0.2**
JAYA	**Jayaque - finc**	**2.03**	**325**	S	**Sn**	**06 42 50.1**	**-0.6**
JAYA	**Jayaque - finc**	**2.03**	**325**	P	**Pn**	**06 42 25.4**	**-0.5**
SABN	**Sabanita**	**2.04**	**91**	P	**Pn**	**06 42 26.0**	**+0.1**
MASN	**Masaya**	**2.05**	**90**	P	**Pn**	**06 42 24.7**	**-1.3**
NANN	**Nandasmo**	**2.08**	**91**	S	**Sn**	**06 42 51.8**	**+0.3**
NANN	**Nandasmo**	**2.08**	**91**	P	**Pn**	**06 42 27.1**	**+0.7**
NADN	**Granada**	**2.18**	**96**	*e*P	**Pn**	**06 42 26.6**	**-1.1**
NADN				*e*S	**Sn**	**06 42 52.7**	**-1.2**
TGUH	**Tegucigalpa,Un**	**2.27**	**25**	P	**Pn**	**06 42 29.1**	**0.0**
TGUH				S	**Sn**	**06 42 56.5**	**+0.2**
LLGN	**La Laguna**	**2.27**	**343**	P	**Pn**	**06 42 29.7**	**+0.5**
LLGN	**La Laguna**	**2.27**	**343**	S	**Sn**	**06 42 56.3**	**-0.1**
UNIC	**Universidad Ca**	**2.36**	**327**	S	**Sn**	**06 42 57.9**	**-0.6**
UNIC	**Universidad Ca**	**2.36**	**327**	P	**Pn**	**06 42 30.4**	**+0.1**
YUSH	**Yuscaran**	**2.39**	**35**	P	**Pn**	**06 42 30.6**	**-0.2**
NUBE	**Las Nubes**	**2.42**	**322**	P	**Pn**	**06 42 31.2**	**-0.1**
MATN	**Matagalpa**	**2.45**	**67**	S	**Sn**	**06 43 01.0**	**+0.1**
MATN	**Matagalpa**	**2.45**	**67**	P	**Pn**	**06 42 31.9**	**+0.3**
FAME	**Alcaldia de Sa**	**2.53**	**317**	P	**Pn**	**06 42 33.2**	**+0.5**
FAME	**Alcaldia de Sa**	**2.53**	**317**	S	**Sn**	**06 43 01.8**	**-0.9**
RCVN	**Varillal2**	**2.55**	**51**	P	**Pn**	**06 42 33.2**	**+0.1**
CONN	**Concepcion**	**2.60**	**99**	P	**Pn**	**06 42 35.0**	**+1.4**
CONN				S	**Sn**	**06 43 03.5**	**-0.8**
RCPN	**Sur Rio San Ju**	**2.60**	**54**	P	**Pn**	**06 42 33.5**	**-0.2**
MTO3	**Montecristo**	**2.63**	**336**	P	**Pn**	**06 42 34.3**	**0.0**
MTO3	**Montecristo**	**2.63**	**336**	S	**Sn**	**06 43 05.3**	**-0.3**
LCRUZ	**La Cruz**	**2.71**	**109**	*e*P	**Pn**	**06 42 35.9**	**+0.7**
ESQI	**Esquipulas**	**2.77**	**337**	P	**Pn**	**06 42 36.9**	**+0.7**
ESQI	**Esquipulas**	**2.77**	**337**	S	**Sn**	**06 43 08.8**	**-0.1**
SARH	**Santa Rosa de**	**2.82**	**350**	S	**Sn**	**06 43 09.8**	**-0.2**
SAJU	**San Juanillo,**	**3.13**	**127**	*e*P	**Pn**	**06 42 40.5**	**-0.4**
JUD3	**Juan Diaz 3**	**3.21**	**124**	*e*P	**Pn**	**06 42 42.8**	**+0.7**
JUD3				*e*S	**Sn**	**06 43 16.7**	**-2.9**
VMAR	**Armenia, Volca**	**3.28**	**110**	*e*P	**Pn**	**06 42 42.9**	**-0.1**
VMAR				*e*S	**Sn**	**06 43 20.6**	**-0.7**
CMARA	**Lajas Hojancha**	**3.39**	**125**	*e*P	**Pn**	**06 42 42.5**	**-2.1**
NYURE	**Nandayure**	**3.54**	**124**	*e*P	**Pn**	**06 42 45.0**	**-1.6**
JTS	**Las Juntas de**	**3.64**	**117**	*e*P	**Pn**	**06 42 44.4**	**-3.6**
ACOS	**Acosta**	**4.56**	**118**	*e*P	**Pn**	**06 43 03.3**	**+2.6**
PAR1A	**Puntarenas Pro**	**4.58**	**121**	*e*P	**Pn**	**06 43 03.0**	**+2.1**
PAR1A				*e*S	**Sn**	**06 43 53.6**	**+0.2**
PICV	**PH. Pirrs**	**4.62**	**120**	*e*P	**Pn**	**06 43 04.2**	**+2.8**
PITB	**Pirrs, San**	**4.75**	**119**	*e*P	**Pn**	**06 43 05.5**	**+2.2**
PITB				*e*S	**Sn**	**06 43 56.1**	**-1.5**
LLNJ	**Naranjito**	**4.77**	**121**	*e*P	**Pn**	**06 43 04.2**	**+0.7**
PIEC	**Cerro El Cedra**	**4.82**	**119**	*e*P	**Pn**	**06 43 06.7**	**+2.3**
ABRB	**Las Abras (San**	**4.86**	**113**	*e*P	Pn	06 43 09.9	+4.9
BUS1	**Rivas**	**5.03**	**118**	*e*P	**Pn**	**06 43 09.9**	**+2.4**
SAJE	**San Jernim**	**5.34**	**119**	*e*P	**Pn**	**06 43 13.8**	**+2.3**
DRK0	**Durika**	**5.61**	**118**	*e*P	**Pn**	**06 43 17.6**	**+2.5**

*NEIC **04** 06:47:38.6±1.4, 11°.32S±0°.10×162°.69E±0°.10, h10km±1km, mb4.7/20, Error ellipse: s-maj=19.6km s-min=11.7km az=42.0*
*GCMT **04** 06:47:40.6±0.2, 11°.14S±0°.01×162°.57E±0°.01, h16km±1km, MW5.0/116, Moment Tensor Solution. s52,c59; s116,c178; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.34±.10; Mθθ-1.30±.09; Mϕϕ1.64±.09; Mrθ0.67±.27; Mθϕ3.49±.09; Mϕr-1.84±.29; Best double couple: M₀4.27400×10¹⁶ NP1:ϕs257.00000°, δ63.00000°, λ-6.00000°. NP2:ϕs350.00000°, δ85.00000°, λ-153.00000°. Principal axes: T 4.2710, Plg15.0000°, Azm120.0000°; N 0.0030, Plg62.0000°, Azm360.0000°; P -4.2760, Plg23.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **04** 06:47:43.2±3.0, 11°.25S×162°.57E, h45km±27km, mb3.7/8, mbtmp4.0/10, ML4.0/2, MS4.2/41 Error ellipse: s-maj=27.7km s-min=23.1km az=76.0*

ISC 04 06:47:42.3±0.6, 11°.34S±0°.09×162°.7E±0°.1, h39km, n82, σ1§04/40, mb4.4/18, MS4.2/41, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.30**	**305**		**Pn**	**06 48 30.6**	**-0.9**
HNR	**Honiara**	**3.30**	**305**	P	**Pn**	**06 48 31.3**	**-0.2**
	52nm,0.3s,baz=168,slow=0.7,SNR=12						
HNR				S	**Sn**	**06 49 11.7**	**+2.2**
	1µm,0.9s,baz=280,slow=18,SNR=4.3						
	310nm,0.5s						
SANVU	**Saraoutou**	**5.99**	**133**		**Pn**	**06 49 08.5**	**0.0**
DZM	**Mont Dzumac**	**11.26**	**162**	P	**Pn**	**06 50 22.3**

SHEM	**Shemya Is, Ala**	**64.56**	**8**	LR	LR	07 21 00.4		
	comp=Z,207nm,21.0s,baz=136,slow=31							
VNDA	**Vanda**	**66.18**	**180**	P	**P**	**06 58 27.9**	**+2.4**	
	comp=Z,1.1nm,0.9s,baz=352,slow=4.6,SNR=4.0							
VNDA				LR	LR	07 24 16.2		
	comp=Z,202nm,18.0s,baz=1.0,slow=33							
	comp=Z,1.1nm,0.9s							
CM31	**Chiang Mai Arr**	**69.50**	**295**	P	**P**	**06 58 47.2**	**-0.2**	
CMAR	**Chiang Mai Arr**	**69.50**	**295**	P	**P**	**06 58 46.6**	**-0.8**	
CMAR	**Chiang Mai Arr**	**69.50**	**295**	P	**P**	**06 58 47.2**	**-0.2**	
	comp=Z,1.1nm,0.3s,baz=112,slow=6.9,SNR=4.2							
	comp=Z,1.1nm,0.3s							
MA2	**Magadan**	**71.32**	**354**	LR	LR	07 24 59.5		
	comp=Z,67nm,22.0s,baz=160,slow=31							
SEY	**Seymchan**	**74.47**	**355**	LR	LR	07 27 24.4		
	comp=Z,107nm,21.5s,baz=166,slow=32							
ULN	**Ulaanbaatar**	**76.80**	**325**	P	**P**	**06 59 30.3**	**+0.1**	
ULN				IAmb	IAmb	06 59 41.9		
	comp=Z,11nm,1.1s							
SONM	**Songino Array**	**77.16**	**325**	P	**P**	**06 59 31.7**	**-0.4**	
	comp=Z,2.8nm,0.9s,baz=136,slow=6.7,SNR=7.8							
SONM				LR	LR	07 33 24.7		
	comp=Z,122nm,20.1s,baz=124,slow=36							
	comp=Z,2.8nm,0.9s							
BRDH	**Bariadhala**	**77.33**	**296**	LR	LR	07 32 20.6		
	comp=Z,82nm,21.8s,baz=143,slow=35							
YAK	**Yakutsk**	**77.56**	**345**	LR	LR	07 32 37.6		
	comp=Z,106nm,20.9s,baz=145,slow=35							
KDAK	**Kodiak Island**	**77.97**	**23**	LR	LR	07 30 20.7		
	comp=Z,70nm,18.5s,baz=227,slow=33							
RPN	**Rapa Nui**	**83.14**	**116**	LR	LR	07 28 11.5		
	comp=Z,177nm,21.8s,baz=12,slow=29							
MAW	**Mawson**	**83.33**	**202**	LR	LR	07 33 16.6		
	comp=Z,107nm,19.5s,baz=94,slow=33							
IMAR	**Indian Mountai**	**83.53**	**16**	P	**P**	**07 00 05.7**	**-0.1**	
HDA	**Harding Lake**	**84.50**	**20**	P	**P**	**07 00 11.5**	**+0.7**	
HDA				IAmb	IAmb	07 00 24.4		
	comp=Z,6.4nm,1.0s							
IL31		**84.76**	**19**	P	**P**	**07 00 11.7**	**-0.3**	
IL31				IAmb	IAmb	07 00 52.9		
	comp=Z,4.0nm,1.3s							
ILAR	**Eielson Array**	**84.76**	**19**	P	**P**	**07 00 11.7**	**-0.4**	
ILAR	**Eielson Array**	**84.76**	**19**	P	**P**	**07 00 11.1**	**-1.0**	
	comp=Z,0.5nm,0.8s,baz=223,slow=4.1,SNR=4.1							
ILAR				LR	LR	07 31 50.6		
	comp=Z,214nm,21.6s,baz=235,slow=31							
	comp=Z,0.5nm,0.8s							
J25K	**Salcha River,**	**85.15**	**20**	P	**P**	**07 00 14.8**	**+0.6**	
J25K				IAmb	IAmb	07 00 25.2		
	comp=Z,3.7nm,0.8s							
BCAR	**Beaver Creek A**	**85.47**	**22**	P	**P**	**07 00 16.9**	**+1.1**	
YBH	**Yreka Blue Hor**	**86.24**	**46**	LR	LR	07 31 50.4		
	comp=Z,7.2nm,20.9s,baz=265,slow=31							
BBB	**Bella Bella**	**86.52**	**35**	LR	LR	07 29 58.0		
	comp=Z,74nm,21.4s,baz=222,slow=29							
DLBC	**Dease Lake**	**88.10**	**29**	LR	LR	07 33 04.9		
	comp=Z,197nm,20.0s,baz=238,slow=31							
NVAR	**Mina Array Bea**	**88.50**	**50**	P	**P**	**07 00 31.4**	**+0.1**	
	comp=Z,0.1nm,0.3s,baz=295,slow=7.8,SNR=1.7							
NVAR				LR	LR	07 32 55.2		
	comp=Z,166nm,19.5s,baz=264,slow=31							
	comp=Z,0.1nm,0.3s							
PFO	**Pinyon Flats O**	**88.70**	**55**	LR	LR	07 33 20.9		
	comp=Z,146nm,19.9s,baz=262,slow=31							
BELA	**Belgrano 2**	**90.40**	**176**	P	**P**	**07 00 39.3**	**+0.1**	
BELA				IAmb	IAmb	07 01 14.7		
	comp=Z,4.0nm,1.1s							
INK	**Inuvik**	**91.16**	**19**	LR	LR	07 36 14.6		
	comp=Z,196nm,21.0s,baz=182,slow=32							
ELK	**Elko**	**91.38**	**49**	LR	LR	07 34 49.8		
	comp=Z,104nm,20.3s,baz=218,slow=31							
MK31	**Makanchi Array**	**91.69**	**317**	P	**P**	**07 00 45.7**	**-0.1**	
MK31				IAmb	IAmb	07 01 02.9		
	comp=Z,2.9nm,1.1s							
MKAR	**Makanchi Array**	**91.69**	**317**	P	**P**	**07 00 45.5**	**-0.2**	
MKAR	**Makanchi Array**	**91.69**	**317**	P	**P**	**07 00 45.2**	**-0.6**	
	comp=Z,0.4nm,0.7s,baz=81,slow=7.5,SNR=3.7							
	comp=Z,0.4nm,0.7s							
LPIG	**La Paz**	**91.85**	**66**	LR	LR	07 36 28.8		
	comp=Z,76nm,18.8s,baz=265,slow=32							
NEW	**Newport**	**91.92**	**41**	LR	LR	07 36 20.4		
	comp=Z,75nm,19.9s,baz=259,slow=32							
ZALV	**Zalesovo Beam**	**92.05**	**325**	LR	LR	07 43 08.5		
	comp=Z,44nm,20.3s,baz=120,slow=36							
PDAR	**Pinedale Array**	**95.95**	**48**	LR	LR	07 38 00.5		
	comp=Z,62nm,19.9s,baz=252,slow=31							
PMSA	**Palmer Station**	**96.41**	**162**	LR	LR	07 43 16.7		
	comp=Z,166nm,18.2s,baz=266,slow=34							
YKA	**Yellowknife Ar**	**96.61**	**28**	LR	LR	07 39 21.2		
	comp=Z,127nm,19.4s,baz=284,slow=32							
SNAA	**Sanae**	**96.61**	**185**	P	**P**	**07 01 09.6**	**+1.6**	
SNAA				IAmb	IAmb	07 01 30.9		
	comp=Z,4.5nm,1.4s							
SNAA	**Sanae**	**96.61**	**185**	LR	LR	07 42 35.8		
	comp=Z,126nm,18.5s,baz=188,slow=34							
ANMO	**Albuquerque**	**97.08**	**56**	LR	LR	07 39 21.3		
	comp=Z,147nm,18.4s,baz=2.5,slow=32							
TXAR	**Lajitas Array**	**98.60**	**62**	LR	LR	07 37 08.3		
	comp=Z,56nm,21.4s,baz=262,slow=30							

*SJA **04** 06:55:18.8±0.8, 32.°19S×71.°79W, h12km±4km, ML3.5, MW3.6*
*GUC **04** 06:55:19.5±0.8, 32.°08S×71.°80W, h33km±4km, ML3.4*
ISC 04 06:55:17.6±2.6, 32.°11S±0.°03×71.°88W±0.°08, h13km±16km, n22, σ1§15/44, 7C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.67**	**133**	⇓*iP*	**Pb**	**06 55 31.8**	**+0.7**
VA06				*i* S	**Sb**	**06 55 40.5**	**+0.2**
VA06				IAML		06 55 44.1	
	comp=E,3μm,0.3s						
CO04	**Los Peladeros**	**0.77**	**86**	⇓*iP*	**Pb**	**06 55 33.2**	**+0.2**
CO04				*i* S	**Sg**	**06 55 42.6**	**-0.1**
CO04				IAML		06 55 43.5	
	comp=N,5μm,0.2s						
VA01	**Torpederas**	**0.94**	**168**	⇑*iP*	**Pn**	**06 55 36.7**	**+0.3**
VA01				*i* S	**Sn**	**06 55 49.3**	**-0.4**
ROCH	**El Roble**	**1.13**	**140**	⇑*iP*	**Pb**	**06 55 39.4**	**+0.2**
ROCH				⇑*iP*	**Pb**	**06 55 39.4**	**+0.2**
ROCH				*i* S	**Sb**	**06 55 53.8**	**-0.1**
ROCH				*i* S	**Sn**	**06 55 54.1**	**-0.7**
ROCH				IAML		06 55 57.6	
	comp=N,1μm,0.6s						
ROCH				IAML		06 55 57.7	
	comp=N,730nm,0.6s						
CO02	**Combarbal**	**1.17**	**40**	⇓*iP*	**Pn**	**06 55 39.5**	**-0.3**
CO02				*i* S	**Sb**	**06 55 54.3**	**-0.6**
CO02				IAML		06 55 59.1	
	comp=E,4μm,0.2s						
VA03	**San Esteban**	**1.30**	**121**	⇑*iP*	**Pn**	**06 55 41.7**	**+0.1**
VA03				*i* S	**Sb**	**06 55 58.1**	**-0.5**
VA03				IAML		06 56 02.5	
	comp=E,2μm,0.2s						
VA03	**San Esteban**	**1.30**	**121**	*i* P	**Pn**	**06 55 41.6**	**+0.1**
VA03				*i* S	**Sb**	**06 55 57.9**	**-0.7**
VA03				IAML		06 56 05.3	
	comp=Z,750nm,0.8s						
MT02	**Curacav**	**1.31**	**152**	⇑*iP*	**Pb**	**06 55 42.0**	**-0.1**
CO06	**Fray Jorge**	**1.44**	**8**	⇓*iP*	**Pn**	**06 55 43.4**	**0.0**
CO06				*i* S	**Sn**	**06 55 61.5**	**-0.7**
CO06				IAML		06 56 06.7	
	comp=E,679nm,0.2s						
PEL	**Peldehue**	**1.44**	**136**	⇑*iP*	**Pn**	**06 55 44.1**	**+0.6**
PEL				*i* S	**Sb**	**06 56 02.4**	**-0.3**
PEL				IAML		06 56 05.1	
	comp=E,662nm,0.6s						
PEL	**Peldehue**	**1.44**	**136**	*i* P	**Pn**	**06 55 44.1**	**+0.6**
PEL				*i* S	**Sb**	**06 56 02.6**	**-0.1**
PEL				IAML		06 56 07.6	
	comp=Z,471nm,0.6s						
MT05	**Renca**	**1.60**	**144**	*eP*	**Pn**	**06 55 46.5**	**+0.8**
MT05				*i* S	**Sb**	**06 56 07.8**	**+0.5**
MT05				IAML		06 56 11.9	
	comp=E,887nm,0.2s						
MT10	**Hacienda Santa**	**1.62**	**136**	⇑*iP*	**Pb**	**06 55 47.0**	**-0.5**
MT10				*i* S	**Sb**	**06 56 08.0**	**0.0**
MT10				IAML		06 56 11.3	
	comp=N,1μm,0.6s						
MT14	**Cerro Cal¡n**	**1.71**	**139**	*eP*	**Pb**	**06 55 48.5**	**-0.5**
MT14				*i* S	**Sb**	**06 56 10.3**	**-0.2**
MT14				IAML		06 56 13.2	
	comp=E,836nm,0.3s						
MT04	**Ro Olivares**	**1.96**	**132**	*eP*	**Pn**	**06 55 52.0**	**+1.3**
MT04				*i* S	**Sb**	**06 56 16.8**	**-0.8**
MT04				IAML		06 56 19.2	
	comp=E,261nm,0.5s						
AUSP	**Uspallata**	**2.11**	**94**	*i* P	**Pb**	**06 55 55.8**	**-0.1**
AUSP				*i* S	**Sb**	**06 56 23.4**	**+1.2**
RTLS	**Leoncito**	**2.21**	**83**	*i* P	**Pb**	**06 55 57.5**	**-0.2**
RTLS				*i* S	**Sb**	**06 56 25.6**	**+0.5**
RTLS				IAML		06 56 29.9	
	comp=Z,1μm,1.0s						
ARCO	**CERRO ARCO**	**2.59**	**107**	*i* P	**Pb**	**06 56 02.1**	**-2.0**
ARCO				*i* S	**Sb**	**06 56 34.0**	**-1.9**
ARCO				IAML		06 56 43.6	
	comp=Z,164nm,1.5s						
AAGR	**Agrelo**	**2.75**	**112**	*i* P	**Pn**	**06 56 03.4**	**+1.9**
AAGR				*i* S	**Sb**	**06 56 37.4**	**-3.0**
AAGR				IAML		06 56 52.0	
	comp=Z,163nm,1.0s						
AROD	**Rodeo**	**2.82**	**47**	*i* P	**Pb**	**06 56 07.2**	**-0.9**
AROD				*i* S	**Sb**	**06 56 42.7**	**0.0**
ACCO	**Cerro Coronel**	**2.84**	**59**	*i* P	**Pb**	**06 56 07.0**	**-1.4**
ACCO				*i* S	**Sb**	**06 56 43.4**	**+0.2**
AGUA	**GUANDACOL**	**3.91**	**49**	*i* P	**Pn**	**06 56 22.0**	**+4.5**
AGUA				IAML		06 57 26.2	
	comp=Z,100nm,0.9s						

*DJA **04** 06:59:57.0±1.2, 2.°S±6.°×14.°1E±.°, h18km±9km, M4.8/7, mb4.5/7, mB5.6/2, MLv4.9/4, Mw(mB)5.1/2*
*IDC **04** 07:00:00.5±0.6, 2.°43S×140.°04E, h0km, mb4.1/10, mbtmp4.2/11, ML4.5/1, MS4.1/12, Error ellipse: s-maj=12.7km s-min=7.8km az=177.0*
*NEIC **04** 07:00:09.0±0.9, 2.°71S±0.°06×140.°2E±0.°1, h35km±1km, mb4.4/23, Error ellipse: s-maj=19.9km s-min=7.5km az=246.0*
ISC 04 07:00:05.6±0.5, 2.°59S±0.°07×140.°30E±0.°04, h24km, n68, σ1§74/64, mb4.4/22, MS4.2/12, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.41**	**79**	Pg	**Pn**	**07 00 13.6**	**-2.6**
	1μm,0.3s,baz=253,slow=9.4,SNR=1551						
JAY				Lg	Lg	07 00 22.1	
	6μm,0.3s,baz=113,slow=19,SNR=42						
JAY	**Jayapura**	**0.41**	**79**	P	**Pn**	**07 00 13.5**	**-2.6**
JAY				S	**Sn**	**07 00 22.4**	**-0.6**
SMPI	**Sarmi**	**1.70**	**291**	P	**Pn**	**07 00 30.8**	**-3.0**
SMPI				S	**Sb**	**07 00 56.5**	**-0.7**
SRPI	**Serui, Papua**	**4.12**	**280**	P	**Pn**	**07 01 07.0**	**-0.2**
SRPI				S	**Sn**	**07 01 56.1**	**+1.4**
PMG	**Port Moresby**	**9.61**	**135**	LR	LR	07 07 28.7	
	comp=Z,776nm,18.6s,baz=69,slow=45						
MTN	**Manton Dam**	**13.64**	**221**		**Pn**	**07 03 16.6**	**-1.2**
KNRA	**Kununurra**	**17.27**	**220**	P	**Pn**	**07 04 03.7**	**-1.7**
KNRA				IAmb	IAmb	07 04 18.4	
	comp=Z,18nm,0.7s						
WB0	**Warramunga Arr**	**18.02**	**198**		**Pn**	**07 04 13.1**	**-1.6**
WR8	**Warramunga Arr**	**18.16**	**198**		**P**	**07 04 16.6**	**0.0**
BATI	**Baumata**	**18.17**	**245**	P	**P**	**07 04 18.4**	**+1.7**
	comp=Z,33nm,0.4s,baz=140,slow=7.9,SNR=2.7						
BATI	**Baumata**	**18.17**	**245**	P	**P**	**07 04 18.1**	**+1.4**
	comp=Z,3μmcomp=Z,75nm,0.9s						
WRAB	**Tennant Creek**	**18.19**	**198**	P	**P**	**07 04 16.2**	**-0.7**
WRAB				IAmb	IAmb	07 04 27.7	
	comp=Z,22nm,1.1s						
WRA	**Warramunga Arr**	**18.20**	**198**		**P**	**07 04 16.5**	**-0.5**
WRA	**Warramunga Arr**	**18.20**	**198**	P	**P**	**07 04 17.5**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=21,slow=12,SNR=40						
WRA				LR	LR	07 11 23.3	
	comp=Z,518nm,19.1s,baz=43,slow=37						
	comp=Z,5.3nm,0.6s						
MRSI	**Marisa**	**18.61**	**279**	P	**P**	**07 04 17.0**	**-4.5**
	comp=Z,3μmcomp=Z,12nm,0.7s						
BSSI	**Bau Bau, Buton**	**20.06**	**259**	P	**P**	**07 04 37.5**	**0.0**
	comp=Z,35nm,1.4s						
BKSI	**Bulukumba**	**20.31**	**262**	P	**P**	**07 04 39.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**21.08**	**222**		**P**	**07 04 48.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**21.08**	**222**	P	**P**	**07 04 47.9**	**-0.5**
	comp=Z,8.8nm,0.6s,baz=46,slow=8.8,SNR=30						
FITZ				S	**S**	**07 08 39.8**	**-2.2**
	comp=Z,10nm,1.1s,baz=102,slow=11,SNR=4.0						
	comp=Z,8.8nm,0.6s						
AS31	**Alice Springs**	**21.84**	**196**		**P**	**07 04 56.5**	**-0.2**
ASAR	**Alice Springs**	**21.85**	**196**		**P**	**07 04 56.2**	**-0.4**
ASAR	**Alice Springs**	**21.85**	**196**	P	**P**	**07 04 57.5**	**+0.9**
	comp=Z,5.2nm,0.5s,baz=27,slow=10,SNR=90						
ASAR				S	**S**	**07 09 00.1**	**+2.9**
	comp=Z,0.7nm,0.9s,baz=21,slow=24,SNR=2.0						
	comp=Z,5.2nm,0.5s						
INKA	**Innaminka**	**25.01**	**179**		**P**	**07 05 28.9**	**+1.1**
INKA				IAmb	IAmb	07 05 57.1	
	comp=Z,15nm,1.4s						
MBWA	**Marble Bar**	**27.24**	**226**	P	**P**	**07 05 47.4**	**-0.6**
MBWA				IAmb	IAmb	07 05 56.4	
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	**29.16**	**178**	P	**P**	**07 06 04.8**	**-0.3**
STKA	**Stephens Creek**	**29.16**	**178**	P	**P**	**07 06 04.3**	**-0.8**
	comp=Z,4.1nm,0.7s,baz=353,slow=9.2,SNR=5.4						
STKA				LR	LR	07 19 59.2	
	comp=Z,635nm,18.7s,baz=360,slow=41						
	comp=Z,4.1nm,0.7s						
BBOO	**Buckleboo**	**30.32**	**187**	P	**P**	**07 06 16.4**	**+1.0**
FORT	**Forrest**	**30.33**	**201**	P	**P**	**07 06 16.2**	**+0.7**
FORT				IAmb	IAmb	07 06 17.1	
	comp=Z,5.0nm,0.9s						
MORW	**Morawa**	**35.01**	**219**	P	**P**	**07 06 55.9**	**-0.6**
JHJ	**Hachijo jima 2**	**35.52**	**359**	LR	LR	07 17 59.2	
	comp=Z,288nm,20.5s,baz=188,slow=30						
RPSI	**Rantau Prapat**	**41.70**	**277**	P	**P**	**07 07 53.3**	**+0.4**
RPSI				IAmb	IAmb	07 08 01.0	
	comp=Z,18nm,1.3s						
KMI	**Kunming**	**45.66**	**309**	P	**P**	**07 08 27.0**	**+2.0**
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
KMI				LR	LR		
	comp=N,200nm,9.7s						
KMI				LR	LR		
	comp=E,200nm,16.0s						
KMI				LR	LR		
	comp=Z,280nm,20.3s						
CM31	**Chiang Mai Arr**	**45.77**	**299**	P	**P**	**07 08 26.1**	**+0.4**
CM31				IAmb	IAmb	07 08 39.2	
	comp=Z,4.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**45.77**	**299**	P	**P**	**07 08 25.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**45.77**	**299**	P	**P**	**07 08 21.5**	**-4.2**
	comp=Z,0.5nm,0.3s,baz=118,slow=7.3,SNR=7.4						
	comp=Z,0.5nm,0.3s						
JKA	**Kamikawa-asahi**	**46.54**	**2**	P	**P**	**07 08 34.0**	**+2.7**
PZH	**PanZhiHua**	**47.15**	**310**	P	**P**	**07 08 39.3**	**+2.7**
TUWZ	**Tuamarina**	**49.08**	**147**	P	**P**	**07 08 52.8**	**+1.7**
HHC	**Hu-ho-hao-te**	**50.56**	**332**	*eP*	P	07 09 07.2	+4.7
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
SHL	**Shillong**	**54.58**	**304**	P	**P**	**07 09 32.9**	**+0.3**
SHL				IAmb	IAmb	07 09 46.6	
	comp=Z,9.5nm,1.3s						
KPA	**Kalaupapa**	**65.72**	**65**	P	**P**	**07 10 50.1**	**+1.2**
WMQ	**Urumqi**	**65.91**	**321**	*eP*	P	07 10 53.4	+3.6
WMQ				LR	LR		
	comp=Z,230nm,21.7s						
CASY	**Casey**	**66.93**	**193**	P	**P**	**07 10 56.1**	**+0.3**
MK31	**Makanchi Array**	**70.67**	**322**	P	**P**	**07 11 19.7**	**+0.2**
MK31				IAmb	IAmb	07 11 39.4	
	comp=Z,2.7nm,1.0s						
MKAR	**Makanchi Array**	**70.67**	**322**	P	**P**	**07 11 19.6**	**+0.1**
MKAR	**Makanchi Array**	**70.67**	**322**	P	**P**	**07 11 17.2**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=118,slow=7.4,SNR=7.5						
	comp=Z,1.3nm,0.8s						
KURBB	**Kurchatov Arra**	**74.55**	**324**	P	**P**	**07 11 39.1**	**-3.3**
	comp=Z,0.5nm,0.6s,baz=114,slow=5.3,SNR=5.2						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**75.76**	**175**	P	**P**	**07 11 50.1**	**+1.1**
VNDA				IAmb	IAmb	07 12 16.5	
	comp=Z,6.6nm,1.4s						
VNDA	**Vanda**	**75.76**	**175**	P	**P**	**07 11 49.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=323,slow=7.8,SNR=5.7						
VNDA				LR	LR	07 44 45.8	
	comp=Z,191nm,19.6s,baz=358,slow=35						
	comp=Z,1.2nm,0.6s						
BVAR	**Borovoye Array**	**80.13**	**325**	P	**P**	**07 12 11.3**	**-2.4**
	comp=Z,1.5nm,0.6s,baz=90,slow=7.4,SNR=4.8						
BVAR				LR	LR	07 47 12.9	
	comp=Z,72nm,20.8s,baz=85,slow=36						
	comp=Z,1.5nm,0.6s						
KDAK	**Kodiak Island**	**80.20**	**30**	LR	LR	07 43 07.3	
	comp=Z,98nm,21.5s,baz=251,slow=32						
MAW	**Mawson**	**82.83**	**202**	P	**P**	**07 12 27.1**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=353,slow=8.1,SNR=2.7						
	comp=Z,2.5nm,0.8s						
IL31		**85.07**	**24**		**P**	**07 12 41.2**	**+2.1**
IL31				IAmb	IAmb	07 13 23.3	
	comp=Z,3.1nm,1.1s						
ILAR	**Eielson Array**	**85.07**	**24**	P	**P**	**07 12 41.2**	**+2.1**
ILAR	**Eielson Array**	**85.07**	**24**	P	**P**	**07 12 36.4**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=263,slow=5.0,SNR=6.5						
	comp=Z,0.6nm,0.8s						
AB31	**Akbulak array**	**85.66**	**320**	P	**P**	**07 12 43.5**	**+1.1**
AB31				IAmb	IAmb	07 12 52.2	
	comp=Z,1.8nm,0.9s						
ABKAR	**Akbulak array**	**85.66**	**320**	P	**P**	**07 12 43.5**	**+1.1**
BMAR	**Burnt Mountain**	**86.70**	**22**	P	**P**	**07 12 49.4**	**+2.1**
BCAR	**Beaver Creek A**	**86.83**	**26**	P	**P**	**07 12 50.2**	**+2.2**
AKTO	**Aktyubinsk**	**87.06**	**321**	LR	LR	07 50 42.6	
	comp=Z,99nm,21.3s,baz=56,slow=35						
QSPA	**South Pole Qui**	**87.35**	**180**	P	**P**	**07 12 51.9**	**+1.3**
QSPA				IAmb	IAmb	07 13 05.1	
	comp=Z,5.0nm,1.1s						
QSPA	**South Pole Qui**	**87.35**	**180**	P	**P**	**07 12 52.7**	**+2.2**
	comp=Z,2.6nm,0.6s,baz=290,slow=0.8,SNR=16						
QSPA				LR	LR	07 53 25.3	
	comp=Z,126nm,19.4s,baz=9.5,slow=37						
ARTI	**Arti**	**87.66**	**327**	LR	LR	07 53 08.1	
	comp=Z,113nm,19.7s,baz=113,slow=36						
BBB	**Bella Bella**	**93.00**	**38**	LR	LR	07 49 48.3	
	comp=Z,48nm,19.3s,baz=222,slow=32						
GNI	**Garni**	**95.91**	**310**	LR	LR	08 00 01.6	
	comp=Z,35nm,20.4s,baz=69,slow=38						
DBIC	**Dimbokro**	**145.05**	**278**	PKP	**PKPbc**	**07 19 39.3**	**-2.2**
	comp=Z,5.1nm,0.7s,baz=116,slow=2.9,SNR=16						
LPAZ	**La Paz**	**146.22**	**125**	PKPbc	**PKPbc**	**07 19 44.6**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=268,slow=5.3,SNR=7.1						
CPUP	**Villa Florida**	**146.57**	**150**	PKPbc	**PKPab**	**07 19 45.7**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=236,slow=3.6,SNR=4.7						

IDC 04 07:03:12.6±1.4, 2.°21S×138.°40E, h0km, mb3.7/4, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=70.2km s-min=25.8km az=93.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.07**	**192**	P	Pn	**07 07 25.5**	**+0.2**
	0.2nm,0.3s,baz=15,slow=12,SNR=2.7						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**21.77**	**191**	P	P	07 08 06.2	0.0
	1.0nm,0.4s,baz=10,slow=11,SNR=4.8						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**69.20**	**322**	P	P	07 14 20.8	-0.5
	0.6nm,0.6s,baz=110,slow=8.1,SNR=3.8						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**78.72**	**325**	P	P	07 15 17.5	+0.6
	0.7nm,0.5s,baz=116,slow=3.4,SNR=4.0						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**85.51**	**24**	P	P	07 15 52.1	-0.1
	0.5nm,0.8s,baz=261,slow=3.6,SNR=3.8						
	0.5nm,0.8s						

*NNC **04** 07:25:55.8±5.8, 39.°51N×75.°97E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=40.9km s-min=31.4km az=175.0*
*SOME **04** 07:25:55.5, 39.°43N×75.°70E, h5km*
*KRNET **04** 07:26:04.0±0.1, 39.°81N×76.°07E, mb3.2*
ISC 04 07:26:05.6±1.8, 39.°79N±0.°08×76.°02E±0.°05, h10km, n25, σ1§96/45, 23C-13D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.30**	**348**	⇑*iP*	**Pn**	**07 26 28.5**	**-1.5**
JNKS				⇑*iS*	**Sb**	**07 26 46.4**	**-0.7**
SFK	**Sufi-Kurgan**	**1.95**	**277**	⇑*iP*	**Pb**	**07 26 40.8**	**-0.6**
SFK				⇑*iS*	**Sg**	**07 27 08.1**	**-0.2**
SALK	**Salom-Alik**	**2.01**	**304**	⇑*eP*	**Pb**	**07 26 41.5**	**-0.8**
SALK				⇑*iS*	**Sg**	**07 27 09.0**	**-1.1**
TARG	**Taragay, Kyrgy**	**2.36**	**34**	⇑*iP*	**Pb**	**07 26 45.8**	**-2.7**
TARG				⇑*iS*	**Sb**	**07 27 16.2**	**-1.7**
ARLS	**Aral**	**2.44**	**329**	⇑*iP*	**Pn**	**07 26 47.1**	**+1.5**
ARLS				⇑*iS*	**Sb**	**07 27 18.5**	**-1.3**
ULHL	**Ulahol**	**2.46**	**4**	⇓*iP*	**Pn**	**07 26 47.3**	**+1.3**
ULHL				⇓*iS*	**Sb**	**07 27 18.7**	**-1.8**
KDJ	**Kajisay**	**2.50**	**20**	⇓*iP*	**Pn**	**07 26 47.5**	**+1.1**
KDJ				⇓*iS*	**Sb**	**07 27 19.2**	**-2.3**
OHH	**Osh**	**2.59**	**288**	⇑*iP*	**Pb**	**07 26 49.5**	**-2.6**
OH

I46RU	**ZALESOVO INFRA**	**4.64**	**20**	I	I		07 59 20.0
	baz=202,slow=326,SNR=6.0						

*RSNC **04** 08:04:13.1±1.1, 10˚N±4˚×7˚0W±˚, h0km, M2.5, mb3.4, ML2.2*
*FUNV **04** 08:04:15.2, 9.92N×69.92W, h5km, MW3.1*
ISC 04 08:04:12.1±2.2, 9.96N±0.04×69.97W±0.03, h9km±11km, n17, σ1§36/26, 1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	**1.25**	**212**	P	**Pg**	**08 04 36.2**	**0.0**
SDV				S	**Sg**	**08 04 52.4**	**-0.1**
MAPV	**Macapo**	**1.50**	**95**	*e*P	**Pg**	**08 04 40.9**	**0.0**
MAPV				*e*S	**Sg**	**08 05 01.5**	**+1.2**
JACV	**Jacura**	**1.58**	**45**	*e*P	**Pg**	**08 04 42.7**	**+0.1**
JACV				*e*S	**Sg**	**08 05 05.1**	**+2.0**
TURV	**Turiamo**	**2.15**	**77**	*e*S	**Sb**	**08 05 16.8**	**-1.4**
BAUV	**El Baul**	**2.16**	**118**	*e*P	**Pb**	**08 04 50.1**	**-1.2**
BAUV				*e*S	**Sn**	**08 05 16.5**	**+1.3**
BENV	**Beln**	**2.34**	**90**	*e*P	**Pb**	**08 04 53.1**	**-1.4**
BENV				*e*S	**Sn**	**08 05 21.5**	**+1.8**
MCQV	**Machiques**	**2.53**	**272**⇓	*e*P	**Pb**	**08 04 57.1**	**-0.6**
MCQV				*e*S	**Sb**	**08 05 28.0**	**-1.0**
URIC	**Uribia, Colomb**	**2.63**	**311**	P	**Pn**	**08 04 54.5**	**-0.4**
TACV	**Tcata**	**2.91**	**86**	P	**Pn**	**08 04 59.9**	**+1.2**
TACV				*e*S	**Sn**	**08 05 34.1**	**+0.3**
CRJC	**Cerrejon, Guaj**	**3.05**	**290**	P	**Pn**	**08 05 00.9**	**+0.2**
CRJC				S	**Sn**	**08 05 37.2**	**-0.2**
OCAC	**Ocana**	**3.72**	**243**	P	**Pn**	**08 05 11.6**	**+1.6**
CACV	**CAICARA DEL OR**	**4.14**	**125**	*e*P	**Pb**	**08 05 22.8**	**-2.5**
CACV				*e*S	**Sb**	**08 06 14.9**	**-0.6**
RUSC	**La Rusia**	**5.08**	**218**	P	**Pn**	**08 05 30.2**	**+1.2**
	5.1nm,2.4s						
SJCC	**San Jacinto, C**	**5.13**	**270**	P	**Pn**	**08 05 29.0**	**-0.3**
	9.2nm,1.5s						
PTBC	**PUERTO BERRIO,**	**5.59**	**233**	P	**Pn**	**08 05 34.8**	**-0.8**
	1.5nm,0.4s						
CHIC	**Chingaza**	**6.48**	**215**	P	**Pn**	**08 05 49.4**	**+1.2**
HELC	**Santa Helena**	**6.66**	**236**	P	**Pn**	**08 05 53.6**	**+3.0**

*IDC **04** 08:09:52.1±1.7, 18˚21S×172˚79W, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=118.4km s-min=20.6km az=149.0*
ISC 04 08:09:56.2±1.6, 18˚2S±0.7×172˚8W±0.4, h26km, n19, σ0§36/7, mb3.7/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11S2	**WAKE ISLAND Hy**	**41.67**	**330**	T	T	09 02 53.4	
	baz=148,slow=76,SNR=43						
H11S3	**WAKE ISLAND Hy**	**41.69**	**330**	T	T	09 02 52.8	
	baz=148,slow=76,SNR=23						
H11S1	**WAKE ISLAND Hy**	**41.69**	**330**	T	T	09 02 54.0	
	baz=148,slow=76,SNR=27						
H11N3	**WAKE ISLAND Hy**	**42.64**	**331**	T	T	09 04 03.5	
	baz=150,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**42.64**	**331**	T	T	09 03 58.2	
	baz=150,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy**	**42.66**	**331**	T	T	09 04 04.8	
	baz=150,slow=76,SNR=9.2						
STKA	**Stephens Creek**	**43.17**	**243**	P	**P**	**08 17 55.0**	**0.0**
	0.9nm,0.6s,baz=84,slow=10,SNR=1.9						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**49.80**	**259**	P	**P**	**08 18 47.1**	**-0.1**
	2.8nm,0.7s,baz=95,slow=7.5,SNR=25						
	2.8nm,0.7s						
ASAR	**Alice Springs**	**49.82**	**254**	P	**P**	**08 18 47.6**	**+0.2**
	8.0nm,0.8s,baz=86,slow=8.4,SNR=71						
	8.0nm,0.8s						
NVAR	**Mina Array Bea**	**76.06**	**41**	P	**P**	**08 21 42.2**	**+0.4**
	0.4nm,0.7s,baz=226,slow=8.1,SNR=3.5						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**81.73**	**56**	P	**P**	**08 22 13.1**	**+0.1**
	0.3nm,0.9s,baz=231,slow=7.9,SNR=3.5						
	0.3nm,0.9s						
H03S2	**Juan Fernandez**	**83.19**	**123**	T	T	09 53 11.2	
	baz=251,slow=75,SNR=25						
H03S1	**Juan Fernandez**	**83.20**	**123**	T	T	09 53 13.0	
	baz=251,slow=75,SNR=30						
H03S3	**Juan Fernandez**	**83.20**	**123**	T	T	09 53 10.1	
	baz=251,slow=75,SNR=24						
H03N2	**Juan Fernandez**	**83.30**	**123**	T	T	09 53 15.6	
	baz=247,slow=73,SNR=31						
H03N3	**Juan Fernandez**	**83.30**	**123**	T	T	09 53 16.0	
	baz=247,slow=73,SNR=22						
H03N1	**Juan Fernandez**	**83.31**	**123**	T	T	09 53 16.2	
	baz=247,slow=73,SNR=7.5						
PDAR	**Pinedale Array**	**84.00**	**41**	P	**P**	**08 22 24.1**	**-0.6**
	baz=222,slow=5.6,SNR=5.8						
ILAR	**Eielson Array**	**85.10**	**11**	P	**P**	**08 22 29.4**	**0.0**
	0.6nm,1.0s,baz=206,slow=4.8,SNR=5.8						
	0.6nm,1.0s						

*NNC **04** 08:12:00.4±5.4, 39.70N×76.25E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=52.1km s-min=35.5km az=90.0*
*SOME **04** 08:12:02.1, 39.80N×75.80E, h5km*
*KRNET **04** 08:12:04.3±0.1, 39.86N×75.94E, h20km, mb2.8*
ISC 04 08:12:04.5±1.7, 39.80N±0.08×75.94E±0.04, h10km, n26, σ1§63/46, 26C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.27**	**350**	⇑*i*P	**Pn**	**08 12 27.0**	**-1.6**
JNKS				⇑*i*S	**Sb**	**08 12 43.5**	**-1.8**
SFK	**Sufi-Kurgan**	**1.89**	**277**	⇑*i*P	**Pb**	**08 12 38.7**	**-0.5**
SFK				⇑*i*S	**Sg**	**08 13 03.8**	**-1.4**
SALK	**Salom-Alik**	**1.95**	**304**	⇑*i*P	**Pb**	**08 12 39.2**	**-1.0**
SALK				⇑*i*S	**Sb**	**08 13 04.5**	**-0.1**
TARG	**Taragay, Kyrgy**	**2.39**	**36**	⇓*i*P	**Pn**	**08 12 45.1**	**+1.0**
TARG				⇓*i*S	**Sn**	**08 13 15.0**	**+1.4**
ARLS	**Aral**	**2.40**	**330**	⇑*i*P	**Pn**	**08 12 45.0**	**+1.1**
ARLS				⇑*i*S	**Sn**	**08 13 14.7**	**+1.2**
ULHL	**Ulahol**	**2.45**	**5**	⇑*i*P	**Pn**	**08 12 45.7**	**+0.9**
ULHL				⇑*i*S	**Sn**	**08 13 15.8**	**+0.9**
KDJ	**Kajisay**	**2.51**	**22**	⇓*i*P	**Pn**	**08 12 46.5**	**+1.0**
KDJ				⇓*i*S	**Sn**	**08 13 17.3**	**+1.0**
OHH	**Osh**	**2.52**	**288**	⇑*e*P	**Pn**	**08 12 46.9**	**+1.3**
OHH				⇑*e*S	**Sb**	**08 13 18.6**	**-2.5**
UCH	**Uchtor**	**2.65**	**336**	⇑*i*P	**Pn**	**08 12 48.7**	**+0.9**
UCH				⇑*i*S	**Sn**	**08 13 21.1**	**+0.9**
BOOM	**Boomskoye usch**	**2.69**	**360**	⇑*i*P	**Pn**	**08 12 48.9**	**+1.0**
BOOM				⇑*i*S	**Sn**	**08 13 21.4**	**+0.8**
ARSB	**Arslanbob**	**2.72**	**305**	⇑*e*P	**Pn**	**08 12 50.0**	**+1.6**
ARSB				⇑*e*S	**Sn**	**08 13 22.9**	**+1.5**
AAK	**Ala-Archa**	**3.04**	**339**	⇑*i*P	**Pn**	**08 12 53.7**	**+1.0**
AAK				⇑*i*S	**Sn**	**08 13 30.1**	**+0.9**
TKM2	**Tokmak 2**	**3.13**	**355**	⇓*i*P	**Pn**	**08 12 55.0**	**+1.0**
TKM2				⇓*i*S	**Sn**	**08 13 32.0**	**+0.4**
KST	**Kastek**	**3.24**	**0**	Pg	**Pb**	**08 13 01.6**	**-0.6**
	1.3nm,0.4s						
KST				Lg	Lg	08 13 45.1	
	8.5nm,0.4s						
KST	**Kastek**	**3.24**	**0**	*e*P	**Pb**	**08 13 02.0**	**-0.1**
	1.2nm,0.4s						
KST				*e*S	**Sg**	**08 13 45.3**	**-3.2**
	8.5nm,0.4s						
PRZ	**Przheval'sk**	**3.26**	**34**	⇑*e*P	**Pn**	**08 12 57.1**	**+1.3**
PRZ				⇑*e*S	**Sn**	**08 13 35.8**	**+1.0**
EKS2	**Erkin-Say**	**3.29**	**331**	⇑*i*P	**Pn**	**08 12 57.3**	**+1.1**
EKS2				⇑*i*S	**Sn**	**08 13 36.1**	**+0.6**
TNSS	**Tian-Shan**	**3.32**	**13**	Pg	**Pb**	**08 13 04.2**	**+0.5**
TNSS				Lg	Lg	08 13 49.0	
TNSS	**Tian-Shan**	**3.32**	**13**	*e*P	**Pb**	**08 13 04.6**	**+0.9**
	0.1nm,0.0s						
TNSS				*e*S	**Sg**	**08 13 49.7**	**-1.4**
	0.9nm,0.3s						
MTBS	**Maitube**	**3.35**	**6**	Pg	**Pb**	**08 13 03.8**	**-0.2**
	2.0nm,0.2s						
MTBS				Lg	Lg	08 13 48.5	
	5.2nm,0.2s						
MTBS	**Maitube**	**3.35**	**6**	*e*P	**Pb**	**08 13 03.8**	**-0.2**
	0.7nm,0.1s						
MTBS				*e*S	**Sb**	**08 13 48.2**	**+3.5**
	2.1nm,0.3s						
MDOK	**Medeo**	**3.46**	**14**	Pg	**Pb**	**08 13 06.7**	**+0.7**
MDOK				Lg	Lg	08 13 53.5	
KNDC	**Almaty**	**3.50**	**12**	⇑Pg	**Pn**	**08 13 02.1**	**+3.0**
	26nm,0.4s						
KNDC				⇑Lg	Lg	08 13 52.1	
	18nm,0.2s						

KOTS	**Kotyrbulak**	**3.54**	**14**	*e*P	**Pb**	**08 13 07.5**	**+0.2**
	1.9nm,0.2s						
KOTS				*e*S	**Sg**	**08 13 54.4**	**-3.8**
	20nm,0.5s						
MRKS	**Merke**	**3.58**	**326**	*e*P	**Pb**	**08 13 07.5**	**-0.5**
	0.4nm,0.2s						
MRKS				*e*S	**Sb**	**08 13 54.5**	**+3.0**
	5.7nm,0.5s						
PDGK	**Podgornoye**	**4.42**	**36**	⇓Pg	**Pb**	**08 13 18.6**	**-3.7**
	1.7nm,0.9s						
PDGK				⇓Lg	Lg	08 14 20.8	
	6.5nm,1.1s						

*IDC **04** 09:11:33.3±8.4, 25˚75S×179˚68E, h550km±110km, mb2.8/4, mbtmp3.9/5, Error ellipse: s-maj=84.9km s-min=27.1km az=4.0*
ISC 04 09:11:30.3±1.1, 25˚6S±0˚1×179˚7E±0˚2, h507km, n6, σ1§05/6, mb3.4/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.80**	**189**	P	**P**	**09 14 18.2**	**+1.2**
	25nm,1.2s,baz=101,slow=5.2,SNR=3.2						
URZ				S	**S**	**09 16 33.2**	**-1.3**
	20nm,1.1s,baz=348,slow=7.2,SNR=3.3						
ASAR	**Alice Springs**	**41.51**	**263**	P	**P**	**09 18 33.0**	**0.0**
	0.3nm,0.3s,baz=91,slow=7.3,SNR=10						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**42.04**	**268**	P	**P**	**09 18 37.0**	**-0.2**
	0.5nm,0.4s,baz=104,slow=7.9,SNR=5.6						
	0.5nm,0.4s						
NVAR	**Mina Array Bea**	**86.17**	**44**	P	**P**	**09 23 17.4**	**-0.3**
	0.4nm,0.7s,baz=224,slow=12,SNR=4.6						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**91.57**	**58**	P	**P**	**09 23 42.9**	**-0.1**
	0.4nm,0.8s,baz=208,slow=5.1,SNR=4.5						
	0.4nm,0.8s						
HFS	**Hagfors**	**144.16**	**348**	PKP	PKPbc	09 30 04.5	-2.4
	1.7nm,0.6s,baz=44,slow=4.4,SNR=4.8						

*IDC **04** 09:14:34.5±8.5, 25˚39S×179˚76E, h500km±107km, mb3.0/5, mbtmp4.0/6, Error ellipse: s-maj=76.8km s-min=24.7km az=4.0*
ISC 04 09:14:35.7±1.0, 25˚5S±0˚1×179˚7E±0˚2, h507km, n8, σ1§86/8, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.95**	**189**	P	**P**	**09 17 23.6**	**-0.5**
	5.6nm,0.4s,baz=277,slow=5.6,SNR=6.9						
URZ				S	**S**	**09 19 41.0**	**-1.9**
	12nm,1.0s,baz=330,slow=8.1,SNR=2.3						
ASAR	**Alice Springs**	**41.51**	**262**	P	**P**	**09 21 38.4**	**-0.1**
	0.9nm,0.7s,baz=85,slow=7.0,SNR=12						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**42.03**	**268**	P	**P**	**09 21 42.0**	**-0.5**
	1.7nm,0.6s,baz=104,slow=7.9,SNR=14						
	1.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.43**	**267**	P	**P**	**09 22 46.9**	**+0.4**
	1.2nm,0.5s,baz=120,slow=13,SNR=6.0						
	1.2nm,0.5s						
QSPA	**South Pole Qui**	**64.64**	**180**	P	**P**	**09 24 25.9**	**+3.1**
	1.1nm,0.7s,baz=273,slow=1.2,SNR=6.8						
NVAR	**Mina Array Bea**	**86.07**	**44**	P	**P**	**09 26 20.9**	**-1.8**
	0.3nm,0.5s,baz=248,slow=4.8,SNR=4.3						
	0.3nm,0.5s						
TXAR	**Lajitas Array**	**91.50**	**58**	P	**P**	**09 26 48.5**	**+0.4**
	0.5nm,0.8s,baz=225,slow=6.7,SNR=5.4						
	0.5nm,0.8s						
HFS	**Hagfors**	**144.00**	**348**	PKP	PKPbc	09 33 09.4	-2.5
	1.9nm,0.6s,baz=27,slow=4.8,SNR=2.2						

*IDC **04** 09:19:34.7±1.0, 63.77N×18.82E, h0km, mbtmp2.8/3, ML1.8/2, Error ellipse: s-maj=11.1km s-min=10.6km az=25.0*
*UPP **04** 09:19:37.5±0.1, 63.76N×18.85E, h29km±1km, ML2.4, Confirmed Earthquake*
*DNK **04** 09:19:37.7±0.8, 63.76N×18.86E, h27km±2km, ML2.4(UPP), Confirmed Earthquake*
*HEL **04** 09:19:37.8, 63.75N×18.82E, h30km, ML2.1, ML2.4(UPP), Confirmed Earthquake*
*BER **04** 09:19:39.0±3.7, 63.75N×18.93E, h14km±11km, ML2.0, ML2.3(UPP), Confirmed Earthquake*
ISC 04 09:19:37.6±0.9, 63.76N±0.02×18.87E±0.02, h27km±6km, n61, σ0§97/98, 7C-7D, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BREU	**Bredtraesk**	**0.18**	**316**	⇓P	**Pb**	**09 19 43.1**	**-0.2**
BREU				S	**Sb**	**09 19 47.1**	**-0.2**
BREU	**Bredtraesk**	**0.18**	**316**	⇓P	**Pb**	**09 19 43.2**	**-0.2**
BREU				S	**Sb**	**09 19 47.1**	**-0.2**
BREU	**Bredtraesk**	**0.18**	**316**	⇓P	**Pb**	**09 19 43.1**	**-0.2**
BREU				S	**Sb**	**09 19 47.1**	**-0.2**
BREU	**Bredtraesk**	**0.18**	**316**	⇓*i*P	**Pb**	**09 19 43.1**	**-0.2**
BREU				*i*S	**Sb**	**09 19 47.1**	**-0.2**
HUSU	**Husum**	**0.45**	**159**	⇑P	**Pb**	**09 19 46.8**	**-0.3**
HUSU				S	**Sb**	**09 19 53.2**	**-0.3**
HUSU	**Husum**	**0.45**	**159**	⇑P	**Pb**	**09 19 46.8**	**-0.3**
HUSU				S	**Sb**	**09 19 53.3**	**-0.3**
HUSU	**Husum**	**0.45**	**159**	⇑P	**Pb**	**09 19 46.8**	**-0.3**
HUSU				S	**Sb**	**09 19 53.2**	**-0.3**
HUSU	**Husum**	**0.45**	**159**	*e*P	**Pb**	**09 19 46.8**	**-0.3**
HUSU				*e*S	**Sb**	**09 19 53.3**	**-0.2**
SVAU	**Svanoeiden**	**0.80**	**23**	⇑P	**Pb**	**09 19 52.4**	**-0.5**
SVAU				S	**Sb**	**09 20 03.2**	**0.0**
SVAU	**Svanoeiden**	**0.80**	**23**	⇑P	**Pb**	**09 19 52.4**	**-0.5**
SVAU				S	**Sb**	**09 20 03.2**	**0.0**
SVAU	**Svanoeiden**	**0.80**	**23**	⇑P	**Pb**	**09 19 52.4**	**-0.5**
SVAU				S	**Sb**	**09 20 03.2**	**0.0**
SVAU	**Svanoeiden**	**0.80**	**23**	⇑*i*P	**Pb**	**09 19 52.4**	**-0.5**
SVAU				*i*S	**Sb**	**09 20 03.2**	**0.0**
UMAU	**Umeaa**	**0.81**	**81**	⇓P	**Pb**	**09 19 52.8**	**-0.4**
UMAU				S	**Sb**	**09 20 03.5**	**-0.1**
UMAU	**Umeaa**	**0.81**	**81**	⇓P	**Pb**	**09 19 52.8**	**-0.4**
UMAU				S	**Sb**	**09 20 03.6**	**-0.1**
UMAU	**Umeaa**	**0.81**	**81**	⇓P	**Pb**	**09 19 52.8**	**-0.4**
UMAU				S	**Sb**	**09 20 03.5**	**-0.1**
UMAU	**Umeaa**	**0.81**	**81**	*e*P	**Pb**	**09 19 52.8**	**-0.4**
UMAU				*e*S	**Sb**	**09 20 03.6**	**-0.1**
ODEU	**Stanfors**	**1.04**	**51**	P	**Pn**	**09 19 56.5**	**+0.2**
ODEU				S	**Sn**	**09 20 10.2**	**+0.2**
ODEU	**Stanfors**	**1.04**	**51**	*e*P	**Pn**	**09 19 56.5**	**+0.2**
ODEU				*e*S	**Sn**	**09 20 10.2**	**+0.2**
HEMU	**Hemsoen**	**1.15**	**199**	P	**Pn**	**09 19 57.8**	**-0.1**
HEMU				S	**Sn**	**09 20 12.5**	**-0.2**
HEMU	**Hemsoen**	**1.15**	**199**	P	**Pn**	**09 19 57.8**	**-0.1**
HEMU				S	**Sn**	**09 20 12.5**	**-0.2**
HEMU	**Hemsoen**	**1.15**	**199**	P	**Pn**	**09 19 57.8**	**-0.1**
HEMU				S	**Sn**	**09 20 12.5**	**-0.2**
HEMU	**Hemsoen**	**1.15**	**199**	*e*P	**Pn**	**09 19 57.7**	**-0.1**
HEMU				*e*S	**Sn**	**09 20 12.5**	**-0.2**
HEMU				smax	smax	09 20 12.7	
	comp=Z,39nm,0.1s						
BURU	**Burvik**	**1.38**	**52**	P	**Pb**	**09 20 02.2**	**-0.4**
BURU				S	**Sb**	**09 20 20.2**	**+0.4**
BURU	**Burvik**	**1.38**	**52**	*e*P	**Pb**	**09 20 02.1**	**-0.6**
BURU				*e*S	**Sn**	**09 20 19.2**	**+1.0**
BURU				smax	smax	09 20 21.2	
	comp=Z,35nm,0.1s						
NOD	**Norderasen**	**1.82**	**262**	P	**Pn**	**09 20 07.4**	**+0.3**
NOD				S	**Sn**	**09 20 29.9**	**+0.6**
NOD	**Norderasen**	**1.82**	**262**	P	**Pn**	**09 20 07.4**	**+0.3**
NOD				S	**Sn**	**09 20 29.9**	**+0.6**
NOD	**Norderasen**	**1.82**	**262**	*e*P	**Pn**	**09 20 07.4**	**+0.3**
NOD				*e*S	**Sn**	**09 20 29.9**	**+0.6**
VAF	**Ylistaro**	**1.86**	**111**	*e*P	**Pb**	**09 20 10.3**	**-0.6**
VAF	**Ylistaro**	**1.86**	**111**	*e*PB	**Pb**	**09 20 10.0**	**-0.8**
VAF				*e*SB	**Sb**	**09 20 34.2**	**+0.6**
VAF				smax	smax	09 20 35.0	
	comp=Z,15nm,0.1s						
HASU	**Hassela**	**1.91**	**214**	P	**Pn**	**09 20 08.5**	**+0.1**
HASU				S	**Sn**	**09 20 31.9**	**+0.4**
HASU	**Hassela**	**1.91**	**214**	P	**Pn**	**09 20 08.5**	**+0.1**
HASU				S	**Sn**	**09 20 31.9**	**+0.4**
HASU	**Hassela**	**1.91**	**214**	*e*P	**Pn**	**09 20 08.5**	**+0.1**
HASU				*e*S	**Sn**	**09 20 31.9**	**+0.4**
OBF8	**Ulkokalla**	**2.09**	**72**	*e*P	**Pn**	**09 20 11.5**	**+0.7**
OBF8				smax	smax	09 20 38.5	
	comp=Z,7.0nm,0.1s						

ARNU	**Arnoeviken**	**2.19**	**199**	P	**Pn**	**09 20 12.3**	**+0.2**
ARNU				S	**Sn**	**09 20 38.7**	**+0.5**
ARNU	**Arnoeviken**	**2.19**	**199**	P	**Pn**	**09 20 12.3**	**+0.2**
ARNU				S	**Sn**	**09 20 38.7**	**+0.5**
ARNU	**Arnoeviken**	**2.19**	**199**	*e*P	**Pn**	**09 20 12.3**	**+0.2**
ARNU				*e*S	**Sn**	**09 20 38.7**	**+0.5**
KPF	**Kankaanpaa**	**2.43**	**141**	smax	smax	09 20 50.9	
	comp=Z,5.8nm,0.1s						
OUF	**Merijarvi**	**2.65**	**74**	*e*P	**Pn**	**09 20 18.7**	**+0.3**
OBF4	**Vikkela, Lumij**	**2.92**	**66**	*e*P	**Pn**	**09 20 22.5**	**+0.4**
OBF4				*e*S	**Sn**	**09 20 56.5**	**+0.3**
RAF	**Rauma**	**3.06**	**153**	*e*P	**Pn**	**09 20 26.9**	**+2.8**
NSS	**Namsos**	**3.12**	**287**	*e*P	**Pb**	**09 20 31.4**	**-1.0**
NSS				IAML		09 21 16.7	
	comp=Z,8.7nm,0.5s						
NSS	**Namsos**	**3.12**	**287**	*e*P	**Pb**	**09 20 31.4**	**-1.0**
NSS				IAML		09 21 16.7	
	comp=Z,8.7nm,0.5s						
KEF	**Keuruu**	**3.17**	**118**	*e*P	**Pn**	**09 20 27.7**	**+2.0**
RAUS	**Rausandaksla**	**3.37**	**325**	*e*P	**Pn**	**09 20 28.6**	**+0.1**
RAUS				IAML		09 21 24.1	
	comp=Z,9.5nm,0.6s						
LEIR	**Leirfjorden**	**3.40**	**317**	*e*P	**Pn**	**09 20 29.7**	**+0.9**
LEIR				IAML		09 21 24.9	
	comp=Z,12nm,0.5s						
LEIR	**Leirfjorden**	**3.40**	**317**	*e*P	**Pn**	**09 20 29.7**	**+0.9**
LEIR				IAML		09 21 24.9	
	comp=Z,12nm,0.5s						
STOK	**Stokkvaagen**	**3.58**	**319**	*e*P	**Pn**	**09 20 31.6**	**+0.3**
STOK				IAML		09 21 31.4	
	comp=Z,9.1nm,0.5s						
AAL	**Aland**	**3.63**	**171**	*e*P	**Pn**	**09 20 33.4**	**+1.4**
SALU	**Saltoluokta**	**3.64**	**358**	*e*P	**Pn**	**09 20 32.6**	**+0.6**
SALU	**Saltoluokta**	**3.64**	**358**	*e*P	**Pn**	**09 20 32.6**	**+0.6**
VAGH	**Vaagaholmen**	**3.80**	**324**	*e*P	**Pn**	**09 20 37.5**	**+3.3**
VAGH				IAML		09 21 35.7	
	comp=Z,6.0nm,0.4s						
VAGH	**Vaagaholmen**	**3.80**	**324**	*e*P	**Pn**	**09 20 37.5**	**+3.3**
VAGH				IAML		09 21 35.7	
	comp=Z,6.0nm,0.4s						
FAUS	**Fauske**	**3.93**	**339**	*e*P	**Pn**	**09 20 36.2**	**+0.2**
FAUS				IAML		09 21 47.4	
	comp=Z,8.7nm,0.5s						
FAUS	**Fauske**	**3.93**	**339**	*e*P	**Pn**	**09 20 36.2**	**+0.2**
FAUS				IAML		09 21 47.4	
	comp=Z,8.7nm,0.5s						
FINES	**FINESS Array B**	**4.06**	**122**	Pn	**Pn**	**09 20 37.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=308,slow=14,SNR=3.2						
FINES				Pg	**Pb**	**09 20 47.0**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=310,slow=13,SNR=7.6						
FINES				Lg	Lg	09 21 42.1	
	comp=Z,2.4nm,0.3s,baz=310,slow=29,SNR=24						
	comp=Z,1.4nm,0.8s						
MEF	**Metsahovi**	**4.41**	**141**	*e*P	**Pn**	**09 20 45.3**	**+2.7**
STEI	**Steigen**	**4.44**	**342**	*e*P	**Pn**	**09 20 43.4**	**+0.3**
STEI	**Steigen**	**4.44**	**342**	*e*P	**Pn**	**09 20 43.4**	**+0.3**
NOA	**NORSAR Array B**	**4.49**	**236**	Pn	**Pn**	**09 20 43.3**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=49,slow=11,SNR=2.3						
NOA				Sn	**Sn**	**09 21 32.7**	**-2.3**
	baz=106,slow=11,SNR=1.6						
NOA				Lg	Lg	09 21 51.1	
	comp=Z,0.1nm,0.3s,baz=35,slow=14,SNR=5.0						
JOF	**Joensuu**	**5.67**	**93**	*e*P	**Pn**	**09 20 59.1**	**-0.8**
ARCES	**ARCESS Array B**	**6.37**	**22**	Pn	**Pn**	**09 21 09.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=206,slow=14,SNR=2.5						
ARCES				Sn	**Sn**	**09 22 16.3**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=205,slow=21,SNR=2.0						
	comp=Z,5.8nm,1.2s						

*SJA **04** 09:19:54.3±0.9, 25˚89S×70˚76W, h40km±999km, ML4.1, MW4.0*
*GUC **04** 09:19:56.5±0.9, 25˚87S×70˚62W, h67km±6km, ML4.1*
*NEIC **04** 09:19:56.4±2.2, 25˚87S±0˚04×70˚70W±0˚06, h51km±5km, mb4.5/8, Mwr4.2(GUC), Error ellipse: s-maj=8.3km s-min=5.2km az=92.0*
*IDC **04** 09:19:57.7±0.6, 25˚78S×70˚35W, h63km±4km, mb3.8/7, mbtmp3.9/10, MS3.1/4, Error ellipse: s-maj=23.5km s-min=15.3km az=89.0*
ISC 04 09:19:56.1±0.5, 25˚86S±0˚03×70˚73W±0˚06, h61km±4km, h60km:pP-P, n92, σ1§37/104, mb4.2/12, 4C-16D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC01	**Pan de Azucar**	**0.31**	**158**		**Pn**	**09 20 07.0**	**+0.6**
AC01	**Pan de Azucar**	**0.31**	**158**	⇑*i*P	**Pn**	**09 20 07.0**	**+0.6**
AC01				*i*S	**Sn**	**09 20 14.3**	**+0.5**
AC01				IAML		09 20 14.6	
	comp=E,38μm,0.2s						
AC01	**Pan de Azucar**	**0.31**	**158**	*i*P	**Pn**	**09 20 05.1**	**-1.3**
AC01

VCA					IAML			09 21 19.4	
	comp=E,283nm,0.4s								
VCA	**Vinchina**	**3.64**	**142**	*i* P		**Pn**	**09 20 50.9**	**+0.8**
VCA					IAML			09 21 55.5	
	comp=Z,144nm,1.4s								
AF01	**San Pedro de A**	**3.71**	**39**			**Pn**	**09 20 52.2**	**+1.0**
AF01	**San Pedro de A**	**3.71**	**39**	*e*P		**Pn**	**09 20 52.3**	**+1.0**
PB03	**IPOC Station P**	**3.90**	**13**			**Pn**	**09 20 52.5**	**-1.3**
PB03	**IPOC Station P**	**3.90**	**13**	IAML			09 22 04.6	
	comp=Z,410nm,0.3s								
AGUA	**GUANDACOL**	**4.12**	**152**	*i* P		**Pn**	**09 20 57.7**	**+1.1**
AGUA				*i* S		Sn	09 21 26.7	-17
AGUA					IAML		09 22 06.2	
	comp=Z,102nm,1.2s								
CO01	**Juntas del Tor**	**4.14**	**172**			**Pn**	**09 20 57.0**	**+0.1**
PB09	**IPOC Station P**	**4.27**	**19**			**Pn**	**09 20 59.0**	**+0.2**
PB09	**IPOC Station P**	**4.27**	**19**	IAML			09 22 19.2	
	comp=Z,617nm,0.8s								
FSA	**Cafayete**	**4.28**	**94**	*i* P		**Pn**	**09 21 00.4**	**+1.5**
FSA				*i* S		Sn	09 21 30.5	-17
GO04	**Tololo Observa**	**4.29**	**181**			**Pn**	**09 20 58.4**	**-0.7**
SALTA		**4.30**	**69**	*e*P		**Pn**	**09 21 02.8**	**+3.3**
PB02	**IPOC Station P**	**4.59**	**10**			**Pn**	**09 21 02.0**	**-1.1**
PB02	**IPOC Station P**	**4.59**	**10**	IAML			09 22 31.1	
	comp=Z,372nm,0.4s								
SLA	**San Lorenzo**	**4.86**	**78**	*e*P		**Pn**	**09 21 10.7**	**+3.8**
PB01	**IPOC Station P**	**4.93**	**14**	IAML			09 22 35.5	
	comp=Z,149nm,0.4s								
PATCX	**Punta Patache**	**5.05**	**6**	IAML			09 22 46.0	
	comp=Z,116nm,0.5s								
CFA	**Coronel Fontan**	**6.12**	**160**	P		**Pn**	**09 21 23.9**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=341,slow=15,SNR=29								
CFA				S		**Sn**	**09 22 27.9**	**-4.8**
	comp=Z,9.5nm,0.4s,baz=211,slow=18,SNR=7.2								
PB16	**IPOC Station P**	**7.58**	**9**	Pn		**Pn**	**09 21 43.6**	**-0.8**
BO04	**La Punta**	**8.10**	**179**	Pn		**Pn**	**09 21 49.2**	**-1.9**
LPAZ	**La Paz**	**9.83**	**15**	P		**Pn**	**09 22 13.9**	**-1.4**
	comp=Z,1.7nm,0.4s,baz=208,slow=4.9,SNR=12								
LPAZ				LR		LR	09 26 53.5		
	comp=Z,76nm,20.3s,baz=214,slow=43								
H03N1	**Juan Fernandez**	**10.37**	**221**	P		**Pn**	**09 22 21.1**	**-0.8**
	baz=109,slow=15,SNR=53								
H03N1				T		T	09 33 07.8		
	baz=47,slow=72,SNR=264								
H03N2	**Juan Fernandez**	**10.38**	**221**	P		**Pn**	**09 22 21.4**	**-0.6**
	baz=109,slow=15,SNR=26								
H03N2				T		T	09 33 02.2		
	baz=47,slow=72,SNR=192								
H03N3	**Juan Fernandez**	**10.39**	**221**	P		**Pn**	**09 22 21.3**	**-0.9**
	baz=109,slow=15,SNR=68								
H03N3				T		T	09 33 03.2		
	baz=47,slow=72,SNR=165								
H03S3	**Juan Fernandez**	**10.64**	**220**	P		**Pn**	**09 22 23.8**	**-1.7**
	baz=42,slow=20,SNR=41								
H03S1	**Juan Fernandez**	**10.66**	**220**	P		**Pn**	**09 22 23.5**	**-2.2**
	baz=42,slow=20,SNR=18								
H03S2	**Juan Fernandez**	**10.66**	**220**	P		**Pn**	**09 22 23.9**	**-1.9**
	baz=42,slow=20,SNR=26								
CPUP	**Villa Florida**	**12.05**	**95**	P		**Pn**	**09 22 43.5**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=133,slow=16,SNR=3.5								
CPUP				LR		LR	09 27 59.8		
	comp=Z,41nm,21.6s,baz=95,slow=41								
SIV	**San Ignacio**	**13.33**	**44**	P		Pn	09 22 56.5	-6.0	
	comp=Z,4.5nm,0.4s,baz=242,slow=5.8,SNR=46								
SIV				S		Sn	09 25 15.9	-13	
	comp=Z,0.9nm,0.5s,baz=336,slow=20,SNR=1.6								
PLCA	**Paso Flores**	**14.83**	**179**	LR		LR	09 30 10.3		
	comp=Z,151nm,20.1s,baz=270,slow=41								
PTLB	**Pontes e Lacer**	**14.99**	**49**	Pn		**Pn**	**09 23 20.4**	**-4.0**
ITAB	**Concordia**	**16.70**	**99**			**Pn**	**09 23 45.4**	**-0.6**
VAO	**Valinhos**	**21.82**	**88**			**P**	**09 24 40.9**	**-2.5**
VAO				IAmb		IAmb	09 24 45.4		
	comp=Z,15nm,0.7s								
BDFB	**Brasilia**	**23.51**	**69**	IAmb		IAmb	09 24 59.1		
	comp=Z,10nm,0.9s								
BDFB	**Brasilia**	**23.51**	**69**	P		**P**	**09 24 58.2**	**-2.8**
	comp=Z,6.5nm,0.8s,baz=228,slow=11,SNR=9.0								
	comp=Z,6.5nm,0.8s								
MACA	**Manacapuru-AM**	**24.55**	**25**			**P**	**09 25 10.0**	**-0.3**
MACA				IAmb		IAmb	09 25 30.9		
	comp=Z,8.1nm,0.5s								
ROSC	**El Rosal**	**30.72**	**353**	LR		LR	09 39 50.7		
	comp=Z,55nm,21.8s,baz=181,slow=39								
BELA	**Belgrano 2**	**54.69**	**171**	P		**P**	**09 29 19.2**	**+0.7**
BELA				IAmb		IAmb	09 29 36.8		
	comp=Z,6.3nm,1.5s								
VNA3	**Neumayer Olymp**	**56.52**	**160**	⇓P		**P**	**09 29 31.2**	**-0.5**
	comp=Z,1.5nm,0.8s								
VNA3				⇓sP		**sP**	**09 29 54.9**	**0.0**
VNA1	**Neumayer--Stat**	**56.78**	**159**	⇓P		**P**	**09 29 33.5**	**0.0**
	comp=Z,1.3nm,0.3s								
VNA2	**Neumayer--Watz**	**57.13**	**160**	⇓P		**P**	**09 29 35.0**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=278,slow=5.7								
VNA2				⇑sP		**sP**	**09 29 58.8**	**-0.4**
	baz=150,slow=35								
SNAA	**Sanae**	**58.74**	**160**	⇓P		**P**	**09 29 46.0**	**-1.4**
	comp=Z,21nm,0.6s								
SNAA				⇓pP		**pP**	**09 30 02.9**	**-0.8**
SNAA	**Sanae**	**58.74**	**160**	P		**P**	**09 29 47.0**	**-0.4**
SNAA	**Sanae**	**58.74**	**160**	P		**P**	**09 29 47.0**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=262,slow=6.8,SNR=8.5								
	comp=Z,0.8nm,0.5s								
H06E1	**SOCORRO T-PHAS**	**59.13**	**315**	T		T	10 33 52.6		
	SNR=6.3								
TROLL	**Troll, Antarti**	**60.46**	**160**	⇓P		**P**	**09 29 58.9**	**-0.4**
	comp=Z,45nm,0.6s								
TXAR	**Lajitas Array**	**63.34**	**328**	P		**P**	**09 30 21.4**	**+2.3**
	comp=Z,0.4nm,0.6s,baz=150,slow=8.6,SNR=7.8								
	comp=Z,0.4nm,0.6s								
QSPA	**South Pole Qui**	**64.35**	**180**	P		**P**	**09 30 28.8**	**+3.5**
QSPA				IAmb		IAmb	09 30 55.4		
	comp=Z,5.7nm,1.1s								
QSPA	**South Pole Qui**	**64.35**	**180**	P		**P**	**09 30 29.2**	**+3.9**
	comp=Z,2.5nm,0.5s,baz=268,slow=0.4,SNR=41								
QSPA				pP		**pP**	**09 30 45.1**	**+3.5**
	comp=Z,2.2nm,0.5s,baz=43,slow=0.6,SNR=5.4								
	comp=Z,2.5nm,0.5s								
NVAR	**Mina Array Bea**	**77.95**	**324**	P		**P**	**09 31 49.5**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=150,slow=6.7,SNR=4.4								
	comp=Z,0.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**80.39**	**70**	P		**P**	**09 32 01.0**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=267,slow=3.8,SNR=3.9								
TORD				pP		**pP**	**09 32 17.9**	**-0.7**
	comp=Z,3.4nm,0.5s,baz=276,slow=3.7,SNR=3.6								
	comp=Z,2.8nm,0.5s								
MAW	**Mawson**	**80.64**	**164**	P		**P**	**09 32 02.2**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=221,slow=9.3,SNR=1.6								
	comp=Z,1.5nm,0.5s								
ASAR	**Alice Springs**	**125.29**	**208**	PKP		**PKPdf**	**09 38 50.6**	**0.0**
	comp=Z,0.9nm,0.8s,baz=130,slow=1.7,SNR=12								
ASAR				pPKP		**pPKPdf**	**09 39 08.8**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=150,slow=1.8,SNR=2.2								
WR8	**Warramunga Arr**	**128.28**	**211**	PKPdf		**PKiKP**	**09 38 57.3**	**+0.2**
WRA	**Warramunga Arr**	**128.37**	**211**	PKP		**PKPdf**	**09 38 57.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=161,slow=1.7,SNR=11								
AKTO	**Aktyubinsk**	**132.96**	**44**	PKP		**PKPdf**	**09 39 05.3**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=323,slow=5.1,SNR=3.0								
KURK	**Kurchatov**	**145.86**	**35**			**PKPab**	**09 39 29.2**	**+0.4**
KURBB	**Kurchatov Arra**	**145.86**	**35**	PKPbc		**PKPab**	**09 39 29.2**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=302,slow=3.6,SNR=12								
KURBB				pPKPbc		**pPKPdf**	**09 39 46.4**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=302,slow=3.2,SNR=5.8								
ZAA0	**Zalesovo Array**	**146.59**	**26**	PKPbc		**PKPab**	**09 39 31.4**	**-0.1**
ZALV	**Zalesovo Beam**	**146.59**	**26**	PKPbc		**PKPbc**	**09 39 30.4**	**0.0**
	comp=Z,4.7nm,0.6s,baz=309,slow=3.7,SNR=19								
ZALV				pPKPbc		**pPKPdf**	**09 39 47.9**	**+1.3**
	comp=Z,6.1nm,0.7s,baz=316,slow=3.5,SNR=8.6								
AAK	**Ala-Archa**	**147.02**	**51**	PKPbc		**PKPab**	**09 39 33.7**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=200,slow=22,SNR=5.8								
AAK				pPKPbc	pPKPbc		09 39 50.9	+0.8	
	comp=Z,2.0nm,0.6s,baz=201,slow=3.3,SNR=3.2								
MKAR	**Makanchi Array**	**150.10**	**39**	PKPbc		**PKPbc**	**09 39 40.3**	**+0.4**
	comp=Z,3.4nm,0.7s,baz=323,slow=2.3,SNR=22								
MKAR				pPKPbc		**pPKPbc**	**09 39 58.1**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=323,slow=2.5,SNR=9.8								

*IDC **04** 09:32:43.0±0.9, 14°.32N×119°.55E, h35km±7km, mb3.7/6, mbtmp3.9/6, MS3.2/14, Error ellipse: s-maj=33.9km s-min=17.4km az=57.0*

ISC 04 09:32:42.6±0.8, 14°.3N±0°.2×119°.4E±0°.1, h35km, n24, σ1s13/13, mb4.0/8, MS3.1/12, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGY	**Tagaytay City**	**1.50**	**97**	Pn		**Pn**	**09 33 05.7**	**-1.3**
	532nm,0.3s,baz=289,slow=3.2,SNR=45							
TGY				Sn		**Sn**	**09 33 27.0**	**+1.6**
	583nm,0.3s,baz=287,slow=14,SNR=8.4							
DAV	**Davao City (W)**	**9.39**	**139**	LR		LR	09 39 27.2	
	comp=Z,557nm,18.5s,baz=314,slow=43							
KAPI	**Kappang**	**19.18**	**179**	LR		LR	09 44 34.9	
	comp=Z,40nm,19.8s,baz=36,slow=37							
CMAR	**Chiang Mai Arr**	**20.06**	**285**	P		Pn	09 37 18.9	+3.9
	3.7nm,0.8s,baz=97,slow=9.0,SNR=18							
CMAR				LR		LR	09 45 11.0	
	comp=Z,35nm,20.4s,baz=95,slow=37							
JNU	**Nakatsue**	**21.46**	**27**	LR		LR	09 45 23.4	
	comp=Z,62nm,19.7s,baz=209,slow=36							
PSI	**Prapat**	**23.22**	**242**	LR		LR	09 47 17.0	
	comp=Z,48nm,18.9s,baz=51,slow=37							
GUMO	**Guam**	**24.72**	**88**	LR		LR	09 47 15.3	
	comp=Z,65nm,19.6s,baz=276,slow=36							
JHJ	**Hachijo jima 2**	**26.36**	**41**	LR		LR	09 49 12.1	
	comp=Z,21nm,19.4s,baz=252,slow=38							
SONM	**Songino Array**	**35.16**	**345**	LR		LR	09 56 01.1	
	comp=Z,40nm,19.2s,baz=178,slow=40							
WRA	**Warramunga Arr**	**37.05**	**156**	P		**P**	**09 39 49.1**	**-0.3**
	1.2nm,0.5s,baz=336,slow=9.5,SNR=26							
	1.2nm,0.5s							
PALK	**Pallekele**	**38.61**	**264**	LR		LR	09 56 07.4	
	comp=Z,30nm,18.2s,baz=85,slow=36							
ASAR	**Alice Springs**	**40.30**	**159**	P		**P**	**09 40 16.9**	**+0.3**
	1.2nm,0.7s,baz=338,slow=6.6,SNR=22							
	1.2nm,0.7s							
MKAR	**Makanchi Array**	**44.82**	**324**	LR		LR	10 00 44.9	
	comp=Z,53nm,18.7s,baz=104,slow=38							
AAK	**Ala-Archa**	**47.77**	**315**	LR		LR	10 02 46.6	
	comp=Z,69nm,21.9s,baz=48,slow=38							
ZALV	**Zalesovo Beam**	**47.97**	**333**	pP		pP	09 41 28.1	+0.6
	1.3nm,0.8s,baz=125,slow=7.8,SNR=3.1							
KURBB	**Kurchatov Arra**	**49.01**	**326**	P		**P**	**09 41 27.4**	**+1.6**
	0.6nm,0.6s,baz=126,slow=7.7,SNR=4.6							
KURBB				pP		**sP**	**09 41 37.5**	**-1.1**
	2.1nm,0.8s,baz=124,slow=7.3,SNR=8.7							
	0.6nm,0.6s							
STKA	**Stephens Creek**	**50.59**	**155**	P		**P**	**09 41 38.4**	**+0.4**
	3.9nm,0.8s,baz=296,slow=3.7,SNR=3.7							
STKA				LR		LR	10 04 44.0	
	comp=Z,20nm,21.8s,baz=31,slow=38							
	3.9nm,0.8s							
MA2	**Magadan**	**50.77**	**20**	LR		LR	10 04 10.1	
	comp=Z,24nm,19.1s,baz=4.5,slow=37							
BVAR	**Borovoye Array**	**54.59**	**326**	pP		pP	09 42 19.1	+2.4
	1.2nm,0.7s,baz=97,slow=7.8,SNR=4.4							
TIXI	**Tiksi**	**57.62**	**4**	LR		LR	10 10 05.6	
	comp=Z,33nm,18.2s,baz=28,slow=39							
ILAR	**Eielson Array**	**78.78**	**26**	P		**P**	**09 44 41.1**	**-0.4**
	0.4nm,0.8s,baz=311,slow=4.8,SNR=4.7							
	0.4nm,0.8s							
NB2	**NORSAR Subarra**	**86.17**	**332**	P		**P**	**09 45 20.1**	**0.0**
	comp=Z,3.6nm,0.9s,baz=69,slow=5.1							
NOA	**NORSAR Array B**	**86.17**	**332**	P		**P**	**09 45 19.3**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=64,slow=4.8,SNR=3.2							
NOA				pP		**pP**	**09 45 30.7**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=67,slow=5.0,SNR=3.9							
	comp=Z,0.8nm,0.6s							
TXAR	**Lajitas Array**	**119.93**	**43**	PKP		**PKiKP**	**09 51 31.0**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=350,slow=2.4,SNR=4.8							
TXAR				pPKP		**sPKPdf**	**09 51 42.7**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=348,slow=3.1,SNR=3.1							

*CATAC **04** 09:44:58.2±0.5, 12°.N±2°.×8°.8W±°, h26km±4km, M3.7/35, MLv3.7/35, Error ellipse: s-maj=5.0km s-min=1.9km az=30.9, confirmed*

*SNET **04** 09:45:02.7±6.0, 12°.32N×88°.15W, h8km, ML3.4*

*UCR **04** 09:45:08.7±1.3, 10°.88N×87°.84W, h0km±347km, MW3.7*

ISC 04 09:44:56.8±3.2, 11°.98N±0°.04×88°.24W±0°.03, h11km±23km, n94, σ1s91/104, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.19**	**34**	P		**Pn**	**09 45 19.4**	**-0.1**
CSGN				S		**Sn**	**09 45 34.7**	**-1.1**
POTN	**Potosi Cosigui**	**1.24**	**35**	P		**Pn**	**09 45 20.1**	**-0.1**
POTN				S		**Sn**	**09 45 37.5**	**+0.5**
CNCH	**Conchagua**	**1.35**	**17**	*e*P		**Pn**	**09 45 21.4**	**-0.4**
CNCH				*e*S		**Sb**	**09 45 41.8**	**+2.3**
CNCH	**Conchagua**	**1.35**	**17**	P		**Pn**	**09 45 21.3**	**-0.4**
CNCH	**Conchagua**	**1.35**	**17**	S		**Sn**	**09 45 38.6**	**-1.1**
LCND	**La Caada**	**1.36**	**14**	*e*P		**Pn**	**09 45 21.4**	**-0.5**
LCND	**La Caada**	**1.36**	**14**	P		**Pn**	**09 45 21.1**	**-0.8**
CRIN	**San Cristobal**	**1.37**	**58**	P		**Pn**	**09 45 21.9**	**0.0**
CRIN	**San Cristobal**	**1.37**	**58**	S		**Sn**	**09 45 41.5**	**+1.4**
PKGN	**Cerro Pekin**	**1.41**	**61**	P		**Pn**	**09 45 21.9**	**-0.6**
PKGN				S		**Sn**	**09 45 40.8**	**-0.4**
BLLM	**Bellamira**	**1.45**	**0**	*i* P		**Pn**	**09 45 23.0**	**-0.1**
PACA	**Pacayal**	**1.48**	**357**	*e*P		**Pn**	**09 45 23.4**	**-0.2**
PACA				*e*S		**Sn**	**09 45 42.8**	**-0.3**
PACA	**Pacayal**	**1.48**	**357**	P		**Pn**	**09 45 23.5**	**0.0**
CNRM	**Centro Naciona**	**1.49**	**3**	P		**Pn**	**09 45 23.3**	**-0.3**
CNRM	**Centro Naciona**	**1.49**	**3**	S		**Sn**	**09 45 43.1**	**+0.1**
TECA	**Tecapa**	**1.53**	**350**	*e*P		**Pn**	**09 45 23.7**	**-0.5**
POLN	**Al Sur del Vol**	**1.55**	**64**	P		Pn	09 45 19.4	-5.0
POLN				S		**Sn**	**09 45 43.5**	**-1.0**
CNGA	**Al SSO del Vol**	**1.59**	**71**	P		**Pn**	**09 45 25.2**	**+0.2**
CNGA				S		**Sn**	**09 45 45.4**	**-0.1**
CNGN	**Cerro Negro**	**1.59**	**71**	S		**Sn**	**09 45 44.6**	**-1.1**
CNGN	**Cerro Negro**	**1.59**	**71**	P		**Pn**	**09 45 24.6**	**-0.4**
TECO	**Alcaldia de Te**	**1.64**	**341**	P		**Pn**	**09 45 26.0**	**+0.4**
TECO	**Alcaldia de Te**	**1.64**	**341**	S		**Sn**	**09 45 47.4**	**+0.7**
PQSS	**Presa 15 de Se**	**1.66**	**349**	S		**Sn**	**09 45 47.3**	**-0.1**
PQSS	**Presa 15 de Se**	**1.66**	**349**	P		**Pn**	**09 45 26.1**	**+0.1**
UESV	**Universidad de**	**1.73**	**342**	P		**Pn**	**09 45 26.5**	**-0.4**
UESV	**Universidad de**	**1.73**	**342**	S		**Sn**	**09 45 50.3**	**+1.3**
MOM3	**MOM3**	**1.77**	**72**	P		**Pn**	**09 45 26.8**	**-0.5**
MOM3				S		**Sn**	**09 45 49.5**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.78**	**345**	P		**Pn**	**09 45 27.3**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.78**	**345**	S		**Sn**	**09 45 50.6**	**+0.4**
PAVA	**Las Pavas**	**1.85**	**339**	P		**Pn**	**09 45 28.5**	**-0.2**
PAVA	**Las Pavas**	**1.85**	**339**	S		**Sn**	**09 45 53.3**	**+1.1**
APQ2	**Apoyeque**	**1.89**	**83**	P		**Pn**	**09 45 28.5**	**-0.5**
APQ2				S		**Sn**	**09 45 52.2**	**-0.7**
APQ2	**Apoyeque**	**1.89**	**83**	P		**Pn**	**09 45 28.7**	**-0.3**
APQ2				S		**Sn**	**09 45 52.8**	**-0.1**
UNAN	**Cigeo UNAN**	**1.93**	**86**	P		**Pn**	**09 45 29.3**	**-0.3**
UNAN				S		**Sn**	**09 45 53.6**	**-0.4**
TISN	**Laguna Tiscapa**	**1.94**	**85**	P		**Pn**	**09 45 29.4**	**-0.3**
IGN	**Direccin Gen**	**1.95**	**332**	S		**Sn**	**09 45 55.0**	**+0.5**
UTEC	**Universidad Te**	**1.95**	**331**	S		**Sn**	**09 45 55.2**	**+0.6**
UTEC	**Universidad Te**	**1.95**	**331**	P		**Pn**	**09 45 30.1**	**+0.1**
MGAN	**Managua**	**1.96**	**85**	S		**Sn**	**09 45 54.2**	**-0.4**
MGAN	**Managua**	**1.96**	**85**	P		**Pn**	**09 45 29.7**	**-0.3**
UEES	**Universidad Ev**	**1.98**	**331**	P		**Pn**	**09 45 30.3**	**-0.1**
UEES	**Universidad Ev**	**1.98**	**331**	S		**Sb**	**09 45 57.1**	**-0.7**
PMON	**Piamonte**	**2.02**	**329**	P		**Pb**	**09 45 33.4**	**-0.1**
PMON	**Piamonte**	**2.02**	**329**	S		**Sn**	**09 45 55.8**	**-0.4**
WILN	**Americas 2**	**2.02**	**85**	P		**Pn**	**09 45 30.4**	**-0.5**
WILN				S		**Sn**	**09 45 55.8**	**-0.3**
MAS3	**Al N del Volca**	**2.02**	**89**	P		**Pn**	**09 45 30.4**	**-0.5**
MAS3				S		**Sn**	**09 45 55.5**	**-0.8**
JAYA	**Jayaque - finc**	**2.04**	**325**	*e*P		**Pn**	**09 45 30.8**	**-0.5**
JAYA				*e*S		**Sn**	**09 45 54.7**	**-2.1**
JAYA	**Jayaque - finc**	**2.04**	**325**	S		**Sn**	**09 45 55.4**	**-1.5**
JAYA	**Jayaque - finc**	**2.04**	**325**	P		**Pn**	**09 45 31.1**	**-0.2**
NANN	**Nandasmo**	**2.08**	**91**	P		**Pb**	**09 45 32.9**	**-1.6**
NANN	**Nandasmo**	**2.08**	**91**	S		**Sn**	**09 45 57.3**	**-0.2**
LIMN	**Finca el Limon**	**2.12**	**59**	P		**Pn**	**09 45 32.6**	**+0.2**
LIMN				S		**Sn**	**09 45 59.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.27**	**24**	P		**Pn**	**09 45 34.7**	**+0.3**
TGUH				S		**Sn**	**09 46 03.1**	**+0.6**
LLGN	**La Laguna**	**2.27**	**343**	S		**Sn**	**09 46 03.3**	**+0.7**
LLGN	**La Laguna**	**2.27**	**343**	P		**Pn**	**09 45 34.7**	**+0.2**
INTHN	**La Esperanza I**	**2.32**	**3**	P		**Pn**	**09 45 36.3**	**+1.0**
INTHN	**La Esperanza I**	**2.32**	**3**	S		**Sn**	**09 46 04.1**	**+0.1**
UNIC	**Universidad Ca**	**2.36**	**327**	S		**Sn**	**09 46 04.1**	**-0.6**
UNIC	**Universidad Ca**	**2.36**	**327**	P		**Pn**	**09 45 35.4**	**-0.3**
YUSH	**Yuscaran**	**2.39**	**35**	P		**Pn**	**09 45 36.2**	**+0.1**
YUSH	**Yuscaran**	**2.39**	**35**	S		**Sn**	**09 46 04.8**	**-0.7**
NUBE	**Las Nubes**	**2.43**	**322**	S		**Sn**	**09 46 05.6**	**-0.9**
NUBE	**Las Nubes**	**2.43**	**322**	P		**Pn**	**09 45 36.3**	**-0.3**
MATN	**Matagalpa**	**2.45**	**67**	P		**Pn**	**09 45 36.9**	**0.0**
RCON	**San Juan de Ri**	**2.52**	**53**	P		**Pn**	**09 45 38.2**	**+0.2**
FAME	**Alcaldia de Sa**	**2.53**	**317**	P		**Pn**	**09 45 38.1**	**+0.1**
FAME	**Alcaldia de Sa**	**2.53**	**317**	S		**Sn**	**09 46 07.1**	**-1.7**
RCVN	**Varillal2**	**2.56**	**51**	S		**Sn**	**09 46 09.6**	**0.0**
RCVN	**Varillal2**	**2.56**	**51**	P		**Pn**	**09 45 38.5**	**+0.1**
MORN	**Al O del Volca**	**2.58**	**99**	P		**Pn**	**09 45 38.2**	**-0.4**
MORN				S		**Sn**	**09 46 09.1**	**-0.8**
CONN	**Concepcion**	**2.59**	**99**	S		**Sn**	**09 46 09.1**	**-1.3**
RCPN	**Sur Rio San Ju**	**2.60**	**54**	P		**Pn**	**09 45 39.1**	**+0.1**
MTO3	**Montecristo**	**2.64**	**336**	P		**Pn**	**09 45 39.4**	**-0.2**
ESQI	**Esquipulas**	**2.78**	**337**	P		**Pn**	**09 45 42.4**	**+1.0**
SARH	**Santa Rosa de**	**2.82**	**350**	P		**Pn**	**09 45 43.5**	**+1.5**
ELI1	**Hacienda Flor**	**2.95**	**116**	P		**Pn**	**09 45 44.3**	**+0.7**
PAR1A	**Puntarenas Pro**	**4.58**	**121**	*e*P		**Pn**	**09 46 08.5**	**+2.4**
CVIMO	**Finca Echandi**	**4.65**	**114**	*e*P		Pn	09 46 11.1	+3.8
PITB	**Pirrs, San**	**4.74**	**119**	*e*P		**Pn**	**09 46 10.7**	**+2.2**
LLNJ	**Naranjito**	**4.77**	**121**	*e*P		**Pn**	**09 46 10.8**	**+2.1**
PIEC	**Cerro El Cedra**	**4.82**	**119**	*e*P		**Pn**	**09 46 11.6**	**+2.0**
VINA	**Juan Vinas**	**4.88**	**115**	*e*P		Pn	09 46 14.0	+3.7
VERB	**Verbena**	**4.90**	**114**	*e*P		Pn	09 46 14.5	+3.8
RESJ	**San Isidro (Tu**	**4.91**	**113**	*e*P		Pn	09 46 15.4	-7.6
BUS1	**Rivas**	**5.03**	**118**	*e*P		**Pn**	**09 46 14.7**	**+2.0**
BUS1				*e*S		**Sn**	**09 47 07.8**	**-3.3**
SAJE	**San Jernim**	**5.34**	**119**	*e*P		**Pn**	**09 46 18.2**	**+1.5**
VERH	**Veragua Rainfo**	**5.36**	**112**	*e*P		Pn	09 46 20.7	+3.8
EDPE	**Pejibaye, P**	**5.38**	**121**	*e*P		Pn	09 46 19.9	+2.7
LAES	**El Progreso Va**	**5.56**	**113**	*e*P		Pn	09 46 22.9	+3.4
DRK0	**Durika**	**5.60**	**118**	*e*P		**Pn**	**09 46 22.4**	**+2.1**
FIMO	**Fila Mora**	**5.65**	**121**	*e*P		**Pn**	**09 46 23.2**	**+2.2**
PIRO	**Carate, Puerto**	**5.99**	**126**	*e*P		**Pn**	**09 46 27.1**	**+1.6**
ALCO	**Alturas Coton,**	**6.11**	**119**	*e*P		**Pn**	**09 46 29.0**	**+1.6**
RBALA	**Bur**	**6.73**	**117**	*e*P		**Pn**	**09 46 38.0**	**+2.2**

*AEIC **04** 10:08:58.2±1.7, 53°.4N±0°.1×159°.4W±0°.1, h7km±9km, Error ellipse: s-maj=17.6km s-min=10.7km az=157.0*

**NEIC 04 10:08:55.8±1.8, 53°.50N±0°.07×159°.6W±0°.1, h10km±2

KMO Kumora 0.99 341 ⇓*i*Pg **Pb** **10 30 29.7 -0.4**
KMO Pmax 10 30 32.4
comp=N,5μm,0.6s
KMO *i* Sg **Sn** **10 30 44.0 -2.0**
KMO Smax 10 30 50.1
comp=N,36μm,1.2s
KMO Kumora 0.99 341 ⇓*i*PG **Pb** **10 30 29.8 -0.4**
KMO *e* 10 30 43.9
KMO pmax pmax
comp=Z,5μm,0.3s
KMO smax smax
comp=N,238μm,1.2s
UKT Uakit 1.19 62 ⇑*i*Pg **Pg** **10 30 33.8 +0.9**
UKT Pmax 10 30 39.4
comp=N,7μm,0.9s
UKT *i* Sg **Sn** **10 30 50.4 -0.7**
UKT Smax 10 30 56.0
comp=N,56μm,0.6s
UKT Uakit 1.19 62 ⇑*i*PG **Pg** **10 30 33.3 +0.4**
UKT *e* 10 30 50.2
UKT pmax pmax
comp=Z,7μm,0.8s
UKT smax smax
comp=N,56μm,0.5s
YOAB Uoyan, Buryati 1.19 359 ⇓*i*Pg **Pg** **10 30 33.9 +1.0**
YOAB *e*Pb **Pn** **10 30 36.0 +2.0**
YOAB max 10 30 37.1
comp=N,6μm,0.4s
YOAB *e*Sg **Sn** **10 30 50.8 -0.1**
YOAB Smax 10 30 55.8
comp=N,32μm,1.3s
YOAB Uoyan, Buryati 1.19 359 ⇓*i*PG **Pg** **10 30 33.9 +1.0**
YOAB *e* 10 30 50.8
YOAB pmax pmax
comp=Z,6μm,0.5s
YOAB smax smax
comp=N,62μm,2.0s
NIZB Nizh Angarsk 1.51 304 ⇑*i*Pn **Pb** **10 30 38.1 -0.9**
NIZB *e*Pg **Pg** **10 30 38.7 -0.3**
NIZB Pmax 10 30 43.3
comp=N,3μm,1.6s
NIZB *e*Sg **Sg** **10 30 58.6 0.0**
NIZB Smax 10 31 03.2
comp=N,13μm,2.2s
NIZB Nizh Angarsk 1.51 304 ⇑*i*PG **Pb** **10 30 38.1 -0.9**
NIZB *e* 10 30 58.8
NIZB pmax pmax
comp=Z,2μm,1.4s
NIZB smax smax
comp=N,12μm,0.6s
SVKR Severomuysk 1.55 40 ⇓*i*Pn **Pg** **10 30 41.1 +1.3**
SVKR *e*Pg **Pb** **10 30 41.6 +1.9**
SVKR Pmax 10 30 44.9
comp=N,10μm,1.2s
SVKR *e*Sg **Sg** **10 31 03.4 +3.6**
SVKR Smax 10 31 07.4
comp=N,48μm,1.6s
SVKR Severomuysk 1.55 40 *e*PG **Pg** **10 30 41.0 +1.3**
SVKR *e* 10 31 02.7
SVKR pmax pmax
comp=Z,10μm,0.3s
SVKR smax smax
comp=N,46μm,0.5s
SYVR Suvo 1.66 219 ⇑*i*Pn **Pn** **10 30 39.4 -1.0**
SYVR *e*Pg **Pb** **10 30 40.1 -1.4**
SYVR Pmax 10 30 42.5
comp=N,4μm,0.8s
SYVR *e*Sg **Sn** **10 31 01.2 -1.2**
SYVR Smax 10 31 08.0
comp=N,22μm,1.5s
SYVR Suvo 1.66 219 ⇑*i*PG **Pn** **10 30 39.5 -1.0**
SYVR *e* 10 31 01.1
SYVR pmax pmax
comp=Z,4μm,0.8s
SYVR smax smax
comp=N,23μm,1.4s
MXMB Maximikha 2.46 228 *e*Pn **Pn** **10 30 51.3 -0.1**
MXMB *e*Pg **Pb** **10 30 54.0 -1.1**
MXMB Pmax 10 30 55.6
comp=N,1μm,1.2s
MXMB *e*Sg **Sb** **10 31 24.4 -1.4**
MXMB Smax 10 31 28.9
comp=N,16μm,2.6s
NLYR Nelyaty 2.71 54 ⇓*i*Pn **Pb** **10 30 56.6 -2.8**
NLYR *e*Pg **Pg** **10 31 02.0 +0.1**
NLYR Pmax 10 31 08.1
comp=N,2μm,0.9s
NLYR *e*Sg **Sg** **10 31 37.9 +0.9**
NLYR *e* 10 31 47.4
NLYR max 10 31 50.1
comp=N,31μm,1.5s
OGRR Ongureny 2.77 244 *e*Pn **Pn** **10 30 55.5 -0.2**
OGRR *e*Pg **Pb** **10 30 59.2 -1.3**
OGRR Pmax 10 31 03.9
comp=N,768nm,0.9s
OGRR *e* 10 31 29.3
OGRR *e*Sg **Sb** **10 31 34.6 -0.4**
OGRR Smax 10 31 39.5
comp=N,5μm,1.8s
OGRR Ongureny 2.77 244 *e*PN **Pn** **10 30 55.1 -0.6**
OGRR *e* 10 30 59.0
OGRR *e*S **Sn** **10 31 29.4 -0.5**
OGRR *e* 10 31 34.6
OGRR pmax pmax
comp=Z,767nm,0.9s
OGRR smax smax
comp=N,5μm,1.8s
GORB Goryachinsk 2.85 228 *e*Pn **Pn** **10 30 56.3 -0.4**
GORB *e*Sg **Sb** **10 31 37.4 +0.3**
UZR Uzur 2.88 237 *e*Pn **Pn** **10 30 56.3 -0.8**
UZR *e*Sg **Sb** **10 31 37.5 -0.4**
KELR Kotokel 3.10 226 *e*Pn **Pn** **10 30 59.8 -0.4**
KELR *e*Pg **Pb** **10 31 06.0 0.0**
KELR Pmax 10 31 10.5
comp=N,1μm,1.0s
KELR *e*Sg **Sb** **10 31 45.7 +1.4**
KELR Smax 10 32 12.8
comp=N,15μm,5.6s
CIT Chita 3.12 159 *e*Pg **Pb** **10 31 06.3 -0.1**
CIT Pmax 10 31 13.8
comp=N,1μm,1.3s
CIT *e*Sg **Sb** **10 31 45.7 +0.6**
CIT Smax 10 31 48.1
comp=N,21μm,1.5s
CIT Chita 3.12 159 *e*PN **Pn** **10 31 02.0 +1.4**
CIT *e* 10 31 08.1
CIT *e*S **Sn** **10 31 37.7 -0.8**
CIT *e* 10 31 45.4
CIT pmax pmax
comp=Z,1μm,1.3s
CIT smax smax
comp=N,21μm,1.4s
BOD Bodaibo 3.13 22 ⇓*i*Pn **Pn** **10 31 02.0 +1.3**
BOD *e*Pg **Pg** **10 31 09.8 -0.3**
BOD Pmax 10 31 14.1
comp=N,3μm,1.4s
BOD *e*Sn **Sn** **10 31 40.7 +2.0**
BOD *e*Sg **Sg** **10 31 49.9 -0.7**
BOD Smax 10 31 54.2
comp=N,11μm,1.3s
BOD Bodaibo 3.13 22 ⇓*i*PN **Pn** **10 31 01.9 +1.3**
BOD *e* 10 31 09.6
BOD *e*S **Sb** **10 31 40.9 -4.4**
BOD *e* 10 31 49.4
BOD pmax pmax
comp=Z,3μm,1.2s
BOD smax smax
comp=N,11μm,1.4s
ZRHB Zarechye 3.64 231 *e*Pn **Pn** **10 31 08.6 +0.9**
ZRHB *e*Pg **Pb** **10 31 16.4 +1.1**
ZRHB Pmax 10 31 32.4
comp=N,1μm,1.1s
ZRHB *e*Sg **Sb** **10 32 01.1 +1.1**
ZRHB Smax 10 32 14.3
comp=N,12μm,1.4s
TRG Tyrgan 3.89 238 *e*Pn **Pn** **10 31 10.5 -0.6**
TRG *e*Pg **Pb** **10 31 20.4 +0.9**
TRG Pmax 10 31 23.8
comp=N,447nm,1.3s
TRG *e*Sg **Sb** **10 32 08.6 +1.5**
TRG Smax 10 32 21.2
comp=N,2μm,2.0s
TRG Tyrgan 3.89 238 *e*PN **Pn** **10 31 10.7 -0.4**
TRG *e* 10 31 20.5
TRG *e*S **Sn** **10 31 56.6 -0.8**
TRG *e* 10 32 08.8
TRG pmax pmax
comp=Z,459nm,1.1s
TRG smax smax
comp=N,2μm,1.6s
UUDB Ulan-Yde 3.95 220 ⇓*i*Pn **Pn** **10 31 11.5 -0.4**
UUDB *e*Pg **Pb** **10 31 21.4 +0.9**
UUDB Pmax 10 31 24.0
comp=N,844nm,1.6s
UUDB *e*Sg **Sb** **10 32 11.6 +2.9**
UUDB Smax 10 32 19.9
comp=N,10μm,2.8s
CRS Chara 4.14 59 ⇓*i*Pn **Pn** **10 31 16.5 +2.0**
CRS *i* Pg **Pg** **10 31 27.7 -1.8**
CRS Pmax 10 31 32.4
comp=N,2μm,0.9s
CRS *e*Sg **Sg** **10 32 21.3 -1.8**
CRS Smax 10 32 25.3
comp=N,13μm,1.5s
CRS Chara 4.14 59 *e*PN **Pn** **10 31 16.6 +2.0**
CRS *e* 10 31 27.9
CRS *e* 10 32 21.8
CRS pmax pmax
comp=Z,2μm,1.0s
CRS smax smax
comp=N,11μm,1.4s
FFNB Fofonovo 4.17 228 *e*Pn **Pn** **10 31 14.5 -0.4**
FFNB *e*Pg **Pb** **10 31 24.2 -0.1**
FFNB *e*Sn **Sn** **10 32 00.9 -3.4**
FFNB *e*Sg **Sb** **10 32 17.3 +2.2**
KAB Kabansk 4.21 229 *e*Pg **Pb** **10 31 26.6 +1.6**
KAB Pmax 10 31 35.7
comp=N,1μm,1.2s
KAB *e*Sg **Sb** **10 32 19.6 +3.2**
KAB Smax 10 32 49.5
comp=N,10μm,1.7s
HRMR Khuramsha 4.41 223 *e*Pn **Pn** **10 31 17.9 -0.3**
HRMR *e*Pg **Pb** **10 31 28.9 +0.6**
HRMR Pmax 10 31 31.0
comp=N,789nm,1.1s
HRMR *e*Sg **Sb** **10 32 25.3 +3.3**
HRMR Smax 10 33 01.3
comp=N,7μm,3.9s
TUP Tupik 4.78 93 ⇑*i*Pn **Pn** **10 31 24.1 +0.8**
TUP *e*Pg **Pb** **10 31 37.6 +3.0**
TUP Pmax 10 31 44.3
comp=N,644nm,1.1s
TUP *e*Sn **Sn** **10 32 18.0 -1.3**
TUP *e*Sg **Sg** **10 32 39.3 -4.2**
TUP Smax 10 32 44.9
comp=N,9μm,0.7s
TUP *e* 10 32 52.0
TUP Tupik 4.78 93 *e*PN **Pn** **10 31 24.2 +0.9**
TUP *e* 10 31 37.7
TUP *e*S **Sn** **10 32 18.1 -1.3**
TUP *e* 10 32 41.5
TUP pmax pmax
comp=Z,648nm,0.8s
TUP smax smax
comp=N,9μm,0.7s
BGT Bolshoye Golou 4.78 235 *e*Pn **Pn** **10 31 22.5 -0.8**
BGT *e*Sg **Sb** **10 32 37.4 +4.6**
BGT Smax 10 32 48.8
comp=N,1μm,1.3s
KHNR Khani 5.02 63 ⇓*i*Pn **Pn** **10 31 28.9 +2.3**
KHNR *e* 10 31 40.8
KHNR *e*Sn **Sn** **10 32 24.9 -0.4**
KHNR *e*Sg **Sg** **10 32 47.9 -3.3**
LSTR Listvyanka 5.17 236 *e*Pn **Pn** **10 31 28.2 -0.5**
LSTR *e*Pg **Pb** **10 31 43.0 +1.7**
LSTR Pmax 10 31 45.9
comp=N,152nm,1.2s
LSTR *e*Sn **Sn** **10 32 26.3 -2.7**
LSTR *e*Sg **Sb** **10 32 48.1 +4.2**
LSTR Smax 10 32 58.0
comp=N,2μm,1.7s
IRK Irkutsk 5.22 242 *e*Pn **Pn** **10 31 30.3 +0.9**
IRK *e*Sg **Sb** **10 32 49.7 +4.3**
IRK Smax 10 32 53.6
comp=N,3μm,1.5s
IRK Irkutsk 5.22 242 *e*PN **Pn** **10 31 30.4 +1.0**
IRK *e* 10 31 44.5
IRK *e* 10 32 49.9
IRK pmax pmax
comp=Z,311nm,0.3s
IRK smax smax
comp=E,3μm,0.9s
KPC Khapcheranga 5.27 176 *e*Pn **Pn** **10 31 28.7 -1.4**
KPC *e*Pg **Pb** **10 31 45.4 +2.4**
KPC Pmax 10 31 52.3
comp=E,250nm,1.3s
KPC *e*Sg **Sg** **10 32 52.9 -6.3**
KPC Smax 10 32 56.6
comp=E,6μm,1.7s
KPC Khapcheranga 5.27 176 *e*PN **Pn** **10 31 29.0 -1.1**
KPC *e* 10 31 44.5
KPC *e* 10 32 52.2
KPC pmax pmax
comp=Z,250nm,0.8s
KPC smax smax
comp=E,6μm,1.7s
IVK Ivanovka 5.42 237 *e*Sg **Sb** **10 32 54.9 +3.9**
IVK Smax 10 33 02.3
comp=E,3μm,1.7s
YKLR Yuktali 5.82 70 *e*Pn **Pn** **10 31 39.1 +1.6**
YKLR *e*Sg **Sg** **10 33 13.5 -3.3**
YKLR Smax 10 33 22.6
comp=E,11μm,3.6s
TLY Talaya 5.87 239 *e*Sg **Sb** **10 33 09.0 +5.0**
TLY Smax 10 33 32.7
comp=E,898nm,2.0s
ARS Arshan 6.36 245 *e*Pn **Pn** **10 31 45.5 +0.5**
ARS *e*Pg **Pb** **10 32 04.3 +2.8**
ARS Pmax 10 32 06.9
comp=E,329nm,0.7s
ARS *e*Sg **Sb** **10 33 24.3 +6.3**
ARS Smax 10 33 38.1
comp=E,4μm,1.0s
ZAK Zakamensk 6.90 232 *e*Pn **Pn** **10 31 52.4 0.0**
ZAK *e*Sg Sb 10 33 41.8 +8.2
ZAK Smax 10 34 02.5
comp=E,1μm,1.7s
ZAK Zakamensk 6.90 232 *e*PN **Pn** **10 31 52.9 +0.5**
ZAK *e* 10 32 12.5
ZAK *e* 10 33 44.9
ZAK pmax pmax
comp=Z,70nm,0.9s
ZAK smax smax
comp=N,1μm,1.5s
MOY Mondy 7.25 247 *e*Pn **Pn** **10 31 58.1 +0.9**
MOY *e*Sg Sg 10 33 53.1 -9.5
MOY Smax 10 34 05.6
comp=N,2μm,2.1s
MOY Mondy 7.25 247 *e*PN **Pn** **10 31 59.6 +2.4**
MOY *e* 10 32 21.7
MOY *e*S **Sn** **10 33 17.0 -3.2**
MOY *e* 10 33 52.1
MOY pmax pmax
comp=Z,151nm,1.0s
MOY smax smax
comp=N,2μm,1.7s
HILR Hailar Array B 7.29 135 Pn **Pn** **10 31 56.2 -1.6**
baz=325,slow=12
HILR Lg Lg 10 33 57.9
baz=327,slow=29
HILR LR LR 10 35 07.1
comp=N,1μm,20.2s,baz=65,slow=41
comp=N,16nm,0.3s
ORL Orlik 7.49 256 ⇓*i*Pn **Pn** **10 32 01.1 +0.5**
ORL *e* 10 32 11.1
ORL *e*Sn **Sn** **10 33 20.7 -5.5**
ORL *e*Sg Sg 10 34 01.9 -8.6
ORL Smax 10 34 12.7
comp=N,2μm,1.7s
ORL Orlik 7.49 256 *e*PN **Pn** **10 32 01.5 +0.9**
ORL *e* 10 32 25.1
ORL *e*S **Sn** **10 33 20.7 -5.5**
ORL *e* 10 33 59.1
ORL pmax pmax
comp=Z,341nm,0.9s
ORL smax smax
comp=N,2μm,1.5s
HIA Hailar 7.51 136 **Pn** **10 31 58.9 -1.9**
HIA Hailar 7.51 136 *e*Pn **Pn** **10 32 01.4 +0.6**
HIA *e*Pg Pb 10 32 26.9 +5.7
HIA *e*Sg **Sg** **10 34 03.9 -7.3**
HIA Smax 10 34 22.0
comp=N,5μm,5.8s
HIA Hailar 7.51 136 PN **Pn** **10 31 58.9 -1.9**
CLNS Chul'man 7.62 70 *e*Pn **Pn** **10 32 04.0 +1.8**
CLNS *e*Sg **Sg** **10 34 09.2 -5.3**
ULN Ulaanbaatar 7.68 204 Pn **Pn** **10 32 04.3 +1.0**
ULN Ulaanbaatar 7.68 204 *e*Pn **Pn** **10 32 04.1 +0.8**
ULN *e*Pg **Pb** **10 32 28.4 +4.3**
ULN Pmax 10 32 30.2
comp=N,149nm,1.3s
ULN *e*Sg Sg 10 34 06.7 -10
ULN Smax 10 34 47.7
comp=N,4μm,6.4s
ULN Ulaanbaatar 7.68 204 *c i*PN **Pn** **10 32 03.4 +0.1**
SONM Songino Array 7.88 207 Pn **Pn** **10 32 06.0 +0.1**
comp=N,7.5nm,0.3s,baz=20,slow=12,SNR=60
SONM Sn **Sn** **10 33 36.3 +0.6**
comp=N,6.0nm,0.3s,baz=17,slow=24,SNR=4.1
SONM Lg Lg 10 34 18.9
comp=N,15nm,0.3s,baz=20,slow=27,SNR=18
comp=N,11nm,0.4s
ZEA Zeya 9.13 91 *e*P **Pn** **10 32 25.1 +2.2**
ZEA *e* 10 34 01.5
ZEA pmax pmax
comp=Z,100nm,1.2s
ZEA pmax pmax
comp=E,30nm,0.7s
ZEA pmax pmax
comp=N,20nm,0.6s
ZEA pmax pmax
comp=Z,70nm,1.1s
ZEA MLR MLR
comp=N,1μm,3.0s
ZEA MLR MLR
comp=E,2μm,3.0s
ZEA MLR MLR
comp=Z,2μm,6.0s
KNGR Kungurtug, Tuv 9.67 249 *e*Sg Sn 10 35 08.1 +48
KNGR Smax 10 35 26.8
comp=Z,4μm,1.8s
HEH HeiHe 10.61 110 *e*P **Pn** **10 32 44.0 +0.9**
HEH S **Sn** **10 34 44.6 +2.1**
HEH LR LR
comp=Z,2μm,4.7s
HEH LR LR
comp=Z,4μm,5.0s
HEH LR LR
comp=Z,3μm,5.4s
ARDR Aradan 11.11 265 *e*Sg Sn 10 35 53.2 +58
ARDR Smax 10 36 05.6
comp=Z,2μm,3.2s
XLT XiLinHaoTe 11.41 164 *e*P **Pn** **10 32 55.0 +0.8**
XLT sP 10 33 01.9
XLT S **Sn** **10 35 00.3 -2.1**
XLT pmax pmax
comp=Z,23nm,1.1s
XLT pmax pmax
comp=Z,88nm,3.9s
XLT LR LR
comp=Z,280nm,8.0s
XLT LR LR
comp=Z,2μm,8.3s
XLT LR LR
comp=Z,2μm,8.7s
YAK Yakutsk 11.72 46 **Pn** **10 32 57.8 -0.5**
YAK Yakutsk 11.72 46 Pn **Pn** **10 32 57.3 -1.1**
comp=Z,2.1nm,0.3s,baz=265,slow=1.2,SNR=5.7
YAK Lg Lg 10 36 12.0
comp=Z,8.3nm,0.3s,baz=186,slow=22,SNR=12
YAK LR LR 10 37 41.7
comp=Z,345nm,18.4s,baz=238,slow=38
YAK Yakutsk 11.72 46 *e*P **Pn** **10 32 57.2 -1.1**
YAK *e*S **Sn** **10 35 08.3 -1.4**
YAK pmax pmax
comp=Z,33nm,1.2s
YAK pmax pmax
comp=N,28nm,1.7s
YAK pmax pmax
comp=E,31nm,1.7s
YAK smax smax
comp=E,350nm,3.8s
YAK smax smax
comp=N,74nm,1.1s
YAK MLR MLR
comp=Z,514nm,24.0s
YAK MLR MLR
comp=E,332nm,23.0s
BNX BinXian 13.56 126 ⇑P **Pn** **10 33 23.5 0.0**
BNX S **Sn** **10 35 53.8 -1.0**
HHC Hu-ho-hao-te 14.11 181 *e*P **P** **10 33 35.8 -3.3**
HHC sP Pn 10 33 41.4 +10
HHC S S 10 36 18.2 -12
HHC pmax pmax
comp=E,13nm,0.8s
HHC pmax pmax
comp=E,96nm,5.9s
HHC LR LR
comp=E,3μm,8.4s
HHC LR LR
comp=E,4μm,12.9s
HHC LR LR
comp=E,4μm,8.6s
CN2 Changchun 14.25 136 P **P** **10 33 44.2 +3.7**
CN2 S S 10 36 22.8 -10
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 LR LR
comp=N,2μm,8.0s
CN2 LR LR
comp=E,2μm,8.0s
CN2 LR LR
comp=Z,2μm,8.0s
BTO Baotou 14.40 185 *e*P **Pn** **10 33 35.0 -0.1**
BTO pP **P** **10 33 38.8 -3.5**
BTO sP 10 33 41.9
BTO PP **PnPn** **10 33 46.4 +3.5**
BTO S **Sn** **10 36 14.7 -0.8**
BTO pmax pmax
comp=Z,21nm,0.7s
BTO pmax pmax
comp=Z,240nm,6.9s
BTO LR LR
comp=Z,5μm,7.4s
BTO LR LR
comp=Z,4μm,7.8s
BTO LR LR
comp=Z,5μm,10.4s
BJI Beijing 15.21 167 P **P** **10 33 48.4 -2.7**
BJI pmax pmax
comp=Z,18nm,1.2s
BJI LR LR
comp=Z,590nm,9.7s
BJI LR LR
comp=Z,2μm,9.3s
BJI LR LR
comp=Z,1μm,8.7s
BJT Baijiatuau 15.23 167 **P** **10 33 48.2 -3.2**
BJT Baijiatuau 15.23 167 P **P** **10 33 48.2 -3.2**
BJT pmax pmax
comp=Z,17nm,1.2s
MDJ Mudanjiang 15.43 125 P **P** **10 33 58.2 +4.6**
MDJ S **Sn** **10 36 45.8 +5.5**
MDJ SS **S** **10 37 02.3 +5.6**
MDJ pmax pmax
comp=Z,11nm,1.1s
MDJ LR LR
comp=N,3μm,6.9s
MDJ LR LR
comp=E,2μm,6.2s
MDJ LR LR
comp=Z,2μm,6.9s
ZAA0 Zalesovo Array 15.67 277 Pn **Pn** **10 33 51.0 -0.9**
ZAA0 IAmb IAmb 10 33 54.8
comp=Z,118nm,1.1s
ZALV Zalesovo Beam 15.67 277 Pn **Pn** **10 33 51.5 -0.5**
comp=Z,0.9nm,0.3s,baz=76,slow=9.5,SNR=45
ZALV Lg Lg 10 38 19.9
baz=80,slow=25
ZALV LR LR 10 40 01.1
comp=Z,649nm,20.4s,baz=80,slow=38
comp=Z,52nm,0.8s
ZALV Zalesovo Beam 15.67 277 *i* P **P** **10 33 54.0 -2.2**
ZALV pmax pmax

comp=Z,52nm,0.8s
DGZ Jazzator, Alta 15.74 261⇑ *e*P Pn **10 33 52.9 -0.1**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
USRK Ussuriysk Ar. 16.89 121 Pn P **10 34 10.7 +0.9**
comp=Z,0.1nm,0.3s,baz=324,slow=9.4,SNR=13
USRK Lg Lg 10 39 03.3
comp=Z,0.3nm,0.3s,baz=322,slow=28,SNR=9.3
PSTR Posyet 17.50 127⇓ *e*P Pn **10 34 13.6 -1.6**
GTA Gaotai 17.50 212 P P **10 34 15.4 -1.3**
GTA pP 10 34 19.5
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA LR LR
comp=Z,1μm,11.6s
GTA LR LR
comp=Z,1μm,10.4s
GTA LR LR
comp=Z,2μm,10.8s
HNS HongShan 17.67 172 ⇓P P **10 34 21.8 +3.4**
HNS pmax pmax
comp=Z,24nm,1.0s
HNS LR LR
comp=Z,1μm,10.3s
HNS LR LR
comp=Z,810nm,10.7s
TIXI Tiksi 18.30 17 Pn **10 34 21.3 -3.6**
TIXI Tiksi 18.30 17 P Pn **10 34 20.6 -4.4**
comp=Z,15nm,0.5s,baz=233,slow=9.8,SNR=30
TIXI Lg Lg 10 39 40.7
comp=Z,0.2nm,0.3s,baz=33,slow=22,SNR=4.8
TIXI LR LR 10 41 50.5
comp=Z,217nm,22.0s,baz=208,slow=38
TIXI Tiksi 18.30 17 *i* P Pn **10 34 21.1 -3.8**
TIA Tai'an 19.10 167 P Pn **10 34 37.0 +2.1**
TIA S S **10 38 12.8 +1.3**
TIA pmax pmax
comp=Z,11nm,1.1s
TIA LR LR
comp=Z,800nm,9.0s
TIA LR LR
comp=Z,500nm,5.5s
TIA LR LR
comp=Z,960nm,10.0s
WMQ Urumqi 19.12 244 *e*P Pn **10 34 39.8 +4.6**
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ LR LR
comp=Z,2μm,12.7s
WMQ LR LR
comp=Z,880nm,10.7s
WMQ LR LR
comp=Z,590nm,18.1s
LZH Lanzhou 19.64 199 *e*P Pn **10 34 42.2 +0.6**
LZH sP 10 34 50.0
LZH pmax pmax
comp=Z,23nm,1.1s
LZH LR LR
comp=Z,2μm,8.8s
LZH LR LR
comp=Z,820nm,8.2s
LZH LR LR
comp=Z,2μm,10.7s
LZDM Lanzhou Array 19.80 200 P Pn **10 34 43.3 -0.3**
baz=352,slow=4.5
comp=Z,5.9nm,0.6s
MK31 Makanchi Array 20.19 258⇑ *e*P Pn 10 34 46.7 -1.2
MKAR Makanchi Array 20.19 258 Pn 10 34 47.0 -0.9
MKAR Makanchi Array 20.19 258 P Pn 10 34 47.9 0.0
comp=Z,16nm,1.0s,baz=48,slow=8.0,SNR=35
MKAR Lg Lg 10 40 47.4
comp=Z,0.1nm,0.3s,baz=60,slow=30,SNR=6.1
MKAR LR LR 10 42 37.5
comp=Z,494nm,21.4s,baz=37,slow=37
comp=Z,16nm,1.0s
MKAR Makanchi Array 20.19 258 *i* P Pn 10 34 48.5 +0.6
MKAR pmax pmax
comp=Z,16nm,1.0s
INCN Inchon 20.20 144 P Pn 10 34 48.2 +0.2
INCN IAmb IAmb 10 34 51.0
comp=Z,86nm,1.3s
INCN Inchon 20.20 144 P Pn 10 34 48.2 +0.2
INCN pmax pmax
comp=Z,86nm,1.3s
KURK Kurchatov 20.35 272 Pn 10 34 48.3 -1.4
KURK IAmb IAmb 10 34 52.9
comp=Z,40nm,1.0s
KURK Kurchatov 20.35 272 *de*P Pn 10 34 47.7 -2.0
KURK pmax pmax
comp=Z,57nm,1.3s
MAKZ Makanchi 20.36 259 Pn 10 34 49.0 -0.9
MAKZ Makanchi 20.36 259 P Pn 10 34 49.0 -0.9
MAKZ pmax pmax
comp=Z,23nm,1.0s
LYN LuoYang 20.40 178 P Pn 10 34 52.7 +2.3
LYN pmax pmax
comp=Z,20nm,0.7s
LYN pmax pmax
comp=Z,350nm,4.8s
LYN LR LR
comp=Z,3μm,9.0s
LYN LR LR
comp=Z,1μm,8.8s
LYN LR LR
comp=Z,3μm,9.2s
KURBB Kurchatov Arra 20.44 272 P Pn 10 34 50.1 -0.7
comp=Z,16nm,0.8s,baz=63,slow=12,SNR=36
KURBB Lg Lg 10 40 57.1
baz=71,slow=34,SNR=8.8
KURBB LR LR 10 42 51.5
comp=Z,512nm,19.7s,baz=171,slow=37
comp=Z,16nm,0.8s
KS19 Wonju Array Si 20.61 141 Pn 10 34 52.4 -0.5
KSAR Wonju Array Be 20.67 141 Pn 10 34 53.6 0.0
KSAR Wonju Array Be 20.67 141 P Pn 10 34 53.6 0.0
KSRS Korea Array 20.68 141 P Pn 10 34 54.0 +0.4
comp=Z,14nm,1.0s,baz=336,slow=11,SNR=32
KSRS Lg Lg 10 41 01.3
comp=Z,0.1nm,0.3s,baz=336,slow=25,SNR=4.8
YSS Yuzhno-Sakhali 20.96 100 *e*P P **10 34 53.1 -1.2**
YSS *e*S S 10 38 37.4 -11
YSS pmax pmax
comp=Z,300nm,5.3s
YSS smax smax
comp=N,200nm,4.5s
YSS MLR MLR
comp=E,600nm,16.0s
XAN Xi'an 21.00 187 P P **10 34 55.9 +0.9**
XAN S S **10 38 50.1 +0.5**
XAN pmax pmax
comp=E,48nm,1.3s
XAN LR LR
comp=E,800nm,12.0s
XAN LR LR
comp=E,2μm,14.8s
XAN LR LR
comp=E,2μm,10.7s
MA2 Magadan 21.36 62 LR LR 10 42 01.0
comp=E,102nm,21.4s,baz=266,slow=33
MA2 Magadan 21.36 62 *e*P P **10 35 00.1 +1.5**
MA2 pmax pmax
comp=Z,28nm,1.1s
SEY Seymchan 22.08 52 LR LR 10 43 56.8
comp=Z,157nm,20.5s,baz=280,slow=38
SEY Seymchan 22.08 52⇑ *e*P P **10 35 08.5 +2.3**
SEY pmax pmax
comp=Z,46nm,1.7s
SEY MLR MLR
comp=Z,166nm,16.0s
GOMU GeErMu 22.09 219 P P **10 35 06.8 -0.1**
GOMU sP 10 35 14.1
GOMU pmax pmax
comp=Z,14nm,1.1s
GOMU LR LR
comp=Z,590nm,11.4s
GOMU LR LR
comp=Z,550nm,9.9s
ASAJ Asahikawa 22.57 106 LR LR 10 44 20.4
comp=Z,273nm,21.2s,baz=324,slow=38
NJ2 Nanjing 23.44 165 *e*P P **10 35 23.6 +2.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 LR LR
comp=Z,740nm,14.2s
NJ2 LR LR
comp=Z,380nm,18.5s
NJ2 LR LR

comp=Z,730nm,10.9s
BVAR Borovoye Array 24.16 283 P P **10 35 28.4 +0.8**
comp=Z,13nm,0.6s,baz=72,slow=8.1,SNR=30
BVAR LR LR 10 45 34.4
comp=Z,591nm,19.3s,baz=69,slow=38
comp=Z,13nm,0.6s
WHN Wuhan 24.46 175 P P **10 35 33.3 +2.8**
WHN pmax pmax
comp=Z,130nm,1.1s
WHN LR LR
comp=Z,1μm,10.3s
CD2 Chengdu 24.70 197 P P **10 35 35.4 +2.7**
CD2 pmax pmax
comp=Z,10.0nm,0.4s
JNU Nakatsue 25.62 141 LR LR 10 46 13.6
comp=Z,192nm,21.9s,baz=336,slow=38
MJAR Matsushiro Arr 25.81 125 LR LR 10 46 08.3
comp=Z,351nm,18.3s,baz=320,slow=37
TARG Taragay, Kyrgy 25.87 253 P **10 35 44.1 +0.5**
TARG Taragay, Kyrgy 25.87 253 P P **10 35 44.2 +0.5**
TARG pmax pmax
comp=Z,9.0nm,0.9s
KDJ Kajisay 25.95 255 P P **10 35 44.8 +0.7**
KDJ Kajisay 25.95 255 P P **10 35 44.8 +0.7**
KDJ pmax pmax
comp=Z,9.0nm,0.8s
BOOM Boomskoye usch 26.41 257 P P **10 35 49.4 +1.2**
BOOM Boomskoye usch 26.41 257 P P **10 35 49.4 +1.2**
BOOM pmax pmax
comp=Z,13nm,1.0s
PEA0B Petropavlovsk- 26.67 75 *i* P P **10 35 53.2 +2.9**
PETK Petropavlovsk- 26.67 75 P P **10 35 51.4 +1.1**
comp=Z,1.6nm,0.4s,baz=305,slow=10,SNR=3.4
PETK LR LR 10 47 14.8
comp=Z,235nm,19.9s,baz=287,slow=38
comp=Z,1.6nm,0.4s
AAK Ala-Archa 27.13 259 P **10 35 56.0 +1.3**
AAK Ala-Archa 27.13 259 LR LR 10 47 00.2
comp=Z,637nm,19.1s,baz=36,slow=37
AAK Ala-Archa 27.13 259⇑ *e*P P **10 35 55.8 +1.1**
AAK pmax pmax
comp=Z,11nm,1.1s
PET Petropavlovsk 27.23 74 *e*P P 10 36 04.8 +9.4
PET *e*S S **10 40 38.2 +3.1**
PET MLR MLR
comp=Z,300nm,17.0s
PET MLR MLR
comp=Z,400nm,14.0s
BILL Bilibino 28.01 41 P **10 36 03.7 +1.5**
BILL Bilibino 28.01 41⇓ *e*P P **10 36 04.1 +1.9**
BILL pmax pmax
comp=Z,9.0nm,1.1s
BILL MLR MLR
comp=Z,145nm,17.0s
SVE Sverdlovsk 28.20 295 *e*P P **10 36 04.3 +0.4**
SVE pmax pmax
comp=Z,21nm,0.7s
SVE MLR MLR
comp=Z,628nm,16.0s
ARSB Arslanbob 28.84 258 P P **10 36 10.9 +0.9**
ARSB IAmb IAmb 10 36 51.2
comp=Z,9.7nm,0.5s
ARSB Arslanbob 28.84 258 P P **10 36 10.9 +0.9**
ARSB pmax pmax
comp=Z,10.0nm,0.5s
KKAR Karatay Array 29.10 263 P **10 36 13.3 +1.1**
KKAR Karatay Array 29.10 263 P P **10 36 13.3 +1.1**
JHJ Hachijo jima 2 29.36 126 LR LR 10 48 30.7
comp=Z,172nm,19.1s,baz=91,slow=38
PZH PanZhiHua 29.36 199 P P 10 36 19.7 +5.0
ARTI Arti 29.52 295 P P **10 36 17.0 +1.3**
ARTI IAmb IAmb 10 37 22.2
comp=Z,15nm,0.5s
ARTI Arti 29.52 295 LR LR 10 49 23.4
comp=Z,312nm,18.6s,baz=74,slow=39
ARTI Arti 29.52 295 *c i*P P **10 36 16.6 +0.9**
ARTI 10 37 08.8
ARTI S S **10 41 14.4 +3.5**
ARTI SS SnSn **10 42 41.3 +3.9**
ARTI pmax pmax
comp=Z,11nm,1.1s
ARTI MLR MLR
comp=Z,625nm,15.0s
JOW Kunigami 30.58 150 LR LR 10 50 03.3
comp=Z,277nm,18.7s,baz=66,slow=39
AB31 Akbulak array 31.71 282 P **10 36 33.4 -1.7**
ABKAR Akbulak array 31.71 282 P P **10 36 35.5 +0.4**
GAR Garm 31.91 257 P **10 36 37.9 +0.7**
GAR IAmb IAmb 10 36 45.2
comp=Z,22nm,1.0s
AKTO Aktyubinsk 32.21 285 LR LR 10 50 51.7
comp=Z,390nm,19.7s,baz=76,slow=38
EVN Everest 32.48 224 P P **10 36 43.5 +0.8**
EVN IAmb IAmb 10 36 45.5
comp=Z,9.7nm,0.9s
KIRV Kirov 33.28 302 LR LR 10 52 01.0
comp=Z,418nm,19.3s,baz=66,slow=39
KIRV Kirov 33.28 302⇑ *e*P P **10 36 48.7 0.0**
JCJ Chichijima 35.55 129 LR LR 10 51 15.9
comp=Z,115nm,21.3s,baz=49,slow=36
SHEM Shemya Is, Ala 35.77 67 LR LR 10 52 31.4
comp=Z,148nm,19.6s,baz=298,slow=38
APA Apatity 36.97 321⇓ *e*P P 10 37 13.4 -7.0
APA *e* 10 38 43.0
KLMR Klimovskoe 37.03 309 *e*P P **10 37 19.5 -1.5**
KLMR *e* 10 38 43.1
KLMR *e* 10 39 39.6
KLMR pmax pmax
comp=Z,29nm,1.4s
GAMB Gambell 37.67 45 P P **10 37 25.6 -0.8**
baz=293
CMAR Chiang Mai Arr 37.73 200 P P **10 37 28.1 +0.8**
comp=Z,0.4nm,0.3s,baz=349,slow=6.4,SNR=4.7
CMAR PcP **PcP 10 39 44.6 +0.2**
comp=Z,0.5nm,0.3s,baz=22,slow=2.3,SNR=4.8
CMAR LR LR 10 54 59.9
comp=Z,37nm,19.1s,baz=25,slow=40
comp=Z,0.4nm,0.3s
SPITS Spitsbergen Ar 37.99 341 LR LR 10 53 58.4
comp=Z,126nm,19.0s,baz=64,slow=38
C16K Lisburne Hills 38.31 37 P P **10 37 31.8 0.0**
baz=293
TNA Tin City 38.45 41 P P **10 37 33.5 +0.6**
baz=294
ARCES ARCESS Array B 38.93 326 P P **10 37 37.3 +0.3**
comp=Z,4.7nm,0.9s,baz=51,slow=9.6,SNR=11
ARCES LR LR 10 57 55.4
comp=Z,193nm,18.2s,baz=65,slow=43
comp=Z,4.7nm,0.9s
A19K Wainwright 38.95 33 P P **10 37 37.8 +0.8**
baz=294
C17K DeLong Mountai 38.96 36 P P **10 37 38.4 +1.1**
baz=294
B18K Kokolik River 39.06 34 P P **10 37 38.4 +0.4**
baz=294
F14K Arctic Creek 39.09 41 P P **10 37 37.9 -0.4**
baz=295
RDOG Red Dog Mine 39.23 36 P P **10 37 38.9 -0.6**
baz=295
D17K Noatak River 39.32 37 P P **10 37 41.0 +0.8**
baz=295
C18K Utukok River 39.55 35 P P **10 37 42.8 +0.5**
baz=295
F15K North Star Dit 39.62 40 P P **10 37 42.7 -0.1**
baz=296
A21K Barrow 39.82 30 P P **10 37 44.9 +0.6**
baz=296
ANM Nome 39.85 42 P P **10 37 44.7 -0.1**
baz=297
C19K Lookout Ridge 39.88 34 P P **10 37 45.6 +0.6**
baz=296
E17K Hotham Inlet 40.02 37 P P **10 37 46.4 +0.3**
baz=296
G15K Niukluk 40.16 41 P P **10 37 47.8 +0.5**
baz=297
B20K Meade River 40.24 32 P P **10 37 48.9 +1.0**
baz=297
MOS Moscow 40.29 303 *e*P P **10 37 47.7 -0.7**
E18K Tukpahlearik C 40.30 37 P P **10 37 49.5 +1.1**
baz=297
A22K Sinclair Lake 40.44 30 P P **10 37 50.1 +0.6**
baz=297
F17K Baldwin Pennin 40.52 38 P P **10 37 51.0 +0.8**
baz=298
G16K Koyuk River 40.61 40 P P **10 37 51.6 +0.6**
baz=298
D19K Kuna River 40.64 34 P P **10 37 52.7 +1.4**
baz=298
NOR Nord 40.96 350 *i* P P **10 37 54.0 +0.3**
NOR IAmb IAmb 10 37 57.8
comp=Z,5.3nm,0.8s
F18K Selawik 41.01 37 P P **10 37 55.0 +0.8**
baz=298
H16K Elim 41.01 41 P P **10 37 55.7 +1.4**
baz=299
D20K Etivluk River 41.02 34 IAmb IAmb 10 37 57.1
comp=Z,22nm,1.1s
D20K Etivluk River 41.02 34 P P **10 37 55.1 +0.7**
baz=298
OBN Obninsk 41.13 302 LR LR 10 56 46.8
comp=Z,425nm,18.3s,baz=58,slow=39
OBN Obninsk 41.13 302⇓ *e*P P **10 37 54.6 -0.7**
OBN *i* 10 39 34.4
OBN *e*S S **10 44 09.0 0.0**
OBN *e*SS SnSn **10 47 13.4 -5.0**
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,434nm,16.0s
G17K Kiwalik Mounta 41.18 39 P P **10 37 56.1 +0.4**
baz=299
B21K Ikpikpuk River 41.21 32 P P **10 37 56.6 +0.8**
baz=299
B22K Teshekpuk Lake 41.21 31 P P **10 37 56.6 +0.8**
baz=299
SPIA Saint Paul Isl 41.37 54 P P **10 37 58.3 +1.0**
baz=301
E20K Nigu River 41.38 34 P P **10 37 57.5 +0.1**
baz=299
C21K Knifeblade Rid 41.38 33 P P **10 37 58.3 +1.0**
baz=299
K13K Kusilvak Mount 41.39 45 P P **10 37 58.6 +1.1**
baz=300
E19K Redstone River 41.43 36 P P **10 37 58.8 +1.1**
baz=299
J14K Nanvaranak Lak 41.43 44 P P **10 37 58.2 +0.4**
baz=300
M11K Mekoryuk 41.52 48 P P **10 37 59.3 +0.8**
baz=300
F19K Shaleruckik Mo 41.55 37 P P **10 37 58.7 0.0**
baz=300
G18K Tagagawik 41.71 38 P P **10 38 00.2 +0.1**
baz=300
H17K Granite Mounta 41.73 40 P P **10 38 01.3 +1.1**
baz=300
I17K Unalakleet 41.97 41 P P **10 38 01.8 -0.3**
baz=300
E21K Killik River 42.00 33 P P **10 38 03.2 +0.8**
baz=301
F20K Avaraart Lake 42.14 36 P P **10 38 04.3 +0.8**
baz=301
D22K Ayikyak River 42.18 32 IAmb IAmb 10 38 09.5
comp=Z,16nm,1.0s
D22K Ayikyak River 42.18 32 P P **10 38 03.9 0.0**
baz=301
H18K Honhosa River 42.19 39 P P **10 38 04.9 +0.9**
baz=301
C23K Itkillik River 42.30 31 P P **10 38 05.7 +0.9**
baz=302
J16K Anvik River 42.32 42 P P **10 38 05.6 +0.6**
baz=301
MAK Makhachkala 42.39 281 *c i*P P **10 38 03.6 -2.2**
MAK *e*S S **10 44 24.7 -3.2**
MAK *e*SS SS **10 47 28.8 -7.4**
MAK MLR MLR
comp=Z,233nm,14.0s
K15K Wolf Creek Mou 42.47 44 P P **10 38 07.3 +1.0**
baz=302
L14K Kuka Creek 42.50 45 P P **10 38 06.5 0.0**
baz=302
FIA1 FINESS Array S 42.51 315 P P **10 38 06.7 +0.2**
FINES FINESS Array B 42.51 315 P P **10 38 06.5 0.0**
comp=Z,10nm,0.7s,baz=62,slow=8.0,SNR=16
FINES LR LR 10 57 02.3
comp=Z,178nm,20.6s,baz=47,slow=38
comp=Z,10nm,0.7s
H19K Roundabout Mou 42.68 38 IAmb IAmb 10 38 11.7
comp=Z,21nm,1.4s
H19K Roundabout Mou 42.68 38 P P **10 38 09.1 +1.2**
baz=302
M13K Dall Lake 42.72 47 P P **10 38 09.4 +1.2**
baz=302
D23K Nanushuk River 42.74 32 IAmb IAmb 10 38 11.6
comp=Z,25nm,1.2s
D23K Nanushuk River 42.74 32 P P **10 38 09.2 +0.8**
baz=303
F21K Alatna River 42.80 35 P P **10 38 09.7 +0.8**
baz=302
L15K Ungalak Mounta 42.81 44 P P **10 38 10.1 +1.1**
baz=302
J17K VABM Dome 42.84 41 IAmb IAmb 10 38 12.5
comp=Z,24nm,1.2s
J17K VABM Dome 42.84 41 P P **10 38 10.3 +1.0**
baz=302
C24K Franklin Bluff 42.92 30 P P **10 38 10.4 +0.6**
baz=303
GCSA Galena City Sc 42.94 39 P P **10 38 11.3 +1.2**
baz=302
F22K John River 43.07 34 P P **10 38 12.2 +1.1**
baz=303,SNR=7.2
M14K Bethel 43.12 46 P P **10 38 12.7 +1.2**
baz=303
G21K Allakaket 43.17 36 P P **10 38 12.4 +0.5**
baz=303
D24K Happy Valley 43.20 31 P P **10 38 13.4 +1.2**
baz=304
AKT Akhty 43.22 279 *e*P P **10 38 10.0 -2.7**
AKT pmax pmax
comp=Z,37nm,1.1s
H20K Anotleneega Mo 43.25 37 P P **10 38 13.8 +1.2**
baz=303
TOLK Toolik Lake Re 43.26 32 P P **10 38 13.5 +0.8**
baz=304
K17K Iditarod 43.51 42 P P **10 38 15.9 +1.2**
baz=303
E23K Chandalar 43.57 33 P P **10 38 16.2 +0.9**
baz=304
L16K Owhat River 43.60 44 P P **10 38 16.3 +0.9**
baz=303
G22K Bettles 43.61 35 P P **10 38 15.8 +0.4**
baz=304
M15K Kasigluk River 43.67 45 P P **10 38 16.7 +0.7**
baz=304
N14K Kuskokwak Cree 43.68 47 P P **10 38 17.2 +1.1**
baz=304
J18K Innoko River 43.70 41 P P **10 38 17.2 +0.9**
baz=303
I20K Naaghedeneel 43.78 38 P P **10 38 17.9 +1.1**
baz=304
J19K Poorman 43.81 40 P P **10 38 18.0 +0.9**
baz=304
D25K Kavik River 43.82 30 P P **10 38 18.1 +0.9**
baz=305
L17K Donlin 43.83 43 P P **10 38 17.7 +0.4**
baz=304
VSU Vasula 43.85 311⇑ *e*P P **10 38 16.5 -0.9**
VSU pmax pmax
comp=Z,16nm,0.9s
COLD Coldfoot 43.86 34 P P **10 38 18.7 +1.3**
baz=304
H21K Melozitna Rive 43.88 37 IAmb IAmb 10 38 20.4
comp=Z,17nm,1.0s
H21K Melozitna Rive 43.88 37 P P **10 38 16.9 -0.8**
baz=304,SNR=13
C26K Camden Bay 43.89 29 P P **10 38 17.6 0.0**
baz=306
E24K Your Creek 43.91 32 P P **10 38 18.2 +0.3**
baz=305
M16K Timber Creek 44.19 44 P P **10 38 20.1 -0.1**
baz=304
N15K Kwethluk River 44.21 46 P P **10 38 19.8 -0.6**
baz=304
G23K Bananza Creek 44.21 34 P P **10 38 20.7 +0.3**
baz=305
H22K Ishtalitna Cre 44.23 36 P P **10 38 20.4 -0.1**
baz=305
O14K Tigvkauivet M 44.24 47 P P **10 38 21.3 +0.8**
baz=304
J20K Nowinta River 44.25 39 P P **10 38 20.6 0.0**
baz=304
NIKH Nikolski High 44.37 58 P P **10 38 22.2 +0.5**
baz=306
C27K Jago River 44.40 29 P P **10 38 21.8 0.0**
baz=307
L18K Granite Mounta 44.41 42 P P **10 38 22.8 +0.8**

baz=305
F24K Squaw Lake 44.42 33 P P 10 38 22.2 +0.2
baz=306
I21K Tanana 44.44 37 P P 10 38 22.7 +0.6
baz=305
KVAR Kislovodsk Arr 44.45 286 LR LR 10 58 15.7
comp=Z,96nm,18.8s,baz=263,slow=38
KIV Kislovodsk 44.46 286 P P 10 38 24.4 +1.7
KIV IAmb IAmb 10 38 28.8
comp=Z,19nm,0.9s
KIV Kislovodsk 44.46 286 *e*P P 10 38 24.2 +1.5
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,71nm,16.0s
KBZ Khabaz 44.49 285 LR LR 10 59 10.5
comp=Z,156nm,18.5s,baz=36,slow=39
N16K Nishlik Lake 44.58 45 P P 10 38 24.5 +1.2
baz=305
M17K Holitna River 44.58 43 P P 10 38 24.3 +1.0
baz=305
SHA1 Shidzhatmaz 44.62 285 *e*P P 10 38 23.8 -0.3
K20K Telida 44.74 40 P P 10 38 25.4 +0.8
baz=305
E25K Arctic Village 44.77 31 P P 10 38 25.7 +0.9
baz=307
DAG Danmarks Havn 44.87 346 P P 10 38 25.1 -0.3
DAG pmax pmax
comp=Z,13nm,1.0s
DAG Danmarks Havn 44.87 346 *i* P P 10 38 24.6 -0.8
DAG IAmb IAmb 10 38 28.6
comp=Z,8.1nm,0.9s
H23K Yukon River 44.89 35 P P 10 38 26.9 +1.1
baz=306
O15K Ungalikthiuk R 44.89 47 P P 10 38 27.1 +1.3
baz=305
MLY Manley 44.95 37 P P 10 38 27.3 +1.0
baz=306
UNV Unalaska Valle 44.99 56 P P 10 38 28.4 +1.8
baz=306
G24K Hadweenzic Riv 45.04 34 P P 10 38 27.1 +0.2
baz=307,SNR=6.5
F25K Christian Rive 45.07 32 IAmb IAmb 10 38 30.7
comp=Z,24nm,1.6s
F25K Christian Rive 45.07 32 P P 10 38 28.0 +0.8
baz=307
CHUM Lake Minchumin 45.08 38 P P 10 38 28.2 +1.0
baz=306
L19K White Mountain 45.13 41 P P 10 38 29.2 +1.5
baz=306
M18K Stony River 45.16 43 P P 10 38 28.1 +0.2
baz=306
N17K Nushagak Hills 45.19 44 P P 10 38 29.3 +1.1
baz=306
L20K Farewell, AK 45.33 41 P P 10 38 30.2 +0.9
baz=306
I23K Minto, Yukon-K 45.35 36 P P 10 38 30.5 +1.1
baz=307
O16K Kokwok River B 45.37 46 P P 10 38 30.9 +1.4
baz=306
D27M Malcolm River 45.40 29 P P 10 38 30.3 +0.5
baz=309
H24K Noodor Dome 45.43 35 IAmb IAmb 10 38 33.1
comp=Z,10nm,1.0s
H24K Noodor Dome 45.43 35 P P 10 38 31.2 +1.1
baz=307
G25K Bearman Lake 45.44 33 P P 10 38 30.1 +0.1
baz=308
F26K Sheenjek River 45.46 31 P P 10 38 31.1 +0.8
baz=308
M19K Big River Lodg 45.48 41 P P 10 38 31.1 +0.7
baz=306
BMAR Burnt Mountain 45.49 32 P P 10 38 32.2 +1.7
N18K Kilae Creek 45.62 43 P P 10 38 32.6 +1.0
baz=306
O17K Koliganek Bris 45.67 45 P P 10 38 33.8 +1.8
baz=306
PPLA Purkeypile 45.71 40 P P 10 38 32.7 +0.2
baz=307
P16K Nushagak River 45.74 46 P P 10 38 33.6 +1.1
baz=306
KTH Kantishna Hill 45.77 38 IAmb IAmb 10 38 35.9
comp=Z,26nm,1.3s
NEA2 Nenana 45.79 36 P P 10 38 33.8 +0.9
baz=307
GNI Garni 45.80 280 LR LR 10 59 59.3
comp=Z,200nm,19.9s,baz=73,slow=39
FALS False Pass 45.84 53 P P 10 38 34.6 +1.2
baz=307
E27K Coleen River 45.90 30 IAmb IAmb 10 38 36.3
comp=Z,19nm,1.3s
E27K Coleen River 45.90 30 P P 10 38 34.5 +0.8
baz=310
S12K Black Hills 45.96 52 P P 10 38 34.7 +0.3
baz=307
M20K Styx River 45.97 41 P P 10 38 35.3 +0.9
baz=307
POKR Poker Plat Res 46.02 35 P P 10 38 35.4 +0.7
baz=308
COLA College 46.03 36 *d i* P P 10 38 36.2 +1.5
COLA pmax pmax
comp=Z,9.0nm,0.9s
COLA College 46.03 36 P P 10 38 36.0 +1.3
baz=308
G26K Porcupine Rive 46.04 32 P P 10 38 35.5 +0.8
baz=309,SNR=7.0
TRF Thorofare Moun 46.06 38 IAmb IAmb 10 38 38.1
comp=Z,29nm,1.4s
TRF Thorofare Moun 46.06 38 P P 10 38 36.0 +0.8
baz=308,SNR=5.2
N19K Bonanza Creek 46.09 43 P P 10 38 36.1 +0.7
baz=307
CCB Clear Creek Bu 46.19 36 IAmb IAmb 10 38 38.6
comp=Z,12nm,1.1s
WRH Wood River Hil 46.20 36 IAmb IAmb 10 38 38.6
comp=Z,12nm,1.0s
E28M Babbage River 46.21 29 P P 10 38 36.8 +0.7
baz=311
MCK McKinley 46.37 37 IAmb IAmb 10 38 42.5
comp=Z,7.8nm,1.0s
MCK McKinley 46.37 37 P P 10 38 38.7 +1.2
baz=309
O18K Koktuh Hills 46.38 44 P P 10 38 38.7 +1.1
baz=307
IL31 46.42 35 IAmb IAmb 10 38 40.4
comp=Z,16nm,0.9s
ILAR Eielson Array 46.42 35 P P 10 38 38.9 +1.0
ILAR Eielson Array 46.42 35 P P 10 38 39.0 +1.2
comp=Z,9.4nm,0.9s,baz=298,slow=6.5,SNR=60
comp=Z,9.4nm,0.9s
SKT Skwentna 46.51 40 P P 10 38 39.7 +1.1
baz=308
Q16K King Salmon 46.51 46 P P 10 38 40.1 +1.5
baz=307
O19K Port Alsworth 46.53 43 P P 10 38 39.8 +1.1
baz=308
HDA Harding Lake 46.62 36 IAmb IAmb 10 38 41.2
comp=Z,6.7nm,0.8s
HDA Harding Lake 46.62 36 P P 10 38 40.2 +0.7
baz=309,SNR=5.1
P18K Big Mountain, 46.66 45 P P 10 38 40.6 +0.8
baz=308
S14K Fog Glacier 46.73 50 P P 10 38 41.2 +0.8
baz=308
SPCR Spurr Chakacha 46.73 41 P P 10 38 41.2 +0.8
baz=308
F28M Old Crow 46.77 30 IAmb IAmb 10 38 43.3
comp=Z,16nm,1.4s
F28M Old Crow 46.77 30 P P 10 38 41.0 +0.4
baz=311
G27K Doyon Strip 46.77 31 P P 10 38 41.6 +1.0
baz=311
R16K Pilot Point 46.80 48 P P 10 38 42.3 +1.4
baz=308
E29M Blow River 46.81 28 P P 10 38 41.6 +0.8
baz=312
SDPT Sand Point 46.89 51 P P 10 38 42.0 +0.4
baz=308
RED Redoubt Volcan 47.00 42 P P 10 38 44.0 +1.5
J25K Salcha River, 47.02 35 P P 10 38 42.8 +0.1
baz=310
WAT1 Susitna Watana 47.07 38 P P 10 38 43.5 +0.5
baz=309
DBG Daneborg 47.08 344 *i* P P 10 38 41.0 -1.9
DBG IAmb IAmb 10 38 48.1
comp=Z,5.5nm,0.8s
Q17K Contact Creek 47.08 46 P P 10 38 43.9 +0.6
baz=308

SUA Susitna One 47.12 41 P P 10 38 45.0 +1.5
SUA IAmb IAmb 10 38 48.2
comp=Z,17nm,1.0s
SUA Susitna One 47.12 41 P P 10 38 44.5 +1.0
baz=309
M22K Willow 47.17 40 P P 10 38 44.7 +1.0
baz=309
H27K Steamboat Moun 47.19 32 P P 10 38 44.7 +0.8
baz=311
Q18K Katmai Hardscr 47.21 45 P P 10 38 44.9 +0.7
baz=308
O20K Slope Mountain 47.27 43 P P 10 38 45.2 +0.6
baz=309
R17L Mt. Peulik Vol 47.28 47 P P 10 38 45.6 +1.0
baz=308
I26K Coal Creek Min 47.29 34 P P 10 38 45.6 +1.0
baz=311
P19K Oil Pt 47.30 43 P P 10 38 45.5 +0.7
baz=309
AKASG Malin Array Be 47.31 301 P P 10 38 45.0 +0.1
comp=Z,1.9nm,0.6s,baz=47,slow=8.5,SNR=11
AKASG LR LR 11 00 40.4
comp=Z,319nm,19.0s,baz=58,slow=39
comp=Z,1.9nm,0.6s
AKASG Malin Array Be 47.31 301 *i* P P 10 38 46.7 +1.7
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 47.31 301 *e*P P 10 38 45.2 +0.2
KIEV Kiev 47.32 301 P P 10 38 45.0 0.0
KIEV IAmb IAmb 10 38 49.3
comp=Z,18nm,1.4s
KIEV Kiev 47.32 301 P P 10 38 45.0 0.0
KIEV pmax pmax
comp=Z,18nm,1.4s
DHY Denali Highway 47.33 37 P P 10 38 45.7 +0.6
baz=310
CAPN Captain Cook N 47.41 41 P P 10 38 46.6 +1.1
baz=309
K24K Donnelly Dome 47.41 36 P P 10 38 46.2 +0.6
baz=310
NEEM North Greenlan 47.43 355 *i* P P 10 38 46.2 +0.2
WAT6 Susitna Watana 47.51 38 P P 10 38 47.0 +0.4
baz=310
I27K Kandik River 47.58 33 P P 10 38 46.9 0.0
baz=312
GHO Glory Hole Cre 47.60 39 IAmb IAmb 10 38 49.5
comp=Z,12nm,1.0s
CHNA Chnabura Isl 47.61 52 P P 10 38 47.5 +0.3
baz=309
PMR Palmer 47.64 40 IAmb IAmb 10 38 53.9
comp=Z,12nm,1.1s
PMR Palmer 47.64 40 P P 10 38 48.0 +0.7
baz=310
J26L Joseph Creek 47.69 34 P P 10 38 47.7 -0.2
baz=311
RC01 Rabbit Creek A 47.74 40 P P 10 38 48.0 -0.2
baz=310
RIDG Independent Ri 47.77 36 P P 10 38 49.0 +0.6
RIDG Independent Ri 47.77 36 P P 10 38 48.3 -0.1
baz=311
G29M Pine Creek 47.77 30 IAmb IAmb 10 38 57.2
comp=Z,16nm,1.2s
G29M Pine Creek 47.77 30 P P 10 38 48.7 +0.3
baz=313
SML Sawmill 47.80 39 P P 10 38 48.2 -0.5
baz=310
SCRK Sand Creek 47.90 35 P P 10 38 49.2 -0.3
baz=311
F30M Barrier River 47.92 28 P P 10 38 49.3 -0.2
baz=314
HOM Homer 47.92 43 P P 10 38 49.4 -0.2
baz=310
SLKM Skilak Lake 47.93 41 P P 10 38 50.6 +1.0
SLKM IAmb IAmb 10 38 53.2
comp=Z,12nm,0.9s
KNK Knik Glacier 48.01 40 P P 10 38 50.2 -0.1
baz=310
M23K Glacier View 48.03 39 P P 10 38 50.8 +0.3
baz=310
INK Inuvik 48.04 27 IAmb IAmb 10 38 57.7
comp=Z,18nm,1.4s
INK Inuvik 48.04 27 P P 10 38 51.3 +1.0
INK pmax pmax
comp=Z,8.0nm,1.3s
INK Inuvik 48.04 27 P P 10 38 50.3 0.0
baz=315
PAX Paxson 48.06 37 P P 10 38 50.7 0.0
baz=311
O22K Cooper Landing 48.13 41 P P 10 38 51.5 +0.3
baz=310
SCM Sheep Creek Mo 48.15 39 P P 10 38 51.3 -0.1
baz=310
H29M Whitestone 48.15 31 P P 10 38 51.4 +0.1
baz=313
HFS Hagfors 48.19 318 P P 10 38 51.4 -0.3
comp=Z,5.7nm,0.5s,baz=62,slow=6.9,SNR=20
HFS LR LR 11 00 54.3
comp=Z,113nm,18.9s,baz=64,slow=38
comp=Z,5.7nm,0.5s
I28M Miner Creek 48.21 32 P P 10 38 51.7 -0.1
baz=313
BRSE Bradley Lake S 48.22 42 P P 10 38 51.9 0.0
baz=310
G30M tAoh Zraii Nji 48.24 29 P P 10 38 52.2 +0.1
baz=314
Q20K Shuyak Island 48.29 44 P P 10 38 52.4 -0.1
baz=310
NC303 NORSAR Array S 48.36 320 P P 10 38 52.9 -0.1
M24K Tolsona, Glenn 48.38 38 P P 10 38 53.6 +0.4
baz=311
PWL Port Wells 48.41 40 P P 10 38 53.1 -0.3
baz=311
SEW Seward 48.48 41 P P 10 38 54.1 +0.2
baz=310
K27K Chicken 48.49 34 P P 10 38 54.3 +0.4
baz=312
EPYK Eagle Plains 48.53 30 P P 10 38 53.9 -0.3
baz=314
NB2 NORSAR Subarra 48.54 320 P P 10 38 54.2 -0.2
comp=Z,6.9nm,0.7s,baz=51,slow=7.9
NB2 NORSAR Subarra 48.54 320 P P 10 38 53.5 -0.9
NB2 pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 48.54 320 P P 10 38 53.3 -1.1
comp=Z,3.3nm,0.6s,baz=52,slow=7.2,SNR=12
NOA LR LR 11 00 56.5
comp=Z,111nm,19.1s,baz=65,slow=38
comp=Z,3.3nm,0.6s
HARP HAARP 48.54 37 P P 10 38 54.8 +0.4
baz=312
F31M Tsiigehtchic 48.60 28 P P 10 38 54.8 +0.1
baz=316
NORES NORESS Array B 48.62 320 P P 10 38 58.3 +3.4
MENT Mentasta 48.68 36 IAmb IAmb 10 38 56.8
comp=Z,5.3nm,0.7s
NBO00 NORSAR Array S 48.70 320 P P 10 38 55.9 +0.3
CHIR Chirikof Islan 48.74 49 P P 10 38 56.5 +0.6
baz=310
L26K Log Cabin Wild 48.75 36 P P 10 38 55.8 -0.2
baz=312
KDAK Kodiak Island 48.75 45 P P 10 38 56.4 +0.4
baz=310
OHAK Old Harbor 48.82 46 P P 10 38 56.9 +0.3
baz=310
G31M Satah River 48.83 29 P P 10 38 56.7 +0.2
baz=316
GLI Glacier Island 48.86 40 P P 10 38 56.9 +0.1
baz=311
KLU Klutina 48.88 38 IAmb IAmb 10 39 02.3
comp=Z,23nm,1.2s
KLU Klutina 48.88 38 P P 10 38 57.4 +0.4
baz=312
SII Sitkinak Islan 48.88 47 P P 10 38 58.2 +1.2
baz=310
L27K Beaver Creek, 49.23 35 P P 10 39 00.0 +0.3
baz=313
BCAR Beaver Creek A 49.24 35 P P 10 39 01.4 +1.6
N25K Chitina, Valde 49.27 38 P P 10 38 59.9 -0.1
baz=312,SNR=6.8
M26K Nabesna, AK 49.29 36 P P 10 38 59.9 -0.2
baz=313
P23K Montague Islan 49.33 41 P P 10 39 00.9 +0.5
baz=312
DAWY Dawson 49.33 33 P P 10 39 01.0 +0.5
baz=314
RES Resolute Bay 49.42 9 P P 10 39 01.2 +0.3
RES IAmb IAmb 10 39 02.2
comp=Z,9.5nm,0.9s

RES Resolute Bay 49.42 9 LR LR 11 00 34.2
comp=Z,35nm,20.7s,baz=22,slow=37
RES Resolute Bay 49.42 9 P P 10 39 01.2 +0.3
RES pmax pmax
comp=Z,9.0nm,1.0s
I30M Mount Dempster 49.44 31 P P 10 39 01.4 0.0
baz=315
C36M Paulatuk 49.55 23 P P 10 39 01.8 -0.1
baz=321
EYAK Cordova Ski Ar 49.57 39 P P 10 39 02.3 +0.1
baz=312
H31M Peel River 49.61 30 P P 10 39 02.1 -0.4
baz=316
M27K Edge Creek, AK 49.70 36 P P 10 39 03.7 +0.3
baz=314
BMRM Bremner River 49.70 38 IAmb IAmb 10 39 06.9
comp=Z,25nm,1.3s
BMRM Bremner River 49.70 38 P P 10 39 03.6 +0.3
baz=313
J30M Hart River 49.91 32 P P 10 39 05.8 +0.9
baz=316
MCARA McCarthy VSAT 49.98 37 P P 10 39 06.1 +0.8
baz=313
K29M Barlow Dome 50.07 33 P P 10 39 06.8 +0.6
baz=315,SNR=7.7
CRQM Cirque 50.37 38 IAmb IAmb 10 39 11.4
comp=Z,38nm,1.5s
CRQE Cirque 50.39 38 P P 10 39 09.1 +0.5
baz=314
L29M L29M 50.41 34 IAmb IAmb 10 39 11.7
comp=Z,16nm,1.2s
L29M L29M 50.41 34 P P 10 39 09.6 +1.0
baz=315
KAIM Kayak Island 50.48 39 P P 10 39 09.5 +0.4
baz=314
BARN Barnard Glacie 50.68 37 IAmb IAmb 10 39 13.8
comp=Z,20nm,1.1s
MAYO Mayo, Yukon 50.76 32 P P 10 39 11.8 +0.5
baz=316
M29M Somme Creek 50.77 34 P P 10 39 12.4 +0.9
baz=316
CTG Chitna Glacier 50.85 37 P P 10 39 13.2 +1.0
baz=315,SNR=6.7
CTGM Chitina Glacie 50.86 37 IAmb IAmb 10 39 14.8
comp=Z,15nm,0.8s
YUK8 Steele Glacier 51.17 36 P P 10 39 15.8 +1.1
baz=315
MESA MESA 51.20 38 P P 10 39 15.7 +0.9
baz=315
M30M Minto, Yukon 51.22 34 P P 10 39 15.1 +0.4
baz=316
BUR08 Bucovina Ar. S 51.31 300 P P 10 39 17.0 +1.3
BUR08 IAmb IAmb 10 39 20.0
comp=Z,32nm,1.8s
O28M Mount Upton 51.39 37 P P 10 39 16.6 +0.3
baz=316
YUK4 Talbot Arm 51.50 35 P P 10 39 17.5 +0.5
baz=316
PINM Pinnacle 51.85 37 P P 10 39 19.7 +0.1
baz=316
YUK6 Outpost Mounta 51.89 36 P P 10 39 20.9 +0.9
baz=316
N30M Aishikik Lake 51.94 35 P P 10 39 21.6 +1.4
baz=317
M31M Drury Creek, Y 52.25 33 IAmb IAmb 10 39 24.8
comp=Z,11nm,0.9s
M31M Drury Creek, Y 52.25 33 P P 10 39 23.5 +1.1
baz=318,SNR=8.1
HYT Haines Junctio 52.26 35 P P 10 39 23.6 +0.9
baz=317
O29M Mount Kennedy 52.28 36 P P 10 39 23.6 +0.8
baz=317
BRTR Keskin Array B 52.30 287 P P 10 39 24.1 +0.9
comp=Z,2.9nm,0.6s,baz=64,slow=5.0,SNR=13
BRTR LR LR 11 06 21.7
comp=Z,81nm,20.9s,baz=76,slow=42
comp=Z,2.9nm,0.6s
BRTR Keskin Array B 52.30 287 *i* P P 10 39 24.7 +1.4
BRTR pmax pmax
comp=Z,5.0nm,0.9s
N31M Braeburn, Yuko 52.34 34 IAmb IAmb 10 39 26.1
comp=Z,19nm,0.8s
N31M Braeburn, Yuko 52.34 34 P P 10 39 24.3 +1.1
baz=318,SNR=8.1
MLR Muntele Rosu 52.40 298 LR LR 11 03 44.6
comp=Z,268nm,19.2s,baz=81,slow=38
PNL Peninsula 52.46 37 P P 10 39 24.9 +0.8
baz=316
O30N Mendenhall 52.77 35 IAmb IAmb 10 39 29.1
comp=Z,10nm,1.0s
O30N Mendenhall 52.77 35 P P 10 39 27.1 +0.7
baz=318,SNR=5.3
P30M Million Dollar 52.97 36 P P 10 39 28.2 +0.4
baz=318
P29M Windy Craggy 53.06 37 P P 10 39 28.7 +0.2
baz=318
LANS Liptovska Anna 53.07 305 *e*P P 10 39 32.6 +3.9
LANS pmax pmax
comp=Z,5.0nm,1.1s
LANS Liptovska Anna 53.07 305 *e*P P 10 39 32.6 +3.9
LANS *e*PP PP 10 41 34.9 +6.9
WHY Whitehorse 53.25 34 P P 10 39 30.5 +0.5
baz=319
N32M Quiet Lake 53.45 33 P P 10 39 32.0 +0.6
baz=320
MORC Moravsky Berou 53.53 306 *e*P P 10 39 32.9 +0.8
PALK Pallekele 53.63 219 LR LR 11 04 09.2
comp=Z,41nm,19.8s,baz=1.0,slow=38
PLBC Pleasant Camp 53.66 36 P P 10 39 33.2 +0.4
baz=318
SKAG Skagway 54.01 36 P P 10 39 35.5 +0.2
baz=319
P33M Teslin, Yukon 54.26 34 IAmb IAmb 10 39 39.5
comp=Z,15nm,0.9s
P33M Teslin, Yukon 54.26 34 P P 10 39 38.1 +0.8
baz=320,SNR=9.0
VRAC Vranov 54.30 307 LR LR 11 05 18.8
comp=Z,295nm,19.7s,baz=38,slow=39
VRAC Vranov 54.30 307 *e*P P 10 39 36.6 -1.1
P32M Atlin 54.45 35 P P 10 39 39.1 +0.5
baz=320
CLL Collm 54.50 310 *i* P P 10 39 41.6 +2.5
CLL pmax pmax
comp=Z,6.0nm,0.7s
CLL Collm 54.50 310 *i* P P 10 39 41.6 +2.5
comp=Z,6.0nm,0.7s
CLL L L 11 05 00.0
comp=Z,200nm,18.2s
KRUC Moravsky 54.57 307 *e*P P 10 39 40.0 +0.4
WRGLY Wrigley 54.60 27 P P 10 39 39.0 -0.6
baz=324
MODS Modra-Piesok 54.64 305 *e*P P 10 39 45.4 +5.2
MODS Modra-Piesok 54.64 305 *e*P P 10 39 45.4 +5.2
R31K City Hall, Gus 54.66 37 P P 10 39 40.5 +0.4
baz=319
TREC Trest 54.82 307 P P 10 39 42.8 +1.3
TREC pmax pmax
comp=Z,12nm,1.2s
S31K Pelican 54.84 37 P P 10 39 41.9 +0.6
baz=319
R32K Eaglecrest 55.19 36 P P 10 39 44.3 +0.4
baz=320
BORG Borgarnes 55.33 338 LR LR 11 04 14.3
comp=Z,59nm,18.0s,baz=33,slow=37
ISP Isparta 55.37 288 *ce*P P 10 39 45.0 -0.7
ISP pmax pmax
comp=Z,23nm,0.6s
Q32M Nakina River 55.41 34 P P 10 39 45.6 -0.1
baz=321
R33M Jennings River 55.49 34 IAmb IAmb 10 39 50.9
comp=Z,11nm,0.9s
R33M Jennings River 55.49 34 P P 10 39 47.1 +0.8
baz=322
RONA Rosalia, Austr 55.59 305 *e*P P 10 39 47.2 +0.1
comp=Z,2.2nm,0.7s
CONA Conrad Observa 55.63 306 *e*P P 10 39 47.3 -0.1
comp=Z,0.1nm,0.4s
S32K Killisnoo 55.79 37 P P 10 39 48.5 +0.3
baz=320
SIT Sitka 55.84 37 P P 10 39 49.2 +0.6
baz=320
ASF Jabal al Asfar 55.91 279 LR LR 11 06 40.5
comp=Z,87nm,18.1s,baz=81,slow=39
GERES GERESS Array B 55.96 308 P P 10 39 50.6 +0.8
comp=Z,2.0nm,0.8s,baz=38,slow=6.8,SNR=8.2
GERES LR LR 11 05 51.0
comp=Z,240nm,19.6s,baz=65,slow=38
comp=Z,2.0nm,0.8s

MMAI **Mount Meron Ar** 56.14 280 LR LR 11 06 49.6
comp=Z,147nm,19.3s,baz=26,slow=39
MOA **Molln** 56.42 307 *e*P **P** **10 39 53.5 +0.5**
comp=Z,2.6nm,0.9s
DLBC **Dease Lake** 56.54 34 P **P** **10 39 54.8 +1.0**
baz=322
S34M **Telegraph Cree** 56.60 35 P **P** **10 39 54.3 +0.2**
baz=322
SOKA **Soboth** 56.92 305 *e*P **P** **10 39 57.7 +1.1**
comp=Z,4.0nm,1.1s
LIRD **Liard River Hi** 56.97 31 P **P** **10 39 56.9 +0.1**
baz=324
KOTAN **Kotaneelee Air** 56.98 30 P **P** **10 39 56.8 0.0**
baz=325
OBKA **Obir** 57.27 305 *e*P **P** **10 40 00.1 +1.0**
comp=Z,3.5nm,0.7s
U33K **Whale Pass** 57.35 37 P **P** **10 40 00.1 +0.8**
baz=322
WRAK **Wrangell Islan** 57.37 36 P **P** **10 39 60.0 +0.4**
baz=322
KBA **Koelnbreinsper** 57.42 307 *e*P **P** **10 40 00.5 +0.2**
comp=Z,11nm,1.0s
KBA **Koelnbreinsper** 57.42 307 P **P** **10 40 03.1 +2.9**
KBA pmax pmax
comp=Z,26nm,1.2s
LESA **Schwarzleotal** 57.47 307 *e*P **P** **10 40 01.5 +1.0**
comp=Z,2.1nm,1.1s
RAYN **Ar Rayn** 57.50 265 P **P** **10 40 00.9 -0.1**
RAYN IAmb IAmb 10 40 03.2
comp=Z,5.9nm,0.8s
RAYN **Ar Rayn** 57.50 265 P **P** **10 40 00.9 -0.1**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
MYKA **Terra Mystica** 57.61 306 *e*P **P** **10 40 01.4 -0.1**
comp=Z,5.2nm,1.0s
T35M **Bob Quinn** 57.63 35 P **P** **10 40 02.4 +1.0**
baz=323
TOAD **Toad River Com** 57.69 31 P **P** **10 40 01.9 +0.1**
baz=325
CRAG **Craig** 57.85 38 P **P** **10 40 03.0 +0.1**
baz=322
EKA **Eskdalemuir Ar** 57.90 322 P **P** **10 40 03.1 -0.1**
comp=Z,12nm,1.1s,baz=46,slow=7.1,SNR=6.4
comp=Z,12nm,1.1s
MEM **Membach** 58.01 314 *d*P **P** **10 40 03.4 -0.8**
comp=Z,14nm,0.6s
WATA **Walderalm** 58.04 308 *e*P **P** **10 40 04.4 -0.2**
comp=Z,4.0nm,1.0s
WTTA **Wattenberg** 58.06 308 *e*P **P** **10 40 05.0 +0.2**
comp=Z,3.9nm,0.7s
WTTA **Wattenberg** 58.06 308 P **P** **10 40 06.0 +1.2**
WTTA pmax pmax
comp=Z,16nm,1.2s
MOTA **Moosalm** 58.24 308 *e*P **P** **10 40 06.2 +0.2**
comp=Z,1.4nm,0.5s
SQTA **Sankt Quirin** 58.29 308 *e*P **P** **10 40 07.0 +0.7**
comp=Z,4.7nm,1.0s
RETA **Reutte** 58.29 309 *e*P **P** **10 40 06.6 +0.3**
comp=Z,3.1nm,1.0s
STAL **STALIGIAL** 58.31 306 IAmb IAmb 10 40 10.6
comp=Z,13nm,1.0s
V35K **Ketchikan** 58.49 37 P **P** **10 40 07.4 0.0**
baz=323
FETA **Feichten** 58.66 308 *e*pP 10 40 10.1
comp=Z,6.2nm,0.9s
DAVA **Damuels** 58.84 309 *e*P **P** **10 40 10.0 -0.2**
comp=Z,1.4nm,0.7s
EIL **Elat** 58.88 278 LR LR 11 07 51.2
comp=Z,78nm,20.7s,baz=344,slow=38
CTI **Castel Tesino** 58.96 307 IAmb IAmb 10 40 14.6
comp=Z,13nm,0.9s
FUORN **Ofenpass-Fuorn** 59.17 308 IAmb IAmb 10 40 23.0
comp=Z,14nm,1.0s
BBB **Bella Bella** 62.26 37 LR LR 11 10 11.5
comp=Z,46nm,18.4s,baz=333,slow=39
VAE **Valguarnera** 64.14 299 LR LR 11 10 06.9
comp=Z,209nm,18.6s,baz=110,slow=37
BATI **Baumata** 65.68 167 LR LR 11 12 06.2
comp=Z,41nm,19.5s,baz=150,slow=38
GNW **Green Mountain** 68.00 37 IAmb IAmb 10 41 13.1
comp=Z,14nm,1.4s
KEST **Kesra** 68.04 301 LR LR 11 14 16.9
comp=Z,222nm,18.2s,baz=10,slow=39
B08A **Colville Reser** 68.47 34 IAmb IAmb 10 41 17.7
comp=Z,5.9nm,0.9s
ATD **Arta Tunnel** 68.56 259 LR LR 11 15 03.0
comp=Z,8.9nm,18.6s,baz=8.5,slow=39
C09A **Chrisman Ranch** 69.30 34 IAmb IAmb 10 41 20.9
comp=Z,13nm,1.1s
MXC **Moxie City** 69.71 35 IAmb IAmb 10 41 54.0
comp=Z,8.1nm,0.6s
D08A **Wollman Farm,** 69.74 34 IAmb IAmb 10 41 23.5
comp=Z,11nm,1.3s
HOOD **Mount Hood Mea** 70.34 37 IAmb IAmb 10 41 27.5
comp=Z,15nm,1.3s
E09A **Wood Farm, Sta** 70.47 34 IAmb IAmb 10 41 28.1
comp=Z,18nm,1.6s
SCHQ **Schefferville** 70.57 359 P **P** **10 41 26.8 +0.3**
comp=Z,7.7nm,0.9s,baz=355,slow=3.6,SNR=6.6
comp=Z,7.7nm,0.9s
G06A **Carlson Farm,** 70.77 36 IAmb IAmb 10 42 02.0
comp=Z,25nm,2.0s
ESDC **Sonseca Array** 70.97 313 P **P** **10 41 30.1 +0.9**
comp=Z,7.4nm,1.0s,baz=32,slow=6.0,SNR=16
ESDC LR LR 11 18 10.1
comp=Z,97nm,20.4s,baz=338,slow=41
comp=Z,7.4nm,1.0s
LNOR **Lincton Mounta** 71.00 35 IAmb IAmb 10 41 31.9
comp=Z,20nm,1.9s
F10A **Beach Ranch, E** 71.25 34 P **P** **10 41 31.3 +0.5**
F10A IAmb IAmb 10 41 33.2
comp=Z,8.4nm,0.9s
WIFE **Three Sisters-** 71.39 38 IAmb IAmb 10 41 34.0
comp=Z,17nm,1.1s
EGMT **Eagleton** 71.61 28 IAmb IAmb 10 41 35.3
comp=Z,25nm,1.5s
PINE **Pine Mountain** 71.93 37 IAmb IAmb 10 41 37.8
comp=Z,10nm,1.1s
BMO **Blue Mountains** 72.22 34 IAmb IAmb 10 41 38.9
comp=Z,11nm,1.3s
J05D **Fort Rock, OR** 72.27 38 IAmb IAmb 10 41 42.1
comp=Z,13nm,1.2s
PLID **Pearl Lake** 72.43 33 IAmb IAmb 10 41 40.1
comp=Z,9.7nm,0.9s
ULM **Lac du Bonnet** 72.65 18 IAmb IAmb 10 41 39.3
comp=Z,11nm,1.1s
ULM **Lac du Bonnet** 72.65 18 P **P** **10 41 38.5 -0.5**
comp=Z,4.5nm,0.7s,baz=334,slow=6.7,SNR=3.5
ULM LR LR 11 14 59.5
comp=Z,45nm,19.8s,baz=332,slow=37
comp=Z,4.5nm,0.7s
K05A **Summer Lake** 72.88 38 IAmb IAmb 10 41 45.4
comp=Z,14nm,1.1s
DLMT **Dillon** 73.23 31 IAmb IAmb 10 41 44.9
comp=Z,17nm,1.2s
BOZ **Bozeman (W)** 73.30 30 IAmb IAmb 10 41 47.2
comp=Z,22nm,1.9s
M02C **Callahan** 73.33 40 IAmb IAmb 10 41 46.7
comp=Z,15nm,1.4s
N02D **Trinity Center** 73.75 40 IAmb IAmb 10 41 50.1
comp=Z,8.0nm,0.8s
BCYI **Bear Canyon** 73.94 32 IAmb IAmb 10 41 48.8
comp=Z,13nm,1.7s
MFID **Camas Ranch** 73.98 34 IAmb IAmb 10 41 49.4
comp=Z,8.4nm,1.1s
YHL **Hebgen Lake** 74.11 30 IAmb IAmb 10 41 50.1
comp=Z,11nm,1.2s
RLMT **Red Lodge** 74.41 29 IAmb IAmb 10 41 51.8
comp=Z,20nm,1.4s
AGMN **Agassiz Nation** 74.53 19 IAmb IAmb 10 41 50.4
comp=Z,11nm,1.0s
MOOW **Moose Ponds** 75.24 30 IAmb IAmb 10 41 57.2
comp=Z,11nm,1.3s
FXWY **Fox Creek** 75.26 31 IAmb IAmb 10 41 57.2
comp=Z,9.5nm,0.9s
LOHW **Long Hollow** 75.41 30 IAmb IAmb 10 41 58.1
comp=Z,29nm,1.9s
TPAW **Teton Pass** 75.42 31 IAmb IAmb 10 42 00.1
comp=Z,8.9nm,0.8s
PDAR **Pinedale Array** 76.49 30 P **P** **10 42 01.9 +0.2**
baz=21,slow=2.7,SNR=14
PNTR **Pine Nut** 76.55 39 IAmb IAmb 10 42 09.9
comp=Z,5.8nm,0.9s
ELK **Elko** 76.57 35 LR LR 11 19 06.4
comp=Z,54nm,20.7s,baz=332,slow=38
RSSD **Black Hills** 76.72 26 P **P** **10 42 03.3 +0.3**
RSSD IAmb IAmb 10 42 03.8
comp=Z,6.9nm,0.9s
RSSD **Black Hills** 76.72 26 P **P** **10 42 03.3 +0.3**
RSSD pmax pmax
comp=Z,7.0nm,0.9s
F33A **5 Mile Ranch,** 76.81 20 IAmb IAmb 10 42 04.2
comp=Z,11nm,1.2s
HWUT **Hardware Ranch** 76.96 32 IAmb IAmb 10 42 06.6
comp=Z,13nm,0.9s
MDT **Midelt** 77.01 309 LR LR 11 17 59.5
comp=Z,69nm,20.6s,baz=37,slow=37
VLDQ **Val d'Or** 77.02 6 IAmb IAmb 10 42 06.9
comp=Z,14nm,1.1s
WRAB **Tennant Creek** 77.04 158 ⇓*e*P **P** **10 42 04.5 -0.1**
WRAB pmax pmax
comp=Z,13nm,1.4s
WRA **Warramunga Arr** 77.05 158 P **P** **10 42 03.6 -1.1**
WRA **Warramunga Arr** 77.05 158 P **P** **10 42 04.0 -0.7**
comp=Z,3.7nm,0.9s,baz=350,slow=6.1,SNR=20
comp=Z,3.7nm,0.9s
WR8 **Warramunga Arr** 77.09 158 P **P** **10 42 06.1 +1.2**
WR8 IAmb IAmb 10 42 06.9
comp=Z,29nm,1.6s
NVAR **Mina Array Bea** 77.59 38 P **P** **10 42 08.3 +0.2**
comp=Z,2.2nm,0.7s,baz=313,slow=3.7,SNR=6.5
NVAR LR LR 11 16 51.9
comp=Z,32nm,19.3s,baz=310,slow=36
comp=Z,2.2nm,0.7s
DUG **Dugway, Tooele** 77.85 33 IAmb IAmb 10 42 11.6
comp=Z,9.9nm,1.1s
SPMN **Marine on St.** 78.04 17 IAmb IAmb 10 42 11.0
comp=Z,12nm,0.9s
BSUT **Blindstream Ca** 78.18 32 IAmb IAmb 10 42 13.8
comp=Z,16nm,1.3s
G40A **Rib Lake** 78.43 16 IAmb IAmb 10 42 15.7
comp=Z,12nm,1.0s
RDMU **Red Mountain** 78.51 31 IAmb IAmb 10 42 15.2
comp=Z,15nm,1.0s
ECSD **EROS Data Cent** 78.77 21 IAmb IAmb 10 42 16.1
comp=Z,19nm,1.1s
K30B **Basset** 79.14 23 IAmb IAmb 10 42 21.1
comp=Z,18nm,1.2s
P17A **Butcher Ranch,** 79.16 32 IAmb IAmb 10 42 18.5
comp=Z,10nm,1.0s
Q16A **Castle Valley** 79.54 33 IAmb IAmb 10 42 20.8
comp=Z,11nm,1.3s
I40A **Norwalk** 79.70 16 IAmb IAmb 10 42 22.4
comp=Z,13nm,0.8s
ASAR **Alice Springs** 80.57 160 P **P** **10 42 23.3 -0.7**
comp=Z,1.1nm,0.7s,baz=355,slow=5.1,SNR=18
comp=Z,1.1nm,0.7s
PV22 **Blue Mesa, Par** 80.61 31 IAmb IAmb 10 42 26.4
comp=Z,9.1nm,1.0s
PV23 **Carpenter Ridg** 80.62 31 IAmb IAmb 10 42 26.6
comp=Z,19nm,1.1s
PV10 **Paradox Valley** 80.69 31 IAmb IAmb 10 42 27.4
comp=Z,20nm,1.1s
PV14 **Lion Creek, Pa** 80.69 31 IAmb IAmb 10 42 28.3
comp=Z,9.6nm,1.1s
PV20 **West Nyswonger** 80.74 31 IAmb IAmb 10 42 26.5
comp=Z,9.6nm,1.1s
KNB **Kanab** 80.74 35 IAmb IAmb 10 42 27.6
comp=Z,16nm,1.1s
PV19 **Morning Glory** 80.76 31 IAmb IAmb 10 42 26.7
comp=Z,16nm,1.2s
PV16 **Nyonger Mesa** 80.78 31 IAmb IAmb 10 42 27.7
comp=Z,23nm,1.8s
PV12 **Saucer Basin,** 80.81 31 IAmb IAmb 10 42 27.0
comp=Z,10nm,1.0s
PV15 **Paradox Valley** 80.89 31 IAmb IAmb 10 42 27.4
comp=Z,6.7nm,0.8s
PV02 **Paradox Valley** 80.93 31 IAmb IAmb 10 42 30.3
comp=Z,8.1nm,0.9s
L40A **Anamosa** 81.39 17 IAmb IAmb 10 42 28.9
comp=Z,16nm,0.8s
MVCO **Mesa Verde** 81.93 31 IAmb IAmb 10 42 33.4
comp=Z,11nm,1.2s
SDCO **Great Sand Dun** 82.30 29 IAmb IAmb 10 42 35.3
comp=Z,7.2nm,1.0s
DNR **Dunn Ranch,Anz** 82.55 39 IAmb IAmb 10 42 38.2
comp=Z,13nm,1.2s
IRM **Iron Mountain** 82.55 38 IAmb IAmb 10 42 36.8
comp=Z,6.9nm,1.1s
PFO **Pinyon Flats O** 82.57 39 ⇓*e*P **P** **10 42 36.2 +1.4**
PFO pmax pmax
comp=Z,5.0nm,1.0s
KIBK **Kibwezi** 82.62 255 P **P** **10 42 35.0 -0.3**
KIBK IAmb IAmb 10 42 39.0
comp=Z,8.5nm,1.1s
BLYC **Blythe** 83.13 37 IAmb IAmb 10 42 39.6
comp=Z,6.5nm,1.1s
T25A **Trinidad** 83.17 28 IAmb IAmb 10 42 40.1
comp=Z,24nm,1.8s
P38A **Dawn** 83.33 19 IAmb IAmb 10 42 39.8
comp=Z,17nm,1.2s
RTBA **Rita Blanca** 84.28 27 IAmb IAmb 10 42 44.8
comp=Z,16nm,1.2s
ANMO **Albuquerque** 84.64 31 P **P** **10 42 46.2 +0.7**
ANMO IAmb IAmb 10 42 47.7
comp=Z,5.4nm,1.1s
ANMO **Albuquerque** 84.64 31 LR LR 11 23 18.8
comp=Z,64nm,19.0s,baz=64,slow=38
ANMO **Albuquerque** 84.64 31 ⇓*e*P **P** **10 42 46.2 +0.7**
ANMO pmax pmax
comp=Z,6.0nm,1.3s
R40A **Maddies Statio** 84.86 19 IAmb IAmb 10 42 49.3
comp=Z,6.5nm,0.6s
CCM **Cathedral Cave** 85.28 18 P **P** **10 42 48.3 -0.2**
CCM IAmb IAmb 10 42 51.2
comp=Z,9.8nm,0.8s
CCM **Cathedral Cave** 85.28 18 P **P** **10 42 48.3 -0.2**
CCM pmax pmax
comp=Z,10.0nm,0.8s
T35A **Sooner Cattle** 85.33 22 IAmb IAmb 10 42 51.6
comp=Z,9.8nm,0.9s
Y22A **Socorro** 85.42 31 IAmb IAmb 10 42 51.9
comp=Z,11nm,1.3s
FVM **French Village** 85.49 17 IAmb IAmb 10 42 50.0
comp=Z,6.1nm,0.7s
Q54A **Coxs Mills** 85.81 10 IAmb IAmb 10 42 54.7
comp=Z,11nm,0.8s
WCI **Wyandotte Cave** 85.90 14 P **P** **10 42 52.1 +0.5**
WCI **Wyandotte Cave** 85.90 14 P **P** **10 42 52.1 +0.5**
WCI pmax pmax
comp=Z,20nm,0.8s
MGMO **Mountain Grove** 85.97 19 IAmb IAmb 10 42 54.7
comp=Z,8.1nm,0.8s
R49A **Shelbyville** 86.00 13 IAmb IAmb 10 42 53.5
comp=Z,18nm,1.2s
SMWD **Samnorwood** 86.18 26 IAmb IAmb 10 42 58.4
comp=Z,10nm,0.9s
U38A **Gravette** 86.24 21 IAmb IAmb 10 42 55.9
comp=Z,10nm,0.9s
TUL3 **Leonard** 86.45 22 IAmb IAmb 10 42 56.8
comp=Z,7.6nm,0.8s
HHAR **Hobbs** 86.49 21 IAmb IAmb 10 42 55.2
comp=Z,9.3nm,1.0s
T47A **Sharon Grove** 87.00 15 IAmb IAmb 10 42 59.8
comp=Z,9.0nm,0.9s
FCAR **Ozark Folk Cen** 87.22 19 IAmb IAmb 10 42 58.3
comp=Z,5.3nm,0.8s
LCAR **Lake Charles** 87.23 18 IAmb IAmb 10 43 01.0
comp=Z,8.6nm,1.0s
U49A **Red Boiling Sp** 87.66 14 IAmb IAmb 10 43 01.6
comp=Z,11nm,1.2s
APMT **Aspermont** 87.90 26 IAmb IAmb 10 43 04.5
comp=Z,5.6nm,0.8s
CLTN **Cedars of Leba** 88.00 15 IAmb IAmb 10 43 03.4
comp=Z,11nm,1.3s
V48A **Smith Brothers** 88.27 15 IAmb IAmb 10 43 05.9
comp=Z,7.8nm,1.0s
X40A **Basin Creek Fa** 88.44 20 IAmb IAmb 10 44 27.2
comp=Z,19nm,1.2s
ABTX **Abilene, Hawle** 88.69 26 IAmb IAmb 10 43 09.3
comp=Z,8.4nm,0.9s
PECS **Pecos** 88.73 30 IAmb IAmb 10 43 08.9
comp=Z,7.3nm,0.8s
PLPT **Palo Pinto** 88.84 25 IAmb IAmb 10 43 09.8
comp=Z,7.9nm,0.9s
V55A **Taylorsville** 88.87 11 IAmb IAmb 10 43 07.4
comp=Z,13nm,1.2s
VHRN **Van Horn** 88.95 31 IAmb IAmb 10 43 08.4
comp=Z,5.3nm,1.1s
X48A **Hartselle** 89.50 15 IAmb IAmb 10 43 09.8
comp=Z,11nm,1.1s
KMSC **Kings Mountain** 89.56 11 IAmb IAmb 10 43 10.3
comp=Z,11nm,1.0s
FPAL **Fort Paine** 89.62 14 IAmb IAmb 10 43 14.2
comp=Z,4.6nm,0.8s
BRDY **Brady** 90.13 26 IAmb IAmb 10 43 13.2
comp=Z,5.5nm,1.0s
HODGE **Hodges** 90.36 12 IAmb IAmb 10 43 16.0
comp=Z,8.7nm,0.7s
TORD **Torodi Ar. Bea** 90.47 294 P **P** **10 43 13.5 -0.2**
comp=Z,1.7nm,0.3s,baz=40,slow=5.4,SNR=6.0
comp=Z,1.7nm,0.3s
TXAR **Lajitas Array** 90.70 30 P **P** **10 43 15.3 +0.5**
comp=Z,0.5nm,0.8s,baz=280,slow=0.8,SNR=6.4
comp=Z,0.5nm,0.8s
LRAL **Lakeview Retre** 90.89 16 IAmb IAmb 10 43 18.6
comp=Z,12nm,1.3s
GOGA **Godfrey** 91.02 13 IAmb IAmb 10 43 19.5
comp=Z,8.8nm,0.8s
DRIO **Del Rio** 91.47 28 IAmb IAmb 10 43 19.5
comp=Z,6.1nm,1.0s
LSZ **Lusaka** 98.72 256 LR LR 11 32 25.2
comp=Z,83nm,20.4s,baz=316,slow=38
DBIC **Dimbokro** 99.35 296 LR LR 11 34 18.6
comp=Z,51nm,19.3s,baz=37,slow=39
LPAZ **La Paz** 141.41 360 PKP **PKiKP** **10 49 45.2 -1.1**
comp=Z,0.4nm,0.5s,baz=32,slow=5.3,SNR=3.7
NVL **N'lazarevskaya** 143.48 213 *e*PKiKP **PKiKP** **10 49 46.6 -1.5**
NVL *e* 10 52 58.8
NVL *e*PPP PPP 10 56 07.1
NVL *e*SS SS 11 11 43.3 +3.9
NVL *e*SSS SSS 11 17 03.6
NVL pmax pmax
comp=Z,8.0nm,0.9s
QSPA **South Pole Qui** 144.71 180 **PKPdf** **10 49 47.4 +0.3**
QSPA **South Pole Qui** 144.71 180 PKP **PKPdf** **10 49 47.6 +0.5**
comp=Z,10nm,0.8s,baz=304,slow=1.4,SNR=42
TROLL **Troll, Antarti** 146.66 212 ⇓P **PKPab** **10 49 51.7 -1.6**
comp=Z,574nm,0.8s
SNAA **Sanae** 148.31 213 ⇓P **PKPbc** **10 49 55.2 -1.4**
comp=Z,65nm,0.7s
SNAA **Sanae** 148.31 213 PKPdf **PKPbc** **10 49 55.9 -0.7**
SNAA **Sanae** 148.31 213 PKPbc **PKPbc** **10 49 55.3 -1.3**
comp=Z,5.3nm,1.0s,baz=110,slow=2.5,SNR=10
SNAA **Sanae** 148.31 213 PKP2 **PKPbc** **10 49 55.9 -0.7**
VNA2 **Neumayer--Watz** 149.75 215 ⇓P **PKiKP** **10 49 59.5 -1.6**
comp=Z,7.9nm,0.6s,baz=76,slow=2.9
VNA1 **Neumayer--Stat** 150.04 215 ⇓P **PKPbc** **10 49 58.9 -1.9**
comp=Z,11nm,0.9s
CPUP **Villa Florida** 150.31 340 PKPbc **PKPbc** **10 50 01.8 -1.0**
comp=Z,2.0nm,0.9s,baz=203,slow=2.4,SNR=9.3
VNA3 **Neumayer Olymp** 150.49 214 ⇓P **PKiKP** **10 50 01.1 -1.6**
comp=Z,9.2nm,0.7s

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*IDC **04** 10:30:37.7±3.9,20°.75S×177°.61W,h466km±39km, mb3.4/8, mbtmp4.3/10, Error ellipse: s-maj=28.7km s-min=15.8km az=94.0*
*NEIC **04** 10:30:41.8±1.4,20°.53S±0°.06×177°.9W±0°.2,h492km±7km, mb4.1/20, Error ellipse: s-maj=24.1km s-min=6.6km az=105.0*
ISC 04 10:30:42.1±0.8,20°.57S±0°.10×177°.9W±0°.1,h500km,n43, σ1°29/41,mb4.1/19,5D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.76**	**306**	P	**P**	**10 32 06.5**	**-0.6**
PINNC	**Pines Island,**	**13.78**	**259**	P	**P**	**10 33 40.1**	**+0.7**
DZM	**Mont Dzumac**	**14.66**	**261**	P	**P**	**10 33 48.0**	**-0.9**
	8.3nm,1.0s,baz=217,slow=5.6,SNR=2.9						
TOZ	**Tahuroa Road**	**18.03**	**197**	P	**P**	**10 34 22.4**	**-0.1**
TOZ				IAmb	IAmb	10 34 35.3	
	comp=Z,9.4nm,1.4s						
URZ	**Urewera**	**18.15**	**193**	P	**P**	**10 34 19.8**	**-3.7**
	comp=Z,3.6nm,0.3s,baz=200,slow=3.0,SNR=12						
URZ				S	**S**	**10 37 22.0**	**-2.3**
	comp=Z,10nm,1.1s,baz=46,slow=19,SNR=2.2						
TCW	**Tory Channel**	**21.62**	**196**	P	**P**	**10 34 56.4**	**+1.2**
QRZ	**Quartz Range**	**21.77**	**200**	P	**P**	**10 34 56.6**	**+0.1**
WHZ	**Wether Hill Ro**	**27.80**	**201**	P	**P**	**10 35 51.5**	**+1.4**
TOO	**Toolangi**	**35.93**	**234**	P	**P**	**10 36 59.7**	**0.0**
TOO				IAmb	IAmb	10 37 17.6	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**37.84**	**244**	P	**P**	**10 37 14.5**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=92,slow=11,SNR=3.9						
	comp=Z,3.1nm,0.8s						
INKA	**Innaminka**	**38.26**	**251**	P	**P**	**10 37 19.4**	**+0.3**
BBOO	**Buckleboo**	**42.60**	**244**	P	**P**	**10 37 53.7**	**0.0**
WR8	**Warramunga Arr**	**44.53**	**262**	P	**P**	**10 38 08.3**	**-0.6**
WR8				IAmb	IAmb	10 38 09.5	
	comp=Z,6.9nm,1.2s						
AS31	**Alice Springs**	**44.59**	**257**	P	**P**	**10 38 09.5**	**+0.1**
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**10 38 09.3**	**-0.1**
	comp=Z,4.2nm,0.5s,baz=98,slow=7.7,SNR=92						
ASAR				PcP	**PcP**	**10 39 41.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=102,slow=4.1,SNR=6.7						
	comp=Z,4.2nm,0.5s						
WB0	**Warramunga Arr**	**44.66**	**262**	P	**P**	**10 38 09.5**	**-0.4**
WB0				IAmb	IAmb	10 38 34.3	
	comp=Z,8.8nm,1.4s						
WRA	**Warramunga Arr**	**44.68**	**262**	IAmb	IAmb	10 38 10.9	
	comp=Z,0.7nm,1.4s						
WRA	**Warramunga Arr**	**44.68**	**262**	P	**P**	**10 38 09.4**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=97,slow=5.3,SNR=21						
	comp=Z,1.2nm,0.4s						
MTN	**Manton Dam**	**49.26**	**271**	P	**P**	**10 38 45.5**	**+0.7**
FORT	**Forrest**	**49.35**	**247**	P	**P**	**10 38 44.7**	**-0.5**
FORT				IAmb	IAmb	10 38 45.2	
	comp=Z,5.5nm,0.7s						
KNRA	**Kununurra**	**50.75**	**266**	P	**P**	**10 38 56.1**	**+0.4**
KNRA				IAmb	IAmb	10 39 02.8	
	comp=Z,21nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.11**	**262**	P	**P**	**10 39 13.0**	**+0.3**
PSA00	**Pilbara Seismi**	**57.74**	**257**	P	**P**	**10 39 44.7**	**-0.3**
PSA00				IAmb	IAmb	10 40 16.1	
	comp=Z,17nm,1.2s						
VNDA	**Vanda**	**57.84**	**185**	P	**P**	**10 39 46.1**	**+1.4**
MBWA	**Marble Bar**	**57.93**	**257**	P	**P**	**10 39 46.1**	**-0.2**
MBWA				IAmb	IAmb	10 39 46.5	
	comp=Z,8.8nm,0.8s						
QSPA	**South Pole Qui**	**69.50**	**180**	P	**P**	**10 41 02.5**	**+2.8**
QSPA				IAmb	IAmb	10 41 06.7	
	comp=Z,3.0nm,1.1s						
QSPA	**South Pole Qui**	**69.50**	**180**	P	**P**	**10 41 02.5**	**+2.8**
	comp=Z,2.5nm,0.6s,baz=351,slow=0.6,SNR=29						
MJAR	**Matsushiro Arr**	**70.32**	**324**	P	**P**	**10 41 04.8**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=155,slow=6.3,SNR=5.3						
	comp=Z,1.9nm,0.6s						
PETK	**Petropavlovsk-**	**76.37**	**345**	P	**P**	**10 41 39.1**	**0.0**
	comp=Z,2.7nm,0.7s,baz=126,slow=10,SNR=3.6						
	comp=Z,2.7nm,0.7s						
TROLL	**Troll, Antarti**	**87.66**	**180**	⇓P	**P**	**10 42 35.0**	**-1.6**
	comp=Z,15nm,0.4s						
SNAA	**Sanae**	**87.93**	**178**	⇓P	**P**	**10 42 36.4**	**-1.5**
	comp=Z,14nm,0.7s						
SNAA	**Sanae**	**87.93**	**178**	IAmb	IAmb	10 43 09.3	
	comp=Z,6.0nm,1.5s						
SNAA	**Sanae**	**87.93**	**178**	P	**P**	**10 42 36.4**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=219,slow=13,SNR=5.2						
	comp=Z,0.5nm,0.7s						
VNA3	**Neumayer Olymp**	**88.06**	**176**	⇓P	**P**	**10 42 37.2**	**-1.2**
	comp=Z,6.6nm,0.7s						
ILAR	**Eielson Array**	**88.37**	**13**	P	**P**	**10 42 38.8**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=212,slow=5.2,SNR=6.8						
	comp=Z,0.5nm,0.5s						
VNA2	**Neumayer--Watz**	**88.50**	**177**	⇓P	**P**	**10 42 39.3**	**-1.2**
	comp=Z,2.9nm,0.6s,baz=173,slow=4.3						
VNA1	**Neumayer--Stat**	**88.73**	**177**	⇓P	**P**	**10 42 40.0**	**-1.4**
	comp=Z,3.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**90.23**	**290**	P	**P**	**10 42 51.4**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=135,slow=3.3,SNR=7.7						
	comp=Z,1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**114.16**	**317**	PKhKP	PKPpre	10 48 19.0	
	comp=Z,0.3nm,0.5s,baz=73,slow=1.9,SNR=4.2						
BVAR	**Borovoye Array**	**119.19**	**320**	PKP	**PKPdf**	**10 48 32.9**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=104,slow=2.9,SNR=4.8						
ARCES	**ARCESS Array B**	**129.01**	**350**	PKP	**PKPdf**	**10 48 51.8**	**-0.2**
	comp=Z,5.8nm,1.0s,baz=60,slow=1.3,SNR=4.5						
AKASG	**Malin Array Be**	**143.12**	**331**	PKP	PKPab	10 49 15.6	-0.4
	comp=Z,1.5nm,0.5s,baz=42,slow=4.1,SNR=9.2						
EKA	**Eskdalemuir Ar**	**145.07**	**5**	PKPbc	**PKPdf**	**10 49 21.4**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=345,slow=3.6,SNR=4.2						

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*GCG **04** 10:36:26.7±0.4, 13°.16N×88°.21W, h15km±4km, MD3.7*
*SNET **04** 10:36:26.4±5.3, 13°.22N×88°.07W, h5km, ML3.0*
*CATAC **04** 10:36:26.1±0.2, 13°N±2°×8°8W±°, h3km±1km, M2.9/14, MLv2.9/14, Error ellipse: s-maj=4.2km s-min=1.8km az=17.8, confirmed*
ISC 04 10:36:25.3±1.0,13°24N±0°.05×88°18W±0°.02,h17km±7km, n40,σ0°76/49,1C,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
CNRM	**Centro Naciona**	**0.24**	**2**	***e*P** **Pg**	**10 36 30.7**	**-0.1**
CNRM				*e*S **Sb**	**10 36 34.7**	**-0.4**
CNRM	**Centro Naciona**	**0.24**	**2**	P **Pg**	**10 36 30.7**	**-0.1**
PACA	**Pacayal**	**0.27**	**329**	***e*P** **Pb**	**10 36 31.6**	**-0.2**
PACA				*e*S **Sb**	**10 36 36.6**	**+0.4**
PACA	**Pacayal**	**0.27**	**329**	P **Pb**	**10 36 31.6**	**-0.2**
PACA	**Pacayal**	**0.27**	**329**	S **Sg**	**10 36 35.5**	**0.0**
LCND	**La Caada**	**0.29**	**76‖**	***e*P** **Pb**	**10 36 32.3**	**+0.2**
LCND				*e*P **Pg**	**10 36 32.5**	**+0.8**
LCND				*e*S **Sb**	**10 36 37.1**	**+0.5**
LCND	**La Caada**	**0.29**	**76**	P **Pb**	**10 36 32.3**	**+0.2**
CNCH	**Conchagua**	**0.34**	**83**	***e*P** **Pb**	**10 36 33.3**	**+0.3**
CNCH				*e*S **Sb**	**10 36 39.8**	**+1.6**
CNCH	**Conchagua**	**0.34**	**83**	P **Pb**	**10 36 33.2**	**+0.3**
CNCH	**Conchagua**	**0.34**	**83**	S **Sb**	**10 36 38.5**	**+0.4**
PQSS	**Presa 15 de Se**	**0.53**	**316**	S **Sb**	**10 36 43.6**	**0.0**
TECO	**Alcaldia de Te**	**0.66**	**297**	P **Pb**	**10 36 38.3**	**-0.1**
TECO	**Alcaldia de Te**	**0.66**	**297**	S **Sb**	**10 36 47.4**	**+0.2**
CSGN	**Cosiguina Volc**	**0.66**	**113**	P **Pn**	**10 36 39.4**	**-0.5**
CSGN				S **Sn**	**10 36 48.7**	**-1.2**
SCLA	**Alcaldia de Sa**	**0.71**	**311**	P **Pb**	**10 36 39.7**	**+0.5**
UESV	**Universidad de**	**0.71**	**304**	P **Pb**	**10 36 39.9**	**+0.6**
UESV	**Universidad de**	**0.71**	**304**	S **Sb**	**10 36 49.5**	**+0.7**
PAVA	**Las Pavas**	**0.88**	**303**	P **Pn**	**10 36 42.9**	**-0.1**
PAVA	**Las Pavas**	**0.88**	**303**	S **Sn**	**10 36 54.9**	**-0.5**
LOMA	**Loma Larga**	**1.05**	**293**	S **Sn**	**10 36 59.6**	**0.0**
LOMA	**Loma Larga**	**1.05**	**293**	P **Pg**	**10 36 46.2**	**+0.5**
INTHN	**La Esperanza I**	**1.07**	**4**	P **Pn**	**10 36 45.7**	**-0.1**
INTHN	**La Esperanza I**	**1.07**	**4**	S **Sn**	**10 37 02.9**	**+2.4**
LLGN	**La Laguna**	**1.18**	**321**	P **Pb**	**10 36 47.3**	**-0.1**
LLGN	**La Laguna**	**1.18**	**321**	S **Sg**	**10 37 03.6**	**-0.2**
PMON	**Piamonte**	**1.20**	**293**	P **Pb**	**10 36 47.9**	**+0.2**
PMON	**Piamonte**	**1.20**	**293**	S **Sg**	**10 37 04.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.20**	**47**	P **Pb**	**10 36 47.7**	**+0.1**
TGUH				S **Sg**	**10 37 04.4**	**0.0**
JAYA	**Jayaque - finc**	**1.30**	**289**	***e*P** **Pb**	**10 36 49.5**	**0.0**
JAYA				*i* S **Sg**	**10 37 07.4**	**-0.2**
JAYA	**Jayaque - finc**	**1.30**	**289**	P **Pb**	**10 36 49.4**	**0.0**
MTO3	**Montecristo**	**1.63**	**315**	*i* P **Pb**	**10 36 55.5**	**+0.5**
SARH	**Santa Rosa de**	**1.63**	**340**	*i* P **Pg**	**10 36 55.8**	**-0.9**
SARH	**Santa Rosa de**	**1.63**	**340**	P **Pg**	**10 36 55.8**	**-0.9**
SARH	**Santa Rosa de**	**1.63**	**340**	S **Sg**	**10 37 16.6**	**-1.4**
NUBE	**Las Nubes**	**1.69**	**293**	***e*P** **Pb**	**10 36 56.1**	**+0.1**
NUBE				*e*S **Sg**	**10 37 18.7**	**-1.2**
NUBE	**Las Nubes**	**1.69**	**293**	P **Pb**	**10 36 56.4**	**+0.3**
FAME	**Alcaldia de Sa**	**1.88**	**289**	P **Pb**	**10 36 59.3**	**+0.1**
FAME	**Alcaldia de Sa**	**1.88**	**289**	S **Sb**	**10 37 23.8**	**+1.3**
MATN	**Matagalpa**	**2.22**	**98**	S **Sb**	**10 37 33.5**	**+1.3**
MATN	**Matagalpa**	**2.22**	**98**	P **Pb**	**10 37 03.2**	**-1.8**

*VAO **04** 10:43:30.5±0.2,20°.69S×45°.73W,h0km,ML3.5*
*OSUNB **04** 10:43:32.7±0.6,20°.68S×45°.73W,h17km±4km,mR2.6/12, Error ellipse: s-maj=1.3km s-min=1.2km az=0.0*
ISC 04 10:43:30.6±1.6,**20°.68S**±0°.03×**45°.74W**±0°.03,**h1**km±12km, **n39,**σ0**82/62,Brazil**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
BSCB	**Bom Sucesso**	**0.96**	**109**	P **Pg**	**10 43 49.2**	**+0.2**
BSCB				S **Sg**	**10 44 01.8**	**+0.3**
BSCB	**Bom Sucesso**	**0.96**	**109**	***e*P** **Pg**	**10 43 48.8**	**-0.2**
BSCB				*e*S **Sg**	**10 44 01.3**	**-0.2**
FJAO	**Mina do Feijao**	**1.62**	**69**	***e*P** **Pn**	**10 43 59.7**	**-0.8**
FABR	**Ouro Preto, Br**	**1.73**	**82**	***e*P** **Pn**	**10 44 01.4**	**-0.6**
FABR				*e*S **Sn**	**10 44 24.0**	**-0.8**
PMNB	**Patos De Minas**	**2.23**	**343**	P **Pn**	**10 44 09.2**	**+0.4**
PMNB				S **Sn**	**10 44 37.1**	**+0.1**
PMNB	**Patos De Minas**	**2.23**	**343**	***e*P** **Pn**	**10 44 08.6**	**-0.2**
PMNB				*e*S **Sn**	**10 44 37.1**	**+0.1**
RCLB	**Rio Claro- Sao**	**2.40**	**224**	P **Pn**	**10 44 11.6**	**+0.5**
RCLB	**Rio Claro- Sao**	**2.40**	**224**	***e*P** **Pn**	**10 44 11.0**	**-0.2**
RCLB				*e*S **Sn**	**10 44 41.7**	**+0.5**
VABB	**Valinhos**	**2.58**	**206**	P **Pn**	**10 44 13.6**	**0.0**
VABB				S **Sn**	**10 44 44.8**	**-0.7**
VAO	**Valinhos**	**2.58**	**206**	***e*P** **Pn**	**10 44 13.8**	**+0.2**
VAO				*e*S **Sn**	**10 44 46.3**	**+0.7**
BB19B	**Bebedouro**	**2.63**	**261**	P **Pn**	**10 44 13.8**	**-0.6**
BB19B				S **Sb**	**10 44 50.3**	**-1.2**
BB19B	**Bebedouro**	**2.63**	**261**	***e*P** **Pn**	**10 44 14.3**	**0.0**
BB19B				*e*S **Sn**	**10 44 48.4**	**+1.5**
PARB	**Paraibuna**	**2.65**	**178**	P **Pn**	**10 44 14.8**	**+0.2**
PARB				S **Sn**	**10 44 47.9**	**+0.6**
PARB	**Paraibuna**	**2.65**	**178**	***e*P** **Pn**	**10 44 14.7**	**+0.1**
SIM2	**UHE Simplicio**	**3.00**	**115**	P **Pn**	**10 44 20.1**	**+0.8**
SIM2				S **Sn**	**10 44 58.3**	**+2.4**
DIAM	**Diamantina, MG**	**3.07**	**40**	P **Pn**	**10 44 20.9**	**+0.5**
DIAM				S **Sn**	**10 44 59.0**	**+1.1**
DIAM	**Diamantina, MG**	**3.07**	**40**	***e*P** **Pn**	**10 44 20.5**	**+0.1**
DIAM				*e*S **Sn**	**10 44 58.5**	**+0.6**
SFA1	**Serra Facao**	**3.27**	**325**	P **Pn**	**10 44 23.3**	**+0.2**
SFA1				S **Sn**	**10 45 02.5**	**-0.2**
SPB	**Sao Paulo**	**3.30**	**208**	*e*S **Sn**	**10 45 04.1**	**+0.9**
DUB01	**Friburgo-RJ**	**3.43**	**115**	P **Pn**	**10 44 26.1**	**+0.8**
DUB01				S **Sn**	**10 45 05.3**	**-1.4**
DUB01	**Friburgo-RJ**	**3.43**	**115**	***e*P** **Pn**	**10 44 25.1**	**-0.2**
DUB01				*e*S **Sn**	**10 45 06.6**	**0.0**
IPMB	**Ipameri, GO**	**3.56**	**319**	S **Sn**	**10 45 08.6**	**-1.2**
IPMB	**Ipameri, GO**	**3.56**	**319**	*e*S **Sn**	**10 45 11.3**	**+1.6**
JQT1	**Jequitai-MG**	**3.66**	**21**	P **Pn**	**10 44 29.2**	**+0.7**
JQT1				S **Sn**	**10 45 11.6**	**-0.8**
BAT3	**Ipameri**	**3.68**	**332**	S **Sn**	**10 45 11.8**	**-1.0**
BAT2	**UHE Batalha**	**3.69**	**333**	P **Pn**	**10 44 29.2**	**+0.4**
BAT2				S **Sn**	**10 45 12.8**	**-0.2**
ITU3	**Corumbazu**	**3.83**	**309**	S **Sn**	**10 45 16.1**	**-0.5**
PET01	**Itanhaem-SP**	**3.86**	**201**	P **Pn**	**10 44 31.5**	**+0.4**
PET01	**Itanhaem-SP**	**3.86**	**201**	***e*P** **Pn**	**10 44 31.4**	**+0.2**
PET01				*e*S **Sn**	**10 45 18.0**	**+0.8**
MC01	**Montes Claros**	**4.30**	**24**	P **Pn**	**10 44 38.8**	**+1.5**
MC01				S **Sn**	**10 45 28.8**	**+0.6**
FRTB	**Fartura**	**4.43**	**233**	S **Sn**	**10 45 29.4**	**-1.9**
FRTB	**Fartura**	**4.43**	**233**	*e*S **Sn**	**10 45 30.9**	**-0.3**
ITRB	**Iturama**	**4.45**	**282**	S **Sn**	**10 45 31.6**	**-0.1**
SJMB	**Sao Joao De Ma**	**4.72**	**66**	S **Sn**	**10 45 37.5**	**-0.8**
SJMB	**Sao Joao De Ma**	**4.72**	**66**	***e*P** **Pn**	**10 44 43.1**	**+0.1**
SJMB				*e*S **Sn**	**10 45 38.0**	**-0.4**
BSFB	**Barra de Sao F**	**4.96**	**69**	***e*P** **Pn**	**10 44 46.3**	**0.0**
BSFB				*e*S **Sn**	**10 45 44.5**	**+0.2**
RIB01	**Linhares ES**	**5.21**	**76**	S **Sn**	**10 45 49.8**	**-0.6**
BDFB	**Brasilia**	**5.46**	**336**	S **Sn**	**10 45 56.1**	**-0.6**
ARAG	**Araguaiana, MT**	**7.60**	**310**	*e*S **Sn**	**10 46 51.3**	**+1.9**

*GCMT **04** 10:50:29.0±0.3,3°.67S±0°.03×152°.20E±0°.04,h22km±1km, MW4.8/65,Moment Tensor Solution. s20,c29; s65,c89; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=1.71±.18; Mθθ1.16±.10; Mφφ0.55±.10; Mrθ0.57±.14; Mrφ0.95±.06; Mθφ0.04±.16; Best double couple: M0 1.87400×10^16^ NP1:ϕs44.00000°,δ38.00000°,λ-106.00000°. NP2: ϕs244.00000°,δ53.00000°,λ-78.00000°. Principal axes: T 1.9210, Plg8.0000°, Azm325.0000°; N -0.0890, Plg10.0000°, Azm56.0000°; P -1.8270, Plg77.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
*IDC **04** 10:50:33.4±5.3,4°.21S×152°.03E,h127km±47km,mb3.2/4, mbtmp3.7/5,MS3.4/17 Error ellipse: s-maj=99.0km s-min=29.8km az=123.0*
ISC 04 10:50:24.6±2.3,**3°.6S**±0°.4×**152°.0E**±0°.7,**h35**km,**n21,** σ0**93/5,mb3.5/4,MS3.4/13,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PMG	**Port Moresby**	**7.50**	**220**	P **Pn**	**10 52 14.2**	**+2.6**
	12nm,0.8s,baz=221,slow=9.3,SNR=3.0					
PMG				LR LR	10 54 43.5	
	comp=Z,156nm,20.9s,baz=92,slow=35					
HNR	**Honiara**	**9.75**	**127**	LR LR	10 56 28.9	
	comp=Z,794nm,21.2s,baz=308,slow=38					
JAY	**Jayapura**	**11.37**	**275**	LR LR	10 56 54.0	
	comp=Z,490nm,20.4s,baz=72,slow=33					
GUMO	**Guam**	**18.53**	**338**	LR LR	11 02 41.6	
	comp=Z,78nm,18.2s,baz=138,slow=38					
DZM	**Mont Dzumac**	**23.05**	**144**	LR LR	11 03 31.4	
	comp=Z,245nm,21.7s,slow=34					
WRA	**Warramunga Arr**	**23.68**	**225**	P **P**	**10 55 30.5**	**-2.7**
	1.5nm,0.8s,baz=52,slow=9.9,SNR=11					
ASAR	**Alice Springs**	**26.52**	**220**	P **P**	**10 55 55.2**	**-3.9**
	0.3nm,0.7s,baz=59,slow=8.7,SNR=6.1					
	0.3nm,0.7s					
DAV	**Davao City (W)**	**28.46**	**292**	LR LR	11 07 59.5	
	comp=Z,45nm,18.1s,baz=78,slow=36					
STKA	**Stephens Creek**	**29.76**	**198**	LR LR	11 08 43.7	
	comp=Z,75nm,19.3s,baz=25,slow=37					
JCJ	**Chichijima**	**32.00**	**343**	LR LR	11 07 24.4	
	comp=Z,73nm,21.3s,baz=82,slow=31					
KAPI	**Kappang**	**32.22**	**266**	LR LR	11 12 06.4	
	comp=Z,26nm,18.6s,baz=63,slow=40					
JOW	**Kunigami**	**38.01**	**324**	LR LR	11 09 41.7	
	comp=Z,67nm,21.6s,baz=268,slow=30					
JHJ	**Hachijo jima 2**	**38.35**	**343**	LR LR	11 11 30.5	
	comp=Z,45nm,20.9s,baz=158,slow=32					
URZ	**Urewera**	**41.37**	**150**	LR LR	11 15 15.3	
	comp=Z,58nm,18.2s,baz=314,slow=36					
JNU	**Nakatsue**	**41.68**	**333**	LR LR	11 14 06.8	
	comp=Z,46nm,19.0s,baz=160,slow=34					
MJAR	**Matsushiro Arr**	**42.00**	**343**	LR LR	11 14 50.3	
	comp=Z,73nm,21.2s,baz=168,slow=34					
ASAJ	**Asahikawa**	**48.28**	**351**	LR LR	11 16 32.5	
	comp=Z,28nm,22.0s,baz=200,slow=32					
RAR	**Rarotonga**	**49.96**	**115**	LR LR	11 18 56.8	
	comp=Z,36nm,18.6s,baz=286,slow=34					
CMAR	**Chiang Mai Arr**	**56.69**	**295**	LR LR	11 23 01.2	
	comp=Z,33nm,20.8s,baz=115,slow=34					
ILAR	**Eielson Array**	**81.38**	**22**	P **P**	**11 02 38.4**	**+0.9**
	0.3nm,0.7s,baz=259,slow=5.2,SNR=3.6					
	0.3nm,0.7s					
BVAR	**Borovoye Array**	**87.85**	**323**	P **P**	**11 03 10.2**	**-0.1**
	0.9nm,0.8s,baz=126,slow=3.7,SNR=4.0					
	0.9nm,0.8s					

*DJA **04** 11:00:46.8±0.5,2°.5S±5°.×12°.7E±°,h14km±5km,M3.9/8, mB5.9/1,mb4.5/1,MLv3.6/8,Mw(mB)5.5/1*
*IDC **04** 11:00:48.5±1.8,1°.98S×127°.41E,h0km,mb3.5/3, mbtmp3.4/4,ML3.3/1, Error ellipse: s-maj=161.8km s-min=23.6km az=67.0*
ISC 04 11:00:47.6±2.3,**1°.7S**±0°.2×**126°.52E**±0°.07,**h29**km,**n11,** σ0**87/10,mb3.7/3,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
SANI	**Sanana**	**0.63**	**237**	P **Pb**	**11 00 59.6**	**-0.6**
SANI				S **Sb**	**11 01 09.3**	**+0.6**
NLAI	**Namlea**	**1.63**	**159**	P **Pn**	**11 01 15.1**	**+0.7**
AAI	**Ambon**	**2.59**	**140**	P **Pn**	**11 01 28.2**	**+0.7**
MSAI	**Masohi**	**2.91**	**124**	P **Pn**	**11 01 32.1**	**+0.2**
LUWI	**Luwuk**	**3.80**	**280**	P **Pn**	**11 01 45.0**	**+0.8**
APSI	**Ampana**	**4.93**	**279**	P **Pn**	**11 02 00.4**	**+0.6**
RKPI	**Ransiki, Papua**	**7.66**	**89**	P **Pn**	**11 02 38.1**	**+0.9**
WRA	**Warramunga Arr**	**19.68**	**158**	P **P**	**11 05 14.0**	**-0.5**
	0.1nm,0.3s,baz=339,slow=12,SNR=2.3					
	0.4nm,0.5s					
ASAR	**Alice Springs**	**22.98**	**162**	P **P**	**11 05 48.7**	**-1.3**
	0.5nm,0.6s,baz=334,slow=9.4,SNR=7.6					
	0.5nm,0.6s					
MKAR	**Makanchi Array**	**61.92**	**327**	P P	**11 11 14.8**	**+10**
	0.3nm,0.5s,baz=123,slow=8.5,SNR=3.7					
	0.3nm,0.5s					
KURBB	**Kurchatov Arra**	**66.21**	**329**	P P	**11 11 42.7**	**+10**
	0.9nm,1.0s,baz=134,slow=6.7,SNR=3.0					
	0.9nm,1.0s					

*IDC **04** 11:15:42.1±2.0,0°.96N×124°.66E,h0km,mb3.3/3, mbtmp3.3/3,MS3.1/2, Error ellipse: s-maj=180.6km s-min=27.8km az=64.0*
*DJA **04** 11:15:53.8±0.3,1°.N±3°.×12°.5E±°,h73km±7km,M4.0/13, mB5.3/2,mb4.0/4,MLv4.1/13,Mw(mB)4.7/2*
ISC 04 11:15:52.2±1.2,**1°.3N**±0°.1×**125°.37E**±0°.08,**h79**km,**n14,** σ1**81/12,mb3.3/3,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
KMSI	**Cibinong**	**1.54**	**244**	P **Pn**	**11 16 19.3**	**+1.3**
SGSI	**Sangihe**	**2.43**	**4**	P **Pn**	**11 16 32.4**	**+2.6**
SANI	**Sanana**	**3.33**	**169**	P **Pn**	**11 16 43.3**	**+1.2**
LUWI	**Luwuk**	**3.45**	**229**	P **Pn**	**11 16 44.9**	**+1.2**
APSI	**Ampana**	**4.29**	**240**	P **Pn**	**11 16 56.2**	**+1.1**
NLAI	**Namlea**	**4.78**	**159**	P **Pn**	**11 17 02.3**	**+0.4**
MSAI	**Masohi**	**5.79**	**142**	P **Pn**	**11 17 17.2**	**+1.6**
BSSI	**Bau Bau, Buton**	**8.81**	**213**	P **Pn**	**11 17 57.9**	**+1.0**
	11nm,0.9s					
EDFI	**Ende, Flores**	**10.59**	**200**	P **Pn**	**11 18 23.7**	**+2.5**
WRA	**Warramunga Arr**	**22.83**	**158**	P **P**	**11 20 46.8**	**-2.1**
	0.5nm,0.4s,baz=333,slow=11,SNR=6.3					
	0.5nm,0.4s					
JOW	**Kunigami**	**25.59**	**6**	LR LR	11 30 59.3	
	comp=Z,37nm,21.2s,baz=98,slow=35					
ASAR	**Alice Springs**	**26.12**	**162**	P **P**	**11 21 17.8**	**-1.2**
	0.3nm,0.5s,baz=345,slow=7.6,SNR=10					
	0.3nm,0.5s					
HILR	**Hailar Array B**	**48.37**	**355**	LR LR	11 47 11.6	
	comp=Z,29nm,20.3s,baz=155,slow=39					
MKAR	**Makanchi Array**	**58.84**	**327**	P **P**	**11 25 41.5**	**-1.1**
	0.2nm,0.5s,baz=113,slow=8.2,SNR=2.9					
	0.2nm,0.5s					

*IDC **04** 11:19:30.7±1.3,0°.34S×124°.77E,h0km,mb3.7/4, mbtmp3.7/4,MS2.9/4,Error ellipse: s-maj=181.4km s-min=21.0km az=63.0*
*DJA **04** 11:19:34.6±0.2,0°.S±3°.×12°.5E±°,h10km,M4.2/18,mB5.2/1, mb4.2/6,MLv4.2/18,Mw(mB)4.6/1*
ISC 04 11:19:37.1±1.0,**0°.14S**±0°.08×**125°.06E**±0°.08,**h53**km,**n23,** σ1**26/20,mb3.7/4,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
KMSI	**Cibinong**	**1.29**	**303**	P **Pn**	**11 19 57.3**	**-1.5**
SANI	**Sanana**	**2.11**	**154**	P **Pn**	**11 20 08.2**	**-1.8**
LUWI	**Luwuk**	**2.46**	**249**	P **Pn**	**11 20 15.8**	**+1.1**
MRSI	**Marisa**	**3.18**	**281**	P **Pn**	**11 20 22.9**	**-1.7**
APSI	**Ampana**	**3.50**	**257**	P **Pn**	**11 20 28.3**	**-0.7**
NLAI	**Namlea**	**3.69**	**147**	P **Pn**	**11 20 30.0**	**-1.6**
SGSI	**Sangihe**	**3.83**	**7**	P **Pn**	**11 20 32.6**	**-1.0**
AAI	**Ambon**	**4.71**	**138**	P **Pn**	**11 20 45.8**	**+0.1**
MSAI	**Masohi**	**5.01**	**130**	P **Pn**	**11 20 51.1**	**+1.4**
MPSI	**Mapaga**	**5.18**	**275**	P **Pn**	**11 20 51.5**	**-0.6**
BNDI	**Bandanaira**	**6.51**	**132**	P **Pn**	**11 21 10.9**	**+0.6**
	75nm,1.3s					
SPSI	**Sidrap Palu**	**6.51**	**234**	P **Pn**	**11 21 11.1**	**+0.8**
	0.1nm2µm21nm,0.7s					
BNSI	**Bone**	**6.51**	**229**	P **Pn**	**11 21 09.9**	**-0.4**
	0.1nm17nm,0.7s					
BKSI	**Bulukumba**	**7.13**	**224**	P **Pn**	**11 21 16.8**	**-2.0**
	0.1nm8.6nm,0.6s					
KAPI	**Kappang**	**7.18**	**228**	LR LR	11 24 27.4	
	comp=Z,39nm,20.0s,baz=72,slow=43					
DAV	**Davao City (W)**	**7.18**	**4**	LR LR	11 24 10.2	
	comp=Z,114nm,18.2s,baz=351,slow=38					
FAKI	**Fak Fak**	**7.70**	**111**	P **Pn**	**11 21 27.5**	**+0.9**
BATI	**Baumata**	**10.10**	**188**	LR LR	11 25 55.1	
	comp=Z,77nm,21.0s,baz=297,slow=39					
WRA	**Warramunga Arr**	**21.68**	**156**	P **P**	**11 24 22.1**	**-1.5**
	0.6nm,0.4s,baz=332,slow=12,SNR=8.6					
	0.6nm,0.4s					
ASAR	**Alice Springs**	**24.91**	**160**	P **P**	**11 24 55.4**	**+0.1**
	0.6nm,0.8s,baz=344,slow=7.5,SNR=8.3					
ASAR				PcP **PcP**	**11 28 31.1**	**+0.9**
	0.3nm,0.5s,baz=345,slow=2.3,SNR=5.9					
	0.6nm,0.8s					
DZM	**Mont Dzumac**	**45.82**	**121**	LR LR	11 47 19.1	
	comp=Z,32nm,21.7s,baz=242,slow=36					
MKAR	**Makanchi Array**	**59.83**	**327**	P **P**	**11 29 38.2**	**+1.1**
	1.0nm,0.4s,baz=125,slow=7.8,SNR=10					
	1.0nm,0.4s					
KURBB	**Kurchatov Arra**	**64.13**	**329**	P **P**	**11 30 06.9**	**+1.0**
	0.5nm,0.3s,baz=133,slow=6.8,SNR=4.2					
	0.5nm,0.3s					

*NOU **04** 11:24:10.5,34°.69S×178°.42W,h71km,MLv4.1/5,South of Kermadec Islands*
*WEL **04** 11:24:24.8±1.4,35°.2S±8°.×18°.0W±1°.3,h12km,M3.5/7, ML3.6/16,MLv3.5/7,Error ellipse: s-maj=17.1km s-min=10.8km az=91.1, confirmed*
ISC 04 11:24:24.2±4.3,**35°.2S**±0°.1×**179°.5W**±0°.2,**h43**km,**n25,** σ0**87/28,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.95**	**215**	P **Pn**	**11 25 08.0**	**-0.5**
MXZ	**Matakaoa Point**	**2.95**	**215**	P **Pn**	**11 25 07.8**	**-0.8**
WMGZ	**Waiomatatini S**	**3.12**	**211**	P **Pn**	**11 25 11.6**	**+0.8**
PKGZ	**Pakihiroa**	**3.30**	**215**	P **Pn**	**11 25 13.3**	**-0.1**
HAZ	**Te Kaha**	**3.36**	**219**	P **Pn**	**11 25 14.8**	**+0.6**
HAZ				S **Sn**	**11 25 53.4**	**+0.5**
PUZ	**Puketiti**	**3.40**	**211**	P **Pn**	**11 25 14.9**	**+0.2**
RUGZ	**Raukumara Rang**	**3.58**	**218**	P **Pn**	**11 25 17.9**	**+0.7**
TWGZ	**Tauwhareparae**	**3.60**	**213**	P **Pn**	**11 25 17.9**	**+0.4**
TWGZ				S **Sn**	**11 26 00.7**	**+1.8**
CNGZ	**Carnagh Statio**	**3.77**	**208**	P **Pn**	**11 25 20.5**	**+0.7**
MWZ	**Matawai**	**3.94**	**216**	P **Pn**	**11 25 22.0**	**-0.1**
URZ	**Urewera**	**4.09**	**220**	P **Pn**	**11 25 23.9**	**-0.2**
URZ	**Urewera**	**4.09**	**220**	P **Pn**	**11 25 24.0**	**-0.2**
URZ				S **Sn**	**11 26 08.3**	**-2.5**
RAGZ	**Rawiri**	**4.12**	**215**	P **Pn**	**11 25 24.9**	**+0.2**
RIGZ	**Rimuhau**	**4.14**	**211**	P **Pn**	**11 25 24.6**	**-0.2**
KUZ	**Kuaotunu**	**4.15**	**246**	P **Pn**	**11 25 25.6**	**+0.6**
KUZ	**Kuaotunu**	**4.15**	**246**	P **Pn**	**11 25 25.3**	**+0.4**
TGRZ	**Tauranga**	**4.24**	**232**	P **Pn**	**11 25 26.2**	**0.0**
SNGZ	**Shannon Statio**	**4.38**	**214**	P **Pn**	**11 25 28.4**	**+0.2**
MUGZ	**Murupara**	**4.43**	**221**	P **Pn**	**11 25 28.3**	**-0.6**
TOZ	**Tahuroa Road**	**4.74**	**236**	P **Pn**	**11 25 34.0**	**+0.9**
WCZ	**Waipu Caves**	**5.04**	**259**	P **Pn**	**11 25 38.5**	**+1.3**
BKZ	**Black Stump Fm**	**5.09**	**217**	P **Pn**	**11 25 37.3**	**-0.7**
BKZ	**Black Stump Fm**	**5.09**	**217**	P **Pn**	**11 25 36.9**	**-1.1**
OUZ	**Omahuta**	**5.62**	**268**	P **Pn**	**11 25 44.5**	**-0.7**
OUZ	**Omahuta**	**5.62**	**268**	P **Pn**	**11 25 44.4**	**-0.7**

*SOME **04** 11:25:22.3,44°.68N×82°.02E,h20km*
*NNC **04** 11:25:23.1±1.2,44°.72N×81°.91E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=15.2km s-min=3.8km az=120.0, Suspected Mining explosion.*
ISC 04 11:25:16.3±2.1,**44°.59N**±0°.08×**82°.2E**±0°.1,**h0**km,**n10,** σ0**68/14,5C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
KAPS	**Kapalarasan**	**2.16**	**290**	Pg **Pg**	**11 25 58.4**	**+0.8**
	11nm,0.1s					
KAPS				Lg Lg	11 26 24.3	
	44nm,0.2s					
MK31	**Makanchi Array**	**2.20**	**1**	Pn **Pg**	**11 25 59.5**	**+0.9**
	4.1nm,0.3s,baz=185,slow=13,SNR=218					
MK31				⇑Sn **Sg**	**11 26 27.1**	**0.0**
	2.2nm,0.2s,baz=193,slow=44,SNR=25					
MAKZ	**Makanchi**	**2.23**	**355**	⇑Pn **Pg**	**11 25 59.4**	**+0.5**
	3.1nm,0.3s					
MAKZ				⇑Sn **Sg**	**11 26 27.0**	**-0.8**
	13nm,0.3s					
PDGK	**Podgornoye**	**2.35**	**238**	⇓Pn **Pg**	**11 26 01.8**	**+0.5**
	2.6nm,0.3s					
PDGK				⇑Sn **Sg**	**11 26 32.0**	**+0.3**
	20nm,0.9s					
SHLS	**Shalkode**	**2.46**	**235**	Pg **Pb**	**11 26 01.5**	**0.0**
	21nm,0.2s					
SHLS				Lg Lg	11 26 29.2	
	26nm,0.3s					
SHLS	**Shalkode**	**2.46**	**235**	***e*P** **Pb**	**11 26 01.5**	**0.0**
	21nm,0.2s					
SHLS				*e*S **Sn**	**11 26 29.2**	**+0.6**
	26nm,0.3s					
BLB	**Baldybastay**	**2.74**	**261**	Pg **Pg**	**11 26 09.1**	**+0.3**
	13nm,0.2s					
BLB				Lg Lg	11 26 42.4	
	23nm,0.3s					
KPKS	**Kokpek**	**2.80**	**248**	Pg **Pg**	**11 26 09.8**	**0.0**
	0.4nm,0.2s					
KPKS				Lg Lg	11 26 43.7	
	13nm,0.4s					
SATY	**Saty**	**3.17**	**242**	Pg **Pg**	**11 26 17.3**	**+0.4**
	4.0nm,0.1s					
SATY				Lg Lg	11 26 56.3	
	17nm,0.3s					
AB31	**Akbulak array**	**15.91**	**295**	⇓Pg **P**	**11 29 03.8**	**-1.4**
	0.5nm,0.6s					
AB31				⇑Lg Lg	11 30 16.3	
	0.5nm,0.6s,baz=347,sl

AMPL	**Ampelaki**	**0.91**	**108**	P	**Pg**	**12 08 38.9 +0.4**
AMPL				S	**Sn**	**12 08 53.7 +1.8**
TETR	**Tetrakomo, Epi**	**0.91**	**81**	P	**Pn**	**12 08 39.1 -0.1**
TETR				S	**Sn**	**12 08 54.5 +2.3**
TETR	**Tetrakomo, Epi**	**0.91**	**81**	P	**Pn**	**12 08 39.2 -0.1**
TETR				S	**Sn**	**12 08 51.8 -0.5**
VLS	**Valsamata**	**1.10**	**160**	P	**Pn**	**12 08 41.7 -0.1**
VLS				S	**Sb**	**12 08 55.1 -0.6**
VLS	**Valsamata**	**1.10**	**160**	P	**Pn**	**12 08 41.6 -0.1**
VLS				S	**Sn**	**12 08 56.4 -0.2**
PSDA	**Pessada-Kefalo**	**1.15**	**161**	P	**Pn**	**12 08 42.0 -0.5**
PSDA				S	**Sg**	**12 08 58.7 +0.4**
PVO	**Paravola**	**1.25**	**118**	P	**Pb**	**12 08 44.5 +0.3**
PVO	**Paravola**	**1.25**	**118**	P	**Pb**	**12 08 44.7 +0.5**
PVO				S	**Sg**	**12 09 01.6 +0.2**
PENT	**Pentalofos**	**1.27**	**39**	P	**Pn**	**12 08 43.2 -1.0**
PENT				S	**Sb**	**12 09 00.6 -0.1**
EVR	**Evrytania**	**1.35**	**102**	P	**Pn**	**12 08 45.2 -0.2**
NEST	**Nestorio**	**1.41**	**31**	P	**Pn**	**12 08 44.9 -1.2**
NEST				S	**Sn**	**12 09 03.6 -0.8**
AXS	**Araxos**	**1.42**	**135**	P	**Pn**	**12 08 46.3 +0.2**
AXS				S	**Sg**	**12 09 06.0 -0.6**
THL	**Klokotos Trika**	**1.52**	**76**	P	**Pg**	**12 08 49.7 -0.5**
THL	**Klokotos Trika**	**1.52**	**76**	P	**Pn**	**12 08 47.0 -0.5**
THL				S	**Sb**	**12 09 08.0 +0.1**
ANX	**Ano Chora**	**1.54**	**113**	P	**Pb**	**12 08 48.9 -0.4**
ANX	**Ano Chora**	**1.54**	**113**	P	**Pn**	**12 08 48.0 0.0**
RLS	**Riolos of Patr**	**1.56**	**137**	P	**Pn**	**12 08 48.5 +0.3**
MAKR	**Makrakomi, Fth**	**1.58**	**96**	P	**Pb**	**12 08 50.5 +0.6**
MAKR	**Makrakomi, Fth**	**1.58**	**96**	P	**Pn**	**12 08 47.8 -0.7**
EFP	**Efpalio**	**1.61**	**119**	P	**Pn**	**12 08 49.1 +0.4**
DRO	**Drossia**	**1.77**	**134**	P	**Pn**	**12 08 51.0 -0.1**
KLV	**Kalavryta, Ach**	**1.98**	**125**	P	**Pn**	**12 08 53.9 0.0**
GUR	**Goura**	**2.16**	**125**	P	**Pn**	**12 08 56.0 -0.5**

DJA 04 12:11:37.1±0.3, 9°S×117°E±, h152km±4km, M3.8/14, mb3.9/6, MLv3.7/14, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.35**	**120**	P	Pn	12 11 59.4	+1.4
PLAI				S	Sn	12 12 15.5	+1.5
TWSI	**Taliwang, Sumb**	**0.59**	**261**	P	Pn	12 12 00.6	+1.5
TWSI				S	Sn	12 12 17.5	+1.6
WBSI	**Waikabubak, Su**	**2.14**	**118**	P	Pn	12 12 15.8	+1.8
WSI	**Waingapu**	**2.97**	**110**	P	Pn	12 12 24.1	-0.1
JAGI	**Jajag, Banyuwa**	**3.29**	**273**	P	Pn	12 12 27.4	-0.8
BASI	**Baing, Sumba**	**3.44**	**117**	P	Pn	12 12 29.9	-0.3
BSSI	**Bau Bau, Buton**	**3.90**	**50**	P	Pn	12 12 36.1	0.0
EDFI	**Ende, Flores**	**4.17**	**92**	P	Pn	12 12 38.7	-1.1
BKSI	**Bulukumba**	**4.23**	**39**	P	Pn	12 12 40.6	+0.2
PCJI	**Pacitan** 45nm,1.6s	**6.24**	**274**	P	Pn	12 13 06.8	-0.3
SOEI	**Soe**	**6.80**	**100**	P	Pn	12 13 14.1	-0.6
UGM	**Wanagama**	**6.91**	**276**	P	Pn	12 13 16.0	-0.1

*DNK **04** 12:12:55.7±3.5, 80°.26N×1°.62W, h10km, ML1.5*
*BER **04** 12:12:58.1±2.6, 80°.24N×1°.71W, h10km, mb(Pn)2.8, ML1.5(DNK), Confirmed Earthquake*
ISC 04 12:12:50.7±0.9, 80°.38N±0°.07×1°.57W±0°.04, h10km, n11, σ3°.22/20, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.67**	**305**	*i* P	**Pg**	**12 13 40.6**	**-1.1**
NOR				*e*S	**Sb**	**12 14 10.4**	**-0.7**
NOR	comp=Z,1.8nm,0.4s			IAML		12 14 13.1	
NOR	**Nord**	**2.67**	**305**	*i* P	**Pb**	**12 13 40.0**	**+1.6**
NOR				*i* S	**Sb**	**12 14 10.3**	**-0.8**
NOR	comp=Z,1.8nm,0.4s			IAML		12 14 13.1	
KBS	**Kingsbay**	**2.84**	**114**	*e*P	**Pb**	**12 13 41.4**	**+0.1**
KBS				*e*S	**Sn**	**12 14 11.2**	**+1.1**
KBS	comp=Z,3.1nm,0.8s			IAML		12 14 15.9	
KBS	**Kingsbay**	**2.84**	**114**	*e*P	**Pb**	**12 13 41.4**	**+0.1**
KBS				*i* S	**Sn**	**12 14 10.8**	**+0.7**
BRBB	**Barentsburg B**	**3.73**	**120**	*e*P	**Pb**	**12 13 56.0**	**-0.5**
BRBB				*e*S	**Sn**	**12 14 34.1**	**+1.9**
SPA0	**Spitsbergen Ar**	**4.00**	**114**	*e*P	**Pb**	**12 13 58.1**	**-3.0**
SPA0				*e*S	**Sn**	**12 14 40.0**	**+1.3**
SPA0	comp=Z,3.4nm,0.8s			IAML		12 14 49.7	
DAG	**Danmarks Havn**	**4.94**	**232**	*i* P	Pn	12 14 09.4	+4.6
DAG				*i* S	**Sn**	**12 15 01.4**	**-0.4**
DAG	comp=Z,2.1nm,0.3s			IAML		12 15 05.0	
DAG	**Danmarks Havn**	**4.94**	**232**	*i* P	Pn	12 14 09.4	+4.6
DAG				*i* S	**Sn**	**12 15 01.4**	**-0.4**
DAG	comp=Z,2.1nm,0.3s			IAML		12 15 05.0	
DBG	**Daneborg**	**7.29**	**223**	*i* P	**Pn**	**12 14 39.4**	**+2.4**
DBG				*e*S	**Sn**	**12 15 54.4**	**-5.3**
DBG	comp=Z,2.2nm,1.0s			IAML		12 16 15.4	
DBG	**Daneborg**	**7.29**	**223**	*i* P	**Pn**	**12 14 41.1**	**+4.1**
DBG				*e*S	**Sn**	**12 15 54.4**	**-5.3**
DBG	comp=Z,2.2nm,1.0s			IAML		12 16 15.4	
NEEM	**North Greenlan**	**9.68**	**278**	*i* P	**Pn**	**12 15 14.1**	**+4.2**
NEEM				*e*S	**Sn**	**12 16 50.9**	**-7.7**

*FUNV **04** 12:16:57.5, 10°.15N×70°.10W, h7km, MW3.4*
*RSNC **04** 12:17:01.1±0.6, 10°.N±3°×7°.0W±°, h55km±15km, M2.9, mB4.5, mb3.9, ML2.5, Mw(mB)3.6*
ISC 04 12:16:54.1±1.0, 10°.18N±0°.05×70°.16W±0°.04, h7km, n29, σ2°.20/42, 1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**1.37**	**200**	P	**Pb**	**12 17 21.4**	**+1.2**
SDV				S	**Sn**	**12 17 39.3**	**+1.0**
JACV	**Jacura**	**1.59**	**55**	*e*P	**Pn**	**12 17 24.9**	**+2.1**
JACV				*e*S	**Sn**	**12 17 44.5**	**+0.9**
TURV	**Turiamo**	**2.30**	**83**	*e*S	**Sn**	**12 18 01.4**	**+0.2**
URIC	**Uribia, Colomb**	**2.35**	**310**	P	**Pn**	**12 17 32.3**	**-0.9**
BAUV	**El Baul**	**2.43**	**120**	*e*P	**Pn**	**12 17 36.1**	**+1.9**
BAUV				*e*S	**Sn**	**12 18 04.7**	**+0.3**
BENV	**Beln**	**2.54**	**95**	*e*P	**Pn**	**12 17 38.2**	**+2.4**
CRJC	**Cerrejon, Guaj**	**2.80**	**288**	P	**Pn**	**12 17 39.5**	**0.0**
CRJC				S	**Sn**	**12 18 11.4**	**-2.2**
TACV	**Tcata**	**3.09**	**90**	*e*P	**Pn**	**12 17 45.5**	**+2.0**
OCAC	**Ocana**	**3.66**	**238**	P	**Pn**	**12 17 56.2**	**+4.8**
ARGC	**Ariguani, Magd**	**4.03**	**266**	P	**Pn**	**12 17 58.1**	**+1.7**
SMRC	**Santa Marta, M**	**4.11**	**284**	P	**Pn**	**12 17 58.8**	**+1.4**
CACV	**CAICARA DEL OR**	**4.42**	**126**	‖*e*P	**Pb**	**12 18 09.8**	**-2.4**
CACV				*e*S	**Sb**	**12 19 02.8**	**-3.0**
BARC	**Barichara**	**4.65**	**220**	P	**Pn**	**12 18 05.6**	**+0.5**
BRJC	**Barrancabermej**	**4.76**	**228**	P	**Pn**	**12 18 08.2**	**+1.8**
SJCC	**San Jacinto, C**	**4.95**	**267**	P	**Pn**	**12 18 11.0**	**+2.0**
RUSC	**La Rusia**	**5.15**	**214**	P	**Pn**	**12 18 13.6**	**+1.5**
RUSC				S	**Sn**	**12 19 11.9**	**-0.2**
PCRV	**Puerto La Cruz**	**5.44**	**90**	*e*P	**Pn**	**12 18 17.3**	**+1.5**
PTBC	**PUERTO BERRIO,**	**5.58**	**230**	P	**Pn**	**12 18 17.8**	**+0.1**
PTBC				S	**Sn**	**12 19 19.6**	**-2.5**
UREC	**San Jos de Ur** 4.0nm,0.9s	**5.83**	**246**	P	**Pn**	**12 18 23.3**	**+2.2**
SPBC	**San Pablo de B** 12nm,0.6s	**5.94**	**221**	P	**Pn**	**12 18 22.7**	**+0.1**
SPBC	12nm,0.6s			S	**Sn**	**12 19 29.9**	**-1.1**
CHIC	**Chingaza** 6.3nm,1.6s	**6.55**	**213**	P	**Pn**	**12 18 33.1**	**+1.7**
CHIC	6.3nm,1.6s			S	**Sn**	**12 19 44.2**	**-2.4**
HELC	**Santa Helena** 4.2nm,0.5s	**6.63**	**234**	P	**Pn**	**12 18 34.6**	**+2.2**
HELC	4.2nm,0.5s			S	**Sn**	**12 19 51.4**	**+3.0**
GUY2C	**Guyana, Caldas** 11nm,0.9s	**7.13**	**227**	P	**Pn**	**12 18 42.3**	**+2.9**
GUY2C	11nm,0.9s			S	**Sn**	**12 19 57.9**	**-3.0**
CBOC	**Ciudad Bolivar**	**7.21**	**234**	P	**Pn**	**12 18 44.4**	**+4.2**
PRAC	**Prado** 5.8nm,0.5s	**7.95**	**216**	P	**Pn**	**12 18 53.1**	**+2.8**
PRAC	5.8nm,0.5s			S	**Sn**	**12 20 19.1**	**-1.5**
ORTC	**Ortega, Tolima** 8.5nm,0.8s	**8.02**	**219**	P	**Pn**	**12 18 52.4**	**+1.2**
ORTC	8.5nm,0.8s			S	**Sn**	**12 20 17.6**	**-4.6**
URMC	**La Uribe, Meta** 5.6nm,1.1s	**8.06**	**212**	P	**Pn**	**12 18 53.5**	**+1.7**
MACC	**Macarena, Meta** 5.0nm,0.6s	**8.78**	**205**	P	**Pn**	**12 19 02.2**	**+0.5**
BCIP	**Isla Barro Col**	**9.59**	**265**	P	**Pn**	**12 19 11.8**	**-0.9**

IDC 04 12:56:29.4±2.3, 5°.60S×130°.49E, h0km, mb3.5/1, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=97.6km s-min=29.3km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=31,slow=5.9,SNR=1.4 1.2nm,0.7s	**13.29**	**200**	Pn	Pn	12 59 40.7	+1.2
WRA	**Warramunga Arr** baz=345,slow=9.5,SNR=1.6	**14.74**	**166**	Pn	Pn	12 59 59.8	+0.5
WRA	0.1nm,0.3s,baz=335,slow=22,SNR=2.0 0.1nm,0.3s			Sn	Sn	13 02 28.9	-15
ASAR	**Alice Springs** 0.1nm,0.3s,baz=351,slow=11,SNR=14 0.3nm,0.4s	**18.26**	**170**	P	Pn	13 00 43.4	-1.0
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=116,slow=6.6,SNR=4.8 0.2nm,0.4s	**67.33**	**326**	P	P	13 07 26.3	0.0

*NOU **04** 12:57:11.2, 41°.32S×172°.73E, h136km, MLv3.5/18, South Island, New Zealand*
*WEL **04** 12:57:13.1±0.9, 41°.5±6°×17°.3E±°, h127km±6km, M3.5/36, MLv3.5/36, Error ellipse: s-maj=10.1km s-min=8.0km az=105.3, confirmed*
ISC 04 12:57:09.7±1.4, 41°.28S±0°.04×172°.76E±0°.04, h158km±7km, n112, σ1°.15/119, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRNZ	**Matariki Terra**	**0.12**	**180**	P	**Pn**	**12 57 31.6**	**+0.8**
MRNZ				S	**Sn**	**12 57 45.7**	**-1.4**
MATW	**Matariki Wadsw**	**0.15**	**195**	P	**Pn**	**12 57 31.7**	**+0.8**
MATW				S	**Sn**	**12 57 45.6**	**-1.6**
MOTS	**Motueka DOC wo**	**0.25**	**50**	P	**Pn**	**12 57 31.6**	**+0.6**
MOTS				S	**Sn**	**12 57 46.3**	**-1.0**
TKNZ	**Takaka Hill**	**0.29**	**32**	P	**Pn**	**12 57 31.7**	**+0.5**
TKNZ				S	**Sn**	**12 57 46.4**	**-1.2**
BTWS	**Nelson Brightw**	**0.30**	**111**	P	**Pn**	**12 57 32.2**	**+1.1**
BTWS				S	**Sn**	**12 57 47.2**	**-0.4**
NLSS	**Nelson Nelmac**	**0.39**	**88**	P	**Pn**	**12 57 32.4**	**+0.9**
KLDS	**Kikiwa Line De**	**0.40**	**167**	P	**Pn**	**12 57 32.7**	**+1.1**
TSFS	**Takaka Scotts**	**0.44**	**6**	P	**Pn**	**12 57 32.5**	**+0.8**
TSFS				S	**Sn**	**12 57 47.6**	**-0.8**
NNZ	**Nelson**	**0.47**	**82**	P	**Pn**	**12 57 32.4**	**+0.6**
KASC	**Karamea School**	**0.48**	**274**	P	**Pn**	**12 57 32.9**	**+1.1**
QRZ	**Quartz Range**	**0.49**	**339**	P	**Pn**	**12 57 32.4**	**+0.4**
QRZ	**Quartz Range**	**0.49**	**339**	S	**Sn**	**12 57 47.6**	**-1.3**
QRZ	**Quartz Range**	**0.49**	**339**	P	**Pn**	**12 57 32.6**	**+0.6**
QRZ				S	**Sn**	**12 57 47.1**	**-1.9**
THZ	**Tophouse**	**0.49**	**167**	P	**Pn**	**12 57 33.1**	**+1.1**
WVFS	**Wairau Valley**	**0.56**	**127**	P	**Pn**	**12 57 33.7**	**+1.4**
MCASZ	**Murchison**	**0.61**	**212**	P	**Pn**	**12 57 34.0**	**+1.5**
KHLK	**Kaihoka Lakes**	**0.73**	**351**	P	**Pn**	**12 57 34.1**	**+0.8**
INGS	**Inangahua Fire**	**0.83**	**226**	P	**Pn**	**12 57 35.0**	**+1.1**
DSZ	**Denniston Nort**	**0.85**	**237**	P	**Pn**	**12 57 35.1**	**+0.9**
MOLW	**Molesworth Sta**	**0.89**	**155**	P	**Pn**	**12 57 36.3**	**+1.8**
TUWZ	**Tuamarina**	**0.90**	**107**	P	**Pn**	**12 57 36.4**	**+1.9**
BSWZ	**Blackbirch Sta**	**0.94**	**118**	P	**Pn**	**12 57 35.9**	**+1.2**
DUWZ	**D'Urville Isla**	**1.00**	**62**	P	**Pn**	**12 57 36.3**	**+1.0**
TCW	**Tory Channel**	**1.15**	**87**	P	**Pn**	**12 57 37.7**	**+1.2**
KHZ	**Kahutara**	**1.27**	**153**	P	**Sn**	**12 57 58.1**	**-1.0**
KHZ	**Kahutara**	**1.27**	**153**	P	**Pn**	**12 57 38.9**	**+1.3**
KHZ	**Kahutara**	**1.27**	**153**	P	**Pn**	**12 57 39.2**	**+1.6**
SNZO	**South Karori**	**1.47**	**92**	P	**Pn**	**12 57 40.1**	**+0.6**
SNZO	**South Karori**	**1.47**	**92**	P	**Sn**	**12 58 01.9**	**-0.5**
WEL	**Wellington**	**1.52**	**91**	P	**Pn**	**12 57 40.9**	**+0.9**
LTZ	**Lake Taylor**	**1.54**	**193**	P	**Pn**	**12 57 41.9**	**+1.6**
BHW	**Baring Head**	**1.60**	**95**	P	**Pn**	**12 57 41.6**	**+0.7**
KIW	**Kapiti Island**	**1.68**	**76**	P	**Pn**	**12 57 42.6**	**+0.8**
GVZ	**Greta Valley S**	**1.70**	**173**	P	**Pn**	**12 57 43.8**	**+1.9**
INZ	**Inchbonnie**	**1.74**	**214**	P	**Pn**	**12 57 43.7**	**+1.3**
CAW	**Cannon Point**	**1.75**	**85**	P	**Pn**	**12 57 43.2**	**+0.7**
MSWZ	**Moikau Station**	**1.88**	**95**	P	**Pn**	**12 57 44.6**	**+0.7**
OGWZ	**Otaki Gorge**	**1.88**	**76**	P	**Pn**	**12 57 44.8**	**+0.8**
AMCZ	**Amberley**	**1.89**	**122**	P	**Pn**	**12 57 45.7**	**+1.7**
PLWZ	**Palliser**	**1.90**	**99**	P	**Pn**	**12 57 45.0**	**+0.8**
PAWZ	**Paruwai Farm**	**2.01**	**94**	P	**Pn**	**12 57 46.2**	**+0.7**
NMEZ	**Namu Road**	**2.06**	**25**	P	**Pn**	**12 57 47.4**	**+1.5**
MTW	**Mount Morrison**	**2.07**	**87**	P	**Pn**	**12 57 46.6**	**+0.5**
OXZ	**Oxford**	**2.11**	**194**	P	**Pn**	**12 57 47.7**	**+1.1**
HOWZ	**Holdsworth Sta**	**2.12**	**80**	P	**Pn**	**12 57 47.2**	**+0.5**
NBEZ	**Newall Road No**	**2.19**	**23**	P	**Pn**	**12 57 49.0**	**+1.5**
KHEZ	**Kahui Hut**	**2.21**	**26**	P	**Pn**	**12 57 49.7**	**+1.9**
KHEZ	**Kahui Hut**	**2.21**	**26**	S	**Sn**	**12 58 17.7**	**+0.5**
KHEZ	**Kahui Hut**	**2.21**	**26**	P	**Pn**	**12 57 49.3**	**+1.5**
TRWZ	**Traveller**	**2.21**	**94**	P	**Pn**	**12 57 48.6**	**+0.8**
LREZ	**Lake Rotokare**	**2.21**	**35**	P	**Pn**	**12 57 49.6**	**+1.8**
PREZ	**Palmer Road**	**2.21**	**29**	P	**Pn**	**12 57 49.2**	**+1.3**
OHWZ	**Ohakea**	**2.22**	**62**	P	**Pn**	**12 57 49.1**	**+1.2**
MRZ	**Mangatainoka R**	**2.23**	**75**	P	**Pn**	**12 57 48.2**	**+0.3**
NEZ	**North Egmont**	**2.26**	**27**	P	**Pn**	**12 57 50.3**	**+1.9**
WAZ	**Wanganui**	**2.28**	**49**	P	**Pn**	**12 57 50.5**	**+1.8**
PKE	**Pukeiti**	**2.29**	**25**	P	**Pn**	**12 57 50.2**	**+1.4**
WVZ	**Waitaha Valley**	**2.34**	**219**	P	**Pn**	**12 57 50.1**	**+1.0**
TMWZ	**Te Maipa**	**2.37**	**87**	P	**Pn**	**12 57 50.3**	**+0.7**
MHCZ	**Mount Hutt**	**2.41**	**201**	P	**Pn**	**12 57 51.1**	**+0.9**
TIWZ	**Tintock**	**2.42**	**79**	P	**Pn**	**12 57 50.7**	**+0.5**
MQZ	**McQueen's Vall**	**2.42**	**182**	P	**Pn**	**12 57 51.2**	**+1.0**
OKCZ	**Okains Bay**	**2.45**	**175**	P	**Pn**	**12 57 52.1**	**+1.5**
POWZ	**Post Office Ro**	**2.45**	**70**	P	**Pn**	**12 57 50.9**	**+0.2**
RACZ	**Rakaia**	**2.48**	**190**	P	**Pn**	**12 57 52.2**	**+1.3**
PRWZ	**Pori Road**	**2.54**	**74**	P	**Pn**	**12 57 52.3**	**+0.6**
AKCZ	**Akaroa Harbour**	**2.59**	**178**	P	**Pn**	**12 57 53.5**	**+1.2**
VRZ	**Vera Road**	**2.65**	**36**	P	**Pn**	**12 57 54.0**	**+1.0**
BFZ	**Birch Farm**	**2.71**	**78**	P	**Pn**	**12 57 54.2**	**+0.4**
BFZ	**Birch Farm**	**2.71**	**78**	P	**Sn**	**12 58 26.7**	**-1.1**
BFZ	**Birch Farm**	**2.71**	**78**	P	**Pn**	**12 57 54.1**	**+0.4**
TSZ	**Takapari Road**	**2.73**	**64**	P	**Pn**	**12 57 54.2**	**+0.2**
RPZ	**Rata Peaks**	**2.74**	**207**	P	**Pn**	**12 57 54.9**	**+0.9**
RPZ	**Rata Peaks**	**2.74**	**207**	S	**Sn**	**12 58 27.2**	**-1.9**
RPZ	**Rata Peaks**	**2.74**	**207**	P	**Pn**	**12 57 55.0**	**+0.9**
WACZ	**Wakanui South**	**2.74**	**194**	P	**Pn**	**12 57 55.4**	**+1.3**
PKVZ	**Pokaka**	**2.81**	**46**	P	**Pn**	**12 57 55.9**	**+0.8**
ARCZ	**Arundel**	**2.91**	**203**	P	**Pn**	**12 57 56.9**	**+0.7**
PNHZ	**Pukenui**	**2.96**	**64**	P	**Pn**	**12 57 56.9**	**0.0**
MOVZ	**Moawhango**	**2.96**	**52**	P	**Pn**	**12 57 57.4**	**+0.5**
WPHZ	**Waipukurau**	**3.05**	**68**	P	**Pn**	**12 57 58.2**	**+0.1**
NNVZ	**North Ngauruho**	**3.07**	**46**	P	**Pn**	**12 57 59.5**	**+1.1**
PRHZ	**Porangahau**	**3.12**	**72**	P	**Pn**	**12 57 59.1**	**+0.3**
FOZ	**Fox Glacier**	**3.13**	**223**	P	**Pn**	**12 57 59.7**	**+0.8**
HIZ	**Hauiti**	**3.20**	**31**	P	**Pn**	**12 58 00.5**	**+0.5**
KRHZ	**Kereru**	**3.21**	**60**	P	**Pn**	**12 57 59.9**	**-0.1**
TMZ	**Timaru**	**3.35**	**202**	P	**Pn**	**12 58 02.8**	**+1.0**
PXZ	**Pawanui**	**3.36**	**70**	P	**Pn**	**12 58 02.2**	**+0.3**
KAHZ	**Kahuranaki**	**3.47**	**66**	P	**Pn**	**12 58 03.7**	**+0.3**
BKZ	**Black Stump Fm**	**3.56**	**55**	P	**Pn**	**12 58 04.6**	**+0.1**
BKZ	**Black Stump Fm**	**3.56**	**55**	P	**Pn**	**12 58 04.5**	**+0.1**
LBZ	**Lake Benmore**	**3.63**	**211**	P	**Pn**	**12 58 06.1**	**+0.7**
TLZ	**Tolley Road**	**3.65**	**37**	P	**Pn**	**12 58 06.6**	**+1.0**
ARHZ	**Aropaoanui**	**3.82**	**59**	P	**Pn**	**12 58 06.6**	**-1.2**
JCZ	**Jackson Bay**	**4.04**	**225**	P	**Pn**	**12 58 11.4**	**+0.7**
JCZ	**Jackson Bay**	**4.04**	**225**	S	**Sn**	**12 58 56.4**	**-1.9**
JCZ	**Jackson Bay**	**4.04**	**225**	P	**Pn**	**12 58 11.5**	**+0.8**
ODZ	**Otahua Downs**	**4.06**	**202**	P	**Pn**	**12 58 12.0**	**+1.1**
ODZ	**Otahua Downs**	**4.06**	**202**	S	**Sn**	**12 58 57.5**	**-1.2**
ODZ	**Otahua Downs**	**4.06**	**202**	P	**Pn**	**12 58 11.9**	**+1.1**
WKZ	**Wanaka**	**4.48**	**216**	P	**Pn**	**12 58 16.5**	**+0.2**
MHGZ	**Mahia Peninsul**	**4.48**	**63**	P	**Pn**	**12 58 16.0**	**-0.4**
RIGZ	**Rimuhau**	**4.63**	**58**	P	**Pn**	**12 58 17.7**	**-0.7**
EAZ	**Earnscleugh**	**4.68**	**211**	P	**Pn**	**12 58 19.0**	**0.0**
MWZ	**Matawai**	**4.71**	**53**	P	**Pn**	**12 58 19.4**	**-0.1**
HHSZ	**Highcliff Hill**	**4.86**	**198**	P	**Pn**	**12 58 23.0**	**+1.7**
WCZ	**Waipu Caves**	**5.48**	**14**	P	**Pn**	**12 58 31.4**	**+1.8**
WMGZ	**Waiomatatini S**	**5.58**	**53**	P	**Pn**	**12 58 29.6**	**-1.2**
WHZ	**Wether Hill Ro**	**5.78**	**216**	P	**Pn**	**12 58 33.9**	**+0.4**
OUZ	**Omahuta**	**6.09**	**6**	P	**Pn**	**12 58 39.8**	**+2.1**
OUZ	**Omahuta**	**6.09**	**6**	P	**Pn**	**12 58 39.8**	**+2.1**
CTZ	**Chatham Island**	**8.22**	**111**	P	**Pn**	**12 59 09.3**	**+3.4**

*VAO **04** 13:03:34.1±0.3, 21°.43S×70°.54W, h10km, mb5.1*
*SJA **04** 13:03:36.9±0.5, 21°.40S×70°.57W, h34km±4km, ML5.0, MW5.1*
*NEIC **04** 13:03:39.6, 21°.41S×70°.50W, h31km*
*NEIC **04** 13:03:39.6, 21°.41S×70°.50W, h31km*
*NEIC **04** 13:03:39.6, 21°.31S×70°.50W, h30km, Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^{16}Nm; M_{rr}2.40; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-3.34; $M_{r\theta}$2.49; $M_{\theta\phi}$-0.92; $M_{r\phi}$-5.25; Fault plane solution: $M_0$6.60000×10^{16} NP1:ϕ_s40.82000°, δ21.87000°, λ.149.34000°. NP2:ϕ_s159.63000°, δ79.05000°, λ.70.95000°. Principal axes: T 6.6983, Plg52.0000°, Azm47.0000°; N -0.2030, Plg19.0000°, Azm163.0000°; P -6.4954, Plg31.0000°, Azm265.0000°;*
*BJI **04** 13:03:39.0, 21°.30S×70°.63W, h30km, mB5.1/2, Ms5.2/8, Ms7 5.2/13*
*NEIC **04** 13:03:39.6±1.3, 21°.41S±0°.04×70°.49W±0°.07, h31km±4km, mb5.3/267, Mwb5.3/14, Mwr5.1/57, Mww5.1/15, Mwr5.1(GUC), Error ellipse: s-maj=8.9km s-min=5.3km az=90.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.57; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-2.99; $M_{r\theta}$0.56; $M_{\theta\phi}$0.30; $M_{r\phi}$-4.90; Fault plane solution: $M_0$5.68000×10^{16} NP1: ϕ_s173.57000°, δ75.24000°, λ.89.14000°. NP2: ϕ_s356.92000°, δ14.78000°, λ.93.24000°. Principal axes: T 5.4471, Plg60.0000°, Azm82.0000°; N 0.4475, Plg1.0000°, Azm174.0000°; P -5.8947, Plg30.0000°, Azm264.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}0.91; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-0.64; $M_{r\theta}$0.45; $M_{\theta\phi}$-0.12; $M_{r\phi}$-0.94; Fault plane solution: $M_0$1.33000×10^{17} NP1: ϕ_s16.92000°, δ20.94000°, λ.120.63000°. NP2: ϕ_s164.55000°, δ72.09000°, λ.78.97000°. Principal axes: T 1.4748, Plg61.0000°, Azm58.0000°; N -0.3787, Plg10.0000°, Azm168.0000°; P -1.0961, Plg26.0000°, Azm263.0000°;*
*NEIC **04** 13:03:40.1, 21°.41S×70°.45W, h29km*
*GUC **04** 13:03:40.7±0.7, 21°.39S×70°.44W, h42km±3km, ML4.9*
*MOS **04** 13:03:41.7±1.0, 21°.47S×70°.16W, h48km, mb5.5/14, Error ellipse: s-maj=14.0km s-min=9.7km az=103.6*
*IDC **04** 13:03:41.0±0.5, 21°.37S×70°.21W, h37km±3km, mb4.6/11, mbtmp4.8/14, ML4.4/3, MS4.4/47, Error ellipse: s-maj=18.0km s-min=14.0km az=72.0*
*GCMT **04** 13:03:44.6±0.1, 21°.36S±0°.01×70°.34W±0°.01, h25km, MW5.4/121, Moment Tensor Solution. s93,c140; s121,c201; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.21±.01; $M_{\theta\theta}$0.13±.01; $M_{\phi\phi}$-0.34±.01; $M_{r\theta}$0.25±.02; $M_{\theta\phi}$0.04±.01; $M_{r\phi}$-1.62±.02; Best double couple: $M_0$1.66200×10^{17} NP1:ϕ_s5.00000°, δ5.00000°, λ.103.00000°. NP2:ϕ_s171.00000°, δ85.00000°, λ.89.00000°. Principal axes: T 1.5990, Plg50.0000°, Azm80.0000°; N 0.1270, Plg1.0000°, Azm171.0000°; P -1.7260, Plg40.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 04 13:03:39.1±0.3, 21°.39S±0°.02×70°.40W±0°.04, h28km±2km, h29km:pP-P, n497, σ1°.50/381, mb5.3/150, MS4.5/47, 30C-15D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.48**	**81**		**Pn**	**13 03 51.0**	**+0.9**
PB02	**IPOC Station P**	**0.48**	**81**	‖*i*P	**Pn**	**13 03 51.0**	**+0.9**
PB02				*e*S	**Sn**	**13 03 58.9**	**+1.3**
PB02	**IPOC Station P**	**0.48**	**81**	*e*P	**Pn**	**13 03 50.3**	**+0.2**
PB02	comp=Z,116μm,0.3s			IAML		13 04 03.2	
PATCX	**Punta Patache**	**0.61**	**22**		**

PB10 IPOC Station P 2.12 184 Pn 13 04 12.8 +0.2
PB10 IPOC Station P 2.12 184⇓ *e*P Pn 13 04 12.5 -0.1
PB10 IPOC Station P 2.12 184 *e*P Pn 13 04 12.1 -0.5
PB10 IAML 13 04 55.5
comp=Z,5µm,0.6s
AF01 San Pedro de A 2.58 127 *e*P Pb 13 04 23.6 -1.2
AF01 San Pedro de A 2.58 127 *e*P Pb 13 04 23.2 -1.6
PB12 IPOC Station P 2.76 1 Pn 13 04 22.2 +0.6
PB12 IPOC Station P 2.76 1 *e*P Pn 13 04 22.0 +0.4
PB12 IPOC Station P 2.76 1 *e*P Pn 13 04 21.6 0.0
PB12 IAML 13 05 17.3
comp=Z,4µm,0.6s
AP01 Chacalluta 3.01 1 Pn Pn 13 04 25.9 +1.1
AP01 Chacalluta 3.01 1 *e*P Pn 13 04 26.5 +1.6
AP01 Chacalluta 3.01 1 *e*P Pn 13 04 26.4 +1.6
AP01 IAML 13 05 30.9
comp=Z,6µm,0.8s
PB16 IPOC Station P 3.15 16 Pn 13 04 28.3 +0.9
PB16 IPOC Station P 3.15 16⇑ *e*P Pn 13 04 28.8 +1.4
PB16 IPOC Station P 3.15 16 *e*P Pn 13 04 28.3 +0.9
PB16 IAML 13 05 22.7
comp=Z,3µm,1.6s
PB14 IPOC Station P 3.22 180 Pn 13 04 27.6 -0.4
PB14 IPOC Station P 3.22 180 *e*P Pn 13 04 27.2 -0.9
PB14 IAML 13 05 31.7
comp=Z,4µm,1.0s
GO02 Mina Guanaco 3.83 169 Pn 13 04 36.9 +0.6
GO02 Mina Guanaco 3.83 169⇑ *e*P Pn 13 04 37.5 +1.1
GO02 Mina Guanaco 3.83 169 *e*P Pn 13 04 37.0 +0.6
GO02 IAML 13 05 42.3
comp=Z,7µm,1.3s
PB18 Visviri 3.88 13 *e*P Pn 13 04 41.5 +4.2
YJA Yavi 4.61 101 *e*P Pn 13 04 52.6 +5.3
SALTA 4.69 128⇓ *e*P Pn 13 04 52.2 +3.8
AC01 Pan de Azucar 4.74 182 Pn 13 04 47.1 -1.5
AC01 Pan de Azucar 4.74 182 *e*P Pn 13 04 47.1 -1.5
AC01 Pan de Azucar 4.74 182 *e*P Pn 13 04 46.4 -2.2
AC01 IAML 13 06 16.2
comp=Z,2µm,1.2s
LPAZ La Paz 5.51 23 Pn Pn 13 05 02.8 +2.9
LPAZ La Paz 5.51 23 Pn Pn 13 05 05.8 +5.9
comp=Z,10nm,0.3s,baz=200,slow=4.3,SNR=150
LPAZ LR LR 13 06 51.2
comp=Z,756nm,18.8s,baz=210,slow=35
LPAZ La Paz 5.51 23 P Pn 13 05 02.8 +2.9
LPAZ La Paz 5.51 23 *e*P Pn 13 04 57.8 -2.1
AC02 Maricunga 5.54 168 Pn 13 05 00.6 +0.4
SLA San Lorenzo 5.60 127⇑ *e*P Pn 13 05 05.2 +4.6
AC06 Mina Casimiro 5.94 180 Pn 13 05 03.8 -1.4
GO03 Copiapo 6.18 179 Pn 13 05 07.6 -0.9
AC04 Llanos de Chal 6.81 185 Pn 13 05 14.1 -3.0
LCO Las Campanas 7.59 182 Pn 13 05 25.9 -2.2
LCO Las Campanas 7.59 182 *e*P Pn 13 05 27.7 -0.4
ZON Zonda 10.23 172 Pn 13 06 02.4 -1.6
ZON Zonda 10.23 172 P Pn 13 06 02.4 -1.6
SIV San Ignacio 10.34 60 Pn Pn 13 06 06.1 +0.4
comp=Z,0.6nm,0.3s,baz=245,slow=10.0,SNR=60
comp=Z,23nm,0.5s
CFA Coronel Fontan 10.35 170 Pn Pn 13 06 06.1 +0.3
comp=Z,0.6nm,0.3s,baz=14,slow=14,SNR=7.9
CFA Sn **Sn 13 07 52.8 -8.1**
comp=Z,0.8nm,0.3s,baz=38,slow=18,SNR=1.4
CFA LR LR 13 10 25.3
comp=Z,1µm,20.5s,baz=329,slow=39
comp=Z,1.9nm,0.3s
NNA Nana 11.20 326 LR LR 13 10 28.0
comp=Z,2µm,21.3s,baz=158,slow=36
MT02 Curacav 11.84 183 Pn 13 06 22.0 -4.1
MURT Porto Murtinho 11.91 94 *e*P Pn 13 06 25.1 -2.0
PTLB Pontes e Lacer 12.21 63 Pn 13 06 30.9 -0.3
PTLB Pontes e Lacer 12.21 63 *e*P Pn 13 06 31.5 +0.3
BDQN Bodoquena, MS 12.79 88 *e*P Pn 13 06 37.6 -1.6
VILB Vilhena 12.86 51 Pn 13 06 40.9 +0.8
VILB Vilhena 12.86 51 *e*P Pn 13 06 39.1 -1.0
CPUP Villa Florida 12.93 115 Pn 13 06 41.2 +0.2
CPUP Villa Florida 12.93 115 Pn Pn 13 06 43.0 +2.1
comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=16
CPUP LR LR 13 12 44.1
comp=Z,954nm,19.9s,baz=152,slow=42
CPUP Villa Florida 12.93 115 P Pn 13 06 41.2 +0.2
CPUP Villa Florida 12.93 115 *e*P Pn 13 06 40.7 -0.3
BO02 Sierra Bellavi 13.36 181 Pn 13 06 46.5 -0.3
CZSB Cruzeiro do Su 13.76 350 *e*P Pn 13 06 50.0 -2.5
AQDB Aquidauana 13.77 89 Pn 13 06 51.8 -0.7
AQDB Aquidauana 13.77 89 *e*P Pn 13 06 51.8 -0.7
H03N1 Juan Fernandez 14.17 210 Pn Pn 13 06 55.9 -1.8
baz=110,slow=14
H03N1 T T 13 21 20.1
baz=35,slow=72,SNR=1035
H03N2 Juan Fernandez 14.18 210 Pn Pn 13 06 55.8 -2.0
baz=110,slow=14
H03N2 T T 13 21 18.4
baz=35,slow=72,SNR=1546
H03N3 Juan Fernandez 14.19 210 Pn Pn 13 06 56.0 -2.0
baz=110,slow=14
H03N3 T T 13 21 20.8
baz=35,slow=72,SNR=1195
AMBA Amambai (Brazi 14.36 99 *e*P Pn 13 06 58.7 -1.9
H03S3 Juan Fernandez 14.49 209 Pn Pn 13 06 59.8 -2.2
baz=113,slow=76
H03S1 Juan Fernandez 14.51 209 Pn Pn 13 06 59.9 -2.3
baz=113,slow=76
H03S2 Juan Fernandez 14.51 210 Pn Pn 13 07 00.2 -2.0
baz=113,slow=76
SALV Santo Antonio 14.97 71 *e*P Pn 13 07 08.9 +0.2
PSAL Palomas, Salto 14.98 133 *e*P Pn 13 07 06.9 -2.0
PP1B Ponte de Pedra 15.11 78 *e*P Pn 13 07 10.5 -0.2
PDRB Porto dos Gac 16.31 56 *e*P Pn 13 07 23.9 -2.3
C2SB Chapadao do Su 16.70 84 *e*P Pn 13 07 31.4 +0.2
PTGB Pitanga 17.20 105 *e*P Pn 13 07 37.5 0.0
CLDB Colider 17.48 56 *e*P Pn 13 07 40.1 -0.9
ITAB Concordia 17.63 113 Pn Pn 13 07 41.7 -1.0
ITAB Concordia 17.63 113 *e*P Pn 13 07 42.2 -0.6
CPSB Cacapava Do Su 17.69 124 *e*P Pn 13 07 41.0 -2.4
LDASE Londrina, Braz 17.94 100 *e*P Pn 13 07 45.7 -1.0
TRQA Tornquist 18.13 158 P P 13 07 49.0 +0.1
TRQA Tornquist 18.13 158 P P 13 07 49.1 +0.1
TRQA pmax pmax
comp=Z,68nm,1.2s
TRQA Tornquist 18.13 158 *e*P Pn 13 07 46.2 -2.6
PLTB Pedras Altas 18.21 128 P Pn 13 07 46.6 -3.2
PLTB Pedras Altas 18.21 128 *e*P Pn 13 07 46.5 -3.4
ARAG Araguaiana, MT 18.50 75 *e*P P 13 07 52.5 -0.7
TEFE Tefe 18.64 18 *e*P P 13 07 53.3 -1.4
ITRB Iturama 18.84 88 *e*P P 13 07 56.0 -1.0
PLCA Paso Flores 19.28 180 P P 13 08 02.1 +0.5
PLCA Paso Flores 19.28 180 P Pn 13 08 03.6 +0.8
comp=Z,0.4nm,0.3s,baz=344,slow=12,SNR=8.4
PLCA LR LR 13 15 40.7
comp=Z,726nm,19.2s,baz=3.5,slow=37
comp=Z,30nm,1.0s
PLCA Paso Flores 19.28 180 *e*P P 13 07 59.9 -1.8
MCRA Macar, Loja 19.30 330 P Pn 13 08 02.8 -0.3
comp=Z,721nmcomp=Z,15nm,1.1s
CNLB Canela 19.33 118 *e*P P 13 08 01.1 -1.2
FRTB Fartura 19.37 100 *e*P P 13 08 02.4 -0.3
MAJ01 Sao Joao Batis 20.37 111 *e*P P 13 08 12.4 -1.1
NPGB Novo Progresso 20.37 48 *e*P P 13 08 10.7 -2.9
BB19B Bebedouro 20.39 93 *e*P P 13 08 12.4 -1.5
MACA Manacapuru-AM 20.44 29 P P 13 08 13.5 -0.8
MACA Manacapuru-AM 20.44 29 *e*P P 13 08 13.0 -1.3
SNDB Serra Nova Dou 20.54 66 *e*P P 13 08 12.9 -2.6
COHC Cochancay 20.69 334 P P 13 08 15.9 -1.1
COHC Cochancay 20.69 334 P Pn 13 08 20.3 +0.8
comp=Z,1µmcomp=Z,47nm,1.0s
LL01 San Ignacio de 20.99 184 P P 13 08 19.9 -0.2
LL01 IAmb IAmb 13 08 32.4
comp=Z,186nm,1.2s
IPMB Ipameri, GO 21.16 85 *e*P P 13 08 20.3 -1.9
RCLB Rio Claro- Sao 21.24 97 *e*P P 13 08 20.9 -2.2
SPB Sao Paulo 21.33 100 P P 13 08 22.6 -1.4
SPB IAmb IAmb 13 08 27.4
comp=Z,102nm,1.1s
SPB Sao Paulo 21.33 100 *e*P P 13 08 22.5 -1.4
SGC2 Sao Gabriel da 21.37 9 P P 13 08 23.5 -0.9
comp=Z,3µmcomp=Z,211nm,1.5s
PET01 Itanhaem-SP 21.50 102 *e*P P 13 08 25.8 0.0
VAO Valinhos 21.76 99 P P 13 08 26.5 -2.1
VAO IAmb IAmb 13 08 31.9
comp=Z,243nm,1.5s
VAO Valinhos 21.76 99 *e*P P 13 08 27.2 -1.4
LL02 Futaleuf 21.77 183 P P 13 08 27.0 -1.5
PTLC Puerto Leguiza 21.86 348 P P 13 08 26.0 -3.6

BDFB Brasilia 21.98 79 P P 13 08 29.2 -1.8
BDFB IAmb IAmb 13 08 46.1
comp=Z,166nm,1.5s
BDFB Brasilia 21.98 79 P P 13 08 31.2 +0.2
comp=Z,30nm,0.5s,baz=243,slow=12,SNR=19
comp=Z,30nm,0.5s
ITTB Itaituba 22.12 42 *e*P P 13 08 29.6 -2.8
PMNB Patos De Minas 22.70 87 *e*P P 13 08 37.0 -1.7
BONI La Bonita 22.80 341 P P 13 08 43.8 +3.8
comp=Z,1µmcomp=Z,58nm,1.1s
OTAV Otavalo 22.89 339 *e*P P 13 08 38.2 -2.9
OTAV Otavalo 22.89 339 P P 13 08 47.7 +6.6
comp=Z,32nm,1.6s
PARB Paraibuna 22.99 100 *e*P P 13 08 39.8 -2.0
TULM Tulcn-Chalpat 23.13 341 P P 13 08 53.9 +10
comp=Z,2µmcomp=Z,73nm,0.8s
FLOC Florencia 23.40 347 P P 13 08 45.2 -0.7
FLOC IAmb IAmb 13 09 01.5
comp=Z,100nm,1.1s
FLOC Florencia 23.40 347 P P 13 08 47.3 +1.4
comp=Z,2µmcomp=Z,106nm,1.6s
GCUF Volcan Galeras 23.48 342 P P 13 08 51.8 +4.7
comp=Z,2µmcomp=Z,101nm,1.0s
MACC Macarena, Meta 23.63 351 P P 13 08 46.6 -1.5
comp=Z,12nm,0.7s
BSCB Bom Sucesso 23.89 94 *e*P P 13 08 48.9 -1.7
POPC Popayan, Colom 24.57 345 P P 13 08 58.5 +1.5
comp=Z,53nm,1.2s
URMC La Tribe, Meta 24.80 350 P P 13 08 59.6 +0.7
comp=Z,35nm,0.9s
MAL2 Monte Alegre, 24.91 42 P P 13 08 59.0 -0.8
PRPB Parauapebas 25.02 56 *e*P P 13 08 59.5 -1.3
SMTB Santa Maria do 25.26 64 *e*P P 13 09 02.4 -0.7
DIAM Diamantina, MG 25.32 88 *e*P P 13 09 03.0 -0.8
BOAV Boa Vista 25.54 23 P P 13 09 05.0 -0.5
BOAV Boa Vista 25.54 23 *e*P P 13 09 04.0 -1.6
BOAV Boa Vista 25.54 23 P P 13 09 04.6 -0.9
comp=Z,2µmcomp=Z,134nm,1.2s
JANB Januaria 25.55 80 *e*P P 13 09 04.8 -1.0
ORTC Ortega, Tolima 25.59 349 P P 13 09 06.2 +0.2
comp=Z,84nm,1.2s
YOTC Yotoco, Valle 25.88 346 P P 13 09 10.1 +1.3
comp=Z,49nm,1.5s
DUB01 Friburgo-RJ 26.03 97 *e*P P 13 09 08.2 -1.9
CHIC Chingaza 26.07 352 P P 13 09 08.0 -2.7
comp=Z,769nmcomp=Z,31nm,1.2s
ROSC El Rosal 26.35 351 LR LR 13 21 10.1
comp=Z,1µm,20.9s,baz=211,slow=40
CAM01 Campos-RJ 26.71 96 *e*P P 13 09 15.0 -1.2
RUSC La Rusia 27.24 354 P P 13 09 21.2 -0.2
RUSC IAmb IAmb 13 09 40.6
comp=Z,91nm,1.3s
TMAB Tom-Au,PA,Br 28.79 52 *e*P P 13 09 33.4 -1.4
GUA01 Guaratinga, BA 29.30 86 *e*P P 13 09 37.2 -2.1
CMC01 Camacan, BA 29.88 84 *e*P P 13 09 44.0 -0.5
SDV Santo Domingo 30.09 360 LR LR 13 20 55.2
comp=Z,1µm,21.7s,baz=198,slow=34
SDV Santo Domingo 30.09 360 P P 13 09 45.5 -1.0
MDP Montagnes des 31.57 35 LR LR 13 23 37.6
comp=Z,3µm,18.8s,baz=234,slow=38
EFI East Falkland 31.72 165⇑ *e*P P 13 10 00.2 -0.1
EFI pmax pmax
comp=Z,131nm,2.2s
JTS Las Juntas de 34.58 334 LR LR 13 24 54.6
comp=Z,198nm,20.0s,baz=146,slow=37
NBAN Anadia - AL 34.80 76 *e*P P 13 10 25.2 -2.4
RPN Rapa Nui 35.85 253 LR LR 13 21 28.8
comp=Z,1µm,20.6s,baz=84,slow=30
RCBR Riachuelo 36.80 70 P P 13 10 44.6 -0.2
RCBR Riachuelo 36.80 70 P P 13 10 44.6 -0.2
RCBR pmax pmax
comp=Z,170nm,1.6s
RCBR Riachuelo 36.80 70 *e*P P 13 10 43.7 -1.2
RCBR Riachuelo 36.80 70 P P 13 10 44.8 -0.1
CRPR Cabo Rojo, PR 39.29 5 P P 13 11 04.2 -1.4
SJG San Juan 39.48 6 LR LR 13 28 43.3
comp=Z,370nm,21.2s,baz=188,slow=38
APG El Apazote 41.18 330 LR LR 13 28 22.8
comp=Z,12nm,21.3s,baz=282,slow=36
HOPE Hope Point 41.65 151 P P 13 11 25.7 +1.0
HOPE Hope Point 41.65 151 *e*P P 13 11 26.8 +2.1
PMSA Palmer Station 43.57 176 LR LR 13 30 11.4
comp=Z,506nm,18.8s,baz=339,slow=36
PMSA Palmer Station 43.57 176 *e*P P 13 11 36.1 -4.0
CMIG Matias Romero 45.15 326 LR LR 13 30 08.9
comp=Z,160nm,20.0s,baz=145,slow=35
BIRD Birdtown, Kers 56.54 350 P P 13 13 18.8 -0.1
BIRD IAmb IAmb 13 13 37.8
comp=Z,32nm,1.1s
HKT Hockley 56.61 333⇑ *e*P P 13 13 21.3 +1.9
HKT pmax pmax
comp=Z,22nm,1.3s
X48A Hartselle 57.75 344 IAmb IAmb 13 13 39.3
comp=Z,38nm,1.3s
V55A Taylorsville 57.84 350 IAmb IAmb 13 13 47.1
comp=Z,29nm,1.2s
W50A Signal Mountai 58.03 346 IAmb IAmb 13 13 47.8
comp=Z,44nm,1.5s
TKL Tuckaleechee C 58.14 347 IAmb IAmb 13 13 48.3
comp=Z,42nm,1.4s
TKL Tuckaleechee C 58.14 347 LR LR 13 38 23.9
comp=Z,292nm,21.9s,baz=160,slow=36
SWET Sewanee 58.20 345 IAmb IAmb 13 13 31.9
comp=Z,45nm,1.5s
U56A King 58.20 351 IAmb IAmb 13 13 49.9
comp=Z,41nm,1.3s
U54A Nelsons Funny 58.60 349 IAmb IAmb 13 13 52.0
comp=Z,33nm,1.2s
T57A Hurt 58.67 352 IAmb IAmb 13 13 53.0
comp=Z,43nm,1.3s
V48A Smith Brothers 58.91 344 IAmb IAmb 13 13 53.8
comp=Z,56nm,1.5s
BELA Belgrano 2 59.05 172 P P 13 13 35.5 -0.5
BELA IAmb IAmb 13 13 49.4
comp=Z,22nm,1.2s
CLTN Cedars of Leba 59.12 345 IAmb IAmb 13 13 38.5
comp=Z,27nm,1.5s
Z38A Mt. Pleasant 59.20 336 IAmb IAmb 13 13 50.9
comp=Z,36nm,1.1s
R58B Mineral 59.46 353 IAmb IAmb 13 13 41.3
comp=Z,45nm,1.3s
LPIG La Paz 59.60 317 LR LR 13 33 56.8
comp=Z,196nm,20.5s,baz=120,slow=30
T50A Nancy 59.67 347 IAmb IAmb 13 13 41.3
comp=Z,38nm,1.6s
TXAR Lajitas Array 59.76 326 P P 13 13 41.7 0.0
TXAR Lajitas Array 59.76 326 P P 13 13 43.2 +1.5
comp=Z,0.4nm,0.7s,baz=149,slow=9.3,SNR=6.4
MIAR Mount Ida 59.83 338 IAmb IAmb 13 13 54.6
comp=Z,48nm,1.2s
S51A Beattyville 60.02 348 IAmb IAmb 13 13 43.8
comp=Z,42nm,1.5s
R55A Marlinton 60.05 351 IAmb IAmb 13 13 46.3
comp=Z,65nm,1.6s
VNA3 Neumayer Olymp 60.63 161 ⇑P P 13 13 47.6 +0.6
comp=Z,14nm,0.9s
VNA3 ⇓sP **sP 13 13 59.3 +0.3**
R50A Paris 60.78 347 IAmb IAmb 13 13 48.9
comp=Z,33nm,1.4s
VNA1 Neumayer--Stat 60.85 160 ⇑P P 13 13 49.6 +1.1
comp=Z,16nm,0.9s
VNA1 ⇑sP **sP 13 14 00.5 +0.1**
P57A Homestead Farm 60.97 353 IAmb IAmb 13 14 09.6
comp=Z,34nm,1.1s
CGM3 Cape Girardeau 61.13 343 IAmb IAmb 13 13 51.6
comp=Z,35nm,1.3s
WCI Wyandotte Cave 61.16 346 P P 13 13 49.3 -1.6
WCI IAmb IAmb 13 14 03.2
comp=Z,46nm,1.4s
WCI Wyandotte Cave 61.16 346 P P 13 13 49.3 -1.6
WCI pmax pmax
comp=Z,46nm,1.4s
WUPA West Chester U 61.20 355 IAmb IAmb 13 13 52.9
comp=Z,33nm,1.6s
VNA2 Neumayer--Watz 61.22 160 ⇑P P 13 13 51.5 +0.5
comp=Z,12nm,0.8s,baz=7.6,slow=12
VNA2 ⇓sP **sP 13 14 03.4 +0.4**
baz=320,slow=6.4
Q51A Peebles 61.31 349 IAmb IAmb 13 13 52.5
comp=Z,29nm,1.3s
MVL Millersville 61.32 355 IAmb IAmb 13 13 54.1
comp=Z,56nm,1.6s
APMT Aspermont 61.36 332 IAmb IAmb 13 14 05.4
comp=Z,20nm,1.0s
MCWV Mont Chateau 61.37 352 IAmb IAmb 13 14 11.7
comp=Z,53nm,1.4s

SIUC Southern Illin 61.40 343 IAmb IAmb 13 13 53.4
comp=Z,47nm,1.2s
P53A Whipple 61.43 350 IAmb IAmb 13 14 11.0
comp=Z,28nm,1.1s
SN07 Snyder 07 61.50 331 IAmb IAmb 13 14 05.3
comp=Z,43nm,1.5s
HHAR Hobbs 61.53 338 IAmb IAmb 13 14 06.0
comp=Z,32nm,1.2s
VHRN Van Horn 61.60 326 IAmb IAmb 13 14 07.6
comp=Z,36nm,1.4s
P52A Corning 61.69 350 IAmb IAmb 13 13 55.0
comp=Z,67nm,1.6s
MGMO Mountain Grove 61.77 340 IAmb IAmb 13 14 07.4
comp=Z,45nm,1.4s
U38A Gravette 61.83 338 IAmb IAmb 13 14 07.2
comp=Z,20nm,1.2s
SSPA Standing Stone 62.10 354 P P 13 13 57.1 -0.1
SSPA IAmb IAmb 13 14 16.8
comp=Z,42nm,1.3s
P48A Milroy 62.14 347 IAmb IAmb 13 14 14.3
comp=Z,48nm,1.6s
CCM Cathedral Cave 62.29 342 P P 13 13 57.6 -1.0
CCM IAmb IAmb 13 14 10.6
comp=Z,34nm,1.4s
CCM Cathedral Cave 62.29 342 P P 13 13 57.6 -1.0
CCM pmax pmax
comp=Z,34nm,1.4s
WSPT Westport, CT 62.30 358 IAmb IAmb 13 14 00.3
comp=Z,31nm,1.0s
OK052 Battle Ridge R 62.30 336 IAmb IAmb 13 14 10.4
comp=Z,52nm,1.3s
Q44A Meyer Farm, Va 62.46 344 IAmb IAmb 13 14 11.7
comp=Z,52nm,1.3s
O49A Covington 62.62 348 IAmb IAmb 13 14 18.7
comp=Z,51nm,1.4s
P46A Rosedale 62.69 345 IAmb IAmb 13 14 12.6
comp=Z,53nm,1.4s
M57A Sunshine Farm, 62.72 354 IAmb IAmb 13 14 21.1
comp=Z,42nm,1.3s
R40A Maddies Statio 62.82 341 IAmb IAmb 13 14 14.2
comp=Z,53nm,1.5s
KSPA Keystone Colle 62.83 355 IAmb IAmb 13 14 04.0
comp=Z,51nm,1.5s
SNAA Sanae 62.84 161 ⇑P P 13 14 02.6 +0.6
comp=Z,300nm,0.7s
SNAA sP **sP 13 14 14.1 +0.2**
SNAA Sanae 62.84 161 P P 13 14 02.3 +0.3
SNAA IAmb IAmb 13 14 04.0
comp=Z,26nm,0.9s
SNAA Sanae 62.84 161 P P 13 14 02.4 +0.5
comp=Z,11nm,0.7s,baz=284,slow=6.3,SNR=33
SNAA LR LR 13 41 17.1
comp=Z,150nm,18.2s,baz=292,slow=36
comp=Z,11nm,0.7s
SNAA Sanae 62.84 161 *c i*P P 13 14 02.1 +0.2
SNAA pmax pmax
comp=Z,27nm,1.1s
O48B Farmland 62.85 347 IAmb IAmb 13 14 20.2
comp=Z,43nm,1.2s
SMWD Samnorwood 62.92 333 IAmb IAmb 13 14 14.8
comp=Z,36nm,1.2s
T35A Sooner Cattle 63.01 337 IAmb IAmb 13 14 16.1
comp=Z,44nm,1.2s
BINY Binghamton 63.48 355 IAmb IAmb 13 14 08.5
comp=Z,48nm,1.2s
HRV Adam Dziewonsk 63.59 359 P P 13 14 07.1 +0.1
HRV Adam Dziewonsk 63.59 359 P P 13 14 07.1 +0.1
HRV pmax pmax
comp=Z,203nm,1.7s
BBTS Babate 63.85 61 LR LR 13 40 29.6
comp=Z,838nm,20.6s,baz=118,slow=35
P40A Paris 63.89 341 IAmb IAmb 13 14 21.4
comp=Z,68nm,1.6s
P38A Dawn 64.43 340 IAmb IAmb 13 14 13.7
comp=Z,26nm,1.3s
J61A Chester 64.45 358 IAmb IAmb 13 14 15.8
comp=Z,28nm,1.2s
TROLL Troll, Antarti 64.55 161 ⇑P P 13 14 14.1 +0.7
comp=Z,355nm,0.5s
TROLL ⇓sP **sP 13 14 25.7 +0.3**
NCB Newcomb 65.13 357 IAmb IAmb 13 14 19.7
comp=Z,31nm,1.2s
ABQ Albuquerque 65.66 328 IAmb IAmb 13 14 34.4
comp=Z,31nm,1.7s
ANMO Albuquerque 65.66 328 P P 13 14 20.9 -0.1
ANMO IAmb IAmb 13 14 34.4
comp=Z,33nm,1.8s
ANMO Albuquerque 65.66 328 *de*P P 13 14 20.5 -0.6
ANMO pmax pmax
comp=Z,17nm,1.5s
LONY Lake Ozonia 65.80 357 IAmb IAmb 13 14 23.4
comp=Z,44nm,1.5s
CBKS Cedar Bluff 65.90 335 IAmb IAmb 13 14 35.5
comp=Z,33nm,1.1s
FRNY Flat Rock 65.97 358 IAmb IAmb 13 14 25.1
comp=Z,48nm,1.4s
L40A Anamosa 66.01 343 IAmb IAmb 13 14 34.8
comp=Z,56nm,1.4s
WBO Williamsburg 66.22 356 IAmb IAmb 13 14 37.4
comp=Z,27nm,1.2s
GGN Saint George 66.27 3 P P 13 14 24.6 +0.2
SADO Sadowa 66.32 353 LR LR 13 44 07.2
comp=Z,2µm,21.8s,baz=178,slow=37
TRQ Mont Tremblant 67.40 357 IAmb IAmb 13 14 44.0
comp=Z,31nm,1.3s
NVL N'lazarevskaya 67.43 159 *e*P P 13 14 34.1 +2.5
NVL *e* 13 16 56.2
NVL *e*S **S 13 23 28.5 +3.1**
NVL *e*SS **SS 13 27 49.9 +4.7**
NVL pmax pmax
comp=Z,7.0nm,0.9s
BATG Bathurst New B 68.46 3 P P 13 14 39.0 +0.7
MVCO Mesa Verde 68.46 328 IAmb IAmb 13 14 52.3
comp=Z,46nm,1.6s
WUAZ Wupatki 68.64 325 IAmb IAmb 13 14 54.1
comp=Z,26nm,1.2s
QSPA South Pole Qui 68.80 180 P P 13 14 44.5 +3.9
QSPA IAmb IAmb 13 14 56.9
comp=Z,49nm,1.2s
QSPA South Pole Qui 68.80 180 P P 13 14 44.8 +4.3
comp=Z,8.3nm,0.6s,baz=278,slow=0.3,SNR=148
QSPA South Pole Qui 68.80 180 P P 13 14 45.6 +5.1
LDAQ Lac Daran 69.04 359 IAmb IAmb 13 14 43.8
comp=Z,44nm,1.3s
ECSD EROS Data Cent 69.13 340 IAmb IAmb 13 14 55.3
comp=Z,36nm,1.4s
PV15 Paradox Valley 69.34 329 IAmb IAmb 13 14 58.2
comp=Z,35nm,1.2s
PV02 Paradox Valley 69.36 329 IAmb IAmb 13 14 58.1
comp=Z,59nm,1.4s
VLDQ Val d'Or 69.47 355 IAmb IAmb 13 14 46.0
comp=Z,56nm,1.5s
U15A North Rim 69.81 325 IAmb IAmb 13 15 01.8
comp=Z,32nm,1.4s
DBIC Dimbokro 70.04 74 P P 13 14 47.8 -1.1
DBIC Dimbokro 70.04 74 P P 13 14 48.1 -0.7
comp=Z,24nm,0.9s,baz=263,slow=6.3,SNR=26
DBIC LR LR 13 45 16.2
comp=Z,307nm,18.0s,baz=266,slow=36
comp=Z,24nm,0.9s
DBIC Dimbokro 70.04 74 P P 13 14 48.1 -0.7
DBIC PcP **PcP 13 15 10.3 -0.6**
PFO Pinyon Flats O 70.13 320 LR LR 13 40 20.1
comp=Z,288nm,21.7s,baz=129,slow=31
PFO Pinyon Flats O 70.13 320⇑ *e*P P 13 14 51.9 +2.8
PFO pmax pmax
comp=Z,8.0nm,1.1s
O20A White River Ci 70.64 330 IAmb IAmb 13 15 05.8
comp=Z,34nm,1.3s
V12A Nelson 70.70 323 IAmb IAmb 13 15 06.6
comp=Z,27nm,1.4s
F33A 5 Mile Ranch, 70.92 341 IAmb IAmb 13 15 05.8
comp=Z,43nm,1.7s
DRLN Deer Lake 71.26 9 P P 13 14 55.2 -0.3
P17A Butcher Ranch, 71.32 328 IAmb IAmb 13 15 10.8
comp=Z,64nm,1.6s
RDMU Red Mountain 71.61 330 IAmb IAmb 13 15 12.2
comp=Z,40nm,1.6s
K22A Casper 71.91 333 IAmb IAmb 13 15 13.8
comp=Z,30nm,1.4s
RSSD Black Hills 72.11 335 P P 13 15 00.8 -0.2
RSSD Black Hills 72.11 335 P P 13 15 00.8 -0.2
RSSD pmax pmax
comp=Z,27nm,1.6s
WSHM Spangler Hills 72.13 321 IAmb IAmb 13 15 15.2
comp=Z,40nm,1.6s
BSUT Blindstream Ca 72.15 329 IAmb IAmb 13 15 15.5

	comp=Z,33nm,1.4s								
TPNV	**Topopah Spring**	**72.36**	**323**		IAmb	IAmb	13 15 17.2		
	comp=Z,37nm,1.4s								
JLU	**Jordanelle**	**72.54**	**328**		IAmb	IAmb	13 15 18.3		
	comp=Z,35nm,1.4s								
SPR3	**Spring Creek 3**	**72.80**	**326**		IAmb	IAmb	13 15 25.3		
	comp=Z,41nm,1.7s								
DUG	**Dugway, Tooele**	**72.91**	**327**		IAmb	IAmb	13 15 19.8		
	comp=Z,35nm,1.4s								
PDAR	**Pinedale Array**	**73.33**	**331**		P	**P**	**13 15 07.8**	**-0.6**	
PDAR	**Pinedale Array**	**73.33**	**331**		P	**P**	**13 15 09.9**	**+1.6**	
	baz=150,slow=7.0,SNR=12								
PDAR					LR	LR	13 50 13.6		
	comp=Z,62nm,19.6s,baz=126,slow=38								
HWUT	**Hardware Ranch**	**73.37**	**329**		IAmb	IAmb	13 15 22.7		
	comp=Z,53nm,1.9s								
EPLO	**Experimental L**	**73.72**	**344**		IAmb	IAmb	13 15 23.3		
	comp=Z,28nm,1.3s								
ACRG	**Accra**	**73.81**	**77**		P	**P**	**13 15 10.2**	**-1.2**	
ACRG					IAmb	IAmb	13 15 12.1		
	comp=Z,32nm,0.7s								
PPT	**Papeete**	**73.99**	**257**		LR	LR	13 39 25.3		
	comp=Z,265nm,18.6s,baz=122,slow=29								
AHID	**Auburn Hatcher**	**74.04**	**330**		IAmb	IAmb	13 15 26.3		
	comp=Z,38nm,1.4s								
ELK	**Elko**	**74.55**	**326**		LR	LR	13 45 34.0		
	comp=Z,212nm,21.9s,baz=143,slow=34								
NVAR	**Mina Array Bea**	**74.56**	**323**		P	**P**	**13 15 15.5**	**-0.1**	
NVAR	**Mina Array Bea**	**74.56**	**323**		P	**P**	**13 15 17.5**	**+1.9**	
	comp=Z,2.5nm,0.7s,baz=143,slow=5.6,SNR=19								
NVAR					LR	LR	13 44 18.8		
	comp=Z,156nm,21.9s,baz=125,slow=33								
	comp=Z,2.5nm,0.7s								
ULM	**Lac du Bonnet**	**74.81**	**343**	⇑	*eP*	**P**	**13 15 15.3**	**-1.1**	
ULM	**Lac du Bonnet**	**74.81**	**343**	⇑	*eP*	**P**	**13 15 15.3**	**-1.1**	
FLWY	**Flagg Ranch**	**74.88**	**331**		IAmb	IAmb	13 15 38.0		
	comp=Z,53nm,1.3s								
RLMT	**Red Lodge**	**75.07**	**333**		IAmb	IAmb	13 15 41.1		
	comp=Z,29nm,1.4s								
YNE	**Yellowstone No**	**75.30**	**332**		IAmb	IAmb	13 15 34.0		
	comp=Z,35nm,1.1s								
YMR	**Madison River**	**75.46**	**331**		IAmb	IAmb	13 15 35.7		
	comp=Z,50nm,1.3s								
YHL	**Hebgen Lake**	**75.70**	**331**		IAmb	IAmb	13 15 37.2		
	comp=Z,33nm,1.4s								
SCHQ	**Schefferville**	**75.97**	**2**		P	**P**	**13 15 23.2**	**+0.1**	
	comp=Z,5.6nm,0.8s,baz=201,slow=5.4,SNR=6.1								
SCHQ					LR	LR	13 48 15.8		
	comp=Z,163nm,21.8s,baz=193,slow=35								
	comp=Z,5.6nm,0.8s								
PAHR	**Pah Rah Range**	**76.05**	**323**		IAmb	IAmb	13 15 38.3		
	comp=Z,40nm,1.4s								
VNDA	**Vanda**	**76.71**	**190**		P	**P**	**13 15 28.1**	**+1.0**	
VNDA	**Vanda**	**76.71**	**190**		P	**P**	**13 15 29.6**	**+2.4**	
	comp=Z,2.8nm,1.0s,baz=139,slow=3.1,SNR=9.5								
VNDA					LR	LR	13 43 08.7		
	comp=Z,112nm,21.9s,baz=143,slow=31								
	comp=Z,2.8nm,1.0s								
VNDA	**Vanda**	**76.71**	**190**		P	**P**	**13 15 28.1**	**+1.0**	
VNDA					pmax	pmax			
	comp=Z,10.0nm,1.2s								
MFID	**Camas Ranch**	**76.81**	**328**		IAmb	IAmb	13 15 42.3		
	comp=Z,37nm,1.5s								
SYO	**Syowa Base**	**77.09**	**160**	⇑	*iP*	**P**	**13 15 30.0**	**+0.7**	
SYO	**Syowa Base**	**77.09**	**160**	⇑	*es*P	sP	13 15 40.8	-0.7	
ORV	**Oroville**	**77.15**	**322**		IAmb	IAmb	13 15 44.2		
	comp=Z,39nm,1.5s								
EGMT	**Eagleton**	**77.59**	**334**		IAmb	IAmb	13 15 46.2		
	comp=Z,35nm,1.3s								
BMO	**Blue Mountains**	**78.58**	**328**		P	**P**	**13 15 39.8**	**+1.7**	
TORD	**Torodi Ar. Bea**	**78.63**	**71**		P	**P**	**13 15 38.6**	**-0.3**	
	comp=Z,15nm,0.6s,baz=241,slow=3.8,SNR=7.0								
TORD					LR	LR	13 49 44.0		
	comp=Z,313nm,20.1s,baz=262,slow=35								
	comp=Z,15nm,0.6s								
K05A	**Summer Lake**	**78.95**	**325**		IAmb	IAmb	13 15 55.2		
	comp=Z,47nm,1.4s								
YBH	**Yreka Blue Hor**	**79.28**	**323**		LR	LR	13 49 05.3		
	comp=Z,8.3nm,21.8s,baz=116,slow=34								
PINE	**Pine Mountain**	**79.70**	**325**		IAmb	IAmb	13 16 04.6		
	comp=Z,53nm,1.8s								
SUR	**Sutherland**	**79.83**	**121**		P	**P**	**13 15 46.3**	**+0.8**	
SUR					IAmb	IAmb	13 15 48.0		
	comp=Z,48nm,1.1s								
I05D	**Terrebonne, OR**	**80.28**	**326**		IAmb	IAmb	13 16 02.1		
	comp=Z,38nm,1.5s								
WIFE	**Three Sisters-**	**80.34**	**325**		IAmb	IAmb	13 16 06.6		
	comp=Z,44nm,1.8s								
NEW	**Newport**	**80.96**	**330**		LR	LR	13 55 35.9		
	comp=Z,89nm,18.6s,baz=134,slow=38								
HOOD	**Mount Hood Mea**	**81.11**	**326**		IAmb	IAmb	13 16 19.1		
	comp=Z,46nm,1.5s								
C09A	**Chrisman Ranch**	**81.16**	**330**		IAmb	IAmb	13 16 05.5		
	comp=Z,35nm,1.3s								
TSUM	**Tsumeb**	**81.40**	**107**		P	**P**	**13 15 53.8**	**-0.2**	
TSUM					IAmb	IAmb	13 15 56.4		
	comp=Z,32nm,0.9s								
TSUM	**Tsumeb**	**81.40**	**107**		LR	LR	13 48 30.3		
	comp=Z,291nm,21.8s,baz=301,slow=33								
TSUM	**Tsumeb**	**81.40**	**107**		P	**P**	**13 15 54.9**	**+0.9**	
LTY	**Liberty**	**81.94**	**328**		IAmb	IAmb	13 16 09.5		
	comp=Z,40nm,1.5s								
RAR	**Rarotonga**	**81.95**	**250**		LR	LR	13 43 33.5		
	comp=Z,156nm,20.3s,baz=108,slow=29								
KOOLE	**Kule**	**82.42**	**112**		IAmb	IAmb	13 16 01.1		
	comp=Z,23nm,0.9s								
KOOLE	**Kule**	**82.42**	**112**		*i* P	**P**	**13 16 00.0**	**+0.7**	
MD31	**MD31**	**82.67**	**51**		IAmb	IAmb	13 16 02.6		
	comp=Z,43nm,1.3s								
MDT	**Midelt**	**82.75**	**51**		LR	LR	13 54 10.9		
	comp=Z,334nm,18.1s,baz=235,slow=37								
CCD	**Concordia, Ant**	**83.33**	**184**		P	**P**	**13 16 05.2**	**+1.8**	
CCD					sP	**sP**	**13 16 16.9**	**+1.2**	
GRTLG	**Ghanzi**	**83.87**	**110**		*i* P	**P**	**13 16 07.5**	**+0.7**	
KGCAE	**Kacgae**	**84.21**	**112**		*i* P	**P**	**13 16 09.2**	**+0.7**	
PGC	**Sidney**	**84.26**	**328**		IAmb	IAmb	13 16 21.3		
	comp=Z,29nm,1.6s								
QNGWA	**Qangwa**	**84.47**	**109**		IAmb	IAmb	13 16 11.7		
	comp=Z,30nm,1.2s								
QNGWA	**Qangwa**	**84.47**	**109**		*i* P	**P**	**13 16 10.5**	**+0.5**	
BOSA	**Boshof**	**84.72**	**119**		P	**P**	**13 16 10.7**	**-0.3**	
BOSA					IAmb	IAmb	13 16 12.2		
	comp=Z,42nm,1.2s								
BOSA	**Boshof**	**84.72**	**119**		P	**P**	**13 16 10.8**	**-0.2**	
	comp=Z,18nm,1.0s,baz=262,slow=5.7,SNR=15								
BOSA					LR	LR	13 51 46.8		
	comp=Z,159nm,18.3s,baz=222,slow=34								
	comp=Z,18nm,1.0s								
BOSA	**Boshof**	**84.72**	**119**		P	**P**	**13 16 11.2**	**+0.1**	
MAW	**Mawson**	**84.83**	**164**		P	**P**	**13 16 11.2**	**+0.6**	
	comp=Z,14nm,0.8s,baz=221,slow=7.0,SNR=30								
MAW					LR	LR	13 53 59.4		
	comp=Z,439nm,20.0s,baz=232,slow=36								
	comp=Z,14nm,0.8s								
FRB	**Frobisher Bay**	**84.87**	**1**		LR	LR	13 55 42.7		
	comp=Z,112nm,19.6s,baz=175,slow=37								
SKOMA	**Sekoma**	**85.10**	**114**		*i* P	**P**	**13 16 13.2**	**+0.2**	
TAM	**Tamanrasset**	**86.02**	**64**		P	**P**	**13 16 17.0**	**-0.5**	
TAM	**Tamanrasset**	**86.02**	**64**		P	**P**	**13 16 17.0**	**-0.5**	
TAM					pmax	pmax			
	comp=Z,35nm,0.6s								
KDWAN	**Kaudwane**	**86.13**	**113**		*i* P	**P**	**13 16 18.3**	**+0.1**	
LBTB	**Lobatse**	**86.32**	**115**		IAmb	IAmb	13 16 20.6		
	comp=Z,36nm,1.4s								
LBTB	**Lobatse**	**86.32**	**115**		LR	LR	13 51 23.4		
	comp=Z,476nm,20.8s,baz=245,slow=33								
ESDC	**Sonseca Array**	**86.74**	**45**		P	**P**	**13 16 20.6**	**+0.1**	
ESDC					IAmb	IAmb	13 16 22.4		
	comp=Z,24nm,1.5s								
ESDC	**Sonseca Array**	**86.74**	**45**		P	**P**	**13 16 20.7**	**+0.1**	
	comp=Z,7.1nm,1.2s,baz=229,slow=4.7,SNR=10.0								
ESDC					LR	LR	13 51 42.7		
	comp=Z,435nm,21.9s,baz=232,slow=33								
	comp=Z,7.1nm,1.2s								
LPHEP	**Lephephe**	**87.16**	**114**		*i* P	**P**	**13 16 24.2**	**+1.0**	
KSANE	**Kasane**	**88.62**	**108**		*i* P	**P**	**13 16 31.8**	**+1.6**	
BBB	**Bella Bella**	**88.81**	**329**		LR	LR	13 59 34.5		
	comp=Z,40nm,18.7s,baz=146,slow=38								
BROLN	**Tlhalogang**	**89.28**	**112**		*i* P	**P**	**13 16 33.7**	**+0.4**	
DRV	**Dumont d'Urvil**	**89.29**	**192**		P	**P**	**13 16 33.4**	**+1.2**	
SFJD	**Kangerlussuaq**	**89.36**	**8**		LR	LR	13 56 06.0		
	comp=Z,122nm,21.4s,baz=198,slow=35								
YKA	**Yellowknife Ar**	**90.63**	**341**		P	**P**	**13 16 38.5**	**+0.2**	
	comp=Z,3.2nm,0.8s,baz=145,slow=4.0,SNR=10.0								
YKA					LR	LR	13 59 46.9		
	comp=Z,197nm,21.5s,baz=102,slow=37								
	comp=Z,3.2nm,0.8s								
LSZ	**Lusaka**	**92.26**	**107**		P	**P**	**13 16 47.3**	**0.0**	
LSZ					IAmb	IAmb	13 16 50.3		
	comp=Z,19nm,1.2s								
LSZ	**Lusaka**	**92.26**	**107**		LR	LR	13 56 57.4		
	comp=Z,564nm,19.3s,baz=265,slow=35								
LSZ	**Lusaka**	**92.26**	**107**		P	**P**	**13 16 47.3**	**0.0**	
LSZ					pmax	pmax			
	comp=Z,19nm,1.3s								
URZ	**Urewera**	**93.27**	**227**		LR	LR	13 49 06.0		
	comp=Z,476nm,20.7s,baz=128,slow=29								
DLBC	**Dease Lake**	**93.47**	**333**		LR	LR	14 02 06.0		
	comp=Z,138nm,19.8s,baz=99,slow=38								
BORG	**Borgarnes**	**93.77**	**19**		LR	LR	13 56 24.4		
	comp=Z,121nm,21.0s,baz=221,slow=34								
RAO	**Raoul Island**	**93.95**	**237**		LR	LR	13 49 36.0		
	comp=Z,268nm,21.6s,baz=120,slow=29								
WTLY	**Watson Lake, Y**	**93.97**	**335**		IAmb	IAmb	13 16 55.9		
	comp=Z,12nm,1.3s								
RPZ	**Rata Peaks**	**94.20**	**220**		LR	LR	13 51 35.3		
	comp=Z,216nm,18.9s,baz=134,slow=30								
KEST	**Kesra**	**94.35**	**53**		LR	LR	13 59 54.1		
	comp=Z,625nm,20.2s,baz=283,slow=36								
VAE	**Valguarnera**	**98.78**	**53**		LR	LR	14 01 48.4		
	comp=Z,404nm,20.2s,baz=320,slow=35								
KLMR	**Klimovskoe**	**118.14**	**31**		*e*PKIKP	**PKPdf**	**13 22 22.6**	**-0.3**	
KLMR					*e*		13 22 33.3		
KLMR					pmax	pmax			
	comp=Z,28nm,1.5s								
KIV	**Kislovodsk**	**120.98**	**51**		*i* PKIKP	**PKPdf**	**13 22 28.8**	**-0.2**	
KIV					pmax	pmax			
	comp=Z,9.0nm,1.1s								
KIV					MLR	MLR			
	comp=Z,134nm,22.0s								
KBZ	**Khabaz**	**121.13**	**51**		PKP	**PKiKP**	**13 22 29.3**	**+0.1**	
	comp=Z,4.4nm,0.9s,baz=304,slow=3.6,SNR=4.1								
AKT	**Akhty**	**124.71**	**54**		*i* PKIKP	**PKiKP**	**13 22 38.0**	**+1.4**	
AKT					*e*		13 24 23.0		
AKT					*e*		13 29 43.0		
AKT					pmax	pmax			
	comp=Z,32nm,1.1s								
H11S2	**WAKE ISLAND Hyl**	**126.48**	**278**		T	T	15 42 06.2		
	baz=103,slow=75,SNR=1800								
H11S1	**WAKE ISLAND Hyl**	**126.49**	**278**		T	T	15 41 58.0		
	baz=103,slow=75,SNR=661								
H11S3	**WAKE ISLAND Hyl**	**126.50**	**278**		T	T	15 42 03.4		
	baz=103,slow=75,SNR=448								
H11N3	**WAKE ISLAND Hyl**	**126.57**	**279**		T	T	15 42 06.6		
	baz=102,slow=75,SNR=2339								
H11N2	**WAKE ISLAND Hyl**	**126.58**	**279**		T	T	15 42 01.8		
	baz=102,slow=75,SNR=1795								
H11N1	**WAKE ISLAND Hyl**	**126.58**	**279**		T	T	15 42 03.5		
	baz=102,slow=75,SNR=1749								
TIXI	**Tiksi**	**128.51**	**352**	⇓	*i* PKIKP	**PKPdf**	**13 22 42.3**	**-0.2**	
TIXI					pmax	pmax			
	comp=Z,4.0nm,1.7s								
ARTI	**Arti**	**128.76**	**34**		*i* PKIKP	**PKiKP**	**13 22 44.0**	**0.0**	
ARTI							13 24 49.4		
ARTI							13 29 52.0		
ARTI					SS	SS	13 41 59.7	-6.2	
ASAR	**Alice Springs**	**129.35**	**209**		PKP	**PKPdf**	**13 22 45.6**	**0.0**	
	comp=Z,3.3nm,0.7s,baz=144,slow=2.1,SNR=30								
ASAR					pPKP	**sPKPdf**	**13 22 57.0**	**-1.1**	
	comp=Z,4.4nm,0.9s,baz=148,slow=2.2,SNR=13								
ASAR					PKKP	**PKKPdf**	**13 32 50.0**	**0.0**	
	comp=Z,0.2nm,1.0s,baz=11,slow=1.9,SNR=4.2								
PETK	**Petropavlovsk-**	**131.65**	**323**		PKP	**PKiKP**	**13 22 49.9**	**-0.1**	
	comp=Z,1.9nm,0.8s,baz=57,slow=4.9,SNR=5.1								
WRA	**Warramunga Arr**	**132.32**	**212**		PKP	**PKPdf**	**13 22 51.5**	**+0.2**	
	comp=Z,2.3nm,0.5s,baz=152,slow=1.8,SNR=42								
WRA					pPKP	**sPKPdf**	**13 23 03.8**	**-0.1**	
	comp=Z,4.9nm,0.8s,baz=154,slow=1.4,SNR=12								
WRA					SKPbc	**SKPbc**	**13 26 14.7**	**-1.5**	
	comp=Z,11nm,1.2s,baz=146,slow=3.6,SNR=19								
BVAR	**Borovoye Array**	**136.48**	**34**		PKP	**PKPdf**	**13 22 58.8**	**+0.7**	
	comp=Z,2.9nm,0.8s,baz=336,slow=3.3,SNR=9.5								
BVAR					pPKP	**sPKPdf**	**13 23 11.4**	**+0.9**	
	comp=Z,3.9nm,1.0s,baz=285,slow=2.9,SNR=7.2								
YAK	**Yakutsk**	**137.09**	**346**		*e*PKIKP	**PKPdf**	**13 22 58.0**	**-0.9**	
YAK					pmax	pmax			
	comp=Z,11nm,1.1s								
YAK					pmax	pmax			
	comp=N,1.0nm,1.0s								
YAK					pmax	pmax			
	comp=E,2.0nm,1.3s								
BRZS	**Berezniki**	**139.28**	**36**		*e*PKP	**PKPdf**	**13 23 04.2**	**+0.8**	
BRZS	**Berezniki**	**139.28**	**36**		*e*PKIKP	**PKPdf**	**13 23 04.1**	**+0.8**	
CHM	**Chimkent**	**140.60**	**49**		*e*PKP	**PKPdf**	**13 23 06.5**	**+0.5**	
CHM	**Chimkent**	**140.60**	**49**		*e*PKIKP	**PKPdf**	**13 23 06.5**	**+0.5**	
IUG	**Iuzhnay**	**140.96**	**49**		*e*PKP	**PKPdf**	**13 23 07.1**	**+0.4**	
IUG	**Iuzhnay**	**140.96**	**49**		*e*PKIKP	**PKPdf**	**13 23 07.1**	**+0.4**	
KURK	**Kurchatov**	**141.99**	**32**	⇑	*e*PKIKP	**PKPdf**	**13 23 05.3**	**-2.8**	
KURBB	**Kurchatov Arra**	**142.00**	**32**		PKhKP	PKPpre	13 23 04.2		
	comp=E,1.8nm,0.9s,baz=304,slow=2.7,SNR=8.1								
ZALV	**Zalesovo Beam**	**142.43**	**24**		PKhKP	PKPpre	13 23 04.0		
	comp=E,5.3nm,0.5s,baz=300,slow=3.0,SNR=14								
ZALV					PKP	**PKPdf**	**13 23 09.8**	**+0.9**	
	comp=E,7.3nm,0.6s,baz=294,slow=2.8,SNR=20								
ZALV					pPKP	sPKPdf	13 23 20.3	-1.0	
	comp=E,8.3nm,0.8s,baz=298,slow=2.2,SNR=6.5								
EKS2	**Erkin-Say**	**143.34**	**46**		P	PKPbc	13 23 09.2	+1.1	
	SNR=6.6								
SGDS	**Sogindy**	**143.58**	**45**		*e*PKP	**PKPdf**	**13 23 11.7**	**+0.4**	
AAK	**Ala-Archa**	**143.84**	**46**		PKP	PKPbc	13 23 10.5	+0.8	
	comp=E,22nm,1.1s,baz=251,slow=3.8,SNR=23								
AAK					pPKP	sPKPdf	13 23 24.4	0.0	
	comp=E,12nm,0.9s,baz=314,slow=13,SNR=5.0								
AAK	**Ala-Archa**	**143.84**	**46**		P	**PKPdf**	**13 23 11.3**	**-0.7**	
	SNR=10								
AAK	**Ala-Archa**	**143.84**	**46**		*ce*PKIKP	PKPbc	13 23 10.2	+0.6	
GRNR	**Gornyy**	**143.92**	**331**	⇓	*i* PKIKP	**PKPdf**	**13 23 11.0**	**-0.6**	
GRNR					pmax	pmax			
	comp=E,8.0nm,0.5s								
UCH	**Uchtor**	**144.02**	**47**		P	**PKPdf**	**13 23 11.8**	**-0.8**	
	SNR=22								
KBK	**Karagaybulak**	**144.13**	**46**		P	**PKPdf**	**13 23 11.7**	**-0.8**	
	SNR=21								
ASAJ	**Asahikawa**	**144.54**	**317**		PKP	**PKPdf**	**13 23 13.2**	**+0.3**	
	comp=Z,6.5nm,0.7s,baz=293,slow=7.7,SNR=5.2								
ZEA	**Zeya**	**145.01**	**342**		*i* PKP2	**PKPdf**	**13 23 13.2**	**-0.2**	
ZEA					pmax	pmax			
	comp=Z,20nm,0.8s								
ULHL	**Ulahol**	**145.17**	**46**		P	**PKPdf**	**13 23 15.6**	**+1.2**	
	SNR=24								
AAA	**Alma-Ata**	**145.17**	**44**		*e*PKP	**PKPdf**	**13 23 14.5**	**+0.4**	
AAA	**Alma-Ata**	**145.17**	**44**		*e*PKIKP	**PKPdf**	**13 23 14.5**	**+0.4**	
TDK	**Taldyqorghan**	**145.20**	**40**		*e*PKP	**PKPdf**	**13 23 14.5**	**+0.5**	
TDK	**Taldyqorghan**	**145.20**	**40**		*e*PKIKP	**PKPdf**	**13 23 14.5**	**+0.5**	
TNSS	**Tian-Shan**	**145.28**	**44**		*e*PKP	**PKPdf**	**13 23 14.7**	**-0.1**	
TNSS	**Tian-Shan**	**145.28**	**44**		*e*PKIKP	**PKPdf**	**13 23 14.6**	**-0.1**	
MDOK	**Medeo**	**145.28**	**44**		*e*PKP	**PKPdf**	**13 23 14.7**	**+0.2**	
MDOK					*e*PP	**PP**	**13 26 35.9**	**+2.1**	
MDOK	**Medeo**	**145.28**	**44**		*e*PKIKP	**PKPdf**	**13 23 14.6**	**+0.2**	
MDOK					*e*		13 26 35.8		
BATI	**Baumata**	**145.69**	**205**		PKP	**PKPab**	**13 23 17.6**	**+1.2**	
BAKI	**Biak**	**145.72**	**232**		PKP	**PKPbc**	**13 23 16.3**	**+0.1**	
SOEI	**Soe**	**145.86**	**206**		PKP	**PKiKP**	**13 23 20.1**	**-0.2**	
KSH	**Kashi**	**146.11**	**50**		PKPbc	**PKPab**	**13 23 17.2**	**-0.3**	
KSH					sPKP	sPKPdf	13 23 29.9	+1.5	
SATY	**Saty**	**146.20**	**43**		*e*PKP	**PKPdf**	**13 23 16.2**	**+0.2**	
SATY	**Saty**	**146.20**	**43**		*e*PKIKP	**PKPdf**	**13 23 16.1**	**+0.2**	
MK31	**Makanchi Array**	**146.35**	**35**		*ce*PKP	**PKPdf**	**13 23 16.0**	**0.0**	
MKAR	**Makanchi Array**	**146.35**	**35**		PKPbc	**PKPdf**	**13 23 16.0**	**0.0**	
	comp=Z,16nm,0.8s,baz=322,slow=3.2,SNR=85								
MKAR					pPKPbc	**sPKPdf**	**13 23 28.6**	**+0.2**	
	comp=Z,11nm,0.8s,baz=316,slow=3.3,SNR=10								
MKAR	**Makanchi Array**	**146.35**	**35**		*ce*PKP2	**PKPbc**	**13 23 16.6**	**-0.6**	
MKAR					pmax	pmax			
	comp=Z,16nm,0.8s								
UZB	**Uzynbulak**	**146.55**	**42**		*e*PKP	**PKPdf**	**13 23 16.8**	**+0.2**	
UZB	**Uzynbulak**	**146.55**	**42**		*e*PKIKP	**PKPdf**	**13 23 16.7**	**+0.2**	
DGZ	**Jazzator, Alta**	**146.74**	**27**		*e*PKIKP	**PKPdf**	**13 23 16.9**	**+0.2**	
SHLS	**Shalkode**	**146.82**	**42**		*e*PKP	**PKPdf**	**13 23 17.7**	**+0.6**	
SHLS	**Shalkode**	**146.82**	**42**		*e*PKIKP	**PKPdf**	**13 23 17.6**	**+0.6**	
FAKI	**Fak Fak**	**147.21**	**225**		PKP	**PKPbc**	**13 23 21.1**	**+0.5**	
ZSN	**Zaisan**	**147.22**	**32**		*e*PKP	**PKPdf**	**13 23 18.0**	**+0.5**	
ZSN					*e*PP	**PP**	**13 26 47.1**	**+2.5**	
ZSN	**Zaisan**	**147.22**	**32**		*e*PKIKP	**PKPdf**	**13 23 17.9**	**+0.5**	
ZSN					*e*		13 26 47.1		
EDFI	**Ende, Flores**	**147.78**	**203**		PKP	**PKPdf**	**13 23 20.1**	**+0.7**	
HEH	**HeiHe**	**147.95**	**338**		*e*PKPbc	**PKPbc**	**13 23 21.3**	**-0.2**	
IRK	**Irkutsk**	**148.93**	**6**		*e*PKHKP	PKPpre	13 23 14.5		
IRK					pmax	pmax			
	comp=Z,84nm,1.8s								
MOY	**Mondy**	**149.05**	**10**		*e*PKIKP	**PKPdf**	**13 23 21.5**	**+1.1**	
MOY					pmax	pmax			
	comp=Z,54nm,1.7s								
TWSI	**Taliwang, Sumb**	**149.22**	**194**		PKP	**PKPdf**	**13 23 22.4**	**+0.8**	
CIT	**Chita**	**149.27**	**355**		*e*PKP2	**PKiKP**	**13 23 26.0**	**-0.1**	
CIT					pmax	pmax			
	comp=Z,87nm,2.0s								
KNGR	**Kungurtug, Tuv**	**149.34**	**15**	⇓	*e*PKHKP	PKPpre	13 23 22.0		
JAGI	**Jajag, Banyuwa**	**149.99**	**189**		PKP	**PKPdf**	**13 23 22.5**	**-0.4**	
HYB	**Hyderabad**	**150.48**	**92**		*e*PKIKP	**PKPbc**	**13 23 29.2**	**+0.3**	
HYB					*es*PKPbc	**sPKPbc**	**13 23 41.9**	**+0.6**	
BSSI	**Bau Bau, Buton**	**150.62**	**203**		PKP	**PKPdf**	**13 23 26.3**	**+2.4**	
ZAK	**Zakamensk**	**150.64**	**8**		*e*PKIKP	**PKPdf**	**13 23 24.5**	**+1.6**	
ZAK					pmax	pmax			
	comp=Z,20nm,1.7s								
USRK	**Ussuriysk Ar.**	**150.66**	**326**		PKPbc	**PKiKP**	**13 23 29.4**	**+0.3**	
	comp=Z,8.2nm,0.6s,baz=358,slow=1.8,SNR=11								
USRK					pPKPbc	**sPKPbc**	**13 23 40.6**	**-0.2**	
	comp=Z,13nm,0.9s,baz=19,slow=1.7,SNR=5.6								
HILR	**Hailar Array B**	**150.76**	**346**		PKPbc	**PKiKP**	**13 23 29.3**	**+0.1**	
	comp=Z,4.6nm,0.5s,baz=113,slow=3.4,SNR=12								
HILR					pPKPbc	**sPKPbc**	**13 23 40.7**	**-0.4**	
	comp=Z,8.1nm,0.7s,baz=116,slow=3.4,SNR=2.9								
MJAR	**Matsushiro Arr**	**150.91**	**308**		PKPbc	**PKiKP**	**13 23 30.3**	**+0.3**	
	comp=Z,5.4nm,0.8s,baz=88,slow=2.6,SNR=12								
MJAR					pPKPbc	**sPKPbc**	**13 23 41.8**	**+0.2**	
	comp=Z,10nm,1.0s,baz=252,slow=1.4,SNR=8.5								
MAJO	**Matsushiro**	**150.91**	**308**	⇑	*e*PKIKP	**PKPdf**	**13 23 24.2**	**+0.5**	
WMQ	**Urumqi**	**151.17**	**34**		*e*PKPbc	**PKPdf**	**13 23 24.1**	**+0.2**	
WMQ					LR	LR			
	comp=Z,340nm,21.3s								
BKSI	**Bulukumba**	**151.52**	**202**		PKP	**PKPbc**	**13 23 29.2**	**-2.2**	
MDJ	**Mudanjiang**	**151.56**	**329**		PKPbc	**PKPdf**	**13 23 19.2**	**-5.2**	
SANI	**Sanana**	**151.72**	**217**		PKP	**PKPbc**	**13 23 30.8**	**-1.1**	
KAPI	**Kappang**	**151.93**	**202**		*i* PKIKP	**PKPdf**	**13 23 24.6**	**-1.3**	
BNSI	**Bone**	**152.38**	**203**		PKP	**PKPbc**	**13 23 30.9**	**-2.4**	
SPSI	**Sidrap Palu**	**152.90**

*AEIC **04** 13:21:12.0±0.9, 54.˚39N±0.˚07×162.˚83W±0.˚06, h41km±9km, Error ellipse: s-maj=10.5km s-min=4.4km az=163.0*

NEIC 04 13:21:12.5±1.0, 54.˚39N±0.˚06×162.˚78W±0.˚07, h35km±2km, ML2.9/18, ML2.6(AEIC), Error ellipse: s-maj=11.6km s-min=4.8km az=152.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.60**	**322**		Pn	13 21 24.0	-0.5
FALS	**False Pass**	**0.60**	**322**		Sn	13 21 33.4	+0.4
ISNN	**Isanotski Nort**	**0.73**	**308**		Pn	13 21 26.2	-0.1
ISNN					Sn	13 21 36.3	0.0
DT1	**Dutton Round H**	**0.78**	**22**		Pn	13 21 26.6	-0.4
DT1					Sn	13 21 37.4	-0.1
SSLS	**Shishaldin Sou**	**0.78**	**295**		Pn	13 21 26.9	-0.2
SSLS					Sn	13 21 37.9	+0.4
DOL	**Dolgoi Island**	**0.93**	**34**		Pn	13 21 29.2	+0.1
DOL					Sn	13 21 42.0	+0.7
HAG	**Hague Volcano**	**1.06**	**28**		Pn	13 21 31.5	+0.6
PS4A	**Pavlof South-4**	**1.10**	**29**		Pn	13 21 31.6	+0.2
PN7A	**Pavlof North-7**	**1.14**	**23**		Pn	13 21 32.2	+0.2
PS1A	**Pavlof South-1**	**1.20**	**30**		Pn	13 21 33.0	+0.2
PS1A					Sn	13 21 49.4	+1.6
S12K	**Black Hills**	**1.39**	**17**		Pn	13 21 34.5	-0.8
S12K	**Black Hills**	**1.39**	**17**	IAML		13 21 51.6	
	comp=N,348nm,0.2s						
SDPT	**Sand Point**	**1.65**	**53**		Pn	13 21 39.1	+0.3
SDPT	**Sand Point**	**1.65**	**53**	IAML		13 22 01.0	
	comp=N,103nm,0.4s						
SDPT				IAML		13 22 05.9	
	comp=E,84nm,1.2s						
AKUT	**Akutan**	**1.77**	**263**	Pn	Pn	13 21 40.5	0.0
AKUT				IAML		13 22 06.2	
	comp=N,53nm,1.1s						
AKUT				IAML		13 22 32.2	
	comp=E,57nm,0.9s						
ZRO	**Akutan Zero**	**1.90**	**262**		Pn	13 21 42.2	-0.1
CNBA	**Chernabura Isl**	**1.91**	**75**		Pn	13 21 42.9	+0.5
AKMO	**Akutan Morgan**	**1.92**	**262**		Pn	13 21 42.4	-0.2
UNV	**Unalaska Valle**	**2.26**	**258**		Pn	13 21 46.7	-0.5
MGOD	**Makushin Gods**	**2.48**	**258**		Pn	13 21 50.1	-0.3
VNKR	**Veniaminof 5**	**2.56**	**48**		Pn	13 21 52.1	+0.7
VNFG	**Fog Glacier, M**	**2.65**	**43**		Pn	13 21 52.8	0.0
VNFG				IAML		13 22 37.9	
	comp=N,92nm,1.1s						
O14K	**Tigyukauivet M**	**4.95**	**9**	Pn	Pn	13 22 23.3	-0.9
O14K				IAML		13 23 40.5	
	comp=E,7.1nm,1.1s						
O14K				IAML		13 23 54.8	
	comp=N,11nm,1.0s						
O15K	**Ungalikthiuk R**	**5.07**	**17**	Pn	Pn	13 22 24.8	-1.1
O15K				IAML		13 23 55.9	
	comp=E,7.6nm,1.1s						
O15K				IAML		13 25 48.6	
	comp=N,8.2nm,1.2s						
N14K	**Kuskokwak Cree**	**5.59**	**6**	Pn	Pn	13 22 32.3	-0.6
N15K	**Kwethluk River**	**5.98**	**13**	Pn	Pn	13 22 37.6	-0.8
M16K	**Timber Creek**	**6.96**	**16**	Pn	Pn	13 22 50.9	-0.9
M17K	**Holitna River**	**7.59**	**20**	Pn	Pn	13 22 59.8	-0.6
SLKM	**Skilak Lake**	**9.13**	**43**	Pn	Pn	13 23 21.4	-0.1

*IDC **04** 13:21:17.4±1.9, 40.˚64N×122.˚66E, h0km, mb4.3/1, mbtmp3.9/3, ML3.3/2, MS3.9/6, Error ellipse: s-maj=35.1km s-min=20.7km az=29.0*

*KEA **04** 13:21:18.6, 40.˚64N×122.˚70E, h18km, ML4.0/4*

ISC 04 13:21:18.9±1.5, 40.˚69N±0.˚05×122.˚76E±0.˚09, h10km, n14, σ2.9s06/14, MS4.1/5, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYS	**Pyongsong**	**2.78**	**120**	Pg	**Pg**	**13 22 10.7**	**-1.6**
PYS				Sg	**Sg**	**13 22 48.1**	**-0.2**
PYS				AML	AML		
	comp=N,2μm,0.2s						
PYS				AML	AML		
	comp=E,2μm,0.5s						
PYS				AML	AML		
	comp=Z,678nm,0.1s						
PYAG	**Pyongyang**	**2.83**	**124**	Pg	**Pb**	**13 22 09.8**	**+0.3**
PYAG				Sg	**Sg**	**13 22 47.9**	**-2.0**
PYAG				AML	AML		
	comp=N,648nm,0.6s						
PYAG				AML	AML		
	comp=E,605nm,0.7s						
PYAG				AML	AML		
	comp=Z,467nm,0.5s						
KGE	**Kanggye**	**2.94**	**84**	Pg	**Pb**	**13 22 13.1**	**+1.7**
KGE				Sg	**Sg**	**13 22 52.7**	**-0.5**
KGE				AML	AML		
	comp=N,581nm,0.6s						
KGE				AML	AML		
	comp=E,236nm,0.4s						
KGE				AML	AML		
	comp=Z,274nm,0.2s						
HHU	**Hamhung**	**3.73**	**100**	Pg	**Pb**	**13 22 27.7**	**+2.8**
HHU				Sg	**Sg**	**13 23 16.9**	**-1.7**
HHU				AML	AML		
	comp=N,671nm,0.7s						
HHU				AML	AML		
	comp=E,360nm,0.8s						
HHU				AML	AML		
	comp=Z,178nm,0.8s						
KSRS	**Korea Array**	**5.16**	**127**	Pn	**Pn**	**13 22 37.2**	**+1.0**
	comp=Z,1.5nm,0.3s,baz=312,slow=14,SNR=25						
KSRS				Pg	**Pg**	**13 22 55.8**	**-1.9**
	comp=Z,3.2nm,0.3s,baz=311,slow=17,SNR=14						
KSRS				LR	LR	13 23 53.1	
	comp=Z,5μm,21.9s,baz=165,slow=30						
KSRS				Lg	Lg	13 23 59.8	
	comp=Z,11nm,0.3s,baz=308,slow=31,SNR=7.1						
	comp=Z,4.2nm,0.4s						
BNX	**BinXian**	**6.08**	**32**	Pg	**Pg**	**13 23 13.8**	**-1.5**
BNX				Sg	**Sg**	**13 24 30.6**	**-3.4**
BNX				smax	smax		
	comp=N,54nm,0.8s						
BNX				smax	smax		
	comp=E,56nm,0.8s						
USRK	**Ussuriysk Ar.**	**7.67**	**60**	Pn	**Pn**	**13 23 13.3**	**+2.6**
	comp=E,0.4nm,0.3s,baz=246,slow=13,SNR=4.4						
USRK				Lg	Lg	13 25 22.0	
	comp=E,2.7nm,0.3s,baz=252,slow=25,SNR=9.4						
	comp=E,1.6nm,0.5s						
HILR	**Hailar Array B**	**9.12**	**348**	Lg	Lg	13 26 09.9	
	baz=148,slow=32						
FINES	**FINESS Array B**	**58.19**	**326**	P	**P**	**13 31 12.5**	**-0.2**
	comp=E,2.0nm,0.5s,baz=61,slow=6.0,SNR=15						
	comp=E,2.0nm,0.5s						
HFS	**Hagfors**	**64.03**	**328**	LR	LR	14 00 57.8	
	comp=E,132nm,19.3s,baz=248,slow=37						
NOA	**NORSAR Array B**	**64.44**	**330**	LR	LR	14 02 53.5	
	comp=E,49nm,18.6s,baz=260,slow=39						
VRAC	**Vranov**	**69.36**	**318**	LR		14 04 19.8	
	comp=E,127nm,20.9s,baz=244,slow=37						
STKA	**Stephens Creek**	**74.28**	**163**	LR	LR	14 04 34.1	
	comp=E,114nm,21.9s,baz=194,slow=35						
ATD	**Arta Tunnel**	**74.96**	**272**	LR	LR	14 09 53.5	
	comp=E,14nm,20.9s,baz=208,slow=39						

WEL 04 13:26:27.1±1.0, 35˚S±7˚×18˚0W±1˚3, h12km, M3.7/12, ML3.9/17, MLv3.7/12, Error ellipse: s-maj=17.6km s-min=6.8km az=109.7, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.14**	**210**	P	Pn	13 27 16.3	-0.1
MXZ				S	Sn	13 27 54.6	+0.8
WMGZ	**Waiomatatini S**	**3.32**	**207**	P	Pn	13 27 19.5	+0.7
WMGZ				S	Sn	13 28 01.4	+3.1
PKGZ	**Pakihiroa**	**3.49**	**210**	P	Pn	13 27 21.5	+0.3
PKGZ				S	Sn	13 28 04.8	+2.3
HAZ	**Te Kaha**	**3.53**	**214**	P	Pn	13 27 21.8	0.0
HAZ				S	Sn	13 28 05.8	+2.4
PUZ	**Puketiti**	**3.60**	**206**	P	Pn	13 27 22.6	-0.1
PUZ				S	Sn	13 28 06.1	+0.8
RUGZ	**Raukumara Rang**	**3.75**	**213**	P	Pn	13 27 25.0	+0.2
RUGZ				S	Sn	13 28 10.2	+1.2
TWGZ	**Tauwhareparae**	**3.80**	**209**	P	Pn	13 27 25.3	-0.2
TWGZ				S	Sn	13 28 10.4	+0.3
CNGZ	**Carnagh Statio**	**3.99**	**204**	P	Pn	13 27 28.2	+0.1
CNGZ				S	Sn	13 28 16.9	+2.1
TKGZ	**Te Karaka**	**4.08**	**208**	P	Pn	13 27 27.9	-1.3
TKGZ				S	Sn	13 28 15.5	-1.4
MWZ	**Matawai**	**4.12**	**212**	P	Pn	13 27 29.0	-0.9
MWZ				S	Sn	13 28 17.7	-0.4
KUZ	**Kuaotunu**	**4.16**	**242**	P	Pn	13 27 30.2	-0.2
URZ	**Urewera**	**4.25**	**216**	P	Pn	13 27 30.6	-1.0
URZ				S	Sn	13 28 20.9	-0.3
RIGZ	**Rimuhau**	**4.34**	**207**	P	Pn	13 27 33.4	+0.4
RIGZ				S	Sn	13 28 24.1	+0.5
SNGZ	**Shannon Statio**	**4.58**	**210**	P	Pn	13 27 36.6	+0.4
SNGZ				S	Sn	13 28 27.9	-1.4
MUGZ	**Murupara**	**4.59**	**217**	P	Pn	13 27 37.3	+1.0
MHGZ	**Mahia Peninsul**	**4.69**	**203**	P	Pn	13 27 36.2	-1.6
MHGZ				S	Sn	13 28 33.8	+1.7
RAHZ	**Arahi**	**4.80**	**211**	P	Pn	13 27 38.7	-0.5
RAHZ				S	Sn	13 28 35.3	+0.6
TOZ	**Tahuroa Road**	**4.81**	**232**	P	Pn	13 27 40.7	+1.3
MTHZ	**Maungataniwha**	**4.85**	**214**	P	Pn	13 27 40.9	+0.9
MTHZ				S	Sn	13 28 37.5	+1.4
WCZ	**Waipu Caves**	**4.97**	**256**	P	Pn	13 27 41.3	-0.2
BKZ	**Black Stump Fm**	**5.27**	**214**	P	Pn	13 27 45.4	-0.2

*UCR **04** 14:27:19.0±1.1, 10.˚68N×85.˚75W, h45km±3km, MW3.5*

*CATAC **04** 14:27:20.6±0.3, 11˚N±3˚×8˚6W±˚, h32km±3km, M2.9/12, MLv2.9/12, Error ellipse: s-maj=8.4km s-min=3.5km az=54.3, confirmed*

ISC 04 14:27:20.1±1.9, 10.˚63N±0.˚03×85.˚76W±0.˚04, h36km±1km, n50, σ0.˚94/79, 9C-11D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELI1	**Hacienda Flor**	**0.20**	**86**	P	**Pn**	**14 27 28.0**	**-0.7**
ELI1				S	**Sn**	**14 27 31.8**	**-4.5**
ELI1	**Hacienda Flor**	**0.20**	**86**	↓*iP*	**Pn**	**14 27 27.9**	**-0.7**
ELI1				*eS*	**Sn**	**14 27 34.6**	**-1.7**
ALIBA	**Liberia Airpor**	**0.21**	**100**	↓*iP*	**Pn**	**14 27 28.0**	**-0.4**
ALIBA				*eS*	**Sn**	**14 27 34.8**	**-1.1**
DELF	**Filadelfia**	**0.27**	**132**	↓*eP*	**Pn**	**14 27 28.2**	**+0.1**
DELF				*eS*	**Sn**	**14 27 35.5**	**+0.6**
LAPC	**Finca la Perla**	**0.35**	**67**	↓*eP*	**Pn**	**14 27 28.1**	**-0.5**
LAPC				*eS*	**Sn**	**14 27 34.8**	**-0.3**
GPS3	**Bodega del ICE**	**0.41**	**72**	↓*iP*	**Pn**	**14 27 31.4**	**+2.0**
GPS3				*eS*	**Sn**	**14 27 37.5**	**+1.4**
GPS2	**Hotel Rincn d**	**0.42**	**73**	↓*iP*	**Pn**	**14 27 29.2**	**-0.4**
GPS2				*eS*	**Sn**	**14 27 36.8**	**+0.5**
VRLE	**La Escondida,**	**0.42**	**68**	↓*iP*	**Pn**	**14 27 29.1**	**-0.4**
VRLE				*eS*	**Sn**	**14 27 36.5**	**+0.1**
GPS1	**Guardaparques**	**0.43**	**70**	↓*iP*	**Pn**	**14 27 29.2**	**-0.5**
GPS1				*eS*	**Sn**	**14 27 36.6**	**0.0**
VORI	**VORI**	**0.45**	**65**	*eP*	**Pn**	**14 27 29.7**	**-0.4**
LCRUZ	**La Cruz**	**0.46**	**16**	↓*eP*	**Pn**	**14 27 30.0**	**-0.1**
LCRUZ				*eS*	**Sn**	**14 27 38.3**	**+1.0**
BUAI	**Buenos Aires**	**0.49**	**60**	↓*iP*	**Pn**	**14 27 30.6**	**0.0**
BUAI				*eS*	**Sn**	**14 27 39.2**	**+1.3**
JUD3	**Juan Diaz 3**	**0.51**	**155**	↑*iP*	**Pn**	**14 27 31.2**	**+0.2**
JUD3				*eS*	**Sn**	**14 27 40.2**	**+1.7**
PEJA	**Penjamo Buenos**	**0.51**	**59**	↑*eP*	**Pn**	**14 27 30.6**	**-0.4**
PEJA				*eS*	**Sn**	**14 27 39.6**	**+1.1**
SAJU	**San Juanillo,**	**0.56**	**175**	↑*iP*	**Pn**	**14 27 31.6**	**-0.2**
SAJU				*eS*	**Sn**	**14 27 40.8**	**+1.0**
HORNC	**Hornillas**	**0.58**	**82**	↓*iP*	**Pn**	**14 27 31.1**	**-0.9**
HORNC				*eS*	**Sn**	**14 27 39.9**	**-0.4**
NICO	**Nicoya**	**0.58**	**148**	*eP*	**Pn**	**14 27 31.8**	**-0.2**
CUI	**Cuipilapa**	**0.59**	**87**	↑*eP*	**Pn**	**14 27 31.2**	**-0.9**
CUI				*eS*	**Sn**	**14 27 40.4**	**-0.1**
CARN	**Rivas**	**0.60**	**23**	P	**Pn**	**14 27 31.7**	**-0.6**
CARN				S	**Sn**	**14 27 40.3**	**-0.4**
CARN	**Rivas**	**0.60**	**23**	*eP*	**Pn**	**14 27 31.0**	**-1.3**
CARN				*eS*	**Sn**	**14 27 40.7**	**0.0**
VMAR	**Armenia, Volca**	**0.66**	**74**	↑*eP*	**Pn**	**14 27 31.9**	**-1.2**
VMAR				*eS*	**Sn**	**14 27 42.7**	**+0.4**
MOTZ	**Rio Naranjo**	**0.68**	**85**	*eP*	**Pn**	**14 27 32.6**	**-0.7**
CMARA	**Lajas Hojancha**	**0.69**	**151**	P	**Pn**	**14 27 34.6**	**+1.1**
CMARA	**Lajas Hojancha**	**0.69**	**151**	*eP*	**Pn**	**14 27 33.2**	**-0.3**
INVE	**Universidad In**	**0.70**	**103**	*eP*	**Pn**	**14 27 33.7**	**+0.1**
INVE				*eS*	**Sn**	**14 27 43.4**	**+0.1**
TIMP	**Tierras Morena**	**0.73**	**94**	*eP*	**Pn**	**14 27 32.8**	**-1.2**
TENO	**El Achiote**	**0.77**	**85**	*eP*	**Pn**	**14 27 33.1**	**-1.5**
TENO				*eS*	**Sn**	**14 27 43.9**	**-1.1**
TILA	**Tilaran**	**0.79**	**102**	*eP*	**Pn**	**14 27 34.9**	**+0.1**
NYURE	**Nandayure**	**0.81**	**142**	*eP*	**Pn**	**14 27 34.9**	**-0.1**
QUEB	**Quebradon, Cot**	**0.85**	**90**	*eP*	**Pn**	**14 27 34.8**	**-0.8**
QUEB				*eS*	**Sn**	**14 27 46.9**	**0.0**
JTS	**Las Juntas de**	**0.86**	**113**	P	**Pn**	**14 27 35.3**	**-0.5**
JTS				S	**Sn**	**14 27 46.9**	**-0.4**
JTS	**Las Juntas de**	**0.86**	**113**	↑*iP*	**Pn**	**14 27 35.2**	**-0.5**
JTS				*eS*	**Sn**	**14 27 47.2**	**0.0**
MORN	**Al O del Volca**	**0.92**	**7**	P	**Pn**	**14 27 36.3**	**-0.2**
MORN				S	**Sn**	**14 27 48.3**	**-0.2**
CONN	**Concepcion**	**0.94**	**8**	P	**Pn**	**14 27 36.5**	**-0.2**
CONN				S	**Sn**	**14 27 48.7**	**-0.2**
TABAC	**Tabacon**	**0.99**	**98**	*eP*	**Pn**	**14 27 36.8**	**-0.7**
JCR1	**Jicaral**	**1.00**	**140**	*eP*	**Pn**	**14 27 37.5**	**-0.2**
ARE1	**Arenal 1**	**1.04**	**99**	↑*iP*	**Pn**	**14 27 37.6**	**-0.6**
ARE1				*eS*	**Sn**	**14 27 51.8**	**+0.4**
VARE2	**V. Arenal**	**1.04**	**99**	↑*iP*	**Pn**	**14 27 37.6**	**-0.6**
VARE2				*eS*	**Sn**	**14 27 51.8**	**+0.3**
CEDE	**Laguna Cedeo**	**1.05**	**98**	↑*iP*	**Pn**	**14 27 37.8**	**-0.6**
CEDE				*eS*	**Sn**	**14 27 51.9**	**+0.1**
VACR	**Volcan Arenal**	**1.08**	**98**	*eP*	**Pn**	**14 27 37.9**	**-0.8**
SOCE	**Pocosol**	**1.15**	**102**	P	**Pn**	**14 27 39.0**	**-0.7**
SOCE	**Pocosol**	**1.15**	**102**	S	**Sn**	**14 27 52.8**	**-1.4**
CBL1	**Cabuya**	**1.23**	**147**	*eP*	**Pn**	**14 27 40.0**	**-0.7**
COVE	**Coope Vega, Sa**	**1.34**	**86**	P	**Pn**	**14 27 41.6**	**-0.7**
COVE	**Coope Vega, Sa**	**1.34**	**86**	S	**Sn**	**14 27 56.9**	**-1.9**
NANN	**Nandasmo**	**1.35**	**345**	P	**Pn**	**14 27 43.2**	**+0.8**
NANN	**Nandasmo**	**1.35**	**345**	S	**Sn**	**14 28 00.1**	**+1.0**
MASN	**Masaya**	**1.40**	**344**	P	**Pn**	**14 27 43.7**	**+0.5**
MAS3	**Al N del Volca**	**1.44**	**344**	P	**Pn**	**14 27 44.2**	**+0.5**
LCR2	**La Lucha 2**	**1.94**	**117**	P	**Pn**	**14 27 50.1**	**-0.6**

*MOS **04** 14:38:45.3±0.7, 33.˚54N×135.˚96E, h412km, mb4.2/19, Error ellipse: s-maj=11.0km s-min=7.0km az=102.0*

*NIED **04** 14:38:47.0, 33.˚61N×135.˚92E, h413km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.25; $M_{\theta\theta}$1.92; $M_{\phi\phi}$-2.17; $M_{r\theta}$1.38; $M_{\theta\phi}$0.53; $M_{\phi r}$-2.58; Fault plane solution: $M_0$3.48000×10^{15} NP1:ϕ_s44.00000°, δ34.00000°, λ175.00000°. NP2:ϕ_s138.00000°, δ87.00000°, λ56.00000°.*

*IDC **04** 14:38:46.9±0.8, 33.˚59N×135.˚90E, h411km±8km, mb3.4/15, mbtmp4.2/23 Error ellipse: s-maj=11.8km s-min=9.7km az=103.0*

*JMA **04** 14:38:47.0±0.2, 34˚N±1˚×135.˚9E±0.˚7, h413km±1km, MV3.8/35, SOUTHERN WAKAYAMA PREF*

*NEIC **04** 14:38:47.1±0.9, 33.˚60N±0.˚07×135.˚9E±0.˚1, h410km±8km, mb4.1/46, Error ellipse: s-maj=14.6km s-min=10.2km az=96.0*

ISC 04 14:38:46.7±0.5, 33.˚57N±0.˚05×135.˚95E±0.˚05, h410km±5km, n157, σ0.˚78/166, mb4.0/48, 5C-8D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWKM	**Wakayamakushim**	**0.20**	**233**	P	**P**	**14 39 37.9**	**+0.6**
JWKM				S	**S**	**14 40 18.0**	**0.0**
JMMH	**Miemihama**	**0.26**	**14**	*iP*	**P**	**14 39 37.9**	**+0.6**
JMMH				S	**S**	**14 40 18.1**	**0.0**
JTNC	**Tanabenakahech**	**0.38**	**312**	*iP*	**P**	**14 39 38.3**	**+0.8**
JTNC				S	**S**	**14 40 18.1**	**-0.3**
TTO1	**TONANKAI O.B.S**	**0.70**	**85**	P	**P**	**14 39 39.2**	**+1.5**
JWY	**Kouya**	**0.71**	**336**	*iP*	**P**	**14 39 39.0**	**+0.9**
JWY				S	**S**	**14 40 19.5**	**-0.1**
JIE	**Ise**	**1.04**	**37**	P	**P**	**14 39 40.0**	**+1.1**
JIE				*eS*	**S**	**14 40 21.2**	**+0.1**
JAI	**Aioi**	**1.27**	**281**	*iP*	**P**	**14 39 40.6**	**+0.8**
JAI				S	**S**	**14 40 23.0**	**+0.2**
TK02	**Tokai 2**	**1.55**	**75**	P	**P**	**14 39 42.1**	**+1.3**
JMN	**Monobe**	**1.73**	**276**		**P**	**14 39 43.0**	**+0.9**
JMN	**Monobe**	**1.73**	**276**	P	**P**	**14 39 42.7**	**+0.6**
JMN	**Monobe**	**1.73**	**276**	*iP*	**P**	**14 39 43.0**	**+0.9**
JMN				S	**S**	**14 40 27.5**	**+0.6**
JWT	**Wachi**	**1.77**	**345**	*iP*	**P**	**14 39 42.7**	**+0.6**
JWT				S	**S**	**14 40 26.2**	**-0.9**
INU	**Inuyama**	**1.98**	**26**		**P**	**14 39 43.7**	**+0.3**
INU	**Inuyama**	**1.98**	**26**	P	**P**	**14 39 43.9**	**+0.5**
JSG	**Sagara**	**2.16**	**59**	P	**P**	**14 39 45.7**	**+1.2**
JGF	**Kuroka**	**2.34**	**29**		**P**	**14 39 46.2**	**+0.5**
JGF	**Kuroka**	**2.34**	**29**	P	**P**	**14 39 46.2**	**+0.5**
JTO	**Tosashimizu**	**2.73**	**256**	*iP*	**P**	**14 39 49.4**	**+0.8**
JTO				S	**S**	**14 40 38.5**	**-0.2**
JHS	**Saijyo**	**2.74**	**302**	*iP*	**P**	**14 39 49.1**	**+0.5**
JNA	**Nagahama**	**2.90**	**271**	P	**P**	**14 39 50.8**	**+1.0**
JNA				S	**S**	**14 40 41.2**	**+0.2**
JOD2	**Odawara 2**	**3.10**	**56**	P	**P**	**14 39 52.5**	**+1.2**
JHT	**Toyohira**	**3.12**	**291**	P	**P**	**14 39 52.0**	**+0.5**
JGT2	**ShimaneMisato**	**3.21**	**299**	P	**P**	**14 39 52.5**	**+0.2**
JHJ	**Hachijo jima 2**	**3.24**	**97**	P	**P**	**14 39 54.1**	**+1.5**
	124nm,0.5s,baz=205,slow=23,SNR=6.5						
JHJ2	**Mitsune**	**3.27**	**97**	*eP*	**P**	**14 39 51.7**	**-1.0**
JRY	**Ryogami san**	**3.45**	**44**	P	**P**	**14 39 54.7**	**+0.5**
MAJO	**Matsushiro**	**3.50**	**31**		**P**	**14 39 54.8**	**+0.2**
MAJO	**Matsushiro**	**3.50**	**31**	P	**P**	**14 39 55.0**	**+0.3**
MAJO	**Matsushiro**	**3.50**	**31**	*diP*	**P**	**14 39 54.9**	**+0.2**
MJAR	**Matsushiro Arr**	**3.50**	**31**	P	**P**	**14 39 54.7**	**0.0**
MJAR	**Matsushiro Arr**	**3.50**	**31**	P	**P**	**14 39 55.0**	**+0.4**
	25nm,0.5s,baz=192,slow=6.2,SNR=117						
MJAR				S	**S**	**14 40 50.1**	**0.0**
	5.2nm,0.6s,baz=76,slow=7.1,SNR=2.3						
MJB9	**Matsu-Tunnel**	**3.50**	**31**	P	**P**	**14 39 55.6**	**+0.9**
JNU	**Nakatsue**	**4.27**	**265**	P	**P**	**14 40 02.3**	**+0.5**
JNU	**Nakatsue**	**4.27**	**265**	P	**P**	**14 40 02.5**	**+0.7**
	64nm,0.8s,baz=106,slow=2.1,SNR=31						
JNU	**Nakatsue**	**4.27**	**265**	P	**P**	**14 40 02.5**	**+0.7**
BSO1	**Boso 1**	**4.31**	**74**	S	**S**	**14 41 02.0**	**-0.7**
JSD	**Sado**	**4.84**	**22**	P	**P**	**14 40 07.5**	**+0.2**
JSD	**Sado**	**4.84**	**22**	P	**P**	**14 40 07.6**	**+0.4**
JMM	**Marumori**	**5.82**	**41**		**P**	**14 40 16.3**	**-1.1**
JMM	**Marumori**	**5.82**	**41**	P	**P**	**14 40 16.3**	**-1.1**
TJN	**Taejon**	**7.58**	**294**		**P**	**14 40 37.2**	**-0.1**
TJN	**Taejon**	**7.58**	**294**	*diP*	**P**	**14 40 37.0**	**-0.3**
KSRS	**Korea Array**	**7.61**	**303**	P	**P**	**14 40 37.5**	**-0.1**
	5.2nm,0.6s,baz=119,slow=12,SNR=27						
KS19	**Wonju Array S**	**7.67**	**303**	P	**P**	**14 40 38.0**	**-0.3**
JTM	**Tenmabayashi**	**8.28**	**28**	P	**P**	**14 40 43.7**	**-1.2**
JOW	**Kunigami**	**9.44**	**227**	P	**P**	**14 40 58.5**	**+0.6**
	66nm,0.6s,baz=72,slow=8.7,SNR=14						
PSTR	**Posyet**	**9.93**	**337**	*ceP*	**P**	**14 41 03.2**	**+0.1**
VLA	**Vladivostok**	**10.05**	**343**	↓*eP*	**P**	**14 41 05.1**	**+0.6**
ERM	**Erimo**	**10.18**	**32**	P	**P**	**14 41 05.1**	**-0.7**
ERM	**Erimo**	**10.18**	**32**	P	**P**	**14 41 05.1**	**-0.7**
USRK	**Ussuriysk Ar.**	**11.05**	**345**	P	**P**	**14 41 15.7**	**+0.1**
	3.8nm,0.5s,baz=147,slow=11,SNR=10						
ASAJ	**Asahikawa**	**11.73**	**24**	P	**P**	**14 41 23.5**	**+0.5**
	18nm,0.8s,baz=237,slow=14,SNR=27						
ASAJ				S	**S**	**14 43 29.0**	**-3.1**
	8.5nm,0.6s,baz=353,slow=23,SNR=3.6						
JKA	**Kamikawa-asahi**	**11.73**	**24**	P	**P**	**14 41 22.1**	**-0.9**
YSS	**Yuzhno-Sakhali**	**14.34**	**19**	*eP*	**P**	**14 41 49.8**	**-1.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NACB	**Ninganchiao**	**15.66**	**237**	P	**P**	**14 42 05.0**	**-1.0**
TIA	**Tai'an**	**15.67**	**285**	P	**P**	**14 42 06.0**	**0.0**
TIA				pmax	pmax		
	comp=Z,22nm,0.7s						
SSLB	**Suanglung**	**16.36**	**237**	P	**P**	**14 42 13.7**	**+0.2**
YULB	**Yu-li**	**16.37**	**236**	P	**P**	**14 42 15.3**	**+1.6**
TPUB	**Ta-pu**	**16.90**	**237**	P	**P**	**14 42 17.3**	**-1.9**
TPUB	**Ta-pu**	**16.90**	**237**	P	**P**	**14 42 21.4**	**+2.1**
BJT	**Baijiatuan**	**17.09**	**298**		**P**	**14 42 20.6**	**-0.5**
BJT	**Baijiatuan**	**17.09**	**298**	P	**P**	**14 42 20.6**	**-0.5**
BJT				pmax	pmax		
	comp=Z,21nm,0.9s						
HEH	**HeiHe**	**17.82**	**342**	*eP*	**P**	**14 42 27.5**	**-1.2**
TYV	**Tymovskoe**	**17.97**	**14**	*eP*	P	14 42 40.1	+10
TYV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,2.3s						
WHN	**Wuhan**	**18.55**	**267**	↓*P*	**P**	**14 42 36.1**	**-0.5**
WHN				pmax	pmax		
	comp=Z,180nm,0.9s						
HILR	**Hailar Array B**	**19.98**	**328**	P	**P**	**14 42 50.9**	**+0.7**
	comp=Z,5.2nm,0.5s,baz=136,slow=9.3,SNR=7.7						
HHC	**Hu-ho-hao-te**	**20.70**	**298**	*eP*	**P**	**14 42 56.6**	**-0.3**
HHC				pmax	pmax		
	comp=

comp=Z,0.7nm,0.5s
KKAR Karatay Array 51.03 301 P **P** **14 47 09.0 0.0**
KKAR Karatay Array 51.03 301 P **P** **14 47 09.0 0.0**
GAR Garm 52.17 296 P **P** **14 47 16.9 -0.6**
GAR IAmb IAmb 14 47 18.7
comp=Z,12nm,1.2s
FITZ Fitzroy Crossi 52.31 192 P **P** **14 47 18.2 -0.2**
comp=Z,7.2nm,0.9s,baz=43,slow=6.5,SNR=5.1
comp=Z,7.2nm,0.9s
KDAK Kodiak Island 52.64 40 P **P** **14 47 20.8 +0.5**
KDAK IAmb IAmb 14 47 36.6
comp=Z,27nm,1.3s
KDAK Kodiak Island 52.64 40 P **P** **14 47 20.9 +0.6**
comp=Z,9.7nm,0.8s,baz=274,slow=5.0,SNR=4.5
comp=Z,9.7nm,0.8s
WB0 Warramunga Arr 53.06 182 P **P** **14 47 23.1 -0.8**
WB0 IAmb IAmb 14 47 53.4
comp=Z,8.1nm,0.9s
CHGR Chuyangaron 53.13 296 P **P** **14 47 24.1 -0.3**
CHGR IAmb IAmb 14 47 25.1
comp=Z,10nm,0.6s
CHGR Chuyangaron 53.13 296 P **P** **14 47 24.1 -0.3**
CHGR pmax pmax
comp=Z,10.0nm,0.6s
WRA Warramunga Arr 53.23 182 **P** **14 47 24.4 -0.7**
WRA Warramunga Arr 53.23 182 P **P** **14 47 24.9 -0.2**
comp=Z,4.0nm,0.7s,baz=357,slow=7.8,SNR=16
comp=Z,4.0nm,0.7s
WRA Warramunga Arr 53.23 182 *i* P **P** **14 47 24.8 -0.3**
WRA pmax pmax
comp=Z,4.0nm,0.7s
WR8 Warramunga Arr 53.24 182 P **P** **14 47 25.1 -0.1**
WR8 IAmb IAmb 14 47 37.2
comp=Z,7.3nm,1.0s
TRF Thorofare Moun 53.38 33 P **P** **14 47 26.7 +0.8**
SLKM Skilak Lake 53.61 36 P **P** **14 47 28.0 +0.6**
SLKM IAmb IAmb 14 47 49.0
comp=Z,19nm,1.2s
RND Reindeer 54.02 33 P **P** **14 47 30.7 +0.4**
RND IAmb IAmb 14 47 32.5
comp=Z,5.7nm,0.9s
RND Reindeer 54.02 33 P **P** **14 47 30.7 +0.4**
RND pmax pmax
comp=Z,6.0nm,0.9s
SEW Seward 54.03 37 P **P** **14 47 30.6 +0.3**
KNK Knik Glacier 54.38 35 P **P** **14 47 33.4 +0.6**
KNK IAmb IAmb 14 47 43.5
comp=Z,13nm,0.8s
ILAR Eielson Array 54.78 31 P **P** **14 47 35.8 +0.2**
comp=Z,0.6nm,0.5s,baz=270,slow=6.6,SNR=10
comp=Z,0.6nm,0.5s
HDA Harding Lake 54.78 31 P **P** **14 47 36.0 +0.4**
HDA IAmb IAmb 14 47 37.5
comp=Z,9.8nm,1.3s
GLI Glacier Island 55.10 36 P **P** **14 47 38.5 +0.6**
GLI IAmb IAmb 14 47 39.8
comp=Z,5.8nm,0.7s
FID Port Fidalgo 55.41 36 P **P** **14 47 40.4 +0.3**
FID IAmb IAmb 14 47 56.3
comp=Z,16nm,1.2s
SCRK Sand Creek 56.12 32 P **P** **14 47 45.2 0.0**
SCRK IAmb IAmb 14 47 47.0
comp=Z,7.2nm,1.2s
MBWA Marble Bar 56.58 198 P **P** **14 47 48.5 -0.1**
MBWA IAmb IAmb 14 47 50.4
comp=Z,17nm,1.2s
AB31 Akbulak array 56.77 311 P **P** **14 47 49.4 -0.3**
AB31 IAmb IAmb 14 47 50.4
comp=Z,2.6nm,0.5s
ABKAR Akbulak array 56.77 311 P **P** **14 47 49.1 -0.6**
VRDI Verde Repeater 56.80 35 P **P** **14 47 50.6 +0.6**
VRDI IAmb IAmb 14 47 52.9
comp=Z,23nm,1.5s
ASAR Alice Springs 56.95 182 P **P** **14 47 51.4 +0.1**
comp=Z,2.9nm,0.8s,baz=11,slow=8.2,SNR=8.5
comp=Z,2.9nm,0.8s
MCARA McCarthy VSAT 56.97 35 P **P** **14 47 52.0 +1.0**
MCARA IAmb IAmb 14 47 54.9
comp=Z,12nm,1.2s
G30M tAoh Zraii Nji 58.77 27 P **P** **14 48 03.7 +0.4**
G30M IAmb IAmb 14 48 28.5
comp=Z,7.0nm,1.4s
INK Inuvik 59.47 26 P **P** **14 48 07.9 +0.1**
INK Inuvik 59.47 26 P **P** **14 48 07.9 +0.1**
INK pmax pmax
comp=Z,6.0nm,1.4s
G31M Satah River 59.53 27 P **P** **14 48 08.7 +0.3**
G31M IAmb IAmb 14 48 10.4
comp=Z,10nm,1.2s
C36M Paulatuk 62.41 23 P **P** **14 48 27.8 +0.5**
FORT Forrest 64.43 188 P **P** **14 48 40.7 -0.2**
FORT IAmb IAmb 14 48 42.1
comp=Z,6.6nm,0.7s
ARCES ARCESS Array B 65.63 339 P **P** **14 48 48.1 0.0**
ARCES ARCESS Array B 65.63 339 P **P** **14 48 47.6 -0.5**
comp=Z,6.3nm,1.0s,baz=60,slow=6.5,SNR=5.7
comp=Z,6.3nm,1.0s
ARCES ARCESS Array B 65.63 339 P **P** **14 48 48.1 0.0**
ARCES pmax pmax
comp=Z,36nm,1.5s
BBOO Buckleboo 66.03 180 P **P** **14 48 51.4 +0.4**
RES Resolute Bay 67.02 13 P **P** **14 48 56.9 +0.3**
RES Resolute Bay 67.02 13 P **P** **14 48 56.9 +0.3**
RES pmax pmax
comp=Z,15nm,1.5s
OBN Obninsk 68.14 322 *e*P **P** **14 49 06.6 +2.7**
OBN pmax pmax
comp=Z,7.0nm,1.0s
FINES FINESS Array B 69.74 331 P **P** **14 49 12.0 -1.5**
comp=Z,3.9nm,1.0s,baz=64,slow=4.4,SNR=5.4
comp=Z,3.9nm,1.0s
FINES FINESS Array B 69.74 331 *i* P **P** **14 49 13.1 -0.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
SUMG Summit 74.07 358 P **P** **14 49 39.4 +0.2**
SUMG Summit 74.07 358 P **P** **14 49 39.4 +0.2**
SUMG pmax pmax
comp=Z,2.0nm,1.2s
BRTR Keskin Array B 77.70 310 P **P** **14 49 59.6 -0.2**
comp=Z,1.1nm,0.9s,baz=177,slow=4.9,SNR=4.0
comp=Z,1.1nm,0.9s
BRTR Keskin Array B 77.70 310 *ce*P **P** **14 49 59.2 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
NVAR Mina Array Bea 80.64 50 P **P** **14 50 16.4 +0.8**
comp=Z,0.3nm,0.5s,baz=293,slow=5.5,SNR=4.1
comp=Z,0.3nm,0.5s
LTZ Lake Taylor 82.95 154 P **P** **14 50 26.3 -0.6**
KMBO Kilima Mbogo 97.87 274 P Pdif 14 51 39.1 +1.4
comp=Z,87nm,0.5s,baz=209,slow=16,SNR=6.1
QSPA South Pole Qui 123.32 180 PKP **PKiKP** **14 56 56.9 +1.7**
comp=Z,0.9nm,0.8s,baz=239,slow=2.3,SNR=2.1

*NEIC **04** 14:40:38.8±2.0,5.°12S±0.°07×143.°61E±0.°05,h108km±9km, mb4.1/15, Error ellipse: s-maj=10.3km s-min=7.0km az=150.0*
*IDC **04** 14:40:38.1±1.8,5.°10S×143.°59E,h112km±18km,mb3.4/6, mbtmp4.0/10,MS3.9/1, Error ellipse: s-maj=23.2km s-min=14.4km az=52.0*
ISC 04 14:40:37.7±0.6,5.°15S±0.°07×143.°63E±0.°07,h101km,n41, σ1°43/41,mb3.9/8,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.92**	**312**	P	**Pn**	**14 41 36.7**	**+0.8**
	26nm,0.4s,baz=162,slow=6.7,SNR=15						
JAY				S	**Sn**	**14 42 19.9**	**-1.1**
	61nm,0.7s,baz=33,slow=20,SNR=3.6						
MANU	**Manus Island**	**4.84**	**51**	Pn	**Pn**	**14 41 49.4**	**+1.2**
PMG	**Port Moresby**	**5.49**	**141**	P	**Pn**	**14 41 58.4**	**+1.3**
	17nm,0.5s,baz=23,slow=4.0,SNR=15						
PMG				S	**Sn**	**14 42 56.3**	**-2.7**
	49nm,0.6s,baz=298,slow=22,SNR=26						
RABL	**Rabaul**	**8.56**	**84**		**Pn**	**14 42 39.5**	**+0.7**
COEN	**Coen**	**8.77**	**183**		**Pn**	**14 42 43.7**	**+2.0**
COEN	**Coen**	**8.77**	**183**	P	**Pn**	**14 42 44.2**	**+2.5**
MTSU	**Mount Surprise**	**12.93**	**177**	P	**P**	**14 43 42.3**	**-2.2**
DRS	**Darwin Rock St**	**14.51**	**239**	P	**Pn**	**14 43 58.9**	**+0.6**
MTN	**Manton Dam**	**14.52**	**237**		**Pn**	**14 43 57.9**	**-0.5**
AUDHS	**Darwin High Sc**	**14.57**	**239**	P	**Pn**	**14 43 59.4**	**+0.3**
HNR	**Honiara**	**16.73**	**106**	P	**P**	**14 44 27.6**	**+0.9**
HNR					IAmb	14 44 56.2	
	comp=Z,53nm,0.9s						
HNR	**Honiara**	**16.73**	**106**	P	**P**	**14 44 27.8**	**+1.2**
	comp=Z,18nm,0.4s,baz=196,slow=1.2,SNR=4.5						
WB0	**Warramunga Arr**	**17.09**	**211**	P	**Pn**	**14 44 29.4**	**-1.1**
WB0				IAmb	IAmb	14 44 31.4	
	comp=Z,6.6nm,1.1s						
WR8	**Warramunga Arr**	**17.20**	**210**	P	**Pn**	**14 44 30.9**	**-0.9**
WR8				IAmb	IAmb	14 44 39.6	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**17.27**	**211**	P	**P**	**14 44 32.1**	**-0.5**
WRA	**Warramunga Arr**	**17.27**	**211**	P	**P**	**14 44 31.6**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=32,slow=12,SNR=9.9						
KNRA	**Kununurra**	**17.97**	**233**	P	**P**	**14 44 39.5**	**-0.8**
KNRA				IAmb	IAmb	14 44 44.9	
	comp=Z,15nm,0.9s						
SOEI	**Soe**	**19.73**	**255**	P	**P**	**14 44 59.7**	**0.0**
SOEI	**Soe**	**19.73**	**255**	P	**P**	**14 45 00.4**	**+0.6**
BATI	**Baumata**	**20.41**	**255**	P	**P**	**14 45 07.7**	**+0.7**
	comp=Z,22nm,0.7s,baz=66,slow=4.9,SNR=5.6						
	comp=Z,22nm,0.7s						
AS31	**Alice Springs**	**20.66**	**206**		**P**	**14 45 10.3**	**+0.7**
ASAR	**Alice Springs**	**20.66**	**206**	P	**P**	**14 45 10.2**	**+0.6**
ASAR	**Alice Springs**	**20.66**	**206**	P	**P**	**14 45 08.9**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=31,slow=10,SNR=33						
	comp=Z,0.8nm,0.8s						
AUALC	**St Philip's Co**	**20.69**	**206**	P	Pn	14 45 12.3	-0.9
QLP	**Quilpie**	**21.32**	**179**	P	**P**	**14 45 20.0**	**+3.4**
EIDS	**Eidsvold**	**21.34**	**161**	P	**P**	**14 45 17.6**	**+0.8**
EIDS				IAmb	IAmb	14 45 40.7	
	comp=Z,8.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.79**	**232**	P	**P**	**14 45 20.3**	**-1.3**
FITZ	**Fitzroy Crossi**	**21.79**	**232**	P	**P**	**14 45 20.1**	**-1.6**
	comp=Z,1.6nm,0.5s,baz=30,slow=9.0,SNR=8.9						
	comp=Z,1.6nm,0.5s						
INKA	**Innaminka**	**22.64**	**187**	P	**P**	**14 45 29.1**	**-1.3**
INKA				IAmb	IAmb	14 45 30.8	
	comp=Z,2.9nm,0.9s						
TOLI2	**Tolitoli**	**23.66**	**285**	P	**P**	**14 45 38.3**	**-1.9**
TOLI2	**Tolitoli**	**23.66**	**285**	P	**P**	**14 45 39.7**	**-0.5**
AULRC	**Lightning Ridg**	**24.50**	**171**	P	**P**	**14 45 50.2**	**+2.5**
JOW	**Kunigami**	**35.09**	**336**	LR	LR	14 59 13.6	
	comp=Z,180nm,19.3s,baz=350,slow=32						
CMAR	**Chiang Mai Ar**	**49.90**	**299**	P	**P**	**14 49 21.0**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=119,slow=7.1,SNR=6.4						
	comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**72.98**	**176**	P	**P**	**14 51 55.7**	**-0.2**
VNDA				IAmb	IAmb	14 51 56.1	
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**72.98**	**176**	P	**P**	**14 51 55.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=333,slow=5.8,SNR=9.8						
	comp=Z,1.0nm,0.6s						
QSPA	**South Pole Qui**	**84.82**	**180**	P	**P**	**14 53 02.1**	**+1.2**
QSPA				IAmb	IAmb	14 53 03.1	
	comp=Z,3.4nm,0.9s						
QSPA	**South Pole Qui**	**84.82**	**180**	P	**P**	**14 53 02.5**	**+1.7**
	comp=Z,2.1nm,0.7s,baz=139,slow=0.9,SNR=17						
ILAR	**Eielson Array**	**86.04**	**24**	P	**P**	**14 53 04.0**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=240,slow=10,SNR=2.0						
	comp=Z,0.3nm,0.7s						
WAX	**Waxell Ridge**	**86.40**	**28**	P	**P**	**14 53 08.1**	**-0.6**
F28M	**Old Crow**	**89.61**	**22**	P	**P**	**14 53 24.1**	**+0.3**
F28M				IAmb	IAmb	14 53 51.1	
	comp=Z,6.1nm,1.4s						

*IDC **04** 14:41:09.2±1.0,52.°24N×173.°97W,h0km,mb3.8/5, mbtmp3.7/6,ML3.6/1,MS3.1/2, Error ellipse: s-maj=40.1km s-min=22.6km az=162.0*
*NEIC **04** 14:41:10.8±2.0,52.°20N±0.°07×173.°77W±0.°06,h9km±5km, mb3.9/33,ML3.9(AEIC), Error ellipse: s-maj=11.3km s-min=4.0km az=197.0*
*AEIC **04** 14:41:11.0±2.4,52.°3N±0.°1×173.°83W±0.°04,h7km±4km, Error ellipse: s-maj=16.7km s-min=3.7km az=177.0*
ISC 04 14:41:11.8±0.8,52.°31N±0.°07×173.°88W±0.°04,h15km±5km, n97,σ1°36/112,mb3.9/13,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOSE	**Korovin Southe**	**0.11**	**287**		**Pg**	**14 41 15.2**	**0.0**
KOSE					**Sg**	**14 41 18.1**	**+0.6**
KOFP	**Korovin Flat P**	**0.14**	**254**		**Pg**	**14 41 16.0**	**+0.4**
KOFP					**Sg**	**14 41 19.3**	**+1.3**
KONE	**Korovin Northe**	**0.17**	**299**		**Pg**	**14 41 16.0**	**+0.1**
KOKV	**Korovin Volcan**	**0.18**	**286**		**Pg**	**14 41 16.4**	**+0.2**
KOKV					**Sg**	**14 41 19.9**	**+0.8**
KOKL	**Mount Kliuchef**	**0.20**	**273**		**Pg**	**14 41 16.7**	**+0.2**
KOKL					**Sg**	**14 41 20.1**	**+0.6**
KONW	**Korovin Northw**	**0.22**	**293**		**Pg**	**14 41 16.7**	**-0.1**
KONW					**Sg**	**14 41 17.0**	**-3.0**
ATKA	**Atka Island**	**0.22**	**240**		**Pg**	**14 41 16.9**	**+0.1**
ATKA					**Sg**	**14 41 21.2**	**+1.1**
KOWE	**Korovin West**	**0.23**	**283**		**Pg**	**14 41 17.3**	**+0.3**
KOWE					**Sb**	**14 41 21.8**	**+0.1**
GSIG	**Igitkin Island**	**1.30**	**256**		**Pn**	**14 41 34.9**	**-0.6**
GSIG					**Sb**	**14 41 52.9**	**+0.5**
GSTR	**Great Sitkin T**	**1.36**	**262**	Pn	**Pn**	**14 41 35.8**	**-0.4**
GSTR	**Great Sitkin T**	**1.36**	**262**		**Sg**	**14 41 56.3**	**+0.7**
GSMY	**Great Sitkin M**	**1.36**	**259**		**Pn**	**14 41 35.7**	**-0.6**
GSMY					**Sg**	**14 41 55.3**	**-0.5**
GSTD	**Great Sitkin T**	**1.42**	**260**		**Pn**	**14 41 36.6**	**-0.5**
GSTD					**Sn**	**14 41 56.4**	**+1.1**
GSSP	**Great Sitkin S**	**1.43**	**262**		**Pn**	**14 41 37.0**	**-0.1**
GSCK	**Great Sitkin C**	**1.44**	**259**		**Pn**	**14 41 37.1**	**-0.2**
GSCK					**Sg**	**14 41 57.5**	**-0.5**
ETKA	**Kagalaska Isla**	**1.62**	**255**		**Pn**	**14 41 40.4**	**+0.6**
ETKA					**Sb**	**14 42 02.0**	**+0.4**
ADAG	**Mount Adagdak**	**1.71**	**260**		**Pn**	**14 41 42.0**	**+1.0**
ADAG					**Sb**	**14 42 04.4**	**+0.3**
ADK	**Adak**	**1.78**	**257**		**Pn**	**14 41 43.0**	**+1.0**
ADK	**Adak**	**1.78**	**257**		**Sb**	**14 42 07.3**	**+1.1**
KIWB	**Kanaga Island**	**2.07**	**258**		**Pn**	**14 41 47.3**	**+1.4**
KIWB	**Kanaga Island**	**2.07**	**258**		**Sn**	**14 42 13.3**	**+1.9**
KIKV	**Kanaga Island**	**2.07**	**259**		**Pn**	**14 41 46.8**	**+0.7**
KIKV					**Pb**	**14 41 47.8**	**-1.4**
KIKV					**Sn**	**14 42 13.7**	**+2.1**
KIMD	**Kanaga Island**	**2.14**	**256**		**Pn**	**14 41 47.8**	**+0.8**
KIMD					**Pb**	**14 41 48.4**	**-1.8**
KIMD					**Sb**	**14 42 17.1**	**+0.4**
TAPA	**Tanaga Point A**	**2.48**	**260**		**Pn**	**14 41 52.6**	**+1.0**
TAPA					**Pb**	**14 41 53.7**	**-2.3**
TAPA					**Sb**	**14 42 25.3**	**-1.0**
TAFL	**Tanaga Flats**	**2.54**	**259**		**Pn**	**14 41 53.3**	**+0.9**
TAFL					**Pb**	**14 41 53.5**	**-3.5**
TAFL					**Sb**	**14 42 26.5**	**-1.6**
TAFP	**Tanaga Falls P**	**2.56**	**262**		**Pn**	**14 41 53.4**	**+0.6**
TASE	**Tanaga Southea**	**2.61**	**261**		**Sn**	**14 42 27.7**	**+2.9**
TANO	**Tanaga North**	**2.64**	**263**		**Pn**	**14 41 54.7**	**+0.8**
GANE	**Gareloi Northe**	**3.06**	**263**		**Pn**	**14 42 00.9**	**+1.3**
GALAA	**Gareloi Lava P**	**3.07**	**262**		**Pn**	**14 42 01.0**	**+1.3**
GASW	**Gareloi Southw**	**3.12**	**262**		**Pn**	**14 42 01.5**	**+1.1**
GASW					**Sn**	**14 42 40.5**	**+3.2**
GAKI	**Gareloi-Kavalg**	**3.15**	**258**		**Pn**	**14 42 01.8**	**+1.1**
GAKI					Pb	14 42 02.1	-5.2
GAKI					**Sn**	**14 42 41.3**	**+3.4**
OKWE	**Okmok W'ng Wal**	**3.61**	**69**		**Sn**	**14 42 52.4**	**+2.9**
OKNC	**Okmok New Cone**	**3.67**	**70**		**Sn**	**14 42 54.1**	**+3.1**
CEPE	**Semis' Perret**	**4.00**	**268**		**Sn**	**14 43 01.3**	**+2.2**
CERB	**Semis' Cerberu**	**4.02**	**267**		**Pn**	**14 42 13.9**	**+1.2**
CERB					Pb	14 42 14.2	-8.0
CERB					**Sn**	**14 43 01.8**	**+2.3**
AMKA	**Amchitka**	**4.33**	**260**		**Pn**	**14 42 18.3**	**+1.3**
AMKA					**Sn**	**14 43 09.1**	**+1.9**
LSSE	**Little Sitkin**	**4.67**	**268**		**Pn**	**14 42 23.3**	**+1.6**
LSSA	**Little Sitkin**	**4.70**	**269**		**Pn**	**14 42 24.2**	**+2.0**
UNV	**Unalaska Valle**	**4.71**	**68**		**Pn**	**14 42 22.6**	**+0.5**
O14K	**Tigyukauivet M**	**9.93**	**41**	Pn	**Pn**	**14 43 34.9**	**+1.1**
N14K	**Kuskokwak Cree**	**10.21**	**37**	Pn	**Pn**	**14 43 36.5**	**-1.1**
O15K	**Ungalikthiuk R**	**10.48**	**43**	Pn	**Pn**	**14 43 42.5**	**+1.2**
N15K	**Kwethluk River**	**10.97**	**39**	Pn	**Pn**	**14 43 49.7**	**+1.7**
KDAK	**Kodiak Island**	**13.35**	**57**	LR	LR	14 49 37.6	
	comp=Z,53nm,18.7s,baz=246,slow=38						
N19K	**Bonanza Creek**	**13.62**	**44**	Pn	**Pn**	**14 44 26.0**	**+1.7**
ILSW	**Iliamna Southw**	**13.83**	**48**	Pn	**Pn**	**14 44 26.8**	**-0.4**
J18K	**Innoko River**	**14.37**	**32**		**P**	**14 44 41.8**	**+0.4**
CNPM	**China Poot**	**14.55**	**51**	P	**P**	**14 44 42.7**	**-0.8**
H18K	**Honhosa River**	**15.12**	**26**	Pn	**Pn**	**14 44 46.0**	**+1.5**
H18K				IAmb	IAmb	14 45 17.4	
	comp=Z,12nm,1.3s						
SKT	**Skwentna**	**15.43**	**42**		**P**	**14 44 53.1**	**-0.1**
SKT				IAmb	IAmb	14 44 59.0	
	comp=Z,8.2nm,1.0s						
KTH	**Kantishna Hill**	**16.48**	**38**	P	**P**	**14 45 05.7**	**+0.9**
RND	**Reindeer**	**17.20**	**40**	P	**P**	**14 45 13.0**	**+0.1**
DHY	**Denali Highway**	**17.65**	**42**	P	**Pn**	**14 45 17.6**	**+0.6**
HDA	**Harding Lake**	**18.42**	**38**	P	**Pn**	**14 45 27.2**	**+0.8**
HDA				IAmb	IAmb	14 45 30.0	
	comp=Z,8.9nm,1.4s						
K24K	**Donnelly Dome**	**18.61**	**41**	P	**P**	**14 45 28.7**	**+0.4**
K24K				IAmb	IAmb	14 45 33.9	
	comp=Z,9.7nm,0.8s						
IL31		**18.62**	**38**	P	**Pn**	**14 45 29.4**	**+0.7**
ILAR	**Eielson Array**	**18.62**	**38**	P	**Pn**	**14 45 29.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=235,slow=8.9,SNR=12						
	comp=Z,1.5nm,0.9s						
H24K	**Noodor Dome**	**18.82**	**34**		**Pn**	**14 45 32.1**	**+0.8**
J25K	**Salcha River,**	**19.12**	**39**		**P**	**14 45 34.1**	**+0.1**
J25K				IAmb	IAmb	14 45 38.4	
	comp=Z,4.5nm,0.7s						
DOT	**Dot Lake**	**19.25**	**42**	P	**P**	**14 45 35.1**	**-0.2**
DOT				IAmb	IAmb	14 45 40.8	
	comp=Z,4.0nm,0.7s						
SCRK	**Sand Creek**	**19.41**	**41**		**P**	**14 45 36.7**	**-0.4**
SCRK				IAmb	IAmb	14 45 47.7	
	comp=Z,5.2nm,0.8s						
J26L	**Joseph Creek**	**19.78**	**40**		**P**	**14 45 41.3**	**+0.1**
TOLK	**Toolik Lake Re**	**20.04**	**26**	P	Pn	14 45 46.0	+0.2
I26K	**Coal Creek Min**	**20.28**	**38**	P	**P**	**14 45 46.6**	**+0.2**
I26K				IAmb	IAmb	14 45 54.6	
	comp=Z,4.5nm,0.7s						
F25K	**Christian Rive**	**20.54**	**31**	P	**P**	**14 45 50.4**	**+1.0**
BMAR	**Burnt Mountain**	**20.80**	**32**	P	Pn	14 45 54.3	-0.3
G26K	**Porcupine Rive**	**20.81**	**34**		**P**	**14 45 53.5**	**+1.3**
G26K				IAmb	IAmb	14 46 02.0	
	comp=Z,4.6nm,0.8s						
H27K	**Steamboat Moun**	**21.28**	**37**	P	**P**	**14 45 57.0**	**-0.3**
H27K				IAmb	IAmb	14 46 11.8	
	comp=Z,6.9nm,1.4s						
DAWY	**Dawson**	**21.34**	**43**		**P**	**14 45 57.0**	**-0.9**
DAWY				IAmb	IAmb	14 46 08.2	
	comp=Z,4.3nm,1.0s						
I28M	**Miner Creek**	**21.57**	**39**		**P**	**14 46 00.7**	**+0.1**
L29M	**L29M**	**21.63**	**46**	P	**P**	**14 46 00.7**	**-0.5**
L29M				IAmb	IAmb	14 46 13.1	
	comp=Z,4.6nm,1.2s						
K29M	**Barlow Dome**	**22.07**	**44**	P	**P**	**14 46 05.9**	**0.0**
K29M				IAmb	IAmb	14 46 14.9	
	comp=Z,3.2nm,0.9s						
H29M	**Whitestone**	**22.45**	**38**	P	**P**	**14 46 09.8**	**-0.1**
H29M				IAmb	IAmb	14 46 30.6	
	comp=Z,7.9nm,1.2s						
F28M	**Old Crow**	**22.47**	**34**	P	**P**	**14 46 11.4**	**+1.4**
F28M				IAmb	IAmb	14 46 16.7	
	comp=Z,4.4nm,0.8s						
MAYO	**Mayo, Yukon**	**22.72**	**45**	P	**P**	**14 46 09.4**	**-3.3**
J30M	**Hart River**	**22.76**	**43**	P	**P**	**14 46 12.1**	**-1.2**
J30M				IAmb	IAmb	14 46 28.6	
	comp=Z,4.1nm,1.1s						
I30M	**Mount Dempster**	**22.91**	**41**	P	**P**	**14 46 13.3**	**-1.6**
E29M	**Blow River**	**23.48**	**33**	P	**P**	**14 46 20.7**	**+0.3**
E29M				IAmb	IAmb	14 46 24.9	
	comp=Z,3.6nm,0.8s						
G31M	**Satah River**	**24.23**	**38**	P	**P**	**14 46 27.7**	**+0.1**
F31M	**Tsiigehtchic**	**24.59**	**37**	P	**P**	**14 46 29.0**	**-1.8**
INK	**Inuvik**	**24.94**	**35**	P	**P**	**14 46 33.8**	**-0.2**
YAK	**Yakutsk**	**31.11**	**311**	LR	LR	15 01 00.9	
	comp=Z,61nm,20.1s,baz=219,slow=38						
E03A	**Lebam**	**32.67**	**80**	P	**P**	**14 47 39.9**	**-3.2**
H11N2	**WAKE ISLAND Hy**	**35.81**	**212**	T	T	15 25 45.6	
	baz=21,slow=76,SNR=58						
H11N3	**WAKE ISLAND Hy**	**35.82**	**212**	T	T	15 25 44.6	
	baz=21,slow=76,SNR=46						
H11N1	**WAKE ISLAND Hy**	**35.83**	**212**	T	T	15 25 45.3	
	baz=21,slow=76,SNR=40						
H11S1	**WAKE ISLAND Hy**	**37.01**	**212**	T	T	15 27 23.3	
	baz=20,slow=76,SNR=88						
H11S2	**WAKE ISLAND Hy**	**37.03**	**212**	T	T	15 27 16.6	
	baz=20,slow=76,SNR=67						
H11S3	**WAKE ISLAND Hy**	**37.03**	**212**	T	T	15 27 18.2	
	baz=20,slow=76,SNR=35						
NVAR	**Mina Array Bea**	**40.43**	**87**	P	**P**	**14 48 50.7**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=303,slow=6.3,SNR=2.2						
	comp=Z,0.4nm,0.5s						
PDAR	**Pinedale Array**	**43.12**	**76**	P	**P**	**14 49 10.9**	**-0.6**
	baz=349,slow=2.4,SNR=6.8						
TXAR	**Lajitas Array**	**55.52**	**85**	P	**P**	**14 50 46.3**	**0.0**
	comp=Z,1.1nm,0.7s,baz=298,slow=5.5,SNR=12						
	comp=Z,1.1nm,0.7s						
BVAR	**Borovoye Array**	**62.09**	**322**	P	**P**	**14 51 31.3**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=50,slow=6.2,SNR=4.1						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**84.85**	**228**	P	**P**	**14 53 44.9**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=26,slow=5.0,SNR=2.8						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**88.29**	**226**	P	**P**	**14 54 02.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=22,slow=5.0,SNR=8.2						
	comp=Z,0.5nm,0.5s						
QSPA	**South Pole Qui**	**142.07**	**180**	PKP	**PKPdf**	**15 00 39.1**	**-2.7**
	comp=Z,1.2nm,1.0s,baz=283,slow=3.8,SNR=6.8						

*BJI **04** 14:50:02.9,14.°30N×119.°98E,h31km,mB4.9/12,mb4.3/37, Ms4.5/42,Ms7 4.3/42*
*DJA **04** 14:50:04.7±0.5,15.°N±3.°×12.°0E±.°,h30km±4km,M4.8/42, mb4.8/42,mB5.4/7,Mw(mB)4.9/7*
*IDC **04** 14:50:06.3±0.5,14.°54N×119.°98E,h32km±3km,mb4.2/27, mbtmp4.4/28,ML4.4/1,MS3.9/49, Error ellipse: s-maj=18.4km s-min=10.0km az=69.0*
*NEIC **04** 14:50:07.0±2.3,14.°65N±0.°06×119.°72E±0.°04,h35km±1km, mb4.9/123, Error ellipse: s-maj=10.6km s-min=5.6km az=199.0*
*GCMT **04** 14:50:07.0±0.3,14.°49N±0.°02×119.°49E±0.°02,h29km±1km, MW4.9/72,Moment Tensor Solution. s32,c38; s72,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.35±.16; $M_{\theta\theta}$-0.08±.09; $M_{\phi\phi}$-2.27±.10; $M_{r\theta}$0.44±.15; $M_{\theta\phi}$0.31±.05; $M_{\phi r}$-1.99±.13; Best double couple: $M_0$3.09700×10^{16} NP1:ϕ_s355.00000°,δ25.00000°,λ95.00000°. NP2: ϕ_s169.00000°,δ66.00000°,$\lamb

comp=Z,140nm,3.9s
GYA LR LR
comp=N,770nm,14.6s
GYA LR LR
comp=E,640nm,18.7s
GYA LR LR
comp=Z,1µm,17.0s
NJ2 Nanjing 17.47 357 *e*P **P 14 54 09.5 +0.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.8s
NJ2 LR LR
comp=N,330nm,17.1s
NJ2 LR LR
comp=E,540nm,14.7s
NJ2 LR LR
comp=Z,630nm,18.0s
SPSI Sidrap Palu 18.37 180 P **Pn 14 54 20.9 +2.0**
BNSI Bone 18.81 179 P **Pn 14 54 26.5 +2.4**
27nm,0.9s
KMI Kunming 19.18 306 P **Pn 14 54 30.9 +2.0**
KMI pmax pmax
comp=Z,9.0nm,1.2s
KMI LR LR
comp=N,310nm,13.2s
KMI LR LR
comp=E,560nm,15.7s
KMI LR LR
comp=Z,570nm,14.8s
KAPI Kappang 19.41 180 P **Pn 14 54 31.4 -0.1**
KAPI Kappang 19.41 180 Pn **Pn 14 54 32.4 +1.0**
1.2nm,0.3s,baz=329,slow=12,SNR=15
KAPI LR LR 15 03 01.8
comp=Z,304nm,18.1s,baz=12,slow=40
25nm,0.7s
BKSI Bulukumba 19.72 179 P **P 14 54 34.8 +1.3**
20nm,0.7s
AAI Ambon 19.92 155 P **P 14 54 37.5 +1.9**
57nm,0.7s
MSAI Masohi 19.93 152 P **P 14 54 37.2 +1.4**
MSAI pP **pP 14 54 44.5 +1.0**
5µm101nm,0.9s
5µm101nm,0.9s
MYKOM **Kota Tinggi 20.21 233** Pn **Pn 14 54 40.2 -0.7**
CM31 Chiang Mai Arr 20.38 284 Pn Pn 14 54 42.2 -0.6
CMAR Chiang Mai Arr 20.38 284 Pn Pn 14 54 41.9 -1.0
CMAR Chiang Mai Arr 20.38 284 P Pn 14 54 42.7 -0.2
16nm,0.8s,baz=99,slow=11,SNR=101
CMAR PcP **PcP 14 58 54.1 +1.2**
0.6nm,0.3s,baz=105,slow=1.8,SNR=4.9
CMAR LR LR 15 02 35.6
comp=Z,186nm,21.2s,baz=100,slow=36
16nm,0.8s
CHTO Chiang Mai 20.43 285 Pn Pn 14 54 42.1 -1.4
BSSI Bau Bau, Buton 20.55 178 P **P 14 54 43.8 +1.3**
26nm,1.4s
PZH PanZhiHua 20.66 308 P Pn 14 54 45.3 -0.9
KULM Kulim 20.96 246 P Pn 14 54 46.7 -3.0
LYN LuoYang 21.01 343 P 14 54 49.3
LYN pP sP 14 55 00.1 +1.3
LYN S **S 14 58 41.4 +1.7**
LYN pmax pmax
comp=Z,25nm,0.7s
LYN pmax pmax
comp=Z,390nm,5.1s
LYN LR LR
comp=N,930nm,12.8s
LYN LR LR
comp=E,730nm,9.8s
LYN LR LR
comp=Z,910nm,15.5s
IPM Ipoh 21.02 243 P 14 54 48.5
JNU Nakatsue 21.07 27 LR LR 15 03 22.4
comp=Z,186nm,21.9s,baz=219,slow=38
DSRI Dabo 21.20 227 P **P 14 54 49.1 -0.4**
868nm22nm,0.9s
FAKI Fak Fak 21.27 144 P **P 14 54 50.8 +0.5**
TIA Tai'an 21.73 354 P **P 14 54 51.8 -3.2**
TIA pmax pmax
comp=Z,6.0nm,0.9s
CD2 Chengdu 21.98 321 P **P 14 54 57.7 -0.1**
CD2 S **S 14 58 59.8 +1.0**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=E,1µm,17.2s
CD2 LR LR
comp=Z,2µm,16.7s
EDFI Ende, Flores 23.20 175 P **P 14 55 10.9 0.0**
HNS HongShan 23.23 350 ⇓P **P 14 55 13.6 +2.8**
HNS S **S 14 59 24.1 +3.3**
HNS pmax pmax
comp=Z,7.0nm,1.1s
HNS LR LR
comp=N,540nm,17.1s
HNS LR LR
comp=E,340nm,15.5s
HNS LR LR
comp=Z,630nm,16.6s
PLAI Plampang 23.29 185 P **P 14 55 12.7 +1.1**
981nm93nm,1.2s
TWSI Taliwang, Sumb 23.30 187 P **P 14 55 12.6 +0.9**
39nm,0.9s
PSI Prapat 23.67 242 P **P 14 55 17.1 +1.6**
7.0nm,0.4s,baz=43,slow=4.1,SNR=5.9
PSI LR LR 15 04 30.8
comp=Z,234nm,19.4s,baz=92,slow=36
7.0nm,0.4s
RPSI Rantau Prapat 23.72 242 P **P 14 55 17.1 +1.2**
KSAR Wonju Array Be 23.93 16 P **P 14 55 15.9 -1.7**
KSRS Korea Array 23.95 16 P **P 14 55 17.1 -0.7**
1.4nm,0.6s,baz=196,slow=9.9,SNR=8.7
1.4nm,0.6s
KCSI Kotacane, Aceh 24.32 245 P **P 14 55 19.8 -1.7**
GUMO Guam 24.33 89 LR LR 15 04 28.9
comp=Z,364nm,19.1s,baz=245,slow=36
LEM Lembang 24.42 210 LR LR 15 06 08.4
comp=Z,112nm,21.0s,baz=18,slow=39
MDSI Maura Dua 24.43 220 P **P 14 55 25.2 +2.8**
SOEI Soe 24.53 169 **P 14 55 22.7 -0.8**
SOEI Soe 24.53 169 P **P 14 55 22.9 -0.5**
BATI Baumata 24.87 171 P **P 14 55 26.5 +0.1**
186nm,0.8s,baz=296,slow=1.0,SNR=49
BATI Baumata 24.87 171 P **P 14 55 25.7 -0.7**
LZH Lanzhou 25.79 329 *e*P **P 14 55 36.1 +1.3**
LZH pP sP 14 55 44.4 -2.3
LZH sP pwP 14 55 48.3 +1.8
LZH pmax pmax
comp=Z,18nm,1.1s
LZH LR LR
comp=N,770nm,16.0s
LZH LR LR
comp=E,630nm,15.1s
LZH LR LR
comp=Z,910nm,14.8s
JHJ Hachijo jima 2 25.93 41 LR LR 15 06 35.3
comp=Z,120nm,18.1s,baz=270,slow=38
JAY Jayapura 26.75 128 LR LR 15 05 47.0
comp=Z,193nm,21.0s,baz=348,slow=35
HHC Hu-ho-hao-te 27.19 346 *e*P **P 14 55 48.6 +1.3**
HHC S **S 15 00 25.4 +1.2**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,100nm,6.7s
HHC LR LR
comp=N,330nm,17.6s
HHC LR LR
comp=E,260nm,14.3s
HHC LR LR
comp=Z,380nm,16.2s
MJAR Matsushiro Arr 27.40 34 PcP **PcP 14 59 08.6 +0.9**
5.0nm,0.8s,baz=191,slow=2.9,SNR=9.7
MJAR LR LR 15 07 03.8
comp=Z,116nm,19.8s,baz=216,slow=37
BRDH Bariadhala 27.86 291 LR LR 15 08 15.3
comp=Z,284nm,20.3s,baz=137,slow=39
JSD Sado 28.56 32 P **P 14 55 58.0 -1.4**
JSD IAmb IAmb 14 55 58.7
comp=Z,32nm,1.1s
CN2 Changchun 29.57 8 P **P 14 56 08.9 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,400nm,17.0s
GTA Gaotai 30.38 328 *e*P **P 14 56 17.7 +1.9**
GTA pP sP 14 56 26.8 -0.9
GTA PcP **PcP 14 59 16.1 +0.9**
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA LR LR
comp=Z,550nm,16.3s
GTA LR LR
comp=Z,660nm,15.9s
GTA LR LR
comp=Z,920nm,18.3s
USRK Ussuriysk Ar. 31.35 17 P **P 14 56 23.6 -0.4**
comp=Z,3.1nm,0.7s,baz=153,slow=4.8,SNR=4.2
comp=Z,3.1nm,0.7s
BNX BinXian 31.77 10 ⇓P **P 14 56 27.0 -0.7**
BNX pmax pmax
comp=Z,5.0nm,1.3s
FITZ Fitzroy Crossi 32.92 170 P **P 14 56 37.1 -1.0**
EVN Everest 33.40 299 P **P 14 56 41.3 -1.8**
EVN IAmb IAmb 14 56 55.4
comp=Z,26nm,1.7s
HILR Hailar Array B 34.93 360 LR LR 15 12 23.4
comp=Z,226nm,19.1s,baz=250,slow=38
SONM Songino Array 35.03 344 P **P 14 56 56.2 -0.1**
SONM Songino Array 35.03 344 P **P 14 56 55.8 -0.4**
comp=Z,1.4nm,0.7s,baz=168,slow=10.0,SNR=6.9
comp=Z,1.4nm,0.7s
ASAJ Asahikawa 35.32 29 LR LR 15 13 07.1
comp=Z,107nm,18.7s,baz=204,slow=39
MBWA Marble Bar 35.46 180 P **P 14 56 59.2 -0.9**
MBWA IAmb IAmb 14 57 00.4
comp=Z,12nm,0.8s
PSA00 Pilbara Seismi 35.88 180 P **P 14 57 03.0 -0.7**
PSA00 IAmb IAmb 14 57 04.1
comp=Z,14nm,0.8s
PMG Port Moresby 36.07 130 LR LR 15 14 04.8
comp=Z,74nm,18.1s,baz=330,slow=40
HEH HeiHe 36.16 8 *e*P **P 14 57 06.8 +1.0**
HEH LR LR
comp=Z,120nm,16.2s
HEH LR LR
comp=Z,290nm,15.4s
HEH LR LR
comp=Z,310nm,15.8s
WB0 Warramunga Arr 36.98 157 P **P 14 57 10.9 -2.1**
WB0 IAmb IAmb 14 57 42.0
comp=Z,32nm,1.6s
WRAB Tennant Creek 37.11 157 P **P 14 57 12.0 -2.3**
WRA Warramunga Arr 37.12 157 P **P 14 57 12.6 -1.7**
WRA Warramunga Arr 37.12 157 P **P 14 57 12.6 -1.7**
comp=Z,4.2nm,0.5s,baz=336,slow=9.5,SNR=63
WRA LR LR 15 16 35.8
comp=Z,65nm,18.6s,baz=272,slow=43
comp=Z,4.2nm,0.5s
WR8 Warramunga Arr 37.19 157 P **P 14 57 12.8 -2.2**
WR8 IAmb IAmb 14 57 14.2
comp=Z,19nm,1.4s
PALK Pallekele 39.02 264 LR LR 15 13 39.8
comp=Z,164nm,18.3s,baz=84,slow=36
WMQ Urumqi 40.03 323 *e*P **P 14 57 40.0 +1.4**
WMQ LR LR
comp=Z,800nm,20.5s
WMQ LR LR
comp=Z,760nm,18.3s
WMQ LR LR
comp=Z,410nm,18.3s
AS31 Alice Springs 40.38 160 P **P 14 57 40.7 -1.0**
ASAR Alice Springs 40.39 160 P **P 14 57 40.3 -1.4**
ASAR Alice Springs 40.39 160 P **P 14 57 40.8 -0.9**
comp=Z,6.1nm,0.7s,baz=340,slow=6.5,SNR=83
comp=Z,6.1nm,0.7s
MORW Morawa 43.49 185 P **P 14 58 05.7 -1.3**
MORW IAmb IAmb 14 58 17.8
comp=Z,33nm,1.6s
MKAR Makanchi Array 44.85 324 P **P 14 58 15.9 -1.8**
MKAR Makanchi Array 44.85 324 P **P 14 58 18.1 +0.4**
comp=Z,1.5nm,0.9s,baz=124,slow=6.5,SNR=9.4
MKAR PcP **PcP 14 59 59.0 -0.2**
comp=Z,1.4nm,0.7s,baz=120,slow=3.4,SNR=4.0
comp=Z,1.5nm,0.9s
FORT Forrest 45.74 170 P **P 14 58 24.2 -0.6**
FORT IAmb IAmb 14 58 25.4
comp=Z,22nm,0.9s
INKA Innaminka 46.67 154 P **P 14 58 31.1 -1.0**
AAK Ala-Archa 47.87 315 LR LR 15 20 10.9
comp=Z,343nm,21.9s,baz=94,slow=38
ZALV Zalesovo Beam 47.93 333 P **P 14 58 40.5 -1.3**
ZALV Zalesovo Beam 47.93 333 P **P 14 58 40.9 -0.8**
comp=Z,1.0nm,0.4s,baz=120,slow=6.8,SNR=7.4
ZALV LR LR 15 19 44.3
comp=Z,284nm,18.3s,baz=124,slow=37
comp=Z,1.0nm,0.4s
YAK Yakutsk 47.96 6 P **P 14 58 40.7 -1.1**
YAK Yakutsk 47.96 6 LR LR 15 21 53.1
comp=Z,133nm,18.2s,baz=172,slow=40
YAK Yakutsk 47.96 6 P **P 14 58 41.4 -0.4**
YAK sP **pwP 14 58 56.2 +2.4**
PETK Petropavlovsk- 48.73 30 P **P 14 58 45.8 -2.1**
PETK Petropavlovsk- 48.73 30 P **P 14 58 47.2 -0.7**
comp=Z,4.5nm,0.8s,baz=209,slow=5.7,SNR=10
PETK LR LR 15 17 48.2
comp=Z,55nm,21.3s,baz=212,slow=34
comp=Z,4.5nm,0.8s
KURBB Kurchatov Arra 49.02 326 P **P 14 58 50.6 +0.5**
comp=Z,3.9nm,0.9s,baz=122,slow=8.3,SNR=14
KURBB pP **sP 14 59 01.2 -1.1**
KURBB comp=Z,8.8nm,0.8s,baz=124,slow=7.9,SNR=18
LR LR 15 20 21.1
comp=Z,201nm,18.3s,baz=176,slow=37
comp=Z,3.9nm,0.9s
KURK Kurchatov 49.02 326 pwP 14 59 01.2 -1.1
KURK Kurchatov 49.02 326 P **P 14 58 49.9 -0.3**
KURK Kurchatov 49.02 326 P **P 14 58 50.4 +0.2**
KURK pP **sP 14 59 01.3 -1.0**
BBOO Buckleboo 49.57 162 P **P 14 58 53.0 -1.5**
MA2 Magadan 50.42 20 LR LR 15 21 33.5
comp=Z,109nm,19.5s,baz=210,slow=38
STKA Stephens Creek 50.65 156 P **P 14 59 01.7 -1.1**
comp=Z,5.7nm,0.8s,baz=342,slow=8.6,SNR=9.3
comp=Z,5.7nm,0.8s
KK31 Karatay Array 50.78 314 IAmb IAmb 14 59 15.4
comp=Z,6.7nm,0.7s
KKAR Karatay Array 50.78 314 P **P 14 59 04.0 +0.3**
SEY Seymchan 53.49 18 LR LR 15 23 50.2
comp=Z,69nm,19.2s,baz=220,slow=38
BVAR Borovoye Array 54.60 326 P **P 14 59 32.4 +0.6**
comp=Z,1.4nm,0.6s,baz=113,slow=8.6,SNR=8.9
BVAR pP **sP 14 59 42.7 -1.4**
comp=Z,4.4nm,0.7s,baz=116,slow=9.4,SNR=13
BVAR LR LR 15 24 16.3
comp=Z,212nm,18.2s,baz=111,slow=38
comp=Z,1.4nm,0.6s
TIXI Tiksi 57.36 3 P **P 14 59 50.3 -0.9**
TIXI IAmb IAmb 15 00 06.5
comp=Z,10nm,0.9s
TIXI Tiksi 57.36 3 LR LR 15 27 59.1
comp=Z,168nm,18.7s,baz=199,slow=40
TIXI Tiksi 57.36 3 P **P 14 59 50.4 -0.9**
DZM Mont Dzumac 58.42 128 P **P 14 59 58.7 -0.8**
comp=Z,4.4nm,0.6s,baz=259,slow=11,SNR=5.1
DZM LR LR 15 24 35.4
comp=Z,56nm,21.7s,baz=3.0,slow=36
comp=Z,4.4nm,0.6s
AB31 Akbulak array 59.54 319 P **P 15 00 06.5 -0.3**
AB31 IAmb IAmb 15 00 18.6
comp=Z,9.5nm,0.9s
ABKAR Akbulak array 59.54 319 P **P 15 00 06.5 -0.3**
AKTO Aktyubinsk 61.03 320 P **P 15 00 17.6 +0.7**
comp=Z,2.5nm,0.6s,baz=134,slow=6.7,SNR=6.3
AKTO LR LR 15 28 19.9
comp=Z,219nm,19.5s,baz=76,slow=38
comp=Z,2.5nm,0.6s
BILL Bilibino 61.19 18 P **P 15 00 16.7 -1.1**
BILL IAmb IAmb 15 00 18.4
comp=Z,4.8nm,0.7s
BILL Bilibino 61.19 18 P **P 15 00 17.2 -0.6**
ARTI Arti 62.30 327 pP **pP 15 00 35.7 +1.4**
ARTI comp=Z,6.5nm,0.7s,baz=151,slow=3.8,SNR=7.9
LR LR 15 28 51.3
comp=Z,140nm,18.7s,baz=166,slow=37
SPIA Saint Paul Isl 67.05 34 P **P 15 00 55.8 -0.5**
baz=261
NIKH Nikolski High 67.30 38 P **P 15 00 57.3 -0.8**
baz=264
KIRV Kirov 67.51 328 pP **pP 15 01 09.6 +1.4**
comp=Z,9.6nm,0.7s,baz=270,slow=4.9,SNR=4.2
KIRV LR LR 15 32 16.7
comp=Z,169nm,18.1s,baz=91,slow=37
GAMB Gambell 67.60 27 P **P 15 00 59.6 -0.2**
baz=257
UNV Unalaska Valle 68.78 38 P **P 15 01 07.5 +0.2**
baz=266
GNI Garni 69.42 308 LR LR 15 36 09.7
comp=Z,52nm,19.0s,baz=97,slow=40
TNA Tin City 69.55 25 P **P 15 01 11.2 -0.7**
baz=260
M11K Mekoryuk 69.58 31 P **P 15 01 11.3 -0.8**
baz=264
RAYN Ar Rayn 70.16 290 P **P 15 01 16.6 +0.1**
RAYN IAmb IAmb 15 01 28.1
comp=Z,8.2nm,0.8s
F14K Arctic Creek 70.19 25 P **P 15 01 15.5 -0.4**
baz=262
ANM Nome 70.47 26 P **P 15 01 17.4 -0.2**
baz=263
K13K Kusilvak Mount 70.49 29 P **P 15 01 17.6 -0.1**
baz=264
KBZ Khabaz 70.69 312 P **P 15 01 20.8 +1.5**
comp=Z,2.8nm,1.0s,baz=98,slow=15,SNR=2.9
KBZ pP **sP 15 01 29.4 -2.3**
comp=Z,8.0nm,1.0s,baz=142,slow=1.1,SNR=7.4
KBZ LR LR 15 35 42.6
comp=Z,45nm,19.5s,baz=92,slow=39
comp=Z,2.8nm,1.0s
F15K North Star Dit 70.92 25 P **P 15 01 20.3 0.0**
baz=263
C16K Lisburne Hills 71.00 22 P **P 15 01 20.7 0.0**
baz=262
J14K Nanvaranak Lak 71.08 28 P **P 15 01 21.4 +0.1**
baz=265
G15K Niukluk 71.09 26 P **P 15 01 20.8 -0.5**
baz=264
L14K Kuka Creek 71.38 30 P **P 15 01 23.0 -0.1**
baz=266
M14K Bethel 71.69 30 P **P 15 01 25.0 0.0**
baz=267
D17K Noatak River 71.77 23 P **P 15 01 25.3 -0.1**
baz=264
N14K Kuskokwak Cree 71.79 31 P **P 15 01 25.4 -0.2**
baz=268
H16K Eilm 71.82 26 P **P 15 01 25.9 +0.2**
baz=266
C17K DeLong Mountai 71.82 22 P **P 15 01 25.9 +0.1**
baz=264
G16K Koyuk River 71.83 26 P **P 15 01 25.5 -0.3**
baz=265
RDOG Red Dog Mine 71.88 23 P **P 15 01 25.7 -0.3**
baz=264
L15K Ungalak Mounta 71.97 29 P **P 15 01 26.5 -0.2**
baz=267
O14K Tigyukauivet M 71.98 32 P **P 15 01 26.7 0.0**
baz=268
K15K Wolf Creek Mou 71.98 29 P **P 15 01 26.6 -0.2**
baz=267
E17K Hotham Inlet 72.19 24 P **P 15 01 27.6 -0.3**
baz=265
M15K Kasigluk River 72.32 31 P **P 15 01 28.1 -0.6**
baz=268
SDPT Sand Point 72.34 36 P **P 15 01 28.1 -0.9**
baz=270
F17K Baldwin Pennin 72.37 24 P **P 15 01 28.4 -0.6**
baz=266
B18K Kokolik River 72.41 21 P **P 15 01 28.7 -0.5**
baz=264
I17K Unalakleet 72.44 27 P **P 15 01 28.5 -1.0**
baz=267
J16K Anvik River 72.46 28 P **P 15 01 28.7 -0.9**
baz=268
G17K Kiwalik Mounta 72.55 25 P **P 15 01 29.8 -0.3**
baz=267
C18K Utukok River 72.57 22 P **P 15 01 30.1 -0.1**
baz=265
N15K Kwethluk River 72.60 31 P **P 15 01 29.8 -0.7**
baz=269
E18K Tukpahlearik C 72.69 23 P **P 15 01 30.2 -0.7**
baz=266
O15K Ungalikthiuk R 72.72 32 P **P 15 01 30.5 -0.7**
baz=270
H17K Granite Mounta 72.83 26 IAmb IAmb 15 01 33.7
comp=Z,10.0nm,0.8s
H17K Granite Mounta 72.83 26 P **P 15 01 31.3 -0.5**
baz=268
CHNA Chernabura Isl 72.86 37 P **P 15 01 31.2 -0.9**
baz=271
S14K Fog Glacier 72.86 35 P **P 15 01 31.5 -0.7**
baz=271
L16K Owhat River 72.93 29 P **P 15 01 31.8 -0.6**
baz=269
F18K Selawik 73.02 24 P **P 15 01 32.8 0.0**
baz=267,SNR=8.9
J17K VABM Dome 73.15 28 P **P 15 01 32.6 -1.1**
baz=269
M16K Timber Creek 73.17 30 P **P 15 01 33.4 -0.5**
baz=270
C19K Lookout Ridge 73.18 22 P **P 15 01 33.1 -0.7**
baz=267
N16K Nishlik Lake 73.26 31 P **P 15 01 34.1 -0.4**
baz=270
G18K Tagagawik 73.39 25 P **P 15 01 34.9 -0.2**
baz=268
L17K Donlin 73.49 29 P **P 15 01 36.0 +0.3**
baz=270
K17K Iditarod 73.49 28 IAmb IAmb 15 01 37.8
comp=Z,13nm,0.8s
K17K Iditarod 73.49 28 P **P 15 01 35.2 -0.5**
baz=270
H18K Honhosa River 73.50 26 P **P 15 01 35.1 -0.6**
baz=269
O16K Kokwok River B 73.60 32 P **P 15 01 36.0 -0.4**
baz=271
P16K Nushagak River 73.66 32 P **P 15 01 36.5 -0.3**
baz=271
D19K Kuna River 73.69 22 P **P 15 01 36.2 -0.6**
baz=268
F19K Shaleruckik Mo 73.77 24 P **P 15 01 36.9 -0.3**
baz=269
M17K Holitna River 73.90 30 IAmb IAmb 15 01 40.9
comp=Z,16nm,0.9s
M17K Holitna River 73.90 30 P **P 15 01 37.8 -0.4**
baz=271
R16K Pilot Point 73.92 34 P **P 15 01 37.8 -0.5**
baz=272
E19K Redstone River 74.00 23 IAmb IAmb 15 01 40.2
comp=Z,12nm,0.9s
E19K Redstone River 74.00 23 P **P 15 01 38.3 -0.3**
baz=269
N17K Nushagak Hills 74.04 31 P **P 15 01 38.9 -0.1**
baz=271
B20K Meade River 74.07 21 P **P 15 01 39.0 0.0**
baz=269
O17K Koliganek Bris 74.11 31 P **P 15 01 39.3 0.0**
baz=272
GCSA Galena City Sc 74.13 26 P **P 15 01 39.2 -0.2**
baz=270
J18K Innoko River 74.21 28 P **P 15 01 39.9 0.0**
baz=271
D20K Etivluk River 74.24 22 P **P 15 01 39.6 -0.5**
baz=270
L18K Granite Mounta 74.25 29 IAmb IAmb 15 01 42.2
comp=Z,9.3nm,0.8s
L18K Granite Mounta 74.25 29 P **P 15 01 40.1 0.0**
baz=271
A21K Barrow 74.28 19 P **P 15 01 39.8 -0.4**
baz=269
H19K Roundabout Mou 74.30 25 P **P 15 01 40.3 -0.1**
baz=271
E20K Nigu River 74.40 23 P **P 15 01 40.9 -0.2**
baz=270
R17L Mt. Peulik Vol 74.57 34 P **P 15 01 41.6 -0.5**
baz=273
F20K Avaraart Lake 74.58 24 IAmb IAmb 15 01 43.5
comp=Z,11nm,0.7s
F20K Avaraart Lake 74.58 24 P **P 15 01 41.9 -0.1**
baz=271,SNR=16
LTZ Lake Taylor 74.59 143 P **P 15 01 41.9 -0.6**
M18K Stony River 74.68 30 P **P 15 01 42.4 -0.2**
baz=272
N18K Kilae Creek 74.68 31 P **P 15 01 42.6 -0.1**
baz=272
J19K Poorman 74.69 27 P **P 15 01 42.4 -0.3**
baz=272
A22K Sinclair Lake 74.81 20 P **P 15 01 43.4 +0.1**
baz=270
C21K Knifeblade Rid 74.90 22 P **P 15 01 43.4 -0.4**

baz=271
B21K Ikpikpuk River 74.95 21 P P 15 01 44.2 +0.1
baz=271
H20K Anotleneega Mo 74.96 25 P P 15 01 44.2 -0.1
baz=272,SNR=13
O18K Koktuh Hills 75.06 31 P P 15 01 44.8 -0.1
baz=273
L19K White Mountain 75.11 29 IAmb IAmb 15 01 47.0
comp=Z,13nm,0.9s
L19K White Mountain 75.11 29 P P 15 01 45.2 0.0
baz=273
RTZ Ruatahuna 75.15 137 P P 15 01 43.4 -2.4
I20K Naaghedeneel 75.15 26 P P 15 01 45.5 +0.2
baz=273
E21K Killik River 75.22 22 P P 15 01 45.6 -0.1
baz=272
J20K Nowinta River 75.33 27 IAmb IAmb 15 01 48.3
comp=Z,10nm,0.8s
J20K Nowinta River 75.33 27 P P 15 01 46.0 -0.3
baz=273
M19K Big River Lodg 75.34 29 P P 15 01 46.3 -0.2
baz=273
B22K Teshekpuk Lake 75.35 20 P P 15 01 46.1 -0.3
baz=272
N19K Bonanza Creek 75.36 30 P P 15 01 45.6 -1.2
baz=274
IMAR Indian Mountai 75.41 25 P P 15 01 46.8 0.0
K20K Telida 75.41 28 P P 15 01 46.4 -0.5
baz=273
G21K Allakaket 75.48 24 IAmb IAmb 15 01 48.9
comp=Z,16nm,0.8s
G21K Allakaket 75.48 24 P P 15 01 46.1 -1.1
baz=273
O19K Port Alsworth 75.48 31 P P 15 01 47.0 -0.3
baz=274
L20K Farewell, AK 75.54 29 P P 15 01 47.2 -0.5
baz=274
D22K Ayikyak River 75.67 22 P P 15 01 48.3 +0.1
baz=273
H21K Melozitna Rive 75.81 25 IAmb IAmb 15 01 51.0
comp=Z,16nm,1.0s
H21K Melozitna Rive 75.81 25 P P 15 01 49.0 -0.2
baz=274
SII Sitkinak Islan 75.83 35 P P 15 01 49.1 -0.3
baz=275
M20K Styx River 75.94 29 P P 15 01 50.0 0.0
baz=274
F22K John River 75.94 23 P P 15 01 49.7 -0.1
baz=274
P19K Oil Pt 76.07 31 P P 15 01 50.4 -0.3
baz=275
CHUM Lake Minchumin 76.15 27 P P 15 01 50.3 -0.8
baz=275
I21K Tanana 76.19 26 P P 15 01 51.6 +0.4
I21K IAmb IAmb 15 02 42.8
comp=Z,13nm,0.7s
I21K Tanana 76.19 26 P P 15 01 51.4 +0.1
baz=275,SNR=8.7
G22K Bettles 76.24 24 P P 15 01 51.4 -0.1
baz=275,SNR=8.4
PPLA Purkeypile 76.29 28 P P 15 01 51.8 -0.3
baz=275
O20K Slope Mountain 76.33 31 P P 15 01 51.3 -1.0
baz=275
C23K Itkillik River 76.34 21 P P 15 01 52.4 +0.3
baz=275
H22K Ishtalitna Cre 76.38 25 P P 15 01 52.5 +0.1
baz=275,SNR=12
D23K Nanushuk River 76.39 22 P P 15 01 52.2 -0.2
baz=275
SPCR Spurr Chakacha 76.43 30 P P 15 01 52.1 -0.7
baz=276
KDAK Kodiak Island 76.58 33 P P 15 01 52.8 -0.8
baz=276
Q20K Shuyak Island 76.59 33 P P 15 01 53.2 -0.5
baz=276
SKT Skwentna 76.68 29 IAmb IAmb 15 01 54.5
comp=Z,14nm,1.1s
SKT Skwentna 76.68 29 P P 15 01 54.0 -0.2
baz=276
BPAW Bear Paw Mtn. 76.71 27 P P 15 01 54.0 -0.3
BPAW Bear Paw Mtn. 76.71 27 P P 15 01 54.5 +0.2
baz=276,SNR=5.3
COLD Coldfoot 76.72 24 P P 15 01 52.7 -1.6
COLD Coldfoot 76.72 24 P P 15 01 54.7 +0.4
baz=276,SNR=5.9
MLY Manley 76.73 26 P P 15 01 54.4 0.0
baz=276
TOLK Toolik Lake Re 76.82 22 P P 15 01 54.3 -0.5
TOLK IAmb IAmb 15 01 56.7
comp=Z,12nm,0.7s
TOLK Toolik Lake Re 76.82 22 P P 15 01 55.1 +0.3
baz=276,SNR=5.8
G23K Bananza Creek 76.85 24 IAmb IAmb 15 01 57.0
comp=Z,19nm,1.6s
G23K Bananza Creek 76.85 24 P P 15 01 55.3 +0.2
baz=276,SNR=5.8
E23K Chandalar 76.86 23 IAmb IAmb 15 01 56.8
comp=Z,13nm,0.7s
E23K Chandalar 76.86 23 P P 15 01 55.2 0.0
baz=276,SNR=17
HOM Homer 76.87 31 P P 15 01 55.0 -0.3
baz=276
CAPN Captain Cook N 76.99 30 P P 15 01 55.9 0.0
baz=276
C24K Franklin Bluff 77.01 21 P P 15 01 55.7 -0.1
baz=277
D24K Happy Valley 77.03 22 P P 15 01 56.0 0.0
baz=277
TRF Thorofare Moun 77.09 27 IAmb IAmb 15 01 59.8
comp=Z,7.5nm,0.9s
TRF Thorofare Moun 77.09 27 P P 15 01 56.1 -0.5
baz=277
SUA Susitna One 77.11 30 P P 15 01 55.3 -1.4
SUA Susitna One 77.11 30 P P 15 01 56.2 -0.5
baz=277,SNR=6.4
H23K Yukon River 77.14 25 P P 15 01 56.3 -0.4
baz=277
CUT Chulitna 77.22 29 P P 15 01 57.0 -0.1
baz=277
E24K Your Creek 77.28 23 P P 15 01 57.3 -0.2
baz=277
I23K Minto, Yukon-K 77.30 26 P P 15 01 57.8 +0.3
baz=277
BRSE Bradley Lake S 77.31 31 P P 15 01 57.7 -0.1
baz=277
M22K Willow 77.37 29 P P 15 01 57.3 -0.7
baz=277,SNR=6.7
NEA2 Nenana 77.49 26 IAmb IAmb 15 02 00.2
comp=Z,13nm,0.7s
NEA2 Nenana 77.49 26 P P 15 01 58.2 -0.4
baz=278,SNR=8.7
F24K Squaw Lake 77.58 23 P P 15 01 59.0 -0.1
baz=278,SNR=17
RC01 Rabbit Creek A 77.64 30 P P 15 01 59.1 -0.4
baz=278
MCK McKinley 77.66 27 P P 15 01 58.6 -1.0
MCK McKinley 77.66 27 P P 15 01 59.4 -0.3
baz=278,SNR=16
O22K Cooper Landing 77.72 30 P P 15 02 00.2 +0.2
baz=278
RND Reindeer 77.74 27 P P 15 01 58.9 -1.2
RND IAmb IAmb 15 02 00.5
comp=Z,13nm,0.8s
H24K Noodor Dome 77.82 25 IAmb IAmb 15 02 02.3
comp=Z,7.7nm,0.8s
H24K Noodor Dome 77.82 25 P P 15 02 00.6 +0.1
baz=278,SNR=9.1
G24K Hadweenzic Riv 77.85 24 IAmb IAmb 15 02 02.4
comp=Z,11nm,0.8s
G24K Hadweenzic Riv 77.85 24 P P 15 02 00.5 -0.1
baz=278,SNR=8.0
PMR Palmer 77.86 29 IAmb IAmb 15 02 02.1
comp=Z,23nm,1.3s
PMR Palmer 77.86 29 P P 15 01 59.9 -0.8
baz=278
D25K Kavik River 77.87 21 P P 15 02 00.6 -0.2
baz=279
SEW Seward 77.91 31 P P 15 02 00.6 -0.4
baz=278
WRH Wood River Hil 77.92 26 IAmb IAmb 15 02 03.2
comp=Z,18nm,1.3s
WAT1 Susitna Watana 77.95 28 P P 15 02 01.0 -0.3
baz=278
BRTR Keskin Array B 77.96 308 P P 15 02 04.1 +2.2
comp=Z,0.9nm,0.9s,baz=343,slow=4.5,SNR=2.7
BRTR LR LR 15 40 46.8
comp=Z,40nm,18.4s,baz=66,slow=39
comp=Z,0.9nm,0.9s
COLA College 77.97 26 P P 15 02 00.6 -0.6
COLA IAmb IAmb 15 02 03.3
comp=Z,6.7nm,0.8s
COLA College 77.97 26 P P 15 02 01.0 -0.3
baz=278
COLA College 77.97 26 P P 15 02 01.1 -0.2
BR106 Keskin Array S 77.97 308 P P 15 02 10.2 +8.2
ARCES ARCESS Array B 78.01 339 P P 15 02 01.5 +0.1
comp=Z,7.6nm,1.0s,baz=61,slow=5.7,SNR=10
ARCES LR LR 15 39 56.0
comp=Z,114nm,18.2s,baz=66,slow=38
comp=Z,7.6nm,1.0s
CCB Clear Creek Bu 78.02 26 P P 15 02 00.5 -1.1
POKR Poker Plat Res 78.11 26 P P 15 02 01.8 -0.3
baz=279
KNK Knik Glacier 78.20 29 P P 15 02 00.7 -2.0
KNK IAmb IAmb 15 02 03.7
comp=Z,14nm,1.0s
KNK Knik Glacier 78.20 29 P P 15 02 01.9 -0.8
baz=279
SML Sawmill 78.21 29 P P 15 02 01.7 -1.0
SML Sawmill 78.21 29 P P 15 02 02.0 -0.7
baz=279
C26K Camden Bay 78.28 21 P P 15 02 02.2 -0.7
baz=280
PWL Port Wells 78.35 30 P P 15 02 02.6 -0.9
PWL IAmb IAmb 15 02 04.6
comp=Z,16nm,0.9s
PWL Port Wells 78.35 30 P P 15 02 03.0 -0.5
baz=279
E25K Arctic Village 78.36 22 P P 15 02 03.5 +0.1
baz=280
WAT6 Susitna Watana 78.36 28 P P 15 02 03.2 -0.5
baz=279,SNR=7.5
G25K Bearman Lake 78.38 24 P P 15 02 03.4 -0.1
baz=280,SNR=6.3
IL31 78.39 26 P P 15 02 02.4 -1.1
ILAR Eielson Array 78.39 26 P P 15 02 01.7 -1.9
ILAR Eielson Array 78.39 26 P P 15 02 02.6 -1.0
comp=Z,2.7nm,0.8s,baz=280,slow=4.9,SNR=25
ILAR LR LR 15 37 43.0
comp=Z,32nm,21.0s,baz=266,slow=36
comp=Z,2.7nm,0.8s
F25K Christian Rive 78.42 23 IAmb IAmb 15 02 05.8
comp=Z,9.7nm,0.7s
F25K Christian Rive 78.42 23 P P 15 02 04.1 +0.3
baz=280
HDA Harding Lake 78.42 26 IAmb IAmb 15 02 03.6
comp=Z,6.5nm,0.6s
HDA Harding Lake 78.42 26 P P 15 02 03.2 -0.6
baz=279,SNR=5.8
DHY Denali Highway 78.45 28 P P 15 02 03.4 -0.7
DHY Denali Highway 78.45 28 P P 15 02 03.9 -0.3
baz=279
M23K Glacier View 78.49 29 P P 15 02 04.2 0.0
baz=279
SPITS Spitsbergen Ar 78.61 348 P P 15 02 04.8 +0.1
comp=Z,25nm,1.1s,baz=113,slow=4.1,SNR=5.7
SPITS LR LR 15 40 03.5
comp=Z,129nm,20.9s,baz=58,slow=38
comp=Z,25nm,1.1s
SCM Sheep Creek Mo 78.67 29 P P 15 02 04.7 -0.7
SCM IAmb IAmb 15 02 06.4
comp=Z,18nm,0.9s
SCM Sheep Creek Mo 78.67 29 P P 15 02 05.2 -0.1
baz=280,SNR=5.2
C27K Jago River 78.75 21 P P 15 02 05.3 -0.2
baz=281
BMAR Burnt Mountain 78.85 23 P P 15 02 06.2 +0.1
GLI Glacier Island 78.94 30 P P 15 02 06.2 -0.6
GLI IAmb IAmb 15 02 08.0
comp=Z,19nm,1.0s
GLI Glacier Island 78.94 30 P P 15 02 06.3 -0.4
baz=280
P23K Montague Islan 78.94 31 P P 15 02 06.5 -0.2
baz=280
F26K Sheenjek River 78.97 23 P P 15 02 06.2 -0.6
baz=281
K24K Donnelly Dome 79.03 27 P P 15 02 07.1 -0.2
K24K Donnelly Dome 79.03 27 P P 15 02 06.4 -0.8
baz=281,SNR=9.4
J25K Salcha River, 79.06 26 P P 15 02 06.8 -0.6
baz=281
FINES FINESS Array B 79.14 331 P P 15 02 07.2 -0.6
comp=Z,2.6nm,0.5s,baz=66,slow=4.6,SNR=13
FINES LR LR 15 40 09.5
comp=Z,112nm,18.9s,baz=54,slow=38
comp=Z,2.6nm,0.5s
M24K Tolsona, Glenn 79.16 29 P P 15 02 07.6 -0.4
baz=280
AK09 Malin Array Si 79.25 320 P P 15 02 15.2 +6.6
G26K Porcupine Rive 79.25 23 IAmb IAmb 15 02 10.7
comp=Z,11nm,1.0s
G26K Porcupine Rive 79.25 23 P P 15 02 07.9 -0.3
baz=282,SNR=9.3
AK03 Malin Array Si 79.27 320 P P 15 02 15.6 +6.9
AK03 pP pwP 15 02 26.1 +4.8
AK10 Malin Array Si 79.27 320 P P 15 02 15.3 +6.6
AKASG Malin Array Be 79.27 320 IAmb IAmb 15 02 17.0
comp=Z,5.2nm,1.1s
AKASG Malin Array Be 79.27 320 P P 15 02 07.7 -1.0
comp=Z,0.2nm,0.3s,baz=69,slow=5.7,SNR=4.8
AKASG pP pP 15 02 18.5 +0.6
comp=Z,4.3nm,0.8s,baz=68,slow=5.7,SNR=4.3
AKASG LR LR 15 40 28.8
comp=Z,57nm,18.1s,baz=66,slow=38
comp=Z,0.2nm,0.3s
AK11 Malin Array Si 79.31 320 P P 15 02 15.4 +6.5
PAX Paxson 79.32 28 P P 15 02 09.1 +0.2
PAX Paxson 79.32 28 P P 15 02 08.6 -0.3
baz=281
AK16 Malin Array Si 79.35 320 P P 15 02 15.6 +6.4
AK18 Malin Array Si 79.37 320 P P 15 02 15.4 +6.2
KLU Klutina 79.39 29 P P 15 02 09.2 -0.1
baz=281
RIDG Independent Ri 79.45 27 P P 15 02 08.9 -0.6
RIDG Independent Ri 79.45 27 P P 15 02 08.4 -1.1
baz=281,SNR=13
DIV Divide 79.53 29 IAmb IAmb 15 02 11.7
comp=Z,13nm,1.0s
HARP HAARP 79.58 28 P P 15 02 09.8 -0.4
baz=281
EYAK Cordova Ski Ar 79.65 30 P P 15 02 09.8 -0.8
baz=281
D27M Malcolm River 79.78 21 IAmb IAmb 15 02 12.9
comp=Z,16nm,0.8s
D27M Malcolm River 79.78 21 P P 15 02 11.6 +0.4
baz=284,SNR=7.9
SCRK Sand Creek 79.78 26 P P 15 02 11.5 +0.1
baz=282,SNR=7.6
E27K Coleen River 79.80 22 IAmb IAmb 15 02 12.9
comp=Z,12nm,0.9s
E27K Coleen River 79.80 22 P P 15 02 11.2 -0.1
baz=284
DOT Dot Lake 79.81 27 P P 15 02 11.3 -0.2
I26K Coal Creek Min 79.84 25 P P 15 02 11.2 -0.4
baz=283
J26L Joseph Creek 79.85 26 P P 15 02 11.3 -0.5
baz=282
N25K Chitina, Valde 79.99 29 P P 15 02 12.3 -0.2
baz=282
G27K Doyon Strip 80.10 23 P P 15 02 12.9 -0.1
baz=284,SNR=8.0
MENT Mentasta 80.11 27 IAmb IAmb 15 02 13.6
comp=Z,10nm,0.7s
BMRM Bremner River 80.12 30 P P 15 02 13.5 +0.3
baz=282
L26K Log Cabin Wild 80.26 27 P P 15 02 14.2 +0.3
baz=283,SNR=5.4
H27K Steamboat Moun 80.29 24 P P 15 02 14.2 +0.2
baz=284
GLB Gilahina Butte 80.40 29 IAmb IAmb 15 02 16.0
comp=Z,11nm,1.1s
I27K Kandik River 80.40 25 P P 15 02 14.9 +0.2
baz=284
KAIM Kayak Island 80.43 31 P P 15 02 15.1 +0.3
baz=282
E28M Babbage River 80.44 21 P P 15 02 15.0 +0.3
baz=285
D28M Stokes Point 80.52 21 P P 15 02 15.5 +0.4
baz=286
M26K Nabesna, AK 80.56 28 IAmb IAmb 15 02 17.4
comp=Z,9.9nm,0.7s
M26K Nabesna, AK 80.56 28 P P 15 02 15.6 +0.1
baz=283,SNR=11
F28M Old Crow 80.57 22 P P 15 02 15.3 -0.2
F28M IAmb IAmb 15 02 17.0
comp=Z,11nm,0.8s
F28M Old Crow 80.57 22 P P 15 02 15.8 +0.4
baz=285,SNR=14
K27K Chicken 80.59 26 P P 15 02 16.0 +0.5
baz=284
MCARA McCarthy VSAT 80.78 29 P P 15 02 17.0 +0.3
baz=283
CRQE Cirque 80.89 30 P P 15 02 17.2 -0.2
baz=283
L27K Beaver Creek, 80.93 27 P P 15 02 17.9 +0.5
baz=284
BCAR Beaver Creek A 80.94 27 P P 15 02 18.3 +0.7
M27K Edge Creek, AK 81.08 28 P P 15 02 18.6 +0.2
baz=284
E29M Blow River 81.08 21 P P 15 02 18.3 +0.2
baz=287
I28M Miner Creek 81.12 25 P P 15 02 18.4 -0.1
baz=285
RNPP9 Sopachiv 81.20 321 P P 15 02 25.3 +6.2
RNPP5 Staryi Chortor 81.25 321 P P 15 02 25.5 +6.2
G29M Pine Creek 81.46 23 P P 15 02 20.2 0.0
baz=287,SNR=15
H29M Whitestone 81.53 24 IAmb IAmb 15 02 22.0
comp=Z,14nm,0.8s
H29M Whitestone 81.53 24 P P 15 02 20.4 -0.2
baz=287,SNR=6.9
MESA MESA 81.58 30 P P 15 02 20.8 -0.3
baz=284
CTG Chitna Glacier 81.67 29 P P 15 02 21.3 -0.3
baz=285
CTGM Chitina Glacie 81.67 29 IAmb IAmb 15 02 23.6
comp=Z,10nm,1.0s
DAWY Dawson 81.72 26 P P 15 02 21.9 +0.2
DAWY IAmb IAmb 15 02 23.2
comp=Z,9.1nm,0.9s
DAWY Dawson 81.72 26 P P 15 02 21.6 -0.1
baz=286,SNR=9.0
NOR Nord 81.76 354 *i* P P 15 02 21.2 -0.3
NOR IAmb IAmb 15 02 22.0
comp=Z,6.4nm,0.9s
F30M Barrier River 82.07 22 IAmb IAmb 15 02 24.7
comp=Z,16nm,0.8s
F30M Barrier River 82.07 22 P P 15 02 23.5 +0.1
baz=289
G30M tAoh Zraii Nji 82.11 23 P P 15 02 23.7 0.0
baz=289
EPYK Eagle Plains 82.12 23 P P 15 02 23.3 -0.4
baz=288,SNR=6.7
O28M Mount Upton 82.27 29 P P 15 02 24.3 -0.6
baz=286
YUK8 Steele Glacier 82.32 29 P P 15 02 25.4 +0.2
baz=286
DRV Dumont d'Urvil 82.33 172 P P 15 02 23.6 -0.9
PINM Pinnacle 82.42 30 P P 15 02 25.5 +0.1
baz=286
BURAR Bucovina Array 82.46 317 P P 15 02 25.7 -0.3
BUR08 Bucovina Ar. S 82.47 317 P P 15 02 26.4 +0.4
BUR08 IAmb IAmb 15 02 37.6
comp=Z,11nm,0.8s
L29M L29M 82.53 27 P P 15 02 26.6 +0.6
baz=287
K29M Barlow Dome 82.57 26 IAmb IAmb 15 02 28.1
comp=Z,8.3nm,0.8s
K29M Barlow Dome 82.57 26 P P 15 02 25.8 -0.4
baz=288,SNR=8.5
M29M Somme Creek 82.58 27 IAmb IAmb 15 02 28.6
comp=Z,6.6nm,0.8s
M29M Somme Creek 82.58 27 P P 15 02 26.0 -0.3
baz=287,SNR=8.3
I30M Mount Dempster 82.61 24 IAmb IAmb 15 02 27.7
comp=Z,14nm,0.8s
I30M Mount Dempster 82.61 24 P P 15 02 26.0 -0.5
baz=289,SNR=15
INK Inuvik 82.64 21 P P 15 02 25.6 -0.7
INK IAmb IAmb 15 02 27.2
comp=Z,10nm,0.8s
INK Inuvik 82.64 21 LR LR 15 43 02.6
comp=Z,40nm,19.0s,baz=44,slow=38
INK Inuvik 82.64 21 P P 15 02 24.2 -2.1
baz=291
YUK4 Talbot Arm 82.82 28 P P 15 02 26.9 -0.8
baz=287
J30M Hart River 82.84 25 IAmb IAmb 15 02 39.7
comp=Z,29nm,1.9s
J30M Hart River 82.84 25 P P 15 02 26.5 -1.1
baz=289
G31M Satah River 82.86 22 P P 15 02 26.3 -1.2
baz=290
F31M Tsiigehtchic 82.87 22 P P 15 02 27.4 -0.1
baz=291
YUK6 Outpost Mounta 83.07 29 P P 15 02 28.7 -0.3
baz=287
O29M Mount Kennedy 83.16 29 P P 15 02 28.9 -0.5
baz=286
H31M Peel River 83.22 24 IAmb IAmb 15 02 31.0
comp=Z,16nm,1.1s
H31M Peel River 83.22 24 P P 15 02 29.0 -0.4
baz=290
M30M Minto, Yukon 83.28 27 IAmb IAmb 15 02 32.1
comp=Z,11nm,1.3s
M30M Minto, Yukon 83.28 27 P P 15 02 29.8 -0.1
baz=289,SNR=5.6
MAYO Mayo, Yukon 83.34 26 P P 15 02 30.2 +0.1
baz=289
N30M Aishikik Lake 83.50 28 P P 15 02 30.9 -0.1
baz=288
HYT Haines Junctio 83.51 29 P P 15 02 31.3 +0.2
baz=288
KWP Kalwaria Pacla 83.59 320 *e*P P 15 02 32.0 +0.3
A36M Sachs Harbour 83.70 16 P P 15 02 32.1 +0.4
baz=298
P29M Windy Craggy 83.77 30 P P 15 02 32.4 0.0
baz=288
P30M Million Dollar 83.99 29 P P 15 02 33.4 -0.1
baz=289
N31M Braeburn, Yuko 84.09 28 P P 15 02 33.7 -0.3
baz=290
O30N Mendenhall 84.18 29 P P 15 02 33.7 -0.8
baz=289
M31M Drury Creek, Y 84.46 27 P P 15 02 35.8 -0.1
baz=291
STHS Stebnicka Huta 84.57 320 *e*P P 15 02 36.4 -0.3
STHS *e* 15 02 44.4
WHY Whitehorse 84.78 28 IAmb IAmb 15 02 40.2
comp=Z,11nm,0.8s
WHY Whitehorse 84.78 28 P P 15 02 37.0 -0.6
baz=290
SKAG Skagway 84.98 30 P P 15 02 38.6 +0.1
baz=290
R31K City Hall, Gus 85.14 31 P P 15 02 38.6 -0.7
baz=290
NIE Niedzica 85.16 320 *e*P P 15 02 40.8 +1.1
OJC Ojcow 85.24 321 *e*P P 15 02 40.5 +0.5
C36M Paulatuk 85.31 19 P P 15 02 38.5 -1.4
baz=299
HFS Hagfors 85.34 331 P P 15 02 39.8 -0.5
comp=Z,2.3nm,0.6s,baz=101,slow=3.0,SNR=4.7
HFS pP pP 15 02 50.6 +1.1
comp=Z,5.5nm,0.7s,baz=88,slow=4.6,SNR=4.4
HFS LR LR 15 43 49.0
comp=Z,84nm,18.0s,baz=64,slow=38
comp=Z,2.3nm,0.6s
N32M Quiet Lake 85.42 28 P P 15 02 40.7 -0.1
baz=292
DAG Danmarks Havn 85.66 351 *i* P P 15 02 40.8 -0.8
DAG IAmb IAmb 15 02 41.9
comp=Z,4.6nm,0.8s
LANS Liptovska Anna 85.76 320 *e*P P 15 02 43.8 +1.1
LANS *e* 15 02 54.7
R32K Eaglecrest 85.79 31 P P 15 02 41.4 -1.2
baz=291
SIT Sitka 85.82 32 P P 15 02 42.2 -0.4
baz=290
NC405 NORSAR Array S 85.88 332 P P 15 02 42.4 -0.5
P33M Teslin, Yukon 85.90 29 P P 15 02 42.6 -0.6
baz=292
NC303 NORSAR Array S 85.99 333 P P 15 02 41.2 -2.3
S32K Killisnoo 86.05 31 P P 15 02 43.0 -0.8
baz=291
NB2 NORSAR Subarra 86.13 332 P P 15 02 43.3 -0.9
comp=Z,18nm,1.0s,baz=69,slow=4.6
NOA NORSAR Array B 86.13 332 P P 15 02 43.5 -0.7
comp=Z,3.5nm,0.7s,baz=68,slow=4.8,SNR=11
NOA pP pP 15 02 54.4 +0.9
comp=Z,5.6nm,0.7s,baz=68,slow=4.9,SNR=11
NOA LR LR 15 43 24.6

	comp=Z,69nm,20.0s,baz=75,slow=37							
	comp=Z,3.5nm,0.7s							
NC204	**NORSAR Array S**	**86.24**	**333**	P		**P**	**15 02 43.9**	**-0.8**
RAR	**Rarotonga**	**86.52**	**113**	LR		LR	15 34 33.4	
	comp=Z,56nm,20.4s,baz=277,slow=31							
Q32M	**Nakina River**	**86.63**	**30**	P		**P**	**15 02 46.3**	**-0.7**
	baz=293							
MORC	**Moravsky Berou**	**86.76**	**321**	*eP*		**P**	**15 02 47.2**	**-0.4**
JAVC	**Velka Javorina**	**86.98**	**320**	*eP*		**P**	**15 02 50.7**	**+2.0**
R33M	**Jennings River**	**87.08**	**29**	P		**P**	**15 02 47.9**	**-1.2**
	baz=294							
U33K	**Whale Pass**	**87.29**	**32**	P		**P**	**15 02 49.8**	**-0.1**
	baz=292							
VRAC	**Vranov**	**87.50**	**320**	LR		LR	15 43 51.0	
	comp=Z,82nm,19.4s,baz=72,slow=37							
VRAC	**Vranov**	**87.50**	**320**	*eP*		**P**	**15 02 51.2**	**+0.1**
CRAG	**Craig**	**87.54**	**33**	P		**P**	**15 02 51.2**	**+0.1**
	baz=292							
WRAK	**Wrangell Islan**	**87.58**	**32**	P		**P**	**15 02 51.1**	**-0.2**
	baz=293							
S34M	**Telegraph Cree**	**87.60**	**30**	P		**P**	**15 02 51.3**	**-0.1**
	baz=294							
KRUC	**Moravsky**	**87.71**	**320**	*eP*		**P**	**15 02 49.9**	**-2.2**
WTLY	**Watson Lake, Y**	**87.78**	**28**	P		**P**	**15 02 52.5**	**+0.2**
	baz=296							
JMIC	**Jan Mayen**	**87.78**	**345**	LR		LR	15 45 13.3	
	comp=Z,71nm,20.9s,baz=255,slow=38							
DBG	**Daneborg**	**87.83**	**350**	*i* P		**P**	**15 02 53.9**	**+1.7**
DLBC	**Dease Lake**	**87.92**	**30**	P		**P**	**15 02 51.4**	**-1.6**
	baz=295							
NEEM	**North Greenlan**	**88.05**	**358**	*i* P		**P**	**15 02 53.9**	**+0.3**
NEEM				IAmb		IAmb	15 02 56.3	
	comp=Z,15nm,1.0s							
V35K	**Ketchikan**	**88.38**	**33**	P		**P**	**15 02 54.4**	**-0.8**
	baz=294							
T35M	**Bob Quinn**	**88.41**	**31**	P		**P**	**15 02 54.8**	**-0.5**
	baz=295							
GERES	**GERESS Array B**	**89.44**	**321**	P		**P**	**15 03 00.2**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=27,slow=6.7,SNR=3.5							
GERES				pP		**sP**	**15 03 11.1**	**-2.0**
	comp=Z,1.2nm,0.7s,baz=46,slow=5.8,SNR=4.8							
GERES				LR		LR	15 45 00.2	
	comp=Z,72nm,21.0s,baz=69,slow=37							
CCD	**Concordia, Ant**	**89.47**	**179**	P		**P**	**15 03 00.7**	**+0.5**
TOAD	**Toad River Com**	**89.97**	**28**	P		**P**	**15 03 02.2**	**-0.4**
	baz=299							
YKA	**Yellowknife Ar**	**92.34**	**22**	P		**P**	**15 03 12.8**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=249,slow=4.0,SNR=8.7							
	comp=Z,2.8nm,0.7s							
PPT	**Papeete**	**94.86**	**107**	LR		LR	15 39 41.1	
	comp=Z,67nm,19.7s,baz=296,slow=31							
VNDA	**Vanda**	**94.98**	**172**	P		**P**	**15 03 24.5**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=308,slow=4.3,SNR=4.2							
VNDA				LR		LR	15 46 48.9	
	comp=Z,21nm,19.7s,baz=297,slow=36							
	comp=Z,1.2nm,0.9s							
LSZ	**Lusaka**	**95.26**	**256**	LR		LR	15 44 28.3	
	comp=Z,128nm,18.3s,baz=139,slow=34							
BORG	**Borgarnes**	**95.64**	**344**	LR		LR	15 50 21.2	
	comp=Z,84nm,18.0s,baz=9.1,slow=38							
LBTB	**Lobatse**	**99.75**	**247**	LR		LR	15 46 15.4	
	comp=Z,65nm,18.8s,baz=109,slow=34							
PDAR	**Pinedale Array**	**107.21**	**36**	PKiKP		**PKiKP**	**15 08 30.1**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=86,slow=3.6,SNR=4.1							
TXAR	**Lajitas Array**	**119.48**	**44**			pPKPdf	15 09 05.5	+2.3
TXAR	**Lajitas Array**	**119.48**	**44**	PKP		**PKPdf**	**15 08 54.3**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=229,slow=0.5,SNR=26							
TXAR				pPKP		**pPKPdf**	**15 09 05.2**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=172,slow=0.8,SNR=6.8							
PLCA	**Paso Flores**	**152.37**	**163**	PKPbc		**PKPbc**	**15 09 59.2**	**-0.5**
	comp=Z,5.5nm,0.7s,baz=203,slow=2.8,SNR=8.6							
CPUP	**Villa Florida**	**167.95**	**192**	PKPab		**PKPab**	**15 11 17.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=0.2,slow=2.5,SNR=4.6							

*NOU **04** 15:17:50.2, 15°.07S×168°.44E, h17km, mb4.3/6, Vanuatu Islands*
*IDC **04** 15:17:53.5±8.9, 15°.13S×167°.34E, h104km±58km, mb3.6/5, mbtmp4.1/6, Error ellipse: s-maj=73.2km s-min=25.8km az=35.0*
*NEIC **04** 15:17:54.2±0.8, 15°.16S±0°.02×167°.6E±0°.1, h122km±5km, mb4.3/17, Error ellipse: s-maj=17.9km s-min=3.2km az=93.0*
ISC 04 15:17:54.7±1.0,**15°.16S**±0°.09×**167°.5E**±0°.1,**h129km**,**n49,**
σ0s88/51,mb4.3/12,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.42**	**227**		**Pn**	**15 18 12.1**	**-1.2**
SANVU				Sn	**Sn**	**15 18 25.6**	**-1.6**
SANVU	**Saraoutou**	**0.42**	**227**	P	**Pn**	**15 18 12.7**	**-0.5**
MARNC	**Mare, Loyalty**	**6.30**	**176**	Pn	**Pn**	**15 19 23.4**	**-1.9**
MARNC	**Mare, Loyalty**	**6.30**	**176**	P	**Pn**	**15 19 23.4**	**-1.9**
YATNC	**Mamie plateau,**	**6.88**	**185**	P	**Pn**	**15 19 33.0**	**-0.2**
DZM	**Mont Dzumac**	**6.95**	**188**	P	**Pn**	**15 19 33.7**	**-0.4**
	21nm,0.3s,baz=76,slow=12,SNR=143						
DZM				S	**Sn**	**15 20 50.5**	**-1.3**
	baz=120,slow=20						
ONTNC	**Ouen Toro**	**7.18**	**188**		**Pn**	**15 19 36.5**	**-0.6**
ONTNC	**Ouen Toro**	**7.18**	**188**	P	**Pn**	**15 19 38.1**	**+1.0**
OUENC	**Ouen Island, N**	**7.25**	**185**	P	**Pn**	**15 19 38.5**	**+0.5**
PINNC	**Pines Island,**	**7.41**	**181**	Pn	**Pn**	**15 19 40.4**	**+0.2**
PINNC	**Pines Island,**	**7.41**	**181**	P	**Pn**	**15 19 40.2**	**0.0**
EIDS	**Eidsvold**	**18.45**	**234**	Pn	**Pn**	**15 22 02.2**	**+0.1**
EIDS				IAmb	IAmb	15 22 30.4	
	comp=Z,13nm,1.4s						
OUZ	**Omahuta**	**20.70**	**166**	P	**P**	**15 22 26.1**	**+1.4**
TOZ	**Tahuroa Road**	**23.57**	**164**	P	**P**	**15 22 54.0**	**+0.5**
TOZ				IAmb	IAmb	15 22 56.3	
	comp=Z,12nm,0.6s						
TOZ	**Tahuroa Road**	**23.57**	**164**	P	**P**	**15 22 55.1**	**+1.6**
HIZ	**Hauiti**	**24.14**	**166**	P	**P**	**15 22 58.9**	**+0.2**
HIZ	**Hauiti**	**24.14**	**166**	P	**P**	**15 22 57.9**	**-0.8**
URZ	**Urewera**	**24.52**	**162**	P	**P**	**15 23 02.2**	**+0.1**
MWZ	**Matawai**	**24.71**	**161**	P	**P**	**15 23 04.1**	**+0.1**
MTHZ	**Maungataniwha**	**24.98**	**163**	P	**P**	**15 23 07.1**	**+0.6**
SNGZ	**Shannon Statio**	**25.07**	**162**	P	**P**	**15 23 07.4**	**+0.2**
BKZ	**Black Stump Fm**	**25.18**	**163**	P	**P**	**15 23 08.4**	**+0.2**
BKZ				IAmb	IAmb	15 23 09.7	
	comp=Z,9.9nm,0.7s						
BKZ	**Black Stump Fm**	**25.18**	**163**	P	**P**	**15 23 08.5**	**+0.3**
KRHZ	**Kereru**	**25.59**	**164**	P	**P**	**15 23 11.9**	**-0.1**
PNHZ	**Pukenui**	**25.80**	**165**	P	**P**	**15 23 13.5**	**-0.4**
KAHZ	**Kahuranaki**	**25.87**	**163**	P	**P**	**15 23 14.2**	**-0.3**
TSZ	**Takapari Road**	**25.88**	**165**	P	**P**	**15 23 14.3**	**-0.2**
PXZ	**Pawanui**	**26.09**	**164**	P	**P**	**15 23 15.5**	**-0.8**
MRZ	**Mangatainoka R**	**26.36**	**166**	P	**P**	**15 23 18.3**	**-0.4**
THZ	**Tophouse**	**26.91**	**171**	P	**P**	**15 23 24.5**	**+0.7**
KHZ	**Kahutara**	**27.65**	**170**	P	**P**	**15 23 30.6**	**+0.4**
STKA	**Stephens Creek**	**28.90**	**230**	P	**P**	**15 23 42.2**	**+0.6**
STKA	**Stephens Creek**	**28.90**	**230**	P	**P**	**15 23 42.4**	**+0.8**
	comp=Z,2.1nm,0.3s,baz=62,slow=9.5,SNR=14						
	comp=Z,2.1nm,0.3s						
WB0	**Warramunga Arr**	**31.90**	**257**	P	**P**	**15 24 07.6**	**-0.6**
WB0				IAmb	IAmb	15 24 46.6	
	comp=Z,9.0nm,1.5s						
WRA	**Warramunga Arr**	**31.96**	**257**	P	**P**	**15 24 08.4**	**-0.3**
WRA	**Warramunga Arr**	**31.96**	**257**	P	**P**	**15 24 08.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=85,slow=9.2,SNR=2.9						
	comp=Z,0.2nm,0.3s						
AS31	**Alice Springs**	**32.75**	**250**	P	**P**	**15 24 15.2**	**-0.4**
ASAR	**Alice Springs**	**32.75**	**250**	P	**P**	**15 24 14.7**	**-0.9**
ASAR	**Alice Springs**	**32.75**	**250**	P	**P**	**15 24 15.1**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=76,slow=9.1,SNR=18						
	comp=Z,0.5nm,0.5s						
BBOO	**Buckleboo**	**33.51**	**233**	P	**P**	**15 24 21.9**	**-0.1**
BBOO				IAmb	IAmb	15 24 39.2	
	comp=Z,14nm,1.2s						
FORT	**Forrest**	**39.29**	**240**	P	**P**	**15 25 11.2**	**+0.1**
FORT				IAmb	IAmb	15 25 21.3	
	comp=Z,5.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.18**	**260**	P	**P**	**15 25 18.6**	**-0.1**
VNDA	**Vanda**	**62.44**	**181**	P	**P**	**15 28 03.7**	**+0.1**
VNDA	**Vanda**	**62.44**	**181**	P	**P**	**15 28 03.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=15,slow=6.2,SNR=8.5						
	comp=Z,0.5nm,0.5s						
SBA	**Scott Base**	**62.71**	**180**	P	**P**	**15 28 06.7**	**+1.3**
SBA				IAmb	IAmb	15 28 07.3	
	comp=Z,2.0nm,0.8s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**15 29 21.2**	**+0.1**
QSPA				IAmb	IAmb	15 29 25.2	
	comp=Z,8.4nm,1.3s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**15 29 23.9**	**+2.8**
	comp=Z,2.8nm,0.6s,baz=208,slow=0.8,SNR=38						
	comp=Z,2.8nm,0.6s						
GLI	**Glacier Island**	**83.97**	**20**	P	**P**	**15 30 10.2**	**+0.1**
BELA	**Belgrano 2**	**86.27**	**175**	P	**P**	**15 30 20.3**	**-1.2**
BELA				IAmb	IAmb	15 30 21.3	
	comp=Z,3.5nm,1.0s						

*NORS **04** 15:22:56.7, 42°.53N×47°.79E, h8km, MPVA4.4*
*DRS **04** 15:22:57.5, 42°.53N×47°.82E, h15km*
*TIF **04** 15:22:57.9, 42°.53N×47°.80E, h21km*
*MOS **04** 15:22:58.0, 42°.50N×47°.79E, h27km, MPVA4.7*
ISC 04 15:22:56.7±1.0,**42°.61N**±0°.02×**47°.95E**±0°.03,**h11**km±7km,
n83,σ1s43/151,7C-2D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGKR	**Sergokala**	**0.27**	**235**	*i* Pg	**Pg**	**15 23 03.0**	**+0.8**
SGKR				*e*Sg	**Sg**	**15 23 06.4**	**+0.5**
SGKR	**Sergokala**	**0.27**	**235**	⇓*i*PG	**Pg**	**15 23 02.1**	**-0.1**
SGKR				*e*S	**Sg**	**15 23 06.4**	**+0.5**
SGKR				pmax	pmax		
	comp=Z,9μm,0.2s						
MAK	**Makhachkala**	**0.48**	**317**	*e*Pg	**Pn**	**15 23 09.2**	**-0.3**
MAK				*e*Sg	**Sb**	**15 23 17.0**	**+2.8**
MAK	**Makhachkala**	**0.48**	**317**	*e*PG	**Pn**	**15 23 09.2**	**-0.3**
MAK				*e*S	**Sb**	**15 23 17.0**	**+2.8**
URKR	**Urkarakh**	**0.51**	**208**	*i* Pg	**Pg**	**15 23 06.6**	**-0.1**
URKR				*e*Sg	**Sg**	**15 23 13.1**	**-0.3**
URKR	**Urkarakh**	**0.51**	**208**	*i* PG	**Pg**	**15 23 06.6**	**-0.1**
URKR				*e*S	**Sg**	**15 23 13.1**	**-0.3**
DRN	**Derbent**	**0.65**	**154**	*e*Pg	**Pb**	**15 23 11.0**	**+1.1**
DRN				*e*Sg	**Sb**	**15 23 21.0**	**+2.0**
DRN	**Derbent**	**0.65**	**154**	*e*PG	**Pb**	**15 23 11.1**	**+1.1**
DRN				*e*S	**Sb**	**15 23 21.1**	**+2.1**
BUJR	**Buynaksk**	**0.66**	**289**	*e*Pg	**Pb**	**15 23 10.3**	**+0.1**
BUJR				*e*Sg	**Sb**	**15 23 19.9**	**+0.5**
BUJR	**Buynaksk**	**0.66**	**289**	*e*PG	**Pb**	**15 23 10.1**	**-0.1**
BUJR				*e*S	**Sb**	**15 23 19.0**	**-0.4**
BUJR				pmax	pmax		
	comp=Z,557nm,0.5s						
KANR	**Karaman**	**0.67**	**330**	*e*Pg	**Pn**	**15 23 13.3**	**+1.1**
KANR				*e*Sg	**Sn**	**15 23 23.9**	**+1.3**
KANR	**Karaman**	**0.67**	**330**	*e*PG	**Pn**	**15 23 13.3**	**+1.1**
KANR				*e*S	**Sn**	**15 23 23.9**	**+1.3**
ARKR	**Arakani**	**0.71**	**269**	*i* Pg	**Pg**	**15 23 10.3**	**-0.2**
ARKR				*e*Sg	**Sg**	**15 23 19.4**	**-0.4**
ARKR	**Arakani**	**0.71**	**269**	⇑*i*PG	**Pg**	**15 23 10.2**	**-0.2**
ARKR				*e*S	**Sg**	**15 23 19.3**	**-0.4**
ARKR				pmax	pmax		
	comp=Z,585nm,0.2s						
KMKR	**Kumukh**	**0.80**	**233**	*i* Pg	**Pg**	**15 23 11.8**	**-0.3**
KMKR				*e*Sg	**Sg**	**15 23 21.8**	**-0.8**
KMKR	**Kumukh**	**0.80**	**233**	*i* PG	**Pg**	**15 23 11.8**	**-0.3**
KMKR				*e*S	**Sg**	**15 23 21.8**	**-0.8**
KRNR	**Karanay**	**0.80**	**286**	*i* Pg	**Pb**	**15 23 12.3**	**-0.4**
KRNR				*e*Sg	**Sb**	**15 23 23.0**	**-0.4**
KRNR	**Karanay**	**0.80**	**286**	*i* PG	**Pb**	**15 23 12.3**	**-0.4**
KRNR				*e*S	**Sb**	**15 23 23.2**	**-0.4**
UNCR	**Uncukul**	**0.86**	**277**	*i* Pg	**Pg**	**15 23 12.9**	**-0.5**
UNCR				*e*Sg	**Sg**	**15 23 23.9**	**-0.7**
UNCR	**Uncukul**	**0.86**	**277**	⇑*i*PG	**Pg**	**15 23 13.0**	**-0.3**
UNCR				*e*S	**Sg**	**15 23 24.4**	**-0.2**
UNCR				pmax	pmax		
	comp=Z,215nm,0.3s						
HNZR	**Khunzah**	**0.92**	**267**	*e*Pg	**Pg**	**15 23 14.0**	**-0.4**
HNZR				*e*S	**Sg**	**15 23 26.4**	**0.0**
XNZR	**Khunzakh**	**0.93**	**266**	*i* Pg	**Pg**	**15 23 13.9**	**-0.7**
XNZR				*e*Sg	**Sg**	**15 23 25.7**	**-0.9**
KSMR	**Kasumkent**	**1.02**	**173**	*i* Pg	**Pg**	**15 23 16.3**	**0.0**
KSMR				*e*Sg	**Sg**	**15 23 30.0**	**+0.4**
KSMR	**Kasumkent**	**1.02**	**173**	*i* PG	**Pg**	**15 23 16.3**	**0.0**
KSMR				*e*S	**Sg**	**15 23 30.0**	**+0.4**
DLMR	**Dylym**	**1.07**	**296**	*e*Pg	**Pn**	**15 23 17.6**	**-0.1**
DLMR				*e*Sg	**Sn**	**15 23 32.6**	**+0.1**
DLMR	**Dylym**	**1.07**	**296**	*e*PG	**Pn**	**15 23 17.6**	**-0.1**
DLMR				*e*S	**Sn**	**15 23 32.7**	**+0.1**
AKT	**Akhty**	**1.15**	**188**	*i* Pg	**Pg**	**15 23 17.4**	**-1.4**
AKT				*e*Sg	**Sg**	**15 23 31.8**	**-1.9**
AKT	**Akhty**	**1.15**	**188**	*i* PG	**Pg**	**15 23 17.4**	**-1.4**
AKT				*e*S	**Sg**	**15 23 31.8**	**-1.9**
BTLR	**Botlikh**	**1.28**	**273**	*e*Pg	**Pn**	**15 23 20.3**	**-0.2**
BTLR				*e*Sg	**Sg**	**15 23 37.4**	**-0.5**
BTLR	**Botlikh**	**1.28**	**273**	*e*PG	**Pn**	**15 23 20.5**	**-0.1**
BTLR				*e*S	**Sn**	**15 23 38.0**	**+0.3**
TLTR	**Tlyarata**	**1.29**	**247**	*i* Pg	**Pn**	**15 23 19.5**	**-1.3**
TLTR				*e*Sg	**Sb**	**15 23 35.2**	**-2.5**
TLTR	**Tlyarata**	**1.29**	**247**	*i* PG	**Pn**	**15 23 19.5**	**-1.3**
DVE	**Vedeno**	**1.39**	**285**	*e*Pg	**Pb**	**15 23 22.2**	**-0.5**
DVE				*e*Sg	**Sb**	**15 23 39.5**	**-0.9**
DVE	**Vedeno**	**1.39**	**285**	*e*PG	**Pg**	**15 23 22.2**	**-0.9**
DVE				*e*S	**Sn**	**15 23 42.3**	**+1.9**
LGD	**Lagodekhi**	**1.49**	**239**	P	**Pn**	**15 23 23.4**	**0.0**
LGD				S	**Sn**	**15 23 41.2**	**-1.7**
LGD	**Lagodekhi**	**1.49**	**239**	PG	**Pn**	**15 23 23.4**	**0.0**
SEKA	**Sheki**	**1.51**	**202**	PG	**Pn**	**15 23 23.6**	**-0.2**
GROC	**Groznyy**	**1.69**	**291**	*e*Pg	**Pg**	**15 23 28.0**	**-1.2**
GROC				*e*Sg	**Sg**	**15 23 50.7**	**-0.4**
GROC	**Groznyy**	**1.69**	**291**	*e*PN	**Pg**	**15 23 28.5**	**-0.7**
GROC				*e*S	**Sg**	**15 23 52.9**	**+1.8**
VSHL	**Vashlovani**	**1.80**	**220**	P	**Pb**	**15 23 30.0**	**+0.3**
VSHL				S	**Sg**	**15 23 56.8**	**+2.1**
MNGR	**Mingechevir, A**	**1.95**	**200**	PN	**Pn**	**15 23 31.7**	**+2.0**
DGRG	**David-gareji**	**2.25**	**240**	P	**Pn**	**15 23 35.8**	**+1.9**
DGRG	**David-gareji**	**2.25**	**240**	PN	**Pn**	**15 23 35.9**	**+2.1**
KMGR	**Komgaron**	**2.31**	**282**	*e*Pg	**Pb**	**15 23 37.2**	**-1.2**
KMGR				*e*Sg	**Sn**	**15 24 03.8**	**+0.6**
KMGR	**Komgaron**	**2.31**	**282**	*e*PN	**Pb**	**15 23 37.2**	**-1.2**
KMGR				*e*S	**Sn**	**15 24 03.8**	**+0.6**
GANJ	**Ganja**	**2.31**	**212**	PN	**Pn**	**15 23 35.3**	**+0.5**
VLKR	**Vladikavkaz**	**2.45**	**281**	*e*Pn	**Pn**	**15 23 37.8**	**+1.2**
VLKR				*e*Sn	**Sn**	**15 24 07.9**	**+1.4**
VLKR	**Vladikavkaz**	**2.45**	**281**	*e*PN	**Pb**	**15 23 39.7**	**-1.1**
VLKR				*e*S	**Sg**	**15 24 13.6**	**-1.8**
GUDG	**Gudauri**	**2.57**	**268**	P	**Pb**	**15 23 42.1**	**-0.9**
GUDG	**Gudauri**	**2.57**	**268**	*e*PN	**Pb**	**15 23 41.6**	**-1.4**
GUDG				*e*S	**Sn**	**15 24 12.2**	**+2.3**
LACR	**Lac**	**2.70**	**276**	*e*Pn	**Pn**	**15 23 40.9**	**+0.7**
LACR				*e*Sn	**Sn**	**15 24 15.1**	**+2.2**
LACR	**Lac**	**2.70**	**276**	*e*PN	**Pn**	**15 23 41.8**	**+1.6**
LACR				*e*S	**Sb**	**15 24 17.4**	**-0.9**
PRTR	**Priterechnaya**	**2.92**	**294**	*e*Pn	**Pn**	**15 23 44.1**	**+1.1**
PRTR				*e*Sn	**Sn**	**15 24 19.8**	**+1.8**
PRTR	**Priterechnaya**	**2.92**	**294**	*e*PN	**Pn**	**15 23 44.1**	**+1.1**
PRTR				*e*S	**Sn**	**15 24 19.8**	**+1.8**
STDR	**Stavd-Durt**	**2.95**	**286**	*e*PN	**Pn**	**15 23 45.8**	**+2.3**
STDR				*e*S	**Sn**	**15 24 19.1**	**+0.2**
TRLG	**Trialeti**	**3.06**	**251**	P	**Pn**	**15 23 45.9**	**+0.7**
TRLG				S	**Sn**	**15 24 21.3**	**-0.5**
TRLG	**Trialeti**	**3.06**	**251**	PN	**Pn**	**15 23 45.9**	**+0.7**
TRLG				S	**Sn**	**15 24 21.3**	**-0.5**
LSNR	**Lesken**	**3.10**	**284**	*e*Pn	**Pn**	**15 23 46.4**	**+0.8**
LSNR				*e*Sn	**Sn**	**15 24 23.8**	**+1.2**
LSNR	**Lesken**	**3.10**	**284**	*e*PN	**Pn**	**15 23 46.4**	**+0.8**
LSNR				*e*S	**Sn**	**15 24 23.8**	**+1.2**
DIGR	**Digorskoe uzhe**	**3.23**	**277**	*e*Pn	**Pn**	**15 23 48.8**	**+1.3**
DIGR				*e*Sn	**Sn**	**15 24 25.4**	**-0.7**
DIGR	**Digorskoe uzhe**	**3.23**	**277**	*e*PN	**Pn**	**15 23 48.8**	**+1.3**
DIGR				*e*S	**Sn**	**15 24 25.4**	**-0.7**
GARIG	**Gari**	**3.31**	**271**	P	**Pb**	**15 23 52.3**	**-3.1**
NCK	**Nalchik**	**3.31**	**287**	*e*PN	**Pn**	**15 23 49.3**	**+0.8**
GNI	**Garni**	**3.45**	**226**	*e*Pn	**Pn**	**15 23 53.8**	**+3.3**
GNI				*e*S	**Sn**	**15 24 34.8**	**+3.4**
KBTC	**Kuba-Taba**	**3.53**	**291**	*e*Pn	**Pn**	**15 23 52.2**	**+0.7**
KBTC				*e*Sn	**Sn**	**15 24 33.5**	**+0.3**
KBTC	**Kuba-Taba**	**3.53**	**291**	*e*PN	**Pn**	**15 23 52.2**	**+0.7**
KBTC				*e*S	**Sn**	**15 24 33.6**	**+0.3**
AKH	**Akhalkalaki**	**3.53**	**252**	*e*Pn	**Pn**	**15 23 52.5**	**+0.8**
AKH				*e*Sn	**Sn**	**15 24 30.8**	**-2.8**
AKH	**Akhalkalaki**	**3.53**	**252**	*e*PN	**Pn**	**15 23 52.5**	**+0.8**
PYA1	**Pyatigorsk**	**3.83**	**294**	*e*PN	**Pn**	**15 23 56.1**	**+0.5**
PYA1				*e*S	**Sn**	**15 24 40.1**	**-0.4**
KBZ	**Khabaz**	**3.86**	**288**	*e*PN	**Pn**	**15 23 55.8**	**-0.2**
KBZ				*e*S	**Sn**	**15 24 40.1**	**-1.2**
NEUR	**Neytrino**	**3.91**	**281**	*e*PN	**Pn**	**15 23 58.5**	**+1.7**
NEUR				*e*S	**Sn**	**15 24 42.3**	**-0.5**
SHA1	**Shidzhatmaz**	**4.03**	**288**	*e*PN	**Pn**	**15 23 58.2**	**-0.4**
SHA1				*e*S	**Sn**	**15 24 45.4**	**-0.5**
KIV0	**Kislovodsk Arr**	**4.07**	**291**	*e*Pn	**Pn**	**15 23 59.2**	**+0.3**
KIV0				*e*Sn	**Sn**	**15 24 45.3**	**-1.2**
KIV	**Kislovodsk**	**4.07**	**291**	*e*PN	**Pn**	**15 23 59.2**	**+0.2**
KIV				*e*S	**Sn**	**15 24 45.3**	**-1.4**
GOF	**Gofitskoye**	**4.31**	**306**	*c*ePN	**Pg**	**15 24 21.0**	**+1.7**
GOF				*e*S	**Sg**	**15 25 20.8**	**+5.7**
GRYR	**Gornoye**	**5.22**	**289**	*e*Pn	**Pn**	**15 24 15.7**	**+1.0**
GRYR				*e*Sn	**Sn**	**15 25 12.4**	**-2.5**
GRYR	**Gornoye**	**5.22**	**289**	*e*PN	**Pn**	**15 24 15.7**	**+1.0**
GRYR				*e*S	**Sn**	**15 25 12.4**	**-2.5**
SOC	**Sochi**	**6.11**	**282**	*e*P	**Pn**	**15 24 25.8**	**-1.0**
SOC				*e*		15 25 35.9	
SOC				MLR	MLR		
	comp=Z,20nm,7.0s						
AKTO	**Aktyubinsk**	**10.45**	**38**	⇓P	**Pn**	**15 25 25.5**	**-0.8**
	comp=Z,3.7nm,1.1s						
AKTO				⇑S	Sn	15 27 13.7	-10
	comp=Z,2.9nm,1.0s						
AKTO	**Aktyubinsk**	**10.45**	**38**	P	**Pn**	**15 25 25.5**	**-0.8**
AB31	**Akbulak array**	**10.66**	**47**	P	**Pn**	**15 25 29.7**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=237,slow=12,SNR=18						
AB31				⇑S	**Sn**	**15 27 23.4**	**-5.1**
	comp=Z,0.8nm,0.4s,baz=233,slow=24,SNR=6.6						
AB31	**Akbulak array**	**10.66**	**47**	P	**Pn**	**15 25 29.7**	**+0.4**
AB31				S	**Sn**	**15 27 23.4**	**-5.1**
AAK	**Ala-Archa**	**19.51**	**81**	⇑*e*P	**Pn**	**15 27 24.9**	**-0.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s						

*IDC **04** 15:52:02.8±1.1, 43°.47N×147°.86E, h0km, mb4.2/19, mbtmp4.2/21, ML3.3/2, MS2.9/8, Error ellipse: s-maj=25.2km s-min=18.6km az=120.0*
*NEIC **04** 15:52:05.2±1.7, 43°.46N±0°.10×147°.83E±0°.06, h10km±1km, mb4.6/36, Error ellipse: s-maj=16.7km s-min=7.2km az=187.0*
*JMA **04** 15:52:05.1±0.3, 43°N±1°×14°8E±°, h14km, MV4.7/34, E OFF HOKKAIDO*
*NIED **04** 15:52:05.1, 43°.12N×147°.84E, h14km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-0.46; Mθθ1.41; Mφφ-0.95; Mrθ0.49; Mθφ0.25; Mφr0.33; Fault plane solution: M0.1.35000×10^15 NP1: φs129.00000°, δ60.00000°, λ-9.00000°. NP2:φs223.00000°, δ82.00000°, λ-150.00000°.*
*SKHL **04** 15:52:07.0±0.0, 43°.30N×148°.00E, h55km±5km, mb5.0/4*
*MOS **04** 15:52:08.5±1.1, 43°.49N×147°.80E, h55km, mb4.7/16, Error ellipse: s-maj=10.7km s-min=7.1km az=122.5*
ISC 04 15:52:03.2±1.1,**43°.40N**±0°.05×**147°.87E**±0°.04,**h7**km±5km,
n152,σ1s80/171,mb4.5/47,MS3.0/7,10C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.55**	**270**	*e*P	**Pg**	**15 52 32.7**	**-0.2**
NEM2				*e*S	**Sb**	**15 52 52.9**	**+0.9**
NMR	**Nemuro--Hokkai**	**1.56**	**270**	*e*PN	**Pg**	**15 52 32.9**	**-0.1**
NMR				*e*S	**Sb**	**15 52 52.9**	**+0.6**
NMR	**Nemuro--Hokkai**	**1.56**	**270**	*e

YSS					*e*S		**Sn**	**15 54 21.6**	**+3.2**
JTM	**Tenmabayashi**	**5.69**	**245**				**Pn**	**15 53 26.4**	**-1.8**
TYV	**Tymovskoe**	**8.27**	**336**		*e*P		**Pn**	**15 54 07.6**	**+4.1**
SKR	**Severo-Kuril's**	**9.21**	**35**		*e*PN		**Pn**	**15 54 16.2**	**-0.1**
SKR					pmax	pmax			
	comp=Z,25nm,0.6s								
SKR	**Severo-Kuril's**	**9.21**	**35**		*e*P		**Pn**	**15 54 16.8**	**+0.5**
SKR					AMB	AMB		15 54 18.3	
	comp=Z,30nm,0.5s								
SKR					*e*S		**Sn**	**15 55 55.0**	**-5.1**
SKR					A	A		15 55 55.3	
	comp=Z,30nm,0.2s								
SKR					A	A		15 55 55.3	
	comp=Z,40nm,0.2s								
MAJO	**Matsushiro**	**10.09**	**231**		Pn		**Pn**	**15 54 26.8**	**-1.7**
MAJO	**Matsushiro**	**10.09**	**231**		PN		**Pn**	**15 54 26.8**	**-1.7**
MJAR	**Matsushiro Arr**	**10.09**	**230**		Pn		**Pn**	**15 54 27.3**	**-1.2**
	baz=65,slow=6.9,SNR=3.5								
MJAR					Sn		**Sn**	**15 56 25.2**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=212,slow=44,SNR=2.0								
	comp=Z,1.3nm,0.7s								
PAU	**Pauzhetka**	**10.09**	**34**		*e*P		**Pn**	**15 54 31.5**	**+3.1**
PAU					*e*S		**Sn**	**15 56 19.5**	**-2.2**
PAU					A	A		15 56 20.5	
	comp=Z,40nm,0.2s								
PAU					A	A		15 56 20.5	
	comp=Z,50nm,0.2s								
JGF	**Kuroka**	**11.24**	**230**		Pn		**Pn**	**15 54 43.0**	**-1.4**
PETK	**Petropavlovsk-**	**11.71**	**30**		LR	LR		15 59 52.9	
	comp=Z,36nm,18.1s,baz=225,slow=40								
PET	**Petropavlovsk**	**12.01**	**33**		*e*S		**Sn**	**15 57 04.1**	**-4.7**
HEH	**HeiHe**	**15.56**	**303**		*e*P		**P**	**15 55 47.3**	**0.0**
SEY	**Seymchan**	**19.75**	**6**		P		**P**	**15 56 32.0**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=153,slow=23,SNR=8.1								
SEY					LR	LR		16 05 28.0	
	comp=Z,38nm,18.3s,baz=205,slow=41								
	comp=Z,2.1nm,0.5s								
SEY	**Seymchan**	**19.75**	**6**⇑		*e*P		**Pn**	**15 56 33.7**	**-1.1**
SEY					pmax	pmax			
	comp=Z,2.0nm,0.5s								
SMY	**Shemya**	**19.77**	**53**				**Pn**	**15 56 36.9**	**+1.8**
SMY	**Shemya**	**19.77**	**53**		P		**Pn**	**15 56 36.9**	**+1.8**
SMY					pmax	pmax			
	comp=Z,168nm,1.3s								
HILR	**Hailar Array B**	**20.25**	**298**		P		**P**	**15 56 38.5**	**-0.4**
	comp=Z,4.9nm,0.4s,baz=97,slow=12,SNR=9.5								
	comp=Z,4.9nm,0.4s								
YAK	**Yakutsk**	**21.53**	**336**				**P**	**15 56 51.0**	**-1.6**
YAK					IAmb	IAmb		15 56 53.1	
	comp=Z,22nm,0.6s								
YAK	**Yakutsk**	**21.53**	**336**		P		**P**	**15 56 51.3**	**-1.3**
	comp=Z,16nm,0.5s,baz=116,slow=1.3,SNR=13								
YAK					LR	LR		16 05 38.3	
	comp=Z,47nm,19.5s,baz=155,slow=38								
	comp=Z,16nm,0.5s								
YAK	**Yakutsk**	**21.53**	**336**		*e*P		**P**	**15 56 51.6**	**-1.0**
YAK					*e*			15 57 08.6	
YAK					*e*S		S	16 00 36.8	-14
YAK					*e**SS		**sS**	**16 00 52.1**	**-0.9**
YAK					*e*SSS		SSS	16 01 17.1	
YAK					pmax	pmax			
	comp=Z,13nm,0.7s								
YAK					smax	smax			
	comp=N,215nm,5.6s								
YAK					smax	smax			
	comp=E,172nm,6.1s								
YAK	**Yakutsk**	**21.53**	**336**		*e*P		**P**	**15 56 51.6**	**-1.0**
NJ2	**Nanjing**	**25.46**	**253**		*e*P		**P**	**15 57 31.8**	**0.0**
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.8s								
BILL	**Bilibino**	**26.56**	**15**		P		**P**	**15 57 41.9**	**+0.5**
BILL	**Bilibino**	**26.56**	**15**	*c*	*e*P		**P**	**15 57 40.1**	**-1.3**
BILL					pmax	pmax			
	comp=Z,2.0nm,1.3s								
BILL	**Bilibino**	**26.56**	**15**		*e*P		**P**	**15 57 40.1**	**-1.3**
HHC	**Hu-ho-hao-te**	**26.91**	**277**		*e*P		**P**	**15 57 45.4**	**+0.4**
HHC					pmax	pmax			
	comp=Z,19nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**28.49**	**140**		T	T		16 29 04.7	
	baz=330,slow=76,SNR=36								
H11N1	**WAKE ISLAND Hy**	**28.51**	**140**		T	T		16 29 00.8	
	baz=330,slow=76,SNR=31								
H11N3	**WAKE ISLAND Hy**	**28.51**	**140**		T	T		16 29 02.4	
	baz=330,slow=76,SNR=33								
ULN	**Ulaanbaatar**	**28.64**	**293**				**P**	**15 58 01.7**	**+1.2**
ULN					IAmb	IAmb		15 58 04.0	
	comp=Z,5.4nm,0.8s								
ULN	**Ulaanbaatar**	**28.64**	**293**	*c*	*e*P		**P**	**15 58 01.7**	**+1.2**
ULN					pmax	pmax			
	comp=Z,5.0nm,0.7s								
ULN	**Ulaanbaatar**	**28.64**	**293**		*e*P		**P**	**15 58 01.7**	**+1.2**
SONM	**Songino Array**	**29.09**	**293**		P		**P**	**15 58 05.7**	**+1.3**
SONM	**Songino Array**	**29.09**	**293**		P		**P**	**15 58 05.6**	**+1.2**
	comp=Z,4.4nm,0.7s,baz=84,slow=8.3,SNR=18								
SONM					LR	LR		16 11 15.1	
	comp=Z,47nm,19.1s,baz=98,slow=40								
	comp=Z,4.4nm,0.7s								
SONM	**Songino Array**	**29.09**	**293**		P		**P**	**15 58 05.7**	**+1.3**
SONM					pmax	pmax			
	comp=Z,3.0nm,0.8s								
H11S1	**WAKE ISLAND Hy**	**29.46**	**141**		T	T		16 30 12.1	
	baz=332,slow=76,SNR=108								
H11S3	**WAKE ISLAND Hy**	**29.47**	**142**		T	T		16 30 16.1	
	baz=332,slow=76,SNR=91								
H11S2	**WAKE ISLAND Hy**	**29.48**	**141**		T	T		16 30 13.3	
	baz=332,slow=76,SNR=64								
TIXI	**Tiksi**	**29.81**	**348**		P		**P**	**15 58 08.1**	**-2.3**
TIXI	**Tiksi**	**29.81**	**348**		LR	LR		16 10 38.6	
	comp=Z,15nm,18.6s,baz=214,slow=38								
TIXI	**Tiksi**	**29.81**	**348**⇑		*e*P		**P**	**15 58 08.1**	**-2.3**
TIXI					pmax	pmax			
	comp=Z,1.0nm,0.8s								
GUMO	**Guam**	**29.82**	**186**		LR	LR		16 07 39.1	
	comp=Z,9.7nm,19.5s,baz=4.0,slow=31								
F17K	**Baldwin Pennin**	**35.74**	**32**		P		**P**	**15 59 03.3**	**+1.1**
F17K					IAmb	IAmb		15 59 11.4	
	comp=Z,16nm,1.3s								
E19K	**Redstone River**	**37.51**	**31**		P		**P**	**15 59 18.2**	**+0.9**
E19K					IAmb	IAmb		15 59 53.7	
	comp=Z,7.3nm,1.2s								
IMAR	**Indian Mountai**	**38.65**	**34**		P		**P**	**15 59 29.1**	**+2.2**
G21K	**Allakaket**	**38.80**	**33**		P		**P**	**15 59 30.4**	**+2.2**
SUA	**Susitna One**	**39.81**	**41**		P		**P**	**15 59 39.3**	**+2.4**
SUA					IAmb	IAmb		15 59 47.7	
	comp=Z,8.7nm,1.3s								
COLD	**Coldfoot**	**40.17**	**32**		P		**P**	**15 59 41.6**	**+2.0**
NEA2	**Nenana**	**40.53**	**36**		P		**P**	**15 59 44.9**	**+2.3**
NEA2					IAmb	IAmb		15 59 48.8	
	comp=Z,11nm,1.4s								
PZH	**PanZhiHua**	**40.84**	**261**		P		**P**	**15 59 46.4**	**+0.7**
E24K	**Your Creek**	**40.89**	**31**		P		**P**	**15 59 47.0**	**+1.4**
E24K					IAmb	IAmb		16 00 05.6	
	comp=Z,12nm,1.5s								
C24K	**Franklin Bluff**	**40.95**	**28**		P		**P**	**15 59 47.0**	**+1.1**
C24K					IAmb	IAmb		15 59 50.4	
	comp=Z,9.9nm,0.7s								
DGZ	**Jazzator, Alta**	**41.05**	**301**⇓		*e*P		**P**	**15 59 47.2**	**0.0**
DGZ					pmax	pmax			
	comp=Z,2.0nm,0.6s								
IL31		**41.47**	**36**		P		**P**	**15 59 52.8**	**+2.5**
ILAR	**Eielson Array**	**41.47**	**36**		P		**P**	**15 59 51.9**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=264,slow=5.4,SNR=10								
	comp=Z,1.1nm,0.8s								
ZALV	**Zalesovo Beam**	**41.63**	**308**		P		**P**	**15 59 52.0**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=71,slow=6.0,SNR=9.0								
ZALV					PcP		**PcP**	**16 01 47.3**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=62,slow=3.4,SNR=3.5								
	comp=Z,2.1nm,0.5s								
F25K	**Christian Rive**	**41.95**	**32**		P		**P**	**15 59 55.6**	**+1.3**
BMAR	**Burnt Mountain**	**42.35**	**32**		P		**P**	**15 59 59.3**	**+1.7**
C27K	**Jago River**	**42.68**	**29**		P		**P**	**16 00 01.3**	**+1.1**
C27K					IAmb	IAmb		16 00 05.6	
	comp=Z,6.0nm,0.8s								
J26L	**Joseph Creek**	**42.91**	**36**		P		**P**	**16 00 03.4**	**+1.2**
BCAR	**Beaver Creek A**	**43.85**	**38**		P		**P**	**16 00 10.9**	**+1.1**
MK31	**Makanchi Array**	**45.21**	**298**	*c*	*e*P		**P**	**16 00 21.0**	**+0.2**
MKAR	**Makanchi Array**	**45.21**	**298**		P		**P**	**16 00 21.6**	**+0.7**
MKAR	**Makanchi Array**	**45.21**	**298**		P		**P**	**16 00 21.8**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=81,slow=8.8,SNR=24								
	comp=Z,3.7nm,0.6s								
MAKZ	**Makanchi**	**45.41**	**298**		P		**P**	**16 00 23.6**	**+1.2**
MAKZ					IAmb	IAmb		16 00 24.8	
	comp=Z,14nm,1.1s								
MAKZ	**Makanchi**	**45.41**	**298**		P		**P**	**16 00 23.6**	**+1.2**
MAKZ					pmax	pmax			
	comp=Z,14nm,1.2s								

KURK	**Kurchatov**	**46.16**	**304**				**P**	**16 00 29.0**	**+0.8**
KURK					IAmb	IAmb		16 00 29.8	
	comp=Z,5.7nm,0.5s								
KURK	**Kurchatov**	**46.16**	**304**	*ce*	P		**P**	**16 00 28.5**	**+0.3**
KURK					pmax	pmax			
	comp=Z,5.0nm,0.9s								
KURK	**Kurchatov**	**46.16**	**304**		*e*P		**P**	**16 00 28.5**	**+0.3**
KURBB	**Kurchatov Arra**	**46.24**	**304**		P		**P**	**16 00 29.7**	**+0.8**
	comp=Z,4.1nm,0.4s,baz=74,slow=8.1,SNR=18								
	comp=Z,4.1nm,0.4s								
INK	**Inuvik**	**46.44**	**30**		P		**P**	**16 00 32.2**	**+2.0**
INK					IAmb	IAmb		16 00 35.1	
	comp=Z,7.0nm,1.2s								
INK	**Inuvik**	**46.44**	**30**		P		**P**	**16 00 32.2**	**+2.0**
INK					pmax	pmax			
	comp=Z,7.0nm,1.3s								
BVAR	**Borovoye Array**	**50.13**	**310**		P		**P**	**16 00 59.9**	**+1.0**
	comp=Z,1.6nm,0.4s,baz=80,slow=10,SNR=12								
BVAR					LR	LR		16 23 35.7	
	comp=Z,22nm,18.1s,baz=359,slow=38								
	comp=Z,1.6nm,0.4s								
BORK	**Borovoye**	**50.16**	**310**⇑		*e*P		**P**	**16 00 59.5**	**+0.4**
BORK					pmax	pmax			
	comp=Z,5.0nm,0.9s								
ARSB	**Arslanbob**	**53.59**	**295**		P		**P**	**16 01 25.2**	**+0.1**
ARSB					IAmb	IAmb		16 01 30.8	
	comp=Z,8.4nm,1.1s								
ARSB	**Arslanbob**	**53.59**	**295**		P		**P**	**16 01 25.2**	**+0.1**
ARSB					pmax	pmax			
	comp=Z,8.0nm,1.1s								
KK31	**Karatay Array**	**54.34**	**298**				**P**	**16 01 31.0**	**+0.7**
KK31					IAmb	IAmb		16 01 34.7	
	comp=Z,3.8nm,0.8s								
KK31	**Karatay Array**	**54.34**	**298**		P		**P**	**16 01 31.0**	**+0.7**
KK31					pmax	pmax			
	comp=Z,4.0nm,0.8s								
KKAR	**Karatay Array**	**54.34**	**298**		P		**P**	**16 01 31.0**	**+0.7**
KKAR	**Karatay Array**	**54.34**	**298**		P		**P**	**16 01 31.0**	**+0.7**
ARTI	**Arti**	**55.07**	**317**		P		**P**	**16 01 35.9**	**+0.6**
ARTI	**Arti**	**55.07**	**317**	*c*	*i*P		**P**	**16 01 35.8**	**+0.4**
ARTI								16 03 37.5	
ARTI					S		**S**	**16 09 20.4**	**+2.5**
ARTI					SS		**SS**	**16 12 50.8**	**-10**
ARTI					pmax	pmax			
	comp=Z,18nm,1.3s								
RES	**Resolute Bay**	**55.16**	**17**				**P**	**16 01 36.1**	**+0.4**
RES					IAmb	IAmb		16 01 40.0	
	comp=Z,18nm,1.4s								
RES	**Resolute Bay**	**55.16**	**17**		P		**P**	**16 01 36.2**	**+0.4**
RES					pmax	pmax			
	comp=Z,18nm,1.5s								
SPITS	**Spitsbergen Ar**	**55.23**	**349**		P		**P**	**16 01 36.1**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=74,slow=17,SNR=5.1								
	comp=Z,4.4nm,0.7s								
AB31	**Akbulak array**	**57.69**	**309**		P		**P**	**16 01 54.8**	**+0.6**
AB31					IAmb	IAmb		16 01 56.5	
	comp=Z,6.1nm,1.3s								
ABKAR	**Akbulak array**	**57.69**	**309**		P		**P**	**16 01 54.9**	**+0.7**
KEV	**Kevo**	**59.23**	**340**		P		**P**	**16 02 05.3**	**+0.8**
KEV	**Kevo**	**59.23**	**340**		P		**P**	**16 02 05.4**	**+0.8**
KEV					pmax	pmax			
	comp=Z,91nm,1.5s								
ARCES	**ARCESS Array B**	**59.76**	**340**		P		**P**	**16 02 09.2**	**+0.9**
ARCES	**ARCESS Array B**	**59.76**	**340**		P		**P**	**16 02 08.9**	**+0.6**
	comp=Z,4.5nm,0.8s,baz=50,slow=7.5,SNR=11								
	comp=Z,4.5nm,0.8s								
ARCES	**ARCESS Array B**	**59.76**	**340**		P		**P**	**16 02 09.2**	**+0.9**
ARCES					pmax	pmax			
	comp=Z,33nm,1.4s								
KLMR	**Klimovskoe**	**61.01**	**328**		*e*P		**P**	**16 02 14.9**	**-2.0**
KLMR					pmax	pmax			
	comp=Z,17nm,1.3s								
ILON	**Igloolik, Nuna**	**61.77**	**18**		P		**P**	**16 02 23.3**	**+1.4**
WRA	**Warramunga Arr**	**64.24**	**194**		P		**P**	**16 02 40.2**	**+1.3**
	comp=Z,4.4nm,0.7s,baz=9.1,slow=6.8,SNR=3.8								
	comp=Z,0.4nm,0.7s								
SUMG	**Summit**	**64.24**	**2**		P		**P**	**16 02 39.1**	**+0.3**
SUMG					IAmb	IAmb		16 02 41.1	
	comp=Z,7.5nm,0.9s								
SUMG	**Summit**	**64.24**	**2**		P		**P**	**16 02 39.1**	**+0.3**
SUMG					pmax	pmax			
	comp=Z,7.0nm,0.9s								
FINES	**FINESS Array B**	**65.42**	**333**		P		**P**	**16 02 46.2**	**0.0**
FINES	**FINESS Array B**	**65.42**	**333**		P		**P**	**16 02 45.7**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=46,slow=5.5,SNR=10								
	comp=Z,2.5nm,0.7s								
FINES	**FINESS Array B**	**65.42**	**333**		P		**P**	**16 02 46.2**	**0.0**
NC303	**NORSAR Array S**	**69.92**	**339**		P		**P**	**16 03 14.8**	**+0.2**
NC405	**NORSAR Array S**	**69.93**	**339**		P		**P**	**16 03 14.8**	**+0.1**
NC204	**NORSAR Array S**	**70.03**	**340**		P		**P**	**16 03 15.4**	**0.0**
NB201	**NORSAR Array S**	**70.09**	**339**		P		**P**	**16 03 15.8**	**+0.1**
NB2	**NORSAR Subarra**	**70.12**	**339**		P		**P**	**16 03 15.9**	**0.0**
	comp=Z,1.3nm,0.5s,baz=30,slow=6.5								
NOA	**NORSAR Array B**	**70.12**	**339**		P		**P**	**16 03 15.8**	**0.0**
	comp=Z,1.6nm,0.6s,baz=31,slow=6.6,SNR=11								
NOA					LR	LR		16 37 14.6	
	comp=Z,9.8nm,20.5s,baz=225,slow=39								
	comp=Z,1.6nm,0.6s								
HFS	**Hagfors**	**70.22**	**338**		P		**P**	**16 03 16.1**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=46,slow=4.7,SNR=18								
	comp=Z,3.0nm,0.6s								
KIV	**Kislovodsk**	**70.39**	**312**		*e*P		**P**	**16 03 14.8**	**-3.1**
KIV					pmax	pmax			
	comp=Z,7.0nm,1.0s								
KIV					MLR	MLR			
	comp=Z,17nm,18.0s								
KBZ	**Khabaz**	**70.42**	**312**		P		**P**	**16 03 19.1**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=58,slow=7.8,SNR=5.7								
	comp=Z,2.8nm,0.8s								
AKASG	**Malin Array Be**	**72.17**	**324**		P		**P**	**16 03 27.9**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=41,slow=6.2,SNR=5.5								
	comp=Z,0.8nm,0.4s								
BURAR	**Bucovina Array**	**76.23**	**324**		P		**P**	**16 03 52.7**	**+0.4**
BURAR					IAmb	IAmb		16 03 57.5	
	comp=Z,3.4nm,1.1s								
BURAR	**Bucovina Array**	**76.23**	**324**		P		**P**	**16 03 52.7**	**+0.4**
BURAR					pmax	pmax			
	comp=Z,3.0nm,1.0s								
CLL	**Collm**	**77.87**	**333**	*i*	P		**P**	**16 04 01.0**	**-0.3**
BRTR	**Keskin Array B**	**78.16**	**314**		P		**P**	**16 04 03.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=96,slow=2.7,SNR=4.2								
	comp=Z,0.5nm,0.7s								
EKA	**Eskdalemuir Ar**	**78.61**	**344**		P		**P**	**16 04 05.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=23,slow=6.4,SNR=2.8								
	comp=Z,1.4nm,0.7s								
GERES	**GERESS Array B**	**79.72**	**331**		P		**P**	**16 04 14.2**	**+2.5**
	comp=Z,0.4nm,0.4s,baz=45,slow=8.9,SNR=3.0								
MMAI	**Mount Meron Ar**	**82.11**	**308**		P		**P**	**16 04 25.7**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=52,slow=9.3,SNR=2.5								
	comp=Z,1.1nm,0.6s								
TXAR	**Lajitas Array**	**82.41**	**57**		P		P	16 04 31.7	+5.3
	comp=Z,0.1nm,0.3s,baz=328,slow=3.7,SNR=1.9								

IDC 04 16:16:07.0±1.7, 5°47'N×126°28'E, h0^{km}, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=157.9km s-min=22.4km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.46**	**163**	P		16 21 45.1	-1.0
	1.1nm,0.7s,baz=343,slow=10,SNR=7.2						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**29.90**	**166**	P		16 22 17.5	+0.8
	0.2nm,0.6s,baz=346,slow=8.7,SNR=4.3						
ASAR				PcP	PcP	16 25 20.4	+0.4
	0.2nm,1.0s,baz=336,slow=2.2,SNR=1.2						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**55.88**	**325**	P		16 25 45.6	-1.0
	0.3nm,0.6s,baz=122,slow=6.8,SNR=2.7						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**60.05**	**327**	P		16 26 16.6	+0.9
	0.3nm,0.5s,baz=120,slow=8.1,SNR=4.1						
	0.3nm,0.5s						

*BJI **04** 16:25:18.3, 3°.39S×128°.35E, h20^{km}, mB4.9/6, mb4.6/36, Ms4.5/6, Ms7 4.2/8*
*NEIC **04** 16:25:24.5±1.4, 2°.84S±0°.05×127°.87E±0°.08, h20^{km}±2^{km}, mb4.7/37, Error ellipse: s-maj=11.5km s-min=7.3km az=68.0*
*IDC **04** 16:25:26.7±5.1, 2°.82S×128°.06E, h33^{km}±40^{km}, mb4.0/18, mbtmp4.3/21, ML4.7/3, MS3.9/36, Error ellipse: s-maj=22.1km s-min=12.1km az=70.0*
*DJA **04** 16:25:26.6±0.6, 3°.S±2°×12°.8E±°, h29^{km}±5^{km}, M4.8/37, mB5.3/19, mb5.0/37, MLv5.1/21, Mw4.6/55, Mw(mB)4.7/19, MwMwp4.5/4, Mwp4.9/4*

ISC 04 16:25:27.0±0.4, 2°.87S±0°.05×127°.86E±0°.06, h38^{km}, n141, σ1§40/115, mb4.7/39, MS3.9/35, 1D, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.84**	**244**	P		**Pn**	**16 25 40.7**	**-1.7**
AAI	**Ambon**	**0.88**	**158**	P		**Pn**	**16 25 42.0**	**-0.9**
MSAI	**Masohi**	**1.17**	**114**	P		**Pn**	**16 25 48.7**	**+1.9**
SANI	**Sanana**	**2.04**	**293**	P		**Pn**	**16 25 56.3**	**-2.5**
BNDI	**Bandanaira**	**2.62**	**129**	P		**Pn**	**16 26 08.0**	**+1.2**
TNTI	**Ternate**	**3.65**	**352**	Pn		**Pn**	**16 26 19.9**	**-1.1**
TNTI	**Ternate**	**3.65**	**352**	P		**Pn**	**16 26 21.4**	**+0.4**
SWI	**Sorong**	**3.94**	**60**	P		**Pn**	**16 26 25.7**	**+0.7**
FAKI	**Fak Fak**	**4.38**	**91**			**Pn**	**16 26 29.5**	**-1.6**
FAKI	**Fak Fak**	**4.38**	**91**	P		**Pn**	**16 26 31.3**	**+0.2**
KMSI	**Cibinong**	**5.17**	**311**	P		**Pn**	**16 26 40.6**	**-1.3**
LUWI	**Luwuk**	**5.40**	**290**			**Pn**	**16 26 44.1**	**-0.9**
LUWI	**Luwuk**	**5.40**	**290**	P		**Pn**	**16 26 44.6**	**-0.4**
	2.5nm2μm5μm300nm,0.8s							
KMPI	**Kaimana, Papua**	**5.89**	**98**	P		**Pn**	**16 26 51.6**	**-0.2**
	6.2nm4μm308nm,0.7s							
SAUI	**Saumlaki**	**6.13**	**146**			**Pn**	**16 26 53.4**	**-1.7**
SAUI	**Saumlaki**	**6.13**	**146**	P		**Pn**	**16 26 57.7**	**+2.6**
RKPI	**Ransiki, Papua**	**6.46**	**78**	P		**Pn**	**16 27 00.8**	**+1.2**
APSI	**Ampana**	**6.50**	**287**	P		**Pn**	**16 27 00.5**	**+0.3**
MRSI	**Marisa**	**6.79**	**299**	P		**Pn**	**16 27 03.8**	**-0.3**
	1.6nm1μm3μm184nm,0.5s							
SGSI	**Sangihe**	**6.92**	**340**	P		**Pn**	**16 27 05.1**	**-0.8**
SOEI	**Soe**	**7.72**	**207**			**Pn**	**16 27 18.8**	**+1.7**
BSSI	**Bau Bau, Buton**	**8.03**	**246**	P		**Pn**	**16 27 25.2**	**+3.9**
	898nm84nm,0.8s							
BKSI	**Bulukumba**	**8.09**	**252**	P		**Pn**	**16 27 22.9**	**+0.8**
	777nm52nm,1.0s							
TOLI2	**Tolitoli**	**8.11**	**299**			**Pn**	**16 27 19.9**	**-2.3**
SPSI	**Sidrap Palu**	**8.15**	**262**	P		**Pn**	**16 27 25.1**	**+2.3**
	1μm69nm,0.5s							
KAPI	**Kappang**	**8.37**	**255**	Pn		**Pn**	**16 27 29.4**	**+3.6**
	8.7nm,0.3s,baz=187,slow=7.8,SNR=7.6							
KAPI				LR	LR		16 31 09.1	
	comp=Z,639nm,20.4s,baz=75,slow=40							
	16nm,0.3s							
BATI	**Baumata**	**8.40**	**210**	Pn		Pn	16 27 33.0	+6.7
	6.5nm,0.3s,baz=75,slow=2.4,SNR=11							
BATI				LR	LR		16 30 40.7	
	comp=Z,1μm,21.3s,baz=32,slow=37							
BAKI	**Biak**	**8.41**	**79**	P		**Pn**	**16 27 27.8**	**+1.4**
	2μm201nm,0.6s							
MPSI	**Mapaga**	**8.57**	**292**	P		**Pn**	**16 27 29.4**	**+0.8**
MTN	**Manton Dam**	**10.43**	**162**	P		**Pn**	**16 27 57.6**	**+3.5**
MTN	**Manton Dam**	**10.43**	**162**			**Pn**	**16 27 54.9**	**+0.8**
KDU	**Kakadu**	**10.77**	**155**	P		**Pn**	**16 27 59.9**	**+1.1**
	comp=Z,20nm,0.4s							
WBSI	**Waikabubak, Su**	**10.77**	**231**	P		**Pn**	**16 28 00.8**	**+1.9**
	comp=Z,2μmcomp=Z,38nm,0.7s							
SMPI	**Sarmi**	**10.88**	**86**	P		**Pn**	**16 27 58.8**	**-1.4**
	comp=Z,83nm,1.0s							
MYLDM	**Lahad Datu**	**12.30**	**311**			**Pn**	**16 28 17.6**	**-2.1**
KNRA	**Kununurra**	**12.76**	**176**	P		**Pn**	**16 28 26.6**	**+0.7**
	comp=Z,86nm,0.6s							
KNRA	**Kununurra**	**12.76**	**176**			**Pn**	**16 28 26.5**	**+0.5**
JAY	**Jayapura**	**12.84**	**89**	Pn		**Pn**	**16 28 29.8**	**+2.7**
	comp=Z,1.2nm,0.3s,baz=238,slow=15,SNR=4.9							
JAY	**Jayapura**	**12.84**	**89**	P		**Pn**	**16 28 28.5**	**+1.4**
	comp=Z,26nm,1.1s							
FITZ	**Fitzroy Crossi**	**15.29**	**188**			**Pn**	**16 29 00.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**15.29**	**188**	Pn		**Pn**	**

CHTO	**Chiang Mai**	**35.69**	**308**	P	**P**	**16 32 20.4**	**-1.7**
NJ2	**Nanjing**	**35.77**	**347**	*e*P	**P**	**16 32 23.4**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JNU	**Nakatsue**	**35.91**	**4**	LR	LR	16 45 30.2	
	comp=Z,153nm,20.9s,baz=164,slow=34						
JHJ	**Hachijo jima 2**	**37.53**	**17**	LR	LR	16 48 31.8	
	comp=Z,228nm,18.1s,baz=142,slow=37						
CAN	**Canberra**	**37.78**	**151**	P	**P**	**16 32 38.7**	**-1.0**
CAN				lAmb	lAmb	16 32 38.8	
	comp=Z,26nm,1.3s						
PZH	**PanZhiHua**	**38.60**	**321**	P	**P**	**16 32 47.8**	**+1.0**
JGF	**Kuroka**	**39.29**	**12**	P	**P**	**16 32 50.1**	**-2.2**
JGF				lAmb	lAmb	16 33 01.5	
	comp=Z,28nm,1.3s						
LYN	**LuoYang**	**39.94**	**340**	*e*P	**P**	**16 33 01.4**	**+3.7**
LYN				pmax	pmax		
	comp=Z,15nm,0.5s						
KSRS	**Korea Array**	**40.12**	**0**	P	**P**	**16 32 59.0**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=172,slow=9.2,SNR=5.9						
	comp=Z,1.5nm,0.8s						
MJAR	**Matsushiro Arr**	**40.38**	**13**	P	**P**	**16 33 00.0**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=189,slow=9.3,SNR=8.6						
MJAR				LR	LR	16 48 09.2	
	comp=Z,325nm,20.0s,baz=168,slow=34						
	comp=Z,1.7nm,0.6s						
MAJO	**Matsushiro**	**40.38**	**13**	P	**P**	**16 32 59.3**	**-2.1**
XAN	**Xi'an**	**40.82**	**336**	P	**P**	**16 33 05.3**	**+0.2**
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
HNS	**HongShan**	**41.89**	**344**	⇓P	**P**	**16 33 14.1**	**+0.4**
HNS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRDH	**Bariadhala**	**43.52**	**308**	LR	LR	16 52 31.9	
	comp=Z,69nm,21.7s,baz=132,slow=37						
LZDM	**Lanzhou Array**	**44.74**	**332**	P	**P**	**16 33 38.8**	**+1.6**
	comp=Z,2.0nm,0.3s,baz=188,slow=8.7,SNR=2.4						
	comp=Z,2.0nm,0.3s						
LZH	**Lanzhou**	**44.78**	**332**	*e*P	**P**	**16 33 40.0**	**+2.7**
LZH				pP	pP	16 33 45.1	-2.1
LZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH				LR	LR		
	comp=Z,190nm,15.1s						
LZH				LR	LR		
	comp=Z,190nm,14.9s						
LZH				LR	LR		
	comp=Z,250nm,16.7s						
HHC	**Hu-ho-hao-te**	**45.99**	**343**	*e*P	**P**	**16 33 49.6**	**+2.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
USRK	**Ussuriysk Ar.**	**47.00**	**4**	P	**P**	**16 33 55.1**	**+0.7**
	comp=Z,7.3nm,0.6s,baz=185,slow=6.9,SNR=25						
	comp=Z,7.3nm,0.6s						
ASAJ	**Asahikawa**	**48.61**	**14**	LR	LR	16 53 41.8	
	comp=Z,278nm,20.5s,baz=202,slow=35						
GTA	**Gaotai**	**49.35**	**331**	*e*P	**P**	**16 34 14.9**	**+2.0**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				LR	LR		
	comp=Z,170nm,15.1s						
GTA				LR	LR		
	comp=Z,130nm,13.9s						
GTA				LR	LR		
	comp=Z,230nm,17.5s						
EVN	**Everest**	**49.97**	**311**		**P**	**16 34 16.5**	**-1.9**
HILR	**Hailar Array B**	**52.69**	**353**	P	**P**	**16 34 37.5**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=172,slow=11,SNR=2.6						
	comp=Z,0.5nm,0.4s						
HEH	**HeiHe**	**52.91**	**360**	*e*P	**P**	**16 34 39.1**	**-0.1**
HEH				LR	LR		
	comp=Z,200nm,13.8s						
HEH				LR	LR		
	comp=Z,140nm,14.5s						
HEH				LR	LR		
	comp=Z,170nm,14.0s						
ULN	**Ulaanbaatar**	**53.71**	**343**	P	**P**	**16 34 44.8**	**-0.6**
ULN				lAmb	lAmb	16 34 47.0	
	comp=Z,4.5nm,0.7s						
SONM	**Songino Array**	**53.88**	**342**	P	**P**	**16 34 47.1**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=147,slow=8.1,SNR=11						
	comp=Z,2.3nm,0.8s						
FOZ	**Fox Glacier**	**54.95**	**144**	P	**P**	**16 34 54.2**	**-0.1**
URZ	**Urewera**	**57.05**	**135**	LR	LR	17 00 42.2	
	comp=Z,267nm,20.2s,baz=320,slow=37						
WMQ	**Urumqi**	**58.79**	**327**	*e*P	**P**	**16 35 23.6**	**+2.0**
WMQ				LR	LR		
	comp=Z,110nm,23.9s						
PETK	**Petropavlovsk-**	**61.14**	**20**	LR	LR	16 59 37.7	
	comp=Z,49nm,21.8s,baz=214,slow=34						
MKAR	**Makanchi Array**	**63.62**	**327**	P	**P**	**16 35 53.8**	**-0.4**
MKAR	**Makanchi Array**	**63.62**	**327**	P	**P**	**16 35 54.7**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=126,slow=7.8,SNR=28						
MKAR				LR	LR	17 06 01.9	
	comp=Z,78nm,19.4s,baz=122,slow=38						
	comp=Z,4.4nm,0.7s						
MAKZ	**Makanchi**	**63.80**	**327**	P	**P**	**16 35 55.4**	**0.0**
MAKZ				lAmb	lAmb	16 36 18.2	
	comp=Z,13nm,1.2s						
CASY	**Casey**	**64.46**	**188**	P	**P**	**16 35 59.6**	**+0.3**
YAK	**Yakutsk**	**64.74**	**1**	LR	LR	17 06 32.9	
	comp=Z,82nm,18.1s,baz=176,slow=38						
MA2	**Magadan**	**64.82**	**13**	LR	LR	17 02 14.5	
	comp=Z,65nm,20.7s,baz=148,slow=34						
ZALV	**Zalesovo Beam**	**66.96**	**334**	P	**P**	**16 36 15.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=104,slow=6.3,SNR=5.3						
	comp=Z,0.6nm,0.5s						
SHEM	**Shemya Is, Ala**	**67.63**	**28**	LR	LR	17 02 09.9	
	comp=Z,91nm,20.8s,baz=78,slow=33						
KURBB	**Kurchatov Arra**	**67.90**	**329**	P	**P**	**16 36 21.8**	**+0.2**
	comp=Z,4.9nm,0.7s,baz=130,slow=5.8,SNR=53						
	comp=Z,4.9nm,0.7s						
KURK	**Kurchatov**	**67.90**	**329**	P	**P**	**16 36 19.9**	**-1.8**
KURK				lAmb	lAmb	16 36 24.4	
	comp=Z,8.2nm,0.8s						
SEY	**Seymchan**	**68.19**	**12**	LR	LR	17 06 35.8	
	comp=Z,45nm,19.9s,baz=233,slow=36						
RAR	**Rarotonga**	**72.53**	**111**	LR	LR	17 06 41.7	
	comp=Z,31nm,21.6s,baz=278,slow=34						
BVAR	**Borovoye Array**	**73.45**	**328**	P	**P**	**16 36 55.4**	**0.0**
	comp=Z,1.0nm,0.5s,baz=120,slow=8.7,SNR=8.5						
	comp=Z,1.0nm,0.5s						
TIXI	**Tiksi**	**74.39**	**0**	P	**P**	**16 37 00.5**	**0.0**
TIXI				lAmb	lAmb	16 37 01.7	
	comp=Z,5.2nm,0.8s						
TIXI	**Tiksi**	**74.39**	**0**	LR	LR	17 10 18.4	
	comp=Z,132nm,20.7s,baz=197,slow=36						
VNDA	**Vanda**	**76.78**	**173**	P	**P**	**16 37 14.1**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=302,slow=5.0,SNR=4.1						
	comp=Z,0.8nm,1.0s						
ABKAR	**Akbulak array**	**77.97**	**322**	P	**P**	**16 37 20.9**	**-0.5**
AKTO	**Aktyubinsk**	**79.52**	**322**	LR	LR	17 16 13.7	
	comp=Z,88nm,21.0s,baz=98,slow=38						
PPT	**Papeete**	**82.06**	**107**	LR	LR	17 13 56.5	
	comp=Z,24nm,18.5s,baz=318,slow=36						
KDAK	**Kodiak Island**	**86.85**	**32**	LR	LR	17 11 24.1	
	comp=Z,91nm,21.3s,baz=242,slow=32						
QSPA	**South Pole Qui**	**87.08**	**180**	P	**P**	**16 38 08.9**	**+0.2**
QSPA				lAmb	lAmb	16 38 38.4	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**87.08**	**180**	P	**P**	**16 38 09.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=218,slow=1.2,SNR=10						
	comp=Z,1.2nm,0.7s						
SKT	**Skwentna**	**88.10**	**28**	P	**P**	**16 38 12.9**	**-0.6**
RND	**Reindeer**	**89.53**	**27**	P	**P**	**16 38 19.2**	**-1.1**
RND				lAmb	lAmb	16 38 31.9	
	comp=Z,6.3nm,1.1s						
ILAR	**Eielson Array**	**90.54**	**25**	P	**P**	**16 38 25.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=243,slow=4.8,SNR=8.1						
ILAR				LR	LR	17 12 43.2	
	comp=Z,36nm,20.6s,baz=266,slow=31						
	comp=Z,0.4nm,0.5s						
DOT	**Dot Lake**	**91.69**	**27**	P	**P**	**16 38 29.4**	**-0.9**
DOT				lAmb	lAmb	16 38 54.8	
	comp=Z,7.3nm,1.3s						
ASF	**Jabal al Asfar**	**92.33**	**302**	LR	LR	17 23 59.4	
	comp=Z,30nm,21.8s,baz=153,slow=38						
EIL	**Elat**	**93.93**	**299**	LR	LR	17 27 21.7	
	comp=Z,34nm,19.4s,baz=164,slow=40						
ARCES	**ARCESS Array B**	**96.99**	**340**	P	**P**	**16 38 54.0**	**-0.3**
	comp=Z,8.6nm,1.1s,baz=36,slow=4.8,SNR=4.4						
ARCES				LR	LR	17 27 56.3	
	comp=Z,44nm,18.7s,baz=132,slow=39						
SPITS	**Spitsbergen Ar**	**97.13**	**349**	LR	LR	17 28 21.1	
	comp=Z,38nm,18.4s,baz=80,slow=39						
DLBC	**Dease Lake**	**98.77**	**31**	LR	LR	17 23 05.9	
	comp=Z,30nm,18.7s,baz=242,slow=35						
CPUP	**Villa Florida**	**150.54**	**171**	PKPbc	**PKiKP**	**16 45 16.4**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=62,slow=1.4,SNR=5.4						

*IDC **04** 16:26:38.9±3.7,7.7°72S×127.9°99E,h104km±32km, mb3.9/13, mbtmp4.2/13,MS4.1/3,Error ellipse: s-maj=28.4km s-min=13.6km az=82.0*

*DJA **04** 16:26:39.4±0.3,8.3°S±5.5°×12.8°E±°,h198km±8km, M5.0/12, mb5.1/12,mB5.3/9,MLv5.3/10,Mw(mB)4.7/9*

*NEIC **04** 16:26:41.5±1.0,7.80S±0.07°×127.92E±0.04,h135km±7km, mb4.5/34,Error ellipse: s-maj=11.7km s-min=1.8km az=151.0*

ISC 04 16:26:41.3±0.4,**7.88S**±0.06°×**127.92E**±0.07,**h135**km,**n79,** σ1§**28**/72,**mb4.3**/27,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.35**	**92**	Pn	**Pn**	**16 27 33.0**	**+0.4**
SAUI	**Saumlaki**	**3.35**	**92**	P	**Pn**	**16 27 32.9**	**+0.3**
SOEI	**Soe**	**4.06**	**242**	Pn	**Pn**	**16 27 42.7**	**+0.6**
SOEI	**Soe**	**4.06**	**242**	P	**Pn**	**16 27 42.8**	**+0.6**
MSAI	**Masohi**	**4.61**	**13**	P	**Pn**	**16 27 48.3**	**-1.0**
BATI	**Baumata**	**4.80**	**241**	P	**Pn**	**16 27 52.0**	**+0.2**
	935nm,0.5s,baz=137,slow=0.7,SNR=60						
BATI				S	**Sn**	**16 28 47.4**	**+0.6**
	391nm,0.4s,baz=327,slow=21,SNR=7.3						
BATI	**Baumata**	**4.80**	**241**	P	**Pn**	**16 27 52.2**	**+0.4**
MMRI	**Maumere**	**5.67**	**262**	Pn	**Pn**	**16 28 03.7**	**+0.2**
MMRI	**Maumere**	**5.67**	**262**	P	**Pn**	**16 28 03.2**	**-0.3**
	0.9nm3µm217nm,0.8s						
EDFI	**Ende, Flores**	**6.22**	**262**	P	**Pn**	**16 28 10.9**	**-0.1**
	2µm71nm,0.7s						
BASI	**Baing, Sumba**	**7.62**	**252**	P	**Pn**	**16 28 28.6**	**-1.0**
	1.9nm5µm483nm,0.6s						
WSI	**Waingapu**	**7.74**	**256**	P	**Pn**	**16 28 29.9**	**-1.4**
WBSI	**Waikabubak, Su**	**8.61**	**258**	P	**Pn**	**16 28 40.9**	**-2.1**
	2µm144nm,0.7s						
PLAI	**Plampang**	**10.08**	**264**	P	**Pn**	**16 29 00.9**	**-1.8**
	3µm124nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.40**	**192**	S	**Sn**	**16 30 55.8**	**-6.0**
	50nm,0.4s,baz=123,slow=7.8,SNR=10						
BAKI	**Biak**	**10.52**	**51**	P	Pn	16 29 02.6	-5.9
	265nm,1.0s						
TWSI	**Taliwang, Sumb**	**10.96**	**265**	P	**Pn**	**16 29 12.4**	**-2.0**
WRA	**Warramunga Arr**	**13.51**	**153**	S	Sn	16 32 06.4	-11
	20nm,0.5s,baz=334,slow=23,SNR=12						
JAY	**Jayapura**	**13.80**	**68**	LR	LR	16 35 05.9	
	comp=Z,1µm,20.7s,baz=262,slow=37						
PSA00	**Pilbara Seismi**	**15.69**	**209**	Pn	**Pn**	**16 30 15.0**	**0.0**
PSA00				lAmb	lAmb	16 30 15.9	
	comp=Z,28nm,0.6s						
PSA00	**Pilbara Seismi**	**15.69**	**209**	Pn	**Pn**	**16 30 15.1**	**+0.1**
PSA00				lAmb	lAmb	16 30 20.1	
	comp=Z,23nm,1.1s						
ASAR	**Alice Springs**	**16.72**	**161**	S	Sn	16 33 23.4	-11
	comp=Z,6.9nm,0.7s,baz=322,slow=18,SNR=5.0						
SBUM	**Sibu**	**18.72**	**303**		**Pn**	**16 30 52.4**	**+0.8**
SBUM				lAmb	lAmb	16 30 53.5	
	comp=Z,20nm,0.8s						
MORW	**Morawa**	**23.86**	**206**	P	**P**	**16 31 42.3**	**-0.1**
MORW				lAmb	lAmb	16 32 23.1	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**27.06**	**154**	lAmb	lAmb	16 32 20.5	
	comp=Z,45nm,1.1s						
STKA	**Stephens Creek**	**27.06**	**154**	P	**P**	**16 32 12.5**	**+1.3**
	comp=Z,4.2nm,0.7s,baz=325,slow=16,SNR=2.9						
STKA				PcP	**PcP**	**16 35 30.3**	**+1.3**
	comp=Z,3.4nm,0.6s,baz=19,slow=3.2,SNR=3.7						
	comp=Z,4.2nm,0.7s						
KULM	**Kulim**	**30.18**	**295**	P	**P**	**16 32 38.4**	**-0.7**
KULM				lAmb	lAmb	16 32 39.6	
	comp=Z,5.9nm,0.8s						
HNR	**Honiara**	**31.70**	**95**	P	**P**	**16 32 49.4**	**-3.0**
CMAR	**Chiang Mai Arr**	**38.76**	**313**	P	**P**	**16 33 52.5**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=140,slow=6.5,SNR=8.4						
CMAR				PcP	**PcP**	**16 36 03.4**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=157,slow=2.7,SNR=6.4						
	comp=Z,1.1nm,0.6s						
JMN	**Monobe**	**41.76**	**7**	P	**P**	**16 34 15.5**	**-1.8**
KSRS	**Korea Array**	**45.09**	**0**	P	**P**	**16 34 43.9**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=178,slow=9.8,SNR=5.4						
	comp=Z,0.9nm,0.4s						
KS19	**Wonju Array Si**	**45.14**	**360**	P	**P**	**16 34 44.3**	**0.0**
KS19				lAmb	lAmb	16 34 46.8	
	comp=Z,17nm,1.3s						
JYT	**Yasato**	**45.36**	**14**	P	**P**	**16 34 44.5**	**-1.6**
LZDM	**Lanzhou Array**	**49.20**	**334**	LR	LR	16 54 10.9	
	comp=Z,92nm,20.1s,baz=20,slow=34						
USRK	**Ussuriysk Ar.**	**51.96**	**4**	P	**P**	**16 35 36.1**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=187,slow=7.1,SNR=6.8						
	comp=Z,1.6nm,0.4s						
KHZ	**Kahutara**	**52.80**	**138**	P	**P**	**16 35 43.0**	**+0.3**
SONM	**Songino Array**	**58.65**	**343**	P	**P**	**16 36 24.8**	**+0.4**
SONM	**Songino Array**	**58.65**	**343**	P	**P**	**16 36 25.1**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=169,slow=7.0,SNR=4.4						
	comp=Z,2.0nm,0.9s						
CASY	**Casey**	**59.54**	**188**	P	**P**	**16 36 32.9**	**+2.8**
CASY				lAmb	lAmb	16 37 14.2	
	comp=Z,5.9nm,1.4s						
PETK	**Petropavlovsk-**	**65.81**	**19**	P	**P**	**16 37 11.6**	**-0.3**
PETK	**Petropavlovsk-**	**65.81**	**19**	P	**P**	**16 37 11.8**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=176,slow=3.9,SNR=4.4						
	comp=Z,2.7nm,0.9s						
MKAR	**Makanchi Array**	**67.85**	**328**	P	**P**	**16 37 24.2**	**-0.7**
MKAR	**Makanchi Array**	**67.85**	**328**	P	**P**	**16 37 26.0**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=123,slow=7.7,SNR=6.0						
	comp=Z,0.9nm,0.5s						
KDJ	**Kajisay**	**67.95**	**322**	P	**P**	**16 37 24.9**	**-1.0**
BOOM	**Boomskoye usch**	**68.92**	**321**	P	**P**	**16 37 31.2**	**-0.7**
YAK	**Yakutsk**	**69.71**	**1**	P	**P**	**16 37 36.2**	**+0.1**
YAK				lAmb	lAmb	16 37 37.0	
	comp=Z,7.3nm,0.8s						
ARSB	**Arslanbob**	**70.18**	**319**	P	**P**	**16 37 38.7**	**-0.9**
ZALV	**Zalesovo Beam**	**71.47**	**335**	P	**P**	**16 37 44.8**	**-2.1**
ZALV	**Zalesovo Beam**	**71.47**	**335**	P	**P**	**16 37 46.3**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=142,slow=5.0,SNR=4.7						
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	**71.84**	**173**	P	**P**	**16 37 49.1**	**+0.2**
VNDA				lAmb	lAmb	16 37 54.3	
	comp=Z,3.9nm,1.2s						
VNDA	**Vanda**	**71.84**	**173**	P	**P**	**16 37 49.3**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=282,slow=9.3,SNR=12						
	comp=Z,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**72.19**	**329**	P	**P**	**16 37 51.0**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=132,slow=5.5,SNR=6.5						
	comp=Z,1.9nm,0.5s						
KURK	**Kurchatov**	**72.20**	**330**	P	**P**	**16 37 50.7**	**-0.7**
KURK				lAmb	lAmb	16 37 53.3	
	comp=Z,4.8nm,0.9s						
BVAR	**Borovoye Array**	**77.72**	**329**	P	**P**	**16 38 23.3**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=130,slow=9.3,SNR=3.5						
	comp=Z,0.8nm,0.4s						
TIXI	**Tiksi**	**79.36**	**0**	P	**P**	**16 38 31.2**	**-0.4**
AB31	**Akbulak array**	**81.92**	**322**	P	**P**	**16 38 45.1**	**-0.6**
ABKAR	**Akbulak array**	**81.92**	**322**	P	**P**	**16 38 44.7**	**-1.1**
QSPA	**South Pole Qui**	**82.11**	**180**	P	P	16 38 52.0	+5.4
QSPA				lAmb	lAmb	16 38 52.1	
	comp=Z,8.4nm,1.4s						
QSPA	**South Pole Qui**	**82.11**	**180**	P	P	16 38 51.9	+5.3
	comp=Z,2.6nm,0.7s,baz=149,slow=3.6,SNR=6.4						
ARTI	**Arti**	**85.44**	**328**	P	**P**	**16 39 03.7**	**+0.1**
ARTI				lAmb	lAmb	16 39 04.0	
	comp=Z,3.3nm,0.7s						
L16K	**Owhat River**	**88.77**	**27**	P	**P**	**16 39 19.6**	**+0.1**
L16K				lAmb	lAmb	16 39 40.0	
	comp=Z,12nm,1.2s						
M16K	**Timber Creek**	**88.79**	**28**	P	**P**	**16 39 19.3**	**-0.3**
C19K	**Lookout Ridge**	**91.16**	**20**	P	**P**	**16 39 30.5**	**0.0**
E19K	**Redstone River**	**91.48**	**22**	P	**P**	**16 39 31.9**	**-0.1**
E19K				lAmb	lAmb	16 40 00.8	
	comp=Z,6.7nm,1.1s						
F20K	**Avaraart Lake**	**91.92**	**22**	P	**P**	**16 39 34.0**	**-0.1**
F20K				lAmb	lAmb	16 39 53.6	
	comp=Z,5.5nm,1.4s						
SML	**Sawmill**	**93.93**	**28**	P	**P**	**16 39 42.9**	**-0.6**
SNAA	**Sanae**	**94.33**	**194**	lAmb	lAmb	16 39 49.4	
	comp=Z,2.3nm,0.7s						
SNAA	**Sanae**	**94.33**	**194**	P	P	**16 39 47.7**	**+2.5**
	comp=Z,2.2nm,0.7s,baz=155,slow=4.8,SNR=22						
	comp=Z,2.2nm,0.7s						
DHY	**Denali Highway**	**94.56**	**27**	P	**P**	**16 39 45.8**	**-0.7**
ILAR	**Eielson Array**	**95.02**	**25**	P	**P**	**16 39 47.0**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=301,slow=5.3,SNR=1.7						
	comp=Z,0.3nm,0.6s						
F25K	**Christian Rive**	**95.86**	**23**	P	**P**	**16 39 52.1**	**-0.1**
F25K				lAmb	lAmb	16 40 05.8	
	comp=Z,4.1nm,1.5s						
BMAR	**Burnt Mountain**	**96.25**	**23**	P	**P**	**16 39 54.1**	**+0.2**
J26L	**Joseph Creek**	**96.41**	**26**	P	**P**	**16 39 54.4**	**-0.4**
J26L				lAmb	lAmb	16 40 24.6	
	comp=Z,4.0nm,1.4s						
L27K	**Beaver Creek,**	**97.08**	**27**	P	**P**	**16 39 57.7**	**0.0**
L27K				lAmb	lAmb	16 40 09.0	
	comp=Z,4.6nm,1.4s						
LBTB	**Lobatse**	**97.73**	**243**	LR	LR	17 19 35.1	
	comp=Z,87nm,19.7s,baz=126,slow=32						
PDAR	**Pinedale Array**	**118.97**	**45**	PKP	**PKiKP**	**16 45 15.3**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=192,slow=0.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**126.95**	**280**	PKP	**PKiKP**	**16 45 31.7**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=71,slow=3.4,SNR=2.6						
CPUP	**Villa Florida**	**145.62**	**172**	PKPbc	**PKiKP**	**16 46 07.3**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=21,slow=3.2,SNR=5.5						
LPAZ	**La Paz**	**151.21**	**147**	PKPbc	**PKiKP**	**16 46 23.4**	**+2.3**
	comp=Z,5.1nm,0.4s,baz=64,slow=3.9,SNR=25						

KRSC 04 16:40:38.3±1.5,**48°36N**×**156°32E**,**h16**km±**27**km,**MI3.9,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.33**	**357**	*e*P	Pn	16 41 16.2	+0.3
SKR				*e*S	Sn	16 41 45.8	+1.6
PAU	**Pauzhetka**	**3.13**	**6**	*e*S	Sn	16 42 07.5	+3.6
KDTR	**Khodutka, Kamc**	**3.64**	**17**	*e*P	Pn	16 41 37.3	+3.5
KDTR				*e*S	Sn	16 42 20.7	+4.3
ASAK	**Asacha**	**4.16**	**13**	*e*P	Pn	16 41 45.5	+4.4
MTVR	**Mutnovka**	**4.30**	**15**	*e*P	Pn	16 41 47.1	+4.0
MTVR				*e*S	Sb	16 42 39.2	-5.9
RUS	**Russkaya**	**4.32**	**18**	*e*P	Pn	16 41 46.1	+3.0
RUS				*e*S	Sn	16 42 37.1	+4.1
GRL	**Gorelyy**	**4.35**	**14**	*e*P	Pn	16 41 47.8	+4.1
APC	**Apacha**	**4.60**	**6**	*e*P	Pn	16 41 51.3	+4.2
DALK	**Dalny**	**4.93**	**17**	*e*P	Pn	16 41 55.6	+4.0
DALK				*e*S	Sn	16 42 53.8	+5.6
UGLR	**Uglovaya**	**5.11**	**17**	*e*P	Pn	16 41 57.8	+3.7
AVH	**Avacha**	**5.15**	**16**	*e*P	Pn	16 41 59.8	+5.1
KOK	**Koryaka**	**5.15**	**16**	*e*P	Pn	16 42 00.4	+5.6
SMAR	**Somma**	**5.16**	**17**	*e*P	Pn	16 42 01.0	+6.0
SDLR	**Sedlovina**	**5.19**	**17**	*e*P	Pn	16 41 59.4	+4.1
KRX	**Arik**	**5.22**	**16**	*e*P	Pn	16 42 00.1	+4.4

NNC 04 16:48:44.1±6.9,**37°39N**×**71°39E**,**h0**km,**mb3.9,mpv3.7,**
3C-2D,Error ellipse: s-maj=54.3km s-min=44.5km
az=166.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.75**	**354**	⇑P	Pn	16 50 12.3	+1.6
	13nm,0.5s,baz=180,slow=13,SNR=55						
KK31				⇑S	Sn	16 51 19.1	+1.8
	8.1nm,0.3s,baz=148,slow=16,SNR=14						
AAK	**Ala-Archa**	**5.75**	**23**	⇓P	Pn	16 50 10.9	0.0
	1.4nm,0.5s						
AAK				⇓S	Sn	16 51 18.1	+0.3
	2.6nm,0.5s						
AB31	**Akbulak array**	**14.47**	**329**	P	Pn	16 52 06.6	-3.5
	0.3nm,0.3s,baz=136,slow=14,SNR=20						
AB31				⇑S	Sn	16 54 51.0	-0.2
	1.7nm,0.8s,baz=149,slow=24,SNR=6.4						

DJA 04 16:49:40.5±0.2,**8°S**±3°×**11°7E**±°,**h10**km,**M4.1**/17,**mb4.2**/5,
MLv4.0/17,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**0.47**	**160**	P	Pg	16 49 49.3	-0.5
TWSI				S	Sg	16 49 57.0	+1.0
PLAI	**Plampang**	**1.17**	**117**	P	Pb	16 50 01.4	-1.5
PLAI				S	Sb	16 50 18.0	-0.2
SRBI	**Singaraja**	**1.51**	**278**	P	Pn	16 50 07.3	-0.3
SRBI				S	Sb	16 50 27.8	+0.1
DNP	**Denpasar**	**1.54**	**255**	P	Pb	16 50 08.7	-0.5
ABJI	**Asem Bagus**	**2.51**	**281**	P	Pn	16 50 23.0	+1.6
JAGI	**Jajag, Banyuwa**	**2.55**	**266**	P	Pn	16 50 20.5	-1.4
WBSI	**Waikabubak, Su**	**2.96**	**117**	P	Pn	16 50 28.7	+1.1
KMMI	**Kalianget**	**2.99**

MHTO	**MHTO**	**7.39**	**175**	P	**Pn**	**17 01 11.8**	**+0.7**
DMTO	**DMTO**	**10.84**	**192**	P	**Pn**	**17 01 56.4**	**-2.0**
WHFO	**Wadi Hawf**	**10.91**	**198**	P	**Pn**	**17 01 58.1**	**-1.4**
	SNR=13						
ABTO	**Aybut**	**11.58**	**199**	P	**Pn**	**17 02 06.5**	**-2.2**

IDC 04 17:03:29.8±5.3, 18°.89S×172°.98W, h0km, mb3.6/3, mbtmp3.6/3, MS2.9/1, Error ellipse: s-maj=256.3km s-min=35.2km az=143.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**27.85**	**286**	LR	LR	17 20 07.2	
	comp=Z,24nm,20.2s,baz=188,slow=36						
ASAR	**Alice Springs**	**49.50**	**255**	P	P	17 12 22.6	+0.1
	0.6nm,0.6s,baz=96,slow=8.1,SNR=25						
	0.6nm,0.6s						
WRA	**Warramunga Arr**	**49.53**	**260**	P	P	17 12 22.1	-0.6
	0.2nm,0.3s,baz=97,slow=6.6,SNR=3.5						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**85.77**	**11**	P	P	17 16 10.2	-0.3
	0.2nm,0.6s,baz=229,slow=6.4,SNR=8.6						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**120.85**	**321**	PKP	PKiKP	17 22 24.1	+0.2
	0.6nm,0.6s,baz=90,slow=1.4,SNR=4.2						

IDC 04 18:03:37.1±2.1, 5°.37N×126°.20E, h0km, mb3.5/5, mbtmp3.5/5, MS3.6/2, Error ellipse: s-maj=217.9km s-min=20.4km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.80**	**340**	LR	LR	18 05 12.1	
	comp=Z,150nm,18.2s,baz=216,slow=53						
GUMO	**Guam**	**20.12**	**65**	LR	LR	18 14 22.8	
	comp=Z,24nm,21.4s,baz=214,slow=32						
WRA	**Warramunga Arr**	**26.40**	**163**	P	P	18 09 15.2	-0.4
	0.2nm,0.4s,baz=342,slow=9.2,SNR=3.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**29.83**	**166**	P	P	18 09 46.5	+0.2
	0.2nm,0.8s,baz=345,slow=8.0,SNR=2.7						
	0.2nm,0.8s						
MKAR	**Makanchi Array**	**55.92**	**325**	P	P	18 13 16.3	-0.7
	0.4nm,0.5s,baz=122,slow=7.1,SNR=4.6						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**60.08**	**327**	P	P	18 13 44.9	-1.2
	0.5nm,0.6s,baz=128,slow=6.4,SNR=4.1						
	0.5nm,0.6s						
RAO	**Raoul Island**	**63.72**	**126**	LR	LR	18 38 24.8	
	comp=Z,301nm,20.9s,baz=166,slow=33						
BVAR	**Borovoye Array**	**65.67**	**327**	P	P	18 14 24.6	+1.3
	0.6nm,0.7s,baz=116,slow=6.6,SNR=3.1						
	0.6nm,0.7s						

*ATH **04** 18:17:55.6, 37°.43N×20°.47E, h5km±1km, ML3.3/25, Manual Solution by G.Panopoulou First location: 2019/11/04 18:18:15, This location: 2019/11/04 19:40:33 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*THE **04** 18:17:56.4, 37°N±1°×2°.0E±°, h0km±1km, M3.1/34, MLh3.1/34*

*IDC **04** 18:18:19.9±38.0, 38°.27N×20°.97E, h191km±224km, mb3.3/3, mbtmp3.7/4, ML4.2/1, MS2.8/1, Error ellipse: s-maj=338.5km s-min=56.7km az=23.0*

ISC 04 18:17:56.3±1.4, 37°.45N±0°.04×20°.49E±0°.04, h9km±8km, n91, σ0°84/126, mb3.7/3, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.38**	**47**	P	**Pg**	**18 18 03.4**	**-0.3**
LTHK				S	**Sg**	**18 18 08.4**	**-0.4**
LTHK	**Lithakia**	**0.38**	**47**	S	**Pg**	**18 18 03.2**	**-0.5**
LTHK				S	**Sg**	**18 18 08.8**	**0.0**
ORTH	**Orthonies,Zaky**	**0.43**	**23**	P	**Pg**	**18 18 05.3**	**+0.5**
ORTH				S	**Sb**	**18 18 11.4**	**-1.3**
ORTH	**Orthonies,Zaky**	**0.43**	**23**	P	**Pg**	**18 18 05.1**	**+0.3**
ORTH				S	**Sb**	**18 18 11.4**	**-1.3**
KYPS	**Kipseli, Zakin**	**0.45**	**36**	P	**Pg**	**18 18 04.9**	**-0.2**
KYPS				S	**Sg**	**18 18 11.7**	**+0.6**
ZAK2	**Zakynthos**	**0.47**	**44**	P	**Pg**	**18 18 05.7**	**+0.2**
ZAK2				S	**Sb**	**18 18 12.9**	**-0.9**
RTZL	**Ratzakli, Kefa**	**0.66**	**20**	P	**Pg**	**18 18 08.5**	**-0.6**
RTZL				S	**Sg**	**18 18 18.2**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.66**	**7**	P	**Pg**	**18 18 08.6**	**-0.6**
PSDA				S	**Sb**	**18 18 18.9**	**-0.5**
PSDA	**Pessada-Kefalo**	**0.66**	**7**	P	**Pg**	**18 18 09.5**	**+0.4**
PSDA				S	**Sg**	**18 18 17.0**	**-0.8**
CLEM	**Kyllini,Ilia,G**	**0.68**	**49**	P	**Pg**	**18 18 09.1**	**-0.3**
CLEM				S	**Sg**	**18 18 17.7**	**-0.5**
ARG2	**Argostoli**	**0.72**	**0**	P	**Pg**	**18 18 10.3**	**0.0**
ARG2				S	**Sb**	**18 18 21.0**	**-0.1**
ARG2	**Argostoli**	**0.72**	**0**	P	**Pg**	**18 18 10.4**	**0.0**
VLS	**Valsamata**	**0.73**	**7**	P	**Pg**	**18 18 09.5**	**-0.8**
VLS				S	**Sb**	**18 18 20.5**	**-0.8**
VLS	**Valsamata**	**0.73**	**7**	P	**Pg**	**18 18 09.6**	**-0.8**
VLS				S	**Sg**	**18 18 20.1**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.75**	**357**	S	**Sb**	**18 18 22.2**	**+0.4**
LCHA	**Lechaina**	**0.79**	**52**	P	**Pg**	**18 18 11.6**	**+0.2**
LCHA				S	**Sg**	**18 18 21.5**	**-0.1**
DMLN	**Damoulianata-K**	**0.79**	**354**	P	**Pg**	**18 18 11.3**	**-0.2**
DMLN				S	**Sb**	**18 18 22.8**	**-0.3**
DMLN	**Damoulianata-K**	**0.79**	**354**	P	**Pg**	**18 18 10.8**	**-0.7**
ZARO	**Zacharo**	**0.93**	**88**	P	**Pg**	**18 18 13.7**	**-0.4**
AMT	**Artemida-Makis**	**0.98**	**85**	P	**Pg**	**18 18 14.3**	**-0.8**
RLS	**Riolos of Patr**	**0.98**	**52**	P	**Pg**	**18 18 14.3**	**-0.9**
RLS				S	**Sb**	**18 18 28.7**	**0.0**
RLS	**Riolos of Patr**	**0.98**	**52**	S	**Pg**	**18 18 13.9**	**-1.3**
RLS				S	**Sb**	**18 18 28.6**	**0.0**
FSK	**Fiskardo**	**1.01**	**3**	P	**Pg**	**18 18 14.8**	**-0.8**
FSK				S	**Sb**	**18 18 30.2**	**+1.0**
FSK	**Fiskardo**	**1.01**	**3**	P	**Pg**	**18 18 14.6**	**-1.1**
FSK				S	**Sb**	**18 18 29.5**	**+0.3**
AXS	**Araxos**	**1.02**	**43**	P	**Pg**	**18 18 14.5**	**-1.5**
AXS				S	**Sb**	**18 18 30.8**	**+1.0**
AXS	**Araxos**	**1.02**	**43**	P	**Pg**	**18 18 14.7**	**-1.3**
AXS				S	**Sg**	**18 18 29.0**	**-0.4**
DRO	**Drossia**	**1.09**	**62**	P	**Pg**	**18 18 16.7**	**-0.7**
DRO				S	**Sn**	**18 18 33.7**	**+0.7**
DRO	**Drossia**	**1.09**	**62**	P	**Pg**	**18 18 16.6**	**-0.7**
PYL1	**Pylos**	**1.11**	**119**	P	**Pg**	**18 18 17.4**	**-0.2**
PYL1				S	**Sg**	**18 18 31.8**	**-0.2**
PYL2	**Kinigos**	**1.13**	**119**	P	**Pg**	**18 18 17.1**	**-0.9**
PYL2				S	**Sg**	**18 18 32.4**	**-0.4**
EVGI	**Lefkada island**	**1.17**	**7**	P	**Pg**	**18 18 17.7**	**-1.2**
EVGI				S	**Sn**	**18 18 35.6**	**+0.6**
EVGI	**Lefkada island**	**1.17**	**7**	P	**Pg**	**18 18 17.6**	**-1.2**
EVGI				S	**Sn**	**18 18 35.1**	**0.0**
MSL1	**Messolongi**	**1.18**	**39**	P	**Pg**	**18 18 18.2**	**-0.8**
ITM	**Ithomi**	**1.18**	**103**	P	**Pg**	**18 18 18.9**	**-0.1**
ITM				S	**Sn**	**18 18 36.4**	**+1.2**
ITM	**Ithomi**	**1.18**	**103**	P	**Pg**	**18 18 18.7**	**-0.3**
AST1	**Astakos**	**1.19**	**24**	P	**Pb**	**18 18 19.1**	**+0.1**
AST1				S	**Sn**	**18 18 35.6**	**+0.2**
NYDR	**Nydri-Lefkada**	**1.27**	**8**	P	**Pg**	**18 18 19.7**	**-1.0**
NYDR				S	**Sn**	**18 18 38.4**	**+1.0**
NYDR	**Nydri-Lefkada**	**1.27**	**8**	P	**Pg**	**18 18 19.4**	**-1.3**
NYDR				S	**Sn**	**18 18 37.5**	**+0.1**
UPR	**University Cam**	**1.32**	**51**	P	**Pn**	**18 18 21.1**	**+0.2**
UPR				S	**Sn**	**18 18 40.4**	**+1.7**
UPR	**University Cam**	**1.32**	**51**	P	**Pb**	**18 18 21.5**	**+0.2**
TSLK	**Tsoukalades, L**	**1.38**	**6**	P	**Pn**	**18 18 21.4**	**-0.3**
TSLK				S	**Sn**	**18 18 41.6**	**+1.6**
TSLK	**Tsoukalades, L**	**1.38**	**6**	P	**Pn**	**18 18 21.4**	**-0.3**
PVO	**Paravola**	**1.42**	**35**	P	**Pn**	**18 18 22.1**	**-0.2**
PVO	**Paravola**	**1.42**	**35**	P	**Pn**	**18 18 22.0**	**-0.3**
KLV	**Kalavryta, Ach**	**1.45**	**65**	P	**Pn**	**18 18 22.8**	**0.0**
KLV				S	**Sg**	**18 18 42.7**	**-0.1**
KLV	**Kalavryta, Ach**	**1.45**	**65**	P	**Pn**	**18 18 22.3**	**-0.4**
KLV				S	**Sb**	**18 18 41.4**	**-0.5**
EFP	**Efpalio**	**1.49**	**49**	P	**Pn**	**18 18 22.9**	**-0.3**
EFP				S	**Sg**	**18 18 44.9**	**+0.8**
EFP	**Efpalio**	**1.49**	**49**	P	**Pn**	**18 18 23.5**	**+0.3**
GUR	**Goura**	**1.55**	**71**	P	**Pn**	**18 18 24.6**	**+0.5**
GUR				S	**Sb**	**18 18 45.5**	**+0.5**
GUR	**Goura**	**1.55**	**71**	P	**Pn**	**18 18 24.0**	**-0.2**
TRIZ	**Trizonia**	**1.55**	**54**	P	**Pn**	**18 18 24.0**	**0.0**
SERG	**Sergoula**	**1.57**	**52**	P	**Pn**	**18 18 24.2**	**-0.2**
SERG	**Sergoula**	**1.57**	**52**	P	**Pn**	**18 18 25.0**	**+0.6**
AMPL	**Ampelaki**	**1.57**	**21**	P	**Pn**	**18 18 24.9**	**+0.5**
ANX	**Ano Chora**	**1.61**	**44**	P	**Pn**	**18 18 25.1**	**+0.2**
ANX	**Ano Chora**	**1.61**	**44**	P	**Pn**	**18 18 25.4**	**+0.5**
KALE	**Kalithea**	**1.61**	**54**	P	**Pn**	**18 18 25.5**	**+0.6**
KALE	**Kalithea**	**1.61**	**54**	P	**Pn**	**18 18 25.4**	**+0.5**
EVR	**Evrytania**	**1.79**	**35**	P	**Pb**	**18 18 28.8**	**-0.6**
EVR	**Evrytania**	**1.79**	**35**	P	**Pn**	**18 18 28.1**	**+0.5**
TETR	**Tetrakomo, Epi**	**1.99**	**18**	P	**Pn**	**18 18 31.4**	**+1.2**
TETR	**Tetrakomo, Epi**	**1.99**	**18**	P	**Pn**	**18 18 31.4**	**+1.2**
MAKR	**Makrakomi, Fth**	**2.03**	**39**	P	**Pn**	**18 18 32.0**	**+1.3**
MAKR	**Makrakomi, Fth**	**2.03**	**39**	P	**Pn**	**18 18 31.5**	**+0.8**
LTK	**Loutraki**	**2.05**	**73**	P	**Pn**	**18 18 31.3**	**+0.3**
LTK	**Loutraki**	**2.05**	**73**	P	**Pn**	**18 18 30.8**	**-0.2**
IGT	**Igoumenitsa**	**2.08**	**357**	P	**Pn**	**18 18 32.3**	**+0.9**
IGT	**Igoumenitsa**	**2.08**	**357**	P	**Pn**	**18 18 32.2**	**+0.8**
VLI	**Veliai**	**2.09**	**110**	P	**Pn**	**18 18 32.3**	**+0.8**
VLI	**Veliai**	**2.09**	**110**	P	**Pn**	**18 18 31.6**	**+0.1**
PRMD	**Pramanda**	**2.13**	**13**	P	**Pn**	**18 18 33.2**	**+1.1**
AGG	**Agios Georgios**	**2.14**	**42**	P	**Pn**	**18 18 33.6**	**+1.4**
AGG	**Agios Georgios**	**2.14**	**42**	P	**Pn**	**18 18 33.5**	**+1.3**
AXAR	**Agios Charalam**	**2.16**	**52**	P	**Pn**	**18 18 33.8**	**+1.3**
AXAR	**Agios Charalam**	**2.16**	**52**	P	**Pn**	**18 18 33.3**	**+0.9**
MET2	**Kameni Chora,**	**2.27**	**85**	P	**Pn**	**18 18 33.8**	**-0.1**
MET5	**Makryloggos,Me**	**2.29**	**85**	P	**Pn**	**18 18 34.9**	**+0.6**
LKR	**Lokris**	**2.32**	**58**	P	**Pn**	**18 18 34.8**	**+0.2**
LKR	**Lokris**	**2.32**	**58**	P	**Pn**	**18 18 34.9**	**+0.3**
VIL2	**Platees**	**2.33**	**70**	P	**Pn**	**18 18 35.0**	**+0.1**
VILL	**Villia**	**2.35**	**72**	P	**Pn**	**18 18 35.3**	**+0.2**
ATAL	**Atalanti**	**2.35**	**58**	P	**Pn**	**18 18 36.0**	**+0.8**
ATAL	**Atalanti**	**2.35**	**58**	P	**Pn**	**18 18 35.7**	**+0.5**
KTHA	**Kythira Island**	**2.39**	**119**	P	**Pn**	**18 18 37.1**	**+1.5**
THL	**Klokotos Trika**	**2.43**	**29**	P	**Pn**	**18 18 36.6**	**+0.5**
THL	**Klokotos Trika**	**2.43**	**29**	P	**Pn**	**18 18 37.5**	**+1.3**
MLR	**Muntele Rosu**	**9.01**	**25**	LR	LR	18 24 00.4	
	comp=Z,57nm,18.3s,baz=206,slow=42						
AKASG	**Malin Array Be**	**14.64**	**22**	P	**Pn**	**18 21 26.7**	**+3.2**
	1.1nm,0.3s,baz=209,slow=9.3,SNR=4.1						
	0.2nm,0.3s						
HFS	**Hagfors**	**23.11**	**351**	P	**P**	**18 23 01.8**	**-0.5**
	1.9nm,0.8s,baz=158,slow=9.0,SNR=1.6						
	1.9nm,0.8s						
FINES	**FINESS Array B**	**24.27**	**7**	P	**P**	**18 23 11.3**	**-2.2**
	4.6nm,0.9s,baz=177,slow=11,SNR=6.5						
	4.6nm,0.9s						
ZALV	**Zalesovo Beam**	**46.20**	**48**	P	**P**	**18 26 18.8**	**-2.5**
	0.4nm,0.4s,baz=262,slow=10.0,SNR=2.1						
	0.4nm,0.4s						

*BGR **04** 18:32:40.8, 21°.37S×176°.41W, h33km*

*BJI **04** 18:32:47.0, 22°.30S×176°.40W, h110km, mB5.2/11, mb4.9/38*

*NEIC **04** 18:32:48.7, 22°.38S×176°.08W, h160km, Moment Tensor Solution. Duration: 28s4 Moment tensor: Scale 10^17^Nm; Mrr0.52; Mθθ0.67; Mϕϕ-1.19; Mrθ-0.96; Mθϕ0.01; Mϕr-1.19; Fault plane solution: M0 1.85000×10^17^ NP1: ϕs322.20000°, δ29.93000°, λ19.59000°. NP2: ϕs215.06000°, δ80.37000°, λ118.48000°. Principal axes: T 1.8109, Plg47.0000°, Azm155.0000°; N 0.0695, Plg28.0000°, Azm30.0000°; P -1.8804, Plg30.0000°, Azm282.0000°;*

*NEIC **04** 18:32:48.7, 22°.18S×176°.51W, h160km*

*IDC **04** 18:32:51.0±1.1, 22°.16S×176°.54W, h132km±8km, mb4.9/26, mbtmp5.3/28, MS4.0/27, Error ellipse: s-maj=11.3km s-min=10.8km az=12.0*

*NEIC **04** 18:32:53.4±2.0, 22°.12S±0°.09×176°.7W±0°.1, h152km±4km, mb5.0/415, Mwws.4/30, Error ellipse: s-maj=16.2km s-min=12.3km az=78.0*

*GCMT **04** 18:32:54.4±0.1, 22°.25S±0°.01×176°.22W±0°.01, h157km, MW5.5/156, Moment Tensor Solution. s128,c227; s156,c305; Duration: 1s4 Moment tensor: Scale 10^17^Nm; Mrr0.38±.02; Mθθ0.86±.02; Mϕϕ-1.25±.02; Mrθ-1.23±.02; Mθϕ0.01±.02; Mϕr-1.49±.02; Best double couple: M◎2.22600×10^17^ NP1:ϕs319.00000°, δ28.00000°, λ12.00000°. NP2:ϕs218.00000°, δ84.00000°, λ118.00000°. Principal axes: T 2.1860, Plg44.0000°, Azm155.0000°; N 0.0790, Plg27.0000°, Azm35.0000°; P -2.2670, Plg34.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **04** 18:32:55.6±1.3, 22°.21S×176°.78W, h150km, mb5.2/26 Error ellipse: s-maj=9.3km s-min=8.4km az=129.7*

*NOU **04** 18:32:55.6, 22°.19S×176°.37W, h182km, mb5.3/101, South of Fiji Islands*

ISC 04 18:32:52.7±0.5, 22°.27S±0°.04×176°.52W±0°.05, h150km±4km, n1205, σ1934/1075, mb5.1/304, 65C-60D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.81**	**311**		**Pn**	**18 34 32.3**	**+2.0**
MSVF				Sn	Sn	18 35 53.8	+7.0
MSVF	**Nonsavu**	**6.81**	**311**	P	**Pn**	**18 34 33.2**	**+2.9**
MSVF	**Nonsavu**	**6.81**	**311**	P	**Pn**	**18 34 32.3**	**+2.0**
MSVF						18 35 53.8	
NIUE	**Niue**	**6.95**	**64**	P	Pn	18 34 25.3	-6.7
NIUE				S	Sn	18 35 33.3	-17
NIUE	**Niue**	**6.95**	**64**		Pn	18 34 24.6	-7.5
NIUE	**Niue**	**6.95**	**64**	P	Pn	18 34 24.6	-7.4
NIUE				S	Sn	18 35 33.9	-16
RIZ	**Raoul Island**	**7.06**	**190**	P	**Pn**	**18 34 33.4**	**-0.1**
RIZ				S	**Sn**	**18 35 51.2**	**-1.4**
RAO	**Raoul Island**	**7.07**	**190**	Pn	**Pn**	**18 34 31.5**	**-2.0**
RAO				Sn	**Sn**	**18 35 49.0**	**-3.7**
RAO	**Raoul Island**	**7.07**	**190**	P	**Pn**	**18 34 31.6**	**-1.9**
	237nm,0.2s,baz=65,slow=22,SNR=6.7						
RAO				S	**Sn**	**18 35 50.4**	**-2.3**
	1µm,0.4s,baz=108,slow=20,SNR=11						
RAO	**Raoul Island**	**7.07**	**190**	P	Pn	**18 34 35.0**	**+1.5**
GLKZ	**Green Lake**	**7.08**	**190**	P	**Pn**	**18 34 33.5**	**-0.2**
GLKZ				S	**Sn**	**18 35 50.2**	**-2.8**
AFI	**Afiamalu**	**9.46**	**29**		Pn	18 34 57.0	-8.7
FUNA	**Funafuti**	**14.27**	**343**		**Pn**	**18 36 04.3**	**-3.8**
MARNC	**Mare, Loyalty**	**14.36**	**270**		**P**	**18 36 11.5**	**-0.3**
MARNC	**Mare, Loyalty**	**14.36**	**270**	P	**P**	**18 36 13.3**	**+1.5**
PINNC	**Pines Island,**	**14.83**	**266**		**Pn**	**18 36 11.2**	**-3.8**
PINNC	**Pines Island,**	**14.83**	**266**	P	**P**	**18 36 18.8**	**+1.8**
YATNC	**Mamie plateau,**	**15.37**	**268**	P	**P**	**18 36 25.1**	**+2.1**
OUENC	**Ouen Island, N**	**15.39**	**266**	P	**P**	**18 36 26.2**	**+2.9**
OUZ	**Omahuta**	**15.53**	**212**	P	**P**	**18 36 25.6**	**+1.0**
NFK	**Norfolk Island**	**15.54**	**241**	P	**P**	**18 36 27.9**	**+3.1**
	comp=Z,277nm,0.9s						
RAR	**Rarotonga**	**15.60**	**89**		**Pn**	**18 36 20.4**	**-4.2**
RAR	**Rarotonga**	**15.60**	**89**	P	**Pn**	**18 36 24.1**	**-0.4**
	comp=Z,116nm,0.5s,baz=263,slow=8.3,SNR=12						
RAR				S	Sn	18 39 02.6	-16
	comp=Z,47nm,0.4s,baz=94,slow=23,SNR=6.9						
RAR	**Rarotonga**	**15.60**	**89**	P	**Pn**	**18 36 23.6**	**-1.0**
ONTNC	**Ouen Toro**	**15.76**	**267**		**P**	**18 36 29.6**	**+2.3**
ONTNC	**Ouen Toro**	**15.76**	**267**	P	**P**	**18 36 29.9**	**+2.6**
WCZ	**Waipu Caves**	**15.77**	**208**	P	**P**	**18 36 28.5**	**+1.2**
DZM	**Mont Dzumac**	**15.78**	**268**	P	**P**	**18 36 30.6**	**+3.0**
	comp=Z,216nm,0.9s,baz=84,slow=17,SNR=45						
DZM				LR	LR	18 40 20.6	
	comp=Z,1µm,19.7s,baz=144,slow=28						
MXZ	**Matakaoa Point**	**15.88**	**195**	Pn	**Pn**	**18 36 25.5**	**-2.4**
MXZ	**Matakaoa Point**	**15.88**	**195**	P	Pn	18 36 22.1	-5.8
MXZ				S	S	18 39 06.6	-19
WMGZ	**Waiomatatini S**	**16.10**	**195**	P	Pn	18 36 24.8	-5.7
WMGZ				S	S	18 39 07.8	-22
HAZ	**Te Kaha**	**16.20**	**196**	P	Pn	18 36 24.8	-6.9
HAZ				S	S	18 39 15.2	-16
PKGZ	**Pakihiroa**	**16.22**	**195**	P	Pn	18 36 23.7	-8.4
PKGZ				S	S	18 39 14.1	-18
RUGZ	**Raukumara Rang**	**16.42**	**196**	P	**P**	**18 36 30.9**	**-3.7**
RUGZ				S	S	18 39 16.5	-21
WHRZ	**Whale Island**	**16.51**	**198**	P	**P**	**18 36 36.1**	**+0.6**
TWGZ	**Tauwhareparae**	**16.54**	**195**	P	**P**	**18 36 34.3**	**-1.6**
TWGZ				S	S	18 39 24.0	-16
MWZ	**Matawai**	**16.81**	**196**	P	**P**	**18 36 36.9**	**-1.9**
MWZ				S	S	18 39 26.5	-19
SANVU	**Saraoutou**	**16.82**	**291**		**Pn**	**18 36 41.6**	**+2.1**
SANVU	**Saraoutou**	**16.82**	**291**	P	**Pn**	**18 36 41.8**	**+2.3**
TKGZ	**Te Karaka**	**16.82**	**195**	P	**P**	**18 36 36.1**	**-2.9**
TKGZ				S	S	18 39 27.9	-18
URZ	**Urewera**	**16.85**	**198**	P	P	18 36 33.0	-6.2
	comp=Z,58nm,0.3s,baz=297,slow=0.8,SNR=54						
URZ				S	S	18 39 33.1	-14
	comp=Z,64nm,0.4s,baz=245,slow=23,SNR=7.9						
URZ	**Urewera**	**16.85**	**198**	P	**P**	**18 36 34.7**	**-4.5**
TOZ	**Tahuroa Road**	**16.87**	**202**		**P**	**18 36 39.9**	**+0.4**
TOZ	**Tahuroa Road**	**16.87**	**202**	P	**P**	**18 36 41.4**	**+1.9**
RAGZ	**Rawiri**	**16.99**	**196**	P	**P**	**18 36 38.1**	**-2.8**
RAGZ				S	S	18 39 30.7	-20
RIGZ	**Rimuhau**	**17.10**	**195**	P	**P**	**18 36 40.0**	**-2.0**
RIGZ				S	S	18 39 33.8	-19
MUGZ	**Murupara**	**17.15**	**198**	P	**P**	**18 36 39.3**	**-3.2**
MUGZ				S	S	18 39 37.8	-16
RTZ	**Ruatahuna**	**17.22**	**197**		**P**	**18 36 39.5**	**-3.8**
SNGZ	**Shannon Statio**	**17.28**	**196**	P	**P**	**18 36 41.5**	**-2.5**
SNGZ				S	S	18 39 38.2	-18
TLZ	**Tolley Road**	**17.40**	**201**	P	**P**	**18 36 46.2**	**+0.9**
MHGZ	**Mahia Peninsul**	**17.49**	**195**	P	**P**	**18 36 44.3**	**-2.0**
MHGZ				S	S	18 39 41.0	-20
HIZ	**Hauiti**	**17.80**	**203**	P	**P**	**18 36 50.3**	**+0.6**
HIZ	**Hauiti**	**17.80**	**203**	P	**P**	**18 36 51.7**	**+2.1**
BKZ	**Black Stump Fm**	**17.87**	**198**	P	**P**	**18 36 46.2**	**-4.3**
BKZ	**Black Stump Fm**	**17.87**	**198**	P	**Pn**	**18 36 53.1**	**+1.2**
BKZ	**Black Stump Fm**	**17.87**	**198**	P	**P**	**18 36 46.4**	**-4.1**
BKZ				S	S	18 39 53.4	-15
KOUNC	**Koumac, New Ca**	**17.95**	**272**	P	**Pn**	**18 36 54.3**	**+1.3**
TMVZ	**Te Maari**	**18.06**	**200**	P	**P**	**18 36 49.8**	**-2.8**
TMVZ				S	S	18 39 58.7	-13
ETVZ	**East Tongariro**	**18.07**	**200**	P	**P**	**18 36 50.5**	**-2.2**
WTVZ	**West Tongariro**	**18.09**	**200**	P	**P**	**18 36 50.5**	**-2.5**
NNVZ	**North Ngauruho**	**18.10**	**200**	P	**P**	**18 36 52.1**	**-1.0**
TWVZ	**Taurewa**	**18.10**	**201**	P	**P**	**18 36 50.6**	**-2.5**
OTVZ	**Oturere**	**18.11**	**200**	P	**P**	**18 36 50.2**	**-3.0**
NGZ	**Ngauruhoe**	**18.14**	**200**	P	**P**	**18 36 51.7**	**-1.9**
NGZ				S	**S**	**18 40 08.0**	**-5.6**
COVZ	**Chateau Observ**	**18.19**	**200**	P	**P**	**18 36 53.6**	**-0.4**
TUVZ	**Tukino**	**18.21**	**200**	P	**P**	**18 36 54.3**	**-0.1**
FWVZ	**Far West T-bar**	**18.23**	**200**	P	**P**	**18 36 51.5**	**-3.1**
FWVZ				S	**S**	**18 40 07.8**	**-7.7**
WNVZ	**Wahianoa**	**18.28**	**200**	P	**P**	**18 36 52.0**	**-3.1**
WNVZ				S	S	18 40 03.9	-13
MOVZ	**Moawhango**	**18.31**	**199**	P	**P**	**18 36 50.7**	**-4.6**
MOVZ				S	S	18 40 00.3	-16
PKVZ	**Pokaka**	**18.33**	**200**	P	**P**	**18 36 53.9**	**-1.6**
KRHZ	**Kereru**	**18.35**	**198**	P	**P**	**18 36 52.3**	**-3.4**
KRHZ				S	S	18 40 01.6	-16
KAHZ	**Kahuranaki**	**18.35**	**196**	P	**P**	**18 36 52.0**	**-3.7**
KAHZ				S	S	18 40 02.0	-16
MTVZ	**Mangateitei**	**18.38**	**200**	P	**P**	**18 36 55.4**	**-0.6**
VRZ	**Vera Road**	**18.38**	**202**	P	**P**	**18 36 55.8**	**-0.1**
PXZ	**Pawanui**	**18.58**	**196**	P	**P**	**18 36 54.6**	**-3.5**
PXZ				S	S	18 40 05.0	-17
PNHZ	**Pukenui**	**18.64**	**198**	P	**P**	**18 36 56.4**	**-2.5**
PNHZ				S	S	18 40 03.9	-20
PKE	**Pukeiti**	**18.72**	**204**	P	**P**	**18 37 01.1**	**+1.5**
NEZ	**North Egmont**	**18.74**	**203**	P	**P**	**18 37 02.0**	**+2.0**
KHEZ	**Kahui Hut**	**18.79**	**203**	P	**P**	**18 37 02.9**	**+2.3**
KHEZ				S	**S**	**18 40 25.2**	**-1.3**
LREZ	**Lake Rotokare**	**18.80**	**202**	P	**P**	**18 37 02.5**	**+2.0**
TSZ	**Takapari Road**	**18.85**	**198**	P	**P**	**18 36 58.2**	**-2.9**
TSZ				S	S	18 40 12.7	-15
PRHZ	**Porangahau**	**18.86**	**196**	P	**P**	**18 37 00.4**	**-0.7**
PRHZ				S	S	18 40 14.2	-13
DVHZ	**Dannevirke**	**19.01**	**197**	P	**P**	**18 37 00.7**	**-2.2**
DVHZ				S	S	18 40 14.8	-16
PRWZ	**Pori Road**	**19.31**	**198**	P	**P**	**18 37 04.5**	**-1.6**
PRWZ				S	S	18 40 21.9	-15
BFZ	**Birch Farm**	**19.35**	**197**	P	**P**	**18 37 02.7**	**-3.8**
BFZ	**Birch Farm**	**19.35**	**197**	P	**P**	**18 37 05.4**	**-1.1**
BFZ				S	S	18

comp=Z,50nm,0.9s
EIDS Eidsvold 29.76 258 P **P** 18 38 45.9 +0.7
AUPHS Peel High Scho 30.33 246 P **P** 18 38 51.9 +1.7
AUNRC North Rockhamp 30.35 262 P **P** 18 38 52.5 +2.1
MGCD Mangrove Creek 30.54 242 P **P** 18 38 53.1 +1.2
comp=Z,61nm,1.3s
SYDH Sydney Hard Ro 30.96 241 P **P** 18 38 57.3 +1.7
RMQ Roma 31.84 255 P **P** 18 39 06.0 +2.5
comp=Z,36nm,1.4s
CNB Canberra Magne 32.43 239 P **P** 18 39 09.6 +0.9
comp=Z,62nm,1.4s
CNB Canberra Magne 32.43 239 P **P** 18 39 10.6 +2.0
AUDAR Daramalan Coll 32.59 239 P **P** 18 39 11.2 +1.2
AUSIS Research Schoo 32.62 239 P **P** 18 39 12.3 +2.0
AULRC Lightning Ridg 32.64 250 P **P** 18 39 12.2 +1.8
AUMHS Melrose High S 32.66 239 P **P** 18 39 12.4 +1.8
AUMTS Mt Stromlo 32.72 239 P **P** 18 39 13.1 +2.0
CAN Canberra 32.72 239 P **P** 18 39 12.3 +1.1
comp=Z,54nm,1.3s
CAN Canberra 32.72 239 P **P** 18 39 10.7 -0.4
CAN IAmb IAmb 18 39 13.6
comp=Z,53nm,1.0s
CAN Canberra 32.72 239 P **P** 18 39 12.9 +1.8
CAN Canberra 32.72 239 P **P** 18 39 10.7 -0.4
CAN pmax pmax
comp=Z,53nm,1.0s
CAN Canberra 32.72 239 P **P** 18 39 12.4 +1.3
YNG Young 32.98 241 P **P** 18 39 14.2 +0.9
comp=Z,25nm,0.8s
MILA Mila 33.06 236 P **P** 18 39 14.0 0.0
comp=Z,12nm,1.5s
TV1H Townsville Har 34.38 268 P **P** 18 39 26.9 +1.4
CMSA Cobar Meteorol 34.79 246 P **P** 18 39 28.8 -0.3
comp=Z,185nm,1.0s
CMSA Cobar Meteorol 34.79 246 P **P** 18 39 29.3 +0.3
QLP Quilpie 35.89 255 P **P** 18 39 38.7 +0.3
comp=Z,223nm,1.4s
QLP Quilpie 35.89 255 P **P** 18 39 39.1 +0.6
CORO Coronation Par 35.96 229 P **P** 18 39 40.3 +1.5
TOO Toolangi 36.01 236 P **P** 18 39 38.8 -0.6
comp=Z,13nm,1.1s
TOO Toolangi 36.01 236 P **P** 18 39 38.7 -0.6
TOO Toolangi 36.01 236 P **P** 18 39 38.7 -0.7
TOO pmax pmax
comp=Z,7.0nm,0.8s
AUMAG Moama Anglican 36.27 239 P **P** 18 39 43.1 +1.6
TAU Tasmania Unive 36.38 227 P **P** 18 39 42.4 0.0
TAU IAmb IAmb 18 39 46.0
comp=Z,28nm,0.8s
TAU Tasmania Unive 36.38 227 P **P** 18 39 42.4 0.0
TAU pmax pmax
comp=Z,28nm,0.8s
MTSU Mount Surprise 36.91 269 P **P** 18 39 47.5 +0.3
comp=Z,86nm,1.1s
MTSU Mount Surprise 36.91 269 P **P** 18 39 48.0 +0.8
PMG Port Moresby 37.09 284 P **P** 18 39 49.3 +0.5
PMG Port Moresby 37.09 284 P **P** 18 39 49.6 +0.8
comp=Z,124nm,1.0s,baz=88,slow=6.7,SNR=19
PMG S S 18 45 12.9 -11
comp=Z,9.7nm,1.0s,baz=24,slow=20,SNR=2.1
comp=Z,124nm,1.0s
PMG Port Moresby 37.09 284 P **P** 18 39 49.5 +0.8
PMG Port Moresby 37.09 284*d* iP **P** 18 39 48.7 -0.1
PMG pmax pmax
comp=Z,137nm,1.1s
PMG Port Moresby 37.09 284 P **P** 18 39 49.0 +0.2
BRAT Ballarat 37.21 237 P **P** 18 39 51.0 +1.5
AUMTC Mt Clear Colle 37.27 237 P **P** 18 39 51.3 +1.3
STKA Stephens Creek 38.30 246 P **P** 18 39 58.6 -0.2
comp=Z,332nm,1.2s
STKA Stephens Creek 38.30 246 **ScP** 18 45 45.1 +1.5
STKA Stephens Creek 38.30 246 P **P** 18 39 59.1 +0.3
comp=Z,33nm,0.5s,baz=89,slow=9.9,SNR=75
STKA ScP **ScP** 18 45 47.0 +3.4
comp=Z,6.8nm,0.9s,baz=76,slow=1.9,SNR=5.1
comp=Z,33nm,0.5s
STKA Stephens Creek 38.30 246 P **P** 18 39 59.1 +0.3
COEN Coen 39.09 275 P **P** 18 40 05.8 +0.3
comp=Z,202nm,1.1s
COEN Coen 39.09 275 P **P** 18 40 06.6 +1.1
AUMBR Murray Bridge 40.51 242 P **P** 18 40 18.2 +1.2
HTT Hallett 40.66 244 P **P** 18 40 17.7 -0.6
comp=Z,33nm,0.9s
HTT Hallett 40.66 244 P **P** 18 40 18.4 +0.1
HTT Hallett 40.66 244 P **P** 18 40 17.7 -0.6
QIS Mount Isa 40.77 264 P **P** 18 40 19.2 -0.2
comp=Z,48nm,1.4s
QIS Mount Isa 40.77 264 P **P** 18 40 19.5 +0.1
AUJCS Jamestown Cent 40.90 245 P **P** 18 40 21.6 +1.3
AUMAR Marden Senior 41.02 242 P **P** 18 40 22.3 +1.1
WHYH Whyalla 41.76 245 P **P** 18 40 28.4 +1.1
BBOO Buckleboo 43.03 245 P **P** 18 40 36.4 -1.1
comp=Z,64nm,0.7s
BBOO Buckleboo 43.03 245 P **P** 18 40 36.3 -1.2
BBOO IAmb IAmb 18 40 38.1
comp=Z,51nm,0.9s
BBOO Buckleboo 43.03 245 P **P** 18 40 37.3 -0.2
AUCAS Cummins Area S 43.37 243 P **P** 18 40 40.7 +0.5
AS31 Alice Springs 45.48 258 IAmb IAmb 18 40 58.5
comp=Z,31nm,0.8s
ASAR Alice Springs 45.48 258 P **P** 18 40 56.1 -1.1
ASAR Alice Springs 45.48 258 **ScP** 18 46 14.0 +1.5
ASAR Alice Springs 45.48 258 P **P** 18 40 56.5 -0.7
comp=Z,78nm,0.7s,baz=98,slow=7.4,SNR=625
ASAR PcP **PcP** 18 42 34.3 +0.6
comp=Z,25nm,0.8s,baz=97,slow=3.9,SNR=6.3
ASAR ScP **ScP** 18 46 15.9 +3.5
comp=Z,6.1nm,0.9s,baz=107,slow=4.2,SNR=10
ASAR S **S** 18 47 22.6 -5.1
comp=Z,1.5nm,0.7s,baz=93,slow=14,SNR=5.8
ASAR ScS **ScS** 18 50 34.9 -3.5
comp=Z,3.1nm,1.0s,baz=79,slow=6.7,SNR=6.9
comp=Z,78nm,0.7s
AUALC St Philip's Co 45.49 258 P **P** 18 40 57.1 -0.2
WRAB Tennant Creek 45.73 263 P **P** 18 40 58.6 -0.6
WRAB Tennant Creek 45.73 263 P **P** 18 40 58.9 -0.3
WRAB Tennant Creek 45.73 263*d* iP **P** 18 40 58.0 -1.2
WRAB pmax pmax
comp=Z,133nm,1.3s
WRAB Tennant Creek 45.73 263 P **P** 18 40 58.0 -1.2
WRAB PcP **PcP** 18 42 35.2 +0.7
WRA Warramunga Arr 45.74 263 P **P** 18 40 57.5 -1.8
WRA Warramunga Arr 45.74 263 **ScP** 18 46 16.3 +2.7
WRA Warramunga Arr 45.74 263 P **P** 18 40 57.7 -1.6
comp=Z,72nm,0.8s,baz=99,slow=8.2,SNR=253
WRA PcP **PcP** 18 42 34.5 0.0
comp=Z,24nm,1.1s,baz=99,slow=3.9,SNR=6.3
WRA ScP **ScP** 18 46 15.6 +2.0
comp=Z,6.3nm,1.0s,baz=98,slow=4.5,SNR=11
WRA S **S** 18 47 26.0 -5.6
comp=Z,5.7nm,1.1s,baz=98,slow=14,SNR=5.5
comp=Z,72nm,0.8s
JAY Jayapura 45.91 289 P **P** 18 41 00.3 -0.3
comp=Z,97nm,0.8s,baz=157,slow=4.8,SNR=41
comp=Z,97nm,0.8s
JAY Jayapura 45.91 289 P **P** 18 41 00.0 -0.7
comp=Z,1μmcomp=Z,141nm,1.2s
SMPI Sarmi 47.91 288 P **P** 18 41 15.3 -0.8
comp=Z,80nm,1.3s
KDU Kakadu 49.38 272 P **P** 18 41 26.1 -1.2
comp=Z,38nm,1.4s
FORT Forrest 49.88 248 P **P** 18 41 29.7 -1.3
comp=Z,209nm,0.7s
WRKA Warakurna 50.33 255 P **P** 18 41 33.4 -1.1
comp=Z,82nm,0.8s
MTN Manton Dam 50.57 271 P **P** 18 41 36.1 -0.2
comp=Z,45nm,0.6s
MTN Manton Dam 50.57 271 IAmb IAmb 18 41 36.9
comp=Z,32nm,0.7s
BAKI Biak 50.58 288 P **P** 18 41 37.4 +1.0
DRS Darwin Rock St 50.91 272 P **P** 18 41 40.0 +1.1
AUDHS Darwin High Sc 50.98 272 P **P** 18 41 39.0 -0.4
KNRA Kununurra 51.93 267 P **P** 18 41 45.9 -0.6
comp=Z,189nm,0.8s
GUMO Guam 51.98 310 P **P** 18 41 46.4 -0.3
GUMO Guam 51.98 310 P **P** 18 41 47.2 +0.4
comp=Z,216nm,0.9s,baz=179,slow=8.4,SNR=12
GUMO LR LR 19 01 16.4
comp=Z,126nm,20.8s,baz=136,slow=33
comp=Z,216nm,0.9s
GUMO Guam 51.98 310 P **P** 18 41 47.5 +0.7
GUMO Guam 51.98 310 P **P** 18 41 47.0 +0.3
SAUI Saumlaki 52.08 277 P **P** 18 41 48.4 +0.8
SAUI Saumlaki 52.08 277 P **P** 18 41 48.0 +0.4
FAKI Fak Fak 53.24 284 P **P** 18 41 54.5 -1.6
FAKI Fak Fak 53.24 284 P **P** 18 41 55.4 -0.8
FAKI Fak Fak 53.24 284 P **P** 18 41 55.0 -1.2
comp=Z,1μmcomp=Z,73nm,1.3s
FITZ Fitzroy Crossi 54.17 263 IAmb IAmb 18 42 04.8
comp=Z,20nm,0.9s
FITZ Fitzroy Crossi 54.17 263 P **P** 18 42 03.0 +0.2
comp=Z,65nm,0.8s,baz=75,slow=3.6,SNR=116
comp=Z,65nm,0.8s
BNDI Bandanaira 54.70 281 P **P** 18 42 07.9 +1.2
BNDI Bandanaira 54.70 281 P **P** 18 42 05.5 -1.2
SWI Sorong 55.03 285 P **P** 18 42 08.3 -0.9
SWI Sorong 55.03 285 P **P** 18 42 08.2 -0.9
KMBL Kambalda 55.10 247 P **P** 18 42 07.9 -1.5
comp=Z,12nm,1.0s
MSAI Masohi 56.07 281 P **P** 18 42 15.6 -0.9
comp=Z,2μmcomp=Z,75nm,1.2s
SBA Scott Base 56.21 184 P **P** 18 42 19.8 +3.3
SBA Scott Base 56.21 184 P **P** 18 42 19.8 +3.3
SBA pmax pmax
comp=Z,136nm,1.7s
VNDA Vanda 56.28 186 P **P** 18 42 19.2 +2.2
VNDA IAmb IAmb 18 42 21.2
comp=Z,45nm,1.6s
VNDA Vanda 56.28 186 P **P** 18 42 19.8 +2.7
comp=Z,11nm,1.1s,baz=0.9,slow=7.7,SNR=33
comp=Z,11nm,1.1s
VNDA Vanda 56.28 186 P **P** 18 42 19.8 +2.7
AAI Ambon 56.59 281 P **P** 18 42 19.7 -0.5
NLAI Namlea 57.77 281 P **P** 18 42 27.9 -0.6
comp=Z,2μmcomp=Z,118nm,1.7s
SOEI Soe 57.94 272 P **P** 18 42 30.8 +1.0
SOEI Soe 57.94 272 P **P** 18 42 31.0 +1.2
BATI Baumata 58.34 272 P **P** 18 42 33.7 +1.2
comp=Z,102nm,0.7s,baz=173,slow=2.0,SNR=25
comp=Z,102nm,0.7s
BATI Baumata 58.34 272 P **P** 18 42 33.5 +1.0
comp=Z,1μmcomp=Z,111nm,0.7s
KLBR Kellerberrin 58.57 246 P **P** 18 42 33.9 0.0
PSAC2 Pilbara Seismi 58.57 258 P **P** 18 42 32.6 -1.4
comp=Z,40nm,0.8s
PSAB3 Pilbara Seismi 58.61 258 P **P** 18 42 34.2 0.0
comp=Z,41nm,0.8s
PSA00 Pilbara Seismi 58.62 258 P **P** 18 42 33.6 -0.7
comp=Z,41nm,0.8s
PSA00 Pilbara Seismi 58.62 258 P **P** 18 42 33.2 -1.1
PSA00 IAmb IAmb 18 42 35.8
comp=Z,17nm,1.0s
PSA00 Pilbara Seismi 58.62 258 IAmb IAmb 18 42 35.7
comp=Z,35nm,1.0s
PSA00 Pilbara Seismi 58.62 258 P **P** 18 42 35.3 +1.0
MEEK Meekatharra 58.65 252 P **P** 18 42 34.7 +0.2
NWAO Narrogin (SRO) 58.82 244 P **P** 18 42 35.1 -0.5
comp=Z,33nm,1.3s
NWAO Narrogin (SRO) 58.82 244 P **P** 18 42 34.9 -0.7
NWAO pmax pmax
comp=Z,27nm,1.0s
MBWA Marble Bar 58.82 258 P **P** 18 42 35.0 -0.7
MBWA Marble Bar 58.82 258 P **P** 18 42 36.0 +0.3
MBWA Marble Bar 58.82 258 P **P** 18 42 34.7 -1.0
TNTI Ternate 59.24 285 P **P** 18 42 37.6 -1.1
TNTI Ternate 59.24 285 P **P** 18 42 39.1 +0.4
TNTI Ternate 59.24 285 P **P** 18 42 38.0 -0.7
comp=Z,1μmcomp=Z,86nm,1.3s
SANI Sanana 59.27 281 P **P** 18 42 39.7 +0.8
SANI Sanana 59.27 281 P **P** 18 42 38.0 -0.9
comp=Z,871nmcomp=Z,65nm,1.3s
BLDU Ballidu 59.61 247 P **P** 18 42 40.8 -0.2
MUN Mundaring 59.82 245 P **P** 18 42 43.3 +0.9
AUMAZ Mazenod Senior 59.95 245 P **P** 18 42 44.4 +1.1
MMRI Maumere 60.20 273 P **P** 18 42 43.9 -1.4
MMRI Maumere 60.20 273 P **P** 18 42 45.6 +0.3
MMRI Maumere 60.20 273 P **P** 18 42 44.5 -0.8
comp=Z,1μmcomp=Z,92nm,1.0s
MORW Morawa 60.44 248 P **P** 18 42 45.5 -1.2
MORW Morawa 60.44 248 P **P** 18 42 46.7 0.0
RPN Rapa Nui 60.60 109 LR LR 19 03 22.2
comp=Z,200nm,21.4s,baz=6.5,slow=30
EDFI Ende, Flores 60.67 272 P **P** 18 42 47.6 -1.0
CCD Concordia, Ant 61.11 195 ⇑P **P** 18 42 53.0 +2.0
BASI Baing, Sumba 61.20 270 P **P** 18 42 52.1 +0.1
comp=Z,223nm,1.2s
WSI Waingapu 61.64 271 P **P** 18 42 54.6 -0.4
SGSI Sangihe 62.19 287 P **P** 18 42 58.9 +0.2
comp=Z,3μmcomp=Z,180nm,1.2s
KMSI Cibinong 62.20 283 P **P** 18 42 58.8 +0.1
comp=Z,101nm,1.2s
WBSI Waikabubak, Su 62.49 271 P **P** 18 43 00.0 -0.7
comp=Z,76nm,0.8s
LUWI Luwuk 62.61 281 P **P** 18 43 02.4 +0.9
LUWI Luwuk 62.61 281 P **P** 18 43 01.2 -0.3
comp=Z,2μmcomp=Z,106nm,1.6s
BSSI Bau Bau, Buton 62.72 275 P **P** 18 43 01.8 -0.4
comp=Z,781nmcomp=Z,62nm,1.4s
CASY Casey 62.97 206 P **P** 18 43 04.1 +1.2
CASY Casey 62.97 206 P **P** 18 43 04.3 +1.4
CASY PcP **PcP** 18 43 40.6 +1.1
JCJ Chichijima 63.27 319 LR LR 19 06 33.8
comp=Z,76nm,20.9s,baz=133,slow=32
BKSI Bulukumba 63.36 275 P **P** 18 43 05.3 -1.1
comp=Z,61nm,1.0s
APSI Ampana 63.69 280 P **P** 18 43 08.6 0.0
comp=Z,890nmcomp=Z,65nm,1.8s
BNSI Bone 63.72 276 P **P** 18 43 08.1 -0.7
comp=Z,942nmcomp=Z,73nm,1.8s
KAPI Kappang 63.82 275 IAmb IAmb 18 43 12.4
comp=Z,113nm,1.9s
KAPI Kappang 63.82 275 P **P** 18 43 07.5 -1.9
comp=Z,7.7nm,0.3s,baz=66,slow=7.7,SNR=5.2
comp=Z,7.7nm,0.3s
KAPI Kappang 63.82 275*de* P **P** 18 43 08.8 -0.6
KAPI pmax pmax
comp=Z,14nm,0.9s
SPSI Sidrap Palu 64.20 277 P **P** 18 43 10.3 -1.6
comp=Z,26nm,0.8s
PLAI Plampang 64.27 271 P **P** 18 43 11.9 -0.4
PLAI Plampang 64.27 271 P **P** 18 43 11.3 -1.0
comp=Z,123nm,1.2s
TWSI Taliwang, Sumb 65.13 271 P **P** 18 43 16.8 -1.1
comp=Z,952nmcomp=Z,80nm,0.9s
TOLI2 Tolitoli 65.32 282 P **P** 18 43 18.0 -1.1
TOLI2 Tolitoli 65.32 282 P **P** 18 43 19.5 +0.4
SRBI Singaraja 66.90 271 P **P** 18 43 28.3 -0.9
comp=Z,67nm,1.1s
JAGI Jajag, Banyuwa 67.75 270 P **P** 18 43 33.0 -1.5
JAGI Jajag, Banyuwa 67.75 270 P **P** 18 43 33.9 -0.7
JAGI Jajag, Banyuwa 67.75 270 P **P** 18 43 33.1 -1.5
comp=Z,68nm,0.9s
QSPA South Pole Qui 67.81 180 P **P** 18 43 38.1 +3.8
QSPA South Pole Qui 67.81 180 P **P** 18 43 38.9 +4.6
comp=Z,36nm,0.7s,baz=24,slow=0.8,SNR=240
QSPA LR LR 19 07 12.2
comp=Z,68nm,21.5s,baz=44,slow=30
QSPA PKP2bc P'P'bc 19 11 49.3 -8.0
comp=Z,4.0nm,1.1s,baz=259,slow=3.0,SNR=6.0
BBKI Banjar Baru 68.93 275 P **P** 18 43 41.8 -0.2
comp=Z,52nm,1.2s
MYLDM Lahad Datu 69.12 285 P **P** 18 43 40.2 -2.9
MYLDM IAmb IAmb 18 44 32.1
comp=Z,56nm,1.3s
MYLDM Lahad Datu 69.12 285 P **P** 18 43 43.4 +0.3
GRJI Gresik 69.85 271 P **P** 18 43 47.9 +0.3
MTKI Muara Teweh, K 69.86 277 P **P** 18 43 46.9 -0.7
comp=Z,34nm,0.9s
PCJI Patan 70.60 269 P **P** 18 43 52.1 -0.1
comp=Z,164nm,1.1s
MJAR Matsushiro Arr 72.44 323 P **P** 18 44 01.1 -1.7
MJAR Matsushiro Arr 72.44 323 P **P** 18 44 01.6 -1.1
comp=Z,9.9nm,0.8s,baz=155,slow=5.8,SNR=27
MJAR LR LR 19 11 11.7
comp=Z,50nm,20.3s,baz=132,slow=32
comp=Z,9.9nm,0.8s
MAJO Matsushiro 72.45 323 P **P** 18 44 01.5 -1.2
MAJO Matsushiro 72.45 323 P **P** 18 44 02.4 -0.3
MAJO Matsushiro 72.45 323⇑*e*P **P** 18 44 02.1 -0.6
MAJO pmax pmax
comp=Z,12nm,0.8s
KPJI Karang Pucung 72.98 269 P **P** 18 44 05.2 -1.2
comp=Z,47nm,0.9s
SBUM Sibu 73.66 280 P **P** 18 44 10.9 +0.6
KIWB Kanaga Island 73.80 360 P **P** 18 44 09.3 -1.0
ADK Adak 73.83 360 P **P** 18 44 09.4 -1.0
ADK Adak 73.83 360 P **P** 18 44 09.4 -1.0
ADK pmax pmax
comp=Z,103nm,0.8s
ADK Adak 73.83 360 P **P** 18 44 09.4 -1.0
BBJI Bungbulang 74.12 268 P **P** 18 44 12.5 -0.7
ATKA Atka Island 74.18 1 P **P** 18 44 11.3 -1.2
ATKA Atka Island 74.18 1 P **P** 18 44 11.2 -1.2
LEM Lembang 74.38 269 P **P** 18 44 14.7 -0.1
comp=Z,107nm,1.0s,baz=100,slow=6.4,SNR=15
comp=Z,107nm,1.0s
LEM Lembang 74.38 269 P **P** 18 44 14.6 -0.2
comp=Z,99nm,1.2s
JNU Nakatsue 74.50 316 P **P** 18 44 13.2 -1.6
comp=Z,13nm,0.9s,baz=113,slow=2.6,SNR=5.1
comp=Z,13nm,0.9s
CNJI Cibinong 74.66 268 P **P** 18 44 15.2 -1.0
comp=Z,41nm,1.1s
KSM Kuching 75.02 278 IAmb IAmb 18 44 20.6
comp=Z,57nm,1.2s
KSM Kuching 75.02 278 P **P** 18 44 18.7 +0.5
SHEM Shemya Is, Ala 75.13 354 LR LR 19 10 17.9
comp=Z,166nm,21.5s,baz=80,slow=30
NIKH Nikolski High 75.22 5 P **P** 18 44 17.4 -1.0
baz=188
DBJI Dramaga 75.28 269 P **P** 18 44 19.1 -0.7
comp=Z,3μmcomp=Z,112nm,1.2s
TPI Tanjungpandan 75.84 273 P **P** 18 44 22.6 -0.3
comp=Z,34nm,1.2s
ASAJ Asahikawa 75.93 331 P **P** 18 44 23.9 +1.1
comp=Z,16nm,0.8s,baz=235,slow=8.4,SNR=6.5
ASAJ LR LR 19 13 13.2
comp=Z,103nm,19.6s,baz=158,slow=32
comp=Z,16nm,0.8s
UNV Unalaska Valle 76.29 6 P **P** 18 44 23.9 -0.5
baz=190
BELA Belgrano 2 77.63 172 P **P** 18 44 32.0 +0.1
FALS False Pass 77.63 8 P **P** 18 44 32.2 +0.3
baz=192
KASI Kota Agung 77.74 269 P **P** 18 44 32.7 -0.9
comp=Z,69nm,1.2s
PET Petropavlovsk 78.02 345 *e*P **P** 18 44 30.4 -3.7
PET *e*S **S** 18 54 12.4 -2.8
PET *e* 18 54 38.1
PET *e*SS **SS** 18 59 20.4 -0.1
PET pmax pmax
comp=Z,100nm,15.1s
HULI Fort Hunter Li 78.05 43 IAmb IAmb 18 44 38.2
comp=Z,68nm,1.3s
YSS Yuzhno-Sakhali 78.09 333 P **P** 18 44 34.5 -0.2
YSS IAmb IAmb 18 44 35.9
comp=Z,32nm,1.0s
YSS Yuzhno-Sakhali 78.09 333 P **P** 18 44 34.4 -0.2
YSS Yuzhno-Sakhali 78.09 333*ke*P **P** 18 44 34.7 0.0
YSS *e* 18 47 33.9
YSS *e*S **S** 18 54 15.8 -0.4
YSS *e* 18 54 40.7
YSS *e**SS **sS** 18 55 21.5 +2.4
YSS *e*SS **SS** 18 59 21.1 -0.7
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=Z,300nm,3.3s
CHNA Chernabura Isl 78.15 10 P **P** 18 44 34.1 -0.7
baz=196
PEA0B Petropavlovsk- 78.33 344⇑*e*P **P** 18 44 35.3 -0.6
PETK Petropavlovsk- 78.33 344 P **P** 18 44 34.5 -1.4
PETK Petropavlovsk- 78.33 344 P **P** 18 44 34.8 -1.1
comp=Z,24nm,0.9s,baz=142,slow=7.3,SNR=23
PETK LR LR 19 13 11.9
comp=Z,115nm,21.1s,baz=157,slow=31
comp=Z,24nm,0.9s
LWLI Liwa 78.33 269 P **P** 18 44 35.7 -1.3
comp=Z,83nm,1.1s
MDSI Maura Dua 78.42 270 P **P** 18 44 35.1 -2.2
PMPB Monarch Peak 78.45 43 IAmb IAmb 18 45 18.0
comp=Z,60nm,1.6s
SDPT Sand Point 78.51 9 P **P** 18 44 36.7 -0.1
baz=195
BBGB Big Mountain B 78.53 43 IAmb IAmb 18 44 57.7
comp=Z,32nm,1.0s
MHC Mount Hamilton 78.63 42 IAmb IAmb 18 44 40.6
comp=Z,22nm,1.1s
S12K Black Hills 78.63 8 P **P** 18 44 37.8 +0.3
baz=194
P08K Saint George I 78.78 4 P **P** 18 44 37.6 -0.6
baz=187
KSRS Korea Array 79.12 318 P **P** 18 44 40.6 +0.1
comp=Z,4.1nm,1.0s,baz=142,slow=6.3,SNR=9.2
comp=Z,4.1nm,1.0s
PMSA Palmer Station 79.12 156 LR LR 19 12 16.2
comp=Z,163nm,20.1s,baz=252,slow=30
MNRC McLaughlin Min 79.13 40 IAmb IAmb 18 44 43.5
comp=Z,33nm,1.1s
KSAR Wonju Array Be 79.13 318 P **P** 18 44 39.2 -1.4
KSAR Wonju Array Be 79.13 318 P **P** 18 44 39.2 -1.4
LPIG La Paz 79.14 58 LR LR 19 12 53.8
comp=Z,55nm,18.7s,baz=314,slow=30
KMPM Mount Pierce 79.16 38 IAmb IAmb 18 44 43.7
comp=Z,35nm,1.0s
KMRM Mail Ridge 79.26 38 IAmb IAmb 18 44 44.2
comp=Z,40nm,1.0s
TPO Tropico Hills 79.30 45 IAmb IAmb 18 44 43.9
comp=Z,28nm,1.1s
SPIA Saint Paul Isl 79.31 3 P **P** 18 44 40.7 -0.4
baz=186
DSRI Dabo 79.54 274 P **P** 18 44 43.4 -0.1
comp=Z,21nm,1.1s
S14K Fog Glacier 79.56 10 P **P** 18 44 42.8 +0.2
baz=196
ISA Isabella, Lake 79.60 45 IAmb IAmb 18 44 45.7
comp=Z,19nm,0.9s
PFO Pinyon Flats O 79.74 47 P **P** 18 44 44.1 -0.1
PFO Pinyon Flats O 79.74 47 LR LR 19 12 32.8
comp=Z,50nm,19.8s,baz=244,slow=30
PFO Pinyon Flats O 79.74 47 P **P** 18 44 44.1 -0.1
PFO pmax pmax
comp=Z,13nm,1.4s
O02D Mt. Diablo Mer 79.77 39 IAmb IAmb 18 44 47.7
comp=Z,37nm,1.3s
CHIR Chirikof Islan 79.79 12 P **P** 18 44 44.1 +0.3
baz=200
KSI Kapahiang 80.19 270 P **P** 18 44 45.7 -1.3
comp=Z,108nm,0.9s
CCCA Chr Cany lake 80.25 45 IAmb IAmb 18 44 49.1
comp=Z,28nm,1.2s
N02D Trinity Center 80.33 38 IAmb IAmb 18 45 27.5
comp=Z,43nm,1.5s
MAW Mawson 80.37 200 P **P** 18 44 48.5 +1.6
comp=Z,20nm,0.6s,baz=138,slow=5.8,SNR=63
comp=Z,20nm,0.6s
O03E Paynes Creek 80.42 39 IAmb IAmb 18 45 48.3
comp=Z,30nm,1.2s
M02C Callahan 80.52 38 IAmb IAmb 18 44 51.7
comp=Z,29nm,1.3s
MASI Maura Aman, Be 80.71 270 P **P** 18 44 49.2 -0.6
comp=Z,123nm,1.1s
WAKR Walker 80.72 42 IAmb IAmb 18 45 29.5
comp=Z,44nm,1.6s
SII Sitkinak Islan 80.76 12 P **P** 18 44 48.8 -0.2
baz=201
PSTR Posyet 80.79 324*de* P **P** 18 44 50.4 +1.0
YBH Yreka Blue Hor 80.82 38 IAmb IAmb 18 45 29.9
comp=Z,41nm,1.6s
YBH Yreka Blue Hor 80.82 38 LR LR 19 12 42.1
comp=Z,7.1nm,21.0s,baz=249,slow=30
MPK Martis Peak 80.84 41 IAmb IAmb 18 45 30.1
comp=Z,36nm,1.3s
M03C McCloud 80.86 38 IAmb IAmb 18 45 29.9
comp=Z,60nm,1.6s
HATC Hat Creek Radi 80.95 39 IAmb IAmb 18 45 30.5
comp=Z,64nm,1.4s
PNTR Pine Nut 80.98 41 IAmb IAmb 18 45 30.7
comp=Z,23nm,1.0s
BTDF Bukit Timah Da 80.99 275 P **P** 18 44 52.1 +0.9
MG05 Puerto Natales 81.08 142 P **P** 18 44 52.6 +1.7
MYKOM Kota Tinggi 81.08 276 P **P** 18 44 52.1 +0.4
R16K Pilot Point 81.10 10 P **P** 18 44 50.6 -0.1
baz=198
LHV Little Huntoon 81.14 43 IAmb IAmb 18 44 54.1
comp=Z,29nm,1.4s
USRK Ussuriysk Ar. 81.19 325 P **P** 18 44 51.9 +0.3
comp=Z,9.0nm,0.8s,baz=141,slow=3.9,SNR=15
comp=Z,9.0nm,0.8s
TYV Tymovskoe 81.21 335 *e*P **P** 18 44 49.0 -2.5
TYV *e*S **S** 18 54 46.1 -2.8
TYV pmax pmax

comp=Z,100nnm,2.4s
TYV pmax pmax
comp=Z,29nm,1.2s
TYV smax smax
comp=N,300nnm,3.4s
TYV smax smax
comp=E,200nm,3.4s
R17L Mt. Peulik Vol 81.37 11 P **P** 18 44 51.4 -0.8
baz=199
NVAR Mina Array Bea 81.38 42 P **P** 18 44 52.8 -0.1
NVAR Mina Array Bea 81.38 42 P **P** 18 44 53.7 +0.7
comp=E,9.0nm,1.1s,baz=224,slow=8.2,SNR=27
NVAR PKPPKP **P'P'df** 19 11 30.6 +0.4
comp=E,0.3nm,0.6s,baz=48,slow=3.5,SNR=4.0
NVAR LR LR 19 14 47.5
comp=E,70nm,18.4s,baz=256,slow=31
comp=E,9.0nm,1.1s
OHAK Old Harbor 81.56 13 P **P** 18 44 52.4 -0.7
baz=202
KRJI Kerinci 81.82 271 P **P** 18 44 53.6 -2.1
V12A Nelson 82.03 46 IAmb IAmb 18 44 58.7
comp=Z,32nm,1.7s
Q17K Contact Creek 82.05 11 P **P** 18 44 55.1 -0.8
baz=199
NJ2 Nanjing 82.06 309 *e*P **P** 18 44 58.2 +1.8
NJ2 pmax pmax
comp=Z,12nm,0.7s
ACHA Angle Creek He 82.10 11 IAmb IAmb 18 46 19.2
comp=Z,87nm,1.9s
J04A Umpqua Nationa 82.14 37 IAmb IAmb 18 44 59.9
comp=Z,33nm,1.0s
O14K Tigyukauivet M 82.19 8 P **P** 18 44 56.1 -0.3
baz=194
KDAK Kodiak Island 82.22 13 P **P** 18 44 56.0 -0.5
baz=202
O15K Ungalikthiuk R 82.31 9 P **P** 18 44 56.3 -0.7
baz=196
Q16K King Salmon 82.31 10 P **P** 18 44 57.0 0.0
baz=199,SNR=6.3
P16K Nushagak River 82.44 10 P **P** 18 44 56.8 -0.9
baz=197
K05A Summer Lake 82.50 38 IAmb IAmb 18 45 11.9
comp=Z,24nm,0.9s
Q18K Katmai Hardscr 82.57 11 P **P** 18 44 57.1 -1.4
baz=200
J05D Fort Rock, OR 82.66 37 IAmb IAmb 18 45 12.5
comp=Z,21nm,0.8s
MDJ Mudanjiang 82.75 324 P **P** 18 45 00.5 +0.8
MDJ sP pwP 18 45 39.2 0.0
MDJ S **SKSac** 18 55 08.0 +1.1
MDJ pmax pmax
comp=Z,20nm,1.0s
MDJ Mudanjiang 82.75 324 P **P** 18 44 59.6 -0.1
M11K Mekoryuk 82.78 5 P **P** 18 44 58.7 -0.7
baz=190
N14K Kuskokwak Cree 82.79 7 P **P** 18 44 58.4 -1.0
baz=194
WIFE Three Sisters- 82.84 36 IAmb IAmb 18 45 03.3
comp=Z,23nm,1.2s
PRN Pahroc Range 82.86 45 IAmb IAmb 18 45 03.3
comp=Z,28nm,1.2s
O16K Kokwok River B 82.96 9 IAmb IAmb 18 45 00.0
comp=Z,30nm,1.0s
O16K Kokwok River B 82.96 9 P **P** 18 44 59.5 -0.9
baz=197,SNR=5.5
TUC Tucson 83.00 51 P **P** 18 45 02.6 +1.2
TUC IAmb IAmb 18 45 04.1
comp=Z,17nm,0.9s
TUC Tucson 83.00 51 P **P** 18 45 02.6 +1.2
TUC pmax pmax
comp=Z,17nm,0.9s
TUC Tucson 83.00 51 P **P** 18 45 03.2 +1.8
Q20K Shuyak Island 83.03 12 P **P** 18 45 00.3 -0.5
baz=202
H04A Detroit Lake 83.04 36 IAmb IAmb 18 45 03.7
comp=Z,22nm,1.1s
M13K Dall Lake 83.08 7 P **P** 18 45 01.1 +0.1
baz=192
PINE Pine Mountain 83.15 37 P **P** 18 45 03.4 +1.4
PINE IAmb IAmb 18 45 42.4
comp=Z,47nm,1.3s
P18K Big Mountain, 83.23 11 P **P** 18 45 01.1 -0.7
baz=200
N15K Kwethluk River 83.23 8 P **P** 18 45 00.9 -0.8
baz=195
I05D Terrebonne, OR 83.28 36 P **P** 18 45 02.9 +0.4
I05D IAmb IAmb 18 45 14.5
comp=Z,18nm,1.1s
O17K Koliganek Bris 83.28 10 P **P** 18 45 01.4 -0.6
baz=198
E03A Lebam 83.54 34 IAmb IAmb 18 45 07.3
comp=Z,37nm,1.0s
M14K Bethel 83.57 7 P **P** 18 45 03.2 -0.2
baz=194
319A Douglas 83.61 53 IAmb IAmb 18 45 07.2
comp=Z,26nm,0.9s
WVOR Wild Horse Val 83.61 39 IAmb IAmb 18 45 07.1
comp=Z,22nm,1.2s
WVOR Wild Horse Val 83.61 39 P **P** 18 45 05.4 +1.1
WVOR pmax pmax
comp=Z,18nm,1.2s
X16A Lo Mia Camp, P 83.65 49 IAmb IAmb 18 45 07.5
comp=Z,20nm,1.0s
M15K Kasigluk River 83.66 8 P **P** 18 45 03.7 -0.3
baz=195,SNR=7.9
O18K Koktuh Hills 83.67 11 P **P** 18 45 03.2 -0.8
baz=200,SNR=12
N16K Nishlik Lake 83.71 9 P **P** 18 45 03.9 -0.3
baz=197
HOOD Mount Hood Mea 83.74 35 IAmb IAmb 18 45 22.8
comp=Z,15nm,0.7s
P19K Oil Pt 83.83 12 P **P** 18 45 04.4 -0.5
baz=202
H03S2 Juan Fernandez 83.86 124 T T 20 16 59.3
baz=246,slow=74,SNR=136
H03S1 Juan Fernandez 83.88 124 T T 20 17 10.8
baz=246,slow=74,SNR=206
H03S3 Juan Fernandez 83.88 124 T T 20 17 09.3
baz=246,slow=74,SNR=175
COYC Coyhaique 83.92 137 P **P** 18 45 07.1 +1.2
COYC IAmb IAmb 18 45 10.6
comp=Z,31nm,1.0s
NLWA Neilton Lookou 83.95 33 IAmb IAmb 18 45 09.0
comp=Z,22nm,1.2s
N17K Nushagak Hills 83.99 9 P **P** 18 45 05.4 -0.2
baz=196
L14K Kuka Creek 84.06 7 P **P** 18 45 06.2 +0.3
baz=193
KNB Kanab 84.11 46 IAmb IAmb 18 45 12.4
comp=Z,79nm,1.9s
O19K Port Alsworth 84.14 11 P **P** 18 45 06.2 -0.2
baz=201,SNR=9.2
HOM Homer 84.15 12 P **P** 18 45 05.8 -0.6
baz=203
U15A North Rim 84.15 47 IAmb IAmb 18 45 10.0
comp=Z,23nm,0.9s
M16K Timber Creek 84.21 8 P **P** 18 45 06.6 -0.1
baz=196
SZCU Shurtz Canyon 84.25 46 IAmb IAmb 18 45 10.3
comp=Z,22nm,1.2s
N18K Kilae Creek 84.34 10 P **P** 18 45 07.4 0.0
baz=199
O20K Slope Mountain 84.35 12 P **P** 18 45 08.0 +0.5
baz=202
BRSE Bradley Lake S 84.41 13 P **P** 18 45 08.1 +0.3
baz=204,SNR=9.5
K13K Kusilvak Mount 84.45 6 P **P** 18 45 08.3 +0.5
baz=191
L15K Ungalak Mounta 84.52 7 P **P** 18 45 08.4 +0.2
baz=194
CN2 Changchun 84.53 322 P **P** 18 45 08.9 +0.1
CN2 S **S** 18 55 27.3 +4.4
CN2 pmax pmax
comp=Z,10.0nm,1.2s
MNSI Mandailing Nat 84.65 273 P **P** 18 45 08.5 -1.6
comp=Z,17nm,0.8s
BNX BinXian 84.66 324 ⇓P **P** 18 45 08.3 -1.0
BNX S **S** 18 55 29.0 +5.0
BNX pmax pmax
comp=Z,12nm,0.9s
BNX pmax pmax
comp=Z,130nm,5.1s
N19K Bonanza Creek 84.70 11 IAmb IAmb 18 45 10.3
comp=Z,26nm,0.8s
N19K Bonanza Creek 84.70 11 P **P** 18 45 08.3 -1.0
baz=200,SNR=10.0
IPM Ipoh 84.72 277 IAmb IAmb 18 45 11.5
comp=Z,41nm,0.9s
IPM Ipoh 84.72 277 P **P** 18 45 10.6 +0.2
M17K Holitna River 84.79 9 P **P** 18 45 10.2 +0.5
baz=198,SNR=13
CLRS Cowichan Lake 84.79 32 IAmb IAmb 18 45 21.8
comp=Z,23nm,1.1s
L16K Owhat River 84.80 8 IAmb IAmb 18 45 16.9
comp=Z,19nm,0.9s
L16K Owhat River 84.80 8 P **P** 18 45 10.2 +0.6
baz=198,SNR=7.8
SEW Seward 85.00 13 IAmb IAmb 18 45 11.8
comp=Z,32nm,0.8s
SEW Seward 85.00 13 P **P** 18 45 10.9 +0.2
baz=205,SNR=6.5
PGC Sidney 85.01 32 IAmb IAmb 18 45 51.2
comp=Z,18nm,1.1s
CBB Campbell River 85.03 30 IAmb IAmb 18 45 52.4
comp=Z,51nm,1.7s
LL02 Futaleuf 85.10 135 P **P** 18 45 12.5 +0.6
M18K Stony River 85.12 10 P **P** 18 45 11.2 0.0
baz=199,SNR=7.6
K15K Wolf Creek Mou 85.12 7 P **P** 18 45 11.5 +0.2
baz=194
G08A Pilot Rock 85.19 37 IAmb IAmb 18 45 52.3
comp=Z,23nm,1.2s
CAPN Captain Cook N 85.27 12 P **P** 18 45 11.7 -0.3
baz=204
121A Cokes Peak, D 85.29 52 IAmb IAmb 18 45 15.9
comp=Z,24nm,1.1s
SYO Syowa Base 85.30 192⇑*i*P **P** 18 45 12.6 +0.3
SYO Syowa Base 85.30 192⇑*e*PcP **P** 18 45 14.2 +1.9
SYO Syowa Base 85.30 192⇓*ep*P pP 18 45 49.4 +0.2
J14K Nanvaranak Lak 85.35 6 P **P** 18 45 12.1 -0.3
baz=192
P23K Montague Islan 85.36 14 P **P** 18 45 11.9 -0.6
baz=207
L17K Donlin 85.37 8 P **P** 18 45 12.2 -0.3
baz=197
KULM Kulim 85.37 278 P **P** 18 45 14.2 +0.5
A04D Lumni Island 85.42 32 IAmb IAmb 18 45 25.3
comp=Z,30nm,0.9s
SPCR Spurr Chakacha 85.46 12 P **P** 18 45 12.2 -0.9
baz=203,SNR=8.1
TIA Tai'an 85.48 312 P **P** 18 45 13.4 -0.3
TIA pmax pmax
comp=Z,9.0nm,1.3s
E07A Sunnyside 85.50 35 IAmb IAmb 18 45 16.5
comp=Z,23nm,1.2s
HAWA Hanford 85.57 36 IAmb IAmb 18 45 54.2
comp=Z,34nm,1.4s
L18K Granite Mounta 85.68 9 IAmb IAmb 18 45 21.6
comp=Z,24nm,0.9s
L18K Granite Mounta 85.68 9 P **P** 18 45 14.0 0.0
baz=198,SNR=11
CRAG Craig 85.78 23 P **P** 18 45 14.7 +0.1
baz=220
STLK Strandline Lak 85.81 12 IAmb IAmb 18 45 15.4
comp=Z,27nm,0.8s
GAMB Gambell 85.84 2 P **P** 18 45 15.2 +0.5
baz=185,SNR=16
RC01 Rabbit Creek A 85.84 13 P **P** 18 45 14.8 0.0
baz=205
MA2 Magadan 85.85 344 LR LR 19 18 07.9
comp=Z,77nm,21.7s,baz=131,slow=32
L19K White Mountain 85.92 10 P **P** 18 45 14.6 -0.6
baz=200
K17K Iditarod 85.93 8 P **P** 18 45 14.8 -0.5
baz=197
PWL Port Wells 85.93 13 P **P** 18 45 14.9 -0.4
baz=206,SNR=12
M20K Styx River 85.93 11 P **P** 18 45 14.7 -0.7
baz=202
TROLL Troll, Antarti 85.97 180 ⇑P **P** 18 45 15.9 +0.2
comp=Z,541nm,0.6s
RPSI Rantau Prapat 85.97 275 IAmb IAmb 18 45 16.8
comp=Z,27nm,1.0s
SUA Susitna One 85.98 12 P **P** 18 45 15.6 -0.1
baz=204
KAIM Kayak Island 86.01 16 P **P** 18 45 16.2 +0.5
baz=210
PSI Prapat 86.01 275 LR LR 19 26 29.6
comp=Z,138nm,19.1s,baz=157,slow=37
PSI Prapat 86.01 275 P **P** 18 45 16.4 -0.6
PSI Prapat 86.01 275 P **P** 18 45 15.7 -1.3
PSI pmax pmax
comp=Z,27nm,1.2s
J16K Anvik River 86.19 7 IAmb IAmb 18 45 18.3
comp=Z,13nm,0.8s
J16K Anvik River 86.19 7 P **P** 18 45 17.0 +0.5
baz=195
SNAA Sanae 86.21 178 ⇑P **P** 18 45 16.8 -0.1
comp=Z,279nm,1.4s
SNAA Sanae 86.21 178 P **P** 18 45 16.2 -0.7
SNAA IAmb IAmb 18 45 18.4
comp=Z,22nm,1.2s
SNAA Sanae 86.21 178 P **P** 18 45 16.9 +0.1
comp=Z,18nm,1.2s,baz=203,slow=10,SNR=23
SNAA LR LR 19 23 46.2
comp=Z,59nm,18.0s,baz=195,slow=35
comp=Z,18nm,1.2s
SNAA Sanae 86.21 178 *ce*P **P** 18 45 16.7 -0.1
SNAA pmax pmax
comp=Z,31nm,1.7s
GLI Glacier Island 86.22 14 P **P** 18 45 16.6 -0.1
baz=207,SNR=22
EYAK Cordova Ski Ar 86.23 15 IAmb IAmb 18 45 18.1
comp=Z,20nm,0.8s
EYAK Cordova Ski Ar 86.23 15 P **P** 18 45 15.5 -1.2
EYAK Cordova Ski Ar 86.23 15 P **P** 18 45 16.7 -0.1
baz=208
V35K Ketchikan 86.23 24 P **P** 18 45 16.5 -0.4
baz=221
FID Port Fidalgo 86.24 14 IAmb IAmb 18 45 17.5
comp=Z,17nm,0.9s
SIT Sitka 86.26 21 P **P** 18 45 17.0 +0.1
baz=218
U33K Whale Pass 86.28 23 P **P** 18 45 16.9 -0.2
baz=220
VNA3 Neumayer Olymp 86.29 176 ⇑P **P** 18 45 17.3 +0.1
comp=Z,19nm,0.6s
D08A Wollman Farm, 86.31 35 IAmb IAmb 18 45 20.4
comp=Z,29nm,1.4s
SKT Skwentna 86.31 12 P **P** 18 45 16.1 -1.1
baz=203,SNR=5.6
L20K Farewell, AK 86.36 10 P **P** 18 45 17.0 -0.5
baz=201,SNR=10
M22K Willow 86.37 12 P **P** 18 45 17.2 -0.2
baz=204,SNR=9.2
KNK Knik Glacier 86.40 13 IAmb IAmb 18 45 18.6
comp=Z,30nm,0.8s
KNK Knik Glacier 86.40 13 P **P** 18 45 17.4 -0.2
baz=206,SNR=11
HMT Hamilton 86.40 15 IAmb IAmb 18 45 20.9
comp=Z,30nm,1.0s
TMUT Trail Mountain 86.42 45 IAmb IAmb 18 46 01.0
comp=Z,16nm,1.1s
PMR Palmer 86.42 13 IAmb IAmb 18 45 17.9
comp=Z,17nm,0.9s
PMR Palmer 86.42 13 P **P** 18 45 17.4 -0.3
PMR Palmer 86.42 13 P **P** 18 45 17.6 -0.1
baz=205
J17K VABM Dome 86.48 8 P **P** 18 45 18.5 +0.6
baz=196
VHRN Van Horn 86.53 55 IAmb IAmb 18 45 21.5
comp=Z,20nm,1.0s
F10A Beach Ranch, E 86.57 37 IAmb IAmb 18 45 31.2
comp=Z,12nm,0.8s
Y22A Socorro 86.58 51 IAmb IAmb 18 45 21.8
comp=Z,18nm,1.1s
MNTX Cornudas Mount 86.67 54 IAmb IAmb 18 45 21.9
comp=Z,19nm,1.0s
S31K Pelican 86.69 20 P **P** 18 45 18.9 -0.1
baz=217
GSI Gunungsitoli 86.69 273 P **P** 18 45 20.8 +0.6
GSI Gunungsitoli 86.69 273 P **P** 18 45 20.6 +0.4
comp=Z,1μmcomp=Z,94nm,1.2s
DIV Divide 86.74 14 IAmb IAmb 18 45 20.4
comp=Z,33nm,0.8s
VNA2 Neumayer--Watz 86.75 176 ⇑P **P** 18 45 19.7 +0.3
comp=Z,23nm,0.6s,baz=182,slow=4.8
I17K Unalakleet 86.76 7 P **P** 18 45 19.1 -0.1
baz=195
SRU San Rafael Swe 86.77 45 IAmb IAmb 18 46 01.9
comp=Z,13nm,1.0s
SML Sawmill 86.78 13 IAmb IAmb 18 45 22.2
comp=Z,21nm,1.0s
SML Sawmill 86.78 13 P **P** 18 45 19.6 +0.1
baz=206,SNR=5.4
WRAK Wrangell Islan 86.80 23 P **P** 18 45 20.5 +0.9
baz=220
P17A Butcher Ranch, 86.82 45 IAmb IAmb 18 46 03.2
comp=Z,22nm,1.4s
S32K Killisnoo 86.84 21 P **P** 18 45 19.9 +0.2
baz=218
MESA MESA 86.86 17 P **P** 18 45 20.3 +0.3
baz=212,SNR=7.4
J18K Innoko River 86.86 9 P **P** 18 45 20.2 +0.4
baz=198
TX31 Lajitas Ar. Si 86.86 57 IAmb IAmb 18 45 23.1
comp=Z,19nm,1.0s
TXAR Lajitas Array 86.86 57 P **P** 18 45 21.2 +0.5
TXAR Lajitas Array 86.86 57 P **P** 18 45 21.7 +1.0
comp=Z,9.8nm,0.9s,baz=212,slow=6.8,SNR=76
TXAR PKKPbc **PKKPbc** 19 03 18.7 +4.4
comp=Z,0.7nm,0.6s,baz=46,slow=4.4,SNR=8.8
comp=Z,9.8nm,0.9s
BMRM Bremner River 86.87 15 IAmb IAmb 18 45 21.1
comp=Z,29nm,0.8s
BMRM Bremner River 86.87 15 P **P** 18 45 19.9 -0.1
baz=210,SNR=9.5
M23K Glacier View 86.90 13 P **P** 18 45 20.1 +0.1
baz=207
CUT Chulitna 86.94 12 P **P** 18 45 19.8 -0.3
baz=204,SNR=11
VNA1 Neumayer--Stat 86.96 176 ⇑P **P** 18 45 21.1 +0.7
comp=Z,30nm,1.0s
ANM Nome 86.98 5 P **P** 18 45 20.8 +0.5
baz=190
SCM Sheep Creek Mo 87.02 13 P **P** 18 45 20.8 +0.1
baz=207,SNR=22
KLU Klutina 87.03 14 IAmb IAmb 18 45 23.5
comp=Z,10nm,0.8s
KLU Klutina 87.03 14 P **P** 18 45 21.0 +0.2
baz=208,SNR=6.8
PPLA Purkeypile 87.04 11 IAmb IAmb 18 48 04.3
comp=Z,69nm,2.0s
PPLA Purkeypile 87.04 11 P **P** 18 45 21.0 +0.2
baz=203
CRQM Cirque 87.05 16 IAmb IAmb 18 45 22.3
comp=Z,21nm,0.8s
CRQE Cirque 87.05 16 P **P** 18 45 21.1 +0.2
baz=211,SNR=6.2
PLCA Paso Flores 87.06 133 IAmb IAmb 18 45 24.4
comp=Z,44nm,1.2s
PLCA Paso Flores 87.06 133 P **P** 18 45 21.9 +0.2
comp=Z,14nm,1.0s,baz=244,slow=4.3,SNR=11
PLCA LR LR 19 17 41.8
comp=Z,139nm,19.0s,baz=256,slow=31
comp=Z,14nm,1.0s
C09A Chrisman Ranch 87.11 35 IAmb IAmb 18 45 23.9
comp=Z,20nm,1.2s
ISLE Juniper Island 87.12 16 IAmb IAmb 18 45 22.6
comp=Z,32nm,0.9s
TGL Tana Glacier 87.12 16 IAmb IAmb 18 45 22.7
comp=Z,21nm,0.9s
PNL Peninsula 87.12 18 P **P** 18 45 20.9 -0.3
baz=214
K20K Telida 87.16 10 P **P** 18 45 21.0 -0.3
baz=201
R31K City Hall, Gus 87.20 20 P **P** 18 45 20.7 -0.8
baz=217
PINM Pinnacle 87.24 17 P **P** 18 45 21.7 -0.1
baz=213
U35K Hyder 87.27 24 P **P** 18 45 21.3 -0.6
baz=222
TABL Table Mountain 87.29 17 IAmb IAmb 18 45 23.6
comp=Z,26nm,0.8s
H16K Elim 87.33 6 P **P** 18 45 22.1 +0.1
baz=193
KCSI Kotacane, Aceh 87.35 275 P **P** 18 45 22.4 -0.9
ALPN Alpine 87.36 56 IAmb IAmb 18 45 25.2
comp=Z,12nm,1.0s
BSUT Blindstream Ca 87.37 44 IAmb IAmb 18 45 25.1
comp=Z,15nm,1.3s
VRDI Verde Repeater 87.38 15 IAmb IAmb 18 45 23.9
comp=Z,14nm,0.9s
PV19 Morning Glory 87.38 47 IAmb IAmb 18 45 28.0
comp=Z,14nm,1.0s
GRNC Granite Creek 87.38 16 IAmb IAmb 18 45 24.0
comp=Z,19nm,0.8s
PV18 Skein Mesa, Pa 87.39 47 IAmb IAmb 18 45 27.3
comp=Z,13nm,1.1s
PV20 West Nyswonger 87.40 47 IAmb IAmb 18 46 37.6
comp=Z,48nm,1.7s
PV16 Nyswonger Mesa 87.42 47 IAmb IAmb 18 46 07.2
comp=Z,32nm,2.0s
N25K Chitina, Valde 87.43 15 IAmb IAmb 18 45 24.0
comp=Z,26nm,0.8s
N25K Chitina, Valde 87.43 15 P **P** 18 45 22.8 +0.1
baz=210,SNR=15
PV23 Carpenter Ridg 87.43 47 IAmb IAmb 18 45 27.2
comp=Z,15nm,1.1s
PV03 Paradox Valley 87.44 47 IAmb IAmb 18 46 07.4
comp=Z,18nm,1.4s
ABQ Albuquerque 87.44 51 IAmb IAmb 18 45 25.6
comp=Z,14nm,1.2s
ANMO Albuquerque 87.45 51 P **P** 18 45 23.6 +0.1
ANMO IAmb IAmb 18 45 25.6
comp=Z,15nm,1.2s
ANMO Albuquerque 87.45 51 *ce*P **P** 18 45 24.3 +0.8
ANMO pmax pmax
comp=Z,21nm,1.7s
ANMO Albuquerque 87.45 51 P **P** 18 45 24.6 +1.0
ANMO pP **pP** 18 46 02.8 +1.9
GLB Gilahina Butte 87.47 15 IAmb IAmb 18 45 24.1
comp=Z,17nm,0.8s
R32K Eaglecrest 87.49 21 P **P** 18 45 23.1 +0.1
baz=218
PV02 Paradox Valley 87.49 47 IAmb IAmb 18 46 05.3
comp=Z,30nm,1.6s
PV12 Saucer Basin, 87.50 47 IAmb IAmb 18 45 26.6
comp=Z,18nm,1.1s
M24K Tolsona, Glenn 87.51 14 P **P** 18 45 23.4 +0.4
baz=208
G15K Niukluk 87.52 5 P **P** 18 45 22.7 -0.2
baz=192
J19K Poorman 87.52 9 P **P** 18 45 22.9 -0.1
baz=199
HEH HeiHe 87.53 328 *e*P **P** 18 45 22.5 -0.8
HEH sP **pwP** 18 46 03.2 +0.1
HEH PP **PP** 18 48 53.9 +3.2
HEH SKS **SKSac** 18 55 34.7 -2.1
HEH pmax pmax
comp=Z,13nm,1.7s
PV01 Paradox Valley 87.57 47 IAmb IAmb 18 46 05.4
comp=Z,21nm,1.7s
P29M Windy Craggy 87.57 19 P **P** 18 45 24.1 +0.8
baz=216
WAT6 Susitna Watana 87.60 13 P **P** 18 45 23.3 -0.2
baz=207,SNR=15
MCARA McCarthy VSAT 87.62 15 IAmb IAmb 18 45 25.0
comp=Z,24nm,1.0s
MCARA McCarthy VSAT 87.62 15 P **P** 18 45 23.9 +0.4
baz=211,SNR=5.8
LOGN Logan Glacier 87.65 17 IAmb IAmb 18 45 25.3
comp=Z,16nm,0.8s
WAT1 Susitna Watana 87.66 12 P **P** 18 45 23.5 -0.2
baz=206
BARN Barnard Glacie 87.68 16 IAmb IAmb 18 45 25.6
comp=Z,26nm,0.8s
CTG Chitna Glacier 87.69 16 P **P** 18 45 24.1 +0.1
baz=212,SNR=9.9
CTGM Chitina Glacie 87.69 16 IAmb IAmb 18 45 25.5
comp=Z,20nm,0.8s
HNS HongShan 87.75 312 ⇓P **P** 18 45 24.4 -0.2
HNS SKS **SKSac** 18 55 39.7 +1.0
HNS pmax pmax
comp=Z,8.0nm,0.9s
TNA Tin City 87.80 4 P **P** 18 45 23.6 -0.5
baz=188
F14K Arctic Creek 87.81 4 P **P** 18 45 24.2 -0.1
baz=190
O28M Mount Upton 87.83 17 P **P** 18 45 24.3 -0.5
baz=213
PLBC Pleasant Camp 87.84 19 P **P** 18 45 24.9 +0.3
baz=217
H17K Granite Mounta 87.87 7 P **P** 18 45 25.2 +0.7
baz=196
O29M Mount Kennedy 87.88 18 IAmb IAmb 18 45 32.2
comp=Z,12nm,0.9s
O29M Mount Kennedy 87.88 18 P **P** 18 45 24.9 0.0
baz=215
TRF Thorofare Moun 87.89 11 P **P** 18 45 24.4 -0.6
baz=204,SNR=52
J20K Nowinta River 87.91 10 IAmb IAmb 18 45 26.7
comp=Z,20nm,1.1s
J20K Nowinta River 87.91 10 P **P** 18 45 24.9 +0.1

baz=201,SNR=11
LYN LuoYang 87.93 309 P P 18 45 26.2 +0.6
LYN S S 18 55 55.9 -0.4
LYN pmax pmax
comp=Z,25nm,0.7s
CHUM Lake Minchumin 87.94 10 P P 18 45 24.1 -0.8
baz=202,SNR=10
T35M Bob Quinn 87.98 23 P P 18 45 25.5 +0.2
baz=222
HARP HAARP 88.00 14 P P 18 45 25.4 +0.1
baz=209,SNR=6.1
G16K Koyuk River 88.06 6 P P 18 45 24.8 -0.6
baz=193
GCSA Galena City Sc 88.06 8 P P 18 45 25.5 +0.1
baz=198
BJI Beijing 88.11 315 P P 18 45 28.3 +2.0
BJI pmax pmax
comp=Z,3.0nm,1.2s
DHY Denali Highway 88.12 13 IAmb IAmb 18 45 28.4
comp=Z,14nm,1.2s
DHY Denali Highway 88.12 13 P P 18 45 26.0 0.0
baz=207,SNR=7.0
ENH Enshi 88.16 304 P P 18 45 26.9 +0.1
SKAG Skagway 88.17 20 IAmb IAmb 18 45 30.4
comp=Z,22nm,1.2s
SKAG Skagway 88.17 20 P P 18 45 24.6 -1.5
SKAG Skagway 88.17 20 P P 18 45 26.4 +0.3
baz=218
F15K North Star Dit 88.17 5 P P 18 45 25.8 -0.2
baz=191
P30M Million Dollar 88.20 19 P P 18 45 26.6 +0.3
baz=216
H18K Honhosa River 88.26 8 P P 18 45 26.6 +0.1
baz=197
G17K Kiwalik Mounta 88.34 7 P P 18 45 26.8 +0.1
baz=195
SAND Sanderson 88.34 57 IAmb IAmb 18 45 30.5
comp=Z,11nm,1.0s
S34M Telegraph Cree 88.36 22 IAmb IAmb 18 45 36.7
comp=Z,13nm,0.8s
S34M Telegraph Cree 88.36 22 P P 18 45 27.5 +0.4
baz=221,SNR=5.2
BPAW Bear Paw Mtn. 88.36 11 P P 18 45 26.8 -0.1
baz=204
YUK8 Steele Glacier 88.37 17 P P 18 45 27.4 +0.1
baz=214,SNR=9.1
BI02 San Fabin de 88.39 129 IAmb IAmb 18 45 31.2
comp=Z,13nm,0.9s
MCK McKinley 88.40 12 P P 18 45 26.9 -0.2
baz=206,SNR=15
SEY Seymchan 88.41 346 LR LR 19 18 53.8
comp=Z,116nm,21.5s,baz=154,slow=31
SEY Seymchan 88.41 346 *e*P P 18 45 25.3 -1.8
SEY pmax pmax
comp=Z,39nm,1.4s
PAX Paxson 88.43 14 P P 18 45 26.7 -0.7
baz=209
I20K Naaghedeneel 88.45 9 P P 18 45 27.6 +0.3
baz=200
YUK6 Outpost Mounta 88.47 18 P P 18 45 28.3 +0.5
baz=215
M26K Nabesna, AK 88.50 15 P P 18 45 28.1 +0.4
baz=211
HYT Haines Junctio 88.62 18 IAmb IAmb 18 45 30.3
comp=Z,10nm,0.9s
HYT Haines Junctio 88.62 18 P P 18 45 29.0 +0.6
baz=216
GYA Guiyang 88.71 299 ||P P 18 45 30.5 +0.9
GYA pmax pmax
comp=Z,17nm,0.9s
YUK4 Talbot Arm 88.72 17 P P 18 45 29.9 +0.9
baz=215
M27K Edge Creek, AK 88.73 15 P P 18 45 29.5 +0.6
baz=212
LHMI Lhok Sumawe 88.75 276 P P 18 45 30.1 +0.2
comp=Z,44nm,1.2s
Q32M Nakina River 88.77 21 P P 18 45 29.7 +0.5
baz=220
P32M Atlin 88.78 20 P P 18 45 29.8 +0.7
baz=219
MENT Mentasta 88.80 14 IAmb IAmb 18 45 31.4
comp=Z,17nm,0.7s
MENT Mentasta 88.80 14 P P 18 45 28.0 -1.0
H19K Roundabout Mou 88.86 8 P P 18 45 29.3 +0.1
baz=199
DLMT Dillon 88.87 39 IAmb IAmb 18 46 10.2
comp=Z,41nm,1.9s
MLSI Meulaboh, Aceh 88.89 275 P P 18 45 30.1 -0.5
comp=Z,70nm,1.4s
CMIG Matias Romero 88.93 71 LR LR 19 16 57.0
comp=Z,81nm,18.5s,baz=200,slow=30
G18K Tagagawik 88.94 7 IAmb IAmb 18 45 30.0
comp=Z,11nm,1.0s
G18K Tagagawik 88.94 7 P P 18 45 29.6 0.0
baz=197
L26K Log Cabin Wild 88.96 14 IAmb IAmb 18 45 31.3
comp=Z,14nm,0.8s
L26K Log Cabin Wild 88.96 14 P P 18 45 30.5 +0.7
baz=211,SNR=5.5
O30N Mendenhall 88.98 19 IAmb IAmb 18 45 32.0
comp=Z,12nm,0.8s
O30N Mendenhall 88.98 19 P P 18 45 30.5 +0.6
baz=217,SNR=7.5
H20K Anotleneega Mo 89.04 9 P P 18 45 30.6 +0.5
baz=200,SNR=13
K24K Donnelly Dome 89.10 13 P P 18 45 30.9 +0.5
baz=208,SNR=11
DLBC Dease Lake 89.14 22 LR LR 19 20 27.2
comp=Z,47nm,18.3s,baz=212,slow=32
DLBC Dease Lake 89.14 22 P P 18 45 30.9 +0.1
baz=222
NEA2 Nenana 89.16 11 IAmb IAmb 18 45 31.9
comp=Z,14nm,0.8s
NEA2 Nenana 89.16 11 P P 18 45 30.7 +0.1
baz=205,SNR=9.0
F17K Baldwin Pennin 89.19 6 P P 18 45 30.7 0.0
baz=194
I21K Tanana 89.19 10 P P 18 45 30.7 -0.1
baz=203,SNR=16
RIDG Independent Ri 89.24 14 IAmb IAmb 18 45 32.4
comp=Z,18nm,1.0s
RIDG Independent Ri 89.24 14 P P 18 45 31.1 0.0
baz=209,SNR=7.7
N30M Aishikik Lake 89.25 18 P P 18 45 31.3 0.0
baz=216
WHY Whitehorse 89.26 19 IAmb IAmb 18 45 33.2
comp=Z,18nm,0.8s
WHY Whitehorse 89.26 19 P P 18 45 31.5 +0.1
baz=218
MLY Manley 89.26 11 IAmb IAmb 18 45 32.0
comp=Z,13nm,0.9s
MLY Manley 89.26 11 P P 18 45 30.5 -0.7
baz=204
DRIO Del Rio 89.28 58 IAmb IAmb 18 46 12.8
comp=Z,28nm,1.4s
FLWY Flagg Ranch 89.30 41 IAmb IAmb 18 45 34.4
comp=Z,25nm,1.4s
PDAR Pinedale Array 89.31 43 P P 18 45 31.6 -0.6
PDAR Pinedale Array 89.31 43 P P 18 45 31.9 -0.3
baz=204,slow=3.3,SNR=16
DOT Dot Lake 89.34 14 IAmb IAmb 18 45 32.9
comp=Z,23nm,0.9s
L27K Beaver Creek, 89.35 15 IAmb IAmb 18 45 33.1
comp=Z,11nm,0.8s
L27K Beaver Creek, 89.35 15 P P 18 45 31.0 -0.6
baz=212,SNR=13
BCAR Beaver Creek A 89.36 15 P P 18 45 31.5 -0.2
HDA Harding Lake 89.40 12 P P 18 45 31.6 -0.2
baz=207,SNR=28
YHL Hebgen Lake 89.42 40 IAmb IAmb 18 45 36.1
comp=Z,19nm,1.2s
SDCO Great Sand Dun 89.48 49 IAmb IAmb 18 45 37.5
comp=Z,20nm,2.0s
H21K Melozitna Rive 89.51 10 IAmb IAmb 18 45 34.1
comp=Z,17nm,0.7s
H21K Melozitna Rive 89.51 10 P P 18 45 32.4 +0.1
baz=202,SNR=20
F18K Selawik 89.51 7 P P 18 45 31.9 -0.3
baz=196
R33M Jennings River 89.53 21 P P 18 45 33.2 +0.5
baz=222
P33M Teslin, Yukon 89.55 20 P P 18 45 33.1 +0.4
baz=220,SNR=5.4
BOZ Bozeman (W) 89.56 39 IAmb IAmb 18 45 36.0
comp=Z,19nm,1.3s
BO02 Sierra Bellavi 89.59 128 IAmb IAmb 18 45 35.6
comp=Z,14nm,1.0s
I23K Minto, Yukon-K 89.61 11 IAmb IAmb 18 45 39.8
comp=Z,7.6nm,0.7s
I23K Minto, Yukon-K 89.61 11 P P 18 45 33.6 +0.9
baz=205,SNR=7.7
SCRK Sand Creek 89.64 14 IAmb IAmb 18 45 35.3
comp=Z,17nm,0.9s
SCRK Sand Creek 89.64 14 P P 18 45 33.5 +0.4
baz=210,SNR=20
COLA College 89.64 12 P P 18 45 32.4 -0.4
COLA College 89.64 12 P P 18 45 31.7 -1.1
COLA College 89.64 12*c i*P P 18 45 32.6 -0.2
COLA pmax pmax
comp=Z,29nm,0.8s
COLA College 89.64 12 P P 18 45 32.2 -0.6
baz=206
COLA College 89.64 12 P P 18 45 32.5 -0.4
N31M Braeburn, Yuko 89.65 18 IAmb IAmb 18 45 34.9
comp=Z,18nm,0.8s
N31M Braeburn, Yuko 89.65 18 P P 18 45 33.6 +0.5
baz=217,SNR=8.3
MSTX Muleshoe 89.67 53 IAmb IAmb 18 45 35.5
comp=Z,18nm,0.8s
IMAR Indian Mountai 89.67 9 P P 18 45 31.7 -1.3
M29M Somme Creek 89.68 17 IAmb IAmb 18 45 35.0
comp=Z,19nm,0.9s
M29M Somme Creek 89.68 17 P P 18 45 33.4 +0.1
baz=215,SNR=15
IL31 89.74 12 IAmb IAmb 18 45 34.0
comp=Z,9.4nm,0.8s
ILAR Eielson Array 89.74 12 P P 18 45 31.9 -1.5
ILAR Eielson Array 89.74 12 P P 18 45 32.8 -0.6
comp=Z,10.0nm,0.8s,baz=221,slow=5.4,SNR=62
ILAR PP PP 18 49 01.4 -6.6
comp=Z,0.6nm,0.9s,baz=204,slow=8.2,SNR=2.9
ILAR PKKP PKKPdf 19 03 03.4 -1.3
comp=Z,0.4nm,0.5s,baz=1.5,slow=3.6,SNR=7.1
ILAR LR LR 19 25 22.5
comp=Z,35nm,18.4s,baz=258,slow=35
comp=Z,10.0nm,0.8s
E17K Hotham Inlet 89.76 6 P P 18 45 33.5 +0.1
baz=194
ZEA Zeya 89.84 330 *e*P P 18 45 35.1 +1.0
ZEA pmax pmax
comp=Z,10.0nm,1.4s
J25K Salcha River, 89.90 13 P P 18 45 34.0 -0.2
baz=209
POKR Poker Plat Res 89.94 12 IAmb IAmb 18 45 34.7
comp=Z,18nm,0.8s
POKR Poker Plat Res 89.94 12 P P 18 45 33.8 -0.5
baz=207,SNR=7.3
F19K Shaleruckik Mo 89.94 7 IAmb IAmb 18 45 35.8
comp=Z,18nm,0.7s
F19K Shaleruckik Mo 89.94 7 P P 18 45 33.9 -0.3
baz=197,SNR=16
H22K Ishtalitna Cre 89.95 10 P P 18 45 34.5 +0.2
baz=203,SNR=32
K27K Chicken 90.11 14 P P 18 45 36.0 +0.9
baz=212
J26L Joseph Creek 90.19 14 P P 18 45 36.4 +0.8
baz=210
N32M Quiet Lake 90.19 19 P P 18 45 35.8 +0.2
baz=220
H23K Yukon River 90.20 11 P P 18 45 35.5 0.0
baz=205
G21K Allakaket 90.20 9 IAmb IAmb 18 45 37.8
comp=Z,23nm,0.9s
G21K Allakaket 90.20 9 P P 18 45 35.6 +0.2
baz=201
E18K Tukpahlearik C 90.21 6 IAmb IAmb 18 45 41.2
comp=Z,22nm,1.2s
E18K Tukpahlearik C 90.21 6 P P 18 45 35.5 +0.1
baz=195
POST Post 90.21 54 IAmb IAmb 18 45 37.6
comp=Z,20nm,0.9s
YNE Yellowstone No 90.21 41 IAmb IAmb 18 45 38.8
comp=Z,12nm,1.2s
M30M Minto, Yukon 90.24 17 P P 18 45 35.8 0.0
baz=216,SNR=13
D17K Noatak River 90.25 5 P P 18 45 35.5 -0.1
baz=193
XAN Xi'an 90.29 307 P P 18 45 37.1 +0.4
XAN SKS SKSac 18 55 55.2 +1.2
XAN S ScS 18 56 23.4 +1.6
XAN pmax pmax
comp=Z,18nm,1.2s
L29M L29M 90.31 16 P P 18 45 36.6 +0.5
baz=215
F20K Avaraart Lake 90.40 8 P P 18 45 36.8 +0.4
baz=199
PEL Peldehue 90.41 126 P P 18 45 37.0 -0.5
PEL pmax pmax
comp=Z,32nm,1.3s
H24K Noodor Dome 90.50 11 P P 18 45 36.3 -0.6
baz=206
E19K Redstone River 90.61 7 P P 18 45 37.3 0.0
baz=198
RDOG Red Dog Mine 90.62 5 P P 18 45 37.6 +0.2
baz=193
M31M Drury Creek, Y 90.62 18 IAmb IAmb 18 45 45.2
comp=Z,8.5nm,0.9s
M31M Drury Creek, Y 90.62 18 P P 18 45 37.7 +0.1
baz=218
C16K Lisburne Hills 90.65 4 P P 18 45 37.3 -0.2
baz=190
SN07 Snyder 07 90.68 54 IAmb IAmb 18 45 39.5
comp=Z,12nm,1.0s
RLMT Red Lodge 90.72 41 IAmb IAmb 18 45 41.4
comp=Z,12nm,1.4s
DAWY Dawson 90.78 15 P P 18 45 38.5 +0.2
baz=214,SNR=22
WTLY Watson Lake, Y 90.81 22 P P 18 45 38.5 0.0
baz=223
F21K Alatna River 90.87 9 P P 18 45 38.7 +0.1
baz=201
G22K Bettles 90.88 10 P P 18 45 38.8 +0.2
baz=203
AMTX Amarillo 90.88 53 IAmb IAmb 18 45 40.9
comp=Z,18nm,1.1s
DKNS Dickens 90.91 54 IAmb IAmb 18 45 41.7
comp=Z,17nm,1.3s
G23K Bananza Creek 90.92 10 IAmb IAmb 18 45 40.9
comp=Z,11nm,0.9s
G23K Bananza Creek 90.92 10 P P 18 45 39.2 +0.3
baz=204,SNR=8.2
BILL Bilibino 90.93 354 P P 18 45 38.3 -0.5
BILL IAmb IAmb 18 45 40.8
comp=Z,20nm,0.9s
BILL Bilibino 90.93 354*de*P P 18 45 38.5 -0.3
BILL pmax pmax
comp=Z,21nm,0.8s
I26K Coal Creek Min 90.97 13 P P 18 45 40.0 +0.9
baz=211
C17K DeLong Mountai 91.01 5 P P 18 45 39.3 +0.1
baz=192
K29M Barlow Dome 91.07 16 P P 18 45 40.1 +0.4
baz=216,SNR=23
HILR Hailar Array B 91.08 324 P P 18 45 38.4 -1.7
comp=Z,1.4nm,0.5s,baz=116,slow=6.9,SNR=3.8
comp=Z,1.4nm,0.5s
K22A Casper 91.18 44 IAmb IAmb 18 45 42.8
comp=Z,18nm,1.5s
TOAD Toad River Com 91.19 24 P P 18 45 40.9 +0.6
baz=226,SNR=6.1
LIRD Liard River Hi 91.26 23 P P 18 45 40.8 +0.3
baz=226
H25L Birch Creek 91.27 12 P P 18 45 40.4 0.0
baz=208
F22K John River 91.32 9 P P 18 45 41.1 +0.5
baz=203
BRDY Brady 91.34 57 IAmb IAmb 18 45 42.9
comp=Z,12nm,1.0s
C18K Hook River 91.34 6 P P 18 45 40.3 -0.6
baz=194
G24K Hadweenzic Riv 91.35 11 IAmb IAmb 18 45 43.0
comp=Z,11nm,1.2s
G24K Hadweenzic Riv 91.35 11 P P 18 45 40.8 0.0
baz=207
APMT Aspermont 91.36 54 IAmb IAmb 18 45 43.0
comp=Z,22nm,1.0s
COLD Coldfoot 91.37 10 IAmb IAmb 18 45 48.5
comp=Z,16nm,0.9s
COLD Coldfoot 91.37 10 P P 18 45 41.7 +0.8
baz=204,SNR=11
KMI Kunming 91.37 297 ||P P 18 45 43.0 +0.8
KMI SKS SKSac 18 56 00.2 -0.7
KMI pmax pmax
comp=Z,18nm,0.9s
E20K Nigu River 91.49 7 P P 18 45 41.7 +0.2
baz=199
D19K Kuna River 91.50 7 P P 18 45 41.6 +0.1
baz=197
I27K Kandik River 91.56 14 P P 18 45 41.9 0.0
baz=212,SNR=7.7
HHC Hu-ho-hao-te 91.57 314 *e*P P 18 45 44.7 +2.1
HHC pmax pmax
comp=Z,11nm,0.7s
G25K Bearman Lake 91.66 12 P P 18 45 42.4 +0.2
baz=208
I28M Miner Creek 91.81 14 P P 18 45 43.0 -0.1
baz=214
MMPY Sheldon Lake, 91.87 19 IAmb IAmb 18 46 25.1
comp=Z,19nm,1.3s
MMPY Sheldon Lake, 91.87 19 P P 18 45 43.4 0.0
baz=221
D20K Etivluk River 91.88 7 P P 18 45 43.6 +0.4
baz=198
C19K Lookout Ridge 91.94 6 P P 18 45 44.3 +0.7
baz=196
E22K Anaktuvuk Pass 91.96 9 P P 18 45 44.3 +0.6
baz=203
J30M Hart River 91.97 16 IAmb IAmb 18 45 45.6
comp=Z,8.4nm,0.9s
J30M Hart River 91.97 16 P P 18 45 44.7 +0.8
baz=217,SNR=7.6
B18K Kokolik River 91.99 5 P P 18 45 44.6 +0.9
baz=194
CM31 Chiang Mai Arr 92.00 289 IAmb IAmb 18 45 47.1
comp=Z,22nm,1.0s
CMAR Chiang Mai Arr 92.00 289 P P 18 45 44.8 -0.2
CMAR Chiang Mai Arr 92.00 289 P P 18 45 45.5 +0.6
comp=Z,12nm,0.9s,baz=125,slow=3.1,SNR=71
CMAR PP PP 18 49 23.0 -3.8
comp=Z,0.3nm,0.4s,baz=112,slow=7.1,SNR=3.1
CMAR PKKP PKKPdf 19 02 56.2 -2.4
comp=Z,0.4nm,0.5s,baz=283,slow=2.7,SNR=4.1
CMAR LR LR 19 24 40.5
comp=Z,63nm,21.0s,baz=100,slow=34
comp=Z,12nm,0.9s
CMAR Chiang Mai Arr 92.00 289 *i* P P 18 45 46.0 +1.1
CMAR pmax pmax
comp=Z,13nm,0.9s
TGTN Hyland Airport 92.01 21 P P 18 45 44.9 +0.8
baz=224,SNR=8.2
F24K Squaw Lake 92.02 11 IAmb IAmb 18 45 46.2
comp=Z,8.3nm,0.7s
F24K Squaw Lake 92.02 11 P P 18 45 44.6 +0.7
baz=206,SNR=10
H27K Steamboat Moun 92.11 13 P P 18 45 45.0 +0.5
baz=212
CHTO Chiang Mai 92.13 289 P P 18 45 44.8 -0.8
CHTO IAmb IAmb 18 45 47.4
comp=Z,15nm,0.9s
CHTO Chiang Mai 92.13 289 P P 18 45 45.9 +0.4
CHTO Chiang Mai 92.13 289 P P 18 45 44.8 -0.8
CHTO pmax pmax
comp=Z,15nm,1.0s
E23K Chandalar 92.22 10 IAmb IAmb 18 45 47.6
comp=Z,37nm,1.8s
E23K Chandalar 92.22 10 P P 18 45 45.0 +0.1
baz=205
LCO Las Campanas 92.26 123 P P 18 45 46.6 +0.2
LCO Las Campanas 92.26 123 P P 18 45 46.6 +0.2
LCO pmax pmax
comp=Z,39nm,1.1s
G26K Porcupine Rive 92.27 12 P P 18 45 45.5 +0.5
baz=210,SNR=16
E24K Your Creek 92.42 10 P P 18 45 46.4 +0.6
baz=206
F25K Christian Rive 92.48 11 P P 18 45 46.7 +0.6
baz=208
I30M Mount Dempster 92.48 16 IAmb IAmb 18 45 48.2
comp=Z,15nm,0.8s
I30M Mount Dempster 92.48 16 P P 18 45 46.3 +0.1
baz=217,SNR=16
KOTAN Kotaneelee Air 92.51 23 P P 18 45 46.7 +0.4
baz=227
C21K Knifeblade Rid 92.52 8 P P 18 45 46.2 +0.1
baz=200
D22K Ayikyak River 92.53 8 P P 18 45 46.7 +0.4
baz=202
BMAR Burnt Mountain 92.53 12 P P 18 45 46.5 +0.2
G27K Doyon Strip 92.58 13 P P 18 45 47.1 +0.5
baz=212,SNR=8.4
ZON Zonda 92.65 126 IAmb IAmb 18 47 06.3
comp=Z,27nm,1.7s
PZH PanZhiHua 92.75 297 P P 18 45 49.8 +1.4
TOLK Toolik Lake Re 92.76 10 P P 18 45 48.0 +0.7
baz=205
H29M Whitestone 92.81 15 P P 18 45 47.7 +0.1
baz=215,SNR=12
F26K Sheenjek River 92.85 12 P P 18 45 48.0 +0.3
baz=210
A19K Wainwright 92.87 5 P P 18 45 47.7 -0.1
baz=194
D23K Nanushuk River 92.89 9 P P 18 45 48.5 +0.7
baz=204
CD2 Chengdu 92.89 302 *e*P P 18 45 49.0 +0.1
E25K Arctic Village 92.96 11 IAmb IAmb 18 45 52.3
comp=Z,7.3nm,1.0s
E25K Arctic Village 92.96 11 P P 18 45 48.7 +0.5
baz=209
WMOK Wichita Mounta 92.97 54 P P 18 45 49.4 +0.3
WMOK pmax pmax
comp=Z,6.0nm,1.3s
B21K Ikpikpuk River 92.97 8 P P 18 45 48.1 -0.1
baz=200
EPYK Eagle Plains 93.33 15 IAmb IAmb 18 45 57.3
comp=Z,11nm,0.9s
EPYK Eagle Plains 93.33 15 P P 18 45 49.9 -0.1
baz=217
D24K Happy Valley 93.34 10 P P 18 45 50.5 +0.6
baz=206
G29M Pine Creek 93.46 14 IAmb IAmb 18 45 51.9
comp=Z,9.3nm,0.9s
G29M Pine Creek 93.46 14 P P 18 45 50.8 +0.2
baz=215
H31M Peel River 93.46 16 P P 18 45 50.4 -0.2
baz=219
RSSD Black Hills 93.48 43 P P 18 45 51.6 +0.1
RSSD IAmb IAmb 18 45 52.6
comp=Z,16nm,1.1s
RSSD Black Hills 93.48 43 P P 18 45 51.6 +0.1
RSSD pmax pmax
comp=Z,16nm,1.1s
F28M Old Crow 93.64 13 IAmb IAmb 18 45 52.7
comp=Z,7.9nm,0.8s
F28M Old Crow 93.64 13 P P 18 45 51.4 0.0
baz=214,SNR=9.0
C23K Itkillik River 93.70 9 P P 18 45 52.0 +0.5
baz=204
E27K Coleen River 93.77 12 P P 18 45 52.2 +0.2
baz=212
B22K Teshekpuk Lake 93.80 8 P P 18 45 52.6 +0.6
baz=202
C24K Franklin Bluff 93.87 9 P P 18 45 53.0 +0.7
baz=206
D25K Kavik River 93.88 10 P P 18 45 52.5 -0.1
baz=208
G30M tAoh Zraii Nji 93.94 15 IAmb IAmb 18 45 55.4
comp=Z,19nm,1.1s
G30M tAoh Zraii Nji 93.94 15 P P 18 45 52.8 +0.1
baz=217,SNR=8.3
A22K Sinclair Lake 94.24 7 P P 18 45 53.9 -0.1
baz=200
YAK Yakutsk 94.26 338 P P 18 45 52.9 -1.4
YAK Yakutsk 94.26 338 LR LR 19 24 41.6
comp=Z,39nm,20.6s,baz=168,slow=33
YAK Yakutsk 94.26 338 *e*P P 18 45 52.9 -1.4
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.5s
HERN Volcan Telica 94.41 78 IAmb IAmb 18 47 50.9
comp=Z,90nm,0.5s
E28M Babbage River 94.53 13 P P 18 45 55.9 +0.4
baz=214
F30M Barrier River 94.54 15 IAmb IAmb 18 46 04.3
comp=Z,8.5nm,0.8s
F30M Barrier River 94.54 15 P P 18 45 55.8 +0.3
baz=217
C27K Jago River 94.61 11 P P 18 45 56.5 +0.7
baz=210
C26K Camden Bay 94.65 10 P P 18 45 56.8 +0.9
baz=209
E29M Blow River 94.70 13 P P 18 45 56.2 +0.1

baz=216
D27M **Malcolm River** 94.78 12 P **P** 18 45 56.7 +0.1
baz=213
F31M **Tsiigehtchic** 94.89 15 P **P** 18 45 57.0 0.0
baz=219
JTS **Las Juntas de** 95.27 81 LR LR 19 18 53.1
comp=Z,93nm,21.6s,baz=272,slow=29
JTS **Las Juntas de** 95.27 81 *de*P **P** 18 45 58.5 -1.6
JTS pmax pmax
comp=Z,9.0nm,1.0s
D28M **Stokes Point** 95.30 13 P **P** 18 45 58.9 +0.1
baz=215
INK **Inuvik** 95.62 15 IAmb IAmb 18 46 08.8
comp=Z,16nm,1.4s
INK **Inuvik** 95.62 15 P **P** 18 46 00.6 +0.3
INK pmax pmax
comp=Z,8.0nm,2.1s
INK **Inuvik** 95.62 15 P **P** 18 46 01.2 +0.9
baz=220
SONM **Songino Array** 97.98 318 PP **PP** 18 50 07.2 -5.7
comp=Z,3.6nm,1.0s,baz=101,slow=4.5,SNR=9.7
PB16 **IPOC Station P** 98.03 113 P **P** 18 46 13.1 -0.1
C36M **Paulatuk** 98.74 17 P Pdif 18 46 15.2 +0.8
baz=228
LPAZ **La Paz** 100.12 112 P **Pdif** 18 46 24.9 +2.3
comp=Z,3.0nm,0.9s,baz=265,slow=3.2,SNR=8.3
LPAZ PP **PP** 18 50 28.6 -1.2
comp=Z,3.2nm,1.1s,baz=264,slow=3.4,SNR=7.3
LPAZ **La Paz** 100.12 112 P **Pdif** 18 46 25.0 +2.3
A36M **Sachs Harbour** 100.24 14 P **Pdif** 18 46 20.5 -0.6
baz=227
WMQ **Urumqi** 109.12 310 Pdif **Pdif** 18 47 00.3 -1.0
WMQ LR LR
comp=Z,130nm,24.3s
ZALV **Zalesovo Beam** 112.73 321 PKiKP **PKiKP** 18 51 09.8 -1.2
comp=Z,1.6nm,0.5s,baz=149,slow=1.3,SNR=8.2
MK31 **Makanchi Array** 113.41 313 *d*PKIKP **PKiKP** 18 51 12.6 -0.1
MKAR **Makanchi Array** 113.41 313 PKiKP **PKiKP** 18 51 12.0 -0.7
comp=Z,0.9nm,0.5s,baz=154,slow=0.7,SNR=14
MKAR PP PP 18 51 57.8 -8.5
comp=Z,3.1nm,1.0s,baz=96,slow=5.1,SNR=5.2
MKAR PKKPbc **PKKPbc** 19 01 57.0 -1.8
comp=Z,0.5nm,0.6s,baz=263,slow=1.9,SNR=5.6
TARG **Taragay, Kyrgy** 115.92 307 PKIKP **PKPdf** 18 51 16.9 -1.3
KURK **Kurchatov** 116.22 317 **PKPdf** 18 51 17.3 -0.6
KURK **Kurchatov** 116.22 317 *d*PKIKP **PKiKP** 18 51 18.2 +0.3
KURBB **Kurchatov Arra** 116.27 317 PKP **PKPdf** 18 51 17.1 -0.9
comp=Z,3.0nm,1.0s,baz=102,slow=1.8,SNR=30
KURBB PP PP 18 52 17.2 -9.0
comp=Z,2.7nm,1.0s,baz=97,slow=6.5,SNR=6.5
KURBB SKP **SKPdf** 18 54 40.0 +0.5
comp=Z,1.3nm,0.9s,baz=101,slow=1.6,SNR=5.5
KURBB PKKPab **PKKPab** 19 01 53.0 +1.8
comp=Z,2.2nm,1.1s,baz=283,slow=5.2,SNR=6.2
NOR **Nord** 120.04 3 *i* P **PKPdf** 18 51 24.3 -0.2
ARK **Arkit** 120.28 306 PKIKP **PKiKP** 18 51 26.5 +0.2
TRKS **Terek-Say** 120.88 306 PKIKP **PKPdf** 18 51 26.8 -0.6
OPO **Amboh idratompo** 121.05 230 PKP **PKiKP** 18 51 29.2 +0.6
comp=Z,3.3nm,0.7s,baz=10,slow=4.2,SNR=6.6
BVAR **Borovoye Array** 121.31 319 PKP **PKPdf** 18 51 27.1 -0.6
comp=Z,5.4nm,0.4s,baz=113,slow=2.4,SNR=78
BVAR PP **PP** 18 53 03.9 +3.1
comp=Z,3.5nm,0.8s,baz=90,slow=7.2,SNR=4.1
BORK **Borovoye** 121.35 319 *d*PKIKP **PKPdf** 18 51 27.6 -0.1
KKAR **Karatay Array** 121.42 308 **PKPdf** 18 51 26.6 -1.5
KKAR **Karatay Array** 121.42 308 PKIKP **PKPdf** 18 51 26.7 -1.5
KBL **Kabul** 121.94 298 **PKPdf** 18 51 29.2 -0.5
KBL **Kabul** 121.94 298 PKIKP **PKPdf** 18 51 29.2 -0.5
CHGR **Chuyangaron** 122.21 303 PKIKP **PKiKP** 18 51 31.4 +1.2
SPITS **Spitsbergen Ar** 123.70 357 PKP **PKPdf** 18 51 31.3 -0.3
comp=Z,12nm,0.8s,baz=76,slow=7.0,SNR=7.8
DAG **Danmarks Havn** 124.35 6 *i* P **PKPdf** 18 51 32.4 -0.4
BOSA **Boshof** 125.22 204 PKP **PiKiP** 18 51 37.5 +0.9
comp=Z,3.9nm,0.5s,baz=149,slow=2.4,SNR=18
SVE **Sverdlovsk** 126.22 325 *e*PKIKP **PKPdf** 18 51 37.2 +0.3
SVE pmax pmax
comp=Z,19nm,1.4s
DBG **Daneborg** 126.40 8 *i* P **PKPdf** 18 51 36.9 0.0
ARTI **Arti** 127.54 325 **PKPdf** 18 51 38.0 -1.4
ARTI **Arti** 127.54 325 *i* PKIKP **PKiKP** 18 51 40.1 +0.1
ARTI 18 53 41.9
ARTI 18 58 36.7
ARTI SS SS 19 10 35.1 -5.8
ABKAR **Akbulak array** 128.31 316 **PKPdf** 18 51 40.8 -0.3
LBTB **Lobatse** 128.32 206 PKP **PKPdf** 18 51 42.6 +0.4
comp=Z,2.1nm,0.5s,baz=165,slow=4.0,SNR=5.9
ARCES **ARCESS Array B** 130.90 350 PKhKP PKPpre 18 51 34.5
comp=Z,2.3nm,0.7s,baz=38,slow=0.8,SNR=3.8
ARCES PKP **PKPdf** 18 51 44.4 -1.1
comp=Z,5.3nm,0.6s,baz=55,slow=2.2,SNR=27
ARCES SKPbc **SKPab** 18 54 58.0 +1.8
comp=Z,10.0nm,0.8s,baz=46,slow=5.2,SNR=5.5
KIRV **Kirov** 131.18 330 *c*PKIKP **PKPdf** 18 51 46.6 +0.3
SOHO **SOHO** 131.44 283 *i* PKiKP **PKPdf** 18 51 48.4 +0.6
SNR=7.6
KGCAE **Kacgae** 131.58 203 **PKPdf** 18 51 48.4 -0.1
MDH **Madha** 131.82 285 *i* PKiKP **PKPdf** 18 51 49.0 +0.4
SNR=6.4
UOSS **Minazif** 131.86 284 *i* PKiKP **PKPdf** 18 51 49.4 +0.7
SNR=5.8
HATD **Hatta, Dubai** 131.91 284 *i* PKiKP **PKiKP** 18 51 51.2 +1.3
SNR=9.5
ASHO **Ashiyiah** 131.95 284 *i* PKiKP **PKPdf** 18 51 48.7 -0.2
SNR=7.4
MSFE **Esma-Masafi** 131.96 285 *i* PKiKP **PKiKP** 18 51 50.6 +0.6
SNR=7.4
SHME **Shamm** 132.06 286 *i* PKiKP **PKiKP** 18 51 50.9 +0.9
SNR=10
NAZ **Nazwa, Dubai** 132.35 284 *i* PKiKP **PKiKP** 18 51 50.4 -0.2
SNR=7.2
GRTLG **Ghanzi** 133.31 203 **PKPdf** 18 51 52.8 +1.1
MZR **Muzera** 134.03 281 *i* PKiKP **PKPdf** 18 51 53.7 +0.9
SNR=9.2
KLMR **Klimovskoe** 134.04 336 *e*PKIKP **PKPdf** 18 51 50.7 -0.9
KLMR pmax pmax
comp=Z,21nm,1.3s
BELG **Belogornoye** 134.84 323 *d*PKIKP **PKiKP** 18 51 54.6 -0.2
LSZ **Lusaka** 135.52 215 **PKPdf** 18 51 57.3 +1.3
LSZ **Lusaka** 135.52 215 PKP **PKPdf** 18 51 56.4 +0.4
comp=Z,3.8nm,0.6s,baz=109,slow=2.5,SNR=6.2
LSZ SKPbc **SKPbc** 18 55 14.0 +0.6
comp=Z,2.8nm,0.6s,baz=108,slow=3.3,SNR=4.1
LSZ **Lusaka** 135.52 215 PKIKP **PKPdf** 18 51 57.3 +1.3
TSUM **Tsumeb** 136.53 200 PKP **PKPdf** 18 51 57.4 -0.4
comp=Z,3.3nm,0.4s,baz=134,slow=3.8,SNR=4.7
FINES **FINESS Array B** 137.85 344 PKhKP PKPpre 18 51 47.6
comp=Z,3.0nm,0.8s,baz=61,slow=2.0,SNR=14
FINES PKP **PKPdf** 18 51 58.0 -0.7
comp=Z,5.8nm,0.7s,baz=89,slow=2.8,SNR=8.6
FINES SKPbc **SKPbc** 18 55 20.1 +1.5
comp=Z,21nm,1.0s,baz=106,slow=4.8,SNR=14
FINES **FINESS Array B** 137.85 344 PKIKP **PKPdf** 18 51 58.0 -0.7
MAK **Makhachkala** 138.14 310 *i* P **Pdif** 18 49 09.4 -0.8
MAK *i* 18 52 00.1
MAK *e* 18 54 49.0
MAK pmax pmax
comp=Z,352nm,1.1s
AKT **Akhty** 138.34 308 *e*PKIKP **PKPdf** 18 52 00.0 -0.4
AKT pmax pmax
comp=Z,653nm,0.6s
OBN **Obninsk** 138.96 331 ⇓*i*PKIKP **PKPdf** 18 52 01.4 +0.5
OBN *e* 18 52 44.2
OBN pmax pmax
comp=Z,39nm,1.7s
GNI **Garni** 140.87 307 ⇑*i*PKIKP **PKPdf** 18 52 06.6 +1.5
GNI pmax pmax
comp=Z,21nm,1.7s
NB2 **NORSAR Subarra** 140.88 354 PKP **PKPdf** 18 51 56.9 -7.4
comp=Z,5.7nm,0.8s,baz=14,slow=4.8
NB2 pPKP PP 18 55 30.8 +25
comp=Z,0.2nm,0.5s,baz=16,slow=5.1
NOA **NORSAR Array B** 140.88 354 PKhKP PKPpre 18 51 57.2
comp=Z,0.8nm,0.4s,baz=30,slow=1.8,SNR=18
NOA PKP **PKiKP** 18 52 06.0 -1.0
comp=Z,2.8nm,0.8s,baz=14,slow=3.9,SNR=6.4
NOA SKPbc **SKiKP** 18 55 28.4 -0.7
comp=Z,4.8nm,1.0s,baz=16,slow=2.8,SNR=5.2
NOA SKPab **SKPab** 18 55 41.7 +1.5
comp=Z,3.0nm,0.8s,baz=11,slow=3.2,SNR=5.6
NOA **NORSAR Array B** 140.88 354 PKIKP **PKiKP** 18 52 06.0 -1.0
KBZ **Khabaz** 141.10 313 PKhKP PKPpre 18 51 59.9
comp=Z,2.9nm,1.0s,baz=180,slow=9.1,SNR=3.1
KIV **Kislovodsk** 141.17 313 *i* PKIKP **PKiKP** 18 52 07.2 -1.0
KIV *e* 18 55 06.1
KIV *e*SS SS 19 13 21.3 -4.2
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,57nm,24.0s
RAYN **Ar Rayn** 141.36 280 PKPpre 18 51 58.0
RAYN **Ar Rayn** 141.36 280 PKHKP PKPpre 18 51 58.0
HFS **Hagfors** 141.49 352 PKhKP PKPpre 18 51 59.0
comp=Z,6.3nm,0.3s,baz=61,slow=2.4,SNR=46
SOC **Sochi** 143.30 314 *e*PKIKP **PKPdf** 18 52 09.7 +0.6
SOC *e* 18 55 25.8
SOC *e*PPP PPP 18 58 32.4
SOC *e*SS SS 19 13 50.8 +1.0
SOC *e*SSS SSS 19 19 11.1
LODK **Lodwar** 143.85 243 PKPab 18 52 07.7 -0.8
HOMB **Homborsund** 143.85 355 *i* P PKPbc 18 52 07.5 -0.2
SNART **Snartemo** 143.87 357 *i* P PKPbc 18 52 07.8 +0.1
KOPT **Kop Dagi** 144.03 308 PKPbc 18 52 09.7 +0.5
BORU **Boraas** 144.03 351 *i* P PKPab 18 52 07.0 -0.8
ANN **Anapa** 144.25 317 *e*PKIKP PKPbc 18 52 09.4 +0.1
ANN pmax pmax
comp=Z,58nm,1.0s
KPL **Plockton** 144.34 8 *e*P **PKPab** 18 52 08.7 -0.2
ONAU **Onsala** 144.38 352 *i* P **PKPab** 18 52 08.2 -0.8
FABU **Falkenberg** 144.65 351 *i* P **PKPab** 18 52 09.2 -0.9
SUW **Suwalki** 144.97 340 *e*PKP **PKPab** 18 52 11.3 -0.1
DEL **Delary** 144.99 350 *i* P **PKPab** 18 52 10.8 -0.6
GOET **G??ttrup** 145.02 355 *i* P **PKPdf** 18 52 13.2 +1.5
AKASG **Malin Array Be** 145.22 331 PKPbc **PKPbc** 18 52 11.2 -1.0
comp=Z,71nm,0.8s,baz=42,slow=4.3,SNR=213
AKASG SKPbc **SKiKP** 18 55 38.9 +0.5
comp=Z,10.0nm,0.9s,baz=42,slow=2.2,SNR=12
AKBB **Malin Array Si** 145.22 331 *de*PKP2 **PKPbc** 18 52 10.8 -1.4
KIEV **Kiev** 145.23 331 **PKPbc** 18 52 10.3 -1.9
KIEV **Kiev** 145.23 331 PKPbc **PKPbc** 18 52 11.1 -1.1
KIEV **Kiev** 145.23 331 PKP2 **PKPbc** 18 52 10.3 -1.9
AK05 **Malin Array Si** 145.29 331 PKP **PKPbc** 18 52 11.3 -1.1
AK12 **Malin Array Si** 145.29 331 PKP **PKPbc** 18 52 11.4 -1.0
AK16 **Malin Array Si** 145.30 331 PKP **PKPbc** 18 52 11.4 -1.0
AK19 **Malin Array Si** 145.30 331 PKP **PKPbc** 18 52 11.4 -1.0
AK17 **Malin Array Si** 145.31 331 PKP **PKPbc** 18 52 11.4 -1.1
AK06 **Malin Array Si** 145.31 331 PKP **PKPbc** 18 52 11.4 -1.1
AK14 **Malin Array Si** 145.32 331 PKP **PKPbc** 18 52 11.5 -1.0
AK07 **Malin Array Si** 145.34 331 PKP **PKPbc** 18 52 11.5 -1.1
AK13 **Malin Array Si** 145.36 331 PKP **PKPbc** 18 52 11.6 -1.0
LAWE **Loch Awe, Argy** 145.42 9 *e*P **PKPdf** 18 52 11.9 -0.5
INVG **Invergeldie, C** 145.44 7 *e*P **PKPdf** 18 52 12.1 -0.4
BJUU **Bjuv** 145.51 351 *i* P **PKPdf** 18 52 12.6 0.0
MUD **Monsted U'grnd** 145.60 354 *i* P **PKPab** 18 52 13.7 +0.1
MI28 **Mi28,Pidlybu** 145.74 333 PKP **PKPdf** 18 52 13.3 +0.2
LUNU **Lund** 145.87 350 *i* P **PKPdf** 18 52 13.7 +0.5
COP **Copenhagen** 145.97 351 *i* P **PKPab** 18 52 14.9 -0.1
RNPP9 **Sopachiv** 146.10 335 PKP **PKPdf** 18 52 14.2 +0.5
RNPP8 **Varash** 146.18 335 PKP **PKPdf** 18 52 14.6 +0.8
SIM **Simferopol'** 146.23 319 *e*PKP2 **PKPbc** 18 52 15.7 +0.2
SIM pmax pmax
comp=Z,189nm,0.9s
RNPP5 **Staryi Chortor** 146.25 334 PKP **PKPdf** 18 52 14.4 +0.5
EKA **Eskdalemuir Ar** 146.61 7 PKPbc **PKPbc** 18 52 16.1 -0.2
comp=Z,11nm,0.7s,baz=346,slow=2.1,SNR=20
ESK **Eskdalemuir** 146.62 7 *e*P **PKPbc** 18 52 16.2 0.0
NEWG **New Galloway** 146.69 8 *e*P **PKPbc** 18 52 16.1 -0.3
GAL1 **Galloway** 146.87 9 *e*P **PKPab** 18 52 18.0 -0.6
R9F13 **Warsaw-Wawer** 147.14 340 *e*PKPdf **PKPbc** 18 52 18.3 +0.5
R9F13 *ep*PKPdf pPKPdf 18 52 38.5 -16
EDMD **Edmundbyers** 147.23 6 *e*P **PKPdf** 18 52 16.1 +0.6
GKP **Gorka Klasztor** 147.31 345 *e*PKP **PKPbc** 18 52 18.9 +0.7
KESW **Keswick, Cumbr** 147.35 7 *e*P **PKPbc** 18 52 18.4 +0.1
ILTH **Belurgan, Co L** 147.43 11 *e*P **PKPbc** 18 52 18.3 -0.2
BEL **Belsk** 147.59 340 *e*PKP **PKPbc** 18 52 18.9 -0.2
BEL **Belsk** 147.59 340 PKP2 **PKPbc** 18 52 19.7 +0.7
BZK **Bozkurt** 147.79 315 ⇑P **PKPbc** 18 52 20.6 +0.7
BSEG **Bad Segeberg** 147.96 352 PKP2 **PKPbc** 18 52 20.5 +0.6
BSEG **Bad Segeberg** 147.96 352 *e*PKPbc **PKPbc** 18 52 20.6 +0.7
baz=15,slow=2.5
HLG **Helgoland** 147.96 355 *e*PKPbc **PKPbc** 18 52 20.8 +0.9
baz=15,slow=2.5
KIS **Kishinev** 147.96 326 *e*P **PKPbc** 18 52 20.0 -0.2
comp=Z,150nm,1.1s
MILM **Milestii Mici** 148.02 326 ⇓P **PKPbc** 18 52 19.3 -1.1
MILM **Milestii Mici** 148.02 326 ⇓PKP2 **PKPbc** 18 52 19.3 -1.1
MILM **Milestii Mici** 148.02 326 ⇓*i*P **PKPbc** 18 52 18.9 -1.4
comp=Z,270nm,1.2s
HPK **Haverah Park** 148.12 6 *e*P **PKPbc** 18 52 20.6 +0.2
CIDE **Kastamonu/Cide** 148.52 315 ⇑P **PKPbc** 18 52 21.8 0.0
KWP **Kalwaria Pacla** 148.76 336 *e*PKP **PKPbc** 18 52 22.5 +0.3
FKH **Fakeheh** 148.77 300 *e*P **PKPbc** 18 52 23.6 +0.7
BEIL **Beino** 148.88 300 *e*P **PKPbc** 18 52 23.5 +0.5
LLW **Llanuwychllyn** 148.98 8 *e*P **PKPbc** 18 52 22.5 -0.1
FOEL **Foel Wylfa** 149.00 8 *e*P **PKPbc** 18 52 22.8 +0.1
BRTR **Keskin Array B** 149.04 311 **PKPdf** 18 52 21.1 +2.0
BRTR **Keskin Array B** 149.04 311 PKPbc **PKPbc** 18 52 21.9 -1.5
comp=Z,21nm,0.8s,baz=140,slow=2.9,SNR=104
BRTR **Keskin Array B** 149.04 311 PKIKP **PKPdf** 18 52 21.1 +2.0
BIR **Birlad** 149.06 326 ⇑P **PKPbc** 18 52 23.4 +0.4
BIR **Birlad** 149.06 326 ⇑PKP2 **PKPbc** 18 52 23.5 +0.4
VLDR **Vladesti** 149.11 325 ⇓P **PKPbc** 18 52 22.8 -0.4
HWQ **Hawqa** 149.13 300 *e*P **PKPbc** 18 52 23.8 0.0
TLCR 149.14 324 ⇑P **PKPbc** 18 52 23.5 +0.2
TLCR 149.14 324 ⇑PKP2 **PKPbc** 18 52 23.5 +0.2
RETH **Rethem/Aller,** 149.25 353 *e*PKPbc **PKiKP** 18 52 24.1 -0.3
baz=15,slow=2.5
BURAR **Bucovina Array** 149.27 331 **PKPbc** 18 52 21.9 -1.8
BURAR **Bucovina Array** 149.27 331 ⇑P **PKiKP** 18 52 24.7 -0.1
BURAR **Bucovina Array** 149.27 331 ⇑PKP2 **PKiKP** 18 52 24.7 -0.1
ZAHL **Zahle** 149.28 299 *e*P **PKPbc** 18 52 24.8 +0.7
OJC **Ojcow** 149.30 339 *e*PKP **PKPbc** 18 52 23.7 +0.2
OJC **Ojcow** 149.30 339 PKP2 **PKPbc** 18 52 23.9 +0.4
GHRR 149.31 326 ⇑P **PKiKP** 18 52 25.3 +0.5
BIZ **Bicaz** 149.35 329 ⇑P **PKiKP** 18 52 25.4 +0.6
TESR **Tescani** 149.39 328 ⇓P **PKPbc** 18 52 24.2 +0.4
FLTG **Flechtingen** 149.40 351 *e*PKPbc **PKPbc** 18 52 24.1 +0.4
baz=15,slow=2.5
RCY **Rachaya** 149.41 299 *e*P **PKPbc** 18 52 25.1 +0.6
HLM1 **Long Mynd** 149.41 8 *e*P **PKPbc** 18 52 22.8 -0.9
BHL **Bhannes** 149.46 299 *e*P **PKPbc** 18 52 24.9 +0.3
STHS **Stebnicka Huta** 149.48 337 *e*PKP2 **PKPbc** 18 52 24.4 +0.4
STHS **Stebnicka Huta** 149.48 337 *e*PKP **PKPbc** 18 52 24.4 +0.4
STHS *e* 18 52 29.8
SHBL **Chebaa** 149.51 298 *e*P **PKiKP** 18 52 25.5 -0.3
CFR **Carcaliu** 149.52 324 ⇓P **PKPbc** 18 52 24.6 +0.4
CFR **Carcaliu** 149.52 324 ⇓PKP2 **PKPbc** 18 52 24.6 +0.4
QRWL **Qaraoun** 149.52 299 *e*P **PKPbc** 18 52 25.3 +0.6
ANTO **Ankara** 149.56 312 **PKPbc** 18 52 23.3 -1.3
ANTO **Ankara** 149.56 312 ⇓P **PKPbc** 18 52 24.8 +0.2
ANTO **Ankara** 149.56 312 PKHKP PKPpre 18 52 23.3
TPGR **Topolog** 149.57 324 ⇑P **PKiKP** 18 52 25.1 -0.3
ONER **Baraj Valea Uz** 149.64 328 ⇑P **PKiKP** 18 52 25.6 +0.2
ASSE **Asse, Remlinge** 149.68 351 *e*PKPbc **PKiKP** 18 52 25.1 -0.1
baz=15,slow=2.5
KSP **Ksiaz** 149.77 344 *e*PKP **PKiKP** 18 52 25.6 0.0
VRI **Vrincioaia** 149.79 327 ⇓P **PKPbc** 18 52 24.9 0.0
VRI **Vrincioaia** 149.79 327 ⇓PKP2 **PKPbc** 18 52 24.9 0.0
NIE **Niedzica** 149.81 338 *e*PKP **PKiKP** 18 52 26.2 +0.5
TIRR **Tirgusor** 149.82 323 **PKPbc** 18 52 24.3 -0.6
TIRR **Tirgusor** 149.82 323 PKHKP PKPpre 18 52 24.3
PLOR **Plostina** 149.84 327 ⇓P **PKPbc** 18 52 25.3 +0.2
PLOR **Plostina** 149.84 327 ⇓PKP2 **PKPbc** 18 52 25.3 +0.2
MMAI **Mount Meron Ar** 149.87 298 PKPbc **PKiKP** 18 52 26.3 -0.1
comp=Z,21nm,0.4s,baz=81,slow=5.3,SNR=104
HARR **Harsova** 149.94 324 ⇑P **PKPbc** 18 52 25.8 +0.6
HARR **Harsova** 149.94 324 ⇑PKP2 **PKPbc** 18 52 25.8 +0.6
TLBR **Topalu** 149.97 324 ⇑P **PKPbc** 18 52 23.1 -2.2
BMR **Baia Mare** 149.99 332 PKP2 **PKPbc** 18 52 25.8 +0.5
CLZ **Clausthal** 150.00 351 *e*PKPbc **PKiKP** 18 52 26.1 +0.1
baz=15,slow=2.5
TURR **Turia** 150.02 328 ⇑P **PKiKP** 18 52 26.4 +0.1
OSTC **Ostas** 150.05 344 *e*PKP2 **PKiKP** 18 52 26.5 +0.3
OSTC **Ostas** 150.05 344 ⇑*e*PKP **PKiKP** 18 52 26.5 +0.3
CHVC **Chvalec** 150.07 344 *e*PKP2 **PKiKP** 18 52 26.5 +0.3
CHVC **Chvalec** 150.07 344 ⇑*e*PKP **PKiKP** 18 52 26.5 +0.3
CLL **Collm** 150.08 348 *i* PKP2 **PKPbc** 18 52 25.9 +0.5
CLL pmax pmax
comp=Z,60nm,1.0s
CLL MLR MLR
comp=Z,6μm,19.6s
CLL **Collm** 150.08 348 *e*PKPbc **PKPbc** 18 52 25.9 +0.5
baz=15,slow=2.5
CLL **Collm** 150.08 348 *i* PKPbc **PKPbc** 18 52 25.9 +0.5
comp=Z,60nm,1.0s
CLL *i* PKPab **PKPab** 18 52 31.6 -0.1
comp=Z,59nm,1.0s
CLL *i* x x 18 52 39.6
comp=Z,42nm,1.3s
OZUR 150.10 328 ⇓P **PKiKP** 18 52 26.4 -0.1
MANR **Mangalia** 150.12 322 ⇑P **PKiKP** 18 52 26.3 -0.2
UPC **Upice** 150.15 344 *e*PKIKP **PKiKP** 18 52 26.3 -0.1
UPC **Upice** 150.15 344 ⇑*e*PKP **PKiKP** 18 52 26.3 -0.1
OKC **Ostrava-Krasne** 150.15 341 *e*PKIKP **PKPbc** 18 52 25.5 -0.1
OKC **Ostrava-Krasne** 150.15 341 ⇑*e*PKP **PKPbc** 18 52 25.5 -0.1
DPC **Dobruska-Polom** 150.21 343 *e*PKIKP **PKiKP** 18 52 26.8 +0.2
DPC **Dobruska-Polom** 150.21 343 ⇑*e*PKP **PKiKP** 18 52 26.8 +0.2
BRG **Berggiesshubel** 150.30 347 *e*PKPbc **PKiKP** 18 52 26.7 0.0
baz=15,slow=2.5
NEHR **Nehoiu** 150.32 327 ⇑P **PKPbc** 18 52 26.6 +0.5
LANS **Liptovska Anna** 150.33 339 *e*PKIKP **PKiKP** 18 52 27.6 +0.8
LANS *e* 18 52 33.8
LANS **Liptovska Anna** 150.33 339 *e*PKP **PKiKP** 18 52 27.6 +0.8
LANS *e* 18 52 33.8
KRLC **Kraliky** 150.34 343 *e*PKIKP **PKiKP** 18 52 26.8 0.0
KRLC **Kraliky** 150.34 343 ⇑*e*PKP **PKiKP** 18 52 26.8 0.0
GTTG **Gottingen** 150.35 352 *e*PKPbc **PKiKP** 18 52 26.8 0.0
baz=15,slow=2.5
MORC **Moravsky Berou** 150.39 341 ⇓P **PKPbc** 18 52 26.7 +0.4
MORC **Moravsky Berou** 150.39 341 *e*PKP **PKiKP** 18 52 27.0 +0.1
MORC **Moravsky Berou** 150.39 341 ⇓PKIKP **PKPbc** 18 52 26.7 +0.4
DOPR **Dopca** 150.39 328 ⇑P **PKiKP** 18 52 27.2 +0.1
ISR **Istrita** 150.40 326 ⇓P **PKPbc** 18 52 26.9 +0.5
ISR **Istrita** 150.40 326 ⇓PKIKP **PKPbc** 18 52 26.9 +0.5
NEUB **Neuenburg** 150.40 349 *e*PKPbc **PKiKP** 18 52 26.9 +0.1
baz=15,slow=2.5
MLR **Muntele Rosu** 150.45 327 ⇑P **PKPbc** 18 52 26.1 -0.5
MLR **Muntele Rosu** 150.45 327 ⇑PKIKP **PKPbc** 18 52 26.1 -0.5
PVCC **Panska Ves** 150.49 346 *e*PKIKP **PKiKP** 18 52 27.2 +0.2
PVCC *e* 18 52 34.4
PVCC **Panska Ves** 150.49 346 ⇑*e*PKP **PKiKP** 18 52 27.2 +0.2
PVCC *e*PKPAB **PKPab** 18 52 34.4 +1.0
RICC **Richard** 150.58 346 ⇑*e*PKP **PKiKP** 18 52 27.6 +0.4
HSKC **Hora Svate Kat** 150.66 347 *e*PKP **PKiKP** 18 52 27.4 0.0
CJR **Cluj-Napoca** 150.68 331 ⇑P **PKPbc** 18 52 27.3 +0.3
CJR **Cluj-Napoca** 150.68 331 ⇑PKIKP **PKPbc** 18 52 27.3 +0.3
KASTN **Kahler Asten** 150.87 354 *e*PKPbc **PKiKP** 18 52 27.9 +0.1
baz=15,slow=2.5
MARR **Marisel-Cluj** 150.92 332 ⇓P **PKiKP** 18 52 28.8 +0.6
PRA **Prague** 150.94 345 *e*PKIKP **PKiKP** 18 52 28.6 +0.6
PRA **Prague** 150.94 345 *e*PKP **PKiKP** 18 52 28.6 +0.6
MOX **Moxa** 150.97 349 *e*PKPbc **PKiKP** 18 52 28.2 +0.1
baz=15,slow=2.5
PRU **Pruhonice** 151.00 345 *e*PKIKP **PKiKP** 18 52 28.1 0.0
PRU *e* 18 52 35.7
PRU **Pruhonice** 151.00 345 *e*PKP **PKiKP** 18 52 28.1 0.0
PRU *e*PKPAB **PKPab** 18 52 35.7 +0.2
DRGR 151.01 332 ⇑P **PKPbc** 18 52 28.0 +0.2
DRGR 151.01 332 ⇑PKIKP **PKPbc** 18 52 28.0 +0.2
PLN **Plauen** 151.03 349 *e*PKPbc **PKiKP** 18 52 28.4 +0.2
baz=15,slow=2.5
TANN **Tannenbergstha** 151.04 348 *e*PKPbc **PKiKP** 18 52 28.6 +0.3
baz=15,slow=2.5
VRAC **Vranov** 151.08 342 ⇑P **PKiKP** 18 52 28.8 +0.4
VRAC **Vranov** 151.08 342 *e*PKP **PKiKP** 18 52 28.7 +0.4
VRAC **Vranov** 151.08 342 ⇑PKIKP **PKiKP** 18 52 28.8 +0.4
JAVC **Velka Javorina** 151.16 340 *e*PKP **PKiKP** 18 52 29.6 +1.0
ARR **Arges** 151.19 328 ⇑P **PKiKP** 18 52 29.4 +0.6
PSZ **Piszkesteto** 151.22 337 **PKPbc** 18 52 28.7 +0.4
PSZ **Piszkesteto** 151.22 337 ⇓P **PKiKP** 18 52 29.8 +1.1
PSZ **Piszkesteto** 151.22 337 PKIKP **PKPbc** 18 52 28.7 +0.4
KRUC **Moravsky** 151.36 342 *e*PKP **PKPbc** 18 52 28.2 -0.3
TREC **Trest** 151.40 343 *e*PKIKP **PKPbc** 18 52 29.1 +0.1
TREC **Trest** 151.40 343 ⇑*e*PKP **PKPbc** 18 52 29.1 +0.1
RAZG **Razgrad** 151.45 323 ⇑P **PKPbc** 18 52 28.7 -0.2
MANZ **Manzenberg** 151.51 348 *e*PKPbc **PKiKP** 18 52 29.6 +0.3
baz=15,slow=2.5
UCC **Uccle** 151.52 359 *d*PKIKP **PKPbc** 18 52 29.2 +0.4
UCC *d*PKP **PKPab** 18 52 37.3 -0.4
UCC **Uccle** 151.52 359 PKIKP **PKPdf** 18 52 23.6 +1.2
LOT **Lotru** 151.55 329 ⇑P **PKiKP** 18 52 29.8 +0.3
ZVC **Zvikov** 151.59 345 ⇑*e*PKP **PKiKP** 18 52 29.5 +0.1
HUMR **Humele** 151.61 327 ⇓P **PKPbc** 18 52 29.4 +0.3
MEM **Membach** 151.65 357 *d*PKIKP **PKPbc** 18 52 29.3 +0.3
MEM *d*PKP **PKPab** 18 52 37.7 -0.5
BTNL **Ternell** 151.66 356 *d*PKIKP **PKPbc** 18 52 29.5 +0.3
BSTI **Sart Tilman** 151.69 357 *d*PKIKP **PKPbc** 18 52 29.5 +0.3
MODS **Modra-Piesok** 151.72 340 *e*PKIKP **PKiKP** 18 52 31.2 +1.5
MODS **Modra-Piesok** 151.72 340 *e*PKP **PKiKP** 18 52 31.2 +1.5
COPA **Copaceanca** 151.76 326 ⇓P **PKPbc** 18 52 28.9 -0.6
SIRR **Siria** 151.87 333 ⇑P **PKPbc** 18 52 29.7 -0.1
BHOU **Houvegnez** 151.90 357 *d*PKIKP **PKiKP** 18 52 30.2 +0.2
BHOU *d*PKP **PKPab** 18 52 39.3 0.0
BGES **Gesves** 151.91 358 *d*PKP **PKPab** 18 52 38.9 -0.4
GRFO **Grafenberg** 151.96 349 **PKPab** 18 52 38.4 -1.2
BMRD **Maredsous** 152.00 358 *d*PKIKP **PKPbc** 18 52 30.2 +0.4
BMRD *d*PKP **PKPab** 18 52 39.4 -0.3
KHC **Kasperske Hory** 152.02 346 ⇑*e*PKIKP **PKPdf** 18 52 23.7 +0.4
KHC **Kasperske Hory** 152.02 346 *e*PKP **PKiKP** 18 52 30.7 +0.4
KHC *e*PKPAB **PKPab** 18 52 39.8 -0.1
GZR **Gura Zlata** 152.05 330 ⇑P **PKPbc** 18 52 30.4 +0.1
GZR **Gura Zlata** 152.05 330 ⇑PKIKP **PKPbc** 18 52 30.4 +0.1
SURR **Surduc** 152.07 331 ⇑P **PKPbc** 18 52 28.3 -1.8
DOU **Dourbes** 152.22 358 *d*PKIKP **PKPbc** 18 52 30.8 +0.2
DOU *d*PKP **PKPab** 18 52 40.1 -0.5
ELND **Elena** 152.22 323 ⇑P **PKiKP** 18 52 31.0 +0.1
GEC2 **GERESS Array S** 152.26 345 *e*PKPbc **PKiKP** 18 52 31.0 +0.1
baz=15,slow=2.5
GERES **GERESS Array B** 152.26 345 PKP **PKPdf** 18 52 23.5 -0.3
comp=Z,1.2nm,0.8s,baz=64,slow=2.3,SNR=4.2
GERES PKPbc **PKPbc** 18 52 30.9 +0.2
comp=Z,9.4nm,0.9s,baz=263,slow=10,SNR=11
VLAD **Vladila** 152.28 326 ⇑P **PKiKP** 18 52 31.2 +0.3
BZS **Buzias** 152.40 332 ⇓P **PKiKP** 18 52 31.4 +0.2
BZS **Buzias** 152.40 332 ⇓PKIKP **PKiKP** 18 52 31.4 +0.2
BAND **Balkesir-Ban** 152.44 317 ⇓P **PKPbc** 18 52 30.6 -0.6
CONA **Conrad Observa** 152.54 342 *e*PKP **PKiKP** 18 52 31.7 +0.2
comp=Z,14nm,0.8s,SNR=7.6
CONA *e*PKP **PKPab** 18 52 41.8 -0.3
comp=Z,5.2nm,0.5s
WLF **Walferdange** 152.58 356 *d*PKIKP **PKPbc** 18 52 31.0 -0.2
WLF *d*PKP **PKPab** 18 52 42.4 +0.2
WLF **Walferdange** 152.58 356 *e*PKPbc **PKiKP** 18 52 32.4 +1.0
baz=15,slow=2.5
PLVB **Pleven** 152.59 325 ⇓P **PKi

	comp=Z,18nm,0.9s						
MOTA	**Moosalm**	**154.24 348**	*i* PKP	**PKPbc**	**18 52 34.9**	**-0.2**	
	comp=Z,3.0nm,0.5s						
MOTA			*i* PKP	**PKPab**	**18 52 49.2**	**-0.2**	
	comp=Z,15nm,0.7s,SNR=6.0						
SQTA	**Sankt Quirin**	**154.34 348**	*i* PKP	**PKPbc**	**18 52 35.3**	**0.0**	
	comp=Z,6.0nm,0.7s						
SQTA			*i* PKP	**PKPab**	**18 52 49.5**	**-0.3**	
	comp=Z,5.3nm,0.6s						
MYKA	**Terra Mystica**	**154.34 344**	*i* PKP	**PKPbc**	**18 52 34.7**	**-0.5**	
	comp=Z,3.3nm,0.5s						
MYKA			*i* PKP	**PKPab**	**18 52 49.2**	**-0.6**	
	comp=Z,4.7nm,0.5s						
ABTA	**Abfaltersbach**	**154.51 345**	*e*PKP	**PKPbc**	**18 52 35.0**	**-0.6**	
	comp=Z,8.4nm,0.7s,SNR=4.1						
ABTA			*i* PKP	**PKPab**	**18 52 49.6**	**-0.9**	
	comp=Z,14nm,0.8s						
DAVA	**Damuels**	**154.51 350**	*i* PKiKP	**PKiKP**	**18 52 37.0**	**+1.4**	
	comp=Z,2.0nm,0.4s						
DAVA			*i* PKP	**PKPab**	**18 52 50.0**	**-0.6**	
	comp=Z,12nm,0.6s						
FETA	**Feichten**	**154.62 348**	*i* PKP	**PKPbc**	**18 52 36.0**	**+0.1**	
	comp=Z,5.7nm,0.8s						
FETA			*e*PKP	**PKPab**	**18 52 50.9**	**-0.2**	
	comp=Z,16nm,1.0s,SNR=5.0						
ESDC	**Sonseca Array**	**161.53 18**	PKPab	**PKPab**	**18 53 21.8**	**+0.7**	
	comp=Z,4.2nm,0.8s,baz=320,slow=3.7,SNR=12						
DBIC	**Dimbokro**	**162.53 151**		**PKPdf**	**18 52 37.6**	**+0.1**	
DBIC				**PKPab**	**18 53 24.5**	**-1.5**	
DBIC	**Dimbokro**	**162.53 151**	PKP	**PKPdf**	**18 52 37.2**	**-0.3**	
	comp=Z,3.8nm,0.5s,baz=220,slow=1.2,SNR=5.3						
DBIC			PKPab	**PKPab**	**18 53 26.1**	**+0.1**	
	comp=Z,9.2nm,1.0s,baz=217,slow=6.7,SNR=4.6						
DBIC	**Dimbokro**	**162.53 151**	PKIKP	**PKPdf**	**18 52 37.6**	**+0.1**	
DBIC					18 53 24.5		
KEST	**Kesra**	**165.64 340**	PKPab	**PKPab**	**18 53 38.8**	**-0.5**	
	comp=Z,7.6nm,0.8s,baz=323,slow=5.1,SNR=5.5						
TORD	**Torodi Ar. Bea**	**170.77 169**	PKP	**PKPdf**	**18 52 43.1**	**-0.5**	
	comp=Z,3.0nm,0.4s,baz=17,slow=2.2,SNR=3.3						
TORD			PKPab	**PKPab**	**18 54 01.2**	**-1.0**	
	comp=Z,5.0nm,0.7s,baz=151,slow=3.1,SNR=4.0						

IDC 04 18:33:57.0±2.3, 5°31N×126°14E, h0km, mb3.4/4, mbtmp3.4/4, MS3.3/1, Error ellipse: s-maj=235.7km s-min=23.3km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.84**	**342**	LR	LR	18 34 41.1	
	comp=Z,18nm,21.8s,baz=200,slow=24						
BATI	**Baumata**	**15.61**	**189**	LR	LR	18 45 01.2	
	comp=Z,96nm,18.6s,baz=280,slow=43						
WRA	**Warramunga Arr**	**26.35**	**162**	P	P	18 39 34.2	-0.8
	0.7nm,0.7s,baz=341,slow=9.8,SNR=5.0						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**29.78**	**166**	P	P	18 40 06.7	+1.0
	0.1nm,0.8s,baz=348,slow=8.7,SNR=1.2						
	0.1nm,0.8s						
MKAR	**Makanchi Array**	**55.93**	**325**	P	P	18 43 37.4	+0.3
	0.3nm,0.5s,baz=111,slow=7.4,SNR=5.6						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**60.10**	**327**	P	P	18 44 05.7	-0.5
	0.4nm,0.6s,baz=128,slow=6.5,SNR=5.9						
	0.4nm,0.6s						

IDC 04 18:50:40.8±10.0, 32°07S×179°47W, h266km±107km, mb3.0/2, mbtmp3.6/3, Error ellipse: s-maj=106.2km s-min=49.7km az=0.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.78**	**203**	P	Pn	18 52 19.5	+0.7
	3.1nm,0.8s,baz=23,slow=13,SNR=1.3						
URZ				S	S	18 53 37.3	-0.4
	2.2nm,0.4s,baz=315,slow=23,SNR=6.9						
ASAR	**Alice Springs**	**41.80**	**269**	P	P	18 58 05.2	+0.2
	0.4nm,0.5s,baz=103,slow=7.5,SNR=10						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**42.94**	**275**	P	P	18 58 13.6	-0.5
	0.5nm,0.4s,baz=115,slow=7.8,SNR=8.0						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**146.25**	**338**	PKPbc	PKPdf	19 09 48.3	+0.6
	4.4nm,0.9s,baz=34,slow=6.7,SNR=3.7						

*KRNET **04** 19:06:49.0±0.1, 42°.53N×80°.69E, mb3.0*
*SOME **04** 19:06:51.5, 42°.15N×80°.45E, h20km*
ISC 04 19:06:52.6±2.7, 42°.42N±0°.08×80°.5E±0°.1, h12km±12km, n19, σ1°s44/38, 12C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.06**	**314**	*e*P	**Pb**	**19 07 11.1**	**-1.9**
	2.9nm,0.1s						
SHLS				*e*S	**Sb**	**19 07 25.3**	**-1.7**
	59nm,0.2s						
UZB	**Uzynbulak**	**1.31**	**304**	*e*P	**Pg**	**19 07 17.9**	**+0.2**
	1.9nm,0.2s						
UZB				*e*S	**Sg**	**19 07 37.3**	**+2.5**
	11nm,0.3s						
PRZ	**Przheval'sk**	**1.55**	**273**	⇑*i*P	**Pn**	**19 07 19.5**	**-0.8**
PRZ				⇑*i*S	**Sb**	**19 07 41.9**	**+0.7**
TARG	**Taragay, Kyrgy**	**2.12**	**252**	⇓*i*P	**Pn**	**19 07 28.0**	**-0.3**
TARG				⇓*i*S	**Sn**	**19 07 56.2**	**+1.4**
KDJ	**Kajisay**	**2.48**	**264**	⇑*i*P	**Pn**	**19 07 32.3**	**-0.7**
KDJ				⇑*i*S	**Sn**	**19 08 04.0**	**+0.6**
KOTS	**Kotyrbulak**	**2.62**	**289**	*e*P	**Pb**	**19 07 40.0**	**+0.4**
	6.4nm,0.3s						
KOTS				*e*S	**Sg**	**19 08 14.8**	**-2.0**
	38nm,0.5s						
TNSS	**Tian-Shan**	**2.69**	**284**	*e*P	**Pb**	**19 07 41.5**	**+0.5**
	0.2nm,0.0s						
TNSS				*e*S	**Sg**	**19 08 17.6**	**-1.4**
	2.6nm,0.3s						
CHKK	**Chushkaly**	**2.94**	**300**	*e*P	**Pg**	**19 07 46.7**	**-2.3**
	0.9nm,0.1s						
CHKK				*e*S	**Sg**	**19 08 26.4**	**-0.7**
	10.0nm,0.3s						
TDK	**Taldyqorghan**	**2.99**	**330**	*e*P	**Pg**	**19 07 50.3**	**+0.3**
	5.1nm,0.3s						
TDK				*e*S	**Sg**	**19 08 32.6**	**+3.8**
	11nm,0.2s						
MTBS	**Maitube**	**3.08**	**285**	*e*P	**Pb**	**19 07 47.6**	**+0.2**
	0.5nm,0.1s						
MTBS				*e*S	**Sb**	**19 08 27.9**	**+2.9**
	11nm,0.4s						
ULHL	**Ulahol**	**3.16**	**268**	⇑*i*P	**Pn**	**19 07 41.8**	**-0.6**
ULHL				⇑*i*S	**Sn**	**19 08 20.7**	**+0.5**
BOOM	**Boomskoye usch**	**3.37**	**270**	⇑*i*P	**Pn**	**19 07 44.6**	**-0.7**
BOOM				⇑*i*S	**Sn**	**19 08 25.5**	**+0.1**
KST	**Kastek**	**3.40**	**282**	*e*P	**Pb**	**19 07 53.3**	**+0.4**
	1.6nm,0.2s						
KST				*e*S	**Sb**	**19 08 37.7**	**+3.4**
	10nm,0.4s						
JNKS	**Jany-Kuch**	**3.87**	**251**	⇓*i*P	**Pn**	**19 07 52.2**	**-0.1**
JNKS				⇓*i*S	**Sn**	**19 08 38.1**	**+0.3**
CHMS	**Chumysh**	**4.27**	**280**	⇓*i*P	**Pn**	**19 07 57.0**	**-0.6**
CHMS				⇓*i*S	**Sn**	**19 08 46.6**	**-0.8**
UCH	**Uchtor**	**4.44**	**270**	⇓*i*P	**Pn**	**19 08 00.0**	**-0.3**
UCH				⇓*i*S	**Sn**	**19 08 51.5**	**-0.6**
AAK	**Ala-Archa**	**4.44**	**275**	⇑*i*P	**Pn**	**19 07 59.6**	**-0.4**
AAK				⇑*i*S	**Sn**	**19 08 51.1**	**-0.6**
USP	**Ospenovka**	**4.49**	**285**	⇓*i*P	**Pn**	**19 08 00.0**	**-0.6**
USP				⇓*i*S	**Sn**	**19 08 51.6**	**-1.2**
ARLS	**Aral**	**4.62**	**265**	⇑*i*P	**Pn**	**19 08 02.2**	**-0.3**
ARLS				⇑*i*S	**Sn**	**19 08 55.6**	**-0.7**

*ATH **04** 19:56:26.3±0.3, 41°.97N×20°.87E, h10km, ML3.1/13, Manual Solution by G.Panopoulou First location: 2019/11/04 19:57:55, This location: 2019/11/04 20:09:10 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*SKO **04** 19:56:26.2, 41°.86N×20°.92E, h10km, ML3.2*
*PDG **04** 19:56:26.0±0.2, 41°.92N×20°.98E, h5km, ML3.2/13, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*BEO **04** 19:56:27.6±0.7, 41°.96N×20°.86E, h12km±4km, ML2.9/8*
*THE **04** 19:56:28.7, 42°.N±7°×2°.1E±°, h1km±35km, M2.8/14, MLh2.8/14*
ISC 04 19:56:26.4±1.1, 41°.93N±0°.02×20°.88E±0°.02, h6km±9km, n117, σ0s85/162, 13C-19D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.42**	**84**	⇓*i*Pg	**Pg**	**19 56 34.3**	**-0.2**
SKO				*i* Sg	**Sg**	**19 56 41.0**	**+1.0**
OHR	**Ohrid**	**0.82**	**184**	⇓*i*Pg	**Pg**	**19 56 41.2**	**-0.9**
OHR				*i* Sg	**Sg**	**19 56 53.3**	**+0.6**
OHR				*e*Lg	Lg	19 56 54.6	
	comp=E,1μm,0.5s						
OHR				*e*Lg	Lg	19 56 56.0	
	comp=N,933nm,0.7s						
PVY	**Plav**	**0.95**	**314**	⇑*i*Pg	**Pg**	**19 56 43.6**	**-1.1**
PVY				*i* Sg	**Sb**	**19 56 58.4**	**+0.1**
TIR	**Tirane**	**0.96**	**233**	*i* Pg	**Pg**	**19 56 44.3**	**-0.4**
TIR				*i* Sg	**Sn**	**19 56 59.4**	**-0.9**
IVA	**Berane**	**1.19**	**322**	⇓*i*Pg	**Pg**	**19 56 48.6**	**-0.6**
IVA				*i* Sg	**Sn**	**19 57 06.7**	**+0.5**
ULC	**Ulcinj**	**1.22**	**272**	⇑*i*Pg	**Pg**	**19 56 48.9**	**-0.9**
ULC				*i* Sg	**Sn**	**19 57 08.4**	**+1.6**
DRME	**Dracevica, Mon**	**1.29**	**282**	⇓*i*Pg	**Pn**	**19 56 49.9**	**-1.0**
DRME				*i* Sg	**Sn**	**19 57 10.1**	**+1.7**
SELS	**Selova**	**1.30**	**8**	*e*Pg	**Pn**	**19 56 51.1**	**0.0**
SELS				*e*Sg	**Sn**	**19 57 08.6**	**-0.2**
KBN	**Korca**	**1.31**	**183**	P	**Pn**	**19 56 50.1**	**-1.1**
KBN				S	**Sn**	**19 57 09.4**	**+0.4**
PDG	**Podgorica**	**1.31**	**293**	P	**Pn**	**19 56 49.7**	**-1.4**
PDG				S	**Sb**	**19 57 06.8**	**-1.5**
PDG	**Podgorica**	**1.31**	**293**	⇑*i*Pg	**Pn**	**19 56 50.4**	**-0.7**
PDG				*i* Sg	**Sn**	**19 57 10.7**	**+1.9**
BOSS	**Bosilegrad**	**1.31**	**64**	*e*Pg	**Pg**	**19 56 51.1**	**-0.1**
BOSS				*e*Sg	**Sg**	**19 57 09.3**	**+0.7**
KOME	**Kolasin**	**1.37**	**313**	⇓*i*Pg	**Pn**	**19 56 51.4**	**-0.6**
KOME				*i* Sg	**Sn**	**19 57 12.8**	**+2.3**
VAY	**Valandovo**	**1.40**	**115**	⇓*i*Pg	**Pn**	**19 56 52.0**	**-0.4**
VAY				*i* Sg	**Sb**	**19 57 10.1**	**-0.9**
VAY				*e*Lg	Lg	19 57 12.2	
	comp=E,287nm,0.4s						
VAY				*e*Lg	Lg	19 57 12.6	
	comp=N,407nm,0.6s						
SJES	**Sjenica**	**1.49**	**334**	*e*Pg	**Pb**	**19 56 54.2**	**-0.3**
SJES				*e*Sg	**Sg**	**19 57 14.7**	**+0.4**
NEST	**Nestorio**	**1.52**	**175**	P	**Pn**	**19 56 53.2**	**-0.9**
NEST				S	**Sg**	**19 57 16.2**	**+1.0**
NEST	**Nestorio**	**1.52**	**175**	P	**Pn**	**19 56 53.0**	**-1.1**
NEST				S	**Sn**	**19 57 14.2**	**-0.1**
BUM	**Brajici-Budva**	**1.52**	**285**	⇓*i*Pn	**Pb**	**19 56 54.5**	**-0.5**
BUM				*i* Sn	**Sg**	**19 57 18.1**	**+2.7**
CEME	**Cevo**	**1.58**	**294**	⇓*i*Pn	**Pn**	**19 56 55.1**	**+0.1**
CEME				*i* Sn	**Sg**	**19 57 20.1**	**+2.9**
TRAN	**Tran**	**1.59**	**55**	P	**Pn**	**19 56 55.6**	**+0.5**
GOCS	**Kraljevo Serbi**	**1.63**	**360**	*e*Pn	**Pn**	**19 56 55.5**	**-0.2**
GOCS				*e*Sg	**Sg**	**19 57 19.1**	**+0.3**
NKME	**Niksic**	**1.66**	**301**	⇑*i*Pn	**Pn**	**19 56 56.0**	**0.0**
NKME				*i* Sn	**Sg**	**19 57 22.0**	**+2.4**
KKB	**Krupnik**	**1.68**	**92**	P	**Pn**	**19 56 56.4**	**+0.1**
KKB				S	**Sn**	**19 57 18.2**	**+0.2**
KKB	**Krupnik**	**1.68**	**92**	P	**Pn**	**19 56 56.4**	**+0.1**
KKB	**Krupnik**	**1.68**	**92**	⇓*i*Pg	**Pn**	**19 56 56.5**	**+0.3**
KKB				*i* Sg	**Sn**	**19 57 18.1**	**0.0**
KNT	**Kendrikon**	**1.70**	**116**	P	**Pn**	**19 56 56.2**	**-0.3**
KNT				S	**Sn**	**19 57 17.5**	**-1.0**
KNT	**Kendrikon**	**1.70**	**116**	⇓*i*Pg	**Pn**	**19 56 56.2**	**-0.3**
KNT				*i* Sg	**Sn**	**19 57 17.9**	**-0.6**
KNT	**Kendrikon**	**1.70**	**116**	P	**Pn**	**19 56 56.0**	**-0.5**
KNT				S	**Sn**	**19 57 17.4**	**-1.1**
IVAS	**Ivanjica**	**1.73**	**342**	*e*Pn	**Pn**	**19 56 56.7**	**-0.3**
IVAS				*e*Sg	**Sg**	**19 57 22.5**	**+0.5**
PENT	**Pentalofos**	**1.74**	**174**	P	**Pn**	**19 56 57.5**	**+0.3**
KZN	**Kozani**	**1.75**	**157**	P	**Pn**	**19 56 58.2**	**+0.9**
KZN				S	**Sb**	**19 57 21.3**	**+0.1**
KZN	**Kozani**	**1.75**	**157**	P	**Pn**	**19 56 58.0**	**+0.7**
PLE	**Pljevlja**	**1.78**	**322**	⇑*i*Pn	**Pb**	**19 56 58.5**	**-0.9**
PLE				*i* Sn	**Sg**	**19 57 24.3**	**+0.7**
BOVS	**Bovan**	**1.81**	**19**	*e*Pn	**Pn**	**19 56 58.0**	**0.0**
BOVS				*e*Sg	**Sg**	**19 57 23.9**	**-0.6**
HCY	**Herceg Novi**	**1.85**	**287**	⇓*i*Pn	**Pb**	**19 56 59.8**	**-0.7**
HCY				*i* Sn	**Sg**	**19 57 26.1**	**+0.4**
ZAPS	**Zavoj**	**1.86**	**43**	*e*Pn	**Pb**	**19 57 00.1**	**-0.7**
ZAPS				*e*Sg	**Sg**	**19 57 28.8**	**+0.5**
VTS	**Vitosha**	**1.88**	**68**	P	**Pn**	**19 56 59.3**	**+0.2**
VTS				S	**Sb**	**19 57 24.7**	**-0.2**
UPM	**Unac-Piva**	**1.94**	**312**	⇓*i*Pn	**Pb**	**19 57 01.0**	**-1.1**
UPM				*i* Sn	**Sg**	**19 57 28.3**	**-0.3**
GRUS	**Gruza**	**1.96**	**356**	*e*Pn	**Pn**	**19 57 00.3**	**+0.2**
GRUS				*e*Sg	**Sg**	**19 57 28.4**	**-1.0**
PLNA	**Plana**	**1.97**	**73**	P	**Pn**	**19 57 01.4**	**+1.1**
BRY	**Bratogost**	**1.99**	**300**	⇓*i*Pn	**Pb**	**19 57 02.1**	**-0.9**
BRY				*i* Sn	**Sg**	**19 57 29.7**	**-0.5**
BLSH	**Balsha**	**2.00**	**62**	P	**Pg**	**19 57 05.7**	**+1.0**
RUDO	**Rudo**	**2.02**	**327**	*e*Pn	**Pn**	**19 57 00.4**	**-0.5**
RUDO	**Rudo**	**2.02**	**327**	*e*Pg	**Pn**	**19 57 01.7**	**+0.8**
TREB	**Trebinje**	**2.04**	**294**	*e*Pn	**Pb**	**19 57 03.2**	**-0.5**
TREB	**Trebinje**	**2.04**	**294**	*e*Pn	**Pb**	**19 57 03.5**	**-0.2**
TREB				*e*Sg	**Sg**	**19 57 30.9**	**-0.8**
THE	**Thessaloniki**	**2.04**	**129**	P	**Pn**	**19 57 02.0**	**+0.9**
THE				S	**Sn**	**19 57 26.7**	**-0.1**
THE	**Thessaloniki**	**2.04**	**129**	*i* Pn	**Pb**	**19 57 02.7**	**-1.0**
THE	**Thessaloniki**	**2.04**	**129**	P	**Pn**	**19 57 06.6**	**+0.5**
KLINJ	**Klinje**	**2.10**	**307**	*e*Pn	**Pb**	**19 57 05.4**	**+0.5**
ZAGS	**Zajecar**	**2.13**	**27**	*e*Pn	**Pn**	**19 57 03.2**	**+0.8**
ZAGS				*e*Sg	**Sg**	**19 57 34.1**	**-0.6**
HORT	**Hortiatis**	**2.14**	**128**	P	**Pn**	**19 57 02.3**	**-0.3**
BLKB	**Belogradchik**	**2.15**	**37**	⇓P	**Pn**	**19 57 03.8**	**+1.1**
BLKB				⇓S	Sn	19 57 07.0	-23
SOH	**Sokhos**	**2.17**	**120**	P	**Pn**	**19 57 02.8**	**-0.1**
SOH	**Sokhos**	**2.17**	**120**	*i* Pn	**Pn**	**19 57 03.0**	**+0.1**
SOH	**Sokhos**	**2.17**	**120**	P	**Pn**	**19 57 02.9**	**-0.1**
MMB	**Musomishta**	**2.18**	**99**	P	**Pn**	**19 57 03.3**	**+0.2**
MMB				S	**Sn**	**19 57 30.6**	**+0.1**
MMB	**Musomishta**	**2.18**	**99**	P	**Pn**	**19 57 03.7**	**+0.6**
MMB	**Musomishta**	**2.18**	**99**	*i* Pn	**Pn**	**19 57 03.4**	**+0.3**
SRS	**Serrai**	**2.19**	**111**	P	**Pn**	**19 57 03.3**	**0.0**
SRS	**Serrai**	**2.19**	**111**	*i* Pn	**Pn**	**19 57 03.2**	**-0.1**
SRS				*i* Sg	**Sn**	**19 57 30.5**	**-0.2**
SRS	**Serrai**	**2.19**	**111**	P	**Pn**	**19 57 03.2**	**-0.1**
LIT	**Litokhoron**	**2.20**	**146**	P	**Pn**	**19 57 03.9**	**+0.5**
LIT	**Litokhoron**	**2.20**	**146**	*i* Pn	**Pn**	**19 57 03.9**	**+0.5**
LIT	**Litokhoron**	**2.20**	**146**	P	**Pn**	**19 57 03.9**	**+0.5**
BBLS	**Lazi&#263i**	**2.22**	**331**	*e*Pn	**Pn**	**19 57 04.1**	**+0.4**
DIVS	**Divibare**	**2.26**	**344**	*e*Pn	**Pn**	**19 57 04.3**	**0.0**
JAN	**Janina**	**2.27**	**181**	P	**Pb**	**19 57 07.1**	**-0.6**
JAN	**Janina**	**2.27**	**181**	P	**Pn**	**19 57 03.8**	**-0.6**
BORS2	**Bor- Borsko je**	**2.31**	**21**	*e*Pn	**Pn**	**19 57 05.7**	**+0.7**
BORS2				*e*Sg	**Sg**	**19 57 40.5**	**-0.2**
TRUS	**Trudelj**	**2.32**	**352**	*e*Pn	**Pn**	**19 57 05.0**	**0.0**
TRUS				*e*Sg	**Sg**	**19 57 40.6**	**-0.2**
KEK	**Kerkira**	**2.36**	**201**	P	**Pb**	**19 57 10.3**	**+1.0**
PRMD	**Pramanda**	**2.40**	**176**	P	**Pn**	**19 57 07.7**	**+1.5**
IGT	**Igoumenitsa**	**2.43**	**190**	P	**Pn**	**19 57 08.3**	**+1.7**
IGT	**Igoumenitsa**	**2.43**	**190**	*i* Pn	**Pn**	**19 57 08.3**	**+1.7**
IGT	**Igoumenitsa**	**2.43**	**190**	P	**Pn**	**19 57 07.3**	**+0.7**
PLG	**Polygyros**	**2.48**	**128**	P	**Pn**	**19 57 07.5**	**+0.2**
PLG	**Polygyros**	**2.48**	**128**	P	**Pn**	**19 57 07.2**	**-0.1**
THL	**Klokotos Trika**	**2.52**	**160**	P	**Pn**	**19 57 08.2**	**+0.5**
THL	**Klokotos Trika**	**2.52**	**160**	P	**Pn**	**19 57 07.8**	**+0.1**
MPEP	**Malo Peshtene**	**2.54**	**55**	P	**Pg**	**19 57 15.5**	**+0.4**
KUBS	**Kucevo**	**2.55**	**13**	*e*Pn	**Pn**	**19 57 07.0**	**-1.2**
VALD	**Valchedram**	**2.57**	**46**	P	**Pg**	**19 57 16.1**	**+0.4**
TETR	**Tetrakomo, Epi**	**2.60**	**173**	P	**Pn**	**19 57 10.7**	**+1.7**
TETR	**Tetrakomo, Epi**	**2.60**	**173**	P	**Pn**	**19 57 08.8**	**-0.2**
AVAS	**Avala Beograd**	**2.78**	**355**	*e*Pn	**Pn**	**19 57 11.3**	**0.0**
AVAS				*e*Sg	**Sg**	**19 57 55.9**	**+0.3**
TEKS	**Tekeris**	**2.80**	**340**	*e*Pn	**Pn**	**19 57 11.2**	**-0.4**
KAVA	**Kavala**	**2.88**	**108**	P	**Pn**	**19 57 13.1**	**+0.3**
KAVA	**Kavala**	**2.88**	**108**	P	**Pn**	**19 57 12.7**	**-0.1**
MDVR	**Moldovita**	**2.91**	**12**	⇑P	**Pn**	**19 57 13.2**	**0.0**
MDVR				⇓S	Sn	19 57 20.0	-29
MAKR	**Makrakomi, Fth**	**3.07**	**161**	P	**Pn**	**19 57 15.7**	**+0.3**
NOCI	**Noci**	**3.09**	**250**	P	**Pn**	**19 57 15.3**	**-0.3**
EVR	**Evrytania**	**3.09**	**166**	P	**Pn**	**19 57 16.2**	**+0.5**
AGG	**Agios Georgios**	**3.11**	**159**	P	**Pn**	**19 57 16.4**	**+0.5**
HERR	**Herculane**	**3.15**	**20**	⇓P	**Pn**	**19 57 16.9**	**+0.4**
HERR				⇑S	Sn	19 57 25.6	-29
NEO	**Neokhori**	**3.17**	**145**	P	**Pn**	**19 57 16.7**	**-0.1**
VRSS	**Vrsac**	**3.21**	**6**	*e*Pn	**Pn**	**19 57 17.0**	**-0.2**
VRSS				*e*Sg	**Sg**	**19 58 08.5**	**-0.9**
NYDR	**Nydri-Lefkada**	**3.22**	**183**	P	**Pn**	**19 57 17.1**	**-0.2**
EVGI	**Lefkada island**	**3.31**	**183**	P	**Pn**	**19 57 17.4**	**-1.2**
LTRZ	**Laterza**	**3.34**	**248**	P	**Pn**	**19 57 18.2**	**-0.8**
ANX	**Ano Chora**	**3.43**	**166**	P	**Pn**	**19 57 20.5**	**+0.2**
AXAR	**Agios Charalam**	**3.44**	**156**	P	**Pn**	**19 57 21.0**	**+0.6**
RDO	**Rodhopi**	**3.58**	**101**	P	**Pn**	**19 57 22.4**	**+0.1**
BZS	**Buzias**	**3.72**	**8**	⇑P	**Pn**	**19 57 23.9**	**-0.4**
BZS				⇓S	Sn	19 57 36.9	-32
BZS	**Buzias**	**3.72**	**8**	*e*Pn	**Pn**	**19 57 23.8**	**-0.5**
GZR	**Gura Zlata**	**3.73**	**21**	⇑P	**Pn**	**19 57 24.9**	**+0.5**
BLY	**Banja Luka**	**3.90**	**317**	*e*Pn	**Pb**	**19 57 36.6**	**+1.1**
SURR	**Surduc**	**3.93**	**13**	⇑P	**Pn**	**19 57 25.3**	**-1.8**
SURR				⇑S	Sn	19 57 37.5	-36
ARR	**Arges**	**4.38**	**37**	⇑P	**Pn**	**19 57 34.7**	**+1.2**
MORH	**Mrgy, Hungar**	**4.58**	**340**	*e*Pn	**Pn**	**19 57 34.7**	**-1.3**
MORH	**Mrgy, Hungar**	**4.58**	**340**	*e*Pn	**Pn**	**19 57 35.9**	**-0.1**
DRGR		**5.03**	**14**	⇓P	**Pn**	**19 57 42.4**	**0.0**
DRGR		**5.03**	**14**	*e*Pn	**Pn**	**19 57 42.9**	**+0.5**
MLR	**Muntele Rosu**	**5.11**	**44**	⇑P	**Pn**	**19 57 46.0**	**+2.5**
MLR	**Muntele Rosu**	**5.11**	**44**	*e*Pn	**Pn**	**19 57 44.1**	**+0.6**
AQU	**L'Aquila**	**5.58**	**277**	*e*Pn	**Pn**	**19 57 50.5**	**+0.7**
KECS	**Kecovo**	**6.56**	**358**	*e*PN	**Pn**	**19 58 04.3**	**+1.0**

IDC 04 20:21:49.4±1.5, 49°.63S×125°.29E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=104.3km s-min=22.7km az=100.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.85**	**327**	T	T	20 43 16.4	
	baz=152,slow=74						
H01W2	**Cape Leeuwin H**	**16.85**	**327**	T	T	20 43 08.9	
	baz=152,slow=74						
H01W3	**Cape Leeuwin H**	**16.87**	**327**	T	T	20 43 21.1	
	baz=152,slow=74						
ASAR	**Alice Springs**	**26.79**	**18**	P	P	20 27 31.1	+0.1
	0.4nm,0.5s,baz=192,slow=8.9,SNR=7.5						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**30.49**	**17**	P	P	20 28 03.9	-0.2
	0.3nm,0.9s,baz=197,slow=8.2,SNR=1.3						
	0.3nm,0.9s						
VNDA	**Vanda**	**31.22**	**166**	P	P	20 28 09.6	-0.4
	0.6nm,0.8s,baz=304,slow=12,SNR=5.5						
	0.6nm,0.8s						
SNAA	**Sanae**	**53.58**	**198**	P	P	20 31 11.8	+0.2
	1.7nm,0.9s,baz=159,slow=8.7,SNR=5.8						
	1.7nm,0.9s						

*NEIC **04** 20:52:04.5±0.9, 45°.04N±0°.01×67°.02W±0°.02, h5km±2km, ML1.9/6, Error ellipse: s-maj=3.4km s-min=2.6km az=128.0*
*OTT **04** 20:52:05.2±0.3, 45°.07N×66°.99W, h5km, MN2.5/7, 6km east from Saint Andrews, Nb Northern Appalachians Seismic Zone.*
ISC 04 20:52:04.1±1.0, 45°.05N±0°.04×67°.00W±0°.03, h13km±6km, n20, σ1°s36/31, 1D, New Brunswick

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GGN	**Saint George**	**0.13**	**56**	Pg	**Pg**	**20 52 07.5**	**+0.1**
GGN				Sg	**Sg**	**20 52 09.6**	**-0.3**
GGN				IAML		20 52 09.7	
	comp=N,1μm,0.1s						
GGN	**Saint George**	**0.13**	**56**	⇓PG	**Pg**	**20 52 07.5**	**+0.1**
GGN				SG	**Sg**	**20 52 09.5**	**-0.3**
GGN				Trac		20 52 09.6	
	comp=N,944nm,0.

IDC 04 21:15:01.1±5.2, 4°.83S×152°.20E, h0km, mb3.9/4, mbtmp3.9/4, MS3.0/1, Error ellipse: s-maj=134.0km s-min=43.6km az=166.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.76**	**227**	Pn	Pn	21 16 49.3	+7.7
	1.6nm,0.3s,baz=45,slow=13,SNR=4.3						
PMG				Sn	Sb	21 18 12.7	-8.2
	2.0nm,0.3s,baz=313,slow=11,SNR=3.1						
HNR	**Honiara**	**8.94**	**121**	LR	LR	21 20 41.6	
	comp=Z,93nm,18.6s,baz=316,slow=38						
WRA	**Warramunga Arr**	**22.98**	**228**	P	P	21 20 08.3	+0.7
	1.8nm,0.4s,baz=52,slow=10,SNR=23						
	1.8nm,0.4s						
ASAR	**Alice Springs**	**25.73**	**222**	P	P	21 20 33.0	-0.4
	0.4nm,0.5s,baz=61,slow=8.6,SNR=9.5						
	0.4nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**27.23**	**31**	T	T	21 48 11.5	
	baz=210,slow=75						
H11S2	**WAKE ISLAND Hy**	**27.23**	**31**	T	T	21 48 09.3	
	baz=210,slow=75						
H11S1	**WAKE ISLAND Hy**	**27.25**	**31**	T	T	21 48 05.2	
	baz=210,slow=75						
VNDA	**Vanda**	**72.82**	**178**	P	P	21 26 31.1	-0.1
	1.4nm,0.8s,baz=337,slow=6.7,SNR=11						
	1.4nm,0.8s						
QSPA	**South Pole Qui**	**85.13**	**180**	P	P	21 27 39.2	+0.1
	2.3nm,0.8s,baz=38,slow=0.6,SNR=7.8						
	2.3nm,0.8s						

*GCG **04** 21:38:02.4±1.7, 14°.29N×93°.03W, h35km±999km, MD4.2, ML3.2*
*MEX **04** 21:38:03.6±0.5, 14°.47N×93°.05W, h10km, MD4.0*
ISC 04 21:38:00.1±3.2, 14°.4N±0°.1×93°.02W±0°.09, h6km±13km, n13, σ1s73/21, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PATR	**El Naranjo**	**1.02**	**48**	*eP*	**Pg**	**21 38 20.0**	**+0.3**
PATR				*eS*	**Sg**	**21 38 33.5**	**+0.5**
CHUJ	**Union Juarez**	**1.10**	**53**	*eP*	**Pg**	**21 38 21.3**	**0.0**
CHUJ				*eS*	**Sg**	**21 38 35.9**	**+0.2**
PAVE	**Pavencul**	**1.12**	**47**	*eP*	**Pg**	**21 38 21.5**	**0.0**
PAVE				*eS*	**Sg**	**21 38 35.3**	**-0.7**
PCIG		**1.28**	**351**	*eP*	**Pn**	**21 38 23.3**	**-1.2**
PCIG				*eS*	**Sb**	**21 38 37.8**	**-3.6**
RTAL	**Retalhuleu**	**1.29**	**86**	*eP*	**Pn**	**21 38 23.8**	**-0.8**
RTAL				*eS*	**Sb**	**21 38 39.4**	**-2.1**
STG2	**El Palmar, Qui**	**1.59**	**89**	*eP*	Pn	21 38 25.4	-3.5
CCIG	**Comitan**	**2.03**	**25**	*eP*	**Pn**	**21 38 37.3**	**+2.3**
CCIG				*eS*	**Sn**	**21 39 01.2**	**+0.5**
CCIG	**Comitan**	**2.03**	**25**	*eP*	**Pn**	**21 38 37.7**	**+2.8**
CCIG				IAML		21 39 09.9	
	comp=N,106nm,0.3s						
QUIS	**Sacapulas**	**2.05**	**65**	*eP*	**Pn**	**21 38 37.1**	**+1.9**
QUIS				IAML		21 39 09.5	
	comp=E,227nm,0.4s						
TGIG		**2.34**	**358**	*eP*	**Pn**	**21 38 39.2**	**+0.2**
TGIG				*eS*	**Sn**	**21 39 06.5**	**-1.7**
TGIG		**2.34**	**358**	*i P*	**Pn**	**21 38 40.5**	**+1.4**
TGIG				*eS*	**Sn**	**21 39 09.6**	**+1.4**
APG	**El Apazote**	**2.54**	**77**	*eP*	**Pn**	**21 38 43.0**	**+1.0**
UXUV	**UXUV**	**3.07**	**339**	*eP*	**Pn**	**21 38 51.1**	**+2.0**
UXUV				*eS*	**Sn**	**21 39 27.7**	**+1.6**

*LDO **04** 21:48:48.2±0.8, 41°.13N±0°.01×74°.04W±0°.01, h2km±4km, Error ellipse: s-maj=1.6km s-min=1.2km az=211.0*
NEIC 04 21:48:48.0±0.7, 41°.125N±0°.010×74°.03W±0°.02, h6km±2km, ML1.9/9, ML1.6/11(LDO), Error ellipse: s-maj=1.8km s-min=1.5km az=70.0, New York

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAL	**Palisades**	**0.15**	**143**	Pg	Pg	21 48 51.2	+0.2
PAL				Sg	Sg	21 48 53.4	+0.3
FOR	**Fordham**	**0.28**	**158**		Pg	21 48 53.7	+0.2
FOR					Sg	21 48 57.4	+0.1
BRNY	**Black Rk. Fore**	**0.29**	**2**		Pg	21 48 53.6	-0.1
BRNY					Sg	21 48 57.2	-0.3
CPNY	**Central Park**	**0.34**	**172**	Pg	Pg	21 48 54.0	-0.6
CPNY				Sg	Sg	21 48 58.7	-0.3
CUNY	**Queens College**	**0.42**	**158**		Sg	21 49 01.9	+0.2
N62A	**Caumsett State**	**0.46**	**114**	Pg	Pg	21 48 57.1	+0.1
N62A				Sg	Sg	21 49 03.3	+0.3
N62A				IAML		21 49 09.0	
	129nm,0.1s						
WSPT	**Westport, CT**	**0.53**	**85**	Pg	Pg	21 48 58.3	+0.1
WSPT				Sg	Sg	21 49 04.7	-0.3
WSPT				IAML		21 49 09.9	
	73nm,0.1s						
WSPT				IAML		21 49 09.9	
	74nm,0.1s						
BRNJ	**Basking Ridge**	**0.60**	**223**		Sg	21 49 07.2	-0.2
BRNJ	**Basking Ridge**	**0.60**	**223**	Pg	Pg	21 48 59.2	-0.4
NPNY	**Mohonk Preserv**	**0.64**	**352**		Pg	21 48 59.8	-0.5
NPNY					Sg	21 49 08.0	-0.6
KSCT	**Kent School, K**	**0.72**	**34**	Pg	Pg	21 49 01.3	-0.7
KSCT				Sg	Sg	21 49 11.0	-0.4
KSCT				IAML		21 49 15.8	
	comp=E,28nm,0.4s						
L59A	**Walton**	**1.31**	**325**	Pg	Pn	21 49 11.7	-1.2
L59A				Sg	Sb	21 49 28.7	-1.5
L59A				IAML		21 49 50.8	
	comp=E,24nm,3.4s						
KSPA	**Keystone Colle**	**1.38**	**289**		Pn	21 49 13.3	-0.5
UCCT	**U. Connecticut**	**1.51**	**63**		Sn	21 49 34.1	-1.5
UCCT	**U. Connecticut**	**1.51**	**63**		Pn	21 49 14.9	-0.7
M63A	**Gales Ferry**	**1.52**	**79**		Pn	21 49 15.3	-0.4
PSUB	**Penn St. - Bra**	**1.62**	**223**		Pn	21 49 16.8	-0.3
L61B	**Northampton**	**1.66**	**37**	Pn	Pn	21 49 16.7	-1.0
WUPA	**West Chester U**	**1.69**	**226**		Pn	21 49 17.6	-0.5
WUPA	**West Chester U**	**1.69**	**226**		Pn	21 49 17.9	-0.2
N58A	**Sunbury**	**2.06**	**263**	Pn	Pn	21 49 22.8	-0.3
HRV	**Adam Dziewonsk**	**2.30**	**52**	Pn	Pn	21 49 25.8	-0.7
M57A	**Sunshine Farm,**	**2.35**	**276**	Pn	Pn	21 49 26.4	-0.7
WES	**Weston**	**2.38**	**57**	Pn	Pn	21 49 27.1	-0.4
K57A	**Scipio Center**	**2.46**	**312**	Pn	Pn	21 49 27.1	-1.5
MCVT	**Middlebury Col**	**2.93**	**15**		Pn	21 49 37.4	+2.2

*BJI **04** 21:53:21.1, 31°.81S×71°.77W, h35km, mB6.1/65, Ms6.3/35, Ms7 6.2/34*
*VAO **04** 21:53:23.1±0.9, 31°.77S×71°.15W, h34km±6km, mb6.1*
*SJA **04** 21:53:23.9±0.9, 31°.76S×71°.38W, h57km, ML6.1, MW6.1*
*MOS **04** 21:53:23.7±1.1, 31°.80S×71°.40W, h48km, mb6.4/46, MS5.9/18, Error ellipse: s-maj=10.8km s-min=6.2km az=95.7*
*IPGP **04** 21:53:24.0, 31°.82S×71°.37W, h57km, Mw6.1, Fault plane solution: NP1:φs183.00000°, δ31.00000°, λ99.00000°. NP2:φs353.00000°, δ59.00000°, λ85.00000°.*
*NEIC **04** 21:53:24.9, 31°.82S×71°.37W, h60km*
*NEIC **04** 21:53:24.9, 31°.72S×71°.72W, h60km, Moment Tensor Solution. Duration: 5s7 Moment tensor: Scale 10^18Nm; Mrr1.41; Mθθ-0.02; Mφφ-1.39; Mrθ-0.33; Mθφ-0.22; Mφr0.46; Fault plane solution: M0 1.53000×10^18 NP1: φs202.45000°, δ38.78000°, λ112.27000°. NP2: φs354.74000°, δ54.57000°, λ73.06000°. Principal axes: T 1.5685, Plg74.0000°, Azm217.0000°; N -0.0871, Plg14.0000°, Azm5.0000°; P -1.4814, Plg8.0000°, Azm97.0000°;*
*GUC **04** 21:53:24.5±0.8, 31°.81S×71°.34W, h56km±4km, ML6.1*
*NEIC **04** 21:53:25, 31°.81S×71°.37W, h50km*
*NEIC **04** 21:53:25.3±2.3, 31°.84S±0°.04×71°.38W±0°.06, h53km±1km, mb6.2/796, Mwb6.2/191, Mww6.1/30, Mww6.1(GUC), Error ellipse: s-maj=8.3km s-min=6.1km az=270.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr2.39; Mθθ-0.28; Mφφ-2.11; Mrθ-0.41; Mθφ-0.32; Mφr1.36; Fault plane solution: M0 2.69000×10^18 NP1: φs357.08000°, δ60.76000°, λ78.62000°. NP2: φs199.47000°, δ31.19000°, λ109.41000°. Principal axes: T 2.8422, Plg72.0000°, Azm240.0000°; N -0.3371, Plg10.0000°, Azm3.0000°; P -2.5051, Plg15.0000°, Azm95.0000°;*
*CATAC **04** 21:53:25.4±0.4, 32°.52±2°.×7°.1W±°., h58km±3km, M6.3/7, mb6.1/7, mB6.5/7, MLv6.8/4, Mw(mB)6.2/7, MwMwp5.8/6, Mwp5.9/6 Error ellipse: s-maj=11.9km s-min=4.8km az=83.2, confirmed*
*ISC-PP **04** 21:53:25, 31°.84S×71°.38W, h46km, Mwppsm6.5, Moment Tensor Solution. s27 Moment tensor: Scale 10^18Nm; Mrr0.58±.16; Mθθ0.02±.16; Mφφ-0.73±.17; Mrθ-0.15±.15; Mθφ0.20±.33; Mφr-0.05±.10; Fault plane solution: M0 6.53000×10^18 NP1:φs350.00000°, δ54.90000°, λ72.80000°. NP2:φs198.30000°, δ38.60000°, λ112.80000°.*
*IDC **04** 21:53:25.9±0.3, 31°.77S×71°.25W, h59km±2km, mb5.7/19, mbtmp6.0/22, MS5.7/29 Error ellipse: s-maj=9.7km s-min=8.5km az=31.0*
*GCMT **04** 21:53:26.3±0.1, 31°.81S±0°.01×71°.37W±0°.01, h67km, MW6.1/158, Moment Tensor Solution. s158, c375; s150, c466; Duration: 2s8 Moment tensor: Scale 10^18 Nm; Mrr1.44±.01; Mθθ0.23±.01; Mφφ-1.67±.01; Mrθ-0.34±.01; Mθφ-0.27±.01; Mφr0.90±.01; Best double couple: M0 1.85200×10^18 NP1:φs205.00000°, δ33.00000°, λ118.00000°. NP2:φs352.00000°, δ61.00000°, λ73.00000°. Principal axes: T 1.7800, Plg69.0000°, Azm227.0000°; N 0.1410, Plg15.0000°, Azm1.0000°; P -1.9240, Plg14.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*OSUNB **04** 21:53:26.6±0.3, 31°.81S×71°.08W, h74km±2km, mb6.1/10 Error ellipse: s-maj=2.1km s-min=1.8km az=0.0*
ISC 04 21:53:24.6±0.2, 31°.78S±0°.02×71°.34W±0°.03, h52km±1km, h52km:pP-P,n1969,σ1s61/1951, mb6.2/422, MS5.9/49, 129C-75D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO04	**Los Peladeros**	**0.41**	**130**	*eP*	**Pn**	**21 53 35.1**	**-0.2**
CO02	**Combarbal**	**0.65**	**27**		**Pn**	**21 53 38.2**	**+0.4**
CO02	**Combarbal**	**0.65**	**27**	*eP*	**Pn**	**21 53 38.2**	**+0.4**
CO02	**Combarbal**	**0.65**	**27**	*iP*	**Pn**	**21 53 38.0**	**+0.1**
CO02	**Combarbal**	**0.65**	**27**	*eP*	**Pn**	**21 53 38.3**	**+0.4**
CO02				IAML		21 53 53.1	
	comp=Z,683μm,2.5s						
VA06	**Catapilco**	**0.78**	**177**		**Pn**	**21 53 39.1**	**-0.3**
VA06				Sn	**Sn**	**21 53 49.0**	**-1.3**
VA06	**Catapilco**	**0.78**	**177**	*eP*	**Pn**	**21 53 39.1**	**-0.3**
VA06				*i* S	**Sn**	**21 53 50.6**	**+0.3**
CO03	**El Pedregal**	**1.09**	**31**		**Pn**	**21 53 44.3**	**+0.6**
CO03				Sn	**Sn**	**21 53 57.1**	**-0.7**
CO03	**El Pedregal**	**1.09**	**31**	*eP*	**Pn**	**21 53 44.4**	**+0.6**
CO03				*i* S	**Sn**	**21 53 59.2**	**+1.4**
CO03	**El Pedregal**	**1.09**	**31**	*eP*	**Pn**	**21 53 44.5**	**+0.8**
CO03				IAML		21 54 14.7	
	comp=Z,133μm,1.9s						
CO03	**El Pedregal**	**1.09**	**31**	P	**Pn**	**21 53 44.4**	**+0.6**
CO03				S	**Sn**	**21 53 59.4**	**+1.5**
CO06	**Fray Jorge**	**1.13**	**347**		**Pn**	**21 53 44.9**	**+0.8**
CO06				Sn	**Sn**	**21 53 57.2**	**-1.4**
CO06	**Fray Jorge**	**1.13**	**347**	*eP*	**Pn**	**21 53 44.8**	**+0.6**
CO06				*i* S	**Sn**	**21 54 01.1**	**+2.5**
VA03	**San Esteban**	**1.19**	**146**		**Pn**	**21 53 45.0**	**0.0**
VA03				Sn	**Sn**	**21 54 00.1**	**0.0**
VA03	**San Esteban**	**1.19**	**146**	*eP*	**Pn**	**21 53 44.7**	**-0.2**
VA03	**San Esteban**	**1.19**	**146**	*eP*	**Pn**	**21 53 44.7**	**-0.2**
ROCH	**El Roble**	**1.22**	**167**	*eP*		21 53 45.6	
ROCH				*iP*	**Pn**	**21 53 45.4**	**-0.1**
ROCH				*i* S	**Sn**	**21 54 01.5**	**+0.4**
ROCH				*i* S		21 54 01.5	
ROCH				IAML		21 54 07.1	
	comp=E,761μm,0.8s						
ROC1	**El Roble**	**1.22**	**167**	*eP*	**Pn**	**21 53 46.3**	**+0.7**
ROC1				*eS*	**Sn**	**21 54 03.0**	**+1.8**
VA01	**Torpederas**	**1.27**	**192**		**Pn**	**21 53 45.2**	**-0.7**
VA01				Sn	**Sn**	**21 54 01.1**	**-0.7**
VA01	**Torpederas**	**1.27**	**192**	*eP*	**Pn**	**21 53 46.0**	**+0.1**
VA01				*eS*	**Sn**	**21 54 02.2**	**+0.4**
VA01				IAML		21 54 09.2	
	comp=E,308μm,0.3s						
VA01	**Torpederas**	**1.27**	**192**	*eP*	**Pn**	**21 53 45.6**	**-0.3**
VA01				IAML		21 54 07.3	
	comp=Z,331μm,1.4s						
PEL	**Peldehue**	**1.47**	**158**	Pn	**Pn**	**21 53 48.6**	**-0.1**
PEL				Sn	**Sn**	**21 54 06.0**	**-0.9**
PEL	**Peldehue**	**1.47**	**158**	P	**Pn**	**21 53 48.0**	**-0.7**
PEL				S	**Sn**	**21 54 03.9**	**-3.0**
PEL	**Peldehue**	**1.47**	**158**	*eP*	**Pn**	**21 53 48.6**	**-0.1**
PEL				*i* S	**Sn**	**21 54 07.9**	**+1.0**
PEL	**Peldehue**	**1.47**	**158**	*iP*	**Pn**	**21 53 48.4**	**-0.4**
PEL	**Peldehue**	**1.47**	**158**	P	**Pn**	**21 53 48.6**	**-0.1**
PEL				S	**Sn**	**21 54 03.7**	**-3.2**
MT02	**Curacav**	**1.48**	**173**	Pn	**Pn**	**21 53 49.0**	**+0.1**
MT02				Sn	**Sn**	**21 54 07.7**	**+0.5**
MT02	**Curacav**	**1.48**	**173**	*eP*	**Pn**	**21 53 48.7**	**-0.2**
MT02	**Curacav**	**1.48**	**173**	*eP*	**Pn**	**21 53 49.2**	**+0.2**
MT02				IAML		21 54 10.9	
	comp=Z,136μm,0.9s						
MT10	**Hacienda Santa**	**1.64**	**156**	*eP*	**Pn**	**21 53 51.1**	**0.0**
MT10				*i* S	**Sn**	**21 54 11.5**	**+0.4**
GO04	**Tololo Observa**	**1.67**	**16**	Pn	**Pn**	**21 53 53.2**	**+1.5**
GO04	**Tololo Observa**	**1.67**	**16**	*eP*	**Pn**	**21 53 52.5**	**+0.8**
GO04				*i* S	**Sn**	**21 54 14.4**	**+2.3**
GO04	**Tololo Observa**	**1.67**	**16**	*iP*	**Pn**	**21 53 52.6**	**+1.0**
GO04	**Tololo Observa**	**1.67**	**16**	*eP*	**Pn**	**21 53 53.1**	**+1.4**
GO04				IAML		21 54 22.8	
	comp=Z,372μm,0.7s						
MT05	**Renca**	**1.69**	**163**	Pn	**Pn**	**21 53 52.6**	**+0.9**
MT05	**Renca**	**1.69**	**163**	*eP*	**Pn**	**21 53 51.7**	**0.0**
MT05				*i* S	**Sn**	**21 54 12.9**	**+0.7**
MT05				IAML		21 54 16.3	
	comp=E,520μm,0.5s						
MT05	**Renca**	**1.69**	**163**	*eP*	**Pn**	**21 53 51.6**	**0.0**
MT05				IAML		21 54 18.2	
	comp=Z,384μm,1.0s						
RTLS	**Leoncito**	**1.74**	**91**	*eP*	**Pn**	**21 53 54.6**	**+1.9**
RTLS				*eS*	**Sn**	**21 54 14.6**	**+0.7**
RTLS				IAML		21 54 25.8	
	comp=Z,399μm,1.0s						
MT14	**Cerro Cal¡n**	**1.75**	**157**	*eP*	**Pn**	**21 53 52.6**	**+0.1**
MT14				*i* S	**Sn**	**21 54 14.1**	**+0.4**
MT14				IAML		21 54 18.2	
	comp=E,445μm,0.7s						
MT16	**CCHEN**	**1.78**	**157**	Pn	**Pn**	**21 53 53.4**	**+0.4**
MT16	**CCHEN**	**1.78**	**157**	*eP*	**Pn**	**21 53 53.1**	**+0.1**
MT16				*i* S	**Sn**	**21 54 14.8**	**+0.2**
MT16				IAML		21 54 19.4	
	comp=N,143μm,0.7s						
MT03	**Universidad Ad**	**1.85**	**158**	Pn	**Pn**	**21 53 54.4**	**+0.5**
MT03	**Universidad Ad**	**1.85**	**158**	*eP*	**Pn**	**21 53 54.3**	**+0.3**
MT03				*i* S	**Sn**	**21 54 19.1**	**+2.9**
MT03	**Universidad Ad**	**1.85**	**158**	*eP*	**Pn**	**21 53 54.5**	**+0.6**
MT03				*eS*	**Sn**	**21 54 19.2**	**+2.9**
MT03				IAML		21 54 21.7	
	comp=Z,242μm,1.1s						
CO05	**La Serena**	**1.86**	**3**	Pn	**Pn**	**21 53 55.4**	**+1.4**
CO05	**La Serena**	**1.86**	**3**	*iP*	**Pn**	**21 53 54.9**	**+0.9**
CO05				*i* S	**Sn**	**21 54 18.7**	**+2.3**
CO05				IAML		21 54 27.1	
	comp=E,365μm,0.4s						
MT04	**Ro Olivares**	**1.91**	**148**	*eP*	**Pn**	**21 53 55.5**	**+0.5**
MT04				*i* S	**Sn**	**21 54 20.7**	**+2.7**
MT04				IAML		21 54 28.6	
	comp=E,206μm,0.5s						
MT04	**Ro Olivares**	**1.91**	**148**	*eP*	**Pn**	**21 53 55.5**	**+0.5**
MT04				*eS*	**Sn**	**21 54 22.6**	**+4.6**
MT04				IAML		21 54 27.8	
	comp=Z,84μm,1.0s						
MT15	**Las Vizcachas**	**1.94**	**159**	*eP*	**Pn**	**21 53 55.4**	**+0.2**
MT15				*i* S	**Sn**	**21 54 18.8**	**+0.3**
MT15				IAML		21 54 25.5	
	comp=E,344μm,0.4s						
MT08	**Bocatoma Ro**	**2.00**	**146**	Pn	**Pn**	**21 53 57.2**	**+1.1**
MT08	**Bocatoma Ro**	**2.00**	**146**	*eP*	**Pn**	**21 53 57.0**	**+0.9**
MT08				*i* S	**Sn**	**21 54 24.7**	**+4.6**
MT08				IAML		21 54 28.3	
	comp=N,220μm,0.6s						
MT08	**Bocatoma Ro**	**2.00**	**146**	*eP*	**Pn**	**21 53 57.5**	**+1.3**
MT08				*eS*	**Sn**	**21 54 25.4**	**+5.3**
MT08				IAML		21 54 27.5	
	comp=Z,142μm,1.0s						
MT09	**Talagante**	**2.01**	**172**		**Pn**	**21 53 56.6**	**+0.4**
MT09	**Talagante**	**2.01**	**172**	*eP*	**Pn**	**21 53 56.6**	**+0.4**
MT09				*i* S	**Sn**	**21 54 20.9**	**+0.6**
MT09				IAML		21 54 31.0	
	comp=E,239μm,0.3s						
MT12	**Pirque**	**2.06**	**161**	*eP*	**Pn**	**21 53 56.7**	**-0.1**
MT12				IAML		21 54 38.2	
	comp=E,302μm,0.5s						
MT01	**Popeta**	**2.08**	**178**	Pn	**Pn**	**21 53 57.3**	**+0.3**
MT01	**Popeta**	**2.08**	**178**	*iP*	**Pn**	**21 53 56.9**	**-0.2**
MT01				*i* S	**Sn**	**21 54 22.5**	**+0.8**
MT01				IAML		21 54 28.9	
	comp=E,145μm,0.4s						
MT01	**Popeta**	**2.08**	**178**	*eP*	**Pn**	**21 53 57.5**	**+0.5**
MT01				*eS*	**Sn**	**21 54 25.6**	**+3.9**
MT01				IAML		21 54 29.6	
	comp=Z,125μm,0.9s						
CO01	**Juntas del Tor**	**2.09**	**31**	Pn	**Pn**	**21 53 59.3**	**+1.8**
CO01	**Juntas del Tor**	**2.09**	**31**	*eP*	**Pn**	**21 53 59.1**	**+1.6**
CO01				IAML		21 54 28.3	
	comp=E,166μm,0.7s						
CO01	**Juntas del Tor**	**2.09**	**31**	*eP*	**Pn**	**21 53 59.1**	**+1.6**
CO01				*eS*	**Sn**	**21 54 24.7**	**+2.2**
CO01				IAML		21 54 29.1	
	comp=Z,112μm,0.8s						
AROD	**Rodeo**	**2.27**	**45**	*eP*	**Pn**	**21 54 03.1**	**+3.1**
LMEL	**Las Melosas**	**2.27**	**155**	Pn	**Pn**	**21 54 01.0**	**+1.1**
LMEL	**Las Melosas**	**2.27**	**155**	*eP*	**Pn**	**21 54 00.5**	**+0.7**
LMEL				IAML		21 54 35.7	
	comp=N,181μm,0.4s						
LMEL	**Las Melosas**	**2.27**	**155**	*eP*	**Pn**	**21 54 00.6**	**+0.7**
LMEL				*eS*	**Sn**	**21 54 30.4**	**+3.7**
LMEL				IAML		21 54 36.2	
	comp=Z,87μm,0.4s						
ASAL	**Salagasta**	**2.27**	**111**	*eP*	**Pn**	**21 54 02.7**	**+2.9**
ZON	**Zonda**	**2.28**	**85**	Pn	**Pn**	**21 54 02.4**	**+2.5**
ZON	**Zonda**	**2.28**	**85**	P	**Pn**	**21 54 02.4**	**+2.5**
ZON	**Zonda**	**2.28**	**85**	*iP*	**Pn**	**21 54 02.4**	**+2.5**
ZON	**Zonda**	**2.28**	**85**	*eP*	**Pn**	**21 54 02.5**	**+2.7**
ZON				IAML		21 54 45.6	
	comp=Z,44μm,0.9s						
ACCO	**Cerro Coronel**	**2.29**	**59**	*eP*	**Pn**	**21 54 03.4**	**+3.2**
BO04	**La Punta**	**2.29**	**165**	Pn	**Pn**	**21 54 00.8**	**+0.9**
BO04	**La Punta**	**2.29**	**165**	*iP*	**Pn**	**21 54 00.0**	**+0.1**
BO04				*i* S	**Sn**	**21 54 28.2**	**+1.3**
BO04				IAML		21 54 32.1	
	comp=E,143μm,0.4s						
ARCO	**CERRO ARCO**	**2.30**	**118**	*eP*	**Pn**	**21 54 03.0**	**+2.9**
ARCO				IAML		21 54 46.0	
	comp=Z,61μm,0.8s						
SJA	**San Juan**	**2.38**	**85**	*eP*	**Pn**	**21 54 04.5**	**+3.3**
SJA				*i* S	**Sn**	**21 54 35.8**	**+6.4**
SJA				IAML		21 54 42.0	
	comp=Z,67μm,0.4s						
RTLL	**Cerro Villicun**	**2.49**	**80**	*eP*	**Pn**	**21 54 04.1**	**+1.4**
RTLL				*i* S	**Sn**	**21 54 38.6**	**+6.7**
RTLL				IAML		21 55 01.2	
	comp=Z,49μm,0.5s						
AAGR	**Agrelo**	**2.49**	**122**	*eP*	**Pn**	**21 54 05.8**	**+3.0**
ACDV	**Cuesta del Vie**	**2.49**	**51**	*eP*	**Pn**	**21 54 06.3**	**+3.4**
ACDV				IAML		21 54 59.7	
	comp=Z,44μm,0.6s						
BO01	**Tunca**	**2.61**	**175**		**Pn**	**21 54 04.4**	**+0.1**
BO01	**Tunca**	**2.61**	**175**	*iP*	**Pn**	**21 54 04.0**	**-0.3**
BO01				*i* S	**Sn**	**21 54 35.1**	**+0.2**
BO01	**Tunca**	**2.61**	**175**	*eP*	**Pn**	**21 54 04.1**	**-0.2**
BO01				IAML		21 54 49.4	
	comp=Z,75μm,1.4s						
CFA	**Coronel Fontan**	**2.65**	**87**	P	**Pn**	**21 54 06.7**	**+1.8**
	comp=Z,13μm,0.4s,baz=254,slow=12,SNR=2130						
CFA				S	**Sn**	**21 54 36.7**	**+0.8**
	comp=Z,20μm,0.4s,baz=85,slow=7.8,SNR=5.3						
CFA				LR	LR	21 55 21.6	
	comp=Z,183μm,19.2s,baz=282,slow=45						
CFA	**Coronel Fontan**	**2.65**	**87**	*eP*	**Pn**	**21 54 07.2**	**+2.3**
CFA				*eS*	**Sn**	**21 54 42.5**	**+6.6**
BO03	**Pichilemu**	**2.76**	**191**	*iP*	**Pn**	**21 54 04.9**	**-1.4**
BO03				IAML		21 54 55.5	
	comp=E,35μm,0.5s						
LCO	**Las Campanas**	**2.82**	**12**		**Pn**	**21 54 07.8**	**+0.4**
LCO	**Las Campanas**	**2.82**	**12**	*eP*	**Pn**	**21 54 07.8**	**+0.4**
LCO	**Las Campanas**	**2.82**	**12**	*iP*	**Pn**	**21 54 08.2**	**+0.8**
LCO				*eS*	**Sn**	**21 54 41.7**	**+1.5**
LCO	**Las Campanas**	**2.82**	**12**	*iP*	**Pn**	**21 54 08.2**	**+0.8**
LCO	**Las Campanas**	**2.82**	**12**	*eP*	**Pn**	**21 54 08.3**	**+0.9**
LCO				*eS*	**Sn**	**21 54 44.9**	**+4.7**
LCO				IAML		21 55 01.8	
	comp=E,85μm,0.8s						
LCO	**Las Campanas**	**2.82**	**12**	P	**Pn**	**21 54 08.3**	**+0.9**
LCO				S	**Sn**	**21 54 43.3**	**+3.0**
AVIZ	**Vizcacheras**	**2.92**	**126**	*eP*	**Pn**	**21 54 10.5**	**+1.9**
BO02	**Sierra Bellavi**	**3.04**	**171**	Pn	**Pn**	**21 54 11.0**	**+0.7**
BO02	**Sierra Bellavi**	**3.04**	**171**	*iP*	**Pn**	**21 54 10.2**	**0.0**
BO02				*i* S	**Sn**	**21 54 46.5**	**+1.0**
BO02				IAML		21 54 56.8	
	comp=N,128μm,0.4s						
BO02	**Sierra Bellavi**	**3.04**	**171**	*iP*	**Pn**	**21 54 10.2**	**0.0**
BO02	**Sierra Bellavi**	**3.04**	**171**	*eP*	**Pn**	**21 54 10.9**	**+0.7**
BO02				*eS*	**Sn**	**21 54 50.1**	**+4.7**
BO02				IAML		21 55 02.8	
	comp=Z,97μm,1.4s						
GO05	**Hualane**	**3.26**	**189**	*iP*	**Pn**	**21 54 11.7**	**-1.5**
GO05	**Hualane**	**3.26**	**189**	*eP*	**Pn**	**21 54 12.2**	**-1.0**
GO05				IAML		21 55 07.8	
	comp=Z,61μm,1.4s						
AGUA	**GUANDACOL**	**3.36**	**48**	*eP*	**Pn**	**21 54 18.3**	**+3.6

PLCA Paso Flores 8.96 176 eP Pn 21 55 30.4 -0.9
LL03 Petrohue 9.38 185 Pn Pn 21 55 34.7 -2.3
TRQA Tornquist 9.91 132 Pn Pn 21 55 43.6 -0.7
TRQA Tornquist 9.91 132 P Pn 21 55 43.6 -0.7
TRQA Tornquist 9.91 132 P Pn 21 55 43.4 -0.9
TRQA S Sn 21 57 32.1 -2.0
LL01 San Ignacio de 10.61 184 ⇓P Pn 21 55 51.6 -2.3
TA01 Diego Aracena 11.22 6 Pn 21 55 59.8 -2.4
LL02 Futaleuf 11.40 182 Pn Pn 21 56 00.5 -4.1
LL02 Futaleuf 11.40 182 ⇓P Pn 21 56 01.5 -3.1
PSAL Palomas, Salto 11.75 90 eP Pn 21 56 06.7 -2.8
PB08 IPOC Station P 11.76 10 P Pn 21 56 04.8 -5.2
GO01 Chusmiza 12.22 10 Pn Pn 21 56 10.9 -5.4
PB12 IPOC Station P 13.14 4 Pn Pn 21 56 23.7 -5.0
AP01 Chacalluta 13.38 4 Pn Pn 21 56 28.6 -3.3
CPUP Villa Florida 13.40 70 Pn 21 56 29.3 -2.8
CPUP Villa Florida 13.40 70 P Pn 21 56 29.4 -2.6
comp=Z,32nm,0.6s,baz=104,slow=12,SNR=78
CPUP S Sn 21 58 50.2 -9.3
comp=Z,146nm,0.9s,baz=113,slow=11,SNR=3.3
CPUP LR LR 22 02 16.6
comp=Z,25µm,18.3s,baz=107,slow=40
CPUP Villa Florida 13.40 70 P Pn 21 56 29.3 -2.8
CPUP Villa Florida 13.40 70 P Pn 21 56 28.8 -3.3
CPUP Villa Florida 13.40 70 eP Pn 21 56 28.6 -3.4
PB16 IPOC Station P 13.49 7 Pn Pn 21 56 30.5 -3.4
COYC Coyhaique 13.78 182 Pn Pn 21 56 35.8 -1.3
COYC Coyhaique 13.78 182 ⇑P Pn 21 56 35.5 -1.7
PB18 Visviri 14.23 7 Pn Pn 21 56 41.2 -2.6
PLTB Pedras Altas 15.09 95 Pn Pn 21 56 50.1 -4.4
PLTB Pedras Altas 15.09 95 P Pn 21 56 49.4 -5.1
PLTB Pedras Altas 15.09 95 eP Pn 21 56 49.8 -4.7
CPSB Cacapava Do Su 15.40 90 P Pn 21 56 53.4 -5.2
CPSB Cacapava Do Su 15.40 90 eP Pn 21 56 53.7 -4.9
AY03 Cochrane 15.48 183 Pn Pn 21 56 57.6 -1.8
LPAZ La Paz 15.70 11 P Pn 21 57 03.1 +0.1
comp=Z,207nm,0.7s,baz=186,slow=7.0,SNR=281
LPAZ La Paz 15.70 11 ⇑P Pn 21 57 01.8 -1.2
LPAZ La Paz 15.70 11 P Pn 21 57 03.0 0.0
LPAZ La Paz 15.70 11 eP Pn 21 57 01.5 -1.5
AMBA Amambai (Brazi 16.98 63 eP Pn 21 57 16.5 -2.0
BDQN Bodoquena, MS 17.27 53 eP Pn 21 57 19.8 -2.3
ITAB Concordia 17.32 80 Pn Pn 21 57 20.8 -2.0
ITAB IAmb IAmb 21 57 27.7
comp=Z,4µm,2.0s
ITAB Concordia 17.32 80 P Pn 21 57 19.6 -3.1
ITAB Concordia 17.32 80 eP Pn 21 57 19.6 -3.1
CNLB Canela 17.82 87 P Pn 21 57 26.3 -2.6
CNLB Canela 17.82 87 eP Pn 21 57 26.1 -2.8
AQDB Aquidauana 17.98 55 P 21 57 29.1 -1.7
AQDB Aquidauana 17.98 55 P P 21 57 27.5 -3.3
AQDB S Sn 22 00 51.0 +0.5
AQDB Aquidauana 17.98 55 eP P 21 57 28.8 -2.0
SIV San Ignacio 18.29 33 P P 21 57 33.2 -1.1
comp=Z,414nm,0.6s,baz=197,slow=7.9,SNR=468
SIV pP pP 21 57 46.4 +0.1
comp=Z,304nm,0.9s,baz=217,slow=14,SNR=7.5
SIV LR LR 22 05 58.7
comp=Z,43µm,20.7s,baz=220,slow=41
PTGB Pitanga 18.37 72 P P 21 57 34.1 -1.1
PTGB S Sn 22 00 58.7 -1.5
PTGB Pitanga 18.37 72 eP P 21 57 33.7 -1.5
GO09 Cerro Castillo 19.49 182 P 21 57 47.7 +0.6
GO09 IAmb IAmb 21 57 51.9
comp=Z,2µm,1.3s
PTLB Pontes e Lacer 19.70 37 P 21 57 48.6 -1.1
PTLB Pontes e Lacer 19.70 37 P P 21 57 49.1 -0.6
PTLB Pontes e Lacer 19.70 37 eP P 21 57 48.8 -0.9
MAJ01 Sao Joao Batis 19.90 83 P P 21 57 49.6 -2.2
MAJ01 S S 22 01 30.1 -2.9
MAJ01 Sao Joao Batis 19.90 83 eP P 21 57 51.0 -0.8
MG05 Puerto Natales 19.90 182 P 21 57 51.8 +0.2
MG05 IAmb IAmb 21 57 59.2
comp=Z,3µm,1.4s
NNA Nana 20.34 344 P 21 57 56.1 -0.6
NNA Nana 20.34 344 P P 21 57 57.9 +1.2
comp=Z,272nm,1.2s,baz=190,slow=11,SNR=18
NNA LR LR 22 04 16.8
comp=Z,17µm,20.7s,baz=172,slow=32
comp=Z,272nm,1.2s
NNA Nana 20.34 344 ceP P 21 57 56.8 +0.1
NNA pmax pmax
comp=Z,459nm,1.3s
NNA Nana 20.34 344 ⇑P P 21 57 57.8 +1.1
PP1B Ponte de Pedra 20.53 50 eP P 21 57 58.0 -0.7
TIJ01 Guaruva-PR 20.63 77 P P 21 57 55.6 -4.3
TIJ01 S S 22 01 38.9 -8.8
FRTB Fartura 21.03 72 P P 21 58 02.2 -1.9
FRTB S S 22 01 52.8 -2.8
FRTB Fartura 21.03 72 eP P 21 58 03.0 -1.1
MG02 Cerro Sombrero 21.04 176 P P 21 58 03.2 -0.7
MG02 IAmb IAmb 21 58 11.6
comp=Z,2µm,1.2s
MG02 Cerro Sombrero 21.04 176 ⇑P P 21 58 05.0 +1.1
C2SB Chapadao do Su 21.12 57 P P 21 58 04.7 -0.3
C2SB S S 22 01 56.4 -0.9
C2SB Chapadao do Su 21.12 57 eP P 21 58 04.8 -0.3
SALV Santo Antonio 21.28 46 P P 21 58 05.6 -1.3
SALV S S 22 01 57.7 -2.8
SALV Santo Antonio 21.28 46 eP P 21 58 05.5 -1.3
VILB Vilhena 21.36 31 P P 21 58 06.4 -1.1
VILB IAmb IAmb 21 58 23.6
comp=Z,1µm,0.8s
VILB Vilhena 21.36 31 P P 21 58 06.6 -1.1
VILB Vilhena 21.36 31 eP P 21 58 06.5 -1.1
MAS01 UHE Manso 22.00 44 P P 21 58 13.2 -1.3
MAS01 S S 22 02 12.7 -1.7
EFI East Falkland 22.14 158 P P 21 58 14.4 -1.3
EFI East Falkland 22.14 158 ceP P 21 58 14.5 -1.3
EFI pmax pmax
comp=Z,752nm,0.9s
EFI MLR MLR
comp=Z,30µm,21.0s
EFI East Falkland 22.14 158 ⇓P P 21 58 15.0 -0.7
ITRB Iturama 22.36 62 P P 21 58 16.5 -1.8
ITRB S S 22 02 16.6 -4.3
ITRB Iturama 22.36 62 eP P 21 58 16.5 -1.8
PET01 Itanhaem-SP 22.49 77 P P 21 58 17.5 -2.2
PET01 S S 22 02 18.9 -4.2
PET01 Itanhaem-SP 22.49 77 eP P 21 58 17.5 -2.2
SPB Sao Paulo 22.66 75 P P 21 58 19.9 -1.6
SPB Sao Paulo 22.66 75 ⇑P P 21 58 19.8 -2.0
SPB Sao Paulo 22.66 75 P P 21 58 19.8 -1.6
SPB S S 22 02 23.4 -2.6
SPB Sao Paulo 22.66 75 eP P 21 58 19.9 -1.6
LABB L¡brea 22.96 14 P P 21 58 24.4 -0.3
LABB S S 22 02 29.0 -2.2
BB19B Bebedouro 23.00 68 P P 21 58 22.4 -2.8
BB19B S S 22 02 26.2 -5.8
BB19B Bebedouro 23.00 68 eP P 21 58 22.5 -2.6
RCLB Rio Claro- Sao 23.12 72 P P 21 58 23.6 -2.7
RCLB S S 22 02 30.0 -3.9
RCLB Rio Claro- Sao 23.12 72 eP P 21 58 24.1 -2.2
USHA Ushuaia 23.13 176 LR LR 22 08 22.8
comp=Z,18µm,18.6s,baz=358,slow=39
MG01 Puerto William 23.29 175 P P 21 58 26.7 -0.9
MG01 IAmb IAmb 21 58 29.9
comp=Z,1µm,1.1s
VABB Valinhos 23.30 74 P P 21 58 25.9 -2.3
VABB S S 22 02 32.6 -4.3
VAO Valinhos 23.30 74 P P 21 58 26.1 -2.0
VAO Valinhos 23.30 74 eP P 21 58 26.2 -2.0
ARAG Araguaiana, MT 23.93 53 eP P 21 58 32.2 -1.7
CZSB Cruzeiro do Su 23.96 357 P P 21 58 33.7 -0.5
PDRB Porto dos Gac 24.18 37 P P 21 58 35.5 -0.7
PDRB S S 22 02 46.8 -4.1
PDRB Porto dos Gac 24.18 37 eP P 21 58 34.6 -1.6
PARB Paraibuna 24.26 76 P P 21 58 35.0 -2.0
PARB S S 22 02 48.7 -3.6
PARB Paraibuna 24.26 76 eP P 21 58 35.4 -1.6
ITU3 Corumbazu 24.37 62 P P 21 58 36.3 -1.7
ITU3 S S 22 02 50.3 -3.8
IPMB Ipameri, GO 25.01 62 P P 21 58 42.1 -1.7
IPMB S S 22 02 59.6 -4.8
IPMB Ipameri, GO 25.01 62 eP P 21 58 42.2 -1.7
CANS Sao Roque de M 25.11 69 S S 22 03 02.6 -3.4
CLDB Colider 25.29 38 P P 21 58 45.4 -0.9
CLDB S S 22 03 12.0 +3.4
CLDB Colider 25.29 38 eP P 21 58 45.3 -1.0
SFA1 Serra Facao 25.40 63 P P 21 58 46.0 -1.4
SFA1 S S 22 03 05.4 -5.2

BAT3 Ipameri 25.87 62 P P 21 58 50.1 -1.6
BAT2 UHE Batalha 25.95 62 P P 21 58 50.7 -1.7
PMNB Patos De Minas 26.04 66 P P 21 58 51.8 -1.4
PMNB S S 22 03 13.8 -6.9
PMNB Patos De Minas 26.04 66 eP P 21 58 52.0 -1.2
BSCB Bom Sucesso 26.05 72 P P 21 58 51.3 -2.0
BSCB S S 22 03 17.6 -3.2
BSCB Bom Sucesso 26.05 72 eP P 21 58 51.7 -1.5
SNDB Serra Nova Dou 27.01 48 P P 21 59 01.0 -0.9
SNDB S S 22 03 29.2 -6.7
SNDB Serra Nova Dou 27.01 48 eP P 21 59 01.0 -0.9
DUB01 Friburgo-RJ 27.50 77 P P 21 59 05.4 -0.9
DUB01 S S 22 03 40.5 -3.2
DUB01 Friburgo-RJ 27.50 77 eP P 21 59 05.4 -0.9
CAN3 Cana Brava 28.17 54 P P 21 59 11.1 -1.1
CAM01 Campos-RJ 28.21 77 P P 21 59 11.5 -1.0
CAM01 Campos-RJ 28.21 77 eP P 21 59 11.6 -1.0
DIAM Diamantina, MG 28.34 68 P P 21 59 13.0 -0.9
DIAM S S 22 03 53.3 -3.9
DIAM Diamantina, MG 28.34 68 eP P 21 59 13.1 -0.9
JQT1 Jequitai-MG 28.40 66 P P 21 59 12.8 -1.6
MCRA Macar, Loja 28.44 342 P P 21 59 15.2 +0.5
comp=Z,13µmcomp=Z,3µmcomp=Z,159nm,1.3s
NPGB Novo Progresso 28.78 35 P P 21 59 15.7 -1.9
NPGB S S 22 03 58.5 -5.3
NPGB Novo Progresso 28.78 35 eP P 21 59 15.9 -1.7
TEFE Tefe 28.82 14 P P 21 59 16.9 -1.1
TEFE S S 22 04 01.2 -3.2
TEFE Tefe 28.82 14 eP P 21 59 17.0 -1.0
MC01 Montes Claros 29.03 65 P P 21 59 18.4 -1.6
MC01 S S 22 04 03.4 -4.5
COHC Cochancay 30.10 344 P P 21 59 31.1 +1.8
comp=Z,16µmcomp=Z,4µmcomp=Z,166nm,1.0s
SJMB Sao Joao De Ma 30.11 72 P P 21 59 28.1 -1.4
SJMB S S 22 04 19.1 -5.7
SJMB Sao Joao De Ma 30.11 72 eP P 21 59 27.4 -2.1
MACA Manacapuru-AM 30.18 22 P P 21 59 28.7 -1.4
MACA IAmb IAmb 21 59 32.2
comp=Z,423nm,0.7s
MACA Manacapuru-AM 30.18 22 P P 21 59 29.1 -1.0
MACA Manacapuru-AM 30.18 22 eP P 21 59 28.6 -1.4
BSFB Barra de Sao F 30.32 72 eP P 21 59 29.7 -1.6
LAJE UHE Lajeado 30.42 50 P P 21 59 31.1 -1.1
RIB01 Linhares ES 30.45 73 P P 21 59 31.4 -1.0
RIB01 S S 22 04 26.0 -3.9
RIB01 Linhares ES 30.45 73 eP P 21 59 31.8 -0.6
ITTB Itaituba 30.96 31 P P 21 59 35.4 -1.6
ITTB S S 22 04 31.7 -6.2
ITTB Itaituba 30.96 31 eP P 21 59 35.1 -1.8
SDBA SAO DESIDERIO 31.03 58 P P 21 59 36.4 -1.3
SDBA SAO DESIDERIO 31.03 58 eP P 21 59 36.1 -1.5
PIAT Ana Tenorio 31.31 347 P P 21 59 42.8 +2.4
comp=Z,14µmcomp=Z,3µmcomp=Z,162nm,1.0s
SGC2 Sao Gabriel da 31.73 8 P P 21 59 41.8 -1.8
SGC2 Sao Gabriel da 31.73 8 P P 21 59 42.2 -1.5
comp=Z,8µmcomp=Z,2µmcomp=Z,311nm,0.9s
SMTB Santa Maria do 31.73 49 P P 21 59 43.2 -0.6
SMTB Santa Maria do 31.73 49 eP P 21 59 43.4 -0.3
PTLC Puerto Leguiza 31.95 353 P P 21 59 44.3 -1.3
comp=Z,12µmcomp=Z,7µmcomp=Z,495nm,1.0s
GUA01 Guaratinga, BA 32.36 70 P P 21 59 47.8 -1.5
GUA01 Guaratinga, BA 32.36 70 eP P 21 59 48.6 -0.6
PRPB Paraupebas 32.47 43 P P 21 59 48.8 -1.4
PRPB Paraupebas 32.47 43 eP P 21 59 49.2 -1.0
ABR01 Abrolhos, BA 32.52 73 eP P 21 59 49.2 -1.4
OTAV Otavalo 32.55 347 P P 21 59 52.9 +1.5
OTAV Otavalo 32.55 347 eP P 21 59 53.7 +2.3
OTAV Otavalo 32.55 347 ⇑P P 21 59 52.8 +1.4
OTAV Otavalo 32.55 347 P P 21 59 53.0 +1.6
OTAV S S 22 05 05.0 +1.5
OTAV Otavalo 32.55 347 P P 21 59 53.2 +1.8
OTAV Otavalo 32.55 347 eP P 21 59 51.2 -0.1
OTAV Otavalo 32.55 347 P P 21 59 53.9 +2.5
comp=Z,13µmcomp=Z,4µmcomp=Z,137nm,1.7s
OTAV Otavalo 32.55 347 P P 21 59 53.5 +2.1
BONI La Bonita 32.59 348 P P 21 59 53.1 +1.6
comp=Z,12µmcomp=Z,2µmcomp=Z,98nm,1.1s
CUSE Cuicocha Este 32.60 347 P P 21 59 54.6 +2.8
comp=Z,5µmcomp=Z,114nm,0.7s
ANA01 Lindo Horizont 32.80 66 P P 21 59 51.7 -1.5
ESPZ Base Esperanza 32.92 168 P P 21 59 53.0 -0.6
ESPZ IAmb IAmb 21 59 56.3
comp=Z,639nm,1.1s
CMBC Cumbal 33.12 348 P P 22 00 00.1 +3.8
CMC01 Camacan, BA 33.27 68 P P 21 59 56.1 -1.1
CMC01 Camacan, BA 33.27 68 eP P 21 59 56.5 -0.7
GCUF Volcan Galeras 33.32 349 P P 22 00 00.3 +2.2
comp=Z,10µmcomp=Z,4µmcomp=Z,128nm,1.7s
PMSA Palmer Station 33.33 174 P P 21 59 57.1 0.0
PMSA Palmer Station 33.33 174 LR LR 22 14 14.8
comp=Z,16µm,18.4s,baz=353,slow=38
PMSA Palmer Station 33.33 174 ⇓P P 21 59 57.9 +0.8
PMSA Palmer Station 33.33 174 eP P 21 59 58.3 +1.2
FLOC Florencia 33.43 352 IAmb IAmb 22 01 07.6
comp=Z,399nm,1.2s
FLOC Florencia 33.43 352 P P 22 00 00.5 +1.9
FLOC S S 22 05 18.0 +1.5
FLOC Florencia 33.43 352 P P 22 00 00.5 +1.9
comp=Z,11µmcomp=Z,5µmcomp=Z,237nm,1.1s
PAL01 Palmeiras do T 33.45 47 P P 21 59 57.9 -0.9
HOPE Hope Point 33.45 143 P P 21 59 58.5 +0.2
HOPE IAmb IAmb 22 00 22.1
comp=Z,418nm,1.0s
HOPE Hope Point 33.45 143 P P 21 59 58.5 +0.2
HOPE pmax pmax
comp=Z,418nm,1.0s
HOPE Hope Point 33.45 143 ⇓P P 21 59 59.2 +0.9
HOPE Hope Point 33.45 143 P P 21 59 59.0 +0.7
HOPE pP pP 22 00 14.3 +2.2
PAL2 UHE Estreito - 33.51 47 P P 21 59 58.4 -0.9
NBIT Itapeh - BA 33.59 67 P P 21 59 58.9 -1.1
CRUC La Cruz 33.59 350 P P 22 00 03.9 +3.5
BMO2 UHE Belo Monte 33.64 37 P P 21 59 59.2 -1.2
MAL2 Monte Alegre, 33.74 32 IAmb IAmb 22 00 02.9
comp=Z,418nm,0.9s
MAL2 Monte Alegre, 33.74 32 P P 21 59 59.6 -1.7
MACC Macarena, Meta 33.82 355 P P 22 00 03.5 +1.5
comp=Z,9µmcomp=Z,3µmcomp=Z,206nm,1.1s
BMO1 UHE Belo Monte 33.92 37 P P 22 00 00.9 -1.9
TUMC Tumaco 34.15 347 IAmb IAmb 22 00 09.3
comp=Z,576nm,1.2s
TUMC Tumaco 34.15 347 P P 22 00 07.7 +2.9
comp=Z,15µmcomp=Z,8µmcomp=Z,372nm,1.1s
TUC4 UHE Tucurui 34.19 41 P P 22 00 04.0 -1.2
BETC Betania 34.49 353 P P 22 00 09.6 +1.8
POPC Popayan, Colom 34.51 351 P P 22 00 10.3 +2.1
comp=Z,13µmcomp=Z,4µmcomp=Z,191nm,1.4s
URMC La Uribe, Meta 34.95 355 P P 22 00 12.9 +1.1
comp=Z,9µmcomp=Z,817nm,0.9s
PRAC Prado 35.46 354 P P 22 00 17.6 +1.5
PRAC S S 22 05 51.6 +3.9
PRAC Prado 35.46 354 P P 22 00 18.2 +2.1
comp=Z,13µmcomp=Z,10µmcomp=Z,394nm,1.2s
BOAV Boa Vista 35.51 19 P P 22 00 15.2 -1.3
BOAV IAmb IAmb 22 00 18.1
comp=Z,362nm,0.8s
BOAV Boa Vista 35.51 19 P P 22 00 15.5 -1.0
BOAV Boa Vista 35.51 19 eP P 22 00 15.5 -1.0
ORTC Ortega, Tolima 35.69 353 P P 22 00 20.6 +2.5
comp=Z,14µmcomp=Z,8µmcomp=Z,562nm,0.9s
PTGC Puerto Gaitan, 35.79 359 P P 22 00 20.6 +1.7
comp=Z,11µmcomp=Z,7µmcomp=Z,568nm,1.1s
YOTC Yotoco, Valle 35.88 351 P P 22 00 21.6 +1.7
comp=Z,10µmcomp=Z,3µmcomp=Z,97nm,0.7s
CVER Cruz Verde, Cu 36.19 355 P P 22 00 26.3 +3.4
comp=Z,6µmcomp=Z,288nm,1.4s
CHIC Chingaza 36.28 356 P P 22 00 26.1 +2.5
comp=Z,12µmcomp=Z,5µmcomp=Z,229nm,0.9s
SMAI San Martin Ant 36.47 177 P P 22 00 24.3 +0.1
ROSC El Rosal 36.53 355 IAmb IAmb 22 00 32.3
comp=Z,229nm,0.9s
ROSC El Rosal 36.53 355 P P 22 00 27.6 +2.0
comp=Z,177nm,0.7s,baz=160,slow=5.6,SNR=41
ROSC pP sP 22 00 42.7 -2.8
comp=Z,196nm,0.9s,baz=77,slow=21,SNR=7.3
comp=Z,177nm,0.7s
ROSC El Rosal 36.53 355 P P 22 00 31.1 +5.4
TMAB Tom-Au,PA,Br 36.55 41 P P 22 00 24.6 -0.8
TMAB Tom-Au,PA,Br 36.55 41 eP P 22 00 25.1 -0.4
GUY2C Guyana, Caldas 37.00 353 P P 22 00 31.8 +2.0
comp=Z,11µmcomp=Z,6µmcomp=Z,199nm,0.7s
NBLA Lagarto - SE 37.23 64 P P 22 00 29.6 -1.7
SPBC San Pablo de B 37.31 356 P P 22 00 33.7 +1.7

comp=Z,10µmcomp=Z,5µmcomp=Z,105nm,0.9s
RUSC La Rusia 37.50 357 P P 22 00 34.3 +0.3
RUSC La Rusia 37.50 357 P P 22 00 34.7 +0.7
RUSC La Rusia 37.50 357 P P 22 00 36.0 +2.0
comp=Z,12µmcomp=Z,13µmcomp=Z,1µm,1.0s
CBOC Ciudad Bolivar 37.70 352 P P 22 00 37.0 +1.6
comp=Z,10µmcomp=Z,5µmcomp=Z,377nm,1.0s
HELC Santa Helena 37.97 353 P P 22 00 39.1 +1.2
comp=Z,12µmcomp=Z,5µmcomp=Z,371nm,0.9s
BARC Barichara 38.20 357 P P 22 00 40.7 +1.1
PTBC PUERTO BERRIO, 38.22 355 P P 22 00 39.8 +0.2
comp=Z,1µmcomp=Z,135nm,0.7s
BRJC Barrancabermej 38.60 356 P P 22 00 41.8 -1.0
comp=Z,4µmcomp=Z,260nm,0.7s
DBBC Dabeiba 38.86 352 P P 22 00 47.9 +2.9
NBPS Pedro II - PI 39.10 52 P P 22 00 46.0 -1.1
PTAC Punta Ardita, 39.20 350 P P 22 00 50.3 +2.6
comp=Z,5µmcomp=Z,333nm,1.2s
NBAN Anadia - AL 39.22 64 P P 22 00 46.2 -1.8
NBAN Anadia - AL 39.22 64 eP P 22 00 46.2 -1.8
UREC San Jos de Ur 39.51 353 P P 22 00 51.1 +0.7
comp=Z,10µmcomp=Z,4µmcomp=Z,121nm,0.9s
APAC Apartado, Choc 39.77 352 P P 22 00 55.8 +3.3
comp=Z,12µmcomp=Z,6µmcomp=Z,325nm,0.9s
OCAC Ocana 39.84 357 P P 22 00 52.1 -1.1
comp=Z,6µmcomp=Z,3µmcomp=Z,260nm,0.6s
AZU Azuero 40.27 346 eP P 22 00 57.6 +1.0
NBCA Caruaru-PE 40.34 62 P P 22 00 55.7 -1.7
SBBR Sobral 40.37 53 P P 22 00 56.1 -1.4
GMAL Guarumal, Vera 40.44 345 eP P 22 00 59.4 +1.3
BAUV El Baul 40.62 5 IAmb IAmb 22 01 01.2
comp=Z,679nm,1.0s
LCBC Los crdobas, 40.69 352 P P 22 00 59.3 -0.8
comp=Z,7µmcomp=Z,285nm,0.9s
MDP Montagnes des 40.78 29 LR LR 22 19 22.5
comp=Z,28µm,21.6s,baz=200,slow=38
MPGF Montagnes des 40.79 29 P P 22 01 00.3 -0.6
MPGF pP pP 22 01 14.8 0.0
MPGF sP sP 22 01 22.7 +1.8
NBPA Parau_RN 41.17 58 P P 22 01 03.1 -1.1
ZANG Zanguenga, Cho 41.32 347 eP P 22 01 06.6 +1.3
ARGC Ariguani, Magd 41.50 356 P P 22 01 07.2 +0.5
comp=Z,13µmcomp=Z,10µmcomp=Z,644nm,0.5s
CAZU Cerro Azul, Pa 41.51 348 eP P 22 01 07.5 +0.5
BCIP Isla Barro Col 41.52 347 ⇑P P 22 01 08.2 +1.3
BCIP Isla Barro Col 41.52 347 eP P 22 01 07.5 +0.5
PIRO Carate, Puerto 41.57 342 eP P 22 01 08.9 +1.5
SJCC San Jacinto, C 41.60 354 P P 22 01 07.6 -0.1
comp=Z,8µmcomp=Z,5µmcomp=Z,393nm,1.1s
KKNTU Kakint[2] 41.61 344 eP P 22 01 08.9 +1.2
JEFFS S de V. Baru 41.62 343 eP P 22 01 09.6 +1.7
BQTLY Boquete Panama 41.69 343 eP P 22 01 10.6 +2.1
JIME Puerto Jimenez 41.70 342 eP P 22 01 12.0 +3.7
DAP26 falda E V. Bar 41.71 343 eP pP 22 01 22.6 +0.2
RBALA Bur 41.73 344 eP P 22 01 09.8 +1.1
PBNVO Pueblo Nuevo, 41.75 344 eP P 22 01 09.4 +0.6
BRU2 Volcan 41.78 343 eP P 22 01 10.8 +1.6
ALCO Alturas Coton, 41.97 343 eP P 22 01 11.5 +0.7
RCBR Riachuelo 42.00 60 P P 22 01 10.6 -0.4
RCBR Riachuelo 42.00 60 P P 22 01 10.6 -0.4
RCBR pmax pmax
comp=Z,172nm,0.9s
RCBR Riachuelo 42.00 60 ⇑P P 22 01 10.9 -0.1
RCBR Riachuelo 42.00 60 P P 22 01 10.6 -0.4
RCBR Riachuelo 42.00 60 eP P 22 01 10.7 -0.4
RCBR Riachuelo 42.00 60 P P 22 01 11.1 +0.1
NBPV Pedro Velho 42.06 61 P P 22 01 10.2 -1.2
FIMO Fila Mora 42.14 342 eP P 22 01 14.0 +1.8
EDPE Pejibaye, P 42.36 342 eP P 22 01 15.6 +1.8
DRK0 Durika 42.37 342 eP P 22 01 15.4 +1.3
SAJE San Jernim 42.52 342 eP P 22 01 15.7 +0.5
RGM0 Gandoca 42.53 343 eP P 22 01 17.0 +1.9
CRJC Cerrejon, Guaj 42.58 358 P P 22 01 11.8 -3.9
comp=Z,7µmcomp=Z,2µmcomp=Z,125nm,0.9s
BRIBI Bribri 42.61 343 eP P 22 01 18.0 +2.2
CEUA Cerro Uatsi, L 42.64 343 eP P 22 01 17.7 +1.6
BUS1 Rivas 42.78 342 eP P 22 01 18.7 +1.0
SMRC Santa Marta, M 42.79 356 P P 22 01 16.2 -1.0
SMRC Santa Marta, M 42.79 356 P P 22 01 17.0 -0.2
comp=Z,8µmcomp=Z,6µmcomp=Z,174nm,1.2s
LLNJ Naranjito 42.80 341 eP P 22 01 19.1 +1.7
LAES El Progreso Va 42.80 343 eP P 22 01 17.9 +0.5
PIEC Cerro El Cedra 42.90 342 eP P 22 01 19.3 +0.8
PICV PH. Pirrs 42.97 341 eP P 22 01 19.6 +0.8
VERH Veragua Rainfo 42.99 343 eP P 22 01 19.8 +0.8
VINA Juan Vinas 43.11 342 eP P 22 01 21.7 +1.7
ABRB Las Abras (San 43.21 342 eP P 22 01 21.5 +0.6
RESJ San Isidro (Tu 43.21 342 eP P 22 01 21.7 +0.9
CVTV Tajo 43.21 342 eP P 22 01 22.1 +1.0
CVTQ Turrialba Volc 43.22 342 eP P 22 01 22.1 +0.9
VICA Volcano Irazu 43.22 342 eP P 22 01 22.3 +1.0
VTR0 Volcan Turrial 43.23 342 eP P 22 01 22.3 +0.9
CVTR Volcan Turrial 43.23 342 eP P 22 01 22.1 +0.8
URIC Uribia, Colomb 43.24 359 P P 22 01 17.7 -3.2
comp=Z,7µmcomp=Z,2µmcomp=Z,154nm,1.0s
RVLA Villa Bonita 43.27 342 eP P 22 01 23.5 +2.3
CVIMO Finca Echandi 43.28 342 eP P 22 01 23.0 +1.4
HDC Heredia 43.31 341 eP P 22 01 22.9 +1.3
HDC Heredia 43.31 341 eP P 22 01 23.1 +1.5
CVTG V. Turrialba, 43.36 342 eP P 22 01 22.4 +0.5
EGUB Earth Gujpi 43.37 342 eP P 22 01 23.0 +1.0
PILE Guapiles 43.43 342 eP P 22 01 24.0 +1.6
VPS8 V Poas 43.51 341 eP P 22 01 25.1 +1.6
VPS5 V. Poas 43.52 341 eP P 22 01 25.2 +1.7
VPL1 V. Platanar 43.62 341 eP P 22 01 25.4 +1.2
VPL2 V. Platanar 43.67 341 eP P 22 01 26.5 +1.9
SOCE Pocosol 43.81 341 IAmb IAmb 22 01 30.0
comp=Z,378nm,1.0s
SOCE Pocosol 43.81 341 eP P 22 01 27.0 +1.5
JTS Las Juntas de 43.82 340 P P 22 01 26.7 +1.1
JTS Las Juntas de 43.82 340 ceP P 22 01 26.4 +0.8
JTS pmax pmax
comp=Z,86nm,0.9s
JTS MLR MLR
comp=Z,7µm,21.0s
JTS Las Juntas de 43.82 340 ⇑P P 22 01 26.1 +0.6
JTS Las Juntas de 43.82 340 eP P 22 01 26.1 +0.6
SAJU San Juanillo, 43.83 339 eP P 22 01 25.4 -0.2
JUD3 Juan Diaz 3 43.87 340 eP P 22 01 25.8 -0.3
ARE1 Arenal 1 43.91 341 eP P 22 01 27.9 +1.5
VACR Volcan Arenal 43.91 341 eP P 22 01 27.7 +1.4
VARE2 V. Arenal 43.91 341 eP P 22 01 27.5 +1.1
CEDE Laguna Cedeo 43.93 341 eP P 22 01 27.5 +1.0
TABAC Tabacon 43.96 341 eP P 22 01 28.9 +2.1
PLVR Palo Verde 43.99 340 eP P 22 01 28.6 +1.5
INVE Universidad In 44.02 340 eP P 22 01 29.3 +2.0
TIMP Tierras Morena 44.11 340 eP P 22 01 29.3 +1.3
QUEB Quebradon, Cot 44.12 341 eP P 22 01 28.8 +0.8
CUI Cuipilapa 44.23 340 eP P 22 01 30.0 +1.1
ALIBA Liberia Airpor 44.27 340 eP P 22 01 31.8 +2.6
HORNC Hornillas 44.28 340 eP P 22 01 30.5 +1.1
ELI1 Hacienda Flor 44.33 340 eP P 22 01 33.7 +4.1
VMAR Armenia, Volca 44.36 340 eP P 22 01 30.9 +0.9
GPS2 Hotel Rincn d 44.37 340 eP P 22 01 30.5 +0.5
GPS1 Guardaparques 44.39 340 eP P 22 01 30.9 +0.6
LAPC Finca la Perla 44.41 340 eP P 22 01 31.2 +0.9
VRLE La Escondida, 44.41 340 eP P 22 01 29.3 -1.1
VORI VORI 44.43 340 eP P 22 01 31.2 +0.5
BUAI Buenos Aires 44.48 340 eP P 22 01 31.4 +0.5
PEJA Penjamo Buenos 44.49 340 eP P 22 01 31.4 +0.4
GRGR Grenville 44.64 14 P P 22 01 30.6 -1.5
GRGR Grenville 44.64 14 ⇑P P 22 01 31.9 -0.3
CARN Rivas 44.83 340 eP P 22 01 32.6 -1.0
SAIC Isla e San And 45.17 346 P P 22 01 35.9 -0.4
MGAN Managua 45.95 340 IAmb IAmb 22 01 45.3
comp=Z,366nm,1.3s
MGAN Managua 45.95 340 eP P 22 01 40.6 -2.0
CNGN Cerro Negro 46.42 339 P P 22 01 45.6 -0.7
CNGN Cerro Negro 46.42 339 eP P 22 01 45.7 -0.6
CRIN San Cristobal 46.72 339 IAmb IAmb 22 01 51.2
comp=Z,333nm,0.7s
CRIN San Cristobal 46.72 339 eP P 22 01 48.3 -0.3
BILN Bilwi Airport 47.01 344 P P 22 01 51.3 +0.5
BILN IAmb IAmb 22 01 53.9
comp=Z,384nm,1.0s
SIUN Universidad Ur 47.04 342 IAmb IAmb 22 01 55.3
comp=Z,81nm,0.8s
CSGN Cosiguina Volc 47.14 338 eP P 22 01 50.1 -1.8
POTN Potosi Cosigui 47.15 338 eP P 22 01 51.9 0.0
ILAM Ilet Lapin Mar 47.37 14 IAmb IAmb 22 01 54.7
comp=Z,322nm,0.8s
TGUH Tegucigalpa,Un 48.07 339 ⇑P P 22 01 59.6 +0.4

CBE Ff, Capester 48.48 13 lAmb lAmb 22 02 02.3
comp=Z,213nm,0.9s
GDHS Morne Mazeau, 48.66 12 lAmb lAmb 22 02 42.8
comp=Z,148nm,0.7s
BELA Belgrano 2 48.96 170 P **P** **22 02 05.2 0.0**
MTO3 Montecristo 49.06 337 lAmb lAmb 22 02 10.1
comp=Z,227nm,1.2s
ESQI Esquipulas 49.20 337 P **P** **22 02 08.7 +0.8**
ESQI lAmb lAmb 22 02 11.5
comp=Z,285nm,1.0s
HOJ Hope 49.77 353 *i* P **P** **22 02 13.8 +1.8**
GWJ Greenwich 49.84 353 *i* P **P** **22 02 13.3 +0.7**
STH Stony Hill 49.85 353 *i* P **P** **22 02 13.4 +0.7**
SJG San Juan 49.86 6 P **P** **22 02 11.1 -1.6**
SJG San Juan 49.86 6 P **P** **22 02 11.1 -1.6**
SJG pmax pmax
comp=Z,653nm,1.1s
SJG San Juan 49.86 6 ⇑P **P** **22 02 11.1 -1.6**
SJG San Juan 49.86 6 P **P** **22 02 11.8 -0.9**
SJG pP **pP** **22 02 26.5 -0.3**
HUMP Col San Antoni 49.92 7 lAmb lAmb 22 02 13.9
comp=Z,211nm,1.1s
SDD Santo Domingo 49.97 2 P **P** **22 02 12.9 -0.6**
APG El Apazote 50.01 336 LR LR 22 19 11.2
comp=Z,374nm,19.7s,baz=262,slow=31
ANWB Willy Bob 50.02 12 lAmb lAmb 22 02 14.1
comp=Z,329nm,0.8s
ANWB Willy Bob 50.02 12 ⇑P **P** **22 02 11.0 -2.8**
AOPR Arecibo Observ 50.03 6 P **P** **22 02 12.3 -1.7**
AOPR lAmb lAmb 22 02 39.9
comp=Z,400nm,1.2s
MTDJ Mount Denham 50.08 352 lAmb lAmb 22 02 17.0
comp=Z,326nm,1.0s
MTDJ Mount Denham 50.08 352 *i* P **P** **22 02 14.4 0.0**
MTDJ Mount Denham 50.08 352 ⇑P **P** **22 02 14.5 0.0**
DR12 Loma Pena Alta 50.31 2 P **P** **22 02 14.1 -2.1**
SDDR Presa de Saban 50.47 0 ⇑P **P** **22 02 16.6 -0.7**
VNA3 Neumayer Olymp 51.20 159 ⇑P **P** **22 02 21.9 -0.4**
comp=Z,216nm,1.0s
VNA3 ⇓sP **pP** **22 02 37.8 +1.4**
VNA3 ⇓S **S** **22 09 37.8 +1.3**
VNA1 Neumayer--Stat 51.49 158 ⇑P **P** **22 02 24.5 +0.1**
comp=Z,189nm,1.0s
VNA1 ⇑S **S** **22 09 45.7 +5.2**
CHIV Chivirico 51.69 354 lAmb lAmb 22 02 42.9
comp=Z,87nm,0.9s
CCIG Comitan 51.79 334 lAmb lAmb 22 02 30.4
comp=Z,251nm,1.1s
VNA2 Neumayer--Watz 51.83 158 ⇑P **P** **22 02 26.5 -0.5**
comp=Z,123nm,0.6s,baz=283,slow=8.1
VNA2 ⇓sP **pP** **22 02 42.5 +1.3**
baz=291,slow=6.6
VNA2 ⇑S **S** **22 09 44.0 -1.3**
baz=348,slow=21
SNAA Sanae 53.42 158 ⇑P **P** **22 02 38.4 -0.4**
comp=Z,7μm,0.9s
SNAA ⇑sP **pP** **22 02 54.4 +1.4**
SNAA ⇑S **S** **22 10 04.9 -2.1**
SNAA Sanae 53.42 158 P **P** **22 02 38.4 -0.4**
comp=Z,343nm,0.9s,baz=278,slow=6.5,SNR=653
SNAA pP **pP** **22 02 55.1 +2.0**
comp=Z,1μm,1.2s,baz=60,slow=23,SNR=26
SNAA LR LR 22 23 33.3
comp=Z,10μm,22.0s,baz=288,slow=34
SNAA PKPPKP 22 32 44.3
comp=Z,1.4nm,0.9s,baz=117,slow=4.6,SNR=4.0
comp=Z,343nm,0.9s
SNAA Sanae 53.42 158*c i*P **P** **22 02 38.5 -0.4**
SNAA pmax pmax
comp=Z,584nm,1.1s
CMIG Matias Romero 53.59 332 LR LR 22 20 12.0
comp=Z,5μm,21.2s,baz=156,slow=30
TEIG Tepich 54.20 340 P **P** **22 02 44.2 -0.7**
TEIG Tepich 54.20 340 P **P** **22 02 45.0 +0.1**
TEIG pP **pP** **22 03 01.1 +1.9**
TROLL Troll, Antarti 55.13 159 ⇑P **P** **22 02 50.9 -0.4**
comp=Z,7μm,0.8s
TROLL ⇑sP **pP** **22 03 06.7 +1.1**
TROLL ⇑S **S** **22 10 29.8 -0.4**
CAMR Camarioca 55.37 349 lAmb lAmb 22 02 55.8
comp=Z,837nm,0.8s
SOR Soroa 55.40 347 P **P** **22 02 53.0 -0.6**
SOR Soroa 55.40 347 P **P** **22 02 53.0 -0.6**
SOR pmax pmax
comp=Z,386nm,0.9s
ASCN Ascension 57.89 79 P **P** **22 03 11.4 -0.1**
ASCN lAmb lAmb 22 03 12.8
comp=Z,188nm,0.7s
NVL N'lazarevskaya 58.13 157 *e*P **P** **22 03 08.7 -3.7**
NVL *e*S **S** **22 11 07.8 -1.6**
NVL *e*SS **SS** **22 15 01.0 +0.1**
NVL pmax pmax
comp=Z,108nm,1.1s
QSPA South Pole Qui 58.45 180 P **P** **22 03 17.3 +2.3**
QSPA South Pole Qui 58.45 180 P **P** **22 03 17.2 +2.3**
comp=Z,480nm,1.1s,baz=152,slow=1.9,SNR=366
QSPA pP **sP** **22 03 32.3 -2.9**
comp=Z,672nm,1.0s,baz=146,slow=7.5,SNR=23
QSPA LR LR 22 27 18.5
comp=Z,4μm,20.9s,baz=159,slow=35
QSPA PKPPKP P'P'df 22 32 42.8 -15
comp=Z,5.7nm,1.0s,baz=257,slow=0.7,SNR=7.3
comp=Z,480nm,1.1s
QSPA South Pole Qui 58.45 180 P **P** **22 03 18.6 +3.7**
QSPA pP **sP** **22 03 34.8 -0.4**
MOIG Morelia 58.63 327 lAmb lAmb 22 03 20.5
comp=Z,174nm,0.8s
DWPF Disney Wildern 60.33 350 P **P** **22 03 27.8 -0.2**
DWPF lAmb lAmb 22 03 30.3
comp=Z,285nm,0.9s
SHEL Horse Pasture 61.20 92 P **P** **22 03 35.1 +0.7**
SHEL lAmb lAmb 22 03 36.7
comp=Z,161nm,0.8s
SHEL Horse Pasture 61.20 92 P **P** **22 03 35.1 +0.7**
SHEL pmax pmax
comp=Z,161nm,0.8s
456A Hilliard 62.98 350 P **P** **22 03 45.5 -0.4**
257A Skidaway Islan 64.07 351 P **P** **22 03 53.8 +0.8**
BBSR BB Station 64.11 6 P **P** **22 03 53.5 +0.2**
BBSR lAmb lAmb 22 03 55.5
comp=Z,167nm,0.8s
BBSR BB Station 64.11 6 P **P** **22 03 53.8 +0.6**
BBSR pP **pP** **22 04 08.8 +0.8**
250A Grady 64.97 346 lAmb lAmb 22 04 00.8
comp=Z,336nm,0.9s
SACV Santiago Islan 65.22 52 P **P** **22 04 01.4 +0.5**
SACV lAmb lAmb 22 04 03.5
comp=Z,322nm,0.9s
152A Waverly Hall 65.34 348 lAmb lAmb 22 04 03.0
comp=Z,291nm,0.9s
735A Kenedy 65.35 335 P **P** **22 04 02.5 +1.1**
SBA Scott Base 65.36 191 P **P** **22 04 01.5 +0.6**
SBA lAmb lAmb 22 04 37.7
comp=Z,416nm,1.6s
SBA Scott Base 65.36 191 P **P** **22 04 01.5 +0.6**
SBA pmax pmax
comp=Z,416nm,1.6s
SBA Scott Base 65.36 191 P **P** **22 04 02.2 +1.2**
SBA pP **pP** **22 04 16.5 +0.9**
HKT Hockley 65.65 337 P **P** **22 04 03.9 +0.6**
HKT lAmb lAmb 22 04 07.7
comp=Z,429nm,1.4s
HKT Hockley 65.65 337*c i*P **P** **22 04 03.7 +0.4**
HKT pmax pmax
comp=Z,187nm,1.4s
HKT MLR MLR
comp=Z,3μm,19.0s
Y60A Bolivia 65.76 354 P **P** **22 04 05.0 +1.1**
GOGA Godfrey 65.85 349 lAmb lAmb 22 04 06.4
comp=Z,247nm,1.0s
GOGA Godfrey 65.85 349 P **P** **22 04 03.8 -0.7**
Y57A Sumter 66.00 352 lAmb lAmb 22 04 07.7
comp=Z,273nm,1.0s
LRAL Lakeview Retre 66.14 346 lAmb lAmb 22 04 08.6
comp=Z,273nm,1.1s
JSC Jenkinsville 66.37 351 lAmb lAmb 22 04 10.0
comp=Z,196nm,1.0s
SLBS Sierra La Lagu 66.37 321 P **P** **22 04 08.8 +0.5**
SLBS Sierra La Lagu 66.37 321 P **P** **22 04 09.5 +1.3**
VNDA Vanda 66.39 191 P **P** **22 04 07.2 -0.3**
VNDA Vanda 66.39 191 P **P** **22 04 08.9 +1.4**
comp=Z,51nm,1.0s,baz=127,slow=5.8,SNR=116
VNDA LR LR 22 28 01.4
comp=Z,3μm,21.6s,baz=131,slow=31
VNDA PKPPKP P'P'df 22 32 23.9 -21
comp=Z,0.9nm,1.1s,baz=219,slow=4.4,SNR=3.2
VNDA PKP2bc P'P'bc 22 32 40.0 -8.2
comp=Z,14nm,1.0s,baz=290,slow=4.8,SNR=24
comp=Z,51nm,1.0s
VNDA Vanda 66.39 191 P **P** **22 04 08.4 +0.9**
X58A Rowland 66.41 353 lAmb lAmb 22 04 10.4
comp=Z,320nm,0.8s
Y49A Blount Mountai 66.82 346 P **P** **22 04 10.0 -0.8**
Y49A lAmb lAmb 22 04 13.4
comp=Z,222nm,1.0s
LPIG La Paz 66.90 321 LR LR 22 28 37.7
comp=Z,2μm,18.4s,baz=159,slow=32
W59A Clinton 66.93 354 lAmb lAmb 22 04 14.1
comp=Z,212nm,1.1s
HPIG 66.94 327 lAmb lAmb 22 04 15.3
comp=Z,293nm,1.0s
PAULI Pauline 66.98 351 lAmb lAmb 22 04 14.0
comp=Z,298nm,1.1s
435B Jarrell 67.02 336 lAmb lAmb 22 04 15.4
comp=Z,323nm,1.1s
W57A Gilead 67.08 352 lAmb lAmb 22 04 14.4
comp=Z,236nm,1.0s
X51A Calhoun 67.21 348 P **P** **22 04 12.7 -0.5**
KMSC Kings Mountain 67.23 351 lAmb lAmb 22 04 15.5
comp=Z,224nm,0.9s
BG3 Lake Jocassee 67.31 350 lAmb lAmb 22 04 16.2
comp=Z,328nm,1.0s
FPAL Fort Paine 67.32 347 lAmb lAmb 22 04 16.0
comp=Z,234nm,1.2s
JCT Junction City 67.55 334 P **P** **22 04 16.2 +0.7**
W52A Murphy 67.57 349 P **P** **22 04 15.6 +0.1**
W52A lAmb lAmb 22 04 17.9
comp=Z,306nm,0.9s
V58A Windy Hill, Pi 67.62 353 lAmb lAmb 22 04 17.8
comp=Z,220nm,0.9s
SYO Syowa Base 67.71 159⇑*i*P **P** **22 04 15.0 -1.0**
SYO Syowa Base 67.71 159⇓*i*pP pP 22 04 30.0 -0.8
SYO Syowa Base 67.71 159⇓*i*sP sP 22 04 37.4 +0.7
V55A Taylorsville 67.91 351 lAmb lAmb 22 04 19.9
comp=Z,313nm,0.9s
V53A Saluda 67.95 350 lAmb lAmb 22 04 20.0
comp=Z,297nm,0.9s
BRDY Brady 67.98 335 lAmb lAmb 22 04 21.0
comp=Z,259nm,0.9s
TKL Tuckaleechee C 68.09 349 lAmb lAmb 22 04 20.6
comp=Z,351nm,0.9s
TXAR Lajitas Array 68.10 330 P **P** **22 04 19.2 +0.1**
TXAR Lajitas Array 68.10 330 P **P** **22 04 19.6 +0.5**
comp=Z,82nm,0.7s,baz=153,slow=8.6,SNR=393
TXAR pP **sP** **22 04 37.2 -2.4**
comp=Z,20nm,0.6s,baz=157,slow=8.1,SNR=4.0
TXAR LR LR 22 30 11.9
comp=Z,6μm,18.6s,baz=177,slow=32
TXAR PKP2bc **P'P'bc** **22 32 36.9 +1.4**
comp=Z,12nm,1.2s,baz=264,slow=1.3,SNR=16
comp=Z,82nm,0.7s
TX31 Lajitas Ai Si 68.10 330 lAmb lAmb 22 04 22.3
comp=Z,181nm,0.9s
CCAR Cane Creek 68.13 342 lAmb lAmb 22 04 22.2
comp=Z,371nm,1.1s
PLAL Pickwick Lake 68.25 345 lAmb lAmb 22 04 21.8
comp=Z,370nm,0.9s
TREL Terrell 68.29 338 lAmb lAmb 22 04 23.3
comp=Z,471nm,1.2s
U56A King 68.30 352 lAmb lAmb 22 04 22.5
comp=Z,278nm,0.9s
FW13 Cleburne 68.39 336 lAmb lAmb 22 04 23.4
comp=Z,470nm,1.3s
Z38A Mt. Pleasant 68.43 339 lAmb lAmb 22 04 24.1
comp=Z,431nm,1.1s
OZNA Ozona 68.46 333 lAmb lAmb 22 04 24.1
comp=Z,405nm,0.9s
U54A Nelsons Funny 68.65 351 lAmb lAmb 22 04 24.3
comp=Z,404nm,0.9s
TZTN Tazewell 68.92 349 lAmb lAmb 22 04 25.9
comp=Z,441nm,1.4s
CLTN Cedars of Leba 68.97 347 P **P** **22 04 23.5 -0.7**
CLTN lAmb lAmb 22 04 26.5
comp=Z,248nm,0.9s
FW06 Azle 69.00 337 lAmb lAmb 22 04 27.4
comp=Z,437nm,1.5s
UALR University of 69.09 342 lAmb lAmb 22 04 27.4
comp=Z,329nm,1.3s
PLPT Palo Pinto 69.12 336 lAmb lAmb 22 04 28.0
comp=Z,384nm,0.9s
MIAR Mount Ida 69.22 340 lAmb lAmb 22 04 29.1
comp=Z,322nm,1.1s
U49A Red Boiling Sp 69.27 348 lAmb lAmb 22 04 28.1
comp=Z,270nm,1.1s
SGCY Sterling City 69.34 333 lAmb lAmb 22 04 29.2
comp=Z,368nm,1.1s
HBAR Harrisburg 69.39 343 lAmb lAmb 22 04 29.3
comp=Z,452nm,1.1s
MBO M'Bour 69.44 57 P **P** **22 04 28.0 +0.4**
MBO M'Bour 69.44 57 P **P** **22 04 28.4 +0.8**
MNHN Monahans 69.48 332 lAmb lAmb 22 04 30.5
comp=Z,345nm,0.7s
S57A Dark Hollow, R 69.55 354 lAmb lAmb 22 04 30.3
comp=Z,282nm,1.0s
WHAR Wooly Hollow 69.56 342 lAmb lAmb 22 04 30.4
comp=Z,318nm,1.1s
T50A Nancy 69.60 349 lAmb lAmb 22 04 29.9
comp=Z,483nm,1.7s
R58B Mineral 69.65 354 lAmb lAmb 22 04 31.5
comp=Z,390nm,1.1s
S54A Dingess, Beckl 69.85 352 lAmb lAmb 22 04 31.5
comp=Z,310nm,1.0s
R61A Willards 69.85 357 P **P** **22 04 31.8 +2.2**
CBN Corbin Frederi 69.85 355 lAmb lAmb 22 04 32.5
comp=Z,407nm,1.4s
BBTS Babate 69.93 57 LR LR 22 35 35.8
comp=Z,9μm,18.1s,baz=90,slow=36
PECS Pecos 69.96 331 lAmb lAmb 22 04 33.8
comp=Z,610nm,1.6s
T47A Shon Grove 69.98 347 lAmb lAmb 22 04 32.5
comp=Z,379nm,0.8s
S51A Beattyville 70.00 350 lAmb lAmb 22 04 32.5
comp=Z,265nm,0.9s
WTFS Witchita Falls 70.03 336 lAmb lAmb 22 04 33.5
comp=Z,451nm,1.0s
FCAR Ozark Folk Cen 70.08 342 P **P** **22 04 30.3 -0.8**
FCAR lAmb lAmb 22 04 33.2
comp=Z,217nm,0.8s
R55A Marlinton 70.18 353 lAmb lAmb 22 04 34.6
comp=Z,384nm,0.9s
SN07 Snyder 07 70.30 334 lAmb lAmb 22 04 35.1
comp=Z,256nm,0.8s
PBMO Poplar Bluff 70.50 344 lAmb lAmb 22 04 35.9
comp=Z,338nm,0.7s
POST Post 70.51 333 lAmb lAmb 22 04 36.2
comp=Z,183nm,0.7s
CGM3 Cape Girardeau 70.82 345 lAmb lAmb 22 04 37.7
comp=Z,397nm,1.2s
DKNS Dickens 70.82 334 lAmb lAmb 22 04 38.2
comp=Z,249nm,0.8s
Q56A Snyder Ridge, 70.84 354 lAmb lAmb 22 04 38.7
comp=Z,277nm,1.1s
MNTX Cornudas Mount 70.88 330 lAmb lAmb 22 04 38.1
comp=Z,194nm,0.8s
HHAR Hobbs 70.94 341 lAmb lAmb 22 04 38.7
comp=Z,393nm,0.9s
SSFO Shawnee State 70.98 350 lAmb lAmb 22 04 38.5
comp=Z,299nm,1.0s
WMOK Wichita Mounta 71.02 336 P **P** **22 04 36.0 -0.9**
WCI Wyandotte Cave 71.03 348 P **P** **22 04 35.8 -1.0**
WCI lAmb lAmb 22 04 38.4
comp=Z,280nm,0.8s
WCI Wyandotte Cave 71.03 348 P **P** **22 04 35.8 -1.0**
WCI pmax pmax
comp=Z,280nm,0.9s
WCI Wyandotte Cave 71.03 348 P **P** **22 04 36.1 -0.7**
WCI pP **pP** **22 04 52.2 +0.6**
S44A Carbondale 71.11 345 lAmb lAmb 22 04 39.4
comp=Z,422nm,0.8s
Q52A Bidwell 71.11 351 lAmb lAmb 22 04 39.8
comp=Z,458nm,1.0s
SIUC Southern Illin 71.12 345 lAmb lAmb 22 04 39.5
comp=Z,444nm,0.9s
TUL3 Leonard 71.14 339 lAmb lAmb 22 04 39.7
comp=Z,367nm,0.8s
RLO Rose Lookout 71.14 340 lAmb lAmb 22 04 39.9
comp=Z,222nm,0.8s
PPT Papeete 71.16 261 P **P** **22 04 39.5 +1.2**
comp=Z,249nm,0.9s,baz=112,slow=9.9,SNR=10
comp=Z,249nm,0.9s
P61A Hammonton 71.17 357 lAmb lAmb 22 04 40.5
comp=Z,539nm,1.2s
P57A Homestead Farm 71.17 355 lAmb lAmb 22 04 40.9
comp=Z,416nm,0.9s
DEOK Depew 71.29 339 lAmb lAmb 22 04 40.7
comp=Z,448nm,1.1s
MGMO Mountain Grove 71.32 342 lAmb lAmb 22 04 41.1
comp=Z,291nm,0.9s
Q51A Peebles 71.33 350 lAmb lAmb 22 04 41.1
comp=Z,414nm,1.0s
EPT El Paso 71.44 329 lAmb lAmb 22 04 42.4
comp=Z,231nm,1.0s
MCWV Mont Chateau 71.52 353 lAmb lAmb 22 04 42.2
comp=Z,272nm,0.9s
P53A Whipple 71.52 352 lAmb lAmb 22 04 41.9
comp=Z,380nm,1.1s
OK029 Liberty Lake 71.55 338 lAmb lAmb 22 04 42.3
comp=Z,489nm,1.1s
MVL Millersville 71.57 356 lAmb lAmb 22 04 43.1
comp=Z,296nm,1.1s
QUOK Quay 71.66 339 lAmb lAmb 22 04 43.1
comp=Z,493nm,1.2s
P51A Williamsport 71.73 350 lAmb lAmb 22 04 42.8
comp=Z,475nm,1.0s
MSTX Muleshoe 71.80 333 P **P** **22 04 41.2 -0.5**
PAGS Pennsylvania G 71.82 356 lAmb lAmb 22 04 44.3
comp=Z,397nm,0.9s
OLIL Olney 71.87 346 lAmb lAmb 22 04 44.2
comp=Z,605nm,1.2s
CCM Cathedral Cave 71.92 344 P **P** **22 04 41.4 -0.7**
CCM Cathedral Cave 71.92 344 P **P** **22 04 41.4 -0.7**
CCM pmax pmax
comp=Z,686nm,1.0s
CCM Cathedral Cave 71.92 344 P **P** **22 04 42.0 -0.1**
CCM pP **pP** **22 04 58.4 +1.5**
CCM sP **sP** **22 05 03.5 +0.7**
BLO Bloomington 71.99 348 lAmb lAmb 22 04 44.2
comp=Z,220nm,0.8s
P48A Milroy 72.08 349 lAmb lAmb 22 04 44.5
comp=Z,456nm,0.9s
BRNJ Basking Ridge 72.16 357 lAmb lAmb 22 04 46.6
comp=Z,288nm,0.9s
AMTX Amarillo 72.19 334 lAmb lAmb 22 04 46.8
comp=Z,493nm,1.1s
O52A Adamsville 72.19 352 lAmb lAmb 22 04 45.6
comp=Z,305nm,0.9s
Q44A Meyer Farm, Va 72.22 346 lAmb lAmb 22 04 45.5
comp=Z,256nm,1.0s
O53A New Philadelph 72.25 352 lAmb lAmb 22 04 46.1
comp=Z,344nm,1.1s
T35A Sooner Cattle 72.28 339 lAmb lAmb 22 04 47.6
comp=Z,367nm,1.0s
SSPA Standing Stone 72.31 355 P **P** **22 04 44.6 +0.1**
SSPA lAmb lAmb 22 04 47.1
comp=Z,251nm,0.9s
SSPA Standing Stone 72.31 355 P **P** **22 04 44.7 +0.3**
BLOK Blackwell 72.36 338 lAmb lAmb 22 04 47.5
comp=Z,339nm,0.9s
319A Douglas 72.37 327 lAmb lAmb 22 04 49.0
comp=Z,354nm,1.2s
CROK Carrier 72.37 338 lAmb lAmb 22 04 47.4
comp=Z,360nm,0.9s
N62A Caumsett State 72.38 358 lAmb lAmb 22 04 47.6
comp=Z,320nm,0.9s
N58A Sunbury 72.43 356 lAmb lAmb 22 04 48.0
comp=Z,271nm,0.9s
ELIS Ellis County 72.44 336 lAmb lAmb 22 04 48.5
comp=Z,489nm,1.1s
P46A Rosedale 72.55 347 lAmb lAmb 22 04 47.9
comp=Z,394nm,0.9s
OK038 West end E0370 72.59 337 lAmb lAmb 22 04 48.9
comp=Z,430nm,0.9s
O49A Covington 72.61 350 P **P** **22 04 45.6 -0.7**
121A Cookes Peak, D 72.65 328 lAmb lAmb 22 04 50.8
comp=Z,364nm,1.0s
N53A Lisbon 72.76 352 lAmb lAmb 22 04 49.3
comp=Z,372nm,1.3s
KAN14 Manchester OK 72.78 338 lAmb lAmb 22 04 49.9
comp=Z,296nm,1.1s
NOKA Waynoka 72.80 337 lAmb lAmb 22 04 50.3
comp=Z,276nm,0.9s
PAMR Moraine State 72.81 353 lAmb lAmb 22 04 49.8
comp=Z,354nm,1.0s
O48B Farmland 72.81 349 P **P** **22 04 46.6 -0.9**
O48B lAmb lAmb 22 04 48.9
comp=Z,330nm,0.8s
KAN01 Argonia South 72.89 338 lAmb lAmb 22 04 50.8
comp=Z,471nm,0.9s
CCD Concordia, Ant 72.95 184 P **P** **22 04 48.7 +0.3**
CCD pP **PcP** **22 05 05.5 +0.2**
M57A Sunshine Farm, 72.95 355 lAmb lAmb 22 04 51.1
comp=Z,307nm,1.2s
N51A Ashland 73.05 351 P **P** **22 04 48.0 -0.8**
N51A lAmb lAmb 22 04 50.7
comp=Z,445nm,1.0s
SFIN Lafayette 73.27 347 lAmb lAmb 22 04 51.3
comp=Z,251nm,1.1s
PAOC Oil Creek Stat 73.34 353 lAmb lAmb 22 04 52.5
comp=Z,251nm,0.8s
L64A Middleborough 73.36 0 P **P** **22 04 52.1 +1.5**
ELIM Elim 73.57 121 *e*P **P** **22 04 53.6 +1.3**
L59A Walton 73.69 357 lAmb lAmb 22 04 55.5
comp=Z,337nm,0.8s
BCX Boston College 73.75 0 P **P** **22 04 53.3 +0.4**
CER Ceres 73.80 119 *e*P **P** **22 04 55.0 +1.2**
TUC Tucson 73.85 326 P **P** **22 04 53.8 -0.1**
TUC Tucson 73.85 326 P **P** **22 04 53.8 -0.1**
TUC pmax pmax
comp=Z,289nm,1.6s
TUC Tucson 73.85 326 P **P** **22 04 55.3 +1.4**
TUC sP **PcP** **22 05 11.1 +2.0**
L61B Northampton 73.88 359 lAmb lAmb 22 04 56.5
comp=Z,246nm,0.9s
DBIC Dimbokro 73.92 71 lAmb lAmb 22 04 56.2
comp=Z,380nm,0.9s
DBIC Dimbokro 73.92 71 P **P** **22 04 54.0 -0.6**
comp=Z,314nm,0.8s,baz=252,slow=5.9,SNR=200
DBIC pP **PcP** **22 05 10.4 +0.6**
comp=Z,93nm,0.7s,baz=240,slow=6.4,SNR=7.4
DBIC LR LR 22 34 14.7
comp=Z,11μm,21.9s,baz=242,slow=33
comp=Z,314nm,0.8s
DBIC Dimbokro 73.92 71 *e*P P 22 05 01.2 +6.7
DBIC Dimbokro 73.92 71 P **P** **22 04 54.1 -0.4**
DBIC Dimbokro 73.92 71 P **P** **22 04 54.5 -0.1**
DBIC pP **PcP** **22 05 10.1 +0.4**
HRV Adam Dziewonsk 73.92 360 P **P** **22 04 54.6 +0.7**
HRV Adam Dziewonsk 73.92 360 P **P** **22 04 54.6 +0.7**
HRV pmax pmax
comp=Z,170nm,1.0s
HRV Adam Dziewonsk 73.92 360 P **P** **22 04 55.1 +1.1**
HRV pP **PcP** **22 05 09.1 0.0**
RTBA Rita Blanca 73.96 334 lAmb lAmb 22 04 57.5
comp=Z,795nm,1.9s
KOMG Komaggas 74.08 115 *e*P **P** **22 04 57.9 +2.5**
ANMO Albuquerque 74.13 331 P **P** **22 04 55.9 +0.3**
ANMO Albuquerque 74.13 331 LR LR 22 33 12.9
comp=Z,8μm,20.2s,baz=242,slow=32
ANMO Albuquerque 74.13 331*c i*P **P** **22 04 56.4 +0.8**
ANMO pmax pmax
comp=Z,239nm,1.3s
ANMO Albuquerque 74.13 331 P **P** **22 04 56.3 +0.8**
ANMO pP **PcP** **22 05 11.7 +1.2**
TRY Troy 74.18 358 lAmb lAmb 22 04 59.2
comp=Z,378nm,1.0s
R32A Long Quarter, 74.35 338 lAmb lAmb 22 04 59.4
comp=Z,338nm,0.9s
MMNY Mt. Morris Dam 74.39 355 lAmb lAmb 22 04 59.1
comp=Z,469nm,1.0s
214A Organ Pipe Nat 74.55 324 lAmb lAmb 22 05 01.8
comp=Z,369nm,1.2s
AUSN Aus 74.58 112 *e*P **P** **22 05 02.2 +3.6**
AAM Ann Arbor 74.58 351 lAmb lAmb 22 04 59.5
comp=Z,413nm,1.3s
AAM Ann Arbor 74.58 351 P **P** **22 04 57.3 -0.5**
L46A Eue Claire 74.71 349 lAmb lAmb 22 04 59.8
comp=Z,365nm,0.8s
J61A Chester 74.77 359 P **P** **22 04 59.6 +0.7**
MATJ Matjiesfontein 74.80 120 *e*P **P** **22 04 59.1 -0.5**
MEDO Medina 74.87 355 lAmb lAmb 22 05 01.6
comp=Z,245nm,0.9s
J55A Hilton 74.92 355 lAmb lAmb 22 05 01.9
comp=Z,332nm,1.2s
J57A Williamstown 74.95 356 lAmb lAmb 22 05 02.2
comp=Z,273nm,0.9s
CVNA Calvinia 75.03 118 *e*P **P** **22 05 02.0 +1.0**
MAW Mawson 75.14 163 P **P** **22 05 00.7 -0.1**
comp=Z,96nm,1.3s
MAW Mawson 75.14 163 P **P** **22 05 01.0 +0.2**

comp=Z,209nm,1.1s,baz=222,slow=7.0,SNR=77
MAW pP **pP** **22 05 17.4 +1.6**
MAW LR LR 22 37 24.2
comp=Z,436nm,1.1s,baz=212,slow=6.8,SNR=25
comp=Z,8µm,22.0s,baz=224,slow=35
comp=Z,209nm,1.1s
T25A Trinidad 75.21 333 IAmb IAmb 22 05 05.6
comp=Z,447nm,1.0s
X18A Snowflake 75.30 328 IAmb IAmb 22 05 06.3
comp=Z,334nm,1.4s
L42A Oliver, Polo 75.34 346 IAmb IAmb 22 05 04.0
comp=Z,380nm,0.9s
SUR Sutherland 75.39 119 P **P** **22 05 03.2 0.0**
SUR Sutherland 75.39 119 P **P** **22 05 03.8 +0.6**
SUR Sutherland 75.39 119 P **P** **22 05 03.2 0.0**
SUR pP **pP** **22 05 18.6 +0.4**
I63A Otisfield 75.47 1 IAmb IAmb 22 05 06.4
comp=Z,248nm,1.0s
PECO Prince Edward 75.53 356 IAmb IAmb 22 05 05.5
comp=Z,281nm,0.8s
VTX Valle De La Tr 75.62 322 IAmb IAmb 22 05 08.1
comp=Z,405nm,1.3s
W18A Petrified Fore 75.70 328 IAmb IAmb 22 05 09.1
comp=Z,684nm,1.4s
K43A Burlington 75.75 347 P **P** **22 05 03.7 -0.7**
K43A IAmb IAmb 22 05 06.4
comp=Z,297nm,0.9s
MERW Merweville 75.78 120 *eP* **P** **22 05 05.3 0.0**
X16A Lo Mia Camp, P 75.90 327 IAmb IAmb 22 05 09.7
comp=Z,383nm,1.3s
SCIA State Center 76.04 343 IAmb IAmb 22 05 09.2
comp=Z,398nm,0.8s
I49A Point Hope 76.08 351 IAmb IAmb 22 05 07.9
comp=Z,383nm,0.9s
LONY Lake Ozonia 76.09 358 IAmb IAmb 22 05 09.0
comp=Z,217nm,0.9s
CPBX Cerro Prieto 76.18 323 IAmb IAmb 22 05 11.4
comp=Z,292nm,0.9s
ESJX Sierra Juarez 76.19 322 P **P** **22 05 08.4 +0.9**
KSCO Kaye Shedlock' 76.20 335 IAmb IAmb 22 05 10.8
comp=Z,340nm,1.0s
FRNY Flat Rock 76.28 358 IAmb IAmb 22 05 10.1
comp=Z,204nm,0.8s
HAL Halifax 76.38 6 IAmb IAmb 22 05 11.0
comp=Z,202nm,0.8s
GRAN Grantham 76.44 120 *eP* **P** **22 05 08.9 -0.1**
SADO Sadowa 76.52 354 IAmb IAmb 22 05 10.8
comp=Z,303nm,0.9s
SADO Sadowa 76.52 354 LR LR 22 40 19.3
comp=Z,2µm,21.8s,baz=182,slow=37
G62A West of Eustis 76.64 1 IAmb IAmb 22 05 12.7
comp=Z,303nm,1.0s
GGN Saint George 76.64 3 P **P** **22 05 10.1 +0.6**
GGN IAmb IAmb 22 05 12.6
comp=Z,225nm,0.9s
ARMS Ukamas 76.65 115 *eP* **P** **22 05 11.7 +1.4**
I45A Fountain 76.67 349 IAmb IAmb 22 05 11.0
comp=Z,261nm,1.0s
WUAZ Wupatki 76.77 327 IAmb IAmb 22 05 14.6
comp=Z,368nm,1.2s
CBX Cerro Bola 76.81 322 IAmb IAmb 22 05 14.9
comp=Z,251nm,1.1s
AUGR Augrabies 76.84 115 *eP* **P** **22 05 12.7 +1.4**
BLYC Blythe 76.85 324 IAmb IAmb 22 05 14.9
comp=Z,250nm,1.1s
OTT Ottawa 76.91 357 P **P** **22 05 11.3 +0.3**
MVCO Mesa Verde 76.92 330 P **P** **22 05 12.2 +0.6**
MVCO IAmb IAmb 22 05 15.2
comp=Z,362nm,1.2s
I42A Draeger Farm, 77.00 347 IAmb IAmb 22 05 13.7
comp=Z,353nm,0.9s
BAR Barrett 77.10 322 IAmb IAmb 22 05 16.2
comp=Z,210nm,1.0s
ACRG Accra 77.12 75 IAmb IAmb 22 05 14.5
comp=Z,312nm,0.9s
WIN Windhoek 77.21 109 P **P** **22 05 13.7 0.0**
BRAK Brakfontein 77.22 119 *eP* **P** **22 05 14.2 +0.7**
BC3 Big Chuckawall 77.24 323 P **P** **22 05 13.9 +0.6**
BC3 IAmb IAmb 22 05 17.1
comp=Z,272nm,1.0s
F64A Sherman 77.33 2 IAmb IAmb 22 05 16.4
comp=Z,233nm,0.9s
I40A Norwalk 77.34 346 IAmb IAmb 22 05 15.5
comp=Z,279nm,0.9s
BORC Borrego Spring 77.43 323 IAmb IAmb 22 05 18.2
comp=Z,331nm,1.4s
LMN Caledonia Moun 77.50 5 IAmb IAmb 22 05 16.9
comp=Z,228nm,0.8s
ALKP Alkanpan, Nort 77.64 118 *eP* **P** **22 05 15.7 -0.2**
TRQ Mont Tremblant 77.69 358 IAmb IAmb 22 05 17.7
comp=Z,305nm,1.0s
PMD Palm Desert 77.70 323 IAmb IAmb 22 05 19.7
comp=Z,278nm,1.2s
PFO Pinyon Flats O 77.72 323 P **P** **22 05 16.7 +0.8**
PFO IAmb IAmb 22 05 20.1
comp=Z,318nm,1.1s
PFO Pinyon Flats O 77.72 323 *c iP* **P** **22 05 16.9 +0.9**
PFO pmax pmax
comp=Z,359nm,1.0s
PFO Pinyon Flats O 77.72 323 P **P** **22 05 17.4 +1.5**
OGNE Ogallala 77.72 337 IAmb IAmb 22 05 19.0
comp=Z,346nm,1.3s
PV01 Paradox Valley 77.73 331 IAmb IAmb 22 05 19.8
comp=Z,293nm,1.3s
BFON Badsfontein, M 77.80 120 *eP* **P** **22 05 17.2 +0.5**
PV13 Radium Mtn., P 77.86 331 IAmb IAmb 22 05 20.2
comp=Z,276nm,1.0s
RAR Rarotonga 77.86 253 P **P** **22 05 17.2 +0.2**
RAR IAmb IAmb 22 05 19.5
comp=Z,450nm,1.6s
RAR Rarotonga 77.86 253 P **P** **22 05 17.2 +0.2**
RAR pmax pmax
comp=Z,450nm,1.7s
PV15 Paradox Valley 77.87 331 IAmb IAmb 22 05 20.7
comp=Z,290nm,1.2s
PV05 Paradox Valley 77.91 330 IAmb IAmb 22 05 20.3
comp=Z,267nm,1.1s
U15A North Rim 77.94 327 IAmb IAmb 22 05 21.3
comp=Z,206nm,1.1s
PV18 Skein Mesa, Pa 77.97 331 IAmb IAmb 22 05 20.7
comp=Z,349nm,1.0s
PV12 Saucer Basin, 77.99 331 IAmb IAmb 22 05 21.0
comp=Z,316nm,1.0s
ISCO Idaho Springs 77.99 334 P **P** **22 05 18.4 +0.8**
PV11 David Mesa, Pa 78.00 331 IAmb IAmb 22 05 20.9
comp=Z,228nm,1.1s
E62A Clayton Lake 78.05 1 IAmb IAmb 22 05 20.4
comp=Z,255nm,0.8s
PV19 Morning Glory 78.06 331 IAmb IAmb 22 05 21.1
comp=Z,422nm,1.2s
PV20 West Nyswonger 78.08 331 P **P** **22 05 18.5 +0.5**
PV20 IAmb IAmb 22 05 21.2
comp=Z,344nm,1.2s
PV04 Paradox Valley 78.09 331 IAmb IAmb 22 05 21.5
comp=Z,316nm,1.3s
PV14 Lion Creek, Pa 78.13 331 IAmb IAmb 22 05 21.6
comp=Z,238nm,1.1s
PV10 Paradox Valley 78.14 331 IAmb IAmb 22 05 21.2
comp=Z,386nm,1.0s
GRAF Camdeboo Natio 78.16 121 *eP* **P** **22 05 19.7 +1.1**
PV23 Carpenter Ridg 78.19 331 IAmb IAmb 22 05 22.0
comp=Z,438nm,1.2s
ELS Elsinore Mount 78.25 322 IAmb IAmb 22 05 22.7
comp=Z,236nm,0.9s
HMU Henry Mountain 78.50 329 P **P** **22 05 20.6 +0.2**
D62A Allapoint, All 78.53 2 IAmb IAmb 22 05 22.7
comp=Z,268nm,0.9s
CTZ Chatham Island 78.56 226 P **P** **22 05 21.1 +0.6**
CTZ IAmb IAmb 22 05 24.3
comp=Z,275nm,1.3s
G40A Rib Lake 78.58 347 IAmb IAmb 22 05 22.5
comp=Z,328nm,1.4s
V12A Nelson 78.59 325 IAmb IAmb 22 05 24.2
comp=Z,229nm,1.0s
KNB Kanab 78.67 327 IAmb IAmb 22 05 25.2
comp=Z,559nm,1.3s
BFSC Mount Baldy Ra 78.83 322 IAmb IAmb 22 05 25.7
comp=Z,247nm,1.0s
DRV Dumont d'Urvil 78.99 192 P **P** **22 05 22.0 -0.4**
DRV Dumont d'Urvil 78.99 192 P **P** **22 05 22.2 -0.2**
DRV pP **pP** **22 05 38.7 +1.2**
GRHM Grahamstown, E 79.02 122 P **P** **22 05 23.6 +0.3**
GRHM IAmb IAmb 22 05 25.6
comp=Z,298nm,1.1s
MWC Mount Wilson 79.02 322 IAmb IAmb 22 05 27.0
comp=Z,254nm,0.9s
PASC Pasadena Art C 79.05 322 IAmb IAmb 22 05 27.0
comp=Z,366nm,1.2s
SPMN Marine on St. 79.09 345 IAmb IAmb 22 05 24.7
comp=Z,208nm,0.8s
TSUM Tsumeb 79.25 106 P **P** **22 05 24.2 -0.7**
TSUM Tsumeb 79.25 106 P **P** **22 05 25.2 +0.2**
comp=Z,141nm,1.1s,baz=218,slow=5.9,SNR=76
TSUM pP **pP** **22 05 41.6 +1.7**
comp=Z,89nm,0.9s,baz=267,slow=4.3,SNR=8.9
TSUM LR LR 22 35 23.2
comp=Z,14µm,21.7s,baz=229,slow=32
comp=Z,141nm,1.1s
MACI Morro de la Ar 79.28 47 P **P** **22 05 26.0 +1.2**
MACI IAmb IAmb 22 05 56.6
comp=Z,288nm,1.0s
O20A White River Ci 79.30 332 IAmb IAmb 22 05 28.0
comp=Z,222nm,0.9s
CCUT Cedar City 79.35 327 IAmb IAmb 22 05 29.3
comp=Z,299nm,1.1s
SRU San Rafael Swe 79.38 330 IAmb IAmb 22 05 28.1
comp=Z,220nm,0.9s
SHOC Shoshone, Teco 79.42 324 IAmb IAmb 22 05 28.7
comp=Z,374nm,1.6s
KOOLE Kule 79.48 110 *i* P **P** **22 05 26.2 +0.1**
Q16A Castle Valley 79.50 329 IAmb IAmb 22 05 29.3
comp=Z,282nm,1.0s
TPO Tropico Hills 79.62 322 IAmb IAmb 22 05 29.8
comp=Z,226nm,0.9s
OSI Osito Audit: C 79.67 322 IAmb IAmb 22 05 30.8
comp=Z,383nm,0.9s
CCCA Chr Cany lake 79.68 323 IAmb IAmb 22 05 30.6
comp=Z,436nm,1.0s
P18A Preston Nutter 79.69 330 IAmb IAmb 22 05 30.4
comp=Z,374nm,1.0s
VLDQ Val d'Or 79.72 356 P **P** **22 05 26.5 +0.1**
VLDQ IAmb IAmb 22 05 28.8
comp=Z,298nm,0.9s
LKGWB Lokgwabe 79.74 112 P **P** **22 05 28.7 +1.3**
HVD Gariep Dam 79.74 120 *eP* **P** **22 05 27.9 +0.5**
EOSO Osorio 79.76 48 P **P** **22 05 29.1 +1.9**
P17A Butcher Ranch, 79.77 330 IAmb IAmb 22 05 30.4
comp=Z,408nm,1.3s
WSHM Spangler Hills 79.80 323 IAmb IAmb 22 05 31.0
comp=Z,288nm,1.0s
LRMC Laurel Mtn Rad 79.80 323 IAmb IAmb 22 05 31.1
comp=Z,271nm,1.1s
TMUT Trail Mountain 79.83 330 IAmb IAmb 22 05 30.9
comp=Z,408nm,1.5s
SUSD Miller 79.93 340 IAmb IAmb 22 05 29.9
comp=Z,319nm,0.8s
CLC China Lake 80.02 323 IAmb IAmb 22 05 32.0
comp=Z,293nm,1.2s
RDMU Red Mountain 80.21 331 IAmb IAmb 22 05 32.6
comp=Z,271nm,0.9s
TPNV Topopah Spring 80.24 325 IAmb IAmb 22 05 33.8
comp=Z,300nm,1.1s
WCT Wildcat Mounta 80.30 325 IAmb IAmb 22 05 34.1
comp=Z,278nm,1.2s
PHPEN Phepeng 80.34 114 *i* P **P** **22 05 31.7 +1.1**
ISA Isabella, Lake 80.35 323 IAmb IAmb 22 05 34.3
comp=Z,284nm,1.0s
BOSA Boshof 80.58 118 P **P** **22 05 31.7 -0.2**
BOSA Boshof 80.58 118 P **P** **22 05 31.7 -0.2**
comp=Z,140nm,1.0s,baz=241,slow=5.2,SNR=100
BOSA pP **pP** **22 05 48.9 +1.8**
comp=Z,30nm,0.4s,baz=253,slow=4.5,SNR=8.1
comp=Z,140nm,1.0s
BOSA Boshof 80.58 118 *eP* **P** **22 05 31.4 -0.5**
BOSA Boshof 80.58 118 P **P** **22 05 31.9 0.0**
BOSA Boshof 80.58 118 P **P** **22 05 31.9 0.0**
BOSA sP **sP** **22 05 53.0 +0.1**
BSUT Blindstream Ca 80.67 331 IAmb IAmb 22 05 35.6
comp=Z,336nm,1.2s
K22A Casper 80.81 334 IAmb IAmb 22 05 35.9
comp=Z,353nm,1.0s
GRAC Grapevine Rang 80.83 324 IAmb IAmb 22 05 36.7
comp=Z,296nm,1.2s
SPR3 Spring Creek 3 80.97 327 IAmb IAmb 22 05 37.0
comp=Z,309nm,1.2s
R11B Troy Canyon, C 81.03 326 P **P** **22 05 34.6 +0.6**
GRTLG Ghanzi 81.12 110 *i* P **P** **22 05 35.0 0.0**
KGCAE Kacgae 81.15 111 *i* P **P** **22 05 35.9 +0.8**
RSSD Black Hills 81.22 337 P **P** **22 05 34.8 -0.1**
RSSD IAmb IAmb 22 05 38.3
comp=Z,296nm,1.1s
RSSD Black Hills 81.22 337 P **P** **22 05 34.8 -0.1**
RSSD pmax pmax
comp=Z,296nm,1.1s
RSSD Black Hills 81.22 337 P **P** **22 05 35.5 +0.6**
RSSD pP **pP** **22 05 51.3 +1.4**
CMLA Cha da Macela 81.33 35 P **P** **22 05 37.0 +1.7**
CMLA IAmb IAmb 22 05 38.2
comp=Z,238nm,0.8s
CMLA Cha da Macela 81.33 35 P **P** **22 05 37.1 +1.7**
CMLA pmax pmax
comp=Z,238nm,0.8s
EYMN Ely 81.40 346 IAmb IAmb 22 05 37.4
comp=Z,254nm,1.0s
TCUT Toone Canyon 81.43 331 IAmb IAmb 22 05 39.1
comp=Z,172nm,0.8s
DRLN Deer Lake 81.61 9 IAmb IAmb 22 05 38.8
comp=Z,210nm,0.8s
SKOMA Sekoma 81.67 114 *i* P **P** **22 05 38.5 +0.7**
MAKGR Makgori 81.67 115 *i* P **P** **22 05 37.4 -0.4**
TBO Thunder Bay 81.68 348 IAmb IAmb 22 05 38.9
comp=Z,216nm,0.9s
HWUT Hardware Ranch 81.90 331 IAmb IAmb 22 05 41.3
comp=Z,225nm,0.8s
PMPB Monarch Peak 81.99 322 IAmb IAmb 22 05 44.0
comp=Z,492nm,1.5s
QNGWA Qangwa 82.02 108 *i* P **P** **22 05 39.9 +0.2**
BW06 Boulder Array 82.06 333 IAmb IAmb 22 05 41.9
comp=Z,307nm,1.6s
PDAR Pinedale Array 82.06 333 P **P** **22 05 38.6 -0.7**
PDAR Pinedale Array 82.06 333 LR LR 22 38 54.1
comp=Z,2µm,20.4s,baz=142,slow=33
HULI Fort Hunter Li 82.07 321 IAmb IAmb 22 05 43.6
comp=Z,350nm,1.1s
PMOZ Porto Moniz, M 82.11 44 P **P** **22 05 41.8 +2.1**
PMOZ Porto Moniz, M 82.11 44 *eP* **P** **22 05 41.7 +2.0**
PMOZ epP **pP** **22 05 55.0 +0.2**
PMOZ *i* IAmb IAmb 22 06 08.1
comp=Z,238nm,1.2s
PMOZ *eS* **S** **22 15 51.7 +1.2**
PMOZ *eLR* LR 22 32 50.8
PMOZ *i* IAMs_20 IAMs_20 22 39 11.4
comp=Z,3µm,22.0s
FUL Funchal 82.16 44 *eP* **P** **22 05 41.8 +1.9**
FUL *i* IAmb IAmb 22 05 43.1
comp=Z,296nm,1.1s
FUL epP **pP** **22 05 57.0 +2.0**
Q09A Carvers 82.18 326 IAmb IAmb 22 05 43.6
comp=Z,327nm,1.0s
PMAR Madeira 82.21 44 *eP* **P** **22 05 42.2 +1.9**
PMAR epP **sP** **22 05 58.8 -2.5**
PMAR *i* IAmb IAmb 22 06 01.6
comp=Z,428nm,1.1s
CASY Casey 82.24 181 P **P** **22 05 40.3 +0.5**
CASY Casey 82.24 181 P **P** **22 05 40.7 +0.8**
CASY pP **pP** **22 05 56.5 +1.5**
LHV Little Huntoon 82.37 324 IAmb IAmb 22 05 44.8
comp=Z,250nm,0.9s
BBGB Big Mountain B 82.39 322 P **P** **22 05 42.4 +1.3**
BBGB IAmb IAmb 22 05 47.0
comp=Z,233nm,0.9s
NVAR Mina Array Bea 82.41 325 P **P** **22 05 41.9 +0.6**
NVAR Mina Array Bea 82.41 325 P **P** **22 05 42.1 +0.8**
comp=Z,92nm,0.8s,baz=153,slow=6.0,SNR=169
NVAR pP **pP** **22 05 58.6 +2.3**
comp=Z,42nm,0.9s,baz=141,slow=7.1,SNR=7.4
NVAR PKKP **PKKPdf** **22 24 01.8 +1.3**
comp=Z,1.1nm,0.7s,baz=349,slow=1.8,SNR=3.8
NVAR PKKPbc **PKKPbc** **22 24 08.4 -0.7**
comp=Z,6.5nm,0.9s,baz=336,slow=3.6,SNR=13
NVAR PKPPKP **P'P'df** **22 32 15.9 +6.4**
comp=Z,1.1nm,0.8s,baz=321,slow=3.1,SNR=5.3
comp=Z,92nm,0.8s
KSTD Kokstad 82.53 121 *eP* **P** **22 05 40.4 -1.9**
XAUDM Khaudum 82.65 107 *i* P **P** **22 05 44.6 +1.6**
AHID Auburn Hatcher 82.67 332 IAmb IAmb 22 05 45.1
comp=Z,458nm,1.6s
RYN Ryan 82.67 325 IAmb IAmb 22 05 46.1
comp=Z,196nm,1.0s
AGMN Agassiz Nation 82.69 344 IAmb IAmb 22 05 44.3
comp=Z,232nm,0.8s
LBTB Lobatse 82.70 115 IAmb IAmb 22 05 44.7
comp=Z,186nm,0.8s
LBTB Lobatse 82.70 115 P **P** **22 05 42.8 -0.4**
comp=Z,155nm,0.8s,baz=242,slow=5.5,SNR=156
LBTB pP **pP** **22 05 59.5 +1.1**
comp=Z,72nm,0.6s,baz=237,slow=7.1,SNR=8.9
LBTB LR LR 22 37 59.9
comp=Z,16µm,21.4s,baz=230,slow=32
comp=Z,155nm,0.8s
LBTB Lobatse 82.70 115 *eP* **P** **22 05 42.9 -0.4**
LBTB Lobatse 82.70 115 P **P** **22 05 42.6 -0.6**
LBTB pP **pP** **22 05 59.6 +1.3**
LBTB sP **sP** **22 06 04.0 -0.2**
SAO San Andreas Ge 82.75 322 P **P** **22 05 44.2 +1.4**
PMPS Porto Santo 82.78 44 *eP* **P** **22 05 46.8 +3.8**
ELK Elko 82.79 328 LR LR 22 37 52.0
comp=Z,4µm,21.9s,baz=150,slow=32
PMPST Porto Santo, M 82.80 44 *eP* **P** **22 05 46.0 +2.8**
KDWAN Kaudwane 82.82 113 IAmb IAmb 22 05 45.7
comp=Z,290nm,1.0s
KDWAN Kaudwane 82.82 113 *i* P **P** **22 05 43.9 +0.1**
TOA0 Torodi Ar. Sit 82.90 70 P **P** **22 05 44.1 0.0**
SNR=70
TORD Torodi Ar. Bea 82.90 70 P **P** **22 05 41.2 -2.9**
TORD IAmb IAmb 22 05 45.9
comp=Z,286nm,0.8s
TORD Torodi Ar. Bea 82.90 70 P **P** **22 05 44.1 0.0**
comp=Z,290nm,0.8s,baz=116,slow=33,SNR=26
TORD pP **pP** **22 06 00.4 +1.3**
comp=Z,77nm,0.7s,baz=296,slow=2.6,SNR=4.9
TORD LR LR 22 39 17.3
comp=Z,12µm,21.9s,baz=228,slow=33
comp=Z,290nm,0.8s
WAKR Walker 83.03 324 P **P** **22 05 45.4 +0.9**
WAKR IAmb IAmb 22 05 48.6
comp=Z,265nm,1.1s
CMB Columbia Colle 83.15 323 P **P** **22 05 46.2 +1.3**
MHC Mount Hamilton 83.28 322 IAmb IAmb 22 05 49.7
comp=Z,279nm,1.2s
EPLO Experimental L 83.50 346 IAmb IAmb 22 05 48.1
comp=Z,186nm,1.0s
PNTR Pine Nut 83.56 324 IAmb IAmb 22 05 51.6
comp=Z,322nm,0.9s
FLWY Flagg Ranch 83.62 333 IAmb IAmb 22 05 50.5
comp=Z,220nm,1.1s
LPHEP Lephephe 83.77 113 IAmb IAmb 22 05 50.5
comp=Z,231nm,1.0s
LPHEP Lephephe 83.77 113 *i* P **P** **22 05 48.7 0.0**
YPP Pitchstone Pla 83.81 333 P **P** **22 05 48.2 -0.3**
HRAO HartRAO 83.84 117 *eP* **P** **22 05 48.5 -0.7**
PAHR Pah Rah Range 83.93 325 IAmb IAmb 22 05 52.8
comp=Z,297nm,1.0s
MPK Martis Peak 83.94 324 IAmb IAmb 22 05 53.1
comp=Z,367nm,1.1s
YFT Old Faithful 83.98 333 IAmb IAmb 22 05 53.2
comp=Z,341nm,1.7s
PMBG Pietermaritzbu 84.01 121 *eP* **P** **22 05 47.4 -2.4**
KHWEE KHWEE 84.19 112 P **P** **22 05 50.2 -0.7**
KHWEE IAmb IAmb 22 05 52.7
comp=Z,231nm,1.1s
KHWEE KHWEE 84.19 112 *i* P **P** **22 05 51.2 +0.4**
YHB Horse Butte 84.37 333 IAmb IAmb 22 05 54.5
comp=Z,232nm,1.3s
PHDHD Phuduhudu 84.38 110 IAmb IAmb 22 05 53.7
comp=Z,228nm,0.8s
PHDHD Phuduhudu 84.38 110 *i* P **P** **22 05 52.0 +0.1**
YHL Hebgen Lake 84.45 333 IAmb IAmb 22 05 55.2
comp=Z,214nm,1.2s
CVS Carmenet Viney 84.46 322 IAmb IAmb 22 05 55.0
comp=Z,392nm,1.1s
NWCL Newcastle 84.52 119 *eP* **P** **22 05 50.4 -2.1**
ULM Lac du Bonnet 84.52 344 IAmb IAmb 22 05 53.8
comp=Z,267nm,0.9s
ULM Lac du Bonnet 84.52 344 P **P** **22 05 51.3 -0.2**
comp=Z,250nm,0.9s,baz=155,slow=5.3,SNR=76
ULM PKKP **PKKPdf** **22 24 00.0 +2.8**
comp=Z,7.7nm,0.5s,baz=284,slow=3.1,SNR=4.4
comp=Z,250nm,0.9s
ULM Lac du Bonnet 84.52 344 *c iP* **P** **22 05 50.4 -1.1**
MCCM Marconi Confer 84.53 322 IAmb IAmb 22 05 55.5
comp=Z,200nm,1.1s
BEKR Beckworth 84.53 324 IAmb IAmb 22 05 55.5
comp=Z,186nm,1.1s
BFZ Birch Farm 84.64 225 P **P** **22 05 54.6 +1.9**
BFZ IAmb IAmb 22 05 56.7
comp=Z,468nm,1.5s
HLID Hailey 84.70 330 IAmb IAmb 22 05 56.2
comp=Z,175nm,1.1s
SUTB Sutter Butte 84.77 323 IAmb IAmb 22 05 56.2
comp=Z,355nm,1.4s
MTW Mount Morrison 84.79 224 P **P** **22 05 55.2 +1.7**
MNRC McLaughlin Min 84.85 322 IAmb IAmb 22 05 57.4
comp=Z,217nm,1.3s
BCYI Bear Canyon 84.89 331 IAmb IAmb 22 05 57.2
comp=Z,198nm,1.1s
HOWZ Holdsworth Sta 84.95 224 P **P** **22 05 56.1 +1.8**
LEPH Lephalale, Lim 85.01 115 *eP* **P** **22 05 54.5 -0.4**
MRZ Mangatainoka R 85.05 225 P **P** **22 05 56.9 +2.1**
ODZ Otahua Downs 85.06 219 IAmb IAmb 22 05 58.1
comp=Z,367nm,1.5s
GVZ Greta Valley S 85.09 222 IAmb IAmb 22 05 58.2
comp=Z,526nm,1.7s
KHZ Kahutara 85.15 222 P **P** **22 05 56.8 +1.6**
SNZO South Karori 85.17 224 P **P** **22 05 56.6 +1.3**
SNZO IAmb IAmb 22 05 59.0
comp=Z,224nm,1.1s
SNZO South Karori 85.17 224 P **P** **22 05 56.3 +1.0**
MFID Camas Ranch 85.19 329 IAmb IAmb 22 05 58.4
comp=Z,418nm,1.6s
TSZ Takapari Road 85.19 225 P **P** **22 05 58.1 +2.6**
BOZ Bozeman (W) 85.25 333 P **P** **22 05 55.4 -0.1**
HOPS Hopland Field 85.26 322 IAmb IAmb 22 05 59.5
comp=Z,437nm,1.6s
MWZ Matawai 85.28 227 P **P** **22 05 57.9 +1.9**
TMZ Timaru 85.30 220 P **P** **22 05 56.6 +0.6**
BKZ Black Stump Fm 85.42 226 IAmb IAmb 22 06 01.1
comp=Z,274nm,1.4s
BKZ Black Stump Fm 85.42 226 P **P** **22 05 58.7 +2.0**
OXZ Oxford 85.42 221 IAmb IAmb 22 05 59.8
comp=Z,317nm,1.3s
MREMI Moremi 85.43 114 IAmb IAmb 22 05 58.9
comp=Z,189nm,1.1s
MREMI Moremi 85.43 114 *i* P **P** **22 05 58.0 +0.9**
DLMT Dillon 85.43 332 IAmb IAmb 22 06 00.2
comp=Z,325nm,1.1s
URZ Urewera 85.59 227 P **P** **22 05 58.3 +0.9**
comp=Z,28nm,0.7s,baz=114,slow=2.8,SNR=23
comp=Z,28nm,0.7s
URZ Urewera 85.59 227 P **P** **22 05 58.7 +1.2**
LTZ Lake Taylor 85.64 221 P **P** **22 05 58.0 +0.3**
LTZ Lake Taylor 85.64 221 P **P** **22 05 58.9 +1.2**
WVOR Wild Horse Val 85.68 327 IAmb IAmb 22 06 00.9
comp=Z,186nm,1.2s
WVOR Wild Horse Val 85.68 327 P **P** **22 05 58.1 +0.4**
RPZ Rata Peaks 85.71 220 P **P** **22 05 59.0 +0.9**
MOVZ Moawhango 85.72 226 P **P** **22 06 00.0 +1.8**
LBZ Lake Benmore 85.74 219 IAmb IAmb 22 06 01.3
comp=Z,340nm,1.6s
DCMP DeCamp, Califo 85.75 322 IAmb IAmb 22 06 02.1
comp=Z,206nm,1.2s
THZ Tophouse 85.93 222 P **P** **22 06 00.5 +1.3**
THZ Tophouse 85.93 222 P **P** **22 06 01.0 +1.8**
O02D Mt. Diablo Mer 85.99 323 IAmb IAmb 22 06 02.4
comp=Z,210nm,1.4s
NNZ Nelson 86.00 223 P **P** **22 06 01.4 +1.9**
POGA Pongola 86.08 120 IAmb IAmb 22 06 02.7
comp=Z,236nm,1.1s
POGA Pongola 86.08 120 *eP* **P** **22 05 57.7 -2.4**
BROLN Tlhalogang 86.12 112 *i* P **P** **22 06 00.4 -0.2**
KSANE Kasane 86.14 108 *i* P **P** **22 06 01.0 +0.4**
MLZ Mavora Lakes 86.18 217 IAmb IAmb 22 06 03.3
comp=Z,284nm,1.6s
MRNZ Matariki Terra 86.25 223 P **P** **22 06 02.7 +2.0**
WVZ Waitaha Valley 86.31 220 P **P** **22 06 01.3 +0.4**
SCHQ Schefferville 86.35 3 P **P** **22 05 59.8 -0.7**
comp=Z,152nm,1.1s,baz=158,slow=4.3,SNR=40
SCHQ PKKP **PKKPdf** **22 23 55.4 +1.1**
comp=Z,4.5nm,0.6s,baz=329,slow=5.7,SNR=6.0
SCHQ LR LR 22 44 57.8
comp=Z,2µm,22.0s,baz=198,slow=36
comp=Z,152nm,1.1s
TKNZ Takaka Hill 86.36 223 P **P** **22 06 02.5 +1.2**
M03C McCloud 86.48 324 IAmb IAmb 22 06 04.2
comp=Z,174nm,1.0s
FOZ Fox Glacier 86.51 220 IAmb IAmb 22 06 04.9
comp=Z,431nm,1.6s
FOZ Fox Glacier 86.51 220 P **P** **22 06 02.4 +0.5**
N02D Trinity Center 86.54 324 P **P** **22 06 01.5 -0.5**

KHBM	Hayfork Bally	86.57	323		IAmb	IAmb	22 06 05.8				
	comp=Z,263nm,1.3s										
DSZ	Denniston Nort	86.57	222		P	P	22 06 02.5	+0.2			
EGMT	Eagleton	86.59	335		IAmb	IAmb	22 06 04.1				
	comp=Z,293nm,1.2s										
DCZ	Deep Cove	86.61	217		IAmb	IAmb	22 06 04.8				
	comp=Z,307nm,1.9s										
QRZ	Quartz Range	86.75	223		P	P	22 06 03.6	+0.4			
NEZ	North Egmont	86.81	225		P	P	22 06 05.1	+1.5			
HIZ	Hauiti	86.83	226		P	P	22 06 04.9	+1.3			
KHEZ	Kahui Hut	86.84	225		P	P	22 06 04.9	+1.2			
M02C	Callahan	86.93	324		P	P	22 06 03.3	-0.5			
M02C					IAmb	IAmb	22 06 06.8				
	comp=Z,258nm,1.4s										
BMO	Blue Mountains	86.98	329		IAmb	IAmb	22 06 06.7				
	comp=Z,142nm,1.1s										
KHMM	Horse Mountain	86.99	323		IAmb	IAmb	22 06 08.0				
	comp=Z,289nm,1.1s										
TIO	Tlouine	87.03	51		P	P	22 06 05.2	+0.6			
JCC	Jacoby Creek,	87.10	323		IAmb	IAmb	22 06 08.3				
	comp=Z,262nm,1.1s										
MSO	Missoula	87.17	332		IAmb	IAmb	22 06 08.0				
	comp=Z,286nm,1.6s										
L04D	Klamath Falls	87.27	325		IAmb	IAmb	22 06 08.2				
	comp=Z,260nm,1.2s										
I07A	Izee	87.36	327		IAmb	IAmb	22 06 09.3				
	comp=Z,251nm,1.0s										
MUSN	Musina, Limpop	87.45	115	*eP*		P	22 06 05.5	-1.5			
XMAS	Kiritimati	87.75	274		P	P	22 06 09.0	+0.7			
KSXB	Camp Six Broad	87.77	324		IAmb	IAmb	22 06 11.4				
	comp=Z,267nm,1.3s										
L02F	Cave Junction	87.83	324		IAmb	IAmb	22 06 11.5				
	comp=Z,228nm,1.1s										
F10A	Beach Ranch, E	87.83	330		IAmb	IAmb	22 06 11.5				
	comp=Z,265nm,1.5s										
BBOR	Butler Butte	87.96	325		IAmb	IAmb	22 06 11.1				
	comp=Z,171nm,1.3s										
MOPA	Mopani	87.96	116	*eP*		P	22 06 07.1	-2.3			
G08A	Pilot Rock	88.05	329		IAmb	IAmb	22 06 12.1				
	comp=Z,159nm,1.1s										
KBO	Bosley Butte	88.23	324		P	P	22 06 11.2	+1.2			
AVE	Averroes	88.45	49		P	P	22 06 12.2	+1.0			
AVE	Averroes	88.45	49		IAmb	IAmb	22 06 14.1				
	comp=Z,116nm,0.8s										
I04A	Tendick Farm,	88.51	326		IAmb	IAmb	22 06 13.9				
	comp=Z,229nm,1.3s										
I03D	Drain, OR	88.89	325		P	P	22 06 14.4	+1.4			
I03D					IAmb	IAmb	22 06 16.2				
	comp=Z,230nm,1.5s										
H04A	Detroit Lake	89.07	326		IAmb	IAmb	22 06 16.4				
	comp=Z,215nm,1.2s										
H04D	Lebanon	89.21	326		IAmb	IAmb	22 06 38.7				
	comp=Z,108nm,1.1s										
HOOD	Mount Hood Mea	89.30	327		IAmb	IAmb	22 06 18.2				
	comp=Z,189nm,1.2s										
D08A	Wollman Farm,	89.41	330		IAmb	IAmb	22 06 18.1				
	comp=Z,142nm,0.9s										
E07A	Sunnyside	89.43	329		IAmb	IAmb	22 06 18.6				
	comp=Z,119nm,1.0s										
I02E	Swieshome, OR	89.43	325		IAmb	IAmb	22 06 19.1				
	comp=Z,289nm,1.6s										
WAH2	Wahluke Slope	89.45	329		IAmb	IAmb	22 06 18.4				
	comp=Z,133nm,1.0s										
COR	Corvallis	89.52	326		P	P	22 06 17.2	+1.3			
COR	Corvallis	89.52	326		P	P	22 06 17.2	+1.3			
COR					pmax	pmax					
	comp=Z,258nm,1.1s										
COR	Corvallis	89.52	326		P	P	22 06 18.6	+2.7			
COR					sP	sP	22 06 39.4	+2.6			
KUQ	Kuujjuuaa	89.58	2		IAmb	IAmb	22 06 17.8				
	comp=Z,252nm,1.8s										
NEW	Newport	89.60	331		IAmb	IAmb	22 06 18.1				
	comp=Z,169nm,1.4s										
NEW	Newport	89.60	331		LR	LR	22 43 39.9				
	comp=Z,4µm,18.2s,baz=118,slow=34										
NEW	Newport	89.60	331		P	P	22 06 15.6	-0.7			
MXC	Moxie City	89.64	329		IAmb	IAmb	22 06 19.7				
	comp=Z,141nm,1.0s										
MD01	Midelt array s	89.90	51		P	P	22 06 18.2	0.0			
LSZ	Lusaka	89.93	108		P	P	22 06 20.1	+1.3			
LSZ					IAmb	IAmb	22 06 21.9				
	comp=Z,159nm,0.8s										
LSZ	Lusaka	89.93	108		P	P	22 06 20.0	+1.3			
	comp=Z,119nm,0.8s,baz=230,slow=3.7,SNR=159										
LSZ					pP	sP	22 06 37.1	-2.7			
	comp=Z,74nm,1.1s,baz=230,slow=3.9,SNR=4.5										
LSZ					LR	LR	22 43 48.5				
	comp=Z,7µm,18.9s,baz=247,slow=34										
	comp=Z,119nm,0.8s										
LSZ	Lusaka	89.93	108		P	P	22 06 20.2	+1.3			
LSZ	Lusaka	89.93	108	*eP*		P	22 06 19.0	+0.1			
LSZ	Lusaka	89.93	108		P	P	22 06 20.1	+1.3			
LSZ					pmax	pmax					
	comp=Z,159nm,0.9s										
LSZ	Lusaka	89.93	108		P	P	22 06 19.8	+1.0			
MDT	Midelt	89.97	51		LR	LR	22 45 11.2				
	comp=Z,3µm,21.8s,baz=236,slow=34										
G03D	McMinnville, O	89.97	326		IAmb	IAmb	22 06 21.4				
	comp=Z,262nm,1.5s										
PFVI	Vila Bisbo	90.05	45		P	P	22 06 19.7	+1.0			
IFR	Ifrane	90.06	50		P	P	22 06 19.5	+0.5			
FFC	Flin Flon	90.11	343		P	P	22 06 18.4	0.0			
FFC					IAmb	IAmb	22 06 20.2				
	comp=Z,111nm,1.1s										
FFC	Flin Flon	90.11	343		P	P	22 06 18.4	0.0			
FFC					pmax	pmax					
	comp=Z,111nm,1.1s										
MORF	Marmelete	90.27	45	*eP*		P	22 06 20.4	+0.7			
MORF				*e*	SKSac	SKSac	22 16 46.2	-0.2			
MORF					IAMs_20	IAMs_20	22 45 18.3				
	comp=E,5µm,14.2s										
MORF	Marmelete	90.27	45	*eP*		P	22 06 21.1	+1.5			
MORF	Marmelete	90.27	45	*eP*		P	22 06 20.4	+0.7			
MORF				*e*			22 16 46.2				
LTY	Liberty	90.33	329		IAmb	IAmb	22 06 22.2				
	comp=Z,135nm,1.0s										
PTEO	Sao Teotonio	90.39	45	*eP*		P	22 06 21.7	+1.5			
PTEO				*i*	IAmb	IAmb	22 06 50.1				
	comp=Z,191nm,1.4s										
F03A	Seaside	90.64	327		IAmb	IAmb	22 06 24.2				
	comp=Z,142nm,1.2s										
PBDV	Barranco-do-Ve	90.67	46		P	P	22 06 22.3	+0.7			
PBDV	Barranco-do-Ve	90.67	46	*eP*		P	22 06 23.1	+1.6			
PBDV				*i*	IAmb	IAmb	22 06 24.6				
	comp=Z,202nm,1.4s										
PBDV					*ep*P	sP	22 06 41.7	-0.8			
PCVE	Castro Verde	90.85	45		P	P	22 06 22.4	+0.1			
PCVE	Castro Verde	90.85	45	*eP*		P	22 06 23.6	+1.2			
PCVE					*ep*P	pP	22 06 38.8	+1.2			
PCVE				*i*	IAmb	IAmb	22 06 42.9				
	comp=Z,92nm,1.3s										
MESJ	Messejana	90.88	45	*eP*		P	22 06 22.9	+0.4			
MESJ				*e*	SKSac	SKSac	22 16 50.0	+0.1			
MESJ					IAMs_20	IAMs_20	22 44 27.2				
	comp=Z,5µm,14.8s										
MESJ	Messejana	90.88	45	*eP*		P	22 06 23.3	+0.8			
MESJ				*i*	IAmb	IAmb	22 06 26.1				
	comp=Z,114nm,1.3s										
MESJ					*ep*P	pP	22 06 38.7	+1.0			
MESJ	Messejana	90.88	45	*eP*		P	22 06 22.9	+0.4			
MESJ				*e*			22 16 50.0				
LIS	Lisbon	90.90	44	*e*	SKSac	SKSac	22 16 49.9	0.0			
LIS					IAMs_20	IAMs_20	22 43 34.9				
	comp=Z,9µm,18.3s										
PVAQ	Vaqueiros	90.90	46		IAmb	IAmb	22 06 26.1				
	comp=Z,107nm,1.0s										
PVAQ	Vaqueiros	90.90	46	*eP*		P	22 06 23.5	+1.0			
PVAQ				*i*	IAmb	IAmb	22 06 25.6				
	comp=Z,115nm,1.2s										
PVAQ					*ep*P	pP	22 06 39.0	+1.2			
PVAQ					eS	SKSac	22 16 52.3	+2.3			
PVAQ					eLR	LR	22 36 18.3				
PVAQ					*i* IAMs_20	IAMs_20	22 46 09.4				
	comp=Z,5µm,20.0s										
E03A	Lebam	91.10	327		IAmb	IAmb	22 06 26.1				
	comp=Z,143nm,1.1s										
RADR	Rader Ridge	91.12	327		IAmb	IAmb	22 06 26.4				
	comp=Z,108nm,1.1s										
EGRO	El Granado	91.13	46		P	P	22 06 24.5	+0.9			
PBEJ	Beja	91.21	45	*eP*		P	22 06 24.4	+0.4			
PBEJ				*i*	IAmb	IAmb	22 06 26.2				
	comp=Z,89nm,1.2s										
PBEJ					*ep*P	sP	22 06 44.8	-0.2			
TAM	Tamanrasset	91.33	64		IAmb	IAmb	22 06 27.2				
	comp=Z,78nm,1.0s										
TAM	Tamanrasset	91.33	64		P	P	22 06 25.9	+0.8			
CEU	Ceuta	91.40	48		P	P	22 06 26.8	+1.9			
EVO	Evora	91.45	45		P	P	22 06 26.2	+1.1			
EVO	Evora	91.45	45	*eP*		P	22 06 26.3	+1.2			
EVO				*i*	IAmb	IAmb	22 06 27.6				
	comp=Z,68nm,1.7s										
GNW	Green Mountain	91.52	328		IAmb	IAmb	22 06 27.5				
	comp=Z,104nm,1.3s										
WISH	Wishkah	91.62	327		P	P	22 06 27.2	+1.6			
WISH					IAmb	IAmb	22 06 28.9				
	comp=Z,113nm,1.2s										
PARRA	Arraiolos	91.62	44	*eP*		P	22 06 26.9	+1.1			
PARRA				*i*	IAmb	IAmb	22 06 28.5				
	comp=Z,76nm,1.6s										
PARRA					*ep*P	sP	22 06 45.1	-1.8			
PSBE	So Bento	91.63	43	*eP*		P	22 06 26.5	+0.6			
PSBE					*ep*P	sP	22 06 45.1	-1.9			
PMTG	Montargil	91.67	44	*eP*		P	22 06 26.8	+0.7			
PMTG				*i*	IAmb	IAmb	22 06 28.7				
	comp=Z,150nm,1.3s										
PMTG					*ep*P	pP	22 06 41.6	+0.2			
ESPR	Espera	91.70	47		P	P	22 06 27.3	+1.0			
EMIN	Mina Concepcio	91.77	46		P	P	22 06 26.7	+0.1			
PBAR	Barrancos	91.81	45		P	P	22 06 27.0	+0.2			
PBAR	Barrancos	91.81	45	*eP*		P	22 06 26.7	0.0			
PBAR					*ep*P	pP	22 06 42.4	+0.4			
PBAR				*i*	IAmb	IAmb	22 06 45.6				
	comp=Z,51nm,1.7s										
PESTR	Estremoz	91.92	44		P	P	22 06 28.1	+0.8			
PESTR	Estremoz	91.92	44	*eP*		P	22 06 28.1	+0.8			
PESTR				*i*	IAmb	IAmb	22 06 49.4				
	comp=Z,75nm,1.8s										
PSARD	Sardoal	92.06	44	*eP*		P	22 06 28.8	+0.9			
PSARD					*ep*P	pP	22 06 44.1	+0.9			
PCAS	Casmilo, Conde	92.15	43	*eP*		P	22 06 29.6	+1.3			
PCAS					*ep*P	pP	22 06 45.7	+2.1			
EMIJ	Mijas	92.19	48		P	P	22 06 28.9	+0.3			
EBAD	Badajoz	92.19	45		P	P	22 06 28.6	+0.1			
PMRV	Marv??o	92.40	44	*eP*		P	22 06 30.1	+0.6			
PMRV					*ep*P	pP	22 06 46.1	+1.4			
PMRV					*e*S	SKSac	22 16 57.9	-0.6			
PMRV					eLR	LR	22 37 05.3				
PMRV					*i* IAMs_20	IAMs_20	22 45 01.9				
	comp=Z,4µm,22.0s										
EMAL	Malaga-Limoner	92.53	48		P	P	22 06 31.2	+1.1			
PGC	Sidney	92.60	328		IAmb	IAmb	22 06 32.8				
	comp=Z,93nm,1.2s										
PCBR	Castelo Branco	92.61	44	*eP*		P	22 06 30.8	+0.4			
PCBR				*i*	IAmb	IAmb	22 06 31.9				
	comp=Z,78nm,1.2s										
ECAB	El Cabril	92.73	46		P	P	22 06 31.2	+0.1			
PVIS	Viseu	92.93	43	*eP*		P	22 06 32.0	0.0			
PVIS					*ep*P	sP	22 06 50.4	-2.6			
MTE	Manteigas	92.94	43		IAmb	IAmb	22 06 34.0				
	comp=Z,74nm,1.0s										
MTE	Manteigas	92.94	43	*eP*		P	22 06 32.5	+0.5			
MTE				*i*	IAmb	IAmb	22 06 33.6				
	comp=Z,100nm,1.1s										
MTE					*ep*P	sP	22 06 50.5	-2.5			
MTE					*e*S	SKSac	22 17 04.6	+3.2			
MTE					eLR	LR	22 38 07.0				
MTE					*i* IAMs_20	IAMs_20	22 45 36.7				
	comp=Z,9µm,22.0s										
EGOR	Sierra Gorda,	92.95	48		P	P	22 06 33.6	+1.4			
EADA	Adamuz	93.31	47		P	P	22 06 34.1	+0.4			
PVRL	Vila Real	93.40	43	*eP*		P	22 06 34.4	+0.3			
POLO	Lamas de Olo	93.42	42	*eP*		P	22 06 35.1	+0.8			
PCAB	Cabril	93.50	42	*eP*		P	22 06 35.5	+1.0			
PGAV	Gavieira, Arco	93.53	42	*e*S		S	22 17 45.7	+6.7			
PGAV					eLR	LR	22 39 52.3				
PGAV					*i* IAMs_20	IAMs_20	22 47 01.3				
	comp=Z,9µm,20.0s										
MVO	Moncorvo	93.72	43	*eP*		P	22 06 36.1	+0.5			
MVO				*i*	IAmb	IAmb	22 06 38.0				
	comp=Z,152nm,1.1s										
MVO					*ep*P	sP	22 06 54.6	-2.0			
MVO					*e*S	SKSac	22 17 05.3	-0.5			
MVO					eLR	LR	22 38 37.2				
MVO					*i* IAMs_20	IAMs_20	22 45 50.1				
	comp=Z,8µm,22.0s										
OZB	Mount Ozzard	93.75	328		IAmb	IAmb	22 06 38.2				
	comp=Z,77nm,1.1s										
PBRG	Braganca	94.30	43	*eP*		P	22 06 38.3	0.0			
PBRG					*ep*P	pP	22 06 54.8	+1.3			
PAB	San Pablo	94.30	46		P	P	22 06 38.3	0.0			
PAB	San Pablo	94.30	46		P	P	22 06 38.3	0.0			
PAB					pmax	pmax					
	comp=Z,50nm,1.1s										
ESDC	Sonseca Array	94.61	46		P	P	22 06 39.6	-0.1			
ESDC	Sonseca Array	94.61	46		P	P	22 06 39.7	-0.1			
	comp=Z,22nm,0.9s,baz=246,slow=4.3,SNR=48										
ESDC					pP	sP	22 06 58.2	-2.6			
	comp=Z,12nm,1.1s,baz=234,slow=4.9,SNR=4.7										
ESDC					LR	LR	22 46 29.1				
	comp=Z,4µm,21.5s,baz=224,slow=34										
	comp=Z,22nm,0.9s										
BYL	Byron's Ledge	95.05	290		IAmb	IAmb	22 06 46.6				
	comp=Z,124nm,1.1s										
FRB	Frobisher Bay	95.23	1		LR	LR	22 53 21.8				
	comp=Z,2µm,19.6s,baz=174,slow=38										
MSVF	Nonsavu	97.30	244	‖	*eP*	Pdif	22 06 52.9	+0.2			
MSVF					pmax	pmax					
	comp=Z,14nm,1.0s										
BLKN	Baker Lake	97.73	349		IAmb	IAmb	22 07 09.7				
	comp=Z,112nm,1.9s										
SFJD	Kangerlussuaq	99.72	8		LR	LR	22 52 48.0				
	comp=Z,819nm,21.9s,baz=182,slow=36										
YKA	Yellowknife Ar	100.15	341		P	Pdif	22 07 03.4	-0.7			
	comp=Z,8.3nm,0.7s,baz=152,slow=3.7,SNR=16										
YKA					pP	pP	22 07 20.4	+1.1			
	comp=Z,4.2nm,0.7s,baz=154,slow=3.4,SNR=4.0										
V35K	Ketchikan	100.88	330		P	Pdif	22 07 09.1	+1.7			
	baz=131										
KEST	Kesra	101.11	55		P	Pdif	22 07 08.3	-0.8			
	comp=Z,5.9nm,0.8s,baz=295,slow=4.8,SNR=6.5										
KEST	Kesra	101.11	55		P	Pdif	22 07 09.6	+0.5			
KOTAN	Kotaneelee Air	101.27	336		P	Pdif	22 07 11.2	+2.0			
	baz=136										
T35M	Bob Quinn	101.41	331		P	Pdif	22 07 11.8	+2.0			
	baz=132										
LIRD	Liard River Hi	101.48	335		P	Pdif	22 07 12.2	+2.1			
	baz=135										
CRAG	Craig	101.63	329		P	Pdif	22 07 12.8	+2.1			
	baz=130										
WRAK	Wrangell Islan	101.91	330		P	Pdif	22 07 13.6	+1.6			
	baz=130										
U33K	Whale Pass	102.04	330		P	Pdif	22 07 14.5	+1.9			
	baz=130										
DLBC	Dease Lake	102.30	333		P	Pdif	22 07 16.0	+2.2			
	baz=132										
S34M	Telegraph Cree	102.39	332		P	Pdif	22 07 16.0	+1.9			
	baz=131										
R33M	Jennings River	103.30	333		P	Pdif	22 07 20.5	+2.2			
	baz=131										
S32K	Kiliisoo	103.52	330		P	Pdif	22 07 21.4	+2.3			
	baz=129										
Q32M	Nakina River	103.52	332		P	Pdif	22 07 21.5	+2.1			
	baz=130										
SIT	Sitka	103.58	330		P	Pdif	22 07 21.7	+2.3			
	baz=128										
TGTN	Hyland Airport	103.73	336		P	Pdif	22 07 22.3	+2.2			
	baz=133										
R32K	Eaglecrest	104.00	331		P	Pdif	22 07 23.4	+2.1			
	baz=128										
EKA	Eskdalemuir Ar	104.44	33		Pdiff	Pdif	22 07 23.8	+0.5			
	comp=Z,7.9nm,0.9s,baz=238,slow=4.8,SNR=9.2										
P32M	Atlin	104.50	332		P	Pdif	22 07 25.5	+2.0			
	baz=129										
S31K	Pelican	104.53	330		P	Pdif	22 07 25.6	+2.0			
	baz=127										
P33M	Teslin, Yukon	104.54	333		P	Pdif	22 07 25.7	+2.0			
	baz=130										
PLBC	Pleasant Camp	105.48	331		P	PKiKP	22 11 42.5	+1.4			
	baz=127										
MMPY	Sheldon Lake,	105.51	335		P	PKiKP	22 11 42.4	+1.3			
	baz=130										
WHY	Whitehorse	105.62	333		P	PKiKP	22 11 42.8	+1.4			
	baz=128										
BMRD	Maredsous	105.73	40	*d*	PKiKP	PKiKP	22 11 43.8	+2.0			
RCHB	Rochefort	105.91	41	*d*	PKiKP	PKiKP	22 11 42.9	+0.8			
P30M	Million Dollar	106.12	332		P	PKiKP	22 11 43.5	+1.1			
	baz=126										
P29M	Windy Craggy	106.15	331		P	PKiKP	22 11 43.6	+1.3			
	baz=126										
O30N	Mendenhall	106.16	332		P	PKiKP	22 11 43.9	+1.5			
	baz=127										
M31M	Drury Creek, Y	106.38	334		P	PKiKP	22 11 43.8	+1.1			
	baz=128										
N31M	Braeburn, Yuko	106.47	333		P	PKiKP	22 11 44.2	+1.3			
	baz=127										
BTNL	Ternell	106.62	40	*d*	PKP	PP	22 11 57.1	-2.3			
HYT	Haines Junctio	106.75	332		P	PKiKP	22 11 44.9	+1.3			
	baz=126										
PNL	Peninsula	106.86	331		P	PKiKP	22 11 44.9	+1.3			
	baz=124										
O29M	Mount Kennedy	106.88	331		P	PKiKP	22 11 45.0	+1.2			
	baz=125										
N30M	Aishikik Lake	106.96	333		P	PKiKP	22 11 45.3	+1.4			
	baz=126										
YUK6	Outpost Mounta	107.17	332		P	PKiKP	22 11 45.6	+1.2			
	baz=125										
DAVA	Damuels	107.18	45	*i*	Pdiff	Pdif	22 07 37.9	+2.0			
	comp=Z,19nm,1.2s										
DAVA				*i*	PKiKP	PKiKP	22 11 46.2	+1.4			
	comp=Z,4.2nm,0.7s										
DAVA				*i*	PKKP	PKKPbc	22 23 02.2	0.0			
	comp=Z,19nm,1.1s										
PINM	Pinnacle	107.46	331		P	PKiKP	22 11 46.2	+1.4			
	baz=124										
M30M	Minto, Yukon	107.50	334		P	PKiKP	22 11 46.1	+1.3			
	baz=126										
YUK4	Talbot Arm	107.51	332		P	PKiKP	22 11 46.0	+1.0			
	baz=125										
FETA	Feichten	107.57	45	*i*	Pdiff	Pdif	22 07 39.5	+1.8			
	comp=Z,13nm,1.1s										
FETA				*e*	PKiKP	PKiKP	22 11 46.8	+1.3			
	comp=Z,2.6nm,0.7s										
FETA				*i*	PKKP	PKKPbc	22 23 01.2	+0.2			
	comp=Z,16nm,1.2s										
RETA	Reutte	107.81	45	*i*	Pdiff	Pdif	22 07 40.3	+1.7			
	comp=Z,16nm,1.1s,SNR=6.4										
RETA				*i*	PKiKP	PKiKP	22 11 46.0	+0.2			
	comp=Z,1.8nm,0.7s										
RETA				*e*	PKKP	PKKPbc	22 23 00.7	+0.6			
	comp=Z,9.2nm,1.3s										
O28M	Mount Upton	107.81	331		P	PKiKP	22 11 46.7	+1.0			
	baz=124										
C36M	Paulatuk	107.88	343		P	PKiKP	22 11 46.9	+1.7			
	baz=135										
YUK8	Steele Glacier	107.92	332		P	PKiKP	22 11 46.9	+1.1			
	baz=124										
MOTA	Moosalm	107.95	45	*i*	Pdiff	Pdif	22 07 41.1	+1.7			
	comp=Z,12nm,1.0s,SNR=4.8										
MOTA				*i*	PKiKP	PKiKP	22 11 46.9	+0.6			
	comp=Z,4.8nm,0.7s										
MOTA				*i*	PKKP	PKKPbc	22 22 59.6	-0.2			
	comp=Z,12nm,1.3s										
SQTA	Sankt Quirin	107.95	45	*e*	Pdiff	Pdif	22 07 41.3	+2.0			
	comp=Z,20nm,1.0s,SNR=8.4										
SQTA				*i*	PKiKP	PKiKP	22 11 46.9	+0.7			
	comp=Z,3.1nm,0.5s										
SQTA				*e*	PKKP	PKKPbc	22 22 59.1	-0.7			
	comp=Z,10nm,1.3s										
M29M	Somme Creek	108.06	333		P	PKiKP	22 11 47.4	+1.4			
	baz=124										
MESA	MESA	108.22	330		P	PKiKP	22 11 47.6	+1.2			
	baz=122										
WATA	Walderalm	108.23	45	*i*	PKKP		22 23 00.1				
	comp=Z,5.7nm,0.9s										
WTTA	Wattenberg	108.23	45	*i*	Pdiff	Pdif	22 07 42.5	+1.9			
	comp=Z,18nm,1.0s,SNR=4.3										
WTTA				*i*	PKiKP	PKiKP	22 11 46.9	+0.1			
	comp=Z,4.6nm,0.8s										
WTTA				*i*	PKKP	PKKPbc	22 22 58.4	-0.5			
	comp=Z,2.3nm,0.4s										
L29M	L29M	108.31	334		P	PKiKP	22 11 47.5	+1.2			
	baz=124										
CTG	Chitna Glacier	108.39	331		P	PKiKP	22 11 47.8	+1.2			
	baz=123										
J30M	Hart River	108.50	336		P	PKiKP	22 11 47.9	+1.2		

PSDA	**Pessada-Kefalo**	**110.17**	**57**	P		**Pdif**	**22 07 52.7**	**+3.6**	
GERES	**GERESS Array B**	**110.17**	**45**	PKiKP		**PKiKP**	**22 11 50.0**	**-0.2**	
	comp=Z,6.2nm,0.8s,baz=174,slow=1.0,SNR=15								
GERES				PKKPbc		**PKKPbc**	**22 22 51.6**	**-1.0**	
	comp=Z,1.9nm,0.9s,baz=353,slow=3.2,SNR=6.7								
GERES				PKKP		**PKKPdf**	**22 23 10.0**	**+0.1**	
	comp=Z,0.9nm,0.7s,baz=75,slow=10,SNR=3.4								
LTHK	**Lithakia**	**110.18**	**58**	P		**Pdif**	**22 07 50.4**	**+1.1**	
VLS	**Valsamata**	**110.20**	**57**	P		**Pdif**	**22 07 48.8**	**-0.6**	
KHC	**Kasperske Hory**	**110.22**	**44**	*e*PKIKP		**PKiKP**	**22 11 48.7**	**-1.6**	
KHC				*e*			22 12 35.8		
KHC				*e*			22 21 46.4		
KHC				*e*SS		SS	22 27 47.9	-0.9	
KHC	**Kasperske Hory**	**110.22**	**44**	*e*PKP		**PKiKP**	**22 11 48.7**	**-1.6**	
KHC				*e*PP		PP	22 12 35.8	+10	
KHC				*ex*		x	22 21 46.4		
KHC				*e*SS		SS	22 27 47.9	-0.9	
ZAK2	**Zakynthos**	**110.25**	**58**	P		**Pdif**	**22 07 50.1**	**+0.5**	
I28M	**Miner Creek**	**110.26**	**336**	P		**PKiKP**	**22 11 50.8**	**+0.8**	
	baz=122								
L26K	**Log Cabin Wild**	**110.27**	**332**	P		**PKiKP**	**22 11 51.0**	**+1.0**	
	baz=120								
RTZL	**Ratzaki, Kefa**	**110.28**	**57**	P		**Pdif**	**22 07 50.4**	**+0.7**	
FSK	**Fiskardo**	**110.30**	**57**	P		**Pdif**	**22 07 49.9**	**+0.2**	
K27K	**Chicken**	**110.30**	**334**	P		**PKiKP**	**22 11 50.9**	**+1.0**	
	baz=121								
KMY	**Karmoy**	**110.36**	**32**	*e*Pdif		**Pdif**	**22 07 50.6**	**+1.1**	
G29M	**Pine Creek**	**110.41**	**337**	P		**PKiKP**	**22 11 51.0**	**+1.0**	
	baz=124								
EVGI	**Lefkada island**	**110.43**	**57**	P		**Pdif**	**22 07 53.4**	**+3.0**	
P23K	**Montague Islan**	**110.49**	**329**	P		**PKiKP**	**22 11 51.4**	**+1.1**	
	baz=118								
NYDR	**Nydri-Lefkada**	**110.50**	**57**	P		**Pdif**	**22 07 52.1**	**+1.5**	
TSLK	**Tsoukalades, L**	**110.51**	**56**	P		**Pdif**	**22 07 51.6**	**+0.9**	
KLU	**Klutina**	**110.56**	**330**	P		**PKiKP**	**22 11 51.5**	**+0.9**	
	baz=119								
ARSA	**Arzberg**	**110.61**	**47**	*i* PKiKP		**PKiKP**	**22 11 51.0**	**0.0**	
	comp=Z,2.1nm,0.5s								
ARSA				*e*PKKP		**PKKPdf**	**22 23 04.1**	**-4.8**	
	comp=Z,12nm,1.3s								
BLY	**Banja Luka**	**110.62**	**50**	⇑P		**PKiKP**	**22 11 52.6**	**+1.5**	
HARP	**HAARP**	**110.69**	**331**	P		**PKiKP**	**22 11 52.0**	**+1.3**	
	baz=119								
AST1	**Astakos**	**110.70**	**57**	P		**Pdif**	**22 07 52.0**	**+0.4**	
ZVC	**Zvikov**	**110.72**	**44**	*e*PKP		**PKiKP**	**22 11 51.3**	**+0.1**	
ZVC				*e*SP		SP	22 21 50.9	-2.4	
ZVC				*e*SS		**SS**	**22 27 50.1**	**-5.2**	
HSKC	**Hora Svate Kat**	**110.76**	**43**	*e*PKP		**PKiKP**	**22 11 52.4**	**+1.2**	
HSKC				*e*PP		PP	22 12 41.4	+12	
HSKC				*ex*		x	22 21 52.6		
HSKC				*e*SS		SS	22 27 56.4	+0.5	
GLI	**Glacier Island**	**110.77**	**330**	P		**PKiKP**	**22 11 52.1**	**+1.2**	
	baz=118								
RLS	**Riolos of Patr**	**110.78**	**57**	P		**Pdif**	**22 07 54.6**	**+2.7**	
CLL	**Collm**	**110.81**	**42**	*i* PKiKP		**PKiKP**	**22 11 52.5**	**+1.2**	
	comp=Z,18nm,1.1s								
CLL				*i* PP		**PP**	**22 12 27.2**	**-2.6**	
	comp=Z,19nm,1.3s								
CLL				*e*SKSac		**SKSac**	**22 18 27.0**	**+0.7**	
CLL				*e*Sdif		**Sdif**	**22 20 10.0**	**+5.9**	
CLL				*e*SP		SP	22 21 53.0	-1.1	
CLL				*i* PKKPab		**PKKPab**	**22 23 00.4**	**+2.7**	
	comp=Z,30nm,1.3s								
CLL				*e*SS		**SS**	**22 27 54.0**	**-2.5**	
CLL				*e*SSS		SSS	22 32 00.0		
CLL				AMS		AMS	22 57 00.0		
	comp=N,2μm,21.3s								
CLL				AMS		AMS	22 57 00.0		
	comp=E,5μm,19.4s								
CLL				AMS		AMS	22 57 00.0		
	comp=Z,6μm,19.6s								
DRO	**Drossia**	**110.91**	**58**	P		**Pdif**	**22 07 56.2**	**+3.7**	
ASK	**Askoy**	**110.93**	**31**	*e*Pdif		**Pdif**	**22 07 51.2**	**-0.8**	
ASK				*e*PP		**PP**	**22 12 30.5**	**+0.2**	
I27K	**Kandik River**	**110.94**	**335**	P		**PKiKP**	**22 11 52.3**	**+1.1**	
	baz=121								
BER	**Bergen**	**110.94**	**31**	*e*Pdif		**Pdif**	**22 07 51.2**	**-0.9**	
BER				*e*			22 21 57.1		
AMPL	**Ampelaki**	**110.95**	**57**	P		**Pdif**	**22 07 56.4**	**+3.7**	
M24K	**Tolsona, Glenn**	**110.96**	**331**	P		**PKiKP**	**22 11 52.3**	**+1.0**	
	baz=118								
SCRK	**Sand Creek**	**111.00**	**333**	P		**PKiKP**	**22 11 52.6**	**+1.2**	
	baz=120,SNR=5.5								
BLS5	**Blasjo**	**111.00**	**32**	*e*Pdif		**Pdif**	**22 07 52.6**	**+0.1**	
SUE	**Sulen**	**111.00**	**30**	*e*Pdif		**Pdif**	**22 07 52.6**	**+0.3**	
SUE				*e*			22 21 57.6		
PVO	**Paravola**	**111.05**	**57**	P		**Pdif**	**22 07 56.1**	**+3.0**	
PAX	**Paxson**	**111.09**	**332**	P		**PKiKP**	**22 11 52.6**	**+1.1**	
	baz=119								
J26L	**Joseph Creek**	**111.09**	**334**	P		**PKiKP**	**22 11 52.7**	**+1.2**	
	baz=120								
CONA	**Conrad Observa**	**111.10**	**46**	*i* PKiKP		**PKiKP**	**22 11 52.2**	**+0.2**	
	comp=Z,5.1nm,0.7s								
CONA				*i* PKKP		**PKKPab**	**22 23 01.2**	**+4.4**	
	comp=Z,23nm,1.3s								
PRMD	**Pramanda**	**111.12**	**56**	P		**Pdif**	**22 07 55.1**	**+1.6**	
PRA	**Prague**	**111.12**	**44**	*e*SP		SP	22 21 56.0	-1.0	
PRA				*e*SS		**SS**	**22 28 00.4**	**-0.3**	
RICC	**Richard**	**111.12**	**43**	*e*SP		SP	22 21 57.2	+0.3	
RICC				*e*SS		**SS**	**22 28 07.5**	**+6.8**	
PRU	**Pruhonice**	**111.15**	**44**	*e*PKIKP		**PKiKP**	**22 11 53.0**	**+1.0**	
PRU				*e*			22 21 55.5		
PRU				*e*SS		SS	22 28 02.2	+1.1	
PRU	**Pruhonice**	**111.15**	**44**	*e*PKP		**PKiKP**	**22 11 53.0**	**+1.0**	
PRU				*e*PP		PP	22 12 44.2	+12	
PRU				*ex*		x	22 21 55.5		
PRU				*e*SS		SS	22 28 02.2	+1.1	
TETR	**Tetrakomo, Epi**	**111.17**	**56**	P		**Pdif**	**22 07 55.6**	**+1.9**	
E29M	**Blow River**	**111.18**	**339**	P		**PKiKP**	**22 11 52.4**	**+0.9**	
	baz=123								
ANKY	**Antikythira Is**	**111.21**	**60**	P		**Pdif**	**22 07 56.5**	**+2.6**	
RIDG	**Independent Ri**	**111.21**	**333**	P		**PKiKP**	**22 11 52.8**	**+1.1**	
	baz=119,SNR=5.2								
H27K	**Steamboat Moun**	**111.23**	**336**	P		**PKiKP**	**22 11 53.0**	**+1.3**	
	baz=121								
KLV	**Kalavryta, Ach**	**111.26**	**58**	P		**Pdif**	**22 07 56.3**	**+2.1**	
RONA	**Rosalia, Austr**	**111.27**	**46**	*i* PKiKP		**PKiKP**	**22 11 53.1**	**+0.7**	
	comp=Z,1.7nm,0.5s								
PWL	**Port Wells**	**111.30**	**329**	P		**PKiKP**	**22 11 53.1**	**+1.1**	
	baz=117								
ODD1	**Odda**	**111.30**	**32**	*e*Pdif		**Pdif**	**22 07 54.0**	**+0.2**	
SCM	**Sheep Creek Mo**	**111.31**	**330**	P		**PKiKP**	**22 11 52.9**	**+0.9**	
	baz=118								
I26K	**Coal Creek Min**	**111.34**	**335**	P		**PKiKP**	**22 11 52.8**	**+0.9**	
	baz=120,SNR=11								
PVCC	**Panska Ves**	**111.39**	**43**	*e*PKIKP		**PKiKP**	**22 11 53.8**	**+1.4**	
PVCC				*e*			22 21 58.5		
PVCC	**Panska Ves**	**111.39**	**43**	*e*PKP		**PKiKP**	**22 11 53.8**	**+1.4**	
PVCC				*e*SP		SP	22 21 58.5	-0.9	
F28M	**Old Crow**	**111.39**	**337**	P		**PKiKP**	**22 11 52.4**	**+0.5**	
	baz=122,SNR=13								
TREC	**Trest**	**111.43**	**45**	*e*PP		PP	22 12 45.2	+11	
TREC				*e*SP		SP	22 21 57.4	-2.5	
NEST	**Nestorio**	**111.44**	**55**	P		**Pdif**	**22 07 54.3**	**-0.7**	
HOMB	**Homborsund**	**111.45**	**34**	*e*Pdif		**Pdif**	**22 07 55.1**	**+0.7**	
SEW	**Seward**	**111.45**	**328**	P		**PKiKP**	**22 11 53.3**	**+1.1**	
	baz=116								
M23K	**Glacier View**	**111.47**	**330**	P		**PKiKP**	**22 11 53.2**	**+1.0**	
	baz=117								
G27K	**Doyon Strip**	**111.57**	**336**	P		**PKiKP**	**22 11 53.5**	**+1.2**	
	baz=120								
KNK	**Knik Glacier**	**111.60**	**330**	P		**PKiKP**	**22 11 53.5**	**+1.0**	
	baz=117								
K24K	**Donnelly Dome**	**111.61**	**333**	P		**PKiKP**	**22 11 53.9**	**+1.4**	
	baz=118								
SML	**Sawmill**	**111.73**	**330**	P		**PKiKP**	**22 11 53.8**	**+1.0**	
	baz=117								
O22K	**Cooper Landing**	**111.74**	**329**	P		**PKiKP**	**22 11 53.8**	**+1.1**	
	baz=116								
AGG	**Agios Georgios**	**111.79**	**57**	P		**Pdif**	**22 07 54.5**	**-2.0**	
E28M	**Babbage River**	**111.81**	**338**	P		**PKiKP**	**22 11 53.3**	**+0.6**	
	baz=122								
WAT6	**Susitna Watana**	**111.83**	**331**	P		**PKiKP**	**22 11 53.7**	**+0.6**	
	baz=117								
J25K	**Salcha River,**	**111.83**	**333**	P		**PKiKP**	**22 11 53.6**	**+0.7**	
	baz=118,SNR=6.0								
BRSE	**Bradley Lake S**	**111.88**	**328**	P		**PKiKP**	**22 11 53.6**	**+0.6**	
	baz=116								
KRUC	**Moravsky**	**111.88**	**45**	*e*PKIKP		**PKiKP**	**22 11 53.9**	**+0.5**	
KRUC				*e*PKKP		**PKKPab**	**22 22 56.0**	**+2.9**	
DHY	**Denali Highway**	**111.91**	**332**	P		**PKiKP**	**22 11 54.1**	**+0.9**	
	baz=117								
KDAK	**Kodiak Island**	**111.91**	**325**	P		**PKiKP**	**22 11 53.9**	**+0.8**	
	baz=115								
D28M	**Stokes Point**	**111.95**	**339**	P		**PKiKP**	**22 11 54.1**	**+1.3**	
	baz=122								
PMR	**Palmer**	**111.97**	**330**	P		**PKiKP**	**22 11 54.2**	**+1.1**	
	baz=116								
RC01	**Rabbit Creek A**	**112.01**	**329**	P		**PKiKP**	**22 11 53.4**	**+0.2**	
	baz=116								
OHAK	**Old Harbor**	**112.02**	**324**	P		**PKiKP**	**22 11 54.2**	**+0.9**	
	baz=115								
VRAC	**Vranov**	**112.10**	**45**	⇓P		**PKiKP**	**22 11 55.1**	**+1.3**	
VRAC	**Vranov**	**112.10**	**45**	*e*PKIKP		**PKiKP**	**22 11 54.7**	**+0.9**	
VRAC				*e*			22 12 35.4		
VRAC				*e*PKKP		**PKKPab**	**22 22 55.5**	**+3.3**	
VRAC	**Vranov**	**112.10**	**45**	⇓PKIKP		**PKiKP**	**22 11 55.1**	**+1.3**	
MODS	**Modra-Piesok**	**112.14**	**46**	*e*PKIKP		**PKiKP**	**22 11 53.9**	**0.0**	
MODS				*e*			22 12 37.5		
MODS	**Modra-Piesok**	**112.14**	**46**	*e*PKP		**PKiKP**	**22 11 53.9**	**0.0**	
MODS				*e*PP		**PP**	**22 12 37.5**	**-2.0**	
MODS				*e*			22 22 56.4		
VILL	**Villia**	**112.15**	**58**	P		**Pdif**	**22 07 57.4**	**-0.7**	
Q20K	**Shuyak Island**	**112.16**	**326**	P		**PKiKP**	**22 11 54.0**	**+0.4**	
	baz=115								
SII	**Sitkinak Islan**	**112.19**	**324**	P		**PKiKP**	**22 11 54.6**	**+0.8**	
	baz=114								
UPC	**Upice**	**112.23**	**44**	*e*PKIKP		**PKiKP**	**22 11 54.2**	**+0.2**	
UPC				*e*			22 22 02.6		
UPC	**Upice**	**112.23**	**44**	*e*PKP		**PKiKP**	**22 11 54.2**	**+0.2**	
UPC				*e*SP		SP	22 22 02.6	-4.5	
E27K	**Coleen River**	**112.25**	**338**	P		**PKiKP**	**22 11 54.1**	**+0.6**	
	baz=120								
WAT1	**Susitna Watana**	**112.28**	**331**	P		**PKiKP**	**22 11 54.9**	**+1.1**	
	baz=116								
CHVC	**Chvalec**	**112.28**	**43**	*e*PKIKP		**PKiKP**	**22 11 54.5**	**+0.4**	
CHVC				*e*			22 22 05.7		
CHVC	**Chvalec**	**112.28**	**43**	*e*PKP		**PKiKP**	**22 11 54.5**	**+0.4**	
CHVC				*ex*		x	22 22 05.7		
SMOL	**Smolenice**	**112.29**	**46**	*e*PKIKP		**PKiKP**	**22 11 55.2**	**+1.0**	
HDA	**Harding Lake**	**112.34**	**333**	P		**PKiKP**	**22 11 54.7**	**+0.9**	
	baz=117								
DPC	**Dobruska-Polom**	**112.35**	**44**	*e*PKIKP		**PKiKP**	**22 11 54.8**	**+0.5**	
DPC				*e*			22 22 07.2		
DPC				*e*SS		SS	22 28 12.2	-4.9	
DPC	**Dobruska-Polom**	**112.35**	**44**	*e*PKP		**PKiKP**	**22 11 54.8**	**+0.5**	
DPC				*e*SP		SP	22 22 07.2	-1.1	
DPC				*e*SS		**SS**	**22 28 12.2**	**-4.9**	
OSTC	**Ostas**	**112.36**	**44**	*e*PKIKP		**PKiKP**	**22 11 54.9**	**+0.6**	
OSTC				*e*			22 22 08.6		
OSTC	**Ostas**	**112.36**	**44**	*e*PKP		**PKiKP**	**22 11 54.9**	**+0.6**	
OSTC				*ex*		x	22 22 08.6		
G26K	**Porcupine Rive**	**112.37**	**336**	P		**PKiKP**	**22 11 55.0**	**+1.3**	
	baz=119								
SKAR	**Skarslia**	**112.39**	**32**	*e*Pdif		**Pdif**	**22 07 59.9**	**+1.2**	
AKN	**Aaknes**	**112.46**	**30**	*e*Pdif		**Pdif**	**22 07 59.9**	**+1.0**	
M22K	**Willow**	**112.47**	**330**	P		**PKiKP**	**22 11 55.4**	**+1.3**	
	baz=115								
ILAR	**Eielson Array**	**112.48**	**333**			**Pdif**	**22 07 59.0**	**+0.2**	
ILAR						**PKiKP**	**22 11 53.3**	**-0.8**	
ILAR	**Eielson Array**	**112.48**	**333**	Pdiff		**Pdif**	**22 07 59.5**	**+0.7**	
	comp=Z,2.0nm,0.9s,baz=143,slow=2.7,SNR=17								
ILAR				PKiKP		**PKiKP**	**22 11 53.5**	**-0.5**	
	comp=Z,11nm,0.9s,baz=168,slow=1.0,SNR=35								
ILAR				PKKPbc		**PKKPbc**	**22 22 42.1**	**-3.2**	
	comp=Z,0.8nm,0.5s,baz=307,slow=3.3,SNR=8.9								
ILAR				PKKP		**PKKPdf**	**22 23 05.7**	**-0.1**	
	comp=Z,3.7nm,1.1s,baz=270,slow=4.5,SNR=4.1								
CAPN	**Captain Cook N**	**112.50**	**328**	P		**PKiKP**	**22 11 55.3**	**+1.2**	
	baz=115								
KRLC	**Kraliky**	**112.51**	**44**	*e*PKIKP		**PKiKP**	**22 11 56.1**	**+1.5**	
KRLC				*e*			22 12 53.1		
KRLC				*e*			22 22 07.5		
KRLC	**Kraliky**	**112.51**	**44**	*e*PKP		**PKiKP**	**22 11 56.1**	**+1.5**	
KRLC				*e*PP		PP	22 12 53.1	+11	
KRLC				*ex*		x	22 22 07.5		
KONO	**Kongsberg**	**112.55**	**33**	*e*Pdif		**Pdif**	**22 07 59.9**	**+0.6**	
JAVC	**Velka Javorina**	**112.57**	**46**	*e*PKIKP		**PKiKP**	**22 11 56.4**	**+1.6**	
JAVC				*e*PKKP		**PKKPab**	**22 22 54.0**	**+3.8**	
D27M	**Malcolm River**	**112.58**	**339**	P		**PKiKP**	**22 11 55.6**	**+1.4**	
	baz=120								
SUA	**Susitna One**	**112.62**	**329**	P		**PKiKP**	**22 11 55.7**	**+1.1**	
	baz=115								
CHIR	**Chirikof Islan**	**112.63**	**323**	P		**PKiKP**	**22 11 55.4**	**+0.9**	
	baz=113								
H25L	**Birch Creek**	**112.77**	**335**	P		**PKiKP**	**22 11 55.8**	**+1.3**	
	baz=117								
CUT	**Chulitna**	**112.81**	**330**	P		**PKiKP**	**22 11 55.8**	**+1.1**	
	baz=115								
MCK	**McKinley**	**112.83**	**332**	P		**PKiKP**	**22 11 55.7**	**+0.9**	
	baz=116,SNR=10								
POKR	**Poker Plat Res**	**112.85**	**334**	P		**PKiKP**	**22 11 55.4**	**+0.7**	
	baz=116								
F26K	**Sheenjek River**	**112.85**	**337**	P		**PKiKP**	**22 11 56.2**	**+1.5**	
	baz=118								
MORC	**Moravsky Berou**	**112.85**	**45**	⇑P		**PKiKP**	**22 11 55.7**	**+0.4**	
MORC	**Moravsky Berou**	**112.85**	**45**	⇑P		**PKKPab**	**22 22 52.2**	**+3.3**	
MORC	**Moravsky Berou**	**112.85**	**45**	*e*PKIKP		**PKiKP**	**22 11 55.9**	**+0.6**	
MORC				*e*PKKP		**PKKPab**	**22 22 52.0**	**+3.1**	
MORC	**Moravsky Berou**	**112.85**	**45**	⇑PKIKP		**PKiKP**	**22 11 55.7**	**+0.4**	
MOL	**Molde**	**112.86**	**30**	*e*Pdif		**Pdif**	**22 08 01.5**	**+1.0**	
O20K	**Slope Mountain**	**112.88**	**327**	P		**PKiKP**	**22 11 55.9**	**+0.9**	
	baz=114								
COLA	**College**	**112.90**	**333**	*d* *i* PKIKP		**PKiKP**	**22 11 55.4**	**+0.6**	
COLA				MLR		MLR			
	comp=Z,3μm,18.0s								
COLA	**College**	**112.90**	**333**	P		**PKiKP**	**22 11 56.1**	**+1.3**	
	baz=116								
P19K	**Oil Pt**	**112.99**	**327**	P		**PKiKP**	**22 11 56.1**	**+0.9**	
	baz=114								
DAG	**Danmarks Havn**	**113.03**	**11**	*i* P		**PKiKP**	**22 11 53.3**	**-1.4**	
G25K	**Bearman Lake**	**113.10**	**335**	P		**PKiKP**	**22 11 56.4**	**+1.3**	
	baz=117								
N20K	**Mount Spurr**	**113.15**	**329**	P		**PKiKP**	**22 11 56.0**	**+0.5**	
	baz=114								
SPCR	**Spurr Chakacha**	**113.15**	**329**	P		**PKiKP**	**22 11 56.4**	**+0.9**	
	baz=114								
SKT	**Skwentna**	**113.17**	**330**	P		**PKiKP**	**22 11 56.5**	**+1.0**	
	baz=114								
OKC	**Ostrava-Krasne**	**113.23**	**45**	*e*PP		PP	22 12 57.4	+10	
OKC				*e*SP		SP	22 22 16.5	+0.1	
OKC				*e*SS		**SS**	**22 28 27.6**	**-1.2**	
NEA2	**Nenana**	**113.25**	**333**	P		**PKiKP**	**22 11 56.5**	**+0.9**	
	baz=115								
TRF	**Thorofare Moun**	**113.26**	**331**	P		**PKiKP**	**22 11 55.8**	**0.0**	
	baz=115,SNR=9.2								
DOMB	**Dombas**	**113.29**	**30**	*e*Pdif		**Pdif**	**22 08 03.7**	**+1.1**	
F25K	**Christian Rive**	**113.31**	**336**	P		**PKiKP**	**22 11 56.3**	**+0.7**	
	baz=117								
H24K	**Noodoo Dome**	**113.33**	**334**	P		**PKiKP**	**22 11 56.0**	**+0.3**	
	baz=116								
Q18K	**Katmai Hardscr**	**113.43**	**326**	P		**PKiKP**	**22 11 56.7**	**+0.5**	
	baz=113								
E25K	**Arctic Village**	**113.52**	**337**	P		**PKiKP**	**22 11 56.5**	**+0.5**	
	baz=117								
G24K	**Hadweenzic Riv**	**113.56**	**335**	P		**PKiKP**	**22 11 56.8**	**+0.7**	
	baz=116								
I23K	**Minto, Yukon-K**	**113.60**	**333**	P		**PKiKP**	**22 11 56.8**	**+0.7**	
	baz=115								
C27K	**Jago River**	**113.62**	**339**	P		**PKiKP**	**22 11 56.8**	**+0.7**	
	baz=118								
O19K	**Port Alsworth**	**113.70**	**327**	P		**PKiKP**	**22 11 56.9**	**+0.4**	
	baz=113								
R17L	**Mt. Peulik Vol**	**113.71**	**324**	P		**PKiKP**	**22 11 56.9**	**+0.3**	
	baz=112								
Q17K	**Contact Creek**	**113.71**	**325**	P		**PKiKP**	**22 11 57.0**	**+0.3**	
	baz=112								
LANS	**Liptovska Anna**	**113.78**	**46**	*e*PKIKP		**PKiKP**	**22 11 59.2**	**+2.1**	
LANS	**Liptovska Anna**	**113.78**	**46**	*e*PKP		**PKiKP**	**22 11 59.2**	**+2.1**	
BLKB	**Belogradchik**	**113.81**	**52**	⇓P		**PKiKP**	**22 11 57.9**	**+0.7**	
BLKB	**Belogradchik**	**113.81**	**52**	⇓P		**PKKPab**	**22 22 38.5**	**-6.5**	
BPAW	**Bear Paw Mtn.**	**113.81**	**332**	P		**PKiKP**	**22 11 56.7**	**0.0**	
	baz=114,SNR=6.1								
PPLA	**Purkeypile**	**113.82**	**330**	P		**PKiKP**	**22 11 57.3**	**+0.4**	
	baz=113								
P18K	**Big Mountain,**	**113.82**	**326**	P		**PKiKP**	**22 11 57.2**	**+0.4**	
	baz=112								
M20K	**Styx River**	**113.83**	**329**	P		**PKiKP**	**22 11 57.5**	**+0.7**	
	baz=113								
NB2	**NORSAR Subarra**	**113.84**	**32**	PKPdf		**PKiKP**	**22 11 57.2**	**+0.4**	
	comp=Z,20nm,1.4s,baz=248,slow=1.9								
NB2				PP		**PP**	**22 12 49.0**	**-2.2**	
	comp=Z,1.9nm,0.8s,baz=241,slow=6.9								
NB2				PKKP		**PKKPab**	**22 22 45.6**	**+1.6**	
	comp=Z,1.9nm,0.8s,baz=72,slow=5.1								
NOA	**NORSAR Array B**	**113.84**	**32**	PKiKP		**PKiKP**	**22 11 56.5**	**-0.3**	
	comp=Z,3.4nm,0.8s,baz=251,slow=2.0,SNR=11								
NOA				PKKPab		**PKKPab**	**22 22 44.7**	**+0.8**	
	comp=Z,6.0nm,1.0s,baz=68,slow=4.5,SNR=6.7								
NOA				PKKP		**PKKPdf**	**22 23 01.6**	**-1.5**	
	comp=Z,3.7nm,1.0s,baz=70,slow=4.5,SNR=3.8								
BZS	**Buzias**	**113.84**	**50**	⇑P		**PKiKP**	**22 11 57.2**	**0.0**	
BZS	**Buzias**	**113.84**	**50**	⇑P		**PKKPab**	**22 22 47.2**	**+2.5**	
BZS	**Buzias**	**113.84**	**50**	⇑PKIKP		**PKiKP**	**22 11 57.2**	**0.0**	
NC602	**NORSAR Array S**	**113.87**	**32**	*e*Pdif		**Pdif**	**22 08 06.1**	**+1.0**	
H23K	**Yukon River**	**113.95**	**334**	P		**PKiKP**	**22 11 57.8**	**+0.9**	
	baz=114								
GKP	**Gorka Klasztor**	**113.98**	**41**	*e*PKP		**PKiKP**	**22 11 57.8**	**+0.6**	
O18K	**Kokta Hills**	**113.99**	**327**	P		**PKiKP**	**22 11 57.6**	**+0.5**	
	baz=112								
N19K	**Bonanza Creek**	**114.02**	**328**	P		**PKiKP**	**22 11 57.5**	**+0.2**	
	baz=112								
F24K	**Squaw Lake**	**114.06**	**336**	P		**PKiKP**	**22 11 58.0**	**+1.0**	
	baz=115								
MLY	**Manley**	**114.08**	**333**	P		**PKiKP**	**22 11 57.9**	**+0.7**	
	baz=114								
HERR	**Herculane**	**114.10**	**51**	⇑P		**PKiKP**	**22 11 57.9**	**+0.2**	
SIRR	**Siria**	**114.11**	**49**	⇑P		**PKKPab**	**22 22 46.1**	**+2.6**	
C26K	**Camden Bay**	**114.12**	**339**	P		**PKiKP**	**22 11 58.2**	**+1.2**	
	baz=116								
SURR	**Surduc**	**114.22**	**50**	⇑P		PKPdf	22 11 56.3	-1.7	
Q16K	**King Salmon**	**114.24**	**325**	P		**PKiKP**	**22 11 58.2**	**+0.7**	
	baz=112								
CHUM	**Lake Minchumin**	**114.26**	**331**	P		**PKiKP**	**22 11 58.1**	**+0.7**	
	baz=113,SNR=11								
R16K	**Pilot Point**	**114.29**	**324**	P		**PKiKP**	**22 11 58.3**	**+0.6**	
	baz=111								
D25K	**Kavik River**	**114.32**	**338**	P		**PKiKP**	**22 11 58.6**	**+1.1**	
	baz=116								
CHNA	**Chernabura Isl**	**114.36**	**321**	P		**PKiKP**	**22 11 58.3**	**+0.4**	
	baz=111								
OJC	**Ojcow**	**114.37**	**45**	*e*PKP		**PKiKP**	**22 11 59.1**	**+1.0**	
L20K	**Farewell, AK**	**114.38**	**330**	P		**PKiKP**	**22 11 58.7**	**+0.9**	
	baz=112								
NIE	**Niedzica**	**114.38**	**46**	*e*PKP		**PKiKP**	**22 11 59.0**	**+0.8**	
G23K	**Bananza Creek**	**114.48**	**335**	P		**PKiKP**	**22 11 58.8**	**+0.9**	
	baz=114								
E24K	**Your Creek**	**114.49**	**336**	P		**PKiKP**	**22 11 58.4**	**+0.6**	
	baz=114								
GZR	**Gura Zlata**	**114.52**	**51**	⇑P		**PKiKP**	**22 11 59.7**	**+1.1**	
GZR	**Gura Zlata**	**114.52**	**51**	⇑P		**PKKPab**	**22 22 45.1**	**+3.3**	
GZR	**Gura Zlata**	**114.52**	**51**	⇑PKIKP		**PKiKP**	**22 11 59.7**	**+1.1**	
N18K	**Kilae Creek**	**114.61**	**327**	P		**PKiKP**	**22 11 59.0**	**+0.8**

baz=108
F20K **Avaraart Lake** 116.71 334 P PKiKP 22 12 03.7 +1.6
baz=108
M15K **Kasigluk River** 116.84 327 P PKiKP 22 12 04.0 +1.5
baz=107
BURAR **Bucovina Array** 116.86 49 PKPdf PKPdf 22 12 02.6 -0.5
BURAR **Bucovina Array** 116.86 49 ⇓P PKiKP 22 12 03.6 +0.4
BURAR **Bucovina Array** 116.86 49 PKIKP PKPdf 22 12 02.6 -0.5
NEHR **Nehoiu** 116.86 51 ⇑P PKPdf 22 12 02.9 -0.2
TURR **Turia** 116.88 51 ⇓P PKiKP 22 12 04.4 +1.3
J17K **VABM Dome** 116.93 330 P PKiKP 22 12 04.0 +1.4
baz=107
B22K **Teshekpuk Lake** 116.97 338 P PKiKP 22 12 04.2 +1.8
baz=109
C21K **Knifeblade Rid** 117.04 336 P PKiKP 22 12 04.5 +1.8
baz=108
N14K **Kuskokwak Cree** 117.09 326 P PKiKP 22 12 04.4 +1.5
baz=107
B21K **Ikpikpuk River** 117.13 337 P PKiKP 22 12 03.7 +0.9
baz=108
H18K **Honhosa River** 117.15 332 P PKiKP 22 12 03.8 +0.8
baz=107
BISRR **Bisoca** 117.18 51 ⇑P PKiKP 22 12 04.7 +0.9
ONER **Baraj Valea Uz** 117.22 51 ⇑P PKiKP 22 12 03.8 0.0
PLOR **Plostina** 117.23 51 ⇑P PKPdf 22 12 03.1 -0.7
PLOR **Plostina** 117.23 51 ⇑P PKKPab 22 22 34.0 +4.0
PLOR **Plostina** 117.23 51 ⇑PKIKP PKPdf 22 12 03.1 -0.7
E20K **Nigu River** 117.25 335 P PKiKP 22 12 03.9 +0.7
baz=108
VRI **Vrincioaia** 117.29 51 ⇓P PKiKP 22 12 04.1 +0.2
VRI **Vrincioaia** 117.29 51 ⇓P PKKPab 22 22 34.3 +4.7
VRI **Vrincioaia** 117.29 51 ⇓PKIKP PKiKP 22 12 04.1 +0.2
E19K **Redstone River** 117.39 334 P PKiKP 22 12 04.1 +0.7
baz=107
F19K **Shaleruckik Mo** 117.41 334 P PKiKP 22 12 04.2 +0.8
baz=107
TESR **Tescani** 117.44 50 ⇓P PKPdf 22 12 03.6 -0.6
M14K **Bethel** 117.46 326 P PKiKP 22 12 04.3 +0.7
baz=106
G18K **Tagagawik** 117.48 332 P PKiKP 22 12 04.5 +0.9
baz=106
L15K **Ungalak Mounta** 117.50 327 P PKiKP 22 12 04.6 +0.9
baz=106
D20K **Etivluk River** 117.53 336 P PKiKP 22 12 04.7 +1.0
baz=107
J16K **Anvik River** 117.55 329 P PKiKP 22 12 05.0 +1.1
baz=106
SUW **Suwalki** 117.56 42 *e*PKP PKPdf 22 12 03.9 -0.1
A22K **Sinclair Lake** 117.66 338 P PKiKP 22 12 05.0 +1.2
baz=107
K15K **Wolf Creek Mou** 117.69 328 P PKiKP 22 12 05.0 +0.8
baz=106
H17K **Granite Mounta** 117.72 331 P PKiKP 22 12 05.0 +0.9
baz=106
HARR **Harsova** 117.72 53 ⇓P PKiKP 22 12 04.8 +0.1
HARR **Harsova** 117.72 53 ⇓PKIKP PKiKP 22 12 04.8 +0.1
I17K **Unalakleet** 117.76 330 P PKiKP 22 12 05.3 +1.1
baz=106
GHRR 117.80 51 ⇓P PKiKP 22 12 04.9 0.0
UNV **Unalaska Valle** 117.88 318 P PKiKP 22 12 05.3 +0.8
baz=106
L14K **Kuka Creek** 117.96 327 P PKiKP 22 12 05.3 +0.7
baz=106
TIRR **Tirgusor** 117.98 53 ⇑P PKPdf 22 12 04.6 -0.6
TIRR **Tirgusor** 117.98 53 ⇑PKIKP PKPdf 22 12 04.6 -0.6
D19K **Kuna River** 118.00 335 PKPdf PKPdf 22 12 04.6 0.0
D19K **Kuna River** 118.00 335 P PKiKP 22 12 05.0 +0.4
baz=106
CFR **Carcaliu** 118.02 52 ⇑P PKPdf 22 12 05.2 0.0
CFR **Carcaliu** 118.02 52 ⇑PKIKP PKPdf 22 12 05.2 0.0
M13K **Dall Lake** 118.02 326 P PKiKP 22 12 05.7 +1.0
baz=106
F18K **Selawik** 118.06 333 P PKiKP 22 12 05.7 +1.0
baz=105,SNR=14
B20K **Meade River** 118.09 337 P PKiKP 22 12 05.3 +0.6
baz=106
G17K **Kiwalik Mounta** 118.17 332 P PKiKP 22 12 05.5 +0.5
baz=105,SNR=12
A21K **Barrow** 118.27 339 P PKiKP 22 12 05.5 +0.5
baz=106
TLCR 118.47 52 ⇑P PKPdf 22 12 05.8 -0.3
TLCR 118.47 52 ⇑PKIKP PKPdf 22 12 05.8 -0.3
SAHE **Sakarya_HENDEK** 118.55 58 ⇓P PKPdf 22 12 06.4 -0.1
H16K **Elim** 118.61 331 P PKiKP 22 12 06.4 +0.5
baz=104
E18K **Tukpahlearik C** 118.64 334 P PKiKP 22 12 06.3 +0.5
baz=104
F17K **Baldwin Pennin** 118.64 333 P PKiKP 22 12 06.4 +0.6
baz=104
C19K **Lookout Ridge** 118.68 336 P PKiKP 22 12 06.7 +0.8
baz=104
J14K **Nanvaranak Lak** 118.71 328 P PKiKP 22 12 07.0 +0.9
baz=104
G16K **Koyuk River** 118.83 331 P PKiKP 22 12 07.0 +0.8
baz=104,SNR=8.7
MILM **Milestii Mici** 118.98 50 ⇑P PKPdf 22 12 05.4 -1.6
MILM **Milestii Mici** 118.98 50 ⇑PKIKP PKPdf 22 12 05.4 -1.6
MILM **Milestii Mici** 118.98 50 ⇓*i*PKP PKPdf 22 12 05.0 -2.0
comp=Z,210nm,1.2s
MILM **Milestii Mici** 118.98 50 *e*PP PP 22 13 34.0 +6.5
MILM *eL* L 22 50 37.0
MILM LRM MLR 23 05 50.0
comp=Z,4μm,20.0s
NIKH **Nikolski High** 119.00 317 P PKiKP 22 12 07.5 +0.5
baz=105
KIS **Kishinev** 119.01 50 *e*PKP PKPdf 22 12 07.0 -0.1
comp=Z,80nm,1.0s
KIS **Kishinev** 119.01 50 *e*PP PP 22 13 35.0 +7.3
KIS **Kishinev** 119.01 50 *e*L L 22 52 03.0
KIS *e*PS **SP** **22 22 56.0 -13**
KIS LRM MLR 23 05 40.0
comp=Z,2μm,19.0s
E17K **Hotham Inlet** 119.02 333 P PKiKP 22 12 07.7 +1.1
baz=103
K13K **Kusilvak Mount** 119.02 327 P PKiKP 22 12 07.5 +0.8
baz=104
SORM **Soroca** 119.03 49 ⇑P PKPdf 22 12 07.1 0.0
SORM **Soroca** 119.03 49 ⇑PKIKP PKPdf 22 12 07.1 0.0
C18K **Utukok River** 119.14 335 P PKiKP 22 12 07.9 +1.1
baz=103
MMAI **Mount Meron Ar** 119.37 67 PKP PKPdf 22 12 08.2 -0.2
comp=Z,20nm,0.9s,baz=297,slow=0.6,SNR=15
MMAI pPKP **pPKPdf** 22 12 25.0 +0.9
comp=Z,3.0nm,0.5s,baz=307,slow=0.4,SNR=3.8
MMAI PKKPab **PKKPab** 22 22 21.4 -0.1
comp=Z,22nm,1.1s,baz=79,slow=4.4,SNR=10
M11K **Mekoryuk** 119.39 325 P PKiKP 22 12 08.6 +1.1
baz=103
A19K **Wainwright** 119.43 337 P PKiKP 22 12 08.6 +1.3
baz=102
G15K **Niukluk** 119.44 331 P PKiKP 22 12 08.7 +1.2
baz=102
B18K **Kokolik River** 119.50 336 P PKiKP 22 12 08.3 +0.9
baz=102
PURM **Purcari** 119.57 51 ⇑P PKiKP 22 12 08.7 +0.5
D17K **Noatak River** 119.62 334 P PKiKP 22 12 09.0 +1.3
baz=102,SNR=7.1
RDOG **Red Dog Mine** 119.63 334 P PKiKP 22 12 08.5 +0.7
baz=102,SNR=9.1
ANTO **Ankara** 119.65 59 PKPdf PKPdf 22 12 08.4 -0.3
ANTO **Ankara** 119.65 59 P PKPdf 22 12 08.4 -0.3
ANTO **Ankara** 119.65 59 ⇑P PKiKP 22 12 09.3 +0.5
ANTO **Ankara** 119.65 59 ⇑PKIKP PKiKP 22 12 09.3 +0.5
ANTO **Ankara** 119.65 59 PKP PKiKP 22 12 09.1 +0.3
ASAR **Alice Springs** 119.81 207 PKPdf PKPdf 22 12 07.5 -2.0
ASAR **Alice Springs** 119.81 207 PKP PKPdf 22 12 08.2 -1.3
comp=Z,23nm,0.5s,baz=128,slow=1.6,SNR=148
ASAR pPKP **pPKPdf** 22 12 25.1 -0.3
comp=Z,27nm,0.9s,baz=149,slow=2.0,SNR=8.9
ASAR PKKPbc **PKKPbc** 22 22 18.8 -0.1
comp=Z,9.7nm,0.8s,baz=337,slow=2.9,SNR=43
ASAR SKKPbc SKKPbc 22 25 45.9 -14
comp=Z,3.5nm,1.0s,baz=348,slow=3.9,SNR=4.2
ASAR PKPPKP 22 30 53.2
comp=Z,0.6nm,0.7s,baz=313,slow=3.0,SNR=4.2
C17K **DeLong Mountai** 119.81 335 P PKiKP 22 12 09.3 +1.2
baz=101
NACGM **Naroch** 119.83 41 ⇑*i*PKiKP PKPdf 22 12 07.6 -0.8
comp=Z,125nm,0.9s,baz=256
F15K **North Star Dit** 119.83 332 P PKiKP 22 12 09.4 +1.2
baz=102
ANM **Nome** 119.91 330 P PKiKP 22 12 09.4 +1.1
baz=102
BRTR **Keskin Array B** 120.23 60 PKPdf PKPdf 22 12 08.5 -1.4
BRTR **Keskin Array B** 120.23 60 PKP PKPdf 22 12 09.3 -0.6
comp=Z,28nm,0.8s,baz=196,slow=2.6,SNR=76
BRTR pPKP **pPKPdf** 22 12 26.8 +1.0
comp=Z,9.9nm,0.8s,baz=220,slow=5.3,SNR=6.0
BRTR PKKPab **PKKPab** 22 22 18.4 +1.0
comp=Z,2.0nm,0.9s,baz=119,slow=4.4,SNR=4.8
BR131 **Keskin Array S** 120.23 60 P PKiKP 22 12 10.1 +0.1
SNR=16
BR131 **Keskin Array S** 120.23 60 *c i*PKIKP PKPdf 22 12 08.9 -1.0
KIEV **Kiev** 120.24 46 PKPdf PKPdf 22 12 07.9 -1.5
KIEV **Kiev** 120.24 46 *i*PKPdf PKPdf 22 12 08.3 -1.1
SNR=29
KIEV **Kiev** 120.24 46 PKIKP PKPdf 22 12 07.9 -1.5
KIRS **Kirsehir-Merke** 120.25 60 ⇓P PKiKP 22 12 10.5 +0.5
AKASG **Malin Array Be** 120.25 46 PKPdf PKPdf 22 12 07.9 -1.5
AKASG **Malin Array Be** 120.25 46 PKP PKPdf 22 12 08.1 -1.3
comp=Z,32nm,0.7s,baz=265,slow=2.8,SNR=70
AKASG pPKP **pPKPdf** 22 12 27.4 +2.4
comp=Z,7.9nm,0.6s,baz=278,slow=2.1,SNR=3.9
AKASG PP PP 22 13 32.5 -3.7
comp=Z,7.5nm,0.9s,baz=256,slow=7.1,SNR=7.5
AKASG PKKPbc **PKKPbc** 22 22 17.6 +0.2
comp=Z,6.0nm,0.9s,baz=61,slow=3.6,SNR=13
AKBB **Malin Array Si** 120.25 46 *d i*PKIKP PKPdf 22 12 07.8 -1.6
P08K **Saint George I** 120.26 321 P PKiKP 22 12 10.2 +1.0
baz=103
MNK **Minsk** 120.36 42 *i*PKP PKPdf 22 12 07.9 -1.6
comp=Z,18nm,0.7s
MNK *i*PKiKP **PKiKP** 22 12 09.9 +0.4
comp=E,28nm,0.9s
MNK *i*PKiKP **PKiKP** 22 12 09.9 +0.4
comp=N,20nm,1.0s
MNK *i*PKiKP **PKiKP** 22 12 09.9 +0.4
comp=Z,146nm,0.9s,baz=256
MNK *i*PP PP 22 13 48.5 +12
MNK *i*SKP 22 15 41.8
MNK *i*PKS 22 15 46.5
MNK *i*PPP PPP 22 16 08.8
MNK *i*SKS **SKSdf** **22 19 11.8 -5.0**
MNK *i*SS **SS** **22 30 01.8 +0.5**
MNK *i*SSS SSS 22 35 54.2
MNK *i*LQ LQ 22 56 05.4
MNK *i*LRM MLR 23 03 54.0
comp=N,3μm,19.1s
MNK *i*LRM MLR 23 03 58.6
comp=Z,4μm,18.4s
MNK **Minsk** 120.36 42 *i*PKIKP PKPdf 22 12 07.8 -1.6
MNK *i*PPP PPP 22 16 08.8
MNK *i* 22 19 11.7
MNK *i* 22 23 24.8
MNK *i*SS SS 22 30 01.8 +0.5
MNK pmax pmax
comp=Z,18nm,0.7s
MNK pmax pmax
comp=N,20nm,1.0s
MNK pmax pmax
comp=E,28nm,0.9s
CIDE **Kastamonu/Cide** 120.37 57 ⇑P PKPdf 22 12 09.2 -0.7
SPITS **Spitsbergen Ar** 120.39 14 PKP PKPdf 22 12 08.9 0.0
comp=E,8.1nm,0.7s,baz=288,slow=1.4,SNR=5.0
SPITS PKKPbc **PKKPab** 22 22 15.3 +0.6
comp=E,18nm,0.9s,baz=102,slow=7.8,SNR=10
F14K **Arctic Creek** 120.48 331 P PKiKP 22 12 10.6 +1.1
baz=100
C16K **Lisburne Hills** 120.57 334 P PKiKP 22 12 10.5 +1.0
baz=99,SNR=5.6
VSU **Vasula** 120.58 37 *c i*PKIKP PKPdf 22 12 08.3 -1.4
VSU pmax pmax
comp=Z,107nm,0.7s
SPIA **Saint Paul Isl** 120.76 321 P PKiKP 22 12 11.3 +1.1
baz=102
FINES **FINESS Array B** 120.83 34 PKPdf PKPdf 22 12 09.3 -0.8
FINES **FINESS Array B** 120.83 34 PKP PKPdf 22 12 09.9 -0.2
comp=Z,16nm,0.8s,baz=174,slow=1.4,SNR=16
FINES pPKP **pPKPdf** 22 12 27.4 +1.5
comp=Z,7.5nm,0.9s,baz=175,slow=5.4,SNR=2.9
FINES PKKPbc **PKKPbc** 22 22 14.5 -1.0
comp=Z,4.3nm,0.7s,baz=72,slow=4.2,SNR=21
FIA1 **FINESS Array S** 120.83 34 PKPdf PKiKP 22 12 10.7 +0.5
TNA **Tin City** 121.15 331 P PKiKP 22 12 11.7 +1.0
baz=99
ARCES **ARCESS Array B** 121.76 24 PKPdf 22 12 10.5 -1.3
ARCES **ARCESS Array B** 121.76 24 PKP PKPdf 22 12 11.3 -0.5
comp=Z,9.3nm,0.8s,baz=258,slow=2.8,SNR=16
ARCES pPKP **pPKPdf** 22 12 29.1 +1.6
comp=Z,3.6nm,0.6s,baz=329,slow=1.4,SNR=2.5
ARCES PKKPbc **PKKPab** 22 22 08.8 -0.3
comp=Z,2.9nm,0.6s,baz=26,slow=3.4,SNR=22
SIM **Simferopol'** 122.02 54 *i*P Pdif 22 09 00.3 +19
SIM *e* 22 12 13.6
SIM *e* 22 13 59.0
SIM *e*SS SS 22 30 24.0 +0.9
SIM pmax pmax
comp=Z,35nm,3.3s
SIM pmax pmax
comp=Z,98nm,1.0s
SIM pmax pmax
comp=Z,400nm,11.0s
GAMB **Gambell** 122.52 329 P PKiKP 22 12 14.2 +0.7
baz=97
PUL **Pulkovo** 122.63 36 *c i*PKIKP PKiKP 22 12 14.7 +0.9
PUL pmax pmax
comp=Z,88nm,0.7s
PUL MLR MLR
comp=Z,4μm,24.0s
WRA **Warramunga Arr** 122.98 209 PKPdf PKPdf 22 12 13.9 -1.8
WRA **Warramunga Arr** 122.98 209 PKP PKPdf 22 12 14.9 -0.7
comp=Z,100nm,0.9s,baz=166,slow=1.5,SNR=306
WRA pPKP **pPKPdf** 22 12 31.0 -0.5
comp=Z,44nm,0.7s,baz=161,slow=1.4,SNR=9.1
WRA PP **PP** 22 13 53.3 -0.6
comp=Z,3.6nm,0.7s,baz=174,slow=7.1,SNR=4.8
WRA PKKPbc **PKKPbc** 22 22 07.0 +0.2
comp=Z,6.2nm,0.8s,baz=343,slow=4.4,SNR=17
WRA SKKPbc SKKPbc 22 25 46.7 -2.5
comp=Z,8.1nm,1.0s,baz=354,slow=4.7,SNR=6.2
WRA **Warramunga Arr** 122.98 209 PKIKP PKPdf 22 12 15.0 -0.7
WRAB **Tennant Creek** 122.98 209 PKPdf PKPdf 22 12 13.6 -2.1
WRAB **Tennant Creek** 122.98 209 *c i*PKIKP PKPdf 22 12 14.8 -0.9
WRAB pmax pmax
comp=Z,203nm,1.3s
WRAB MLR MLR
comp=Z,13μm,19.0s
ADK **Adak** 123.43 314 PKPdf PKPdf 22 12 14.3 -1.1
ADK **Adak** 123.43 314 PKIKP PKPdf 22 12 14.3 -1.1
RAYN **Ar Rayn** 124.12 82 P PKiKP 22 12 18.0 0.0
RAYN **Ar Rayn** 124.12 82 *i*PKPdf PKPdf 22 12 17.7 -0.1
SNR=5.6
RAYN **Ar Rayn** 124.12 82 ⇓PKIKP PKiKP 22 12 18.4 +0.4
ANN **Anapa** 124.28 55 *i*PKIKP PKPdf 22 12 17.3 0.0
ANN *e* 22 12 34.8
ANN *e* 22 14 12.4
ANN *e*PPP PPP 22 16 41.3
ANN *e* 22 19 14.7
ANN *e*SP SP 22 23 50.2 -5.9
ANN pmax pmax
comp=E,65nm,1.7s
ANN pmax pmax
comp=Z,105nm,1.1s
ANN pmax pmax
comp=N,45nm,1.2s
APA **Apatity** 124.55 27 *i*PKIKP PKPdf 22 12 17.1 0.0
APA *i* 22 14 07.8
APA *i*SS SS 22 30 58.8 +4.9
PMG **Port Moresby** 124.93 229 PKPdf PKPdf 22 12 18.9 -0.6
PMG **Port Moresby** 124.93 229 *c i*PKIKP PKPdf 22 12 19.5 0.0
PMG pmax pmax
comp=Z,123nm,1.0s
LVZ **Lovozero** 125.03 26 ⇓*i*PKIKP PKiKP 22 12 19.2 +0.8
LVZ MLR MLR
comp=Z,3μm,19.0s
OBN **Obninsk** 125.41 42 PKPdf PKPdf 22 12 18.6 -0.5
OBN **Obninsk** 125.41 42 ⇓PKIKP PKPdf 22 12 18.7 -0.4
OBN *i* 22 14 14.9
OBN *e*SS SS 22 31 03.1 -2.2
OBN pmax pmax
comp=Z,189nm,1.3s
OBN MLR MLR
comp=Z,3μm,20.0s
SOC **Sochi** 125.62 57 *e*PKIKP PKPdf 22 12 19.6 -0.3
SOC *e* 22 14 10.4
SOC *e*PPP PPP 22 16 56.4
SOC *e*PS PS 22 24 10.3 -4.3
SOC *e*SS SS 22 31 09.0 +0.3
SOC *e*SSS SSS 22 35 47.8
SOC pmax pmax
comp=Z,101nm,0.8s
SOC MLR MLR
comp=Z,2μm,18.0s
VSLR **Vesoyoye** 125.82 57 *d i*PKIKP PKiKP 22 12 20.8 +0.1
PSA00 **Pilbara Seismi** 125.88 193 PKPdf PKPdf 22 12 18.8 -2.4
MOS **Moscow** 126.07 41 *i*PKIKP PKPdf 22 12 19.6 -0.8
MOS *e* 22 12 32.5
MOS *e*PPP PPP 22 17 03.1
MOS *e* 22 19 16.9
MOS *e*SS SS 22 31 07.8 -5.8
MOS pmax pmax
comp=Z,125nm,0.9s
MOS pmax pmax
comp=N,48nm,1.0s
MOS MLR MLR
comp=E,4μm,19.0s
MOS MLR MLR
comp=Z,7μm,19.0s
MBWA **Marble Bar** 126.30 193 PKPdf PKPdf 22 12 20.7 -1.3
MBWA **Marble Bar** 126.30 193 P PKPdf 22 12 20.7 -1.3
MBWA **Marble Bar** 126.30 193 PKP PKPdf 22 12 21.2 -0.8
MBWA PKP PKiKP 22 12 21.5 -0.9
H11S2 **WAKE ISLAND Hyd** 126.37 270 T T 00 31 18.0
baz=118,slow=75,SNR=3317
H11S1 **WAKE ISLAND Hyd** 126.38 270 T T 00 31 27.9
baz=118,slow=75,SNR=3055
H11S3 **WAKE ISLAND Hyd** 126.38 270 T T 00 31 25.5
baz=118,slow=75,SNR=2775
VSR **Storozhevoye** 126.52 47 *e*PKIKP PKPdf 22 12 17.6 -3.8
VSR pmax pmax
comp=Z,70nm,1.0s
LPSR **Galich'ya Gora** 126.53 45 *i*PKIKP PKPdf 22 12 21.3 -0.1
LPSR pmax pmax
comp=Z,163nm,1.0s
LABN **Labinsk** 126.54 55 *i*PKIKP PKPdf 22 12 21.2 -0.5
LABN *e* 22 12 36.5
LABN *e* 22 14 30.0
LABN *e* 22 19 24.3
LABN pmax pmax
comp=Z,65nm,0.8s
ERBR **Yeremizino-Bor** 126.57 54 *i*PKIKP PKPdf 22 12 21.5 -0.2
ERBR *e* 22 12 36.7
ERBR *e* 22 19 25.5
ERBR *e*SP SP 22 24 19.8 +3.6
ERBR pmax pmax
comp=Z,73nm,0.9s
VORD **Divnogorie** 126.57 47 *e*PKIKP PKPdf 22 12 18.8 -2.7
VORD pmax pmax
comp=Z,60nm,1.0s
H11N3 **WAKE ISLAND Hyd** 126.72 272 T T 00 31 47.2
baz=116,slow=75,SNR=4639
H11N1 **WAKE ISLAND Hyd** 126.74 272 T T 00 31 48.2
baz=116,slow=75,SNR=736
H11N2 **WAKE ISLAND Hyd** 126.74 272 T T 00 31 47.0
baz=116,slow=75,SNR=5731
KLMR **Klimovskoe** 127.26 35 *e*PKIKP PKPdf 22 12 21.7 -0.8
KLMR *e* 22 12 37.8
KLMR SS SS 22 31 28.3 +0.2
KLMR pmax pmax
comp=Z,277nm,1.3s
KIV **Kislovodsk** 127.80 57 PKPdf PKPdf 22 12 23.7 -0.5
KIV **Kislovodsk** 127.80 57 P PKiKP 22 12 25.1 +0.3
KIV **Kislovodsk** 127.80 57 ⇓P PKiKP 22 12 25.2 +0.3
KIV **Kislovodsk** 127.80 57 *i*PKPdf PKPdf 22 12 23.9 -0.3
SNR=9.3
KIV **Kislovodsk** 127.80 57 *i*P Pdif 22 09 06.5 -1.1
KIV *i* 22 12 23.6
KIV *e* 22 14 24.9
KIV *e* 22 19 24.1
KIV *e*PS **PS** **22 24 31.5 -2.4**
KIV *e*SS SS 22 31 33.0 -3.2
KIV *e*SSS SSS 22 36 17.9
KIV pmax pmax
comp=Z,103nm,1.1s
KIV MLR MLR
comp=Z,2μm,23.0s
KIV **Kislovodsk** 127.80 57 PKP PKiKP 22 12 24.5 -0.3
KIV PKP PKPdf 22 12 25.0 +0.8
DGAR **Diego Garcia** 127.91 132 *d i*PKIKP PKiKP 22 12 26.8 +1.0
DGAR pmax pmax
comp=Z,158nm,1.7s
KBZ **Khabaz** 127.92 57 PKP PKiKP 22 12 25.4 +0.6
comp=Z,48nm,1.0s,baz=252,slow=2.9,SNR=28
KBZ pPKP **pPKPdf** 22 12 42.1 +2.0
comp=Z,22nm,1.0s,baz=232,slow=5.1,SNR=3.5
KBZ SP SP 22 24 27.9 -0.1
comp=Z,5.3nm,1.1s,baz=224,slow=4.1,SNR=4.1
VRH **Novokhopyorsk** 128.12 47 *i*PKIKP PKiKP 22 12 24.9 -0.1
VRH pmax pmax
comp=Z,64nm,0.9s
VRH MLR MLR
comp=Z,5μm,24.0s
ABTO **Aybut** 128.15 92 P PKPdf 22 12 25.6 0.0
SNR=13
GOF **Gofitskoye** 128.24 55 *ce*PKIKP PKiKP 22 12 25.4 -0.1
GNI **Garni** 128.58 62 PKPdf PKPdf 22 12 25.2 -0.7
GNI **Garni** 128.58 62 P PKiKP 22 12 27.3 +0.7
GNI **Garni** 128.58 62 *c i*PKIKP PKiKP 22 12 26.4 -0.2
GNI pmax pmax
comp=Z,109nm,1.3s
GNI MLR MLR
comp=Z,2μm,18.0s
WHFO **Wadi Hawf** 128.80 92 P PKPdf 22 12 26.4 -0.4
SNR=6.3
TBLG **Delisi** 128.89 60 PKIKP PKiKP 22 12 28.0 +1.0
RBK **Rabkut** 128.99 93 P PKPdf 22 12 27.4 +0.2
SNR=6.8
SMRA **Abu-Samra** 129.08 83 P PKPdf 22 12 26.6 -0.5
SNR=9.1
SAKB **Bahrain** 129.28 81 P PKPdf 22 12 26.8 -0.6
TRNA **Turayna** 129.41 83 P PKPdf 22 12 28.1 +0.4
SNR=14
DOK **Doka** 129.42 91 P PKPdf 22 12 27.8 -0.1
SNR=18
SLWR **Sila** 129.56 84 P PKPdf 22 12 28.1 0.0
SHMA **Al-Shehemyia** 129.60 81 P PKPdf 22 12 27.9 -0.2
SNR=6.5
SHAO **Shalim** 130.43 93 *i*PKPdf PKPdf 22 12 30.0 +0.1
SNR=13
GHWR **Ruwais** 130.53 84 P PKiKP 22 12 30.5 -0.2
MZR **Muzera** 130.67 86 P PKiKP 22 12 31.3 +0.2
SNR=37
MZR **Muzera** 130.67 86 *i*PKPdf PKPdf 22 12 30.1 -0.1
SNR=44
JRN **Qarnain Island** 130.86 83 P PKiKP 22 12 31.7 +0.4
SNR=6.2
AKT **Akhty** 131.06 61 *i*PKIKP PKiKP 22 12 31.8 +0.4
AKT *e* 22 12 44.8
AKT *e* 22 12 49.5
AKT *e* 22 14 51.2
AKT *e*PPP PPP 22 17 39.7
AKT pmax pmax
comp=Z,137nm,1.0s
BILL **Bilibino** 131.09 335 *c i*PKIKP PKPdf 22 12 29.5 -0.1
BILL pmax pmax
comp=Z,147nm,1.3s
BILL MLR MLR
comp=Z,5μm,20.0s
MAK **Makhachkala** 131.11 59 *i*P Pdif 22 09 22.6 +0.4
MAK *i* 22 12 30.7
MAK *e* 22 14 45.6
MAK *e*PPP PPP 22 17 42.3
MAK *e* 22 19 33.1
MAK *e*SS SS 22 32 20.2 +3.5
MAK pmax pmax
comp=Z,243nm,1.1s
BELG **Belogornoye** 131.83 46 PKP PKiKP 22 12 32.4 0.0
comp=Z,120nm,0.9s,baz=291,slow=2.6,SNR=30
BELG **Belogornoye** 131.83 46 *d i*PKIKP PKPdf 22 12 31.8 +0.4
BELG MLR MLR
comp=Z,571nm,19.0s
UMZA **Um Al Zommool** 131.99 87 P PKPdf 22 12 32.9 +0.2
KIRV **Kirov** 132.42 38 PKP PKiKP 22 12 33.0 -0.4
comp=Z,52nm,0.7s,baz=271,slow=3.6,SNR=21
KIRV **Kirov** 132.42 38 *d i*PKIKP PKiKP 22 12 33.4 0.0
AJN **Ajban** 132.54 85 P PKPdf 22 12 32.9 -0.8
SNR=7.5
AJN **Ajban** 132.54 85 *i*PKPdf PKPdf 22 12 33.5 -0.1
SNR=9.5
ASUD **Al Ashush, Dub** 132.85 85 P PKPdf 22 12 34.3 +0.1
SNR=10
ASUD **Al Ashush, Dub** 132.85 85 *i*PKPdf PKPdf 22 12 34.3 +0.1
SNR=7.8
DQM **DQM** 132.89 92 P PKPdf 22 12 34.7 +0.2
SNR=5.5
ALNE **Al Ain** 133.00 86 P PKPdf 22 12 34.4 -0.2

	SNR=23									
ALNE	**Al Ain**	**133.00**	**86**	*i*	PKPdf	**PKPdf**	**22 12 34.2**	**-0.4**		
	SNR=31									
FAQ	**Al Faqa, Dubai**	**133.12**	**85**		P	**PKPdf**	**22 12 34.7**	**-0.1**		
	SNR=15									
FAQ	**Al Faqa, Dubai**	**133.12**	**85**	*i*	PKPdf	**PKPdf**	**22 12 34.4**	**-0.3**		
	SNR=7.6									
NAZ	**Nazwa, Dubai**	**133.26**	**84**		P	**PKPdf**	**22 12 34.8**	**-0.2**		
	SNR=14									
NAZ	**Nazwa, Dubai**	**133.26**	**84**	*i*	PKPdf	**PKPdf**	**22 12 35.0**	**0.0**		
	SNR=16									
ARQ	**Araqi**	**133.39**	**87**		P	**PKPdf**	**22 12 34.9**	**-0.5**		
	SNR=7.6									
ASHO	**Ashiyiah**	**133.49**	**85**		P	**PKPdf**	**22 12 34.6**	**-1.0**		
	SNR=7.9									
ASHO	**Ashiyiah**	**133.49**	**85**	*i*	PKPdf	**PKPdf**	**22 12 34.6**	**-1.0**		
	SNR=5.8									
HATD	**Hatta, Dubai**	**133.60**	**85**		P	**PKPdf**	**22 12 35.1**	**-0.6**		
	SNR=10									
HATD	**Hatta, Dubai**	**133.60**	**85**	*i*	PKPdf	**PKPdf**	**22 12 34.8**	**-0.9**		
	SNR=16									
MHTO	**MHTO**	**133.69**	**91**		P	**PKPdf**	**22 12 35.5**	**-0.5**		
	SNR=7.6									
SOHO	**SOHO**	**133.69**	**86**		P	**PKPdf**	**22 12 35.5**	**-0.4**		
SOHO	**SOHO**	**133.69**	**86**	*i*	PKPdf	**PKPdf**	**22 12 35.0**	**-0.8**		
	SNR=28									
UOSS	**Minazif**	**133.71**	**85**		PKPdf	**PKPdf**	**22 12 35.1**	**-0.8**		
UOSS	**Minazif**	**133.71**	**85**		P	**PKPdf**	**22 12 35.4**	**-0.5**		
UOSS	**Minazif**	**133.71**	**85**	*i*	PKPdf	**PKPdf**	**22 12 34.7**	**-1.2**		
	SNR=6.1									
UOSS	**Minazif**	**133.71**	**85**		PKP	**PKPdf**	**22 12 33.2**	**-2.6**		
UOSS					PKP	**PKiKP**	**22 12 35.9**	**-1.3**		
MSFE	**Esma-Masafi**	**133.81**	**84**	*i*	PKPdf	**PKPdf**	**22 12 35.3**	**-0.8**		
	SNR=17									
MASF	**Masafi**	**133.82**	**84**		P	**PKPdf**	**22 12 35.6**	**-0.5**		
	SNR=9.1									
MDH	**Madha**	**133.91**	**84**		P	**PKPdf**	**22 12 36.3**	**0.0**		
	SNR=6.6									
MDH	**Madha**	**133.91**	**84**	*i*	PKPdf	**PKPdf**	**22 12 35.4**	**-0.8**		
	SNR=10									
SHME	**Shamm**	**134.04**	**83**		P	**PKPdf**	**22 12 36.3**	**-0.2**		
	SNR=13									
SHME	**Shamm**	**134.04**	**83**	*i*	PKPdf	**PKPdf**	**22 12 35.8**	**-0.7**		
	SNR=28									
BANOM	**Banah**	**134.13**	**83**		P	**PKPdf**	**22 12 36.2**	**-0.5**		
BANOM	**Banah**	**134.13**	**83**	*i*	PKPdf	**PKPdf**	**22 12 35.9**	**-0.8**		
	SNR=5.4									
HOQ	**Hoqain**	**134.15**	**87**		P	**PKPdf**	**22 12 35.7**	**-1.1**		
	SNR=5.8									
JAY	**Jayapura**	**134.29**	**228**		PKP	**PKiKP**	**22 12 38.5**	**-0.3**		
JMDO	**Jabal Madar**	**134.36**	**89**		P	**PKPdf**	**22 12 36.6**	**-0.6**		
SMDO	**Samad**	**134.58**	**88**		P	**PKPdf**	**22 12 37.3**	**-0.4**		
	SNR=9.7									
WSAR	**Wadi Sarin**	**135.14**	**88**		P	**PKiKP**	**22 12 40.1**	**-0.1**		
	SNR=6.0									
WBK	**Wadi Bani Khal**	**135.19**	**89**		P	**PKiKP**	**22 12 40.5**	**+0.3**		
JLN	**Jalan Bani Buh**	**135.39**	**90**		P	**PKPdf**	**22 12 39.0**	**-0.1**		
SMPI	**Sarmi**	**135.94**	**226**		PKP	**PKPdf**	**22 12 40.8**	**+0.4**		
SOEI	**Soe**	**136.08**	**202**		PKP	PKPpre	22 12 30.0			
BASI	**Baing, Sumba**	**136.71**	**197**		PKP	**PKPdf**	**22 12 40.6**	**-1.2**		
WBSI	**Waikabubak, Su**	**137.55**	**196**		PKP	**PKPdf**	**22 12 42.8**	**-0.7**		
ARTI	**Arti**	**137.59**	**39**			PKPpre	22 12 30.4			
ARTI						**PKPdf**	**22 12 43.0**	**+0.9**		
ARTI	**Arti**	**137.59**	**39**		PKhKP	PKPpre	22 12 32.3			
	comp=Z,11nm,0.9s,baz=268,slow=1.1,SNR=14									
ARTI					PKP	**PKiKP**	**22 12 43.8**	**-0.2**		
	comp=Z,124nm,1.1s,baz=276,slow=2.1,SNR=42									
ARTI	**Arti**	**137.59**	**39**	*i*	PKIKP	**PKPdf**	**22 12 42.6**	**+0.5**		
ARTI					PPP	PPP	22 18 28.3			
ARTI					MLR	MLR				
	comp=Z,5μm,22.0s									
NGCH	**Negor - Chabah**	**138.04**	**86**		P	**PKiKP**	**22 12 46.6**	**+0.7**		
SEY	**Seymchan**	**138.38**	**332**	*i*	PKIKP	**PKPdf**	**22 12 43.5**	**+0.1**		
SEY					pmax	pmax				
	comp=Z,208nm,1.0s									
AKTO	**Aktyubinsk**	**138.44**	**48**		PKhKP	PKPpre	22 12 34.0			
	comp=Z,3.6nm,0.7s,baz=273,slow=1.8,SNR=9.9									
AKTO					PKP	**PKiKP**	**22 12 45.4**	**-0.6**		
	comp=Z,51nm,1.0s,baz=294,slow=2.2,SNR=34									
AKTO					PP	**PP**	**22 15 32.5**	**-2.2**		
	comp=Z,22nm,0.9s,baz=282,slow=9.6,SNR=5.8									
PET	**Petropavlovsk**	**138.45**	**316**			**PKPdf**	**22 12 43.6**	**-0.1**		
PET	**Petropavlovsk**	**138.45**	**316**	*d*	PKIKP	**PKiKP**	**22 12 45.2**	**-0.7**		
PET					pmax	pmax				
	comp=Z,117nm,1.0s									
TIXI	**Tiksi**	**138.62**	**350**	*d*	PKIKP	**PKPdf**	**22 12 44.5**	**+1.0**		
TIXI					pmax	pmax				
	comp=Z,108nm,1.0s									
SVE	**Sverdlovsk**	**138.67**	**38**	*i*	PKIKP	**PKPdf**	**22 12 44.3**	**+0.2**		
SVE					pmax	pmax				
	comp=Z,70nm,1.3s									
PEA0B	**Petropavlovsk-**	**139.00**	**316**	⇑	PKIKP	**PKiKP**	**22 12 47.1**	**+0.1**		
PETK	**Petropavlovsk-**	**139.00**	**316**		PKhKP	PKPpre	22 12 36.4			
	comp=Z,4.7nm,0.5s,baz=66,slow=6.0,SNR=9.7									
PETK					PKP	**PKPdf**	**22 12 45.8**	**+1.0**		
	comp=Z,207nm,1.0s,baz=88,slow=2.0,SNR=49									
PETK					pPKP	pPKPdf	22 13 02.8	+2.2		
	comp=Z,183nm,1.1s,baz=72,slow=6.4,SNR=8.2									
JAGI	**Jajag, Banyuwa**	**139.63**	**188**		PKP	PKPpre	22 12 37.0			
ABKAR	**Akbulak array**	**139.83**	**50**		PKPpre	PKPpre	22 12 36.7			
SRBI	**Singaraja**	**139.87**	**190**		PKP	PKPpre	22 12 40.5			
MSAI	**Masohi**	**140.10**	**213**		PKP	PKPpre	22 12 39.0			
AAI	**Ambon**	**140.13**	**211**		PKP	PKPpre	22 12 39.8			
SKR	**Severo-Kuril's**	**140.42**	**313**	⇑	PKIKP	**PKiKP**	**22 12 51.1**	**+1.1**		
MA2	**Magadan**	**140.60**	**327**		PKPdf	**PKPdf**	**22 12 47.8**	**+0.3**		
MA2	**Magadan**	**140.60**	**327**	*d*	PKIKP	**PKiKP**	**22 12 49.1**	**-1.0**		
MA2					MLR	MLR				
	comp=Z,3μm,19.0s									
BSSI	**Bau Bau, Buton**	**140.63**	**199**		PKP	PKPpre	22 12 42.3			
NLAI	**Namlea**	**141.01**	**210**		PKP	PKPpre	22 12 42.6			
KMMI	**Kalianget**	**141.06**	**188**		PKP	PKPpre	22 12 45.6			
CNJI	**Cibinong**	**141.10**	**178**		PKP	PKPpre	22 12 40.8			
KPJI	**Karang Pucung**	**141.11**	**180**		PKP	PKPpre	22 12 42.7			
SWI	**Sorong**	**141.11**	**218**		PKP	PKPpre	22 12 41.6			
SMRI	**Semarang**	**141.35**	**183**		PKP	PKPpre	22 12 45.9			
BKSI	**Bulukumba**	**141.52**	**199**		PKP	PKPpre	22 12 44.3			
LEM	**Lembang**	**141.60**	**178**		PKhKP	PKPpre	22 12 46.1			
	comp=Z,123nm,0.7s,baz=357,slow=3.8,SNR=18									
LEM	**Lembang**	**141.60**	**177**		PKP	PKPpre	22 12 44.0			
DBJI	**Dramaga**	**141.84**	**177**		PKP	PKPpre	22 12 44.0			
KAPI	**Kappang**	**141.91**	**198**		PKPdf	**PKPdf**	**22 12 48.4**	**-3.0**		
KAPI	**Kappang**	**141.91**	**198**		PKIKP	**PKPdf**	**22 12 48.4**	**-3.0**		
KAPI	**Kappang**	**141.91**	**198**		PKP	PKPpre	22 12 43.1			
GUMO	**Guam**	**142.24**	**250**		PKPpre	PKPpre	22 12 46.4			
GUMO	**Guam**	**142.24**	**250**		PKHKP	PKPpre	22 12 46.4			
BNSI	**Bone**	**142.40**	**199**		PKP	PKPpre	22 12 47.0			
TRD	**Trivandrum**	**142.54**	**121**	*eP*		**PKPdf**	**22 12 49.4**	**-3.0**		
SANI	**Sanana**	**142.55**	**209**		PKP	PKPpre	22 12 42.5			
SANI	**Sanana**	**142.55**	**209**		PKP	PKPpre	22 12 46.5			
KASI	**Kota Agung**	**142.69**	**173**		PKP	PKPpre	22 12 46.3			
SPSI	**Sidrap Palu**	**142.91**	**199**		PKP	PKPpre	22 12 48.9			
LWLI	**Liwa**	**143.15**	**172**		PKP	PKPab	22 12 49.7	+0.5		
KLI	**Kotabumi**	**143.38**	**174**		PKP	PKPbc	22 12 50.7	-0.4		
MDSI	**Maura Dua**	**143.68**	**172**		PKP	PKPab	22 12 51.1	-0.1		
MNGI	**Mangalore**	**143.74**	**113**	*eP*		PKPbc	22 12 52.8	+0.7		
KOD	**Kodaikanal**	**144.06**	**120**	*eP*		**PKPab**	**22 12 53.2**	**+0.2**		
LHSI	**Lahat**	**144.25**	**171**		PKP	**PKPab**	**22 12 53.5**	**+0.2**		
KSI	**Kapahiang**	**144.29**	**170**		PKP	**PKPab**	**22 12 53.1**	**-0.5**		
PALK	**Pallekele**	**144.31**	**127**		PKPdf	**PKPab**	**22 12 53.1**	**-0.5**		
PALK	**Pallekele**	**144.31**	**127**		PKP	PKPbc	22 12 54.6	+0.7		
	comp=Z,162nm,1.1s,baz=216,slow=2.9,SNR=39									
PALK	**Pallekele**	**144.31**	**127**		P	PKPbc	22 12 54.2	+0.2		
PALK	**Pallekele**	**144.31**	**127**		PKIKP	**PKPab**	**22 12 53.1**	**-0.5**		
PALK	**Pallekele**	**144.31**	**127**		PKP	**PKPab**	**22 12 52.9**	**-0.7**		
PALK					PKP	PKPbc	22 12 54.3	+0.3		
GOA	**Goa**	**144.40**	**109**	*eP*		**PKPab**	**22 12 53.5**	**-0.3**		
TNTI	**Ternate**	**144.45**	**213**		PKP	**PKPab**	**22 12 52.6**	**-1.5**		
BBKI	**Banjar Baru**	**144.46**	**191**		PKP	**PKPab**	**22 12 53.6**	**-0.5**		
BHUJ	**Bhuj**	**144.53**	**94**	*eP*		**PKPdf**	**22 12 55.9**	**+0.3**		
PPSI	**Pulau Pagai**	**144.68**	**165**		PKP	PKPbc	22 12 55.5	+0.5		
LUWI	**Luwuk**	**144.72**	**205**		PKP	**PKPab**	**22 12 53.9**	**-1.2**		
LUWI	**Luwuk**	**144.72**	**205**		PKP	**PKPab**	**22 12 54.8**	**-0.3**		
MASI	**Maura Aman, Be**	**144.74**	**169**		PKP	**PKPab**	**22 12 55.0**	**-0.2**		
MALK	**Mahakanadarawa**	**145.01**	**126**		PKP	**PKPbc**	**22 12 53.7**	**-2.4**		
BORK	**Borovoye**	**145.20**	**41**	*c*	PKIKP	**PKPab**	**22 12 55.7**	**0.0**		
BORK					MLR	MLR				
	comp=Z,5μm,19.0s									
APSI	**Ampana**	**145.23**	**203**		PKP	**PKPab**	**22 12 56.9**	**0.0**		
BVAR	**Borovoye Array**	**145.24**	**41**		PKPbc	**PKPdf**	**22 12 56.4**	**+0.4**		
	comp=Z,404nm,0.7s,baz=302,slow=3.2,SNR=595									
BVAR					pPKPbc	**pPKPdf**	**22 13 12.6**	**+0.9**		
	comp=Z,80nm,0.6s,baz=326,slow=7.7,SNR=4.7									
PMBI	**Palembang**	**145.29**	**173**		PKP	**PKPbc**	**22 12 57.0**	**0.0**		
SALM	**Salem**	**145.52**	**119**	*eP*		**PKPab**	**22 12 57.9**	**-0.1**		
KRJI	**Kerinci**	**145.63**	**167**		PKP	**PKPdf**	**22 12 57.6**	**-0.4**		
TPI	**Tanjungpandan**	**145.64**	**178**		PKP	**PKPdf**	**22 12 57.5**	**-0.4**		
KAD	**Karad**	**145.66**	**107**	*eP*		**PKPdf**	**22 12 57.5**	**-0.3**		
KMSI	**Cibinong**	**145.75**	**208**		PKP	**PKPdf**	**22 12 57.8**	**-0.2**		
SISI	**Saibi**	**145.84**	**163**		PKP	**PKPdf**	**22 12 58.2**	**0.0**		
POO	**Poona**	**146.00**	**104**	*eP*		**PKPbc**	**22 12 59.2**	**+0.1**		
PPBI	**Pangkal Pinang**	**146.16**	**175**		PKP	**PKPdf**	**22 12 57.9**	**-0.9**		
BKB	**Balikpapan**	**146.22**	**195**		PKP	**PKPbc**	**22 12 59.8**	**-0.1**		
MRSI	**Marisa**	**146.43**	**205**		PKP	**PKPdf**	**22 12 57.1**	**-2.1**		
PDSI	**Padang**	**146.57**	**165**		PKP	**PKPdf**	**22 12 59.4**	**-0.1**		
YAK	**Yakutsk**	**146.82**	**342**		PKPdf	**PKPdf**	**22 12 57.7**	**-0.6**		
YAK	**Yakutsk**	**146.82**	**342**		PKPbc	**PKPbc**	**22 13 00.2**	**0.0**		
	comp=Z,766nm,0.8s,baz=29,slow=1.7,SNR=162									
YAK					pPKPbc	pPKPbc	22 13 16.4	+0.6		
	comp=Z,1μm,1.0s,baz=25,slow=1.9,SNR=18									
YAK	**Yakutsk**	**146.82**	**342**	*e*	PKIKP	**PKPdf**	**22 12 58.2**	**-0.1**		
YAK				*e*			22 13 15.1			
YAK				*e*			22 16 23.2			
YAK					pmax	pmax				
	comp=Z,963nm,1.0s									
YAK					pmax	pmax				
	comp=E,101nm,1.0s									
YAK					pmax	pmax				
	comp=N,186nm,1.3s									
YAK					pmax	pmax				
	comp=Z,383nm,1.3s									
YAK					pmax	pmax				
	comp=N,219nm,1.6s									
YAK					pmax	pmax				
	comp=E,158nm,2.3s									
KUR	**Kuril'sk**	**146.84**	**305**	*ce*	PKIKP	**PKPdf**	**22 12 59.8**	**+0.9**		
PBSI	**Pulau Batu**	**146.85**	**161**		PKP	**PKPbc**	**22 13 01.2**	**-0.5**		
KBL	**Kabul**	**146.87**	**74**		PKPdf	**PKPdf**	**22 12 58.9**	**-0.7**		
KBL	**Kabul**	**146.87**	**74**		P	**PKPdf**	**22 13 00.2**	**+0.6**		
	SNR=41									
KBL	**Kabul**	**146.87**	**74**		PKIKP	**PKPdf**	**22 12 58.9**	**-0.7**		
MTKI	**Muara Teweh, K**	**146.92**	**191**		PKP	**PKPdf**	**22 12 59.9**	**-0.2**		
KBU	**Kabul Universi**	**146.94**	**74**		PKP	**PKPdf**	**22 12 59.7**	**0.0**		
CHM	**Chimkent**	**147.36**	**60**	*e*	PKP	**PKPdf**	**22 13 00.1**	**+0.1**		
CHM					LQ	LQ	23 11 25.5			
CHM					LR	LR	23 22 45.8			
	comp=E,2μm,23.7s									
CHM	**Chimkent**	**147.36**	**60**	*e*	PKIKP	**PKPdf**	**22 13 00.0**	**+0.1**		
TOLI2	**Tolitoli**	**147.41**	**203**		PKPdf	**PKPdf**	**22 12 59.7**	**-1.1**		
BRLS	**Borolday**	**147.45**	**59**	*e*	PKP	**PKPdf**	**22 13 00.1**	**0.0**		
BRLS				*e*	PP	**PP**	**22 16 28.8**	**-0.6**		
BRLS	**Borolday**	**147.45**	**59**	*e*	PKIKP	**PKPdf**	**22 13 00.0**	**0.0**		
BRLS				*e*			22 16 28.8			
DSRI	**Dabo**	**147.68**	**172**		PKP	**PKPdf**	**22 12 59.9**	**-1.4**		
BRZS	**Berezniki**	**147.69**	**45**	*e*	PKP	**PKPdf**	**22 13 00.7**	**+0.5**		
BRZS	**Berezniki**	**147.69**	**45**	*e*	PKIKP	**PKPdf**	**22 13 00.7**	**+0.5**		
IUG	**Iuzhnay**	**147.69**	**60**	*e*	PKP	**PKPdf**	**22 13 00.7**	**+0.1**		
IUG	**Iuzhnay**	**147.69**	**60**	*e*	PKIKP	**PKPdf**	**22 13 00.7**	**+0.1**		
SGSI	**Sangihe**	**147.87**	**213**		PKP	**PKPdf**	**22 13 01.3**	**-0.3**		
GSI	**Gunungsitoli**	**147.93**	**159**		PKP	**PKPdf**	**22 13 01.9**	**+0.2**		
KKAR	**Karatay Array**	**147.93**	**58**		PKPdf	**PKPdf**	**22 13 00.6**	**-0.2**		
KKAR	**Karatay Array**	**147.93**	**58**		PKIKP	**PKPdf**	**22 13 00.6**	**-0.2**		
MDRS	**Chennai**	**147.96**	**119**	*eP*		**PKPdf**	**22 12 59.5**	**-2.2**		
MNSI	**Mandailing Nat**	**148.01**	**163**		PKP	**PKPdf**	**22 13 00.9**	**-0.9**		
YUK	**Yuzh-Kuril'sk**	**148.46**	**304**	*e*	PKIKP	**PKPdf**	**22 13 02.4**	**+0.8**		
YUK				*e*			22 16 33.6			
YUK				*e*	PPP	PPP	22 19 57.4			
YUK				*e*	SS	SS	22 35 40.2	+0.2		
YUK					pmax	pmax				
	comp=Z,1μm,1.2s									
YUK					pmax	pmax				
	comp=E,258nm,1.1s									
UDPR	**Udaipur**	**148.47**	**94**	*eP*		**PKPdf**	**22 13 03.9**	**+1.6**		
TYV	**Tymovskoe**	**148.53**	**317**	*e*	PKIKP	**PKPbc**	**22 13 04.0**	**-1.2**		
TYV					pmax	pmax				
	comp=Z,4μm,3.4s									
TYV					pmax	pmax				
	comp=Z,332nm,1.1s									
SBSI	**Sibolga**	**148.55**	**161**		PKP	**PKPdf**	**22 13 01.1**	**-1.6**		
DZA	**Taraz**	**148.55**	**59**	*e*	PKP	**PKPdf**	**22 13 02.1**	**+0.2**		
DZA	**Taraz**	**148.55**	**59**	*e*	PKIKP	**PKPdf**	**22 13 02.1**	**+0.2**		
SNSI	**Sinabang, Aceh**	**148.56**	**156**		PKP	**PKPdf**	**22 13 02.2**	**-0.5**		
NKL	**Nikolayevsk**	**148.57**	**322**	*i*	PKIKP	**PKPdf**	**22 13 01.2**	**-0.2**		
NKL				*e*			22 16 32.9			
TPRI	**Tanjung Pinang**	**149.06**	**172**		PKP	**PKPdf**	**22 13 02.8**	**-0.7**		
BKNR	**BIKANER**	**149.18**	**88**	⇑	*e*P	**PKPdf**	**22 13 02.2**	**-1.1**		
HYBB	**Hyderabad (bro**	**149.24**	**111**	*e*	PKPdf	**PKPdf**	**22 13 03.4**	**-0.3**		
HYBB				*e*	PKPbc	**PKPbc**	**22 13 07.5**	**-0.5**		
HYBB				*e*	PKiKP	**PKiKP**	**22 13 09.3**	**+0.1**		
HYBB				*e*	pPKPbc	**pPKPbc**	**22 13 23.2**	**-0.5**		
HYBB				*e*	pPKiKP	**pPKiKP**	**22 13 25.1**	**+0.1**		
HYBB				*e*	SKSdf	**SKSdf**	**22 20 06.5**	**-1.3**		
HYBB				*e*	SKKSac	**SKKSac**	**22 23 25.8**	**-1.4**		
HYBB				*e*	SS	**SS**	**22 35 50.9**	**+1.5**		
UGL	**Uglegorsk**	**149.58**	**314**	*e*	PKHKP	PKPpre	22 13 05.1			
UGL					pmax	pmax				
	comp=Z,4μm,3.3s									
UGL					pmax	pmax				
	comp=Z,400nm,1.3s									
RPSI	**Rantau Prapat**	**149.65**	**160**			**PKPdf**	**22 13 04.4**	**-0.1**		
AKL	**Akola**	**149.65**	**104**	⇑	*e*P	**PKPdf**	**22 13 02.4**	**-1.9**		
PSI	**Prapat**	**149.75**	**160**		PKP	**PKPdf**	**22 13 04.4**	**-0.4**		
	comp=Z,101nm,0.8s,baz=199,slow=3.1,SNR=21									
PSI					PKPbc	**PKPbc**	**22 13 08.5**	**-1.0**		
	comp=Z,316nm,0.9s,baz=196,slow=4.5,SNR=33									
YSS	**Yuzhno-Sakhali**	**149.88**	**310**	*i*	PKIKP	**PKPdf**	**22 13 03.0**	**-0.8**		
YSS				*e*			22 16 43.2			
YSS				*e*			22 20 06.9			
YSS				*e*	SS	SS	22 35 56.0	+0.6		
YSS					pmax	pmax				
	comp=Z,400nm,0.9s									
KCSI	**Kotacane, Aceh**	**150.08**	**158**		PKP	**PKPdf**	**22 13 04.0**	**-1.2**		
SRGN	**SRI GANGA NAGA**	**150.16**	**84**	*eP*		**PKPdf**	**22 13 06.3**	**+1.5**		
JMP	**Maruseppu**	**150.24**	**304**		P	**PKPdf**	**22 13 05.0**	**+0.5**		
NIL	**Nilore**	**150.24**	**77**		PKPdf	**PKPdf**	**22 13 04.5**	**-0.3**		
NIL						**PKPbc**	**22 13 09.5**	**-0.5**		
NIL	**Nilore**	**150.24**	**77**		PKIKP	**PKPdf**	**22 13 04.5**	**-0.3**		
MLSI	**Meulaboh, Aceh**	**150.31**	**155**		PKP	**PKPdf**	**22 13 04.4**	**-1.1**		
EKS2	**Erkin-Say**	**150.37**	**59**		P	**PKPdf**	**22 13 05.7**	**+0.8**		
	SNR=32									
VJD	**Vijayawada**	**150.38**	**114**	*eP*		**PKPdf**	**22 13 05.6**	**+0.1**		
CBIJ	**Chichi jima**	**150.50**	**270**		P	**PKPbc**	**22 13 10.2**	**-0.5**		
NRDN	**NARMADA NAGAR**	**150.67**	**100**	*eP*		**PKPdf**	**22 13 06.1**	**+0.3**		
JKA	**Kamikawa-asahi**	**150.75**	**305**			**PKPdf**	**22 13 05.5**	**+0.2**		
JKA						**PKPbc**	**22 13 11.0**	**+0.2**		
ASAJ	**Asahikawa**	**150.75**	**305**		PKPbc	**PKiKP**	**22 13 11.8**	**+0.3**		
	comp=Z,335nm,0.9s,baz=98,slow=7.1,SNR=43									
ASAJ	**Asahikawa**	**150.75**	**305**		PKIKP	**PKPdf**	**22 13 05.5**	**+0.2**		
ASAJ	**Asahikawa**	**150.75**	**305**		P	**PKPdf**	**22 13 05.5**	**+0.2**		
ERM	**Erimo**	**150.75**	**300**		PKPbc	**PKiKP**	**22 13 11.9**	**+0.3**		
ERM	**Erimo**	**150.75**	**300**		PKIKP	**PKiKP**	**22 13 11.9**	**+0.3**		
ERM	**Erimo**	**150.75**	**300**		PKP	**PKPdf**	**22 13 06.0**	**+0.7**		
JEM	**Erimo**	**150.75**	**300**		P	**PKPdf**	**22 13 07.4**	**+2.1**		
USP	**Ospenovka**	**150.78**	**57**		P	**PKPdf**	**22 13 05.9**	**+0.5**		
	SNR=34									
SGDS	**Sogindy**	**150.83**	**57**	*e*	PKP	**PKPdf**	**22 13 05.7**	**+0.1**		
KURBB	**Kurchatov Arra**	**150.84**	**41**		PKP	**PKPdf**	**22 13 05.3**	**+0.1**		
	comp=Z,22nm,1.0s,baz=294,slow=2.4,SNR=78									
KURBB					PKPbc	**PKiKP**	**22 13 11.2**	**-0.2**		
	comp=Z,221nm,0.7s,baz=299,slow=3.0,SNR=162									
KURK	**Kurchatov**	**150.84**	**41**			**PKPdf**	**22 13 05.0**	**-0.2**		
KURK						**PKPbc**	**22 13 10.5**	**-0.3**		
KURK	**Kurchatov**	**150.84**	**41**		P	**PKPdf**	**22 13 06.8**	**+1.7**		
KURK	**Kurchatov**	**150.84**	**41**	*ce*	PKIKP	**PKPdf**	**22 13 04.7**	**-0.5**		
AAK	**Ala-Archa**	**150.89**	**58**		PKPdf	**PKPdf**	**22 13 06.1**	**+0.3**		
AAK					PKPbc	**PKiKP**	**22 13 12.1**	**+0.1**		
AAK	**Ala-Archa**	**150.89**	**58**		PKP	**PKPdf**	**22 13 06.2**	**+0.5**		
	comp=Z,92nm,0.8s,baz=224,slow=5.4,SNR=32									
AAK	**Ala-Archa**	**150.89**	**58**		P	**PKPbc**	**22 13 08.7**	**-2.8**		
AAK	**Ala-Archa**	**150.89**	**58**		P	**PKPdf**	**22 13 08.3**	**+2.5**		
	SNR=28									
AAK	**Ala-Archa**	**150.89**	**58**	*i*	PKPdf	**PKPdf**	**22 13 06.6**	**+0.8**		
	SNR=167									
AAK	**Ala-Archa**	**150.89**	**58**		PKIKP	**PKPdf**	**22 13 06.1**	**+0.3**		
AAK	**Ala-Archa**	**150.89**	**58**		PKP	**PKPdf**	**22 13 06.9**	**+1.1**		
AAK					PKP	**PKPbc**	**22 13 08.5**	**-3.0**		
UCH	**Uchtor**	**150.98**	**59**		P	**PKPdf**	**22 13 07.3**	**+1.0**		
	SNR=58									
CHMS	**Chumysh**	**151.01**	**58**		P	**PKPdf**	**22 13 06.7**	**+0.9**		
	SNR=6.3									
BHPL	**Bhopal**	**151.10**	**99**	*eP*		**PKPdf**	**22 13 07.4**	**+0.9**		
KBK	**Karagaybulak**	**151.22**	**58**		P	**PKPdf**	**22 13 07.0**	**+0.7**		
	SNR=19									
LHMI	**Lhok Sumawe**	**151.40**	**155**		PKP	**PKPdf**	**22 13 06.2**	**-1.0**		
JMU	**Jammu**	**151.50**	**79**	⇑	*e*P	**PKPdf**	**22 13 07.4**	**+0.6**		
GUNA	**GUNA**	**151.56**	**97**	*eP*		**PKPdf**	**22 13 07.4**	**+0.2**		
TKM2	**Tokmak 2**	**151.63**	**58**		P	**PKPdf**	**22 13 07.3**	**+0.4**		
	SNR=53									
CMBY	**CAMPBELL BAY**	**151.78**	**148**	*eP*		**PKPdf**	**22 13 07.1**	**-0.6**		
JEW	**Eniwo**	**151.84**	**302**		P	**PKPdf**	**22 13 07.9**	**+1.0**		
KUDL	**Kundal**	**151.95**	**89**	*eP*		**PKPdf**	**22 13 07.8**	**+0.2**		
ZALV	**Zalesovo Beam**	**152.03**	**31**		PKPdf	**PKPdf**	**22 13 05.9**	**-1.0**		
ZALV					PKPbc	**PKPbc**	**22 13 12.9**	**-0.5**		
ZALV	**Zalesovo Beam**	**152.03**	**31**		PKP	**PKPdf**	**22 13 06.5**	**-0.4**

CIT				*e*		22 21 21.0			
CIT				pmax	pmax				
	comp=Z,342nm,2.7s								
WMQ	**Urumqi**	**159.60**	**48**	PKP	**PKPdf**	**22 13 18.8**	**+1.4**		
WMQ				pPKP	pPKPdf	22 13 33.0	-0.3		
WMQ				PKPab	**PKPab**	**22 13 57.5**	**+1.6**		
WMQ				PP	**PP**	**22 17 37.8**	**+0.1**		
WMQ				AMB	AMB				
	comp=Z,620nm,11.7s								
CAL	**Calcutta**	**159.73**	**112**	*e*P	**PKPdf**	**22 13 17.5**	**-0.6**		
BNX	**BinXian**	**159.87**	**319**	⇓PKP	**PKPdf**	**22 13 16.5**	**-1.0**		
BNX				sPKP	**sPKPdf**	**22 13 33.0**	**-5.9**		
BNX				PP	**PP**	**22 17 38.5**	**-0.3**		
BNX				SS	SS	22 37 45.8	+2.6		
BNX				AMB	AMB				
	comp=Z,830nm,9.1s								
HILR	**Hailar Array B**	**160.39**	**338**	PKP	**PKPdf**	**22 13 18.1**	**+0.1**		
	comp=Z,14nm,0.8s,baz=108,slow=1.9,SNR=17								
HILR				pPKP	**pPKPdf**	**22 13 32.5**	**-1.3**		
	comp=Z,17nm,0.9s,baz=108,slow=3.3,SNR=5.2								
HILR				PKPab	**PKPab**	**22 14 00.1**	**+1.0**		
	comp=Z,59nm,1.1s,baz=92,slow=4.5,SNR=12								
HILR				pPKPab	**pPKPab**	**22 14 15.8**	**+1.4**		
	comp=Z,38nm,1.0s,baz=86,slow=4.9,SNR=3.4								
HILR				PP	**PP**	**22 17 42.0**	**+0.9**		
	comp=Z,10nm,0.9s,baz=104,slow=4.9,SNR=5.0								
HIA	**Hailar**	**160.65**	**338**	PKPdf	**PKPdf**	**22 13 17.9**	**-0.4**		
HIA				PKPab	**PKPab**	**22 13 59.8**	**-0.4**		
HIA	**Hailar**	**160.65**	**338**	PKIKP	**PKPdf**	**22 13 17.9**	**-0.4**		
HIA						22 13 59.8			
ZAK	**Zakamensk**	**160.99**	**11**	*e*PKIKP	**PKPdf**	**22 13 19.1**	**+0.4**		
ZAK				pmax	pmax				
	comp=Z,58nm,1.6s								
CN2	**Changchun**	**162.15**	**317**	PKP	**PKPdf**	**22 13 17.5**	**-2.5**		
CN2				PP	**PP**	**22 17 51.5**	**+0.4**		
CN2				SS	SS	22 38 07.1	-0.1		
CN2				AMB	AMB				
	comp=Z,1μm,5.0s								
BELO	**BELONIA**	**162.54**	**115**	*e*P	**PKPdf**	**22 13 20.2**	**-0.8**		
AGT	**Agartala**	**162.72**	**113**	*e*P	**PKPdf**	**22 13 19.4**	**-1.7**		
KSRS	**Korea Array**	**163.17**	**295**	PKP	**PKPdf**	**22 13 20.8**	**-0.4**		
	comp=Z,22nm,1.0s,baz=91,slow=0.6,SNR=59								
KSRS				pPKP	**pPKPdf**	**22 13 37.4**	**+0.4**		
	comp=Z,3.5nm,0.8s,baz=176,slow=0.6,SNR=9.2								
KSRS				PKPab	**PKPab**	**22 14 13.7**	**+2.0**		
	comp=Z,52nm,1.1s,baz=88,slow=4.4,SNR=22								
KSRS				pPKPab	**sPKPab**	**22 14 30.3**	**-2.4**		
	comp=Z,11nm,0.9s,baz=86,slow=4.3,SNR=3.0								
KSAR	**Wonju Array Be**	**163.20**	**295**	PKPdf	**PKPdf**	**22 13 20.1**	**-1.1**		
KSAR	**Wonju Array Be**	**163.20**	**295**	PKIKP	**PKPdf**	**22 13 20.1**	**-1.1**		
SONM	**Songino Array**	**163.87**	**5**	PKPdf	**PKPdf**	**22 13 20.2**	**-1.5**		
SONM					**PKPab**	**22 14 15.1**	**+0.6**		
SONM	**Songino Array**	**163.87**	**5**	PKP	**PKPdf**	**22 13 20.9**	**-0.8**		
	comp=Z,11nm,1.0s,baz=282,slow=0.8,SNR=32								
SONM				pPKP	**pPKPdf**	**22 13 38.0**	**+0.4**		
	comp=Z,9.5nm,1.0s,baz=20,slow=0.4,SNR=6.1								
SONM				PKPab	**PKPab**	**22 14 15.5**	**+1.1**		
	comp=Z,24nm,0.8s,baz=339,slow=4.6,SNR=11								
SONM				PP	**PP**	**22 17 59.5**	**0.0**		
	comp=Z,12nm,1.1s,baz=7.1,slow=4.6,SNR=5.4								
ULN	**Ulaanbaatar**	**163.89**	**4**	PKPdf	**PKPdf**	**22 13 20.7**	**-1.1**		
ULN	**Ulaanbaatar**	**163.89**	**4**	PKIKP	**PKPdf**	**22 13 20.7**	**-1.1**		
SHL	**Shillong**	**164.04**	**109**	P	**PKPdf**	**22 13 22.7**	**0.0**		
	SNR=46								
SHL	**Shillong**	**164.04**	**109**	*e*P	**PKPdf**	**22 13 22.3**	**-0.4**		
CM31	**Chiang Mai Arr**	**164.09**	**144**	P	**PKPdf**	**22 13 23.0**	**+0.4**		
	SNR=37								
CMAR	**Chiang Mai Arr**	**164.09**	**144**	PKPdf	**PKPdf**	**22 13 21.4**	**-1.3**		
CMAR				PKPab	**PKPab**	**22 14 14.9**	**-1.2**		
CMAR	**Chiang Mai Arr**	**164.09**	**144**	PKP	**PKPdf**	**22 13 22.7**	**+0.1**		
	comp=Z,50nm,1.0s,baz=250,slow=2.2,SNR=129								
CMAR				pPKP	**pPKPdf**	**22 13 39.6**	**+1.1**		
	comp=Z,15nm,0.9s,baz=248,slow=2.7,SNR=4.9								
CMAR				PKPab	**PKPab**	**22 14 16.6**	**+0.5**		
	comp=Z,46nm,1.1s,baz=228,slow=5.3,SNR=13								
CMAR				pPKPab	**pPKPab**	**22 14 33.1**	**+1.8**		
	comp=Z,29nm,1.0s,baz=227,slow=5.9,SNR=3.2								
CHTO	**Chiang Mai**	**164.40**	**144**	PKPdf	**PKPdf**	**22 13 21.8**	**-1.1**		
CHTO	**Chiang Mai**	**164.40**	**144**	P	**PKPdf**	**22 13 22.7**	**-0.2**		
CHTO	**Chiang Mai**	**164.40**	**144**	PKIKP	**PKPdf**	**22 13 21.8**	**-1.1**		
CHTO	**Chiang Mai**	**164.40**	**144**	PKP	**PKPdf**	**22 13 22.2**	**-0.7**		
CHTO				PKP	**PKPdf**	**22 13 22.8**	**-0.2**		
LSA	**Lhasa**	**164.80**	**93**	PKP	**PKPdf**	**22 13 19.2**	**-4.4**		
LSA	**Lhasa**	**164.80**	**93**	PKPdf	**PKPdf**	**22 13 24.5**	**+0.9**		
TAWA	**Tawang**	**164.82**	**102**	*e*P	**PKPdf**	**22 13 22.9**	**-0.6**		
TEZP	**TEZPUR**	**165.23**	**106**	*e*P	**PKPdf**	**22 13 23.3**	**-0.1**		
TEZP				IAmb	IAmb	22 13 24.6			
	comp=Z,81nm,1.0s								
IMP	**Imphal**	**165.32**	**114**	*e*P	**PKPdf**	**22 13 24.9**	**+1.3**		
KOHI	**KOHIMA**	**165.89**	**112**	*e*P	**PKPdf**	**22 13 24.7**	**+0.5**		
KOHI				IAmb	IAmb	22 13 26.5			
	comp=Z,181nm,1.0s								
ITAN	**ITANAGAR**	**166.19**	**106**	*e*P	**PKPdf**	**22 13 24.2**	**0.0**		
ITAN				IAmb	IAmb	22 13 26.2			
	comp=Z,489nm,1.6s								
ZIRO	**ZIRO**	**166.44**	**104**	*e*P	**PKPdf**	**22 13 25.1**	**+0.5**		
ZIRO				IAmb	IAmb	22 13 26.5			
	comp=Z,69nm,1.0s								
JORH	**JORHAT**	**166.46**	**108**	*e*P	**PKPdf**	**22 13 24.2**	**-0.2**		
JORH				IAmb	IAmb	22 13 26.7			
	comp=Z,632nm,1.6s								
XLT	**XiLinHaoTe**	**166.56**	**336**	*e*PKP	**PKPdf**	**22 13 24.7**	**+0.6**		
XLT				sPKP	sPKPdf	22 13 39.6	-5.9		
XLT				PKPab	**PKPab**	**22 14 27.8**	**+1.4**		
XLT				PP	**PP**	**22 18 13.8**	**0.0**		
XLT				SS	SS	22 38 51.1	-0.6		
DL2	**Dalian**	**167.25**	**307**	PKP	**PKPdf**	**22 13 24.0**	**-0.6**		
DL2				sPKP	**sPKPdf**	**22 13 40.2**	**-5.9**		
DL2				PKPab	**PKPab**	**22 14 30.9**	**+1.3**		
DL2				PP	**PP**	**22 18 16.6**	**-1.5**		
DL2				SS	SS	22 38 55.4	-4.7		
DL2				AMB	AMB				
	comp=Z,2μm,6.1s								
QIZ	**Qiongzhong**	**167.26**	**185**	PKP	**PKPdf**	**22 13 24.9**	**-0.3**		
QIZ				PP	**PP**	**22 18 18.3**	**+1.4**		
QIZ				SS	SS	22 39 01.6	+3.7		
QIZ				AMB	AMB				
	comp=Z,2μm,10.8s								
GOMU	**GeErMu**	**167.70**	**65**	PKP	**PKPdf**	**22 13 26.0**	**+0.5**		
GOMU				PP	**PP**	**22 18 22.0**	**+0.8**		
GOMU				SKKS		22 25 07.6			
LKP	**Lekhapani**	**168.00**	**108**	IAmb	IAmb	22 13 20.6			
	comp=Z,505nm,1.6s								
LKP				*e*P	**PKPdf**	**22 13 25.6**	**+0.1**		
TNCH	**TengChong**	**168.83**	**124**	PKP	**PKPdf**	**22 13 25.8**	**-0.6**		
TNCH				sPKP	sPKPdf	22 13 43.5	-4.5		
TNCH				PKPab	**PKPab**	**22 14 37.5**	**+0.3**		
TNCH				PP	**PP**	**22 18 27.9**	**+1.5**		
TNCH				LR	LR				
	comp=Z,8μm,23.0s								
TNCH				LR	LR				
	comp=Z,6μm,24.5s								
QZH	**Quanzhou**	**168.92**	**235**	PKP	**PKPdf**	**22 13 26.2**	**0.0**		
QZH				PKPab	**PKPab**	**22 14 40.2**	**+2.9**		
QZH				PP	**PP**	**22 18 25.8**	**-0.8**		
QZH				SKKS		22 25 11.1			
QZH				SS	**SS**	**22 39 17.8**	**+1.0**		
QZH				AMB	AMB				
	comp=Z,2μm,11.2s								
GTA	**Gaotai**	**169.53**	**41**	PKP	**PKPdf**	**22 13 25.9**	**-0.4**		
GTA				sPKP	sPKPdf	22 13 42.9	-5.0		
GTA				PKPab	**PKPab**	**22 14 40.7**	**+0.9**		
GTA				PP	**PP**	**22 18 27.0**	**-2.4**		
GTA				SKKS		22 25 10.6			
GTA				SS	**SS**	**22 39 19.5**	**-3.0**		
GTA				AMB	AMB				
	comp=Z,1μm,12.4s								
BJI	**Beijing**	**169.75**	**326**	PKP	**PKPdf**	**22 13 25.6**	**-0.6**		
BJI				pPKP	**pPKPdf**	**22 13 40.6**	**-1.4**		
BJI				PP	**PP**	**22 18 30.5**	**+0.4**		
BJI				AMB	AMB				
	comp=Z,850nm,8.1s								
HHC	**Hu-ho-hao-te**	**170.65**	**346**	⇑*i*PKP	**PKPdf**	**22 13 26.8**	**-0.1**		
HHC				PP	**PP**	**22 18 33.9**	**-0.4**		
HHC				SS	SS	22 39 28.8	-3.4		
HHC				AMB	AMB				
	comp=Z,1μm,11.4s								
BTO	**Baotou**	**171.12**	**353**	⇓*i*PKP	**PKPdf**	**22 13 28.1**	**+1.0**		
BTO				PP	**PP**	**22 18 35.8**	**-0.8**		
BTO				SS	SS	22 39 32.5	-4.2		
NJ2	**Nanjing**	**171.33**	**274**	*e*PKP	**PKPdf**	**22 13 26.3**	**-1.0**		
NJ2				sPKP	**sPKPdf**	**22 13 44.0**	**-4.8**		
NJ2				PKPab	**PKPab**	**22 14 49.2**	**+1.2**		
NJ2				PP	**PP**	**22 18 38.4**	**-0.9**		
NJ2				SKKS		22 25 15.7			
NJ2				AMB	AMB				
	comp=Z,2μm,9.0s								
NJ2				LR	LR				
	comp=Z,8μm,23.7s								
NJ2				LR	LR				
	comp=Z,12μm,24.6s								
NJ2				LR	LR				
	comp=Z,30μm,24.9s								
KMI	**Kunming**	**171.57**	**140**	⇑PKP	**PKPdf**	**22 13 27.6**	**-0.4**		
TIA	**Tai'an**	**171.70**	**304**	PKP	**PKPdf**	**22 13 27.2**	**-0.2**		
TIA				PP	**PP**	**22 18 38.8**	**-1.8**		
TIA				SKS	**SKSdf**	**22 20 25.3**	**-1.1**		
TIA				AMB	AMB				
	comp=Z,2μm,6.3s								
PZH	**PanZhiHua**	**171.99**	**129**	PKP	**PKPdf**	**22 13 28.5**	**+0.5**		
PZH				PP	**PP**	**22 18 39.0**	**-3.0**		
PZH				SKKS		22 25 25.1			
PZH				AMB	AMB				
	comp=Z,790nm,7.3s								
HNS	**HongShan**	**172.50**	**320**	⇑PKP	**PKPdf**	**22 13 27.4**	**-0.3**		
HNS				PKPab	**PKPab**	**22 14 54.7**	**+1.9**		
HNS				PP	**PP**	**22 18 41.9**	**-2.1**		
HNS				AMB	AMB				
	comp=Z,2μm,8.6s								
HNS				LR	LR				
	comp=Z,7μm,19.6s								
TIY	**Taiyuan**	**173.32**	**333**	PKP	**PKPdf**	**22 13 27.8**	**-0.3**		
TIY				PKPab	**PKPab**	**22 14 57.9**	**+1.4**		
TIY				PP	**PP**	**22 18 43.9**	**-3.8**		
TIY				AMB	AMB				
	comp=Z,2μm,8.9s								
TIY				LR	LR				
	comp=Z,5μm,19.6s								
TIY				LR	LR				
	comp=Z,6μm,18.2s								
TIY				LR	LR				
	comp=Z,8μm,16.3s								
GULI	**GuiLin**	**173.36**	**193**	⇓PKP	**PKPdf**	**22 13 29.2**	**+0.8**		
GULI				PP	**PP**	**22 18 44.8**	**-2.7**		
GULI				SS	SS	22 39 56.2	-2.2		
LZH	**Lanzhou**	**174.13**	**42**	⇑PKP	**PKPdf**	**22 13 29.0**	**+0.4**		
LZH				sPKP	sPKPdf	22 13 46.4	-3.7		
LZH				PP	**PP**	**22 18 51.6**	**-0.7**		
LZH				SKKS		22 25 33.0			
LZH				SS	**SS**	**22 40 11.6**	**+3.9**		
LZH				AMB	AMB				
	comp=Z,2μm,7.1s								
LZH				LR	LR				
	comp=Z,6μm,17.2s								
LZH				LR	LR				
	comp=Z,16μm,19.1s								
LZH				LR	LR				
	comp=Z,22μm,21.0s								
LZDM	**Lanzhou Array**	**174.14**	**43**	PKP	**PKPdf**	**22 13 28.9**	**0.0**		
	comp=Z,27nm,1.0s,baz=330,slow=2.1,SNR=25								
LZDM				pPKP	**pPKPdf**	**22 13 46.6**	**+2.0**		
	comp=Z,28nm,1.1s,baz=284,slow=6.0,SNR=3.7								
LZDM				PKPab	**PKPab**	**22 15 01.9**	**+1.3**		
	comp=Z,31nm,0.8s,baz=323,slow=3.7,SNR=10								
LZDM				pPKPab	**pPKPab**	**22 15 18.4**	**+2.5**		
	comp=Z,7.9nm,0.6s,baz=32,slow=8.7,SNR=2.9								
GYA	**Guiyang**	**174.42**	**161**	PKP	**PKPdf**	**22 13 29.3**	**+0.4**		
GYA				PKPab	**PKPab**	**22 15 01.3**	**-0.3**		
GYA				PP	**PP**	**22 18 51.6**	**-1.3**		
GYA				SS	SS	22 40 05.5	-3.5		
GYA				AMB	AMB				
	comp=Z,1μm,7.9s								
GYA				LR	LR				
	comp=Z,2μm,18.8s								
GYA				LR	LR				
	comp=Z,2μm,14.6s								
GYA				LR	LR				
	comp=Z,4μm,17.2s								
CNSH	**ChangSha**	**174.84**	**227**	PKP	**PKPdf**	**22 13 28.6**	**-0.2**		
CNSH				AMB	AMB				
	comp=Z,2μm,10.6s								
WHN	**Wuhan**	**174.97**	**257**	⇑PKP	**PKPdf**	**22 13 29.0**	**+0.2**		
WHN				PKPab	**PKPab**	**22 15 05.6**	**+1.5**		
WHN				PP	**PP**	**22 18 57.5**	**+0.4**		
WHN				SKKS		22 25 35.7			
CD2	**Chengdu**	**175.72**	**100**	PKP	**PKPdf**	**22 13 28.4**	**-0.7**		
CD2				pPKP	pPKPdf	22 13 43.3	-1.6		
CD2				PP	**PP**	**22 19 00.4**	**-0.4**		
CD2				SS	SS	22 40 23.2	-1.3		
CD2				AMB	AMB				
	comp=Z,3μm,10.3s								
LYN	**LuoYang**	**175.78**	**312**	⇑PKP	**PKPdf**	**22 13 28.4**	**-0.5**		
LYN				sPKP	sPKPdf	22 13 45.6	-4.8		
LYN				PKPab	**PKPab**	**22 15 09.2**	**+1.7**		
LYN				PP	**PP**	**22 18 59.3**	**-0.9**		
LYN				AMB	AMB				
	comp=Z,2μm,7.9s								
XAN	**Xi'an**	**177.74**	**354**	⇑PKP	**PKPdf**	**22 13 29.9**	**+0.5**		
XAN				PKPab	PKPab	22 15 17.1	+1.0		
XAN				PP	**PP**	**22 19 07.0**	**-1.4**		
XAN				SS	SS	22 40 34.8	-5.4		
XAN				LR	LR				
	comp=Z,12μm,20.0s								
XAN				LR	LR				
	comp=Z,14μm,21.6s								
XAN				LR	LR				
	comp=Z,18μm,22.7s								
ENH	**Enshi**	**178.34**	**206**	PKPdf	**PKPdf**	**22 13 29.1**	**-0.4**		

*IDC **04** 22:28:03.0±2.1, 36˚.22N×139˚.85E, h84km±18km, mb3.3/6, mbtmp3.7/8, Error ellipse: s-maj=32.0km s-min=10.5km az=63.0.*
*JMA **04** 22:28:02.9±0.1, 36˚.3N±0˚.3×140˚.0E±0˚.4, h73km, MV3.4/40, SW IBARAKI PREF*
JMA Felt I J1 at SW IBARAKI PREF
ISC 04 22:28:02.3±0.8, 36˚.29N±0˚.04×140˚.01E±0˚.05, h79km±6km, n27, σ0˚73/30, mb3.7/6, 11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.16**	**113**	*i*	P		**Pn**	**22 28 13.8**	**0.0**
JYT					S		**Sn**	**22 28 21.9**	**-0.4**
JAG	**Ashikaga**	**0.47**	**287**	⇓*i*	P		**Pn**	**22 28 15.8**	**+0.1**
JAG				⇓	S		**Sn**	**22 28 25.2**	**-0.3**
JKT	**Katashina**	**0.77**	**308**	⇓*i*	P		**Pn**	**22 28 19.0**	**+0.3**
JKT				⇓	S		**Sn**	**22 28 31.4**	**+0.4**
JRY	**Ryogami san**	**0.94**	**253**	⇓*i*	P		**Pn**	**22 28 21.2**	**+0.6**
JRY				⇓	S		**Sn**	**22 28 34.5**	**+0.3**
JFY	**Yanaizu**	**1.14**	**348**		P		**Pn**	**22 28 23.3**	**+0.3**
JUON	**Uonuma**	**1.19**	**320**	⇓*i*	P		**Pn**	**22 28 24.0**	**+0.3**
JOD2	**Odawara 2**	**1.27**	**216**	⇓*i*	P		**Pn**	**22 28 25.2**	**+0.5**
JOD2				⇓	S		**Sn**	**22 28 41.4**	**-0.1**
JFK	**Kawauchi**	**1.28**	**33**	*i*	P		**Pn**	**22 28 24.7**	**-0.1**
JFK					S		**Sn**	**22 28 41.1**	**-0.5**
JOTO	**OTAMA OYAMA**	**1.29**	**12**		P		**Pn**	**22 28 25.5**	**+0.6**
JOTO					S		**Sn**	**22 28 42.4**	**+0.5**
JYN	**Shimodate**	**1.43**	**237**	⇓*i*	P		**Pn**	**22 28 27.9**	**+1.2**
MJAR	**Matsushiro Arr**	**1.47**	**280**		P		**Pn**	**22 28 26.8**	**-0.4**
	52nm,0.4s,baz=89,slow=14,SNR=197								
MJAR					S		**Sn**	**22 28 43.6**	**-2.5**
	12nm,0.3s,baz=26,slow=34,SNR=4.1								
MAT	**Matsushiro**	**1.47**	**280**	*i*	P		**Pn**	**22 28 28.1**	**+0.9**
JNS	**Sasagawa**	**1.62**	**340**	⇓	P		**Pn**	**22 28 29.6**	**+0.4**
JHJ	**Hachijo jima 2**	**3.17**	**183**		P		**Pn**	**22 28 50.4**	**+0.4**
	353nm,1.0s,baz=330,slow=23,SNR=7.3								
JHJ					S		**Sn**	**22 29 25.9**	**-0.8**
	57nm,0.2s,baz=24,slow=10.0,SNR=1.3								
USRK	**Ussuriysk Ar.**	**9.99**	**325**		P		**Pn**	**22 30 23.5**	**+0.6**
	1.1nm,0.6s,baz=138,slow=14,SNR=2.9								
H11N2	**WAKE ISLAND Hy**	**28.77**	**118**		T		T	23 04 06.3	
	baz=313								
H11N1	**WAKE ISLAND Hy**	**28.78**	**118**		T		T	23 04 00.5	
	baz=313								
H11N3	**WAKE ISLAND Hy**	**28.79**	**118**		T		T	23 04 05.8	
	baz=313								
H11S1	**WAKE ISLAND Hy**	**29.44**	**120**		T		T	23 04 53.9	
	baz=314,slow=76								
H11S3	**WAKE ISLAND Hy**	**29.44**	**120**		T		T	23 04 53.4	
	baz=314,slow=76								
H11S2	**WAKE ISLAND Hy**	**29.45**	**120**		T		T	23 04 49.7	
	baz=314,slow=76								
ZALV	**Zalesovo Beam**	**41.59**	**313**		P		**P**	**22 35 42.3**	**+0.2**
	0.5nm,0.5s,baz=113,slow=6.7,SNR=3.6								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**43.56**	**303**		P		**P**	**22 35 58.4**	**+0.1**
	0.4nm,0.7s,baz=72,slow=9.0,SNR=2.3								
	0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**45.57**	**308**		P		**P**	**22 36 13.7**	**-0.5**
	0.6nm,0.5s,baz=86,slow=8.3,SNR=5.6								
	0.6nm,0.5s								
ILAR	**Eielson Array**	**50.72**	**32**		P		**P**	**22 36 54.4**	**+0.8**
	0.3nm,0.8s,baz=253,slow=6.7,SNR=4.1								
	0.3nm,0.8s								
WRA	**Warramunga Arr**	**56.19**	**186**		P		**P**	**22 37 33.6**	**-0.4**
	0.5nm,0.4s,baz=4.3,slow=7.5,SNR=5.4								
	0.5nm,0.4s								
FINES	**FINESS Array B**	**68.94**	**332**		P		**P**	**22 38 57.9**	**-0.6**
	1.9nm,0.9s,baz=34,slow=5.5,SNR=1.1								
	1.9nm,0.9s								

*BJI **04** 22:43:30.4, 18˚.55S×175˚.20W, h10km, mB6.4/76, mb5.6/68, Ms6.7/96, Ms7 6.6/93*
*IDC **04** 22:43:30.7±0.4, 18˚.46S×175˚.42W, h0km, mb5.3/25, mbtmp5.3/27, ML4.7/2, MS6.5/51, Error ellipse: s-maj=15.6km s-min=13.2km az=98.0*
*NEIC **04** 22:43:31.9, 18˚.37S×175˚.26W, h14km, Moment Tensor Solution. Duration: 10s6 Moment tensor: Scale 10^{19}Nm; M_{rr}0.02; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$0.63; $M_{r\theta}$0.32; $M_{\theta\phi}$-0.84; $M_{\phi r}$-0.29; Fault plane solution: $M_0$1.14000×10^{19} NP1: ϕ_s200.25000°, δ70.12000°, λ7.75000°. NP2:ϕ_s107.60000°, δ82.71000°, λ159.95000°. Principal axes: T 1.1884, Plg19.0000°, Azm62.0000°; N -0.0962, Plg69.0000°, Azm268.0000°; P -1.0922, Plg9.0000°, Azm155.0000°;*
*NEIC **04** 22:43:31.9, 18˚.57S×175˚.26W, h14km*
*ISC-PP **04** 22:43:32, 18˚.58S×175˚.27W, h3km, Mwppsm6.5, Moment Tensor Solution. s28 Moment tensor: Scale 10^{18}Nm; M_{rr}0.43±.15; $M_{\theta\theta}$0.01±.18; $M_{\phi\phi}$0.55±.15; $M_{r\theta}$-0.36±.14; $M_{\theta\phi}$0.32±.14; $M_{\phi r}$-0.17±.14; Fault plane solution: $M_0$8.04000×10^{18} NP1:ϕ_s37.90000°, δ35.50000°, λ11.00000°. NP2:ϕ_s298.90000°, δ83.60000°, λ125.00000°.*
*NEIC **04** 22:43:32.3±1.9, 18˚.58S±0˚.08×175˚.27W±0˚.07, h10km±1km, mb6.0/638, Ms_20 6.7/724, Mwb6.5/159, Mww6.6/61 Error ellipse: s-maj=13.9km s-min=11.4km az=181.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.37; $M_{\theta\theta}$-5.78; $M_{\phi\phi}$4.41; $M_{r\theta}$0.66; $M_{\theta\phi}$-5.44; $M_{\phi r}$0.65; Fault plane solution: $M_0$7.61000×10^{18} NP1: ϕ_s201.55000°, δ88.87000°, λ-6.20000°. NP2:ϕ_s291.67000°, δ83.81000°, λ-178.87000°. Principal axes: T 6.7934, Plg4.0000°, Azm247.0000°; N 1.4293, Plg84.0000°, Azm11.0000°; P -8.2226, Plg5.0000°, Azm156.0000°;*
*NEIC **04** 22:43:32, 18˚.58S×175˚.26W, h8km*
*MOS **04** 22:43:32.2±1.9, 18˚.38S×175˚.50W, h10km, mb6.0/48, MS6.5/40, Error ellipse: s-maj=7.7km s-min=7.1km az=101.6*
*NOU **04** 22:43:34.2, 18˚.64S×175˚.32W, h18km, ML6.3/149, Tonga Islands*
*BGR **04** 22:43:37.5, 18˚.33S×174˚.51W, h33km, Ms6.8*
*GCMT **04** 22:43:40.3±0.0, 18˚.38S×175˚.35W, h12km, MW6.6/164, Moment Tensor Solution. s163,c410; s164,c748; Duration: 5s1 Moment tensor: Scale 10^{19}Nm; M_{rr}0.07±.00; $M_{\theta\theta}$-0.67±.00; $M_{\phi\phi}$0.60±.00; $M_{r\theta}$0.02±.01; $M_{\theta\phi}$-0.95±.00; $M_{\phi r}$0.03±.01; Best double couple: $M_0$1.14900×10^{19} NP1:ϕ_s287.00000°, δ88.00000°, λ-180.00000°. NP2:ϕ_s197.00000°, δ90.00000°, λ-2.00000°. Principal axes: T 1.1150, Plg1.0000°, Azm242.0000°; N 0.0680, Plg88.0000°, Azm9.0000°; P -1.1830, Plg1.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 04 22:43:32.7±0.4, 18˚.64S±0˚.04×175˚.29W±0˚.04, h12km±1km, h13km:pP-P, n1867, σ2s01/1639, mb6.0/416, MS6.7/468, 98C-103D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.09**	**96**				**Pn**	**22 44 47.1**	**-1.7**
NIUE	**Niue**	**5.09**	**96**		P		**Pn**	**22 44 48.2**	**-0.6**
NIUE	**Niue**	**5.09**	**96**		P		**Pn**	**22 44 47.9**	**-1.0**
NIUE	**Niue**	**5.09**	**96**	⇓	P		**Pn**	**22 44 48.2**	**-0.6**
AFI	**Afiamalu**	**5.79**	**36**		Pn		Pn	22 44 52.8	-5.7
AFI	**Afiamalu**	**5.79**	**36**		P		**Pn**	**22 44 53.8**	**-4.7**
AFI	**Afiamalu**	**5.79**	**36**		P		Pn	22 44 52.8	-5.6
AFI	**Afiamalu**	**5.79**	**36**	⇑	P		Pn	22 44 52.8	-5.7
MSVF	**Nonsavu**	**6.40**	**277**		Pn		**Pn**	**22 45 06.7**	**-0.1**
MSVF	**Nonsavu**	**6.40**	**277**		P		**Pn**	**22 45 07.7**	**+0.9**
MSVF	**Nonsavu**	**6.40**	**277**

HIZ	Hauiti	21.58	201	P		P		22 48 22.7	+0.5
BKZ	Black Stump Fm	21.66	198	P		P		22 48 21.4	-1.7
BKZ	Black Stump Fm	21.66	198	P		P		22 48 21.4	-1.7
BKZ	Black Stump Fm	21.66	198	P		P		22 48 23.9	+0.8
VRZ	Vera Road	22.16	201	P		P		22 48 30.0	+1.5
PXZ	Pawanui	22.37	196	P		P		22 48 29.9	-0.7
KHEZ	Kahui Hut	22.57	202	P		P		22 48 35.0	+2.1
TARA	Tarawa	23.01	328	P		P		22 48 34.8	-2.8
TARA	Tarawa	23.01	328	IAms_20	IAms_20		22 55 03.8		
	comp=Z,338µm,21.0s								
TARA	Tarawa	23.01	328	P		P		22 48 35.7	-1.9
TARA	Tarawa	23.01	328	⇓P		P		22 48 35.7	-1.9
BFZ	Birch Farm	23.14	197	P		P		22 48 38.2	-0.5
BFZ				IAms_20	IAms_20		22 58 02.2		
	comp=Z,195µm,19.0s								
BFZ	Birch Farm	23.14	197	P		P		22 48 38.5	-0.3
BFZ	Birch Farm	23.14	197	P		P		22 48 39.5	+0.8
MRZ	Mangatainoka R	23.31	198	P		P		22 48 40.1	-0.3
MRZ	Mangatainoka R	23.31	198	P		P		22 48 41.0	+0.5
MSWZ	Moikau Station	24.10	198	P		P		22 48 47.6	-0.5
SNZO	South Karori	24.16	199	P		P		22 48 48.4	-0.3
SNZO				IAmb	IAmb		22 49 03.5		
	comp=Z,379nm,1.1s								
SNZO	South Karori	24.16	199	P		P		22 48 49.5	+0.8
SNZO	South Karori	24.16	199	⇓P		P		22 48 50.1	+1.5
PLWZ	Palliser	24.24	197	P		P		22 48 49.7	+0.2
PPT	Papeete	24.46	92	P		P		22 48 52.3	+0.7
	comp=Z,477nm,1.1s,baz=337,slow=3.1,SNR=12								
PPT				LR		LR	22 55 58.5		
	comp=Z,113µm,20.0s,baz=262,slow=30								
	comp=Z,477nm,1.1s								
QRZ	Quartz Range	24.46	203	P		P		22 48 50.6	-0.9
QRZ				IAmb	IAmb		22 49 05.7		
	comp=Z,402nm,1.0s								
QRZ	Quartz Range	24.46	203	P		P		22 48 51.4	0.0
PPTF	Pamatai, Papee	24.46	92	P		P		22 48 51.6	-0.1
PPTF				IAmb	IAmb		22 49 00.0		
	comp=Z,621nm,1.1s								
PPTF	Pamatai, Papee	24.46	92	P		P		22 48 53.7	+1.9
PPTF	Pamatai, Papee	24.46	92	⇓P		P		22 48 54.2	+2.4
NNZ	Nelson	24.50	201	P		P		22 48 52.0	+0.2
CTZ	Chatham Island	25.04	182	P		P		22 48 57.7	+1.1
THZ	Tophouse	25.15	201	P		P		22 48 57.0	-0.8
DSZ	Denniston Nort	25.53	203	P		P		22 49 01.2	+0.1
KHZ	Kahutara	25.53	199	IAmb	IAmb		22 49 09.9		
	comp=Z,752nm,1.9s								
KHZ				IAMs_20	IAMs_20		22 59 33.7		
	comp=Z,172µm,21.0s								
KHZ	Kahutara	25.53	199	P		P		22 49 00.7	-0.3
KHZ	Kahutara	25.53	199	⇓P		P		22 48 59.4	-1.6
HNR	Honiara	25.68	287	P		P		22 49 02.5	-0.2
HNR				IAmb	IAmb		22 49 16.5		
	comp=Z,384nm,0.8s								
HNR	Honiara	25.68	287	P		P		22 49 03.2	+0.5
HNR	Honiara	25.68	287	P		P		22 49 02.5	-0.2
HNR				pmax	pmax				
	comp=Z,384nm,0.9s								
HNR				MLR	MLR				
	comp=Z,86µm,22.0s								
SAVO	Savo Central	25.92	288	P		P		22 49 06.3	+1.4
GVZ	Greta Valley S	26.19	200	P		P		22 49 06.1	-1.0
LTZ	Lake Taylor	26.27	201	P		P		22 49 08.9	+1.0
LHI	Lord Howe Isla	26.46	236	P		P		22 49 10.0	+0.3
INZ	Inchbonnie	26.51	202	IAmb	IAmb		22 49 20.3		
	comp=Z,353nm,0.9s								
OXZ	Oxford	26.84	201	IAmb	IAmb		22 49 23.7		
	comp=Z,221nm,0.8s								
MQZ	McQueen's Vall	26.97	200	P		P		22 49 15.2	+1.1
XMAS	Kiritimati	27.03	42	P		P		22 49 13.0	-1.9
XMAS	Kiritimati	27.03	42	IAMs_20	IAMs_20		22 56 58.1		
	comp=Z,154µm,21.0s								
XMAS	Kiritimati	27.03	42	P		P		22 49 14.7	-0.2
WVZ	Waitaha Valley	27.07	203	P		P		22 49 15.9	+0.9
RPZ	Rata Peaks	27.52	202	P		P		22 49 19.2	+0.1
RPZ				IAMs_20	IAMs_20		23 01 37.3		
	comp=Z,155µm,20.0s								
RPZ	Rata Peaks	27.52	202	P		P		22 49 20.6	+1.5
FOZ	Fox Glacier	27.81	204	IAMs_20	IAMs_20		22 59 58.4		
	comp=Z,201µm,19.0s								
FOZ	Fox Glacier	27.81	204	P		P		22 49 19.3	-2.4
TMZ	Timaru	28.12	201	P		P		22 49 22.6	-1.8
LBZ	Lake Benmore	28.41	202	P		P		22 49 26.9	-0.1
LBZ				IAMs_20	IAMs_20		23 00 07.2		
	comp=Z,147µm,20.0s								
JCZ	Jackson Bay	28.67	204	P		P		22 49 30.7	+1.3
ODZ	Otahua Downs	28.82	201	⇑P		P		22 49 31.5	+0.9
WKZ	Wanaka	29.21	203	P		P		22 49 34.9	+0.7
WKZ				IAMs_20	IAMs_20		23 01 02.6		
	comp=Z,195µm,21.0s								
MLZ	Mavora Lakes	30.01	204	IAMs_20	IAMs_20		23 01 25.6		
	comp=Z,136µm,22.0s								
MLZ	Mavora Lakes	30.01	204	P		P		22 49 40.2	-1.1
GC1S	Gold Coast 1 S	30.09	246	P		P		22 49 43.7	+1.6
AUWSH	Wavell State H	30.36	247	P		P		22 49 45.3	+0.8
DCZ	Deep Cove	30.47	205	P		P		22 49 46.0	+0.8
WHZ	Wether Hill Ro	30.52	203	P		P		22 49 45.6	-0.1
WHZ				IAmb	IAmb		22 49 58.0		
	comp=Z,276nm,1.2s								
WHZ	Wether Hill Ro	30.52	203	P		P		22 49 46.4	+0.7
SYZ	Scrubby Hill	30.64	201	P		P		22 49 48.3	+1.6
APZ	The Paps	31.30	202	P		P		22 49 54.5	+1.9
TW1H	Toowoomba 1 Ha	31.32	248	P		P		22 49 55.1	+2.1
GD1S	Gladstone Soft	31.64	255	P		P		22 49 56.4	+0.6
EIDS	Eidsvold	31.83	252	P		P		22 49 56.5	-1.0
EIDS				IAmb	IAmb		22 50 04.5		
	comp=Z,226nm,1.4s								
EIDS	Eidsvold	31.83	252	P		P		22 49 57.5	0.0
EIDS	Eidsvold	31.83	252	⇑P		P		22 49 57.0	-0.6
ARMA	Armidale	32.18	242	P		P		22 50 01.2	+0.5
ARMA	Armidale	32.18	242	P		P		22 50 02.2	+1.5
ARMA	Armidale	32.18	242	⇑P		P		22 50 01.9	+1.1
AUPHS	Peel High Scho	32.97	241	P		P		22 50 08.2	+0.8
AUKHS	Kincumber High	33.22	237	P		P		22 50 11.2	+1.7
MGCD	Mangrove Creek	33.36	238	P		P		22 50 11.9	+1.1
SYDH	Sydney Hard Ro	33.81	237	P		P		22 50 16.4	+1.6
RMQ	Roma	34.02	250	P		P		22 50 18.9	+2.2
RABL	Rabaul	34.89	290	P		P		22 50 22.1	-2.2
RABL				IAmb	IAmb		22 50 24.0		
	comp=Z,335nm,1.4s								
AULRC	Lightning Ridg	35.09	245	P		P		22 50 26.3	+0.4
CNB	Canberra Magne	35.38	235	P		P		22 50 29.9	+1.5
AUDAR	Daramalan Coll	35.53	235	P		P		22 50 31.7	+2.0
AUSIS	Research Schoo	35.57	235	P		P		22 50 31.3	+1.3
AUMHS	Melrose High S	35.61	235	P		P		22 50 31.6	+1.3
AUMTS	Mt Stromlo	35.66	235	P		P		22 50 30.2	-0.6
CAN	Canberra	35.66	235	IAmb	IAmb		22 50 42.5		
	comp=Z,530nm,1.7s								
CAN				IAMs_20	IAMs_20		23 02 13.3		
	comp=Z,132µm,20.0s								
CAN	Canberra	35.66	235	P		P		22 50 30.3	-0.5
CAN	Canberra	35.66	235	P		P		22 50 30.6	-0.2
CAN				pmax	pmax				
	comp=Z,153nm,1.2s								
CAN	Canberra	35.66	235	⇓P		P		22 50 30.8	-0.1
TV1H	Townsville Har	35.82	263	P		P		22 50 30.9	-1.4
PATS	Pohnpei	36.32	312	IAMs_20	IAMs_20		23 01 53.0		
	comp=Z,171µm,20.0s								
AUSMG	Snowy Mountain	36.32	233	P		P		22 50 37.7	+1.2
CMSA	Cobar Meteorol	37.40	242	P		P		22 50 45.0	-0.7
PMG	Port Moresby	37.50	279	P		P		22 50 45.0	-1.6
PMG				IAmb	IAmb		22 50 50.0		
	comp=Z,327nm,1.2s								
PMG	Port Moresby	37.50	279	IAMs_20	IAMs_20		23 04 41.4		
	comp=Z,129µm,18.0s								
PMG	Port Moresby	37.50	279	LR	LR		23 04 17.4		
	comp=Z,87µm,18.2s,baz=98,slow=33								
PMG	Port Moresby	37.50	279	P		P		22 50 46.1	-0.6
PMG	Port Moresby	37.50	279	P		P		22 50 46.0	-0.6
PMG	Port Moresby	37.50	279	*ce*P		P		22 50 45.7	-0.9
PMG				pmax	pmax				
	comp=Z,314nm,1.3s								
PMG	Port Moresby	37.50	279	⇑P		P		22 50 45.8	-0.9
QLP	Quilpie	38.07	251	P		P		22 50 51.1	-0.2
QLP	Quilpie	38.07	251	⇑P		P		22 50 50.6	-0.8
MTSU	Mount Surprise	38.28	264	P		P		22 50 51.4	-1.8
TOO	Toolangi	39.05	233	⇓P		P		22 50 58.8	-0.7
TOO	Toolangi	39.05	233	⇓P		P		22 50 58.9	-0.7
CORO	Coronation Par	39.24	226	P		P		22 51 01.9	+0.9
MOO	Moorlands	39.62	225	P		P		22 51 06.1	+1.9
TAU	Tasmania Unive	39.73	224	P		P		22 51 05.3	+0.2
TAU	Tasmania Unive	39.73	224	IAMs_20	IAMs_20		23 03 48.0		
	comp=Z,118µm,22.0s								
TAU	Tasmania Unive	39.73	224	P		P		22 51 05.9	+0.8
TAU	Tasmania Unive	39.73	224	P		P		22 51 05.3	+0.2
TAU				pmax	pmax				
	comp=Z,204nm,1.5s								
AUBRN	Burnie High Sc	39.97	228	P		P		22 51 07.5	+0.5
COEN	Coen	40.08	270	P		P		22 51 06.0	-2.2
COEN	Coen	40.08	270	P		P		22 51 06.9	-1.4
COEN	Coen	40.08	270	⇑P		P		22 51 06.2	-2.0
MANU	Manus Island	40.13	290	P		P		22 51 08.1	-0.6
MANU				IAmb	IAmb		22 51 20.1		
	comp=Z,588nm,1.2s								
GEXS	Deakin Univers	40.15	232	P		P		22 51 10.1	+1.5
BRAT	Ballarat	40.23	233	P		P		22 51 09.8	+0.6
AUMTC	Mt Clear Colle	40.29	233	P		P		22 51 11.2	+1.5
STKA	Stephens Creek	40.90	243	P		P		22 51 13.5	-1.4
STKA	Stephens Creek	40.90	243	P		P		22 51 14.6	-0.4
	comp=Z,78nm,0.9s,baz=92,slow=10,SNR=5.7								
STKA				LR	LR		23 06 51.8		
	comp=Z,104µm,18.5s,baz=90,slow=34								
	comp=Z,78nm,0.9s								
STKA	Stephens Creek	40.90	243	P		P		22 51 14.5	-0.4
STKA	Stephens Creek	40.90	243	*ce*P		P		22 51 14.9	0.0
H11S2	WAKE ISLAND Hy	40.92	333	T		T		23 36 03.4	
	baz=149,slow=75								
H11S3	WAKE ISLAND Hy	40.93	333	T		T		23 35 56.5	
	baz=149,slow=75								
H11S1	WAKE ISLAND Hy	40.94	333	T		T		23 36 21.5	
	baz=149,slow=75								
INKA	Innaminka	41.24	249	P		P		22 51 17.2	-0.5
INKA				IAmb	IAmb		22 51 25.8		
	comp=Z,486nm,1.7s								
WAKE	Wake Island	41.65	334	P		P		22 51 20.0	-1.1
WAKE	Wake Island	41.65	334	IAMs_20	IAMs_20		23 04 41.8		
	comp=Z,106µm,20.0s								
WAKE	Wake Island	41.65	334	P		P		22 51 21.5	+0.5
WAKE	Wake Island	41.65	334	⇓P		P		22 51 19.9	-1.1
H11N3	WAKE ISLAND Hy	41.93	334	T		T		23 36 49.0	
	baz=157,slow=74								
H11N1	WAKE ISLAND Hy	41.94	334	T		T		23 36 40.8	
	baz=157								
H11N2	WAKE ISLAND Hy	41.95	334	T		T		23 36 47.3	
	baz=157,slow=74								
QIS	Mount Isa	42.44	260	P		P		22 51 25.9	-1.8
MWH	Mokuaweoweo	42.53	28	P		P		22 51 27.2	-1.7
HUH	Hualalai	42.60	28	P		P		22 51 27.3	-1.9
PUH	Pauahi	42.61	29	P		P		22 51 27.8	-1.2
PUH				IAmb	IAmb		22 51 45.7		
	comp=Z,391nm,1.3s								
UWE	Uwekahuna	42.61	28	IAmb	IAmb		22 51 41.3		
	comp=Z,376nm,1.3s								
BYL	Byron's Ledge	42.62	29	IAmb	IAmb		22 51 31.1		
	comp=Z,515nm,1.6s								
HATHI	Halema'uma'u T	42.63	29	IAmb	IAmb		22 51 32.0		
	comp=Z,508nm,1.5s								
KNHH	Kane Nui o Ham	42.63	29	P		P		22 51 27.6	-1.6
MLH	Mauna Loa	42.63	28	IAmb	IAmb		22 51 31.6		
	comp=Z,465nm,1.5s								
STCH	Steam Cracks	42.66	29	IAmb	IAmb		22 51 36.4		
	comp=Z,208nm,0.9s								
HMH	Humu'ula Sheep	42.69	28	P		P		22 51 28.7	-1.2
JOKA	Jonika Flow	42.76	29	IAmb	IAmb		22 51 42.5		
	comp=Z,290nm,1.1s								
POHA	Pohakuloa	42.80	28	P		P		22 51 32.3	+1.6
HPAH	Hawaii Prepara	42.97	28	P		P		22 51 29.8	-2.1
HPAH				IAmb	IAmb		22 51 43.6		
	comp=Z,276nm,1.0s								
HON	Honolulu	43.18	24	P		P		22 51 33.3	-0.1
HON	Honolulu	43.18	24	P		P		22 51 33.3	-0.1
HON				pmax	pmax				
	comp=Z,1µm,1.8s								
KIP	Kipapa	43.26	24	P		P		22 51 32.9	-1.3
KIP	Kipapa	43.26	24	P		P		22 51 34.8	+0.7
KIP	Kipapa	43.26	24	P		P		22 51 34.9	+0.8
KIP	Kipapa	43.26	24	⇓*e*P		P		22 51 34.2	+0.1
KIP				pmax	pmax				
	comp=Z,702nm,1.7s								
AUMBR	Murray Bridge	43.33	238	P		P		22 51 36.1	+1.4
HTT	Hallett	43.36	241	P		P		22 51 34.3	-0.7
HTT	Hallett	43.36	241	P		P		22 51 35.3	+0.3
HTT	Hallett	43.36	241	⇑P		P		22 51 34.1	-0.9
HLK	Haleakala	43.37	26	IAmb	IAmb		22 51 58.7		
	comp=Z,340nm,1.2s								
PTPS	Port Pirie	44.09	241	P		P		22 51 42.6	+1.8
WHYH	Whyalla	44.42	242	P		P		22 51 43.7	+0.2
BBOO	Buckleboo	45.67	242	P		P		22 51 52.4	-1.0
JAY	Jayapura	45.96	285	LR	LR		23 09 42.0		
	comp=Z,56µm,21.7s,baz=112,slow=34								
JAY	Jayapura	45.96	285	P		P		22 51 55.9	-0.1
MIDW	Midway	46.62	357	P		P		22 51 59.0	-1.8
MIDW	Midway	46.62	357	P		P		22 52 01.4	+0.6
WB1	Warramunga Ar.	47.41	260	P		P		22 52 05.2	-2.1
WRAB	Tennant Creek	47.41	260	P		P		22 52 04.6	-2.6
WRAB	Tennant Creek	47.41	260	P		P		22 52 04.7	-2.6
WRAB	Tennant Creek	47.41	260	*ce*P		P		22 52 04.8	-2.5
WRAB				pmax	pmax				
	comp=Z,291nm,3.4s								
WRA	Warramunga Arr	47.42	260	P		P		22 52 03.9	-3.5
WRA	Warramunga Arr	47.42	260	P		P		22 52 05.2	-2.1
	comp=Z,18nm,0.8s,baz=95,slow=6.4,SNR=62								
WRA				PcP		PcP		22 53 38.3	+0.4
	comp=Z,17nm,1.1s,baz=86,slow=3.6,SNR=1.7								
WRA				LR	LR		23 10 45.2		
	comp=Z,171µm,20.5s,baz=97,slow=34								
	comp=Z,18nm,0.8s								
ASAR	Alice Springs	47.45	255	P		P		22 52 05.5	-2.1
ASAR	Alice Springs	47.45	255	P		P		22 52 05.7	-1.9
	comp=Z,128nm,0.8s,baz=87,slow=8.2,SNR=348								
ASAR				PcP		PcP		22 53 37.6	-0.5
	comp=Z,23nm,1.0s,baz=91,slow=4.0,SNR=1.1								
	comp=Z,128nm,0.8s								
SMPI	Sarmi	47.99	285	P		P		22 52 13.9	+2.0
	comp=Z,8µmcomp=Z,189nm,1.9s								
GUMO	Guam	50.68	306	P		P		22 52 31.0	-1.3
GUMO	Guam	50.68	306	LR	LR		23 10 59.9		
	comp=Z,46µm,21.1s,baz=130,slow=33								
GUMO	Guam	50.68	306	P		P		22 52 33.1	+0.8
GUMO	Guam	50.68	306	P		P		22 52 31.0	-1.3
GUMO				pmax	pmax				
	comp=Z,793nm,1.3s								
GUMO				MLR	MLR				
	comp=Z,45µm,20.0s								
BAKI	Biak	50.70	284	P		P		22 52 30.5	-2.0
	comp=Z,9µmcomp=Z,176nm,0.9s								
DRS	Darwin Rock St	52.06	269	P		P		22 52 41.7	-1.0
RKPI	Ransiki, Papua	52.35	283	P		P		22 52 47.5	+2.5
	comp=Z,8µmcomp=Z,177nm,1.0s								
FORT	Forrest	52.38	245	P		P		22 52 43.2	-1.8
SAUI	Saumlaki	52.87	274	P		P		22 52 50.7	+1.9
FAKI	Fak Fak	53.63	280	P		P		22 52 52.5	-1.8
FAKI				IAmb	IAmb		22 53 28.6		
	comp=Z,292nm,1.7s								
FAKI				IAMs_20	IAMs_20		23 14 23.8		
	comp=Z,51µm,20.0s								
FAKI	Fak Fak	53.63	280	P		P		22 52 55.1	+0.7
FAKI	Fak Fak	53.63	280	P		P		22 52 55.1	+0.7
	comp=Z,7µmcomp=Z,66nm,1.4s								
BNDI	Bandanaira	55.27	278	P		P		22 53 07.4	+1.1
BNDI	Bandanaira	55.27	278	P		P		22 53 06.2	-0.1
SWI	Sorong	55.30	282	P		P		22 53 05.3	-1.2
	comp=Z,7µmcomp=Z,210nm,1.1s								
FITZ	Fitzroy Crossi	55.83	260	LR	LR		23 16 33.7		
	comp=Z,138µm,18.3s,baz=99,slow=36								
MSAI	Masohi	56.59	278	P		P		22 53 18.0	+2.3
	comp=Z,5µmcomp=Z,207nm,1.2s								
AAI	Ambon	57.16	278	P		P		22 53 20.1	+0.3
	comp=Z,7µmcomp=Z,228nm,1.2s								
NLAI	Namlea	58.34	278	P		P		22 53 26.2	-1.9
	comp=Z,6µmcomp=Z,159nm,1.9s								
SOEI	Soe	59.04	270	P		P		22 53 31.7	-1.4
SOEI	Soe	59.04	270	IAMs_20	IAMs_20		23 18 30.2		
	comp=Z,58µm,20.0s								
SOEI	Soe	59.04	270	P		P		22 53 33.3	+0.2
SOEI	Soe	59.04	270	P		P		22 53 33.7	+0.6
SOEI	Soe	59.04	270	⇑P		P		22 53 33.1	0.0
BATI	Baumata	59.49	269	LR	LR		23 20 57.6		
	comp=Z,79µm,18.0s,baz=126,slow=38								
BATI	Baumata	59.49	269	P		P		22 53 38.1	+2.0
	comp=Z,10µmcomp=Z,207nm,3.0s								
TNTI	Ternate	59.52	282	P		P		22 53 35.4	-0.8
TNTI	Ternate	59.52	282	P		P		22 53 38.9	+2.6
	comp=Z,5µmcomp=Z,152nm,2.1s								
SANI	Sanana	59.79	279	P		P		22 53 36.0	-2.2
SANI	Sanana	59.79	279	P		P		22 53 36.7	-1.5
SANI	Sanana	59.79	279	P		P		22 53 37.5	-0.7
	comp=Z,5µmcomp=Z,93nm,1.1s								
SANI	Sanana	59.79	279	⇑P		P		22 53 36.4	-1.8
SBA	Scott Base	59.90	184	P		P		22 53 38.8	+0.9
SBA	Scott Base	59.90	184	P		P		22 53 38.8	+0.9
SBA				pmax	pmax				
	comp=Z,72nm,1.0s								
SBA				MLR	MLR				
	comp=Z,30µm,18.0s								
VNDA	Vanda	59.99	186	P		P		22 53 39.3	+0.8
VNDA	Vanda	59.99	186	P		P		22 53 40.2	+1.6
	comp=Z,22nm,1.1s,baz=8.9,slow=6.9,SNR=45								
VNDA				LR	LR		23 14 39.2		
VNDA				PKPPKP	P'P'df		23 22 60.0	-8.8	
	comp=Z,0.8nm,1.1s,baz=299,slow=4.1,SNR=3.8								
	comp=Z,22nm,1.1s								
PSA00	Pilbara Seismi	60.59	255	P		P		22 53 41.9	-1.7
PSA00	Pilbara Seismi	60.59	255	P		P		22 53 42.0	-1.6
RPN	Rapa Nui	60.76	111	LR	LR		23 13 01.3		
	comp=Z,24µm,21.1s,baz=267,slow=29								
MBWA	Marble Bar	60.77	256	P		P		22 53 42.5	-2.3
MBWA	Marble Bar	60.77	256	P		P		22 53 43.2	-1.6
MBWA				S		S		23 01 59.0	-3.1
MBWA	Marble Bar	60.77	256	P		P		22 53 43.5	-1.3
MBWA	Marble Bar	60.77	256	⇑P		P		22 53 43.2	-1.6
AUALB	St Joseph's Co	60.80	240	P		P		22 53 46.8	+2.0
MEEK	Meekatharra	60.95	249	P		P		22 53 44.5	-1.6
KLBR	Kellerberrin	61.16	244	P		P		22 53 46.3	-1.1
MMRI	Maumere	61.27	270	P		P		22 53 46.1	-2.2
MMRI				IAmb	IAmb		22 54 18.4		
	comp=Z,206nm,1.1s								
MMRI	Maumere	61.27	270	P		P		22 53 47.8	-0.5
MMRI	Maumere	61.27	270	P		P		22 53 48.3	0.0
	comp=Z,10µmcomp=Z,229nm,1.9s								
JCJ	Chichijima	61.38	317	LR	LR		23 16 11.9		
	comp=Z,28µm,20.0s,baz=148,slow=32								
JCJ	Chichijima	61.38	317	P		P		22 53 50.2	+1.5
NWAO	Narrogin (SRO)	61.49	242	P		P		22 53 48.8	-0.7
NWAO	Narrogin (SRO)	61.49	242	LR	LR		23 19 20.6		
	comp=Z,50µm,18.5s,baz=82,slow=35								
NWAO	Narrogin (SRO)	61.49	242	P		P		22 53 49.0	-0.6
NWAO				S		S		23 02 08.4	-2.6
NWAO	Narrogin (SRO)	61.49	242	P		P		22 53 49.5	0.0
NWAO	Narrogin (SRO)	61.49	242	P		P		22 53 48.8	-0.7
NWAO				pmax	pmax				
	comp=Z,264nm,1.3s								
EDFI	Ende, Flores	61.76	270	P		P		22 53 50.1	-1.6
BLDU	Balidu	62.15	245	P		P		22 53 52.8	-1.2
KDI	Kendari	62.32	275	P		P		22 53 54.1	-1.3
BASI	Baing, Sumba	62.41	268	P		P		22 53 56.4	+0.4
MUN	Mundaring	62.44	243	P		P		22 53 56.1	+0.2
AUMAZ	Mazenod Senior	62.58	243	P		P		22 53 56.6	-0.3
KMSI	Cibinong	62.59	281	P		P		22 53 59.0	+1.8
	comp=Z,5µmcomp=Z,222nm,0.9s								
AUHAR	St Anne's Scho	62.60	242	P		P		22 53 59.3	+2.3
MTKN	Mount Kenneth	62.81	243	P		P		22 53 59.0	+0.6
WSI	Waingapu	62.82	269	P		P		22 54 01.3	+2.6
MORW	Morawa	62.91	246	P		P		22 53 58.5	-0.6
LUWI	Luwuk	63.15	279	P		P		22 53 58.4	-2.5
LUWI	Luwuk	63.15	279	P		P		22 54 01.1	+0.2
LUWI	Luwuk	63.15	279	P		P		22 54 00.5	-0.4
	comp=Z,9µmcomp=Z,273nm,2.4s								
LUWI	Luwuk	63.15	279	⇑P		P		22 53 59.2	-1.7
DAV	Davao City (W)	63.64	288	P		P		22 54 02.3	-1.9
BSSI	Bau Bau, Buton	63.66	272	P		P		22 54 07.4	+3.1
	comp=Z,4µmcomp=Z,107nm,2.2s								
WBSI	Waikabubak, Su	63.69	268	P		P		22 54 04.7	+0.1
	comp=Z,5µmcomp=Z,227nm,1.5s								
BKSI	Bulukumba	64.25

JMN	Monobe	71.13	317	P	P	22 54 52.5	+1.3	CVS		IAMs_20	IAMs_20	23 20 41.9
JWT	Wachi	71.15	319	P	P	22 54 50.4	-0.9		comp=Z,48µm,20.0s			
JSD	Sado	71.28	323	P	P	22 54 54.3	+2.3	HOPS	Hopland Field	75.31	40	P	P	22 55 14.9	-0.8
QSPA	South Pole Qui	71.42	180	P	P	22 54 56.4	+3.7	HOPS		IAmb	IAmb	22 55 19.1		
QSPA				IAmb	IAmb	22 55 02.2			comp=Z,245nm,1.4s			
	comp=Z,216nm,1.1s							HOPS		IAMs_20	IAMs_20	23 20 12.8		
QSPA	South Pole Qui	71.42	180	IAMs_20	IAMs_20	23 20 47.0			comp=Z,52µm,21.0s			
	comp=Z,42µm,22.0s							GDXM	Geysers	75.36	40	IAmb	IAmb	22 55 38.1	
QSPA	South Pole Qui	71.42	180	P	P	22 54 55.1	+2.4	YSS	Yuzhno-Sakhali	75.43	332	P	P	22 55 15.1	-1.1
	comp=Z,103nm,0.9s,baz=42,slow=2.6,SNR=54							YSS		IAmb	IAmb	22 55 30.1		
QSPA				LR	LR	23 21 19.7			comp=Z,166nm,1.3s			
	comp=Z,38µm,21.8s,baz=34,slow=32							YSS	Yuzhno-Sakhali	75.43	332	P	P	22 55 17.9	+1.7
	comp=Z,103nm,0.9s							YSS	Yuzhno-Sakhali	75.43	332	κeP	P	22 55 15.9	-0.3
NIKH	Nikolski High	71.53	4	P	P	22 54 53.1	0.0	YSS				eS	S	23 04 55.3	-0.7
NIKH	Nikolski High	71.53	4	P	P	22 54 51.1	-2.0	YSS				eSS	SS	23 09 44.5	-2.6
	baz=186							YSS				pmax	pmax		
NIKH				S	S	23 04 11.9	+0.3		comp=Z,4µm,11.4s						
	baz=186							YSS				pmax	pmax		
TBJI	Tambak Boyo	71.65	269	P	P	22 54 55.4	+0.6		comp=N,1µm,10.7s						
SHEM	Shemya Is, Ala	71.67	353	LR	LR	23 19 52.2		YSS				pmax	pmax		
	comp=Z,40µm,21.7s,baz=179,slow=30								comp=E,1µm,8.6s						
SMY	Shemya	71.67	353	P	P	22 54 55.9	+2.0	YSS				pmax	pmax		
JAD	Aida	71.71	318	P	P	22 54 54.0	-0.7		comp=Z,80nm,1.1s						
YUK	Yuzh-Kuril'sk	71.79	332	c iP	P	22 54 54.7	-0.2	YSS				MLR	MLR		
YUK				e		22 55 13.0			comp=N,10µm,16.0s						
YUK				i		22 57 32.8		BBJI	Bungbulang	75.43	267	P	P	22 55 15.8	-1.4
YUK				ePPP	PPP	22 59 14.9		KCPM	Cahto Peak	75.44	39	P	P	22 55 16.8	+0.1
YUK				i S	S	23 04 13.3	-1.7	KCPM				IAmb	IAmb	22 55 20.0	
YUK				e		23 04 59.8			comp=Z,207nm,1.3s						
YUK				pmax	pmax			OSI	Osito Audit: C	75.45	45	IAMs_20	IAMs_20	23 20 35.7	
	comp=Z,267nm,1.5s								comp=Z,51µm,21.0s						
NGJI	Ngawi	71.85	268	P	P	22 54 58.0	+2.0	DCMP	DeCamp, Califo	75.45	39	IAmb	IAmb	22 55 31.8	
	comp=Z,104nm,1.0s								comp=Z,187nm,1.7s						
KUR	Kuril'sk	71.86	334	eP	P	22 54 54.1	-1.2	PASC	Pasadena Art C	75.56	46	P	P	22 55 17.2	-0.1
KUR				e		22 55 13.1		PASC				IAmb	IAmb	22 55 22.7	
KUR				eS	S	23 04 18.2	+2.5		comp=Z,160nm,1.4s						
KUR				pmax	pmax			PASC				IAMs_20	IAMs_20	23 20 59.7	
	comp=Z,4µm,9.5s								comp=Z,48µm,20.0s						
KUR				pmax	pmax			CBX	Cerro Bola	75.58	48	P	P	22 55 17.7	0.0
	comp=Z,485nm,1.4s							CBX				IAmb	IAmb	22 55 23.4	
KUR				MLR	MLR				comp=Z,253nm,1.6s						
	comp=Z,28µm,18.0s							CPE	Camp Elliot	75.59	48	IAMs_20	IAMs_20	23 20 28.4	
KUR				MLR	MLR				comp=Z,42µm,22.0s						
	comp=N,35µm,17.0s							KMPM	Mount Pierce	75.60	38	P	P	22 55 17.9	+0.4
PCJI	Pacitan	71.88	267	P	P	22 54 56.2	0.0	KMPM				IAmb	IAmb	22 55 21.0	
JHS	Saijyo	72.41	318	P	P	22 54 58.2	-0.7		comp=Z,263nm,1.3s						
UGM	Wanagama	72.58	267	P	P	22 55 00.1	-0.3	KMPM				IAMs_20	IAMs_20	23 20 10.3	
UNV	Unalaska Valle	72.58	5	P	P	22 54 56.7	-2.7		comp=Z,46µm,22.0s						
	baz=189							MNRC	McLaughlin Min	75.62	40	IAMs_20	IAMs_20	23 20 44.0	
UNV				S	S	23 04 22.7	-0.9		comp=Z,48µm,20.0s						
	baz=189							SPIA	Saint Paul Isl	75.64	3	IAMs_20	IAMs_20	23 24 03.0	
JNU	Nakatsue	72.74	315	LR	LR	23 22 02.3			comp=Z,26µm,20.0s						
	comp=N,14µm,21.4s,baz=128,slow=32							SPIA	Saint Paul Isl	75.64	3	P	P	22 55 15.8	-1.4
JNU	Nakatsue	72.74	315	P	P	22 55 01.3	+0.4		baz=185						
JNU	Nakatsue	72.74	315	P	P	22 55 01.0	+0.1	SPIA				S	S	23 04 58.3	+0.3
SMRI	Semarang	72.91	268	IAmb	IAmb	22 55 11.4			baz=185						
	comp=Z,128nm,0.9s							LEM	Lembang	75.65	268	P	P	22 55 19.8	+1.3
SMRI	Semarang	72.91	268	P	P	22 55 02.3	-0.1		comp=Z,7µmcomp=Z,135nm,1.0s						
SMRI	Semarang	72.91	268	P	P	22 55 05.3	+2.9	MWC	Mount Wilson	75.68	46	IAMs_20	IAMs_20	23 21 02.7	
	comp=Z,160nm,1.0s								comp=Z,48µm,20.0s						
JEW	Eniwo	72.98	328	P	P	22 55 05.2	+3.1	VTX	Valle De La Tr	75.71	49	IAmb	IAmb	22 55 33.9	
JKA	Kamikawa-asahi	73.37	330	IAmb	IAmb	22 55 11.4			comp=Z,320nm,2.0s						
	comp=Z,202nm,1.5s							KMRM	Mail Ridge	75.71	38	IAMs_20	IAMs_20	23 20 46.0	
ASAJ	Asahikawa	73.37	330	P	P	22 55 02.2	-2.2		comp=Z,46µm,20.0s						
	comp=Z,4.6nm,0.3s,baz=220,slow=27,SNR=8.4							KSM	Kuching	75.72	276	P	P	22 55 18.1	-0.6
ASAJ				LR	LR	23 25 27.8		DPP	Dos Picos Cty	75.76	48	P	P	22 55 18.4	-0.2
	comp=Z,40µm,18.3s,baz=158,slow=34							BAR	Barrett	75.78	48	IAmb	IAmb	22 55 33.0	
	comp=Z,4.6nm,0.3s								comp=Z,253nm,1.9s						
SKR	Severo-Kuril's	73.47	341	i P	P	22 55 04.2	-0.5	BAR				IAMs_20	IAMs_20	23 20 33.4	
SKR				i S	SKiKP	23 04 37.2	+1.7		comp=Z,37µm,21.0s						
SKR				pmax	pmax			ELS	Elsinore Mount	75.79	47	IAmb	IAmb	22 55 24.4	
	comp=Z,4µm,9.6s								comp=Z,235nm,1.6s						
SKR				pmax	pmax			S14K	Fog Glacier	75.81	9	P	P	22 55 15.2	-3.1
	comp=Z,120nm,1.1s								baz=195						
SKR				smax	smax			S14K				S	S	23 04 59.1	-0.9
	comp=N,12µm,15.1s								baz=195						
SKR				smax	smax			JCC	Jacoby Creek,	75.91	38	IAMs_20	IAMs_20	23 22 32.6	
	comp=E,4µm,10.2s								comp=Z,32µm,19.0s						
JSH	Shimam	73.55	327	P	P	22 55 07.2	+1.8	VES	Vestal, Richgr	75.92	44	IAMs_20	IAMs_20	23 21 02.0	
FALS	False Pass	73.90	7	P	P	22 55 05.0	-2.2		comp=Z,35µm,20.0s						
	baz=192							BFSC	Mount Baldy Ra	75.96	46	IAMs_20	IAMs_20	23 20 51.2	
FALS				S	S	23 04 38.2	-0.4		comp=Z,46µm,20.0s						
	baz=192							CNJI	Cibinong	75.97	267	P	P	22 55 21.2	+1.1
SBUM	Sibu	74.25	278	P	P	22 55 10.7	+0.5		comp=Z,48nm,1.1s						
KPJI	Karang Pucung	74.26	267	P	P	22 55 10.2	-0.1	CHIR	Chirikof Islan	76.02	11	IAMs_20	IAMs_20	23 24 52.9	
	comp=E,4µmcomp=E,102nm,0.9s								comp=Z,32µm,20.0s						
CNBA	Chernabura Isl	74.39	9	IAMs_20	IAMs_20	23 23 47.0		CHIR	Chirikof Islan	76.02	11	P	P	22 55 17.9	-1.5
	comp=Z,26µm,19.0s								baz=199						
CHNA	Chernabura Isl	74.40	9	P	P	22 55 12.0	+1.9	KHMM	Horse Mountain	76.12	38	IAmb	IAmb	22 55 24.0	
CHNA	Chernabura Isl	74.40	9	P	P	22 55 08.2	-1.9		comp=Z,130nm,1.3s						
	baz=195							KHMM				IAMs_20	IAMs_20	23 20 37.1	
CHNA				S	S	23 04 43.8	-0.4		comp=Z,40µm,21.0s						
	baz=195							KRPM	Rodgers	76.13	37	IAMs_20	IAMs_20	23 22 58.1	
YULB	Yu-li	74.67	302	P	P	22 55 13.5	+1.1		comp=Z,36µm,20.0s						
FORD	Fort Ord Natur	74.68	42	IAMs_20	IAMs_20	23 20 14.1		ISA	Isabella, Lake	76.22	45	IAMs_20	IAMs_20	23 21 01.0	
	comp=Z,50µm,20.0s								comp=Z,50µm,21.0s						
SDPT	Sand Point	74.77	9	P	P	22 55 14.0	+1.8	O02D	Mt. Diablo Mer	76.23	39	IAmb	IAmb	22 55 27.1	
SDPT	Sand Point	74.77	9	P	P	22 55 10.2	-2.0		comp=Z,136nm,1.2s						
	baz=194							SUTB	Sutter Butte	76.24	40	IAmb	IAmb	22 55 35.8	
SDPT				S	S	23 04 48.2	-0.1		comp=Z,246nm,1.6s						
	baz=194							SUTB				IAMs_20	IAMs_20	23 21 03.3	
NACB	Ninganchiao	74.80	302	P	P	22 55 15.0	+1.9		comp=Z,26µm,20.0s						
JRSC	Jasper Ridge	74.83	41	IAmb	IAmb	22 55 18.8		LPIG	La Paz	76.26	58	LR	LR	23 20 13.7	
	comp=Z,200nm,1.4s								comp=Z,28µm,21.8s,baz=242,slow=29						
JRSC				IAMs_20	IAMs_20	23 20 39.1		BORC	Borrego Spring	76.28	48	IAmb	IAmb	22 55 36.8	
	comp=Z,47µm,21.0s								comp=Z,299nm,1.8s						
PET	Petropavlovsk	74.85	344	P	P	22 55 11.8	-0.9	KHBM	Hayfork Bally	76.28	38	IAmb	IAmb	22 55 36.7	
PET				IAmb	IAmb	22 55 19.0			comp=Z,282nm,1.8s						
	comp=Z,215nm,1.5s							KHBM				IAMs_20	IAMs_20	23 20 44.4	
PET				IAMs_20	IAMs_20	23 21 13.5			comp=Z,53µm,22.0s						
	comp=Z,45µm,22.0s							YUH	Yuha Desert	76.29	48	IAmb	IAmb	22 55 27.3	
PET	Petropavlovsk	74.85	344	P	P	22 55 13.5	+0.8		comp=Z,177nm,1.6s						
PET	Petropavlovsk	74.85	344	eP	P	22 55 11.6	-1.1	SLBS	Sierra La Lagu	76.37	59	IAMs_20	IAMs_20	23 19 31.5	
PET				eS	S	23 04 47.7	-1.6		comp=Z,33µm,22.0s						
PET				eSP	SKSac	23 05 20.7	-0.3	SLBS	Sierra La Lagu	76.37	59	⇑P	P	22 55 23.7	+1.5
PET				ePS	PnS	23 05 42.6	+18	CMB	Columbia Colle	76.38	42	IAMs_20	IAMs_20	23 21 28.1	
PET				eSS	SS	23 09 41.2	+3.2		comp=Z,46µm,20.0s						
PET				pmax	pmax			CMB	Columbia Colle	76.38	42	⇑P	P	22 55 21.5	-0.5
	comp=Z,3µm,6.3s							WELL	Weller Preserv	76.41	41	IAMs_20	IAMs_20	23 21 28.9	
PET				pmax	pmax				comp=Z,44µm,21.0s						
	comp=Z,3µm,11.4s							PFO	Pinyon Flats O	76.44	47	P	P	22 55 21.6	-0.9
PET				pmax	pmax			PFO				IAmb	IAmb	22 55 28.3	
	comp=Z,91nm,1.4s								comp=Z,230nm,1.8s						
PET				smax	smax			PFO	Pinyon Flats O	76.44	47	IAMs_20	IAMs_20	23 21 13.0	
	comp=N,8µm,16.3s								comp=Z,46µm,20.0s						
PET				smax	smax			PFO	Pinyon Flats O	76.44	47	LR	LR	23 21 25.0	
	comp=N,6µm,15.6s								comp=Z,46µm,20.3s,baz=251,slow=30						
MCCM	Marconi Confer	74.89	40	IAmb	IAmb	22 55 27.6		PFO	Pinyon Flats O	76.44	47	c iP	P	22 55 22.4	-0.1
	comp=Z,471nm,1.9s							PFO				pmax	pmax		
MCCM				IAMs_20	IAMs_20	23 20 08.7			comp=Z,189nm,1.7s						
	comp=Z,45µm,21.0s							PFO				MLR	MLR		
S12K	Black Hills	74.89	8	P	P	22 55 11.7	-1.3		comp=Z,16µm,17.0s						
	baz=193							DBJI	Dramaga	76.56	268	P	P	22 55 22.7	-0.8
S12K				S	S	23 04 48.9	-0.8		comp=Z,173nm,2.4s						
	baz=193							SKJI	Subduni	76.61	267	P	P	22 55 22.5	-1.3
SAO	San Andreas Ge	74.93	42	⇑P	P	22 55 13.6	-0.1		comp=Z,7µmcomp=Z,168nm,0.7s						
PMPB	Monarch Peak	75.02	43	P	P	22 55 14.8	+0.5	ORV	Oroville	76.61	40	IAMs_20	IAMs_20	23 21 05.2	
PKD	Bear Valley Ra	75.02	43	IAmb	IAmb	22 55 20.0			comp=Z,34µm,22.0s						
	comp=Z,350nm,1.8s							LRMC	Laurel Mtn Rad	76.64	45	IAmb	IAmb	22 55 29.3	
P08K	Saint George I	75.11	3	P	P	22 55 12.0	-2.1		comp=Z,162nm,1.2s						
	baz=186							KSXB	Camp Six Broad	76.65	37	IAMs_20	IAMs_20	23 20 54.5	
P08K				S	S	23 04 52.5	+0.5		comp=Z,38µm,22.0s						
	baz=186							KBO	Bosley Butte	76.70	36	IAMs_20	IAMs_20	23 21 17.8	
MHC	Mount Hamilton	75.16	42	IAmb	IAmb	22 55 21.1			comp=Z,31µm,21.0s						
	comp=Z,184nm,1.2s							TNG	Tangerang	76.77	268	P	P	22 55 26.5	+1.8
MHC				IAMs_20	IAMs_20	23 20 50.0		N02D	Trinity Center	76.78	38	IAmb	IAmb	22 55 27.7	
	comp=Z,49µm,20.0s								comp=Z,175nm,1.4s						
TPUB	Ta-pu	75.16	301	P	P	22 55 13.9	-1.4	N02D				IAMs_20	IAMs_20	23 21 10.6	
TPUB	Ta-pu	75.16	301	P	P	22 55 14.1	-1.2		comp=Z,53µm,22.0s						
PEA0B	Petropavlovsk-	75.18	344	IAmb	IAmb	22 55 21.3		WSHM	Spangler Hills	76.84	45	IAmb	IAmb	22 55 30.3	
	comp=Z,367nm,1.5s								comp=Z,250nm,1.4s						
PEA0B	Petropavlovsk-	75.18	344	⇓eP	P	22 55 13.1	-1.6	TPI	Tanjungpandan	76.86	272	P	P	22 55 27.1	+1.9
PETK	Petropavlovsk-	75.18	344	P	P	22 55 13.1	-1.6		comp=Z,3µmcomp=Z,47nm,1.2s						
PETK	Petropavlovsk-	75.18	344	P	P	22 55 12.6	-2.0	O03E	Paynes Creek	76.89	39	P	P	22 55 23.6	-1.2
	comp=Z,20nm,0.8s,baz=115,slow=7.5,SNR=13							O03E				IAmb	IAmb	22 55 27.7	
PETK				LR	LR	23 21 57.7			comp=Z,205nm,1.3s						
	comp=Z,45µm,21.8s,baz=165,slow=31							O03E				IAMs_20	IAMs_20	23 21 27.5	
	comp=Z,20nm,0.8s								comp=Z,52µm,21.0s						
PETK	Petropavlovsk-	75.18	344	P	P	22 55 13.1	-1.6	M02C	Callahan	76.96	38	IAmb	IAmb	22 55 28.8	
YHNB	Yeheng	75.21	303	IAMs_20	IAMs_20	23 25 25.1			comp=Z,148nm,1.4s						
	comp=Z,29µm,20.0s							M02C				IAMs_20	IAMs_20	23 21 17.3	
YHNB	Yeheng	75.21	303	P	P	22 55 18.1	+2.5		comp=Z,43µm,22.0s						
TATO	Taipei	75.27	303	IAMs_20	IAMs_20	23 21 23.3		BELC	Belle Mtn. Jos	76.97	47	IAmb	IAmb	22 55 31.2	
	comp=Z,34µm,22.0s								comp=Z,197nm,1.5s						
CVS	Carmenet Viney	75.28	40	IAmb	IAmb	22 55 23.1		BELC				IAMs_20	IAMs_20	23 21 30.0	
	comp=Z,203nm,1.3s								comp=Z,44µm,20.0s						
TJN	Taejon	76.98	316	P	P	22 55 25.3	0.0
TJN	Taejon	76.98	316	deP	P	22 55 25.6	+0.3
SII	Sitkinak Islan	76.99	12	IAMs_20	IAMs_20	23 24 44.5	
	comp=Z,24µm,19.0s						
SII	Sitkinak Islan	76.99	12	P	P	22 55 22.8	-2.2
	baz=200						
SII				S	S	23 05 14.4	+1.6
	baz=200						
TEY	Ternei	77.01	327	⇓eP	P	22 55 23.9	-1.3
TEY				e		22 58 14.0	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MPMC	Manual Prospec	77.10	45	IAmb	IAmb	22 55 32.1	
	comp=Z,238nm,1.3s						
GSC	Goldstone, Bar	77.14	46	IAmb	IAmb	22 55 31.9	
	comp=Z,232nm,1.6s						
BC3	Big Chuckawall	77.16	48	IAMs_20	IAMs_20	23 21 36.2	
	comp=Z,33µm,20.0s						
TIN	Tinemaha, Big	77.18	44	IAmb	IAmb	22 55 32.4	
	comp=Z,196nm,1.1s						
KSRS	Korea Array	77.24	317	P	P	22 55 26.8	+0.1
	comp=Z,29nm,1.1s,baz=141,slow=6.1,SNR=27						
KSRS				LR	LR	23 24 08.1	
	comp=Z,11503µm,21.6s,baz=135,slow=32						
	comp=Z,29nm,1.1s						
KSAR	Wonju Array Be	77.26	317	P	P	22 55 25.9	-0.9
KSAR	Wonju Array Be	77.26	317	P	P	22 55 25.9	-0.9
YBH	Yreka Blue Hor	77.26	38	LR	LR	23 21 48.3	
	comp=Z,3µm,21.8s,baz=251,slow=30						
SBJI	Serang	77.27	268	P	P	22 55 30.1	+2.6
	comp=Z,9µmcomp=Z,135nm,0.6s						
GLA	Glamis	77.28	49	IAMs_20	IAMs_20	23 21 51.3	
	comp=Z,30µm,20.0s						
KS19	Wonju Array Si	77.30	317	IAmb	IAmb	22 55 41.1	
	comp=Z,407nm,1.9s						
UGL	Uglegorsk	77.34	333	eP	P	22 55 26.8	-0.2
UGL				eS	S	23 05 15.5	-1.3
UGL				pmax	pmax		
	comp=Z,4µm,9.3s						
R16K	Pilot Point	77.34	10	P	P	22 55 25.9	-0.9
	baz=197						
MPK	Martis Peak	77.36	41	IAmb	IAmb	22 55 33.3	
	comp=Z,269nm,1.3s						
HATC	Hat Creek Radi	77.42	39	IAMs_20	IAMs_20	23 21 32.5	
	comp=Z,51µm,21.0s						
QSM	Queen of Sheba	77.46	45	IAmb	IAmb	22 55 33.7	
	comp=Z,253nm,1.4s						
BEKR	Beckworth	77.50	40	IAmb	IAmb	22 55 43.5	
	comp=Z,329nm,1.9s						
PNTR	Pine Nut	77.50	41	IAmb	IAmb	22 55 34.1	
	comp=Z,247nm,1.2s						
DSP	Deep Springs	77.53	43	IAmb	IAmb	22 55 34.5	
	comp=Z,208nm,1.4s						
QZH	Quanzhou	77.57	302	P	P	22 55 30.8	+1.9
QZH				S	S	23 05 24.1	+3.7
QZH				pmax	pmax		
	comp=Z,4µm,5.3s						
QZH				LR	LR		
	comp=Z,9µm,22.5s						
QZH				LR	LR		
	comp=Z,18µm,23.9s						
QZH				LR	LR		
	comp=Z,15µm,20.1s						
R17L	Mt. Peulik Vol	77.61	10	P	P	22 55 27.5	-0.8
	baz=198						
R17L				S	S	23 05 19.7	+0.2
	baz=198						
IRM	Iron Mountain	77.65	47	IAmb	IAmb	22 55 35.2	
	comp=Z,340nm,1.6s						
IRM				IAMs_20	IAMs_20	23 21 41.0	
	comp=Z,41µm,20.0s						
LHV	Little Huntoon	77.70	42	IAmb	IAmb	22 55 35.3	
	comp=Z,254nm,1.3s						
GWY	Greenwater Val	77.72	45	IAmb	IAmb	22 55 44.8	
	comp=Z,213nm,1.5s						
DANC	Danby, Needles	77.75	47	IAMs_20	IAMs_20	23 21 46.5	
	comp=Z,35µm,20.0s						
OHAK	Old Harbor	77.78	12	P	P	22 55 29.8	+0.5
OHAK	Old Harbor	77.78	12	P	P	22 55 28.3	-1.0
	baz=201						
OHAK				S	S	23 05 22.5	+1.2
	baz=201						
L04D	Klamath Falls	77.80	37	IAmb	IAmb	22 55 45.9	
	comp=Z,334nm,1.5s						
SHOC	Shoshone, Teco	77.83	45	IAmb	IAmb	22 55 36.5	
	comp=Z,357nm,1.6s						
SHOC				IAMs_20	IAMs_20	23 22 11.6	
	comp=Z,46µm,21.0s						
BLYC	Blythe	77.87	48	IAmb	IAmb	22 55 36.5	
	comp=Z,164nm,1.4s						
R18K	Karluk	77.88	11	P	P	22 55 28.5	-1.3
	baz=200						
R18K				S	S	23 05 22.1	-0.2
	baz=200						
113A	Mohawk Valley,	77.89	49	IAmb	IAmb	22 55 36.5	
	comp=Z,157nm,1.5s						
RYN	Ryan	77.91	42	IAmb	IAmb	22 55 46.8	
	comp=Z,342nm,1.7s						
NVAR	Mina Array Bea	77.93	42	P	P	22 55 29.9	-1.0
NVAR	Mina Array Bea	77.93	42	P	P	22 55 30.5	-0.4
	comp=Z,46nm,1.0s,baz=226,slow=8.9,SNR=60						
NVAR				LR	LR	23 22 43.1	
	comp=Z,60µm,20.9s,baz=238,slow=30						
	comp=Z,46nm,1.0s						
GMN	Gold Mountain	77.96	44	IAmb	IAmb	22 55 36.6	
	comp=Z,102nm,1.0s						
PAHR	Pah Rah Range	78.00	41	IAmb	IAmb	22 55 36.8	
	comp=Z,200nm,1.5s						
NV11	Mina Array Sit	78.03	42	IAmb	IAmb	22 55 37.0	
	comp=Z,296nm,1.4s						
WCT	Wildcat Mounta	78.09	44	IAmb	IAmb	22 55 37.4	
	comp=Z,204nm,1.5s						
HSIG		78.09	54	IAmb	IAmb	22 55 45.1	
	comp=Z,223nm,1.9s						
INCN	Inchon	78.09	316	IAMs_20	IAMs_20	23 23 15.7	
	comp=Z,32µm,22.0s						
INCN	Inchon	78.09	316	P	P	22 55 31.4	-0.2
INCN				S	S	23 05 30.5	+4.9
INCN	Inchon	78.09	316	P	P	22 55 32.1	+0.5
INCN	Inchon	78.09	316	⇑P	P	22 55 32.5	+0.9
I03D	Drain, OR	78.16	36	IAmb	IAmb	22 55 46.8	
	comp=Z,189nm,1.5s						
214A	Organ Pipe Nat	78.16	50	IAmb	IAmb	22 55 47.0	
	comp=Z,224nm,1.6s						
VLA	Vladivostok	78.28	323	deP	P	22 55 34.6	+2.2
VLA				pmax	pmax		
	comp=Z,190nm,1.9s						
VLA				MLR	MLR		
	comp=Z,19µm,19.0s						
Q17K	Contact Creek	78.29	10	P	P	22 55 30.4	-1.9
	baz=199						
Q17K				S	S	23 05 25.7	-1.3
	baz=199						
BLSI	Bandar Lampung	78.34	268	P	P	22 55 34.9	+1.4
NEE2	Needles Airpor	78.34	47	IAmb	IAmb	22 55 39.0	
	comp=Z,265nm,1.5s						
NEE2				IAMs_20	IAMs_20	23 22 13.4	
	comp=Z,31µm,20.0s						
TPNV	Topopah Spring	78.43	45	IAmb	IAmb	22 55 39.4	
	comp=Z,176nm,1.2s						
KDAK	Kodiak Island	78.45	12	P	P	22 55 32.6	-0.4
KDAK	Kodiak Island	78.45	12	IAMs_20	IAMs_20	23 28 06.1	
	comp=Z,26µm,19.0s						
KDAK	Kodiak Island	78.45	12	LR	LR	23 27 22.5	
	comp=Z,19µm,18.2s,baz=201,slow=34						
KDAK	Kodiak Island	78.45	12	⇓eP	P	22 55 32.2	-0.8
KDAK				pmax	pmax		
	comp=Z,333nm,1.9s						
KDAK	Kodiak Island	78.45	12	P	P	22 55 31.8	-1.2
	baz=202						
KDAK				S	S	23 05 28.4	0.0
	baz=202						
O14K	Tigyukauivet M	78.46	7	P	P	22 55 31.6	-1.5
	baz=194						
O14K				S	S	23 05 28.1	-0.4
	baz=194						
SSE	Sheshan	78.50	308	P	P	22 55 33.7	-0.2
SSE				S	S	23 05 32.1	+1.9
SSE				pmax	pmax		
	comp=Z,18nm,0.8s						
SSE				pmax	pmax		
	comp=Z,1µm,6.5s						
SSE				LR	LR		
	comp=Z,4µm

baz=198
Q16K S **S** **23 05 29.0 -0.5**
baz=198
J04A **Umpqua Nationa** **78.56 37** IAmb IAmb 22 55 39.7
comp=Z,152nm,1.1s
O15K **Ungalikthiuk R** **78.57 8** P **P** **22 55 31.6 -2.1**
baz=195
O15K S **S** **23 05 30.9 +1.2**
baz=195
PSTR **Posyet** **78.60 323** *de*P **P** **22 55 34.6 +0.4**
P16K **Nushagak River** **78.69 9** P **P** **22 55 32.8 -1.5**
baz=197
P16K S **S** **23 05 31.1 +0.2**
baz=197
V12A **Nelson** **78.70 46** IAmb IAmb 22 55 41.0
comp=Z,210nm,1.5s
COR **Corvallis** **78.75 35** P **P** **22 55 34.1 -0.9**
COR IAmb IAmb 22 55 49.5
comp=Z,256nm,1.8s
COR **Corvallis** **78.75 35** P **P** **22 55 34.1 -0.9**
COR pmax pmax
comp=Z,255nm,1.8s
Q18K **Katmai Hardscr** **78.80 11** P **P** **22 55 33.0 -2.1**
baz=200
Q18K S **S** **23 05 32.2 -0.3**
baz=200
USRK **Uesuriysk Ar.** **78.91 324** P **P** **22 55 36.6 +0.7**
comp=Z,11nm,1.1s,baz=116,slow=4.4,SNR=13
comp=Z,11nm,1.1s
HHU **Hamhung** **78.93 319** P **P** **22 55 36.4 +0.3**
HHU S **S** **23 05 32.6 -1.8**
HHU AmB
comp=Z,5μm,5.7s
HHU AMS AMS
comp=Z,13μm,17.4s
K05A **Summer Lake** **78.93 38** P **P** **22 55 35.8 -0.5**
K05A IAmb IAmb 22 55 52.5
comp=Z,405nm,1.7s
KASI **Kota Agung** **79.00 268** P **P** **22 55 34.7 -2.4**
comp=Z,117nm,1.0s
HJU **Haeju** **79.00 316** P **P** **22 55 36.7 +0.2**
HJU S **S** **23 05 32.9 -2.4**
HJU AmB
comp=Z,6μm,5.8s
HJU AMS AMS
comp=Z,41μm,23.8s
N14K **Kuskokwak Cree** **79.06 7** P **P** **22 55 35.1 -1.3**
baz=193,SNR=9.5
N14K S **S** **23 05 35.0 +0.1**
baz=193
J05D **Fort Rock, OR** **79.08 37** IAmb IAmb 22 55 40.1
comp=Z,157nm,1.3s
M11K **Mekoryuk** **79.09 5** P **P** **22 55 36.1 -0.3**
baz=189
M11K S **S** **23 05 40.2 +5.0**
baz=189
S11A **Rachel** **79.14 44** IAmb IAmb 22 55 53.9
comp=Z,302nm,1.4s
G03D **McMinnville, O** **79.18 35** IAmb IAmb 22 55 52.4
comp=Z,214nm,1.4s
O16K **Kokwok River B** **79.21 9** IAmb IAmb 22 55 53.3
comp=Z,396nm,1.9s
O16K **Kokwok River B** **79.21 9** P **P** **22 55 35.3 -1.9**
baz=196
O16K S **S** **23 05 36.3 -0.3**
baz=196
Q20K **Shuyak Island** **79.25 12** P **P** **22 55 35.8 -1.6**
baz=202
Q20K S **S** **23 05 38.7 +1.7**
baz=202
Q19K **Cape Douglas,** **79.31 11** IAMs_20 IAMs_20 23 26 23.0
comp=Z,26μm,20.0s
M13K **Dall Lake** **79.37 6** P **P** **22 55 37.6 -0.3**
baz=192
M13K S **S** **23 05 39.9 +1.7**
baz=192
P18K **Big Mountain,** **79.47 10** P **P** **22 55 36.8 -1.8**
baz=199
P18K S **S** **23 05 40.8 +1.4**
baz=199
PRN **Pahroc Range** **79.48 45** IAmb IAmb 22 55 45.5
comp=Z,224nm,1.4s
F03A **Seaside** **79.49 34** IAmb IAmb 22 56 14.1
comp=Z,265nm,1.6s
N15K **Kwethluk River** **79.50 8** IAmb IAmb 22 55 56.1
comp=Z,338nm,1.8s
N15K **Kwethluk River** **79.50 8** P **P** **22 55 37.2 -1.5**
baz=195
N15K S **S** **23 05 41.5 +1.8**
baz=195
O17K **Koliganek Bris** **79.53 9** P **P** **22 55 37.6 -1.3**
baz=198,SNR=15
O17K S **S** **23 05 41.2 +1.2**
baz=198
PMBI **Palembang** **79.54 270** P **P** **22 55 40.8 +0.7**
PYAG **Pyongyang** **79.55 317** P **P** **22 55 39.9 +0.4**
PYAG S **S** **23 05 39.3 -1.8**
PYAG AmB
comp=Z,6μm,5.5s
PINE **Pine Mountain** **79.56 37** IAmb IAmb 22 55 42.9
comp=Z,183nm,1.4s
LWLI **Liwa** **79.57 268** P **P** **22 55 41.1 +0.7**
MDSI **Maura Dua** **79.62 269** P **P** **22 55 41.4 +0.9**
comp=Z,3μmcomp=Z,57nm,1.0s
I05D **Terrebonne, OR** **79.68 36** IAmb IAmb 22 55 45.6
comp=Z,203nm,1.6s
TUC **Tucson** **79.83 51** P **P** **22 55 41.2 -0.1**
TUC IAmb IAmb 22 55 46.7
comp=Z,311nm,1.9s
TUC **Tucson** **79.83 51** IAMs_20 IAMs_20 23 23 26.8
comp=Z,38μm,20.0s
TUC **Tucson** **79.83 51** P **P** **22 55 41.2 -0.1**
TUC pmax pmax
comp=Z,311nm,2.0s
M14K **Bethel** **79.84 7** P **P** **22 55 40.0 -0.5**
baz=193
M14K S **S** **23 05 45.2 +2.0**
baz=193
O18K **Koktuh Hills** **79.91 10** P **P** **22 55 38.5 -2.5**
baz=199,SNR=14
O18K S **S** **23 05 46.4 +2.3**
baz=199
M15K **Kasigluk River** **79.93 7** P **P** **22 55 39.9 -1.1**
baz=194
M15K S **S** **23 05 46.1 +1.9**
baz=194
N16K **Nishlik Lake** **79.96 8** P **P** **22 55 39.5 -1.8**
baz=196
N16K S **S** **23 05 46.7 +2.1**
baz=196
P19K **Oil Pt** **80.07 11** P **P** **22 55 40.8 -1.1**
baz=201
P19K S **S** **23 05 47.2 +1.5**
baz=201
HKPS **Hong Kong Po S** **80.07 298** IAMs_20 IAMs_20 23 25 23.8
comp=Z,35μm,21.0s
WVOR **Wild Horse Val** **80.08 39** ⇑P **P** **22 55 42.9 +0.4**
HOOD **Mount Hood Mea** **80.13 35** P **P** **22 55 42.1 -0.6**
WISH **Wishkah** **80.16 33** IAmb IAmb 22 56 04.7
comp=Z,364nm,1.5s
N17K **Nushagak Hills** **80.24 9** P **P** **22 55 41.0 -1.7**
baz=197
N17K S **S** **23 05 49.1 +1.6**
baz=197
C03A **Quillayute Air** **80.31 32** IAmb IAmb 22 55 47.0
comp=Z,270nm,1.4s
CNPM **China Poot** **80.33 12** IAmb IAmb 22 55 56.4
comp=Z,289nm,1.6s
CNPM IAMs_20 IAMs_20 23 28 22.6
comp=Z,28μm,19.0s
L14K **Kuka Creek** **80.34 6** P **P** **22 55 42.4 -0.9**
baz=192
L14K S **S** **23 05 52.9 +4.4**
baz=192
HG4B **Hotspring** **80.35 26** IAmb IAmb 22 55 48.7
comp=Z,208nm,1.5s
HOM **Homer** **80.37 12** IAMs_20 IAMs_20 23 27 29.6
comp=Z,25μm,20.0s
HOM **Homer** **80.37 12** P **P** **22 55 42.6 -0.8**
baz=203
HOM S **S** **23 05 51.1 +2.3**
baz=203
O19K **Port Alsworth** **80.38 10** IAmb IAmb 22 55 48.4
comp=Z,367nm,1.4s
O19K **Port Alsworth** **80.38 10** P **P** **22 55 41.9 -1.5**
baz=200,SNR=21
O19K S **S** **23 05 51.2 +2.3**
baz=200
X16A **Lo Mia Camp, P** **80.40 49** IAmb IAmb 22 55 59.7
comp=Z,288nm,1.8s
LHSI **Lahat** **80.45 269** P **P** **22 55 44.1 -0.9**
comp=Z,4μmcomp=Z,58nm,1.6s
M16K **Timber Creek** **80.47 8** P **P** **22 55 43.7 -0.2**
baz=196
M16K S **S** **23 05 53.0 +3.2**
baz=196
LCMT **Little Creek M** **80.48 46** IAmb IAmb 22 56 00.6
comp=Z,225nm,1.8s
DSRI **Dabo** **80.50 273** P **P** **22 55 44.7 -0.5**
comp=Z,4μmcomp=Z,37nm,1.0s
MDJ **Mudanjiang** **80.51 324** IAMs_20 IAMs_20 23 24 55.3
comp=Z,33μm,22.0s
MDJ **Mudanjiang** **80.51 324** P **P** **22 55 44.4 -0.2**
MDJ S **S** **23 05 55.9 +4.9**
MDJ pmax pmax
comp=Z,64nm,2.2s
MDJ pmax pmax
comp=Z,4μm,9.6s
MDJ LR LR
comp=Z,17μm,18.6s
MDJ LR LR
comp=Z,23μm,19.2s
MDJ LR LR
comp=Z,56μm,24.2s
MDJ **Mudanjiang** **80.51 324** P **P** **22 55 46.9 +2.3**
I07A **Izee** **80.56 37** P **P** **22 55 43.9 -1.1**
O20K **Slope Mountain** **80.58 11** P **P** **22 55 42.6 -2.0**
baz=202
O20K S **S** **23 05 54.5 +3.3**
baz=202
N18K **Kilae Creek** **80.58 10** IAmb IAmb 22 56 00.5
comp=Z,241nm,2.0s
N18K **Kilae Creek** **80.58 10** P **P** **22 55 43.0 -1.6**
baz=199
N18K S **S** **23 05 53.6 +2.5**
baz=199
BRLK **Bradley Lake** **80.62 12** IAmb IAmb 22 55 57.8
comp=Z,328nm,1.6s
BRSE **Bradley Lake S** **80.63 12** P **P** **22 55 43.8 -1.1**
baz=204,SNR=9.7
BRSE S **S** **23 05 53.0 +1.3**
baz=204
MOBC **Moresby Island** **80.68 25** IAmb IAmb 22 56 00.8
comp=Z,386nm,1.7s
CCUT **Cedar City** **80.69 45** IAmb IAmb 22 56 01.2
comp=Z,202nm,1.7s
NJ2 **Nanjing** **80.71 308** ⇓*i*P **P** **22 55 46.9 +1.0**
NJ2 sP **PcP** **22 55 57.1 +4.5**
NJ2 S **S** **23 05 54.9 +1.4**
NJ2 SS **SS** **23 11 12.0 +4.9**
NJ2 pmax pmax
comp=Z,25nm,0.9s
NJ2 pmax pmax
comp=Z,3μm,7.6s
NJ2 LR LR
comp=Z,18μm,17.5s
NJ2 LR LR
comp=Z,19μm,16.1s
NJ2 LR LR
comp=Z,15μm,18.5s
K13K **Kusilvak Mount** **80.75 5** P **P** **22 55 44.9 -0.5**
baz=190
K13K S **S** **23 05 56.8 +4.2**
baz=190
L15K **Ungalak Mounta** **80.80 7** P **P** **22 55 44.8 -0.9**
baz=193,SNR=18
L15K S **S** **23 05 56.6 +3.4**
baz=193
U15A **North Rim** **80.83 47** IAmb IAmb 22 56 02.0
comp=Z,232nm,1.5s
RED **Redoubt Volcan** **80.87 11** IAmb IAmb 22 56 03.7
comp=Z,160nm,1.2s
SZCU **Shurtz Canyon** **80.89 45** IAmb IAmb 22 56 03.0
comp=Z,269nm,1.7s
N19K **Bonanza Creek** **80.94 10** IAmb IAmb 22 56 03.2
comp=Z,246nm,1.7s
N19K **Bonanza Creek** **80.94 10** P **P** **22 55 44.9 -1.7**
baz=200
N19K S **S** **23 05 56.9 +1.9**
baz=200
NKL **Nikolayevsk** **80.97 335** *e*P **P** **22 55 43.6 -3.2**
NKL *e*S **S** **23 05 53.5 -1.8**
NKL pmax pmax
comp=E,79nm,1.3s
NKL pmax pmax
comp=N,83nm,1.2s
NKL pmax pmax
comp=Z,160nm,1.7s
NKL smax smax
comp=E,1μm,7.4s
NKL smax smax
comp=N,395nm,4.5s
TPRI **Tanjung Pinang** **80.99 274** P **P** **22 55 46.4 -1.5**
WUAZ **Wupatki** **81.00 48** IAMs_20 IAMs_20 23 23 47.5
comp=Z,29μm,21.0s
M17K **Holitna River** **81.04 9** P **P** **22 55 47.0 -0.1**
baz=197
M17K S **S** **23 05 59.3 +3.5**
baz=197
L16K **Owhat River** **81.07 8** P **P** **22 55 46.0 -1.1**
baz=195,SNR=22
L16K S **SKSac** **23 06 00.8 -4.7**
baz=195
GRNR **Gornyy** **81.07 331** ⇓*i*P **P** **22 55 47.3 -0.2**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GZH **Guangzhou** **81.08 298** P **P** **22 55 49.2 +1.1**
GZH S **S** **23 06 01.1 +3.3**
GZH pmax pmax
comp=Z,2μm,12.0s
GZH LR LR
comp=Z,15μm,22.2s
GZH LR LR
comp=Z,9μm,23.8s
GZH LR LR
comp=Z,33μm,29.2s
D05A **Enumclaw** **81.13 34** P **P** **22 55 47.4 -0.4**
D05A IAmb IAmb 22 55 55.7
comp=Z,316nm,1.3s
ELK **Elko** **81.19 42** LR LR 23 24 44.3
comp=Z,49μm,20.8s,baz=232,slow=30
ELK **Elko** **81.19 42** P **P** **22 55 48.1 -0.5**
SEW **Seward** **81.23 13** P **P** **22 55 46.8 -1.2**
baz=205
SEW S **S** **23 05 59.3 +1.6**
baz=205
Q23K **Middleton Isla** **81.31 14** P **P** **22 55 47.2 -1.2**
baz=208
Q23K S **S** **23 06 02.0 +3.4**
baz=208
CBB **Campbell River** **81.32 30** IAmb IAmb 22 56 04.4
comp=Z,225nm,1.5s
M18K **Stony River** **81.36 9** P **P** **22 55 47.4 -1.4**
baz=199
M18K S **S** **23 06 02.3 +3.2**
baz=199
KSI **Kapahiang** **81.38 269** P **P** **22 55 51.3 +1.2**
comp=Z,122nm,0.8s
K15K **Wolf Creek Mou** **81.40 6** P **P** **22 55 47.9 -1.0**
baz=193
K15K S **SKSac** **23 06 05.7 -2.0**
baz=193
CAPN **Captain Cook N** **81.49 12** P **P** **22 55 48.8 -0.6**
baz=203
CAPN S **SKSac** **23 06 05.3 -3.1**
baz=203
O22K **Cooper Landing** **81.51 12** P **P** **22 55 47.4 -2.1**
baz=204
O22K S **S** **23 06 03.1 +2.4**
baz=204
P23K **Montague Islan** **81.58 14** IAmb IAmb 22 56 03.8
comp=Z,262nm,1.7s
P23K IAMs_20 IAMs_20 23 24 13.5
comp=Z,28μm,21.0s
P23K **Montague Islan** **81.58 14** P **P** **22 55 48.1 -1.8**
baz=207
P23K S **S** **23 06 03.9 +2.5**
baz=207
BBB **Bella Bella** **81.58 27** IAmb IAmb 22 56 03.6
comp=Z,335nm,1.8s
BBB **Bella Bella** **81.58 27** LR LR 23 24 54.9
comp=Z,10μm,20.7s,baz=232,slow=30
G08A **Pilot Rock** **81.60 36** IAmb IAmb 22 55 53.3
comp=Z,145nm,1.3s
L17K **Donlin** **81.63 8** P **P** **22 55 50.1 -0.1**
baz=196,SNR=32
L17K S **SKSac** **23 06 09.2 -0.1**
baz=196
J14K **Nanvaranak Lak** **81.65 5** IAmb IAmb 22 55 54.0
comp=Z,274nm,1.9s
J14K **Nanvaranak Lak** **81.65 5** P **P** **22 55 49.1 -1.1**
baz=191
J14K S **SKSac** **23 06 07.0 -2.3**
baz=191
MXC **Moxie City** **81.65 35** P **P** **22 55 49.2 -1.4**
N20K **Mount Spurr** **81.70 11** P **P** **22 55 48.5 -2.1**
baz=202
N20K S **S** **23 06 03.2 +0.4**
baz=202
SPCR **Spurr Chakacha** **81.70 11** P **P** **22 55 48.4 -2.3**
baz=202,SNR=8.8
SPCR S **S** **23 06 03.2 +0.4**
baz=202
A04D **Lummi Island** **81.75 32** IAmb IAmb 22 55 54.0
comp=Z,230nm,1.2s
BTDF **Bukit Timah Da** **81.85 274** P **P** **22 55 52.5 +0.1**
MASI **Maura Aman, Be** **81.88 269** P **P** **22 55 54.3 +1.7**
comp=Z,4μmcomp=Z,121nm,1.6s
E07A **Sunnyside** **81.88 35** IAmb IAmb 22 55 54.7
comp=Z,131nm,1.2s
MYKOM **Kota Tinggi** **81.92 275** P **P** **22 55 52.7 -0.1**
L18K **Granite Mounta** **81.93 9** P **P** **22 55 50.7 -1.0**
baz=198
L18K S **SKSac** **23 06 09.9 -1.5**
baz=198
HAWA **Hanford** **81.95 35** IAmb IAmb 22 55 55.1
comp=Z,141nm,1.2s
HAWA IAMs_20 IAMs_20 23 31 46.1
comp=Z,25μm,18.0s
PMSA **Palmer Station** **81.96 156** P **P** **22 55 52.5 +0.5**
PMSA IAmb IAmb 22 56 08.1
comp=Z,183nm,1.8s
PMSA **Palmer Station** **81.96 156** LR LR 23 23 12.6
comp=Z,18μm,21.7s,baz=234,slow=29
PMSA **Palmer Station** **81.96 156** *e*P P 22 55 58.2 +6.2
CRAG **Craig** **82.01 23** P **P** **22 55 54.1 +1.9**
CRAG **Craig** **82.01 23** P **P** **22 55 52.1 -0.1**
baz=220,SNR=6.4
CRAG S **SKSac** **23 06 11.0 -1.0**
baz=220
RC01 **Rabbit Creek A** **82.07 12** P **P** **22 55 50.8 -1.6**
baz=204
RC01 S **S** **23 06 06.9 +0.4**
baz=204
HIN **Hinchinbrook I** **82.14 14** IAmb IAmb 22 55 56.9
comp=Z,406nm,1.9s
HIN IAMs_20 IAMs_20 23 24 51.4
comp=Z,27μm,20.0s
PWL **Port Wells** **82.15 13** IAmb IAmb 22 56 18.1
comp=Z,208nm,1.4s
PWL **Port Wells** **82.15 13** P **P** **22 55 51.6 -1.3**
baz=206,SNR=18
PWL S **S** **23 06 07.3 0.0**
baz=206
L19K **White Mountain** **82.17 10** P **P** **22 55 51.6 -1.4**
baz=200
L19K S **SKSac** **23 06 10.2 -2.9**
baz=200
M20K **Styx River** **82.17 10** IAmb IAmb 22 55 56.8
comp=Z,201nm,2.0s
M20K **Styx River** **82.17 10** P **P** **22 55 51.0 -2.1**
baz=201
M20K S **S** **23 06 09.7 +2.0**
baz=201
DL2 **Dalian** **82.17 315** ⇓P **P** **22 55 54.3 +0.8**
DL2 PP **PP** **22 59 00.8 -1.3**
DL2 S **SKSac** **23 06 11.9 -2.1**
DL2 SS **SS** **23 11 33.4 +4.6**
DL2 pmax pmax
comp=Z,110nm,2.1s
DL2 pmax pmax
comp=Z,4μm,8.5s
DL2 LR LR
comp=Z,18μm,19.3s
DL2 LR LR
comp=Z,23μm,24.3s
DL2 LR LR
comp=Z,37μm,24.2s
K17K **Iditarod** **82.19 8** P **P** **22 55 52.8 -0.2**
baz=196
K17K S **SKSac** **23 06 12.6 -0.5**
baz=196
GAMB **Gambell** **82.20 2** P **P** **22 55 52.7 -0.3**
baz=183
GAMB S **SKSac** **23 06 10.8 -2.1**
baz=183
SUA **Susitna One** **82.21 12** IAMs_20 IAMs_20 23 24 37.5
comp=Z,31μm,22.0s
SUA **Susitna One** **82.21 12** P **P** **22 55 52.2 -1.2**
baz=203
SUA S **S** **23 06 09.5 +1.3**
baz=203
KAIM **Kayak Island** **82.22 15** IAMs_20 IAMs_20 23 24 27.5
comp=Z,28μm,20.0s
KAIM **Kayak Island** **82.22 15** P **P** **22 55 52.3 -0.9**
baz=209
KAIM S **SKSac** **23 06 11.3 -2.1**
baz=209
BMO **Blue Mountains** **82.28 37** ⇑P **P** **22 55 53.3 -0.8**
MFID **Camas Ranch** **82.33 39** IAMs_20 IAMs_20 23 25 01.1
comp=Z,31μm,21.0s
LNOR **Lincton Mounta** **82.33 36** P **P** **22 55 52.8 -1.5**
BNX **BinXian** **82.42 324** ⇓P **P** **22 55 53.9 -0.8**
BNX pP **pP** **22 55 58.3 +0.2**
BNX S **SKSac** **23 06 16.1 +0.7**
BNX pmax pmax
comp=Z,36nm,1.5s
BNX pmax pmax
comp=Z,3μm,9.5s
BNX LR LR
comp=Z,13μm,19.3s
BNX LR LR
comp=Z,25μm,22.5s
BNX LR LR
comp=Z,46μm,26.3s
CN2 **Changchun** **82.43 321** P **P** **22 55 54.5 -0.3**
CN2 pP sP 22 55 59.4 0.0
CN2 S **S** **23 06 09.5 -1.4**
CN2 pmax pmax
comp=Z,80nm,1.3s
CN2 pmax pmax
comp=Z,3μm,9.0s
CN2 LR LR
comp=Z,7μm,19.0s
CN2 LR LR
comp=Z,19μm,19.0s
CN2 LR LR
comp=Z,16μm,20.0s
GLI **Glacier Island** **82.43 13** IAmb IAmb 22 56 00.5
comp=Z,133nm,1.2s
GLI **Glacier Island** **82.43 13** P **P** **22 55 51.6 -2.8**
baz=207,SNR=13
GLI S **S** **23 06 11.5 +1.3**
baz=207
EYAK **Cordova Ski Ar** **82.44 14** IAmb IAmb 22 56 12.5
comp=Z,159nm,1.4s
EYAK IAMs_20 IAMs_20 23 24 28.5
comp=Z,34μm,22.0s
EYAK **Cordova Ski Ar** **82.44 14** P **P** **22 55 55.4 +1.0**
EYAK **Cordova Ski Ar** **82.44 14** P **P** **22 55 52.6 -1.8**
baz=208
EYAK S **S** **23 06 12.0 +1.7**
baz=208
DUG **Dugway, Tooele** **82.45 43** IAMs_20 IAMs_20 23 25 04.5
comp=Z,34μm,20.0s
FID **Port Fidalgo** **82.46 14** IAmb IAmb 22 56 08.0
comp=Z,215nm,1.6s
FID IAMs_20 IAMs_20 23 24 27.6
comp=Z,30μm,22.0s
J16K **Anvik River** **82.46 7** P **P** **22 55 53.9 -0.6**
baz=194
J16K S **SKSac** **23 06 16.3 +1.4**
baz=194
QIZ **Qiongzhong** **82.46 293** P **P** **22 55 56.5 +1.0**
QIZ S **S** **23 06 14.6 +2.4**
QIZ pmax pmax
comp=Z,1μm,6.7s
QIZ LR LR
comp=Z,14μm,20.6s
QIZ LR LR
comp=Z,6μm,17.9s
QIZ LR LR
comp=Z,18μm,26.1s

SNY	**Shenyang**	**82.47**	**319**	⇓P	**P**	22 55 54.8	-0.2	
SNY				S	**SKSac**	23 06 14.5	-1.4	
SNY				pmax	pmax			
	comp=Z,43nm,2.1s							
SNY				pmax	pmax			
	comp=Z,3µm,11.2s							
SNY				LR	LR			
	comp=Z,8µm,17.1s							
SNY				LR	LR			
	comp=Z,10µm,18.0s							
SNY				LR	LR			
	comp=Z,20µm,18.2s							
SIT	**Sitka**	**82.47**	**21**	P	**P**	22 55 54.2	-0.4	
	baz=218							
SIT				S	**SKSac**	23 06 16.2	+1.1	
	baz=218							
SUCK	**Suckling Hills**	**82.50**	**15**	IAMs_20	IAMs_20	23 24 04.1		
	comp=Z,28µm,21.0s							
U33K	**Whale Pass**	**82.50**	**22**	IAmb	IAmb	22 56 14.0		
	comp=Z,157nm,1.4s							
U33K	**Whale Pass**	**82.50**	**22**	P	**P**	22 55 54.1	-0.7	
	baz=220							
U33K				S	**SKSac**	23 06 15.4	+0.1	
	baz=220							
SKT	**Skwentna**	**82.54**	**11**	IAmb	IAmb	22 56 19.2		
	comp=Z,151nm,1.6s							
SKT	**Skwentna**	**82.54**	**11**	P	**P**	22 55 52.4	-2.6	
	baz=203,SNR=7.9							
SKT				S	**S**	23 06 11.2	-0.2	
	baz=203							
RAGM	**Ragged Mountai**	**82.56**	**15**	IAmb	IAmb	22 55 59.5		
	comp=Z,280nm,1.8s							
RAGM				IAMs_20	IAMs_20	23 24 50.5		
	comp=Z,34µm,20.0s							
M22K	**Willow**	**82.60**	**12**	IAMs_20	IAMs_20	23 24 47.6		
	comp=Z,32µm,22.0s							
M22K	**Willow**	**82.60**	**12**	P	**P**	22 55 53.6	-1.6	
	baz=204							
M22K				S	**S**	23 06 13.3	+1.5	
	baz=204							
L20K	**Farewell, AK**	**82.61**	**10**	P	**P**	22 55 53.7	-1.6	
	baz=200							
L20K				S	**SKSac**	23 06 15.2	-0.8	
	baz=200							
HMT	**Hamilton**	**82.61**	**15**	IAmb	IAmb	22 56 13.7		
	comp=Z,213nm,1.6s							
HMT				IAMs_20	IAMs_20	23 24 51.0		
	comp=Z,35µm,20.0s							
KNK	**Knik Glacier**	**82.62**	**13**	IAmb	IAmb	22 56 11.4		
	comp=Z,170nm,1.3s							
KNK	**Knik Glacier**	**82.62**	**13**	P	**P**	22 55 53.9	-1.5	
	baz=206,SNR=12							
KNK				S	**SKSac**	23 06 13.9	-2.2	
	baz=206							
PMR	**Palmer**	**82.65**	**12**	P	**P**	22 55 55.7	+0.3	
PMR	**Palmer**	**82.65**	**12**	P	**P**	22 55 54.6	-0.8	
	baz=205							
PMR				S	**S**	23 06 12.6	+0.3	
	baz=205							
BGLC	**Bering Glacier**	**82.67**	**16**	P	**P**	22 55 55.1	-0.5	
	baz=210							
BGLC				S	**SKSac**	23 06 15.0	-1.3	
	baz=210							
D08A	**Wollman Farm,**	**82.69**	**35**	IAmb	IAmb	22 55 58.9		
	comp=Z,141nm,1.3s							
MA2	**Magadan**	**82.71**	**343**	P	**P**	22 55 54.6	-1.2	
MA2				IAmb	IAmb	22 56 01.4		
	comp=Z,112nm,1.3s							
MA2				IAMs_20	IAMs_20	23 26 19.1		
	comp=Z,46µm,22.0s							
MA2	**Magadan**	**82.71**	**343**	P	**P**	22 55 56.7	+0.8	
	comp=Z,22nm,0.8s,baz=160,slow=11,SNR=4.8							
MA2				LR	LR	23 26 52.0		
	comp=Z,44µm,21.4s,baz=152,slow=32 comp=Z,22nm,0.8s							
MA2	**Magadan**	**82.71**	**343**	P	**P**	22 55 57.8	+1.9	
MA2	**Magadan**	**82.71**	**343**	*de*P	**P**	22 55 54.7	-1.2	
MA2				pmax	pmax			
	comp=Z,126nm,1.7s							
J17K	**VABM Dome**	**82.75**	**7**	P	**P**	22 55 55.0	-1.0	
	baz=195							
J17K				S	**S**	23 06 18.7	+5.3	
	baz=195							
BERG	**Berg Lake**	**82.80**	**15**	IAMs_20	IAMs_20	23 24 57.2		
	comp=Z,35µm,21.0s							
SNH	**Sunshine Point**	**82.84**	**16**	IAmb	IAmb	22 56 15.6		
	comp=Z,212nm,1.2s							
SNH				IAMs_20	IAMs_20	23 24 36.9		
	comp=Z,33nm,21.0s							
GHO	**Glory Hole Cre**	**82.85**	**12**	IAmb	IAmb	22 56 46.1		
	comp=Z,243nm,1.7s							
Q16A	**Castle Valley**	**82.87**	**45**	IAmb	IAmb	22 56 14.7		
	comp=Z,148nm,1.4s							
S31K	**Pelican**	**82.90**	**20**	IAMs_20	IAMs_20	23 27 54.6		
	comp=Z,22µm,19.0s							
S31K	**Pelican**	**82.90**	**20**	P	**P**	22 55 55.8	-1.0	
	baz=217							
S31K				S	**SKSac**	23 06 19.3	+1.4	
	baz=217							
KRJI	**Kerinci**	**82.94**	**270**	P	**P**	22 55 58.7	+0.4	
DIV	**Divide**	**82.95**	**14**	IAmb	IAmb	22 56 15.2		
	comp=Z,201nm,1.5s							
DIV				IAMs_20	IAMs_20	23 24 56.0		
	comp=Z,25µm,21.0s							
F10A	**Beach Ranch, E**	**82.98**	**37**	IAmb	IAmb	22 55 60.0		
	comp=Z,154nm,1.2s							
SML	**Sawmill**	**83.00**	**13**	IAmb	IAmb	22 56 01.6		
	comp=Z,260nm,1.9s							
SML	**Sawmill**	**83.00**	**13**	P	**P**	22 55 55.5	-1.9	
	baz=206							
SML				S	**SKSac**	23 06 17.7	-1.0	
	baz=206							
WRAK	**Wrangell Islan**	**83.02**	**22**	IAmb	IAmb	22 56 00.3		
	comp=Z,153nm,1.5s							
WRAK	**Wrangell Islan**	**83.02**	**22**	P	**P**	22 55 56.2	-1.2	
	baz=220,SNR=5.8							
WRAK				S	**S**	23 06 22.2	+5.9	
	baz=220							
I17K	**Unalakleet**	**83.04**	**6**	P	**P**	22 55 57.2	-0.2	
	baz=194							
I17K				S	**S**	23 06 21.5	+5.3	
	baz=194							
S32K	**Killisnoo**	**83.05**	**21**	IAmb	IAmb	22 56 00.3		
	comp=Z,149nm,1.8s							
S32K	**Killisnoo**	**83.05**	**21**	P	**P**	22 55 56.4	-1.2	
	baz=218							
S32K				S	**S**	23 06 21.0	+4.4	
	baz=218							
MESA	**MESA**	**83.06**	**16**	IAMs_20	IAMs_20	23 24 32.9		
	comp=Z,35µm,22.0s							
MESA	**MESA**	**83.06**	**16**	P	**P**	22 55 57.3	-0.7	
	baz=212							
MESA				S	**S**	23 06 21.6	+4.5	
	baz=212							
WAX	**Waxell Ridge**	**83.06**	**16**	IAMs_20	IAMs_20	23 25 04.9		
	comp=Z,37µm,21.0s							
BMRM	**Bremner River**	**83.08**	**15**	IAMs_20	IAMs_20	23 24 58.4		
	comp=Z,23µm,20.0s							
BMRM	**Bremner River**	**83.08**	**15**	P	**P**	22 55 56.9	-0.9	
	baz=209,SNR=19							
BMRM				S	**SKSac**	23 06 19.0	-0.3	
	baz=209							
T33K	**Petersburg**	**83.10**	**22**	P	**P**	22 55 58.0	+0.1	
	baz=220							
T33K				S	**S**	23 06 23.1	+6.0	
	baz=220							
J18K	**Innoko River**	**83.12**	**8**	IAmb	IAmb	22 56 15.7		
	comp=Z,263nm,1.6s							
J18K	**Innoko River**	**83.12**	**8**	P	**P**	22 55 58.0	+0.1	
	baz=198,SNR=30							
J18K				S	**S**	23 06 23.3	+6.1	
	baz=198							
M23K	**Glacier View**	**83.12**	**13**	P	**P**	22 55 56.7	-1.3	
	baz=206							
M23K				S	**SKSac**	23 06 20.1	+0.7	
	baz=206							
CUT	**Chulitna**	**83.17**	**11**	IAMs_20	IAMs_20	23 25 39.7		
	comp=Z,26µm,22.0s							
CUT	**Chulitna**	**83.17**	**11**	P	**P**	22 55 56.8	-1.4	
	baz=204,SNR=22							
CUT				S	**SKSac**	23 06 20.3	+0.8	
	baz=204							
PLID	**Pearl Lake**	**83.18**	**38**	IAmb	IAmb	22 56 03.9		
	comp=Z,222nm,1.8s							
PLID				IAMs_20	IAMs_20	23 24 58.6		
	comp=Z,44µm,22.0s							
MG05	**Puerto Natales**	**83.22**	**142**	IAMs_20	IAMs_20	23 22 60.0		
	comp=Z,37µm,22.0s							
SCM	**Sheep Creek Mo**	**83.24**	**13**	IAmb	IAmb	22 56 16.0		
	comp=Z,224nm,1.5s							
SCM	**Sheep Creek Mo**	**83.24**	**13**	P	**P**	22 55 58.0	-0.6	
	baz=206,SNR=9.7							
SCM				S	**SKSac**	23 06 21.6	+1.3	
	baz=206							
KLU	**Klutina**	**83.24**	**14**	IAmb	IAmb	22 56 26.4		
	comp=Z,142nm,1.5s							
KLU				IAMs_20	IAMs_20	23 25 26.6		
	comp=Z,22µm,20.0s							
KLU	**Klutina**	**83.24**	**14**	P	**P**	22 55 57.8	-0.8	
	baz=208,SNR=12							
KLU				S	**SKSac**	23 06 21.1	+0.8	
	baz=208							
CRQM	**Cirque**	**83.26**	**15**	P	**P**	22 55 57.7	-1.2	
CRQM				IAmb	IAmb	22 56 17.3		
	comp=Z,301nm,1.8s							
CRQM				IAMs_20	IAMs_20	23 25 22.2		
	comp=Z,34µm,21.0s							
HLID	**Hailey**	**83.26**	**40**	IAmb	IAmb	22 56 05.1		
	comp=Z,99nm,1.1s							
HLID				IAMs_20	IAMs_20	23 25 29.9		
	comp=Z,28µm,21.0s							
CRQE	**Cirque**	**83.27**	**15**	P	**P**	22 55 58.5	-0.4	
	baz=210,SNR=7.9							
CRQE				S	**S**	23 06 22.6	+3.6	
	baz=210							
YAH	**Yahtse**	**83.28**	**16**	IAmb	IAmb	22 56 17.9		
	comp=Z,222nm,1.4s							
YAH				IAMs_20	IAMs_20	23 24 29.4		
	comp=Z,36µm,21.0s							
PPLA	**Purkeypile**	**83.28**	**10**	IAmb	IAmb	22 56 50.8		
	comp=Z,273nm,1.9s							
PPLA	**Purkeypile**	**83.28**	**10**	P	**P**	22 55 55.8	-3.1	
	baz=202							
PPLA				S	**S**	23 06 18.6	-0.4	
	baz=202							
ANM	**Nome**	**83.29**	**4**	P	**P**	22 55 57.8	-1.0	
	baz=189							
ANM				S	**SKSac**	23 06 21.9	+1.6	
	baz=189							
ISLE	**Juniper Island**	**83.33**	**16**	IAmb	IAmb	22 56 24.8		
	comp=Z,212nm,1.4s							
ISLE				IAMs_20	IAMs_20	23 24 52.8		
	comp=Z,35µm,21.0s							
PNL	**Peninsula**	**83.33**	**17**	P	**P**	22 56 00.0	+0.9	
PNL	**Peninsula**	**83.33**	**17**	P	**P**	22 55 57.7	-1.4	
	baz=214							
PNL				S	**S**	23 06 22.9	+3.4	
	baz=214							
TGL	**Tana Glacier**	**83.33**	**15**	IAmb	IAmb	22 56 24.9		
	comp=Z,210nm,1.5s							
TGL				IAMs_20	IAMs_20	23 25 14.0		
	comp=Z,33µm,21.0s							
LLLB	**Lillooet**	**83.38**	**31**	IAmb	IAmb	22 56 20.3		
	comp=Z,204nm,1.9s							
K20K	**Telida**	**83.40**	**9**	P	**P**	22 55 58.5	-0.9	
	baz=200							
K20K				S	**S**	23 06 23.8	+3.8	
	baz=200							
SRU	**San Rafael Swe**	**83.40**	**45**	IAmb	IAmb	22 56 03.4		
	comp=Z,182nm,1.3s							
R31K	**City Hall, Gus**	**83.42**	**20**	P	**P**	22 55 59.4	-0.1	
	baz=217							
R31K				S	**S**	23 06 25.2	+4.9	
	baz=217							
P17A	**Butcher Ranch,**	**83.44**	**45**	IAmb	IAmb	22 56 03.9		
	comp=Z,144nm,1.3s							
WHN	**Wuhan**	**83.44**	**305**	⇓P	**P**	22 56 01.0	+0.7	
WHN				S	**S**	23 06 29.3	+7.6	
WHN				pmax	pmax			
	comp=Z,630nm,1.9s							
WHN				pmax	pmax			
	comp=Z,7µm,6.1s							
WHN				LR	LR			
	comp=Z,20µm,21.2s							
WHN				LR	LR			
	comp=Z,24µm,17.2s							
WHN				LR	LR			
	comp=Z,32µm,19.7s							
PCA	**Pinnacle**	**83.45**	**17**	IAMs_20	IAMs_20	23 25 38.2		
	comp=Z,36µm,20.0s							
PINM	**Pinnacle**	**83.45**	**17**	P	**P**	22 55 58.9	-0.9	
	baz=213							
PINM				S	**SKSac**	23 06 22.6	+0.9	
	baz=213							
GO09	**Cerro Castillo**	**83.47**	**142**	IAMs_20	IAMs_20	23 23 33.5		
	comp=Z,40µm,21.0s							
VHRN	**Van Horn**	**83.50**	**55**	IAmb	IAmb	22 56 05.3		
	comp=Z,190nm,1.7s							
TABL	**Table Mountain**	**83.50**	**16**	P	**P**	22 55 59.0	-1.2	
TABL				IAmb	IAmb	22 56 18.7		
	comp=Z,144nm,1.2s							
TABL				IAMs_20	IAMs_20	23 24 58.4		
	comp=Z,35µm,20.0s							
BCPM	**Bancas Point**	**83.50**	**17**	IAMs_20	IAMs_20	23 26 10.5		
	comp=Z,35µm,20.0s							
U35K	**Hyder**	**83.50**	**24**	P	**P**	22 55 59.3	-0.7	
	baz=223							
U35K				S	**S**	23 06 26.9	+5.7	
	baz=223							
CNSH	**ChangSha**	**83.55**	**302**	P	**P**	22 55 59.8	-1.1	
CNSH				S	**S**	23 06 22.4	-0.5	
CNSH				pmax	pmax			
	comp=Z,2µm,6.7s							
CNSH				LR	LR			
	comp=Z,13µm,20.9s							
CNSH				LR	LR			
	comp=Z,18µm,26.9s							
CNSH				LR	LR			
	comp=Z,33µm,25.5s							
JLU	**Jordanelle**	**83.55**	**43**	IAmb	IAmb	22 56 08.6		
	comp=Z,115nm,1.3s							
GRNC	**Granite Creek**	**83.59**	**16**	IAmb	IAmb	22 56 19.1		
	comp=Z,197nm,1.4s							
GRNC				IAMs_20	IAMs_20	23 25 00.8		
	comp=Z,33µm,21.0s							
VRDI	**Verde Repeater**	**83.59**	**15**	IAmb	IAmb	22 56 26.9		
	comp=Z,255nm,1.7s							
VRDI				IAMs_20	IAMs_20	23 25 42.7		
	comp=Z,25µm,21.0s							
MNTX	**Cornudas Mount**	**83.59**	**54**	IAmb	IAmb	22 56 16.4		
	comp=Z,190nm,1.6s							
MNTX				IAMs_20	IAMs_20	23 25 06.3		
	comp=Z,41µm,22.0s							
H16K	**Elim**	**83.62**	**6**	P	**P**	22 55 59.7	-0.8	
	baz=192,SNR=11							
H16K				S	**S**	23 06 28.2	+6.0	
	baz=192							
N25K	**Chitina, Valde**	**83.64**	**14**	IAmb	IAmb	22 56 19.1		
	comp=Z,183nm,1.4s							
N25K				IAMs_20	IAMs_20	23 25 18.3		
	comp=Z,26µm,22.0s							
N25K	**Chitina, Valde**	**83.64**	**14**	P	**P**	22 55 59.7	-1.1	
	baz=209,SNR=23							
N25K				S	**SKSac**	23 06 25.0	+2.1	
	baz=209							
GLB	**Gilahina Butte**	**83.69**	**15**	IAmb	IAmb	22 56 19.2		
	comp=Z,103nm,1.3s							
R32K	**Eaglecrest**	**83.70**	**20**	P	**P**	22 56 00.3	-0.7	
	baz=218							
M24K	**Tolsona, Glenn**	**83.73**	**13**	P	**P**	22 56 00.7	-0.4	
	baz=208,SNR=12							
M24K				S	**S**	23 06 26.8	+3.3	
	baz=208							
JIS	**Juneau Island**	**83.75**	**20**	P	**P**	22 56 02.8	+1.6	
BNM	**Barren Site**	**83.76**	**51**	P	**P**	22 56 01.3	-1.0	
J19K	**Poorman**	**83.77**	**9**	P	**P**	22 56 00.6	-0.7	
	baz=199							
J19K				S	**S**	23 06 28.0	+4.3	
	baz=199							
P29M	**Windy Craggy**	**83.78**	**18**	IAmb	IAmb	22 56 06.7		
	comp=Z,262nm,1.8s							
P29M				IAMs_20	IAMs_20	23 26 06.9		
	comp=Z,33µm,20.0s							
P29M	**Windy Craggy**	**83.78**	**18**	P	**P**	22 56 01.1	-0.3	
	baz=216							
P29M				S	**S**	23 06 28.4	+4.4	
	baz=216							
G15K	**Niukluk**	**83.82**	**5**	P	**P**	22 56 00.9	-0.6	
	baz=191							
G15K				S	**S**	23 06 28.3	+4.2	
	baz=191							
WAT6	**Susitna Watana**	**83.83**	**12**	P	**P**	22 56 00.3	-1.5	
	baz=206,SNR=33							
WAT6				S	**S**	23 06 25.0	+0.4	
	baz=206							
MCARA	**McCarthy VSAT**	**83.83**	**15**	P	**P**	22 56 00.6	-1.0	
	baz=211,SNR=6.5							
MCARA				S	**S**	23 06 25.0	+0.7	
	baz=211							
BESE	**Bessie Mountai**	**83.83**	**20**	IAmb	IAmb	22 56 04.5		
	comp=Z,205nm,1.6s							
P18A	**Preston Nutter**	**83.85**	**45**	IAmb	IAmb	22 56 10.4		
	comp=Z,120nm,1.3s							
MVCO	**Mesa Verde**	**83.86**	**48**	IAmb	IAmb	22 56 17.4		
	comp=Z,179nm,1.7s							
MVCO				IAMs_20	IAMs_20	23 24 57.9		
	comp=Z,34µm,22.0s							
PV05	**Paradox Valley**	**83.86**	**47**	IAmb	IAmb	22 56 06.5		
	comp=Z,184nm,1.3s							
LOGN	**Logan Glacier**	**83.86**	**16**	IAmb	IAmb	22 56 20.6		
	comp=Z,132nm,1.3s							
LOGN				IAMs_20	IAMs_20	23 25 20.0		
	comp=Z,34µm,21.0s							
WAT1	**Susitna Watana**	**83.89**	**12**	P	**P**	22 56 00.6	-1.3	
	baz=205							
WAT1				S	**S**	23 06 27.2	+2.2	
	baz=205							
BARN	**Barnard Glacie**	**83.89**	**16**	IAMs_20	IAMs_20	23 24 59.8		
	comp=Z,29µm,21.0s							
CTG	**Chitna Glacier**	**83.89**	**16**	P	**P**	22 56 01.0	-1.2	
	baz=212,SNR=9.5							
CTG				S	**S**	23 06 28.1	+2.7	
	baz=212							
CTGM	**Chitina Glacie**	**83.90**	**16**	IAmb	IAmb	22 56 20.6		
	comp=Z,156nm,1.4s							
CTGM				IAMs_20	IAMs_20	23 25 10.9		
	comp=Z,31µm,21.0s							
TX31	**Lajitas Ar. Si**	**83.90**	**56**	IAmb	IAmb	22 56 10.2		
	comp=Z,273nm,1.7s							
TXAR	**Lajitas Array**	**83.90**	**56**	P	**P**	22 56 02.8	-0.1	
TXAR	**Lajitas Array**	**83.90**	**56**	P	**P**	22 56 03.2	+0.3	
	comp=Z,27nm,1.2s,baz=223,slow=6.8,SNR=36							
TXAR				PKKPbc	**PKKPbc**	23 14 19.1	-0.1	
	comp=Z,0.9nm,1.0s,baz=39,slow=5.0,SNR=4.9							
TXAR				LR	LR	23 25 17.6		
	comp=Z,35µm,22.0s,baz=250,slow=30 comp=Z,27nm,1.2s							
TIA	**Tai'an**	**83.94**	**311**	P	**P**	22 56 02.3	-0.5	
TIA				S	**S**	23 06 30.6	+4.0	
TIA				pmax	pmax			
	comp=Z,18nm,1.1s							
TIA				pmax	pmax			
	comp=Z,3µm,7.9s							
TIA				LR	LR			
	comp=Z,13µm,23.7s							
TIA				LR	LR			
	comp=Z,23µm,24.7s							
TIA				LR	LR			
	comp=Z,37µm,25.0s							
BSUT	**Blindstream Ca**	**83.97**	**44**	IAmb	IAmb	22 56 06.4		
	comp=Z,111nm,1.2s							
O28M	**Mount Upton**	**84.03**	**16**	IAmb	IAmb	22 56 05.3		
	comp=Z,149nm,1.8s							
O28M				IAMs_20	IAMs_20	23 25 56.6		
	comp=Z,33µm,20.0s							
O28M	**Mount Upton**	**84.03**	**16**	P	**P**	22 56 01.1	-1.9	
	baz=213,SNR=5.3							
O28M				S	**S**	23 06 29.2	+2.2	
	baz=213							
PV17	**East Wray Mesa**	**84.05**	**46**	IAmb	IAmb	22 56 06.8		
	comp=Z,146nm,1.3s							
PLBC	**Pleasant Camp**	**84.05**	**19**	P	**P**	22 56 01.0	-1.8	
	baz=217,SNR=13							
PLBC				S	**S**	23 06 30.2	+3.5	
	baz=217							
PV14	**Lion Creek, Pa**	**84.06**	**46**	IAmb	IAmb	22 56 06.8		
	comp=Z,138nm,1.2s							
O29M	**Mount Kennedy**	**84.09**	**17**	IAmb	IAmb	22 56 22.2		
	comp=Z,123nm,1.4s							
O29M				IAMs_20	IAMs_20	23 26 29.2		
	comp=Z,32µm,20.0s							
O29M	**Mount Kennedy**	**84.09**	**17**	P	**P**	22 56 02.9	-0.3	
	baz=215							
O29M				S	**S**	23 06 30.4	+3.1	
	baz=215							
PV16	**Nyswonger Mesa**	**84.10**	**46**	IAmb	IAmb	22 56 07.1		
	comp=Z,154nm,1.3s							
KTH	**Kantishna Hill**	**84.11**	**11**	P	**P**	22 56 01.7	-1.3	
KTH				IAmb	IAmb	22 56 26.9		
	comp=Z,122nm,1.4s							
PPSI	**Pulau Pagai**	**84.11**	**269**	P	**P**	22 56 05.5	+1.4	
	comp=Z,5µmcomp=Z,134nm,1.1s							
PV03	**Paradox Valley**	**84.12**	**47**	IAmb	IAmb	22 56 07.2		
	comp=Z,158nm,1.3s							
TRF	**Thorofare Moun**	**84.13**	**11**	IAMs_20	IAMs_20	23 29 35.9		
	comp=Z,35µm,20.0s							
TRF	**Thorofare Moun**	**84.13**	**11**	P	**P**	22 56 01.2	-2.0	
	baz=204,SNR=34							
TRF				S	**S**	23 06 28.4	+0.8	
	baz=204							
TNA	**Tin City**	**84.13**	**3**	P	**P**	22 56 02.3	-0.7	
	baz=187							
TNA				S	**S**	23 06 31.2	+4.1	
	baz=187							
F14K	**Arctic Creek**	**84.13**	**4**	P	**P**	22 56 01.7	-1.3	
	baz=188							
F14K				S	**S**	23 06 31.7	+4.4	
	baz=188							
PV04	**Paradox Valley**	**84.15**	**46**	IAmb	IAmb	22 56 09.9		
	comp=Z,125nm,1.1s							
H17K	**Granite Mounta**	**84.15**	**7**	P	**P**	22 56 01.6	-1.6	
	baz=195,SNR=18							
H17K				S	**S**	23 06 32.6	+5.2	
	baz=195							
MAW	**Mawson**	**84.16**	**199**	P	**P**	22 56 03.9	+0.6	
	comp=Z,75nm,1.2s,baz=129,slow=6.2,SNR=23							
MAW				LR	LR	23 33 54.2		
	comp=Z,26µm,18.4s,baz=118,slow=36 comp=Z,75nm,1.2s							
J20K	**Nowinta River**	**84.16**	**9**	P	**P**	22 56 02.2	-1.0	
	baz=200							
J20K				S	**S**	23 06 31.3	+3.7	
	baz=200							
CHUM	**Lake Minchumin**	**84.18**	**10**	P	**P**	22 56 01.0	-2.3	
	baz=202,SNR=20							
CHUM				S	**S**	23 06 26.8	-0.9	
	baz=202							
COCO	**West Island**	**84.20**	**259**	P	**P**	22 56 00.6	-4.0	
T35M	**Bob Quinn**	**84.20**	**23**	IAmb	IAmb	22 56 12.1		
	comp=Z,124nm,1.6s							
T35M	**Bob Quinn**	**84.20**	**23**	P	**P**	22 56 03.2	-0.4	
	baz=222,SNR=13							
T35M				S	**S**	23 06 34.6	+6.2	
	baz=222							
HARP	**HAARP**	**84.21**	**14**	P	**P**	22 56 02.2	-1.3	
	baz=208							
HARP				S	**S**	23 06 30.6	+2.4	
	baz=208							
PV01	**Paradox Valley**	**84.25**	**47**	IAmb	IAmb	22 56 07.8		
	comp=Z,105nm,1.2s							
ABQ	**Albuquerque**	**84.25**	**50**	IAmb	IAmb	22 56 11.0		
	comp=Z,162nm,1.4s							
ANMO	**Albuquerque**	**84.25**	**50**	P	**P**	22 56 05.0	+0.3	
ANMO				IAmb	IAmb	22 56 11.0		
	comp=Z,160nm,1.4s							
ANMO	**Albuquerque**	**84.25**	**50**	IAMs_20	IAMs_20	23 26 21.6		
	comp=Z,33µm,20.0s							
ANMO	**Albuquerque**	**84.25**	**50**	LR	LR	23 26 33.4		
	comp=Z,41µm,19.6s,baz=330,slow=31							
ANMO	**Albuquerque**	**84.25**	**50**	*ce*P	**P**	22 56 04.5	-0.2	
ANMO				pmax	pmax			
	comp=Z,98nm,1.3s							
ANMO				MLR	MLR			
	comp=Z,13µm,17.0s							
USHA	**Ushuaia**	**84.26**	**146**	LR	LR	23 26 26.5		
	comp=Z,13µm,20.4s,baz=246,slow=30							
PDSI	**Padang**	**84.26**	**271**	P	**P**	22 56 03.4	-1.6	
BCYI	**Bear Canyon**	**84.28**	**40**	IAmb	IAmb	22

comp=Z,28µm,22.0s
G16K Koyuk River 84.35 5 IAmb IAmb 22 56 16.4
comp=Z,157nm,1.3s
G16K Koyuk River 84.35 5 P **P** **22 56 03.0 -1.1**
baz=192,SNR=14
G16K S **S** **23 06 34.1 +4.7**
baz=192
SKAG Skagway 84.38 19 P **P** **22 56 06.1 +1.7**
SKAG Skagway 84.38 19 P **P** **22 56 04.1 -0.3**
baz=218,SNR=12
SKAG S **S** **23 06 34.1 +4.3**
baz=218
NEW Newport 84.39 35 IAMs_20 IAMs_20 23 31 45.5
comp=Z,25µm,18.0s
NEW Newport 84.39 35 LR LR 23 28 12.8
comp=Z,12µm,18.9s,baz=234,slow=32
NEW Newport 84.39 35 P **P** **22 56 04.3 -0.5**
P30M Million Dollar 84.41 18 P **P** **22 56 04.1 -0.6**
baz=216
P30M S **S** **23 06 33.4 +3.0**
baz=216
PV15 Paradox Valley 84.41 47 IAmb IAmb 22 56 20.0
comp=Z,168nm,1.4s
GULI GuiLin 84.46 299 P **P** **22 56 06.9 +1.3**
GULI S **S** **23 06 36.2 +4.0**
GULI pmax pmax
comp=Z,41nm,2.1s
GULI LR LR
comp=Z,8µm,18.1s
GULI LR LR
comp=Z,9µm,22.1s
GULI LR LR
comp=Z,25µm,29.9s
F15K North Star Dit 84.48 4 IAmb IAmb 22 56 09.5
comp=Z,265nm,1.8s
F15K North Star Dit 84.48 4 P **P** **22 56 03.6 -1.2**
baz=190
F15K S **S** **23 06 35.2 +4.5**
baz=190
H18K Honhosa River 84.53 7 P **P** **22 56 03.8 -1.3**
H18K Honhosa River 84.53 7 P **P** **22 56 03.3 -1.8**
baz=196
H18K S **S** **23 06 36.8 +5.5**
baz=196
YUK8 Steele Glacier 84.58 16 P **P** **22 56 04.6 -1.1**
baz=214,SNR=9.3
YUK8 S **S** **23 06 34.7 +2.3**
baz=214
S34M Telegraph Cree 84.58 22 IAmb IAmb 22 56 13.7
comp=Z,106nm,1.1s
S34M Telegraph Cree 84.58 22 P **P** **22 56 04.7 -0.7**
baz=222,SNR=27
S34M S **S** **23 06 38.3 +6.3**
baz=222
BPAW Bear Paw Mtn. 84.60 10 IAmb IAmb 22 56 32.4
comp=Z,133nm,1.7s
BPAW Bear Paw Mtn. 84.60 10 P **P** **22 56 02.7 -2.8**
baz=203
BPAW S **S** **23 06 32.2 +0.1**
baz=203
G17K Kiwalik Mounta 84.62 6 P **P** **22 56 04.2 -1.4**
baz=194,SNR=27
G17K S **S** **23 06 36.8 +4.7**
baz=194
MCK McKinley 84.63 11 IAMs_20 IAMs_20 23 26 46.3
comp=Z,26µm,21.0s
MCK McKinley 84.63 11 P **P** **22 56 04.2 -1.5**
baz=205,SNR=36
MCK S **S** **23 06 34.1 +1.7**
baz=205
MG01 Puerto William 84.64 146 IAMs_20 IAMs_20 23 23 32.1
comp=Z,27µm,22.0s
PAX Paxson 84.65 13 IAmb IAmb 22 56 31.0
comp=Z,174nm,1.6s
PAX Paxson 84.65 13 P **P** **22 56 04.2 -1.6**
baz=208,SNR=21
PAX S **S** **23 06 34.2 +1.5**
baz=208
MG02 Cerro Sombrero 84.66 144 IAMs_20 IAMs_20 23 23 40.9
comp=Z,34µm,22.0s
YUK6 Outpost Mounta 84.68 17 P **P** **22 56 05.3 -0.9**
baz=215,SNR=22
YUK6 S **S** **23 06 38.8 +5.4**
baz=215
I20K Naaghedeneel 84.70 9 P **P** **22 56 05.1 -0.8**
baz=200,SNR=11
I20K S **S** **23 06 37.2 +4.3**
baz=200
M26K Nabesna, AK 84.71 14 IAmb IAmb 22 56 24.7
comp=Z,241nm,1.5s
M26K Nabesna, AK 84.71 14 P **P** **22 56 04.7 -1.4**
baz=210
M26K S **S** **23 06 35.9 +2.5**
baz=210
RDMU Red Mountain 84.77 44 IAmb IAmb 22 56 09.9
comp=Z,88nm,1.2s
AY03 Cochrane 84.80 138 IAMs_20 IAMs_20 23 24 31.8
comp=Z,47µm,22.0s
HYT Haines Junctio 84.82 18 P **P** **22 56 05.8 -1.0**
HYT Haines Junctio 84.82 18 P **P** **22 56 06.2 -0.6**
baz=216,SNR=16
HYT S **S** **23 06 39.1 +4.5**
baz=216
AHID Auburn Hatcher 84.89 42 IAmb IAmb 22 56 10.6
comp=Z,142nm,1.3s
AHID IAMs_20 IAMs_20 23 26 41.0
comp=Z,35µm,21.0s
H03S2 Juan Fernandez 84.91 124 T T 00 30 34.4
baz=250,slow=75
H03S1 Juan Fernandez 84.93 124 T T 00 30 34.7
baz=250,slow=75
H03S3 Juan Fernandez 84.93 124 T T 00 30 35.5
baz=250,slow=75
YUK4 Talbot Arm 84.93 17 P **P** **22 56 06.7 -0.8**
baz=215,SNR=6.4
YUK4 S **S** **23 06 41.1 +5.2**
baz=215
BWN Browne 84.94 11 IAMs_20 IAMs_20 23 30 11.2
comp=Z,33µm,19.0s
M27K Edge Creek, AK 84.94 15 P **P** **22 56 07.0 -0.4**
baz=212
M27K S **S** **23 06 39.7 +3.9**
baz=212
Q32M Nakina River 84.98 21 P **P** **22 56 07.3 -0.4**
baz=220
Q32M S **S** **23 06 41.2 +4.8**
baz=220
P32M Atlin 84.99 20 IAmb IAmb 22 56 12.8
comp=Z,212nm,1.8s
P32M Atlin 84.99 20 P **P** **22 56 06.8 -0.8**
baz=219,SNR=10.0
P32M S **S** **23 06 41.3 +5.1**
baz=219
MENT Mentasta 85.01 14 IAmb IAmb 22 56 26.4
comp=Z,192nm,1.5s
MENT Mentasta 85.01 14 P **P** **22 56 08.2 +0.6**
HEH HeiHe 85.11 327 *eP* **P** **22 56 06.8 -1.5**
HEH pP **pP** **22 56 09.6 -2.1**
HEH S **S** **23 06 39.7 +2.1**
HEH pmax pmax
comp=Z,4µm,9.5s
HEH LR LR
comp=Z,12µm,19.0s
HEH LR LR
comp=Z,12µm,19.2s
HEH LR LR
comp=Z,36µm,19.7s
H19K Roundabout Mou 85.12 8 P **P** **22 56 07.0 -1.0**
baz=198,SNR=40
H19K S S 23 06 47.1 +10
baz=198
L26K Log Cabin Wild 85.17 14 IAmb IAmb 22 56 27.1
comp=Z,164nm,1.5s
L26K Log Cabin Wild 85.17 14 P **P** **22 56 07.4 -1.0**
baz=210,SNR=15
L26K S **S** **23 06 42.7 +4.9**
baz=210
SEY Seymchan 85.18 346 P **P** **22 56 07.0 -1.4**
comp=Z,32nm,0.8s,baz=134,slow=6.2,SNR=16
SEY LR LR 23 27 31.0
comp=Z,23µm,21.5s,baz=154,slow=31
comp=Z,32nm,0.8s
SEY Seymchan 85.18 346 *eP* **P** **22 56 05.9 -2.5**
SEY pmax pmax
comp=Z,235nm,1.7s
O30N Mendenhall 85.19 18 IAmb IAmb 22 56 35.7
comp=Z,220nm,1.6s
O30N IAMs_20 IAMs_20 23 27 52.2
comp=Z,33µm,20.0s
O30N Mendenhall 85.19 18 P **P** **22 56 07.5 -1.1**
baz=217,SNR=17
O30N S **S** **23 06 43.2 +5.1**
baz=217
G18K Tagagawik 85.21 7 P **P** **22 56 07.2 -1.3**
G18K Tagagawik 85.21 7 P **P** **22 56 07.5 -1.0**
baz=196
G18K S **S** **23 06 40.5 +2.5**
baz=196
S22A 4UR Ranch, Cre 85.28 48 IAmb IAmb 22 56 16.1
comp=Z,121nm,1.3s
S22A IAMs_20 IAMs_20 23 26 05.6
comp=Z,36µm,21.0s
H20K Anotleneega Mo 85.30 8 P **P** **22 56 08.5 -0.5**
baz=199,SNR=34
H20K S **S** **23 06 44.6 +5.7**
baz=199
DLMT Dillon 85.33 39 IAMs_20 IAMs_20 23 27 10.7
comp=Z,37µm,20.0s
MSO Missoula 85.34 37 IAmb IAmb 22 56 11.9
comp=Z,131nm,1.5s
MSO IAMs_20 IAMs_20 23 26 37.9
comp=Z,26µm,21.0s
TPAW Teton Pass 85.36 41 IAmb IAmb 22 56 15.7
comp=Z,127nm,1.3s
TPAW IAMs_20 IAMs_20 23 27 16.3
comp=Z,23µm,20.0s
DLBC Dease Lake 85.36 22 LR LR 23 31 42.2
comp=Z,9µm,18.1s,baz=216,slow=34
DLBC Dease Lake 85.36 22 P **P** **22 56 08.7 -0.9**
baz=222,SNR=15
DLBC S **S** **23 06 45.5 +5.6**
baz=222
SAND Sanderson 85.38 56 IAmb IAmb 22 56 25.4
comp=Z,167nm,1.6s
FXWY Fox Creek 85.38 41 IAmb IAmb 22 56 13.4
comp=Z,126nm,1.4s
FXWY IAMs_20 IAMs_20 23 26 05.1
comp=Z,22µm,21.0s
NEA2 Nenana 85.39 11 IAMs_20 IAMs_20 23 30 24.4
comp=Z,31µm,19.0s
NEA2 Nenana 85.39 11 P **P** **22 56 07.4 -2.0**
baz=205,SNR=18
NEA2 S **S** **23 06 39.9 +0.1**
baz=205
SISI Saibi 85.43 270 P **P** **22 56 10.6 -0.2**
comp=Z,3µmcomp=Z,46nm,1.4s
I21K Tanana 85.44 10 P **P** **22 56 08.4 -1.2**
baz=202,SNR=22
I21K S **S** **23 06 40.9 +0.7**
baz=202
O20A White River Ci 85.44 45 IAmb IAmb 22 56 26.5
comp=Z,116nm,1.3s
O20A IAMs_20 IAMs_20 23 26 16.8
comp=Z,45µm,22.0s
IPM Ipoh 85.45 276 P **P** **22 56 10.3 -0.6**
N30M Aishikik Lake 85.46 17 IAmb IAmb 22 56 36.0
comp=Z,151nm,1.6s
N30M IAMs_20 IAMs_20 23 27 13.4
comp=Z,32µm,21.0s
N30M Aishikik Lake 85.46 17 P **P** **22 56 08.8 -1.1**
baz=216
N30M S **S** **23 06 44.6 +3.8**
baz=216
MNHN Monahans 85.46 55 IAmb IAmb 22 56 23.8
comp=Z,115nm,1.3s
RIDG Independent Ri 85.46 13 P **P** **22 56 08.3 -1.6**
baz=209,SNR=8.1
RIDG S **S** **23 06 43.9 +3.2**
baz=209
SNOW Snow King Moun 85.46 41 IAmb IAmb 22 56 16.3
comp=Z,151nm,1.1s
SNOW IAMs_20 IAMs_20 23 27 29.2
comp=Z,23µm,20.0s
WRH Wood River Hil 85.46 11 IAMs_20 IAMs_20 23 27 12.3
comp=Z,24µm,21.0s
WHY Whitehorse 85.47 19 P **P** **22 56 09.8 -0.3**
WHY Whitehorse 85.47 19 P **P** **22 56 09.2 -0.8**
baz=218,SNR=14
WHY S **S** **23 06 45.3 +4.4**
baz=218
F17K Baldwin Pennin 85.48 6 P **P** **22 56 08.4 -1.3**
baz=193,SNR=24
F17K S **S** **23 06 44.8 +4.2**
baz=193
MLY Manley 85.50 10 IAmb IAmb 22 56 16.6
comp=Z,135nm,1.4s
MLY Manley 85.50 10 P **P** **22 56 08.1 -1.9**
baz=203,SNR=12
MLY S **S** **23 06 41.9 +0.9**
baz=203
DOT Dot Lake 85.55 13 IAmb IAmb 22 56 28.7
comp=Z,239nm,1.6s
L27K Beaver Creek, 85.56 15 P **P** **22 56 09.1 -1.2**
baz=212
L27K S **S** **23 06 45.1 +3.5**
baz=212
BCAR Beaver Creek A 85.57 15 P **P** **22 56 09.2 -1.2**
HDA Harding Lake 85.63 12 P **P** **22 56 09.3 -1.3**
baz=207,SNR=42
HDA S **S** **23 06 44.0 +1.8**
baz=207
LOHW Long Hollow 85.63 41 IAMs_20 IAMs_20 23 26 22.7
comp=Z,23µm,22.0s
MNSI Mandailing Nat 85.64 272 P **P** **22 56 08.9 -2.9**
comp=Z,5µmcomp=Z,39nm,0.9s
CCB Clear Creek Bu 85.67 11 P **P** **22 56 08.5 -2.3**
CCB IAMs_20 IAMs_20 23 27 17.9
comp=Z,24µm,21.0s
R33M Jennings River 85.75 21 IAmb IAmb 22 56 14.4
comp=Z,188nm,1.4s
R33M Jennings River 85.75 21 P **P** **22 56 11.1 -0.4**
baz=222,SNR=44
R33M S **S** **23 06 46.0 +2.1**
baz=222
COYC Coyhaique 85.76 137 IAMs_20 IAMs_20 23 24 43.2
comp=Z,31µm,22.0s
H21K Melozitna Rive 85.76 9 P **P** **22 56 10.5 -0.7**
baz=201
H21K S **S** **23 06 46.9 +3.4**
baz=201
P33M Teslin, Yukon 85.76 20 IAmb IAmb 22 56 16.6
comp=Z,261nm,2.0s
P33M Teslin, Yukon 85.76 20 P **P** **22 56 10.6 -0.8**
baz=220,SNR=10
P33M S **S** **23 06 49.0 +5.2**
baz=220
F18K Selawik 85.79 6 P **P** **22 56 10.2 -1.1**
baz=195,SNR=15
F18K S **S** **23 06 48.5 +4.9**
baz=195
FLWY Flagg Ranch 85.82 41 IAmb IAmb 22 56 26.8
comp=Z,188nm,1.4s
FLWY IAMs_20 IAMs_20 23 26 40.5
comp=Z,23µm,22.0s
I23K Minto, Yukon-K 85.85 11 IAMs_20 IAMs_20 23 30 49.4
comp=Z,30µm,19.0s
I23K Minto, Yukon-K 85.85 11 P **P** **22 56 09.8 -1.8**
baz=204,SNR=52
I23K S **S** **23 06 45.1 +0.9**
baz=204
YPP Pitchstone Pla 85.85 41 IAmb IAmb 22 56 28.4
comp=Z,165nm,1.8s
N31M Braeburn, Yuko 85.86 18 IAmb IAmb 22 56 44.2
comp=Z,225nm,1.6s
N31M IAMs_20 IAMs_20 23 28 42.7
comp=Z,27µm,20.0s
N31M Braeburn, Yuko 85.86 18 P **P** **22 56 11.1 -0.7**
baz=217,SNR=11
N31M S **S** **23 06 47.2 +2.7**
baz=217
YHB Horse Butte 85.86 40 IAmb IAmb 22 56 16.1
comp=Z,150nm,1.3s
SCRK Sand Creek 85.86 13 IAmb IAmb 22 56 30.6
comp=Z,286nm,1.8s
SCRK Sand Creek 85.86 13 P **P** **22 56 10.8 -1.1**
baz=210,SNR=29
SCRK S **S** **23 06 45.9 +1.1**
baz=210
PDAR Pinedale Array 85.87 42 P **P** **22 56 10.3 -2.3**
PDAR Pinedale Array 85.87 42 LR LR 23 28 05.0
comp=Z,27µm,19.9s,baz=230,slow=31
COLA College 85.87 11 IAMs_20 IAMs_20 23 26 51.0
comp=Z,25µm,22.0s
COLA College 85.87 11 P **P** **22 56 10.9 -0.9**
COLA College 85.87 11 *c i* P **P** **22 56 10.0 -1.8**
COLA pmax pmax
comp=Z,294nm,2.0s
COLA College 85.87 11 P **P** **22 56 10.3 -1.4**
baz=206
COLA S **S** **23 06 43.0 -1.4**
baz=206
M29M Somme Creek 85.89 16 IAMs_20 IAMs_20 23 26 36.7
comp=Z,35µm,20.0s
M29M Somme Creek 85.89 16 P **P** **22 56 11.1 -1.0**
baz=215
M29M S **S** **23 06 47.4 +2.4**
baz=215
YHL Hebgen Lake 85.92 40 IAmb IAmb 22 56 16.6
comp=Z,228nm,1.3s
IMAR Indian Mountai 85.92 9 P **P** **22 56 10.0 -2.0**
YMR Madison River 85.95 40 P **P** **22 56 13.3 +0.3**
YMR IAmb IAmb 22 56 16.7
comp=Z,205nm,1.5s
IL31 85.96 12 IAmb IAmb 22 56 37.4
comp=Z,264nm,1.5s
ILAR Eielson Array 85.96 12 P **P** **22 56 09.2 -3.1**
ILAR Eielson Array 85.96 12 P **P** **22 56 10.2 -2.1**
comp=Z,29nm,1.1s,baz=220,slow=5.0,SNR=77
ILAR LR LR 23 27 48.4
comp=Z,15µm,21.9s,baz=204,slow=31
comp=Z,29nm,1.1s
BOZ Bozeman (W) 86.03 39 IAmb IAmb 22 56 16.4
comp=Z,121nm,1.4s
BOZ IAMs_20 IAMs_20 23 27 32.2
comp=Z,41µm,21.0s
E17K Hotham Inlet 86.06 5 P **P** **22 56 12.0 -0.6**
baz=193,SNR=18
E17K S **S** **23 06 48.4 +2.1**
baz=193
KULM Kulim 86.07 277 IAMs_20 IAMs_20 23 41 27.4
comp=Z,20µm,19.0s
KULM Kulim 86.07 277 P **P** **22 56 15.1 +1.1**
J25K Salcha River, 86.12 12 IAmb IAmb 22 56 31.5
comp=Z,289nm,1.6s
J25K Salcha River, 86.12 12 P **P** **22 56 12.1 -1.0**
baz=208
J25K S **S** **23 06 47.9 +0.7**
baz=208
POKR Poker Plat Res 86.17 11 IAMs_20 IAMs_20 23 26 36.9
comp=Z,28µm,22.0s
POKR Poker Plat Res 86.17 11 P **P** **22 56 11.6 -1.7**
baz=206,SNR=23
POKR S **S** **23 06 46.7 -0.8**
baz=206
H22K Ishtalitna Cre 86.20 10 P **P** **22 56 12.3 -1.1**
baz=203
H22K S **S** **23 06 49.7 +2.0**
baz=203
HNS HongShan 86.21 311 ⇑P **P** **22 56 13.9 -0.2**
HNS SKS **SKSac** **23 06 37.6 -2.6**
HNS S **S** **23 06 49.0 0.0**
HNS SS **SS** **23 12 28.6 +0.1**
HNS pmax pmax
comp=Z,40nm,1.1s
HNS LR LR
comp=Z,16µm,23.1s
HNS LR LR
comp=Z,17µm,24.5s
HNS LR LR
comp=Z,37µm,24.9s
SDCO Great Sand Dun 86.21 48 IAMs_20 IAMs_20 23 28 14.4
comp=Z,23µm,19.0s
F19K Shaleruckik Mo 86.22 7 IAmb IAmb 22 56 17.9
comp=Z,244nm,1.5s
F19K Shaleruckik Mo 86.22 7 P **P** **22 56 11.9 -1.6**
baz=197,SNR=50
F19K S **S** **23 06 49.9 +2.1**
baz=197
HAYD Hayden 86.28 45 IAMs_20 IAMs_20 23 26 45.1
comp=Z,22µm,22.0s
K27K Chicken 86.33 14 IAmb IAmb 22 56 33.3
comp=Z,238nm,1.6s
K27K Chicken 86.33 14 P **P** **22 56 14.2 +0.1**
baz=211
K27K S **S** **23 06 53.3 +4.2**
baz=211
LL05 Los Muermos 86.37 132 IAMs_20 IAMs_20 23 25 53.6
comp=Z,41µm,21.0s
BJT Baijiatuau 86.40 314 P **P** **22 56 14.0 -1.0**
BJT Baijiatuau 86.40 314 IAMs_20 IAMs_20 23 34 51.4
comp=Z,22µm,20.0s
BJT Baijiatuau 86.40 314 P **P** **22 56 16.2 +1.2**
BJT Baijiatuau 86.40 314 P **P** **22 56 14.0 -1.0**
BJT pmax pmax
comp=Z,340nm,1.7s
BJT MLR MLR
comp=Z,22µm,20.0s
N32M Quiet Lake 86.40 19 IAmb IAmb 22 56 21.9
comp=Z,212nm,1.6s
N32M IAMs_20 IAMs_20 23 28 11.2
comp=Z,27µm,19.0s
N32M Quiet Lake 86.40 19 P **P** **22 56 14.3 -0.2**
baz=220
N32M S **S** **23 06 54.3 +4.3**
baz=220
BJI Beijing 86.40 314 P **P** **22 56 14.8 -0.2**
BJI PP **PP** **22 59 34.2 -2.4**
BJI S **S** **23 06 53.7 +3.0**
BJI sS **ScS** **23 07 00.0 +0.8**
BJI pmax pmax
comp=Z,52nm,1.9s
BJI pmax pmax
comp=Z,1µm,5.4s
BJI LR LR
comp=Z,6µm,19.9s
BJI LR LR
comp=Z,9µm,21.8s
BJI LR LR
comp=Z,18µm,24.3s
PANO Nakornpanom 86.40 289 P P 22 56 20.4 +4.9
J26L Joseph Creek 86.41 13 P **P** **22 56 13.9 -0.7**
baz=210
J26L S **S** **23 06 53.7 +3.7**
baz=210
H23K Yukon River 86.43 10 IAmb IAmb 22 56 32.6
comp=Z,172nm,1.9s
H23K IAMs_20 IAMs_20 23 31 37.9
comp=Z,23µm,20.0s
H23K Yukon River 86.43 10 P **P** **22 56 12.7 -1.9**
baz=204
H23K S **S** **23 06 50.9 +0.8**
baz=204
M30M Minto, Yukon 86.45 17 IAmb IAmb 22 56 33.4
comp=Z,169nm,1.6s
M30M IAMs_20 IAMs_20 23 28 26.3
comp=Z,36µm,20.0s
M30M Minto, Yukon 86.45 17 P **P** **22 56 13.7 -1.1**
baz=216,SNR=22
M30M S **S** **23 06 53.8 +3.5**
baz=216
G21K Allakaket 86.46 9 P **P** **22 56 13.8 -0.9**
baz=201
G21K S **S** **23 06 53.9 +3.7**
baz=201
E18K Tukpahlearik C 86.50 6 IAmb IAmb 22 56 26.7
comp=Z,185nm,1.4s
E18K Tukpahlearik C 86.50 6 P **P** **22 56 13.6 -1.2**
baz=194
E18K S **S** **23 06 54.2 +3.6**
baz=194
L29M L29M 86.52 16 IAMs_20 IAMs_20 23 27 17.4
comp=Z,36µm,21.0s
L29M L29M 86.52 16 P **P** **22 56 14.2 -0.9**
baz=215,SNR=43
L29M S **S** **23 06 53.5 +2.4**
baz=215
MSTX Muleshoe 86.56 53 IAmb IAmb 22 56 30.9
comp=Z,111nm,1.2s
D17K Noatak River 86.56 5 P **P** **22 56 14.3 -0.8**
baz=192,SNR=6.7
D17K S **S** **23 06 53.7 +2.6**
baz=192
OZNA Ozona 86.56 56 IAmb IAmb 22 56 29.2
comp=Z,225nm,1.6s
LYN LuoYang 86.60 308 ⇑P **P** **22 56 15.5 -0.6**
LYN pP pP 22 56 19.4 -0.1
LYN PP **PP** **22 59 40.7 +2.3**
LYN S **S** **23 06 51.0 -1.9**
LYN sS ScS 23 07 03.0 +1.9
LYN pmax pmax
comp=Z,49nm,1.0s
LYN pmax pmax
comp=Z,3µm,7.0s

LYN LR LR
comp=Z,23µm,18.2s
LYN LR LR
comp=Z,11µm,18.8s
LYN LR LR
comp=Z,30µm,18.8s
CMIG Matias Romero 86.65 71 LR LR 23 25 29.7
comp=Z,53µm,21.5s,baz=248,slow=29
F20K Avaraart Lake 86.67 8 P **P** **22 56 15.0 -0.6**
baz=198
F20K S **S** **23 06 54.2 +2.1**
baz=198
T25A Trinidad 86.72 49 IAMs_20 IAMs_20 23 27 33.8
comp=Z,26µm,20.0s
H24K Noodor Dome 86.74 11 IAMs_20 IAMs_20 23 31 16.1
comp=Z,34µm,20.0s
H24K Noodor Dome 86.74 11 P **P** **22 56 14.4 -1.7**
baz=206
H24K S **S** **23 06 53.8 +0.8**
baz=206
LL01 San Ignacio de 86.74 134 IAMs_20 IAMs_20 23 27 28.4
comp=Z,21µm,20.0s
M31M Drury Creek, Y 86.83 18 IAMs_20 IAMs_20 23 29 23.4
comp=Z,30µm,20.0s
M31M Drury Creek, Y 86.83 18 P **P** **22 56 15.5 -1.1**
baz=218,SNR=9.8
M31M S **S** **23 06 57.1 +3.1**
baz=218
RPSI Rantau Prapat 86.86 274 IAMs_20 IAMs_20 23 39 42.5
comp=Z,23µm,21.0s
E19K Redstone River 86.88 7 P **P** **22 56 16.0 -0.7**
baz=197
E19K S **S** **23 06 55.3 +1.0**
baz=197
PSI Prapat 86.90 274 P **P** **22 56 16.8 -1.4**
833A Chaparral WMA, 86.92 59 IAmb IAmb 22 56 21.9
comp=Z,168nm,1.4s
RDOG Red Dog Mine 86.92 5 P **P** **22 56 15.7 -1.2**
baz=192
RDOG S **S** **23 06 56.2 +1.6**
baz=192
LR04 Corral 86.97 131 IAMs_20 IAMs_20 23 25 51.4
comp=Z,42µm,21.0s
SGCY Sterling City 86.97 55 P **P** **22 56 18.0 -0.1**
C16K Lisburne Hills 86.97 4 P **P** **22 56 14.6 -2.5**
baz=189
C16K S **S** **23 06 55.0 0.0**
baz=189
DAWY Dawson 87.00 15 IAmb IAmb 22 56 36.2
comp=Z,194nm,1.5s
DAWY Dawson 87.00 15 P **P** **22 56 16.5 -0.9**
baz=214,SNR=28
DAWY S **S** **23 06 55.8 +0.1**
baz=214
WTLY Watson Lake, Y 87.02 21 IAmb IAmb 22 56 36.6
comp=Z,263nm,1.9s
WTLY Watson Lake, Y 87.02 21 P **P** **22 56 17.4 -0.3**
baz=224
WTLY S **S** **23 06 59.5 +3.5**
baz=224
ISCO Idaho Springs 87.07 46 IAMs_20 IAMs_20 23 28 26.9
comp=Z,28µm,20.0s
ISCO Idaho Springs 87.07 46 P **P** **22 56 18.9 +0.2**
F21K Alatna River 87.13 8 IAmb IAmb 22 56 36.3
comp=Z,153nm,1.6s
F21K Alatna River 87.13 8 P **P** **22 56 17.0 -0.9**
baz=201
F21K S **S** **23 06 57.2 +0.5**
baz=201
G22K Bettles 87.13 9 P **P** **22 56 17.6 -0.3**
baz=202
G22K S **S** **23 06 57.2 +0.5**
baz=202
ENH Enshi 87.14 303 P **P** **22 56 19.3 +0.4**
POST Post 87.15 54 IAmb IAmb 22 56 33.5
comp=Z,110nm,1.4s
G23K Bananza Creek 87.17 10 IAmb IAmb 22 56 36.9
comp=Z,242nm,1.7s
G23K Bananza Creek 87.17 10 P **P** **22 56 17.0 -1.2**
baz=204,SNR=31
G23K S **S** **23 06 58.8 +1.7**
baz=204
I26K Coal Creek Min 87.19 13 P **P** **22 56 17.5 -0.8**
baz=210,SNR=30
I26K S **S** **23 07 01.1 +3.8**
baz=210
LL03 Petrohue 87.22 133 IAMs_20 IAMs_20 23 26 19.1
comp=Z,33µm,22.0s
RLMT Red Lodge 87.22 40 IAmb IAmb 22 56 22.4
comp=Z,173nm,2.0s
K29M Barlow Dome 87.28 16 IAMs_20 IAMs_20 23 27 50.6
comp=Z,28µm,21.0s
K29M Barlow Dome 87.28 16 P **P** **22 56 18.1 -0.8**
baz=216,SNR=38
K29M S **S** **23 07 01.5 +3.0**
baz=216
ZEA Zeya 87.28 330 *e*P **P** **22 56 18.3 -0.7**
ZEA *e* 22 59 44.9
ZEA *e*S **S** **23 06 52.1 -6.6**
ZEA pmax pmax
comp=E,300nm,8.2s
ZEA pmax pmax
comp=N,300nm,5.5s
ZEA pmax pmax
comp=Z,2µm,11.2s
ZEA pmax pmax
comp=E,20nm,1.8s
ZEA pmax pmax
comp=N,30nm,1.2s
ZEA pmax pmax
comp=Z,70nm,1.3s
C17K DeLong Mountai 87.31 4 P **P** **22 56 17.6 -1.2**
baz=191
C17K S **S** **23 07 01.8 +3.3**
baz=191
TOAD Toad River Com 87.42 24 P **P** **22 56 18.7 -0.9**
baz=227,SNR=31
TOAD S **S** **23 07 01.4 +1.5**
baz=227
JCT Junction City 87.43 57 IAMs_20 IAMs_20 23 27 28.1
comp=Z,21µm,21.0s
BILL Bilibino 87.48 353 P **P** **22 56 17.6 -2.0**
BILL IAmb IAmb 22 56 30.9
comp=Z,166nm,1.3s
BILL IAMs_20 IAMs_20 23 28 53.9
comp=Z,41µm,22.0s
BILL Bilibino 87.48 353 *de*P **P** **22 56 18.9 -0.7**
BILL pmax pmax
comp=Z,148nm,1.7s
LIRD Liard River Hi 87.48 23 P **P** **22 56 19.0 -0.8**
baz=226
LIRD S **S** **23 07 00.2 -0.2**
baz=226
H25L Birch Creek 87.50 11 P **P** **22 56 18.3 -1.5**
baz=208
H25L S **S** **23 07 01.9 +1.6**
baz=208
MAYO Mayo, Yukon 87.51 17 P **P** **22 56 19.2 -0.7**
baz=217
MAYO S **S** **23 07 03.3 +2.8**
baz=217
F22K John River 87.58 9 P **P** **22 56 19.6 -0.6**
baz=202
F22K S **S** **23 07 03.7 +2.7**
baz=202
G24K Hadweenzic Riv 87.59 11 IAmb IAmb 22 56 38.3
comp=Z,138nm,1.8s
G24K IAMs_20 IAMs_20 23 31 51.6
comp=Z,32µm,20.0s
G24K Hadweenzic Riv 87.59 11 P **P** **22 56 19.2 -1.0**
baz=206,SNR=7.0
G24K S **S** **23 07 02.3 +1.1**
baz=206
COLD Coldfoot 87.61 10 IAmb IAmb 22 56 37.3
comp=Z,115nm,1.5s
COLD Coldfoot 87.61 10 P **P** **22 56 19.9 -0.4**
baz=204,SNR=13
COLD S **S** **23 07 04.6 +3.3**
baz=204
SN07 Snyder 07 87.62 54 IAmb IAmb 22 56 33.8
comp=Z,157nm,1.6s
C18K Utukok River 87.64 5 P **P** **22 56 19.5 -0.9**
baz=193
C18K S **S** **23 07 01.9 +0.2**
baz=193
GSI Gunungsitoli 87.70 272 IAmb IAmb 22 56 27.7
comp=Z,174nm,1.4s
GSI IAMs_20 IAMs_20 23 34 25.7
comp=Z,37µm,22.0s
GSI Gunungsitoli 87.70 272 P **P** **22 56 22.0 +0.1**
GSI Gunungsitoli 87.70 272 P **P** **22 56 21.0 -0.9**
comp=Z,92nm,1.2s
AMTX Amarillo 87.76 52 IAmb IAmb 22 56 29.4
comp=Z,112nm,1.4s
E20K Nigu River 87.77 7 P **P** **22 56 20.1 -1.0**
baz=198,SNR=21
E20K S **S** **23 07 00.2 -2.7**
baz=198
K22A Casper 87.77 43 IAmb IAmb 22 56 28.8
comp=Z,131nm,2.0s
I27K Kandik River 87.78 13 P **P** **22 56 20.3 -0.9**
baz=212,SNR=18
I27K S **S** **23 07 02.5 -0.7**
baz=212
D19K Kuna River 87.78 6 IAmb IAmb 22 56 37.5
comp=Z,113nm,1.4s
D19K Kuna River 87.78 6 P **P** **22 56 20.5 -0.6**
baz=196
D19K S **S** **23 07 02.5 -0.5**
baz=196
LR03 Panguipulli 87.83 131 IAMs_20 IAMs_20 23 26 18.3
comp=Z,31µm,21.0s
LR05 Currie 87.84 132 IAMs_20 IAMs_20 23 26 07.7
comp=Z,21µm,21.0s
G25K Bearman Lake 87.89 11 P **P** **22 56 20.5 -1.1**
baz=208,SNR=5.4
G25K S **S** **23 07 05.9 +1.9**
baz=208
TIY Taiyuan 87.97 311 P **P** **22 56 23.8 +1.0**
TIY PP **PP** **22 59 53.3 +3.8**
TIY S **S** **23 07 12.2 +6.0**
TIY pmax pmax
comp=Z,51nm,0.7s
TIY pmax pmax
comp=Z,2µm,6.5s
TIY LR LR
comp=Z,6µm,16.7s
TIY LR LR
comp=Z,17µm,27.3s
TIY LR LR
comp=Z,33µm,27.5s
GYA Guiyang 87.98 299 ⇑P **P** **22 56 25.8 +2.7**
GYA PP **PP** **22 59 51.2 +1.4**
GYA SKS **SKSac** **23 06 49.9 -2.0**
GYA S **S** **23 07 05.3 -1.6**
GYA pmax pmax
comp=Z,31nm,2.0s
GYA pmax pmax
comp=Z,2µm,9.8s
GYA LR LR
comp=Z,7µm,19.6s
GYA LR LR
comp=Z,8µm,18.0s
GYA LR LR
comp=Z,10µm,19.9s
I28M Miner Creek 88.03 14 IAMs_20 IAMs_20 23 28 08.5
comp=Z,29µm,21.0s
I28M Miner Creek 88.03 14 P **P** **22 56 21.1 -1.3**
baz=213
I28M S **S** **23 07 08.7 +3.1**
baz=213
MMPY Sheldon Lake, 88.08 19 P **P** **22 56 22.4 -0.3**
baz=221,SNR=28
MMPY S **S** **23 07 11.1 +5.0**
baz=221
D20K Etivluk River 88.15 7 P **P** **22 56 21.6 -1.3**
baz=198
D20K S **S** **23 07 07.9 +1.4**
baz=198
J30M Hart River 88.18 16 IAmb IAmb 22 56 28.3
comp=Z,241nm,1.9s
J30M IAMs_20 IAMs_20 23 29 42.8
comp=Z,28µm,20.0s
J30M Hart River 88.18 16 P **P** **22 56 22.4 -0.8**
baz=217
J30M S **S** **23 07 10.2 +3.0**
baz=217
E21K Killik River 88.21 8 IAMs_20 IAMs_20 23 33 22.2
comp=Z,19µm,19.0s
E21K Killik River 88.21 8 P **P** **22 56 21.6 -1.5**
baz=200
E21K S **S** **23 07 09.6 +2.5**
baz=200
E22K Anaktuvuk Pass 88.21 9 P **P** **22 56 22.7 -0.4**
baz=202
E22K S **S** **23 07 10.4 +3.2**
baz=202
KCSI Kotacane, Aceh 88.22 274 P **P** **22 56 26.1 +1.7**
TGTN Hyland Airport 88.23 21 P **P** **22 56 23.1 -0.3**
baz=224,SNR=13
TGTN S **S** **23 07 12.5 +5.0**
baz=224
C19K Lookout Ridge 88.23 6 P **P** **22 56 21.5 -1.7**
baz=195
C19K S **S** **23 07 09.7 +2.5**
baz=195
F24K Squaw Lake 88.25 10 IAmb IAmb 22 56 27.4
comp=Z,189nm,1.9s
F24K IAMs_20 IAMs_20 23 32 53.6
comp=Z,23µm,19.0s
F24K Squaw Lake 88.25 10 P **P** **22 56 22.6 -0.8**
baz=206,SNR=7.8
F24K S **S** **23 07 11.3 +3.7**
baz=206
XLT XiLinHaoTe 88.27 318 *e*P **P** **22 56 26.0 +1.9**
XLT sP pwP 22 56 33.9 +3.4
XLT SKS **SKSac** **23 06 51.9 -0.8**
XLT S **ScS** **23 07 14.4 -0.4**
XLT SS **SS** **23 13 03.3 +4.7**
XLT pmax pmax
comp=Z,38nm,1.6s
XLT pmax pmax
comp=Z,2µm,6.6s
XLT LR LR
comp=Z,16µm,19.9s
XLT LR LR
comp=Z,20µm,19.3s
B18K Kokolik River 88.29 5 P **P** **22 56 22.6 -0.8**
baz=193
B18K S **S** **23 07 10.8 +3.0**
baz=193
BI05 Punta Hualpn 88.30 128 IAMs_20 IAMs_20 23 31 57.9
comp=Z,25µm,18.0s
H27K Steamboat Moun 88.33 13 P **P** **22 56 23.6 -0.2**
H27K IAmb IAmb 22 56 42.8
comp=Z,158nm,1.6s
H27K Steamboat Moun 88.33 13 P **P** **22 56 22.7 -1.1**
baz=212,SNR=20
H27K S **S** **23 07 13.8 +5.4**
baz=212
EGMT Eagleton 88.39 38 IAmb IAmb 22 56 29.8
comp=Z,82nm,1.2s
EGMT IAMs_20 IAMs_20 23 28 12.4
comp=Z,31µm,22.0s
735A Kenedy 88.41 59 IAMs_20 IAMs_20 23 28 56.0
comp=Z,24µm,20.0s
E23K Chandalar 88.47 9 P **P** **22 56 23.4 -1.1**
baz=204
E23K S **S** **23 07 15.2 +5.5**
baz=204
SLVN Son La 88.49 293 P **P** **22 56 27.0 +1.4**
G26K Porcupine Rive 88.49 12 IAmb IAmb 22 56 43.7
comp=Z,164nm,1.4s
G26K Porcupine Rive 88.49 12 P **P** **22 56 23.9 -0.6**
baz=210,SNR=26
G26K S **S** **23 07 14.6 +4.9**
baz=210
E24K Your Creek 88.66 10 P **P** **22 56 24.5 -0.8**
baz=205
E24K S **S** **23 07 16.1 +4.7**
baz=205
PLCA Paso Flores 88.67 133 P **P** **22 56 27.1 +0.9**
comp=Z,3.4nm,0.9s,baz=42,slow=0.5,SNR=4.9
PLCA LR LR 23 27 37.3
comp=Z,27µm,21.2s,baz=240,slow=30
comp=Z,3.4nm,0.9s
I30M Mount Dempster 88.69 15 IAMs_20 IAMs_20 23 28 37.3
comp=Z,24µm,21.0s
I30M Mount Dempster 88.69 15 P **P** **22 56 24.4 -1.2**
baz=216
I30M S **S** **23 07 15.5 +3.5**
baz=216
HIA Hailar 88.70 324 P **P** **22 56 26.4 +0.5**
F25K Christian Rive 88.71 11 IAMs_20 IAMs_20 23 32 37.3
comp=Z,30µm,20.0s
F25K Christian Rive 88.71 11 P **P** **22 56 25.1 -0.5**
baz=208
F25K S **S** **23 07 17.0 +5.1**
baz=208
KOTAN Kotaneelee Air 88.73 23 P **P** **22 56 24.9 -0.8**
baz=228,SNR=9.1
KOTAN S **S** **23 07 15.6 +3.3**
baz=228
BMAR Burnt Mountain 88.76 11 P **P** **22 56 25.0 -0.8**
C21K Knifeblade Rid 88.79 7 P **P** **22 56 25.1 -0.7**
baz=199
C21K S **S** **23 07 17.4 +5.0**
baz=199
D22K Ayikyak River 88.79 8 P **P** **22 56 25.1 -0.8**
baz=201
D22K S **S** **23 07 16.0 +3.5**
baz=201
KSCO Kaye Shedlock' 88.80 48 IAMs_20 IAMs_20 23 28 22.8
comp=Z,24µm,21.0s
G27K Doyon Strip 88.80 13 P **P** **22 56 25.3 -0.7**
baz=212
G27K S **S** **23 07 17.5 +4.7**
baz=212
HILR Hailar Array B 88.84 324 P **P** **22 56 25.9 -0.7**
comp=Z,13nm,0.9s,baz=134,slow=6.4,SNR=16
comp=Z,13nm,0.9s
TOLK Toolik Lake Re 89.01 9 IAmb IAmb 22 56 31.8
comp=Z,206nm,2.0s
TOLK Toolik Lake Re 89.01 9 P **P** **22 56 25.7 -1.2**
baz=204
TOLK S **S** **23 07 17.0 +2.3**
baz=204
H29M Whitestone 89.03 14 IAMs_20 IAMs_20 23 28 26.7
comp=Z,27µm,22.0s
H29M Whitestone 89.03 14 P **P** **22 56 26.0 -1.0**
baz=215,SNR=13
H29M S **S** **23 07 18.5 +3.7**
baz=215
XAN Xi'an 89.07 306 ⇑P **P** **22 56 27.8 -0.2**
XAN SKS **SKSac** **23 06 56.6 -1.3**
XAN S **S** **23 07 17.2 +0.5**
XAN SS **SS** **23 13 14.0 +3.4**
XAN pmax pmax
comp=Z,140nm,1.7s
XAN pmax pmax
comp=Z,3µm,6.9s
XAN LR LR
comp=Z,12µm,22.0s
XAN LR LR
comp=Z,13µm,21.4s
XAN LR LR
comp=Z,18µm,23.4s
F26K Sheenjek River 89.08 11 IAmb IAmb 22 56 47.0
comp=Z,211nm,2.0s
F26K IAMs_20 IAMs_20 23 28 38.9
comp=Z,26µm,22.0s
F26K Sheenjek River 89.08 11 P **P** **22 56 27.3 +0.1**
baz=209,SNR=10.0
F26K S **S** **23 07 20.2 +4.9**
baz=209
SYO Syowa Base 89.08 192 ⇓*e*P **P** **22 56 26.8 -0.6**
SYO Syowa Base 89.08 192 ⇓*i*PcP **PcP** **22 56 29.0 +0.1**
SYO Syowa Base 89.08 192 ⇓*i*sP sP 22 56 33.0 +1.0
D23K Nanushuk River 89.14 9 IAmb IAmb 22 56 31.5
comp=Z,196nm,1.9s
D23K Nanushuk River 89.14 9 P **P** **22 56 27.1 -0.4**
baz=203
D23K S **S** **23 07 19.8 +4.0**
baz=203
A19K Wainwright 89.17 5 S **S** **23 07 18.5 +2.6**
baz=193
E25K Arctic Village 89.19 11 IAMs_20 IAMs_20 23 33 01.9
comp=Z,28µm,20.0s
E25K Arctic Village 89.19 11 P **P** **22 56 26.6 -1.2**
baz=208,SNR=15
E25K S **S** **23 07 20.8 +4.4**
baz=208
SNSI Sinabang, Aceh 89.23 273 P **P** **22 56 31.8 +2.6**
comp=Z,68nm,1.7s
B21K Ikpikpuk River 89.25 7 P **P** **22 56 27.8 -0.1**
baz=200
B21K S **S** **23 07 20.3 +3.6**
baz=200
B20K Meade River 89.34 6 P **P** **22 56 27.8 -0.5**
baz=197
B20K S **S** **23 07 19.3 +1.8**
baz=197
RNTT Ranong 89.43 280 P **P** **22 56 31.3 +1.2**
comp=Z,3µmcomp=Z,49nm,1.2s
EPYK Eagle Plains 89.54 15 P **P** **22 56 28.2 -1.3**
baz=216,SNR=15
EPYK S **S** **23 07 23.1 +3.4**
baz=216
LHMI Lhok Sumawe 89.54 276 IAMs_20 IAMs_20 23 41 48.4
comp=Z,22µm,20.0s
LHMI Lhok Sumawe 89.54 276 P **P** **22 56 32.6 +2.0**
LHMI Lhok Sumawe 89.54 276 P **P** **22 56 28.6 -2.0**
comp=Z,77nm,1.0s
TROLL Troll, Antarti 89.57 179 ⇑P **P** **22 56 29.9 0.0**
comp=Z,1µm,0.8s
TROLL ⇓SKSac **SKSac** **23 07 02.9 +3.0**
TROLL ⇑S **ScS** **23 07 24.3 -0.7**
D24K Happy Valley 89.59 9 IAmb IAmb 22 56 47.5
comp=Z,140nm,1.9s
D24K Happy Valley 89.59 9 P **P** **22 56 28.8 -0.7**
baz=205
D24K S **S** **23 07 22.6 +2.7**
baz=205
H31M Peel River 89.67 16 IAmb IAmb 22 56 58.2
comp=Z,197nm,1.6s
H31M IAMs_20 IAMs_20 23 29 07.2
comp=Z,28µm,21.0s
H31M Peel River 89.67 16 P **P** **22 56 29.2 -0.9**
baz=218,SNR=7.8
H31M S **S** **23 07 24.4 +3.5**
baz=218
G29M Pine Creek 89.68 14 IAmb IAmb 22 58 02.2
comp=Z,162nm,1.9s
G29M IAMs_20 IAMs_20 23 29 30.9
comp=Z,24µm,21.0s
G29M Pine Creek 89.68 14 P **P** **22 56 29.2 -0.9**
baz=215,SNR=6.4
G29M S **S** **23 07 25.2 +4.3**
baz=215
MLSI Meulaboh, Aceh 89.75 275 P **P** **22 56 33.1 +1.5**
SNAA Sanae 89.77 178 ⇑P **P** **22 56 30.5 -0.3**
comp=Z,666nm,0.8s
SNAA SKSac **SKSac** **23 07 02.3 +1.3**
SNAA S **ScS** **23 07 25.4 -1.1**
SNAA Sanae 89.77 178 P **P** **22 56 29.5 -1.2**
SNAA Sanae 89.77 178 P **P** **22 56 30.4 -0.3**
comp=Z,23nm,0.8s,baz=207,slow=4.2,SNR=43
SNAA LR LR 23 36 03.9
comp=Z,33µm,18.0s,baz=194,slow=35
comp=Z,23nm,0.8s
SNAA Sanae 89.77 178 *de*P **P** **22 56 30.7 0.0**
SNAA pmax pmax
comp=Z,55nm,1.0s
SNAA MLR MLR
comp=Z,38µm,18.0s
VNA3 Neumayer Olymp 89.80 175 ⇑P **P** **22 56 30.2 -0.6**
comp=Z,79nm,0.7s
VNA3 SKSac **SKSac** **23 07 01.5 +0.5**
VNA3 S **ScS** **23 07 25.2 -1.4**
F28M Old Crow 89.86 13 IAmb IAmb 22 56 57.1
comp=Z,159nm,1.9s
F28M IAMs_20 IAMs_20 23 36 28.4
comp=Z,19µm,19.0s
F28M Old Crow 89.86 13 P **P** **22 56 29.5 -1.4**
baz=213,SNR=8.3
F28M S **S** **23 07 28.9 +6.4**
baz=213
WHTX Lake Whitney, 89.87 56 IAMs_20 IAMs_20 23 28 11.5
comp=Z,34µm,22.0s
WMOK Wichita Mounta 89.89 53 IAMs_20 IAMs_20 23 29 58.9
comp=Z,39µm,20.0s
HHC Hu-ho-hao-te 89.91 313 ⇓*i*P **P** **22 56 32.5 +0.6**
HHC sP pwP 22 56 38.3 0.0
HHC S **S** **23 07 30.9 +6.5**
HHC SS **SS** **23 13 20.6 -2.1**
HHC pmax pmax
comp=Z,36nm,1.9s
HHC pmax pmax
comp=Z,2µm,5.9s
HHC LR LR
comp=Z,12µm,20.2s
HHC LR LR
comp=Z,19µm,22.7s

HHC LR LR
comp=Z,44µm,24.8s
APG El Apazote 89.95 74 LR LR 23 27 24.1
comp=Z,1µm,21.4s,baz=231,slow=29
C23K Itkillik River 89.96 8 IAMs_20 IAMs_20 23 34 32.0
comp=Z,22µm,20.0s
C23K Itkillik River 89.96 8 P **P** **22 56 30.0 -1.3**
baz=203
C23K S **S** **23 07 28.7 +5.4**
baz=203
E27K Coleen River 89.99 12 P **P** **22 56 30.8 -0.7**
baz=212
E27K S **S** **23 07 28.8 +5.0**
baz=212
ML02 Panimavida 90.00 128 IAMs_20 IAMs_20 23 29 21.9
comp=Z,27µm,20.0s
OGNE Ogallala 90.03 47 IAMs_20 IAMs_20 23 30 24.2
comp=Z,25µm,20.0s
RSSD Black Hills 90.05 43 IAMs_20 IAMs_20 23 31 12.8
comp=Z,19µm,20.0s
B22K Teshekpuk Lake 90.07 7 P **P** **22 56 31.2 -0.5**
baz=201
B22K S **S** **23 07 27.0 +2.8**
baz=201
C24K Franklin Bluff 90.12 9 IAmb IAmb 22 56 35.9
comp=Z,137nm,1.7s
C24K Franklin Bluff 90.12 9 P **P** **22 56 30.9 -1.1**
baz=205
C24K S **S** **23 07 28.7 +3.9**
baz=205
D25K Kavik River 90.12 10 IAMs_20 IAMs_20 23 33 10.2
comp=Z,23µm,20.0s
D25K Kavik River 90.12 10 P **P** **22 56 30.4 -1.8**
baz=207
D25K S **S** **23 07 26.5 +1.5**
baz=207
G30M tAoh Zraii Nji 90.15 14 IAMs_20 IAMs_20 23 29 11.7
comp=Z,21µm,22.0s
G30M tAoh Zraii Nji 90.15 14 P **P** **22 56 31.0 -1.3**
baz=217
G30M S **S** **23 07 27.4 +2.0**
baz=217
VNA2 Neumayer--Watz 90.27 176 ⇑P **P** **22 56 33.2 +0.2**
comp=Z,4.1nm,0.7s,baz=176,slow=4.0
VNA2 ⇑SKSac **SKSac** **23 07 07.1 +3.4**
VNA2 ⇑S **S** **23 07 25.8 -0.9**
HKT Hockley 90.41 59 IAMs_20 IAMs_20 23 30 00.1
comp=Z,24µm,21.0s
HKT Hockley 90.41 59*ce*P **P** **22 56 35.2 +1.0**
HKT pmax pmax
comp=Z,72nm,1.5s
VNA1 Neumayer--Stat 90.48 176 ⇑P **P** **22 56 33.4 -0.5**
comp=Z,98nm,0.9s
A22K Sinclair Lake 90.52 7 P **P** **22 56 32.2 -1.6**
baz=199
A22K S **S** **23 07 29.8 +1.5**
baz=199
A21K Barrow 90.65 6 S **S** **23 07 30.5 +0.9**
baz=198
E28M Babbage River 90.76 12 P **P** **22 56 33.6 -1.4**
baz=214
E28M S **S** **23 07 34.5 +3.8**
baz=214
F30M Barrier River 90.76 14 IAmb IAmb 22 56 52.8
comp=Z,227nm,1.8s
F30M Barrier River 90.76 14 P **P** **22 56 34.2 -0.9**
baz=217
F30M S **S** **23 07 34.5 +3.7**
baz=217
CBKS Cedar Bluff 90.77 49 IAmb IAmb 22 56 43.1
comp=Z,183nm,1.9s
CBKS IAMs_20 IAMs_20 23 29 20.1
comp=Z,26µm,21.0s
BO01 Tunca 90.79 127 IAMs_20 IAMs_20 23 27 26.8
comp=Z,42µm,22.0s
KMI Kunming 90.81 296 ‖P **P** **22 56 38.1 +1.5**
KMI sP pwP 22 56 47.0 +4.0
KMI pmax pmax
comp=Z,25nm,2.1s
KMI pmax pmax
comp=Z,1µm,8.6s
KMI LR LR
comp=Z,14µm,21.7s
KMI LR LR
comp=Z,23µm,21.1s
KMI LR LR
comp=Z,37µm,21.2s
C27K Jago River 90.84 11 IAmb IAmb 22 57 07.5
comp=Z,132nm,1.8s
C27K IAMs_20 IAMs_20 23 29 49.2
comp=Z,27µm,22.0s
C27K Jago River 90.84 11 P **P** **22 56 33.9 -1.6**
baz=210
C27K S **S** **23 07 34.2 +2.7**
baz=210
MT01 Popeta 90.87 126 IAMs_20 IAMs_20 23 27 08.0
comp=Z,28µm,22.0s
BTO Baotou 90.88 313 *e*P **P** **22 56 37.3 +0.9**
BTO pP **pwP** **22 56 42.5 -0.3**
BTO sP **sP** **22 56 44.7 +3.7**
BTO PP **PP** **23 00 16.9 +4.2**
BTO S **S** **23 07 35.8 +2.5**
BTO sS **sS** **23 07 41.6 +2.6**
BTO SS **SS** **23 13 37.9 +1.2**
BTO pmax pmax
comp=Z,28nm,1.1s
BTO pmax pmax
comp=Z,4µm,8.3s
BTO LR LR
comp=Z,31µm,20.8s
BTO LR LR
comp=Z,41µm,23.8s
BTO LR LR
comp=Z,78µm,23.1s
VA01 Torpederas 90.89 125 IAMs_20 IAMs_20 23 28 08.8
comp=Z,20µm,21.0s
C26K Camden Bay 90.89 10 P **P** **22 56 34.7 -0.9**
baz=209
C26K S **S** **23 07 35.2 +3.3**
baz=209
E29M Blow River 90.92 13 IAmb IAmb 22 57 07.2
comp=Z,129nm,2.0s
E29M Blow River 90.92 13 P **P** **22 56 34.6 -1.2**
baz=215
E29M S **S** **23 07 35.3 +3.0**
baz=215
PAF Port-aux-Franc 90.96 217 IAMs_20 IAMs_20 23 31 22.5
comp=Z,27µm,21.0s
D27M Malcolm River 91.01 12 IAmb IAmb 22 56 40.4
comp=Z,157nm,1.9s
D27M IAMs_20 IAMs_20 23 29 50.7
comp=Z,23µm,22.0s
D27M Malcolm River 91.01 12 P **P** **22 56 35.8 -0.5**
baz=212
D27M S **S** **23 07 36.5 +3.2**
baz=212
WRGLY Wrigley 91.03 21 IAmb IAmb 22 56 43.5
comp=Z,109nm,1.6s
WRGLY Wrigley 91.03 21 P **P** **22 56 35.6 -0.8**
baz=228
WRGLY S **S** **23 07 35.0 +1.7**
baz=228
MT09 Talagante 91.10 126 IAMs_20 IAMs_20 23 27 36.2
comp=Z,26µm,22.0s
F31M Tsiigehtchic 91.11 15 IAMs_20 IAMs_20 23 29 42.5
comp=Z,24µm,22.0s
F31M Tsiigehtchic 91.11 15 P **P** **22 56 35.8 -0.8**
baz=219
F31M S **S** **23 07 34.7 +0.8**
baz=219
MT02 Curacav 91.19 126 IAMs_20 IAMs_20 23 28 38.6
comp=Z,25µm,21.0s
EFI East Falkland 91.23 146 IAMs_20 IAMs_20 23 28 33.6
comp=Z,25µm,22.0s
BO04 La Punta 91.31 126 IAMs_20 IAMs_20 23 27 42.6
comp=Z,32µm,21.0s
LAMP Lampang 91.33 289 P **P** **22 56 39.7 +0.9**
comp=Z,1µmcomp=Z,25nm,1.3s
YAK Yakutsk 91.38 337 P **P** **22 56 38.0 +0.1**
YAK Yakutsk 91.38 337 P **P** **22 56 38.5 +0.5**
comp=Z,32nm,0.8s,baz=125,slow=6.5,SNR=7.6
YAK LR LR 23 33 15.4
comp=Z,16µm,20.6s,baz=132,slow=33
comp=Z,32nm,0.8s
YAK Yakutsk 91.38 337 *e*P **P** **22 56 35.9 -2.1**
YAK *e* 23 00 12.4
YAK *e*S **SKSac** **23 07 07.6 -2.2**
YAK *e* 23 07 37.3
YAK *e*SS **SS** **23 13 40.2 -2.4**
YAK *e*SSS SSS 23 17 15.4
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK pmax pmax
comp=Z,2µm,7.8s
YAK pmax pmax
comp=N,279nm,4.2s
YAK pmax pmax
comp=E,690nm,5.5s
YAK smax smax
comp=E,2µm,11.1s
YAK smax smax
comp=N,1µm,11.6s
YAK MLR MLR
comp=Z,14µm,26.0s
YAK MLR MLR
comp=E,5µm,16.0s
MT05 Renca 91.45 126 IAMs_20 IAMs_20 23 28 46.3
comp=Z,22µm,20.0s
D28M Stokes Point 91.52 12 P **P** **22 56 37.3 -1.2**
baz=214
D28M S **S** **23 07 39.5 +1.9**
baz=214
MT03 Universidad Ad 91.58 126 IAMs_20 IAMs_20 23 27 28.9
comp=Z,26µm,22.0s
PEL Peldehue 91.58 126 IAMs_20 IAMs_20 23 28 51.2
comp=Z,23µm,21.0s
MT16 CCHEN 91.60 126 IAMs_20 IAMs_20 23 27 30.3
comp=Z,24µm,22.0s
LMEL Las Melosas 91.67 126 IAMs_20 IAMs_20 23 27 45.2
comp=Z,35µm,21.0s
CO06 Fray Jorge 91.81 123 IAMs_20 IAMs_20 23 27 57.0
comp=Z,25µm,22.0s
INK Inuvik 91.83 14 IAmb IAmb 22 57 04.8
comp=Z,142nm,1.6s
INK Inuvik 91.83 14 P **P** **22 56 38.8 -1.2**
baz=219
INK S **S** **23 07 40.2 -0.2**
baz=219
DGMT Dagmar 91.87 39 IAMs_20 IAMs_20 23 30 47.7
comp=Z,38µm,21.0s
CMAR Chiang Mai Arr 91.92 289 P **P** **22 56 39.4 -2.2**
CMAR Chiang Mai Arr 91.92 289 P **P** **22 56 41.6 +0.1**
comp=Z,3.5nm,0.8s,baz=105,slow=2.8,SNR=23
CMAR LR LR 23 36 05.3
comp=Z,11µm,19.6s,baz=100,slow=34
comp=Z,3.5nm,0.8s
CMAR Chiang Mai Arr 91.92 289 *i*P **P** **22 56 41.7 +0.1**
CMAR pmax pmax
comp=Z,6.0nm,1.0s
CD2 Chengdu 91.97 302 P **P** **22 56 41.2 -0.4**
CD2 SKS **SKSac** **23 07 15.5 +0.8**
CD2 S **ScS** **23 07 49.6 +3.6**
CD2 SS **SS** **23 13 52.7 +0.1**
CD2 pmax pmax
comp=Z,2µm,9.3s
CD2 LR LR
comp=Z,15µm,19.2s
CD2 LR LR
comp=Z,26µm,22.4s
CD2 LR LR
comp=Z,20µm,22.6s
MT08 Bocatoma Ro 91.98 126 IAMs_20 IAMs_20 23 28 05.5
comp=Z,24µm,21.0s
NATX Nacogdoches 92.00 57 IAMs_20 IAMs_20 23 30 21.0
comp=Z,25µm,21.0s
CHTO Chiang Mai 92.04 289 P **P** **22 56 41.1 -1.0**
CHTO Chiang Mai 92.04 289 P **P** **22 56 42.2 0.0**
CHTO Chiang Mai 92.04 289 P **P** **22 56 42.8 +0.7**
CHTO Chiang Mai 92.04 289 P **P** **22 56 41.1 -1.0**
CHTO pmax pmax
comp=Z,35nm,1.4s
CHTO MLR MLR
comp=Z,17µm,21.0s
CHTO Chiang Mai 92.04 289 P **P** **22 56 42.0 -0.1**
comp=Z,1µmcomp=Z,16nm,1.4s
CO02 Combarbal 92.10 124 IAMs_20 IAMs_20 23 28 17.8
comp=Z,24µm,21.0s
PZH PanZhiHua 92.12 297 P **P** **22 56 43.5 +1.0**
PZH S **S** **23 07 47.3 +2.1**
PZH sS **sS** **23 07 54.0 +3.1**
PZH pmax pmax
comp=Z,30nm,2.2s
PZH pmax pmax
comp=Z,970nm,8.6s
PZH LR LR
comp=Z,11µm,23.5s
PZH LR LR
comp=Z,19µm,21.2s
PZH LR LR
comp=Z,29µm,21.4s
Z38A Mt. Pleasant 92.27 56 IAMs_20 IAMs_20 23 29 38.1
comp=Z,37µm,22.0s
K30B Basset 92.38 46 IAMs_20 IAMs_20 23 30 43.5
comp=Z,20µm,22.0s
T35A Sooner Cattle 92.41 52 IAmb IAmb 22 56 46.6
comp=Z,60nm,1.2s
CO05 La Serena 92.42 123 IAMs_20 IAMs_20 23 29 52.2
comp=Z,26µm,20.0s
CO03 El Pedregal 92.49 124 IAMs_20 IAMs_20 23 28 29.1
comp=Z,23µm,21.0s
TGUH Tegucigalpa,Un 92.57 76 IAMs_20 IAMs_20 23 28 05.9
comp=Z,29µm,22.0s
TUL3 Leonard 92.59 53 IAMs_20 IAMs_20 23 30 55.5
comp=Z,39µm,22.0s
GO04 Tololo Observa 92.67 123 IAMs_20 IAMs_20 23 27 58.8
comp=Z,27µm,22.0s
441A DeRidder 92.83 59 IAMs_20 IAMs_20 23 34 37.2
comp=Z,21µm,20.0s
LCO Las Campanas 93.20 122 IAMs_20 IAMs_20 23 28 25.0
comp=Z,27µm,22.0s
AC04 Llanos de Chal 93.22 121 IAMs_20 IAMs_20 23 28 57.4
comp=Z,22µm,21.0s
RLO Rose Lookout 93.26 53 IAmb IAmb 22 57 01.9
comp=Z,158nm,1.9s
CO01 Juntas del Tor 93.31 123 IAMs_20 IAMs_20 23 28 08.7
comp=Z,29µm,22.0s
CIT Chita 93.47 324 *e*P **P** **22 56 50.2 +2.2**
CIT *e* 22 56 57.8
CIT *e* 23 00 29.4
CIT *e* 23 09 40.8
JTS Las Juntas de 93.55 80 IAMs_20 IAMs_20 23 28 35.9
comp=Z,32µm,21.0s
JTS Las Juntas de 93.55 80 LR LR 23 28 56.7
comp=Z,32µm,20.6s,baz=252,slow=29
JTS Las Juntas de 93.55 80*ce*P **P** **22 56 50.4 +1.2**
JTS pmax pmax
comp=Z,88nm,1.5s
JTS MLR MLR
comp=Z,12µm,16.0s
TEIG Tepich 93.60 70 IAMs_20 IAMs_20 23 30 05.0
comp=Z,38µm,22.0s
LZH Lanzhou 93.69 307 *e*P **P** **22 56 48.7 -0.9**
LZH sP pwP 22 56 57.9 +1.9
LZH PP **PP** **23 00 38.1 +3.1**
LZH S **S** **23 07 59.0 +0.1**
LZH SS **SS** **23 14 14.0 -3.5**
LZH pmax pmax
comp=Z,38nm,1.0s
LZH pmax pmax
comp=Z,1µm,4.8s
LZH LR LR
comp=Z,6µm,17.2s
LZH LR LR
comp=Z,16µm,19.1s
LZH LR LR
comp=Z,22µm,21.0s
LZDM Lanzhou Array 93.76 307 P **P** **22 56 49.0 -1.2**
comp=Z,4.1nm,0.6s,baz=132,slow=2.2,SNR=9.0
comp=Z,4.1nm,0.6s
YKA Yellowknife Ar 93.78 24 P **P** **22 56 48.7 -0.4**
comp=Z,8.7nm,1.0s,baz=248,slow=4.9,SNR=12
comp=Z,8.7nm,1.0s
YKA Yellowknife Ar 93.78 24 P **P** **22 56 48.8 -0.3**
MIAR Mount Ida 93.81 55 IAmb IAmb 22 57 04.9
comp=Z,118nm,1.4s
MIAR IAMs_20 IAMs_20 23 31 43.0
comp=Z,31µm,21.0s
U38A Gravette 93.84 53 IAmb IAmb 22 57 05.5
comp=Z,112nm,1.6s
U38A IAMs_20 IAMs_20 23 32 03.6
comp=Z,31µm,21.0s
CFA Coronel Fontan 94.10 125 LR LR 23 30 34.7
comp=Z,7µm,21.8s,baz=246,slow=30
AC06 Mina Casimiro 94.13 121 IAMs_20 IAMs_20 23 29 15.8
comp=Z,24µm,21.0s
GO03 Copiapo 94.14 121 IAMs_20 IAMs_20 23 28 42.9
comp=Z,24µm,22.0s
HDC Heredia 94.24 81 IAMs_20 IAMs_20 23 28 57.4
comp=Z,34µm,21.0s
L34A Svendsen Farm, 94.34 47 IAMs_20 IAMs_20 23 33 26.4
comp=Z,26µm,20.0s
TNCH TengChong 94.39 295 P **P** **22 56 53.5 +0.4**
TNCH S **S** **23 08 08.5 +3.0**
TNCH SS **SS** **23 14 32.0 +4.1**
TNCH pmax pmax
comp=Z,16nm,0.7s
TNCH pmax pmax
comp=Z,380nm,3.5s
TNCH LR LR
comp=Z,8µm,22.1s
TNCH LR LR
comp=Z,6µm,25.3s
TNCH LR LR
comp=Z,28µm,24.5s
AC01 Pan de Azucar 94.41 119 IAMs_20 IAMs_20 23 29 54.1
comp=Z,20µm,20.0s
MDND Maddock 94.41 41 IAMs_20 IAMs_20 23 33 19.0
comp=Z,29µm,20.0s
N35A Tabor 94.46 48 IAMs_20 IAMs_20 23 32 01.7
comp=Z,33µm,22.0s
ECSD EROS Data Cent 94.81 46 IAmb IAmb 22 56 56.8
comp=Z,81nm,1.4s
ECSD EROS Data Cent 94.81 46 IAMs_20 IAMs_20 23 31 47.8
comp=Z,37µm,22.0s
143A Socs Landing, 94.91 57 IAMs_20 IAMs_20 23 33 14.2
comp=Z,18µm,20.0s
C36M Paulatuk 94.95 16 IAMs_20 IAMs_20 23 33 09.2
comp=Z,25µm,21.0s
C36M Paulatuk 94.95 16 P **P** **22 56 52.4 -1.9**
baz=228
C36M S **S** **23 08 08.3 +0.3**
baz=228
PB14 IPOC Station P 95.16 118 IAMs_20 IAMs_20 23 30 10.2
comp=Z,23µm,21.0s
AC02 Maricunga 95.34 120 IAMs_20 IAMs_20 23 29 54.8
comp=Z,26µm,22.0s
FCAR Ozark Folk Cen 95.38 54 IAmb IAmb 22 57 11.5
comp=Z,146nm,1.7s
PB10 IPOC Station P 95.47 117 IAMs_20 IAMs_20 23 29 29.3
comp=Z,26µm,22.0s
VBMS Vicksburg 95.47 58 IAMs_20 IAMs_20 23 35 30.0
comp=Z,17µm,20.0s
GO02 Mina Guanaco 95.63 119 IAMs_20 IAMs_20 23 30 42.5
comp=Z,25µm,21.0s
ULN Ulaanbaatar 95.65 319 P **P** **22 56 58.2 -0.1**
ULN Ulaanbaatar 95.65 319 IAMs_20 IAMs_20 23 38 43.8
comp=Z,18µm,20.0s
ULN Ulaanbaatar 95.65 319 P **P** **22 56 59.2 +0.9**
ULN Ulaanbaatar 95.65 319*de*P **P** **22 56 58.4 +0.1**
ULN pmax pmax
comp=Z,18nm,1.3s
ULN MLR MLR
comp=Z,18µm,19.0s
MGMO Mountain Grove 95.68 53 IAmb IAmb 22 57 04.2
comp=Z,62nm,1.1s
F33A 5 Mile Ranch, 95.78 44 IAmb IAmb 22 57 00.8
comp=Z,67nm,1.2s
BOD Bodaibo 95.78 329 *e*P **P** **22 56 59.5 +1.1**
BOD pmax pmax
comp=Z,31nm,1.5s
FFC Flin Flon 95.79 34 P **P** **22 56 58.0 -0.5**
FFC IAmb IAmb 22 57 12.5
comp=Z,85nm,1.9s
FFC Flin Flon 95.79 34 P **P** **22 56 58.0 -0.5**
FFC pmax pmax
comp=Z,85nm,1.9s
FFC MLR MLR
comp=Z,17µm,20.0s
PB05 IPOC Station P 96.02 116 IAMs_20 IAMs_20 23 29 44.0
comp=Z,23µm,22.0s
SONM Songino Array 96.05 318 P **P** **22 56 59.3 -0.8**
SONM Songino Array 96.05 318 P **P** **22 57 00.1 +0.1**
comp=Z,1.4nm,1.0s,baz=118,slow=2.2,SNR=8.0
SONM PP **PP** **23 00 52.3 -0.7**
comp=Z,9.2nm,1.1s,baz=115,slow=6.3,SNR=7.6
comp=Z,1.4nm,1.0s
N38A Joes South For 96.16 49 IAMs_20 IAMs_20 23 34 16.6
comp=Z,25µm,20.0s
LCAR Lake Charles 96.18 54 IAmb IAmb 22 57 03.9
comp=Z,64nm,1.4s
A36M Sachs Harbour 96.46 14 IAmb IAmb 22 57 26.1
comp=Z,55nm,1.0s
A36M Sachs Harbour 96.46 14 P **P** **22 56 60.0 -1.2**
baz=227
A36M S **S** **23 08 23.1 +2.1**
baz=227
OTAV Otavalo 96.56 92 IAMs_20 IAMs_20 23 30 58.8
comp=Z,23µm,20.0s
OTAV Otavalo 96.56 92 *e*P **P** **22 57 07.7 +4.1**
PB06 IPOC Station P 96.62 117 IAMs_20 IAMs_20 23 30 11.7
comp=Z,22µm,21.0s
PB03 IPOC Station P 96.72 116 IAMs_20 IAMs_20 23 29 29.5
comp=Z,22µm,22.0s
CCM Cathedral Cave 96.74 52 P **P** **22 57 01.8 -1.4**
CCM Cathedral Cave 96.74 52 P **P** **22 57 01.8 -1.4**
CCM pmax pmax
comp=Z,31nm,1.4s
Y45A Yeager Farm, C 96.76 57 IAMs_20 IAMs_20 23 33 34.0
comp=Z,32µm,21.0s
146A Union 96.77 58 IAMs_20 IAMs_20 23 36 58.5
comp=Z,18µm,21.0s
AGMN Agassiz Nation 96.91 41 IAmb IAmb 22 57 05.4
comp=Z,65nm,1.3s
AGMN IAMs_20 IAMs_20 23 35 37.1
comp=Z,27µm,20.0s
PBMO Poplar Bluff 96.96 54 IAmb IAmb 22 57 17.5
comp=Z,128nm,1.9s
OXF Oxford 97.06 56 IAMs_20 IAMs_20 23 35 29.0
comp=Z,30µm,19.0s
I37A Lemond, Waseca 97.09 46 IAMs_20 IAMs_20 23 34 53.2
comp=Z,27µm,20.0s
PB09 IPOC Station P 97.25 116 IAMs_20 IAMs_20 23 29 45.7
comp=Z,20µm,22.0s
FVM French Village 97.33 53 IAmb IAmb 22 57 20.1
comp=Z,102nm,1.7s
PB01 IPOC Station P 97.34 115 IAMs_20 IAMs_20 23 29 48.0
comp=Z,19µm,22.0s
LKP Lekhapani 97.38 296 *e*P P 22 56 56.1 -10
LKP IAmb IAmb 23 01 42.1
comp=Z,3µm,5.2s
PB12 IPOC Station P 97.55 112 IAMs_20 IAMs_20 23 30 07.5
comp=Z,19µm,22.0s
ULM Lac du Bonnet 97.57 40 IAmb IAmb 22 57 10.9
comp=Z,48nm,1.3s
ULM Lac du Bonnet 97.57 40 LR LR 23 34 14.2
comp=Z,38µm,21.9s,baz=252,slow=31
ULM Lac du Bonnet 97.57 40‖*e*P **P** **22 57 05.8 -0.9**
AP01 Chacalluta 97.62 112 IAMs_20 IAMs_20 23 30 09.7
comp=Z,18µm,21.0s
TIXI Tiksi 97.63 345 P **P** **22 57 04.3 -2.1**
TIXI Tiksi 97.63 345 IAMs_20 IAMs_20 23 34 36.0
comp=Z,32µm,22.0s
TIXI Tiksi 97.63 345 LR LR 23 35 04.3
comp=Z,42µm,21.8s,baz=144,slow=32
TIXI Tiksi 97.63 345‖*e*P **P** **22 57 04.8 -1.7**
TIXI pmax pmax
comp=Z,28nm,1.0s
SLM Saint Louis 97.67 52 P Pdif 22 57 07.8 +0.3
SLM Saint Louis 97.67 52 P Pdif 22 57 07.8 +0.3
SLM pmax pmax
comp=Z,29nm,1.1s
AF01 San Pedro de A 97.70 117 IAMs_20 IAMs_20 23 31 11.3
comp=Z,21µm,21.0s
CGM3 Cape Girardeau 97.70 53 IAmb IAmb 22 57 20.9
comp=Z,82nm,1.7s
Z47A Carrollton 97.73 58 IAMs_20 IAMs_20 23 37 08.9
comp=Z,22µm,20.0s
GTA Gaotai 97.79 309 P **P** **22 57 07.8 -0.4**
GTA sP pwP 22 57 15.8 +1.2
GTA SKS **SKSac** **23 07 49.3 +3.5**
GTA S **S** **23 08 31.1 -3.0**
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,740nm,8.8s
GTA LR LR
comp=Z,6µm,21.9s
GTA LR LR

comp=Z,19µm,24.7s
GTA LR LR
comp=Z,34µm,24.3s
SPMN Marine on St. 97.88 45 IAmb IAmb 22 57 10.8
comp=Z,58nm,1.1s
L40A Anamosa 97.99 48 IAMs_20 IAMs_20 23 34 32.2
comp=Z,28µm,21.0s
S44A Carbondale 98.13 53 IAMs_20 IAMs_20 23 33 23.1
comp=Z,28µm,22.0s
PLAL Pickwick Lake 98.25 56 IAMs_20 IAMs_20 23 37 54.4
comp=Z,21µm,20.0s
IMP Imphal 98.29 293 *e*P P 22 57 00.7 -10
PB16 IPOC Station P 98.37 112 IAMs_20 IAMs_20 23 30 35.4
comp=Z,19µm,22.0s
KOHI KOHIMA 98.40 294 *e*P P 22 57 00.1 -11
KOHI IAmb IAmb 23 01 33.1
comp=Z,38nm,1.3s
LRAL Lakeview Retre 98.55 58 IAMs_20 IAMs_20 23 35 26.5
comp=Z,24µm,22.0s
JORH JORHAT 98.57 295 *e*P P 22 57 01.5 -10
EPLO Experimental L 98.69 41 IAmb IAmb 22 57 16.6
comp=Z,37nm,1.3s
X48A Hartselle 98.91 57 IAMs_20 IAMs_20 23 34 59.0
comp=Z,33µm,21.0s
I40A Norwalk 98.96 47 IAmb IAmb 22 57 15.4
comp=Z,35nm,1.1s
I40A IAMs_20 IAMs_20 23 35 32.8
comp=Z,26µm,20.0s
ZIRO ZIRO 99.13 296 *e*P **Pdif 22 57 03.7 -11**
ZIRO IAmb IAmb 23 01 28.5
comp=Z,331nm,2.4s
ITAN ITANAGAR 99.14 296 *e*P **Pdif 22 57 03.7 -11**
Y49A Blount Mountai 99.25 57 IAMs_20 IAMs_20 23 35 55.0
comp=Z,27µm,21.0s
HOPE Hope Point 99.26 157 IAMs_20 IAMs_20 23 36 58.5
comp=Z,21µm,21.0s
V48A Smith Brothers 99.44 56 IAMs_20 IAMs_20 23 34 35.1
comp=Z,32µm,22.0s
EYMN Ely 99.57 43 IAMs_20 IAMs_20 23 36 25.6
comp=Z,25µm,20.0s
G40A Rib Lake 99.65 46 IAmb IAmb 22 57 23.4
comp=Z,55nm,1.5s
TEZP TEZPUR 99.78 295 *e*P **Pdif 22 57 06.8 -10**
TEZP IAmb IAmb 23 01 27.1
comp=Z,241nm,2.4s
352A Blakely 99.80 60 IAMs_20 IAMs_20 23 38 43.9
comp=Z,18µm,22.0s
I42A Draeger Farm, 100.14 47 IAMs_20 IAMs_20 23 35 49.1
comp=Z,34µm,21.0s
K43A Burlington 100.23 48 IAMs_20 IAMs_20 23 36 19.4
comp=Z,23µm,21.0s
SHL Shillong 100.29 294 *e*P **Pdif 22 57 08.4 -11**
HQIL Hanson Quary C 100.33 49 IAMs_20 IAMs_20 23 35 17.0
comp=Z,31µm,22.0s
LPAZ La Paz 100.37 111 *e*P **Pdif 22 57 26.2 +5.4**
L44A Lake County Fo 100.39 49 IAMs_20 IAMs_20 23 34 58.6
comp=Z,18µm,22.0s
W50A Signal Mountai 100.49 56 IAMs_20 IAMs_20 23 38 18.7
comp=Z,20µm,20.0s
X51A Calhoun 100.68 57 IAMs_20 IAMs_20 23 36 23.9
comp=Z,29µm,21.0s
GOMU GeErMu 100.69 305 P **Pdif 22 57 24.7 +3.2**
GOMU PP **PP 23 01 31.4 +2.3**
GOMU SS SS 23 15 56.1 -0.5
GOMU pmax pmax
comp=Z,880nm,5.5s
GOMU LR LR
comp=Z,7µm,21.0s
GOMU LR LR
comp=Z,8µm,20.3s
TAWA Tawang 100.85 296 *e*P **Pdif 22 57 09.5 -13**
TAWA IAmb IAmb 23 01 39.0
comp=Z,77nm,1.9s
H43A Windswept, Lux 101.09 47 IAMs_20 IAMs_20 23 36 58.1
comp=Z,25µm,20.0s
Y52A Lilburn 101.13 58 IAMs_20 IAMs_20 23 36 03.9
comp=Z,26µm,22.0s
656A Willston 101.23 63 IAMs_20 IAMs_20 23 41 01.8
comp=Z,16µm,20.0s
GOGA Godfrey 101.50 59 IAMs_20 IAMs_20 23 37 14.6
comp=Z,20µm,22.0s
P48A Milroy 101.50 52 IAMs_20 IAMs_20 23 37 31.2
comp=Z,26µm,20.0s
L46A Eue Claire 101.50 49 IAMs_20 IAMs_20 23 36 35.2
comp=Z,33µm,21.0s
W52A Murphy 101.55 57 IAMs_20 IAMs_20 23 36 40.0
comp=Z,22µm,22.0s
154A Montrose 101.59 59 IAMs_20 IAMs_20 23 36 57.1
comp=Z,25µm,22.0s
LSA Lhasa 102.00 297 IAMs_20 IAMs_20 23 39 02.2
comp=Z,18µm,22.0s
060A Indiantown 102.49 66 IAMs_20 IAMs_20 23 36 51.3
comp=Z,35µm,22.0s
V53A Saluda 102.58 56 IAMs_20 IAMs_20 23 40 11.1
comp=Z,19µm,20.0s
MTDJ Mount Denham 102.73 75 IAMs_20 IAMs_20 23 33 48.1
comp=Z,23µm,22.0s
J47A Sunmer 102.86 49 IAMs_20 IAMs_20 23 37 09.9
comp=Z,31µm,22.0s
Q51A Peebles 102.96 53 IAMs_20 IAMs_20 23 37 18.0
comp=Z,33µm,21.0s
AAM Ann Arbor 103.48 50 IAMs_20 IAMs_20 23 39 11.4
comp=Z,26µm,20.0s
ACSO Alum Creek Sta 103.51 52 IAMs_20 IAMs_20 23 37 25.1
comp=Z,30µm,22.0s
U54A Nelsons Funny 103.56 56 IAMs_20 IAMs_20 23 37 47.0
comp=Z,29µm,22.0s
KMSC Kings Mountain 103.63 57 IAMs_20 IAMs_20 23 40 18.7
comp=Z,25µm,20.0s
Q52A Bidwell 103.76 53 IAMs_20 IAMs_20 23 38 04.0
comp=Z,30µm,20.0s
V55A Taylorsville 103.89 57 IAMs_20 IAMs_20 23 41 21.4
comp=Z,14µm,19.0s
NHSC New Hope 104.10 60 IAMs_20 IAMs_20 23 41 11.3
comp=Z,17µm,20.0s
Y57A Sumter 104.13 59 IAMs_20 IAMs_20 23 38 38.1
comp=Z,30µm,22.0s
K50A Casco 104.33 49 IAMs_20 IAMs_20 23 39 00.5
comp=Z,16µm,20.0s
P53A Whipple 104.54 53 IAMs_20 IAMs_20 23 38 47.5
comp=Z,29µm,20.0s
U56A King 104.65 56 IAMs_20 IAMs_20 23 39 03.7
comp=Z,24µm,21.0s
Y58A Scranton 104.69 59 IAMs_20 IAMs_20 23 39 45.0
comp=Z,16µm,20.0s
N53A Lisbon 105.23 52 IAMs_20 IAMs_20 23 38 59.6
comp=Z,27µm,20.0s
PALK Pallekele 105.53 273 IAMs_20 IAMs_20 23 44 47.4
comp=Z,28µm,20.0s
V58A Windy Hill, Pi 105.54 57 IAMs_20 IAMs_20 23 39 45.2
comp=Z,21µm,22.0s
Y60A Bolivia 105.89 59 IAMs_20 IAMs_20 23 41 00.7
comp=Z,20µm,20.0s
VIS Vishakhapatnam 105.93 284 *e*P **Pdif 22 57 30.6 -14**
W59A Clinton 105.95 58 IAMs_20 IAMs_20 23 38 58.1
comp=Z,28µm,22.0s
WMQ Urumqi 107.64 311 Pdif **Pdif 22 57 55.2 +3.4**
WMQ PP **PP 23 02 18.4 -1.9**
WMQ SS SS 23 17 33.8 +2.7
WMQ AMB AMB
comp=Z,610nm,8.9s
WMQ LR LR
comp=Z,11µm,22.1s
WMQ LR LR
comp=Z,20µm,23.9s
WMQ LR LR
comp=Z,27µm,24.0s
J55A Hilton 107.88 50 IAMs_20 IAMs_20 23 40 41.6
comp=Z,24µm,21.0s
GRTK Grand Turk 109.37 73 IAMs_20 IAMs_20 23 39 42.9
comp=Z,22µm,22.0s
TRD Trivandrum 109.43 273 *e*P **Pdif 22 57 50.6 -10**
HYBB Hyderabad (bro 110.27 282 *e*PKiKP **PKiKP 23 02 05.8 +0.4**
HYBB *e*PP **PP 23 02 38.8 -1.3**
HYBB *e*SKSac **SKSac 23 08 42.4 -1.6**
HYBB IVMs_BB IVMs_BB 23 41 09.0
comp=Z,4µm,26.2s
ZALV Zalesovo Beam 110.64 322 PKiKP **PKiKP 23 02 03.0 -2.0**
comp=Z,2.9nm,0.9s,baz=110,slow=3.4,SNR=7.3
ZALV Zalesovo Beam 110.64 322 *i* PKiKP **PKiKP 23 02 03.0 -2.0**
MKAR Makanchi Array 111.78 314 PKiKP **PKiKP 23 02 05.7 -1.7**
comp=Z,1.6nm,0.7s,baz=87,slow=1.5,SNR=11
MKAR PKKPbc **PKKPbc 23 13 00.4 -1.4**
comp=Z,1.0nm,0.7s,baz=323,slow=2.2,SNR=4.0
MKAR PKKPab **PKKPab 23 13 08.2 -0.5**
comp=Z,1.1nm,0.9s,baz=299,slow=3.5,SNR=4.4
TULEG Thule 111.83 14 IAMs_20 IAMs_20 23 44 56.5
comp=Z,18µm,20.0s
HNH Hanover 111.93 50 IAMs_20 IAMs_20 23 44 56.7
comp=Z,22µm,20.0s
HMDM Hanimaadhoo 112.51 270 IAMs_20 IAMs_20 23 44 43.5
comp=Z,16µm,22.0s
I62A Tamworth 112.63 49 IAMs_20 IAMs_20 23 42 13.3
comp=Z,27µm,22.0s
I63A Otisfield 113.19 49 IAMs_20 IAMs_20 23 43 26.0
comp=Z,27µm,22.0s
CLDB Colider 113.51 111 *e*P **Pdif 22 58 23.6 +5.1**
E62A Clayton Lake 114.06 47 IAMs_20 IAMs_20 23 55 50.5
comp=Z,13µm,18.0s
KURK Kurchatov 114.35 318 IAMs_20 IAMs_20 23 47 34.9
comp=Z,19µm,21.0s
KURK Kurchatov 114.35 318 ⇓ *i* PKIKP PKPdf 23 02 11.0 -1.1
KURK MLR MLR
comp=Z,13µm,19.0s
KURBB Kurchatov Arra 114.41 318 PKiKP PKPdf 23 02 10.4 -1.9
comp=Z,1.7nm,0.2s,baz=102,slow=2.0,SNR=12
KURBB PP **PP 23 03 07.5 -1.2**
comp=Z,2.9nm,0.2s,baz=86,slow=7.1,SNR=4.7
KURBB PKKPab **PKKPab 23 12 58.3 +1.4**
comp=Z,1.3nm,0.2s,baz=277,slow=4.6,SNR=6.7
F64A Sherman 114.85 47 IAMs_20 IAMs_20 23 45 44.9
comp=Z,25µm,20.0s
SABA Saba 115.78 79 IAMs_20 IAMs_20 23 42 11.0
comp=Z,16µm,22.0s
KSH Kashi 115.91 305 PKP **PKiKP 23 02 18.0 +2.3**
KSH SKKS 23 10 20.5
KSH SS **SS 23 19 23.8 +2.2**
KSH LR LR
comp=Z,6µm,20.6s
KSH LR LR
comp=Z,12µm,19.3s
KSH LR LR
comp=Z,16µm,20.6s
SEUS St. Eustatius 116.00 79 IAMs_20 IAMs_20 23 42 18.7
comp=Z,15µm,22.0s
GDHS Morne Mazeau, 116.87 81 IAMs_20 IAMs_20 23 47 23.8
comp=Z,14µm,20.0s
AAK Ala-Archa 117.14 309 IAMs_20 IAMs_20 23 50 15.8
comp=Z,16µm,22.0s
AAK Ala-Archa 117.14 309 *i* PKIKP **PKiKP 23 02 19.3 +1.2**
AAK MLR MLR
comp=Z,9µm,20.0s
ABD La Joyeuse, An 117.17 81 IAMs_20 IAMs_20 23 44 20.8
comp=Z,14µm,22.0s
MAGL Baie de l'ile 117.25 81 IAMs_20 IAMs_20 23 42 29.8
comp=Z,14µm,22.0s
NIL Nilore 117.69 299 P **PKiKP 23 02 20.0 +0.8**
SAQQ Saqqaq 118.53 19 *i* P **PKiKP 23 02 19.6 0.0**
ILULI Ilulissat 119.14 20 IAMs_20 IAMs_20 23 48 08.0
comp=Z,22µm,20.0s
BVAR Borovoye Array 119.28 321 PKP **PKPdf 23 02 20.0 -1.6**
comp=Z,6.0nm,0.7s,baz=86,slow=4.5,SNR=18
BVAR Borovoye Array 119.28 321 PKIKP **PKPdf 23 02 20.0 -1.6**
BORK Borovoye 119.32 321 ⇓ *i* PKIKP **PKPdf 23 02 21.1 -0.6**
BORK pmax pmax
comp=Z,16nm,1.3s
BORK MLR MLR
comp=Z,17µm,19.0s
KKAR Karatay Array 120.07 309 **PKPdf 23 02 21.5 -1.9**
KKAR Karatay Array 120.07 309 PKIKP **PKPdf 23 02 21.5 -1.9**
FOMA Nahampoana Res 120.23 225 IAMs_20 IAMs_20 23 43 10.3
comp=Z,24µm,22.0s
SFJD Kangerlussuaq 120.27 22 IAMs_20 IAMs_20 23 52 02.1
comp=Z,14µm,20.0s
DAG Danmarks Havn 120.64 6 *i* P **PKiKP 23 02 27.0 +3.3**
SUMG Summit 120.75 14 *i* P **PKiKP 23 02 24.8 +0.2**
KBL Kabul 121.22 300 PKPdf **PKPdf 23 02 25.1 -1.0**
KBL Kabul 121.22 300 P **PKiKP 23 02 27.2 +0.9**
SNR=19
KBL Kabul 121.22 300 PKIKP **PKPdf 23 02 25.2 -1.0**
VOI Vohitsoka 122.39 227 IAMs_20 IAMs_20 23 47 11.9
comp=Z,16µm,20.0s
VOI Vohitsoka 122.39 227 P **PKiKP 23 02 29.9 +1.0**
DBG Daneborg 122.67 8 *i* P **PKiKP 23 02 30.8 +3.1**
SVE Sverdlovsk 123.88 327 *i* PKIKP **PKPdf 23 02 30.0 -0.3**
SVE pmax pmax
comp=Z,21nm,0.9s
SVE MLR MLR
comp=Z,22µm,20.0s
ARTI Arti 125.20 327 PKPdf **PKPdf 23 02 31.3 -1.5**
ARTI Arti 125.20 327 *i* PKIKP **PKPdf 23 02 32.0 -0.9**
ARTI 23 04 22.2
ARTI PPP PPP 23 06 59.9
ARTI 23 09 43.6
SCO Scoresbysund 125.73 11 *i* P **PKPdf 23 02 33.4 0.0**
ABKAR Akbulak array 126.46 318 PKPdf **PKPdf 23 02 33.4 -2.1**
SUR Sutherland 126.98 197 IAMs_20 IAMs_20 23 52 41.2
comp=Z,18µm,21.0s
LVZ Lovozero 127.23 346 IAMs_20 IAMs_20 23 58 35.5
comp=Z,21µm,20.0s
LVZ Lovozero 127.23 346 ⇑ *i* PKIKP **PKiKP 23 02 40.7 +3.7**
LVZ MLR MLR
comp=Z,21µm,20.0s
ARCES ARCESS Array B 127.53 351 **PKPdf 23 02 35.7 -1.3**
ARCES ARCESS Array B 127.53 351 PKP **PKPdf 23 02 35.4 -1.6**
comp=Z,5.4nm,0.8s,baz=18,slow=2.2,SNR=8.4
ARCES ARCESS Array B 127.53 351 PKIKP **PKPdf 23 02 35.7 -1.3**
APA Apatity 127.78 347 ⇓ *i* PKIKP **PKiKP 23 02 39.6 +1.6**
APA *i* 23 04 40.1
KIRV Kirov 128.58 332 *d i* PKIKP **PKiKP 23 02 40.2 +0.4**
JLN Jalan Bani Buh 128.84 284 P **PKPdf 23 02 39.0 -1.8**
BOSA Boshof 129.00 203 PKP **PKiKP 23 02 42.6 +0.7**
comp=Z,9.0nm,1.0s,baz=169,slow=3.4,SNR=8.0
BOSA PP **PP 23 04 47.4 +0.2**
comp=Z,14nm,1.2s,baz=82,slow=4.6,SNR=4.4
WSAR Wadi Sarin 129.67 285 P **PKiKP 23 02 44.2 +1.1**
MHTO MHTO 130.03 282 P **PKPdf 23 02 43.0 -0.1**
SNR=5.5
JMDO Jabal Madar 130.06 284 P **PKiKP 23 02 44.1 +0.1**
SMDO Samad 130.18 285 P **PKPdf 23 02 43.5 0.0**
DQM DQM 130.29 281 P **PKPdf 23 02 41.3 -2.3**
BORG Borgarnes 130.73 14 IAMs_20 IAMs_20 23 56 33.6
comp=Z,15µm,20.0s
HOQ Hoqain 130.90 285 P **PKPdf 23 02 44.2 -0.5**
SNR=9.1
KLMR Klimovskoe 131.16 338 *e*PKIKP **PKPdf 23 02 41.5 -2.6**
KLMR pmax pmax
comp=Z,76nm,1.6s
ARQ Araqi 131.61 285 P **PKPdf 23 02 46.5 +0.4**
SOHO SOHO 131.66 286 P **PKPdf 23 02 46.1 0.0**
SOHO SOHO 131.66 286 *i* Pdiff **PKPdf 23 02 44.1 -2.0**
SNR=15
MAKGR Makgori 131.69 204 *i* P **PKiKP 23 02 47.6 +0.2**
SHAO Shalim 131.80 278 P **PKiKP 23 02 48.7 +1.1**
MDH Madha 131.94 288 P **PKPdf 23 02 45.5 -1.1**
MDH Madha 131.94 288 *i* Pdiff **PKPdf 23 02 45.3 -1.3**
SNR=10
BANOM Banah 131.97 288 *i* Pdiff **PKPdf 23 02 45.2 -1.5**
SNR=6.5
UOSS Minazif 132.00 287 P **PKPdf 23 02 46.2 -0.6**
UOSS Minazif 132.00 287 *i* Pdiff **PKPdf 23 02 43.4 -3.4**
SNR=9.2
HATD Hatta, Dubai 132.06 287 P **PKPdf 23 02 45.7 -1.2**
SNR=11
HATD Hatta, Dubai 132.06 287 *i* Pdiff **PKPdf 23 02 44.1 -2.8**
SNR=10.0
MSFE Esma-Masafi 132.07 288 *i* Pdiff **PKPdf 23 02 44.5 -2.4**
SNR=11
MASF Masafi 132.07 288 P **PKiKP 23 02 48.5 +0.5**
SNR=11
LBTB Lobatse 132.08 206 PKP **PKPdf 23 02 47.6 +0.5**
comp=Z,4.8nm,0.9s,baz=225,slow=2.9,SNR=5.2
SHME Shamm 132.11 289 P **PKPdf 23 02 46.4 -0.6**
SHME Shamm 132.11 289 *i* Pdiff **PKPdf 23 02 44.1 -2.8**
SNR=6.9
ASHO Ashiyiah 132.12 287 P **PKPdf 23 02 46.9 -0.1**
SNR=12
ASHO Ashiyiah 132.12 287 *i* Pdiff **PKPdf 23 02 46.4 -0.6**
SNR=11
ALNE Al Ain 132.36 286 P **PKiKP 23 02 48.4 -0.2**
SNR=19
ALNE Al Ain 132.36 286 *i* Pdiff **PKPdf 23 02 46.9 -0.6**
SNR=9.8
DMTO DMTO 132.39 277 P **PKiKP 23 02 49.7 +1.0**
SNR=12
NAZ Nazwa, Dubai 132.50 287 P **PKiKP 23 02 49.8 +1.0**
NAZ Nazwa, Dubai 132.50 287 *i* Pdiff **PKPdf 23 02 46.5 -1.2**
SNR=8.1
UMQ Umm Al-Quwin 132.52 288 P **PKiKP 23 02 49.8 +1.0**
FAQ Al Faqa, Dubai 132.55 287 P **PKiKP 23 02 49.3 +0.4**
SNR=9.0
ASUD Al Ashush, Dub 132.78 287 P **PKiKP 23 02 51.4 +2.0**
ASUD Al Ashush, Dub 132.78 287 Pdiff **PKPdf 23 02 47.6 -0.7**
UMZA Um Al Zommool 132.80 284 P **PKiKP 23 02 50.8 +1.3**
RBK Rabkut 133.06 277 P **PKiKP 23 02 50.3 +0.1**
SNR=25
AJN Ajban 133.09 286 P **PKPdf 23 02 47.9 -0.9**
SKOMA Sekoma 133.19 204 *i* P **PKiKP 23 02 51.4 +0.9**
DOK Doka 133.30 278 P **PKiKP 23 02 51.3 +0.7**
SNR=15
MREMI Moremi 133.40 209 *i* P **PKPdf 23 02 50.1 +0.5**
LPHEP Lephephe 133.43 207 *i* P **PKPdf 23 02 51.2 +0.3**
WHFO Wadi Hawf 133.53 277 P **PKiKP 23 02 52.0 +0.8**
SNR=19
ABTO Aybut 133.89 276 P **PKiKP 23 02 53.0 +1.1**
SNR=22
KDWAN Kaudwane 133.92 206 *i* P **PKiKP 23 02 53.0 +1.1**
MZR Muzera 134.37 284 P **PKiKP 23 02 53.4 +0.7**
SNR=11
MZR Muzera 134.37 284 *i* Pdiff **PKPdf 23 02 51.1 -0.2**
SNR=16
FINES FINESS Array B 134.66 346 PKP **PKPdf 23 02 48.5 -2.1**
comp=Z,5.0nm,0.8s,baz=85,slow=2.9,SNR=7.1
BROLN Tlhalogang 134.71 210 *i* P **PKPdf 23 02 51.9 -0.3**
GHWR Ruwais 134.98 286 P **PKiKP 23 02 54.0 +0.2**
JRN Qarnain Island 135.05 287 P **PKiKP 23 02 55.3 +1.3**
KGCAE Kacgae 135.36 203 *i* P **PKiKP 23 02 56.2 +1.3**
MOS Moscow 135.41 334 *i* PKIKP **PKiKP 23 02 55.2 +1.5**
MOS *e* 23 05 31.7
MOS *e*SS SS 23 23 18.2 -5.8
MOS pmax pmax
comp=Z,96nm,2.0s
MOS MLR MLR
comp=N,23µm,22.0s
MOS MLR MLR
comp=Z,28µm,22.0s
MOS MLR MLR
comp=E,12µm,21.0s
KOOLE Kule 135.94 201 *i* P **PKiKP 23 02 56.5 +0.4**
SLWR Sila 136.07 286 P **PKiKP 23 02 56.4 +0.3**
OBN Obninsk 136.28 334 ⇓ *i* PKIKP **PKiKP 23 02 56.4 +0.9**
OBN *e* 23 05 32.5
OBN *e* 23 10 08.3
OBN pmax pmax
comp=Z,85nm,2.5s
OBN MLR MLR
comp=Z,30µm,21.0s
VRH Novokhopyorsk 136.33 327 *i* PKIKP **PKiKP 23 02 55.9 +0.2**
VRH pmax pmax
comp=Z,38nm,1.9s
TRNA Turayna 136.53 287 P **PKPdf 23 02 56.1 +0.8**
MAK Makhachkala 136.60 313 *i* P **Pdif 22 59 49.9 -11**
MAK *i* 23 02 50.7
MAK *e* 23 05 32.2
MAK *e* 23 09 58.7
MAK *e*SS SS 23 23 31.6 -7.9
MAK *e*SSS SSS 23 28 44.5
MAK pmax pmax
comp=Z,453nm,1.2s
SHMA Al-Shehemyia 136.77 288 P **PKPdf 23 02 54.3 -1.4**
SMRA Abu-Samra 136.88 287 P **PKPdf 23 02 55.0 -0.9**
LPSR Galich'ya Gora 136.89 330 *e*PKIKP **PKiKP 23 02 56.2 -0.6**
LPSR pmax pmax
comp=Z,20nm,1.0s
AKT Akhty 136.93 311 *e*PKIKP **PKiKP 23 03 00.3 +2.8**
AKT *e* 23 05 42.8
AKT *e* 23 10 03.3
AKT *e* 23 15 55.2
AKT *e*SS SS 23 23 34.5 -9.5
AKT pmax pmax
comp=Z,39nm,1.3s
AKT pmax pmax
comp=N,43nm,1.3s
AKT pmax pmax
comp=E,35nm,1.3s
AKT MLR MLR
comp=Z,29µm,25.0s
AKT MLR MLR
comp=N,17µm,22.0s
AKT MLR MLR
comp=E,23µm,25.0s
SAKB Bahrain 137.15 288 P **PKiKP 23 02 58.2 0.0**
NOA NORSAR Array B 137.40 355 PKP **PKPdf 23 02 54.7 -1.1**
comp=E,4.7nm,1.1s,baz=15,slow=2.5,SNR=6.9
VSR Storozhevoye 137.62 328 *e*PKIKP **PKPdf 23 02 54.2 -2.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 137.71 328 *e*PKIKP **PKPdf 23 02 54.6 -2.0**
VORD pmax pmax
comp=Z,20nm,1.1s
HFS Hagfors 138.06 353 PKhKP PKPpre 23 02 47.3
comp=Z,2.4nm,0.7s,baz=41,slow=2.9,SNR=5.1
KSANE Kasane 138.58 210 *i* P **PKPdf 23 02 58.1 -1.4**
GOF Gofitskoye 138.70 318 *ce*PKIKP **PKiKP 23 03 00.1 -0.7**
QNGWA Qangwa 138.77 204 *i* P **PKiKP 23 03 01.3 -0.7**
KONO Kongsberg 138.89 356 IAMs_20 IAMs_20 00 06 44.2
comp=Z,12µm,22.0s
KBZ Khabaz 139.39 316 PKP **PKPdf 23 02 58.4 -1.5**
comp=Z,3.6nm,1.0s,baz=100,slow=6.1,SNR=3.4
KIV Kislovodsk 139.43 317 P **PKiKP 23 03 01.7 -0.7**
KIV Kislovodsk 139.43 317 Pdiff **PKPdf 23 03 01.3 +1.1**
KIV Kislovodsk 139.43 317 *i* PKIKP **PKPdf 23 03 00.7 +0.5**
KIV *e* 23 05 49.4
KIV *e*SS SS 23 24 05.0 -8.0
KIV *e*SSS SSS 23 29 23.7
KIV pmax pmax
comp=Z,6.0nm,1.0s
GNI Garni 139.51 311 IAMs_20 IAMs_20 00 08 30.4
comp=Z,12µm,21.0s
GNI Garni 139.51 311 P **PKiKP 23 03 02.8 -0.1**
GNI Garni 139.51 311 Pdiff **PKPdf 23 03 00.5 0.0**
GNI Garni 139.51 311 ⇑ *e*PKIKP **PKPdf 23 02 59.9 -0.6**
GNI MLR MLR
comp=Z,18µm,25.0s
KBD Kabd 139.53 293 P **PKPdf 23 02 59.8 -0.9**
ERBR Yeremizino-Bor 139.97 320 *i* PKIKP **PKPdf 23 03 01.1 +0.1**
ERBR pmax pmax
comp=Z,27nm,1.0s
MNK Minsk 140.04 339 *i* PKIKP **PKPdf 23 03 01.2 +0.4**
MNK *i* 23 05 55.9
MNK *i* PPP PPP 23 08 59.8
MNK *i* 23 10 08.5
MNK *i* SS SS 23 24 20.1 +1.5
MNK pmax pmax
comp=E,17nm,0.9s
MNK pmax pmax
comp=Z,15nm,1.1s
MNK pmax pmax
comp=N,10.0nm,1.0s
TSUM Tsumeb 140.33 199 PKPdf **PKPdf 23 03 00.1 -2.5**
TSUM Tsumeb 140.33 199 PKP **PKPdf 23 03 03.1 +0.5**
comp=N,5.9nm,0.9s,baz=154,slow=6.1,SNR=4.9
LABN Labinsk 140.36 319 *i* PKIKP **PKiKP 23 03 08.0 +3.8**
LABN pmax pmax
comp=Z,17nm,0.9s
KIBK Kibwezi 141.14 241 PKP **PKPdf 23 03 02.4 -1.7**
KIBK Kibwezi 141.14 241 IAMs_20 IAMs_20 00 01 27.6
comp=Z,18µm,21.0s
KIBK Kibwezi 141.14 241 P **PKPdf 23 03 03.0 -1.2**
SNR=14
SOC Sochi 141.50 318 *e*PKIKP **PKPdf 23 03 01.9 -1.9**
SOC *e* 23 06 04.4
SOC *e*SS SS 23 24 34.4 -2.6
SOC pmax pmax
comp=Z,24nm,0.8s
RAYN Ar Rayn 141.72 285 PKPdf PKPpre 23 03 00.0
RAYN Ar Rayn 141.72 285 IAMs_20 IAMs_20 00 06 46.8
comp=Z,14µm,20.0s
RAYN Ar Rayn 141.72 285 P **PKPdf 23 03 05.3 +0.4**
RAYN Ar Rayn 141.72 285 *i* Pdiff **PKPdf 23 03 01.1 -3.7**
SNR=12
RAYN Ar Rayn 141.72 285 PKHKP PKPpre 23 03 00.0
RAYN MLR MLR
comp=Z,14µm,20.0s
RAYN Ar Rayn 141.72 285 ⇑ P **PKPdf 23 03 01.5 -3.4**
SUW Suwalki 141.93 342 *e*PKP PKPpre 23 02 59.9
ANN Anapa 142.28 321 *i* PKIKP **PKPdf 23 03 05.8 +0.7**
ANN *e*SS SS 23 24 42.6 -3.2
ANN *e*SSS SSS 23 30 00.9
ANN pmax pmax
comp=Z,43nm,0.9s
ANN Anapa 142.28 321 *i* P **PKPdf 23 03 05.9 +0.8**
ANN Anapa 142.28 321 MLR MLR
comp=E,6µm,21.0s
ANN Anapa 142.28 321 MLR MLR
comp=Z,14µm,21.0s
ANN Anapa 142.28 321 MLR MLR

comp=N,12µm,19.0s
ANN Anapa 142.28 321 pmax pmax
comp=Z,44nm,0.9s
AKASG Malin Array Be 142.54 334 PKhKP PKPpre 23 02 60.0
Z,4.0nm,0.7s,baz=41,slow=4.3,SNR=11
AKASG Malin Array Be 142.54 334 P PKPpre 23 03 00.0
KIEV Kiev 142.56 334 PKPdf **PKPdf 23 03 04.9 -0.5**
KIEV Kiev 142.56 334 P **PKPdf 23 03 04.9 -0.5**
ATD Arta Tunnel 142.57 265 IAMs_20 IAMs_20 00 01 29.9
comp=Z,17µm,20.0s
ATD Arta Tunnel 142.57 265 P **PKiKP 23 03 08.7 -1.0**
SNR=9.0
EKA Eskdalemuir Ar 142.88 7 PKP **PKPdf 23 03 05.2 -0.7**
comp=Z,5.5nm,0.9s,baz=350,slow=2.1,SNR=5.1
EKA Eskdalemuir Ar 142.88 7 P **PKPdf 23 03 05.2 -0.7**
ESK Eskdalemuir 142.90 8 IAMs_20 IAMs_20 00 10 40.1
comp=Z,15µm,20.0s
GKP Gorka Klasztor 144.09 347 *e*PKP **PKiKP 23 03 10.2 -1.4**
R9F13 Warsaw-Wawer 144.09 343 *e*PKPdf **PKPab 23 03 05.8 +0.2**
SHEL Horse Pasture 144.11 163 IAMs_20 IAMs_20 00 05 01.5
comp=Z,10µm,20.0s
SIM Simferopol' 144.12 323 *e*PKIKP **PKPdf 23 03 07.9 -0.5**
SIM *e* 23 03 10.0
SIM pmax pmax
comp=Z,23nm,0.9s
DSB Dublin 144.40 11 PKP **PKiKP 23 03 11.2 -1.0**
DSB Dublin 144.40 11 IAMs_20 IAMs_20 00 02 36.1
comp=Z,14µm,22.0s
BEL Belsk 144.54 343 *e*PKP **PKPab 23 03 06.3 -0.9**
VAL Valentia 144.75 16 PKP **PKPab 23 03 05.4 -2.6**
SORM Soroca 144.86 332 ⇓P PKPbc 23 03 08.6 0.0
SORM Soroca 144.86 332 ⇓PKIKP PKPbc 23 03 08.6 0.0
STNC Stoke 145.20 7 *e*P **PKPbc 23 03 07.0 -2.6**
LLW Llanuwychllyn 145.24 9 *e*P **PKPbc 23 03 08.6 -1.1**
FOEL Foel Wylfa 145.27 8 *e*P **PKPbc 23 03 08.6 -1.2**
PURM Purcari 145.32 329 ⇓P **PKiKP 23 03 13.0 -1.3**
GORT1 Trebel 145.34 353 *e*PKPbc **PKPbc 23 03 09.9 0.0**
baz=10,slow=2.8
KIS Kishinev 145.49 330 *i* PKP **PKPdf 23 03 10.0 -0.7**
KIS LRM MLR 00 06 02.0
comp=Z,10µm,21.0s
MILM Milestii Mici 145.55 330 ⇓P **PKPab 23 03 12.4 +1.2**
MILM Milestii Mici 145.55 330 ⇓PKIKP **PKPab 23 03 12.4 +1.2**
MILM Milestii Mici 145.55 330 *e*PKP PKPpre 23 03 05.0
comp=Z,2µm,4.5s
MILM Milestii Mici 145.55 330 *e*L L 23 53 10.0
MILM Milestii Mici 145.55 330 LRM MLR 00 06 46.0
comp=Z,26µm,21.5s
MILM Milestii Mici 145.55 330 *e*PP PP 23 06 43.0 +12
CWF Charnwood Fore 145.65 6 *e*P **PKPdf 23 03 10.0 -0.8**
HLM1 Long Mynd 145.67 8 *e*P **PKPdf 23 03 10.1 -0.8**
RETH Rethem/Aller, 145.78 355 *e*PKPbc **PKPbc 23 03 11.4 0.0**
baz=10,slow=2.8
WACR West Acre 145.84 4 *e*P **PKPdf 23 03 10.5 -0.6**
KWP Kalwaria Pacla 145.87 339 *e*PKP **PKPbc 23 03 11.8 0.0**
BZK Bozkurt 145.94 319 ⇓P **PKPab 23 03 14.0 +1.3**
FLTG Flechtingen 145.99 353 *e*PKPbc **PKPdf 23 03 11.6 +0.3**
baz=10,slow=2.8
MCH1 Michaelchurch 146.16 9 *e*P **PKPdf 23 03 11.3 -0.3**
VASR Vaslui 146.23 331 ⇓P **PKPbc 23 03 13.0 0.0**
ASSE Asse, Remlinge 146.25 353 *e*PKPbc **PKPbc 23 03 13.0 +0.2**
baz=10,slow=2.8
OJC Ojcow 146.26 342 *e*PKP **PKPbc 23 03 13.2 +0.1**
IBBN Ibbenburen 146.32 357 *e*PKPbc **PKPbc 23 03 13.2 +0.1**
baz=10,slow=2.8
MONM Monmouth 146.35 8 *e*P **PKPdf 23 03 11.6 -0.4**
LODK Lodwar 146.42 247 IAMs_20 IAMs_20 00 03 35.4
comp=Z,16µm,20.0s
LODK Lodwar 146.42 247 P **PKPbc 23 03 15.1 +0.4**
SNR=47
ELMS Elmsett, Ipswi 146.49 4 *e*P **PKPbc 23 03 13.7 +0.2**
STRD Stroud 146.49 8 *e*P **PKPdf 23 03 12.8 +0.5**
STHS Stebnicka Huta 146.54 340 *e*PKP2 **PKPbc 23 03 13.8 -0.1**
STHS Stebnicka Huta 146.54 340 *e*PKP **PKPbc 23 03 13.8 -0.1**
CLZ Clausthal 146.57 354 *e*PKPbc **PKPbc 23 03 14.3 +0.4**
baz=10,slow=2.8
KSP Ksiaz 146.58 347 *e*PKP **PKPab 23 03 14.6 -0.3**
BIR Birlad 146.59 331 ⇑P **PKPab 23 03 14.7 -0.4**
BIR Birlad 146.59 331 ⇑PKP2 **PKPab 23 03 14.7 -0.4**
BURAR Bucovina Array 146.60 335 **PKPbc 23 03 13.6 -0.6**
BURAR Bucovina Array 146.60 335 ⇓P **PKPbc 23 03 14.5 +0.3**
BURAR Bucovina Array 146.60 335 ⇓PKP2 **PKPbc 23 03 14.5 +0.3**
CIDE Kastamonu/Cide 146.63 320 ⇑P **PKPab 23 03 15.7 +0.3**
VLDR Vladesti 146.68 330 ⇓P **PKPbc 23 03 14.9 +0.5**
CLL Collm 146.75 350 *i* PKP2 **PKPbc 23 03 13.8 -0.6**
CLL pmax pmax
comp=Z,83nm,1.3s
CLL Collm 146.75 350 *e*PKPbc **PKPbc 23 03 14.4 0.0**
baz=10,slow=2.8
TLCR 146.79 328 ⇓P **PKPbc 23 03 14.6 -0.1**
TLCR 146.79 328 ⇓PKP2 **PKPbc 23 03 14.6 -0.1**
NIE Niedzica 146.83 341 *e*PKP **PKPbc 23 03 15.1 +0.4**
GHRR 146.84 331 ⇑P **PKPbc 23 03 14.7 -0.1**
SCTR Scanteiesti 146.85 330 ⇓P **PKPab 23 03 16.1 0.0**
TESR Tescani 146.85 332 ⇑P **PKPbc 23 03 14.2 -0.6**
OSTC Ostas 146.86 347 *e*PKP2 **PKPbc 23 03 14.9 +0.1**
OSTC *e*SS SS 23 25 39.3 +2.3
OSTC MLR MLR
comp=Z,22µm,20.0s
OSTC Ostas 146.86 347 *e*PKP **PKPbc 23 03 14.9 +0.1**
OSTC *ex* x 23 03 21.4
OSTC *e*SS SS 23 25 39.3 +2.3
OSTC AMS AMS 00 12 30.0
comp=Z,22µm,20.0s
CHVC Chvalec 146.87 347 *e*PKP2 **PKPbc 23 03 15.1 +0.3**
CHVC MLR MLR
comp=Z,25µm,19.8s
CHVC Chvalec 146.87 347 *e*PKP **PKPbc 23 03 15.1 +0.3**
CHVC *ex* x 23 03 20.9
CHVC AMS AMS 00 13 50.0
comp=Z,25µm,19.8s
GTTG Gottingen 146.91 354 *e*PKPbc **PKPbc 23 03 15.2 +0.4**
baz=10,slow=2.8
UPC Upice 146.95 347 *e*PKP2 **PKPbc 23 03 14.6 -0.4**
UPC *e*SS SS 23 25 39.5 +1.5
UPC MLR MLR
comp=Z,27µm,19.7s
UPC Upice 146.95 347 *e*PKP **PKPbc 23 03 14.6 -0.4**
UPC *ep*PKP pPKPab 23 03 19.9 +0.1
UPC *e*SS SS 23 25 39.5 +1.5
UPC AMS AMS 00 13 40.0
comp=Z,27µm,19.7s
BRG Berggiesshubel 147.01 349 *e*PKPbc **PKPbc 23 03 15.5 +0.4**
baz=10,slow=2.8
NEUB Neuenburg 147.03 352 *e*PKPbc **PKPbc 23 03 15.4 +0.2**
baz=10,slow=2.8
DPC Dobruska-Polom 147.03 346 *e*PKP2 **PKPbc 23 03 14.9 -0.4**
DPC *e*SS SS 23 25 45.1 +6.1
DPC MLR MLR
comp=Z,26µm,22.2s
DPC Dobruska-Polom 147.03 346 *e*PKP **PKPbc 23 03 14.9 -0.4**
DPC *ex* x 23 03 23.9
DPC *e*SS SS 23 25 45.1 +6.1
DPC AMS AMS 00 07 30.0
comp=Z,26µm,22.2s
COSR Cosmesti PH 147.04 330 ⇑P **PKPab 23 03 16.7 -0.1**
IZVR Izvoarele 147.05 330 ⇓P **PKPdf 23 03 14.0 +0.6**
OKC Ostrava-Krasne 147.06 344 *e*PKP2 **PKPbc 23 03 15.2 -0.1**
OKC *e*SS SS 23 25 44.5 +5.2
OKC MLR MLR
comp=Z,25µm,23.5s
OKC Ostrava-Krasne 147.06 344 *e*PKP **PKPbc 23 03 15.2 -0.1**
OKC *ep*PKP **sPKPab 23 03 22.6 +1.1**
OKC *e*SS SS 23 25 44.5 +5.2
OKC AMS AMS 00 05 10.0
comp=Z,25µm,23.5s
WOL Wolverton 147.06 7 *e*P **PKPdf 23 03 12.8 -0.4**
CFR Carcaliu 147.14 329 ⇑P **PKPbc 23 03 15.2 -0.5**
CFR Carcaliu 147.14 329 ⇑PKP2 **PKPbc 23 03 15.2 -0.5**
KRLC Kraliky 147.18 346 *e*PKP2 **PKPbc 23 03 15.6 -0.1**
KRLC *e*SS SS 23 25 43.2 +2.5
KRLC MLR MLR
comp=Z,24µm,22.6s
KRLC Kraliky 147.18 346 *e*PKP **PKPbc 23 03 15.6 -0.1**
KRLC *ep*PKP **sPKPab 23 03 23.1 +1.1**
KRLC *e*SS SS 23 25 43.2 +2.5
KRLC AMS AMS 00 06 50.0
comp=Z,24µm,22.6s
BUG Bochum--Univer 147.21 357 *e*PKPbc **PKPbc 23 03 15.9 +0.2**
baz=10,slow=2.8
ODBI Odobesti 147.23 331 ⇑P **PKPbc 23 03 16.3 +0.3**
TPGR Topolog 147.23 328 ⇓P **PKPbc 23 03 16.3 +0.3**
PVCC Panska Ves 147.23 348 *e*PKP2 **PKPbc 23 03 15.4 -0.4**
PVCC *e*SS SS 23 25 40.4 -0.6
PVCC MLR MLR
comp=Z,21µm,22.7s
PVCC Panska Ves 147.23 348 *e*PKP **PKPbc 23 03 15.4 -0.4**
PVCC *ep*PKP **sPKPab 23 03 22.6 +0.5**
PVCC *e*SS SS 23 25 40.4 -0.6
PVCC AMS AMS 00 04 50.0
comp=Z,21µm,22.7s
BMR Baia Mare 147.23 336 ⇓P **PKPbc 23 03 16.0 +0.1**
BMR Baia Mare 147.23 336 ⇓PKP2 **PKPbc 23 03 16.0 +0.1**
MORC Moravsky Berou 147.27 345 ⇑P **PKPbc 23 03 15.9 -0.1**
MORC Moravsky Berou 147.27 345 *e*PKP **PKPbc 23 03 15.6 -0.4**
MORC Moravsky Berou 147.27 345 ⇑PKP2 **PKPbc 23 03 15.9 -0.1**
RICC Richard 147.30 349 *e*PKP **PKPab 23 03 17.1 -0.6**
RICC *ex* x 23 03 22.7
RICC AMS AMS 00 04 10.0
comp=Z,17µm,22.1s
VRI Vrincioaia 147.30 331 ⇓P **PKPbc 23 03 15.2 -0.9**
VRI Vrincioaia 147.30 331 ⇓PKP2 **PKPbc 23 03 15.2 -0.9**
LANS Liptovska Anna 147.32 342 *e*PKP2 **PKPab 23 03 18.0 +0.1**
LANS Liptovska Anna 147.32 342 *e*PKP **PKPab 23 03 18.0 +0.1**
PLOR Plostina 147.35 331 ⇑P **PKPbc 23 03 16.7 +0.4**
PLOR Plostina 147.35 331 ⇑PKP2 **PKPbc 23 03 16.7 +0.4**
HSKC Hora Svate Kat 147.36 350 *e*PKP **PKPbc 23 03 16.6 +0.4**
HSKC *e*SS SS 23 25 44.1 +1.6
HSKC AMS AMS 00 10 30.0
comp=Z,16µm,20.1s
ARCR ARCALIA 147.37 335 ⇓P **PKPbc 23 03 16.8 +0.4**
KASTN Kahler Asten 147.38 356 *e*PKPbc **PKPbc 23 03 16.6 +0.3**
baz=10,slow=2.8
BR131 Keskin Array S 147.38 316 P **PKPbc 23 03 16.4 -0.3**
SNR=56
BR131 Keskin Array S 147.38 316 *de*PKIKP **PKPdf 23 03 13.5 -0.8**
BRTR Keskin Array B 147.38 316 PKPdf **PKPdf 23 03 12.3 -2.0**
BRTR Keskin Array B 147.38 316 PKPbc **PKPdf 23 03 15.1 +0.7**
comp=Z,19nm,0.9s,baz=145,slow=3.0,SNR=29
BRTR Keskin Array B 147.38 316 PKHKP **PKPdf 23 03 12.3 -2.0**
TURR Turia 147.48 332 ⇓P **PKPbc 23 03 16.6 -0.1**
KIRS Kirsehir-Merke 147.50 315 ⇑P **PKPdf 23 03 15.5 +1.0**
TIRR Tirgusor 147.51 328 ⇑P **PKPbc 23 03 16.5 -0.2**
TIRR Tirgusor 147.51 328 ⇑PKP2 **PKPbc 23 03 16.5 -0.2**
BISRR Bisoca 147.55 331 ⇓P **PKPbc 23 03 17.4 +0.5**
GRER 147.55 330 ⇓P **PKPab 23 03 18.9 0.0**
OZUR 147.55 332 ⇓P **PKPbc 23 03 17.6 +0.7**
ASCN Ascension 147.58 143 IAMs_20 IAMs_20 00 08 50.9
comp=Z,11nm,20.0s
HARR Harsova 147.59 328 ⇑P **PKPbc 23 03 16.4 -0.6**
HARR Harsova 147.59 328 ⇑PKP2 **PKPbc 23 03 16.4 -0.6**
KECS Kecovo 147.60 340 *e*PKP2 **PKiKP 23 03 18.6 -0.4**
KECS Kecovo 147.60 340 *e*PKP **PKiKP 23 03 18.6 -0.4**
MOX Moxa 147.60 352 *e*PKPbc **PKPbc 23 03 17.2 +0.3**
baz=10,slow=2.8
MOX *e*L L 00 08 49.1
comp=Z,15µm,21.0s
CEI Carei 147.61 337 ⇑P **PKPbc 23 03 17.9 +1.0**
CEI Carei 147.61 337 ⇑PKP2 **PKPbc 23 03 17.9 +1.0**
UBBA Unterbreizbach 147.62 354 *e*PKPbc **PKPbc 23 03 17.3 +0.6**
baz=10,slow=2.8
PLN Plauen 147.68 351 *e*PKPbc **PKPbc 23 03 17.5 +0.4**
baz=10,slow=2.8
PRA Prague 147.69 348 *e*PKP2 **PKPbc 23 03 17.0 -0.1**
PRA *e*SS SS 23 25 46.3 +0.1
PRA MLR MLR
comp=Z,23µm,22.5s
PRA Prague 147.69 348 *e*PKP **PKPbc 23 03 17.0 -0.1**
PRA *ep*PKP **pPKPab 23 03 23.0 +0.3**
PRA *e*SS SS 23 25 46.3 +0.1
PRA AMS AMS 00 04 50.0
comp=Z,23µm,22.5s
TANN Tannenbergstha 147.70 351 *e*PKPbc **PKPbc 23 03 17.7 +0.5**
baz=10,slow=2.8
PRU Pruhonice 147.75 348 *e*PKP2 **PKPbc 23 03 16.5 -0.7**
PRU *e*SS SS 23 25 48.5 +1.6
PRU MLR MLR
comp=Z,25µm,22.7s
PRU Pruhonice 147.75 348 *e*PKP **PKPbc 23 03 16.5 -0.7**
PRU *ep*PKP **pPKPab 23 03 23.0 0.0**
PRU *e*SS SS 23 25 48.5 +1.6
PRU AMS AMS 00 05 00.0
comp=Z,25µm,22.7s
DOPR Dopca 147.82 332 ⇓P **PKPdf 23 03 16.0 +1.3**
NEHR Nehoiu 147.83 331 ⇓P **PKPbc 23 03 18.3 +0.6**
ANTO Ankara 147.85 317 IAMs_20 IAMs_20 00 14 50.2
comp=Z,10µm,20.0s
ANTO Ankara 147.85 317 P **PKPbc 23 03 16.6 -1.4**
ANTO Ankara 147.85 317 ⇑P **PKPbc 23 03 17.9 -0.1**
ANTO Ankara 147.85 317 ⇑PKP2 **PKPbc 23 03 17.9 -0.1**
MESR Meseseni 147.87 336 ⇑P **PKPbc 23 03 17.5 -0.1**
BEBN Eben Emael 147.91 359 *d*PKP **PKiKP 23 03 19.0 -0.5**
UCC Uccle 147.91 0 *d*PKP **PKPbc 23 03 17.7 +0.1**
AMRR Amara 147.94 329 ⇓P **PKPbc 23 03 18.4 +0.5**
AMRR Amara 147.94 329 ⇓PKP2 **PKPbc 23 03 18.4 +0.5**
VRAC Vranov 147.94 345 PKPbc **PKPbc 23 03 17.8 0.0**
comp=Z,19nm,1.1s,baz=32,slow=1.8,SNR=17
VRAC Vranov 147.94 345 ⇑P **PKPbc 23 03 17.8 0.0**
VRAC Vranov 147.94 345 *e*PKP **PKPbc 23 03 17.7 0.0**
MLR Muntele Rosu 147.94 331 PKPbc **PKPbc 23 03 17.1 -1.0**
comp=Z,26nm,1.1s,baz=76,slow=7.1,SNR=15
MLR Muntele Rosu 147.94 331 ⇑P **PKPbc 23 03 18.3 +0.2**
MLR Muntele Rosu 147.94 331 ⇑PKP2 **PKPbc 23 03 18.3 +0.2**
CJR Cluj-Napoca 147.98 335 ⇑P **PKPbc 23 03 17.2 -0.8**
CJR Cluj-Napoca 147.98 335 ⇑PKP2 **PKPbc 23 03 17.2 -0.8**
JAVC Velka Javorina 148.08 344 *e*PKP **PKPbc 23 03 17.8 -0.4**
MEM Membach 148.09 358 *d*PKP **PKPdf 23 03 15.9 +1.0**
BTNL Ternell 148.11 358 *d*PKP **PKPbc 23 03 17.7 -0.5**
MDB Medias 148.12 334 ⇓P **PKPbc 23 03 17.0 -1.3**
MDB Medias 148.12 334 ⇓PKP2 **PKPbc 23 03 17.0 -1.3**
BSTI Sart Tilman 148.12 359 *d*PKP **PKPbc 23 03 17.1 -1.1**
HWQ Hawqa 148.16 306 *e*P **PKPdf 23 03 16.8 +1.0**
MANZ Manzenberg 148.17 351 *e*PKPbc **PKPbc 23 03 19.0 +0.6**
baz=10,slow=2.8
MARR Marisel-Cluj 148.20 336 ⇑P **PKPbc 23 03 19.4 +0.7**
TREC Trest 148.21 347 *e*PKP2 **PKPbc 23 03 17.2 -1.3**
TREC *e*SS SS 23 25 53.3 +1.1
TREC MLR MLR
comp=Z,28µm,22.1s
TREC Trest 148.21 347 *e*PKP **PKPbc 23 03 17.2 -1.3**
TREC *ex* x 23 03 24.3
TREC *e*SS SS 23 25 53.3 +1.1
TREC AMS AMS 00 08 50.0
comp=Z,28µm,22.1s
KRUC Moravsky 148.22 345 *e*PKP **PKPbc 23 03 17.0 -1.5**
DRGR 148.26 336 ⇓P **PKPbc 23 03 18.1 -0.7**
DRGR 148.26 336 ⇓PKP2 **PKPbc 23 03 18.1 -0.7**
PSZ Piszkesteto 148.28 340 ⇓P **PKPbc 23 03 18.4 -0.4**
PSZ Piszkesteto 148.28 340 ⇓PKP2 **PKPbc 23 03 18.4 -0.4**
BCLA Clavier 148.29 359 *d*PKP **PKPbc 23 03 18.4 -0.2**
BGES Gesves 148.33 360 *d*PKP **PKiKP 23 03 20.4 0.0**
ZVC Zvikov 148.34 348 *e*PKP **PKPbc 23 03 19.1 +0.3**
ZVC *ep*PKP **pPKPab 23 03 24.7 -0.7**
ZVC *e*SS SS 23 25 56.4 +2.8
ZVC AMS AMS 00 05 10.0
comp=Z,28µm,23.1s
BHOU Houvegnez 148.34 358 *d*PKP **PKPbc 23 03 19.2 +0.4**
TNS Taunus Mts 148.35 355 *e*PKPbc **PKPbc 23 03 19.4 +0.5**
baz=10,slow=2.8
BORR Bors 148.36 338 ⇓P **PKPdf 23 03 16.6 +1.1**
ROTZ Rotzenmuhle 148.37 351 *e*PKPbc **PKPbc 23 03 19.5 +0.6**
baz=10,slow=2.8
BMRD Maredsous 148.41 360 *d*PKP **PKPbc 23 03 17.9 -1.1**
SULR 148.41 330 ⇑P **PKiKP 23 03 20.3 -0.4**
BHL Bhannes 148.52 305 *e*P **PKPdf 23 03 17.3 +1.0**
MDUB Mudurnu 148.52 319 PKPbc **PKPbc 23 03 19.0 -0.7**
TNR Turnu Rosu 148.56 333 ⇓P **PKiKP 23 03 20.6 -0.5**
TNR Turnu Rosu 148.56 333 ⇓PKP2 **PKiKP 23 03 20.6 -0.5**
RCHB Rochefort 148.56 359 *d*PKP **PKPbc 23 03 19.2 -0.1**
GRF Grafenberg Arr 148.58 352 *e*PKPbc **PKPbc 23 03 19.9 +0.5**
baz=10,slow=2.8
GRF *e*L L 00 09 06.8
comp=Z,22µm,21.6s
GRFO Grafenberg 148.59 352 PKPbc **PKPbc 23 03 18.8 -0.7**
GRFO Grafenberg 148.59 352 PKP2 **PKPbc 23 03 18.8 -0.7**
GRFO MLR MLR
comp=Z,22µm,21.0s
DOU Dourbes 148.62 0 *d*PKP **PKPbc 23 03 19.2 -0.3**
ARR Arges 148.62 333 ⇑P **PKPdf 23 03 17.1 +1.0**
MODS Modra-Piesok 148.63 344 *e*PKP2 **PKPbc 23 03 20.3 +0.7**
MODS Modra-Piesok 148.63 344 *e*PKP **PKPbc 23 03 20.3 +0.7**
MODS *e* 23 03 25.3
BSZH Besenyszg 148.70 339 ⇑P **PKPbc 23 03 19.4 -0.4**
KHC Kasperske Hory 148.75 349 *e*PKP2 **PKPbc 23 03 19.5 -0.5**
KHC *e*SS SS 23 25 59.2 +0.9
KHC MLR MLR
comp=Z,26µm,22.5s
KHC Kasperske Hory 148.75 349 *e*PKP **PKPbc 23 03 19.5 -0.5**
KHC *ep*PKP **pPKPab 23 03 27.0 -0.1**
KHC *e*SS SS 23 25 59.2 +0.9
KHC AMS AMS 00 07 00.0
comp=Z,26µm,22.5s
ZST Bratislava 148.84 344 *e*PKP2 **PKPab 23 03 31.3 +7.3**
SRO Srobarova 148.86 342 *e*PKP2 **PKPbc 23 03 20.7 +0.5**
SRO Srobarova 148.86 342 *e*PKP **PKPbc 23 03 20.7 +0.5**
e 23 03 25.2
WET Wettzell 148.87 350 *e*PKPbc **PKPbc 23 03 20.9 +0.6**
baz=10,slow=2.8
LOT Lotru 148.93 334 ⇓P **PKPab 23 03 23.8 -0.8**
DEV Deva 148.94 335 ⇑P **PKPbc 23 03 20.3 -0.2**
DEV Deva 148.94 335 ⇑PKP2 **PKPbc 23 03 20.3 -0.2**
NEF NEVSHA 148.94 327 *e*P **PKPbc 23 03 20.9 +0.3**
PRD Provadia 148.94 327 *e*P **PKPbc 23 03 20.9 +0.4**
GEC2 GERESS Array S 149.00 348 *e*PKPbc **PKPbc 23 03 21.0 +0.3**
baz=10,slow=2.8
GERES GERESS Array B 149.00 348 PKPbc **PKPbc 23 03 19.7 -1.0**
comp=Z,11nm,1.1s,baz=43,slow=9.9,SNR=3.8
MMAI Mount Meron Ar 149.02 304 PKPbc **PKPbc 23 03 20.7 -0.5**
comp=Z,45nm,0.9s,baz=48,slow=1.2,SNR=30
WLF Walferdange 149.03 358 PKP **PKPdf 23 03 17.1 +0.5**
WLF Walferdange 149.03 358 *d*PKP **PKPbc 23 03 20.6 0.0**
WLF Walferdange 149.03 358 *e*PKPbc **PKiKP 23 03 21.5 -0.4**
baz=10,slow=2.8
SIRR Siria 149.10 337 ⇓P **PKPbc 23 03 20.3 -0.6**
RAZG Razgrad 149.11 328 ⇑P **PKPbc 23 03 20.5 -0.5**
HUMR Humele 149.12 331 ⇑P **PKPdf 23 03 17.5 +0.7**
LOZB Loznitsa 149.21 328 ⇑P **PKPbc 23 03 20.9 -0.3**
SURR Surduc 149.35 336 ⇓P **PKPbc 23 03 21.3 -0.2**
GZR Gura Zlata 149.39 335 ⇑P **PKPbc 23 03 20.9 -0.8**
CONA Conrad Observa 149.41 345 *e*PKiKP **PKPbc 23 03 21.7 0.0**
comp=Z,252nm,1.8s,SNR=24
CONA *e*PP **PP 23 06 54.6 +1.5**
comp=Z,34nm,1.6s
GHAJ Ghor Haditha 149.43 300 IAMs_20 IAMs_20 00 12 06.3
comp=Z,17µm,21.0s
RONA Rosalia, Austr 149.51 344 *i* PKiKP **PKPbc 23 03 21.9 -0.1**
comp=Z,208nm,1.5s,SNR=30
RONA *e*PP **PP 23 06 55.2 +1.6**
comp=Z,18nm,1.4s
SZH Strazhitsa 149.59 328 P **PKPdf 23 03 19.1 +1.5**
SZH Strazhitsa 149.59 328 *e*P **PKPdf 23 03 19.4 +1.8**
BZS Buzias 149.66 336 ⇑P **PKPbc 23 03 20.1 -2.2**
BZS Buzias 149.66 336 ⇑PKIKP **PKPbc 23 03 20.1 -2.2**
STU Stuttgart 149.72 354 *e*PKPbc **PKPbc 23 03 22.8 +0.5**
baz=10,slow=2.8
VLAD Vladila 149.79 331 ⇓P **PKPbc 23 03 22.2 -0.5**
SRE Strehaia 149.80 333 ⇑P **PKPbc 23 03 21.8 -0.9**
SRE Strehaia 149.80 333 ⇑PKP2 **PKPbc 23 03 21.8 -0.9**
MOA Molln 149.84 347 *i* PKP **PKPbc 23 03 22.3 -0.4**
comp=Z,106nm,1.6s
CSS Mathiatis 149.87 308 IAMs_20 IAMs_20 00 14 28.0
comp=Z,11µm,20.0s
JMB Yambol 149.87 327 *e*P **PKPdf 23 03 19.9 +1.8**
ELND Elena 149.89 328 ⇓P **PKiKP 23 03 24.5 +0.6**
HERR Herculane 149.95 334 ⇑P **PKPdf 23 03 19.1 +0.9**
PVL Pavlikeni 150.09 329 *e*P **PKPdf 23 03 20.7 +2.3**
ARSA Arzberg 150.12 345 *e*PKiKP **PKPbc 23 03 23.2 -0.2**
comp=Z,80nm,1.4s,SNR=12
BIOA Bad Ischl, Aus 150.12 348 *e*PKP **PKPbc 23 03 22.9 -0.5**
comp=Z,126nm,1.3s,SNR=14
PLVB Pleven 150.16 330 ⇑P **PKPbc 23 03 22.5 -1.0**
MORH Mrgy, Hungar 150.19 340 ⇓P **PKPbc 23 03 21.8 -1.7**
RJOB Jochberg 150.24 349 *e*PKPbc **PKPbc 23 03 23.9 +0.1**
baz=10,slow=2.8
BFO Black Forest 150.24 355 PKPbc **PKPbc 23 03 22.0 -1.7**
BFO Black Forest 150.24 355 PKHKP PKPpre 23 03 22.0
BFO MLR MLR
comp=Z,22µm,21.0s
BFO Black Forest 150.24 355 *e*PKPbc **PKPbc 23 03 24.0 +0.3**
baz=10,slow=2.8
MDVR Moldovita 150.32 335 ⇑P **PKPbc 23 03 22.4 -1.5**
VALD Valchedram 150.47 332 *e*P **PKPbc 23 03 24.1 -0.2**
LESA Schwarzleotal 150.56 349 *ep*PKP pPKPdf 23 03 22.8 +0.2
comp=Z,53nm,1.2s
MPEP Malo Peshtene 150.59 331 *e*P **PKPbc 23 03 24.1 -0.5**
DIM Dimitrovgrad 150.68 327 *e*P **PKPbc 23 03 24.3 -0.5**
KBA Kalnbreinsper 150.77 348 *ep*PKP **pPKPdf 23 03 21.4 -1.7**
comp=Z,44nm,1.0s
KBA *e*PP **PP 23 07 01.0 0.0**
comp=Z,33nm,1.4s
SOKA Soboth 150.78 345 *ep*PKP pPKPdf 23 03 23.1 +0.1
comp=Z,57nm,1.2s,SNR=9.4
PERS Pernice 150.79 345 *e*PKPbc **PKPbc 23 03 23.2 -1.9**
RETA Reutte 150.81 352 *i* PKiKP **PKPbc 23 03 24.6 -0.4**
comp=Z,60nm,1.2s
RETA *i* PP **PP 23 07 04.3 +3.2**
comp=Z,25nm,2.0s
WATA Walderalm 150.83 350 *ep*PKP **pPKPdf 23 03 23.2 +0.1**
comp=Z,63nm,1.4s,SNR=8.7
WATA *i* PP **PP 23 07 03.7 +2.4**
comp=Z,20nm,1.3s
WTTA Wattenberg 150.89 350 *e*PKP **PKPbc 23 03 23.7 -1.7**
comp=Z,86nm,1.2s,SNR=14
WTTA *e*PP **PP 23 07 02.8 +1.1**
comp=Z,21nm,1.2s
MOTA Moosalm 150.90 351 *e*PKP **PKPbc 23 03 23.7 -1.7**
comp=Z,73nm,1.2s,SNR=11
MOTA *e*PP **PP 23 07 02.9 +1.2**
comp=Z,13nm,1.3s
SQTA Sankt Quirin 151.00 351 *e*PKP **PKPbc 23 03 24.8 -0.8**
comp=Z,58nm,1.2s,SNR=11
SQTA *i* PP **PP 23 07 03.4 +1.1**
comp=Z,18nm,1.6s
PGB Panagyurishte 151.04 329 *e*P **PKPbc 23 03 24.3 -1.4**
OBKA Obir 151.05 346 *ep*PKP **pPKPdf 23 03 23.6 +0.2**
comp=Z,44nm,1.5s
OBKA *e*PP **PP 23 07 01.4 -1.1**
comp=Z,27nm,1.3s
KDZ Kurdzhali 151.11 327 *e*P **PKPdf 23 03 22.7 +2.6**
DAVA Damuels 151.12 353 *i* PKP **PKPbc 23 03 24.2 -1.7**
comp=Z,61nm,1.2s
DAVA *i* PP **PP 23 07 06.2 +3.3**
comp=Z,19nm,1.3s
MYKA Terra Mystica 151.13 347 *ep*PKP pPKPdf 23 03 23.5 0.0
comp=Z,37nm,1.2s
ABTA Abfaltersbach 151.24 349 *ep*PKP **pPKPdf 23 03 23.5 -0.2**
comp=Z,68nm,0.9s
ABTA *i* PP **PP 23 07 05.3 +1.7**
comp=Z,22nm,1.5s
FETA Feichten 151.27 351 *e*PKP **PKPbc 23 03 24.4 -1.9**
comp=Z,60nm,1.3s
RDO Rodhopi 151.35 326 P **PKPdf 23 03 21.6 +1.2**
VTS Vitosha 151.40 331 P **PKPbc 23 03 25.7 -1.0**
VTS Vitosha 151.40 331 *e*P **PKiKP 23 03 29.4 +2.2**
LJU Ljubljana 151.49 346 *e*PKPbc **PKPbc 23 03 25.1 -1.5**
MMB Musomishta 151.97 329 *e*P **PKPbc 23 03 22.7 +1.3**
KKB Krupnik 152.05 330 *e*P **PKPbc 23 03 26.1 -2.0**
PRK Paraskevi 152.25 322 P **PKPdf 23 03 15.6 -6.2**
YER Yerkesik 152.32 317 P **PKPdf 23 03 17.2 -4.9**
SRS Serrai 152.37 328 P **PKPdf 23 03 16.1 -5.9**
SIGR SIGRI 152.51 323 P **PKPbc 23 03 26.2 -2.9**
SACV Santiago Islan 152.66 93 IAMs_20 IAMs_20 00 19 56.6
comp=Z,8µm,20.0s
KNT Kendrikon 152.68 329 P **PKPdf 23 03 24.6 +2.2**
SOH Sokhos 152.72 328 P **PKiKP 23 03 32.5 +2.7**
OUR Ouranopolis 152.75 327 P **PKPbc 23 03 27.9 -1.7**
SMG Samos 152.89 319 P **PKPbc 23 03 28.7 -1.4**
CHOS Chios island 152.94 321 P **PKPdf 23 03 25.8 +2.8**
PLG Polygyros 153.00 327 P **PKPbc 23 03 27.3 -3.0**
THE Thessaloniki 153.05 328 P **PKPbc 23 03 29.4 -0.9**
PDG Podgorica 153.26 336 IAMs_20 IAMs_20 00 18 23.1
comp=Z,15nm,20.0s
SSB Saint Sauveur 153.44 0 PKPbc **PKPbc 23 03 28.4 -2.6**
SSB Saint Sauveur 153.44 0 PKiKP **PKPbc 23 03 28.5 -2.6**
LIT Litokhoron 153.69 328 P **PKPbc 23 03 28.5 -3.2**
KYMI Kymi, Euboea I 153.90 324 P **PKPdf 23 03 26.1 +1.9**
KARP Karpathos 153.97 315 IAMs_20 IAMs_20 00 22 23.5
comp=Z,11µm,20.0s
KARY Karystos 154.13 322 P **PKPdf 23 03 25.1 +0.5**
PGAV Gavieira, Arco 154.25 23 *e*SS SS 23 27 13.3 +14
PGAV *e*LQ LQ 23 47 34.8
PGAV *e*LR LR 23 55 19.1
PGAV *i* IAMs_20 IAMs_20 00 09 08.8
comp=Z,21µm,20.0s
LKR Lokris 154.50 325 P **PKPbc 23 03 30.1 -3.4**
THR8 Santorini-Mono 154.55 318 P **PKPbc 23 03

POLO ePKPab **PKPab** **23 03 50.0 +0.3**
PVRL Vila Real 155.06 23 ePKPab **PKPab** **23 03 49.2 -0.9**
AQU L'Aquila 155.24 344 PKP **PKPdf** **23 03 27.5 +1.4**
MVO Moncorvo 155.40 22 ePKPdf **PKPdf** **23 03 30.5 +4.1**
MVO eSS SS 23 27 18.9 +7.0
MVO eLQ LQ 23 47 54.3
MVO eLR LR 23 55 52.3
MVO *i* IAMs_20 IAMs_20 00 07 05.3
comp=Z,17µm,20.0s
PVIS Viseu 155.48 24 ePKPab **PKPab** **23 03 51.8 -0.2**
IDI Anoyia 155.62 317 PKP **PKPdf** **23 03 30.7 +3.9**
PMOZ Porto Moniz, M 155.80 50 eSS SS 23 27 40.2 +22
PMOZ eLR LR 23 56 41.3
PMOZ *i* IAMs_20 IAMs_20 00 05 52.0
comp=Z,13µm,22.0s
MTE Manteigas 155.88 23 IAMs_20 IAMs_20 00 06 07.1
comp=Z,16µm,22.0s
MTE Manteigas 155.88 23 eSS SS 23 27 28.0 +11
MTE eLQ LQ 23 48 03.5
MTE eLR LR 23 56 15.1
MTE *i* IAMs_20 IAMs_20 00 07 01.4
comp=Z,13µm,22.0s
PSARD Sardoal 156.33 25 ePKPab **PKPab** **23 03 56.1 +0.5**
PMTG Montargil 156.75 26 ePKPdf **PKPdf** **23 03 27.6 -0.5**
PMTG ePKPab **PKPab** **23 03 58.1 +0.7**
PMRV Marv??o 156.78 24 ePKPab **PKPab** **23 03 58.7 +1.1**
PMRV eSS SS 23 27 36.4 +10
PMRV etx tx 23 33 28.2
PMRV eLQ LQ 23 48 15.1
PMRV eLR LR 23 56 51.3
PMRV *i* IAMs_20 IAMs_20 00 06 23.8
comp=Z,12µm,22.0s
PARRA Arraiolos 157.04 26 ePKPab **PKPab** **23 03 59.4 +2.5**
PESTR Estremoz 157.19 25 PKP **PKPdf** **23 03 35.9 +7.2**
EVO Evora 157.29 27 PKP **PKPdf** **23 03 31.0 +2.2**
UCM Universidad Co 157.34 16 PKP **PKPdf** **23 03 30.4 +1.5**
EBAD Badajoz 157.51 25 PKP **PKPdf** **23 03 25.2 -3.9**
ESDC Sonseca Array 157.74 18 **PKPdf** **23 03 27.9 -1.5**
ESDC Sonseca Array 157.74 18 PKP **PKPdf** **23 03 28.6 -0.9**
comp=Z,5.6nm,1.2s,baz=344,slow=3.4,SNR=8.3
ESDC PKPab **PKPab** **23 04 01.2 -0.5**
comp=Z,16nm,1.2s,baz=330,slow=4.2,SNR=11
ESDC PP **PP** **23 07 39.8 -0.3**
comp=Z,9.3nm,1.3s,baz=333,slow=3.9,SNR=4.2
PVAQ Vaqueiros 158.37 28 ePKPab **PKPab** **23 04 03.6 -0.8**
PVAQ eSS SS 23 27 52.3 +8.4
PVAQ etx tx 23 33 43.5
PVAQ eLQ LQ 23 49 01.7
PVAQ eLR LR 23 57 33.7
PVAQ *i* IAMs_20 IAMs_20 00 05 03.4
comp=Z,17µm,24.0s
KEST Kesra 162.49 347 PKPab **PKPab** **23 04 21.8 -0.7**
comp=Z,7.4nm,1.0s,baz=295,slow=5.7,SNR=4.4
MDT Midelt 163.59 29 PKPab **PKPab** **23 04 27.4 -0.1**
comp=Z,10nm,0.9s,baz=312,slow=3.5,SNR=5.5
MDT PP **PP** **23 08 13.6 +1.6**
comp=Z,0.9nm,0.3s,baz=14,slow=7.9,SNR=4.3
DBIC Dimbokro 164.88 141 PKPab **PKPab** **23 04 34.7 +1.2**
comp=Z,4.4nm,1.0s,baz=239,slow=5.9,SNR=1.3
TORD Torodi Ar. Bea 173.81 152 PKPdf **PKPdf** **23 03 41.0 -2.1**

*IDC **04** 22:46:06.5±0.7, 18°36S×175°52W, h0km, mb4.7/13, mbtmp4.7/14, ML4.2/1, Error ellipse: s-maj=23.7km s-min=14.6km az=118.0*
*MOS **04** 22:46:08.5±1.6, 18°69S×175°70W, h10km, mb5.4/20, Error ellipse: s-maj=12.9km s-min=11.1km az=179.9*
*BJI **04** 22:46:09.4, 18°45S×175°07W, h10km, mb5.0/22*
*NEIC **04** 22:46:10.7±2.0, 18°6S±0°1×175°7W±0°1, h10km±1km, mb5.5/70, Error ellipse: s-maj=22.6km s-min=16.7km az=169.0*

ISC 04 22:46:10.1±0.3, 18°68S±0°09×175°64W±0°07, h10km, n166, σ1s63/141, mb5.4/68, 11C-24D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NIUE	**Niue**	**5.42**	**95**	Pn		**Pn**	**22 47 32.1**	**+1.0**
MSVF	**Nonsavu**	**6.08**	**278**	Pn		**Pn**	**22 47 43.7**	**+3.5**
MSVF	**Nonsavu**	**6.08**	**278**	*i* P		**Pn**	**22 47 38.5**	**-1.6**
DZM	**Mont Dzumac**	**17.14**	**256**	P		**P**	**22 50 11.8**	**+0.2**
	0.8nm,0.3s,baz=76,slow=15,SNR=2.6							
	32nm,1.1s							
TOZ	**Tahuroa Road**	**20.51**	**200**	P		**P**	**22 50 49.7**	**+1.3**
TOZ				IAmb		IAmb	22 50 56.5	
	comp=Z,402nm,2.0s							
URZ	**Urewera**	**20.51**	**196**	P		**P**	**22 50 48.8**	**+0.4**
	comp=Z,44nm,1.0s,baz=13,slow=11,SNR=2.4							
URZ				S		Sn	22 54 44.6	+2.7
	comp=Z,1.7nm,0.5s,baz=162,slow=20,SNR=1.3							
	comp=Z,44nm,1.0s							
HIZ	**Hauiti**	**21.43**	**201**	P		**P**	**22 50 58.8**	**+0.4**
QRZ	**Quartz Range**	**24.30**	**202**	P		**P**	**22 51 27.7**	**-0.1**
QRZ				IAmb		IAmb	22 51 34.7	
	comp=Z,120nm,1.2s							
PPT	**Papeete**	**24.79**	**92**	P		**P**	**22 51 29.2**	**-3.2**
	comp=Z,104nm,1.0s,baz=229,slow=19,SNR=3.9							
	comp=Z,104nm,1.0s							
PPTF	**Pamatai, Papee**	**24.79**	**92**	P		**P**	**22 51 30.8**	**-1.8**
DSZ	**Denniston Nort**	**25.37**	**202**	P		**P**	**22 51 38.5**	**+0.9**
LTZ	**Lake Taylor**	**26.12**	**201**	P		**P**	**22 51 43.7**	**-0.7**
PMG	**Port Moresby**	**37.18**	**279**	⇑*e*P		**P**	**22 53 19.4**	**-2.4**
PMG				pmax		pmax		
	comp=Z,41nm,1.2s							
STKA	**Stephens Creek**	**40.59**	**243**	P		**P**	**22 53 50.5**	**+0.3**
	comp=Z,28nm,1.0s,baz=96,slow=9.2,SNR=2.9							
	comp=Z,28nm,1.0s							
STKA	**Stephens Creek**	**40.59**	**243**	*ce*P		**P**	**22 53 51.2**	**+1.0**
KIP	**Kipapa**	**43.43**	**24**	⇑*e*P		**P**	**22 54 12.6**	**-0.7**
KIP				pmax		pmax		
	comp=Z,53nm,1.0s							
BBOO	**Buckleboo**	**45.36**	**242**	P		**P**	**22 54 28.7**	**-0.1**
WB0	**Warramunga Arr**	**47.06**	**260**	P		**P**	**22 54 41.9**	**-0.5**
WRAB	**Tennant Creek**	**47.08**	**260**	⇑*e*P		**P**	**22 54 41.9**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,20nm,0.8s							
WRA	**Warramunga Arr**	**47.09**	**260**	P		**P**	**22 54 40.9**	**-1.7**
WRA	**Warramunga Arr**	**47.09**	**260**	P		**P**	**22 54 40.3**	**-2.3**
	comp=Z,6.7nm,0.8s,baz=94,slow=7.5,SNR=2.3							
	comp=Z,6.7nm,0.8s							
WRA	**Warramunga Arr**	**47.09**	**260**	P		**P**	**22 54 40.9**	**-1.7**
WRA				pmax		pmax		
	comp=Z,8.0nm,1.9s							
AS31	**Alice Springs**	**47.12**	**255**	P		**P**	**22 54 42.2**	**-0.7**
ASAR	**Alice Springs**	**47.13**	**255**	P		**P**	**22 54 41.5**	**-1.4**
ASAR	**Alice Springs**	**47.13**	**255**	P		**P**	**22 54 41.9**	**-1.1**
	comp=Z,24nm,0.8s,baz=87,slow=8.8,SNR=4.3							
	comp=Z,24nm,0.8s							
MTN	**Manton Dam**	**51.41**	**268**	P		**P**	**22 55 14.5**	**-1.3**
FORT	**Forrest**	**52.07**	**245**	P		**P**	**22 55 20.0**	**-0.5**
KNRA	**Kununurra**	**53.03**	**264**	P		**P**	**22 55 27.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**55.50**	**261**	P		**P**	**22 55 44.8**	**-1.0**
SOEI	**Soe**	**58.71**	**270**	P		**P**	**22 56 08.9**	**+0.2**
SBA	**Scott Base**	**59.84**	**184**	P		**P**	**22 56 16.2**	**+0.8**
SBA	**Scott Base**	**59.84**	**184**	P		**P**	**22 56 16.2**	**+0.8**
SBA				pmax		pmax		
	comp=Z,109nm,1.8s							
PSA00	**Pilbara Seismi**	**60.27**	**255**	P		**P**	**22 56 17.9**	**-1.3**
PSA00				IAmb		IAmb	22 56 27.9	
	comp=Z,59nm,1.1s							
PSA00	**Pilbara Seismi**	**60.27**	**255**	P		**P**	**22 56 17.9**	**-1.3**
PSA00				IAmb		IAmb	22 56 27.9	
	comp=Z,33nm,1.1s							
MJAR	**Matsushiro Arr**	**70.11**	**322**	P		**P**	**22 57 21.7**	**-1.1**
MJAR	**Matsushiro Arr**	**70.11**	**322**	P		**P**	**22 57 19.3**	**-3.5**
	comp=Z,3.1nm,0.8s,baz=134,slow=3.3,SNR=4.6							
	comp=Z,3.1nm,0.8s							
MJAR	**Matsushiro Arr**	**70.11**	**322**	P		**P**	**22 57 21.7**	**-1.1**
MJAR				pmax		pmax		
	comp=Z,17nm,1.1s							
MAJO	**Matsushiro**	**70.12**	**322**	⇑*e*P		**P**	**22 57 22.7**	**-0.1**
MAJO				pmax		pmax		
	comp=Z,13nm,1.1s							
UGM	**Wanagama**	**72.25**	**267**	P		**P**	**22 57 34.0**	**-2.3**
SKR	**Severo-Kuril's**	**73.40**	**342**	⇓*e*P		**P**	**22 57 42.2**	**0.0**
PEA0B	**Petropavlovsk-**	**75.12**	**344**	⇓*e*P		**P**	**22 57 53.5**	**+1.3**
PETK	**Petropavlovsk-**	**75.12**	**344**	P		**P**	**22 57 47.9**	**-4.3**
	comp=Z,7.7nm,0.8s,baz=99,slow=9.2,SNR=4.0							
	comp=Z,7.7nm,0.8s							
YSS	**Yuzhno-Sakhali**	**75.31**	**332**	*e*P		**P**	**22 57 57.3**	**+3.9**
YSS				pmax		pmax		
	comp=Z,50nm,1.2s							
HOPS	**Hopland Field**	**75.55**	**40**	P		**P**	**22 57 56.5**	**+1.5**
HOPS				IAmb		IAmb	22 57 57.5	
	comp=Z,65nm,1.4s							
MNRC	**McLaughlin Min**	**75.86**	**40**	P		**P**	**22 57 56.5**	**-0.3**
MWC	**Mount Wilson**	**75.94**	**46**	P		**P**	**22 57 58.1**	**+0.5**
MWC				IAmb		IAmb	22 58 07.4	
	comp=Z,74nm,1.4s							
MWC	**Mount Wilson**	**75.94**	**46**	P		**P**	**22 57 58.1**	**+0.5**
MWC				pmax		pmax		
	comp=Z,73nm,1.4s							
KMRM	**Mail Ridge**	**75.94**	**38**			**P**	**22 57 56.3**	**-1.0**
KHMM	**Horse Mountain**	**76.35**	**38**	P		**P**	**22 58 00.7**	**+1.0**
KHMM				IAmb		IAmb	22 58 04.3	
	comp=Z,47nm,1.3s							
O02D	**Mt. Diablo Mer**	**76.46**	**39**	P		**P**	**22 58 01.3**	**+1.1**
O02D				IAmb		IAmb	22 58 03.3	
	comp=Z,75nm,1.6s							
ISA	**Isabella, Lake**	**76.47**	**45**	P		**P**	**22 58 00.5**	**+0.1**
ISA				IAmb		IAmb	22 58 03.0	
	comp=Z,56nm,1.3s							
ISA	**Isabella, Lake**	**76.47**	**45**	P		**P**	**22 58 00.5**	**+0.1**
ISA				pmax		pmax		
	comp=Z,56nm,1.3s							
BORC	**Borrego Spring**	**76.55**	**48**	P		**P**	**22 58 02.0**	**+1.1**
CMB	**Columbia Colle**	**76.62**	**42**	IAmb		IAmb	22 58 03.4	
	comp=Z,46nm,1.4s							
PFO	**Pinyon Flats O**	**76.70**	**47**	⇓*e*P		**P**	**22 58 02.7**	**+0.8**
PFO				pmax		pmax		
	comp=Z,30nm,1.3s							
N02D	**Trinity Center**	**77.01**	**38**	IAmb		IAmb	22 58 06.1	
	comp=Z,56nm,1.4s							
KSRS	**Korea Array**	**77.04**	**317**	P		**P**	**22 58 01.5**	**-2.0**
	comp=Z,1.0nm,0.4s,baz=131,slow=6.6,SNR=5.1							
	comp=Z,1.0nm,0.4s							
KSAR	**Wonju Array Be**	**77.06**	**317**	P		**P**	**22 58 04.2**	**+0.6**
KSAR	**Wonju Array Be**	**77.06**	**317**	P		**P**	**22 58 04.2**	**+0.6**
CCCA	**Chr Cany lake**	**77.14**	**45**	IAmb		IAmb	22 58 06.2	
	comp=Z,67nm,1.2s							
MDPB	**Devils Postpil**	**77.22**	**43**	P		**P**	**22 58 05.4**	**+0.5**
MDPB				IAmb		IAmb	22 58 07.2	
	comp=Z,35nm,1.3s							
MPK	**Martis Peak**	**77.60**	**41**	P		**P**	**22 58 06.3**	**-0.6**
MPK				IAmb		IAmb	22 58 09.4	
	comp=Z,71nm,1.3s							
IRM	**Iron Mountain**	**77.92**	**48**			**P**	**22 58 08.4**	**-0.2**
IRM				IAmb		IAmb	22 58 21.6	
	comp=Z,121nm,2.0s							
VLA	**Vladivostok**	**78.11**	**324**	⇑*e*P		**P**	**22 58 09.7**	**+0.4**
VLA				pmax		pmax		
	comp=Z,18nm,0.8s							
NVAR	**Mina Array Bea**	**78.18**	**42**	P		**P**	**22 58 07.8**	**-2.4**
NVAR	**Mina Array Bea**	**78.18**	**42**	P		P	22 58 05.6	-4.5
	comp=Z,3.3nm,0.9s,baz=243,slow=4.0,SNR=5.2							
	comp=Z,3.3nm,0.9s							
PSTR	**Posyet**	**78.43**	**323**	⇓*e*P		**P**	**22 58 10.1**	**-1.0**
J04A	**Umpqua Nationa**	**78.78**	**37**	P		**P**	**22 58 13.7**	**+0.4**
J04A				IAmb		IAmb	22 58 15.7	
	comp=Z,44nm,1.0s							
E03A	**Lebam**	**80.10**	**34**	IAmb		IAmb	22 58 57.8	
	comp=Z,107nm,1.7s							
NJ2	**Nanjing**	**80.47**	**308**	*e*P		**P**	**22 58 25.0**	**+2.5**
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
GNW	**Green Mountain**	**81.15**	**33**			**P**	**22 58 26.8**	**+1.0**
A04D	**Lummi Island**	**81.95**	**32**	IAmb		IAmb	22 58 33.1	
	comp=Z,71nm,1.1s							
HAWA	**Hanford**	**82.17**	**35**	IAmb		IAmb	22 58 33.6	
	comp=Z,48nm,1.4s							
CN2	**Changchun**	**82.25**	**321**	P		**P**	**22 58 33.3**	**+1.6**
CN2				pmax		pmax		
	comp=Z,20nm,1.5s							
BNX	**BinXian**	**82.25**	**324**	⇓P		**P**	**22 58 32.6**	**+1.0**
BNX				pmax		pmax		
	comp=Z,12nm,1.6s							
GLI	**Glacier Island**	**82.55**	**14**	IAmb		IAmb	22 58 34.6	
	comp=Z,38nm,1.0s							
MFID	**Camas Ranch**	**82.56**	**39**			**P**	**22 58 34.5**	**+1.0**
MFID				IAmb		IAmb	22 59 04.6	
	comp=Z,66nm,1.6s							
D08A	**Wollman Farm,**	**82.91**	**35**	IAmb		IAmb	22 58 37.4	
	comp=Z,51nm,1.3s							
DIV	**Divide**	**83.07**	**14**	IAmb		IAmb	22 58 37.5	
	comp=Z,25nm,1.0s							
HLID	**Hailey**	**83.50**	**40**			**P**	**22 58 38.5**	**0.0**
HLID				IAmb		IAmb	22 59 12.7	
	comp=Z,82nm,1.9s							
CTU	**Camp Tracy**	**83.65**	**43**	IAmb		IAmb	22 58 41.6	
	comp=Z,24nm,1.2s							
TXAR	**Lajitas Array**	**84.20**	**57**	P		**P**	**22 58 42.8**	**+0.6**
TXAR	**Lajitas Array**	**84.20**	**57**	P		**P**	**22 58 40.3**	**-1.9**
	comp=Z,2.5nm,1.1s,baz=254,slow=4.6,SNR=2.5							
	comp=Z,2.5nm,1.1s							
TXAR	**Lajitas Array**	**84.20**	**57**	P		**P**	**22 58 42.8**	**+0.6**
T35M	**Bob Quinn**	**84.37**	**23**	IAmb		IAmb	22 58 44.8	
	comp=Z,26nm,1.2s							
ANMO	**Albuquerque**	**84.53**	**50**	⇑*e*P		**P**	**22 58 42.3**	**-1.6**
ANMO				pmax		pmax		
	comp=Z,19nm,1.4s							
S34M	**Telegraph Cree**	**84.74**	**22**	IAmb		IAmb	22 58 47.2	
	comp=Z,38nm,1.1s							
HYT	**Haines Junctio**	**84.96**	**18**	IAmb		IAmb	22 58 48.3	
	comp=Z,29nm,1.3s							
SEY	**Seymchan**	**85.14**	**346**	P		**P**	**22 58 42.2**	**-3.8**
	comp=Z,7nm,0.7s,baz=148,slow=5.0,SNR=3.9							
	comp=Z,4.7nm,0.7s							
SEY	**Seymchan**	**85.14**	**346**	*e*P		**P**	**22 58 46.2**	**+0.2**
SEY				pmax		pmax		
	comp=Z,52nm,1.4s							
S22A	**4UR Ranch, Cre**	**85.55**	**48**			**P**	**22 58 49.8**	**+0.7**
SAND	**Sanderson**	**85.68**	**57**			**P**	**22 58 49.8**	**+0.2**
SAND				IAmb		IAmb	22 58 52.9	
	comp=Z,85nm,1.9s							
H21K	**Melozitna Rive**	**85.84**	**9**	IAmb		IAmb	22 58 52.6	
	comp=Z,54nm,1.4s							
LOHW	**Long Hollow**	**85.88**	**41**	IAmb		IAmb	22 59 44.4	
	comp=Z,53nm,1.8s							
R33M	**Jennings River**	**85.90**	**21**	IAmb		IAmb	22 58 53.1	
	comp=Z,40nm,1.2s							
COLA	**College**	**85.97**	**12**	P		**P**	**22 58 50.5**	**+0.4**
COLA	**College**	**85.97**	**12**	⇓*e*P		**P**	**22 58 50.5**	**+0.4**
COLA				pmax		pmax		
	comp=Z,41nm,1.1s							
IL31		**86.06**	**12**	IAmb		IAmb	22 58 52.7	
	comp=Z,70nm,1.4s							
ILAR	**Eielson Array**	**86.06**	**12**	P		**P**	**22 58 50.6**	**0.0**
ILAR	**Eielson Array**	**86.06**	**12**	P		P	22 58 46.1	-4.6
	comp=Z,2.7nm,1.1s,baz=228,slow=5.1,SNR=4.7							
	comp=Z,2.7nm,1.1s							
ILAR	**Eielson Array**	**86.06**	**12**	P		**P**	**22 58 50.6**	**0.0**
YHB	**Horse Butte**	**86.09**	**40**	IAmb		IAmb	22 58 57.1	
	comp=Z,47nm,1.3s							
LYN	**LuoYang**	**86.36**	**308**	*e*P		**P**	**22 58 56.6**	**+3.8**
LYN				pmax		pmax		
	comp=Z,47nm,1.5s							
DRIO	**Del Rio**	**86.66**	**58**	IAmb		IAmb	22 58 58.7	
	comp=Z,30nm,1.1s							
BILL	**Bilibino**	**87.48**	**353**	⇑*e*P		**P**	**22 58 58.2**	**+0.8**
BILL				pmax		pmax		
	comp=Z,21nm,1.1s							
GYA	**Guiyang**	**87.71**	**299**	⇓P		**P**	**22 59 01.4**	**+1.7**
GYA				pmax		pmax		
	comp=Z,9.0nm,1.0s							
XAN	**Xi'an**	**88.83**	**306**	*e*P		P	22 59 11.9	+7.2
XAN				pmax		pmax		
	comp=Z,41nm,1.4s							
SYO	**Syowa Base**	**88.98**	**192**	⇓*e*P		**P**	**22 59 04.0**	**-0.8**
SYO	**Syowa Base**	**88.98**	**192**	⇓*e*PcP		**P**	**22 59 06.0**	**+1.2**
TROLL	**Troll, Antarti**	**89.54**	**179**	⇓P		**P**	**22 59 06.4**	**-1.2**
	comp=Z,202nm,0.7s							
HHC	**Hu-ho-hao-te**	**89.70**	**314**	*e*P		**P**	**22 59 09.4**	**+0.7**
HHC				S		**S**	**23 09 59.0**	**-1.5**
HHC				pmax		pmax		
	comp=Z,11nm,0.8s							
SNAA	**Sanae**	**89.75**	**178**	⇓P		**P**	**22 59 06.9**	**-1.6**
	comp=Z,109nm,1.1s							
VNA3	**Neumayer Olymp**	**89.79**	**176**	⇓P		**P**	**22 59 07.0**	**-1.6**
	comp=Z,8.3nm,0.8s							
VNA2	**Neumayer--Watz**	**90.26**	**176**	⇓P		**P**	**22 59 09.7**	**-1.1**
	comp=Z,8.2nm,0.6s,baz=185,slow=3.9							
VNA1	**Neumayer--Stat**	**90.47**	**176**	⇓P		**P**	**22 59 11.4**	**-0.3**
	comp=Z,14nm,0.9s							
HKT	**Hockley**	**90.71**	**59**	⇑*e*P		**P**	**22 59 15.0**	**+1.5**
HKT				pmax		pmax		
	comp=Z,15nm,1.3s							
YAK	**Yakutsk**	**91.28**	**337**	⇑*e*P		**P**	**22 59 14.1**	**-1.3**
YAK				pmax		pmax		
	comp=Z,12nm,1.3s							
LZH	**Lanzhou**	**93.45**	**307**	*e*P		**P**	**22 59 29.7**	**+3.4**
LZH				pP		pwP	22 59 34.0	+1.7
LZH				sP		sP	22 59 36.5	+6.8
LZH				pmax		pmax		
	comp=Z,19nm,1.2s							
JTS	**Las Juntas de**	**93.88**	**81**	⇑*e*P		**P**	**22 59 27.4**	**-1.2**
JTS				pmax		pmax		
	comp=Z,8.0nm,1.1s							
YKA	**Yellowknife Ar**	**93.94**	**24**	P		**P**	**22 59 25.7**	**-2.0**
	comp=Z,3.3nm,1.0s,baz=251,slow=4.4,SNR=3.7							
	comp=Z,3.3nm,1.0s							
MGMO	**Mountain Grove**	**95.97**	**53**	IAmb		IAmb	22 59 40.3	
	comp=Z,25nm,1.2s							
WMQ	**Urumqi**	**107.42**	**311**	Pdif		**Pdif**	**23 00 27.3**	**-1.4**
HYBB	**Hyderabad (bro**	**109.96**	**282**	*e*PKiKP		**PKiKP**	**23 04 43.5**	**+0.8**
HYBB				IVMs_BB		IVMs_BB	23 41 10.5	
	comp=Z,4µm,26.2s							
BVAR	**Borovoye Array**	**119.10**	**321**	PKP		**PKPdf**	**23 04 55.9**	**-3.2**
	comp=Z,1.2nm,0.6s,baz=107,slow=5.0,SNR=1.9							
ARTI	**Arti**	**125.05**	**327**	*i* PKiKP		**PKiKP**	**23 05 12.5**	**+1.7**
APA	**Apatity**	**127.73**	**346**	⇓*i*PKiKP		**PKiKP**	**23 05 21.3**	**+5.5**
KLMR	**Klimovskoe**	**131.07**	**338**	*e*PKiKP		**PKPdf**	**23 05 20.4**	**-1.4**
KLMR				pmax		pmax		
	comp=Z,30nm,1.6s							
KDWAN	**Kaudwane**	**133.74**	**206**			PKPpre	23 05 14.0	
KHWEE	**KHWEE**	**134.66**	**208**			PKPpre	23 05 16.6	
KGCAE	**Kacgae**	**135.19**	**204**	PKPpre		PKPpre	23 05 17.5	
MOS	**Moscow**	**135.30**	**334**	*e*PKiKP		**PKiKP**	**23 05 32.6**	**+1.2**
KOOLE	**Kule**	**135.79**	**201**	PKPpre		PKPpre	23 05 20.2	
NC204	**NORSAR Array S**	**137.21**	**355**	PKPdf		**PKiKP**	**23 05 35.9**	**+0.7**
KIV	**Kislovodsk**	**139.23**	**317**	*e*PKiKP		**PKPdf**	**23 05 38.6**	**+0.9**
KIV				pmax		pmax		
	comp=Z,5.0nm,1.1s							
ERBR	**Yeremizino-Bor**	**139.79**	**320**	*i* PKiKP		**PKPdf**	**23 05 37.9**	**-0.6**
ERBR				pmax		pmax		
	comp=Z,38nm,1.3s							
BEL	**Belsk**	**144.47**	**342**	*e*PKP		**PKPdf**	**23 05 47.6**	**+0.9**
MILM	**Milestii Mici**	**145.42**	**330**	*i* PKP		**PKPbc**	**23 05 44.0**	**-4.3**
	comp=Z,2µm,6.5s							
MILM				LRM		MLR	00 09 09.0	
	comp=Z,17µm,19.0s							
KWP	**Kalwaria Pacla**	**145.78**	**339**	*e*PKP		**PKPdf**	**23 05 48.1**	**-0.9**
OJC	**Ojcow**	**146.20**	**342**	*e*PKP		**PKPdf**	**23 05 44.7**	**-5.0**
STHS	**Stebnicka Huta**	**146.46**	**340**	*e*PKP2		**PKiKP**	**23 05 57.9**	**+3.4**
STHS	**Stebnicka Huta**	**146.46**	**340**	*e*PKP		**PKiKP**	**23 05 57.9**	**+3.4**
BUR08	**Bucovina Ar. S**	**146.47**	**334**	PKPdf		**PKPdf**	**23 05 49.7**	**-0.7**
BURAR	**Bucovina Array**	**146.49**	**334**	PKPdf		**PKPdf**	**23 05 49.4**	**-1.0**
KSP	**Ksiaz**	**146.53**	**346**	*e*PKP		**PKPab**	**23 05 52.9**	**+0.2**
CLL	**Collm**	**146.73**	**350**	*i* PKP2		**PKPab**	**23 05 54.2**	**+0.9**
CLL				pmax		pmax		
	comp=Z,95nm,1.4s							
CLL	**Collm**	**146.73**	**350**	*i* PKPdf		**PKPdf**	**23 05 51.7**	**+1.2**
CLL				*i* PKPbc		**PKPab**	**23 05 54.2**	**+0.9**
	comp=Z,95nm,1.4s							
CLL				*i* x		x	23 06 14.1	
	comp=Z,73nm,1.6s							
NIE	**Niedzica**	**146.76**	**341**	*e*PKP		**PKPdf**	**23 05 50.7**	**0.0**
BRTR	**Keskin Array B**	**147.18**	**316**	PKPdf		**PKPdf**	**23 05 50.6**	**-1.3**
BRTR	**Keskin Array B**	**147.18**	**316**	PKPbc		**PKPdf**	**23 05 51.5**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=83,slow=2.7,SNR=2.3							
BRTR	**Keskin Array B**	**147.18**	**316**	PKiKP		**PKPdf**	**23 05 50.6**	**-1.3**
MORC	**Moravsky Berou**	**147.22**	**344**	*e*PKP		**PKPbc**	**23 05 54.7**	**+1.0**
UCC	**Uccle**	**147.95**	**0**	*d*PKP		**PKiKP**	**23 05 58.1**	**+0.7**
MEM	**Membach**	**148.11**	**358**	*d*PKP		**PKiKP**	**23 05 58.1**	**+0.3**
BTNL	**Ternell**	**148.13**	**358**	*d*PKP		**PKiKP**	**23 05 58.0**	**+0.1**
BSTI	**Sart Tilman**	**148.15**	**359**	*d*PKP		**PKiKP**	**23 05 58.5**	**+0.6**
BGES	**Gesves**	**148.36**	**359**	*d*PKP		**PKPbc**	**23 05 56.1**	**-0.6**
BHOU	**Houvegnez**	**148.37**	**358**	*d*PKP		**PKiKP**	**23 05 59.2**	**+0.8**
BMRD	**Maredsous**	**148.44**	**360**	*d*PKPdf		**PKPdf**	**23 05 54.7**	**+1.3**
MODS	**Modra-Piesok**	**148.57**	**343**	*e*PKP2		**PKPab**	**23 06 00.7**	**-0.1**
MODS	**Modra-Piesok**	**148.57**	**343**	*e*PKP		**PKPab**	**23 06 00.7**	**-0.1**
DOU	**Dourbes**	**148.65**	**360**	*d*PKP		**PKiKP**	**23 05 59.6**	**+0.6**
MMAI	**Mount Meron Ar**	**148.77**	**303**	PKPbc		**PKPdf**	**23 05 56.5**	**+1.9**
	comp=Z,7.7nm,1.0s,baz=77,slow=3.1,SNR=2.5							
GERES	**GERESS Array B**	**148.97**	**348**	PKPbc		**PKPdf**	**23 05 55.9**	**+1.5**
	comp=Z,1.5nm,0.9s,baz=33,slow=5.3,SNR=1.5							
WLF	**Walferdange**	**149.05**	**358**	*d*PKP		**PKPab**	**23 06 01.9**	**-0.7**
FUORN	**Ofenpass-Fuorn**	**151.71**	**351

GRNC	Granite Creek	13.49	51	Pn	Pn	23 00 28.1	-0.9	
PCA	Pinnacle	13.99	54	Pn	Pn	23 00 37.6	+1.9	
O28M	Mount Upton	14.22	52	Pn	Pn	23 00 39.0	-0.1	
J26L	Joseph Creek	14.61	36	Pn	Pn	23 00 44.0	-0.2	
O29M	Mount Kennedy	14.86	55	Pn	Pn	23 00 47.8	+0.2	
I26K	Coal Creek Min	15.24	34	Pn	Pn	23 00 50.4	-2.1	
I26K				IAmb	IAmb	23 00 58.6		
	comp=Z,6.9nm,1.4s							
M29M	Somme Creek	15.58	47	Pn	Pn	23 00 57.2	+0.1	
E24K	Your Creek	15.87	21		P	23 01 02.9	-1.4	
E24K				IAmb	IAmb	23 01 03.2		
	comp=Z,12nm,1.5s							
I28M	Miner Creek	16.41	36	Pn	Pn	23 01 06.5	-1.3	
J30M	Hart River	17.32	41		P	23 01 20.2	-0.3	
H29M	Whitestone	17.38	35		Pn	23 01 20.1	+0.3	
H29M				IAmb	IAmb	23 01 45.9		
	comp=Z,13nm,1.4s							
H31M	Peel River	18.61	39	P	P	23 01 34.6	+0.1	
H31M				IAmb	IAmb	23 02 17.1		
	comp=Z,11nm,1.2s							
MMPY	Sheldon Lake,	18.82	50	P	Pn	23 01 39.0	+1.5	

*ISK **04** 22:59:57.1, 35°.61N×35°.82E, h14km, ML2.5/9*
*AFAD **04** 23:00:01.2, 35°.88N×35°.68E, h16km±1km, ML2.3*
*GRAL **04** 23:00:02.4±0.3, 35°.86N×35°.43E, h12km±6km, MD3.2*
*GII **04** 23:00:03.7±0.0, 35°.634N±0°.003×35°.577E±0°.001, h1km, Mws2.3, confirmed*

ISC 04 23:00:00.8±1.1, **35°.84N**±0°.02×**35°.65E**±0°.03, **h8**km±10km, **n46**, σ0°**90**/65, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASUZ	Hatay-Arsuz	0.46	14	P	Pg	23 00 09.7	0.0
ASUZ				S	Sg	23 00 16.0	+0.2
ASUZ				*i* IAML		23 00 22.0	
	comp=N,241nm,0.4s						
ASUZ				*i* IAML		23 00 24.0	
	comp=E,233nm,0.6s						
TAHT	Tahtakopru-Hat	0.69	39	Pg	Pg	23 00 13.5	-0.5
TAHT				Sg	Sb	23 00 25.4	+0.7
RHAN	Hatay/Reyhanl	0.88	62	P	Pg	23 00 17.2	-0.4
RHAN				S	Sg	23 00 29.2	+0.2
RHAN				*i* IAML		23 00 31.0	
	comp=N,221nm,0.2s						
RHAN				*i* IAML		23 00 33.0	
	comp=E,137nm,0.2s						
YURE	YUREGIR	0.98	359	P	Pn	23 00 21.8	+0.8
YURE				S	Sn	23 00 35.2	+0.2
HASA	Hatay-Hassa-Ha	1.13	37	P	Pb	23 00 22.5	-0.1
HASA				S	Sb	23 00 37.3	-0.2
HASA				*i* IAML		23 00 40.0	
	comp=E,98nm,0.5s						
HASA				*i* IAML		23 00 41.0	
	comp=N,119nm,0.2s						
CEYT	Ceyhan	1.17	4	Pn	Pb	23 00 23.1	-0.1
CEYT				Sn	Sn	23 00 41.7	+2.1
MERS	Mersin	1.37	319	Pn	Pn	23 00 25.9	-0.4
BEIL	Beino	1.37	161	*e*P	Pg	23 00 27.1	0.0
BEIL				*e*S	Sg	23 00 45.6	+0.7
KIZK	Mersin	1.37	298	P	Pn	23 00 25.1	-1.1
KIZK				S	Sg	23 00 46.1	+1.2
KIZK	Mersin	1.37	298	Pn	Pn	23 00 25.9	-0.3
KIZK				Sn	Sg	23 00 46.8	+1.9
SILI	Silifke-Mersin	1.49	291	Pn	Pn	23 00 27.5	-0.4
KARA	Karaisali	1.49	342	Pn	Pn	23 00 28.1	+0.2
KAMA	Osmaniye	1.57	31	P	Pn	23 00 28.8	-0.3
HWQ	Hawqa	1.58	171	*e*P	Pn	23 00 29.7	+0.4
HWQ				*e*S	Sn	23 00 50.0	+0.1
GULE	Gulek	1.60	334	P	Pb	23 00 30.6	-0.1
GULE				S	Sg	23 00 52.2	0.0
GULE				*i* IAML		23 00 58.0	
	comp=N,47nm,0.3s						
GULE				*i* IAML		23 00 59.0	
	comp=E,44nm,0.7s						
AKO	Adana	1.62	354	P	Pn	23 00 30.2	+0.4
AKO				S	Sb	23 00 52.1	+0.4
KEBE	Keben-Mersin	1.68	292	Pn	Pn	23 00 30.3	-0.2
FKH	Fakeheh	1.71	158	*e*P	Pb	23 00 32.2	-0.4
GULN	MERSIN_Gulnar	1.74	282	P	Pn	23 00 31.5	+0.3
GULN				S	Sn	23 00 54.4	+0.7
ANDN	Andirin	1.82	18	P	Pb	23 00 34.0	-0.5
ANDN				S	Sb	23 00 56.7	-0.7
ANDN				*i* IAML		23 00 58.0	
	comp=E,26nm,1.7s						
GAZ	Gaziantep	1.83	43	Pn	Pn	23 00 30.1	-2.5
TEVE	Tevekalti-Mers	1.88	289	Pn	Pn	23 00 32.7	-0.6
CMRD	Camardi-Nigde	1.89	344	Pn	Pn	23 00 33.8	+0.3
BHL	Bhannes	1.94	180	*e*P	Pn	23 00 34.3	+0.2
KERG	Konya-Eregli	1.99	322	P	Pn	23 00 35.7	+0.8
KERG				S	Sn	23 01 01.3	+1.3
KERG				*i* IAML		23 01 10.0	
	comp=E,21nm,0.4s						
ZAHL	Zahle	1.99	174	*e*P	Pn	23 00 35.3	+0.4
CSS	Mathiatis	2.09	246	P	Pb	23 00 38.1	-0.8
SAIM	ADANA	2.16	9	P	Pn	23 00 40.7	+0.6
YAHY	KAYSERI_Yahyal	2.26	354	P	Pn	23 00 40.0	+1.4
YAHY				S	Sb	23 01 08.9	-1.2
NIDE	Nigde/Merkez-G	2.26	342	P	Pn	23 00 39.7	+1.0
NIDE				S	Sb	23 01 08.9	-1.3
NIDE				*i* IAML		23 01 11.0	
	comp=E,31nm,0.5s						
NIDE				*i* IAML		23 01 12.0	
	comp=N,20nm,0.5s						
QRWL	Qaraoun	2.29	179	*e*P	Pn	23 00 39.2	+0.2
RCY	Rachaya	2.35	176	*e*P	Pn	23 00 40.3	+0.5
SHBL	Chebaa	2.49	178	*e*P	Pn	23 00 42.0	+0.2
KKBE	Karaman, Kazim	2.58	303	P	Pb	23 00 44.0	+1.1
KKBE				S	Sb	23 01 17.3	-1.9
NATI	Neve Ativ	2.58	178	P	Pn	23 00 43.5	+0.7
NATI	Neve Ativ	2.58	178	S	Sn	23 01 14.8	+0.4
GEM	Giv'at Ha'Em	2.63	180	P	Pn	23 00 44.2	+0.7
GEM	Giv'at Ha'Em	2.63	180	S	Sn	23 01 15.4	-0.2
BSIR	Belisirma, Guz	2.65	336	P	Pb	23 00 46.7	-1.9
BSIR				S	Sb	23 01 20.1	-1.3
BSIR				*i* IAML		23 01 41.0	
	comp=N,12nm,1.0s						
MMA0	Mount Meron ar	2.83	184	P	Pn	23 00 46.8	+0.5
MMA0B	Mount Meron ar	2.83	184	P	Pn	23 00 46.9	+0.5
MMA0B	Mount Meron ar	2.83	184	S	Sn	23 01 19.8	-0.9
KSHT	Keshet	2.86	177	P	Pn	23 00 47.9	+1.1
MMLI	Mount Malkishu	3.40	183	P	Pn	23 00 55.5	+1.3
MMLI	Mount Malkishu	3.40	183	S	Sn	23 01 34.6	-0.2
HMDT	Nahal Hemdat	3.58	182	P	Pn	23 00 57.8	+1.2

*SDD **04** 23:00:02.4±2.3, 19°.27N×67°.12W, h30km±97km, MD3.7, ML2.7, MW3.2*
*NEIC **04** 23:00:03.0±0.6, 19°.1N±0°.1×67°.22W±0°.06, h10km±2km, ML2.7/15, Md3.1/13(RSPR), Error ellipse: s-maj=19.2km s-min=3.1km az=27.0*
*RSPR **04** 23:00:05.1, 19°.22N×67°.28W, h20km±8km, MD3.1/13*

ISC 04 23:00:01.6±1.4, **19°.23N**±0°.06×**67°.15W**±0°.03, **h16**km±9km, **n49**, σ0°**66**/56, **24C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.75	177	*e*Pg	Pb	23 00 16.4	0.0
AGPR				⇑*e*Sg	Sg	23 00 26.8	+0.5
AGPR				IAML		23 00 27.8	
	comp=N,478nm,0.2s						
AGPR	Aguadilla, PR	0.75	177	*e*P	Pg	23 00 16.6	+0.3
AGPR	Aguadilla, PR	0.75	177	*e*S	Sg	23 00 27.4	+1.1
IDE	Isla Desecheo	0.89	200	||*e*P	Pb	23 00 18.4	-0.3
IDE	Isla Desecheo	0.89	200	*e*S	Sb	23 00 30.3	-0.1
EMPR	Esperanza - Ma	0.95	142	*e*P	Pn	23 00 22.5	+2.2
EMPR	Esperanza - Ma	0.95	142	*e*S	Sn	23 00 34.4	+0.9
AOPR	Arecibo Observ	0.95	157		Pg	23 00 19.9	-0.1
AOPR				IAML		23 00 36.1	
	comp=N,347nm,0.3s						
AOPR	Arecibo Observ	0.95	157	⇑*e*Pg	Pb	23 00 19.7	0.0
AOPR				⇑*e*Sg	Sb	23 00 31.2	-0.9
AOPR				IAML		23 00 42.2	
	comp=N,326nm,0.2s						
AOPR	Arecibo Observ	0.95	157	||*e*P	Pg	23 00 20.0	-0.1
AOPR	Arecibo Observ	0.95	157	*e*S	Sn	23 00 33.4	-0.2
LSP	Las Mesas	1.04	177	||*e*P	Pb	23 00 21.4	0.0
LSP	Las Mesas	1.04	177	*e*S	Sn	23 00 35.4	-0.5
UUPR	Utuado, UPR, P	1.05	157	||*e*P	Pg	23 00 22.4	+0.6
UUPR	Utuado, UPR, P	1.05	157	*e*S	Sg	23 00 35.9	+0.3
ECPR	Experimental S	1.17	140	||*e*P	Pg	23 00 24.4	+0.2
ECPR	Experimental S	1.17	140	*e*S	Sg	23 00 40.6	+1.2
CRPR	Cabo Rojo, PR	1.21	178		Pn	23 00 23.6	-0.3
CRPR				IAML		23 00 43.4	
	comp=N,175nm,0.4s						
CRPR	Cabo Rojo, PR	1.21	178	⇑*e*Pg	Pn	23 00 23.5	-0.4
CRPR				⇑*e*Sg	Sb	23 00 39.3	-0.3
CRPR				IAML		23 00 43.3	
	comp=N,196nm,0.4s						
CRPR	Cabo Rojo, PR	1.21	178	⇑*e*P	Pn	23 00 23.5	-0.4
CRPR	Cabo Rojo, PR	1.21	178	*e*S	Sb	23 00 39.4	-0.3
MLPR	Magueyes Islan	1.25	176	||*e*Pg	Pn	23 00 24.1	-0.3
MLPR				⇑*e*Sg	Sb	23 00 40.2	-0.6
MLPR				IAML		23 00 44.3	
	comp=N,49nm,0.5s						
MLPR	Magueyes Islan	1.25	176	⇑*e*P	Pn	23 00 24.1	-0.3
MLPR	Magueyes Islan	1.25	176	*e*S	Sb	23 00 40.6	-0.2
OBIP	Obispado Ponce	1.28	156		Pb	23 00 25.1	-0.2
OBIP				IAML		23 00 42.9	
	comp=N,123nm,0.5s						
OBIP				IAML		23 00 47.6	
	comp=E,142nm,0.3s						
OBIP	Obispado Ponce	1.28	156	||*e*P	Pb	23 00 25.2	-0.2
OBIP	Obispado Ponce	1.28	156	*e*S	Sn	23 00 42.0	+0.3
GCPR	Guaynabo City	1.36	132		Pb	23 00 26.9	+0.2
GCPR	Guaynabo City	1.36	132	||*e*P	Pg	23 00 27.2	-0.6
GCPR	Guaynabo City	1.36	132	*e*S	Sg	23 00 45.5	0.0
PCDR	Punta Cana, DR	1.37	239	||*e*P	Pn	23 00 25.7	-0.3
PCDR				⇑*e*Sg	Sb	23 00 44.8	+0.8
PCDR				IAML		23 00 45.9	
	comp=N,198nm,0.7s						
SJG	San Juan	1.46	139		Pg	23 00 29.0	-0.7
SJG				IAML		23 00 56.1	
	comp=N,107nm,0.2s						
SJG				IAML		23 00 57.2	
	comp=N,118nm,0.3s						
SJG	San Juan	1.46	139	||*e*Pg	Pb	23 00 28.3	0.0
SJG	San Juan	1.46	139	||*e*P	Pg	23 00 29.5	-0.2
SJG	San Juan	1.46	139	*e*S	Sg	23 00 47.6	-1.0
HIDR	Higuey Centro	1.61	247	||*e*Pg	Pn	23 00 28.9	-0.6
HIDR				IAML		23 01 01.3	
	comp=N,149nm,0.2s						
HIDR	Higuey Centro	1.61	247	||*e*P	Pn	23 00 29.5	0.0
HUMP	Col San Antoni	1.64	131		Pb	23 00 30.7	-0.7
HUMP				IAML		23 00 55.5	
	comp=N,83nm,0.2s						
HUMP				IAML		23 01 04.9	
	comp=E,120nm,0.2s						
HUMP	Col San Antoni	1.64	131	⇑*e*P	Pb	23 00 30.9	-0.5
HUMP	Col San Antoni	1.64	131	*e*S	Sg	23 00 52.9	-1.4
MIDR	Miches	1.81	263	⇑*e*Pg	Pn	23 00 32.4	+0.1
MIDR				⇑*e*Sg	Sb	23 00 57.4	+0.4
MIDR				IAML		23 01 02.7	
	comp=N,42nm,1.2s						
MIDR	Miches	1.81	263	||*e*P	Pn	23 00 32.3	+0.1
MIDR	Miches	1.81	263	*e*S	Sg	23 00 58.9	-1.2
SMDR	Samana, DR	1.93	272	||*e*P	Pn	23 00 33.2	-0.6
DR12	Loma Pena Alta	2.16	259		Pn	23 00 37.7	+0.7
HATOM	Hato Mayor del	2.16	259	||*e*Pg	Pn	23 00 37.9	+0.9
HATOM				⇑*e*Sg	Sn	23 01 03.5	0.0
HATOM				IAML		23 01 09.9	
	comp=N,35nm,0.5s						
BANI	BANI	3.15	255	Pn	Pn	23 00 51.4	+0.6
SC01	Santiago de lo	3.39	274	Pn	Pn	23 00 54.0	+0.2
SDDR	Presa de Saban	3.92	267	Pn	Pn	23 01 02.6	+1.3
SDDR				IAML		23 02 07.1	
	comp=N,29nm,0.7s						

*ATH **04** 23:04:02.2, 37°.61N×21°.09E, h25km±1km, ML2.7/7, Manual Solution by A.Moschou First location: 2019/11/04 23:04:58, This location: 2019/11/04 23:20:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*

THE 04 23:04:03.0, **38°N**±4°×**21°E**±°, **h20**km±2km, **M2.4**/21, **MLh2.4**/21, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAK2	Zakynthos	0.21	308	P	Pb	23 04 08.3	-0.2
ZAK2				S	Sb	23 04 13.0	+0.6
LTHK	Lithakia	0.23	284	P	Pb	23 04 07.8	-0.8
LTHK				S	Sb	23 04 12.5	-0.1
LTHK	Lithakia	0.23	284	P	Pb	23 04 07.8	-0.8
LTHK				S	Sb	23 04 12.1	-0.4
CLEM	Kyllini,Ilia,G	0.24	4	P	Pb	23 04 08.0	-0.8
CLEM				S	Sb	23 04 13.1	+0.3
KYPS	Kipseli, Zakin	0.28	306	P	Pb	23 04 09.3	-0.1
KYPS				S	Sb	23 04 14.0	+0.2
LCHA	Lechaina	0.31	23	P	Pb	23 04 09.3	-0.4
LCHA				S	Sb	23 04 15.2	+0.9
ORTH	Orthonies,Zaky	0.38	301	P	Pb	23 04 11.1	+0.1
ORTH				S	Sb	23 04 17.5	+0.9
ORTH	Orthonies,Zaky	0.38	301	P	Pb	23 04 11.0	0.0
ORTH				S	Sb	23 04 17.0	+0.4
AMT	Artemida-Makis	0.49	104	P	Pb	23 04 12.4	-0.5
AMT				S	Sb	23 04 19.7	+0.1
RLS	Riolos of Patr	0.49	35	P	Pb	23 04 12.0	-0.9
RLS	Riolos of Patr	0.49	35	P	Pb	23 04 12.0	-0.9
RLS				S	Sb	23 04 20.5	+0.9
RTZL	Ratzakli, Kefa	0.50	327	P	Pb	23 04 12.2	-0.8
RTZL				S	Sb	23 04 20.5	+0.6
DRO	Drossia	0.56	58	P	Pb	23 04 13.7	-0.4
DRO				S	Sn	23 04 23.6	-0.9
DRO	Drossia	0.56	58	P	Pb	23 04 13.6	-0.5
DRO				S	Sb	23 04 22.5	+0.8
AXS	Araxos	0.58	21	P	Pb	23 04 13.7	-0.8
AXS	Araxos	0.58	21	P	Pb	23 04 13.6	-0.8
AXS				S	Sb	23 04 23.4	+1.1
PSDA	Pessada-Kefalo	0.62	318	P	Pb	23 04 14.1	-1.1
PSDA				S	Sb	23 04 24.1	+0.6
PSDA	Pessada-Kefalo	0.62	318	P	Pb	23 04 14.0	-1.2
PSDA				S	Sb	23 04 24.1	+0.6
VLS	Valsamata	0.67	322	P	Pb	23 04 14.7	-1.2
VLS				S	Sb	23 04 25.0	+0.2
VLS	Valsamata	0.67	322	P	Pb	23 04 14.7	-1.2
VLS				S	Sb	23 04 25.1	+0.2
ARG2	Argostoli	0.72	317	P	Pb	23 04 16.4	-0.4
ARG2				S	Sn	23 04 27.9	-0.5
LXR1	Lixouri, Cepha	0.76	316	P	Pb	23 04 17.0	-0.6
LXR1				S	Sn	23 04 29.4	0.0
ITM	Ithomi	0.80	126	P	Pb	23 04 18.6	+0.4
ITM	Ithomi	0.80	126	P	Pb	23 04 17.9	-0.4
ITM				S	Sb	23 04 28.5	-0.1
UPR	University Cam	0.82	40	P	Pb	23 04 18.1	-0.5
AST1	Astakos	0.89	359	P	Pb	23 04 19.1	-0.5
AST1				S	Sn	23 04 33.1	+0.6
KLV	Kalavryta, Ach	0.91	64	P	Pb	23 04 19.6	-0.5
KLV	Kalavryta, Ach	0.91	64	P	Pb	23 04 19.6	-0.4
KLV				S	Sn	23 04 32.6	-0.6
FSK	Fiskardo	0.91	332	P	Pb	23 04 18.8	-1.3
FSK	Fiskardo	0.91	332	P	Pb	23 04 19.9	-0.2
FSK				S	Sb	23 04 32.3	+0.5
EFP	Efpalio	0.99	39	P	Pb	23 04 20.7	-0.8
EFP	Efpalio	0.99	39	P	Pb	23 04 21.2	-0.3
EFP				S	Sn	23 04 35.1	-0.1
GUR	Goura	1.01	73	P	Pb	23 04 21.2	-0.7
GUR	Goura	1.01	73	P	Pb	23 04 21.4	-0.5
GUR				S	Sb	23 04 35.1	+0.3
PVO	Paravola	1.01	19	P	Pb	23 04 21.6	-0.3
PVO	Paravola	1.01	19	P	Pb	23 04 21.6	-0.3
PVO				S	Sn	23 04 36.0	+0.2
EVGI	Lefkada island	1.03	340	P	Pb	23 04 21.0	-1.1
SERG	Sergoula	1.06	44	P	Pb	23 04 22.2	-0.5
KALE	Kalithea	1.09	47	P	Pn	23 04 22.6	-0.6
NYDR	Nydri-Lefkada	1.11	343	P	Pn	23 04 22.2	-1.1
ANX	Ano Chora	1.13	34	P	Pn	23 04 23.3	-0.5
AMPL	Ampelaki	1.27	4	P	Pn	23 04 25.4	-0.2
EVR	Evrytania	1.37	23	P	Pb	23 04 27.6	-0.4
IGT	Igoumenitsa	1.97	342	P	Pn	23 04 35.5	+0.2

IDC 04 23:05:13.9±9.1, **14°.94S**×**178°.12W**, **h0**km, **mb3.6**/2, **mbtmp3.6**/2, **Error ellipse: s-maj=410.6km s-min=35.3km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.51	257	P	P	23 13 35.2	-0.4
	0.7nm,0.6s,baz=92,slow=6.8,SNR=6.1						
	0.7nm,0.6s						
ASAR	Alice Springs	45.93	251	P	P	23 13 39.0	+0.1
	14nm,0.5s,baz=83,slow=8.3,SNR=123						
ILAR	Eielson Array	82.95	13	P	P	23 17 40.5	+0.1
	0.1nm,0.3s,baz=213,slow=6.5,SNR=6.4						
	0.1nm,0.3s						

*NEIC **04** 23:07:11.9±2.1, 31°.82S±0°.03×71°.55W±0°.04, h35km±2km, mb4.0/3, ML4.3(GUC), Error ellipse: s-maj=5.7km s-min=4.2km az=104.0*
*SJA **04** 23:07:11.1±0.7, 31°.82S×71°.41W, h38km±2km, ML4.1, MW4.2*
*IDC **04** 23:07:11.6±0.6, 32°.25S×71°.47W, h55km±5km, mb3.7/4, mbtmp4.1/5, Error ellipse: s-maj=18.0km s-min=11.6km az=170.0*
*GUC **04** 23:07:12.3±0.6, 31°.82S×71°.33W, h56km±3km, ML4.3*

ISC 04 23:07:11.0±0.8, **31°.81S**±0°.03×**71°.49W**±0°.05, **h36**km±2km, **n124**, σ1°**82**/153, **mb4.0**/6, **12C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.50	118	⇑*i*P	Pn	23 07 22.9	+1.1
CO04				*e*S	Sn	23 07 30.5	+1.1
CO04				IAML		23 07 31.1	
	comp=N,54µm,0.2s						
CO02	Combarbal	0.74	35	P	Pn	23 07 26.0	+1.1
CO02				Sn	Sn	23 07 36.0	+1.1
CO02	Combarbal	0.74	35	⇑*i*P	Pn	23 07 26.1	+1.1
CO02				*e*S	Sn	23 07 36.1	+1.1
CO02	Combarbal	0.74	35	*i* P	Pn	23 07 26.1	+1.1
CO02				IAML		23 07 36.8	
	comp=Z,13µm,0.1s						
CO02				*i* S	Sn	23 07 36.9	+1.9
VA06	Catapilco	0.77	168	P	Pn	23 07 27.1	+1.7
VA06				Sn	Sn	23 07 37.3	+1.7
VA06	Catapilco	0.77	168	*e*P	Pn	23 07 27.0	+1.7
VA06				*e*S	Sn	23 07 37.8	+2.2
VA06				IAML		23 07 40.8	
	comp=N,23µm,0.4s						
CO06	Fray Jorge	1.14	354	P	Pn	23 07 32.8	+2.3
CO06				Sn	Sn	23 07 44.5	-0.3
CO06	Fray Jorge	1.14	354	*e*P	Pn	23 07 32.8	+2.3
CO06				IAML		23 07 53.9	
	comp=E,10µm,0.4s						
CO03	El Pedregal	1.19	36	P	Pn	23 07 32.4	+1.3
CO03				Sn	Sn	23 07 46.7	+0.6
CO03	El Pedregal	1.19	36	⇑*e*P	Pn	23 07 32.3	+1.1
CO03				*e*S	Sn	23 07 46.9	+0.8
CO03				IAML		23 07 47.5	
	comp=N,20µm,0.1s						
CO03	El Pedregal	1.19	36	*i* P	Pn	23 07 32.3	+1.1
CO03				IAML		23 07 47.2	
	comp=Z,16µm,0.4s						
CO03				*i* S	Sn	23 07 47.4	+1.3
VA01	Torpederas	1.22	186	P	Pn	23 07 33.1	+1.6
VA01				Sn	Sn	23 07 46.8	+0.1
VA01	Torpederas	1.22	186	*e*P	Pn	23 07 33.4	+1.9
VA01	Torpederas	1.22	186	*i* P	Pn	23 07 33.4	+1.9
VA01				IAML		23 07 52.3	
	comp=Z,2µm,0.3s						
ROCH	El Roble	1.23	161	⇑*e*P	Pn	23 07 33.0	+1.2
ROCH				*e*P		23 07 33.4	
ROCH				IAML		23 07 51.5	
	comp=N,17µm,0.3s						
ROCH				IAML		23 07 51.5	
	comp=N,8µm,0.3s						
VA03	San Esteban	1.24	140	P	Pn	23 07 32.7	+0.8
VA03				Sn	Sn	23 07 46.6	-0.9
VA03	San Esteban	1.24	140	⇑*e*P	Pn	23 07 32.5	+0.6
VA03				*e*S	Sn	23 07 47.5	+0.1
VA03				IAML		23 07 50.6	
	comp=E,14µm,0.2s						
VA03	San Esteban	1.24	140	*i* P	Pn	23 07 32.5	+0.6
VA03				*i* S	Sn	23 07 49.4	+2.0
VA03				IAML		23 07 51.6	
	comp=Z,5µm,0.3s						
MT02	Curacav	1.48	168	P	Pn	23 07 35.9	+0.9
MT02				Sn	Sn	23 07 50.3	-2.8
MT02	Curacav	1.48	168	*e*P	Pn	23 07 36.4	+1.4
MT02				*e*S	Sn	23 07 55.2	+2.1
MT02	Curacav	1.48	168	*i* P	Pn	23 07 36.5	+1.4
MT02				*i* S	Sn	23 07 55.2	+2.1
MT02				IAML		23 07 58.9	
	comp=Z,2µm,0.3s						
PEL	Peldehue	1.49	153	P	Pn	23 07 35.9	+0.5
PEL				Sn	Sn	23 07 55.4	+1.8
PEL	Peldehue	1.49	153	*e*P	Pn	23 07 36.4	+1.1
PEL				IAML		23 07 57.5	
	comp=E,6µm,0.2s						
MT10	Hacienda Santa	1.67	151	⇑*e*P	Pn	23 07 38.9	+1.1
MT05	Renca	1.70	158	P	Pn	23 07 39.3	+1.1
MT05	Renca	1.70	158	*e*P	Pn	23 07 39.6	+1.4
MT05				IAML		23 08 06.8	
	comp=E,9µm,0.4s						
MT05	Renca	1.70	158	*i* P	Pn	23 07 39.7	+1.5
MT05				*i* S	Sn	23 08 00.8	+2.1
MT05				IAML		23 08 07.0	
	comp=Z,2µm,0.5s						
GO04	Tololo Observa	1.74	20	P	Pn	23 07 40.5	+1.6
GO04	Tololo Observa	1.74	20	⇑*e*P	Pn	23 07 40.5	+1.6
GO04	Tololo Observa	1.74	20	*i* P	Pn	23 07 41.0	+2.1
GO04				*i* S	Sn	23 08 02.9	+3.0
GO04				IAML		23 08 07.8	
	comp=Z,5µm,0.2s						
MT14	Cerro Cal¡n	1.77	153	||*e*P	Pn	23 07 40.6	+1.4
MT14				IAML		23 08 04.4	
	comp=E,6µm,0.3s						
MT16	CCHEN	1.81	153	Pn	Pn	23 07 40.7	+1.0
MT16	CCHEN	1.81	153	||*e*P	Pn	23 07 41.1	+1.4
MT16				IAML		23 08 21.9	
	comp=N,2µm,0.6s						
RTLS	Leoncito

LMEL					IAML			23 08 23.2	
	comp=Z,2µm,0.1s								
ASAL	**Salagasta**	**2.38**	**110**	*i* P		**Pn**		**23 07 50.7**	**+3.1**
ASAL					IAML			23 08 25.6	
	comp=Z,0.6nm,0.3s								
AROD	**Rodeo**	**2.38**	**47**	*i* P		**Pn**		**23 07 51.8**	**+3.9**
ARCO	**CERRO ARCO**	**2.40**	**116**	*i* P		**Pn**		**23 07 50.7**	**+2.8**
ARCO					IAML			23 08 27.1	
	comp=Z,1µm,0.3s								
ACCO	**Cerro Coronel**	**2.41**	**60**	*i* P		**Pn**		**23 07 51.1**	**+3.0**
ZON	**Zonda**	**2.41**	**84**			**Pn**		**23 07 50.3**	**+2.3**
AAGR	**Agrelo**	**2.58**	**120**	*i* P		**Pn**		**23 07 53.7**	**+3.3**
AAGR					IAML			23 08 32.1	
	comp=Z,1µm,0.5s								
BO01	**Tunca**	**2.60**	**173**			**Pn**		**23 07 51.8**	**+1.4**
BO01	**Tunca**	**2.60**	**173**	*eP*		**Pn**		**23 07 51.9**	**+1.4**
BO01	**Tunca**	**2.60**	**173**	*i* P		**Pn**		**23 07 52.6**	**+2.2**
BO01					IAML			23 08 37.2	
	comp=Z,773nm,1.0s								
ACDV	**Cuesta del Vie**	**2.61**	**52**	*i* P		**Pn**		**23 07 53.2**	**+2.4**
ACDV					IAML			23 08 36.5	
	comp=Z,782nm,0.5s								
BO03	**Pichilemu**	**2.71**	**188**⇑	*eP*		**Pn**		**23 07 52.7**	**+0.7**
CFA	**Coronel Fontan**	**2.78**	**87**	P		**Pn**		**23 07 55.0**	**+2.0**
	comp=Z,348nm,0.4s,baz=253,slow=12,SNR=141								
CFA					S	**Sn**		**23 08 27.4**	**+2.0**
	comp=Z,310nm,0.4s,baz=59,slow=14,SNR=7.6								
CFA	**Coronel Fontan**	**2.78**	**87**	*i* P		**Pn**		**23 07 54.4**	**+1.4**
CFA					IAML			23 08 38.7	
	comp=Z,464nm,0.5s								
LCO	**Las Campanas**	**2.87**	**14**			**Pn**		**23 07 55.6**	**+1.1**
LCO	**Las Campanas**	**2.87**	**14**	*eP*		**Pn**		**23 07 56.4**	**+1.9**
AVIZ	**Vizcacheras**	**3.01**	**124**	*i* P		**Pn**		**23 07 58.2**	**+2.0**
BO02	**Sierra Bellavi**	**3.03**	**169**			**Pn**		**23 07 58.1**	**+1.6**
BO02	**Sierra Bellavi**	**3.03**	**169**	*eP*		**Pn**		**23 07 58.2**	**+1.6**
BO02	**Sierra Bellavi**	**3.03**	**169**	*i* P		**Pn**		**23 07 58.8**	**+2.2**
BO02					IAML			23 08 49.0	
	comp=Z,813nm,0.5s								
GO05	**Hualane**	**3.21**	**186**	*eP*		**Pn**		**23 07 59.8**	**+0.9**
AC04	**Llanos de Chal**	**3.61**	**6**			**Pn**		**23 08 06.1**	**+1.6**
AC04	**Llanos de Chal**	**3.61**	**6**⇑	*eP*		**Pn**		**23 08 05.5**	**+1.1**
ML02	**Panimavida**	**3.94**	**179**			**Pn**		**23 08 10.4**	**+1.4**
ML02	**Panimavida**	**3.94**	**179**	*eP*		**Pn**		**23 08 12.7**	**+3.7**
VCA	**Vinchina**	**4.18**	**44**⇓	*eP*		**Pn**		**23 08 16.3**	**+3.9**
BI02	**San Fabin de**	**4.84**	**178**			**Pn**		**23 08 23.4**	**+1.9**
BI05	**Punta Hualpn**	**5.12**	**195**	Pn		**Pn**		**23 08 25.4**	**+0.3**
AC02	**Maricunga**	**5.37**	**23**			**Pn**		**23 08 30.0**	**+0.9**
AC01	**Pan de Azucar**	**5.70**	**8**	Pn		**Pn**		**23 08 31.9**	**-1.2**
TCA	**Tanti**	**5.90**	**87**⇓	*eP*		**Pn**		**23 08 35.3**	**-0.7**
VA04	**Juan Fernndez**	**6.45**	**252**	Pn		**Pn**		**23 08 44.1**	**+0.7**
GO02	**Mina Guanaco**	**6.83**	**15**			**Pn**		**23 08 48.5**	**-0.5**
PB14	**IPOC Station P**	**7.22**	**8**	Pn		**Pn**		**23 08 55.1**	**+0.8**
LR04	**Corral**	**8.20**	**190**	Pn		**Pn**		**23 09 06.5**	**-0.9**
PB10	**IPOC Station P**	**8.31**	**6**	Pn		**Pn**		**23 09 11.1**	**+2.2**
LR05	**Currie**	**8.41**	**183**	Pn		**Pn**		**23 09 10.3**	**0.0**
PLCA	**Paso Flores**	**8.94**	**175**	Pn		**Pn**		**23 09 18.2**	**+0.6**
PLCA	**Paso Flores**	**8.94**	**175**	P		**Pn**		**23 09 15.7**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=357,slow=11,SNR=6.0								
PB05	**IPOC Station P**	**9.00**	**8**	Pn		**Pn**		**23 09 17.9**	**-0.6**
TRQA	**Tornquist**	**9.99**	**131**			**Pn**		**23 09 32.4**	**+0.5**
PB09	**IPOC Station P**	**10.17**	**12**	Pn		**Pn**		**23 09 36.2**	**+1.5**
HMBC	**Humberstone**	**11.57**	**8**	Pn		**Pn**		**23 09 53.8**	**-0.1**
PB11	**IPOC Station P**	**12.11**	**8**	Pn		**Pn**		**23 10 02.2**	**+1.0**
GO01	**Chusmiza**	**12.27**	**10**	Pn		**Pn**		**23 10 06.3**	**+2.7**
CPUP	**Villa Florida**	**13.53**	**70**			**Pn**		**23 10 19.6**	**-0.9**
CPUP	**Villa Florida**	**13.53**	**70**	P		**Pn**		**23 10 17.8**	**-2.6**
	comp=Z,0.5nm,0.4s,baz=105,slow=11,SNR=8.8								
CPUP					S	**Sn**		**23 12 43.8**	**-5.7**
	comp=Z,2.1nm,0.7s,baz=117,slow=11,SNR=3.6								
PLTB	**Pedras Altas**	**15.21**	**95**	Pn		**Pn**		**23 10 40.9**	**-2.3**
PLTB					IAmb	IAmb		23 11 01.5	
	comp=Z,18nm,1.1s								
LPAZ	**La Paz**	**15.75**	**12**			**Pn**		**23 10 50.9**	**+0.1**
LPAZ					IAmb	IAmb		23 11 11.0	
	comp=Z,5.1nm,0.7s								
LPAZ	**La Paz**	**15.75**	**12**	P		**Pn**		**23 10 50.3**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=227,slow=7.8,SNR=7.6								
ITAB	**Concordia**	**17.45**	**80**			**Pn**		**23 11 12.6**	**+1.0**
ITAB					IAmb	IAmb		23 11 31.9	
	comp=Z,14nm,1.0s								
SIV	**San Ignacio**	**18.38**	**33**	P		**P**		**23 11 21.6**	**-1.3**
	comp=Z,3.0nm,0.6s,baz=189,slow=7.8,SNR=23								
SIV					pP	**sP**		**23 11 38.4**	**+1.2**
	comp=Z,4.1nm,0.7s,baz=185,slow=4.4,SNR=6.3								
VNA3	**Neumayer Olymp**	**51.22**	**159**	⇓P		**P**		**23 16 09.9**	**-0.6**
	comp=Z,1.4nm,1.0s								
VNA2	**Neumayer--Watz**	**51.85**	**158**	⇓P		**P**		**23 16 12.9**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=279,slow=4.7								
SNAA	**Sanae**	**53.44**	**158**	⇓P		**P**		**23 16 26.4**	**-0.7**
	comp=Z,38nm,1.0s								
SNAA	**Sanae**	**53.44**	**158**	P		P		23 16 23.1	-3.9
	comp=Z,1.5nm,0.9s,baz=278,slow=9.2,SNR=9.4								
SNAA					pP	pP		23 16 38.1	+0.3
	comp=Z,3.4nm,1.0s,baz=139,slow=2.3,SNR=6.4								
	comp=Z,1.5nm,0.9s								
QSPA	**South Pole Qui**	**58.42**	**180**	P		P		23 16 56.8	-6.0
	comp=Z,1.5nm,0.6s,baz=229,slow=0.4,SNR=16								
	comp=Z,1.5nm,0.6s								
TXAR	**Lajitas Array**	**68.06**	**330**	P		**P**		**23 18 07.7**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=152,slow=8.6,SNR=12								
TXAR					pP	**sP**		**23 18 23.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=143,slow=7.2,SNR=3.6								
	comp=Z,1.0nm,0.6s								
NVAR	**Mina Array Bea**	**82.36**	**325**	P		**P**		**23 19 29.7**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=96,slow=2.9,SNR=5.6								
	comp=Z,0.8nm,0.7s								
ASAR	**Alice Springs**	**119.72**	**207**	PKP		**PKPdf**		**23 25 55.1**	**-2.7**
	comp=Z,0.3nm,0.4s,baz=139,slow=2.0,SNR=2.7								
ASAR					pPKP	**pPKPdf**		**23 26 11.3**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=131,slow=1.4,SNR=2.0								
WRA	**Warramunga Arr**	**122.89**	**209**	PKP		**PKPdf**		**23 26 01.8**	**-2.2**
	comp=Z,0.3nm,0.4s,baz=156,slow=1.8,SNR=8.1								
WRA					pPKP	**pPKPdf**		**23 26 18.4**	**+2.9**
	comp=Z,0.8nm,0.4s,baz=168,slow=1.6,SNR=4.9								
H11S2	**WAKE ISLAND Hyl**	**26.24**	**270**	T		T		01 45 17.2	
	baz=117,slow=75,SNR=42								
H11S1	**WAKE ISLAND Hyl**	**26.25**	**270**	T		T		01 45 14.9	
	baz=117,slow=75,SNR=32								
H11S3	**WAKE ISLAND Hyl**	**26.26**	**270**	T		T		01 45 17.8	
	baz=117,slow=75,SNR=33								
BVAR	**Borovoye Array**	**145.35**	**41**	PKPbc		**PKPbc**		**23 26 43.8**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=267,slow=2.6,SNR=7.3								
BVAR					pPKPbc	**pPKPdf**		**23 26 59.2**	**+2.9**
	comp=Z,1.2nm,0.5s,baz=295,slow=3.0,SNR=5.7								
KURBB	**Kurchatov Arra**	**150.94**	**41**	PKPbc		**PKPbc**		**23 26 58.1**	**-1.4**
KURBB					pPKPbc	**sPKPbc**		**23 27 14.2**	**-1.1**
	comp=Z,0.7nm,0.2s,baz=293,slow=0.7,SNR=1.5								
	comp=Z,0.6nm,0.3s,baz=298,slow=2.8,SNR=1.8								
ZALV	**Zalesovo Beam**	**152.12**	**31**	PKPbc		**PKPbc**		**23 27 00.9**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=312,slow=2.2,SNR=6.0								
ZALV					pPKPbc	**pPKPbc**		**23 27 16.5**	**+2.7**
	comp=Z,1.9nm,0.5s,baz=320,slow=3.2,SNR=7.7								

*JSO **04** 23:07:23.4±0.0,32.˚N±1.˚×3.˚5E±.˚, h10km±2km, M2.4/8, Md2.2/8, ML2.6/8, MLv2.4/8, MLv2.4/8*
*GII **04** 23:07:23.0±0.0,31.˚506N±0.˚001×35.˚480E±0.˚001, h16km, Mws2.0, confirmed*

ISC 04 23:07:23.1±0.9,**31.˚50N**±0.˚02×**35.˚48E**±0.˚03,**h18**km±3km, **n55**,σ0°**52**/56,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KEGD	**Kibutz Ein-Ged**	**0.09**	**238**	P		**Pg**		**23 07 26.5**	**-0.2**
KEGD	**Kibutz Ein-Ged**	**0.09**	**238**	S		**Sg**		**23 07 29.6**	**+0.6**
MZS	**Mizpe Shalem**	**0.09**	**316**	P		**Pg**		**23 07 26.5**	**-0.1**
MZS	**Mizpe Shalem**	**0.09**	**316**	S		**Sg**		**23 07 29.3**	**+0.2**
DSI	**Dead Sea**	**0.11**	**310**	P		**Pg**		**23 07 26.7**	**-0.1**
DSI	**Dead Sea**	**0.11**	**310**	P		**Pg**		**23 07 26.9**	**0.0**
DSI	**Dead Sea**	**0.11**	**310**	S		**Sg**		**23 07 29.6**	**+0.2**
GHAJ	**Ghor Haditha**	**0.21**	**159**	P		**Pg**		**23 07 28.1**	**-0.1**
GHAJ	**Ghor Haditha**	**0.21**	**159**	P		**Pg**		**23 07 28.0**	**-0.2**
GHAJ	**Ghor Haditha**	**0.21**	**159**	S		**Sg**		**23 07 32.5**	**+0.9**
MSBI	**Mazada**	**0.21**	**208**	P		**Pb**		**23 07 27.9**	**-0.4**
MSBI	**Mazada**	**0.21**	**208**	S		**Sg**		**23 07 32.1**	**+0.5**
ALMO	**Almog**	**0.29**	**357**	P		**Pg**		**23 07 29.2**	**-0.2**
KARV	**Kedem Haarava**	**0.30**	**4**	P		**Pg**		**23 07 29.9**	**+0.2**
KARV	**Kedem Haarava**	**0.30**	**4**	S		**Sb**		**23 07 35.4**	**+0.7**
VJRH	**Vered Jericho**	**0.33**	**354**	P		**Pg**		**23 07 29.8**	**-0.2**
VJRH	**Vered Jericho**	**0.33**	**354**	S		**Sg**		**23 07 35.2**	**+0.3**
ARADI	**Arad**	**0.33**	**221**	P		**Pg**		**23 07 30.0**	**-0.2**
ARADI	**Arad**	**0.33**	**221**	S		**Sg**		**23 07 35.5**	**+0.5**
YTIR	**Yattir**	**0.34**	**246**	P		**Pg**		**23 07 29.6**	**-0.7**
YTIR				S		**Sb**		**23 07 36.6**	**+0.8**
YTIR	**Yattir**	**0.34**	**246**	P		**Pg**		**23 07 30.2**	**-0.1**
JER	**Jerusalem**	**0.36**	**319**	P		**Pg**		**23 07 30.7**	**0.0**
JER	**Jerusalem**	**0.36**	**319**	S		**Sg**		**23 07 36.3**	**+0.4**
YITV	**Yitav**	**0.45**	**354**	P		**Pg**		**23 07 31.9**	**-0.3**
YITV	**Yitav**	**0.45**	**354**	S		**Sg**		**23 07 39.0**	**+0.6**
UJAP	**Al Uja**	**0.45**	**359**	P		**Pg**		**23 07 31.9**	**-0.4**
UJAP	**Al Uja**	**0.45**	**359**	S		**Sg**		**23 07 38.7**	**+0.3**
AMAZ	**Amatzia**	**0.48**	**274**	P		**Pg**		**23 07 32.6**	**-0.2**
AMAZ	**Amatzia**	**0.48**	**274**	S		**Sg**		**23 07 40.1**	**+0.8**
SWQJ	**Swaqa**	**0.56**	**117**	P		**Pb**		**23 07 33.3**	**-1.1**
MEFR	**Maale Efrayim**	**0.57**	**354**	P		**Pb**		**23 07 34.0**	**-0.6**
MEFR	**Maale Efrayim**	**0.57**	**354**	S		**Sg**		**23 07 42.9**	**+0.7**
SALP	**Salfit**	**0.62**	**337**	P		**Pb**		**23 07 34.5**	**-0.8**
SALP	**Salfit**	**0.62**	**337**	P		**Pb**		**23 07 34.6**	**-0.8**
SALP	**Salfit**	**0.62**	**337**	S		**Sb**		**23 07 43.9**	**+0.2**
RGMN	**Argaman**	**0.67**	**3**	P		**Pb**		**23 07 35.9**	**-0.3**
RGMN	**Argaman**	**0.67**	**3**	S		**Sg**		**23 07 45.9**	**+0.8**
HMRA	**Hamra**	**0.70**	**357**	P		**Pb**		**23 07 36.0**	**-0.7**
HMRA	**Hamra**	**0.70**	**357**	S		**Sb**		**23 07 46.3**	**+0.3**
ROII	**Roi**	**0.74**	**1**	P		**Pb**		**23 07 37.3**	**-0.2**
HMDT	**Nahal Hemdat**	**0.75**	**3**	P		**Pb**		**23 07 37.1**	**-0.6**
HMDT	**Nahal Hemdat**	**0.75**	**3**	S		**Sg**		**23 07 48.4**	**+0.5**
SLTI	**Sal'it**	**0.83**	**333**	P		**Pb**		**23 07 38.2**	**-0.7**
SLTI	**Sal'it**	**0.83**	**333**	S		**Sb**		**23 07 50.6**	**+0.9**
HSUJ	**Al Zarqa**	**0.86**	**45**	P		**Pb**		**23 07 39.0**	**-0.5**
MMLI	**Mount Malkishu**	**0.94**	**357**	P		**Pb**		**23 07 40.7**	**-0.1**
MMLI	**Mount Malkishu**	**0.94**	**357**	S		**Sg**		**23 07 53.9**	**+0.3**
RMNI	**Mount Ramon**	**1.09**	**214**	P		**Pb**		**23 07 42.9**	**-0.6**
RMNI	**Mount Ramon**	**1.09**	**214**	S		**Sn**		**23 07 58.0**	**-0.3**
KZIT	**Kziot**	**1.10**	**238**	P		**Pn**		**23 07 43.0**	**-0.6**
KZIT	**Kziot**	**1.10**	**238**	S		**Sn**		**23 07 58.2**	**-0.1**
PRNI	**Paran**	**1.22**	**200**	P		**Pn**		**23 07 45.6**	**0.0**
PRNI	**Paran**	**1.22**	**200**	P		**Pn**		**23 07 45.1**	**-0.1**
PRNI	**Paran**	**1.22**	**200**	S		**Sn**		**23 08 01.7**	**+0.4**
ASF	**Jabal al Asfar**	**1.38**	**61**	P		**Pn**		**23 07 47.7**	**+0.1**

*CATAC **04** 23:35:05.7±0.9, 14.˚N±4.˚×93.˚3W±.˚, h18km±6km, M3.8/9, MLv3.8/9, Error ellipse: s-maj=10.6km s-min=4.6km az=29.6, confirmed*
*MEX **04** 23:35:08.0±1.1, 14.˚39N×93.˚37W, h23km±91km, MD4.4*
*GCG **04** 23:35:08.0±1.4, 14.˚28N×93.˚19W, h35km±999km, MD3.9, ML3.8*

ISC 04 23:35:05.1±1.7,**14.˚32N**±0.˚06×**93.˚28W**±0.˚04,**h27**km±14km, **n29**,σ2°**33**/45,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THIG		**1.14**	**59**	*eP*		**Pb**		**23 35 26.2**	**0.0**
THIG				*eS*		**Sb**		**23 35 39.7**	**-0.9**
THIG		**1.14**	**59**	*eP*		**Pb**		**23 35 26.1**	**0.0**
THIG				*eS*		**Sn**		**23 35 40.9**	**+0.9**
THIG					IAML			23 35 45.7	
	comp=E,3µm,0.3s								
SMCA	**Catarina**	**1.28**	**65**	*eP*		**Pn**		**23 35 27.7**	**+0.5**
SMCA				*eS*		**Sb**		**23 35 44.5**	**-0.1**
PATR	**El Naranjo**	**1.28**	**52**	*eP*		**Pn**		**23 35 27.6**	**+0.1**
PATR				*eS*		**Sb**		**23 35 45.6**	**+0.7**
CHUJ	**Union Juarez**	**1.37**	**56**	*eP*		**Pn**		**23 35 29.1**	**+0.4**
CHUJ				*eS*		**Sn**		**23 35 44.2**	**-1.8**
PAVE	**Pavencul**	**1.37**	**51**	*eP*		**Pn**		**23 35 28.9**	**+0.1**
PAVE				*eS*		**Sn**		**23 35 42.6**	**-3.5**
PCIG		**1.38**	**2**	*eP*		**Pn**		**23 35 29.0**	**+0.4**
PCIG				*eS*		**Sn**		**23 35 43.4**	**-2.6**
RTAL	**Retalhuleu**	**1.54**	**82**	P		**Pn**		**23 35 32.1**	**+1.2**
RTAL				S		**Sb**		**23 35 53.5**	**+1.2**
STG2	**El Palmar, Qui**	**1.84**	**86**	*eP*		**Pn**		**23 35 34.1**	**-1.6**
STG2				*eS*		**Sn**		**23 35 54.0**	**-3.7**
CCIG	**Comitan**	**2.24**	**29**	*eP*		**Pb**		**23 35 44.3**	**-0.7**
CCIG				*eS*		**Sn**		**23 36 07.7**	**+0.2**
CCIG	**Comitan**	**2.24**	**29**	*eP*		**Pb**		**23 35 44.6**	**-0.5**
CCIG	**Comitan**	**2.24**	**29**	S		**Sb**		**23 36 13.2**	**+0.7**
TGIG		**2.45**	**3**	*eP*		**Pn**		**23 35 46.2**	**+2.8**
TGIG				*eS*		**Sb**		**23 36 16.0**	**-2.4**
TGIG		**2.45**	**3**	*i* P		**Pn**		**23 35 46.2**	**+2.8**
TGIG				*eS*		**Sb**		**23 36 15.6**	**-2.8**
TGIG					IAML			23 36 19.3	
	comp=E,277nm,0.4s								
APG	**El Apazote**	**2.80**	**76**	*eP*		**Pn**		**23 35 50.7**	**+2.3**
HUIG	**Huatulco**	**3.09**	**298**	*eS*		**Sn**		**23 36 21.6**	**-6.7**
UXUV	**UXUV**	**3.10**	**344**	*eP*		**Pn**		**23 35 55.3**	**+3.0**
UXUV				*eS*		**Sn**		**23 36 29.9**	**+1.5**
FAME	**Alcaldia de Sa**	**3.20**	**98**	P		**Pn**		**23 35 54.7**	**+1.1**
FAME	**Alcaldia de Sa**	**3.20**	**98**	S		**Sn**		**23 36 31.4**	**+0.5**
NUBE	**Las Nubes**	**3.42**	**97**	S		**Sn**		**23 36 37.1**	**+0.6**
NUBE	**Las Nubes**	**3.42**	**97**	P		**Pn**		**23 35 58.1**	**+1.4**
NEUV	**Arroyo Zacate**	**4.16**	**325**	*eP*		**Pn**		**23 36 08.2**	**+1.4**
NEUV				*eS*		**Sn**		**23 36 51.8**	**-2.8**
PETF	**Flores**	**4.18**	**51**	P		**Pn**		**23 36 09.9**	**+2.8**
YOIG	**Yosondua**	**4.83**	**302**	*eP*		Pn		23 36 22.1	+5.8
YOIG				*eS*		**Sn**		**23 37 15.3**	**+3.8**
SCIG	**Sabancuy**	**5.04**	**23**	*eP*		**Pn**		**23 36 21.0**	**+2.0**
SCIG				*eS*		**Sn**		**23 37 14.4**	**-1.9**
PNIG	**Pinotepa**	**5.12**	**294**	*eP*		Pn		23 36 16.4	-3.6
PNIG				*eS*		**Sn**		**23 37 12.4**	**-5.8**
TOIG	**Toxpalan**	**5.23**	**316**	*eP*		**Pn**		**23 36 24.4**	**+2.7**
TOIG				*eS*		**Sn**		**23 37 21.4**	**+0.2**
HLIG	**Huajuapan de L**	**5.58**	**309**	*eS*		**Sn**		**23 37 30.8**	**+0.8**
FTIG	**Fresnillo de T**	**5.88**	**308**	*eS*		**Sn**		**23 37 38.8**	**+1.6**

*IDC **04** 23:43:21.9±1.2, 28.˚17S×177.˚56W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=35.4km s-min=24.5km az=93.0*

ISC 04 23:43:23.1±1.3,**28.˚22S**±0.˚10×**177.˚6W**±0.˚2,**h10**km,**n11**, σ0°**66**/10,**mb3.9/4,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.08**	**198**	Pn		**Pn**		**23 43 45.0**	**+0.7**
	809nm,0.3s,baz=164,slow=2.8,SNR=10								
RAO					Sn	**Sg**		**23 43 57.0**	**-1.0**
	756nm,0.3s,baz=19,slow=22,SNR=6.4								
URZ	**Urewera**	**10.96**	**203**	Pn		Pn		23 45 51.8	-8.2
	0.2nm,0.3s,baz=72,slow=19,SNR=1.6								
URZ					Sn	Sn		23 47 50.0	-13
	0.8nm,0.3s,baz=70,slow=22,SNR=8.1								
STKA	**Stephens Creek**	**35.41**	**254**	P		**P**		**23 50 19.8**	**+0.4**
	0.9nm,0.5s,baz=122,slow=9.6,SNR=3.6								
	0.9nm,0.5s								
ASAR	**Alice Springs**	**43.67**	**264**	P		**P**		**23 51 28.4**	**+0.1**
	0.8nm,0.6s,baz=97,slow=7.2,SNR=8.6								
	0.8nm,0.6s								
WRA	**Warramunga Arr**	**44.46**	**270**	P		**P**		**23 51 34.8**	**+0.1**
	1.4nm,0.7s,baz=108,slow=7.6,SNR=6.5								
	1.4nm,0.7s								
QSPA	**South Pole Qui**	**61.88**	**180**	P		**P**		**23 53 43.1**	**+0.6**
	1.2nm,0.8s,baz=23,slow=1.1,SNR=7.4								
	1.2nm,0.8s								
FINES	**FINESS Array B**	**143.23**	**341**	PKhKP		PKPpre		00 02 52.8	
	1.9nm,0.8s,baz=98,slow=2.9,SNR=5.2								
NOA	**NORSAR Array B**	**146.66**	**352**	PKPbc		**PKPab**		**00 03 05.0**	**-0.6**
	1.2nm,1.0s,baz=9.0,slow=2.8,SNR=2.2								
HFS	**Hagfors**	**147.18**	**350**	PKPbc		**PKPbc**		**00 03 05.9**	**-0.1**
	1.8nm,0.8s,baz=64,slow=3.4,SNR=5.4								
AKASG	**Malin Array Be**	**149.77**	**325**	PKPbc		**PKPbc**		**00 03 12.5**	**-0.5**
	0.6nm,0.5s,baz=41,slow=1.8,SNR=4.6								
BRTR	**Keskin Array B**	**151.84**	**302**	PKPbc		**PKPbc**		**00 03 17.8**	**-0.7**
	0.7nm,0.5s,baz=142,slow=4.6,SNR=6.2								

*MOS **05** 00:05:28.3±0.9, 18.˚40S×175.˚41W, h11km, mb5.0/44, Error ellipse: s-maj=11.1km s-min=7.6km az=135.1*
*IDC **05** 00:05:29.1±0.5, 18.˚24S×175.˚75W, h0km, mb4.5/19, mbtmp4.5/19, Error ellipse: s-maj=18.5km s-min=14.8km az=118.0*
*BJI **05** 00:05:29.1, 18.˚01S×175.˚00W, h12km, mb4.9/22*
*NEIC **05** 00:05:30.0±1.6, 18.˚55S±0.˚09×175.˚29W±0.˚07, h10km±1km, mb4.9/375, Error ellipse: s-maj=14.7km s-min=10.8km az=179.0*
*NOU **05** 00:05:36.1, 18.˚26S×175.˚35W, h51km, mb5.1/38, Tonga Islands*

ISC 05 00:05:30.3±0.8,**18.˚48S**±0.˚06×**175.˚29W**±0.˚05,**h14**km±4km, **h14**km:**pP-P**,**n577**,σ1°**08**/584,**mb4.9**/218,**27C-23D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.12**	**98**	Pn		**Pn**		**00 06 45.1**	**-1.5**
NIUE						**Sn**		**00 07 42.3**	**-3.3**
AFI	**Afiamalu**	**5.66**	**37**			**Pn**		**00 06 54.3**	**+0.1**
AFI	**Afiamalu**	**5.66**	**37**	P		**Pn**		**00 06 54.3**	**+0.1**
MSVF	**Nonsavu**	**6.38**	**276**			**Pn**		**00 07 06.4**	**+2.4**
MSVF	**Nonsavu**	**6.38**	**276**⇑	*eP*		**Pn**		**00 07 03.8**	**-0.2**
MARNC	**Mare, Loyalty**	**15.96**	**256**	Pn		Pn		**00 09 13.5**	**-1.1**
MARNC					IAmb	IAmb		00 09 17.2	
	comp=Z,91nm,1.0s								
PINNC	**Pines Island,**	**16.68**	**253**	Pn		**Pn**		**00 09 22.0**	**-1.8**
SANVU	**Saraoutou**	**17.01**	**278**	Pn		**Pn**		**00 09 25.9**	**-2.1**
SANVU					IAmb	IAmb		00 09 37.2	
	comp=Z,122nm,1.1s								
SANVU	**Saraoutou**	**17.01**	**278**	P		**P**		**00 09 30.2**	**+0.3**
ONTNC	**Ouen Toro**	**17.53**	**254**			**Pn**		**00 09 34.3**	**-0.2**
ONTNC					IAmb	IAmb		00 09 53.8	
	comp=Z,81nm,1.1s								
ONTNC	**Ouen Toro**	**17.53**	**254**	P		**P**		**00 09 37.7**	**+2.2**
KOUNC	**Koumac, New Ca**	**19.36**	**261**	P		**Pn**		**00 09 58.1**	**+1.3**
URZ	**Urewera**	**20.79**	**197**	P		**P**		**00 10 11.1**	**-0.1**
	comp=Z,9.6nm,0.8s,baz=0.5,slow=5.0,SNR=5.7								
	comp=Z,9.6nm,0.8s								
TOZ	**Tahuroa Road**	**20.80**	**201**			**P**		**00 10 10.2**	**-1.1**
RTZ	**Ruatahuna**	**21.16**	**197**			**P**		**00 10 13.0**	**-2.3**
RTZ					IAmb	IAmb		00 10 31.3	
	comp=Z,33nm,0.8s								
HIZ	**Hauiti**	**21.73**	**201**			**P**		**00 10 20.1**	**-1.2**
HIZ					IAmb	IAmb		00 10 31.7	
	comp=Z,56nm,1.0s								
TARA	**Tarawa**	**22.87**	**328**	P		**P**		**00 10 34.3**	**+0.7**
TARA					IAmb	IAmb		00 10 52.2	
	comp=Z,66nm,1.1s								
SNZO	**South Karori**	**24.32**	**199**	P		**P**		**00 10 47.2**	**-0.3**
TCW	**Tory Channel**	**24.36**	**199**	P		**P**

MORW Morawa 62.97 246 P P 00 15 56.0 -1.0
LUWI Luwuk 63.12 278 P P 00 15 57.4 -0.7
BNSI Bone 64.54 274 P P 00 16 06.5 -1.0
comp=Z,40nm,1.6s
PLAI Plampang 65.44 269 P P 00 16 14.4 +1.0
PLAI Plampang 65.44 269 P P 00 16 11.8 -1.6
comp=Z,64nm,1.5s
TOLI2 Tolitoli 65.73 280 P P 00 16 13.6 -1.6
TOLI2 IAmb IAmb 00 16 28.9
comp=Z,8.5nm,1.1s
TWSI Taliwang, Sumb 66.32 268 P P 00 16 17.9 -1.2
JAGI Jajag, Banyuwa 68.98 268 P P 00 16 33.8 -2.2
MYLDM Lahad Datu 69.32 283 P P 00 16 36.6 -1.4
MYLDM IAmb IAmb 00 16 51.1
comp=Z,12nm,1.1s
JMM Marumori 69.60 324 P P 00 16 38.4 -0.8
JMM IAmb IAmb 00 16 43.9
comp=Z,12nm,1.1s
MJAR Matsushiro Arr 70.16 322 P P 00 16 41.9 -0.8
MJAR Matsushiro Arr 70.16 322 P P 00 16 39.5 -3.2
comp=Z,4.5nm,0.8s,baz=154,slow=5.6,SNR=6.7
comp=Z,4.5nm,0.8s
MJAR Matsushiro Arr 70.16 322 P P 00 16 41.9 -0.8
MJAR pmax pmax
comp=Z,4.0nm,1.1s
MAJO Matsushiro 70.16 322 P P 00 16 42.1 -0.6
MAJO IAmb IAmb 00 16 48.4
comp=Z,8.3nm,1.1s
MAJO Matsushiro 70.16 322 P P 00 16 42.1 -0.6
MAJO pmax pmax
comp=Z,8.0nm,1.2s
MJB9 Matsu-Tunnel 70.17 322 P P 00 16 42.2 -0.5
JOW Kunigami 70.89 308 P P 00 16 48.3 +1.0
JSD Sado 71.15 323 P P 00 16 50.0 +1.4
NIKH Nikolski High 71.37 4 P P 00 16 50.4 +0.8
QSPA South Pole Qui 71.58 180 P P 00 16 55.4 +4.3
comp=Z,19nm,1.0s,baz=37,slow=3.8,SNR=28
comp=Z,19nm,1.0s
PCJI Pacitan 71.88 267 P P 00 16 51.8 -1.8
JKA Kamikawa-asahi 73.23 330 P P 00 17 00.2 -0.8
JKA IAmb IAmb 00 17 11.8
comp=Z,13nm,1.0s
ASAJ Asahikawa 73.23 330 P P 00 17 00.2 -0.7
ASAJ pmax pmax
comp=Z,13nm,1.0s
YOJ Yonaguni jima 73.72 303 P P 00 17 03.7 -0.6
YOJ Yonaguni jima 73.72 303 P P 00 17 03.7 -0.6
YOJ pmax pmax
comp=Z,106nm,1.0s
FALS False Pass 73.74 7 P P 00 17 02.2 -1.4
JRSC Jasper Ridge 74.71 41 P P 00 17 09.6 -0.2
JRSC IAmb IAmb 00 17 17.0
comp=Z,19nm,1.0s
SAO San Andreas Ge 74.82 42 P P 00 17 08.7 -1.7
SAO IAmb IAmb 00 17 18.3
comp=Z,21nm,1.1s
SAO San Andreas Ge 74.82 42 P P 00 17 08.7 -1.7
SAO pmax pmax
comp=Z,21nm,1.1s
PKD Bear Valley Ra 74.91 43 P P 00 17 10.8 -0.3
PKD IAmb IAmb 00 17 18.2
comp=Z,15nm,1.1s
BBGB Big Mountain B 74.97 43 P P 00 17 10.0 -1.4
PETK Petropavlovsk- 75.02 344 P P 00 17 09.5 -1.7
PETK Petropavlovsk- 75.02 344 P P 00 17 10.5 -0.7
comp=Z,3.9nm,0.7s,baz=113,slow=9.8,SNR=5.0
PETK PP PP 00 19 53.2 -6.3
comp=Z,3.5nm,1.0s,baz=157,slow=5.3,SNR=2.4
comp=Z,3.9nm,0.7s
MHC Mount Hamilton 75.05 42 P P 00 17 11.5 -0.4
MHC IAmb IAmb 00 17 19.3
comp=Z,12nm,1.1s
MHC Mount Hamilton 75.05 42 P P 00 17 11.5 -0.4
MHC pmax pmax
comp=Z,12nm,1.1s
YSS Yuzhno-Sakhali 75.29 332 eP P 00 17 08.3 -4.6
YSS pmax pmax
comp=Z,20nm,0.5s
MNRC McLaughlin Min 75.50 40 P P 00 17 13.7 -0.6
MWC Mount Wilson 75.57 46 P P 00 17 14.7 -0.4
MWC IAmb IAmb 00 17 21.9
comp=Z,17nm,1.1s
MWC Mount Wilson 75.57 46 P P 00 17 14.7 -0.4
MWC pmax pmax
comp=Z,17nm,1.1s
KMRM Mail Ridge 75.59 38 P P 00 17 13.9 -1.0
VTX Valle De La Tr 75.61 50 P P 00 17 14.5 -0.7
VTX IAmb IAmb 00 17 28.0
comp=Z,7.5nm,0.9s
DPP Dos Picos Cty 75.66 48 P P 00 17 14.8 -0.6
BAR Barrett 75.67 48 P P 00 17 14.7 -0.8
ELS Elsinore Mount 75.68 47 P P 00 17 15.4 -0.1
ELS IAmb IAmb 00 17 22.6
comp=Z,11nm,1.1s
KSM Kuching 75.69 276 P P 00 17 15.2 -0.9
KSM Kuching 75.69 276 P P 00 17 16.7 +0.7
VES Vestal, Richgr 75.81 44 P P 00 17 16.3 +0.2
ESJX Sierra Juarez 75.82 49 P P 00 17 15.3 -1.3
TPO Tropico Hills 75.82 45 P P 00 17 14.9 -1.5
TPO IAmb IAmb 00 17 24.9
comp=Z,15nm,1.0s
BFSC Mount Baldy Ra 75.85 46 P P 00 17 16.4 -0.2
BFSC IAmb IAmb 00 17 31.5
comp=Z,12nm,1.2s
KHMM Horse Mountain 75.99 38 P P 00 17 16.6 -0.7
SFX San Felipe 76.10 50 P P 00 17 18.4 +0.5
SFX IAmb IAmb 00 17 29.9
comp=Z,8.5nm,0.9s
O02D Mt. Diablo Mer 76.10 39 P P 00 17 17.7 -0.1
O02D IAmb IAmb 00 17 26.1
comp=Z,16nm,1.1s
ISA Isabella, Lake 76.11 45 P P 00 17 17.9 -0.1
ISA IAmb IAmb 00 17 26.6
comp=Z,19nm,1.1s
ISA Isabella, Lake 76.11 45 P P 00 17 17.9 -0.1
ISA pmax pmax
comp=Z,19nm,1.2s
SUTB Sutter Butte 76.12 40 P P 00 17 18.4 +0.5
SUTB IAmb IAmb 00 17 30.7
comp=Z,9.9nm,0.8s
KHBM Hayfork Bally 76.16 38 P P 00 17 18.9 +0.6
BORC Borrego Spring 76.17 48 P P 00 17 18.8 +0.5
BORC IAmb IAmb 00 17 25.4
comp=Z,13nm,1.2s
SRIG Santa Rosalia 76.18 55 P P 00 17 19.6 +1.2
SRIG IAmb IAmb 00 17 30.8
comp=Z,9.2nm,0.7s
YUH Yuha Desert 76.19 48 P P 00 17 19.1 +0.7
DNR Dunn Ranch,Anz 76.19 47 P P 00 17 18.9 +0.3
CMB Columbia Colle 76.26 42 P P 00 17 18.9 +0.2
CMB IAmb IAmb 00 17 26.2
comp=Z,12nm,1.1s
CMB Columbia Colle 76.26 42 P P 00 17 18.9 +0.2
CMB pmax pmax
comp=Z,12nm,1.1s
PFO Pinyon Flats O 76.33 47 P P 00 17 18.7 -0.6
PFO Pinyon Flats O 76.33 47 P P 00 17 18.7 -0.6
PFO pmax pmax
comp=Z,6.0nm,1.1s
PMD Palm Desert 76.41 47 P P 00 17 19.3 -0.3
ORV Oroville 76.49 40 P P 00 17 20.6 +0.6
ORV IAmb IAmb 00 17 27.2
comp=Z,11nm,1.1s
ORV Oroville 76.49 40 P P 00 17 20.6 +0.6
ORV pmax pmax
comp=Z,11nm,1.1s
LRMC Laurel Mtn Rad 76.53 45 P P 00 17 20.4 -0.1
LRMC IAmb IAmb 00 17 28.2
comp=Z,16nm,1.1s
N02D Trinity Center 76.66 38 P P 00 17 20.9 -0.1
N02D IAmb IAmb 00 17 29.0
comp=Z,15nm,1.1s
WSHM Spangler Hills 76.73 45 P P 00 17 21.4 -0.1
WSHM IAmb IAmb 00 17 29.2
comp=Z,15nm,1.2s
O03E Paynes Creek 76.77 39 P P 00 17 22.2 +0.6
O03E IAmb IAmb 00 17 31.0
comp=Z,15nm,1.1s
CCCA Chr Cany lake 76.77 45 P P 00 17 22.0 +0.3
CLC China Lake 76.78 45 P P 00 17 21.6 -0.2
CLC IAmb IAmb 00 17 29.0
comp=Z,11nm,1.1s
CLC China Lake 76.78 45 P P 00 17 21.6 -0.2
CLC pmax pmax
comp=Z,11nm,1.1s

CWC Cottonwood Cre 76.81 44 P P 00 17 21.6 -0.5
CWC IAmb IAmb 00 17 29.2
comp=Z,8.2nm,1.0s
M02C Callahan 76.83 38 P P 00 17 22.0 +0.1
M02C IAmb IAmb 00 17 31.4
comp=Z,9.8nm,1.1s
MDPB Devils Postpil 76.85 43 P P 00 17 22.1 -0.3
MDPB IAmb IAmb 00 17 29.9
comp=Z,14nm,1.1s
BELC Belle Mtn. Jos 76.86 47 P P 00 17 22.0 -0.4
BELC IAmb IAmb 00 17 29.5
comp=Z,11nm,1.1s
KEBM Edson Butte 76.94 36 P P 00 17 22.1 -0.4
MPMC Manual Prospec 76.99 45 P P 00 17 23.3 +0.2
MPMC IAmb IAmb 00 17 30.4
comp=Z,17nm,1.1s
GSC Goldstone, Bar 77.03 46 P P 00 17 23.3 +0.1
GSC IAmb IAmb 00 17 30.2
comp=Z,14nm,1.1s
GSC Goldstone, Bar 77.03 46 P P 00 17 23.3 +0.1
GSC pmax pmax
comp=Z,14nm,1.1s
BC3 Big Chuckawall 77.06 48 P P 00 17 23.4 -0.1
TIN Tinemaha, Big 77.07 44 P P 00 17 23.4 0.0
TIN Tinemaha, Big 77.07 44 P P 00 17 23.4 0.0
TIN pmax pmax
comp=Z,22nm,0.8s
KSRS Korea Array 77.12 317 P P 00 17 22.7 -0.8
comp=Z,3.4nm,1.0s,baz=140,slow=6.5,SNR=9.5
comp=Z,3.4nm,1.0s
YBH Yreka Blue Hor 77.13 38 P P 00 17 22.7 -0.9
YBH IAmb IAmb 00 17 31.5
comp=Z,10nm,1.0s
YBH Yreka Blue Hor 77.13 38 P P 00 17 22.7 -0.9
YBH pmax pmax
comp=Z,10.0nm,1.0s
KSAR Wonju Array Be 77.14 317 P P 00 17 23.0 -0.6
KSAR Wonju Array Be 77.14 317 P P 00 17 23.0 -0.6
WAKR Walker 77.14 42 P P 00 17 23.3 -0.6
WAKR IAmb IAmb 00 17 31.7
comp=Z,11nm,1.0s
GLA Glamis 77.18 49 P P 00 17 25.4 +1.4
GLA IAmb IAmb 00 17 32.3
comp=Z,17nm,1.1s
GLA Glamis 77.18 49 P P 00 17 25.4 +1.4
GLA pmax pmax
comp=Z,17nm,1.1s
M03C McCloud 77.19 38 P P 00 17 23.7 -0.3
M03C IAmb IAmb 00 17 36.6
comp=Z,12nm,1.0s
MPK Martis Peak 77.24 41 P P 00 17 24.9 +0.4
HATC Hat Creek Radi 77.29 39 P P 00 17 24.4 -0.2
HATC IAmb IAmb 00 17 29.1
comp=Z,14nm,1.0s
QSM Queen of Sheba 77.35 45 P P 00 17 25.1 +0.2
QSM IAmb IAmb 00 17 31.9
comp=Z,13nm,1.1s
BEKR Beckworth 77.38 40 P P 00 17 25.2 0.0
BEKR IAmb IAmb 00 17 32.6
comp=Z,10nm,1.1s
PNTR Pine Nut 77.38 41 P P 00 17 25.5 +0.2
PNTR IAmb IAmb 00 17 33.0
comp=Z,15nm,1.1s
PIX Pinacate 77.39 50 P P 00 17 25.4 +0.2
DSP Deep Springs 77.42 43 P P 00 17 25.5 +0.3
DSP IAmb IAmb 00 17 33.4
comp=Z,19nm,1.2s
IRM Iron Mountain 77.55 47 P P 00 17 26.1 0.0
LHV Little Huntoon 77.58 42 P P 00 17 26.3 +0.2
LHV IAmb IAmb 00 17 33.7
comp=Z,16nm,1.1s
GRAC Grapevine Rang 77.60 44 P P 00 17 26.0 -0.3
GRAC IAmb IAmb 00 17 34.0
comp=Z,19nm,1.1s
GWY Greenwater Val 77.61 45 P P 00 17 26.9 +0.3
FURC Furnace Creek, 77.64 45 P P 00 17 26.1 -0.4
FURC IAmb IAmb 00 17 33.6
comp=Z,12nm,1.1s
DANC Danby, Needles 77.64 47 P P 00 17 26.9 +0.3
DANC IAmb IAmb 00 17 38.5
comp=Z,18nm,1.1s
SHOC Shoshone, Teco 77.72 45 P P 00 17 27.2 +0.2
SHOC IAmb IAmb 00 17 33.9
comp=Z,19nm,1.1s
BLYC Blythe 77.76 48 P P 00 17 27.7 +0.5
113A Mohawk Valley, 77.79 49 P P 00 17 27.6 +0.2
RYN Ryan 77.79 42 P P 00 17 28.2 +0.7
RYN IAmb IAmb 00 17 34.5
comp=Z,9.8nm,1.1s
NVAR Mina Array Bea 77.81 42 P P 00 17 28.1 +0.4
NVAR Mina Array Bea 77.81 42 P P 00 17 28.5 +0.8
comp=Z,1.8nm,0.7s,baz=223,slow=8.0,SNR=12
NVAR PP PP 00 20 26.3 +2.7
comp=Z,0.2nm,0.5s,baz=256,slow=5.5,SNR=3.6
comp=Z,1.8nm,0.7s
GMN Gold Mountain 77.84 44 P P 00 17 28.3 +0.4
GMN IAmb IAmb 00 17 35.5
comp=Z,12nm,1.0s
BBOR Butler Butte 77.88 37 P P 00 17 27.3 -0.6
PAHR Pah Rah Range 77.88 41 P P 00 17 27.6 -0.4
NV11 Mina Array Sit 77.91 42 P P 00 17 28.6 +0.4
NV11 IAmb IAmb 00 17 38.4
comp=Z,12nm,1.1s
WCT Wildcat Mounta 77.98 45 P P 00 17 28.5 0.0
MTPC Mountain Pass 77.98 46 P P 00 17 29.8 +1.1
HSIG 78.00 54 P P 00 17 30.3 +1.6
HSIG IAmb IAmb 00 17 49.3
comp=Z,6.6nm,0.4s
I03D Drain, OR 78.03 36 P P 00 17 30.4 +2.0
I03D IAmb IAmb 00 17 33.7
comp=Z,14nm,1.2s
214A Organ Pipe Nat 78.06 50 P P 00 17 29.7 +0.7
NEE2 Needles Airpor 78.24 47 P P 00 17 31.9 +2.0
TPNV Topopah Spring 78.31 45 P P 00 17 30.5 +0.1
TPNV IAmb IAmb 00 17 37.7
comp=Z,10nm,1.0s
TPNV Topopah Spring 78.31 45 P P 00 17 30.5 +0.1
TPNV pmax pmax
comp=Z,11nm,1.0s
J04A Umpqua Nationa 78.43 37 P P 00 17 30.9 -0.1
V12A Nelson 78.59 46 P P 00 17 32.6 +0.7
V12A IAmb IAmb 00 17 40.0
comp=Z,17nm,1.2s
USRK Ussuriysk Ar. 78.78 324 P P 00 17 30.7 -1.9
comp=Z,1.0nm,0.3s,baz=156,slow=1.9,SNR=4.3
comp=Z,1.0nm,0.3s
SHPR Sheep Range 78.80 45 P P 00 17 33.9 +0.7
K05A Summer Lake 78.81 38 P P 00 17 33.8 +0.7
K05A IAmb IAmb 00 17 40.8
comp=Z,15nm,1.0s
W13A Hualapai Mount 78.92 47 P P 00 17 33.2 -0.7
Y14A Wickenburg 78.94 49 P P 00 17 33.4 -0.4
J05D Fort Rock, OR 78.96 37 P P 00 17 34.2 +0.4
J05D IAmb IAmb 00 17 41.5
comp=Z,23nm,1.1s
H04A Detroit Lake 79.30 35 P P 00 17 35.8 +0.3
PINE Pine Mountain 79.44 37 P P 00 17 36.4 -0.1
PINE IAmb IAmb 00 17 44.8
comp=Z,22nm,1.1s
R11B Troy Canyon, C 79.53 44 P P 00 17 37.0 -0.1
SMAI San Martin Ant 79.56 159 P P 00 17 35.9 -0.7
SMAI IAmb IAmb 00 17 45.3
comp=Z,16nm,1.0s
TUC Tucson 79.73 51 P P 00 17 39.2 +1.0
TUC Tucson 79.73 51 P P 00 17 39.2 +1.0
TUC pmax pmax
comp=Z,4.0nm,1.1s
F04D Rainier, OR 79.75 34 P P 00 17 38.3 +0.4
E03A Lebam 79.76 33 P P 00 17 39.0 +1.1
E03A IAmb IAmb 00 17 51.2
comp=Z,16nm,1.0s
WVOR Wild Horse Val 79.96 39 P P 00 17 40.2 +0.9
WVOR IAmb IAmb 00 17 46.7
comp=Z,14nm,1.0s
WVOR Wild Horse Val 79.96 39 P P 00 17 40.2 +0.9
WVOR pmax pmax
comp=Z,14nm,1.0s
HOOD Mount Hood Mea 80.00 35 P P 00 17 39.5 0.0
HOOD IAmb IAmb 00 17 46.4
comp=Z,14nm,1.1s
WISH Wishkah 80.03 33 P P 00 17 39.9 +0.6
WISH IAmb IAmb 00 17 52.3
comp=Z,13nm,1.2s
C03A Quillayute Air 80.17 32 P P 00 17 40.4 +0.3
C03A IAmb IAmb 00 17 50.9

comp=Z,22nm,1.1s
ILSW Iliamna Southw 80.23 11 P P 00 17 40.2 -0.1
X16A Lo Mia Camp, P 80.30 49 P P 00 17 40.5 -0.9
LCMT Little Creek M 80.37 46 P P 00 17 41.1 -0.6
MDJ Mudanjiang 80.38 324 P P 00 17 41.7 +0.4
MDJ pmax pmax
comp=Z,11nm,1.0s
319A Douglas 80.40 52 P P 00 17 42.7 +0.8
I07A Izee 80.44 37 P P 00 17 41.8 0.0
G06A Carlson Farm, 80.50 36 P P 00 17 42.8 +0.8
CCUT Cedar City 80.58 45 P P 00 17 43.5 +0.7
NJ2 Nanjing 80.60 308 eP P 00 17 43.7 +0.9
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
KNB Kanab 80.66 46 P P 00 17 42.9 -0.4
KNB IAmb IAmb 00 17 51.0
comp=Z,11nm,1.1s
KNB Kanab 80.66 46 P P 00 17 42.9 -0.4
KNB pmax pmax
comp=Z,11nm,1.1s
SPR3 Spring Creek 3 80.70 44 P 00 17 42.6 -1.0
U15A North Rim 80.72 47 P P 00 17 43.7 0.0
U15A IAmb IAmb 00 17 52.1
comp=Z,17nm,1.2s
SZCU Shurtz Canyon 80.78 45 P P 00 17 43.6 -0.4
GNW Green Mountain 80.81 33 P P 00 17 43.5 0.0
M17K Holitna River 80.88 9 P P 00 17 45.7 +2.0
WUAZ Wupatki 80.90 48 P 00 17 44.4 -0.1
CLRS Cowichan Lake 80.97 31 P P 00 17 45.1 +0.7
D05A Enumclaw 81.00 34 P P 00 17 44.8 +0.3
D05A IAmb IAmb 00 17 55.0
comp=Z,13nm,0.8s
ELK Elko 81.08 42 P 00 17 46.0 +0.5
ELK Elko 81.08 42 P P 00 17 46.0 +0.5
ELK pmax pmax
comp=Z,6.0nm,1.0s
DUN6 Lazy B Ranch 81.10 51 P P 00 17 46.3 +0.7
CBB Campbell River 81.19 30 P 00 17 46.1 +0.6
CBB IAmb IAmb 00 17 52.9
comp=Z,13nm,1.1s
PGC Sidney 81.20 32 P 00 17 46.1 +0.6
PGC IAmb IAmb 00 17 52.8
comp=Z,14nm,1.1s
BELA Belgrano 2 81.21 172 P P 00 17 45.1 -0.3
BELA IAmb IAmb 00 17 52.7
comp=Z,8.4nm,0.8s
K15K Wolf Creek Mou 81.24 6 P 00 17 47.0 +1.5
K15K IAmb IAmb 00 18 06.1
comp=Z,9.3nm,1.1s
SLKM Skilak Lake 81.28 12 P P 00 17 44.7 -1.1
SLKM IAmb IAmb 00 17 56.2
comp=Z,14nm,1.0s
O22K Cooper Landing 81.36 12 P P 00 17 47.9 +1.7
G08A Pilot Rock 81.47 36 P 00 17 48.3 +1.0
G08A IAmb IAmb 00 17 55.2
comp=Z,16nm,1.1s
MXC Moxie City 81.52 35 P P 00 17 48.0 +0.6
A04D Lummi Island 81.62 32 P P 00 17 48.2 +0.5
LTY Liberty 81.74 34 P P 00 17 48.5 -0.2
E07A Sunnyside 81.75 35 P 00 17 48.9 +0.3
E07A IAmb IAmb 00 17 56.7
comp=Z,20nm,1.2s
HAWA Hanford 81.82 35 P P 00 17 49.9 +0.9
HAWA IAmb IAmb 00 17 56.4
comp=Z,17nm,1.1s
STLK Strandline Lak 81.89 11 P P 00 17 49.1 +0.1
RC01 Rabbit Creek A 81.91 12 P P 00 17 50.8 +1.7
RC01 IAmb IAmb 00 18 03.6
comp=Z,14nm,1.2s
YPT Yellepit 81.93 36 P P 00 17 49.7 +0.2
PWL Port Wells 81.99 13 P P 00 17 49.8 +0.3
ZAIG Zacatecas 82.02 63 P P 00 17 52.0 +1.1
ZAIG IAmb IAmb 00 17 57.5
comp=Z,9.6nm,1.1s
WAH2 Wahluke Slope 82.03 35 P 00 17 50.5 +0.5
WAH2 IAmb IAmb 00 17 57.3
comp=Z,11nm,1.0s
K17K Iditarod 82.03 8 P P 00 17 49.2 -0.4
121A Cookes Peak, D 82.06 52 P P 00 17 51.6 +0.8
BMO Blue Mountains 82.16 38 P 00 17 50.4 -0.5
BMO Blue Mountains 82.16 38 P P 00 17 50.4 -0.5
BMO pmax pmax
comp=Z,7.0nm,1.1s
LNOR Lincton Mounta 82.20 36 P P 00 17 51.1 +0.1
LNOR IAmb IAmb 00 17 58.0
comp=Z,8.3nm,1.2s
MFID Camas Ranch 82.21 39 P 00 17 51.6 +0.3
MFID IAmb IAmb 00 17 58.5
comp=Z,13nm,1.1s
GLI Glacier Island 82.28 13 P P 00 17 51.8 +0.7
GLI IAmb IAmb 00 17 58.0
comp=Z,13nm,1.1s
CN2 Changchun 82.30 321 eP P 00 17 52.1 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.9s
DUG Dugway, Tooele 82.33 43 P 00 17 52.9 +0.9
DUG Dugway, Tooele 82.33 43 P P 00 17 52.9 +0.9
DUG pmax pmax
comp=Z,3.0nm,1.1s
KNK Knik Glacier 82.47 13 P P 00 17 52.3 +0.3
KNK IAmb IAmb 00 18 00.4
comp=Z,11nm,1.2s
HMU Henry Mountain 82.56 46 P 00 17 52.7 -0.7
HMU IAmb IAmb 00 18 03.4
comp=Z,13nm,1.2s
D08A Wollman Farm, 82.56 35 P P 00 17 52.5 -0.3
D08A IAmb IAmb 00 18 00.9
comp=Z,17nm,1.2s
GHO Glory Hole Cre 82.70 12 P P 00 17 54.4 +1.1
GHO IAmb IAmb 00 18 00.5
comp=Z,11nm,1.0s
Q16A Castle Valley 82.76 45 P P 00 17 54.4 +0.1
SML Sawmill 82.85 13 P P 00 17 54.7 +0.6
SML IAmb IAmb 00 17 56.8
comp=Z,7.8nm,1.2s
SML Sawmill 82.85 13 P P 00 17 54.7 +0.6
SML pmax pmax
comp=Z,8.0nm,1.2s
F10A Beach Ranch, E 82.86 37 P P 00 17 53.7 -0.9
TMUT Trail Mountain 82.93 45 P P 00 17 55.8 +0.5
BMRM Bremner River 82.93 15 P P 00 17 55.0 +0.5
BMRM IAmb IAmb 00 18 04.9
comp=Z,12nm,1.0s
J18K Innoko River 82.96 8 P P 00 17 54.6 0.0
J18K IAmb IAmb 00 18 02.0
comp=Z,6.6nm,0.9s
CUT Chulitna 83.01 11 P P 00 17 55.7 +0.9
CUT IAmb IAmb 00 18 11.6
comp=Z,8.5nm,0.9s
PLID Pearl Lake 83.05 38 P 00 17 56.1 +0.4
B08A Colville Reser 83.13 34 P 00 17 55.7 -0.1
HLID Hailey 83.14 40 P 00 17 56.1 0.0
HLID IAmb IAmb 00 18 04.0
comp=Z,9.8nm,1.0s
K20K Telida 83.24 9 P P 00 17 56.0 0.0
LLLB Lillooet 83.25 31 P P 00 17 56.4 +0.1
LLLB IAmb IAmb 00 18 03.3
comp=Z,9.5nm,1.2s
CTU Camp Tracy 83.29 43 P P 00 17 57.6 +0.6
CTU IAmb IAmb 00 18 05.0
comp=Z,9.8nm,1.0s
SRU San Rafael Swe 83.29 45 P P 00 17 56.9 -0.2
SRU San Rafael Swe 83.29 45 P P 00 17 56.9 -0.2
SRU pmax pmax
comp=Z,19nm,1.1s
Y22A Socorro 83.32 51 P 00 17 58.0 +0.7
P17A Butcher Ranch, 83.33 45 P P 00 17 57.6 +0.4
P17A IAmb IAmb 00 18 05.3
comp=Z,14nm,1.2s
MG05 Puerto Natales 83.36 142 P P 00 17 56.9 -0.1
C09A Chrisman Ranch 83.36 35 P P 00 17 58.0 +1.0
C09A IAmb IAmb 00 18 06.2
comp=Z,7.7nm,1.1s
VHRN Van Horn 83.41 55 P 00 17 57.6 -0.2
VHRN IAmb IAmb 00 18 05.8
comp=Z,11nm,1.1s
LENM Lemitar 83.42 51 P P 00 17 59.5 +1.6
JLU Jordanelle 83.44 43 P P 00 17 58.7 +0.9
JLU IAmb IAmb 00 18 05.3
comp=Z,8.7nm,1.1s
N25K Chitina, Valde 83.49 14 P P 00 17 57.0 -0.4
N25K IAmb IAmb 00 18 04.3
comp=Z,9.2nm,1.1s
MNTX Cornudas Mount 83.50 54 P 00 17 58.6 +0.5

GLB	Gilahina Butte	83.53	15	P		P		00 17 57.0	-0.6
BNM	Barren Site	83.67	51			P		00 18 00.5	+1.3
LOGN	Logan Glacier	83.71	16	P		P		00 17 59.8	+1.1
LOGN				IAmb		IAmb		00 18 00.7	
	comp=Z,7.6nm,1.2s								
TCUT	Toone Canyon	83.73	43	P		P		00 17 58.9	-0.5
P18A	Preston Nutter	83.74	45	P		P		00 17 59.7	+0.2
P18A				IAmb		IAmb		00 18 13.6	
	comp=Z,6.4nm,1.0s								
BARN	Barnard Glacie	83.74	16	P		P		00 17 59.0	+0.1
MVCO	Mesa Verde	83.75	48			P		00 17 59.0	-0.6
PV05	Paradox Valley	83.75	47	P		P		00 18 01.0	+1.5
TX31	Lajitas Ar. Si	83.82	56	P		P		00 17 59.8	0.0
TXAR	Lajitas Array	83.82	56			P		00 17 59.8	-0.1
TXAR	Lajitas Array	83.82	56	P		P		00 18 03.0	+3.2
	comp=Z,0.7nm,0.8s,baz=224,slow=5.2,SNR=8.1								
	comp=Z,0.7nm,0.8s								
BSUT	Blindstream Ca	83.85	44			P		00 18 00.9	+0.7
HWUT	Hardware Ranch	83.88	43			P		00 17 59.8	-0.2
HWUT				IAmb		IAmb		00 18 07.1	
	comp=Z,12nm,1.1s								
PV10	Paradox Valley	83.94	46	P		P		00 18 00.1	-0.4
PV19	Morning Glory	83.94	46	P		P		00 17 60.0	-0.5
PV17	East Wray Mesa	83.95	46	P		P		00 18 00.4	-0.1
PV17				IAmb		IAmb		00 18 08.8	
	comp=Z,11nm,1.0s								
PV14	Lion Creek, Pa	83.95	46	P		P		00 18 00.9	+0.4
PV18	Skein Mesa, Pa	83.96	47	P		P		00 17 59.9	-0.7
TRF	Thorofare Moun	83.97	11			P		00 17 59.4	-0.5
PV20	West Nyswonger	83.97	46	P		P		00 18 00.9	+0.3
PV13	Radium Mtn., P	83.98	47	P		P		00 18 00.8	+0.2
PV16	Nyswonger Mesa	83.99	46	P		P		00 17 59.6	-1.1
PV16				IAmb		IAmb		00 18 09.1	
	comp=Z,13nm,1.2s								
PV23	Carpenter Ridg	83.99	46			P		00 18 00.2	-0.6
J20K	Nowinta River	84.00	9			P		00 18 00.4	+0.6
J20K				IAmb		IAmb		00 18 10.4	
	comp=Z,6.2nm,1.1s								
PV03	Paradox Valley	84.01	47	P		P		00 18 00.4	-0.4
PV11	David Mesa, Pa	84.02	46	P		P		00 18 01.6	+0.8
PV04	Paradox Valley	84.04	46	P		P		00 18 00.9	0.0
PV02	Paradox Valley	84.06	47	P		P		00 17 59.8	-1.4
PV12	Saucer Basin,	84.07	46	P		P		00 18 01.2	0.0
PV21	Cone Mtn., Par	84.07	46	P		P		00 18 01.3	+0.1
PV01	Paradox Valley	84.14	47	P		P		00 18 01.5	0.0
PV01				IAmb		IAmb		00 18 09.1	
	comp=Z,13nm,1.2s								
ABQ	Albuquerque	84.15	50	P		P		00 18 01.7	+0.1
ABQ				IAmb		IAmb		00 18 09.9	
	comp=Z,12nm,1.2s								
ANMO	Albuquerque	84.15	50			P		00 18 01.3	-0.3
ANMO				IAmb		IAmb		00 18 09.2	
	comp=Z,7.5nm,1.1s								
ANMO	Albuquerque	84.15	50⇑	*e*P		P		00 18 02.7	+1.1
ANMO				pmax		pmax			
	comp=Z,7.0nm,1.3s								
BCYI	Bear Canyon	84.16	40			P		00 18 01.5	+0.1
BCYI				IAmb		IAmb		00 18 09.8	
	comp=Z,11nm,1.2s								
PV22	Blue Mesa, Par	84.19	46			P		00 18 00.8	-0.9
PV22				IAmb		IAmb		00 18 09.4	
	comp=Z,13nm,1.2s								
RND	Reindeer	84.20	12			P		00 18 01.5	+0.5
RND				IAmb		IAmb		00 18 09.0	
	comp=Z,6.5nm,1.0s								
RND	Reindeer	84.20	12	P		P		00 18 01.5	+0.5
RND				pmax		pmax			
	comp=Z,7.0nm,1.0s								
PV07	Paradox Valley	84.24	46	P		P		00 18 01.8	-0.2
PV07				IAmb		IAmb		00 18 09.7	
	comp=Z,13nm,1.1s								
NEW	Newport	84.26	35			P		00 18 02.9	+1.3
NEW	Newport	84.26	35	P		P		00 18 02.9	+1.3
NEW				pmax		pmax			
	comp=Z,3.0nm,1.0s								
ALPN	Alpine	84.28	56	P		P		00 18 03.3	+1.0
PV15	Paradox Valley	84.31	47	P		P		00 18 02.6	+0.3
MAW	Mawson	84.31	199	P		P		00 18 02.1	+0.5
	comp=Z,12nm,1.2s,baz=110,slow=6.6,SNR=6.5								
	comp=Z,12nm,1.2s								
H18K	Honhosa River	84.37	7	P		P		00 18 02.0	+0.3
H18K				IAmb		IAmb		00 18 12.2	
	comp=Z,7.3nm,1.1s								
S34M	Telegraph Cree	84.43	22			P		00 18 01.6	-0.6
S34M				IAmb		IAmb		00 18 13.8	
	comp=Z,8.7nm,1.0s								
BPAW	Bear Paw Mtn.	84.44	10	P		P		00 18 02.4	+0.2
MCK	McKinley	84.48	11			P		00 18 02.4	+0.1
MCK	McKinley	84.48	11	P		P		00 18 02.4	+0.1
MCK				pmax		pmax			
	comp=Z,17nm,1.2s								
RDMU	Red Mountain	84.66	44	P		P		00 18 04.5	+0.5
RDMU				IAmb		IAmb		00 18 11.3	
	comp=Z,13nm,1.0s								
AHID	Auburn Hatcher	84.77	42	P		P		00 18 04.7	+0.2
MCMT	McKenzie Canyo	84.77	39	P		P		00 18 05.4	+0.9
M27K	Edge Creek, AK	84.79	15	P		P		00 18 04.7	+0.6
H19K	Roundabout Mou	84.97	8			P		00 18 04.1	-0.6
HEH	HeiHe	84.97	327	*e*P		P		00 18 05.1	0.0
L26K	Log Cabin Wild	85.02	14	P		P		00 18 05.5	+0.5
L26K				IAmb		IAmb		00 18 12.9	
	comp=Z,6.8nm,1.2s								
SEY	Seymchan	85.03	346	*e*P		P		00 18 03.3	-1.7
SEY				pmax		pmax			
	comp=Z,12nm,1.2s								
O30N	Mendenhall	85.04	18	P		P		00 18 05.8	+0.5
S22A	4UR Ranch, Cre	85.17	48			P		00 18 06.3	-0.5
S22A				IAmb		IAmb		00 18 18.2	
	comp=Z,10nm,1.1s								
DLMT	Dillon	85.21	39			P		00 18 06.5	-0.1
MSO	Missoula	85.22	37			P		00 18 05.6	-0.9
NEA2	Nenana	85.23	11	P		P		00 18 06.3	+0.2
NEA2				IAmb		IAmb		00 18 17.1	
	comp=Z,6.8nm,1.2s								
TPAW	Teton Pass	85.24	41	P		P		00 18 06.6	-0.3
TPAW				IAmb		IAmb		00 18 14.5	
	comp=Z,9.7nm,1.0s								
FXWY	Fox Creek	85.27	41	P		P		00 18 06.3	-0.8
I21K	Tanana	85.28	10	P		P		00 18 05.4	-0.9
I21K				IAmb		IAmb		00 18 13.7	
	comp=Z,10nm,0.9s								
BPMT	Black Pine Rid	85.29	38	P		P		00 18 07.3	+0.2
SAND	Sanderson	85.30	56			P		00 18 07.0	-0.3
WRH	Wood River Hil	85.31	11			P		00 18 06.6	+0.2
RIDG	Independent Ri	85.31	13	P		P		00 18 07.3	+0.8
O20A	White River Ci	85.33	45	P		P		00 18 05.5	-2.0
O20A				IAmb		IAmb		00 18 14.8	
	comp=Z,9.6nm,1.0s								
MLY	Manley	85.34	10	P		P		00 18 05.2	-1.5
MLY				IAmb		IAmb		00 18 16.7	
	comp=Z,6.9nm,1.0s								
SNOW	Snow King Moun	85.34	41	P		P		00 18 07.5	0.0
MNHN	Monahans	85.37	55	P		P		00 18 08.5	+0.9
MNHN				IAmb		IAmb		00 18 15.1	
	comp=Z,5.0nm,0.8s								
DOT	Dot Lake	85.40	13	P		P		00 18 07.1	+0.1
DOT				IAmb		IAmb		00 18 15.0	
	comp=Z,5.9nm,1.0s								
BCAR	Beaver Creek A	85.42	15	P		P		00 18 06.8	-0.4
IPM	Ipoh	85.43	276	P		P		00 18 06.3	-2.0
IPM	Ipoh	85.43	276	P		P		00 18 08.9	+0.6
HDA	Harding Lake	85.47	12	P		P		00 18 07.4	+0.2
HDA				IAmb		IAmb		00 18 17.5	
	comp=Z,7.8nm,0.9s								
MOOW	Moose Ponds	85.50	41			P		00 18 08.4	+0.2
LOHW	Long Hollow	85.52	41	P		P		00 18 08.8	+0.5
LOHW				IAmb		IAmb		00 18 16.4	
	comp=Z,7.1nm,1.1s								
CCB	Clear Creek Bu	85.52	11			P		00 18 06.6	-0.9
CCB				IAmb		IAmb		00 18 15.2	
	comp=Z,12nm,1.1s								
JTMT	Jette	85.53	36	P		P		00 18 07.5	-0.6
LRM	Limekiln Ridge	85.54	39	P		P		00 18 08.2	-0.2
H21K	Melozitna Rive	85.60	9	P		P		00 18 07.6	-0.3
H21K				IAmb		IAmb		00 18 19.8	
	comp=Z,8.5nm,1.2s								
R33M	Jennings River	85.60	21			P		00 18 08.1	-0.1
P33M	Teslin, Yukon	85.61	20	P		P		00 18 08.1	0.0
QLMT	Earthquake Lak	85.63	40	P		P		00 18 09.9	+1.1
I23K	Minto, Yukon-K	85.69	11	P		P		00 18 08.2	-0.1
I23K				IAmb		IAmb		00 18 18.0	
	comp=Z,9.7nm,1.2s								
FLWY	Flagg Ranch	85.70	41	P		P		00 18 08.6	-0.6
SCRK	Sand Creek	85.70	13			P		00 18 08.2	-0.4
N31M	Braeburn, Yuko	85.70	18	P		P		00 18 08.3	-0.2
N31M				IAmb		IAmb		00 18 17.1	
	comp=Z,12nm,1.1s								
COLA	College	85.71	11	P		P		00 18 08.8	+0.4
COLA	College	85.71	11	P		P		00 18 08.5	+0.1
COLA	College	85.71	11⇓	*e*P		P		00 18 08.0	-0.4
COLA				pmax		pmax			
	comp=Z,15nm,1.3s								
YHB	Horse Butte	85.73	40	P		P		00 18 08.2	-1.1
BW06	Boulder Array	85.75	42	P		P		00 18 09.1	-0.4
PD31	Pinedale Array	85.75	42			P		00 18 09.7	+0.2
PD31				IAmb		IAmb		00 18 16.4	
	comp=Z,7.1nm,1.1s								
PDAR	Pinedale Array	85.75	42			P		00 18 08.1	-1.4
PDAR	Pinedale Array	85.75	42	P		P		00 18 10.3	+0.8
	comp=Z,0.3nm,0.4s,baz=234,slow=4.8,SNR=13								
PDAR				PP		PP		00 21 30.4	+1.3
	comp=Z,0.3nm,0.7s,baz=242,slow=12,SNR=3.9								
	comp=Z,0.3nm,0.4s								
IMAR	Indian Mountai	85.77	9	P		P		00 18 08.1	-0.6
YHL	Hebgen Lake	85.79	40			P		00 18 09.8	0.0
YFT	Old Faithful	85.80	40	P		P		00 18 09.0	-0.7
YFT				IAmb		IAmb		00 18 18.5	
	comp=Z,7.7nm,1.0s								
IL31		85.81	12	P		P		00 18 08.0	-0.8
ILAR	Eielson Array	85.81	12	P		P		00 18 07.9	-1.0
ILAR	Eielson Array	85.81	12	P		P		00 18 08.7	-0.3
	comp=Z,7.4nm,1.2s,baz=225,slow=6.0,SNR=19								
	comp=Z,7.4nm,1.2s								
YMR	Madison River	85.83	40	P		P		00 18 09.7	-0.1
YMR				IAmb		IAmb		00 18 19.5	
	comp=Z,12nm,1.2s								
ODSA	Odessa	85.86	54	P		P		00 18 10.9	+0.9
OVMT	Ovando	85.89	37	P		P		00 18 10.8	+0.9
BOZ	Bozeman (W)	85.91	39	P		P		00 18 10.4	+0.3
BOZ	Bozeman (W)	85.91	39	P		P		00 18 10.4	+0.3
BOZ				pmax		pmax			
	comp=Z,5.0nm,1.0s								
H17A	Grant Village	85.93	41	P		P		00 18 10.1	-0.3
YHH	Holmes Hill	85.97	40	P		P		00 18 10.4	-0.2
POKR	Poker Plat Res	86.01	11	P		P		00 18 09.8	-0.1
POKR				IAmb		IAmb		00 18 17.0	
	comp=Z,12nm,0.9s								
YNM	Yellowstone No	86.02	40	P		P		00 18 11.2	+0.4
YNR	Norris Junctio	86.03	40	P		P		00 18 11.1	+0.3
YNR				IAmb		IAmb		00 18 21.0	
	comp=Z,9.4nm,1.2s								
HNS	HongShan	86.10	311	⇓P		P		00 18 11.7	+0.7
HNS				pmax		pmax			
	comp=Z,17nm,1.5s								
SDCO	Great Sand Dun	86.11	48	P		P		00 18 11.6	+0.2
J26L	Joseph Creek	86.25	13	P		P		00 18 11.2	0.0
J26L				IAmb		IAmb		00 18 22.5	
	comp=Z,13nm,1.2s								
DRIO	Del Rio	86.28	57	P		P		00 18 13.7	+1.6
BJI	Beijing	86.29	314	P		P		00 18 12.1	+0.3
BJI				pmax		pmax			
	comp=Z,8.0nm,1.9s								
M30M	Minto, Yukon	86.29	17	P		P		00 18 13.5	+2.1
YMP	Mirror Lake Pl	86.37	40	P		P		00 18 13.5	+0.9
L29M	L29M	86.37	16	P		P		00 18 11.3	-0.5
L29M				IAmb		IAmb		00 18 23.3	
	comp=Z,6.5nm,1.1s								
MSTX	Muleshoe	86.46	53	P		P		00 18 13.1	0.0
MSTX				IAmb		IAmb		00 18 21.6	
	comp=Z,9.9nm,0.9s								
OZNA	Ozona	86.48	56			P		00 18 13.5	+0.4
OZNA				IAmb		IAmb		00 18 20.5	
	comp=Z,7.5nm,1.1s								
YNE	Yellowstone No	86.59	40	P		P		00 18 13.5	-0.1
YNE				IAmb		IAmb		00 18 21.5	
	comp=Z,9.1nm,1.2s								
E19K	Redstone River	86.72	7	P		P		00 18 13.8	+0.4
E19K				IAmb		IAmb		00 18 24.1	
	comp=Z,9.0nm,1.0s								
833A	Chaparral WMA,	86.84	59	P		P		00 18 15.1	+0.2
DAWY	Dawson	86.84	15	P		P		00 18 14.9	+0.8
DAWY				IAmb		IAmb		00 18 23.6	
	comp=Z,5.9nm,1.0s								
WTLY	Watson Lake, Y	86.88	21	P		P		00 18 13.7	-0.7
WTLY				IAmb		IAmb		00 18 17.9	
	comp=Z,3.6nm,0.4s								
SGCY	Sterling City	86.88	55	P		P		00 18 13.0	-2.1
SGCY				IAmb		IAmb		00 18 22.3	
	comp=Z,10nm,1.1s								
PSI	Prapat	86.88	274	P		P		00 18 15.0	-0.6
PSI	Prapat	86.88	274	P		P		00 18 13.7	-1.9
PSI				pmax		pmax			
	comp=Z,13nm,1.1s								
HBVL	Hebbronville	86.95	60	P		P		00 18 16.1	+0.6
HBVL				IAmb		IAmb		00 18 29.8	
	comp=Z,13nm,1.2s								
ENH	Enshi	87.05	303	P		P		00 18 16.2	+0.3
POST	Post	87.06	54	P		P		00 18 15.2	-0.7
RLMT	Red Lodge	87.10	40			P		00 18 15.5	-0.6
ZEA	Zeya	87.14	330	*e*P		P		00 18 16.2	+0.5
ZEA				pmax		pmax			
	comp=Z,10.0nm,1.1s								
BILL	Bilibino	87.32	353⇓	*e*P		P		00 18 16.2	-0.1
BILL				pmax		pmax			
	comp=Z,10.0nm,1.3s								
HNDO	Hondo	87.39	58	P		P		00 18 18.5	+0.9
APMT	Aspermont	88.22	54			P		00 18 22.5	+1.1
APMT				IAmb		IAmb		00 18 28.0	
	comp=Z,5.8nm,1.1s								
BRDY	Brady	88.30	56			P		00 18 24.5	+2.7
ABTX	Abilene, Hawle	88.31	55	P		P		00 18 23.0	+1.1
HILR	Hailar Array B	88.71	324	P		P		00 18 22.3	-1.0
	comp=Z,0.8nm,0.4s,baz=142,slow=7.4,SNR=5.0								
	comp=Z,0.8nm,0.4s								
XAN	Xi'an	88.97	306	P		P		00 18 25.9	+0.9
XAN				pmax		pmax			
	comp=Z,28nm,1.6s								
SYO	Syowa Base	89.23	192⇑	*e*P		P		00 18 25.4	-0.2
SYO	Syowa Base	89.23	192⇑	*e*P		pP		00 18 28.1	-1.2
PLPT	Palo Pinto	89.42	55			P		00 18 28.7	+1.6
TROLL	Troll, Antarti	89.73	179	⇓P		P		00 18 28.3	+0.3
	comp=Z,283nm,0.7s								
TROLL				⇑sP		pwP		00 18 34.5	-0.4
WHTX	Lake Whitney,	89.78	56	P		P		00 18 29.6	+0.9
WHTX				IAmb		IAmb		00 18 43.1	
	comp=Z,6.5nm,1.0s								
HHC	Hu-ho-hao-te	89.80	313	*e*P		P		00 18 29.6	+0.8
HHC				pmax		pmax			
	comp=Z,13nm,0.8s								
BI02	San Fabin de	89.86	129			P		00 18 25.2	-4.1
SNAA	Sanae	89.93	178	⇓P		P		00 18 29.2	+0.3
	comp=Z,108nm,0.7s								
SNAA				⇑sP		pwP		00 18 35.3	-0.5
SNAA	Sanae	89.93	178	P		P		00 18 27.6	-1.3
SNAA				IAmb		IAmb		00 18 36.0	
	comp=Z,7.7nm,0.9s								
SNAA	Sanae	89.93	178	P		P		00 18 29.4	+0.5
	comp=Z,2.5nm,0.9s,baz=206,slow=8.2,SNR=14								
	comp=Z,2.5nm,0.9s								
FW13	Cleburne	89.94	56	P		P		00 18 29.0	-0.5
FW13				IAmb		IAmb		00 18 37.2	
	comp=Z,10nm,1.0s								
RSSD	Black Hills	89.94	43	P		P		00 18 28.7	-0.8
RSSD				IAmb		IAmb		00 18 36.2	
	comp=Z,6.5nm,1.1s								
RSSD	Black Hills	89.94	43	P		P		00 18 28.7	-0.8
RSSD				pmax		pmax			
	comp=Z,7.0nm,1.1s								
VNA3	Neumayer Olymp	89.96	175	⇓P		P		00 18 29.6	+0.6
	comp=Z,4.8nm,0.8s								
VNA3				⇓sP		pwP		00 18 35.4	-0.5
HKT	Hockley	90.33	59⇓	*e*P		P		00 18 29.2	-2.1
HKT				pmax		pmax			
	comp=Z,3.0nm,0.9s								
VNA2	Neumayer--Watz	90.43	176	⇓P		P		00 18 32.3	+1.1
	comp=Z,20nm,0.6s,baz=179,slow=3.3								
VNA2				⇑sP		pwP		00 18 38.0	0.0
	baz=180,slow=3.2								
VNA1	Neumayer--Stat	90.64	176	⇓P		P		00 18 32.8	+0.7
	comp=Z,17nm,0.8s								
VNA1				⇑sP		pwP		00 18 39.3	+0.3
BTO	Baotou	90.77	313	*e*P		P		00 18 35.0	+1.7
BTO				pmax		pmax			
	comp=Z,19nm,1.1s								
F31M	Tsiigehtchic	90.95	15	P		P		00 18 33.9	+0.6
F31M				IAmb		IAmb		00 18 43.3	
	comp=Z,9.1nm,1.1s								
CMAR	Chiang Mai Arr	91.87	289	P		P		00 18 37.8	-1.0
CMAR	Chiang Mai Arr	91.87	289	P		P		00 18 35.7	-3.0
	comp=Z,0.4nm,0.3s,baz=153,slow=2.1,SNR=6.3								
	comp=Z,0.4nm,0.3s								
CMAR	Chiang Mai Arr	91.87	289	*ce*P		P		00 18 39.4	+0.6
CMAR				pmax		pmax			
	comp=Z,1.0nm,1.0s								
PZH	PanZhiHua	92.05	297	P		P		00 18 41.3	+1.7
Z38A	Mt. Pleasant	92.18	56			P		00 18 39.6	-0.3
ECSD	EROS Data Cent	94.70	45			P		00 18 50.1	-1.2
ECSD				IAmb		IAmb		00 19 00.0	
	comp=Z,3.9nm,1.0s								
WHAR	Wooly Hollow	94.97	55			P		00 18 52.9	+0.2
TIXI	Tiksi	97.47	345⇑	*e*P		P		00 19 02.4	-0.8
TIXI				pmax		pmax			
	comp=Z,2.0nm,1.1s								
WMQ	Urumqi	107.53	311	Pdif		Pdif		00 19 50.4	+1.6
MKAR	Makanchi Array	111.66	314	*c* PKIKP		PKiKP		00 24 04.5	-0.2
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
BVAR	Borovoye Array	119.16	321	PKP		PKPdf		00 24 18.5	-0.3
	comp=Z,1.4nm,0.6s,baz=75,slow=2.2,SNR=7.3								
ARTI	Arti	125.06	327	*i* PKIKP		PKPdf		00 24 28.3	-1.7
ARTI								00 26 17.7	
ARTI								00 31 39.6	
ARTI				SP		SP		00 36 08.6	-8.3
RAYN	Ar Rayn	141.68	285			PKPdf		00 25 03.6	+1.4
RAYN	Ar Rayn	141.68	285	PKIKP		PKPdf		00 25 03.6	+1.4
AKBB	Malin Array Si	142.40	334⇑	*i* PKIKP		PKPdf		00 25 04.4	+1.8
KWP	Kalwaria Pacla	145.72	339	*e*PKP		PKPdf		00 25 08.7	+0.2
OJC	Ojcow	146.11	343	*e*PKP		PKPdf		00 25 09.9	+0.8
STHS	Stebnicka Huta	146.38	340	*e*PKP2		PKPbc		00 25 10.8	-0.1
STHS	Stebnicka Huta	146.38	340	*e*PKP		PKPbc		00 25 10.8	-0.1
KSP	Ksiaz	146.42	347	*e*PKP		PKPbc		00 25 11.2	+0.3
LODK	Lodwar	146.48	247			PKPbc		00 25 12.3	0.0
CLL	Collm	146.59	351			PKPdf		00 25 10.7	+0.9
CLL	Collm	146.59	351	PKP2		PKPdf		00 25 10.7	+0.9
CLL	Collm	146.59	351	*i* PKPbc		PKPbc		00 25 11.2	-0.2
	comp=Z,37nm,1.3s								
CLL				*i* x		x		00 25 17.3	
	comp=Z,39nm,1.4s								
NIE	Niedzica	146.68	341	*e*PKP		PKPdf		00 25 07.0	-3.2
OSTC	Ostas	146.70	347	*e*PKP2		PKiKP		00 25 17.5	+3.0
OSTC	Ostas	146.70	347	*e*PKP		PKiKP		00 25 17.5	+3.0
DPC	Dobruska-Polom	146.87	346	*e*PKP2		PKPbc		00 25 13.4	+1.1
DPC	Dobruska-Polom	146.87	346	*e*PKP		PKPbc		00 25 13.4	+1.1
DPC				*ep*PKP		sPKPab		00 25 19.8	+1.1
BMR	Baia Mare	147.08	336	⇓P		PKPbc		00 25 13.9	+1.0
BMR	Baia Mare	147.08	336	⇓PKP2		PKPbc		00 25 13.9	+1.0
MORC	Moravsky Berou	147.12	345	*e*PKP		PKPbc		00 25 13.0	0.0
VRI	Vrincioaia	147.16	331	⇑P		PKiKP		00 25 18.1	+2.5
VRI	Vrincioaia	147.16	331	⇑PKP2		PKiKP		00 25 18.1	+2.5
LANS	Liptovska Anna	147.16	342	*e*PKP2		PKPab		00 25 14.6	-0.2
LANS	Liptovska Anna	147.16	342	*e*PKP		PKPab		00 25 14.6	-0.2
LANS				*e*				00 25 21.5	
ARCR	ARCALIA	147.23	335	⇓P		PKPbc		00 25 14.0	+0.7
BR131	Keskin Array S	147.26	316	*d* PKP2		PKPbc		00 25 13.8	-0.1
BRTR	Keskin Array B	147.26	316			PKPdf		00 25 13.1	+1.5
BRTR	Keskin Array B	147.26	316	PKPbc		PKPbc		00 25 13.7	-0.1
	comp=Z,2.7nm,0.9s,baz=9.5,slow=1.8,SNR=16								
BRTR	Keskin Array B	147.26	316	PKP2		PKPdf		00 25 13.1	+1.5
TURR	Turia	147.34	332	⇓P		PKPdf		00 25 09.9	-1.4
KIRS	Kirsehir-Merke	147.39	315	⇓P		PKPdf		00 25 11.9	+0.2
HARR	Harsova	147.45	328	⇑P		PKiKP		00 25 19.0	+2.8
HARR	Harsova	147.45	328	⇑PKP2		PKiKP		00 25 19.0	+2.8
DOPR	Dopca	147.68	333	⇓P		PKPbc		00 25 15.3	+0.7
VRAC	Vranov	147.78	345	*e*PKP		PKPbc		00 25 14.7	-0.1
MLR	Muntele Rosu	147.80	331			PKPbc		00 25 14.3	-0.9
MLR	Muntele Rosu	147.80	331	⇑P		PKPdf		00 25 14.1	+1.9
MLR	Muntele Rosu	147.80	331	⇑PKP2		PKPdf		00 25 14.1	+1.9
JAVC	Velka Javorina	147.93	344	*e*PKP		PKPbc		00 25 16.1	+0.8
MARR	Marisel-Cluj	148.05	336	⇓P		PKPbc		00 25 17.0	+1.3
KRUC	Moravsky	148.06	345	*e*PKP		PKPbc		00 25 15.5	0.0
DRGR		148.11	336	⇓P		PKPdf		00 25 14.7	+2.0
DRGR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.49**	**121**	⇑*i*P	**Pn**	**00 30 37.7**	**+0.1**
CO04				*e*S	**Sn**	**00 30 45.5**	**-0.3**
CO04				IAML		00 30 46.3	
	comp=N,45μm,0.1s						
CO02	**Combarbal**	**0.71**	**34**	*e*P	**Pn**	**00 30 40.4**	**+0.1**
CO02				*e*S	**Sn**	**00 30 49.9**	**-0.5**
CO02				IAML		00 30 51.3	
	comp=E,30μm,0.3s						
VA06	**Catapilco**	**0.78**	**169**	*e*P	**Pn**	**00 30 42.2**	**+1.2**
VA06				*e*S	**Sn**	**00 30 53.6**	**+1.9**
VA06				IAML		00 30 54.6	
	comp=E,10μm,0.3s						
CO06	**Fray Jorge**	**1.13**	**353**	*e*P	**Pn**	**00 30 46.9**	**+1.2**
CO03	**El Pedregal**	**1.16**	**35**⇓	*e*P	**Pn**	**00 30 46.6**	**+0.3**
CO03				*e*S	**Sn**	**00 31 00.9**	**-0.2**
VA01	**Torpederas**	**1.23**	**187**	*e*P	**Pn**	**00 30 48.4**	**+1.3**
VA01				IAML		00 31 07.9	
	comp=E,3μm,0.1s						
VA01	**Torpederas**	**1.23**	**187**	*i*P	**Pn**	**00 30 47.0**	**-0.1**
VA01				*i*S	**Sn**	**00 31 04.3**	**+1.7**
VA01				IAML		00 31 08.4	
	comp=Z,1μm,0.4s						
ROCH	**El Roble**	**1.24**	**162**	*e*P	**Pn**	**00 30 48.5**	**+1.1**
ROCH				*e*P	**Pn**	**00 30 48.5**	**+1.1**
ROCH				IAML		00 31 06.2	
	comp=N,4μm,0.2s						
ROCH				IAML		00 31 06.2	
	comp=N,2μm,0.3s						
VA03	**San Esteban**	**1.24**	**141**	*e*P	**Pn**	**00 30 47.4**	**+0.1**
VA03				*e*S	**Sn**	**00 31 02.8**	**-0.1**
VA03				IAML		00 31 05.5	
	comp=E,5μm,0.1s						
MT02	**Curacav**	**1.49**	**169**	*e*P	**Pn**	**00 30 51.6**	**+1.0**
MT02				IAML		00 31 13.2	
	comp=E,1μm,0.5s						
PEL	**Peldehue**	**1.50**	**154**	*e*P	**Pn**	**00 30 51.5**	**+0.7**
PEL				IAML		00 31 14.7	
	comp=E,2μm,0.4s						
MT10	**Hacienda Santa**	**1.67**	**152**	*e*P	**Pn**	**00 30 53.9**	**+0.7**
MT10				IAML		00 31 16.7	
	comp=N,4μm,0.3s						
MT05	**Renca**	**1.71**	**159**	*e*P	**Pn**	**00 30 54.7**	**+1.1**
MT05				*e*S	**Sn**	**00 31 15.7**	**+1.4**
MT05				IAML		00 31 17.4	
	comp=E,4μm,0.3s						
MT05	**Renca**	**1.71**	**159**⇓	*i*P	**Pn**	**00 30 54.7**	**+1.1**
MT05				*i*S	**Sn**	**00 31 16.2**	**+1.9**
MT05				IAML		00 31 21.0	
	comp=Z,903nm,0.2s						
GO04	**Tololo Observa**	**1.72**	**20**	*e*P	**Pn**	**00 30 55.0**	**+1.1**
GO04	**Tololo Observa**	**1.72**	**20**⇓	*i*P	**Pn**	**00 30 55.2**	**+1.3**
GO04				*i*S	**Sn**	**00 31 17.9**	**+3.1**
GO04				IAML		00 31 18.6	
	comp=Z,2μm,0.4s						
MT14	**Cerro Cal¡n**	**1.78**	**154**	*e*P	**Pn**	**00 30 55.8**	**+1.1**
MT16	**CCHEN**	**1.81**	**154**⇑	*e*P	**Pn**	**00 30 56.1**	**+1.0**
MT03	**Universidad Ad**	**1.88**	**155**	*e*P	**Pn**	**00 30 57.0**	**+1.0**
MT03	**Universidad Ad**	**1.88**	**155**	*i*P	**Pn**	**00 30 56.4**	**+0.4**
MT03				*i*S	**Sn**	**00 31 20.0**	**+1.5**
MT03				IAML		00 31 24.5	
	comp=Z,1μm,0.1s						
CO05	**La Serena**	**1.88**	**6**	*e*P	**Pn**	**00 30 57.4**	**+1.4**
CO05				IAML		00 31 24.7	
	comp=E,1μm,0.2s						
MT04	**Ro Olivares**	**1.96**	**145**	*e*P	**Pn**	**00 30 58.6**	**+1.4**
MT15	**Las Vizcachas**	**1.97**	**156**	*e*P	**Pn**	**00 30 58.5**	**+1.3**
MT09	**Talagante**	**2.02**	**169**	*e*P	**Pn**	**00 30 59.5**	**+1.6**
MT09				IAML		00 31 28.7	
	comp=N,2μm,0.2s						
MT08	**Bocatoma Ro**	**2.05**	**144**	*e*P	**Pn**	**00 31 00.3**	**+1.8**
MT08	**Bocatoma Ro**	**2.05**	**144**	*i*P	**Pn**	**00 30 59.9**	**+1.4**
MT08				IAML		00 31 30.9	
	comp=Z,380nm,0.2s						
MT01	**Popeta**	**2.07**	**175**	*e*P	**Pn**	**00 30 59.6**	**+1.1**
MT12	**Pirque**	**2.08**	**158**	*e*P	**Pn**	**00 30 59.8**	**+1.1**
CO01	**Juntas del Tor**	**2.16**	**33**	*e*P	**Pn**	**00 31 01.3**	**+1.2**
CO01				IAML		00 31 28.6	
	comp=N,1μm,0.3s						
CO01	**Juntas del Tor**	**2.16**	**33**	*i*P	**Pn**	**00 31 01.2**	**+1.2**
CO01				*i*S	**Sn**	**00 31 28.9**	**+3.1**
CO01				IAML		00 31 29.3	
	comp=Z,728nm,0.5s						
BO04	**La Punta**	**2.30**	**162**	*e*P	**Pn**	**00 31 03.0**	**+1.3**
LMEL	**Las Melosas**	**2.31**	**153**	*e*P	**Pn**	**00 31 03.6**	**+1.6**
LMEL				IAML		00 31 35.3	
	comp=N,2μm,0.1s						
LMEL	**Las Melosas**	**2.31**	**153**	*i*P	**Pn**	**00 31 03.5**	**+1.6**
LMEL				IAML		00 31 36.3	
	comp=Z,615nm,0.1s						
ASAL	**Salagasta**	**2.37**	**110**	*i*P	**Pn**	**00 31 04.2**	**+1.5**
ASAL				*i*S	**Sn**	**00 31 33.1**	**+2.4**
ASAL				IAML		00 31 43.1	
	comp=Z,0.3nm,0.3s						
ACCO	**Cerro Coronel**	**2.38**	**60**	*i*P	Pn	00 31 05.8	+2.6
ARCO	**CERRO ARCO**	**2.39**	**117**	*i*P	**Pn**	**00 31 04.5**	**+1.5**
ARCO				*i*S	**Sn**	**00 31 33.8**	**+2.7**
ARCO				IAML		00 31 42.8	
	comp=Z,616nm,0.4s						
AAGR	**Agrelo**	**2.58**	**121**	*i*P	**Pn**	**00 31 06.9**	**+1.3**
AAGR				IAML		00 31 48.7	
	comp=Z,473nm,0.3s						
ACDV	**Cuesta del Vie**	**2.59**	**52**	*i*P	**Pn**	**00 31 07.5**	**+1.7**
ACDV				IAML		00 31 48.0	
	comp=Z,226nm,0.4s						
RTLL	**Cerro Villicun**	**2.60**	**80**	*i*P	**Pn**	**00 31 07.3**	**+1.5**
RTLL				IAML		00 31 49.8	
	comp=Z,473nm,0.4s						
BO01	**Tunca**	**2.61**	**173**	*e*P	**Pn**	**00 31 06.8**	**+0.9**
BO01				IAML		00 31 47.8	
	comp=E,422nm,0.2s						
BO01	**Tunca**	**2.61**	**173**	*i*P	**Pn**	**00 31 06.8**	**+0.9**
BO01				IAML		00 31 46.6	
	comp=Z,217nm,0.6s						
CFA	**Coronel Fontan**	**2.76**	**87**	P	**Pn**	**00 31 09.3**	**+1.3**
	comp=Z,101nm,0.3s,baz=252,slow=12,SNR=112						
CFA				S	Sn	00 31 27.9	-12
	comp=Z,123nm,0.5s,baz=259,slow=16,SNR=25						
CFA				Lg	Lg	00 31 43.9	
	comp=Z,40nm,0.3s,baz=119,slow=4.9,SNR=6.3						
CFA	**Coronel Fontan**	**2.76**	**87**	*i*P	**Pn**	**00 31 09.6**	**+1.6**
LCO	**Las Campanas**	**2.85**	**14**	*e*P	**Pn**	**00 31 10.6**	**+1.1**
LCO	**Las Campanas**	**2.85**	**14**⇓	*i*P	**Pn**	**00 31 11.2**	**+1.7**
LCO				IAML		00 31 51.5	
	comp=Z,888nm,0.3s						
BO02	**Sierra Bellavi**	**3.04**	**169**	*e*P	**Pn**	**00 31 13.3**	**+1.3**
BO02				IAML		00 32 00.7	
	comp=N,1μm,0.3s						
BO02	**Sierra Bellavi**	**3.04**	**169**	*i*P	**Pn**	**00 31 12.6**	**+0.7**
BO02				IAML		00 32 03.3	
	comp=Z,517nm,0.2s						
GO05	**Hualane**	**3.23**	**187**	*e*P	**Pn**	**00 31 14.5**	**0.0**
GO05	**Hualane**	**3.23**	**187**	*i*P	**Pn**	**00 31 14.7**	**+0.2**
GO05				IAML		00 32 10.8	
	comp=Z,115nm,0.5s						
AGUA	**GUANDACOL**	**3.45**	**49**⇓	*i*P	Pn	00 31 20.6	+3.1
AGUA				IAML		00 32 11.7	
	comp=Z,387nm,0.4s						
AC04	**Llanos de Chal**	**3.59**	**6**	*e*P	**Pn**	**00 31 19.9**	**+0.4**
AC04	**Llanos de Chal**	**3.59**	**6**	*i*P	**Pn**	**00 31 20.0**	**+0.5**
AC04				IAML		00 32 14.0	
	comp=Z,278nm,0.6s						
AVFE	**Valle Fertil**	**3.62**	**73**	*i*P	**Pn**	**00 31 21.0**	**+1.1**
AVFE				IAML		00 32 09.3	
	comp=Z,297nm,0.3s						
ACAN	**Cantantal**	**3.67**	**99**	*i*P	**Pn**	**00 31 21.9**	**+1.4**
ACAN				IAML		00 32 13.8	
	comp=Z,727nm,0.3s						
RFA	**San Rafael**	**3.89**	**141**	*i*P	**Pn**	**00 31 24.1**	**+0.5**
RFA				IAML		00 32 49.3	
	comp=Z,44nm,0.4s						
ACHE	**Chepes**	**4.15**	**83**	*i*P	**Pn**	**00 31 27.7**	**+0.5**
VCA	**Vinchina**	**4.15**	**44**	*e*P	Pn	00 31 30.4	+3.1
VCA	**Vinchina**	**4.15**	**44**	*i*P	**Pn**	**00 31 28.9**	**+1.6**
VCA				IAML		00 32 32.8	
	comp=Z,324nm,0.6s						
GO03	**Copiapo**	**4.32**	**15**	*i*P	**Pn**	**00 31 30.5**	**+1.0**
GO03				IAML		00 32 38.5	
	comp=Z,164nm,0.5s						
APLL	**PUNTA DE LOS L**	**4.46**	**73**	*i*P	**Pn**	**00 31 32.2**	**+0.8**
APLL				IAML		00 32 31.3	
	comp=Z,25nm,0.7s						
ACLC	**CERRO LA CRUZ**	**4.55**	**60**	*i*P	**Pn**	**00 31 34.0**	**+1.2**
ACLC				IAML		00 32 34.2	
	comp=Z,180nm,0.4s						
BI02	**San Fabin de**	**4.86**	**178**	*i*P	**Pn**	**00 31 37.3**	**+0.5**
BI02				IAML		00 32 55.2	
	comp=Z,44nm,0.5s						
AANI	**Anillaco**	**4.92**	**54**	*i*P	**Pn**	**00 31 39.2**	**+1.4**
AANI				IAML		00 32 58.7	
	comp=Z,461nm,1.0s						
MRA	**San Martin**	**4.92**	**99**	*i*P	**Pn**	**00 31 38.8**	**+1.1**
MRA				IAML		00 32 39.1	
	comp=Z,112nm,0.4s						
TCA	**Tanti**	**5.88**	**87**⇓	*e*P	**Pn**	**00 31 50.0**	**-0.9**
H03N1	**Juan Fernandez**	**6.49**	**253**	P	Pn	00 32 02.9	+4.0
	baz=282,slow=80,SNR=27						
H03N1				T	T	00 38 42.6	
	baz=80,slow=73,SNR=1086						
H03N3	**Juan Fernandez**	**6.50**	**253**	P	Pn	00 32 02.2	+3.1
	baz=282,slow=80,SNR=27						
H03N3				T	T	00 38 42.6	
	baz=80,slow=73,SNR=873						
H03N2	**Juan Fernandez**	**6.51**	**253**	P	Pn	00 32 02.6	+3.5
	baz=282,slow=80,SNR=26						
H03N2				T	T	00 38 43.8	
	baz=80,slow=73,SNR=824						
H03S3	**Juan Fernandez**	**6.58**	**250**	T	T	00 38 49.4	
	baz=82,slow=75,SNR=6.8						
H03S1	**Juan Fernandez**	**6.58**	**250**	T	T	00 38 47.3	
	baz=82,slow=75,SNR=4.6						
H03S2	**Juan Fernandez**	**6.60**	**250**	T	T	00 38 46.7	
	baz=82,slow=75,SNR=9.4						
CPUP	**Villa Florida**	**13.51**	**70**	P	**Pn**	**00 33 34.7**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=26,slow=4.9,SNR=3.4						
CPUP				S	**Sn**	**00 36 01.4**	**-2.4**
	comp=Z,0.4nm,0.6s,baz=55,slow=20,SNR=1.6						
LPAZ	**La Paz**	**15.73**	**12**	P	**Pn**	**00 34 05.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=217,slow=10,SNR=2.2						
SIV	**San Ignacio**	**18.36**	**33**	P	**P**	**00 34 35.9**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=210,slow=9.5,SNR=7.1						
SNAA	**Sanae**	**53.45**	**158**	P	**P**	**00 39 40.1**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=170,slow=1.7,SNR=7.1						
	comp=Z,1.1nm,0.8s						
TXAR	**Lajitas Array**	**68.06**	**330**	P	**P**	**00 41 21.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=161,slow=8.0,SNR=4.0						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**83.01**	**70**	P	**P**	**00 42 45.2**	**-1.3**
	comp=Z,2.7nm,0.2s,baz=243,slow=1.4,SNR=3.7						
	comp=Z,2.7nm,0.2s						
WRA	**Warramunga Arr**	**122.92**	**209**	PKP	**PKPdf**	**00 49 17.0**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=172,slow=1.7,SNR=4.6						
H11S2	**WAKE ISLAND Hyl**	**26.26**	**270**	T	T	03 08 26.0	
	baz=117,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hyl**	**26.27**	**270**	T	T	03 08 31.5	
	baz=117,slow=75,SNR=7.5						
H11S3	**WAKE ISLAND Hyl**	**26.28**	**270**	T	T	03 08 27.3	
	baz=117,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hyl**	**26.62**	**272**	T	T	03 08 54.3	
	baz=117						
H11N1	**WAKE ISLAND Hyl**	**26.63**	**272**	T	T	03 08 44.8	
	baz=117						
H11N2	**WAKE ISLAND Hyl**	**26.63**	**272**	T	T	03 08 55.3	
	baz=117						
BVAR	**Borovoye Array**	**145.32**	**41**	PKPbc	**PKPbc**	**00 49 58.3**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=310,slow=2.3,SNR=7.9						
KURBB	**Kurchatov Arra**	**150.92**	**41**	PKPbc	**PKPbc**	**00 50 12.9**	**0.0**
	comp=Z,0.5nm,0.2s,baz=297,slow=2.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**152.10**	**31**	PKPbc	**PKPbc**	**00 50 15.7**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=316,slow=3.4,SNR=5.0						
MKAR	**Makanchi Array**	**154.92**	**46**	PKPab	**PKPab**	**00 50 37.1**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=301,slow=5.2,SNR=1.6						

*IDC **05** 00:32:44.7±1.1,54.°81N×111.°97E,h0km,mb3.6/9, mbtmp3.7/13,ML4.1/3,Error ellipse: s-maj=22.2km s-min=15.9km az=57.0*
*MOS **05** 00:32:45.2±1.1,54.°83N×111.°70E,h12km,mb3.7/1,Error ellipse: s-maj=10.7km s-min=7.0km az=75.9*
*BYKL **05** 00:32:46.2±0.1,54.°85N×111.°69E,h6km±2km*
ISC 05 00:32:45.7±0.5,54.°78N±0.°02×111.°62E±0.°02,h10km,n71, σ2.962/128,mb3.6/7,7C-3D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.28**	**291**	⇑*i*Pg	**Pb**	**00 32 51.5**	**-1.3**
YLYR				Pmax		00 32 51.7	
	4μm,0.3s						
YLYR				*e*Sg	**Sb**	**00 32 56.1**	**-1.5**
YLYR				Smax		00 32 56.3	
	7μm,0.4s						
YLYR	**Ulyunkhan**	**0.28**	**291**	⇑*i*PG	**Pb**	**00 32 51.6**	**-1.3**
YLYR				*e*		00 32 55.7	
YLYR				pmax	pmax		
	comp=Z,4μm,0.4s						
YLYR				smax	smax		
	comp=N,8μm,0.5s						
KMO	**Kumora**	**1.14**	**348**	⇑*i*Pg	**Pb**	**00 33 05.1**	**-2.4**
KMO				Pmax		00 33 06.4	
	comp=N,586nm,0.3s						
KMO				*e*Sg	**Sg**	**00 33 19.6**	**-2.7**
KMO				Smax		00 33 22.4	
	comp=N,2μm,1.2s						
KMO	**Kumora**	**1.14**	**348**	⇑*i*PG	**Pb**	**00 33 05.0**	**-2.4**
KMO				*e*		00 33 19.6	
KMO				pmax	pmax		
	comp=Z,549nm,0.3s						
KMO				smax	smax		
	comp=N,2μm,1.3s						
UKT	**Uakit**	**1.36**	**57**⇑	*i*Pg	**Pn**	**00 33 08.5**	**-2.3**
UKT				Pmax		00 33 13.0	
	comp=N,489nm,0.5s						
UKT				*e*Sg	**Sb**	**00 33 26.4**	**-2.3**
UKT				Smax		00 33 32.9	
	comp=N,2μm,0.5s						
UKT	**Uakit**	**1.36**	**57**⇑	*i*PG	**Pn**	**00 33 08.5**	**-2.3**
UKT				*e*		00 33 26.0	
UKT				pmax	pmax		
	comp=Z,66nm,0.1s						
UKT				smax	smax		
	comp=N,754nm,0.2s						
YOAB	**Uoyan, Buryati**	**1.37**	**3**	*e*Pg	**Pn**	**00 33 09.8**	**-1.0**
YOAB				Pmax		00 33 11.4	
	comp=N,5.0nm,0.1s						
YOAB				*e*Sg	**Sb**	**00 33 27.1**	**-1.8**
YOAB				Smax		00 33 39.1	
	comp=N,2μm,0.5s						
SYVR	**Suvo**	**1.47**	**221**⇓	*i*Pg	**Pg**	**00 33 14.2**	**+0.4**
SYVR				Pmax		00 33 16.3	
	comp=N,289nm,0.5s						
SYVR				*e*Sg	**Sg**	**00 33 35.4**	**+2.5**
SYVR				*e*		00 33 38.3	
SYVR				max		00 33 38.6	
	comp=N,2μm,0.6s						
SYVR	**Suvo**	**1.47**	**221**⇓	*i*PN	**Pg**	**00 33 14.1**	**+0.3**
SYVR				*e*		00 33 35.1	
SYVR				pmax	pmax		
	comp=Z,309nm,0.6s						
SYVR				smax	smax		
	comp=E,2μm,0.6s						
NIZB	**Nizh Angarsk**	**1.55**	**311**	*e*Pg	**Pb**	**00 33 13.8**	**-0.6**
NIZB				Pmax		00 33 14.1	
	comp=E,164nm,0.3s						
NIZB				*e*Pb	**Pg**	**00 33 15.2**	**-0.1**
NIZB				*e*Sg	**Sg**	**00 33 34.4**	**-1.0**
NIZB				Smax		00 33 38.2	
	comp=E,784nm,0.3s						
NIZB	**Nizh Angarsk**	**1.55**	**311**	*e*PN	**Pb**	**00 33 13.3**	**-1.1**
NIZB				*e*		00 33 35.2	
NIZB				pmax	pmax		
	comp=Z,165nm,0.2s						
NIZB				smax	smax		
	comp=E,778nm,0.3s						
SVKR	**Severomuysk**	**1.74**	**39**	*e*Pg	**Pb**	**00 33 16.7**	**-1.0**
SVKR				*e*Pb	**Pg**	**00 33 17.8**	**-1.2**
SVKR				max		00 33 18.6	
	comp=E,460nm,0.1s						
SVKR				*e*Sg	**Sb**	**00 33 38.1**	**-1.5**
SVKR				*e*		00 33 42.6	
SVKR				max		00 33 47.2	
	comp=E,3μm,0.5s						
SVKR	**Severomuysk**	**1.74**	**39**	*e*PN	**Pb**	**00 33 16.7**	**-1.0**
SVKR				*e*		00 33 17.9	
SVKR				*e*		00 33 40.6	
SVKR				pmax	pmax		
	comp=Z,462nm,0.5s						
SVKR				smax	smax		
	comp=N,3μm,1.1s						
MXMB	**Maximikha**	**2.27**	**229**	*e*Pn	**Pb**	**00 33 26.0**	**-0.8**
MXMB				*e*Pg	**Pg**	**00 33 28.5**	**-0.7**
MXMB				*e*Sg	**Sg**	**00 34 00.1**	**+1.4**
OGRR	**Ongureny**	**2.62**	**246**	*e*Pn	**Pb**	**00 33 30.5**	**-2.2**
OGRR				*e*Pg	**Pg**	**00 33 33.7**	**-2.1**
OGRR				*e*		00 33 35.9	
OGRR				max		00 33 36.1	
	comp=N,73nm,0.3s						
OGRR				*e*		00 33 37.6	
OGRR				*e*Sn	**Sb**	**00 34 03.7**	**-1.2**
OGRR				*e*Sg	**Sg**	**00 34 09.5**	**-0.3**
OGRR				Smax		00 34 11.5	
	comp=N,418nm,0.5s						
OGRR	**Ongureny**	**2.62**	**246**	*e*PN	**Pb**	**00 33 30.1**	**-2.6**
OGRR				*e*		00 33 34.6	
OGRR				*e*S	**Sb**	**00 34 02.7**	**-2.2**
OGRR				*e*		00 34 09.3	
OGRR				pmax	pmax		
	comp=Z,98nm,0.9s						
OGRR				smax	smax		
	comp=N,419nm,0.7s						
GORB	**Goryachinsk**	**2.67**	**229**	*e*Pn	**Pb**	**00 33 31.2**	**-2.2**
GORB				*e*Pg	**Pg**	**00 33 35.2**	**-1.5**
GORB				*e*Sn	**Sn**	**00 34 02.5**	**+1.5**
GORB				*e*Sg	**Sg**	**00 34 12.1**	**+0.9**
UZR	**Uzur**	**2.71**	**239**	*e*Pn	**Pb**	**00 33 31.4**	**-2.8**
UZR				*e*Pg	**Pg**	**00 33 35.3**	**-2.2**
UZR				Pmax		00 33 40.9	
	comp=N,66nm,0.5s						
UZR				*e*Sg	**Sg**	**00 34 12.9**	**+0.3**
UZR				Smax		00 34 14.2	
	comp=N,402nm,0.3s						
NLYR	**Nelyaty**	**2.88**	**52**	*e*Pn	**Pn**	**00 33 32.1**	**+0.4**
NLYR				*e*Pg	**Pb**	**00 33 36.8**	**-0.4**
NLYR				Pmax		00 33 43.3	
	comp=N,116nm,0.5s						
NLYR				*e*Sg	**Sb**	**00 34 13.4**	**+0.9**
NLYR				Smax		00 34 17.6	
	comp=N,791nm,0.9s						
KELR	**Kotokel**	**2.91**	**228**	*e*Pn	**Pb**	**00 33 34.5**	**-3.2**
KELR				*e*Pg	**Pg**	**00 33 40.0**	**-1.4**
KELR				*e*Sn	**Sb**	**00 34 10.9**	**-2.4**
KELR				*e*Sg	**Sg**	**00 34 18.8**	**-0.4**
CIT	**Chita**	**3.00**	**156**	*e*Pg	**Pg**	**00 33 41.3**	**-1.7**
CIT				Pmax		00 33 45.5	
	comp=N,112nm,0.2s						
CIT				*e*Sg	**Sg**	**00 34 20.6**	**-1.2**
CIT				Smax		00 34 22.3	
	comp=N,940nm,0.4s						
CIT	**Chita**	**3.00**	**156**	*e*PN	**Pn**	**00 33 32.6**	**-0.6**
CIT				*e*		00 33 39.8	
CIT				*e*S	**Sn**	**00 34 10.4**	**+1.2**
CIT				*e*		00 34 19.8	
CIT				pmax	pmax		
	comp=Z,178nm,1.0s						
CIT				smax	smax		
	comp=E,942nm,0.4s						
BOD	**Bodaibo**	**3.33**	**23**	*e*Pn	**Pn**	**00 33 38.3**	**+0.6**
BOD				*e*Pg	**Pb**	**00 33 44.2**	**-0.5**
BOD				Pmax		00 33 48.8	
	comp=E,55nm,0.7s						
BOD				*e*Sn	**Sn**	**00 34 16.7**	**-0.5**
BOD				*e*Sg	**Sb**	**00 34 26.1**	**+0.9**
BOD				Smax		00 34 36.2	
	comp=E,320nm,1.4s						
BOD	**Bodaibo**	**3.33**	**23**⇑	*i*PN	**Pn**	**00 33 37.5**	**-0.2**
BOD				*e*		00 33 44.1	
BOD				*e*		00 34 25.2	
BOD				pmax	pmax		
	comp=Z,33nm,0.8s						
BOD				smax	smax		
	comp=N,283nm,0.6s						
ZRHB	**Zarechye**	**3.47**	**232**	*e*Pg	**Pg**	**00 33 49.5**	**-2.5**
ZRHB				Pmax		00 33 50.8	
	comp=N,161nm,0.8s						
ZRHB				*e*Sg	**Sg**	**00 34 36.7**	**-0.2**
ZRHB				Smax		00 35 10.1	
	comp=N,1μm,0.8s						
TRG	**Tyrgan**	**3.72**	**239**	*e*Pn	**Pn**	**00 33 46.3**	**+3.1**
TRG				*e*Pg	**Pg**	**00 33 53.9**	**-3.0**
TRG				Pmax		00 33 57.3	
	comp=N,28nm,0.4s						
TRG				*e*Sg	**Sg**	**00 34 42.8**	**-2.3**
TRG				Smax		00 34 56.6	
	comp=N,235nm,0.7s						
TRG	**Tyrgan**	**3.72**	**239**	*e*PN	**Pn**	**00 33 46.3**	**+3.1**
TRG				*e*		00 33 55.3	
TRG				*e*S	**Sn**	**00 34 30.7**	**+3.6**
TRG				*e*		00 34 43.6	
TRG				pmax	pmax		
	comp=Z,28nm,0.3s						
TRG				smax	smax		
	comp=N,237nm,0.6s						
UUDB	**Ulan-Yde**	**3.76**	**221**	*e*Pn	**Pn**	**00 33 46.3**	**+2.6**
UUDB				*e*Pg	**Pg**	**00 33 55.6**	**-2.0**
UUDB				Pmax		00 33 59.2	
	comp=N,60nm,0.7s						
UUDB				*e*Sg	**Sg**	**00 34 46.1**	**-0.1**
UUDB				Smax		00 34 54.2	
	comp=N,555nm,1.5s						
FFNB	**Fofonovo**	**3.99**	**229**	*e*Pn	**Pn**	**00 33 49.3**	**+2.5**
FFNB				*e*Pg	**Pg**	**00 33 59.2**	**-2.8**
FFNB				*e*Sg	**Sg**	**00 34 52.3**	**-1.3**
KAB	**Kabansk**	**4.03**	**229**	*e*Pg	**Pg**	**00 34 00.8**	**-2.1**
KAB				Pmax		00 34 12.7	
	comp=N,174nm,0.4s						
KAB				*e*Sg	**Sg**	**00 34 54.3**	**-0.8**
KAB				Smax		00 35 30.2	
	comp=N,679nm,1.0s						
HRMR	**Khuramsha**	**4.22**	**224**	*e*Pn	**Pn**	**00 33 52.7**	**+2.7**
HRMR				*e*Pg	**Pg**	**00 34 03.3**	**-3.1**
HRMR				Pmax		00 34 05.1	
	comp=N,61nm,0.6s						
HRMR				*e*Sg	**Sg**	**00 34 59.6**	**-1.4**
HRMR				Smax		00 35 05.9	
	comp=N,545nm,0.5s						
CRS	**Chara**	**4.31**	**58**	*e*Pn	**Pn**	**00 33 51.9**	**+0.7**
CRS				*e*Pg	**Pb**	**00 34 02.5**	**+1.0**
CRS				Pmax		00 34 08.1	
	comp=N,56nm,1.0s						
CRS				*e*Sg	**Sb**	**00 34 57.2**	**+3.7**
CRS				Smax		00 35 04.2	
	comp=N,329nm,1.2s						
CRS	**Chara**	**4.31**	**58**	*e

KPC	**Khapcheranga**	**5.10**	**174**	*e*Pn	**Pn**	**00 34 03.9**	**+1.7**
KPC				*e*		00 34 12.3	
KPC				*e*Pg	**Pg**	**00 34 19.3**	**-4.0**
KPC				Pmax		00 34 24.4	
	comp=Z,19nm,0.5s						
KPC				*e*Sg	**Sg**	**00 35 26.0**	**-3.4**
KPC				Smax		00 35 29.9	
	comp=Z,199nm,0.7s						
KPC	**Khapcheranga**	**5.10**	**174**	*e*PN	**Pn**	**00 34 03.4**	**+1.2**
KPC				*e*		00 34 17.2	
KPC				*e*		00 35 24.8	
KPC				pmax	pmax		
	comp=Z,19nm,0.5s						
KPC				smax	smax		
	comp=E,199nm,1.5s						
KHNR	**Khani**	**5.18**	**62**	*e*Pn	**Pn**	**00 34 04.6**	**+1.4**
KHNR				*e*Pg	**Pb**	**00 34 17.8**	**+1.5**
KHNR				*e*Sg	**Sg**	**00 35 24.4**	**-7.4**
IVK	**Ivanovka**	**5.25**	**238**	*e*Pg	**Pg**	**00 34 21.5**	**-4.6**
IVK				Pmax		00 34 56.7	
	comp=E,47nm,0.8s						
IVK				*e*Sg	**Sg**	**00 35 29.6**	**-4.4**
IVK				Smax		00 35 45.5	
	comp=E,185nm,0.9s						
TLY	**Talaya**	**5.70**	**240**	*e*Pg	Pg	00 34 29.6	-5.2
TLY				Pmax		00 34 31.8	
	comp=E,8.0nm,0.3s						
TLY				*e*Sg	**Sg**	**00 35 44.2**	**-4.4**
TLY				Smax		00 35 49.1	
	comp=E,74nm,1.0s						
YKLR	**Yuktali**	**5.96**	**68**	*e*Pn	**Pn**	**00 34 13.7**	**-0.2**
YKLR				*e*Pg	**Pb**	**00 34 31.4**	**+1.8**
YKLR				*e*Sg	**Sg**	**00 35 48.2**	**-8.7**
ARS	**Arshan**	**6.20**	**246**	*e*Pn	**Pn**	**00 34 18.3**	**+1.0**
ARS				*e*Pg	Pg	00 34 38.8	-5.6
ARS				Pmax		00 34 42.1	
	comp=E,27nm,0.5s						
ARS				*e*		00 35 56.2	
ARS				*e*Sg	**Sg**	**00 35 59.8**	**-4.8**
ARS				Smax		00 36 05.3	
	comp=E,407nm,0.8s						
ZAK	**Zakamensk**	**6.72**	**232**	*e*Sn	**Sn**	**00 35 41.1**	**+0.1**
ZAK				*e*Sg	**Sg**	**00 36 17.2**	**-4.0**
ZAK				Smax		00 36 34.2	
	comp=E,76nm,1.6s						
MOY	**Mondy**	**7.10**	**248**	*e*Pn	**Pn**	**00 34 33.6**	**+4.0**
MOY				*e*Pg	Pg	00 34 54.8	-6.7
MOY				Pmax		00 35 04.4	
	comp=E,17nm,1.1s						
MOY				*e*		00 35 54.6	
MOY				*e*Sg	**Sg**	**00 36 27.1**	**-6.2**
MOY				*e*		00 36 41.1	
MOY				max		00 36 43.9	
	comp=E,109nm,0.9s						
MOY	**Mondy**	**7.10**	**248**	*e*PN	Pn	00 34 34.1	+4.5
MOY				*e*		00 34 57.0	
MOY				*e*		00 36 26.7	
MOY				pmax	pmax		
	comp=Z,11nm,0.5s						
MOY				smax	smax		
	comp=E,110nm,1.0s						
HILR	**Hailar Array B**	**7.23**	**133**	Pn	**Pn**	**00 34 30.9**	**-0.5**
	baz=328,slow=13						
HILR				Sn	**Sn**	**00 35 52.7**	**-0.9**
	baz=339,slow=16						
HILR				Lg	Lg	00 36 29.7	
	baz=330,slow=31						
	comp=E,3.0nm,0.3s						
ORL	**Orlik**	**7.37**	**257**	*e*Pn	**Pn**	**00 34 36.3**	**+3.0**
ORL				*e*Pg	Pb	00 34 59.1	+5.6
ORL				Pmax		00 35 05.9	
	comp=E,16nm,1.4s						
ORL				*e*		00 36 01.6	
ORL				*e*Sg	**Sg**	**00 36 35.5**	**-6.4**
ORL				Smax		00 36 42.6	
	comp=E,133nm,1.1s						
ULN	**Ulaanbaatar**	**7.49**	**204**	*e*Pn	**Pn**	**00 34 38.2**	**+3.2**
ULN				*e*Pg	Pg	00 35 02.6	-6.3
ULN				Pmax		00 35 08.0	
	comp=E,21nm,0.8s						
ULN				*e*Sg	**Sg**	**00 36 41.1**	**-4.7**
ULN				Smax		00 37 04.4	
	comp=E,146nm,1.3s						
SONM	**Songino Array**	**7.68**	**207**	Pn	**Pn**	**00 34 40.2**	**+2.5**
	comp=E,1.9nm,0.3s,baz=30,slow=12,SNR=24						
SONM				Sn	**Sn**	**00 36 11.7**	**+7.0**
	comp=E,1.8nm,0.3s,baz=24,slow=21,SNR=6.1						
SONM				Lg	Lg	00 36 52.0	
	comp=E,3.4nm,0.3s,baz=19,slow=26,SNR=16						
	comp=E,2.6nm,0.4s						
CLNS	**Chul'man**	**7.76**	**69**	*e*Sg	Sg	00 36 44.3	-10
ZEA	**Zeya**	**9.21**	**90**	*e*P	Pn	00 35 03.4	+5.0
ZEA				*e*		00 36 51.3	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KNGR	**Kungurtug, Tuv**	**9.52**	**250**	*e*Sg	Sn	00 37 42.9	+53
TDJR	**Todzha**	**9.53**	**262**	*e*Pg	Pn	00 35 39.0	+36
TDJR				*e*		00 37 05.3	
TDJR				*e*Sg	Sn	00 37 42.4	+52
ZALV	**Zalesovo Beam**	**15.61**	**278**	Pn	**Pn**	**00 36 26.5**	**+1.0**
	comp=Z,3.1nm,1.0s,baz=80,slow=9.2,SNR=8.9						
ZALV				Lg	Lg	00 40 58.7	
	baz=17,slow=41,SNR=0.9						
TIXI	**Tiksi**	**18.49**	**17**	P	**P**	**00 37 00.3**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=200,slow=8.5,SNR=4.0						
TIXI				Lg	Lg	00 42 21.9	
	comp=Z,0.2nm,0.3s,baz=74,slow=8.1,SNR=4.1						
	comp=Z,2.9nm,0.3s						
MKAR	**Makanchi Array**	**20.07**	**259**	P	Pn	00 37 22.2	+1.5
	comp=Z,0.3nm,0.4s,baz=56,slow=10,SNR=2.0						
	comp=Z,0.3nm,0.4s						
KURK	**Kurchatov**	**20.27**	**272**	P	Pn	00 37 23.6	+0.6
KURBB	**Kurchatov Arra**	**20.36**	**272**	P	Pn	00 37 23.6	-0.5
	comp=Z,0.9nm,0.8s,baz=64,slow=11,SNR=4.9						
	comp=Z,0.9nm,0.8s						
BVAR	**Borovoye Array**	**24.11**	**283**	P	**P**	**00 38 03.5**	**+2.3**
	comp=Z,0.6nm,0.5s,baz=66,slow=12,SNR=6.0						
	comp=Z,0.6nm,0.5s						
FINES	**FINESS Array B**	**42.57**	**315**	P	**P**	**00 40 43.0**	**+1.9**
	comp=Z,4.9nm,1.0s,baz=47,slow=6.4,SNR=3.3						
	comp=Z,4.9nm,1.0s						
FINES	**FINESS Array B**	**42.57**	**315**	P	**P**	**00 40 43.0**	**+1.9**
HFS	**Hagfors**	**48.27**	**318**	P	**P**	**00 41 28.0**	**+1.8**
	comp=Z,4.6nm,1.1s,baz=69,slow=9.6,SNR=1.7						
	comp=Z,4.6nm,1.1s						
NOA	**NORSAR Array B**	**48.61**	**320**	P	**P**	**00 41 30.9**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=49,slow=7.6,SNR=3.2						
	comp=Z,1.3nm,0.9s						
BRTR	**Keskin Array B**	**52.27**	**288**	P	**P**	**00 42 00.1**	**+3.1**
	comp=Z,0.5nm,0.9s,baz=49,slow=7.3,SNR=1.8						
	comp=Z,0.5nm,0.9s						
GERES	**GERESS Array B**	**56.00**	**308**	P	**P**	**00 42 24.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=66,slow=9.8,SNR=2.2						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**76.92**	**158**	P	**P**	**00 44 37.7**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=342,slow=5.2,SNR=2.3						
	comp=Z,0.3nm,0.6s						

*JMA **05** 00:50:19.4±0.1,24.4N±0.6×12.2E±, h26km±3km, MV3.0/11, TAIWAN REGION*
*TAP **05** 00:50:19.3,24.46N×121.82E,h17km,ML3.7,B*
ISC 05 00:50:19.4±0.8,**24.44N**±0.01×**121.86E**±0.02,**h17**km±4km, **n124**,s0**67**/201,**8C-3D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EWUT	**Wuta**	**0.07**	**273**	⇑*i*P		**Pg**	**00 50 22.6**	**-0.1**
EWUT				*i* S		**Sg**	**00 50 24.5**	**-0.3**
ENA	**Nanau**	**0.11**	**263**	⇑*i*P		**Pb**	**00 50 22.9**	**-0.2**
ENA				*i* S		**Sg**	**00 50 25.0**	**-0.3**
ESAO	**Su ao**	**0.13**	**354**	⇑*i*P		**Pb**	**00 50 23.3**	**-0.3**
ESAO				*i* S		**Sg**	**00 50 25.6**	**-0.2**
EAHA	**Aohua**	**0.16**	**224**	⇓*i*P		**Pb**	**00 50 23.6**	**-0.3**
EAHA				*i* S		**Sg**	**00 50 26.4**	**+0.1**
TWC	**Suao**	**0.17**	**357**	⇑*i*P		**Pb**	**00 50 23.8**	**-0.3**
TWC				*i* S		**Sg**	**00 50 26.5**	**-0.1**
EHP	**Heping Village**	**0.17**	**219**	P		**Pb**	**00 50 23.8**	**-0.4**
EHP				S		**Sg**	**00 50 26.8**	**+0.2**
NDS	**Dongshan**	**0.23**	**326**	*i* P		**Pg**	**00 50 24.6**	**-0.1**
NDS				S		**Sg**	**00 50 27.6**	**-0.7**
LATG	**Datong**	**0.32**	**287**	*i* P		**Pg**	**00 50 25.9**	**-0.3**
LATG				*i* S		**Sg**	**00 50 30.1**	**-0.8**
TWE	**Neicheng**	**0.33**	**328**	P		**Pg**	**00 50 26.1**	**-0.2**
TWE				S		**Sg**	**00 50 29.9**	**-1.2**
ENTT	**Nioudou**	**0.33**	**307**	⇑*i*P		**Pg**	**00 50 26.1**	**-0.3**
ENTT				*i* S		**Sg**	**00 50 30.9**	**-0.3**
ILA	**Ilan**	**0.34**	**343**	*i* P		**Pb**	**00 50 26.6**	**-0.4**
ILA				*i* S		**Sg**	**00 50 31.6**	**+0.3**
EOS2	**EOS2**	**0.34**	**94**	*i* P		**Pb**	**00 50 27.7**	**+0.7**
ETL	**Fush Village**	**0.35**	**217**	*i* P		**Pg**	**00 50 26.6**	**-0.2**
ETL				S		**Sg**	**00 50 31.6**	**-0.2**
NACB	**Ninganchiao**	**0.36**	**222**	*i* P		**Pg**	**00 50 26.4**	**-0.5**
NACB				*i* S		**Sg**	**00 50 31.4**	**-0.5**
FUSB	**Fushanzhiwuyua**	**0.40**	**322**	⇑*i*P		**Pg**	**00 50 27.5**	**-0.2**
FUSB				*i* S		**Sg**	**00 50 32.6**	**-0.6**
EGS		**0.41**	**9**	*e*P		**Pb**	**00 50 28.1**	**-0.1**
EGS				S		**Sg**	**00 50 33.0**	**-0.4**
NTC	**Toucheng**	**0.41**	**356**	P		**Pb**	**00 50 28.0**	**-0.3**
NTC				*e*S		**Sg**	**00 50 33.6**	**+0.1**
ETLH	**Xiulin Townshi**	**0.42**	**236**	*e*P		**Pg**	**00 50 27.6**	**-0.3**
ETLH				S		**Sg**	**00 50 33.1**	**-0.5**
TWD	**Chiawan**	**0.43**	**214**	⇓*i*P		**Pg**	**00 50 27.8**	**-0.3**
TWD				S		**Sg**	**00 50 33.8**	**-0.3**
NNSB	**Datong**	**0.43**	**268**	*i* P		**Pg**	**00 50 28.0**	**-0.3**
NNSB				*i* S		**Sg**	**00 50 33.3**	**-0.9**
NNSH	**Datong**	**0.43**	**268**	P		**Pg**	**00 50 28.0**	**-0.3**
NNSH				S		**Sg**	**00 50 33.3**	**-1.0**
NNS	**Nan Shan**	**0.44**	**270**	*i* P		**Pg**	**00 50 28.0**	**-0.4**
NNS				*e*S		**Sg**	**00 50 33.6**	**-0.9**
EOS3	**EOS3**	**0.45**	**110**	⇓*i*P		**Pb**	**00 50 29.6**	**+0.9**
NWLT	**Wulai**	**0.47**	**316**	*i* P		**Pg**	**00 50 28.5**	**-0.3**
NWLT				S		**Sg**	**00 50 34.3**	**-0.9**
YHNB	**Yeheng**	**0.49**	**297**	P		**Pg**	**00 50 29.3**	**-0.1**
YHNB	**Yeheng**	**0.49**	**297**	S		**Sg**	**00 50 35.3**	**-0.8**
YHNB	**Yeheng**	**0.49**	**297**	⇑*i*P		**Pg**	**00 50 29.0**	**-0.3**
YHNB				*i* S		**Sg**	**00 50 35.0**	**-1.0**
NSK	**Sanguang**	**0.51**	**297**	⇑*i*P		**Pg**	**00 50 29.2**	**-0.4**
NSK				*i* S		**Sg**	**00 50 35.5**	**-1.1**
HWA	**Hwalien**	**0.52**	**207**	*e*P		**Pb**	**00 50 30.1**	**0.0**
HWA				S		**Sb**	**00 50 37.7**	**+0.5**
EOS4	**EOS4**	**0.53**	**127**	*e*P		**Pb**	**00 50 30.5**	**+0.5**
TIPB	**Shuangxi**	**0.53**	**357**	P		**Pb**	**00 50 29.9**	**-0.4**
TIPB				*i* S		**Sg**	**00 50 36.4**	**-0.7**
TWB1	**Santiao Chiao**	**0.58**	**12**	P		**Pb**	**00 50 30.8**	**-0.3**
TWB1				S		**Sg**	**00 50 38.0**	**-0.6**
ETM	**Tongmen**	**0.58**	**215**	*e*P		**Pg**	**00 50 30.4**	**-0.5**
ETM				*e*S		**Sg**	**00 50 37.5**	**-1.1**
LXIB	**Xiulin Townshi**	**0.58**	**224**	*i* P		**Pg**	**00 50 30.4**	**-0.6**
LXIB				*e*S		**Sg**	**00 50 38.6**	**-0.3**
TWA	**Mucha**	**0.59**	**335**	*e*P		**Pb**	**00 50 31.2**	**-0.2**
TWA				S		**Sg**	**00 50 38.5**	**-0.6**
FUSS	**Fushou**	**0.59**	**251**	P		**Pg**	**00 50 31.0**	**-0.2**
FUSS				*e*S		**Sg**	**00 50 38.0**	**-0.4**
WHF	**Hehuan Shan**	**0.62**	**242**	*i* P		**Pg**	**00 50 31.2**	**-0.5**
WHF				S		**Sg**	**00 50 39.2**	**-0.8**
TEYL	**Yanliau Villag**	**0.62**	**203**	P		**Pb**	**00 50 31.6**	**-0.2**
TATO	**Taipei**	**0.63**	**328**	P		**Pb**	**00 50 31.9**	**-0.1**
TATO	**Taipei**	**0.63**	**328**	P		**Pg**	**00 50 31.6**	**-0.2**
TATO				*e*S		**Sg**	**00 50 38.3**	**-1.9**
NWF	**Wu-fen Shan**	**0.63**	**354**	*i* P		**Pb**	**00 50 32.1**	**0.0**
NWF				S		**Sg**	**00 50 39.9**	**-0.5**
WFSB	**Wu-fen Shan**	**0.63**	**354**	P		**Pb**	**00 50 32.1**	**+0.1**
WFSB				S		**Sg**	**00 50 39.8**	**-0.5**
SXI1	**Grass Mountain**	**0.65**	**1**	P		**Pb**	**00 50 32.6**	**+0.2**
SXI1				S		**Sg**	**00 50 40.6**	**-0.4**
TWT	**Tachien**	**0.65**	**253**	*i* P		**Pb**	**00 50 32.3**	**-0.1**
TWT				*i* S		**Sg**	**00 50 40.8**	**-0.1**
TDCB	**Techi**	**0.67**	**254**	P		**Pg**	**00 50 32.2**	**-0.3**
TDCB				S		**Sg**	**00 50 40.7**	**-0.7**
NFF	**Wufeng Townshi**	**0.70**	**286**	*e*P		**Pg**	**00 50 32.9**	**-0.2**
NFF				*i* S		**Sg**	**00 50 41.1**	**-1.0**
SHUL	**Shoufeng**	**0.70**	**203**	*e*P		**Pb**	**00 50 33.8**	**+0.6**
SHUL				*e*S		**Sn**	**00 50 45.6**	**+0.4**
KSHI	**Guanxi Townshi**	**0.71**	**298**	P		**Pb**	**00 50 33.4**	**+0.1**
KSHI				*e*S		**Sb**	**00 50 43.5**	**+0.7**
TNOU	**National Taiwa**	**0.71**	**354**	P		**Pb**	**00 50 33.2**	**-0.1**
TNOU				*e*S		**Sg**	**00 50 41.8**	**-1.0**
ESL	**Shilin**	**0.74**	**212**	*e*P		**Pg**	**00 50 33.1**	**-0.7**
ESL				*e*S		**Sg**	**00 50 42.2**	**-1.4**
YM01	**YM01**	**0.75**	**340**	*e*P		**Pb**	**00 50 34.3**	**+0.2**
YM01				S		**Sb**	**00 50 44.3**	**+0.3**
TWS1	**Kuangyinshan**	**0.77**	**329**	P		**Pb**	**00 50 34.8**	**+0.5**
TWS1				S		**Sb**	**00 50 45.4**	**+0.8**
ZUZH	**Zhuzihu**	**0.77**	**338**	*e*P		**Pb**	**00 50 34.7**	**+0.2**
ZUZH				*e*S		**Sg**	**00 50 44.8**	**0.0**
YM08	**YM08**	**0.78**	**342**	*e*P		**Pb**	**00 50 34.6**	**0.0**
YM08				*e*S		**Sg**	**00 50 44.4**	**-0.6**
TEGC	**Jichi Village**	**0.79**	**202**	*e*P		**Pn**	**00 50 36.0**	**+0.2**
TEGC				*e*S		**Sn**	**00 50 45.8**	**+0.9**
OWD	**Renai**	**0.79**	**232**	*i* P		**Pg**	**00 50 34.2**	**-0.6**
OWD				*e*S		**Sg**	**00 50 44.3**	**-1.0**
LIOB	**Emei**	**0.80**	**285**	*e*P		**Pb**	**00 50 35.2**	**+0.4**
LIOB				S		**Sg**	**00 50 44.5**	**-0.9**
ANP	**Anpu**	**0.80**	**338**	P		**Pb**	**00 50 35.2**	**+0.2**
NSTT	**Nanjuang**	**0.80**	**284**	*i* P		**Pb**	**00 50 35.1**	**+0.2**
NSTT				*i* S		**Sg**	**00 50 44.8**	**-0.9**
NCUH	**Zhongli**	**0.81**	**311**	P		**Pb**	**00 50 35.5**	**+0.4**
NCUH				S		**Sb**	**00 50 46.6**	**+0.9**
NTST	**Danshui**	**0.81**	**333**	*e*P		**Pb**	**00 50 35.6**	**+0.5**
NTST				*e*S		**Sb**	**00 50 46.9**	**+1.2**
WUSB	**Renai**	**0.81**	**237**	*i* P		**Pg**	**00 50 34.8**	**-0.5**
WUSB				S		**Sg**	**00 50 45.5**	**-0.5**
WARBT	**Fenglin Townsh**	**0.84**	**211**	*e*P		**Sg**	**00 50 34.8**	**-0.9**
WARBT				S		**Sg**	**00 50 45.4**	**-1.5**
WHP	**Taichung City**	**0.85**	**259**	*i* P		**Pb**	**00 50 35.7**	**0.0**
WHP				*e*S		**Sg**	**00 50 46.5**	**-0.7**
TWY	**Chenhua**	**0.86**	**344**	P		**Pn**	**00 50 36.6**	**+0.2**
TWY				S		**Sb**	**00 50 47.5**	**+0.2**
SBCB	**Hsinchu**	**0.87**	**294**	P		**Pn**	**00 50 36.9**	**0.0**
SBCB				S		**Sn**	**00 50 49.6**	**+0.4**
HSN	**Hsinchu**	**0.89**	**294**	*e*P		**Pg**	**00 50 36.0**	**-0.6**
HSN				S		**Sb**	**00 50 48.5**	**+0.6**
WCS	**Beigang Elemen**	**0.95**	**246**	P		**Pg**	**00 50 37.0**	**-0.7**
VWDT	**VWDT**	**0.95**	**224**	P		**Pg**	**00 50 37.1**	**-0.7**
VWDT				*e*S		**Sb**	**00 50 50.1**	**+0.4**
NMLH	**Miaoli**	**0.98**	**276**	P		**Pn**	**00 50 39.0**	**+0.6**
NMLH				*e*S		**Sb**	**00 50 51.0**	**+0.4**
JYNG	**Yonagunijimaku**	**0.99**	**89**	*e*S		**Sn**	**00 50 51.6**	**-0.6**
TWQ1	**Liyutan**	**0.99**	**265**	*e*P		**Pn**	**00 50 38.9**	**+0.2**
TWQ1				*e*S		**Sg**	**00 50 50.6**	**-1.1**
NSY	**Sanyi**	**1.00**	**269**	*e*P		**Pg**	**00 50 38.7**	**-0.1**
NSY				*e*S		**Sn**	**00 50 53.4**	**+0.9**
HGSD	**Ruisui**	**1.02**	**203**	*e*P		**Pg**	**00 50 38.8**	**-0.5**
SMLT	**Sun Moon Lake**	**1.04**	**238**	*e*P		**Pb**	**00 50 39.0**	**-0.1**
YOJ	**Yonaguni jima**	**1.05**	**89**	*e*P		**Pn**	**00 50 39.5**	**+0.1**
YOJ				*e*S		**Sg**	**00 50 53.1**	**-0.4**
SSLB	**Suanglung**	**1.05**	**232**	P		**Pb**	**00 50 38.9**	**-0.3**
SSLB	**Suanglung**	**1.05**	**232**	*e*P		**Pb**	**00 50 38.9**	**-0.3**
SSLB				*e*S		**Sb**	**00 50 52.3**	**-0.4**
EHY	**Hungye**	**1.05**	**208**	*e*P		**Pb**	**00 50 39.1**	**-0.1**
EHYH	**Wanrong**	**1.05**	**207**	*e*P		**Pb**	**00 50 39.0**	**-0.3**
YULB	**Yu-li**	**1.16**	**206**	P		**Pn**	**00 50 41.1**	**+0.1**
YULB	**Yu-li**	**1.16**	**206**	*e*P		**Pb**	**00 50 39.5**	**-1.6**
WHYT	**Xinyi Township**	**1.18**	**231**	*e*P		**Pb**	**00 50 41.2**	**-0.2**
WNT	**Mingjian**	**1.21**	**243**	*e*P		**Pg**	**00 50 43.4**	**+0.6**
WNT				*e*S		**Sn**	**00 51 01.6**	**+4.0**
WCHH	**Zhanghua**	**1.24**	**253**	*e*P		**Pg**	**00 50 43.4**	**+0.1**
YUS	**Yu-Shan**	**1.26**	**221**	*i* P		**Pg**	**00 50 43.1**	**-0.7**
YUS				*e*S		**Sn**	**00 51 00.0**	**+0.4**
CHKH	**Chenggong**	**1.31**	**199**	*e*P		**Pn**	**00 50 43.2**	**+0.2**
ALS	**Alishan**	**1.34**	**226**	*e*P		**Pg**	**00 50 44.8**	**-0.4**
FULB	**Fuli**	**1.34**	**203**	*e*P		**Pb**	**00 50 43.8**	**-0.3**
CHN5	**Tsauling**	**1.37**	**232**	P		**Pg**	**00 50 45.5**	**-0.3**
CHN5				*e*S		**Sg**	**00 51 04.9**	**+1.3**
WGK	**Gukeng**	**1.40**	**238**	*e*P		**Pb**	**00 50 45.1**	**-0.1**
EHD	**Haiduan**	**1.42**	**205**	*e*P		**Pn**	**00 50 44.6**	**+0.1**
WDLH	**Douliu**	**1.42**	**238**	*e*P		**Pg**	**00 50 46.5**	**-0.3**
ECS	**Chishang**	**1.46**	**204**	*e*P		**Pn**	**00 50 45.4**	**+0.3**
ELDTW	**Lidau**	**1.47**	**212**	*e*P		**Pn**	**00 50 45.4**	**+0.2**
WCKO	**Fanlu**	**1.52**	**229**	*e*P		**Pg**	**00 50 48.4**	**-0.3**
WCKO				*e*S		**Sg**	**00 51 10.5**	**+2.0**
EDH	**Donghe**	**1.55**	**199**	*e*P		**Pn**	**00 50 45.4**	**-0.9**
EDH				*e*S		**Sn**	**00 51 06.3**	**+0.4**
TPUB	**Ta-pu**	**1.60**	**225**	P		**Pg**	**00 50 49.1**	**-1.1**
TPUB	**Ta-pu**	**1.60**	**225**	*e*P		**Pb**	**00 50 48.8**	**+0.2**
STYH	**Taoyuan**	**1.61**	**218**	*e*P		**Pb**	**00 50 48.9**	**+0.2**
CHY	**Chiayi**	**1.61**	**235**	*e*P		**Pb**	**00 50 48.3**	**-0.4**
CHY				*e*S		**Sg**	**00 51 11.2**	**-0.2**
WTP	**Ta-pu**	**1.65**	**224**	*e*P		**Pb**	**00 50 49.9**	**+0.5**
WTP				*e*S		**Sg**	**00 51 13.8**	**+1.2**
LONT	**Longtian**	**1.67**	**204**	*e*P		**Pb**	**00 50 49.7**	**0.0**
IRIF	**Iriomote-Funau**	**1.71**	**93**	*e*P		**Pn**	**00 50 48.3**	**-0.1**
IRIF				*e*S		**Sn**	**00 51 09.9**	**0.0**
TWK	**Hsinying**	**1.72**	**227**	*e*P		**Pb**	**00 50 51.2**	**+0.6**
CHN1	**Nanshi**	**1.75**	**225**	*e*P		**Pb**	**00 50 51.5**	**+0.4**
WSL	**Shuilin Townsh**	**1.75**	**239**	*e*P		**Pb**	**00 50 51.4**	**+0.3**
WSL				*e*S		**Sg**	**00 51 14.9**	**-0.9**
TWG	**Pinlang**	**1.77**	**204**	*e*P		**Pb**	**00 50 50.5**	**-0.9**
TWGBT	**Beinan**	**1.77**	**204**	P		**Pn**	**00 50 49.4**	**+0.1**
TWGBT	**Beinan**	**1.77**	**204**	*e*P		**Pn**	**00 50 50.2**	**+0.9**
SGST	**Jiashian**	**1.79**	**221**	*e*P		**Pb**	**00 50 51.5**	**-0.3**
LDUT	**Ludao**	**1.80**	**192**	*e*P		**Pn**	**00 50 49.6**	**0.0**
LDUT				*i* S		**Sn**	**00 51 10.7**	**-1.4**
JKRS	**Kuro-shima**	**1.97**	**95**	*e*S		**Sn**	**00 51 17.1**	**+0.7**
SCST	**Cishan**	**1.99**	**219**	*e*P		**Pb**	**00 50 55.4**	**+0.2**
SSD	**Sandimen**	**2.03**	**214**	*e*P		**Pb**	**00 50 55.8**	**0.0**
JIJ	**Ishigaki jima**	**2.08**	**92**	*e*P		**Pn**	**00 50 54.1**	**+0.5**
JIJ				*e*S		**Sn**	**00 51 18.4**	**-0.9**
MASBT	**Mashibuluo**	**2.14**	**212**	*e*P		**Pb**	**00 50 56.2**	**-1.5**
JISG	**Ishigakijimahi**	**2.24**	**86**	*e*P		**Pn**	**00 50 55.7**	**0.0**
JISG				*e*S		**Sn**	**00 51 23.2**	**+0.2**
EAST	**Anshuo**	**2.25**	**205**	*e*P		**Pn**	**00 50 56.9**	**+0.9**
MATB	**Ma-tsu**	**2.43**	**315**	*e*P		**Pn**	**00 50 58.5**	**+0.2**
PTMZ	**Houxiangcun**	**2.56**	**284**	*e*P		**Pn**	**00 51 00.2**	**0.0**
XPSS	**Dashiqiu**	**2.90**	**329**	*e*P		**Pn**	**00 51 04.1**	**-0.8**
KNMB	**Chin-men Tao**	**3.16**	**271**	*e*P		**Pn**	**00 51 08.6**	**+0.1**
AXDP	**Jialang**	**3.57**	**278**	*e*P		**Pn**	**00 51 13.9**	**-0.2**

*GEN **05** 00:54:20.5,46.32N×7.37E,h6km±1km,Ml2.8*
*ZUR **05** 00:54:21.2,46.32N×7.37E,h5km,MLh3.3/148,Error ellipse: s-maj=1313.5km s-min=328.3km az=68.0*
*LDG **05** 00:54:21.7±0.1,46.30N×7.40E,h5km,Ml3.5/49,Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
*PRU **05** 00:54:22.8,46.29N×7.48E,h10km*
*ROM **05** 00:54:22.2±0.1,46.242N±0.004×7.385E±0.005, h11km,ML3.0/72,Error ellipse: s-maj=0.5km s-min=0.3km az=338.0*
*BGR **05** 00:54:23.2±0.5,46.36N×7.36E,h10km,ML3.4/12,Error ellipse: s-maj=10.0km s-min=6.7km az=133.0*
ISC 05 00:54:20.6±0.7,**46.332N**±0.009×**7.380E**±0.009, **h10**km±3km,**n393**,s1**23**/614,**91C-97D**,**Switzerland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STSW2	**Zeuzier, Staus**	**0.04**	**70**	⇓Pg		**Pg**	**00 54 22.9**	**+0.2**
STSW2				Sg		**Sg**	**00 54 24.0**	**-0.3**
STSW2	**Zeuzier, Staus**	**0.04**	**70**	⇓Pg		**Pg**	**00 54 22.9**	**+0.2**
STSW2				Sg		**Sg**	**00 54 24.0**	**-0.3**
RAW2	**Sanetsch, VS**	**0.05**	**249**	⇓Pg		**Pg**	**00 54 22.7**	**-0.2**
RAW2				Sg		**Sg**	**00 54 23.5**	**-0.9**
RAW2	**Sanetsch, VS**	**0.05**	**249**	⇓Pg		**Pg**	**00 54 22.6**	**-0.2**
RAW2				Sg		**Sg**	**00 54 23.6**	**-0.9**
SAYF2	**Ayent-Fortunoz**	**0.05**	**150**	⇑Pg		**Pg**	**00 54 22.8**	**+0.1**
SAYF2				Sg		**Sg**	**00 54 23.9**	**-0

SAIG	**Aigle Rue de l**	**0.29**	**267**	⇓Pg	**Pg**	**00 54 26.6 +0.3**
SAIG				Sg	**Sg**	**00 54 30.9 +0.7**
RAR01	**Raron, Gemeind**	**0.29**	**94**	⇓Pg	**Pb**	**00 54 27.4 -0.6**
RAR01				Sg	**Sb**	**00 54 31.8 -1.1**
AIGLE	**Aigle**	**0.30**	**272**	⇓Pg	**Pg**	**00 54 26.8 +0.2**
AIGLE	**Aigle**	**0.30**	**272**	⇓Pg	**Pg**	**00 54 26.8 +0.2**
AIGLE				Sg	**Sg**	**00 54 31.0 +0.5**
JAUN	**Jaun, Euschels**	**0.31**	**348**	⇑Pg	**Pg**	**00 54 27.7 +0.8**
JAUN				Sg	**Sb**	**00 54 32.7 -0.9**
JAUN	**Jaun, Euschels**	**0.31**	**348**	⇑Pg	**Pg**	**00 54 27.6 +0.8**
JAUN				Sg	**Sb**	**00 54 32.7 -0.9**
RAR02	**Raron, Airdrom**	**0.31**	**95**	⇓Pg	**Pb**	**00 54 27.7 -0.5**
RAR02				Sg	**Sb**	**00 54 32.3 -1.1**
SFRS	**Frutigen, Schu**	**0.32**	**37**	⇑Pg	**Pb**	**00 54 27.7 -0.7**
SFRS	**Frutigen, Schu**	**0.32**	**37**	Pg	**Pb**	**00 54 27.8 -0.7**
SFRS				Sg	**Sb**	**00 54 32.7 -0.9**
SMAO	**Martigny, Rue**	**0.32**	**222**	⇑Pg	**Pg**	**00 54 27.3 +0.4**
SMAO	**Martigny, Rue**	**0.32**	**222**	⇑Pg	**Pg**	**00 54 27.3 +0.4**
SMAO				Sg	**Sg**	**00 54 31.4 +0.3**
ILLEZ	**Chalet Vouargn**	**0.33**	**250**	⇓Pg	**Pg**	**00 54 27.3 +0.2**
ILLEZ				Sg	**Sg**	**00 54 31.8 +0.4**
ILLEZ	**Chalet Vouargn**	**0.33**	**250**	⇓Pg	**Pg**	**00 54 27.3 +0.2**
ILLEZ				Sg	**Sg**	**00 54 31.9 +0.4**
SNIB	**St. Niklaus Ba**	**0.33**	**118**	⇓Pg	**Pg**	**00 54 28.0 +0.7**
EMBD	**Embd, Matterta**	**0.33**	**110**	⇓Pg	**Pg**	**00 54 28.0 +0.7**
EMBD	**Embd, Matterta**	**0.33**	**110**	⇓Pg	**Pg**	**00 54 28.0 +0.7**
EMBD				Sg	**Sg**	**00 54 32.5 +0.7**
EMBD	**Embd, Matterta**	**0.33**	**110**	P	**Pg**	**00 54 28.0 +0.7**
EMBD				S	**Sg**	**00 54 32.6 +0.9**
SALAN	**Lac Salanfe**	**0.34**	**237**	⇑Pg	**Pg**	**00 54 27.7 +0.2**
SALAN				Sg	**Sg**	**00 54 32.2 +0.2**
SALAN	**Lac Salanfe**	**0.34**	**237**	⇓Pg	**Pg**	**00 54 27.6 +0.2**
SALAN				Sg	**Sg**	**00 54 32.2 +0.2**
SVISP	**Visp, Lonza VS**	**0.35**	**95**	⇓Pg	**Pb**	**00 54 28.3 -0.5**
SVISP				Sg	**Sb**	**00 54 33.2 -1.3**
SVIO	**Visp Obere Sta**	**0.35**	**97**	⇓Pg	**Pb**	**00 54 28.4 -0.6**
SVIO				Sg	**Sb**	**00 54 33.2 -1.3**
SVIO	**Visp Obere Sta**	**0.35**	**97**	⇓Pg	**Pb**	**00 54 28.4 -0.6**
SVIO				Sg	**Sb**	**00 54 33.2 -1.3**
SVIT	**Visp-Terbiners**	**0.35**	**97**	⇓Pg	**Pb**	**00 54 28.4 -0.6**
SVIT				Sg	**Sb**	**00 54 33.4 -1.3**
SVIT	**Visp-Terbiners**	**0.35**	**97**	⇓Pg	**Pb**	**00 54 28.4 -0.6**
SVIT				Sg	**Sb**	**00 54 33.3 -1.3**
SVIL	**Visp Littennar**	**0.35**	**96**	⇓Pg	**Pb**	**00 54 28.5 -0.5**
SVIL				Sg	**Sb**	**00 54 33.6 -1.1**
SBUL	**Bulle cole,**	**0.37**	**323**	⇓Pg	**Pg**	**00 54 29.1 +1.1**
SBUL				Sg	**Sb**	**00 54 35.0 -0.3**
SBUL	**Bulle cole,**	**0.37**	**323**	⇓Pg	**Pg**	**00 54 29.0 +1.1**
SBUL				Sg	**Sb**	**00 54 35.0 -0.3**
WIMIS	**Wimmis**	**0.37**	**27**	⇑Pg	**Pb**	**00 54 28.9 -0.5**
WIMIS	**Wimmis**	**0.37**	**27**	⇑Pg	**Pb**	**00 54 28.8 -0.5**
WIMIS				Sg	**Sb**	**00 54 34.6 -0.6**
BIBA	**Brigerbad**	**0.38**	**94**	⇓Pg	**Pb**	**00 54 29.0 -0.5**
BIBA				Sg	**Sg**	**00 54 34.1 +0.9**
SVEJ	**Vevey Jardin d**	**0.40**	**289**	Pg	**Pg**	**00 54 28.9 +0.6**
SZEK	**Zermatt, Kirch**	**0.40**	**141**	⇓Pg	**Pg**	**00 54 29.0 +0.5**
SZEK				Sg	**Sg**	**00 54 34.1 +0.2**
SEMOS	**Emosson Stauma**	**0.41**	**230**	⇑Pg	**Pg**	**00 54 28.9 +0.2**
SNTZ	**Naters, Zentru**	**0.42**	**91**	⇓Pg	**Pb**	**00 54 29.8 -0.4**
SNTZ				Sg	**Sb**	**00 54 35.6 -1.1**
SNTZ	**Naters, Zentru**	**0.42**	**91**	⇓Pg	**Pb**	**00 54 29.8 -0.4**
SNTZ				Sg	**Sb**	**00 54 35.6 -1.1**
MFERR	**Prayon, Val Fe**	**0.42**	**206**	⇑Pg	**Pg**	**00 54 29.1 +0.1**
MFERR				Sg	**Sg**	**00 54 34.6 0.0**
MFERR	**Prayon, Val Fe**	**0.42**	**206**	⇑Pg	**Pg**	**00 54 29.1 +0.1**
MFERR				Sg	**Sg**	**00 54 34.5 -0.1**
STK	**Thun, Kantonss**	**0.45**	**23**	Pg	**Pb**	**00 54 30.7 +0.1**
SIMPL	**Simplonpass**	**0.45**	**101**	⇓Pg	**Pb**	**00 54 30.2 -0.6**
SIMPL				Sg	**Sg**	**00 54 36.3 +0.8**
SIMPL	**Simplonpass**	**0.45**	**101**	⇓Pg	**Pb**	**00 54 30.2 -0.6**
SIMPL				Sg	**Sg**	**00 54 36.3 +0.8**
SIMPL	**Simplonpass**	**0.45**	**101**	P	**Pb**	**00 54 30.2 -0.6**
SIMPL				S	**Sg**	**00 54 36.4 +0.8**
SFRU	**Fribourg, Univ**	**0.48**	**342**	⇑Pg	**Pb**	**00 54 31.5 +0.2**
SFRU				Sg	**Sb**	**00 54 38.7 +0.2**
STAF	**Tafers**	**0.49**	**347**	⇑Pg	**Pb**	**00 54 31.4 +0.1**
STAF				Sg	**Sb**	**00 54 38.8 +0.3**
MMK	**Mattmark**	**0.49**	**125**	⇓Pg	**Pg**	**00 54 30.6 +0.4**
MMK	**Mattmark**	**0.49**	**125**	⇓Pg	**Pg**	**00 54 30.6 +0.4**
MMK				Sg	**Sg**	**00 54 37.0 +0.2**
MMK	**Mattmark**	**0.49**	**125**	P	**Pg**	**00 54 30.6 +0.4**
MMK				S	**Sg**	**00 54 37.0 +0.2**
MMK	**Mattmark**	**0.49**	**125**	P	**Pg**	**00 54 30.8 +0.6**
MMK				S	**Sg**	**00 54 37.3 +0.5**
MMK				AML	AML	
	comp=N,262µm,0.2s					
MMK				AML	AML	
	comp=N,262µm,0.2s					
MMK				AML	AML	
	comp=N,262µm,1.8s					
MMK				AML	AML	
	comp=E,174µm,0.2s					
OGSI	**Sixt**	**0.51**	**239**	⇑Pg	**Pg**	**00 54 30.8 +0.3**
OGSI				Sg	**Sg**	**00 54 37.5 +0.3**
OGSI	**Sixt**	**0.51**	**239**	Pg	**Pg**	**00 54 30.8 +0.3**
OGSI				Sg	**Sg**	**00 54 37.5 +0.3**
FIESA	**Fiescheralp**	**0.52**	**78**	⇓Pg	**Pb**	**00 54 31.5 -0.4**
FIESA	**Fiescheralp**	**0.52**	**78**	⇓Pg	**Pb**	**00 54 31.5 -0.4**
FIESA				Sg	**Sb**	**00 54 38.8 -0.8**
FIESA	**Fiescheralp**	**0.52**	**78**	P	**Pb**	**00 54 31.5 -0.4**
FIESA				S	**Sb**	**00 54 38.5 -1.0**
REMY	**Saint-Rhmy-en**	**0.52**	**198**	⇑Pg	**Pg**	**00 54 30.9 +0.2**
SMOE	**Moudon cole,**	**0.53**	**311**	⇓Pg	**Pg**	**00 54 31.6 +0.8**
TORNY	**Torny/Romont**	**0.53**	**327**	⇓Pg	**Pb**	**00 54 32.0 -0.1**
TORNY	**Torny/Romont**	**0.53**	**327**	⇓Pg	**Pb**	**00 54 32.0 -0.1**
TORNY				Sg	**Sb**	**00 54 39.8 +0.1**
SCOU	**Cournillens**	**0.56**	**340**	⇑Pg	**Pb**	**00 54 32.7 +0.2**
SCOU				Sg	**Sb**	**00 54 40.9 +0.3**
SATI	**Passo dei Sala**	**0.57**	**143**	⇓Pg	**Pg**	**00 54 32.0 +0.3**
SATI				Sg	**Sg**	**00 54 38.9 -0.4**
SATI	**Passo dei Sala**	**0.57**	**143**	P	**Pg**	**00 54 32.0 +0.3**
SATI				S	**Sg**	**00 54 39.0 -0.2**
SATI	**Passo dei Sala**	**0.57**	**143**	P	**Pg**	**00 54 32.0 +0.3**
SATI				S	**Sg**	**00 54 39.0 -0.2**
SATI				AML	AML	
	comp=E,1260µm,0.5s					
SATI				AML	AML	
	comp=N,1147µm,1.1s					
SATI				AML	AML	
	comp=E,1260µm,1.5s					
BLANC	**P.ta Helbronne**	**0.58**	**213**	⇑Pg	**Pg**	**00 54 32.3 +0.4**
MRGE	**Morge**	**0.60**	**202**	⇑Pg	**Pg**	**00 54 32.3 0.0**
MRGE				Sg	**Sg**	**00 54 39.9 -0.4**
MRGE	**Morge**	**0.60**	**202**	P	**Pg**	**00 54 32.4 0.0**
MRGE				S	**Sg**	**00 54 40.2 -0.1**
MRGE	**Morge**	**0.60**	**202**	P	**Pg**	**00 54 32.4 0.0**
MRGE				S	**Sg**	**00 54 40.1 -0.1**
MRGE				AML	AML	
	comp=E,1420µm,1.1s					
MRGE				AML	AML	
	comp=N,1275µm,0.6s					
MRGE				AML	AML	
	comp=N,1275µm,1.4s					
SBERN	**Bern, Kleine S**	**0.62**	**4**	⇑Pg	**Pb**	**00 54 33.8 +0.4**
SBERN				PmP		00 54 37.2
SCHAT	**Chetillon,**	**0.63**	**323**	Pg	**Pb**	**00 54 33.8 +0.2**
WOLEN	**Wohlen bei Ber**	**0.67**	**359**	⇑Pg	**Pb**	**00 54 34.9 +0.5**
WOLEN				PmP		00 54 37.9
WOLEN				Sg	**Sb**	**00 54 44.7 +1.0**
WOLEN				SmS		00 54 49.3
HASLI	**Hasliberg/Brie**	**0.68**	**51**	Pg	**Pb**	**00 54 34.6 0.0**
GRIMS	**Grimsel Gerste**	**0.69**	**69**	⇓Pg	**Pb**	**00 54 34.8 -0.2**
GRIMS				Sg	**Sb**	**00 54 43.8 -0.9**
BTNF	**Ladstafel, Nuf**	**0.70**	**78**	⇓Pg	**Pb**	**00 54 34.9 -0.1**
BTNF				Sg	**Sb**	**00 54 44.0 -0.8**
SNES2	**Neuenburg, Obs**	**0.73**	**336**	⇑Pg	**Pb**	**00 54 35.8 +0.4**
SNES2				PmP		00 54 38.5
SNES2				Sg	**Sb**	**00 54 45.9 +0.4**
SNES2				SmS		00 54 50.0
RA43	**Rhonegletscher**	**0.74**	**69**	⇓Pg	**Pb**	**00 54 35.6 -0.1**
RA43				Sg	**Sb**	**00 54 45.5 -0.4**
CIRO	**Champorcher**	**0.74**	**170**	⇑Pg	**Pg**	**00 54 34.5 -0.3**
CIRO				Sg	**Sg**	**00 54 43.5 -1.2**
CIRO	**Champorcher**	**0.74**	**170**	P	**Pg**	**00 54 34.6 -0.3**
CIRO				S	**Sg**	**00 54 43.4 -1.2**
CIRO	**Champorcher**	**0.74**	**170**	P	**Pg**	**00 54 34.6 -0.3**
CIRO				S	**Sg**	**00 54 43.8 -0.9**
CIRO				AML	AML	
	comp=E,722µm,0.4s					
CIRO				AML	AML	
	comp=N,580µm,1.2s					
CIRO				AML	AML	
	comp=N,580µm,0.8s					
GSF03	**Obergoms, Fort**	**0.74**	**70**	⇓Pg	**Pb**	**00 54 35.7 0.0**
GSF03				Sg	**Sb**	**00 54 45.6 -0.4**
A060B	**Romoos, Napf,**	**0.78**	**32**	⇑Pg	**Pb**	**00 54 37.1 +0.8**
A060B				PmP		00 54 39.7
A060B				Sg	**Sb**	**00 54 48.3 +1.3**
GIMEL	**St. Georges /**	**0.80**	**285**	⇓Pg	**Pg**	**00 54 37.0 +1.0**
GIMEL	**St. Georges /**	**0.80**	**285**	P	**Pb**	**00 54 37.2 +0.6**
GIMEL				AML	AML	
	comp=E,1210µm,0.2s					
GIMEL				AML	AML	
	comp=E,1210µm,0.2s					
GIMEL				AML	AML	
	comp=N,966µm,1.3s					
GIMEL				AML	AML	
	comp=N,966µm,1.3s					
GIMEL				AML	AML	
	comp=N,966µm,0.7s					
GIMEL				AML	AML	
	comp=E,1210µm,1.8s					
SARK	**Sarnen Kantons**	**0.82**	**46**	Pg	**Pb**	**00 54 37.6 +0.7**
SARK				PmP		00 54 40.4
OG02	**Monnetier-Morn**	**0.82**	**258**	Pg	**Pg**	**00 54 36.9 +0.4**
RSL	**Roselend**	**0.83**	**220**	⇑Pg	**Pg**	**00 54 36.5 -0.1**
RSL	**Roselend**	**0.83**	**220**	P	**Pg**	**00 54 36.5 -0.1**
RSL				S	**Sg**	**00 54 47.4 -0.1**
TRAV	**Traversella**	**0.86**	**163**	Pg	**Pg**	**00 54 36.9 -0.3**
TRAV	**Traversella**	**0.86**	**163**	P	**Pg**	**00 54 36.9 -0.3**
TRAV				S	**Sg**	**00 54 47.1 -1.1**
TRAV	**Traversella**	**0.86**	**163**	P	**Pg**	**00 54 36.8 -0.3**
TRAV				S	**Sg**	**00 54 47.2 -1.1**
TRAV				AML	AML	
	comp=N,1670µm,0.3s					
TRAV				AML	AML	
	comp=E,1190µm,1.2s					
TRAV				AML	AML	
	comp=E,1190µm,0.8s					
BTAO	**Waffenplatz Be**	**0.86**	**76**	⇓Pg	**Pb**	**00 54 37.8 +0.1**
BTAO				Sg	**Sg**	**00 54 48.6 +0.2**
SENGL	**Engelberg, Klo**	**0.86**	**55**	⇓Pg	**Pb**	**00 54 38.1 +0.4**
BRANT	**Les Verrieres**	**0.87**	**314**	⇓Pg	**Pb**	**00 54 38.3 +0.5**
LSD	**Lago del Serru**	**0.89**	**191**	⇑Pg	**Pg**	**00 54 37.5 -0.2**
LSD	**Lago del Serru**	**0.89**	**191**	P	**Pg**	**00 54 37.5 -0.2**
LSD				S	**Sg**	**00 54 49.1 -0.2**
LSD	**Lago del Serru**	**0.89**	**191**	P	**Pg**	**00 54 37.5 -0.2**
LSD				S	**Sg**	**00 54 48.5 -0.8**
LSD				AML	AML	
	comp=E,5µm,1.0s					
LSD				AML	AML	
	comp=E,5µm,1.0s					
LSD				AML	AML	
	comp=N,492µm,0.3s					
GMS01	**Gemsstock NE-G**	**0.89**	**72**	⇓Pg	**Pb**	**00 54 38.7 +0.3**
FUSIO	**Fusio**	**0.90**	**82**	⇓Pg	**Pb**	**00 54 38.5 +0.2**
FUSIO				Sg	**Sb**	**00 54 50.1 -0.2**
FUSIO	**Fusio**	**0.90**	**82**	P	**Pb**	**00 54 38.5 +0.2**
FUSIO				S	**Sb**	**00 54 50.2 -0.2**
FUSIO	**Fusio**	**0.90**	**82**	P	**Pb**	**00 54 38.5 +0.2**
FUSIO				AML	AML	
	comp=E,732µm,1.2s					
FUSIO				AML	AML	
	comp=N,676µm,1.0s					
FUSIO				AML	AML	
	comp=N,676µm,1.0s					
FUSIO				AML	AML	
	comp=E,732µm,0.8s					
BNALP	**Bannalp**	**0.90**	**53**	⇓Pg	**Pb**	**00 54 38.8 +0.4**
BNALP	**Bannalp**	**0.90**	**53**	P	**Pb**	**00 54 39.0 +0.6**
BNALP				AML	AML	
	comp=E,1018µm,0.4s					
BNALP				AML	AML	
	comp=N,766µm,1.6s					
BNALP				AML	AML	
	comp=N,766µm,0.4s					
BNALP				AML	AML	
	comp=E,1018µm,1.6s					
LPL	**La Plagne**	**0.93**	**209**	*e*Pg	**Pg**	**00 54 38.3 -0.2**
LPL				*e*Sg	**Sg**	**00 54 50.4 -0.3**
	comp=E,45nm,0.2s					
CABF	**La Chapelle**	**0.94**	**288**	*e*Pg	**Pb**	**00 54 39.6 +0.6**
CABF	**La Chapelle**	**0.94**	**288**	*e*P	**Pn**	**00 54 41.1 +1.2**
CABF				*e*Sg	**Sg**	**00 54 51.8 +1.0**
	comp=E,286nm,0.3s					
LPG	**La Plagne**	**0.94**	**208**	*e*Pg	**Pg**	**00 54 38.8 +0.1**
LPG				*e*Sg	**Sg**	**00 54 51.1 +0.1**
	comp=E,65nm,0.2s					
SLUW	**Luzern Werkhof**	**0.96**	**42**	Pg	**Pn**	**00 54 41.1 +0.9**
NALPS	**Val Nalps**	**0.98**	**74**	⇓Pg	**Pb**	**00 54 40.1 +0.3**
SAIRA	**Les Sairains D**	**0.99**	**348**	Pg	**Pn**	**00 54 41.3 +0.6**
DAGMA	**Luttertal, Dagm**	**1.00**	**26**	⇑Pg	**Pn**	**00 54 41.0 +0.2**
SEFS	**Erstfeld, Schu**	**1.00**	**60**	Pg	**Pb**	**00 54 40.6 +0.6**
BALST	**Balsthal**	**1.03**	**12**	⇑Pg	**Pb**	**00 54 41.2 +0.7**
BALST	**Balsthal**	**1.03**	**12**	*e*Pn	**Pb**	**00 54 41.3 +0.7**
BALST				*e*Pg	**Pn**	**00 54 42.2 +1.0**
BALST				*e*Sg	**Sn**	**00 54 56.8 +1.2**
CHMF	**Charmoille**	**1.04**	**332**	⇑Pg	**Pb**	**00 54 41.5 +0.7**
MTIA2	**Mont Terri MTI**	**1.05**	**352**	Pg	**Pn**	**00 54 41.8 +0.4**
MTIA3	**Mont Terri MTI**	**1.05**	**350**	⇑Pg	**Pn**	**00 54 41.8 +0.3**
MTIA3				PmP		00 54 43.4
MTI02	**Mont Terri, (H**	**1.06**	**352**	⇑Pg	**Pn**	**00 54 41.8 +0.3**
MTIA4	**Mont Terri MTI**	**1.06**	**353**	Pg	**Pn**	**00 54 42.0 +0.4**
BOURR	**Bourrignon**	**1.07**	**355**	⇑Pn	**Pn**	**00 54 42.0 +0.3**
BOURR				PmP		00 54 43.6
VARE	**Varese**	**1.07**	**115**	Pg	**Pg**	**00 54 41.3 +0.1**
VARE	**Varese**	**1.07**	**115**	P	**Pb**	**00 54 41.5 +0.2**
VARE				AML	AML	
	comp=N,883µm,1.3s					
VARE				AML	AML	
	comp=E,775µm,0.4s					
MUO	**Muotathal**	**1.07**	**53**	Pn	**Pn**	**00 54 42.4 +0.5**
RIVEL	**MONT RIVEL**	**1.09**	**294**	Pn	**Pg**	**00 54 42.3 +0.7**
HAMIK	**Hmikon, Dlik**	**1.10**	**33**	⇑Pn	**Pn**	**00 54 42.9 +0.7**
PREO2	**Preonzo, Alpe**	**1.11**	**94**	⇓Pg	**Pb**	**00 54 42.4 +0.3**
PREO4	**Preonzo, Alpe**	**1.11**	**94**	⇓Pg	**Pb**	**00 54 42.4 +0.3**
SWYZ	**Schwyz, Kanton**	**1.12**	**51**	Pg	**Pn**	**00 54 43.2 +0.8**
OGMY	**Moye**	**1.13**	**247**	Pg	**Pg**	**00 54 42.8 +0.5**
SAARA	**Aarau, neue Ka**	**1.15**	**23**	Pg	**Pn**	**00 54 43.8 +1.0**
SAARA				PmP		00 54 44.9
RSP	**Reno Superiore**	**1.19**	**184**	Pg	**Pg**	**00 54 42.8 -0.6**
RSP	**Reno Superiore**	**1.19**	**184**	P	**Pg**	**00 54 42.7 -0.6**
RSP				AML	AML	
	comp=E,512µm,0.9s					
RSP				AML	AML	
	comp=E,526µm,0.3s					
RSP				AML	AML	
	comp=N,693µm,0.5s					
RSP				AML	AML	
	comp=E,512µm,1.1s					
RSP				AML	AML	
	comp=N,665µm,0.5s					
EMMET	**Emmethof**	**1.19**	**21**	⇑Pn	**Pn**	**00 54 44.2 +0.8**
SRER	**Reinach, Raine**	**1.19**	**7**	Pn	**Pn**	**00 54 44.4 +1.1**
BOUC	**Bouclans**	**1.20**	**320**	Pn	**Pn**	**00 54 44.5 +1.0**
ROTHE	**Rothenfluh**	**1.20**	**18**	⇑Pn	**Pn**	**00 54 44.5 +1.0**
MUGIO	**Muggio**	**1.23**	**109**	⇓Pg	**Pb**	**00 54 44.1 +0.2**
MUGIO	**Muggio**	**1.23**	**109**	P	**Pn**	**00 54 44.3 +0.5**
MUGIO				S	**Sg**	**00 54 59.6 -0.5**
MUGIO				AML	AML	
	comp=E,312µm,0.3s					
MUGIO				AML	AML	
	comp=N,398µm,0.2s					
MUGIO				AML	AML	
	comp=E,312µm,1.7s					
MATTE	**Schuetzenmatte**	**1.23**	**6**	Pn	**Pn**	**00 54 44.6 +0.8**
SKAF	**Kaiseraugst-Fr**	**1.23**	**11**	Pn	**Pn**	**00 54 44.6 +0.7**
SBEG	**Bettingen Gewe**	**1.25**	**9**	⇑Pn	**Pn**	**00 54 45.0 +0.8**
EWZT2	**Wettswil, ZR**	**1.26**	**37**	⇑Pn	**Pn**	**00 54 45.8 +1.4**
OG35	**Corcelles**	**1.29**	**258**	⇑Pn	**Pn**	**00 54 45.4 +0.7**
PANIX	**Pigniu (Panix)**	**1.29**	**67**	⇓Pg	**Pb**	**00 54 45.8 +0.7**
PANIX				Sg	**Sn**	**00 55 02.3 0.0**
SULZ	**Cheisacher**	**1.30**	**22**	⇑Pn	**Pg**	**00 54 45.7 +0.2**
SULZ	**Cheisacher**	**1.30**	**22**	*e*Pn	**Pg**	**00 54 45.7 +0.2**
SULZ				*e*Sg	**Sn**	**00 55 04.7 +2.4**
MONC	**Moncucco Torin**	**1.31**	**163**	Pn	**Pg**	**00 54 47.6 +1.8**
MONC	**Moncucco Torin**	**1.31**	**163**	AML	AML	
	comp=E,950µm,0.4s					
MONC				AML	AML	
	comp=N,966µm,0.3s					
MONC				AML	AML	
	comp=N,966µm,1.7s					
STUF	**Presbytere Uff**	**1.32**	**2**	⇑Pn	**Pg**	**00 54 46.0 +0.1**
ZUR	**Degenried**	**1.32**	**38**	⇑Pn	**Pg**	**00 54 46.5 +0.5**
ILLF	**Illfurth**	**1.35**	**356**	⇑Pn	**Pb**	**00 54 46.5 +0.5**
TUE	**Stuetta**	**1.37**	**83**	⇓Pg	**Pg**	**00 54 47.0 +0.1**
TUE	**Stuetta**	**1.37**	**83**	P	**Pg**	**00 54 47.0 +0.1**
TUE				S	**Sn**	**00 55 05.2 +1.0**
TUE				AML	AML	
	comp=E,846µm,0.6s					
TUE				AML	AML	
	comp=N,1031µm,1.2s					
TUE				AML	AML	
	comp=E,830µm,0.6s					
TUE				AML	AML	
	comp=N,1040µm,1.2s					
TUE				AML	AML	
	comp=N,1040µm,0.8s					
TUE				AML	AML	
	comp=N,1031µm,0.8s					
TUE				AML	AML	
	comp=E,830µm,1.4s					
TUE				AML	AML	
	comp=E,846µm,1.4s					
BNI	**Bardonecchia**	**1.37**	**201**	AML	AML	
	comp=E,178µm,1.5s					
BNI				AML	AML	
	comp=E,178µm,0.5s					
BNI				AML	AML	
	comp=N,170µm,0.6s					
BOBI	**Bbikon, Wasse**	**1.38**	**28**	⇑Pn	**Pg**	**00 54 46.9 -0.2**
ACHB	**Acheberg**	**1.39**	**25**	⇑Pn	**Pb**	**00 54 46.8 +0.1**
ENDD	**Endenburg**	**1.40**	**10**	⇑Pn	**Pn**	**00 54 46.7 +0.4**
QEG01	**Stadel, Weggab**	**1.43**	**31**	⇑Pn	**Pb**	**00 54 47.7 +0.3**
NDBU	**Wasserreservoi**	**1.44**	**32**	Pn	**Pb**	**00 54 47.7 +0.1**
RONF	**Ronchamp**	**1.47**	**340**	⇑Pn	**Pb**	**00 54 48.2 +0.2**
RRL	**Rocca Remolon**	**1.47**	**197**	P	**Pn**	**00 54 47.3 0.0**
QEG00	**Eglisau, Reser**	**1.48**	**32**	⇑Pn	**Pb**	**00 54 48.3 0.0**
BHB	**Bricherasio**	**1.49**	**183**	P	**Pn**	**00 54 48.0 +0.5**
BHB				S	**Sn**	**00 55 06.0 -1.0**
BHB				AML	AML	
	comp=E,221µm,0.5s					
BHB				AML	AML	
	comp=N,196µm,0.3s					
BHB				AML	AML	
	comp=N,196µm,1.7s					
METMA	**Mettma DE**	**1.50**	**23**	⇑Pn	**Pn**	**00 54 48.0 +0.3**
METMA	**Mettma DE**	**1.50**	**23**	*e*Pn	**Pg**	**00 54 50.4 +0.9**
METMA				*e*Sg	**Sg**	**00 55 10.3 +1.3**
QEG02	**Wil, Freihalte**	**1.51**	**31**	⇑Pn	**Pn**	**00 54 48.4 +0.7**
A121B	**Sulzburg**	**1.52**	**9**	⇑Pn	**Pn**	**00 54 48.3 +0.4**
HINF	**Hinteralfeld**	**1.53**	**347**	*e*Pn	**Pn**	**00 54 48.4 +0.4**
HINF	**Hinteralfeld**	**1.53**	**347**	*e*Pg	**Pg**	**00 54 50.3 +0.4**
HINF				*e*Sg	**Sg**	**00 55 10.0 +0.2**
	comp=N,189nm,0.2s					
PLONS	**Plons/SG**	**1.55**	**62**	⇑Pg	**Pg**	**00 54 50.7 +0.3**
PLONS	**Plons/SG**	**1.55**	**62**	*e*Pn	**Pg**	**00 54 50.7 +0.3**
PLONS	**Plons/SG**	**1.55**	**62**	P	**Pg**	**00 54 50.7 +0.3**
PLONS				AML	AML	
	comp=E,532µm,1.3s					
PLONS				AML	AML	
	comp=N,724µm,0.9s					
PLONS				AML	AML	
	comp=E,532µm,1.3s					
PLONS				AML	AML	
	comp=N,724µm,0.9s					
PLONS				AML	AML	
	comp=E,532µm,0.7s					
PLONS				AML	AML	
	comp=N,724µm,1.1s					
MERA	**Merate**	**1.57**	**114**	P	**Pb**	**00 54 50.0 +0.4**
BRIZ2	**Brienz, Instab**	**1.57**	**76**	Pg	**Pg**	**00 54 50.7 0.0**
NDTR1	**NAGRA Drilling**	**1.59**	**35**	Pn	**Pn**	**00 54 49.7 +0.9**
FELD	**Feldberg im Sc**	**1.60**	**15**	⇑Pn	**Pn**	**00 54 49.4 +0.2**
SLE	**Schleitheim**	**1.62**	**28**	⇑Pn	**Pn**	**00 54 49.7 +0.4**
SLE	**Schleitheim**	**1.62**	**28**	*e*Pn	**Pg**	**00 54 52.5 +0.8**
WEIN	**Weingarten**	**1.63**	**42**	Pn	**Pb**	**00 54 50.7 0.0**
ROTM	**Rocchetta Tana**	**1.63**	**155**	P	**Pn**	**00 54 50.5 +1.2**
BERGE	**Lenzkirch (DE)**	**1.64**	**19**	⇑Pn	**Pn**	**00 54 49.8 +0.3**
BERGE	**Lenzkirch (DE)**	**1.64**	**19**	*e*Pn	**Pn**	**00 54 49.8 +0.3**
BERGE				*e*Pg	**Pg**	**00 54 52.4 +0.5**
MBDF	**Montbardon**	**1.66**	**195**	*e*Pg	**Pb**	**00 54 51.6 +0.2**
MBDF				*e*Sg	**Sb**	**00 55 13.2 +0.8**
	comp=N,90nm,0.4s					
KIZ	**Kirchzarten**	**1.67**	**13**	⇑Pn	**Pn**	**00 54 50.1 +0.2**
SGT18	**Golfpark Waldk**	**1.71**	**48**	⇑Pn	**Pb**	**00 54 52.0 -0.1**
MDI	**Monti di Nese**	**1.71**	**108**	Pn	**Pb**	**00 54 52.9 +0.6**
MDI	**Monti di Nese**	**1.71**	**108**	P	**Pb**	**00 54 52.

BFO	**Black Forest**	**2.10**	**18**	*e*Pn		**Pn**	**00 54 55.8**	**0.0**
BFO				*e*Sg		**Sg**	**00 55 27.8**	**-0.3**
GUT	**Gutenstein**	**2.10**	**34**	⇑Pn		**Pn**	**00 54 56.2**	**+0.3**
ENR	**Entracque**	**2.10**	**179**	P		**Pn**	**00 54 56.3**	**+0.4**
GBOS	**Grotte di Boss**	**2.12**	**171**	P		**Pn**	**00 54 56.9**	**+0.8**
A037A	**Kartellspeiche**	**2.12**	**69**	Pn		**Pb**	**00 54 59.2**	**0.0**
QLNO	**Quiliano**	**2.12**	**161**	P		**Pn**	**00 54 57.1**	**+1.0**
BOB	**Bobbio (Coli)**	**2.13**	**136**	P		**Pn**	**00 54 58.4**	**+2.0**
RNCA	**Ronca, Sant'Ol**	**2.17**	**149**	P		**Pn**	**00 54 58.3**	**+1.6**
GORR	**Gorreto**	**2.19**	**141**	P		**Pn**	**00 54 58.8**	**+1.8**
A102A	**Sigmaringen, J**	**2.19**	**34**	⇑Pn		**Pn**	**00 54 57.4**	**+0.3**
MABI	**Malga Bissina**	**2.19**	**96**	P		**Pn**	**00 54 59.0**	**+1.8**
MABI				AML	AML			
	comp=E,200µm,1.1s							
MABI				AML	AML			
	comp=N,135µm,0.5s							
MABI				AML	AML			
	comp=E,200µm,0.9s							
CANO	**Canova, Maglio**	**2.21**	**164**	P		**Pn**	**00 54 58.3**	**+1.0**
RORO	**Rocca Rossa**	**2.27**	**167**	P		**Pn**	**00 55 00.1**	**+1.9**
CARE	**Lago del Cares**	**2.30**	**86**	P		**Pb**	**00 55 01.3**	**-1.0**
CARE				AML	AML			
	comp=N,105µm,1.0s							
CARE				AML	AML			
	comp=E,115µm,0.5s							
CARE				AML	AML			
	comp=N,105µm,1.0s							
UBR	**Ueberruh**	**2.30**	**53**	Pn		**Pn**	**00 55 00.4**	**+1.8**
UBR	**Ueberruh**	**2.30**	**53**	*e*Pn		**Pn**	**00 55 00.5**	**+1.8**
UBR				*e*Pg		**Pg**	**00 55 05.8**	**+1.1**
UBR				*e*Sg		**Sg**	**00 55 36.5**	**+2.0**
MAGA	**Magasa**	**2.33**	**103**	P		**Pn**	**00 55 00.7**	**+1.6**
MAGA				AML	AML			
	comp=N,414µm,0.6s							
MAGA				AML	AML			
	comp=E,651µm,0.4s							
VIVF	**Saint-Julien-l**	**2.41**	**233**	*e*Pn		**Pn**	**00 55 01.4**	**+1.3**
VIVF	**Saint-Julien-l**	**2.41**	**233**	*e*Pg		**Pg**	**00 55 06.5**	**-0.2**
VIVF				*e*Sg		**Sb**	**00 55 36.4**	**+2.7**
	comp=E,64nm,0.3s							
FETA	**Feichten**	**2.41**	**72**	Pn		**Pb**	**00 55 03.8**	**-0.3**
FETA	**Feichten**	**2.41**	**72**	*i* Pn		**Pn**	**00 55 02.1**	**+1.9**
	comp=E,11nm,0.2s,SNR=15							
FETA				Sn		**Sb**	**00 55 32.5**	**-1.4**
	comp=E,57nm,0.6s							
IMI	**Imperia**	**2.45**	**171**	P		**Pn**	**00 55 02.1**	**+1.5**
SFTF	**Sexfontaines**	**2.46**	**320**	*e*Pn		**Pn**	**00 55 01.2**	**+0.4**
	baz=140							
SFTF	**Sexfontaines**	**2.46**	**320**	*e*Pg		**Pg**	**00 55 07.7**	**0.0**
SFTF				*e*Sn		**Sn**	**00 55 30.9**	**0.0**
SFTF				*e*Sg		**Sg**	**00 55 39.1**	**-0.5**
	comp=E,26nm,0.1s							
SMF	**Signal de Mont**	**2.46**	**279**	*e*Pn		**Pn**	**00 55 01.6**	**+0.8**
SMF	**Signal de Mont**	**2.46**	**279**	*e*Pg		**Pg**	**00 55 07.2**	**-0.6**
SMF				*e*Sn		**Sn**	**00 55 29.2**	**-1.8**
SMF				*e*Sg		**Sb**	**00 55 38.5**	**+3.1**
	comp=E,29nm,0.2s							
SBF	**Sospel**	**2.47**	**179**	*e*P		**Pn**	**00 55 03.6**	**+2.7**
SBF	**Sospel**	**2.47**	**179**	*e*Pg		**Pb**	**00 55 06.8**	**+1.7**
SBF				*e*Sg		**Sb**	**00 55 37.2**	**+1.6**
	comp=E,63nm,0.3s							
PAGF	**Fort de Pagny**	**2.49**	**334**	*e*P		**Pn**	**00 55 03.0**	**+1.8**
	baz=152							
PAGF	**Fort de Pagny**	**2.49**	**334**	*e*Pg		**Pg**	**00 55 09.1**	**+0.8**
PAGF				*e*Sn		**Sn**	**00 55 30.4**	**-1.3**
PAGF				*e*Sg		**Sg**	**00 55 40.9**	**+0.3**
	comp=E,66nm,0.3s							
GAGG	**Gaggia**	**2.50**	**94**	P		**Pn**	**00 55 03.3**	**+1.9**
GAGG				AML	AML			
	comp=E,190µm,0.9s							
GAGG				AML	AML			
	comp=N,185µm,0.8s							
GAGG				AML	AML			
	comp=N,185µm,1.2s							
VARA	**Varagna**	**2.50**	**100**	P		**Pn**	**00 55 03.0**	**+1.5**
LUSI	**Trento, Gardas**	**2.50**	**97**	P		**Pn**	**00 55 03.2**	**+1.8**
LUSI				AML	AML			
	comp=N,226µm,0.4s							
LUSI				AML	AML			
	comp=E,182µm,0.4s							
RETA	**Reutte**	**2.59**	**62**	Pn		**Pn**	**00 55 04.9**	**+2.3**
RETA	**Reutte**	**2.59**	**62**	*e*Pn		**Pb**	**00 55 05.2**	**-2.0**
	comp=E,2.1nm,0.2s,SNR=7.3							
RETA				Sn		**Sn**	**00 55 35.9**	**+1.7**
	comp=E,22nm,0.3s							
LOR	**Lormes**	**2.59**	**292**	*e*Pn		**Pn**	**00 55 03.9**	**+1.3**
LOR	**Lormes**	**2.59**	**292**	*e*Pg		**Pg**	**00 55 10.8**	**+0.5**
	baz=111							
LOR				*e*Sn		**Sn**	**00 55 33.6**	**-0.6**
LOR				*e*Sg		**Sb**	**00 55 42.4**	**+3.3**
	comp=E,40nm,0.2s							
ROVR	**Rover Verones**	**2.66**	**104**	P		**Pn**	**00 55 05.1**	**+1.4**
ROVR				AML	AML			
	comp=E,149µm,0.6s							
ROVR				AML	AML			
	comp=E,52µm,0.6s							
ROVR				AML	AML			
	comp=N,96µm,0.3s							
ROVR				AML	AML			
	comp=N,227µm,0.3s							
ROVR				AML	AML			
	comp=E,52µm,1.4s							
ROVR				AML	AML			
	comp=E,149µm,1.4s							
SMRF	**Simiane la Rot**	**2.68**	**209**	*e*P		**Pn**	**00 55 06.0**	**+2.2**
SMRF	**Simiane la Rot**	**2.68**	**209**	*e*Pg		**Pg**	**00 55 11.4**	**-0.5**
SMRF				*e*Sg		**Sb**	**00 55 44.7**	**+3.1**
	comp=E,14nm,0.4s							
MEZF	**Maizieres J'vi**	**2.69**	**325**	*e*P		**Pn**	**00 55 05.9**	**+2.0**
	baz=142							
MEZF	**Maizieres J'vi**	**2.69**	**325**	*e*Pg		**Pg**	**00 55 12.6**	**+0.6**
MEZF				*e*Sn		**Sn**	**00 55 35.8**	**-0.6**
MEZF				*e*Sg		**Sg**	**00 55 46.2**	**-0.6**
	comp=E,46nm,0.3s							
STU	**Stuttgart**	**2.73**	**26**	*e*Pn		**Pn**	**00 55 04.0**	**-0.5**
STU				*e*Sg		**Sg**	**00 55 50.1**	**+1.8**
MOTA	**Moosalm**	**2.75**	**67**	*e*Pn		**Pb**	**00 55 08.1**	**-1.8**
	comp=E,4.0nm,0.3s,SNR=12							
MOTA				*i* Sn		**Sb**	**00 55 41.4**	**-2.4**
	comp=E,11nm,0.2s							
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pn		**Pn**	**00 55 06.2**	**+1.5**
SAVF	**Savonnieres en**	**2.75**	**327**	*e*P		**Pn**	**00 55 06.6**	**+1.9**
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pg		**Pg**	**00 55 13.1**	**-0.2**
SAVF				*e*Sn		**Sn**	**00 55 36.9**	**-1.1**
SAVF				*e*Sn		**Sb**	**00 55 37.2**	**-6.4**
SAVF				*e*Sg		**Sg**	**00 55 48.1**	**-0.8**
	comp=E,119nm,0.5s							
SAVF				*e*Sg		Sg	00 55 48.5	-0.4
	comp=E,31nm,0.3s							
SSF	**Saint Saulge**	**2.77**	**287**	*e*Pn		**Pn**	**00 55 06.1**	**+1.2**
SSF	**Saint Saulge**	**2.77**	**287**	*e*Pg		**Pb**	**00 55 12.3**	**+2.2**
SSF				*e*Sg		**Sb**	**00 55 47.6**	**+3.6**
	comp=E,38nm,0.3s							
SQTA	**Sankt Quirin**	**2.78**	**70**	*i* Pn		**Pn**	**00 55 07.4**	**+2.2**
	comp=E,2.9nm,0.2s,SNR=14							
SQTA				*e*Sn		**Sn**	**00 55 40.9**	**+2.0**
	comp=E,14nm,0.3s							
AVF	**Avril sur Loir**	**2.82**	**281**	*e*Pn		**Pn**	**00 55 06.6**	**+1.0**
AVF				*e*Sn		**Sn**	**00 55 38.2**	**-1.4**
AVF				*e*Sg		**Sg**	**00 55 49.9**	**-1.1**
	comp=E,16nm,0.2s							
ROSI	**Rosskopf**	**2.84**	**76**	P		**Pn**	**00 55 08.6**	**+2.4**
ROSI				AML	AML			
	comp=N,253µm,1.6s							
ROSI				AML	AML			
	comp=N,253µm,0.4s							
ROSI				AML	AML			
	comp=E,210µm,1.1s							
ROTT	**Steinweiler**	**2.85**	**10**	*e*Pn		**Pn**	**00 55 06.5**	**+0.4**
WATA	**Walderalm**	**3.05**	**69**	*i* Pn		**Pn**	**00 55 11.0**	**+2.0**
	comp=E,2.8nm,0.3s,SNR=8.6							
WATA				*i* Sn		**Sn**	**00 55 49.1**	**+3.5**
	comp=E,5.0nm,0.3s							
LMR	**La Mourre**	**3.06**	**192**	*e*P		**Pn**	**00 55 11.3**	**+2.3**
LMR	**La Mourre**	**3.06**	**192**	*e*Pg		**Pb**	**00 55 17.0**	**+1.9**
LMR				*e*Sg		**Sg**	**00 55 56.7**	**-2.2**
	comp=E,8.7nm,0.3s							
WTTA	**Wattenberg**	**3.07**	**71**	Pn		**Pb**	**00 55 12.7**	**-2.6**
WTTA	**Wattenberg**	**3.07**	**71**	*i* Pn		**Pn**	**00 55 10.8**	**+1.5**
	comp=E,3.2nm,0.2s,SNR=12							
WTTA				*i* Sn		**Sb**	**00 55 50.3**	**-2.6**
	comp=E,31nm,0.4s							
CGRP	**Cima Grappa**	**3.11**	**97**	P		**Pn**	**00 55 11.9**	**+2.1**
CGRP				AML	AML			
	comp=E,148µm,0.5s							
CGRP				AML	AML			
	comp=N,148µm,1.1s							
BGF	**Bois d'Agland**	**3.14**	**276**	*e*Pn		**Pn**	**00 55 10.9**	**+0.7**
BGF	**Bois d'Agland**	**3.14**	**276**	*e*Pg		**Pg**	**00 55 19.9**	**-0.9**
BGF				*e*Sn		**Sn**	**00 55 47.0**	**-0.7**
BGF				*e*Sg		**Sg**	**00 56 01.2**	**-0.3**
	comp=N,57nm,0.3s							
FUR	**Furstenfeldbru**	**3.23**	**54**	*e*Sg		**Sg**	**00 56 04.6**	**+0.4**
LASF	**Ste Croix**	**3.36**	**229**	*e*P		**Pn**	**00 55 15.3**	**+2.1**
LASF	**Ste Croix**	**3.36**	**229**	*e*Pg		**Pb**	**00 55 23.2**	**+3.0**
LASF				*e*Sg		**Sb**	**00 56 05.0**	**+3.8**
	comp=N,26nm,0.4s							
HYF	**Humbligny**	**3.39**	**288**	*e*P		**Pn**	**00 55 15.5**	**+2.0**
HYF	**Humbligny**	**3.39**	**288**	*e*Pg		**Pg**	**00 55 24.4**	**-1.1**
HYF				*e*Sn		**Sn**	**00 55 53.9**	**+0.1**
HYF				*e*Sg		**Sg**	**00 56 08.0**	**-1.4**
WLF	**Walferdange**	**3.44**	**347**	*d*P		**Pn**	**00 55 15.9**	**+1.7**
WLF				*d*S		**Sn**	**00 55 54.5**	**-0.4**
WLF	**Walferdange**	**3.44**	**347**	*e*Pn		**Pn**	**00 55 16.2**	**+2.1**
ABH	**Alteburg**	**3.55**	**2**	*e*Pn		**Pn**	**00 55 16.9**	**+1.1**
ABTA	**Abfaltersbach**	**3.57**	**81**	*i* Pn		**Pn**	**00 55 17.7**	**+1.6**
	comp=N,1.3nm,0.2s							
ABTA				*i* Sn		**Sn**	**00 56 02.7**	**+4.4**
	comp=N,7.7nm,0.5s							
TCF	**Toulx Ste Croi**	**3.58**	**271**	*e*Pn		**Pn**	**00 55 17.0**	**+0.8**
TCF	**Toulx Ste Croi**	**3.58**	**271**	*e*Pg		**Pg**	**00 55 28.1**	**-1.1**
TCF				*e*Sn		**Sn**	**00 55 58.0**	**-0.6**
TCF				*e*Sg		**Sg**	**00 56 13.2**	**-2.4**
	comp=N,9.0nm,0.3s							
LESA	**Schwarzleotal**	**3.79**	**71**	*i* Pn		**Pn**	**00 55 20.5**	**+1.3**
	comp=N,1.8nm,0.2s,SNR=8.3							
LESA				*i* Sn		**Sn**	**00 56 05.7**	**+1.8**
	comp=N,5.2nm,0.3s							
PGF	**Pioggiola**	**3.96**	**162**	*e*Pn		**Pn**	**00 55 21.3**	**-0.1**
PGF				*e*Sn		**Sn**	**00 56 05.5**	**-2.4**
	comp=N,2.0nm,0.3s							
TNS	**Taunus Mts**	**3.96**	**10**	*e*Pn		**Pn**	**00 55 21.6**	**+0.2**
CAF	**Calviac**	**3.98**	**251**	*e*Pn		**Pn**	**00 55 23.0**	**+1.2**
CAF	**Calviac**	**3.98**	**251**	*e*Pg		**Pg**	**00 55 35.2**	**-1.7**
CAF				*e*Sn		**Sn**	**00 56 05.8**	**-2.7**
CAF				*e*Sg		**Sg**	**00 56 25.6**	**-2.9**
	comp=N,12nm,0.3s							
RCHB	**Rochefort**	**4.09**	**340**	*d*P		**Pn**	**00 55 24.4**	**+1.3**
RCHB				*d*S		**Sn**	**00 56 09.9**	**-1.1**
BHOU	**Houvegnez**	**4.13**	**348**	*d*P		**Pn**	**00 55 24.4**	**+0.7**
BHOU				*d*S		**Sn**	**00 56 10.0**	**-2.0**
GIVF	**Givet**	**4.14**	**337**	*e*P		**Pn**	**00 55 26.0**	**+2.1**
GIVF				*e*Sn		**Sn**	**00 56 10.3**	**-2.0**
GIVF				*e*Sg		**Sg**	**00 56 32.2**	**-1.3**
	comp=N,9.7nm,0.2s							
KBA	**Koelnbreinsper**	**4.17**	**78**	*i* Pn		**Pn**	**00 55 26.5**	**+2.1**
	comp=N,1.2nm,0.2s,SNR=5.7							
KBA				*e*Sn		**Sn**	**00 56 16.2**	**+2.9**
	comp=N,3.6nm,0.3s							
DOU	**Dourbes**	**4.20**	**335**	*d*P		**Pn**	**00 55 26.7**	**+2.1**
DOU				*d*S		**Sn**	**00 56 12.6**	**-1.2**
RJF	**Les Rejaudoux**	**4.23**	**258**	*e*Pn		**Pn**	**00 55 27.0**	**+2.0**
RJF	**Les Rejaudoux**	**4.23**	**258**	*e*Pg		**Pg**	**00 55 41.5**	**0.0**
RJF				*e*Sg		**Sg**	**00 56 34.2**	**-2.0**
	comp=N,10nm,0.3s							
GRFO	**Grafenberg**	**4.24**	**36**	*e*Sg		**Sg**	**00 56 36.4**	**-0.2**
BAIF	**Baives**	**4.29**	**332**	*e*P		**Pn**	**00 55 27.8**	**+1.9**
BAIF				*e*Sn		**Sn**	**00 56 13.7**	**-2.3**
BAIF				*e*Sg		**Sg**	**00 56 36.5**	**-1.8**
	comp=N,5.2nm,0.2s							
BGES	**Gesves**	**4.33**	**340**	*d*P		**Pn**	**00 55 28.1**	**+1.6**
BGES				*d*S		**Sn**	**00 56 17.1**	**+0.1**
MYKA	**Terra Mystica**	**4.34**	**84**	*i* Pn		**Pn**	**00 55 28.3**	**+1.7**
	comp=N,3.0nm,0.4s							
BTNL	**Ternell**	**4.34**	**349**	*d*P		**Pn**	**00 55 28.2**	**+1.6**
BTNL				*d*S		**Sn**	**00 56 15.1**	**-2.1**
BMRD	**Maredsous**	**4.34**	**337**	*d*P		**Pn**	**00 55 28.6**	**+2.1**
BMRD				*d*S		**Sn**	**00 56 17.9**	**+0.8**
MEM	**Membach**	**4.38**	**348**	*d*P		**Pn**	**00 55 28.8**	**+1.8**
MEM				*d*S		**Sn**	**00 56 16.8**	**-1.3**
BSTI	**Sart Tilman**	**4.42**	**345**	*d*P		**Pn**	**00 55 29.8**	**+2.1**
BIOA	**Bad Ischl, Aus**	**4.49**	**70**	*i* Pn		**Pn**	**00 55 31.2**	**+2.5**
	comp=N,1.2nm,0.2s							
BIOA				*i* Sn		**Sn**	**00 56 23.2**	**+2.2**
	comp=N,12nm,0.5s							
MTLF	**Montolieu**	**4.74**	**233**	*e*Pn		**Pn**	**00 55 33.0**	**+1.0**
MTLF	**Montolieu**	**4.74**	**233**	*e*Pg		**Pg**	**00 55 49.8**	**-1.4**
MTLF				*e*Sg		**Sg**	**00 56 48.8**	**-3.8**
	comp=N,9.5nm,0.4s							
LFF	**La Frestale**	**4.86**	**256**	*e*P		**Pn**	**00 55 35.8**	**+2.1**
LFF	**La Frestale**	**4.86**	**256**	*e*Pg		**Pg**	**00 55 52.6**	**-1.0**
LFF				*e*Sg		**Sg**	**00 56 53.0**	**-3.6**
	comp=N,4.4nm,0.2s							
MOA	**Molln**	**4.94**	**70**	*i* Pn		**Pn**	**00 55 37.0**	**+2.1**
	comp=N,0.1nm,0.1s,SNR=6.1							
MOA				*i* Sn		**Sn**	**00 56 33.0**	**+0.9**
	comp=N,2.1nm,0.2s							
OBKA	**Obir**	**4.96**	**85**	*i* Pn		**Pn**	**00 55 35.5**	**+0.3**
	comp=N,2.0nm,0.3s							
KHC	**Kasperske Hory**	**5.03**	**54**	*e*PN		**Pn**	**00 55 36.6**	**+0.5**
KHC				*e*SN		**Sn**	**00 56 31.9**	**-2.4**
KHC				*e*SG		**Sg**	**00 57 00.4**	**-1.7**
	comp=N,24nm,0.6s							
MFF	**Saint Martin d**	**5.21**	**276**	*e*Pn		**Pn**	**00 55 39.7**	**+1.2**
MFF	**Saint Martin d**	**5.21**	**276**	*e*Pn		**Pn**	**00 55 40.0**	**+1.5**
	baz=91							
MFF				*e*Sn		**Sn**	**00 56 34.7**	**-3.9**
	comp=N,12nm,0.3s							
MFF				*e*Sn		Sb	00 56 35.5	-19
	comp=N,9.6nm,0.3s							
MFF				*e*Sg		**Sg**	**00 57 06.8**	**-0.9**
	comp=N,25nm,0.6s							
SOKA	**Soboth**	**5.29**	**83**	*e*Pn		**Pn**	**00 55 41.8**	**+2.0**
	comp=N,0.9nm,0.2s							
ZVC	**Zvikov**	**5.54**	**53**	*e*PN		**Pn**	**00 55 44.1**	**+1.1**
ZVC				*e*SN		**Sn**	**00 56 45.1**	**-1.6**
ZVC				*e*SG		**Sg**	**00 57 17.8**	**-0.4**
LDF	**La Druitiere**	**5.57**	**297**	*e*Pn		**Pn**	**00 55 43.4**	**0.0**
LDF				*e*Sn		**Sn**	**00 56 44.4**	**-3.1**
LDF				*e*Sg		**Sg**	**00 57 15.8**	**-3.4**
	comp=N,11nm,0.3s							
ARSA	**Arzberg**	**5.67**	**78**	*i* Pn		**Pn**	**00 55 47.0**	**+2.2**
	comp=N,0.9nm,0.3s							
ARSA				*e*Sn		**Sn**	**00 56 51.5**	**+1.5**
	comp=N,0.9nm,0.3s							
FLN	**La Foliniere**	**5.85**	**297**	*e*Pn		**Pn**	**00 55 48.1**	**+0.8**
	baz=113							
FLN				*e*Sn		**Sn**	**00 56 51.6**	**-2.8**
FLN				*e*Sg		**Sg**	**00 57 26.2**	**-2.1**
	comp=N,9.9nm,0.3s							
HSKC	**Hora Svate Kat**	**5.87**	**41**	*e*SG		**Sg**	**00 57 29.3**	**+0.3**
	comp=N,13nm,0.5s							
GRR	**Gorron**	**5.96**	**293**	*e*Pn		**Pn**	**00 55 49.8**	**+0.9**
GRR				*e*Sn		**Sn**	**00 56 53.8**	**-3.4**
GRR				*e*Sg		**Sg**	**00 57 29.1**	**-2.8**
	comp=N,2.3nm,0.2s							
CONA	**Conrad Observa**	**6.00**	**72**	*i* Pn		**Pn**	**00 55 51.3**	**+1.8**
	comp=N,0.5nm,0.2s,SNR=4.8							
CONA				*i* Sn		**Sn**	**00 56 58.1**	**-0.3**
	comp=N,8.2nm,0.4s							
EPF	**Esparros**	**6.01**	**239**	*e*Pn		**Pn**	**00 55 49.7**	**+0.2**
EPF	**Esparros**	**6.01**	**239**	*e*Pg		**Pg**	**00 56 13.7**	**-1.9**
EPF				*e*Sg		**Sg**	**00 57 29.4**	**-3.9**
	comp=N,5.8nm,0.4s							
PRU	**Pruhonice**	**6.03**	**50**	*e*SG		**Sg**	**00 57 32.4**	**-1.5**
CLL	**Collm**	**6.21**	**35**	*i* Pg		**Pg**	**00 56 17.2**	**-2.2**
CLL				*e*Sg		**Sg**	**00 57 38.0**	**-1.8**
TREC	**Trest**	**6.21**	**59**	*e*PN		**Pn**	**00 55 54.1**	**+1.8**
TREC				*e*SN		**Sn**	**00 57 02.1**	**-1.3**
RONA	**Rosalia, Austr**	**6.25**	**74**	*i* Pn		**Pn**	**00 55 54.9**	**+2.0**
	comp=N,1.8nm,0.3s,SNR=6.4							
RONA				*i* Sn		**Sn**	**00 57 03.6**	**-0.7**
	comp=N,4.0nm,0.4s							
KRUC	**Moravsky**	**6.67**	**63**	*e*PN		**Pn**	**00 55 57.8**	**-0.8**
KRUC				*e*SN		**Sn**	**00 57 10.9**	**-3.7**
VRAC	**Vranov**	**6.88**	**61**	*e*PN		**Pn**	**00 56 01.8**	**+0.3**
VRAC				*e*SN		**Sn**	**00 57 16.0**	**-3.8**
SGMF	**Saint Gilles**	**7.03**	**289**	*e*Pn		**Pn**	**00 56 04.0**	**+0.5**
SGMF				*e*Sn		**Sn**	**00 57 18.9**	**-4.5**
	comp=N,9.6nm,0.3s							
KRLC	**Kraliky**	**7.31**	**56**	*e*PN		**Pn**	**00 56 08.5**	**+1.1**
QUIF	**Quistinic**	**7.37**	**286**	*e*Pn		**Pn**	**00 56 08.3**	**+0.2**
QUIF				*e*Sn		**Sn**	**00 57 28.7**	**-3.0**
	comp=N,7.6nm,0.2s							
ROSF	**Rostrenen**	**7.51**	**289**	*e*Pn		**Pn**	**00 56 10.3**	**+0.2**
ROSF				*e*Sn		**Sn**	**00 57 30.5**	**-4.8**
	comp=N,7.7nm,0.3s							
MORC	**Moravsky Berou**	**7.63**	**59**	*e*PN		**Pn**	**00 56 11.5**	**-0.3**

ZUR 05 01:34:37.5, 46°32N×7°37E, *h*4km, MLh0.7/17, 10C-2D,
Error ellipse: s-maj=1736.5km s-min=557.1km az=100.0,
Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.04**	**255**	⇑Pg	Pg	01 34 39.0	+0.2
RAW2				Sg	Sg	01 34 39.9	+0.3
SAYF2	**Ayent-Fortunoz**	**0.05**	**135**	⇑Pg	Pg	01 34 39.0	+0.2
SAYF2				Sg	Sg	01 34 40.1	+0.3
STSW2	**Zeuzier, Staus**	**0.05**	**66**	⇑Pg	Pg	01 34 39.2	+0.2
STSW2				Sg	Sg	01 34 40.2	+0.2
SENIN	**Lac Senin/Sane**	**0.06**	**311**	⇓Pg	Pg	01 34 39.3	+0.2
SENIN				Sg	Sg	01 34 40.5	+0.3
LEO01	**Saint Lonard,**	**0.09**	**150**	Pg	Pg	01 34 39.6	+0.3
LEO01				Sg	Sg	01 34 41.4	+0.9
SIOV	**Sion-Valere**	**0.09**	**180**	⇑Pg	Pg	01 34 39.6	+0.2
SIOV				Sg	Sg	01 34 41.0	+0.4
SIE01	**Sierre, Farmho**	**0.11**	**121**	⇓Pg	Pg	01 34 40.1	+0.4
RAW1	**Lenk, BE**	**0.11**	**27**	⇑Pg	Pg	01 34 40.0	+0.2
RAW1				Sg	Sg	01 34 41.8	+0.4
VET01	**Vtroz, Route**	**0.12**	**213**	⇑Pg	Pg	01 34 40.0	+0.1
VET01				Sg	Sg	01 34 42.1	+0.5
SARC	**Ardon Commune,**	**0.14**	**214**	⇑Pg	Pg	01 34 40.5	+0.3
SARC				Sg	Sg	01 34 42.6	+0.5
GRYON	**Gryon**	**0.19**	**247**	⇑Pg	Pg	01 34 41.5	+0.2
GRYON				Sg	Sg	01 34 44.2	+0.4
LKBD2	**Leukerbad 2**	**0.20**	**75**	⇑Pg	Pg	01 34 41.8	+0.3
LKBD2				Sg	Sg	01 34 44.6	+0.5
FULLY	**Reservoir Maze**	**0.23**	**224**	⇑Pg	Pg	01 34 42.1	+0.1
FULLY				Sg	Sg	01 34 45.4	+0.4
DIX	**Grande Dixence**	**0.25**	**173**	Pg	Pg	01 34 42.6	+0.3
DIX				Sg	Sg	01 34 45.8	+0.3

ZUR 05 01:35:20.4, 46°33N×7°36E, *h*4km, MLh0.9/23, 9C-6D,
Error ellipse: s-maj=1692.2km s-min=533.2km az=106.0,
Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**252**	⇓Pg	Pg	01 35 21.7	+0.2
RAW2				Sg	Sg	01 35 22.6	+0.2
RAW2	**Sanetsch, VS**	**0.03**	**252**	⇓Pg	Pg	01 35 21.7	+0.2
RAW2				Sg	Sg	01 35 22.6	+0.2
SAYF2	**Ayent-Fortunoz**	**0.05**	**134**	⇑Pg	Pg	01 35 21.9	+0.2
SAYF2				Sg	Sg	01 35 22.9	+0.3
SAYF2	**Ayent-Fortunoz**	**0.05**	**134**	⇑Pg	Pg	01 35 21.9	+0.2
SAYF2				Sg	Sg	01 35 22.9	+0.3
STSW2	**Zeuzier, Staus**	**0.05**	**68**	⇑Pg	Pg	01 35 22.0	+0.2
STSW2				Sg	Sg	01 35 23.1	+0.3
STSW2	**Zeuzier, Staus**	**0.05**	**68**	⇑Pg	Pg	01 35 22.0	+0.2
STSW2				Sg	Sg	01 35 23.1	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**311**	⇓Pg	Pg	01 35 22.0	+0.2
SENIN				Sg	Sg	01 35 23.2	+0.2
SENIN	**Lac Senin/Sane**	**0.06**	**311**	⇓Pg	Pg	01 35 22.0	+0.2
SENIN				Sg	Sg	01 35 23.2	+0.2
SIOV	**Sion-Valere**	**0.09**	**179**	⇑Pg	Pg	01 35 22.4	+0.2
SIOV				Sg	Sg	01 35 23.9	+0.4
SIOV	**Sion-Valere**	**0.09**	**179**	⇑Pg	Pg	01 35 22.4	+0.2
SIOV				Sg	Sg	01 35 23.9	+0.4
SIOO	**Sion-Ophtalmol**	**0.09**	**171**	Sg	Sg	01 35 24.6	+1.0
SIOO	**Sion-Ophtalmol**	**0.09**	**171**	Sg	Sg

	comp=Z,272nm,0.2s							
PEL	**Peldehue**	**1.46**	**154**	⇑	*i* P	**Pn**	**01 38 17.6**	**-1.2**
PEL					*i* S	**Sn**	**01 38 35.5**	**-1.5**
PEL	**Peldehue**	**1.46**	**154**		*e*P	**Pn**	**01 38 17.6**	**-1.2**
PEL					*e*S	**Sn**	**01 38 37.7**	**+0.7**
PEL					IAML		01 38 39.9	
	comp=Z,218nm,0.3s							
MT10	**Hacienda Santa**	**1.63**	**152**	⇑	*i* P	**Pn**	**01 38 20.0**	**-1.3**
MT10					*i* S	**Sn**	**01 38 39.5**	**-1.9**
MT10					IAML		01 38 44.9	
	comp=E,1μm,0.3s							
MT05	**Renca**	**1.67**	**159**		*i* P	**Pn**	**01 38 20.6**	**-1.1**
MT05					*i* S	**Sn**	**01 38 41.6**	**-0.6**
MT05					IAML		01 38 45.7	
	comp=E,799nm,0.3s							
MT05	**Renca**	**1.67**	**159**		*e*P	**Pn**	**01 38 20.7**	**-1.0**
MT05					*e*S	**Sn**	**01 38 43.6**	**+1.5**
MT05					IAML		01 38 46.2	
	comp=Z,285nm,0.1s							
MT14	**Cerro Cal¡n**	**1.74**	**154**		*i* P	**Pn**	**01 38 21.7**	**-1.0**
MT14					*i* S	**Sn**	**01 38 42.7**	**-1.2**
MT14					IAML		01 38 48.0	
	comp=E,547nm,0.5s							
GO04	**Tololo Observa**	**1.74**	**19**	⇑	*i* P	**Pn**	**01 38 22.0**	**-1.0**
GO04					*i* S	**Sn**	**01 38 43.5**	**-0.8**
GO04	**Tololo Observa**	**1.74**	**19**		*e*P	**Pn**	**01 38 22.1**	**-0.8**
GO04					*e*S	**Sn**	**01 38 44.3**	**0.0**
GO04					IAML		01 38 46.6	
	comp=Z,781nm,0.3s							
MT16	**CCHEN**	**1.77**	**154**		*i* P	**Pn**	**01 38 22.2**	**-0.9**
MT16					*i* S	**Sn**	**01 38 43.7**	**-1.1**
RTLS	**Leoncito**	**1.83**	**90**		*e*P	**Pn**	**01 38 23.7**	**-0.5**
RTLS					IAML		01 38 50.3	
	comp=Z,269nm,0.8s							
MT03	**Universidad Ad**	**1.83**	**155**		*e*P	**Pn**	**01 38 23.4**	**-0.6**
MT03					*e*S	**Sn**	**01 38 48.1**	**+1.7**
MT03					IAML		01 38 52.1	
	comp=Z,470nm,0.1s							
MT04	**Ro Olivares**	**1.92**	**145**		*i* P	**Pn**	**01 38 24.6**	**-0.6**
MT04					*i* S	**Sn**	**01 38 47.5**	**-1.1**
MT04	**Ro Olivares**	**1.92**	**145**		*e*P	**Pn**	**01 38 24.7**	**-0.6**
MT04					*e*S	**Sn**	**01 38 50.2**	**+1.7**
MT04					IAML		01 38 54.5	
	comp=Z,191nm,0.6s							
MT15	**Las Vizcachas**	**1.93**	**156**		*i* P	**Pn**	**01 38 24.5**	**-0.8**
MT15					*i* S	**Sn**	**01 38 47.5**	**-1.2**
MT15					IAML		01 38 54.2	
	comp=N,876nm,0.2s							
MT09	**Talagante**	**1.98**	**169**	⇑	*i* P	**Pn**	**01 38 25.6**	**-0.5**
MT09					*i* S	**Sn**	**01 38 49.2**	**-0.7**
MT09					IAML		01 38 57.1	
	comp=N,654nm,0.2s							
MT08	**Bocatoma Ro**	**2.01**	**144**		*i* P	**Pn**	**01 38 26.7**	**+0.2**
MT08					*i* S	**Sn**	**01 38 48.7**	**-2.2**
MT08					IAML		01 38 56.0	
	comp=E,269nm,0.6s							
MT08	**Bocatoma Ro**	**2.01**	**144**		*e*P	**Pn**	**01 38 26.8**	**+0.3**
MT08					*e*S	**Sn**	**01 38 53.2**	**+2.3**
MT08					IAML		01 38 55.4	
	comp=Z,156nm,0.6s							
MT01	**Popeta**	**2.03**	**175**		*i* P	**Pn**	**01 38 25.9**	**-0.7**
MT01	**Popeta**	**2.03**	**175**		*e*P	**Pn**	**01 38 26.0**	**-0.7**
MT01					*e*S	**Sn**	**01 38 50.0**	**-1.1**
MT01					IAML		01 38 56.6	
	comp=Z,168nm,0.3s							
CO01	**Juntas del Tor**	**2.18**	**32**		*i* P	**Pn**	**01 38 28.6**	**-0.4**
CO01					*e*S	**Sn**	**01 38 53.7**	**-1.5**
CO01	**Juntas del Tor**	**2.18**	**32**		*e*P	**Pn**	**01 38 28.6**	**-0.4**
CO01					*e*S	**Sn**	**01 38 54.8**	**-0.3**
CO01					IAML		01 38 56.8	
	comp=Z,138nm,0.1s							
BO04	**La Punta**	**2.26**	**162**		*i* P	**Pn**	**01 38 29.0**	**-0.9**
BO04					*i* S	**Sn**	**01 38 56.0**	**-0.9**
LMEL	**Las Melosas**	**2.26**	**153**		*i* P	**Pn**	**01 38 29.6**	**-0.4**
LMEL					*i* S	**Sn**	**01 38 58.3**	**+1.2**
LMEL	**Las Melosas**	**2.26**	**153**		*e*P	**Pn**	**01 38 29.6**	**-0.4**
LMEL					*e*S	**Sn**	**01 38 58.6**	**+1.5**
LMEL					IAML		01 39 01.4	
	comp=Z,269nm,0.1s							
ASAL	**Salagasta**	**2.34**	**110**		*e*P	**Pn**	**01 38 31.9**	**+1.0**
ASAL					*e*S	**Sn**	**01 38 57.4**	**-1.3**
ARCO	**CERRO ARCO**	**2.35**	**116**		*e*P	**Pn**	**01 38 32.6**	**+1.4**
ARCO					*e*S	**Sn**	**01 39 00.1**	**+0.9**
ARCO					IAML		01 39 08.1	
	comp=Z,116nm,0.3s							
AROD	**Rodeo**	**2.37**	**46**		*e*P	**Pn**	**01 38 32.9**	**+1.3**
AROD					*e*S	**Sn**	**01 38 58.4**	**+2.9**
ZON	**Zonda**	**2.37**	**84**		*e*P	**Pn**	**01 38 32.0**	**+0.6**
ZON					IAML		01 39 07.1	
	comp=Z,66nm,0.3s							
ACCO	**Cerro Coronel**	**2.38**	**59**		*e*P	**Pn**	**01 38 32.6**	**+0.8**
ACCO					*e*S	**Sn**	**01 39 03.3**	**+3.0**
SJA	**San Juan**	**2.48**	**84**		*e*P	**Pn**	**01 38 34.1**	**+1.3**
SJA					IAML		01 39 28.6	
	comp=Z,42nm,0.7s							
AAGR	**Agrelo**	**2.54**	**120**		*e*P	**Pn**	**01 38 35.1**	**+1.4**
AAGR					*e*S	**Sb**	**01 39 11.4**	**+1.3**
AAGR					IAML		01 39 14.4	
	comp=Z,104nm,0.6s							
BO01	**Tunca**	**2.57**	**173**		*e*P	**Pn**	**01 38 33.2**	**-0.8**
BO01					*e*S	**Sn**	**01 39 04.0**	**-0.4**
BO01					IAML		01 39 13.7	
	comp=Z,102nm,0.5s							
RTLL	**Cerro Villicun**	**2.58**	**80**		*e*P	**Pn**	**01 38 34.5**	**+0.3**
RTLL					*e*S	**Sn**	**01 39 07.1**	**+2.4**
RTLL					IAML		01 39 12.5	
	comp=Z,106nm,0.5s							
CFA	**Coronel Fontan**	**2.74**	**86**		*e*P	**Pn**	**01 38 36.2**	**-0.2**
CFA					*e*S	**Sn**	**01 39 07.5**	**-1.1**
LCO	**Las Campanas**	**2.88**	**13**		*e*P	**Pn**	**01 38 37.9**	**-0.7**
LCO					*e*S	**Sn**	**01 39 15.0**	**+2.5**
LCO					IAML		01 39 22.7	
	comp=Z,282nm,0.3s							
BO02	**Sierra Bellavi**	**3.00**	**170**		*e*P	**Pn**	**01 38 39.6**	**-0.5**
BO02					*e*S	**Sn**	**01 39 17.6**	**+2.4**
BO02					IAML		01 39 26.6	
	comp=Z,176nm,0.1s							
GO05	**Hualane**	**3.19**	**187**		*e*P	**Pn**	**01 38 41.1**	**-1.5**
GO05					*e*S	**Sb**	**01 39 34.0**	**+5.1**
GO05					IAML		01 39 35.3	
	comp=Z,60nm,0.8s							
AGUA	**GUANDACOL**	**3.45**	**48**		*e*P	**Pn**	**01 38 48.1**	**+1.8**
AGUA					*e*S	**Sn**	**01 39 30.4**	**+4.0**
AGUA					IAML		01 39 42.8	
	comp=Z,105nm,0.4s							
AVFE	**Valle Fertil**	**3.61**	**72**		*e*P	**Pn**	**01 38 47.9**	**-0.6**
AVFE					*e*S	**Sn**	**01 39 30.0**	**-0.2**
AVFE					IAML		01 39 36.6	
	comp=Z,63nm,0.4s							
AC04	**Llanos de Chal**	**3.63**	**5**		*e*P	**Pn**	**01 38 47.4**	**-1.3**
AC04					*e*S	**Sb**	**01 39 43.2**	**+1.8**
AC04					IAML		01 39 44.5	
	comp=Z,65nm,0.5s							
ACAN	**Cantantal**	**3.64**	**98**		*e*P	**Pn**	**01 38 47.4**	**-1.5**
RFA	**San Rafael**	**3.85**	**140**		*e*P	**Pn**	**01 38 52.0**	**+0.3**
RFA					IAML		01 39 55.6	
	comp=Z,15nm,2.4s							
ACHE	**Chepes**	**4.14**	**82**		*e*P	**Pn**	**01 38 56.5**	**+0.7**
ACHE					*e*S	**Sn**	**01 39 40.6**	**-2.7**
VCA	**Vinchina**	**4.17**	**43**		*e*P	**Pn**	**01 38 57.9**	**+1.7**
VCA					*e*S	**Sn**	**01 39 46.1**	**+2.1**
APLL	**PUNTA DE LOS L**	**4.45**	**72**		*e*P	**Pn**	**01 38 58.9**	**-1.1**
APLL					*e*S	**Sn**	**01 39 50.4**	**-0.5**
ACLC	**CERRO LA CRUZ**	**4.55**	**59**		*e*P	**Pn**	**01 39 01.0**	**-0.5**
ACLC					*e*S	**Sn**	**01 39 49.9**	**-3.7**
ACLC					IAML		01 40 00.5	
	comp=Z,29nm,0.6s							
BI02	**San Fabin de**	**4.82**	**178**		*e*P	**Pn**	**01 39 04.2**	**-0.9**
BI02					IAML		01 40 26.2	
	comp=Z,12nm,0.8s							
MRA	**San Martin**	**4.89**	**98**		*e*P	**Pn**	**01 39 04.4**	**-1.7**
MRA					*e*S	**Sn**	**01 39 59.1**	**-2.7**
MRA					IAML		01 40 05.0	
	comp=Z,36nm,0.8s							

*DJA **05** 01:50:02.7±0.4,8°S±9″×11″7E±°, h285km±4km, M3.9/14, mb3.9/6, MLv3.9/14*
*IDC **05** 01:50:05.6±3.9, 7″.59S×117″.66E, h313km±35km, mb3.3/6, mbtmp4.0/9, Error ellipse: s-maj=86.5km s-min=13.1km az=58.0*
ISC 05 01:50:02.9±0.7,**7″.95S**±0″.08×**117″.34E**±0″.08,**h300**km,**n21,**
σ1§90/25,mb3.8/5,Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.91**	**210**	P			**Pn**	**01 50 41.5**	**-1.4**
TWSI				S			**S**	**01 51 11.6**	**-3.1**
PLAI	**Plampang**	**0.97**	**154**	P			**Pn**	**01 50 41.4**	**-1.8**
PLAI				S			**S**	**01 51 11.2**	**-4.0**
SRBI	**Singaraja**	**2.11**	**266**	P			**Pn**	**01 50 49.4**	**-1.2**
WBSI	**Waikabubak, Su**	**2.63**	**130**	P			**Pn**	**01 50 52.7**	**-2.5**
JAGI	**Jajag, Banyuwa**	**3.20**	**260**	P			**Pn**	**01 50 59.3**	**-1.4**
WSI	**Waingapu**	**3.39**	**121**	P			**Pn**	**01 50 59.6**	**-3.0**
KAPI	**Kappang**	**3.77**	**40**	P			**Pn**	**01 51 05.8**	**-0.9**
	3.6nm,0.3s,baz=217,slow=20,SNR=4.3								
BKSI	**Bulukumba**	**3.80**	**47**	P			**Pn**	**01 51 06.3**	**-0.7**
BASI	**Baing, Sumba**	**3.91**	**125**	P			**Pn**	**01 51 07.4**	**-0.8**
PCJI	**Pacitan**	**6.11**	**267**	P			**Pn**	**01 51 33.0**	**-0.5**
	36nm,1.1s								
BATI	**Baumata**	**6.64**	**110**	P			**Pn**	**01 51 40.0**	**+0.1**
	22nm,0.4s,baz=253,slow=10,SNR=1.9								
BATI				S			**S**	**01 52 56.5**	**-1.8**
	15nm,0.3s,baz=348,slow=8.5,SNR=2.1								
BATI	**Baumata**	**6.64**	**110**	P			**Pn**	**01 51 38.8**	**-1.1**
UGM	**Wanagama**	**6.75**	**270**	P			**Pn**	**01 51 40.7**	**-0.7**
	55nm,2.5s								
SOEI	**Soe**	**7.08**	**105**	P			**Pn**	**01 51 43.9**	**-1.5**
	0.2nm26nm,1.4s								
FITZ	**Fitzroy Crossi**	**12.92**	**142**	P			**P**	**01 52 59.3**	**+2.2**
	1.0nm,0.3s,baz=331,slow=6.9,SNR=6.0								
FITZ				S			**S**	**01 55 20.1**	**+0.2**
	0.6nm,0.3s,baz=254,slow=11,SNR=1.0								
WRA	**Warramunga Arr**	**20.33**	**128**	P			**P**	**01 54 18.4**	**+1.1**
	0.6nm,0.3s,baz=298,slow=12,SNR=11								
	0.6nm,0.3s								
ASAR	**Alice Springs**	**22.28**	**136**	P			**P**	**01 54 38.1**	**+2.5**
	3.1nm,0.5s,baz=311,slow=8.3,SNR=24								
	3.1nm,0.5s								
CMAR	**Chiang Mai Arr**	**31.91**	**325**	P			**P**	**01 56 02.1**	**+0.9**
	3.0nm,0.4s,baz=142,slow=9.8,SNR=1.8								
	3.0nm,0.4s								
STKA	**Stephens Creek**	**32.81**	**140**	P			**P**	**01 56 11.4**	**+2.6**
	1.1nm,0.4s,baz=330,slow=8.3,SNR=3.3								
	1.1nm,0.4s								
SONM	**Songino Array**	**56.38**	**351**	P			**P**	**01 59 13.0**	**-0.5**
	1.2nm,0.8s,baz=163,slow=8.2,SNR=5.0								
	1.2nm,0.8s								
MKAR	**Makanchi Array**	**62.79**	**334**	P			**P**	**01 59 56.4**	**-0.6**
	0.6nm,0.7s,baz=152,slow=7.7,SNR=4.9								
	0.6nm,0.7s								

*NEIC **05** 02:20:43.5±1.7, 7″.22S±0″.06×148″.03E±0″.06, h35km±2km, mb4.2/15, Error ellipse: s-maj=13.9km s-min=3.0km az=137.0*
*IDC **05** 02:20:44.7±0.7, 7″.16S×148″.11E, h55km±5km, mb4.0/14, mbtmp4.3/17, Error ellipse: s-maj=24.1km s-min=8.5km az=100.0*
ISC 05 02:20:44.9±0.5,**7″.22S**±0″.06×**148″.04E**±0″.10,**h54**km,**n40,**
σ1§16/47,mb4.3/17,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.34**	**202**				**Pn**	**02 21 21.1**	**+0.1**
PMG							**Sn**	**02 21 47.3**	**-1.3**
PMG	**Port Moresby**	**2.34**	**202**	P			**Pn**	**02 21 21.4**	**+0.4**
	826nm,0.5s,baz=17,slow=6.1,SNR=223								
PMG				S			**Sn**	**02 21 51.8**	**+3.2**
	1μm,0.6s,baz=113,slow=16,SNR=6.5								
RABL	**Rabaul**	**5.09**	**54**	Pn			**Pn**	**02 21 58.7**	**0.0**
COEN	**Coen**	**8.23**	**215**	Pn			**Pn**	**02 22 41.0**	**-0.7**
JAY	**Jayapura**	**8.67**	**302**	P			**Pn**	**02 22 49.3**	**+1.5**
	4.5nm,0.4s,baz=52,slow=5.7,SNR=4.3								
WB0	**Warramunga Arr**	**18.19**	**225**				**P**	**02 24 52.0**	**-1.4**
WR8	**Warramunga Ar**	**18.24**	**225**				**P**	**02 24 52.6**	**-1.4**
WR8					IAmb		IAmb	02 25 05.5	
	comp=Z,11nm,1.1s								
EIDS	**Eidsvold**	**18.28**	**171**				**P**	**02 24 54.3**	**0.0**
EIDS					IAmb		IAmb	02 25 28.5	
	comp=Z,11nm,1.1s								
WRA	**Warramunga Arr**	**18.35**	**225**	P			**P**	**02 24 54.7**	**-0.4**
WRA	**Warramunga Ar**	**18.35**	**225**	P			**P**	**02 24 55.4**	**+0.3**
	comp=Z,3.1nm,0.5s,baz=52,slow=11,SNR=23								
WRA				S			Sn	02 28 06.7	-13
	comp=Z,0.8nm,0.6s,baz=40,slow=24,SNR=1.1								
KNRA	**Kununurra**	**20.66**	**244**	P			**P**	**02 25 19.9**	**-0.5**
KNRA					IAmb		IAmb	02 25 44.8	
	comp=Z,14nm,0.7s								
AS31	**Alice Springs**	**21.25**	**218**				**P**	**02 25 25.6**	**-1.1**
AS31					IAmb		IAmb	02 25 46.7	
	comp=Z,3.8nm,0.6s								
ASAR	**Alice Springs**	**21.25**	**218**				**P**	**02 25 26.0**	**-0.7**
ASAR	**Alice Springs**	**21.25**	**218**	P			**P**	**02 25 26.1**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=55,slow=9.2,SNR=60								
ASAR				S			**S**	**02 29 16.5**	**-3.7**
	comp=Z,2.5nm,0.8s,baz=35,slow=23,SNR=6.4								
	comp=Z,4.2nm,0.6s								
INKA	**Innaminka**	**21.55**	**198**				**P**	**02 25 30.7**	**+0.9**
INKA					IAmb		IAmb	02 25 36.6	
	comp=Z,6.6nm,0.9s								
ARMA	**Armidale**	**23.33**	**172**	P			**P**	**02 25 48.6**	**+0.1**
ARMA					IAmb		IAmb	02 25 53.0	
	comp=Z,21nm,1.1s								
FITZ	**Fitzroy Crossi**	**24.35**	**242**	P			**P**	**02 25 57.0**	**-0.9**
STKA	**Stephens Creek**	**25.26**	**193**				**P**	**02 26 05.6**	**-0.5**
STKA	**Stephens Creek**	**25.26**	**193**	P			**P**	**02 26 04.9**	**-1.2**
	comp=Z,5.1nm,0.7s,baz=354,slow=7.2,SNR=9.7								
	comp=Z,5.1nm,0.7s								
MJAR	**Matsushiro Arr**	**44.49**	**349**	P			**P**	**02 28 50.3**	**-0.7**
MJAR					IAmb		IAmb	02 29 08.5	
	comp=Z,7.6nm,1.2s								
MJAR	**Matsushiro Ar**	**44.49**	**349**	P			**P**	**02 28 49.7**	**-1.4**
	comp=Z,4.3nm,0.9s,baz=169,slow=8.4,SNR=6.8								
	comp=Z,4.3nm,0.9s								
KSRS	**Korea Array**	**48.25**	**338**	P			**P**	**02 29 20.4**	**0.0**
	comp=Z,1.7nm,0.6s,baz=153,slow=8.5,SNR=5.7								
	comp=Z,1.7nm,0.6s								
CMAR	**Chiang Mai Arr**	**54.73**	**299**	P			**P**	**02 30 09.3**	**0.0**
CMAR	**Chiang Mai Ar**	**54.73**	**299**	P			**P**	**02 30 09.5**	**+0.2**
	comp=Z,2.0nm,0.3s,baz=117,slow=5.8,SNR=5.8								
	comp=Z,2.0nm,0.3s								
PETK	**Petropavlovsk-**	**60.65**	**7**	P			**P**	**02 30 50.0**	**-0.3**
PETK	**Petropavlovsk-**	**60.65**	**7**	P			**P**	**02 30 49.8**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=182,slow=7.4,SNR=1.6								
	comp=Z,1.2nm,0.6s								
SONM	**Songino Array**	**65.96**	**331**	P			**P**	**02 31 25.6**	**0.0**
SONM					IAmb		IAmb	02 31 39.4	
	comp=Z,1.7nm,1.1s								
SONM	**Songino Array**	**65.96**	**331**	P			**P**	**02 31 26.8**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=114,slow=4.5,SNR=2.1								
SONM					pP		**pP**	**02 31 41.1**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=163,slow=4.8,SNR=2.6								
	comp=Z,0.5nm,0.5s								
VNDA	**Vanda**	**70.65**	**177**				**P**	**02 31 54.7**	**+0.4**
VNDA					IAmb		IAmb	02 31 55.3	
	comp=Z,2.4nm,0.7s								
VNDA	**Vanda**	**70.65**	**177**	P			**P**	**02 31 54.9**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=333,slow=6.9,SNR=34								
VNDA					pP		**pP**	**02 32 09.2**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=312,slow=5.6,SNR=5.7								
	comp=Z,2.3nm,0.6s								
MKAR	**Makanchi Array**	**79.09**	**320**	P			**P**	**02 32 43.0**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=106,slow=5.7,SNR=7.3								
	comp=Z,1.3nm,0.6s								
ZALV	**Zalesovo Beam**	**80.58**	**328**	P			**P**	**02 32 50.4**	**-1.1**
ZALV	**Zalesovo Beam**	**80.58**	**328**	P			**P**	**02 32 50.0**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=112,slow=1.6,SNR=3.6								
ZALV					pP		**pP**	**02 33 06.3**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=110,slow=6.5,SNR=6.6								
	comp=Z,1.1nm,0.6s								
QSPA	**South Pole Qui**	**82.76**	**180**	P			**P**	**02 33 04.8**	**+1.8**
QSPA	**South Pole Qui**	**82.76**	**180**	P			**P**	**02 33 04.5**	**+1.6**
	comp=Z,8.0nm,0.6s,baz=346,slow=0.5,SNR=25								
	comp=Z,8.0nm,0.6s								
ILAR	**Eielson Array**	**86.19**	**23**	P			**P**	**02 33 20.5**	**+0.4**
ILAR	**Eielson Array**	**86.19**	**23**	P			**P**	**02 33 19.2**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=253,slow=4.7,SNR=16								
ILAR					pP		**pP**	**02 33 35.5**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=251,slow=4.8,SNR=4.4								
	comp=Z,1.8nm,0.5s								
BVAR	**Borovoye Array**	**88.35**	**324**	P			**P**	**02 33 29.9**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=95,slow=8.1,SNR=2.0								
	comp=Z,0.9nm,0.6s								
SNAA	**Sanae**	**98.97**	**189**	P			**P**	**02 34 18.4**	**-0.9**
SNAA	**Sanae**	**98.97**	**189**	P			**P**	**02 34 18.5**	**-0.9**
	comp=Z,1.3nm,1.1s,baz=192,slow=3.7,SNR=2.7								
	comp=Z,1.3nm,1.1s								

*IDC **05** 02:20:52.4±0.6, 12″.42N×143″.99E, h0km, mb4.2/16, mbtmp4.2/16, Error ellipse: s-maj=20.6km s-min=14.6km az=105.0*
*NEIC **05** 02:20:58.9±1.5, 12″.47N±0″.08×143″.95E±0″.09, h35km±1km, mb4.5/32, Error ellipse: s-maj=16.6km s-min=11.7km az=314.0*
ISC 05 02:20:56.0±0.7,**12″.39N**±0″.09×**144″.08E**±0″.1,**h21**km±6km,
n71,σ0§99/70,mb4.5/35,1D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.46**	**35**				**Pn**	**02 21 20.7**	**-0.4**
GUMO							**Sb**	**02 21 40.2**	**-0.3**
GUMO	**Guam**	**1.46**	**35**	Pn			**Pn**	**02 21 21.0**	**-0.1**
	243nm,0.3s,baz=183,slow=6.7,SNR=76								
GUMO				Sn			**Sb**	**02 21 40.5**	**+0.1**
	446nm,0.3s,baz=225,slow=22,SNR=8.4								
H11S3	**WAKE ISLAND Hy**	**22.67**	**72**	T		T		02 49 28.6	
	baz=258,slow=75,SNR=12								
H11S1	**WAKE ISLAND Hy**	**22.69**	**72**	T		T		02 49 23.1	
	baz=258,slow=75,SNR=9.3								
H11S2	**WAKE ISLAND Hy**	**22.69**	**72**	T		T		02 49 30.8	
	baz=258,slow=75,SNR=19								
H11N1	**WAKE ISLAND Hy**	**23.14**	**69**	T		T		02 50 03.3	
	baz=255,slow=75,SNR=23								
H11N2	**WAKE ISLAND Hy**	**23.15**	**69**	T		T		02 50 04.1	
	baz=255,slow=75,SNR=23								
H11N3	**WAKE ISLAND Hy**	**23.16**	**69**	T		T		02 50 04.7	
	baz=255,slow=75,SNR=20								
MJAR	**Matsushiro Arr**	**24.61**	**349**	P			**P**	**02 26 13.7**	**-1.2**
MJAR	**Matsushiro Ar**	**24.61**	**349**	P			**P**	**02 26 14.2**	**-0.7**
	1.8nm,0.3s,baz=176,slow=9.8,SNR=4.6								
	1.8nm,0.3s								
ERM	**Erimo**	**29.52**	**359**	P			**P**	**02 26 59.0**	**+0.1**
NJ2	**Nanjing**	**30.28**	**314**	*e*P			**P**	**02 27 07.0**	**+1.2**
NJ2				pmax			pmax		
	comp=Z,10.0nm,0.6s								
WRA	**Warramunga Arr**	**33.51**	**197**	P			**P**	**02 27 34.7**	**+0.4**
WRA							**PcP**	**02 30 15.5**	**+0.4**
WRA	**Warramunga Ar**	**33.51**	**197**	P			**P**	**02 27 33.0**	**-1.2**
	comp=Z,2.5nm,0.8s,baz=19,slow=9.7,SNR=6.0								
WRA				PcP			**PcP**	**02 30 16.2**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=25,slow=4.0,SNR=2.8								
	comp=Z,2.5nm,0.8s								
HNS	**HongShan**	**36.15**	**319**	⇓	P		**P**	**02 27 59.5**	**+2.6**
HNS					pmax		pmax		
	comp=Z,8.0nm,1.5s								
ASAR	**Alice Springs**	**37.17**	**195**	P			**P**	**02 28 05.0**	**-0.8**
ASAR					PcP		**PcP**	**02 30 25.9**	**+0.2**
ASAR	**Alice Springs**	**37.17**	**195**	P			**P**	**02 28 04.8**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=18,slow=12,SNR=5.1								
ASAR				PcP			**PcP**	**02 30 26.2**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=22,slow=3.9,SNR=5.2								
	comp=Z,1.8nm,0.6s								
XAN	**Xi'an**	**38.50**	**310**	*e*P			P	02 28 22.4	+5.4
HEH	**HeiHe**	**40.14**	**343**	*e*P			**P**	**02 28 30.4**	**+0.1**
HHC	**Hu-ho-hao-te**	**40.15**	**321**	*e*P			**P**	**02 28 33.0**	**+2.3**
HHC				pmax			pmax		
	comp=Z,15nm,0.5s								
HHC				pmax			pmax		
	comp=Z,130nm,4.9s								
PZH	**PanZhiHua**	**42.06**	**296**	P			**P**	**02 28 48.9**	**+2.2**
CMAR	**Chiang Mai Arr**	**43.78**	**284**	P			**P**	**02 28 59.5**	**-1.0**
CMAR	**Chiang Mai Ar**	**43.78**	**284**	P			**P**	**02 29 00.6**	**0.0**
	comp=Z,1.1nm,0.3s,baz=87,slow=6.3,SNR=10								
	comp=Z,1.1nm,0.3s								
STKA	**Stephens Creek**	**44.07**	**183**	P			**P**	**02 29 03.4**	**+0.8**
STKA	**Stephens Creek**	**44.07**	**183**	P			**P**	**02 29 02.7**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=347,slow=14,SNR=2.0								
	comp=Z,2.7nm,0.9s								
SONM	**Songino Array**	**47.24**	**326**	P			**P**	**02

comp=Z,0.2nm,0.6s
BRTR Keskin Array B 97.27 313 P **P** **02 34 25.7 -2.2**
comp=Z,0.5nm,0.8s,baz=67,slow=3.2,SNR=2.2
comp=Z,0.5nm,0.8s
DBIC Dimbokro 143.72 300 PKPbc 02 40 28.1 0.0
DBIC Dimbokro 143.72 300 PKP PKPbc 02 40 28.0 -0.1
comp=Z,3.3nm,0.8s,baz=57,slow=3.6,SNR=5.4
LPAZ La Paz 148.64 101 PKPbc **PKPdf** **02 40 41.2 +1.6**
LPAZ La Paz 148.64 101 PKPbc **PKPbc** **02 40 43.9 +0.6**
comp=Z,3.1nm,0.7s,baz=309,slow=1.3,SNR=9.2

IDC 05 02:36:45.1±2.3,5°22'N×125°40'E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=251.6km s-min=23.9km az=65.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.51**	**161**	P	P	02 42 25.5	+1.0
	0.3nm,0.7s,baz=341,slow=9.7,SNR=1.4						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**29.89**	**164**	P	P	02 42 53.7	-1.0
	0.3nm,0.9s,baz=344,slow=8.2,SNR=2.4						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**55.58**	**325**	P	P	02 46 22.7	+0.2
	0.3nm,0.4s,baz=121,slow=7.3,SNR=6.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Array**	**59.77**	**327**	P	P	02 46 51.6	-0.3
	0.7nm,0.2s,baz=129,slow=5.3,SNR=5.0						
	0.7nm,0.2s						

DJA 05 03:25:37.6±1.0,8°S±5'×10°7'E±°,h11km±7km,M4.2/17, mB5.6/1,mb4.5/6,MLv4.0/17,Mw(mB)5.0/1,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.88**	**354**	P	Pb	03 25 55.0	+0.1
SKJI	**Sukabumi**	**1.35**	**331**	P	Pn	03 26 02.2	-0.2
LEM	**Lembang**	**1.41**	**16**	P	Pn	03 26 03.5	+0.1
DBJI	**Dramaga**	**1.69**	**344**	P	Pn	03 26 07.1	0.0
KPJI	**Karang Pucung**	**1.90**	**63**	P	Pn	03 26 09.4	-0.5
TNG	**Tangerang**	**2.08**	**344**	P	Pn	03 26 12.6	+0.1
UGM	**Wanagama**	**3.28**	**85**	P	Pn	03 26 28.3	-0.7
SMRI	**Semarang**	**3.39**	**71**	P	Pn	03 26 30.6	+0.1
KASI	**Kota Agung**	**3.79**	**314**	P	Pn	03 26 36.8	+0.9
PCJI	**Pacitan**	**3.92**	**90**	P	Pn	03 26 36.9	-0.8
JAGI	**Jajag, Banyuwa**	**6.87**	**93**	P	Pn	03 27 19.9	+1.6
	25nm,0.6s						
PPSI	**Pulau Pagai**	**8.97**	**307**	P	Pn	03 27 45.5	-1.8
	40nm,0.7s						
TWSI	**Taliwang, Sumb**	**9.57**	**94**	P	Pn	03 27 55.7	+0.2
	16nm,0.7s						
PLAI	**Plampang**	**10.46**	**94**	P	Pn	03 28 07.4	-0.3

*SCB **05** 03:26:53.2±1.0,16°99S×64°77W,h12km±4km,MB2.0, ML3.3/2,Error ellipse: s-maj=3.2km s-min=2.4km az=2.0*
*VAO **05** 03:26:53.6±0.5,17°05S×65°17W,h10km,mb4.0*
ISC 05 03:26:54.1±0.7,17°02S±0°04×65°17W±0°05,h10km,n28, σ1§90/38,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.16**	**183**	Pg	**Pn**	**03 27 17.2**	**+0.5**
SOET	**ToroToro**	**1.25**	**209**	Pg	**Pg**	**03 27 21.7**	**+3.5**
SOET				Sg	**Sn**	**03 27 41.4**	**+6.3**
SOET				IAML		03 27 42.3	
	264nm,0.2s						
BBOE	**La Paz, Chanca**	**2.70**	**274**	Pn	**Pg**	**03 27 47.4**	**+1.6**
BBOJ	**La Paz, Jacaqu**	**2.89**	**270**	Pn	**Pg**	**03 27 50.1**	**+0.6**
LPAZ	**La Paz**	**2.92**	**284**	Pn	**Pg**	**03 27 50.2**	**0.0**
BBOB	**La Paz, Bander**	**2.97**	**287**	Pn	**Pg**	**03 27 50.6**	**-0.4**
SOEO	**Opoqueri**	**3.01**	**239**	Pn	**Pg**	**03 27 51.6**	**-0.2**
BBOD	**La Paz, Gloria**	**3.30**	**276**	Pn	**Pg**	**03 27 55.7**	**-1.7**
SIV	**San Ignacio**	**4.06**	**76**	Pn	**Pn**	**03 27 55.5**	**-0.9**
MOCB	**Mochara**	**4.24**	**186**	Pn	**Pb**	**03 28 04.5**	**-4.5**
MOCB				Sn	**Sb**	**03 28 57.8**	**-2.6**
MOCB				IAML		03 29 13.4	
	44nm,0.3s						
PB16	**IPOC Station P**	**4.33**	**252**	Pn	**Pb**	**03 28 09.8**	**-0.9**
PB11	**IPOC Station P**	**5.06**	**237**	Pn	**Pb**	03 28 19.4	-3.4
YJA	**Yavi**	**5.14**	**184**	Pn	Pn	03 28 16.5	+4.9
PB01	**IPOC Station P**	**5.72**	**225**	Pn	Pb	03 28 27.4	-6.6
PTLB	**Pontes e Lacer**	**6.00**	**76**	Pn	**Pn**	**03 28 21.4**	**-1.6**
VILB	**Vilhena**	**6.28**	**51**	*eP*	**Pn**	**03 28 26.9**	**+0.1**
VILB				*eS*	**Sn**	**03 29 40.6**	**+2.0**
BDQN	**Bodoquena, MS**	**8.68**	**114**	*eP*	**Pn**	**03 28 58.9**	**-1.0**
BDQN				*eS*	**Sn**	**03 30 37.9**	**+0.1**
SALV	**Santo Antonio**	**9.16**	**84**	*eP*	**Pn**	**03 29 05.5**	**-0.9**
SALV				*eS*	**Sn**	**03 30 50.4**	**+0.6**
AQDB	**Aquidauana**	**9.61**	**112**	*eP*	**Pn**	**03 29 12.6**	**0.0**
AQDB				*eS*	**Sn**	**03 31 01.7**	**+1.0**
PDRB	**Porto dos Gac**	**9.79**	**58**	*eS*	**Sn**	**03 31 06.2**	**+1.1**
PP1B	**Ponte de Pedra**	**9.85**	**95**	*eP*	**Pn**	**03 29 14.2**	**-1.6**
PP1B				*eS*	**Sn**	**03 31 07.4**	**+0.8**
CLDB	**Colider**	**10.96**	**57**	*eP*	**Pn**	**03 29 30.0**	**-1.1**
CLDB				*eS*	**Sn**	**03 31 35.0**	**+1.1**
AMBA	**Amambai (Brazi**	**11.23**	**123**	*eP*	**Pn**	**03 29 33.5**	**-1.3**
CPUP	**Villa Florida**	**11.79**	**143**	*eP*	**Pn**	**03 29 42.2**	**-0.2**
ARAG	**Araguaiana, MT**	**12.89**	**86**	*eP*	**Pn**	**03 29 55.8**	**-1.7**
ARAG				*eS*	**Sn**	**03 32 21.8**	**+0.6**
TEFE	**Tefe**	**13.43**	**2**	*eP*	**Pn**	**03 30 05.8**	**+0.9**
TEFE				*eS*	**Sn**	**03 32 36.0**	**+1.6**
NPGB	**Novo Progresso**	**13.79**	**45**	*eP*	**Pn**	**03 30 09.9**	**+0.1**
NPGB				*eS*	**Sn**	**03 32 44.2**	**+1.1**
SNDB	**Serra Nova Dou**	**14.34**	**71**	*eP*	**Pn**	**03 30 16.4**	**-0.9**
SNDB				*eS*	**Sn**	**03 32 57.3**	**+0.7**

*GII **05** 03:29:37.6±0.0,33°44N±0°01×34°61E±0°01,h9km, Mws2.1,confirmed*
*GRAL **05** 03:29:38.2±0.3,33°59N×34°68E,h6km±3km,MD2.7*
ISC 05 03:29:35.3±1.5,33°53N±0°05×34°59E±0°07,h13km,n42, σ0§61/44,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNTI	**Hanita**	**0.66**	**133**	P	**Pg**	**03 29 48.2**	**0.0**
HNTI	**Hanita**	**0.66**	**133**	S	**Sb**	**03 29 57.8**	**0.0**
MMC7	**Mount Meron ar**	**0.84**	**127**	P	**Pb**	**03 29 52.4**	**+0.6**
MMA0B	**Mount Meron ar**	**0.85**	**127**	P	**Pb**	**03 29 52.4**	**+0.4**
MMA0B	**Mount Meron ar**	**0.85**	**127**	S	**Sb**	**03 30 03.3**	**-0.1**
QRWL	**Qaraoun**	**0.91**	**89**	*eP*	**Pb**	**03 29 53.4**	**+0.4**
BLGI	**Bet Lehem HaGe**	**0.94**	**148**	P	**Pg**	**03 29 52.7**	**-0.7**
BLGI	**Bet Lehem HaGe**	**0.94**	**148**	S	**Sg**	**03 30 04.9**	**-0.8**
GEM	**Giv'at Ha'Em**	**0.95**	**109**	P	**Pn**	**03 29 54.4**	**0.0**
GEM	**Giv'at Ha'Em**	**0.95**	**109**	S	**Sb**	**03 30 06.8**	**+0.7**
BHL	**Bhannes**	**0.96**	**67**	*eP*	**Pg**	**03 29 53.9**	**+0.1**
OFRI	**`Ofer**	**0.96**	**160**	P	**Pb**	**03 29 54.0**	**+0.1**
OFRI	**`Ofer**	**0.96**	**160**	S	**Sg**	**03 30 05.6**	**-1.0**
SHBL	**Chebaa**	**0.98**	**100**	*eP*	**Pb**	**03 29 54.7**	**+0.5**
SHBL				*eS*	**Sb**	**03 30 07.0**	**-0.1**
NATI	**Neve Ativ**	**0.99**	**105**	P	**Pn**	**03 29 55.1**	**+0.2**
NATI	**Neve Ativ**	**0.99**	**105**	S	**Sb**	**03 30 07.9**	**+0.6**
RCY	**Rachaya**	**1.04**	**92**	*eP*	**Pn**	**03 29 55.8**	**+0.1**
RCY				*eS*	**Sb**	**03 30 08.7**	**-0.1**
MMLI	**Mount Malkishu**	**1.29**	**147**	P	**Pn**	**03 29 59.1**	**0.0**
MMLI	**Mount Malkishu**	**1.29**	**147**	S	**Sb**	**03 30 15.7**	**-0.4**
SLTI	**Sal'it**	**1.34**	**164**	P	**Pn**	**03 30 00.1**	**+0.3**
SLTI	**Sal'it**	**1.34**	**164**	S	**Sb**	**03 30 16.9**	**-0.5**
HWQ	**Hawqa**	**1.35**	**56**	*eP*	**Pn**	**03 30 00.4**	**+0.4**
HMDT	**Nahal Hemdat**	**1.50**	**148**	P	**Pn**	**03 30 02.4**	**+0.6**
HMDT	**Nahal Hemdat**	**1.50**	**148**	S	**Sn**	**03 30 21.4**	**+0.2**
BEIL	**Beino**	**1.66**	**52**	*eP*	**Pb**	**03 30 05.4**	**-0.4**
FKH	**Fakeheh**	**1.67**	**64**	*eP*	**Pb**	**03 30 05.8**	**-0.2**
AMAZ	**Amatzia**	**2.01**	**172**	P	**Pn**	**03 30 09.4**	**+0.4**
AMAZ	**Amatzia**	**2.01**	**172**	S	**Sn**	**03 30 33.9**	**-0.2**
DSI	**Dead Sea**	**2.06**	**161**	P	**Pn**	**03 30 10.2**	**+0.5**
DSI	**Dead Sea**	**2.06**	**161**	S	**Sn**	**03 30 35.0**	**-0.3**
MSBI	**Mazada**	**2.31**	**164**	P	**Pn**	**03 30 13.5**	**+0.5**
MSBI	**Mazada**	**2.31**	**164**	S	**Sn**	**03 30 41.3**	**+0.1**
GHAJ	**Ghor Haditha**	**2.37**	**159**	P	**Pn**	**03 30 15.4**	**+1.6**
GHAJ	**Ghor Haditha**	**2.37**	**159**	S	**Sn**	**03 30 42.7**	**-0.1**
KZIT	**Kziot**	**2.62**	**184**	P	**Pn**	**03 30 18.1**	**+0.7**
KZIT	**Kziot**	**2.62**	**184**	S	**Sn**	**03 30 48.0**	**-1.1**
PRNI	**Paran**	**3.19**	**174**	P	**Pn**	**03 30 26.2**	**+1.0**
PRNI	**Paran**	**3.19**	**174**	S	**Sn**	**03 31 03.7**	**+0.6**
KRMI	**Paran Flat**	**3.41**	**178**	P	**Pn**	**03 30 28.9**	**+0.8**
KRMI	**Paran Flat**	**3.41**	**178**	S	**Sn**	**03 31 07.3**	**-1.1**
MBRI	**Mt Berech**	**3.74**	**176**	P	**Pn**	**03 30 33.8**	**+1.0**
MBRI	**Mt Berech**	**3.74**	**176**	S	**Sn**	**03 31 17.2**	**+0.6**

*GEN **05** 03:36:49.5,46°33N×7°37E,h6km±1km,Ml2.9*
*LDG **05** 03:36:50.7±0.1,46°29N×7°41E,h5km,Ml3.5/48,Error ellipse: s-maj=1.0km s-min=0.9km az=105.0*
*ZUR **05** 03:36:50.1,46°32N×7°36E,h5km,MLh3.3/145,Error ellipse: s-maj=1341.2km s-min=347.0km az=132.0*
*BGR **05** 03:36:51.0±0.5,46°33N×7°34E,h10km,ML3.4/11,Error ellipse: s-maj=6.7km s-min=4.4km az=124.0*
*PRU **05** 03:36:51.9,46°29N×7°52E,h10km*
*ROM **05** 03:36:51.1±0.1,46°246N±0°005×7°390E±0°009, h11km,ML3.1/88,Error ellipse: s-maj=0.8km s-min=0.2km az=136.0*
ISC 05 03:36:49.0±0.7,46°31N±0°01×7°35E±0°01,h11km±3km, n226,σ1§38/381,20C-26D,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.02**	**272**	⇓Pg	**Pg**	**03 36 51.5**	**+0.2**
RAW2				Sg	**Sg**	**03 36 52.4**	**-0.4**
SAYF2	**Ayent-Fortunoz**	**0.06**	**119**	⇓Pg	**Pg**	**03 36 51.6**	**+0.4**
SAYF2				Sg	**Sg**	**03 36 52.7**	**-0.2**
SENIN	**Lac Senin/Sane**	**0.06**	**326**	⇓Pg	**Pg**	**03 36 51.8**	**+0.3**
SENIN				Sg	**Sg**	**03 36 53.0**	**-0.3**
SENIN	**Lac Senin/Sane**	**0.06**	**326**	P	**Pg**	**03 36 51.8**	**+0.3**
SENIN				S	**Sg**	**03 36 53.1**	**-0.3**
STSW2	**Zeuzier, Staus**	**0.07**	**62**	Pg	**Pg**	**03 36 51.8**	**+0.3**
STSW2				Sg	**Sg**	**03 36 52.9**	**-0.5**
SIOV	**Sion-Valere**	**0.08**	**172**	⇑Pg	**Pg**	**03 36 52.2**	**+0.7**
SIOV				Sg	**Sg**	**03 36 53.7**	**+0.4**
LEO01	**Saint Lonard,**	**0.08**	**139**	⇑Pg	**Pg**	**03 36 52.3**	**+0.8**
LEO01				Sg	**Sg**	**03 36 53.3**	**-0.1**
SIOO	**Sion-Ophtalmol**	**0.09**	**163**	⇑Pg	**Pg**	**03 36 52.4**	**+0.9**
SIOO				Sg	**Sg**	**03 36 53.6**	**+0.2**
SIOM	**Sion-Mayennets**	**0.09**	**173**	⇑Pg	**Pg**	**03 36 52.3**	**+0.8**
SIOM				Sg	**Sg**	**03 36 54.0**	**+0.6**
VET01	**Vtroz, Route**	**0.11**	**211**	⇑Pg	**Pg**	**03 36 52.6**	**+0.8**
VET01				Sg	**Sg**	**03 36 54.6**	**+0.8**
VET02	**Vtroz, Route**	**0.11**	**209**	⇑Pg	**Pg**	**03 36 52.8**	**+0.9**
SIE01	**Sierre, Farmho**	**0.11**	**113**	⇓Pg	**Pg**	**03 36 52.7**	**+0.8**
VET03	**Vtroz, Le Bot**	**0.12**	**205**	⇑Pg	**Pg**	**03 36 53.1**	**+1.2**
SARC	**Ardon Commune,**	**0.12**	**211**	⇑Pg	**Pg**	**03 36 52.9**	**+0.8**
RAW1	**Lenk, BE**	**0.12**	**30**	⇑Pg	**Pg**	**03 36 52.6**	**+0.5**
RAW1				Sg	**Sg**	**03 36 54.5**	**+0.1**
SIEB	**Ecole de Borzu**	**0.13**	**98**	⇓Pg	**Pg**	**03 36 52.9**	**+0.7**
SIEB				Sg	**Sg**	**03 36 55.1**	**+0.7**
SHER	**Hrmence, R**	**0.13**	**165**	⇑Pg	**Pg**	**03 36 53.3**	**+1.0**
SHER				Sg	**Sg**	**03 36 55.5**	**+0.8**
RAW4	**Former Reservo**	**0.16**	**228**	⇑Pg	**Pg**	**03 36 53.7**	**+1.0**
RAW4				Sg	**Sg**	**03 36 56.4**	**+1.1**
GRYON	**Gryon**	**0.18**	**249**	Pg	**Pg**	**03 36 53.8**	**+0.9**
GRYON				Sg	**Sg**	**03 36 56.7**	**+1.1**
VANNI	**Vissoie, Val d**	**0.20**	**121**	⇓Pg	**Pg**	**03 36 54.4**	**+1.0**
VANNI	**Vissoie, Val d**	**0.20**	**121**	P	**Pg**	**03 36 54.4**	**+1.0**
VANNI				S	**Sg**	**03 36 57.4**	**+1.1**
LKBD2	**Leukerbad 2**	**0.21**	**73**	⇓Pg	**Pg**	**03 36 54.3**	**+0.7**
LKBD2				Sg	**Sg**	**03 36 57.3**	**+0.5**
FULLY	**Reservoir Maze**	**0.22**	**223**	⇑Pg	**Pg**	**03 36 54.7**	**+1.1**
SCOD	**Chcteau-dO**	**0.22**	**316**	⇓Pg	**Pg**	**03 36 54.7**	**+1.0**
SCOD				Sg	**Sg**	**03 36 58.2**	**+1.5**
AG01	**Agarn, Footbal**	**0.22**	**94**	⇓Pg	**Pg**	**03 36 54.7**	**+1.0**
DIX	**Grande Dixence**	**0.24**	**170**	⇑Pg	**Pg**	**03 36 55.3**	**+1.2**
DIX				Sg	**Sg**	**03 36 58.5**	**+1.1**
DIX	**Grande Dixence**	**0.24**	**170**	P	**Pg**	**03 36 55.3**	**+1.2**
DIX				S	**Sg**	**03 36 58.6**	**+1.2**
DIX	**Grande Dixence**	**0.24**	**170**	⇑P	**Pg**	**03 36 55.2**	**+1.2**
DIX				S	**Sg**	**03 36 58.5**	**+1.1**
DIX				AML	AML		
	comp=E,37750µm,0.3s						
DIX				AML	AML		
	comp=E,37750µm,0.3s						
DIX				AML	AML		
	comp=N,21800µm,0.3s						
SZWD2	**Zweisimmen Kir**	**0.24**	**4**	⇑Pg	**Pg**	**03 36 54.9**	**+0.9**
SZWD2				Sg	**Sg**	**03 36 58.5**	**+1.1**
LAVEY	**Lavey les Bain**	**0.25**	**243**	⇑Pg	**Pb**	**03 36 55.2**	**-0.3**
LAVEY				Sg	**Sg**	**03 36 59.0**	**+1.3**
SGAK	**Gampel Kirche,**	**0.27**	**90**	⇓Pg	**Pb**	**03 36 55.5**	**-0.4**
SGAK				Sg	**Sg**	**03 36 59.3**	**+1.0**
AIGLE	**Aigle**	**0.28**	**276**	⇓Pg	**Pb**	**03 36 55.7**	**-0.3**
AIGLE				Sg	**Sb**	**03 37 00.1**	**-0.6**
SMAO	**Martigny, Rue**	**0.29**	**221**	⇑Pg	**Pb**	**03 36 56.2**	**0.0**
ILLEZ	**Chalet Vouargn**	**0.30**	**252**	⇓Pg	**Pb**	**03 36 56.1**	**-0.3**
ILLEZ				Sg	**Sg**	**03 37 00.7**	**+1.5**
NIE01	**Niedergesteln,**	**0.30**	**90**	⇓Pg	**Pb**	**03 36 56.0**	**-0.5**
NIE01				Sg	**Sg**	**03 36 60.0**	**+0.8**
LAUCH	**Lauchernalp**	**0.31**	**71**	⇓Pg	**Pb**	**03 36 56.2**	**-0.5**
LAUCH				Sg	**Sg**	**03 37 00.3**	**+0.7**
LAUCH	**Lauchernalp**	**0.31**	**71**	P	**Pb**	**03 36 56.2**	**-0.5**
LAUCH				S	**Sg**	**03 37 00.3**	**+0.7**
SALAN	**Lac Salanfe**	**0.31**	**237**	⇑Pg	**Pb**	**03 36 56.5**	**-0.2**
RAR01	**Raron, Gemeind**	**0.31**	**91**	⇓Pg	**Pb**	**03 36 56.3**	**-0.3**
RAR01				Sg	**Sb**	**03 37 00.8**	**-1.0**
JAUN	**Jaun, Euschels**	**0.32**	**353**	⇓Pg	**Pb**	**03 36 56.5**	**-0.4**
JAUN				Sg	**Sb**	**03 37 01.6**	**-0.6**
SFRS	**Frutigen, Schu**	**0.34**	**38**	Pg	**Pb**	**03 36 56.7**	**-0.5**
SFRS				Sg	**Sb**	**03 37 01.7**	**-1.0**
EMBD	**Embd, Matterta**	**0.35**	**106**	⇓Pg	**Pb**	**03 36 56.9**	**-0.4**
EMBD	**Embd, Matterta**	**0.35**	**106**	P	**Pb**	**03 36 56.9**	**-0.4**
EMBD				S	**Sg**	**03 37 01.6**	**+0.9**
SVIO	**Visp Obere Sta**	**0.37**	**93**	⇓Pg	**Pb**	**03 36 57.3**	**-0.3**
SVIO				Sg	**Sg**	**03 37 02.2**	**+0.9**
SBUL	**Bulle cole,**	**0.37**	**327**	⇓Pg	**Pb**	**03 36 57.9**	**+0.2**
SBUL				Sg	**Sb**	**03 37 03.7**	**+0.2**
SVIT	**Visp-Terbiners**	**0.37**	**94**	⇓Pg	**Pb**	**03 36 57.4**	**-0.3**
SVIT				Sg	**Sg**	**03 37 02.2**	**+0.8**
SEMOS	**Emosson Stauma**	**0.38**	**229**	Pg	**Pb**	**03 36 57.7**	**-0.1**
MFERR	**Prayon, Val Fe**	**0.40**	**204**	⇑Pg	**Pb**	**03 36 57.9**	**-0.2**
MFERR				Sg	**Sg**	**03 37 03.5**	**+1.3**
WIMIS	**Wimmis**	**0.40**	**28**	⇑Pg	**Pb**	**03 36 57.7**	**-0.4**
WIMIS				Sg	**Sb**	**03 37 03.8**	**-0.5**
SZEK	**Zermatt, Kirch**	**0.41**	**137**	Pg	**Pb**	**03 36 57.9**	**-0.3**
SNTZ	**Naters, Zentru**	**0.45**	**88**	⇓Pg	**Pb**	**03 36 58.8**	**-0.1**
SNTZ				Sg	**Sb**	**03 37 04.7**	**-0.9**
SIMPL	**Simplonpass**	**0.47**	**99**	⇓Pg	**Pb**	**03 36 59.1**	**-0.3**
SIMPL	**Simplonpass**	**0.47**	**99**	P	**Pb**	**03 36 59.1**	**-0.3**
SIMPL				S	**Sg**	**03 37 05.2**	**+0.7**
STAF	**Tafers**	**0.50**	**350**	Sg	**Sb**	**03 37 07.7**	**+0.6**
MMK	**Mattmark**	**0.50**	**121**	⇓Pg	**Pg**	**03 36 59.5**	**+0.7**
MMK	**Mattmark**	**0.50**	**121**	P	**Pg**	**03 36 59.5**	**+0.7**
MMK				S	**Sg**	**03 37 05.5**	**0.0**
MMK	**Mattmark**	**0.50**	**121**	P	**Pg**	**03 36 59.6**	**+0.7**
MMK				S	**Sg**	**03 37 06.3**	**+0.8**
MMK				AML	AML		
	comp=E,133µm,0.6s						
MMK				AML	AML		
	comp=N,226µm,1.6s						
MMK				AML	AML		
	comp=E,133µm,1.4s						
FIESA	**Fiescheralp**	**0.54**	**77**	⇓Pg	**Pb**	**03 37 00.5**	**-0.2**
FIESA	**Fiescheralp**	**0.54**	**77**	P	**Pb**	**03 37 00.5**	**-0.2**
FIESA				S	**Sb**	**03 37 07.9**	**-0.6**
SATI	**Passo dei Sala**	**0.57**	**140**	⇓Pg	**Pg**	**03 37 00.9**	**+0.7**
SATI	**Passo dei Sala**	**0.57**	**140**	P	**Pg**	**03 37 00.9**	**+0.7**
SATI				S	**Sg**	**03 37 08.1**	**+0.4**
SATI	**Passo dei Sala**	**0.57**	**140**	P	**Pg**	**03 37 00.8**	**+0.7**
SATI				S	**Sg**	**03 37 08.1**	**+0.4**
SATI				AML	AML		
	comp=N,978µm,0.1s						
SATI				AML	AML		
	comp=E,1350µm,0.8s						
MRGE	**Morge**	**0.58**	**200**	P	**Pb**	**03 37 01.2**	**0.0**
MRGE				S	**Sg**	**03 37 08.9**	**+1.0**
MRGE	**Morge**	**0.58**	**200**	P	**Pb**	**03 37 01.2**	**0.0**
MRGE				AML	AML		
	comp=E,1735µm,1.0s						
MRGE				AML	AML		
	comp=N,1535µm,0.3s						
CIRO	**Champorcher**	**0.73**	**168**	P	**Pg**	**03 37 03.6**	**+0.5**
CIRO				S	**Sg**	**03 37 13.0**	**+0.4**
CIRO	**Champorcher**	**0.73**	**168**	P	**Pg**	**03 37 03.6**	**+0.5**
CIRO				S	**Sg**	**03 37 12.8**	**+0.1**
CIRO				AML	AML		
	comp=E,748µm,0.4s						
CIRO				AML	AML		
	comp=N,586µm,0.9s						
GIMEL	**St. Georges /**	**0.78**	**287**	P	**Pn**	**03 37 06.1**	**+0.1**
GIMEL				AML	AML		
	comp=N,1240µm,0.2s						
GIMEL				AML	AML		
	comp=E,1330µm,0.2s						
GIMEL				AML	AML		
	comp=N,1240µm,0.2s						
RSL	**Roselend**	**0.80**	**219**	P	**Pb**	**03 37 05.5**	**+0.5**
RSL				S	**Sb**	**03 37 16.3**	**+0.3**
TRAV	**Traversella**	**0.85**	**161**	P	**Pg**	**03 37 05.7**	**+0.4**
TRAV				S	**Sg**	**03 37 16.0**	**-0.4**
TRAV	**Traversella**	**0.85**	**161**	P	**Pg**	**03 37 05.6**	**+0.3**
TRAV				S	**Sg**	**03 37 16.4**	**0.0**
TRAV				AML	AML		
	comp=N,1605µm,0.3s						
TRAV				AML	AML		
	comp=E,1700µm,1.2s						
LSD	**Lago del Serru**	**0.87**	**190**	P	**Pb**	**03 37 06.4**	**+0.2**
LSD				S	**Sg**	**03 37 17.8**	**+0.7**
LSD	**Lago del Serru**	**0.87**	**190**	P	**Pb**	**03 37 06.4**	**+0.2**
LSD				AML	AML		
	comp=E,4µm,0.7s						
LSD				AML	AML		
	comp=N,553µm,0.3s						
LSD				AML	AML		
	comp=N,553µm,1.7s						
LSD				AML	AML		
	comp=E,4µm,1.3s						
LPL	**La Plagne**	**0.91**	**209**	*e*Pg	**Pb**	**03 37 07.3**	**+0.5**
LPL				*e*Sg	**Sb**	**03 37 19.2**	**+0.2**
	comp=E,127nm,0.4s						
LPG	**La Plagne**	**0.92**	**207**	*e*Pg	**Pb**	**03 37 07.8**	**+0.7**
LPG				*e*Sg	**Sb**	**03 37 19.8**	**+0.4**
	comp=E,206nm,0.4s						
CABF	**La Chapelle**	**0.92**	**289**	*e*Pg	**Pn**	**03 37 08.4**	**+0.4**
CABF	**La Chapelle**	**0.92**	**289**	*eP*	**Pn**	**03 37 10.3**	**+2.3**
CABF				*e*Sg	**Sn**	**03 37 22.8**	**+1.6**
	comp=E,193nm,0.2s						
FUSIO	**Fusio**	**0.92**	**81**	P	**Pb**	**03 37 07.4**	**+0.3**
FUSIO				S	**Sb**	**03 37 19.4**	**0.0**
FUSIO	**Fusio**	**0.92**	**81**	⇓P	**Pb**	**03 37 07.4**	**+0.3**
FUSIO				S	**Sb**	**03 37 19.4**	**0.0**
FUSIO				AML	AML		
	comp=N,617µm,0.8s						
FUSIO				AML	AML		
	comp=E,678µm,1.3s						
FUSIO				AML	AML		
	comp=N,617µm,1.2s						
FUSIO				AML	AML		
	comp=E,678µm,0.7s						
BNALP	**Bannalp**	**0.93**	**53**	P	**Pn**	**03 37 07.8**	**-0.3**
BNALP				AML	AML		
	comp=E,790µm,0.2s						
BNALP				AML	AML		
	comp=N,642µm,0.9s						
BNALP				AML	AML		
	comp=N,642µm,1.0s						
BALST	**Balsthal**	**1.05**	**13**	*e*Pn	**Pn**	**03 37 10.2**	**+0.5**
BALST				*e*Pg	**Pb**	**03 37 11.1**	**+1.9**
BALST				*e*Sg	**Sn**	**03 37 26.2**	**+1.8**
VARE	**Varese**	**1.09**	**114**	P	**Pn**	**03 37 10.3**	**+0.1**
VARE				AML	AML		
	comp=E,780µm,0.3s						
VARE				AML	AML		
	comp=N,966µm,1.5s						
VARE				AML	AML		
	comp=E,780µm,1.7s						
VARE				AML	AML		
	comp=N,966µm,0.5s						
RSP	**Reno Superiore**	**1.17**	**183**	P	**Pn**	**03 37 11.8**	**+0.4**
RSP				S	**Sb**	**03 37 26.2**	**-0.2**
RSP				AML	AML		
	comp=E,672µm,0.3s						
RSP				AML	AML		
	comp=N,760µm,0.3s						
RSP				AML	AML		
	comp=E,673µm,0.3s						
RSP				AML	AML		
	comp=E,700µm,0.2s						
RSP				AML	AML		
	comp=N,728µm,0.2s						
MUGIO	**Muggio**	**1.24**	**108**	P	**Pg**	**03 37 13.3**	**+0.5**
MUGIO				S	**Sn**	**03 37 29.2**	**+0.1**
MUGIO				AML	AML		
	comp=E,338µm,0.7s						
MUGIO				AML	AML		
	comp=N,368µm,0.4s						
MU

MBDF *eSg* **Sg** **03 37 42.0 +0.3**
comp=N,88nm,0.3s
SLE Schleitheim 1.65 28 *ePn* **Pn** **03 37 18.7 +0.8**
SLE *ePg* **Pg** **03 37 21.4 +0.8**
SLE *eSg* **Sg** **03 37 43.0 +1.0**
BERGE Lenzkirch (DE) 1.66 20 *ePn* **Pn** **03 37 18.5 +0.4**
BERGE *ePg* **Pg** **03 37 21.6 +0.8**
BERGE *eSg* **Sg** **03 37 43.0 +0.7**
MDI Monti di Nese 1.73 107 P **Pb** **03 37 21.5 +0.7**
MDI AML AML
comp=N,470µm,0.6s
MDI AML AML
comp=E,456µm,0.3s
MDI AML AML
comp=E,479µm,0.3s
MDI AML AML
comp=N,470µm,1.4s
MDI AML AML
comp=N,487µm,0.7s
ORIF Oris-en-Rattie 1.73 217 *ePg* **Pg** **03 37 22.5 +0.3**
ORIF *eSg* **Sg** **03 37 45.9 +1.2**
comp=N,58nm,0.2s
ORIF Oris-en-Rattie 1.73 217 P **Pb** **03 37 21.4 +0.5**
ORIF AML AML
comp=E,280µm,0.4s
ORIF AML AML
comp=E,280µm,1.6s
ORIF AML AML
comp=N,231µm,0.6s
DAVOX Davos/Dischmat 1.81 74 P **Pg** **03 37 23.2 -0.5**
DAVOX AML AML
comp=N,2885µm,0.5s
DAVOX AML AML
comp=E,1325µm,0.3s
DAVOX AML AML
comp=N,2885µm,1.5s
DAVOX AML AML
comp=E,1325µm,0.3s
DAVOX AML AML
comp=N,2885µm,1.5s
ACQ Acqui Terme 1.81 154 P **Pb** **03 37 22.2 +0.1**
PZZ Stroppo 1.81 185 P **Pb** **03 37 22.4 +0.2**
PZZ AML AML
comp=N,494µm,0.4s
PZZ AML AML
comp=E,542µm,0.6s
SARZ Sarezzano 1.81 142 P **Pb** **03 37 23.2 +1.0**
HAU Haudompre 1.82 338 *ePn* **Pb** **03 37 21.7 -0.7**
HAU Haudompre 1.82 338 *ePg* **Pg** **03 37 25.6 +1.6**
HAU *eSg* **Sg** **03 37 48.2 +0.6**
comp=E,317nm,0.3s
BERNI Berninapass 1.85 86 P **Pb** **03 37 23.1 +0.1**
BERNI AML AML
comp=N,224µm,0.5s
BERNI AML AML
comp=N,224µm,0.5s
BERNI AML AML
comp=E,227µm,0.7s
EMING Emmingen-Lipti 1.88 32 *ePn* **Pn** **03 37 22.0 +0.8**
EMING *ePg* **Pg** **03 37 25.7 +0.6**
EMING *eSg* **Sg** **03 37 49.6 +0.2**
WALHA Wallhausen, DE 1.88 40 *ePn* **Pn** **03 37 22.2 +1.1**
WALHA *eSg* **Sg** **03 37 50.8 +1.3**
PCP Piancastagn 1.96 154 P **Pb** **03 37 24.4 -0.3**
DAVA Damuels 1.99 60 *ePg* **Pg** **03 37 28.3 +1.1**
comp=E,11nm,0.2s
DAVA *eSg* **Sg** **03 37 56.1 +3.1**
comp=E,258nm,0.4s
ZONE Zone 2.01 105 P **Pb** **03 37 24.9 -0.6**
ZONE AML AML
comp=E,310µm,0.8s
ZONE AML AML
comp=N,311µm,0.6s
ZONE AML AML
comp=E,310µm,1.2s
BRMO Bormio 2.10 84 P **Pb** **03 37 26.6 -0.5**
BRMO AML AML
comp=E,108µm,0.7s
BRMO AML AML
comp=N,136µm,1.3s
BRMO AML AML
comp=N,136µm,0.7s
CDF Champ du Feu 2.10 359 *ePn* **Pn** **03 37 24.8 +0.6**
CDF Champ du Feu 2.10 359 *ePg* **Pg** **03 37 30.0 +0.8**
CDF *eSg* **Sg** **03 37 56.4 -0.1**
comp=N,120nm,0.4s
BFO Black Forest 2.12 18 *ePn* **Pn** **03 37 24.8 +0.3**
BFO *eSg* **Sg** **03 37 56.7 -0.5**
CANO Canova, Maglio 2.20 163 P **Pb** **03 37 27.6 -1.1**
CANO AML AML
comp=E,636µm,1.4s
CANO AML AML
comp=N,293µm,1.6s
CANO AML AML
comp=N,293µm,0.4s
CANO AML AML
comp=E,636µm,0.6s
MABI Malga Bissina 2.21 96 P **Pb** **03 37 28.3 -0.9**
MABI AML AML
comp=E,236µm,0.8s
MABI AML AML
comp=N,132µm,0.3s
MOSI Grossmontoni 2.23 81 P **Pb** **03 37 29.7 +0.2**
MOSI AML AML
comp=E,497µm,0.5s
MOSI AML AML
comp=E,497µm,1.5s
MOSI AML AML
comp=N,876µm,0.5s
RONC Roncone 2.30 97 P **Pb** **03 37 29.2 -1.4**
RONC AML AML
comp=E,370µm,1.1s
RONC AML AML
comp=N,535µm,0.3s
CARE Lago del Cares 2.32 86 P **Pb** **03 37 30.4 -0.6**
CARE AML AML
comp=N,88µm,0.7s
CARE AML AML
comp=E,112µm,0.7s
CARE AML AML
comp=E,112µm,0.7s
UBR Ueberruh 2.33 53 *ePg* **Pg** **03 37 34.8 +1.1**
UBR *eSg* **Sg** **03 38 05.5 +1.6**
MAGA Magasa 2.35 102 P **Pb** **03 37 30.1 -1.2**
MAGA AML AML
comp=E,589µm,0.5s
MAGA AML AML
comp=N,400µm,0.6s
VIVF Saint-Julien-I 2.38 233 *eP* **Pb** **03 37 30.4 -1.4**
VIVF Saint-Julien-I 2.38 233 *ePg* **Pg** **03 37 35.4 +0.9**
VIVF *eSg* **Sg** **03 38 05.6 +0.2**
comp=N,66nm,0.2s
FETA Feichten 2.43 72 *ePn* **Pb** **03 37 33.1 +0.2**
comp=N,10nm,0.2s,SNR=13
FETA *eSn* **Sb** **03 38 02.3 -0.6**
comp=N,63nm,0.7s
IMI Imperia 2.43 171 P **Pn** **03 37 30.8 +2.0**
SMF Signal de Mont 2.45 279 *ePn* **Pn** **03 37 30.5 +1.6**
SMF Signal de Mont 2.45 279 *ePg* **Pg** **03 37 36.0 +0.2**
SMF *eSn* **Sn** **03 37 58.6 -0.2**
SMF *eSg* **Sg** **03 38 08.7 +1.2**
comp=N,33nm,0.2s
SBF Sospel 2.45 179 *eP* **Pb** **03 37 31.7 -1.4**
SBF Sospel 2.45 179 *ePg* **Pg** **03 37 36.0 0.0**
SBF *eSg* **Sg** **03 38 06.1 -1.6**
comp=N,61nm,0.3s
SFTF Sexfontaines 2.46 321 *ePn* **Pn** **03 37 31.2 +2.1**
baz=138
SFTF Sexfontaines 2.46 321 *ePg* **Pg** **03 37 36.8 +0.7**
SFTF *eSn* **Sn** **03 38 00.0 +0.9**
SFTF *eSg* **Sg** **03 38 08.2 +0.2**
comp=N,42nm,0.2s
PAGF Fort de Pagny 2.50 334 *ePn* **Pn** **03 37 31.5 +1.9**
baz=152
PAGF Fort de Pagny 2.50 334 *ePg* **Pg** **03 37 38.2 +1.4**
PAGF *eSn* **Sn** **03 37 59.6 -0.4**
PAGF *eSg* **Sg** **03 38 09.4 +0.2**
comp=N,30nm,0.2s
GAGG Gaggia 2.52 94 P **Pn** **03 37 32.0 +2.0**
GAGG AML AML
comp=E,174µm,0.5s
GAGG AML AML
comp=E,220µm,0.6s
GAGG AML AML
comp=N,166µm,0.8s
GAGG AML AML
comp=E,174µm,1.5s
GAGG AML AML
comp=N,238µm,0.7s
GAGG AML AML
comp=N,166µm,1.2s
VARA Varagna 2.52 100 P **Pn** **03 37 32.1 +2.1**
VARA AML AML
comp=N,245µm,1.5s
VARA AML AML
comp=N,245µm,0.5s
VARA AML AML
comp=E,280µm,0.4s
MBAL Monte Baldo - 2.52 103 P **Pb** **03 37 32.8 -1.5**
MBAL AML AML
comp=E,215µm,0.6s
MBAL AML AML
comp=N,273µm,1.6s
MBAL AML AML
comp=E,144µm,0.8s
MBAL AML AML
comp=N,121µm,0.7s
MBAL AML AML
comp=N,121µm,0.7s
MBAL AML AML
comp=E,144µm,1.2s
MBAL AML AML
comp=E,215µm,1.4s
MBAL AML AML
comp=N,273µm,0.4s
LUSI Trento, Gardas 2.52 97 P **Pn** **03 37 32.0 +2.0**
LUSI AML AML
comp=E,182µm,0.5s
LUSI AML AML
comp=N,230µm,0.5s
LOR Lormes 2.58 293 *ePn* **Pn** **03 37 32.5 +1.8**
LOR Lormes 2.58 293 *ePg* **Pg** **03 37 38.5 +0.1**
baz=113
LOR *eSn* **Sn** **03 38 02.9 +0.8**
LOR *eSg* **Sg** **03 38 11.6 -0.2**
comp=N,88nm,0.4s
RETA Reutte 2.62 62 *i* Pn **Pb** **03 37 34.0 -1.9**
comp=N,1.7nm,0.2s,SNR=7.7
RETA *eSn* **Sn** **03 38 05.1 +1.9**
comp=N,28nm,0.3s
GRAM Graiana 2.64 133 AML AML
comp=N,1128µm,1.6s
GRAM AML AML
comp=E,784µm,0.6s
GRAM AML AML
comp=E,784µm,1.4s
GRAM AML AML
comp=N,1128µm,0.4s
SMRF Simiane la Rot 2.65 209 *eP* **Pb** **03 37 34.9 -1.6**
SMRF Simiane la Rot 2.65 209 *ePg* **Pg** **03 37 40.6 +0.8**
SMRF *eSg* **Sg** **03 38 14.0 -0.2**
comp=N,16nm,0.4s
MEZF Maizieres J'vi 2.69 325 *ePn* **Pn** **03 37 33.8 +1.6**
MEZF Maizieres J'vi 2.69 325 *ePg* **Pg** **03 37 41.4 +0.9**
MEZF *eSn* **Sn** **03 38 05.6 +0.9**
MEZF *eSg* **Sg** **03 38 15.8 +0.5**
comp=N,25nm,0.3s
DOSS Dosso del Somm 2.71 98 P **Pb** **03 37 35.5 -2.0**
DOSS AML AML
comp=E,208µm,0.9s
DOSS AML AML
comp=N,189µm,0.9s
DOSS AML AML
comp=E,168µm,0.4s
DOSS AML AML
comp=N,217µm,0.6s
SSF Saint Saulge 2.75 287 *ePn* **Pn** **03 37 34.7 +1.7**
SSF Saint Saulge 2.75 287 *ePg* **Pg** **03 37 41.6 0.0**
SSF *eSn* **Sn** **03 38 06.7 +0.5**
SSF *eSg* **Sg** **03 38 17.4 +0.2**
comp=N,60nm,0.4s
SAVF Savonnieres en 2.75 328 *ePn* **Pn** **03 37 34.9 +1.9**
baz=145
SAVF Savonnieres en 2.75 328 *ePn* **Pn** **03 37 35.1 +2.0**
SAVF Savonnieres en 2.75 328 *ePg* **Pg** **03 37 44.0 +2.3**
SAVF Savonnieres en 2.75 328 *ePg* **Pg** **03 37 44.2 +2.5**
SAVF *eSn* **Sn** **03 38 05.4 -0.9**
comp=N,35nm,0.2s
SAVF *eSn* **Sb** **03 38 06.6 -5.3**
comp=N,35nm,0.3s
MOTA Moosalm 2.78 67 *ePn* **Pb** **03 37 37.1 -1.6**
comp=N,4.7nm,0.2s,SNR=14
MOTA *i* Sn **Sb** **03 38 10.3 -2.5**
comp=N,30nm,0.4s
AVF Avril sur Loir 2.80 281 *ePn* **Pn** **03 37 35.3 +1.6**
AVF *eSn* **Sn** **03 38 07.0 -0.4**
AVF *eSg* **Sg** **03 38 18.9 +0.1**
comp=N,18nm,0.2s
SQTA Sankt Quirin 2.80 70 *ePn* **Pb** **03 37 37.7 -1.4**
comp=N,2.7nm,0.2s,SNR=13
SQTA *eSn* **Sb** **03 38 11.7 -1.8**
comp=N,47nm,0.3s
ROSI Rosskopf 2.87 76 P **Pn** **03 37 37.2 +2.4**
ROSI AML AML
comp=E,192µm,1.1s
ROSI AML AML
comp=N,228µm,1.1s
ROTT Steinweiler 2.87 11 *ePn* **Pn** **03 37 35.4 +0.8**
LMR La Mourre 3.04 192 *eP* **Pb** **03 37 40.6 -2.5**
LMR La Mourre 3.04 192 *ePg* **Pg** **03 37 46.4 -0.8**
LMR *eSn* **Sn** **03 38 12.3 -1.0**
LMR *eSg* **Sg** **03 38 24.1 -2.5**
comp=N,14nm,0.3s
WATA Walderalm 3.08 69 *i* Pn **Pb** **03 37 41.1 -2.7**
comp=N,3.7nm,0.2s,SNR=8.5
WATA *i* Sn **Sn** **03 38 17.9 +3.3**
comp=N,11nm,0.3s
WTTA Wattenberg 3.10 71 *i* Pn **Pb** **03 37 41.8 -2.4**
comp=N,2.9nm,0.2s,SNR=17
WTTA *i* Sn **Sb** **03 38 18.9 -3.1**
comp=N,24nm,0.6s
WTTA Wattenberg 3.10 71 P **Pn** **03 37 41.0 +3.1**
WTTA AML AML
comp=E,135µm,1.2s
WTTA AML AML
comp=N,142µm,1.4s
WTTA AML AML
comp=E,135µm,0.8s
WTTA AML AML
comp=N,142µm,0.6s
BGF Bois d'Agland 3.12 276 *ePn* **Pn** **03 37 40.1 +2.0**
BGF Bois d'Agland 3.12 276 *ePg* **Pg** **03 37 48.7 -0.1**
BGF *eSn* **Sn** **03 38 14.8 -0.6**
BGF *eSg* **Sg** **03 38 32.3 +3.1**
comp=N,45nm,0.2s
CGRP Cima Grappa 3.13 96 P **Pn** **03 37 40.6 +2.2**
CGRP AML AML
comp=E,137µm,1.0s
CGRP AML AML
comp=N,148µm,1.2s
CGRP AML AML
comp=E,137µm,1.0s
CGRP AML AML
comp=N,148µm,0.8s
TEOL Teolo 3.17 106 P **Pn** **03 37 40.9 +2.2**
TEOL AML AML
comp=E,258µm,0.7s
TEOL AML AML
comp=N,249µm,0.8s
TEOL AML AML
comp=E,258µm,1.3s
TEOL AML AML
comp=N,249µm,1.2s
CARD Cardoso 3.19 135 P **Pn** **03 37 41.0 +1.9**
FUR Furstenfeldbru 3.25 54 *eSg* **Sg** **03 38 33.3 -0.2**
NORI Noerdlinger Ri 3.27 42 *ePg* **Pg** **03 37 53.4 +1.7**
LASF Ste Croix 3.33 229 *eP* **Pn** **03 37 44.1 +3.1**
LASF Ste Croix 3.33 229 *ePg* **Pg** **03 37 52.3 -0.5**
LASF *eSg* **Sg** **03 38 34.2 -1.7**
comp=N,26nm,0.4s
HYF Humbligny 3.37 288 *ePn* **Pn** **03 37 44.1 +2.5**
HYF *eSn* **Sn** **03 38 24.1 +2.5**
TCF Toulx Ste Croi 3.56 271 *ePn* **Pn** **03 37 46.0 +1.8**
TCF *eSn* **Sn** **03 38 26.5 +0.2**
TCF *eSg* **Sg** **03 38 43.2 -0.1**
comp=N,12nm,0.3s
ABH Alteburg 3.57 2 *ePn* **Pn** **03 37 45.8 +1.4**
ABTA Abfaltersbach 3.59 81 *i* Pn **Pn** **03 37 47.0 +2.3**
comp=N,18nm,0.9s
ABTA *eSn* **Sn** **03 38 30.5 +3.4**
comp=N,8.2nm,0.6s
LESA Schwarzleotal 3.82 71 *i* Pn **Pn** **03 37 51.3 +3.5**
comp=N,2.8nm,0.2s,SNR=11
LESA *i* Sn **Sn** **03 38 34.5 +1.8**
comp=N,7.0nm,0.5s
PGF Pioggiola 3.95 162 *ePn* **Pn** **03 37 51.2 +1.6**
PGF *eSn* **Sn** **03 38 36.2 +0.3**
comp=N,6.0nm,0.4s
CAF Calviac 3.96 251 *ePn* **Pn** **03 37 51.4 +1.7**
CAF Calviac 3.96 251 *ePg* **Pg** **03 38 04.3 -0.5**
CAF *eSn* **Sn** **03 38 37.9 +1.8**
CAF *eSg* **Sg** **03 38 55.6 -0.4**
comp=N,7.7nm,0.3s
TNS Taunus Mts 3.98 10 *ePn* **Pn** **03 37 50.5 +0.5**
GIVF Givet 4.15 337 *ePn* **Pn** **03 37 55.0 +2.8**
GIVF *eSn* **Sn** **03 38 39.8 -0.9**
GIVF *eSg* **Sg** **03 39 01.8 -0.3**
comp=N,16nm,0.3s
KBA Koelnbreinsper 4.20 77 *i* Pn **Pn** **03 37 57.0 +3.9**
comp=N,2.0nm,0.2s,SNR=5.5
KBA *i* Sn **Sn** **03 38 44.5 +2.4**
comp=N,1.6nm,0.2s
RJF Les Rejaudoux 4.20 258 *eP* **Pn** **03 37 56.1 +3.1**
RJF Les Rejaudoux 4.20 258 *ePg* **Pg** **03 38 10.4 +1.0**
RJF *eSg* **Sg** **03 39 03.9 +0.1**
comp=N,11nm,0.2s
ACOM Acomizza, Ital 4.27 85 P **Pn** **03 37 56.8 +2.7**
BAIF Baives 4.30 332 *ePn* **Pn** **03 37 56.4 +2.2**
BAIF *eSn* **Sn** **03 38 42.8 -1.5**
BAIF *eSg* **Sg** **03 39 05.8 -1.0**
comp=N,27nm,0.6s
MYKA Terra Mystica 4.36 84 *ePn* **Pn** **03 37 58.0 +2.8**
comp=N,2.2nm,0.4s
BIOA Bad Ischl, Aus 4.52 70 *i* Pn **Pn** **03 38 00.1 +2.8**
comp=N,1.0nm,0.2s
BIOA *i* Sn **Sn** **03 38 50.9 +1.0**
comp=N,5.1nm,0.4s
MTLF Montolieu 4.71 233 *ePn* **Pn** **03 38 02.2 +2.3**
MTLF Montolieu 4.71 233 *ePg* **Pg** **03 38 18.4 -0.7**
MTLF *eSg* **Sg** **03 39 18.3 -1.7**
comp=N,31nm,0.6s
LFF La Frestale 4.83 256 *ePn* **Pn** **03 38 03.7 +2.0**
LFF La Frestale 4.83 256 *ePg* **Pg** **03 38 18.8 -2.7**
LFF *eSg* **Sg** **03 39 21.9 -2.2**
comp=N,6.3nm,0.2s
MOA Molln 4.97 69 *i* Pn **Pn** **03 38 05.9 +2.4**
comp=N,0.7nm,0.2s
MOA *i* Sn **Sn** **03 39 01.1 +0.1**
comp=N,2.3nm,0.2s
OBKA Obir 4.98 85 *i* Pn **Pn** **03 38 06.3 +2.5**
comp=N,0.6nm,0.3s
OBKA *i* Sn **Sn** **03 38 59.6 -1.8**
comp=N,3.9nm,0.4s
KHC Kasperske Hory 5.06 54 *ePN* **Pn** **03 38 06.0 +1.2**
KHC *eSN* **Sn** **03 39 00.6 -2.7**
KHC *eSG* **Sg** **03 39 30.0 -1.4**
comp=N,30nm,0.7s
MFF Saint Martin d 5.19 276 *ePn* **Pn** **03 38 08.4 +1.9**
MFF Saint Martin d 5.19 276 *ePn* **Pn** **03 38 08.6 +2.1**
baz=91
MFF Saint Martin d 5.19 276 *ePg* **Pg** **03 38 27.1 -1.2**
MFF *eSn* **Sn** **03 39 04.2 -2.1**
MFF *eSn* **Sn** **03 39 04.9 -1.4**
MFF *eSg* **Sg** **03 39 34.6 -0.8**
comp=N,13nm,0.4s
MFF *eSg* **Sg** **03 39 35.2 -0.2**
comp=N,21nm,0.3s
SOKA Soboth 5.32 83 *i* Pn **Pn** **03 38 09.5 +1.1**
comp=N,0.5nm,0.3s
SOKA *i* Sn **Sn** **03 39 11.9 +2.2**
comp=N,1.1nm,0.3s
LDF La Druitiere 5.56 297 *ePn* **Pn** **03 38 13.1 +1.5**
LDF *eSn* **Sn** **03 39 13.1 -2.3**
LDF *eSg* **Sg** **03 39 44.9 -2.3**
comp=N,6.7nm,0.3s
ZVC Zvikov 5.56 53 *ePN* **Pn** **03 38 13.4 +1.7**
ZVC *eSN* **Sn** **03 39 14.8 -0.8**
ZVC *eSG* **Sg** **03 39 47.0 -0.5**
comp=N,20nm,1.0s
ARSA Arzberg 5.69 78 *i* Pn **Pn** **03 38 16.8 +3.3**
comp=N,2.2nm,0.4s
ARSA *eSn* **Sn** **03 39 21.6 +2.8**
comp=N,0.6nm,0.3s
FLN La Foliniere 5.84 298 *ePn* **Pn** **03 38 16.7 +1.2**
FLN *eSn* **Sn** **03 39 20.2 -2.2**
FLN *eSg* **Sg** **03 39 55.7 -0.6**
comp=N,19nm,0.3s
HSKC Hora Svate Kat 5.90 41 *eSG* **Sg** **03 39 58.3 0.0**
comp=N,18nm,0.9s
GRR Gorron 5.95 293 *ePn* **Pn** **03 38 18.8 +1.8**
GRR *eSn* **Sn** **03 39 22.8 -2.3**
comp=N,36nm,0.4s
EPF Esparros 5.98 239 *ePn* **Pn** **03 38 18.6 +1.2**
EPF Esparros 5.98 239 *ePg* **Pg** **03 38 42.4 -1.0**
EPF *eSg* **Sg** **03 39 59.8 -1.0**
comp=N,3.0nm,0.3s
CONA Conrad Observa 6.03 71 *i* Pn **Pn** **03 38 20.1 +1.9**
comp=N,0.7nm,0.4s
CONA *i* Sn **Sn** **03 39 25.9 -1.3**
comp=N,1.7nm,0.2s
PRU Pruhonice 6.06 50 *eSG* **Sg** **03 40 01.7 -1.5**
CLL Collm 6.24 35 *ePn* Pn 03 38 16.0 -4.9
CLL *eSg* **Sg** **03 40 08.0 -1.1**
TREC Trest 6.24 59 *ePN* **Pn** **03 38 22.7 +1.7**
TREC *eSN* **Sn** **03 39 29.1 -3.2**
RONA Rosalia, Austr 6.28 74 *i* Pn **Pn** **03 38 23.8 +2.3**
comp=N,1.9nm,0.2s,SNR=4.7
RONA *i* Sn **Sn** **03 39 30.6 -2.5**
comp=N,5.8nm,0.5s
KRUC Moravsky 6.70 62 *ePN* **Pn** **03 38 27.8 +0.6**
KRUC *eSN* **Sn** **03 39 40.5 -3.0**
VRAC Vranov 6.91 61 *ePN* **Pn** **03 38 31.6 +1.5**
VRAC *eSN* **Sn** **03 39 48.7 0.0**
SGMF Saint Gilles 7.01 290 *ePn* **Pn** **03 38 32.3 +0.8**
SGMF *eSn* **Sn** **03 39 48.1 -3.1**
comp=N,16nm,0.4s
UPC Upice 7.13 51 *eSG* **Sg** **03 40 35.5 -2.1**
DPC Dobruska-Polom 7.22 53 *eSG* **Sg** **03 40 38.2 -2.2**
KRLC Kraliky 7.34 56 *ePN* **Pn** **03 38 37.6 +1.5**
QUIF Quistinic 7.35 286 *ePn* **Pn** **03 38 37.4 +1.2**
QUIF *eSn* **Sn** **03 39 57.5 -2.0**
comp=N,16nm,0.3s
ROSF Rostrenen 7.50 289 *ePn* **Pn** **03 38 39.3 +1.1**
ROSF *eSn* **Sn** **03 40 00.3 -2.8**
comp=N,13nm,0.4s
MORC Moravsky Berou 7.66 59 *ePN* **Pn** **03 38 41.4 +0.9**

*IDC **05** 03:50:22.8±1.1,36°.95N×28°.68E,h0km,mb3.7/5, mbtmp3.8/8,ML1.8/1, Error ellipse: s-maj=27.0km s-min=16.2km az=153.0*
*ISK **05** 03:50:23.6,37°.07N×28°.56E,h6km,ML3.7/25*
*AFAD **05** 03:50:23.9,37°.03N×28°.57E,h7km±3km,MW3.6*
*GII **05** 03:50:23.6±0.0,36°.881N±0°.002×28°.544E±0°.001,h5km, Mws3.7,confirmed*
*THE **05** 03:50:25.4,37°N±3°×2°9E±°,h15km±17km,M3.4/12, MLh3.4/12*
*ATH **05** 03:50:25.0,37°.05N×28°.55E,h10km±2km,ML3.6/7, Manual Solution by A.Moschou First location: 2019/11/05 03:51:50, This location: 2019/11/05 04:02:58 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*HLW **05** 03:50:25.4,36°.91N×28°.61E,h10km±2km,Ml3.6*
ISC 05 03:50:24.2±0.8,37°.04N±0°.02×28°.56E±0°.01,h12km±5km, n129,σ1§10/169,mb3.4/4,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.23**	**160**	Pg	**Pb**	**03 50 29.2**	**-1.1**
DALY				Sg	**Sg**	**03 50 33.8**	**+1.4**
YER	**Yerkesik**	**0.24**	**295**	P	**Pb**	**03 50 30.5**	**-0.1**
YER				S	**Sb**	**03 50 34.6**	**+1.8**
MULA	**Mugla, Merkez-**	**0.29**	**320**	SPECP		03 50 30.0	
MULA				P	**Pg**	**03 50 30.1**	**-0.1**
MULA				S	**Sg**	**03 50 34.6**	**+0.3**
TURN	**Turunc**	**0.36**	**224**	SPECP		03 50 31.0	
TURN				P	**Pg**	**03 50 31.4**	**-0.1**
TURN				S	**Sb**	**03 50 37.5**	**-0.6**
TURN	**Turunc**	**0.36**	**224**	Pg	**Pg**	**03 50 31.4**	**-0.1**
TURN				Sg	**Sb**	**03 50 38.0**	**-0.1**
SABU	**Mula-Dalaman**	**0.39**	**122**	SPECP		03 50 31.0	
SABU				P	**Pg**	**03 50 31.6**	**-0.5**
SABU				S	**Sg**	**03 50 37.3**	**0.0**

DNZT	**Denizli-Tavas-**	**0.45**	**57**	SPECP			03 50 32.0	
DNZT				P		**Pg**	**03 50 32.5**	**-0.6**
DNZT				S		**Sb**	**03 50 40.0**	**-0.8**
TAVA	**DENIZLI_Tavas**	**0.52**	**33**	SPECP			03 50 33.0	
TAVA				P		**Pg**	**03 50 33.5**	**-0.9**
TAVA				S		**Sg**	**03 50 40.9**	**-0.4**
FETY	**Fethiye**	**0.58**	**133**	P		Pg	03 50 27.4	-8.2
CAME	**Cameli-Denizli**	**0.60**	**98**	Pg		**Pg**	**03 50 35.7**	**-0.4**
CAEL	**Denizli, Camel**	**0.62**	**82**	SPECP			03 50 36.0	
CAEL				P		**Pb**	**03 50 36.2**	**-0.9**
RDI1	**Rhodes Town Ha**	**0.64**	**205**	P		**Pn**	**03 50 38.0**	**-1.1**
RDI1				S		**Sb**	**03 50 46.1**	**-0.1**
RODB	**Rodos**	**0.65**	**205**	P		**Pn**	**03 50 37.8**	**-1.3**
MLSB	**Milas**	**0.68**	**293**	Pg		**Pg**	**03 50 36.5**	**-0.9**
MLSB				S		**Sb**	**03 50 46.8**	**-0.5**
DNIZ	**Denizli-Tavas-**	**0.70**	**33**	P		**Pg**	**03 50 36.8**	**-1.2**
DNIZ				S		**Sb**	**03 50 47.5**	**-0.7**
APMY	**Acipayam-Deniz**	**0.74**	**54**	Pg		**Pg**	**03 50 37.8**	**-0.8**
DATC	**Datca-Mugla**	**0.77**	**249**	Pg		**Pb**	**03 50 39.0**	**-0.5**
ESEN	**Aydn-Nazilli**	**0.78**	**348**	SPECP			03 50 38.0	
ESEN				P		**Pg**	**03 50 38.8**	**-0.6**
ESEN				S		**Sg**	**03 50 48.2**	**-1.4**
IZZE	**Mula-Seydike**	**0.80**	**138**	SPECP			03 50 39.0	
IZZE				P		**Pb**	**03 50 39.5**	**-0.6**
IZZE				S		**Sb**	**03 50 50.0**	**-0.9**
AYDN	**Tasoluk**	**0.83**	**319**	SPECP			03 50 40.0	
AYDN				P		**Pb**	**03 50 40.2**	**-0.4**
AYDN				S		**Sg**	**03 50 49.9**	**-1.1**
GOLH	**Golhisar**	**0.83**	**76**	P		**Pg**	**03 50 39.8**	**-0.5**
KNIK	**Mula-Seydike**	**0.84**	**103**	P		**Pb**	**03 50 40.0**	**-0.7**
KNIK				S		**Sb**	**03 50 52.2**	**+0.2**
DAT	**Datca**	**0.84**	**249**	Pg		**Pb**	**03 50 40.2**	**-0.3**
ARG	**Arkhangelos**	**0.89**	**203**	Pg		**Pb**	**03 50 41.2**	**-0.3**
ARG	**Arkhangelos**	**0.89**	**203**	P		**Pb**	**03 50 41.1**	**-0.5**
ARG				S		**Sn**	**03 50 54.9**	**-0.4**
ARG	**Arkhangelos**	**0.89**	**203**	P		**Pb**	**03 50 41.4**	**-0.1**
ARG				S		**Sn**	**03 50 53.9**	**-1.3**
BDRM	**Kayabasi**	**0.89**	**272**	SPECP			03 50 41.0	
BDRM				P		**Pn**	**03 50 41.9**	**-0.7**
BDRM				S		**Sn**	**03 50 56.6**	**+1.2**
NAZL	**Nazilli-Aydin**	**0.95**	**347**	Pg		**Pg**	**03 50 42.0**	**-0.6**
YAZI	**Mula-Dat§a-**	**0.95**	**249**	SPECP			03 50 43.0	
YAZI				P		**Pn**	**03 50 43.2**	**-0.2**
YAZI				S		**Sn**	**03 50 57.6**	**+0.7**
BODT	**Bodrum**	**1.00**	**272**	Pg		**Pn**	**03 50 44.9**	**+0.9**
BODT	**Bodrum**	**1.00**	**272**	P		**Pn**	**03 50 45.1**	**+1.0**
BODT				S		**Sn**	**03 50 59.1**	**+1.1**
YKAV	**Yalikavak-Bodr**	**1.02**	**275**	Pg		**Pg**	**03 50 43.6**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**330**	Pg		**Pg**	**03 50 44.1**	**-0.5**
INCE	**Denizli-Bozkur**	**1.05**	**50**	P		**Pg**	**03 50 43.6**	**-0.9**
INCE				S		**Sn**	**03 51 00.4**	**+0.8**
ELL	**Elmali**	**1.12**	**104**	Pn		**Pn**	**03 50 45.8**	**-0.1**
DDIM	**Aydin, Didim**	**1.13**	**292**	SPECP			03 50 45.0	
DDIM				P		**Pb**	**03 50 45.5**	**-0.2**
AKAS	**Kas**	**1.16**	**133**	P		**Pn**	**03 50 46.8**	**+0.3**
AKAS				S		**Sn**	**03 51 06.9**	**+4.6**
AKAS	**Kas**	**1.16**	**133**	Pn		**Pn**	**03 50 46.8**	**+0.3**
KIRA	**zmir-Kiraz**	**1.17**	**354**	P		**Pb**	**03 50 45.8**	**-0.6**
KIRA				S		**Sg**	**03 51 02.1**	**+0.2**
IZMR	**zmir-demi**	**1.20**	**337**	P		**Pb**	**03 50 46.7**	**-0.2**
IZMR				S		**Sn**	**03 51 03.5**	**+0.5**
KSL	**Kastellorizon**	**1.21**	**137**	P		**Pg**	**03 50 47.6**	**+0.1**
KSL				S		**Sn**	**03 51 04.9**	**+1.7**
KSL	**Kastellorizon**	**1.21**	**137**	P		**Pg**	**03 50 48.3**	**+0.8**
KSL				S		**Sn**	**03 51 04.4**	**+1.2**
NISR	**Nisiros**	**1.22**	**250**	P		**Pg**	**03 50 47.7**	**0.0**
NISR				S		**Sn**	**03 51 04.5**	**+1.0**
NISR	**Nisiros**	**1.22**	**250**	P		**Pg**	**03 50 47.7**	**0.0**
NISR				S		**Sn**	**03 51 04.3**	**+0.8**
GCAM	**G?zelcaml?**	**1.25**	**303**	P		**Pg**	**03 50 48.2**	**0.0**
GCAM	**G?zelcaml?**	**1.25**	**303**	Pn		**Pb**	**03 50 47.5**	**-0.2**
ODEM	**Odemis-Izmir**	**1.30**	**343**	Pn		**Pn**	**03 50 47.9**	**-0.3**
DEMR	**Demre-Antalya**	**1.35**	**126**	Pn		**Pg**	**03 50 54.4**	**+0.3**
KORT	**Korkueli**	**1.44**	**91**	Pn		**Pb**	**03 50 50.7**	**-0.3**
KULA	**Kula-Manisa**	**1.48**	**3**	Pn		**Pn**	**03 50 50.6**	**-0.2**
BASM	**Basmaki-Afyon**	**1.48**	**53**	Pn		**Pn**	**03 50 50.8**	**0.0**
SMG	**Samos**	**1.53**	**297**	P		**Pn**	**03 50 51.2**	**-0.1**
SMG				S		**Sb**	**03 51 12.4**	**+0.7**
SMG	**Samos**	**1.53**	**297**	P		**Pn**	**03 50 51.2**	**-0.1**
SMG				S		**Sb**	**03 51 12.4**	**+0.7**
KEMT	**Kemer-ANTALYA**	**1.66**	**104**	Pn		**Pg**	**03 50 54.8**	**-1.3**
BCK	**Bucak**	**1.68**	**75**	Pn		**Pb**	**03 50 54.3**	**-0.8**
ANTB	**Antalya**	**1.69**	**94**	Pn		**Pb**	**03 50 54.5**	**-0.6**
ISP	**Isparta**	**1.75**	**63**	Pn		**Pn**	**03 50 54.7**	**+0.2**
ISP	**Isparta**	**1.75**	**63**	P		**Pb**	**03 50 55.8**	**-0.5**
ISP	**Isparta**	**1.75**	**63**	P		**Pb**	**03 50 55.5**	**-0.9**
ISP				S		**Sb**	**03 51 18.7**	**+0.4**
BLCB	**Balcova**	**1.81**	**319**	P		**Pn**	**03 50 54.9**	**-0.2**
BLCB				S		**Sn**	**03 51 17.2**	**-0.8**
KARP	**Karpathos**	**1.86**	**218**	Pn		**Pb**	**03 50 57.5**	**-0.8**
KARP	**Karpathos**	**1.86**	**218**	P		**Pb**	**03 50 57.2**	**-1.0**
KARP				S		**Sb**	**03 51 20.5**	**-1.0**
KARP	**Karpathos**	**1.86**	**218**	P		**Pb**	**03 50 57.5**	**-0.8**
KARP				S		**Sb**	**03 51 20.8**	**-0.7**
CHOS	**Chios island**	**2.40**	**305**	P		**Pn**	**03 51 03.7**	**+0.3**
CHOS				S		**Sn**	**03 51 32.3**	**-0.4**
APE	**Apeiranthos**	**2.42**	**272**	P		**Pn**	**03 51 03.9**	**+0.2**
APE				S		**Sn**	**03 51 33.4**	**+0.2**
APE	**Apeiranthos**	**2.42**	**272**	P		**Pn**	**03 51 03.8**	**+0.2**
APE	**Apeiranthos**	**2.42**	**272**	S		**Sn**	**03 51 34.0**	**+0.8**
APE	**Apeiranthos**	**2.42**	**272**	P		**Pn**	**03 51 03.9**	**+0.2**
THERA	**Ancient Thera,**	**2.56**	**256**	P		**Pn**	**03 51 06.5**	**+0.9**
ZKR	**Zakros**	**2.69**	**225**	P		**Pn**	**03 51 08.6**	**+1.2**
PRK	**Paraskevi**	**2.85**	**321**	P		**Pn**	**03 51 10.2**	**+0.7**
IDI	**Anoyia**	**3.44**	**241**	Pn		**Pn**	**03 51 18.8**	**+1.1**
	4.7nm,0.3s,baz=353,slow=8.4,SNR=39							
IDI				Sn		**Sn**	**03 52 01.6**	**+3.2**
	6.2nm,0.3s,baz=107,slow=19,SNR=7.1 15nm,0.3s							
IDI	**Anoyia**	**3.44**	**241**	P		**Pn**	**03 51 18.7**	**+1.0**
AKMS	**Akamas**	**3.67**	**122**	P		**Pn**	**03 51 21.7**	**+0.9**
ALFC	**Alefka**	**3.77**	**119**	P		**Pn**	**03 51 23.0**	**+0.8**
LIA	**Limnos Island**	**3.90**	**318**	P		**Pn**	**03 51 24.2**	**+0.3**
SMTH	**Samothraki Isl**	**4.17**	**326**	P		**Pn**	**03 51 28.1**	**+0.5**
CSS	**Mathiatis**	**4.39**	**117**	P		**Pn**	**03 51 30.5**	**-0.2**
CSS	**Mathiatis**	**4.39**	**117**	S		**Sn**	**03 52 21.2**	**+0.6**
BRTR	**Keskin Array B**	**4.81**	**55**	Pn		**Pn**	**03 51 38.1**	**+1.5**
	16nm,0.5s,baz=242,slow=17,SNR=60							
BRTR				Sn		**Sn**	**03 52 32.9**	**+0.5**
	1.4nm,0.3s,baz=234,slow=27,SNR=6.9							
MATC	**Matruh**	**5.78**	**191**	P		**Pn**	**03 51 50.1**	**+0.3**
SLUM	**Salum**	**6.18**	**208**	P		**Pn**	**03 51 54.8**	**-0.6**
SLUM				S		**Sn**	**03 53 01.6**	**-4.3**
HNTI	**Hanita**	**6.71**	**124**	P		**Pn**	**03 52 01.8**	**-0.8**
HNTI	**Hanita**	**6.71**	**124**	S		**Sn**	**03 53 17.9**	**-1.0**
MMC7	**Mount Meron ar**	**6.89**	**124**	P		**Pn**	**03 52 04.7**	**-0.4**
MMA0B	**Mount Meron ar**	**6.90**	**124**	P		**Pn**	**03 52 04.7**	**-0.6**
MMA0B	**Mount Meron ar**	**6.90**	**124**	S		**Sn**	**03 53 23.5**	**-0.2**
MMAI	**Mount Meron Ar**	**6.90**	**124**	Pn		**Pn**	**03 52 04.8**	**-0.5**
	13nm,0.5s,baz=312,slow=12,SNR=36							
MMAI				Sn		**Sn**	**03 53 20.9**	**-2.8**
	5.8nm,0.3s,baz=309,slow=28,SNR=5.9							
GEM	**Giv'at Ha'Em**	**6.96**	**121**	P		**Pn**	**03 52 05.9**	**-0.1**
GEM	**Giv'at Ha'Em**	**6.96**	**121**	S		**Sn**	**03 53 24.8**	**-0.3**
NATI	**Neve Ativ**	**6.98**	**121**	P		**Pn**	**03 52 05.5**	**-0.7**
NATI	**Neve Ativ**	**6.98**	**121**	S		**Sn**	**03 53 26.0**	**+0.4**
MMLI	**Mount Malkishu**	**7.28**	**127**	P		**Pn**	**03 52 09.5**	**-0.9**
MMLI	**Mount Malkishu**	**7.28**	**127**	S		**Sn**	**03 53 32.3**	**-0.7**
SALP	**Salfit**	**7.38**	**130**	P		**Pn**	**03 52 11.4**	**-0.4**
SALP	**Salfit**	**7.38**	**130**	S		**Sn**	**03 53 34.4**	**-1.1**
HMDT	**Nahal Hemdat**	**7.46**	**128**	P		**Pn**	**03 52 12.6**	**-0.3**
HMDT	**Nahal Hemdat**	**7.46**	**128**	S		**Sn**	**03 53 36.7**	**-0.8**
KOT	**Kottamia**	**7.60**	**158**	P		**Pn**	**03 52 15.2**	**+0.4**
KZIT	**Kziot**	**7.80**	**140**	P		**Pn**	**03 52 17.2**	**-0.4**
KZIT	**Kziot**	**7.80**	**140**	S		**Sn**	**03 53 44.8**	**-1.0**
YTIR	**Yattir**	**7.84**	**134**	P		**Pn**	**03 52 17.2**	**-1.0**
YTIR	**Yattir**	**7.84**	**134**	S		**Sn**	**03 53 46.2**	**-0.7**
DSI	**Dead Sea**	**7.85**	**132**	P		**Pn**	**03 52 17.6**	**-0.5**
DSI	**Dead Sea**	**7.85**	**132**	S		**Sn**	**03 53 45.6**	**-1.3**
MSBI	**Mazada**	**8.02**	**133**	P		**Pn**	**03 52 19.7**	**-0.8**
MSBI	**Mazada**	**8.02**	**133**	S		**Sn**	**03 53 49.8**	**-1.3**
RYAN	**Fayoum**	**8.06**	**169**	P		**Pn**	**03 52 20.9**	**-0.2**
GHAJ	**Ghor Haditha**	**8.15**	**133**	P		**Pn**	**03 52 21.8**	**-0.5**
GHAJ	**Ghor Haditha**	**8.15**	**133**	S		**Sn**	**03 53 53.3**	**-0.9**
SWA2		**8.19**	**199**	P		**Pn**	**03 52 23.6**	**+0.6**
SWA2				S		**Sn**	**03 53 49.2**	**-6.2**
RMNI	**Mount Ramon**	**8.24**	**139**	P		**Pn**	**03 52 22.6**	**-1.0**
RMNI	**Mount Ramon**	**8.24**	**139**	S		**Sn**	**03 53 55.0**	**-1.6**
PRNI	**Paran**	**8.56**	**139**	P		**Pn**	**03 52 27.2**	**-0.8**
PRNI	**Paran**	**8.56**	**139**	S		**Sn**	**03 54 03.3**	**-1.1**
KRMI	**Paran Flat**	**8.61**	**142**	P		**Pn**	**03 52 27.4**	**-1.2**
KRMI	**Paran Flat**	**8.61**	**142**	S		**Sn**	**03 54 03.8**	**-1.8**
NBNS	**Bani Suef**	**8.70**	**164**	P		**Pn**	**03 52 29.3**	**-0.6**
HRFI	**Mount Harif**	**8.83**	**140**	P		**Pn**	**03 52 30.8**	**-0.9**
HRFI	**Mount Harif**	**8.83**	**140**	S		**Sn**	**03 54 09.4**	**-1.7**
MBRI	**Mt Berech**	**8.96**	**142**	P		**Pn**	**03 52 32.6**	**-0.9**
MBRI	**Mt Berech**	**8.96**	**142**	S		**Sn**	**03 54 13.4**	**-1.1**
EIL	**Elat**	**9.08**	**142**	P		**Pn**	**03 52 34.1**	**-1.0**
EIL	**Elat**	**9.08**	**142**	S		**Sn**	**03 54 16.3**	**-1.0**
FINES	**FINESS Array B**	**24.48**	**357**	P		**P**	**03 55 43.6**	**+0.7**
	3.9nm,0.8s,baz=186,slow=10,SNR=5.7 3.9nm,0.8s							
ESDC	**Sonseca Array**	**25.56**	**286**	P		**P**	**03 55 54.4**	**+1.4**
	0.7nm,0.8s,baz=88,slow=9.3,SNR=1.8 0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**33.80**	**232**	P		**P**	**03 57 06.0**	**-0.2**
	2.7nm,0.4s,baz=46,slow=8.3,SNR=7.0 2.7nm,0.4s							
MKAR	**Makanchi Array**	**40.45**	**59**	P		**P**	**03 58 02.3**	**-0.2**
	0.4nm,0.5s,baz=266,slow=9.9,SNR=2.3 0.4nm,0.5s							
ILAR	**Eielson Array**	**78.46**	**358**	P		**P**	**04 02 26.9**	**+2.3**
	0.2nm,0.8s,baz=347,slow=3.7,SNR=1.2 0.2nm,0.8s							

*ISK **05** 03:51:39.2, 37.06N×28.53E, h9km, ML3.1/8*
*AFAD **05** 03:51:39.4, 37.02N×28.60E, h7km±2km, MW3.2*

ISC 05 03:51:39.6±0.9, 37.05N±0.03×28.56E±0.02, h13km±8km, n15, σ0.59/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.25**	**162**	Pg	**Pg**	**03 51 44.6**	**-0.2**
DALY				Sg	**Sg**	**03 51 49.3**	**+1.0**
MULA	**Mugla, Merkez-**	**0.28**	**317**	SPECP		03 51 46.0	
MULA				P	**Pb**	**03 51 46.0**	**-0.5**
MULA				S	**Sg**	**03 51 49.4**	**+0.1**
TURN	**Turunc**	**0.38**	**222**	SPECP		03 51 47.0	
TURN				P	**Pg**	**03 51 47.2**	**+0.2**
TURN				S	**Sb**	**03 51 52.8**	**-1.0**
TURN	**Turunc**	**0.38**	**222**	Pg	**Pg**	**03 51 46.7**	**-0.4**
TURN				Sg	**Sb**	**03 51 52.8**	**-1.0**
SABU	**Mula-Dalaman**	**0.40**	**125**	SPECP		03 51 47.0	
SABU				P	**Pg**	**03 51 47.0**	**-0.5**
SABU				S	**Sg**	**03 51 52.0**	**-0.9**
DNZT	**Denizli-Tavas-**	**0.43**	**59**	SPECP		03 51 48.0	
DNZT				P	**Pg**	**03 51 48.2**	**0.0**
DNZT				S	**Sb**	**03 51 55.5**	**-0.2**
TAVA	**DENIZLI_Tavas**	**0.50**	**34**	SPECP		03 51 49.0	
TAVA				P	**Pg**	**03 51 49.2**	**-0.2**
TAVA				S	**Sg**	**03 51 56.4**	**+0.4**
CAME	**Cameli-Denizli**	**0.60**	**100**	Pg	**Pb**	**03 51 51.6**	**-0.5**
CAME				Sg	**Sb**	**03 52 01.4**	**+0.8**
MLSB	**Milas**	**0.67**	**291**	Pg	**Pg**	**03 51 51.9**	**-0.7**
MLSB				Sg	**Sg**	**03 52 01.9**	**+0.4**
APMY	**Acipayam-Deniz**	**0.72**	**55**	Pg	**Pg**	**03 51 53.5**	**-0.1**
BDRM	**Kayabasi**	**0.89**	**271**	P	**Pb**	**03 51 57.3**	**+0.3**
BDRM				S	**Sn**	**03 52 11.3**	**+0.6**
NAZL	**Nazilli-Aydin**	**0.93**	**347**	Pg	**Pg**	**03 51 57.2**	**-0.4**
YAZI	**Mula-Dat§a-**	**0.96**	**248**	P	**Pb**	**03 51 58.0**	**+0.4**
YAZI				S	**Sn**	**03 52 12.7**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.04**	**329**	Pg	**Pg**	**03 51 59.3**	**-0.3**
ODEM	**Odemis-Izmir**	**1.28**	**343**	Pn	**Pn**	**03 52 03.7**	**+0.4**

*CATAC **05** 04:21:09.7±0.6, 12.4°N±4.8°×89.9°W±0.2°, h25km±8km, M3.5/22, MLv3.5/22, Error ellipse: s-maj=10.2km s-min=2.9km az=36.7, confirmed*
*GCG **05** 04:21:12.2±0.8, 12.34N×89.49W, h18km±8km, MD3.8*
*SNET **05** 04:21:13.1±1.2, 12.36N×89.18W, h36km, ML3.3*

ISC 05 04:21:09.8±2.0, 12.19N±0.09×89.28W±0.06, h20km±10km, n75, σ0.74/85, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**1.29**	**358**	*e*S	**Sn**	**04 21 48.8**	**-0.7**
LALI	**Alcalda de L**	**1.29**	**358**	S	**Sn**	**04 21 49.3**	**-0.2**
LALI	**Alcalda de L**	**1.29**	**358**	P	**Pb**	**04 21 33.5**	**0.0**
PANCS	**Alcalda de**	**1.42**	**4**	S	**Sn**	**04 21 52.5**	**-0.1**
TECO	**Alcaldia de Te**	**1.43**	**20**	*e*P	**Pn**	**04 21 33.7**	**-1.0**
TECO				*e*S	**Sn**	**04 21 50.2**	**-2.6**
TECO	**Alcaldia de Te**	**1.43**	**20**	P	**Pn**	**04 21 34.3**	**-0.4**
TECO	**Alcaldia de Te**	**1.43**	**20**	S	**Sn**	**04 21 52.7**	**-0.1**
LFRS	**El Faro**	**1.44**	**9**	*e*P	**Pn**	**04 21 34.7**	**-0.2**
LFRS				*e*S	**Sn**	**04 21 52.4**	**-0.9**
LOMA	**Loma Larga**	**1.45**	**4**	*e*P	**Pn**	**04 21 35.1**	**+0.1**
LOMA				*e*S	**Sn**	**04 21 53.0**	**-0.6**
LOMA	**Loma Larga**	**1.45**	**4**	S	**Sn**	**04 21 54.0**	**+0.4**
LOMA	**Loma Larga**	**1.45**	**4**	P	**Pn**	**04 21 34.5**	**-0.5**
JAYA	**Jayaque - finc**	**1.47**	**354**	*e*P	**Pn**	**04 21 34.9**	**-0.3**
JAYA	**Jayaque - finc**	**1.47**	**354**	*e*P	**Pn**	**04 21 35.0**	**-0.3**
JAYA	**Jayaque - finc**	**1.47**	**354**	P	**Pn**	**04 21 35.1**	**-0.2**
JAYA	**Jayaque - finc**	**1.47**	**354**	S	**Sn**	**04 21 53.7**	**-0.2**
COEG	**Centro de Oper**	**1.48**	**15**	*e*P	**Pn**	**04 21 35.5**	**+0.2**
COEG	**Centro de Oper**	**1.48**	**15**	S	**Sn**	**04 21 52.6**	**-1.5**
COEG	**Centro de Oper**	**1.48**	**15**	P	**Pn**	**04 21 35.5**	**-1.8**
TECA	**Tecapa**	**1.50**	**30**	*e*P	**Pn**	**04 21 35.2**	**-0.7**
UTEC	**Universidad Te**	**1.50**	**3**	S	**Sn**	**04 21 55.4**	**+0.5**
PMON	**Piamonte**	**1.51**	**359**	*e*P	**Pn**	**04 21 35.5**	**-0.4**
PMON	**Piamonte**	**1.51**	**359**	S	**Sb**	**04 21 56.1**	**0.0**
PMON	**Piamonte**	**1.51**	**359**	P	**Pn**	**04 21 35.7**	**-0.3**
UESV	**Universidad de**	**1.52**	**18**	*e*P	**Pn**	**04 21 35.2**	**-0.7**
UESV	**Universidad de**	**1.52**	**18**	S	**Sn**	**04 21 55.3**	**+0.2**
UESV	**Universidad de**	**1.52**	**18**	P	**Pn**	**04 21 35.7**	**-0.2**
UEES	**Universidad Ev**	**1.52**	**2**	S	**Sn**	**04 21 55.8**	**+0.6**
UEES	**Universidad Ev**	**1.52**	**2**	P	**Pn**	**04 21 35.2**	**-0.8**
IGN	**Direccin Gen**	**1.52**	**4**	P	**Pn**	**04 21 36.2**	**+0.2**
IGN	**Direccin Gen**	**1.52**	**4**	S	**Sb**	**04 21 56.4**	**+0.2**
UDBS	**Universidad Do**	**1.52**	**5**	S	**Sn**	**04 21 55.9**	**+0.7**
UDBS	**Universidad Do**	**1.52**	**5**	P	**Pb**	**04 21 37.6**	**+0.1**
PAVA	**Las Pavas**	**1.55**	**12**	*e*P	**Pn**	**04 21 36.1**	**-0.4**
PAVA	**Las Pavas**	**1.55**	**12**	P	**Pn**	**04 21 36.4**	**0.0**
PAVA	**Las Pavas**	**1.55**	**12**	S	**Sn**	**04 21 57.0**	**+0.9**
RANC	**El Ranchito**	**1.57**	**38**	*e*P	**Pn**	**04 21 36.3**	**-0.5**
VSM	**San Miguel**	**1.58**	**38**	*e*P	**Pn**	**04 21 36.4**	**-0.5**
PACA	**Pacayal**	**1.58**	**36**	*e*P	**Pn**	**04 21 36.5**	**-0.4**
PACA	**Pacayal**	**1.58**	**36**	P	**Pn**	**04 21 36.7**	**-0.1**
PQSS	**Presa 15 de Se**	**1.59**	**26**	S	**Sb**	**04 21 58.3**	**0.0**
PQSS	**Presa 15 de Se**	**1.59**	**26**	P	**Pn**	**04 21 36.6**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.60**	**20**	*e*P	**Pn**	**04 21 36.7**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.60**	**20**	P	**Pn**	**04 21 37.1**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.60**	**20**	S	**Sn**	**04 21 58.2**	**+1.1**
CEDA	**San Andres**	**1.61**	**356**	S	**Sn**	**04 21 58.3**	**+0.9**
BLLM	**Bellamira**	**1.61**	**39**	*e*P	**Pn**	**04 21 36.4**	**-0.8**
CEVE	**Cerro Verde**	**1.66**	**348**	S	**Sb**	**04 22 00.4**	**-0.2**
CEVE	**Cerro Verde**	**1.66**	**348**	P	**Pn**	**04 21 38.6**	**+0.5**
SBLS	**San Blas**	**1.67**	**349**	*e*P	**Pn**	**04 21 38.4**	**+0.1**
CNRM	**Centro Naciona**	**1.68**	**40**	S	**Sn**	**04 22 00.0**	**+1.1**
CNRM	**Centro Naciona**	**1.68**	**40**	P	**Pn**	**04 21 38.0**	**0.0**
SNJE	**San Jose**	**1.70**	**349**	*e*P	**Pn**	**04 21 38.8**	**+0.2**
LCND	**La Caada**	**1.76**	**50**	*e*P	**Pn**	**04 21 37.9**	**-1.3**
LCND	**La Caada**	**1.76**	**50**	P	**Pn**	**04 21 38.4**	**-0.7**
NUBE	**Las Nubes**	**1.77**	**344**	*e*P	**Pn**	**04 21 39.1**	**-0.4**
NUBE				*e*S	**Sn**	**04 22 00.5**	**-1.0**
NUBE	**Las Nubes**	**1.77**	**344**	*e*P	**Pn**	**04 21 39.2**	**-0.3**
NUBE				*e*S	**Sn**	**04 22 00.9**	**-0.6**
NUBE	**Las Nubes**	**1.77**	**344**	P	**Pn**	**04 21 39.1**	**-0.4**
CNCH	**Conchagua**	**1.78**	**52**	*e*P	**Pn**	**04 21 39.0**	**-0.6**
CNCH	**Conchagua**	**1.78**	**52**	P	**Pn**	**04 21 39.1**	**-0.4**
FAME	**Alcaldia de Sa**	**1.79**	**337**	S	**Sn**	**04 22 01.1**	**-0.7**
FAME	**Alcaldia de Sa**	**1.79**	**337**	P	**Pn**	**04 21 39.3**	**-0.4**
UNIC	**Universidad Ca**	**1.80**	**352**	P	**Pn**	**04 21 40.1**	**+0.3**
UNIC	**Universidad Ca**	**1.80**	**352**	S	**Sn**	**04 22 02.3**	**+0.1**
CSGN	**Cosiguina Volc**	**1.86**	**65**	P	**Pn**	**04 21 41.1**	**+0.5**
LOAL	**Lomas de Alarc**	**1.86**	**345**	S	**Sn**	**04 22 04.1**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.89**	**345**	P	**Pn**	**04 21 40.1**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.89**	**345**	S	**Sn**	**04 22 05.9**	**+1.5**
POTN	**Potosi Cosigui**	**1.91**	**65**	P	**Pn**	**04 21 40.8**	**-0.5**
POTN				S	**Sn**	**04 22 05.5**	**+0.8**
PKGN	**Cerro Pekin**	**2.30**	**78**	P	**Pn**	**04 21 46.6**	**-0.1**
PKGN				S	**Sn**	**04 22 15.1**	**+0.7**
POLN	**Al Sur del Vol**	**2.46**	**79**	P	**Pn**	**04 21 47.3**	**-1.5**
POLN				S	**Sn**	**04 22 17.8**	**-0.5**
SARH	**Santa Rosa de**	**2.62**	**11**	*e*P	**Pn**	**04 21 52.5**	**+1.4**
MOM3	**MOM3**	**2.72**	**83**	P	**Pn**	**04 21 51.5**	**-0.9**
MOM3				S	**Sn**	**04 22 25.3**	**+0.6**
LIMN	**Finca el Limon**	**2.98**	**73**	P	**Pn**	**04 21 55.9**	**-0.1**
LIMN				S	**Sn**	**04 22 31.9**	**+0.7**
APG	**El Apazote**	**3.02**	**338**	*e*P	**Pn**	**04 21 57.8**	**+1.0**
RCPN	**Sur Rio San Ju**	**3.38**	**67**	P	**Pn**	**04 22 02.8**	**+1.2**

ZUR 05 04:23:29.1, 46.33N×7.36E, h4km±1km, MLh0.0/2, 1C-4D, Error ellipse: s-maj=1955.9km s-min=767.2km az=3.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.03**	**251**	⇓Pg	**Pg**	04 23 30.5	+0.1
RAW2				Sg	Sg	04 23 31.5	+0.3
SAYF2	**Ayent-Fortunoz**	**0.05**	**133**	⇑Pg	**Pg**	04 23 30.6	+0.1
SAYF2				Sg	Sg	04 23 31.8	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**68**	⇓Pg	**Pg**	04 23 30.7	+0.2
STSW2				Sg	Sg	04 23 31.8	+0.2
SENIN	**Lac Senin/Sane**	**0.06**	**313**	⇓Pg	**Pg**	04 23 30.8	+0.2
SENIN				Sg	Sg	04 23 32.0	+0.3
LEO01	**Saint Lonard,**	**0.09**	**148**	Sg	Sg	04 23 33.0	+0.8
SIOV	**Sion-Valere**	**0.09**	**178**	Sg	Sg	04 23 32.6	+0.3
RAW1	**Lenk, BE**	**0.11**	**29**	⇓Pg	**Pg**	04 23 31.6	+0.2
RAW1				Sg	Sg	04 23 33.6	+0.6
GRYON	**Gryon**	**0.19**	**247**	Pg	**Pg**	04 23 32.9	+0.1
GRYON				Sg	Sg	04 23 35.7	+0.4
LAUCH	**Lauchernalp**	**0.30**	**72**	Sg	Sg	04 23 39.3	+0.4

*GEN **05** 04:23

SNAA				Sn	Sn	04 34 35.0	-18	
	comp=Z,0.1nm,0.3s,baz=288,slow=19,SNR=2.4							
SNAA				LR	LR	04 36 35.6		
	comp=Z,76nm,20.1s,baz=358,slow=32							
TROLL	**Troll, Antarti**	**16.48**	**150**	⇑P	**Pn**	**04 32 24.5**	**-3.2**	
	comp=Z,82nm,0.3s							
TROLL				⇑S	Sn	04 35 16.4	-14	
BELA	**Belgrano 2**	**18.63**	**187**	P	**P**	**04 32 54.1**	**+0.2**	
PMSA	**Palmer Station**	**18.79**	**237**	LR	LR	04 38 21.3		
	comp=Z,131nm,19.1s,baz=26,slow=31							
SMAI	**San Martin Ant**	**20.08**	**227**	P	**P**	**04 33 10.7**	**+0.9**	
SMAI				IAmb	IAmb	04 33 19.9		
	comp=Z,28nm,1.4s							
QSPA	**South Pole Qui**	**30.62**	**180**	P	**P**	**04 34 51.5**	**+0.8**	
QSPA	**South Pole Qui**	**30.62**	**180**	P	**P**	**04 34 53.5**	**+2.9**	
	comp=Z,1.1nm,0.6s,baz=230,slow=2.6,SNR=7.5							
	comp=Z,1.1nm,0.6s							
TRQA	**Tornquist**	**31.99**	**296**	P	**P**	**04 35 01.8**	**-0.9**	
TRQA				IAmb	IAmb	04 35 04.8		
	comp=Z,4.1nm,0.8s							
PLCA	**Paso Flores**	**33.99**	**283**	P	**P**	**04 35 19.1**	**-1.2**	
PLCA	**Paso Flores**	**33.99**	**283**	P	**P**	**04 35 18.6**	**-1.6**	
	comp=Z,1.6nm,0.7s,baz=144,slow=8.8,SNR=4.6							
	comp=Z,1.6nm,0.7s							
BO02	**Sierra Bellavi**	**38.77**	**289**	P	**P**	**04 36 00.8**	**-0.4**	
BO02				IAmb	IAmb	04 36 07.0		
	comp=Z,8.3nm,1.1s							
BO01	**Tunca**	**39.24**	**289**	P	**P**	**04 36 02.9**	**-2.1**	
BO01				IAmb	IAmb	04 36 19.4		
	comp=Z,16nm,1.3s							
BO04	**La Punta**	**39.34**	**290**	P	**P**	**04 36 05.4**	**-0.5**	
BO04				IAmb	IAmb	04 36 10.4		
	comp=Z,12nm,1.2s							
MT09	**Talagante**	**39.70**	**290**	P	**P**	**04 36 08.0**	**-1.0**	
MT09				IAmb	IAmb	04 36 12.9		
	comp=Z,19nm,1.1s							
MT03	**Universidad Ad**	**39.70**	**290**	P	**P**	**04 36 07.4**	**-1.5**	
MT03				IAmb	IAmb	04 36 10.2		
	comp=Z,24nm,1.4s							
MT01	**Popeta**	**39.75**	**289**	P	**P**	**04 36 08.1**	**-1.1**	
MT01				IAmb	IAmb	04 36 12.9		
	comp=Z,9.8nm,1.1s							
PEL	**Peldehue**	**40.07**	**291**	P	**P**	**04 36 11.9**	**0.0**	
PEL				IAmb	IAmb	04 36 24.7		
	comp=Z,16nm,1.0s							
ZON	**Zonda**	**40.45**	**294**	P	**P**	**04 36 13.8**	**-1.3**	
ZON				IAmb	IAmb	04 36 17.0		
	comp=Z,9.4nm,1.3s							
VA06	**Catapilco**	**40.84**	**290**	P	**P**	**04 36 18.0**	**-0.3**	
CO02	**Combarbal**	**41.82**	**292**	P	**P**	**04 36 26.2**	**-0.2**	
CO01	**Juntas del Tor**	**42.42**	**294**	P	**P**	**04 36 31.2**	**-0.4**	
CO01				IAmb	IAmb	04 36 34.1		
	comp=Z,6.9nm,0.8s							
GO04	**Tololo Observa**	**42.59**	**293**	P	**P**	**04 36 31.8**	**-1.1**	
VNDA	**Vanda**	**43.05**	**182**	P	**P**	**04 36 37.4**	**+1.5**	
VNDA	**Vanda**	**43.05**	**182**	P	**P**	**04 36 37.3**	**+1.5**	
	comp=Z,0.4nm,0.5s,baz=182,slow=6.0,SNR=2.0							
	comp=Z,0.4nm,0.5s							
LCO	**Las Campanas**	**43.52**	**294**	P	**P**	**04 36 39.9**	**-0.6**	
AC02	**Maricunga**	**44.66**	**297**	P	**P**	**04 36 48.4**	**-1.5**	
AC02				IAmb	IAmb	04 37 00.1		
	comp=Z,16nm,1.4s							
AC01	**Pan de Azucar**	**45.91**	**296**	P	**P**	**04 36 58.8**	**-0.5**	
PB03	**IPOC Station P**	**49.09**	**300**	P	**P**	**04 37 23.2**	**-0.9**	
LPAZ	**La Paz**	**53.50**	**305**	P	**P**	**04 37 56.5**	**-1.3**	
LPAZ	**La Paz**	**53.50**	**305**	P	**P**	**04 37 57.0**	**-0.7**	
	comp=Z,1.3nm,0.5s,baz=158,slow=5.8,SNR=7.4							
	comp=Z,1.3nm,0.5s							
TORD	**Torodi Ar. Bea**	**75.60**	**27**	P	**P**	**04 40 20.9**	**-0.5**	
TORD				IAmb	IAmb	04 40 37.1		
	comp=Z,2.5nm,0.5s							
TORD	**Torodi Ar. Bea**	**75.60**	**27**	P	**P**	**04 40 23.5**	**+2.1**	
	comp=Z,2.0nm,0.3s,baz=184,slow=5.2,SNR=1.9							
	comp=Z,2.0nm,0.3s							
ASAR	**Alice Springs**	**95.18**	**160**	P	**P**	**04 42 00.2**	**0.0**	
ASAR	**Alice Springs**	**95.18**	**160**	P	**P**	**04 42 01.4**	**+1.1**	
	comp=Z,0.6nm,0.9s,baz=183,slow=3.7,SNR=3.2							
	comp=Z,0.6nm,0.9s							
SONM	**Songino Array**	**149.51**	**91**		**PKPdf**	**04 48 22.8**	**+2.2**	
SONM	**Songino Array**	**149.51**	**91**	PKPbc	**PKiKP**	**04 48 26.3**	**0.0**	
	comp=Z,0.2nm,0.3s,baz=251,slow=4.4,SNR=1.8							
ILAR	**Eielson Array**	**153.37**	**306**	PKPbc	**PKPbc**	**04 48 32.8**	**-0.5**	
ILAR	**Eielson Array**	**153.37**	**306**	PKPbc	**PKiKP**	**04 48 33.9**	**+0.4**	
	comp=Z,2.5nm,1.0s,baz=139,slow=1.6,SNR=15							
RC01	**Rabbit Creek A**	**153.41**	**297**	PKPdf	**PKPdf**	**04 48 25.5**	**-0.4**	

*HVO **05** 04:42:25.6±1.0,19.413N±0.004×155.64W±0.01, h-0km,9km, ML2.6/40, ML2.6/40(NEIC), Error ellipse: s-maj=1.7km s-min=0.5km az=91.0*

NEIC 05 04:42:26.4±0.9, 19.407N±0.007×155.61W±0.01, h2km±10km, Error ellipse: s-maj=1.7km s-min=0.8km az=60.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWH	**Mokuaweoweo**	**0.08**	**8**		Pg	04 42 28.1	-0.1
MWH					Sg	04 42 29.8	+0.4
MWH	**Mokuaweoweo**	**0.08**	**8**	IAML		04 42 32.1	
	comp=E,5μm,0.4s						
MWH				IAML		04 42 32.4	
	comp=N,5μm,0.3s						
ALEP	**Alea Permanent**	**0.14**	**346**		Pg	04 42 29.1	0.0
ALEP					Sg	04 42 31.6	+0.5
AIN	**Ainahou**	**0.15**	**104**		Pg	04 42 29.8	+0.5
AIN					Sg	04 42 32.7	+1.5
AIN	**Ainahou**	**0.15**	**104**	IAML		04 42 33.3	
	comp=N,2μm,0.5s						
AIN				IAML		04 42 34.4	
	comp=E,3μm,0.5s						
KHU	**Kahuku**	**0.16**	**182**		Pg	04 42 29.5	-0.1
KHU					Sg	04 42 32.3	+0.6
HMH	**Humu'ula Sheep**	**0.23**	**31**		Pg	04 42 30.9	0.0
HMH					Sg	04 42 34.6	+0.7
HMH	**Humu'ula Sheep**	**0.23**	**31**	IAML		04 42 35.1	
	comp=E,969nm,0.5s						
HMH				IAML		04 42 35.2	
	comp=N,633nm,0.5s						
MLH	**Mauna Loa**	**0.23**	**68**		Pg	04 42 31.1	+0.2
MLH					Sg	04 42 34.4	+0.6
MLH	**Mauna Loa**	**0.23**	**68**	IAML		04 42 36.5	
	comp=E,1μm,0.9s						
MLH				IAML		04 42 37.9	
	comp=N,1μm,0.6s						
HTC	**Hot Caves**	**0.26**	**130**		Pg	04 42 31.4	0.0
WRMHI	**West Rim**	**0.29**	**90**		Pg	04 42 32.0	0.0
WRMHI					Sg	04 42 36.8	+1.0
SDHHI	**Sand Hill**	**0.30**	**93**		Pg	04 42 32.0	-0.1
SDHHI					Sg	04 42 37.1	+1.0
UWE	**Uwekahuna**	**0.30**	**87**		Pg	04 42 32.2	0.0
UWE					Sg	04 42 37.0	+0.9
UWE	**Uwekahuna**	**0.30**	**87**	IAML		04 42 41.4	
	comp=E,2μm,0.4s						
UWE				IAML		04 42 42.0	
	comp=N,1μm,0.4s						
HLP	**Hilina Pali**	**0.30**	**111**		Pg	04 42 32.3	0.0
HLP	**Hilina Pali**	**0.30**	**111**	IAML		04 42 41.0	
	comp=N,577nm,0.3s						
HLP				IAML		04 42 43.2	
	comp=E,888nm,0.8s						
OBL	**Observatory Le**	**0.31**	**88**		Pg	04 42 32.2	-0.1
UWB	**Uwekahuna Bluf**	**0.31**	**87**		Pg	04 42 32.3	-0.2
RIM	**Rim**	**0.32**	**92**		Pg	04 42 32.3	-0.2
RSD	**Rainshed**	**0.32**	**80**		Pg	04 42 32.5	0.0
RSD	**Rainshed**	**0.32**	**80**	IAML		04 42 42.7	
	comp=N,874nm,0.7s						
RSD				IAML		04 42 43.4	
	comp=E,783nm,0.9s						
SBLHI	**Steaming Bluff**	**0.32**	**86**		Pg	04 42 32.4	-0.2
KKO	**Keanakako'i**	**0.32**	**91**		Pg	04 42 32.5	-0.2
BYL	**Byron's Ledge**	**0.33**	**89**		Pg	04 42 32.4	-0.3
BYL				IAML		04 42 43.0	
	comp=N,611nm,0.8s						
BYL				IAML		04 42 43.6	
	comp=E,768nm,0.6s						
HATHI	**Halema'uma'u T**	**0.33**	**87**		Pg	04 42 32.3	-0.5
HATHI				IAML		04 42 44.8	
	comp=N,900nm,0.6s						
HUH	**Hualalai**	**0.35**	**322**		Pg	04 42 33.5	+0.4
POHA	**Pohakuloa**	**0.36**	**12**		Pg	04 42 32.6	-0.7
PUH	**Pauahi**	**0.37**	**95**		Pg	04 42 33.1	-0.5
PUH	**Pauahi**	**0.37**	**95**	IAML		04 42 46.4	
	comp=E,523nm,0.8s						
PUH				IAML		04 42 47.1	
	comp=N,565nm,0.6s						
KNHH	**Kane Nui o Ham**	**0.42**	**94**		Pg	04 42 33.9	-0.5
STCH	**Steam Cracks**	**0.46**	**93**		Pg	04 42 34.9	-0.3
STCH					Sg	04 42 41.8	+0.7
STCH	**Steam Cracks**	**0.46**	**93**	IAML		04 42 42.6	
	comp=N,385nm,0.5s						
STCH				IAML		04 42 43.2	
	comp=E,6.1nm,0.5s						
NPOC	**North of Pu'u**	**0.47**	**92**		Pg	04 42 35.2	-0.3
NPOC					Sg	04 42 42.2	+0.7
JOKA	**Jonika Flow**	**0.57**	**87**		Pg	04 42 36.5	-0.8
JOKA				IAML		04 42 54.4	
	comp=N,298nm,2.3s						

ZUR 05 05:07:53.5, 46.33N×7.36E, h4km±1km, MLh0.7/9, 4C-2D, Error ellipse: s-maj=1995.0km s-min=760.5km az=130.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**246**	⇓Pg	Pg	05 07 54.8	+0.2
RAW2					Sg	05 07 55.7	+0.2
SENIN	**Lac Senin/Sane**	**0.05**	**312**	⇓Pg	Pg	05 07 55.1	+0.2
SENIN					Sg	05 07 56.3	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**71**	⇑Pg	Pg	05 07 55.1	+0.2
STSW2					Sg	05 07 56.2	+0.2
SAYF2	**Ayent-Fortunoz**	**0.06**	**133**	Sg	Sg	05 07 56.1	+0.3
SIOV	**Sion-Valere**	**0.09**	**177**	⇑Pg	Pg	05 07 55.5	+0.2
SIOV				Sg	Sg	05 07 57.0	+0.4
RAW1	**Lenk, BE**	**0.11**	**31**	⇑Pg	Pg	05 07 56.0	+0.2
RAW1				Sg	Sg	05 07 57.8	+0.5
LKBD2	**Leukerbad 2**	**0.20**	**77**	Pg	Pg	05 07 58.0	+0.5
LKBD2				Sg	Sg	05 08 00.8	+0.5
FULLY	**Reservoir Maze**	**0.23**	**222**	⇑Pg	Pg	05 07 58.0	+0.1
LAVEY	**Lavey les Bain**	**0.26**	**241**	Sg	Sg	05 08 02.4	+0.4
LAUCH	**Lauchernalp**	**0.30**	**73**	Pg	Pg	05 07 59.6	+0.2
LAUCH				Sg	Sg	05 08 03.7	+0.4

ZUR 05 05:08:29.1, 46.32N×7.36E, h4km±1km, MLh0.8/9, 7C-6D, Error ellipse: s-maj=1978.5km s-min=613.1km az=118.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**255**	⇓Pg	Pg	05 08 30.5	+0.2
RAW2					Sg	05 08 31.4	+0.3
STSW2	**Zeuzier, Staus**	**0.05**	**66**	⇓Pg	Pg	05 08 30.8	+0.2
STSW2					Sg	05 08 31.8	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**312**	⇓Pg	Pg	05 08 30.8	+0.2
SENIN					Sg	05 08 32.0	+0.3
SIOV	**Sion-Valere**	**0.09**	**180**	⇑Pg	Pg	05 08 31.2	+0.2
SIOV					Sg	05 08 32.7	+0.5
RAW1	**Lenk, BE**	**0.11**	**27**	⇑Pg	Pg	05 08 31.6	+0.2
RAW1					Sg	05 08 33.5	+0.5
VET01	**Vtroz, Route**	**0.12**	**213**	⇑Pg	Pg	05 08 31.7	+0.1
RAW4	**Former Reservo**	**0.17**	**228**	⇑Pg	Pg	05 08 32.8	+0.2
GRYON	**Gryon**	**0.19**	**248**	Pg	Pg	05 08 33.1	+0.2
LKBD2	**Leukerbad 2**	**0.20**	**75**	⇑Pg	Pg	05 08 33.4	+0.3
LKBD2					Sg	05 08 36.4	+0.6
FULLY	**Reservoir Maze**	**0.23**	**224**	⇑Pg	Pg	05 08 33.8	+0.2
FULLY					Sg	05 08 37.0	+0.4
DIX	**Grande Dixence**	**0.24**	**173**	Sg	Sg	05 08 37.6	+0.4
LAVEY	**Lavey les Bain**	**0.27**	**243**	Sg	Sg	05 08 38.1	+0.3
LAUCH	**Lauchernalp**	**0.30**	**72**	⇓Pg	Pg	05 08 35.1	+0.2
LAUCH					Sg	05 08 39.3	+0.4
JAUN	**Jaun, Euschels**	**0.32**	**351**	Sg	Sg	05 08 40.7	+1.3
SALAN	**Lac Salanfe**	**0.33**	**237**	⇑Pg	Pg	05 08 35.7	+0.2
MH44	**Zermatt, Posit**	**0.40**	**148**	⇓Pg	Pg	05 08 37.1	+0.1
MH36	**Zermatt, Posit**	**0.40**	**148**	⇓Pg	Pg	05 08 37.1	+0.1

*GCG **05** 05:12:55.4±1.0, 14.39N×90.63W, h167km±9km, MD4.0, ML4.0, MW3.1*
*CATAC **05** 05:12:55.5±0.5, 14°N±5'×9°1W±', h169km±3km, M3.1/18, MLv3.1/18, Error ellipse: s-maj=11.5km s-min=3.6km az=28.2, confirmed*
*SNET **05** 05:12:56.0±0.9, 14°31N×90°63W, h164km, ML3.2*

ISC 05 05:12:58.2±2.1, 14.38N±0.07×90.61W±0.06, h156km±13km, n57, σ1s52/61, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.21**	**272**	*i* P	**Pn**	**05 13 18.0**	**-1.3**
APG	**El Apazote**	**0.64**	**13**	*i* P	**Pn**	**05 13 20.7**	**-1.6**
APG				*e*S	**Sn**	**05 13 39.2**	**+0.1**
STG2	**El Palmar, Qui**	**0.74**	**275**	*e*P	**Pn**	**05 13 22.5**	**+0.8**
STG2				*e*S	**Sn**	**05 13 45.1**	**+5.4**
FAME	**Alcaldia de Sa**	**0.79**	**132**	P	**Pn**	**05 13 20.5**	**-1.4**
FAME	**Alcaldia de Sa**	**0.79**	**132**	S	**Sn**	**05 13 41.0**	**+0.9**
ESSJ	**San Jos, E**	**0.82**	**172**	*i* P	**Pn**	**05 13 19.4**	**-2.8**
SLOZ	**Alcaldia de Sa**	**0.88**	**113**	P	**Pn**	**05 13 20.2**	**-2.4**
JUAM	**Asuncion Mita**	**0.88**	**93**	*i* P	**Pn**	**05 13 21.9**	**-0.7**
JUAM				*e*S	**Sn**	**05 13 42.1**	**+0.7**
SOKI	**Kika Raxquin**	**0.88**	**300**	*e*P	**Pn**	**05 13 22.1**	**-1.0**
LOAL	**Lomas de Alarc**	**0.89**	**115**	*e*P	**Pn**	**05 13 21.9**	**-0.8**
LOAL	**Lomas de Alarc**	**0.89**	**115**	P	**Pn**	**05 13 22.3**	**-0.5**
NUBE	**Las Nubes**	**0.94**	**120**	*e*P	**Pn**	**05 13 22.2**	**-1.0**
NUBE				*e*S	**Sn**	**05 13 42.9**	**+0.5**
NUBE	**Las Nubes**	**0.94**	**120**	*i* P	**Pn**	**05 13 22.2**	**-1.0**
NUBE	**Las Nubes**	**0.94**	**120**	P	**Pn**	**05 13 22.3**	**-1.0**
QUIS	**Sacapulas**	**1.02**	**333**	*i* P	**Pn**	**05 13 23.2**	**-0.7**
QUIS				*e*S	**Sn**	**05 13 43.9**	**+0.3**
RTAL	**Retalhuleu**	**1.06**	**278**	P	**Pn**	**05 13 22.5**	**-1.6**
RTAL	**Retalhuleu**	**1.06**	**278**	S	**Sn**	**05 13 43.8**	**0.0**
SBLS	**San Blas**	**1.10**	**119**	*e*P	**Pn**	**05 13 23.9**	**-0.8**
SNJE	**San Jose**	**1.10**	**117**	*e*P	**Pn**	**05 13 23.7**	**-1.0**
CEVE	**Cerro Verde**	**1.10**	**120**	*e*P	**Pn**	**05 13 23.6**	**-1.1**
CEVE	**Cerro Verde**	**1.10**	**120**	P	**Pn**	**05 13 24.0**	**-0.7**
UNIC	**Universidad Ca**	**1.11**	**111**	*e*P	**Pn**	**05 13 23.3**	**-1.2**
UNIC	**Universidad Ca**	**1.11**	**111**	P	**Pn**	**05 13 23.5**	**-1.0**
MTO3	**Montecristo**	**1.22**	**89**	P	**Pn**	**05 13 24.7**	**-1.0**
MTO3	**Montecristo**	**1.22**	**89**	S	**Sn**	**05 13 47.3**	**+0.6**
CEDA	**San Andres**	**1.31**	**116**	*e*P	**Pn**	**05 13 25.4**	**-1.0**
CEDA	**San Andres**	**1.31**	**116**	P	**Pn**	**05 13 25.4**	**-1.0**
JAYA	**Jayaque - finc**	**1.34**	**122**	*e*P	**Pn**	**05 13 25.6**	**-1.2**
JAYA	**Jayaque - finc**	**1.34**	**122**	P	**Pn**	**05 13 25.7**	**-1.1**
PMON	**Piamonte**	**1.43**	**118**	*e*P	**Pn**	**05 13 26.4**	**-1.2**
PMON	**Piamonte**	**1.43**	**118**	P	**Pn**	**05 13 26.8**	**-0.8**
BOQS	**Boqueron**	**1.44**	**116**	*e*P	**Pn**	**05 13 26.9**	**-1.4**
UEES	**Universidad Ev**	**1.49**	**116**	*e*P	**Pn**	**05 13 26.6**	**-1.6**
LALI	**Alcalda de L**	**1.54**	**125**	P	**Pn**	**05 13 27.3**	**-1.3**
LALI	**Alcalda de L**	**1.54**	**125**	S	**Sn**	**05 13 52.0**	**+0.1**
LOMA	**Loma Larga**	**1.58**	**117**	*e*P	**Pn**	**05 13 28.3**	**-0.9**
LOMA	**Loma Larga**	**1.58**	**117**	P	**Pn**	**05 13 29.0**	**-0.2**
LOMA	**Loma Larga**	**1.58**	**117**	S	**Sn**	**05 13 52.9**	**-0.1**
LBRS	**Las Brisas**	**1.65**	**112**	*e*P	**Pn**	**05 13 28.6**	**-1.3**
LFRS	**El Faro**	**1.68**	**116**	*e*P	**Pn**	**05 13 29.2**	**-1.1**
PAVA	**Las Pavas**	**1.76**	**112**	*e*P	**Pn**	**05 13 29.9**	**-1.2**
PAVA	**Las Pavas**	**1.76**	**112**	P	**Pn**	**05 13 30.1**	**-1.0**
SARH	**Santa Rosa de**	**1.84**	**77**	P	**Pn**	**05 13 31.5**	**-0.4**
COEG	**Centro de Oper**	**1.84**	**114**	*e*P	**Pn**	**05 13 31.2**	**-0.8**
COEG	**Centro de Oper**	**1.84**	**114**	P	**Pn**	**05 13 28.4**	**-3.6**
COEG	**Centro de Oper**	**1.84**	**114**	S	**Sn**	**05 13 58.1**	**+0.1**
UESV	**Universidad de**	**1.92**	**112**	P	Pn	05 13 38.5	+5.7
SCLA	**Alcaldia de Sa**	**1.95**	**110**	*e*P	**Pn**	**05 13 32.1**	**-1.1**
SCLA	**Alcaldia de Sa**	**1.95**	**110**	P	**Pn**	**05 13 32.3**	**-0.9**
TECO	**Alcaldia de Te**	**1.97**	**115**	*e*P	**Pn**	**05 13 31.7**	**-1.6**
TECO	**Alcaldia de Te**	**1.97**	**115**	P	**Pn**	**05 13 32.1**	**-1.3**
TECA	**Tecapa**	**2.23**	**113**	*e*P	**Pn**	**05 13 35.4**	**-1.1**
CCIG	**Comitan**	**2.40**	**322**	P	**Pn**	**05 13 37.3**	**-1.3**
PACA	**Pacayal**	**2.40**	**112**	S	**Sn**	**05 14 14.2**	**+4.5**
PETF	**Flores**	**2.62**	**16**	P	**Pn**	**05 13 39.5**	**-1.6**
LCND	**La Caada**	**2.85**	**112**	P	**Pn**	**05 13 45.6**	**+1.7**
CNCH	**Conchagua**	**2.92**	**112**	P	**Pn**	**05 13 44.2**	**-0.6**

*IDC **05** 05:14:36.9±7.1, 6.16S×128.53E, h262km±77km, mb3.3/4, mbtmp4.1/8, Error ellipse: s-maj=88.5km s-min=23.2km az=54.0*
*NEIC **05** 05:14:42.1±1.2, 6.50S±0.07×128.06E±0.08, h318km±9km, mb4.2/7, Error ellipse: s-maj=13.0km s-min=7.0km az=130.0*

ISC 05 05:14:41.5±0.6, 6.57S±0.06×128.09E±0.06, h318km, n28, σ1s27/34, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.48**	**114**	Pn	**Pn**	**05 15 43.2**	**-0.1**
SAUI				Sn	**S**	**05 16 31.2**	**-1.7**
SOEI	**Soe**	**4.93**	**230**		**Pn**	**05 15 59.8**	**+0.7**
SOEI				Sn	**S**	**05 16 59.2**	**-2.3**
FAKI	**Fak Fak**	**5.51**	**49**	Pn	**Pn**	**05 16 06.1**	**+0.4**
BATI	**Baumata**	**5.67**	**230**	P	**Pn**	**05 16 08.3**	**+0.7**
	82nm,0.4s,baz=71,slow=3.5,SNR=12						
BATI				S	**S**	**05 17 15.6**	**-1.4**
	24nm,0.3s,baz=288,slow=20,SNR=3.6						
MMRI	**Maumere**	**6.15**	**250**	Pn	**Pn**	**05 16 13.3**	**+0.2**
MTN	**Manton Dam**	**6.92**	**155**	Pn	**Pn**	**05 16 23.8**	**+1.5**
KNRA	**Kununurra**	**9.07**	**176**	Pn	**Pn**	**05 16 49.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**11.70**	**192**	P	**P**	**05 17 22.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**11.70**	**192**	P	**P**	**05 17 22.6**	**+1.3**
	1.4nm,0.5s,baz=0.2,slow=12,SNR=6.5						
FITZ				S	**S**	**05 19 29.1**	**-1.8**
	0.8nm,0.4s,baz=149,slow=21,SNR=1.3						
WB0	**Warramunga Arr**	**14.48**	**156**	P	**P**	**05 17 53.4**	**+1.3**
WRAB	**Tennant Creek**	**14.61**	**156**	P	**P**	**05 17 54.4**	**+1.0**
WRA	**Warramunga Arr**	**14.62**	**156**	P	**P**	**05 17 53.5**	**0.0**
WRA	**Warramunga Arr**	**14.62**	**156**	P	**P**	**05 17 54.4**	**+0.9**
	4.6nm,0.4s,baz=340,slow=11,SNR=42						
WRA				S	**S**	**05 20 30.1**	**-2.8**
	0.7nm,0.7s,baz=336,slow=21,SNR=4.1						
WR8	**Warramunga Arr**	**14.69**	**156**	P	**P**	**05 17 55.4**	**+1.0**
COEN	**Coen**	**16.56**	**118**	P	**P**	**05 18 16.8**	**+2.0**
COEN				IAmb	IAmb	05 18 17.3	
	comp=Z,10nm,0.7s						
AS31	**Alice Springs**	**17.89**	**162**	P	**P**	**05 18 30.6**	**+1.5**
AS31				IAmb	IAmb	05 18 31.7	
	comp=Z,2.8nm,0.5s						
ASAR	**Alice Springs**	**17.90**	**162**	P	**P**	**05 18 30.6**	**+1.4**
	comp=Z,6.2nm,0.5s,baz=345,slow=12,SNR=65						
ASAR				S	**S**	**05 21 37.3**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=345,slow=21,SNR=5.4						
BBOO	**Buckleboo**	**27.14**	**165**	P	**P**	**05 19 57.1**	**+0.8**
BBOO				IAmb	IAmb	05 20 28.9	
	comp=Z,36nm,1.5s						
NACB	**Ninganchiao**	**31.21**	**349**	P	**P**	**05 20 31.2**	**-1.0**
CHTO	**Chiang Mai**	**38.23**	**312**	P	**P**	**05 21 33.1**	**+1.1**
SONM	**Songino Array**	**57.45**	**343**	P	**P**	**05 23 58.7**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=163,slow=5.6,SNR=3.8						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**66.84**	**328**	P	**P**	**05 24 59.4**	**-0.3**
MKAR	**Makanchi Array**	**66.84**	**328**	P	**P**	**05 25 00.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=119,slow=6.7,SNR=8.8						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**70.37**	**335**	P	**P**	**05 25 19.9**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=116,slow=6.6,SNR=2.2						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**71.16**	**329**	P	**P**	**05 25 25.9**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=126,slow=5.1,SNR=4.5						
	comp=Z,0.6nm,0.3s						
ABKAR	**Akbulak array**	**81.00**	**322**	P	**P**	**05 26 20.0**	**-1.1**
QSPA	**South Pole Qui**	**83.40**	**180**	P	**P**	**05 26 32.2**	**-1.2**
QSPA				IAmb	IAmb	05 27 02.4	
	comp=Z,4.7nm,1.4s						
M13K	**Dall Lake**	**85.33**	**28**	P	**P**	**05 26 42.3**	**-0.6**

GCG 05 05:26:25.0±0.5, 14.21N×91.24W, h67km±6km, MD3.5, ML3.6, MW3.2, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.26**	**329**	*e*P	Pn	05 26 39.6	+3.8
STG2				*e*S	Sn	05 26 50.4	+6.7
ESSG	**Sabana Grande**	**0.43**	**67**	*i* P	Pn	05 26 37.1	+0.1
ESSG				*e*S	Sn	05 26 46.9	+1.1
SOKI	**Kika Raxquin**	**0.63**	**345**	*e*P	Pn	05 26 40.3	+0.9
SOKI				*e*S	Sn	05 26 52.3	+2.5
SOKI				IAML		05 26 57.0	
	comp=N,564nm,0.5s						
FG16	**Alotenango, Sa**	**0.71**	**85**	*i* P	Pn	05 26 37.6	-2.5
FG16				*e*S	Sn	05 26 47.7	-3.4
FG16				IAML		05 26 48.9

ellipse: s-maj=0.9km s-min=0.8km az=117.0
*ROM **05** 05:55:35.4±0.1,46°.267N×0°.004×7°.376E±0°.005,h11^{km}, ML2.2/29,Error ellipse: s-maj=0.5km s-min=0.3km az=316.0*
*PRU **05** 05:55:36.4,46°.27N×7°.46E,h10^{km}*
ISC 05 05:55:34.5±0.7,**46°29N**±0°.01×**7°39E**±0°.01,**h13**km±2km, **n170,**σ0⁰80/279,**41C-22D,Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAYF2	**Ayent-Fortunoz**	**0.02**	**96**	⇓Pg	**Pg**	**05 55 36.5**	**-0.4**
SAYF2				Sg	**Sg**	**05 55 37.7**	**-0.9**
SAYF2	**Ayent-Fortunoz**	**0.02**	**96**	⇓Pg	**Pg**	**05 55 36.5**	**-0.4**
SAYF2				Sg	**Sg**	**05 55 37.5**	**-1.0**
LEO01	**Saint Lonard,**	**0.05**	**145**	⇓Pg	**Pg**	**05 55 37.1**	**+0.2**
LEO01				Sg	**Sg**	**05 55 38.9**	**+0.2**
LEO01	**Saint Lonard,**	**0.05**	**145**	Pg	**Pg**	**05 55 37.0**	**+0.2**
RAW2	**Sanetsch, VS**	**0.06**	**297**	⇓Pg	**Pg**	**05 55 36.2**	**-1.0**
RAW2				Sg	**Sg**	**05 55 37.0**	**-2.2**
RAW2	**Sanetsch, VS**	**0.06**	**297**	⇓Pg	**Pg**	**05 55 36.2**	**-1.0**
RAW2				Sg	**Sg**	**05 55 37.0**	**-2.2**
SIOV	**Sion-Valere**	**0.06**	**195**	⇑Pg	**Pg**	**05 55 37.0**	**-0.1**
SIOV				Sg	**Sg**	**05 55 38.3**	**-0.5**
SIOV	**Sion-Valere**	**0.06**	**195**	⇑Pg	**Pg**	**05 55 37.0**	**-0.1**
SIOO	**Sion-Ophtalmol**	**0.06**	**182**	⇑Pg	**Pg**	**05 55 37.3**	**+0.2**
SIOO				Sg	**Sg**	**05 55 39.2**	**+0.4**
SIOO	**Sion-Ophtalmol**	**0.06**	**182**	Pg	**Pg**	**05 55 37.2**	**+0.2**
SIOO				Sg	**Sg**	**05 55 39.1**	**+0.3**
SIOM	**Sion-Mayennets**	**0.06**	**195**	⇑Pg	**Pg**	**05 55 37.1**	**0.0**
SIOM				Sg	**Sg**	**05 55 38.7**	**-0.3**
SIOM	**Sion-Mayennets**	**0.06**	**195**	⇑Pg	**Pg**	**05 55 37.1**	**0.0**
SIOM				Sg	**Sg**	**05 55 38.6**	**-0.3**
STSW2	**Zeuzier, Staus**	**0.06**	**31**	⇑Pg	**Pg**	**05 55 36.6**	**-0.7**
STSW2				Sg	**Sg**	**05 55 37.8**	**-1.5**
STSW2	**Zeuzier, Staus**	**0.06**	**31**	⇑Pg	**Pg**	**05 55 36.6**	**-0.7**
STSW2				Sg	**Sg**	**05 55 37.8**	**-1.5**
SIE01	**Sierre, Farmho**	**0.08**	**105**	⇓Pg	**Pg**	**05 55 37.6**	**+0.3**
SIE01				Sg	**Sg**	**05 55 39.7**	**+0.5**
SIE01	**Sierre, Farmho**	**0.08**	**105**	⇓Pg	**Pg**	**05 55 37.6**	**+0.3**
SIE01				Sg	**Sg**	**05 55 39.7**	**+0.5**
SENIN	**Lac Senin/Sane**	**0.10**	**321**	⇓Pg	**Pg**	**05 55 36.6**	**-1.1**
SENIN				Sg	**Sg**	**05 55 37.7**	**-2.2**
SENIN	**Lac Senin/Sane**	**0.10**	**321**	⇓Pg	**Pg**	**05 55 36.5**	**-1.1**
SENIN				Sg	**Sg**	**05 55 37.6**	**-2.2**
SENIN	**Lac Senin/Sane**	**0.10**	**321**	P	**Pg**	**05 55 36.5**	**-1.1**
SENIN				S	**Sg**	**05 55 37.7**	**-2.2**
CON01	**Conthey, Agros**	**0.10**	**216**	Sg	**Sg**	**05 55 39.4**	**-0.1**
SIEB	**Ecole de Borzu**	**0.10**	**87**	Pg	**Pg**	**05 55 37.8**	**+0.3**
SIEB				Sg	**Sg**	**05 55 39.8**	**+0.1**
SHER	**Hrmence, R**	**0.10**	**176**	Pg	**Pg**	**05 55 38.1**	**+0.5**
SHER				Sg	**Sg**	**05 55 40.3**	**+0.4**
VET01	**Vtroz, Route**	**0.11**	**230**	⇑Pg	**Pg**	**05 55 37.3**	**-0.2**
VET01				Sg	**Sg**	**05 55 39.2**	**-0.6**
VET01	**Vtroz, Route**	**0.11**	**230**	⇑Pg	**Pg**	**05 55 37.3**	**-0.2**
VET01				Sg	**Sg**	**05 55 39.1**	**-0.6**
VET02	**Vtroz, Route**	**0.11**	**227**	Sg	**Sg**	**05 55 40.0**	**+0.3**
VET03	**Vtroz, Le Bot**	**0.11**	**223**	Sg	**Sg**	**05 55 40.4**	**+0.6**
VET03	**Vtroz, Le Bot**	**0.11**	**223**	Sg	**Sg**	**05 55 40.3**	**+0.5**
SARC	**Ardon Commune,**	**0.12**	**228**	Pg	**Pg**	**05 55 37.8**	**+0.1**
SARC				Sg	**Sg**	**05 55 39.9**	**-0.2**
RAW1	**Lenk, BE**	**0.14**	**15**	⇑Pg	**Pg**	**05 55 37.5**	**-0.6**
RAW1				Sg	**Sg**	**05 55 39.3**	**-1.2**
RAW1	**Lenk, BE**	**0.14**	**15**	⇑Pg	**Pg**	**05 55 37.4**	**-0.6**
RAW1				Sg	**Sg**	**05 55 39.3**	**-1.2**
RAW4	**Former Reservo**	**0.17**	**240**	⇑Pg	**Pg**	**05 55 38.4**	**-0.1**
RAW4	**Former Reservo**	**0.17**	**240**	⇑Pg	**Pg**	**05 55 38.4**	**-0.1**
VANNI	**Vissoie, Val d**	**0.17**	**119**	⇓Pg	**Pb**	**05 55 39.3**	**-0.3**
VANNI				Sg	**Sb**	**05 55 42.1**	**-0.8**
VANNI	**Vissoie, Val d**	**0.17**	**119**	⇓Pg	**Pb**	**05 55 39.2**	**-0.3**
VANNI	**Vissoie, Val d**	**0.17**	**119**	P	**Pb**	**05 55 39.2**	**-0.3**
VANNI				S	**Sb**	**05 55 42.1**	**-0.8**
GRYON	**Gryon**	**0.20**	**258**	⇑Pg	**Pg**	**05 55 38.6**	**-0.3**
GRYON				Sg	**Sg**	**05 55 41.3**	**-0.6**
GRYON	**Gryon**	**0.20**	**258**	Pg	**Pg**	**05 55 38.6**	**-0.3**
GRYON				Sg	**Sg**	**05 55 41.3**	**-0.6**
AGA01	**Agarn, Footbal**	**0.20**	**87**	Sg	**Sb**	**05 55 43.0**	**-0.6**
LKBD2	**Leukerbad 2**	**0.20**	**65**	Pg	**Pg**	**05 55 39.2**	**+0.1**
LKBD2				Sg	**Sg**	**05 55 42.3**	**+0.1**
LKBD2	**Leukerbad 2**	**0.20**	**65**	⇑Pg	**Pg**	**05 55 39.1**	**+0.1**
LKBD2				Sg	**Sg**	**05 55 42.3**	**+0.1**
DIX	**Grande Dixence**	**0.21**	**176**	⇓Pg	**Pb**	**05 55 40.1**	**-0.3**
DIX				Sg	**Sb**	**05 55 43.2**	**-1.0**
DIX	**Grande Dixence**	**0.21**	**176**	P	**Pb**	**05 55 40.0**	**-0.3**
DIX				S	**Sb**	**05 55 43.3**	**-1.0**
DIX	**Grande Dixence**	**0.21**	**176**	P	**Pb**	**05 55 40.1**	**-0.3**
DIX				S	**Sb**	**05 55 43.3**	**-1.0**
DIX				AML	AML		
	comp=E,6675μm,0.3s						
DIX				AML	AML		
	comp=N,3915μm,0.3s						
DIX				AML	AML		
	comp=E,6675μm,0.3s						
FULLY	**Reservoir Maze**	**0.22**	**232**	⇑Pg	**Pg**	**05 55 39.4**	**+0.1**
FULLY				Sg	**Sg**	**05 55 42.6**	**+0.1**
FULLY	**Reservoir Maze**	**0.22**	**232**	⇑Pg	**Pg**	**05 55 39.4**	**+0.1**
SGAK	**Gampel Kirche,**	**0.25**	**84**	Pg	**Pb**	**05 55 40.5**	**-0.4**
SGAK				Sg	**Sb**	**05 55 44.1**	**-1.1**
SCOD	**Chcteau-dO**	**0.25**	**315**	⇓Pg	**Pg**	**05 55 39.4**	**-0.5**
SCOD				Sg	**Sg**	**05 55 43.0**	**-0.6**
SCOD	**Chcteau-dO**	**0.25**	**315**	⇓Pg	**Pg**	**05 55 39.4**	**-0.5**
SZWD2	**Zweisimmen Kir**	**0.26**	**358**	Pg	**Pg**	**05 55 39.8**	**-0.2**
SZWD2				Sg	**Sg**	**05 55 43.3**	**-0.5**
LAVEY	**Lavey les Bain**	**0.27**	**250**	Sg	**Sg**	**05 55 43.8**	**-0.1**
NIE01	**Niedergesteln,**	**0.28**	**85**	Pg	**Pb**	**05 55 41.0**	**-0.4**
NIE01				Sg	**Sb**	**05 55 44.8**	**-1.2**
RAR01	**Raron, Gemeind**	**0.29**	**86**	Sg	**Sb**	**05 55 45.7**	**-0.7**
LAUCH	**Lauchernalp**	**0.29**	**65**	⇑Pg	**Pg**	**05 55 41.0**	**+0.3**
LAUCH				Sg	**Sg**	**05 55 45.3**	**+0.4**
LAUCH	**Lauchernalp**	**0.29**	**65**	⇑Pg	**Pg**	**05 55 41.0**	**+0.3**
LAUCH				Sg	**Sg**	**05 55 45.3**	**+0.4**
LAUCH	**Lauchernalp**	**0.29**	**65**	P	**Pg**	**05 55 41.0**	**+0.3**
LAUCH				S	**Sg**	**05 55 45.3**	**+0.4**
AIGLE	**Aigle**	**0.30**	**280**	Sg	**Sb**	**05 55 44.6**	**-0.4**
RAR02	**Raron, Airdrom**	**0.30**	**87**	Sg	**Sb**	**05 55 46.1**	**-0.7**
ILLEZ	**Chalet Vouargn**	**0.32**	**257**	Pg	**Pg**	**05 55 41.2**	**+0.2**
ILLEZ				Sg	**Sg**	**05 55 45.3**	**-0.1**
EMBD	**Embd, Matterta**	**0.32**	**103**	Sg	**Sb**	**05 55 46.3**	**-0.9**
EMBD	**Embd, Matterta**	**0.32**	**103**	P	**Pg**	**05 55 40.9**	**-0.1**
EMBD				S	**Sb**	**05 55 46.3**	**-0.9**
SALAN	**Lac Salanfe**	**0.32**	**243**	⇑Pg	**Pg**	**05 55 41.2**	**0.0**
SALAN				Sg	**Sg**	**05 55 45.7**	**+0.1**
SVISP	**Visp, Lonza VS**	**0.34**	**88**	Sg	**Sb**	**05 55 46.9**	**-0.9**
SVIO	**Visp Obere Sta**	**0.34**	**90**	⇑Pg	**Pb**	**05 55 42.3**	**-0.2**
SVIO				Sg	**Sb**	**05 55 47.0**	**-0.9**
SFRS	**Frutigen, Schu**	**0.35**	**32**	⇓Pg	**Pg**	**05 55 41.5**	**0.0**
SFRS				Sg	**Sg**	**05 55 46.7**	**+0.4**
SFRS	**Frutigen, Schu**	**0.35**	**32**	Pg	**Pg**	**05 55 41.5**	**0.0**
SFRS				Sg	**Sg**	**05 55 46.7**	**+0.4**
SVIL	**Visp Littennar**	**0.35**	**89**	Sg	**Sb**	**05 55 47.5**	**-0.6**
JAUN	**Jaun, Euschels**	**0.35**	**349**	⇑Pg	**Pg**	**05 55 40.8**	**-0.8**
JAUN				Sg	**Sg**	**05 55 46.3**	**-0.1**
MH44	**Zermatt, Posit**	**0.37**	**147**	⇓Pg	**Pb**	**05 55 42.8**	**-0.3**
MH36	**Zermatt, Posit**	**0.37**	**147**	⇓Pg	**Pb**	**05 55 42.8**	**-0.4**
SZEK	**Zermatt, Kirch**	**0.37**	**137**	⇓Pg	**Pb**	**05 55 42.8**	**-0.3**
SZEK	**Zermatt, Kirch**	**0.37**	**137**	⇓Pg	**Pb**	**05 55 42.7**	**-0.3**
BIBA	**Brigerbad**	**0.38**	**88**	Sg	**Sb**	**05 55 48.1**	**-0.8**
SEMOS	**Emosson Stauma**	**0.38**	**235**	Sg	**Sg**	**05 55 47.6**	**+0.2**
MFERR	**Prayon, Val Fe**	**0.39**	**209**	Pg	**Pg**	**05 55 42.5**	**+0.2**
MFERR				Sg	**Sg**	**05 55 48.1**	**+0.5**
MFERR	**Prayon, Val Fe**	**0.39**	**209**	Pg	**Pg**	**05 55 42.5**	**+0.2**
MFERR				Sg	**Sg**	**05 55 48.0**	**+0.5**
SBUL	**Bulle cole,**	**0.41**	**326**	⇓Pg	**Pg**	**05 55 42.7**	**0.0**
SBUL				Sg	**Sg**	**05 55 48.9**	**+0.7**
WIMIS	**Wimmis**	**0.41**	**24**	⇑Pg	**Pg**	**05 55 42.6**	**-0.1**
WIMIS	**Wimmis**	**0.41**	**24**	⇑Pg	**Pg**	**05 55 42.6**	**-0.1**
WIMIS				Sg	**Sg**	**05 55 48.5**	**+0.3**
SIMPL	**Simplonpass**	**0.44**	**96**	⇓Pg	**Pg**	**05 55 44.0**	**-0.3**
SIMPL				Sg	**Sb**	**05 55 50.1**	**-0.9**
SIMPL	**Simplonpass**	**0.44**	**96**	P	**Pb**	**05 55 44.2**	**-0.1**
SIMPL				S	**Sb**	**05 55 50.2**	**-0.7**
MMK	**Mattmark**	**0.47**	**121**	Pg	**Pb**	**05 55 44.4**	**-0.4**
MMK	**Mattmark**	**0.47**	**121**	P	**Pb**	**05 55 44.6**	**-0.1**
MMK				S	**Sb**	**05 55 50.8**	**-0.8**
MMK	**Mattmark**	**0.47**	**121**	P	**Pb**	**05 55 44.2**	**-0.5**
OGSI	**Sixt**	**0.49**	**243**	⇑Pg	**Pg**	**05 55 44.3**	**+0.2**
OGSI				Sg	**Sg**	**05 55 50.9**	**+0.1**
FIESA	**Fiescheralp**	**0.52**	**74**	⇑Pg	**Pb**	**05 55 45.3**	**-0.4**
FIESA				Sg	**Sb**	**05 55 52.2**	**-1.0**
FIESA	**Fiescheralp**	**0.52**	**74**	P	**Pb**	**05 55 45.3**	**-0.4**
FIESA				S	**Sb**	**05 55 52.3**	**-1.0**
SATI	**Passo dei Sala**	**0.53**	**141**	⇓Pg	**Pb**	**05 55 45.7**	**-0.3**
SATI	**Passo dei Sala**	**0.53**	**141**	P	**Pb**	**05 55 45.7**	**-0.3**
SATI				S	**Sb**	**05 55 53.0**	**-0.7**
SATI	**Passo dei Sala**	**0.53**	**141**	P	**Pb**	**05 55 45.6**	**-0.3**
SATI				S	**Sb**	**05 55 53.1**	**-0.6**
SATI				AML	AML		
	comp=E,130μm,1.6s						
SATI				AML	AML		
	comp=N,174μm,0.2s						
SATI				AML	AML		
	comp=E,121μm,0.2s						
SATI				AML	AML		
	comp=E,130μm,0.4s						
BLANC	**P.ta Helbronne**	**0.55**	**215**	⇑Pg	**Pb**	**05 55 45.9**	**-0.3**
BLANC				Sg	**Sg**	**05 55 53.2**	**+0.6**
TORNY	**Torny/Romont**	**0.57**	**329**	Pg	**Pg**	**05 55 45.8**	**+0.2**
MRGE	**Morge**	**0.57**	**204**	⇑Pg	**Pb**	**05 55 46.0**	**-0.4**
MRGE				Sg	**Sb**	**05 55 53.6**	**-0.9**
MRGE	**Morge**	**0.57**	**204**	P	**Pb**	**05 55 46.0**	**-0.4**
MRGE				S	**Sb**	**05 55 53.6**	**-0.9**
MRGE	**Morge**	**0.57**	**204**	P	**Pb**	**05 55 46.0**	**-0.4**
MRGE				S	**Sb**	**05 55 53.8**	**-0.7**
MRGE				AML	AML		
	comp=N,278μm,0.9s						
MRGE				AML	AML		
	comp=E,330μm,0.4s						
MRGE				AML	AML		
	comp=N,278μm,1.1s						
CIRO	**Champorcher**	**0.70**	**169**	P	**Pn**	**05 55 49.4**	**-1.0**
CIRO				S	**Sb**	**05 55 57.5**	**-0.9**
CIRO	**Champorcher**	**0.70**	**169**	P	**Pb**	**05 55 48.6**	**-0.1**
CIRO				S	**Sb**	**05 55 58.0**	**-0.4**
CIRO				AML	AML		
	comp=E,108μm,0.3s						
CIRO				AML	AML		
	comp=N,106μm,1.4s						
BTNF	**Ladstafel, Nuf**	**0.71**	**74**	⇑Pg	**Pb**	**05 55 48.7**	**-0.1**
BTNF				Sg	**Sb**	**05 55 57.7**	**-0.8**
GRIMS	**Grimsel Gerste**	**0.71**	**66**	⇑Pg	**Pb**	**05 55 48.5**	**-0.3**
RA43	**Rhonegletscher**	**0.75**	**66**	⇑Pg	**Pb**	**05 55 49.4**	**-0.2**
RA43				Sg	**Sb**	**05 55 59.0**	**-0.8**
GSF03	**Obergoms, Fort**	**0.75**	**67**	⇑Pg	**Pb**	**05 55 49.4**	**-0.2**
GSF03				Sg	**Sb**	**05 55 59.2**	**-0.7**
RSL	**Roselend**	**0.80**	**222**	⇑Pg	**Pg**	**05 55 50.1**	**+0.1**
RSL				Sg	**Sg**	**05 56 00.7**	**+0.2**
RSL	**Roselend**	**0.80**	**222**	P	**Pb**	**05 55 50.2**	**-0.2**
RSL				S	**Sb**	**05 56 01.1**	**-0.1**
A060B	**Romoos, Napf,**	**0.81**	**30**	⇑Pg	**Pb**	**05 55 50.7**	**+0.2**
GIMEL	**St. Georges /**	**0.81**	**288**	P	**Pg**	**05 55 50.5**	**+0.3**
TRAV	**Traversella**	**0.82**	**162**	P	**Pn**	**05 55 51.6**	**-0.3**
TRAV				S	**Sb**	**05 56 01.0**	**-0.6**
TRAV	**Traversella**	**0.82**	**162**	P	**Pb**	**05 55 50.7**	**+0.1**
TRAV				AML	AML		
	comp=N,179μm,1.3s						
TRAV				AML	AML		
	comp=E,224μm,0.2s						
TRAV				AML	AML		
	comp=N,179μm,0.7s						
TRAV				AML	AML		
	comp=E,102μm,2.2s						
LSD	**Lago del Serru**	**0.85**	**192**	Pg	**Pb**	**05 55 51.1**	**-0.1**
LSD	**Lago del Serru**	**0.85**	**192**	P	**Pb**	**05 55 51.1**	**-0.1**
LSD				S	**Sb**	**05 56 03.1**	**+0.4**
LSD	**Lago del Serru**	**0.85**	**192**	P	**Pb**	**05 55 51.1**	**-0.1**
LSD				AML	AML		
	comp=E,778nm,0.2s						
LSD				AML	AML		
	comp=N,119μm,0.3s						
BTAO	**Waffenplatz Be**	**0.87**	**74**	⇑Pg	**Pb**	**05 55 51.4**	**-0.1**
FUSIO	**Fusio**	**0.90**	**79**	⇑Pg	**Pn**	**05 55 52.2**	**-0.7**
FUSIO	**Fusio**	**0.90**	**79**	P	**Pn**	**05 55 52.3**	**-0.7**
FUSIO				S	**Sb**	**05 56 04.1**	**0.0**
FUSIO	**Fusio**	**0.90**	**79**	⇑P	**Pn**	**05 55 52.3**	**-0.7**
FUSIO				AML	AML		
	comp=E,116μm,1.4s						
FUSIO				AML	AML		
	comp=N,143μm,0.4s						
FUSIO				AML	AML		
	comp=E,116μm,1.4s						
FUSIO				AML	AML		
	comp=E,116μm,0.6s						
LPL	**La Plagne**	**0.90**	**211**	*e*Pg	**Pb**	**05 55 52.3**	**+0.2**
LPL				*e*Sg	**Sn**	**05 56 05.1**	**-0.9**
	comp=E,23nm,0.3s						
GMS01	**Gemsstock NE-G**	**0.90**	**69**	⇑Pg	**Pb**	**05 55 52.4**	**+0.2**
LPG	**La Plagne**	**0.91**	**209**	*e*Pg	**Pb**	**05 55 52.6**	**+0.3**
LPG				*e*Sg	**Sb**	**05 56 04.5**	**+0.1**
	comp=E,45nm,0.3s						
BNALP	**Bannalp**	**0.92**	**51**	Pg	**Pb**	**05 55 52.6**	**+0.2**
BNALP	**Bannalp**	**0.92**	**51**	P	**Pb**	**05 55 52.7**	**+0.2**
BNALP				AML	AML		
	comp=E,126μm,0.6s						
BNALP				AML	AML		
	comp=N,95μm,1.4s						
BNALP				AML	AML		
	comp=E,126μm,0.6s						
BNALP				AML	AML		
	comp=N,95μm,1.4s						
BNALP				AML	AML		
	comp=E,126μm,1.4s						
BNALP				AML	AML		
	comp=N,95μm,0.6s						
CABF	**La Chapelle**	**0.95**	**290**	*e*Pg	**Pb**	**05 55 53.2**	**+0.3**
CABF				*e*Sg	**Sg**	**05 56 05.5**	**+0.1**
	comp=N,33nm,0.3s						
NALPS	**Val Nalps**	**0.99**	**72**	⇑Pg	**Pn**	**05 55 53.9**	**-0.5**
DAGMA	**Lutertal, Dagm**	**1.03**	**24**	⇑Pg	**Pg**	**05 55 54.7**	**+0.3**
VARE	**Varese**	**1.05**	**113**	P	**Pn**	**05 55 55.3**	**+0.3**
VARE				S	**Sn**	**05 56 09.2**	**-0.5**
VARE	**Varese**	**1.05**	**113**	P	**Pn**	**05 55 54.9**	**-0.1**
HAMIK	**Hmikon, Dlik**	**1.13**	**32**	⇑Pg	**Pg**	**05 55 56.6**	**+0.3**
RSP	**Reno Superiore**	**1.15**	**184**	P	**Pg**	**05 55 56.9**	**+0.4**
RSP				S	**Sn**	**05 56 11.6**	**-0.3**
RSP	**Reno Superiore**	**1.15**	**184**	P	**Pn**	**05 55 56.1**	**-0.3**
RSP				AML	AML		
	comp=E,114μm,0.2s						
RSP				AML	AML		
	comp=N,137μm,0.3s						
RSP				AML	AML		
	comp=E,114μm,1.8s						
MUGIO	**Muggio**	**1.21**	**107**	P	**Pg**	**05 55 58.3**	**+0.5**
MUGIO				S	**Sn**	**05 56 13.5**	**0.0**
MUGIO	**Muggio**	**1.21**	**107**	P	**Pg**	**05 55 57.8**	**+0.1**
MUGIO				AML	AML		
	comp=E,74μm,0.3s						
MUGIO				AML	AML		
	comp=N,154μm,0.3s						
MUGIO				AML	AML		
	comp=N,154μm,1.7s						
BNI	**Bardonecchia**	**1.33**	**202**	P	**Pb**	**05 55 59.1**	**-0.3**
TUE	**Stuetta**	**1.37**	**82**	P	**Pg**	**05 56 01.3**	**+0.5**
TUE				S	**Sg**	**05 56 18.7**	**+0.1**
TUE	**Stuetta**	**1.37**	**82**	P	**Pg**	**05 56 00.5**	**-0.3**
TUE				AML	AML		
	comp=E,122μm,1.4s						
TUE				AML	AML		
	comp=E,114μm,0.6s						
TUE				AML	AML		
	comp=N,134μm,1.5s						
TUE				AML	AML		
	comp=N,106μm,1.2s						
TUE				AML	AML		
	comp=N,91μm,0.4s						
TUE				AML	AML		
	comp=E,95μm,0.3s						
TUE				AML	AML		
	comp=N,134μm,0.5s						
TUE				AML	AML		
	comp=E,114μm,1.4s						
RRL	**Rocca Remolon**	**1.43**	**197**	P	**Pg**	**05 56 02.7**	**+0.7**
RRL				S	**Sg**	**05 56 20.5**	**-0.1**
RRL	**Rocca Remolon**	**1.43**	**197**	P	**Pb**	**05 56 01.3**	**+0.1**
VDL	**Val di Lei**	**1.44**	**82**	P	**Pg**	**05 56 02.3**	**+0.1**
VDL				S	**Sg**	**05 56 21.0**	**+0.1**
BHB	**Bricherasio**	**1.45**	**183**	P	**Pg**	**05 56 02.6**	**+0.3**
BHB				S	**Sg**	**05 56 19.9**	**-1.3**
BHB	**Bricherasio**	**1.45**	**183**	P	**Pb**	**05 56 01.5**	**+0.1**
BHB				AML	AML		
	comp=N,59μm,1.6s						
BHB				AML	AML		
	comp=E,76μm,1.5s						
BHB				AML	AML		
	comp=N,59μm,0.4s						
PLONS	**Plons/SG**	**1.57**	**60**	P	**Pg**	**05 56 04.0**	**-0.6**
HINF	**Hinteralfeld**	**1.57**	**347**	*e*Pn	**Pn**	**05 56 02.4**	**+0.3**
HINF	**Hinteralfeld**	**1.57**	**347**	*e*Pg	**Pb**	**05 56 04.1**	**+0.7**
HINF				*e*Sn	**Sn**	**05 56 22.1**	**-0.3**
HINF				*e*Sg	**Sb**	**05 56 24.6**	**+1.4**
	comp=N,27nm,0.2s						
MBDF	**Montbardon**	**1.62**	**196**	*e*Pg	**Pg**	**05 56 06.3**	**+0.7**
MBDF				*e*Sg	**Sg**	**05 56 26.8**	**+0.1**
	comp=N,42nm,0.5s						
ORIF	**Oris-en-Rattie**	**1.73**	**218**	*e*Pg	**Pg**	**05 56 07.5**	**-0.2**
ORIF				*e*Sg	**Sg**	**05 56 30.9**	**+0.7**
	comp=N,15nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.73**	**218**	P	**Pb**	**05 56 05.3**	**-0.9**
ORIF				AML	AML		
	comp=E,54μm,1.5s						
ORIF				AML	AML		
	comp=E,54μm,1.5s						
ORIF				AML	AML		
	comp=N,69μm,1.6s						
ORIF				AML	AML		
	comp=E,54μm,0.5s						
ORIF				AML	AML		
	comp=N,69μm,0.4s						
DAVOX	**Davos/Dischmat**	**1.79**	**73**	P	**Pb**	**05 56 06.6**	**-0.7**
DAVOX				AML	AML		
	comp=E,218μm,0.3s						
DAVOX				AML	AML		
	comp=N,348μm,0.5s						
DAVOX				AML	AML		
	comp=N,348μm,0.5s						
DAVOX				AML	AML		
	comp=E,218μm,0.3s						
HAU	**Haudompre**	**1.86**	**338**	*e*Pn	**Pn**	**05 56 06.8**	**+0.7**
HAU	**Haudompre**	**1.86**	**338**	*e*Pg	**Pb**	**05 56 09.6**	**+1.3**
HAU				*e*Sn	**Sn**	**05 56 28.9**	**-0.5**
HAU				*e*Sg	**Sb**	**05 56 33.0**	**+1.5**
	comp=E,27nm,0.2s						
DAVA	**Damuels**	**1.98**	**59**	*i* Pg	**Pg**	**05 56 13.1**	**+0.6**
	comp=E,2.9nm,0.1s						
DAVA				*e*Sg	**Sg**	**05 56 40.2**	**+2.0**
	comp=E,51nm,0.6s						
CDF	**Champ du Feu**	**2.12**	**358**	*e*Pn	**Pn**	**05 56 09.9**	**+0.1**
CDF	**Champ du Feu**	**2.12**	**358**	*e*Pg	**Pg**	**05 56 14.5**	**-0.7**
CDF				*e*Sn	**Sn**	**05 56 35.3**	**-0.8**
CDF				*e*Sg	**Sb**	**05 56 41.6**	**+2.4**
	comp=E,18nm,0.4s						
VIVF	**Saint-Julien-l**	**2.38**	**234**	*e*Pn	**Pn**	**05 56 14.0**	**+0.7**
VIVF	**Saint-Julien-l**	**2.38**	**234**	*e*Pg	**Pg**	**05 56 19.2**	**-1.0**
VIVF				*e*Sn	**Sn**	**05 56 42.9**	**+0.5**
VIVF				*e*Sg	**Sg**	**05 56 49.9**	**-1.2**
	comp=E,11nm,0.3s						
FETA	**Feichten**	**2.42**	**71**	*e*Pn	**Pb**	**05 56 18.1**	**+0.2**
	comp=E,3.5nm,0.4s						
FETA				*e*Sn	**Sb**	**05 56 48.7**	**+1.1**
	comp=E,3.6nm,0.3s						
SBF	**Sospel**	**2.43**	**179**	*e*Pn	**Pn**	**05 56 14.1**	**+0.2**
SBF	**Sospel**	**2.43**	**179**	*e*Pg	**Pg**	**05 56 20.4**	**-0.6**
SBF				*e*Sg	**Sg**	**05 56 51.2**	**-1.3**
	comp=E,16nm,0.4s						
SMF	**Signal de Mont**	**2.48**	**280**	*e*Pn	**Pn**	**05 56 15.5**	**+0.9**
SMF	**Signal de Mont**	**2.48**	**280**	*e*Pg	**Pg**	**05 56 21.4**	**-0.5**
SMF				*e*Sn	**Sn**	**05 56 44.6**	**-0.1**
SMF				*e*Sg	**Sb**	**05 56 52.5**	**+3.3**
	comp=E,7.1nm,0.3s						
LOR	**Lormes**	**2.61**	**293**	*e*Pn	**Pn**	**05 56 16.5**	**0.0**
LOR	**Lormes**	**2.61**	**293**	*e*Pg	**Pg**	**05 56 23.7**	**-0.9**
LOR				*e*Sn	**Sn**	**05 56 47.8**	**-0.3**
LOR				*e*Sg	**Sg**	**05 56 57.2**	**-1.2**
	comp=E,6.1nm,0.3s						
MOTA	**Moosalm**	**2.76**	**66**	*e*Pn	**Pb**	**05 56 22.8**	**-1.0**
	comp=E,0.9nm,0.2s						
MOTA				*e*Sn	**Sb**	**05 56 56.0**	**-1.6**
	comp=E,1.1nm,0.2s						
SAVF	**Savonnieres en**	**2.79**	**327**	*e*Pn	**Pn**	**05 56 18.9**	**+0.1**
SAVF	**Savonnieres en**	**2.79**	**327**	*e*Pg	**Pb**	**05 56 26.0**	**+1.9**
SQTA	**Sankt Quirin**	**2.79**	**69**

	comp=N,1µm,0.7s							
CRPR	**Cabo Rojo, PR**	**1.33 176**	⇓	*i*P	**Pg**	**06 04 13.2**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.33 176**		*e*S	**Sn**	**06 04 28.6**	**-2.0**
MLPR	**Magueyes Islan**	**1.37 173**	⇑	*e*Pg	**Pb**	**06 04 12.9**	**-0.8**
MLPR			⇑	*e*Sg	**Sb**	**06 04 30.6**	**-0.9**
MLPR				IAML		06 04 38.6	
	comp=N,167nm,0.4s						
MLPR	**Magueyes Islan**	**1.37 173**	⇓	*i*P	**Pg**	**06 04 13.6**	**-0.4**
MLPR	**Magueyes Islan**	**1.37 173**		*e*S	**Sb**	**06 04 30.5**	**-0.9**
GBPR	**Guanica, Bosqu**	**1.40 167**			**Pg**	**06 04 14.5**	**0.0**
GBPR	**Guanica, Bosqu**	**1.40 167**	⇑	*e*P	**Pg**	**06 04 14.5**	**0.0**
OBIP	**Obispado Ponce**	**1.42 156**			**Pb**	**06 04 13.3**	**-1.1**
OBIP				IAML		06 04 31.9	
	comp=E,2µm,0.9s						
OBIP				IAML		06 04 32.6	
	comp=N,1µm,0.9s						
OBIP	**Obispado Ponce**	**1.42 156**			**Sn**	**06 04 30.1**	**-2.5**
OBIP	**Obispado Ponce**	**1.42 156**		Pg	**Pb**	**06 04 13.5**	**-0.9**
OBIP	**Obispado Ponce**	**1.42 156**	⇑	*e*P	**Pb**	**06 04 13.3**	**-1.1**
OBIP	**Obispado Ponce**	**1.42 156**		*e*S	**Sn**	**06 04 30.1**	**-2.5**
GCPR	**Guaynabo City**	**1.48 134**			**Sn**	**06 04 32.0**	**-2.4**
GCPR	**Guaynabo City**	**1.48 134**		Pn	**Pn**	**06 04 13.8**	**-1.0**
GCPR	**Guaynabo City**	**1.48 134**	⇑	*i*P	**Pn**	**06 04 13.9**	**-0.8**
GCPR	**Guaynabo City**	**1.48 134**		*e*S	**Sn**	**06 04 32.0**	**-2.4**
SJG	**San Juan**	**1.59 140**			**Pn**	**06 04 15.6**	**-0.5**
SJG				IAML		06 04 37.2	
	comp=N,635nm,0.4s						
SJG				IAML		06 04 44.6	
	comp=N,480nm,0.5s						
SJG	**San Juan**	**1.59 140**	⇑	*i*P	**Pn**	**06 04 15.6**	**-0.5**
SJG	**San Juan**	**1.59 140**		*e*S	**Sn**	**06 04 34.3**	**-2.6**
HIDR	**Higuey Centro**	**1.60 243**	⇑	*e*Pg	**Pg**	**06 04 18.9**	**+0.5**
HIDR			⇑	*e*Sg	**Sg**	**06 04 40.6**	**+1.4**
HIDR				IAML		06 04 51.9	
	comp=N,399nm,0.5s						
HIDR	**Higuey Centro**	**1.60 243**	⇓	*i*P	**Pg**	**06 04 19.3**	**+0.9**
HIDR	**Higuey Centro**	**1.60 243**		*e*S	**Sg**	**06 04 40.7**	**+1.4**
HUMP	**Col San Antoni**	**1.76 132**			**Sn**	**06 04 38.3**	**-2.9**
HUMP	**Col San Antoni**	**1.76 132**		Pn	**Pn**	**06 04 17.9**	**-0.7**
HUMP				IAML		06 04 43.1	
	comp=E,443nm,0.2s						
HUMP	**Col San Antoni**	**1.76 132**	⇓	*e*P	**Pb**	**06 04 18.7**	**-1.5**
HUMP	**Col San Antoni**	**1.76 132**		*e*S	**Sn**	**06 04 38.3**	**-2.9**
MIDR	**Miches**	**1.77 259**	⇑	*e*Pg	**Pg**	**06 04 21.2**	**-0.4**
MIDR			⇑	*e*Sg	**Sg**	**06 04 44.0**	**-0.5**
MIDR				IAML		06 05 04.2	
	comp=N,138nm,0.9s						
MIDR	**Miches**	**1.77 259**	⇓	*i*P	**Pg**	**06 04 21.5**	**-0.1**
MIDR	**Miches**	**1.77 259**		*e*S	**Sg**	**06 04 44.0**	**-0.5**
SMDR	**Samana, DR**	**1.86 269**	⇑	*e*Pg	**Pb**	**06 04 22.1**	**+0.1**
SMDR			⇑	*e*Sg	**Sb**	**06 04 46.0**	**+0.5**
SMDR				IAML		06 04 46.6	
	comp=N,206nm,0.6s						
SMDR	**Samana, DR**	**1.86 269**	⇑	*i*P	**Pg**	**06 04 22.5**	**-0.9**
SMDR	**Samana, DR**	**1.86 269**		*e*S	**Sg**	**06 04 46.4**	**-1.2**
DR12	**Loma Pena Alta**	**2.12 255**		Pn	**Pb**	**06 04 26.7**	**+0.3**
HATOM	**Hato Mayor del**	**2.12 255**	⇑	*e*Pg	**Pb**	**06 04 26.5**	**+0.1**
HATOM			⇑	*e*Sg	**Sg**	**06 04 54.2**	**-1.7**
HATOM				IAML		06 05 14.6	
	comp=N,119nm,0.7s						
SDD	**Santo Domingo**	**2.70 251**			**Sb**	**06 05 08.9**	**-0.7**
SDD	**Santo Domingo**	**2.70 251**			**Pb**	**06 04 35.6**	**-0.7**
SDD				IAML		06 05 12.3	
	comp=E,113nm,0.6s						
SDD	**Santo Domingo**	**2.70 251**	⇓	*i*P	**Pb**	**06 04 35.6**	**-0.7**
SDD	**Santo Domingo**	**2.70 251**		*e*S	**Sb**	**06 05 08.9**	**-0.7**
BANI	**BANI**	**3.12 253**			**Pb**	**06 04 41.9**	**-1.7**
SC01	**Santiago de lo**	**3.31 272**			**Sb**	**06 05 28.3**	**+0.9**
SC01	**Santiago de lo**	**3.31 272**			**Pb**	**06 04 44.5**	**-2.3**
SC01	**Santiago de lo**	**3.31 272**	⇓	*e*P	**Pb**	**06 04 44.6**	**-2.2**
SC01	**Santiago de lo**	**3.31 272**		*e*S	**Sb**	**06 05 28.3**	**+0.9**
SDDR	**Presa de Saban**	**3.87 265**			**Pb**	**06 04 52.3**	**-3.9**
SDDR	**Presa de Saban**	**3.87 265**	⇑	*i*P	**Pb**	**06 04 52.4**	**-3.8**
SDDR	**Presa de Saban**	**3.87 265**		*e*S	**Sb**	**06 05 38.4**	**-4.8**
SDDR	**Presa de Saban**	**3.87 265**		*e*P	**Pb**	**06 04 51.8**	**-4.4**
SDDR				*e*S	**Sn**	**06 05 37.1**	**+3.8**
SDDR				*e*Sg	**Sg**	**06 05 56.1**	**+4.2**
MASC	**Masc**	**6.66 278**		*e*P	**Pn**	**06 05 25.7**	**-0.2**
MASC				*e*S	**Sn**	**06 06 38.7**	**-3.3**
MASC				IAML		06 06 41.3	
	comp=N,7.5nm,0.3s						
MASC				IAML		06 06 41.4	
	comp=E,7.0nm,0.3s						
QMBU	**Quimbuelo**	**7.20 278**	⇑	*e*P	**Pn**	**06 05 33.7**	**+0.2**
QMBU				*e*S	**Sn**	**06 06 52.0**	**-3.6**
QMBU				IAML		06 06 55.8	
	comp=N,8.9nm,0.3s						
QMBU				IAML		06 06 57.0	
	comp=E,11nm,0.3s						
NMDO	**Nuevo Mundo**	**7.41 281**		*e*P	**Pn**	**06 05 35.4**	**-0.7**
NMDO				*e*S	**Sn**	**06 06 56.5**	**-4.3**
GTBY	**Guantanamo Bay**	**7.46 276**		*e*P	**Pn**	**06 05 37.2**	**+0.2**
GTBY				*e*S	**Sn**	**06 06 59.9**	**-2.0**
SABCS	**La Quijada**	**7.69 279**	⇑	*e*P	**Pn**	**06 05 40.4**	**+0.3**
SABCS				*e*S	**Sn**	**06 07 04.3**	**-3.2**
RCC	**Rio Carpintero**	**8.02 276**		*e*P	**Pn**	**06 05 45.1**	**+0.6**
RCC			⇑	*e*S	**Sn**	**06 07 13.2**	**-2.4**
RCC				IAML		06 07 14.4	
	comp=E,3.1nm,0.3s						
RCC				IAML		06 07 14.7	
	comp=N,2.2nm,0.3s						
PINC	**Pinares de May**	**8.15 279**	⇑	*e*P	**Pn**	**06 05 46.0**	**-0.3**
HLGC	**Holguin**	**8.45 282**	⇑	*e*P	**Pn**	**06 05 51.9**	**+1.4**
HLGC				*e*S	**Sn**	**06 07 24.9**	**-1.3**
HLGC				IAML		06 07 30.5	
	comp=N,5.6nm,0.3s						
HLGC				IAML		06 07 30.8	
	comp=E,3.0nm,0.4s						
CHIV	**Chivirico**	**8.69 276**		*e*P	**Pn**	**06 05 55.2**	**+1.3**
TXAR	**Lajitas Array**	**34.55 294**		P	**P**	**06 10 40.4**	**+3.3**
	comp=E,0.2nm,0.7s,baz=100,slow=7.8,SNR=3.9						
	comp=E,0.2nm,0.7s						
NVAR	**Mina Array Bea**	**47.96 305**		P	P	06 12 32.6	+5.2
	comp=E,0.4nm,0.8s,baz=109,slow=8.1,SNR=2.9						
	comp=E,0.4nm,0.8s						
ESDC	**Sonseca Array**	**57.50 55**		P	**P**	**06 13 39.8**	**+2.1**
	comp=E,1.5nm,0.8s,baz=263,slow=7.3,SNR=4.6						
	comp=E,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.09 84**		P	**P**	**06 14 36.7**	**+0.8**
	comp=E,1.4nm,0.3s,baz=270,slow=5.8,SNR=2.6						
	comp=E,1.4nm,0.3s						
ASAR	**Alice Springs**	**159.89 254**		PKPab	**PKPab**	**06 24 28.2**	**+0.6**
	comp=E,0.4nm,0.7s,baz=96,slow=4.4,SNR=3.1						

TRN 05 06:24:40.9, 18°.18N×62°.66W, h3km, MD3.5, East of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKI	**Saint Kitts**	**0.85**	**185**	*e*P	Pn	06 25 00.9	+1.0
SKI				*e*S	Sn	06 25 16.0	+3.2
SKOC	**St. Kitts, UWI**	**0.89**	**184**	*e*P	Pn	06 25 01.9	+1.6
SKOC				*e*S	Sn	06 25 17.6	+3.9
ANWB	**Willy Bob**	**0.98**	**121**	*e*P	Pn	06 25 03.7	+2.1
ANWB				*e*S	Sn	06 25 20.6	+4.7
MBFL	**Flemmings, Mon**	**1.49**	**163**	*e*P	Pg	06 25 11.4	+1.9
MBFL				*e*S	Sg	06 25 33.2	+4.4
ATGZ	**Broadband at L**	**2.26**	**157**	*e*P	Pb	06 25 21.2	-1.2
ATGZ				*e*S	Sg	06 25 54.7	+1.0
DSLB	**Salisbury**	**2.98**	**156**	*e*P	Pb	06 25 32.3	-2.4

*SDD **05** 06:35:50.1±2.3, 19°.32N×67°.05W, h24km±937km, MD3.7, ML2.7, MW3.3*

*NEIC **05** 06:35:52.1±1.4, 19°.19N±0°.09×67°.10W±0°.05, h28km±16km, ML2.7/11, Md3.6/12(RSPR), Error ellipse: s-maj=14.3km s-min=5.6km az=198.0*

*RSPR **05** 06:35:52.4, 19°.32N×67°.08W, h40km±13km, MD3.6/12*

ISC 05 06:35:48.7±1.6, **19°.38N**±0°.06×**67°.08W**±0°.04, **h28**km±13km, **n53**, σ1°**74**/68, **18C-13D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.91**	**182**	⇑ *e*Pg	**Pb**	**06 36 05.8**	**-0.1**
AGPR				⇑ *e*Sg	**Sb**	**06 36 15.3**	**-2.3**
AGPR				IAML		06 36 18.2	
	comp=N,453nm,0.4s						
AGPR	**Aguadilla, PR**	**0.91**	**182**	⇓ *i*P	**Pb**	**06 36 06.2**	**+0.3**
AGPR	**Aguadilla, PR**	**0.91**	**182**	*e*S	**Sb**	**06 36 15.4**	**-2.2**
EMPR	**Esperanza - Ma**	**1.04**	**150**	⇓ *i*P	**Pb**	**06 36 09.0**	**+0.9**
EMPR	**Esperanza - Ma**	**1.04**	**150**	*e*S	**Sn**	**06 36 22.9**	**+2.0**
IDE	**Isla Desecheo**	**1.06**	**201**	⇓ *i*P	**Pn**	**06 36 07.9**	**+0.2**
IDE	**Isla Desecheo**	**1.06**	**201**	*e*S	**Sn**	**06 36 22.1**	**+0.5**
AOPR	**Arecibo Observ**	**1.07**	**163**		**Pn**	**06 36 07.8**	**-0.2**
AOPR				Sn	**Sn**	**06 36 21.4**	**-0.5**
AOPR	**Arecibo Observ**	**1.07**	**163**	⇑ *e*Pg	**Pn**	**06 36 07.7**	**-0.2**
AOPR				IAML		06 36 26.8	
	comp=N,330nm,0.4s						
AOPR	**Arecibo Observ**	**1.07**	**163**	⇓ *e*P	**Pn**	**06 36 08.4**	**+0.5**
PRSN	**Puerto Rico Se**	**1.16**	**183**	⇓ *e*P	**Pb**	**06 36 10.8**	**+0.7**
PRSN	**Puerto Rico Se**	**1.16**	**183**	*e*S	**Sb**	**06 36 24.0**	**-0.8**
UUPR	**Utuado, UPR, P**	**1.17**	**163**	⇑ *e*P	**Pn**	**06 36 10.4**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.17**	**163**	*e*S	**Sb**	**06 36 25.1**	**-0.1**
LSP	**Las Mesas**	**1.20**	**180**	*e*P	**Pn**	**06 36 10.3**	**+0.6**
LSP	**Las Mesas**	**1.20**	**180**	*e*S	**Sb**	**06 36 25.0**	**-1.0**
ECPR	**Experimental S**	**1.25**	**147**	⇓ *i*P	**Pn**	**06 36 11.7**	**+1.3**
ECPR	**Experimental S**	**1.25**	**147**	*e*S	**Sb**	**06 36 28.4**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.37**	**181**		**Pn**	**06 36 12.6**	**+0.7**
CRPR				Sn	**Sn**	**06 36 27.8**	**-1.4**
CRPR				IAML		06 36 31.7	
	comp=N,193nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.37**	**181**	⇑ *e*Pg	**Pn**	**06 36 12.3**	**+0.4**
CRPR				⇑ *e*Sg	**Sn**	**06 36 28.0**	**-1.1**
CRPR				IAML		06 36 31.6	
	comp=N,224nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.37**	**181**	⇓ *i*P	**Pn**	**06 36 12.9**	**+1.0**
CRPR	**Cabo Rojo, PR**	**1.37**	**181**	*e*S	**Sb**	**06 36 29.6**	**-1.2**
OBIP	**Obispado Ponce**	**1.41**	**161**		**Pn**	**06 36 13.1**	**+0.7**
OBIP				Sn	**Sn**	**06 36 29.7**	**-0.3**
OBIP				IAML		06 36 32.2	
	comp=E,181nm,0.7s						
OBIP				IAML		06 36 32.3	
	comp=N,162nm,0.7s						
OBIP	**Obispado Ponce**	**1.41**	**161**	⇓ *e*P	**Pn**	**06 36 13.8**	**+1.4**
OBIP	**Obispado Ponce**	**1.41**	**161**	*e*S	**Sn**	**06 36 29.7**	**-0.3**
MLPR	**Magueyes Islan**	**1.41**	**179**	⇑ *e*Pg	**Pn**	**06 36 13.2**	**+0.8**
MLPR				⇑ *e*Sg	**Sn**	**06 36 28.9**	**-1.1**
MLPR				IAML		06 36 36.8	
	comp=N,29nm,0.2s						
MLPR	**Magueyes Islan**	**1.41**	**179**	⇓ *i*P	**Pn**	**06 36 13.4**	**+1.0**
MLPR	**Magueyes Islan**	**1.41**	**179**	*e*S	**Sb**	**06 36 30.6**	**-1.2**
GCPR	**Guaynabo City**	**1.42**	**138**		**Pn**	**06 36 13.8**	**+1.1**
GCPR	**Guaynabo City**	**1.42**	**138**	⇑ *e*P	**Pn**	**06 36 14.1**	**+1.5**
GCPR	**Guaynabo City**	**1.42**	**138**	*e*S	**Sb**	**06 36 31.6**	**-0.7**
PCDR	**Punta Cana, DR**	**1.51**	**235**	⇑ *e*Pg	**Pn**	**06 36 16.1**	**+2.3**
PCDR				⇑ *e*Sg	**Sb**	**06 36 34.8**	**+0.1**
PCDR				IAML		06 36 40.5	
	comp=N,150nm,2.9s						
SJG	**San Juan**	**1.54**	**145**		**Pn**	**06 36 15.4**	**+1.1**
SJG				Sn	**Sb**	**06 36 34.3**	**-1.3**
SJG				IAML		06 36 36.9	
	comp=N,94nm,0.4s						
SJG				IAML		06 36 44.4	
	comp=N,72nm,0.3s						
SJG	**San Juan**	**1.54**	**145**	⇑ *i*P	**Pn**	**06 36 15.4**	**+1.1**
SJG	**San Juan**	**1.54**	**145**	*e*S	**Sn**	**06 36 34.0**	**+0.6**
HUMP	**Col San Antoni**	**1.69**	**137**		**Pn**	**06 36 17.8**	**+1.4**
HUMP				IAML		06 36 45.5	
	comp=N,62nm,0.2s						
HUMP				IAML		06 36 46.3	
	comp=E,76nm,0.3s						
HUMP	**Col San Antoni**	**1.69**	**137**	⇑ *e*P	**Pn**	**06 36 18.2**	**+1.8**
HUMP	**Col San Antoni**	**1.69**	**137**	*e*S	**Sb**	**06 36 40.6**	**+0.5**
HIDR	**Higuey Centro**	**1.74**	**243**	⇑ *e*Pg	**Pn**	**06 36 18.9**	**+1.9**
HIDR				⇑ *e*Sg	**Sb**	**06 36 41.8**	**+0.4**
HIDR				IAML		06 36 43.6	
	comp=N,105nm,0.2s						
HIDR	**Higuey Centro**	**1.74**	**243**	⇓ *e*P	**Pn**	**06 36 19.0**	**+1.9**
HIDR	**Higuey Centro**	**1.74**	**243**	*e*S	**Sb**	**06 36 40.9**	**-0.6**
MIDR	**Miches**	**1.91**	**258**	⇓ *e*Pg	**Pn**	**06 36 21.4**	**+2.1**
MIDR				⇑ *e*Sg	**Sn**	**06 36 43.7**	**+1.3**
MIDR				IAML		06 36 56.5	
	comp=N,36nm,0.5s						
MIDR	**Miches**	**1.91**	**258**	⇑ *e*P	**Pn**	**06 36 21.4**	**+2.1**
MIDR	**Miches**	**1.91**	**258**	*e*S	**Sn**	**06 36 43.7**	**+1.3**
SMDR	**Samana, DR**	**2.00**	**268**	⇓ *e*P	**Pn**	**06 36 22.4**	**+1.8**
SMDR	**Samana, DR**	**2.00**	**268**	*e*S	**Sn**	**06 36 46.4**	**+1.8**
DR12	**Loma Pena Alta**	**2.26**	**255**	Pn	**Pn**	**06 36 26.2**	**+2.0**
DR12				Sn	**Sn**	**06 36 53.5**	**+2.2**
HATOM	**Hato Mayor del**	**2.26**	**255**	⇓ *e*Pg	**Pn**	**06 36 26.6**	**+2.4**
HATOM				⇑ *e*Sg	**Sn**	**06 36 54.1**	**+2.9**
HATOM				IAML		06 37 07.8	
	comp=N,30nm,0.4s						
BANI	**BANI**	**3.26**	**253**	Pn	**Pn**	**06 36 41.4**	**+3.3**
QMBU	**Quimbuelo**	**7.33**	**278**	*e*P	**Pn**	**06 37 32.8**	**-1.1**
QMBU				*e*S	**Sn**	**06 38 52.4**	**-3.8**
QMBU				IAML		06 38 54.4	
	comp=N,6.4nm,0.3s						
QMBU				IAML		06 38 54.6	
	comp=E,0.8nm,0.3s						
SABCS	**La Quijada**	**7.81**	**279**	*e*P	**Pn**	**06 37 40.8**	**+0.2**
SABCS				*e*S	**Sn**	**06 39 03.7**	**-4.5**
RCC	**Rio Carpintero**	**8.14**	**276**	*e*P	**Pn**	**06 37 44.4**	**-0.7**
RCC				*e*S	**Sn**	**06 39 11.6**	**-4.7**
PINC	**Pinares de May**	**8.27**	**279**	*e*P	Pn	06 37 43.4	-3.4
PINC				*e*P	**Sn**	**06 39 14.8**	**-4.6**
PINC				IAML		06 39 15.6	
	comp=N,0.9nm,0.1s						
PINC				IAML		06 39 15.8	
	comp=E,1.3nm,0.1s						

*IDC **05** 06:45:50.9±0.9, 18°.11S×175°.74W, h0km, mb4.0/6, mbtmp4.0/6, MS3.2/5, Error ellipse: s-maj=41.2km s-min=25.1km az=140.0*

ISC 05 06:46:20.0±1.0, **18°.1S**±0°.3×**176°.1W**±0°.2, **h250**km, **n13**, σ1°**28**/9, **mb3.6**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**15.66**	**104**	LR	LR	06 55 11.4	
	comp=Z,48nm,18.1s,baz=284,slow=36						
DZM	**Mont Dzumac**	**16.89**	**254**	LR	LR	06 55 14.7	
	comp=Z,102nm,20.1s,baz=26,slow=33						
HNR	**Honiara**	**24.82**	**287**	LR	LR	07 01 08.8	
	comp=Z,26nm,18.1s,baz=260,slow=36						
PPT	**Papeete**	**25.22**	**93**	LR	LR	06 58 14.5	
	comp=Z,34nm,19.5s,baz=294,slow=30						
WRA	**Warramunga Arr**	**46.78**	**259**	P	**P**	**06 54 24.1**	**-0.9**
	0.5nm,0.5s,baz=97,slow=9.3,SNR=7.4						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**46.88**	**254**	P	**P**	**06 54 25.6**	**-0.1**
	5.8nm,0.8s,baz=94,slow=8.1,SNR=54						
	5.8nm,0.8s						
QSPA	**South Pole Qui**	**71.94**	**180**	P	**P**	**06 57 16.2**	**+0.1**
	2.7nm,1.0s,baz=94,slow=1.6,SNR=9.5						
	2.7nm,1.0s						
NVAR	**Mina Array Bea**	**78.05**	**43**	P	**P**	**06 57 51.1**	**-0.4**
	0.4nm,0.7s,baz=212,slow=9.1,SNR=4.0						
NVAR				LR	LR	07 24 31.2	
	comp=Z,47nm,20.3s,baz=310,slow=30						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**85.61**	**12**	P	**P**	**06 58 30.4**	**+0.5**
	3.2nm,1.3s,baz=206,slow=6.0,SNR=5.4						
	3.2nm,1.3s						
PDAR	**Pinedale Array**	**85.98**	**43**	P	**P**	**06 58 30.9**	**-1.6**
	0.2nm,0.6s,baz=232,slow=6.4,SNR=2.6						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**118.41**	**321**	PKP	**PKiKP**	**07 04 40.0**	**+2.4**
	0.9nm,0.6s,baz=113,slow=1.9,SNR=3.7						
BRTR	**Keskin Array B**	**146.49**	**316**	PKPbc	**PKiKP**	**07 05 35.2**	**+0.3**
	0.7nm,0.5s,baz=62,slow=3.4,SNR=4.6						
MMAI	**Mount Meron Ar**	**148.11**	**304**	PKPbc	**PKPab**	**07 05 40.1**	**-0.3**
	0.9nm,0.2s,baz=73,slow=4.8,SNR=2.5						

*ECX **05** 06:58:06.9±0.3, 30°.21N×114°.16W, h16km±5km, ML3.8, Fault plane solution: NP1:φs62.00000°, δ69.00000°, λ-42.00000°.*

*MEX **05** 06:58:07.7±0.8, 30°.37N×113°.92W, h10km, MD4.3*

ISC 05 06:58:05.1±1.3, **30°.26N**±0°.03×**114°.11W**±0°.03, **h10**km±11km, **n28**, σ0°**96**/40, **11C-7D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLGB	**San Luis Gonza**	**0.50**	**211**	⇓ *i*P	**Pg**	**06 58 14.9**	**+0.1**
SLGB				IAML		06 58 21.9	
	comp=E,9µm,0.5s						
SLGB				⇓ *e*		06 58 21.9	
SLGB				⇑ *e*		06 58 23.7	
SLGB				IAML		06 58 23.7	
	comp=N,13µm,0.7s						
SFX	**San Felipe**	**1.01**	**321**	⇑ *i*P	**Pg**	**06 58 24.7**	**+0.2**
SFX	**San Felipe**	**1.01**	**321**	*e*P	**Pg**	**06 58 24.8**	**+0.2**
SFX				*e*S	**Sg**	**06 58 37.9**	**+0.3**
PLIB	**Puerto Liberta**	**1.27**	**105**	⇑ *e*P	**Pb**	**06 58 28.6**	**-0.6**
PLIB				⇑ *e*		06 58 57.4	
PLIB				IAML		06 58 57.4	
	comp=E,1µm,0.7s						
BAHB	**Baha de los**	**1.39**	**160**	⇑ *e*P	**Pn**	**06 58 29.8**	**-0.8**
BAHB				*e*S	**Sn**	**06 58 48.4**	**-0.7**
BAHB				IAML		06 58 55.6	
	comp=N,1µm,0.8s						
BAHB				⇓ *e*		06 58 55.6	
BAHB	**Baha de los**	**1.39**	**160**	*e*P	**Pn**	**06 58 29.9**	**-0.7**
BAHB				*i*S	**Sn**	**06 58 49.5**	**+0.4**
SPIG	**San Pedro Mart**	**1.41**	**304**	⇑ *i*P	**Pn**	**06 58 30.9**	**-0.2**
SPIG	**San Pedro Mart**	**1.41**	**304**	*e*P	**Pn**	**06 58 30.9**	**-0.2**
SPIG				*i*S	**Sn**	**06 58 49.5**	**-0.5**
PIX	**Pinacate**	**1.41**	**23**	⇓ *i*P	**Pg**	**06 58 32.2**	**-0.1**
ECBX	**El Chinero**	**1.46**	**326**	*e*P	**Pn**	**06 58 30.4**	**-1.1**
ECBX				*e*S	**Sn**	**06 58 49.6**	**-1.1**
SQX	**San Quintin**	**1.56**	**282**	⇑ *i*P	**Pn**	**06 58 32.7**	**-0.2**
SQX				IAML		06 58 55.5	
	comp=E,2µm,0.2s						
SQX				⇑ *e*		06 58 55.5	
SQX				IAML		06 58 57.2	
	comp=N,2µm,0.4s						
SQX				⇑ *e*		06 58 57.2	
LAPR	**La Primavera**	**1.57**	**81**	*e*P	**Pg**	**06 58 33.8**	**-1.4**
LAPR				⇓ *e*		06 59 16.8	
LAPR				IAML		06 59 16.8	
	comp=E,926nm,0.8s						
VTX	**Valle De La Tr**	**1.83**	**309**	⇑ *e*P	**Pn**	**06 58 37.3**	**+0.6**
SV2X	**San Vicente**	**2.12**	**301**	⇑ *i*P	**Pn**	**06 58 41.7**	**+1.0**
SFQB	**San Francisqui**	**2.14**	**149**	*e*P	**Pn**	**06 58 41.2**	**+0.2**
SJX	**San Joaquin**	**2.19**	**314**	⇓ *e*P	**Pb**	**06 58 44.4**	**-0.3**
ALAMX	**Rancho Alamar**	**2.22**	**322**	⇓ *e*P	**Pn**	**06 58 42.2**	**+0.2**
NE74	**Guerrero Negro**	**2.24**	**178**	*e*P	**Pn**	**06 58 42.6**	**+0.3**
BKIRB	**Bahia Kino**	**2.31**	**127**	*e*P	**Pn**	**06 58 44.0**	**+0.8**
CBX	**Cerro Bola**	**3.00**	**314**	*e*P	**Pn**	**06 58 53.5**	**+0.7**
HSIG		**3.02**	**113**	*e*P	**Pn**	**06 58 53.2**	**+0.3**
HSIG				*i*S	**Sn**	**06 59 28.8**	**-0.4**
TJIG	**Tijuana**	**3.09**	**315**	*e*P	**Pn**	**06 58 55.0**	**+1.1**
TJIG				*e*S	**Sn**	**06 59 31.8**	**+0.8**
SRIG	**Santa Rosalia**	**3.35**	**150**	*e*P	**Pn**	**06 59 00.1**	**+2.5**
SRIG				*e*S	**Sn**	**06 59 38.6**	**+1.1**
TUC	**Tucson**	**3.51**	**53**	*e*P	**Pn**	**06 59 01.7**	**+2.0**
TUC				*i*S	**Sn**	**06 59 40.6**	**-0.8**
GUYB	**Guaymas**	**3.68**	**129**	*e*P	**Pn**	**06 59 02.5**	**+0.4**
NZIG	**Nacozari, Sono**	**3.94**	**87**	*e*P	**Pn**	**06 59 07.7**	**+1.9**
NZIG				*e*S	**Sn**	**06 59 52.0**	**-0.3**
CGIG		**5.30**	**87**	*e*P	**Pn**	**06 59 26.5**	**+1.9**
CGIG				*i*S	**Sn**	**07 00 24.8**	**-1.1**
CSIG	**Choix**	**6.09**	**123**	*e*P	**Pn**	**06 59 34.4**	**-0.9**
CSIG				*i*S	**Sn**	**07 00 45.0**	**-0.1**

*AEIC **05** 07:03:43.6±1.9, 52°.38N±0°.09×172°.90W±0°.07, h128km±4km, Error ellipse: s-maj=12.9km s-min=6.0km az=166.0*

*GCMT **05** 07:03:44.9±0.3, 52°.47N±0°.03×172°.88W±0°.03, h120km±3km, MW4.9/101, Moment Tensor Solution. s22,c27; s101,c134; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~1.71±.10; Mθθ0.01±.18; Mφφ1.71±.15; Mrθ1.20±.09; Mφφ-2.00±.13; Mθr-0.71±.08; Best double couple: Mo2.85300×10^16 NP1:φs177.00000°, δ39.00000°, λ-42.00000°. NP2:φs302.00000°, δ65.00000°, λ-121.00000°. Principal axes: T 3.3490, Plg14.0000°, Azm55.0000°; N -0.9860, Plg28.0000°

P08K	**Saint George I**	**4.52**	**24**			**Pn**	07 04 53.1	**+1.8**
P08K	comp=N,910nm,1.1s			IAML			07 05 48.6	
P08K	**Saint George I** baz=206,SNR=5.6	**4.52**	**24**	P		**Pn**	07 04 53.0	**+1.6**
P08K	baz=206			S		**Sn**	07 05 43.4	**+0.3**
AKUT	**Akutan**	**4.56**	**67**			**Pn**	07 04 53.0	**+1.0**
AKUT	**Akutan**	**4.56**	**67**	P		**Pn**	07 04 53.4	**+1.4**
AKSA	**Akutan Strait**	**4.60**	**67**			**Pn**	07 04 53.4	**+0.9**
SPIA	**Saint Paul Isl**	**4.90**	**17**			**Pn**	07 04 58.7	**+2.3**
SPIA	comp=N,539nm,1.0s			IAML			07 05 57.5	
SPIA	comp=E,912nm,1.1s			IAML			07 05 57.5	
SPIA	**Saint Paul Isl** baz=199,SNR=8.6	**4.90**	**17**	P		**Pn**	07 04 58.4	**+2.0**
SPIA	baz=199			S		**Sn**	07 05 54.3	**+2.2**
AMKA	**Amchitka**	**4.96**	**260**			**Pn**	07 04 57.1	**-0.3**
WEBT	**Westdahl Beart**	**5.27**	**64**			**Pn**	07 05 02.4	**+0.9**
LSPA	**Little Sitkin**	**5.28**	**267**			**Pn**	07 05 01.9	**+0.3**
LSNW	**Little Sitkin**	**5.31**	**267**			**Pn**	07 05 02.2	**+0.2**
SSBA	**Shishaldin**	**5.68**	**63**			**Pn**	07 05 07.4	**+0.4**
FALS	**False Pass**	**6.09**	**64**			**Pn**	07 05 13.3	**+0.8**
FALS	**False Pass**	**6.09**	**64**	P		**Pn**	07 05 13.6	**+1.1**
FALS	**False Pass** baz=251,SNR=24	**6.09**	**64**	P		**Pn**	07 05 13.1	**+0.7**
FALS	baz=251			S		**Sn**	07 06 22.0	**+1.1**
DT1	**Dutton Round H**	**6.79**	**64**			**Pn**	07 05 21.8	**-0.1**
S12K	**Black Hills**	**7.11**	**59**			**Pn**	07 05 26.7	**+0.4**
S12K	**Black Hills** baz=247	**7.11**	**59**	P		**Pn**	07 05 26.7	**+0.4**
SDPT	**Sand Point**	**7.85**	**64**			**Pn**	07 05 35.5	**-0.7**
SDPT	**Sand Point**	**7.85**	**64**	P		**Pn**	07 05 35.9	**-0.3**
SDPT	**Sand Point** baz=254,SNR=12	**7.85**	**64**	P		**Pn**	07 05 35.4	**-0.7**
SHEM	**Shemya Is, Ala** comp=E,121nm,0.6s,baz=41,slow=4.8,SNR=8.0	**7.92**	**277**	P		**Pn**	07 05 36.9	**-0.2**
SHEM	comp=E,69nm,0.9s,baz=294,slow=21,SNR=1.4			S		**Sn**	07 07 04.7	**-0.3**
CNBA	**Chernabura Isl**	**8.23**	**69**			**Pn**	07 05 39.3	**-1.9**
CHNA	**Chernabura Isl**	**8.23**	**69**	P		**Pn**	07 05 39.7	**-1.5**
CHNA	**Chernabura Isl** baz=259,SNR=28	**8.23**	**69**	P		**Pn**	07 05 39.3	**-1.9**
S14K	**Fog Glacier** baz=249,SNR=26	**8.64**	**59**	P		**Pn**	07 05 47.5	**+0.7**
VNFG	**Fog Glacier, M**	**8.64**	**59**			**Pn**	07 05 47.0	**+0.1**
VNKR	**Veniaminof 5**	**8.65**	**61**			**Pn**	07 05 46.3	**-0.7**
M11K	**Mekoryuk** baz=208	**8.69**	**23**	P		**Pn**	07 05 49.8	**+2.3**
O14K	**Tigyukauivet M**	**9.37**	**40**			**Pn**	07 05 58.8	**+2.2**
O14K	**Tigyukauivet M** baz=229,SNR=28	**9.37**	**40**	P		**Pn**	07 05 58.9	**+2.4**
M13K	**Dall Lake**	**9.49**	**30**			**Pn**	07 06 00.4	**+2.2**
M13K	**Dall Lake** baz=218	**9.49**	**30**	P		**Pn**	07 06 00.2	**+2.0**
N14K	**Kuskokwak Cree**	**9.67**	**36**			**Pn**	07 06 02.7	**+2.1**
N14K	**Kuskokwak Cree** baz=225,SNR=37	**9.67**	**36**	P		**Pn**	07 06 02.8	**+2.2**
O15K	**Ungalikthiuk R**	**9.90**	**43**			**Pn**	07 06 05.6	**+1.9**
O15K	**Ungalikthiuk R** baz=233,SNR=16	**9.90**	**43**	P		**Pn**	07 06 05.6	**+1.9**
M14K	**Bethel**	**10.19**	**32**			**Pn**	07 06 09.3	**+1.9**
M14K	**Bethel** baz=221,SNR=18	**10.19**	**32**	P		**Pn**	07 06 09.2	**+1.7**
K13K	**Kusilvak Mount** baz=209,SNR=7.8	**10.42**	**22**	P		**Pn**	07 06 12.5	**+1.9**
N15K	**Kwethluk River** baz=228,SNR=37	**10.42**	**38**	P		**Pn**	07 06 13.0	**+2.3**
L14K	**Kuka Creek** baz=216	**10.43**	**28**	P		**Pn**	07 06 12.2	**+1.5**
M15K	**Kasigluk River** baz=224,SNR=52	**10.57**	**35**	P		**Pn**	07 06 14.2	**+1.5**
P16K	**Nushagak River** baz=236,SNR=9.6	**10.61**	**46**	P		**Pn**	07 06 14.6	**+1.5**
CHIR	**Chirikof Islan**	**10.64**	**65**			**Pn**	07 06 11.4	**-2.2**
CHIR	**Chirikof Islan** baz=259	**10.64**	**65**	P		**Pn**	07 06 10.9	**-2.7**
R17L	**Mt. Peulik Vol** baz=248	**10.75**	**55**	P		**Pn**	07 06 14.6	**-0.6**
O16K	**Kokwok River B** baz=236	**10.87**	**44**	P		**Pn**	07 06 18.1	**+1.6**
Q16K	**King Salmon** baz=243,SNR=11	**11.04**	**50**	P		**Pn**	07 06 19.6	**+0.7**
L15K	**Ungalak Mounta** baz=219,SNR=26	**11.05**	**29**	P		**Pn**	07 06 20.3	**+1.3**
N16K	**Nishlik Lake** baz=230,SNR=13	**11.12**	**39**	P		**Pn**	07 06 21.5	**+1.4**
Q17K	**Contact Creek** baz=246	**11.23**	**53**	P		**Pn**	07 06 20.7	**-0.9**
GAMB	**Gambell** baz=184	**11.29**	**3**	P		**Pn**	07 06 23.4	**+1.3**
J14K	**Nanvaranak Lak** baz=210	**11.38**	**22**	P		**Pn**	07 06 24.9	**+1.5**
O17K	**Koliganek Bris** baz=237,SNR=16	**11.39**	**44**	P		**Pn**	07 06 24.9	**+1.4**
M16K	**Timber Creek** baz=228,SNR=21	**11.41**	**36**	P		**Pn**	07 06 24.8	**+1.0**
K15K	**Wolf Creek Mou** baz=217,SNR=16	**11.52**	**27**	P		**Pn**	07 06 26.7	**+1.5**
SII	**Sitkinak Islan**	**11.58**	**62**	P		**Pn**	07 06 26.3	**+0.2**
SII	**Sitkinak Islan** baz=257	**11.58**	**62**	P		**Pn**	07 06 22.6	**-3.5**
L16K	**Owhat River** baz=224	**11.71**	**33**	P		**Pn**	07 06 28.7	**+0.9**
N17K	**Nushagak Hills** baz=234,SNR=16	**11.78**	**41**	P		**Pn**	07 06 30.0	**+1.4**
Q18K	**Katmai Hardscr** baz=246,SNR=16	**11.80**	**52**	P		**Pn**	07 06 28.3	**-0.8**
P18K	**Big Mountain,**	**12.02**	**48**			**Pn**	07 06 32.6	**+0.7**
P18K	**Big Mountain,** baz=242,SNR=7.0	**12.02**	**48**	P		**Pn**	07 06 31.7	**-0.1**
OHAK	**Old Harbor** baz=255,SNR=5.1	**12.21**	**60**	P		**Pn**	07 06 31.2	**-3.1**
M17K	**Holitna River** baz=230	**12.22**	**37**	P		**Pn**	07 06 35.4	**+1.0**
O18K	**Koktuh Hills** baz=241,SNR=9.5	**12.25**	**46**	P		**Pn**	07 06 35.5	**+0.7**
N18K	**Kilae Creek** baz=236,SNR=18	**12.39**	**42**	P		**Pn**	07 06 37.9	**+1.3**
L17K	**Donlin** baz=226,SNR=13	**12.40**	**33**	P		**Pn**	07 06 37.2	**+0.4**
J16K	**Anvik River** baz=216	**12.57**	**26**	P		**Pn**	07 06 38.0	**-1.0**
ANM	**Nome** baz=201	**12.67**	**15**	P		**Pn**	07 06 41.1	**+0.8**
KDAK	**Kodiak Island**	**12.72**	**58**	Pn		**Pn**	07 06 37.9	**-3.1**
KDAK	**Kodiak Island** comp=E,35nm,0.4s,baz=259,slow=1.3,SNR=75	**12.72**	**58**	P		**Pn**	07 06 37.0	**-4.0**
KDAK	comp=E,8.0nm,0.6s,baz=77,slow=22,SNR=1.8			S		**Sn**	07 08 52.0	-9.0
KDAK	comp=E,195nm,20.0s,baz=202,slow=41			LR		LR	07 12 23.3	
KDAK	**Kodiak Island** baz=254	**12.72**	**58**	P		**Pn**	07 06 38.5	**-2.5**
O19K	**Port Alsworth** baz=241,SNR=14	**12.80**	**46**	P		**Pn**	07 06 42.8	**+0.8**
K17K	**Iditarod** baz=224,SNR=9.8	**12.82**	**32**	P		**Pn**	07 06 43.0	**+0.9**
M18K	**Stony River** baz=233	**12.88**	**39**	P		**Pn**	07 06 43.4	**+0.4**
L18K	**Granite Mounta** baz=229,SNR=21	**13.02**	**35**	P		**Pn**	07 06 46.3	**+1.5**
I17K	**Unalakleet** baz=215	**13.04**	**24**	P		**Pn**	07 06 44.6	**-0.4**
N19K	**Bonanza Creek** baz=238,SNR=55	**13.04**	**43**	P		**Pn**	07 06 46.5	**+1.3**
P19K	**Oil Pt**	**13.05**	**49**	P		**Pn**	07 06 47.4	**+2.2**
P19K	**Oil Pt** baz=245,SNR=7.2	**13.05**	**49**	P		**Pn**	07 06 46.4	**+1.2**
Q20K	**Shuyak Island** baz=251	**13.07**	**54**	P		**Pn**	07 06 43.9	**-1.5**
J17K	**VABM Dome** baz=220,SNR=9.1	**13.09**	**28**	P		**Pn**	07 06 46.3	**+0.6**
G15K	**Niukluk** baz=204,SNR=11	**13.29**	**17**	P		**Pn**	07 06 50.5	**+2.3**
TNA	**Tin City** baz=193	**13.31**	**9**	P		**Pn**	07 06 48.1	**-0.3**
H16K	**Elim** baz=209	**13.32**	**20**	P		**Pn**	07 06 47.9	**-0.8**
F14K	**Arctic Creek** baz=197	**13.40**	**12**	P		**Pn**	07 06 50.5	**+0.8**
O20K	**Slope Mountain** baz=245	**13.51**	**48**	P		**Pn**	07 06 50.3	**-0.9**
L19K	**White Mountain** baz=233,SNR=69	**13.66**	**38**	P		**Pn**	07 06 53.2	**+0.1**
M19K	**Big River Lodg** baz=235	**13.68**	**39**	P		**Pn**	07 06 54.3	**+1.1**
HOM	**Homer** baz=248	**13.79**	**51**	P		**Pn**	07 06 54.1	**-0.6**
F15K	**North Star Dit** baz=201,SNR=9.3	**13.85**	**14**	P		**Pn**	07 06 56.1	**+0.6**
J18K	**Innoko River** baz=225,SNR=16	**13.86**	**31**	P		**Pn**	07 06 56.2	**+0.7**
G16K	**Koyuk River** baz=207,SNR=10.0	**13.96**	**19**	P		**Pn**	07 06 58.6	**+1.8**
H17K	**Granite Mounta** baz=214,SNR=11	**14.10**	**23**	P		**Pn**	07 06 59.7	**+1.1**
M20K	**Styx River** baz=237,SNR=33	**14.16**	**41**	P		**Pn**	07 07 00.4	**+0.8**
N20K	**Mount Spurr** baz=241	**14.20**	**44**	P		**Pn**	07 07 00.9	**+0.9**
SPCR	**Spurr Chakacha** baz=241,SNR=12	**14.20**	**44**	P		**Pn**	07 07 00.9	**+0.9**
L20K	**Farewell, AK** baz=234,SNR=52	**14.21**	**38**	P		**Pn**	07 06 59.4	**-0.7**
BRSE	**Bradley Lake S** baz=249,SNR=11	**14.25**	**51**	P		**Pn**	07 06 59.2	**-1.4**
G17K	**Kiwalik Mounta** baz=211,SNR=12	**14.41**	**21**	P		**Pn**	07 07 02.9	**+0.4**
J19K	**Poorman** baz=226,SNR=44	**14.58**	**31**	P		**Pn**	07 07 04.6	**-0.1**
H18K	**Honhosa River** baz=217	**14.66**	**25**	P		**Pn**	07 07 06.8	**+1.0**
K20K	**Telida** baz=231	**14.67**	**35**	P		**Pn**	07 07 07.0	**+1.1**
GCSA	**Galena City Sc** baz=221,SNR=9.2	**14.74**	**28**	P		**Pn**	07 07 07.8	**+1.1**
SKT	**Skwentna** baz=240,SNR=34	**14.86**	**42**	P		**P**	07 07 10.2	**-0.6**
SUA	**Susitna One** baz=243,SNR=9.2	**14.95**	**45**	P		**Pn**	07 07 10.4	**+1.0**
SEW	**Seward** comp=E,70nm,1.0s	**14.99**	**50**	IAmb	IAmb		07 07 18.7	
SEW	**Seward** baz=250,SNR=21	**14.99**	**50**	P		**Pn**	07 07 07.7	**-2.1**
O22K	**Cooper Landing** baz=248,SNR=9.3	**14.99**	**49**	P		**Pn**	07 07 07.4	**-2.5**
PPLA	**Purkeypile**	**15.09**	**38**	P		**P**	07 07 13.9	**+0.5**
PPLA	**Purkeypile** baz=236,SNR=24	**15.09**	**38**	P		**P**	07 07 12.5	**-0.9**
F17K	**Baldwin Pennin** comp=E,84nm,1.4s	**15.11**	**18**	IAmb	IAmb		07 07 18.1	
F17K	**Baldwin Pennin** baz=208,SNR=8.0	**15.11**	**18**	P		**P**	07 07 12.4	**-0.9**
J20K	**Nowinta River** comp=E,31nm,0.6s	**15.18**	**33**	IAmb	IAmb		07 07 31.5	
J20K	**Nowinta River** baz=228,SNR=15	**15.18**	**33**	P		**Pn**	07 07 13.1	**+0.9**
G18K	**Tagagawik** comp=E,65nm,1.2s	**15.19**	**23**	IAmb	IAmb		07 07 18.9	
G18K	**Tagagawik** baz=215,SNR=20	**15.19**	**23**	P		**Pn**	07 07 13.1	**+0.8**
RC01	**Rabbit Creek A** comp=E,46nm,0.9s	**15.23**	**47**	IAmb	IAmb		07 07 24.8	
RC01	**Rabbit Creek A** baz=246,SNR=7.2	**15.23**	**47**	P		**Pn**	07 07 12.7	**-0.1**
M22K	**Willow** baz=243	**15.34**	**44**	P		**Pn**	07 07 14.6	**+0.4**
H19K	**Roundabout Mou** comp=E,67nm,1.3s	**15.46**	**26**	IAmb	IAmb		07 07 19.2	
H19K	**Roundabout Mou** baz=220,SNR=17	**15.46**	**26**	P		**P**	07 07 16.8	**-0.4**
I20K	**Naaghedeneel** comp=E,44nm,0.8s	**15.49**	**30**	IAmb	IAmb		07 07 22.2	
I20K	**Naaghedeneel** baz=226	**15.49**	**30**	P		**P**	07 07 17.2	**-0.5**
F18K	**Selawik** baz=211,SNR=15	**15.56**	**20**	P		**P**	07 07 17.9	**-0.5**
E17K	**Hotham Inlet** baz=206,SNR=11	**15.57**	**16**	P		**P**	07 07 18.1	**-0.5**
CUT	**Chulitna** baz=241,SNR=11	**15.59**	**42**	P		**P**	07 07 18.4	**-0.3**
CHUM	**Lake Minchumin** baz=233,SNR=28	**15.62**	**35**	P		**Pn**	07 07 17.6	**0.0**
PMR	**Palmer**	**15.70**	**45**	P		**Pn**	07 07 19.1	**+0.5**
PMR	**Palmer** baz=245,SNR=10	**15.70**	**45**	P		**Pn**	07 07 18.6	**-0.1**
PWL	**Port Wells** comp=E,61nm,1.0s	**15.77**	**48**	IAmb	IAmb		07 07 27.8	
PWL	**Port Wells** baz=249,SNR=16	**15.77**	**48**	P		**Pn**	07 07 17.5	**-2.1**
H20K	**Anotleneega Mo** baz=224,SNR=9.6	**15.87**	**28**	P		**Pn**	07 07 20.5	**-0.2**
KNK	**Knik Glacier** comp=Z,60nm,0.7s	**15.92**	**46**	IAmb	IAmb		07 07 23.2	
KNK	**Knik Glacier** baz=247,SNR=34	**15.92**	**46**	P		**Pn**	07 07 20.0	**-1.4**
P23K	**Montague Islan** P23K comp=Z,47nm,0.6s	**15.93**	**52**	Pn IAmb		**Pn** IAmb	07 07 19.0 07 07 33.0	**-2.5**
P23K	**Montague Islan** baz=253	**15.93**	**52**	P		**Pn**	07 07 19.8	**-1.7**
D17K	**Noatak River** baz=202,SNR=9.6	**15.94**	**14**	P		**P**	07 07 24.6	**+2.0**
E18K	**Tukpahlearik C** baz=208	**16.09**	**17**	P		**P**	07 07 24.3	**0.0**
TRF	**Thorofare Moun** TRF comp=E,85nm,1.0s	**16.11**	**38**	P IAmb		**P** IAmb	07 07 25.8 07 07 28.2	**+1.0**
TRF	**Thorofare Moun** baz=238,SNR=36	**16.11**	**38**	P		**P**	07 07 24.4	**-0.4**
SML	**Sawmill** baz=246,SNR=26	**16.14**	**45**	P		**Pn**	07 07 23.8	**-0.3**
F19K	**Shaleruckik Mo** comp=E,86nm,1.1s	**16.17**	**22**	IAmb	IAmb		07 07 27.9	
F19K	**Shaleruckik Mo** baz=215	**16.17**	**22**	P		**P**	07 07 26.0	**+0.9**
C16K	**Lisburne Hills** baz=197	**16.20**	**10**	P		**P**	07 07 26.3	**+0.8**
BPAW	**Bear Paw Mtn.**	**16.22**	**36**	P		**P**	07 07 27.4	**+1.7**
BPAW	**Bear Paw Mtn.** baz=234,SNR=15	**16.22**	**36**	P		**Pn**	07 07 24.7	**-0.4**
Q23K	**Middleton Isla** baz=256	**16.30**	**54**	P		**Pn**	07 07 26.2	**+0.3**
RDOG	**Red Dog Mine** baz=202	**16.30**	**13**	P		**P**	07 07 27.8	**+1.2**
GLI	**Glacier Island** comp=Z,29nm,0.6s	**16.35**	**49**	IAmb	IAmb		07 07 32.3	
GLI	**Glacier Island** baz=251,SNR=6.8	**16.35**	**49**	P		**Pn**	07 07 25.5	**-1.1**
M23K	**Glacier View** baz=247,SNR=69	**16.39**	**46**	P		**Pn**	07 07 25.9	**-1.3**
WAT1	**Susitna Watana** baz=242	**16.49**	**42**	P		**Pn**	07 07 28.3	**-0.1**
I21K	**Tanana** baz=230,SNR=25	**16.54**	**32**	P		**P**	07 07 30.2	**+0.9**
IMAR	**Indian Mountai**	**16.55**	**28**	P		**P**	07 07 30.7	**+1.4**
SCM	**Sheep Creek Mo** baz=247,SNR=46	**16.58**	**46**	P		**Pn**	07 07 28.9	**-0.7**
H21K	**Melozitna Rive** baz=227,SNR=52	**16.60**	**30**	P		**P**	07 07 31.3	**+1.4**
RND	**Reindeer** comp=Z,49nm,0.9s	**16.64**	**40**	IAmb	IAmb		07 07 47.2	
C17K	**DeLong Mountai** baz=201,SNR=6.0	**16.65**	**13**	P		**P**	07 07 32.0	**+1.6**
WAT6	**Susitna Watana** baz=244,SNR=13	**16.71**	**43**	P		**Pn**	07 07 30.2	**-1.0**
MCK	**McKinley** baz=239,SNR=71	**16.78**	**39**	P		**Pn**	07 07 31.2	**-0.6**
E19K	**Redstone River** comp=Z,41nm,0.9s	**16.80**	**21**	IAmb	IAmb		07 07 35.9	
E19K	**Redstone River** baz=215	**16.80**	**21**	P		**Pn**	07 07 33.9	**+1.8**
F20K	**Avaraart Lake** comp=E,51nm,1.1s	**16.82**	**24**	IAmb	IAmb		07 07 36.1	
F20K	**Avaraart Lake** baz=218,SNR=20	**16.82**	**24**	P		**Pn**	07 07 34.4	**+2.0**
MLY	**Manley** baz=232,SNR=18	**16.86**	**34**	P		**Pn**	07 07 34.4	**+1.5**
EYAK	**Cordova Ski Ar** comp=Z,36nm,1.0s	**16.88**	**51**	IAmb	IAmb		07 07 35.4	
EYAK	**Cordova Ski Ar**	**16.88**	**51**	P		**P**	07 07 31.9	**-1.0**
EYAK	**Cordova Ski Ar** baz=254	**16.88**	**51**	P		**P**	07 07 32.1	**-0.9**
G21K	**Allakaket** comp=Z,63nm,0.8s	**17.00**	**27**	IAmb	IAmb		07 07 37.8	
G21K	**Allakaket** baz=224	**17.00**	**27**	P		**Pn**	07 07 36.0	**+1.4**
DIV	**Divide** comp=Z,31nm,0.6s	**17.04**	**49**	IAmb	IAmb		07 07 36.1	
DHY	**Denali Highway** comp=Z,52nm,0.7s	**17.08**	**42**	IAmb	IAmb		07 07 38.3	
DHY	**Denali Highway** baz=243,SNR=42	**17.08**	**42**	P		**P**	07 07 35.3	**-0.1**
KLU	**Klutina** comp=Z,81nm,1.1s	**17.09**	**48**	IAmb	IAmb		07 07 57.5	
KLU	**Klutina** baz=250,SNR=29	**17.09**	**48**	P		**P**	07 07 34.1	**-1.3**
C18K	**Utukok River** baz=205	**17.10**	**15**	P		**Pn**	07 07 36.0	**+0.2**
NEA2	**Nenana** comp=Z,34nm,0.8s	**17.19**	**36**	IAmb	IAmb		07 07 39.0	
NEA2	**Nenana** baz=236,SNR=10	**17.19**	**36**	P		**P**	07 07 36.2	**-0.2**
M24K	**Tolsona, Glenn** baz=248,SNR=24	**17.19**	**46**	P		**P**	07 07 36.2	**-0.3**
H22K	**Ishtalitna Cre** baz=229,SNR=29	**17.20**	**31**	P		**Pn**	07 07 37.6	**+0.7**
RAGM	**Ragged Mountai** comp=Z,93nm,1.3s	**17.35**	**52**	IAmb	IAmb		07 07 40.9	
KAIM	**Kayak Island** baz=257	**17.36**	**54**	P		**P**	07 07 38.0	**-0.4**
I23K	**Minto, Yukon-K** baz=234,SNR=27	**17.40**	**34**	P		**Pn**	07 07 39.6	**+0.2**
D19K	**Kuna River** comp=Z,53nm,1.1s	**17.50**	**18**	IAmb	IAmb		07 07 43.9	
D19K	**Kuna River** baz=211	**17.50**	**18**	P		**P**	07 07 39.9	**+0.2**
F21K	**Alatna River** baz=222,SNR=13	**17.52**	**25**	P		**Pn**	07 07 40.8	**-0.1**
BMRM	**Bremner River** comp=Z,77nm,1.1s	**17.53**	**50**	IAmb	IAmb		07 07 41.6	
BMRM	**Bremner River** baz=254,SNR=15	**17.53**	**50**	P		**P**	07 07 39.5	**-0.8**
B18K	**Kokolik River** baz=203	**17.67**	**13**	P		**P**	07 07 42.0	**+0.4**
E20K	**Nigu River** baz=215	**17.69**	**21**	P		**P**	07 07 41.4	**-0.5**
N25K	**Chitina, Valde** baz=252,SNR=33	**17.72**	**48**	P		**P**	07 07 42.0	**-0.4**
PEA0B	**Petropavlovsk-**	**17.73**	**284**	*i* P		**Pn**	07 07 43.7	**+0.3**
PETK	**Petropavlovsk-** comp=Z,7.1nm,0.6s,baz=85,slow=15,SNR=30	**17.73**	**284**	P		**P**	07 07 42.8	**+0.3**
PETK	comp=Z,1.3nm,0.5s,baz=60,slow=1.8,SNR=4.3			PcP ScP		**PcP ScP**	07 12 13.9 07 15 35.9	**+0.4 -0.5**
H23K	**Yukon River** comp=E,56nm,1.0s	**17.74**	**32**	IAmb	IAmb		07 07 46.8	
H23K	**Yukon River** baz=232	**17.74**	**32**	P		**Pn**	07 07 43.5	**+0.1**
HARP	**HAARP** baz=249,SNR=59	**17.74**	**45**	P		**P**	07 07 42.0	**-0.4**
C19K	**Lookout Ridge** baz=207,SNR=9.3	**17.77**	**16**	P		**Pn**	07 07 43.6	**-0.1**
COLA	**College**	**17.78**	**36**	P		**P**	07 07 42.8	**0.0**
COLA	comp=Z,42nm,0.8s			IAmb	IAmb		07 07 46.5	
COLA	**College**	**17.78**	**36**	P		**P**	07 07 42.8	**0.0**
COLA	**College** comp=Z,29nm,0.8s	**17.78**	**36**	*i* P pmax		**P** pmax	07 07 42.6	**-0.2**
COLA	**College** baz=238	**17.78**	**36**	P		**P**	07 07 43.2	**+0.4**
BERG	**Berg Lake** comp=Z,74nm,0.9s	**17.82**	**52**	IAmb	IAmb		07 07 47.2	
PAX	**Paxson** comp=Z,44nm,0.9s	**17.82**	**43**	IAmb	IAmb		07 07 47.5	
PAX	**Paxson** baz=247,SNR=32	**17.82**	**43**	P		**P**	07 07 43.5	**0.0**
G22K	**Bettles** baz=226	**17.85**	**28**	P		**Pn**	07 07 44.2	**-0.5**
HDA	**Harding Lake** baz=240,SNR=142	**17.87**	**38**	P		**P**	07 07 44.1	**+0.2**
D20K	**Etivluk River** comp=Z,100nm,1.5s	**17.98**	**19**	IAmb	IAmb		07 07 50.0	
D20K	**Etivluk River** baz=214	**17.98**	**19**	P		**P**	07 07 45.6	**+0.6**
GLB	**Gilahina Butte** comp=E,26nm,0.6s	**18.04**	**49**	IAmb	IAmb		07 07 48.4	
POKR	**Poker Plat Res** baz=238,SNR=18	**18.06**	**36**	P		**P**	07 07 45.8	**-0.1**
F22K	**John River** baz=224	**18.08**	**26**	P		**P**	07 07 46.8	**+0.6**
ILAR	**Eielson Array** comp=Z,34nm,0.4s,baz=246,slow=10,SNR=355	**18.08**	**37**	P		**P**	07 07 44.5	**-1.7**
ILAR	comp=Z,4.2nm,0.9s,baz=231,slow=20,SNR=6.3			S PcP		**S PcP**	07 10 59.6 07 12 13.6	**-6.9 -0.3**
ILAR	comp=Z,1.1nm,0.4s,baz=288,slow=3.5,SNR=4.6			ScP		**ScP**	07 15 35.9	**-1.1**
VRDI	**Verde Repeater**	**18.14**	**50**	P		**P**	07 07 46.0	**-1.0**
VRDI	comp=Z,25nm,0.5s			IAmb	IAmb		07 07 49.2	
G23K	**Bananza Creek** comp=Z,41nm,0.7s	**18.15**	**30**	IAmb	IAmb		07 07 54.5	
G23K	**Bananza Creek** baz=230,SNR=38	**18.15**	**30**	P		**Pn**	07 07 48.2	**-0.1**
CRQM	**Cirque** comp=Z,39nm,0.7s	**18.17**	**51**	IAmb	IAmb		07 07 51.1	
SNH	**Sunshine Point** comp=Z,54nm,0.7s	**18.19**	**53**	IAmb	IAmb		07 07 55.2	
CRQE	**Cirque** baz=256,SNR=19	**18.19**	**51**	P		**P**	07 07 46.8	**-0.8**
H24K	**Noodor Dome** baz=235,SNR=123	**18.30**	**34**	P		**Pn**	07 07 50.2	**0.0**
TGL	**Tana Glacier** comp=Z,34nm,0.6s	**18.32**	**51**	IAmb	IAmb		07 07 52.2	
E21K	**Killik River** comp=Z,45nm,0.9s	**18.33**	**22**	IAmb	IAmb		07 07 53.6	
E21K	**Killik River** baz=219	**18.33**	**22**	P		**P**	07 07 49.7	**+0.7**
MCARA	**McCarthy VSAT** comp=Z,37nm,0.9s	**18.38**	**49**	IAmb	IAmb		07 08 29.2	
MCARA	**McCarthy VSAT** baz=254,SNR=9.2	**18.38**	**49**	P		**P**	07 07 49.6	**+0.1**
RIDG	**Independent Ri** baz=245,SNR=9.1	**18.39**	**42**	P		**P**	07 07 49.8	**+0.2**
COLD	**Coldfoot** comp=Z,50nm,1.1s	**18.44**	**28**	IAmb	IAmb		07 07 55.2	
COLD	**Coldfoot** baz=228,SNR=20	**18.44**	**28**	P		**P**	07 07 50.6	**+0.6**
BILL	**Bilibino**	**18.50**	**335**	P		**Pn**	07 07 52.6	**+0.3**
BILL	**Bilibino** comp=Z,108nm,0.8s	**18.50**	**335**	*ce* P pmax		**Pn** pmax	07 07 52.8	**+0.4**
ISLE	**Juniper Island** comp=Z,49nm,0.8s	**18.52**	**52**	IAmb	IAmb		07 07 58.6	
MENT	**Mentasta** comp=Z,30nm,0.6s	**18.55**	**44**	IAmb	IAmb		07 08 14.5	
MENT	**Mentasta**	**18.55**	**44**	P		**Pn**	07 07 53.4	**+0.3**
J25K	**Salcha River,** baz=242,SNR=461	**18.57**	**39**	P		**P**	07 07 51.2	**-0.4**
MESA	**MESA** baz=259,SNR=12	**18.63**	**54**	P		**P**	07 07 52.2	**-0.2**
E22K	**Anaktuvuk Pass** comp=Z,39nm,0.8s	**18.63**	**25**	IAmb	IAmb		07 07 57.4	
E22K	**Anaktuvuk Pass** baz=223	**18.63**	**25**	P		**P**	07 07 52.8	**+0.6**
M26K	**Nabesna, AK** comp=Z,40nm,0.6s	**18.69**	**46**	IAmb	IAmb		07 07 55.1	
M26K	**Nabesna, AK** baz=252,SNR=48	**18.69**	**46**	P		**P**	07 07 51.9	**-1.0**
C21K	**Knifeblade Rid** baz=216,SNR=7.4	**18.72**	**20**	P		**P**	07 07 54.0	**+0.9**
L26K	**Log Cabin Wild** comp=Z,48nm,1.1s	**18.74**	**44**	IAmb	IAmb		07 08 09.7	
L26K	**Log Cabin Wild** baz=249,SNR=47	**18.74**	**44**	P		**P**	07 07 54.2	**+0.8**
GRNC	**Granite Creek** comp=Z,35nm,0.9s	**18.83**	**52**	IAmb	IAmb		07 08 08.1	
SCRK	**Sand Creek** baz=246,SNR=205	**18.84**	**41**	P		**P**	07 07 53.9	**-0.6**
G24K	**Hadweenzic Riv** baz=234,SNR=47	**18.94**	**32**	P		**Pn**	07 07 56.8	**-0.8**
BARN	**Barnard Glacie** comp=Z,41nm,1.1s	**18.95**	**51**	IAmb	IAmb		07 08 30.1	
D22K	**Ayikyak River** baz=220,SNR=18	**18.97**	**23**	P		**P**	07 07 56.4	**+0.5**
B20K	**Meade River** baz=210	**18.98**	**17**	P		**P**	07 07 56.6	**+0.8**
CTG	**Chitna Glacier** baz=258,SNR=31	**19.08**	**51**	P		**P**	07 07 56.6	**-0.6**
B21K	**Ikpikpuk River** comp=Z,26nm,0.7s	**19.13**	**20**	IAmb	IAmb		07 07 59.6	
B21K	**Ikpikpuk River** baz=216	**19.13**	**20**	P		**P**	07 07 57.8	**+0.3**
E23K	**Chandalar** comp=Z,55nm,1.1s	**19.16**

E23K	**Chandalar**	19.16	27	P		Pn	07 07 59.5	-0.8
	baz=227,SNR=19							
M27K	**Edge Creek, AK**	19.18	47	P		P	07 07 57.5	-0.8
	baz=253,SNR=47							
LOGN	**Logan Glacier**	19.21	52	IAmb		IAmb	07 08 01.3	
	comp=Z,32nm,0.8s							
J26L	**Joseph Creek**	19.22	40	P		P	07 07 58.8	+0.1
	baz=245							
H25L	**Birch Creek**	19.24	34	P		P	07 07 59.3	+0.5
	baz=237,SNR=31							
F24K	**Squaw Lake**	19.31	29	IAmb		IAmb	07 08 34.0	
	comp=Z,30nm,1.0s							
F24K	**Squaw Lake**	19.31	29	P		P	07 08 00.7	+1.1
	baz=231,SNR=17							
L27K	**Beaver Creek,**	19.41	45	P		P	07 07 59.9	-0.8
	baz=251,SNR=34							
G25K	**Bearman Lake**	19.42	33	P		P	07 08 00.9	+0.3
	baz=236,SNR=13							
BCAR	**Beaver Creek A**	19.43	45	P		P	07 08 00.7	-0.3
PINM	**Pinnacle**	19.45	54	P		P	07 08 00.8	-0.4
	baz=261,SNR=12							
E24K	**Your Creek**	19.49	28	IAmb		IAmb	07 08 10.9	
	comp=Z,34nm,0.8s							
E24K	**Your Creek**	19.49	28	P		P	07 08 01.6	+0.1
	baz=229,SNR=28							
D23K	**Nanushuk River**	19.52	24	IAmb		IAmb	07 08 08.1	
	comp=Z,59nm,1.1s							
D23K	**Nanushuk River**	19.52	24	P		P	07 08 01.8	0.0
	baz=224							
TOLK	**Toolik Lake Re**	19.58	26	IAmb		IAmb	07 08 04.9	
	comp=Z,60nm,0.8s							
TOLK	**Toolik Lake Re**	19.58	26	P		P	07 08 03.4	+1.0
	baz=226,SNR=26							
O28M	**Mount Upton**	19.59	52	P		P	07 08 01.3	-1.7
	baz=260,SNR=18							
K27K	**Chicken**	19.64	42	P		P	07 08 03.1	0.0
	baz=248							
I26K	**Coal Creek Min**	19.73	38	P		P	07 08 03.9	-0.2
	baz=244							
BCPM	**Bancas Point**	19.74	55	IAmb		IAmb	07 08 07.7	
	comp=Z,63nm,1.0s							
PNL	**Peninsula**	19.83	56	P		P	07 08 06.1	+0.9
PNL	**Peninsula**	19.83	56	P		P	07 08 04.9	-0.3
	baz=264,SNR=9.5							
YUK8	**Steele Glacier**	19.89	51	P		P	07 08 06.5	+0.3
	baz=259,SNR=5.9							
B22K	**Teshekpuk Lake**	19.96	19	P		P	07 08 06.9	+0.5
	baz=216							
F25K	**Christian Rive**	20.04	31	P		Pn	07 08 09.0	-1.5
F25K				IAmb		IAmb	07 08 13.3	
	comp=Z,33nm,1.0s							
F25K	**Christian Rive**	20.04	31	P		P	07 08 08.7	+1.2
	baz=234,SNR=31							
D24K	**Happy Valley**	20.13	25	IAmb		IAmb	07 08 10.4	
	comp=Z,48nm,1.2s							
D24K	**Happy Valley**	20.13	25	P		P	07 08 09.3	+1.0
	baz=226							
C23K	**Itkillik River**	20.18	22	P		P	07 08 08.9	+0.1
	baz=222,SNR=17							
A22K	**Sinclair Lake**	20.21	17	P		P	07 08 09.6	+0.4
	baz=213							
BMAR	**Burnt Mountain**	20.29	32	P		P	07 08 11.6	+1.5
G26K	**Porcupine Rive**	20.29	34	IAmb		IAmb	07 08 14.8	
	comp=Z,44nm,0.9s							
G26K	**Porcupine Rive**	20.29	34	P		P	07 08 10.9	+0.8
	baz=239,SNR=28							
O29M	**Mount Kennedy**	20.31	54	P		P	07 08 10.0	-0.5
	baz=263,SNR=24							
E25K	**Arctic Village**	20.38	30	P		Pn	07 08 13.4	-1.0
E25K				IAmb		IAmb	07 08 16.0	
	comp=Z,64nm,1.5s							
E25K	**Arctic Village**	20.38	30	P		P	07 08 11.1	+0.1
	baz=234,SNR=21							
YUK4	**Talbot Arm**	20.43	51	P		P	07 08 11.6	-0.3
	baz=260							
I27K	**Kandik River**	20.44	38	P		P	07 08 11.2	-0.5
	baz=245,SNR=36							
YUK6	**Outpost Mounta**	20.50	52	P		P	07 08 13.0	+0.3
	baz=261,SNR=9.1							
C24K	**Franklin Bluff**	20.55	24	IAmb		IAmb	07 08 43.8	
	comp=Z,42nm,1.1s							
C24K	**Franklin Bluff**	20.55	24	P		P	07 08 12.8	-0.1
	baz=225,SNR=7.9							
F26K	**Sheenjek River**	20.57	31	IAmb		IAmb	07 08 17.9	
	comp=Z,42nm,0.8s							
F26K	**Sheenjek River**	20.57	31	P		P	07 08 13.0	-0.1
	baz=237,SNR=47							
P29M	**Windy Craggy**	20.66	56	P		P	07 08 14.1	0.0
	baz=265,SNR=22							
M29M	**Somme Creek**	20.73	48	IAmb		IAmb	07 08 28.5	
	comp=Z,20nm,0.7s							
M29M	**Somme Creek**	20.73	48	P		P	07 08 14.0	-1.0
	baz=257,SNR=18							
H27K	**Steamboat Moun**	20.74	37	IAmb		IAmb	07 08 51.8	
	comp=Z,26nm,1.0s							
H27K	**Steamboat Moun**	20.74	37	P		P	07 08 13.8	-1.1
	baz=244,SNR=28							
DAWY	**Dawson**	20.76	43	P		P	07 08 14.9	-0.2
	baz=252,SNR=82							
D25K	**Kavik River**	20.89	26	P		P	07 08 16.5	-0.1
	baz=230,SNR=8.1							
HYT	**Haines Junctio**	20.90	53	IAmb		IAmb	07 08 22.6	
	comp=Z,21nm,0.7s							
HYT	**Haines Junctio**	20.90	53	P		P	07 08 16.2	-0.6
	baz=262,SNR=10							
G27K	**Doyon Strip**	20.96	35	P		P	07 08 17.2	-0.1
	baz=242,SNR=9.7							
SEY	**Seymchan**	20.98	313	P		P	07 08 18.2	+0.8
	comp=Z,5.4nm,0.7s,baz=108,slow=11,SNR=8.9							
SEY				PcP		PcP	07 12 19.2	+0.1
	comp=Z,3.2nm,1.0s,baz=125,slow=4.8,SNR=5.7							
SEY				ScP		ScP	07 15 42.8	-0.7
	comp=Z,1.3nm,0.4s,baz=24,slow=5.1,SNR=9.3							
SEY	**Seymchan**	20.98	313	*e*P		P	07 08 16.9	-0.6
SEY				*e*			07 08 44.6	
SEY				pmax		pmax		
	comp=Z,31nm,1.3s							
I28M	**Miner Creek**	21.02	39	P		P	07 08 17.7	-0.3
	baz=248,SNR=55							
L29M	**L29M**	21.04	46	IAmb		IAmb	07 08 21.3	
	comp=Z,31nm,0.7s							
L29M	**L29M**	21.04	46	P		P	07 08 17.4	-0.7
	baz=256,SNR=31							
P30M	**Million Dollar**	21.09	55	P		P	07 08 18.0	-0.8
	baz=265							
N30M	**Aishikik Lake**	21.19	51	P		P	07 08 19.3	-0.6
	baz=261							
MA2	**Magadan**	21.26	304	IAmb		IAmb	07 08 33.4	
	comp=Z,51nm,1.3s							
MA2	**Magadan**	21.26	304	P		P	07 08 23.7	+3.2
	comp=Z,3.5nm,0.3s,baz=230,slow=14,SNR=1.9							
MA2	**Magadan**	21.26	304	P		P	07 08 23.7	+3.2
MA2				pmax		pmax		
	comp=Z,51nm,1.3s							
PLBC	**Pleasant Camp**	21.35	57	P		P	07 08 22.1	+0.6
	baz=267,SNR=6.9							
S31K	**Pelican**	21.40	61	P		P	07 08 22.2	+0.3
	baz=271,SNR=6.0							
K29M	**Barlow Dome**	21.49	44	IAmb		IAmb	07 08 25.6	
	comp=Z,56nm,0.9s							
K29M	**Barlow Dome**	21.49	44	P		P	07 08 22.1	-1.0
	baz=255,SNR=51							
M30M	**Minto, Yukon**	21.52	48	P		P	07 08 22.8	-0.5
	baz=259							
O30N	**Mendenhall**	21.58	53	P		P	07 08 23.2	-0.8
O30N				IAmb		IAmb	07 08 56.1	
	comp=Z,26nm,0.8s							
O30N	**Mendenhall**	21.58	53	P		P	07 08 23.3	-0.8
	baz=264							
R31K	**City Hall, Gus**	21.65	59	P		P	07 08 24.8	+0.1
	baz=270							
E27K	**Coleen River**	21.65	32	IAmb		IAmb	07 08 57.6	
	comp=Z,74nm,1.1s							
E27K	**Coleen River**	21.65	32	P		P	07 08 24.7	+0.1
	baz=239,SNR=35							
C26K	**Camden Bay**	21.67	26	P		P	07 08 25.0	+0.2
	baz=231							
C27K	**Jago River**	21.82	27	IAmb		IAmb	07 08 59.5	
	comp=Z,31nm,1.1s							
C27K	**Jago River**	21.82	27	P		P	07 08 26.8	+0.4
	baz=233,SNR=10							
N31M	**Braeburn, Yuko**	21.82	51	P		P	07 08 26.4	-0.1
SKAG	**Skagway**	21.88	57	P		P	07 08 27.1	+0.1
SKAG				IAmb		IAmb	07 08 40.7	
	comp=Z,30nm,0.8s							
SKAG	**Skagway**	21.88	57	P		P	07 08 29.0	+2.0
SKAG	**Skagway**	21.88	57	P		P	07 08 26.9	-0.2
	baz=268,SNR=8.0							
H29M	**Whitestone**	21.91	38	P		P	07 08 26.9	-0.4
	baz=248,SNR=41							
SIT	**Sitka**	21.93	63	P		P	07 08 29.1	+1.5
SIT	**Sitka**	21.93	63	P		P	07 08 27.5	-0.1
	baz=274							
F28M	**Old Crow**	21.95	34	IAmb		IAmb	07 09 00.9	
	comp=Z,48nm,1.1s							
F28M	**Old Crow**	21.95	34	P		P	07 08 27.9	+0.2
	baz=243,SNR=22							
BESE	**Bessie Mountai**	22.11	59	IAmb		IAmb	07 08 50.2	
	comp=Z,92nm,1.4s							
WHY	**Whitehorse**	22.17	54	IAmb		IAmb	07 09 02.7	
	comp=Z,52nm,0.8s							
WHY	**Whitehorse**	22.17	54	P		P	07 08 29.9	-0.3
	baz=265							
J30M	**Hart River**	22.18	43	IAmb		IAmb	07 08 34.2	
	comp=Z,53nm,0.9s							
J30M	**Hart River**	22.18	43	P		P	07 08 29.9	-0.5
	baz=254,SNR=49							
R32K	**Eaglecrest**	22.30	60	IAmb		IAmb	07 08 46.9	
	comp=Z,41nm,0.8s							
R32K	**Eaglecrest**	22.30	60	P		P	07 08 31.6	+0.2
	baz=272							
G29M	**Pine Creek**	22.30	36	IAmb		IAmb	07 09 01.5	
	comp=Z,58nm,0.8s							
G29M	**Pine Creek**	22.30	36	P		P	07 08 30.3	-1.1
	baz=247,SNR=22							
S32K	**Killisnoo**	22.30	62	IAmb		IAmb	07 09 07.8	
	comp=Z,35nm,1.1s							
S32K	**Killisnoo**	22.30	62	P		P	07 08 31.0	-0.4
	baz=274							
I30M	**Mount Dempster**	22.35	41	P		P	07 08 30.8	-1.2
	baz=253,SNR=75							
JIS	**Juneau Island**	22.37	60	P		P	07 08 34.2	+2.2
D27M	**Malcolm River**	22.40	30	P		P	07 08 32.8	+0.4
	baz=238,SNR=21							
E28M	**Babbage River**	22.52	32	IAmb		IAmb	07 08 36.4	
	comp=Z,40nm,0.9s							
E28M	**Babbage River**	22.52	32	P		P	07 08 33.5	0.0
	baz=241,SNR=39							
M31M	**Drury Creek, Y**	22.56	50	P		P	07 08 33.0	-1.0
	baz=262							
EPYK	**Eagle Plains**	22.58	38	P		P	07 08 33.5	-0.7
	baz=250,SNR=31							
P32M	**Atlin**	22.70	56	P		P	07 08 35.1	-0.3
	baz=269							
E29M	**Blow River**	22.96	33	P		P	07 08 37.5	-0.1
	baz=244,SNR=86							
G30M	**tAoh Zraii Nji**	22.98	37	IAmb		IAmb	07 08 38.2	
	comp=Z,61nm,1.2s							
G30M	**tAoh Zraii Nji**	22.98	37	P		P	07 08 37.0	-1.0
	baz=249,SNR=19							
N32M	**Quiet Lake**	23.08	52	IAmb		IAmb	07 09 14.3	
	comp=Z,39nm,1.0s							
N32M	**Quiet Lake**	23.08	52	P		P	07 08 38.1	-0.8
	baz=266							
D28M	**Stokes Point**	23.13	31	P		P	07 08 39.4	+0.2
	baz=241,SNR=5.7							
P33M	**Teslin, Yukon**	23.17	55	IAmb		IAmb	07 09 19.0	
	comp=Z,25nm,1.0s							
P33M	**Teslin, Yukon**	23.17	55	P		P	07 08 39.3	-0.5
	baz=268,SNR=6.0							
U33K	**Whale Pass**	23.24	65	IAmb		IAmb	07 08 43.6	
	comp=Z,41nm,0.8s							
U33K	**Whale Pass**	23.24	65	P		P	07 08 41.4	+1.0
	baz=278,SNR=5.9							
T33K	**Petersburg**	23.25	63	P		P	07 08 40.1	-0.3
	baz=276							
H31M	**Peel River**	23.33	40	P		P	07 08 40.5	-0.7
	baz=254,SNR=33							
CRAG	**Craig**	23.34	67	IAmb		IAmb	07 08 44.7	
	comp=Z,47nm,0.9s							
CRAG	**Craig**	23.34	67	P		P	07 08 43.3	+2.1
CRAG	**Craig**	23.34	67	P		P	07 08 42.1	+0.8
	baz=279,SNR=5.9							
F30M	**Barrier River**	23.37	36	P		P	07 08 41.1	-0.4
	baz=248,SNR=37							
Q32M	**Nakina River**	23.45	58	P		P	07 08 42.8	+0.2
	baz=272,SNR=5.2							
WRAK	**Wrangell Islan**	23.63	64	P		P	07 08 44.7	+0.9
	baz=278,SNR=9.1							
F31M	**Tsiigehtchic**	24.05	37	P		P	07 08 46.9	-0.6
	baz=251,SNR=40							
MMPY	**Sheldon Lake,**	24.06	49	P		P	07 08 47.2	-0.6
	baz=264,SNR=16							
R33M	**Jennings River**	24.11	57	IAmb		IAmb	07 09 27.1	
	comp=Z,24nm,1.1s							
R33M	**Jennings River**	24.11	57	P		P	07 08 48.6	+0.2
	baz=272,SNR=8.1							
S34M	**Telegraph Cree**	24.11	60	P		P	07 08 49.0	+0.8
	baz=275,SNR=8.9							
DIB	**Dawson Inlet,**	24.18	72	IAmb		IAmb	07 08 52.2	
	comp=Z,26nm,1.0s							
INK	**Inuvik**	24.42	35	P		P	07 08 51.2	+0.3
INK				IAmb		IAmb	07 08 51.8	
	comp=Z,38nm,0.8s							
INK	**Inuvik**	24.42	35	P		P	07 08 51.2	+0.3
INK				pmax		pmax		
	comp=Z,38nm,0.8s							
INK	**Inuvik**	24.42	35	P		P	07 08 50.6	-0.3
	baz=250,SNR=30							
MOBC	**Moresby Island**	24.50	72	IAmb		IAmb	07 08 55.9	
	comp=Z,34nm,0.8s							
DLBC	**Dease Lake**	24.65	59	P		P	07 08 52.7	-0.6
	baz=275							
T35M	**Bob Quinn**	24.70	63	IAmb		IAmb	07 09 24.1	
	comp=Z,36nm,1.1s							
T35M	**Bob Quinn**	24.70	63	P		P	07 08 54.4	+0.8
	baz=278,SNR=13							
HG4B	**Hotspring**	25.18	74	P		P	07 08 59.5	+1.4
HG4B				IAmb		IAmb	07 09 01.0	
	comp=Z,19nm,0.9s							
TGTN	**Hyland Airport**	25.41	52	P		P	07 08 59.9	-0.1
	baz=270,SNR=8.6							
LIRD	**Liard River Hi**	26.59	56	P		P	07 09 11.6	+0.9
	baz=276							
TOAD	**Toad River Com**	27.10	58	P		P	07 09 16.3	+1.1
	baz=277							
KOTAN	**Kotaneelee Air**	27.54	55	P		P	07 09 20.1	+1.0
	baz=276							
WRGLY	**Wrigley**	27.65	48	P		P	07 09 20.7	+0.6
	baz=270							
C36M	**Paulatuk**	28.00	35	P		P	07 09 22.7	-0.4
	baz=258							
A36M	**Sachs Harbour**	28.30	29	IAmb		IAmb	07 09 57.8	
	comp=Z,28nm,0.9s							
A36M	**Sachs Harbour**	28.30	29	P		P	07 09 25.9	+0.2
	baz=252							
YAK	**Yakutsk**	31.43	310	LR		LR	07 23 10.4	
	comp=Z,56nm,19.4s,baz=78,slow=37							
YAK	**Yakutsk**	31.43	310	*e*P		P	07 09 53.0	-0.4
YAK				*e**PP		pP	07 10 19.3	-1.0
YAK				*e*			07 12 42.3	
YAK				*e*S		S	07 14 53.1	+1.9
YAK				*e**SS		sS	07 15 41.6	+2.0
YAK				*e*SS		SnSn	07 16 54.0	+3.6
YAK				*e*			07 20 13.3	
YAK				pmax		pmax		
	comp=Z,10.0nm,0.9s							
YAK				pmax		pmax		
	comp=N,2.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,2.0nm,1.1s							
YAK				smax		smax		
	comp=N,56nm,3.3s							
YAK				smax		smax		
	comp=E,24nm,1.7s							
NLWA	**Neilton Lookou**	31.45	79	IAmb		IAmb	07 09 57.3	
	comp=Z,17nm,1.1s							
TIXI	**Tiksi**	31.48	329	LR		LR	07 25 29.1	
	comp=Z,43nm,18.6s,baz=350,slow=42							
TIXI	**Tiksi**	31.48	329	*i* P		P	07 09 55.5	+1.7
TIXI				pmax		pmax		
	comp=Z,1.0nm,0.3s							
YKA	**Yellowknife Ar**	31.75	49	P		P	07 09 56.0	-0.3
	comp=Z,1.7nm,0.6s,baz=234,slow=8.5,SNR=23							
YKA				ScP		ScP	07 16 15.4	+0.1
	comp=Z,2.0nm,0.7s,baz=223,slow=5.1,SNR=5.9							
	comp=Z,1.7nm,0.6s							
YKA	**Yellowknife Ar**	31.75	49	P		P	07 09 56.0	-0.3
D05A	**Enumclaw**	32.68	79	IAmb		IAmb	07 10 08.1	
	comp=Z,22nm,1.0s							
H04D	**Lebanon**	33.57	83	IAmb		IAmb	07 10 16.4	
	comp=Z,17nm,1.0s							
B08A	**Colville Reser**	33.70	75	IAmb		IAmb	07 10 44.7	
	comp=Z,16nm,0.9s							
HOOD	**Mount Hood Mea**	33.81	81	IAmb		IAmb	07 10 56.0	
	comp=Z,11nm,0.8s							
G05A	**Wamic**	34.05	81	IAmb		IAmb	07 10 54.6	
	comp=Z,12nm,0.9s							
I04A	**Tendick Farm,**	34.16	84	IAmb		IAmb	07 10 50.1	
	comp=Z,21nm,0.9s							
WAH2	**Wahluke Slope**	34.34	78	IAmb		IAmb	07 10 50.1	
	comp=Z,18nm,0.7s							
WIFE	**Three Sisters-**	34.38	83	IAmb		IAmb	07 10 22.7	
	comp=Z,19nm,0.9s							
BBOR	**Butler Butte**	34.49	86	IAmb		IAmb	07 10 53.0	
	comp=Z,28nm,1.3s							
I05D	**Terrebonne, OR**	34.52	83	IAmb		IAmb	07 10 29.6	
	comp=Z,13nm,0.8s							
HAWA	**Hanford**	34.54	78	IAmb		IAmb	07 10 52.1	
	comp=Z,15nm,0.8s							
D08A	**Wollman Farm,**	34.57	77	IAmb		IAmb	07 10 51.9	
	comp=Z,9.9nm,0.8s							
C09A	**Chrisman Ranch**	34.59	76	IAmb		IAmb	07 10 53.1	
	comp=Z,13nm,1.0s							
NEW	**Newport**	35.05	74	IAmb		IAmb	07 10 56.1	
	comp=Z,18nm,0.9s							
NEW	**Newport**	35.05	74	P		P	07 10 26.4	+1.3
NEW				pmax		pmax		
	comp=Z,16nm,0.9s							
PINE	**Pine Mountain**	35.05	83	IAmb		IAmb	07 10 29.4	
	comp=Z,17nm,1.2s							
YPT	**Yellepit**	35.05	79	IAmb		IAmb	07 10 57.2	
	comp=Z,11nm,0.8s							
L04D	**Klamath Falls**	35.10	86	P		P	07 10 26.8	+1.1
L04D				IAmb		IAmb	07 10 28.9	
	comp=Z,20nm,1.0s							
JMM	**Marumori**	35.13	264	P		P	07 10 25.4	-0.3
JMM				IAmb		IAmb	07 10 26.4	
	comp=Z,25nm,1.0s							
YBH	**Yreka Blue Hor**	35.13	87	P		P	07 10 28.0	+2.1
YBH	**Yreka Blue Hor**	35.13	87	P		P	07 10 28.0	+2.1
YBH				pmax		pmax		
	comp=Z,7.0nm,0.9s							
J05D	**Fort Rock, OR**	35.15	84	P		P	07 10 28.7	+2.5
J05D				IAmb		IAmb	07 10 29.6	
	comp=Z,26nm,1.3s							
K04D	**Chiloquin, OR**	35.21	85	IAmb		IAmb	07 10 29.8	
	comp=Z,19nm,0.9s							
M03C	**McCloud**	35.76	88	IAmb		IAmb	07 11 03.5	
	comp=Z,14nm,1.0s							
I07A	**Izee**	35.76	82	IAmb		IAmb	07 10 34.1	
	comp=Z,9.1nm,0.8s							
O02D	**Mt. Diablo Mer**	36.01	90	IAmb		IAmb	07 11 06.0	
	comp=Z,21nm,0.9s							
HEH	**HeiHe**	36.39	291	*e*P		P	07 10 33.9	-2.5
HEH				pP		pP	07 11 03.9	+0.1
HEH				pmax		pmax		
	comp=Z,15nm,1.1s							
USRK	**Ussuriysk Ar.**	36.74	279	P		P	07 10 37.6	-1.9
	comp=Z,3.9nm,0.7s,baz=61,slow=3.2,SNR=4.2							
USRK				PcP		PcP	07 12 59.3	+0.4
	comp=Z,6.9nm,0.8s,baz=27,slow=3.3,SNR=5.6							
	comp=Z,3.9nm,0.7s							
GDXM	**Geysers**	36.84	91	IAmb		IAmb	07 11 13.1	
	comp=Z,21nm,1.1s							
RES	**Resolute Bay**	37.15	25	LR		LR	07 28 41.4	
	comp=Z,121nm,18.5s,baz=14,slow=40							
RES	**Resolute Bay**	37.15	25	P		P	07 10 42.6	+0.1
RES				pmax		pmax		
	comp=Z,4.0nm,1.6s							
WVOR	**Wild Horse Val**	37.21	84	IAmb		IAmb	07 10 46.4	
	comp=Z,15nm,0.8s							
WVOR	**Wild Horse Val**	37.21	84	P		P	07 10 45.6	+2.0
WVOR				pmax		pmax		
	comp=Z,20nm,0.9s							
MAJO	**Matsushiro**	37.55	265	P		P	07 10 46.8	+0.4
MAJO	**Matsushiro**	37.55	265	P		P	07 10 46.6	+0.2
MAJO	**Matsushiro**	37.55	265	*i* P		P	07 10 46.1	-0.3
MAJO				pmax		pmax		
	comp=Z,27nm,0.8s							
MAJO	**Matsushiro**	37.55	265	P		P	07 10 46.9	+0.4
MJAR	**Matsushiro Arr**	37.55	265	P		P	07 10 47.1	+0.7
MJAR				IAmb		IAmb	07 10 47.5	
	comp=Z,19nm,1.4s							
MJAR	**Matsushiro Arr**	37.55	265	P		P	07 10 46.3	-0.1
	comp=Z,8.6nm,0.8s,baz=48,slow=7.5,SNR=19							
MJAR				PcP		PcP	07 13 01.7	+0.1
	comp=Z,11nm,0.9s,baz=82,slow=2.0,SNR=14							
MJAR				ScP		ScP	07 16 36.0	-0.6
	comp=Z,0.6nm,0.3s,baz=122,slow=1.6,SNR=4.5							
	comp=Z,8.6nm,0.8s							
MJAR	**Matsushiro Arr**	37.55	265	P		P	07 10 47.1	+0.7
MJAR				pmax		pmax		
	comp=Z,19nm,1.4s							
MJB9	**Matsu-Tunnel**	37.55	265	P		P	07 10 47.8	+1.4
MSO	**Missoula**	37.63	74	IAmb		IAmb	07 11 18.0	
	comp=Z,14nm,1.1s							
MPK	**Martis Peak**	38.23	89	IAmb		IAmb	07 11 24.5	
	comp=Z,26nm,1.0s							
PAHR	**Pah Rah Range**	38.37	88	IAmb		IAmb	07 11 25.4	
	comp=Z,15nm,0.9s							
BNX	**BinXian**	38.65	284	⇓P		P	07 10 53.6	-1.9
BNX				pmax		pmax		
	comp=Z,9.0nm,0.9s							
JGF	**Kuroka**	38.69	264	IAmb		IAmb	07 10 57.3	
	comp=Z,24nm,0.9s							
WAKR	**Walker**	39.08	89	IAmb		IAmb	07 11 31.9	
	comp=Z,17nm,1.0s							
BCYI	**Bear Canyon**	39.30	78	IAmb		IAmb	07 11 03.2	
	comp=Z,9.0nm,0.8s							
EGMT	**Eagleton**	39.46	70	IAmb		IAmb	07 11 07.0	
	comp=Z,12nm,0.8s							
RYN	**Ryan**	39.56	88	IAmb		IAmb	07 11 35.4	
	comp=Z,14nm,1.0s							
LHV	**Little Huntoon**	39.81	89	IAmb		IAmb	07 11 38.0	
	comp=Z,15nm,1.1s							
NVAR	**Mina Array Bea**	39.82	88	P		P	07 11 06.9	+1.4
NVAR	**Mina Array Bea**	39.82	88	P		P	07 11 07.3	+1.8
	comp=Z,6.6nm,0.8s,baz=295,slow=8.0,SNR=60							
NVAR				pP		pP	07 11 34.8	+0.7
	comp=Z,10nm,0.9s,baz=295,slow=8.6,SNR=14							
NVAR				PcP		PcP	07 13 10.4	+1.4
	comp=Z,3.1nm,0.8s,baz=297,slow=2.2,SNR=6.6							
NVAR				Sc

PDAR pP **pP** **07 11 56.2 0.0**
comp=Z,12nm,0.8s,baz=307,slow=3.9,SNR=10
PDAR ScP **ScP** **07 16 56.0 -0.1**
comp=Z,2.3nm,0.9s,baz=294,slow=1.5,SNR=9.1
comp=Z,7.2nm,0.7s
SHOC Shoshone, Teco 42.69 90 IAmb IAmb 07 12 00.8
comp=Z,17nm,0.9s
GSC Goldstone, Bar 42.76 91 IAmb IAmb 07 12 01.5
comp=Z,19nm,0.9s
KSRS Korea Array 43.24 274 P **P** **07 11 32.8 -0.3**
comp=Z,1.0nm,0.5s,baz=46,slow=6.8,SNR=5.1
comp=Z,1.0nm,0.5s
TMUT Trail Mountain 43.59 82 IAmb IAmb 07 12 08.3
comp=Z,12nm,0.7s
RDMU Red Mountain 43.79 80 IAmb IAmb 07 12 10.8
comp=Z,17nm,1.2s
LCMT Little Creek M 43.81 86 IAmb IAmb 07 11 41.2
comp=Z,12nm,0.9s
Q16A Castle Valley 43.85 83 IAmb IAmb 07 11 41.6
comp=Z,13nm,1.0s
SRU San Rafael Swe 44.12 82 IAmb IAmb 07 12 14.9
comp=Z,9.9nm,0.7s
JNU Nakatsue 44.31 267 P **P** **07 11 42.7 +0.9**
JNU IAmb IAmb 07 11 43.6
comp=Z,24nm,1.1s
JNU Nakatsue 44.31 267 P **P** **07 11 42.4 +0.6**
U15A North Rim 44.77 86 IAmb IAmb 07 12 18.0
comp=Z,20nm,1.0s
O20A White River Ci 44.86 79 IAmb IAmb 07 11 47.9
comp=Z,14nm,0.9s
RSSD Black Hills 44.93 72 P **P** **07 11 47.4 +0.6**
RSSD Black Hills 44.93 72 P **P** **07 11 47.4 +0.6**
RSSD pmax pmax
comp=Z,4.0nm,0.9s
RSSD Black Hills 44.93 72 P **P** **07 11 47.0 +0.2**
RSSD pP **pP** **07 12 16.2 +0.2**
RSSD PcP **PcP** **07 13 25.8 -0.1**
NRIK Noril'sk 45.23 330 *i* P **P** **07 11 50.1 +1.5**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
NEEM North Greenlan 45.41 15 *i* P **P** **07 11 50.5 +0.3**
NEEM IAmb IAmb 07 11 51.2
comp=Z,21nm,1.1s
E28A Huff 45.41 67 IAmb IAmb 07 11 53.7
comp=Z,15nm,0.7s
PV23 Carpenter Ridg 45.46 82 IAmb IAmb 07 12 22.3
comp=Z,13nm,0.8s
PV10 Paradox Valley 45.49 82 IAmb IAmb 07 12 23.0
comp=Z,23nm,0.8s
NOR Nord 45.50 5 *i* P **P** **07 11 51.1 +0.5**
NOR IAmb IAmb 07 11 53.5
comp=Z,7.5nm,1.2s
PV20 West Nyswonger 45.55 82 IAmb IAmb 07 12 23.0
comp=Z,18nm,0.8s
PV04 Paradox Valley 45.56 82 IAmb IAmb 07 12 23.1
comp=Z,15nm,0.7s
PV19 Morning Glory 45.56 82 IAmb IAmb 07 12 23.1
comp=Z,13nm,0.7s
PV17 East Wray Mesa 45.60 82 IAmb IAmb 07 12 23.4
comp=Z,12nm,0.8s
PV16 Nyswonger Mesa 45.60 82 IAmb IAmb 07 12 23.4
comp=Z,10nm,0.7s
PV11 David Mesa, Pa 45.64 82 IAmb IAmb 07 12 25.4
comp=Z,20nm,0.6s
PV18 Skein Mesa, Pa 45.65 82 IAmb IAmb 07 12 23.8
comp=Z,22nm,0.8s
PV12 Saucer Basin 45.67 82 IAmb IAmb 07 12 25.2
comp=Z,23nm,0.9s
PV03 Paradox Valley 45.68 82 IAmb IAmb 07 12 24.0
comp=Z,10nm,0.8s
PV01 Paradox Valley 45.93 82 IAmb IAmb 07 12 26.0
comp=Z,13nm,0.7s
WUAZ Wupatki 45.93 86 IAmb IAmb 07 12 27.0
comp=Z,19nm,0.9s
ULM Lac du Bonnet 45.96 60 IAmb IAmb 07 11 55.1
comp=Z,8.4nm,0.6s
ULM Lac du Bonnet 45.96 60 P **P** **07 11 54.0 -0.5**
comp=Z,6.1nm,0.4s,baz=298,slow=6.7,SNR=8.1
comp=Z,6.1nm,0.4s
ULM Lac du Bonnet 45.96 60 *i* P **P** **07 11 53.8 -0.8**
EPLO Experimental L 47.43 60 IAmb IAmb 07 12 38.5
comp=Z,14nm,0.9s
X18A Snowflake 47.46 86 IAmb IAmb 07 12 39.2
comp=Z,15nm,1.3s
F33A 5 Mile Ranch, 48.31 66 IAmb IAmb 07 12 13.2
comp=Z,13nm,1.0s
TUC Tucson 48.46 89 P **P** **07 12 14.8 +0.5**
TUC Tucson 48.46 89 P **P** **07 12 14.8 +0.5**
TUC pmax pmax
comp=Z,8.0nm,1.0s
ULN Ulaanbaatar 48.97 298 *ce* P **P** **07 12 20.3 +2.2**
ULN pmax pmax
comp=Z,11nm,2.5s
T25A Trinidad 49.08 80 IAmb IAmb 07 12 22.0
comp=Z,16nm,1.1s
TASM ASL Pad, Albur 49.30 83 IAmb IAmb 07 12 52.8
comp=Z,6.4nm,1.4s
ANMO Albuquerque 49.30 83 P **P** **07 12 21.0 +0.2**
ANMO Albuquerque 49.30 83 *ce* P **P** **07 12 22.7 +1.9**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
SONM Songino Array 49.34 299 P **P** **07 12 19.8 -1.1**
comp=Z,0.8nm,0.5s,baz=52,slow=7.7,SNR=5.2
SONM pP **pP** **07 12 50.7 +1.0**
comp=Z,4.4nm,1.0s,baz=55,slow=7.6,SNR=7.3
SONM ScP **ScP** **07 17 23.1 -1.3**
comp=Z,1.0nm,0.6s,baz=82,slow=2.7,SNR=4.5
SONM LR LR 07 34 07.9
comp=Z,47nm,18.9s,baz=112,slow=37
comp=Z,0.8nm,0.5s
SONM Songino Array 49.34 299 P **P** **07 12 19.8 -1.1**
SONM pmax pmax
comp=Z,5.0nm,1.1s
ECSD EROS Data Cent 49.42 68 IAmb IAmb 07 12 21.6
comp=Z,6.9nm,0.7s
SPITS Spitsbergen Ar 49.43 357 P **P** **07 12 20.8 -0.2**
comp=Z,24nm,1.1s,baz=44,slow=5.0,SNR=8.0
SPITS pP **pP** **07 12 49.9 +0.2**
comp=Z,17nm,0.8s,baz=46,slow=7.1,SNR=4.0
comp=Z,24nm,1.1s
Y22A Socorro 49.68 85 IAmb IAmb 07 12 26.3
comp=Z,11nm,0.8s
DAG Danmarks Havn 49.93 8 *i* P **P** **07 12 24.0 -0.7**
DAG IAmb IAmb 07 12 25.0
comp=Z,3.1nm,1.1s
RTBA Rita Blanca 50.55 79 IAmb IAmb 07 12 31.6
comp=Z,9.2nm,1.0s
CBKS Cedar Bluff 50.76 75 IAmb IAmb 07 13 05.0
comp=Z,16nm,0.8s
HHC Hu-ho-hao-te 50.84 289 *e* P **P** **07 12 32.6 +0.4**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,65nm,7.0s
SUMG Summit 51.24 16 *i* P **P** **07 12 34.8 -0.3**
HNS HongShan 51.25 283 ⇓P **P** **07 12 34.0 -1.1**
HNS pmax pmax
comp=Z,11nm,0.8s
EPT El Paso 51.45 86 IAmb IAmb 07 12 39.4
comp=Z,19nm,1.0s
BTO Baotou 51.88 289 *e* P **P** **07 12 41.1 +1.1**
BTO pP **pP** **07 13 10.4 +1.3**
BTO sP **sP** **07 13 24.8 +1.7**
BTO pmax pmax
comp=Z,19nm,0.8s
BTO pmax pmax
comp=Z,280nm,4.0s
DBG Daneborg 52.11 9 *i* P **P** **07 12 40.2 -0.8**
DBG IAmb IAmb 07 12 40.9
comp=Z,2.9nm,0.5s
MNTX Cornudas Mount 52.18 86 IAmb IAmb 07 12 44.5
comp=Z,9.1nm,0.8s
KNGR Kungurtug, Tuv 52.20 306 *i* P **P** **07 12 42.8 +0.7**
MSTX Muleshoe 52.20 82 IAmb IAmb 07 13 14.2
comp=Z,25nm,1.3s
NJ2 Nanjing 52.39 275 *e* P **P** **07 12 44.1 +0.5**
NJ2 pmax pmax
comp=Z,12nm,0.5s
SMWD Samnorwood 52.94 79 IAmb IAmb 07 12 49.4
comp=Z,8.2nm,0.9s
POST Post 53.59 81 IAmb IAmb 07 12 54.5
comp=Z,20nm,1.1s
P38A Dawn 53.84 70 IAmb IAmb 07 13 24.9
comp=Z,12nm,0.7s
MNHN Monahans 54.03 84 IAmb IAmb 07 12 57.5
comp=Z,14nm,0.7s
ALPN Alpine 54.17 85 IAmb IAmb 07 12 58.8
comp=Z,8.4nm,0.8s
APMT Aspermont 54.24 80 IAmb IAmb 07 12 58.6
comp=Z,8.3nm,1.0s
TX31 Lajitas Ar. Si 54.90 86 IAmb IAmb 07 13 04.4
comp=Z,12nm,0.9s
TXAR Lajitas Array 54.90 86 P **P** **07 13 03.0 +0.9**
TXAR Lajitas Array 54.90 86 P **P** **07 13 03.2 +1.1**
comp=Z,7.2nm,0.7s,baz=298,slow=5.2,SNR=95
TXAR pP **pP** **07 13 31.5 -0.8**
comp=Z,4.7nm,0.8s,baz=296,slow=5.4,SNR=7.6
TXAR PcP **PcP** **07 14 03.7 +1.1**
comp=Z,3.1nm,0.6s,baz=303,slow=2.3,SNR=9.3
TXAR ScP **ScP** **07 17 49.5 +0.8**
comp=Z,2.0nm,0.7s,baz=286,slow=3.3,SNR=16
comp=Z,7.2nm,0.7s
ABTX Abilene, Hawle 55.02 81 IAmb IAmb 07 13 05.0
comp=Z,15nm,1.0s
OZNA Ozona 55.31 83 IAmb IAmb 07 13 06.7
comp=Z,11nm,0.9s
R40A Maddies Statio 55.47 70 IAmb IAmb 07 13 35.4
comp=Z,7.5nm,0.5s
SCO Scoresbysund 55.51 11 *i* P **P** **07 13 05.6 -0.2**
SCO IAmb IAmb 07 13 06.4
comp=Z,2.3nm,0.4s
PLPT Palo Pinto 55.68 79 IAmb IAmb 07 13 10.2
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 55.82 316 pP pP 07 13 38.1 +0.3
comp=Z,1.1nm,0.6s,baz=28,slow=6.7,SNR=3.0
MGMO Mountain Grove 56.24 71 IAmb IAmb 07 13 15.0
comp=Z,7.3nm,1.1s
BRDY Brady 56.34 81 IAmb IAmb 07 13 14.1
comp=Z,9.7nm,0.9s
JCT Junction City 56.43 82 IAmb IAmb 07 13 14.3
comp=Z,11nm,0.7s
FW13 Cleburne 56.53 79 IAmb IAmb 07 13 46.7
comp=Z,8.4nm,0.8s
DRIO Del Rio 56.69 84 IAmb IAmb 07 13 15.7
comp=Z,6.1nm,0.8s
SCHQ Schefferville 56.77 42 P **P** **07 13 13.9 -1.1**
comp=Z,6.2nm,0.8s,baz=338,slow=5.6,SNR=5.2
comp=Z,6.2nm,0.8s
WHTX Lake Whitney, 56.77 79 IAmb IAmb 07 13 48.5
comp=Z,13nm,0.8s
XAN Xi'an 56.98 284 *eP* **P** **07 13 16.6 -0.2**
FCAR Ozark Folk Cen 57.20 72 IAmb IAmb 07 13 19.6
comp=Z,11nm,1.1s
MIAR Mount Ida 57.29 75 IAmb IAmb 07 13 51.9
comp=Z,8.4nm,0.9s
MIAR Mount Ida 57.29 75 P **P** **07 13 19.1 +0.2**
MIAR pmax pmax
comp=Z,7.0nm,0.9s
ARCES ARCESS Array B 57.50 352 IAmb IAmb 07 14 00.0
comp=Z,21nm,1.3s
ARCES ARCESS Array B 57.50 352 P **P** **07 13 18.0 -1.9**
comp=Z,1.7nm,0.6s,baz=17,slow=6.8,SNR=7.3
ARCES PcP **PcP** **07 14 10.8 -1.2**
comp=Z,1.0nm,0.4s,baz=12,slow=4.7,SNR=8.6
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 57.50 352 P **P** **07 13 18.0 -1.9**
ARCES pmax pmax
comp=Z,21nm,1.3s
GTA Gaotai 58.47 295 *eP* **P** **07 13 27.8 +0.6**
GTA sP pP 07 13 58.3 +1.2
GTA pmax pmax
comp=Z,3.0nm,1.3s
WCI Wyandotte Cave 58.91 67 P **P** **07 13 29.6 -0.5**
WCI pmax pmax
comp=Z,20nm,2.4s
T47A Sharon Grove 59.32 68 IAmb IAmb 07 14 03.4
comp=Z,7.9nm,0.7s
R50A Paris 59.97 65 IAmb IAmb 07 13 38.2
comp=Z,9.7nm,0.6s
CLTN Cedars of Leba 60.40 68 P **P** **07 13 41.2 +0.9**
Q52A Bidwell 60.62 63 P **P** **07 13 41.5 -0.3**
Q52A IAmb IAmb 07 13 42.1
comp=Z,17nm,1.0s
P53A Whipple 60.72 62 IAmb IAmb 07 13 43.0
comp=Z,11nm,0.7s
KURK Kurchatov 60.79 316 P **P** **07 13 42.6 -0.2**
KURK IAmb IAmb 07 14 16.9
comp=Z,9.1nm,0.9s
KURK Kurchatov 60.79 316 *ce* P **P** **07 13 44.6 +1.8**
KURK pmax pmax
comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra 60.90 316 P **P** **07 13 42.5 -1.0**
comp=Z,1.1nm,0.3s,baz=41,slow=7.0,SNR=9.2
KURBB pP **pP** **07 14 13.3 -0.3**
comp=Z,7.5nm,0.8s,baz=42,slow=7.2,SNR=6.1
comp=Z,1.1nm,0.3s
Q54A Coxs Mills 61.38 63 IAmb IAmb 07 13 47.8
comp=Z,15nm,0.9s
SSPA Standing Stone 61.77 59 P **P** **07 13 49.3 -0.2**
SSPA IAmb IAmb 07 13 50.8
comp=Z,16nm,0.9s
SSPA Standing Stone 61.77 59 P **P** **07 13 49.6 0.0**
MKAR Makanchi Array 62.10 311 P **P** **07 13 50.0 -1.7**
comp=Z,1.0nm,0.6s,baz=44,slow=5.9,SNR=8.2
MKAR pP **pP** **07 14 20.6 -1.4**
comp=Z,1.4nm,0.7s,baz=50,slow=6.5,SNR=4.9
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 62.10 311 *i* P **P** **07 13 50.2 -1.5**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 62.28 322 P **P** **07 13 52.2 -0.6**
comp=Z,2.3nm,0.5s,baz=48,slow=5.9,SNR=15
BVAR pP **pP** **07 14 22.6 -0.3**
comp=Z,6.5nm,0.7s,baz=47,slow=6.5,SNR=5.8
BVAR sP **sP** **07 14 37.7 +1.0**
comp=Z,2.9nm,0.6s,baz=34,slow=8.2,SNR=2.8
comp=Z,2.3nm,0.5s
BORK Borovoye 62.29 322 *ce* P **P** **07 13 52.8 -0.1**
BORK pmax pmax
comp=Z,4.0nm,1.3s
BORK Borovoye 62.29 322 P **P** **07 13 52.7 -0.1**
BORK pP **pP** **07 14 22.7 -0.3**
SDMD Soldier's Deli 63.21 60 IAmb IAmb 07 14 00.2
comp=Z,10nm,0.9s
ARTI Arti 63.55 331 *c i* P **P** **07 14 00.9 -0.1**
ARTI *PP **pP** **07 14 30.1 -1.3**
ARTI S **S** **07 22 27.3 +3.4**
ARTI SS **SS** **07 26 33.5 +1.2**
ARTI pmax pmax
comp=Z,5.0nm,1.0s
ARTI Arti 63.55 331 P **P** **07 14 01.1 0.0**
ARTI pP **pP** **07 14 30.0 -1.3**
T57A Hurt 63.68 63 IAmb IAmb 07 14 03.1
comp=Z,14nm,0.7s
KMSC Kings Mountain 63.89 66 IAmb IAmb 07 14 36.2
comp=Z,12nm,0.9s
GOGA Godfrey 63.96 69 P **P** **07 14 04.0 -0.1**
GOGA pmax pmax
comp=Z,6.0nm,0.8s
KLMR Klimovskoe 64.03 343 *eP* **P** **07 14 00.3 -3.8**
KLMR *e*PP **pP** **07 14 32.1 -2.4**
KLMR pmax pmax
comp=Z,17nm,1.4s
HODGE Hodges 64.04 67 IAmb IAmb 07 14 06.0
comp=Z,7.6nm,0.6s
FINES FINESS Array B 65.37 350 P **P** **07 14 11.9 -0.9**
FINES FINESS Array B 65.37 350 P **P** **07 14 11.4 -1.3**
comp=Z,3.1nm,0.8s,baz=12,slow=9.8,SNR=6.1
comp=Z,3.1nm,0.8s
FINES FINESS Array B 65.37 350 P **P** **07 14 11.9 -0.9**
SAVO Savo Central 65.73 210 P **P** **07 14 16.5 +0.8**
PZH PanZhiHua 66.69 283 P **P** **07 14 23.5 +1.5**
NB2 NORSAR Subarra 66.73 358 P **P** **07 14 20.7 -0.9**
comp=Z,3.8nm,0.8s,baz=1.5,slow=6.2
NOA NORSAR Array B 66.73 358 P **P** **07 14 20.1 -1.4**
comp=Z,1.7nm,0.7s,baz=2.0,slow=6.4,SNR=5.2
NOA pP **pP** **07 14 51.5 -0.7**
comp=Z,3.1nm,0.7s,baz=2.1,slow=6.4,SNR=8.2
comp=Z,1.7nm,0.7s
HFS Hagfors 67.56 356 P **P** **07 14 25.8 -0.9**
comp=Z,2.1nm,0.4s,baz=36,slow=2.8,SNR=18
HFS pP **pP** **07 14 57.2 -0.2**
comp=Z,7.4nm,0.7s,baz=29,slow=3.4,SNR=5.3
comp=Z,2.1nm,0.4s
BOOM Boomskoye usch 68.30 312 P **P** **07 14 31.7 -0.3**
BOOM pmax pmax
comp=Z,7.0nm,0.7s
AAK Ala-Archa 68.84 313 *ce* P **P** **07 14 35.6 +0.4**
AAK pmax pmax
comp=Z,4.0nm,0.8s
AB31 Akbulak array 69.12 326 P **P** **07 14 36.7 0.0**
ABKAR Akbulak array 69.12 326 P **P** **07 14 36.6 -0.1**
OBN Obninsk 69.97 342 ⇓ *e* P **P** **07 14 42.0 +0.3**
OBN 07 15 04.0
OBN *e*PP **pP** **07 15 09.5 -3.2**
OBN *SP **sP** **07 15 24.0 -2.4**
OBN S **S** **07 23 33.0 -8.1**
OBN pmax pmax
comp=Z,11nm,0.5s
OBN MLR MLR
comp=Z,121nm,18.0s
OBN Obninsk 69.97 342 P **P** **07 14 42.6 +0.9**
comp=Z,22nm,0.7s
PMG Port Moresby 70.52 222 *ce* P **P** **07 14 47.2 +1.7**
PMG pmax pmax
comp=Z,14nm,1.0s
EKA Eskdalemuir Ar 72.16 6 P **P** **07 14 54.6 -0.4**
comp=Z,0.8nm,0.4s,baz=353,slow=5.0,SNR=3.6
comp=Z,0.8nm,0.4s
MYLDM Lahad Datu 72.97 256 P **P** **07 15 01.8 +1.5**
GAR Garm 73.64 314 IAmb IAmb 07 15 38.0
comp=Z,21nm,1.3s
CHGR Chuyangaron 74.43 314 P **P** **07 15 08.3 -0.4**
CHGR IAmb IAmb 07 15 10.3
comp=Z,12nm,0.7s
CHGR Chuyangaron 74.43 314 P **P** **07 15 08.3 -0.4**
CHGR pmax pmax
comp=Z,12nm,0.7s
CMAR Chiang Mai Arr 74.47 280 P **P** **07 15 09.0 0.0**
CMAR Chiang Mai Arr 74.47 280 P **P** **07 15 08.4 -0.6**
comp=Z,2.8nm,0.8s,baz=26,slow=7.0,SNR=15
comp=Z,2.8nm,0.8s
CMAR Chiang Mai Arr 74.47 280 *i* P **P** **07 15 08.1 -1.0**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
TOLI2 Tolitoli 74.90 252 P **P** **07 15 11.1 -0.5**
TOLI2 Tolitoli 74.90 252 P **P** **07 15 11.5 -0.1**
AKASG Malin Array Be 75.45 346 P **P** **07 15 12.6 -1.6**
comp=Z,1.0nm,0.5s,baz=20,slow=6.1,SNR=4.9
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 75.45 346 P **P** **07 15 12.6 -1.6**
AKASG pmax pmax
comp=Z,2.0nm,1.0s
NOUC Port Laguerre 76.50 200 P **P** **07 15 21.8 +1.4**
DPC Dobruska-Polom 77.19 354 P **P** **07 15 24.1 0.0**
DPC pmax pmax
comp=Z,6.0nm,0.6s
DPC Dobruska-Polom 77.19 354 P **P** **07 15 24.2 +0.1**
comp=Z,6.2nm,0.6s
KHC Kasperske Hory 78.56 356 *ce* P **P** **07 15 32.9 +1.2**
KHC pmax pmax
comp=Z,6.0nm,1.7s
GERES GERESS Array B 78.84 356 P **P** **07 15 32.7 -0.6**
comp=Z,1.4nm,0.7s,baz=35,slow=7.2,SNR=6.2
GERES pP **pP** **07 16 05.1 +0.2**
comp=Z,1.1nm,0.6s,baz=26,slow=7.4,SNR=4.1
comp=Z,1.4nm,0.7s
SBUM Sibu 78.89 259 P **P** **07 15 32.7 -1.2**
SBUM IAmb IAmb 07 15 35.6
comp=Z,21nm,1.3s
SBUM Sibu 78.89 259 P **P** **07 15 35.0 +1.1**
KIV Kislovodsk 79.12 335 *eP* **P** **07 15 33.8 -1.1**
KIV pmax pmax
comp=Z,11nm,1.1s
KBZ Khabaz 79.27 334 P **P** **07 15 35.3 -0.3**
comp=Z,3.9nm,0.8s,baz=20,slow=5.1,SNR=4.9
KBZ LR LR 07 57 13.3
comp=Z,35nm,18.1s,baz=317,slow=41
comp=Z,3.9nm,0.8s
MTSU Mount Surprise 79.55 221 P **P** **07 15 38.1 +0.8**
KSM Kuching 80.81 260 P **P** **07 15 45.7 +1.4**
MTN Manton Dam 80.88 235 P **P** **07 15 44.3 -0.2**
DAVOX Davos/Dischmat 81.03 358 P **P** **07 15 44.9 -0.3**
comp=Z,1.6nm,0.5s,baz=256,slow=4.2,SNR=2.3
comp=Z,1.6nm,0.5s
GNI Garni 82.08 332 LR LR 07 59 39.7
comp=Z,20nm,18.4s,baz=348,slow=41
QIS Mount Isa 83.67 224 P **P** **07 15 59.8 +0.9**
KULM Kulim 83.68 270 P **P** **07 15 59.9 +0.7**
IPM Ipoh 84.08 270 P **P** **07 16 02.0 +0.7**
BR131 Keskin Array S 85.27 340 *i* P **P** **07 16 06.9 -0.2**
BRTR Keskin Array B 85.27 340 P **P** **07 16 06.7 -0.4**
comp=Z,2.6nm,0.6s,baz=48,slow=3.0,SNR=13
BRTR pP **pP** **07 16 39.9 +0.6**
comp=Z,2.3nm,0.8s,baz=36,slow=2.3,SNR=5.4
comp=Z,2.6nm,0.6s
BRTR Keskin Array B 85.27 340 *i* P **P** **07 16 07.3 +0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.6s
WB0 Warramunga Arr 85.28 229 IAmb IAmb 07 16 06.9
comp=Z,12nm,0.9s
RDO Rodhopi 85.34 346 IAmb IAmb 07 16 08.2
comp=Z,18nm,1.0s
WRAB Tennant Creek 85.44 229 P **P** **07 16 07.8 0.0**
WRAB Tennant Creek 85.44 229 *ce* P **P** **07 16 08.0 +0.2**
WRAB pmax pmax
comp=Z,20nm,1.7s
WRAB Tennant Creek 85.44 229 P **P** **07 16 07.0 -0.8**
WRA Warramunga Arr 85.45 229 P **P** **07 16 06.6 -1.3**
WRA Warramunga Arr 85.45 229 P **P** **07 16 07.0 -0.8**
comp=Z,4.3nm,0.4s,baz=32,slow=5.7,SNR=38
comp=Z,4.3nm,0.4s
WRA Warramunga Arr 85.45 229 *i* P **P** **07 16 07.4 -0.5**
WRA pmax pmax
comp=Z,5.0nm,0.4s
PSI Prapat 86.69 270 P **P** **07 16 14.8 +0.5**
PSI Prapat 86.69 270 P **P** **07 16 14.5 +0.2**
PSI pmax pmax
comp=Z,45nm,1.1s
QLP Quilpie 87.22 218 P **P** **07 16 17.4 +1.1**
ESDC Sonseca Array 87.66 9 P **P** **07 16 17.1 -1.5**
comp=Z,0.9nm,0.6s,baz=350,slow=4.1,SNR=6.2
comp=Z,0.9nm,0.6s
FITZ Fitzroy Crossi 88.11 237 P **P** **07 16 21.4 +0.7**
AS31 Alice Springs 88.88 227 IAmb IAmb 07 16 25.5
comp=Z,8.5nm,0.8s
ASAR Alice Springs 88.89 227 P **P** **07 16 24.7 +0.3**
comp=Z,28nm,0.8s,baz=26,slow=4.9,SNR=261
TOZ Tahuroa Road 90.46 189 P **P** **07 16 32.1 +0.9**
CMSA Cobar Meteorol 91.20 214 P **P** **07 16 36.2 +1.3**
ASF Jabal al Asfar 91.72 335 LR LR 08 05 35.1
comp=Z,19nm,18.4s,baz=276,slow=40
OTAV Otavalo 92.53 86 P **P** **07 16 42.6 +0.5**
OTAV IAmb IAmb 07 16 44.4
comp=Z,4.4nm,1.0s
OTAV Otavalo 92.53 86 P **P** **07 16 42.6 +0.5**
OTAV pmax pmax
comp=Z,4.0nm,1.0s
STKA Stephens Creek 92.97 217 P **P** **07 16 42.9 -0.2**
STKA Stephens Creek 92.97 217 P **P** **07 16 43.3 +0.2**
comp=Z,3.0nm,0.3s,baz=354,slow=7.0,SNR=8.5
comp=Z,3.0nm,0.3s
STKA Stephens Creek 92.97 217 P **P** **07 16 43.8 +0.7**
TORD Torodi Ar. Bea 114.42 6 PKP **PKiKP** **07 22 08.4 -1.1**
comp=Z,2.7nm,0.3s,baz=355,slow=2.2,SNR=2.5
DBIC Dimbokro 120.15 14 PKP **PKPdf** **07 22 19.7 -0.9**
comp=Z,2.2nm,0.3s,baz=29,slow=1.9,SNR=10
CPUP Villa Florida 125.86 87 PKP **PKPdf** **07 22 30.8 -0.3**
comp=Z,0.4nm,0.6s,baz=255,slow=6.8,SNR=4.1
PLCA Paso Flores 127.87 110 PKP **PKiKP** **07 22 35.1 -0.1**
comp=Z,7.8nm,0.8s,baz=304,slow=2.6,SNR=17
VNDA Vanda 130.74 187 PKP **PKiKP** **07 22 39.6 -0.2**
comp=Z,0.7nm,0.8s,baz=351,slow=3.6,SNR=3.8
QSPA South Pole Qui 142.29 180 PKPdf **PKPdf** **07 22 59.1 -1.4**
QSPA South Pole Qui 142.29 180 PKP **PKPdf** **07 22 58.3 -2.2**
comp=Z,7.9nm,0.5s,baz=352,slow=1.4,SNR=61
QSPA SKPbc **SKPbc** **07 26 23.8 -2.1**
comp=Z,3.3nm,0.8s,baz=84,slow=1.8,SNR=4.0
MAW Mawson 149.66 219 PKPbc **PKPbc** **07 23 18.1 +0.4**
comp=Z,31nm,0.8s,baz=102,slow=2.6,SNR=39
BOSA Boshof 152.57 324 PKPbc **PKPbc** **07 23 25.1 -0.8**
comp=Z,3.8nm,0.5s,baz=26,slow=2.8,SNR=14
VNA3 Neumayer Olymp 159.78 164 ⇓P **PKPab** **07 24 06.3 -0.3**
comp=Z,4.0nm,0.7s
SNAA Sanae 160.29 171 ⇓P **PKPab** **07 24 08.3 -0.5**
comp=Z,133nm,0.6s
SNAA Sanae 160.29 171 PKP **PKPdf** **07 23 26.6 -0.7**
comp=Z,1.6nm,1.0s,baz=182,slow=5.6,SNR=5.1
SNAA PKPab **PKPab** **07 24 08.6 -0.2**
comp=Z,10.0nm,0.8s,baz=214,slow=8.7,SNR=30
TROLL Troll, Antarti 160.35 176 ⇑P **PKPab** **07 24 09.0 -0.1**
comp=Z,564nm,0.5s
VNA2 Neumayer--Watz 160.42 166 ⇓P **PKPab** **07 24 09.1 -0.2**
comp=Z,8.0nm,0.6s,baz=229,slow=1.9
VNA1 Neumayer--Stat 160.53 165 ⇓P **PKPab** **07 24 09.3 -0.5**
comp=Z,6.2nm,0.9s

*BUC **05** 07:18:34.3◦0.2,45˚42N◦26˚26E,h126km±1km,ml3.6/49,*
Error ellipse: s-maj=1.3km s-min=1.1km az=174.0

*SOF **05** 07:18:36.5, 45°30N±0°02×26°33E±0°02, h100km±2km, MD3.0/4*
ISC 05 07:18:32.9±1.4, **45°44N**±0°03×**26°27E**±0°03, **h139**km±7km, **n64**, σ0**°78**/107, **66C-33D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.02**	**129**	⇓P	**Pn**	**07 18 52.2**	**+0.6**
NEHR				⇑S	**Sn**	**07 19 05.2**	**-0.6**
MLR	**Muntele Rosu**	**0.24**	**283**	⇑P	**Pn**	**07 18 52.7**	**+0.6**
MLR				⇑S	**Sn**	**07 19 05.8**	**-0.7**
BISRR	**Bisoca**	**0.33**	**70**	⇓P	**Pn**	**07 18 52.8**	**+0.5**
BISRR				⇑S	**Sn**	**07 19 06.6**	**-0.3**
ISR	**Istrita**	**0.37**	**149**	⇑P	**Pn**	**07 18 52.9**	**+0.4**
ISR				⇑S	**Sn**	**07 19 06.4**	**-0.8**
PLOR	**Plostina**	**0.49**	**33**	⇑P	**Pn**	**07 18 53.4**	**+0.5**
PLOR				⇑S	**Sn**	**07 19 06.8**	**-1.4**
GRER		**0.50**	**97**	⇓S	**Sn**	**07 19 07.3**	**-0.8**
VRI	**Vrincioaia**	**0.53**	**37**	⇑P	**Pn**	**07 18 53.8**	**+0.7**
VRI				⇑S	**Sn**	**07 19 08.2**	**-0.3**
PLAR	**PLOIESTI**	**0.55**	**198**	⇓S	**Sn**	**07 19 08.2**	**-0.4**
ODBI	**Odobesti**	**0.64**	**59**	⇑S	**Sn**	**07 19 09.3**	**-0.3**
TURR	**Turia**	**0.64**	**344**	⇑P	**Pn**	**07 18 54.2**	**+0.4**
TURR				⇑S	**Sn**	**07 19 09.2**	**-0.6**
OZUR		**0.74**	**333**	⇓P	**Pn**	**07 18 54.7**	**+0.2**
OZUR				⇑S	**Sn**	**07 19 09.9**	**-1.0**
PANC	**Panciu**	**0.75**	**54**	⇓P	**Pn**	**07 18 55.4**	**+0.9**
PANC				⇓S	**Sn**	**07 19 11.0**	**+0.1**
SULR		**0.76**	**181**	⇑P	**Pn**	**07 18 55.4**	**+0.8**
SULR				⇑S	**Sn**	**07 19 10.5**	**-0.5**
DOPR	**Dopca**	**0.81**	**311**	⇑P	**Pn**	**07 18 54.9**	**-0.1**
DOPR				⇑S	**Sn**	**07 19 11.4**	**-0.5**
COSR	**Cosmesti PH**	**0.84**	**60**	⇑P	**Pn**	**07 18 55.9**	**+0.7**
COSR				⇑S	**Sn**	**07 19 11.5**	**-0.6**
MTUR	**Matau**	**0.88**	**256**	⇑P	**Pn**	**07 18 56.1**	**+0.5**
ONER	**Baraj Valea Uz**	**0.90**	**5**	⇑P	**Pn**	**07 18 56.4**	**+0.7**
ONER				⇑S	**Sn**	**07 19 12.6**	**-0.5**
TUDR		**0.99**	**81**	⇑P	**Pn**	**07 18 56.7**	**+0.2**
TUDR				⇓S	**Sn**	**07 19 14.2**	**-0.2**
GHRR		**1.01**	**52**	⇑P	**Pn**	**07 18 57.7**	**+1.1**
GHRR				⇑S	**Sn**	**07 19 15.0**	**+0.3**
CIOR	**Ciorogarla**	**1.03**	**196**	⇑P	**Pn**	**07 19 14.2**	**-0.8**
LEHL	**Lehliu**	**1.04**	**158**	⇑P	**Pn**	**07 18 57.6**	**+0.6**
LEHL				⇑S	**Sn**	**07 19 14.6**	**-0.5**
SCHL	**Schela**	**1.10**	**86**	⇑S	**Sn**	**07 19 15.2**	**-0.9**
SCHLR	**Schela**	**1.10**	**88**	⇓P	**Pn**	**07 18 57.7**	**+0.3**
SCHLR				⇓S	**Sn**	**07 19 15.6**	**-0.5**
SCHLR	**Schela**	**1.10**	**88**	⇓P	**Pn**	**07 18 57.7**	**+0.3**
TESR	**Tescani**	**1.10**	**14**	⇑P	**Pn**	**07 18 57.9**	**+0.4**
NEGRR	**Negrea**	**1.13**	**84**	⇑P	**Pn**	**07 18 58.3**	**+0.6**
NEGRR				⇑S	**Sn**	**07 19 16.5**	**-0.2**
ARR	**Arges**	**1.16**	**267**	⇑P	**Pn**	**07 18 58.7**	**+0.6**
ARR				⇓S	**Sn**	**07 19 16.2**	**-1.1**
VARL	**Varlezi**	**1.20**	**67**	⇑P	**Pn**	**07 18 59.2**	**+0.8**
VARL				⇑S	**Sn**	**07 19 17.9**	**+0.1**
SCTR	**Scanteiesti**	**1.23**	**78**	⇑P	**Pn**	**07 18 59.4**	**+0.7**
SCTR				⇑S	**Sn**	**07 19 18.7**	**+0.2**
SGRR	**Singureni**	**1.23**	**190**	⇑P	**Pn**	**07 18 59.0**	**+0.2**
SGRR				⇑S	**Sn**	**07 19 18.0**	**-0.5**
BIR	**Birlad**	**1.26**	**48**	⇑P	**Pn**	**07 18 59.9**	**+0.9**
BIR				⇑S	**Sn**	**07 19 18.6**	**-0.3**
TATR	**Tatarca**	**1.26**	**82**	⇓P	**Pn**	**07 18 59.7**	**+0.7**
TATR				⇑S	**Sn**	**07 19 18.3**	**-0.5**
HUMR	**Humele**	**1.29**	**226**	⇑P	**Pn**	**07 18 59.9**	**+0.5**
HUMR				⇓S	**Sn**	**07 19 19.6**	**0.0**
VLDR	**Vladesti**	**1.33**	**72**	⇑P	**Pn**	**07 19 00.6**	**+0.9**
VLDR				⇑S	**Sn**	**07 19 20.2**	**0.0**
CFR	**Carcaliu**	**1.34**	**101**	⇑P	**Pn**	**07 19 00.3**	**+0.4**
CFR				⇑S	**Sn**	**07 19 19.3**	**-1.1**
GIUM	**Giurgiulesti**	**1.36**	**87**	⇑P	**Pn**	**07 19 00.7**	**+0.7**
GIUM				⇑S	**Sn**	**07 19 21.5**	**+0.7**
HARR	**Harsova**	**1.39**	**122**	⇑P	**Pn**	**07 19 00.5**	**+0.1**
BIZ	**Bicaz**	**1.50**	**356**	⇓S	**Sn**	**07 19 23.6**	**0.0**
COPA	**Copaceanca**	**1.51**	**210**	⇑P	**Pn**	**07 19 01.8**	**+0.2**
COPA				⇓S	**Sn**	**07 19 23.2**	**-0.3**
TLBR	**Topalu**	**1.54**	**125**	⇑P	**Pn**	**07 19 02.8**	**+0.8**
TLBR				⇑S	**Sn**	**07 19 23.4**	**-0.9**
VASR	**Vaslui**	**1.60**	**41**	⇑P	**Pn**	**07 19 03.2**	**+0.6**
TPGR	**Topolog**	**1.63**	**110**	⇑P	**Pn**	**07 19 03.5**	**+0.5**
CVDA	**Cernavoda**	**1.67**	**131**	⇑P	**Pn**	**07 19 04.2**	**+0.7**
CVDA				⇓S	**Sn**	**07 19 26.2**	**-0.6**
ICOR	**Ion Corvin**	**1.71**	**140**	⇑P	**Pn**	**07 19 04.9**	**+1.0**
ICOR				⇑S	**Sn**	**07 19 27.5**	**-0.1**
LOT	**Lotru**	**1.76**	**271**	⇓P	**Pn**	**07 19 05.3**	**+0.7**
LOT				⇓S	**Sn**	**07 19 28.6**	**-0.3**
TIRR	**Tirgusor**	**1.81**	**122**	⇓P	**Pn**	**07 19 05.7**	**+0.6**
TIRR				⇓S	**Sn**	**07 19 28.9**	**-0.7**
TLCR		**1.81**	**97**	⇓P	**Pn**	**07 19 05.9**	**+0.9**
TLCR				⇓S	**Sn**	**07 19 29.7**	**0.0**
RAZG	**Razgrad**	**1.88**	**175**	⇓P	**Pn**	**07 19 06.8**	**+0.9**
RAZG				⇑S	**Sn**	**07 19 30.9**	**-0.3**
VLAD	**Vladila**	**1.96**	**223**	⇑P	**Pn**	**07 19 07.3**	**+0.4**
VLAD				⇑S	**Sn**	**07 19 32.1**	**-0.3**
MFTR	**Murfatlar**	**1.98**	**129**	⇑P	**Pn**	**07 19 07.4**	**+0.4**
SZH	**Strazhitsa**	**2.18**	**186**	P	**Pn**	**07 19 10.3**	**+0.7**
PSN	**Preselentsi**	**2.24**	**143**	*eP*	**Pn**	**07 19 11.3**	**+1.1**
NEF	**NEVSHA**	**2.29**	**161**	*iP*	**Pn**	**07 19 11.7**	**+0.8**
NEF				S	**Sn**	**07 19 37.1**	**-2.9**
MILM	**Milestii Mici** 90nm,0.1s	**2.30**	**49**	⇑*iP*	**Pn**	**07 19 10.4**	**-0.5**
MILM	140nm,0.1s			*eS*	**Sn**	**07 19 37.1**	**-3.1**
KIS	**Kishinev** 65nm,0.1s	**2.36**	**48**	⇑*iP*	**Pn**	**07 19 12.2**	**+0.6**
KIS	230nm,0.4s			*eS*	**Sn**	**07 19 40.0**	**-1.4**
PRD	**Provadia**	**2.42**	**160**	⇓*iP*	**Pn**	**07 19 13.3**	**+0.8**
PVL	**Pavlikeni**	**2.45**	**199**	⇓*iP*	**Pn**	**07 19 13.3**	**+0.5**
PVL				S	**Sn**	**07 19 42.3**	**-1.2**
GZR	**Gura Zlata**	**2.46**	**270**	⇑P	**Pn**	**07 19 13.3**	**+0.3**
GZR				⇓S	**Sn**	**07 19 43.8**	**-0.2**
ROIA	**ROIAK**	**2.48**	**161**	*eP*	**Pn**	**07 19 14.5**	**+1.3**
MARR	**Marisel-Cluj**	**2.52**	**301**	⇓P	**Pn**	**07 19 14.9**	**+1.1**
MARR				⇑S	**Sn**	**07 19 46.0**	**+0.7**
ELND	**Elena**	**2.53**	**187**	⇑P	**Pn**	**07 19 14.6**	**+0.8**
MPEP	**Malo Peshtene**	**2.76**	**222**	P	**Pn**	**07 19 17.5**	**+0.7**
HERR	**Herculane**	**2.79**	**260**	⇑P	**Pn**	**07 19 16.9**	**-0.1**
DRGR		**2.82**	**300**	⇓P	**Pn**	**07 19 17.8**	**+0.2**

*NNC **05** 07:21:49.1±0.5, 50°01N×78°84E, h0km, mpv1.7, Error ellipse: s-maj=9.2km s-min=2.3km az=74.0, Suspected Mining explosion.*
*IDC **05** 07:21:50.9±1.1, 50°06N×78°71E, h0km, mbtmp2.3/2, ML1.9/2, Error ellipse: s-maj=10.0km s-min=7.4km az=57.0*
ISC 05 07:21:49.8±2.5, **49°98N**±0°08×**78°5E**±0°3, **h0**km, **n14**, σ0**°47**/24, **14C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.61**	**2**	⇑P	**Pg**	**07 22 01.2**	**-0.2**
KUR07				⇑S	**Sg**	**07 22 09.9**	**+0.6**
KUR06	**Kurchatov Arra**	**0.63**	**3**	⇓P	**Pg**	**07 22 01.4**	**-0.4**
KUR06				⇑S	**Sg**	**07 22 10.3**	**+0.3**
KUR14	**Kurchatov Arra**	**0.64**	**7**	⇑P	**Pg**	**07 22 01.6**	**-0.5**
KUR14				⇓S	**Sg**	**07 22 10.4**	**-0.1**
KUR15	**Kurchatov Arra**	**0.65**	**5**	⇑P	**Pg**	**07 22 01.8**	**-0.3**
KUR15				⇑S	**Sg**	**07 22 10.6**	**+0.1**
KURBB	**Kurchatov Arra** 0.5nm,0.3s,baz=170,slow=18,SNR=15	**0.65**	**3**	Pg	**Pg**	**07 22 02.0**	**-0.2**
KURBB	0.8nm,0.3s,baz=167,slow=31,SNR=7.6			Lg	Lg	07 22 10.9	
KURBB	**Kurchatov Arra**	**0.65**	**3**	⇑P	**Pg**	**07 22 01.4**	**-0.8**
KURBB	49nm,0.7s			⇓S	**Sg**	**07 22 11.2**	**+0.6**
KUR16	**Kurchatov Arra**	**0.65**	**1**	⇑P	**Pg**	**07 22 02.1**	**-0.1**
KUR16				⇑S	**Sg**	**07 22 10.7**	**0.0**
KUR17	**Kurchatov Arra**	**0.66**	**360**	⇑P	**Pg**	**07 22 02.1**	**-0.2**
KUR17				⇑S	**Sg**	**07 22 10.8**	**0.0**
KUR05	**Kurchatov Arra**	**0.67**	**3**	⇓P	**Pg**	**07 22 02.1**	**-0.5**
KUR05				⇓S	**Sg**	**07 22 11.4**	**+0.2**
KUR04	**Kurchatov Arra**	**0.69**	**4**	⇑P	**Pg**	**07 22 02.4**	**-0.6**
KUR04				⇑S	**Sg**	**07 22 11.9**	**0.0**
KURK	**Kurchatov** 0.4nm,0.2s	**0.74**	**7**	⇑P	**Pg**	**07 22 03.2**	**-0.8**
KURK	17nm,1.1s			⇓S	**Sg**	**07 22 13.3**	**-0.5**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=328,slow=15,SNR=6.4	**4.08**	**140**	Pn	**Pn**	**07 22 53.9**	**+0.6**
MKAR				Pg	**Pb**	**07 23 02.0**	**-0.4**
	0.1nm,0.3s,baz=327,slow=16,SNR=4.4						
MKAR				Lg	Lg	07 23 54.0	
	0.4nm,0.3s,baz=320,slow=26,SNR=8.6						
	0.1nm,0.3s						
I46RU	**ZALESOVO INFRA** baz=224,slow=323,SNR=7.3	**5.58**	**42**	I	I	07 51 40.0	
ZALV	**Zalesovo Beam** 0.2nm,0.0s,baz=231,slow=11,SNR=2.1	**5.58**	**42**	Pn	**Pn**	**07 23 14.8**	**+0.8**
	0.3nm,0.3s						

*INMG **05** 07:22:40.5±3.5, 38°62N×29°16W, h6km, #DIST_RANGE: DISTANT*
*NEIC **05** 07:22:41.5±1.5, 38°35N±0°08×29°28W±0°03, h10km±1km, mb4.6/15, Error ellipse: s-maj=14.4km s-min=3.5km az=349.0*
*IDC **05** 07:22:42.2±0.8, 38°71N×29°20W, h0km, mb4.0/17, mbtmp4.0/18, ML4.3/1, MS3.7/42, Error ellipse: s-maj=25.3km s-min=15.8km az=157.0*
ISC 05 07:22:41.7±0.5, **38°51N**±0°09×**29°35W**±0°06, **h10**km, **n80**, σ1**°77**/43, **mb4.1**/21, **MS3.6**/41, **Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07S1	**FLORES T-PHASE**	**1.68**	**301**	Pn	**Pn**	**07 23 11.9**	**+0.6**
H07S1				Sn	**Sn**	**07 23 29.4**	**-3.6**
H07S1				T	T	07 24 30.5	
H07N1	**FLORES T-PHASE**	**1.81**	**311**	Pn	**Pn**	**07 23 14.7**	**+1.7**
H07N1				Sn	**Sn**	**07 23 32.9**	**-3.1**
H07N1	SNR=8.4			T	T	07 24 36.7	
CMLA	**Cha da Macela**	**3.11**	**103**	Pn	**Pn**	**07 23 28.1**	**-2.7**
PMOZ	**Porto Moniz, M**	**11.40**	**116**	Pn	**Pn**	**07 25 22.0**	**-2.7**
PMOZ	**Porto Moniz, M**	**11.40**	**116**	*eP*	**Pn**	**07 25 22.6**	**-2.1**
PMAR	**Madeira**	**11.65**	**116**	*eP*	**Pn**	**07 25 25.7**	**-2.5**
FUL	**Funchal**	**11.71**	**116**	*eP*	**Pn**	**07 25 27.6**	**-1.2**
MACI	**Morro de la Ar**	**14.81**	**130**	Pn	**Pn**	**07 26 10.2**	**-1.2**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=279,slow=12,SNR=6.4	**19.73**	**79**	P	**Pn**	**07 27 12.6**	**-0.4**
ESDC	comp=Z,269nm,19.4s,baz=278,slow=33 0.5nm,0.4s			LR	LR	07 33 24.7	
MD01	**Midelt array s**	**20.73**	**98**	P	**P**	**07 27 19.3**	**-3.2**
MDT	**Midelt** comp=Z,112nm,18.1s,baz=356,slow=34	**20.86**	**98**	LR	LR	07 34 37.6	
EKA	**Eskdalemuir Ar** 2.3nm,0.8s,baz=232,slow=8.9,SNR=4.0 2.3nm,0.8s	**24.34**	**38**	P	**P**	**07 27 59.4**	**-0.1**
GBN	**Guysborough**	**24.77**	**297**	P	**P**	**07 28 02.2**	**-1.3**
BORG	**Borgarnes** comp=Z,49nm,19.2s,baz=203,slow=29	**26.70**	**8**	LR	LR	07 35 20.4	
FDMO	**Fiordimonte**	**32.20**	**68**	P	**P**	**07 29 09.6**	**-0.3**
GERES	**GERESS Array B** 1.0nm,0.8s,baz=271,slow=8.7,SNR=4.3	**32.41**	**57**	P	**P**	**07 29 11.3**	**-0.5**
GERES	comp=Z,66nm,20.2s,baz=266,slow=34 1.0nm,0.8s			LR	LR	07 40 58.6	
NOA	**NORSAR Array B** 1.4nm,0.8s,baz=246,slow=8.3,SNR=3.3 1.4nm,0.8s	**33.72**	**35**	P	**P**	**07 29 23.4**	**+0.5**
JMIC	**Jan Mayen** comp=Z,91nm,18.1s,baz=228,slow=32	**34.29**	**12**	LR	LR	07 40 58.6	
VRAC	**Vranov** comp=Z,80nm,19.0s,baz=278,slow=35	**34.32**	**57**	LR	LR	07 42 26.7	
FRB	**Frobisher Bay** comp=Z,93nm,19.7s,baz=48,slow=30	**34.33**	**330**	LR	LR	07 39 40.5	
HFS	**Hagfors** comp=Z,171nm,18.6s,baz=344,slow=34	**34.53**	**37**	LR	LR	07 42 16.0	
SADO	**Sadowa** comp=Z,77nm,21.4s,baz=92,slow=33	**37.25**	**296**	LR	LR	07 43 23.5	
TORD	**Torodi Ar. Bea** comp=Z,11nm,0.8s	**37.36**	**124**	IAmb	IAmb	07 30 18.2	
TORD	**Torodi Ar. Bea** comp=Z,6.4nm,0.4s,baz=330,slow=8.5,SNR=2.3 comp=Z,6.4nm,0.4s	**37.36**	**124**	P	**P**	**07 29 56.4**	**+1.8**
SJG	**San Juan** comp=Z,47nm,22.0s,baz=132,slow=30	**37.90**	**248**	LR	LR	07 41 51.8	
MDP	**Montagnes des** comp=Z,89nm,18.4s,baz=10,slow=31	**39.42**	**218**	LR	LR	07 43 13.7	
FINES	**FINESS Array B** comp=Z,200nm,18.1s,baz=260,slow=35	**40.73**	**37**	LR	LR	07 46 08.1	
MLR	**Muntele Rosu** comp=Z,64nm,18.5s,baz=261,slow=36	**40.98**	**62**	LR	LR	07 47 18.7	
ARCES	**ARCESS Array B** comp=Z,6.0nm,0.9s,baz=264,slow=5.7,SNR=7.3	**42.33**	**25**	P	**P**	**07 30 35.9**	**+0.6**
ARCES	comp=Z,88nm,19.6s,baz=276,slow=32 comp=Z,6.0nm,0.9s			LR	LR	07 44 52.0	
AKASG	**Malin Array Be** comp=Z,11nm,1.2s	**42.38**	**54**	IAmb	IAmb	07 31 04.5	
AKASG	**Malin Array Be** comp=Z,3.1nm,0.7s,baz=276,slow=8.3,SNR=6.6	**42.38**	**54**	P	**P**	**07 30 36.1**	**+0.1**
AKASG	comp=Z,105nm,18.1s,baz=246,slow=36 comp=Z,3.1nm,0.7s			LR	LR	07 47 42.4	
TKL	**Tuckaleechee C** comp=Z,56nm,18.6s,baz=41,slow=33	**42.98**	**284**	LR	LR	07 46 36.6	
BAUV	**El Baul**	**45.51**	**240**	P	**P**	**07 31 01.1**	**-0.5**
OBN	**Obninsk** comp=Z,115nm,18.7s,baz=215,slow=36	**46.25**	**47**	LR	LR	07 50 19.0	
RES	**Resolute Bay** comp=Z,62nm,20.5s,baz=20,slow=30	**46.83**	**341**	LR	LR	07 46 18.4	
SDV	**Santo Domingo**	**47.34**	**242**	P	**P**	**07 31 16.3**	**+0.2**
SDV	**Santo Domingo** comp=Z,34nm,18.2s,baz=78,slow=34	**47.34**	**242**	LR	LR	07 50 02.0	
OXF	**Oxford**	**47.69**	**285**		**P**	**07 31 17.4**	**-1.1**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.7s,baz=324,slow=7.1,SNR=2.9	**47.97**	**68**	P	**P**	**07 31 20.7**	**-0.1**
BRTR	comp=Z,41nm,21.1s,baz=279,slow=35 comp=Z,0.8nm,0.7s			LR	LR	07 50 32.4	
H10N2	**ASCENSION HYDR** baz=345,slow=75,SNR=114	**48.14**	**160**	T	T	08 22 23.4	
H10N3	**ASCENSION HYDR** baz=345,slow=75,SNR=90	**48.15**	**160**	T	T	08 22 24.4	
H10N1	**ASCENSION HYDR** baz=345,slow=75,SNR=127	**48.16**	**160**	T	T	08 22 25.1	
H10S3	**ASCENSION HYDR** baz=236,slow=74,SNR=59	**49.17**	**161**	T	T	08 23 42.4	
H10S2	**ASCENSION HYDR** baz=344,slow=74,SNR=63	**49.18**	**161**	T	T	08 23 41.1	
KIRV	**Kirov** comp=Z,122nm,21.8s,baz=308,slow=34	**52.53**	**40**	LR	LR	07 52 42.2	
ROSC	**El Rosal** comp=Z,109nm,21.6s,baz=43,slow=33	**52.77**	**242**	LR	LR	07 51 42.9	
KBZ	**Khabaz** comp=Z,5.4nm,1.0s,baz=300,slow=4.5,SNR=5.4 comp=Z,5.4nm,1.0s	**53.09**	**60**	P	**P**	**07 32 01.3**	**+2.2**
YKA	**Yellowknife Ar** comp=Z,40nm,18.2s,baz=360,slow=33	**54.59**	**325**	LR	LR	07 52 45.6	
BRU2	**Volcan**	**56.14**	**255**	P	**P**	**07 32 20.1**	**-1.8**
BRDY	**Brady**	**56.35**	**285**		**P**	**07 32 22.8**	**-0.3**
BRDY	comp=Z,11nm,1.2s			IAmb	IAmb	07 32 26.4	
ARTI	**Arti** comp=Z,137nm,18.0s,baz=307,slow=36	**57.82**	**41**	LR	LR	07 57 33.9	
YNE	**Yellowstone No** comp=Z,5.0nm,0.7s	**58.17**	**305**	P	**P**	**07 32 35.8**	**-0.2**
YNE				IAmb	IAmb	07 33 03.2	
PDAR	**Pinedale Array** comp=Z,0.7nm,0.8s,baz=57,slow=5.5,SNR=5.5 comp=Z,0.7nm,0.8s	**58.81**	**302**	P	**P**	**07 32 42.1**	**+1.6**
AKTO	**Aktyubinsk** comp=Z,111nm,18.5s,baz=84,slow=36	**60.01**	**48**	LR	LR	07 58 44.9	
ANMO	**Albuquerque** comp=Z,79nm,20.4s,baz=154,slow=35	**60.17**	**293**	LR	LR	07 57 25.6	
CMIG	**Matias Romero** comp=Z,37nm,21.4s,baz=46,slow=33	**60.53**	**269**	LR	LR	07 55 52.0	
TXAR	**Lajitas Array**	**60.83**	**286**	P	**P**	**07 32 54.5**	**+0.1**
TXAR	**Lajitas Array** comp=Z,1.8nm,0.9s,baz=82,slow=6.6,SNR=18	**60.83**	**286**	P	**P**	**07 32 57.0**	**+2.6**
TXAR	comp=Z,50nm,19.2s,baz=55,slow=35 comp=Z,1.8nm,0.9s			LR	LR	07 58 24.4	
TX31	**Lajitas Ar. Si**	**60.83**	**286**		**P**	**07 32 54.6**	**+0.2**
TX31	comp=Z,7.1nm,1.2s			IAmb	IAmb	07 32 58.6	
DLBC	**Dease Lake** comp=Z,36nm,18.8s,baz=57,slow=33	**63.19**	**325**	LR	LR	07 57 29.1	
LPAZ	**La Paz**	**65.51**	**221**	P	**P**	**07 33 24.6**	**-1.5**
LPAZ	comp=Z,6.7nm,1.1s			IAmb	IAmb	07 33 37.0	
LPAZ	**La Paz** comp=Z,1.5nm,0.9s,baz=7.4,slow=6.5,SNR=10	**65.51**	**221**	P	**P**	**07 33 29.2**	**+3.1**
LPAZ	comp=Z,73nm,19.6s,baz=53,slow=34 comp=Z,1.5nm,0.9s			LR	LR	07 59 46.8	
BVAR	**Borovoye Array** comp=Z,0.8nm,0.6s,baz=316,slow=6.2,SNR=4.8	**65.54**	**41**	P	**P**	**07 33 24.8**	**-0.4**
BVAR	comp=Z,96nm,18.2s,baz=312,slow=37 comp=Z,0.8nm,0.6s			LR	LR	08 02 52.0	
ILAR	**Eielson Array**	**66.12**	**335**	P	**P**	**07 33 27.2**	**-1.5**
ILAR	**Eielson Array** comp=Z,0.3nm,0.9s,baz=46,slow=8.4,SNR=2.1 comp=Z,0.3nm,0.9s	**66.12**	**335**	P	**P**	**07 33 31.0**	**+2.3**
PFO	**Pinyon Flats O** comp=Z,40nm,18.2s,baz=47,slow=36	**67.99**	**296**	LR	LR	08 03 16.7	
LPIG	**La Paz** comp=Z,34nm,19.6s,baz=46,slow=35	**68.62**	**284**	LR	LR	08 02 50.6	
CPUP	**Villa Florida** comp=Z,16nm,18.9s,baz=224,slow=34	**69.62**	**207**	LR	LR	08 02 20.9	
KURK	**Kurchatov**	**71.05**	**40**	P	**P**	**07 34 00.3**	**+0.6**
KURK	**Kurchatov** comp=Z,3.8nm,1.0s	**71.05**	**40**	IAmb	IAmb	07 34 08.0	
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.7s,baz=308,slow=6.3,SNR=9.0	**71.06**	**40**	P	**P**	**07 34 00.3**	**+0.5**
KURBB	comp=Z,56nm,18.1s,baz=164,slow=36 comp=Z,1.0nm,0.7s			LR	LR	08 04 48.4	
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.5s,baz=311,slow=11,SNR=4.9	**71.92**	**35**	P	**P**	**07 34 05.5**	**+0.6**
ZALV	comp=Z,38nm,18.3s,baz=348,slow=36 comp=Z,0.8nm,0.5s			LR	LR	08 06 13.0	
AAK	**Ala-Archa** comp=Z,69nm,18.8s,baz=344,slow=36	**73.74**	**48**	LR	LR	08 07 20.4	
MKAR	**Makanchi Array** comp=Z,0.7nm,0.8s,baz=325,slow=6.1,SNR=4.5	**75.42**	**41**	P	**P**	**07 34 26.4**	**+0.8**
MKAR	comp=Z,108nm,18.3s,baz=310,slow=36 comp=Z,0.7nm,0.8s			LR	LR	08 07 53.4	
SEY	**Seymchan** comp=Z,14nm,20.8s,baz=338,slow=34	**78.89**	**359**	LR	LR	08 06 38.4	
SONM	**Songino Array** comp=Z,2.2nm,1.1s	**85.43**	**28**	IAmb	IAmb	07 35 22.3	
SONM	**Songino Array** comp=Z,1.1nm,0.9s,baz=350,slow=7.5,SNR=5.7	**85.43**	**28**	P	**P**	**07 35 19.8**	**+0.2**
SONM	comp=Z,38nm,19.7s,baz=322,slow=37 comp=Z,1.1nm,0.9s			LR	LR	08 15 06.1	
PLCA	**Paso Flores** comp=Z,31nm,19.7s,baz=4.0,slow=35	**87.39**	**210**	LR	LR	08 13 33.0	
BRDH	**Bariadhala** comp=Z,83nm,18.1s,baz=339,slow=38	**97.78**	**53**	LR	LR	08 24 23.4	
QSPA	**South Pole Qui** comp=Z,0.6nm,0.7s,baz=253,slow=1.9,SNR=2.0	**128.40**	**180**	PKP	**PKiKP**	**07 41 52.2**	**+3.9**

*IDC **05** 07:23:08.7±1.4, 49°69N×81°59E, h0km, mbtmp2.5/1, ML1.6/1, Error ellipse: s-maj=17.8km s-min=9.4km az=59.0*
ISC 05 07:23:00.9±1.4, **49°96N**±0°06×**82°21E**±0°08, **h10**km, **n6**, σ0**°91**/5, **3C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov** 5.2nm,0.7s	**2.42**	**290**	⇑Pn	**Pg**	**07 23 46.5**	**-0.8**
KURK	15nm,0.8s			⇑Lg	Lg	07 24 16.4	
KURBB	**Kurchatov Arra** 0.3nm,0.3s,baz=112,slow=19,SNR=15	**2.45**	**287**	Pg	**Pg**	**07 23 48.0**	**+0.1**
KURBB	0.3nm,0.3s,baz=115,slow=30,SNR=5.0			Lg	Lg	07 24 17.6	
MK31	**Makanchi Array** 0.9nm,0.4s,baz=347,slow=15,SNR=6.9	**3.17**	**179**	⇓Pg	**Pb**	**07 23 57.9**	**+0.7**
MK31	6.0nm,0.6s,baz=355,slow=29,SNR=13			⇑Lg	Lg	07 24 40.1	
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=348,slow=19,SNR=5.1	**3.17**	**179**	Pg	**Pg**	**07 24 00.8**	**-0.7**
MKAR	0.6nm,0.3s,baz=354,slow=28,SNR=20			Lg	Lg	07 24 40.3	
I46RU	**ZALESOVO INFRA** baz=203,slow=323,SNR=2.4	**4.31**	**21**	I	I	07 50 20.0	
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=213,slow=12,SNR=2.0	**4.31**	**21**	Pn	**Pg**	**07 24 23.0**	**-0.3**
ZALV	0.3nm,0.3s,baz=206,slow=26,SNR=8.4 0.3nm,0.3s			Lg	Lg	07 25 36.4	

*RSNC **05** 07:26:37.5±1.6, 1°N±5°×8°0W±°, h0km±9km, M3.0, mb3.9, ML2.4*
*IGQ **05** 07:26:38.9±0.2, 1°N±2°×8°0W±°, h9km±1km, MLv3.4/37*
ISC 05 07:26:38.6±0.9, **0°84N**±0°04×**79°72W**±0°05, **h14**km±7km, **n89**, σ1**°12**/95, **12C-20D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMA1	**Acelerografo,**	**0.09**	**354**	⇑P	**Pg**	**07 26 40.9**	**-0.8**
AMA1				S	**Sg**	**07 26 43.9**	**+0.1**
AES2	**Ecuador-Puerto**	**0.16**	**25**	⇓P	**Pg**	**07 26 41.5**	**-1.1**
AES2				S	**Sg**	**07 26 46.2**	**+1.0**
AV21	**Acelerografo,**	**0.24**	**137**	P	**Pb**	**07 26 45.0**	**+0.1**

PIS1	Pisayambo	2.31	145	P		Pb	07 27 19.9	-0.5
PIAT	Ana Tenorio	2.33	141	P		Pn	07 27 18.4	+1.4
GCUF	Volcan Galeras	2.40	81	P		Pn	07 27 18.4	+0.4
CHSH	Refugio Sur-Vo	2.47	160	P		Pb	07 27 22.3	-0.9
CASC	Dorado de Casc	2.48	106	P		Pb	07 27 21.8	-1.3
TAMH	Tambohuasha Ch	2.55	158	P		Pb	07 27 23.4	-1.0
BULB	Ulba Tungurahu	2.61	150	P		Pn	07 27 19.1	-1.7
ARDO	Archidona, Ten	2.64	134	⇑P		Pb	07 27 25.2	-0.6
JSCH	Cashca Tororas	2.65	164	P		Pn	07 27 23.3	+2.0
BPAT	Tungurahua Vol	2.66	151	P		Pb	07 27 24.7	-1.6
CRUC	La Cruz	2.86	75	P		Pn	07 27 25.5	+1.4
PKYU	Pakayacu	3.26	139	P		Pb	07 27 36.0	-0.3
COHC	Cochancay	3.32	172	P		Pn	07 27 30.3	+0.1
POPC	Popayan, Colom	3.48	61	P		Pn	07 27 32.5	-0.1
TAIS	Taisha	3.89	145	P		Pb	07 27 44.9	-2.2
PCRA	Pucara 2	4.03	177	P		Pn	07 27 40.6	+0.2
FLOC	Florencia	4.13	80	P		Pn	07 27 45.1	+3.8
FLOC	Florencia	4.13	80	P		Pn	07 27 43.9	+2.5
ARNL	Arenillas	4.37	185	P		Pn	07 27 46.1	+1.3
YOTC	Yotoco, Valle	4.59	47	P		Pn	07 27 49.4	+1.6
PTLC	Puerto Leguiza	4.96	98	P		Pn	07 27 51.6	-1.2
PTLC	Puerto Leguiza	4.96	98	P		Pn	07 27 53.7	+0.9
MCRA	Macar, Loja	5.18	183	P		Pn	07 27 56.8	+0.9
	8.9nm,0.8s							
ORTC	Ortega, Tolima	5.41	56	P		Pn	07 27 56.2	-2.8
ZUMB	Zumba	5.70	174	P		Pn	07 28 08.1	+5.1

CATAC 05 07:35:40.8±0.6,11°N±3°×8°7W±°,h25km±6km,M2.9/20, MLv2.9/20,Error ellipse: s-maj=6.4km s-min=5.5km az=44.5,confirmed,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SABN	Sabanita	0.84	51	P	Pb	07 35 56.6	-0.3
NADN	Granada	0.84	67	P	Pb	07 35 56.3	-0.5
NADN				S	Sn	07 36 08.7	0.0
NANN	Nandasmo	0.86	53	P	Pn	07 35 58.0	+0.6
NANN	Nandasmo	0.86	53	S	Sn	07 36 10.2	+1.0
MAS3	Al N del Volca	0.87	47	P	Pb	07 35 57.1	-0.3
MAS3				S	Sn	07 36 09.6	+0.1
UNAN	Cigeo UNAN	0.87	38	P	Pn	07 35 57.7	+0.1
TISN	Laguna Tiscapa	0.90	37	P	Pb	07 35 57.6	-0.2
APQ2	Apoyeque	0.91	32	P	Pb	07 35 57.8	-0.2
APQ2	Apoyeque	0.91	32	P	Pn	07 35 58.1	0.0
MGAN	Managua	0.92	38	P	Pn	07 35 58.3	+0.2
MGAN	Managua	0.92	38	S	Sn	07 36 11.1	+0.6
APQN	BB Volcan Apoy	0.95	33	P	Pn	07 35 57.9	-0.6
WILN	Americas 2	0.96	40	P	Pn	07 35 58.6	-0.1
WILN				S	Sn	07 36 12.4	+0.7
CNGA	Al SSO del Vol	1.07	7	P	Pn	07 36 00.0	-0.3
CNGN	Cerro Negro	1.08	7	P	Pn	07 36 00.2	-0.2
CNGN	Cerro Negro	1.08	7	S	Sn	07 36 14.7	+0.1
MOM3	MOM3	1.12	16	P	Pn	07 36 00.6	-0.3
POLN	Al Sur del Vol	1.22	1	P	Pn	07 36 01.1	-1.3
POLN				S	Sn	07 36 17.1	-0.9
PKGN	Cerro Pekin	1.25	353	P	Pn	07 36 02.4	-0.3
PKGN				S	Sb	07 36 19.5	+0.1
CARN	Rivas	1.30	100	P	Pn	07 36 03.1	-0.3
LIMN	Finca el Limon	1.69	15	P	Pn	07 36 08.5	-0.4
LIMN				S	Sn	07 36 30.8	+1.1
CSGN	Cosiguina Volc	1.70	335	P	Pn	07 36 08.9	-0.2
CSGN				S	Sn	07 36 31.2	+1.1
POTN	Potosi Cosigui	1.70	337	P	Pn	07 36 09.0	+0.1
POTN				S	Sn	07 36 30.7	+0.8
MATN	Matagalpa	1.74	30	P	Pn	07 36 08.3	-1.2
MATN	Matagalpa	1.74	30	S	Sn	07 36 30.8	-0.2
CNCH	Conchagua	2.09	332	P	Pn	07 36 14.4	0.0
LCND	La Caada	2.14	331	P	Pn	07 36 14.8	-0.2
JTS	Las Juntas de	2.16	121	P	Pn	07 36 15.9	+0.7
RCPN	Sur Rio San Ju	2.21	19	P	Pn	07 36 17.1	+1.0
OCON	Estacion meteo	2.22	9	P	Pn	07 36 16.8	+0.6

*IDC **05** 07:39:21.9±2.3,18°23S×172°74W,h0km,mb3.6/6, mbtmp3.6/6,MS2.7/1,Error ellipse: s-maj=147.3km s-min=24.9km az=152.0*

ISC 05 07:39:26.0±2.2,18°2S±0°8×172°8W±0°5,h26km,n7, σ0s37/6,mb3.8/6,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	22.09	92	LR	LR	07 50 25.2	
	comp=Z,19nm,19.0s,baz=214,slow=30						
WRA	Warramunga Arr	49.83	259	P	P	07 48 17.0	-0.3
	0.9nm,0.8s,baz=97,slow=7.5,SNR=3.3						
	0.9nm,0.8s						
ASAR	Alice Springs	49.85	254	P	P	07 48 17.7	+0.2
	1.8nm,1.0s,baz=91,slow=8.0,SNR=13						
	1.8nm,1.0s						
NVAR	Mina Array Bea	76.04	41	P	P	07 51 11.4	-0.1
	0.6nm,0.8s,baz=215,slow=6.5,SNR=4.3						
	0.6nm,0.8s						
TXAR	Lajitas Array	81.70	56	P	P	07 51 42.8	+0.2
	0.2nm,0.8s,baz=233,slow=5.1,SNR=2.5						
	0.2nm,0.8s						
PDAR	Pinedale Array	83.98	41	P	P	07 51 53.9	-0.4
	0.6nm,0.8s,baz=224,slow=4.7,SNR=5.3						
	0.6nm,0.8s						
ILAR	Eielson Array	85.10	11	P	P	07 51 59.4	+0.2
	0.3nm,0.8s,baz=207,slow=5.1,SNR=5.2						
	0.3nm,0.8s						

*SOME **05** 07:46:25.7,44°60N×82°35E,h35km*
*NNC **05** 07:46:27.9±2.3,44°68N×82°15E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=34.6km s-min=5.9km az=115.0, Suspected Mining explosion.*

ISC 05 07:46:25.0±2.9,44°7N±0°1×82°1E±0°3,h0km,n5,σ0s54/10, 4C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.10	4	⇑Pn	Pg	07 47 04.9	-0.4
	2.3nm,0.3s,baz=191,slow=14,SNR=62						
MK31				⇓Sn	Sg	07 47 32.6	0.0
	4.9nm,0.3s,baz=173,slow=16,SNR=28						
MAKZ	Makanchi	2.11	358	⇓Pn	Pb	07 47 04.4	+0.1
	1.4nm,0.4s						
MAKZ				⇑Sn	Sg	07 47 32.8	-0.1
	4.7nm,0.5s						
PDGK	Podgornoye	2.31	235	⇑Pn	Pb	07 47 07.3	-0.4
	1.7nm,0.6s						
PDGK				⇑Sn	Sg	07 47 39.1	-0.2
	7.5nm,0.5s						
SHLS	Shalkode	2.43	232	*e*P	Pn	07 47 06.8	+0.6
	6.0nm,0.1s						
SHLS				*e*S	Sn	07 47 36.0	-0.7
	18nm,0.4s						
UZB	Uzynbulak	2.69	236	*e*P	Pb	07 47 14.1	-0.1
	4.2nm,0.3s						
UZB				*e*S	Sb	07 47 48.7	+0.9
	5.2nm,0.3s						

*GEN **05** 07:47:56.6,46°31N×7°37E,h6km,Ml2.3*
*ZUR **05** 07:47:57.3,46°33N×7°36E,h5km,MLh2.7/122,Error ellipse: s-maj=1449.3km s-min=511.0km az=126.0*
*LDG **05** 07:47:57.9±0.0,46°30N×7°40E,h4km,Ml3.0/28,Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
*ROM **05** 07:47:57.8±0.1,46°262N±0°004×7°412E±0°004, h13km,ML2.3/29,Error ellipse: s-maj=0.3km s-min=0.2km az=342.0*
*BGR **05** 07:47:58.2±0.7,46°38N×7°26E,h10km,ML2.7/8,Error ellipse: s-maj=11.1km s-min=5.6km az=111.0*

ISC 05 07:47:56.9±0.7,46°32N±0°01×7°35E±0°01,h9km±3km, n189,σ0s80/314,27C-39D,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	Sanetsch, VS	0.03	255	⇓Pg	Pg	07 47 58.8	+0.1
RAW2				Sg	Sg	07 47 59.8	-0.3
RAW2	Sanetsch, VS	0.03	255	⇓Pg	Pg	07 47 58.8	+0.1
RAW2				Sg	Sg	07 47 59.8	-0.3
SAYF2	Ayent-Fortunoz	0.06	127	⇑Pg	Pg	07 47 58.9	+0.1
SAYF2				Sg	Sg	07 47 60.0	-0.3
SAYF2	Ayent-Fortunoz	0.06	127	⇑Pg	Pg	07 47 58.9	+0.1
SAYF2				Sg	Sg	07 47 60.0	-0.3
SENIN	Lac Senin/Sane	0.06	318	⇓Pg	Pg	07 47 59.1	+0.1
SENIN				Sg	Sg	07 48 00.3	-0.2
STSW2	Zeuzier, Staus	0.06	67	⇑Pg	Pg	07 47 59.0	0.0
STSW2				Sg	Sg	07 48 00.1	-0.5
STSW2	Zeuzier, Staus	0.06	67	⇑Pg	Pg	07 47 59.0	0.0
STSW2				Sg	Sg	07 48 00.1	-0.5
LEO01	Saint Lonard,	0.09	144	⇑Pg	Pg	07 47 59.5	+0.3
LEO01				Sg	Sg	07 48 01.3	+0.6
LEO01	Saint Lonard,	0.09	144	⇑Pg	Pg	07 47 59.5	+0.3
LEO01				Sg	Sg	07 48 01.3	+0.6
SIOV	Sion-Valere	0.09	175	Pg	Pg	07 47 59.5	+0.3
SIOV				Sg	Sg	07 48 00.9	+0.1
SIOV	Sion-Valere	0.09	175	⇑Pg	Pg	07 47 59.5	+0.3
SIOV				Sg	Sg	07 48 00.9	+0.1
SIOO	Sion-Ophtalmol	0.09	167	⇑Pg	Pg	07 47 59.7	+0.5
SIOO				Sg	Sg	07 48 01.7	+0.8
SIOO	Sion-Ophtalmol	0.09	167	⇑Pg	Pg	07 47 59.7	+0.5
SIOO				Sg	Sg	07 48 01.7	+0.8
SIOM	Sion-Mayennets	0.09	176	Sg	Sg	07 48 01.2	+0.3
SIOM	Sion-Mayennets	0.09	176	Sg	Sg	07 48 01.2	+0.3
SIE01	Sierre, Farmho	0.11	118	⇓Pg	Pg	07 47 59.9	+0.4
SIE01	Sierre, Farmho	0.11	118	⇓Pg	Pg	07 47 59.9	+0.4
CON01	Conthey, Agros	0.12	198	Sg	Sg	07 48 02.2	+0.8
RAW1	Lenk, BE	0.12	30	⇑Pg	Pg	07 47 59.8	+0.2
RAW1				Sg	Sg	07 48 01.7	+0.1
RAW1	Lenk, BE	0.12	30	⇑Pg	Pg	07 47 59.8	+0.2
RAW1				Sg	Sg	07 48 01.7	+0.1
VET01	Vtroz, Route	0.12	211	⇑Pg	Pg	07 47 59.9	+0.3
VET01				Sg	Sg	07 48 02.0	+0.6
VET01	Vtroz, Route	0.12	211	⇑Pg	Pg	07 47 59.9	+0.3
VET01				Sg	Sg	07 48 02.0	+0.6
VET02	Vtroz, Route	0.12	208	Pg	Pg	07 48 00.1	+0.5
VET02	Vtroz, Route	0.12	208	Pg	Pg	07 48 00.1	+0.5
VET02				Sg	Sg	07 48 02.5	+1.0
VET03	Vtroz, Le Bot	0.12	205	Sg	Sg	07 48 03.1	+1.4
VET03	Vtroz, Le Bot	0.12	205	Sg	Sg	07 48 03.1	+1.4
SIEB	Ecole de Borzu	0.13	102	⇓Pg	Pg	07 48 00.1	+0.3
SIEB	Ecole de Borzu	0.13	102	⇓Pg	Pg	07 48 00.1	+0.3
SARC	Ardon Commune,	0.13	211	Pg	Pg	07 48 00.3	+0.6
SARC				Sg	Sg	07 48 02.5	+0.6
SHER	Hrmence, R	0.14	168	⇑Pg	Pg	07 48 00.5	+0.5
SHER				Sg	Sg	07 48 02.8	+0.6
SHER	Hrmence, R	0.14	168	⇑Pg	Pg	07 48 00.5	+0.5
SHER				Sg	Sg	07 48 02.8	+0.6
RAW4	Former Reservo	0.17	227	⇑Pg	Pg	07 48 01.0	+0.6
RAW4	Former Reservo	0.17	227	⇑Pg	Pg	07 48 01.0	+0.6
GRYON	Gryon	0.18	247	⇓Pg	Pg	07 48 01.1	+0.4
GRYON				Sg	Sg	07 48 04.1	+0.7
GRYON	Gryon	0.18	247	⇓Pg	Pg	07 48 01.1	+0.4
GRYON				Sg	Sg	07 48 04.1	+0.7
VANNI	Vissoie, Val d	0.20	123	⇓Pg	Pg	07 48 01.6	+0.5
VANNI	Vissoie, Val d	0.20	123	⇓Pg	Pg	07 48 01.6	+0.5
VANNI	Vissoie, Val d	0.20	123	P	Pg	07 48 01.6	+0.5
VANNI				S	Sg	07 48 04.4	+0.4
LKBD2	Leukerbad 2	0.21	75	⇓Pg	Pg	07 48 01.5	+0.2
LKBD2				Sg	Sg	07 48 04.5	+0.3
LKBD2	Leukerbad 2	0.21	75	⇓Pg	Pg	07 48 01.5	+0.2
LKBD2				Sg	Sg	07 48 04.5	+0.3
SCOD	Chcteau-dO	0.21	314	⇓Pg	Pg	07 48 01.9	+0.6
SCOD	Chcteau-dO	0.21	314	⇓Pg	Pg	07 48 01.9	+0.6
AGA01	Agarn, Footbal	0.22	96	Sg	Sg	07 48 05.2	+0.8
AGA01	Agarn, Footbal	0.22	96	Sg	Sg	07 48 05.2	+0.8
FULLY	Reservoir Maze	0.22	223	⇑Pg	Pg	07 48 02.0	+0.6
FULLY	Reservoir Maze	0.22	223	⇑Pg	Pg	07 48 02.0	+0.6
FULLY				Sg	Sg	07 48 05.3	+0.8
SZWD2	Zweisimmen Kir	0.23	3	Pg	Pg	07 48 02.4	+0.8
DIX	Grande Dixence	0.24	171	⇑Pg	Pg	07 48 02.4	+0.6
DIX				Sg	Sg	07 48 05.7	+0.5
DIX	Grande Dixence	0.24	171	⇑Pg	Pg	07 48 02.4	+0.6
DIX				Sg	Sg	07 48 05.7	+0.5
DIX	Grande Dixence	0.24	171	P	Pg	07 48 02.5	+0.6
DIX				S	Sg	07 48 05.7	+0.5
DIX	Grande Dixence	0.24	171	P	Pg	07 48 02.4	+0.6
DIX				S	Sg	07 48 05.7	+0.5
DIX				AML	AML		
	comp=E,7700μm,0.2s						
DIX				AML	AML		
	comp=E,7700μm,0.3s						
DIX				AML	AML		
	comp=N,6100μm,0.2s						
DIX				AML	AML		
	comp=E,7696μm,0.2s						
DIX				AML	AML		
	comp=N,6099μm,0.2s						
LAVEY	Lavey les Bain	0.26	242	⇓Pg	Pg	07 48 02.6	+0.5
LAVEY				Sg	Sg	07 48 06.4	+0.9
LAVEY	Lavey les Bain	0.26	242	⇓Pg	Pg	07 48 02.6	+0.5
LAVEY				Sg	Sg	07 48 06.4	+0.9
SGAK	Gampel Kirche,	0.27	91	⇓Pg	Pg	07 48 02.7	+0.4
SGAK	Gampel Kirche,	0.27	91	⇓Pg	Pg	07 48 02.7	+0.4
SGAK				Sg	Sg	07 48 06.3	+0.4
AIGLE	Aigle	0.28	274	⇓Pg	Pg	07 48 02.9	+0.5
AIGLE	Aigle	0.28	274	⇓Pg	Pg	07 48 02.9	+0.5
NIE01	Niedergesteln,	0.30	92	⇓Pg	Pg	07 48 03.2	+0.3
NIE01				Sg	Sg	07 48 07.0	+0.2
NIE01	Niedergesteln,	0.30	92	⇓Pg	Pg	07 48 03.2	+0.3
NIE01				Sg	Sg	07 48 07.0	+0.2
ILLEZ	Chalet Vouargn	0.30	250	Sg	Sg	07 48 08.1	+1.0
ILLEZ	Chalet Vouargn	0.30	250	Sg	Sg	07 48 08.1	+1.0
LAUCH	Lauchernalp	0.30	72	Pg	Pg	07 48 03.4	+0.3
LAUCH				Sg	Sg	07 48 07.4	+0.3
LAUCH	Lauchernalp	0.30	72	Pg	Pg	07 48 03.4	+0.3
LAUCH				Sg	Sg	07 48 07.4	+0.3
LAUCH	Lauchernalp	0.30	72	P	Pg	07 48 03.3	+0.3
LAUCH				S	Sg	07 48 07.4	+0.3
RAR01	Raron, Gemeind	0.31	92	⇑Pg	Pg	07 48 03.5	+0.5
RAR01				Sg	Sg	07 48 07.8	+0.7
JAUN	Jaun, Euschels	0.32	352	⇓Pg	Pg	07 48 03.8	+0.6
JAUN				Sg	Sg	07 48 08.8	+1.4
JAUN	Jaun, Euschels	0.32	352	⇓Pg	Pg	07 48 03.8	+0.6
JAUN				Sg	Sg	07 48 08.8	+1.4
SALAN	Lac Salanfe	0.32	236	⇑Pg	Pg	07 48 03.8	+0.6
SALAN	Lac Salanfe	0.32	236	⇑Pg	Pg	07 48 03.8	+0.6
SALAN				Sg	Sg	07 48 08.5	+1.0
EMBD	Embd, Matterta	0.35	107	⇓Pg	Pg	07 48 04.1	+0.3
EMBD	Embd, Matterta	0.35	107	⇓Pg	Pg	07 48 04.1	+0.3
EMBD				Sg	Sg	07 48 08.5	+0.2
EMBD	Embd, Matterta	0.35	107	P	Pg	07 48 04.1	+0.3
EMBD				S	Sg	07 48 08.5	+0.2
SVISP	Visp, Lonza VS	0.36	93	Sg	Sg	07 48 09.2	+0.4
SVIO	Visp Obere Sta	0.37	95	Pg	Pg	07 48 04.4	+0.4
SVIO				Sg	Sg	07 48 09.2	+0.3
SBUL	Bulle cole,	0.37	326	Pg	Pg	07 48 05.3	+1.2
SBUL	Bulle cole,	0.37	326	Pg	Pg	07 48 05.3	+1.2
SVIT	Visp-Terbiners	0.37	95	⇑Pg	Pg	07 48 04.5	+0.4
WIMIS	Wimmis	0.39	28	Pg	Pg	07 48 05.2	+0.7
WIMIS	Wimmis	0.39	28	Pg	Pg	07 48 05.2	+0.7
BIBA	Brigerbad	0.40	93	⇓Pg	Pg	07 48 05.1	+0.4
BIBA	Brigerbad	0.40	93	⇓Pg	Pg	07 48 05.1	+0.4
BIBA				Sg	Sg	07 48 10.3	+0.3
MH36	Zermatt, Posit	0.41	147	⇓Pg	Pg	07 48 05.2	+0.3
MH36	Zermatt, Posit	0.41	147	⇓Pg	Pg	07 48 05.2	+0.3
MH44	Zermatt, Posit	0.41	147	⇓Pg	Pg	07 48 05.2	+0.3
MH44	Zermatt, Posit	0.41	147	⇓Pg	Pg	07 48 05.2	+0.3
MFERR	Prayon, Val Fe	0.41	204	⇑Pg	Pg	07 48 05.2	+0.4
MFERR	Prayon, Val Fe	0.41	204	⇑Pg	Pg	07 48 05.2	+0.4
MFERR				Sg	Sg	07 48 10.7	+0.5
SZEK	Zermatt, Kirch	0.41	138	Pg	Pg	07 48 05.1	+0.3
SZEK	Zermatt, Kirch	0.41	138	Pg	Pg	07 48 05.1	+0.3
SNTZ	Naters, Zentru	0.44	89	Pg	Pg	07 48 05.9	+0.4
SNTZ	Naters, Zentru	0.44	89	Pg	Pg	07 48 05.9	+0.4
SIMPL	Simplonpass	0.47	100	⇓Pg	Pg	07 48 06.2	+0.3
SIMPL	Simplonpass	0.47	100	⇓Pg	Pg	07 48 06.3	+0.3
SIMPL				Sg	Sg	07 48 12.4	+0.2
SIMPL	Simplonpass	0.47	100	P	Pg	07 48 06.3	+0.3
SIMPL				S	Sg	07 48 12.3	+0.1
MMK	Mattmark	0.50	122	⇓Pg	Pg	07 48 06.7	0.0
MMK	Mattmark	0.50	122	⇓Pg	Pg	07 48 06.7	0.0
MMK	Mattmark	0.50	122	P	Pg	07 48 06.7	0.0
MMK				S	Sg	07 48 13.1	-0.2
MMK	Mattmark	0.50	122	P	Pg	07 48 06.6	0.0
FIESA	Fiescheralp	0.54	77	P	Pg	07 48 07.6	+0.3
FIESA				S	Sg	07 48 14.2	-0.2
SATI	Passo dei Sala	0.57	141	P	Pg	07 48 08.1	+0.1
SATI				S	Sg	07 48 15.1	-0.5
SATI	Passo dei Sala	0.57	141	P	Pg	07 48 08.0	0.0
SATI				S	Sg	07 48 15.1	-0.5
SATI				AML	AML		
	comp=E,309μm,0.3s						
SATI				AML	AML		
	comp=N,316μm,0.3s						
SATI				AML	AML		
	comp=E,309μm,0.3s						
SATI				AML	AML		
	comp=N,308μm,0.2s						
MRGE	Morge	0.59	200	P	Pg	07 48 08.5	+0.2
MRGE				S	Sg	07 48 16.3	+0.3
MRGE	Morge	0.59	200	P	Pg	07 48 08.4	+0.1
MRGE				S	Sg	07 48 16.3	+0.3
MRGE				AML	AML		
	comp=E,338μm,1.1s						
MRGE				AML	AML		
	comp=N,237μm,0.5s						
MRGE				AML	AML		
	comp=E,257μm,0.5s						
MRGE				AML	AML		
	comp=N,206μm,0.3s						
CIRO	Champorcher	0.73	168	P	Pg	07 48 10.8	-0.2
CIRO				S	Sg	07 48 19.5	-1.2
CIRO	Champorcher	0.73	168	P	Pg	07 48 10.6	-0.5
CIRO				S	Sg	07 48 19.8	-0.9
CIRO				AML	AML		
	comp=N,138μm,1.0s						
CIRO				AML	AML		
	comp=E,142μm,0.3s						
CIRO				AML	AML		
	comp=N,114μm,0.3s						
CIRO				AML	AML		
	comp=E,142μm,0.3s						
GIMEL	St. Georges /	0.78	286	P	Pb	07 48 13.3	+0.6
GIMEL				S	Sb	07 48 25.0	+1.5
GIMEL				AML	AML		
	comp=N,354μm,0.6s						
GIMEL				AML	AML		
	comp=N,354μm,0.6s						
GIMEL				AML	AML		
	comp=E,532μm,0.2s						
GIMEL				AML	AML		
	comp=E,532μm,0.2s						
GIMEL				AML	AML		
	comp=N,345μm,0.2s						
GIMEL				AML	AML		
	comp=E,532μm,1.8s						
RSL	Roselend	0.81	219	P	Pg	07 48 12.6	+0.2
RSL				S	Sg	07 48 23.6	+0.6
TRAV	Traversella	0.85	161	P	Pg	07 48 13.0	-0.3
TRAV				S	Sg	07 48 23.5	-0.9
TRAV	Traversella	0.85	161	P	Pg	07 48 12.8	-0.5
TRAV				S	Sg	07 48 23.4	-1.0
TRAV				AML	AML		
	comp=E,336μm,1.2s						
TRAV				AML	AML		
	comp=N,376μm,1.3s						
TRAV				AML	AML		
	comp=E,336μm,0.8s						
TRAV				AML	AML		
	comp=N,376μm,0.7s						
LSD	Lago del Serru	0.88	190	P	Pg	07 48 13.6	-0.1
LSD				S	Sg	07 48 25.5	+0.4
LSD	Lago del Serru	0.88	190	P	Pg	07 48 13.3	-0.4
LSD				AML	AML		
	comp=E,642nm,1.2s						
LSD				AML	AML		
	comp=N,108μm,0.3s						
LSD				AML	AML		
	comp=E,642nm,0.8s						
LPL	La Plagne	0.92	209	*e*Pg	Pg	07 48 14.7	+0.2
LPL				*e*Sg	Sb	07 48 27.5	+0.1
	comp=E,24nm,0.4s						
FUSIO	Fusio	0.92	81	P	Pg	07 48 14.5	+0.1
FUSIO				S	Sg	07 48 26.2	-0.2
FUSIO	Fusio	0.92	81	P	Pg	07 48 14.4	-0.1
FUSIO				S	Sg	07 48 26.3	-0.2
FUSIO				AML	AML		
	comp=E,136μm,1.1s						
FUSIO				AML	AML		
	comp=N,143μm,1.1s						
FUSIO				AML	AML		
	comp=E,118μm,0.3s						
FUSIO				AML	AML		
	comp=N,120μm,0.4s						
FUSIO				AML	AML		
	comp=E,136μm,0.9s						
BNALP	Bannalp	0.92	53	P	Pb	07 48 14.9	-0.2
BNALP				AML	AML		
	comp=E,183μm,0.8s						
BNALP				AML	AML		
	comp=E,183μm,0.8s						
BNALP				AML	AML		
	comp=N,154μm,0.2s						
BNALP				AML	AML		
	comp=E,183μm,1.2s						
CABF	La Chapelle	0.92	289	*e*Pg	Pb	07 48 15.6	+0.5
CABF				*e*Sg	Sg	07 48 27.7	+1.1
	comp=E,88nm,0.2s						
LPG	La Plagne	0.93	207	*e*Pg	Pg	07 48 14.9	+0.2
LPG				*e*Sg	Sb	07 48 28.2	+0.4
	comp=E,25nm,0.2s						
BALST	Balsthal	1.04	13	*e*Pn	Pb	07 48 17.4	+0.2
BALST				*e*Pg	Pn	07 48 18.3	+0.5
VARE	Varese	1.08	114	P	Pb	07 48 17.7	-0.2
VARE				S	Sb	07 48 32.0	-0.2
VARE	Varese	1.08	114	P	Pg	07 48 16.8	-0.9
VARE				AML	AML		
	comp=N,214μm,1.5s						
VARE				AML	AML		
	comp=E,160μm,0.3s						
VARE				AML	AML		
	comp=N,214μm,0.5s						
VARE				AML	AML		
	comp=E,160μm,1.7s						
RSP	Reno Superiore	1.18	183	P	Pb	07 48 18.9	-0.5
RSP				S	Sg	07 48 34.6	-0.1
RSP	Reno Superiore	1.18	183	P	Pb	07 48 18.6	-0.8
RSP				AML	AML		
	comp=N,146μm,0.5s						
RSP

PLONS				*e*Pg		**Pb**	07 48 28.7	+2.5
PLONS	**Plons/SG**	**1.57**	**62**	P		**Pb**	07 48 26.3	+0.1
PLONS				AML		AML		
	comp=E,100µm,1.3s							
PLONS				AML		AML		
	comp=N,132µm,0.8s							
PLONS				AML		AML		
	comp=N,132µm,0.8s							
PLONS				AML		AML		
	comp=E,100µm,0.7s							
PLONS				AML		AML		
	comp=N,132µm,1.2s							
SLE	**Schleitheim**	**1.64**	**28**	*e*Pn		**Pn**	07 48 25.8	-0.1
SLE				*e*Pg		**Pg**	07 48 28.5	+0.2
SLE				*e*Sg		**Sg**	07 48 50.0	+0.4
MBDF	**Montbardon**	**1.65**	**195**	*e*Pn		**Pn**	07 48 26.5	+0.4
MBDF	**Montbardon**	**1.65**	**195**	*e*Pg		**Pg**	07 48 28.7	+0.3
MBDF				*e*Sg		**Sg**	07 48 49.8	0.0
	comp=N,11nm,0.3s							
BERGE	**Lenzkirch (DE)**	**1.65**	**20**	*e*Pn		**Pn**	07 48 25.8	-0.3
BERGE				*e*Pg		**Pg**	07 48 28.8	+0.3
BERGE				*e*Sg		**Sg**	07 48 50.1	+0.2
ORIF	**Oris-en-Rattie**	**1.74**	**217**	*e*Pn		**Pn**	07 48 28.1	+0.7
ORIF	**Oris-en-Rattie**	**1.74**	**217**	*e*Pg		**Pb**	07 48 29.8	+0.7
ORIF				*e*Sg		**Sg**	07 48 52.9	0.0
	comp=N,15nm,0.4s							
ORIF	**Oris-en-Rattie**	**1.74**	**217**	P		**Pn**	07 48 28.3	+0.9
HAU	**Haudompre**	**1.82**	**338**	*e*Pn		**Pn**	07 48 29.1	+0.7
HAU	**Haudompre**	**1.82**	**338**	*e*Pg		**Pg**	07 48 31.5	-0.2
HAU				*e*Sg		**Sg**	07 48 55.2	-0.1
	comp=N,107nm,0.3s							
EMING	**Emmingen-Lipti**	**1.87**	**32**	*e*Pg		**Pg**	07 48 32.7	0.0
EMING				*e*Sg		**Sg**	07 48 57.0	0.0
WALHA	**Wallhausen, DE**	**1.88**	**40**	*e*Pg		**Pg**	07 48 33.1	+0.4
DAVA	**Damuels**	**1.99**	**60**	*e*Pg		**Pg**	07 48 35.4	+0.5
	comp=N,3.2nm,0.2s							
DAVA				*e*Sg		**Sb**	07 48 57.3	-0.9
	comp=N,17nm,0.2s							
CDF	**Champ du Feu**	**2.09**	**359**	*e*Pn		**Pn**	07 48 32.0	-0.2
CDF	**Champ du Feu**	**2.09**	**359**	*e*Pg		**Pg**	07 48 37.1	+0.1
CDF				*e*Sn		**Sn**	07 48 57.5	-0.9
CDF				*e*Sg		**Sg**	07 49 03.7	-0.4
	comp=N,12nm,0.2s							
BFO	**Black Forest**	**2.12**	**18**	*e*Pn		**Pn**	07 48 31.9	-0.5
VIVF	**Saint-Julien-l**	**2.38**	**233**	*e*Pn		**Pn**	07 48 37.2	+1.0
VIVF	**Saint-Julien-l**	**2.38**	**233**	*e*Pg		**Pg**	07 48 42.2	-0.4
VIVF				*e*Sn		**Sn**	07 49 05.2	-0.4
VIVF				*e*Sg		**Sg**	07 49 12.5	-1.0
	comp=N,13nm,0.3s							
FETA	**Feichten**	**2.43**	**72**	*e*Pn		**Pn**	07 48 37.7	+0.8
	comp=N,4.8nm,0.3s							
FETA				*i* Sn		**Sn**	07 49 08.2	+1.4
	comp=N,3.1nm,0.2s							
SMF	**Signal de Mont**	**2.45**	**279**	*e*Pg		**Pg**	07 48 43.0	-0.8
SMF				*e*Sg		**Sg**	07 49 15.0	-0.5
	comp=N,12nm,0.2s							
SFTF	**Sexfontaines**	**2.46**	**321**	*e*Pn		**Pn**	07 48 38.2	+1.1
SFTF	**Sexfontaines**	**2.46**	**321**	*e*Pg		**Pg**	07 48 43.8	-0.1
SFTF				*e*Sn		**Sn**	07 49 07.2	-0.1
SFTF				*e*Sg		**Sg**	07 49 15.7	0.0
	comp=N,40nm,0.4s							
SBF	**Sospel**	**2.46**	**179**	*e*Pn		**Pn**	07 48 37.3	+0.1
SBF	**Sospel**	**2.46**	**179**	*e*Pg		**Pb**	07 48 42.4	+1.1
SBF				*e*Sn		**Sn**	07 49 06.1	-1.3
SBF				*e*Sg		**Sg**	07 49 15.2	-0.6
	comp=N,25nm,0.4s							
PAGF	**Fort de Pagny**	**2.49**	**334**	*e*Pn		**Pn**	07 48 38.6	+1.0
PAGF	**Fort de Pagny**	**2.49**	**334**	*e*Pg		**Pg**	07 48 44.1	-0.5
PAGF				*e*Sn		**Sn**	07 49 06.8	-1.4
PAGF				*e*Sg		**Sg**	07 49 16.7	-0.2
	comp=N,15nm,0.3s							
LOR	**Lormes**	**2.58**	**293**	*e*Pn		**Pn**	07 48 39.8	+0.9
LOR	**Lormes**	**2.58**	**293**	*e*Pg		**Pg**	07 48 48.1	+1.8
	baz=123							
LOR				*e*Sg		**Sg**	07 49 18.7	-1.0
	comp=N,15nm,0.2s							
RETA	**Reutte**	**2.61**	**62**	*e*Pn		**Pn**	07 48 40.3	+1.0
	comp=N,1.1nm,0.2s							
RETA				*e*Sn		**Sb**	07 49 13.4	-2.7
	comp=N,3.7nm,0.2s							
SMRF	**Simiane la Rot**	**2.66**	**209**	*e*Pg		**Pg**	07 48 48.0	+0.2
SMRF				*e*Sg		**Sg**	07 49 21.6	-0.7
	comp=N,2.8nm,0.3s							
MEZF	**Maizieres J'vi**	**2.68**	**325**	*e*Pn		**Pn**	07 48 41.4	+1.2
MEZF	**Maizieres J'vi**	**2.68**	**325**	*e*Pg		**Pg**	07 48 48.3	0.0
MEZF				*e*Sn		**Sn**	07 49 12.7	-0.2
MEZF				*e*Sg		**Sg**	07 49 23.2	+0.2
	comp=N,25nm,0.5s							
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pn		**Pn**	07 48 41.7	+0.6
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pn		**Pn**	07 48 41.9	+0.8
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pg		**Pg**	07 48 49.6	+0.1
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pg		**Pg**	07 48 49.7	+0.2
SAVF				*e*Sn		**Sn**	07 49 12.8	-1.7
SAVF				*e*Sn		**Sb**	07 49 13.0	-6.9
SAVF				*e*Sg		**Sg**	07 49 23.8	-1.3
	comp=N,14nm,0.3s							
SAVF				*e*Sg		Sg	07 49 24.8	-0.3
	comp=N,16nm,0.4s							
SSF	**Saint Saulge**	**2.75**	**287**	*e*Pn		**Pn**	07 48 42.5	+1.3
SSF	**Saint Saulge**	**2.75**	**287**	*e*Pg		**Pg**	07 48 49.0	-0.5
SSF				*e*Sn		**Sn**	07 49 13.8	-0.7
SSF				*e*Sg		**Sg**	07 49 24.5	-0.6
	comp=N,13nm,0.3s							
MOTA	**Moosalm**	**2.77**	**67**	*e*Pn		**Pn**	07 48 43.2	+1.6
	comp=N,1.7nm,0.2s							
MOTA				*i* Sn		**Sn**	07 49 16.8	+1.5
	comp=N,0.9nm,0.1s							
SQTA	**Sankt Quirin**	**2.80**	**70**	*e*Pn		**Pn**	07 48 43.0	+1.0
	comp=N,1.5nm,0.2s							
SQTA				*i* Sn		**Sn**	07 49 18.1	+2.3
	comp=N,3.8nm,0.2s							
AVF	**Avril sur Loir**	**2.80**	**281**	*e*Pn		**Pn**	07 48 42.6	+0.8
AVF	**Avril sur Loir**	**2.80**	**281**	*e*Pg		**Pg**	07 48 50.8	+0.3
AVF				*e*Sn		**Sn**	07 49 15.6	-0.1
AVF				*e*Sg		**Sg**	07 49 26.5	-0.3
	comp=N,6.9nm,0.3s							
LMR	**La Mourre**	**3.05**	**192**	*e*Pn		**Pn**	07 48 46.4	+1.2
LMR	**La Mourre**	**3.05**	**192**	*e*Pg		**Pg**	07 48 54.5	-0.7
LMR				*e*Sg		**Sg**	07 49 34.1	-0.6
	comp=N,4.0nm,0.4s							
WATA	**Walderalm**	**3.07**	**69**	*e*Pn		**Pn**	07 48 45.8	+0.1
	comp=N,1.0nm,0.2s							
WATA				*i* Sn		**Sb**	07 49 32.0	+2.6
	comp=N,1.5nm,0.2s							
WTTA	**Wattenberg**	**3.09**	**71**	*i* Pn		**Pn**	07 48 46.9	+0.9
	comp=N,1.7nm,0.3s							
WTTA				*i* Sn		**Sn**	07 49 25.6	+2.4
	comp=N,6.3nm,0.4s							
BGF	**Bois d'Agland**	**3.12**	**276**	*e*Pn		**Pn**	07 48 47.1	+0.8
BGF				*e*Sg		**Sg**	07 49 36.5	-0.7
	comp=N,24nm,0.4s							
LASF	**Ste Croix**	**3.34**	**229**	*e*Pn		**Pn**	07 48 50.5	+1.2
LASF	**Ste Croix**	**3.34**	**229**	*e*Pg		**Pg**	07 48 59.8	-1.0
LASF				*e*Sg		**Sg**	07 49 43.3	-0.8
	comp=N,5.3nm,0.4s							
TCF	**Toulx Ste Croi**	**3.56**	**271**	*e*Pn		**Pn**	07 48 52.4	0.0
TCF				*e*Sn		**Sn**	07 49 32.1	-2.6
TCF				*e*Sg		**Sg**	07 49 50.1	-1.2
	comp=N,3.1nm,0.2s							

*IDC **05** 07:52:17.4±1.9,2°.57N×126°.18E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=127.5km s-min=23.8km az=68.0*
*DJA **05** 07:52:33.7±0.4,2°.N±3°×12°.6E±°,h91km±5km,M4.4/17, mB5.5/2,mb4.6/6,MLv4.3/17,Mw(mB)5.0/2*
ISC 05 07:52:31.8±1.1,2°.05N±0°.07×125°.60E±0°.07,h100km,n15, σ2§13/15,mb3.4/3,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SGSI	**Sangihe**	**1.63**	**358**	P	**Pn**	**07**	**53**	**01.9**	**+2.2**
TNTI	**Ternate**	**2.18**	**126**	P	**Pn**	**07**	**53**	**08.4**	**+1.7**
KMSI	**Cibinong**	**2.18**	**228**	P	**Pn**	**07**	**53**	**08.5**	**+1.7**
MRSI	**Marisa**	**3.98**	**247**	P	**Pn**	**07**	**53**	**32.3**	**+1.6**
SANI	**Sanana**	**4.09**	**175**	P	**Pn**	**07**	**53**	**31.5**	**-0.8**
LUWI	**Luwuk**	**4.17**	**223**	P	**Pn**	**07**	**53**	**35.0**	**+1.6**
APSI	**Ampana**	**4.92**	**233**	P	**Pn**	**07**	**53**	**46.7**	**+3.2**
NLAI	**Namlea**	**5.46**	**164**	P	**Pn**	**07**	**53**	**51.5**	**+0.6**
	3µm48nm,0.5s								
AAI	**Ambon**	**6.26**	**156**	P	**Pn**	**07**	**54**	**04.5**	**+2.8**
	0.3nm47nm,0.5s								
MSAI	**Masohi**	**6.31**	**148**	P	**Pn**	**07**	**54**	**05.3**	**+2.9**
KDI	**Kendari**	**6.67**	**207**	P	**Pn**	**07**	**54**	**08.8**	**+1.5**
FITZ	**Fitzroy Crossi**	**20.02**	**180**	P	**P**	**07**	**56**	**56.5**	**-0.3**
	0.6nm,0.3s,baz=2.2,slow=11,SNR=1.3 0.6nm,0.3s								
WRA	**Warramunga Arr**	**23.48**	**159**	P	**P**	**07**	**57**	**32.1**	**-0.6**
	0.6nm,0.3s,baz=341,slow=10,SNR=9.0 0.6nm,0.3s								
ASAR	**Alice Springs**	**26.81**	**163**	P	**P**	**07**	**58**	**02.7**	**-0.2**
	0.3nm,0.6s,baz=339,slow=8.6,SNR=7.3 0.3nm,0.6s								
MKAR	**Makanchi Array**	**58.30**	**326**	P	**P**	**08**	**02**	**13.3**	**-2.9**
	0.3nm,0.4s,baz=117,slow=6.7,SNR=7.3 0.3nm,0.4s								

*IDC **05** 07:52:53.5±0.8,21°.93S×170°.22E,h0km,mb4.1/12, mbtmp4.1/13,ML4.4/1,MS3.6/14,Error ellipse: s-maj=24.0km s-min=21.5km az=91.0*
*NEIC **05** 07:52:56.6±1.4,22°.00S±0°.10×170°.03E±0°.07,h10km±1km, mb4.5/14,Error ellipse: s-maj=16.4km s-min=10.9km az=167.0*
*NOU **05** 07:52:56.9,21°.99S×169°.90E,h0km,MLv3.9/9,Southeast of Loyalty Islands*
ISC 05 07:52:57.7±0.6,21°.99S±0°.08×170°.07E±0°.07,h25km,n59, σ0§89/46,mb4.3/19,MS3.6/12,4C-1D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
MARNC	**Mare, Loyalty**	**1.96**	**285**		**Pn**	**07**	**53**	**29.3**	**-0.2**
MARNC	**Mare, Loyalty**	**1.96**	**285**	P	**Pn**	**07**	**53**	**29.1**	**-0.3**
MARNC	**Mare, Loyalty**	**1.96**	**285**	S	**Sn**	**07**	**53**	**52.9**	**-0.4**
PINNC	**Pines Island,**	**2.51**	**255**		**Pn**	**07**	**53**	**36.6**	**-0.3**
PINNC	**Pines Island,**	**2.51**	**255**	P	**Pn**	**07**	**53**	**36.4**	**-0.5**
PINNC	**Pines Island,**	**2.51**	**255**	S	**Sn**	**07**	**54**	**06.5**	**-0.2**
YATNC	**Mamie plateau,**	**2.95**	**268**	P	**Pn**	**07**	**53**	**42.1**	**-0.9**
OUENC	**Ouen Island, N**	**3.02**	**261**	P	**Pn**	**07**	**53**	**43.9**	**-0.1**
OUENC	**Ouen Island, N**	**3.02**	**261**	S	**Sn**	**07**	**54**	**20.5**	**+1.1**
DZM	**Mont Dzumac**	**3.37**	**268**	Pn	**Pn**	**07**	**53**	**49.0**	**+0.2**
	33nm,0.3s,baz=116,slow=10,SNR=1228								
DZM				LR	LR	07	54	18.9	
	comp=Z,137nm,18.9s,baz=94,slow=24								
DZM				Sn	**Sn**	**07**	**54**	**26.2**	**-1.9**
	50nm,0.3s,baz=190,slow=19,SNR=12 81nm,0.4s								
ONTNC	**Ouen Toro**	**3.37**	**264**		**Pn**	**07**	**53**	**49.0**	**+0.2**
ONTNC	**Ouen Toro**	**3.37**	**264**	P	**Pn**	**07**	**53**	**49.1**	**+0.3**
ONTNC	**Ouen Toro**	**3.37**	**264**	S	**Sn**	**07**	**54**	**27.4**	**-0.5**
SANVU	**Saraoutou**	**7.05**	**337**	Pn	**Pn**	**07**	**54**	**39.5**	**+0.1**
MSVF	**Nonsavu**	**8.62**	**62**	Pn	**Pn**	**07**	**55**	**01.8**	**+0.7**
RAO	**Raoul Island**	**13.02**	**126**	LR	LR	08	00	04.4	
	comp=Z,208nm,18.2s,baz=316,slow=33								
MRZ	**Mangatainoka R**	**19.19**	**167**	P	**P**	**07**	**57**	**18.6**	**-0.9**
MRZ				IAmb	IAmb	07	57	28.7	
	comp=Z,25nm,1.0s								
RPZ	**Rata Peaks**	**21.68**	**178**	LR	LR	08	05	08.9	
	comp=Z,125nm,19.4s,baz=126,slow=34								
STKA	**Stephens Creek**	**27.16**	**243**	P	**P**	**07**	**58**	**40.4**	**+1.2**
	comp=Z,3.3nm,0.6s,baz=90,slow=13,SNR=13								
STKA				LR	LR	08	08	30.3	
	comp=Z,143nm,21.5s,baz=32,slow=34 comp=Z,3.3nm,0.6s								
RAR	**Rarotonga**	**28.03**	**94**	LR	LR	08	07	48.9	
	comp=Z,53nm,19.2s,baz=266,slow=32								
BBOO	**Buckleboo**	**31.93**	**243**	P	**P**	**07**	**59**	**22.3**	**+0.7**
WR8	**Warramunga Arr**	**33.23**	**267**	P	**P**	**07**	**59**	**32.4**	**-0.7**
WR8				IAmb	IAmb	07	59	51.0	
	comp=Z,6.1nm,1.1s								
ASAR	**Alice Springs**	**33.32**	**260**	P	**P**	**07**	**59**	**33.9**	**0.0**
	comp=Z,1.3nm,0.9s,baz=89,slow=8.6,SNR=8.7								
ASAR				LR	LR	08	13	27.1	
	comp=Z,122nm,19.1s,baz=102,slow=37 comp=Z,1.3nm,0.9s								
WB0	**Warramunga Arr**	**33.36**	**267**	P	**P**	**07**	**59**	**34.4**	**+0.2**
WB0				IAmb	IAmb	07	59	41.2	
	comp=Z,10nm,1.4s								
WRA	**Warramunga Arr**	**33.38**	**267**	P	**P**	**07**	**59**	**34.0**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=99,slow=8.4,SNR=8.6 comp=Z,1.5nm,0.5s								
MTN	**Manton Dam**	**38.16**	**277**	P	**P**	**08**	**00**	**15.8**	**+0.4**
MTN				IAmb	IAmb	08	00	25.7	
	comp=Z,14nm,1.4s								
FORT	**Forrest**	**38.45**	**248**	P	**P**	**08**	**00**	**18.0**	**+0.3**
FORT				IAmb	IAmb	08	00	38.3	
	comp=Z,10nm,1.1s								
FITZ	**Fitzroy Crossi**	**41.81**	**267**	P	**P**	**08**	**00**	**46.4**	**+0.7**
	comp=Z,3.3nm,0.9s,baz=95,slow=9.1,SNR=2.5								
FITZ				LR	LR	08	18	49.4	
	comp=Z,124nm,18.4s,baz=60,slow=37 comp=Z,3.3nm,0.9s								
BATI	**Bamata**	**45.93**	**277**	LR	LR	08	20	56.1	
	comp=Z,159nm,20.4s,baz=152,slow=36								
KAPI	**Kappang**	**51.49**	**282**	LR	LR	08	23	10.9	
	comp=Z,25nm,21.9s,baz=105,slow=35								
VNDA	**Vanda**	**55.72**	**182**	IAmb	IAmb	08	03	04.4	
	comp=Z,3.3nm,1.4s								
VNDA	**Vanda**	**55.72**	**182**	P	**P**	**08**	**02**	**31.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=339,slow=6.8,SNR=5.6 comp=Z,0.5nm,0.5s								
MJAR	**Mashiro**	**65.54**	**332**	IAmb	IAmb	08	03	39.0	
	comp=Z,4.4nm,1.4s								
MJAR	**Matsushiro Arr**	**65.54**	**332**	P	**P**	**08**	**03**	**38.8**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=162,slow=6.8,SNR=3.6 comp=Z,2.0nm,0.8s								
QSPA	**South Pole Qui**	**68.07**	**180**	IAmb	IAmb	08	03	59.4	
	comp=Z,6.2nm,1.2s								
QSPA	**South Pole Qui**	**68.07**	**180**	P	**P**	**08**	**03**	**57.0**	**+1.9**
	comp=Z,2.0nm,0.9s,baz=318,slow=3.2,SNR=5.4 comp=Z,2.0nm,0.9s								
KSRS	**Korea Array**	**71.21**	**326**	P	**P**	**08**	**04**	**15.0**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=160,slow=7.5,SNR=2.2 comp=Z,0.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**80.34**	**294**	P	**P**	**08**	**05**	**08.9**	**+1.7**
	comp=Z,1.0nm,0.3s,baz=125,slow=4.5,SNR=5.9 comp=Z,1.0nm,0.3s								
TROLL	**Troll, Antarti**	**85.85**	**184**	⇑P	**P**	**08**	**05**	**34.1**	**-1.0**
	comp=Z,216nm,0.6s								
SNAA	**Sanae**	**86.45**	**182**	⇑P	**P**	**08**	**05**	**36.5**	**-1.5**
	comp=Z,19nm,0.5s								
SNAA	**Sanae**	**86.45**	**182**	IAmb	IAmb	08	05	55.8	
	comp=Z,5.9nm,1.3s								
SNAA	**Sanae**	**86.45**	**182**	P	**P**	**08**	**05**	**36.5**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=193,slow=11,SNR=14								
SNAA				LR	LR	08	43	05.9	
	comp=Z,46nm,18.0s,baz=187,slow=35 comp=Z,1.2nm,0.7s								
VNA3	**Neumayer Olymp**	**87.01**	**180**	⇑P	**P**	**08**	**05**	**39.2**	**-1.4**
	comp=Z,4.0nm,0.6s								
VNA2	**Neumayer--Watz**	**87.32**	**181**	⇓P	**P**	**08**	**05**	**41.1**	**-1.0**
	comp=Z,4.6nm,0.5s,baz=170,slow=5.3								
VNA1	**Neumayer--Stat**	**87.60**	**181**	⇑P	**P**	**08**	**05**	**42.5**	**-1.0**
	comp=Z,3.3nm,1.1s								
SONM	**Songino Array**	**89.88**	**323**	IAmb	IAmb	08	05	55.7	
	comp=Z,1.0nm,0.8s								
SONM	**Songino Array**	**89.88**	**323**	P	**P**	**08**	**05**	**55.0**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=149,slow=3.4,SNR=3.1 comp=Z,0.8nm,0.8s								
LPIG	**La Paz**	**89.91**	**64**	LR	LR	08	38	11.5	
	comp=Z,47nm,18.8s,baz=276,slow=30								
NVAR	**Mina Array Bea**	**90.04**	**48**	LR	LR	08	37	40.3	
	comp=Z,20nm,21.4s,baz=48,slow=30								
BBB	**Bella Bella**	**91.35**	**33**	LR	LR	08	40	49.4	
	comp=Z,24nm,18.3s,baz=195,slow=32								
ILAR	**Eielson Array**	**92.62**	**17**	P	**P**	**08**	**06**	**04.3**	**-2.4**
	comp=Z,0.3nm,0.6s,baz=224,slow=5.6,SNR=6.1 comp=Z,0.3nm,0.6s								
TXAR	**Lajitas Array**	**97.39**	**61**	LR	LR	08	45	41.6	
	comp=Z,43nm,18.3s,baz=258,slow=33								
ARCES	**ARCESS Array B**	**127.92**	**345**	PKP	**PKiKP**	**08**	**12**	**01.1**	**-0.1**
	comp=Z,6.1nm,1.1s,baz=39,slow=2.2,SNR=1.4								
DPC	**Dobruska-Polom**	**145.00**	**330**	*e*PKP	**PKPab**	**08**	**12**	**32.3**	**+0.2**
CLL	**Collm**	**145.73**	**334**	*i* PKPbc	**PKPbc**	**08**	**12**	**34.1**	**-0.2**
	comp=Z,11nm,0.9s								
EKA	**Eskdalemuir Ar**	**146.32**	**353**	PKPbc	**PKPdf**	**08**	**12**	**34.8**	**0.0**
	comp=Z,2.1nm,0.6s,baz=345,slow=2.3,SNR=9.8								
ZVC	**Zvikov**	**146.62**	**331**	*e*PKP	**PKPbc**	**08**	**12**	**36.9**	**-0.1**
KHC	**Kasperske Hory**	**147.12**	**331**	*e*PKP	**PKPbc**	**08**	**12**	**38.4**	**-0.1**
GERES	**GERESS Array B**	**147.27**	**331**	PKPbc	**PKPbc**	**08**	**12**	**38.2**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=45,slow=4.0,SNR=9.1								

*IDC **05** 07:59:31.7±2.9,34°.05N×26°.35E,h0km,mb4.0/6, mbtmp3.8/8,ML3.5/2,MS2.8/4,Error ellipse: s-maj=74.1km s-min=25.1km az=173.0*
*ISK **05** 07:59:32.9,34°.20N×26°.42E,h5km,ML2.8/13*
*ATH **05** 07:59:39.7,34°.56N×26°.42E,h19km±8km,ML2.5/4, Manual Solution by I.Dede First location: 2019/11/05 08:01:27, This location: 2020/10/23 15:26:21 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 7 km; Longitude uncertainty: 6 km*
ISC 05 07:59:36.2±2.3,34°.36N±0°.10×26°.39E±0°.05,h14km±11km, n30,σ1§50/31,mb3.9/6,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
ZKR	**Zakros**	**0.77**	**349**	Pg	**Pg**	**07**	**59**	**51.7**	**+0.6**
ZKR				Sg	**Sn**	**08**	**00**	**05.8**	**+1.8**
ZKR	**Zakros**	**0.77**	**349**	P	**Pg**	**07**	**59**	**51.3**	**+0.2**
ZKR				S	**Sg**	**07**	**59**	**59.3**	**-2.0**
STIA	**Sitia Lasithi**	**0.88**	**344**	P	**Pg**	**07**	**59**	**53.4**	**+0.2**
STIA				S	**Sn**	**08**	**00**	**04.2**	**-2.5**
NPS	**Neapolis**	**1.11**	**325**	P	**Pb**	**07**	**59**	**58.0**	**+0.9**
NPS				S	**Sb**	**08**	**00**	**10.5**	**-0.9**
KARP	**Karpathos**	**1.35**	**28**	Pn	**Pg**	**08**	**00**	**01.8**	**-0.3**
KARP	**Karpathos**	**1.35**	**28**	P	**Pb**	**08**	**00**	**01.1**	**-0.1**
IDI	**Anoyia**	**1.54**	**307**	Pn	**Pn**	**08**	**00**	**04.6**	**+1.3**
IDI	**Anoyia**	**1.54**	**307**	P	**Pn**	**08**	**00**	**05.5**	**+2.2**
IDI				S	**Sn**	**08**	**00**	**23.2**	**0.0**
GVD	**Gavdhos**	**1.96**	**285**	Pn	**Pn**	**08**	**00**	**09.4**	**+0.5**
ARG	**Arkhangelos**	**2.34**	**37**	Pn	**Pn**	**08**	**00**	**15.1**	**+0.9**
DAT	**Datca**	**2.56**	**22**	Pn	**Pn**	**08**	**00**	**18.8**	**+1.5**
APE	**Apeiranthos**	**2.80**	**346**	Pn	**Pn**	**08**	**00**	**22.8**	**+2.3**
TURN	**Turunc**	**2.85**	**32**	Pn	**Pn**	**08**	**00**	**23.4**	**+2.2**
DALY	**Dalyan (Mula)**	**3.07**	**36**	Pn	**Pn**	**08**	**00**	**25.8**	**+1.6**
AKAS	**Kas**	**3.23**	**54**	Pn	**Pn**	**08**	**00**	**27.6**	**+1.1**
CAME	**Cameli-Denizli**	**3.51**	**42**	Pn	**Pn**	**08**	**00**	**32.2**	**+1.8**
APMY	**Acipayam-Deniz**	**3.91**	**36**	Pn	**Pn**	**08**	**00**	**38.2**	**+2.4**
KORT	**Korkueli**	**4.17**	**50**	Pn	**Pn**	**08**	**00**	**41.2**	**+1.8**
MMAI	**Mount Meron Ar**	**7.63**	**98**	LR	LR	08	04	51.2	
	comp=Z,25nm,19.8s,baz=304,slow=42								
BRTR	**Keskin Array B**	**7.89**	**45**	Pn	**Pn**	**08**	**01**	**31.9**	**+1.2**
	0.1nm,0.3s,baz=214,slow=12,SNR=2.2 0.4nm,0.5s								
GNI	**Garni**	**15.71**	**63**	LR	LR	08	11	29.1	
	comp=Z,24nm,20.0s,baz=342,slow=45								
AKASG	**Malin Array Be**	**16.47**	**6**	Pn	**Pn**	**08**	**03**	**28.4**	**+1.8**
	1.0nm,0.3s,baz=194,slow=11,SNR=2.9 0.4nm,0.4s								
ESDC	**Sonseca Array**	**24.74**	**291**	P	**P**	**08**	**04**	**56.1**	**-1.2**
	0.8nm,0.7s,baz=86,slow=8.7,SNR=2.5 0.8nm,0.7s								
ARCES	**ARCESS Array B**	**35.23**	**359**	LR	LR	08	22	28.2	
	comp=Z,20nm,19.3s,baz=27,slow=39								
BVAR	**Borovoye Array**	**36.18**	**45**	P	**P**	**08**	**06**	**37.5**	**-0.5**
	1.0nm,0.7s,baz=239,slow=9.4,SNR=3.9 1.0nm,0.7s								
KURBB	**Kurchatov Arra**	**40.85**	**50**	P	**P**	**08**	**07**	**16.7**	**-0.6**
	1.3nm,0.5s,baz=273,slow=8.7,SNR=11 1.3nm,0.5s								
MKAR	**Makanchi Array**	**43.38**	**56**	P	**P**	**08**	**07**	**37.9**	**-0.2**
	1.0nm,0.5s,baz=276,slow=7.1,SNR=9.6 1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**44.84**	**46**	P	**P**	**08**	**07**	**48.9**	**-0.7**
	3.5nm,0.5s,baz=261,slow=8.8,SNR=9.7 3.5nm,0.5s

ISC 05 08:04:25.9±1.6, 12.77N±0.07×88.95W±0.03, h21km±4km, n83, σ0.44/111, 3C-14D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.78**	**12**	*e*P **Pn**	**08 04 41.5**	**-0.2**
TECO				*e*S **Sb**	**08 04 50.4**	**-0.7**
TECO	**Alcaldia de Te**	**0.78**	**12**	S **Sb**	**08 04 51.5**	**+0.5**
TECO	**Alcaldia de Te**	**0.78**	**12**	⇓P **Pn**	**08 04 41.6**	**-0.2**
LALI	**Alcalda de L**	**0.80**	**333**	*e*P **Pn**	**08 04 42.4**	**+0.5**
LALI				*e*S **Sb**	**08 04 51.7**	**+0.2**
LALI	**Alcalda de L**	**0.80**	**333**	*i* P **Pn**	**08 04 42.5**	**+0.5**
LALI				*e*S **Sb**	**08 04 52.0**	**+0.4**
LALI	**Alcalda de L**	**0.80**	**333**	⇓P **Pn**	**08 04 42.5**	**+0.5**
TECA	**Tecapa**	**0.84**	**31**	*e*P **Pn**	**08 04 42.7**	**-0.1**
SNVI	**San Vicente**	**0.84**	**8**	*e*P **Pn**	**08 04 42.6**	**-0.2**
LFRS	**El Faro**	**0.85**	**353**	*e*P **Pn**	**08 04 42.8**	**-0.1**
LFRS				*e*S **Sb**	**08 04 52.6**	**-0.6**
PANCS	**Alcalda de**	**0.86**	**345**	*e*P **Pn**	**08 04 43.0**	**+0.1**
PANCS				*e*S **Sb**	**08 04 53.3**	**+0.1**
UESV	**Universidad de**	**0.88**	**11**	*e*P **Pn**	**08 04 43.1**	**0.0**
UESV	**Universidad de**	**0.88**	**11**	S **Sb**	**08 04 54.3**	**+0.5**
UESV	**Universidad de**	**0.88**	**11**	⇓P **Pn**	**08 04 43.1**	**0.0**
LOMA	**Loma Larga**	**0.89**	**346**	*e*P **Pb**	**08 04 43.2**	**+0.3**
LOMA				*e*S **Sb**	**08 04 54.7**	**+0.3**
LOMA	**Loma Larga**	**0.89**	**346**	⇓P **Pn**	**08 04 43.3**	**-0.1**
LCY	**Lacayo**	**0.91**	**45**	*e*P **Pn**	**08 04 43.6**	**-0.1**
LCY				*e*S **Sb**	**08 04 55.2**	**+0.4**
RANC	**El Ranchito**	**0.92**	**44**	*e*P **Pn**	**08 04 43.8**	**0.0**
PACA	**Pacayal**	**0.93**	**41**	*e*P **Pn**	**08 04 44.1**	**+0.2**
PACA				*e*S **Sb**	**08 04 55.6**	**+0.3**
PACA	**Pacayal**	**0.93**	**41**	P **Pn**	**08 04 44.0**	**+0.2**
VSM	**San Miguel**	**0.93**	**45**	*e*P **Pn**	**08 04 44.2**	**+0.1**
PQSS	**Presa 15 de Se**	**0.93**	**24**	*e*P **Pn**	**08 04 44.0**	**+0.3**
PQSS				*e*S **Sb**	**08 04 54.8**	**-0.5**
PQSS	**Presa 15 de Se**	**0.93**	**24**	S **Sn**	**08 04 56.1**	**-0.4**
PQSS	**Presa 15 de Se**	**0.93**	**24**	P **Pn**	**08 04 44.1**	**+0.3**
PAVA	**Las Pavas**	**0.94**	**1**	*e*P **Pn**	**08 04 44.1**	**+0.1**
PAVA				*e*S **Sb**	**08 04 55.4**	**-0.2**
PAVA	**Las Pavas**	**0.94**	**1**	S **Sb**	**08 04 56.2**	**+0.5**
PAVA	**Las Pavas**	**0.94**	**1**	⇓P **Pn**	**08 04 44.1**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.95**	**13**	*e*P **Pn**	**08 04 44.4**	**+0.3**
SCLA				*e*S **Sb**	**08 04 56.2**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.95**	**13**	⇓P **Pn**	**08 04 44.5**	**+0.4**
UTEC	**Universidad Te**	**0.95**	**345**	P **Pn**	**08 04 44.6**	**+0.4**
UTEC	**Universidad Te**	**0.95**	**345**	S **Sb**	**08 04 56.2**	**+0.1**
IGN	**Direccin Gen**	**0.96**	**347**	P **Pn**	**08 04 44.6**	**+0.3**
IGN	**Direccin Gen**	**0.96**	**347**	S **Sb**	**08 04 56.4**	**+0.1**
BLLM	**Bellamira**	**0.96**	**46**	*e*P **Pn**	**08 04 44.2**	**-0.1**
MAGS	**Ministerio de**	**0.96**	**340**	*e*P **Pn**	**08 04 44.4**	**+0.1**
MAGS				*e*S **Sb**	**08 04 56.3**	**-0.1**
LBRS	**Las Brisas**	**0.96**	**355**	*e*P **Pn**	**08 04 44.7**	**+0.3**
UEES	**Universidad Ev**	**0.98**	**343**	*e*P **Pn**	**08 04 44.7**	**+0.1**
UEES				*e*S **Sb**	**08 04 56.9**	**+0.1**
UEES	**Universidad Ev**	**0.98**	**343**	⇓P **Pn**	**08 04 44.8**	**+0.1**
LFU	**La Fuente**	**0.98**	**351**	*e*P **Pn**	**08 04 44.8**	**+0.2**
PMON	**Piamonte**	**1.00**	**339**	*e*P **Pn**	**08 04 45.1**	**+0.3**
PMON				*e*S **Sb**	**08 04 57.1**	**-0.3**
PMON	**Piamonte**	**1.00**	**339**	⇓P **Pn**	**08 04 45.2**	**+0.3**
JAYA	**Jayaque - finc**	**1.00**	**331**	*e*P **Pn**	**08 04 45.3**	**+0.4**
JAYA				*e*S **Sb**	**08 04 57.2**	**-0.3**
JAYA	**Jayaque - finc**	**1.00**	**331**	*e*P **Pn**	**08 04 45.3**	**+0.4**
JAYA				*e*S **Sb**	**08 04 57.4**	**-0.2**
JAYA	**Jayaque - finc**	**1.00**	**331**	P **Pn**	**08 04 45.2**	**+0.3**
BOQS	**Boqueron**	**1.01**	**342**	*e*P **Pn**	**08 04 45.5**	**+0.4**
BOQS				*e*S **Sb**	**08 04 58.4**	**+0.5**
PIC2	**El Picacho**	**1.01**	**343**	*e*P **Pn**	**08 04 45.5**	**+0.4**
PIC2				*e*S **Sb**	**08 04 58.3**	**+0.4**
CNRM	**Centro Naciona**	**1.03**	**47**	*e*P **Pn**	**08 04 45.3**	**0.0**
CNRM				*e*S **Sb**	**08 04 57.9**	**-0.4**
CNRM	**Centro Naciona**	**1.03**	**47**	S **Sb**	**08 04 58.3**	**0.0**
CNRM	**Centro Naciona**	**1.03**	**47**	⇑P **Pn**	**08 04 45.4**	**+0.2**
QUEZ	**Alcaldia de Qu**	**1.10**	**344**	*e*P **Pb**	**08 04 46.5**	**+0.2**
QUEZ				*e*S **Sb**	**08 04 59.7**	**-0.6**
CEDA	**San Andres**	**1.11**	**337**	*e*P **Pb**	**08 04 46.8**	**+0.2**
CEDA				*e*S **Sb**	**08 04 59.4**	**-1.2**
LCND	**La Caada**	**1.17**	**63**	*e*P **Pn**	**08 04 47.1**	**+0.1**
LCND	**La Caada**	**1.17**	**63**	⇓P **Pn**	**08 04 47.3**	**+0.2**
CNCH	**Conchagua**	**1.20**	**65**	*e*P **Pb**	**08 04 48.0**	**-0.1**
CNCH				*e*S **Sn**	**08 05 03.3**	**-0.1**
CNCH	**Conchagua**	**1.20**	**65**	P **Pn**	**08 04 47.8**	**+0.1**
CEVE	**Cerro Verde**	**1.24**	**328**	*e*P **Pb**	**08 04 49.6**	**+0.8**
CEVE				*e*S **Sb**	**08 05 04.6**	**+0.2**
SBLS	**San Blas**	**1.25**	**328**	*e*P **Pb**	**08 04 49.5**	**+0.5**
SNJE	**San Jose**	**1.26**	**330**	*e*P **Pb**	**08 04 49.2**	**0.0**
SNJE				*e*S **Sb**	**08 05 04.6**	**-0.4**
UNIC	**Universidad Ca**	**1.34**	**334**	*e*P **Pb**	**08 04 50.2**	**-0.1**
UNIC				*e*S **Sn**	**08 05 05.9**	**-0.8**
UNIC	**Universidad Ca**	**1.34**	**334**	S **Sn**	**08 05 06.7**	**+0.1**
UNIC	**Universidad Ca**	**1.34**	**334**	⇑P **Pb**	**08 04 50.3**	**+0.1**
CSGN	**Cosiguina Volc**	**1.37**	**81**	⇑P **Pb**	**08 04 51.4**	**+0.4**
LLGN	**La Laguna**	**1.38**	**0**	*e*P **Pn**	**08 04 50.4**	**+0.2**
LLGN	**La Laguna**	**1.38**	**0**	P **Pn**	**08 04 50.5**	**+0.4**
LLGN	**La Laguna**	**1.38**	**0**	S **Sn**	**08 05 08.2**	**+0.3**
NUBE	**Las Nubes**	**1.38**	**324**	*e*P **Pb**	**08 04 50.9**	**-0.3**
NUBE				*e*S **Sn**	**08 05 06.7**	**-1.2**
NUBE	**Las Nubes**	**1.38**	**324**	*i* P **Pb**	**08 04 50.9**	**-0.3**
NUBE				*e*S **Sn**	**08 05 07.4**	**-0.5**
NUBE	**Las Nubes**	**1.38**	**324**	⇓P **Pb**	**08 04 50.9**	**-0.3**
POTN	**Potosi Cosigui**	**1.43**	**81**	P **Pn**	**08 04 50.9**	**+0.2**
POTN				S **Sn**	**08 05 07.8**	**-1.1**
FAME	**Alcaldia de Sa**	**1.48**	**316**	P **Pn**	**08 04 52.4**	**+0.9**
SLOZ	**Alcaldia de Sa**	**1.49**	**327**	S **Sn**	**08 05 09.5**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.49**	**327**	⇓P **Pn**	**08 04 51.0**	**-0.5**
MARCA	**Marcala la Paz**	**1.64**	**33**	*i* P **Pn**	**08 04 54.0**	**+0.3**
MARCA	**Marcala la Paz**	**1.64**	**33**	⇓P **Pn**	**08 04 54.1**	**+0.3**
MTO3	**Montecristo**	**1.67**	**346**	*e*P **Pn**	**08 04 54.7**	**+0.4**
MTO3	**Montecristo**	**1.67**	**346**	*i* P **Pn**	**08 04 54.7**	**+0.5**
MTO3	**Montecristo**	**1.67**	**346**	P **Pn**	**08 04 54.6**	**+0.5**
ESQI	**Esquipulas**	**1.82**	**348**	S **Sn**	**08 05 18.6**	**0.0**
ESQI	**Esquipulas**	**1.82**	**348**	⇓P **Pn**	**08 04 57.1**	**+0.9**
PKGN	**Cerro Pekin**	**1.93**	**93**	P **Pn**	**08 04 58.3**	**+0.8**
SARH	**Santa Rosa de**	**2.00**	**5**	*i* P **Pn**	**08 04 59.6**	**+1.0**
SARH	**Santa Rosa de**	**2.00**	**5**	⇓P **Pn**	**08 04 59.6**	**+1.0**
POLN	**Al Sur del Vol**	**2.09**	**93**	P **Pn**	**08 04 59.2**	**-0.6**
CNGA	**Al SSO del Vol**	**2.21**	**97**	P **Pn**	**08 05 02.2**	**+0.7**

*NEIC **05** 08:26:30.7±1.4, 35.60N±0.02×117.43W±0.02, h10km±1km, Error ellipse: s-maj=3.1km s-min=2.8km az=314.0*

PAS 05 08:26:31.5±1.1, 35.61N±0.02×117.45W±0.02, h6km±3km, ML3.0/21, ML2.9/102(NEIC), Error ellipse: s-maj=2.3km s-min=2.1km az=202.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
WSHM	**Spangler Hills**	**0.04**	**250**	Pg	08 26 33.1	+0.2
CCCA	**Chr Cany lake**	**0.11**	**143**	Pg	08 26 34.4	+0.4
GPO	**China Lake**	**0.18**	**282**	Pg	08 26 35.3	+0.2
GPO				Sg	08 26 38.6	+1.0
LRMC	**Laurel Mtn Rad**	**0.23**	**235**	Pg	08 26 36.1	0.0
LRMC				IAML	08 26 40.1	
	comp=N,4μm,0.3s					
LRMC				IAML	08 26 41.3	
	comp=E,2μm,0.4s					
CLC	**China Lake**	**0.24**	**329**	Pg	08 26 36.1	-0.1
CLC				IAML	08 26 39.9	
	comp=E,2μm,0.5s					
CLC				IAML	08 26 39.9	
	comp=N,1μm,0.3s					
SRTC	**Snort**	**0.26**	**288**	Pg	08 26 36.9	+0.3
WVPM	**Volcano Peak E**	**0.45**	**318**	Pg	08 26 40.0	-0.3
QSM	**Queen of Sheba**	**0.59**	**53**	Pg	08 26 42.5	-0.3
QSM				IAML	08 26 54.4	
	comp=E,565nm,0.4s					
QSM				IAML	08 26 54.4	
	comp=N,864nm,0.5s					
GSC	**Goldstone, Bar**	**0.61**	**121**	Pg	08 26 42.9	-0.4
GSC				IAML	08 26 54.4	
	comp=E,549nm,0.4s					
GSC				IAML	08 26 55.0	
	comp=N,399nm,0.2s					
ISA	**Isabella, Lake**	**0.84**	**274**	Pg	08 26 47.0	-0.6
ISA				IAML	08 26 58.1	
	comp=N,503nm,0.6s					
ISA				IAML	08 26 58.6	
	comp=E,392nm,0.4s					
GWY	**Greenwater Val**	**0.85**	**48**	Pg	08 26 47.3	-0.5
GWY				IAML	08 27 01.9	
	comp=N,543nm,0.5s					
GWY				IAML	08 27 04.1	
	comp=E,500nm,0.4s					
CWC	**Cottonwood Cre**	**0.97**	**328**	Pg	08 26 49.5	-0.7
CWC				IAML	08 27 03.4	
	comp=N,186nm,0.2s					
TPO	**Tropico Hills**	**0.97**	**221**	Pg	08 26 49.4	-0.8
TPO				IAML	08 27 06.0	
	comp=E,458nm,0.5s					
TPO				IAML	08 27 10.6	
	comp=N,346nm,0.6s					
FURC	**Furnace Creek,**	**0.97**	**29**	Pg	08 26 49.6	-0.6
FURC				IAML	08 27 03.7	
	comp=E,434nm,0.6s					
FURC				IAML	08 27 09.2	
	comp=N,431nm,0.5s					
SHOC	**Shoshone, Teco**	**0.99**	**73**	Pg	08 26 50.0	-0.6
DSCC	**Desert Studies**	**1.19**	**113**	Pg	08 26 52.6	-1.7
SPG2	**Springville 2**	**1.22**	**299**	Pg	08 26 54.1	-0.8
TUQ	**Turquoise Moun**	**1.25**	**98**	Pg	08 26 54.3	-1.3
WCT	**Wildcat Mounta**	**1.35**	**29**	Pn	08 26 55.4	-1.5
VES	**Vestal, Richgr**	**1.35**	**280**	Pn	08 26 56.2	-0.6
GRAC	**Grapevine Rang**	**1.38**	**3**	Pn	08 26 56.6	-0.7
GRAC				IAML	08 27 20.2	
	comp=E,362nm,0.6s					
BFSC	**Mount Baldy Ra**	**1.38**	**187**	Pn	08 26 56.4	-1.0
BFSC				IAML	08 27 16.1	
	comp=E,348nm,0.8s					
BFSC				IAML	08 27 17.0	
	comp=N,278nm,0.5s					
OSI	**Osito Audit: C**	**1.45**	**227**	Pn	08 26 57.7	-0.5
OSI				IAML	08 27 24.1	
	comp=E,106nm,0.8s					
MWC	**Mount Wilson**	**1.48**	**200**	Pn	08 26 58.5	-0.2
MWC				IAML	08 27 20.2	
	comp=N,199nm,0.6s					
MWC				IAML	08 27 20.4	
	comp=E,144nm,0.8s					
PASC	**Pasadena Art C**	**1.56**	**203**	Pn	08 26 59.0	-0.7
PASC				IAML	08 27 26.1	
	comp=E,96nm,0.5s					
TIN	**Tinemaha, Big**	**1.57**	**336**	Pn	08 26 59.6	-0.4
TIN				IAML	08 27 27.9	
	comp=N,132nm,0.8s					
TIN				IAML	08 27 29.1	
	comp=E,142nm,1.0s					
TPNV	**Topopah Spring**	**1.65**	**36**	Pn	08 27 00.0	-1.0
TPNV				IAML	08 27 27.3	
	comp=E,77nm,0.5s					
TPNV				IAML	08 27 30.1	
	comp=E,84nm,0.6s					
DSP	**Deep Springs**	**1.80**	**347**	Pn	08 27 02.6	-0.4
DANC	**Danby, Needles**	**1.95**	**119**	Pn	08 27 03.2	-2.0
DANC				IAML	08 27 37.8	
	comp=N,127nm,0.4s					
DANC				IAML	08 27 42.9	
	comp=E,172nm,0.6s					
BELC	**Belle Mtn. Jos**	**2.00**	**143**	Pn	08 27 04.3	-1.6
BELC				IAML	08 27 38.0	
	comp=E,75nm,0.4s					
BELC				IAML	08 27 39.7	
	comp=N,58nm,0.4s					
SHPR	**Sheep Range**	**2.06**	**64**	Pn	08 27 05.9	-0.8
V12A	**Nelson**	**2.12**	**86**	Pn	08 27 06.6	-0.9
V12A				IAML	08 27 39.2	
	comp=N,100nm,0.7s					
V12A				IAML	08 27 42.3	
	comp=E,58nm,0.6s					
PMD	**Palm Desert**	**2.15**	**156**	Pn	08 27 06.6	-1.2
PFO	**Pinyon Flats O**	**2.16**	**158**	Pn	08 27 07.7	-0.3
IRM	**Iron Mountain**	**2.38**	**127**	Pn	08 27 08.8	-2.3
IRM				IAML	08 27 48.5	
	comp=N,41nm,0.5s					
IRM				IAML	08 27 48.6	
	comp=E,54nm,0.4s					
PKD	**Bear Valley Ra**	**2.54**	**278**	Pn	08 27 14.7	+1.5
PKD				IAML	08 28 11.2	
	comp=N,31nm,1.3s					
BC3	**Big Chuckawall**	**2.55**	**139**	Pn	08 27 11.8	-1.7
BC3				IAML	08 28 00.5	
	comp=N,34nm,0.7s					
LHV	**Little Huntoon**	**2.77**	**342**	Pn	08 27 16.5	+0.2
LHV				IAML	08 28 06.3	
	comp=E,37nm,0.7s					
LHV				IAML	08 28 12.8	
	comp=N,26nm,1.1s					
PMPB	**Monarch Peak**	**2.79**	**283**	Pn Pn	08 27 17.0	+0.3
PMPB				IAML	08 28 06.6	
	comp=E,69nm,1.0s					
PMPB				IAML	08 28 12.7	
	comp=N,62nm,1.2s					
NV11	**Mina Array Sit**	**2.87**	**349**	Pn Pn	08 27 17.9	0.0
W13A	**Hualapai Mount**	**2.96**	**99**	Pn	08 27 17.9	-1.2
W13A				IAML	08 28 12.7	
	comp=N,29nm,0.7s					
BLYC	**Blythe**	**3.04**	**127**	IAML	08 28 09.4	
	comp=E,19nm,0.5s					
BLYC				IAML	08 28 10.5	
	comp=N,19nm,0.5s					

ZUR 05 08:39:23.7, 46.33N×7.36E, h4km±1km, MLh1.4/11, 3C-4D, Error ellipse: s-maj=2181.3km s-min=797.0km az=149.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.03**	**246**	⇓Pg Pg	08 39 25.1	+0.2
RAW2				Sg Sg	08 39 26.0	+0.2
STSW2	**Zeuzier, Staus**	**0.05**	**72**	⇓Pg Pg	08 39 25.4	+0.2
STSW2				Sg Sg	08 39 26.4	+0.2
SENIN	**Lac Senin/Sane**	**0.06**	**310**	⇓Pg Pg	08 39 25.4	+0.2
SENIN				Sg Sg	08 39 26.6	+0.3
SAYF2	**Ayent-Fortunoz**	**0.06**	**135**	⇓Pg Pg	08 39 25.3	+0.2
SAYF2				Sg Sg	08 39 26.3	+0.2
SIOO	**Sion-Ophtalmol**	**0.10**	**170**	Sg Sg	08 39 28.0	+0.9
RAW1	**Lenk, BE**	**0.11**	**30**	⇑Pg Pg	08 39 26.2	+0.2
RAW1				⇑Sg Sg	08 39 28.0	+0.5
RAW4	**Former Reservo**	**0.17**	**226**	⇑Pg Pg	08 39 27.4	+0.2
LKBD2	**Leukerbad 2**	**0.20**	**77**	Sg Sg	08 39 31.0	+0.6
DIX	**Grande Dixence**	**0.25**	**172**	Pg Pg	08 39 28.9	+0.3
DIX				Sg Sg	08 39 32.1	+0.2

*GEN **05** 08:39:42.9, 46.32N×7.37E, h5km±2km, Ml1.8*
*LDG **05** 08:39:43.8±0.1, 46.29N×7.39E, h4km, Ml2.6/8, Error ellipse: s-maj=1.2km s-min=1.2km az=97.0*
*ZUR **05** 08:39:43.5, 46.32N×7.36E, h4km±1km, MLh2.2/48, Error ellipse: s-maj=2191.6km s-min=643.4km az=194.0*
*ROM **05** 08:39:43.8±0.1, 46.273N±0.003×7.379E±0.004, h11km, ML1.8/7, Error ellipse: s-maj=0.3km s-min=0.3km az=275.0*

ISC 05 08:39:42.7±0.8, 46.31N±0.02×7.37E±0.02, h11km±3km, n63, σ0.60/107, 7C-1D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.03**	**276**	Pg **Pg**	**08 39 44.8**	**-0.3**
RAW2				Sg **Sg**	**08 39 45.6**	**-1.0**
SAYF2	**Ayent-Fortunoz**	**0.04**	**123**	Sg **Sg**	**08 39 46.2**	**-0.4**
STSW2	**Zeuzier, Staus**	**0.06**	**55**	⇑Pg **Pg**	**08 39 45.2**	**0.0**
STSW2				Sg **Sg**	**08 39 46.3**	**-0.7**
SENIN	**Lac Senin/Sane**	**0.07**	**319**	⇓Pg **Pg**	**08 39 45.1**	**-0.2**
SENIN	**Lac Senin/Sane**	**0.07**	**319**	P **Pg**	**08 39 45.1**	**-0.2**
SENIN				S **Sg**	**08 39 46.2**	**-1.0**
SIOV	**Sion-Valere**	**0.08**	**180**	⇑Pg **Pg**	**08 39 45.5**	**+0.4**
SIOV				Sg **Sg**	**08 39 47.0**	**0.0**
SIOM	**Sion-Mayennets**	**0.08**	**181**	Sg **Sg**	**08 39 47.2**	**+0.2**
VET01	**Vtroz, Route**	**0.11**	**217**	⇑Pg **Pg**	**08 39 45.9**	**+0.3**
VET02	**Vtroz, Route**	**0.11**	**214**	⇑Pg **Pg**	**08 39 46.1**	**+0.4**
SIEB	**Ecole de Borzu**	**0.12**	**97**	Sg **Sg**	**08 39 48.4**	**+0.5**
RAW1	**Lenk, BE**	**0.12**	**24**	⇑Pg **Pg**	**08 39 46.0**	**+0.2**
RAW1				Sg **Sg**	**08 39 47.9**	**-0.2**
SARC	**Ardon Commune,**	**0.13**	**217**	Sg **Sg**	**08 39 48.4**	**+0.4**
RAW4	**Former Reservo**	**0.17**	**232**	⇑Pg **Pg**	**08 39 47.0**	**+0.4**
VANNI	**Vissoie, Val d**	**0.19**	**122**	P **Pb**	**08 39 47.8**	**-0.6**
VANNI				S **Sg**	**08 39 50.8**	**+1.0**
LKBD2	**Leukerbad 2**	**0.20**	**72**	Sg **Sg**	**08 39 50.9**	**+0.6**
FULLY	**Reservoir Maze**	**0.22**	**226**	⇑Pg **Pg**	**08 39 47.9**	**+0.5**
SCOD	**Chteau-dO**	**0.23**	**314**	Sg **Sg**	**08 39 51.5**	**+0.7**
DIX	**Grande Dixence**	**0.23**	**173**	Sg **Sg**	**08 39 51.9**	**+0.8**
DIX	**Grande Dixence**	**0.23**	**173**	P **Pb**	**08 39 48.6**	**-0.6**
DIX				S **Sg**	**08 39 51.9**	**+0.8**
DIX	**Grande Dixence**	**0.23**	**173**	P **Pb**	**08 39 48.5**	**-0.6**
DIX				S **Sg**	**08 39 51.8**	**+0.8**
DIX				AML AML		
	comp=E,3075μm,0.3s					
DIX				AML AML		
	comp=N,2075μm,0.3s					
DIX				AML AML		
	comp=E,3077μm,0.3s					
DIX				AML AML		
	comp=E,3077μm,1.7s					
DIX				AML AML		
	comp=N,2074μm,0.3s					
LAVEY	**Lavey les Bain**	**0.26**	**245**	Sg **Sg**	**08 39 52.2**	**+0.5**
LAUCH	**Lauchernalp**	**0.30**	**70**	P **Pg**	**08 39 49.4**	**+0.4**
LAUCH				S **Sg**	**08 39 53.7**	**+0.7**
EMBD	**Embd, Matterta**	**0.34**	**106**	P **Pb**	**08 39 50.4**	**-0.5**
EMBD				S **Sb**	**08 39 54.9**	**-1.4**
SIMPL	**Simplonpass**	**0.46**	**99**	P **Pb**	**08 39 52.7**	**-0.3**
SIMPL				S **Sb**	**08 39 58.6**	**-1.3**
MMK	**Mattmark**	**0.49**	**122**	P **Pb**	**08 39 53.1**	**-0.4**
MMK				S **Sg**	**08 39 59.5**	**+0.6**
MMK	**Mattmark**	**0.49**	**122**	P **Pb**	**08 39 53.1**	**-0.4**
MMK				S **Sb**	**08 39 60.0**	**-0.8**
FIESA	**Fiescheralp**	**0.53**	**76**	P **Pb**	**08 39 53.8**	**-0.4**
FIESA				S **Sg**	**08 40 00.6**	**+0.3**
SATI	**Passo dei Sala**	**0.56**	**141**	P **Pb**	**08 39 54.2**	**-0.5**
SATI				S **Sg**	**08 40 01.1**	**0.0**
SATI	**Passo dei Sala**	**0.56**	**141**	P **Pb**	**08 39 54.1**	**-0.6**
SATI				S **Sg**	**08 40 01.6**	**+0.4**
MRGE	**Morge**	**0.58**	**201**	P **Pg**	**08 39 54.5**	**+0.4**
MRGE				S **Sg**	**08 40 02.3**	**+0.6**
MRGE	**Morge**	**0.58**	**201**	P **Pg**	**08 39 54.5**	**+0.4**
MRGE				S **Sg**	**08 40 02.3**	**+0.6**
MRGE				AML AML		
	comp=E,156μm,0.5s					
MRGE				AML AML		
	comp=N,138μm,1.4s					
MRGE				AML AML		
	comp=E,130μm,0.2s					
MRGE				AML AML		
	comp=N,138μm,0.4s					
CIRO	**Camporcher**	**0.72**	**169**	P **Pb**	**08 39 58.0**	**+0.5**
CIRO				S **Sg**	**08 40 06.6**	**+0.3**
CIRO	**Camporcher**	**0.72**	**169**	P **Pb**	**08 39 57.1**	**-0.4**
CIRO				S **Sg**	**08 40 06.6**	**+0.3**
CIRO				AML AML		
	comp=E,79μm,1.2s					
CIRO				AML AML		
	comp=N,57μm,1.5s					
CIRO				AML AML		
	comp=E,47μm,0.2s					
CIRO				AML AML		
	comp=N,47μm,0.4s					
CIRO				AML AML		
	comp=N,47μm,1.6s					
CIRO				AML AML		
	comp=N,57μm,0.5s					
GIMEL	**St. Georges /**	**0.79**	**287**	P **Pb**	**08 39 59.0**	**+0.5**
RSL	**Roselend**	**0.81**	**220**	P **Pg**	**08 39 58.6**	**+0.2**
RSL				S **Sg**	**08 40 09.2**	**+0.3**
TRAV	**Traversella**	**0.84**	**161**	P **Pb**	**08 39 59.2**	**-0.2**
TRAV				S **Sg**	**08 40 09.7**	**-0.3**
TRAV	**Traversella**	**0.84**	**161**	P **Pg**	**08 39 58.9**	**-0.1**
TRAV				S **Sg**	**08 40 09.7**	**-0.3**
TRAV				AML AML		
	comp=E,130μm,0.2s					
TRAV				AML AML		
	comp=N,90μm,0.5s					
TRAV				AML AML		
	comp=N,90μm,1.5s					
TRAV				AML AML		
	comp=E,130μm,0.2s					
TRAV				AML AML		
	comp=N,84μm,0.3s					
TRAV				AML AML		
	comp=N,84μm,1.7s					
LSD	**Lago del Serru**	**0.87**	**191**	P **Pb**	**08 39 59.7**	**-0.3**
LSD				S **Sg**	**08 40 10.5**	**-0.3**
LSD	**Lago del Serru**	**0.87**	**191**	P **Pb**	**08 39 59.6**	**-0.3**
LSD				S **Sg**	**08 40 10.6**	**-0.2**
LSD				AML AML		
	comp=E,610nm,1.2s					
LSD				AML AML		
	comp=N,56μm,1.1s					
LSD				AML AML		
	comp=N,56μm,0.4s					
LSD				AML AML		
	comp=N,56μm,1.6s					
LPL	**La Plagne**	**0.91**	**209**	*e*Pg **Pb**	**08 40 00.6**	**0.0**
LPL				*e*Sg **Sg**	**08 40 12.3**	**+0.2**
FUSIO	**Fusio**	**0.91**	**80**	P **Pn**	**08 40 01.0**	**-0.6**
FUSIO				S **Sb**	**08 40 12.7**	**-0.1**
FUSIO	**Fusio**	**0.91**	**80**	P **Pb**	**08 40 00.5**	**-0.1**
LPG	**La Plagne**	**0.92**	**208**	*e*Pg **Pb**	**08 40 01.1**	**+0.3**
LPG				*e*Sg **Sg**	**08 40 12.7**	**+0.2**
BNALP	**Bannalp**	**0.92**	**52**	P **Pn**	**08 40 01.3**	**-0.4**
CABF	**La Chapelle**	**0.93**	**289**	*e*Pg **Pn**	**08 40 01.5**	**-0.4**
CABF				*e*Sg **Sb**	**08 40 13.9**	**+0.5**
VARE	**Varese**	**1.07**	**114**	P **Pn**	**08 40 04.0**	**+0.2**
VARE				S **Sg**	**08 40 17.3**	**-0.1**
RSP	**Reno Superiore**	**1.17**	**183**	P **Pg**	**08 40 05.3**	**+0.2**
RSP				S **Sg**	**08 40 20.2**	**-0.1**
MUGIO

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.90**	**316**	⇑Pn	Pn	08 53 42.6	+0.7
	1.1nm,0.7s,baz=127,slow=15,SNR=5.9						
MK31				⇓Lg	Lg	08 55 03.3	
	2.5nm,0.6s,baz=124,slow=33,SNR=4.4						
MAKZ	**Makanchi**	**5.07**	**314**	⇓Pn	Pn	08 53 42.7	-1.5
	1.3nm,0.7s						
MAKZ				⇑Lg	Lg	08 55 10.8	
	3.3nm,0.6s						
PDGK	**Podgornoye**	**5.68**	**272**	⇑Pn	Pn	08 53 54.1	+1.3
	3.7nm,0.8s						
PDGK				⇑Sn	Sn	08 54 59.3	+0.5
	4.0nm,0.6s						
PDGK				⇓Lg	Lg	08 55 26.4	
	14nm,0.8s						

IDC 05 09:03:33.4±3.1, 53°74N×87°09E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=29.0km s-min=17.5km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**280**	I	I	09 10 35.5	
	baz=100,slow=336,SNR=13						
ZALV	**Zalesovo Beam**	**1.36**	**280**	Pg	Pg	09 03 58.5	-1.0
	1.0nm,0.3s,baz=97,slow=12,SNR=7.6						
ZALV				Lg	Lg	09 04 17.1	
	1.4nm,0.3s,baz=95,slow=34,SNR=9.4						
KURBB	**Kurchatov Arra**	**6.12**	**243**	Pn	Pn	09 05 05.6	+0.7
	0.1nm,0.3s,baz=53,slow=30,SNR=1.9						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.60**	**206**	Pn	Pn	09 05 26.4	+1.1
	0.1nm,0.3s,baz=28,slow=13,SNR=1.8						
	0.2nm,0.3s						

DJA 05 09:18:55.1±0.8, 7°N±5°×12°5E±°, h10km, M4.5/7, mB5.0/1, mb4.6/4, MLv4.5/7, Mw(mB)4.3/1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**3.13**	**170**	P	Pn	09 19 45.0	+0.5
SGSI				S	Sn	09 20 22.5	+0.5
SANI	**Sanana**	**8.84**	**174**	P	Pn	09 21 02.1	-0.9

IDC 05 09:27:26.1±2.7, 53°68N×87°09E, h0km, mbtmp3.0/2, ML2.7/1, Error ellipse: s-maj=27.3km s-min=16.0km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.37**	**282**	I	I	09 34 19.9	
	baz=100,slow=339,SNR=8.9						
ZALV	**Zalesovo Beam**	**1.37**	**282**	Pg	Pn	09 27 52.5	0.0
	0.9nm,0.3s,baz=106,slow=12,SNR=25						
ZALV				Lg	Lg	09 28 09.8	
	0.9nm,0.3s,baz=99,slow=30,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.09**	**243**	Pn	Pn	09 28 57.7	+0.4
	1.2nm,0.2s,baz=57,slow=14,SNR=1.4						
MKAR	**Makanchi Array**	**7.55**	**206**	Pn	Pn	09 29 18.4	+1.0
	0.1nm,0.3s,baz=24,slow=13,SNR=7.5						
	0.1nm,0.3s						

IDC 05 09:38:16.2±2.1, 6°80S×129°23E, h0km, mb3.7/1, mbtmp4.0/5, ML4.0/4, Error ellipse: s-maj=53.5km s-min=28.0km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.46**	**238**	Pn	Pn	09 39 52.8	+0.2
	11nm,0.3s,baz=77,slow=18,SNR=1.9						
BATI				Sn	Sn	09 40 59.0	-8.1
	8.5nm,0.3s,baz=338,slow=21,SNR=1.7						
	36nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.76**	**197**	Pn	Pn	09 41 03.5	-1.8
	0.9nm,0.3s,baz=15,slow=19,SNR=19						
FITZ				Sn	Sn	09 42 58.9	-18
	0.8nm,0.3s,baz=317,slow=23,SNR=2.7						
	3.2nm,0.4s						
WRA	**Warramunga Arr**	**13.97**	**160**	Pn	Pn	09 41 36.5	+0.8
	0.4nm,0.3s,baz=345,slow=13,SNR=15						
WRA				Sn	Sn	09 44 00.2	-11
	1.0nm,0.3s,baz=340,slow=22,SNR=16						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**17.36**	**165**	P	P	09 42 21.0	-0.5
	0.5nm,0.3s,baz=340,slow=12,SNR=63						
ASAR				S	Sn	09 45 19.4	-15
	1.0nm,0.6s,baz=346,slow=27,SNR=8.2						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**67.64**	**327**	P	P	09 49 15.1	+0.1
	0.4nm,0.5s,baz=112,slow=7.9,SNR=5.1						
	0.4nm,0.5s						

CATAC 05 09:42:02.7±0.4, 12°N±3°×87°8W±°, h34km±3km, M2.7/12, MLv2.7/12, Error ellipse: s-maj=7.0km s-min=2.5km az=30.8, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.54**	**28**	P	Pb	09 42 14.8	+0.7
CSGN				S	Sn	09 42 23.9	+2.0
POTN	**Potosi Cosigui**	**0.58**	**31**	P	Pb	09 42 15.1	+0.4
POTN				S	Sb	09 42 24.7	+1.8
CNCH	**Conchagua**	**0.77**	**359**	P	Pb	09 42 17.8	-0.2
CNCH	**Conchagua**	**0.77**	**359**	S	Sb	09 42 29.0	+0.7
CRIN	**San Cristobal**	**0.78**	**75**	P	Pb	09 42 18.5	+0.6
CRIN	**San Cristobal**	**0.78**	**75**	S	Sb	09 42 30.7	+2.4
LCND	**La Caada**	**0.81**	**355**	P	Pb	09 42 18.2	-0.2
LCND	**La Caada**	**0.81**	**355**	S	Sb	09 42 30.1	+1.0
PKGN	**Cerro Pekin**	**0.84**	**78**	P	Pb	09 42 19.1	+0.2
PKGN				S	Sb	09 42 31.0	+1.0
POLN	**Al Sur del Vol**	**0.99**	**81**	P	Pn	09 42 19.4	-0.9
POLN				S	Sn	09 42 33.6	+0.5
PACA	**Pacayal**	**1.08**	**333**	P	Pb	09 42 22.4	-0.7
PACA	**Pacayal**	**1.08**	**333**	S	Sb	09 42 36.3	-0.7
MOM3	**MOM3**	**1.27**	**89**	P	Pn	09 42 24.5	+0.5
MOM3				S	Sb	09 42 41.1	-1.1
PQSS	**Presa 15 de Se**	**1.33**	**327**	S	Sn	09 42 42.3	+0.8
PQSS	**Presa 15 de Se**	**1.33**	**327**	P	Pn	09 42 25.3	+0.4
TECO	**Alcaldia de Te**	**1.40**	**318**	P	Pn	09 42 25.5	-0.4
TECO	**Alcaldia de Te**	**1.40**	**318**	S	Sn	09 42 42.0	-1.1
APQ2	**Apoyeque**	**1.49**	**101**	S	Sn	09 42 46.2	+0.9
SCLA	**Alcaldia de Sa**	**1.49**	**324**	S	Sn	09 42 45.9	+0.4
SCLA	**Alcaldia de Sa**	**1.49**	**324**	P	Pn	09 42 27.5	+0.3
LIMN	**Finca el Limon**	**1.52**	**68**	P	Pn	09 42 27.9	+0.3
LIMN				S	Sn	09 42 46.9	+0.5
UNAN	**Cigeo UNAN**	**1.56**	**104**	S	Sn	09 42 47.6	+0.4
PAVA	**Las Pavas**	**1.63**	**318**	S	Sn	09 42 49.7	+0.7
PAVA	**Las Pavas**	**1.63**	**318**	P	Pn	09 42 30.2	+1.1
WILN	**Americas 2**	**1.63**	**102**	S	Sn	09 42 49.4	+0.6
TGUH	**Tegucigalpa,Un**	**1.64**	**19**	P	Pn	09 42 29.7	+0.4
TGUH				S	Sn	09 42 49.9	+0.6
MAS3	**Al N del Volca**	**1.67**	**106**	S	Sn	09 42 49.4	-0.5
OCON	**Estacion meteo**	**1.73**	**49**	P	Pb	09 42 39.2	+5.3
YUSH	**Yuscaran**	**1.73**	**33**	S	Sn	09 42 52.0	+0.5
YUSH	**Yuscaran**	**1.73**	**33**	P	Pn	09 42 31.0	+0.4
NANN	**Nandasmo**	**1.75**	**108**	S	Sn	09 42 52.7	+0.8
RCPN	**Sur Rio San Ju**	**1.97**	**58**	P	Pn	09 42 34.7	+0.9

*IDC **05** 09:45:36.1±2.1, 38°60N×142°96E, h0km, mb3.6/3, mbtmp3.8/5, ML3.2/2, MS2.9/2, Error ellipse: s-maj=43.2km s-min=30.8km az=71.0*
*JMA **05** 09:45:43.5±0.1, 38°4N±0°4×142°2E±0°7, h37km±1km, MV3.3/39, E OFF MIYAGI PREF*
ISC 05 09:45:42.7±1.8, 38°41N±0°05×142°27E±0°09, h29km±12km, n25, σ1°34/29, mb3.8/3, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.64**	**262**	*i* P	**Pb**	**09 45 55.1**	**-0.2**
JIKH				S	**Sb**	**09 46 03.4**	**-0.7**
JIO	**Ouri**	**0.73**	**274**	*i* P	**Pb**	**09 45 56.7**	**-0.1**
JIO				S	**Sb**	**09 46 05.9**	**-0.5**
JKMT	**Kesennumamotoy**	**0.74**	**303**	*i* P	**Pb**	**09 45 57.1**	**0.0**
JKMT				S	**Sb**	**09 46 06.6**	**-0.3**
OFUJ	**Ofunato**	**0.82**	**325**	⇓*i* P	**Pb**	**09 45 58.2**	**-0.2**
OFUJ				⇓S	**Sb**	**09 46 08.7**	**-0.4**
JMK	**Ichinoseki**	**0.99**	**304**	*i* P	**Pn**	**09 46 00.6**	**+0.1**
JOU	**Okura**	**1.27**	**269**	*i* P	**Pn**	**09 46 04.7**	**+0.3**
JOU				S	**Sn**	**09 46 20.5**	**0.0**
JMM	**Marumori**	**1.29**	**246**	P	**Pn**	**09 46 04.1**	**-0.6**
JMM				S	**Sn**	**09 46 19.9**	**-1.1**
JOM	**Ohasama**	**1.31**	**325**	P	**Pn**	**09 46 05.8**	**+0.8**
JFK	**Kawauchi**	**1.52**	**227**	P	**Pn**	**09 46 07.2**	**-0.8**
JFK				S	**Sn**	**09 46 24.3**	**-2.4**
JYK	**Kaneyama**	**1.58**	**289**	*i* P	**Pn**	**09 46 09.4**	**+0.6**
JRG	**Rokugo**	**1.62**	**308**	P	**Pn**	**09 46 10.3**	**+1.1**
JYS	**Shirataka**	**1.75**	**265**	P	**Pn**	**09 46 11.4**	**+0.3**
JYS				S	**Sn**	**09 46 32.4**	**0.0**
JOTO	**OTAMA OYAMA**	**1.75**	**242**	P	**Pn**	**09 46 11.6**	**+0.5**
JOTO				S	**Sn**	**09 46 32.0**	**-0.5**
MJAR	**Matsushiro Arr**	**3.73**	**241**	Pn	**Pn**	**09 46 41.8**	**+3.4**
	0.3nm,0.3s,baz=64,slow=10,SNR=20						
MJAR				Sn	**Sb**	**09 47 35.1**	**+2.5**
	0.2nm,0.3s,baz=54,slow=17,SNR=4.1						
MJAR				LR	LR	09 48 25.5	
	comp=Z,88nm,18.5s,baz=86,slow=39						
	5.7nm,0.7s						
JHJ	**Hachijo jima 2**	**5.65**	**202**	Pn	**Pn**	**09 47 07.2**	**+2.5**
	7.1nm,0.3s,baz=45,slow=19,SNR=1.1						
JHJ				Sn	**Sn**	**09 48 05.7**	**-3.0**
	4.7nm,0.3s,baz=17,slow=18,SNR=1.8						
	66nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.31**	**124**	T	T	10 21 49.9	
	baz=315,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.32**	**124**	T	T	10 21 50.6	
	baz=315,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**28.33**	**124**	T	T	10 21 51.3	
	baz=315,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**29.07**	**126**	T	T	10 22 49.8	
	baz=317,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.08**	**126**	T	T	10 22 49.8	
	baz=317,slow=76,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**29.09**	**126**	T	T	10 22 51.3	
	baz=317,slow=76,SNR=7.4						
KURBB	**Kurchatov Arra**	**45.71**	**307**	P	**P**	**09 54 01.1**	**+0.2**
	0.5nm,0.4s,baz=83,slow=8.1,SNR=6.4						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**58.52**	**189**	P	**P**	**09 55 35.8**	**-0.6**
	0.7nm,0.7s,baz=9.8,slow=7.4,SNR=4.6						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**62.24**	**189**	P	**P**	**09 56 01.7**	**-0.1**
	0.4nm,0.7s,baz=4.2,slow=4.8,SNR=6.0						
	0.4nm,0.7s						
STKA	**Stephens Creek**	**69.93**	**181**	LR	LR	10 29 44.4	
	comp=Z,13nm,20.1s,baz=206,slow=38						

DJA 05 09:48:28.5±0.4, 8°S±3°×10°6E±°, h10km, M3.7/12, mb4.0/2, MLv3.6/12, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.82**	**49**	P	Pg	09 48 43.2	-1.2
SKJI				S	Sb	09 48 55.9	-0.2
CNJI	**Cibinong**	**1.21**	**79**	P	Pn	09 48 50.6	-0.9
CNJI				S	Sb	09 49 06.9	-0.4
SBJI	**Serang**	**1.44**	**8**	P	Pn	09 48 54.6	0.0
SBJI				S	Sn	09 49 12.9	-0.6
LEM	**Lembang**	**1.82**	**67**	P	Pb	09 49 01.2	-0.9
KPJI	**Karang Pucung**	**2.98**	**86**	P	Pn	09 49 16.0	+0.1
UGM	**Wanagama**	**4.57**	**95**	P	Pn	09 49 37.9	+0.2
PCJI	**Pacitan**	**5.24**	**97**	P	Pn	09 49 48.1	+1.2
	0.3nm22nm,0.9s						

*IDC **05** 09:50:37.8±0.8, 35°74N×75°85E, h0km, mb3.9/11, mbtmp3.8/17, ML3.4/6, MS3.2/11, Error ellipse: s-maj=19.4km s-min=13.4km az=65.0*
*NEIC **05** 09:50:40.6±1.5, 35°77N±0°05×76°14E±0°07, h10km±1km, mb4.4/13, Error ellipse: s-maj=12.8km s-min=3.6km az=130.0*
*MOS **05** 09:50:42.5±1.1, 35°87N×75°94E, h30km, mb4.5/12, Error ellipse: s-maj=9.7km s-min=5.2km az=94.8*
*NNC **05** 09:50:45.0±11.0, 35°82N×76°15E, h43km±101km, mb3.7, mpv3.7, Error ellipse: s-maj=121.7km s-min=60.3km az=26.0*
ISC 05 09:50:43.6±0.5, 35°78N±0°04×76°01E±0°05, h38km, n113, σ1°96/121, mb4.0/20, MS3.2/11, 11C-7D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**1.83**	**148**	*e*P	**Pn**	**09 51 12.8**	**-0.1**
ALCI				*e*S	**Sn**	**09 51 36.3**	**+1.4**
ALCI				IAML		09 51 44.9	
	comp=E,439nm,0.4s						
ALCI				IAML		09 51 45.3	
	comp=N,855nm,0.5s						
SRNI	**Srinagar**	**1.93**	**210**	*e*S	**Sn**	**09 51 40.0**	**+3.3**
TSSA	**Tissa**	**2.93**	**178**	*e*P	**Pn**	**09 51 31.5**	**+3.6**
TSSA				*e*S	**Sn**	**09 52 06.8**	**+4.9**
TSSA				IAML		09 52 12.8	
	comp=N,948nm,0.6s						
TSSA				IAML		09 52 13.1	
	comp=E,814nm,0.6s						
NIL	**Nilore**	**3.11**	**228**		**Pn**	**09 51 31.1**	**+1.0**
NIL	**Nilore**	**3.11**	**228**	P	**Pn**	**09 51 31.1**	**+1.0**
JMU	**Jammu**	**3.19**	**197**	*e*P	**Pn**	**09 51 32.1**	**+1.0**
JMU				IAML		09 52 19.6	
	comp=N,853nm,0.6s						
JMU				IAML		09 52 22.2	
	comp=E,767nm,0.7s						
DHRM	**DHARAMSHALA**	**3.52**	**176**	*e*P	**Pn**	**09 51 37.5**	**+1.5**
DHRM				*e*S	**Sn**	**09 52 19.7**	**+3.2**
DHRM				IAML		09 52 33.0	
	comp=N,336nm,0.8s						
DHRM				IAML		09 52 33.2	
	comp=E,294nm,0.6s						
KSH	**Kashi**	**3.73**	**360**	Pn	**Pn**	**09 51 40.3**	**+1.5**
KSH				Sn	**Sn**	**09 52 26.1**	**+4.6**
KSH				smax	smax		
	comp=N,190nm,0.8s						
KSH				smax	smax		
	comp=E,230nm,1.3s						
TLWR	**Talawar**	**3.81**	**181**	*ex*	x	09 51 47.8	
TLWR				*e*S	**Sn**	**09 52 26.2**	**+3.0**
HNLY	**HANLEY**	**3.87**	**140**	*e*P	**Pn**	**09 51 42.0**	**+1.1**
HNLY				IAML		09 52 34.5	
	comp=E,238nm,0.9s						
HNLY				IAML		09 52 34.8	
	comp=N,236nm,1.0s						
BHK	**Bhakra**	**4.36**	**175**	*e*P	**Pn**	**09 51 48.9**	**+1.6**
BHK				*e*S	**Sn**	**09 52 41.7**	**+4.8**
BHK				IAML		09 52 58.4	
	comp=N,313nm,0.7s						
BHK				IAML		09 53 00.9	
	comp=E,154nm,0.9s						
SMLA	**Simla**	**4.73**	**168**	*e*P	**Pn**	**09 51 54.1**	**+1.8**
SMLA				*e*S	**Sn**	**09 52 48.5**	**+2.5**
SMLA				IAML		09 53 11.5	
	comp=N,126nm,0.7s						
SMLA				IAML		09 53 13.3	
	comp=E,146nm,0.7s						
DRK	**Karamyk**	**4.99**	**319**	Pn	**Pn**	**09 51 58.0**	**+1.9**
DRK	**Karamyk**	**4.99**	**319**	P	**Pn**	**09 51 58.0**	**+1.9**
GAR	**Garm**	**5.56**	**307**	Pn	**Pn**	**09 52 04.8**	**+0.9**
KBL	**Kabul**	**5.84**	**260**	Pn	**Pn**	**09 52 09.0**	**+1.2**
KBL	**Kabul**	**5.84**	**260**	P	**Pn**	**09 52 09.0**	**+1.2**
JOSI	**Joshimath**	**5.99**	**149**	*e*P	**Pn**	**09 52 09.1**	**-0.8**
JOSI				*e*S	**Sn**	**09 53 18.3**	**+0.9**
JOSI				IAML		09 53 22.0	
	comp=E,201nm,0.8s						
JOSI				IAML		09 53 31.3	
	comp=N,268nm,0.9s						
ARSB	**Arslanbob**	**6.03**	**338**		**Pn**	**09 52 10.7**	**+0.4**
ARSB	**Arslanbob**	**6.03**	**338**	P	**Pn**	**09 52 10.7**	**+0.4**
TARG	**Taragay, Kyrgy**	**6.11**	**13**		**Pn**	**09 52 11.2**	**-0.4**
TARG	**Taragay, Kyrgy**	**6.11**	**13**	P	**Pn**	**09 52 11.2**	**-0.4**
CHGR	**Chuyangaron**	**6.18**	**300**	Pn	**Pn**	**09 52 13.7**	**+1.4**
CHGR	**Chuyangaron**	**6.18**	**300**	P	**Pn**	**09 52 13.7**	**+1.4**
KDJ	**Kajisay**	**6.41**	**8**	Pn	**Pn**	**09 52 16.0**	**+0.5**
KDJ	**Kajisay**	**6.41**	**8**	P	**Pn**	**09 52 16.0**	**+0.5**
BOOM	**Boomskoye usch**	**6.71**	**360**	Pn	**Pn**	**09 52 19.2**	**-0.4**
BOOM	**Boomskoye usch**	**6.71**	**360**	P	**Pn**	**09 52 19.2**	**-0.4**
AAK	**Ala-Archa**	**6.95**	**351**		**Pn**	**09 52 21.6**	**-1.4**
AAK	**Ala-Archa**	**6.95**	**351**	Pn	**Pn**	**09 52 25.2**	**+2.2**
	comp=N,0.4nm,0.3s,baz=174,slow=10,SNR=4.1						
AAK				Sn	**Sn**	**09 53 44.9**	**+4.0**
	comp=N,0.3nm,0.3s,baz=180,slow=11,SNR=1.1						
AAK				Lg	Lg	09 54 17.6	
	comp=N,0.3nm,0.3s,baz=198,slow=19,SNR=1.7						
AAK				LR	LR	09 55 23.2	
	comp=N,124nm,20.4s,baz=132,slow=41						
	comp=N,1.8nm,0.5s						
AAK	**Ala-Archa**	**6.95**	**351**	⇑*i*P	**Pn**	**09 52 23.3**	**+0.3**
PTH	**Pithoragarh**	**7.15**	**149**	*e*S	**Sn**	**09 53 44.3**	**-1.4**
KUDL	**Kundal**	**7.62**	**177**	*e*P	**Pn**	**09 52 31.6**	**-0.4**
KUDL				*e*S	**Sn**	**09 53 54.3**	**-2.7**
KUDL				IAML		09 53 58.0	
	comp=E,236nm,0.6s						
KUDL				IAML		09 53 59.3	
	comp=N,224nm,0.5s						
KK31	**Karatay Array**	**8.46**	**331**		**Pn**	**09 52 43.6**	**0.0**
KK31	**Karatay Array**	**8.46**	**331**	⇓P	**Pn**	**09 52 44.4**	**+0.8**
	comp=N,1.4nm,0.4s,baz=140,slow=12,SNR=14						
KK31				⇑S	**Sn**	**09 54 18.3**	**+0.6**
	comp=N,10nm,0.8s,baz=144,slow=12,SNR=6.1						
KK31	**Karatay Array**	**8.46**	**331**	P	**Pn**	**09 52 43.6**	**0.0**
KKAR	**Karatay Array**	**8.46**	**331**		**Pn**	**09 52 44.4**	**+0.8**
KKAR	**Karatay Array**	**8.46**	**331**	P	**Pn**	**09 52 44.4**	**+0.8**
AJM	**Ajmer**	**9.34**	**188**	*e*S	**Sn**	**09 54 35.3**	**-4.2**
MAKZ	**Makanchi**	**11.89**	**20**		**Pn**	**09 53 30.3**	**-0.2**
MAKZ	**Makanchi**	**11.89**	**20**	P	**Pn**	**09 53 30.3**	**-0.2**
MK31	**Makanchi Array**	**11.97**	**21**	Pn	**Pn**	**09 53 30.1**	**-1.5**
MK31	**Makanchi Array**	**11.97**	**21**	⇑P	**Pn**	**09 53 29.1**	**-2.4**
	comp=N,1.7nm,0.6s,baz=204,slow=13,SNR=8.2						
MK31	**Makanchi Array**	**11.97**	**21**	⇑*i*P	**Pn**	**09 53 32.5**	**+0.9**
MKAR	**Makanchi Array**	**11.97**	**21**		**Pn**	**09 53 29.6**	**-1.9**
MKAR	**Makanchi Array**	**11.97**	**21**	Pn	**Pn**	**09 53 32.9**	**+1.3**
	comp=N,0.3nm,0.3s,baz=203,slow=12,SNR=9.0						
MKAR				Sn	**Sn**	**09 55 45.1**	**+1.3**
	comp=N,0.1nm,0.3s,baz=188,slow=20,SNR=2.4						
	comp=N,1.3nm,0.7s						
EVN	**Everest**	**12.04**	**127**		**Pn**	**09 53 30.6**	**-2.5**
KURBB	**Kurchatov Arra**	**14.95**	**6**	Pn	**Pn**	**09 54 10.9**	**-1.1**
	baz=192,slow=12,SNR=6.9						
KURBB				Lg	Lg	09 58 34.4	
	comp=N,0.1nm,0.3s,baz=186,slow=34,SNR=5.0						
	comp=N,1.1nm,0.7s						
KURK	**Kurchatov**	**15.05**	**6**		**Pn**	**09 54 12.3**	**-1.0**
KURK				IAmb	IAmb	09 54 22.2	
	comp=Z,10nm,0.8s						
KURK	**Kurchatov**	**15.05**	**6**	⇑*i*P	**Pn**	**09 54 13.1**	**-0.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
DGZ	**Jazzator, Alta**	**16.22**	**27**	⇑*i*P	**P**	**09 54 29.4**	**-1.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SHL	**Shillong**	**17.00**	**122**	Pn	**Pn**	**09 54 36.5**	**-2.2**
SHL	**Shillong**	**17.00**	**122**	P	**Pn**	**09 54 36.5**	**-2.2**
SHL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BVA0	**Borovoye Array**	**17.70**	**349**	⇓P	**P**	**09 54 50.8**	**+3.3**
	comp=Z,7.4nm,1.3s,baz=169,slow=10,SNR=15						
BVA0	**Borovoye Array**	**17.70**	**349**	P	**P**	**09 54 50.8**	**+3.3**
BVAR	**Borovoye Array**	**17.70**	**349**	Pn	**Pn**	**09 54 43.3**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=161,slow=8.8,SNR=7.1						
	comp=Z,0.3nm,0.3s						
BORK	**Borovoye**	**17.73**	**349**	⇑*i*P	**P**	**09 54 47.0**	**-0.8**
BORK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AB31	**Akbulak array**	**17.89**	**324**		**P**	**09 54 48.9**	**-0.7**
AB31	**Akbulak array**	**17.89**	**324**	P	**Pn**	**09 54 47.3**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=126,slow=14,SNR=11						
AB31	**Akbulak array**	**17.89**	**324**	P	**Pn**	**09 54 47.3**	**-2.0**
ABKAR	**Akbulak array**	**17.89**	**324**		**P**	**09 54 48.9**	**-0.7**
HYBB	**Hyderabad (bro**	**18.42**	**172**	*e*P	Pn	09 55 05.0	+8.9
ZAA0	**Zalesovo Array**	**19.18**	**16**	P	**Pn**	**09 55 03.6**	**-1.3**
ZALV	**Zalesovo Beam**	**19.18**	**16**	P	**Pn**	**09 55 03.7**	**-1.2**
ZALV	**Zalesovo Beam**	**19.18**	**16**	P	**Pn**	**09 55 03.5**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=214,slow=9.5,SNR=6.7						
	comp=Z,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**19.18**	**16**	*e*P	**Pn**	**09 55 07.3**	**+2.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**19.60**	**324**	P	**P**	**09 55 07.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=128,slow=13,SNR=11						
AKTO				LR	LR	10 03 20.3	
	comp=Z,94nm,19.2s,baz=206,slow=39						
	comp=Z,2.5nm,0.5s						
AKTO	**Aktyubinsk**	**19.60**	**324**	⇓P	**Pn**	**09 55 09.7**	**-0.3**
	comp=Z,1.8nm,0.5s						
AKTO	**Aktyubinsk**	**19.60**	**324**	P	**Pn**	**09 55 09.7**	**-0.3**
KNGR	**Kungurtug, Tuv**	**21.46**	**40**	⇓*i*P	**P**	**09 55 30.6**	**+2.0**
KNGR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARTI	**Arti**	**23.84**	**335**	P	**P**	**09 55 53.8**	**+0.9**
ARTI				IAmb	IAmb	09 56 27.5	
	comp=Z,4.9nm,0.6s						
ARTI	**Arti**	**23.84**	**335**	LR	LR	10 05 50.0	
	comp=Z,64nm,20.1s,baz=179,slow=38						
ARTI	**Arti**	**23.84**	**335**	*c*P	**P**	**09 55 53.7**	**+0.8**
ARTI						09 56 18.6	
ARTI				S	**S**	**10 00 09.5**	**+3.5**
ARTI				SS	**SnSn**	**10 00 45.0**	**-1.9**
ARTI				pmax	pmax		
	comp=Z,13nm,1.9s						
GNI	**Garni**	**24.97**	**290**	P	**P**	**09 56 05.0**	**+1.3**
GNI				IAmb	IAmb	09 56 21.5	
	comp=Z,7.7nm,0.8s						
GNI	**Garni**	**24.97**	**290**	P	**P**	**09 56 05.0**	**+1.3**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM	**Songino Array**	**25.48**	**52**	P	**P**	**09 56 08.4**

ARCES	**ARCESS Array B**	**43.39**	**337**	P		**P**	**09 58 41.0**	**-0.9**	
	comp=Z,1.5nm,0.6s,baz=116,slow=8.5,SNR=4.9								
	comp=Z,1.5nm,0.6s								
ARCES	**ARCESS Array B**	**43.39**	**337**	*e*P		**P**	**09 58 41.2**	**-0.7**	
ARCES				pmax		pmax			
	comp=Z,2.0nm,0.8s								
VRAC	**Vranov**	**44.70**	**307**	LR		LR	10 21 35.2		
	comp=Z,41nm,19.9s,baz=335,slow=42								
TIXI	**Tiksi**	**44.96**	**21**	⇓*i*P		**P**	**09 58 55.3**	**+0.9**	
TIXI				pmax		pmax			
	comp=Z,2.0nm,0.9s								
HFS	**Hagfors**	**46.14**	**322**	P		**P**	**09 59 03.4**	**-0.5**	
	comp=Z,1.7nm,0.5s,baz=106,slow=8.4,SNR=5.2								
HFS				LR		LR	10 17 25.9		
	comp=Z,27nm,21.2s,baz=188,slow=35								
	comp=Z,1.7nm,0.5s								
NOA	**NORSAR Array B**	**47.39**	**323**	P		**P**	**09 59 12.5**	**-1.2**	
	comp=Z,0.5nm,0.6s,baz=100,slow=8.0,SNR=2.0								
NOA				LR		LR	10 20 10.0		
	comp=Z,44nm,19.0s,baz=100,slow=37								
	comp=Z,0.5nm,0.6s								
MURB	**Monte Urbino**	**48.50**	**299**			**P**	**09 59 22.7**	**0.0**	
SKR	**Severo-Kuril's**	**57.45**	**48**	*ce*P		**P**	**10 00 24.5**	**-3.9**	
TORD	**Torodi Ar. Bea**	**69.78**	**272**	P		**P**	**10 01 48.9**	**-1.4**	
	comp=Z,2.0nm,0.9s,baz=50,slow=7.4,SNR=7.0								
	comp=Z,2.0nm,0.9s								
ILAR	**Eielson Array**	**74.30**	**18**	P		**P**	**10 02 17.3**	**+0.8**	
ILAR	**Eielson Array**	**74.30**	**18**	P		**P**	**10 02 17.1**	**+0.6**	
	comp=Z,0.4nm,0.8s,baz=326,slow=4.9,SNR=4.5								
	comp=Z,0.4nm,0.8s								
ILAR	**Eielson Array**	**74.30**	**18**	*e*P		P	10 02 21.0	+4.5	
ILAR				pmax		pmax			
	comp=Z,1.0nm,0.9s								
PPLA	**Purkeypile**	**74.39**	**21**	P		**P**	**10 02 18.1**	**+0.8**	
N18K	**Kilae Creek**	**74.95**	**24**	P		**P**	**10 02 21.1**	**+0.7**	
N18K				IAmb		IAmb	10 02 36.3		
	comp=Z,13nm,1.2s								
WRA	**Warramunga Arr**	**78.21**	**125**	P		**P**	**10 02 38.8**	**-0.6**	
	comp=Z,0.7nm,1.0s,baz=320,slow=5.2,SNR=5.3								
	comp=Z,0.7nm,1.0s								
WRA	**Warramunga Arr**	**78.21**	**125**	*i* P		P	10 02 43.7	+4.4	
WRAB	**Tennant Creek**	**78.21**	**125**	⇓*i*P		**P**	**10 02 40.7**	**+1.4**	
WRAB				pmax		pmax			
	comp=Z,1.0nm,0.3s								
ASAR	**Alice Springs**	**80.56**	**128**	P		**P**	**10 02 51.8**	**-0.4**	
	comp=Z,0.3nm,0.6s,baz=310,slow=5.4,SNR=8.1								
	comp=Z,0.3nm,0.6s								

ZUR 05 09:51:19.0, 46°32N×7°36E, *h*4km±1km, MLh0.3/4, 2C-3D, Error ellipse: s-maj=2039.1km s-min=724.9km az=128.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**266**		⇑Pg		Pg	09 51 20.3	+0.2
RAW2					Sg		Sg	09 51 21.1	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**320**		⇓Pg		Pg	09 51 20.6	+0.1
SENIN					Sg		Sg	09 51 21.8	+0.2
STSW2	**Zeuzier, Staus**	**0.06**	**62**		⇑Pg		Pg	09 51 20.7	+0.3
STSW2					Sg		Sg	09 51 21.9	+0.4
RAW1	**Lenk, BE**	**0.12**	**28**		⇓P		Pg	09 51 21.6	+0.2
RAW1					Sg		Sg	09 51 23.4	+0.4
GRYON	**Gryon**	**0.18**	**249**		Pg		Pg	09 51 22.9	+0.3
GRYON					Sg		Sg	09 51 25.4	+0.4
LKBD2	**Leukerbad 2**	**0.21**	**74**		Pg		Pg	09 51 23.5	+0.4
LKBD2					Sg		Sg	09 51 26.5	+0.6
DIX	**Grande Dixence**	**0.24**	**171**		⇓Pg		Pg	09 51 24.1	+0.4
DIX					Sg		Sg	09 51 27.3	+0.5

ZUR 05 09:52:12.8, 46°32N×7°37E, *h*4km±1km, MLh0.3/8, 1C-5D, Error ellipse: s-maj=1805.8km s-min=544.0km az=96.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.04**	**265**		⇓Pg		Pg	09 52 14.2	+0.2
RAW2					Sg		Sg	09 52 15.2	+0.2
SAYF2	**Ayent-Fortunoz**	**0.05**	**130**		Sg		Sg	09 52 15.4	+0.4
STSW2	**Zeuzier, Staus**	**0.05**	**60**		⇓Pg		Pg	09 52 14.6	+0.3
STSW2					Sg		Sg	09 52 15.6	+0.3
SENIN	**Lac Senin/Sane**	**0.07**	**314**		⇓Pg		Pg	09 52 14.6	+0.1
SENIN					Sg		Sg	09 52 15.8	+0.1
RAW1	**Lenk, BE**	**0.11**	**25**		⇑Pg		Pg	09 52 15.4	+0.1
RAW1					Sg		Sg	09 52 17.2	+0.4
VET01	**Vtroz, Route**	**0.12**	**215**		Sg		Sg	09 52 17.4	+0.6
VET03	**Vtroz, Le Bot**	**0.12**	**209**		Sg		Sg	09 52 17.4	+0.4
RAW4	**Former Reservo**	**0.17**	**230**		⇓Pg		Pg	09 52 16.4	+0.2
GRYON	**Gryon**	**0.19**	**249**		Pg		Pg	09 52 16.7	+0.1
GRYON					Sg		Sg	09 52 19.5	+0.5
LKBD2	**Leukerbad 2**	**0.20**	**74**		Sg		Sg	09 52 20.1	+0.6
DIX	**Grande Dixence**	**0.24**	**173**		Pg		Pg	09 52 18.0	+0.5
DIX					Sg		Sg	09 52 21.2	+0.5
LAVEY	**Lavey les Bain**	**0.27**	**244**		Sg		Sg	09 52 21.8	+0.3
LAUCH	**Lauchernalp**	**0.30**	**71**		⇓Pg		Pg	09 52 19.0	+0.3
LAUCH					Sg		Sg	09 52 23.0	+0.4
JAUN	**Jaun, Euschels**	**0.32**	**351**		Sg		Sg	09 52 24.4	+1.1
SALAN	**Lac Salanfe**	**0.32**	**238**		Sg		Sg	09 52 23.9	+0.4

*IDC **05** 09:57:00.9±0.8, 40°.69N×78°.79E, *h*0km, *mb*4.0/13, mbtmp4.0/19, ML3.2/6, MS4.4/1, Error ellipse: s-maj=14.8km s-min=11.4km az=48.0*
*SOME **05** 09:57:01.1, 40°.80N×78°.73E, *h*10km*
*MOS **05** 09:57:02.3±1.8, 40°.77N×78°.97E, *h*13km, *mb*4.3/5, Error ellipse: s-maj=6.7km s-min=4.5km az=116.4*
*NNC **05** 09:57:03.5±1.0, 40°.84N×78°.71E, *h*0km±6km, *mb*4.8, mpv4.5, Error ellipse: s-maj=6.7km s-min=4.5km az=151.0*
*KRNET **05** 09:57:04.9±0.1, 40°.95N×78°.72E, *h*16km, *mb*4.3*
ISC 05 09:57:03.8±1.3, 40°.86N±0°.03×78°.87E±0°.03, h11km±8km, n140, σ2s08/191, mb3.9/13, 29C-44D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.18**	**317**		⇓*e*P		**Pg**	**09 57 24.6**	**-2.0**
TARG					⇓*e*S		**Sg**	**09 57 38.9**	**-3.1**
TARG	**Taragay, Kyrgy**	**1.18**	**317**		⇓*e*PG		**Pg**	**09 57 24.6**	**-2.0**
PRZ	**Przheval'sk**	**1.66**	**348**		⇓*e*P		**Pn**	**09 57 34.0**	**+1.0**
PRZ					⇓*e*S		**Sn**	**09 57 55.2**	**+0.9**
PRZ	**Przheval'sk**	**1.66**	**348**		⇓*e*PN		**Pn**	**09 57 34.0**	**+1.0**
PRZ					*e*S		**Sn**	**09 57 55.2**	**+0.9**
KDJ	**Kajisay**	**1.79**	**315**		⇓*e*P		**Pn**	**09 57 35.2**	**+0.4**
KDJ					⇓*e*S		**Sn**	**09 57 57.5**	**-0.2**
KDJ	**Kajisay**	**1.79**	**315**		⇓*e*PN		**Pn**	**09 57 35.2**	**+0.4**
KDJ					*e*S		**Sn**	**09 57 57.5**	**-0.2**
SATY	**Saty**	**2.22**	**351**		Pg		**Pb**	**09 57 44.5**	**+0.5**
	585nm,0.7s								
SATY					Lg		Lg	09 58 15.7	
	2μm,0.7s								
UZB	**Uzynbulak**	**2.29**	**3**		Pg		**Pb**	**09 57 45.8**	**+0.7**
	327nm,0.5s								
UZB					Lg		Lg	09 58 17.1	
	1μm,0.7s								
UZB	**Uzynbulak**	**2.29**	**3**	*e*P			**Pb**	**09 57 45.5**	**+0.4**
	327nm,0.5s								
UZB				*e*S			**Sg**	**09 58 17.1**	**-0.1**
	1μm,0.7s								
UZB	**Uzynbulak**	**2.29**	**3**	*e*PN			**Pb**	**09 57 45.6**	**+0.4**
SHLS	**Shalkode**	**2.33**	**11**	Pg			**Pg**	**09 57 49.0**	**+0.5**
	1μm,0.6s								
SHLS				Lg			Lg	09 58 21.3	
	2μm,0.7s								
SHLS	**Shalkode**	**2.33**	**11**	*e*P			**Pb**	**09 57 47.8**	**+1.9**
	1μm,0.6s								
SHLS				*e*S			**Sg**	**09 58 21.3**	**+2.5**
	2μm,0.7s								
SHLS	**Shalkode**	**2.33**	**11**	*e*PN			**Pg**	**09 57 48.0**	**-0.5**
ULHL	**Ulahol**	**2.41**	**306**	P			**Pn**	**09 57 45.8**	**+2.5**
	SNR=50								
ULHL	**Ulahol**	**2.41**	**306**		⇑*e*P		**Pn**	**09 57 45.2**	**+1.9**
ULHL					⇑*e*S		**Sn**	**09 58 14.6**	**+1.7**
ULHL	**Ulahol**	**2.41**	**306**	*e*PN			**Pn**	**09 57 45.2**	**+1.9**
ULHL				*e*S			**Sn**	**09 58 14.6**	**+1.7**
JNKS	**Jany-Kuch**	**2.44**	**276**		⇑*e*P		**Pn**	**09 57 45.0**	**+1.2**
JNKS					⇑*e*S		**Sn**	**09 58 16.1**	**+2.3**
PDGK	**Podgornoye**	**2.51**	**10**		⇑Pn		**Pn**	**09 57 47.1**	**+2.5**
	520nm,0.7s								
PDGK					⇑Lg		Lg	09 58 22.9	
	2μm,0.7s								
PDGK	**Podgornoye**	**2.51**	**10**	PN			**Pn**	**09 57 47.1**	**+2.5**
PDGK								09 58 22.8	
KSH	**Kashi**	**2.59**	**240**	Pn			**Pb**	**09 57 52.0**	**+1.6**
KSH					Sn		**Sg**	**09 58 35.5**	**+8.3**
KSH					smax		smax		
	comp=N,500nm,1.0s								
KSH					smax		smax		
	comp=E,520nm,1.3s								
TNSS	**Tian-Shan**	**2.60**	**327**	Pg			**Pb**	**09 57 50.5**	**-0.2**
	comp=E,74nm,0.4s								
TNSS					Lg		Lg	09 58 26.0	
	comp=E,233nm,0.8s								
TNSS	**Tian-Shan**	**2.60**	**327**	*e*P			**Pb**	**09 57 50.5**	**-0.2**
	comp=E,74nm,0.4s								
TNSS				*e*S			**Sg**	**09 58 26.0**	**-1.5**
	comp=E,233nm,0.8s								
KPKS	**Kokpek**	**2.61**	**357**	Pg			**Pb**	**09 57 50.9**	**+0.4**
	comp=E,175nm,0.4s								
KPKS					Lg		Lg	09 58 26.8	
	comp=E,508nm,0.6s								
MDOK	**Medeo**	**2.67**	**330**	Pg			**Pb**	**09 57 52.0**	**+0.3**
	comp=E,118nm,0.5s								
MDOK					Lg		Lg	09 58 28.6	
	comp=E,672nm,0.9s								
KURS	**Kuram**	**2.67**	**349**	Pg			**Pb**	**09 57 52.6**	**+0.9**
	comp=E,218nm,0.9s								
KURS					Lg		Lg	09 58 29.6	
	comp=E,591nm,1.0s								
BOOM	**Boomskoye usch**	**2.73**	**307**		⇓*e*P		**Pn**	**09 57 49.7**	**+2.0**
BOOM					⇓*e*S		**Sn**	**09 58 22.3**	**+1.5**
BOOM	**Boomskoye usch**	**2.73**	**307**		⇓*e*PN		**Pn**	**09 57 49.7**	**+2.0**
BOOM					*e*S		**Sn**	**09 58 22.3**	**+1.5**
KNDC	**Almaty**	**2.75**	**330**		⇑Pg		**Pb**	**09 57 53.2**	**+0.3**
	comp=E,463nm,0.6s								
KNDC					⇑Lg		Lg	09 58 30.7	
	comp=E,1μm,0.9s								
KNDC	**Almaty**	**2.75**	**330**	PN			**Pb**	**09 57 53.2**	**+0.3**
KNDC								09 58 30.7	
IZV	**Izvestkoviy**	**2.75**	**323**	Pg			**Pb**	**09 57 53.3**	**+0.3**
	comp=E,82nm,0.5s								
IZV					Lg		Lg	09 58 30.5	
	comp=E,373nm,0.8s								
IZV	**Izvestkoviy**	**2.75**	**323**	*e*P			**Pb**	**09 57 53.3**	**+0.3**
	comp=E,82nm,0.5s								
IZV				*e*S			**Sg**	**09 58 30.5**	**-1.6**
	comp=E,373nm,0.8s								
AAA	**Alma-Ata**	**2.76**	**329**	Pg			**Pb**	**09 57 54.3**	**+1.2**
	comp=E,846nm,0.5s								
AAA					Lg		Lg	09 58 32.0	
	comp=E,113nm,0.7s								
AAA	**Alma-Ata**	**2.76**	**329**	*e*P			**Pb**	**09 57 54.3**	**+1.2**
	comp=E,846nm,0.5s								
AAA				*e*S			**Sg**	**09 58 32.0**	**-0.5**
	comp=E,113nm,0.7s								
MTBS	**Maitube**	**2.91**	**322**	Pg			**Pb**	**09 57 54.1**	**-1.6**
	comp=E,42nm,0.4s								
MTBS					Lg		Lg	09 58 30.9	
	comp=E,300nm,0.6s								
MTBS	**Maitube**	**2.91**	**322**	*e*P			**Pn**	**09 57 53.3**	**+3.3**
	comp=E,42nm,0.4s								
MTBS				*e*S			**Sb**	**09 58 30.9**	**-0.3**
	comp=E,300nm,0.6s								
KST	**Kastek**	**3.08**	**316**	Pg			**Pb**	**09 57 57.1**	**-1.5**
	comp=E,41nm,0.4s								
KST					Lg		Lg	09 58 37.9	
	comp=E,353nm,0.7s								
KST	**Kastek**	**3.08**	**316**	*e*P			**Pb**	**09 57 57.5**	**-1.0**
	comp=E,41nm,0.4s								
KST				*e*S			**Sb**	**09 58 37.9**	**+1.8**
	comp=E,353nm,0.7s								
TKM2	**Tokmak 2**	**3.19**	**311**	P			**Pn**	**09 57 56.8**	**+2.6**
	SNR=14								
TKM2	**Tokmak 2**	**3.19**	**311**		⇓*e*P		**Pn**	**09 57 56.2**	**+2.1**
TKM2					⇓*e*S		**Sn**	**09 58 33.5**	**+1.2**
TKM2	**Tokmak 2**	**3.19**	**311**		⇓*e*PN		**Pn**	**09 57 56.2**	**+2.1**
TKM2					*e*S		**Sn**	**09 58 33.5**	**+1.2**
CHKK	**Chushkaly**	**3.30**	**336**	Pg			**Pb**	**09 58 02.5**	**+0.2**
	comp=E,74nm,0.5s								
CHKK					Lg		Lg	09 58 47.2	
	comp=E,987nm,0.4s								
CHKK	**Chushkaly**	**3.30**	**336**	*e*P			**Pb**	**09 58 02.9**	**+0.6**
	comp=E,74nm,0.5s								
CHKK				*e*S			**Sg**	**09 58 47.2**	**-2.6**
	comp=E,987nm,0.4s								
ARXS	**Arharly**	**3.44**	**347**	Pg			**Pb**	**09 58 05.3**	**+0.6**
	comp=E,148nm,0.8s								
ARXS					Lg		Lg	09 58 51.4	
	comp=E,447nm,0.4s								
ARXS	**Arharly**	**3.44**	**347**	*e*P			**Pb**	**09 58 05.3**	**+0.6**
ARXS				*e*S			**Sg**	**09 58 51.4**	**-2.7**
KBK	**Karagaybulak**	**3.44**	**303**	P			**Pn**	**09 57 59.7**	**+2.3**
	SNR=18								
KBK	**Karagaybulak**	**3.44**	**303**		⇓*e*P		**Pn**	**09 57 59.4**	**+2.0**
KBK					⇓*e*S		**Sn**	**09 58 39.4**	**+1.1**
KBK	**Karagaybulak**	**3.44**	**303**		⇓*e*PN		**Pn**	**09 57 59.4**	**+2.0**
KBK					*e*S		**Sn**	**09 58 39.4**	**+1.1**
UCH	**Uchtor**	**3.54**	**294**	P			**Pn**	**09 58 00.1**	**+1.0**
	SNR=30								
ARLS	**Aral**	**3.57**	**288**		⇓*e*P		**Pn**	**09 58 01.2**	**+2.0**
ARLS					⇓*e*S		**Sn**	**09 58 42.4**	**+1.0**
ARLS	**Aral**	**3.57**	**288**		⇓*e*PN		**Pn**	**09 58 01.2**	**+2.0**
ARLS					*e*S		**Sn**	**09 58 42.4**	**+1.0**
FRU1	**Bishkek**	**3.72**	**303**		⇑*i*P		**Pn**	**09 58 03.6**	**+2.4**
FRU1					⇑*e*S		**Sn**	**09 58 46.4**	**+1.4**
FRU1	**Bishkek**	**3.72**	**303**		*i* PN		**Pn**	**09 58 03.6**	**+2.4**
FRU1					*e*S		**Sn**	**09 58 46.4**	**+1.4**
AAK	**Ala-Archa**	**3.72**	**300**	Pn			**Pn**	**09 58 03.6**	**+2.3**
	comp=E,4.6nm,0.3s,baz=106,slow=9.2,SNR=12								
AAK					Lg		Lg	09 58 58.5	
	comp=E,9.3nm,0.3s,baz=90,slow=20,SNR=9.1								
	comp=E,5.8nm,0.4s								
AAK	**Ala-Archa**	**3.72**	**300**	P			**Pb**	**09 58 09.5**	**-0.1**
	SNR=13								
AAK	**Ala-Archa**	**3.72**	**300**		⇓Pg		**Pb**	**09 58 08.6**	**-1.0**
	comp=E,367nm,0.8s								
AAK					⇑Lg		Lg	09 58 57.9	
	comp=E,1μm,0.8s								
AAK	**Ala-Archa**	**3.72**	**300**		⇑*e*P		**Pn**	**09 58 03.5**	**+2.2**
AAK					⇑*e*S		**Sn**	**09 58 46.2**	**+0.9**
AAK	**Ala-Archa**	**3.72**	**300**	*i* PN			**Pn**	**09 58 02.8**	**+1.5**
CHMS	**Chumysh**	**3.74**	**306**	P			**Pb**	**09 58 09.7**	**-0.2**
	SNR=6.9								
CHMS	**Chumysh**	**3.74**	**306**		⇓*e*P		**Pn**	**09 58 03.6**	**+2.1**
CHMS					⇓*e*S		**Sn**	**09 58 46.4**	**+0.9**
CHMS	**Chumysh**	**3.74**	**306**		⇓*e*PN		**Pn**	**09 58 03.6**	**+2.1**
CHMS					*e*S		**Sn**	**09 58 46.4**	**+0.9**
SALK	**Salom-Alik**	**3.83**	**272**	P			**Pn**	**09 58 05.2**	**+2.4**
SALK					⇑*e*S		**Sn**	**09 58 49.5**	**+1.6**
SALK	**Salom-Alik**	**3.83**	**272**	*e*PN			**Pn**	**09 58 05.2**	**+2.4**
SALK					*e*S		**Sn**	**09 58 49.5**	**+1.6**
USP	**Ospenovka**	**4.04**	**308**	P			**Pb**	**09 58 15.6**	**+0.5**
	SNR=17								
USP	**Ospenovka**	**4.04**	**308**		⇓*e*P		**Pn**	**09 58 07.8**	**+2.2**
USP					⇓*e*S		**Sn**	**09 58 53.7**	**+0.7**
USP	**Ospenovka**	**4.04**	**308**		⇓*e*PN		**Pn**	**09 58 07.8**	**+2.2**
USP					*e*S		**Sn**	**09 58 53.7**	**+0.7**
TDK	**Taldyqorghan**	**4.15**	**355**	Pg			**Pb**	**09 58 19.3**	**+2.4**
	comp=E,244nm,0.6s								
TDK					Lg		Lg	09 59 15.3	
	comp=E,542nm,0.7s								
TDK	**Taldyqorghan**	**4.15**	**355**	*e*P			**Pb**	**09 58 19.2**	**+2.4**
	comp=E,244nm,0.6s								
TDK				*e*S			**Sg**	**09 59 15.3**	**-1.7**
	comp=E,542nm,0.7s								
SFK	**Sufi-Kurgan**	**4.18**	**260**		⇑*e*P		**Pn**	**09 58 10.5**	**+2.8**
SFK					⇑*e*S		**Sn**	**09 58 58.5**	**+1.8**
SFK	**Sufi-Kurgan**	**4.18**	**260**	*e*PN			**Pn**	**09 58 10.5**	**+2.8**
SFK					*e*S		**Sn**	**09 58 58.5**	**+1.8**
EKS2	**Erkin-Say**	**4.21**	**297**	P			**Pb**	**09 58 18.7**	**+0.8**
	SNR=18								
EKS2	**Erkin-Say**	**4.21**	**297**		⇓*e*P		**Pn**	**09 58 10.2**	**+2.2**
EKS2					⇓*e*S		**Sn**	**09 58 57.9**	**+0.6**
EKS2	**Erkin-Say**	**4.21**	**297**		⇓*e*PN		**Pn**	**09 58 10.2**	**+2.2**
EKS2					*e*S		**Sn**	**09 58 57.9**	**+0.6**
KAPS	**Kapalarasan**	**4.43**	**4**	Pg			**Pb**	**09 58 24.2**	**+2.5**
	comp=E,51nm,0.5s								
KAPS					Lg		Lg	09 59 23.7	
	comp=E,244nm,0.5s								
ARSB	**Arslanbob**	**4.47**	**278**		⇓*e*P		**Pn**	**09 58 14.1**	**+2.5**
ARSB					⇓*e*S		**Sn**	**09 59 04.7**	**+1.0**
ARSB	**Arslanbob**	**4.47**	**278**		⇓*e*PN		**Pn**	**09 58 14.1**	**+2.5**
ARSB					*e*S		**Sn**	**09 59 04.7**	**+1.0**
MRKS	**Merke**	**4.62**	**296**	Pg			**Pb**	**09 58 25.6**	**+0.7**
	comp=E,19nm,0.5s								
MRKS					Lg		Lg	09 59 26.2	
	comp=E,40nm,0.8s								
MRKS	**Merke**	**4.62**	**296**	*e*P			**Pb**	**09 58 25.6**	**+0.7**
	comp=E,19nm,0.5s								
MRKS				*e*S			**Sb**	**09 59 26.2**	**+5.6**
	comp=E,40nm,0.8s								
OHH	**Osh**	**4.64**	**268**		⇓*e*P		**Pn**	**09 58 16.5**	**+2.7**
OHH					⇓*e*S		**Sn**	**09 59 08.8**	**+1.1**
OHH	**Osh**	**4.64**	**268**		⇓*e*PN		**Pn**	**09 58 16.5**	**+2.7**
OHH					*e*S		**Sn**	**09 59 08.8**	**+1.1**
ARK	**Arkit**	**5.29**	**282**		⇑*e*P		**Pn**	**09 58 25.1**	**+2.4**
ARK					⇑*e*S		**Sn**	**09 59 23.8**	**+0.1**
ARK	**Arkit**	**5.29**	**282**	*e*PN			**Pn**	**09 58 25.1**	**+2.4**
ARK				*e*S			**Sn**	**09 59 23.8**	**+0.1**
TRKS	**Terek-Say**	**5.87**	**279**		⇓*e*P		**Pn**	**09 58 32.9**	**+2.1**
TRKS					⇓*e*S		**Sn**	**09 59 37.2**	**-1.0**
TRKS	**Terek-Say**	**5.87**	**279**		⇓*e*PN		**Pn**	**09 58 32.9**	**+2.1**
MAKZ	**Makanchi**	**6.35**	**20**		⇓Pn		**Pn**	**09 58 39.6**	**+2.3**
	comp=E,2.0nm,0.3s								
MAKZ					⇑Pg		Pb	09 59 00.3	+6.0
	comp=E,28nm,1.1s								
MAKZ					⇑Lg		Lg	10 00 26.7	
	comp=E,32nm,0.8s								
MK31	**Makanchi Array**	**6.42**	**21**		Pn		**Pn**	**09 58 40.2**	**+1.9**
	comp=E,1.1nm,0.3s,baz=202,slow=12,SNR=101								
MK31					⇓Pg		Pb	09 59 01.6	+6.1
	comp=E,15nm,0.6s,baz=200,slow=13,SNR=4.3								
MK31					⇑Sn		**Sn**	**09 59 54.5**	**+2.9**
	comp=E,19nm,0.7s,baz=203,slow=28,SNR=4.2								
MK31					⇓Lg		Lg	10 00 29.6	
	comp=E,21nm,0.6s,baz=193,slow=29,SNR=4.5								
MK31	**Makanchi Array**	**6.42**	**21**		PN		**Pn**	**09 58 40.2**	**+1.9**
MK31					*e*			09 59 01.5	
MK31								09 59 54.4	
MKAR	**Makanchi Array**	**6.42**	**21**		Pn		**Pn**	**09 58 40.2**	**+1.9**
	comp=E,2.4nm,0.3s,baz=202,slow=13,SNR=88								
MKAR					Sn		**Sn**	**09 59 53.5**	**+1.9**
	comp=E,3.0nm,0.3s,baz=207,slow=23,SNR=6.0								
MKAR					Lg		Lg	10 00 29.4	
	comp=E,3.5nm,0.3s,baz=200,slow=28,SNR=3.6								
	comp=E,3.5nm,0.3s								
KK31	**Karatay Array**	**6.62**	**293**		⇓Pg		**Pb**	**09 59 00.5**	**+1.7**
	comp=E,18nm,0.9s,baz=108,slow=14,SNR=28								
KK31					⇑Lg		Lg	10 00 28.7	
	comp=E,17nm,0.7s,baz=97,slow=27,SNR=5.1								
IUG	**Iuzhnay**	**6.76**	**284**		Pg		Pb	09 59 06.3	+5.0
	comp=E,72nm,1.0s								
IUG					Lg		Lg	10 00 36.7	
	comp=E,93nm,1.0s								
ALCI	**Alchi Leh**	**6.77**	**192**	*e*P			**Pn**	**09 58 42.9**	**-0.5**
ALCI				*e*S			**Sn**	**09 59 58.4**	**-2.2**
ALCI				IAML				10 00 34.2	
	comp=E,62nm,0.6s								
ALCI				IAML				10 00 41.6	
	comp=N,29nm,0.8s								
GAR	**Garm**	**6.83**	**257**		⇑*e*P		**Pn**	**09 58 46.9**	**+2.9**
GAR					⇑*e*S		**Sn**	**10 00 01.5**	**-0.3**
GAR	**Garm**	**6.83**	**257**	*e*PN			**Pn**	**09 58 46.9**	**+2.9**
BRLS	**Boroldaу**	**7.08**	**291**	Pg			Pb	09 59 11.9	+5.2
	comp=N,4.4nm,0.7s								
BRLS					Lg		Lg	10 00 46.3	
	comp=N,12nm,1.0s								
WMQ	**Urumqi**	**7.17**	**63**	*e*Pn			Pn	09 58 53.4	+4.8
WMQ					Sn		**Sn**	**10 00 17.4**	**+7.3**
WMQ					smax		smax		
	comp=N,70nm,0.9s								
WMQ					smax		smax		
	comp=E,66nm,0.9s								
CHGR	**Chuyangaron**	**7.80**	**257**	P			**Pn**	**09 58 57.9**	**+0.7**
CHGR				pmax			pmax		
	comp=Z,61nm,0.7s								
**H

KIV				MLR	MLR		
	comp=Z,24nm,15.0s						
CMAR	**Chiang Mai Arr**	**28.20 136**	P	**P**		**10 02 54.6**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=308,slow=10.0,SNR=5.2						
	comp=Z,0.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**28.20 136**	*eP*	**P**		**10 02 58.1**	**+1.6**
CMAR			pmax	pmax			
	comp=Z,2.0nm,0.3s						
BRTR	**Keskin Array B**	**34.23 283**	P	**P**		**10 03 48.8**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=92,slow=8.7,SNR=5.3						
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**34.23 283**	*i* P	**P**		**10 03 51.9**	**+2.3**
BRTR			pmax	pmax			
	comp=Z,1.0nm,0.8s						
HEH	**HeiHe**	**34.71 58**	*eP*	**P**		**10 03 53.3**	**-0.1**
FINES	**FINESS Array B**	**37.63 321**	P	**P**		**10 04 17.5**	**-0.8**
	comp=Z,4.4nm,0.9s,baz=116,slow=13,SNR=6.0						
	comp=Z,4.4nm,0.9s						
KSRS	**Korea Array**	**37.79 79**	P	**P**		**10 04 19.5**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=290,slow=9.1,SNR=2.2						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**39.71 334**	P	**P**		**10 04 35.3**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=100,slow=8.5,SNR=20						
	comp=Z,1.5nm,0.4s						
JNU	**Nakatsue**	**41.73 83**	P	**P**		**10 04 52.5**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=318,slow=16,SNR=3.7						
	comp=Z,5.0nm,0.9s						
HFS	**Hagfors**	**43.65 319**	P	**P**		**10 05 06.9**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=114,slow=10,SNR=6.1						
	comp=Z,1.9nm,0.5s						
SPITS	**Spitsbergen Ar**	**44.77 345**	P	**P**		**10 05 16.4**	**-0.4**
	comp=Z,23nm,1.1s,baz=89,slow=10,SNR=2.9						
	comp=Z,23nm,1.1s						
NB2	**NORSAR Subarra**	**44.79 320**	P	**P**		**10 05 15.9**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=85,slow=8.6						
NOA	**NORSAR Array B**	**44.79 320**	P	**P**		**10 05 16.3**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=86,slow=7.9,SNR=4.1						
	comp=Z,0.6nm,0.4s						
TGY	**Tagaytay City**	**45.24 114**	LR	LR		10 24 18.9	
	comp=Z,506nm,21.9s,baz=188,slow=36						
ILAR	**Eielson Array**	**68.77 19**	P	**P**		**10 08 06.4**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=331,slow=7.5,SNR=4.1						
	comp=Z,0.4nm,0.9s						
ASAR	**Alice Springs**	**82.04 131**	P	**P**		**10 09 21.9**	**-2.2**
	comp=Z,0.6nm,0.7s,baz=313,slow=5.3,SNR=6.3						
	comp=Z,0.6nm,0.7s						

*IDC **05** 10:02:43.3±4.5, 14.˚71S×167.˚23E, h79km±38km, mb3.9/11, mbtmp4.2/12, MS2.6/3, Error ellipse: s-maj=28.4km s-min=22.1km az=65.0*
*NEIC **05** 10:02:46.4±1.2, 14.˚85S±0.˚09×167.˚4E±0.˚1, h99km±6km, mb4.3/13, Error ellipse: s-maj=16.1km s-min=12.7km az=58.0*

ISC 05 10:02:45.8±0.7, **14.˚82S**±0.˚07×**167.˚3E**±0.˚1, **h100**km, **n45, σ1§04/47, mb4.3/17, 3C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.62**	**185**		**Pn**	**10 03 02.6**	**+0.1**
SANVU				Sn	**Sn**	**10 03 14.8**	**-0.3**
MARNC	**Mare, Loyalty**	**6.66**	**174**	Pn	**Pn**	**10 04 21.0**	**0.0**
MARNC	**Mare, Loyalty**	**6.66**	**174**	P	**Pn**	**10 04 21.2**	**+0.1**
YATNC	**Mamie plateau,**	**7.21**	**183**	P	**Pn**	**10 04 27.5**	**-1.0**
DZM	**Mont Dzumac**	**7.25**	**186**	P	**Pn**	**10 04 29.4**	**+0.2**
	12nm,0.3s,baz=358,slow=13,SNR=53						
DZM				S	**Sn**	**10 05 49.2**	**-0.8**
	9.4nm,0.4s,baz=298,slow=21,SNR=4.4						
DZM				LR	LR	10 06 19.2	
	comp=Z,22nm,18.2s,baz=217,slow=29						
ONTNC	**Ouen Toro**	**7.48**	**186**	Pn	**Pn**	**10 04 32.7**	**+0.5**
ONTNC	**Ouen Toro**	**7.48**	**186**	P	**Pn**	**10 04 33.8**	**+1.6**
OUENC	**Ouen Island, N**	**7.57**	**183**	P	**Pn**	**10 04 35.0**	**+1.6**
PINNC	**Pines Island,**	**7.75**	**179**	Pn	**Pn**	**10 04 35.7**	**-0.2**
PINNC	**Pines Island,**	**7.75**	**179**	P	**Pn**	**10 04 36.3**	**+0.4**
HNR	**Honiara**	**8.93**	**306**	LR	LR	10 07 56.5	
	comp=Z,45nm,20.1s,baz=306,slow=35						
EIDS	**Eidsvold**	**18.44**	**233**		**Pn**	**10 06 55.0**	**+0.2**
EIDS				IAmb	IAmb	10 07 08.0	
	comp=Z,15nm,1.2s						
BKZ	**Black Stump Fm**	**25.57**	**163**	P	**P**	**10 08 05.6**	**+0.1**
INKA	**Innaminka**	**27.78**	**238**	P	**P**	**10 08 26.1**	**+0.7**
STKA	**Stephens Creek**	**28.93**	**230**	P	**P**	**10 08 36.4**	**+0.8**
STKA	**Stephens Creek**	**28.93**	**230**	P	**P**	**10 08 36.2**	**+0.7**
	comp=Z,4.7nm,0.6s,baz=48,slow=8.3,SNR=12						
	comp=Z,4.7nm,0.6s						
WB0	**Warramunga Arr**	**31.73**	**256**	P	**P**	**10 08 59.6**	**-0.9**
WB0				IAmb	IAmb	10 09 16.1	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**31.79**	**256**	P	**P**	**10 08 59.8**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=86,slow=9.3,SNR=6.7						
WRA				PcP	**PcP**	**10 11 49.1**	**-1.0**
	comp=Z,0.5nm,1.0s,baz=91,slow=4.3,SNR=2.7						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**32.63**	**249**	P	**P**	**10 09 07.2**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=81,slow=8.9,SNR=11						
ASAR				PcP	**PcP**	**10 11 53.0**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=87,slow=3.6,SNR=1.7						
	comp=Z,0.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.99**	**259**	P	**P**	**10 10 10.3**	**-0.6**
	comp=Z,3.2nm,1.1s,baz=90,slow=4.0,SNR=2.3						
	comp=Z,3.2nm,1.1s						
JNU	**Nakatsue**	**58.99**	**324**	P	**P**	**10 12 34.6**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=120,slow=8.1,SNR=1.7						
	comp=Z,4.3nm,0.9s						
VNDA	**Vanda**	**62.77**	**181**	P	**P**	**10 13 00.5**	**+0.5**
ASAJ	**Asahikawa**	**62.83**	**340**	LR	LR	10 39 18.7	
	comp=Z,5.1nm,18.3s,baz=353,slow=35						
CM31	**Chiang Mai Arr**	**74.98**	**294**	P	**P**	**10 14 18.0**	**+1.3**
CM31				IAmb	IAmb	10 14 25.3	
	comp=Z,4.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**74.98**	**294**	P	**P**	**10 14 17.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**74.98**	**294**	P	**P**	**10 14 17.1**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=113,slow=2.6,SNR=4.3						
	comp=Z,0.5nm,0.3s						
QSPA	**South Pole Qui**	**75.20**	**180**	P	**P**	**10 14 18.7**	**+1.4**
QSPA				IAmb	IAmb	10 14 20.5	
	comp=Z,4.2nm,0.9s						
QSPA	**South Pole Qui**	**75.20**	**180**	P	**P**	**10 14 19.0**	**+1.7**
	comp=Z,3.1nm,0.8s,baz=8.6,slow=2.0,SNR=22						
	comp=Z,3.1nm,0.8s						
SEW	**Seward**	**82.38**	**20**	P	**P**	**10 14 57.4**	**+1.1**
TRF	**Thorofare Moun**	**84.63**	**18**	P	**P**	**10 15 08.3**	**+0.3**
RND	**Reindeer**	**85.03**	**18**	P	**P**	**10 15 10.6**	**+0.7**
RND				IAmb	IAmb	10 15 21.7	
	comp=Z,9.9nm,1.4s						
ILAR	**Eielson Array**	**86.62**	**18**	P	**P**	**10 15 16.6**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=226,slow=4.6,SNR=6.5						
	comp=Z,0.4nm,0.6s						
TROLL	**Troll, Antarti**	**92.77**	**185**	⇑P	**P**	**10 15 45.5**	**-1.2**
	comp=Z,120nm,0.6s						
SNAA	**Sanae**	**93.45**	**183**	⇑P	**P**	**10 15 48.3**	**-1.5**
	comp=Z,24nm,0.7s						
SNAA	**Sanae**	**93.45**	**183**	P	**P**	**10 15 48.5**	**-1.3**
SNAA				IAmb	IAmb	10 15 57.1	
	comp=Z,4.1nm,1.5s						
SNAA	**Sanae**	**93.45**	**183**	P	**P**	**10 15 48.4**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=211,slow=6.7,SNR=13						
	comp=Z,0.9nm,0.7s						
VNA3	**Neumayer Olymp**	**94.12**	**181**	⇑P	**P**	**10 15 51.0**	**-1.8**
	comp=Z,2.3nm,0.5s						
VNA2	**Neumayer--Watz**	**94.39**	**182**	⇓P	**P**	**10 15 51.4**	**-2.6**
	comp=Z,3.2nm,0.6s,baz=178,slow=5.0						
MK31	**Makanchi Array**	**97.26**	**316**	P	**P**	**10 16 07.7**	**+0.2**
MK31				IAmb	IAmb	10 16 08.6	
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**97.26**	**316**	P	**P**	**10 16 07.8**	**+0.4**
MKAR	**Makanchi Array**	**97.26**	**316**	P	**P**	**10 16 07.0**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=96,slow=5.8,SNR=4.2						
	comp=Z,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**97.46**	**324**	P	**P**	**10 16 06.9**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=117,slow=5.0,SNR=2.5						
	comp=Z,0.8nm,0.6s						
ARCES	**ARCESS Array B**	**120.34**	**345**	PKP	**PKPdf**	**10 21 23.8**	**-0.9**
	comp=Z,6.2nm,1.0s,baz=65,slow=1.6,SNR=9.1						
SENIN	**Lac Senin/Sane**	**144.35**	**336**	PKPdf	**PKPab**	**10 22 09.7**	**+0.9**
TIP	**Timpagrande**	**144.51**	**319**	PKPdf	**PKPab**	**10 22 10.5**	**+1.0**

*IDC **05** 10:06:36.4±3.0, 26.˚16N×125.˚76E, h106km±32km, mb3.2/7, mbtmp3.6/8, Error ellipse: s-maj=31.4km s-min=18.3km az=52.0*
*JMA **05** 10:06:42.9±0.2, 25.˚2N×124.˚0E±0.˚7, h131km±3km, MV3.3/15, NW OFF ISHIGAKIJIMA IS*

ISC 05 10:06:42.4±0.9, **25.˚24N**±0.˚10×**123.˚98E**±0.˚04, **h134**km±9km, **n33, σ0§88/41, mb3.5/7, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.71**	**155**	*i* P	**Pn**	**10 07 03.2**	**-0.1**
JISG				S	**Sn**	**10 07 19.1**	**0.0**
JIJ	**Ishigaki jima**	**0.88**	**170**	*i* P	**Pn**	**10 07 04.3**	**-0.4**
JIJ				S	**Sn**	**10 07 20.3**	**-1.3**
JTJ	**Tarama**	**0.88**	**132**	P	**Pn**	**10 07 04.9**	**+0.2**
JTJ				S	**Sn**	**10 07 21.6**	**+0.1**
IRIF	**Iriomote-Funau**	**0.93**	**194**	*i* P	**Pn**	**10 07 04.7**	**-0.4**
IRIF				S	**Sn**	**10 07 21.7**	**-0.5**
JKRS	**Kuro-shima**	**0.99**	**179**	*i* P	**Pn**	**10 07 05.5**	**-0.1**
JKRS				S	**Sn**	**10 07 22.8**	**-0.6**
JIRB	**Irabujima**	**1.15**	**110**	P	**Pn**	**10 07 07.2**	**+0.1**
JIRB				S	**Sn**	**10 07 25.5**	**-0.4**
YOJ	**Yonaguni jima**	**1.17**	**229**	P	**Pn**	**10 07 07.4**	**+0.1**
YOJ	**Yonaguni jima**	**1.17**	**229**	S	**Sn**	**10 07 25.8**	**-0.5**
HATJ	**Hateruma jima**	**1.18**	**188**	S	**Sn**	**10 07 25.9**	**-0.6**
JIKM	**Ikemajima**	**1.19**	**105**	P	**Pn**	**10 07 07.9**	**+0.4**
JIKM				S	**Sn**	**10 07 26.8**	**+0.2**
JYNG	**Yonagunijimaku**	**1.22**	**231**	P	**Pn**	**10 07 07.6**	**-0.3**
JYNG				S	**Sn**	**10 07 26.8**	**-0.4**
JMJ	**Miyako jima 2**	**1.26**	**109**	P	**Pn**	**10 07 09.5**	**+1.3**
JMJ2	**Miyako jima3**	**1.32**	**112**	P	**Pn**	**10 07 09.3**	**+0.5**
JMJ2				S	**Sn**	**10 07 29.3**	**+0.4**
JOGS	**Gusukube**	**1.38**	**110**	P	**Pn**	**10 07 10.4**	**+1.0**
JOGS				S	**Sn**	**10 07 30.4**	**+0.3**
TATO	**Taipei**	**2.28**	**264**	P	**Pn**	**10 07 21.1**	**+1.1**
NACB	**Ninganchiao**	**2.42**	**245**	P	**Pn**	**10 07 21.0**	**-0.7**
YHNB	**Yeheng**	**2.43**	**257**	P	**Pn**	**10 07 23.1**	**+1.1**
YULB	**Yu-li**	**3.06**	**234**	P	**Pn**	**10 07 28.5**	**-1.5**
SSLB	**Suanglung**	**3.11**	**243**	P	**Pn**	**10 07 30.4**	**-0.3**
SSLB	**Suanglung**	**3.11**	**243**	S	**Sn**	**10 08 09.0**	**+1.1**
TWGBT	**Beinan**	**3.58**	**228**	P	**Pn**	**10 07 35.0**	**-1.8**
TPUB	**Ta-pu**	**3.62**	**239**	P	**Pn**	**10 07 37.5**	**+0.3**
TPUB	**Ta-pu**	**3.62**	**239**	S	**Sn**	**10 08 20.1**	**+0.4**
JOW	**Kunigami**	**4.18**	**67**	S	**Pn**	**10 07 43.2**	**-1.4**
	36nm,0.3s,baz=274,slow=18,SNR=70						
JOW	**Kunigami**	**4.18**	**67**	P	**Pn**	**10 07 43.1**	**-1.5**
LZDM	**Lanzhou Array**	**20.43**	**306**	P	Pn	10 11 16.1	+3.1
	1.2nm,0.3s,baz=108,slow=12,SNR=3.6						
	1.2nm,0.3s						
MKAR	**Makanchi Array**	**39.40**	**314**	P	**P**	**10 13 58.7**	**-0.3**
	0.5nm,0.3s,baz=101,slow=8.9,SNR=14						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**40.79**	**325**	P	**P**	**10 14 09.3**	**-1.0**
	1.1nm,0.5s,baz=111,slow=8.9,SNR=6.2						
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**42.98**	**318**	P	**P**	**10 14 27.8**	**-0.3**
	0.5nm,0.5s,baz=98,slow=7.7,SNR=1.6						
WRA	**Warramunga Arr**	**46.02**	**166**	P	**P**	**10 14 52.7**	**+0.1**
	0.2nm,0.5s,baz=349,slow=9.2,SNR=1.9						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**48.50**	**320**	P	**P**	**10 15 10.7**	**-0.8**
	0.7nm,0.3s,baz=98,slow=9.1,SNR=5.3						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**49.55**	**168**	P	**P**	**10 15 22.2**	**+2.5**
	0.1nm,0.5s,baz=352,slow=9.3,SNR=1.5						
	0.1nm,0.5s						
ILAR	**Eielson Array**	**67.11**	**28**	P	P	10 17 08.3	-13
	0.2nm,0.6s,baz=279,slow=7.3,SNR=2.0						
	0.2nm,0.6s						

IDC 05 10:33:13.4±4.8, **35.˚98N×76.˚39E, h0km, mb3.7**/2, **mbtmp3.5**/5, **ML2.9**/3, **MS3.5**/3, **Error ellipse: s-maj=99.0km s-min=30.6km az=72.0, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.81**	**348**	LR	LR	10 37 52.3	
	comp=Z,18nm,20.5s,baz=156,slow=41						
MKAR	**Makanchi Array**	**11.68**	**20**	Pn	Pn	10 36 02.7	+1.4
	0.1nm,0.3s,baz=210,slow=15,SNR=4.3						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**17.57**	**348**	P	Pn	10 37 19.2	-0.4
	baz=170,slow=11,SNR=2.1						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**18.91**	**16**	P	Pn	10 37 36.9	+0.9
	0.2nm,0.3s,baz=195,slow=10,SNR=2.9						
	0.6nm,0.4s						
SONM	**Songino Array**	**25.12**	**53**	P	P	10 38 39.6	-0.4
	0.5nm,0.5s,baz=251,slow=9.0,SNR=3.6						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**26.48**	**125**	P	P	10 38 52.6	+0.1
	0.7nm,0.3s,baz=307,slow=9.1,SNR=2.3						
	0.7nm,0.3s						
NOA	**NORSAR Array B**	**47.42**	**323**	LR	LR	11 04 35.6	
	comp=Z,11nm,18.3s,baz=225,slow=40						
SHEM	**Shemya Is, Ala**	**66.54**	**41**	LR	LR	11 16 00.1	
	comp=Z,153nm,20.0s,baz=316,slow=39						
LSZ	**Lusaka**	**68.37**	**231**	LR	LR	11 16 44.1	
	comp=Z,38nm,18.6s,baz=258,slow=38						

*NNC **05** 10:41:06.0±2.4, 52.˚42N×75.˚92E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=55.6km s-min=5.2km az=29.0, Suspected Mining explosion.*
*IDC **05** 10:41:11.8±1.2, 51.˚71N×75.˚53E, h0km, mbtmp2.7/3, ML1.9/3, Error ellipse: s-maj=21.7km s-min=10.4km az=27.0*

ISC 05 10:41:04.5±1.1, **52.˚47N**±0.˚08×**75.˚86E**±0.˚05, **h0**km, **n11, σ1§43/9, 5C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.46**	**134**	⇑Pg	**Pb**	**10 41 49.5**	**0.0**
	1.3nm,0.7s						
KURK				⇑Lg	Lg	10 42 21.3	
	3.7nm,0.6s						
KURBB	**Kurchatov Arra**	**2.49**	**137**	Pg	**Pg**	**10 41 50.9**	**-1.2**
	0.3nm,0.3s,baz=304,slow=19,SNR=24						
KURBB				Lg	Lg	10 42 22.1	
	0.3nm,0.3s,baz=304,slow=30,SNR=4.9						
KURBB	**Kurchatov Arra**	**2.49**	**137**	⇓Pg	**Pg**	**10 41 51.1**	**-1.1**
	6.5nm,0.7s						
KURBB				⇓Lg	Lg	10 42 23.1	
	29nm,0.7s						
BVA0	**Borovoye Array**	**3.37**	**282**	Pg	**Pg**	**10 42 06.8**	**-2.4**
	2.0nm,0.8s,baz=95,slow=11,SNR=4.5						
BVA0				⇑Lg	Lg	10 42 56.7	
	3.7nm,0.7s,baz=81,slow=25,SNR=6.6						
BVAR	**Borovoye Array**	**3.37**	**282**	Pn	**Pb**	**10 42 06.2**	**+1.0**
	0.1nm,0.3s,baz=108,slow=16,SNR=5.4						
BVAR				Lg	Lg	10 42 54.3	
	0.1nm,0.3s,baz=107,slow=27,SNR=7.2						
	1.8nm,0.7s						
BRVK	**Borovoye**	**3.44**	**282**	⇑Pg	**Pg**	**10 42 09.9**	**-0.6**
BRVK				⇓Lg	Lg	10 42 57.3	
I46RU	**ZALESOVO INFRA**	**5.58**	**71**	I	I	11 17 20.0	
	baz=251,slow=318,SNR=2.2						
ZALV	**Zalesovo Beam**	**5.58**	**71**	Pn	**Pb**	**10 42 42.4**	**-0.4**
	0.2nm,0.3s,baz=248,slow=11,SNR=4.0						
ZALV				Sn	**Sb**	**10 43 51.4**	**+1.1**
	0.1nm,0.3s,baz=254,slow=25,SNR=2.1						
ZALV				Lg	Lg	10 44 27.9	
	0.2nm,0.3s,baz=246,slow=25,SNR=1.7						
	0.2nm,0.4s						
MAKZ	**Makanchi**	**6.92**	**143**	⇓Lg	Lg	10 44 41.2	
	4.0nm,0.8s						
MK31	**Makanchi Array**	**7.05**	**141**	⇑Lg	Lg	10 44 45.5	
	3.3nm,0.9s,baz=328,slow=27,SNR=4.7						
MKAR	**Makanchi Array**	**7.05**	**141**	Pn	**Pn**	**10 42 50.1**	**+1.2**
	0.1nm,0.3s,baz=321,slow=15,SNR=2.1						
MKAR				Lg	Lg	10 44 39.5	
	0.3nm,0.3s,baz=317,slow=33,SNR=5.2						
	0.2nm,0.6s						

*JMA **05** 10:45:18.0±0.1, 24.˚9N±1.˚0×122.˚5E±0.˚4, h2km, MV2.9/9, NW OFF ISHIGAKIJIMA IS*
*TAP **05** 10:45:18.5, 24.˚91N×122.˚42E, h15km, ML3.2, C*

ISC 05 10:45:18.1±1.1, **24.˚89N**±0.˚03×**122.˚45E**±0.˚02, **h10**km±9km, **n86, σ0§55/108, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.43**	**286**	P	**Pg**	**10 45 27.2**	**+0.6**
TWB1				S	**Sb**	**10 45 33.3**	**-1.2**
EGS		**0.47**	**265**	*eP*	**Pg**	**10 45 27.3**	**0.0**
EOS2	**EOS2**	**0.51**	**203**	*eP*	**Pb**	**10 45 29.1**	**0.0**
EOS2				S	**Sb**	**10 45 37.4**	**+0.9**
SXI1	**Grass Mountain**	**0.56**	**292**	*eP*	**Pb**	**10 45 29.9**	**-0.2**
TIPB	**Shuangxi**	**0.57**	**278**	*eP*	**Pb**	**10 45 29.9**	**-0.3**
TIPB				S	**Sb**	**10 45 38.2**	**-0.3**
TWC	**Suao**	**0.61**	**243**	P	**Pg**	**10 45 30.2**	**+0.3**
TWC				*eS*	**Sg**	**10 45 38.0**	**0.0**
EOS3	**EOS3**	**0.61**	**191**	P	**Pb**	**10 45 31.0**	**+0.2**
EOS3				*eS*	**Sb**	**10 45 40.9**	**+1.5**
ESAO	**Su ao**	**0.63**	**240**	*eP*	**Pb**	**10 45 31.0**	**-0.2**
JYNG	**Yonagunijimaku**	**0.63**	**134**	*eP*	**Pg**	**10 45 30.1**	**-0.2**
JYNG				*eS*	**Sg**	**10 45 38.6**	**0.0**
NWF	**Wu-fen Shan**	**0.63**	**287**	P	**Pb**	**10 45 31.4**	**0.0**
NWF				S	**Sb**	**10 45 39.5**	**-0.8**
WFSB	**Wu-fen Shan**	**0.63**	**287**	*eP*	**Pb**	**10 45 31.4**	**+0.1**
TNOU	**National Taiwa**	**0.66**	**293**	*eP*	**Pb**	**10 45 31.7**	**-0.1**
YOJ	**Yonaguni jima**	**0.67**	**129**	P	**Pg**	**10 45 30.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.67**	**129**	P	**Pg**	**10 45 30.7**	**-0.3**
YOJ				*eS*	**Sg**	**10 45 39.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.67**	**129**	P	**Pg**	**10 45 30.7**	**-0.3**
NDS	**Dongshan**	**0.71**	**249**	*eP*	**Pb**	**10 45 32.6**	**0.0**
TWE	**Neicheng**	**0.73**	**257**	*eP*	**Pg**	**10 45 32.4**	**+0.2**
TWE				S	**Sb**	**10 45 42.5**	**-0.5**
EWUT	**Wuta**	**0.75**	**234**	P	**Pg**	**10 45 32.8**	**+0.2**
EOS4	**EOS4**	**0.77**	**189**	*eP*	**Pb**	**10 45 33.5**	**0.0**
EOS4				*eS*	**Sb**	**10 45 44.8**	**+0.9**
TWA	**Mucha**	**0.79**	**277**	*eP*	**Pg**	**10 45 33.5**	**+0.2**
ENA	**Nanau**	**0.79**	**235**	*eP*	**Pg**	**10 45 33.1**	**-0.2**
ENA				*eS*	**Sb**	**10 45 44.2**	**-0.5**
FUSB	**Fushanzhiwuyua**	**0.79**	**261**	*eP*	**Pb**	**10 45 34.2**	**+0.1**
PCYT	**Pengchaiyu**	**0.81**	**335**	*eP*	**Pb**	**10 45 34.3**	**-0.1**
YM08	**YM08**	**0.83**	**291**	*eP*	**Pb**	**10 45 35.2**	**+0.4**
YM01	**YM01**	**0.83**	**288**	*eP*	**Pb**	**10 45 34.7**	**-0.1**
ENTT	**Nioudou**	**0.84**	**253**	*eP*	**Pb**	**10 45 34.6**	**-0.2**
EAHA	**Aohua**	**0.85**	**229**	P	**Pb**	**10 45 35.1**	**+0.1**
EAHA				*eS*	**Sb**	**10 45 46.9**	**+0.4**
TWY	**Chenhua**	**0.86**	**297**	*eP*	**Pb**	**10 45 35.5**	**+0.3**
JUZH	**Zhuzihu**	**0.86**	**289**	*eP*	**Pb**	**10 45 35.9**	**+0.6**
NWLT	**Wulai**	**0.86**	**263**	*eP*	**Pb**	**10 45 35.1**	**-0.2**
TATO	**Taipei**	**0.87**	**276**	P	**Pb**	**10 45 35.2**	**-0.2**
ANP	**Anpu**	**0.89**	**290**	*eP*	**Pb**	**10 45 36.1**	**+0.3**
LATG	**Datong**	**0.91**	**247**	*eP*	**Pb**	**10 45 35.9**	**-0.2**
LATG				*eS*	**Sn**	**10 45 49.4**	**-1.0**
NTST	**Danshui**	**0.94**	**287**	*eP*	**Pn**	**10 45 37.2**	**-0.3**
TWS1	**Kuangyinshan**	**0.96**	**283**	*eP*	**Pn**	**10 45 38.1**	**+0.4**
TWS1				*eS*	**Sn**	**10 45 50.5**	**-0.9**
YHNB	**Yeheng**	**1.00**	**258**	P	**Pb**	**10 45 37.5**	**-0.1**
YHNB	**Yeheng**	**1.00**	**258**	*eP*	**Pg**	**10 45 37.1**	**-0.2**
NSK	**Sanguang**	**1.01**	**258**	*eP*	**Pb**	**10 45 37.7**	**-0.1**
NSK				*eS*	**Sg**	**10 45 49.7**	**-1.1**
ETL	**Fush Village**	**1.04**	**226**	*eP*	**Pb**	**10 45 38.5**	**+0.1**
NACB	**Ninganchiao**	**1.05**	**228**	P	**Pg**	**10 45 38.3**	**-0.1**
NACB	**Ninganchiao**	**1.05**	**228**	P	**Pg**	**10 45 38.2**	**-0.2**
NACB				S	**Sg**	**10 45 51.9**	**-0.2**
NNSB	**Datong**	**1.07**	**245**	*eP*	**Pb**	**10 45 39.0**	**+0.2**
NNS	**Nan Shan**	**1.07**	**246**	*eP*	**Pn**	**10 45 39.4**	**0.0**
NNS				*eS*	**Sn**	**10 45 54.5**	**0.0**
ETLH	**Xiulin Townshi**	**1.11**	**232**	*eP*	**Pn**	**10 45 39.9**	**0.0**
ETLH				*eS*	**Sn**	**10 45 55.0**	**-0.4**
TWD	**Chiawan**	**1.12**	**224**	*eP*	**Pg**	**10 45 38.8**	**-0.8**
KSHI	**Guanxi Townshi**	**1.16**	**265**	*eP*	**Pn**	**10 45 41.3**	**+0.8**
NFF	**Wufeng Townshi**	**1.23**	**258**	*eP*	**Pg**	**10 45 43.0**	**+1.2**
ETM	**Tongmen**	**1.27**	**224**	*eP*	**Pb**	**10 45 42.1**	**0.0**
FUSS	**Fushou**	**1.27**	**240**	*eP*	**Pg**	**10 45 43.2**	**+0.7**
FUSS				*eS*	**Sn**	**10 45 59.4**	**0.0**
LXIB	**

GC02				Sg	Sg	11 04 04.3 +1.1
CROK	**Carrier**	**0.33**	**232**		Pg	11 04 02.9 +0.4
CROK				Sg	Sg	11 04 07.6 +0.8
KAN13	**South Haven SW**	**0.34**	**26**		Pg	11 04 03.4 +0.7
KAN13					Sg	11 04 08.1 +0.9
KAN14	**Manchester OK**	**0.35**	**316**		Pg	11 04 03.5 +0.6
KAN14				IAML		11 04 08.7
	comp=E,4μm,0.1s					
KAN14				IAML		11 04 12.8
	comp=N,4μm,0.2s					
BLOK	**Blackwell**	**0.36**	**81**		Pg	11 04 03.7 +0.5
BLOK					Sg	11 04 08.9 +1.0
BLOK				IAML		11 04 12.3
	comp=E,3μm,0.2s					
KAN01	**Argonia South**	**0.45**	**350**		Pg	11 04 05.4 +0.6
KAN01					Sg	11 04 11.9 +1.1
KAN01				IAML		11 04 12.1
	comp=N,3μm,0.3s					
KAN01				IAML		11 04 12.1
	comp=E,4μm,0.2s					
KAN08	**Anthony NE Sta**	**0.57**	**335**		Pg	11 04 07.7 +0.5
KAN08					Sg	11 04 15.8 +1.1
KAN08				IAML		11 04 16.0
	comp=N,3μm,0.1s					
OK048	**Pawnee Station**	**0.65**	**116**		Pg	11 04 08.8 +0.3
OK051	**E0350 and S346**	**0.69**	**107**		Pg	11 04 09.6 +0.2
OK051				IAML		11 04 23.6
	comp=N,2μm,0.1s					
OK051				IAML		11 04 25.3
	comp=N,1μm,0.2s					
OK038	**West end E0370**	**0.90**	**256**		Pg	11 04 13.2 -0.1
OK038					Sg	11 04 25.5 +0.5
OK029	**Liberty Lake**	**0.92**	**170**		Pg	11 04 13.8 -0.1
OK029					Sg	11 04 26.2 +0.4
OK029				IAML		11 04 30.5
	comp=N,1μm,0.6s					
QUOK	**Quay**	**0.94**	**124**		Pg	11 04 14.0 -0.1
QUOK					Sg	11 04 26.3 +0.1
QUOK				IAML		11 04 32.4
	comp=N,1μm,0.2s					
QUOK				IAML		11 04 32.6
	comp=E,1μm,0.2s					
T35A	**Sooner Cattle**	**0.95**	**77**		Pg	11 04 14.4 +0.1
T35A					Sg	11 04 26.7 +0.2
T35A				IAML		11 04 29.0
	comp=E,924nm,0.2s					
OK052	**Battle Ridge R**	**0.99**	**135**		Pg	11 04 15.0 -0.1
OK052					Sg	11 04 28.1 0.0
OK052				IAML		11 04 33.7
	comp=E,1μm,0.4s					
OK052				IAML		11 04 34.3
	comp=E,2μm,0.2s					
NOKA	**Waynoka**	**1.02**	**266**		Pg	11 04 15.5 -0.2
NOKA					Sg	11 04 29.4 +0.4
NOKA				IAML		11 04 36.0
	comp=N,2μm,0.3s					
NOKA				IAML		11 04 37.7
	comp=E,1μm,0.2s					
BCOK	**Bluff Creek, N**	**1.05**	**178**		Pg	11 04 15.9 -0.3
BCOK					Sg	11 04 30.2 +0.4
DEOK	**Depew**	**1.28**	**132**	IAML		11 04 41.0
	comp=N,1μm,0.2s					
TUL3	**Leonard**	**1.71**	**117**		Pn	11 04 27.1 +0.5
R32A	**Long Quarter,**	**1.91**	**334**		Pb	11 04 30.6 -0.8
X34A	**Smith Ranch, M**	**2.11**	**184**		Pn	11 04 33.2 +1.2
DRZT	**Darrouzett**	**2.14**	**264**		Pn	11 04 33.8 +1.3
WMOK	**Wichita Mounta**	**2.17**	**205**		Pn	11 04 33.3 +0.5
WMOK	**Wichita Mounta**	**2.17**	**205**	IAmb_Lg		11 05 07.2
	comp=Z,47nm,0.7s					
RLO	**Rose Lookout**	**2.19**	**103**		Pn	11 04 34.0 +0.7
KSU1	**Kansas State U**	**2.53**	**19**	Pn	Pn	11 04 38.8 +0.9
SMWD	**Samnorwood**	**2.63**	**233**		Pn	11 04 40.1 +0.8
U38A	**Gravette**	**2.65**	**95**		Pn	11 04 40.4 +0.8
CBKS	**Cedar Bluff**	**2.67**	**323**	Pn	Pn	11 04 40.1 +0.3
WTFS	**Witchita Falls**	**3.01**	**193**		Pn	11 04 44.3 -0.1
HHAR	**Hobbs**	**3.03**	**97**	Pn	Pn	11 04 45.5 +0.7
HHAR				IAmb_Lg		11 05 39.5
	comp=Z,38nm,0.8s					
AMTX	**Amarillo**	**3.74**	**242**	IAmb_Lg		11 06 02.3
	comp=Z,70nm,0.7s					
MIAR	**Mount Ida**	**3.96**	**122**		Pn	11 04 58.1 +0.5
MIAR				IAmb_Lg		11 06 12.3
	comp=Z,40nm,0.8s					
DKNS	**Dickens**	**4.04**	**222**	IAmb_Lg		11 06 14.2
	comp=Z,37nm,0.8s					
RTBA	**Rita Blanca**	**4.09**	**268**	Pn	Pn	11 05 00.4 +0.9
RTBA				IAmb_Lg		11 06 14.9
	comp=Z,22nm,0.8s					
TREL	**Terrell**	**4.17**	**161**	IAmb_Lg		11 06 18.8
	comp=Z,36nm,0.7s					
MGMO	**Mountain Grove**	**4.34**	**82**	IAmb_Lg		11 06 15.5
	comp=Z,41nm,0.8s					
P38A	**Dawn**	**4.37**	**47**		Pn	11 05 03.8 +0.7
ABTX	**Abilene, Hawle**	**4.39**	**202**		Pn	11 05 03.4 0.0
N35A	**Tabor**	**4.44**	**20**		Pn	11 05 05.0 +0.9
SN07	**Snyder 07**	**4.48**	**217**	IAmb_Lg		11 06 19.7
	comp=Z,24nm,0.9s					
X40A	**Basin Creek Fa**	**4.51**	**118**	IAmb_Lg		11 06 24.1
	comp=Z,41nm,0.9s					
FCAR	**Ozark Folk Cen**	**4.55**	**99**	IAmb_Lg		11 06 26.9
	comp=Z,26nm,0.9s					
KSCO	**Kaye Shedlock'**	**4.55**	**302**	IAmb_Lg		11 06 32.0
	comp=Z,21nm,0.9s					
R40A	**Maddies Statio**	**4.57**	**68**		Pn	11 05 06.7 +0.8
R40A				IAmb_Lg		11 06 22.8
	comp=Z,50nm,0.7s					
WHAR	**Wooly Hollow**	**4.58**	**106**	IAmb_Lg		11 06 30.4
	comp=Z,28nm,0.7s					
BGNE	**Belgrade**	**4.71**	**356**		Pn	11 05 08.1 +0.2
UALR	**University of**	**4.74**	**112**	IAmb_Lg		11 06 36.0
	comp=Z,23nm,0.8s					
WLAR	**White Oak Lake**	**4.79**	**128**	IAmb_Lg		11 06 41.1
	comp=Z,35nm,1.0s					
POST	**Post**	**4.81**	**222**	IAmb_Lg		11 06 36.9
	comp=Z,26nm,0.7s					
237A	**Washetta, Mont**	**4.94**	**161**	IAmb_Lg		11 06 44.2
	comp=Z,34nm,1.0s					
MSTX	**Muleshoe**	**4.99**	**238**	IAmb_Lg		11 06 44.1
	comp=Z,35nm,1.1s					
Z41A	**Richland Creek**	**5.27**	**129**	IAmb_Lg		11 06 54.5
	comp=Z,33nm,0.7s					
LCAR	**Lake Charles**	**5.29**	**95**	IAmb_Lg		11 06 48.5
	comp=Z,26nm,1.0s					
L34A	**Svendsen Farm,**	**5.35**	**10**	IAmb_Lg		11 06 55.4
	comp=Z,45nm,0.7s					
T25A	**Trinidad**	**5.42**	**277**	IAmb_Lg		11 06 49.7
	comp=Z,30nm,1.0s					
BRDY	**Brady**	**5.52**	**192**	IAmb_Lg		11 06 58.6
	comp=Z,26nm,1.1s					
NATX	**Nacogdoches**	**5.53**	**152**	IAmb_Lg		11 07 04.6
	comp=Z,24nm,0.9s					
SGCY	**Sterling City**	**5.57**	**212**	IAmb_Lg		11 07 01.9
	comp=Z,26nm,1.1s					
FVM	**French Village**	**5.90**	**75**	Pn	Pn	11 05 24.4 +0.1
FVM				IAmb_Lg		11 07 05.0
	comp=Z,51nm,0.8s					
435B	**Jarrell**	**5.91**	**179**	IAmb_Lg		11 07 13.3
	comp=Z,25nm,0.8s					
K30B	**Basset**	**6.15**	**346**	Pn	Pn	11 05 28.2 +0.6
SLM	**Saint Louis**	**6.20**	**70**	IAmb_Lg		11 07 28.5
	comp=Z,22nm,0.8s					
SCIA	**State Center**	**6.23**	**32**	IAmb_Lg		11 07 21.6
	comp=Z,48nm,0.8s					
Q24A	**Divide**	**6.34**	**293**	IAmb_Lg		11 07 25.1
	comp=Z,17nm,0.9s					
SDCO	**Great Sand Dun**	**6.34**	**282**	IAmb_Lg		11 07 34.1
	comp=Z,14nm,1.1s					
CGM3	**Cape Girardeau**	**6.43**	**82**	IAmb_Lg		11 07 20.4
	comp=Z,33nm,0.9s					
OZNA	**Ozona**	**6.45**	**208**	IAmb_Lg		11 07 34.4
	comp=Z,22nm,1.2s					
JCT	**Junction City**	**6.46**	**197**	IAmb_Lg		11 07 27.7
	comp=Z,28nm,0.9s					
143A	**Socs Landing,**	**6.52**	**126**	IAmb_Lg		11 07 34.2
	comp=Z,14nm,0.7s					
N41A	**Harden Midland**	**6.65**	**51**	IAmb_Lg		11 07 42.3
	comp=Z,41nm,0.9s					
ISCO	**Idaho Springs**	**6.98**	**299**	IAmb_Lg		11 07 42.7
	comp=Z,12nm,0.7s					
ECSD	**EROS Data Cent**	**7.07**	**6**	Pn	Pn	11 05 39.5 -0.7
OXF	**Oxford**	**7.07**	**106**	IAmb_Lg		11 07 51.1
	comp=Z,33nm,1.2s					
L40A	**Anamosa**	**7.31**	**41**	IAmb_Lg		11 07 54.9
	comp=Z,24nm,0.7s					
TASM	**ASL Pad, Albuq**	**7.36**	**259**	IAmb_Lg		11 07 58.7
	comp=Z,6.7nm,0.7s					
TASM	**ASL Pad, Albuq**	**7.36**	**259**	IAmb_Lg		11 07 57.3
	comp=Z,6.5nm,0.8s					
PECS	**Pecos**	**7.41**	**226**	IAmb_Lg		11 08 07.0
	comp=Z,10nm,0.8s					
SUSD	**Miller**	**7.79**	**353**	IAmb_Lg		11 08 22.6
	comp=Z,27nm,1.0s					
PLAL	**Pickwick Lake**	**7.97**	**100**	IAmb_Lg		11 08 23.3
	comp=Z,10nm,1.0s					
ALPN	**Alpine**	**8.05**	**220**	IAmb_Lg		11 08 21.5
	comp=Z,11nm,1.0s					
Y22A	**Socorro**	**8.09**	**253**	IAmb_Lg		11 08 30.6
	comp=Z,14nm,0.9s					
MNTX	**Cornudas Mount**	**8.11**	**234**	IAmb_Lg		11 08 24.9
	comp=Z,15nm,1.1s					
HAYD	**Hayden**	**8.42**	**300**	IAmb_Lg		11 08 39.2
	comp=Z,21nm,1.2s					
JFWS	**Jewell Farm**	**8.42**	**40**	IAmb_Lg		11 08 28.0
	comp=Z,21nm,0.8s					
Z47A	**Carrollton**	**8.62**	**111**	IAmb_Lg		11 08 32.2
	comp=Z,17nm,1.2s					
RSSD	**Black Hills**	**8.86**	**329**	IAmb_Lg		11 08 51.3
	comp=Z,11nm,0.8s					
K22A	**Casper**	**9.05**	**314**	IAmb_Lg		11 09 01.7
	comp=Z,22nm,0.9s					
F33A	**5 Mile Ranch,**	**9.18**	**6**	IAmb_Lg		11 09 12.8
	comp=Z,14nm,1.1s					

*SOME **05** 11:05:06.4, 40°.78N×78°.73E, h5km*
*KRNET **05** 11:05:07.8±0.1, 40°.81N×78°.79E, h15km, mb3.2*
*NNC **05** 11:05:10.6±1.3, 40°.90N×78°.68E, h0km, mb4.0, mpv3.6,*
Error ellipse: s-maj=9.1km s-min=7.7km az=168.0

ISC 05 11:05:11.1±1.8,**40°.86N**±0°.08×**78°.70E**±0°.05,**h10**km,**n37,**
σ1§49/52,20C-7D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.10**	**323**	⇑*i*P	**Pg**	**11 05 30.4**	**-1.9**
TARG				⇑*i*S	**Sg**	**11 05 46.6**	**-0.1**
PRZ	**Przheval'sk**	**1.64**	**352**	⇓*e*P	**Pn**	**11 05 39.6**	**-0.6**
PRZ				⇑*e*S	**Sg**	**11 06 03.3**	**-0.6**
KDJ	**Kajisay**	**1.71**	**319**	⇓*e*P	**Pn**	**11 05 41.0**	**-0.1**
KDJ				⇓*i*S	**Sb**	**11 06 05.1**	**+0.7**
SATY	**Saty**	**2.21**	**354**	Pg	**Pb**	**11 05 50.8**	**-0.4**
	18nm,0.4s						
SATY				Lg	Lg	11 06 22.7	
	127nm,0.6s						
UZB	**Uzynbulak**	**2.30**	**6**	Pg	**Pb**	**11 05 51.3**	**-1.4**
	13nm,0.2s						
UZB				Lg	Lg	11 06 22.8	
	44nm,0.2s						
UZB	**Uzynbulak**	**2.30**	**6**	*e*P	**Pb**	**11 05 50.9**	**-1.9**
	13nm,0.2s						
UZB				*e*S	**Sb**	**11 06 22.8**	**+1.5**
	44nm,0.2s						
JNKS	**Jany-Kuch**	**2.32**	**276**	⇓*e*P	**Pn**	**11 05 50.1**	**+0.6**
JNKS				⇓*e*S	**Sb**	**11 06 21.0**	**-0.9**
SHLS	**Shalkode**	**2.37**	**14**	Pg	**Pb**	**11 05 53.4**	**-0.5**
	111nm,0.4s						
SHLS				Lg	Lg	11 06 27.3	
	207nm,0.6s						
SHLS	**Shalkode**	**2.37**	**14**	*e*P	**Pb**	**11 05 53.4**	**-0.5**
	111nm,0.4s						
SHLS				*e*S	**Sg**	**11 06 27.3**	**+0.1**
	207nm,0.6s						
PDGK	**Podgornoye**	**2.54**	**13**	⇑Pn	**Pn**	**11 05 53.7**	**+1.2**
	9.6nm,0.3s						
PDGK				⇑Lg	Lg	11 06 30.2	
	60nm,0.5s						
TNSS	**Tian-Shan**	**2.54**	**330**	Pg	**Pb**	**11 05 56.4**	**-0.6**
	10nm,0.4s						
TNSS				Lg	Lg	11 06 32.2	
	19nm,0.6s						
TNSS	**Tian-Shan**	**2.54**	**330**	*e*P	**Pb**	**11 05 56.4**	**-0.6**
	10nm,0.4s						
TNSS				*e*S	**Sg**	**11 06 32.2**	**-0.6**
	19nm,0.6s						
KPKS	**Kokpek**	**2.61**	**360**	Pg	**Pb**	**11 05 56.7**	**-1.3**
	16nm,0.4s						
KPKS				Lg	Lg	11 06 32.7	
	186nm,0.4s						
MDOK	**Medeo**	**2.62**	**332**	Pg	**Pb**	**11 05 57.8**	**-0.3**
	35nm,0.5s						
MDOK				Lg	Lg	11 06 34.3	
	65nm,0.7s						
BOOM	**Boomskoye usch**	**2.64**	**309**	⇓*e*P	**Pn**	**11 05 54.3**	**+0.5**
BOOM				⇓*i*S	**Sb**	**11 06 28.6**	**-2.4**
KURS	**Kuram**	**2.66**	**352**	Pg	**Pb**	**11 05 57.5**	**-1.4**
	16nm,0.6s						
KURS				Lg	Lg	11 06 33.7	
	94nm,0.8s						
IZV	**Izvestkoviy**	**2.68**	**325**	Pg	**Pn**	**11 05 56.2**	**+1.8**
	8.9nm,0.3s						
IZV				Lg	Lg	11 06 32.0	
	44nm,0.4s						
IZV	**Izvestkoviy**	**2.68**	**325**	*e*P	**Pn**	**11 05 56.2**	**+1.8**
	8.9nm,0.3s						
IZV				*e*S	**Sb**	**11 06 32.0**	**-0.2**
	44nm,0.4s						
KNDC	**Almaty**	**2.69**	**332**	⇑Pn	**Pb**	**11 05 56.5**	**-2.9**
	59nm,0.6s						
KNDC				⇑Lg	Lg	11 06 34.5	
	114nm,0.6s						
MTBS	**Maitube**	**2.83**	**324**	Pg	**Pb**	**11 06 00.6**	**-1.2**
	5.7nm,0.2s						
MTBS				Lg	Lg	11 06 39.5	
	24nm,0.3s						
MTBS	**Maitube**	**2.83**	**324**	*e*P	**Pb**	**11 06 00.6**	**-1.2**
	5.7nm,0.2s						
MTBS				*e*S	**Sb**	**11 06 39.5**	**+2.9**
	24nm,0.3s						
KST	**Kastek**	**2.99**	**318**	Pg	**Pb**	**11 06 03.7**	**-0.8**
	5.0nm,0.3s						
KST				Lg	Lg	11 06 44.8	
	29nm,0.5s						
KST	**Kastek**	**2.99**	**318**	*e*P	**Pb**	**11 06 03.7**	**-0.8**
	5.0nm,0.3s						
KST				*e*S	**Sg**	**11 06 44.8**	**-2.4**
	29nm,0.5s						
TKM2	**Tokmak 2**	**3.10**	**313**	⇑*e*P	**Pn**	**11 06 01.2**	**+0.9**
TKM2				⇑*i*S	**Sn**	**11 06 40.1**	**+2.6**
KTBS	**Karatobe**	**3.22**	**333**	Pg	**Pb**	**11 06 08.1**	**-0.4**
	20nm,0.8s						
KTBS				Lg	Lg	11 06 51.7	
	26nm,0.5s						
CHKK	**Chushkaly**	**3.25**	**338**	Pg	**Pb**	**11 06 08.4**	**-0.6**
	9.9nm,0.3s						
CHKK				Lg	Lg	11 06 52.2	
	81nm,0.4s						
CHKK	**Chushkaly**	**3.25**	**338**	*e*P	**Pb**	**11 06 08.4**	**-0.6**
	9.9nm,0.3s						
CHKK				*e*S	**Sb**	**11 06 52.2**	**+3.6**
	81nm,0.4s						
ARXS	**Arharly**	**3.42**	**349**	Pg	**Pb**	**11 06 11.0**	**-0.7**
ARXS				Lg	Lg	11 06 57.9	
ARXS	**Arharly**	**3.42**	**349**	*e*P	**Pb**	**11 06 11.4**	**-0.3**
ARXS				*e*S	**Sg**	**11 06 57.9**	**-2.9**
UCH	**Uchtor**	**3.43**	**295**	⇑*i*P	**Pn**	**11 06 05.9**	**+0.9**
UCH				⇑*i*S	**Sn**	**11 06 48.1**	**+2.2**
ARLS	**Aral**	**3.45**	**288**	⇑*e*P	**Pn**	**11 06 05.9**	**+1.0**
ARLS				⇑*e*S	**Sn**	**11 06 48.4**	**+2.5**
AAK	**Ala-Archa**	**3.62**	**301**	⇑Pn	**Pn**	**11 06 08.5**	**+1.2**
	5.1nm,0.8s						
AAK				⇑Lg	Lg	11 07 06.9	
	6.2nm,0.7s						
KRBS	**Karabastau**	**3.62**	**323**	Pg	**Pb**	**11 06 14.8**	**-0.4**
	3.1nm,0.4s						
KRBS				Lg	Lg	11 07 01.7	
	7.0nm,0.5s						
SALK	**Salom-Alik**	**3.70**	**272**	⇑*e*P	**Pn**	**11 06 09.3**	**+0.8**
SALK				⇑*e*S	**Sn**	**11 06 54.2**	**+2.0**
MK31	**Makanchi Array**	**6.48**	**22**	Pn	**Pn**	**11 06 46.5**	**0.0**
	0.6nm,0.2s,baz=201,slow=13,SNR=16						
MK31				⇓Lg	Lg	11 08 34.6	
	1.9nm,0.6s						
KURBB	**Kurchatov Arra**	**9.77**	**359**	⇑Lg	Lg	11 10 19.4	
	8.2nm,0.9s						
KURK	**Kurchatov**	**9.86**	**360**	⇑Lg	Lg	11 10 20.0	
	3.4nm,1.1s						

DJA 05 11:11:23.6±0.5,**2°N**±5°×**12°8E**±°,**h24**km±5km,**M3.8**/5,
mb4.3/1,**MLv3.5**/5,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**6.26**	**142**	P	Pn	11 12 54.0	-0.5

*SJA **05** 11:20:42.5±0.7, 20°.16S×69°.17W, h101km±3km, ML4.0,*
MW3.9
*GUC **05** 11:20:44.3±0.6, 20°.18S×69°.20W, h91km±2km, ML4.0*

ISC 05 11:20:44.9±1.3,**20°.15S**±0°.03×**69°.29W**±0°.04,**h93**km±7km,
n38,σ1§53/63,4C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.13**	**85**	⇓*i*P	**Pn**	**11 20 57.9**	**-0.7**
PB08				*e*S	**Sn**	**11 21 08.4**	**-0.3**
PB08				IAML		11 21 08.9	
	comp=E,16μm,0.3s						
PB08	**IPOC Station P**	**0.13**	**85**	*e*P	**Pn**	**11 20 57.6**	**-1.0**
PB08				*e*S	**Sn**	**11 21 08.7**	**0.0**
PB08				IAML		11 21 09.6	
	comp=Z,9μm,0.2s						
PX03	**IPOC Station P**	**0.41**	**232**	*e*P	**Pn**	**11 20 58.4**	**-1.0**
PX03				*e*S	**Sn**	**11 21 10.5**	**+0.3**
PX03				IAML		11 21 12.2	
	comp=N,8μm,0.2s						
GO01	**Chusmiza**	**0.49**	**11**	⇓*i*P	**Pn**	**11 20 59.9**	**-0.7**
GO01				*e*S	**Sn**	**11 21 12.1**	**+0.1**
GO01				IAML		11 21 13.5	
	comp=N,22μm,0.1s						
GO01	**Chusmiza**	**0.49**	**11**	*e*P	**Pn**	**11 20 59.8**	**-0.7**
GO01				*e*S	**Sn**	**11 21 12.3**	**+0.4**
GO01				IAML		11 21 13.9	
	comp=Z,4μm,0.4s						
PB11	**IPOC Station P**	**0.52**	**318**	⇑*i*P	**Pn**	**11 21 00.2**	**-0.1**
PB11				*e*S	**Sn**	**11 21 13.1**	**+1.3**
PB11				IAML		11 21 13.9	
	comp=E,13μm,0.2s						
PB11	**IPOC Station P**	**0.52**	**318**	*e*P	**Pn**	**11 21 00.2**	**-0.1**
PB11				*e*S	**Sn**	**11 21 13.4**	**+1.6**
PB11				IAML		11 21 14.4	
	comp=Z,4μm,0.2s						
TA02	**Huaiquique**	**0.80**	**261**	*e*P	**Pn**	**11 21 03.0**	**+0.4**
TA02				*e*S	**Sn**	**11 21 17.9**	**+1.9**
TA02				IAML		11 21 19.8	
	comp=E,16μm,0.1s						
TA02	**Huaiquique**	**0.80**	**261**	*e*P	**Pn**	**11 20 59.7**	**-2.9**
TA02				*e*S	**Sn**	**11 21 18.1**	**+2.2**
TA02				IAML		11 21 19.3	
	comp=Z,6μm,0.1s						
PB01	**IPOC Station P**	**0.91**	**192**	⇓*i*P	**Pn**	**11 21 03.2**	**-0.7**
PB01				*e*S	**Sn**	**11 21 18.1**	**0.0**
PB01				IAML		11 21 19.6	
	comp=N,9μm,0.3s						
PB01	**IPOC Station P**	**0.91**	**192**	*e*P	**Pn**	**11 21 02.6**	**-1.3**
PB01				*e*S	**Sn**	**11 21 18.4**	**+0.3**
PB01				IAML		11 21 19.4	
	comp=Z,4μm,0.5s						
TA01	**Diego Aracena**	**0.93**	**244**	⇑*i*P	**Pn**	**11 21 03.9**	**-0.1**
TA01				*e*S	**Sn**	**11 21 19.3**	**+0.9**
TA01	**Diego Aracena**	**0.93**	**244**	*e*P	**Pn**	**11 21 03.8**	**-0.3**
TA01				*e*S	**Sn**	**11 21 20.4**	**+2.0**
TA01				IAML		11 21 21.4	
	comp=Z,1μm,0.3s						
PATCX	**Punta Patache**	**1.05**	**230**	⇑*i*P	**Pn**	**11 21 05.3**	**-0.1**
PATCX				*e*S	**Sn**	**11 21 21.8**	**+0.9**
PATCX				IAML		11 21 25.0	
	comp=E,3μm,0.2s						
PATCX	**Punta Patache**	**1.05**	**230**	*e*P	**Pn**	**11 21 05.4**	**-0.1**
PATCX				*e*S	**Sn**	**11 21 22.3**	**+1.4**
PATCX				IAML		11 21 30.0	
	comp=Z,2μm,0.6s						
PB02	**IPOC Station P**	**1.29**	**206**	*i* P	**Pn**	**11 21 08.1**	**-0.3**
PB02				*e*S	**Sn**	**11 21 26.8**	**+0.7**
PB02				IAML		11 21 30.4	
	comp=E,3μm,0.3s						
PB02	**IPOC Station P**	**1.29**	**206**	*e*P	**Pn**	**11 21 08.1**	**-0.3**
PB02				*e*S	**Sn**	**11 21 27.2**	**+1.1**
PB02				IAML		11 21 30.5	
	comp=Z,4μm,0.3s						
PB09	**IPOC Station P**	**1.64**	**178**	*e*P	**Pn**	**11 21 12.2**	**-0.5**
PB09				*e*S	**Sn**	**11 21 34.2**	**+0.4**
PB09				IAML		11 21 39.0	
	comp=N,963nm,0.5s						
PB09	**IPOC Station P**	**1.64**	**178**	*e*P	**Pn**	**11 21 12.1**	**-0.7**
PB09				IAML		11 21 40.1	
	comp=Z,680nm,0.7s						
PB12	**IPOC Station P**	**1.82**	**327**	*e*P	**Pn**	**11 21 14.7**	**-0.3**
PB12				IAML		11 21 48.0	
	comp=E,2μm,0.2s						
PB12	**IPOC Station P**	**1.82**	**327**	*e*P	**Pn**	**11 21 14.8**	**-0.1**
PB12				*e*S	**Sn**	**11 21 32.9**	**-4.8**
PB12				IAML		11 21 45.4	
	comp=Z,567nm,0.2s						
PB16	**IPOC Station P**	**1.82**	**353**	⇑*i*P	**Pn**	**11 21 16.0**	**+0.5**
PB16				*e*S	**Sn**	**11 21 41.1**	**+2.5**
PB16	**IPOC Station P**	**1.82**	**353**	*e*P	**Pn**	**11 21 15.5**	**0.0**
PB16				*e*S	Sn	11 21 22.3	-16
PB03	**IPOC Station P**	**1.94**	**193**	⇓*e*P	**Pn**	**11 21 15.5**	**-1.0**
PB03				IAML		11 21 49.7	
	comp=E,873nm,0.2s						
PB03	**IPOC Station P**	**1.94**	**193**	*e*P	**Pn**	**11 21 15.6**	**-1.0**
PB03				*e*S	**Sn**	**11 21 41.0**	**+0.4**
PB03				IAML		11 21 51.2	
	comp=Z,832nm,0.5s						
AP01	**Chacalluta**	**2.03**	**331**	*e*P	**Pn**	**11 21 17.7**	**0.0**
AP01				IAML		11 21 48.7	
	comp=E,2μm,0.3s						
AP01	**Chacalluta**	**2.03**	**331**	*e*P	**Pn**	**11 21 18.3**	**+0.6**
AP01				*e*S	**Sn**	**11 21 37.8**	**-4.8**
AP01				IAML		11 21 50.1	
	comp=Z,1μm,0.5s						
PB06	**IPOC Station P**	**2.56**	**186**	*e*P	**Pn**	**11 21 23.9**	**-0.8**
PB06	**IPOC Station P**	**2.56**	**186**	*e*P	**Pn**	**11 21 23.7**	**-1.0**
PB06				*e*S	**Sn**	**11 22 00.2**	**+5.0**
PB06				IAML		11 22 01.5	
	comp=Z,551nm,0.2s						
PB18	**Visviri**	**2.56**	**356**	*e*P	**Pn**	**11 21 28.1**	**+3.0**
PB05	**IPOC Station P**	**2.82**	**197**	*e*P	**Pn**	**11 21 26.8**	**-1.4**
PB05				*e*S	**Sn**	**11 22 01.2**	**-0.3**
PB05				IAML		11 22 20.6	
	comp=Z,358nm,0.6s						
AF01	**San Pedro de A**	**2.97**	**160**	*e*P	**Pn**	**11 21 30.6**	**+0.2**
AF01				IAML		11 22 57.8	
	comp=E,584nm,0.5s						
AF01	**San Pedro de A**	**2.97**	**160**	*e*P	**Pn**	**11 21 31.2**	**+0

comp=N,113nm,0.5s
KIWB IAML 11 23 53.7
comp=E,116nm,0.5s
KDAK Kodiak Island 12.08 55 Pn **Pn 11 24 44.7 -0.3**
comp=E,0.2nm,0.3s,baz=173,slow=12,SNR=1.2
comp=E,7.9nm,0.9s
PWL Port Wells 15.27 46 Pn **Pn 11 25 29.2 +1.0**
PWL IAmb IAmb 11 26 12.2
comp=Z,9.2nm,1.2s
SCM Sheep Creek Mo 16.13 44 Pn **Pn 11 25 40.5 +1.3**
ILAR Eielson Array 17.78 35 P **Pn 11 25 59.5 -0.2**
comp=Z,0.1nm,0.3s,baz=244,slow=12,SNR=5.5
comp=Z,0.1nm,0.5s
PETK Petropavlovsk- 18.83 285 P **P 11 26 10.6 -1.1**
comp=Z,0.1nm,0.3s,baz=75,slow=11,SNR=1.4
comp=Z,1.6nm,0.8s
J26L Joseph Creek 18.87 38 P **P 11 26 12.5 +0.3**
O28M Mount Upton 19.02 51 P **P 11 26 14.8 +0.8**
O28M IAmb IAmb 11 26 52.9
comp=Z,15nm,1.5s
E24K Your Creek 19.37 26 P **P 11 26 17.4 -0.1**
E24K IAmb IAmb 11 26 24.7
comp=Z,4.0nm,1.2s
I26K Coal Creek Min 19.41 36 P **P 11 26 18.4 +0.5**
BMAR Burnt Mountain 20.09 30 P **P 11 26 25.8 +0.5**
F26K Sheenjek River 20.38 30 P **P 11 26 29.0 +0.5**
F26K IAmb IAmb 11 26 38.1
comp=Z,2.0nm,0.7s
I28M Miner Creek 20.68 38 P **P 11 26 32.5 +0.7**
H29M Whitestone 21.59 37 P **P 11 26 42.2 +0.7**
F30M Barrier River 23.09 34 P **P 11 26 58.0 +0.5**
F30M IAmb IAmb 11 27 38.0
comp=Z,8.8nm,1.2s
INK Inuvik 24.16 34 P **P 11 27 07.9 +0.5**
INK IAmb IAmb 11 27 20.7
comp=Z,7.2nm,1.4s
H11N2 WAKE ISLAND Hy 36.59 216 T T 12 08 09.6
baz=20,slow=77
H11N3 WAKE ISLAND Hy 36.60 216 T T 12 08 05.8
baz=20,slow=77
H11N1 WAKE ISLAND Hy 36.61 216 T T 12 08 17.7
baz=20,slow=77
H11S1 WAKE ISLAND Hy 37.78 216 T T 12 09 48.8
baz=22,slow=76,SNR=18
H11S2 WAKE ISLAND Hy 37.80 216 T T 12 09 49.4
baz=22,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 37.80 216 T T 12 09 41.8
baz=22,slow=76,SNR=7.2
PDAR Pinedale Array 41.55 78 P **P 11 29 40.0 +0.8**
PDAR Pinedale Array 41.55 78 P **P 11 29 39.3 +0.1**
comp=Z,0.2nm,0.4s,baz=315,slow=8.1,SNR=3.6
comp=Z,0.2nm,0.4s
KSAR Wonju Array Be 44.34 276 P **P 11 30 01.2 -0.3**
TXAR Lajitas Array 53.88 87 P **P 11 31 14.5 -0.2**
comp=Z,0.2nm,0.7s,baz=300,slow=6.4,SNR=2.3
comp=Z,0.2nm,0.7s
KURBB Kurchatov Arra 61.89 317 P **P 11 32 10.5 +0.1**
comp=Z,0.8nm,0.2s,baz=44,slow=10,SNR=2.7
comp=Z,0.8nm,0.2s
MKAR Makanchi Array 63.13 312 P **P 11 32 18.4 -0.4**
comp=Z,0.3nm,0.7s,baz=28,slow=6.5,SNR=2.6
comp=Z,0.3nm,0.7s
BVAR Borovoye Array 63.22 323 P **P 11 32 19.5 +0.3**
comp=Z,0.7nm,0.5s,baz=32,slow=4.2,SNR=3.9
comp=Z,0.7nm,0.5s
BOOM Boomskoye usch 69.33 313 P **P 11 32 57.0 -1.8**
AB31 Akbulak array 70.02 327 P **P 11 33 02.6 0.0**
AB31 IAmb IAmb 11 33 27.0
comp=Z,2.9nm,1.4s
ABKAR Akbulak array 70.02 327 P **P 11 33 02.6 -0.1**
KKAR Karatay Array 71.19 317 P **P 11 33 09.7 -0.2**
CMAR Chiang Mai Arr 75.56 281 P **P 11 33 36.0 0.0**
comp=Z,0.7nm,0.3s,baz=20,slow=6.3,SNR=5.1
comp=Z,0.7nm,0.3s
WRA Warramunga Arr 85.99 230 P **P 11 34 30.6 -0.8**
comp=Z,0.3nm,0.9s,baz=34,slow=3.8,SNR=1.2
comp=Z,0.3nm,0.9s
ASAR Alice Springs 89.39 229 P **P 11 34 47.8 +0.1**
comp=Z,0.5nm,0.5s,baz=23,slow=5.0,SNR=13
comp=Z,0.5nm,0.5s

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*SDD **05** 11:30:00.5±1.0, 19°40N×67°14W, h12km±999km, MD3.3, ML2.2, MW3.0*
*NEIC **05** 11:30:00.0±0.7, 19°34N±0°03×67°08W±0°07, h10km±1km, ML2.1/5, Md2.8/6(RSPR), Error ellipse: s-maj=11.1km s-min=4.8km az=262.0*
*RSPR **05** 11:30:05.5, 19°18N×67°16W, h8km±31km, MD2.8/6*
ISC 05 11:30:02.0±2.0, 19°25N±0°09×67°08W±0°06, h18km±9km, n22, σ0961/30, 4C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.78**	**182**			**Pn**	**11 30 17.5**	**-0.6**
AGPR						**Sb**	**11 30 28.2**	**+1.0**
AGPR	**Aguadilla, PR**	**0.78**	**182**	*e*Pg		**Pb**	**11 30 16.6**	**-0.4**
AGPR				*e*Sg		**Sb**	**11 30 28.5**	**+1.3**
AGPR				IAML			11 30 42.8	
	comp=N,55nm,0.8s							
AGPR	**Aguadilla, PR**	**0.78**	**182**	⇓*e*P		**Pn**	**11 30 17.5**	**-0.6**
AGPR	**Aguadilla, PR**	**0.78**	**182**	*e*S		**Sb**	**11 30 28.2**	**+1.0**
AOPR	**Arecibo Observ**	**0.95**	**161**	Pg		**Pn**	**11 30 20.1**	**-0.4**
AOPR	**Arecibo Observ**	**0.95**	**161**	*e*Pg		**Pn**	**11 30 20.6**	**+0.1**
AOPR				*e*Sg		**Sn**	**11 30 33.7**	**+0.1**
AOPR				IAML			11 30 43.4	
	comp=N,672nm,0.7s							
ECPR	**Experimental S**	**1.15**	**144**	⇓*e*P		**Pg**	**11 30 24.7**	**+0.5**
ECPR	**Experimental S**	**1.15**	**144**	*e*S		**Sg**	**11 30 39.5**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.23**	**181**			**Pb**	**11 30 24.2**	**-0.5**
CRPR						**Sb**	**11 30 40.1**	**-0.3**
CRPR				IAML			11 30 46.5	
	comp=N,30nm,0.8s							
CRPR				IAML			11 30 50.6	
	comp=E,31nm,2.1s							
CRPR	**Cabo Rojo, PR**	**1.23**	**181**	*e*		**Pg**	**11 30 25.5**	**-0.4**
CRPR				⇑*e*Sg		**Sg**	**11 30 42.4**	**+0.4**
CRPR				IAML			11 30 44.0	
	comp=N,30nm,0.6s							
CRPR	**Cabo Rojo, PR**	**1.23**	**181**	⇓*e*P		**Pb**	**11 30 24.3**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.23**	**181**	*e*S		**Sb**	**11 30 40.2**	**-0.2**
MLPR	**Magueyes Islan**	**1.27**	**179**	*e*Pg		**Pn**	**11 30 24.6**	**-0.2**
MLPR				*e*Sg		**Sg**	**11 30 43.5**	**+0.4**
MLPR				IAML			11 30 49.2	
	comp=N,7.0nm,1.8s							
MLPR	**Magueyes Islan**	**1.27**	**179**	⇑*e*P		**Pb**	**11 30 25.2**	**-0.3**
MLPR	**Magueyes Islan**	**1.27**	**179**	*e*S		**Sn**	**11 30 41.4**	**-0.1**
OBIP	**Obispado Ponce**	**1.28**	**159**			**Pb**	**11 30 25.1**	**-0.5**
OBIP						**Sb**	**11 30 41.7**	**0.0**
OBIP				IAML			11 30 45.3	
	comp=N,27nm,0.2s							
OBIP	**Obispado Ponce**	**1.28**	**159**	⇑*e*P		**Pg**	**11 30 26.5**	**-0.2**
OBIP	**Obispado Ponce**	**1.28**	**159**	*e*S		**Sb**	**11 30 42.0**	**+0.3**
MIDR	**Miches**	**1.88**	**262**	⇑*e*P		**Pn**	**11 30 33.7**	**+0.4**
MIDR	**Miches**	**1.88**	**262**	*e*S		**Sn**	**11 30 56.3**	**-0.4**
DR12	**Loma Pena Alta**	**2.23**	**259**	Pn		**Pn**	**11 30 37.1**	**-1.0**
HATOM	**Hato Mayor del**	**2.23**	**259**	*e*Pg		**Pn**	**11 30 37.9**	**-0.2**
HATOM				*e*Sg		**Sn**	**11 31 06.4**	**+1.2**
HATOM				IAML			11 31 15.7	
	comp=N,16nm,1.7s							

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*IDC **05** 11:41:48.5±3.3, 24°02N×122°82E, h0km, mb3.9/2, mbtmp3.9/4, ML3.5/2, Error ellipse: s-maj=83.6km s-min=26.6km az=118.0*
*TAP **05** 11:41:52.9, 24°49N×122°20E, h76km, ML4.2, C*
*JMA **05** 11:41:52.4±0.2, 24°4N±0°8×122°3E±0°3, h69km±2km, MV3.5/15, TAIWAN REGION*
ISC 05 11:41:52.2±0.9, 24°49N±0°02×122°30E±0°02, h74km±4km, n186, σ1$00/340, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EOS2	**EOS2**	**0.09**	**223**	*i* P		**Pn**	**11 42 03.6**	**+0.8**
EOS2				*i* S		**Sn**	**11 42 12.1**	**+1.5**
EOS3	**EOS3**	**0.20**	**175**	*i* P		**Pn**	**11 42 03.9**	**+0.8**
EOS3				S		**Sn**	**11 42 12.3**	**+1.2**
EOS4	**EOS4**	**0.36**	**177**	P		**Pn**	**11 42 04.2**	**+0.3**
EOS4				S		**Sn**	**11 42 13.1**	**+0.7**
ESAO	**Su ao**	**0.42**	**282**	*i* P		**Pn**	**11 42 04.7**	**-0.1**
ESAO				*i* S		**Sn**	**11 42 13.7**	**-0.3**
TWC	**Suao**	**0.43**	**287**	*i* P		**Pn**	**11 42 04.6**	**-0.1**
TWC				S		**Sn**	**11 42 13.5**	**-0.6**
EWUT	**Wuta**	**0.48**	**265**	P		**Pn**	**11 42 05.2**	**0.0**
EGS		**0.49**	**317**	*e*P		**Pn**	**11 42 05.0**	**-0.3**
ENA	**Nanau**	**0.51**	**264**	P		**Pn**	**11 42 05.6**	**+0.1**
ENA				S		**Sn**	**11 42 15.2**	**-0.1**
EAHA	**Aohua**	**0.53**	**253**	P		**Pn**	**11 42 05.9**	**+0.2**
EAHA				S		**Sn**	**11 42 15.8**	**+0.1**
EHP	**Heping Village**	**0.54**	**251**	P		**Pn**	**11 42 06.0**	**+0.3**
EHP				*e*S		**Sn**	**11 42 16.5**	**+0.7**
NDS	**Dongshan**	**0.55**	**286**	P		**Pn**	**11 42 06.2**	**+0.3**
NDS				*e*S		**Sn**	**11 42 16.1**	**0.0**
NTC	**Toucheng**	**0.56**	**311**	*e*P		**Pn**	**11 42 06.1**	**+0.1**
NTC				*e*S		**Sn**	**11 42 16.0**	**-0.2**
ILA	**Ilan**	**0.57**	**299**	P		**Pn**	**11 42 06.3**	**+0.2**
ILA				S		**Sn**	**11 42 16.4**	**0.0**
JYNG	**Yonagunijimaku**	**0.59**	**93**	P		**Pn**	**11 42 06.6**	**+0.3**
JYNG				*e*S		**Sn**	**11 42 16.6**	**0.0**
TWB1	**Santiao Chiao**	**0.59**	**332**	*i* P		**Pn**	**11 42 06.2**	**-0.2**
TWB1				*i* S		**Sn**	**11 42 16.1**	**-0.6**
TWE	**Neicheng**	**0.62**	**292**	*i* P		**Pn**	**11 42 06.9**	**+0.3**
TWE				S		**Sn**	**11 42 16.9**	**-0.4**
TIPB	**Shuangxi**	**0.65**	**318**	*i* P		**Pn**	**11 42 06.9**	**-0.1**
TIPB				S		**Sn**	**11 42 17.3**	**-0.5**
YOJ	**Yonaguni jima**	**0.65**	**92**	P		**Pn**	**11 42 07.2**	**+0.3**
YOJ	**Yonaguni jima**	**0.65**	**92**	S		**Sn**	**11 42 17.9**	**+0.2**
YOJ	**Yonaguni jima**	**0.65**	**92**	P		**Pn**	**11 42 07.1**	**+0.3**
YOJ				S		**Sn**	**11 42 17.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.65**	**92**	*e*P		**Pn**	**11 42 07.2**	**+0.3**
YOJ				*e*S		**Sn**	**11 42 17.7**	**0.0**
ENTT	**Nioudou**	**0.69**	**283**	*i* P		**Pn**	**11 42 07.9**	**+0.6**
ENTT				S		**Sn**	**11 42 18.8**	**+0.4**
ETL	**Fush Village**	**0.70**	**242**	*e*P		**Pn**	**11 42 07.2**	**-0.3**
FUSB	**Fushanzhiwuyua**	**0.70**	**293**	*i* P		**Pn**	**11 42 08.0**	**+0.4**
FUSB				S		**Sn**	**11 42 18.6**	**-0.3**
LATG	**Datong**	**0.71**	**274**	P		**Pn**	**11 42 08.0**	**+0.3**
LATG				S		**Sn**	**11 42 19.0**	**+0.1**
NACB	**Ninganchiao**	**0.71**	**244**	P		**Pn**	**11 42 07.1**	**-0.5**
NACB	**Ninganchiao**	**0.71**	**244**	*i* P		**Pn**	**11 42 07.1**	**-0.5**
NACB				S		**Sn**	**11 42 18.2**	**-0.8**
SXI1	**Grass Mountain**	**0.72**	**328**	P		**Pn**	**11 42 07.8**	**0.0**
SXI1				S		**Sn**	**11 42 18.8**	**-0.4**
NWF	**Wu-fen Shan**	**0.75**	**321**	*i* P		**Pn**	**11 42 08.2**	**+0.1**
NWF				*i* S		**Sn**	**11 42 19.5**	**-0.4**
WFSB	**Wu-fen Shan**	**0.75**	**321**	*i* P		**Pn**	**11 42 08.2**	**+0.2**
WFSB				*i* S		**Sn**	**11 42 19.4**	**-0.2**
TWD	**Chiawan**	**0.76**	**238**	P		**Pn**	**11 42 07.8**	**-0.2**
TWD				S		**Sn**	**11 42 19.1**	**-0.7**
NWLT	**Wulai**	**0.78**	**292**	P		**Pn**	**11 42 09.0**	**+0.7**
NWLT				*e*S		**Sn**	**11 42 20.7**	**+0.3**
ETLH	**Xiulin Townshi**	**0.80**	**250**	P		**Pn**	**11 42 08.6**	**0.0**
ETLH				S		**Sn**	**11 42 20.7**	**-0.1**
HWA	**Hwalien**	**0.81**	**232**	P		**Pn**	**11 42 08.8**	**+0.1**
HWA				*e*S		**Sn**	**11 42 20.4**	**+0.5**
TWA	**Mucha**	**0.82**	**307**	P		**Pn**	**11 42 09.0**	**+0.2**
TWA				S		**Sn**	**11 42 20.6**	**-0.4**
TNOU	**National Taiwa**	**0.82**	**324**	P		**Pn**	**11 42 08.8**	**+0.1**
TNOU				S		**Sn**	**11 42 20.5**	**-0.5**
NNSB	**Datong**	**0.84**	**266**	*i* P		**Pn**	**11 42 09.3**	**+0.1**
NNSB				S		**Sn**	**11 42 21.7**	**0.0**
NNSH	**Datong**	**0.84**	**266**	*e*P		**Pn**	**11 42 09.2**	**+0.1**
NNS	**Nan Shan**	**0.84**	**267**	P		**Pn**	**11 42 09.3**	**+0.1**
NNS				*e*S		**Sn**	**11 42 22.0**	**+0.2**
NHDH	**Xindian Distri**	**0.85**	**304**	*e*P		**Pn**	**11 42 09.6**	**+0.5**
NHDH				*e*S		**Sn**	**11 42 21.6**	**-0.1**
YHNB	**Yeheng**	**0.86**	**283**	P		**Pn**	**11 42 09.9**	**+0.5**
YHNB	**Yeheng**	**0.86**	**283**	*i* P		**Pn**	**11 42 09.8**	**+0.5**
YHNB				*e*S		**Sn**	**11 42 22.2**	**+0.1**
NHY	**Taipei**	**0.86**	**310**	*e*P		**Pn**	**11 42 09.9**	**+0.6**
NHY				*e*S		**Sn**	**11 42 22.1**	**+0.2**
NSG	**Sanguang**	**0.88**	**283**	P		**Pn**	**11 42 09.8**	**+0.5**
NSK				*e*S		**Sn**	**11 42 22.7**	**+0.3**
TATO	**Taipei**	**0.89**	**304**	P		**Pn**	**11 42 09.9**	**+0.4**
TATO	**Taipei**	**0.89**	**304**	S		**Sn**	**11 42 22.2**	**-0.2**
TATO	**Taipei**	**0.89**	**304**	P		**Pn**	**11 42 09.4**	**-0.2**
TATO				S		**Sn**	**11 42 21.8**	**-0.7**
TEYL	**Yanliau Villag**	**0.89**	**226**	*e*P		**Pn**	**11 42 09.3**	**-0.3**
TEYL				*e*S		**Sn**	**11 42 22.3**	**-0.2**
ETM	**Tongmen**	**0.90**	**235**	P		**Pn**	**11 42 09.3**	**-0.4**
ETM				*e*S		**Sn**	**11 42 22.7**	**-0.1**
TAP	**Taipei**	**0.91**	**308**	*e*P		**Pn**	**11 42 10.0**	**+0.2**
TAP				*e*S		**Sn**	**11 42 22.8**	**-0.1**
NWRT	**Kuosheng**	**0.92**	**321**	*e*P		**Pn**	**11 42 10.1**	**+0.1**
NWRT				*e*S		**Sn**	**11 42 22.7**	**-0.5**
LXIB	**Xiulin Townshi**	**0.93**	**240**	P		**Pn**	**11 42 09.8**	**-0.4**
LXIB				*e*S		**Sn**	**11 42 23.1**	**-0.5**
YM01	**YM01**	**0.93**	**315**	P		**Pn**	**11 42 10.2**	**0.0**
YM01				*e*S		**Sn**	**11 42 22.8**	**-0.7**
YM08	**YM08**	**0.95**	**317**	*e*P		**Pn**	**11 42 11.2**	**+0.8**
YM08				*e*S		**Sn**	**11 42 23.2**	**-0.7**
ZUZH	**Zhuzihu**	**0.96**	**315**	*i* P		**Pn**	**11 42 10.5**	**0.0**
ZUZH				*e*S		**Sn**	**11 42 23.8**	**-0.3**
SHUL	**Shoufeng**	**0.97**	**224**	*i* P		**Pn**	**11 42 10.4**	**-0.1**
SHUL				S		**Sn**	**11 42 24.1**	**-0.1**
FUSS	**Fushou**	**0.99**	**256**	*i* P		**Pn**	**11 42 11.5**	**+0.5**
FUSS				*i* S		**Sn**	**11 42 25.1**	**0.0**
ANP	**Anpu**	**0.99**	**315**	*e*P		**Pn**	**11 42 11.0**	**+0.1**
ANP				*e*S		**Sn**	**11 42 23.6**	**-1.3**
WHF	**Hehuan Shan**	**1.00**	**250**	*i* P		**Pn**	**11 42 11.4**	**0.0**
WHF				*i* S		**Sn**	**11 42 25.3**	**-0.3**
TWS1	**Kuangyinshan**	**1.01**	**308**	*i* P		**Pn**	**11 42 11.4**	**+0.3**
TWS1				*i* S		**Sn**	**11 42 25.2**	**+0.2**
TWY	**Chenhua**	**1.01**	**321**	P		**Pn**	**11 42 11.3**	**+0.2**
TWY				S		**Sn**	**11 42 25.3**	**+0.1**
NTST	**Danshui**	**1.03**	**311**	P		**Pn**	**11 42 11.8**	**+0.5**
NTST				S		**Sn**	**11 42 25.5**	**+0.1**
ESL	**Shilin**	**1.04**	**230**	*i* P		**Pn**	**11 42 10.9**	**-0.5**
ESL				S		**Sn**	**11 42 24.9**	**-0.8**
TEGC	**Jichi Village**	**1.04**	**222**	*e*P		**Pn**	**11 42 11.4**	**0.0**
TEGC				*e*S		**Sn**	**11 42 25.4**	**-0.3**
NTY	**Taoyuan**	**1.04**	**300**	*e*P		**Pn**	**11 42 12.5**	**+1.1**
NTY				*e*S		**Sn**	**11 42 26.8**	**+0.9**
TWT	**Tachien**	**1.05**	**258**	P		**Pn**	**11 42 12.6**	**+0.8**
TWT				*e*S		**Sn**	**11 42 26.9**	**+0.6**
KSHI	**Guanxi Townshi**	**1.06**	**286**	*e*P		**Pn**	**11 42 12.9**	**+1.2**
KSHI				*e*S		**Sn**	**11 42 26.8**	**+0.5**
TDCB	**Techi**	**1.07**	**258**	*i* P		**Pn**	**11 42 12.7**	**+0.8**
TDCB				S		**Sn**	**11 42 26.5**	**-0.1**
NFF	**Wufeng Townshi**	**1.09**	**278**	P		**Pn**	**11 42 12.8**	**+0.8**
NFF				S		**Sn**	**11 42 27.3**	**+0.4**
NCUH	**Zhongli**	**1.12**	**296**	*e*P		**Pn**	**11 42 13.2**	**+0.8**
NCUH				*e*S		**Sn**	**11 42 27.9**	**+0.3**
NJD	**Zhudong**	**1.13**	**283**	*e*P		**Pn**	**11 42 13.7**	**+1.1**
NJD				*e*S		**Sn**	**11 42 28.2**	**+0.4**
WARBT	**Fenglin Townsh**	**1.13**	**228**	P		**Pn**	**11 42 11.9**	**-0.7**
WARBT				*e*S		**Sn**	**11 42 26.3**	**-1.6**
EGFH	**Guangfu**	**1.14**	**225**	*e*P		**Pn**	**11 42 14.2**	**+1.6**
EGFH				*e*S		**Sn**	**11 42 28.3**	**+0.3**
OWD	**Renai**	**1.15**	**243**	*i* P		**Pn**	**11 42 13.1**	**+0.1**
OWD				*e*S		**Sn**	**11 42 28.3**	**-0.2**
PCYT	**Pengchaiyu**	**1.16**	**350**	*e*P		**Pn**	**11 42 13.8**	**+0.9**
PCYT				*e*S		**Sn**	**11 42 28.7**	**+0.3**
LIOB	**Emei**	**1.18**	**278**	*e*P		**Pn**	**11 42 14.2**	**+1.0**
LIOB				*e*S		**Sn**	**11 42 29.0**	**+0.1**
WUSB	**Renai**	**1.19**	**246**	*i* P		**Pn**	**11 42 13.9**	**+0.5**
WUSB				S		**Sn**	**11 42 29.5**	**+0.2**
NSTT	**Nanjuang**	**1.19**	**277**	*i* P		**Pn**	**11 42 14.2**	**+0.9**
NSTT				S		**Sn**	**11 42 29.1**	**0.0**
HSN1	**Hsinchu**	**1.20**	**284**	*e*P		**Pn**	**11 42 14.1**	**+0.7**
HSN1				*e*S		**Sn**	**11 42 29.8**	**+0.4**
SBCB	**Hsinchu**	**1.23**	**285**	*e*P		**Pn**	**11 42 14.2**	**+0.3**
SBCB				*e*S		**Sn**	**11 42 29.6**	**-0.5**
HSN	**Hsinchu**	**1.25**	**285**	*e*P		**Pn**	**11 42 13.7**	**-0.3**
HSN				*e*S		**Sn**	**11 42 29.9**	**-0.6**
WHP	**Taichung City**	**1.25**	**261**	*i* P		**Pn**	**11 42 15.7**	**+1.5**
WHP				S		**Sn**	**11 42 31.6**	**+1.0**
HGSD	**Ruisui**	**1.27**	**219**	*e*P		**Pn**	**11 42 14.0**	**-0.4**
HGSD				*e*S		**Sn**	**11 42 30.8**	**-0.2**
VWDT	**VWDT**	**1.28**	**236**	*i* P		**Pn**	**11 42 14.9**	**+0.4**
VWDT				*e*S		**Sn**	**11 42 30.7**	**-0.5**
IRIF	**Iriomote-Funau**	**1.31**	**96**	P		**Pn**	**11 42 15.1**	**+0.2**
IRIF				S		**Sn**	**11 42 31.8**	**-0.1**
WPL	**Puli Township**	**1.31**	**249**	*e*P		**Pn**	**11 42 15.7**	**+0.8**
WPL				*e*S		**Sn**	**11 42 31.8**	**-0.1**
NJN	**Zhunan**	**1.32**	**279**	*e*S		**Sn**	**11 42 32.6**	**+0.6**
EHYH	**Wanrong**	**1.32**	**222**	*e*P		**Pn**	**11 42 14.3**	**-0.6**
EHYH				*e*S		**Sn**	**11 42 30.8**	**-1.2**
EHY	**Hungye**	**1.32**	**223**	P		**Pn**	**11 42 14.2**	**-0.8**
EHY				S		**Sn**	**11 42 30.3**	**-1.8**
DPDB	**Guoxing**	**1.33**	**251**	P		**Pn**	**11 42 16.2**	**+1.0**
DPDB				*e*S		**Sn**	**11 42 33.2**	**+0.7**
WCS	**Beigang Elemen**	**1.34**	**252**	*e*P		**Pn**	**11 42 16.1**	**+1.0**
NMLH	**Miaoli**	**1.38**	**272**	*e*P		**Pn**	**11 42 17.0**	**+1.3**
NMLH				*e*S		**Sn**	**11 42 33.7**	**+0.4**
TWQ1	**Liyutan**	**1.40**	**265**	*e*P		**Pn**	**11 42 17.2**	**+1.3**
TWQ1				*e*S		**Sn**	**11 42 33.7**	**-0.2**
ECBN	**Changbin**	**1.40**	**214**	*e*P		**Pn**	**11 42 15.7**	**-0.3**
ECBN				*e*S		**Sn**	**11 42 32.8**	**-1.1**
NSY	**Sanyi**	**1.40**	**268**	*e*P		**Pn**	**11 42 17.4**	**+1.3**
NSY				*e*S		**Sn**	**11 42 34.0**	**-0.1**
SMLT	**Sun Moon Lake**	**1.41**	**245**	*e*P		**Pn**	**11 42 16.8**	**+0.5**
SMLT				*e*S		**Sn**	**11 42 35.9**	**+1.5**
SSLB	**Suanglung**	**1.41**	**241**	P		**Pn**	**11 42 16.6**	**+0.4**
SSLB	**Suanglung**	**1.41**	**241**	P		**Pn**	**11 42 16.6**	**+0.4**
SSLB				*e*S		**Sn**	**11 42 35.1**	**+0.8**
YULB	**Yu-li**	**1.42**	**220**	P		**Pn**	**11 42 15.6**	**-0.7**
YULB	**Yu-li**	**1.42**	**220**	S		**Sn**	**11 42 32.6**	**-1.9**
YULB	**Yu-li**	**1.42**	**220**	*e*P		**Pn**	**11 42 16.5**	**-0.7**
YULB				*e*S		**Sn**	**11 42 32.6**	**-1.9**
HATJ	**Hateruma jima**	**1.44**	**107**	P		**Pn**	**11 42 17.7**	**+1.2**
HATJ				*e*S		**Sn**	**11 42 36.0**	**+1.2**
TYC	**Yuchr**	**1.44**	**247**	*e*P		**Pn**	**11 42 17.8**	**+1.3**
TYC				*e*S		**Sn**	**11 42 36.5**	**+1.7**
EYUL	**Yuli**	**1.45**	**219**	*e*P		**Pn**	**11 42 16.3**	**-0.3**
EYUL				*e*S		**Sn**	**11 42 34.8**	**-0.2**
TWF1	**Yuli**	**1.45**	**219**	*i* P		**Pn**	**11 42 16.1**	**-0.7**
TWF1				*e*S		**Sn**	**11 42 34.2**	**-1.0**
TCU	**Taichung**	**1.52**	**258**	*e*P		**Pn**	**11 42 18.5**	**+1.0**
TCU				*e*S		**Sn**	**11 42 36.7**	**0.0**
WDJ	**Dajia District**	**1.52**	**265**	*e*P		**Pn**	**11 42 18.0**	**+0.5**
WDJ				*e*S		**Sn**	**11 42 37.5**	**+0.8**
WWF	**Wufeng**	**1.53**	**254**	P		**Pn**	**11 42 19.4**	**+1.7**
WWF				*e*S		**Sn**	**11 42 39.0**	**+2.2**
CHKH	**Chenggong**	**1.53**	**213**	*e*P		**Pn**	**11 42 17.6**	**-0.1**
CHKH				*e*S		**Sn**	**11 42 36.2**	**-0.7**
WHYT	**Xinyi Township**	**1.54**	**240**	*e*P		**Pn**	**11 42 19.0**	**+1.1**
WHYT				*e*S		**Sn**	**11 42 38.2**	**+1.0**
FULB	**Fuli**	**1.58**	**216**	*e*P		**Pn**	**11 42 18.2**	**-0.2**
FULB				*e*S		**Sn**	**11 42 37.8**	**-0.4**
JKRS	**Kuro-shima**	**1.58**	**99**	P		**Pn**	**11 42 19.1**	**+0.7**
JKRS				S		**Sn**	**11 42 38.7**	**+0.6**
YUS	**Yu-Shan**	**1.58**	**231**	P		**Pn**	**11 42 19.3**	**+0.4**
YUS				*e*S		**Sn**	**11 42 38.2**	**-0.8**
WNT1	**Nantou City**	**1.59**	**249**	*e*P		**Pn**	**11 42 20.1**	**+1.7**
WNT1				*e*S		**Sn**	**11 42 40.4**	**+2.0**
WNT	**Mingjian**	**1.59**	**248**	*e*P		**Pn**	**11 42 20.5**	**+1.9**
WNT				*e*S		**Sn**	**11 42 40.6**	**+2.1**
CHKT	**Chengkung**	**1.62**	**212**	*e*P		**Pn**	**11 42 18.1**	**-0.9**
CHKT				*e*S		**Sn**	**11 42 36.8**	**-2.4**
WCHH	**Zhanghua**	**1.64**	**256**	*e*P		**Pn**	**11 42 20.2**	**+1.1**
WCHH				*e*S		**Sn**	**11 42 40.2**	**+0.7**
WCH1	**Changhua City**	**1.65**	**256**	*e*S		**Sn**	**11 42 40.5**	**+1.0**
WYL	**Yuanlin Townsh**	**1.65**	**252**	*e*S		**Sn**	**11 42 41.2**	**+1.3**
EHD	**Haiduan**	**1.67**	**217**	*e*P		**Pn**	**11 42 19.9**	**+0.4**
EHD				*e*S		**Sn**	**11 42 40.3**	**+0.1**
ALS	**Alishan**	**1.68**	**235**	*e*P		**Pn**	**11 42 21.0**	**+1.1**
ALS				*e*S		**Sn**	**11 42 41.7**	**+0.9**
JJJ	**Ishigaki jima**	**1.69**	**94**	P		**Pn**	**11 42 20.0**	**+0.3**
JJJ				S		**Sn**	**11 42 40.0**	**-0.6**
ECS	**Chishang**	**1.70**	**216**	*e*P		**Pn**	**11 42 19.7**	**-0.3**
ECS				*e*S		**Sn**	**11 42 41.5**	**+0.4**
CHN5	**Tsauling**	**1.73**	**240**	*e*P		**Pn**	**11 42 21.7**	**+1.3**
CHN5				*e*S		**Sn**	**11 42 44.0**	**+2.2**
ELDTW	**Lidau**	**1.75**	**223**	*e*P		**Pn**	**11 42 20.4**	**-0.2**
ELDTW				*e*S		**Sn**	**11 42 40.9**	**-1.3**
EDH	**Donghe**	**1.76**	**211**	*e*P		**Pn**	**11 42

AXDP Jialang 3.96 277 P Pn 11 42 50.8 +0.3
AXDP eS Sn 11 43 33.4 -2.3
DSXP Dongshan 4.52 261 eP Pn 11 42 59.1 +0.9
DSXP eS Sn 11 43 47.3 -2.2
SXFK Yanhouchang 4.62 295 eP Pn 11 42 59.4 -0.2
JOW Kunigami 5.88 65 Pn Pn 11 43 14.7 -2.0
2.5nm,0.3s,baz=252,slow=20,SNR=12
JOW Sn Sn 11 44 19.9 -2.8
1.4nm,0.3s,baz=338,slow=14,SNR=2.4
7.0nm,0.3s
KSRS Korea Array 13.79 19 Pn P 11 45 08.7 -1.6
0.3nm,0.3s,baz=200,slow=13,SNR=6.1
1.2nm,0.5s
WRA Warramunga Arr 45.69 164 P P 11 50 06.4 +0.5
2.4nm,0.7s,baz=346,slow=8.7,SNR=21
2.4nm,0.7s
ASAR Alice Springs 49.17 166 P P 11 50 34.1 +1.2
0.4nm,0.4s,baz=346,slow=8.5,SNR=7.7
0.4nm,0.4s

*IDC **05** 11:57:28.9±0.9,9.42S×151.87E,h0km,mb3.8/8, mbtmp3.8/10,ML3.4/1,MS3.1/7,Error ellipse: s-maj=28.6km s-min=21.7km az=121.0*
*NEIC **05** 11:57:30.7±1.1,9.5S±0.1×151.92E±0.02,h10km±1km, mb4.3/14,Error ellipse: s-maj=17.7km s-min=3.3km az=6.0*
ISC 05 11:57:31.4±0.6,9.47S±0.10×151.91E±0.08,h17km,n37, σ0s82/32,mb4.0/12,MS3.1/7,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.69**	**270**		**Pn**	**11 58 41.2**	**-0.2**
PMG	**Port Moresby**	**4.69**	**270**	Pn	**Pn**	**11 58 41.6**	**+0.2**
	3.1nm,0.4s,baz=138,slow=23,SNR=1.3						
PMG				Sn	**Sn**	**11 59 36.2**	**+0.6**
	0.8nm,0.3s,baz=49,slow=20,SNR=2.0						
RABL	**Rabaul**	**5.25**	**3**	Pn	**Pn**	**11 58 49.4**	**+0.2**
HNR	**Honiara**	**7.93**	**90**	Pn	**Pn**	**11 59 25.7**	**-0.2**
WB0	**Warramunga Arr**	**19.78**	**237**	P	**P**	**12 01 59.8**	**-1.2**
WB0				IAmb	IAmb	12 02 17.1	
	comp=Z,11nm,1.4s						
WR8	**Warramunga Arr**	**19.79**	**236**	P	**P**	**12 02 01.2**	**+0.1**
WRA	**Warramunga Arr**	**19.91**	**237**	P	**P**	**12 02 02.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=62,slow=11,SNR=19						
	comp=Z,3.6nm,0.8s						
MTN	**Manton Dam**	**20.66**	**259**	P	Pn	12 02 11.4	-1.5
MTN				IAmb	IAmb	12 02 17.9	
	comp=Z,11nm,1.1s						
INKA	**Innaminka**	**21.00**	**209**	P	**P**	**12 02 14.2**	**0.0**
INKA				IAmb	IAmb	12 02 23.6	
	comp=Z,6.8nm,0.7s						
AS31	**Alice Springs**	**22.26**	**228**	P	**P**	**12 02 26.5**	**-1.3**
ASAR	**Alice Springs**	**22.26**	**228**	P	**P**	**12 02 27.2**	**-0.6**
ASAR	**Alice Springs**	**22.26**	**228**	P	**P**	**12 02 27.4**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=60,slow=10.0,SNR=22						
ASAR				LR	LR	12 10 06.0	
	comp=Z,61nm,18.9s,baz=58,slow=34						
	comp=Z,1.7nm,0.8s						
GUMO	**Guam**	**23.95**	**343**	LR	LR	12 10 20.5	
	comp=Z,16nm,20.7s,baz=164,slow=32						
STKA	**Stephens Creek**	**24.26**	**202**	P	**P**	**12 02 46.3**	**-1.4**
STKA	**Stephens Creek**	**24.26**	**202**	P	**P**	**12 02 46.2**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=10,slow=14,SNR=5.1						
STKA				LR	LR	12 11 42.3	
	comp=Z,61nm,21.3s,baz=27,slow=35						
	comp=Z,2.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.89**	**249**	P	**P**	**12 03 11.3**	**-0.4**
PPT	**Papeete**	**57.27**	**105**	LR	LR	12 27 54.2	
	comp=Z,23nm,21.1s,baz=304,slow=32						
VNDA	**Vanda**	**68.22**	**178**	P	**P**	**12 08 31.9**	**+1.3**
VNDA				IAmb	IAmb	12 09 15.5	
	comp=Z,3.6nm,1.5s						
VNDA	**Vanda**	**68.22**	**178**	P	**P**	**12 08 32.0**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=339,slow=5.8,SNR=2.2						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**69.82**	**329**	P	**P**	**12 08 41.6**	**+0.4**
SONM				IAmb	IAmb	12 08 50.9	
	comp=Z,4.2nm,1.3s						
SEY	**Seymchan**	**72.19**	**0**	LR	LR	12 36 49.2	
	comp=Z,9.6nm,21.3s,baz=304,slow=33						
QSPA	**South Pole Qui**	**80.52**	**180**	P	**P**	**12 09 42.8**	**+0.3**
QSPA				IAmb	IAmb	12 10 25.8	
	comp=Z,4.7nm,1.4s						
QSPA	**South Pole Qui**	**80.52**	**180**	P	**P**	**12 09 44.4**	**+1.9**
	comp=Z,0.9nm,1.0s,baz=294,slow=1.8,SNR=7.8						
	comp=Z,0.9nm,1.0s						
KDAK	**Kodiak Island**	**80.72**	**27**	LR	LR	12 41 33.3	
	comp=Z,18nm,21.8s,baz=230,slow=33						
MK31	**Makanchi Array**	**83.27**	**320**	P	**P**	**12 09 56.8**	**-0.4**
MK31				IAmb	IAmb	12 10 08.1	
	comp=Z,2.1nm,1.1s						
MKAR	**Makanchi Array**	**83.27**	**320**	P	**P**	**12 09 57.1**	**-0.1**
MKAR	**Makanchi Array**	**83.27**	**320**	P	**P**	**12 09 57.9**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=111,slow=5.3,SNR=6.1						
	comp=Z,0.9nm,0.8s						
ZAA0	**Zalesovo Array**	**84.54**	**327**	P	**P**	**12 10 03.7**	**+0.2**
ZAA0				IAmb	IAmb	12 10 10.3	
	comp=Z,2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**84.54**	**327**	P	**P**	**12 10 03.4**	**-0.1**
ZALV	**Zalesovo Beam**	**84.54**	**327**	P	**P**	**12 10 03.1**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=93,slow=6.4,SNR=6.9						
	comp=Z,0.8nm,0.6s						
IL31		**86.79**	**22**	P	**P**	**12 10 14.8**	**+0.4**
ILAR	**Eielson Array**	**86.79**	**22**	P	**P**	**12 10 15.0**	**+0.5**
ILAR	**Eielson Array**	**86.79**	**22**	P	**P**	**12 10 14.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=247,slow=5.1,SNR=4.3						
	comp=Z,0.4nm,0.7s						
BMAR	**Burnt Mountain**	**88.91**	**20**	P	**P**	**12 10 23.2**	**-1.4**
BELA	**Belgrano 2**	**92.72**	**179**	P	**P**	**12 10 42.2**	**0.0**
NVAR	**Mina Array Bea**	**95.64**	**52**	P	**P**	**12 10 56.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=286,slow=4.4,SNR=3.9						
	comp=Z,0.4nm,0.7s						
NEW	**Newport**	**97.63**	**42**	LR	LR	12 47 04.9	
	comp=Z,15nm,20.1s,baz=26,slow=30						

IDC 05 12:15:14.1±4.6,10.41N×126.39E,h0km,mb3.5/4, mbtmp3.5/4,MS3.3/2,Error ellipse: s-maj=432.2km s-min=25.4km az=68.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.16**	**165**	LR	LR	12 37 11.5	
	comp=Z,28nm,18.6s,baz=178,slow=42						
ASAR	**Alice Springs**	**34.66**	**168**	P	P	12 22 05.5	-0.1
	0.1nm,0.3s,baz=342,slow=8.4,SNR=11						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**51.98**	**323**	P	P	12 24 25.3	+0.1
	0.3nm,0.5s,baz=113,slow=7.0,SNR=4.8						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**54.56**	**331**	P	P	12 24 43.7	-0.2
	0.4nm,0.3s,baz=129,slow=5.7,SNR=4.0						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**56.02**	**325**	P	P	12 24 54.3	-0.2
	0.4nm,0.5s,baz=128,slow=7.2,SNR=3.0						
	0.4nm,0.5s						
MMAI	**Mount Meron Ar**	**85.23**	**303**	LR	LR	13 11 12.9	
	comp=Z,22nm,18.2s,baz=180,slow=39						

*DJA **05** 12:33:05.4±0.7,5˚N±2˚×9˚6E±˚,h10km,M4.2/9,MLv4.2/9*
*IDC **05** 12:33:10.3±5.4,4.62N×96.37E,h61km±36km,mb3.5/7, mbtmp3.8/9,ML3.9/2,MS3.1/8,Error ellipse: s-maj=82.3km s-min=15.7km az=61.0*
ISC 05 12:33:05.5±0.9,4.46N±0.04×96.34E±0.08,h33km,n21, σ1s91/17,mb4.0/7,MS3.2/5,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**0.20**	**162**	P	**Pn**	**12 33 10.4**	**-1.4**
MLSI				S	**Sn**	**12 33 14.8**	**+0.2**
LHMI	**Lhok Sumawe**	**0.97**	**38**	P	**Pb**	**12 33 22.9**	**-1.0**
LHMI				S	**Sb**	**12 33 37.4**	**+0.9**
KCSI	**Kotacane, Aceh**	**1.70**	**123**	P	**Pb**	**12 33 35.7**	**-0.6**
KCSI				S	**Sb**	**12 33 58.9**	**+1.6**
SNSI	**Sinabang, Aceh**	**2.04**	**180**	P	**Pb**	**12 33 40.6**	**-1.3**
PSI	**Prapat**	**3.06**	**122**	P	**Pb**	**12 33 56.5**	**-2.9**
	9.7nm,0.3s,baz=297,slow=9.0,SNR=25						
PSI				S	**Sb**	**12 34 35.9**	**-0.5**
	58nm,0.7s,baz=274,slow=22,SNR=4.9						
	23nm,0.3s						
GSI	**Gunungsitoli**	**3.37**	**158**	P	Pb	12 34 13.6	+9.0
CMAR	**Chiang Mai Arr**	**14.14**	**10**	P	**P**	**12 36 27.2**	**-3.6**
	0.2nm,0.3s,baz=191,slow=9.9,SNR=1.5						
CMAR				LR	LR	12 42 27.3	
	comp=Z,36nm,18.6s,baz=185,slow=40						
	0.4nm,0.4s						
PALK	**Pallekele**	**15.80**	**281**	LR	LR	12 42 20.6	
	comp=Z,55nm,20.1s,baz=103,slow=35						
BRDH	**Bariadhala**	**18.67**	**346**	LR	LR	12 44 51.7	
	comp=Z,50nm,20.7s,baz=116,slow=38						
KAPI	**Kappang**	**25.21**	**112**	LR	LR	12 49 04.2	
	comp=Z,33nm,18.9s,baz=252,slow=38						
FITZ	**Fitzroy Crossi**	**36.57**	**129**	P	**P**	**12 40 11.0**	**+2.4**
	2.6nm,0.7s,baz=324,slow=7.1,SNR=7.5						
	2.6nm,0.7s						
AAK	**Ala-Archa**	**42.69**	**336**	LR	LR	13 00 49.8	
	comp=Z,31nm,18.8s,baz=162,slow=39						
MKAR	**Makanchi Array**	**43.89**	**346**	P	**P**	**12 41 09.6**	**+0.6**
	0.4nm,0.7s,baz=150,slow=9.8,SNR=5.1						
	0.4nm,0.7s						
SONM	**Songino Array**	**44.07**	**10**	P	**P**	**12 41 11.3**	**+0.8**
	0.2nm,0.3s,baz=185,slow=8.3,SNR=1.4						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.52**	**124**	P	**P**	**12 41 16.9**	**+2.5**
	2.2nm,0.7s,baz=301,slow=9.2,SNR=23						
	2.2nm,0.7s						
ASAR	**Alice Springs**	**46.07**	**129**	P	**P**	**12 41 29.4**	**+2.7**
	1.1nm,0.6s,baz=300,slow=8.0,SNR=25						
	1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**50.23**	**351**	P	**P**	**12 41 59.2**	**+1.0**
	0.3nm,0.4s,baz=165,slow=12,SNR=1.7						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**52.91**	**341**	LR	LR	13 07 25.0	
	comp=Z,18nm,18.1s,baz=322,slow=39						
ARTI	**Arti**	**59.91**	**337**	LR	LR	13 10 59.1	
	comp=Z,40nm,18.5s,baz=194,slow=38						
PETK	**Petropavlovsk-**	**69.53**	**34**	P	**P**	**12 44 10.5**	**-0.5**
	1.8nm,0.9s,baz=268,slow=8.4,SNR=1.3						
	1.8nm,0.9s						
TIXI	**Tiksi**	**70.15**	**10**	LR	LR	13 17 20.3	
	comp=Z,24nm,18.9s,baz=230,slow=38						

*NEIC **05** 13:44:09.9±0.8,37.55N±0.06×71.78E±0.10,h110km±8km, mb4.4/13,Error ellipse: s-maj=11.3km s-min=9.3km az=75.0*
*NNC **05** 13:44:13.4±3.0,37.79N×71.71E,h89km±61km,mb3.0, mpv3.1,Error ellipse: s-maj=24.6km s-min=19.3km az=19.0*
*IDC **05** 13:44:13.7±8.2,37.77N×71.98E,h140km±60km,mb3.8/2, mbtmp3.8/7,Error ellipse: s-maj=73.1km s-min=46.9km az=173.0*
ISC 05 13:44:08.2±0.7,37.48N±0.06×71.90E±0.08,h100km,n44, σ1s21/48,mb4.3/9,2C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**1.96**	**321**		**Pn**	**13 44 41.4**	**+0.9**
DRK	**Karamyk**	**2.00**	**358**		**Pn**	**13 44 42.3**	**+1.3**
CHGR	**Chuyangaron**	**2.46**	**299**		**Pn**	**13 44 47.1**	**+0.2**
SIMJ	**Simiganj**	**2.57**	**298**	Pn	**Pn**	**13 44 48.4**	**0.0**
ARSB	**Arslanbob**	**3.93**	**12**		**Pn**	**13 45 07.4**	**+0.9**
NIL	**Nilore**	**3.98**	**164**		**Pn**	**13 45 10.7**	**+3.6**
JMU	**Jammu**	**5.35**	**152**	eS	**Sn**	**13 46 25.7**	**-0.3**
JMU				IAML		13 46 31.8	
	comp=E,171nm,0.3s						
ALCI	**Alchi Leh**	**5.39**	**126**	eS	**Sn**	**13 46 26.1**	**-1.4**
AAK	**Ala-Archa**	**5.52**	**20**		**Pn**	**13 45 29.0**	**+0.9**
AAK	**Ala-Archa**	**5.52**	**20**	P	**Pn**	**13 45 30.3**	**+2.2**
	comp=E,3.3nm,0.4s,baz=207,slow=11,SNR=8.7						
AAK				S	**Sn**	**13 46 30.2**	**-0.1**
	comp=E,3.3nm,0.3s,baz=358,slow=21,SNR=12						
AAK	**Ala-Archa**	**5.52**	**20**	⇓P	**Pn**	**13 45 29.9**	**+1.8**
	comp=E,0.6nm,0.4s						
AAK				⇑S	**Sn**	**13 46 29.9**	**-0.4**
	comp=E,8.6nm,0.9s						
KK31	**Karatay Array**	**5.71**	**350**		**Pn**	**13 45 31.1**	**+0.5**
KK31	**Karatay Array**	**5.71**	**350**	⇓P	**Pn**	**13 45 31.1**	**+0.5**
	comp=E,0.9nm,0.2s,baz=171,slow=12,SNR=30						
KK31				⇑S	**Sn**	**13 46 33.1**	**-1.8**
	comp=E,7.6nm,0.3s,baz=183,slow=24,SNR=17						
KKAR	**Karatay Array**	**5.71**	**350**		**Pn**	**13 45 31.0**	**+0.4**
TSSA	**Tissa**	**5.79**	**142**	eP	**Pn**	**13 45 32.1**	**+0.2**
TSSA				eS	**Sn**	**13 46 34.9**	**-2.2**
TSSA				IAML		13 46 39.2	
	comp=N,168nm,0.3s						
TSSA				IAML		13 46 42.4	
	comp=E,148nm,0.2s						
BOOM	**Boomskoye usch**	**5.89**	**31**	Pn	**Pn**	**13 45 34.8**	**+1.8**
DHRM	**DHARAMSHALA**	**6.35**	**144**	eP	**Pn**	**13 45 41.2**	**+1.8**
DHRM				eS	**Sn**	**13 46 47.6**	**-3.0**
DHRM				IAML		13 46 52.1	
	comp=N,176nm,0.3s						
DHRM				IAML		13 46 52.3	
	comp=E,194nm,0.4s						
SMLA	**Simla**	**7.69**	**144**	eP	**Pn**	**13 45 58.2**	**+0.8**
SMLA				eS	Sn	13 47 17.6	-5.3
SMLA				IAML		13 47 21.0	
	comp=N,131nm,0.2s						
SMLA				IAML		13 47 21.5	
	comp=E,133nm,0.6s						
MAKZ	**Makanchi**	**11.94**	**36**	Pn	**Pn**	**13 46 54.0**	**-1.0**
MK31	**Makanchi Array**	**12.07**	**36**	P	Pn	13 47 01.8	+5.0
	comp=E,0.4nm,0.5s,baz=210,slow=9.1,SNR=4.3						
MKAR	**Makanchi Array**	**12.07**	**36**		**Pn**	**13 46 56.3**	**-0.4**
MKAR	**Makanchi Array**	**12.07**	**36**	P	**Pn**	**13 46 57.1**	**+0.3**
	comp=E,0.2nm,0.5s,baz=216,slow=15,SNR=5.7						
AB31	**Akbulak array**	**14.61**	**327**	Pn	**Pn**	**13 47 27.9**	**-1.9**
AB31	**Akbulak array**	**14.61**	**327**	P	**Pn**	**13 47 30.1**	**+0.3**
	comp=E,0.6nm,0.6s,baz=133,slow=14,SNR=9.3						
ABKAR	**Akbulak array**	**14.61**	**327**	Pn	**Pn**	**13 47 27.9**	**-1.9**
BVAR	**Borovoye Array**	**15.58**	**357**	P	**Pn**	**13 47 40.5**	**-1.6**
	comp=E,0.4nm,0.3s,baz=172,slow=12,SNR=2.2						
AKTO	**Aktyubinsk**	**16.32**	**327**	P	**Pn**	**13 47 51.8**	**+0.6**
	comp=E,2.1nm,0.4s,baz=127,slow=11,SNR=11						
AKTO	**Aktyubinsk**	**16.32**	**327**	⇓P	**P**	**13 47 52.7**	**+0.3**
	comp=E,1.6nm,0.6s						
ZAA0	**Zalesovo Array**	**18.73**	**24**	P	**P**	**13 48 18.9**	**+0.1**
ZALV	**Zalesovo Beam**	**18.73**	**24**	P	**P**	**13 48 18.4**	**-0.3**
	comp=E,0.9nm,0.5s,baz=225,slow=11,SNR=5.9						
CHTO	**Chiang Mai**	**30.07**	**121**	P	**P**	**13 50 08.8**	**+0.7**
FINES	**FINESS Array B**	**37.08**	**325**	P	**P**	**13 51 08.6**	**+0.2**
	comp=E,2.7nm,0.8s,baz=110,slow=9.0,SNR=5.2						
	comp=E,2.7nm,0.8s						
HFS	**Hagfors**	**42.75**	**321**	P	**P**	**13 51 54.9**	**-0.3**
	comp=E,1.7nm,0.4s,baz=75,slow=8.2,SNR=8.9						
	comp=E,1.7nm,0.4s						
NBO00	**NORSAR Array S**	**44.25**	**322**	P	**P**	**13 52 07.2**	**-0.1**
NC204	**NORSAR Array S**	**44.27**	**323**	P	**P**	**13 52 07.0**	**-0.5**
NC204				IAmb	IAmb	13 52 33.0	
	comp=Z,15nm,1.2s						
PET	**Petropavlovsk**	**59.33**	**45**	P	**P**	**13 53 59.7**	**+0.3**
C19K	**Lookout Ridge**	**67.18**	**18**	P	**P**	**13 54 51.7**	**+0.7**
D19K	**Kuna River**	**67.99**	**18**	P	**P**	**13 54 56.4**	**+0.2**
D19K				IAmb	IAmb	13 55 01.4	
	comp=Z,16nm,1.4s						
E22K	**Anaktuvuk Pass**	**69.73**	**16**	P	**P**	**13 55 07.3**	**+0.3**
E22K				IAmb	IAmb	13 55 08.1	
	comp=Z,6.7nm,1.4s						
TOLK	**Toolik Lake Re**	**69.79**	**15**	P	**P**	**13 55 07.9**	**+0.6**
TOLK				IAmb	IAmb	13 55 13.7	
	comp=Z,9.0nm,1.2s						
J14K	**Nanvaranak Lak**	**70.72**	**24**	P	**P**	**13 55 13.2**	**+0.3**
G24K	**Hadweenzic Riv**	**71.86**	**15**	P	**P**	**13 55 20.1**	**+0.3**
G24K				IAmb	IAmb	13 55 22.1	
	comp=Z,7.1nm,1.4s						
PPLA	**Purkeypile**	**73.92**	**19**	P	**P**	**13 55 31.7**	**-0.5**
PPLA				IAmb	IAmb	13 56 11.0	
	comp=Z,13nm,1.3s						
G31M	**Satah River**	**74.01**	**10**	P	**P**	**13 55 32.5**	**+0.1**
G31M				IAmb	IAmb	13 55 55.5	
	comp=Z,4.9nm,1.2s						

IDC 05 13:58:25.7±6.5,5.00S×142.03E,h182km±67km,mb2.8/2, mbtmp3.3/4,Error ellipse: s-maj=138.4km s-min=23.4km az=102.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.80**	**332**	P	Pn	13 59 13.2	+1.0
	4.1nm,0.4s,baz=170,slow=12,SNR=8.9						
JAY				S	Sn	13 59 48.5	0.0
	22nm,0.7s,baz=280,slow=16,SNR=7.2						
WRA	**Warramunga Arr**	**16.63**	**206**	P	P	14 02 06.6	-1.3
	1.0nm,0.8s,baz=33,slow=13,SNR=6.1						
ASAR	**Alice Springs**	**20.14**	**202**	P	P	14 02 46.5	+0.5
	0.4nm,0.5s,baz=36,slow=9.5,SNR=4.4						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**86.55**	**24**	P	P	14 10 47.9	-0.1
	0.3nm,0.9s,baz=261,slow=5.9,SNR=2.5						
	0.3nm,0.9s						

*IDC **05** 13:58:49.0±1.0,52.64N×169.23W,h0km,mb3.9/14, mbtmp3.9/17,ML3.5/3,MS3.0/3,Error ellipse: s-maj=27.3km s-min=15.9km az=176.0*
*AEIC **05** 13:58:52.5±1.9,52.39N±0.07×169.04W±0.07,h21km±5km, Error ellipse: s-maj=10.6km s-min=5.5km az=162.0*
*NEIC **05** 13:58:53.6±1.1,52.44N±0.06×169.13W±0.05,h35km±2km, mb4.1/29,ML3.9/14,ML3.5(AEIC),Error ellipse: s-maj=10.4km s-min=4.6km az=172.0*
ISC 05 13:58:53.8±0.6,52.47N±0.07×169.09W±0.04,h33km, n103,σ1s13/97,mb4.1/19,MS2.9/3,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLCO	**Concord Point,**	**0.50**	**309**		**Pb**	**13 59 04.6**	**+0.3**
CLCO					**Sb**	**13 59 12.9**	**+1.4**
NIKH	**Nikolski High**	**0.52**	**16**		**Pb**	**13 59 04.8**	**+0.2**
NIKH				IAML		13 59 18.7	
	comp=N,5µm,0.5s						
NIKH	**Nikolski High**	**0.52**	**16**		**Sb**	**13 59 13.3**	**+1.2**
NIKH	**Nikolski High**	**0.52**	**16**	P	**Pb**	**13 59 04.8**	**+0.2**
NIKH	**Nikolski High**	**0.52**	**16**	S	**Sb**	**13 59 13.4**	**+1.3**
CLES	**Cleveland East**	**0.60**	**306**		**Pn**	**13 59 06.1**	**+0.1**
CLES				IAML		13 59 22.4	
	comp=N,8µm,0.3s						
CLES	**Cleveland East**	**0.60**	**306**		**Sb**	**13 59 16.7**	**+2.3**
OKSP	**Okmok Steeple**	**0.92**	**31**		**Pn**	**13 59 09.9**	**-0.5**
OKCE	**Okmok Cone E**	**1.11**	**30**		**Pn**	**13 59 13.1**	**+0.1**
OKTU	**Okmok Mt. Tuli**	**1.11**	**34**		**Pn**	**13 59 13.2**	**+0.2**
OKNC	**Okmok New Cone**	**1.15**	**30**		**Pn**	**13 59 14.0**	**+0.6**
OKNC					**Sb**	**13 59 31.3**	**+1.7**
MGOD	**Makushin Gods**	**1.88**	**44**		**Pn**	**13 59 23.5**	**-0.1**
MREP	**Makushin Rep't**	**1.94**	**46**		**Pn**	**13 59 24.7**	**+0.2**
MSW	**Makushin Switc**	**2.00**	**43**		**Pn**	**13 59 25.7**	**+0.4**
MNAT	**Makushin Natee**	**2.02**	**45**		**Pn**	**13 59 25.7**	**+0.1**
UNV	**Unalaska Valle**	**2.08**	**48**		**Pn**	**13 59 26.1**	**-0.1**
UNV				IAML		14 00 06.5	
	comp=E,575nm,0.6s						
UNV				IAML		14 00 11.2	
	comp=N,528nm,0.9s						
UNV	**Unalaska Valle**	**2.08**	**48**		**Sn**	**13 59 51.6**	**+0.7**
UNV					Lg	13 59 52.2	
AKMO	**Akutan Morgan**	**2.46**	**48**		**Pn**	**13 59 32.4**	**+0.9**
AKMO					**Sn**	**14 00 03.3**	**+2.9**
AKMO					Lg	14 00 04.1	
AKRB	**Akutan Reef Bi**	**2.46**	**46**		**Pn**	**13 59 32.4**	**+0.9**
AKRB					**Sb**	**14 00 05.1**	**-2.0**
AKRB					Lg	14 00 05.8	
ZRO	**Akutan Zero**	**2.47**	**48**		**Pn**	**13 59 32.4**	**+0.7**
LVA	**Lava Point**	**2.49**	**46**		**Pn**	**13 59 33.1**	**+1.1**
LVA				IAML		14 00 16.4	
	comp=E,790nm,0.6s						
AKBBA	**Akutan Broad B**	**2.50**	**48**		**Pn**	**13 59 33.1**	**+1.0**
AKLV	**Akutan Long Va**	**2.53**	**47**		**Pn**	**13 59 34.3**	**+1.8**
AHB	**Akutan Harbor**	**2.56**	**49**		**Pn**	**13 59 34.7**	**+1.8**
AKUT	**Akutan**	**2.59**	**49**	Pn	**Pn**	**13 59 33.5**	**+0.2**
AKUT				IAML		14 00 18.7	
	comp=N,270nm,1.1s						
AKUT				IAML		14 00 21.7	
	comp=E,405nm,0.9s						
AKUT	**Akutan**	**2.59**	**49**	P	**Pn**	**13 59 35.3**	**+2.0**
KOFP	**Korovin Flat P**	**3.08**	**268**		**Pn**	**13 59 41.5**	**+1.4**
ATKA	**Atka Island**	**3.15**	**267**		**Pn**	**13 59 41.3**	**+0.4**
ATKA	**Atka Island**	**3.15**	**267**	P	**Pn**	**13 59 41.7**	**+0.8**
ATKA	**Atka Island**	**3.15**	**267**	S	**Sn**	**14 00 19.5**	**+2.2**
GSCK	**Great Sitkin C**	**4.37**	**267**		**Pn**	**13 59 58.5**	**+0.7**
ETKA	**Kagalaska Isla**	**4.55**	**265**		**Pn**	**14 00 00.6**	**+0.4**
ADK	**Adak**	**4.71**	**266**	Pn	**Pn**	**14 00 03.0**	**+0.5**
ADK				IAML		14 01 21.4	
	comp=E,125nm,0.9s						
ADK	**Adak**	**4.71**	**266**	P	**Pn**	**14 00 03.2**	**+0.8**
ADK	**Adak**	**4.71**	**266**	S	**Sn**	**14 00 56.8**	**+0.9**
AMKA	**Amchitka**	**7.26**	**266**	Pn	**Pn**	**14 00 36.4**	**-1.1**
L14K	**Kuka Creek**	**9.55**	**19**	Pn	**Pn**	**14 01 08.9**	**+0.2**
OHAK	**Old Harbor**	**10.27**	**56**	P	**Pn**	**14 01 20.1**	**+1.5**
KDAK	**Kodiak Island**	**10.83**	**54**	Pn	**Pn**	**14 01 26.1**	**-0.1**
	comp=E,0.3nm,0.3s,baz=294,slow=13,SNR=2.1						
	comp=E,18nm,1.1s						
CNPM	**China Poot**	**12.21**	**48**	Pn	**Pn**	**14 01 46.1**	**+1.0**
SUA	**Susitna One**	**13.41**	**41**	Pn	**Pn**	**14 02 02.7**	**+1.0**
PMR	**Palmer**	**14.13**	**42**	P	**Pn**	**14 02 09.9**	**-1.4**
SCM	**Sheep Creek Mo**	**15.00**	**43**	Pn	**Pn**	**14 02 21.5**	**-1.7**
EYAK	**Cordova Ski Ar**	**15.14**	**49**	Pn	**Pn**	**14 02 22.9**	**-1.9**
EYAK				IAmb	IAmb	14 02 44.4	
	comp=Z,30nm,1.5s						
EYAK	**Cordova Ski Ar**	**15.14**	**49**	P	**Pn**	**14 02 25.2**	**+0.3**
KLU	**Klutina**	**15.44**	**45**		**Pn

PDAR	**Pinedale Array**	**40.22**	**79**	P		**P**	**14 06 28.1**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=300,slow=2.8,SNR=4.6							
	comp=Z,0.2nm,0.5s							
KSRS	**Korea Array**	**45.56**	**277**	P		**P**	**14 07 09.2**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=50,slow=8.0,SNR=4.2							
	comp=Z,0.6nm,0.5s							
TXAR	**Lajitas Array**	**52.57**	**89**	P		**P**	**14 08 05.4**	**+1.2**
TXAR	**Lajitas Array**	**52.57**	**89**	P		**P**	**14 08 06.1**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=305,slow=4.4,SNR=3.8							
	comp=Z,0.3nm,0.8s							
ARCES	**ARCESS Array B**	**57.84**	**354**	P		**P**	**14 08 41.0**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=2.1,slow=5.9,SNR=5.2							
	comp=Z,4.6nm,1.0s							
KURK	**Kurchatov**	**62.41**	**318**	P		**P**	**14 09 12.1**	**-0.9**
KURK				IAmb		IAmb	14 09 13.1	
	comp=Z,1.5nm,0.7s							
KURBB	**Kurchatov Array**	**62.52**	**318**	P		**P**	**14 09 12.8**	**-0.8**
	comp=Z,1.3nm,0.2s,baz=46,slow=7.8,SNR=2.1							
	comp=Z,1.3nm,0.2s							
BVAR	**Borovoye Array**	**63.72**	**325**	P		**P**	**14 09 21.4**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=53,slow=7.4,SNR=16							
	comp=Z,2.5nm,0.5s							
MKAR	**Makanchi Array**	**63.86**	**314**	P		**P**	**14 09 21.8**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=49,slow=8.2,SNR=4.2							
	comp=Z,0.3nm,0.5s							
ARTI	**Arti**	**64.69**	**333**	P		**P**	**14 09 27.6**	**-0.3**
FINES	**FINESS Array B**	**65.79**	**352**	P		**P**	**14 09 33.8**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=9.4,slow=7.4,SNR=3.4							
	comp=Z,1.6nm,0.7s							
NC204	**NORSAR Array S**	**66.60**	**0**	P		**P**	**14 09 40.0**	**-0.3**
NC303	**NORSAR Array S**	**66.65**	**360**	P		**P**	**14 09 39.7**	**-0.8**
NOA	**NORSAR Array B**	**66.84**	**360**	P		**P**	**14 09 39.8**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=359,slow=5.9,SNR=2.4							
	comp=Z,0.8nm,0.6s							
HFS	**Hagfors**	**67.72**	**358**	P		**P**	**14 09 46.9**	**-0.4**
	comp=Z,2.1nm,0.4s,baz=29,slow=3.4,SNR=14							
	comp=Z,2.1nm,0.4s							
AB31	**Akbulak array**	**70.44**	**328**	P		**P**	**14 10 04.0**	**-0.3**
AB31				IAmb		IAmb	14 10 05.4	
	comp=Z,1.8nm,1.0s							
ABKAR	**Akbulak array**	**70.44**	**328**	P		**P**	**14 10 03.9**	**-0.4**
AKASG	**Malin Array Be**	**76.04**	**348**	IAmb		IAmb	14 11 07.3	
	comp=Z,4.8nm,1.4s							
AKASG	**Malin Array Be**	**76.04**	**348**	P		**P**	**14 10 35.9**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=14,slow=5.6,SNR=4.3							
	comp=Z,1.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**76.76**	**283**	P		**P**	**14 10 42.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=28,slow=7.0,SNR=6.8							
	comp=Z,0.8nm,0.6s							
BURAR	**Bucovina Array**	**79.54**	**350**	P		**P**	**14 10 57.0**	**-0.1**
BURAR				IAmb		IAmb	14 10 57.7	
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**90.59**	**230**	P		**P**	**14 11 51.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=23,slow=4.1,SNR=4.3							
	comp=Z,0.2nm,0.5s							

IDC 05 13:59:10.7±2.6, 9°.73N×126°.27E, h0km, mb3.3/3, mbtmp3.3/3, MS2.4/1, Error ellipse: s-maj=253.4km s-min=26.3km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.73**	**195**	LR	LR	14 01 18.5	
	comp=Z,68nm,20.3s,baz=344,slow=47						
WRA	**Warramunga Arr**	**30.54**	**165**	P		14 05 25.9	-0.2
	0.5nm,0.9s,baz=344,slow=8.1,SNR=2.5						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**34.02**	**167**	P		14 05 56.8	+0.1
	0.1nm,0.4s,baz=345,slow=7.2,SNR=4.3						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**52.45**	**323**	P		14 08 25.8	+0.5
	0.4nm,0.6s,baz=127,slow=9.3,SNR=4.2						
	0.4nm,0.6s						
FINES	**FINESS Array B**	**86.36**	**332**	P		14 11 54.0	-0.6
	7.9nm,1.1s,baz=60,slow=7.7,SNR=3.4						

DJA 05 14:42:15.8±0.5, 3°N±5°×126°7E±°, h10km, M3.8/6, mb4.2/2, MLv3.6/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.81**	**282**	P	Pn	14 42 46.5	-0.6
SANI	**Sanana**	**5.47**	**194**	P	Pn	14 43 36.5	-1.0

WEL 05 14:50:38.4±0.8, 34°S±9°×17°9W±2°, h33km, M3.8/11, mB4.5/7, ML4.1/14, MLv4.0/11, Mw(mB)3.6/7, Error ellipse: s-maj=29.9km s-min=4.0km az=112.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.44**	**9**	P	Pn	14 51 41.1	-2.2
GLKZ				S	Sn	14 52 33.3	-0.6
MXZ	**Matakaoa Point**	**4.58**	**211**	P	Pn	14 51 46.3	+1.0
MXZ				S	Sn	14 52 37.4	0.0
WMGZ	**Waiomatatini S**	**4.75**	**208**	P	Pn	14 51 47.7	0.0
WMGZ				S	Sn	14 52 43.0	+1.2
PKGZ	**Pakihiroa**	**4.93**	**211**	P	Pn	14 51 50.0	-0.2
PKGZ				S	Sn	14 52 46.7	+0.5
HAZ	**Te Kaha**	**4.97**	**214**	P	Pn	14 51 52.1	+1.3
HAZ				S	Sn	14 52 49.2	+2.1
PUZ	**Puketiti**	**5.04**	**208**	P	Pn	14 51 52.7	+1.1
PUZ				S	Sn	14 52 49.8	+1.1
RUGZ	**Raukumara Rang**	**5.19**	**213**	P	Pn	14 51 54.7	+0.9
RUGZ				S	Sn	14 52 53.9	+1.2
TWGZ	**Tauwhareparae**	**5.24**	**210**	P	Pn	14 51 56.3	+1.9
TWGZ				S	Sn	14 52 54.6	+0.9
CNGZ	**Carnagh Statio**	**5.42**	**206**	P	Pn	14 51 57.2	+0.4
KUZ	**Kuaotunu**	**5.48**	**234**	P	Pn	14 52 01.4	+3.7
TKGZ	**Te Karaka**	**5.51**	**209**	P	Pn	14 51 59.2	+1.0
TKGZ				S	Sn	14 52 59.8	-0.7
MWZ	**Matawai**	**5.56**	**212**	P	Pn	14 51 58.8	-0.1
MWZ				S	Sn	14 53 00.3	-1.4
URZ	**Urewera**	**5.69**	**215**	P	Pn	14 52 01.4	+0.8
URZ				S	Sn	14 53 04.1	-0.7
RAGZ	**Rawiri**	**5.75**	**212**	P	Pn	14 52 02.5	+1.0
RAGZ				S	Sn	14 53 06.0	-0.2
RIGZ	**Rimuhau**	**5.78**	**208**	P	Pn	14 52 02.4	+0.5
PRGZ	**Paritu Road**	**5.92**	**206**	S	Sn	14 53 07.9	-2.6
SNGZ	**Shannon Statio**	**6.02**	**211**	P	Pn	14 52 05.5	+0.3
SNGZ				S	Sn	14 53 12.5	-0.4
MUGZ	**Murupara**	**6.03**	**216**	P	Pn	14 52 05.6	+0.4
MUGZ				S	Sn	14 53 11.0	-2.1
RAHZ	**Arahi**	**6.24**	**212**	P	Pn	14 52 08.5	+0.3
RAHZ				S	Sn	14 53 18.3	0.0
OUZ	**Omahuta**	**6.52**	**254**	P	Pn	14 52 18.0	+6.0

*SKO **05** 15:40:31.3, 40°.54N×20°.82E, h16km, ML2.4*
*ATH **05** 15:40:31.4, 40°.50N×20°.96E, h6km±2km, ML2.5/13, Manual Solution by A.Andreou First location: 2019/11/05 15:41:45, This location: 2019/11/05 15:47:43 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

ISC 05 15:40:29.8±1.3, 40°.52N±0°.03×20°.86E±0°.04, h5km±10km, n24, σ0°.94/32, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.17**	**125**	P	**Pg**	**15 40 34.0**	**+0.7**
NEST				S	**Sg**	**15 40 36.7**	**+1.2**
PENT	**Pentalofos**	**0.38**	**147**	P	**Pg**	**15 40 37.2**	**0.0**
PENT				S	**Sg**	**15 40 42.8**	**+0.6**
OHR	**Ohrid**	**0.60**	**355**	*i* Pg	**Pb**	**15 40 42.0**	**-0.7**
OHR				*i* Sg	**Sb**	**15 40 51.8**	**+0.2**
OHR				*e*Lg	Lg	15 40 52.1	
	comp=E,201nm,0.5s						
OHR				*e*Lg	Lg	15 40 52.6	
	comp=N,59nm,0.5s						
KZN	**Kozani**	**0.72**	**106**	P	**Pb**	**15 40 44.3**	**-0.6**
KZN				S	**Sg**	**15 40 52.6**	**-0.4**
IGT	**Igoumenitsa**	**1.06**	**203**	*i* Pg	**Pg**	**15 40 49.0**	**-1.2**
IGT				*i* Sg	**Sn**	**15 41 07.0**	**+0.5**
KEK	**Kerkira**	**1.14**	**226**	P	**Pn**	**15 40 54.3**	**+1.9**
TETR	**Tetrakomo, Epi**	**1.21**	**165**	P	**Pg**	**15 40 52.6**	**-0.4**
TETR				S	**Sb**	**15 41 09.0**	**-0.2**
THL	**Klokotos Trika**	**1.30**	**137**	P	**Pg**	**15 40 54.3**	**-0.3**
THL				S	**Sn**	**15 41 11.6**	**-0.7**
LIT	**Litokhoron**	**1.31**	**108**	*i* Pg	**Pg**	**15 40 54.8**	**-0.1**
LIT				*i* Sg	**Sn**	**15 41 14.9**	**+2.3**
LIT	**Litokhoron**	**1.31**	**108**	P	**Pg**	**15 40 54.6**	**-0.3**
VAY	**Valandovo**	**1.52**	**58**	*i* Pn	**Pg**	**15 40 58.6**	**-0.4**
KNT	**Kendrikon**	**1.67**	**67**	*i* Pn	**Pn**	**15 40 59.9**	**+0.2**
KNT	**Kendrikon**	**1.67**	**67**	P	**Pb**	**15 41 00.2**	**-0.8**
TSLK	**Tsoukalades, L**	**1.70**	**185**	P	**Pg**	**15 41 02.5**	**+0.2**
EVR	**Evrytania**	**1.75**	**155**	P	**Pn**	**15 41 01.0**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.79**	**146**	P	**Pb**	**15 41 02.0**	**-1.1**
AGG	**Agios Georgios**	**1.87**	**142**	P	**Pn**	**15 41 02.6**	**+0.1**
SOH	**Sokhos**	**1.92**	**80**	*i* Pn	**Pg**	**15 41 05.6**	**-0.9**
PVO	**Paravola**	**1.96**	**165**	P	**Pb**	**15 41 05.2**	**-0.8**
PLG	**Polygyros**	**1.98**	**93**	P	**Pn**	**15 41 04.5**	**+0.6**
FSK	**Fiskardo**	**2.07**	**187**	P	**Pb**	**15 41 06.2**	**-1.5**
ANX	**Ano Chora**	**2.09**	**157**	P	**Pb**	**15 41 06.8**	**-1.3**
SRS	**Serrai**	**2.16**	**73**	P	**Pb**	**15 41 08.1**	**-1.2**
NEO	**Neokhori**	**2.18**	**123**	P	**Pn**	**15 41 07.6**	**+0.8**

*BJI **05** 15:41:26.1, 42°.19N×143°.20E, h67km, mB4.9/12, mb4.5/42, Ms4.9/1, Ms7 4.6/1*
*MOS **05** 15:41:26.9±0.9, 42°.26N×143°.08E, h68km, mb4.8/25, Error ellipse: s-maj=7.8km s-min=5.4km az=92.6*
*SKHL **05** 15:41:27.2±0.7, 42°.10N×143°.10E, h68km±7km, mb5.8/4*
*NEIC **05** 15:41:28.0±1.2, 42°.34N±0°.05×143°.1E±0°.1, h60km±5km, mb4.7/48, Error ellipse: s-maj=12.7km s-min=7.4km az=99.0*
*JMA **05** 15:41:28.8±0.1, 42°.4N±0°.5×143°.1E±0°.5, h52km±1km, MD4.2/40, MV4.5/40, HIDAKA MOUNTAINS REGION*
JMA Felt II J1 at HIDAKA MOUNTAINS REGION .
*IDC **05** 15:41:29.0±1.8, 42°.35N×143°.03E, h65km±15km, mb4.0/26, mbtmp4.3/33, MS3.1/14, Error ellipse: s-maj=14.5km s-min=11.2km az=111.0*
*NIED **05** 15:41:28.8, 42°.35N×143°.07E, h52km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}2.14; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-1.40; $M_{r\theta}$0.61; $M_{\theta\phi}$-0.82; $M_{\phi r}$1.63; Fault plane solution: $M_0$2.68000×10¹⁵ NP1: ϕ_s221.00000°, δ26.00000°, λ103.00000°. NP2: ϕ_s26.00000°, δ65.00000°, λ84.00000°.*

ISC 05 15:41:28.0±0.5, 42°.32N±0°.04×143°.08E±0°.03, h61km±4km, n238, σ1°§41/234, mb4.5/69, 16C-19D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTHR	**Tokachihiroo**	**0.16**	**100**	*i* P	**Pn**	**15 41 37.3**	**-0.1**
JTHR				S	**Sn**	**15 41 43.9**	**-0.2**
JTHR	**Tokachihiroo**	**0.16**	**100**	A	A	15 41 37.3	
	comp=N,17nm,0.2s,comp=E,23nm,0.4s						
JNBK	**Urakawa-nobuka**	**0.25**	**261**	*i* P	**Pn**	**15 41 37.6**	**-0.2**
JNBK				S	**Sn**	**15 41 44.8**	**-0.1**
JNBK	**Urakawa-nobuka**	**0.25**	**261**	A	A	15 41 37.6	
	comp=N,161nm,0.3s,comp=E,97nm,0.6s						
JEM	**Erimo**	**0.31**	**170**	*i* P	**Pn**	**15 41 38.6**	**+0.4**
JEM				S	**Sn**	**15 41 46.0**	**+0.4**
JEM	**Erimo**	**0.31**	**170**	A	A	15 41 38.6	
	comp=N,31nm,1.2s,comp=E,37nm,1.0s						
ERM	**Erimo**	**0.31**	**170**		**Pn**	**15 41 38.6**	**+0.4**
ERM	**Erimo**	**0.31**	**170**	PN	**Pn**	**15 41 38.6**	**+0.4**
JCH	**Churui**	**0.36**	**35**	*i* P	**Pn**	**15 41 38.5**	**-0.1**
JCH				S	**Sn**	**15 41 46.1**	**-0.3**
JCH	**Churui**	**0.36**	**35**	A	A	15 41 38.5	
	comp=N,24nm,0.6s,comp=E,14nm,0.7s						
JSHD	**Hidakashinhida**	**0.47**	**281**	⇓*i* P	**Pn**	**15 41 39.9**	**+0.3**
JSHD	**Hidakashinhida**	**0.47**	**281**	A	A	15 41 39.9	
	comp=N,47nm,1.2s,comp=E,66nm,1.9s						
JBT2	**Biratori 2**	**0.70**	**311**	⇓*i* P	**Pn**	**15 41 42.6**	**+0.4**
JBT2				⇓S	**Sn**	**15 41 54.1**	**+1.3**
JBT2	**Biratori 2**	**0.70**	**311**	A	A	15 41 42.6	
	comp=N,15nm,1.7s,comp=E,22nm,0.6s						
JOB	**Onbets**	**0.81**	**43**	*i* P	**Pn**	**15 41 44.6**	**+1.1**
JOB				S	**Sn**	**15 41 57.0**	**+2.0**
JOB	**Onbets**	**0.81**	**43**	A	A	15 41 44.6	
	comp=N,27nm,0.8s,comp=E,18nm,0.8s						
JIAM	**Iburiatsuma**	**0.91**	**290**	⇓*i* P	**Pn**	**15 41 46.5**	**+1.6**
JIAM	**Iburiatsuma**	**0.91**	**290**	A	A	15 41 46.5	
	comp=N,45nm,0.4s,comp=E,42nm,0.3s						
JFR	**Furan**	**0.92**	**337**	⇓*i* P	**Pn**	**15 41 44.2**	**-0.7**
JFR	**Furan**	**0.92**	**337**	A	A	15 41 44.2	
	comp=N,8.0nm,0.7s,comp=E,8.0nm,1.1s						
JAR	**Ashorobuto**	**1.10**	**27**	*i* P	**Pn**	**15 41 47.6**	**+0.3**
JAR				S	**Sn**	**15 42 01.7**	**0.0**
JAR	**Ashorobuto**	**1.10**	**27**	A	A	15 41 47.6	
	comp=N,9.0nm,0.3s,comp=E,19nm,0.3s						
JEW	**Eniwo**	**1.31**	**294**	⇓*i* P	**Pn**	**15 41 51.2**	**+1.0**
JEW				⇓*e*S	**Sn**	**15 42 08.0**	**+1.3**
JEW	**Eniwo**	**1.31**	**294**	A	A	15 41 51.2	
	comp=N,11nm,1.9s,comp=E,18nm,1.6s						
JAB	**Ashibetsu**	**1.34**	**332**	⇓*i* P	**Pn**	**15 41 51.6**	**+1.1**
JAB	**Ashibetsu**	**1.34**	**332**	A	A	15 41 51.6	
	comp=N,5.0nm,1.0s,comp=E,6.0nm,1.2s						
JAK	**Akkeshi**	**1.37**	**60**	⇓*i* P	**Pn**	**15 41 51.2**	**+0.3**
JAK				⇓*e*S	**Sn**	**15 42 08.9**	**+0.8**
JAK	**Akkeshi**	**1.37**	**60**	A	A	15 41 51.2	
	comp=N,17nm,0.9s,comp=E,13nm,1.0s						
AKK	**Akkeshi**	**1.47**	**61**	*e*P	**Pn**	**15 41 52.6**	**+0.3**
AKK				*e*S	**Sn**	**15 42 11.1**	**+0.5**
JNB	**Noboribetsu**	**1.52**	**276**	A	A	15 41 54.0	
	comp=N,3.0nm,0.3s,comp=E,4.0nm,3.4s						
JISS	**Ishikarishitsu**	**1.55**	**308**	A	A	15 41 54.3	
	comp=N,12nm,0.5s,comp=E,14nm,0.6s						
JKB	**Kayabe**	**1.58**	**255**	A	A	15 41 55.1	
	comp=N,7.0nm,1.7s,comp=E,9.0nm,0.9s						
JAHD	**Aomorihigashid**	**1.68**	**232**	A	A	15 41 56.5	
	comp=N,16nm,0.5s,comp=E,14nm,0.7s						
JMP	**Maruseppu**	**1.70**	**7**	A	A	15 41 56.3	
	comp=N,4.0nm,2.0s,comp=E,4.0nm,2.4s						
JHR	**Hokuryu**	**1.73**	**325**	A	A	15 41 56.9	
	comp=N,10.0nm,0.9s,comp=E,13nm,0.9s						
JTKR	**Abashiri--Toko**	**1.76**	**20**	A	A	15 41 57.2	
	comp=N,2.0nm,2.3s,comp=E,3.0nm,2.4s						
JKA	**Kamikawa-asahi**	**1.83**	**349**		**Pn**	**15 41 57.4**	**+0.3**
JKA	**Kamikawa-asahi**	**1.83**	**349**		**Sn**	**15 42 14.3**	**-4.8**
JKA	**Kamikawa-asahi**	**1.83**	**349**	*e*P	**Pn**	**15 41 59.3**	**+2.2**
ASAJ	**Asahikawa**	**1.83**	**349**	P	**Pn**	**15 41 59.3**	**+2.2**
	comp=E,550nm,0.3s,baz=201,slow=14,SNR=1258						
ASAJ				S	**Sn**	**15 42 14.3**	**-4.9**
	comp=E,394nm,0.5s,baz=19,slow=23,SNR=5.4						
ASAJ				LR	LR	15 42 52.1	
	comp=E,283nm,21.7s,baz=192,slow=46						
JNSB	**Nemuroshibetsu**	**2.02**	**43**	A	A	15 42 01.1	
	comp=N,6.0nm,1.0s,comp=E,5.0nm,1.1s						
JTM	**Tenmabayashi**	**2.15**	**225**		**Pn**	**15 42 01.9**	**+0.4**
NMR	**Nemuro--Hokkai**	**2.21**	**61**	⇑*i* PN	**Pn**	**15 42 01.8**	**-0.4**
NMR				*i* S	**Sn**	**15 42 27.6**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.21**	**61**	*i* P	**Pn**	**15 42 01.8**	**-0.4**
NMR				*i* S	**Sn**	**15 42 27.8**	**-0.6**
GLVR	**Golovnino**	**2.28**	**51**	⇓*i* PN	**Pn**	**15 42 04.3**	**+1.1**
GLVR				*e*S	**Sn**	**15 42 31.8**	**+1.6**
GLVR				pmax	pmax		
	comp=N,465nm,0.2s						
GLVR				pmax	pmax		
	comp=E,327nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,927nm,0.2s						
GLVR				smax	smax		
	comp=E,3μm,0.2s						
GLVR				smax	smax		
	comp=N,7μm,0.3s						
GLVR	**Golovnino**	**2.28**	**51**	*i* P	**Pn**	**15 42 04.3**	**+1.1**
GLVR				AMB	AMB	15 42 07.2	
	comp=N,930nm,0.2s						
GLVR				*e*S	**Sn**	**15 42 31.8**	**+1.6**
GLVR				A	A	15 42 33.7	
	comp=N,7μm,0.2s						
GLVR				A	A	15 42 33.7	
	comp=N,3μm,0.2s						
JKEN	**Kujiedanarisaw**	**2.35**	**207**	A	A	15 42 06.3	
	comp=N,4.0nm,0.7s,comp=E,4.0nm,0.3s						
JSI2	**Shiura 2**	**2.37**	**239**	A	A	15 42 06.3	
	comp=N,4.0nm,1.4s,comp=E,4.0nm,1.4s						
RUSJ	**Misakicho**	**2.38**	**41**	⇓*i* PN	**Pn**	**15 42 06.5**	**+1.9**
RUSJ				*i* S	**Sn**	**15 42 37.1**	**+4.4**
YUK	**Yuzh-Kuril'sk**	**2.66**	**49**	*c* PN	**Pn**	**15 42 09.5**	**+1.1**
YUK				*i* S	**Sn**	**15 42 40.2**	**+0.9**
YUK				pmax	pmax		
	comp=Z,770nm,0.2s						
YUK				pmax	pmax		
	comp=E,203nm,0.1s						
YUK				pmax	pmax		
	comp=N,403nm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.4s						
YUK				smax	smax		
	comp=E,2μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.66**	**49**	*i* P	**Pn**	**15 42 10.1**	**+1.7**
YUK				AMB	AMB	15 42 11.5	
	comp=E,700nm,0.2s						
YUK				*i* S	**Sn**	**15 42 40.3**	**+0.9**
YUK				A	A	15 42 44.2	
	comp=E,3μm,0.4s						
YUK				A	A	15 42 44.2	
	comp=E,3μm,0.4s						
SHO	**Shikotan**	**3.15**	**59**	*e*P	Pn	15 42 22.3	+7.2
SHO				AMB	AMB	15 42 24.1	
	comp=E,170nm,0.4s						
SHO				*e*S	**Sn**	**15 42 58.0**	**+6.5**
SHO				A	A	15 42 59.0	
	comp=E,900nm,0.3s						
SHO				A	A	15 42 59.0	
	comp=E,1μm,0.3s						
KUR	**Kuril'sk**	**4.53**	**48**	*e*PN	**Pn**	**15 42 36.1**	**+2.2**
KUR				*e*S	**Sn**	**15 43 28.3**	**+3.2**
KUR				pmax	pmax		
	comp=Z,119nm,0.3s						
KUR				pmax	pmax		
	comp=N,33nm,0.2s						
KUR				pmax	pmax		
	comp=E,49nm,0.2s						
KUR				smax	smax		
	comp=E,304nm,0.2s						
KUR	**Kuril'sk**	**4.53**	**48**	*e*P	**Pn**	**15 42 35.0**	**+1.1**
KUR				AMB	AMB	15 42 37.2	
	comp=E,160nm,0.4s						
KUR				*e*S	**Sn**	**15 43 27.2**	**+2.1**
KUR				A	A	15 43 29.5	
	comp=E,220nm,0.4s						
KUR				A	A	15 43 29.5	
	comp=E,230nm,0.4s						
YSS	**Yuzhno-Sakhali**	**4.64**	**357**		**Pn**	**15 42 35.6**	**+0.2**
YSS	**Yuzhno-Sakhali**	**4.64**	**357**	*e*PN	**Pn**	**15 42 37.8**	**+2.4**
YSS				*e*S	**Sn**	**15 43 30.4**	**+2.5**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				smax	smax		
	comp=N,30nm,0.7s						
YSS				smax	smax		
	comp=E,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	**Yuzhno-Sakhali**	**4.64**	**357**	*e*P	**Pn**	**15 42 37.9**	**+2.5**
YSS				*e*S	**Sn**	**15 43 31.8**	**+3.9**
JMM	**Marumori**	**4.78**	**202**		**Pn**	**15 42 36.4**	**-1.1**
KHLM	**Kholmsk**	**4.79**	**352**	*e*P	**Pn**	**15 42 41.1**	**+3.6**
TEY	**Ternei**	**5.43**	**302**	*e*PN	**Pn**	**15 42 47.6**	**+1.4**
TEY	**Ternei**	**5.43**	**302**	*e*P	**Pn**	**15 42 47.6**	**+1.4**
JSD	**Sado**	**5.65**	**222**		**Pn**	**15 42 49.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**6.89**	**215**		**Pn**	**15 43 06.5**	**+0.2**
MAJO	**Matsushiro**	**6.89**	**215**		**Pn**	**15 43 06.6**	**+0.2**
MAJO	**Matsushiro**	**6.89**	**215**	*i* PN	**Pn**	**15 43 06.7**	**+0.3**
MJAR	**Matsushiro Arr**	**6.89**	**215**		**Pn**	**15 43 06.3**	**-0.1**
MJAR	**Matsushiro Arr**	**6.89**	**215**	P	**Pn**	**15 43 06.9**	**+0.5**
	comp=Z,5.0nm,0.5s,baz=30,slow=14,SNR=20						
MJAR				LR	LR	15 46 44.1	
	comp=Z,37nm,18.4s,baz=44,slow=46						
JGF	**Kuroka**	**8.05**	**215**		**Pn**	**15 43 22.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**8.31**	**287**	P	**Pn**	**15 43 27.5**	**+1.8**
	comp=Z,5.2nm,0.7s,baz=83,slow=14,SNR=6.2						
INU	**Inuyama**	**8.41**	**216**		**Pn**	**15 43 27.9**	**+0.7**
TYV	**Tymovskoe**	**8.55**	**358**	*e*PN	**Pn**	**15 43 25.3**	**-3.6**
TYV				pmax	pmax		
	comp=Z,11nm,1.2s						
TYV				pmax	pmax		
	comp=Z,200nm,4.3s						
TYV	**Tymovskoe**	**8.55**	**358**	*e*P	**Pn**	**15 43 32.4**	**+3.5**
JHJ	**Hachijo jima 2**	**9.55**	**197**	P	**Pn**	**15 43 40.5**	**-2.2**
	comp=Z,65nm,0.5s,baz=339,slow=20,SNR=10						
JHJ				S	Sn	15 45 19.1	-9.3
	comp=Z,59nm,0.3s,baz=139,slow=23,SNR=8.5						
GRNR	**Gornyy**	**9.61**	**334**	⇓*i* PN	**Pn**	**15 43 46.8**	**+3.3**
GRNR				pmax	pmax		
	comp=N,20nm,0.7s						
GRNR				pmax	pmax		
	comp=E,10.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR	**Gornyy**	**9.61**	**334**	*e*P	**Pn**	**15 43 46.8**	**+3.3**
NKL	**Nikolayevsk**	**10.96**	**352**	*e*P	**Pn**	**15 44 04.6**	**+2.9**
BNX	**BinXian**	**11.79**	**292**	⇑P	**Pn**	**15 44 15.6**	**+2.4**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SKR	**Severo-Kuril's**	**12.26**	**43**	*i* PN	**Pn**	**15 44 20.2**	**+0.7**
SKR	**Severo-Kuril's**	**12.26**	**43**	*e*P	**Pn**	**15 44 20.0**	**+0.5**
KSRS	**Korea Array**	**12.61**	**252**	P	**Pn**	**15 44 25.8**	**+1.3**
	comp=Z,3.5nm,0.9s,baz=68,slow=12,SNR=8.5						
PAU	**Pauzhetka**	**13.09**	**41**	*e*P	**Pn**	**15 44 30.0**	**-

SONM Songino Array 26.31 295 P **P** **15 46 58.3 +0.4**
comp=Z,4.8nm,0.7s,baz=83,slow=8.7,SNR=20
SONM LR LR 15 57 42.8
comp=Z,61nm,19.9s,baz=25,slow=37
comp=Z,4.8nm,0.7s
XAN Xi'an 27.95 264 *e*P **P** **15 47 15.4 +2.8**
H11N2 WAKE ISLAND Hy 30.20 131 T T 16 19 08.3
baz=324,slow=76,SNR=262
H11N1 WAKE ISLAND Hy 30.21 131 T T 16 19 09.3
baz=324,slow=76,SNR=280
H11N3 WAKE ISLAND Hy 30.22 131 T T 16 19 08.9
baz=324,slow=76,SNR=336
LZH Lanzhou 30.83 272 *e*P **P** **15 47 39.5 +1.2**
LZH pP pP 15 47 56.8 +3.5
LZH pmax pmax
comp=Z,15nm,1.0s
H11S1 WAKE ISLAND Hy 31.08 133 T T 16 20 14.6
baz=326,slow=76,SNR=367
H11S3 WAKE ISLAND Hy 31.08 133 T T 16 20 12.5
baz=326,slow=76,SNR=313
H11S2 WAKE ISLAND Hy 31.10 133 T T 16 20 13.4
baz=326,slow=76,SNR=329
GTA Gaotai 32.59 280 P **P** **15 47 54.6 +0.9**
GTA pmax pmax
comp=Z,12nm,0.7s
PZH PanZhiHua 37.18 258 P **P** **15 48 34.6 +1.3**
GOMU GeErMu 37.46 277 P **P** **15 48 36.3 +0.4**
GOMU pP pP 15 48 50.5 -0.8
GOMU S S **15 54 19.9 -0.5**
GOMU pmax pmax
comp=Z,5.0nm,0.8s
DGZ Jazzator, Alta 38.57 301 *i* P **P** **15 48 45.5 +0.7**
DGZ pmax pmax
comp=Z,11nm,1.0s
SLVN Son La 38.87 250 **P** **15 48 47.7 +0.2**
SLVN IAmb IAmb 15 48 50.2
comp=Z,8.7nm,1.1s
C18K Utukok River 39.00 29 P **P** **15 48 47.5 -0.5**
C18K IAmb IAmb 15 49 19.9
comp=Z,16nm,1.4s
NRIK Noril'sk 39.09 332 P **P** **15 48 48.3 -0.4**
comp=Z,2.2nm,0.4s,baz=76,slow=12,SNR=4.4
NRIK LR LR 16 05 05.9
comp=Z,51nm,21.9s,baz=99,slow=36
comp=Z,2.2nm,0.4s
NRIK Noril'sk 39.09 332 P **P** **15 48 48.3 -0.4**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
ZAA0 Zalesovo Array 39.50 308 **P** **15 48 52.0 -0.3**
ZAA0 IAmb IAmb 15 48 53.3
comp=Z,7.6nm,0.7s
ZALV Zalesovo Beam 39.50 308 **P** **15 48 51.9 -0.4**
ZALV **PcP** **15 50 59.8 +0.9**
ZALV Zalesovo Beam 39.50 308 P **P** **15 48 52.6 +0.3**
comp=Z,5.6nm,0.5s,baz=87,slow=7.6,SNR=33
ZALV PcP **PcP** **15 50 59.7 +0.9**
comp=Z,2.4nm,0.6s,baz=93,slow=2.6,SNR=7.9
ZALV LR LR 16 06 02.1
comp=Z,35nm,20.6s,baz=108,slow=37
comp=Z,5.6nm,0.5s
WMQ Urumqi 39.85 292 *e*P **P** **15 48 56.6 +1.2**
SYI Shuyak Island 42.39 44 P **P** **15 49 15.2 -0.8**
MK31 Makanchi Array 42.60 298 *ce*P **P** **15 49 18.4 +0.5**
MKAR Makanchi Array 42.60 298 **P** **15 49 17.8 -0.2**
MKAR Makanchi Array 42.60 298 P **P** **15 49 18.3 +0.4**
comp=Z,4.4nm,0.6s,baz=82,slow=10,SNR=48
MKAR PcP **PcP** **15 51 09.7 +0.5**
comp=Z,1.2nm,0.8s,baz=65,slow=5.1,SNR=4.1
MKAR LR LR 16 06 44.8
comp=Z,18nm,19.6s,baz=128,slow=36
comp=Z,4.4nm,0.6s
MKAR Makanchi Array 42.60 298 *ce*P **P** **15 49 18.2 +0.3**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 42.60 298 *e*P **P** **15 49 18.2 +0.3**
MAKZ Makanchi 42.80 298 **P** **15 49 19.6 0.0**
MAKZ IAmb IAmb 15 49 20.7
comp=Z,6.0nm,0.7s
MAKZ Makanchi 42.80 298 P **P** **15 49 19.6 0.0**
MAKZ pmax pmax
comp=Z,6.0nm,0.7s
KURK Kurchatov 43.86 304 **P** **15 49 27.9 0.0**
KURK IAmb IAmb 15 49 29.3
comp=Z,18nm,0.9s
KURK Kurchatov 43.86 304 **PcP** **15 51 14.0 +0.8**
KURK Kurchatov 43.86 304 *ce*P **P** **15 49 28.2 +0.3**
KURK pmax pmax
comp=Z,15nm,0.8s
KURK Kurchatov 43.86 304 *e*P **P** **15 49 28.2 +0.3**
KURBB Kurchatov Arra 43.94 304 P **P** **15 49 28.7 +0.2**
comp=Z,14nm,0.8s,baz=76,slow=8.8,SNR=100
KURBB PcP **PcP** **15 51 14.0 +0.6**
comp=Z,1.0nm,0.6s,baz=74,slow=3.6,SNR=3.7
comp=Z,14nm,0.8s
COLA College 43.97 35 *i* P **P** **15 49 28.8 +0.2**
COLA pmax pmax
comp=Z,4.0nm,0.8s
CMAR Chiang Mai Arr 44.25 251 P **P** **15 49 32.5 +1.0**
comp=Z,1.2nm,0.6s,baz=45,slow=7.5,SNR=13
comp=Z,1.2nm,0.6s
IL31 44.39 35 P **P** **15 49 31.7 -0.2**
ILAR Eielson Array 44.39 35 P **P** **15 49 32.4 +0.4**
comp=Z,1.6nm,0.9s,baz=259,slow=5.3,SNR=15
comp=Z,1.6nm,0.9s
TARG Taragay, Kyrgy 47.39 293 P **P** **15 49 57.1 +0.7**
TARG IAmb IAmb 15 50 05.7
comp=Z,20nm,1.4s
TARG Taragay, Kyrgy 47.39 293 P **P** **15 49 57.2 +0.7**
TARG pmax pmax
comp=Z,20nm,1.4s
BVAR Borovoye Array 48.10 309 P **P** **15 50 01.7 +0.4**
comp=Z,5.4nm,0.3s,baz=78,slow=9.5,SNR=56
BVAR PcP **PcP** **15 51 29.0 +1.0**
comp=Z,3.1nm,0.5s,baz=87,slow=2.9,SNR=6.6
BVAR LR LR 16 11 29.0
comp=Z,24nm,20.4s,baz=53,slow=38
comp=Z,5.4nm,0.3s
BORK Borovoye 48.13 309 *ce*P **P** **15 50 02.2 +0.7**
BORK pmax pmax
comp=Z,7.0nm,1.3s
BOOM Boomskoye usch 48.35 294 P **P** **15 50 03.9 +0.3**
BOOM IAmb IAmb 15 50 05.0
comp=Z,7.2nm,0.7s
BOOM Boomskoye usch 48.35 294 P **P** **15 50 03.9 +0.3**
BOOM pmax pmax
comp=Z,7.0nm,0.7s
I30M Mount Dempster 48.72 34 IAmb IAmb 15 50 08.5
comp=Z,4.9nm,0.8s
INK Inuvik 49.12 29 P **P** **15 50 09.2 +0.3**
INK IAmb IAmb 15 50 19.5
comp=Z,8.9nm,1.5s
INK Inuvik 49.12 29 P **P** **15 50 09.2 +0.3**
INK pmax pmax
comp=Z,9.0nm,1.5s
AAK Ala-Archa 49.27 295 P **P** **15 50 11.1 +0.5**
AAK IAmb IAmb 15 50 11.4
comp=Z,2.4nm,0.5s
AAK Ala-Archa 49.27 295 LR LR 16 11 21.8
comp=Z,32nm,18.0s,baz=66,slow=36
AAK Ala-Archa 49.27 295 P **P** **15 50 11.1 +0.5**
AAK pmax pmax
comp=Z,2.0nm,0.5s
AAK Ala-Archa 49.27 295 *e*P **P** **15 50 11.1 +0.5**
KKAR Karatay Array 51.73 297 P **P** **15 50 28.5 -0.5**
KKAR Karatay Array 51.73 297 P **P** **15 50 28.5 -0.5**
SVE Sverdlovsk 52.12 316 *e*P **P** **15 50 32.2 +0.5**
SVE pmax pmax
comp=Z,19nm,0.6s
ARTI Arti 53.44 316 P **P** **15 50 40.8 -0.6**
ARTI Arti 53.44 316 LR LR 16 15 26.4
comp=Z,30nm,21.1s,baz=170,slow=38
ARTI Arti 53.44 316 *c i*P **P** **15 50 41.4 0.0**
ARTI *PP **pP** **15 50 58.3 +0.6**
ARTI 15 51 45.4
ARTI 15 52 39.4
ARTI S **S** **15 58 11.0 +2.0**
ARTI SS **SS** **16 01 47.5 -1.7**
ARTI pmax pmax
comp=Z,18nm,0.7s
SPITS Spitsbergen Ar 55.60 348 P **P** **15 50 56.4 -0.3**
comp=Z,10.0nm,1.0s,baz=69,slow=9.9,SNR=7.7
comp=Z,10.0nm,1.0s
AB31 Akbulak array 55.61 308 IAmb IAmb 15 50 58.3
comp=Z,12nm,1.3s
ABKAR Akbulak array 55.61 308 P **P** **15 50 57.4 +0.2**
KIRV Kirov 56.87 321 *ce*P **P** **15 51 06.4 +0.4**

RES Resolute Bay 57.17 16 P **P** **15 51 07.5 -0.4**
RES IAmb IAmb 15 51 08.2
comp=Z,4.4nm,0.6s
RES Resolute Bay 57.17 16 P **P** **15 51 07.5 -0.4**
RES pmax pmax
comp=Z,4.0nm,0.6s
LVZ Lovozero 57.85 335 *ce*P **P** **15 51 12.3 -0.5**
LVZ pmax pmax
comp=Z,96nm,2.5s
ARCES ARCESS Array B 59.52 339 P **P** **15 51 24.7 +0.3**
comp=Z,4.1nm,0.9s,baz=46,slow=8.7,SNR=8.4
comp=Z,4.1nm,0.9s
ARCES ARCESS Array B 59.52 339 P **P** **15 51 24.7 +0.3**
ARCES pmax pmax
comp=Z,29nm,1.5s
KLMR Klimovskoe 60.01 327 *e*P **P** **15 51 25.9 -1.9**
KLMR pmax pmax
comp=Z,21nm,1.4s
BELG Belogornoye 60.87 316 *i* P **P** **15 51 33.3 -0.5**
BELG pmax pmax
comp=Z,2.0nm,0.7s
WB0 Warramunga Arr 62.30 189 P **P** **15 51 43.6 -0.1**
WB0 IAmb IAmb 15 51 45.5
comp=Z,7.0nm,1.2s
WR8 Warramunga Arr 62.47 189 P **P** **15 51 44.5 -0.3**
WR8 IAmb IAmb 15 52 20.2
comp=Z,4.9nm,1.1s
WRA Warramunga Arr 62.47 189 P **P** **15 51 44.7 -0.2**
comp=Z,0.7nm,0.6s,baz=7.8,slow=7.7,SNR=8.9
comp=Z,0.7nm,0.6s
WRA Warramunga Arr 62.47 189 *i* P **P** **15 51 46.0 +1.1**
WRA pmax pmax
comp=Z,1.0nm,0.6s
FIA1 FINESS Array S 64.75 332 P **P** **15 51 58.9 -0.6**
FINES FINESS Array B 64.75 332 P **P** **15 51 59.1 -0.4**
comp=Z,4.8nm,0.4s,baz=49,slow=6.9,SNR=59
comp=Z,4.8nm,0.4s
SUMG Summit 65.40 1 P **P** **15 52 03.6 -0.4**
SUMG IAmb IAmb 15 52 22.4
comp=Z,8.6nm,1.1s
SUMG Summit 65.40 1 P **P** **15 52 03.6 -0.4**
SUMG pmax pmax
comp=Z,9.0nm,1.1s
ASAR Alice Springs 66.20 189 P **P** **15 52 09.7 +0.5**
comp=Z,0.3nm,0.8s,baz=5.4,slow=5.6,SNR=6.2
comp=Z,0.3nm,0.8s
O02D Mt. Diablo Mer 67.04 56 P **P** **15 52 12.7 -1.9**
O02D IAmb IAmb 15 52 13.9
comp=Z,9.6nm,1.5s
KIV Kislovodsk 68.45 310 *e*P **P** **15 52 24.2 +0.7**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,24nm,17.0s
KIV Kislovodsk 68.45 310 *e*P **P** **15 52 24.4 +0.9**
KBZ Khabaz 68.47 310 P **P** **15 52 24.2 +0.7**
comp=Z,2.9nm,0.7s,baz=30,slow=4.9,SNR=6.4
comp=Z,2.9nm,0.7s
NC303 NORSAR Array S 69.62 337 P **P** **15 52 30.2 -0.1**
NC303 IAmb IAmb 15 52 47.5
comp=Z,12nm,1.1s
NC204 NORSAR Array S 69.75 338 P **P** **15 52 30.9 -0.2**
NC204 IAmb IAmb 15 53 08.1
comp=Z,13nm,1.2s
HFS Hagfors 69.81 336 P **P** **15 52 31.3 -0.2**
comp=Z,4.8nm,0.4s,baz=46,slow=6.8,SNR=50
HFS LR LR 16 29 21.9
comp=Z,22nm,18.5s,baz=48,slow=41
comp=Z,4.8nm,0.4s
NB2 NORSAR Subarra 69.81 337 P **P** **15 52 31.2 -0.3**
comp=Z,1.6nm,0.5s,baz=35,slow=6.5
NOA NORSAR Array B 69.81 337 P **P** **15 52 31.5 -0.1**
comp=Z,1.0nm,0.4s,baz=34,slow=6.4,SNR=13
NOA LR LR 16 25 59.1
comp=Z,9.1nm,21.5s,baz=240,slow=38
comp=Z,1.0nm,0.4s
NVAR Mina Array Bea 70.85 55 P **P** **15 52 40.4 +1.8**
comp=Z,0.9nm,0.7s,baz=294,slow=6.5,SNR=6.6
comp=Z,0.9nm,0.7s
AKASG Malin Array Be 70.92 322 P **P** **15 52 38.0 -0.3**
comp=Z,0.7nm,0.3s,baz=45,slow=6.5,SNR=10.0
comp=Z,0.7nm,0.3s
AKBB Malin Array Si 70.92 322 P **P** **15 52 37.9 -0.5**
AKBB IAmb IAmb 15 52 38.9
comp=Z,5.2nm,0.8s
AKBB Malin Array Si 70.92 322 *ce*P **P** **15 52 36.7 -1.7**
AKBB pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 70.93 322 P **P** **15 52 37.8 -0.7**
KIEV Kiev 70.93 322 ⇑P **P** **15 52 38.4 -0.1**
KIEV Kiev 70.93 322 P **P** **15 52 37.8 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s
PDAR Pinedale Array 73.09 47 P **P** **15 52 52.6 +0.8**
comp=Z,0.4nm,0.4s,baz=73,slow=0.8,SNR=6.9
comp=Z,0.4nm,0.4s
BUR08 Bucovina Ar. S 74.95 322 P **P** **15 53 02.6 +0.1**
BURAR Bucovina Array 74.96 322 P **P** **15 53 02.5 0.0**
BURAR Bucovina Array 74.96 322 ⇓P **P** **15 53 03.0 +0.4**
BURAR Bucovina Array 74.96 322 P **P** **15 53 02.5 0.0**
BURAR pmax pmax
comp=Z,3.0nm,0.7s
DOPR Dopca 76.09 320 ⇑P **P** **15 53 10.7 +1.8**
BRTR Keskin Array B 76.31 312 P **P** **15 53 10.5 +0.1**
BRTR Keskin Array B 76.31 312 P **P** **15 53 09.7 -0.7**
comp=Z,1.1nm,0.6s,baz=108,slow=2.8,SNR=7.4
comp=Z,1.1nm,0.6s
BRTR Keskin Array B 76.31 312 *i* P **P** **15 53 11.0 +0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
MARR Marisel-Cluj 76.62 322 ⇑P P 15 53 04.5 -7.5
MORC Moravsky Berou 76.63 327 P **P** **15 53 12.4 +0.5**
MORC Moravsky Berou 76.63 327 ⇑P **P** **15 53 13.0 +1.0**
MORC Moravsky Berou 76.63 327 P **P** **15 53 12.4 +0.5**
MORC pmax pmax
comp=Z,5.0nm,1.2s
ARR Arges 76.89 320 ⇓P **P** **15 53 15.1 +1.6**
CLL Collm 77.15 330 *i* P **P** **15 53 14.6 -0.1**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 77.15 330 *i* P **P** **15 53 14.6 -0.1**
comp=Z,6.0nm,0.9s
EKA Eskdalemuir Ar 78.57 341 P **P** **15 53 22.3 -0.3**
comp=Z,1.1nm,0.5s,baz=24,slow=5.4,SNR=5.9
comp=Z,1.1nm,0.5s
KHC Kasperske Hory 78.70 329 P **P** **15 53 23.4 -0.1**
KHC IAmb IAmb 15 54 07.5
comp=Z,11nm,1.5s
KHC Kasperske Hory 78.70 329 P **P** **15 53 23.4 -0.1**
KHC pmax pmax
comp=Z,11nm,1.5s
GERES GERESS Array B 78.89 329 P **P** **15 53 24.6 0.0**
comp=Z,1.0nm,0.4s,baz=16,slow=5.8,SNR=3.5
GERES LR LR 16 33 53.9
comp=Z,49nm,20.7s,baz=302,slow=40
comp=Z,1.0nm,0.4s
GRA1 Grafenberg Arr 79.12 330 P **P** **15 53 24.7 -1.0**
GRF Grafenberg Arr 79.12 330 P **P** **15 53 24.7 -1.0**
GRF pmax pmax
comp=Z,11nm,0.6s
GRFO Grafenberg 79.12 330 P **P** **15 53 24.7 -1.0**
GRFO Grafenberg 79.12 330 P **P** **15 53 24.7 -1.0**
GRFO pmax pmax
comp=Z,10.0nm,0.6s
MMAI Mount Meron Ar 79.95 306 P **P** **15 53 31.2 +0.6**
comp=Z,2.3nm,0.6s,baz=36,slow=7.6,SNR=4.3
comp=Z,2.3nm,0.6s
BFO Black Forest 81.31 331 *i* P **P** **15 53 37.4 -0.1**
FUORN Ofenpass-Fuorn 82.03 329 P **P** **15 53 41.9 +0.2**
FUORN IAmb IAmb 15 54 08.2
comp=Z,13nm,1.4s
SENIN Lac Senin/Sane 83.35 331 P **P** **15 53 48.7 +0.2**
SENIN IAmb IAmb 15 54 23.0
comp=Z,7.3nm,1.3s
IDI Anoyia 84.31 314 P **P** **15 53 52.7 -0.7**
ITM Ithomi 84.42 317 P **P** **15 53 53.4 -0.5**
TXAR Lajitas Array 85.91 54 P **P** **15 54 02.9 +1.4**
comp=Z,1.1nm,0.5s,baz=298,slow=3.7,SNR=19
comp=Z,1.1nm,0.5s
QSPA South Pole Qui 132.06 180 PKP **PKiKP** **16 00 33.8 -0.7**
comp=Z,0.5nm,0.6s,baz=25,slow=0.2,SNR=5.4
TROLL Troll, Antarti 144.64 200 ⇓P **PKPdf** **16 00 56.3 -0.1**
comp=Z,160nm,0.6s
H03N2 Juan Fernandez 145.96 89 T T 18 44 08.7
baz=300,slow=76,SNR=94
H03N3 Juan Fernandez 145.97 89 T T 18 44 09.8
baz=300,slow=76,SNR=103
H03N1 Juan Fernandez 145.98 89 T T 18 44 10.0
baz=300,slow=76,SNR=80
SNAA Sanae 146.17 199 ⇓P **PKPbc** **16 00 59.7 -0.4**
comp=Z,23nm,0.5s
SNAA Sanae 146.17 199 PKPbc **PKPab** **16 01 00.2 -0.7**
comp=Z,1.0nm,0.6s,baz=203,slow=4.2,SNR=18
VNA2 Neumayer--Watz 147.75 198 ⇓P **PKiKP** **16 01 05.3 -1.1**
comp=Z,4.8nm,0.5s,baz=117,slow=2.8
VNA3 Neumayer Olymp 148.00 196 ⇓P **PKiKP** **16 01 05.7 -1.2**
comp=Z,1.8nm,0.7s

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*BJI **05** 15:59:31.7, 11°.50N × 144°.22E, h10km, mB5.0/15, mb4.6/43, Ms4.5/7, Ms7 4.2/9*
*IDC **05** 15:59:36.6±0.5, 11°.87N × 143°.68E, h0km, mb4.5/26, mbtmp4.5/27, ML4.6/1, MS3.6/19, Error ellipse: s-maj=16.5km s-min=11.2km az=76.0*
*NEIC **05** 15:59:38.7±1.4, 11°.88N±0°.05 × 143°.74E±0°.10, h10km±1km, mb5.1/199, Error ellipse: s-maj=15.9km s-min=8.1km az=278.0*
*MOS **05** 15:59:38.1±0.9, 11°.86N × 143°.65E, h22km, mb5.0/29, Error ellipse: s-maj=11.9km s-min=6.0km az=110.1*
*DJA **05** 15:59:38.2±0.5, 12°N±4°× 14°4E±°, h11km±4km, M4.7/13, mb5.0/13, mB5.4/5, MLv4.5/1, Mw(mB)4.8/5*
ISC 05 15:59:40.5±0.3, 11°.86N±0°.04 × 143°.80E±0°.06, h26km, n509, σ0°.94/422, mb5.0/163, MS3.7/24, 10C-6D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.01**	**31**		**Pn**	**16 00 13.4**	**+0.7**
GUMO	**Guam**	**2.01**	**31**	Pn	**Pn**	**16 00 13.5**	**+0.8**
	200nm,0.3s,baz=194,slow=8.3,SNR=102						
GUMO				Sn	**Sb**	**16 00 39.4**	**-1.5**
	146nm,0.3s,baz=192,slow=23,SNR=5.4						
GUMO				LR	LR	16 01 13.1	
	comp=Z,1μm,21.6s,baz=196,slow=47						
	2μm,0.6s						
JAY	**Jayapura**	**14.61**	**192**	LR	LR	16 08 06.6	
	comp=Z,538nm,19.0s,baz=20,slow=35						
JAY	**Jayapura**	**14.61**	**192**	P	**Pn**	**16 03 05.0**	**-0.7**
	17nm,0.8s						
PATS	**Pohnpei**	**15.16**	**108**	Pn	**Pn**	**16 03 10.3**	**-2.7**
PATS				IAmb	IAmb	16 03 14.0	
	comp=Z,114nm,0.9s						
WAMI	**Wamena**	**16.44**	**198**	P	**P**	**16 03 32.1**	**0.0**
	comp=Z,61nm,0.7s						
TNTI	**Ternate**	**19.68**	**237**	P	**P**	**16 04 07.3**	**-0.6**
JOW	**Kunigami**	**20.86**	**318**	P	**P**	**16 04 20.8**	**+0.3**
JOW				IAmb	IAmb	16 04 24.8	
	comp=Z,196nm,1.8s						
JOW	**Kunigami**	**20.86**	**318**	P	**P**	**16 04 17.6**	**-3.0**
	comp=Z,18nm,0.5s,baz=139,slow=8.9,SNR=6.0						
JOW				LR	LR	16 12 24.2	
	comp=Z,146nm,19.3s,baz=69,slow=37						
	comp=Z,18nm,0.5s						
PMG	**Port Moresby**	**21.39**	**171**	P	**P**	**16 04 27.0**	**+0.7**
PMG	**Port Moresby**	**21.39**	**171**	P	**P**	**16 04 24.5**	**-1.8**
	comp=Z,12nm,0.9s,baz=335,slow=14,SNR=3.4						
PMG				LR	LR	16 12 01.0	
	comp=Z,170nm,18.1s,baz=340,slow=35						
	comp=Z,12nm,0.9s						
PMG	**Port Moresby**	**21.39**	**171**	*i* P	**P**	**16 04 25.4**	**-0.9**
AAI	**Ambon**	**21.90**	**226**	P	**P**	**16 04 31.5**	**-0.3**
	comp=Z,1μmcomp=Z,81nm,0.8s						
KMSI	**Cibinong**	**22.64**	**242**	P	**P**	**16 04 42.2**	**+2.4**
	comp=Z,96nm,0.8s						
SAUI	**Saumlaki**	**23.31**	**213**	P	**P**	**16 04 45.1**	**-1.5**
H11N1	**WAKE ISLAND Hy**	**23.53**	**68**	T	T	16 29 56.1	
	baz=255,slow=75,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**23.54**	**68**	T	T	16 29 40.1	
	baz=255,slow=75,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**23.55**	**68**	T	T	16 29 32.6	
	baz=255,slow=75,SNR=3.0						
JNU	**Nakatsue**	**24.25**	**333**		**P**	**16 04 54.4**	**-1.1**
YULB	**Yu-li**	**24.28**	**301**	P	**P**	**16 04 54.6**	**-1.2**
YULB				IAmb	IAmb	16 04 55.7	
	comp=Z,74nm,1.4s						
MRSI	**Marisa**	**24.47**	**244**	P	**P**	**16 04 58.6**	**+1.0**
	comp=Z,713nmcomp=Z,47nm,1.1s						
LUWI	**Luwuk**	**24.51**	**240**	P	**P**	**16 04 59.8**	**+1.8**
	comp=Z,804nmcomp=Z,69nm,0.9s						
SSLB	**Suanglung**	**24.73**	**302**	P	**P**	**16 04 59.3**	**-0.7**
MJAR	**Matsushiro Arr**	**25.09**	**349**		**P**	**16 05 03.4**	**+0.4**
MJAR	**Matsushiro Arr**	**25.09**	**349**	P	**P**	**16 05 00.7**	**-2.3**
	comp=Z,4.9nm,1.0s,baz=176,slow=8.8,SNR=7.7						
	comp=Z,4.9nm,1.0s						
MJAR	**Matsushiro Arr**	**25.09**	**349**	P	**P**	**16 05 03.4**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAJO	**Matsushiro**	**25.09**	**349**	P	**P**	**16 05 03.1**	**+0.1**
MAJO	**Matsushiro**	**25.09**	**349**	*i* P	**P**	**16 05 02.7**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MJB9	**Matsu-Tunnel**	**25.09**	**349**	P	**P**	**16 05 03.9**	**+0.9**
APSI	**Ampana**	**25.40**	**242**	P	**P**	**16 05 06.8**	**+0.7**
	comp=Z,46nm,1.1s						
COEN	**Coen**	**25.66**	**181**	P	**P**	**16 05 08.2**	**-0.1**
TJN	**Taejon**	**28.56**	**331**	*i* P	**P**	**16 05 33.2**	**-1.0**
SOEI	**Soe**	**28.95**	**223**	P	**P**	**16 05 37.9**	**-0.2**
KSRS	**Korea Array**	**29.19**	**333**	P	**P**	**16 05 38.3**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=138,slow=9.6,SNR=4.3						
KSRS				LR	LR	16 17 00.8	
	comp=Z,54μm,18.1s,baz=140,slow=36						
	comp=Z,1.3nm,0.6s						
NJ2	**Nanjing**	**30.51**	**315**	*e*P	**P**	**16 05 52.3**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KNRA	**Kununurra**	**31.15**	**209**	P	**P**	**16 05 57.3**	**0.0**
JKA	**Kamikawa-asahi**	**32.16**	**358**	P	**P**	**16 06 05.9**	**0.0**
ASAJ	**Asahikawa**	**32.16**	**358**	P	**P**	**16 06 05.9**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,169nm,1.9s						
WB0	**Warramunga Arr**	**32.77**	**197**		**P**	**16 06 10.9**	**-0.6**
WB0				IAmb	IAmb	16 06 14.3	
	comp=Z,42nm,1.9s						
VLA	**Vladivostok**	**32.81**	**344**	*i* P	**P**	**16 06 09.5**	**-2.2**
VLA				pmax	pmax		
	comp=Z,30nm,0.9s						
WR8	**Warramunga Arr**	**32.92**	**196**		**P**	**16 06 12.2**	**-0.7**
WRAB	**Tennant Creek**	**32.94**	**197**	P	**P**	**16 06 12.4**	**-0.6**
WRAB	**Tennant Creek**	**32.94**	**197**	*ce*P	**P**	**16 06 12.5**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA	**Warramunga Arr**	**32.95**	**197**	P	**P**	**16 06 11.2**	**-1.9**
WRA	**Warramunga Arr**	**32.95**	**197**	P	**P**	**16 06 12.6**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=18,slow=9.8,SNR=66						
WRA				LR	LR	16 20 05.9	
	comp=Z,253nm,18.1s,baz=330,slow=37						
	comp=Z,4.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**34.75**	**211**	P	**P**	**16 06 29.0**	**+0.2**
YSS	**Yuzhno-Sakhali**	**34.99**	**359**	*e*P	**P**	**16 06 29.3**	**-1.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
HNS	**HongShan**	**36.41**	**319**	⇑P	**P**	**16 06 42.5**	**-0.4**
HNS				pmax	pmax		
	comp=Z,16nm,1.1s						
BNX	**BinXian**	**36.54**	**341**	⇓P	**P**	**16 06 43.5**	**-0.4**
BNX				pmax	pmax		
	comp=Z,14nm,1.2s						
AS31	**Alice Springs**	**36.61**	**195**		**P**	**16 06 44.6**	**-0.2**
ASAR	**Alice Springs**	**36.61**	**195**	P	**P**	**16 06 43.9**	**-0.9**
ASAR	**Alice Springs**	**36.61**	**195**	P	**P**	**16 06 44.3**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=16,slow=11,SNR=19						
ASAR				PcP	**PcP**	**16 09 08.3**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=23,slow=4.2,SNR=1.3						
ASAR				LR	LR	16 22 01.3	
	comp=Z,171nm,19.7s,baz=1.0,slow=37						
	comp=Z,1.7nm,0.7s						
GYA	**Guiyang**	**37.81**	**298**	⇓P	**P**	**16 06 54.9**	**-0.2**
GYA				pmax	pmax		
	comp=Z,13nm,0.9s						
TYV	**Tymovskoe**	**38.90**	**359**	*e*P	**P**	**16 07 04.1**	**+0.3**
TYV				pmax	pmax		
	comp=Z,13nm,1.4s						
TYV				pmax	pmax		
	comp=Z,300nm,2.8s						
DZM	**Mont Dzumac**	**40.38**	**147**	P	**P**	**16 07 17.4**	**+0.8**
	comp=Z,5.8nm,0.6s,baz=254,slow=2.9,SNR=9.7						
DZM				LR	LR	16 21 10.6	
	comp=Z,59nm,20.1s,baz=261,slow=32						
	comp=Z,5.8nm,0.6s						
HHC	**Hu-ho-hao-te**	**40.43**	**321**	*e*P	**P**	**16 07 17.3**	**+0.5**

HHC pmax pmax
comp=Z,36nm,0.8s
HHC pmax pmax
comp=Z,53nm,4.3s
HHC LR LR
comp=Z,110nm,20.2s
HHC LR LR
comp=Z,170nm,16.8s
HHC LR LR
comp=Z,180nm,16.8s
HEH HeiHe 40.58 344 *e*P **P 16 07 17.0 -0.8**
HEH pmax pmax
comp=Z,11nm,0.8s
PSA00 Pilbara Seismi 40.71 215 P **P 16 07 19.8 +0.6**
BTO Baotou 41.25 320 *e*P **P 16 07 25.0 +1.4**
BTO pP **pP 16 07 29.2 -0.8**
BTO sP **sP 16 07 32.1 -0.7**
BTO pmax pmax
comp=Z,24nm,1.5s
BTO pmax pmax
comp=Z,250nm,6.7s
CD2 Chengdu 41.54 303 *e*P **P 16 07 26.0 -0.1**
PZH PanZhiHua 42.10 296 P **P 16 07 31.6 +0.8**
HILR Hailar Array B 42.51 337 P **P 16 07 34.5 +0.8**
comp=Z,4.6nm,0.7s,baz=141,slow=9.6,SNR=5.9
HILR LR LR 16 24 13.2
comp=Z,95nm,20.9s,baz=90,slow=35
comp=Z,4.6nm,0.7s
PETK Petropavlovsk- 42.62 12 P **P 16 07 35.3 +0.8**
comp=Z,3.9nm,1.0s,baz=201,slow=7.7,SNR=1.5
comp=Z,3.9nm,1.0s
LZH Lanzhou 43.32 311 *e*P **P 16 07 41.1 +0.5**
LZH pP pP 16 07 45.6 -1.4
LZH pmax pmax
comp=Z,15nm,1.1s
LZDM Lanzhou Array 43.38 310 P **P 16 07 41.0 -0.3**
comp=Z,1.6nm,0.4s,baz=152,slow=6.7,SNR=3.5
LZDM LR LR 16 26 54.1
comp=Z,61nm,18.6s,baz=295,slow=38
comp=Z,1.6nm,0.4s
STKA Stephens Creek 43.54 183 IAmb IAmb 16 07 48.4
comp=Z,97nm,1.8s
STKA Stephens Creek 43.54 183 P **P 16 07 41.9 -0.2**
comp=Z,3.5nm,1.0s,baz=335,slow=12,SNR=2.9
STKA LR LR 16 26 44.6
comp=Z,54nm,18.0s,baz=27,slow=37
comp=Z,3.5nm,1.0s
STKA Stephens Creek 43.54 183 P **P 16 07 41.9 -0.2**
STKA pmax pmax
comp=Z,97nm,1.8s
CMAR Chiang Mai Arr 43.70 284 P **P 16 07 44.5 +0.7**
comp=Z,3.4nm,0.7s,baz=87,slow=6.2,SNR=34
CMAR LR LR 16 24 41.7
comp=Z,48nm,20.0s,baz=90,slow=34
comp=Z,3.4nm,0.7s
MASI Maura Aman, Be 43.92 253 P **P 16 07 46.2 +0.6**
MSVF Nonsavu 44.81 130 P **P 16 07 53.9 +1.3**
MSVF IAmb IAmb 16 08 21.9
comp=Z,36nm,1.3s
MSVF Nonsavu 44.81 130 P **P 16 07 53.9 +1.3**
MSVF pmax pmax
comp=Z,36nm,1.3s
BBOO Buckleboo 45.03 189 P **P 16 07 53.6 -0.5**
BBOO IAmb IAmb 16 09 38.8
comp=Z,50nm,1.6s
ULN Ulaanbaatar 47.22 327 *ce*P **P 16 08 11.3 -0.1**
ULN pmax pmax
comp=Z,6.0nm,0.9s
SONM Songino Array 47.56 326 P **P 16 08 13.9 -0.1**
SONM Songino Array 47.56 326 P **P 16 08 14.0 0.0**
comp=Z,2.4nm,0.5s,baz=146,slow=7.5,SNR=12
comp=Z,2.4nm,0.5s
SONM Songino Array 47.56 326 P **P 16 08 14.0 0.0**
GTA Gaotai 47.56 313 *e*P **P 16 08 14.5 +0.3**
GTA PcP **PcP 16 09 47.0 +3.1**
GTA pmax pmax
comp=Z,7.0nm,0.6s
GTA LR LR
comp=Z,88nm,15.9s
GTA LR LR
comp=Z,190nm,17.5s
GTA LR LR
comp=Z,140nm,17.9s
GOMU GeErMu 50.23 307 P **P 16 08 34.4 -0.6**
GOMU pP pP 16 08 38.1 -3.5
GOMU S **S 16 15 48.9 +2.8**
GOMU pmax pmax
comp=Z,4.0nm,0.8s
ZAK Zakamensk 50.71 327 *e*P **P 16 08 36.8 -1.2**
ZAK pmax pmax
comp=Z,8.0nm,1.6s
YAK Yakutsk 51.12 352 *e*P **P 16 08 39.5 -1.2**
YAK *e* 16 09 54.9
YAK *e* 16 10 35.2
YAK *e*S **S 16 15 58.1 +1.3**
YAK *e* 16 18 29.5
YAK *e*SS **SS 16 19 34.7 +2.5**
YAK pmax pmax
comp=Z,10.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=Z,74nm,3.2s
YAK pmax pmax
comp=E,70nm,3.5s
YAK pmax pmax
comp=N,69nm,3.5s
YAK smax smax
comp=N,49nm,2.4s
YAK smax smax
comp=E,22nm,2.3s
LSA Lhasa 51.88 298 P **P 16 08 43.7 -3.9**
LSA pmax pmax
comp=E,2.0nm,0.5s
KNGR Kungurtug, Tuv 53.95 325 *i* P **P 16 09 02.4 +0.3**
KNGR pmax pmax
comp=Z,4.0nm,1.0s
EVN Everest 55.46 296 P **P 16 09 14.1 +0.1**
NIKH Nikolski High 55.68 33 P **P 16 09 14.7 +0.3**
baz=241
SPIA Saint Paul Isl 57.18 28 P **P 16 09 25.9 +0.9**
baz=237
P08K Saint George I 57.19 29 P **P 16 09 25.0 0.0**
baz=238
WMQ Urumqi 57.59 315 *e*P **P 16 09 28.9 +0.6**
WMQ pmax pmax
comp=Z,42nm,1.1s
BILL Bilibino 58.03 10 P **P 16 09 30.6 -0.2**
BILL Bilibino 58.03 10 *ce*P **P 16 09 31.9 +1.1**
BILL pmax pmax
comp=Z,7.0nm,0.7s
BYL Byron's Ledge 58.91 74 P **P 16 09 37.4 -0.6**
KNHH Kane Nui o Ham 59.00 74 P **P 16 09 38.5 0.0**
FALS False Pass 59.40 32 P **P 16 09 41.3 +0.8**
baz=245
DGZ Jazzator, Alta 59.51 321 *i* P **P 16 09 42.0 +0.3**
DGZ pmax pmax
comp=Z,11nm,1.0s
TIXI Tiksi 60.44 355 LR LR 16 36 46.2
comp=Z,30nm,18.3s,baz=13,slow=37
TIXI Tiksi 60.44 355 *i* P **P 16 09 47.1 -0.3**
TIXI pmax pmax
comp=Z,6.0nm,1.5s
GAMB Gambell 60.45 21 P **P 16 09 48.5 +1.0**
baz=232
S12K Black Hills 60.46 32 P **P 16 09 48.7 +0.8**
baz=246
ZSN Zaisan 60.48 318 *e*P **P 16 09 47.8 -0.4**
ZSN Zaisan 60.48 318 *e*P **P 16 09 47.7 -0.4**
M11K Mekoryuk 60.67 26 P **P 16 09 49.8 +0.7**
baz=239
SDPT Sand Point 61.15 33 P **P 16 09 53.0 +0.5**
baz=247
M13K Dall Lake 61.92 27 P **P 16 09 58.4 +0.7**
baz=242
MK31 Makanchi Array 62.02 317 *ce*P **P 16 09 59.4 +0.8**
MKAR Makanchi Array 62.02 317 P **P 16 09 58.3 -0.4**
MKAR Makanchi Array 62.02 317 P **P 16 09 58.8 +0.2**
comp=Z,2.3nm,0.6s,baz=94,slow=8.8,SNR=22
comp=Z,2.3nm,0.6s
MKAR Makanchi Array 62.02 317 *i* P **P 16 09 58.7 +0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
K13K Kusilvak Mount 62.10 25 P **P 16 09 59.6 +0.7**
baz=240
MAKZ Makanchi 62.23 317 P **P 16 09 60.0 -0.1**
MAKZ Makanchi 62.23 317 P **P 16 10 00.0 -0.1**
MAKZ pmax pmax
comp=Z,7.0nm,0.9s
PALK Pallekele 62.29 272 LR LR 16 40 08.5
comp=Z,25nm,18.5s,baz=100,slow=39
O14K Tigyukauivet M 62.34 28 P **P 16 10 00.8 +0.3**
baz=245
ZAA0 Zalesovo Array 62.43 325 P **P 16 10 00.6 -0.5**
ZALV Zalesovo Beam 62.43 325 P **P 16 10 00.4 -0.7**
ZALV Zalesovo Beam 62.43 325 P **P 16 10 00.6 -0.6**
comp=Z,2.3nm,0.5s,baz=101,slow=7.6,SNR=14
comp=Z,2.3nm,0.5s
N14K Kuskokwak Cree 62.44 28 P **P 16 10 02.2 +1.1**
baz=244
L14K Kuka Creek 62.64 26 P **P 16 10 03.1 +0.6**
baz=242
M14K Bethel 62.69 27 P **P 16 10 04.0 +1.3**
baz=243
TNA Tin City 62.82 20 P **P 16 10 04.7 +1.1**
baz=235
J14K Nanvaranak Lak 62.95 24 P **P 16 10 04.3 -0.1**
baz=241
O15K Ungalikthiuk R 62.98 29 P **P 16 10 05.2 +0.4**
baz=246
HYBB Hyderabad (bro 63.13 284 *e*P **P 16 10 06.8 +0.3**
ANM Nome 63.18 22 P **P 16 10 06.5 +0.5**
baz=238
M15K Kasigluk River 63.22 27 P **P 16 10 06.7 +0.3**
baz=245
N15K Kwethluk River 63.27 28 P **P 16 10 06.6 0.0**
baz=246
SHLS Shalkode 63.30 312 *e*P **P 16 10 04.7 -2.7**
SHLS Shalkode 63.30 312 *e*P **P 16 10 04.7 -2.7**
L15K Ungalak Mounta 63.31 26 P **P 16 10 07.1 +0.2**
baz=243
F14K Arctic Creek 63.32 21 P **P 16 10 07.4 +0.4**
baz=237
R16K Pilot Point 63.47 31 P **P 16 10 07.7 -0.3**
baz=249
UZB Uzynbulak 63.61 312 *e*P **P 16 10 09.1 -0.5**
UZB Uzynbulak 63.61 312 *e*P **P 16 10 09.0 -0.5**
P16K Nushagak River 63.80 29 P **P 16 10 10.5 +0.3**
baz=248
G15K Niukluk 63.89 22 P **P 16 10 11.9 +1.2**
baz=239
CHIR Chirikof Islan 63.90 33 P **P 16 10 11.7 +0.8**
baz=252
O16K Kokwok River B 63.96 29 P **P 16 10 12.0 +0.8**
baz=248
N16K Nishlik Lake 63.99 28 P **P 16 10 11.3 -0.2**
baz=247
R17L Mt. Peulik Vol 64.10 31 P **P 16 10 11.9 -0.4**
baz=250
M16K Timber Creek 64.13 27 P **P 16 10 12.5 +0.2**
baz=246
L16K Owhat River 64.19 26 P **P 16 10 13.2 +0.6**
L16K Owhat River 64.19 26 P **P 16 10 13.2 +0.6**
baz=245
Q16K King Salmon 64.32 30 P **P 16 10 14.0 +0.4**
baz=249
TDK Taldyqorghan 64.34 314 *e*P **P 16 10 13.6 -0.5**
comp=Z,9.5nm,0.7s
TDK Taldyqorghan 64.34 314 *e*P **P 16 10 13.5 -0.5**
TDK pmax pmax
comp=Z,9.0nm,0.7s
H16K Elim 64.38 23 P **P 16 10 14.4 +0.5**
baz=241
J16K Anvik River 64.39 24 P **P 16 10 14.4 +0.4**
baz=244
RAR Rarotonga 64.42 120 P **P 16 10 16.9 +2.0**
comp=Z,15nm,0.5s,baz=358,slow=15,SNR=5.5
comp=Z,15nm,0.5s
RAR Rarotonga 64.42 120 P **P 16 10 16.9 +2.0**
RAR pmax pmax
comp=Z,136nm,1.8s
O17K Koliganek Bris 64.50 29 P **P 16 10 15.1 +0.3**
baz=249
I17K Unalakleet 64.63 24 P **P 16 10 16.2 +0.7**
baz=243
G16K Koyuk River 64.70 22 P **P 16 10 16.2 +0.2**
baz=241
N17K Nushagak Hills 64.74 28 P **P 16 10 16.5 +0.2**
baz=248
L17K Donlin 64.87 26 P **P 16 10 17.6 +0.4**
baz=246
M17K Holitna River 64.96 27 P **P 16 10 18.7 +1.0**
baz=248
MDOK Medeo 65.05 312 *e*P **P 16 10 18.4 -0.6**
MDOK Medeo 65.05 312 *e*P **P 16 10 18.3 -0.6**
J17K VABM Dome 65.06 25 P **P 16 10 19.3 +0.9**
baz=245
K17K Iditarod 65.10 25 IAmb IAmb 16 10 31.6
comp=Z,19nm,1.0s
K17K Iditarod 65.10 25 P **P 16 10 19.4 +0.8**
baz=246
TNSS Tian-Shan 65.10 312 *e*P **P 16 10 18.7 -0.9**
TNSS Tian-Shan 65.10 312 *e*P **P 16 10 18.6 -0.9**
Q18K Katmai Hardscr 65.12 30 P **P 16 10 19.0 0.0**
baz=251
C16K Lisburne Hills 65.19 19 P **P 16 10 19.7 +0.6**
baz=237
KURK Kurchatov 65.24 321 P **P 16 10 19.7 -0.1**
KURK Kurchatov 65.24 321 *ce*P **P 16 10 19.4 -0.3**
KURK pmax pmax
comp=Z,21nm,0.9s
P18K Big Mountain, 65.26 30 P **P 16 10 19.9 +0.1**
baz=250
KURBB Kurchatov Arra 65.28 320 P **P 16 10 19.7 -0.3**
comp=Z,12nm,0.7s,baz=106,slow=6.4,SNR=94
comp=Z,12nm,0.7s
G17K Kiwalik Mounta 65.38 22 P **P 16 10 20.9 +0.5**
baz=243
N18K Kilae Creek 65.39 28 P **P 16 10 20.7 +0.1**
baz=249
H17K Granite Mounta 65.40 23 P **P 16 10 21.2 +0.6**
baz=244
O18K Koktuh Hills 65.42 29 P **P 16 10 21.4 +0.6**
baz=250
OHAK Old Harbor 65.55 32 P **P 16 10 21.5 -0.1**
baz=253
L18K Granite Mounta 65.60 26 P **P 16 10 21.8 0.0**
baz=248
D17K Noatak River 65.61 20 P **P 16 10 21.9 +0.1**
baz=239
F17K Baldwin Pennin 65.61 21 P **P 16 10 22.2 +0.4**
baz=242
M18K Stony River 65.71 27 P **P 16 10 23.2 +0.6**
baz=249
E17K Hotham Inlet 65.72 20 P **P 16 10 22.7 +0.2**
baz=241
RDOG Red Dog Mine 65.84 19 P **P 16 10 23.7 +0.3**
baz=239
C17K DeLong Mountai 65.97 19 P **P 16 10 24.8 +0.6**
baz=239
KDAK Kodiak Island 66.08 32 P **P 16 10 25.2 +0.2**
baz=254
N19K Bonanza Creek 66.08 28 P **P 16 10 26.3 +1.2**
baz=251
H18K Honhosa River 66.09 23 P **P 16 10 25.0 0.0**
baz=245
F18K Selawik 66.25 21 P **P 16 10 26.1 +0.2**
baz=243
E18K Tukpahlearik C 66.30 20 P **P 16 10 27.1 +0.8**
baz=242
G18K Tagagawik 66.30 22 P **P 16 10 27.1 +0.8**
baz=244
P19K Oil Pt 66.30 30 P **P 16 10 27.5 +1.0**
baz=252
L19K White Mountain 66.38 27 IAmb IAmb 16 10 29.1
comp=Z,24nm,1.4s
L19K White Mountain 66.38 27 P **P 16 10 27.8 +0.8**
baz=250
Q20K Shuyak Island 66.41 31 P **P 16 10 28.1 +0.9**
baz=253
C18K Utukok River 66.69 19 P **P 16 10 28.9 0.0**
baz=241
J19K Poorman 66.71 25 IAmb IAmb 16 10 30.5
comp=Z,27nm,1.5s
J19K Poorman 66.71 25 P **P 16 10 30.1 +1.1**
baz=248
O20K Slope Mountain 66.73 29 P **P 16 10 28.8 -0.4**
baz=253
SGDS Sogindy 66.83 312 *e*P **P 16 10 29.7 -0.6**
AAK Ala-Archa 66.86 311 LR LR 16 42 33.5
comp=Z,53nm,18.6s,baz=86,slow=39
AAK Ala-Archa 66.86 311 *ce*P **P 16 10 30.6 +0.1**
AAK pmax pmax
comp=Z,1.0nm,0.4s
B18K Kokolik River 66.86 18 P **P 16 10 29.4 -0.4**
baz=240
L20K Farewell, AK 66.91 27 P **P 16 10 30.6 +0.2**
baz=250
H19K Roundabout Mou 66.98 23 IAmb IAmb 16 10 32.2
comp=Z,13nm,1.1s
H19K Roundabout Mou 66.98 23 P **P 16 10 31.4 +0.8**
baz=247
M20K Styx River 67.05 27 IAmb IAmb 16 10 33.2
comp=Z,24nm,1.3s
M20K Styx River 67.05 27 P **P 16 10 32.0 +0.7**
baz=251
K20K Telida 67.13 26 P **P 16 10 32.3 +0.6**
baz=250
CNPM China Poot 67.24 30 P **P 16 10 32.0 -0.5**
SPCR Spurr Chakacha 67.26 28 P **P 16 10 33.0 +0.4**
baz=253
J20K Nowinta River 67.38 25 P **P 16 10 33.9 +0.6**
baz=250
NIL Nilore 67.39 302 P **P 16 10 33.9 0.0**
NIL Nilore 67.39 302 P **P 16 10 33.9 0.0**
NIL pmax pmax
comp=Z,15nm,0.8s
NRIK Noril'sk 67.42 341 IAmb IAmb 16 10 34.0
comp=Z,23nm,1.2s
NRIK Noril'sk 67.42 341 P **P 16 10 33.0 -0.4**
comp=Z,12nm,1.1s,baz=113,slow=7.5,SNR=10
comp=Z,12nm,1.1s
NRIK Noril'sk 67.42 341 *ce*P **P 16 10 33.2 -0.2**
C19K Lookout Ridge 67.42 19 P **P 16 10 34.0 +0.5**
baz=242
I20K Naaghedeneel 67.47 24 P **P 16 10 33.9 +0.1**
baz=249
E19K Redstone River 67.48 21 IAmb IAmb 16 10 47.8
comp=Z,13nm,0.8s
E19K Redstone River 67.48 21 P **P 16 10 34.2 +0.3**
baz=245
A19K Wainwright 67.50 18 P **P 16 10 34.3 +0.4**
baz=240
BRSE Bradley Lake S 67.54 30 P **P 16 10 34.3 0.0**
baz=254
H20K Anotleneega Mo 67.57 23 P **P 16 10 34.8 +0.4**
baz=248
CAPN Captain Cook N 67.62 29 P **P 16 10 34.5 -0.3**
baz=254
D19K Kuna River 67.62 20 IAmb IAmb 16 10 36.1
comp=Z,16nm,0.9s
D19K Kuna River 67.62 20 P **P 16 10 34.3 -0.5**
baz=244
PPLA Purkeypile 67.79 26 P **P 16 10 36.4 +0.4**
PPLA Purkeypile 67.79 26 P **P 16 10 35.8 -0.3**
baz=252
SKT Skwentna 67.80 27 P **P 16 10 36.0 0.0**
baz=253
F20K Avaraart Lake 67.85 22 P **P 16 10 36.7 +0.6**
baz=247
SUA Susitna One 68.01 28 P **P 16 10 36.9 -0.5**
baz=254
CHUM Lake Minchumin 68.05 25 P **P 16 10 38.1 +0.6**
baz=251
E20K Nigu River 68.17 20 P **P 16 10 38.8 +0.6**
baz=246
D20K Etivluk River 68.22 20 P **P 16 10 38.8 +0.3**
baz=245
O22K Cooper Landing 68.23 29 P **P 16 10 38.4 -0.2**
baz=255
SEW Seward 68.26 30 P **P 16 10 38.6 -0.2**
baz=256
RC01 Rabbit Creek A 68.38 29 P **P 16 10 39.1 -0.5**
baz=255
H21K Melozitna Rive 68.43 23 P **P 16 10 39.2 -0.6**
baz=250
G21K Allakaket 68.46 23 P **P 16 10 39.8 -0.3**
baz=249
CUT Chulitna 68.49 27 P **P 16 10 39.6 -0.6**
baz=254
KTH Kantishna Hill 68.53 26 IAmb IAmb 16 10 42.6
comp=Z,17nm,1.1s
B20K Meade River 68.59 18 P **P 16 10 41.1 +0.4**
baz=244
I21K Tanana 68.60 24 IAmb IAmb 16 12 23.7
comp=Z,27nm,1.6s
I21K Tanana 68.60 24 P **P 16 10 40.2 -0.7**
baz=251
BPAW Bear Paw Mtn. 68.67 25 P **P 16 10 40.7 -0.7**
baz=253
F21K Alatna River 68.72 22 P **P 16 10 41.5 -0.2**
baz=249
TRF Thorofare Moun 68.78 26 IAmb IAmb 16 10 46.5
comp=Z,17nm,1.2s
TRF Thorofare Moun 68.78 26 P **P 16 10 41.8 -0.4**
baz=254
PMR Palmer 68.79 28 IAmb IAmb 16 10 55.6
comp=Z,12nm,0.9s
PMR Palmer 68.79 28 P **P 16 10 41.1 -1.0**
baz=255
PWL Port Wells 68.98 29 P **P 16 10 43.6 +0.2**
PWL Port Wells 68.98 29 P **P 16 10 42.6 -0.7**
baz=256
E21K Killik River 69.00 21 P **P 16 10 43.4 0.0**
baz=248
C21K Knifeblade Rid 69.00 20 P **P 16 10 43.3 0.0**
baz=247
MLY Manley 69.05 24 P **P 16 10 43.6 -0.2**
baz=252
KNK Knik Glacier 69.06 28 P **P 16 10 43.7 -0.2**
baz=256
H22K Ishtalitna Cre 69.07 23 P **P 16 10 43.5 -0.3**
baz=252
DZA Taraz 69.20 311 *e*P **P 16 10 44.5 -0.6**
comp=Z,4.7nm,0.7s
DZA Taraz 69.20 311 *e*P **P 16 10 44.5 -0.6**
DZA pmax pmax
comp=Z,5.0nm,0.7s
SML Sawmill 69.21 28 IAmb IAmb 16 10 57.5
comp=Z,21nm,1.0s
SML Sawmill 69.21 28 P **P 16 10 44.8 -0.1**
baz=256
P23K Montague Islan 69.24 30 P **P 16 10 45.7 +0.8**
baz=257
B21K Ikpikpuk River 69.24 19 P **P 16 10 46.2 +1.4**
baz=247
G22K Bettles 69.35 22 P **P 16 10 46.3 +0.8**
baz=251
WAT1 Susitna Watana 69.37 27 P **P 16 10 45.6 -0.2**
baz=255
MCK McKinley 69.44 26 P **P 16 10 46.5 +0.3**
baz=255
M23K Glacier View 69.49 28 P **P 16 10 46.7 +0.2**
baz=256
GLI Glacier Island 69.58 29 P **P 16 10 47.1 +0.1**
baz=257
D22K Ayikyak River 69.60 20 P **P 16 10 47.5 +0.4**
baz=249,SNR=7.6
E22K Anaktuvuk Pass 69.64 21 P **P 16 10 48.0 +0.6**
E22K Anaktuvuk Pass 69.64 21 P **P 16 10 47.6 +0.2**
baz=250,SNR=7.7
I23K Minto, Yukon-K 69.65 24 IAmb IAmb 16 11 43.3
comp=Z,13nm,0.6s
I23K Minto, Yukon-K 69.65 24 P **P 16 10 47.3 0.0**
baz=254
WAT6 Susitna Watana 69.67 27 P **P 16 10 47.8 0.0**
baz=256
SCM Sheep Creek Mo 69.68 28 P **P 16 10 48.2 +0.4**
baz=257
H23K Yukon River 69.77 24 IAmb IAmb 16 10 53.7
comp=Z,12nm,1.2s
H23K Yukon River 69.77 24 P **P 16 10 48.0 -0.1**
baz=253
KK31 Karatay Array 69.81 312 IAmb IAmb 16 10 49.9
comp=Z,9.6nm,0.9s
KKAR Karatay Array 69.81 312 P **P 16 10 48.7 -0.2**
KKAR Karatay Array 69.81 312 P **P 16 10 48.7 -0.2**
G23K Bananza Creek 69.84 23 P **P 16 10 49.0 +0.3**
baz=253
B22K Teshekpuk Lake 69.89 19 P **P 16 10 48.5 -0.3**
baz=248
COLD Coldfoot 69.93 22 IAmb IAmb 16 10 51.1
comp=Z,20nm,1.2s
COLD Coldfoot 69.93 22 P **P 16 10 48.8 -0.3**
baz=252,SNR=6.2
DHY Denali Highway 69.95 27 P **P 16 10 49.9 +0.4**
baz=256
IUG Iuzhnay 70.12 311 *e*P **P 16 10 50.5 -0.5**
comp=Z,8.8nm,1.2s
IUG Iuzhnay 70.12 311 *e*P **P 16 10 50.4 -0.5**
IUG pmax pmax
comp=Z,9.0nm,1.2s

EYAK	Cordova Ski Ar	70.16	30	P		P		16 10 50.5	0.0			
	baz=259											
KLU	Klutina	70.26	29	IAmb		IAmb		16 11 05.0				
	comp=Z,13nm,1.0s											
KLU	Klutina	70.26	29	P		P		16 10 52.1	+0.8			
	baz=258											
M24K	Tolsona, Glenn	70.27	28	P		P		16 10 51.6	+0.2			
	baz=258											
BRLS	Boroldav	70.30	312	*e*P		P		16 10 51.9	0.0			
BRLS	Boroldav	70.30	312	*e*P		P		16 10 51.9	0.0			
D23K	Nanushuk River	70.31	20	P		P		16 10 52.4	+1.0			
	baz=251											
E23K	Chandalar	70.40	21	P		P		16 10 52.8	+0.7			
	baz=252											
POKR	Poker Plat Res	70.42	25	P		P		16 10 52.9	+0.7			
	baz=256											
H24K	Noodor Dome	70.43	24	IAmb		IAmb		16 10 53.9				
	comp=Z,26nm,1.3s											
H24K	Noodor Dome	70.43	24	P		P		16 10 52.9	+0.6			
	baz=255											
HDA	Harding Lake	70.45	26	P		P		16 10 52.8	+0.4			
	baz=256											
IL31		70.56	25	IAmb		IAmb		16 10 53.0				
	comp=Z,19nm,1.4s											
ILAR	Eielson Array	70.56	25	P		P		16 10 51.6	-1.5			
ILAR	Eielson Array	70.56	25	P		P		16 10 51.9	-1.2			
	comp=Z,3.5nm,0.8s,baz=255,slow=4.5,SNR=30											
	comp=Z,3.5nm,0.8s											
TOLK	Toolik Lake Re	70.59	21	P		P		16 10 53.6	+0.5			
	baz=252,SNR=7.1											
C23K	Itkillik River	70.62	20	P		P		16 10 53.7	+0.4			
	baz=251											
BVAR	Borovoye Array	70.64	322	P		P		16 10 53.7	0.0			
	comp=Z,17nm,0.5s,baz=103,slow=8.0,SNR=142											
	comp=Z,17nm,0.5s											
BORK	Borovoye	70.68	322	*ce*P		P		16 10 53.8	-0.2			
BORK				pmax		pmax						
	comp=Z,14nm,0.6s											
KAIM	Kayak Island	70.69	30	P		P		16 10 53.7	-0.2			
	baz=260											
CHGR	Chuyangaron	70.73	307	P		P		16 10 54.6	-0.1			
CHGR	Chuyangaron	70.73	307	P		P		16 10 54.6	-0.1			
CHGR				pmax		pmax						
	comp=Z,24nm,0.8s											
PAX	Paxson	70.77	27	IAmb		IAmb		16 11 06.8				
	comp=Z,16nm,1.4s											
PAX	Paxson	70.77	27	P		P		16 10 54.8	+0.3			
	baz=258											
BMRM	Bremner River	70.79	29	P		P		16 10 54.8	+0.3			
	baz=260											
HARP	HAARP	70.80	28	P		P		16 10 54.9	+0.4			
	baz=259											
E24K	Your Creek	70.81	22	IAmb		IAmb		16 11 08.1				
	comp=Z,30nm,1.4s											
E24K	Your Creek	70.81	22	P		P		16 10 54.4	-0.1			
	baz=254											
G24K	Hadweenzic Riv	70.81	23	P		P		16 10 54.9	+0.3			
	baz=255											
F24K	Squaw Lake	70.87	22	P		P		16 10 55.4	+0.4			
	baz=254											
N25K	Chitina, Valde	70.91	29	P		P		16 10 55.5	+0.2			
	baz=259											
D24K	Happy Valley	71.00	20	P		P		16 10 56.6	+1.0			
	baz=253											
J25K	Salcha River,	71.16	25	P		P		16 10 57.0	+0.2			
	baz=259											
RIDG	Independent Ri	71.21	26	P		P		16 10 57.6	+0.6			
	baz=258											
C24K	Franklin Bluff	71.21	20	P		P		16 10 57.9	+1.0			
	baz=253											
H25L	Birch Creek	71.35	24	P		P		16 10 58.1	+0.4			
	baz=257,SNR=5.4											
G25K	Bearman Lake	71.36	23	P		P		16 10 58.9	+1.2			
	baz=256											
CRQE	Cirque	71.48	30	P		P		16 10 58.3	-0.5			
	baz=261											
DOT	Dot Lake	71.53	27	IAmb		IAmb		16 11 12.5				
	comp=Z,8.9nm,0.8s											
MCARA	McCarthy VSAT	71.61	29	P		P		16 11 00.4	+0.9			
	baz=261											
SCRK	Sand Creek	71.63	26	P		P		16 11 00.3	+0.7			
	baz=259											
F25K	Christian River	71.73	22	P		P		16 11 01.3	+1.2			
	baz=256											
L26K	Log Cabin Wild	71.74	27	P		P		16 11 00.9	+0.7			
	baz=260											
M26K	Nabesna, AK	71.79	28	P		P		16 11 01.2	+0.6			
	baz=261											
E25K	Arctic Village	71.88	22	P		P		16 11 02.1	+1.1			
	baz=256,SNR=7.8											
D25K	Kavik River	71.89	21	P		P		16 11 01.7	+0.7			
	baz=255											
J26L	Joseph Creek	71.91	26	IAmb		IAmb		16 11 03.3				
	comp=Z,34nm,1.6s											
J26L	Joseph Creek	71.91	26	P		P		16 11 01.9	+0.6			
	baz=259											
MESA	MESA	71.96	30	P		P		16 11 01.8	0.0			
	baz=262											
PPT	Papeete	71.98	113	LR		LR		16 33 58.0				
	comp=Z,35nm,20.8s,baz=290,slow=29											
BMAR	Burnt Mountain	72.09	23	P		P		16 11 03.4	+1.1			
GRNC	Granite Creek	72.13	30	P		P		16 11 03.6	+0.7			
I26K	Coal Creek Min	72.22	25	P		P		16 11 02.7	-0.4			
	baz=260											
G26K	Porcupine Rive	72.29	23	P		P		16 11 04.5	+1.2			
	baz=258											
M27K	Edge Creek, AK	72.30	28	P		P		16 11 04.4	+0.6			
	baz=262											
F26K	Sheenjek River	72.31	22	IAmb		IAmb		16 11 06.5				
	comp=Z,28nm,1.2s											
F26K	Sheenjek River	72.31	22	P		P		16 11 04.5	+1.0			
	baz=258											
CTG	Chitna Glacier	72.36	30	P		P		16 11 04.5	+0.4			
	baz=263											
L27K	Beaver Creek,	72.42	27	P		P		16 11 04.9	+0.6			
	baz=262											
BCAR	Beaver Creek A	72.44	27	P		P		16 11 05.2	+0.7			
K27K	Chicken	72.46	26	P		P		16 11 05.8	+1.3			
	baz=261											
C26K	Camden Bay	72.53	20	P		P		16 11 05.8	+1.0			
	baz=256											
PINM	Pinnacle	72.79	31	P		P		16 11 06.8	+0.2			
	baz=264											
C27K	Jago River	72.87	20	IAmb		IAmb		16 11 08.9				
	comp=Z,17nm,0.9s											
C27K	Jago River	72.87	20	P		P		16 11 07.7	+0.8			
	baz=258											
O28M	Mount Upton	72.89	30	P		P		16 11 06.9	-0.6			
	baz=264											
I27K	Kandik River	72.91	25	P		P		16 11 07.8	+0.6			
	baz=261											
H27K	Steamboat Moun	73.05	24	P		P		16 11 08.2	+0.2			
	baz=261											
G27K	Doyon Strip	73.09	24	P		P		16 11 09.1	+0.8			
	baz=260											
YUK8	Steele Glacier	73.16	29	P		P		16 11 09.1	+0.1			
	baz=264											
PNL	Peninsula	73.18	31	P		P		16 11 09.0	+0.2			
	baz=265											
E27K	Coleen River	73.35	22	IAmb		IAmb		16 11 12.4				
	comp=Z,31nm,1.6s											
E27K	Coleen River	73.35	22	P		P		16 11 10.7	+1.0			
	baz=260											
I28M	Miner Creek	73.58	25	P		P		16 11 11.6	+0.4			
	baz=262											
DAWY	Dawson	73.64	26	P		P		16 11 11.8	+0.3			
	baz=263,SNR=7.2											
O29M	Mount Kennedy	73.64	30	IAmb		IAmb		16 11 25.3				
	comp=Z,11nm,0.8s											
O29M	Mount Kennedy	73.64	30	P		P		16 11 11.4	-0.3			
	baz=265											
YUK4	Talbot Arm	73.70	29	P		P		16 11 11.7	-0.4			
	baz=265											
D27M	Malcolm River	73.75	21	IAmb		IAmb		16 11 14.4				
	comp=Z,13nm,0.9s											
D27M	Malcolm River	73.75	21	P		P		16 11 12.4	+0.2			
	baz=260											
YUK6	Outpost Mounta	73.80	30	P		P		16 11 12.0	-0.8			
	baz=265											
M29M	Somme Creek	73.89	28	P		P		16 11 13.1	0.0			
	baz=265											
F28M	Old Crow	73.90	23	P		P		16 11 13.8	+0.8			
F28M				IAmb		IAmb		16 11 15.2				
	comp=Z,12nm,0.9s											
F28M	Old Crow	73.90	23	P		P		16 11 13.0	+0.1			
	baz=262,SNR=13											
P29M	Windy Craggy	74.01	31	P		P		16 11 13.1	-0.7			
	baz=266											
L29M	L29M	74.10	28	P		P		16 11 14.8	+0.5			
	baz=265,SNR=6.9											
E28M	Babbage River	74.17	22	P		P		16 11 15.1	+0.6			
	baz=262											
HYT	Haines Junctio	74.21	30	P		P		16 11 15.4	+0.4			
	baz=266											
H29M	Whitestone	74.31	24	P		P		16 11 16.4	+1.1			
	baz=264											
P30M	Million Dollar	74.44	31	P		P		16 11 16.1	-0.1			
	baz=267											
K29M	Barlow Dome	74.44	27	P		P		16 11 17.4	+1.1			
	baz=265											
N30M	Aishikik Lake	74.46	29	P		P		16 11 17.4	+1.0			
	baz=266											
G29M	Pine Creek	74.53	24	P		P		16 11 17.4	+0.8			
	baz=264											
D28M	Stokes Point	74.55	21	P		P		16 11 17.1	+0.5			
	baz=262											
M30M	Minto, Yukon	74.67	28	P		P		16 11 17.9	+0.4			
	baz=266											
PLBC	Pleasant Camp	74.70	31	P		P		16 11 17.8	+0.1			
	baz=267											
S31K	Pelican	74.71	33	P		P		16 11 18.4	+0.7			
	baz=268											
E29M	Blow River	74.74	22	P		P		16 11 19.0	+1.2			
	baz=264											
O30N	Mendenhall	74.90	30	P		P		16 11 19.5	+0.6			
	baz=267											
R31K	City Hall, Gus	74.98	33	P		P		16 11 20.0	+0.7			
	baz=268											
EPYK	Eagle Plains	74.99	24	P		P		16 11 19.8	+0.4			
	baz=265											
J30M	Hart River	75.02	26	IAmb		IAmb		16 11 22.5				
	comp=Z,32nm,1.8s											
J30M	Hart River	75.02	26	P		P		16 11 20.6	+1.0			
	baz=266											
I30M	Mount Dempster	75.04	25	P		P		16 11 20.5	+0.8			
	baz=266											
N31M	Braeburn, Yuko	75.08	29	P		P		16 11 20.8	+0.8			
	baz=267											
SIT	Sitka	75.17	34	P		P		16 11 20.7	+0.3			
	baz=269											
SKAG	Skagway	75.23	31	P		P		16 11 21.2	+0.4			
	baz=268											
G30M	tAoh Zraii Nji	75.24	24	P		P		16 11 21.5	+0.8			
	baz=266											
F30M	Barrier River	75.46	23	P		P		16 11 22.9	+1.0			
	baz=266											
WHY	Whitehorse	75.49	30	P		P		16 11 22.9	+0.5			
	baz=268											
S32K	Killisnoo	75.59	34	P		P		16 11 23.0	+0.2			
	baz=270											
R32K	Eaglecrest	75.63	33	IAmb		IAmb		16 11 28.4				
	comp=Z,12nm,0.7s											
R32K	Eaglecrest	75.63	33	P		P		16 11 23.3	+0.2			
	baz=269											
M31M	Drury Creek, Y	75.77	29	P		P		16 11 24.4	+0.5			
M31M	Drury Creek, Y	75.77	29	P		P		16 11 24.1	+0.3			
	baz=268											
H31M	Peel River	75.92	25	P		P		16 11 24.5	-0.1			
	baz=268											
G31M	Satah River	76.00	24	P		P		16 11 25.3	+0.3			
	baz=267											
P32M	Atlin	76.06	31	P		P		16 11 25.8	+0.2			
	baz=270											
F31M	Tsiigehtchic	76.23	23	P		P		16 11 26.3	0.0			
	baz=268											
INK	Inuvik	76.35	22	P		P		16 11 26.8	-0.2			
INK				IAmb		IAmb		16 11 28.2				
	comp=Z,17nm,1.1s											
INK	Inuvik	76.35	22	P		P		16 11 26.8	-0.2			
INK				pmax		pmax						
	comp=Z,17nm,1.1s											
INK	Inuvik	76.35	22	P		P		16 11 27.3	+0.3			
	baz=268											
U33K	Whale Pass	76.39	35	P		P		16 11 27.6	+0.1			
	baz=271											
CRAG	Craig	76.40	36	P		P		16 11 28.1	+0.6			
	baz=271											
HRA	Herat	76.49	303	IAmb		IAmb		16 11 30.1				
	comp=Z,13nm,0.8s											
Q32M	Nakina River	76.80	32	P		P		16 11 30.7	+0.7			
	baz=271											
WRAK	Wrangell Islan	76.82	35	P		P		16 11 30.7	+0.8			
	baz=272											
DIB	Dawson Inlet,	76.85	38	IAmb		IAmb		16 11 32.8				
	comp=Z,12nm,0.8s											
AB31	Akbulak array	77.12	318	P		P		16 11 31.3	-0.4			
AB31				IAmb		IAmb		16 11 32.3				
	comp=Z,9.2nm,0.7s											
ABKAR	Akbulak array	77.12	318	P		P		16 11 31.3	-0.4			
S34M	Telegraph Cree	77.43	33	IAmb		IAmb		16 11 37.3				
	comp=Z,23nm,1.4s											
S34M	Telegraph Cree	77.43	33	P		P		16 11 33.6	+0.3			
	baz=272											
R33M	Jennings River	77.46	31	IAmb		IAmb		16 11 37.3				
	comp=Z,34nm,1.6s											
R33M	Jennings River	77.46	31	P		P		16 11 33.7	+0.1			
	baz=272,SNR=6.6											
HG4B	Hotspring	77.67	39	IAmb		IAmb		16 11 37.9				
	comp=Z,10nm,0.8s											
ARTI	Arti	77.69	325	P		P		16 11 33.4	-1.3			
ARTI				IAmb		IAmb		16 11 34.7				
	comp=Z,9.4nm,0.5s											
ARTI	Arti	77.69	325	*d* iP		P		16 11 34.5	-0.3			
ARTI								16 14 31.0				
ARTI				S		S		16 21 27.3	+2.1			
ARTI				SS		SS		16 26 23.8	-1.1			
ARTI				pmax		pmax						
	comp=Z,10.0nm,1.2s											
T35M	Bob Quinn	77.95	34	P		P		16 11 36.4	+0.1			
	baz=273,SNR=5.2											
DLBC	Dease Lake	77.99	32	P		P		16 11 37.1	+0.6			
	baz=273											
WTLY	Watson Lake, Y	78.52	31	IAmb		IAmb		16 11 43.7				
	comp=Z,19nm,1.0s											
A36M	Sachs Harbour	79.10	18	P		P		16 11 42.3	0.0			
A36M				IAmb		IAmb		16 11 43.5				
	comp=Z,17nm,0.9s											
A36M	Sachs Harbour	79.10	18	P		P		16 11 43.0	+0.7			
	baz=275											
C36M	Paulatuk	79.74	21	P		P		16 11 46.3	+0.5			
	baz=276											
LIRD	Laird River Hi	79.94	31	P		P		16 11 48.1	+1.0			
	baz=276											
TOAD	Toad River Com	80.45	32	P		P		16 11 50.7	+0.8			
	baz=277											
WRGLY	Wrigley	80.74	27	P		P		16 11 52.7	+1.4			
	baz=278											
KOTAN	Kotaneelee Air	80.88	30	P		P		16 11 53.0	+0.8			
	baz=278											
KIRV	Kirov	82.26	328	*ce*P		P		16 12 00.0	+0.6			
CLRS	Cowichan Lake	82.53	42	IAmb		IAmb		16 12 06.4				
	comp=Z,14nm,1.2s											
NLWA	Neilton Lookou	82.94	43	IAmb		IAmb		16 12 08.6				
	comp=Z,14nm,1.1s											
B04A	Port Angeles	83.07	42	IAmb		IAmb		16 12 09.1				
	comp=Z,22nm,1.1s											
GNW	Green Mountain	83.61	43	IAmb		IAmb		16 12 11.8				
	comp=Z,14nm,1.0s											
KHMM	Horse Mountain	84.19	50	IAmb		IAmb		16 12 15.3				
	comp=Z,13nm,0.8s											
BELG	Belogornoye	84.44	322	*i* P		P		16 12 11.2	+0.4			
BELG				pmax		pmax						
	comp=Z,3.0nm,0.7s											
H04A	Detroit Lake	84.59	46	IAmb		IAmb		16 12 15.8				
	comp=Z,9.3nm,0.9s											
M02C	Callahan	84.75	49	IAmb		IAmb		16 12 18.3				
	comp=Z,6.7nm,0.8s											
YBH	Yreka Blue Hor	84.79	49	IAmb		IAmb		16 12 18.3				
	comp=Z,8.0nm,0.7s											
HOOD	Mount Hood Mea	84.83	45	IAmb		IAmb		16 12 21.0				
	comp=Z,11nm,0.9s											
YKA	Yellowknife Ar	84.86	27	P		P		16 12 12.8	+0.1			
YKA	Yellowknife Ar	84.86	27	P		P		16 12 13.5	+0.8			
	comp=Z,3.1nm,0.7s,baz=285,slow=5.9,SNR=9.4											
	comp=Z,3.1nm,0.7s											
YKA	Yellowknife Ar	84.86	27	*i* P		P		16 12 16.2	+3.5			
YKA				pmax		pmax						
	comp=Z,1.0nm,0.5s											
N02D	Trinity Center	84.94	49	IAmb		IAmb		16 12 21.1				
	comp=Z,27nm,1.8s											
WIFE	Three Sisters-	84.97	46	IAmb		IAmb		16 12 18.5				
	comp=Z,14nm,0.8s											
LTY	Liberty	85.11	43	IAmb		IAmb		16 12 21.4				
	comp=Z,20nm,1.5s											
M03C	McCloud	85.31	49	IAmb		IAmb		16 12 20.7				
	comp=Z,15nm,0.8s											
J05D	Fort Rock, OR	85.54	47	IAmb		IAmb		16 12 21.4				
	comp=Z,9.4nm,0.8s											
PINE	Pine Mountain	85.65	46	IAmb		IAmb		16 12 22.5				
	comp=Z,16nm,0.8s											
O03E	Paynes Creek	85.75	50	IAmb		IAmb		16 12 37.7				
	comp=Z,7.5nm,0.8s											
E07A	Sunnyside	85.80	43	IAmb		IAmb		16 12 22.6				
	comp=Z,11nm,1.1s											
K05A	Summer Lake	85.91	47	IAmb		IAmb		16 12 23.4				
	comp=Z,9.5nm,0.9s											
D08A	Wollman Farm,	86.31	43	IAmb		IAmb		16 12 24.4				
	comp=Z,12nm,1.0s											
RES	Resolute Bay	86.46	13	P		P		16 12 21.4	+1.0			
RES	Resolute Bay	86.46	13	P		P		16 12 21.4	+1.0			
RES				pmax		pmax						
	comp=Z,8.0nm,1.0s											
C09A	Chrisman Ranch	86.57	42	IAmb		IAmb		16 12 25.9				
	comp=Z,11nm,0.8s											
KLMR	Klimovskoe	86.57	332	*e*P		P		16 12 17.6	-3.6			
KLMR				pmax		pmax						
	comp=Z,12nm,1.8s											
APA	Apatity	86.69	339	‖ *e*P		P		16 12 17.3	-4.4			
BEKR	Beckworth	86.92	50	IAmb		IAmb		16 12 28.6				
	comp=Z,6.6nm,0.7s											
LNOR	Lincton Mounta	87.02	44	IAmb		IAmb		16 12 28.1				
	comp=Z,15nm,1.4s											
NEW	Newport	87.20	41	P		P		16 12 25.0	+0.3			
NEW	Newport	87.20	41	P		P		16 12 25.0	+0.3			
NEW				pmax		pmax						
	comp=Z,18nm,0.9s											
MPK	Martis Peak	87.29	51	IAmb		IAmb		16 12 30.6				
	comp=Z,9.0nm,1.0s											
CMB	Columbia Colle	87.30	52	IAmb		IAmb		16 12 31.1				
	comp=Z,21nm,1.7s											
PKD	Bear Valley Ra	87.64	54	IAmb		IAmb		16 12 32.4				
	comp=Z,9.2nm,0.8s											
PNTR	Pine Nut	87.67	51	IAmb		IAmb		16 12 34.5				
	comp=Z,9.2nm,0.7s											
F10A	Beach Ranch, E	87.71	44	IAmb		IAmb		16 12 31.9				
	comp=Z,7.3nm,1.0s											
WAKR	Walker	87.92	51	IAmb		IAmb		16 13 01.3				
	comp=Z,12nm,1.6s											
BMO	Blue Mountains	87.94	45	P		P		16 12 27.9	-0.5			
BMO	Blue Mountains	87.94	45	P		P		16 12 27.9	-0.5			
BMO				pmax		pmax						
	comp=Z,14nm,0.9s											
ARCES	ARCESS Array B	88.40	342	P		P		16 12 29.8	-0.1			
ARCES	ARCESS Array B	88.40	342	P		P		16 12 30.2	+0.3			
	comp=Z,3.5nm,0.7s,baz=64,slow=5.5,SNR=8.0											
	comp=Z,3.5nm,0.7s											
NVAR	Mina Array Bea	88.81	51	P		P		16 12 32.6	-0.2			
NVAR	Mina Array Bea	88.81	51	P		P		16 12 34.6	+1.9			
	comp=Z,8.6nm,0.7s,baz=267,slow=5.6,SNR=28											
	comp=Z,8.6nm,0.7s											
NV11	Mina Array Sit	88.92	51	IAmb		IAmb		16 12 40.0				
	comp=Z,5.8nm,0.8s											
MFID	Camas Ranch	89.34	46	IAmb		IAmb		16 12 39.7				
	comp=Z,15nm,0.9s											
KIV	Kislovodsk	89.72	315	*e*P		P		16 12 33.6	-3.1			
KIV				pmax		pmax						
	comp=Z,5.0nm,1.1s											
KIV				MLR		MLR						
	comp=Z,32nm,20.0s											
VNDA	Vanda	89.82	176	LR		LR		16 49 31.1				
	comp=Z,38nm,20.4s,baz=312,slow=33											
OBN	Obninsk	89.97	327	‖ *e*P		P		16 12 37.8	+0.3			
OBN				*e*SP		pP		16 12 42.4	-1.0			
OBN				S		SKSac		16 23 06.0	-0.6			
OBN				PS		PS		16 24 59.0	+21			
OBN				SS		SS		16 29 28.0	+1.8			
OBN				pmax		pmax						
	comp=Z,9.0nm,0.7s											
OBN				MLR		MLR						
	comp=Z,41nm,17.0s											
CLC	China Lake	90.00	53	IAmb		IAmb		16 12 43.9				
	comp=Z,26nm,1.9s											
LRMC	Laurel Mtn Rad	90.02	54	IAmb		IAmb		16 12 45.7				
	comp=Z,6.7nm,0.7s											
ELK	Elko	90.49	48	P		P		16 12 42.3	+1.7			
	comp=Z,3.0nm,0.7s,baz=281,slow=3.5,SNR=16											
	comp=Z,3.0nm,0.7s											
WCT	Wildcat Mounta	90.51	52	IAmb		IAmb		16 12 47.1				
	comp=Z,5.8nm,0.7s											
QSM	Queen of Sheba	90.53	53	IAmb		IAmb		16 12 50.6				
	comp=Z,7.5nm,0.7s											
TPNV	Topopah Spring	90.76	52	IAmb		IAmb		16 12 58.4				
	comp=Z,8.2nm,0.7s											
BCYI	Bear Canyon	90.77	44	IAmb		IAmb		16 12 46.5				
	comp=Z,9.6nm,1.2s											
R11B	Troy Canyon, C	90.89	51	IAmb		IAmb		16 12 48.4				
	comp=Z,11nm,1.6s											
DLMT	Dillon	91.00	43	IAmb		IAmb		16 12 47.6				
	comp=Z,14nm,1.6s								

RUSC	**La Rusia**	**0.94**	**181**	P		**Pn**	**16 05 16.0**	**+0.5**
RUSC				S		**Sn**	**16 05 33.5**	**-1.4**
RUSC	**La Rusia**	**0.94**	**181**	P		**Pn**	**16 05 15.6**	**+0.1**
RUSC				S		**Sn**	**16 05 33.6**	**-1.2**
PTBC	**PUERTO BERRIO,**	**1.41**	**258**	P		**Pn**	**16 05 18.1**	**-1.0**
PTBC				S		**Sn**	**16 05 39.5**	**-1.8**
OCAC	**Ocana**	**1.41**	**350**	P		**Pn**	**16 05 19.7**	**+0.4**
OCAC				S		**Sn**	**16 05 41.7**	**0.0**
SPBC	**San Pablo de B**	**1.54**	**220**	P		**Pn**	**16 05 20.5**	**-0.1**
SPBC				S		**Sn**	**16 05 42.5**	**-1.5**
CHIC	**Chingaza**	**2.29**	**197**	P		**Pn**	**16 05 29.6**	**+0.1**
CHIC				S		**Sn**	**16 05 59.2**	**-0.5**
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**	**16 05 30.9**	**+0.9**
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**	**16 05 31.6**	**+1.5**
	1µm,0.4s,baz=303,slow=22,SNR=319							
ROSC				S		**Sn**	**16 06 03.0**	**+2.3**
	5µm,0.5s,baz=336,slow=19,SNR=14							
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**	**16 05 31.3**	**+1.3**
ROSC				S		**Sn**	**16 06 00.7**	**0.0**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	P		**Pn**	**16 05 33.1**	**+1.0**
CVER				S		**Sn**	**16 06 04.9**	**+0.4**
HELC	**Santa Helena**	**2.52**	**255**	P		**Pn**	**16 05 32.6**	**+0.5**
HELC				S		**Sn**	**16 06 03.4**	**-1.1**
HELC	**Santa Helena**	**2.52**	**255**	P		**Pn**	**16 05 32.2**	**0.0**
HELC				S		**Sn**	**16 06 03.4**	**-1.1**
UREC	**San Jos de Ur**	**2.60**	**290**	P		**Pn**	**16 05 31.6**	**-1.2**
UREC				S		**Sn**	**16 06 03.1**	**-2.6**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	P		**Pn**	**16 05 34.9**	**-0.2**
PTGC				S		**Sn**	**16 06 08.6**	**-1.3**
GUY2C	**Guyana, Caldas**	**2.79**	**235**	P		**Pn**	**16 05 35.6**	**+0.1**
GUY2C				S		**Sn**	**16 06 10.4**	**-0.1**
CBOC	**Ciudad Bolivar**	**3.08**	**252**	P		**Pn**	**16 05 38.9**	**0.0**
CBOC				S		**Sn**	**16 06 15.1**	**-1.4**
DBBC	**Dabeiba**	**3.12**	**273**	P		**Pn**	**16 05 38.8**	**-0.5**
DBBC				S		**Sn**	**16 06 14.8**	**-2.5**
SDV	**Santo Domingo**	**3.16**	**50**			**Pn**	**16 05 41.1**	**+1.1**
SDV	**Santo Domingo**	**3.16**	**50**	P		**Pn**	**16 05 41.3**	**+1.4**
	403nm,0.4s,baz=184,slow=3.3,SNR=278							
SDV				S		**Sn**	**16 06 18.6**	**+0.2**
	436nm,0.4s,baz=28,slow=15,SNR=27							
SDV	**Santo Domingo**	**3.16**	**50**	P		**Pn**	**16 05 41.0**	**+1.1**
ARGC	**Ariguani, Magd**	**3.21**	**339**	P		**Pn**	**16 05 41.4**	**+1.0**
ARGC				S		**Sn**	**16 06 20.3**	**+0.9**
PRAC	**Prado**	**3.59**	**210**	P		**Pn**	**16 05 45.6**	**+0.3**
PRAC				S		**Sn**	**16 06 27.7**	**-0.6**
PRAC	**Prado**	**3.59**	**210**	P		**Pn**	**16 05 44.5**	**-0.9**
PRAC				S		**Sn**	**16 06 27.2**	**-1.0**
ORTC	**Ortega, Tolima**	**3.63**	**217**	P		**Pn**	**16 05 45.4**	**-0.4**
ORTC				S		**Sn**	**16 06 29.0**	**0.0**
APAC	**Apartado, Choc**	**3.63**	**287**	P		**Pn**	**16 05 45.5**	**-0.3**
APAC				S		**Sn**	**16 06 26.4**	**-2.6**
SJCC	**San Jacinto, C**	**3.68**	**326**	P		**Pn**	**16 05 45.5**	**-1.0**
SJCC				S		**Sn**	**16 06 26.9**	**-3.3**
SJCC	**San Jacinto, C**	**3.68**	**326**	P		**Pn**	**16 05 45.2**	**-1.3**
SJCC				S		**Sn**	**16 06 26.5**	**-3.7**
URMC	**La Uribe, Meta**	**3.80**	**200**	P		**Pn**	**16 05 48.1**	**0.0**
URMC				S		**Sn**	**16 06 32.3**	**-0.8**
LCBC	**Los crdobas,**	**3.83**	**302**	P		**Pn**	**16 05 48.1**	**-0.2**
LCBC				S		**Sn**	**16 06 33.1**	**-0.4**
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P		**Pn**	**16 05 51.9**	**-0.3**
CRJC				S		**Sn**	**16 06 39.1**	**-2.3**
GUVC	**San Jose del G**	**4.29**	**174**	P		**Pn**	**16 05 53.6**	**-0.8**
GUVC				S		**Sn**	**16 06 42.3**	**-2.2**
YOTC	**Yotoco, Valle**	**4.32**	**229**	P		**Pn**	**16 05 54.3**	**-0.6**
YOTC				S		**Sn**	**16 06 46.5**	**+1.2**
SMRC	**Santa Marta, M**	**4.44**	**345**			**Pn**	**16 05 56.6**	**+0.3**
SMRC	**Santa Marta, M**	**4.44**	**345**	P		**Pn**	**16 05 56.7**	**+0.4**
SMRC				S		**Sn**	**16 06 44.7**	**-3.2**
CAPC	**Capurgana**	**4.60**	**293**	P		**Pn**	**16 06 00.6**	**+2.2**
CAPC				S		Sn	16 06 43.6	-8.0
PTAC	**Punta Ardita,**	**4.71**	**274**	P		**Pn**	**16 05 58.6**	**-1.2**
PTAC				S		**Sn**	**16 06 52.3**	**-1.9**
MACC	**Macarena, Meta**	**4.73**	**189**	P		**Pn**	**16 05 58.6**	**-1.6**
MACC				S		**Sn**	**16 06 50.7**	**-4.1**
BETC	**Betania**	**4.76**	**210**	P		**Pn**	**16 05 59.9**	**-0.7**
BETC				S		**Sn**	**16 06 52.7**	**-2.8**
URI	**Uribia**	**4.94**	**12**	P		**Pn**	**16 06 02.1**	**-0.8**
URI				S		**Sn**	**16 06 57.3**	**-2.5**
URIC	**Uribia, Colomb**	**4.95**	**12**	P		**Pn**	**16 06 01.8**	**-1.1**
URIC				S		**Sn**	**16 06 56.5**	**-3.3**
BAUV	**El Baul**	**5.40**	**67**			**Pn**	**16 06 07.8**	**-1.3**
POPC	**Popayan, Colom**	**5.58**	**220**	P		**Pn**	**16 06 11.3**	**-0.3**
	755nm65nm,0.7s							
POPC				S		**Sn**	**16 07 12.3**	**-3.0**
	755nm65nm,0.7s							
FLOC	**Florencia**	**5.82**	**206**			**Pn**	**16 06 13.8**	**-0.8**
FLOC	**Florencia**	**5.82**	**206**	P		**Pn**	**16 06 13.6**	**-1.0**
FLOC				S		**Sn**	**16 07 19.6**	**-1.1**
FLOC	**Florencia**	**5.82**	**206**	P		**Pn**	**16 06 13.7**	**-1.0**
	4µm142nm,0.6s							
FLOC				S		**Sn**	**16 07 17.7**	**-3.1**
	4µm142nm,0.6s							
CRUC	**La Cruz**	**6.51**	**217**	P		**Pn**	**16 06 25.8**	**+1.7**
	13µm547nm,0.5s							
PTLC	**Puerto Leguiza**	**6.85**	**195**	P		**Pn**	**16 06 31.4**	**+3.1**
	1µm87nm,0.4s							
GCUF	**Volcan Galeras**	**7.02**	**218**	P		**Pn**	**16 06 32.1**	**+1.1**
OTAV	**Otavalo**	**8.47**	**219**			**Pn**	**16 06 50.1**	**-0.3**
COHC	**Cochancay**	**11.12**	**214**	Pn		**Pn**	**16 07 25.1**	**+0.2**
STH	**Stony Hill**	**11.74**	**342**	*i* P		**Pn**	**16 07 36.4**	**+3.3**
MTDJ	**Mount Denham**	**12.12**	**339**			**Pn**	**16 07 39.6**	**+1.6**
MTDJ	**Mount Denham**	**12.12**	**339**	*i* P		**P**	**16 07 41.2**	**-2.8**
MTDJ	**Mount Denham**	**12.12**	**339**	*i* P		**Pn**	**16 07 41.0**	**+3.0**
MTDJ					IAmb	IAmb	16 07 42.0	
	comp=Z,110nm,0.5s							
JTS	**Las Juntas de**	**12.23**	**287**	P		**P**	**16 07 47.5**	**+2.0**
	comp=Z,12nm,0.5s,baz=53,slow=20,SNR=8.9							
DR12	**Loma Pena Alta**	**12.41**	**17**	Pn		**Pn**	**16 07 43.1**	**+1.4**
GTBY	**Guantanamo Bay**	**13.16**	**352**	*i* P		**P**	**16 07 54.2**	**-1.4**
GTBY					IAmb	IAmb	16 07 55.9	
	comp=Z,67nm,0.6s							
BOAV	**Boa Vista**	**13.27**	**109**	Pn		**Pn**	**16 07 51.9**	**-0.8**
MASC	**Masc**	**13.30**	**355**	*i* P		**Pn**	**16 07 54.7**	**+1.6**
MASC					IAmb	IAmb	16 08 01.6	
	comp=Z,46nm,1.2s							
RCC	**Rio Carpintero**	**13.32**	**349**	*i* P		**P**	**16 07 55.3**	**-2.1**
RCC					IVmB_BB		16 07 58.2	
	comp=Z,2µm,1.0s							
RCC					IAmb	IAmb	16 07 58.4	
	comp=Z,71nm,0.5s							
MARVS	**Santiago de Cu**	**13.36**	**348**	*i* P		**P**	**16 07 56.2**	**-1.7**
MARVS					IAmb	IAmb	16 07 58.9	
	comp=Z,30nm,0.7s							
MARVS					IVmB_BB		16 08 24.1	
	comp=Z,2µm,1.0s							
QMBU	**Quimbuelo**	**13.38**	**353**	*i* P		**P**	**16 07 56.9**	**-1.3**
QMBU					IAmb	IAmb	16 08 01.4	
	comp=Z,36nm,1.4s							
CHIV	**Chivirico**	**13.45**	**346**	*i* P		**P**	**16 07 57.4**	**-1.5**
CHIV					IVmB_BB		16 08 03.9	
	comp=Z,640nm,1.0s							
CHIV					IAmb	IAmb	16 08 15.7	
	comp=Z,11nm,1.3s							
SABCS	**La Quijada**	**13.61**	**351**	*i* P		**P**	**16 07 59.1**	**-1.7**
LMGC	**Las Mercedes**	**13.69**	**344**	*i* P		**P**	**16 08 01.1**	**-0.4**
LMGC					IAmb	IAmb	16 08 03.8	
	comp=Z,12nm,0.9s							
LMGC					IVmB_BB		16 08 25.1	
	comp=Z,1µm,1.0s							
NMDO	**Nuevo Mundo**	**13.76**	**352**	*i* P		**P**	**16 08 01.9**	**-0.5**
NMDO					IAmb	IAmb	16 08 07.4	
	comp=Z,27nm,0.6s							
PINC	**Pinares de May**	**13.82**	**349**	*i* P		**P**	**16 08 02.7**	**-0.3**
PINC					IVmB_BB		16 08 04.7	
	comp=Z,700nm,1.0s							
PINC					IAmb	IAmb	16 08 05.0	
	comp=Z,54nm,0.5s							
YAR	**Yar**	**13.82**	**347**	*i* P		**P**	**16 08 03.1**	**+0.1**
YAR					IAmb	IAmb	16 08 06.1	
	comp=Z,32nm,1.0s							
MPOM	**Morne Pois Mar**	**14.18**	**57**	Pn		**P**	**16 08 04.7**	**-2.3**
HLGC	**Holguin**	**14.26**	**349**	*i* P		**P**	**16 08 11.7**	**+3.8**
HLGC					IAmb	IAmb	16 08 12.9	
	comp=Z,27nm,0.6s							
CBCY	**The Bluff, Cay**	**14.37**	**334**	*i* P		**P**	**16 08 10.2**	**+1.1**
CBCY					IAmb	IAmb	16 08 19.1	
	comp=Z,140nm,1.0s							
CCCC	**Cccc**	**14.98**	**343**	*i* P		**P**	**16 08 19.8**	**+3.9**
CCCC					IAmb	IAmb	16 08 22.8	
	comp=Z,13nm,0.7s							
MGV	**Manicaragua**	**16.58**	**337**	*i* P		Pn	16 08 41.7	+7.9
MGV					IAmb	IAmb	16 08 46.2	
	comp=Z,16nm,0.4s							
MGV					IVmB_BB		16 09 05.0	
	comp=Z,16nm,1.0s							
TEIG	**Tepich**	**19.86**	**314**	P		**P**	**16 09 11.3**	**+1.9**
TEIG					IAmb	IAmb	16 09 55.0	
	comp=Z,37nm,1.4s							
LPAZ	**La Paz**	**23.50**	**168**	IAmb		IAmb	16 10 22.2	
	comp=Z,6.6nm,1.1s							
LPAZ	**La Paz**	**23.50**	**168**	P		**P**	**16 09 44.4**	**-2.5**
	comp=Z,0.5nm,0.4s,baz=0.0,slow=8.1,SNR=2.3							
	comp=Z,0.5nm,0.4s							
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**16 11 41.2**	**+0.5**
TXAR						**PcP**	**16 14 01.6**	**+0.2**
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**16 11 41.5**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=128,slow=9.6,SNR=18							
TXAR					PcP	**PcP**	**16 14 02.7**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=126,slow=6.4,SNR=6.2							
	comp=Z,1.0nm,0.6s							
TX31	**Lajitas Ar. Si**	**36.48**	**312**	P		**P**	**16 11 41.2**	**+0.5**
MNTX	**Cornudas Mount**	**38.99**	**314**	P		**P**	**16 12 02.2**	**+0.6**
MNTX					IAmb	IAmb	16 12 04.0	
	comp=Z,2.4nm,0.7s							
LMN	**Caledonia Moun**	**39.52**	**9**	P		**P**	**16 12 07.1**	**+1.3**
LMN					IAmb	IAmb	16 12 19.4	
	comp=Z,11nm,1.0s							
D62A	**Allapoint, All**	**40.24**	**4**	P		**P**	**16 12 12.9**	**+1.2**
D62A					IAmb	IAmb	16 12 21.5	
	comp=Z,20nm,1.4s							
BATG	**Bathurst New B**	**40.73**	**7**	P		**P**	**16 12 17.2**	**+1.4**
BATG					IAmb	IAmb	16 12 31.2	
	comp=Z,22nm,1.3s							
SDCO	**Great Sand Dun**	**42.56**	**321**	P		**P**	**16 12 32.1**	**+0.9**
PV13	**Radium Mtn., P**	**44.92**	**319**	P		**P**	**16 12 51.1**	**+1.2**
PV13					IAmb	IAmb	16 13 19.2	
	comp=Z,5.5nm,1.2s							
U15A	**North Rim**	**46.34**	**315**	P		**P**	**16 13 01.8**	**+0.6**
BSUT	**Blindstream Ca**	**47.51**	**321**	P		**P**	**16 13 11.9**	**+1.6**
BSUT					IAmb	IAmb	16 13 36.5	
	comp=Z,6.1nm,1.4s							
PDAR	**Pinedale Array**	**48.09**	**324**			**PcP**	**16 14 39.6**	**-0.2**
PDAR	**Pinedale Array**	**48.09**	**324**	PcP		**PcP**	**16 14 38.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=69,slow=4.2,SNR=2.4							
SCHQ	**Schefferville**	**48.12**	**5**	P		**P**	**16 13 15.5**	**+1.3**
SCHQ	**Schefferville**	**48.12**	**5**	P		**P**	**16 13 14.9**	**+0.7**
	comp=Z,3.3nm,0.6s,baz=195,slow=8.5,SNR=2.4							
	comp=Z,3.3nm,0.6s							
DSP	**Deep Springs**	**50.81**	**313**	P		**P**	**16 13 36.3**	**+1.4**
NVAR	**Mina Array Bea**	**51.50**	**315**	PcP		**PcP**	**16 14 50.3**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=120,slow=2.5,SNR=2.0							
I07A	**Izee**	**54.88**	**320**	P		**P**	**16 14 05.8**	**+0.9**
I07A					IAmb	IAmb	16 14 39.0	
	comp=Z,4.8nm,1.5s							
PINE	**Pine Mountain**	**55.66**	**319**	P		**P**	**16 14 12.1**	**+1.5**
PINE					IAmb	IAmb	16 14 13.5	
	comp=Z,4.2nm,0.9s							
WIFE	**Three Sisters-**	**56.35**	**319**	P		**P**	**16 14 16.6**	**+1.1**
WIFE					IAmb	IAmb	16 14 36.2	
	comp=Z,7.8nm,1.4s							
YKAW3	**Yellowknife Wh**	**63.31**	**340**	P		**P**	**16 15 03.4**	**+1.1**
YKAW3					IAmb	IAmb	16 15 20.3	
	comp=Z,11nm,0.9s							
M30M	**Minto, Yukon**	**72.03**	**334**	P		**P**	**16 15 58.1**	**+1.1**
INK	**Inuvik**	**73.03**	**340**	P		**P**	**16 16 03.8**	**+1.1**
INK					IAmb	IAmb	16 16 27.6	
	comp=Z,9.8nm,1.5s							
BCAR	**Beaver Creek A**	**74.36**	**334**	P		**P**	**16 16 12.1**	**+1.4**
BMAR	**Burnt Mountain**	**76.66**	**338**	P		**P**	**16 16 24.7**	**+0.9**
ILAR	**Eielson Array**	**76.96**	**335**	P		**P**	**16 16 26.2**	**+0.8**
ILAR	**Eielson Array**	**76.96**	**335**	P		**P**	**16 16 25.8**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=117,slow=4.6,SNR=5.8							
	comp=Z,0.3nm,0.7s							
RND	**Reindeer**	**77.56**	**333**	P		**P**	**16 16 30.2**	**+1.3**
RND					IAmb	IAmb	16 16 30.7	
	comp=Z,2.2nm,0.7s							
SUA	**Susitna One**	**78.13**	**331**	P		**P**	**16 16 32.9**	**+0.7**
PPLA	**Purkeypile**	**78.98**	**333**	P		**P**	**16 16 37.3**	**+0.5**
PPLA					IAmb	IAmb	16 17 04.9	
	comp=Z,16nm,1.3s							
NBO00	**NORSAR Array S**	**81.07**	**29**	P		**P**	**16 16 48.3**	**+0.4**
D19K	**Kuna River**	**81.86**	**338**	P		**P**	**16 16 53.0**	**+1.1**
D19K					IAmb	IAmb	16 17 14.5	
	comp=Z,20nm,1.4s							
C19K	**Lookout Ridge**	**82.41**	**339**	P		**P**	**16 16 56.4**	**+1.7**
ARCES	**ARCESS Array B**	**86.64**	**20**	P		**P**	**16 17 15.0**	**-1.0**
	comp=Z,4.4nm,0.9s,baz=263,slow=5.4,SNR=4.1							
	comp=Z,4.4nm,0.9s							
SNAA	**Sanae**	**90.35**	**163**	P		**P**	**16 17 31.8**	**-1.6**
SNAA	**Sanae**	**90.35**	**163**	P		**P**	**16 17 31.3**	**-2.1**
	comp=Z,1.2nm,1.0s,baz=5.8,slow=4.9,SNR=3.6							
	comp=Z,1.2nm,1.0s							
MKAR	**Makanchi Array**	**122.29**	**20**	PKP		**PKPdf**	**16 23 25.9**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=301,slow=2.8,SNR=4.5							
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc		**PKPbc**	**16 24 20.1**	**-1.2**
	comp=Z,4.1nm,0.7s,baz=116,slow=3.6,SNR=9.4							
WRA	**Warrmunga**	**150.39**	**241**	PKP		**PKPdf**	**16 24 18.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=107,slow=2.3,SNR=5.0							
WRA				PKPbc		**PKPbc**	**16 24 23.4**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=107,slow=3.2,SNR=6.1							
CMAR	**Chiang Mai Arr**	**153.66**	**17**	PKPbc		**PKiKP**	**16 24 31.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=328,slow=3.4,SNR=4.7							

*IDC **05** 16:04:59.8±2.2,23°.27N×142°.08E,h0km,mb3.8/5, mbtmp3.8/7,ML3.4/2,Error ellipse: s-maj=87.8km s-min=20.7km az=82.0*
*NEIC **05** 16:05:01.6±1.6,23°.32N±0°.07×142°.2E±0°.2,h10km±1km, mb4.2/10,Error ellipse: s-maj=30.6km s-min=11.6km az=83.0*

ISC 05 16:05:04.6±0.9,23°.35N±0°.08×142°.1E±0°.2,h35km,n20, σ0s75/21,mb4.1/10,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**3.73**	**1**	Pn		**Pn**	**16 06 00.0**	**+0.3**
	14nm,0.3s,baz=84,slow=22,SNR=43							
JCJ				Sn		**Sn**	**16 06 41.1**	**-1.3**
	26nm,0.3s,baz=146,slow=23,SNR=13							
	34nm,0.3s							
MJAR	**Matsushiro Arr**	**13.57**	**347**	Pn		**Pn**	**16 08 14.3**	**-0.3**
	baz=160,slow=14,SNR=1.4							
	0.5nm,0.5s							
WB0	**Warramunga Arr**	**43.51**	**191**	P		**P**	**16 13 04.6**	**-0.3**
WB0					IAmb	IAmb	16 13 28.2	
	comp=Z,8.4nm,1.5s							
WR8	**Warramunga Arr**	**43.68**	**190**	P		**P**	**16 13 06.6**	**+0.3**
WR8					IAmb	IAmb	16 13 14.7	
	comp=Z,3.7nm,1.1s							
WRAB	**Tennant Creek**	**43.68**	**191**	P		**P**	**16 13 06.9**	**+0.6**
WRAB					IAmb	IAmb	16 13 39.6	
	comp=Z,4.8nm,1.1s							
WRA	**Warramunga Arr**	**43.69**	**191**	P		**P**	**16 13 05.5**	**-0.8**
	comp=Z,0.7nm,0.2s,baz=11,slow=8.0,SNR=8.0							
	comp=Z,0.7nm,0.2s							
FITZ	**Fitzroy Crossi**	**44.22**	**203**	P		**P**	**16 13 11.4**	**+0.8**
ASAR	**Alice Springs**	**47.41**	**190**	P		**P**	**16 13 36.0**	**+0.2**
	comp=Z,0.3nm,1.1s,baz=1.7,slow=6.8,SNR=1.5							
	comp=Z,0.3nm,1.1s							
MKAR	**Makanchi Array**	**52.85**	**312**	P		**P**	**16 14 17.1**	**+0.2**
MKAR	**Makanchi Array**	**52.85**	**312**	P		**P**	**16 14 18.1**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=96,slow=7.7,SNR=4.2							
	comp=Z,0.3nm,0.5s							
MAKZ	**Makanchi**	**53.06**	**312**	P		**P**	**16 14 18.9**	**+0.5**
MAKZ					IAmb	IAmb	16 14 26.6	
	comp=Z,4.4nm,1.4s							
GIRL	**Giralia**	**53.15**	**213**	P		**P**	**16 14 17.8**	**-1.4**
KURK	**Kurchatov**	**55.59**	**316**	P		**P**	**16 14 37.4**	**+0.7**
KURK					IAmb	IAmb	16 14 47.9	
	comp=Z,1.5nm,0.9s							
KURBB	**Kurchatov Arra**	**55.64**	**316**	P		**P**	**16 14 37.9**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=91,slow=8.4,SNR=12							
	comp=Z,0.9nm,0.4s							
N18K	**Kilae Creek**	**56.26**	**32**	P		**P**	**16 14 41.8**	**+0.4**
BVAR	**Borovoye Array**	**60.77**	**319**	P		**P**	**16 15 13.2**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=90,slow=7.2,SNR=9.6							
	comp=Z,2.2nm,0.5s							
KKAR	**Karatay Array**	**61.25**	**308**	P		**P**	**16 15 17.2**	**+0.9**
M31M	**Drury Creek, Y**	**66.62**	**30**	P		**P**	**16 15 51.5**	**+0.1**
AB31	**Akbulak array**	**67.67**	**315**	P		**P**	**16 15 58.0**	**-0.1**
ABKAR	**Akbulak array**	**67.67**	**315**	P		**P**	**16 15 57.9**	**-0.2**

*NOU **05** 16:10:38.7,25°.10S×180°.00E,h509km,mb4.2/30,South of Fiji Islands*
*NEIC **05** 16:10:40.3±1.2,25°.0S±0°.1×179°.78E±0°.08,h503km±8km, mb4.5/49,Error ellipse: s-maj=17.4km s-min=10.1km az=170.0*

*IDC **05** 16:10:43.0±2.2,24°.89S×179°.57E,h531km±23km, mb3.4/12,mbtmp4.3/13,Error ellipse: s-maj=24.2km s-min=12.1km az=159.0*

ISC 05 16:10:39.6±0.4,25°.11S±0°.06×179°.77E±0°.06,h501km, n143,σ1s43/149,mb4.3/34,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**4.61**	**154**	P		**P**	**16 12 04.5**	**+1.5**
GLKZ	**Green Lake**	**4.62**	**154**	P		**P**	**16 12 04.3**	**+1.2**
GLKZ				S		**S**	**16 13 15.1**	**+3.8**
MSVF	**Nonsavu**	**7.52**	**347**	P		**P**	**16 12 30.5**	**-0.8**
MSVF	**Nonsavu**	**7.52**	**347**	P		**P**	**16 12 30.5**	**-0.8**
MARNC	**Mare, Loyalty**	**11.38**	**286**	P		**P**	**16 13 12.0**	**+0.4**
MARNC	**Mare, Loyalty**	**11.38**	**286**	P		**P**	**16 13 13.0**	**+1.4**
MARNC	**Mare, Loyalty**	**11.38**	**286**	S		**S**	**16 15 20.0**	**+3.2**
PINNC	**Pines Island,**	**11.55**	**280**	P		**P**	**16 13 14.3**	**+0.9**
PINNC	**Pines Island,**	**11.55**	**280**	P		**P**	**16 13 15.0**	**+1.6**
WCZ	**Waipu Caves**	**11.76**	**202**	P		**P**	**16 13 17.4**	**+2.0**
KUZ	**Kuaotunu**	**12.10**	**196**	P		**P**	**16 13 19.8**	**+0.8**
KUZ	**Kuaotunu**	**12.10**	**196**	P		**P**	**16 13 20.0**	**+0.9**
YATNC	**Mamie plateau,**	**12.19**	**282**	P		**P**	**16 13 21.8**	**+1.5**
WIAZ	**Waiheke Island**	**12.30**	**198**	P		**P**	**16 13 22.5**	**+1.4**
MXZ	**Matakaoa Point**	**12.47**	**185**	P		**P**	**16 13 22.3**	**-0.7**
MXZ	**Matakaoa Point**	**12.47**	**185**	S		**S**	**16 15 37.6**	**-0.1**
MXZ	**Matakaoa Point**	**12.47**	**185**	P		**P**	**16 13 24.2**	**+1.3**
MKAZ	**Moumakai**	**12.58**	**197**	P		**P**	**16 13 25.2**	**+1.1**
DZM	**Mont Dzumac**	**12.59**	**281**	P		**P**	**16 13 26.1**	**+1.5**
	26nm,0.9s,baz=67,slow=21,SNR=17							
HAZ	**Te Kaha**	**12.72**	**187**	P		**P**	**16 13 25.5**	**0.0**
WMGZ	**Waiomatatini S**	**12.72**	**185**	P		**P**	**16 13 26.1**	**+0.5**
WMGZ				S		**S**	**16 15 40.5**	**-1.9**
PKGZ	**Pakihiroa**	**12.79**	**186**	P		**P**	**16 13 26.6**	**+0.2**
PKGZ				S		**S**	**16 15 40.4**	**-3.6**
RUGZ	**Raukumara Rang**	**12.94**	**187**	P		**P**	**16 13 30.0**	**+2.0**
TOZ	**Tahuroa Road**	**13.09**	**195**	P		**P**	**16 13 29.8**	**+0.3**
TWGZ	**Tauwhareparae**	**13.11**	**186**	P		**P**	**16 13 29.2**	**-0.6**
URZ	**Urewera**	**13.30**	**189**	P		**P**	**16 13 29.2**	**-2.4**
	14nm,0.7s,baz=259,slow=3.4,SNR=20							
URZ				S		**S**	**16 15 50.0**	**-3.6**
	6.2nm,0.5s,baz=216,slow=23,SNR=10.0							
URZ	**Urewera**	**13.30**	**189**	P		**P**	**16 13 30.7**	**-1.0**
URZ	**Urewera**	**13.30**	**189**	S		**S**	**16 15 53.8**	**+0.2**
URZ	**Urewera**	**13.30**	**189**	P		**P**	**16 13 29.6**	**-2.1**
MWZ	**Matawai**	**13.32**	**188**	P		**P**	**16 13 31.7**	**-0.3**
MWZ				S		**S**	**16 15 50.9**	**-3.2**
TLZ	**Tolley Road**	**13.66**	**194**	P		**P**	**16 13 37.0**	**+1.5**
AFI	**Afiamalu**	**13.70**	**37**	P		**P**	**16 13 35.2**	**-1.1**
RAHZ	**Arahi**	**13.95**	**189**	P		**P**	**16 13 37.4**	**-1.1**
RAHZ				S		**S**	**16 16 04.7**	**-1.5**
HIZ	**Hauiti**	**13.99**	**196**	P		**P**	**16 13 39.0**	**0.0**
HIZ	**Hauiti**	**13.99**	**196**	P		**P**	**16 13 41.9**	**+2.9**
RATZ	**Rangitukua**	**14.12**	**193**	P		**P**	**16 13 39.6**	**-0.8**
BKZ	**Black Stump Fm**	**14.28**	**190**	P		**P**	**16 13 41.6**	**-0.5**
BKZ	**Black Stump

	comp=Z,1.3nm,0.7s,baz=139,slow=6.1,SNR=5.7							
	comp=Z,1.3nm,0.7s							
PEA0B	**Petropavlovsk-**	**80.23**	**347**	P		**P**	**16 21 57.3**	**+0.1**
PETK	**Petropavlovsk-**	**80.23**	**347**	P		**P**	**16 21 57.1**	**-0.1**
	comp=Z,6.7nm,0.8s,baz=109,slow=5.9,SNR=10.0							
	comp=Z,6.7nm,0.8s							
USRK	**Ussuriysk Ar.**	**81.67**	**327**	P		**P**	**16 22 05.0**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=192,slow=3.9,SNR=1.6							
	comp=Z,0.9nm,0.5s							
O02D	**Mt. Diablo Mer**	**84.11**	**40**	P		**P**	**16 22 18.1**	**+0.7**
SII	**Sitkinak Islan**	**84.29**	**14**	P		**P**	**16 22 18.7**	**+0.9**
M02C	**Callahan**	**84.85**	**40**	P		**P**	**16 22 22.0**	**+1.0**
GMN	**Gold Mountain**	**85.77**	**45**	P		**P**	**16 22 25.8**	**+0.1**
NVAR	**Mina Array Bea**	**85.77**	**44**	P		**P**	**16 22 25.8**	**+0.1**
NVAR	**Mina Array Bea**	**85.77**	**44**	P		**P**	**16 22 26.2**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=219,slow=8.1,SNR=5.5							
	comp=Z,0.8nm,0.6s							
N14K	**Kuskokwak Cree**	**86.09**	**9**	P		**P**	**16 22 26.7**	**+0.3**
TPNV	**Topopah Spring**	**86.22**	**46**	P		**P**	**16 22 28.3**	**+0.5**
K05A	**Summer Lake**	**86.83**	**39**	P		**P**	**16 22 31.2**	**+0.7**
K05A				IAmb		IAmb	16 23 13.8	
	comp=Z,10.0nm,1.5s							
CNPM	**China Poot**	**87.65**	**14**	P		**P**	**16 22 33.7**	**-0.1**
M17K	**Holitna River**	**88.16**	**11**	P		**P**	**16 22 36.4**	**+0.3**
I07A	**Izee**	**88.46**	**39**	P		**P**	**16 22 38.2**	**+0.1**
I07A				IAmb		IAmb	16 22 39.8	
	comp=Z,3.9nm,0.9s							
LON	**Longmire**	**88.86**	**36**	P		**P**	**16 22 40.0**	**+0.2**
L18K	**Granite Mounta**	**89.05**	**11**	P		**P**	**16 22 40.3**	**+0.1**
L18K				IAmb		IAmb	16 23 04.8	
	comp=Z,7.9nm,1.4s							
L19K	**White Mountain**	**89.34**	**12**	P		**P**	**16 22 42.0**	**+0.4**
L19K				IAmb		IAmb	16 22 50.8	
	comp=Z,14nm,1.4s							
CMAR	**Chiang Mai Arr**	**89.75**	**290**	P		**P**	**16 22 45.4**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=136,slow=3.5,SNR=9.3							
	comp=Z,0.9nm,0.7s							
J17K	**VABM Dome**	**89.78**	**9**	P		**P**	**16 22 43.6**	**0.0**
GHO	**Glory Hole Cre**	**90.18**	**14**	P		**P**	**16 22 45.1**	**-0.5**
TMUT	**Trail Mountain**	**90.83**	**46**	IAmb		IAmb	16 22 51.2	
	comp=Z,4.2nm,0.8s							
N25K	**Chitina, Valde**	**91.06**	**16**	P		**P**	**16 22 49.8**	**+0.1**
N25K				IAmb		IAmb	16 22 54.6	
	comp=Z,13nm,1.4s							
TXAR	**Lajitas Array**	**91.25**	**58**	P		**P**	**16 22 52.2**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=201,slow=6.7,SNR=8.3							
	comp=Z,0.8nm,0.8s							
RND	**Reindeer**	**91.64**	**14**	P		**P**	**16 22 51.9**	**-0.4**
RND				IAmb		IAmb	16 23 13.3	
	comp=Z,8.7nm,1.4s							
M27K	**Edge Creek, AK**	**92.40**	**17**	P		**P**	**16 22 56.0**	**+0.1**
M27K				IAmb		IAmb	16 23 18.8	
	comp=Z,5.3nm,1.2s							
IMAR	**Indian Mountai**	**93.04**	**11**	P		**P**	**16 22 57.8**	**-0.8**
ILAR	**Eielson Array**	**93.25**	**14**	P		**P**	**16 22 58.2**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=223,slow=5.7,SNR=8.2							
	comp=Z,0.3nm,0.5s							
J26L	**Joseph Creek**	**93.77**	**15**	P		**P**	**16 23 02.0**	**-0.1**
M30M	**Minto, Yukon**	**93.98**	**19**	P		**P**	**16 23 03.1**	**+0.1**
M30M				IAmb		IAmb	16 23 03.8	
	comp=Z,1.4nm,0.6s							
RSSD	**Black Hills**	**97.88**	**45**	P		**P**	**16 23 22.9**	**+1.6**
KURBB	**Kurchatov Arra**	**115.97**	**316**	PKP		**PKPdf**	**16 28 23.0**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=113,slow=1.7,SNR=4.2							
BVAR	**Borovoye Array**	**121.20**	**318**	PKP		**PKPdf**	**16 28 33.9**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=127,slow=2.6,SNR=7.1							
ARCES	**ARCESS Array B**	**133.03**	**348**	PKP		**PKPdf**	**16 28 55.9**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=56,slow=4.1,SNR=8.7							
FINES	**FINESS Array B**	**139.52**	**341**	PKhKP		PKPpre	16 28 59.8	
	comp=Z,2.8nm,0.7s,baz=48,slow=2.8,SNR=7.0							
FINES				PKP		**PKPdf**	**16 29 08.6**	**-0.5**
	comp=Z,3.8nm,0.9s,baz=86,slow=2.3,SNR=6.0							
MARD	**Mardin**	**143.15**	**299**			PKPbc	16 29 14.7	+0.1
NB2	**NORSAR Subarra**	**143.24**	**351**	PKP		PKPab	16 29 12.9	-0.7
	comp=Z,1.6nm,0.6s,baz=15,slow=3.2							
NOA	**NORSAR Array B**	**143.24**	**351**	PKP		PKPab	16 29 13.0	-0.6
	comp=Z,2.9nm,0.7s,baz=22,slow=3.8,SNR=10							
HFS	**Hagfors**	**143.69**	**348**	PKP		PKPab	16 29 14.2	-1.0
	comp=Z,10nm,0.4s,baz=60,slow=4.1,SNR=67							
AKASG	**Malin Array Be**	**145.87**	**326**	PKPbc		**PKPdf**	**16 29 21.1**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=47,slow=4.1,SNR=12							
MMAI	**Mount Meron Ar**	**147.99**	**293**	PKPbc		**PKiKP**	**16 29 29.4**	**-0.7**
	comp=Z,3.1nm,0.4s,baz=86,slow=5.9,SNR=18							
BRTR	**Keskin Array B**	**148.12**	**306**	PKPbc		**PKPbc**	**16 29 28.1**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=141,slow=3.7,SNR=9.1							
EKA	**Eskdalemuir Ar**	**149.74**	**3**	PKPbc		**PKPbc**	**16 29 30.5**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=358,slow=3.4,SNR=8.1							
DBIC	**Dimbokro**	**161.13**	**166**	PKP		**PKPdf**	**16 29 44.1**	**+1.1**
	comp=Z,2.4nm,0.7s,baz=161,slow=0.3,SNR=3.0							

*ISU **05** 16:38:13, 41.89N×72.10E, h20km*
*KRNET **05** 16:38:13.8±0.1, 41.85N×72.16E, h21km, mb2.7*
*SOME **05** 16:38:13.9, 41.95N×72.17E, h15km*
*NNC **05** 16:38:14.8±1.1, 41.94N×72.19E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=12.4km s-min=3.8km az=179.0*
*KNET **05** 16:38:15.8±0.3, 41.93N×72.35E, h5km±2km, ml2.4, Error ellipse: s-maj=5.4km s-min=2.5km az=140.0*

ISC 05 16:38:13.8±0.9, 41.91N±0.02×72.16E±0.02, h12km±7km, n38, σ0s92/69, 32C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.18**	**233**	⇑*iP*	**Pg**	**16 38 18.0**	**+0.1**
ARK				⇑*iS*	**Sg**	**16 38 21.3**	**+0.5**
ARSB	**Arslanbob**	**0.85**	**133**	⇑*iP*	**Pg**	**16 38 29.0**	**-1.2**
ARSB				⇑*iS*	**Sg**	**16 38 40.4**	**-0.9**
TRKS	**Terek-Say**	**0.85**	**244**	⇑*iP*	**Pg**	**16 38 29.5**	**-0.8**
TRKS				⇑*iS*	**Sg**	**16 38 41.0**	**-0.4**
KSNS	**Kasansay**	**0.89**	**213**	P	**Pb**	**16 38 30.6**	**-0.6**
KSNS				S	**Sb**	**16 38 42.6**	**-0.5**
MRKS	**Merke**	**1.15**	**43**	P	**Pg**	**16 38 36.0**	**+0.1**
	7.1nm,0.1s						
MRKS				S	**Sn**	**16 38 51.7**	**+0.1**
	56nm,0.1s						
MRKS	**Merke**	**1.15**	**43**	*eP*	**Pg**	**16 38 36.0**	**+0.1**
	7.1nm,0.1s						
MRKS				*eS*	**Sn**	**16 38 51.7**	**+0.1**
	56nm,0.1s						
EKS2	**Erkin-Say**	**1.42**	**57**	⇑P	**Pg**	**16 38 40.4**	**-0.6**
	5.1nm,0.1s,SNR=18						
EKS2				⇑S	**Sg**	**16 38 59.8**	**+0.3**
	10nm,0.2s						
EKS2	**Erkin-Say**	**1.42**	**57**	⇑*iP*	**Pb**	**16 38 40.1**	**-0.2**
EKS2				⇑*iS*	**Sg**	**16 38 59.5**	**+0.1**
OHH	**Osh**	**1.46**	**161**	⇓*eP*	**Pn**	**16 38 39.2**	**-0.9**
OHH				⇓*eS*	**Sn**	**16 38 57.9**	**-1.3**
FRG	**Fergana**	**1.56**	**191**	P	**Pb**	**16 38 43.6**	**+1.0**
FRG				S	**Sg**	**16 39 04.8**	**+0.9**
IUG	**Iuzhnay**	**1.60**	**279**	P	**Pg**	**16 38 44.4**	**-0.2**
	13nm,0.2s						
IUG				S	**Sg**	**16 39 05.7**	**+0.3**
	78nm,0.4s						
ARLS	**Aral**	**1.61**	**91**	⇑*iP*	**Pb**	**16 38 43.4**	**-0.3**
ARLS				⇑*iS*	**Sb**	**16 39 04.6**	**+0.5**
SALK	**Salom-Alik**	**1.61**	**129**	⇑*iP*	**Pn**	**16 38 42.8**	**+0.5**
SALK				⇑*iS*	**Sn**	**16 39 03.5**	**+0.3**
CHMG	**Chimgan**	**1.65**	**258**	P	**Pn**	**16 38 41.1**	**-1.6**
CHMG				S	**Sn**	**16 39 03.0**	**-0.9**
CHRV	**Charvak**	**1.67**	**262**	P	**Pb**	**16 38 45.0**	**+0.4**
CHRV				S	**Sb**	**16 39 06.7**	**+1.0**
CHMI	**Chimion**	**1.71**	**197**	P	**Pb**	**16 38 46.0**	**+0.9**
CHMI				S	**Sg**	**16 39 09.1**	**+0.4**
KK31	**Karatay Array**	**1.71**	**315**	Pn	**Pg**	**16 38 45.6**	**-0.9**
	2.2nm,0.2s,baz=128,slow=17,SNR=24						
KK31				⇑Sn	**Sg**	**16 39 09.5**	**+0.8**
	7.5nm,0.3s,baz=120,slow=28,SNR=5.0						
UCH	**Uchtor**	**1.78**	**79**	⇑P	**Pb**	**16 38 46.5**	**-0.1**
	8.3nm,0.1s,SNR=9.3						
UCH				⇓S	**Sg**	**16 39 10.8**	**-0.3**
	24nm,0.2s						
UCH	**Uchtor**	**1.78**	**79**	⇑*iP*	**Pb**	**16 38 46.2**	**-0.5**
UCH				⇑*iS*	**Sb**	**16 39 09.6**	**+0.5**
AAK	**Ala-Archa**	**1.88**	**66**	⇑P	**Pg**	**16 38 48.9**	**-1.0**
	13nm,0.2s,SNR=25						
AAK				⇑S	**Sg**	**16 39 14.2**	**-0.1**
	8.8nm,0.2s						
AAK	**Ala-Archa**	**1.88**	**66**	⇑Pn	**Pg**	**16 38 48.8**	**-1.0**
	1.3nm,0.3s						
AAK				⇑Sn	**Sg**	**16 39 14.1**	**-0.1**
	3.5nm,0.5s						
FRU1	**Bishkek**	**2.04**	**63**	⇓*eP*	**Pb**	**16 38 49.9**	**-1.0**
FRU1				⇓*eS*	**Sb**	**16 39 15.9**	**-0.3**
SFK	**Sufi-Kurgan**	**2.15**	**151**	⇑*eP*	**Pn**	**16 38 50.3**	**+0.6**
SFK				⇑*eS*	**Sn**	**16 39 16.6**	**+0.2**
USP	**Ospenovka**	**2.20**	**51**	⇑P	**Pb**	**16 38 53.9**	**+0.4**
	23nm,0.3s,SNR=11						
USP				⇑S	**Sg**	**16 39 23.2**	**-1.2**
	34nm,0.2s						
KBK	**Karagaybulak**	**2.20**	**69**	⇑P	**Pb**	**16 38 54.4**	**+0.8**
	26nm,0.4s,SNR=19						
KBK				⇓S	**Sg**	**16 39 23.7**	**-0.8**
	19nm,0.2s						
CHMS	**Chumysh**	**2.21**	**60**	⇑P	**Pb**	**16 38 53.9**	**+0.3**
	11nm,0.2s,SNR=7.4						
CHMS				⇑S	**Sg**	**16 39 23.4**	**-1.2**
	16nm,0.2s						
SGDS	**Sogindy**	**2.39**	**49**	Pg	**Pb**	**16 38 56.7**	**-0.1**
	9.1nm,0.3s						
SGDS				Lg	Lg	16 39 29.6	
	16nm,0.3s						
DRK	**Karamyk**	**2.44**	**187**	⇑*eP*	**Pn**	**16 38 54.1**	**+0.3**
DRK				⇑*eS*	**Sn**	**16 39 23.5**	**-0.2**
TKM2	**Tokmak 2**	**2.74**	**67**	⇑P	**Pb**	**16 39 01.5**	**-1.3**
	3.9nm,0.1s,SNR=8.5						
JNKS	**Jany-Kuch**	**2.76**	**107**	⇓*eP*	**Pn**	**16 38 59.1**	**+1.0**
JNKS				⇓*eS*	**Sn**	**16 39 32.3**	**+0.8**
BOOM	**Boomskoye usch**	**2.87**	**77**	⇓*eP*	**Pn**	**16 39 01.4**	**+1.9**
BOOM				⇓*eS*	**Sn**	**16 39 36.1**	**+2.0**
KST	**Kastek**	**3.03**	**67**	Pg	**Pb**	**16 39 08.2**	**+0.4**
	3.6nm,0.4s						
KST				Lg	Lg	16 39 49.0	
	9.9nm,0.4s						
KST	**Kastek**	**3.03**	**67**	*eP*	**Pb**	**16 39 09.1**	**+1.2**
	3.6nm,0.4s						
KST				*eS*	**Sg**	**16 39 49.0**	**-2.2**
	9.9nm,0.4s						
KRBS	**Karabastau**	**3.14**	**54**	Pg	**Pb**	**16 39 09.0**	**-0.7**
	1.9nm,0.2s						
KRBS				Lg	Lg	16 39 48.6	
	6.9nm,0.4s						
MTBS	**Maitube**	**3.38**	**67**	Pg	**Pb**	**16 39 14.9**	**+1.1**
	2.7nm,0.4s						
MTBS				Lg	Lg	16 40 00.8	
	6.2nm,0.3s						
MTBS	**Maitube**	**3.38**	**67**	*eP*	**Pb**	**16 39 15.8**	**+2.0**
	2.7nm,0.4s						
MTBS				*eS*	**Sg**	**16 40 00.8**	**-1.6**
	6.2nm,0.3s						
KTBS	**Karatobe**	**3.78**	**60**	Pg	**Pb**	**16 39 20.8**	**+0.2**
	3.8nm,0.5s						
KTBS				Lg	Lg	16 40 09.9	
	7.8nm,0.5s						
MDOK	**Medeo**	**3.82**	**69**	Pg	**Pb**	**16 39 23.1**	**+1.9**
	2.6nm,0.4s						
MDOK				Lg	Lg	16 40 14.0	
	4.8nm,0.5s						

DJA 05 16:43:15.1±0.3, 10°S±3°×12°1E±°, h101km±4km, M3.7/12, mb3.8/7, MLv3.6/12, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**0.88**	**26**	P	Pn	16 43 34.5	0.0
EDFI				S	Sn	16 43 48.1	-1.0
BASI	**Baing, Sumba**	**0.97**	**227**	P	Pn	16 43 35.5	+0.2
BASI				S	Sn	16 43 51.2	+0.7
WSI	**Waingapu**	**1.00**	**263**	P	Pn	16 43 36.1	+0.6
WSI				S	Sn	16 43 51.2	+0.3
MMRI	**Maumere**	**1.30**	**46**	P	Pn	16 43 39.4	+0.4
WBSI	**Waikabubak, Su**	**1.89**	**267**	P	Pn	16 43 46.3	0.0
BAUI	**Baumata**	**2.42**	**106**	P	Pn	16 43 54.3	+1.4
SOEI	**Soe**	**2.93**	**94**	P	Pn	16 44 01.3	+1.2
BSSI	**Bau Bau, Buton**	**3.48**	**347**	P	Pn	16 44 07.5	+0.2
PLAI	**Plampang**	**3.55**	**281**	P	Pn	16 44 09.3	+1.0
TWSI	**Taliwang, Sumb**	**4.44**	**280**	P	Pn	16 44 20.8	+0.6
JAGI	**Jajag, Banyuwa**	**7.14**	**278**	P	Pn	16 44 54.4	-2.6
	18nm,1.4s						
PCJI	**Pacitan**	**10.09**	**277**	P	Pn	16 45 36.5	-0.6

IDC 05 17:05:11.8±1.5, 13.09N×120.27E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=32.9km s-min=20.0km az=105.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.20**	**33**	Pg	Pg	17 05 35.0	+0.1
	82nm,0.3s,baz=180,slow=4.0,SNR=7.7						
TGY				Lg	Lg	17 05 46.3	
	271nm,0.3s,baz=356,slow=22,SNR=14						
CMAR	**Chiang Mai Arr**	**21.20**	**287**	P	P	17 09 59.2	0.0
	0.4nm,0.5s,baz=94,slow=9.8,SNR=4.8						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**35.62**	**157**	P	P	17 12 11.1	-0.6
	0.4nm,0.7s,baz=336,slow=9.5,SNR=5.8						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**38.89**	**160**	P	P	17 12 39.6	+0.3
	0.4nm,0.7s,baz=340,slow=6.8,SNR=7.9						
	0.4nm,0.7s						

*TAP **05** 17:05:55.0, 24.81N×122.07E, h9km, ML3.5, C*
*JMA **05** 17:05:55.5±0.1, 24.78N±0.8×122.0E±0.5, h47km, MV2.9/11, TAIWAN REGION*

ISC 05 17:05:55.2±0.9, 24.84N±0.02×122.10E±0.02, h11km±6km, n96, σ0s81/143, 10C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.15**	**272**	⇑*iP*	**Pg**	**17 05 58.6**	**0.0**
EGS				*i* S	**Sg**	**17 06 00.5**	**-0.5**
TWB1	**Santiao Chiao**	**0.19**	**330**	⇑*iP*	**Pg**	**17 05 59.7**	**+0.3**
TWB1				*i* S	**Sg**	**17 06 03.2**	**+0.9**
NTC	**Toucheng**	**0.24**	**273**	P	**Pg**	**17 06 00.4**	**+0.4**
NTC				S	**Sg**	**17 06 04.6**	**+1.0**
TIPB	**Shuangxi**	**0.28**	**298**	⇓*iP*	**Pg**	**17 06 01.4**	**+0.5**
TIPB				*i* S	**Sg**	**17 06 05.1**	**+0.4**
TWC	**Suao**	**0.32**	**224**	⇑*iP*	**Pg**	**17 06 01.1**	**-0.6**
TWC				*eS*	**Sg**	**17 06 04.6**	**-1.3**
SXI1	**Grass Mountain**	**0.32**	**322**	⇑*iP*	**Pb**	**17 06 02.4**	**-0.7**
ILA	**Ilan**	**0.32**	**257**	P	**Pb**	**17 06 02.3**	**-0.7**
ILA				*i* S	**Sg**	**17 06 06.3**	**+0.3**
ESAO	**Su ao**	**0.35**	**221**	*i* P	**Pg**	**17 06 01.7**	**-0.5**
ESAO				*i* S	**Sg**	**17 06 05.5**	**-1.3**
NWF	**Wu-fen Shan**	**0.37**	**309**	⇑*iP*	**Pb**	**17 06 03.2**	**-0.6**
NWF				*i* S	**Sb**	**17 06 08.8**	**-0.8**
WFSB	**Wu-fen Shan**	**0.37**	**309**	⇑*iP*	**Pb**	**17 06 03.2**	**-0.6**
WFSB				*i* S	**Sb**	**17 06 08.9**	**-0.6**
NDS	**Dongshan**	**0.40**	**239**	*i* P	**Pg**	**17 06 02.9**	**-0.2**
NDS				S	**Sg**	**17 06 09.8**	**+1.3**
TWE	**Neicheng**	**0.41**	**253**	*i* P	**Pg**	**17 06 03.0**	**-0.3**
TWE				*eS*	**Sg**	**17 06 08.7**	**+0.1**
TNOU	**National Taiwa**	**0.42**	**317**	*i* P	**Pb**	**17 06 04.4**	**-0.3**
TNOU				S	**Sb**	**17 06 10.3**	**-0.9**
EOS2	**EOS2**	**0.44**	**163**	*eP*	**Pg**	**17 06 04.4**	**+0.6**
FUSB	**Fushanzhiwuyua**	**0.47**	**260**	*i* P	**Pg**	**17 06 04.3**	**-0.1**
FUSB				*i* S	**Sb**	**17 06 11.5**	**-1.0**
TWA	**Mucha**	**0.48**	**287**	⇑*iP*	**Pb**	**17 06 05.1**	**-0.7**
TWA				*i* S	**Sb**	**17 06 12.0**	**-0.9**
EWUT	**Wuta**	**0.49**	**216**	*eP*	**Pg**	**17 06 04.3**	**-0.5**
EWUT				*eS*	**Sg**	**17 06 10.9**	**-0.3**
NHY	**Taipei**	**0.52**	**293**	*eP*	**Pb**	**17 06 05.3**	**-1.0**
NHY				*eS*	**Sb**	**17 06 13.4**	**-0.5**
ENTT	**Nioudou**	**0.52**	**248**	*i* P	**Pg**	**17 06 05.3**	**-0.1**
ENTT				*i* S	**Sg**	**17 06 11.4**	**-0.8**
ENA	**Nanau**	**0.52**	**218**	*i* P	**Pg**	**17 06 04.9**	**-0.5**
ENA				*i* S	**Sg**	**17 06 11.4**	**-0.9**
NHDH	**Xindian Distri**	**0.53**	**283**	*eP*	**Pb**	**17 06 06.5**	**-0.1**
NHDH				*eS*	**Sb**	**17 06 13.5**	**-0.7**
NWLT	**Wulai**	**0.54**	**263**	*eP*	**Pg**	**17 06 05.8**	**0.0**
NWLT				*eS*	**Sg**	**17 06 12.5**	**-0.4**
YM01	**YM01**	**0.57**	**303**	⇑P	**Pb**	**17 06 07.2**	**0.0**
TAP	**Taipei**	**0.57**	**290**	P	**Pb**	**17 06 06.4**	**-0.8**
YM08	**YM08**	**0.57**	**307**	⇑P	**Pb**	**17 06 07.0**	**-0.3**
EOS3	**EOS3**	**0.59**	**160**	*eP*	**Pg**	**17 06 07.1**	**+0.5**
ZUZH	**Zhuzihu**	**0.59**	**303**	*eP*	**Pb**	**17 06 07.8**	**+0.2**
LATG	**Datong**	**0.60**	**240**	P	**Pg**	**17 06 06.5**	**-0.4**
LATG				S	**Sg**	**17 06 14.9**	**+0.1**
EAHA	**Aohua**	**0.60**	**213**	*eP*	**Pg**	**17 06 07.2**	**+0.2**
EAHA				*eS*	**Sg**	**17 06 15.6**	**+0.7**
ANP	**Anpu**	**0.63**	**304**	*eP*	**Pb**	**17 06 08.3**	**0.0**
TWS1	**Kuangyinshan**	**0.67**	**293**	*i* P	**Pn**	**17 06 09.6**	**-1.1**
NTST	**Danshui**	**0.67**	**299**	*eP*	**Pn**	**17 06 09.6**	**-1.0**
YHNB	**Yeheng**	**0.68**	**256**	P	**Pg**	**17 06 07.9**	**-0.5**
NSK	**Sanguang**	**0.69**	**256**	⇑*iP*	**Pg**	**17 06 08.4**	**-0.2**
NSK				*i* S	**Sg**	**17 06 16.2**	**-1.5**
EOS4	**EOS4**	**0.74**	**164**	*eP*	**Pg**	**17 06 09.8**	**+0.2**
NNS	**Nan Shan**	**0.77**	**239**	*eP*	**Pg**	**17 06 09.8**	**-0.2**
NNS				*eS*	**Sg**	**17 06 19.4**	**-0.8**
PCYT	**Pengchaiyu**	**0.79**	**358**	*eP*	**Pn**	**17 06 12.0**	**-0.2**
ETL	**Fush Village**	**0.80**	**212**	*eP*	**Pg**	**17 06 10.0**	**-0.7**
ETL				*eS*	**Sg**	**17 06 20.8**	**-0.4**
NACB	**Ninganchiao**	**0.81**	**215**	*eP*	**Pg**	**17 06 10.0**	**-0.8**
NACB				*i* S	**Sg**	**17 06 20.3**	**-1.0**
NCUH	**Zhongli**	**0.84**	**279**	*eP*	**Pn**	**17 06 13.2**	**+0.2**
KSHI	**Guanxi Townshi**	**0.84**	**266**	*eP*	**Pn**	**17 06 12.5**	**-0.4**
KSHI				*i* S	**Sn**	**17 06 24.4**	**-0.9**
ETLH	**Xiulin Townshi**	**0.84**	**222**	P	**Pg**	**17 06 10.8**	**-0.6**
ETLH				S	**Sg**	**17 06 21.3**	**-1.2**
JYNG	**Yonagunijimaku**	**0.86**	**116**	*eP*	**Pg**	**17 06 12.6**	**+0.7**
JYNG				*eS*	**Sg**	**17 06 24.2**	**+1.1**
TWD	**Chiawan**	**0.88**	**211**	*i* P	**Pg**	**17 06 12.0**	**-0.2**
TWD				S	**Sg**	**17 06 22.5**	**-1.3**
NFF	**Wufeng Townshi**	**0.91**	**257**	*eP*	**Pn**	**17 06 14.0**	**-0.1**
NFF				*eS*	**Sb**	**17 06 26.0**	**+0.7**
YOJ	**Yonaguni jima**	**0.91**	**114**	P	**Pg**	**17 06 13.2**	**+0.3**
YOJ				*eS*	**Sg**	**17 06 25.4**	**+0.7**
YOJ	**Yonaguni jima**	**0.91**	**114**	*eP*	**Pg**	**17 06 13.4**	**+0.6**
YOJ				*eS*	**Sg**	**17 06 25.9**	**+1.1**
FUSS	**Fushou**	**0.97**	**233**	P	**Pg**	**17 06 13.7**	**-0.3**
FUSS				S	**Sg**	**17 06 26.5**	**-0.2**
SBCB	**Hsinchu**	**1.01**	**268**	*eP*	**Pn**	**17 06 16.6**	**+1.3**
NSTT	**Nanjuang**	**1.02**	**258**	*eP*	**Pn**	**17 06 15.8**	**+0.3**
NSTT				S	**Sn**	**17 06 30.3**	**+0.5**
TWT	**Tachien**	**1.02**	**235**	*eP*	**Pn**	**17 06 15.7**	**+0.1**
TWT				*eS*	**Sb**	**17 06 29.1**	**+0.6**
WHF	**Hehuan Shan**	**1.02**	**228**	*i* P	**Pg**	**17 06 14.5**	**-0.5**
WHF				*i* S	**Sg**	**17 06 28.6**	**+0.2**
ETM	**Tongmen**	**1.03**	**212**	*eP*	**Pg**	**17 06 14.6**	**-0.5**
ETM				*eS*	**Sg**	**17 06 26.6**	**-1.8**
TEYL	**Yanliau Villag**	**1.07**	**205**	*eP*	**Pg**	**17 06 15.9**	**+0.1**
SHUL	**Shoufeng**	**1.16**	**205**	P	**Pg**	**17 06 18.1**	**+0.7**
SHUL				*eS*	**Sb**	**17 06 32.3**	**+0.1**
ESL	**Shilin**	**1.19**	**211**	P	**Pn**	**17 06 16.7**	**-1.1**
WHP	**Taichung City**	**1.19**	**242**	P	**Pn**	**17 06 18.3**	**+0.5**
WHP				*i* S	**Sn**	**17 06 34.4**	**+0.4**
OWD	**Renai**	**1.22**	**224**	*i* P	**Pn**	**17 06 18.0**	**-0.4**
OWD				*i* S	**Sb**	**17 06 33.2**	**-0.9**
NMLH	**Miaoli**	**1.22**	**256**	*eP*	**Pg**	**17 06 20.5**	**+1.7**
NMLH				*i* S	**Sn**	**17 06 37.4**	**+2.5**
WUSB	**Renai**	**1.23**	**227**	*i* P	**Pn**	**17 06 18.3**	**-0.1**
WUSB				S	**Sb**	**17 06 34.7**	**+0.3**
NSY	**Sanyi**	**1.29**	**251**	*eP*	**Pg**	**17 06 21.4**	**+1.5**
NSY				S	**Sn**	**17 06 39.0**	**+2.6**
TWQ1	**Liyutan**	**1.30**	**248**	*eP*	**Pg**	**17 06 21.7**	**+1.5**
VWDT	**VWDT**	**1.39**	**219**	P	**Pn**	**17 06 21.3**	**+0.8**
SMLT	**Sun Moon Lake**	**1.45**	**229**	*eP*	**Pb**	**17 06 22.7**	**+0.4**
TYC	**Yuchr**	**1.46**	**231**	*eP*	**Pg**	**17 06 23.7**	**+0.3**
TCU	**Taichung**	**1.47**	**242**	*eP*	**Pg**	**17 06 24.6**	**+1.2**
HGSD	**Ruisui**	**1.48**	**205**	*eP*	**Pb**	**17 06 23.2**	**+0.5**
SSLB	**Suanglung**	**1.48**	**225**	*eP*	**Pb**	**17 06 22.8**	**+0.1**
EHY	**Hungye**	**1.50**	**208**	P	**Pn**	**17 06 22.3**	**+0.1**
EHYH	**Wanrong**	**1.50**	**207**	*eP*	**Pb**	**17 06 23.5**	**+0.3**
IRIF	**Iriomote-Funau**	**1.57**	**108**	*eP*	**Pn**	**17 06 22.1**	**-1.0**
IRIF				*eS*	**Sn**	**17 06 42.2**	**-1.1**
WNT	**Mingjian**	**1.60**	**234**	P	**Pb**	**17 06 25.6**	**+0.7**
WHYT	**Xinyi Township**	**1.61**	**225**	*eP*	**Pg**	**17 06 26.3**	**+0.

JNKS	**Jany-Kuch**	**2.71**	**108**⇑	*eP*		**Pn**	**17 21 27.9**	**+1.7**
JNKS			⇑	*eS*		**Sn**	**17 22 00.3**	**+0.9**
BOOM	**Boomskoye usch**	**2.79**	**78**⇑	*eP*		**Pn**	**17 21 28.7**	**+1.4**
BOOM			⇑	*eS*		**Sn**	**17 22 02.6**	**+1.3**
KST	**Kastek**	**2.95**	**67**	*eP*		**Pb**	**17 21 36.5**	**+1.5**
	1.5nm,0.5s							
KST				*eS*		**Sg**	**17 22 15.6**	**-1.3**
	3.4nm,0.7s							

*KRSC **05** 18:33:06.5±1.0,55˚.70N×163˚.30E,h24km±22km,Mc5.8, Ml5.3,Felt [III-IV] at HMS cape Afrika; [II-III] at Krutoberegovo, Ust-Kamchatsk.*
*NEIC **05** 18:33:06.5±2.0,55˚.83N±0˚.07×163˚.0E±0˚.1,h10km±1km, mb4.8/170,Error ellipse: s-maj=13.9km s-min=10.7km az=138.0*
*MOS **05** 18:33:08.3±1.1,55˚.81N×163˚.23E,h23km,mb4.9/42, MS4.4/6,Error ellipse: s-maj=5.7km s-min=3.8km az=76.4*
*IDC **05** 18:33:14.7±2.1,55˚.85N×162˚.69E,h66km±18km,mb3.9/31, mbtmp4.3/36,MS4.0/60,Error ellipse: s-maj=13.6km s-min=10.7km az=113.0*
ISC 05 18:33:07.1±0.6,55˚.84N±0˚.03×163˚.13E±0˚.03,h16km±3km, n477,σ1§83/406,mb4.7/136,MS4.1/71,20C-16D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
KBTR	**Krutoberegovo**	**0.41**	**335**	PN		**Pn**	**18 33 17.6**		**-0.8**
KBTR	**Krutoberegovo**	**0.41**	**335**	*eP*		**Pn**	**18 33 17.6**		**-0.8**
KBG	**Krutoberegovo**	**0.48**	**331**	PN		**Pn**	**18 33 18.8**		**-0.5**
KBG				S		**Sn**	**18 33 28.4**		**+0.9**
KBG	**Krutoberegovo**	**0.48**	**331**	*eP*		**Pn**	**18 33 18.9**		**-0.5**
KBG				*eS*		**Sn**	**18 33 28.4**		**+0.9**
SMKR	**Semkarok**	**1.19**	**310**	PN		**Pg**	**18 33 30.8**		**+0.7**
SMKR	**Semkarok**	**1.19**	**310**	*eP*		**Pg**	**18 33 30.8**		**+0.7**
ZLN	**Zelenaya**	**1.32**	**279**	PN		**Pg**	**18 33 32.5**		**0.0**
ZLN	**Zelenaya**	**1.32**	**279**	*eP*		**Pg**	**18 33 32.5**		**0.0**
CIRR	**Tsirk**	**1.37**	**283**	PN		**Pg**	**18 33 33.1**		**-0.3**
CIRR	**Tsirk**	**1.37**	**283**	*eP*		**Pg**	**18 33 33.1**		**-0.3**
SRKR	**Sorokina**	**1.37**	**308**	PN		**Pg**	**18 33 33.7**		**+0.3**
SRKR	**Sorokina**	**1.37**	**308**	*eP*		**Pg**	**18 33 33.8**		**+0.3**
BZGR	**Bezymyannyi-Gr**	**1.38**	**275**	PN		**Pg**	**18 33 33.1**		**-0.4**
BZGR				S		**Sg**	**18 33 53.3**		**+1.8**
BZGR	**Bezymyannyi-Gr**	**1.38**	**275**	*eP*		**Pg**	**18 33 33.2**		**-0.4**
BZGR				*eS*		**Sg**	**18 33 53.4**		**+1.8**
LGNR	**Loginova**	**1.40**	**281**	*eS*		**Sn**	**18 33 48.7**		**-1.8**
KLY	**Klyuchi**	**1.47**	**290**	PN		**Pn**	**18 33 33.0**		**+0.1**
KLY				S		**Sb**	**18 33 52.4**		**0.0**
KLY	**Klyuchi**	**1.47**	**290**	*eP*		**Pn**	**18 33 33.0**		**+0.1**
KLY				*eS*		**Sb**	**18 33 52.5**		**0.0**
BZWR	**Bezymyannyi-We**	**1.49**	**276**	PN		**Pb**	**18 33 35.1**		**+0.6**
BZWR	**Bezymyannyi-We**	**1.49**	**276**	*eP*		**Pb**	**18 33 35.1**		**+0.6**
BZMR	**Bezymyannaya**	**1.49**	**275**	PN		**Pb**	**18 33 34.8**		**+0.3**
BZMR	**Bezymyannaya**	**1.49**	**275**	*eP*		**Pb**	**18 33 34.8**		**+0.3**
MKZ	**Mys Kozlova**	**1.51**	**213**	PN		**Pn**	**18 33 32.8**		**-0.7**
MKZ	**Mys Kozlova**	**1.51**	**213**	*eP*		**Pn**	**18 33 32.9**		**-0.7**
KIRR	**Kirishev**	**1.57**	**275**	PN		**Pb**	**18 33 36.2**		**+0.3**
KIRR				S		**Sg**	**18 33 57.1**		**-0.7**
KIRR	**Kirishev**	**1.57**	**275**	*eP*		**Pb**	**18 33 36.2**		**+0.3**
KIRR				*eS*		**Sg**	**18 33 57.2**		**-0.7**
KMNR	**Kamenistaya**	**1.64**	**268**	PN		**Pg**	**18 33 37.8**		**-0.7**
KMNR	**Kamenistaya**	**1.64**	**268**	*eP*		**Pg**	**18 33 37.9**		**-0.7**
KPT	**Kopyto**	**1.64**	**276**	PN		**Pb**	**18 33 37.3**		**+0.2**
KPT				S		**Sg**	**18 33 58.9**		**-1.1**
KPT	**Kopyto**	**1.64**	**276**	*eP*		**Pb**	**18 33 37.3**		**+0.2**
KPT				*eS*		**Sg**	**18 33 59.0**		**-1.1**
TUMD	**Tumrok D**	**1.68**	**249**	PN		**Pb**	**18 33 36.7**		**-0.9**
TUMD				S		**Sb**	**18 33 59.4**		**+0.9**
TUMD	**Tumrok D**	**1.68**	**249**	*eP*		**Pb**	**18 33 36.7**		**-0.9**
TUMD				*eS*		**Sb**	**18 33 59.5**		**+0.9**
BKI	**Bering**	**1.73**	**110**	PN		**Pn**	**18 33 36.3**		**-0.2**
BKI				S		**Sn**	**18 33 57.3**		**-1.0**
BKI	**Bering**	**1.73**	**110**	*eP*		**Pn**	**18 33 36.3**		**-0.2**
BKI				*eS*		**Sn**	**18 33 57.4**		**-1.0**
KZV	**Kizimen**	**1.77**	**247**	PN		**Pb**	**18 33 38.5**		**-0.8**
KZV				S		**Sb**	**18 34 00.7**		**-0.5**
KZV	**Kizimen**	**1.77**	**247**	*eP*		**Pb**	**18 33 38.5**		**-0.8**
KZV				*eS*		**Sb**	**18 34 00.8**		**-0.5**
TUMR	**Tumrok**	**1.78**	**253**	PN		**Pb**	**18 33 38.7**		**-0.7**
TUMR				S		**Sg**	**18 34 03.3**		**-1.2**
TUMR	**Tumrok**	**1.78**	**253**	*eP*		**Pb**	**18 33 38.8**		**-0.7**
TUMR				*eS*		**Sg**	**18 34 03.4**		**-1.2**
KOZ	**Kozyrevsk**	**1.85**	**278**	PN		**Pb**	**18 33 41.1**		**+0.6**
KOZ				S		**Sg**	**18 34 05.7**		**-0.8**
KOZ	**Kozyrevsk**	**1.85**	**278**	*eP*		**Pb**	**18 33 41.1**		**+0.6**
KOZ				*eS*		**Sg**	**18 34 05.7**		**-0.8**
SRDR	**Sredinnyy**	**1.97**	**286**	PN		**Pg**	**18 33 44.3**		**-0.6**
SRDR	**Sredinnyy**	**1.97**	**286**	*eP*		**Pg**	**18 33 44.4**		**-0.6**
ESO	**Esso**	**2.50**	**274**	PN		**Pb**	**18 33 50.5**		**-1.1**
ESO	**Esso**	**2.50**	**274**	*eP*		**Pb**	**18 33 50.6**		**-1.1**
KII	**Karymskiy**	**2.79**	**231**	PN		**Pn**	**18 33 52.3**		**+1.2**
KII	**Karymskiy**	**2.79**	**231**	*eP*		**Pn**	**18 33 52.4**		**+1.2**
OSSR	**Ossora**	**3.42**	**359**	PN		**Pn**	**18 34 02.7**		**+3.0**
OSSR	**Ossora**	**3.42**	**359**	*eP*		**Pn**	**18 34 02.7**		**+3.0**
NLC	**Nalytchevo**	**3.46**	**221**	PN		**Pn**	**18 34 01.8**		**+1.5**
NLC				S		**Sn**	**18 34 42.2**		**+1.3**
NLC	**Nalytchevo**	**3.46**	**221**	*eP*		**Pn**	**18 34 01.8**		**+1.5**
NLC				*eS*		**Sn**	**18 34 42.3**		**+1.3**
SDLR	**Sedlovina**	**3.56**	**226**	PN		**Pn**	**18 34 03.2**		**+1.4**
SDLR	**Sedlovina**	**3.56**	**226**	*eP*		**Pn**	**18 34 03.2**		**+1.4**
KRER	**Koryakskii**	**3.60**	**227**	PN		**Pn**	**18 34 04.1**		**+1.8**
KRER	**Koryakskii**	**3.60**	**227**	*eP*		**Pn**	**18 34 04.1**		**+1.8**
KRX	**Arik**	**3.60**	**228**	PN		**Pn**	**18 34 04.0**		**+1.7**
KRX	**Arik**	**3.60**	**228**	*eP*		**Pn**	**18 34 04.0**		**+1.7**
SMAR	**Somma**	**3.61**	**226**	PN		**Pn**	**18 34 04.0**		**+1.5**
SMAR	**Somma**	**3.61**	**226**	*eP*		**Pn**	**18 34 04.0**		**+1.5**
AVH	**Avacha**	**3.63**	**227**	PN		**Pn**	**18 34 04.3**		**+1.6**
AVH	**Avacha**	**3.63**	**227**	*eP*		**Pn**	**18 34 04.4**		**+1.6**
UGLR	**Uglovaya**	**3.64**	**225**	PN		**Pn**	**18 34 04.3**		**+1.5**
UGLR	**Uglovaya**	**3.64**	**225**	*eP*		**Pn**	**18 34 04.3**		**+1.5**
KOK	**Koryaka**	**3.65**	**228**	PN		**Pn**	**18 34 06.3**		**+3.3**
KOK	**Koryaka**	**3.65**	**228**	*eP*		**Pn**	**18 34 06.3**		**+3.3**
PALN	**Palana**	**3.68**	**334**	PN		**Pb**	**18 34 08.4**		**-3.3**
PALN	**Palana**	**3.68**	**334**	*eP*		**Pb**	**18 34 08.5**		**-3.3**
DALK	**Dalny**	**3.80**	**224**	PN		**Pn**	**18 34 06.0**		**+1.1**
DALK				S		**Sn**	**18 34 50.2**		**+1.0**
DALK	**Dalny**	**3.80**	**224**	*eP*		**Pn**	**18 34 06.1**		**+1.1**
DALK				*eS*		**Sn**	**18 34 50.3**		**+1.0**
INSR	**Institute**	**3.83**	**225**	PN		**Pn**	**18 34 06.6**		**+1.2**
INSR	**Institute**	**3.83**	**225**	*eP*		**Pn**	**18 34 06.6**		**+1.2**
PET	**Petropavlovsk**	**3.84**	**225**			**Pn**	**18 34 05.6**		**+0.1**
PET				Sn		**Sn**	**18 34 51.5**		**+1.1**
PET	**Petropavlovsk**	**3.84**	**225**	*eP*N		**Pn**	**18 34 06.8**		**+1.3**
PET				*eS*		**Sn**	**18 34 52.2**		**+1.9**
PET				pmax	pmax				
	comp=Z,735nm,0.8s								
PET				smax	smax				
	comp=E,1μm,0.9s								
PET				smax	smax				
	comp=N,2μm,0.9s								
PET				MLR	MLR				
	comp=Z,3μm,13.0s								
PET				MLR	MLR				
	comp=Z,2μm,12.0s								
PET	**Petropavlovsk**	**3.84**	**225**	*eP*		**Pn**	**18 34 06.9**		**+1.3**
PET				*eS*		**Sn**	**18 34 53.1**		**+2.8**
PET	**Petropavlovsk**	**3.84**	**225**	P		**Pn**	**18 34 05.3**		**-0.2**
PEA0B	**Petropavlovsk-**	**4.18**	**231**			**Pn**	**18 34 10.5**		**+0.2**
PEA0B				Sn		**Sn**	**18 35 01.7**		**+3.0**
PEA0B	**Petropavlovsk-**	**4.18**	**231**	*ce*PN		**Pn**	**18 34 11.7**		**+1.5**
PETK	**Petropavlovsk-**	**4.18**	**231**			**Pn**	**18 34 10.8**		**+0.5**
PETK	**Petropavlovsk-**	**4.18**	**231**	P		**Pn**	**18 34 12.3**		**+2.0**
	comp=Z,68nm,0.8s,baz=64,slow=14,SNR=90								
PETK				S		**Sn**	**18 35 00.2**		**+1.4**
	comp=Z,101nm,0.8s,baz=65,slow=34,SNR=5.2								
KRMR	**Karymshinskiy**	**4.20**	**226**	PN		**Pn**	**18 34 12.6**		**+2.2**
KRMR				S		**Sn**	**18 35 03.1**		**+4.0**
KRMR	**Karymshinskiy**	**4.20**	**226**	*eP*		**Pn**	**18 34 12.7**		**+2.2**
KRMR				*eS*		**Sn**	**18 35 03.2**		**+4.0**
RUS	**Russkaya**	**4.36**	**220**	PN		**Pn**	**18 34 13.7**		**+1.1**
RUS	**Russkaya**	**4.36**	**220**	*eP*		**Pn**	**18 34 13.7**		**+1.1**
GRL	**Gorelyy**	**4.43**	**224**	PN		**Pn**	**18 34 16.6**		**+2.8**
GRL	**Gorelyy**	**4.43**	**224**	*eP*		**Pn**	**18 34 16.6**		**+2.8**
MTVR	**Mutnovka**	**4.44**	**223**	PN		**Pn**	**18 34 15.0**		**+1.1**
MTVR	**Mutnovka**	**4.44**	**223**	*eP*		**Pn**	**18 34 15.0**		**+1.1**
APC	**Apacha**	**4.55**	**233**	PN		**Pn**	**18 34 18.2**		**+3.0**
APC	**Apacha**	**4.55**	**233**	*eP*		**Pn**	**18 34 18.2**		**+3.0**
ASAK	**Asacha**	**4.63**	**224**	PN		**Pn**	**18 34 19.1**		**+2.7**
ASAK	**Asacha**	**4.63**	**224**	*eP*		**Pn**	**18 34 19.2**		**+2.7**
TILK	**Tilichiki**	**4.89**	**18**	PN		**Pn**	**18 34 24.3**		**+4.4**
TILK	**Tilichiki**	**4.89**	**18**	*eP*		**Pn**	**18 34 24.3**		**+4.4**
KDTR	**Khodutka, Kamc**	**5.02**	**219**	PN		**Pn**	**18 34 22.4**		**+0.7**
KDTR	**Khodutka, Kamc**	**5.02**	**219**	*eP*		**Pn**	**18 34 22.5**		**+0.7**
SKR	**Severo-Kuril's**	**6.66**	**222**	*e*PN		Pn	18 34 49.3		+5.1
SKR				*eS*		**Sn**	**18 36 06.1**		**+6.5**
SKR				pmax	pmax				
	comp=Z,585nm,1.3s								
SKR				smax	smax				
	comp=N,289nm,0.8s								
SKR				smax	smax				
	comp=E,122nm,0.5s								
SKR				MLR	MLR				
	comp=Z,1μm,10.0s								
KMSK	**Kamenskaya**	**6.84**	**12**	PN		**Pn**	**18 34 50.2**		**+3.6**
KMSK	**Kamenskaya**	**6.84**	**12**	*eP*		**Pn**	**18 34 50.2**		**+3.6**
MA2	**Magadan**	**7.61**	**305**	Pn		**Pn**	**18 34 56.0**		**-1.2**
MA2	**Magadan**	**7.61**	**305**	P		**Pn**	**18 35 00.8**		**+3.7**
	comp=Z,29nm,0.9s,baz=93,slow=7.9,SNR=8.0								
MA2	**Magadan**	**7.61**	**305**	*i* PN		**Pn**	**18 34 56.8**		**-0.4**
MA2	**Magadan**	**7.61**	**305**	P		**Pn**	**18 34 56.3**		**-0.9**
	comp=Z,0.3nmcomp=Z,45nm,0.9s								
SEY	**Seymchan**	**8.97**	**327**	P		**Pn**	**18 35 20.3**		**+4.4**
	comp=Z,3.9nm,0.9s,baz=143,slow=5.1,SNR=2.4								
SEY				LR	LR		18 39 07.4		
	comp=Z,1μm,20.2s,baz=122,slow=40								
SEY	**Seymchan**	**8.97**	**327**	*e*PN		Pn	18 35 22.7		+6.8
SEY				pmax	pmax				
	comp=Z,15nm,1.3s								
OKH	**Okha**	**11.90**	**267**	*de*PN		Pn	18 35 46.9		-9.1
OKH				MLR	MLR				
	comp=E,600nm,14.0s								
OKH				MLR	MLR				
	comp=N,800nm,12.0s								
OKH				MLR	MLR				
	comp=Z,400nm,13.0s								
BILL	**Bilibino**	**12.33**	**6**	Pn		**Pn**	**18 36 03.6**		**+1.8**
BILL	**Bilibino**	**12.33**	**6**	*ce*PN		**Pn**	**18 36 05.9**		**+4.1**
BILL				pmax	pmax				
	comp=Z,31nm,2.5s								
TYV	**Tymovskoe**	**13.19**	**256**	*e*PN		**Pn**	**18 36 16.8**		**+3.3**
TYV				*eS*		**Sn**	**18 38 46.8**		**+7.1**
TYV				pmax	pmax				
	comp=Z,21nm,1.4s								
TYV				pmax	pmax				
	comp=Z,100nm,3.0s								
TYV				smax	smax				
	comp=N,200nm,2.9s								
TYV				smax	smax				
	comp=E,100nm,2.9s								
TYV				smax	smax				
	comp=N,15nm,1.8s								
TYV				smax	smax				
	comp=E,12nm,1.8s								
ATKA	**Atka Island**	**13.80**	**96**	Pn		**Pn**	**18 36 20.0**		**-1.8**
GAMB	**Gambell**	**14.86**	**47**	Pn		**Pn**	**18 36 37.5**		**+1.3**
YSS	**Yuzhno-Sakhali**	**15.46**	**243**	Pn		**Pn**	**18 36 41.3**		**-3.0**
YSS	**Yuzhno-Sakhali**	**15.46**	**243**	*eP*		**P**	**18 36 46.8**		**-2.0**
YSS				*eS*		**Sn**	**18 39 35.7**		**+0.5**
YSS				pmax	pmax				
	comp=Z,20nm,1.0s								
YSS				MLR	MLR				
	comp=Z,1μm,16.0s								
YSS				MLR	MLR				
	comp=E,800nm,16.0s								
YUK	**Yuzh-Kuril'sk**	**16.16**	**230**	*ci* P		**Pn**	**18 36 52.2**		**-1.2**
YUK				S		**Sn**	**18 39 51.9**		**-0.3**
YUK				pmax	pmax				
	comp=N,44nm,0.6s								
YUK				pmax	pmax				
	comp=Z,85nm,0.6s								
GRNR	**Gornyy**	**16.69**	**263**	⇓*i* P		**P**	**18 37 06.2**		**+3.8**
GRNR				pmax	pmax				
	comp=Z,10.0nm,1.2s								
GRNR				MLR	MLR				
	comp=E,210nm,16.0s								
GRNR				MLR	MLR				
	comp=N,310nm,14.0s								
GRNR				MLR	MLR				
	comp=Z,390nm,13.0s								
NMR	**Nemuro--Hokkai**	**16.76**	**229**	*eP*		**Pn**	**18 36 54.9**		**-6.0**
NMR				*eS*		**Sn**	**18 40 03.9**		**-2.7**
TNA	**Tin City**	**17.02**	**43**			**P**	**18 37 05.3**		**-0.6**
JKA	**Kamikawa-asahi**	**17.58**	**237**			**Pn**	**18 37 11.6**		**+0.3**
JKA				IAmb	IAmb		18 37 17.1		
	comp=Z,181nm,1.7s								
ASAJ	**Asahikawa**	**17.58**	**237**	P		**P**	**18 37 12.8**		**+0.6**
	comp=Z,31nm,0.9s,baz=50,slow=10,SNR=15								
ASAJ				LR	LR		18 44 32.7		
	comp=Z,893nm,18.1s,baz=14,slow=39								
ASAJ	**Asahikawa**	**17.58**	**237**	P		**Pn**	**18 37 11.6**		**+0.3**
ASAJ				pmax	pmax				
	comp=Z,181nm,1.7s								
YAK	**Yakutsk**	**18.18**	**304**			**Pn**	**18 37 17.5**		**-1.0**
YAK				IAmb	IAmb		18 37 27.3		
	comp=Z,55nm,1.1s								
YAK	**Yakutsk**	**18.18**	**304**	P		**P**	**18 37 19.2**		**+0.5**
	comp=Z,31nm,0.6s,baz=119,slow=13,SNR=14								
YAK				LR	LR		18 44 30.5		
	comp=Z,252nm,20.8s,baz=96,slow=38								
YAK	**Yakutsk**	**18.18**	**304**	*eP*		**P**	**18 37 19.7**		**+1.0**
YAK				*eS*		**Sn**	**18 40 42.9**		**+2.0**
YAK				pmax	pmax				
	comp=E,44nm,1.0s								
YAK				pmax	pmax				
	comp=E,16nm,1.3s								
YAK				pmax	pmax				
	comp=N,3.0nm,1.3s								
YAK				smax	smax				
	comp=N,121nm,2.3s								
YAK				smax	smax				
	comp=E,57nm,2.0s								
YAK				MLR	MLR				
	comp=Z,1μm,16.0s								
YAK				MLR	MLR				
	comp=E,522nm,12.0s								
YAK				MLR	MLR				
	comp=N,418nm,13.0s								
M14K	**Bethel**	**18.84**	**61**	P		**Pn**	**18 37 27.9**		**+1.4**
M14K				IAmb	IAmb		18 37 37.0		
	comp=Z,147nm,1.9s								
ERM	**Erimo**	**18.97**	**232**	P		**P**	**18 37 25.8**		**-1.7**
ERM				IAmb	IAmb		18 37 30.6		
	comp=Z,93nm,1.2s								
ERM	**Erimo**	**18.97**	**232**	P		**P**	**18 37 25.8**		**-1.7**
ERM				pmax	pmax				
	comp=Z,93nm,1.2s								
C16K	**Lisburne Hills**	**19.03**	**37**	P		**Pn**	**18 37 29.0**		**+0.2**
C16K				IAmb	IAmb		18 37 32.9		
	comp=Z,96nm,1.8s								
S12K	**Black Hills**	**19.46**	**76**	P		**Pn**	**18 37 34.5**		**+0.4**
S12K				IAmb	IAmb		18 37 46.4		
	comp=Z,85nm,1.2s								
I17K	**Unalakleet**	**19.62**	**51**	P		**Pn**	**18 37 35.3**		**-0.6**
I17K				IAmb	IAmb		18 37 44.5		
	comp=Z,48nm,1.2s								
N15K	**Kwethluk River**	**19.78**	**62**	IAmb	IAmb		18 37 46.9		
	comp=Z,62nm,1.1s								
L16K	**Owhat River**	**20.04**	**58**	P		Pn	18 37 40.8		0.0
L16K				IAmb	IAmb		18 37 49.3		
	comp=Z,79nm,1.9s								
E18K	**Tukpahlearik C**	**20.40**	**41**	P		**P**	**18 37 42.8**		**-0.2**
ZEA	**Zeya**	**20.65**	**279**	*eP*		Pn	18 37 51.7		+3.6
ZEA				*eS*		**S**	**18 41 34.0**		**-1.8**
ZEA				pmax	pmax				
	comp=N,10.0nm,0.8s								
ZEA				pmax	pmax				
	comp=E,10.0nm,0.8s								
ZEA				pmax	pmax				
	comp=Z,10.0nm,0.7s								
ZEA				MLR	MLR				
	comp=N,200nm,12.0s								
ZEA				MLR	MLR				
	comp=E,100nm,12.0s								
ZEA				MLR	MLR				
	comp=Z,200nm,11.0s								
JTM	**Tennabayashi**	**20.89**	**233**	P		**P**	**18 37 46.6**		**-1.8**
J18K	**Innoko River**	**21.35**	**53**			**P**	**18 37 53.6**		**+0.3**
TIXI	**Tiksi**	**21.43**	**331**			**P**	**18 37 54.2**		**+0.2**
TIXI	**Tiksi**	**21.43**	**331**	P		**P**	**18 37 55.7**		**+1.6**
	comp=Z,19nm,0.6s,baz=115,slow=10,SNR=76								
TIXI				LR	LR		18 46 52.0		
	comp=Z,444nm,21.0s,baz=168,slow=38								
	comp=Z,19nm,0.6s								
TIXI	**Tiksi**	**21.43**	**331**	*ce* P		**P**	**18 37 56.3**		**+2.3**
TIXI				pmax	pmax				
	comp=Z,37nm,1.0s								
H19K	**Roundabout Mou**	**21.64**	**47**	P		**P**	**18 37 57.2**		**+1.0**
HEH	**HeiHe**	**22.01**	**270**	*eP*		**P**	**18 37 58.7**		**-1.7**
HEH				pmax	pmax				
	comp=Z,21nm,1.1s								
HEH				LR	LR				
	comp=Z,2μm,17.8s								
HEH				LR	LR				
	comp=Z,990nm,16.4s								
HEH				LR	LR				
	comp=Z,710nm,13.1s								
IMAR	**Indian Mountai**	**22.80**	**46**	P		**P**	**18 38 09.1**		**+0.4**
G21K	**Allakaket**	**22.95**	**45**	P		**P**	**18 38 10.5**		**+0.2**
B21K	**Ikpikpuk River**	**23.13**	**37**	P		**P**	**18 38 12.4**		**+0.4**
B21K				IAmb	IAmb		18 38 31.9		
	comp=Z,32nm,0.8s								
JMM	**Marumori**	**23.41**	**229**			**P**	**18 38 15.1**		**-0.1**
STLK	**Strandline Lak**	**23.69**	**58**	P		**P**	**18 38 18.8**		**+0.9**
OHAK	**Old Harbor**	**23.78**	**68**	P		**P**	**18 38 18.7**		**+0.1**
SKT	**Skwentna**	**23.78**	**56**			**P**	**18 38 19.4**		**+0.8**
E22K	**Anaktuvuk Pass**	**23.82**	**41**			**P**	**18 38 20.4**		**+1.4**
E22K				IAmb	IAmb		18 38 41.6		
	comp=Z,24nm,1.2s								
KTH	**Kantishna Hill**	**23.95**	**52**	IAmb	IAmb		18 38 30.4		
	comp=Z,57nm,1.7s								
KDAK	**Kodiak Island**	**24.00**	**67**	*i* P		**P**	**18 38 26.0**		**+5.3**
KDAK				pmax	pmax				
	comp=Z,108nm,1.7s								
SUA	**Susitna One**	**24.21**	**58**			**P**	**18 38 22.2**		**-0.6**
SUA				IAmb	IAmb		18 38 32.3		
	comp=Z,23nm,0.9s								
TRF	**Thorofare Moun**	**24.24**	**53**			**P**	**18 38 22.3**		**-0.8**
COLD	**Coldfoot**	**24.32**	**43**			**P**	**18 38 23.2**		**-0.4**
CUT	**Chulitna**	**24.33**	**55**	P		**P**	**18 38 23.9**		**+0.2**
CUT				IAmb	IAmb		18 38 32.5		
	comp=Z,29nm,1.0s								
BNX	**BinXian**	**24.48**	**261**	⇓P		**P**	**18 38 25.5**		**+0.3**
BNX				pmax	pmax				
	comp=Z,5.0nm,1.4s								
H23K	**Yukon River**	**24.51**	**47**	IAmb	IAmb		18 38 36.0		
	comp=Z,29nm,1.1s								
I23K	**Minto, Yukon-K**	**24.58**	**49**	P		**P**	**18 38 26.0**		**0.0**
I23K				IAmb	IAmb		18 38 36.0		
	comp=Z,22nm,1.0s								
E23K	**Chandalar**	**24.62**	**41**	IAmb	IAmb		18 38 54.2		
	comp=Z,25nm,1.1s								
TOLK	**Toolik Lake Re**	**24.71**	**40**	P		**P**	**18 38 27.4**		**+0.3**
RND	**Reindeer**	**24.88**	**53**			**P**	**18 38 29.1**		**+0.4**
RND				IAmb	IAmb		18 38 36.8		
	comp=Z,22nm,1.3s								
RND	**Reindeer**	**24.88**	**53**	P		**P**	**18 38 29.2**		**+0.4**
RND				pmax	pmax				
	comp=Z,22nm,1.3s								
E24K	**Your Creek**	**25.05**	**42**	IAmb	IAmb		18 38 41.4		
	comp=Z,15nm,0.7s								
COLA	**College**	**25.23**	**49**	*i* P		**P**	**18 38 36.6**		**+4.8**
COLA				pmax	pmax				
	comp=Z,9.0nm,1.0s								
CCB	**Clear Creek Bu**	**25.26**	**50**			**P**	**18 38 32.7**		**+0.6**
CCB				IAmb	IAmb		18 38 50.2		
	comp=Z,24nm,1.3s								
G24K	**Hadweenzic Riv**	**25.36**	**45**	IAmb	IAmb		18 38 50.1		
	comp=Z,18nm,1.1s								
DHY	**Denali Highway**	**25.58**	**53**	P		**P**	**18 38 35.1**		**-0.1**
MJB9	**Matsu-Tunnel**	**25.64**	**232**	P		**P**	**18 38 34.8**		**-1.1**
MAJO	**Matsushiro**	**25.64**	**232**	P		**P**	**18 38 34.4**		**-1.4**
MAJO	**Matsushiro**	**25.64**	**232**	*i* P		**P**	**18 38 35.7**		**-0.1**
MAJO				pmax	pmax				
	comp=Z,36nm,0.8s								
MJAR	**Matsushiro Arr**	**25.64**	**232**			**P**	**18 38 34.0**		**-1.8**
MJAR				IAmb	IAmb		18 38 47.1		
	comp=Z,29nm,1.0s								
MJAR	**Matsushiro Arr**	**25.64**	**232**	P		**P**	**18 38 35.6**

NJ2 pmax pmax
comp=Z,7,0nm,0.5s
BBB Bella Bella 39.06 66 LR LR 18 55 55.0
comp=Z,130nm,18.7s,baz=264,slow=35
YKA Yellowknife Ar 39.96 46 P **P** **18 40 41.7 +1.5**
comp=Z,1.1nm,0.7s,baz=304,slow=13,SNR=2.0
comp=Z,1.1nm,0.7s
RES Resolute Bay 40.10 24 P **P** **18 40 42.2 +0.9**
RES Resolute Bay 40.10 24 P **P** **18 40 42.2 +0.9**
RES pmax pmax
comp=Z,8.0nm,1.0s
XAN Xi'an 42.78 263 *e*P P 18 40 57.1 -6.7
XAN LR LR
comp=N,700nm,21.3s
XAN LR LR
comp=E,930nm,20.6s
XAN LR LR
comp=Z,460nm,12.5s
ZALV Zalesovo Beam 42.82 302 P **P** **18 41 02.1 -1.6**
ZALV **PcP** **18 42 54.7 0.0**
ZALV Zalesovo Beam 42.82 302 P **P** **18 41 02.6 -1.2**
comp=Z,0.7nm,0.6s,baz=64,slow=9.8,SNR=2.5
ZALV PcP **PcP** **18 42 52.7 -1.9**
comp=Z,2.5nm,0.9s,baz=77,slow=6.4,SNR=5.1
ZALV LR LR 19 00 11.1
comp=Z,135nm,18.9s,baz=38,slow=38
comp=Z,0.7nm,0.6s
DGZ Jazzator, Alta 44.08 295 *i* P **P** **18 41 13.7 -0.5**
DGZ pmax pmax
comp=Z,6.0nm,0.8s
GTA Gaotai 44.08 276 *e*P **P** **18 41 15.0 +0.7**
GTA sP sP 18 41 24.1 +3.1
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA LR LR
comp=Z,860nm,18.7s
GTA LR LR
comp=Z,430nm,22.3s
GUMO Guam 44.46 206 LR LR 18 58 37.1
comp=Z,64nm,19.3s,baz=48,slow=34
SPITS Spitsbergen Ar 44.71 351 P **P** **18 41 20.6 +1.8**
comp=Z,8.5nm,0.5s,baz=68,slow=9.1,SNR=34
comp=Z,8.5nm,0.5s
SPITS Spitsbergen Ar 44.71 351 P **P** **18 41 18.9 +0.1**
SPITS pmax pmax
comp=Z,73nm,1.2s
SPB2 Spitsbergen Ar 44.72 351 P **P** **18 41 19.1 +0.4**
NEEM North Greenlan 45.28 10 *i* P **P** **18 41 25.3 +1.7**
NEEM IAmb IAmb 18 41 28.6
comp=Z,11nm,0.7s
BLKN Baker Lake 45.83 37 **P** **18 41 28.5 +0.8**
ZSN Zaisan 46.82 294 *e*P **P** **18 41 35.6 -0.2**
ZSN Zaisan 46.82 294 *e*P **P** **18 41 35.6 -0.2**
NEW Newport 47.05 64 LR LR 18 59 39.3
comp=Z,71nm,22.0s,baz=304,slow=34
DAG Danmarks Havn 47.65 1 *i* P **P** **18 41 43.0 +1.2**
DAG IAmb IAmb 18 41 43.9
comp=Z,3.3nm,0.9s
WMQ Urumqi 47.75 289 *e*P **P** **18 41 44.3 +1.2**
WMQ LR LR
comp=Z,1μm,17.9s
WMQ LR LR
comp=Z,310nm,21.9s
KURK Kurchatov 47.80 301 **P** **18 41 41.8 -1.5**
KURK IAmb IAmb 18 41 43.3
comp=Z,13nm,1.1s
KURK Kurchatov 47.80 301 *ce*P **P** **18 41 42.6 -0.8**
KURK pmax pmax
comp=Z,10.0nm,0.8s
KURBB Kurchatov Arra 47.91 301 P **P** **18 41 43.2 -1.0**
comp=Z,4.3nm,0.4s,baz=55,slow=7.8,SNR=35
comp=Z,4.3nm,0.4s
YBH Yreka Blue Hor 48.48 74 LR LR 19 00 27.7
comp=Z,6.6nm,21.1s,baz=292,slow=34
MK31 Makanchi Array 48.58 295 *ce*P **P** **18 41 49.3 -0.1**
MKAR Makanchi Array 48.58 295 **P** **18 41 48.3 -1.1**
MKAR Makanchi Array 48.58 295 P **P** **18 41 48.5 -1.0**
comp=Z,2.8nm,0.7s,baz=56,slow=7.0,SNR=26
MKAR LR LR 19 03 29.8
comp=Z,230nm,20.4s,baz=33,slow=38
comp=Z,2.8nm,0.7s
MAKZ Makanchi 48.73 295 **P** **18 41 48.9 -1.7**
MAKZ IAmb IAmb 18 42 17.7
comp=Z,12nm,1.4s
MAKZ Makanchi 48.73 295 P **P** **18 41 48.9 -1.7**
MAKZ pmax pmax
comp=Z,13nm,1.4s
GOMU GeErMu 49.15 276 P **P** **18 41 51.3 -3.1**
GOMU pmax pmax
comp=Z,8.0nm,0.8s
GOMU LR LR
comp=Z,210nm,15.5s
GOMU LR LR
comp=Z,260nm,13.8s
BVAR Borovoye Array 50.08 308 P **P** **18 42 00.2 -0.6**
comp=Z,3.3nm,0.5s,baz=61,slow=7.8,SNR=19
BVAR LR LR 19 05 60.0
comp=Z,232nm,19.4s,baz=48,slow=39
comp=Z,3.3nm,0.5s
BORK Borovoye 50.10 308 *ce*P **P** **18 42 01.8 +0.9**
BORK pmax pmax
comp=Z,5.0nm,0.8s
DBG Daneborg 50.12 1 *i* P **P** **18 42 01.8 +1.0**
DBG IAmb IAmb 18 42 06.4
comp=Z,4.0nm,0.9s
SUMG Summit 51.00 8 P **P** **18 42 08.7 +0.7**
SUMG IAmb IAmb 18 42 15.4
comp=Z,23nm,1.3s
SUMG Summit 51.00 8 P **P** **18 42 08.7 +0.7**
SUMG pmax pmax
comp=Z,23nm,1.3s
SUMG Summit 51.00 8 *i* P **P** **18 42 09.6 +1.6**
SUMG IAmb IAmb 18 42 13.5
comp=Z,18nm,1.1s
BRZS Berezniki 51.12 304 *e*P **P** **18 42 08.9 +0.1**
BRZS Berezniki 51.12 304 *e*P **P** **18 42 08.8 +0.1**
FARB Farallon Islan 51.16 78 P **P** **18 42 11.7 +2.6**
ARCES ARCESS Array B 51.22 342 P **P** **18 42 09.3 +0.1**
ARCES ARCESS Array B 51.22 342 P **P** **18 42 10.1 +1.0**
comp=Z,4.8nm,0.8s,baz=22,slow=6.9,SNR=6.7
ARCES LR LR 19 07 48.7
comp=Z,180nm,18.2s,baz=36,slow=41
comp=Z,4.8nm,0.8s
ARCES ARCESS Array B 51.22 342 P **P** **18 42 09.3 +0.1**
ARCES pmax pmax
comp=Z,89nm,1.9s
DLMT Dillon 51.30 64 **P** **18 42 12.7 +2.4**
DLMT IAmb IAmb 18 42 17.3
comp=Z,6.7nm,0.8s
APA Apatity 51.38 338 ||*e*P **P** **18 42 11.0 +0.6**
TDK Taldyqorghan 51.78 296 *e*P **P** **18 42 13.6 -0.1**
comp=Z,10nm,1.1s
TDK Taldyqorghan 51.78 296 *e*P **P** **18 42 13.6 -0.1**
TDK pmax pmax
comp=Z,10.0nm,1.1s
PZH PanZhiHua 52.51 262 P **P** **18 42 20.3 +0.8**
SHLS Shalkode 52.54 294 *e*P **P** **18 42 17.8 -1.7**
comp=Z,5.8nm,0.5s
SHLS Shalkode 52.54 294 *e*P **P** **18 42 17.8 -1.7**
SHLS pmax pmax
comp=Z,6.0nm,0.5s
ARTI Arti 52.67 317 P **P** **18 42 18.8 -1.4**
ARTI IAmb IAmb 18 42 30.6
comp=Z,5.5nm,0.7s
ARTI Arti 52.67 317 P **P** **18 42 19.2 -0.9**
comp=Z,1.4nm,0.4s,baz=36,slow=5.5,SNR=4.0
ARTI LR LR 19 07 19.7
comp=Z,388nm,18.4s,baz=47,slow=39
comp=Z,1.4nm,0.4s
ARTI Arti 52.67 317 *d i* P **P** **18 42 19.9 -0.3**
ARTI **18 43 31.9**
ARTI **18 44 10.4**
ARTI S **S** **18 49 47.3 +0.6**
ARTI SS **SS** **18 53 21.0 -3.4**
ARTI pmax pmax
comp=Z,4.0nm,0.8s
ARTI MLR MLR
comp=Z,372nm,15.0s
TGY Tagaytay City 52.74 235 LR LR 19 06 33.8
comp=Z,52nm,18.8s,baz=62,slow=38
UZB Uzynbulak 52.77 294 *e*P **P** **18 42 21.2 -0.1**
UZB Uzynbulak 52.77 294 *e*P **P** **18 42 21.1 -0.1**
SATY Saty 53.15 294 *e*P **P** **18 42 24.1 0.0**
SATY Saty 53.15 294 *e*P **P** **18 42 24.0 0.0**
ELK Elko 53.19 70 LR LR 19 04 13.6
comp=Z,71nm,19.4s,baz=279,slow=35

NVAR Mina Array Bea 53.21 74 P **P** **18 42 24.1 -0.5**
NVAR Mina Array Bea 53.21 74 P **P** **18 42 28.4 +3.8**
comp=Z,1.3nm,0.8s,baz=312,slow=7.4,SNR=6.7
NVAR LR LR 19 03 20.8
comp=Z,92nm,20.4s,baz=294,slow=34
comp=Z,1.3nm,0.8s
JMIC Jan Mayen 53.34 357 LR LR 19 06 00.2
comp=Z,38nm,18.1s,baz=311,slow=37
MDOK Medeo 53.77 295 *e*P **P** **18 42 28.7 +0.1**
MDOK Medeo 53.77 295 *e*P **P** **18 42 28.7 +0.1**
AAA Alma-Ata 53.81 295 *e*P **P** **18 42 28.8 -0.1**
comp=Z,12nm,0.8s
AAA Alma-Ata 53.81 295 *e*P **P** **18 42 28.7 -0.1**
AAA pmax pmax
comp=Z,12nm,0.8s
TNSS Tian-Shan 53.91 295 *e*P **P** **18 42 29.5 -0.5**
TNSS Tian-Shan 53.91 295 *e*P **P** **18 42 29.5 -0.5**
DSP Deep Springs 54.16 75 IAmb IAmb 18 43 09.8
comp=Z,10nm,1.5s
KIRV Kirov 54.23 324 LR LR 19 09 57.0
comp=Z,360nm,18.6s,baz=33,slow=41
KIRV Kirov 54.23 324 *i* P **P** **18 42 32.7 +1.2**
FRB Frobisher Bay 54.27 25 LR LR 19 09 24.0
comp=Z,99nm,18.8s,baz=296,slow=40
GMN Gold Mountain 54.59 74 P **P** **18 42 36.6 +1.8**
PDAR Pinedale Array 54.68 64 P **P** **18 42 35.1 -0.3**
PDAR Pinedale Array 54.68 64 P **P** **18 42 38.4 +3.0**
comp=Z,0.8nm,0.8s,baz=336,slow=3.1,SNR=6.5
PDAR LR LR 19 05 29.0
comp=Z,55nm,20.8s,baz=322,slow=35
comp=Z,0.8nm,0.8s
SGDS Sogindy 54.79 297 *e*P **P** **18 42 36.0 +0.1**
SFJD Kangerlussuaq 54.91 15 LR LR 19 08 51.2
comp=Z,108nm,19.3s,baz=358,slow=39
SPR3 Spring Creek 3 54.93 71 IAmb IAmb 18 43 07.5
comp=Z,6.0nm,0.8s
TPNV Topopah Spring 55.40 74 P **P** **18 42 41.5 +1.0**
TPNV IAmb IAmb 18 43 00.6
comp=Z,17nm,1.6s
TPNV Topopah Spring 55.40 74 P **P** **18 42 41.6 +1.0**
TPNV pmax pmax
comp=Z,17nm,1.6s
AAK Ala-Archa 55.45 296 P **P** **18 42 40.1 -0.7**
AAK IAmb IAmb 18 42 42.1
comp=Z,10nm,0.9s
AAK Ala-Archa 55.45 296 P **P** **18 42 40.7 -0.1**
comp=Z,8.3nm,0.7s,baz=82,slow=7.1,SNR=5.8
AAK LR LR 19 09 28.5
comp=Z,185nm,18.2s,baz=45,slow=39
comp=Z,8.3nm,0.7s
AAK Ala-Archa 55.45 296 *i* P **P** **18 42 40.2 -0.6**
AAK pmax pmax
comp=Z,12nm,0.9s
KLMR Klimovskoe 55.45 330 *e*P **P** **18 42 40.7 +0.4**
KLMR *e* 18 43 41.0
KLMR pmax pmax
comp=Z,20nm,1.1s
KLMR MLR MLR
comp=Z,337nm,13.0s
ULM Lac du Bonnet 55.67 50 LR LR 19 06 21.4
comp=Z,93nm,21.7s,baz=324,slow=36
BSUT Blindstream Ca 55.69 67 IAmb IAmb 18 43 08.7
comp=Z,8.7nm,1.2s
PRN Pahroc Range 55.71 73 IAmb IAmb 18 42 58.0
comp=Z,8.6nm,1.1s
WSHM Spangler Hills 55.72 76 IAmb IAmb 18 43 04.0
comp=Z,6.1nm,1.0s
GWY Greenwater Val 55.73 75 P **P** **18 42 43.8 +0.9**
GWY IAmb IAmb 18 43 19.1
comp=Z,6.2nm,1.0s
QSM Queen of Sheba 55.79 75 IAmb IAmb 18 43 18.0
comp=Z,9.5nm,1.3s
CCCA Chr Cany lake 55.84 76 P **P** **18 42 45.6 +2.0**
LSA Lhasa 56.02 274 P **P** **18 42 45.0 -0.5**
LSA IAmb IAmb 18 42 57.4
comp=Z,5.9nm,0.8s
LSA Lhasa 56.02 274 P **P** **18 42 42.6 -2.9**
LSA pmax pmax
comp=Z,2.0nm,1.0s
LSA Lhasa 56.02 274 P **P** **18 42 45.0 -0.5**
LSA pmax pmax
comp=Z,6.0nm,0.8s
TMUT Trail Mountain 56.36 68 IAmb IAmb 18 43 17.3
comp=Z,5.4nm,0.9s
DZA Taraz 56.84 299 *e*P **P** **18 42 50.9 +0.2**
DZA Taraz 56.84 299 *e*P **P** **18 42 50.8 +0.2**
SRU San Rafael Swe 56.86 68 IAmb IAmb 18 43 20.2
comp=Z,7.9nm,0.9s
KSH Kashi 56.98 293 P **P** **18 42 51.8 0.0**
KSH sP sP 18 43 02.3 +3.8
KSH pmax pmax
comp=Z,4.0nm,0.9s
KSH LR LR
comp=N,590nm,18.6s
KSH LR LR
comp=E,770nm,18.0s
KSH LR LR
comp=Z,290nm,14.2s
DAV Davao City (W) 56.98 226 LR LR 19 08 34.9
comp=Z,78nm,18.6s,baz=3.0,slow=37
KK31 Karatay Array 57.09 299 **P** **18 42 51.2 -1.2**
KK31 IAmb IAmb 18 42 53.3
comp=Z,12nm,0.8s
KK31 Karatay Array 57.09 299 P **P** **18 42 51.2 -1.2**
KK31 pmax pmax
comp=Z,12nm,0.9s
KKAR Karatay Array 57.09 299 **P** **18 42 51.2 -1.2**
KKAR Karatay Array 57.09 299 P **P** **18 42 51.2 -1.2**
AKTO Aktyubinsk 57.27 313 P **P** **18 42 53.7 +0.2**
comp=Z,1.8nm,0.6s,baz=39,slow=1.0,SNR=7.3
AKTO LR LR 19 11 05.0
comp=Z,338nm,18.1s,baz=42,slow=40
comp=Z,1.8nm,0.6s
ABKAR Akbulak array 57.35 311 **P** **18 42 53.2 -0.9**
BRLS Borolday 57.48 300 *e*P **P** **18 42 56.8 +1.7**
BRLS Borolday 57.48 300 *e*P **P** **18 42 56.8 +1.7**
HMU Henry Mountain 57.61 69 IAmb IAmb 18 43 21.9
comp=Z,10nm,0.9s
IUG luzhnay 58.04 299 *e*P **P** **18 42 59.4 +0.2**
comp=Z,8.9nm,0.8s
IUG luzhnay 58.04 299 *e*P **P** **18 42 59.3 +0.2**
IUG pmax pmax
comp=Z,9.0nm,0.8s
IRM Iron Mountain 58.08 75 **P** **18 43 01.4 +2.0**
IRM IAmb IAmb 18 43 10.7
comp=Z,9.5nm,1.2s
CHM Chimkent 58.12 299 *e*P **P** **18 42 59.7 +0.1**
comp=Z,5.5nm,0.7s
CHM Chimkent 58.12 299 *e*P **P** **18 42 59.7 +0.1**
CHM pmax pmax
comp=Z,5.0nm,0.7s
PV23 Carpenter Ridg 58.14 67 IAmb IAmb 18 43 24.8
comp=Z,5nm,1.1s
PV22 Blue Mesa, Par 58.19 67 IAmb IAmb 18 43 25.2
comp=Z,7.4nm,1.0s
PV04 Paradox Valley 58.24 67 IAmb IAmb 18 43 06.0
comp=Z,13nm,1.3s
FINES FINESS Array B 58.29 337 P **P** **18 43 00.6 +0.2**
FINES FINESS Array B 58.29 337 P **P** **18 43 01.1 +0.7**
comp=Z,7.2nm,0.9s,baz=23,slow=10,SNR=9.7
FINES LR LR 19 12 23.8
comp=Z,118nm,18.0s,baz=36,slow=40
comp=Z,7.2nm,0.9s
FINES FINESS Array B 58.29 337 *i* P **P** **18 43 02.0 +1.6**
FINES pmax pmax
comp=Z,12nm,0.9s
PV16 Nyswonger Mesa 58.29 68 IAmb IAmb 18 43 32.3
comp=Z,9.2nm,1.1s
PV12 Saucer Basin, 58.35 67 P **P** **18 43 02.5 +1.0**
PV12 IAmb IAmb 18 43 17.3
comp=Z,11nm,1.0s
PV03 Paradox Valley 58.37 68 IAmb IAmb 18 43 06.8
comp=Z,8.6nm,1.2s
PV05 Paradox Valley 58.37 68 IAmb IAmb 18 43 06.9
comp=Z,9.4nm,1.0s
PV13 Radium Mtn., P 58.45 68 P **P** **18 43 04.3 +2.1**
PV02 Paradox Valley 58.46 67 P **P** **18 43 04.0 +1.7**
ISCO Idaho Springs 58.88 64 P **P** **18 43 06.4 +1.1**
ISCO IAmb IAmb 18 43 16.3
comp=Z,5.4nm,0.9s
ISCO Idaho Springs 58.88 64 P **P** **18 43 06.4 +1.1**
ISCO pmax pmax
comp=Z,5.0nm,0.9s
ESJX Sierra Juarez 59.26 77 IAmb IAmb 18 43 11.7
comp=Z,4.7nm,0.6s
BELG Belogornoye 59.76 320 *i* P **P** **18 43 15.0 +4.3**

BELG pmax pmax
comp=Z,5.0nm,1.1s
EVN Everest 59.79 276 P **P** **18 43 11.4 -0.7**
EVN IAmb IAmb 18 43 23.2
comp=Z,8.4nm,1.1s
S22A 4UR Ranch, Cre 59.80 67 IAmb IAmb 18 43 23.2
comp=Z,5.6nm,1.1s
X16A Lo Mia Camp, P 59.88 72 IAmb IAmb 18 43 23.0
comp=Z,6.4nm,1.3s
CMAR Chiang Mai Arr 60.46 259 P **P** **18 43 14.7 -1.4**
CMAR Chiang Mai Arr 60.46 259 P **P** **18 43 16.4 +0.3**
comp=Z,1.6nm,0.8s,baz=38,slow=6.3,SNR=17
CMAR LR LR 19 11 20.3
comp=Z,115nm,18.3s,baz=40,slow=38
comp=Z,1.6nm,0.8s
SDCO Great Sand Dun 60.49 66 P **P** **18 43 17.1 +0.8**
X18A Snowflake 60.60 71 IAmb IAmb 18 43 28.6
comp=Z,8.7nm,1.0s
CHGR Chuyangaron 61.12 297 **P** **18 43 19.5 -0.9**
CHGR Chuyangaron 61.12 297 P **P** **18 43 19.5 -0.9**
CHGR pmax pmax
comp=Z,14nm,0.8s
OBN Obninsk 61.14 328 LR LR 19 13 14.5
comp=Z,186nm,18.9s,baz=82,slow=39
OBN Obninsk 61.14 328 ||*eP* **P** **18 43 22.3 +2.2**
OBN *i* *SP **sP** **18 43 27.4 +0.7**
OBN **18 44 05.0**
OBN S **S** **18 51 32.0 -6.3**
OBN pmax pmax
comp=Z,13nm,0.7s
OBN MLR MLR
comp=Z,266nm,15.0s
BRDH Bariadhala 61.19 268 LR LR 19 12 35.0
comp=Z,248nm,18.6s,baz=38,slow=39
NB2 NORSAR Subarra 61.38 345 P **P** **18 43 22.4 +0.7**
comp=Z,7.0nm,0.9s,baz=17,slow=6.9
NOA NORSAR Array B 61.38 345 P **P** **18 43 22.5 +0.8**
comp=Z,1.2nm,0.5s,baz=17,slow=6.9,SNR=9.2
NOA LR LR 19 11 41.7
comp=Z,121nm,19.4s,baz=35,slow=38
comp=Z,1.2nm,0.5s
T25A Trinidad 61.51 65 IAmb IAmb 18 43 28.2
comp=Z,9.1nm,1.2s
HFS Hagfors 61.86 343 P **P** **18 43 25.3 +0.4**
comp=Z,3.0nm,0.6s,baz=57,slow=5.3,SNR=16
HFS LR LR 19 12 48.5
comp=Z,110nm,19.4s,baz=61,slow=38
comp=Z,3.0nm,0.6s
TASM ASL Pad, Albuq 62.13 68 IAmb IAmb 18 43 38.3
comp=Z,4.0nm,0.9s
TASM ASL Pad, Albuq 62.13 68 IAmb IAmb 18 43 38.3
comp=Z,4.2nm,1.0s
TASM ASL Pad, Albuq 62.13 68 IAmb IAmb 18 43 38.3
comp=Z,4.3nm,1.0s
ANMO Albuquerque 62.13 68 **P** **18 43 28.8 +1.4**
ANMO IAmb IAmb 18 43 38.3
comp=Z,4.3nm,0.9s
ANMO Albuquerque 62.13 68 LR LR 19 08 57.5
comp=Z,77nm,20.6s,baz=70,slow=34
ANMO Albuquerque 62.13 68 P **P** **18 43 28.8 +1.4**
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ABQ Albuquerque 62.13 68 IAmb IAmb 18 43 38.3
comp=Z,4.1nm,0.9s
SCHQ Schefferville 62.39 30 LR LR 19 13 30.5
comp=Z,93nm,18.5s,baz=320,slow=39
LPSR Galich'ya Gora 62.56 325 *e*P **P** **18 43 31.3 +1.6**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
Y22A Socorro 62.64 69 IAmb IAmb 18 43 56.0
comp=Z,10nm,1.2s
VRH Novokhopyorsk 62.82 323 *e*P **P** **18 43 30.6 -0.9**
VRH pmax pmax
comp=Z,7.0nm,0.8s
RTBA Rita Blanca 62.90 65 IAmb IAmb 18 43 43.8
comp=Z,10.0nm,1.0s
121A Cookes Peak, D 63.29 71 IAmb IAmb 18 43 46.7
comp=Z,8.8nm,1.1s
VSR Storozhevoye 63.66 324 *e*P **P** **18 43 39.1 +2.0**
VSR pmax pmax
comp=Z,5.0nm,1.0s
VORD Divnogorie 63.83 324 *e*P **P** **18 43 39.5 +1.3**
VORD pmax pmax
comp=Z,5.0nm,1.2s
NACGM Naroch 64.00 334 *e*P **P** **18 43 42.2 +3.0**
comp=Z,20nm,0.9s,baz=26
HNR Honiara 65.08 183 LR LR 19 07 45.2
comp=Z,126nm,21.3s,baz=36,slow=32
DKNS Dickens 65.99 65 IAmb IAmb 18 44 07.4
comp=Z,9.6nm,1.2s
VHRN Van Horn 66.14 70 **P** **18 43 55.2 +1.5**
SBUM Sibu 67.02 237 **P** **18 43 59.3 0.0**
AK21 Malin Array Si 67.13 330 P **P** **18 43 59.3 -0.2**
AK22 Malin Array Si 67.13 330 P **P** **18 43 59.4 -0.1**
AK04 Malin Array Si 67.14 330 P **P** **18 43 59.4 -0.2**
AKASG Malin Array Be 67.14 330 P **P** **18 43 59.6 0.0**
AKASG IAmb IAmb 18 44 11.6
comp=Z,7.5nm,1.3s
AKASG Malin Array Be 67.14 330 P **P** **18 43 59.9 +0.2**
comp=Z,1.2nm,0.5s,baz=28,slow=6.9,SNR=9.4
AKASG LR LR 19 16 56.8
comp=Z,264nm,18.6s,baz=20,slow=39
comp=Z,1.2nm,0.5s
AKASG Malin Array Be 67.14 330 P **P** **18 43 59.6 0.0**
AKASG pmax pmax
comp=Z,7.0nm,1.3s
AKBB Malin Array Si 67.14 330 *ce*P **P** **18 44 01.6 +2.0**
AKBB pmax pmax
comp=Z,15nm,1.1s
AKBB Malin Array Si 67.14 330 P **P** **18 43 59.4 -0.2**
KIEV Kiev 67.15 330 ||P P 18 44 08.1 +8.4
KIEV Kiev 67.15 330 ||P P 18 44 08.1 +8.4
AK01 Malin Array Si 67.16 330 P **P** **18 43 59.2 -0.5**
ALPN Alpine 67.17 69 IAmb IAmb 18 44 04.9
comp=Z,6.0nm,1.0s
AK11 Malin Array Si 67.18 330 P **P** **18 43 59.0 -0.8**
AK02 Malin Array Si 67.19 330 P **P** **18 43 59.1 -0.8**
AK09 Malin Array Si 67.20 330 P **P** **18 43 59.2 -0.8**
CCM Cathedral Cave 67.24 56 P **P** **18 44 01.0 +0.6**
CCM Cathedral Cave 67.24 56 P **P** **18 44 01.0 +0.6**
CCM pmax pmax
comp=Z,17nm,1.2s
MI28 Mi28,Pidlybu 67.36 331 P **P** **18 44 00.2 -0.8**
HHAR Hobbs 67.39 59 IAmb IAmb 18 44 10.1
comp=Z,9.0nm,0.9s
RNPP8 Varash 67.48 333 P **P** **18 44 01.7 0.0**
MGMO Mountain Grove 67.48 57 IAmb IAmb 18 44 10.5
comp=Z,8.8nm,0.9s
MAK Makhachkala 67.57 314 *d i* P P 18 43 55.7 -6.7
MAK *e*PPP PPP 18 48 07.1
MAK *e*S S 18 52 47.8 -10
MAK *e*SS **SS** **18 57 14.0 -3.9**
MAK pmax pmax
comp=Z,361nm,1.3s
MAK MLR MLR
comp=Z,852nm,15.0s
TXAR Lajitas Array 67.98 70 **P** **18 44 07.1 +1.7**
TXAR Lajitas Array 67.98 70 P **P** **18 44 07.6 +2.2**
comp=Z,2.5nm,0.7s,baz=299,slow=4.3,SNR=34
comp=Z,2.5nm,0.7s
TXAR Lajitas Array 67.98 70 P **P** **18 44 07.1 +1.7**
LUBAR Lubar, Ukraine 68.25 331 P **P** **18 44 06.6 0.0**
BEL Belsk 68.26 336 *e*P **P** **18 44 10.4 +3.8**
SAND Sanderson 68.30 69 IAmb IAmb 18 44 17.1
comp=Z,8.2nm,1.1s
KIV Kislovodsk 68.61 318 *e*P **P** **18 44 10.0 +0.9**
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,174nm,17.0s
EKA Eskdalemuir Ar 68.63 352 P **P** **18 44 10.3 +1.4**
comp=Z,2.6nm,0.8s,baz=14,slow=6.1,SNR=6.5
comp=Z,2.6nm,0.8s
KBZ Khabaz 68.73 318 P **P** **18 44 10.5 +0.8**
comp=Z,1.9nm,0.8s,baz=76,slow=4.2,SNR=2.4
KBZ LR LR 19 19 24.4
comp=Z,281nm,19.2s,baz=23,slow=40
comp=Z,1.9nm,0.8s
BRDY Brady 68.87 65 **P** **18 44 12.2 +1.4**
X40A Basin Creek Fa 69.37 59 IAmb IAmb 18 44 23.1
comp=Z,5.8nm,0.9s
SORM Soroca 69.70 330 ||P P 18 44 25.6 +10
KMPD K-Podol'skiy 69.84 331 P **P** **18 44 16.3 -0.2**
KMPD P **P** **18 44 16.3 -0.2**
KWP Kalwaria Pacla 69.84 334 *e*P P 18 44 25.6 +9.1
OJC Ojcow 70.00 336 *e*P P 18 44 25.9 +8.5

CLL	**Collm**	**70.39 341**	*i* P		P		18 44 28.4	+8.6
CLL			pmax		pmax			
	comp=Z,30nm,1.5s							
CLL	**Collm**	**70.39 341**	*i* Px		Px		18 44 24.7	
	comp=Z,30nm,1.5s							
CLL			L		L		19 17 00.0	
	comp=Z,200nm,18.8s							
NIE	**Niedzica**	**70.63 335**	*e*P		P		18 44 29.8	+8.4
DPC	**Dobruska-Polom**	**70.64 338**	*e*P		P		18 44 30.0	+8.6
DPC	**Dobruska-Polom**	**70.64 338**	*e*P		P		18 44 30.0	+8.6
DPC	**Dobruska-Polom**	**70.64 338**	P		**P**		**18 44 21.2**	**-0.2**
STEB	**Steborice**	**70.72 337**	*e*P		P		18 44 30.3	+8.4
KRLC	**Kraliky**	**70.80 338**	*e*P		P		18 44 29.0	+6.6
KRLC	**Kraliky**	**70.80 338**	*e*P		P		18 44 29.0	+6.6
MORC	**Moravsky Berou**	**70.92 337**	⇑P		P		18 44 32.4	+9.2
MORC	**Moravsky Berou**	**70.92 337**	*e*P		P		18 44 31.0	+7.9
MORC	**Moravsky Berou**	**70.92 337**	⇑P		P		18 44 32.4	+9.3
BUR08	**Bucovina Ar. S**	**71.03 331**			**P**		**18 44 25.0**	**+1.1**
BUR08			IAmb		IAmb		18 44 35.8	
	comp=Z,5.9nm,0.9s							
BURAR	**Bucovina Array**	**71.05 331**	P		**P**		**18 44 24.3**	**+0.2**
BURAR			IAmb		IAmb		18 44 35.8	
	comp=Z,6.4nm,0.8s							
BURAR	**Bucovina Array**	**71.05 331**	⇑P		**P**		**18 44 20.5**	**-3.6**
BURAR	**Bucovina Array**	**71.05 331**	⇑P		**P**		**18 44 20.5**	**-3.6**
GNI	**Garni**	**71.05 315**	LR		LR		19 17 50.2	
	comp=Z,163nm,21.3s,baz=24,slow=38							
PRU	**Pruhonice**	**71.35 339**	*e*P		P		18 44 33.9	+8.2
PRU	**Pruhonice**	**71.35 339**	*e*P		P		18 44 33.9	+8.2
VRAC	**Vranov**	**71.56 338**	LR		LR		19 19 11.4	
	comp=Z,85nm,19.4s,baz=18,slow=39							
VRAC	**Vranov**	**71.56 338**	⇑P		P		18 44 36.4	+9.4
VRAC	**Vranov**	**71.56 338**	*e*P		P		18 44 35.4	+8.4
TESR	**Tescani**	**71.66 330**	⇓P		P		18 44 37.9	+10
JAVC	**Velka Javorina**	**71.75 337**	*e*P		P		18 44 37.3	+9.1
KRUC	**Moravsky**	**71.84 338**	*e*P		P		18 44 36.8	+8.1
ZVC	**Zvikov**	**71.94 339**	*e*P		P		18 44 37.5	+8.2
VRI	**Vrincioaia**	**72.23 330**	⇑P		P		18 44 41.6	+10
TURR	**Turia**	**72.26 330**	⇑P		P		18 44 41.0	+10
PLOR	**Plostina**	**72.27 330**	⇑P		P		18 44 41.9	+11
KHC	**Kasperske Hory**	**72.36 340**	*ce*P		**P**		**18 44 36.2**	**+4.4**
KHC			pmax		pmax			
	comp=Z,14nm,1.7s							
KHC	**Kasperske Hory**	**72.36 340**	*e*P		P		18 44 39.1	+7.3
GERES	**GERESS Array B**	**72.60 339**	P		**P**		**18 44 34.6**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=30,slow=6.2,SNR=3.9							
GERES			LR		LR		19 22 03.2	
	comp=Z,224nm,18.1s,baz=43,slow=40							
	comp=Z,0.3nm,0.4s							
TKL	**Tuckaleechee C**	**72.60 52**	LR		LR		19 18 29.2	
	comp=Z,136nm,18.2s,baz=354,slow=37							
TPGR	**Topolog**	**72.66 328**	⇑P		P		18 44 47.8	+14
MLR	**Muntele Rosu**	**72.80 330**	P		**P**		**18 44 34.5**	**-0.1**
MLR			IAmb		IAmb		18 44 49.7	
	comp=Z,5.2nm,0.8s							
MLR	**Muntele Rosu**	**72.80 330**	LR		LR		19 21 25.3	
	comp=Z,231nm,18.0s,baz=24,slow=40							
MLR	**Muntele Rosu**	**72.80 330**	⇓P		P		18 44 42.7	+8.1
MLR	**Muntele Rosu**	**72.80 330**	P		**P**		**18 44 34.5**	**-0.1**
MLR			pmax		pmax			
	comp=Z,5.0nm,0.8s							
CONA	**Conrad Observa**	**73.03 338**	*e*pP		pP		18 44 44.6	+3.9
	comp=Z,5.4nm,1.0s							
RONA	**Rosalia, Austr**	**73.15 337**	*e*pP		pP		18 44 45.2	+3.7
	comp=Z,7.2nm,1.6s							
ARR	**Arges**	**73.28 331**	⇑P		**P**		**18 44 39.6**	**+2.2**
GZR	**Gura Zlata**	**73.75 332**	⇓P		**P**		**18 44 35.5**	**-4.7**
GZR	**Gura Zlata**	**73.75 332**	⇓P		**P**		**18 44 35.5**	**-4.7**
BZS	**Buzias**	**73.85 333**	⇓P		P		18 44 51.3	+11
BZS	**Buzias**	**73.85 333**	⇓P		P		18 44 51.3	+11
WATA	**Walderalm**	**74.46 340**	*e*PcP		**PcP**		**18 44 53.7**	**-5.2**
	comp=Z,8.6nm,0.9s							
RETA	**Reutte**	**74.47 341**	*i* PcP		**PcP**		**18 44 53.2**	**-5.6**
	comp=Z,4.4nm,0.8s							
WTTA	**Wattenberg**	**74.52 340**	*e*PcP		**PcP**		**18 44 53.5**	**-5.7**
	comp=Z,2.6nm,0.6s							
MOTA	**Moosalm**	**74.54 341**	*e*PcP		**PcP**		**18 44 53.8**	**-5.5**
	comp=Z,7.6nm,1.0s							
SQTA	**Sankt Quirin**	**74.64 341**	*e*PcP		**PcP**		**18 44 54.5**	**-5.1**
	comp=Z,4.8nm,0.7s							
ABTA	**Abfaltersbach**	**74.84 340**	*i* pP		pP		18 44 53.8	+2.4
	comp=Z,11nm,1.2s							
FETA	**Feichten**	**74.92 341**	*e*PcP		**PcP**		**18 44 55.4**	**-5.5**
	comp=Z,8.1nm,1.0s							
DAVOX	**Davos/Dischmat**	**75.31 341**	LR		LR		19 21 44.2	
	comp=Z,152nm,19.1s,baz=28,slow=39							
BLKB	**Belogradchik**	**75.42 331**	⇑P		P		18 44 59.2	+9.4
BRTR	**Keskin Array B**	**75.59 322**	P		**P**		**18 44 51.0**	**0.0**
BRTR	**Keskin Array B**	**75.59 322**	P		**P**		**18 44 52.0**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=74,slow=4.4,SNR=7.7							
BRTR			LR		LR		19 24 03.9	
	comp=Z,140nm,18.4s,baz=2.5,slow=40							
	comp=Z,1.3nm,0.7s							
BRTR	**Keskin Array B**	**75.59 322**	P		**P**		**18 44 51.0**	**0.0**
WRA	**Warramunga Arr**	**79.33 207**	P		**P**		**18 45 11.7**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=26,slow=6.3,SNR=9.4							
	comp=Z,2.3nm,0.9s							
WRA	**Warramunga Arr**	**79.33 207**	*i* P		**P**		**18 45 12.1**	**+0.3**
WRA			pmax		pmax			
	comp=Z,2.0nm,0.9s							
MMAI	**Mount Meron Ar**	**80.93 318**	P		**P**		**18 45 20.9**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=11,slow=1.5,SNR=2.3							
MMAI			LR		LR		19 26 59.2	
	comp=Z,90nm,19.1s,baz=32,slow=40							
	comp=Z,2.3nm,0.7s							
ASF	**Jabal al Asfar**	**81.10 316**	LR		LR		19 27 09.7	
	comp=Z,110nm,19.7s,baz=56,slow=40							
ASAR	**Alice Springs**	**83.00 207**	P		**P**		**18 45 31.5**	**+0.2**
ASAR	**Alice Springs**	**83.00 207**	P		**P**		**18 45 31.9**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=16,slow=5.2,SNR=20							
ASAR			LR		LR		19 20 51.1	
	comp=Z,36nm,21.9s,baz=0.5,slow=34							
	comp=Z,2.7nm,0.9s							
ASAR	**Alice Springs**	**83.00 207**	P		**P**		**18 45 31.5**	**+0.2**
PPT	**Papeete**	**83.26 135**	LR		LR		19 15 28.9	
	comp=Z,38nm,19.0s,baz=352,slow=30							
VAE	**Valguarnera**	**83.30 335**	LR		LR		19 28 02.1	
	comp=Z,201nm,18.1s,baz=114,slow=40							
EIL	**Elat**	**84.08 317**	LR		LR		19 29 33.0	
	comp=Z,139nm,18.2s,baz=6.0,slow=40							
ESDC	**Sonseca Array**	**84.22 350**	P		**P**		**18 45 37.8**	**+0.2**
ESDC	**Sonseca Array**	**84.22 350**	P		**P**		**18 45 39.0**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=348,slow=6.0,SNR=8.4							
	comp=Z,1.2nm,0.8s							
RAYN	**Ar Rayn**	**84.98 305**	P		**P**		**18 45 40.3**	**-1.4**
RAYN	**Ar Rayn**	**84.98 305**	P		**P**		**18 45 40.3**	**-1.4**
RAYN			pmax		pmax			
	comp=Z,7.0nm,0.6s							
KEST	**Kesra**	**86.09 339**	LR		LR		19 30 01.7	
	comp=Z,86nm,18.8s,baz=8.2,slow=40							
MDT	**Midelt**	**91.08 350**	LR		LR		19 30 23.4	
	comp=Z,47nm,18.6s,baz=43,slow=38							
JTS	**Las Juntas de**	**93.48 66**	LR		LR		19 31 05.1	
	comp=Z,18nm,19.8s,baz=228,slow=37							
QSPA	**South Pole Qui**	**145.59 180**			**PKiKP**		**18 52 45.8**	**-1.2**
QSPA	**South Pole Qui**	**145.59 180**	PKPbc		**PKPab**		**18 52 45.2**	**+1.6**
	comp=Z,7.7nm,1.1s,baz=326,slow=2.9,SNR=12							

*SJA **05** 18:58:12.6±0.8,31°.86S×69°.10W,h120km±3km,ML3.6, MW3.8*
*IDC **05** 18:58:13.5±1.3,31°.75S×69°.02W,h121km±8km,mb3.5/4, mbtmp3.7/5,Error ellipse: s-maj=33.4km s-min=22.7km az=100.0*

ISC 05 18:58:13.4±0.7,31°.84S±0°.03×69°.13W±0°.04,h120km±5km, n47,σ1°49/63,mb4.0/4,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RTLS	**Leoncito**	**0.15**	**287**	*e*P		**Pn**	**18 58 30.0**	**-0.3**
RTLS				*e*S		**Sn**	**18 58 43.6**	**+0.6**
RTLS				IAML			18 58 43.7	
	comp=Z,2μm,0.1s							
ZON	**Zonda**	**0.48**	**52**	*e*P		**Pn**	**18 58 31.4**	**+0.1**
ZON				*e*S		**Sn**	**18 58 44.5**	**-0.3**
ZON				IAML			18 58 46.8	
	comp=Z,1μm,0.4s							
SJA	**San Juan**	**0.58**	**57**	*e*P		**Pn**	**18 58 31.2**	**-0.7**
SJA				*e*S		**Sn**	**18 58 46.2**	**+0.4**
SJA				IAML			18 58 47.8	
	comp=Z,1μm,0.2s							
RTLL	**Cerro Villicun**	**0.76**	**48**	*e*P		**Pn**	**18 58 32.8**	**-0.5**
RTLL				IAML			18 58 51.0	
	comp=Z,3μm,0.3s							
ASAL	**Salagasta**	**0.79**	**162**	*e*P		**Pn**	**18 58 33.3**	**-0.3**

CFA	**Coronel Fontan**	**0.80**	**73**	P		**Pn**	**18 58 33.4**	**-0.2**
	comp=Z,64nm,0.3s,baz=258,slow=9.1,SNR=324							
CFA				S		**Sn**	**18 58 48.4**	**-0.4**
	comp=Z,374nm,0.3s,baz=142,slow=19,SNR=44							
CFA	**Coronel Fontan**	**0.80**	**73**	*e*P		**Pn**	**18 58 33.4**	**-0.2**
CFA				*e*S		**Sn**	**18 58 48.9**	**0.0**
ARCO	**CERRO ARCO**	**1.01**	**171**	*e*P		**Pn**	**18 58 35.8**	**+0.1**
ARCO				IAML			18 58 53.9	
	comp=Z,2μm,0.2s							
ACCO	**Cerro Coronel**	**1.25**	**2**	*e*P		**Pn**	**18 58 39.3**	**+0.9**
AAGR	**Agrelo**	**1.26**	**169**	*e*P		**Pn**	**18 58 38.0**	**-0.2**
AAGR				IAML			18 58 57.5	
	comp=Z,511nm,0.2s							
VA03	**San Esteban**	**1.52**	**232**	*e*P		**Pn**	**18 58 40.9**	**-0.2**
VA03				*e*S		**Sn**	**18 59 02.6**	**+0.5**
VA03				IAML			18 59 03.7	
	comp=Z,602nm,0.5s							
ACDV	**Cuesta del Vie**	**1.67**	**0**	*e*P		**Pn**	**18 58 45.0**	**+2.0**
ACDV				IAML			18 59 10.6	
	comp=Z,205nm,0.6s							
CO03	**El Pedregal**	**1.67**	**306**	*e*P		**Pn**	**18 58 43.5**	**+0.6**
CO03				*e*S		**Sn**	**18 59 06.3**	**+0.9**
CO03				IAML			18 59 08.2	
	comp=Z,825nm,0.7s							
AROD	**Rodeo**	**1.70**	**350**	*e*P		**Pn**	**18 58 45.0**	**+1.4**
ACAN	**Cantantal**	**1.70**	**105**	*e*P		**Pn**	**18 58 42.8**	**-0.5**
ACAN				IAML			18 59 06.9	
	comp=Z,2μm,0.4s							
ACAN				IAML			18 59 11.4	
	comp=Z,2μm,1.1s							
AVIZ	**Vizcacheras**	**1.70**	**163**	*e*P		**Pn**	**18 58 43.2**	**-0.2**
CO02	**Combarbal**	**1.72**	**291**	*e*P		**Pn**	**18 58 43.4**	**-0.1**
CO02				*e*S		**Sn**	**18 59 07.5**	**+1.0**
CO02				IAML			18 59 09.8	
	comp=Z,1μm,0.4s							
MT08	**Bocatoma Ro**	**1.76**	**205**	*e*P		**Pn**	**18 58 44.2**	**0.0**
MT08				*e*S		**Sn**	**18 59 09.4**	**+1.7**
MT08				IAML			18 59 12.6	
	comp=Z,230nm,0.2s							
MT04	**Ro Olivares**	**1.77**	**208**	*e*P		**Pn**	**18 58 44.6**	**+0.3**
MT04				*e*S		Sn	18 59 19.4	+12
PEL	**Peldehue**	**1.85**	**225**	*e*P		**Pn**	**18 58 44.4**	**-0.6**
PEL				*e*S		**Sn**	**18 59 09.1**	**-0.1**
PEL				IAML			18 59 16.1	
	comp=Z,233nm,0.7s							
AVFE	**Valle Fertil**	**1.86**	**51**	*e*P		**Pn**	**18 58 45.8**	**+0.7**
AVFE				IAML			18 59 12.6	
	comp=Z,394nm,0.2s							
ROC1	**El Roble**	**1.96**	**234**	*e*P		**Pn**	**18 58 44.7**	**-1.9**
ROC1				*e*S		**Sn**	**18 59 11.0**	**-0.9**
MT03	**Universidad Ad**	**2.02**	**215**	*e*P		**Pn**	**18 58 47.2**	**+0.1**
MT03				*e*S		**Sn**	**18 59 13.6**	**+0.7**
MT03				IAML			18 59 16.3	
	comp=Z,316nm,0.2s							
CO01	**Juntas del Tor**	**2.04**	**336**	*e*P		**Pn**	**18 58 49.2**	**+1.6**
CO01				*e*S		**Sn**	**18 59 11.9**	**-1.8**
CO01				IAML			18 59 19.4	
	comp=Z,201nm,0.2s							
MT05	**Renca**	**2.06**	**221**	*e*P		**Pn**	**18 58 46.4**	**-1.2**
MT05				IAML			18 59 14.7	
	comp=Z,513nm,0.7s							
LMEL	**Las Melosas**	**2.19**	**204**	*e*P		**Pn**	**18 58 50.0**	**+0.6**
LMEL				*e*S		**Sn**	**18 59 25.8**	**+8.8**
LMEL				IAML			18 59 26.7	
	comp=Z,146nm,0.2s							
GO04	**Tololo Observa**	**2.20**	**319**	*e*P		**Pn**	**18 58 49.5**	**-0.1**
MT02	**Curacav**	**2.21**	**230**	*e*P		**Pn**	**18 58 47.1**	**-2.3**
MT02				IAML			18 59 18.9	
	comp=Z,182nm,0.5s							
ACHE	**Chepes**	**2.21**	**73**	*e*P		**Pn**	**18 58 50.4**	**+0.8**
AGUA	**GUANDACOL**	**2.41**	**13**	*e*P		**Pn**	**18 58 53.5**	**+1.3**
AGUA				IAML			18 59 25.2	
	comp=Z,351nm,0.4s							
APLL	**PUNTA DE LOS L**	**2.66**	**58**	*e*P		**Pn**	**18 58 55.4**	**+0.2**
APLL				IAML			18 59 30.6	
	comp=Z,34nm,0.2s							
MRA	**San Martin**	**2.95**	**102**	*e*P		**Pn**	**18 58 59.0**	**-0.1**
RFA	**San Rafael**	**2.97**	**169**	*e*P		**Pn**	**18 58 58.0**	**-1.4**
RFA				IAML			18 59 34.5	
	comp=Z,145nm,0.5s							
BO01	**Tunca**	**3.03**	**212**	*e*S		**Sn**	**18 59 35.0**	**-0.9**
ACLC	**CERRO LA CRUZ**	**3.05**	**38**	*e*P		**Pn**	**18 59 01.1**	**+0.5**
ACLC				IAML			18 59 39.0	
	comp=Z,172nm,0.7s							
LCO	**Las Campanas**	**3.13**	**334**	*e*P		**Pn**	**18 59 01.3**	**-0.5**
LCO				*e*P		**Pn**	**18 59 01.3**	**-0.5**
LCO				*e*S		**Sn**	**18 59 38.3**	**-0.6**
VCA	**Vinchina**	**3.20**	**15**	*e*P		**Pn**	**18 59 03.6**	**+1.2**
CPUP	**Villa Florida**	**11.69**	**65**	P		**Pn**	**19 00 55.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=110,slow=12,SNR=3.1							
SNAA	**Sanae**	**52.67**	**159**	P		**P**	**19 07 14.9**	**0.0**
	comp=Z,2.0nm,0.8s,baz=295,slow=8.4,SNR=16							
	comp=Z,2.0nm,0.8s							
QSPA	**South Pole Qui**	**58.39**	**180**	P		**P**	**19 07 58.3**	**+2.4**
	comp=Z,1.1nm,0.7s,baz=150,slow=2.2,SNR=5.9							
	comp=Z,1.1nm,0.7s							
TXAR	**Lajitas Array**	**69.13**	**328**	P		**P**	**19 09 07.5**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=158,slow=3.6,SNR=1.6							
	comp=Z,0.1nm,0.4s							
DBIC	**Dimbokro**	**72.16**	**70**	P		**P**	**19 09 24.7**	**-0.6**
	comp=Z,3.8nm,1.1s,baz=253,slow=6.1,SNR=3.7							
	comp=Z,3.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**81.16**	**69**	P		**P**	**19 10 15.9**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=236,slow=5.5,SNR=5.0							
ASAR	**Alice Springs**	**120.57**	**205**	PKP		**PKPdf**	**19 16 49.9**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=131,slow=1.5,SNR=5.1							
WRA	**Warramunga Arr**	**123.81**	**207**	PKP		**PKPdf**	**19 16 56.7**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=160,slow=1.6,SNR=17							
KURBB	**Kurchatov Arra**	**149.63**	**42**	PKPbc		**PKPbc**	**19 17 46.9**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=260,slow=3.7,SNR=4.5							
ZALV	**Zalesovo Beam**	**151.10**	**32**	PKPbc		**PKiKP**	**19 17 51.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=251,slow=4.4,SNR=4.8							

*BER **05** 19:04:25.3±3.2,80°.16N×0°.23W,h10km,mb(Pn)3.6, Confirmed Earthquake*
*DNK **05** 19:04:27.6±4.3,80°.14N×0°.17E,h36km±32km,ML2.1*
*FCIAR **05** 19:04:28.0,80°.07N×1°.66E,h10km,station ZFI2 has station magnitude of 3.70 station OMEGA has station magnitude of 3.50*
*KOLA **05** 19:04:29.1,80°.50N×3°.86E,h0km,ML2.4,Error ellipse: s-maj=80.6km s-min=23.5km az=50.0,Greenland sea*

ISC 05 19:04:20.5±0.8,80°.18N±0°.06×0°.65W±0°.04,h10km,n25, σ3°45/49,2C,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBS	**Kingsbay**	**2.62**	**113**	P		**Pn**	**19 05 04.2**	**+1.5**
KBS				S		**Sn**	**19 05 29.3**	**-4.6**
KBS	**Kingsbay**	**2.62**	**113**	⇑P		**Pn**	**19 05 04.3**	**+1.6**
KBS				*e*S		**Sn**	**19 05 31.6**	**-2.8**
KBS	**Kingsbay**	**2.62**	**113**	⇑P		**Pn**	**19 05 04.3**	**+1.6**
KBS				*i* S		**Sn**	**19 05 31.9**	**-2.5**
NOR	**Nord**	**2.91**	**307**	*i* P		**Pb**	**19 05 11.2**	**-1.1**
NOR				*i* S		**Sn**	**19 05 43.4**	**+1.7**
NOR				IAML			19 05 52.7	
	comp=Z,3.9nm,0.3s							
NOR	**Nord**	**2.91**	**307**	*i* P		**Pb**	**19 05 11.2**	**-1.1**
NOR				*i* S		**Sn**	**19 05 43.4**	**+1.7**
NOR				IAML			19 05 52.7	
	comp=Z,3.9nm,0.3s							
BRBB	**Barentsburg B**	**3.50**	**119**	P		**Pn**	**19 05 17.6**	**+2.8**
BRBB				S		**Sn**	**19 05 55.4**	**-0.8**
BRBB	**Barentsburg B**	**3.50**	**119**	*e*P		**Pn**	**19 05 18.0**	**+3.2**
BRBB				*e*S		**Sn**	**19 05 55.1**	**-1.0**
BRBA	**Barentsburg A**	**3.52**	**120**	*e*P		**Pn**	**19 05 18.5**	**+3.3**
BRBA				*e*S		**Sn**	**19 05 56.3**	**-0.5**
BRBA				IAML			19 05 59.3	
	comp=Z,15nm,0.6s							
SPA0	**Spitsbergen Ar**	**3.77**	**114**	*e*P		**Pn**	**19 05 21.0**	**+2.4**
SPA0				*e*S		**Sn**	**19 06 00.4**	**-2.6**
SPA0	**Spitsbergen Ar**	**3.77**	**114**	*e*P		**Pn**	**19 05 21.1**	**+2.4**
SPA0				*e*S		**Sn**	**19 06 00.6**	**-2.4**
SPA0				IAML			19 06 05.1	
	comp=Z,8.8nm,0.7s							
SPITS	**Spitsbergen Ar**	**3.77**	**114**	P		**Pn**	**19 05 20.9**	**+2.3**
SPITS				S		**Sn**	**19 05 57.1**	**-5.9**
HSPB	**Hornsund (broa**	**4.51**	**127**	P		**Pn**	**19 05 31.5**	**+2.8**
HSPB				S		**Sn**	**19 06 20.2**	**-0.9**
HSPB	**Hornsund (broa**	**4.51**	**127**	*e*P		**Pn**	**19 05 31.4**	**+2.7**
HSPB				*e*S		**Sn**	**19 06 19.3**	**-1.8**
HSPB	**Hornsund (broa**	**4.51**	**127**	*e*P		**Pn**	**19 05 31.5**	**+2.8**
HSPB				*e*S		**Sn**	**19 06 17.9**	**-3.2**
HSPB				IAML			19 06 22.5	
	comp=Z,6.7nm,0.7s							
DAG	**Danmarks Havn**	**4.95**	**236**	*i* P		**Pn**	**19 05 37.9**	**+3.2**
DAG				*i* S		**Sn**	**19 06 29.5**	**-2.4**
DAG				IAML			19 06 35.2	
	comp=Z,15nm,0.3s							
DAG	**Danmarks Havn**	**4.95**	**236**	*i* P		**Pn**	**19 05 37.9**	**+3.2**
DAG				*i* S		**Sn**	**19 06 29.5**	**-2.4**
DAG				IAML			19 06 35.2	
	comp=Z,15nm,0.3s							
DBG	**Daneborg**	**7.26**	**226**	*i* P		**Pn**	**19 06 09.4**	**+3.0**
DBG				*i* S		**Sn**	**19 07 24.1**	**-4.5**
DBG				IAML			19 07 29.8	
	comp=Z,12nm,0.8s							
DBG	**Daneborg**	**7.26**	**226**	*i* P		**Pn**	**19 06 09.4**	**+3.0**
DBG				*i* S		**Sn**	**19 07 24.1**	**-4.5**
DBG				IAML			19 07 29.8	
	comp=Z,12nm,0.8s							
ZFI2	**Zemlya Franca-**	**7.82**	**62**	*e*P		**Pn**	**19 06 17.3**	**+3.2**
ZFI2				*e*S		**Sn**	**19 07 38.0**	**-4.4**
	comp=Z,20nm,2.0s							
OMEGA	**Omega**	**7.84**	**62**	*e*P		**Pn**	**19 06 17.4**	**+3.1**
OMEGA				*e*S		**Sn**	**19 07 38.1**	**-4.8**
	comp=Z,14nm,2.3s							
JNW	**Jan Mayen West**	**9.39**	**196**	*e*P		**Pn**	**19 06 39.7**	**+4.1**
NEEM	**North Greenlan**	**9.86**	**280**	*i* P		**Pn**	**19 06 46.6**	**+4.3**
NEEM				*i* S		**Sn**	**19 08 27.5**	**-5.5**
NEEM				IAML			19 08 35.6	
	comp=Z,3.4nm,0.5s							
NEEM	**North Greenlan**	**9.86**	**280**	*i* P		**Pn**	**19 06 46.6**	**+4.3**
NEEM				*i* S		**Sn**	**19 08 27.5**	**-5.5**
NEEM				IAML			19 08 35.6	
	comp=Z,3.4nm,0.5s							
SUMG	**Summit**	**11.41**	**249**	*i* P		**Pn**	**19 07 05.9**	**+2.4**
SUMG				*i* S		**Sn**	**19 09 04.5**	**-6.5**
SUMG				IAML			19 09 13.3	
	comp=Z,2.8nm,0.8s							
SUMG	**Summit**	**11.41**	**249**	*i* P		**Pn**	**19 07 05.9**	**+2.4**
SUMG				*i* S		**Sn**	**19 09 04.5**	**-6.5**
SUMG				IAML			19 09 13.3	
	comp=Z,2.8nm,0.8s							

*NEIC **05** 19:18:59.2±2.7,9°.49S±0°.06×121°.14E±0°.07,h86km±10km, mb4.0/11,Error ellipse: s-maj=10.9km s-min=7.0km az=56.0*
*DJA **05** 19:19:00.7±0.2,9°.5±2°×12°1E±°,h97km±3km,M4.1/19, mb4.1/16,MLv4.2/19,MwMwp5.3/1,Mwp5.5/1*
*IDC **05** 19:19:01.5±2.4,9°.44S×121°.36E,h121km±29km,mb3.0/2, mbtmp4.0/7,Error ellipse: s-maj=48.3km s-min=17.3km az=52.0*

ISC 05 19:18:59.3±0.7,9°.52S±0°.05×121°.28E±0°.04,h106km±7km, n55,σ2°01/64,mb3.8/4,Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EDFI	**Ende, Flores**	**0.86**	**28**	P		**Pn**	**19 19 19.0**	**0.0**
EDFI				S		**Sn**	**19 19 32.1**	**-1.7**
BASI	**Baing, Sumba**	**0.98**	**225**	P		**Pn**	**19 19 21.7**	**+1.7**
BASI				S		**Sn**	**19 19 37.9**	**+2.3**
WSI	**Waingapu**	**0.98**	**261**	P		**Pn**	**19 19 21.6**	**+1.6**
WSI				S		**Sn**	**19 19 36.1**	**+0.5**
MMRI	**Maumere**	**1.29**	**47**				**19 19 23.5**	**+0.1**
MMRI				Sn		**Sn**	**19 19 40.4**	**-1.3**
MMRI	**Maumere**	**1.29**	**47**	P		**Pn**	**19 19 23.6**	**+0.1**
WBSI	**Waikabubak, Su**	**1.87**	**266**	P		**Pn**	**19 19 31.3**	**+0.8**
BATI	**Baumata**	**2.44**	**106**	P		**Pn**	**19 19 40.6**	**+2.7**
	300nm,0.3s,baz=289,slow=1.0,SNR=372							
BATI				S		**Sn**	**19 20 09.9**	**+2.4**
	237nm,0.4s,baz=312,slow=4.6,SNR=5.7							
BATI	**Baumata**	**2.44**	**106**	P		**Pn**	**19 19 40.5**	**+2.7**
SOEI	**Soe**	**2.95**	**95**				**19 19 47.0**	**+2.4

STSW2	**Zeuzier, Staus**	**0.06**	**68**	⇑Pg	Pg	19	26	00.4	+0.2
STSW2				Sg	Sg	19	26	01.6	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**313**	⇓Pg	Pg	19	26	00.4	+0.1
SENIN				Sg	Sg	19	26	01.7	+0.3
SIOV	**Sion-Valere**	**0.09**	**178**	Sg	Sg	19	26	02.2	+0.3
SIE01	**Sierre, Farmho**	**0.11**	**120**	Pg	Pg	19	26	01.3	+0.3
RAW1	**Lenk, BE**	**0.11**	**29**	Pg	Pg	19	26	01.3	+0.2
RAW1				Sg	Sg	19	26	03.1	+0.5
GRYON	**Gryon**	**0.19**	**247**	Pg	Pg	19	26	02.7	+0.2
GRYON				Sg	Sg	19	26	05.3	+0.4
DIX	**Grande Dixence**	**0.25**	**172**	⇑Pg	Pg	19	26	03.9	+0.3
DIX				Sg	Sg	19	26	06.9	+0.1
LAUCH	**Lauchernalp**	**0.30**	**72**	Pg	Pg	19	26	04.9	+0.3
LAUCH				Sg	Sg	19	26	09.0	+0.3

ZUR 05 19:26:08.0, 46°32N×7°36E, h5km, MLh0.6/12, 7C-3D, Error ellipse: s-maj=1641.5km s-min=493.3km az=101.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**255**	⇑Pg	Pg	19 26 09.5	+0.2
RAW2				Sg	Sg	19 26 10.4	+0.2
SAYF2	**Ayent-Fortunoz**	**0.05**	**130**	⇓Pg	Pg	19 26 09.7	+0.3
SAYF2				Sg	Sg	19 26 10.8	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**316**	⇓Pg	Pg	19 26 09.8	+0.2
SENIN				Sg	Sg	19 26 11.0	+0.2
STSW2	**Zeuzier, Staus**	**0.06**	**67**	⇑Pg	Pg	19 26 09.8	+0.2
STSW2				Sg	Sg	19 26 11.0	+0.2
LEO01	**Saint Lonard,**	**0.09**	**146**	Pg	Pg	19 26 10.3	+0.4
LEO01				Sg	Sg	19 26 12.0	+0.8
SIOO	**Sion-Ophtalmol**	**0.09**	**169**	Sg	Sg	19 26 12.3	+1.0
RAW1	**Lenk, BE**	**0.11**	**29**	⇓Pg	Pg	19 26 10.7	+0.3
RAW1				Sg	Sg	19 26 12.5	+0.4
VET01	**Vtroz, Route**	**0.12**	**212**	⇑Pg	Pg	19 26 10.5	+0.1
VET02	**Vtroz, Route**	**0.12**	**209**	Sg	Sg	19 26 13.1	+1.0
SHER	**Hrmence, R**	**0.14**	**169**	Sg	Sg	19 26 13.4	+0.6
RAW4	**Former Reservo**	**0.17**	**227**	⇑Pg	Pg	19 26 11.6	+0.2
RAW4				Sg	Sg	19 26 14.2	+0.5
GRYON	**Gryon**	**0.18**	**247**	⇑Pg	Pg	19 26 11.9	+0.3
GRYON				Sg	Sg	19 26 14.7	+0.5
LKBD2	**Leukerbad 2**	**0.21**	**75**	Sg	Sg	19 26 15.8	+0.7
FULLY	**Reservoir Maze**	**0.23**	**223**	Pg	Pg	19 26 12.6	+0.3
FULLY				Sg	Sg	19 26 15.7	+0.3
DIX	**Grande Dixence**	**0.24**	**172**	⇑Pg	Pg	19 26 13.2	+0.4
DIX				Sg	Sg	19 26 16.4	+0.3
LAVEY	**Lavey les Bain**	**0.26**	**242**	Sg	Sg	19 26 16.8	+0.3
NIE01	**Niedergesteln,**	**0.30**	**92**	Sg	Sg	19 26 18.1	+0.4
LAUCH	**Lauchernalp**	**0.30**	**72**	⇑Pg	Pg	19 26 14.2	+0.3
LAUCH				Sg	Sg	19 26 18.3	+0.4
ILLEZ	**Chalet Vouargn**	**0.31**	**251**	Sg	Sg	19 26 18.6	+0.5
JAUN	**Jaun, Euschels**	**0.32**	**352**	Sg	Sg	19 26 19.7	+1.3
SALAN	**Lac Salanfe**	**0.32**	**236**	Sg	Sg	19 26 18.9	+0.4
EMBD	**Embd, Matterta**	**0.35**	**108**	Sg	Sg	19 26 19.4	+0.1
MFERR	**Prayon, Val Fe**	**0.41**	**205**	Sg	Sg	19 26 21.3	0.0

*GEN **05** 20:10:58.9, 46°33N×7°37E, h6km±1km, Ml2.0*
*ROM **05** 20:10:60.0±0.1, 46°265N±0°004×7°404E±0°005, h12km, ML2.1/12, Error ellipse: s-maj=0.4km s-min=0.3km az=149.0*
*LDG **05** 20:11:00.0±0.1, 46°30N×7°39E, h5km, Ml2.6/34, Error ellipse: s-maj=0.9km s-min=0.9km az=110.0*

ZUR 05 20:10:59.6, 46°32N×7°36E, h5km, MLh2.5/125, 31C-15D, Error ellipse: s-maj=1246.3km s-min=294.6km az=274.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**262**	⇓Pg	Pg	20 11 01.0	+0.1
RAW2				Sg	Sg	20 11 02.0	0.0
SAYF2	**Ayent-Fortunoz**	**0.05**	**129**	⇑Pg	Pg	20 11 01.1	+0.2
SAYF2				Sg	Sg	20 11 02.3	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**62**	⇑Pg	Pg	20 11 01.3	+0.1
STSW2				Sg	Sg	20 11 02.4	+0.1
SENIN	**Lac Senin/Sane**	**0.06**	**315**	⇓Pg	Pg	20 11 01.3	0.0
SENIN				Sg	Sg	20 11 02.5	0.0
SENIN	**Lac Senin/Sane**	**0.06**	**315**	P	Pg	20 11 01.3	0.0
SENIN				S	Sg	20 11 02.5	0.0
LEO01	**Saint Lonard,**	**0.08**	**147**	⇑Pg	Pg	20 11 01.7	+0.3
LEO01				Sg	Sg	20 11 03.4	+0.8
SIOV	**Sion-Valere**	**0.08**	**179**	⇑Pg	Pg	20 11 01.7	+0.2
SIOV				Sg	Sg	20 11 03.1	+0.3
SIOO	**Sion-Ophtalmol**	**0.09**	**171**	⇑Pg	Pg	20 11 01.9	+0.4
SIOO				Sg	Sg	20 11 03.9	+1.1
SIOM	**Sion-Mayennets**	**0.09**	**180**	Pg	Pg	20 11 01.4	-0.1
SIOM				Sg	Sg	20 11 03.3	+0.4
SIE01	**Sierre, Farmho**	**0.11**	**118**	⇓Pg	Pg	20 11 02.1	+0.3
SIE01				Sg	Sg	20 11 04.3	+1.0
RAW1	**Lenk, BE**	**0.11**	**27**	⇑Pg	Pg	20 11 02.1	+0.1
RAW1				Sg	Sg	20 11 04.0	+0.3
CON01	**Conthey, Agros**	**0.12**	**201**	⇑Pg	Pg	20 11 02.2	+0.3
CON01				Sg	Sg	20 11 04.4	+0.8
VET01	**Vtroz, Route**	**0.12**	**214**	⇑Pg	Pg	20 11 02.0	0.0
VET01				Sg	Sg	20 11 03.9	+0.3
VET02	**Vtroz, Route**	**0.12**	**212**	⇑Pg	Pg	20 11 02.2	+0.2
VET02				Sg	Sg	20 11 04.7	+1.0
SIEB	**Ecole de Borzu**	**0.12**	**101**	Pg	Pg	20 11 02.4	+0.3
SIEB				Sg	Sg	20 11 04.4	+0.6
VET03	**Vtroz, Le Bot**	**0.12**	**208**	⇑Pg	Pg	20 11 02.6	+0.4
VET03				Sg	Sg	20 11 05.2	+1.4
SARC	**Ardon Commune,**	**0.13**	**214**	⇑Pg	Pg	20 11 02.3	+0.1
SARC				Sg	Sg	20 11 04.7	+0.6
SHER	**Hrmence, R**	**0.14**	**170**	⇑Pg	Pg	20 11 02.7	+0.3
SHER				Sg	Sg	20 11 04.9	+0.6
RAW4	**Former Reservo**	**0.17**	**229**	⇑Pg	Pg	20 11 03.1	+0.1
RAW4				Sg	Sg	20 11 05.8	+0.5
GRYON	**Gryon**	**0.19**	**249**	⇑Pg	Pg	20 11 03.3	0.0
GRYON				Sg	Sg	20 11 06.3	+0.5
VANNI	**Vissoie, Val d**	**0.20**	**124**	⇓Pg	Pg	20 11 03.8	+0.4
VANNI				Sg	Sg	20 11 06.7	+0.6
VANNI	**Vissoie, Val d**	**0.20**	**124**	P	Pg	20 11 03.9	+0.4
VANNI				S	Sg	20 11 06.6	+0.6
LKBD2	**Leukerbad 2**	**0.20**	**74**	⇑Pg	Pg	20 11 03.8	+0.1
LKBD2				Sg	Sg	20 11 06.8	+0.4
AGA01	**Agarn, Footbal**	**0.21**	**95**	Pg	Pg	20 11 04.2	+0.4
AGA01				Sg	Sg	20 11 07.5	+0.9
SCOD	**Cheteau-dO**	**0.22**	**313**	⇓Pg	Pg	20 11 04.1	+0.2
SCOD				Sg	Sg	20 11 07.7	+0.8
FULLY	**Reservoir Maze**	**0.23**	**224**	⇑Pg	Pg	20 11 04.1	+0.1
FULLY				Sg	Sg	20 11 07.3	+0.3
SZWD2	**Zweisimmen Kir**	**0.23**	**2**	⇓Pg	Pg	20 11 04.3	+0.1
SZWD2				Sg	Sg	20 11 07.9	+0.7
DIX	**Grande Dixence**	**0.24**	**172**	⇓Pg	Pg	20 11 04.7	+0.3
DIX				Sg	Sg	20 11 07.9	+0.4
DIX	**Grande Dixence**	**0.24**	**172**	P	Pg	20 11 04.7	+0.3
DIX				S	Sg	20 11 07.9	+0.3
DIX	**Grande Dixence**	**0.24**	**172**	P	Pg	20 11 04.7	+0.3
DIX				S	Sg	20 11 07.9	+0.4
DIX	comp=E,3250μm,0.7s			AML	AML		
DIX	comp=N,2620μm,0.3s			AML	AML		
DIX	comp=N,2620μm,0.3s			AML	AML		
SGAK	**Gampel Kirche,**	**0.26**	**91**	⇑Pg	Pg	20 11 05.0	+0.3
SGAK				Sg	Sg	20 11 08.5	+0.3
LAVEY	**Lavey les Bain**	**0.26**	**243**	⇑Pg	Pg	20 11 04.7	0.0
LAVEY				Sg	Sg	20 11 08.4	+0.2
SAIG	**Aigle Rue de l**	**0.27**	**270**	Sg	Sg	20 11 09.3	+0.7
AIGLE	**Aigle**	**0.28**	**275**	⇓Pg	Pg	20 11 05.2	+0.1
AIGLE				Sg	Sg	20 11 09.3	+0.4
NIE01	**Niedergesteln,**	**0.29**	**91**	⇑Pg	Pg	20 11 05.5	+0.2
NIE01				Sg	Sg	20 11 09.4	+0.3
SMUK	**Muraz-Klaeranl**	**0.29**	**264**	Sg	Sg	20 11 10.5	+1.3
SMAO	**Martigny, Rue**	**0.30**	**222**	⇑Pg	Pg	20 11 05.5	+0.2
SMAO				Sg	Sg	20 11 09.6	+0.3
LAUCH	**Lauchernalp**	**0.30**	**71**	⇑Pg	Pg	20 11 05.6	+0.1
LAUCH				Sg	Sg	20 11 09.7	+0.3
LAUCH	**Lauchernalp**	**0.30**	**71**	P	Pg	20 11 05.6	+0.1
LAUCH				S	Sg	20 11 09.9	+0.4
RAR01	**Raron, Gemeind**	**0.30**	**92**	Pg	Pg	20 11 05.8	+0.3
RAR01				Sg	Sg	20 11 09.9	+0.4
ILLEZ	**Chalet Vouargn**	**0.31**	**251**	⇑Pg	Pg	20 11 05.7	0.0
ILLEZ				Sg	Sg	20 11 10.1	+0.4
JAUN	**Jaun, Euschels**	**0.32**	**351**	⇓Pg	Pg	20 11 06.0	+0.1
JAUN				Sg	Sg	20 11 11.0	+0.9
RAR02	**Raron, Airdrom**	**0.32**	**93**	Sg	Sg	20 11 10.6	+0.6
SALAN	**Lac Salanfe**	**0.32**	**237**	⇑Pg	Pg	20 11 05.9	0.0
SALAN				Sg	Sg	20 11 10.4	+0.3
SFRS	**Frutigen, Schu**	**0.33**	**38**	Pg	Pg	20 11 06.2	+0.1
SFRS				Sg	Sg	20 11 11.3	+0.9
EMBD	**Embd, Matterta**	**0.34**	**107**	⇓Pg	Pg	20 11 06.4	+0.1
EMBD				Sg	Sg	20 11 10.8	0.0
EMBD	**Embd, Matterta**	**0.34**	**107**	P	Pg	20 11 06.4	+0.1
EMBD				S	Sg	20 11 10.8	+0.1
NVL3	**Port Valais, L**	**0.34**	**279**	⇑Pg	Pg	20 11 06.6	+0.4
NVL3				Sg	Sg	20 11 11.4	+0.7
SVIO	**Visp Obere Sta**	**0.36**	**94**	Sg	Sg	20 11 11.6	+0.3
SVIT	**Visp-Terbiners**	**0.36**	**94**	Pg	Pg	20 11 06.9	+0.2
SBUL	**Bulle cole,**	**0.37**	**325**	⇓Pg	Pg	20 11 07.4	+0.6
SBUL				Sg	Sg	20 11 13.6	-1.3
SVEJ	**Vevey Jardin d**	**0.39**	**291**	Sg	Sg	20 11 13.4	+1.2
SEMOS	**Emosson Stauma**	**0.39**	**230**	⇑Pg	Pg	20 11 07.2	0.0
SEMOS				Sg	Sg	20 11 12.3	+0.1
WIMIS	**Wimmis**	**0.39**	**28**	⇑Pg	Pg	20 11 07.2	0.0
WIMIS				Sg	Sg	20 11 13.2	+0.9
BIBA	**Brigerbad**	**0.39**	**92**	Pg	Pg	20 11 07.5	+0.3
BIBA				Sg	Sg	20 11 12.7	+0.3
MH44	**Zermatt, Posit**	**0.40**	**147**	⇓Pg	Pg	20 11 07.4	0.0
MH36	**Zermatt, Posit**	**0.40**	**148**	⇓Pg	Pg	20 11 07.4	0.0
SZEK	**Zermatt, Kirch**	**0.40**	**138**	⇓Pg	Pg	20 11 07.3	-0.1
MFERR	**Prayon, Val Fe**	**0.41**	**205**	⇑Pg	Pg	20 11 07.4	-0.1
MFERR				Sg	Sg	20 11 12.8	0.0
SNTZ	**Naters, Zentru**	**0.43**	**89**	Sg	Sg	20 11 13.9	+0.2
SIMPL	**Simplonpass**	**0.46**	**100**	Pg	Pg	20 11 08.7	+0.1
SIMPL				Sg	Sg	20 11 14.5	0.0
SIMPL	**Simplonpass**	**0.46**	**100**	P	Pg	20 11 08.7	+0.1
SIMPL				S	Sg	20 11 14.7	+0.1
OGSI	**Sixt**	**0.49**	**239**	⇑Pg	Pg	20 11 09.1	0.0
OGSI				Sg	Sg	20 11 15.9	+0.4
MMK	**Mattmark**	**0.50**	**123**	Pg	Pg	20 11 09.0	-0.1
MMK	**Mattmark**	**0.50**	**123**	P	Pg	20 11 09.2	0.0
MMK				S	Sg	20 11 15.3	-0.3
MMK	**Mattmark**	**0.50**	**123**	P	Pg	20 11 08.9	-0.2
MMK				S	Sg	20 11 15.5	-0.1
REMY	**Saint-Rhmy-en**	**0.50**	**197**	⇑Pg	Pg	20 11 09.2	0.0
REMY				Sg	Sg	20 11 15.7	-0.1
REMY	**Saint-Rhmy-en**	**0.50**	**197**	P	Pg	20 11 09.2	0.0
REMY				S	Sg	20 11 15.7	-0.2
REMY	**Saint-Rhmy-en**	**0.50**	**197**	P	Pg	20 11 09.2	-0.1
REMY				S	Sg	20 11 15.8	0.0
REMY	comp=N,308μm,0.7s			AML	AML		
REMY	comp=E,322μm,0.9s			AML	AML		
REMY	comp=N,309μm,1.3s			AML	AML		
REMY	comp=E,322μm,0.9s			AML	AML		
REMY	comp=N,308μm,1.3s			AML	AML		
FIESA	**Fiescheralp**	**0.53**	**77**	⇑Pg	Pg	20 11 09.9	+0.1
FIESA	**Fiescheralp**	**0.53**	**77**	P	Pg	20 11 09.9	+0.1
FIESA				S	Sg	20 11 17.0	+0.2
TORNY	**Torny/Romont**	**0.53**	**329**	⇑Pg	Pg	20 11 10.5	+0.7
SATI	**Passo dei Sala**	**0.57**	**141**	⇓Pg	Pg	20 11 10.3	-0.2
SATI	**Passo dei Sala**	**0.57**	**141**	P	Pg	20 11 10.3	-0.2
SATI				S	Sg	20 11 17.4	-0.6
SATI	**Passo dei Sala**	**0.57**	**141**	P	Pg	20 11 10.2	-0.3
SATI				S	Sg	20 11 17.3	-0.6
SATI	comp=N,77μm,1.2s			AML	AML		
SATI	comp=E,101μm,1.3s			AML	AML		
MRGE	**Morge**	**0.59**	**201**	P	Pg	20 11 10.7	-0.2
MRGE				S	Sg	20 11 18.2	-0.3
MRGE	**Morge**	**0.59**	**201**	P	Pg	20 11 10.6	-0.3
MRGE				S	Sg	20 11 18.5	-0.1
MRGE	comp=E,326μm,0.6s			AML	AML		
MRGE	comp=N,324μm,0.6s			AML	AML		
MRGE	comp=N,324μm,0.6s			AML	AML		
CIRO	**Champorcher**	**0.73**	**169**	P	Pg	20 11 13.1	-0.5
CIRO				S	Sg	20 11 23.8	+0.7
CIRO	**Champorcher**	**0.73**	**169**	P	Pg	20 11 13.1	-0.6
CIRO	comp=E,77μm,0.5s			AML	AML		
CIRO	comp=N,75μm,0.6s			AML	AML		
CIRO	comp=E,77μm,0.5s			AML	AML		
GIMEL	**St. Georges /**	**0.79**	**286**	P	Pb	20 11 15.5	-0.3
GIMEL				AML	AML		
GIMEL	comp=E,133μm,1.5s			AML	AML		
GIMEL	comp=N,128μm,0.8s			AML	AML		
RSL	**Roselend**	**0.81**	**219**	P	Pg	20 11 14.9	-0.3
RSL				S	Sg	20 11 25.5	-0.2
TRAV	**Traversella**	**0.85**	**161**	P	Pg	20 11 15.5	-0.3
TRAV				S	Sg	20 11 25.8	-1.1
TRAV	**Traversella**	**0.85**	**161**	P	Pg	20 11 15.2	-0.7
TRAV	comp=E,119μm,1.4s			AML	AML		
TRAV	comp=N,140μm,1.5s			AML	AML		
TRAV	comp=N,140μm,0.5s			AML	AML		
TRAV	comp=E,119μm,0.6s			AML	AML		
TRAV	comp=E,119μm,0.6s			AML	AML		
LSD	**Lago del Serru**	**0.87**	**191**	P	Pg	20 11 15.8	-0.6
LSD				S	Sg	20 11 27.8	+0.1
LSD	**Lago del Serru**	**0.87**	**191**	P	Pg	20 11 15.8	-0.5
FUSIO	**Fusio**	**0.91**	**81**	P	Pg	20 11 16.9	-0.2
FUSIO				S	Sg	20 11 28.7	-0.2
FUSIO	**Fusio**	**0.91**	**81**	P	Pg	20 11 16.6	-0.4
LPL	**La Plagne**	**0.92**	**209**	ePg	Pg	20 11 16.7	-0.4
LPL				eSg	Sg	20 11 28.9	-0.1
LPL	comp=E,11nm,0.2s						
BNALP	**Bannalp**	**0.92**	**53**	P	Pg	20 11 17.0	-0.2
LPG	**La Plagne**	**0.93**	**208**	ePg	Pg	20 11 17.0	-0.3
LPG				eSg	Sg	20 11 29.3	-0.1
LPG	comp=E,23nm,0.2s						
CABF	**La Chapelle**	**0.93**	**289**	ePg	Pb	20 11 17.9	-0.3
CABF				eSg	Sg	20 11 29.7	+0.3
CABF	comp=E,43nm,0.3s						
VARE	**Varese**	**1.08**	**114**	P	Pg	20 11 20.5	+0.2
VARE				S	Sg	20 11 34.2	-0.1
RSP	**Reno Superiore**	**1.17**	**183**	P	Pg	20 11 21.8	-0.3
RSP				S	Sg	20 11 36.8	-0.5
RSP	**Reno Superiore**	**1.17**	**183**	P	Pg	20 11 20.8	-1.3
RSP	comp=E,75μm,1.0s			AML	AML		
RSP	comp=E,75μm,1.0s			AML	AML		
RSP	comp=N,121μm,0.5s			AML	AML		
MUGIO	**Muggio**	**1.23**	**108**	P	Pg	20 11 22.8	-0.4
MUGIO				S	Sg	20 11 37.7	-1.5
BNI	**Bardonecchia**	**1.35**	**201**	P	Pn	20 11 25.3	+0.1
BNI				S	Sg	20 11 42.3	-0.8
BNI	**Bardonecchia**	**1.35**	**201**	P	Pn	20 11 23.8	-1.5
TUE	**Stuetta**	**1.38**	**83**	P	Pn	20 11 25.3	-0.4
TUE				S	Sg	20 11 42.9	-1.1
TUE	**Stuetta**	**1.38**	**83**	S	Pn	20 11 25.2	-0.5
RRL	**Rocca Remolon**	**1.46**	**196**	P	Pn	20 11 25.6	-1.1
HINF	**Hinteralfeld**	**1.54**	**347**	ePg	Pb	20 11 28.7	+0.1
HINF				eSg	Sn	20 11 48.2	+0.1
HINF	comp=N,20nm,0.2s						
MBDF	**Montbardon**	**1.65**	**195**	ePg	Pb	20 11 30.6	+0.1
MBDF				eSg	Sg	20 11 52.4	0.0
MBDF	comp=N,3.6nm,0.1s						
ORIF	**Oris-en-Rattie**	**1.75**	**217**	ePg	Pb	20 11 32.1	0.0
ORIF				eSg	Sg	20 11 55.4	-0.2
ORIF	comp=N,5.3nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.75**	**217**	P	Pn	20 11 30.6	+0.1
HAU	**Haudompre**	**1.82**	**338**	ePg	Pb	20 11 33.9	+0.5
HAU				eSg	Sb	20 11 57.3	+0.7
HAU	comp=N,2.6nm,0.1s						
DAVA	**Damuels**	**1.98**	**60**	Pn	Pn	20 11 34.6	+0.7
DAVA	comp=N,0.5nm,0.3s			Sn	Sb	20 12 00.4	-0.9
DAVA	comp=N,1.4nm,0.2s						
CDF	**Champ du Feu**	**2.10**	**358**	ePn	Pn	20 11 34.3	-1.1
CDF	**Champ du Feu**	**2.10**	**358**	ePg	Pb	20 11 38.9	+0.8
CDF				eSg	Sg	20 12 05.7	-1.2
VIVF	**Saint-Julien-l**	**2.39**	**233**	ePn	Pn	20 11 40.1	+0.7
VIVF	**Saint-Julien-l**	**2.39**	**233**	ePg	Pg	20 11 44.6	-0.7
VIVF				eSg	Sb	20 12 14.4	+1.6
FETA	**Feichten**	**2.42**	**72**	ePn	Pb	20 11 42.3	-1.5
SMF	**Signal de Mont**	**2.46**	**279**	ePn	Pn	20 11 39.1	-1.2
SMF	**Signal de Mont**	**2.46**	**279**	ePg	Pg	20 11 45.7	-0.9
SMF				eSg	Sg	20 12 16.8	-1.6
SBF	**Sospel**	**2.46**	**179**	ePg	Pb	20 11 45.3	+1.1
SBF				eSg	Sg	20 12 16.8	-1.7
SFTF	**Sexfontaines**	**2.46**	**321**	ePn	Pn	20 11 40.3	-0.1
SFTF	**Sexfontaines**	**2.46**	**321**	ePg	Pg	20 11 46.5	-0.3
SFTF				eSn	Sn	20 12 09.1	-1.7
SFTF				eSg	Sg	20 12 17.3	-1.4
PAGF	**Fort de Pagny**	**2.50**	**334**	ePn	Pn	20 11 41.0	+0.1
PAGF	**Fort de Pagny**	**2.50**	**334**	ePg	Pg	20 11 47.1	-0.3
PAGF				eSn	Sn	20 12 09.0	-2.7
PAGF	comp=N,3.3nm,0.2s			eSg	Sg	20 12 18.3	-1.5
LOR	**Lormes**	**2.59**	**293**	ePn	Pn	20 11 41.2	-0.9
LOR	**Lormes**	**2.59**	**293**	ePg	Pg	20 11 48.1	-1.0
LOR	**Lormes**	**2.59**	**293**	ePg	Pg	20 11 48.2	-0.9
LOR				eSg	Sb	20 12 20.4	+1.9
LOR				eSg	Sg	20 12 20.5	-2.2
SMRF	**Simiane la Rot**	**2.66**	**209**	ePg	Pg	20 11 49.7	-0.9
SMRF				eSg	Sg	20 12 23.3	-1.8
SAVF	**Savonnieres en**	**2.75**	**327**	ePn	Pn	20 11 44.0	-0.3
SAVF				eSn	Sn	20 12 14.9	-3.1
SAVF				eSg	Sg	20 12 26.8	-1.2
SSF	**Saint Saulge**	**2.76**	**287**	eP	Pn	20 11 45.4	+1.0
SSF	**Saint Saulge**	**2.76**	**287**	ePg	Pg	20 11 51.2	-1.2
SSF				eSg	Sg	20 12 26.6	-1.5
SQTA	**Sankt Quirin**	**2.79**	**70**	Pn	Pn	20 11 44.1	-0.9
AVF	**Avril sur Loir**	**2.81**	**281**	ePn	Pn	20 11 45.2	+0.1
AVF				eSg	Sb	20 12 26.6	+1.8
NDIM	**Novi di Modena**	**2.87**	**119**	AML	AML		
NDIM				AML	AML		
LMR	**La Mourre**	**3.05**	**192**	ePn	Pn	20 11 48.6	+0.2
LMR	**La Mourre**	**3.05**	**192**	ePg	Pg	20 11 56.3	-1.6
LMR				eSn	Sn	20 12 22.5	-2.7
LMR				eSg	Sb	20 12 34.3	+2.6
WTTA	**Wattenberg**	**3.08**	**71**	ePn	Pn	20 11 49.2	+0.1
BGF	**Bois d'Agland**	**3.13**	**276**	ePn	Pn	20 11 49.7	+0.1
BGF				eSn	Sn	20 12 25.0	-2.3
BGF				eSg	Sg	20 12 39.0	-1.1
LASF	**Ste Croix**	**3.34**	**229**	ePn	Pn	20 11 53.0	+0.5
LASF	**Ste Croix**	**3.34**	**229**	ePg	Pg	20 12 02.1	-1.5
LASF				eSg	Sg	20 12 43.8	-3.1
HYF	**Humbligny**	**3.38**	**288**	ePn	Pn	20 11 53.4	+0.4
HYF				eSn	Sn	20 12 30.5	-3.0
TCF	**Toulx Ste Croi**	**3.57**	**271**	ePn	Pn	20 11 55.5	-0.1
TCF	**Toulx Ste Croi**	**3.57**	**271**	ePg	Pg	20 12 06.9	-1.1
TCF				eSn	Sn	20 12 36.7	-1.5
TCF				eSg	Sg	20 12 51.9	-2.3
PGF	**Pioggiola**	**3.95**	**162**	ePn	Pn	20 11 58.5	-2.4
PGF				eSn	Sn	20 12 41.7	-5.9
CAF	**Calviac**	**3.97**	**251**	ePn	Pn	20 12 01.4	+0.3
CAF	**Calviac**	**3.97**	**251**	ePg	Pg	20 12 14.2	-1.4
CAF				eSn	Sn	20 12 44.5	-3.5
CAF				eSg	Sg	20 13 05.0	-2.0
BAIF	**Baives**	**4.30**	**332**	ePn	Pn	20 12 06.2	+0.7
BAIF				eSn	Sn	20 12 52.3	-3.7
MFF	**Saint Martin d**	**5.20**	**276**	ePn	Pn	20 12 17.3	-0.6
MFF				eSn	Sn	20 13 14.0	-4.2
GRR	**Gorron**	**5.96**	**293**	ePn	Pn	20 12 28.2	-0.1

ROM 05 20:11:41.5±0.1, 46°243N±0°005×7°397E±0°005, h12km, ML1.4/8, Error ellipse: s-maj=0.6km s-min=0.3km az=163.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIX	**Grande Dixence**	**0.16**	**177**	P	Pg	20 11 45.8	+0.3
DIX				S	Sg	20 11 48.9	+0.8
DIX	comp=E,648μm,0.6s			AML	AML		
DIX	comp=N,575μm,0.2s			AML	AML		
REMY	**Saint-Rhmy-en**	**0.44**	**203**	P	Pg	20 11 50.5	+0.2
REMY				S	Sg	20 11 56.9	+0.8
REMY	comp=E,44μm,0.2s			AML	AML		
REMY	comp=N,45μm,2.2s			AML	AML		
MMK	**Mattmark**	**0.44**	**116**	P	Pg	20 11 50.4	+0.1
MMK				S	Sg	20 11 56.9	+0.8
SATI	**Passo dei Sala**	**0.49**	**138**	P	Pg	20 11 51.4	+0.2
SATI				S	Sg	20 11 58.5	+0.6
SATI	comp=N,26μm,1.8s			AML	AML		
SATI	comp=E,96μm,3.0s			AML	AML		
MRGE	**Morge**	**0.53**	**206**	P

az=61.0

ISC 05 20:26:08.0±0.4,**6°02S**±0°04×**127°83E**±0°05,**h386**km,**n94,** σ1ᵍ21/104,**mb3.9**/12,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**2.34**	**9**	P	**Pn**	**20 27 05.5**	**+0.4**
BNDI	**Bandanaira**	**2.54**	**54**	P	**Pn**	**20 27 05.2**	**-1.4**
NLAI	**Namlea**	**2.85**	**345**	P	**Pn**	**20 27 10.3**	**+1.3**
NLAI				S	**S**	**20 27 58.1**	**-0.1**
MSAI	**Masohi**	**2.87**	**22**	P	**Pn**	**20 27 09.7**	**+0.5**
MSAI				S	**S**	**20 27 55.1**	**-3.4**
SAUI	**Saumlaki**	**3.96**	**120**	Pn	**Pn**	**20 27 19.8**	**+0.9**
SAUI				Sn	**S**	**20 28 14.5**	**-1.7**
SAUI	**Saumlaki**	**3.96**	**120**	P	**Pn**	**20 27 20.0**	**+1.1**
SAUI	**Saumlaki**	**3.96**	**120**	P	**Pn**	**20 27 19.8**	**+0.9**
SANI	**Sanana**	**4.35**	**335**	P	**Pn**	**20 27 22.6**	**-0.2**
SANI	**Sanana**	**4.35**	**335**	P	**Pn**	**20 27 22.3**	**-0.5**
SOEI	**Soe**	**5.12**	**223**		**Pn**	**20 27 31.2**	**+0.3**
SOEI				Sn	**S**	**20 28 36.0**	**-2.1**
SOEI	**Soe**	**5.12**	**223**	P	**Pn**	**20 27 31.9**	**+1.1**
SOEI	**Soe**	**5.12**	**223**	P	**Pn**	**20 27 31.4**	**+0.6**
	0.7nm79nm,0.6s						
BBSI	**Bau Bau**	**5.26**	**275**	P	**Pn**	**20 27 33.3**	**+1.1**
	0.2nm57nm,1.0s						
FAKI	**Fak Fak**	**5.37**	**55**		**Pn**	**20 27 32.9**	**-0.5**
FAKI				Sn	**S**	**20 28 37.5**	**-5.3**
FAKI	**Fak Fak**	**5.37**	**55**	P	**Pn**	**20 27 33.3**	**-0.1**
FAKI	**Fak Fak**	**5.37**	**55**	P	**Pn**	**20 27 33.1**	**-0.3**
	0.4nm2μm71nm,0.9s						
BATI	**Baumata**	**5.86**	**224**	P	**Pn**	**20 27 39.8**	**+1.1**
	163nm,0.4s,baz=56,slow=2.4,SNR=75						
BATI				S	**S**	**20 28 48.9**	**-3.5**
	193nm,0.7s,baz=129,slow=22,SNR=12						
BATI	**Baumata**	**5.86**	**224**	P	**Pn**	**20 27 39.5**	**+0.8**
MMRI	**Maumere**	**6.13**	**245**		**Pn**	**20 27 41.7**	**+0.1**
MMRI				Sn	**S**	**20 28 55.6**	**-2.1**
MMRI	**Maumere**	**6.13**	**245**	P	**Pn**	**20 27 42.2**	**+0.6**
MMRI	**Maumere**	**6.13**	**245**	P	**Pn**	**20 27 41.5**	**-0.1**
	0.3nm53nm,0.5s						
SWI	**Sorong**	**6.16**	**34**	P	**Pn**	**20 27 41.7**	**-0.3**
	0.2nm35nm,0.6s						
KMPI	**Kaimana, Papua**	**6.30**	**68**	P	**Pn**	**20 27 44.2**	**+0.6**
EDFI	**Ende, Flores**	**6.67**	**246**	P	**Pn**	**20 27 47.8**	**+0.1**
	0.2nm689nm55nm,1.0s						
DRS	**Darwin Rock St**	**7.06**	**155**	P	**P**	**20 27 53.4**	**+0.6**
DRS	**Darwin Rock St**	**7.06**	**155**	S	**S**	**20 29 18.5**	**+1.6**
BSSI	**Bau Bau, Buton**	**7.30**	**269**	P	**Pn**	**20 27 55.6**	**+0.8**
	0.1nm36nm,0.8s						
MTN	**Manton Dam**	**7.53**	**155**		**Pn**	**20 27 57.6**	**+0.2**
BKSI	**Bulukumba**	**7.70**	**275**	P	**Pn**	**20 27 59.0**	**-0.4**
RKPI	**Ransiki, Papua**	**7.75**	**55**	P	**P**	**20 28 01.2**	**+0.4**
BNSI	**Bone**	**7.86**	**281**	P	**P**	**20 28 02.7**	**+0.8**
	0.1nm17nm,1.0s						
KAPI	**Kappang**	**8.10**	**277**	P	**Pn**	**20 28 04.9**	**+0.9**
KAPI	**Kappang**	**8.10**	**277**	P	**P**	**20 28 05.4**	**+0.4**
	6.8nm,0.3s,baz=183,slow=17,SNR=4.2						
WSI	**Waingapu**	**8.30**	**244**	P	**Pn**	**20 28 04.7**	**-1.6**
BASI	**Baing, Sumba**	**8.30**	**239**	P	**Pn**	**20 28 05.6**	**-0.8**
	54nm,0.7s						
MRSI	**Marisa**	**8.73**	**317**	P	**Pn**	**20 28 11.6**	**+0.3**
	17nm,0.6s						
WBSI	**Waikabubak, Su**	**9.10**	**246**	P	**Pn**	**20 28 13.4**	**-2.3**
	31nm,0.9s						
BAKI	**Biak**	**9.55**	**60**	P	**P**	**20 28 23.4**	**+2.3**
	89nm,1.3s						
KNRA	**Kununurra**	**9.64**	**175**	P	**Pn**	**20 28 22.4**	**+0.5**
SGSI	**Sangihe**	**9.91**	**347**	P	**Pn**	**20 28 24.8**	**-0.3**
TOLI2	**Tolitoli**	**9.98**	**315**	P	**P**	**20 28 26.2**	**+0.3**
TOLI2	**Tolitoli**	**9.98**	**315**	S	**S**	**20 30 19.3**	**+0.4**
TOLI2	**Tolitoli**	**9.98**	**315**	P	**Pn**	**20 28 26.6**	**+0.7**
PLAI	**Plampang**	**10.35**	**254**	P	**P**	**20 28 29.2**	**-0.8**
PLAI	**Plampang**	**10.35**	**254**	P	**P**	**20 28 28.0**	**-2.0**
	24nm,1.3s						
TWSI	**Taliwang, Sumb**	**11.19**	**255**	P	**P**	**20 28 37.9**	**-1.4**
	13nm,1.2s						
FITZ	**Fitzroy Crossi**	**12.20**	**190**	P	**P**	**20 28 50.7**	**+0.3**
	1.5nm,0.3s,baz=18,slow=17,SNR=2.1						
FITZ				S	**S**	**20 31 02.3**	**-2.4**
	1.4nm,0.5s,baz=40,slow=16,SNR=1.8						
JAY	**Jayapura**	**13.30**	**75**	P	**Pn**	**20 29 04.7**	**0.0**
	11nm,0.8s,baz=194,slow=8.3,SNR=4.4						
JAY	**Jayapura**	**13.30**	**75**	P	**P**	**20 29 03.6**	**+0.9**
	20nm,1.1s						
JAGI	**Jajag, Banyuwa**	**13.79**	**259**	P	**P**	**20 29 07.0**	**-0.9**
JAGI	**Jajag, Banyuwa**	**13.79**	**259**	P	**P**	**20 29 08.4**	**+0.4**
JAGI	**Jajag, Banyuwa**	**13.79**	**259**	P	**P**	**20 29 07.0**	**-0.9**
	21nm,1.5s						
WB0	**Warramunga Arr**	**15.08**	**156**	P	**P**	**20 29 22.1**	**+0.1**
WRAB	**Tennant Creek**	**15.22**	**156**	P	**P**	**20 29 23.6**	**+0.2**
WRAB	**Tennant Creek**	**15.22**	**156**	P	**P**	**20 29 23.8**	**+0.3**
WRA	**Warramunga Arr**	**15.22**	**156**		**P**	**20 29 22.4**	**-1.1**
WRA	**Warramunga Arr**	**15.22**	**156**	P	**P**	**20 29 23.4**	**-0.1**
	23nm,0.5s,baz=334,slow=11,SNR=38						
WRA				S	**S**	**20 32 03.2**	**-2.2**
	2.9nm,0.9s,baz=328,slow=20,SNR=4.9						
WR8	**Warramunga Arr**	**15.30**	**156**		**P**	**20 29 24.5**	**+0.2**
PCJI	**Pacitan**	**16.67**	**262**	P	**P**	**20 29 39.3**	**+0.1**
	32nm,2.2s						
MBWA	**Marble Bar**	**16.98**	**207**	P	**P**	**20 29 43.1**	**+0.7**
MBWA				IAmb	IAmb	20 29 53.9	
	comp=Z,22nm,1.4s						
COEN	**Coen**	**17.04**	**119**	P	**P**	**20 29 43.4**	**+0.3**
COEN				IAmb	IAmb	20 29 48.0	
	comp=Z,20nm,1.5s						
UGM	**Wanagama**	**17.28**	**263**	P	**P**	**20 29 47.2**	**+1.4**
QIS	**Mount Isa**	**18.43**	**143**	P	**P**	**20 29 58.4**	**+0.5**
AS31	**Alice Springs**	**18.50**	**162**	P	**P**	**20 29 58.7**	**+0.1**
AS31				IAmb	IAmb	20 29 59.3	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**18.50**	**162**	P	**P**	**20 29 58.5**	**-0.1**
ASAR	**Alice Springs**	**18.50**	**162**	P	**P**	**20 29 58.6**	**0.0**
	comp=Z,19nm,0.3s,baz=344,slow=12,SNR=148						
ASAR				S	**S**	**20 33 09.2**	**+0.1**
	comp=Z,4.6nm,1.0s,baz=343,slow=21,SNR=18						
PMG	**Port Moresby**	**19.45**	**101**	P	**P**	**20 30 08.4**	**0.0**
PMG				IAmb	IAmb	20 30 48.6	
	comp=Z,12nm,0.9s						
PMG	**Port Moresby**	**19.45**	**101**	P	**P**	**20 30 08.8**	**+0.4**
	comp=Z,6.8nm,0.5s,baz=253,slow=14,SNR=2.6						
BBJI	**Bungbulang**	**20.09**	**265**	P	**P**	**20 30 15.5**	**+0.9**
CNJI	**Cibinong**	**20.60**	**265**	P	**P**	**20 30 19.9**	**+0.8**
	comp=Z,16nm,1.4s						
MEEK	**Meekatharra**	**22.31**	**202**	P	**P**	**20 30 35.0**	**+0.4**
FORT	**Forrest**	**24.63**	**180**	P	**P**	**20 30 55.8**	**+0.4**
FORT				IAmb	IAmb	20 31 19.1	
	comp=Z,8.7nm,1.1s						
MNAI	**Manna**	**24.83**	**273**	P	**P**	**20 30 57.1**	**-0.2**
INKA	**Innaminka**	**24.85**	**152**	P	**P**	**20 30 56.6**	**-0.7**
BBOO	**Buckleboo**	**27.74**	**165**	P	**P**	**20 31 22.0**	**-0.9**
STKA	**Stephens Creek**	**28.77**	**155**	P	**P**	**20 31 32.0**	**0.0**
STKA	**Stephens Creek**	**28.77**	**155**	P	**P**	**20 31 32.5**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=332,slow=9.6,SNR=13						
	comp=Z,2.7nm,0.5s						
KULM	**Kulim**	**29.37**	**292**	P	**P**	**20 31 38.5**	**+0.9**
KULM				IAmb	IAmb	20 32 13.3	
	comp=Z,16nm,1.5s						
CMSA	**Cobar Meteorol**	**30.40**	**149**	P	**P**	**20 31 47.5**	**+1.1**
NACB	**Ninganchiao**	**30.62**	**349**	P	**P**	**20 31 47.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**37.46**	**311**	P	**P**	**20 32 46.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**37.46**	**311**	P	**P**	**20 32 46.8**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=139,slow=7.2,SNR=5.9						
	comp=Z,1.2nm,0.6s						
CHTO	**Chiang Mai**	**37.67**	**312**	P	**P**	**20 32 52.2**	**+3.8**
CHTO				IAmb	IAmb	20 32 52.7	
	comp=Z,2.7nm,0.6s						
EVN	**Everest**	**52.03**	**313**	P	**P**	**20 34 40.3**	**-0.4**
EVN				IAmb	IAmb	20 34 41.5	
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**56.85**	**343**	P	**P**	**20 35 14.8**	**+0.8**
SONM	**Songino Array**	**56.85**	**343**	P	**P**	**20 35 15.1**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=148,slow=5.3,SNR=4.2						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**66.24**	**328**	P	**P**	**20 36 16.2**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=116,slow=8.4,SNR=51						
	comp=Z,1.9nm,0.4s						
MAKZ	**Makanchi**	**66.41**	**327**	P	**P**	**20 36 17.3**	**+0.2**
MAKZ				IAmb	IAmb	20 36 17.6	
	comp=Z,1.7nm,0.6s						
ZAA0	**Zalesovo Array**	**69.76**	**335**	P	**P**	**20 36 36.1**	**-1.3**
ZALV	**Zalesovo Beam**	**69.76**	**335**	P	**P**	**20 36 36.8**	**-0.7**
ZALV	**Zalesovo Beam**	**69.76**	**335**	P	**P**	**20 36 37.1**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=133,slow=7.5,SNR=5.6						
	comp=Z,1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**70.56**	**329**	P	**P**	**20 36 42.4**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=134,slow=5.2,SNR=12						
	comp=Z,1.1nm,0.4s						
KURK	**Kurchatov**	**70.57**	**329**	P	**P**	**20 36 42.0**	**-0.3**
KURK				IAmb	IAmb	20 36 43.3	
	comp=Z,3.0nm,0.8s						
ABKAR	**Akbulak array**	**80.41**	**322**	P	**P**	**20 37 37.6**	**-0.1**

*IDC **05** 20:31:13.5±1.3, 18°.14N×144°.88E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=51.7km s-min=22.6km az=91.0*

*NEIC **05** 20:31:14.7±1.3, 18°.17N±0°.07×145°.0E±0°.2, h10km±1km, mb4.2/5, Error ellipse: s-maj=31.3km s-min=5.1km az=68.0*

ISC 05 20:31:16.5±1.0,**18°1N**±0°1×**144°9E**±0°3,**h23**km,**n16,** σ0ᵍ78/16,**mb3.7**/8,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.49**	**180**	Pn	**Pn**	**20 32 23.9**	**+0.8**
WB0	**Warramunga Arr**	**39.02**	**196**	P	**P**	**20 38 41.3**	**-0.3**
WB0				IAmb	IAmb	20 38 45.1	
	comp=Z,7.8nm,1.4s						
WR8	**Warramunga Arr**	**39.17**	**196**	P	**P**	**20 38 42.7**	**-0.2**
WRA	**Warramunga Arr**	**39.20**	**196**	P	**P**	**20 38 42.9**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=20,slow=7.6,SNR=5.0						
	comp=Z,0.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**40.66**	**209**	P	**P**	**20 38 56.6**	**+1.4**
ASAR	**Alice Springs**	**42.88**	**195**	P	**P**	**20 39 12.9**	**-0.5**
ASAR	**Alice Springs**	**42.88**	**195**	P	**P**	**20 39 14.5**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=15,slow=7.2,SNR=9.4						
	comp=Z,0.2nm,0.4s						
BBOO	**Buckleboo**	**51.33**	**190**	P	**P**	**20 40 17.6**	**-1.5**
ZALV	**Zalesovo Beam**	**58.02**	**323**	P	**P**	**20 41 07.1**	**-0.4**
ZALV	**Zalesovo Beam**	**58.02**	**323**	P	**P**	**20 41 07.6**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=89,slow=7.8,SNR=2.5						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.33**	**314**	P	**P**	**20 41 09.8**	**0.0**
MKAR	**Makanchi Array**	**58.33**	**314**	P	**P**	**20 41 10.3**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=93,slow=10,SNR=2.5						
	comp=Z,0.4nm,0.9s						
MAKZ	**Makanchi**	**58.54**	**314**	P	**P**	**20 41 10.5**	**-0.8**
MAKZ				IAmb	IAmb	20 41 28.2	
	comp=Z,2.6nm,1.2s						
ILAR	**Eielson Array**	**64.51**	**26**	P	**P**	**20 41 51.1**	**-0.1**
ILAR	**Eielson Array**	**64.51**	**26**	P	**P**	**20 41 51.8**	**+0.5**
	comp=Z,0.5nm,1.0s,baz=257,slow=6.9,SNR=5.1						
	comp=Z,0.5nm,1.0s						
BVAR	**Borovoye Array**	**66.45**	**321**	P	**P**	**20 42 04.3**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=101,slow=7.9,SNR=4.5						
	comp=Z,0.6nm,0.4s						

*GCG **05** 20:45:03.7±1.4, 14°.23N×93°.76W, h36km±35km, MD4.8, ML4.1*

*IDC **05** 20:45:04.7±2.0, 14°.64N×93°.58W, h0km, mb3.8/5, mbtmp3.8/8, ML3.7/3, MS3.0/2, Error ellipse: s-maj=43.4km s-min=20.9km az=27.0*

*MEX **05** 20:45:05.6±1.1, 14°.29N×93°.72W, h16km±87km, MD4.3*

ISC 05 20:45:02.3±1.7,**14°49N**±0°06×**93°64W**±0°04,**h2**km±10km, **n53,** σ2ᵍ01/73,**mb3.9**/6,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.28**	**19**	*e*P	**Pg**	**20 45 28.0**	**+1.1**
PCIG				*e*S	**Sn**	**20 45 45.7**	**+0.8**
THIG		**1.40**	**72**	*i* P	**Pg**	**20 45 28.8**	**-0.3**
THIG				*e*S	**Sg**	**20 45 46.4**	**-0.8**
THIG		**1.40**	**72**	*e*P	**Pb**	**20 45 28.5**	**-0.6**
THIG				*e*S	**Sg**	**20 45 47.8**	**+0.6**
THIG				IAML		20 45 48.7	
	comp=N,2μm,0.4s						
PATR	**El Naranjo**	**1.50**	**65**	*e*P	**Pn**	**20 45 30.1**	**-0.4**
PATR				*e*S	**Sg**	**20 45 50.8**	**+0.3**
PAVE	**Pavencul**	**1.58**	**63**	*e*P	**Pb**	**20 45 31.5**	**-0.9**
PAVE				*e*S	**Sg**	**20 45 52.6**	**-0.6**
CHUJ	**Union Juarez**	**1.60**	**68**	*e*P	**Pn**	**20 45 31.5**	**-0.4**
CHUJ				*e*S	**Sg**	**20 45 52.2**	**-1.7**
RTAL	**Retalhuleu**	**1.89**	**89**	*e*P	**Pn**	**20 45 35.5**	**-0.1**
RTAL				*e*S	**Sn**	**20 45 58.1**	**-1.9**
QUEO	**Labor Ovalle**	**2.09**	**79**	*e*S	**Sb**	**20 46 05.8**	**-2.0**
QUEO				IAML		20 46 07.6	
	comp=E,2μm,0.6s						
SOKI	**Kika Raxquin**	**2.19**	**81**	*e*P	**Pn**	**20 45 40.6**	**+0.4**
STG2	**El Palmar, Qui**	**2.19**	**91**	*e*P	**Pn**	**20 45 37.1**	**-2.9**
HUEH	**Huehuetenango**	**2.23**	**68**	*e*P	**Pn**	**20 45 40.1**	**-0.4**
HUEH				*e*S	**Sg**	**20 46 12.9**	**-1.1**
HUEH	**Huehuetenango**	**2.23**	**68**	*e*P	**Pb**	**20 45 42.8**	**-0.7**
HUEH				IAML		20 46 21.5	
	comp=E,2μm,0.9s						
CCIG	**Comitan**	**2.30**	**39**	*e*P	**Pb**	**20 45 44.5**	**-0.2**
CCIG	**Comitan**	**2.30**	**39**	*e*P	**Pb**	**20 45 44.4**	**-0.3**
CCIG				IAML		20 46 21.2	
	comp=N,582nm,0.5s						
TGIG		**2.33**	**12**	*e*P	**Pb**	**20 45 44.8**	**-0.5**
TGIG		**2.33**	**12**	*i* P	**Pb**	**20 45 44.7**	**-0.5**
TGIG				*i* S	**Sb**	**20 46 14.6**	**+0.1**
TGIG				IAML		20 46 17.6	
	comp=E,518nm,0.9s						
QUIS	**Sacapulas**	**2.59**	**72**	*e*P	**Pb**	**20 45 47.5**	**-2.2**
QUIS				IAML		20 46 30.5	
	comp=E,1μm,0.5s						
HUIG	**Huatulco**	**2.70**	**298**	*e*P	**Pn**	**20 45 48.3**	**+1.4**
HUIG	**Huatulco**	**2.70**	**298**	*e*P	**Pn**	**20 45 44.7**	**-2.2**
CMIG	**Matias Romero**	**2.85**	**335**	Pn	**Pn**	**20 45 50.0**	**+1.0**
	comp=E,6.5nm,0.3s,baz=163,slow=11,SNR=34						
CMIG				Sn	**Sn**	**20 46 23.7**	**-0.2**
	comp=E,11nm,0.3s,baz=95,slow=11,SNR=5.1						
	comp=E,34nm,0.5s						
APG	**El Apazote**	**3.12**	**80**	Pn	**Pn**	**20 45 53.8**	**+1.0**
	comp=E,0.3nm,0.3s,baz=214,slow=15,SNR=21						
APG	**El Apazote**	**3.12**	**80**	*e*P	**Pn**	**20 45 53.6**	**+0.8**
PEIG	**Puerto Escondi**	**3.70**	**294**	*e*P	**Pn**	**20 45 59.5**	**-1.2**
NUBE	**Las Nubes**	**3.79**	**98**	*e*P	**Pn**	**20 46 01.8**	**-0.2**
NEUV	**Arroyo Zacate**	**3.82**	**327**	*e*P	**Pn**	**20 46 03.3**	**+1.0**
NEUV				*e*S	**Sn**	**20 46 44.1**	**-3.7**
PMUV	**Sontecomapan**	**4.28**	**341**	*e*P	**Pn**	**20 46 07.5**	**-1.1**
PMUV				*e*S	**Sn**	**20 46 54.5**	**-4.7**
PETF	**Flores**	**4.36**	**56**	*e*S	**Sn**	**20 47 00.3**	**-0.9**
YOIG	**Yosondua**	**4.44**	**303**	*e*P	**Pn**	**20 46 12.4**	**+1.4**
YOIG				*e*S	**Sn**	**20 47 02.3**	**-1.2**
PNIG	**Pinotepa**	**4.72**	**294**	*e*P	**Pn**	**20 46 13.5**	**-1.2**
PNIG				*e*S	**Sn**	**20 47 03.6**	**-6.5**
TXIG	**Tlaxiaco**	**4.83**	**305**	*e*P	**Pn**	**20 46 17.5**	**+1.1**
TXIG				*e*S	**Sn**	**20 47 11.9**	**-1.2**
TOIG	**Toxpalan**	**4.87**	**318**	*e*P	**Pn**	**20 46 18.4**	**+1.7**
TOIG				*e*S	**Sn**	**20 47 13.7**	**-0.1**
SCIG	**Sabancuy**	**5.04**	**27**	*e*P	**Pn**	**20 46 13.6**	**-5.3**
SCIG				*e*S	**Sn**	**20 47 15.8**	**-2.0**
HLIG	**Huajuapan de L**	**5.20**	**310**	*e*P	**Pn**	**20 46 21.1**	**-0.3**
HLIG				*e*S	**Sn**	**20 47 20.9**	**-1.2**
TPIG	**Tehuac#an**	**5.30**	**318**	*e*P	**Pn**	**20 46 24.9**	**+2.2**
TPIG				*e*S	**Sn**	**20 47 25.5**	**+1.0**
FTIG	**Fresnillo de T**	**5.50**	**309**	*e*P	**Pn**	**20 46 26.7**	**+1.3**
FTIG				*e*S	**Sn**	**20 47 27.8**	**-1.5**
MGIG	**Malinaltepec**	**5.53**	**300**	*e*P	**Pn**	**20 46 26.4**	**+0.6**
MGIG				*e*S	**Sn**	**20 47 28.2**	**-1.9**
JAUV	**Jalcomulco**	**5.72**	**328**	*e*P	**Pn**	**20 46 26.9**	**-1.5**
JAUV				*e*S	**Sn**	**20 47 29.8**	**-4.9**
POHV	**Veracruz**	**5.74**	**323**	*e*	Pn	20 46 16.8	-12
CRIG	**Cruz Grande**	**5.74**	**294**	*e*P	**Pn**	**20 46 29.8**	**+1.1**
CRIG				*e*		20 47 27.3	
LVIG	**Laguna Verde**	**5.85**	**333**	*e*P	**Pn**	**20 46 26.8**	**-3.2**
LVIG				*e*S	**Sn**	**20 47 31.9**	**-5.8**
PPPT	**Popocatepetl**	**6.53**	**314**	*e*P	**Pn**	**20 46 38.7**	**-1.4**
PBXN	**Popocatepetl**	**6.58**	**314**	*e*P	**Pn**	**20 46 38.2**	**-2.4**
TEIG	**Tepich**	**7.67**	**41**	Pn	**Pn**	**20 46 57.7**	**+2.6**
	baz=132,slow=24,SNR=6.6						
TEIG				Sn	**Sn**	**20 48 22.4**	**-0.3**
	baz=133,slow=24,SNR=1.5						
JTS	**Las Juntas de**	**9.46**	**115**	Pn	**Pn**	**20 47 23.9**	**+4.2**
	comp=E,0.7nm,0.3s,baz=288,slow=16,SNR=1.7						
	comp=E,1.7nm,0.3s						
TXAR	**Lajitas Array**	**17.44**	**330**	P	**P**	**20 49 09.7**	**+1.4**
	comp=E,0.1nm,0.3s,baz=151,slow=7.8,SNR=7.4						
	comp=E,0.6nm,0.8s						
LPIG	**La Paz**	**18.39**	**304**	LR	LR	20 56 55.1	
	comp=E,42nm,18.9s,baz=256,slow=39						
TKL	**Tuckaleechee C**	**22.87**	**21**	LR	LR	20 59 52.8	
	comp=E,37nm,19.3s,baz=266,slow=39						
PDAR	**Pinedale Array**	**31.34**	**337**	P	**P**	**20 51 26.2**	**+1.7**
	comp=E,0.6nm,0.9s,baz=147,slow=8.9,SNR=5.2						
	comp=E,0.6nm,0.9s						
NVAR	**Mina Array Bea**	**32.30**	**322**	P	**P**	**20 51 36.3**	**+3.2**
	comp=E,0.8nm,0.8s,baz=132,slow=7.8,SNR=6.4						
	comp=E,0.8nm,0.8s						
YKA	**Yellowknife Ar**	**50.20**	**348**	P	**P**	**20 54 00.3**	**+1.0**
	comp=E,2.2nm,0.8s,baz=158,slow=7.1,SNR=4.5						
	comp=E,2.2nm,0.8s						
ILAR	**Eielson Array**	**61.77**	**337**	P	**P**	**20 55 23.7**	**+1.4**
	comp=E,0.9nm,0.9s,baz=140,slow=4.0,SNR=8.9						
	comp=E,0.9nm,0.9s						
ESDC	**Sonseca Array**	**80.66**	**51**	P	**P**	**20 57 15.1**	**-2.1**
	comp=E,0.6nm,0.8s,baz=277,slow=4.7,SNR=2.3						
NOA	**NORSAR Array B**	**84.47**	**28**	P	**P**	**20 57 37.4**	**+0.7**
	comp=E,1.1nm,0.8s,baz=298,slow=5.3,SNR=3.8						
	comp=E,1.1nm,0.8s						

*IDC **05** 20:47:39.6±4.0, 20°.07S×179°.34W, h617km±46km, mb2.9/7, mbtmp3.9/8, Error ellipse: s-maj=28.0km s-min=23.0km az=131.0*

ISC 05 20:47:38.1±0.8,**20°1S**±0°2×**179°3W**±0°2,**h600**km,**n16,** σ1ᵍ35/18,**mb3.5**/7,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.46**	**259**	P	**P**	**20 50 31.7**	**-0.1**
	4.7nm,0.8s,baz=232,slow=22,SNR=2.4						
ASAR	**Alice Springs**	**43.43**	**256**	P	**P**	**20 54 49.5**	**-0.2**
	0.7nm,0.5s,baz=98,slow=7.8,SNR=14						
ASAR				PcP	**PcP**	**20 56 23.1**	**-1.1**
	0.8nm,0.6s,baz=103,slow=3.4,SNR=9.0						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**43.45**	**262**	P	**P**	**20 54 49.9**	**0.0**
	0.3nm,0.3s,baz=97,slow=7.1,SNR=10						
WRA				PcP	**PcP**	**20 56 23.9**	**-0.5**
	0.1nm,0.3s,baz=93,slow=3.7,SNR=1.7						
	0.3nm,0.3s						
VNDA	**Vanda**	**58.24**	**185**	P	**P**	**20 56 36.7**	**+0.9**
	0.2nm,0.3s,baz=349,slow=4.4,SNR=6.7						
	0.2nm,0.3s						
PETK	**Petropavlovsk-**	**75.55**	**346**	P	**P**	**20 58 23.7**	**+1.7**
	2.1nm,0.7s,baz=164,slow=5.9,SNR=1.4						
	2.1nm,0.7s						
NVAR	**Mina Array Bea**	**81.55**	**44**	P	**P**	**20 58 54.4**	**-0.2**
	0.6nm,0.6s,baz=220,slow=7.1,SNR=4.8						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**88.17**	**13**	P	**P**	**20 59 26.1**	**+0.5**
	0.3nm,0.4s,baz=206,slow=5.2,SNR=6.8						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**89.49**	**44**	P	**P**	**20 59 31.8**	**-0.9**
	0.5nm,0.6s,baz=251,slow=5.7,SNR=5.7						
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**117.97**	**320**	PKP	**PKPdf**	**21 05 16.3**	**-1.0**
	0.7nm,0.3s,baz=107,slow=2.8,SNR=1.9						
ARCES	**ARCESS Array B**	**128.27**	**349**	PKP	**PKPdf**	**21 05 35.6**	**-1.0**
	5.5nm,1.1s,baz=39,slow=2.2,SNR=1.1						
FINES	**FINESS Array B**	**135.01**	**343**	PKP	**PKPdf**	**21 05 48.9**	**-0.6**
	3.3nm,0.8s,baz=90,slow=6.9,SNR=1.4						
AKASG	**Malin Array Be**	**142.04**	**330**	PKP	**PKPdf**	**21 05 59.7**	**-3.0**
	2.6nm,0.4s,baz=44,slow=4.1,SNR=13						
EKA	**Eskdalemuir Ar**	**144.67**	**4**	PKP	**PKPdf**	**21 06 07.0**	**-0.1**
	1.2nm,0.7s,baz=332,slow=2.5,SNR=2.6					

PMSA Palmer Station 26.21 232 P **P** **20 57 36.9 +0.2**
PMSA IAmb IAmb 20 58 14.0
comp=Z,144nm,0.8s
PMSA Palmer Station 26.21 232 *e*P **P** **20 57 37.1 +0.4**
SMAI San Martin Ant 26.88 225 P **P** **20 57 42.8 -0.1**
EFI East Falkland 28.22 262 P **P** **20 57 55.4 +0.5**
EFI IAmb IAmb 20 58 13.5
comp=Z,219nm,1.2s
EFI East Falkland 28.22 262 *i* P **P** **20 57 54.6 -0.4**
EFI pmax pmax
comp=Z,224nm,1.3s
MG01 Puerto William 31.45 250 IAMs_20 IAMs_20 21 07 59.2
comp=Z,19µm,21.0s
USHA Ushuaia 31.90 250 LR LR 21 08 33.4
comp=Z,23µm,20.9s,baz=116,slow=31
QSPA South Pole Qui 32.10 180 P **P** **20 58 31.1 +1.7**
QSPA IAmb IAmb 20 58 46.8
comp=Z,129nm,0.8s
QSPA South Pole Qui 32.10 180 IAMs_20 IAMs_20 21 11 07.1
comp=Z,24µm,19.0s
QSPA South Pole Qui 32.10 180 P P 20 58 34.4 +5.0
comp=Z,85nm,0.9s,baz=212,slow=7.7,SNR=149
QSPA S **S** **21 03 36.4 -5.0**
comp=Z,6.5nm,0.9s,baz=163,slow=19,SNR=1.2
QSPA LR LR 21 10 56.6
comp=Z,21µm,21.8s,baz=208,slow=35
MAW Mawson 32.31 137 P **P** **20 58 33.6 +2.7**
MAW Mawson 32.31 137 P **P** **20 58 33.8 +2.8**
comp=Z,83nm,1.1s,baz=251,slow=9.1,SNR=47
MAW S **S** **21 03 40.4 -3.8**
comp=Z,2.9nm,0.7s,baz=285,slow=15,SNR=1.6
MAW LR LR 21 09 40.4
comp=Z,17µm,21.6s,baz=258,slow=33
comp=Z,83nm,1.1s
GRHM Grahamstown, E 34.53 60 P **P** **20 58 48.9 -1.9**
GRHM IAmb IAmb 21 00 05.1
comp=Z,87nm,1.3s
GO09 Cerro Castillo 35.83 253 IAMs_20 IAMs_20 21 10 09.0
comp=Z,17µm,22.0s
H04S2 CROZET ISLANDS 37.64 100 T T 21 39 35.0
baz=231,slow=74,SNR=889
H04S3 CROZET ISLANDS 37.65 100 T T 21 39 45.7
baz=231,slow=74,SNR=928
H04S1 CROZET ISLANDS 37.66 100 T T 21 39 46.9
baz=231,slow=74,SNR=594
CRZF Crozet Islands 37.90 99 P **P** **20 59 17.5 -1.9**
CRZF IAmb IAmb 20 59 30.4
comp=Z,198nm,1.1s
CRZF IAMs_20 IAMs_20 21 10 08.7
comp=Z,11µm,19.0s
BOSA Boshof 38.01 54 P **P** **20 59 17.4 -3.2**
BOSA Boshof 38.01 54 P **P** **20 59 21.1 +0.5**
comp=Z,12nm,1.1s,baz=202,slow=8.6,SNR=6.7
BOSA S **S** **21 05 06.8 -5.9**
comp=Z,3.0nm,0.8s,baz=104,slow=20,SNR=0.5
BOSA LR LR 21 11 43.1
comp=Z,13µm,21.5s,baz=208,slow=31
comp=Z,12nm,1.1s
H04N3 CROZET ISLANDS 38.03 99 T T 21 39 32.5
baz=234
H04N1 CROZET ISLANDS 38.04 99 T T 21 39 47.8
baz=234,slow=74
H04N2 CROZET ISLANDS 38.05 99 T T 21 39 48.6
baz=234,slow=74
AY03 Cochrane 38.45 258 IAMs_20 IAMs_20 21 14 42.1
comp=Z,10µm,19.0s
TRQA Tornquist 39.25 277 **P** **20 59 29.6 -1.1**
TRQA IAmb IAmb 20 59 49.9
comp=Z,160nm,1.4s
TRQA Tornquist 39.25 277 P **P** **20 59 29.7 -1.1**
TRQA pmax pmax
comp=Z,160nm,1.4s
TRQA MLR MLR
comp=Z,6µm,18.0s
TRQA Tornquist 39.25 277 *e*P **P** **20 59 30.9 +0.1**
COYC Coyhaique 39.29 260 **P** **20 59 30.6 -0.4**
COYC Coyhaique 39.29 260 IAMs_20 IAMs_20 21 14 12.2
comp=Z,10µm,18.0s
PHPEN Phepeng 39.79 49 P **P** **20 59 32.9 -2.6**
PLTB Pedras Altas 39.86 292 **P** **20 59 34.1 -1.8**
PLTB Pedras Altas 39.86 292 *e*P **P** **20 59 36.2 +0.3**
MAKGR Makgori 40.28 51 P **P** **20 59 37.7 -1.8**
MAKGR IAmb IAmb 21 00 04.2
comp=Z,244nm,1.9s
MAKGR Makgori 40.28 51 *i* P **P** **20 59 40.9 +1.3**
WIN Windhoek 40.31 39 P **P** **20 59 36.5 -3.4**
WIN IAmb IAmb 20 59 56.1
comp=Z,278nm,1.9s
WIN IAMs_20 IAMs_20 21 11 50.4
comp=Z,14µm,22.0s
WIN Windhoek 40.31 39 P **P** **20 59 36.5 -3.4**
WIN pmax pmax
comp=Z,279nm,1.9s
WIN MLR MLR
comp=Z,14µm,22.0s
LKGWB Lokgwabe 40.37 46 P **P** **20 59 38.6 -1.8**
CNLB Canela 40.56 297 *e*P **P** **20 59 42.0 +0.2**
LL02 Futaleuf 40.79 263 **P** **20 59 41.4 -2.0**
CPSB Cacapava Do Su 40.89 293 *e*P **P** **20 59 44.4 -0.1**
KOOLE Kule 41.01 44 P **P** **20 59 43.1 -2.5**
KOOLE Kule 41.01 44 *i* P **P** **20 59 47.5 +1.9**
LBTB Lobatse 41.31 52 P **P** **20 59 45.0 -3.1**
LBTB IAmb IAmb 21 00 02.3
comp=Z,210nm,2.0s
LBTB Lobatse 41.31 52 P **P** **20 59 48.9 +0.8**
comp=Z,11nm,1.0s,baz=212,slow=9.4,SNR=7.9
LBTB S S 21 05 50.5 -12
comp=Z,1.9nm,0.6s,baz=318,slow=13,SNR=1.0
LBTB LR LR 21 14 13.1
comp=Z,30µm,18.7s,baz=206,slow=32
comp=Z,11nm,1.0s
LBTB Lobatse 41.31 52 P **P** **20 59 45.0 -3.1**
LBTB S S 21 05 50.6 -12
LBTB pmax pmax
comp=Z,210nm,2.0s
LL01 San Ignacio de 41.65 264 P **P** **20 59 49.2 -1.3**
LL01 IAMs_20 IAMs_20 21 15 31.6
comp=Z,10µm,20.0s
GO07 Milladeo Hill, 41.80 262 IAMs_20 IAMs_20 21 15 54.5
comp=Z,11µm,20.0s
PLCA Paso Flores 41.84 267 P **P** **20 59 51.6 -0.6**
PLCA Paso Flores 41.84 267 P **P** **20 59 53.8 +1.6**
comp=Z,7.3nm,0.8s,baz=131,slow=7.8,SNR=16
PLCA LR LR 21 16 01.2
comp=Z,4µm,18.9s,baz=132,slow=34
comp=Z,7.3nm,0.8s
PLCA Paso Flores 41.84 267 *e*P **P** **20 59 51.1 -1.1**
KGCAE Kacgae 41.89 46 P **P** **20 59 51.0 -1.8**
KGCAE IAmb IAmb 21 00 33.8
comp=Z,218nm,1.5s
KGCAE Kacgae 41.89 46 *i* P **P** **20 59 54.3 +1.5**
POGA Pongola 41.99 61 P **P** **20 59 51.6 -1.9**
POGA IAmb IAmb 21 00 29.9
comp=Z,148nm,1.6s
KDWAN Kaudwane 42.38 50 P **P** **20 59 55.3 -1.5**
KDWAN IAmb IAmb 21 00 12.1
comp=Z,186nm,1.7s
KDWAN Kaudwane 42.38 50 *i* P **P** **20 59 58.1 +1.2**
PSAL Palomas, Salto 42.41 288 *e*P **P** **20 59 57.9 +1.1**
GRTLG Ghanzi 42.87 44 P **P** **20 59 58.7 -2.1**
GRTLG IAmb IAmb 21 00 15.0
comp=Z,222nm,1.9s
GRTLG Ghanzi 42.87 44 *i* P **P** **21 00 02.1 +1.3**
LPHEP Lephephe 42.89 51 *i* P **P** **21 00 00.8 -0.1**
ITAB Concordia 42.91 297 P **P** **21 00 00.4 -0.5**
ITAB IAmb IAmb 21 00 28.1
comp=Z,172nm,1.2s
ITAB Concordia 42.91 297 *e*P **P** **21 00 01.5 +0.5**
LR05 Currie 42.97 266 **P** **21 00 01.4 +0.1**
LR05 IAmb IAmb 21 00 25.3
comp=Z,304nm,1.4s
CAM01 Campos-RJ 43.13 313 *e*P **P** **21 00 03.3 +0.5**
DUB01 Friburgo-RJ 43.18 312 *e*P **P** **21 00 03.5 +0.3**
PET01 Itanhaem-SP 43.24 305 *e*P **P** **21 00 03.3 -0.4**
PARB Paraibuna 43.37 308 *e*P **P** **21 00 04.5 -0.3**
VAS01 Vassouras-RJ 43.42 311 *e*P **P** **21 00 05.5 +0.3**
TSUM Tsumeb 43.60 38 **P** **21 00 05.5 -1.3**
TSUM IAmb IAmb 21 00 22.9
comp=Z,276nm,1.9s
TSUM Tsumeb 43.60 38 IAMs_20 IAMs_20 21 14 29.7
comp=Z,13µm,20.0s
TSUM Tsumeb 43.60 38 P **P** **21 00 08.5 +1.7**
comp=Z,9.8nm,0.8s,baz=197,slow=7.9,SNR=17
TSUM S **S** **21 06 34.6 -1.4**
comp=Z,1.6nm,0.8s,baz=190,slow=15,SNR=1.7
TSUM LR LR 21 14 42.1
comp=Z,13µm,19.9s,baz=232,slow=31
comp=Z,9.8nm,0.8s
ALF01 Guarapari-ES 43.87 315 *e*P **P** **21 00 09.2 +0.5**
SPB Sao Paulo 43.92 305 P **P** **21 00 09.1 -0.1**
SPB Sao Paulo 43.92 305 *e*P **P** **21 00 08.6 -0.5**
LR04 Corral 43.97 266 P **P** **21 00 08.2 -1.2**
KHWEE KHWEE 43.98 50 IAmb IAmb 21 00 24.2
comp=Z,112nm,1.2s
KHWEE KHWEE 43.98 50 *i* P **P** **21 00 11.1 +1.3**
VAO Valinhos 44.24 306 *e*P **P** **21 00 12.0 +0.2**
SBA Scott Base 44.25 179 P **P** **21 00 11.4 +0.3**
SBA IAmb IAmb 21 00 27.5
comp=Z,106nm,1.0s
SBA Scott Base 44.25 179 P **P** **21 00 11.4 +0.3**
SBA pmax pmax
comp=Z,106nm,1.0s
SBA MLR MLR
comp=Z,21µm,19.0s
VNDA Vanda 44.49 177 P **P** **21 00 12.8 -0.4**
VNDA IAmb IAmb 21 00 47.9
comp=Z,73nm,1.2s
VNDA Vanda 44.49 177 P **P** **21 00 16.6 +3.5**
comp=Z,11nm,0.7s,baz=211,slow=7.5,SNR=83
VNDA S **S** **21 06 44.5 -3.2**
comp=Z,0.9nm,0.8s,baz=84,slow=3.0,SNR=1.3
VNDA LR LR 21 18 30.8
comp=Z,15µm,20.3s,baz=186,slow=36
comp=Z,11nm,0.7s
QNGWA Qangwa 44.54 43 IAmb IAmb 21 00 28.9
comp=Z,214nm,1.6s
QNGWA Qangwa 44.54 43 *i* P **P** **21 00 15.9 +1.7**
RIB01 Linhares ES 44.94 316 *e*P **P** **21 00 18.6 +1.2**
RCLB Rio Claro- Sao 44.99 306 *e*P **P** **21 00 18.0 +0.2**
PTGB Pitanga 45.02 299 *e*P **P** **21 00 16.0 -2.0**
GMARE Gumare 45.03 44 IAmb IAmb 21 00 44.4
comp=Z,57nm,0.9s
GMARE Gumare 45.03 44 *i* P **P** **21 00 19.2 +1.1**
FRTB Fartura 45.07 303 *e*P **P** **21 00 17.0 -1.4**
PHDHD Phuduhudu 45.20 48 *i* P **P** **21 00 21.0 +1.5**
BI02 San Fabin de 45.20 270 P **P** **21 00 20.2 +0.8**
XAUDM Khaudum 45.51 43 *i* P **P** **21 00 23.8 +1.8**
BROLN Tlhalogang 45.51 51 *i* P **P** **21 00 22.9 +0.9**
BSFB Barra de Sao F 45.55 316 *e*P **P** **21 00 22.6 +0.4**
ABR01 Abrolhos, BA 45.58 319 *e*P **P** **21 00 23.6 +1.2**
LDASE Londrina, Braz 45.73 301 *e*P **P** **21 00 23.4 -0.3**
SJMB Sao Joao De Ma 45.79 316 *e*P **P** **21 00 23.7 -0.3**
BI05 Punta Hualpn 46.16 269 P **P** **21 00 26.9 +0.1**
CPUP Villa Florida 46.17 292 P **P** **21 00 28.2 +1.2**
comp=Z,1.2nm,0.8s,baz=19,slow=14,SNR=9.0
CPUP S **S** **21 07 15.5 +2.5**
comp=Z,0.2nm,0.3s,baz=169,slow=7.8,SNR=1.2
comp=Z,1.2nm,0.8s
CPUP Villa Florida 46.17 292 *e*P **P** **21 00 25.3 -1.7**
BO02 Sierra Bellavi 46.36 273 P **P** **21 00 29.7 +1.2**
BO02 IAmb IAmb 21 00 51.4
comp=Z,42nm,0.8s
BB19B Bebedouro 46.62 306 *e*P **P** **21 00 29.7 -0.9**
LMEL Las Melosas 46.78 274 P **P** **21 00 33.0 +1.1**
LMEL IAmb IAmb 21 01 00.3
comp=Z,59nm,0.9s
BO01 Tunca 46.83 273 P **P** **21 00 32.2 +0.1**
BO01 IAMs_20 IAMs_20 21 17 03.2
comp=Z,8µm,19.0s
DIAM Diamantina, MG 47.11 313 *e*P **P** **21 00 34.7 +0.1**
MT03 Universidad Ad 47.21 274 P **P** **21 00 34.8 -0.4**
MT09 Talagante 47.25 273 P **P** **21 00 35.2 -0.4**
MT16 CCHEN 47.27 274 P **P** **21 00 35.3 -0.4**
MT01 Popeta 47.32 273 P **P** **21 00 35.2 -0.7**
MT01 IAmb IAmb 21 01 03.9
comp=Z,74nm,0.8s
CFA Coronel Fontan 47.48 278 P **P** **21 00 38.5 +1.2**
comp=Z,11nm,0.7s,baz=145,slow=8.2,SNR=29
CFA S **S** **21 07 34.5 +2.7**
comp=Z,1.1nm,0.4s,baz=315,slow=7.1,SNR=1.2
CFA LR LR 21 21 54.0
comp=Z,1µm,18.7s,baz=148,slow=38
comp=Z,11nm,0.7s
PEL Peldehue 47.58 274 P **P** **21 00 40.5 +2.5**
PEL pmax pmax
comp=Z,126nm,0.8s
KSANE Kasane 47.61 47 *i* P **P** **21 00 40.0 +1.5**
ZON Zonda 47.76 277 P **P** **21 00 39.1 -0.4**
ZON Zonda 47.76 277 P **P** **21 00 39.1 -0.4**
ZON pmax pmax
comp=Z,334nm,1.6s
VA03 San Esteban 47.80 274 P **P** **21 00 38.5 -1.3**
VA03 IAmb IAmb 21 01 08.2
comp=Z,71nm,0.8s
AMBA Amambai (Brazi 47.92 297 *e*P **P** **21 00 41.2 +0.5**
PMNB Patos De Minas 47.99 310 *e*P **P** **21 00 41.6 +0.2**
CASY Casey 48.06 152 P **P** **21 00 39.7 -1.6**
CASY IAmb IAmb 21 01 05.3
comp=Z,136nm,1.5s
VA01 Torpederas 48.18 273 IAMs_20 IAMs_20 21 21 44.8
comp=Z,7µm,19.0s
CMC01 Camacan, BA 48.28 319 *e*P **P** **21 00 44.4 +0.9**
ITRB Iturama 48.61 304 *e*P **P** **21 00 47.2 +1.1**
IPMB Ipameri, GO 49.22 308 *e*P **P** **21 00 50.4 -0.5**
CO02 Combarbal 49.26 275 IAMs_20 IAMs_20 21 22 52.3
comp=Z,8µm,19.0s
CO03 El Pedregal 49.38 276 P **P** **21 00 49.6 -2.4**
CO03 IAmb IAmb 21 01 33.6
comp=Z,133nm,1.4s
CO01 Juntas del Tor 49.74 277 IAmb IAmb 21 01 34.9
comp=Z,96nm,1.1s
CO01 IAMs_20 IAMs_20 21 18 06.2
comp=Z,10µm,21.0s
MURT Porto Murtinho 50.25 295 *e*P **P** **21 00 58.3 -0.2**
H10N1 ASCENSION HYDR 50.33 353 T T 21 55 37.3
baz=119,slow=73,SNR=4.0
H10N3 ASCENSION HYDR 50.33 353 T T 21 55 40.8
baz=119,slow=73,SNR=26
H10N2 ASCENSION HYDR 50.34 353 T T 21 55 41.2
baz=119,slow=73,SNR=3.7
AQDB Aquidauana 50.36 298 IAmb IAmb 21 01 25.1
comp=Z,190nm,1.5s
AQDB Aquidauana 50.36 298 *e*P **P** **21 00 58.7 -0.7**
LCO Las Campanas 50.83 277 P **P** **21 01 02.3 -0.9**
LCO IAmb IAmb 21 01 30.2
comp=Z,55nm,1.0s
LCO Las Campanas 50.83 277 P **P** **21 01 02.3 -0.9**
LCO pmax pmax
comp=Z,55nm,1.0s
BDQN Bodoquena, MS 50.88 297 *e*P **P** **21 01 03.1 -0.3**
LSZ Lusaka 51.09 49 P **P** **21 01 02.7 -2.4**
LSZ IAmb IAmb 21 01 31.1
comp=Z,71nm,1.2s
LSZ Lusaka 51.09 49 P **P** **21 01 05.7 +0.6**
comp=Z,19nm,0.7s,baz=198,slow=8.7,SNR=44
LSZ LR LR 21 19 58.3
comp=Z,41µm,19.4s,baz=206,slow=33
comp=Z,19nm,0.7s
BDFB Brasilia 51.24 309 P **P** **21 01 04.3 -1.9**
BDFB IAmb IAmb 21 01 32.0
comp=Z,91nm,1.4s
BDFB Brasilia 51.24 309 P **P** **21 01 06.9 +0.7**
comp=Z,7.1nm,0.9s,baz=116,slow=5.9,SNR=6.2
BDFB S **S** **21 08 27.5 +2.7**
comp=Z,0.8nm,0.3s,baz=152,slow=13,SNR=1.2
BDFB LR LR 21 19 11.1
comp=Z,8µm,20.7s,baz=149,slow=32
comp=Z,7.1nm,0.9s
PP1B Ponte de Pedra 52.48 301 *e*P **P** **21 01 14.6 -0.7**
NBAN Anadia - AL 52.58 326 *e*P **P** **21 01 17.4 +1.3**
ARAG Araguaiana, MT 52.78 305 *e*P **P** **21 01 19.2 +1.6**
SDBA SAO DESIDERIO 52.95 315 *e*P **P** **21 01 19.6 +0.7**
GO02 Mina Guanaco 53.35 281 P **P** **21 01 20.4 -1.7**
GO02 IAMs_20 IAMs_20 21 24 07.4
comp=Z,7µm,19.0s
VOI Vohitsoka 53.91 73 P **P** **21 01 23.8 -2.1**
VOI IAmb IAmb 21 02 22.9
comp=Z,94nm,0.9s
SALV Santo Antonio 54.34 301 *e*P **P** **21 01 31.1 +2.1**
SNDB Serra Nova Dou 55.90 308 *e*P **P** **21 01 39.1 -1.2**
RCBR Riachuelo 56.12 328 IAMs_20 IAMs_20 21 19 32.0
comp=Z,7µm,21.0s
RCBR Riachuelo 56.12 328 *e*P **P** **21 01 42.0 +0.2**
PTLB Pontes e Lacer 56.32 298 P **P** **21 01 42.7 -0.5**
PTLB IAmb IAmb 21 02 05.8
comp=Z,80nm,1.1s
PTLB Pontes e Lacer 56.32 298 *e*P **P** **21 01 45.0 +1.7**
ABPO Ambohimpanom 56.55 71 P **P** **21 01 42.2 -2.9**
ABPO IAmb IAmb 21 02 04.0
comp=Z,62nm,0.8s
ABPO Ambohimpanom 56.55 71 P **P** **21 01 42.2 -2.9**
ABPO pmax pmax
comp=Z,62nm,0.8s
ABPO MLR MLR
comp=Z,14µm,19.0s
SIV San Ignacio 56.77 295 P **P** **21 01 48.0 +1.5**
comp=Z,7.5nm,0.6s,baz=145,slow=7.5,SNR=30
SIV S **S** **21 09 36.5 -3.0**
comp=Z,0.5nm,0.5s,baz=271,slow=22,SNR=1.5
comp=Z,7.5nm,0.6s
OPO Ambohidratompo 56.91 71 P **P** **21 01 49.6 +1.9**
comp=Z,4.9nm,1.0s,baz=204,slow=12,SNR=4.4
OPO S **S** **21 09 42.7 +1.2**
comp=Z,2.0nm,0.9s,baz=201,slow=11,SNR=1.6
comp=Z,4.9nm,1.0s
SMTB Santa Maria do 57.22 313 *e*P **P** **21 01 52.0 +2.2**
HMBC Humberstone 57.53 284 IAMs_20 IAMs_20 21 24 40.8
comp=Z,5µm,20.0s
PDRB Porto dos Gac 58.58 302 *e*P **P** **21 02 01.3 +2.1**
CLDB Colider 58.82 304 *e*P **P** **21 02 02.7 +1.8**
PB16 IPOC Station P 58.96 286 IAMs_20 IAMs_20 21 27 09.5
comp=Z,6µm,20.0s
VILB Vilhena 58.99 298 P **P** **21 02 00.1 -2.0**
VILB IAmb IAmb 21 02 38.5
comp=Z,78nm,0.9s
VILB Vilhena 58.99 298 *e*P **P** **21 02 04.0 +1.9**
LPAZ La Paz 59.99 288 P **P** **21 02 06.2 -3.5**
LPAZ La Paz 59.99 288 P **P** **21 02 11.6 +1.9**
comp=Z,25nm,0.9s,baz=153,slow=5.0,SNR=45
LPAZ S **S** **21 10 18.4 -4.2**
comp=Z,0.4nm,0.5s,baz=161,slow=12,SNR=1.6
LPAZ LR LR 21 26 59.9
comp=Z,4µm,21.1s,baz=128,slow=35
comp=Z,25nm,0.9s
LPAZ La Paz 59.99 288 *e*P **P** **21 02 09.3 -0.4**
PRPB Parauapebas 60.55 312 *e*P **P** **21 02 14.0 +1.2**
NPGB Novo Progresso 62.04 306 *e*P **P** **21 02 25.0 +2.1**
TMAB Tom-Au,PA,Br 63.38 316 *e*P **P** **21 02 32.7 +0.9**
EDA Edea 63.67 22 IAMs_20 IAMs_20 21 24 48.2
comp=Z,6µm,20.0s
ITTB Itaituba 64.61 307 *e*P **P** **21 02 42.4 +2.5**
DBIC Dimbokro 64.69 5 P **P** **21 02 38.3 -2.0**
DBIC IAmb IAmb 21 03 13.2
comp=Z,41nm,1.2s
DBIC Dimbokro 64.69 5 P **P** **21 02 40.2 -0.1**
comp=Z,4.0nm,0.8s,baz=180,slow=8.7,SNR=2.6
DBIC LR LR 21 23 30.0
comp=Z,3µm,19.6s,baz=203,slow=29
comp=Z,4.0nm,0.8s
MACA Manacapuru-AM 67.84 303 *e*P **P** **21 03 01.7 +1.1**
NNA Nana 68.07 283 P **P** **21 03 00.8 -1.3**
NNA IAmb IAmb 21 03 28.7
comp=Z,106nm,1.4s
NNA Nana 68.07 283 P **P** **21 03 02.7 +0.5**
comp=Z,4.5nm,0.3s,baz=187,slow=8.1,SNR=3.8
NNA S **S** **21 12 01.5 -0.2**
comp=Z,5.1nm,0.3s,baz=175,slow=4.3,SNR=1.9
comp=Z,4.5nm,0.3s
NNA Nana 68.07 283 *i* P **P** **21 03 01.7 -0.5**
NNA pmax pmax
comp=Z,105nm,1.5s
CZSB Cruzeiro do Su 69.58 289 *e*P **P** **21 03 12.9 +1.3**
TORD Torodi Ar. Bea 71.60 11 P **P** **21 03 22.0 -1.6**
TORD IAmb IAmb 21 03 49.5
comp=Z,96nm,1.9s
TORD Torodi Ar. Bea 71.60 11 P **P** **21 03 24.4 +0.8**
comp=Z,4.2nm,0.4s,baz=183,slow=2.9,SNR=3.6
TORD LR LR 21 27 54.5
comp=Z,5µm,21.9s,baz=182,slow=30
comp=Z,4.2nm,0.4s
MDP Montagnes des 71.97 314 LR LR 21 32 27.2
comp=Z,4µm,19.7s,baz=140,slow=34
BOAV Boa Vista 72.73 305 P **P** **21 03 27.9 -2.7**
BOAV Boa Vista 72.73 305 *e*P **P** **21 03 32.0 +1.5**
BBTS Babate 72.77 353 LR LR 21 28 28.1
comp=Z,3µm,21.4s,baz=177,slow=30
WHZ Wether Hill Ro 76.31 178 IAMs_20 IAMs_20 21 32 49.4
comp=Z,5µm,20.0s
DCZ Deep Cove 76.72 177 IAMs_20 IAMs_20 21 33 12.3
comp=Z,6µm,22.0s
MLZ Mavora Lakes 76.84 178 P **P** **21 03 57.4 +3.3**
FURI Furi 77.26 49 LR LR 21 36 36.1
comp=Z,8µm,18.5s,baz=201,slow=35
COHC Cochancay 77.40 286 P **P** **21 03 53.9 -3.6**
PTLC Puerto Leguiza 77.42 291 P **P** **21 03 57.5 -0.2**
CTZ Chatham Island 77.94 189 IAMs_20 IAMs_20 21 33 56.6
comp=Z,5µm,21.0s
JCZ Jackson Bay 78.14 179 P P 21 04 07.5 +6.0
PIAT Ana Tenorio 78.15 288 P **P** **21 04 04.2 +2.0**
RPZ Rata Peaks 78.52 180 LR LR 21 37 36.4
comp=Z,6µm,19.0s,baz=174,slow=35
MACC Macarena, Meta 78.67 293 P **P** **21 04 05.9 +1.3**
NWAO Narrogin (SRO) 78.88 136 P **P** **21 04 07.3 +1.7**
comp=Z,46nm,0.7s
NWAO Narrogin (SRO) 78.88 136 IAMs_20 IAMs_20 21 32 15.8
comp=Z,4µm,22.0s
NWAO Narrogin (SRO) 78.88 136 LR LR 21 32 05.8
comp=Z,4µm,21.9s,baz=205,slow=30
NWAO Narrogin (SRO) 78.88 136 P **P** **21 04 07.3 +1.7**
FLOC Florencia 79.07 291 P **P** **21 04 11.5 +4.7**
OTAV Otavalo 79.31 288 P **P** **21 04 05.0 -3.6**
OTAV Otavalo 79.31 288 IAMs_20 IAMs_20 21 38 05.6
comp=Z,4µm,21.0s
OTAV Otavalo 79.31 288 P **P** **21 04 05.1 -3.6**
OTAV pmax pmax
comp=Z,49nm,1.2s
OTAV MLR MLR
comp=Z,4µm,21.0s
OTAV Otavalo 79.31 288 *e*P **P** **21 04 09.1 +0.5**
MUN Mundaring 79.35 135 P **P** **21 04 10.0 +1.8**
comp=Z,73nm,1.2s
MUN Mundaring 79.35 135 P **P** **21 04 09.8 +1.6**
comp=Z,72nm,1.2s
MUN Mundaring 79.35 135 P **P** **21 04 10.6 +2.4**
MUN Mundaring 79.35 135 P **P** **21 04 09.7 +1.6**
KHZ Kahutara 79.78 182 IAMs_20 IAMs_20 21 35 05.3
comp=Z,5µm,19.0s
URMC La Uribe, Meta 79.88 293 P **P** **21 04 13.2 +1.9**
THZ Tophouse 80.45 182 P **P** **21 04 16.7 +2.7**
DSZ Denniston Nort 80.48 181 P **P** **21 04 15.9 +1.7**
PRAC Prado 80.53 293 P **P** **21 04 15.1 +0.4**
BHW Baring Head 80.76 183 IAMs_20 IAMs_20 21 39 57.1
comp=Z,3µm,19.0s
CHIC Chingaza 80.77 294 P **P** **21 04 16.6 +0.2**
SNZO South Karori 80.86 183 IAMs_20 IAMs_20 21 43 53.8
comp=Z,5µm,18.0s
ORTC Ortega, Tolima 80.88 293 P **P** **21 04 18.1 +1.5**
NNZ Nelson 80.99 182 P P 21 04 25.6 +8.8
ROSC El Rosal 81.23 294 P **P** **21 04 16.3 -2.6**
ROSC El Rosal 81.23 294 P **P** **21 04 18.6 -0.3**
comp=Z,5.6nm,0.4s,baz=152,slow=5.9,SNR=3.8
ROSC S **SKSac** **21 14 36.4 -2.0**
comp=Z,5.6nm,0.3s,baz=200,slow=21,SNR=1.1
comp=Z,5.6nm,0.4s
ATD Arta Tunnel 81.34 52 LR LR 21 38 15.8
comp=Z,225nm,18.0s,baz=191,slow=34
QRZ Quartz Range 81.39 181 P **P** **21 04 22.6 +3.6**
BFZ Birch Farm 81.44 184 IAMs_20 IAMs_20 21 38 22.0
comp=Z,5µm,19.0s
MRZ Mangatainoka R 81.48 184 P **P** **21 04 16.9 -2.5**
YOTC Yotoco, Valle 81.48 292 P **P** **21 04 19.8 -0.1**
RUSC La Rusia 81.55 296 **P** **21 04 19.8 -0.8**
RUSC La Rusia 81.55 296 P **P** **21 04 19.6 -1.1**
GUY2C Guyana, Caldas 82.08 293 P **P** **21 04 24.1 +0.7**
PTBC PUERTO BERRIO, 82.78 295 P **P** **21 04 25.6 -0.9**
BKZ Black Stump Fm 82.94 185 P **P** **21 04 25.0 -2.2**
BKZ IAmb IAmb 21 04 55.0
comp=Z,64nm,1.1s
BKZ IAMs_20 IAMs_20 21 42 41.7
comp=Z,5µm,20.0s
BKZ Black Stump Fm 82.94 185 P **P** **21 04 31.1 +3.9**
CBOC Ciudad Bolivar 82.94 293 P **P** **21 04 27.5 -0.1**
NGZ Ngauruhoe 82.96 184 P P 21 04 34.9 +7.5
SDV Santo Domingo 83.02 299 P **P** **21 04 25.0 -3.0**
SDV Santo Domingo 83.02 299 LR LR 21 40 27.3
comp=Z,7µm,19.4s,baz=156,slow=35
SDV Santo Domingo 83.02 299 *e*P **P** **21 04 30.5 +2.5**
VRZ Vera Road 83.04 183 P P **21 04 29.8 +2.2**
RTZ Ruatahuna 83.47 185 IAMs_20 IAMs_20 21 36 57.7
comp=Z,5µm,21.0s
HIZ Hauiti 83.65 183 IAMs_20 IAMs_20 21 40 32.5
comp=Z,4µm,20.0s
HIZ Hauiti 83.65 183 P **P** **21 04 32.5 +1.7**
MWZ Matawai 83.72 185 P **P** **21 04 34.3 +3.1**
URZ Urewera 83.81 185 LR LR 21 37 17.6
comp=Z,3µm,21.9s,baz=168,slow=32
URZ Urewera 83.81 185 P **P** **21 04 35.1 +3.4**

HAZ Te Kaha 84.28 186 P P 21 04 36.8 +2.7
UREC San Jos de Ur 84.35 294 P P 21 04 34.0 -0.6
TOZ Tahuroa Road 84.41 184 P P 21 04 33.0 -1.7
TOZ IAmb IAmb 21 04 58.7
comp=Z,37nm,1.2s
TOZ IAMs_20 IAMs_20 21 41 45.6
comp=Z,4µm,21.0s
FORT Forrest 84.51 144 P P 21 04 32.6 -2.7
FORT IAmb IAmb 21 04 41.3
comp=Z,42nm,0.6s
OUZ Omahuta 86.97 182 IAMs_20 IAMs_20 21 39 50.4
comp=Z,4µm,20.0s
STKA Stephens Creek 87.07 156 P P 21 04 45.0 -3.0
STKA Stephens Creek 87.07 156 P P 21 04 50.0 +1.9
comp=Z,2.6nm,0.5s,baz=143,slow=5.1,SNR=4.9
STKA LR LR 21 41 28.6
comp=Z,4µm,19.2s,baz=192,slow=34
comp=Z,2.6nm,0.5s
STKA Stephens Creek 87.07 156 *i* P P 21 04 49.5 +1.5
SABA Saba 87.54 310 IAMs_20 IAMs_20 21 42 54.8
comp=Z,3µm,19.0s
SJG San Juan 89.19 307 IAMs_20 IAMs_20 21 42 02.5
comp=Z,4µm,21.0s
SJG San Juan 89.19 307 LR LR 21 42 23.2
comp=Z,3µm,20.3s,baz=137,slow=34
PSA00 Pilbara Seismi 90.11 134 P P 21 04 59.2 -3.4
PSA00 IAmb IAmb 21 05 05.5
comp=Z,54nm,1.4s
PSA00 Pilbara Seismi 90.11 134 IAmb IAmb 21 05 05.5
comp=Z,73nm,1.4s
MBWA Marble Bar 90.45 134 P P 21 05 01.1 -3.0
MBWA IAmb IAmb 21 05 07.0
comp=Z,50nm,1.1s
MDT Midelt 90.69 4 P P 21 05 05.1 +0.3
comp=Z,1.4nm,0.5s,baz=155,slow=11,SNR=1.7
MDT LR LR 21 39 48.4
comp=Z,3µm,19.9s,baz=182,slow=32
comp=Z,1.4nm,0.5s
INKA Innaminka 90.86 154 P P 21 05 02.9 -3.0
AVE Averroes 91.10 2 IAMs_20 IAMs_20 21 39 30.1
comp=Z,4µm,20.0s
JTS Las Juntas de 91.19 288 LR LR 21 46 11.9
comp=Z,425nm,21.1s,baz=140,slow=36
JTS Las Juntas de 91.19 288 *i* P P 21 05 07.9 +0.4
JTS pmax pmax
comp=Z,59nm,1.6s
SDDR Presa de Saban 92.18 303 IAMs_20 IAMs_20 21 43 20.2
comp=Z,3µm,22.0s
RAO Raoul Island 92.42 190 LR LR 21 42 09.1
comp=Z,1µm,21.1s,baz=176,slow=32
ASAR Alice Springs 92.94 147 P P 21 05 17.1 +1.4
comp=Z,6.8nm,1.0s,baz=210,slow=4.2,SNR=14
ASAR LR LR 21 41 17.8
comp=Z,4µm,21.2s,baz=189,slow=32
comp=Z,6.8nm,1.0s
GRTK Grand Turk 94.34 305 IAMs_20 IAMs_20 21 48 21.2
comp=Z,2µm,20.0s
MTDJ Mount Denham 94.38 298 IAMs_20 IAMs_20 21 45 22.7
comp=Z,3µm,20.0s
GTBY Guantanamo Bay 94.73 301 IAMs_20 IAMs_20 21 44 47.9
comp=Z,3µm,22.0s
KEST Kesra 94.82 15 LR LR 21 42 55.4
comp=Z,2µm,21.2s,baz=172,slow=32
EIL Elat 94.99 38 LR LR 21 44 40.7
comp=Z,5µm,21.9s,baz=190,slow=33
FITZ Fitzroy Crossi 95.44 137 LR LR 21 45 24.1
comp=Z,4µm,18.5s,baz=206,slow=34
PALK Pallekele 96.14 86 LR LR 21 38 27.1
comp=Z,2µm,20.6s,baz=216,slow=29
WRA Warramunga Arr 96.58 146 P P 21 05 29.1 -3.3
WRA Warramunga Arr 96.58 146 P P 21 05 33.4 +1.0
comp=Z,4.1nm,1.0s,baz=196,slow=3.3,SNR=7.3
WRA LR LR 21 44 26.6
comp=Z,3µm,20.6s,baz=197,slow=32
comp=Z,4.1nm,1.0s
RAR Rarotonga 97.22 208 LR LR 21 45 03.6
comp=Z,3µm,18.6s,baz=184,slow=33
VAE Valguarnera 97.31 19 LR LR 21 48 35.0
comp=Z,2µm,18.2s,baz=150,slow=35
IDI Anoyia 97.39 28 LR LR 21 48 00.1
comp=Z,1µm,20.0s,baz=182,slow=34
PPT Papeete 97.75 218 LR LR 21 42 44.0
comp=Z,2µm,18.6s,baz=178,slow=31
LEM Lembang 97.97 117 LR LR 21 44 55.3
comp=Z,2µm,18.7s,baz=206,slow=32
APG El Apazote 98.00 285 LR LR 21 49 30.0
comp=Z,87nm,20.6s,baz=253,slow=35
KARP Karpathos 98.21 29 IAMs_20 IAMs_20 21 52 27.7
comp=Z,3µm,20.0s
MMAI Mount Meron Ar 98.22 37 LR LR 21 49 48.7
comp=Z,3µm,18.1s,baz=195,slow=35
CEL Celeste 98.33 20 IAMs_20 IAMs_20 21 52 12.6
comp=Z,3µm,20.0s
UGM Wanagama 98.37 120 IAMs_20 IAMs_20 21 40 21.8
comp=Z,3µm,22.0s
WSAR Wadi Sarin 98.59 60 LR LR 21 48 11.3
comp=Z,24nm,20.3s,baz=222,slow=34
TIP Timpagrande 99.38 20 IAMs_20 IAMs_20 21 50 42.4
comp=Z,3µm,20.0s
JAGI Jajag, Banyuwa 99.52 123 IAMs_20 IAMs_20 21 42 48.3
comp=Z,3µm,21.0s
ONTNC Ouen Toro 99.79 176 IAMs_20 IAMs_20 21 47 34.9
comp=Z,3µm,20.0s
BKNI Bangkinang 100.92 107 IAMs_20 IAMs_20 21 43 07.8
comp=Z,4µm,20.0s
ISP Isparta 101.25 31 IAMs_20 IAMs_20 21 47 58.7
comp=Z,3µm,22.0s
BBSR BB Station 101.34 315 IAMs_20 IAMs_20 21 44 59.9
comp=Z,3µm,22.0s
061Z Ochoppi 102.52 299 IAMs_20 IAMs_20 21 51 10.3
comp=Z,3µm,21.0s
MMRI Maumere 102.80 131 IAMs_20 IAMs_20 21 45 30.3
comp=Z,3µm,21.0s
PDG Podgorica 103.00 21 IAMs_20 IAMs_20 21 50 06.1
comp=Z,3µm,21.0s
060A Indiantown 103.27 300 IAMs_20 IAMs_20 21 51 55.0
comp=Z,3µm,20.0s
HYBB Hyderabad (bro 103.50 79 *e*PKiKP PKiKP 21 10 20.8 -0.9
HYBB *e*SKSac SKSac 21 16 41.8 -1.1
HYBB *e*SKKSac SKKSac 21 17 21.8 -2.7
HYBB IVMs_BB IVMs_BB 21 45 23.6
comp=Z,944nm,22.8s
BNI Bardonecchia 103.68 12 IAMs_20 IAMs_20 21 53 38.6
comp=Z,2µm,18.0s
ANTO Ankara 103.79 32 IAMs_20 IAMs_20 21 57 42.5
comp=Z,3µm,18.0s
MSVF Nonsavu 104.17 187 IAMs_20 IAMs_20 21 53 27.7
comp=Z,3µm,20.0s
KULM Kulim 104.96 104 IAMs_20 IAMs_20 21 45 18.2
comp=Z,3µm,21.0s
KAPI Kappang 105.04 127 IAMs_20 IAMs_20 21 48 23.7
comp=Z,2µm,20.0s
656A Willston 106.25 299 IAMs_20 IAMs_20 21 55 41.1
comp=Z,3µm,18.0s
BKB Balikpapan 107.15 122 IAMs_20 IAMs_20 21 50 08.2
comp=Z,3µm,20.0s
456A Hilliard 107.16 301 IAMs_20 IAMs_20 21 56 26.1
comp=Z,2µm,20.0s
MLR Muntele Rosu 107.33 25 IAMs_20 IAMs_20 21 50 51.0
comp=Z,3µm,22.0s
257A Skidaway Islan 107.77 302 IAMs_20 IAMs_20 21 58 53.1
comp=Z,3µm,19.0s
553A Crawfordville 107.82 298 IAMs_20 IAMs_20 21 54 32.4
comp=Z,3µm,20.0s
WLF Walferdange 108.19 11 IAMs_20 IAMs_20 21 48 53.0
comp=Z,2µm,20.0s
CKRC Cesky Krumlov 108.36 16 *e*SDIF 21 18 43.6
CKRC *e*SP SP 21 20 33.4 +16
CKRC AMS AMS 21 57 20.0
comp=Z,1µm,22.2s
TIGA Tifton 108.48 300 IAMs_20 IAMs_20 21 52 18.8
comp=Z,3µm,22.0s
KHC Kasperske Hory 108.56 16 *e*PP PP 21 11 08.0 +12
KHC *e*SDIF 21 18 46.7
KHC *e*SP SP 21 20 34.0 +15
KHC AMS AMS 21 56 00.0
comp=Z,2µm,20.1s
451A Vernon 108.80 298 IAMs_20 IAMs_20 21 53 19.5
comp=Z,3µm,22.0s
Y58A Scranton 108.80 304 IAMs_20 IAMs_20 21 52 49.8
comp=Z,2µm,20.0s
ZVC Zvikov 108.94 16 AMS AMS 21 54 40.0
comp=Z,2µm,23.6s
V61A Roper 109.07 308 IAMs_20 IAMs_20 21 50 25.8
comp=Z,2µm,21.0s
352A Blakely 109.14 299 IAMs_20 IAMs_20 21 57 58.9
comp=Z,3µm,18.0s
Y57A Sumter 109.21 304 IAMs_20 IAMs_20 21 59 30.8
comp=Z,2µm,18.0s
154A Montrose 109.25 301 IAMs_20 IAMs_20 21 54 40.9
comp=Z,2µm,20.0s
W59A Clinton 109.34 306 IAMs_20 IAMs_20 21 51 40.9
comp=Z,2µm,21.0s
MILM Milestii Mici 109.34 27 *e*P Pdif 21 06 33.0 +4.7
MILM Milestii Mici 109.34 27 LRM MLR 21 53 20.0
comp=Z,90nm,18.5s
MILM Milestii Mici 109.34 27 *i* PS PS 21 20 40.0 +12
MILM Milestii Mici 109.34 27 *e*L L 21 46 16.0
PRU Pruhonice 109.53 16 AMS AMS 21 56 00.0
comp=Z,2µm,19.7s
PRA Prague 109.59 16 AMS AMS 21 51 00.0
comp=Z,2µm,22.8s
LUWI Luwuk 109.89 128 IAMs_20 IAMs_20 21 52 19.8
comp=Z,2µm,20.0s
OKC Ostrava-Krasne 109.95 19 AMS AMS 22 02 50.0
comp=Z,1µm,16.9s
HSKC Hora Svate Kat 109.98 15 AMS AMS 21 56 50.0
comp=Z,1µm,18.7s
RICC Richard 110.01 16 AMS AMS 21 51 20.0
comp=Z,1µm,18.0s
PVCC Panska Ves 110.06 16 AMS AMS 21 51 20.0
comp=Z,2µm,23.0s
GOGA Godfrey 110.08 301 IAMs_20 IAMs_20 21 56 12.0
comp=Z,2µm,21.0s
V58A Windy Hill, Pi 110.16 306 IAMs_20 IAMs_20 21 52 15.7
comp=Z,2µm,21.0s
JHNI Jhansi 110.16 74 *e*P PKiKP 21 10 38.0 +4.1
250A Grady 110.18 298 IAMs_20 IAMs_20 21 57 20.7
comp=Z,3µm,20.0s
S61A Accomac 110.31 309 IAMs_20 IAMs_20 21 50 07.5
comp=Z,2µm,21.0s
T59A Double "B" Far 110.49 307 IAMs_20 IAMs_20 21 50 56.8
comp=Z,3µm,22.0s
KIV Kislovodsk 110.52 37 *e*P Pdif 21 06 33.1 -0.7
KIV *i* 21 10 33.8
KIV *e* 21 11 09.0
KIV *e*PPP PPP 21 13 29.0
KIV *e* 21 17 12.4
KIV *e*PS PS 21 20 39.4 -0.7
KIV *e*SS SS 21 26 38.3 -0.9
KIV pmax pmax
KIV comp=Z,4.0nm,1.1s MLR MLR
comp=Z,3µm,21.0s
KIV Kislovodsk 110.52 37 P Pdif 21 06 32.8 -1.0
KMSC Kings Mountain 110.58 304 IAMs_20 IAMs_20 21 54 14.9
comp=Z,3µm,22.0s
Y52A Lilburn 110.73 301 IAMs_20 IAMs_20 21 59 48.2
comp=Z,2µm,18.0s
TOLI2 Tolitoli 110.98 125 IAMs_20 IAMs_20 21 55 13.5
comp=Z,2µm,20.0s
V55A Taylorsville 111.12 304 IAMs_20 IAMs_20 21 54 07.3
comp=Z,2µm,21.0s
U56A King 111.17 305 IAMs_20 IAMs_20 21 53 10.6
comp=Z,2µm,22.0s
T57A Hurt 111.23 306 IAMs_20 IAMs_20 21 52 09.1
comp=Z,2µm,22.0s
MAK Makhachkala 111.26 41 *c* *i*P Pdif 21 06 36.7 -0.2
MAK *e* 21 17 08.5
MAK *e*PS PS 21 20 45.2 -1.3
MAK *e*SS SS 21 26 40.8 -8.1
MAK pmax pmax
MAK comp=Z,602nm,1.2s MLR MLR
comp=Z,4µm,15.0s
AGRA Agra 111.31 73 *e*P PKiKP 21 10 40.5 +4.6
LRAL Lakeview Retre 111.39 298 IAMs_20 IAMs_20 21 55 15.1
comp=Z,3µm,22.0s
CBN Corbin Frederi 111.46 308 IAMs_20 IAMs_20 21 51 08.0
comp=Z,2µm,21.0s
R58B Mineral 111.47 308 IAMs_20 IAMs_20 21 51 23.2
comp=Z,3µm,22.0s
P61A Hammonton 111.66 311 IAMs_20 IAMs_20 21 51 41.9
comp=Z,3µm,21.0s
M65A Busby, Falmout 111.67 315 IAMs_20 IAMs_20 21 49 40.9
comp=Z,2µm,21.0s
W52A Murphy 111.69 302 IAMs_20 IAMs_20 21 59 08.7
comp=Z,3µm,19.0s
ALBI Allahabad 111.71 77 *e*P PKiKP 21 10 40.5 +3.7
S57A Dark Hollow, R 111.75 307 IAMs_20 IAMs_20 21 51 47.7
comp=Z,3µm,22.0s
JHJR Jhajjar 111.78 71 *e*P PKiKP 21 10 42.6 +5.8
Y49A Blount Mountai 111.80 299 IAMs_20 IAMs_20 21 56 31.8
comp=Z,2µm,19.0s
FAKI Fak Fak 111.85 138 IAMs_20 IAMs_20 22 03 54.8
comp=Z,3µm,19.0s
BLA Blacksburg 111.92 305 IAMs_20 IAMs_20 21 53 19.2
comp=Z,2µm,21.0s
U54A Nelsons Funny 111.95 304 IAMs_20 IAMs_20 21 52 55.2
comp=Z,2µm,22.0s
Z47A Carrollton 112.03 297 IAMs_20 IAMs_20 21 55 57.3
comp=Z,3µm,22.0s
146A Union 112.04 296 IAMs_20 IAMs_20 21 56 19.4
comp=Z,3µm,21.0s
M63A Gales Ferry 112.06 314 IAMs_20 IAMs_20 21 48 48.4
comp=Z,3µm,22.0s
L64A Middleborough 112.06 315 IAMs_20 IAMs_20 21 49 42.4
comp=Z,3µm,22.0s
JMIU JAMIA UNIVERSI 112.07 71 *e*P PKiKP 21 10 43.7 +6.3
N62A Caumsett State 112.21 313 IAMs_20 IAMs_20 21 50 56.4
comp=Z,3µm,22.0s
WSPT Westport, CT 112.36 313 IAMs_20 IAMs_20 21 50 49.3
comp=Z,3µm,22.0s
GNR GANAUR 112.40 71 *e*P PKiKP 21 10 40.6 +2.6
W50A Signal Mountai 112.41 301 IAMs_20 IAMs_20 21 56 38.7
comp=Z,2µm,21.0s
PAL Palisades 112.44 312 IAMs_20 IAMs_20 21 51 03.6
comp=Z,3µm,22.0s
ASOR Ausora 112.47 72 *e*P PKiKP 21 10 42.8 +4.7
BOK Bokaro 112.60 81 *e*P PKiKP 21 10 41.9 +3.3
WES Weston 112.63 315 IAMs_20 IAMs_20 21 50 07.4
comp=Z,3µm,22.0s
R55A Marlinton 112.69 306 IAMs_20 IAMs_20 21 52 40.5
comp=Z,3µm,22.0s
TZTN Tazewell 112.73 303 IAMs_20 IAMs_20 21 55 46.0
comp=Z,2µm,22.0s
S54A Dingess, Beckl 112.79 305 IAMs_20 IAMs_20 21 53 46.5
comp=Z,3µm,22.0s
P57A Homestead Farm 112.81 309 IAMs_20 IAMs_20 21 51 45.6
comp=Z,3µm,21.0s
HRV Adam Dziewonsk 112.83 315 IAMs_20 IAMs_20 21 50 14.6
comp=Z,3µm,22.0s
CAL Calcutta 112.86 84 *e*P PKiKP 21 10 43.8 +4.7
AK14 Malin Array Si 112.89 25 P Pdif 21 06 42.6 -1.4
Q56A Snyder Ridge, 112.93 307 IAMs_20 IAMs_20 21 52 18.8
comp=Z,2µm,22.0s
GAYA Gaya 113.08 80 *e*P PKiKP 21 10 41.0 +1.6
L61B Northampton 113.20 314 IAMs_20 IAMs_20 21 51 00.6
comp=Z,2µm,20.0s
EMMW East Machias 113.24 319 IAMs_20 IAMs_20 21 49 16.3
comp=Z,2µm,22.0s
Y45A Yeager Farm, C 113.28 297 IAMs_20 IAMs_20 21 58 20.2
comp=Z,2µm,20.0s
BRCI Bahraich 113.44 75 *e*P PKiKP 21 10 44.7 +4.7
PLAL Pickwick Lake 113.50 299 IAMs_20 IAMs_20 22 01 56.9
comp=Z,2µm,19.0s
Q54A Coxs Mills 113.58 306 IAMs_20 IAMs_20 21 53 18.1
comp=Z,3µm,21.0s
CGRH CHANDIGARH 113.58 70 *e*P PKiKP 21 10 44.1 +3.9
S51A Beattyville 113.66 303 IAMs_20 IAMs_20 21 54 10.6
comp=Z,3µm,22.0s
T50A Nancy 113.70 302 IAMs_20 IAMs_20 22 01 17.8
comp=Z,2µm,19.0s
G65A Princeton 113.71 319 IAMs_20 IAMs_20 21 49 39.6
comp=Z,2µm,19.0s
U49A Red Boiling Sp 113.71 301 IAMs_20 IAMs_20 21 56 55.0
comp=Z,2µm,22.0s
MCWV Mont Chateau 113.72 307 IAMs_20 IAMs_20 21 52 54.9
comp=Z,2µm,22.0s
SSPA Standing Stone 113.73 309 IAMs_20 IAMs_20 21 53 54.8
comp=Z,2µm,20.0s
OXF Oxford 113.74 297 IAMs_20 IAMs_20 21 57 09.6
comp=Z,3µm,22.0s
I63A Otisfield 113.79 316 IAMs_20 IAMs_20 21 52 27.0
comp=Z,2µm,22.0s
TRY Troy 113.82 313 IAMs_20 IAMs_20 21 51 32.0
comp=Z,3µm,21.0s
DDI Dehra Dun 113.88 71 *e*P PKiKP 21 10 46.3 +5.4
L59A Walton 113.90 312 IAMs_20 IAMs_20 21 51 48.1
comp=Z,3µm,22.0s
WVL Waterville 113.90 317 IAMs_20 IAMs_20 21 52 08.8
comp=Z,3µm,22.0s
I62A Tamworth 113.92 316 IAMs_20 IAMs_20 21 52 05.4
comp=Z,2µm,21.0s
J61A Chester 113.92 315 IAMs_20 IAMs_20 21 51 10.6
comp=Z,3µm,22.0s
BHK Bhakra 113.96 69 *e*P PKiKP 21 10 45.9 +4.9
SMLA Simla 114.09 70 *e*P PKiKP 21 10 44.1 +3.0
HNH Hanover 114.13 315 IAMs_20 IAMs_20 21 51 06.0
comp=Z,2µm,21.0s
Q52A Bidwell 114.18 305 IAMs_20 IAMs_20 21 54 15.1
comp=Z,2µm,21.0s
P53A Whipple 114.23 306 IAMs_20 IAMs_20 21 53 27.5
comp=Z,3µm,21.0s
JMU Jammu 114.27 67 *e*P PKiKP 21 10 45.1 +3.7
BINY Binghamton 114.28 312 IAMs_20 IAMs_20 21 52 23.2
comp=Z,3µm,21.0s
PKME Peaks-Kenny Pk 114.37 318 IAMs_20 IAMs_20 21 49 11.3
comp=Z,2µm,21.0s
O54A Avella 114.38 307 IAMs_20 IAMs_20 21 53 15.4
comp=Z,3µm,22.0s
LBNH Lisbon 114.45 315 IAMs_20 IAMs_20 21 52 20.5
comp=Z,2µm,22.0s
H62A Milan 114.45 316 IAMs_20 IAMs_20 21 51 58.5
comp=Z,2µm,22.0s
R50A Paris 114.52 303 IAMs_20 IAMs_20 21 54 36.2
comp=Z,3µm,22.0s
F64A Sherman 114.56 319 IAMs_20 IAMs_20 21 50 05.1
comp=Z,2µm,21.0s
DHRM DHARAMSHALA 114.58 68 *e*P PKiKP 21 10 46.4 +4.0
T47A Sharon Grove 114.70 301 IAMs_20 IAMs_20 21 58 07.4
comp=Z,2µm,20.0s
G62A West of Eustis 114.78 317 IAMs_20 IAMs_20 21 52 45.1
comp=Z,2µm,21.0s
JOSI Joshimath 114.83 72 *e*P PKiKP 21 10 49.4 +6.4
VT1 Waterbury 114.84 315 IAMs_20 IAMs_20 21 51 36.5
comp=Z,2µm,21.0s
SUW Suwalki 114.85 20 IAMs_20 IAMs_20 21 53 19.3
comp=Z,2µm,22.0s
R49A Shelbyville 114.90 303 IAMs_20 IAMs_20 22 02 01.4
comp=Z,2µm,19.0s
K57A Scipio Center 114.94 311 IAMs_20 IAMs_20 21 52 43.7
comp=Z,2µm,22.0s
O52A Adamsville 114.95 306 IAMs_20 IAMs_20 21 53 49.3
comp=Z,3µm,21.0s
BELO BELONIA 115.08 86 *e*P PKiKP 21 10 48.9 +5.6
N53A Lisbon 115.10 307 IAMs_20 IAMs_20 21 52 49.3
comp=Z,2µm,21.0s
CMAR Chiang Mai Arr 115.13 95 PKKPab PKKPab 21 21 24.9 +0.9
comp=Z,1.2nm,0.8s,baz=12,slow=4.4,SNR=5.5
J57A Williamstown 115.30 312 IAMs_20 IAMs_20 21 50 55.3
comp=Z,3µm,22.0s
ARIA ARARIA 115.33 81 *e*P PKPdf 21 10 40.7 -3.0
WCI Wyandotte Cave 115.35 302 IAMs_20 IAMs_20 21 55 52.5
comp=Z,2µm,22.0s
SLBS Sierra La Lagu 115.36 274 IAMs_20 IAMs_20 21 52 27.7
comp=Z,2µm,19.0s
CHTO Chiang Mai 115.42 95 IAMs_20 IAMs_20 21 53 39.0
comp=Z,2µm,20.0s
AGT Agartala 115.49 85 *e*P PKiKP 21 10 49.6 +5.5
ACSO Alum Creek Sta 115.54 305 IAMs_20 IAMs_20 21 54 43.1
comp=Z,2µm,21.0s
MIAR Mount Ida 115.76 294 IAMs_20 IAMs_20 22 00 11.2
comp=Z,2µm,20.0s
LONY Lake Ozonia 115.77 314 IAMs_20 IAMs_20 21 52 28.7
comp=Z,2µm,21.0s
ERPA Erie 115.83 309 IAMs_20 IAMs_20 21 55 21.6
comp=Z,3µm,21.0s
N51A Ashland 115.84 306 IAMs_20 IAMs_20 21 54 14.1
comp=Z,3µm,22.0s
D62A Allapoint, All 115.85 319 IAMs_20 IAMs_20 21 50 55.4
comp=Z,2µm,22.0s
P48A Milroy 115.97 303 IAMs_20 IAMs_20 22 02 55.8
comp=Z,2µm,18.0s
O49A Covington 116.09 305 IAMs_20 IAMs_20 21 55 48.7
comp=Z,3µm,22.0s
MNK Minsk 116.24 23 *i* PKP PKPdf 21 10 41.0 -3.6
comp=E,14nm,0.9s
MNK *i* PKP PKPdf 21 10 41.0 -3.6
comp=N,13nm,1.0s
MNK *i* PKP PKPdf 21 10 41.0 -3.6
comp=Z,3.0nm,0.7s,baz=201
MNK *i* PP PP 21 11 45.6 -5.5
MNK *i* PPP PPP 21 14 12.8
MNK *i* SKS SKSdf 21 17 53.1 -2.8
MNK *i* PS PS 21 21 27.8 -4.1
MNK *i* SS SS 21 27 49.8 -4.6
MNK *i* SSS SSS 21 32 11.7
MNK *i* LRM MLR 21 58 29.6
comp=Z,3µm,22.8s
MNK *i* LRM MLR 21 58 39.1
comp=E,2µm,22.5s
MNK Minsk 116.24 23 *i* PKIKP PKPdf 21 10 40.9 -3.6
MNK *i* 21 17 53.1
MNK *i* PS PKKPdf 21 21 27.7 -12
MNK *i* SS SS 21 27 49.8 -4.6
MNK *i* SSS SSS 21 32 11.7
MNK pmax pmax
comp=E,14nm,0.9s
MNK pmax pmax
comp=N,13nm,1.0s
MNK pmax pmax
comp=Z,3.0nm,0.7s
MNK MLR MLR
comp=N,1µm,22.0s
MNK MLR MLR
comp=Z,3µm,23.0s
MNK MLR MLR
comp=E,2µm,22.0s
S44A Carbondale 116.27 299 IAMs_20 IAMs_20 22 02 10.9
comp=Z,2µm,21.0s
JPG JALPAIGURI 116.31 82 *e*P PKiKP 21 10 50.7 +5.1
NACGM Naroch 116.39 22 *e*PKP PKPdf 21 10 44.2 -0.6
comp=Z,14nm,0.8s,baz=201
O48B Farmland 116.50 304 IAMs_20 IAMs_20 21 54 46.8
comp=Z,2µm,22.0s
M50A Fremont 116.53 306 IAMs_20 IAMs_20 21 54 47.2
comp=Z,2µm,22.0s
ALCI Alchi Leh 116.60 68 *e*P PKiKP 21 10 51.4 +5.0
N49A Columbus Grove 116.62 305 IAMs_20 IAMs_20 21 55 26.9
comp=Z,3µm,22.0s
P46A Rosedale 116.89 302 IAMs_20 IAMs_20 21 56 12.3
comp=Z,2µm,21.0s
SILR SILCHAR 117.04 86 *e*P PKiKP 21 10 50.0 +3.0
Q44A Meyer Farm, Va 117.14 300 IAMs_20 IAMs_20 22 04 18.9
comp=Z,2µm,19.0s
SHL Shillong 117.19 85 *e*P PKiKP 21 10 53.4 +5.9
SFIN Lafayette 117.46 303 IAMs_20 IAMs_20 22 02 32.3
comp=Z,2µm,19.0s
K50A Casco 117.47 307 IAMs_20 IAMs_20 21 56 24.2
comp=Z,2µm,22.0s
IMP Imphal 117.69 87 *e*P PKiKP 21 10 53.9 +5.5
TUL3 Leonard 117.93 293 IAMs_20 IAMs_20 22 01 30.8
comp=Z,2µm,20.0s
P43A Skaggs, Pawnee 117.96 301 IAMs_20 IAMs_20 21 57 57.7
comp=Z,3µm,21.0s
R40A Maddies Statio 118.15 298 IAMs_20 IAMs_20 21 59 45.2
comp=Z,2µm,21.0s
KONO Kongsberg 118.39 11 IAMs_20 IAMs_20 21 56 51.7
comp=Z,2µm,20.0s
L46A Eue Claire 118.43 304 IAMs_20 IAMs_20 21 57 08.8
comp=Z,2µm,22.0s
KOHI KOHIMA 118.49 87 *e*P PKiKP 21 10 56.4 +6.4
OK052 Battle Ridge R 118.49 293 IAMs_20 IAMs_20 22 01 45.6
comp=Z,2µm,22.0s
TEZP TEZPUR 118.52 85 *e*P PKiKP 21 10 55.3 +5.4
OK029 Liberty Lake 118.66 292 IAMs_20 IAMs_20 22 02 28.0
comp=Z,2µm,20.0s
XMAS Kiritimati 118.70 217 IAMs_20 IAMs_20 21 49 53.1
comp=Z,2µm,20.0s
M44A Midewin, Midew 118.70 303 IAMs_20 IAMs_20 22 01 28.1
comp=Z,2µm,21.0s
J47A Sunmer 118.78 306 IAMs_20 IAMs_20 21 55 41.0
comp=Z,3µm,22.0s
TAWA Tawang 118.81 84 *e*P PKiKP 21 10 56.9 +6.0
OK048 Pawnee Station 118.90 293 IAMs_20 IAMs_20 22 02 04.3
comp=Z,2µm,21.0s
HQIL Hanson Quary C 118.95 303 IAMs_20 IAMs_20 22 03 31.5
comp=Z,2µm,20.0s
P40A Paris 119.04 299 IAMs_20 IAMs_20 22 00 04.4
comp=Z,2µm,21.0s
T35A Sooner Cattle 119.08 294 IAMs_20 IAMs_20 21 59 19.2
comp=Z,2µm,22.0s
L44A Lake County Fo 119.28 303 IAMs_20 IAMs_20 22 00 53.3
comp=Z,2µm,22.0s
JORH JORHAT 119.39 86 *e*P PKiKP 21 10 56.8 +5.2
MNTX Cornudas Mount 119.40 283 IAMs_20 IAMs_20 22 00 23.4
comp=Z,2µm,20.0s
N41A Harden Midland 119.43 300 IAMs_20 IAMs_20 21 58 42.5
comp=Z,2µm,20.0s
ITAN ITANAGAR 119.43 85 *e*P PKiKP 21 10 59.6 +7.9
ZIRO ZIRO 119.81 85 *e*P PKiKP 21 10 58.1 +5.5

P38A Dawn 119.81 298 IAMs_20 IAMs_20 22 00 00.1
comp=Z,2µm,22.0s
OK038 West end E0370 119.83 292 IAMs_20 IAMs_20 22 03 02.1
comp=Z,2µm,20.0s
K43A Burlington 119.89 303 IAMs_20 IAMs_20 22 04 00.3
comp=Z,2µm,19.0s
L42A Oliver, Polo 119.92 302 IAMs_20 IAMs_20 21 57 38.4
comp=Z,2µm,22.0s
AMTX Amarillo 120.03 288 **PKPdf 21 10 50.8 -1.9**
I45A Fountain 120.03 306 IAMs_20 IAMs_20 21 56 21.1
comp=Z,2µm,22.0s
EPT El Paso 120.04 283 IAMs_20 IAMs_20 22 00 10.4
comp=Z,3µm,20.0s
SLVN Son La 120.11 98 IAMs_20 IAMs_20 21 54 57.2
comp=Z,2µm,20.0s
LSA Lhasa 120.12 82 IAMs_20 IAMs_20 21 55 18.3
comp=Z,3µm,19.0s
KSH Kashi 120.24 63 PKP **PKPdf 21 10 50.7 -2.2**
KSH SKS **SKSdf 21 18 01.5 -3.2**
KSH SS **SKKSdf 21 28 39.2 -3.9**
KSH LR LR
comp=Z,2µm,21.3s
KSH LR LR
comp=Z,2µm,21.6s
KSH LR LR
comp=Z,4µm,23.4s
TNCH TengChong 120.28 91 *e*Pdif **Pdif 21 07 26.4 +8.6**
TNCH PP PP 21 12 31.3 +12
TNCH TengChong 120.28 91 SKS **SKSdf 21 18 06.8 +1.2**
TNCH TengChong 120.28 91 SS SS 21 28 56.0 +8.5
TNCH LR LR
comp=N,1µm,19.8s
TNCH LR LR
comp=E,460nm,21.7s
TNCH LR LR
comp=Z,2µm,21.1s
DIBR DIBRUGARH 120.32 86 *e*P **PKiKP 21 11 00.0 +6.7**
N38A Joes South For 120.59 299 IAMs_20 IAMs_20 22 00 48.5
comp=Z,2µm,22.0s
L40A Anamosa 120.67 301 IAMs_20 IAMs_20 21 58 29.4
comp=Z,3µm,21.0s
LKP Lekhapani 120.71 87 *e*P **PKiKP 21 11 00.4 +6.2**
KSU1 Kansas State U 120.86 295 IAMs_20 IAMs_20 22 01 13.0
comp=Z,2µm,22.0s
JFWS Jewell Farm 120.91 302 IAMs_20 IAMs_20 21 58 38.4
comp=Z,2µm,22.0s
H43A Windswept, Lux 121.05 305 IAMs_20 IAMs_20 21 57 26.9
comp=Z,2µm,20.0s
I42A Draeger Farm, 121.09 304 IAMs_20 IAMs_20 22 01 23.1
comp=Z,2µm,22.0s
QIZ Qiongzhong 121.29 105 PKP **PKPdf 21 10 54.3 -1.1**
QIZ PP **PP 21 12 25.1 -1.1**
QIZ SS SS 21 29 01.4 +1.5
QIZ LR LR
comp=Z,2µm,22.8s
QIZ LR LR
comp=Z,2µm,22.6s
QIZ LR LR
comp=Z,4µm,25.9s
SCIA State Center 121.46 300 IAMs_20 IAMs_20 22 00 17.4
comp=Z,3µm,22.0s
N35A Tabor 121.78 297 IAMs_20 IAMs_20 22 01 11.2
comp=Z,3µm,22.0s
I40A Norwalk 121.84 303 IAMs_20 IAMs_20 22 03 11.2
comp=Z,2µm,22.0s
AAK Ala-Archa 122.00 60 *i* PKIKP **PKPdf 21 10 55.4 -0.9**
F42A Maple Grove Fa 122.22 306 IAMs_20 IAMs_20 21 57 23.0
comp=Z,3µm,22.0s
ANMO Albuquerque 122.51 285 IAMs_20 IAMs_20 22 02 21.6
comp=Z,2µm,20.0s
G40A Rib Lake 122.74 304 IAMs_20 IAMs_20 22 02 09.8
comp=Z,2µm,22.0s
L34A Svendsen Farm, 122.98 297 IAMs_20 IAMs_20 22 01 36.1
comp=Z,3µm,22.0s
I37A Lemond, Waseca 123.19 301 IAMs_20 IAMs_20 21 59 30.1
comp=Z,2µm,22.0s
BGNE Belgrade 123.39 296 IAMs_20 IAMs_20 22 03 02.1
comp=Z,2µm,22.0s
KSCO Kaye Shetlock' 123.73 291 IAMs_20 IAMs_20 22 02 23.3
comp=Z,2µm,21.0s
E38A The Farm, Brul 124.37 304 IAMs_20 IAMs_20 22 01 46.0
comp=Z,2µm,22.0s
ECSD EROS Data Cent 124.46 299 IAMs_20 IAMs_20 22 06 27.7
comp=Z,2µm,20.0s
KLMR Klimovskoe 124.63 27 *e*PKIKP **PKPdf 21 10 59.6 -0.8**
KLMR *e* 21 12 46.5
KLMR MLR MLR
comp=Z,2µm,18.0s
MVCO Mesa Verde 125.31 285 IAMs_20 IAMs_20 22 08 19.3
comp=Z,2µm,20.0s
EYMN Ely 125.38 305 IAMs_20 IAMs_20 21 59 01.4
comp=Z,2µm,20.0s
GYA Guiyang 125.74 97 ⇓PKP **PKiKP 21 11 05.2 +0.9**
GYA PP **PP 21 13 02.4 +6.0**
GYA SS SS 21 29 49.6 -7.0
GYA AMB AMB
comp=Z,220nm,12.3s
GYA LR LR
comp=Z,1µm,18.9s
GYA LR LR
comp=Z,920nm,18.2s
GYA LR LR
comp=Z,2µm,16.2s
ISCO Idaho Springs 125.82 289 IAMs_20 IAMs_20 22 03 19.8
comp=Z,2µm,22.0s
F33A 5 Mile Ranch, 125.91 300 IAMs_20 IAMs_20 22 01 59.0
comp=Z,1µm,20.0s
SUSD Miller 126.09 298 IAMs_20 IAMs_20 22 03 47.3
comp=Z,2µm,22.0s
GOMU GeErMu 127.11 80 PKP **PKPdf 21 11 06.8 +0.3**
GOMU AMB AMB
comp=Z,220nm,6.5s
GOMU LR LR
comp=Z,13µm,16.7s
GOMU LR LR
comp=Z,8µm,17.2s
GOMU LR LR
comp=Z,2µm,19.1s
O20A White River Ci 127.39 288 IAMs_20 IAMs_20 22 02 25.6
comp=Z,2µm,21.0s
AGMN Agassiz Nation 127.56 303 IAMs_20 IAMs_20 22 01 23.5
comp=Z,2µm,22.0s
CD2 Chengdu 127.74 91 PKP **PKPdf 21 11 06.7 -0.8**
CD2 PP **PP 21 13 08.9 -0.7**
CD2 AMB AMB
comp=Z,350nm,6.3s
CD2 LR LR
comp=Z,5µm,32.0s
CD2 LR LR
comp=Z,3µm,26.0s
BORK Borovoye 128.18 49 *i* PKIKP **PKPdf 21 11 03.5 -4.0**
BVAR Borovoye Array 128.20 49 PKP **PKiKP 21 11 08.8 +0.7**
comp=Z,1.9nm,0.7s,baz=222,slow=1.9,SNR=6.4
E28A Huff 128.49 298 IAMs_20 IAMs_20 22 04 59.6
comp=Z,2µm,22.0s
MAKZ Makanchi 128.63 62 IAMs_20 IAMs_20 22 12 11.1
comp=Z,2µm,19.0s
MK31 Makanchi Array 128.77 62 *i* PKIKP **PKPdf 21 11 08.3 -0.6**
MKAR Makanchi Array 128.77 62 **PKPdf 21 11 06.7 -2.2**
MKAR Makanchi Array 128.77 62 PKP **PKPdf 21 11 09.3 +0.4**
comp=Z,0.8nm,0.8s,baz=247,slow=3.0,SNR=3.8
MKAR Makanchi Array 128.77 62 PKIKP **PKPdf 21 11 06.7 -2.2**
MDND Maddock 128.92 300 IAMs_20 IAMs_20 22 02 51.1
comp=Z,2µm,20.0s
WMQ Urumqi 129.19 68 *e*PKP **PKPdf 21 11 09.7 -0.1**
WMQ LR LR
comp=Z,2µm,17.1s
WMQ LR LR
comp=Z,2µm,19.3s
WMQ LR LR
comp=Z,1µm,19.3s
LVZ Lovozero 129.81 20 IAMs_20 IAMs_20 22 04 12.9
comp=Z,2µm,22.0s
ARCES ARCESS Array B 129.82 15 PKP **PKPdf 21 11 10.2 0.0**
comp=Z,3.4nm,0.8s,baz=204,slow=2.0,SNR=3.7
KURK Kurchatov 129.96 56 *i* PKIKP **PKPdf 21 11 09.3 -1.7**
BW06 Boulder Array 130.01 289 IAMs_20 IAMs_20 22 03 56.5
comp=Z,2µm,21.0s
TWG Pinlang 130.10 113 IAMs_20 IAMs_20 22 02 31.4
comp=Z,2µm,20.0s
HWUT Hardware Ranch 130.17 286 IAMs_20 IAMs_20 22 05 54.1
comp=Z,2µm,21.0s
KEV Kevo 130.24 16 IAMs_20 IAMs_20 22 05 11.1
comp=Z,2µm,22.0s
PKD Bear Valley Ra 130.63 275 IAMs_20 IAMs_20 22 00 57.4
comp=Z,2µm,20.0s
YULB Yu-li 130.69 113 IAMs_20 IAMs_20 22 01 25.0
comp=Z,2µm,22.0s
AHID Auburn Hatcher 130.78 288 IAMs_20 IAMs_20 22 07 51.2
comp=Z,1µm,19.0s
SSLB Suanglung 130.86 112 IAMs_20 IAMs_20 22 08 10.4
comp=Z,2µm,18.0s
HULI Fort Hunter Li 131.06 274 IAMs_20 IAMs_20 22 10 45.7
comp=Z,1µm,19.0s
LOHW Long Hollow 131.15 289 IAMs_20 IAMs_20 22 08 18.7
comp=Z,1µm,19.0s
NVAR Mina Array Bea 131.31 279 PKhKP PKPpre 21 11 09.3
comp=Z,0.3nm,0.5s,baz=68,slow=3.9,SNR=1.8
NVAR PKP pPKPdf 21 11 16.6 +0.4
comp=Z,0.7nm,0.6s,baz=124,slow=2.2,SNR=3.8
NVAR SKPbc **SKPab 21 14 40.4 +1.0**
comp=Z,1.3nm,0.8s,baz=116,slow=2.2,SNR=4.0
MOOW Moose Ponds 131.32 289 IAMs_20 IAMs_20 22 08 23.2
comp=Z,2µm,19.0s
ELK Elko 131.43 283 IAMs_20 IAMs_20 22 08 23.6
comp=Z,1µm,20.0s
SAQQ Saqqaq 131.43 342 *i* P **PKiKP 21 11 21.4 +7.3**
NACB Ninganchiao 131.50 113 IAMs_20 IAMs_20 22 02 18.3
comp=Z,2µm,21.0s
DGMT Dagmar 131.50 298 IAMs_20 IAMs_20 22 06 42.7
comp=Z,3µm,22.0s
FLWY Flagg Ranch 131.53 289 IAMs_20 IAMs_20 22 08 47.9
comp=Z,2µm,18.0s
RLMT Red Lodge 131.57 291 IAMs_20 IAMs_20 22 08 41.9
comp=Z,2µm,20.0s
LZH Lanzhou 131.77 87 PKP **PKiKP 21 11 19.6 +3.5**
LZH PKS 21 14 51.3
LZH AMB AMB
comp=Z,330nm,16.2s
LZH LR LR
comp=Z,1µm,17.5s
LZH LR LR
comp=Z,1µm,16.2s
LZH LR LR
comp=Z,2µm,17.1s
YHNB Yeheng 131.80 112 IAMs_20 IAMs_20 22 01 57.7
comp=Z,2µm,21.0s
FORD Fort Ord Natur 131.85 274 IAMs_20 IAMs_20 21 58 58.6
comp=Z,1µm,21.0s
GTA Gaotai 132.13 81 PKP **PKiKP 21 11 18.1 +1.4**
GTA PKS 21 14 52.2
GTA AMB AMB
comp=Z,360nm,10.0s
GTA LR LR
comp=Z,1µm,24.9s
GTA LR LR
comp=Z,1µm,24.9s
GTA LR LR
comp=Z,3µm,24.7s
BOZ Bozeman (W) 133.08 290 IAMs_20 IAMs_20 22 09 45.7
comp=Z,2µm,19.0s
DGZ Jazzator, Alta 133.25 62 *i* PKIKP **PKPdf 21 11 17.0 -0.5**
DLMT Dillon 133.40 289 IAMs_20 IAMs_20 22 10 18.1
comp=Z,2µm,21.0s
MFID Camas Ranch 133.66 285 IAMs_20 IAMs_20 22 12 21.4
comp=Z,1µm,20.0s
WVOR Wild Horse Val 134.41 282 IAMs_20 IAMs_20 22 13 19.6
comp=Z,2µm,19.0s
DAG Danmarks Havn 134.78 357 *i* P **PKiKP 21 11 26.5 +5.8**
FFC Flin Flon 134.81 305 IAMs_20 IAMs_20 22 04 05.3
comp=Z,3µm,22.0s
PLID Pearl Lake 134.92 287 IAMs_20 IAMs_20 22 08 21.8
comp=Z,2µm,21.0s
ZALV Zalesovo Beam 134.94 56 PKP **PKiKP 21 11 24.2 +2.5**
comp=Z,0.4nm,0.4s,baz=197,slow=4.5,SNR=1.9
O02D Mt. Diablo Mer 134.96 277 IAMs_20 IAMs_20 22 13 10.8
comp=Z,1µm,20.0s
MSO Missoula 135.09 290 IAMs_20 IAMs_20 22 10 15.9
comp=Z,2µm,19.0s
LYN LuoYang 135.18 96 PKP **PKiKP 21 11 30.5 +7.6**
LYN PP PP 21 14 07.7 +10
LYN PKS 21 15 03.5
BMO Blue Mountains 135.42 285 IAMs_20 IAMs_20 22 11 31.2
comp=Z,1µm,20.0s
KMRM Mail Ridge 135.47 276 IAMs_20 IAMs_20 22 14 55.2
comp=Z,2µm,20.0s
KHBM Hayfork Bally 135.53 277 IAMs_20 IAMs_20 22 01 40.0
comp=Z,1µm,19.0s
NJ2 Nanjing 136.56 104 *e*PKP **PKPdf 21 11 23.6 -0.4**
NJ2 PP **PP 21 14 12.5 +6.4**
NJ2 AMB AMB
comp=Z,330nm,4.5s
NJ2 LR LR
comp=Z,1µm,21.8s
NJ2 LR LR
comp=Z,2µm,19.9s
NJ2 LR LR
comp=Z,3µm,19.9s
G08A Pilot Rock 136.57 285 **PKPdf 21 11 21.4 -2.4**
KSXB Camp Six Broad 136.72 277 IAMs_20 IAMs_20 22 09 40.3
comp=Z,2µm,22.0s
SSE Sheshan 136.99 107 PKP **PKiKP 21 11 31.8 +5.2**
SSE PP **PP 21 14 16.1 +7.3**
HAWA Hanford 137.62 286 IAMs_20 IAMs_20 22 10 13.2
comp=Z,2µm,21.0s
NEW Newport 137.65 289 IAMs_20 IAMs_20 22 11 43.6
comp=Z,1µm,21.0s
NEEM North Greenlan 137.78 347 *i* P **PKiKP 21 11 29.1 +1.8**
BTO Baotou 138.38 88 *e*PKP **PKPdf 21 11 23.1 -4.1**
BTO PP **PP 21 14 17.8 +0.1**
BTO SS SS 21 32 24.6 -6.0
BTO AMB AMB
comp=Z,170nm,5.1s
BTO LR LR
comp=Z,4µm,18.9s
BTO LR LR
comp=Z,3µm,20.5s
BTO LR LR
comp=Z,5µm,18.4s
HNS HongShan 138.51 95 ⇑PKP **PKiKP 21 11 28.9 -0.6**
HNS SS SS 21 32 36.1 +4.2
HNS AMB AMB
comp=Z,430nm,6.9s
HNS LR LR
comp=Z,410nm,20.0s
HNS LR LR
comp=Z,1µm,19.7s
HNS LR LR
comp=Z,2µm,24.5s
TIA Tai'an 138.89 98 PKP **PKiKP 21 11 32.5 +2.1**
TIA PP **PP 21 14 27.8 +7.1**
TIA AMB AMB
comp=Z,430nm,6.1s
TIA LR LR
comp=Z,2µm,21.6s
TIA LR LR
comp=Z,560nm,22.6s
TIA LR LR
comp=Z,3µm,21.2s
HHC Hu-ho-hao-te 139.37 89 *e*PKP **PKPdf 21 11 25.5 -3.6**
HHC AMB AMB
comp=Z,800nm,9.3s
HHC LR LR
comp=Z,2µm,19.3s
HHC LR LR
comp=Z,540nm,21.9s
HHC LR LR
comp=Z,2µm,19.1s
NOR Nord 139.56 358 *i* P **PKiKP 21 11 34.1 +3.6**
BJT Baijiatuau 141.21 93 IAMs_20 IAMs_20 22 15 25.6
comp=Z,2µm,19.0s
SONM Songino Array 141.40 77 PKP **PKPdf 21 11 33.2 +0.7**
comp=Z,1.0nm,0.7s,baz=200,slow=2.9,SNR=4.2
ZAK Zakamensk 141.42 71 *e*PKIKP **PKPdf 21 11 31.0 -1.4**
ZAK pmax pmax
comp=Z,21nm,2.0s
ULN Ulaanbaatar 141.76 77 *i* PKIKP **PKPdf 21 11 31.0 -2.2**
DL2 Dalian 143.28 100 PKP **PKiKP 21 11 43.2 +4.0**
DL2 PP PP 21 14 55.9 +8.5
RES Resolute Bay 143.74 333 PKPbc 21 11 33.5 +0.1
RES Resolute Bay 143.74 333 PKP **PKPdf 21 11 35.2 -0.5**
comp=Z,0.6nm,0.5s,baz=61,slow=4.5,SNR=16
XLT XiLinHaoTe 143.89 89 *e*PKP PKPab 21 11 33.6 -0.6
XLT LR LR
comp=Z,110nm,21.5s
XLT LR LR
comp=Z,850nm,21.8s
XLT LR LR
comp=Z,1µm,18.7s
NRIK Noril'sk 144.59 37 **PKPab 21 11 36.0 +0.1**
NRIK Noril'sk 144.59 37 PKP **PKPdf 21 11 37.2 -0.1**
comp=Z,7.5nm,0.7s,baz=229,slow=1.1,SNR=12
NRIK Noril'sk 144.59 37 PKIKP **PKPab 21 11 36.1 +0.1**
YKA Yellowknife Ar 144.66 309 **PKPab 21 11 35.1 -1.3**
YKA Yellowknife Ar 144.66 309 PKP PKPbc 21 11 37.1 +0.6
comp=Z,11nm,1.0s,baz=115,slow=2.6,SNR=9.2
YKAW3 Yellowknife Wh 144.69 309 **PKPab 21 11 35.6 -0.8**
KSRS Korea Array 145.42 108 PKPbc **PKPab 21 11 41.3 +1.4**
comp=Z,13nm,1.0s,baz=205,slow=2.7,SNR=33
BBB Bella Bella 145.62 287 PKPbc **PKPab 21 11 40.8 +0.6**
comp=Z,7.7nm,1.0s,baz=114,slow=2.7,SNR=5.4
SNY Shenyang 146.42 98 ⇓PKPbc **PKiKP 21 11 45.6 0.0**
SNY PP **PP 21 15 12.4 +6.2**
SNY AMB AMB
comp=Z,480nm,11.8s
SNY LR LR
comp=Z,1µm,22.7s
SNY LR LR
comp=Z,1µm,21.8s
SNY LR LR
comp=Z,3µm,22.4s
CIT Chita 147.61 76 *e*PKP2 **PKPbc 21 11 46.0 +0.2**
CIT pmax pmax
comp=Z,323nm,3.2s
INU Inuyama 148.13 121 IAMs_20 IAMs_20 22 14 06.2
comp=Z,2µm,22.0s
JGF Kuroka 148.49 121 PKPdf **PKPdf 21 11 42.0 -3.0**
JGF **PKPbc 21 11 49.5 +0.8**
U35K Hyder 148.55 292 IAMs_20 IAMs_20 22 17 59.9
comp=Z,2µm,20.0s
CN2 Changchun 148.78 97 *e*PKPbc **PKPdf 21 11 46.5 +1.3**
CN2 PP **PP 21 15 26.7 +6.7**
CN2 SKKS 21 22 09.1
CN2 AMB AMB
comp=Z,200nm,6.5s
CN2 LR LR
comp=Z,1µm,19.6s
CN2 LR LR
comp=Z,1µm,19.6s
CN2 LR LR
comp=Z,2µm,22.6s
HIA Hailar 149.26 84 PKPdf **PKPdf 21 11 42.7 -3.1**
HIA **PKPbc 21 11 50.3 +0.2**
HIA Hailar 149.26 84 PKHKP PKPpre 21 11 42.7
HIA 21 11 50.3
HIA MLR MLR
comp=Z,3µm,21.0s
HILR Hailar Array B 149.44 84 PKPbc **PKPbc 21 11 51.0 +0.4**
comp=Z,10nm,0.8s,baz=172,slow=4.4,SNR=8.5
MAJO Matsushiro 149.65 121 **PKiKP 21 11 52.4 -0.1**
MAJO Matsushiro 149.65 121 IAMs_20 IAMs_20 22 16 52.5
comp=Z,1µm,22.0s
MAJO Matsushiro 149.65 121 PKP2 **PKiKP 21 11 52.4 -0.1**
MAJO MLR MLR
comp=Z,1µm,22.0s
MJAR Matsushiro Arr 149.65 121 PKPdf **PKPdf 21 11 43.2 -3.6**
MJAR **PKiKP 21 11 52.4 -0.1**
MJAR Matsushiro Arr 149.65 121 PKPbc **PKPbc 21 11 50.9 -0.6**
comp=Z,12nm,1.1s,baz=177,slow=2.1,SNR=20
MJAR Matsushiro Arr 149.65 121 PKIKP **PKPdf 21 11 43.2 -3.6**
MJAR 21 11 52.4
DLBC Dease Lake 149.70 296 PKPbc **PKiKP 21 11 52.3 +0.4**
comp=Z,4.8nm,0.8s,baz=83,slow=3.3,SNR=8.0
WRAK Wrangell Islan 149.93 292 IAMs_20 IAMs_20 22 18 16.5
comp=Z,2µm,21.0s
U33K Whale Pass 150.17 291 IAMs_20 IAMs_20 22 19 12.7
comp=Z,1µm,20.0s
R33M Jennings River 150.54 298 IAMs_20 IAMs_20 22 24 31.1
comp=Z,2µm,21.0s
BOD Bodaibo 150.70 66 *e*PKIKP **PKiKP 21 11 54.1 +0.2**
BOD pmax pmax
comp=Z,67nm,1.4s
Q32M Nakina River 150.99 296 IAMs_20 IAMs_20 22 17 60.0
comp=Z,2µm,20.0s
BNX BinXian 151.12 96 ⇓PKPbc **PKPdf 21 11 44.9 -3.9**
BNX pPKP **sPKPdf 21 11 51.7 +0.5**
BNX SS SS 21 34 53.1 -3.0
BNX AMB AMB
comp=Z,290nm,7.2s
BNX LR LR
comp=Z,1µm,21.1s
BNX LR LR
comp=Z,1µm,20.1s
BNX LR LR
comp=Z,2µm,21.2s
A36M Sachs Harbour 151.38 324 **PKPbc 21 11 53.4 -1.0**
MDJ Mudanjiang 151.51 100 **PKPbc 21 11 55.1 -0.5**
P33M Teslin, Yukon 151.72 298 **PKPbc 21 11 54.6 -1.1**
P32M Atlin 151.91 297 IAMs_20 IAMs_20 22 28 37.4
comp=Z,2µm,21.0s
BESE Bessie Mountai 152.07 294 IAMs_20 IAMs_20 22 15 23.0
comp=Z,2µm,22.0s
N32M Quiet Lake 152.16 300 IAMs_20 IAMs_20 22 17 15.7
comp=Z,1µm,20.0s
USRK Ussuriysk Ar. 152.47 103 PKP **PKPdf 21 11 50.4 -0.5**
comp=Z,1.8nm,0.7s,baz=222,slow=1.9,SNR=2.1
USRK PKPbc **PKiKP 21 11 58.7 +0.7**
comp=Z,5.0nm,0.7s,baz=186,slow=1.4,SNR=5.8
WHY Whitehorse 152.83 299 **PKPdf 21 11 48.1 -2.9**
M31M Drury Creek, Y 153.08 302 IAMs_20 IAMs_20 22 25 23.8
comp=Z,2µm,20.0s
O30N Mendenhall 153.43 298 IAMs_20 IAMs_20 22 14 13.4
comp=Z,1µm,21.0s
N31M Braeburn, Yuko 153.50 300 IAMs_20 IAMs_20 22 18 59.2
comp=Z,2µm,22.0s
P29M Windy Craggy 153.84 295 IAMs_20 IAMs_20 22 17 08.6
comp=Z,2µm,22.0s
INK Inuvik 153.87 316 **PKPdf 21 11 49.1 -3.0**
INK Inuvik 153.87 316 PKP **PKPdf 21 11 53.2 +1.1**
comp=Z,2.4nm,1.1s,baz=90,slow=3.0,SNR=2.0
INK PKPbc **PKiKP 21 12 00.5 +0.4**
comp=Z,3.4nm,0.7s,baz=54,slow=5.7,SNR=5.7
INK Inuvik 153.87 316 PKIKP **PKPdf 21 11 49.1 -3.0**
HEH HeiHe 153.89 89 PKPbc **PKiKP 21 12 01.2 +0.4**
HEH PP PP 21 15 38.2 -11
N30M Aishikik Lake 154.10 300 IAMs_20 IAMs_20 22 36 59.0
comp=Z,2µm,22.0s
O29M Mount Kennedy 154.46 297 IAMs_20 IAMs_20 22 27 24.7
comp=Z,2µm,20.0s
G30M tAoh Zraii Nji 154.78 312 IAMs_20 IAMs_20 22 18 58.5
comp=Z,2µm,22.0s
BCPM Bancas Point 154.85 295 IAMs_20 IAMs_20 22 32 13.4
comp=Z,2µm,21.0s
L29M L29M 154.98 303 IAMs_20 IAMs_20 22 16 29.8
comp=Z,2µm,21.0s
M29M Somme Creek 154.98 301 **PKPdf 21 11 51.1 -2.9**
PCA Pinnacle 155.20 296 IAMs_20 IAMs_20 22 14 48.3
comp=Z,2µm,22.0s
O28M Mount Upton 155.36 297 IAMs_20 IAMs_20 22 19 24.5
comp=Z,2µm,22.0s
G29M Pine Creek 155.48 312 IAMs_20 IAMs_20 22 36 30.0
comp=Z,2µm,22.0s
H29M Whitestone 155.56 310 IAMs_20 IAMs_20 22 17 56.3
comp=Z,2µm,21.0s
ZEA Zeya 155.61 82 *i* PKP2 **PKPab 21 12 17.4 -3.9**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA pmax pmax
comp=Z,300nm,11.2s
LOGN Logan Glacier 155.75 297 IAMs_20 IAMs_20 22 25 45.0
comp=Z,2µm,21.0s
CTGM Chitina Glacie 155.95 297 IAMs_20 IAMs_20 22 34 18.1
comp=Z,1µm,22.0s
E28M Babbage River 156.10 316 IAMs_20 IAMs_20 22 14 55.0
comp=Z,2µm,22.0s
F28M Old Crow 156.22 314 **PKPdf 21 11 52.5 -2.9**
ISLE Juniper Island 156.33 296 IAMs_20 IAMs_20 22 34 04.4
comp=Z,2µm,22.0s
D27M Malcolm River 156.59 318 IAMs_20 IAMs_20 22 26 21.4
comp=Z,2µm,22.0s
TGL Tana Glacier 156.60 296 IAMs_20 IAMs_20 22 18 17.5
comp=Z,2µm,20.0s
H27K Steamboat Moun 156.84 310 IAMs_20 IAMs_20 22 18 53.1
comp=Z,1µm,19.0s
MCARA McCarthy VSAT 156.84 298 IAMs_20 IAMs_20 22 21 01.7
comp=Z,2µm,21.0s
E27K Coleen River 156.87 315 IAMs_20 IAMs_20 22 15 50.6
comp=Z,2µm,22.0s
G27K Doyon Strip 156.91 312 IAMs_20 IAMs_20 22 26 14.8
comp=Z,1µm,21.0s
GLB Gilahina Butte 157.22 298 IAMs_20 IAMs_20 22 20 06.8
comp=Z,2µm,22.0s
I26K Coal Creek Min 157.46 308 IAMs_20 IAMs_20 22 27 36.8
comp=Z,2µm,21.0s
C27K Jago River 157.51 319 IAMs_20 IAMs_20 22 17 32.8
comp=Z,2µm,21.0s
D25K Kavik River 158.49 319 IAMs_20 IAMs_20 22 18 58.6
comp=Z,1µm,22.0s
SCM Sheep Creek Mo 158.95 298 IAMs_20 IAMs_20 22 26 42.3
comp=Z,2µm,21.0s

ILAR	**Eielson Array**	**159.02**	**306**	PKPdf	**PKPdf**	**21 11 56.9**	**-2.1**
ILAR					**PKPab**	**21 12 34.2**	**-1.5**
ILAR	**Eielson Array**	**159.02**	**306**	PKPab	**PKPab**	**21 12 36.7**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=96,slow=3.3,SNR=8.1						
ILAR	**Eielson Array**	**159.02**	**306**	PKIKP	**PKPdf**	**21 11 56.9**	**-2.1**
ILAR						21 12 34.3	
C24K	**Franklin Bluff**	**159.21**	**320**	IAMs_20	IAMs_20	22 35 11.9	
	comp=Z,2μm,21.0s						
G24K	**Hadweenzic Riv**	**159.22**	**312**	IAMs_20	IAMs_20	22 39 01.9	
	comp=Z,2μm,22.0s						
D24K	**Happy Valley**	**159.38**	**319**	IAMs_20	IAMs_20	22 19 04.4	
	comp=Z,2μm,22.0s						
YAK	**Yakutsk**	**159.45**	**62**	IAMs_20	IAMs_20	22 31 14.8	
	comp=Z,2μm,20.0s						
C23K	**Itkillik River**	**159.82**	**321**	IAMs_20	IAMs_20	22 19 32.0	
	comp=Z,2μm,21.0s						
YSS	**Yuzhno-Sakhali**	**159.83**	**112**	*i* PKIKP	**PKPdf**	**21 12 06.0**	**+5.6**
YSS				*e*		21 16 25.7	
YSS				*e*		21 19 02.4	
NEA2	**Nenana**	**159.95**	**306**	IAMs_20	IAMs_20	22 29 39.0	
	comp=Z,2μm,22.0s						
I23K	**Minto, Yukon-K**	**160.07**	**307**	IAMs_20	IAMs_20	22 29 06.5	
	comp=Z,2μm,21.0s						
H23K	**Yukon River**	**160.11**	**309**	IAMs_20	IAMs_20	22 37 53.8	
	comp=Z,2μm,22.0s						
TRF	**Thorofare Moun**	**160.47**	**302**	PKPdf	**PKPdf**	**21 11 58.3**	**-2.5**
TRF					**PKPab**	**21 12 40.7**	**-1.6**
KDAK	**Kodiak Island**	**160.65**	**285**	PKPab	**PKPab**	**21 12 45.4**	**+2.4**
	comp=Z,6.4nm,0.7s,baz=143,slow=3.5,SNR=4.4						

BJI ***05*** *20:52:20.7,36.54N×70.10E,h209km,mB5.0/27,mb5.3/69*
MOS ***05*** *20:52:21.2±1.0,36.52N×70.17E,h212km,mb5.3/49,Error ellipse: s-maj=4.3km s-min=3.0km az=91.3*
NEIC ***05*** *20:52:22.6,36.54N×70.09E,h210km*
NEIC ***05*** *20:52:22.3±2.0,36.55N±0.05×70.12E±0.07,h210km±4km, mb5.2/334,Mww5.1/17,Error ellipse: s-maj=8.2km s-min=7.1km az=114.0*
NEIC ***05*** *20:52:22.6,36.54N×70.22E,h210km,Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10^16Nm; Mrr1.92; Mθθ-0.80; Mφφ-1.12; Mrθ4.17; Mθφ-1.55; Mφr-1.81; Fault plane solution: M05.09000×10^16 NP1: φs211.85000°,δ20.39000°,λ23.60000°. NP2:φs99.58000°, δ81.98000°,λ108.81000°. Principal axes: T 5.7692, Plg50.0000°, Azm30.0000°; N -1.9183, Plg19.0000°, Azm277.0000°; P -3.8509, Plg34.0000°, Azm174.0000°;*
IDC ***05*** *20:52:24.2±0.7,36.53N×70.14E,h227km±6km,mb4.8/38, mbtmp5.4/43 Error ellipse: s-maj=6.4km s-min=5.6km az=5.0*
GCMT ***05*** *20:52:24.3±0.3,36.54N±0.02×70.05E±0.03,h212km±2km, MW5.1/60,Moment Tension Solution. s37,c49; s60,c101; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.43±.21; Mθθ-1.86±.22; Mφφ0.42±.20; Mrθ5.54±.17; Mθφ-1.26±.20; Mφr-1.39±.17; Best double couple: M06.08500×10^16 NP1:φs214.00000°,δ17.00000°,λ24.00000°. NP2: φs102.00000°,δ83.00000°,λ105.00000°. Principal axes: T 6.1720, Plg49.0000°, Azm28.0000°; N -0.1740, Plg15.0000°, Azm280.0000°; P -5.9990, Plg36.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
SOME ***05*** *20:52:25.8,36.97N×70.32E,h0km*
NNC ***05*** *20:52:26.5±1.7,36.95N×70.22E,h215km±14km,mb4.8, mpv5.7,Error ellipse: s-maj=15.0km s-min=9.5km az=8.0*

ISC 05 20:52:21.9±0.2,**36.49N**±0.02×**70.14E**±0.02,**h212**km±2km, **h211**km:**pP-P,n1274,**σ1**58**/1416,**mb5.2**/387,**68C-58D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KBL	**Kabul**	**2.14**	**205**			**Pn**	**20 53 03.5**	**+0.5**
KBL				Sn		**S**	**20 53 33.2**	**-1.3**
KBL	**Kabul**	**2.14**	**205**	P		**Pn**	**20 53 03.7**	**+0.8**
	SNR=1683							
KBL				S		**S**	**20 53 35.0**	**+0.5**
KBL	**Kabul**	**2.14**	**205**	PN		**Pn**	**20 53 03.3**	**+0.3**
KBL				S		**S**	**20 53 34.5**	**0.0**
CHGR	**Chuyangaron**	**2.30**	**340**			**Pn**	**20 53 03.9**	**-0.5**
CHGR				Sn		**S**	**20 53 34.1**	**-3.3**
CHGR	**Chuyangaron**	**2.30**	**340**	PN		**Pn**	**20 53 03.9**	**-0.5**
GAR	**Garm**	**2.51**	**3**			**Pn**	**20 53 06.7**	**0.0**
GAR				Sn		**S**	**20 53 39.5**	**-2.1**
DRK	**Karamyk**	**3.26**	**23**			**Pn**	**20 53 16.0**	**+0.5**
DRK				Sn		**S**	**20 53 54.2**	**-3.0**
DRK	**Karamyk**	**3.26**	**23**	PN		**Pn**	**20 53 15.0**	**-0.5**
SRNI	**Srinagar**	**4.53**	**120**	*e*P		**Pn**	**20 53 30.0**	**-0.6**
SRNI				*e*S		**S**	**20 54 22.4**	**-2.1**
SRNI				*e*S		S	20 54 22.7	-1.7
SRNI				IAML			20 54 39.1	
	comp=E,8μm,0.9s							
SRNI				IAML			20 54 48.6	
	comp=N,10μm,1.1s							
OHH	**Osh**	**4.53**	**26**	PN		**Pn**	**20 53 29.3**	**-1.4**
TRKS	**Terek-Say**	**5.10**	**8**	PN		**Pn**	**20 53 37.1**	**-0.8**
TRKS				pmax		pmax		
	comp=Z,2μm,0.8s							
ARSB	**Arslanbob**	**5.32**	**24**			**Pn**	**20 53 39.7**	**-0.9**
ARSB				Sn		**S**	**20 54 38.6**	**-4.1**
ARSB	**Arslanbob**	**5.32**	**24**	PN		**Pn**	**20 53 39.7**	**-0.9**
JMU	**Jammu**	**5.43**	**132**	*e*P		**Pn**	**20 53 42.0**	**-0.1**
JMU				*e*S		**S**	**20 54 37.1**	**-8.2**
JMU				IAML			20 54 44.9	
	comp=E,4μm,0.9s							
JMU				IAML			20 54 51.1	
	comp=N,6μm,0.9s							
ARK	**Arkit**	**5.49**	**14**	PN		**Pn**	**20 53 42.4**	**-0.4**
ARK				pmax		pmax		
	comp=Z,1μm,1.7s							
KSH	**Kashi**	**5.51**	**55**	P		**Pn**	**20 53 38.9**	**-4.2**
KSH				S		S	20 54 35.7	-11
KSH				smax		smax		
	comp=Z,4μm,0.9s							
KSH				smax		smax		
	comp=Z,4μm,1.0s							
IUG	**Iuzhnay**	**5.66**	**359**	⇓*i*P		**Pn**	**20 53 45.1**	**+0.1**
IUG				*e*S		**S**	**20 54 48.6**	**-1.9**
IUG	**Iuzhnay**	**5.66**	**359**	*d*iPN		**Pn**	**20 53 45.0**	**+0.1**
IUG				*e*S		**S**	**20 54 48.6**	**-1.9**
CHM	**Chimkent**	**5.84**	**356**	*e*P		**Pn**	**20 53 47.5**	**+0.3**
	comp=Z,2μm,0.3s							
CHM				*e*S		**S**	**20 54 51.9**	**-2.8**
	comp=Z,8μm,0.5s							
CHM	**Chimkent**	**5.84**	**356**	⇓*i*P		**Pn**	**20 53 47.5**	**+0.3**
CHM	**Chimkent**	**5.84**	**356**	*d*iPN		**Pn**	**20 53 47.4**	**+0.2**
TSSA	**Tissa**	**6.14**	**125**	*e*P		**Pn**	**20 53 51.9**	**+0.5**
TSSA				*e*S		**S**	**20 54 58.7**	**-3.4**
TSSA				IAML			20 55 07.4	
	comp=E,5μm,0.9s							
TSSA				IAML			20 55 19.5	
	comp=E,5μm,0.4s							
ALCI	**Alchi Leh**	**6.19**	**109**	*e*P		**Pn**	**20 53 51.9**	**-0.1**
ALCI				IAmb		IAmb	20 54 00.6	
	comp=Z,377nm,0.4s							
ALCI				*e*S		**S**	**20 54 58.9**	**-4.4**
ALCI				IAML			20 55 05.9	
	comp=E,1μm,0.7s							
ALCI				IAML			20 55 06.4	
	comp=N,766nm,1.2s							
DZA	**Taraz**	**6.46**	**8**	⇓*i*P		**Pn**	**20 53 55.1**	**-0.1**
DZA	**Taraz**	**6.46**	**8**	*d*iPN		**Pn**	**20 53 55.1**	**-0.1**
BRLS	**Borolday**	**6.54**	**358**	*e*P		**Pn**	**20 53 52.1**	**-4.1**
	comp=N,276nm,0.7s							
BRLS				*e*S		S	20 54 58.8	-12
	comp=N,941nm,1.2s							
BRLS	**Borolday**	**6.54**	**358**	*e*PN		**Pn**	**20 53 52.0**	**-4.2**
TLWR	**Talawar**	**6.60**	**131**	*e*P		**Pn**	**20 53 57.7**	**+0.6**
TLWR				*e*S		**S**	**20 55 07.6**	**-5.1**
TLWR				IAML			20 55 21.2	
	comp=N,2μm,1.6s							
DHRM	**DHARAMSHALA**	**6.62**	**128**	*e*P		**Pn**	**20 53 57.5**	**0.0**
DHRM				*e*S		**S**	**20 55 08.7**	**-4.6**
DHRM				IAML			20 55 11.1	
	comp=N,4μm,1.0s							
DHRM				IAML			20 55 13.1	
	comp=N,4μm,0.7s							
KK31	**Karatay Array**	**6.62**	**2**			**Pn**	**20 53 56.2**	**-1.0**
KK31				Sn		**S**	**20 55 07.7**	**-5.1**
KK31	**Karatay Array**	**6.62**	**2**	P		**Pn**	**20 53 56.1**	**-1.0**
	comp=N,33nm,0.2s,baz=197,slow=17,SNR=1093							
KK31				⇓S		**S**	**20 55 07.4**	**-5.4**
	comp=N,1μm,1.1s,baz=191,slow=22,SNR=9.7							
KK31	**Karatay Array**	**6.62**	**2**	PN		**Pn**	**20 53 56.1**	**-1.0**
KKAR	**Karatay Array**	**6.62**	**2**			**Pn**	**20 53 56.1**	**-1.0**
KKAR	**Karatay Array**	**6.62**	**2**	PN		**Pn**	**20 53 56.1**	**-1.0**
UCH	**Uchtor**	**6.66**	**29**	P		**Pn**	**20 53 58.0**	**-0.2**
	SNR=526							
MRKS	**Merke**	**6.69**	**20**	*e*P		**Pn**	**20 53 57.9**	**-0.3**
	comp=N,405nm,0.8s							
MRKS				*e*S		**S**	**20 55 08.8**	**-5.9**
	comp=N,643nm,1.0s							
EKS2	**Erkin-Say**	**6.78**	**23**	P		**Pn**	**20 53 59.4**	**0.0**
	SNR=261							
HRA	**Herat**	**6.78**	**254**			**Pn**	**20 53 59.7**	**+0.2**
AAK	**Ala-Archa**	**7.00**	**27**			**Pn**	**20 54 02.2**	**-0.1**
AAK					Sn	**S**	**20 55 18.3**	**-3.8**
AAK	**Ala-Archa**	**7.00**	**27**	P		**Pn**	**20 54 02.2**	**-0.1**
	comp=N,80nm,0.4s,baz=176,slow=7.1,SNR=234							
AAK					S	**S**	**20 55 18.0**	**-4.2**
	comp=N,410nm,1.0s,baz=188,slow=11,SNR=4.5							
AAK					ScP	**ScP**	**21 03 38.1**	**-1.7**
	comp=N,9.4nm,0.8s,baz=183,slow=5.1,SNR=5.7							
AAK	**Ala-Archa**	**7.00**	**27**	P		**Pn**	**20 54 02.6**	**+0.3**
AAK	**Ala-Archa**	**7.00**	**27**	P		**Pn**	**20 54 02.4**	**+0.1**
	SNR=163							
AAK	**Ala-Archa**	**7.00**	**27**	⇑P		**Pn**	**20 54 01.4**	**-0.9**
	comp=N,2μm,0.8s							
AAK					⇓S	**S**	**20 55 17.0**	**-5.1**
	comp=N,12μm,1.1s							
AAK	**Ala-Archa**	**7.00**	**27**	*i* P		**Pn**	**20 54 02.6**	**+0.3**
	SNR=191							
AAK	**Ala-Archa**	**7.00**	**27**	PN		**Pn**	**20 54 02.2**	**-0.1**
AAK							20 55 18.3	
KBK	**Karagaybulak**	**7.19**	**30**	P		**Pn**	**20 54 05.1**	**+0.3**
	SNR=69							
FRU1	**Bishkek**	**7.20**	**27**			**Pn**	**20 54 04.6**	**-0.2**
FRU1					Sn	**S**	**20 55 23.9**	**-2.8**
FRU1	**Bishkek**	**7.20**	**27**	PN		**Pn**	**20 54 04.6**	**-0.2**
FRU1							20 55 23.9	
BHK	**Bhakra**	**7.26**	**132**	*e*P		**Pn**	**20 54 09.1**	**+3.5**
BHK					IAML		20 55 26.1	
	comp=N,2μm,1.0s							
BHK				*e*S		**S**	**20 55 28.2**	**0.0**
BHK					IAML		20 55 30.3	
	comp=E,2μm,0.7s							
CHMS	**Chumysh**	**7.41**	**27**	P		**Pn**	**20 54 07.3**	**-0.1**
	SNR=61							
ULHL	**Ulahol**	**7.44**	**38**	P		**Pn**	**20 54 07.8**	**-0.3**
	SNR=70							
BOOM	**Boomskoye usch**	**7.49**	**35**			**Pn**	**20 54 08.1**	**-0.4**
BOOM					Sn	**S**	**20 55 29.4**	**-4.1**
BOOM	**Boomskoye usch**	**7.49**	**35**	PN		**Pn**	**20 54 08.5**	**0.0**
USP	**Ospenovka**	**7.56**	**25**	P		**Pn**	**20 54 08.6**	**-0.8**
	SNR=158							
TKM2	**Tokmak 2**	**7.68**	**32**	P		**Pn**	**20 54 10.8**	**-0.2**
	SNR=230							
SGDS	**Sogindy**	**7.76**	**25**	*e*P		**Pn**	**20 54 11.1**	**-0.9**
KDJ	**Kajisay**	**7.84**	**42**			**Pn**	**20 54 13.1**	**-0.1**
KDJ	**Kajisay**	**7.84**	**42**	PN		**Pn**	**20 54 13.1**	**-0.1**
SMLA	**Simla**	**7.92**	**130**	*e*P		**Pn**	**20 54 14.0**	**-0.1**
SMLA				*e*S		**S**	**20 55 38.6**	**-5.1**
SMLA				IAML			20 55 42.1	
	comp=E,3μm,0.9s							
SMLA				IAML			20 55 45.1	
	comp=N,2μm,0.8s							
TARG	**Taragay, Kyrgy**	**7.93**	**46**			**Pn**	**20 54 14.2**	**-0.3**
TARG	**Taragay, Kyrgy**	**7.93**	**46**	PN		**Pn**	**20 54 14.2**	**-0.3**
CGRH	**CHANDIGARH**	**7.97**	**134**	*e*P		**Pn**	**20 54 14.8**	**0.0**
CGRH				*e*S		**S**	**20 55 38.9**	**-6.1**
TNSS	**Tian-Shan**	**8.38**	**37**	*e*P		**Pn**	**20 54 20.2**	**-0.2**
TNSS	**Tian-Shan**	**8.38**	**37**	*e*PN		**Pn**	**20 54 20.1**	**-0.2**
AAA	**Alma-Ata**	**8.50**	**36**	*e*P		**Pn**	**20 54 21.9**	**+0.4**
AAA	**Alma-Ata**	**8.50**	**36**	*e*PN		**Pn**	**20 54 21.9**	**+0.4**
MDOK	**Medeo**	**8.52**	**36**	*e*P		**Pn**	**20 54 22.0**	**+0.1**
MDOK				*e*S		**S**	**20 55 56.5**	**-1.5**
MDOK	**Medeo**	**8.52**	**36**	*e*PN		**Pn**	**20 54 22.0**	**+0.1**
MDOK				*e*S		**S**	**20 55 56.5**	**-1.5**
KNDC	**Almaty**	**8.53**	**36**	⇓P		**Pn**	**20 54 22.1**	**+0.2**
	comp=N,802nm,1.1s							
KNDC				⇓S		**S**	**20 55 53.8**	**-4.1**
	comp=N,1μm,1.1s							
KNDC	**Almaty**	**8.53**	**36**	PN		**Pn**	**20 54 22.9**	**+1.0**
PRZ	**Przheval'sk**	**8.75**	**44**			**Pn**	**20 54 25.4**	**+0.5**
PRZ	**Przheval'sk**	**8.75**	**44**	PN		**Pn**	**20 54 25.5**	**+0.5**
BKNR	**BIKANER**	**8.85**	**162**	*e*P		**Pn**	**20 54 23.6**	**-2.6**
BKNR					IAML		20 56 02.4	
	comp=E,2μm,1.1s							
BKNR					IAML		20 56 02.5	
	comp=N,2μm,0.7s							
DDI	**Dehra Dun**	**9.03**	**131**	*e*P		**Pn**	**20 54 28.6**	**+0.1**
DDI				*e*S		**S**	**20 56 04.3**	**-5.8**
DDI				*e*S		S	20 56 04.8	-5.3
DDI				IAML			20 56 07.3	
	comp=N,2μm,0.6s							
RTK	**Rohtak**	**9.11**	**143**	*e*P		**Pn**	**20 54 30.0**	**+0.4**
RTK				*e*S		**S**	**20 56 04.5**	**-7.6**
RTK				IAML			20 56 05.5	
	comp=N,1μm,0.6s							
RTK				IAML			20 56 05.5	
	comp=N,2μm,0.4s							
SATY	**Saty**	**9.14**	**42**	⇓*i*P		**Pn**	**20 54 29.5**	**-0.4**
SATY				*e*S		**S**	**20 56 10.6**	**-2.0**
SATY	**Saty**	**9.14**	**42**	*d*iP		**Pn**	**20 54 29.4**	**-0.4**
SATY				*e*S		**S**	**20 56 10.6**	**-2.0**
GNR	**GANAUR**	**9.34**	**140**	*e*P		**Pn**	**20 54 31.6**	**-0.9**
UZB	**Uzynbulak**	**9.53**	**43**	⇓*i*P		**Pn**	**20 54 34.6**	**-0.4**
UZB				*e*S		**S**	**20 56 20.3**	**-1.7**
UZB	**Uzynbulak**	**9.53**	**43**	*d*iP		**Pn**	**20 54 34.6**	**-0.4**
UZB				*e*S		**S**	**20 56 20.2**	**-1.7**
JHJR	**Jhajjar**	**9.58**	**143**	*e*P		**Pn**	**20 54 34.3**	**-1.3**
JHJR				*e*S		**S**	**20 56 15.2**	**-8.0**
NRLA	**Narela**	**9.66**	**141**	*e*P		**Pn**	**20 54 36.3**	**-0.3**
NRLA				*e*S		**S**	**20 56 16.5**	**-8.5**
ARXS	**Arharly**	**9.69**	**35**	*e*P		**Pn**	**20 54 36.4**	**-0.5**
SHLS	**Shalkode**	**9.78**	**44**	⇓*i*P		**Pn**	**20 54 41.2**	**+3.0**
SHLS				*e*S		**S**	**20 56 31.9**	**+3.9**
SHLS	**Shalkode**	**9.78**	**44**	*d*iP		**Pn**	**20 54 41.2**	**+3.0**
SHLS				*e*S		**S**	**20 56 31.8**	**+3.9**
NDI	**New Delhi**	**9.80**	**141**	*e*P		**Pn**	**20 54 37.3**	**-1.2**
NDI				*e*S		S	20 56 19.2	-9.2
NDI				IAML			20 56 23.8	
	comp=E,1μm,0.6s							
NDI				IAML			20 56 29.7	
	comp=E,938nm,0.9s							
NPLP	**NPLP New Delhi**	**9.81**	**141**	*e*P		**Pn**	**20 54 38.0**	**-0.6**
NPLP				*e*S		**S**	**20 56 21.3**	**-7.4**
NPLP				IAML			20 56 25.6	
	comp=E,713nm,0.2s							
NPLP				IAML			20 56 31.2	
	comp=E,1μm,0.7s							
JOSI	**Joshimath**	**9.83**	**124**	*e*P		**Pn**	**20 54 38.2**	**-0.9**
JOSI				*e*S		S	20 56 20.0	-9.4
JOSI				IAML			20 56 25.4	
	comp=N,956nm,0.9s							
JOSI				IAML			20 56 31.7	
	comp=E,980nm,0.8s							
MERT	**Meerut**	**9.85**	**137**	*e*P		**Pn**	**20 54 38.4**	**-0.6**
MERT				*e*S		S	20 56 20.1	-9.3
MERT				IAML			20 56 26.9	
	comp=E,38nm,0.7s							
LDR	**Lodi Road**	**9.88**	**141**	*e*P		**Pn**	**20 54 39.5**	**0.0**
LDR				*e*S		**S**	**20 56 22.2**	**-8.1**
LDR				IAML			20 56 30.3	
	comp=N,5μm,0.9s							
LDR				IAML			20 56 35.7	
	comp=E,4μm,0.9s							
KUDL	**Kundal**	**9.90**	**145**	*e*P		**Pn**	**20 54 38.4**	**-1.3**
KUDL				*e*S		**S**	**20 56 22.8**	**-7.8**
KUDL				IAML			20 56 24.9	
	comp=E,2μm,1.1s							
KUDL				IAML			20 56 30.7	
	comp=N,938nm,0.9s							
PDGK	**Podgornoye**	**9.91**	**44**	⇑P		**Pn**	**20 54 38.7**	**-1.1**
	comp=N,266nm,1.1s							
PDGK	**Podgornoye**	**9.91**	**44**	P		**Pn**	**20 54 38.7**	**-1.1**
AYAN	**Aya Nagar**	**9.92**	**142**	*e*P		**Pn**	**20 54 39.2**	**-0.8**
AYAN					IAmb	IAmb	20 54 41.2	
	comp=Z,340nm,0.7s							
AYAN				*e*S		**S**	**20 56 22.4**	**-8.7**
AYAN				IAML			20 56 24.7	
	comp=N,1μm,0.9s							
AYAN				IAML			20 56 24.8	
	comp=E,1μm,1.1s							
BISR	**Bishrakh**	**10.01**	**140**	*e*P		**Pn**	**20 54 40.7**	**-0.3**
BISR				*e*S		**S**	**20 56 25.5**	**-8.0**
BISR				IAML			20 56 27.8	
	comp=N,3μm,0.8s							
BISR				IAML			20 56 29.4	
	comp=E,4μm,0.9s							
TKRD	**Thakurdwara**	**10.35**	**132**	*e*P		**Pn**	**20 54 45.2**	**-0.3**
TKRD				*e*S		**S**	**20 56 35.4**	**-6.2**
TKRD				IAML			20 57 00.0	
	comp=N,2μm,0.8s							
TKRD				IAML			20 57 11.5	
	comp=E,2μm,2.9s							
TDK	**Taldyqorghan**	**10.56**	**34**	*e*P		**Pn**	**20 54 47.5**	**-0.6**
TDK				*e*S		**S**	**20 56 43.8**	**-2.6**
TDK	**Taldyqorghan**	**10.56**	**34**	*e*P		**Pn**	**20 54 47.5**	**-0.6**
TDK				*e*S		**S**	**20 56 43.7**	**-2.6**
LGTI	**Lohaghat**	**11.01**	**127**	*e*P		**Pn**	**20 54 52.2**	**-1.6**
LGTI				*e*S		S	20 56 46.6	-9.0
LGTI				IAML			20 56 49.0	
	comp=E,272nm,0.9s							
LGTI				IAML			20 57 02.8	
	comp=E,566nm,1.0s							
AGRA	**Agra**	**11.36**	**142**	*e*P		**Pn**	**20 54 58.5**	**+0.2**
AGRA				*e*S		**S**	**20 56 58.0**	**-6.1**
JHNI	**Jhansi**	**13.13**	**144**	IAmb		IAmb	20 55 26.4	
	comp=Z,845nm,0.6s							
JHNI				*e*S		S	20 57 34.6	-12
BHUJ	**Bhuj**	**13.19**	**182**	*e*P		**Pn**	**20 55 21.5**	**0.0**
BHUJ				IAmb		IAmb	20 55 27.6	
	comp=Z,465nm,0.7s							
BHUJ				*e*S		**S**	**20 57 40.6**	**-7.1**
GUNA	**GUNA**	**13.32**	**150**	IAmb		IAmb	20 55 27.8	
	comp=Z,934nm,0.5s							
GUNA				*e*S		S	20 57 40.9	-10
LKN	**LUCKNOW**	**13.32**	**134**	*e*P		**P**	**20 55 26.2**	**+0.7**
LKN				*e*S		S	20 57 41.4	-9.2
NGCH	**Negor - Chabah**	**13.51**	**217**	P		**P**	**20 55 27.1**	**-0.4**
	SNR=5.6							
MAKZ	**Makanchi**	**13.57**	**37**			**Pn**	**20 55 25.6**	**-0.4**
MAKZ	**Makanchi**	**13.57**	**37**	⇑P		**Pn**	**20 55 24.4**	**-1.6**
	comp=Z,781nm,1.4s							
MAKZ	**Makanchi**	**13.57**	**37**	P		**Pn**	**20 55 25.6**	**-0.4**
BRZS	**Berezniki**	**13.62**	**7**	*e*P		**Pn**	**20 55 26.2**	**-0.2**
BRZS	**Berezniki**	**13.62**	**7**	*e*P		**Pn**	**20 55 26.2**	**-0.2**
MK31	**Makanchi Array**	**13.72**	**38**	⇑P		**Pn**	**20 55 27.3**	**-0.5**
	comp=Z,165nm,0.6s,baz=215,slow=8.8,SNR=1727							
MK31	**Makanchi Array**	**13.72**	**38**	*c*eP		**Pn**	**20 55 27.3**	**-0.5**
MKAR	**Makanchi Array**	**13.72**	**38**	P		**Pn**	**20 55 27.2**	**-0.5**
	comp=Z,205nm,0.8s,baz=221,slow=10,SNR=192							
MKAR					S	**S**	**20 58 02.3**	**+2.7**
	comp=Z,14nm,0.8s,baz=218,slow=18,SNR=1.2							
MKAR					ScP	**ScP**	**21 03 47.3**	**-0.9**
	comp=Z,4.4nm,0.8s,baz=240,slow=1.4,SNR=5.0							
MKAR					ScS	**ScS**	**21 07 23.7**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=286,slow=5.8,SNR=5.2							
BHPL	**Bhopal**	**14.62**	**152**	*e*P		**Pn**	**20 55 38.9**	**-0.3**
BHPL				*e*S		**S**	**20 58 20.0**	**-1.1**
BHPL				*e*S		S	20 58 20.4	-0.8
AB31	**Akbulak array**	**14.77**	**333**			**Pn**	**20 55 39.0**	**-1.7**
AB31	**Akbulak array**	**14.77**	**333**	⇑P		**Pn**	**20 55 39.5**	**-1.1**
	comp=Z,75nm,0.7s							
AB31	**Akbulak array**	**14.77**	**333**	P		**Pn**	**20 55 39.5**	**-1.1**
ABKAR	**Akbulak array**	**14.77**	**333**	P		**Pn**	**20 55 39.3**	**-1.4**
ALBI	**Allahabad**	**14.96**	**135**	*e*P		**Pn**	**20 55 42.0**	**-1.3**
NRDN	**NARMADA NAGAR**	**15.01**	**154**	*e*P		**P**	**20 55 46.2**	**+2.0**
NRDN				*e*S		**S**	**20 58 25.6**	**-4.5**
WMQ	**Urumqi**	**15.28**	**56**	⇑P		**P**	**20 55 47.5**	**+0.5**
WMQ				S		**S**	**20 58 35.0**	**-0.9**
WMQ				pmax		pmax		
	comp=Z,320nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,1μm,5.7s							
KURBB	**Kurchatov Arra**	**15.37**	**21**	P		**Pn**	**20 55 46.8**	**-1.0**
	comp=Z,168nm,0.8s,baz=210,slow=10,SNR=135							
KURBB					S	**S**	**20 58 37.1**	**-0.7**
	comp=Z,7.5nm,0.9s,baz=214,slow=20,SNR=4.5							
KURBB					ScP	**ScP**	**21 03 48.5**	**-2.5**
	comp=Z,1.4nm,0.4s,baz=222,slow=2.3,SNR=1.9							
KURBB	**Kurchatov Arra**	**15.37**	**21**	⇑P		**Pn**	**20 55 46.6**	**-1.2**
	comp=Z,282nm,0.8s							
KURBB	**Kurchatov Arra**	**15.37**	**21**	P		**Pn**	**20 55 46.6**	**-1.2**
ZSN	**Zaisan**	**15.46**	**40**	*e*P		**P**	**20 55 48.5**	**-0.5**
ZSN	**Zaisan**	**15.46**	**40**	*e*P		**P**	**20 55 48.5**	**-0.5**
KURK	**Kurchatov**	**15.48**	**21**			**P**	**20 55 47.9**	**-1.2**
KURK	**Kurchatov**	**15.48**	**21**	P		**P**	**20 55 48.3**	**-0.7**
KURK	**Kurchatov**	**15.48**	**21**	*c*eP		**P**	**20 55 48.2**	**-0.9**
KURK				pmax		pmax		
	comp=Z,229nm,1.3s							
BANOM	**Banah**	**15.83**	**232**	P		**Pn**	**20 55 53.6**	**-0.1**
BANOM				S	

JLN S **S** **20 59 15.5 +2.0**
FAQ **Al Faqa, Dubai** **17.11 231** P **Pn** **20 56 08.7 -0.3**
SNR=23
FAQ S **S** **20 59 14.4 -0.3**
FAQ **Al Faqa, Dubai** **17.11 231** *i* P **P** **20 56 06.9 -0.5**
SNR=27
ASUD **Al Ashush, Dub** **17.37 231** P **Pn** **20 56 11.6 -0.3**
SNR=59
ASUD S **S** **20 59 19.9 +0.2**
ASUD **Al Ashush, Dub** **17.37 231** *i* P **P** **20 56 10.3 +0.3**
SNR=59
GAYA **Gaya** **17.42 128** *eP* **P** **20 56 11.5 +0.9**
JMDO **Jabal Madar** **17.52 220** P **Pn** **20 56 14.1 +0.4**
SNR=16
JMDO S **S** **20 59 24.0 +1.2**
ALNE **Al Ain** **17.52 229** P **Pn** **20 56 13.0 -0.7**
SNR=69
ALNE S **S** **20 59 21.5 -1.4**
ALNE **Al Ain** **17.52 229** *i* P **Pn** **20 56 13.0 -0.7**
SNR=257
ARQ **Araqi** **17.61 226** P **Pn** **20 56 14.7 -0.2**
SNR=27
ARQ S **S** **20 59 27.0 +2.3**
AJN **Ajban** **17.63 232** P **Pn** **20 56 14.1 -0.9**
SNR=32
AJN P **Pn** **20 56 14.1 -0.9**
SNR=57
AJN **Ajban** **17.63 232** *i* P **P** **20 56 13.3 +0.4**
SNR=24
AJN *i* P **Pn** **20 56 13.8 -1.1**
SNR=53
BLSP **Bilaspur** **17.70 141** *eP* **Pn** **20 56 15.4 -0.4**
BLSP *eS* **S** **20 59 25.3 -1.1**
AKT **Akhty** **18.11 293** *eP* **P** **20 56 19.2 +1.1**
AKT *eS* **S** **20 59 35.0 +0.6**
AKT pmax pmax
comp=Z,95nm,0.9s
POO **Poona** **18.18 169** *eP* **Pn** **20 56 21.1 -0.5**
DGZ **Jazzator, Alta** **18.21 38** *i* P **Pn** **20 56 21.0 -0.8**
DGZ pmax pmax
comp=Z,1μm,0.9s
MAK **Makhachkala** **18.55 297***c* *i* P **P** **20 56 19.8 -2.9**
MAK *eS* **S** **20 59 38.5 -4.4**
MAK pmax pmax
comp=Z,568nm,1.2s
BOK **Bokaro** **18.55 129** *eP* **P** **20 56 23.8 +0.8**
BOK *eS* **S** **20 59 42.0 -1.3**
BOK IAML 20 59 53.7
comp=Z,282nm,0.9s
BOK IAML 20 59 59.7
comp=Z,138nm,1.5s
BOK IAML 20 59 59.7
comp=Z,139nm,1.1s
JPG **JALPAIGURI** **18.65 117** *eP* **Pn** **20 56 26.6 -0.3**
JPG *eS* **S** **20 59 46.7 +1.5**
MHTO **MHTO** **18.74 218** P **Pn** **20 56 27.3 -0.8**
SNR=41
SHBG **Sahibganj** **18.75 122** *eP* **P** **20 56 26.3 +1.3**
SHBG *eS* **S** **20 59 47.3 +0.3**
JRN **Qarnain Island** **18.77 237** P **P** **20 56 25.2 0.0**
SNR=11
LSA **Lhasa** **18.84 105** P **Pn** **20 56 29.2 -0.5**
LSA **Lhasa** **18.84 105** P **Pn** **20 56 29.6 -0.1**
LSA **Lhasa** **18.84 105** P **P** **20 56 25.8 -0.7**
LSA S **S** **20 59 47.8 -2.0**
LSA pmax pmax
comp=Z,110nm,0.8s
LSA LR LR
comp=Z,2μm,18.5s
LSA LR LR
comp=Z,1μm,18.6s
LSA LR LR
comp=Z,3μm,22.0s
LSA **Lhasa** **18.84 105** P **Pn** **20 56 29.1 -0.5**
LSA **Lhasa** **18.84 105** P **Pn** **20 56 29.2 -0.5**
JHSG **JHARSUGUGA** **18.86 137** *eP* **P** **20 56 27.6 +1.3**
JHSG *eS* **S** **20 59 49.6 0.0**
UMZA **Um Al Zommool** **18.89 228** P **P** **20 56 27.5 +0.9**
MZWR **Madinat Zayed** **18.90 232** P **P** **20 56 26.7 -0.1**
COBR **COOCHBEHAR** **19.34 116** *eP* **Pn** **20 56 33.5 -1.6**
GHWR **Ruwais** **19.41 235** P **P** **20 56 31.9 -0.3**
KAD **Karad** **19.43 168** *eP* **P** **20 56 34.1 +1.6**
SHMA **Al-Shehemyia** **19.50 242** P **P** **20 56 33.5 +0.5**
SNR=6.9
MZR **Muzera** **19.70 232** P **P** **20 56 34.8 -0.5**
SNR=16
MZR **Muzera** **19.70 232** *i* P **P** **20 56 34.9 -0.5**
SNR=8.4
SAKB **Bahrain** **19.73 243** P **P** **20 56 36.2 +0.6**
DQM **DQM** **19.85 217** P **P** **20 56 38.3 +1.4**
SNR=14
GOMU **GeErMu** **19.87 83** P **P** **20 56 38.6 +1.2**
GOMU S **S** **21 00 10.3 +0.7**
GOMU pmax pmax
comp=Z,57nm,1.0s
TRNA **Turayna** **20.02 239** P **P** **20 56 38.1 -0.6**
SNR=6.0
SLWR **Sila** **20.13 237** P **P** **20 56 39.2 -0.7**
KBD **Kabd** **20.20 255** P **P** **20 56 41.6 +1.0**
ZAA0 **Zalesovo Array** **20.22 26** P **P** **20 56 40.6 +0.1**
ZAA0 **Zalesovo Array** **20.22 26** ⇑P **P** **20 56 40.5 -0.1**
comp=Z,59nm,0.6s
ZALV **Zalesovo Beam** **20.22 26** **P** **20 56 41.0 +0.4**
ZALV **Zalesovo Beam** **20.22 26** P **P** **20 56 40.9 +0.3**
comp=Z,492nm,0.5s,baz=220,slow=11,SNR=1006
ZALV S **S** **21 00 14.3 -1.0**
comp=Z,41nm,0.9s,baz=218,slow=18,SNR=5.7
ZALV ScP **ScP** **21 03 59.6 -1.6**
comp=Z,6.1nm,0.8s,baz=247,slow=3.0,SNR=4.5
ZALV PKiKP **PKiKP** **21 08 30.7 -2.5**
comp=Z,0.7nm,0.3s,baz=4.1,slow=0.7,SNR=5.5
comp=Z,492nm,0.5s
GNI **Garni** **20.24 288** P **P** **20 56 42.9 +1.7**
GNI **Garni** **20.24 288** P Pn 20 56 43.9 -2.2
comp=Z,70nm,0.9s,baz=57,slow=2.0,SNR=49
comp=Z,70nm,0.9s
GNI **Garni** **20.24 288** P Pn 20 56 44.3 -1.8
GNI **Garni** **20.24 288***ce* P Pn 20 56 44.3 -1.8
GNI pmax pmax
comp=Z,219nm,1.7s
SMRA **Abu-Samra** **20.29 240** P **P** **20 56 41.2 -0.3**
SNR=13
TBLG **Delisi** **20.36 293** P **P** **20 56 43.6 +1.3**
HYBB **Hyderabad (bro** **20.40 156** *eP* **P** **20 56 43.6 +0.7**
HYBB *ep* P **pP** **20 57 18.9 +1.0**
HYBB *es* P **sP** **20 57 51.5 +6.8**
HYBB *eS* **S** **21 00 21.9 +2.4**
TAWA **Tawang** **20.41 110**⇑ *eP* **P** **20 56 45.8 +2.6**
TAWA ⇑ *eS* **S** **21 00 20.5 +0.4**
RAGD **RAYAGADA** **20.78 142** *eP* **P** **20 56 47.7 +0.8**
RAGD *eS* **S** **21 00 26.8 +0.3**
TRLG **Trialeti** **20.82 292** P **P** **20 56 48.8 +1.5**
BWNR **Bhubaneshwar** **21.17 135** *eP* **P** **20 56 51.8 +1.0**
SVE **Sverdlovsk** **21.33 346***d* *i* P **P** **20 56 52.8 +0.6**
SVE *eS* **S** **21 00 37.2 +2.1**
SVE pmax pmax
comp=Z,329nm,1.3s
ARTI **Arti** **21.43 342** **P** **20 56 53.3 +0.1**
ARTI **Arti** **21.43 342** P **P** **20 56 53.5 +0.2**
comp=Z,332nm,1.0s,baz=158,slow=6.0,SNR=142
comp=Z,332nm,1.0s
ARTI **Arti** **21.43 342***c* *i* P **P** **20 56 53.5 +0.2**
ARTI *pP **pP** **20 57 30.3 +0.8**
ARTI S **S** **21 00 38.4 +1.5**
ARTI pmax pmax
comp=Z,514nm,1.0s
SHL **Shillong** **21.53 114** **P** **20 56 55.0 +0.2**
SHL **Shillong** **21.53 114** P **P** **20 56 55.0 +0.2**
SNR=56
SHL **Shillong** **21.53 114** *eP* **P** **20 56 55.0 +0.2**
SHL *eS* **S** **21 00 39.3 -0.1**
SHL **Shillong** **21.53 114** P **P** **20 56 55.0 +0.2**
TEZP **TEZPUR** **21.63 111**⇑ *eP* **P** **20 56 56.6 +1.1**
TEZP ⇑ *eS* **S** **21 00 39.3 -1.2**
ZIRO **ZIRO** **21.96 107** *eP* **P** **20 57 00.4 +1.5**
ZIRO ⇓ *eS* **S** **21 00 44.6 -1.5**
KBZ **Khabaz** **21.99 298** P **P** **20 56 59.0 +0.2**
comp=Z,31nm,0.8s,baz=119,slow=9.2,SNR=52
comp=Z,31nm,0.8s
KBZ **Khabaz** **21.99 298***ce* P **P** **20 56 59.3 +0.4**
KBZ pmax pmax
comp=Z,48nm,1.1s
VIS **Vishakhapatnam** **22.03 145** *eP* **P** **20 57 00.6 +1.1**
ITAN **ITANAGAR** **22.05 108** *eP* **P** **20 57 01.2 +1.6**
ITAN *eS* **S** **21 00 47.1 -0.1**
AGT **Agartala** **22.09 119** *eP* **P** **20 57 01.8 +1.8**
GOF **Gofitskoye** **22.16 301***c* *i* P **P** **20 57 02.0 +1.6**
SHA1 **Shidzhatmaz** **22.17 298** *i* P **P** **20 57 01.5 +0.7**
KIV **Kislovodsk** **22.18 298** **P** **20 57 00.5 -0.3**
KIV **Kislovodsk** **22.18 298** *i* P **P** **20 57 01.4 +0.6**
SNR=16
KIV **Kislovodsk** **22.18 298** *eP* **P** **20 57 01.1 +0.3**
KIV *eS* **S** **21 00 49.1 -0.2**
KIV pmax pmax
comp=Z,38nm,1.0s
SHAO **Shalim** **22.42 219** P **P** **20 57 05.0 +1.9**
SNR=7.2
SHAO **Shalim** **22.42 219** *i* P **P** **20 57 04.0 +0.9**
SNR=58
BELG **Belogornoye** **22.47 322** *i* P **P** **20 57 03.8 +0.6**
BELG pmax pmax
comp=Z,97nm,0.8s
BELO **BELONIA** **22.64 120** *eP* **P** **20 57 07.2 +2.2**
JORH **JORHAT** **22.66 109** *eP* **P** **20 57 06.3 +1.1**
JORH *eS* **S** **21 00 57.7 +0.5**
SILR **SILCHAR** **22.66 115** *eP* **P** **20 57 08.4 +3.2**
DOK **Doka** **22.71 223** P **P** **20 57 06.5 +0.8**
SNR=53
DMTO **DMTO** **23.02 220** P **P** **20 57 08.9 +0.5**
SNR=8.3
KOHI **KOHIMA** **23.10 111** *eP* **P** **20 57 10.9 +1.6**
BRDH **Bariadhala** **23.15 121** P **P** **20 57 11.7 +2.1**
comp=Z,278nm,0.4s,baz=241,slow=19,SNR=9.6
comp=Z,278nm,0.4s
MARD **Mardin** **23.46 281** **P** **20 57 13.6 +1.2**
WHFO **Wadi Hawf** **23.47 222** P **P** **20 57 13.2 +0.5**
SNR=49
IMP **Imphal** **23.48 113** *eP* **P** **20 57 15.0 +2.3**
IMP *eS* **S** **21 01 12.2 +1.7**
KOPT **Kop Dagi** **23.49 288** P **P** **20 57 15.2 +2.2**
GTA **Gaotai** **23.53 74** P **P** **20 57 14.4 +1.3**
GTA sP sP 20 58 17.7 -2.6
GTA S **S** **21 01 11.7 +0.4**
GTA SS SS 21 02 25.0 -33
GTA ScP **ScP** **21 04 08.9 -1.2**
GTA ScS **ScS** **21 07 54.5 -2.5**
GTA pmax pmax
comp=Z,55nm,1.1s
RBK **Rabkut** **23.58 221** P **P** **20 57 14.1 +0.5**
SNR=27
LKP **Lekhapani** **23.59 105**⇑ *eP* **P** **20 57 17.4 +3.8**
LABN **Labinsk** **23.69 299** *eP* **P** **20 57 15.7 +1.4**
LABN *e* *pP **pP** **20 57 56.2 +2.7**
LABN *eS* **S** **21 01 16.4 +3.0**
LABN pmax pmax
comp=Z,88nm,0.8s
MNGI **Mangalore** **23.82 169** *eP* **P** **20 57 18.2 +2.5**
VSLR **Vesyoloye** **24.02 296** *i* P **P** **20 57 19.1 +1.8**
VSLR pmax pmax
comp=Z,47nm,1.1s
ERBR **Yeremizino-Bor** **24.06 302** *eP* **P** **20 57 18.3 +0.6**
ERBR *e* *PP **pP** **20 57 59.0 +1.5**
ERBR *eS* **S** **21 01 18.1 -1.1**
ERBR pmax pmax
comp=Z,87nm,0.7s
KNGR **Kungurtug, Tuv** **24.18 46** *i* P **P** **20 57 21.3 +2.5**
KNGR pmax pmax
comp=Z,351nm,0.8s
ABTO **Aybut** **24.19 222** P **P** **20 57 19.8 +0.6**
SNR=107
SOC **Sochi** **24.26 296** *eP* **P** **20 57 20.4 +0.9**
SOC *e* *PP **pP** **20 57 58.7 -0.9**
SOC *e* *SP **sP** **20 58 28.1 +2.1**
SOC *eS* **S** **21 01 24.0 +1.6**
SOC *e* *SS **sS** **21 02 40.0 +2.6**
SOC pmax pmax
comp=Z,44nm,0.8s
RAYN **Ar Rayn** **24.86 246** P **P** **20 57 25.4 +0.2**
RAYN **Ar Rayn** **24.86 246** P **P** **20 57 26.2 +1.0**
RAYN **Ar Rayn** **24.86 246** *i* P **P** **20 57 25.9 +0.6**
SNR=11
RAYN **Ar Rayn** **24.86 246** P **P** **20 57 25.8 +0.6**
VRH **Novokhopyorsk** **25.03 315***c* *i* P **P** **20 57 26.6 +0.3**
VRH pmax pmax
comp=Z,84nm,0.7s
ARPR **Arapgir-MALATY** **25.20 286** P **P** **20 57 29.0 +0.7**
KIRV **Kirov** **25.96 335***ce* P **P** **20 57 35.6 +1.0**
ANN **Anapa** **26.03 299** *eP* **P** **20 57 35.6 +0.1**
ANN *e* *PP **pP** **20 58 21.4 +3.6**
ANN *eS* **S** **21 01 49.3 -1.0**
ANN pmax pmax
comp=Z,41nm,0.6s
VORD **Divnogorie** **26.34 313** *eP* **P** **20 57 36.4 -1.7**
VORD pmax pmax
comp=Z,30nm,0.9s
VSR **Storozhevoye** **26.51 314** *eP* **P** **20 57 37.2 -2.4**
VSR pmax pmax
comp=Z,50nm,0.8s
MOY **Mondy** **26.61 45** *eP* **P** **20 57 42.8 +2.1**
MOY pmax pmax
comp=Z,120nm,1.9s
TNCH **TengChong** **26.83 107** P **P** **20 57 44.8 +1.8**
TNCH sP sP 20 58 52.3 +0.7
TNCH S **S** **21 02 03.9 +0.2**
TNCH SS SS 21 03 39.9 -26
TNCH pmax pmax
comp=Z,65nm,0.7s
TNCH pmax pmax
comp=Z,130nm,3.1s
KOD **Kodaikanal** **26.96 164** *eP* **P** **20 57 45.9 +1.6**
LZDM **Lanzhou Array** **27.00 81** P **P** **20 57 46.1 +1.5**
comp=Z,3.0nm,0.5s,baz=266,slow=6.8,SNR=10.0
LZDM PcP **PcP** **21 01 01.0 +0.6**
comp=Z,4.8nm,0.4s,baz=270,slow=1.5,SNR=5.9
LZDM ScP **ScP** **21 04 19.2 -1.2**
comp=Z,13nm,0.7s,baz=261,slow=3.9,SNR=12
comp=Z,3.0nm,0.5s
LZH **Lanzhou** **27.09 81** *eP* **P** **20 57 46.9 +1.6**
LZH S **S** **21 02 10.4 +2.8**
LZH pmax pmax
comp=Z,28nm,1.7s
BNN **Bunyan** **27.16 285** P **P** **20 57 45.7 -0.1**
LPSR **Galich'ya Gora** **27.18 316***c* *i* P **P** **20 57 46.2 +0.6**
LPSR pmax pmax
comp=Z,177nm,0.8s
ZAK **Zakamensk** **27.52 49** *eP* **P** **20 57 49.9 +1.1**
ZAK pmax pmax
comp=Z,79nm,1.1s
SIM **Simferopol'** **28.39 299** *eP* **P** **20 57 57.8 +1.3**
SIM *e* *PP **pP** **20 58 41.4 +2.1**
SIM *e* 20 59 01.0
SIM pmax pmax
comp=Z,15nm,1.0s
SIM pmax pmax
comp=Z,30nm,1.1s
SIM pmax pmax
comp=Z,43nm,1.6s
CD2 **Chengdu** **28.42 91** P **P** **20 57 57.8 +0.8**
CD2 pmax pmax
comp=Z,80nm,0.8s
TRD **Trivandrum** **28.53 166** *eP* **P** **20 57 59.9 +2.0**
PZH **PanZhiHua** **28.61 101** P **P** **20 58 01.1 +2.3**
KIRS **Kirsehir-Merke** **28.62 286** ⇓P **P** **20 58 00.3 +1.6**
ILGA **Ilgaz** **28.63 290** **P** **20 57 59.5 +0.6**
MMAI **Mount Meron Ar** **28.66 273** P **P** **20 58 01.1 +2.0**
comp=Z,0.9nm,0.5s,baz=46,slow=7.1,SNR=5.7
MMAI PcP **PcP** **21 01 05.9 +1.7**
comp=Z,1.9nm,0.5s,baz=78,slow=7.9,SNR=7.5
MMAI ScP **ScP** **21 04 24.7 -0.5**
comp=Z,8.2nm,0.7s,baz=66,slow=1.7,SNR=4.7
IRK **Irkutsk** **28.71 46** *eP* **P** **20 57 59.5 +0.3**
IRK pmax pmax
comp=Z,167nm,1.7s
BALJ **Balqa** **28.75 271** P **P** **20 58 00.1 +0.3**
BALJ IAmb IAmb 20 58 48.6
comp=Z,50nm,1.5s
BR131 **Keskin Array S** **28.78 288** P **P** **20 57 59.7 -0.4**
BR131 **Keskin Array S** **28.78 288** P **P** **20 58 01.8 +1.7**
BR131 **Keskin Array S** **28.78 288** P **P** **20 57 59.7 -0.4**
BR131 pmax pmax
comp=Z,20nm,1.4s
BRTR **Keskin Array B** **28.78 288** P **P** **20 58 01.3 +1.2**
BRTR **Keskin Array B** **28.78 288** P **P** **20 58 01.5 +1.4**
comp=Z,3.7nm,0.7s,baz=98,slow=8.8,SNR=27
BRTR PcP **PcP** **21 01 04.8 +0.3**
comp=Z,1.6nm,0.5s,baz=139,slow=3.4,SNR=6.8
SONM **Songino Array** **28.91 55** P **P** **20 58 02.7 +1.5**
SONM **Songino Array** **28.91 55** P **P** **20 58 03.3 +2.0**
comp=Z,55nm,0.6s,baz=268,slow=9.0,SNR=250
SONM PP **PP** **20 59 11.3 +0.5**
comp=Z,27nm,1.0s,baz=267,slow=12,SNR=8.0
SONM PcP **PcP** **21 01 04.5 -0.2**
comp=Z,4.2nm,0.8s,baz=242,slow=2.6,SNR=2.2
SONM ScP **ScP** **21 04 24.2 -1.6**
comp=Z,2.7nm,0.8s,baz=244,slow=4.3,SNR=3.5
comp=Z,55nm,0.6s
GHAJ **Ghor Haditha** **29.06 270** P **P** **20 58 03.4 +0.9**
MOS **Moscow** **29.24 322** *eP* **P** **20 58 03.0 -0.8**
MOS *e* *PP **pP** **20 58 44.4 -2.2**
MOS *e* 20 59 06.8
MOS *eS* **S** **21 02 37.5 -2.9**
MOS pmax pmax
comp=Z,300nm,1.2s
MOS pmax pmax
comp=Z,182nm,1.0s
ULN **Ulaanbaatar** **29.36 56** P **P** **20 58 06.5 +1.4**
ULN **Ulaanbaatar** **29.36 56** P **P** **20 58 07.0 +1.8**
ULN **Ulaanbaatar** **29.36 56***ce* P **P** **20 58 06.8 +1.7**
ULN pmax pmax
comp=Z,151nm,1.7s
OBN **Obninsk** **29.50 320** **P** **20 58 06.5 +0.4**
OBN **Obninsk** **29.50 320**⇑ P **P** **20 58 07.0 +0.9**
OBN **Obninsk** **29.50 320***c* *i* P **P** **20 58 06.8 +0.7**
OBN *e* *PP **pP** **20 58 49.6 +0.7**
OBN *e* 20 59 10.0
OBN *SP **PP** **20 59 18.0 +1.0**
OBN *i* 21 01 05.8
OBN *i* S **S** **21 02 41.8 -2.7**
OBN *i* 21 04 37.2
OBN pmax pmax
comp=Z,415nm,1.7s
HMDM **Hanimaadhoo** **29.70 174** P **P** **20 58 09.9 +1.7**
HMDM **Hanimaadhoo** **29.70 174** P **P** **20 58 11.4 +3.1**
CSS **Mathiatis** **29.81 278** P **P** **20 58 09.9 +0.8**
KMI **Kunming** **30.07 103**⇑ P **P** **20 58 13.0 +1.3**
KMI S **S** **21 02 54.4 -0.2**
KMI ScP **ScP** **21 04 28.7 -1.3**
KMI pmax pmax
comp=Z,32nm,0.8s
KMI pmax pmax
comp=Z,120nm,3.8s
MDUB **Mudurnu** **30.58 289** **P** **20 58 16.0 +0.1**
PALK **Pallekele** **30.64 159** P **P** **20 58 17.5 +1.0**
PALK IAmb IAmb 20 58 19.1
comp=Z,53nm,0.9s
PALK **Pallekele** **30.64 159** P **P** **20 58 18.1 +1.5**
comp=Z,42nm,0.8s,baz=339,slow=11,SNR=22
comp=Z,42nm,0.8s
PALK **Pallekele** **30.64 159** P **P** **20 58 18.1 +1.5**
CHTO **Chiang Mai** **30.83 117** **P** **20 58 18.4 +0.3**
CHTO **Chiang Mai** **30.83 117** P **P** **20 58 19.0 +0.8**
CHTO **Chiang Mai** **30.83 117** P **P** **20 58 18.9 +0.7**
CHTO **Chiang Mai** **30.83 117** S **S** **21 03 10.4 +4.3**
CHTO **Chiang Mai** **30.83 117** P **P** **20 58 18.5 +0.3**
CHTO pmax pmax
comp=Z,23nm,0.8s
CHTO **Chiang Mai** **30.83 117** P **P** **20 58 18.6 +0.4**
CHTO PcP **PcP** **21 01 11.0 +1.1**
CHTO ScP **ScP** **21 04 30.8 -1.6**
CM31 **Chiang Mai Arr** **31.06 118** P **P** **20 58 20.6 +0.4**
CM31 IAmb IAmb 20 58 23.1
comp=Z,52nm,0.9s
CM31 **Chiang Mai Arr** **31.06 118** P **P** **20 58 21.4 +1.2**
SNR=22
CMAR **Chiang Mai Arr** **31.06 118** P **P** **20 58 20.9 +0.7**
CMAR **Chiang Mai Arr** **31.06 118** **ScP** **21 04 31.2 -1.9**
CMAR **Chiang Mai Arr** **31.06 118** P **P** **20 58 21.1 +0.9**
comp=Z,28nm,0.8s,baz=296,slow=8.0,SNR=169
CMAR PcP **PcP** **21 01 11.7 +1.1**
comp=Z,10nm,0.7s,baz=308,slow=2.5,SNR=12
CMAR S **S** **21 03 12.6 +2.9**
comp=Z,2.9nm,0.9s,baz=291,slow=13,SNR=5.0
CMAR ScP **ScP** **21 04 31.6 -1.5**
comp=Z,19nm,0.9s,baz=313,slow=3.3,SNR=23
comp=Z,28nm,0.8s
KLMR **Klimovskoe** **31.16 331** *eP* **P** **20 58 19.7 -0.9**
KLMR *e* *PP **pP** **20 59 04.6 +0.9**
KLMR pmax pmax
comp=Z,209nm,1.0s
BORA **Eskisehir** **31.20 288** **P** **20 58 20.2 -1.2**
BTO **Baotou** **31.27 70** *eP* **P** **20 58 22.5 +0.5**
BTO pP **pP** **20 59 04.4 -2.0**
BTO sP **sP** **20 59 27.5 -3.9**
BTO PP **PnPn** **20 59 33.7 -0.2**
BTO pmax pmax
comp=Z,130nm,1.0s
BTO pmax pmax
comp=Z,370nm,10.1s
PURM **Purcari** **31.48 301**⇑ P **P** **20 58 25.8 +2.2**
XAN **Xi'an** **31.62 83** P **P** **20 58 25.6 +0.6**
XAN sP PP 20 59 37.9 -3.0
XAN PcP **PcP** **21 01 12.5 +0.6**
XAN sS sS 21 04 33.2 -3.4
XAN pmax pmax
comp=Z,76nm,0.9s
PBA **Port Blair** **32.04 135** P **P** **20 58 31.0 +2.3**
ELL **Elmali** **32.13 283** **P** **20 58 29.7 +0.1**
ELL IAmb IAmb 20 58 31.9
comp=Z,29nm,0.6s
ELL **Elmali** **32.13 283** P **P** **20 58 29.7 +0.1**
ELL pmax pmax
comp=Z,29nm,0.6s
TLCR **32.16 299**⇑ P **P** **20 58 31.0 +1.5**
TLCR **32.16 299** P **P** **20 58 31.0 +1.5**
MILM **Milestii Mici** **32.23 302**⇑ P **P** **20 58 29.9 -0.3**
MILM **Milestii Mici** **32.23 302** P **P** **20 58 29.8 -0.3**
MILM **Milestii Mici** **32.23 302**⇑ *iP* **P** **20 58 29.0 -1.2**
comp=Z,80nm,0.8s
AKASG **Malin Array Be** **32.42 309** P **P** **20 58 31.8 +0.1**
AKASG pP **pP** **20 59 15.7 +0.8**
AKASG **Malin Array Be** **32.42 309** P **P** **20 58 32.0 +0.3**
comp=Z,29nm,0.6s,baz=84,slow=7.0,SNR=163
AKASG PP **PnPn** **20 59 48.0 +0.3**
comp=Z,8.9nm,0.9s,baz=87,slow=9.6,SNR=8.2
AKASG PcP **PcP** **21 01 12.8 -0.9**
comp=Z,6.9nm,0.7s,baz=82,slow=3.2,SNR=9.7
AKASG ScP **ScP** **21 04 34.7 -2.5**
comp=Z,7.8nm,1.0s,baz=81,slow=3.4,SNR=9.6
comp=Z,29nm,0.6s
AKBB **Malin Array Si** **32.42 309** P **P** **20 58 31.8 +0.1**
AKBB pP **pP** **20 59 16.0 +1.1**
AKBB PP **PnPn** **20 59 45.0 -2.8**
AKBB **Malin Array Si** **32.42 309***ce* P **P** **20 58 32.3 +0.6**
AKBB pmax pmax
comp=Z,53nm,0.6s
HHC **Hu-ho-hao-te** **32.42 69**⇓ *iP* **P** **20 58 34.4 +2.4**
HHC S **S** **21 03 35.2 +4.6**
HHC pmax pmax
comp=Z,16nm,1.1s
HHC pmax pmax
comp=Z,120nm,4.9s
HHC LR LR
comp=Z,320nm,11.4s
HHC LR LR
comp=Z,190nm,9.8s
HHC LR LR
comp=Z,800nm,9.8s
KIEV **Kiev** **32.42 309** P **P** **20 58 31.9 +0.1**
KIEV IAmb IAmb 20 58 33.1
comp=Z,56nm,0.7s
KIEV **pP** **20 59 15.1 +0.1**
KIEV PP **PnPn** **20 59 45.7 -2.2**
KIEV **Kiev** **32.42 309**⇓ P **P** **20 58 32.6 +0.8**
KIEV **Kiev** **32.42 309** *i* P **P** **20 58 32.5 +0.8**
SNR=41
KIEV **Kiev** **32.42 309** P **P** **20 58 31.9 +0.1**
KIEV *PP **pP** **20 59 15.1 +0.1**
KIEV 20 59 45.7
KIEV pmax pmax
comp=Z,55nm,0.7s
KIEV **Kiev** **32.42 309** P **P** **20 58 32.1 +0.3**
KIEV PcP **PcP** **21 01 13.2 -0.5**
TPGR **Topolog** **32.44 298**⇑ P **P** **20 58 33.9 +1.9**
MFTR **Murfatlar** **32.44 297**⇑ P **P** **20 58 34.2 +2.2**
TIRR **Tirgusor** **32.44 297** P **P** **20 58 30.1 -1.9**
TIRR **Tirgusor** **32.44 297** P **P** **20 58 30.1 -1.9**
TIRR pmax pmax
comp=Z,60nm,1.8s
AKAS **Kas** **32.48 282** P **P** **20 58 31.3 -1.3**
GYA **Guiyang** **32.55 97**⇓ P **P** **20 58 34.8 +1.5**
GYA pmax pmax
comp=Z,37nm,0.7s

CFR	Carcaliu	32.64	299	⇓	P		P	20 58 35.2	+1.4
CFR	Carcaliu	32.64	299		P		P	20 58 35.1	+1.4
SORM	Soroca	32.64	304	⇓	P		P	20 58 34.2	+0.6
SORM	Soroca	32.64	304		P		P	20 58 34.2	+0.6
CTYL	Yalikoy Yolu	32.68	292	⇓	P		P	20 58 35.8	+1.7
VLDR	Vladesti	32.69	300	⇑	P		P	20 58 36.1	+1.9
TATR	Tatarca	32.70	299	⇓	P		P	20 58 36.5	+2.2
MANT	Manisa	32.86	286		P		P	20 58 35.8	-0.2
MANT					IAmb		IAmb	20 58 59.2	
	comp=Z,27nm,0.3s								
ICOR	Ion Corvin	32.89	297	⇑	P		P	20 58 37.8	+2.0
VASR	Vaslui	32.92	301	⇓	P		P	20 58 37.6	+1.5
SLVN	Son La	32.99	108		P		P	20 58 37.5	+0.3
SLVN					IAmb		IAmb	20 58 39.9	
	comp=Z,41nm,0.7s								
SLVN	Son La	32.99	108		P		P	20 58 38.8	+1.7
GHRR		33.16	300	⇓	P		P	20 58 40.8	+2.5
ENH	Enshi	33.27	89		P		P	20 58 40.3	+0.9
ENH					IAmb		IAmb	20 58 41.6	
	comp=Z,55nm,1.0s								
ENH	Enshi	33.27	89		P		P	20 58 40.5	+1.1
ENH	Enshi	33.27	89		P		P	20 58 40.8	+1.3
ENH					ScP		ScP	21 04 38.8	-1.8
VRI	Vrincioaia	33.63	300	⇓	P		P	20 58 44.3	+1.9
VRI	Vrincioaia	33.63	300		P		P	20 58 44.2	+1.9
ARG	Arkhangelos	33.65	282		IAmb		IAmb	20 58 45.5	
	comp=Z,52nm,1.0s								
PLOR	Plostina	33.69	300	⇑	P		P	20 58 44.9	+2.0
PLOR	Plostina	33.69	300		P		P	20 58 44.8	+2.0
TESR	Tescani	33.70	301	⇑	P		P	20 58 44.1	+1.2
LOZB	Loznitsa	33.79	295	⇑	P		P	20 58 45.2	+1.5
RAZG	Razgrad	33.84	296	⇑	P		P	20 58 45.7	+1.5
NEHR	Nehoiu	33.94	299	⇓	P		P	20 58 48.0	+3.0
MNK	Minsk	34.02	315	*i*	P		P	20 58 46.5	+1.0
	comp=Z,98nm,0.8s,baz=104								
MNK				*i*	pP		pP	20 59 31.4	+2.3
MNK				*i*	PP		PnPn	21 00 08.2	+0.9
MNK				*i*	S		S	21 03 56.4	+1.6
MNK				*i*	sS		sS	21 05 12.7	-1.0
MNK				*i*	SS		SS	21 06 30.5	+2.3
MNK	Minsk	34.02	315	*i*	P		P	20 58 46.5	+1.0
MNK				*i*	*PP		pP	20 59 31.3	+2.3
MNK				*i*				21 00 08.2	
MNK				*i*	S		S	21 03 56.4	+1.6
MNK				*i*	*SS		sS	21 05 12.6	-1.0
MNK					pmax		pmax		
	comp=Z,98nm,0.8s								
TURR	Turia	34.13	300	⇓	P		P	20 58 48.8	+2.1
CIT	Chita	34.18	49	*e*	P		P	20 58 48.4	+1.4
CIT				*e*				20 59 29.2	
CIT				*e*				20 59 57.4	
CIT				*e*				21 00 10.2	
CIT				*e*				21 01 19.4	
CIT				*e*				21 04 01.2	
CIT					pmax		pmax		
	comp=Z,320nm,1.5s								
MLR	Muntele Rosu	34.18	299		P		P	20 58 49.2	+2.0
MLR					IAmb		IAmb	20 58 50.9	
	comp=Z,78nm,1.0s								
MLR	Muntele Rosu	34.18	299	⇓	P		P	20 58 49.2	+2.0
MLR	Muntele Rosu	34.18	299		P		P	20 58 49.2	+2.0
NRIK	Noril'sk	34.27	11				P	20 58 48.4	+0.9
NRIK	Noril'sk	34.27	11		P		P	20 58 49.1	+1.7
	comp=Z,269nm,0.5s,baz=202,slow=5.6,SNR=464								
NRIK					ScP		ScP	21 04 42.1	-1.2
	comp=Z,6.1nm,0.8s,baz=196,slow=2.1,SNR=3.6								
NRIK	Noril'sk	34.27	11	*ce*	P		P	20 58 48.9	+1.4
NRIK					pmax		pmax		
	comp=Z,245nm,0.6s								
OZUR		34.29	300	⇓	P		P	20 58 50.0	+1.9
LYN	LuoYang	34.31	80	⇑	P		P	20 58 50.2	+1.9
LYN					ScP		ScP	21 04 43.0	-1.1
LYN					pmax		pmax		
	comp=Z,92nm,1.1s								
ELND	Elena	34.34	295	⇑	P		P	20 58 49.9	+1.4
EZN	Ezine	34.36	289	⇓	P		P	20 58 49.4	+0.7
EZN	Ezine	34.36	289		P		P	20 58 49.3	+0.7
PUL	Pulkovo	34.53	325	*e*	P		P	20 58 50.2	+0.4
PUL	Pulkovo	34.53	325	*ce*	P		P	20 58 51.1	+1.3
PUL					pmax		pmax		
	comp=Z,168nm,0.6s								
KARP	Karpathos	34.57	282		P		P	20 58 50.5	-0.1
KARP					IAmb		IAmb	20 59 13.6	
	comp=Z,74nm,0.9s								
DOPR	Dopca	34.57	300	⇑	P		P	20 58 52.2	+1.8
BURAR	Bucovina Array	34.71	303		P		P	20 58 52.4	+0.7
BURAR	Bucovina Array	34.71	303	⇓	P		P	20 58 53.3	+1.5
BURAR	Bucovina Array	34.71	303		P		P	20 58 53.2	+1.5
NACGM	Naroch	34.74	316	*e*	P		P	20 58 52.4	+0.7
ATD	Arta Tunnel	34.97	232				P	20 58 54.8	+0.6
ATD					IAmb		IAmb	20 58 57.5	
	comp=Z,74nm,1.2s								
ATD	Arta Tunnel	34.97	232		P		P	20 58 56.6	+2.5
	SNR=8.6								
ARR	Arges	35.11	299	⇑	P		P	20 58 57.0	+1.9
ISAL	Salakas	35.27	317	*e*	P		P	20 58 57.0	+0.8
ARCR	ARCALIA	35.29	302	⇓	P		P	20 58 59.3	+2.8
HNS	HongShan	35.38	75	⇑	P		P	20 58 58.8	+1.4
HNS					PcP		PcP	21 01 23.2	+0.8
HNS					S		S	21 04 19.3	+3.3
HNS					ScP		ScP	21 04 46.9	-1.0
HNS					ScS		ScS	21 08 51.6	-1.3
HNS					pmax		pmax		
	comp=Z,36nm,0.9s								
APE	Apeiranthos	35.49	285	⇑	P		P	20 58 59.5	+1.1
APE	Apeiranthos	35.49	285		P		P	20 58 59.4	+1.1
XLT	XiLinHaoTe	35.49	63	*e*	P		P	20 59 00.8	+2.4
XLT					pmax		pmax		
	comp=Z,26nm,0.8s								
XLT					pmax		pmax		
	comp=Z,130nm,5.9s								
JOF	Joensuu	35.54	330	*e*	P		P	20 58 58.4	+0.1
LOT	Lotru	35.72	299	⇓	P		P	20 59 02.0	+1.7
VSU	Vasula	35.77	322	*e*	P		P	20 58 59.3	-1.1
VSU	Vasula	35.77	322	*ce*	P		P	20 59 00.2	-0.2
VSU					pmax		pmax		
	comp=Z,161nm,0.6s								
BOD	Bodaibo	35.80	39	⇓	*i* P		P	20 59 01.5	+0.8
BOD					pmax		pmax		
	comp=Z,186nm,1.0s								
CJR	Cluj-Napoca	35.80	301		P		P	20 59 03.8	+2.8
BMR	Baia Mare	35.88	303	⇑	P		P	20 59 03.8	+2.2
BMR	Baia Mare	35.88	303		P		P	20 59 03.7	+2.2
KAAM	Kaadhehdhoo	35.91	175		P		P	20 59 02.9	+0.8
KAAM	Kaadhehdhoo	35.91	175		P		P	20 59 04.4	+2.4
BJT	Baijiatuan	36.01	70		P		P	20 59 03.6	+0.9
BJT	Baijiatuan	36.01	70		P		P	20 59 04.1	+1.4
BJT	Baijiatuan	36.01	70		P		P	20 59 03.6	+0.9
BJT					pmax		pmax		
	comp=Z,15nm,0.8s								
BJI	Beijing	36.01	70		P		P	20 59 02.1	-0.6
BJI					pP		pP	20 59 45.1	-2.7
BJI					PcP		PcP	21 01 25.1	+0.9
BJI					ScP		ScP	21 04 49.4	-0.8
BJI					ScS		ScS	21 08 56.3	0.0
BJI					pmax		pmax		
	comp=Z,10.0nm,0.7s								
DEV	Deva	36.31	300		P		P	20 59 07.6	+2.5
DRGR		36.41	302	⇓	P		P	20 59 08.3	+2.2
DRGR		36.41	302		P		P	20 59 08.3	+2.2
GZR	Gura Zlata	36.42	299	⇑	P		P	20 59 07.1	+0.9
GZR	Gura Zlata	36.42	299		P		P	20 59 07.1	+0.9
PABE	Paberze	36.45	316				P	20 59 06.2	0.0
PABE	Paberze	36.45	316	*e*	P		P	20 59 05.7	-0.5
KWP	Kalwaria Pacla	36.46	306	*e*	P		P	20 59 07.3	+0.9
KWP				*e*	L		L	21 45 22.5	
	comp=Z,4μm,40.5s								
KWP	Kalwaria Pacla	36.46	306		P		P	20 59 08.1	+1.7
VSVD	Vaisvydziai	36.57	317	*e*	P		P	20 59 07.6	+0.4
BLKB	Belogradchik	36.62	296	⇓	P		P	20 59 09.6	+1.7
SUW	Suwalki	36.62	314	*e*	P		P	20 59 07.6	-0.1
SUW				*e*	L		L	21 47 29.5	
	comp=Z,4μm,41.7s								
SUW	Suwalki	36.62	314	*e*	P		P	20 59 06.7	-1.0
HERR	Herculane	36.70	298	⇑	P		P	20 59 09.6	+1.1
WHN	Wuhan	37.08	86		P		P	20 59 12.9	+1.0
WHN					PcP		PcP	21 01 28.1	+0.4
WHN					ScP		ScP	21 04 52.8	-1.6
WHN					pmax		pmax		
	comp=Z,150nm,1.0s								
FINES	FINESS Array B	37.11	326		P		P	20 59 11.8	+0.1
FINES	FINESS Array B	37.11	326		P		P	20 59 12.5	+0.8
	comp=Z,100nm,0.7s,baz=112,slow=10,SNR=309								
FINES					PcP		PcP	21 01 27.5	+0.3
	comp=Z,12nm,0.7s,baz=90,slow=3.8,SNR=2.7								
FINES					S		S	21 04 37.6	-4.0
	comp=Z,5.4nm,0.9s,baz=99,slow=14,SNR=2.2								
	comp=Z,100nm,0.7s								
MDVR	Moldovita	37.21	298	⇓	P		P	20 59 15.0	+2.1
BZS	Buzias	37.22	300	⇓	P		P	20 59 15.0	+2.1
BZS	Buzias	37.22	300		P		P	20 59 14.9	+2.1
LVZ	Lovozero	37.22	339		P		P	20 59 12.8	+0.2
LVZ	Lovozero	37.22	339	*ce*	P		P	20 59 13.5	+0.9
LVZ					pmax		pmax		
	comp=Z,111nm,0.5s								
LVZ	Lovozero	37.22	339		P		P	20 59 13.3	+0.7
APA	Apatity	37.39	338	⇓	*i* P		P	20 59 13.0	-0.9
APA					*i* *PP		pP	20 59 57.9	-0.2
APA					*i*			21 01 28.7	
APA					*i* S		S	21 04 42.9	-2.7
APA					*i* SS		SS	21 07 29.8	-8.9
MEF	Metsahovi	37.46	324	*e*	P		P	20 59 14.4	-0.2
TIA	Tai'an	37.55	76		P		P	20 59 17.1	+1.4
TIA					pP		pP	21 00 03.2	+2.1
TIA					PcP		PcP	21 01 29.3	+0.3
TIA					S		S	21 04 51.9	+3.0
TIA					ScP		ScP	21 04 54.0	-2.0
TIA					ScS		ScS	21 09 03.5	-1.6
TIA					pmax		pmax		
	comp=Z,90nm,0.9s								
BEL	Belsk	37.81	310	*e*	P		P	20 59 19.1	+1.4
BEL				*e*	L		L	21 46 11.7	
	comp=Z,80μm,45.9s								
SLIT	Slitere, Latvi	37.81	319	*e*	P		P	20 59 17.1	-0.5
UBPT	Khong Chiam	37.85	115		P		P	20 59 18.6	+0.1
UBPT					IAmb		IAmb	20 59 19.7	
	comp=Z,43nm,0.8s								
UBPT	Khong Chiam	37.85	115		P		P	20 59 18.3	-0.1
HIA	Hailar	37.86	54		IAmb		IAmb	20 59 21.1	
	comp=Z,46nm,1.0s								
HIA	Hailar	37.86	54		P		P	20 59 19.9	+1.7
HIA	Hailar	37.86	54		S		S	21 04 56.5	+3.1
HIA	Hailar	37.86	54		P		P	20 59 20.4	+2.1
HILR	Hailar Array B	37.87	54		P		P	20 59 20.2	+1.8
	comp=Z,13nm,0.4s,baz=282,slow=8.9,SNR=40								
HILR					PcP		PcP	21 01 30.4	+0.6
	comp=Z,5.7nm,0.5s,baz=286,slow=3.4,SNR=7.1								
HILR					ScP		S	21 04 55.3	+1.8
	comp=Z,2.6nm,0.5s,baz=270,slow=2.9,SNR=5.0								
	comp=Z,13nm,0.4s								
KEF	Keuruu	37.91	327	*e*	P		P	20 59 18.5	+0.2
NIE	Niedzica	38.02	306	*e*	P		P	20 59 21.4	+1.8
NIE				*e*	L		L	21 47 02.6	
	comp=Z,2μm,30.7s								
NIE	Niedzica	38.02	306		P		P	20 59 21.4	+1.8
PSZ	Piszkesteto	38.30	303				P	20 59 21.7	-0.3
PSZ	Piszkesteto	38.30	303	⇓	P		P	20 59 24.0	+2.0
PSZ	Piszkesteto	38.30	303	*e*	P		P	20 59 21.9	-0.1
PSZ	Piszkesteto	38.30	303		P		P	20 59 23.9	+2.0
OJC	Ojcow	38.36	307	*e*	P		P	20 59 23.1	+0.8
OJC				*e*	L		L	21 45 27.9	
	comp=Z,4μm,40.3s								
OJC	Ojcow	38.36	307		P		P	20 59 23.1	+0.8
RAF	Rauma	38.94	325	*e*	P		P	20 59 25.8	-1.2
VAF	Ylistaro	39.17	328	*e*	P		P	20 59 28.7	-0.1
MORH	Mrgy, Hungar	39.25	301	⇑	P		P	20 59 30.9	+1.1
SRO	Srobarova	39.37	303	*e*	P		P	20 59 32.7	+2.0
SRO					pmax		pmax		
	comp=Z,37nm,0.9s								
SRO	Srobarova	39.37	303	*e*	P		P	20 59 32.7	+2.0
AAL	Aland	39.56	323	*e*	P		P	20 59 31.2	-0.9
FURI	Furi	39.63	234		P		P	20 59 35.6	+2.1
MAUC	Maruska	39.64	306	*e*	P		P	20 59 35.2	+2.2
LHMI	Lhok Sumawe	39.65	135		P		P	20 59 33.5	+0.1
LHMI					IAmb		IAmb	20 59 38.1	
	comp=Z,50nm,0.7s								
LHMI	Lhok Sumawe	39.65	135		P		P	20 59 31.8	-1.6
	comp=Z,73nm,0.9s								
STEB	Steborice	39.66	307	*e*	P		P	20 59 34.5	+1.4
JAVC	Velka Javorina	39.76	305	*e*	P		P	20 59 35.9	+1.9
MORC	Moravsky Berou	39.81	306		P		P	20 59 33.4	-1.0
MORC	Moravsky Berou	39.81	306	⇑	P		P	20 59 35.7	+1.3
MORC	Moravsky Berou	39.81	306	*e*	P		P	20 59 35.4	+1.0
MORC	Moravsky Berou	39.81	306		P		P	20 59 35.7	+1.3
MODS	Modra-Piesok	40.04	304	*e*	P		P	20 59 37.5	+1.3
MODS					pmax		pmax		
	comp=Z,23nm,1.2s								
MODS	Modra-Piesok	40.04	304	*e*	P		P	20 59 37.5	+1.3
GKP	Gorka Klasztor	40.07	312	*e*	P		P	20 59 37.6	+1.3
GKP				*e*	L		L	21 47 50.7	
	comp=Z,4μm,35.1s								
GKP	Gorka Klasztor	40.07	312		P		P	20 59 37.4	+1.1
MLSI	Meulaboh, Aceh	40.14	137		P		P	20 59 36.4	-1.0
	comp=Z,89nm,0.9s								
NJ2	Nanjing	40.16	82	⇓	*i* P		P	20 59 38.9	+1.5
NJ2					PcP		PcP	21 01 38.1	+0.8
NJ2					ScP		ScP	21 05 04.3	-1.9
NJ2					pmax		pmax		
	comp=Z,60nm,0.9s								
KRLC	Kraliky	40.30	307	*e*	P		P	20 59 39.8	+1.4
KRLC	Kraliky	40.30	307	*e*	P		P	20 59 39.8	+1.4
DL2	Dalian	40.37	70		P		P	20 59 40.1	+1.0
DL2					pP		pP	21 00 25.9	+0.9
DL2					S		S	21 05 34.9	+4.0
DL2					sS		sS	21 06 55.9	+4.6
DL2					pmax		pmax		
	comp=Z,150nm,0.7s								
VRAC	Vranov	40.45	306	⇑	P		P	20 59 42.0	+2.4
VRAC	Vranov	40.45	306	*e*	P		P	20 59 40.7	+1.1
VRAC	Vranov	40.45	306		P		P	20 59 42.0	+2.4
KEV	Kevo	40.56	339		P		P	20 59 40.7	+0.5
KEV	Kevo	40.56	339		P		P	20 59 40.7	+0.5
KEV					pmax		pmax		
	comp=Z,158nm,0.9s								
KEV	Kevo	40.56	339		P		P	20 59 41.0	+0.8
SOP	Sopron	40.56	303		P		P	20 59 42.1	+1.6
KRUC	Moravsky	40.59	305	*e*	P		P	20 59 41.9	+1.2
DPC	Dobruska-Polom	40.59	307	*e*	P		P	20 59 42.4	+1.6
DPC	Dobruska-Polom	40.59	307	*e*	P		P	20 59 42.4	+1.6
KSP	Ksiaz	40.60	308	*e*	P		P	20 59 42.3	+1.5
KSP				*e*	L		L	21 46 37.5	
	comp=Z,5μm,38.4s								
OSTC	Ostas	40.65	308	*e*	P		P	20 59 42.8	+1.5
OSTC	Ostas	40.65	308	*e*	P		P	20 59 42.8	+1.5
CHVC	Chvalec	40.76	308	*e*	P		P	20 59 43.6	+1.5
CHVC	Chvalec	40.76	308	*e*	P		P	20 59 43.6	+1.5
UPC	Upice	40.78	308	*e*	P		P	20 59 44.2	+1.9
UPC	Upice	40.78	308	*e*	P		P	20 59 44.2	+1.9
ARCES	ARCESS Array B	40.90	338		P		P	20 59 43.7	+0.7
ARCES	ARCESS Array B	40.90	338		P		P	20 59 44.1	+1.1
	comp=Z,185nm,0.7s,baz=111,slow=7.8,SNR=675								
	comp=Z,185nm,0.7s								
CONA	Conrad Observa	41.01	304	*e*	P		P	20 59 45.3	+1.0
	comp=Z,19nm,0.9s,SNR=12								
ARSA	Arzberg	41.30	303	*i*	P		P	20 59 47.7	+1.1
	comp=Z,9.2nm,1.2s								
KCSI	Kotacane, Aceh	41.51	136		P		P	20 59 46.0	-2.6
	comp=Z,26nm,0.6s								
SNSI	Sinabang, Aceh	41.64	138		P		P	20 59 49.4	-0.3
SOKA	Soboth	41.69	302		P		P	20 59 51.4	+1.6
	comp=Z,12nm,0.6s,SNR=12								
PRU	Pruhonice	41.75	307	*e*	P		P	20 59 51.5	+1.4
PRU	Pruhonice	41.75	307	*e*	P		P	20 59 51.5	+1.4
KULM	Kulim	41.79	131				P	20 59 51.0	+0.2
KULM					PcP		PcP	21 01 43.8	+0.9
KULM	Kulim	41.79	131		P		P	20 59 51.5	+0.7
PRA	Prague	41.81	307	*e*	P		P	20 59 49.4	-1.2
PRA	Prague	41.81	307	*e*	P		P	20 59 49.4	-1.2
SGRT	San Giovanni R	41.94	294		P		P	20 59 52.4	+0.4
SGRT					PcP		PcP	21 01 44.9	+1.8
CKRC	Cesky Krumlov	41.98	305	*e*	P		P	20 59 53.7	+1.7
CKRC					MLR		MLR		
	comp=Z,1μm,22.2s								
CKRC	Cesky Krumlov	41.98	305	*e*	P		P	20 59 53.7	+1.7
ZVC	Zvikov	42.01	306	*e*	P		P	20 59 53.7	+1.5
MOA	Molln	42.09	304	*e*	P		P	20 59 53.7	+0.8
	comp=Z,12nm,0.8s,SNR=10								
BRG	Berggiesshubel	42.09	308	*e*	P		P	20 59 54.2	+1.3
	comp=Z,25nm,0.9s,baz=84,slow=7.8								
DEL	Delary	42.20	317	*i*	P		P	20 59 54.6	+1.0
DLV	Lat	42.24	115		P		P	20 59 54.5	-0.2
DLV					IAmb		IAmb	20 59 56.9	
	comp=Z,71nm,1.2s								
GEC2	GERESS Array S	42.37	305	*e*	P		P	20 59 56.1	+0.8
	comp=Z,7.5nm,1.1s,baz=84,slow=7.8								
GERES	GERESS Array B	42.37	305		P		P	20 59 56.4	+1.1
	comp=Z,3.6nm,0.9s,baz=79,slow=7.2,SNR=17								
GERES					PP		PP	21 01 36.9	-1.0
	comp=Z,4.3nm,1.0s,baz=78,slow=9.1,SNR=3.9								
GERES					ScP		ScP	21 05 13.0	-1.8
	comp=Z,2.7nm,0.9s,baz=83,slow=3.4,SNR=7.8								
LUNU	Lund	42.39	315	*i*	P		P	20 59 56.2	+1.1
RGN	Rugen	42.43	314		P		P	20 59 55.4	-0.1
KHC	Kasperske Hory	42.43	306	*ce*	P		P	20 59 57.6	+1.9
KHC					pmax		pmax		
	comp=Z,9.0nm,1.7s								
KHC	Kasperske Hory	42.43	306	*e*	P		P	20 59 57.2	+1.5
BIOA	Bad Ischl, Aus	42.52	304	*e*	P		P	20 59 57.6	+1.1
	comp=Z,3.7nm,0.4s								
ZEA	Zeya	42.59	47	*e*	P		P	20 59 59.1	+2.3
ZEA					pmax		pmax		
	comp=E,30nm,0.7s								
ZEA					pmax		pmax		
	comp=N,20nm,0.8s								
ZEA					pmax		pmax		
	comp=Z,70nm,0.8s								
BJUU	Bjuv	42.65	316	*i*	P		P	20 59 57.9	+0.7
MYKA	Terra Mystica	42.65	302	*e*	P		P	20 59 58.8	+1.2
	comp=Z,20nm,1.9s								
HFS	Hagfors	42.65	322		P		P	20 59 57.9	+0.6
	comp=Z,137nm,0.6s,baz=98,slow=10,SNR=506								
	comp=Z,137nm,0.6s								
IPM	Ipoh	42.65	131				P	20 59 57.2	-0.6
IPM					IAmb		IAmb	20 59 59.1	
	comp=Z,82nm,0.7s								
IPM					pP		pP	21 00 40.9	-2.9
IPM					PP		PP	21 01 40.2	-1.2
IPM							PcP	21 01 46.8	+1.0
IPM	Ipoh	42.65	131		P		P	20 59 57.7	-0.1
CLL	Collm	42.66	309	*i*	P		P	20 59 57.9	+0.4
CLL					pmax		pmax		
	comp=Z,17nm,1.0s								
CLL					MLR		MLR		
	comp=Z,3μm,44.0s								
CLL	Collm	42.66	309	*e*	P		P	20 59 58.0	+0.6
	comp=Z,14nm,0.9s,baz=84,slow=7.8								
CLL	Collm	42.66	309	*i*	P		P	20 59 57.9	+0.4
	comp=Z,17nm,1.0s								
CLL				*e*	pP		pP	21 00 47.0	+4.4
CLL				*i*	PP		PcP	21 01 45.1	-0.1
	comp=Z,40nm,1.7s								
PRED	Cave del Predi	42.72	302		P		P	20 59 57.8	-0.3
PSI	Prapat	42.76	135		P		P	20 59 58.4	-0.3
PSI	Prapat	42.76	135		P		P	20 59 58.5	-0.3
PSI					*PP		pP	21 00 42.8	-1.7
PSI								21 01 46.9	
PSI					pmax		pmax		
	comp=Z,66nm,1.0s								
HEH	HeiHe	42.81	53	*e*	P		P	20 59 59.6	+1.0
HEH					pmax		pmax		
	comp=Z,290nm,0.8s								
RPSI	Rantau Prapat	42.84	135		P		P	20 59 58.5	-0.9
RPSI					IAmb		IAmb	21 00 03.1	
	comp=Z,66nm,1.0s								
RPSI					pP		pP	21 00 42.8	-2.3
RPSI					PcP		PcP	21 01 46.9	+0.5
FABU	Falkenberg	42.86	317	*i*	P		P	20 59 59.6	+0.6
BORU	Boraas	42.88	318	*i*	P		P	20 59 59.7	+0.6
COP	Copenhagen	42.97	315	*i*	P		P	21 00 01.6	+1.8
COP					IAmb		IAmb	21 00 01.8	
	comp=Z,103nm,0.8s								
TANN	Tannenbergstha	43.06	308	*e*	P		P	21 00 01.8	+1.1
	comp=Z,13nm,1.1s,baz=84,slow=7.8								
MSEY	Mahe Island	43.18	202		P		P	21 00 02.7	+0.6
MSEY					IAmb		IAmb	21 00 04.2	
	comp=Z,64nm,0.8s								
MSEY	Mahe Island	43.18	202		P		P	21 00 03.5	+1.4
MSEY	Mahe Island	43.18	202	*i*	P		P	21 00 03.5	+1.4
	SNR=7.3								
MSEY	Mahe Island	43.18	202		P		P	21 00 02.7	+0.6
MSEY					pmax		pmax		
	comp=Z,64nm,0.8s								
LESA	Schwarzleotal	43.20	303	*e*	P		P	21 00 02.9	+0.9
	comp=Z,9.6nm,0.4s,SNR=6.0								
LESA				*e*	PP		PP	21 01 46.3	-0.4
	comp=Z,3.7nm,0.6s								
LESA				*e*	ScP		ScP	21 05 16.1	-2.1
	comp=Z,4.2nm,0.8s								
GSI	Gunungsitoli	43.24	138		P		P	21 00 03.2	+0.7
GSI					PcP		PcP	21 01 49.5	+1.7
GSI	Gunungsitoli	43.24	138		P		P	21 00 03.6	+1.

MOTA *e*ScP **ScP** 21 05 20.4 -2.2
comp=Z,12nm,1.0s
YAK Yakutsk 44.38 36 P **P** 21 00 11.2 +0.3
YAK Yakutsk 44.38 36*c i*P **P** 21 00 11.3 +0.3
YAK *e**PP **pP** 21 00 56.3 -1.0
YAK *e* 21 01 52.1
YAK *e* 21 02 00.4
YAK *e*S **S** 21 06 30.1 +1.2
YAK *e**SS **sS** 21 07 49.2 -1.2
YAK *e* 21 09 45.8
YAK pmax pmax
comp=Z,207nm,0.9s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=E,52nm,1.1s
YAK pmax pmax
comp=Z,103nm,2.0s
YAK pmax pmax
comp=E,70nm,2.0s
YAK pmax pmax
comp=N,51nm,2.1s
YAK smax smax
comp=E,267nm,1.8s
YAK smax smax
comp=N,160nm,1.8s
YAK Yakutsk 44.38 36 P **P** 21 00 11.4 +0.4
GTTG Gottingen 44.55 309 *e*P **P** 21 00 13.6 +1.1
comp=N,44nm,1.0s,baz=84,slow=7.8
INCN Inchon 44.55 71 P **P** 21 00 12.9 +0.2
INCN Inchon 44.55 71 P **P** 21 00 13.7 +1.0
INCN Inchon 44.55 71 P **P** 21 00 12.9 +0.2
INCN pmax pmax
comp=Z,30nm,0.7s
SSRD Sdr. Stenderup 44.55 315 *i* P **P** 21 00 14.7 +2.2
SSRD IAmb IAmb 21 00 14.7
comp=Z,83nm,0.9s
FETA Feichten 44.57 303 *e*P **P** 21 00 13.2 +0.2
comp=Z,4.3nm,0.5s,SNR=7.8
FETA *e*PcP **PcP** 21 01 52.0 -0.1
comp=Z,12nm,0.7s
FETA *e*ScP **ScP** 21 05 22.1 -1.8
comp=Z,12nm,1.1s
UBBA Unterbreizbach 44.59 308 *e*P **P** 21 00 13.6 +0.9
comp=Z,6.9nm,1.1s,baz=84,slow=7.8
KONO Kongsberg 44.66 321 P **P** 21 00 13.5 +0.3
KONO IAmb IAmb 21 00 14.4
comp=Z,43nm,0.6s
KONO Kongsberg 44.66 321*c e*P **P** 21 00 14.1 +0.9
KONO pmax pmax
comp=Z,77nm,2.5s
KONO Kongsberg 44.66 321 P **P** 21 00 13.9 +0.7
KONO PcP **PcP** 21 01 52.2 +0.3
MNSI Mandailing Nat 44.77 136 P **P** 21 00 14.6 0.0
comp=Z,3µmcomp=Z,93nm,0.9s
GOET G??ttrup 44.77 317 *i* P **P** 21 00 16.1 +2.0
GOET IAmb IAmb 21 00 16.6
comp=Z,90nm,0.9s
MUD Monsted U'grnd 44.80 316 *i* P **P** 21 00 15.3 +1.0
MUD IAmb IAmb 21 00 16.4
comp=Z,55nm,1.2s
RETH Rethem/Aller, 44.83 311 *e*P **P** 21 00 15.3 +0.7
comp=Z,26nm,1.2s,baz=84,slow=7.8
MDJ Mudanjiang 45.01 60 P **P** 21 00 17.4 +1.1
DAVA Damuels 45.10 303 *e*P **P** 21 00 17.7 +0.5
comp=Z,17nm,0.4s,SNR=17
DAVA *e*ScP **ScP** 21 05 24.5 -1.6
comp=Z,11nm,0.9s
HOMB Homborsund 45.17 319 *i* P **P** 21 00 17.9 +0.7
DAVOX Davos/Dischmat 45.19 303 ScP **ScP** 21 05 25.6 -0.8
comp=Z,5.7nm,0.8s,baz=111,slow=8.6,SNR=6.9
SSLB Suanglung 45.26 92 P **P** 21 00 19.7 +1.2
SSLB IAmb IAmb 21 00 21.7
comp=Z,53nm,0.8s
TJN Taejon 45.44 72 **P** 21 00 18.7 -1.0
TJN Taejon 45.44 72 P **P** 21 00 19.7 0.0
TJN Taejon 45.44 72 P **P** 21 00 18.7 -1.0
TJN pmax pmax
comp=Z,197nm,0.6s
KS19 Wonju Array Si 45.48 71 P **P** 21 00 19.9 -0.1
KS19 IAmb IAmb 21 00 22.9
comp=Z,38nm,0.6s
KS19 PcP **PcP** 21 01 53.7 -1.5
KSAR Wonju Array Be 45.51 71 P **P** 21 00 20.1 -0.2
KSAR pP **pP** 21 01 02.9 -4.3
KSAR PcP **PcP** 21 01 54.0 -1.2
KSRS Korea Array 45.54 71 P **P** 21 00 20.8 +0.3
comp=Z,42nm,0.7s,baz=274,slow=6.9,SNR=129
KSRS PcP **PcP** 21 01 54.2 -1.1
comp=Z,6.4nm,0.8s,baz=286,slow=3.0,SNR=6.3
KSRS ScP **ScP** 21 05 25.9 -1.9
comp=Z,2.7nm,0.9s,baz=288,slow=4.6,SNR=5.1
comp=Z,42nm,0.7s
TNS Taunus Mts 45.64 308 *e*P **P** 21 00 21.7 +0.5
comp=Z,24nm,1.4s,baz=84,slow=7.8
YULB Yu-li 45.72 92 IAmb IAmb 21 00 27.6
comp=Z,232nm,2.0s
TWG Pinlang 45.82 93 IAmb IAmb 21 00 26.4
comp=Z,82nm,1.0s
IBBN Ibbenburen 45.84 311 *e*P **P** 21 00 23.5 +0.9
comp=Z,42nm,0.9s,baz=84,slow=7.8
SNART Snartemo 45.86 319 *i* P **P** 21 00 24.1 +1.4
LODK Lodwar 45.90 232 P **P** 21 00 24.7 +1.0
LODK IAmb IAmb 21 00 26.6
comp=Z,62nm,0.8s
LODK PP **PP** 21 02 10.3 -4.6
LODK Lodwar 45.90 232 P **P** 21 00 25.6 +1.9
SNR=20
BFO Black Forest 45.98 305 P **P** 21 00 24.4 +0.6
BKNI Bangkinang 45.98 134 P **P** 21 00 24.2 0.0
BKNI Bangkinang 45.98 134 P **P** 21 00 24.1 -0.1
comp=Z,157nm,0.8s
TIXI Tiksi 46.05 22 P **P** 21 00 24.4 +0.5
TIXI Tiksi 46.05 22⇑ *e*P **P** 21 00 24.4 +0.5
TIXI pmax pmax
comp=Z,253nm,1.0s
TIXI Tiksi 46.05 22 P **P** 21 00 24.6 +0.7
BUG Bochum--Univer 46.23 310 *e*P **P** 21 00 26.5 +0.8
comp=Z,42nm,1.1s,baz=84,slow=7.8
PPI Padang Panjang 46.26 136 P **P** 21 00 26.0 -0.3
comp=Z,1µmcomp=Z,85nm,0.7s
SISI Saibi 46.26 138 P **P** 21 00 26.5 +0.2
comp=Z,78nm,0.9s
MYKOM Kota Tinggi 46.49 130 **P** 21 00 28.4 +0.3
MYKOM IAmb IAmb 21 00 32.9
comp=Z,59nm,0.8s
MYKOM PcP **PcP** 21 01 58.1 -0.9
MYKOM PP **PP** 21 02 16.9 -3.3
MYKOM Kota Tinggi 46.49 130 P **P** 21 00 28.9 +0.8
PDSI Padang 46.67 136 P **P** 21 00 28.8 -0.7
comp=Z,2µmcomp=Z,134nm,0.6s
USRK Ussuriysk Ar. 46.78 60 P **P** 21 00 30.3 +0.3
comp=Z,20nm,0.7s,baz=284,slow=7.1,SNR=21
comp=Z,20nm,0.7s
BTDF Bukit Timah Da 46.78 131 P **P** 21 00 31.1 +0.7
HSPB Hornsund (broa 46.98 345 *e*P **P** 21 00 32.8 +1.7
HSPB *e*L L 21 58 02.2
comp=Z,2µm,28.1s
BTNL Ternell 47.06 308 *d*P **P** 21 00 33.1 +1.0
comp=Z,11nm,1.0s
MEM Membach 47.13 309 *d*P **P** 21 00 34.2 +1.5
comp=Z,17nm,1.0s
MEM *d*PP **PP** 21 02 26.7 +1.4
BHOU Houvegnez 47.17 308 *d*P **P** 21 00 33.6 +0.6
comp=Z,6.9nm,1.2s
BHOU *d*PcP **PcP** 21 02 01.2 +0.3
WLF Walferdange 47.18 307 P **P** 21 00 32.6 -0.5
WLF Walferdange 47.18 307 *d*P **P** 21 00 34.3 +1.2
comp=Z,19nm,1.0s
WLF *d*PcP **PcP** 21 02 00.9 -0.1
WLF Walferdange 47.18 307 P **P** 21 00 32.6 -0.5
WLF pmax pmax
comp=Z,28nm,1.0s
SPB2 Spitsbergen Ar 47.34 347 P **P** 21 00 35.2 +1.3
SPITS Spitsbergen Ar 47.35 347 P **P** 21 00 35.7 +1.7
comp=Z,104nm,0.6s,baz=116,slow=11,SNR=218
comp=Z,104nm,0.6s
TPRI Tanjung Pinang 47.59 130 P **P** 21 00 36.7 +0.1
comp=Z,98nm,0.7s
RCHB Rochefort 47.69 308 *d*P **P** 21 00 37.8 +0.9
comp=Z,9.2nm,1.0s
PPSI Pulau Pagai 47.95 138 P **P** 21 00 39.6 +0.2
comp=Z,186nm,1.2s
BMRD Maredsous 47.96 308 *d*P **P** 21 00 39.2 +0.2
comp=Z,16nm,1.0s
DOU Dourbes 48.10 308 *d*P **P** 21 00 39.7 -0.5
comp=Z,12nm,1.3s
DOU *d*PcP **PcP** 21 02 04.4 +0.2
DOU *d*PP **PP** 21 02 36.6 +2.5
KRJI Kerinci 48.20 136 P **P** 21 00 40.9 -0.5
KEST Kesra 48.38 288 P **P** 21 00 43.7 +1.1
comp=Z,5.2nm,0.5s,baz=134,slow=2.0,SNR=12
comp=Z,5.2nm,0.5s
GRNR Gornyy 48.45 51⇑ *i* P **P** 21 00 44.3 +1.5
GRNR pmax pmax
comp=E,20nm,0.9s
GRNR pmax pmax
comp=Z,30nm,1.1s
KBS Kingsbay 48.47 347 P **P** 21 00 43.8 +1.3
KBS Kingsbay 48.47 347 *ce*P **P** 21 00 44.3 +1.7
KBS pmax pmax
comp=Z,377nm,1.3s
KBS Kingsbay 48.47 347 *i* P **P** 21 00 44.3 +1.7
KBS Kingsbay 48.47 347 P **P** 21 00 44.2 +1.6
DSRI Dabo 48.72 131 P **P** 21 00 45.4 +0.2
comp=Z,972nmcomp=Z,127nm,0.8s
KIBK Kibwezi 48.84 225 P **P** 21 00 47.1 +0.8
KIBK IAmb IAmb 21 00 48.8
comp=Z,93nm,0.7s
KIBK PP **PP** 21 02 41.6 -0.2
KIBK Kibwezi 48.84 225 P **P** 21 00 48.1 +1.8
SNR=20
JNU Nakatsue 49.27 75 P **P** 21 00 49.0 -0.2
JNU IAmb IAmb 21 00 51.2
comp=Z,83nm,0.8s
JNU Nakatsue 49.27 75 P **P** 21 00 50.5 +1.2
MASI Maura Aman, Be 49.50 136 P **P** 21 00 50.1 -1.1
ELMS Elmsett, Ipswi 49.99 311 *e*P **P** 21 00 54.5 +0.1
ELMS IAmb IAmb 21 00 55.9
comp=Z,31nm,0.6s
LRW Lerwick 50.08 322 *e*P **P** 21 00 54.3 -0.6
LRW IAmb IAmb 21 00 56.4
comp=Z,34nm,0.8s
ELSH Elham, Standar 50.08 310 *e*P **P** 21 00 56.0 +1.0
KSI Kapahiang 50.12 136 P **P** 21 00 54.4 -1.4
LHSI Lahat 50.79 135 P **P** 21 00 57.8 -3.0
comp=Z,1µmcomp=Z,46nm,0.8s
KSM Kuching 50.89 124 **P** 21 01 00.8 -0.8
KSM pP **pP** 21 01 45.2 -4.3
KSM PcP **PcP** 21 02 14.8 -0.2
KSM Kuching 50.89 124 P **P** 21 01 02.7 +1.1
MNAI Manna 50.90 136 P **P** 21 01 00.4 -1.2
comp=Z,212nm,1.2s
PPBI Pangkal Pinang 50.99 131 P **P** 21 01 02.5 +0.2
EDMD Edmundbyers 51.23 315 *e*P **P** 21 01 04.1 +0.5
EDMD IAmb IAmb 21 01 04.8
comp=Z,29nm,0.6s
JMN Monobe 51.36 73 P **P** 21 01 06.5 +1.5
MCD Coleburn Disti 51.48 319 *e*P **P** 21 01 05.3 0.0
MCD IAmb IAmb 21 01 07.0
comp=Z,51nm,0.6s
SBUM Sibu 51.48 121 P **P** 21 01 07.4 +1.4
WOL Wolverton 51.50 311 *e*P **P** 21 01 06.0 +0.4
WOL IAmb IAmb 21 01 07.0
comp=Z,29nm,0.6s
MDSI Maura Dua 51.70 135 P **P** 21 01 04.0 -3.5
EDI Edinburgh 51.72 317 *e*P **P** 21 01 07.8 +0.6
EDI IAmb IAmb 21 01 08.6
comp=Z,17nm,0.7s
EKA Eskdalemuir Ar 51.82 316 P **P** 21 01 07.5 -0.4
comp=Z,17nm,0.7s,baz=100,slow=6.7,SNR=31
EKA PcP **PcP** 21 02 17.8 0.0
comp=Z,3.5nm,0.6s,baz=99,slow=4.5,SNR=2.6
EKA PP **PP** 21 03 04.7 -3.0
comp=Z,6.3nm,0.8s,baz=89,slow=8.6,SNR=4.1
EKA ScP **ScP** 21 05 52.6 -1.6
comp=Z,3.8nm,1.1s,baz=104,slow=5.2,SNR=4.5
comp=Z,17nm,0.7s
ESK Eskdalemuir 51.84 316 *e*P **P** 21 01 07.9 -0.3
ESK IAmb IAmb 21 01 09.5
comp=Z,11nm,0.8s
LWLI Liwa 52.06 135 P **P** 21 01 07.1 -3.3
comp=Z,2µmcomp=Z,156nm,0.6s
INVG Invergeldie, C 52.10 317 *e*P **P** 21 01 09.1 -0.9
INVG IAmb IAmb 21 01 11.2
comp=Z,12nm,0.8s
CEST Esterri de Car 52.15 299 P **P** 21 01 10.8 0.0
HLM1 Long Mynd 52.23 312 *e*P **P** 21 01 10.6 -0.4
HLM1 IAmb IAmb 21 01 12.9
comp=Z,22nm,1.4s
TYV Tymovskoe 52.31 50 *e*P **P** 21 01 12.9 +1.3
TYV *e*S **S** 21 08 21.5 +1.4
TYV pmax pmax
comp=Z,30nm,1.1s
TYV pmax pmax
comp=Z,200nm,3.7s
TYV smax smax
comp=N,16nm,1.7s
TYV smax smax
comp=E,24nm,1.7s
TYV smax smax
comp=N,400nm,4.7s
TYV smax smax
comp=E,700nm,4.7s
MONM Monmouth 52.34 311 *e*P **P** 21 01 11.4 -0.4
MONM IAmb IAmb 21 01 13.6
comp=Z,19nm,1.1s
TPI Tanjungpandan 52.39 130 P **P** 21 01 12.4 -0.3
comp=Z,938nmcomp=Z,66nm,0.7s
MCH1 Michaelchurch 52.42 312 *e*P **P** 21 01 12.0 -0.4
MCH1 IAmb IAmb 21 01 13.8
comp=Z,31nm,0.7s
NEWG New Galloway 52.46 316 *e*P **P** 21 01 12.6 -0.1
NEWG IAmb IAmb 21 01 14.3
comp=Z,28nm,0.7s
PGBU Glenifferbraes 52.46 317 *e*P **P** 21 01 12.0 -0.6
PGBU IAmb IAmb 21 01 15.1
comp=Z,58nm,1.0s
LLW Llanuwychllyn 52.62 313 *e*P **P** 21 01 13.9 0.0
LLW IAmb IAmb 21 01 15.1
comp=Z,7.6nm,0.5s
KASI Kota Agung 52.72 135 P **P** 21 01 11.7 -3.4
comp=Z,78nm,0.8s
GAL1 Galloway 52.78 316 *e*P **P** 21 01 15.4 +0.4
GAL1 IAmb IAmb 21 01 16.5
comp=Z,6.6nm,1.0s
KPL Plockton 52.79 319 *e*P **P** 21 01 14.4 -0.6
KPL IAmb IAmb 21 01 16.4
comp=Z,27nm,0.9s
IOMK Kirk Michael 52.83 315 *e*P **P** 21 01 15.0 -0.4
IOMK IAmb IAmb 21 01 17.1
comp=Z,12nm,0.7s
LAWE Loch Awe, Argy 52.87 317 *e*P **P** 21 01 15.5 -0.2
LAWE IAmb IAmb 21 01 17.3
comp=Z,16nm,0.9s
INU Inuyama 53.15 70 P **P** 21 01 18.0 -0.1
INU Inuyama 53.15 70 P **P** 21 01 18.6 +0.6
INU Inuyama 53.15 70 P **P** 21 01 18.4 +0.4
SBV Sambava 53.21 205 P **P** 21 01 19.6 +1.1
JGF Kuroka 53.31 70 P **P** 21 01 19.6 +0.3
YSS Yuzhno-Sakhali 53.40 55 P **P** 21 01 19.8 +0.2
YSS Yuzhno-Sakhali 53.40 55 P **P** 21 01 20.9 +1.3
YSS Yuzhno-Sakhali 53.40 55*ce*P **P** 21 01 20.7 +1.1
YSS pmax pmax
comp=Z,186nm,1.0s
MJB9 Matsu-Tunnel 53.60 68 IAmb IAmb 21 01 23.5
comp=Z,55nm,0.8s
MAJO Matsushiro 53.60 68 P **P** 21 01 20.5 -0.8
MAJO IAmb IAmb 21 01 22.6
comp=Z,56nm,0.8s
MAJO Matsushiro 53.60 68 P **P** 21 01 21.5 +0.1
MAJO Matsushiro 53.60 68 P **P** 21 01 20.5 -0.8
MAJO pmax pmax
comp=Z,56nm,0.8s
MAJO Matsushiro 53.60 68 P **P** 21 01 21.4 +0.1
MJAR Matsushiro Arr 53.60 68 P **P** 21 01 21.1 -0.2
MJAR IAmb IAmb 21 01 22.2
comp=Z,35nm,0.9s
MJAR Matsushiro Arr 53.60 68 P **P** 21 01 21.5 +0.2
comp=Z,34nm,0.9s,baz=293,slow=9.7,SNR=84
MJAR PcP **PcP** 21 02 25.1 +0.1
comp=Z,6.4nm,1.0s,baz=277,slow=3.0,SNR=2.1
MJAR ScP **ScP** 21 05 59.9 -2.5
comp=Z,2.2nm,0.9s,baz=284,slow=5.0,SNR=4.7
comp=Z,34nm,0.9s
NOR Nord 53.69 350 *i* P **P** 21 01 22.0 +0.7
NOR IAmb IAmb 21 01 22.8
comp=Z,32nm,0.8s
ILTH Belurgan, Co L 53.90 315 P **P** 21 01 23.2 +0.1
MYLDM Lahad Datu 54.09 113 P **P** 21 01 24.5 -0.6
MYLDM IAmb IAmb 21 01 28.7
comp=Z,34nm,0.8s
MYLDM Lahad Datu 54.09 113 P **P** 21 01 27.7 +2.6
DSB Dublin 54.12 314 P **P** 21 01 25.2 +0.4
IDGL Inch Island, C 54.31 316 P **P** 21 01 27.1 +1.0
IDGL Inch Island, C 54.31 316 *e*P **P** 21 01 26.9 +0.8
IDGL IAmb IAmb 21 01 28.0
comp=Z,18nm,0.7s
DAG Danmarks Havn 54.55 344 P **P** 21 01 28.3 +0.8
DAG Danmarks Havn 54.55 344 *i* P **P** 21 01 28.3 +0.8
DAG IAmb IAmb 21 01 29.3
comp=Z,103nm,0.8s
IWEX Carrickbyrne, 54.58 313 P **P** 21 01 28.7 +0.6
SEY Seymchan 54.81 34 *e*P **P** 21 01 29.3 -0.3
SEY pmax pmax
comp=Z,43nm,0.9s
JMM Marumori 55.03 66 P **P** 21 01 32.0 +0.5
DBG Daneborg 55.37 341 *i* P **P** 21 01 34.9 +1.5
DBG IAmb IAmb 21 01 35.6
comp=Z,20nm,0.6s
MTKI Muara Teweh, K 55.77 122 P **P** 21 01 37.8 +0.7
comp=Z,62nm,0.7s
IGLA Glengowla, Co 55.80 315 P **P** 21 01 37.6 +0.8
BBJI Bungbulang 56.11 133 P **P** 21 01 37.6 -1.9
KPJI Karang Pucung 56.77 132 P **P** 21 01 42.3 -1.8
comp=Z,39nm,0.5s
SCO Scoresbysund 56.79 336 *i* P **P** 21 01 45.4 +1.9
SCO IAmb IAmb 21 01 46.1
comp=Z,17nm,1.0s
TAM Tamanrasset 56.85 275 **P** 21 01 44.1 -0.8
TAM IAmb IAmb 21 01 48.2
comp=Z,19nm,0.6s
TAM Tamanrasset 56.85 275 P **P** 21 01 44.1 -0.8
TAM pmax pmax
comp=Z,19nm,0.6s
ESDC Sonseca Array 56.85 298 **P** 21 01 44.3 -0.3
ESDC Sonseca Array 56.85 298 P **P** 21 01 44.6 +0.1
comp=Z,4.4nm,0.8s,baz=54,slow=7.5,SNR=27
ESDC ScP **ScP** 21 06 14.6 -2.0
comp=Z,2.1nm,0.9s,baz=68,slow=4.3,SNR=5.1
comp=Z,4.4nm,0.8s
BBKI Banjar Baru 57.57 124 P **P** 21 01 50.0 +0.3
comp=Z,175nm,0.8s
TOLI2 Tolitoli 58.51 115 P **P** 21 01 57.3 +1.1
OPO Ambohidratompo 58.90 206 P **P** 21 02 00.2 +1.2
comp=Z,38nm,0.8s,baz=13,slow=7.5,SNR=42
comp=Z,38nm,0.8s
BILL Bilibino 58.92 26 P **P** 21 01 59.3 +1.0
BILL IAmb IAmb 21 02 00.8
comp=Z,76nm,1.1s
BILL Bilibino 58.92 26*ce*P **P** 21 01 59.6 +1.2
BILL pmax pmax
comp=Z,116nm,1.7s
BILL Bilibino 58.92 26 P **P** 21 01 59.6 +1.2
MRSI Marisa 59.78 115 P **P** 21 02 05.7 +0.7
comp=Z,1µmcomp=Z,122nm,1.0s
BLJI Banyuglugur 59.97 128 P **P** 21 02 06.7 +0.5
comp=Z,56nm,0.6s
PEA0B Petropavlovsk- 60.46 44*ce*P **P** 21 02 09.7 +0.6
PETK Petropavlovsk- 60.46 44 P **P** 21 02 08.0 -1.0
PETK Petropavlovsk- 60.46 44 P **P** 21 02 08.6 -0.5
comp=Z,14nm,0.6s,baz=302,slow=4.9,SNR=31
comp=Z,14nm,0.6s
APSI Ampana 60.52 116 P **P** 21 02 09.2 -0.8
comp=Z,70nm,1.3s
SUMG Summit 60.85 341 **P** 21 02 11.8 -0.1
SUMG Summit 60.85 341 P **P** 21 02 11.8 -0.1
SUMG pmax pmax
comp=Z,80nm,1.0s
SUMG Summit 60.85 341 *i* P **P** 21 02 13.4 +1.5
SUMG IAmb IAmb 21 02 14.3
comp=Z,95nm,1.1s
JAGI Jajag, Banyuwa 60.87 128 P **P** 21 02 12.0 -0.3
JAGI Jajag, Banyuwa 60.87 128 P **P** 21 02 10.8 -1.5
comp=Z,57nm,0.7s
NEEM North Greenlan 60.90 348 *i* P **P** 21 02 12.9 +0.9
NEEM IAmb IAmb 21 02 14.2
comp=Z,66nm,0.9s
KMSI Cibinong 61.22 113 P **P** 21 02 15.0 +0.3
comp=Z,120nm,0.8s
SPSI Sidrap Palu 61.31 120 P **P** 21 02 14.9 -0.4
comp=Z,25nm,0.7s
BNSI Bone 61.85 120 P **P** 21 02 18.4 -0.5
comp=Z,27nm,0.6s
KAPI Kappang 62.04 121 P **P** 21 02 20.7 +0.5
VOI Vohitsoka 62.13 205 **P** 21 02 21.0 +0.4
VOI Vohitsoka 62.13 205 P **P** 21 02 22.1 +1.4
BKSI Bulukumba 62.52 121 P **P** 21 02 22.2 -1.1
comp=Z,30nm,0.6s
TWSI Taliwang, Sumb 62.83 126 P **P** 21 02 22.6 -2.8
BSSI Bau Bau, Buton 63.36 121 P **P** 21 02 27.8 -1.1
comp=Z,767nmcomp=Z,41nm,0.8s
PLAI Plampang 63.48 125 P **P** 21 02 27.7 -2.0
comp=Z,33nm,0.7s
TNTI Ternate 63.63 110 P **P** 21 02 31.5 +0.8
TNTI Ternate 63.63 110 P **P** 21 02 29.8 -0.9
comp=Z,925nmcomp=Z,48nm,0.9s
KULLO Kullorsuaq 63.92 346 *i* P **P** 21 02 32.9 +1.2
KULLO IAmb IAmb 21 02 33.3
comp=Z,101nm,1.3s
TULEG Thule 64.33 350 IAmb IAmb 21 02 36.8
comp=Z,102nm,1.3s
TULEG Thule 64.33 350 *i* P **P** 21 02 35.6 +1.2
TULEG IAmb IAmb 21 02 36.5
comp=Z,97nm,1.3s
BBSI Bau Bau 64.35 119 P **P** 21 02 35.7 +0.4
comp=Z,75nm,1.0s
SANI Sanana 64.46 114 P **P** 21 02 35.9 -0.2
SANI Sanana 64.46 114 P **P** 21 02 35.4 -0.7
comp=Z,647nmcomp=Z,57nm,0.7s
FOMA Nahampoana Res 64.92 203 **P** 21 02 38.8 +0.1
LSZ Lusaka 64.95 225 IAmb IAmb 21 02 40.7
comp=Z,20nm,0.6s
LSZ Lusaka 64.95 225 P **P** 21 02 39.5 +0.2
comp=Z,18nm,0.6s,baz=57,slow=6.9,SNR=7.2
comp=Z,18nm,0.6s
LSZ Lusaka 64.95 225 P **P** 21 02 40.0 +0.7
LSZ Lusaka 64.95 225 P **P** 21 02 39.5 +0.2
LSZ pmax pmax
comp=Z,20nm,0.6s
TORD Torodi Ar. Bea 65.03 268 P **P** 21 02 38.9 -0.8
TORD Torodi Ar. Bea 65.03 268 P **P** 21 02 39.5 -0.2
comp=Z,8.4nm,0.5s,baz=62,slow=5.6,SNR=4.2
comp=Z,8.4nm,0.5s
WBSI Waikabubak, Su 65.15 125 P **P** 21 02 39.1 -1.4
EDFI Ende, Flores 66.05 122 P **P** 21 02 42.8 -3.6
comp=Z,22nm,0.6s
NLAI Namlea 66.08 114 P **P** 21 02 45.7 -0.7
comp=Z,53nm,0.7s
ILULI Ilulissat 66.19 341 IAmb IAmb 21 02 48.2
comp=Z,63nm,0.8s
ILULI Ilulissat 66.19 341 *i* P **P** 21 02 47.2 +1.0
ILULI IAmb IAmb 21 02 48.4
comp=Z,66nm,0.8s
MMRI Maumere 66.34 122 P **P** 21 02 46.5 -1.6
comp=Z,58nm,0.5s
BASI Baing, Sumba 66.36 124 P **P** 21 02 47.6 -0.6
MSAI Masohi 67.50 112 P **P** 21 02 55.8 +0.4
comp=Z,77nm,0.7s
A21K Barrow 67.51 15 P **P** 21 02 54.6 +0.1
baz=321
SFJD Kangerlussuaq 67.52 339 P **P** 21 02 54.5 -0.2
SFJD IAmb IAmb 21 02 55.8
comp=Z,31nm,1.1s
SFJD Kangerlussuaq 67.52 339 P **P** 21 02 54.5 -0.2
SFJD pmax pmax
comp=Z,31nm,1.1s
SFJD Kangerlussuaq 67.52 339 *i* P **P** 21 02 55.3 +0.6
SFJD IAmb IAmb 21 02 56.0
comp=Z,23nm,0.9s
SWI Sorong 67.64 109 P **P** 21 02 55.1 -1.2
SWI Sorong 67.64 109 P **P** 21 02 56.0 -0.3
C16K Lisburne Hills 67.70 19 IAmb IAmb 21 02 58.0
comp=Z,56nm,0.8s
C16K Lisburne Hills 67.70 19 P **P** 21 02 56.2 +0.4
baz=314,SNR=5.4
B18K Kokolik River 67.82 18 P **P** 21 02 57.9 +1.3
baz=317
A22K Sinclair Lake 68.09 14 P **P** 21 02 59.5 +1.3
baz=322
C17K DeLong Mountai 68.12 19 P **P** 21 02 59.4 +0.9
baz=316
B20K Meade River 68.41 16 P **P** 21 03 01.1 +0.9
baz=320
BATI Baumata 68.44 122 P **P** 21 03 00.5 -0.8
comp=Z,1µmcomp=Z,109nm,0.6s
C18K Utukok River 68.50 18 P **P** 21 03 01.5 +0.6

baz=318,SNR=12
RDOG **Red Dog Mine** 68.50 19 P P 21 03 01.1 +0.3
baz=316,SNR=5.1
SOEI **Soe** 68.54 121 P 21 03 01.1 -0.9
SOEI IAmb IAmb 21 03 12.2
comp=Z,49nm,0.7s
SOEI **Soe** 68.54 121 P P 21 03 03.5 +1.5
SOEI **Soe** 68.54 121 P P 21 03 02.6 +0.6
comp=Z,77nm,0.8s
C19K **Lookout Ridge** 68.55 17 P P 21 03 02.1 +0.9
baz=319,SNR=12
D17K **Noatak River** 68.71 19 P P 21 03 02.5 +0.4
baz=316,SNR=26
GAMB **Gambell** 68.81 25 P P 21 03 03.3 +0.6
baz=310
TNA **Tin City** 68.84 22 P P 21 03 03.7 +0.7
baz=313
POIN **Pond Inlet** 68.89 350 P 21 03 03.7 +0.6
B22K **Teshekpuk Lake** 68.93 14 P P 21 03 04.5 +1.1
baz=324,SNR=6.6
BNDI **Bandanaira** 69.01 113 P P 21 03 03.0 -1.8
comp=Z,132nm,0.6s
B21K **Ikpikpuk River** 69.27 15 P P 21 03 06.6 +1.1
baz=323
D19K **Kuna River** 69.36 17 P P 21 03 06.8 +0.6
baz=320
F14K **Arctic Creek** 69.38 22 P P 21 03 07.3 +1.0
baz=314
E17K **Hotham Inlet** 69.50 19 P P 21 03 07.6 +0.6
baz=317,SNR=18
D20K **Etivluk River** 69.54 16 IAmb IAmb 21 03 09.2
comp=Z,51nm,0.8s
D20K **Etivluk River** 69.54 16 P P 21 03 08.0 +0.8
baz=321,SNR=18
E18K **Tukpahlearik C** 69.56 19 P P 21 03 07.8 +0.5
baz=318,SNR=29
C21K **Knifeblade Rid** 69.60 16 P P 21 03 08.5 +0.9
baz=323
F15K **North Star Dit** 69.71 21 P P 21 03 09.2 +0.9
baz=316,SNR=23
NUUK **Nuuk** 69.76 337 *i* P P 21 03 09.9 +1.3
C23K **Itkillik River** 69.90 14 P P 21 03 09.9 +0.6
C23K **Itkillik River** 69.90 14 P P 21 03 10.2 +0.8
baz=326
E20K **Nigu River** 70.00 17 P P 21 03 10.6 +0.5
baz=322,SNR=19
F17K **Baldwin Pennin** 70.12 20 P P 21 03 11.8 +1.0
baz=318,SNR=21
D22K **Ayikyak River** 70.27 15 P P 21 03 11.9 +0.2
D22K IAmb IAmb 21 03 13.9
comp=Z,39nm,0.7s
D22K **Ayikyak River** 70.27 15 P P 21 03 12.8 +1.1
baz=324
ANM **Nome** 70.31 22 P P 21 03 13.1 +1.1
baz=315
E21K **Killik River** 70.35 16 P P 21 03 12.6 +0.4
baz=324
C24K **Franklin Bluff** 70.36 13 P P 21 03 13.2 +1.0
baz=328
E19K **Redstone River** 70.38 18 IAmb IAmb 21 03 13.9
comp=Z,32nm,0.8s
E19K **Redstone River** 70.38 18 P P 21 03 12.8 +0.5
baz=321
G15K **Niukluk** 70.40 21 P P 21 03 13.4 +0.9
baz=316,SNR=7.1
F18K **Selawik** 70.43 19 P P 21 03 13.1 +0.5
baz=319,SNR=29
G16K **Koyuk River** 70.60 21 IAmb IAmb 21 03 15.9
comp=Z,49nm,1.0s
G16K **Koyuk River** 70.60 21 P P 21 03 14.5 +0.9
baz=317
D23K **Nanushuk River** 70.61 14 IAmb IAmb 21 03 15.9
comp=Z,46nm,0.8s
D23K **Nanushuk River** 70.61 14 P P 21 03 14.8 +1.1
baz=326
F19K **Shaleruckik Mo** 70.73 18 IAmb IAmb 21 03 15.6
comp=Z,111nm,1.8s
F19K **Shaleruckik Mo** 70.73 18 P P 21 03 14.4 0.0
baz=321,SNR=11
D24K **Happy Valley** 70.82 14 IAmb IAmb 21 03 17.1
comp=Z,34nm,0.7s
D24K **Happy Valley** 70.82 14 P P 21 03 15.8 +0.8
baz=328
C26K **Camden Bay** 70.87 12 P P 21 03 16.5 +1.3
baz=331
G17K **Kiwalik Mounta** 70.99 20 P P 21 03 16.8 +0.7
baz=319
F20K **Avaraart Lake** 71.06 17 P P 21 03 15.9 -0.5
F20K **Avaraart Lake** 71.06 17 P P 21 03 16.6 +0.2
baz=322
E22K **Anaktuvuk Pass** 71.07 15 IAmb IAmb 21 03 18.3
comp=Z,48nm,0.9s
E22K **Anaktuvuk Pass** 71.07 15 P P 21 03 17.2 +0.7
baz=325,SNR=23
TOLK **Toolik Lake Re** 71.11 14 P P 21 03 17.6 +0.8
baz=327,SNR=51
D25K **Kavik River** 71.13 13 IAmb IAmb 21 03 19.4
comp=Z,78nm,1.1s
D25K **Kavik River** 71.13 13 P P 21 03 18.2 +1.3
baz=330
H16K **Elim** 71.19 21 P P 21 03 18.0 +0.8
baz=318,SNR=6.1
G18K **Tagagawik** 71.23 19 IAmb IAmb 21 03 19.0
comp=Z,39nm,1.3s
G18K **Tagagawik** 71.23 19 P P 21 03 17.8 +0.3
baz=320
A36M **Sachs Harbour** 71.28 5 P P 21 03 18.5 +0.9
baz=347,SNR=13
C27K **Jago River** 71.33 12 IAmb IAmb 21 03 20.8
comp=Z,49nm,0.8s
C27K **Jago River** 71.33 12 P P 21 03 19.5 +1.5
baz=332
F21K **Alatna River** 71.45 16 IAmb IAmb 21 03 21.7
comp=Z,39nm,0.8s
F21K **Alatna River** 71.45 16 P P 21 03 19.4 +0.6
baz=324
F22K **John River** 71.51 16 P P 21 03 20.1 +0.9
baz=325
E23K **Chandalar** 71.59 15 IAmb IAmb 21 03 21.8
comp=Z,37nm,0.8s
E23K **Chandalar** 71.59 15 P P 21 03 20.5 +0.8
baz=327,SNR=27
H17K **Granite Mounta** 71.62 20 IAmb IAmb 21 03 21.8
comp=Z,33nm,0.8s
H17K **Granite Mounta** 71.62 20 P P 21 03 20.8 +0.9
baz=320,SNR=7.6
E24K **Your Creek** 71.81 14 IAmb IAmb 21 03 23.1
comp=Z,40nm,0.7s
E24K **Your Creek** 71.81 14 P P 21 03 21.9 +0.9
baz=328
KHWEE **KHWEE** 71.83 223 P P 21 03 21.1 -0.6
H18K **Honhosa River** 71.88 19 P 21 03 21.5 +0.1
H18K **Honhosa River** 71.88 19 P P 21 03 21.7 +0.3
baz=321,SNR=8.4
G21K **Allakaket** 72.02 17 IAmb IAmb 21 03 23.4
comp=Z,30nm,0.9s
G21K **Allakaket** 72.02 17 P P 21 03 22.3 +0.1
baz=324
H19K **Roundabout Mou** 72.09 19 IAmb IAmb 21 03 24.4
comp=Z,34nm,0.7s
H19K **Roundabout Mou** 72.09 19 P P 21 03 23.2 +0.7
baz=322
D27M **Malcolm River** 72.11 11 P P 21 03 24.0 +1.2
baz=334
G22K **Bettles** 72.14 16 P P 21 03 23.2 +0.4
baz=326,SNR=25
COLD **Coldfoot** 72.17 15 IAmb IAmb 21 03 25.1
comp=Z,55nm,0.8s
COLD **Coldfoot** 72.17 15 P P 21 03 24.0 +1.0
baz=327,SNR=32
J14K **Nanvaranak Lak** 72.19 23 IAmb IAmb 21 03 25.5
comp=Z,39nm,0.6s
J14K **Nanvaranak Lak** 72.19 23 P P 21 03 24.4 +1.3
baz=317
I17K **Unalakleet** 72.20 21 P P 21 03 24.0 +0.8
baz=319
E25K **Arctic Village** 72.33 13 IAmb IAmb 21 03 26.0
comp=Z,33nm,0.8s
E25K **Arctic Village** 72.33 13 P P 21 03 24.9 +0.9
baz=330,SNR=17
D28M **Stokes Point** 72.37 10 P P 21 03 25.6 +1.4
baz=336
IMAR **Indian Mountai** 72.39 17 P P 21 03 24.0 -0.4
F24K **Squaw Lake** 72.40 14 P P 21 03 25.2 +0.7
baz=329,SNR=12
K13K **Kusilvak Mount** 72.43 24 IAmb IAmb 21 03 26.8
comp=Z,30nm,0.9s
K13K **Kusilvak Mount** 72.43 24 P P 21 03 25.7 +1.1
baz=316
ILON **Igloolik, Nuna** 72.45 350 IAmb IAmb 21 03 26.0
comp=Z,27nm,0.8s
H20K **Anotleneega Mo** 72.52 18 P P 21 03 25.4 +0.2
baz=323,SNR=22
GCSA **Galena City Sc** 72.60 19 P P 21 03 26.4 +0.9
baz=322,SNR=6.9
G23K **Bananza Creek** 72.64 16 IAmb IAmb 21 03 27.9
comp=Z,31nm,0.9s
G23K **Bananza Creek** 72.64 16 P P 21 03 26.6 +0.7
baz=327,SNR=18
J16K **Anvik River** 72.69 22 P P 21 03 27.5 +1.3
baz=319,SNR=9.6
F25K **Christian Rive** 72.77 14 IAmb IAmb 21 03 29.3
comp=Z,44nm,0.9s
F25K **Christian Rive** 72.77 14 P P 21 03 28.1 +1.5
baz=330,SNR=49
H21K **Melozitna River** 72.89 17 IAmb IAmb 21 03 29.1
comp=Z,49nm,1.0s
H21K **Melozitna River** 72.89 17 P P 21 03 28.0 +0.7
baz=325
E28M **Babbage River** 72.91 11 IAmb IAmb 21 03 30.1
comp=Z,35nm,0.8s
E28M **Babbage River** 72.91 11 P P 21 03 28.7 +1.3
baz=335
F26K **Sheenjek River** 72.96 13 IAmb IAmb 21 03 30.9
comp=Z,32nm,1.1s
F26K **Sheenjek River** 72.96 13 P P 21 03 28.8 +1.0
baz=332,SNR=34
E27K **Coleen River** 72.97 12 IAmb IAmb 21 03 30.2
comp=Z,48nm,0.8s
E27K **Coleen River** 72.97 12 P P 21 03 28.9 +1.1
baz=334,SNR=39
M11K **Mekoryuk** 73.02 26 P P 21 03 29.4 +1.3
baz=316
H22K **Ishtalitna Cre** 73.03 17 P P 21 03 29.2 +1.0
baz=326
J17K **VABM Dome** 73.04 21 P P 21 03 29.2 +1.0
baz=320
POGA **Pongola** 73.08 215 IAmb IAmb 21 03 30.4
comp=Z,43nm,0.6s
BMAR **Burnt Mountain** 73.12 13 P 21 03 29.6 +0.9
K15K **Wolf Creek Mou** 73.16 23 P P 21 03 29.9 +1.0
baz=319
I20K **Naagdedeneel** 73.18 18 P P 21 03 29.9 +1.0
baz=324
G24K **Hadweenzic Riv** 73.19 15 IAmb IAmb 21 03 31.4
comp=Z,41nm,0.8s
G24K **Hadweenzic Riv** 73.19 15 P P 21 03 30.2 +1.2
baz=329,SNR=28
E29M **Blow River** 73.36 10 IAmb IAmb 21 03 32.5
comp=Z,56nm,0.8s
E29M **Blow River** 73.36 10 P P 21 03 31.3 +1.3
baz=327
G25K **Bearman Lake** 73.41 14 P P 21 03 31.7 +1.4
baz=330,SNR=22
I21K **Tanana** 73.48 17 IAmb IAmb 21 03 32.8
comp=Z,32nm,1.0s
I21K **Tanana** 73.48 17 P P 21 03 31.5 +0.8
baz=326,SNR=7.7
H23K **Yukon River** 73.50 16 IAmb IAmb 21 03 33.4
comp=Z,43nm,0.8s
H23K **Yukon River** 73.50 16 P P 21 03 32.0 +1.1
baz=328
L14K **Kuka Creek** 73.50 24 IAmb IAmb 21 03 33.5
comp=Z,46nm,0.8s
L14K **Kuka Creek** 73.50 24 P P 21 03 32.1 +1.1
baz=318,SNR=9.2
J19K **Poorman** 73.53 19 IAmb IAmb 21 03 33.2
comp=Z,70nm,1.1s
J19K **Poorman** 73.53 19 P P 21 03 32.2 +1.1
baz=323,SNR=30
L15K **Ungalak Mounta** 73.63 23 P P 21 03 32.7 +1.0
baz=319
J18K **Innoko River** 73.66 20 IAmb IAmb 21 03 33.7
comp=Z,38nm,0.8s
J18K **Innoko River** 73.66 20 P P 21 03 32.6 +0.8
baz=322
G26K **Porcupine Rive** 73.69 13 P P 21 03 33.1 +1.2
baz=332,SNR=17
SPIA **Saint Paul Isl** 73.76 30 P P 21 03 33.4 +0.9
baz=313
F28M **Old Crow** 73.77 12 P 21 03 33.2 +0.7
F28M IAmb IAmb 21 03 34.8
comp=Z,44nm,1.1s
F28M **Old Crow** 73.77 12 P P 21 03 33.3 +0.9
baz=335,SNR=32
J20K **Nowinta River** 73.77 19 IAmb IAmb 21 03 34.5
comp=Z,38nm,0.7s
J20K **Nowinta River** 73.77 19 P P 21 03 33.4 +1.0
baz=324
K17K **Iditarod** 73.80 21 P P 21 03 33.5 +0.9
baz=321,SNR=15
H24K **Noodor Dome** 73.85 15 IAmb IAmb 21 03 35.3
comp=Z,31nm,0.8s
H24K **Noodor Dome** 73.85 15 P P 21 03 34.2 +1.2
baz=329,SNR=24
MLY **Manley** 73.89 17 IAmb IAmb 21 03 35.1
comp=Z,34nm,1.0s
MLY **Manley** 73.89 17 P P 21 03 33.9 +0.6
baz=327,SNR=6.0
H25L **Birch Creek** 73.90 14 P P 21 03 34.5 +1.4
baz=331,SNR=17
C36M **Paulatuk** 73.96 5 P P 21 03 33.8 +0.3
baz=348,SNR=7.4
M13K **Dall Lake** 73.97 25 IAmb IAmb 21 03 36.9
comp=Z,64nm,0.8s
M13K **Dall Lake** 73.97 25 P P 21 03 35.7 +2.0
baz=318
DBIC **Dimbakro** 74.01 266 P P 21 03 34.2 -0.5
comp=Z,8.0nm,0.5s,baz=56,slow=5.4,SNR=10.0
comp=Z,8.0nm,0.5s
MBWA **Marble Bar** 74.03 132 P P 21 03 34.2 -0.3
comp=Z,29nm,1.2s
MBWA **Marble Bar** 74.03 132 P 21 03 34.5 0.0
MBWA **Marble Bar** 74.03 132 P P 21 03 34.7 +0.1
MBWA **Marble Bar** 74.03 132 P P 21 03 36.2 +1.7
INK **Inuvik** 74.03 9 P 21 03 33.8 0.0
INK **Inuvik** 74.03 9 P P 21 03 34.8 +0.9
comp=Z,49nm,0.6s,baz=356,slow=6.4,SNR=159
comp=Z,49nm,0.6s
INK **Inuvik** 74.03 9 P P 21 03 34.7 +0.9
baz=340,SNR=44
SMPI **Sarmi** 74.11 105 P P 21 03 35.1 -0.1
comp=Z,46nm,0.6s
I23K **Minto, Yukon-K** 74.11 16 IAmb IAmb 21 03 36.6
comp=Z,53nm,1.0s
I23K **Minto, Yukon-K** 74.11 16 P P 21 03 35.3 +0.9
baz=328,SNR=28
M14K **Bethel** 74.18 24 P P 21 03 36.2 +1.4
baz=319,SNR=11
G27K **Doyon Strip** 74.20 13 IAmb IAmb 21 03 37.5
comp=Z,44nm,0.8s
G27K **Doyon Strip** 74.20 13 P P 21 03 36.0 +1.0
baz=334,SNR=50
LBTB **Lobatse** 74.21 221 IAmb IAmb 21 03 37.3
comp=Z,44nm,0.7s
LBTB **Lobatse** 74.21 221 P P 21 03 36.1 +0.5
comp=Z,38nm,0.6s,baz=34,slow=4.2,SNR=40
comp=Z,38nm,0.6s
LBTB **Lobatse** 74.21 221 P P 21 03 36.4 +0.7
L16K **Owhat River** 74.23 22 IAmb IAmb 21 03 37.6
comp=Z,48nm,0.7s
L16K **Owhat River** 74.23 22 P P 21 03 36.4 +1.3
baz=320,SNR=12
L17K **Donlin** 74.25 21 P P 21 03 36.6 +1.3
baz=321,SNR=7.5
PSAC1 **Pilbara Seismi** 74.36 133 P P 21 03 35.9 -0.6
comp=Z,33nm,0.8s
TSUM **Tsumeb** 74.37 231 P 21 03 36.5 -0.2
TSUM **Tsumeb** 74.37 231 P P 21 03 36.8 +0.1
comp=Z,12nm,0.6s,baz=7.3,slow=8.3,SNR=9.0
comp=Z,12nm,0.6s
KGCAE **Kacgae** 74.37 225 IAmb IAmb 21 03 38.4
comp=Z,49nm,0.8s
F30M **Barrier River** 74.38 10 P P 21 03 36.9 +0.9
baz=339,SNR=38
PSA00 **Pilbara Seismi** 74.41 133 P P 21 03 36.4 -0.3
comp=Z,40nm,0.9s
PSA00 **Pilbara Seismi** 74.41 133 P P 21 03 36.0 -0.7
PSA00 **Pilbara Seismi** 74.41 133 P P 21 03 38.1 +1.4
PSAB3 **Pilbara Seismi** 74.43 133 P P 21 03 36.0 -0.9
comp=Z,38nm,0.6s
P08K **Saint George I** 74.44 30 P P 21 03 36.6 +0.2
baz=314
PSAC2 **Pilbara Seismi** 74.44 132 P P 21 03 36.5 -0.4
comp=Z,53nm,0.6s
K20K **Telida** 74.45 19 IAmb IAmb 21 03 38.5
comp=Z,74nm,1.1s
K20K **Telida** 74.45 19 P P 21 03 37.6 +1.1
baz=324,SNR=14
CHUM **Lake Minchumin** 74.47 18 P P 21 03 37.3 +0.8
baz=326,SNR=16
POKR **Poker Plat Res** 74.56 16 P P 21 03 38.2 +1.2
baz=329,SNR=20
BPAW **Bear Paw Mtn.** 74.62 17 IAmb IAmb 21 03 38.8
comp=Z,38nm,1.0s
BPAW **Bear Paw Mtn.** 74.62 17 P P 21 03 37.7 +0.3
baz=327,SNR=7.7
M15K **Kasigluk River** 74.63 23 P P 21 03 38.6 +1.2
baz=320,SNR=5.8
NEA2 **Nenana** 74.65 16 P P 21 03 37.6 0.0
baz=328
L18K **Granite Mounta** 74.65 21 P P 21 03 38.2 +0.6
baz=322
COLA **College** 74.68 16 P P 21 03 38.0 +0.3
COLA **College** 74.68 16 P P 21 03 38.3 +0.6
COLA **College** 74.68 16 P P 21 03 38.0 +0.3
COLA pmax pmax
comp=Z,71nm,0.8s
COLA **College** 74.68 16 P P 21 03 38.2 +0.6
baz=329
COLA **College** 74.68 16 P P 21 03 38.3 +0.6
G29M **Pine Creek** 74.70 11 IAmb IAmb 21 03 40.1
comp=Z,42nm,0.9s
G29M **Pine Creek** 74.70 11 P P 21 03 38.5 +0.7
baz=337,SNR=14
H27K **Steamboat Moun** 74.74 13 IAmb IAmb 21 03 40.5
comp=Z,56nm,0.9s
H27K **Steamboat Moun** 74.74 13 P P 21 03 39.4 +1.3
baz=334
F31M **Tsiigehtchic** 74.82 9 P P 21 03 39.2 +0.8
baz=340,SNR=38
N14K **Kuskokwak Cree** 74.90 24 P P 21 03 39.6 +0.6
baz=319
G30M **tAoh Zraii Nji** 74.91 10 P P 21 03 39.6 +0.5
baz=338,SNR=48
M16K **Timber Creek** 74.92 22 IAmb IAmb 21 03 41.8
comp=Z,26nm,0.8s
M16K **Timber Creek** 74.92 22 P P 21 03 40.7 +1.5
baz=321
IL31 **74.98** 15 IAmb IAmb 21 03 40.5
comp=Z,45nm,1.1s
ILAR **Eielson Array** 74.98 15 P P 21 03 38.6 -0.8
ILAR pP pP 21 04 28.7 -1.9
ILAR **Eielson Array** 74.98 15 P P 21 03 39.1 -0.3
comp=Z,21nm,0.9s,baz=308,slow=4.7,SNR=125
ILAR PP PP 21 06 28.6 -0.9
comp=Z,7.3nm,1.0s,baz=326,slow=7.6,SNR=8.1
comp=Z,21nm,0.9s
DRS **Darwin Rock St** 75.05 118 P P 21 03 41.8 +1.3
M17K **Holitna River** 75.08 22 IAmb IAmb 21 03 42.8
comp=Z,51nm,0.8s
M17K **Holitna River** 75.08 22 P P 21 03 41.7 +1.6
baz=322,SNR=8.7
KTH **Kantishna Hill** 75.09 18 IAmb IAmb 21 03 41.6
comp=Z,84nm,1.2s
L19K **White Mountain** 75.20 20 IAmb IAmb 21 03 42.9
comp=Z,44nm,1.2s
L19K **White Mountain** 75.20 20 P P 21 03 41.6 +0.8
baz=324
L20K **Farewell, AK** 75.22 20 P P 21 03 41.6 +0.7
baz=325
N15K **Kwethluk River** 75.23 23 IAmb IAmb 21 03 43.8
comp=Z,58nm,1.2s
N15K **Kwethluk River** 75.23 23 P P 21 03 42.5 +1.6
baz=320
G31M **Satah River** 75.24 10 P P 21 03 41.5 +0.7
baz=340,SNR=18
I26K **Coal Creek Min** 75.27 14 IAmb IAmb 21 03 43.1
comp=Z,33nm,0.8s
MAKGR **Makgori** 75.27 222 P P 21 03 41.8 +0.1
HDA **Harding Lake** 75.28 16 P P 21 03 40.6 -0.6
baz=330,SNR=7.7
H29M **Whitestone** 75.29 12 P P 21 03 42.1 +0.9
baz=337,SNR=39
I27K **Kandik River** 75.29 13 P P 21 03 41.8 +0.6
baz=334,SNR=27
PPLA **Purkeypile** 75.32 19 IAmb IAmb 21 03 44.9
comp=Z,106nm,1.7s
PPLA **Purkeypile** 75.32 19 P P 21 03 41.7 +0.1
baz=326,SNR=6.1
TRF **Thorofare Moun** 75.33 18 P 21 03 41.1 -0.6
TRF **Thorofare Moun** 75.33 18 P P 21 03 41.1 -0.6
baz=327,SNR=6.5
EPYK **Eagle Plains** 75.40 11 IAmb IAmb 21 03 43.4
comp=Z,37nm,0.9s
EPYK **Eagle Plains** 75.40 11 P P 21 03 41.9 +0.1
baz=338,SNR=17
N16K **Nishlik Lake** 75.41 23 P P 21 03 42.2 +0.2
baz=321,SNR=7.7
MCK **McKinley** 75.42 17 IAmb IAmb 21 03 43.3
comp=Z,39nm,0.6s
MCK **McKinley** 75.42 17 P P 21 03 42.3 +0.3
baz=328,SNR=14
J25K **Salcha River,** 75.44 15 IAmb IAmb 21 03 43.3
comp=Z,22nm,0.7s
J25K **Salcha River,** 75.44 15 P P 21 03 41.8 -0.3
baz=331,SNR=27
M18K **Stony River** 75.48 21 P P 21 03 43.3 +0.9
baz=323
O14K **Tigyukauivet M** 75.55 24 P P 21 03 43.8 +1.1
baz=320
M19K **Big River Lodg** 75.55 20 P P 21 03 43.8 +1.0
baz=324
RND **Reindeer** 75.71 17 IAmb IAmb 21 03 44.4
comp=Z,32nm,0.8s
I28M **Miner Creek** 75.73 12 IAmb IAmb 21 03 45.4
comp=Z,41nm,0.9s
I28M **Miner Creek** 75.73 12 P P 21 03 44.2 +0.4
baz=335,SNR=41
KNRA **Kununurra** 75.80 122 P P 21 03 44.4 -0.4
comp=Z,70nm,0.7s
N17K **Nushagak Hills** 75.85 22 IAmb IAmb 21 03 47.2
comp=Z,74nm,1.6s
N17K **Nushagak Hills** 75.85 22 P P 21 03 45.5 +1.1
baz=322
J26L **Joseph Creek** 75.91 14 IAmb IAmb 21 03 46.4
comp=Z,48nm,0.9s
J26L **Joseph Creek** 75.91 14 P P 21 03 45.4 +0.6
baz=333,SNR=41
O15K **Ungalikthiuk R** 76.08 24 P P 21 03 46.7 +1.0
baz=321
N18K **Kilae Creek** 76.11 21 P P 21 03 47.1 +1.1
baz=323
CUT **Chulitna** 76.22 18 IAmb IAmb 21 03 49.1
comp=Z,115nm,1.5s
CUT **Chulitna** 76.22 18 P P 21 03 46.2 -0.3
baz=328
SKT **Skwentna** 76.26 19 P 21 03 46.5 -0.3
SKT IAmb IAmb 21 03 47.6
comp=Z,60nm,1.0s
SKT pP pP 21 04 35.2 -2.4
SKT **Skwentna** 76.26 19 P P 21 03 46.5 -0.3
baz=327,SNR=17
WAT1 **Susitna Watana** 76.28 17 P P 21 03 46.3 -0.6
baz=329
H31M **Peel River** 76.28 10 IAmb IAmb 21 03 48.5
comp=Z,56nm,0.8s
H31M **Peel River** 76.28 10 P P 21 03 47.3 +0.4
baz=340,SNR=24
SCRK **Sand Creek** 76.29 15 IAmb IAmb 21 03 48.8
comp=Z,30nm,0.8s
SCRK **Sand Creek** 76.29 15 P P 21 03 47.6 +0.5
baz=332,SNR=8.7
O16K **Kokwok River B** 76.31 23 P P 21 03 48.2 +1.2
baz=322,SNR=6.3
RIDG **Independent Ri** 76.32 15 P P 21 03 46.7 -0.4
baz=332
DHY **Denali Highway** 76.34 17 IAmb IAmb 21 03 49.0
comp=Z,36nm,0.7s
DHY **Denali Highway** 76.34 17 P P 21 03 47.2 -0.2
baz=330,SNR=28
KDU **Kakadu** 76.35 117 P P 21 03 46.4 -1.5
comp=Z,12nm,0.6s
N19K **Bonanza Creek** 76.42 21 P P 21 03 48.5 +0.8
baz=324
O17K **Koliganek Bris** 76.48 22 P P 21 03 47.7 -0.3
baz=323
I30M **Mount Dempster** 76.53 11 IAmb IAmb 21 03 50.5
comp=Z,56nm,0.8s
I30M **Mount Dempster** 76.53 11 P P 21 03 48.7 +0.4
baz=338,SNR=60
K27K **Chicken** 76.62 14 IAmb IAmb 21 03 51.0
comp=Z,58nm,1.1s
K27K **Chicken** 76.62 14 P P 21 03 49.7 +0.9

	baz=334							
WAT6	**Susitna Watana**	**76.69**	**17**	P	**P**	**21 03 49.2**	**-0.2**	
	baz=330,SNR=13							
SPCR	**Spurr Chakacha**	**76.73**	**20**	P	**P**	**21 03 49.0**	**-0.4**	
	baz=326							
P16K	**Nushagak River**	**76.79**	**23**	P	**P**	**21 03 50.1**	**+0.4**	
	baz=322							
M22K	**Willow**	**76.81**	**18**	IAmb	IAmb	21 03 50.5		
	comp=Z,54nm,0.9s							
M22K	**Willow**	**76.81**	**18**	P	**P**	**21 03 49.5**	**-0.3**	
	baz=328							
PAX	**Paxson**	**76.86**	**16**	IAmb	IAmb	21 03 51.5		
	comp=Z,34nm,0.8s							
PAX	**Paxson**	**76.86**	**16**	P	**P**	**21 03 50.4**	**+0.2**	
	baz=331,SNR=24							
SUA	**Susitna One**	**76.89**	**19**	P	**P**	**21 03 50.5**	**0.0**	
	baz=327							
O19K	**Port Alsworth**	**76.97**	**21**	P	**P**	**21 03 51.2**	**+0.5**	
	baz=325							
O18K	**Koktuh Hills**	**76.98**	**22**	P	**P**	**21 03 51.8**	**+1.0**	
	baz=324							
DAWY	**Dawson**	**77.09**	**13**	IAmb	IAmb	21 03 53.1		
	comp=Z,57nm,1.1s							
DAWY	**Dawson**	**77.09**	**13**	P	**P**	**21 03 51.8**	**+0.3**	
	baz=336,SNR=31							
GHO	**Glory Hole Cre**	**77.09**	**18**	IAmb	IAmb	21 03 52.4		
	comp=Z,41nm,1.0s							
J30M	**Hart River**	**77.14**	**11**	IAmb	IAmb	21 03 53.8		
	comp=Z,43nm,1.0s							
J30M	**Hart River**	**77.14**	**11**	P	**P**	**21 03 52.6**	**+0.8**	
	baz=338,SNR=32							
PMR	**Palmer**	**77.20**	**18**	P	**P**	**21 03 52.4**	**+0.5**	
PMR	**Palmer**	**77.20**	**18**	P	**P**	**21 03 52.0**	**0.0**	
	baz=329							
SML	**Sawmill**	**77.21**	**18**	P	**P**	**21 03 52.2**	**+0.1**	
	baz=329,SNR=21							
L26K	**Log Cabin Wild**	**77.27**	**15**	P	**P**	**21 03 53.3**	**+0.9**	
	baz=333,SNR=16							
MENT	**Mentasta**	**77.27**	**15**	P	**P**	**21 03 52.2**	**-0.2**	
MENT	**Mentasta**	**77.27**	**15**	P	**P**	**21 03 52.4**	**0.0**	
BOSA	**Boshof**	**77.29**	**219**	P	**P**	**21 03 52.3**	**-0.7**	
BOSA	**Boshof**	**77.29**	**219**	P	**P**	**21 03 53.1**	**+0.1**	
	comp=Z,14nm,0.6s,baz=27,slow=2.7,SNR=24							
	comp=Z,14nm,0.6s							
BOSA	**Boshof**	**77.29**	**219**	P	**P**	**21 03 53.4**	**+0.4**	
P18K	**Big Mountain,**	**77.35**	**22**	P	**P**	**21 03 53.5**	**+0.5**	
	baz=324							
M23K	**Glacier View**	**77.37**	**17**	P	**P**	**21 03 53.0**	**0.0**	
	baz=330,SNR=19							
SCM	**Sheep Creek Mo**	**77.43**	**17**	IAmb	IAmb	21 03 54.7		
	comp=Z,45nm,0.8s							
SCM	**Sheep Creek Mo**	**77.43**	**17**	P	**P**	**21 03 54.5**	**+1.1**	
	baz=330,SNR=10							
HARP	**HAARP**	**77.44**	**16**	P	**P**	**21 03 54.5**	**+1.1**	
	baz=332,SNR=26							
M24K	**Tolsona, Glenn**	**77.46**	**17**	P	**P**	**21 03 54.8**	**+1.2**	
	baz=331,SNR=20							
RC01	**Rabbit Creek A**	**77.47**	**19**	P	**P**	**21 03 53.5**	**0.0**	
	baz=328							
Q16K	**King Salmon**	**77.49**	**23**	P	**P**	**21 03 54.6**	**+1.0**	
	baz=323,SNR=5.9							
KNK	**Knik Glacier**	**77.52**	**18**	IAmb	IAmb	21 03 55.5		
	comp=Z,71nm,1.0s							
KNK	**Knik Glacier**	**77.52**	**18**	P	**P**	**21 03 54.3**	**+0.5**	
	baz=329,SNR=12							
O20K	**Slope Mountain**	**77.54**	**20**	P	**P**	**21 03 54.5**	**+0.5**	
	baz=326							
L27K	**Beaver Creek,**	**77.55**	**14**	IAmb	IAmb	21 03 56.2		
	comp=Z,29nm,0.9s							
L27K	**Beaver Creek,**	**77.55**	**14**	P	**P**	**21 03 54.9**	**+0.9**	
	baz=334							
BCAR	**Beaver Creek A**	**77.55**	**14**	P	**P**	**21 03 54.3**	**+0.3**	
K29M	**Barlow Dome**	**77.62**	**12**	IAmb	IAmb	21 03 56.5		
	comp=Z,47nm,1.1s							
K29M	**Barlow Dome**	**77.62**	**12**	P	**P**	**21 03 55.4**	**+0.9**	
	baz=338,SNR=27							
MEEK	**Meekatharra**	**77.63**	**137**	P	**P**	**21 03 55.0**	**+0.1**	
	comp=Z,50nm,0.9s							
MEEK	**Meekatharra**	**77.63**	**137**	P	**P**	**21 03 56.0**	**+1.2**	
P19K	**Oil Pt**	**77.73**	**21**	P	**P**	**21 03 54.7**	**-0.3**	
	baz=326							
SLKM	**Skilak Lake**	**77.84**	**19**	IAmb	IAmb	21 03 56.2		
	comp=Z,28nm,0.6s							
M26K	**Nabesna, AK**	**77.90**	**15**	P	**P**	**21 03 56.2**	**+0.3**	
	baz=333							
S12K	**Black Hills**	**77.97**	**27**	P	**P**	**21 03 56.6**	**+0.3**	
	baz=320							
O22K	**Cooper Landing**	**77.99**	**19**	P	**P**	**21 03 56.3**	**-0.1**	
	baz=328							
Q18K	**Katmai Hardscr**	**78.02**	**22**	P	**P**	**21 03 56.2**	**-0.5**	
	baz=324							
PWL	**Port Wells**	**78.03**	**18**	IAmb	IAmb	21 03 58.3		
	comp=Z,127nm,1.7s							
PWL	**Port Wells**	**78.03**	**18**	P	**P**	**21 03 56.8**	**+0.1**	
	baz=329,SNR=5.1							
KLU	**Klutina**	**78.06**	**17**	IAmb	IAmb	21 03 58.8		
	comp=Z,46nm,1.0s							
KLU	**Klutina**	**78.06**	**17**	P	**P**	**21 03 57.4**	**+0.6**	
	baz=331,SNR=14							
Q17K	**Contact Creek**	**78.06**	**23**	P	**P**	**21 03 57.2**	**+0.3**	
	baz=324							
MAYO	**Mayo, Yukon**	**78.12**	**12**	P	**P**	**21 03 57.7**	**+0.6**	
	baz=339							
M27K	**Edge Creek, AK**	**78.17**	**15**	P	**P**	**21 03 58.4**	**+0.9**	
M27K				IAmb	IAmb	21 03 59.9		
	comp=Z,78nm,1.0s							
M27K				pP	**pP**	**21 04 47.0**	**-1.7**	
M27K	**Edge Creek, AK**	**78.17**	**15**	P	**P**	**21 03 58.7**	**+1.2**	
	baz=334,SNR=42							
HOM	**Homer**	**78.17**	**20**	P	**P**	**21 03 58.3**	**+0.9**	
	baz=327							
MORW	**Morawa**	**78.18**	**140**	P	**P**	**21 03 58.3**	**+0.5**	
	comp=Z,44nm,0.8s							
MORW	**Morawa**	**78.18**	**140**	IAmb	IAmb	21 03 59.9		
	comp=Z,27nm,0.6s							
MORW	**Morawa**	**78.18**	**140**	P	**P**	**21 03 59.4**	**+1.6**	
L29M	**L29M**	**78.20**	**13**	IAmb	IAmb	21 03 59.8		
	comp=Z,44nm,1.1s							
L29M	**L29M**	**78.20**	**13**	P	**P**	**21 03 58.4**	**+0.8**	
	baz=337							
N25K	**Chitina, Valde**	**78.26**	**16**	IAmb	IAmb	21 04 00.1		
	comp=Z,96nm,1.9s							
N25K	**Chitina, Valde**	**78.26**	**16**	P	**P**	**21 03 58.7**	**+0.8**	
	baz=332,SNR=6.4							
GLI	**Glacier Island**	**78.31**	**18**	IAmb	IAmb	21 03 59.4		
	comp=Z,47nm,0.9s							
GLI	**Glacier Island**	**78.31**	**18**	P	**P**	**21 03 58.5**	**+0.3**	
	baz=330,SNR=5.2							
BRSE	**Bradley Lake S**	**78.35**	**20**	P	**P**	**21 03 57.9**	**-0.5**	
	baz=328							
SEW	**Seward**	**78.39**	**19**	P	**P**	**21 03 58.5**	**0.0**	
	baz=328							
DIV	**Divide**	**78.41**	**17**	IAmb	IAmb	21 04 00.4		
	comp=Z,32nm,0.7s							
S14K	**Fog Glacier**	**78.42**	**26**	P	**P**	**21 03 58.9**	**0.0**	
	baz=321							
FID	**Port Fidalgo**	**78.58**	**17**	IAmb	IAmb	21 04 00.7		
	comp=Z,41nm,1.0s							
M29M	**Somme Creek**	**78.75**	**13**	P	**P**	**21 04 01.7**	**+1.0**	
	baz=337							
MCARA	**McCarthy VSAT**	**78.81**	**16**	P	**P**	**21 04 01.5**	**+0.7**	
	baz=333							
SDPT	**Sand Point**	**78.82**	**27**	P	**P**	**21 04 01.7**	**+0.7**	
	baz=321							
BMRM	**Bremner River**	**78.83**	**16**	IAmb	IAmb	21 04 02.9		
	comp=Z,62nm,1.1s							
BMRM	**Bremner River**	**78.83**	**16**	P	**P**	**21 04 01.8**	**+0.8**	
	baz=332,SNR=11							
Q20K	**Shuyak Island**	**78.83**	**21**	P	**P**	**21 04 01.6**	**+0.6**	
	baz=326							
VRDI	**Verde Repeater**	**78.85**	**16**	IAmb	IAmb	21 04 03.0		
	comp=Z,38nm,1.2s							
M30M	**Minto, Yukon**	**78.93**	**12**	P	**P**	**21 04 02.2**	**+0.7**	
	baz=338,SNR=6.6							
EYAK	**Cordova Ski Ar**	**78.93**	**17**	P	**P**	**21 04 01.8**	**+0.4**	
EYAK				IAmb	IAmb	21 04 03.5		
	comp=Z,41nm,0.8s							
EYAK	**Cordova Ski Ar**	**78.93**	**17**	P	**P**	**21 04 02.9**	**+1.4**	
EYAK	**Cordova Ski Ar**	**78.93**	**17**	P	**P**	**21 04 02.4**	**+0.9**	
	baz=331,SNR=7.2							
YUK3	**Moose Creek**	**78.98**	**14**	P	**P**	**21 04 02.9**	**+0.8**	
	baz=335							
P23K	**Montague Islan**	**79.01**	**18**	P	**P**	**21 04 02.7**	**+0.8**	
	baz=330							
CRQM	**Cirque**	**79.34**	**16**	IAmb	IAmb	21 04 05.8		
	comp=Z,31nm,1.0s							
CRQE	**Cirque**	**79.36**	**16**	P	**P**	**21 04 04.6**	**+0.6**	
	baz=333,SNR=5.5							
BARN	**Barnard Glacie**	**79.39**	**15**	IAmb	IAmb	21 04 06.4		
	comp=Z,51nm,1.3s							
KDAK	**Kodiak Island**	**79.47**	**22**	IAmb	IAmb	21 04 05.8		
	comp=Z,89nm,1.0s							
KDAK	**Kodiak Island**	**79.47**	**22**	P	**P**	**21 04 04.9**	**+0.5**	
	comp=Z,43nm,0.6s,baz=307,slow=2.7,SNR=21							
	comp=Z,43nm,0.6s							
KDAK	**Kodiak Island**	**79.47**	**22**	P	**P**	**21 04 04.9**	**+0.5**	
KDAK				pmax	pmax			
	comp=Z,89nm,1.0s							
KDAK	**Kodiak Island**	**79.47**	**22**	P	**P**	**21 04 04.7**	**+0.3**	
	baz=326							
KDAK	**Kodiak Island**	**79.47**	**22**	P	**P**	**21 04 05.0**	**+0.5**	
CTG	**Chitna Glacier**	**79.54**	**15**	P	**P**	**21 04 05.9**	**+0.9**	
	baz=335,SNR=9.4							
CTGM	**Chitina Glacie**	**79.54**	**15**	IAmb	IAmb	21 04 07.0		
	comp=Z,42nm,1.1s							
CHNA	**Chernabura Isl**	**79.54**	**27**	P	**P**	**21 04 05.3**	**+0.4**	
	baz=321							
KUQ	**Kuujjuaa**	**79.57**	**339**		**P**	**21 04 05.3**	**+0.3**	
KUQ				IAmb	IAmb	21 04 06.4		
	comp=Z,39nm,0.8s							
YUK8	**Steele Glacier**	**79.57**	**14**	P	**P**	**21 04 05.8**	**+0.5**	
	baz=336							
GRNC	**Granite Creek**	**79.67**	**15**	IAmb	IAmb	21 04 08.2		
	comp=Z,51nm,1.4s							
M31M	**Drury Creek, Y**	**79.67**	**11**	IAmb	IAmb	21 04 07.4		
	comp=Z,45nm,1.1s							
M31M	**Drury Creek, Y**	**79.67**	**11**	P	**P**	**21 04 06.2**	**+0.7**	
	baz=340,SNR=26							
WAX	**Waxell Ridge**	**79.68**	**16**	IAmb	IAmb	21 04 07.3		
	comp=Z,24nm,0.7s							
OHAK	**Old Harbor**	**79.72**	**22**	P	**P**	**21 04 06.2**	**+0.4**	
	baz=326							
YUK4	**Talbot Arm**	**79.73**	**14**	P	**P**	**21 04 06.5**	**+0.3**	
	baz=337,SNR=9.7							
LOGN	**Logan Glacier**	**79.74**	**15**	IAmb	IAmb	21 04 08.1		
	comp=Z,31nm,0.9s							
MMPY	**Sheldon Lake,**	**79.74**	**10**	P	**P**	**21 04 06.9**	**+0.9**	
	baz=343,SNR=14							
Q23K	**Middleton Isla**	**79.77**	**18**	P	**P**	**21 04 06.7**	**+0.7**	
	baz=331							
BLDU	**Ballidu**	**79.77**	**140**	P	**P**	**21 04 04.9**	**-1.4**	
	comp=Z,0.0nmcomp=Z,78nm,1.3s							
BLDU	**Ballidu**	**79.77**	**140**	P	**P**	**21 04 07.6**	**+1.2**	
N30M	**Nishkik Lake**	**79.91**	**13**	P	**P**	**21 04 08.0**	**+1.1**	
	baz=338,SNR=14							
O28M	**Mount Upton**	**79.95**	**15**	P	**P**	**21 04 08.1**	**+0.6**	
	baz=336							
SII	**Sitkinak Islan**	**79.99**	**23**	P	**P**	**21 04 08.4**	**+1.0**	
	baz=325							
YAH	**Yahtse**	**80.00**	**15**	IAmb	IAmb	21 04 09.6		
	comp=Z,28nm,0.8s							
WRGLY	**Wrigley**	**80.03**	**6**		**P**	**21 04 08.0**	**+0.6**	
WRGLY				pP	**pP**	**21 04 55.8**	**-3.0**	
WRGLY	**Wrigley**	**80.03**	**6**	P	**P**	**21 04 08.4**	**+1.1**	
	baz=349,SNR=10							
N31M	**Braeburn, Yuko**	**80.12**	**12**	IAmb	IAmb	21 04 10.2		
	comp=Z,41nm,0.8s							
N31M	**Braeburn, Yuko**	**80.12**	**12**	P	**P**	**21 04 08.5**	**+0.6**	
	baz=339,SNR=18							
MESA	**MESA**	**80.12**	**16**	P	**P**	**21 04 08.8**	**+0.6**	
	baz=334							
YUK6	**Outpost Mounta**	**80.16**	**14**	P	**P**	**21 04 09.2**	**+0.8**	
	baz=337,SNR=5.6							
HYT	**Haines Junctio**	**80.43**	**13**	IAmb	IAmb	21 04 11.9		
	comp=Z,32nm,0.9s							
HYT	**Haines Junctio**	**80.43**	**13**	P	**P**	**21 04 10.9**	**+1.2**	
	baz=338,SNR=16							
PINM	**Pinnacle**	**80.56**	**15**	P	**P**	**21 04 11.4**	**+1.0**	
	baz=336,SNR=5.3							
O29M	**Mount Kennedy**	**80.71**	**14**	P	**P**	**21 04 12.0**	**+0.7**	
	baz=337							
O30N	**Mendenhall**	**80.73**	**13**	IAmb	IAmb	21 04 13.1		
	comp=Z,39nm,0.8s							
O30N	**Mendenhall**	**80.73**	**13**	P	**P**	**21 04 11.7**	**+0.5**	
	baz=339,SNR=16							
N32M	**Quiet Lake**	**80.88**	**11**	P	**P**	**21 04 12.2**	**+0.2**	
	baz=341							
WHY	**Whitehorse**	**81.05**	**12**	IAmb	IAmb	21 04 14.1		
	comp=Z,48nm,1.0s							
WHY	**Whitehorse**	**81.05**	**12**	P	**P**	**21 04 13.0**	**0.0**	
	baz=340,SNR=11							
KLBR	**Kellerberrin**	**81.08**	**140**	P	**P**	**21 04 14.6**	**+1.3**	
	comp=Z,72nm,0.8s							
KLBR	**Kellerberrin**	**81.08**	**140**	P	**P**	**21 04 14.6**	**+1.3**	
PNL	**Peninsula**	**81.13**	**15**	P	**P**	**21 04 14.5**	**+1.1**	
	baz=336							
P30M	**Million Dollar**	**81.18**	**13**	P	**P**	**21 04 14.6**	**+1.0**	
	baz=338							
TGTN	**Hyland Airport**	**81.19**	**9**	P	**P**	**21 04 15.1**	**+1.4**	
	baz=345,SNR=14							
YKAW3	**Yellowknife W/n**	**81.22**	**2**	IAmb	IAmb	21 04 15.3		
	comp=Z,32nm,0.9s							
YKA	**Yellowknife Ar**	**81.29**	**2**		**P**	**21 04 13.7**	**-0.3**	
YKA	**Yellowknife Ar**	**81.29**	**2**	P	**P**	**21 04 14.6**	**+0.6**	
	comp=Z,16nm,0.7s,baz=344,slow=5.6,SNR=28							
YKA				PP	**PP**	**21 07 20.7**	**-1.2**	
	comp=Z,6.3nm,0.8s,baz=350,slow=7.9,SNR=5.6							
	comp=Z,16nm,0.7s							
YKAW1	**Yellowknife Wh**	**81.30**	**2**	IAmb	IAmb	21 04 15.8		
	comp=Z,49nm,0.8s							
P29M	**Windy Craggy**	**81.49**	**14**	P	**P**	**21 04 16.0**	**+0.7**	
	baz=338							
P33M	**Teslin, Yukon**	**81.81**	**11**	IAmb	IAmb	21 04 18.4		
	comp=Z,71nm,0.9s							
P33M	**Teslin, Yukon**	**81.81**	**11**	P	**P**	**21 04 17.3**	**+0.3**	
	baz=342,SNR=36							
SCHQ	**Schefferville**	**81.83**	**336**	P	**P**	**21 04 17.4**	**+0.3**	
	comp=Z,13nm,0.7s,baz=31,slow=4.3,SNR=18							
SCHQ				PP	**PP**	**21 07 22.8**	**-3.8**	
	comp=Z,6.3nm,0.7s,baz=32,slow=8.1,SNR=5.4							
	comp=Z,13nm,0.7s							
PLBC	**Pleasant Camp**	**81.91**	**13**	P	**P**	**21 04 18.2**	**+0.9**	
	baz=339,SNR=19							
SKAG	**Skagway**	**82.10**	**13**	P	**P**	**21 04 19.3**	**+1.0**	
	baz=340							
WRKA	**Warakurna**	**82.15**	**129**	P	**P**	**21 04 18.7**	**-0.5**	
	comp=Z,8.1nm,0.8s							
P32M	**Atlin**	**82.26**	**12**	P	**P**	**21 04 19.8**	**+0.6**	
	baz=341,SNR=8.6							
WTLY	**Watson Lake, Y**	**82.49**	**9**	IAmb	IAmb	21 04 22.1		
	comp=Z,34nm,0.8s							
WTLY	**Watson Lake, Y**	**82.49**	**9**	P	**P**	**21 04 21.2**	**+0.8**	
	baz=345,SNR=7.4							
WRA	**Warramunga Arr**	**82.57**	**121**	P	**P**	**21 04 19.8**	**-1.6**	
WRA	**Warramunga Arr**	**82.57**	**121**	P	**P**	**21 04 20.1**	**-1.2**	
	comp=Z,18nm,0.5s,baz=322,slow=4.9,SNR=159							
WRA				S	S	21 14 10.6	-10	
	comp=Z,0.6nm,0.7s,baz=310,slow=5.6,SNR=5.2							
WRA				PKKPbc	**PKKPbc**	**21 22 45.6**	**+0.8**	
	comp=Z,1.4nm,0.5s,baz=133,slow=2.1,SNR=9.1							
	comp=Z,18nm,0.5s							
WRAB	**Tennant Creek**	**82.57**	**121**	P	**P**	**21 04 20.1**	**-1.3**	
WRAB				IAmb	IAmb	21 04 22.3		
	comp=Z,26nm,0.6s							
WRAB	**Tennant Creek**	**82.57**	**121**	P	**P**	**21 04 20.4**	**-1.0**	
WRAB	**Tennant Creek**	**82.57**	**121**	P	**P**	**21 04 20.1**	**-1.3**	
WRAB				pmax	pmax			
	comp=Z,27nm,0.6s							
WRAB	**Tennant Creek**	**82.57**	**121**	P	**P**	**21 04 20.3**	**-1.1**	
SUR	**Sutherland**	**82.60**	**220**	P	**P**	**21 04 22.7**	**+1.2**	
R33M	**Jennings River**	**82.88**	**11**	IAmb	IAmb	21 04 24.4		
	comp=Z,31nm,0.9s							
R33M	**Jennings River**	**82.88**	**11**	P	**P**	**21 04 23.1**	**+0.6**	
	baz=343							
KOTAN	**Kotaneelee Air**	**83.03**	**7**	P	**P**	**21 04 24.0**	**+0.9**	
	baz=349							
Q32M	**Nakina River**	**83.09**	**11**	P	**P**	**21 04 24.6**	**+0.9**	
	baz=342							
RKGY	**Rocky Gully**	**83.11**	**143**	P	**P**	**21 04 25.6**	**+1.8**	
	comp=Z,132nm,0.8s							
S31K	**Pelican**	**83.34**	**14**	P	**P**	**21 04 25.6**	**+0.9**	
	baz=339							
R32K	**Eaglecrest**	**83.36**	**13**	P	**P**	**21 04 26.3**	**+1.4**	
	baz=340							
LIRD	**Liard River Hi**	**83.51**	**8**	P	**P**	**21 04 26.4**	**+0.7**	
	baz=347,SNR=5.4							
DLBC	**Dease Lake**	**83.94**	**11**	P	**P**	**21 04 28.9**	**+1.0**	
	baz=344,SNR=9.8							
S32K	**Killisnoo**	**84.11**	**13**	P	**P**	**21 04 29.7**	**+1.1**	
	baz=340							
TOAD	**Toad River Com**	**84.16**	**8**	P	**P**	**21 04 29.8**	**+0.8**	
	baz=348,SNR=7.3							
S34M	**Telegraph Cree**	**84.27**	**11**	IAmb	IAmb	21 04 31.9		
	comp=Z,51nm,0.8s							
S34M	**Telegraph Cree**	**84.27**	**11**	P	**P**	**21 04 30.8**	**+1.3**	
	baz=343,SNR=24							
SIT	**Sitka**	**84.36**	**14**	P	**P**	**21 04 30.8**	**+1.0**	
	baz=340							
ASAR	**Alice Springs**	**84.82**	**124**		**P**	**21 04 31.6**	**-1.1**	
ASAR				pP	**pP**	**21 05 21.9**	**-3.5**	
ASAR	**Alice Springs**	**84.82**	**124**	P	**P**	**21 04 31.6**	**-1.1**	
	comp=Z,25nm,0.5s,baz=311,slow=4.9,SNR=216							
ASAR				S	**SKSac**	**21 14 29.4**	**-7.5**	
	comp=Z,0.7nm,0.7s,baz=311,slow=7.3,SNR=6.4							
ASAR				PKKPbc	**PKKPbc**	**21 22 40.3**	**+0.5**	
	comp=Z,1.2nm,0.6s,baz=133,slow=2.4,SNR=11							
	comp=Z,25nm,0.5s							
AUALC	**St Philip's Co**	**84.82**	**124**	P	**P**	**21 04 32.3**	**-0.4**	
COEN	**Coen**	**85.04**	**111**	P	**P**	**21 04 33.8**	**-0.2**	
	comp=Z,12nm,0.8s							
COEN	**Coen**	**85.04**	**111**	P	**P**	**21 04 33.2**	**-0.8**	
COEN	**Coen**	**85.04**	**111**	P	**P**	**21 04 34.5**	**+0.5**	
T35M	**Bob Quinn**	**85.31**	**11**	P	**P**	**21 04 36.0**	**+1.3**	
	baz=344,SNR=9.0							
WRAK	**Wrangell Islan**	**85.50**	**12**	P	**P**	**21 04 36.6**	**+1.0**	
	baz=342							
U33K	**Whale Pass**	**85.66**	**13**	P	**P**	**21 04 37.3**	**+0.9**	
	baz=342							
FORT	**Forrest**	**86.16**	**133**	P	**P**	**21 04 38.8**	**-0.3**	
	comp=Z,60nm,0.6s							
CRAG	**Craig**	**86.27**	**13**	P	**P**	**21 04 39.5**	**+0.1**	
	baz=342							
QIS	**Mount Isa**	**86.66**	**118**	P	**P**	**21 04 40.6**	**-1.2**	
	comp=Z,17nm,0.9s							
QIS	**Mount Isa**	**86.66**	**118**	P	**P**	**21 04 41.3**	**-0.5**	
MTSU	**Mount Surprise**	**88.52**	**114**	P	**P**	**21 04 50.4**	**-0.3**	
	comp=Z,5.9nm,1.0s							
MTSU	**Mount Surprise**	**88.52**	**114**	P	**P**	**21 04 51.2**	**+0.5**	
FFC	**Flin Flon**	**88.90**	**355**		**P**	**21 04 52.1**	**+0.1**	
FFC				IAmb	IAmb	21 04 53.5		
	comp=Z,36nm,1.2s							
FFC	**Flin Flon**	**88.90**	**355**	P	**P**	**21 04 52.1**	**+0.1**	
FFC				pmax	pmax			
	comp=Z,36nm,1.3s							
FFC	**Flin Flon**	**88.90**	**355**	P	**P**	**21 04 52.7**	**+0.7**	
BBB	**Bella Bella**	**90.27**	**11**	P	**P**	**21 05 00.5**	**+2.2**	
	comp=Z,44nm,0.9s,baz=334,slow=8.7,SNR=3.4							
VLDQ	**Val d'Or**	**90.95**	**339**	IAmb	IAmb	21 05 03.4		
	comp=Z,17nm,0.9s							
ULM	**Lac du Bonnet**	**92.76**	**351**	IAmb	IAmb	21 05 10.6		
	comp=Z,22nm,0.9s							
ULM	**Lac du Bonnet**	**92.76**	**351**	P	**P**	**21 05 09.6**	**-0.3**	
	comp=Z,16nm,0.8s,baz=14,slow=2.8,SNR=10.0							
	comp=Z,16nm,0.8s							
QLP	**Quilpie**	**93.77**	**120**	P	**P**	**21 05 16.1**	**+1.3**	
AGMN	**Agassiz Nation**	**94.67**	**351**	IAmb	IAmb	21 05 19.8		
	comp=Z,20nm,1.1s							
B08A	**Colville Reser**	**95.11**	**6**	IAmb	IAmb	21 05 22.2		
	comp=Z,33nm,1.9s							
PDAR	**Pinedale Array**	**101.12**	**360**	P	**Pdif**	**21 05 48.6**	**+0.4**	
	comp=Z,0.4nm,0.5s,baz=11,slow=2.0,SNR=2.2							
NVAR	**Mina Array Bea**	**105.05**	**7**	PKIKP	**PKiKP**	**21 10 18.7**	**-0.5**	
	comp=Z,0.6nm,0.7s,baz=356,slow=4.3,SNR=3.6							
NVAR				PKKPbc	**PKKPbc**	**21 21 47.0**	**+0.8**	
	comp=Z,0.4nm,0.6s,baz=199,slow=2.8,SNR=3.6							
TXAR	**Lajitas Array**	**114.27**	**354**	PKP	PKPdf	21 10 36.6	0.0	
	comp=Z,0.4nm,0.8s,baz=18,slow=2.1,SNR=2.4							
TXAR				PKKPbc	**PKKPbc**	**21 21 12.4**	**-4.2**	
	comp=Z,0.2nm,0.4s,baz=190,slow=2.4,SNR=2.5							
BDFB	**Brasilia**	**121.67**	**274**	PKP	**PKiKP**	**21 10 52.2**	**+1.1**	
	comp=Z,1.3nm,0.4s,baz=169,slow=5.2,SNR=2.0							
TOZ	**Tahuroa Road**	**122.01**	**116**		**PKPdf**	**21 10 50.4**	**-0.4**	
RUSC	**La Rusia**	**125.58**	**313**		**PKPdf**	**21 10 56.9**	**-2.2**	
VNDA	**Vanda**	**125.67**	**164**		**PKPdf**	**21 10 56.8**	**0.0**	
VNDA	**Vanda**	**125.67**	**164**	PKP	**PKPdf**	**21 10 56.6**	**-0.1**	
	comp=Z,3.8nm,0.8s,baz=287,slow=4.8,SNR=11							
VNDA	**Vanda**	**125.67**	**164**	PKIKP	**PKPdf**	**21 10 56.8**	**0.0**	
QSPA	**South Pole Qui**	**126.28**	**180**		**PKPdf**	**21 10 58.4**	**+0.2**	
QSPA	**South Pole Qui**	**126.28**	**180**	PKP	**PKiKP**	**21 11 00.8**	**+2.0**	
	comp=Z,12nm,0.8s,baz=292,slow=2.3,SNR=14							
ROSC	**El Rosal**	**127.15**	**313**	PKP	**PKiKP**	**21 11 02.5**	**-0.1**	
	comp=Z,12nm,0.4s,baz=115,slow=14,SNR=6.0							
SIV	**San Ignacio**	**132.28**	**282**	PKP	**PKPdf**	**21 11 10.9**	**-0.3**	
	comp=Z,2.2nm,0.6s,baz=49,slow=1.5,SNR=6.7							
SIV				SKPbc	**SKPbc**	**21 14 15.5**	**-2.2**	
	comp=Z,1.2nm,0.6s,baz=317,slow=1.1,SNR=3.2							
CPUP	**Villa Florida**	**134.52**	**267**		**PKPdf**	**21 11 13.8**	**-1.2**	
CPUP	**Villa Florida**	**134.52**	**267**	PKP	**PKPdf**	**21 11 14.4**	**-0.6**	
	comp=Z,1.8nm,0.6s,baz=291,slow=1.9,SNR=17							
CPUP				SKPbc	**SKPbc**	**21 14 24.6**	**-0.2**	
	comp=Z,0.4nm,0.4s,baz=340,slow=1.5,SNR=4.0							
LPAZ	**La Paz**	**137.96**	**287**	PKP	**PKPdf**	**21 11 21.6**	**-0.9**	

PATCX *i* S **Sn** **21 02 11.8 +1.4**
PATCX IAML 21 02 16.3
comp=Z,4µm,0.6s
HMBC Humberstone 1.49 307 Pn 21 01 50.2 0.0
HMBC Humberstone 1.49 307 ⇓ *i* P **Pn 21 01 50.3 +0.2**
HMBC *e*S **Sn 21 02 10.9 +0.1**
HMBC IAML 21 02 13.4
comp=N,5µm,0.3s
HMBC Humberstone 1.49 307 *i* P **Pn 21 01 50.2 0.0**
HMBC *i* S **Sn 21 02 12.3 +1.6**
HMBC IAML 21 02 17.9
comp=Z,4µm,0.4s
TA01 Diego Aracena 1.58 293 Pn 21 01 51.5 +0.4
TA01 Diego Aracena 1.58 293 *e*P **Pn 21 01 51.5 +0.4**
TA01 *e*S **Sn 21 02 12.5 0.0**
TA01 IAML 21 02 13.8
comp=E,6µm,0.2s
TA01 Diego Aracena 1.58 293 *i* P **Pn 21 01 51.5 +0.4**
TA01 *i* S **Sn 21 02 13.6 +1.1**
TA01 IAML 21 02 17.6
comp=Z,2µm,0.2s
GO01 Chusmiza 1.61 341 Pn 21 01 52.7 +0.8
GO01 Chusmiza 1.61 341 ⇓ *i* P **Pn 21 01 52.7 +0.8**
GO01 *e*S **Sn 21 02 14.9 +1.0**
GO01 IAML 21 02 20.1
comp=N,6µm,0.2s
GO01 Chusmiza 1.61 341 *i* P **Pn 21 01 52.8 +0.9**
GO01 *i* S **Sn 21 02 16.2 +2.4**
GO01 IAML 21 02 20.6
comp=Z,931nm,0.2s
TA02 Huaiquique 1.68 303 *e*P **Pn 21 01 52.6 +0.3**
TA02 *e*S **Sn 21 02 14.3 -0.3**
TA02 IAML 21 02 21.0
comp=N,10µm,0.1s
TA02 Huaiquique 1.68 303 *i* P **Pn 21 01 52.2 -0.1**
TA02 *i* S **Sn 21 02 15.7 +1.1**
TA02 IAML 21 02 16.9
comp=Z,3µm,0.1s
PB11 IPOC Station P 1.72 326 Pn 21 01 53.0 0.0
PB11 IPOC Station P 1.72 326 ⇓ *i* P **Pn 21 01 53.2 +0.2**
PB11 *e*S **Sn 21 02 15.7 0.0**
PB11 IAML 21 02 20.3
comp=E,5µm,0.2s
PB11 IPOC Station P 1.72 326 *i* P **Pn 21 01 53.0 0.0**
PB11 *i* S **Sn 21 02 17.1 +1.3**
PB11 IAML 21 02 21.6
comp=Z,2µm,0.2s
PB06 IPOC Station P 1.74 210 Pn **Pn 21 01 53.7 +0.5**
PB06 IPOC Station P 1.74 210 ⇑ *i* P **Pn 21 01 53.8 +0.5**
PB06 *e*S **Sn 21 02 16.8 +0.5**
PB06 IAML 21 02 19.9
comp=E,3µm,0.2s
PB06 IPOC Station P 1.74 210 *i* P **Pn 21 01 53.5 +0.2**
PB06 *i* S **Sn 21 02 16.9 +0.6**
PB06 IAML 21 02 24.4
comp=Z,3µm,0.3s
AF01 San Pedro de A 1.80 167 Pn 21 01 55.6 +1.5
AF01 San Pedro de A 1.80 167 *e*P **Pn 21 01 55.3 +1.2**
AF01 IAML 21 02 43.7
comp=E,1µm,0.5s
PB05 IPOC Station P 2.21 221 *e*P **Pn 21 01 58.9 -0.1**
PB05 IAML 21 02 36.5
comp=E,3µm,0.2s
PB05 IPOC Station P 2.21 221 *i* P **Pn 21 01 58.3 -0.7**
PB05 IAML 21 02 39.9
comp=Z,917nm,0.5s
PB10 IPOC Station P 2.92 217 Pn **Pn 21 02 08.1 -0.1**
PB10 IPOC Station P 2.92 217 *e*P **Pn 21 02 08.8 +0.7**
PB10 IAML 21 02 55.3
comp=E,1µm,0.3s
PB10 IPOC Station P 2.92 217 *i* P **Pn 21 02 06.8 -1.3**
PB10 IAML 21 02 55.8
comp=Z,616nm,0.4s
PB16 IPOC Station P 2.96 344 Pn **Pn 21 02 10.4 +1.2**
PB16 IPOC Station P 2.96 344 *e*P **Pn 21 02 11.0 +1.8**
PB16 IAML 21 02 57.9
comp=E,456nm,0.7s
PB16 IPOC Station P 2.96 344 *i* P **Pn 21 02 09.2 0.0**
PB16 IAML 21 03 04.2
comp=Z,298nm,0.3s
PB12 IPOC Station P 3.02 328 Pn 21 02 09.2 -0.3
PB12 IPOC Station P 3.02 328 *e*P **Pn 21 02 09.2 -0.3**
PB12 IAML 21 02 56.9
comp=E,1µm,0.2s
PB12 IPOC Station P 3.02 328 *i* P **Pn 21 02 09.3 -0.3**
PB12 *i* S **Sn 21 02 45.5 0.0**
PB12 IAML 21 02 57.2
comp=Z,803nm,0.3s
YJA Yavi 3.06 109 *e*P **Pn 21 02 12.8 +2.4**
AP01 Chacalluta 3.24 330 Pn 21 02 13.4 +1.1
AP01 Chacalluta 3.24 330 *e*P **Pn 21 02 12.2 -0.1**
PB18 Visviri 3.67 347 *e*P **Pn 21 02 22.5 +3.9**
PB14 IPOC Station P 3.79 205 Pn 21 02 19.6 -0.4
PB14 IPOC Station P 3.79 205 *e*P **Pn 21 02 19.1 -0.8**
PB14 IPOC Station P 3.79 205 *i* P **Pn 21 02 19.2 -0.7**
PB14 IAML 21 03 16.9
comp=Z,466nm,0.9s
GO02 Mina Guanaco 4.05 192 *i* P **Pn 21 02 22.2 -1.3**
GO02 IAML 21 03 42.1
comp=Z,294nm,0.2s
LPAZ La Paz 4.90 6 P **Pn 21 02 37.6 +2.4**
comp=Z,38nm,0.6s,baz=172,slow=7.1,SNR=11
AC01 Pan de Azucar 5.25 200 Pn 21 02 37.5 -1.9
GO03 Copiapo 6.54 193 Pn **Pn 21 02 54.1 -2.6**
SIV San Ignacio 8.84 55 P **Pn 21 03 25.2 -2.7**
comp=Z,52nm,0.6s,baz=239,slow=14,SNR=38
SIV S Sn 21 04 55.1 -11
comp=Z,1.6nm,0.5s,baz=139,slow=22,SNR=0.7
CFA Coronel Fontan 10.38 178 P **Pn 21 03 46.8 -1.9**
comp=Z,1.0nm,0.3s,baz=0.0,slow=10,SNR=1.1
PTLB Pontes e Lacer 10.67 59 Pn **Pn 21 03 50.1 -2.5**
VILB Vilhena 11.49 46 Pn **Pn 21 04 02.9 -0.8**
CPUP Villa Florida 11.54 118 S **Sn 21 06 09.2 -2.0**
comp=Z,0.7nm,0.4s,baz=271,slow=2.0,SNR=4.0
MT02 Curacav 12.22 190 Pn **Pn 21 04 12.4 -0.8**
BO01 Tunca 13.33 189 Pn **Pn 21 04 26.2 -1.4**
ITAB Concordia 16.20 115 Pn **Pn 21 05 03.4 -0.6**
ITAB IAmb IAmb 21 05 07.8
comp=Z,32nm,1.2s
PLTB Pedras Altas 17.06 131 P **Pn 21 05 12.6 -1.9**
PLTB IAmb IAmb 21 05 22.7
comp=Z,13nm,1.2s
TRQA Tornquist 17.76 163 P **Pn 21 05 21.9 -1.0**
TRQA IAmb IAmb 21 05 24.4
comp=Z,7.5nm,0.7s
PLCA Paso Flores 19.55 184 P **Pn 21 05 42.4 -1.7**
PLCA Paso Flores 19.55 184 P **Pn 21 05 43.8 -0.2**
comp=Z,4.4nm,0.8s,baz=2.6,slow=11,SNR=6.4
MAL2 Monte Alegre, 23.69 38 P **P 21 06 23.3 -1.2**
BOAV Boa Vista 24.75 20 P **P 21 06 33.4 -0.6**
BOAV IAmb IAmb 21 06 56.5
comp=Z,19nm,1.4s
RUSC La Rusia 27.27 350 P **P 21 06 56.5 -0.7**
QSPA South Pole Qui 69.00 180 P **P 21 12 18.9 +3.1**
QSPA South Pole Qui 69.00 180 P **P 21 12 19.9 +4.1**
comp=Z,3.4nm,0.5s,baz=106,slow=7.4,SNR=5.3
comp=Z,3.4nm,0.5s
BOSA Boshof 83.36 118 P **P 21 13 37.1 -0.7**
BOSA IAmb IAmb 21 14 20.8
comp=Z,1.4nm,0.8s
BOSA Boshof 83.36 118 P **P 21 13 38.4 +0.6**
comp=Z,2.3nm,0.8s,baz=243,slow=9.0,SNR=4.6
comp=Z,2.3nm,0.8s
MAW Mawson 84.55 163 P **P 21 13 44.9 +2.0**
comp=Z,4.6nm,0.6s,baz=198,slow=5.7,SNR=14
comp=Z,4.6nm,0.6s
LBTB Lobatse 84.91 115 P **P 21 13 45.9 +0.3**
LBTB IAmb IAmb 21 13 51.0
comp=Z,9.2nm,1.4s
VAE Valguarnera 97.34 53 P **P 21 14 42.3 -1.1**
comp=Z,13nm,0.4s,baz=258,slow=0.2,SNR=6.3
H11S2 WAKE ISLAND Hyd 28.10 277 T T 23 40 27.8
baz=102,slow=75,SNR=38
H11S1 WAKE ISLAND Hyd 28.11 277 T T 23 40 27.8
baz=102,slow=75,SNR=29
H11S3 WAKE ISLAND Hyd 28.12 277 T T 23 40 27.8
baz=102,slow=75,SNR=22
H11N3 WAKE ISLAND Hyd 28.17 279 T T 23 40 31.5
baz=102,slow=75,SNR=27
H11N2 WAKE ISLAND Hyd 28.19 279 T T 23 40 31.5
baz=102,slow=75,SNR=24
H11N1 WAKE ISLAND Hyd 28.19 279 T T 23 40 31.5
baz=102,slow=75,SNR=20
ASAR Alice Springs 130.31 207 PKP **PKiKP 21 20 21.2 -0.1**
comp=Z,0.8nm,0.8s,baz=134,slow=1.6,SNR=6.5

WRA Warramunga Arr 133.35 210 PKiKP 21 20 27.3 -0.2
WRA Warramunga Arr 133.35 210 PKP **PKiKP 21 20 28.2 +0.7**
comp=Z,0.8nm,0.6s,baz=159,slow=1.7,SNR=12
ZALV Zalesovo Beam 141.56 25 PKPdf 21 20 40.2 0.0
ZALV Zalesovo Beam 141.56 25 PKP **PKPdf 21 20 40.5 +0.2**
comp=Z,1.2nm,0.6s,baz=322,slow=3.3,SNR=4.8
MKAR Makanchi Array 145.23 36 PKPab 21 20 47.8 +0.6
MKAR Makanchi Array 145.23 36 PKP **PKPab 21 20 48.2 +1.1**
comp=Z,4.0nm,0.7s,baz=324,slow=3.3,SNR=30
SONM Songino Array 153.12 7 PKPbc **PKiKP 21 21 07.6 +0.3**
comp=Z,0.4nm,0.5s,baz=346,slow=0.6,SNR=3.6

*GII **05** 21:01:21.6±0.0, 35.°338N±0.°002×31.°590E±0.°001, h5km, Mws3.2, confirmed*
*ISK **05** 21:01:22.6, 35.°53N×31.°68E, h6km, ML3.2/41*
*NIC **05** 21:01:23.1, 35.°58N×31.°70E, h17km, Ml3.2/10*
*HLW **05** 21:01:24.4, 35.°43N×31.°56E, h30km±2km, Ml3.3*
*AFAD **05** 21:01:24.2, 35.°64N×31.°60E, h20km, ML3.1*
*GRAL **05** 21:01:25.9±0.5, 35.°50N×31.°80E, h17km±335km, MD3.7*

ISC 05 21:01:23.9±1.3, **35.°43N**±0.°03×**31.°63E**±0.°03, **h24**km±13km, **n144,** σ1§**14**/168, **2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.71**	**125**	⇓ *i* P		**Pb**		**21 01 37.4**	**-0.3**
AKMS				S		**Sn**		**21 01 49.3**	**+0.6**
AKMS				AML	AML			21 01 53.0	
	5.2nm,0.3s								
AKMS				AML	AML			21 01 53.9	
	7.4nm,0.2s								
ALFC	**Alefka**	**0.84**	**109**	P		**Pb**		**21 01 39.0**	**-0.9**
ALFC				S		**Sb**		**21 01 51.9**	**+1.1**
ALFC				AML	AML			21 01 56.0	
	3.5nm,0.2s								
ALFC				AML	AML			21 01 58.0	
	3.0nm,0.2s								
GAZI	**Gazipasa**	**0.98**	**35**	P		**Pn**		**21 01 40.2**	**-1.9**
GAZI				S		**Sb**		**21 01 51.7**	**-3.0**
GAZI				*i* IAML				21 01 56.0	
	comp=E,930nm,0.3s								
GAZI				*i* IAML				21 01 56.0	
	comp=N,630nm,0.2s								
GAZI	**Gazipasa**	**0.98**	**35**	Pg		**Pn**		**21 01 39.8**	**-2.3**
GAZI				Sg		**Sb**		**21 01 52.2**	**-2.5**
NATA	**Nata**	**1.01**	**130**	⇓ *i* P		**Pn**		**21 01 43.6**	**+1.0**
NATA				S		**Sb**		**21 01 58.6**	**+3.0**
NATA				AML	AML			21 02 08.5	
	9.0nm,0.7s								
NATA				AML	AML			21 02 09.0	
	9.9nm,0.5s								
TROD	**Troodos**	**1.12**	**115**	P		**Pn**		**21 01 44.0**	**-0.3**
TROD				S		**Sb**		**21 02 00.3**	**+1.2**
TROD				AML	AML			21 02 05.1	
	1.2nm,0.6s								
TROD				AML	AML			21 02 06.5	
	1.1nm,0.4s								
ALAN	**Alanya-ANTALYA**	**1.17**	**16**	Pg		**Pn**		**21 01 42.5**	**-2.3**
ALAN				Sg		**Sn**		**21 01 58.7**	**-1.2**
APOL	**The Sanctuary**	**1.27**	**127**	P		**Pn**		**21 01 46.8**	**+0.7**
APOL				S		**Sb**		**21 02 04.6**	**+1.6**
APOL				AML	AML			21 02 18.2	
	0.7nm,0.3s								
APOL				AML	AML			21 02 23.4	
	1.1nm,0.6s								
BOZY	**Bozyazi-Mersin**	**1.29**	**58**	Pn		**Pn**		**21 01 45.9**	**-0.4**
BOZY				Sn		**Sn**		**21 02 03.0**	**+0.2**
MNVG	**Manavgat-Antal**	**1.37**	**353**	Pn		**Pn**		**21 01 47.4**	**-0.1**
AKUM	**Antalya-Kumluc**	**1.37**	**311**	P		**Pn**		**21 01 48.0**	**+0.4**
AKUM				S		**Sn**		**21 02 05.0**	**+0.1**
AKUM				*i* IAML				21 02 10.0	
	comp=N,345nm,0.7s								
AKUM				*i* IAML				21 02 15.0	
	comp=E,310nm,0.6s								
TEKE	**Tekeli-Mersin**	**1.40**	**59**	Pn		**Pn**		**21 01 47.6**	**-0.3**
TEKE				Sn		**Sn**		**21 02 06.4**	**+0.8**
KEMT	**Kemer-ANTALYA**	**1.46**	**324**	Pn		**Pn**		**21 01 49.3**	**+0.6**
CSS	**Mathiatis**	**1.47**	**108**	Pn		**Pn**		**21 01 49.7**	**+0.8**
CSS				Sn		**Sb**		**21 02 10.4**	**+1.5**
CSS	**Mathiatis**	**1.47**	**108**	P		**Pn**		**21 01 48.7**	**-0.2**
CSS	**Mathiatis**	**1.47**	**108**	P		**Pn**		**21 01 48.7**	**-0.2**
CSS				S		**Sn**		**21 02 08.7**	**+1.3**
CSS				AML	AML			21 02 20.7	
	0.7nm,0.7s								
CSS				AML	AML			21 02 24.8	
	0.7nm,0.7s								
ATHAL	**Athalassa**	**1.48**	**101**	P		**Pn**		**21 01 48.9**	**0.0**
ATHAL				S		**Sn**		**21 02 08.0**	**+0.6**
ATHAL				AML	AML			21 02 31.9	
	2.0nm,0.7s								
ATHAL				AML	AML			21 02 34.6	
	1.7nm,0.5s								
ASGA	**Asgata**	**1.48**	**115**	P		**Pn**		**21 01 49.5**	**+0.6**
ASGA				S		**Sb**		**21 02 10.2**	**+1.2**
ASGA				AML	AML			21 02 20.0	
	1.1nm,0.7s								
ASGA				AML	AML			21 02 20.3	
	1.4nm,0.4s								
LFK	**Lefkose**	**1.56**	**95**	Pn		**Pn**		**21 01 50.9**	**+0.7**
BERE	**Bereket-Mersin**	**1.58**	**54**	Pn		**Pn**		**21 01 50.4**	**-0.2**
ERMK	**Ermenek**	**1.59**	**40**	P		**Pn**		**21 01 51.3**	**+0.5**
ERMK				S		**Sn**		**21 02 12.0**	**+1.3**
ERMK				*i* IAML				21 02 15.0	
	comp=N,524nm,0.9s								
ERMK				*i* IAML				21 02 15.0	
	comp=E,290nm,0.8s								
YORU	**Yoruktepe-Mers**	**1.61**	**63**	Pn		**Pn**		**21 01 50.6**	**-0.3**
ANTB	**Antalya**	**1.66**	**332**	Pn		**Pn**		**21 01 51.9**	**+0.4**
OREN	**Orenkoy-Mersin**	**1.68**	**62**	Pn		**Pn**		**21 01 52.0**	**+0.3**
HDMB	**Hadim**	**1.68**	**24**	Pn		**Pn**		**21 01 51.9**	**-0.1**
MVOU	**Mavrovouni**	**1.69**	**104**	P		**Pn**		**21 01 51.7**	**-0.3**
MVOU				S		**Sn**		**21 02 13.5**	**+0.6**
MVOU				AML	AML			21 02 24.0	
	0.6nm,0.5s								
MVOU				AML	AML			21 02 27.9	
	0.5nm,0.8s								
AKK1	**Akkuyu-Mersin**	**1.71**	**65**	Pn		**Pn**		**21 01 52.6**	**+0.4**
AKK2	**Akkuyu-Mersin**	**1.71**	**65**	Pn		**Pn**		**21 01 52.7**	**+0.5**
GULN	**MERSIN_Gulnar**	**1.73**	**64**	P		**Pn**		**21 01 52.6**	**+0.1**
GULN				S		**Sn**		**21 02 14.0**	**+0.3**
TEPK	**Tepekoy-MERSIN**	**1.75**	**63**	Pn		**Pn**		**21 01 53.7**	**+1.0**
TEVE	**Tevekalti-Mers**	**1.78**	**55**	Pn		**Pn**		**21 01 53.5**	**+0.3**
YESI	**Yesilovacik-Me**	**1.81**	**64**	Pn		**Pn**		**21 01 54.2**	**+0.7**
TISA	**Tisan-Mersin**	**1.82**	**66**	Pn		**Pn**		**21 01 53.7**	**0.0**
AKAS	**Kas**	**1.83**	**296**	P		**Pn**		**21 01 55.8**	**+1.8**
AKAS	**Kas**	**1.83**	**296**	Pn		**Pn**		**21 01 55.3**	**+1.4**
KORT	**Korkueli**	**1.88**	**327**	P		**Pn**		**21 01 55.3**	**+0.7**
KORT	**Korkueli**	**1.88**	**327**	Pn		**Pn**		**21 01 55.3**	**+0.7**
ELL	**Elmali**	**1.92**	**314**	Pn		**Pn**		**21 01 56.3**	**+1.2**
ELL	**Elmali**	**1.92**	**314**	S		**Sn**		**21 02 18.1**	**-0.5**
ELL				AML	AML			21 02 30.9	
	0.7nm,1.0s								
ELL				AML	AML			21 02 35.9	
	1.2nm,0.6s								
KEBE	**Keben-Mersin**	**1.97**	**58**	Pn		**Pn**		**21 01 56.9**	**+1.0**
SEYD	**Seydisehir-KON**	**1.98**	**5**	Pn		**Pn**		**21 01 55.9**	**-0.1**
KKBE	**Karaman, Kazim**	**2.07**	**30**	P		**Pn**		**21 01 58.7**	**+1.4**
KKBE				S		**Sn**		**21 02 24.5**	**+2.1**
BUCA	**Burdur, Bucak-**	**2.08**	**336**	P		**Pn**		**21 01 57.8**	**+0.4**
SILI	**Silifke-Mersin**	**2.08**	**63**	Pn		**Pn**		**21 01 58.1**	**+0.8**
KNIK	**Mula-Seydike**	**2.18**	**311**	P		**Pn**		**21 01 58.6**	**-0.2**
KRMN	**Karaman**	**2.18**	**37**	Pn		**Pn**		**21 01 58.9**	**+0.1**
IZZE	**Mula-Seydike**	**2.19**	**298**	P		**Pn**		**21 01 57.8**	**-1.0**
KIZK	**Mersin**	**2.29**	**62**	P		**Pn**		**21 02 01.8**	**+1.6**
KIZK				S		**Sn**		**21 02 26.8**	**-0.8**
KIZK	**Mersin**	**2.29**	**62**	Pn		**Pn**		**21 02 00.9**	**+0.7**
CAME	**Cameli-Denizli**	**2.41**	**309**	Pn		**Pn**		**21 02 02.4**	**+0.4**
GOLH	**Golhisar**	**2.46**	**318**	P		**Pn**		**21 02 03.7**	**+1.1**
CAEL	**Denizli, Camel**	**2.52**	**313**	P		**Pn**		**21 02 04.0**	**+0.6**
ISP	**Isparta**	**2.55**	**340**	Pn		**Pn**		**21 02 04.4**	**+0.6**
ISP	**Isparta**	**2.55**	**340**	P		**Pn**		**21 02 04.4**	**+0.6**
ISP	**Isparta**	**2.55**	**340**	S		**Sn**		**21 02 37.0**	**+2.9**
KONT	**Konya--Tatoy**	**2.58**	**13**	P		**Pn**		**21 02 06.5**	**+2.4**
KONT	**Konya--Tatoy**	**2.58**	**13**	Pn		**Pn**		**21 02 04.2**	**+0.1**
BRDR	**BURDUR-Merkez**	**2.59**	**331**	P		**Pn**		**21 02 05.6**	**+1.2**
BAGG	**Egridir - ISPA**	**2.64**	**345**	P		**Pn**		**21 02 06.0**	**+0.9**
DOGA	**KONYA_Doganhis**	**2.67**	**1**	P		**Pn**		**21 02 06.6**	**+1.1**
MERS	**Mersin**	**2.75**	**58**	Pn		**Pn**		**21 02 07.1**	**+0.6**
APMY	**Acipayam-Deniz**	**2.77**	**318**	Pn		**Pn**		**21 02 07.0**	**+0.2**
BASM	**Basmaki-Afyon**	**2.79**	**333**	Pn		**Pn**		**21 02 08.2**	**+1.1**
KERG	**Konya-Eregli**	**2.82**	**45**	P		**Pn**		**21 02 09.9**	**+2.2**
LADK	**Ladik-KONYA**	**2.83**	**12**	Pn		**Pn**		**21 02 08.3**	**+0.7**

YVAC Isparta, Yalva 2.85 354 P **Pn** **21 02 07.9 -0.1**
YESY Yesilyurt 2.90 35 Pn **Pn** **21 02 08.9 +0.3**
AFYN Afyon-Dinar-K 2.97 343 P **Pn** **21 02 10.7 +1.0**
ALIN Konya, Altinte 3.03 19 P **Pn** **21 02 11.9 +1.4**
KDHN Kadinhani 3.11 7 P **Pn** **21 02 13.6 +2.0**
GULE Gulek 3.14 53 P **Pn** **21 02 14.8 +2.7**
UCKU Afyonkarahisar 3.20 357 P **Pn** **21 02 13.5 +0.7**
SHUT Suhut-Afyon 3.23 345 Pn **Pn** **21 02 13.8 +0.6**
CHBY Cihanbeyli 3.30 17 Pn **Pn** **21 02 14.8 +0.6**
KARA Karaisali 3.31 56 Pn **Pn** **21 02 15.6 +1.3**
KIZT Kizilcal 3.45 3 Pn **Pn** **21 02 16.7 +0.5**
CMRD Camardi-Nigde 3.50 50 Pn **Pn** **21 02 17.6 +0.6**
BSIR Belisirma, Guz 3.55 36 P **Pn** **21 02 20.0 +2.4**
GULA Gulagac 3.58 35 Pn **Pn** **21 02 18.9 +0.9**
BHL Bhannes 3.65 114 *e*P **Pn** **21 02 19.3 +0.3**
CEYT Ceyhan 3.68 64 Pn **Pn** **21 02 20.4 +1.1**
HWQ Hawqa 3.73 107 *e*P **Pn** **21 02 20.3 +0.2**
HWQ *e*S **Sn** **21 03 00.9 -2.4**
KULU Kulu 3.77 17 Pn **Pn** **21 02 21.3 +0.7**
TAHT Tahtakopru-Hat 3.82 74 Pn **Pn** **21 02 22.9 +1.7**
QRWL Qaraoun 3.84 118 *e*P **Pn** **21 02 22.1 +0.5**
ZAHL Zahle 3.84 113 *e*P **Pn** **21 02 21.8 +0.1**
BEIL Beino 3.84 102 *e*P **Pn** **21 02 21.8 +0.2**
BEIL *e*S **Sn** **21 03 02.8 -3.2**
MMC7 Mount Meron ar 3.94 127 P **Pn** **21 02 22.8 -0.1**
MMA0B Mount Meron ar 3.95 127 P **Pn** **21 02 22.7 -0.3**
MMA0B Mount Meron ar 3.95 127 S **Sn** **21 03 09.5 +0.9**
OFRI `Ofer 3.95 134 P **Pn** **21 02 22.5 -0.6**
OFRI `Ofer 3.95 134 S **Sn** **21 03 08.7 -0.1**
RCY Rachaya 3.98 118 *e*P **Pn** **21 02 23.9 +0.4**
SHBL Chebaa 3.99 120 *e*P **Pn** **21 02 24.2 +0.5**
BLGI Bet Lehem HaGe 4.00 131 P **Pn** **21 02 23.0 -0.7**
BLGI Bet Lehem HaGe 4.00 131 S **Sn** **21 03 09.9 +0.2**
GEM Giv'at Ha'Em 4.01 122 P **Pn** **21 02 23.5 -0.3**
GEM Giv'at Ha'Em 4.01 122 S **Sn** **21 03 10.7 +0.8**
NATI Neve Ativ 4.03 121 P **Pn** **21 02 24.0 -0.1**
NATI Neve Ativ 4.03 121 S **Sn** **21 03 10.9 +0.5**
FKH Fakeheh 4.11 105 *e*P **Pn** **21 02 25.4 +0.1**
FKH *e*S **Sn** **21 03 08.9 -3.7**
KSHT Keshet 4.24 124 P **Pn** **21 02 26.7 -0.3**
SLTI Sal'it 4.26 137 P **Pn** **21 02 26.7 -0.6**
SLTI Sal'it 4.26 137 S **Sn** **21 03 16.4 0.0**
MMLI Mount Malkishu 4.34 132 P **Pn** **21 02 27.9 -0.5**
MMLI Mount Malkishu 4.34 132 S **Sn** **21 03 18.2 -0.1**
SALP Salfit 4.48 138 P **Pn** **21 02 30.1 -0.2**
SALP Salfit 4.48 138 S **Sn** **21 03 22.0 +0.3**
HMDT Nahal Hemdat 4.54 133 P **Pn** **21 02 31.2 +0.2**
HMDT Nahal Hemdat 4.54 133 S **Sn** **21 03 23.5 +0.5**
UJAP Al Uja 4.72 136 P **Pn** **21 02 33.0 -0.5**
UJAP Al Uja 4.72 136 S **Sn** **21 02 27.6 +0.2**
AMAZ Amatzia 4.76 144 P **Pn** **21 02 35.0 +0.8**
AMAZ Amatzia 4.76 144 S **Sn** **21 03 28.5 -0.1**
DSI Dead Sea 4.96 140 P **Pn** **21 02 36.5 -0.4**
DSI Dead Sea 4.96 140 S **Sn** **21 03 33.5 -0.1**
YTIR Yattir 5.00 143 P **Pn** **21 02 36.9 -0.6**
YTIR Yattir 5.00 143 S **Sn** **21 03 34.5 0.0**
KZIT Kziot 5.08 152 P **Pn** **21 02 38.2 -0.3**
KZIT Kziot 5.08 152 S **Sn** **21 03 36.2 -0.2**
MSBI Mazada 5.16 142 P **Pn** **21 02 38.8 -0.8**
MSBI Mazada 5.16 142 S **Sn** **21 03 38.5 +0.2**
APE Apeiranthos 5.19 290 P **Pn** **21 02 39.8 -0.3**
GHAJ Ghor Haditha 5.27 140 P **Pn** **21 02 40.9 -0.2**
GHAJ Ghor Haditha 5.27 140 S **Sn** **21 03 41.6 +0.5**
RMNI Mount Ramon 5.49 151 P **Pn** **21 02 43.2 -1.1**
RMNI Mount Ramon 5.49 151 S **Sn** **21 03 46.2 -0.6**
IDAN Idan 5.51 145 P **Pn** **21 02 43.8 -0.7**
IDAN Idan 5.51 145 S **Sn** **21 03 46.8 -1.1**
ZFRI Zfri 5.71 148 P **Pn** **21 02 46.1 -1.0**
ZFRI Zfri 5.71 148 S **Sn** **21 03 51.8 0.0**
PRNI Paran 5.81 150 P **Pn** **21 02 48.0 -0.6**
PRNI Paran 5.81 150 S **Sn** **21 03 54.3 -0.1**
KRMI Paran Flat 5.91 153 P **Pn** **21 02 49.1 -0.9**
KRMI Paran Flat 5.91 153 S **Sn** **21 03 57.0 +0.2**
HRFI Mount Harif 6.10 151 P **Pn** **21 02 51.7 -0.8**
HRFI Mount Harif 6.10 151 S **Sn** **21 04 01.2 -0.4**
MBRI Mt Berech 6.27 153 P **Pn** **21 02 54.3 -0.6**
MBRI Mt Berech 6.27 153 S **Sn** **21 04 05.8 0.0**
EIL Elat 6.39 153 P **Pn** **21 02 55.7 -0.9**
EIL Elat 6.39 153 S **Sn** **21 04 08.5 -0.3**
RYAN Fayoum 6.43 191 P **Pn** **21 02 57.2 +0.1**
RYAN S **Sn** **21 04 04.5 -5.3**
SLUM Salum 6.65 236 P **Pn** **21 03 00.0 -0.1**
SWA2 8.08 222 P **Pn** **21 03 19.7 -0.1**

*NEIC **05** 21:08:25.8±1.4, 43.°78N±0.°04×105.°30W±0.°06, h0km±1km, ML3.2/50, Error ellipse: s-maj=10.6km s-min=2.7km az=313.0*
*IDC **05** 21:08:28.1±1.8, 43.°87N×105.°62W, h0km, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=61.7km s-min=8.8km az=148.0*

ISC 05 21:08:27.7±1.2, **43.°80N**±0.°07×**105.°35W**±0.°07, **h0**km, **n35,** σ0§**87**/34, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
K22A	**Casper**	**1.43**	**217**			**Pn**		**21 08 53.5**	**-1.7**
K22A				IAML				21 09 16.9	
	317nm,0.3s								
K22A				IAML				21 09 17.3	
	322nm,0.3s								
RLMT	**Red Lodge**	**3.10**	**297**			**Pn**		**21 09 16.5**	**-1.6**
RLMT				IAML				21 10 15.0	
	67nm,0.4s								
RLMT				IAML				21 10 22.8	
	47nm,0.6s								
BW06	**Boulder Array**	**3.24**	**253**			**Pn**		**21 09 20.6**	**+0.5**
BW06				IAML				21 10 12.5	
	43nm,0.4s								
BW06				IAML				21 10 13.9	
	48nm,0.7s								
PD31	**Pinedale Array**	**3.24**	**253**			**Pn**		**21 09 20.5**	**+0.4**
PDAR	**Pinedale Array**	**3.24**	**253**			**Pn**		**21 09 20.3**	**+0.2**
PDAR	**Pinedale Array**	**3.24**	**253**	Pn		**Pn**		**21 09 20.7**	**+0.6**
	6.2nm,0.3s,baz=62,slow=14,SNR=71								
PDAR				Lg	Lg			21 10 04.0	
	7.8nm,0.3s,baz=74,slow=28,SNR=2.6								
	6.7nm,0.4s								
YNE	**Yellowstone No**	**3.55**	**292**			**Pn**		**21 09 24.7**	**+0.4**
YNE				IAML				21 10 31.4	
	comp=N,71nm,0.7s								
HAYD	**Hayden**	**3.57**	**204**	Pn		**Pn**		**21 09 25.9**	**+1.3**
HAYD				IAML				21 10 25.6	
	comp=N,46nm,0.9s								
HAYD				IAML				21 10 33.8	
	comp=E,52nm,0.9s								
YMP	**Mirror Lake Pl**	**3.58**	**287**			**Pn**		**21 09 25.0**	**+0.2**
OGNE	**Ogallala**	**3

ECSD	EROS Data Cent	6.33	88	Pn		Pn	21 10 01.9	-0.4
T25A	Trinidad	6.69	174			Pn	21 10 07.0	-0.4
HMU	Henry Mountain	7.14	217			Pn	21 10 13.2	-0.4
I10CA	LAC DU BONNET	9.03	42	I		I	22 03 10.0	
	baz=216,slow=240,SNR=2.7							
ULM	Lac du Bonnet	9.13	42	Pn		Pn	21 10 40.1	-0.6
	comp=N,3.8nm,0.3s,baz=225,slow=12,SNR=12							
ULM				Lg		Lg	21 13 11.2	
	comp=N,0.3nm,0.3s,baz=348,slow=8.1,SNR=3.3							
	comp=N,6.7nm,0.3s							
NVAR	Mina Array Bea	11.14	246	Pn		Pn	21 11 11.0	+2.5
	comp=N,0.1nm,0.3s,baz=46,slow=15,SNR=3.3							
NVAR				Lg		Lg	21 14 12.9	
	baz=264,slow=40,SNR=2.0							
	comp=N,0.6nm,0.6s							

UCR ***05*** *21:11:09.0±1.4, 7˚.07N×82˚.36W, h6km±20km, MW3.6*
UPA ***05*** *21:11:10.6±1.6, 7˚.05N×82˚.35W, h23km±26km, MW3.8*

ISC 05 21:11:07.8±2.0, 7˚.06N±0˚.09×82˚.35W±0˚.05, h9km±13km, n46, σ0s94/57, 5C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LMNES	Limones	1.15	334	eP		Pb	21 11 29.6	-0.3
GMAL	Guarumal, Vera	1.31	58	eP		Pg	21 11 32.6	-0.4
GMAL				eS		Sb	21 11 48.8	-0.8
GMAL	Guarumal, Vera	1.31	58	eP		Pb	21 11 32.5	-0.1
GMAL				eS		Sb	21 11 48.9	-0.8
LOCO3	Loma Colorada,	1.34	357	eP		Pb	21 11 32.9	-0.2
LOMA3	Las Lomas, Chi	1.36	358	eP		Pg	21 11 35.1	+1.1
LOMA3				eS		Sn	21 11 51.3	+0.1
DVD	David	1.37	356	eP		Pn	21 11 33.3	+0.2
BAGA3	Bagala, Chiriq	1.41	353	eP		Pn	21 11 33.8	+0.1
BAGA3				eS		Sn	21 11 51.7	-0.6
MARI3	Mariato, Verag	1.47	66↑	eP		Pg	21 11 35.6	-0.5
MARI3				eS		Sn	21 11 52.8	-1.1
CACAO	El Cacao, Vera	1.51	79	eP		Pb	21 11 35.6	-0.4
CACAO				eS		Sn	21 11 54.1	-0.6
MESA3	La Mesa, Verag	1.58	47	eP		Pb	21 11 36.6	-0.7
MESA3				eS		Sn	21 11 56.3	-0.4
PIRO	Carate, Puerto	1.65	324↑	eP		Pn	21 11 36.5	-0.5
PIRO	Carate, Puerto	1.65	324↑	eP		Pn	21 11 36.5	-0.5
DMCAL	E. de Neily	1.66	345	eP		Pn	21 11 37.4	+0.3
WILLF	Boquete	1.68	357	eP		Pn	21 11 37.6	+0.1
NELY	Ciudad Neily	1.69	340	eP		Pn	21 11 37.0	-0.4
BQTLY	Boquete Panama	1.69	356	eP		Pn	21 11 37.7	+0.1
STIA3	Santiago, Vera	1.71	53	eP		Pb	21 11 39.1	-0.4
LNBQ3	Los Naranjos,	1.72	357	eP		Pn	21 11 38.5	+0.4
LNBQ3				eS		Sb	21 12 01.7	+0.2
PTJ1	Puerto Jimnez	1.74	327	eP		Pn	21 11 38.8	+0.6
PTJ1	Puerto Jimnez	1.74	327	eP		Pn	21 11 38.5	+0.3
BRU2	Volcan	1.76	349↑	eP		Pn	21 11 38.8	+0.3
BRU2				eS		Sn	21 12 01.4	+0.3
BRU2	Volcan	1.76	349	eP		Pn	21 11 38.5	-0.1
JIME	Puerto Jimenez	1.76	327	eP		Pn	21 11 38.4	0.0
BC3P	Paso Ancho	1.76	352	eP		Pn	21 11 39.2	+0.5
BC3P				eS		Sb	21 12 02.9	+0.2
EDAD	Golfito	1.78	333	eP		Pn	21 11 38.1	-0.6
RBALA	Bur	1.82	6	eP		Pn	21 11 40.2	+0.9
KKNTU	Kakint²	1.85	17	eP		Pn	21 11 40.3	+0.6
ALCO	Alturas Coton,	1.94	346	eP		Pn	21 11 41.2	+0.1
CALO3	Calobre, Verag	1.95	50	eP		Pn	21 11 42.0	+0.9
EDP2	Potrero Grande	2.11	337	eP		Pb	21 11 44.8	-1.4
FIMO	Fila Mora	2.16	333	eP		Pn	21 11 44.7	+0.7
AZU	Azuero	2.19	70	eP		Pn	21 11 45.5	+1.2
DRK0	Durika	2.36	338	eP		Pn	21 11 48.2	+1.0
DRK0				eS		Sn	21 12 16.0	-0.1
DRK0	Durika	2.36	338	eP		Pn	21 11 47.8	+0.9
CEUA	Cerro Uatsi, L	2.61	347	eP		Pb	21 11 52.9	-1.9
BUS1	Rivas	2.84	331	eP		Pn	21 11 54.6	+0.9
VERH	Veragua Rainfo	2.97	344	eP		Pn	21 11 57.0	+1.9
PIEC	Cerro El Cedra	3.00	328	eP		Pn	21 11 57.2	+1.4
PAR1A	Puntarenas Pro	3.14	323	eP		Pn	21 11 58.5	+0.9
CVTV	Tajo	3.24	335	eP		Pn	21 12 00.7	+1.7
VTR0	Volcan Turrial	3.25	335	eP		Pn	21 12 01.1	+1.7
BCIP	Isla Barro Col	3.25	50	eP		Pn	21 12 00.5	+1.5
GAMB1	Gamboa	3.32	52	eP		Pn	21 12 01.5	+1.6
FRIJ	El Hiral	3.37	50↑	eP		Pn	21 12 02.5	+1.9
JTS	Las Juntas de	4.11	322	eP		Pn	21 12 13.2	+2.3
JUD3	Juan Diaz 3	4.41	315	eP		Pn	21 12 15.8	+0.8

NEIC ***05*** *21:14:11.0±1.6, 31˚.07N±0˚.01×103˚.27W±0˚.01, h3km±2km, mb_Lg2.5/24, ML2.4/54, Error ellipse: s-maj=2.0km s-min=0.8km az=140.0*

TXNET 05 21:14:10.5, 31˚.1N±0˚.7×103˚.3W±0˚.5, h3km±1km, ML2.6/14, 1C, Error ellipse: s-maj=1.0km s-min=0.8km az=172.0, final, Western Texas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TPB16	Coyonosa	0.05	4	↑P		Pg	21 14 11.9	+0.3
TPB16				S		Sg	21 14 12.7	+0.3
TPB04	Verhalen	0.11	354	P		Pg	21 14 13.1	+0.4
TPB04				S		Sg	21 14 15.5	+1.3
TPB05	Hovey Rd	0.17	200	P		Pg	21 14 15.0	+1.2
TPB05				S		Sg	21 14 18.9	+2.9
TPB15	Southwest of C	0.20	48	P		Pg	21 14 15.6	+1.2
TPB15				S		Sg	21 14 20.3	+3.3
TPB03	Saragosa	0.22	271	P		Pg	21 14 16.2	+1.4
TPB03				S		Sg	21 14 20.2	+2.5
TPB19	West of Imperi	0.26	31	P		Pb	21 14 16.9	-1.0
TPB19				S		Sb	21 14 24.1	+1.2
TPB08	Permian Basin	0.35	122	P		Pb	21 14 19.2	-0.2
TPB01	Permian Basin	0.47	253	P		Pb	21 14 20.6	-0.9
TPB10	Southeast of T	0.47	296	P		Pb	21 14 21.6	+0.1
TPB10				S		Sb	21 14 28.4	-0.6
MNHN	Monahans	0.50	58	Pg		Pg	21 14 20.7	+0.7
MNHN				Sg		Sg	21 14 27.6	+1.0
MNHN				IAML			21 14 31.3	
	326nm,0.3s							
MNHN	Monahans	0.50	58	P		Pg	21 14 20.8	+0.7
MNHN				S		Sg	21 14 27.7	+1.2
TPB27	North of Pyote	0.51	12	S		Sb	21 14 29.0	-0.9
TPB06	Permian Basin	0.57	3	S		Sb	21 14 30.6	-1.1
PECS	Pecos	0.60	299	Pg		Pg	21 14 22.8	+0.8
PECS				Sg		Sb	21 14 31.6	-1.0
PECS				IAML			21 14 41.4	
	219nm,0.4s							
PECS				IAML			21 14 42.7	
	213nm,0.4s							
PECS	Pecos	0.60	299	P		Pg	21 14 22.8	+0.8
PECS				S		Sb	21 14 31.8	-0.8
TPB12	Southwest of T	0.62	283	P		Pb	21 14 23.2	-0.7
TPB12				S		Sb	21 14 32.4	-0.7
ALPN	Alpine	0.78	205	Pg		Pg	21 14 26.0	+0.7
ALPN				Sg		Sb	21 14 36.7	-1.0
ALPN				IAML			21 14 37.9	
	126nm,0.3s							
ALPN				IAML			21 14 40.4	
	154nm,0.3s							
ALPN	Alpine	0.78	205	P		Pb	21 14 26.1	-0.6
ALPN				S		Sb	21 14 36.9	-0.8
TMB02	Rankin	1.05	83	P		Pg	21 14 30.8	+0.1
TMB02				S		Sb	21 14 45.0	-0.6
TMB01	Midkiff	1.16	59	P		Pb	21 14 33.4	+0.1
TMB01				S		Sb	21 14 48.8	0.0
ODSA	Odessa	1.20	30	Pg		Pg	21 14 33.2	-0.3
ODSA				Sg		Sb	21 14 49.6	-0.3
ODSA	Odessa	1.20	30	S		Sb	21 14 50.4	+0.5
NM01	Eunice	1.28	355	P		Pn	21 14 35.4	0.0
NM01				S		Sn	21 14 52.8	-0.3
CLNB	Carlsbad	1.30	336	P		Pb	21 14 35.5	0.0
CLN7	Carlsbad 7	1.41	341	Pg		Pb	21 14 37.5	0.0
HTMS	Hat Mesa	1.43	347			Pb	21 14 37.8	0.0
HTMS	Hat Mesa	1.43	347	P		Pg	21 14 38.1	+0.2
HTMS				S		Sn	21 14 57.4	+0.6
CBET	Carlsbad E Tow	1.48	335			Pn	21 14 38.0	-0.1
CBET	Carlsbad E Tow	1.48	335	P		Pn	21 14 38.0	-0.1
SAND	Sanderson	1.49	139			Pb	21 14 38.7	-0.1
SAND				IAML			21 15 03.4	
	74nm,0.6s							
SAND	Sanderson	1.49	139	P		Pb	21 14 38.8	0.0
SAND				S		Sg	21 14 59.1	+0.8
VHRN	Van Horn	1.51	259			Pb	21 14 39.2	-0.1
VHRN						Sg	21 14 59.6	+0.4
VHRN				IAML			21 15 04.9	
	77nm,0.3s							
VHRN	Van Horn	1.51	259	P		Pb	21 14 39.4	+0.1
VHRN				S		Sg	21 14 59.9	+0.8

TMB06	Greenwood	1.53	54	P		Pg	21 14 40.1	+0.2
TMB06				S		Sg	21 15 00.9	+1.2
TMB04	Seminole	1.68	23	P		Pn	21 14 41.3	+0.5
TMB04				S		Sg	21 15 04.5	+0.1
TX31	Lajitas Ar. Si	1.77	192	Pn		Pb	21 14 43.5	-0.2
TX31	Lajitas Ar. Si	1.77	192	P		Pb	21 14 43.8	+0.1
TX31				S		Sg	21 15 07.9	+0.3
TXAR	Lajitas Array	1.77	192	Pn		Pb	21 14 43.4	-0.3
OZNA	Ozona	1.83	94	Pn		Pb	21 14 44.0	-0.7
OZNA				IAmb_Lg			21 15 10.7	
	comp=Z,7.9nm,0.8s							
OZNA	Ozona	1.83	94	P		Pb	21 14 44.5	-0.3
OZNA				S		Sg	21 15 08.8	-0.6
MNTX	Cornudas Mount	1.92	289	Pn		Pb	21 14 45.5	-0.7
MNTX				IAML			21 15 13.5	
	comp=Z,28nm,0.7s							
MNTX				IAML			21 15 13.6	
	comp=Z,31nm,0.6s							
MNTX	Cornudas Mount	1.92	289	P		Pb	21 14 45.9	-0.3
MNTX				S		Sb	21 15 11.1	+0.5
TMB05	Klondike	1.95	37	P		Pb	21 14 46.2	-0.5
TMB05				S		Sg	21 15 12.8	-0.3
SGCY	Sterling City	2.00	65	Pn		Pn	21 14 46.4	+1.1
SGCY				IAmb_Lg			21 15 20.1	
	comp=Z,20nm,0.8s							
SGCY	Sterling City	2.00	65	P		Pb	21 14 47.0	-0.6
SGCY				S		Sb	21 15 13.1	+0.2
CPRX	Cap Rock	2.01	345	Pn		Pb	21 14 46.8	-1.1
CPRX	Cap Rock	2.01	345	P		Pb	21 14 47.3	-0.6
POST	Post	2.48	36	Pn		Pn	21 14 52.5	+0.6
POST				IAmb_Lg			21 15 32.9	
	comp=Z,18nm,0.9s							
DRIO	Del Rio	2.82	125	Pn		Pn	21 14 56.9	+0.5
DRIO				IAmb_Lg			21 15 39.3	
	comp=Z,13nm,0.9s							
SN07	Snyder 07	2.84	44	Pn		Pn	21 14 57.5	+0.7
SN07				IAmb_Lg			21 15 40.1	
	comp=Z,23nm,0.8s							
MSTX	Muleshoe	2.91	8	Pn		Pn	21 14 58.9	+1.1
MSTX				IAmb_Lg			21 15 46.9	
	comp=Z,8.0nm,0.9s							
DKNS	Dickens	3.25	37	Pn		Pn	21 15 03.3	+0.8
DKNS				IAmb_Lg			21 15 59.5	
	comp=Z,18nm,1.0s							
ABTX	Abilene, Hawle	3.44	62	Pn		Pn	21 15 06.3	+1.3
BRDY	Brady	3.65	86	Pn		Pn	21 15 09.2	+1.2
BRDY				IAmb_Lg			21 16 11.2	
	comp=Z,13nm,0.8s							
WTFS	Witchita Falls	4.86	55	Pn		Pn	21 15 25.6	+1.1
WTFS				IAmb_Lg			21 16 56.0	
	comp=Z,13nm,0.8s							
WMOK	Wichita Mounta	5.24	45	Pn		Pn	21 15 30.2	+0.4

SJA ***05*** *21:22:05.0±0.7, 31˚.42S×67˚.76W, h13km±2km, ML3.7, MW3.7*
IDC ***05*** *21:22:06.0±1.8, 31˚.71S×67˚.80W, h35km±16km, mbtmp3.5/3, ML3.6/3, Error ellipse: s-maj=31.7km s-min=24.1km az=123.0*

ISC 05 21:22:05.7±1.1, 31˚.51S±0˚.02×67˚.75W±0˚.02, h10km±8km, n47, σ1s86/76, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CFA	Coronel Fontan	0.43	257	Pg		Pg	21 22 14.8	+0.6
	160nm,0.3s,baz=46,slow=9.4,SNR=5522							
CFA				Lg		Lg	21 22 22.4	
	1µm,0.3s,baz=71,slow=20,SNR=172							
CFA	Coronel Fontan	0.43	257	eP		Pg	21 22 14.9	+0.8
CFA				eS		Sb	21 22 21.2	-0.8
RTLL	Cerro Villicun	0.65	286	eP		Pg	21 22 17.6	-0.6
RTLL				eS		Sg	21 22 26.6	-0.1
RTLL				IAML			21 22 27.6	
	comp=Z,5µm,0.3s							
SJA	San Juan	0.69	268	eP		Pg	21 22 19.4	+0.2
SJA				eS		Sg	21 22 28.6	+0.4
SJA				IAML			21 22 31.6	
	comp=Z,2µm,0.2s							
ZON	Zonda	0.80	267	eP		Pg	21 22 20.6	-0.5
ZON				eS		Sg	21 22 32.3	+0.8
ZON				IAML			21 22 32.9	
	comp=Z,2µm,0.2s							
AVFE	Valle Fertil	0.88	17	eP		Pb	21 22 21.0	-2.0
AVFE				eS		Sb	21 22 32.3	-2.6
AVFE				IAML			21 22 32.8	
	comp=Z,2µm,0.3s							
ACAN	Cantantal	0.90	148	eP		Pb	21 22 23.8	+0.3
ACAN				IAML			21 22 39.6	
	comp=Z,6µm,0.2s							
ACHE	Chepes	0.99	70	eP		Pb	21 22 24.4	-0.6
RTLS	Leoncito	1.35	257	eP		Pn	21 22 30.3	-0.6
RTLS				eS		Sn	21 22 49.0	-0.1
RTLS				IAML			21 22 49.6	
	comp=Z,2µm,0.2s							
ASAL	Salagasta	1.42	220	eP		Pb	21 22 32.6	+0.2
ASAL				eS		Sg	21 22 53.1	+1.5
ACCO	Cerro Coronel	1.46	309	eP		Pn	21 22 30.9	-1.4
ACCO				eS		Sn	21 22 50.4	-1.2
APLL	PUNTA DE LOS L	1.52	44	eP		Pn	21 22 32.2	-0.8
APLL				eS		Sn	21 22 51.8	-1.1
ARCO	CERRO ARCO	1.67	217	eP		Pn	21 22 30.8	-4.4
ARCO				IAML			21 23 01.8	
	comp=Z,2µm,0.8s							
ACDV	Cuesta del Vie	1.78	318	eP		Pn	21 22 19.6	-17
ACDV				IAML			21 22 36.3	
	comp=Z,475nm,0.4s							
AAGR	Agrelo	1.82	210	eP		Pb	21 22 38.5	-0.7
AAGR				eS		Sg	21 23 05.0	+0.7
MRA	San Martin	1.95	118	eP		Pn	21 22 39.4	+0.5
MRA				IAML			21 23 09.7	
	comp=Z,605nm,0.6s							
AROD	Rodeo	2.00	311	eP		Pn	21 22 39.8	+0.1
AROD				eS		Sn	21 23 05.9	+1.0
AVIZ	Vizcacheras	2.07	198	eP		Pg	21 22 44.6	-0.8
AGUA	GUANDACOL	2.11	342	eP		Pn	21 22 41.3	+0.2
AGUA				eS		Sn	21 23 09.4	+1.9
AGUA				IAML			21 23 10.1	
	comp=Z,556nm,0.5s							
ACLC	CERRO LA CRUZ	2.18	19	eP		Pn	21 22 26.9	-15
ACLC				eS		Sn	21 23 06.5	-2.9
ACLC				IAML			21 23 15.3	
	comp=Z,355nm,0.2s							
CO01	Juntas del Tor	2.53	306	eP		Pn	21 22 47.8	+0.8
CO01				eS		Sn	21 23 20.0	+2.0
CO01				IAML			21 23 20.9	
	comp=Z,397nm,0.8s							
CO03	El Pedregal	2.61	284	eP		Pn	21 22 49.4	+1.4
CO03				eS		Sb	21 23 22.8	-2.0
CO03				IAML			21 23 23.7	
	comp=Z,1µm,0.5s							
VA03	San Esteban	2.69	241	eP		Pn	21 22 51.4	+2.3
VA03				eS		Sb	21 23 25.0	-2.0
VA03				IAML			21 23 30.4	
	comp=Z,353nm,0.5s							
TCA	Tanti	2.70	87	eP		Pn	21 22 48.6	-0.6
TCA				eS		Sn	21 23 23.3	+1.3
TCA				IAML			21 23 38.3	
	comp=Z,666nm,0.5s							
MT08	Bocatoma Ro	2.72	224	eP		Pn	21 22 51.8	+2.0
MT08				eS		Sb	21 23 26.8	-1.5
MT08				IAML			21 23 32.6	
	comp=Z,300nm,0.7s							
MT04	Ro Olivares	2.77	226	eP		Pn	21 22 52.4	+2.1
MT04				eS		Sb	21 23 28.0	-1.5
VCA	Vinchina	2.79	352	eP		Pn	21 22 52.2	+1.7
VCA				eS		Sn	21 23 23.9	-0.4
VCA				IAML			21 23 36.1	
	comp=Z,457nm,0.3s							
CO02	Combarbal	2.80	275	eP		Pn	21 22 51.7	+1.1
CO02				eS		Sn	21 23 22.3	-2.2
CO02				IAML			21 23 29.9	
	comp=Z,971nm,0.8s							
GO04	Tololo Observa	2.94	296	eP		Pn	21 22 53.1	+0.4
GO04				eS		Sb	21 23 33.5	-0.9
GO04				IAML			21 23 35.7	
	comp=Z,750nm,0.5s							
PEL	Peldehue	2.98	236	eP		Pn	21 22 54.8	+1.8
PEL				eS		Sb	21 23 32.5	-2.8
PEL				IAML			21 23 39.3	
	comp=Z,152nm,0.3s							
MT03	Universidad Ad	3.06	229	eP		Pn	21 22 56.3	+2.1
MT03				eS		Sb	21 23 39.5	+1.7
MT03				IAML			21 23 53.4	

	comp=Z,131nm,0.7s							
LMEL	Las Melosas	3.12	221	eP		Pn	21 22 53.9	-1.2
LMEL				eS		Sg	21 23 46.9	+0.9
LMEL				IAML			21 23 49.8	
	comp=Z,106nm,0.8s							
ROC1	El Roble	3.13	241	eP		Pn	21 22 56.2	+0.9
ROC1				eS		Sb	21 23 36.6	-3.4
MT05	Renca	3.15	233	eP		Pn	21 22 58.0	+2.6
MT05				IAML			21 23 47.2	
	comp=Z,79nm,0.3s							
PIL	Pilar	3.30	94	eS		Sb	21 23 47.8	+3.2
RFA	San Rafael	3.31	190	eP		Pn	21 22 53.5	-4.1
RFA				eS		Sg	21 23 51.8	-0.3
RFA				IAML			21 23 54.8	
	comp=Z,387nm,0.5s							
MT02	Curacav	3.36	238	eP		Pn	21 22 58.9	+0.6
MT02				eS		Sb	21 23 46.1	-0.1
MT02				IAML			21 23 51.6	
	comp=Z,183nm,0.8s							
LCO	Las Campanas	3.56	313	eP		Pn	21 23 01.1	-0.2
LCO				eS		Sn	21 23 46.8	+3.2
LCO				IAML			21 23 52.7	
	comp=Z,338nm,0.3s							
MT01	Popeta	3.78	231	eP		Pn	21 23 04.3	+0.4
MT01				eS		Sn	21 23 49.0	+0.5
MT01				IAML			21 23 49.2	
	comp=Z,75nm,0.3s							
BO01	Tunca	4.02	223	eP		Pn	21 23 08.1	+0.8
BO01				eS		Sb	21 23 59.1	-6.2
BO01				IAML			21 24 06.4	
	comp=Z,36nm,1.6s							
BO02	Sierra Bellavi	4.15	217	eP		Pn	21 23 12.0	+2.8
BO02				IAML			21 24 24.3	
	comp=Z,50nm,0.8s							
PLCA	Paso Flores	9.48	193	Pn		Pn	21 24 19.0	-3.3
	comp=Z,0.1nm,0.3s,baz=14,slow=17,SNR=3.1							
PLCA				Lg		Lg	21 26 59.8	
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=3.1							
	comp=Z,0.8nm,0.5s							
CPUP	Villa Florida	10.48	63	Pn		Pn	21 24 37.1	+1.1
	baz=238,slow=18,SNR=1.5							
CPUP				Lg		Lg	21 27 43.2	
	comp=Z,0.1nm,0.3s,baz=16,slow=20,SNR=3.0							
	comp=Z,0.3nm,0.3s							
LPAZ	La Paz	15.15	359	Pn		Pn	21 25 41.6	+1.2
	comp=Z,0.5nm,0.3s,baz=161,slow=7.0,SNR=8.8							
	comp=Z,1.7nm,0.4s							
KURBB	Kurchatov Arra	148.58	43	PKPbc		PKPdf	21 41 48.7	-0.1
	comp=Z,0.7nm,0.6s,baz=297,slow=3.3,SNR=10							
ZALV	Zalesovo Beam	150.18	33	PKPbc		PKPdf	21 41 52.5	+1.3
	comp=Z,0.8nm,0.4s,baz=312,slow=3.2,SNR=4.0							
MKAR	Makanchi Array	152.41	48	PKPbc		PKPdf	21 41 57.8	+2.9
	comp=Z,0.5nm,0.6s,baz=280,slow=2.2,SNR=6.5							

DJA ***05*** *21:34:07.4±0.2, 7˚.5±3˚×12˚.7E±˚, h359km±4km, M4.3/20, mb4.0/20, mB4.9/5, MLv4.6/12, Mw(mB)4.2/5, MwMwp6.2/2, Mwp6.2/2*
NEIC ***05*** *21:34:08.3±1.2, 7˚.32S±0˚.07×126˚.73E±0˚.10, h355km±4km, mb4.1/12, Error ellipse: s-maj=14.2km s-min=9.8km az=107.0*
IDC ***05*** *21:34:08.1±1.7, 7˚.31S×126˚.73E, h348km±19km, mb3.4/10, mbtmp4.2/13, Error ellipse: s-maj=27.6km s-min=10.4km az=66.0*

ISC 05 21:34:07.6±0.5, 7˚.32S±0˚.05×126˚.73E±0˚.06, h350km, n70, σ1s07/76, mb3.7/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SOEI	Soe	3.44	225			Pn	21 35 11.9	+0.7
SOEI				Sn		S	21 36 01.1	-1.3
SOEI	Soe	3.44	225	P		Pn	21 35 11.9	+0.7
SOEI	Soe	3.44	225	S		S	21 36 01.5	-0.9
SOEI	Soe	3.44	225	P		Pn	21 35 11.9	+0.7
SOEI				S		S	21 36 01.5	-0.9
NLAI	Namlea	4.07	5	P		Pn	21 35 18.7	+1.3
BATI	Baumata	4.17	226	P		Pn	21 35 19.7	+1.2
	743nm,0.4s,baz=90,slow=1.3,SNR=132							
BATI				S		S	21 36 15.8	+0.1
	105nm,0.3s,baz=105,slow=9.5,SNR=12							
BATI	Baumata	4.17	226	P		Pn	21 35 19.7	+1.2
MMRI	Maumere	4.64	253			Pn	21 35 23.4	0.0
MMRI	Maumere	4.64	253	P		Pn	21 35 24.1	+0.7
MMRI	Maumere	4.64	253	S		S	21 36 24.9	+0.3
MMRI	Maumere	4.64	253	P		Pn	21 35 23.0	-0.4
EDFI	Ende, Flores	5.19	254	P		Pn	21 35 29.4	-0.1
	944nm35nm,0.8s							
SANI	Sanana	5.29	352	P		Pn	21 35 31.4	+0.9
SANI	Sanana	5.29	352	P		Pn	21 35 30.8	+0.3
DRS	Darwin Rock St	6.53	141	P		Pn	21 35 45.2	+0.6
BASI	Baing, Sumba	6.73	244	P		Pn	21 35 46.1	-0.8
	0.5nm58nm,1.4s							
WSI	Waingapu	6.78	249	P		Pn	21 35 46.2	-1.3
MTN	Manton Dam	6.99	142			Pn	21 35 50.2	+0.3
FAKI	Fak Fak	7.02	52	Pn		Pn	21 35 48.4	-2.0
FAKI	Fak Fak	7.02	52	P		Pn	21 35 49.0	-1.4
FAKI	Fak Fak	7.02	52	P		Pn	21 35 49.0	-1.4
	0.2nm51nm,1.3s							
WBSI	Waikabubak, Su	7.62	252	P		Pn	21 35 55.9	-1.5
	0.2nm35nm,0.7s							
SWI	Sorong	7.84	35	P		Pn	21 36 00.0	0.0
	0.1nm12nm,0.6s							
K

PETK	**Petropavlovsk-** comp=Z,15nm,1.2s,baz=201,slow=2.8,SNR=4.8 comp=Z,15nm,1.2s	**65.68**	**20**	P		**P**		**21 44 16.7**	**+1.3**
MKAR	**Makanchi Array**	**66.76**	**328**	P		**P**		**21 44 22.3**	**0.0**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.4s,baz=122,slow=6.9,SNR=7.5 comp=Z,0.4nm,0.4s	**66.76**	**328**	P		**P**		**21 44 23.1**	**+0.8**
ZAA0	**Zalesovo Array**	**70.47**	**335**	P		**P**		**21 44 44.3**	**-0.5**
ZALV	**Zalesovo Beam**	**70.47**	**335**	P		**P**		**21 44 44.6**	**-0.2**
ZALV	**Zalesovo Beam** comp=Z,1.5nm,0.4s,baz=125,slow=5.3,SNR=9.6 comp=Z,1.5nm,0.4s	**70.47**	**335**	P		**P**		**21 44 44.8**	**-0.1**
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.6s,baz=134,slow=5.0,SNR=11 comp=Z,0.8nm,0.6s	**71.12**	**330**	P		**P**		**21 44 49.5**	**+0.7**
KURK	**Kurchatov**	**71.14**	**330**	P		**P**		**21 44 49.1**	**+0.2**
VNDA	**Vanda**	**72.54**	**172**	P		**P**		**21 44 56.7**	**0.0**
VNDA				IAmb		IAmb		21 45 16.6	
VNDA	**Vanda** comp=Z,4.0nm,1.4s	**72.54**	**172**	P		**P**		**21 44 57.4**	**+0.7**
BVAR	**Borovoye Array** comp=Z,0.5nm,0.7s,baz=318,slow=10,SNR=6.0 comp=Z,0.5nm,0.7s	**76.63**	**329**	P		**P**		**21 45 20.6**	**+0.2**
TIXI	**Tiksi**	**78.82**	**1**	P		**P**		**21 45 32.0**	**+0.1**
TIXI				IAmb		IAmb		21 45 33.4	
ABKAR	**Akbulak array** comp=Z,8.3nm,1.5s	**80.76**	**322**	P		**P**		**21 45 42.6**	**-0.2**

*NEIC **05** 22:23:15.8±0.5, 19.25°N±0.04×155.48°W±0.05, h35km±2km, Error ellipse: s-maj=7.9km s-min=5.6km az=68.0*

HVO 05 22:23:16.7±0.7, 19°21'N±0'06×155°45'W±0'06, h34km±3km, ML3.0/45, ML3.0/44(NEIC), Error ellipse: s-maj=10.3km s-min=6.6km az=138.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.06**	**63**		Pb	22 23 22.1	-0.4
HLP	**Hilina Pali**	**0.16**	**58**		Pb	22 23 22.6	-0.5
HLP					Sb	22 23 27.1	-0.4
HLP	comp=E,3μm,0.3s			IAML		22 23 27.4	
HLP	comp=N,2μm,0.2s			IAML		22 23 27.6	
HPO	**Honuapo**	**0.16**	**219**		Pb	22 23 22.4	-0.6
HPO					Sb	22 23 26.6	-0.8
AIN	**Ainahou**	**0.16**	**357**		Pb	22 23 22.7	-0.5
AIN					Sb	22 23 27.4	-0.4
KHU	**Kahuku**	**0.16**	**282**		Pb	22 23 22.5	-0.9
KHU					Sb	22 23 26.8	-1.1
SDHHI	**Sand Hill**	**0.23**	**40**		Pn	22 23 23.0	-0.1
SDHHI					Sb	22 23 27.8	-1.0
WRMHI	**West Rim**	**0.24**	**36**		Pn	22 23 23.0	-0.3
WRMHI					Sb	22 23 27.7	-1.2
RIM	**Rim**	**0.25**	**42**		Pn	22 23 23.1	-0.4
RIM					Sn	22 23 27.8	+1.0
KKO	**Keanakako'i**	**0.25**	**43**		Pn	22 23 23.2	-0.5
KKO					Sn	22 23 27.9	+0.6
UWE	**Uwekahuna**	**0.26**	**35**		Pn	22 23 23.2	-0.5
UWE	**Uwekahuna**	**0.26**	**35**		Sn	22 23 28.2	+0.8
OBL	**Observatory Le**	**0.26**	**37**		Pn	22 23 23.1	-0.6
OBL					Sn	22 23 28.0	+0.5
UWB	**Uwekahuna Bluf**	**0.27**	**37**		Pn	22 23 23.1	-0.8
UWB					Sn	22 23 27.9	+0.1
BYL	**Byron's Ledge**	**0.27**	**42**		Pn	22 23 23.2	-0.8
PUH	**Pauahi**	**0.27**	**54**		Pn	22 23 23.3	-0.8
PUH	comp=E,2μm,0.3s			IAML		22 23 28.3	
PUH	comp=N,2μm,0.3s			IAML		22 23 28.4	
SBLHI	**Steaming Bluff**	**0.27**	**39**		Pn	22 23 23.2	-0.9
SBLHI					Sn	22 23 28.0	-0.2
HATHI	**Halema'uma'u T**	**0.28**	**40**		Pn	22 23 23.3	-0.9
HATHI	comp=N,1μm,0.2s			IAML		22 23 28.4	
HATHI	comp=E,2μm,0.4s			IAML		22 23 28.6	
HATHI	**Halema'uma'u T**	**0.28**	**40**		Sn	22 23 28.4	+0.1
MLH	**Mauna Loa**	**0.29**	**12**		Pn	22 23 23.7	-0.7
MLH					Sn	22 23 28.7	-0.2
MLH	**Mauna Loa** comp=N,2μm,0.4s	**0.29**	**12**	IAML		22 23 29.1	
MLH	comp=E,1μm,0.2s			IAML		22 23 29.1	
RSD	**Rainshed**	**0.30**	**33**		Pn	22 23 23.5	-1.1
RSD	comp=E,1μm,0.2s			IAML		22 23 29.1	
RSD	**Rainshed**	**0.30**	**33**		Sn	22 23 28.6	-0.6
MWH	**Mokuaweoweo**	**0.30**	**333**		Pn	22 23 23.8	-1.0
MWH					Sn	22 23 29.1	-0.8
MWH	comp=E,2μm,0.6s			IAML		22 23 29.4	
MWH	comp=N,2μm,0.3s			IAML		22 23 29.4	
KNHH	**Kane Nui o Ham**	**0.31**	**58**		Pn	22 23 23.8	-1.0
STCH	**Steam Cracks**	**0.35**	**61**		Pb	22 23 24.1	-1.1
STCH	comp=N,2μm,0.1s			IAML		22 23 30.0	
STCH	**Steam Cracks**	**0.35**	**61**		Sn	22 23 29.8	-1.2
ALEP	**Alea Permanent**	**0.38**	**331**		Pb	22 23 24.3	-1.6
HMH	**Humu'ula Sheep**	**0.39**	**355**		Pb	22 23 25.1	-1.0
HMH	**Humu'ula Sheep**	**0.39**	**355**		Sn	22 23 31.3	-0.9
JOKA	**Jonika Flow**	**0.47**	**62**		Sb	22 23 32.1	-2.0
JOKA	**Jonika Flow**	**0.47**	**62**		Pb	22 23 25.5	-1.5
JOKA	comp=E,867nm,0.2s			IAML		22 23 32.4	
JOKA	comp=N,1μm,0.3s			IAML		22 23 35.8	
POHA	**Pohakuloa**	**0.55**	**352**		Pn	22 23 26.4	-1.9
POHA	**Pohakuloa**	**0.55**	**352**		Sb	22 23 33.5	-2.8
HUH	**Hualalai**	**0.59**	**322**		Pn	22 23 27.3	-1.6
HUH	**Hualalai**	**0.59**	**322**		Sb	22 23 35.2	-2.3
HPAH	**Hawaii Prepara**	**0.85**	**344**		Pn	22 23 30.2	-2.1
HPAH	comp=E,451nm,0.2s			IAML		22 23 40.4	
HPAH	comp=N,399nm,0.3s			IAML		22 23 40.4	

GCG 05 22:27:31.3±2.1, 15°54'N×88°57'W, h0km±8km, MD3.6, ML3.3, MW2.5, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARH	**Santa Rosa de**	**0.78**	**194**	*eP*	Pg	22 27 46.6	+0.3
SARH				*eS*	Sb	22 27 58.0	-1.0
ZAFR2	**Estanzuela, Za**	**1.22**	**218**	*iP*	Pg	22 27 53.2	-1.5
ZAFR2				*eS*	Sg	22 28 09.2	-1.2
MTO3	**Montecristo**	**1.37**	**214**	*eP*	Pg	22 27 56.7	-0.8
PETF	**Flores**	**1.85**	**318**	*eP*	Pn	22 28 05.0	+0.7
PETF				*eS*	Sn	22 28 27.4	-1.0
APG	**El Apazote**	**1.90**	**254**	*eS*	Sg	22 28 32.7	+0.1
NUBE	**Las Nubes**	**2.00**	**216**	*eP*	Pn	22 28 07.5	+0.9
NUBE				*eS*	Sg	22 28 35.4	-0.4
JAYA	**Jayaque - finc**	**2.06**	**205**	*eP*	Pb	22 28 08.5	-1.1
JAYA				*eS*	Sb	22 28 36.5	+0.6

ZUR 05 22:30:01.9, 46°32N×7°35E, h5km, MLh0.8/1, 12C-6D, Error ellipse: s-maj=1760.8km s-min=608.0km az=112.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**252**	⇓Pg	Pg	22 30 03.3	+0.2
RAW2					Sg	22 30 04.2	+0.2
RAW2	**Sanetsch, VS**	**0.03**	**252**	⇓Pg	Pg	22 30 03.3	+0.2
RAW2					Sg	22 30 04.2	+0.2
SENIN	**Lac Senin/Sane**	**0.06**	**316**	⇓Pg	Pg	22 30 03.8	+0.2
SENIN					Sg	22 30 04.9	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**316**	⇓Pg	Pg	22 30 03.6	+0.2
SENIN					Sg	22 30 04.9	+0.3
SAYF2	**Ayent-Fortunoz**	**0.06**	**129**	⇑Pg	Pg	22 30 03.6	+0.2
SAYF2					Sg	22 30 04.6	+0.3
SAYF2	**Ayent-Fortunoz**	**0.06**	**129**	⇑Pg	Pg	22 30 03.6	+0.2
SAYF2					Sg	22 30 04.6	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**69**	⇓Pg	Pg	22 30 03.7	+0.2
STSW2					Sg	22 30 04.9	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**69**	⇓Pg	Pg	22 30 03.7	+0.2
STSW2					Sg	22 30 04.9	+0.3
SIOV	**Sion-Valere**	**0.09**	**176**	⇑Pg	Pg	22 30 04.0	+0.2
SIOV					Sg	22 30 05.4	+0.3
RAW1	**Lenk, BE**	**0.11**	**30**	Pg	Pg	22 30 04.6	+0.2
RAW1					Sg	22 30 06.4	+0.5
RAW1	**Lenk, BE**	**0.11**	**30**	Pg	Pg	22 30 04.6	+0.2
RAW1					Sg	22 30 06.4	+0.5
SIE01	**Sierre, Farmho**	**0.11**	**119**	⇑Pg	Pg	22 30 04.6	+0.4
SIE01	**Sierre, Farmho**	**0.11**	**119**	⇑Pg	Pg	22 30 04.6	+0.4
VET01	**Vtroz, Route**	**0.12**	**210**	⇑Pg	Pg	22 30 04.4	0.0
VET01					Sg	22 30 06.3	+0.4
VET01	**Vtroz, Route**	**0.12**	**210**	⇑Pg	Pg	22 30 04.4	0.0
VET01					Sg	22 30 06.3	+0.4
SHER	**Hrmence, R**	**0.14**	**168**	⇑Pg	Pg	22 30 05.1	+0.3
SHER					Sg	22 30 07.2	+0.5
RAW4	**Former Reservo**	**0.17**	**227**	⇑Pg	Pg	22 30 05.4	+0.1
GRYON	**Gryon**	**0.18**	**247**		Sg	22 30 08.5	+0.5
DIX	**Grande Dixence**	**0.25**	**171**	⇑Pg	Pg	22 30 07.0	+0.3
DIX					Sg	22 30 10.5	+0.5
DIX	**Grande Dixence**	**0.25**	**171**	⇑Pg	Pg	22 30 07.0	+0.3
DIX					Sg	22 30 10.5	+0.5
LAUCH	**Lauchernalp**	**0.30**	**72**	⇑Pg	Pg	22 30 08.1	+0.2
LAUCH					Sg	22 30 12.2	+0.3

ZUR 05 22:30:25.7, 46°33N×7°36E, h5km±1km, MLh1.0/5, 18C-6D, Error ellipse: s-maj=1833.3km s-min=522.6km az=123.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**246**	⇓Pg	Pg	22 30 27.2	+0.1
RAW2					Sg	22 30 28.1	+0.1
RAW2	**Sanetsch, VS**	**0.03**	**246**	⇓Pg	Pg	22 30 27.2	+0.1
RAW2					Sg	22 30 28.1	+0.1
SENIN	**Lac Senin/Sane**	**0.05**	**313**	⇓Pg	Pg	22 30 27.5	+0.2
SENIN					Sg	22 30 28.8	+0.4
SENIN	**Lac Senin/Sane**	**0.05**	**313**	⇓Pg	Pg	22 30 27.5	+0.2
SENIN					Sg	22 30 28.8	+0.4
SAYF2	**Ayent-Fortunoz**	**0.06**	**132**	⇑Pg	Pg	22 30 27.4	+0.2
SAYF2	**Ayent-Fortunoz**	**0.06**	**132**	⇑Pg	Pg	22 30 27.4	+0.2
STSW2	**Zeuzier, Staus**	**0.06**	**71**	⇑Pg	Pg	22 30 27.5	+0.2
STSW2					Sg	22 30 28.6	+0.2
STSW2	**Zeuzier, Staus**	**0.06**	**71**	⇑Pg	Pg	22 30 27.5	+0.2
STSW2					Sg	22 30 28.6	+0.2
LEO01	**Saint Lonard,**	**0.09**	**147**	⇑Pg	Pg	22 30 27.9	+0.3
LEO01					Sg	22 30 29.8	+0.8
LEO01	**Saint Lonard,**	**0.09**	**147**	⇑Pg	Pg	22 30 27.9	+0.3
LEO01					Sg	22 30 29.8	+0.8
SIOV	**Sion-Valere**	**0.09**	**176**	⇑Pg	Pg	22 30 27.9	+0.2
SIOV					Sg	22 30 29.3	+0.2
SIOV	**Sion-Valere**	**0.09**	**176**	⇑Pg	Pg	22 30 27.9	+0.2
SIOV					Sg	22 30 29.3	+0.2
SIOM	**Sion-Mayennets**	**0.10**	**177**		Sg	22 30 29.6	+0.4
SIOM	**Sion-Mayennets**	**0.10**	**177**		Sg	22 30 29.6	+0.4
RAW1	**Lenk, BE**	**0.11**	**31**	⇑Pg	Pg	22 30 28.4	+0.2
RAW1					Sg	22 30 30.2	+0.5
RAW1	**Lenk, BE**	**0.11**	**31**	⇑Pg	Pg	22 30 28.4	+0.2
RAW1					Sg	22 30 30.2	+0.5
SIE01	**Sierre, Farmho**	**0.11**	**120**	⇓Pg	Pg	22 30 28.5	+0.4
SIE01	**Sierre, Farmho**	**0.11**	**120**	⇓Pg	Pg	22 30 28.5	+0.4
VET01	**Vtroz, Route**	**0.12**	**210**	⇑Pg	Pg	22 30 28.2	0.0
VET01					Sg	22 30 30.3	+0.4
VET01	**Vtroz, Route**	**0.12**	**210**	⇑Pg	Pg	22 30 28.2	0.0
VET01					Sg	22 30 30.3	+0.4
SHER	**Hrmence, R**	**0.14**	**169**	Sg	Sg	22 30 31.3	+0.6
SHER	**Hrmence, R**	**0.14**	**169**	Sg	Sg	22 30 31.3	+0.6
RAW4	**Former Reservo**	**0.17**	**226**	⇑Pg	Pg	22 30 29.3	+0.2
RAW4					Sg	22 30 32.0	+0.6
RAW4	**Former Reservo**	**0.17**	**226**	⇑Pg	Pg	22 30 29.3	+0.2
RAW4					Sg	22 30 32.0	+0.6
GRYON	**Gryon**	**0.19**	**246**	Pg	Pg	22 30 29.6	+0.2
GRYON					Sg	22 30 32.3	+0.4
GRYON	**Gryon**	**0.19**	**246**	Pg	Pg	22 30 29.6	+0.2
GRYON					Sg	22 30 32.3	+0.4
LKBD2	**Leukerbad 2**	**0.21**	**77**	Pg	Pg	22 30 30.2	+0.3
LKBD2					Sg	22 30 33.1	+0.5
LKBD2	**Leukerbad 2**	**0.21**	**77**	Pg	Pg	22 30 30.2	+0.3
LKBD2					Sg	22 30 33.1	+0.5
FULLY	**Reservoir Maze**	**0.23**	**222**	Pg	Pg	22 30 30.3	+0.1
FULLY					Sg	22 30 33.5	+0.3
DIX	**Grande Dixence**	**0.25**	**171**	⇑Pg	Pg	22 30 30.9	+0.3
DIX					Sg	22 30 34.1	+0.2
DIX	**Grande Dixence**	**0.25**	**171**	⇑Pg	Pg	22 30 30.9	+0.3
DIX					Sg	22 30 34.1	+0.2
LAUCH	**Lauchernalp**	**0.30**	**73**	⇑Pg	Pg	22 30 31.9	+0.2
LAUCH					Sg	22 30 36.0	+0.3
LAUCH	**Lauchernalp**	**0.30**	**73**	⇑Pg	Pg	22 30 31.9	+0.2
LAUCH					Sg	22 30 36.0	+0.3

IDC 05 22:38:03.0±3.1, 15°02S×174°84W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=111.8km s-min=34.3km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**37.94**	**331**	T	T	23 27 04.0	
H11S3	baz=147,slow=76,SNR=13 **WAKE ISLAND Hy** baz=147,slow=76	**37.95**	**331**	T	T	23 27 04.6	
H11S1	**WAKE ISLAND Hy** baz=147,slow=76	**37.96**	**331**	T	T	23 27 04.0	
H11N3	**WAKE ISLAND Hy** baz=149,slow=76,SNR=4.6	**38.91**	**332**	T	T	23 28 07.3	
H11N1	**WAKE ISLAND Hy** baz=149,slow=76,SNR=5.2	**38.92**	**332**	T	T	23 28 07.3	
H11N2	**WAKE ISLAND Hy** baz=149,slow=76,SNR=4.2	**38.93**	**332**	T	T	23 28 07.3	
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=95,slow=6.9,SNR=8.8 0.5nm,0.5s	**48.58**	**257**	P	P	22 46 49.2	+0.4
ASAR	**Alice Springs** 4.2nm,0.5s,baz=93,slow=7.7,SNR=66 4.2nm,0.5s	**48.91**	**252**	P	P	22 46 50.9	-0.4
MJAR	**Matsushiro Arr** 1.3nm,0.2s,baz=128,slow=5.8,SNR=1.4 1.3nm,0.2s	**67.76**	**321**	P	P	22 49 01.9	-0.9
ILAR	**Eielson Array** 0.5nm,0.9s,baz=220,slow=6.5,SNR=4.8 0.5nm,0.9s	**82.35**	**12**	P	P	22 50 26.7	+0.3
BRTR	**Keskin Array B** 0.9nm,0.8s,baz=48,slow=2.1,SNR=5.6	**144.99**	**320**	PKP	PKPbc	22 57 42.4	+0.3

*CATAC **05** 23:11:41.3±0.4, 9°N±2°×8°4W±°, h5km±1km, M4.5/18, MLv4.5/18, Error ellipse: s-maj=6.2km s-min=2.6km az=38.6, confirmed*

*UCR **05** 23:11:41.1±1.2, 8.51N×83.77W, h8km±7km, MW4.6, Fault plane solution: NP1:φ342.12000°, δ60.13000°, λ84.23000°.*

ISC 05 23:11:40.0±1.1, 8°48N±0°05×83°81W±0°03, h8km, n103, σ0°88/103, 12C-32D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	**Carate, Puerto**	**0.47**	**99**	S	**Sb**	**23 11 57.8**	**-0.1**
PIRO	**Carate, Puerto**	**0.47**	**99**	⇓P	**Pg**	**23 11 50.5**	**+1.3**
PIRO	**Carate, Puerto**	**0.47**	**99**	⇓*eP*	**Pg**	**23 11 50.6**	**+1.3**
JIME	**Puerto Jimenez**	**0.48**	**83**	⇓*eP*	**Pg**	**23 11 50.5**	**+1.1**
PTJ1	**Puerto Jimnez**	**0.51**	**83**	S	**Sb**	**23 11 59.0**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.51**	**83**	⇓P	**Pg**	**23 11 50.8**	**+0.9**
PTJ1	**Puerto Jimnez**	**0.51**	**83**	⇓*eP*	**Pg**	**23 11 50.8**	**+0.9**
PANP	**Palmar Norte**	**0.59**	**36**	⇓*eP*	**Pg**	**23 11 52.1**	**+0.5**
OCHAL	**Ojochal**	**0.64**	**15**	S	**Sg**	**23 12 01.5**	**+0.7**
OCHAL	**Ojochal**	**0.64**	**15**	⇓P	**Pg**	**23 11 52.8**	**+0.4**
EDAD	**Golfito**	**0.66**	**75**	⇓*eP*	**Pg**	**23 11 52.5**	**-0.3**
FITO	**Golfito**	**0.67**	**77**	⇓*eP*	**Pg**	**23 11 52.6**	**-0.3**
FIMO	**Fila Mora**	**0.68**	**41**	⇓*eP*	**Pg**	**23 11 53.7**	**+0.4**
EDPE	**Pejibaye, P**	**0.72**	**19**	⇓*eP*	**Pg**	**23 11 54.1**	**+0.2**
EDP2	**Potrero Grande**	**0.82**	**49**	⇓*eP*	**Pg**	**23 11 56.2**	**+0.2**
BURE	**Buenos Aires**	**0.83**	**34**	⇓*eP*	**Pg**	**23 11 56.3**	**+0.1**
NELY	**Ciudad Neily**	**0.87**	**79**	⇓*eP*	**Pg**	**23 11 56.6**	**-0.3**
ZEDO	**Perez Zeledon**	**0.88**	**8**	*eP*	**Pg**	**23 11 57.1**	**+0.1**
VITO	**San Vito**	**0.90**	**68**	*eP*	**Pg**	**23 11 57.5**	**+0.1**
SAJE	**San Jernim**	**0.92**	**19**	*eP*	**Pg**	**23 11 57.1**	**-0.6**
CDITO	**Canoas**	**0.93**	**84**	S	**Sg**	**23 12 10.4**	**+0.3**
CDITO	**Canoas**	**0.93**	**84**	⇓P	**Pg**	**23 11 57.4**	**-0.6**
DRK0	**Durika**	**0.96**	**36**	S	**Sg**	**23 12 10.9**	**-0.2**
DRK0	**Durika**	**0.96**	**36**	⇓P	**Pg**	**23 11 58.2**	**-0.3**
DRK0	**Durika**	**0.96**	**36**	⇓*eP*	**Pg**	**23 11 58.2**	**-0.3**
ARIEL	**Armuelles**	**0.97**	**101**	*eP*	Pn	23 12 06.4	+6.5
QUEP	**Quepos**	**1.01**	**340**	S	**Sg**	**23 12 13.4**	**+0.8**
QUEP	**Quepos**	**1.01**	**340**	P	**Pg**	**23 11 59.1**	**-0.3**
QUEP	**Quepos**	**1.01**	**340**	*eP*	**Pg**	**23 11 59.2**	**-0.3**
SVQ2	**Quepos**	**1.01**	**340**	*eP*	**Pg**	**23 11 59.2**	**-0.4**
LMNES	**Limones**	**1.01**	**112**	*eP*	**Pg**	**23 11 58.6**	**-0.9**
DMCAL	**E. de Neily**	**1.02**	**79**	⇓*eP*	**Pg**	**23 11 59.1**	**-0.7**
LLNJ	**Naranjito**	**1.03**	**344**	⇑*eP*	**Pg**	**23 11 59.5**	**-0.4**
BUS1	**Rivas**	**1.07**	**3**	⇓*eP*	**Pg**	**23 12 00.2**	**-0.5**
ALCO	**Alturas Coton,**	**1.07**	**64**	⇓*eP*	**Pg**	**23 11 59.9**	**-0.8**
PIEC	**Cerro El Cedra**	**1.15**	**353**	⇑*eP*	**Pg**	**23 12 01.1**	**-1.0**
BRU2	**Volcan**	**1.15**	**74**	S	**Sb**	**23 12 17.3**	**-0.2**
BRU2	**Volcan**	**1.15**	**74**	⇓P	**Pg**	**23 12 01.2**	**-0.9**
BRU2	**Volcan**	**1.15**	**74**	⇓*eP*	**Pg**	**23 12 01.2**	**-0.9**
TBS2		**1.18**	**74**	⇓*eP*	**Pg**	**23 12 02.6**	**-0.2**
RAZU	**San Marcos de**	**1.19**	**350**	*eP*	**Pg**	**23 12 03.0**	**0.0**
PICV	**PH. Pirrs**	**1.21**	**342**	⇑*eP*	**Pg**	**23 12 02.1**	**-1.1**
LCR2	**La Lucha 2**	**1.27**	**351**	P	**Pb**	**23 12 03.2**	**-1.2**
LCR2	**La Lucha 2**	**1.27**	**351**	S	**Sg**	**23 12 20.1**	**-0.9**
JEFFS	**S de V. Baru**	**1.28**	**81**	⇓*eP*	**Pb**	**23 12 03.4**	**-1.1**
REPA	**Paraso**	**1.34**	**358**	*eP*	**Pn**	**23 12 04.5**	**-0.7**
ACOS	**Acosta**	**1.36**	**345**	*eP*	**Pn**	**23 12 03.5**	**-1.9**
BQTLY	**Boquete Panama**	**1.36**	**78**	⇓*eP*	**Pn**	**23 12 04.4**	**-1.2**
WILLF	**Boquete**	**1.39**	**79**	⇓*eP*	**Pn**	**23 12 04.7**	**-1.2**
VINA	**Juan Vinas**	**1.41**	**3**	*eP*	**Pn**	**23 12 05.7**	**-0.5**
CEUA	**Cerro Uatsi, L**	**1.43**	**37**	*eP*	**Pb**	**23 12 07.4**	**+0.4**
TURIB	**Turrialba**	**1.43**	**5**	*eP*	**Pn**	**23 12 05.8**	**-0.5**
PCAYA	**Pacayas**	**1.43**	**360**	*eP*	**Pn**	**23 12 06.5**	**0.0**
AMPA	**Desamparados**	**1.43**	**350**	*eP*	**Pn**	**23 12 05.4**	**-1.1**
LUJA	**Lujan**	**1.46**	**350**	*eP*	**Pn**	**23 12 06.1**	**-0.8**
VERB	**Verbena**	**1.46**	**4**	*eP*	**Pn**	**23 12 06.5**	**-0.4**
CENT	**San Jose**	**1.47**	**350**	*eP*	**Pn**	**23 12 07.5**	**+0.5**
ECI	**Escuela Centro**	**1.47**	**351**	*eP*	**Pn**	**23 12 06.5**	**-0.6**
LAES	**El Progreso Va**	**1.48**	**30**	⇓*eP*	**Pn**	**23 12 06.9**	**-0.1**
SANTA	**Santa Ana**	**1.49**	**346**	*eP*	**Pn**	**23 12 06.3**	**-0.9**
VICA	**Volcano Irazu**	**1.50**	**359**	⇑*eP*	**Pn**	**23 12 07.2**	**-0.5**
BRIBI	**Bribri**	**1.50**	**41**	⇓*eP*	**Pn**	**23 12 07.9**	**+0.6**
CVTQ	**Turrialba Volc**	**1.52**	**2**	⇑*eP*	**Pn**	**23 12 07.7**	**-0.2**
CVTV	**Tajo**	**1.52**	**2**	⇑*eP*	**Pn**	**23 12 07.6**	**-0.2**
VTR0	**Volcan Turrial**	**1.53**	**2**	⇑*eP*	**Pn**	**23 12 07.9**	**-0.2**
CVTR	**Volcan Turrial**	**1.54**	**2**	⇑*eP*	**Pn**	**23 12 07.8**	**-0.3**
BELE	**Belen**	**1.54**	**346**	*eP*	**Pn**	**23 12 07.0**	**-0.9**
HEME	**Heredia, Merce**	**1.54**	**348**	*eP*	**Pn**	**23 12 08.6**	**+0.6**
CVIMO	**Finca Echandi**	**1.54**	**355**	*eP*	**Pn**	**23 12 07.9**	**-0.2**
HDC	**Heredia**	**1.54**	**349**	⇑*eP*	**Pn**	**23 12 07.6**	**-0.4**
RESJ	**San Isidro (Tu**	**1.55**	**6**	*eP*	**Pn**	**23 12 08.1**	**0.0**
LCOCO	**El Coco**	**1.62**	**9**	*eP*	**Pn**	**23 12 09.3**	**+0.4**
RGM0	**Gandoca**	**1.62**	**47**	S	**Sg**	**23 12 32.9**	**+0.5**
RGM0	**Gandoca**	**1.62**	**47**	⇓P	**Pn**	**23 12 10.0**	**+1.0**
RGM0	**Gandoca**	**1.62**	**47**	⇓*eP*	**Pn**	**23 12 09.9**	**+1.0**
TCS1	**Tacares**	**1.63**	**343**	P	**Pn**	**23 12 09.9**	**+0.8**
RVLA	**Villa Bonita**	**1.64**	**8**	*eP*	**Pn**	**23 12 09.4**	**+0.2**
IRES	**Siquirres**	**1.64**	**11**	*eP*	**Pn**	**23 12 09.6**	**+0.5**
CVTG	**V. Turrialba,**	**1.66**	**1**	*eP*	**Pn**	**23 12 09.8**	**+0.2**
CBL1	**Cabuya**	**1.68**	**311**	⇑*eP*	**Pn**	**23 12 08.6**	**-1.2**
RBALA	**Bur**	**1.69**	**76**	⇓*eP*	**Pn**	**23 12 08.8**	**-1.0**
EGUB	**Earth Gu¡pi**	**1.74**	**7**	*eP*	**Pn**	**23 12 11.0**	**+0.4**
JCR1	**Jicaral**	**1.87**	**317**	*eP*	**Pn**	**23 12 13.8**	**+1.3**
CARI	**Cariari**	**1.88**	**2**	*eP*	**Pn**	**23 12 13.7**	**+1.3**
KKNTU	**Kakint[e]**	**2.02**	**80**	*eP*	**Pn**	**23 12 13.8**	**-0.6**
SOCE	**Pocosol**	**2.06**	**337**	P	**Pn**	**23 12 15.2**	**+0.3**
SOCE	**Pocosol**	**2.06**	**337**	S	**Sb**	**23 12 43.5**	**+0.1**
SOCE	**Pocosol**	**2.06**	**337**	*eP*	**Pn**	**23 12 15.9**	**+1.0**
JTS	**Las Juntas de**	**2.13**	**328**	⇑P	**Pn**	**23 12 17.7**	**+1.8**
JTS	**Las Juntas de**	**2.13**	**328**	⇑*eP*	**Pn**	**23 12 17.8**	**+1.9**
ARE1	**Arenal 1**	**2.17**	**336**	*eP*	**Pn**	**23 12 17.8**	**+1.3**
CEDE	**Laguna Cedeo**	**2.18

OUENC **Ouen Island, N** 8.70 186 P **Pn** 23 19 31.7 +0.3
OUENC **Ouen Island, N** 8.70 186 S **Sn** 23 21 12.4 +3.3
HNR **Honiara** 8.78 298 Pn **Pn** 23 19 32.0 -0.4
HNR **Honiara** 8.78 298 Pn **Pn** 23 19 32.6 +0.2
46nm,0.3s,baz=207,slow=3.3,SNR=44
HNR LR LR 23 23 08.3
comp=Z,65µm,19.0s,baz=138,slow=39
1µm,0.8s
HNR **Honiara** 8.78 298 P **Pn** 23 19 32.5 0.0
SAVO **Savo Central** 9.04 299 P **Pn** 23 19 35.4 -0.6
SAVO **Savo Central** 9.04 299 S **Sn** 23 21 19.2 +1.8
MSVF **Nonsavu** 10.66 113 Pn **Pn** 23 19 57.3 -0.9
MSVF **Nonsavu** 10.66 113 P **Pn** 23 19 59.0 +0.7
MSVF **Nonsavu** 10.66 113 *e*P **Pn** 23 19 56.9 -1.4
MSVF **Nonsavu** 10.66 113 ⇑P **Pn** 23 19 57.5 -0.8
NFK **Norfolk Island** 15.25 179 P **Pn** 23 21 01.7 +0.9
TARA **Tarawa** 15.81 19 **Pn** 23 21 06.3 -1.9
TARA IAmb IAmb 23 21 13.9
comp=Z,1µm,1.8s
TARA **Tarawa** 15.81 19 P **P** 23 21 11.4 -0.5
RABL **Rabaul** 18.09 300 Pn **Pn** 23 21 34.8 -2.1
GD1S **Gladstone Soft** 18.66 235 P **Pn** 23 21 45.1 +1.3
AUWSH **Wavell State H** 19.36 223 P **Pn** 23 21 53.2 +1.0
LHI **Lord Howe Isla** 19.45 203 P **Pn** 23 21 58.5 +5.3
EIDS **Eidsvold** 19.53 231 P **Pn** 23 21 54.8 +0.6
comp=Z,513nm,1.7s
EIDS **Eidsvold** 19.53 231 P **P** 23 21 53.1 +0.2
EIDS **Eidsvold** 19.53 231 P **Pn** 23 21 54.7 +0.5
EIDS **Eidsvold** 19.53 231 ⇓P **Pn** 23 21 54.7 +0.5
GC1S **Gold Coast 1 S** 19.58 221 P **Pn** 23 21 55.6 +0.8
AFI **Afiamalu** 19.85 93 P **Pn** 23 22 01.5 +3.3
TW1H **Toowoomba 1 Ha** 20.18 225 P Pn 23 22 01.9 -0.1
RIZ **Raoul Island** 20.35 142 P Pn 23 22 02.5 -1.4
RAO **Raoul Island** 20.36 142 P **P** 23 22 00.9 -1.0
RAO **Raoul Island** 20.36 142 P **P** 23 22 02.2 +0.3
comp=Z,116nm,0.3s,baz=311,slow=23,SNR=5.1
RAO S **S** 23 25 45.6 -3.9
comp=Z,76nm,0.4s,baz=47,slow=23,SNR=1.5
RAO LR LR 23 28 03.8
comp=Z,39µm,20.3s,baz=328,slow=32
RAO **Raoul Island** 20.36 142 P **P** 23 22 00.9 -1.0
RAO pmax pmax
comp=Z,2µm,1.7s
RAO MLR MLR
comp=Z,46µm,22.0s
GLKZ **Green Lake** 20.37 142 P **P** 23 22 02.7 +0.7
PMG **Port Moresby** 20.65 280 P **P** 23 22 04.0 -1.2
PMG **Port Moresby** 20.65 280 IAMs_20 IAMs_20 23 30 06.4
comp=Z,59µm,18.0s
PMG **Port Moresby** 20.65 280 P **P** 23 22 05.4 +0.2
comp=Z,64nm,0.9s,baz=73,slow=4.7,SNR=14
PMG LR LR 23 29 02.2
comp=Z,46µm,19.8s,baz=10,slow=34
comp=Z,64nm,0.9s
PMG **Port Moresby** 20.65 280 P **P** 23 22 05.9 +0.6
PMG **Port Moresby** 20.65 280 *ce*P **P** 23 22 05.8 +0.5
PMG pmax pmax
comp=Z,386nm,1.7s
TV1H **Townsville Har** 20.86 252 P **P** 23 22 08.8 +1.3
RMQ **Roma** 21.89 232 P **P** 23 22 22.7 +4.2
comp=Z,289nm,1.8s
RMQ **Roma** 21.89 232 P **P** 23 22 19.9 +1.4
OUZ **Omahuta** 22.05 167 P **P** 23 22 20.3 +0.2
OUZ **Omahuta** 22.05 167 ⇓P **P** 23 22 19.8 -0.2
ARMA **Armidale** 22.33 219 P **P** 23 22 24.0 +0.7
comp=Z,0.0nmcomp=Z,231nm,2.0s
ARMA **Armidale** 22.33 219 P **P** 23 22 22.6 -0.6
ARMA IAmb IAmb 23 22 31.7
comp=Z,1µm,2.0s
ARMA **Armidale** 22.33 219 P **P** 23 22 23.9 +0.7
ARMA **Armidale** 22.33 219 ⇓P **P** 23 22 23.7 +0.5
PATS **Pohnpei** 22.48 335 P **P** 23 22 25.2 +0.4
comp=Z,416nm,1.3s
PATS **Pohnpei** 22.48 335 P **P** 23 22 24.2 -0.7
PATS IAmb IAmb 23 22 27.6
comp=Z,725nm,1.3s
PATS **Pohnpei** 22.48 335 P **P** 23 22 26.5 +1.6
WCZ **Waipu Caves** 22.90 166 P **P** 23 22 29.5 +0.4
MTSU **Mount Surprise** 22.99 256 P **P** 23 22 30.5 +0.2
comp=Z,241nm,1.0s
MTSU **Mount Surprise** 22.99 256 P **P** 23 22 30.4 +0.2
MANU **Manus Island** 23.29 298 P **P** 23 22 31.4 -1.9
MANU **Manus Island** 23.29 298 ⇓P **P** 23 22 32.3 -1.0
GRZ **Great Barrier** 23.47 164 P **P** 23 22 35.1 +0.2
COEN **Coen** 23.90 266 P **P** 23 22 39.7 +0.4
comp=Z,0.0nmcomp=Z,207nm,2.4s
COEN **Coen** 23.90 266 P **P** 23 22 38.5 -0.8
COEN IAmb IAmb 23 22 57.8
comp=Z,287nm,1.3s
COEN **Coen** 23.90 266 P **P** 23 22 40.6 +1.3
COEN **Coen** 23.90 266 ⇑P **P** 23 22 38.6 -0.7
KUZ **Kuaotunu** 24.01 164 P **P** 23 22 43.0 +2.9
KUZ **Kuaotunu** 24.01 164 P **P** 23 22 39.0 -1.0
AULRC **Lightning Ridg** 24.10 226 P **P** 23 22 43.4 +2.4
MGCD **Mangrove Creek** 24.64 215 P **P** 23 22 46.8 +0.8
comp=Z,60nm,0.9s
MGCD **Mangrove Creek** 24.64 215 P **P** 23 22 48.1 +2.1
AUKHS **Kincumber High** 24.68 214 P **P** 23 22 47.4 +1.1
TOZ **Tahuroa Road** 24.89 165 P **P** 23 22 47.5 -0.6
TOZ IAmb IAmb 23 22 54.1
comp=Z,500nm,1.5s
TOZ IAMs_20 IAMs_20 23 30 32.1
comp=Z,37µm,20.0s
TOZ **Tahuroa Road** 24.89 165 P **P** 23 22 50.1 +2.0
RIV **Riverview** 25.08 214 P **P** 23 22 52.7 +2.8
RIV **Riverview** 25.08 214 P **P** 23 22 51.5 +1.6
RIV pmax pmax
comp=Z,286nm,2.3s
SYDH **Sydney Hard Ro** 25.26 215 P **P** 23 22 54.0 +2.5
TLZ **Tolley Road** 25.46 166 P **P** 23 22 56.0 +2.6
HIZ **Hauiti** 25.48 167 P **P** 23 22 51.7 -1.8
HIZ IAMs_20 IAMs_20 23 31 25.9
comp=Z,39µm,19.0s
HIZ **Hauiti** 25.48 167 P **P** 23 22 55.8 +2.4
QLP **Quilpie** 25.49 236 P **P** 23 22 53.9 +0.1
comp=Z,748nm,1.8s
QLP **Quilpie** 25.49 236 P **P** 23 22 55.5 +1.8
QLP **Quilpie** 25.49 236 ⇓P **P** 23 22 53.3 -0.5
MXZ **Matakaoa Point** 25.53 160 P **P** 23 22 53.1 -0.8
MXZ IAmb IAmb 23 23 05.5
comp=Z,415nm,1.6s
MXZ **Matakaoa Point** 25.53 160 P **P** 23 22 57.9 +4.0
MXZ **Matakaoa Point** 25.53 160 P **P** 23 22 55.2 +1.3
HAZ **Te Kaha** 25.54 161 P **P** 23 22 54.3 +0.3
URZ **Urewera** 25.81 163 LR LR 23 31 00.0
comp=Z,37µm,21.5s,baz=343,slow=32
URZ **Urewera** 25.81 163 P **P** 23 22 55.5 -0.9
URZ **Urewera** 25.81 163 ⇑P **P** 23 22 57.6 +1.2
PUZ **Puketiti** 25.98 161 P **P** 23 22 59.0 +1.0
MWZ **Matawai** 26.00 162 P **P** 23 22 59.5 +1.3
VRZ **Vera Road** 26.05 168 P **P** 23 23 00.4 +1.8
RTZ **Ruatahuna** 26.11 163 P **P** 23 22 58.1 -1.1
RTZ IAmb IAmb 23 23 24.8
comp=Z,670nm,1.9s
RTZ IAMs_20 IAMs_20 23 30 59.5
comp=Z,39µm,20.0s
RTZ **Ruatahuna** 26.11 163 P **P** 23 23 00.7 +1.4
NGZ **Ngauruhoe** 26.28 166 P **P** 23 23 03.1 +2.2
BKZ **Black Stump Fm** 26.49 165 P **P** 23 23 02.5 -0.2
BKZ IAMs_20 IAMs_20 23 31 13.7
comp=Z,39µm,21.0s
BKZ **Black Stump Fm** 26.49 165 P **P** 23 23 04.8 +2.1
BKZ **Black Stump Fm** 26.49 165 P **P** 23 23 01.2 -1.5
KNZ **Kokohu** 26.68 163 P **P** 23 23 05.0 +0.7
WAZ **Wanganui** 26.70 168 P **P** 23 23 06.4 +1.9
CMSA **Cobar Meteorol** 26.94 225 P **P** 23 23 06.9 +0.1
comp=Z,0.0nmcomp=Z,216nm,1.9s
CMSA **Cobar Meteorol** 26.94 225 P **P** 23 23 07.1 +0.4
YNG **Young** 26.99 217 P **P** 23 23 11.5 +4.3
comp=Z,55nm,1.9s
CNB **Canberra Magne** 27.17 214 P **P** 23 23 13.4 +4.5
comp=Z,0.0nmcomp=Z,95nm,2.1s
CNB **Canberra Magne** 27.17 214 P **P** 23 23 11.0 +2.1
TSZ **Takapari Road** 27.21 166 P **P** 23 23 09.2 +0.1
QRZ **Quartz Range** 27.33 172 P **P** 23 23 10.4 +0.3
QRZ **Quartz Range** 27.33 172 P **P** 23 23 10.7 +0.5
AUMHS **Melrose High S** 27.36 215 P **P** 23 23 12.9 +2.4
AUMTS **Mt Stromlo** 27.38 215 P **P** 23 23 12.8 +2.1
CAN **Canberra** 27.38 215 P **P** 23 23 15.3 +4.6
comp=Z,0.0nmcomp=Z,61nm,2.1s
CAN **Canberra** 27.38 215 P **P** 23 23 13.0 +2.3
CAN **Canberra** 27.38 215 P **P** 23 23 14.2 +3.5
CAN pmax pmax
comp=Z,61nm,2.1s
CAN **Canberra** 27.38 215 ⇑P **P** 23 23 14.2 +3.5
MRZ **Mangatainoka R** 27.70 167 P **P** 23 23 13.2 -0.3
MRZ **Mangatainoka R** 27.70 167 P **P** 23 23 13.2 -0.3
QIS **Mount Isa** 27.75 252 P **P** 23 23 14.3 +0.1
comp=Z,63nm,1.4s
QIS **Mount Isa** 27.75 252 P **P** 23 23 14.9 +0.7
BFZ **Birch Farm** 27.87 166 IAMs_20 IAMs_20 23 33 02.3
comp=Z,51µm,19.0s
BFZ **Birch Farm** 27.87 166 P **P** 23 23 18.9 +3.9
SNZO **South Karori** 28.15 169 IAMs_20 IAMs_20 23 33 05.6
comp=Z,34µm,19.0s
MILA **Mila** 28.59 212 P **P** 23 23 25.0 +3.5
comp=Z,22nm,2.0s
INKA **Innaminka** 28.80 237 P **P** 23 23 22.1 -1.3
JAY **Jayapura** 28.99 290 LR LR 23 35 53.3
comp=Z,20µm,18.1s,baz=106,slow=38
JAY **Jayapura** 28.99 290 P **P** 23 23 25.3 0.0
INZ **Inchbonnie** 29.08 174 IAMs_20 IAMs_20 23 33 43.9
comp=Z,29µm,18.0s
GENI **Genyem** 29.45 290 P **P** 23 23 31.1 +1.8
OXZ **Oxford** 29.73 174 IAMs_20 IAMs_20 23 34 32.2
comp=Z,24µm,18.0s
RPZ **Rata Peaks** 30.03 175 LR LR 23 34 43.6
comp=Z,19µm,18.4s,baz=340,slow=35
STKA **Stephens Creek** 30.03 229 P **P** 23 23 34.6 +0.2
comp=Z,0.0nmcomp=Z,1µm,2.0s
STKA **Stephens Creek** 30.03 229 P **P** 23 23 33.9 -0.5
STKA **Stephens Creek** 30.03 229 P **P** 23 23 34.2 -0.1
comp=Z,20nm,0.5s,baz=50,slow=8.4,SNR=67
STKA S **S** 23 28 31.4 -0.5
comp=Z,1.7nm,0.3s,baz=357,slow=21,SNR=5.3
STKA LR LR 23 35 20.4
comp=Z,35µm,18.2s,baz=53,slow=36
comp=Z,20nm,0.5s
STKA **Stephens Creek** 30.03 229 P **P** 23 23 34.6 +0.2
JCZ **Jackson Bay** 30.27 179 P **P** 23 23 39.6 +3.2
TOO **Toolangi** 30.96 216 P P 23 23 47.3 +4.7
comp=Z,0.0nmcomp=Z,32nm,2.0s
TOO **Toolangi** 30.96 216 P **P** 23 23 42.2 -0.4
TOO **Toolangi** 30.96 216 P **P** 23 23 42.2 -0.4
TOO pmax pmax
comp=Z,144nm,1.9s
SMPI **Sarmi** 31.02 290 P **P** 23 23 40.4 -2.8
WKZ **Wanaka** 31.03 178 IAMs_20 IAMs_20 23 34 06.3
comp=Z,28µm,22.0s
ODZ **Otahua Downs** 31.32 176 P **P** 23 23 48.8 +3.3
MLZ **Mavora Lakes** 31.55 180 IAMs_20 IAMs_20 23 35 12.1
comp=Z,32µm,19.0s
RAR **Rarotonga** 31.78 108 LR LR 23 33 37.7
comp=Z,10µm,20.6s,baz=276,slow=31
RAR **Rarotonga** 31.78 108 P **P** 23 23 53.2 +3.3
BRAT **Ballarat** 31.85 218 P **P** 23 23 52.9 +2.6
AUMTC **Mt Clear Colle** 31.92 217 P **P** 23 23 53.5 +2.6
H11S2 **WAKE ISLAND Hy** 32.02 358 T T 23 57 21.9
baz=181,slow=76,SNR=50
H11S3 **WAKE ISLAND Hy** 32.02 358 T T 23 57 22.3
baz=181,slow=76,SNR=34
H11S1 **WAKE ISLAND Hy** 32.04 358 T T 23 57 23.3
baz=181,slow=76,SNR=40
WHZ **Wether Hill Ro** 32.07 180 IAmb IAmb 23 23 54.8
comp=Z,224nm,2.0s
WHZ IAMs_20 IAMs_20 23 35 28.0
comp=Z,23µm,19.0s
WB0 **Warramunga Arr** 32.50 255 IAmb IAmb 23 24 01.1
comp=Z,76nm,0.8s
WRAB **Tennant Creek** 32.56 254 P **P** 23 23 55.5 -1.3
WRAB **Tennant Creek** 32.56 254 IAMs_20 IAMs_20 23 36 12.4
comp=Z,38µm,19.0s
WRAB **Tennant Creek** 32.56 254 P **P** 23 23 58.1 +1.3
WRAB **Tennant Creek** 32.56 254 *ce*P **P** 23 23 58.3 +1.5
WRAB pmax pmax
comp=Z,180nm,2.5s
WRA **Warramunga Arr** 32.57 254 P **P** 23 23 55.3 -1.5
WRA **Warramunga Arr** 32.57 254 P **P** 23 23 54.9 -2.0
comp=Z,32nm,0.8s,baz=85,slow=9.0,SNR=75
WRA PcP **PcP** 23 26 42.6 -0.7
comp=Z,11nm,1.0s,baz=84,slow=2.5,SNR=5.6
WRA ScP **ScP** 23 30 29.0 +2.5
comp=Z,2.6nm,1.0s,baz=75,slow=3.4,SNR=9.4
WRA LR LR 23 36 32.2
comp=Z,40µm,18.4s,baz=82,slow=35
comp=Z,32nm,0.8s
WRA **Warramunga Arr** 32.57 254 *i* P **P** 23 23 55.7 -1.2
WRA pmax pmax
comp=Z,32nm,0.8s
ARPS **Mount Arapiles** 32.64 221 P P 23 24 02.0 +4.8
comp=Z,64nm,2.1s
HTT **Hallett** 32.76 228 P **P** 23 23 58.8 +0.3
comp=Z,69nm,1.6s
HTT **Hallett** 32.76 228 P **P** 23 24 00.2 +1.8
HTT **Hallett** 32.76 228 P **P** 23 23 58.7 +0.3
HTT **Hallett** 32.76 228 ⇑P **P** 23 23 58.1 -0.3
H11N1 **WAKE ISLAND Hy** 33.23 358 T T 23 58 58.1
baz=172,slow=76,SNR=41
H11N3 **WAKE ISLAND Hy** 33.23 358 T T 23 58 58.1
baz=172,slow=76,SNR=36
H11N2 **WAKE ISLAND Hy** 33.25 358 T T 23 58 58.1
baz=172,slow=76,SNR=27
AUMBR **Murray Bridge** 33.39 225 P **P** 23 24 06.0 +2.2
ASAR **Alice Springs** 33.51 248 P **P** 23 24 03.6 -1.5
ASAR **Alice Springs** 33.51 248 P **P** 23 24 03.0 -2.1
comp=Z,5.8nm,0.4s,baz=76,slow=9.3,SNR=74
ASAR PcP **PcP** 23 26 44.3 -1.6
comp=Z,7.6nm,0.9s,baz=80,slow=3.2,SNR=5.3
ASAR ScP **ScP** 23 30 32.7 +3.0
comp=Z,4.0nm,1.2s,baz=111,slow=2.8,SNR=5.4
ASAR LR LR 23 36 45.7
comp=Z,24µm,18.7s,baz=72,slow=35
comp=Z,5.8nm,0.4s
ASAR **Alice Springs** 33.51 248 P **P** 23 24 03.6 -1.5
WHYH **Whyalla** 33.56 230 P **P** 23 24 05.4 +0.1
MOO **Moorlands** 33.72 208 P P 23 24 11.8 +5.2
comp=Z,128nm,1.8s
BAKI **Biak** 33.72 289 P **P** 23 24 08.4 +1.4
comp=Z,6µmcomp=Z,318nm,1.9s
TAU **Tasmania Unive** 34.03 207 IAMs_20 IAMs_20 23 35 20.5
comp=Z,24µm,21.0s
KDU **Kakadu** 34.38 268 P **P** 23 24 11.6 -1.1
comp=Z,37nm,1.7s
BBOO **Buckleboo** 34.60 231 P **P** 23 24 14.2 -0.1
comp=Z,171nm,0.9s
BBOO **Buckleboo** 34.60 231 P **P** 23 24 13.2 -1.2
BBOO **Buckleboo** 34.60 231 P **P** 23 24 14.1 -0.3
GUMO **Guam** 35.37 319 IAMs_20 IAMs_20 23 36 39.6
comp=Z,28µm,22.0s
GUMO **Guam** 35.37 319 LR LR 23 38 14.2
comp=Z,16µm,20.7s,baz=130,slow=35
RKPI **Ransiki, Papua** 35.39 287 P **P** 23 24 21.8 +0.4
comp=Z,7µmcomp=Z,397nm,1.7s
AUCAS **Cummins Area S** 35.50 229 P **P** 23 24 24.4 +2.3
MTN **Manton Dam** 35.66 267 P **P** 23 24 23.2 -0.6
comp=Z,84nm,2.0s
MTN **Manton Dam** 35.66 267 P **P** 23 24 21.5 -2.2
DRS **Darwin Rock St** 35.93 268 P **P** 23 24 26.1 0.0
SAUI **Saumlaki** 36.26 275 IAMs_20 IAMs_20 23 38 47.5
comp=Z,26µm,18.0s
SAUI **Saumlaki** 36.26 275 P **P** 23 24 31.6 +2.8
FAKI **Fak Fak** 36.70 284 IAMs_20 IAMs_20 23 39 34.7
comp=Z,18µm,19.0s
FAKI **Fak Fak** 36.70 284 P **P** 23 24 34.0 +1.3
FAKI **Fak Fak** 36.70 284 P **P** 23 24 33.0 +0.3
comp=Z,4µmcomp=Z,182nm,2.1s
JOHN **Johnston Islan** 37.65 37 IAMs_20 IAMs_20 23 36 44.3
comp=Z,21µm,20.0s
KNRA **Kununurra** 37.76 262 P **P** 23 24 41.5 -0.1
comp=Z,137nm,1.0s
KNRA **Kununurra** 37.76 262 P **P** 23 24 40.8 -0.9
KNRA IAmb IAmb 23 24 45.7
comp=Z,111nm,0.9s
SWI **Sorong** 38.34 286 P **P** 23 24 45.8 -0.7
comp=Z,5µmcomp=Z,284nm,1.4s
SWI **Sorong** 38.34 286 P **P** 23 24 47.5 +1.0
BNDI **Bandanaira** 38.45 280 P **P** 23 24 49.0 +1.5
BNDI **Bandanaira** 38.45 280 P **P** 23 24 47.6 +0.1
WRKA **Warakurna** 38.79 247 P **P** 23 24 49.6 -0.7
comp=Z,68nm,2.2s
MSAI **Masohi** 39.72 281 P **P** 23 24 57.5 -0.6
comp=Z,7µmcomp=Z,106nm,1.0s
FORT **Forrest** 40.25 238 P **P** 23 25 01.5 -0.8
comp=Z,96nm,0.9s
FORT **Forrest** 40.25 238 P **P** 23 25 00.5 -1.8
AAI **Ambon** 40.32 281 P **P** 23 25 02.3 -0.8
comp=Z,3µmcomp=Z,165nm,1.6s
FITZ **Fitzroy Crossi** 40.70 258 LR LR 23 41 28.6
comp=Z,33µm,18.6s,baz=85,slow=35
PPT **Papeete** 41.17 101 LR LR 23 38 15.5
comp=Z,6µm,19.4s,baz=268,slow=31
NLAI **Namlea** 41.50 281 P **P** 23 25 12.5 -0.3
TNTI **Ternate** 42.55 287 P **P** 23 25 22.1 +0.7
comp=Z,7µmcomp=Z,45nm,0.4s
SOEI **Soe** 42.75 270 P **P** 23 25 25.1 +1.9
SOEI **Soe** 42.75 270 P **P** 23 25 22.4 -0.7
SOEI IAMs_20 IAMs_20 23 42 15.4
comp=Z,15µm,20.0s
SOEI **Soe** 42.75 270 P **P** 23 25 24.7 +1.5
SOEI **Soe** 42.75 270 P **P** 23 25 23.5 +0.3
comp=Z,5µmcomp=Z,4µmcomp=Z,116nm,0.9s
SOEI **Soe** 42.75 270 ⇑P **P** 23 25 26.3 +3.1
SANI **Sanana** 42.91 282 P **P** 23 25 22.0 -2.3
SANI **Sanana** 42.91 282 P **P** 23 25 23.9 -0.4
SANI **Sanana** 42.91 282 P **P** 23 25 23.9 -0.4
comp=Z,5µmcomp=Z,4µmcomp=Z,157nm,1.6s
SANI **Sanana** 42.91 282 ⇑P **P** 23 25 22.6 -1.8
BATI **Baumata** 43.26 270 LR LR 23 43 12.1
comp=Z,28µm,18.9s,baz=120,slow=36
BATI **Baumata** 43.26 270 P **P** 23 25 27.8 +0.6
comp=Z,5µmcomp=Z,4µmcomp=Z,249nm,1.2s
MMRI **Maumere** 44.92 271 P **P** 23 25 38.5 -2.0
MMRI **Maumere** 44.92 271 P **P** 23 25 42.0 +1.5
MMRI **Maumere** 44.92 271 P **P** 23 25 39.7 -0.8
comp=Z,5µmcomp=Z,272nm,1.4s
BBSI **Bau Bau** 45.26 276 P **P** 23 25 43.0 -0.2
comp=Z,7µmcomp=Z,278nm,1.9s
SGSI **Sangihe** 45.35 289 P **P** 23 25 45.8 +1.9
EDFI **Ende, Flores** 45.43 271 P **P** 23 25 42.7 -2.0
comp=Z,5µmcomp=Z,3µmcomp=Z,125nm,1.3s
KMBL **Kambalda** 45.53 239 P **P** 23 25 44.8 -0.4
comp=Z,107nm,1.3s
KMSI **Cibinong** 45.65 285 P **P** 23 25 46.7 +0.4
comp=Z,178nm,0.7s
PSAC2 **Pilbara Seismi** 46.15 253 P **P** 23 25 50.9 +0.7
comp=Z,230nm,2.0s
PSAB3 **Pilbara Seismi** 46.20 253 P **P** 23 25 51.4 +0.8
comp=Z,220nm,1.6s
PSA00 **Pilbara Seismi** 46.20 253 P **P** 23 25 50.4 -0.2
comp=Z,220nm,2.1s
PSA00 **Pilbara Seismi** 46.20 253 P **P** 23 25 49.7 -0.9
PSA00 **Pilbara Seismi** 46.20 253 P **P** 23 25 51.7 +1.1
BASI **Baing, Sumba** 46.26 269 P **P** 23 25 52.7 +1.6
LUWI **Luwuk** 46.28 282 P **P** 23 25 48.3 -2.9
LUWI **Luwuk** 46.28 282 P **P** 23 25 49.5 -1.8
LUWI **Luwuk** 46.28 282 P **P** 23 25 53.3 +2.1
LUWI **Luwuk** 46.28 282 P **P** 23 25 52.3 +1.1
comp=Z,5µmcomp=Z,4µmcomp=Z,231nm,1.1s
MBWA **Marble Bar** 46.30 254 P **P** 23 25 51.0 -0.4
comp=Z,270nm,1.8s
MBWA **Marble Bar** 46.30 254 P **P** 23 25 49.5 -1.8
MBWA **Marble Bar** 46.30 254 P **P** 23 25 51.3 0.0
WSI **Waingapu** 46.62 270 P **P** 23 25 54.0 +0.1
DAV **Davao City (W)** 46.71 294 LR LR 23 45 49.0
comp=Z,5µm,19.1s,baz=120,slow=36
BSSI **Bau Bau, Buton** 47.12 274 P **P** 23 25 59.0 +1.1
comp=Z,3µmcomp=Z,136nm,1.3s
APSI **Ampana** 47.39 282 P **P** 23 26 00.2 +0.3
comp=Z,3µmcomp=Z,172nm,1.5s
WBSI **Waikabubak, Su** 47.51 269 P **P** 23 26 01.4 +0.5
comp=Z,4µmcomp=Z,238nm,0.9s
MRSI **Marisa** 47.55 283 P **P** 23 26 00.2 -0.9
comp=Z,3µmcomp=Z,1µmcomp=Z,62nm,1.1s
MEEK **Meekatharra** 47.64 246 P **P** 23 26 03.3 +1.5
BKSI **Bulukumba** 47.67 275 P **P** 23 26 01.8 -0.3
comp=Z,2µmcomp=Z,87nm,1.8s
BNSI **Bone** 47.91 277 P **P** 23 26 03.2 -0.7
comp=Z,4µmcomp=Z,3µmcomp=Z,209nm,1.5s
KAPI **Kappang** 48.10 276 P **P** 23 26 04.4 -1.1
KAPI **Kappang** 48.10 276 P **P** 23 26 07.1 +1.6
KAPI **Kappang** 48.10 276 *i* P **P** 23 26 05.4 -0.1
KAPI pmax pmax
comp=Z,350nm,1.6s
KAPI **Kappang** 48.10 276 ⇑P **P** 23 26 04.4 -1.1
SPSI **Sidrap Palu** 48.34 277 P **P** 23 26 07.4 +0.1
comp=Z,2µmcomp=Z,64nm,1.3s
KIP **Kipapa** 48.44 44 IAMs_20 IAMs_20 23 40 39.2
comp=Z,13µm,21.0s
KIP **Kipapa** 48.44 44 *i* P **P** 23 26 07.3 -0.6
KIP pmax pmax
comp=Z,363nm,2.7s
TOLI2 **Tolitoli** 48.85 284 P **P** 23 26 09.6 -1.6
TOLI2 IAmb IAmb 23 26 13.4
comp=Z,76nm,1.1s
TOLI2 **Tolitoli** 48.85 284 P **P** 23 26 12.8 +1.6
KLBR **Kellerberrin** 49.04 240 P **P** 23 26 13.7 +1.2
POHA **Pohakuloa** 49.09 48 IAMs_20 IAMs_20 23 41 33.3
comp=Z,14µm,22.0s
HPAH **Hawaii Prepara** 49.14 48 P **P** 23 26 14.4 +1.0
KHLH **Kahului Airpor** 49.19 46 P **P** 23 26 14.0 +0.4
PLAI **Plampang** 49.22 270 P **P** 23 26 13.3 -0.8
PLAI **Plampang** 49.22 270 P **P** 23 26 13.3 -0.8
comp=Z,4µmcomp=Z,5µmcomp=Z,261nm,1.5s
JOKA **Jonika Flow** 49.27 49 P **P** 23 26 13.9 -0.4
AUALB **St Joseph's Co** 49.57 236 P **P** 23 26 18.1 +1.7
NWAO **Narrogin (SRO)** 49.70 238 P **P** 23 26 14.6 -2.9
NWAO **Narrogin (SRO)** 49.70 238 IAMs_20 IAMs_20 23 47 00.0
comp=Z,17µm,19.0s
NWAO **Narrogin (SRO)** 49.70 238 LR LR 23 47 10.2
comp=Z,17µm,18.3s,baz=76,slow=36
NWAO **Narrogin (SRO)** 49.70 238 P **P** 23 26 17.0 -0.5
NWAO **Narrogin (SRO)** 49.70 238 P **P** 23 26 14.6 -2.9
NWAO pmax pmax
comp=Z,316nm,1.3s
NWAO MLR MLR
comp=Z,17µm,19.0s
BLDU **Balidu** 49.78 241 P **P** 23 26 20.1 +2.0
TWSI **Taliwang, Sumb** 50.10 270 P **P** 23 26 19.9 -0.9
MORW **Morawa** 50.16 244 P **P** 23 26 19.2 -1.9
MORW IAmb IAmb 23 26 26.5
comp=Z,254nm,1.2s
MORW **Morawa** 50.16 244 P **P** 23 26 23.1 +2.0
MORW **Morawa** 50.16 244 ⇑P **P** 23 26 20.0 -1.1
MUN **Mundaring** 50.40 240 P **P** 23 26 24.6 +1.7
AUMAZ **Mazenod Senior** 50.55 240 P **P** 23 26 24.1 +0.1
GIRL **Giralia** 51.42 252 P **P** 23 26 31.1 +0.4
GIRL IAmb IAmb 23 26 38.2
comp=Z,195nm,1.2s
DNP **Denpasar** 51.74 270 P **P** 23 26 34.8 +1.7
SRBI **Singaraja** 51.85 270 P **P** 23 26 35.6 +1.7
comp=Z,4µmcomp=Z,4µmcomp=Z,217nm,1.9s
MYLDM **Lahad Datu** 52.39 288 IAMs_20 IAMs_20 23 45 29.7
comp=Z,9µm,18.0s
MYLDM **Lahad Datu** 52.39 288 P **P** 23 26 39.7 +1.7
MYLDM **Lahad Datu** 52.39 288 ⇑P **P** 23 26 41.5 +3.5
JAGI **Jajag, Banyuwa** 52.81 270 P **P** 23 26 40.9 -0.2
JAGI IAmb IAmb 23 26 44.3
comp=Z,291nm,1.4s
JAGI **Jajag, Banyuwa** 52.81 270 P **P** 23 26 42.5 +1.4
JAGI **Jajag, Banyuwa** 52.81 270 P **P** 23 26 41.8 +0.7
comp=Z,3µmcomp=Z,158nm,2.1s
ABJI **Asem Bagus** 52.85 271 P **P** 23 26 42.9 +1.5
comp=Z,4µmcomp=Z,175nm,1.4s
BBKI **Banjar Baru** 53.22 276 P **P** 23 26 45.7 +1.5
comp=Z,7µmcomp=Z,278nm,1.9s
KMMI **Kalianget** 53.26 271 P **P** 23 26 45.5 +1.1
comp=Z,3µmcomp=Z,98nm,1.8s
BLJI **Banyuglugur** 53.49 270 P **P** 23 26 47.9 +1.8
comp=Z,3µmcomp=Z,140nm,1.7s
JHJ **Hachijo jima 2** 53.70 331 LR LR 23 47 18.8
comp=Z,4µm,21.5s,baz=148,slow=33
MTKI **Muara Teweh, K** 53.84 279 P **P** 23 26 49.3 +0.6
comp=Z,89nm,1.2s
TGY **Tagaytay City** 54.00 299 LR LR 23 49 21.7
comp=Z,3µm,19.9s,baz=136,slow=36
TBJI **Tambak Boyo** 55.37 271 P **P** 23 27 01.2 +1.4
comp=Z,5µmcomp=Z,247nm,1.1s
NGJI **Ngawi** 55.63 270 P **P** 23 27 04.4 +2.7
comp=Z,38nm,1.1s
PCJI **Pacitan** 55.75 269 P **P** 23 27 03.3 +0.8
comp=Z,5µmcomp=Z,346nm,1.7s
UGM **Wanagama** 56.44 270 P **P** 23 27 09.6 +2.1
UGM **Wanagama** 56.44 270 P **P** 23 27 10.1 +2.6
comp=Z,200nm,2.4s
YOGI **Yogyakarta** 56.68 270 P **P** 23 27 12.5 +3.3
comp=Z,5µmcomp=Z,234nm,1.1s
SMRI **Semarang** 56.69 271 P **P** 23 27 08.3 -1.0
SMRI **Semarang** 56.69 271 P **P** 23 27 11.2 +1.9
SMRI **Semarang** 56.69 271 P **P** 23 27 10.9 +1.6
comp=Z,7µmcomp=Z,188nm,1.8s
INU **Inuyama** 56.84 330 IAmb IAmb 23 27 12.9
comp=Z,154nm,1.7s
INU **Inuyama** 56.84 330 P **P** 23 27 12.1 +2.2
JGF **Kuroka** 56.88 330 P **P** 23 27 10.9 +0.7

JGF	**Kuroka**	**56.88**	**330**	P	**P**	**23 27 11.8**	**+1.6**
JMN	**Monobe**	**57.18**	**326**	IAmb	IAmb	23 27 28.1	
	comp=Z,200nm,1.2s						
JMN	**Monobe**	**57.18**	**326**	P	**P**	**23 27 14.3**	**+1.9**
JMN	**Monobe**	**57.18**	**326**	⇑P	**P**	**23 27 14.3**	**+1.9**
JMM	**Marumori**	**57.22**	**335**	IAmb	IAmb	23 27 14.9	
	comp=Z,148nm,1.5s						
JMM	**Marumori**	**57.22**	**335**	P	**P**	**23 27 14.9**	**+2.4**
MJAR	**Matsushiro Arr**	**57.25**	**332**	P	**P**	**23 27 12.3**	**-0.5**
MJAR	**Matsushiro Arr**	**57.25**	**332**	P	**P**	**23 27 11.0**	**-1.7**
	comp=Z,18nm,1.0s,baz=161,slow=7.0,SNR=21						
	comp=Z,18nm,1.0s						
MJAR	**Matsushiro Arr**	**57.25**	**332**	P	**P**	**23 27 12.3**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,44nm,1.4s						
MAJO	**Matsushiro**	**57.25**	**332**	P	**P**	**23 27 12.9**	**+0.1**
MAJO	**Matsushiro**	**57.25**	**332**	P	**P**	**23 27 14.9**	**+2.1**
MAJO	**Matsushiro**	**57.25**	**332**	*i*P	**P**	**23 27 12.9**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,71nm,1.5s						
SBUM	**Sibu**	**57.38**	**282**	P	**P**	**23 27 13.7**	**-0.5**
SBUM				IAmb	IAmb	23 27 26.3	
	comp=Z,156nm,1.7s						
SBUM	**Sibu**	**57.38**	**282**	P	**P**	**23 27 16.1**	**+1.9**
KPJI	**Karang Pucung**	**58.10**	**270**	P	**P**	**23 27 19.1**	**-0.1**
	comp=Z,3µmcomp=Z,100nm,0.7s						
JNU	**Nakatsue**	**58.40**	**324**	LR	LR	23 48 53.2	
	comp=Z,3µm,21.4s,baz=126,slow=32						
JNU	**Nakatsue**	**58.40**	**324**	P	**P**	**23 27 21.8**	**+0.8**
JNU	**Nakatsue**	**58.40**	**324**	⇑P	**P**	**23 27 22.2**	**+1.2**
YULB	**Yu-li**	**58.55**	**309**	IAMs_20	IAMs_20	23 49 28.1	
	comp=Z,10µm,20.0s						
YULB	**Yu-li**	**58.55**	**309**	P	**P**	**23 27 24.1**	**+1.9**
NACB	**Ninganchiao**	**58.77**	**310**	P	**P**	**23 27 23.6**	**0.0**
NACB				IAmb	IAmb	23 27 26.6	
	comp=Z,188nm,1.5s						
NACB	**Ninganchiao**	**58.77**	**310**	P	**P**	**23 27 25.6**	**+2.0**
KSM	**Kuching**	**58.92**	**280**	P	**P**	**23 27 26.4**	**+1.5**
TPUB	**Ta-pu**	**59.01**	**308**	IAMs_20	IAMs_20	23 49 44.2	
	comp=Z,9µm,20.0s						
SSLB	**Suanglung**	**59.03**	**309**	IAMs_20	IAMs_20	23 48 23.9	
	comp=Z,8µm,20.0s						
YHNB	**Yeheng**	**59.21**	**310**	P	**P**	**23 27 27.2**	**+0.4**
YHNB				IAmb	IAmb	23 27 32.1	
	comp=Z,196nm,1.4s						
YHNB				IAMs_20	IAMs_20	23 49 25.8	
	comp=Z,11µm,20.0s						
YHNB	**Yeheng**	**59.21**	**310**	P	**P**	**23 27 28.8**	**+2.0**
TATO	**Taipei**	**59.31**	**310**	IAMs_20	IAMs_20	23 50 11.0	
	comp=Z,11µm,20.0s						
BBJI	**Bungbulang**	**59.32**	**269**	P	**P**	**23 27 29.7**	**+1.9**
LEM	**Lembang**	**59.48**	**270**	P	**P**	**23 27 28.3**	**-0.7**
	comp=Z,5µmcomp=Z,236nm,2.1s						
CNJI	**Cibinong**	**59.85**	**269**	P	**P**	**23 27 30.5**	**-0.9**
TPI	**Tanjungpandan**	**60.35**	**275**	P	**P**	**23 27 34.8**	**0.0**
	comp=Z,2µmcomp=Z,101nm,1.9s						
DBJI	**Dramaga**	**60.38**	**270**	P	**P**	**23 27 34.8**	**-0.2**
	comp=Z,319nm,2.2s						
SKJI	**Sukabumi**	**60.47**	**270**	P	**P**	**23 27 35.5**	**-0.2**
TNG	**Tangerang**	**60.56**	**271**	P	**P**	**23 27 36.1**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**60.85**	**342**	*e*P	**P**	**23 27 41.5**	**+3.9**
YUK				S	**S**	**23 35 51.0**	**-3.3**
YUK				SSS	SSS	23 42 30.8	
YUK				pmax	pmax		
	comp=N,309nm,1.0s						
YUK				pmax	pmax		
	comp=Z,509nm,1.0s						
SBJI	**Serang**	**61.07**	**271**	P	**P**	**23 27 39.9**	**+0.2**
	comp=Z,270nm,2.1s						
KUR	**Kuril'sk**	**61.38**	**344**	P	**P**	**23 27 41.7**	**+0.6**
KUR				*e*S	**S**	**23 36 03.8**	**+2.8**
KUR				*e*SSS	SSS	23 42 38.7	
KUR				pmax	pmax		
	comp=Z,2µm,6.9s						
KUR				MLR	MLR		
	comp=Z,3µm,15.0s						
QZH	**Quanzhou**	**61.46**	**309**	P	**P**	**23 27 40.1**	**-2.0**
QZH				S	**S**	**23 36 05.0**	**+2.2**
QZH				pmax	pmax		
	comp=Z,160nm,1.9s						
QZH				LR	LR		
	comp=Z,5µm,17.9s						
QZH				LR	LR		
	comp=Z,8µm,21.3s						
QZH				LR	LR		
	comp=Z,8µm,20.3s						
ASAJ	**Asahikawa**	**61.97**	**340**	LR	LR	23 49 44.1	
	comp=Z,6µm,20.9s,baz=168,slow=31						
BLSI	**Bandar Lampung**	**62.09**	**271**	P	**P**	**23 27 46.1**	**-0.5**
KLI	**Kotabumi**	**62.58**	**272**	P	**P**	**23 27 49.0**	**-0.9**
TJN	**Taejon**	**62.74**	**324**	P	**P**	**23 27 52.7**	**+2.2**
TJN	**Taejon**	**62.74**	**324**	*i*P	**P**	**23 27 50.9**	**+0.4**
KASI	**Kota Agung**	**62.78**	**271**	P	**P**	**23 27 50.6**	**-0.6**
	comp=Z,2µmcomp=Z,89nm,1.1s						
PMBI	**Palembang**	**63.10**	**274**	P	**P**	**23 27 56.1**	**+2.7**
SSE	**Sheshan**	**63.15**	**316**	P	**P**	**23 27 52.1**	**-1.2**
SSE				pP	**pP**	**23 27 54.7**	**-4.2**
SSE				S	**S**	**23 36 23.2**	**-0.6**
SSE				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,230nm,3.6s						
SSE				LR	LR		
	comp=Z,2µm,18.7s						
KSRS	**Korea Array**	**63.19**	**325**	P	**P**	**23 27 52.0**	**-1.5**
	comp=Z,17nm,1.1s,baz=148,slow=6.7,SNR=21						
	comp=Z,17nm,1.1s						
KSRS	**Korea Array**	**63.19**	**325**	P	**P**	**23 27 52.0**	**-1.5**
KSAR	**Wonju Array Be**	**63.21**	**325**	P	**P**	**23 27 54.5**	**+1.0**
KSAR	**Wonju Array Be**	**63.21**	**325**	P	**P**	**23 27 54.5**	**+1.0**
LWLI	**Liwa**	**63.32**	**271**	P	**P**	**23 27 54.5**	**-0.5**
	comp=Z,93nm,0.7s						
MDSI	**Maura Dua**	**63.32**	**272**	P	**P**	**23 27 53.7**	**-1.1**
	comp=Z,2µmcomp=Z,93nm,2.0s						
VNDA	**Vanda**	**63.88**	**181**	P	**P**	**23 27 56.5**	**-1.0**
VNDA	**Vanda**	**63.88**	**181**	P	**P**	**23 27 55.3**	**-2.2**
	comp=Z,4.5nm,0.8s,baz=358,slow=6.2,SNR=14						
VNDA				LR	LR	23 52 07.5	
	comp=Z,6µm,20.2s,baz=17,slow=33						
	comp=Z,4.5nm,0.8s						
VNDA	**Vanda**	**63.88**	**181**	P	**P**	**23 27 56.5**	**-1.0**
VNDA				pmax	pmax		
	comp=Z,32nm,1.2s						
DSRI	**Dabo**	**63.90**	**276**	P	**P**	**23 27 57.6**	**-1.0**
	comp=Z,2µmcomp=Z,104nm,1.9s						
INCN	**Inchon**	**63.94**	**324**	P	**P**	**23 27 59.3**	**+0.9**
INCN	**Inchon**	**63.94**	**324**	P	**P**	**23 28 00.8**	**+2.4**
INCN	**Inchon**	**63.94**	**324**	P	**P**	**23 27 59.3**	**+0.9**
INCN				pmax	pmax		
	comp=Z,241nm,1.6s						
INCN				MLR	MLR		
	comp=Z,6µm,20.0s						
DLV	**Lat**	**64.08**	**291**	P	**P**	**23 27 59.8**	**-0.2**
LHSI	**Lahat**	**64.11**	**272**	P	**P**	**23 28 00.8**	**+0.8**
	comp=Z,3µmcomp=Z,77nm,2.2s						
SBA	**Scott Base**	**64.15**	**180**	P	**P**	**23 27 59.6**	**+0.4**
SBA				IAmb	IAmb	23 28 03.2	
	comp=Z,95nm,1.4s						
SBA	**Scott Base**	**64.15**	**180**	P	**P**	**23 27 59.6**	**+0.4**
SBA				pmax	pmax		
	comp=Z,95nm,1.5s						
SBA				MLR	MLR		
	comp=Z,4µm,21.0s						
TPRI	**Tanjung Pinang**	**64.31**	**278**	P	**P**	**23 28 02.1**	**+0.7**
	comp=Z,60nm,1.7s						
YSS	**Yuzhno-Sakhali**	**64.43**	**341**	P	**P**	**23 28 01.4**	**0.0**
YSS				IAmb	IAmb	23 28 04.5	
	comp=Z,94nm,1.2s						
YSS	**Yuzhno-Sakhali**	**64.43**	**341**	P	**P**	**23 28 04.3**	**+2.9**
YSS	**Yuzhno-Sakhali**	**64.43**	**341**	*e*P	**P**	**23 28 03.5**	**+2.1**
YSS				*e*S	**S**	**23 36 40.2**	**+1.0**
YSS				*e*PS	**PnS**	**23 36 55.9**	**-2.1**
YSS				pmax	pmax		
	comp=Z,900nm,3.4s						
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				smax	smax		
	comp=N,2µm,10.9s						
MNAI	**Manna**	**64.54**	**272**	P	**P**	**23 28 05.0**	**+2.1**
	comp=N,5µmcomp=N,255nm,1.7s						
GZH	**Guangzhou**	**64.62**	**304**	P	**P**	**23 28 05.3**	**+2.1**
GZH				S	**S**	**23 36 48.2**	**+5.7**
GZH				pmax	pmax		
	comp=N,110nm,2.0s						
GZH				LR	LR		
	comp=N,3µm,14.0s						
GZH				LR	LR		
	comp=N,4µm,20.8s						
GZH				LR	LR		
	comp=N,6µm,19.8s						
CASY	**Casey**	**64.65**	**202**	P	**P**	**23 28 01.6**	**-1.0**
CASY	**Casey**	**64.65**	**202**	IAMs_20	IAMs_20	23 52 41.3	
	comp=Z,9µm,19.0s						
HJU	**Haeju**	**64.84**	**324**	P	**P**	**23 28 05.5**	**+1.2**
HJU				S	S	23 36 35.2	-9.4
HJU				AmB			
	comp=Z,833nm,2.8s						
HJU				AMS	AMS		
	comp=Z,3µm,12.8s						
SKR	**Severo-Kuril's**	**64.93**	**352**	*e*P	P	23 27 56.6	-8.0
SKR				*e*S	**S**	**23 36 50.3**	**+5.1**
SKR				pmax	pmax		
	comp=Z,1µm,8.6s						
SKR				MLR	MLR		
	comp=Z,4µm,16.0s						
TEY	**Ternei**	**64.95**	**336**	⇓*e*P	P	23 27 52.6	-12
TEY						23 36 44.8	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KSI	**Kapahiang**	**65.05**	**272**	P	**P**	**23 28 06.9**	**+0.6**
BTDF	**Bukit Timah Da**	**65.16**	**278**	P	**P**	**23 28 08.8**	**+1.9**
HHU	**Hamhung**	**65.18**	**327**	P	**P**	**23 28 08.2**	**+1.8**
HHU				S	**S**	**23 36 40.8**	**-7.9**
HHU				AmB			
	comp=Z,612nm,2.1s						
HHU				AMS	AMS		
	comp=Z,3µm,12.8s						
MYKOM	**Kota Tinggi**	**65.20**	**278**	P	**P**	**23 28 06.8**	**-0.4**
MYKOM				IAmb	IAmb	23 28 10.8	
	comp=Z,104nm,1.4s						
MYKOM	**Kota Tinggi**	**65.20**	**278**	P	**P**	**23 28 09.3**	**+2.2**
NJ2	**Nanjing**	**65.31**	**315**	⇑*i*P	**P**	**23 28 09.4**	**+2.0**
NJ2				sP	**sP**	**23 28 17.6**	**+2.5**
NJ2				S	**S**	**23 36 50.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,69nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,230nm,4.3s						
NJ2				LR	LR		
	comp=Z,4µm,18.5s						
NJ2				LR	LR		
	comp=Z,5µm,16.6s						
NJ2				LR	LR		
	comp=Z,7µm,21.8s						
MASI	**Maura Aman, Be**	**65.51**	**273**	P	**P**	**23 28 06.0**	**-3.2**
	comp=Z,3µmcomp=Z,70nm,1.9s						
PYAG	**Pyongyang**	**65.53**	**325**	P	**P**	**23 28 10.2**	**+1.5**
PYAG				S	**S**	**23 36 44.6**	**-8.3**
PYAG				AmB			
	comp=Z,1µm,1.9s						
QIZ	**Qiongzhong**	**65.69**	**298**	P	**P**	**23 28 10.4**	**+0.2**
QIZ				S	**S**	**23 36 59.7**	**+3.9**
QIZ				pmax	pmax		
	comp=Z,810nm,10.0s						
QIZ				LR	LR		
	comp=Z,3µm,18.6s						
QIZ				LR	LR		
	comp=Z,2µm,14.9s						
QIZ				LR	LR		
	comp=Z,4µm,28.2s						
USRK	**Ussuriysk Ar.**	**66.22**	**333**	P	**P**	**23 28 11.6**	**-1.5**
	comp=Z,50nm,1.2s,baz=134,slow=5.5,SNR=34						
	comp=Z,50nm,1.2s						
SHEM	**Shemya Is, Ala**	**66.39**	**4**	LR	LR	23 51 07.4	
	comp=Z,6µm,21.8s,baz=172,slow=30						
KRJI	**Kerinci**	**66.51**	**274**	P	**P**	**23 28 15.2**	**-0.6**
	comp=Z,87nm,0.5s						
KIWB	**Kanaga Island**	**66.59**	**10**	P	**P**	**23 28 16.0**	**+0.7**
KIWB				IAmb	IAmb	23 28 39.6	
	comp=Z,102nm,1.3s						
PET	**Petropavlovsk**	**66.93**	**354**	*e*P	**P**	**23 28 22.1**	**+4.7**
PET				*e*S	**S**	**23 37 14.1**	**+4.6**
PET				MLR	MLR		
	comp=Z,3µm,18.0s						
PETK	**Petropavlovsk-**	**67.11**	**353**	P	**P**	**23 28 19.3**	**+0.7**
PETK	**Petropavlovsk-**	**67.11**	**353**	P	**P**	**23 28 17.5**	**-1.1**
	comp=Z,26nm,1.1s,baz=119,slow=9.0,SNR=8.7						
	comp=Z,26nm,1.1s						
PETK	**Petropavlovsk-**	**67.11**	**353**	P	**P**	**23 28 19.3**	**+0.7**
CNSH	**ChangSha**	**67.47**	**309**	P	**P**	**23 28 23.3**	**+1.9**
CNSH				S	**S**	**23 37 16.6**	**-0.4**
CNSH				pmax	pmax		
	comp=Z,50nm,2.3s						
CNSH				LR	LR		
	comp=Z,4µm,17.9s						
CNSH				LR	LR		
	comp=Z,4µm,19.8s						
CNSH				LR	LR		
	comp=Z,7µm,20.7s						
BKNI	**Bangkinang**	**67.52**	**276**	P	**P**	**23 28 18.6**	**-3.5**
BKNI	**Bangkinang**	**67.52**	**276**	P	**P**	**23 28 21.0**	**-1.0**
BKNI	**Bangkinang**	**67.52**	**276**	P	**P**	**23 28 25.3**	**+3.3**
BKNI	**Bangkinang**	**67.52**	**276**	P	**P**	**23 28 22.4**	**+0.4**
	comp=Z,5µmcomp=Z,220nm,1.6s						
MDJ	**Mudanjiang**	**67.63**	**331**	IAmb	IAmb	23 28 31.3	
	comp=Z,180nm,1.7s						
MDJ	**Mudanjiang**	**67.63**	**331**	P	**P**	**23 28 24.0**	**+1.9**
MDJ				PP	**PP**	**23 30 53.9**	**+2.4**
MDJ				S	**S**	**23 37 20.6**	**+2.3**
MDJ				ScS	**SKiKP**	**23 38 17.6**	**-1.7**
MDJ				SS	**SS**	**23 41 38.9**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,85nm,2.3s						
MDJ				LR	LR		
	comp=Z,3µm,17.3s						
MDJ				LR	LR		
	comp=Z,3µm,19.3s						
MDJ				LR	LR		
	comp=Z,6µm,20.2s						
MDJ	**Mudanjiang**	**67.63**	**331**	P	**P**	**23 28 24.7**	**+2.6**
WHN	**Wuhan**	**67.65**	**311**	P	**P**	**23 28 22.4**	**0.0**
WHN				S	**S**	**23 37 20.9**	**+1.9**
WHN				pmax	pmax		
	comp=Z,2µm,4.4s						
WHN				LR	LR		
	comp=Z,15µm,17.5s						
WHN				LR	LR		
	comp=Z,13µm,20.8s						
WHN				LR	LR		
	comp=Z,24µm,19.7s						
PPSI	**Pulau Pagai**	**67.77**	**273**	P	**P**	**23 28 25.8**	**+2.2**
	comp=Z,4µmcomp=Z,209nm,1.6s						
PDSI	**Padang**	**67.77**	**275**	P	**P**	**23 28 22.6**	**-1.1**
	comp=Z,19nm,0.7s						
DL2	**Dalian**	**67.80**	**323**	P	**P**	**23 28 25.6**	**+2.4**
DL2				S	**S**	**23 37 21.1**	**+0.6**
DL2				pmax	pmax		
	comp=Z,83nm,1.3s						
DL2				pmax	pmax		
	comp=Z,750nm,6.7s						
DL2				LR	LR		
	comp=Z,3µm,18.0s						
DL2				LR	LR		
	comp=Z,4µm,17.6s						
DL2				LR	LR		
	comp=Z,6µm,19.8s						
PPI	**Padang Panjang**	**67.95**	**275**	P	**P**	**23 28 25.3**	**+0.6**
	comp=Z,2µmcomp=Z,60nm,2.1s						
UBPT	**Khong Chiam**	**68.03**	**293**	P	**P**	**23 28 27.4**	**+2.2**
GULI	**GuiLin**	**68.06**	**305**	P	**P**	**23 28 24.3**	**-0.9**
GULI				S	**S**	**23 37 25.2**	**+1.0**
GULI				pmax	pmax		
	comp=Z,78nm,2.2s						
GULI				LR	LR		
	comp=Z,2µm,17.9s						
GULI				LR	LR		
	comp=Z,3µm,17.3s						
GULI				LR	LR		
	comp=Z,4µm,21.7s						
SNY	**Shenyang**	**68.65**	**326**	⇓P	**P**	**23 28 30.6**	**+2.1**
SNY				S	**S**	**23 37 31.7**	**+1.2**
SNY				pmax	pmax		
	comp=Z,25nm,1.7s						
SNY				pmax	pmax		
	comp=Z,330nm,2.7s						
SNY				LR	LR		
	comp=Z,5µm,18.2s						
SNY				LR	LR		
	comp=Z,3µm,21.8s						
SNY				LR	LR		
	comp=Z,4µm,26.9s						
IPM	**Ipoh**	**68.65**	**280**	P	**P**	**23 28 31.3**	**+2.1**
IPM	**Ipoh**	**68.65**	**280**	⇑P	**P**	**23 28 27.2**	**-2.0**
TIA	**Tai'an**	**68.92**	**318**	P	**P**	**23 28 31.5**	**+1.1**
TIA				S	**S**	**23 37 35.4**	**+1.3**
TIA				SKS	**SKSac**	**23 38 28.3**	**-1.0**
TIA				SS	**SS**	**23 41 56.8**	**-3.3**
TIA				pmax	pmax		
	comp=Z,43nm,1.5s						
TIA				pmax	pmax		
	comp=Z,830nm,9.6s						
TIA				LR	LR		
	comp=Z,6µm,17.8s						
TIA				LR	LR		
	comp=Z,8µm,23.1s						
TIA				LR	LR		
	comp=Z,15µm,24.9s						
COCO	**West Island**	**68.93**	**262**	IAMs_20	IAMs_20	23 54 57.7	
	comp=Z,7µm,21.0s						
SISI	**Saibi**	**69.00**	**274**	P	**P**	**23 28 31.3**	**0.0**
	comp=Z,2µmcomp=Z,84nm,2.2s						
CN2	**Changchun**	**69.04**	**329**	*e*P	**P**	**23 28 30.5**	**-0.4**
CN2				PP	**PP**	**23 31 05.2**	**+1.4**
CN2				*e*S	**S**	**23 37 36.8**	**+1.6**
CN2				SS	**SS**	**23 41 54.4**	**-7.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=Z,4µm,22.0s						
CN2				LR	LR		
	comp=Z,3µm,22.0s						
CN2				LR	LR		
	comp=Z,4µm,22.6s						
MNSI	**Mandailing Nat**	**69.05**	**276**	P	**P**	**23 28 31.7**	**+0.1**
	comp=Z,3µmcomp=Z,102nm,1.9s						
KULM	**Kulim**	**69.24**	**281**	IAmb	IAmb	23 28 36.8	
	comp=Z,226nm,1.7s						
KULM	**Kulim**	**69.24**	**281**	P	**P**	**23 28 34.7**	**+1.9**
NIKH	**Nikolski High**	**69.39**	**15**	IAMs_20	IAMs_20	23 53 57.3	
	comp=Z,8µm,19.0s						
NIKH	**Nikolski High**	**69.39**	**15**	P	**P**	**23 28 34.0**	**+1.1**
	baz=204						
BNX	**BinXian**	**69.50**	**331**	⇓P	**P**	**23 28 32.3**	**-1.4**
BNX				pP	**sP**	**23 28 43.5**	**+2.2**
BNX				PcP	**PcP**	**23 28 56.2**	**-0.6**
BNX				PP	**PP**	**23 31 06.6**	**-1.0**
BNX				S	**S**	**23 37 38.0**	**-2.4**
BNX				pmax	pmax		
	comp=Z,75nm,2.0s						
BNX				pmax	pmax		
	comp=Z,840nm,2.6s						
BNX				LR	LR		
	comp=Z,3µm,20.9s						
BNX				LR	LR		
	comp=Z,2µm,19.1s						
BNX				LR	LR		
	comp=Z,5µm,25.2s						
GRNR	**Gornyy**	**69.82**	**339**	⇑*i*P	**P**	**23 28 36.0**	**+0.4**
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PBSI	**Pulau Batu**	**70.09**	**275**	P	**P**	**23 28 38.1**	**0.0**
	comp=Z,163nm,2.0s						
RPSI	**Rantau Prapat**	**70.18**	**278**	IAmb	IAmb	23 28 41.9	
	comp=Z,104nm,1.2s						
PSI	**Prapat**	**70.21**	**278**	LR	LR	00 01 15.8	
	comp=Z,5µm,19.9s,baz=122,slow=37						
PSI	**Prapat**	**70.21**	**278**	P	**P**	**23 28 40.7**	**+1.8**
UNV	**Unalaska Valle**	**70.79**	**16**	IAMs_20	IAMs_20	23 52 46.2	
	comp=Z,9µm,21.0s						
UNV	**Unalaska Valle**	**70.79**	**16**	P	**P**	**23 28 43.1**	**+1.8**
	baz=206						
ENH	**Enshi**	**71.12**	**309**	P	**P**	**23 28 46.3**	**+2.3**
GSI	**Gunungsitoli**	**71.12**	**276**	P	**P**	**23 28 41.9**	**-2.5**
GSI				IAmb	IAmb	23 28 49.7	
	comp=Z,89nm,1.0s						
GSI				IAMs_20	IAMs_20	00 00 43.5	
	comp=Z,7µm,22.0s						
GSI	**Gunungsitoli**	**71.12**	**276**	P	**P**	**23 28 46.3**	**+2.0**
GSI	**Gunungsitoli**	**71.12**	**276**	P	**P**	**23 28 43.6**	**-0.7**
	comp=Z,129nm,2.0s						
LYN	**LuoYang**	**71.13**	**314**	P	**P**	**23 28 43.2**	**-0.7**
LYN				pP	sP	23 28 54.3	+2.7
LYN				S	**S**	**23 37 59.6**	**-0.4**
LYN				pmax	pmax		
	comp=Z,110nm,1.4s						
LYN				pmax	pmax		
	comp=Z,870nm,3.8s						
LYN				LR	LR		
	comp=Z,11µm,17.5s						
LYN				LR	LR		
	comp=Z,9µm,23.9s						
LYN				LR	LR		
	comp=Z,18µm,22.5s						
HNS	**HongShan**	**71.19**	**318**	⇓P	**P**	**23 28 43.7**	**-0.5**
HNS				S	**S**	**23 38 01.8**	**+1.3**
HNS				pmax	pmax		
	comp=Z,80nm,1.7s						
HNS				LR	LR		
	comp=Z,4µm,23.0s						
HNS				LR	LR		
	comp=Z,7µm,22.4s						
HNS				LR	LR		
	comp=Z,12µm,23.1s						
KCSI	**Kotacane, Aceh**	**71.51**	**278**	P	**P**	**23 28 44.9**	**-1.8**
GYA	**Guiyang**	**71.56**	**304**	⇓P	**P**	**23 28 49.3**	**+2.4**
GYA				S	**S**	**23 38 05.0**	**-0.6**
GYA				pmax	pmax		
	comp=Z,48nm,2.0s						
GYA				pmax	pmax		
	comp=Z,430nm,3.1s						
GYA				LR	LR		
	comp=Z,2µm,20.6s						
GYA				LR	LR		
	comp=Z,2µm,18.1s						
GYA				LR	LR		
	comp=Z,4µm,19.4s						
SLVN	**Son La**	**71.72**	**298**	P	**P**	**23 28 49.9**	**+2.0**
BJT	**Baijiatuau**	**71.79**	**321**	P	**P**	**23 28 50.2**	**+2.4**
BJI	**Beijing**	**71.80**	**321**	P	**P**	**23 28 47.2**	**-0.6**
BJI				PcP	**PcP**	**23 29 07.3**	**+0.6**
BJI				S	**S**	**23 38 07.2**	**-0.3**
BJI				SS	**SS**	**23 42 43.6**	**-0.5**
BJI				pmax	pmax		
	comp=Z,20nm,1.5s						
BJI				pmax	pmax		
	comp=Z,370nm,4.0s						
BJI				LR	LR		
	comp=Z,3µm,19.2s						
BJI				LR	LR		
	comp=Z,1µm,25.2s						
BJI				LR	LR		
	comp=Z,5µm,26.3s						
FALS	**False Pass**	**72.53**	**17**	P	**P**	**23 28 53.9**	**+2.0**
	baz=209						
P08K	**Saint George I**	**72.56**	**13**	IAMs_20	IAMs_20	23 53 55.1	
	comp=Z,8µm,21.0s						
P08K	**Saint George I**	**72.56**	**13**	P	**P**	**23 28 53.2**	**+1.2**
	baz=203						
SNSI	**Sinabang, Aceh**	**72.61**	**277**	P	**P**	**23 28 54.5**	**+1.2**
	comp=Z,90nm,1.9s						
LHMI	**Lhok Sumawe**	**72.76**	**280**	P	**P**	**23 28 54.7**	**+0.5**
	comp=Z,3µmcomp=Z,48nm,1.3s						
TIY	**Taiyuan**	**72.86**	**317**	P	**P**	**23 28 56.6**	**+2.2**
TIY				S	**S**	**23 38 22.1**	**+2.1**
TIY				pmax	pmax		
	comp=Z,71nm,1.3s						
TIY				pmax	pmax		
	comp=Z,530nm,4.7s						
TIY				LR	LR		
	comp=Z,4µm,19.1s						
TIY				LR	LR		
	comp=Z,4µm,20.8s						
TIY				LR	LR		
	comp=Z,8µm,24.7s						
HEH	**HeiHe**	**72.86**	**334**	*e*P	**P**	**23 28 55.0**	**+1.0**
HEH				sP	**pP**	**23 28 59.5**	**-0.2**
HEH				PP	**PP**	**23 31 40.3**	**+3.8**
HEH				S	**S**	**23 38 18.0**	**-1.3**
HEH				SS	**SS**	**23 42 52.0**	**-8.1**
HEH				pmax	pmax		
	comp=Z,53nm,2.4s						
HEH				pmax	pmax		
	comp=

HEH LR LR
comp=Z,5µm,17.0s
HEH LR LR
comp=Z,6µm,20.1s
SPIA Saint Paul Isl 72.94 12 P P 23 28 55.5 +1.2
baz=202
MLSI Meulaboh, Aceh 73.02 279 P P 23 28 56.0 +0.3
comp=Z,3µmcomp=Z,153nm,0.8s
XAN Xi'an 73.38 312 ⇑P P **23 28 59.3 +1.8**
XAN S **SKiKP 23 38 29.6 +1.4**
XAN pmax pmax
comp=Z,81nm,1.8s
XAN pmax pmax
comp=Z,1µm,8.9s
XAN LR LR
comp=Z,4µm,21.5s
XAN LR LR
comp=Z,5µm,17.8s
XAN LR LR
comp=Z,9µm,20.6s
S12K Black Hills 73.65 17 IAMs_20 IAMs_20 23 54 00.0
comp=Z,10µm,22.0s
S12K Black Hills 73.65 17 P P 23 29 00.3 +1.7
baz=210
CHNA Chernabura Isl 73.66 19 P P 23 28 59.9 +1.4
baz=213
SDPT Sand Point 73.82 18 P P 23 29 01.2 +1.8
baz=212
XLT XiLinHaoTe 74.18 324 *e*P **P 23 29 03.8 +1.8**
XLT pP sP 23 29 12.9 +3.2
XLT S **S 23 38 34.8 +0.1**
XLT pmax pmax
comp=Z,66nm,2.0s
XLT pmax pmax
comp=Z,470nm,3.7s
XLT LR LR
comp=Z,3µm,15.0s
XLT LR LR
comp=Z,3µm,20.0s
KMI Kunming 74.21 301 P P 23 29 02.9 +0.2
KMI S **S 23 38 38.2 +2.2**
KMI pmax pmax
comp=Z,96nm,1.4s
KMI pmax pmax
comp=Z,670nm,4.3s
KMI LR LR
comp=Z,3µm,18.5s
KMI LR LR
comp=Z,2µm,21.9s
KMI LR LR
comp=Z,5µm,19.4s
MA2 Magadan 74.33 351 LR LR 23 58 47.3
comp=Z,3µm,20.2s,baz=176,slow=33
S14K Fog Glacier 74.89 18 P P 23 29 07.4 +1.6
baz=213
CMAR Chiang Mai Arr 75.00 294 P P 23 29 04.7 -2.5
CMAR Chiang Mai Arr 75.00 294 P P 23 29 06.2 -1.1
comp=Z,7.7nm,0.9s,baz=120,slow=4.1,SNR=24
CMAR LR LR 00 00 37.3
comp=Z,1µm,21.9s,baz=110,slow=34
comp=Z,7.7nm,0.9s
CMAR Chiang Mai Arr 75.00 294 *i* P **P 23 29 07.8 +0.6**
CMAR pmax pmax
comp=Z,16nm,0.9s
CHTO Chiang Mai 75.12 294 P P 23 29 07.0 -0.9
CHTO IAmb IAmb 23 29 12.1
comp=Z,129nm,1.4s
CHTO Chiang Mai 75.12 294 P P 23 29 09.9 +2.0
CHTO Chiang Mai 75.12 294 P P 23 29 07.0 -0.9
CHTO pmax pmax
comp=Z,129nm,1.5s
CHTO MLR MLR
comp=Z,2µm,22.0s
HHC Hu-ho-hao-te 75.14 319 ⇑*i*P **P 23 29 09.4 +1.7**
HHC pP pP 23 29 14.3 +0.9
HHC sP sP 23 29 18.6 +3.2
HHC S **S 23 38 46.6 +1.0**
HHC sS sS 23 38 55.0 -0.1
HHC pmax pmax
comp=Z,50nm,1.4s
HHC pmax pmax
comp=Z,410nm,4.7s
HHC LR LR
comp=Z,6µm,20.2s
HHC LR LR
comp=Z,6µm,21.9s
HHC LR LR
comp=Z,14µm,21.9s
ZEA Zeya 75.57 337 *e*P P 23 29 16.2 +6.5
ZEA *e*S **S 23 38 57.6 +8.1**
ZEA pmax pmax
comp=E,30nm,1.2s
ZEA pmax pmax
comp=N,20nm,1.5s
ZEA pmax pmax
comp=Z,30nm,2.4s
ZEA pmax pmax
comp=Z,300nm,4.9s
ZEA smax smax
comp=N,2µm,11.8s
PZH PanZhiHua 75.58 302 ⇑P **P 23 29 12.0 +1.5**
PZH S **S 23 38 49.2 -1.9**
PZH sS **sS 23 39 00.2 -0.3**
PZH ScS **SKSac 23 39 20.2 0.0**
PZH SS **SS 23 43 40.7 -1.9**
PZH pmax pmax
comp=N,40nm,3.0s
PZH pmax pmax
comp=N,650nm,7.3s
PZH LR LR
comp=N,2µm,20.6s
PZH LR LR
comp=N,3µm,19.4s
PZH LR LR
comp=N,3µm,18.8s
HIA Hailar 75.67 330 P P 23 29 12.5 +2.1
CHIR Chirikof Islan 75.77 20 P P 23 29 11.7 +1.0
baz=217
CD2 Chengdu 75.80 307 P P 23 29 13.5 +1.9
CD2 S **S 23 38 51.8 -1.3**
CD2 pmax pmax
comp=N,60nm,0.9s
CD2 pmax pmax
comp=N,730nm,5.0s
CD2 LR LR
comp=N,5µm,17.3s
CD2 LR LR
comp=N,6µm,17.6s
HILR Hailar Array B 75.85 330 P P 23 29 10.1 -1.4
comp=N,1.7nm,0.4s,baz=134,slow=11,SNR=6.1
HILR LR LR 23 58 43.8
comp=N,1µm,21.8s,baz=95,slow=33
comp=N,1.7nm,0.4s
BTO Baotou 76.00 318 *e*P **P 23 29 15.8 +3.2**
BTO PP **PP 23 32 09.1 +5.6**
BTO S **S 23 39 00.5 +5.4**
BTO pmax pmax
comp=N,95nm,1.6s
BTO pmax pmax
comp=N,2µm,9.3s
BTO LR LR
comp=N,16µm,19.4s
BTO LR LR
comp=N,13µm,21.6s
BTO LR LR
comp=N,22µm,24.8s
QSPA South Pole Qui 76.31 180 P P 23 29 13.8 -0.2
QSPA South Pole Qui 76.31 180 P P 23 29 14.0 0.0
comp=N,22nm,1.0s,baz=10.0,slow=1.8,SNR=12
QSPA LR LR 23 58 01.3
comp=N,5µm,21.9s,baz=33,slow=32
comp=N,22nm,1.0s
R16K Pilot Point 76.56 18 P P 23 29 16.8 +1.6
baz=215
M11K Mekoryuk 76.74 13 IAMs_20 IAMs_20 23 56 33.6
comp=Z,6µm,21.0s
M11K Mekoryuk 76.74 13 P P 23 29 17.5 +1.3
baz=206
SII Sitkinak Islan 76.84 21 P P 23 29 18.1 +1.2
baz=218
O14K Tigyukauivet M 76.93 16 IAMs_20 IAMs_20 23 57 48.8
comp=Z,8µm,20.0s
O14K Tigyukauivet M 76.93 16 P P 23 29 19.0 +1.7
baz=211
R17L Mt. Peulik Vol 76.99 19 P P 23 29 19.3 +1.6
baz=216
O15K Ungalikthiuk R 77.25 16 IAMs_20 IAMs_20 23 56 57.3
comp=Z,8µm,21.0s
O15K Ungalikthiuk R 77.25 16 P P 23 29 21.1 +2.0
baz=212
SEY Seymchan 77.34 353 LR LR 23 59 13.2
comp=Z,3µm,19.7s,baz=170,slow=32
SEY Seymchan 77.34 353 *e*P **P 23 29 19.3 -0.2**
SEY pmax pmax
comp=Z,59nm,1.4s
N14K Kuskokwak Cree 77.40 15 IAMs_20 IAMs_20 23 57 46.2
comp=Z,8µm,20.0s
N14K Kuskokwak Cree 77.40 15 P P 23 29 21.5 +1.6
baz=210
M13K Dall Lake 77.42 14 IAMs_20 IAMs_20 23 59 47.6
comp=Z,7µm,20.0s
M13K Dall Lake 77.42 14 P P 23 29 21.8 +1.9
baz=209
R18K Karluk 77.55 20 P P 23 29 22.3 +1.5
baz=218
RPN Rapa Nui 77.63 115 LR LR 23 55 44.3
comp=Z,5µm,20.2s,baz=266,slow=30
P16K Nushagak River 77.65 17 P P 23 29 22.3 +1.0
baz=214
Q17K Contact Creek 77.65 19 P P 23 29 22.3 +0.8
baz=216
OHAK Old Harbor 77.67 20 P P 23 29 22.5 +1.1
baz=219
TNCH TengChong 77.70 300 P P 23 29 24.7 +2.0
TNCH PP **PP 23 32 19.4 +1.2**
TNCH S **S 23 39 15.0 +0.5**
TNCH pmax pmax
comp=Z,96nm,2.2s
TNCH pmax pmax
comp=Z,680nm,4.7s
TNCH LR LR
comp=Z,2µm,20.1s
TNCH LR LR
comp=Z,1µm,17.6s
TNCH LR LR
comp=Z,5µm,24.0s
Q16K King Salmon 77.75 18 P P 23 29 22.8 +0.9
baz=215
LZH Lanzhou 78.02 312 *e*P **P 23 29 25.5 +1.4**
LZH sP PcP 23 29 35.9 +2.1
LZH S **S 23 39 09.3 -8.1**
LZH pmax pmax
comp=Z,85nm,1.6s
LZH pmax pmax
comp=Z,650nm,4.3s
LZH LR LR
comp=Z,3µm,16.5s
LZH LR LR
comp=Z,6µm,17.1s
LZH LR LR
comp=Z,9µm,16.5s
N15K Kwethluk River 78.03 16 IAMs_20 IAMs_20 23 59 22.7
comp=Z,8µm,20.0s
N15K Kwethluk River 78.03 16 P P 23 29 25.0 +1.5
baz=212
M14K Bethel 78.05 15 P P 23 29 22.3 -1.2
M14K IAmb IAmb 23 29 25.7
comp=Z,161nm,1.5s
M14K IAMs_20 IAMs_20 23 59 58.3
comp=Z,8µm,19.0s
M14K Bethel 78.05 15 P P 23 29 24.8 +1.3
baz=210
LZDM Lanzhou Array 78.06 312 P P 23 29 23.9 -0.7
comp=Z,23nm,1.0s,baz=101,slow=7.7,SNR=18
LZDM LR LR 00 02 04.4
comp=Z,5µm,20.4s,baz=95,slow=34
comp=Z,23nm,1.0s
O16K Kokwok River B 78.09 17 P P 23 29 24.0 +0.3
baz=214
Q18K Katmai Hardscr 78.24 19 P P 23 29 25.1 +0.3
baz=217
M15K Kasigluk River 78.32 15 P P 23 29 26.6 +1.6
baz=211
KDAK Kodiak Island 78.34 20 LR LR 23 58 14.0
comp=Z,14µm,20.4s,baz=208,slow=31
KDAK Kodiak Island 78.34 20 P P 23 29 26.7 +1.5
baz=219
L14K Kuka Creek 78.39 14 IAmb IAmb 23 29 31.2
comp=Z,196nm,1.9s
L14K IAMs_20 IAMs_20 00 00 28.3
comp=Z,7µm,20.0s
L14K Kuka Creek 78.39 14 P P 23 29 27.1 +1.7
baz=209
K13K Kusilvak Mount 78.47 13 IAmb IAmb 23 29 31.8
comp=Z,108nm,1.6s
K13K Kusilvak Mount 78.47 13 P P 23 29 27.1 +1.3
baz=207
O17K Koliganek Bris 78.52 17 P P 23 29 27.5 +1.3
baz=215
N16K Nishlik Lake 78.64 16 P P 23 29 28.9 +2.0
baz=213
P18K Big Mountain, 78.77 18 P P 23 29 28.7 +1.1
baz=217
GAMB Gambell 78.85 9 IAMs_20 IAMs_20 00 02 11.3
comp=Z,6µm,20.0s
GAMB Gambell 78.85 9 P P 23 29 28.9 +1.1
baz=200
L15K Ungalak Mounta 78.97 14 P P 23 29 29.8 +1.2
baz=210
M16K Timber Creek 79.05 16 IAMs_20 IAMs_20 00 00 05.7
comp=Z,8µm,19.0s
M16K Timber Creek 79.05 16 P P 23 29 30.8 +1.7
baz=213
Q20K Shuyak Island 79.05 20 P P 23 29 30.8 +1.7
baz=219
SYI Shuyak Island 79.05 20 IAMs_20 IAMs_20 23 58 52.9
comp=Z,9µm,20.0s
N17K Nushagak Hills 79.12 17 P P 23 29 31.2 +1.7
baz=215
O18K Koktuh Hills 79.14 18 P P 23 29 30.6 +1.0
baz=216
J14K Nanvaranak Lak 79.43 13 P P 23 29 33.1 +2.0
baz=208
K15K Wolf Creek Mou 79.49 14 IAMs_20 IAMs_20 00 01 12.4
comp=Z,9µm,20.0s
K15K Wolf Creek Mou 79.49 14 P P 23 29 31.7 +0.3
baz=210
L16K Owhat River 79.50 15 IAMs_20 IAMs_20 23 59 50.5
comp=Z,6µm,20.0s
L16K Owhat River 79.50 15 P P 23 29 32.8 +1.3
baz=212
P19K Oil Pt 79.59 19 P P 23 29 33.2 +1.2
baz=218
N18K Kilae Creek 79.61 17 P P 23 29 33.4 +1.2
baz=216
O19K Port Alsworth 79.69 18 P P 23 29 32.9 +0.4
O19K IAmb IAmb 23 29 37.2
comp=Z,298nm,1.9s
O19K IAMs_20 IAMs_20 23 57 11.6
comp=Z,11µm,22.0s
O19K Port Alsworth 79.69 18 P P 23 29 33.8 +1.3
baz=217
M17K Holitna River 79.77 16 P P 23 29 33.5 +0.5
M17K IAMs_20 IAMs_20 23 57 54.9
comp=Z,7µm,22.0s
M17K Holitna River 79.77 16 P P 23 29 34.9 +1.9
baz=214
HOM Homer 80.11 20 P P 23 29 36.4 +1.6
baz=220
O20K Slope Mountain 80.12 19 P P 23 29 35.9 +0.9
baz=219
N19K Bonanza Creek 80.13 18 P P 23 29 36.0 +1.0
baz=217
L17K Donlin 80.16 15 P P 23 29 37.1 +2.0
baz=213
M18K Stony River 80.29 17 P P 23 29 37.8 +2.0
baz=216
CIT Chita 80.46 329 *e*P **P 23 29 38.8 +1.8**
CIT *e* 23 29 45.4
CIT *e* 23 34 35.4
CIT *e* 23 39 40.2
CIT pmax pmax
comp=Z,314nm,2.1s
BRSE Bradley Lake S 80.47 20 P P 23 29 38.5 +1.7
baz=221
J16K Anvik River 80.56 14 IAMs_20 IAMs_20 00 02 04.7
comp=Z,8µm,20.0s
J16K Anvik River 80.56 14 P P 23 29 39.2 +1.9
baz=211
K17K Iditarod 80.64 15 IAMs_20 IAMs_20 00 01 25.8
comp=Z,7µm,20.0s
K17K Iditarod 80.64 15 P P 23 29 39.6 +1.9
baz=213
L18K Granite Mounta 80.65 16 IAMs_20 IAMs_20 23 58 23.1
comp=Z,8µm,21.0s
L18K Granite Mounta 80.65 16 P P 23 29 39.5 +1.8
baz=215
ANM Nome 80.68 11 IAMs_20 IAMs_20 23 58 46.6
comp=Z,5µm,21.0s
ANM Nome 80.68 11 P P 23 29 39.6 +1.9
baz=206
LKP Lekhapani 80.77 301 *e*P **P 23 29 38.5 -0.6**
J17K VABM Dome 81.02 14 IAmb IAmb 23 29 42.4
comp=Z,116nm,1.6s
J17K VABM Dome 81.02 14 P P 23 29 41.2 +1.6
baz=212
M19K Big River Lodg 81.03 17 P P 23 29 41.5 +1.7
baz=217
I17K Unalakleet 81.06 14 IAMs_20 IAMs_20 23 59 11.8
comp=Z,7µm,21.0s
I17K Unalakleet 81.06 14 P P 23 29 42.0 +2.2
baz=211
CAPN Captain Cook N 81.12 19 P P 23 29 41.7 +1.5
baz=220
N20K Mount Spurr 81.12 18 P P 23 29 41.2 +0.8
baz=219
SPCR Spurr Chakacha 81.12 18 P P 23 29 40.9 +0.6
baz=219
L19K White Mountain 81.12 17 IAmb IAmb 23 29 43.9
comp=Z,203nm,1.8s
L19K White Mountain 81.12 17 P P 23 29 41.8 +1.5
baz=217
TNA Tin City 81.12 10 P P 23 29 41.8 +1.7
baz=204
SEW Seward 81.17 20 IAMs_20 IAMs_20 00 02 39.9
comp=Z,5µm,19.0s
SEW Seward 81.17 20 P P 23 29 41.7 +1.3
baz=222
YAK Yakutsk 81.21 343 P P 23 29 40.5 -0.2
YAK IAmb IAmb 23 29 43.4
comp=Z,100nm,1.1s
YAK Yakutsk 81.21 343 LR LR 00 07 43.8
comp=Z,1µm,18.0s,baz=139,slow=37
YAK Yakutsk 81.21 343 *e*P **P 23 29 41.8 +1.1**
YAK *e* 23 29 48.5
YAK *e* 23 32 45.0
YAK *e*PPP PPP 23 34 36.8
YAK *e*S **S 23 39 51.7 +2.0**
YAK *e*SS **SS 23 45 07.6 +1.9**
YAK pmax pmax
comp=Z,85nm,1.3s
YAK pmax pmax
comp=E,25nm,1.4s
YAK pmax pmax
comp=N,19nm,1.2s
YAK pmax pmax
comp=Z,384nm,5.3s
YAK pmax pmax
comp=E,165nm,2.9s
YAK pmax pmax
comp=N,238nm,5.8s
YAK smax smax
comp=E,467nm,3.3s
YAK smax smax
comp=N,316nm,3.2s
SLKM Skilak Lake 81.22 20 P P 23 29 41.2 +0.4
SLKM IAmb IAmb 23 29 46.1
comp=Z,151nm,1.4s
G15K Niukluk 81.32 12 P P 23 29 42.8 +1.6
baz=208
F14K Arctic Creek 81.32 11 P P 23 29 42.9 +1.7
baz=205
O22K Cooper Landing 81.36 20 IAMs_20 IAMs_20 00 00 27.0
comp=Z,8µm,20.0s
O22K Cooper Landing 81.36 20 P P 23 29 42.9 +1.4
baz=222
H16K Elim 81.38 13 P P 23 29 43.1 +1.6
baz=209
M20K Styx River 81.38 18 P P 23 29 42.6 +0.9
baz=218
IMP Imphal 81.53 298 *e*P **P 23 29 41.1 -2.2**
IMP IAmb IAmb 23 29 45.6
comp=Z,85nm,1.3s
BILL Bilibino 81.54 359 P P 23 29 42.5 +0.2
BILL IAmb IAmb 23 29 53.2
comp=Z,105nm,1.4s
BILL Bilibino 81.54 359*ce*P **P 23 29 41.2 -1.1**
BILL pmax pmax
comp=Z,103nm,1.7s
ULN Ulaanbaatar 81.62 324 P P 23 29 42.5 -0.9
ULN IAmb IAmb 23 29 48.4
comp=Z,183nm,1.8s
ULN Ulaanbaatar 81.62 324*ce*P **P 23 29 43.3 -0.1**
ULN pmax pmax
comp=Z,164nm,2.5s
L20K Farewell, AK 81.63 17 P P 23 29 44.8 +1.8
baz=218
J18K Innoko River 81.67 15 IAmb IAmb 23 29 46.4
comp=Z,121nm,1.8s
J18K IAMs_20 IAMs_20 00 02 08.0
comp=Z,5µm,20.0s
J18K Innoko River 81.67 15 P P 23 29 44.4 +1.3
baz=215
KOHI KOHIMA 81.68 299 *e*P **P 23 29 41.2 -3.0**
KOHI IAmb IAmb 23 29 46.5
comp=Z,150nm,1.4s
Q23K Middleton Isla 81.75 22 P P 23 29 45.7 +2.2
baz=225
MID Middleton Isla 81.76 22 IAMs_20 IAMs_20 00 03 48.6
comp=Z,6µm,18.0s
SUA Susitna One 81.78 19 IAmb IAmb 23 29 45.3
comp=Z,161nm,1.7s
SUA Susitna One 81.78 19 P P 23 29 44.8 +1.0
baz=220
P23K Montague Islan 81.79 21 P P 23 29 45.6 +1.8
baz=224
RC01 Rabbit Creek A 81.81 19 P P 23 29 45.7 +1.8
baz=222
F15K North Star Dit 81.84 11 IAMs_20 IAMs_20 23 58 49.3
comp=Z,5µm,22.0s
F15K North Star Dit 81.84 11 P P 23 29 46.0 +2.0
baz=207
JORH JORHAT 81.90 300 *e*P **P 23 29 45.6 +0.4**
JORH IAmb IAmb 23 29 48.3
comp=Z,456nm,1.6s
SKT Skwentna 81.93 18 P P 23 29 45.8 +1.3
SKT Skwentna 81.93 18 P P 23 29 46.8 +2.2
baz=220
SONM Songino Array 81.99 323 P P 23 29 44.7 -0.6
SONM IAmb IAmb 23 29 50.0
comp=Z,171nm,1.8s
SONM Songino Array 81.99 323 P **P 23 29 43.6 -1.7**
comp=Z,5.4nm,0.9s,baz=138,slow=2.7,SNR=30
SONM LR LR 00 04 08.5
comp=Z,3µm,21.8s,baz=113,slow=34
comp=Z,5.4nm,0.9s
SONM Songino Array 81.99 323 P P 23 29 44.7 -0.6
SONM pmax pmax
comp=Z,171nm,1.8s
G16K Koyuk River 82.01 12 IAmb IAmb 23 30 01.5
comp=Z,186nm,2.0s
G16K IAMs_20 IAMs_20 00 00 42.0
comp=Z,6µm,21.0s
G16K Koyuk River 82.01 12 P P 23 29 46.8 +1.9
baz=209
PWL Port Wells 82.10 20 IAMs_20 IAMs_20 00 02 49.6
comp=Z,6µm,20.0s
PWL Port Wells 82.10 20 P P 23 29 46.9 +1.4
baz=223
H17K Granite Mounta 82.14 13 IAMs_20 IAMs_20 23 59 23.3
comp=Z,7µm,21.0s
H17K Granite Mounta 82.14 13 P P 23 29 47.4 +1.9
baz=212
M22K Willow 82.19 19 IAmb IAmb 23 29 50.8
comp=Z,100nm,1.1s
M22K Willow 82.19 19 P P 23 29 46.9 +1.0
baz=221
K20K Telida 82.28 16 IAmb IAmb 23 29 52.4
comp=Z,189nm,2.0s
K20K IAMs_20 IAMs_20 00 01 25.2
comp=Z,9µm,20.0s
K20K Telida 82.28 16 P P 23 29 48.2 +1.8
baz=217
GTA Gaotai 82.33 314 P P 23 29 45.3 -2.0
GTA pP PcP 23 29 49.8 -2.7
GTA PP **PP 23 32 56.0 -0.4**
GTA S **S 23 40 04.8 +2.2**
GTA SS **SS 23 45 22.7 -1.0**
GTA pmax pmax
comp=Z,640nm,4.4s
GTA LR LR
comp=Z,4µm,24.3s

GTA LR LR
comp=Z,6µm,24.3s
GTA LR LR
comp=Z,10µm,24.3s
PMR Palmer 82.38 19 IAmb IAmb 23 29 52.1
comp=Z,127nm,1.3s
PMR Palmer 82.38 19 P P **23 29 49.1 +2.3**
PMR Palmer 82.38 19 P P **23 29 48.3 +1.5**
baz=222
J19K Poorman 82.38 15 P P **23 29 48.7 +1.8**
baz=216
HIN Hinchinbrook I 82.39 21 IAMs_20 IAMs_20 23 58 38.2
comp=Z,9µm,22.0s
PPLA Purkeypile 82.45 17 P P **23 29 48.1 +0.7**
baz=219
G17K Kiwalik Mounta 82.46 13 P P **23 29 49.1 +1.9**
baz=211
KNK Knik Glacier 82.47 20 IAMs_20 IAMs_20 00 00 52.3
comp=Z,7µm,20.0s
KNK Knik Glacier 82.47 20 P P **23 29 48.9 +1.5**
baz=223
ITAN ITANAGAR 82.48 300 *e*P P **23 29 50.0 +1.8**
ITAN IAmb IAmb 23 29 51.8
comp=Z,263nm,1.7s
ZIRO ZIRO 82.50 301 *e*P P **23 29 46.6 -1.9**
ZIRO IAmb IAmb 23 29 53.7
comp=Z,65nm,1.1s
FARB Farallon Islan 82.52 48 IAMs_20 IAMs_20 23 58 17.8
comp=Z,8µm,20.0s
GLI Glacier Island 82.53 20 P P **23 29 47.9 +0.2**
GLI IAMs_20 IAMs_20 00 00 20.0
comp=Z,8µm,20.0s
GLI Glacier Island 82.53 20 P P **23 29 49.1 +1.4**
baz=224
GHO Glory Hole Cre 82.58 19 IAmb IAmb 23 29 59.6
comp=Z,289nm,1.9s
CUT Chulitna 82.64 18 IAMs_20 IAMs_20 23 58 57.8
comp=Z,9µm,22.0s
CUT Chulitna 82.64 18 P P **23 29 49.2 +1.0**
baz=221
H18K Honhosa River 82.67 14 IAMs_20 IAMs_20 00 02 50.5
comp=Z,8µm,20.0s
H18K Honhosa River 82.67 14 P P **23 29 49.2 +0.8**
baz=213
GCSA Galena City Sc 82.69 14 P P **23 29 49.8 +1.4**
baz=214
EYAK Cordova Ski Ar 82.76 21 P P **23 29 49.7 +0.9**
EYAK IAmb IAmb 23 30 00.2
comp=Z,229nm,1.7s
EYAK IAMs_20 IAMs_20 23 58 03.1
comp=Z,9µm,22.0s
EYAK Cordova Ski Ar 82.76 21 P P **23 29 51.7 +2.9**
EYAK Cordova Ski Ar 82.76 21 P P **23 29 50.3 +1.4**
baz=225
MCCM Marconi Confer 82.79 48 IAMs_20 IAMs_20 23 58 24.8
comp=Z,9µm,20.0s
SML Sawmill 82.80 19 P P **23 29 50.5 +1.3**
baz=223,SNR=5.3
KAIM Kayak Island 82.80 22 P P **23 29 49.6 +0.5**
baz=226
KMPM Mount Pierce 82.84 46 P P **23 29 50.1 +0.3**
KMPM IAmb IAmb 23 29 56.6
comp=Z,198nm,1.4s
KMPM IAMs_20 IAMs_20 23 58 55.1
comp=Z,8µm,20.0s
BRDH Bariadhala 82.84 295 LR LR 00 09 15.7
comp=Z,1µm,18.1s,baz=138,slow=38
KCPM Cahto Peak 82.91 46 IAMs_20 IAMs_20 23 58 29.0
comp=Z,9µm,20.0s
J20K Nowinta River 82.92 16 IAmb IAmb 23 30 01.6
comp=Z,112nm,2.0s
J20K IAMs_20 IAMs_20 00 02 07.0
comp=Z,9µm,20.0s
J20K Nowinta River 82.92 16 P P **23 29 51.3 +1.7**
baz=217
JRSC Jasper Ridge 82.96 49 P P **23 29 50.3 -0.1**
DCMP DeCamp, Califo 83.00 47 IAmb IAmb 23 29 56.8
comp=Z,81nm,1.6s
MAW Mawson 83.01 202 P P **23 29 47.8 -2.4**
comp=Z,5.9nm,1.0s,baz=105,slow=7.9,SNR=14
MAW LR LR 00 01 22.2
comp=Z,8µm,21.9s,baz=97,slow=32
comp=Z,5.9nm,1.0s
FORD Fort Ord Natur 83.02 50 IAMs_20 IAMs_20 00 01 15.1
comp=Z,7µm,18.0s
RAGM Ragged Mountai 83.03 22 IAmb IAmb 23 31 43.5
comp=Z,85nm,1.0s
RAGM IAMs_20 IAMs_20 00 03 25.1
comp=Z,6µm,19.0s
JCC Jacoby Creek, 83.07 45 IAMs_20 IAMs_20 23 57 39.1
comp=Z,6µm,21.0s
TEZP TEZPUR 83.09 299 *e*P P **23 29 50.3 -1.0**
TEZP IAmb IAmb 23 30 03.2
comp=Z,605nm,2.9s
GDXM Geysers 83.11 47 IAmb IAmb 23 29 57.8
comp=Z,210nm,1.8s
SCM Sheep Creek Mo 83.14 20 P P **23 29 52.2 +1.3**
baz=224
F17K Baldwin Pennin 83.15 12 IAMs_20 IAMs_20 00 01 16.1
comp=Z,5µm,20.0s
F17K Baldwin Pennin 83.15 12 P P **23 29 52.4 +1.7**
baz=210
CVS Carmenet Viney 83.17 48 IAmb IAmb 23 29 57.4
comp=Z,92nm,1.2s
HULI Fort Hunter Li 83.17 51 IAMs_20 IAMs_20 00 08 05.1
comp=Z,6µm,18.0s
CHUM Lake Minchumin 83.18 17 P P **23 29 52.5 +1.6**
baz=219,SNR=6.3
BELO BELONIA 83.19 296 *e*P P **23 29 52.3 +0.4**
KRPM Rodgers 83.21 45 P P **23 29 52.2 +0.4**
KRPM IAMs_20 IAMs_20 23 57 33.0
comp=Z,5µm,22.0s
G18K Tagagawik 83.23 13 IAmb IAmb 23 29 56.9
comp=Z,100nm,1.8s
G18K IAMs_20 IAMs_20 00 05 15.3
comp=Z,7µm,19.0s
G18K Tagagawik 83.23 13 P P **23 29 52.9 +1.7**
baz=213
KHMM Horse Mountain 83.30 45 IAmb IAmb 23 29 59.1
comp=Z,167nm,1.5s
KHMM IAMs_20 IAMs_20 23 59 20.2
comp=Z,6µm,20.0s
SAO San Andreas Ge 83.30 50 IAmb IAmb 23 29 58.3
comp=Z,165nm,1.9s
SAO IAMs_20 IAMs_20 00 00 37.4
comp=Z,7µm,20.0s
I20K Naaghedeneel 83.33 15 IAMs_20 IAMs_20 00 03 00.8
comp=Z,6µm,20.0s
I20K Naaghedeneel 83.33 15 P P **23 29 53.5 +1.9**
baz=217
BGLC Bering Glacier 83.35 22 P P **23 29 53.4 +1.5**
baz=228
KLU Klutina 83.37 20 IAMs_20 IAMs_20 23 59 54.1
comp=Z,9µm,22.0s
KLU Klutina 83.37 20 P P **23 29 53.6 +1.5**
baz=225,SNR=5.7
MHC Mount Hamilton 83.38 49 IAmb IAmb 23 29 59.0
comp=Z,203nm,1.9s
TRF Thorofare Moun 83.43 18 P P **23 29 53.2 +0.7**
baz=221
H19K Roundabout Mou 83.44 14 IAmb IAmb 23 30 04.4
comp=Z,79nm,1.6s
H19K Roundabout Mou 83.44 14 P P **23 29 54.0 +1.7**
baz=215
BMRM Bremner River 83.46 21 IAMs_20 IAMs_20 00 05 40.5
comp=Z,6µm,19.0s
BMRM Bremner River 83.46 21 P P **23 29 53.8 +1.3**
baz=226,SNR=7.4
WAT1 Susitna Watana 83.48 19 P P **23 29 53.5 +0.9**
baz=222
KBO Bosley Butte 83.52 44 IAMs_20 IAMs_20 23 58 56.0
comp=Z,5µm,20.0s
SHL Shillong 83.53 298 *e*P P **23 29 51.7 -2.2**
SHL IAmb IAmb 23 30 05.6
comp=Z,284nm,2.0s
AGT Agartala 83.55 296 *e*P P **23 29 55.2 +1.4**
SNH Sunshine Point 83.56 22 IAMs_20 IAMs_20 23 59 32.2
comp=Z,8µm,21.0s
WAT6 Susitna Watana 83.56 19 P P **23 29 54.5 +1.3**
baz=223,SNR=9.5
KHBM Hayfork Bally 83.56 46 IAmb IAmb 23 30 00.1
comp=Z,127nm,1.5s
PMPB Monarch Peak 83.57 50 P P **23 29 53.5 -0.3**
KSXB Camp Six Broad 83.59 44 IAmb IAmb 23 30 00.3
comp=Z,161nm,1.6s
KSXB IAMs_20 IAMs_20 23 58 50.0
comp=Z,6µm,21.0s
E17K Hotham Inlet 83.59 11 P P **23 29 55.0 +2.0**
baz=210,SNR=5.2
F18K Selawik 83.62 12 P P **23 29 54.4 +1.3**
baz=212
PKD Bear Valley Ra 83.67 51 IAmb IAmb 23 30 00.4
comp=Z,136nm,1.6s
PKD IAMs_20 IAMs_20 23 57 39.2
comp=Z,6µm,22.0s
BPAW Bear Paw Mtn. 83.72 17 IAmb IAmb 23 30 04.2
comp=Z,96nm,1.8s
BPAW Bear Paw Mtn. 83.72 17 P P **23 29 54.4 +0.6**
baz=220
M24K Tolsona, Glenn 83.72 20 P P **23 29 55.6 +1.7**
baz=225
KEBM Edson Butte 83.72 43 IAMs_20 IAMs_20 23 59 22.4
comp=Z,5µm,20.0s
WAX Waxell Ridge 83.73 22 IAMs_20 IAMs_20 00 03 46.8
comp=Z,8µm,20.0s
H20K Anotleneega Mo 83.79 15 P P **23 29 56.1 +2.0**
baz=216
CRQM Cirque 83.84 22 IAMs_20 IAMs_20 00 04 18.9
comp=Z,6µm,20.0s
CRQE Cirque 83.85 22 P P **23 29 55.7 +1.0**
baz=228
MESA MESA 83.89 23 IAMs_20 IAMs_20 23 59 20.9
comp=Z,8µm,21.0s
MESA MESA 83.89 23 P P **23 29 54.9 -0.1**
baz=229
DIB Dawson Inlet, 83.89 32 P P **23 29 55.0 +0.1**
DIB IAmb IAmb 23 30 00.5
comp=Z,195nm,1.8s
D17K Noatak River 83.90 11 P P **23 29 55.4 +0.8**
baz=208
N25K Chitina, Valde 83.90 21 IAMs_20 IAMs_20 00 00 10.2
comp=Z,8µm,21.0s
N25K Chitina, Valde 83.90 21 P P **23 29 56.1 +1.2**
baz=226,SNR=15
L02F Cave Junction 83.92 44 IAmb IAmb 23 30 00.9
comp=Z,156nm,1.9s
TGL Tana Glacier 83.95 22 IAMs_20 IAMs_20 00 04 22.5
comp=Z,6µm,20.0s
SUTB Sutter Butte 84.00 47 IAMs_20 IAMs_20 23 57 48.0
comp=Z,8µm,22.0s
C16K Lisburne Hills 84.02 10 P P **23 29 56.8 +1.7**
baz=206
ISLE Juniper Island 84.03 22 IAMs_20 IAMs_20 00 03 56.5
comp=Z,7µm,19.0s
DHY Denali Highway 84.03 19 P P **23 29 56.5 +0.9**
baz=224,SNR=9.3
MCK McKinley 84.04 18 P P **23 29 56.3 +0.9**
baz=222,SNR=23
VRDI Verde Repeater 84.04 21 IAmb IAmb 23 29 58.5
comp=Z,187nm,1.8s
N02D Trinity Center 84.05 45 IAMs_20 IAMs_20 23 57 49.1
comp=Z,9µm,22.0s
GLB Gilahina Butte 84.06 21 IAMs_20 IAMs_20 23 59 07.5
comp=Z,6µm,22.0s
HG4B Hotspring 84.07 33 P P **23 29 56.0 +0.2**
HG4B IAmb IAmb 23 30 01.9
comp=Z,98nm,1.4s
YAH Yahtse 84.09 23 IAMs_20 IAMs_20 23 59 48.1
comp=Z,8µm,21.0s
K02D Willamette Mer 84.10 44 IAmb IAmb 23 30 02.6
comp=Z,126nm,1.5s
M02C Callahan 84.11 45 IAmb IAmb 23 30 03.1
comp=Z,193nm,1.6s
M02C IAMs_20 IAMs_20 23 57 51.8
comp=Z,7µm,22.0s
MOBC Moresby Island 84.12 32 IAmb IAmb 23 29 59.4
comp=Z,123nm,1.5s
E18K Tukpahlearik C 84.13 12 IAMs_20 IAMs_20 00 00 19.9
comp=Z,7µm,21.0s
E18K Tukpahlearik C 84.13 12 P P **23 29 56.2 +0.5**
baz=211
TAWA Tawang 84.19 300 *e*P P **23 29 57.2 -0.2**
TAWA IAmb IAmb 23 30 10.2
comp=Z,310nm,2.2s
BWN Browne 84.21 17 P P **23 29 56.7 +0.4**
F19K Shaleruckik Mo 84.22 13 IAMs_20 IAMs_20 00 06 22.3
comp=Z,6µm,19.0s
F19K Shaleruckik Mo 84.22 13 P P **23 29 57.5 +1.3**
baz=214
RDOG Red Dog Mine 84.25 11 P P **23 29 58.2 +1.8**
baz=209
HARP HARP 84.27 20 P P **23 29 58.1 +1.5**
baz=226
I21K Tanana 84.28 16 P P **23 29 58.1 +1.6**
baz=219,SNR=6.5
MCARA McCarthy VSAT 84.30 21 IAmb IAmb 23 30 03.1
comp=Z,104nm,1.4s
MCARA McCarthy VSAT 84.30 21 P P **23 29 58.1 +1.3**
baz=228,SNR=5.7
GRNC Granite Creek 84.33 22 P P **23 29 57.7 +0.5**
GRNC IAMs_20 IAMs_20 00 08 38.5
comp=Z,6µm,19.0s
ORV Oroville 84.33 47 IAmb IAmb 23 30 03.3
comp=Z,120nm,1.6s
ORV IAMs_20 IAMs_20 23 57 58.7
comp=Z,9µm,22.0s
YBH Yreka Blue Hor 84.35 45 IAmb IAmb 23 30 04.0
comp=Z,136nm,1.5s
YBH Yreka Blue Hor 84.35 45 LR LR 23 59 27.3
comp=Z,226nm,21.7s,baz=259,slow=30
TABL Table Mountain 84.36 23 IAMs_20 IAMs_20 23 59 46.5
comp=Z,8µm,22.0s
O03E Paynes Creek 84.41 46 P P **23 29 57.0 -0.9**
O03E IAMs_20 IAMs_20 23 58 00.7
comp=Z,8µm,22.0s
H21K Melozitna Rive 84.44 15 IAMs_20 IAMs_20 00 04 24.3
comp=Z,6µm,20.0s
H21K Melozitna Rive 84.44 15 P P **23 29 59.2 +1.8**
baz=218,SNR=5.9
IMAR Indian Mountai 84.46 15 P P **23 29 58.0 +0.5**
WELL Weller Preserv 84.47 48 IAMs_20 IAMs_20 23 58 15.3
comp=Z,9µm,22.0s
PCA Pinnacle 84.48 23 IAMs_20 IAMs_20 00 04 51.6
comp=Z,8µm,19.0s
PINM Pinnacle 84.48 23 P P **23 29 58.9 +1.0**
baz=230
MLY Manley 84.50 16 IAMs_20 IAMs_20 00 01 10.9
comp=Z,8µm,21.0s
MLY Manley 84.50 16 P P **23 29 58.8 +1.0**
baz=220
PNL Peninsula 84.54 24 P P **23 29 58.8 +0.7**
baz=231
CMB Columbia Colle 84.56 49 P P **23 29 56.8 -1.9**
CMB IAmb IAmb 23 30 03.6
comp=Z,67nm,1.4s
CMB Columbia Colle 84.56 49 P P **23 29 56.8 -1.9**
CMB pmax pmax
comp=Z,67nm,1.5s
I02E Swisshome, OR 84.56 42 P P **23 29 59.3 +0.8**
PAX Paxson 84.56 20 IAmb IAmb 23 30 00.8
comp=Z,151nm,1.9s
PAX IAMs_20 IAMs_20 00 03 57.7
comp=Z,6µm,20.0s
PAX Paxson 84.56 20 P P **23 29 59.1 +0.9**
baz=225,SNR=8.4
C17K DeLong Mountai 84.57 10 P P **23 29 59.6 +1.6**
baz=208
OSI Osito Audit: C 84.57 53 P P **23 29 57.8 -1.0**
OSI IAmb IAmb 23 30 06.0
comp=Z,93nm,1.5s
OSI IAMs_20 IAMs_20 00 02 46.2
comp=Z,5µm,19.0s
BARN Barnard Glacie 84.58 22 IAMs_20 IAMs_20 00 08 47.1
comp=Z,6µm,18.0s
BCPM Bancas Point 84.63 24 IAMs_20 IAMs_20 00 04 46.5
comp=Z,8µm,19.0s
CTG Chitna Glacier 84.63 22 P P **23 29 60.0 +1.3**
baz=229
CTGM Chitna Glacie 84.64 22 IAMs_20 IAMs_20 00 09 14.6
comp=Z,6µm,18.0s
NEA2 Nenana 84.64 17 P P **23 29 59.1 +0.7**
baz=222,SNR=5.7
LOGN Logan Glacier 84.67 23 IAMs_20 IAMs_20 00 00 49.5
comp=Z,5µm,20.0s
SIT Sitka 84.68 27 P P **23 29 59.2 +0.5**
baz=235
VES Vestal, Richgr 84.73 51 P P **23 29 58.3 -1.3**
GOMU GeErMu 84.74 309 P P **23 30 01.6 +1.5**
GOMU sP pP 23 30 06.5 +0.7
GOMU PP **PP** **23 33 16.4 -0.1**
GOMU S **S** **23 40 26.3 -1.3**
GOMU pmax pmax
comp=Z,15nm,1.5s
GOMU LR LR
comp=Z,1µm,17.7s
GOMU LR LR
comp=Z,1µm,22.6s
CRAG Craig 84.80 29 P P **23 30 00.4 +1.0**
baz=237
S31K Pelican 84.81 26 IAMs_20 IAMs_20 23 59 29.5
comp=Z,6µm,21.0s
S31K Pelican 84.81 26 P P **23 30 00.5 +1.1**
baz=234
BBOR Butler Butte 84.84 44 IAmb IAmb 23 30 06.2
comp=Z,147nm,1.8s
PASC Pasadena Art C 84.84 53 IAMs_20 IAMs_20 00 00 52.2
comp=Z,6µm,20.0s
HATC Hat Creek Radi 84.85 46 P P **23 29 59.1 -1.1**
HATC IAMs_20 IAMs_20 00 00 13.4
comp=Z,6µm,20.0s
F20K Avaraart Lake 84.85 14 P P **23 30 01.3 +1.9**
baz=216
E19K Redstone River 84.86 13 IAMs_20 IAMs_20 00 07 28.1
comp=Z,6µm,19.0s
E19K Redstone River 84.86 13 P P **23 30 00.3 +0.8**
baz=214
O28M Mount Upton 84.94 23 IAMs_20 IAMs_20 00 00 14.7
comp=Z,6µm,22.0s
O28M Mount Upton 84.94 23 P P **23 30 01.0 +0.6**
baz=230
G21K Allakaket 84.95 15 IAmb IAmb 23 30 03.4
comp=Z,214nm,1.8s
G21K IAMs_20 IAMs_20 00 04 20.6
comp=Z,6µm,19.0s
G21K Allakaket 84.95 15 P P **23 30 01.2 +1.3**
baz=218
MWC Mount Wilson 84.95 53 IAMs_20 IAMs_20 00 01 53.3
comp=Z,7µm,19.0s
I23K Minto, Yukon-K 84.98 17 IAMs_20 IAMs_20 00 02 58.4
comp=Z,9µm,20.0s
I23K Minto, Yukon-K 84.98 17 P P **23 30 01.2 +1.1**
baz=222,SNR=8.9
H22K Ishtalitna Cre 85.00 16 P P **23 30 01.8 +1.6**
baz=220,SNR=10
M26K Nabesna, AK 85.00 21 IAMs_20 IAMs_20 00 00 01.3
comp=Z,8µm,22.0s
M26K Nabesna, AK 85.00 21 P P **23 30 01.3 +1.0**
baz=228
ZAK Zakamensk 85.02 325 *e*P P **23 30 00.1 -0.7**
ZAK pmax pmax
comp=Z,102nm,2.0s
C18K Utukok River 85.08 11 IAmb IAmb 23 30 12.5
comp=Z,189nm,2.0s
C18K IAMs_20 IAMs_20 00 00 29.9
comp=Z,6µm,22.0s
C18K Utukok River 85.08 11 P P **23 30 01.9 +1.2**
baz=210
COR Corvallis 85.12 42 IAMs_20 IAMs_20 23 58 59.3
comp=Z,5µm,21.0s
MENT Mentasta 85.12 20 P P **23 30 03.6 +2.7**
HDA Harding Lake 85.13 18 P P **23 30 01.7 +0.8**
baz=222,SNR=30
ISA Isabella, Lake 85.13 52 P P **23 30 01.9 +0.2**
ISA Isabella, Lake 85.13 52 P P **23 30 01.9 +0.2**
ISA pmax pmax
comp=Z,288nm,1.9s
ISA MLR MLR
comp=Z,4µm,22.0s
U33K Whale Pass 85.16 29 IAmb IAmb 23 30 12.7
comp=Z,176nm,1.7s
U33K IAMs_20 IAMs_20 23 59 27.8
comp=Z,7µm,21.0s
U33K Whale Pass 85.16 29 P P **23 30 02.2 +1.0**
baz=237
P29M Windy Craggy 85.18 25 IAmb IAmb 23 30 07.5
comp=Z,94nm,1.4s
P29M IAMs_20 IAMs_20 00 05 09.3
comp=Z,7µm,19.0s
P29M Windy Craggy 85.18 25 P P **23 30 01.9 +0.6**
baz=232
COLA College 85.20 17 *i*P P **23 30 00.9 -0.3**
COLA pmax pmax
comp=Z,151nm,1.5s
COLA College 85.20 17 P P **23 30 02.1 +0.9**
baz=223
S32K Killisnoo 85.25 27 P P **23 30 02.0 +0.4**
S32K IAmb IAmb 23 30 07.2
comp=Z,95nm,1.4s
S32K IAMs_20 IAMs_20 00 03 24.1
comp=Z,7µm,19.0s
S32K Killisnoo 85.25 27 P P **23 30 02.9 +1.3**
baz=235
CPE Camp Elliot 85.25 55 IAmb IAmb 23 30 08.1
comp=Z,107nm,1.5s
ELS Elsinore Mount 85.25 54 IAmb IAmb 23 30 08.2
comp=Z,172nm,1.9s
O29M Mount Kennedy 85.26 24 IAMs_20 IAMs_20 00 04 20.3
comp=Z,8µm,19.0s
O29M Mount Kennedy 85.26 24 P P **23 30 01.7 -0.1**
baz=232
BEKR Beckworth 85.27 47 P P **23 30 01.8 -0.6**
BEKR IAmb IAmb 23 30 08.3
comp=Z,134nm,1.6s
BFSC Mount Baldy Ra 85.27 53 IAmb IAmb 23 30 08.1
comp=Z,141nm,1.6s
BFSC IAMs_20 IAMs_20 00 00 45.7
comp=Z,7µm,20.0s
MPK Martis Peak 85.29 48 IAmb IAmb 23 30 08.7
comp=Z,188nm,1.5s
L26K Log Cabin Wild 85.30 20 P P **23 30 02.7 +0.9**
baz=227,SNR=8.7
RIDG Independent Ri 85.31 19 P P **23 30 03.0 +1.1**
baz=226
M27K Edge Creek, AK 85.36 21 IAMs_20 IAMs_20 00 00 22.7
comp=Z,6µm,22.0s
M27K Edge Creek, AK 85.36 21 P P **23 30 03.6 +1.3**
baz=229
IRK Irkutsk 85.37 326 *e*P P **23 30 00.3 -2.1**
IRK pmax pmax
comp=Z,135nm,2.8s
MDPB Devils Postpil 85.38 50 IAmb IAmb 23 30 09.0
comp=Z,108nm,1.6s
I04A Tendick Farm, 85.38 43 IAmb IAmb 23 30 08.4
comp=Z,77nm,1.4s
CBX Cerro Bola 85.41 55 IAmb IAmb 23 30 09.2
comp=Z,140nm,1.6s
ILAR Eielson Array 85.41 18 P P 23 29 56.9 -5.5
ILAR Eielson Array 85.41 18 P P **23 29 58.6 -3.7**
comp=Z,7.5nm,0.7s,baz=242,slow=5.1,SNR=75
ILAR LR LR 00 02 53.7
comp=Z,13µm,20.3s,baz=228,slow=32
comp=Z,7.5nm,0.7s
DPP Dos Picos Cty 85.42 55 IAmb IAmb 23 30 09.0
comp=Z,85nm,1.4s
YUK8 Steele Glacier 85.42 23 P P **23 30 04.0 +1.2**
baz=231
H23K Yukon River 85.44 16 IAMs_20 IAMs_20 00 02 44.3
comp=Z,8µm,20.0s
H23K Yukon River 85.44 16 P P **23 30 03.9 +1.4**
baz=221
LSA Lhasa 85.45 302 P P **23 30 00.0 -3.9**
LSA S **SKSac** **23 40 24.2 -4.8**
LSA LR LR
comp=Z,1µm,21.6s
LSA LR LR
comp=Z,2µm,21.3s
LSA LR LR
comp=Z,4µm,21.3s
YUK3 Moose Creek 85.48 22 P P **23 30 04.3 +1.3**
baz=230
DOT Dot Lake 85.50 19 IAmb IAmb 23 30 09.0
comp=Z,135nm,1.7s
POKR Poker Plat Res 85.50 17 IAMs_20 IAMs_20 00 04 42.4
comp=Z,8µm,20.0s
POKR Poker Plat Res 85.50 17 P P **23 30 03.4 +0.6**
baz=223
F21K Alatna River 85.51 14 IAmb IAmb 23 30 06.1
comp=Z,202nm,1.9s
F21K IAMs_20 IAMs_20 00 04 19.6
comp=Z,8µm,20.0s
F21K Alatna River 85.51 14 P P **23 30 04.5 +1.7**
baz=218
F03A Seaside 85.52 41 IAmb IAmb 23 30 09.5
comp=Z,133nm,1.5s
BAR Barrett 85.52 55 IAmb IAmb 23 30 08.6
comp=Z,95nm,1.9s
BAR IAMs_20 IAMs_20 00 00 59.4
comp=Z,7µm,20.0s
PNTR Pine Nut 85.52 48 P P **23 30 03.0 -0.8**
PNTR IAmb IAmb 23 30 09.9
comp=Z,153nm,1.6s
D19K Kuna River 85.54 12 IAmb IAmb 23 30 06.3
comp=Z,135nm,1.6s
D19K IAMs_20 IAMs_20 00 06 05.1

	comp=Z,5µm,19.0s							
D19K	**Kuna River**	85.54	12	P	P	23 30 04.4	+1.5	
	baz=213,SNR=8.6							
B18K	**Kokolik River**	85.59	10	P	P	23 30 04.2	+1.1	
	baz=210							
PLBC	**Pleasant Camp**	85.64	25	P	P	23 30 03.9	+0.4	
	baz=234							
OZB	**Mount Ozzard**	85.64	37	IAmb	IAmb	23 30 17.4		
	comp=Z,90nm,1.6s							
BBB	**Bella Bella**	85.66	34	IAmb	IAmb	23 30 09.6		
	comp=Z,68nm,1.4s							
BBB	**Bella Bella**	85.66	34	LR	LR	00 03 01.0		
	comp=Z,8µm,19.2s,baz=272,slow=32							
LRMC	**Laurel Mtn Rad**	85.67	52	IAmb	IAmb	23 30 09.8		
	comp=Z,182nm,1.8s							
LRMC				IAMs_20	IAMs_20	00 02 25.4		
	comp=Z,4µm,19.0s							
WRAK	**Wrangell Islan**	85.68	29	IAMs_20	IAMs_20	00 03 37.7		
	comp=Z,6µm,19.0s							
WRAK	**Wrangell Islan**	85.68	29	IAmb	IAmb	23 30 10.1		
	comp=Z,123nm,1.6s							
WRAK	**Wrangell Islan**	85.68	29	P	P	23 30 04.8	+1.0	
	baz=237							
CWC	**Cottonwood Cre**	85.70	51	IAmb	IAmb	23 30 10.8		
	comp=Z,157nm,1.9s							
CWC				IAMs_20	IAMs_20	23 59 05.1		
	comp=Z,6µm,22.0s							
R32K	**Eaglecrest**	85.73	27	IAMs_20	IAMs_20	23 58 50.9		
	comp=Z,6µm,22.0s							
R32K	**Eaglecrest**	85.73	27	P	P	23 30 05.4	+1.4	
	baz=235							
YUK6	**Outpost Mounta**	85.74	23	P	P	23 30 05.1	+0.8	
	baz=232							
E20K	**Nigu River**	85.74	13	P	P	23 30 05.8	+1.9	
	baz=215							
SCRK	**Sand Creek**	85.75	19	IAMs_20	IAMs_20	00 03 28.9		
	comp=Z,7µm,20.0s							
SCRK	**Sand Creek**	85.75	19	P	P	23 30 05.2	+1.0	
	baz=227							
C03A	**Quillayute Air**	85.75	39	P	P	23 30 06.5	+2.2	
C03A				IAmb	IAmb	23 30 17.4		
	comp=Z,206nm,1.7s							
J25K	**Salcha River,**	85.76	18	P	P	23 30 05.1	+1.0	
	baz=225							
BESE	**Bessie Mountai**	85.76	26	IAMs_20	IAMs_20	00 00 08.6		
	comp=Z,6µm,21.0s							
G22K	**Bettles**	85.76	15	P	P	23 30 05.6	+1.6	
	baz=219							
C19K	**Lookout Ridge**	85.77	11	IAmb	IAmb	23 30 07.8		
	comp=Z,225nm,1.8s							
C19K				IAMs_20	IAMs_20	00 02 21.2		
	comp=Z,7µm,22.0s							
C19K	**Lookout Ridge**	85.77	11	P	P	23 30 05.9	+1.8	
	baz=212							
P30M	**Million Dollar**	85.79	24	P	P	23 30 05.6	+1.2	
	baz=233							
TIN	**Tinemaha, Big**	85.80	50	IAMs_20	IAMs_20	23 58 56.7		
	comp=Z,7µm,22.0s							
VTX	**Valle De La Tr**	85.82	56	IAmb	IAmb	23 30 11.6		
	comp=Z,106nm,1.5s							
COBR	**COOCHBEHAR**	85.83	298	*e*P	P	23 30 06.7	+1.5	
L27K	**Beaver Creek,**	85.84	21	IAMs_20	IAMs_20	00 01 32.6		
	comp=Z,8µm,21.0s							
L27K	**Beaver Creek,**	85.84	21	P	P	23 30 06.0	+1.4	
	baz=229							
BCAR	**Beaver Creek A**	85.86	21	P	P	23 30 00.7	-3.9	
YUK4	**Talbot Arm**	85.88	23	P	P	23 30 06.6	+1.6	
	baz=232							
H04A	**Detroit Lake**	85.89	42	IAmb	IAmb	23 30 08.3		
	comp=Z,100nm,1.6s							
H24K	**Noodor Dome**	85.90	17	P	P	23 30 06.7	+1.9	
	baz=223							
PAHR	**Pah Rah Range**	85.90	48	IAmb	IAmb	23 30 11.6		
	comp=Z,179nm,1.7s							
BORC	**Borrego Spring**	85.92	55	IAmb	IAmb	23 30 11.6		
	comp=Z,118nm,1.6s							
J05D	**Fort Rock, OR**	85.97	44	IAmb	IAmb	23 30 12.1		
	comp=Z,148nm,1.4s							
G23K	**Bananza Creek**	85.98	16	P	P	23 30 06.8	+1.7	
	baz=221,SNR=5.8							
PFO	**Pinyon Flats O**	86.00	54	P	P	23 30 04.8	-1.3	
PFO				IAmb	IAmb	23 33 16.0		
	comp=Z,24nm,0.5s							
PFO	**Pinyon Flats O**	86.00	54	LR	LR	00 03 09.6		
	comp=Z,9µm,18.5s,baz=269,slow=32							
PFO	**Pinyon Flats O**	86.00	54	*i* P	P	23 30 05.0	-1.1	
PFO				pmax	pmax			
	comp=Z,80nm,2.0s							
HYT	**Haines Junctio**	86.00	24	P	P	23 30 06.6	+1.1	
	baz=233							
MPMC	**Manual Prospec**	86.02	52	IAmb	IAmb	23 30 12.5		
	comp=Z,143nm,1.7s							
MPMC				IAMs_20	IAMs_20	23 59 05.5		
	comp=Z,5µm,22.0s							
LHV	**Little Huntoon**	86.02	49	P	P	23 30 04.6	-1.3	
LHV				IAmb	IAmb	23 30 12.3		
	comp=Z,135nm,1.6s							
D20K	**Etivluk River**	86.03	12	IAMs_20	IAMs_20	00 08 47.1		
	comp=Z,5µm,19.0s							
D20K	**Etivluk River**	86.03	12	P	P	23 30 07.1	+1.8	
	baz=215							
F22K	**John River**	86.05	14	P	P	23 30 07.1	+1.7	
	baz=219							
SKAG	**Skagway**	86.07	25	P	P	23 30 08.7	+3.1	
SKAG	**Skagway**	86.07	25	P	P	23 30 06.8	+1.2	
	baz=235							
PMD	**Palm Desert**	86.07	54	IAmb	IAmb	23 33 17.7		
	comp=Z,42nm,0.7s							
DSP	**Deep Springs**	86.11	50	P	P	23 30 04.2	-2.2	
DSP				IAmb	IAmb	23 30 12.7		
	comp=Z,176nm,1.7s							
YUH	**Yuha Desert**	86.11	55	IAmb	IAmb	23 30 11.8		
	comp=Z,129nm,1.7s							
RYN	**Ryan**	86.14	49	IAmb	IAmb	23 30 12.8		
	comp=Z,79nm,1.5s							
CBB	**Campbell River**	86.19	36	IAmb	IAmb	23 30 12.8		
	comp=Z,95nm,1.4s							
NVAR	**Mina Array Bea**	86.23	49	P	P	23 30 03.8	-3.5	
NVAR	**Mina Array Bea**	86.23	49	P	P	23 30 04.2	-3.1	
	comp=Z,6.8nm,0.7s,baz=236,slow=7.8,SNR=32							
NVAR				LR	LR	00 00 41.4		
	comp=Z,11µm,20.6s,baz=280,slow=30							
	comp=Z,6.8nm,0.7s							
J26L	**Joseph Creek**	86.24	19	IAMs_20	IAMs_20	00 04 23.0		
	comp=Z,7µm,20.0s							
J26L	**Joseph Creek**	86.24	19	P	P	23 30 08.0	+1.5	
	baz=227							
GSC	**Goldstone, Bar**	86.29	52	IAmb	IAmb	23 30 22.6		
	comp=Z,155nm,1.9s							
COLD	**Coldfoot**	86.33	15	P	P	23 30 08.3	+1.6	
	baz=221,SNR=10							
NV11	**Mina Array Sit**	86.34	49	IAmb	IAmb	23 30 12.9		
	comp=Z,99nm,1.4s							
PINE	**Pine Mountain**	86.36	43	IAmb	IAmb	23 30 14.1		
	comp=Z,134nm,1.5s							
E21K	**Killik River**	86.38	13	IAMs_20	IAMs_20	00 03 31.7		
	comp=Z,8µm,20.0s							
E21K	**Killik River**	86.38	13	P	P	23 30 08.5	+1.4	
	baz=217							
K27K	**Chicken**	86.40	20	IAMs_20	IAMs_20	00 02 24.3		
	comp=Z,6µm,20.0s							
K27K	**Chicken**	86.40	20	P	P	23 30 08.4	+1.1	
	baz=228							
GRAC	**Grapevine Rang**	86.43	51	IAmb	IAmb	23 30 14.2		
	comp=Z,109nm,1.4s							
B04A	**Port Angeles**	86.44	39	IAmb	IAmb	23 30 14.2		
	comp=Z,77nm,1.3s							
A19K	**Wainwright**	86.45	10	P	P	23 30 09.2	+1.9	
	baz=210							
SFX	**San Felipe**	86.47	57	IAmb	IAmb	23 30 14.1		
	comp=Z,77nm,1.6s							
BELC	**Belle Mtn. Jos**	86.49	54	IAmb	IAmb	23 30 13.8		
	comp=Z,134nm,1.5s							
BELC				IAMs_20	IAMs_20	00 00 43.0		
	comp=Z,8µm,20.0s							
HOOD	**Mount Hood Mea**	86.49	42	IAmb	IAmb	23 30 14.1		
	comp=Z,124nm,1.3s							
O30N	**Mendenhall**	86.52	24	IAMs_20	IAMs_20	00 04 59.7		
	comp=Z,6µm,19.0s							
O30N	**Mendenhall**	86.52	24	P	P	23 30 07.5	-0.5	
	baz=234							
U35K	**Hyder**	86.53	30	IAMs_20	IAMs_20	23 59 27.0		
	comp=Z,7µm,22.0s							
U35K	**Hyder**	86.53	30	P	P	23 30 09.2	+1.3	
	baz=239							
JPG	**JALPAIGURI**	86.54	298	*e*P	P	23 30 05.6	-3.2	
N30M	**Aishikik Lake**	86.55	23	P	P	23 30 08.4	+0.3	
	baz=233							
E22K	**Anaktuvuk Pass**	86.63	14	IAMs_20	IAMs_20	00 05 45.0		
	comp=Z,7µm,20.0s							
E22K	**Anaktuvuk Pass**	86.63	14	P	P	23 30 08.6	+0.2	
	baz=219,SNR=14							
FURC	**Furnace Creek,**	86.63	51	IAMs_20	IAMs_20	00 05 59.7		
	comp=Z,4µm,19.0s							
M29M	**Somme Creek**	86.64	22	IAMs_20	IAMs_20	00 05 19.5		
	comp=Z,7µm,20.0s							
M29M	**Somme Creek**	86.64	22	P	P	23 30 08.1	-0.4	
	baz=232							
G24K	**Hadweenzic Riv**	86.65	16	P	P	23 30 07.7	-0.7	
	baz=223,SNR=9.4							
GNW	**Green Mountain**	86.65	39	IAmb	IAmb	23 30 14.9		
	comp=Z,70nm,1.3s							
GWY	**Greenwater Val**	86.69	52	IAmb	IAmb	23 30 15.3		
	comp=Z,120nm,1.7s							
PGC	**Sidney**	86.72	38	IAmb	IAmb	23 30 15.1		
	comp=Z,80nm,1.4s							
C21K	**Knifeblade Rid**	86.78	13	P	P	23 30 09.5	+0.5	
	baz=216							
H25L	**Birch Creek**	86.80	17	P	P	23 30 09.5	+0.4	
	baz=225							
BC3	**Big Chuckawall**	86.81	54	IAmb	IAmb	23 30 15.5		
	comp=Z,180nm,1.8s							
BC3				IAMs_20	IAMs_20	00 03 24.4		
	comp=Z,8µm,19.0s							
P32M	**Atlin**	86.82	26	IAMs_20	IAMs_20	00 01 03.5		
	comp=Z,6µm,21.0s							
P32M	**Atlin**	86.82	26	P	P	23 30 08.1	-1.4	
	baz=236							
SHOC	**Shoshone, Teco**	86.89	52	P	P	23 30 10.6	+0.3	
MOY	**Mondy**	86.89	325	*e*P	P	23 30 10.6	+0.5	
MOY				pmax	pmax			
	comp=Z,95nm,2.6s							
I26K	**Coal Creek Min**	86.92	19	P	P	23 30 10.0	+0.2	
	baz=227							
WCT	**Wildcat Mounta**	86.92	51	IAmb	IAmb	23 30 15.8		
	comp=Z,74nm,1.3s							
WHY	**Whitehorse**	86.94	25	P	P	23 30 10.3	+0.2	
	baz=235							
LON	**Longmire**	86.96	40	IAmb	IAmb	23 30 22.3		
	comp=Z,90nm,1.9s							
T35M	**Bob Quinn**	86.96	29	IAMs_20	IAMs_20	00 09 11.6		
	comp=Z,6µm,18.0s							
T35M	**Bob Quinn**	86.96	29	P	P	23 30 10.5	+0.3	
	baz=239							
B20K	**Meade River**	87.00	11	IAMs_20	IAMs_20	00 03 12.4		
	comp=Z,6µm,21.0s							
B20K	**Meade River**	87.00	11	P	P	23 30 09.8	-0.2	
	baz=214							
D22K	**Ayikyak River**	87.01	13	P	P	23 30 10.4	+0.3	
	baz=218							
S34M	**Telegraph Cree**	87.04	28	IAMs_20	IAMs_20	00 00 46.5		
	comp=Z,7µm,20.0s							
S34M	**Telegraph Cree**	87.04	28	P	P	23 30 10.5	0.0	
	baz=238							
SHBG	**Sahibganj**	87.06	297	*e*P	P	23 30 12.4	+1.1	
N31M	**Braeburn, Yuko**	87.07	24	IAmb	IAmb	23 30 16.8		
N31M				IAMs_20	IAMs_20	00 06 24.1		
	comp=Z,8µm,19.0s							
N31M	**Braeburn, Yuko**	87.07	24	P	P	23 30 11.0	+0.4	
	baz=234							
G25K	**Bearman Lake**	87.07	17	P	P	23 30 10.7	+0.3	
	baz=224,SNR=5.4							
Q32M	**Nakina River**	87.09	27	IAMs_20	IAMs_20	23 59 43.9		
	comp=Z,6µm,22.0s							
Q32M	**Nakina River**	87.09	27	P	P	23 30 10.0	-1.0	
	baz=237							
E23K	**Chandalar**	87.10	15	P	P	23 30 10.5	-0.2	
	baz=221							
GLA	**Glamis**	87.11	55	IAmb	IAmb	23 30 17.1		
	comp=Z,93nm,1.2s							
GLA				IAMs_20	IAMs_20	00 02 07.5		
	comp=Z,6µm,20.0s							
G06A	**Carlson Farm,**	87.12	42	IAmb	IAmb	23 31 08.5		
	comp=Z,108nm,2.0s							
F24K	**Squaw Lake**	87.14	16	IAmb	IAmb	23 30 32.5		
	comp=Z,115nm,1.9s							
F24K	**Squaw Lake**	87.14	16	P	P	23 30 10.7	-0.1	
	baz=223							
L29M	**L29M**	87.17	22	IAMs_20	IAMs_20	00 02 42.6		
	comp=Z,6µm,20.0s							
L29M	**L29M**	87.17	22	P	P	23 30 10.9	-0.1	
	baz=232							
DANC	**Danby, Needles**	87.18	53	IAMs_20	IAMs_20	00 01 36.2		
	comp=Z,7µm,20.0s							
B21K	**Ikpikpuk River**	87.19	12	IAMs_20	IAMs_20	00 02 48.8		
	comp=Z,5µm,21.0s							
B21K	**Ikpikpuk River**	87.19	12	P	P	23 30 11.4	+0.5	
	baz=216							
IRM	**Iron Mountain**	87.21	54	IAMs_20	IAMs_20	00 01 05.0		
	comp=Z,8µm,20.0s							
TPNV	**Topopah Spring**	87.26	51	P	P	23 30 11.0	-1.3	
TPNV				IAmb	IAmb	23 30 17.4		
	comp=Z,104nm,1.4s							
TPNV				IAMs_20	IAMs_20	23 59 33.3		
	comp=Z,5µm,22.0s							
TPNV	**Topopah Spring**	87.26	51	P	P	23 30 11.0	-1.3	
TPNV				pmax	pmax			
	comp=Z,105nm,1.5s							
TPNV				MLR	MLR			
	comp=Z,5µm,22.0s							
MTPC	**Mountain Pass**	87.31	53	IAmb	IAmb	23 30 18.6		
	comp=Z,155nm,1.7s							
DAWY	**Dawson**	87.33	21	P	P	23 30 12.1	+0.3	
	baz=231							
M30M	**Minto, Yukon**	87.33	22	P	P	23 30 11.8	-0.1	
	baz=233							
E24K	**Your Creek**	87.40	15	IAmb	IAmb	23 30 15.6		
	comp=Z,99nm,1.9s							
E24K				IAMs_20	IAMs_20	00 05 19.1		
	comp=Z,8µm,20.0s							
E24K	**Your Creek**	87.40	15	P	P	23 30 12.0	-0.1	
	baz=222							
WVOR	**Wild Horse Val**	87.42	45	IAMs_20	IAMs_20	00 06 06.3		
	comp=Z,5µm,18.0s							
WVOR	**Wild Horse Val**	87.42	45	P	P	23 30 13.5	+0.6	
I07A	**Izee**	87.43	44	IAmb	IAmb	23 30 19.1		
	comp=Z,178nm,1.7s							
D23K	**Nanushuk River**	87.54	14	IAMs_20	IAMs_20	00 05 36.1		
	comp=Z,8µm,20.0s							
D23K	**Nanushuk River**	87.54	14	P	P	23 30 13.3	+0.6	
	baz=220							
P33M	**Teslin, Yukon**	87.54	25	IAMs_20	IAMs_20	00 11 46.6		
	comp=Z,6µm,18.0s							
P33M	**Teslin, Yukon**	87.54	25	P	P	23 30 12.7	-0.3	
	baz=237							
TOLK	**Toolik Lake Re**	87.55	14	IAmb	IAmb	23 30 16.4		
	comp=Z,145nm,1.9s							
TOLK	**Toolik Lake Re**	87.55	14	P	P	23 30 13.3	+0.5	
	baz=221,SNR=6.0							
I27K	**Kandik River**	87.60	19	P	P	23 30 13.4	+0.3	
	baz=229							
BELA	**Belgrano 2**	87.69	175	P	P	23 30 11.7	-1.8	
PIX	**Pinacate**	87.76	57	IAmb	IAmb	23 30 19.5		
	comp=Z,116nm,1.8s							
F25K	**Christian Rive**	87.79	16	P	P	23 30 14.3	+0.4	
	baz=225							
DLBC	**Dease Lake**	87.81	28	LR	LR	00 04 47.7		
	comp=Z,6µm,18.9s,baz=238,slow=32							
DLBC	**Dease Lake**	87.81	28	P	P	23 30 14.4	+0.1	
	baz=239							
NEE2	**Needles Airpor**	87.81	54	IAMs_20	IAMs_20	00 01 55.0		
	comp=Z,8µm,20.0s							
K29M	**Barlow Dome**	87.84	21	P	P	23 30 14.5	+0.2	
	baz=232							
MXC	**Moxie City**	87.85	41	IAmb	IAmb	23 30 20.8		
	comp=Z,65nm,1.4s							
G26K	**Porcupine Rive**	87.86	17	P	P	23 30 14.6	+0.5	
	baz=227							
113A	**Mohawk Valley,**	87.87	56	IAmb	IAmb	23 30 20.5		
	comp=Z,122nm,1.7s							
LTY	**Liberty**	87.87	40	IAmb	IAmb	23 30 20.5		
	comp=Z,120nm,1.6s							
R33M	**Jennings River**	87.89	27	P	P	23 30 15.2	+0.4	
R33M				IAMs_20	IAMs_20	00 03 03.0		
	comp=Z,5µm,20.0s							
R33M	**Jennings River**	87.89	27	P	P	23 30 15.1	+0.4	
	baz=236							
V12A	**Nelson**	87.93	53	IAmb	IAmb	23 30 20.7		
	comp=Z,166nm,1.9s							
SHPR	**Sheep Range**	87.94	52	IAmb	IAmb	23 30 21.9		
	comp=Z,134nm,1.7s							
N32M	**Quiet Lake**	87.95	25	IAMs_20	IAMs_20	00 06 29.1		
	comp=Z,6µm,18.0s							
N32M	**Quiet Lake**	87.95	25	P	P	23 30 14.9	+0.1	
	baz=237							
BMAR	**Burnt Mountain**	87.97	17	P	P	23 30 11.9	-2.9	
B22K	**Teshekpuk Lake**	88.01	12	IAMs_20	IAMs_20	00 09 06.5		
	comp=Z,6µm,19.0s							
B22K	**Teshekpuk Lake**	88.01	12	P	P	23 30 15.3	+0.4	
	baz=218							
M31M	**Drury Creek, Y**	88.02	23	P	P	23 30 15.3	+0.1	
	baz=235							
I28M	**Miner Creek**	88.03	19	IAMs_20	IAMs_20	00 06 53.3		
	comp=Z,5µm,19.0s							
I28M	**Miner Creek**	88.03	19	P	P	23 30 15.6	+0.4	
	baz=230							
H27K	**Steamboat Moun**	88.04	18	P	P	23 30 15.6	+0.4	
	baz=229							
D24K	**Happy Valley**	88.12	14	IAmb	IAmb	23 30 18.4		
	comp=Z,85nm,1.6s							
D24K	**Happy Valley**	88.12	14	P	P	23 30 17.8	+2.4	
	baz=222,SNR=5.5							
E25K	**Arctic Village**	88.19	16	P	P	23 30 17.4	+1.6	
	baz=225							
R11B	**Troy Canyon, C**	88.21	50	IAmb	IAmb	23 30 22.8		
	comp=Z,106nm,1.8s							
C23K	**Itkillik River**	88.22	13	P	P	23 30 16.6	+0.7	
	baz=220							
BOK	**Bokaro**	88.23	295	*e*P	P	23 30 17.8	+0.8	
A22K	**Sinclair Lake**	88.24	11	P	P	23 30 18.1	+2.2	
	baz=216							
HAWA	**Hanford**	88.27	41	IAmb	IAmb	23 30 22.9		
	comp=Z,134nm,1.6s							
HAWA				IAMs_20	IAMs_20	00 06 13.6		
	comp=Z,5µm,18.0s							
F26K	**Sheenjek River**	88.27	17	P	P	23 30 15.1	-1.2	
F26K				IAMs_20	IAMs_20	00 05 29.6		
	comp=Z,6µm,20.0s							
F26K	**Sheenjek River**	88.27	17	P	P	23 30 17.4	+1.2	
	baz=226							
PRN	**Pahroc Range**	88.31	51	IAmb	IAmb	23 30 23.7		
	comp=Z,132nm,1.4s							
LPIG	**La Paz**	88.31	65	LR	LR	00 04 24.0		
	comp=Z,1µm,18.1s,baz=252,slow=32							
WAH2	**Wahluke Slope**	88.38	41	IAmb	IAmb	23 30 23.1		
	comp=Z,106nm,1.5s							
G27K	**Doyon Strip**	88.38	18	P	P	23 30 17.6	+0.8	
	baz=229							
LLLB	**Lillooet**	88.46	37	IAmb	IAmb	23 30 31.0		
	comp=Z,164nm,1.7s							
YPT	**Yellepit**	88.51	42	IAmb	IAmb	23 30 23.9		
	comp=Z,106nm,1.5s							
SLBS	**Sierra La Lagu**	88.52	65	IAMs_20	IAMs_20	00 07 35.0		
	comp=Z,4µm,18.0s							
EVN	**Everest**	88.56	299	IAmb	IAmb	23 30 22.6		
	comp=Z,53nm,1.2s							
C24K	**Franklin Bluff**	88.57	14	IAmb	IAmb	23 30 21.4		
	comp=Z,121nm,1.3s							
C24K	**Franklin Bluff**	88.57	14	P	P	23 30 19.6	+2.1	
	baz=222							
J30M	**Hart River**	88.69	21	P	P	23 30 18.9	+0.5	
	baz=234							
Y14A	**Wickenburg**	88.83	55	IAmb	IAmb	23 30 25.0		
	comp=Z,66nm,1.6s							
D25K	**Kavik River**	88.84	15	P	P	23 30 19.6	+0.8	
D25K				IAmb	IAmb	23 30 22.2		
	comp=Z,76nm,1.9s							
D25K	**Kavik River**	88.84	15	P	P	23 30 20.3	+1.4	
	baz=224							
LNOR	**Lincton Mounta**	88.89	42	IAmb	IAmb	23 30 25.4		
	comp=Z,68nm,1.7s							
PALK	**Pallekele**	88.89	278	LR	LR	00 11 37.1		
	comp=Z,4µm,19.9s,baz=111,slow=37							
D08A	**Wollman Farm,**	88.91	41	IAmb	IAmb	23 30 25.8		
	comp=Z,138nm,1.5s							
VIS	**Vishakhapatnam**	88.96	288	*e*P	P	23 30 18.8	-1.7	
H29M	**Whitestone**	89.02	19	IAMs_20	IAMs_20	00 03 12.3		
	comp=Z,7µm,22.0s							
H29M	**Whitestone**	89.02	19	P	P	23 30 20.5	+0.8	
	baz=232							
I30M	**Mount Dempster**	89.06	20	P	P	23 30 21.2	+1.1	
	baz=234							
GAYA	**Gaya**	89.07	296	*e*P	P	23 30 21.9	+1.0	
TIXI	**Tiksi**	89.08	349	P	P	23 30 19.8	-0.1	
TIXI	**Tiksi**	89.08	349	LR	LR	00 08 47.9		
	comp=Z,3µm,19.5s,baz=158,slow=35							
TIXI	**Tiksi**	89.08	349	*ce*P	P	23 30 18.7	-1.2	
TIXI				pmax	pmax			
	comp=Z,48nm,2.5s							
HSIG		89.11	60	IAmb	IAmb	23 30 26.8		
	comp=Z,170nm,2.0s							
BMO	**Blue Mountains**	89.17	43	IAMs_20	IAMs_20	00 02 46.7		
	comp=Z,6µm,20.0s							
WTLY	**Watson Lake, Y**	89.20	27	P	P	23 30 21.2	+0.5	
	baz=240							
RAGD	**RAYAGADA**	89.23	290	*e*P	P	23 30 19.6	-2.2	
ELK	**Elko**	89.24	48	IAmb	IAmb	23 30 27.8		
	comp=Z,132nm,1.8s							
ELK				IAMs_20	IAMs_20	00 01 05.6		
	comp=Z,7µm,22.0s							
ELK	**Elko**	89.24	48	LR	LR	00 05 16.3		
	comp=Z,6µm,18.8s,baz=246,slow=32							
MALK	**Mahakanadarawa**	89.31	279	P	P	23 30 23.0	+0.7	
E27K	**Coleen River**	89.31	17	IAMs_20	IAMs_20	00 08 36.2		
	comp=Z,6µm,19.0s							
E27K	**Coleen River**	89.31	17	P	P	23 30 22.3	+1.1	
	baz=229							
SPR3	**Spring Creek 3**	89.35	50	IAmb	IAmb	23 30 28.3		
	comp=Z,157nm,1.7s							
F28M	**Old Crow**	89.44	18	P	P	23 30 20.9	-0.8	
F28M	**Old Crow**	89.44	18	P	P	23 30 22.8	+1.1	
	baz=230							
MMPY	**Sheldon Lake,**	89.47	24	P	P	23 30 22.4	+0.4	
	baz=238							
G29M	**Pine Creek**	89.56	19	P	P	23 30 22.8	+0.5	
	baz=232							
LCMT	**Little Creek M**	89.56	52	IAmb	IAmb	23 30 29.5		
	comp=Z,146nm,1.8s							
C09A	**Chrisman Ranch**	89.58	40	IAmb	IAmb	23 30 28.7		
	comp=Z,139nm,1.9s							
C26K	**Camden Bay**	89.62	15	P	P	23 30 23.5	+1.0	
	baz

WUAZ IAMs_20 IAMs_20 00 03 22.1
comp=Z,7µm,20.0s
F30M Barrier River 90.67 19 P **P** **23 30 28.3 +0.9**
baz=234
HLID Hailey 90.72 45 IAmb IAmb 23 30 34.8
comp=Z,77nm,1.6s
HLID IAMs_20 IAMs_20 00 03 44.5
comp=Z,8µm,20.0s
G31M Satah River 90.75 20 IAMs_20 IAMs_20 00 05 19.3
comp=Z,7µm,20.0s
G31M Satah River 90.75 20 P **P** **23 30 28.8 +1.0**
baz=235
DUG Dugway, Tooele 90.83 49 IAmb IAmb 23 30 35.2
comp=Z,60nm,1.4s
D28M Stokes Point 90.85 17 P **P** **23 30 29.6 +1.4**
baz=231
VAR Varanasi 91.14 296 *e*P **P** **23 30 29.9 -0.7**
BLSP Bilaspur 91.14 292 *e*P **P** **23 30 28.9 -1.8**
VJD Vijayawada 91.15 287 *e*P **P** **23 30 33.0 +2.3**
F31M Tsiigehtchic 91.22 19 IAMs_20 IAMs_20 00 04 50.5
comp=Z,8µm,22.0s
F31M Tsiigehtchic 91.22 19 P **P** **23 30 30.6 +0.7**
baz=236
KOTAN Kotaneelee Air 91.32 28 P **P** **23 30 30.6 0.0**
baz=244
X18A Snowflake 91.43 55 IAmb IAmb 23 30 37.5
comp=Z,55nm,1.3s
BCYI Bear Canyon 91.64 45 IAmb IAmb 23 30 39.1
comp=Z,121nm,1.9s
MPU Maple Canyon 91.65 49 IAmb IAmb 23 30 39.1
comp=Z,81nm,1.7s
CTU Camp Tracy 91.75 49 IAmb IAmb 23 30 39.3
comp=Z,98nm,1.7s
W18A Petrified Fore 91.75 54 IAmb IAmb 23 30 38.8
comp=Z,37nm,1.1s
TMUT Trail Mountain 91.76 50 IAmb IAmb 23 30 40.2
comp=Z,59nm,1.5s
INK Inuvik 91.77 19 LR LR 00 07 01.4
comp=Z,8µm,20.1s,baz=220,slow=32
INK Inuvik 91.77 19 P **P** **23 30 32.8 +0.3**
baz=236
MSO Missoula 92.04 42 P **P** **23 30 33.3 -1.1**
MSO IAmb IAmb 23 30 39.6
comp=Z,61nm,1.8s
TCUT Toone Canyon 92.12 48 IAmb IAmb 23 30 56.8
comp=Z,128nm,2.0s
HWUT Hardware Ranch 92.14 48 IAmb IAmb 23 30 39.9
comp=Z,79nm,1.9s
HWUT IAMs_20 IAMs_20 00 02 49.5
comp=Z,5µm,22.0s
P17A Butcher Ranch, 92.16 50 IAmb IAmb 23 30 41.6
comp=Z,48nm,1.6s
ALBI Allahabad 92.20 295 *e*P **P** **23 30 32.6 -2.9**
WMQ Urumqi 92.38 314 *e*P **P** **23 30 37.8 +1.8**
WMQ SKS **SKSac** **23 41 10.3 +1.6**
WMQ S **S** **23 41 38.0 -0.9**
WMQ SS **SS** **23 47 46.8 -3.4**
WMQ pmax pmax
comp=Z,38nm,1.7s
WMQ pmax pmax
comp=Z,710nm,4.1s
WMQ LR LR
comp=Z,4µm,15.5s
WMQ LR LR
comp=Z,2µm,18.1s
WMQ LR LR
comp=Z,4µm,24.3s
BSUT Blindstream Ca 92.43 49 IAmb IAmb 23 30 42.9
comp=Z,99nm,1.9s
DLMT Dillon 92.50 44 IAmb IAmb 23 30 42.7
comp=Z,123nm,1.7s
DLMT IAMs_20 IAMs_20 00 06 04.7
comp=Z,6µm,20.0s
PMSA Palmer Station 92.55 160 LR LR 00 04 06.9
comp=Z,2µm,21.5s,baz=232,slow=30
KOD Kodaikanal 92.69 280 *e*P **P** **23 30 39.4 +1.0**
TRD Trivandrum 92.78 278 *e*P **P** **23 30 36.7 -1.7**
AHID Auburn Hatcher 92.80 47 IAMs_20 IAMs_20 00 03 20.7
comp=Z,6µm,22.0s
FXWY Fox Creek 93.09 46 IAmb IAmb 23 30 54.9
comp=Z,56nm,1.9s
FXWY IAMs_20 IAMs_20 00 04 07.4
comp=Z,6µm,21.0s
TPAW Teton Pass 93.10 46 IAmb IAmb 23 30 45.9
comp=Z,86nm,1.9s
TPAW IAMs_20 IAMs_20 00 03 56.6
comp=Z,6µm,21.0s
QLMT Earthquake Lak 93.14 45 P **P** **23 30 38.7 -1.0**
PV10 Paradox Valley 93.14 51 IAmb IAmb 23 30 44.7
comp=Z,68nm,1.5s
PV19 Morning Glory 93.17 51 IAmb IAmb 23 30 45.0
comp=Z,93nm,1.7s
PV20 West Nyswonger 93.19 51 IAmb IAmb 23 30 45.0
comp=Z,96nm,1.7s
PV18 Skein Mesa, Pa 93.21 52 IAmb IAmb 23 30 54.1
comp=Z,96nm,1.9s
BOZ Bozeman (W) 93.22 44 IAmb IAmb 23 30 46.1
comp=Z,111nm,1.9s
BOZ IAMs_20 IAMs_20 00 05 37.7
comp=Z,6µm,20.0s
SNOW Snow King Moun 93.23 46 IAMs_20 IAMs_20 00 03 27.2
comp=Z,7µm,22.0s
PV04 Paradox Valley 93.25 51 IAmb IAmb 23 30 45.5
comp=Z,65nm,1.7s
HYBB Hyderabad (bro 93.31 287 *e*P **P** **23 30 39.9 -0.9**
HYBB *e*pP **pP** **23 30 46.4 -0.4**
HYBB *e*PP **PP** **23 34 23.6 -1.3**
HYBB *e*SKSac **SKSac** **23 41 13.1 -1.7**
RDMU Red Mountain 93.31 49 P **P** **23 30 40.2 -0.4**
MOOW Moose Ponds 93.32 46 IAMs_20 IAMs_20 00 04 47.4
comp=Z,6µm,21.0s
PV02 Paradox Valley 93.33 52 IAmb IAmb 23 30 45.8
comp=Z,125nm,1.9s
LKN LUCKNOW 93.36 297 *e*P **P** **23 30 41.0 +0.2**
LOHW Long Hollow 93.38 46 IAMs_20 IAMs_20 00 03 32.1
comp=Z,7µm,22.0s
DGAR Diego Garcia 93.41 262 IAMs_20 IAMs_20 00 16 00.4
comp=Z,18.0s
FLWY Flagg Ranch 93.44 46 IAMs_20 IAMs_20 00 03 47.6
comp=Z,8µm,22.0s
BW06 Boulder Array 93.89 47 IAMs_20 IAMs_20 00 03 32.7
comp=Z,5µm,22.0s
PDAR Pinedale Array 93.89 47 P **P** **23 30 42.4 -0.8**
PDAR Pinedale Array 93.89 47 P **P** **23 30 41.4 -1.8**
comp=Z,0.5nm,0.6s,baz=242,slow=3.2,SNR=7.2
PDAR LR LR 00 05 54.0
comp=Z,2µm,20.6s,baz=265,slow=31
comp=Z,0.5nm,0.6s
TROLL Troll, Antarti 93.91 185 ⇓P **P** **23 30 38.6 -4.1**
comp=Z,987nm,0.9s
O20A White River Ci 94.19 50 IAmb IAmb 23 30 58.6
comp=Z,58nm,1.8s
O20A IAMs_20 IAMs_20 00 06 16.6
comp=Z,7µm,20.0s
DGZ Jazzator, Alta 94.21 320 *i* P **P** **23 30 45.3 +0.9**
DGZ pmax pmax
comp=Z,33nm,1.9s
TASM ASL Pad, Albuq 94.31 55 IAmb IAmb 23 30 50.0
comp=Z,14nm,1.3s
TASM ASL Pad, Albuq 94.31 55 IAmb IAmb 23 30 50.0
comp=Z,15nm,1.4s
ANMO Albuquerque 94.31 55 P **P** **23 30 44.0 -1.3**
ANMO Albuquerque 94.31 55 IAMs_20 IAMs_20 00 07 22.2
comp=Z,4µm,19.0s
ANMO Albuquerque 94.31 55 LR LR 00 06 56.3
comp=Z,5µm,19.2s,baz=357,slow=32
ANMO Albuquerque 94.31 55*ce*P **P** **23 30 45.6 +0.3**
ANMO pmax pmax
comp=Z,13nm,1.6s
LGTI Lohaghat 94.52 299⇑ *e*P **P** **23 30 45.7 -0.4**
SNAA Sanae 94.58 183 ⇓P **P** **23 30 42.1 -3.6**
comp=Z,135nm,1.0s
SNAA Sanae 94.58 183 P **P** **23 30 43.9 -1.8**
SNAA Sanae 94.58 183 P **P** **23 30 41.7 -3.9**
comp=Z,5.6nm,1.0s,baz=192,slow=3.5,SNR=16
SNAA LR LR 00 09 21.4
comp=Z,3µm,21.7s,baz=172,slow=33
comp=Z,5.6nm,1.0s
SNAA Sanae 94.58 183*ce*P **P** **23 30 46.2 +0.5**
SNAA pmax pmax
comp=Z,18nm,1.3s
RLMT Red Lodge 94.70 45 IAMs_20 IAMs_20 00 06 53.9
comp=Z,7µm,20.0s
KAAM Kaadhehdhoo 94.77 269 IAMs_20 IAMs_20 00 07 42.1
comp=Z,4µm,20.0s
HAYD Hayden 95.01 50 IAMs_20 IAMs_20 00 07 31.3
comp=Z,4µm,20.0s

EGMT Eagleton 95.11 42 IAmb IAmb 23 30 54.3
comp=Z,118nm,1.9s
EGMT IAMs_20 IAMs_20 00 09 24.6
comp=Z,4µm,19.0s
JHNI Jhansi 95.12 295 *e*P **P** **23 30 45.9 -3.0**
VNA3 Neumayer Olymp 95.23 181 ⇓P **P** **23 30 45.4 -3.2**
comp=Z,8.0nm,0.8s
ZSN Zaisan 95.26 317 *e*P **P** **23 30 48.0 -1.2**
ZSN *e*PP **PP** **23 34 37.9 -1.6**
ZSN Zaisan 95.26 317 *e*P **P** **23 30 47.9 -1.2**
ZSN *e* 23 34 37.9
C36M Paulatuk 95.27 19 IAMs_20 IAMs_20 00 07 22.7
comp=Z,6µm,21.0s
JOSI Joshimath 95.35 300 *e*P **P** **23 30 47.6 -2.5**
TX31 Lajitas Ar. Si 95.35 61 IAmb IAmb 23 30 56.1
comp=Z,70nm,2.0s
TXAR Lajitas Array 95.35 61 P **P** **23 30 48.3 -1.8**
TXAR Lajitas Array 95.35 61 P **P** **23 30 47.1 -2.9**
comp=Z,0.6nm,0.7s,baz=245,slow=5.0,SNR=7.1
TXAR LR LR 00 08 26.2
comp=Z,3µm,18.6s,baz=260,slow=32
comp=Z,0.6nm,0.7s
TXAR Lajitas Array 95.35 61 P **P** **23 30 48.3 -1.8**
AKL Akola 95.45 290 *e*P **P** **23 30 50.0 -0.6**
VNA2 Neumayer--Watz 95.50 182 ⇓P **P** **23 30 45.4 -4.4**
comp=Z,8.6nm,0.7s,baz=165,slow=4.3
BHPL Bhopal 95.63 292 *e*P **P** **23 30 52.5 +1.1**
NRDN NARMADA NAGAR 95.75 292 *e*P **P** **23 30 54.4 +2.5**
VNA1 Neumayer--Stat 95.80 181 ⇓P **P** **23 30 51.2 0.0**
comp=Z,7.0nm,0.8s
GUNA GUNA 96.01 294 *e*P **P** **23 30 52.9 -0.2**
AGRA Agra 96.02 296⇑ *e*P **P** **23 30 52.3 -0.6**
K22A Casper 96.03 48 IAMs_20 IAMs_20 00 06 53.5
comp=Z,4µm,20.0s
A36M Sachs Harbour 96.06 17 IAMs_20 IAMs_20 00 07 57.4
comp=Z,7µm,22.0s
ISCO Idaho Springs 96.07 51 IAMs_20 IAMs_20 00 06 31.6
comp=Z,6µm,21.0s
YKA Yellowknife Ar 96.42 27 P **P** **23 30 54.1 +0.2**
YKA Yellowknife Ar 96.42 27 P **P** **23 30 51.0 -3.0**
comp=Z,5.4nm,1.1s,baz=257,slow=5.9,SNR=6.0
YKA LR LR 00 07 04.7
comp=Z,4µm,21.2s,baz=258,slow=31
comp=Z,5.4nm,1.1s
YKA Yellowknife Ar 96.42 27 P **P** **23 30 54.1 +0.2**
T25A Trinidad 96.42 53 IAMs_20 IAMs_20 00 07 02.0
comp=Z,6µm,20.0s
MERT Meerut 96.56 298 *e*P **P** **23 30 52.9 -2.6**
MK31 Makanchi Array 96.82 316*ce*P **P** **23 30 55.7 -0.5**
MKAR Makanchi Array 96.82 316 P **P** **23 30 53.9 -2.3**
MKAR Makanchi Array 96.82 316 P **P** **23 30 53.5 -2.7**
comp=Z,5.7nm,0.9s,baz=97,slow=5.3,SNR=23
MKAR PP **PP** **23 34 50.1 -1.5**
comp=Z,2.6nm,1.1s,baz=98,slow=10,SNR=5.5
MKAR LR LR 00 15 36.3
comp=Z,1µm,19.6s,baz=88,slow=36
comp=Z,5.7nm,0.9s
MKAR Makanchi Array 96.82 316 *i* P **P** **23 30 54.7 -1.5**
MKAR pmax pmax
comp=Z,6.0nm,0.9s
ZAA0 Zalesovo Array 96.88 324 IAmb IAmb 23 31 01.9
comp=Z,48nm,1.9s
ZALV Zalesovo Beam 96.88 324 P **P** **23 30 54.8 -1.4**
ZALV Zalesovo Beam 96.88 324 P **P** **23 30 53.5 -2.8**
comp=Z,1.6nm,0.7s,baz=127,slow=3.9,SNR=13
ZALV LR LR 00 13 32.6
comp=Z,2µm,21.4s,baz=97,slow=35
comp=Z,1.6nm,0.7s
ZALV Zalesovo Beam 96.88 324 *i* P **P** **23 30 56.9 +0.7**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
USHA Ushuaia 96.92 151 LR LR 00 05 28.5
comp=Z,3µm,21.6s,baz=226,slow=30
NPLP NPLP New Delhi 96.98 298 *e*P **P** **23 30 56.0 -1.3**
MAKZ Makanchi 97.03 316 P **P** **23 30 56.4 -0.8**
MAKZ IAmb IAmb 23 31 00.1
comp=Z,57nm,1.6s
MAKZ Makanchi 97.03 316 P **P** **23 30 56.4 -0.8**
MAKZ pmax pmax
comp=Z,57nm,1.6s
UNM Universidad Na 97.24 72 IAMs_20 IAMs_20 00 08 54.1
comp=Z,4µm,18.0s
JHJR Jhajjar 97.43 298 *e*P **P** **23 30 55.8 -3.5**
SMLA Simla 97.48 300 *e*P **P** **23 30 59.7 +0.2**
SHLS Shalkode 98.03 312 *e*P **P** **23 30 59.5 -2.4**
SHLS *e*PP **PP** **23 34 57.1 -4.1**
SHLS Shalkode 98.03 312 *e*P **P** **23 30 59.5 -2.4**
SHLS *e* 23 34 57.0
ALCI Alchi Leh 98.07 303 IAmb IAmb 23 35 07.5
comp=Z,281nm,3.2s
AMTX Amarillo 98.14 56 IAMs_20 IAMs_20 00 08 27.5
comp=Z,4µm,20.0s
UZB Uzynbulak 98.35 312 *e*P **P** **23 31 01.7 -1.7**
comp=Z,26nm,2.0s
UZB *e*PP **PP** **23 35 02.0 -1.6**
UZB Uzynbulak 98.35 312 *e*P **P** **23 31 01.6 -1.7**
UZB *e* 23 35 01.9
UZB pmax pmax
comp=Z,26nm,2.0s
AY03 Cochrane 98.90 143 IAMs_20 IAMs_20 00 10 41.6
comp=Z,4µm,19.0s
OGNE Ogallala 98.98 50 IAMs_20 IAMs_20 00 07 29.6
comp=Z,7µm,22.0s
TDK Taldyqorghan 99.12 314 *e*P **Pdif** **23 31 05.0 -1.6**
comp=Z,40nm,1.9s
TDK *e*PP **PP** **23 35 07.6 -1.7**
TDK LR LR 00 17 28.7
TDK Taldyqorghan 99.12 314 *e*P **Pdif** **23 31 05.0 -1.6**
TDK *e* 23 35 07.6
TDK pmax pmax
comp=Z,40nm,1.9s
NRIK Noril'sk 99.31 339 P **Pdif** **23 31 04.2 -2.6**
comp=Z,2.2nm,0.7s,baz=98,slow=5.6,SNR=6.4
NRIK LR LR 00 12 28.2
comp=Z,2µm,21.5s,baz=106,slow=33
comp=Z,2.2nm,0.7s
NRIK Noril'sk 99.31 339*ce*P **Pdif** **23 31 07.6 +0.8**
NRIK pmax pmax
comp=Z,29nm,2.3s
MDOK Medeo 99.77 312 *e*P **Pdif** **23 31 07.7 -2.1**
MDOK *e*PP **PP** **23 35 12.6 -1.8**
MDOK LR LR 00 17 52.4
MDOK Medeo 99.77 312 *e*P **Pdif** **23 31 07.6 -2.1**
MDOK *e* 23 35 12.6
TNSS Tian-Shan 99.83 312 *e*P **Pdif** **23 31 08.4 -2.0**
TNSS *e*PP **PP** **23 35 13.0 -2.2**
TNSS Tian-Shan 99.83 312 *e*P **Pdif** **23 31 08.3 -2.0**
TNSS *e* 23 35 12.9
AAA Alma-Ata 99.88 312 *e*P **Pdif** **23 31 09.2 -0.9**
comp=Z,38nm,2.2s
AAA Alma-Ata 99.88 312 *e*P **Pdif** **23 31 09.1 -0.9**
AAA pmax pmax
comp=Z,37nm,2.2s
KURK Kurchatov 99.95 320 **Pdif** **23 31 10.3 +0.2**
KURK Kurchatov 99.95 320 IAMs_20 IAMs_20 00 14 14.3
comp=Z,6µm,22.0s
KURK Kurchatov 99.95 320 P **Pdif** **23 31 10.3 +0.2**
KURK pmax pmax
comp=Z,17nm,1.7s
KURK MLR MLR
comp=Z,6µm,22.0s
KSH Kashi 99.97 308 P **Pdif** **23 31 11.0 +0.3**
KSH PP **PP** **23 35 18.2 +2.2**
KSH SKS **SKSac** **23 41 52.1 +3.2**
KSH pmax pmax
comp=Z,4.0nm,1.9s
KSH LR LR
comp=Z,1µm,15.1s
KSH LR LR
comp=Z,4µm,21.2s
KSH LR LR
comp=Z,6µm,24.7s
KURBB Kurchatov Arra 100.00 320 P **Pdif** **23 31 08.6 -1.7**
comp=Z,0.3nm,0.8s,baz=101,slow=4.8,SNR=6.7
735A Kenedy 100.29 63 IAMs_20 IAMs_20 00 15 45.6
comp=Z,5µm,18.0s
OK038 West end E0370 100.77 55 IAMs_20 IAMs_20 00 10 30.1
comp=Z,4µm,20.0s
E28A Huff 100.86 45 IAMs_20 IAMs_20 00 18 25.9
comp=Z,3µm,18.0s
H03S2 Juan Fernandez 100.91 129 T T 01 23 49.6
baz=240,slow=74,SNR=6.2
H03S1 Juan Fernandez 100.92 129 T T 01 23 50.8
baz=240,slow=74,SNR=6.1
H03S3 Juan Fernandez 100.92 129 T T 01 23 49.9
baz=240,slow=74,SNR=7.1

K30B Basset 101.05 49 IAMs_20 IAMs_20 00 08 55.2
comp=Z,4µm,21.0s
H03N2 Juan Fernandez 101.07 128 T T 01 24 06.5
baz=238
H03N3 Juan Fernandez 101.07 129 T T 01 24 06.5
baz=238
H03N1 Juan Fernandez 101.08 129 T T 01 24 05.7
baz=238,SNR=2.8
R32A Long Quarter, 101.09 53 IAMs_20 IAMs_20 00 10 00.6
comp=Z,6µm,20.0s
LL02 Futaleuf 101.46 140 IAMs_20 IAMs_20 00 06 26.7
comp=Z,4µm,20.0s
LL01 San Ignacio de 101.52 139 IAMs_20 IAMs_20 00 06 27.4
comp=Z,4µm,20.0s
SGDS Sogindy 101.56 312 *e*P **Pdif** **23 31 15.9 -1.6**
OK029 Liberty Lake 101.70 56 IAMs_20 IAMs_20 00 10 30.7
comp=Z,5µm,20.0s
MDND Maddock 101.77 43 IAMs_20 IAMs_20 00 14 37.9
comp=Z,5µm,19.0s
LR04 Corral 102.10 136 IAMs_20 IAMs_20 00 06 43.3
comp=Z,7µm,22.0s
HKT Hockley 102.17 62 IAMs_20 IAMs_20 00 16 04.3
comp=Z,5µm,19.0s
OK048 Pawnee Station 102.19 55 IAMs_20 IAMs_20 00 12 02.9
comp=Z,5µm,20.0s
OK052 Battle Ridge R 102.25 56 IAMs_20 IAMs_20 00 11 08.3
comp=Z,6µm,20.0s
OK051 E0350 and S346 102.29 55 IAMs_20 IAMs_20 00 17 51.5
comp=Z,5µm,18.0s
T35A Sooner Cattle 102.61 55 IAMs_20 IAMs_20 00 09 21.8
comp=Z,4µm,22.0s
KSU1 Kansas State U 102.82 53 IAMs_20 IAMs_20 00 14 04.2
comp=Z,5µm,19.0s
LR05 Currie 102.87 137 IAMs_20 IAMs_20 00 06 32.6
comp=Z,5µm,22.0s
LR03 Panguipulli 102.95 137 IAMs_20 IAMs_20 00 07 18.7
comp=Z,7µm,22.0s
TUL3 Leonard 103.05 56 IAMs_20 IAMs_20 00 11 51.5
comp=Z,5µm,20.0s
ECSD EROS Data Cent 103.36 48 IAMs_20 IAMs_20 00 13 37.3
comp=Z,4µm,19.0s
N35A Tabor 103.76 51 IAMs_20 IAMs_20 00 10 32.1
comp=Z,5µm,22.0s
BI05 Punta Hualpn 103.79 134 IAMs_20 IAMs_20 00 07 17.4
comp=Z,4µm,21.0s
U38A Gravette 104.24 56 IAMs_20 IAMs_20 00 12 38.1
comp=Z,4µm,20.0s
AGMN Agassiz Nation 104.31 43 IAMs_20 IAMs_20 00 11 59.2
comp=Z,5µm,20.0s
BI02 San Fabin de 105.17 134 IAMs_20 IAMs_20 00 08 29.8
comp=Z,4µm,21.0s
P38A Dawn 105.24 52 IAMs_20 IAMs_20 00 12 44.5
comp=Z,5µm,20.0s
BVAR Borovoye Array 105.27 322 PKiKP **PKiKP** **23 35 47.7 -0.1**
comp=Z,4.9nm,1.1s,baz=64,slow=3.4,SNR=6.1
I37A Lemond, Waseca 105.70 48 IAMs_20 IAMs_20 00 11 48.2
comp=Z,3µm,22.0s
SPMN Marine on St. 106.20 47 IAMs_20 IAMs_20 00 11 48.4
comp=Z,6µm,22.0s
P40A Paris 106.38 53 IAMs_20 IAMs_20 00 11 22.5
comp=Z,6µm,22.0s
BO01 Tunca 106.44 132 IAMs_20 IAMs_20 00 09 34.7
comp=Z,4µm,22.0s
BO02 Sierra Bellavi 106.46 133 IAMs_20 IAMs_20 00 09 38.1
comp=Z,4µm,21.0s
MT01 Popeta 106.58 132 IAMs_20 IAMs_20 00 08 42.6
comp=Z,4µm,22.0s
VA01 Torpederas 106.70 131 IAMs_20 IAMs_20 00 10 03.1
comp=Z,4µm,19.0s
MT09 Talagante 106.81 132 IAMs_20 IAMs_20 00 10 06.7
comp=Z,3µm,21.0s
CCM Cathedral Cave 106.89 54 IAMs_20 IAMs_20 00 13 39.2
comp=Z,5µm,20.0s
MT02 Curacav 106.96 131 IAMs_20 IAMs_20 00 08 17.7
comp=Z,4µm,21.0s
BO04 La Punta 106.98 132 IAMs_20 IAMs_20 00 10 02.1
comp=Z,4µm,20.0s
E38A The Farm, Brul 107.13 45 IAMs_20 IAMs_20 00 13 58.0
comp=Z,5µm,20.0s
MT05 Renca 107.19 132 IAMs_20 IAMs_20 00 10 33.6
comp=Z,3µm,19.0s
MT03 Universidad Ad 107.30 132 IAMs_20 IAMs_20 00 10 30.6
comp=Z,3µm,19.0s
MT16 CCHEN 107.32 132 IAMs_20 IAMs_20 00 10 01.2
comp=Z,4µm,22.0s
LMEL Las Melosas 107.34 132 IAMs_20 IAMs_20 00 10 03.6
comp=Z,5µm,22.0s
VA03 San Esteban 107.63 131 IAMs_20 IAMs_20 00 10 08.6
comp=Z,3µm,21.0s
MT08 Bocatoma Ro 107.68 132 IAMs_20 IAMs_20 00 10 25.0
comp=Z,4µm,20.0s
I40A Norwalk 107.70 48 IAMs_20 IAMs_20 00 19 24.1
comp=Z,3µm,19.0s
G40A Rib Lake 108.04 47 IAMs_20 IAMs_20 00 12 54.0
comp=Z,6µm,22.0s
OXF Oxford 108.10 58 IAMs_20 IAMs_20 00 20 38.4
comp=Z,3µm,19.0s
S44A Carbondale 108.44 55 IAMs_20 IAMs_20 00 13 13.2
comp=Z,5µm,21.0s
Q44A Meyer Farm, Va 108.69 53 IAMs_20 IAMs_20 00 14 43.7
comp=Z,5µm,20.0s
T45A Paducah 108.89 55 IAMs_20 IAMs_20 00 24 00.0
comp=Z,5µm,18.0s
I42A Draeger Farm, 108.93 48 IAMs_20 IAMs_20 00 27 34.7
comp=Z,3µm,18.0s
AC04 Llanos de Chal 109.44 127 IAMs_20 IAMs_20 00 10 14.0
comp=Z,4µm,22.0s
F42A Maple Grove Fa 109.50 46 IAMs_20 IAMs_20 00 15 00.6
comp=Z,6µm,21.0s
M44A Midewin, Midew 109.52 51 IAMs_20 IAMs_20 00 14 21.6
comp=Z,6µm,22.0s
H43A Windswept, Lux 109.76 47 IAMs_20 IAMs_20 00 16 51.6
comp=Z,4µm,20.0s
LRAL Lakeview Retre 110.00 60 IAMs_20 IAMs_20 00 24 20.8
comp=Z,3µm,18.0s
P46A Rosedale 110.12 53 IAMs_20 IAMs_20 00 14 20.5
comp=Z,5µm,21.0s
GO03 Copiapo 110.38 127 IAMs_20 IAMs_20 00 11 40.0
comp=Z,4µm,22.0s
AC06 Mina Casimiro 110.40 126 IAMs_20 IAMs_20 00 11 38.6
comp=Z,4µm,22.0s
Y49A Blount Mountai 110.54 59 IAMs_20 IAMs_20 00 16 48.0
comp=Z,4µm,21.0s
TRQA Tornquist 110.54 140 IAMs_20 IAMs_20 00 12 21.2
comp=Z,3µm,22.0s
WCI Wyandotte Cave 110.80 54 IAMs_20 IAMs_20 00 14 45.6
comp=Z,6µm,21.0s
L46A Eue Claire 110.84 50 IAMs_20 IAMs_20 00 14 36.4
comp=Z,6µm,22.0s
I45A Fountain 110.86 48 IAMs_20 IAMs_20 00 27 34.9
comp=Z,4µm,18.0s
P48A Milroy 111.50 53 IAMs_20 IAMs_20 00 19 35.9
comp=Z,5µm,20.0s
W50A Signal Mountai 111.50 57 IAMs_20 IAMs_20 00 26 17.4
comp=Z,3µm,18.0s
AC02 Maricunga 111.61 126 IAMs_20 IAMs_20 00 12 26.5
comp=Z,4µm,21.0s
R49A Shelbyville 111.68 54 IAMs_20 IAMs_20 00 15 55.0
comp=Z,6µm,22.0s
GO02 Mina Guanaco 112.03 125 IAMs_20 IAMs_20 00 11 48.2
comp=Z,4µm,22.0s
ARTI Arti 112.05 326 *i* PKIKP **PKiKP** **23 36 02.5 +2.1**
ARTI 23 43 14.6
ARTI SS SS 23 52 17.1 -4.2
ARTI MLR MLR
comp=Z,3µm,19.0s
E46A Sault Ste Mari 112.14 45 IAMs_20 IAMs_20 00 16 39.5
comp=Z,5µm,22.0s
VOI Vohitsoka 112.17 239 IAMs_20 IAMs_20 00 16 15.5
comp=Z,6µm,21.0s
R50A Paris 112.35 54 IAMs_20 IAMs_20 00 16 35.6
comp=Z,5µm,21.0s
Y52A Lilburn 112.49 59 IAMs_20 IAMs_20 00 18 45.7
comp=Z,4µm,20.0s
S51A Beattyville 112.93 55 IAMs_20 IAMs_20 00 15 30.0
comp=Z,5µm,22.0s
GOGA Godfrey 112.98 59 IAMs_20 IAMs_20 00 17 53.5
comp=Z,5µm,19.0s
Q51A Peebles 113.11 53 IAMs_20 IAMs_20 00 20 35.8
comp=Z,5µm,19.0s
PB02 IPOC Station P 113.53 121 IAMs_20 IAMs_20 00 12 08.5
comp=Z,3µm,22.0s
V53A Saluda 113.55 57 IAMs_20 IAMs_20 00 26 47.7
comp=Z,3µm,18.0s
Q52A Bidwell 113.95 53 IAMs_20 IAMs_20 00 21 11.1
comp=Z,4µm,19.0s
HMBC Humberstone 114.00 120 IAMs_20 IAMs_20 00 13 19.9
comp=Z,3µm,20.0s

U54A	**Nelsons Funny**	**114.36**	**56**	IAMs_20	IAMs_20	00 18 49.8				
	comp=Z,4μm,20.0s									
PB11	**IPOC Station P**	**114.42**	**119**	IAMs_20	IAMs_20	00 13 22.2				
	comp=Z,3μm,22.0s									
M52A	**Chesterland**	**114.54**	**50**	IAMs_20	IAMs_20	00 30 44.5				
	comp=Z,3μm,18.0s									
KMSC	**Kings Mountain**	**114.76**	**57**	IAMs_20	IAMs_20	00 17 56.7				
	comp=Z,4μm,21.0s									
GO01	**Chusmiza**	**114.85**	**119**	IAMs_20	IAMs_20	00 13 56.6				
	comp=Z,3μm,21.0s									
V55A	**Taylorsville**	**114.85**	**57**	IAMs_20	IAMs_20	00 22 08.0				
	comp=Z,4μm,19.0s									
Q54A	**Coxs Mills**	**115.07**	**53**	IAMs_20	IAMs_20	00 21 44.6				
	comp=Z,4μm,20.0s									
BLA	**Blacksburg**	**115.46**	**55**	IAMs_20	IAMs_20	00 20 50.1				
	comp=Z,5μm,20.0s									
U56A	**King**	**115.52**	**56**	IAMs_20	IAMs_20	00 18 37.6				
	comp=Z,5μm,21.0s									
ERPA	**Erie**	**115.52**	**50**	IAMs_20	IAMs_20	00 20 45.4				
	comp=Z,5μm,20.0s									
NHSC	**New Hope**	**115.73**	**60**	IAMs_20	IAMs_20	00 28 20.4				
	comp=Z,3μm,18.0s									
T57A	**Hurt**	**116.40**	**55**	IAMs_20	IAMs_20	00 21 20.0				
	comp=Z,5μm,19.0s									
X58A	**Rowland**	**116.41**	**58**	IAMs_20	IAMs_20	00 20 49.4				
	comp=Z,4μm,20.0s									
V58A	**Windy Hill, Pi**	**116.56**	**57**	IAMs_20	IAMs_20	00 19 12.3				
	comp=Z,4μm,21.0s									
S57A	**Dark Hollow, R**	**116.60**	**55**	IAMs_20	IAMs_20	00 18 37.3				
	comp=Z,4μm,21.0s									
W59A	**Clinton**	**117.13**	**57**	IAMs_20	IAMs_20	00 24 05.4				
	comp=Z,5μm,19.0s									
L56A	**Greenwood**	**117.32**	**50**	IAMs_20	IAMs_20	00 18 27.0				
	comp=Z,5μm,22.0s									
Y60A	**Bolivia**	**117.35**	**59**	IAMs_20	IAMs_20	00 20 38.4				
	comp=Z,3μm,21.0s									
R58B	**Mineral**	**117.44**	**54**	IAMs_20	IAMs_20	00 19 34.5				
	comp=Z,5μm,21.0s									
M57A	**Sunshine Farm,**	**117.73**	**50**	IAMs_20	IAMs_20	00 28 26.8				
	comp=Z,4μm,18.0s									
T59A	**Double "B" Far**	**117.76**	**55**	IAMs_20	IAMs_20	00 25 18.9				
	comp=Z,5μm,19.0s									
LVZ	**Lovozero**	**118.00**	**342**	IAMs_20	IAMs_20	00 31 26.1				
	comp=Z,3μm,20.0s									
APA	**Apatity**	**118.58**	**342**	*i* PKIKP	**PKPdf**	**23 36 11.5**	**-1.1**			
APA				*e*		23 37 32.8				
KEV	**Kevo**	**118.88**	**345**	IAMs_20	IAMs_20	00 32 49.2				
	comp=Z,3μm,21.0s									
LONY	**Lake Ozonia**	**119.13**	**46**	IAMs_20	IAMs_20	00 24 01.5				
	comp=Z,4μm,19.0s									
S61A	**Accomac**	**119.20**	**54**	IAMs_20	IAMs_20	00 20 57.2				
	comp=Z,5μm,21.0s									
ARCES	**ARCESS Array B**	**119.40**	**346**		**PKPdf**	**23 36 12.3**	**-1.8**			
ARCES	**ARCESS Array B**	**119.40**	**346**	PKP	**PKPdf**	**23 36 13.2**	**-1.0**			
	comp=Z,3.0nm,0.8s,baz=62,slow=3.3,SNR=5.5									
ARCES	**ARCESS Array B**	**119.40**	**346**	PKIKP	**PKPdf**	**23 36 12.3**	**-1.8**			
KLMR	**Klimovskoe**	**120.01**	**334**	*e*PKIKP	**PKPdf**	**23 36 13.4**	**-2.1**			
KLMR				*e*		23 37 38.1				
KLMR				SP	SP	23 47 26.1	-0.4			
KLMR				SS	SS	23 54 05.1	+0.3			
KLMR				pmax	pmax					
	comp=Z,14nm,1.2s									
PAL	**Palisades**	**120.18**	**50**	IAMs_20	IAMs_20	00 22 36.7				
	comp=Z,4μm,20.0s									
N62A	**Caumsett State**	**120.52**	**50**	IAMs_20	IAMs_20	00 22 45.7				
	comp=Z,5μm,20.0s									
WSPT	**Westport, CT**	**120.59**	**50**	IAMs_20	IAMs_20	00 20 52.5				
	comp=Z,4μm,22.0s									
MAK	**Makhachkala**	**121.31**	**312**	*d* P	**Pdif**	**23 32 42.1**	**-3.2**			
MAK				*e*		23 37 46.4				
MAK				*e*PPP	PPP	23 40 24.4				
MAK				*e*		23 43 13.2				
MAK				*e*PS	**PS**	**23 47 35.4**	**-7.0**			
MAK				*e*SS	SS	23 54 20.1	-2.8			
MAK				*e*SSS	SSS	23 58 48.6				
AKT	**Akhty**	**121.41**	**310**	*e*PKIKP	**PKiKP**	**23 36 20.6**	**+1.5**			
AKT				*e*		23 37 47.9				
AKT				*e*		23 43 29.0				
AKT				*e*SP	SP	23 47 39.3	-1.3			
AKT				MLR	MLR					
	comp=Z,4μm,22.0s									
H62A	**Milan**	**121.54**	**46**	IAMs_20	IAMs_20	00 20 58.3				
	comp=Z,4μm,22.0s									
E62A	**Clayton Lake**	**122.17**	**43**	IAMs_20	IAMs_20	00 21 18.8				
	comp=Z,5μm,22.0s									
PKME	**Peaks-Kenny Pk**	**122.67**	**45**	IAMs_20	IAMs_20	00 23 35.1				
	comp=Z,4μm,21.0s									
VRH	**Novokhopyorsk**	**122.89**	**323**	*i* PKIKP	**PKPdf**	**23 36 20.8**	**-0.5**			
VRH				pmax	pmax					
	comp=Z,9.0nm,0.8s									
VRH				MLR	MLR					
	comp=Z,3μm,19.0s									
MOS	**Moscow**	**123.28**	**329**	*i* PKIKP	**PKPdf**	**23 36 17.5**	**-4.4**			
MOS				*e*		23 38 00.7				
MOS				*e*PPP	PPP	23 40 44.7				
MOS				*e*SS	SS	23 54 40.5	-6.4			
G65A	**Princeton**	**123.87**	**44**	IAMs_20	IAMs_20	00 28 27.7				
	comp=Z,3μm,19.0s									
LPSR	**Galich'ya Gora**	**123.96**	**325**	*i* PKIKP	**PKiKP**	**23 36 23.8**	**+0.2**			
LPSR				pmax	pmax					
	comp=Z,10.0nm,1.0s									
OBN	**Obninsk**	**124.11**	**329**	IAMs_20	IAMs_20	00 28 51.8				
	comp=Z,3μm,21.0s									
OBN	**Obninsk**	**124.11**	**329**	*e*PKIKP	**PKPdf**	**23 36 20.2**	**-3.3**			
OBN				*i*		23 36 24.8				
OBN				PPP	PPP	23 40 48.0				
OBN				*e*		23 43 36.9				
OBN				*i* PS	**PS**	**23 48 07.4**	**+0.8**			
OBN				*e*PPS	PPS	23 49 36.5				
OBN				*i* SS	SS	23 55 10.3	+13			
OBN				*i* SSS	SSS	23 59 34.7				
OBN				pmax	pmax					
	comp=Z,21nm,1.9s									
OBN				pmax	pmax					
	comp=Z,10.0nm,1.0s									
OBN				pmax	pmax					
	comp=Z,21nm,1.9s									
OBN				MLR	MLR					
	comp=Z,2μm,18.0s									
SUR	**Sutherland**	**124.33**	**214**	IAMs_20	IAMs_20	00 31 36.3				
	comp=Z,4μm,19.0s									
VSR	**Storozhevoye**	**124.38**	**323**	*i* PKIKP	**PKPdf**	**23 36 22.4**	**-1.8**			
VSR				pmax	pmax					
	comp=Z,7.0nm,1.0s									
VSR				MLR	MLR					
	comp=Z,2μm,19.0s									
VORD	**Divnogorie**	**124.40**	**323**	*e*PKIKP	**PKPdf**	**23 36 22.9**	**-1.3**			
VORD				pmax	pmax					
	comp=Z,6.0nm,1.0s									
KIV	**Kislovodsk**	**124.51**	**314**	*i* PKIKP	**PKPdf**	**23 36 23.4**	**-1.4**			
KIV				*e*		23 38 10.1				
KIV				*e*		23 43 26.5				
KIV				*e*PS	**PS**	**23 48 08.4**	**-2.6**			
KIV				*e*SS	SS	23 55 04.7	+1.1			
KIV				pmax	pmax					
	comp=Z,7.0nm,1.1s									
KIV				MLR	MLR					
	comp=Z,2μm,22.0s									
FINES	**FINESS Array B**	**124.97**	**339**	PKP	**PKPdf**	**23 36 22.9**	**-2.1**			
	comp=Z,4.1nm,1.0s,baz=189,slow=11,SNR=1.6									
PTLB	**Pontes e Lacer**	**125.29**	**120**	PKPdf	**PKPdf**	**23 36 25.7**	**-1.3**			
ATD	**Arta Tunnel**	**126.32**	**274**	IAMs_20	IAMs_20	00 30 37.5				
	comp=Z,3μm,20.0s									
SOC	**Sochi**	**126.68**	**314**	*e*PKIKP	**PKPdf**	**23 36 24.7**	**-4.1**			
SOC				*e*		23 38 20.0				
SOC				*e*PPP	PPP	23 41 05.0				
SOC				*e*SS	SS	23 55 48.4	+18			
SOC				MLR	MLR					
	comp=Z,1μm,18.0s									
KIBK	**Kibwezi**	**127.68**	**256**	PKP	**PKiKP**	**23 36 32.8**	**+0.4**			
KIBK	**Kibwezi**	**127.68**	**256**	IAMs_20	IAMs_20	00 25 45.2				
	comp=Z,5μm,22.0s									
ANN	**Anapa**	**127.84**	**317**	*i* PKIKP	**PKPdf**	**23 36 29.5**	**-1.5**			
ANN				*e*		23 38 35.3				
ANN				pmax	pmax					
	comp=Z,58nm,1.6s									
ANN				MLR	MLR					
	comp=E,4μm,20.0s									
ANN				MLR	MLR					
	comp=N,5μm,22.0s									
ANN				MLR	MLR					
	comp=Z,3μm,22.0s									
MNK	**Minsk**	**128.68**	**331**	*i* PKIKP	**PKPdf**	**23 36 26.9**	**-5.4**			
MNK				*i*		23 43 35.2				
MNK				*i* PS	**PS**	**23 48 43.2**	**-3.5**			
MNK				*i* SS	SS	23 55 50.8	-3.5			
MNK				pmax	pmax					
	comp=N,5.0nm,0.9s									
MNK				pmax	pmax					
	comp=Z,5.0nm,0.9s									
MNK				pmax	pmax					
	comp=E,9.0nm,0.9s									
MNK				MLR	MLR					
	comp=E,3μm,21.0s									
MNK				MLR	MLR					
	comp=N,2μm,22.0s									
MNK				MLR	MLR					
	comp=Z,4μm,22.0s									
BBSR	**BB Station**	**128.78**	**59**	IAMs_20	IAMs_20	00 29 05.1				
	comp=Z,3μm,20.0s									
SPB	**Sao Paulo**	**129.39**	**137**	IAMs_20	IAMs_20	00 23 41.9				
	comp=Z,4μm,22.0s									
NB2	**NORSAR Subarra**	**129.78**	**345**	PKPdf	**PKPdf**	**23 36 34.8**	**+0.5**			
	comp=Z,13nm,1.4s,baz=31,slow=1.9									
NOA	**NORSAR Array B**	**129.78**	**345**	PKP	**PKPdf**	**23 36 32.3**	**-2.0**			
	comp=Z,0.7nm,0.9s,baz=31,slow=1.9,SNR=3.4									
FURI	**Furi**	**129.94**	**270**	IAMs_20	IAMs_20	00 31 08.1				
	comp=Z,3μm,19.0s									
AKASG	**Malin Array Be**	**130.18**	**327**	PKP	**PKPdf**	**23 36 32.9**	**-2.3**			
	comp=Z,1.8nm,0.8s,baz=61,slow=1.7,SNR=14									
AKBB	**Malin Array Si**	**130.18**	**327**	*i* PKIKP	**PKiKP**	**23 36 36.2**	**+0.1**			
AKBB	**Malin Array Si**	**130.18**	**327**	PKP	**PKPdf**	**23 36 35.3**	**0.0**			
AK01	**Malin Array Si**	**130.19**	**327**	PKP	**PKPdf**	**23 36 35.3**	**0.0**			
KIEV	**Kiev**	**130.19**	**327**	PKPdf	**PKPdf**	**23 36 34.9**	**-0.4**			
KIEV	**Kiev**	**130.19**	**327**	IAMs_20	IAMs_20	00 36 44.4				
	comp=Z,3μm,22.0s									
KIEV	**Kiev**	**130.19**	**327**	PKIKP	**PKPdf**	**23 36 34.9**	**-0.4**			
AK21	**Malin Array Si**	**130.23**	**327**	PKP	**PKPdf**	**23 36 35.4**	**0.0**			
BOAV	**Boa Vista**	**130.97**	**99**	PKPdf	**PKPdf**	**23 36 36.6**	**-1.3**			
SUW	**Suwalki**	**131.13**	**333**	*e*PKP	**PKPdf**	**23 36 32.4**	**-4.5**			
SUW	**Suwalki**	**131.13**	**333**	IAMs_20	IAMs_20	00 35 38.2				
	comp=Z,3μm,21.0s									
LUBAR	**Lubar, Ukraine**	**131.39**	**326**	PKP	**PKPdf**	**23 36 36.2**	**-1.4**			
LODK	**Lodwar**	**131.95**	**262**	IAMs_20	IAMs_20	00 32 04.0				
	comp=Z,2μm,20.0s									
BRTR	**Keskin Array B**	**132.22**	**312**	PKPdf	**PKPdf**	**23 36 38.9**	**-0.8**			
BRTR	**Keskin Array B**	**132.22**	**312**	PKP	**PKPdf**	**23 36 37.8**	**-1.9**			
	comp=Z,1.3nm,0.9s,baz=64,slow=2.9,SNR=7.9									
KIS	**Kishinev**	**132.34**	**323**	*e*PP	PP	23 39 04.0	+1.9			
KIS				*e*SKP	**SKPdf**	**23 40 11.0**	**-3.0**			
MILM	**Milestii Mici**	**132.38**	**322**	*e*PKP	**PKPdf**	**23 36 36.0**	**-3.6**			
MILM	**Milestii Mici**	**132.38**	**322**	*e*PP	PP	23 39 06.0	+3.6			
MILM				*e*SKP	**SKPab**	**23 40 08.0**	**+1.3**			
KMPD	**K-Podol'skiy**	**132.85**	**326**	PKP	**PKiKP**	**23 36 40.8**	**-0.7**			
KMPD				PKP	**PKPdf**	**23 36 40.2**	**-0.2**			
QNGWA	**Qangwa**	**133.40**	**226**	PKPdf	**PKPdf**	**23 36 41.1**	**-1.4**			
TIRR	**Tirgusor**	**133.84**	**320**	IAMs_20	IAMs_20	00 40 56.7				
	comp=Z,3μm,20.0s									
BURAR	**Bucovina Array**	**134.08**	**325**	PKPdf	**PKPdf**	**23 36 43.5**	**+0.5**			
KWP	**Kalwaria Pacla**	**134.20**	**329**	*e*PKP	**PKPdf**	**23 36 42.1**	**-0.9**			
RGN	**Rugen**	**134.62**	**339**	IAMs_20	IAMs_20	00 42 43.4				
	comp=Z,2μm,19.0s									
MLR	**Muntele Rosu**	**134.83**	**322**	IAMs_20	IAMs_20	00 39 47.7				
	comp=Z,3μm,21.0s									
NIE	**Niedzica**	**135.53**	**330**	*e*PKP	**PKPdf**	**23 36 45.6**	**+0.1**			
LANS	**Liptovska Anna**	**136.11**	**330**	*e*PKIKP	**PKiKP**	**23 36 49.1**	**+0.9**			
LANS	**Liptovska Anna**	**136.11**	**330**	*e*PKP	**PKiKP**	**23 36 49.1**	**+0.9**			
OKC	**Ostrava-Krasne**	**136.26**	**332**	AMS	AMS	00 36 30.0				
	comp=Z,2μm,20.7s									
KSP	**Ksiaz**	**136.36**	**334**	*e*PKP	**PKiKP**	**23 36 51.2**	**+2.6**			
OSTC	**Ostas**	**136.60**	**334**	AMS	AMS	00 44 00.0				
	comp=Z,3μm,18.7s									
CHVC	**Chvalec**	**136.65**	**334**	AMS	AMS	00 44 00.0				
	comp=Z,3μm,19.3s									
DPC	**Dobruska-Polom**	**136.71**	**333**	*e*PKIKP	**PKiKP**	**23 36 52.0**	**+2.6**			
DPC				MLR	MLR					
	comp=Z,3μm,24.1s									
DPC	**Dobruska-Polom**	**136.71**	**333**	*e*PKP	**PKiKP**	**23 36 52.0**	**+2.6**			
DPC				AMS	AMS	00 36 20.0				
	comp=Z,3μm,24.1s									
KRLC	**Kraliky**	**136.71**	**333**	*e*PKIKP	**PKiKP**	**23 36 51.6**	**+2.2**			
KRLC				MLR	MLR					
	comp=Z,2μm,21.1s									
KRLC	**Kraliky**	**136.71**	**333**	*e*PKP	**PKiKP**	**23 36 51.6**	**+2.2**			
KRLC				*e*SKP	**SKPab**	**23 40 26.9**	**+1.3**			
KRLC				AMS	AMS	00 36 10.0				
	comp=Z,2μm,21.1s									
PSZ	**Piszkesteto**	**136.72**	**329**	IAMs_20	IAMs_20	00 35 39.5				
	comp=Z,3μm,21.0s									
UPC	**Upice**	**136.72**	**334**	*e*SKP	**SKPab**	**23 40 28.9**	**+3.3**			
UPC				AMS	AMS	00 44 10.0				
	comp=Z,3μm,19.5s									
JAVC	**Velka Javorina**	**137.17**	**331**	*e*PKP	**PKPdf**	**23 36 47.8**	**-0.8**			
PVCC	**Panska Ves**	**137.32**	**335**	AMS	AMS	00 41 00.0				
CLL	**Collm**	**137.33**	**337**	IAMs_20	IAMs_20	00 39 48.3				
	comp=Z,3μm,20.0s									
VRAC	**Vranov**	**137.35**	**332**	*e*PKP	**PKPdf**	**23 36 49.0**	**+0.2**			
VRAC				*e*PP	**PP**	**23 39 33.7**	**+0.2**			
KRUC	**Moravsky**	**137.62**	**332**	*e*PKP	**PKPdf**	**23 36 48.2**	**-1.1**			
KRUC				*e*PP	**PP**	**23 39 36.5**	**+1.4**			
MODS	**Modra-Piesok**	**137.70**	**331**	*e*PKIKP	**PKPdf**	**23 36 49.8**	**+0.3**			
MODS	**Modra-Piesok**	**137.70**	**331**	*e*PKP	**PKPdf**	**23 36 49.8**	**+0.3**			
HSKC	**Hora Svate Kat**	**137.72**	**336**	*e*SKP	**SKPab**	**23 40 32.2**	**+2.3**			
HSKC				AMS	AMS	00 43 20.0				
	comp=Z,3μm,18.8s									
PRA	**Prague**	**137.72**	**335**	AMS	AMS	00 41 30.0				
	comp=Z,3μm,18.5s									
PRU	**Pruhonice**	**137.74**	**334**	*e*SKP	**SKPab**	**23 40 34.5**	**+4.5**			
PRU				AMS	AMS	00 42 00.0				
	comp=Z,3μm,23.0s									
TREC	**Trest**	**137.85**	**333**	*e*SKP	**SKPab**	**23 40 30.6**	**0.0**			
ESK	**Eskdalemuir**	**137.90**	**352**	IAMs_20	IAMs_20	00 41 18.1				
	comp=Z,3μm,20.0s									
ZVC	**Zvikov**	**138.30**	**334**	AMS	AMS	00 37 30.0				
	comp=Z,4μm,20.5s									
RONA	**Rosalia, Austr**	**138.64**	**331**	*e*pPKP	**PKiKP**	**23 36 55.3**	**+1.9**			
	comp=Z,7.3nm,0.9s									
CONA	**Conrad Observa**	**138.68**	**331**	*e*pPKP	**PKiKP**	**23 36 54.9**	**+1.4**			
	comp=Z,8.2nm,1.2s									
CKRC	**Cesky Krumlov**	**138.72**	**333**	AMS	AMS	00 43 30.0				
	comp=Z,3μm,21.3s									
KHC	**Kasperske Hory**	**138.80**	**334**	IAMs_20	IAMs_20	00 38 24.2				
	comp=Z,4μm,22.0s									
KHC	**Kasperske Hory**	**138.80**	**334**	*e*PKIKP	**PKPdf**	**23 36 51.2**	**-0.3**			
KHC				MLR	MLR					
	comp=Z,4μm,20.1s									
KHC	**Kasperske Hory**	**138.80**	**334**	*e*PKP	**PKPdf**	**23 36 51.2**	**-0.3**			
KHC				AMS	AMS	00 37 50.0				
	comp=Z,4μm,20.1s									
GERES	**GERESS Array B**	**138.97**	**334**	PKP	**PKPdf**	**23 36 50.2**	**-1.7**			
	comp=Z,0.2nm,0.4s,baz=49,slow=3.3,SNR=1.6									
GRA1	**Grafenberg Arr**	**139.31**	**337**	IAMs_20	IAMs_20	00 39 41.5				
	comp=Z,2μm,22.0s									
GRFO	**Grafenberg**	**139.31**	**337**	IAMs_20	IAMs_20	00 39 41.6				
	comp=Z,2μm,21.0s									
ARSA	**Arzberg**	**139.33**	**331**	*e*pPKP	**PKiKP**	**23 36 56.5**	**+1.6**			
	comp=Z,2.2nm,0.8s									
MOA	**Molln**	**139.47**	**332**	*e*pPKiKP	**PKiKP**	**23 36 58.3**	**+3.2**			
	comp=Z,9.6nm,1.6s									
SOKA	**Soboth**	**139.97**	**331**	*e*PKP	**PKPdf**	**23 36 51.7**	**-2.2**			
	comp=Z,7.0nm,1.2s									
IDI	**Anoyia**	**140.32**	**309**	PKP	**PKiKP**	**23 36 56.7**	**-0.6**			
LESA	**Schwarzleotal**	**140.50**	**333**	*e*PKP	**PKPdf**	**23 36 53.0**	**-1.8**			
	comp=Z,5.4nm,1.0s									
PDG	**Podgorica**	**140.54**	**323**	IAMs_20	IAMs_20	00 47 03.7				
	comp=Z,3μm,20.0s									
STU	**Stuttgart**	**140.83**	**338**	IAMs_20	IAMs_20	00 42 07.7				
	comp=Z,2μm,20.0s									
WATA	**Walderalm**	**141.04**	**334**	*e*PKP	**PKPdf**	**23 36 54.6**	**-1.2**			
	comp=Z,11nm,1.0s									
WLF	**Walferdange**	**141.12**	**341**	IAMs_20	IAMs_20	00 44 50.2				
	comp=Z,4μm,20.0s									
MOTA	**Moosalm**	**141.23**	**335**	*e*PKP	**PKPdf**	**23 36 55.1**	**-1.1**			
	comp=Z,8.7nm,1.2s									
SQTA	**Sank Quirin**	**141.28**	**334**	*e*PKP	**PKPdf**	**23 36 55.7**	**-0.6**			
	comp=Z,6.3nm,1.3s									
FETA	**Feichten**	**141.64**	**335**	*e*PKP	**PKPdf**	**23 36 55.6**	**-1.3**			
	comp=Z,7.8nm,1.1s									
FUORN	**Ofenpass-Fuorn**	**142.15**	**335**	IAMs_20	IAMs_20	00 44 54.9				
	comp=Z,4μm,22.0s									
TUE	**Stuetta**	**142.65**	**335**	IAMs_20	IAMs_20	00 40 47.0				
	comp=Z,3μm,22.0s									
SENIN	**Lac Senin/Sane**	**143.54**	**337**	IAMs_20	IAMs_20	00 48 14.6				
	comp=Z,2μm,19.0s									
AQU	**L'Aquila**	**143.87**	**327**	PKP	**PKPdf**	**23 37 00.2**	**-0.7**			
TIP	**Timpagrande**	**144.01**	**320**	PKPdf	PKPbc	23 36 59.9	+0.8			
TIP				IAMs_20	IAMs_20	00 43 57.7				
	comp=Z,2μm,22.0s									
CUC	**Castrocucco**	**144.08**	**322**	IAMs_20	IAMs_20	00 42 07.6				
	comp=Z,2μm,22.0s									
VSL	**Villasalto**	**148.04**	**327**	PKPbc	**PKPbc**	**23 37 11.5**	**+0.4**			
MAHO	**Mahon**	**150.17**	**334**	PKP	**PKPdf**	**23 37 12.4**	**+1.0**			
MAHO	**Mahon**	**150.17**	**334**	IAMs_20	IAMs_20	00 45 15.0				
	comp=Z,2μm,21.0s									
KEST	**Kesra**	**150.74**	**322**	PKPbc	**PKPbc**	**23 37 16.3**	**-1.8**			
KEST	**Kesra**	**150.74**	**322**	PKPbc	**PKPbc**	**23 37 15.8**	**-2.3**			
	comp=Z,32nm,1.0s,baz=253,slow=0.6,SNR=15									
PBRG	**Braganca**	**151.61**	**351**	*e*PKPbc	**PKPab**	**23 37 25.5**	**-2.8**			
PGAV	**Gavieira, Arco**	**151.65**	**354**	*e*PKPbc	**PKPab**	**23 37 30.5**	**+2.0**			
PGAV				*e*LQ	LQ	00 20 19.6				
PGAV				*e*LR	LR	00 33 17.6				
PGAV				*i* IAMs_20	IAMs_20	00 52 05.3				
	comp=Z,2μm,18.0s									
POLO	**Lamas de Olo**	**152.18**	**353**	*e*PKPdf	**PKPdf**	**23 37 14.0**	**-0.6**			
POLO				*e*PKPbc	**pPKPab**	**23 37 35.2**	**-1.4**			
PVRL	**Vila Real**	**152.26**	**353**	*e*PKPdf	**PiKiKP**	**23 37 23.1**	**+1.4**			
PVRL				*e*PKPbc	**pPKPab**	**23 37 35.3**	**-1.6**			
MVO	**Moncorvo**	**152.28**	**352**	*e*PKPdf	**PKPbc**	**23 37 19.9**	**-1.6**			
MVO				*e*PKPbc	**pPKPab**	**23 37 36.3**	**-0.7**			
MVO				*e*LQ	LQ	00 20 11.3				
MVO				*e*LR	LR	00 30 36.5				
MVO				*i* IAMs_20	IAMs_20	00 53 44.0				
	comp=Z,3μm,18.0s									
UCM	**Universidad Co**	**152.36**	**345**	PKP	**PKPdf**	**23 37 16.3**	**+1.5**			
ECHE	**Chera**	**152.39**	**341**	PKP	**PKPdf**	**23 37 16.3**	**+1.5**			
MTE	**Manteigas**	**153.10**	**352**	*e*LQ	LQ	00 20 37.6				
MTE				*e*LR	LR	00 29 18.9				
MTE				*i* IAMs_20	IAMs_20	00 47 53.3				
	comp=Z,2μm,22.0s									
ESDC	**Sonseca Array**	**153.14**	**346**	PKPbc	**PKPdf**	**23 37 19.6**	**+3.6**			
	comp=Z,0.6nm,0.9s,baz=48,slow=36,SNR=2.5									
ESDC				PKPab	**PKPab**	**23 37 33.9**	**-0.9**			
	comp=Z,2.2nm,0.9s,baz=19,slow=2.3,SNR=4.0									
PAB	**San Pablo**	**153.35**	**346**	IAMs_20	IAMs_20	00 46 32.9				
	comp=Z,3μm,20.0s									
PCBR	**Castelo Branco**	**153.64**	**352**	*e*PKPdf	**PKPdf**	**23 37 17.8**	**+1.2**			
PCBR				*e*PKPbc	**pPKPbc**	**23 37 31.7**	**+1.4**			
PSARD	**Sardoal**	**153.97**	**353**	*e*PKPbc	**PiKiKP**	**23 37 30.5**	**+5.3**			
PMRV	**Marv??o**	**154.04**	**351**	*e*PKPbc	**PKPab**	**23 37 38.9**	**+0.3**			
PMRV				*e*LQ	LQ	00 21 06.2				
PMRV				*e*LR	LR	00 31 28.1				
PMRV				*i* IAMs_20	IAMs_20	00 48 48.5				
	comp=Z,3μm,20.0s									
PSBE	**So Bento**	**154.12**	**354**	*e*PKPbc	**PKPbc**	**23 37 25.3**	**-0.1**			
PBAR	**Barrancos**	**155.21

	comp=Z,48nm,1.2s							
EDFI	**Ende, Flores**	**45.38**	**271**	P	**P**	**23 42 33.4**	**-0.9**	
	comp=Z,15nm,0.9s							
PSA00	**Pilbara Seismi**	**46.17**	**253**	P	**P**	**23 42 40.5**	**+0.1**	
PSA00				IAmb	IAmb	23 42 45.5		
	comp=Z,42nm,2.0s							
MBWA	**Marble Bar**	**46.27**	**254**	P	**P**	**23 42 40.9**	**-0.3**	
PLAI	**Plampang**	**49.17**	**270**	P	**P**	**23 43 04.8**	**+1.0**	
NWAO	**Narrogin (SRO)**	**49.69**	**238**	P	**P**	**23 43 07.2**	**-0.3**	
TWSI	**Taliwang, Sumb**	**50.06**	**270**	P	**P**	**23 43 12.9**	**+2.4**	
MORW	**Morawa**	**50.15**	**243**	P	**P**	**23 43 10.9**	**-0.2**	
MORW				IAmb	IAmb	23 43 14.6		
	comp=Z,16nm,0.8s							
MJAR	**Matsushiro Arr**	**57.17**	**332**	P	**P**	**23 44 00.6**	**-1.7**	
	comp=Z,1.2nm,0.4s,baz=176,slow=5.8,SNR=4.1							
	comp=Z,1.2nm,0.4s							
VNDA	**Vanda**	**63.94**	**181**	P	**P**	**23 44 46.7**	**-1.3**	
VNDA	**Vanda**	**63.94**	**181**	P	**P**	**23 44 48.0**	**0.0**	
	comp=Z,1.3nm,0.6s,baz=2.6,slow=5.8,SNR=8.1							
	comp=Z,1.3nm,0.6s							
SBA	**Scott Base**	**64.21**	**180**	P	**P**	**23 44 49.7**	**0.0**	
NJ2	**Nanjing**	**65.23**	**315**	*e*P	**P**	**23 44 59.2**	**+2.1**	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**66.14**	**333**	P	**P**	**23 45 01.5**	**-1.2**	
	comp=Z,3.0nm,0.6s,baz=61,slow=16,SNR=4.1							
	comp=Z,3.0nm,0.6s							
PETK	**Petropavlovsk-**	**67.05**	**353**	P	**P**	**23 45 07.6**	**-0.7**	
	comp=Z,4.0nm,0.8s,baz=117,slow=12,SNR=3.6							
	comp=Z,4.0nm,0.8s							
HNS	**HongShan**	**71.11**	**318**	‖P	**P**	**23 45 33.8**	**-0.1**	
HNS				pmax	pmax			
	comp=Z,6.0nm,1.3s							
XAN	**Xi'an**	**73.31**	**312**	P	**P**	**23 45 46.5**	**-0.7**	
XAN				pmax	pmax			
	comp=Z,7.0nm,1.2s							
KMI	**Kunming**	**74.13**	**301**	P	**P**	**23 45 53.8**	**+1.4**	
KMI				pmax	pmax			
	comp=Z,9.0nm,0.9s							
CM31	**Chiang Mai Arr**	**74.93**	**294**	P	**P**	**23 45 56.9**	**-0.1**	
CMAR	**Chiang Mai Arr**	**74.93**	**294**	P	**P**	**23 45 55.8**	**-1.1**	
CMAR	**Chiang Mai Arr**	**74.93**	**294**	P	**P**	**23 45 56.7**	**-0.3**	
	comp=Z,0.7nm,0.4s,baz=130,slow=4.7,SNR=6.1							
	comp=Z,0.7nm,0.4s							
CHTO	**Chiang Mai**	**75.06**	**294**	P	**P**	**23 45 57.0**	**-0.7**	
HHC	**Hu-ho-hao-te**	**75.07**	**319**	*e*P	**P**	**23 46 00.6**	**+3.2**	
HHC				pmax	pmax			
	comp=Z,10.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,110nm,5.5s							
PZH	**PanZhiHua**	**75.51**	**302**	P	**P**	**23 46 03.2**	**+2.9**	
QSPA	**South Pole Qui**	**76.37**	**180**	P	**P**	**23 46 05.5**	**+1.0**	
QSPA	**South Pole Qui**	**76.37**	**180**	P	**P**	**23 46 06.1**	**+1.6**	
	comp=Z,1.6nm,0.6s,baz=48,slow=1.3,SNR=5.6							
	comp=Z,1.6nm,0.6s							
LZDM	**Lanzhou Array**	**77.99**	**312**	P	**P**	**23 46 13.6**	**-0.8**	
	comp=Z,1.2nm,0.3s,baz=266,slow=40,SNR=1.9							
	comp=Z,1.2nm,0.3s							
SONM	**Songino Array**	**81.91**	**323**	P	**P**	**23 46 33.8**	**-1.2**	
SONM	**Songino Array**	**81.91**	**323**	P	**P**	**23 46 33.7**	**-1.3**	
	comp=Z,1.4nm,1.0s,baz=127,slow=4.4,SNR=7.0							
	comp=Z,1.4nm,1.0s							
GTA	**Gaotai**	**82.26**	**314**	*e*P	**P**	**23 46 37.6**	**+0.5**	
GTA				pmax	pmax			
	comp=Z,4.0nm,1.3s							
KMRM	**Mail Ridge**	**83.03**	**46**	P	**P**	**23 46 41.4**	**+0.4**	
MAW	**Mawson**	**83.04**	**202**	P	**P**	**23 46 41.5**	**+1.0**	
	comp=Z,5.2nm,1.1s,baz=92,slow=6.9,SNR=4.4							
	comp=Z,5.2nm,1.1s							
GDXM	**Geysers**	**83.11**	**47**	P	**P**	**23 46 42.8**	**+1.4**	
GDXM				IAmb	IAmb	23 46 44.8		
	comp=Z,14nm,1.2s							
MHC	**Mount Hamilton**	**83.37**	**49**	P	**P**	**23 46 43.4**	**+0.4**	
MHC				IAmb	IAmb	23 46 45.5		
	comp=Z,9.6nm,0.9s							
KHBM	**Hayfork Bally**	**83.56**	**46**	P	**P**	**23 46 44.4**	**+0.6**	
KHBM				IAmb	IAmb	23 46 47.0		
	comp=Z,12nm,1.4s							
O02D	**Mt. Diablo Mer**	**83.66**	**46**	P	**P**	**23 46 45.1**	**+0.8**	
O02D				IAmb	IAmb	23 46 47.8		
	comp=Z,12nm,1.0s							
SUTB	**Sutter Butte**	**84.00**	**47**	P	**P**	**23 46 46.3**	**+0.4**	
M02C	**Callahan**	**84.10**	**45**	IAmb	IAmb	23 46 50.0		
	comp=Z,12nm,1.2s							
YBH	**Yreka Blue Hor**	**84.34**	**45**	IAmb	IAmb	23 46 50.4		
	comp=Z,8.5nm,0.9s							
CMB	**Columbia Colle**	**84.56**	**49**	P	**P**	**23 46 48.8**	**0.0**	
E19K	**Redstone River**	**84.81**	**13**	IAmb	IAmb	23 46 52.2		
	comp=Z,20nm,1.4s							
O28M	**Mount Upton**	**84.90**	**23**	IAmb	IAmb	23 46 57.0		
	comp=Z,13nm,1.1s							
BEKR	**Beckworth**	**85.26**	**47**	P	**P**	**23 46 51.7**	**-0.8**	
MPK	**Martis Peak**	**85.28**	**48**	IAmb	IAmb	23 46 55.1		
	comp=Z,8.5nm,0.8s							
IL31		**85.37**	**18**	IAmb	IAmb	23 46 53.1		
	comp=Z,17nm,1.4s							
ILAR	**Eielson Array**	**85.37**	**18**	P	**P**	**23 46 49.2**	**-3.0**	
ILAR	**Eielson Array**	**85.37**	**18**	P	**P**	**23 46 49.6**	**-2.6**	
	comp=Z,3.1nm,0.7s,baz=239,slow=5.2,SNR=36							
	comp=Z,3.1nm,0.7s							
MDPB	**Devils Postpil**	**85.37**	**50**	IAmb	IAmb	23 46 55.5		
	comp=Z,9.3nm,0.9s							
WAKR	**Walker**	**85.42**	**49**	IAmb	IAmb	23 46 56.0		
	comp=Z,12nm,1.0s							
DOT	**Dot Lake**	**85.46**	**19**	P	**P**	**23 46 53.0**	**+0.3**	
J25K	**Salcha River,**	**85.72**	**18**	IAmb	IAmb	23 47 00.5		
	comp=Z,7.4nm,0.8s							
PAHR	**Pah Rah Range**	**85.90**	**48**	IAmb	IAmb	23 46 58.6		
	comp=Z,22nm,1.6s							
BORC	**Borrego Spring**	**85.92**	**55**	P	**P**	**23 46 55.5**	**-0.2**	
G23K	**Bananza Creek**	**85.93**	**16**	IAmb	IAmb	23 46 58.0		
	comp=Z,11nm,1.0s							
J05D	**Fort Rock, OR**	**85.96**	**44**	IAmb	IAmb	23 46 58.4		
	comp=Z,12nm,1.0s							
K05A	**Summer Lake**	**85.97**	**44**	IAmb	IAmb	23 46 58.6		
	comp=Z,11nm,0.9s							
LHV	**Little Huntoon**	**86.02**	**49**	IAmb	IAmb	23 46 58.8		
	comp=Z,9.8nm,1.0s							
DSP	**Deep Springs**	**86.11**	**50**	IAmb	IAmb	23 46 59.1		
	comp=Z,13nm,0.9s							
NVAR	**Mina Array Bea**	**86.23**	**49**	P	**P**	**23 46 57.6**	**+0.2**	
NVAR	**Mina Array Bea**	**86.23**	**49**	P	**P**	**23 46 56.7**	**-0.7**	
	comp=Z,3.9nm,0.8s,baz=229,slow=8.3,SNR=19							
NVAR				LR	LR	00 18 41.0		
	comp=Z,1μm,19.7s,baz=304,slow=31							
	comp=Z,3.9nm,0.8s							
NV11	**Mina Array Sit**	**86.34**	**49**	P	**P**	**23 46 58.0**	**+0.2**	
NV11				IAmb	IAmb	23 47 00.1		
	comp=Z,7.3nm,0.9s							
PINE	**Pine Mountain**	**86.35**	**43**	IAmb	IAmb	23 47 00.9		
	comp=Z,20nm,1.5s							
CLRS	**Cowichan Lake**	**86.37**	**38**	P	**P**	**23 46 58.9**	**+1.4**	
QSM	**Queen of Sheba**	**86.46**	**52**	IAmb	IAmb	23 47 01.1		
	comp=Z,17nm,1.5s							
BELC	**Belle Mtn. Jos**	**86.49**	**54**	IAmb	IAmb	23 47 01.0		
	comp=Z,8.6nm,0.8s							
WCT	**Wildcat Mounta**	**86.92**	**51**	P	**P**	**23 46 59.6**	**-1.1**	
WCT				IAmb	IAmb	23 47 02.9		
	comp=Z,6.4nm,0.9s							
IRM	**Iron Mountain**	**87.21**	**54**	IAmb	IAmb	23 47 04.7		
	comp=Z,6.6nm,1.0s							
TPNV	**Topopah Spring**	**87.26**	**51**	IAmb	IAmb	23 47 04.6		
	comp=Z,6.0nm,0.8s							
BLYC	**Blythe**	**87.58**	**55**	IAmb	IAmb	23 47 06.4		
	comp=Z,10nm,1.1s							
G26K	**Porcupine Rive**	**87.81**	**17**	IAmb	IAmb	23 47 07.5		
	comp=Z,7.1nm,1.1s							
LTY	**Liberty**	**87.86**	**40**	P	**P**	**23 47 03.7**	**-1.2**	
V12A	**Nelson**	**87.94**	**53**	IAmb	IAmb	23 47 07.9		
	comp=Z,4.3nm,0.8s							
SHPR	**Sheep Range**	**87.94**	**52**	IAmb	IAmb	23 47 09.0		
	comp=Z,11nm,1.6s							
E07A	**Sunnyside**	**88.11**	**41**	IAmb	IAmb	23 47 08.4		
	comp=Z,8.2nm,1.0s							
G08A	**Pilot Rock**	**88.22**	**43**	IAmb	IAmb	23 47 09.6		
	comp=Z,12nm,1.1s							
HAWA	**Hanford**	**88.26**	**41**	IAmb	IAmb	23 47 09.2		
	comp=Z,6.6nm,0.9s							
W13A	**Hualapai Mount**	**88.49**	**53**	IAmb	IAmb	23 47 10.9		
	comp=Z,6.3nm,1.0s							
EVN	**Everest**	**88.49**	**299**	IAmb	IAmb	23 50 32.0		
	comp=Z,10nm,1.0s							
B08A	**Colville Reser**	**89.11**	**40**	P	**P**	**23 47 10.0**	**-0.8**	
B08A				IAmb	IAmb	23 47 13.2		
	comp=Z,21nm,1.6s							
BMO	**Blue Mountains**	**89.17**	**43**	IAmb	IAmb	23 47 13.9		
	comp=Z,11nm,1.3s							
E09A	**Wood Farm, Sta**	**89.19**	**42**	IAmb	IAmb	23 47 13.3		
	comp=Z,6.2nm,1.0s							
SPR3	**Spring Creek 3**	**89.35**	**50**	IAmb	IAmb	23 47 14.6		
	comp=Z,5.7nm,0.8s							
LCMT	**Little Creek M**	**89.56**	**52**	IAmb	IAmb	23 47 15.9		
	comp=Z,8.6nm,0.9s							
F10A	**Beach Ranch, E**	**89.60**	**42**	IAmb	IAmb	23 47 15.1		
	comp=Z,9.1nm,0.9s							
SYO	**Syowa Base**	**89.86**	**196**	‖*e*P	**P**	**23 47 13.1**	**-0.8**	
SYO	**Syowa Base**	**89.86**	**196**	‖epP	pP	23 47 16.6	-0.4	
KNB	**Kanab**	**89.89**	**52**	P	**P**	**23 47 14.9**	**0.0**	
KNB				IAmb	IAmb	23 47 19.2		
	comp=Z,14nm,1.3s							
PLID	**Pearl Lake**	**90.12**	**43**	IAmb	IAmb	23 47 17.6		
	comp=Z,6.5nm,0.9s							
U15A	**North Rim**	**90.12**	**53**	IAmb	IAmb	23 47 18.9		
	comp=Z,7.7nm,0.8s							
X16A	**Lo Mia Camp, P**	**90.22**	**55**	IAmb	IAmb	23 47 19.8		
	comp=Z,5.7nm,0.8s							
WUAZ	**Wupatki**	**90.58**	**54**	IAmb	IAmb	23 47 21.4		
	comp=Z,5.7nm,0.9s							
HLID	**Hailey**	**90.71**	**45**	IAmb	IAmb	23 47 21.7		
	comp=Z,16nm,1.8s							
DUG	**Dugway, Tooele**	**90.83**	**49**	P	**P**	**23 47 19.7**	**+0.5**	
DUG				IAmb	IAmb	23 47 35.1		
	comp=Z,14nm,1.8s							
WMQ	**Urumqi**	**92.30**	**314**	*e*P	**P**	**23 47 28.2**	**+2.4**	
BSUT	**Blindstream Ca**	**92.43**	**49**	IAmb	IAmb	23 47 30.1		
	comp=Z,4.1nm,0.9s							
PV21	**Cone Mtn., Par**	**93.24**	**51**	IAmb	IAmb	23 47 39.7		
	comp=Z,4.1nm,0.8s							
PV22	**Blue Mesa, Par**	**93.38**	**51**	IAmb	IAmb	23 47 33.3		
	comp=Z,4.2nm,0.8s							
PDAR	**Pinedale Array**	**93.89**	**47**	P	**P**	**23 47 32.5**	**-0.8**	
PDAR	**Pinedale Array**	**93.89**	**47**	P	**P**	**23 47 31.8**	**-1.5**	
	comp=Z,0.4nm,0.7s,baz=228,slow=1.8,SNR=4.2							
PDAR				LR	LR	00 24 04.6		
	comp=Z,517nm,20.1s,baz=294,slow=32							
	comp=Z,0.4nm,0.7s							
SNAA	**Sanae**	**94.64**	**183**	P	**P**	**23 47 36.3**	**+0.2**	
	comp=Z,1.1nm,0.8s,baz=172,slow=7.9,SNR=5.8							
	comp=Z,1.1nm,0.8s							
MKAR	**Makanchi Array**	**96.74**	**316**	P	**P**	**23 47 44.4**	**-1.7**	
MKAR	**Makanchi Array**	**96.74**	**316**	P	**P**	**23 47 43.4**	**-2.6**	
	comp=Z,0.8nm,0.6s,baz=95,slow=6.1,SNR=5.8							
	comp=Z,0.8nm,0.6s							
ARCES	**ARCESS Array B**	**119.33**	**346**		**PKPdf**	**23 53 02.3**	**-1.9**	
ARCES	**ARCESS Array B**	**119.33**	**346**	PKP	**PKPdf**	**23 53 02.4**	**-1.8**	
	comp=Z,2.4nm,0.8s,baz=62,slow=2.3,SNR=5.5							
CLL	**Collm**	**137.26**	**337**	*e*PKPdf	**PKiKP**	**23 53 42.0**	**+1.4**	
	comp=Z,3.0nm,0.8s							
SRO	**Srobarova**	**137.51**	**329**	*e*PKP	**PKiKP**	**23 53 45.3**	**+4.1**	
KEST	**Kesra**	**150.66**	**322**	PKPbc	**PKPbc**	**23 54 08.2**	**+0.2**	
	comp=Z,7.8nm,0.9s,baz=59,slow=1.9,SNR=6.4							

IDC 05 23:44:49.9±5.8, 13°.27N×144°.02E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=179.4km s-min=44.9km az=4.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**64.33**	**320**	P	P	23 55 28.1	+0.7
	0.7nm,0.7s,baz=105,slow=6.6,SNR=6.0						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**69.21**	**25**	P	P	23 55 58.2	-0.1
	0.4nm,0.6s,baz=258,slow=5.5,SNR=6.8						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**69.67**	**322**	P	P	23 56 01.6	+0.3
	0.6nm,0.3s,baz=114,slow=6.5,SNR=5.1						
	0.6nm,0.3s						
NVAR	**Mina Array Bea**	**87.76**	**51**	P	P	23 57 42.1	+0.6
	0.5nm,0.6s,baz=283,slow=5.3,SNR=3.8						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**91.10**	**335**	P	P	23 57 54.6	-1.8
	0.9nm,0.7s,baz=62,slow=5.5,SNR=5.2						
	0.9nm,0.7s						

*SNET **06** 00:11:10.8±0.9, 12°.80N×88°.35W, h60km±82km, ML3.3*
*CATAC **06** 00:11:10.1±0.4, 13°.N±3°×8°.8W±°, h38km±6km, M3.3/18, MLv3.3/18, Error ellipse: s-maj=6.8km s-min=2.0km az=25.5, confirmed*

ISC 06 00:11:10.2±1.3, 12°.75N±0°.07×88°.37W±0°.04, h56km±18km, n61, σ0°.54/73, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**0.67**	**6**	*e*P	**Pn**	**00 11 24.0**	**-0.1**
RANC	**El Ranchito**	**0.69**	**7**	‖*e*P	**Pn**	**00 11 24.2**	**-0.1**
RANC				*e*S	**Sn**	**00 11 34.3**	**-0.2**
BLLM	**Bellamira**	**0.70**	**11**	*e*P	**Pn**	**00 11 24.2**	**-0.2**
PACA	**Pacayal**	**0.72**	**4**	*e*P	**Pn**	**00 11 24.6**	**0.0**
PACA				*e*S	**Sn**	**00 11 35.2**	**+0.1**
PACA	**Pacayal**	**0.72**	**4**	P	**Pn**	**00 11 24.7**	**+0.1**
LCND	**La Caada**	**0.73**	**40**	*e*P	**Pn**	**00 11 24.2**	**-0.4**
LCND	**La Caada**	**0.73**	**40**	P	**Pn**	**00 11 24.2**	**-0.4**
CNCH	**Conchagua**	**0.74**	**45**	*e*P	**Pn**	**00 11 24.8**	**-0.1**
CNCH	**Conchagua**	**0.74**	**45**	S	**Sn**	**00 11 36.9**	**+1.3**
CNCH	**Conchagua**	**0.74**	**45**	P	**Pn**	**00 11 24.8**	**-0.1**
CNRM	**Centro Naciona**	**0.75**	**15**	S	**Sn**	**00 11 35.8**	**+0.3**
TECA	**Tecapa**	**0.75**	**350**	*e*P	**Pn**	**00 11 24.9**	**-0.2**
TECA				*e*S	**Sn**	**00 11 35.4**	**-0.6**
CSGN	**Cosiguina Volc**	**0.82**	**74**	P	**Pn**	**00 11 26.1**	**+0.2**
CSGN				S	**Sn**	**00 11 37.7**	**+0.3**
POTN	**Potosi Cosigui**	**0.88**	**73**	P	**Pn**	**00 11 26.6**	**+0.1**
POTN				S	**Sn**	**00 11 38.7**	**+0.1**
TECO	**Alcaldia de Te**	**0.88**	**333**	*e*P	**Pn**	**00 11 26.3**	**-0.2**
TECO				*e*S	**Sn**	**00 11 37.8**	**-0.8**
TECO	**Alcaldia de Te**	**0.88**	**333**	P	**Pn**	**00 11 26.4**	**-0.2**
PQSS	**Presa 15 de Se**	**0.89**	**348**	P	**Pn**	**00 11 26.3**	**-0.3**
PQSS	**Presa 15 de Se**	**0.89**	**348**	S	**Sn**	**00 11 39.3**	**+0.6**
UESV	**Universidad de**	**0.97**	**335**	P	**Pn**	**00 11 27.7**	**-0.1**
UESV	**Universidad de**	**0.97**	**335**	S	**Sn**	**00 11 40.6**	**-0.1**
COEG	**Centro de Oper**	**1.00**	**330**	*e*P	**Pn**	**00 11 27.4**	**-0.7**
LFRS	**El Faro**	**1.10**	**322**	*e*P	**Pn**	**00 11 29.2**	**-0.3**
LFRS				*e*S	**Sn**	**00 11 43.5**	**-0.4**
PAVA	**Las Pavas**	**1.11**	**330**	P	**Pn**	**00 11 29.6**	**0.0**
PAVA	**Las Pavas**	**1.11**	**330**	S	**Sn**	**00 11 44.7**	**+0.7**
PANCS	**Alcalda de**	**1.16**	**318**	S	**Sn**	**00 11 45.3**	**-0.1**
LALI	**Alcalda de L**	**1.18**	**309**	S	**Sn**	**00 11 45.0**	**-0.7**
LOMA	**Loma Larga**	**1.18**	**319**	S	**Sn**	**00 11 45.6**	**-0.3**
LOMA	**Loma Larga**	**1.18**	**319**	P	**Pn**	**00 11 31.5**	**+0.8**
UDBS	**Universidad Do**	**1.23**	**322**	S	**Sn**	**00 11 46.7**	**-0.1**
CRIN	**San Cristobal**	**1.29**	**92**	S	**Sn**	**00 11 49.7**	**+1.4**
CRIN	**San Cristobal**	**1.29**	**92**	P	**Pn**	**00 11 32.3**	**+0.3**
PMON	**Piamonte**	**1.33**	**316**	*e*P	**Pn**	**00 11 32.6**	**0.0**
PMON	**Piamonte**	**1.33**	**316**	P	**Pn**	**00 11 32.6**	**0.0**
PMON	**Piamonte**	**1.33**	**316**	S	**Sn**	**00 11 49.2**	**-0.1**
PKGN	**Cerro Pekin**	**1.36**	**93**	P	**Pn**	**00 11 32.6**	**-0.3**
PKGN				S	**Sn**	**00 11 50.3**	**+0.3**
JAYA	**Jayaque - finc**	**1.38**	**311**	*e*P	**Pn**	**00 11 33.1**	**-0.3**
JAYA	**Jayaque - finc**	**1.38**	**311**	S	**Sn**	**00 11 49.9**	**-0.8**
JAYA	**Jayaque - finc**	**1.38**	**311**	P	**Pn**	**00 11 33.2**	**-0.2**
CEDA	**San Andres**	**1.45**	**317**	S	**Sn**	**00 11 52.7**	**+0.6**
POLN	**Al Sur del Vol**	**1.52**	**94**	P	**Pn**	**00 11 34.5**	**-0.7**
POLN				S	**Sn**	**00 11 53.3**	**-0.7**
CEVE	**Cerro Verde**	**1.62**	**311**	S	**Sn**	**00 11 57.0**	**+0.3**
CNGA	**Al SSO del Vol**	**1.65**	**99**	S	**Sn**	**00 11 56.7**	**-0.3**
CNGN	**Cerro Negro**	**1.65**	**98**	P	**Pn**	**00 11 36.7**	**-0.2**
CNGN	**Cerro Negro**	**1.65**	**98**	S	**Sn**	**00 11 57.5**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.68**	**39**	P	**Pn**	**00 11 37.3**	**-0.2**
TGUH				S	**Sn**	**00 11 58.6**	**+0.6**
NUBE	**Las Nubes**	**1.79**	**310**	*e*P	**Pn**	**00 11 39.4**	**+0.4**
NUBE	**Las Nubes**	**1.79**	**310**	P	**Pn**	**00 11 39.3**	**+0.4**
NUBE	**Las Nubes**	**1.79**	**310**	S	**Sn**	**00 12 00.6**	**0.0**
MOM3	**MOM3**	**1.82**	**97**	P	**Pn**	**00 11 39.3**	**+0.1**
MOM3				S	**Sn**	**00 12 01.6**	**+0.3**
COPN	**Copaltepe**	**1.83**	**108**	P	**Pn**	**00 11 39.7**	**+0.5**
MOM2	**El Cardon**	**1.87**	**99**	S	**Sn**	**00 12 02.2**	**-0.1**
MTO3	**Montecristo**	**1.90**	**330**	P	**Pn**	**00 11 40.5**	**0.0**
YUSH	**Yuscaran**	**1.91**	**51**	S	**Sn**	**00 12 04.1**	**+0.6**
YUSH	**Yuscaran**	**1.91**	**51**	P	**Pn**	**00 11 40.7**	**+0.2**
FAME	**Alcaldia de Sa**	**1.94**	**304**	P	**Pn**	**00 11 42.0**	**+1.3**
FAME	**Alcaldia de Sa**	**1.94**	**304**	S	**Sn**	**00 12 04.0**	**0.0**
LIMN	**Finca el Limon**	**1.98**	**81**	P	**Pn**	**00 11 40.9**	**-0.5**
LIMN				S	**Sn**	**00 12 05.5**	**+0.3**
UNAN	**Cigeo UNAN**	**2.15**	**107**	S	**Sn**	**00 12 08.0**	**-1.2**
NANN	**Nandasmo**	**2.34**	**110**	S	**Sn**	**00 12 14.8**	**+0.9**
MATN	**Matagalpa**	**2.39**	**85**	P	**Pn**	**00 11 45.8**	**-1.3**
MATN	**Matagalpa**	**2.39**	**85**	S	**Sn**	**00 12 14.1**	**-1.2**

IDC 06 00:14:11.9±2.3, 6°.26N×127°.53E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=202.7km s-min=22.2km az=67.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.89**	**166**	P	P	00 19 55.6	+0.9
	0.5nm,0.6s,baz=346,slow=10,SNR=6.7						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**30.39**	**168**	P	P	00 20 24.7	-1.2
	0.1nm,0.3s,baz=348,slow=9.0,SNR=2.6						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**55.97**	**324**	P	P	00 23 52.3	+0.1
	0.2nm,0.4s,baz=116,slow=8.8,SNR=4.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**60.07**	**326**	P	P	00 24 20.3	-0.4
	1.1nm,0.2s,baz=126,slow=6.7,SNR=4.3						
	1.1nm,0.2s						
BVAR	**Borovoye Array**	**65.66**	**326**	P	P	00 24 58.2	+0.2
	0.4nm,0.4s,baz=122,slow=5.2,SNR=3.0						
	0.4nm,0.4s						

*IDC **06** 00:14:15.1±0.7, 37°.95N×135°.14E, h350km±7km, mb3.3/19, mbtmp4.1/26, Error ellipse: s-maj=11.6km s-min=8.8km az=55.0*
*JMA **06** 00:14:15.0±0.2, 38°.0N±0°.9×135°.3E±0°.9, h371km±1km, MV3.4/38, SEA OF JAPAN*
*NEIC **06** 00:14:16.2±2.0, 37°.98N±0°.06×135°.3E±0°.1, h356km±8km, mb4.1/31, Error ellipse: s-maj=12.2km s-min=8.0km az=106.0*

ISC 06 00:14:15.5±0.6, 37°.95N±0°.06×135°.22E±0°.05, h357km±6km, n99, σ1°.34/111, mb3.9/35, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHG	**Hegura jima**	**1.35**	**94**	*e*P	**Pn**	**00 15 04.5**	**+0.9**
JHG				*e*S	**S**	**00 15 42.8**	**+0.6**
JKG	**Kaga**	**1.89**	**152**	*e*S	**S**	**00 15 49.3**	**+1.3**
JTT	**Ttatey**	**2.16**	**128**	P	**Pn**	**00 15 09.4**	**+0.7**
JOI	**OKI**	**2.28**	**224**	P	**Pn**	**00 15 10.7**	**+1.1**
JKY	**Yasaka**	**2.32**	**182**	P	**Pn**	**00 15 10.9**	**+0.9**
JKY				*e*S	**S**	**00 15 53.6**	**+1.0**
JKSM	**Kasumi**	**2.40**	**191**	P	**Pn**	**00 15 11.4**	**+0.8**
JKSM				*e*S	**S**	**00 15 56.2**	**+1.5**
JSD	**Sado**	**2.41**	**87**		**Pn**	**00 15 10.4**	**-0.1**
JSD	**Sado**	**2.41**	**87**	P	**Pn**	**00 15 10.8**	**+0.3**
JSD	**Sado**	**2.41**	**87**	P	**Pn**	**00 15 10.7**	**+0.2**
JSD				*e*S	**S**	**00 15 53.6**	**-1.0**
JWT	**Wachi**	**2.67**	**177**	P	**Pn**	**00 15 13.4**	**+0.7**
JWT				S	**S**	**00 15 58.8**	**+0.2**
MJB9	**Matsu-Tunnel**	**2.77**	**120**	Pn	**Pn**	**00 15 14.8**	**+1.3**
MAJO	**Matsushiro**	**2.77**	**120**	Pn	**Pn**	**00 15 13.4**	**-0.1**
MAJO	**Matsushiro**	**2.77**	**120**	P	**Pn**	**00 15 14.1**	**+0.6**
MAT	**Matsushiro**	**2.77**	**120**	P	**Pn**	**00 15 13.8**	**+0.3**
JNG	**Nsakai**	**2.77**	**123**	P	**Pn**	**00 15 13.9**	**+0.3**
MJAR	**Matsushiro Arr**	**2.77**	**120**	Pn	**Pn**	**00 15 12.9**	**-0.6**
MJAR	**Matsushiro Arr**	**2.77**	**120**	P	**Pn**	**00 15 14.1**	**+0.5**
	45nm,0.8s,baz=303,slow=9.6,SNR=7s						
MJAR				S	**S**	**00 16 00.2**	**+0.1**
	2.0nm,0.3s,baz=126,slow=23,SNR=0.7						
JGF	**Kuroka**	**2.91**	**143**	Pn	**Pn**	**00 15 14.9**	**+0

ARTI	**Arti**	**52.47**	**317**	P	**P**	**00 22 52.3**	**-0.3**
D27M	**Malcolm River**	**52.95**	**26**	P	**P**	**00 22 57.2**	**+1.3**
AB31	**Akbulak array**	**53.53**	**308**	P	**P**	**00 23 00.4**	**0.0**
AB31				IAmb	IAmb	00 23 01.0	
	comp=Z,3.4nm,0.5s						
ABKAR	**Akbulak array**	**53.53**	**308**	P	**P**	**00 23 00.1**	**-0.3**
H29M	**Whitestone**	**54.56**	**30**	P	**P**	**00 23 09.1**	**+1.6**
H29M				IAmb	IAmb	00 23 18.2	
	comp=Z,7.7nm,1.4s						
I30M	**Mount Dempster**	**55.62**	**31**	P	**P**	**00 23 16.7**	**+1.5**
I30M				IAmb	IAmb	00 23 17.5	
	comp=Z,6.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**56.47**	**191**	P	**P**	**00 23 21.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**56.47**	**191**	P	**P**	**00 23 21.6**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=3.6,slow=13,SNR=6.4						
	comp=Z,1.6nm,0.8s						
WB0	**Warramunga Arr**	**57.41**	**181**	P	**P**	**00 23 28.2**	**+0.2**
WB0				IAmb	IAmb	00 23 28.7	
	comp=Z,3.8nm,0.6s						
WRA	**Warramunga Arr**	**57.59**	**181**	P	**P**	**00 23 28.9**	**-0.3**
WRA	**Warramunga Arr**	**57.59**	**181**	P	**P**	**00 23 29.3**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=357,slow=7.5,SNR=57						
WRA				PcP	**PcP**	**00 24 18.4**	**+0.5**
	comp=Z,0.1nm,0.2s,baz=359,slow=4.6,SNR=5.4						
	comp=Z,2.3nm,0.5s						
WR8	**Warramunga Arr**	**57.60**	**181**	P	**P**	**00 23 29.1**	**-0.2**
WR8				IAmb	IAmb	00 23 29.9	
	comp=Z,16nm,1.5s						
ASAR	**Alice Springs**	**61.30**	**181**	P	**P**	**00 23 55.0**	**+0.7**
ASAR	**Alice Springs**	**61.30**	**181**	P	**P**	**00 23 54.6**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=13,slow=6.5,SNR=9.3						
	comp=Z,1.1nm,0.8s						
RES	**Resolute Bay**	**62.89**	**13**	P	**P**	**00 24 04.3**	**+0.2**
RES				IAmb	IAmb	00 24 32.4	
	comp=Z,11nm,1.5s						
FIA1	**FINESS Array S**	**65.63**	**330**	P	**P**	**00 24 23.2**	**+1.3**
FINES	**FINESS Array B**	**65.64**	**330**	P	**P**	**00 24 21.9**	**0.0**
FINES	**FINESS Array B**	**65.64**	**330**	P	**P**	**00 24 22.8**	**+0.9**
	comp=Z,2.2nm,0.6s,baz=134,slow=8.2,SNR=9.1						
	comp=Z,2.2nm,0.6s						
HFS	**Hagfors**	**71.14**	**333**	P	**P**	**00 24 55.5**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=121,slow=7.1,SNR=5.3						
	comp=Z,2.9nm,0.9s						
NOA	**NORSAR Array B**	**71.35**	**335**	P	**P**	**00 24 57.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=58,slow=8.2,SNR=1.8						
	comp=Z,0.4nm,0.6s						
O02D	**Mt. Diablo Mer**	**74.47**	**51**	P	**P**	**00 25 16.2**	**+0.6**
NVAR	**Mina Array Bea**	**78.29**	**50**	P	**P**	**00 25 37.8**	**+0.7**
NVAR	**Mina Array Bea**	**78.29**	**50**	P	**P**	**00 25 38.7**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=279,slow=4.6,SNR=4.9						
	comp=Z,0.6nm,0.5s						
PDAR	**Pinedale Array**	**80.43**	**42**	P	**P**	**00 25 48.5**	**0.0**
PDAR	**Pinedale Array**	**80.43**	**42**	P	**P**	**00 25 49.0**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=37,slow=0.3,SNR=9.1						
	comp=Z,1.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**80.51**	**337**	P	**P**	**00 25 48.4**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=29,slow=4.2,SNR=1.6						
	comp=Z,1.1nm,0.9s						
PFO	**Pinyon Flats O**	**82.53**	**53**	P	**P**	**00 26 00.3**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=225,slow=1.4,SNR=6.4						
	comp=Z,1.5nm,0.7s						
TXAR	**Lajitas Array**	**93.34**	**48**	P	**P**	**00 26 52.2**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=264,slow=1.7,SNR=3.7						
	comp=Z,0.4nm,0.6s						

*SJA **06** 00:25:26.5±0.7, 31°.77S×71°.42W, h34km±2km, ML3.8, MW3.9*

*GUC **06** 00:25:28.5±0.7, 31°.76S×71°.23W, h58km±2km, ML4.1*

ISC 06 00:25:26.0±1.3**, 31°.77S**±0°.02×**71°.35W**±0°.03**, h8**km±10km**, n75**,σ1°34/137**, 7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO04	**Los Peladeros**	**0.42**	**131**	*i*P	**Pn**	**00 25 39.1**	**+0.3**
CO04				*i* S	**Sb**	**00 25 46.7**	**+4.0**
CO04				IAML		00 25 47.0	
	comp=E,17μm,0.3s						
CO02	**Combarbal**	**0.63**	**28**	*i*P	**Pn**	**00 25 41.3**	**-0.2**
CO02				*i* S	**Sn**	**00 25 50.5**	**-1.4**
CO02				IAML		00 25 52.9	
	comp=N,12μm,0.2s						
CO02	**Combarbal**	**0.63**	**28**	*e*P	**Pn**	**00 25 40.8**	**-0.7**
CO02				*e*S	**Sn**	**00 25 50.7**	**-1.2**
CO02				IAML		00 25 51.0	
	comp=Z,5μm,0.1s						
VA06	**Catapilco**	**0.79**	**177**	*i*P	**Pn**	**00 25 44.1**	**+0.4**
VA06				*i* S	**Sn**	**00 25 55.7**	**0.0**
VA06				IAML		00 25 58.3	
	comp=N,11μm,0.5s						
CO03	**El Pedregal**	**1.08**	**31**	*i*P	**Pn**	**00 25 47.3**	**-0.3**
CO03				*i* S	**Sb**	**00 26 00.9**	**-0.5**
CO03				IAML		00 26 03.1	
	comp=E,6μm,0.2s						
CO03	**El Pedregal**	**1.08**	**31**	*e*P	**Pn**	**00 25 47.3**	**-0.3**
CO03				*e*S	**Sn**	**00 26 02.2**	**-0.7**
CO03				IAML		00 26 03.0	
	comp=Z,2μm,0.1s						
CO06	**Fray Jorge**	**1.12**	**347**	*i* P	**Pn**	**00 25 48.4**	**+0.3**
CO06				*i* S	**Sn**	**00 26 04.0**	**+0.4**
VA03	**San Esteban**	**1.20**	**146**	*i*P	**Pg**	**00 25 48.9**	**-0.3**
VA03				*i* S	**Sg**	**00 26 04.1**	**-0.7**
VA03				IAML		00 26 04.7	
	comp=E,6μm,0.2s						
VA03	**San Esteban**	**1.20**	**146**	*e*P	**Pg**	**00 25 48.2**	**-0.9**
VA03				*e*S	**Sg**	**00 26 04.5**	**-0.2**
VA03				IAML		00 26 06.7	
	comp=Z,2μm,0.2s						
ROCH	**El Roble**	**1.23**	**167**	*i*P	**Pg**	**00 25 49.6**	**-0.2**
ROCH				*i* S	**Sg**	**00 26 06.0**	**+0.1**
ROC1	**El Roble**	**1.24**	**167**	*e*P	**Pg**	**00 25 49.7**	**-0.2**
ROC1				*e*S	**Sb**	**00 26 06.5**	**+0.3**
VA01	**Torpederas**	**1.28**	**191**	*e*P	**Pn**	**00 25 50.7**	**+0.4**
VA01				*i* P		00 25 50.9	
VA01				*e*S	**Sg**	**00 26 07.6**	**+0.4**
VA01	**Torpederas**	**1.28**	**191**	*e*P	**Pn**	**00 25 50.5**	**+0.3**
VA01				*e*S	**Sn**	**00 26 09.8**	**+2.2**
VA01				IAML		00 26 11.0	
	comp=Z,607nm,0.2s						
PEL	**Peldehue**	**1.48**	**158**	*i* P	**Pn**	**00 25 52.9**	**-0.3**
PEL				*i* S	**Sn**	**00 26 11.2**	**-1.6**
PEL	**Peldehue**	**1.48**	**158**	*e*P	**Pn**	**00 25 52.9**	**-0.3**
PEL				*e*S	**Sn**	**00 26 11.1**	**-1.7**
PEL				IAML		00 26 14.7	
	comp=Z,1μm,0.3s						
MT02	**Curacav**	**1.50**	**173**	*i* P	**Pn**	**00 25 53.4**	**+0.1**
MT02				*i* S	**Sn**	**00 26 11.9**	**-1.2**
MT02				IAML		00 26 15.3	
	comp=E,2μm,0.7s						
MT02	**Curacav**	**1.50**	**173**	*e*P	**Pn**	**00 25 53.4**	**+0.1**
MT02				*e*S	**Sn**	**00 26 12.3**	**-0.8**
MT02				IAML		00 26 13.2	
	comp=Z,1μm,0.3s						
MT10	**Hacienda Santa**	**1.65**	**156**	*i* P	**Pn**	**00 25 55.3**	**-0.2**
MT10				*i* S	**Sn**	**00 26 15.8**	**-1.3**
MT10				IAML		00 26 19.4	
	comp=N,4μm,0.4s						
GO04	**Tololo Observa**	**1.66**	**17**	*i*P	**Pn**	**00 25 55.6**	**-0.1**
GO04				*i* S	**Sn**	**00 26 16.5**	**-0.9**
GO04				IAML		00 26 21.5	
	comp=N,7μm,0.3s						
GO04	**Tololo Observa**	**1.66**	**17**	*e*P	**Pn**	**00 25 55.7**	**-0.1**
GO04				*e*S	**Sb**	**00 26 17.9**	**-0.3**
GO04				IAML		00 26 18.8	
	comp=Z,2μm,0.2s						
MT05	**Renca**	**1.70**	**163**	*i* P	**Pn**	**00 25 56.0**	**-0.1**
MT05				*i* S	**Sn**	**00 26 16.6**	**-1.6**
MT05				IAML		00 26 20.5	
	comp=E,3μm,0.3s						
MT05	**Renca**	**1.70**	**163**	*e*P	**Pn**	**00 25 56.2**	**0.0**
MT05				*e*S	**Sn**	**00 26 19.1**	**+0.9**
MT05				IAML		00 26 26.3	
	comp=Z,954nm,0.3s						
RTLS	**Leoncito**	**1.75**	**92**	*e*P	**Pb**	**00 25 57.9**	**-0.6**
RTLS				*e*S	**Sg**	**00 26 25.3**	**+3.1**
RTLS				IAML		00 26 30.1	
	comp=Z,610nm,0.6s						
MT14	**Cerro Cal¡n**	**1.76**	**157**	*i* P	**Pn**	**00 25 57.0**	**0.0**
MT14				*i* S	**Sn**	**00 26 17.7**	**-2.1**
MT14				IAML		00 26 26.9	
	comp=E,2μm,0.3s						
MT16	**CCHEN**	**1.80**	**157**	*i* P	**Pn**	**00 25 57.4**	**-0.1**
CO05	**La Serena**	**1.84**	**3**	*i* P	**Pn**	**00 25 58.3**	**+0.3**
CO05				*i* S	**Sn**	**00 26 20.2**	**-1.4**
MT03	**Universidad Ad**	**1.86**	**158**	*i* P	**Pn**	**00 25 58.4**	**-0.1**
MT03				*i* S	**Sn**	**00 26 21.4**	**-0.8**
MT03				IAML		00 26 27.1	
	comp=E,3μm,0.1s						
MT03	**Universidad Ad**	**1.86**	**158**	*e*P	**Pn**	**00 25 58.7**	**+0.3**
MT03				*e*S	**Sn**	**00 26 22.0**	**-0.2**
MT03				IAML		00 26 27.4	
	comp=Z,1μm,0.1s						
MT04	**Ro Olivares**	**1.93**	**148**	*i* P	**Pn**	**00 25 59.8**	**+0.4**
MT04				*i* S	**Sn**	**00 26 22.8**	**-1.3**
MT04	**Ro Olivares**	**1.93**	**148**	*e*P	**Pn**	**00 25 59.9**	**+0.4**
MT04				*e*S	**Sn**	**00 26 25.0**	**+1.0**
MT04				IAML		00 26 28.3	
	comp=Z,864nm,0.2s						
MT15	**Las Vizcachas**	**1.96**	**159**	*i* P	**Pn**	**00 25 59.8**	**+0.1**
MT15				*i* S	**Sn**	**00 26 23.5**	**-1.1**
MT15				IAML		00 26 28.7	
	comp=N,4μm,0.3s						
MT08	**Bocatoma Ro**	**2.02**	**147**	*i* P	**Pn**	**00 26 01.8**	**+1.1**
MT08				*i* S	**Sn**	**00 26 26.8**	**+0.6**
MT08				IAML		00 26 31.3	
	comp=E,1μm,0.3s						
MT08	**Bocatoma Ro**	**2.02**	**147**	*e*P	**Pn**	**00 26 01.9**	**+1.3**
MT08				*e*S	**Sb**	**00 26 28.2**	**-0.3**
MT08				IAML		00 26 33.4	
	comp=Z,486nm,0.6s						
MT09	**Talagante**	**2.03**	**172**	*i* P	**Pn**	**00 26 00.9**	**+0.2**
MT09				*i* S	**Sn**	**00 26 25.6**	**-0.7**
MT09				IAML		00 26 32.7	
	comp=N,2μm,0.2s						
MT12	**Pirque**	**2.07**	**161**	*i* P	**Pn**	**00 26 01.1**	**-0.2**
MT12				*i* S	**Sn**	**00 26 25.7**	**-1.7**
MT12				IAML		00 26 32.5	
	comp=E,2μm,0.5s						
CO01	**Juntas del Tor**	**2.08**	**31**	*i*P	**Pn**	**00 26 02.1**	**+0.5**
CO01				*i* S	**Sn**	**00 26 26.9**	**-0.9**
CO01				IAML		00 26 29.5	
	comp=N,1μm,0.2s						
CO01	**Juntas del Tor**	**2.08**	**31**	*e*P	**Pn**	**00 26 02.0**	**+0.5**
CO01				*e*S	**Sn**	**00 26 27.4**	**-0.5**
CO01				IAML		00 26 30.2	
	comp=Z,660nm,0.3s						
MT01	**Popeta**	**2.09**	**178**	*i* P	**Pn**	**00 26 01.9**	**+0.4**
MT01				*i* S	**Sn**	**00 26 27.3**	**-0.5**
MT01				IAML		00 26 33.2	
	comp=N,2μm,0.2s						
MT01	**Popeta**	**2.09**	**178**	*e*P	**Pn**	**00 26 01.3**	**-0.2**
MT01				*e*S	**Sg**	**00 26 35.1**	**+1.7**
MT01				IAML		00 26 36.3	
	comp=Z,787nm,0.2s						
AROD	**Rodeo**	**2.27**	**46**	*e*P	**Pb**	**00 26 06.0**	**-1.4**
AROD				*e*S	**Sn**	**00 26 32.7**	**+0.2**
ACCO	**Cerro Coronel**	**2.28**	**60**	*e*P	**Pb**	**00 26 06.4**	**-1.3**
ACCO				*e*S	**Sb**	**00 26 36.5**	**+0.2**
ASAL	**Salagasta**	**2.28**	**112**	*e*P	**Pb**	**00 26 06.4**	**-1.2**
ASAL				*e*S	**Sg**	**00 26 40.6**	**+1.2**
ZON	**Zonda**	**2.29**	**85**	*e*P	**Pn**	**00 26 05.7**	**+1.5**
ZON				*e*S	**Sb**	**00 26 35.7**	**-0.4**
ZON				IAML		00 26 38.5	
	comp=Z,199nm,0.3s						
LMEL	**Las Melosas**	**2.29**	**155**	*i* P	**Pn**	**00 26 05.0**	**+0.7**
LMEL	**Las Melosas**	**2.29**	**155**	*e*P	**Pn**	**00 26 05.1**	**+0.7**
LMEL				*e*S	**Sn**	**00 26 33.4**	**+0.5**
LMEL				IAML		00 26 37.8	
	comp=Z,510nm,0.1s						
BO04	**La Punta**	**2.30**	**165**	*i* P	**Pn**	**00 26 04.6**	**+0.2**
BO04				*i* S	**Sn**	**00 26 32.0**	**-1.0**
ARCO	**CERRO ARCO**	**2.31**	**118**	*e*P	**Pb**	**00 26 07.1**	**-1.0**
ARCO				*e*S	**Sg**	**00 26 44.6**	**+4.3**
ARCO				IAML		00 26 45.3	
	comp=Z,290nm,0.3s						
SJA	**San Juan**	**2.39**	**85**	*e*P	Pn	00 25 52.5	-13
SJA				*e*S	**Sn**	**00 26 34.0**	**-1.1**
SJA				IAML		00 26 41.8	
	comp=Z,327nm,0.2s						
ACDV	**Cuesta del Vie**	**2.49**	**51**	*e*P	**Pb**	**00 26 10.0**	**-1.1**
ACDV				*e*S	**Sb**	**00 26 42.9**	**+0.8**
ACDV				IAML		00 26 45.5	
	comp=Z,198nm,0.2s						
RTLL	**Cerro Villicun**	**2.49**	**81**	*e*P	**Pn**	**00 26 08.2**	**+1.2**
RTLL				*e*S	**Sb**	**00 26 40.3**	**-1.7**
RTLL				IAML		00 26 45.8	
	comp=Z,402nm,0.3s						
AAGR	**Agrelo**	**2.50**	**122**	*e*P	**Pb**	**00 26 09.8**	**-1.6**
AAGR				*e*S	**Sg**	**00 26 45.2**	**-1.3**
AAGR				IAML		00 26 47.9	
	comp=Z,210nm,0.8s						
BO01	**Tunca**	**2.63**	**175**	*e*P	**Pn**	**00 26 09.1**	**+0.2**
BO01	**Tunca**	**2.63**	**175**	*e*P	**Pn**	**00 26 09.0**	**+0.2**
BO01				*e*S	**Sn**	**00 26 43.7**	**+2.7**
BO01				IAML		00 26 47.6	
	comp=Z,316nm,0.2s						
CFA	**Coronel Fontan**	**2.66**	**87**	*e*P	**Pn**	**00 26 10.5**	**+1.3**
CFA				*e*S	**Sb**	**00 26 46.1**	**-0.7**
BO03	**Pichilemu**	**2.77**	**191**	*e*P	**Pn**	**00 26 10.2**	**-0.6**
LCO	**Las Campanas**	**2.80**	**12**	*e*P	**Pn**	**00 26 09.7**	**-1.8**
LCO				*e*S	**Sn**	**00 26 46.0**	**+4.0**
LCO				IAML		00 26 54.9	
	comp=Z,598nm,0.3s						
AVIZ	**Vizcacheras**	**2.93**	**126**	*e*P	**Pn**	**00 26 13.2**	**+0.1**
BO02	**Sierra Bellavi**	**3.06**	**171**	*e*P	**Pn**	**00 26 15.6**	**+0.8**
BO02	**Sierra Bellavi**	**3.06**	**171**	*e*P	**Pn**	**00 26 15.5**	**+0.7**
BO02				*e*S	**Sb**	**00 26 57.2**	**-1.1**
BO02				IAML		00 27 00.3	
	comp=Z,662nm,0.2s						
GO05	**Hualane**	**3.27**	**188**	*e*P	**Pn**	**00 26 16.7**	**-1.1**
GO05	**Hualane**	**3.27**	**188**	*e*P	**Pn**	**00 26 17.2**	**-0.5**
GO05				*e*S	**Sn**	**00 26 59.8**	**+2.9**
GO05				IAML		00 27 11.6	
	comp=Z,174nm,0.8s						
AGUA	**GUANDACOL**	**3.35**	**48**	*e*P	**Pn**	**00 26 21.2**	**+2.3**
AGUA				*e*S	Sn	00 26 44.6	-14
AGUA				IAML		00 26 45.2	
	comp=Z,286nm,0.4s						
AVFE	**Valle Fertil**	**3.51**	**73**	*e*P	**Pn**	**00 26 21.7**	**+0.6**
AVFE				*e*S	**Sn**	**00 27 02.7**	**-0.2**
AVFE				IAML		00 27 11.4	
	comp=Z,320nm,0.5s						
AC04	**Llanos de Chal**	**3.56**	**4**	*e*P	**Pn**	**00 26 21.4**	**-0.3**
AC04	**Llanos de Chal**	**3.56**	**4**	*e*P	**Pn**	**00 26 21.7**	**+0.1**
AC04				*e*S	**Sn**	**00 27 06.0**	**+2.1**
AC04				IAML		00 27 16.6	
	comp=Z,308nm,1.4s						
ACAN	**Cantantal**	**3.57**	**99**	*e*P	**Pn**	**00 26 21.4**	**-0.5**
ACAN				IAML		00 27 28.1	
	comp=Z,292nm,0.7s						
RFA	**San Rafael**	**3.85**	**142**	*e*P	**Pn**	**00 26 26.7**	**+1.0**
RFA				*e*S	**Sb**	**00 27 24.7**	**+3.6**
VCA	**Vinchina**	**4.06**	**43**	*e*P	**Pn**	**00 26 31.2**	**+2.4**
VCA	**Vinchina**	**4.06**	**43**	*e*P	**Pn**	**00 26 31.3**	**+2.6**
VCA				*e*S	**Sn**	**00 27 18.2**	**+1.6**
VCA				IAML		00 27 31.5	
	comp=Z,262nm,0.9s						
GO03	**Copiapo**	**4.27**	**13**	*e*P	**Pn**	**00 26 31.7**	**+0.2**
GO03				*e*S	**Sn**	**00 27 22.1**	**+0.5**
GO03				IAML		00 27 43.0	
	comp=Z,177nm,0.6s						
APLL	**PUNTA DE LOS L**	**4.35**	**73**	*e*P	**Pn**	**00 26 32.8**	**+0.2**
APLL				*e*S	**Sn**	**00 27 22.8**	**-0.9**
ACLC	**CERRO LA CRUZ**	**4.45**	**60**	*e*P	**Pn**	**00 26 34.6**	**+0.5**
ACLC				*e*S	**Sn**	**00 27 26.9**	**+0.7**
ACLC				IAML		00 27 33.7	
	comp=Z,86nm,0.4s						
MRA	**San Martin**	**4.82**	**99**	*e*P	**Pn**	**00 26 38.5**	**-0.6**
MRA				*e*S	**Sn**	**00 27 31.4**	**-3.8**
MRA				IAML		00 27 40.4	
	comp=Z,91nm,0.6s						
AC02	**Maricunga**	**5.28**	**22**	*e*P	**Pn**	**00 26 46.0**	**+0.2**
AC02				*e*S	**Sn**	**00 27 53.2**	**+6.1**
AC02				IAML		00 28 02.2	
	comp=Z,64nm,1.1s						
TCA	**Tanti**	**5.78**	**88**	*e*P	**Pn**	**00 26 50.8**	**-1.5**

*IDC **06** 00:29:47.2±0.9, 26°.56S×176°.74W, h0km, mb4.0/7, mbtmp4.0/9, ML3.9/2, Error ellipse: s-maj=32.1km s-min=19.7km az=101.0*

ISC 06 00:29:49.7±0.8**, 26.72S**±0°.09×**176.9W**±0°.2**, h10**km**, n15,** σ2°43/18**, mb4.1/7, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.67**	**199**	Pn	**Pn**	**00 30 34.3**	**+1.5**
	35nm,0.3s,baz=218,slow=23,SNR=4.0						
RAO				Sn	**Sb**	**00 31 10.6**	**+0.1**
	131nm,0.3s,baz=285,slow=24,SNR=6.9						
	127nm,0.3s						
URZ	**Urewera**	**12.55**	**202**	Pn	**Pn**	**00 32 48.9**	**+0.6**
	0.4nm,0.3s,baz=28,slow=7.3,SNR=2.2						
URZ				Sn	**Sn**	**00 35 04.0**	**-4.3**
	0.6nm,0.3s,baz=190,slow=22,SNR=5.9						
	1.2nm,0.4s						
ASAR	**Alice Springs**	**44.38**	**263**	P	**P**	**00 38 01.6**	**+0.9**
	0.7nm,0.6s,baz=88,slow=7.2,SNR=7.9						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**45.04**	**268**	P	**P**	**00 38 06.2**	**+0.2**
	2.7nm,0.6s,baz=107,slow=7.5,SNR=20						
	2.7nm,0.6s						
VNDA	**Vanda**	**51.84**	**186**	P	**P**	**00 38 57.8**	**+0.2**
	0.9nm,1.0s,baz=0.0,slow=9.7,SNR=1.5						
	0.9nm,1.0s						
QSPA	**South Pole Qui**	**63.38**	**180**	P	**P**	**00 40 19.8**	**+0.7**
	1.6nm,0.7s,baz=38,slow=4.7,SNR=4.3						
	1.6nm,0.7s						
MAW	**Mawson**	**76.07**	**200**	P	**P**	**00 41 38.1**	**+1.0**
	1.4nm,0.8s,baz=169,slow=10,SNR=2.0						
	1.4nm,0.8s						
KSRS	**Korea Array**	**82.19**	**319**	P	**P**	**00 42 11.2**	**+0.3**
	1.9nm,0.8s,baz=136,slow=6.0,SNR=4.6						
	1.9nm,0.8s						
NVAR	**Mina Array Bea**	**84.90**	**42**	P	**P**	**00 42 24.9**	**-0.3**
	0.4nm,0.6s,baz=240,slow=4.2,SNR=1.5						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**119.20**	**315**	PKP	**PKPdf**	**00 48 35.4**	**-3.4**
	0.3nm,0.3s,baz=75,slow=2.3,SNR=4.3						
NB2	**NORSAR Subarra**	**145.25**	**353**	PKP	**PKPbc**	**00 49 23.5**	**-3.4**
	comp=Z,1.0nm,0.8s,baz=8.7,slow=3.7						
NOA	**NORSAR Array B**	**145.25**	**353**	PKPbc	**PKPbc**	**00 49 24.0**	**-2.9**
	comp=Z,2.3nm,0.9s,baz=9.8,slow=2.3,SNR=5.1						
HFS	**Hagfors**	**145.81**	**351**	PKPbc	**PKPdf**	**00 49 25.5**	**-2.6**
	comp=Z,1.7nm,0.6s,baz=15,slow=6.0,SNR=7.7						
AKASG	**Malin Array Be**	**148.84**	**327**	PKPbc	**PKPdf**	**00 49 34.2**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=54,slow=1.6,SNR=5.0						
BRTR	**Keskin Array B**	**151.48**	**305**	PKPbc	**PKPdf**	**00 49 43.3**	**+5.1**
	comp=Z,0.4nm,0.8s,baz=106,slow=2.7,SNR=1.5						
BRTR				PKPab	**PKPab**	**00 49 53.1**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=66,slow=3.6,SNR=7.1						

*CATAC **06** 00:36:33.4±0.5, 10°.N±2°×8°.6W±°, h13km±3km, M3.8/26, MLv3.8/26, Error ellipse: s-maj=5.2km s-min=3.5km az=39.1, confirmed*

*UCR **06** 00:36:33.5±0.8, 10°.39N×86°.22W, h5km±5km, MW4.0*

ISC 06 00:36:33.4±1.5**, 10°.37N**±0°.04×**86°.26W**±0°.05**, h13**km±10km**, n76,σ0°.97/83, 19C-3D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAJU	**San Juanillo,**	**0.61**	**119**	*e*P	**Pg**	**00 36 45.8**	**+0.4**
SACU	**Santa Cruz**	**0.67**	**99**	*e*P	**Pg**	**00 36 46.8**	**+0.3**
DELF	**Filadelfia**	**0.69**	**83**	*e*P	**Pg**	**00 36 47.5**	**+0.6**
ALIBA	**Liberia Airpor**	**0.73**	**72**	*e*P	**Pb**	**00 36 48.6**	**+0.6**
JUD3	**Juan Diaz 3**	**0.73**	**106**	*e*P	**Pg**	**00 36 47.7**	**0.0**
ELI1	**Hacienda Flor**	**0.74**	**68**	P	**Pb**	**00 36 49.0**	**+0.8**
ELI1	**Hacienda Flor**	**0.74**	**68**	S	**Sb**	**00 37 00.3**	**+2.0**
ELI1	**Hacienda Flor**	**0.74**	**68**	*e*P	**Pb**	**00 36 49.3**	**+1.0**
CMARA	**Lajas Hojancha**	**0.89**	**113**	P	**Pg**	**00 36 50.4**	**-0.2**
CMARA	**Lajas Hojancha**	**0.89**	**113**	*e*P	**Pg**	**00 36 49.9**	**-0.8**
PLVR	**Palo Verde**	**0.89**	**91**	*e*P	**Pg**	**00 36 50.9**	**+0.2**
LAPC	**Finca la Perla**	**0.90**	**64**	*e*P	**Pg**	**00 36 50.5**	**-0.3**
LCRUZ	**La Cruz**	**0.94**	**41**	*e*P	**Pg**	**00 36 51.6**	**+0.1**
GPS2	**Hotel Rincn d**	**0.97**	**67**	*e*P	**Pg**	**00 36 51.7**	**-0.4**
VRLE	**La Escondida,**	**0.97**	**64**	*e*P	**Pg**	**00 36 51.6**	**-0.6**
GPS1	**Guardaparques**	**0.98**	**65**	*e*P	**Pg**	**00 36 51.8**	**-0.5**
BAGA	**Bagaces**	**0.99**	**81**	*e*P	**Pg**	**00 36 52.3**	**-0.2**
VORI	**VORI**	**1.00**	**63**	*e*P	**Pg**	**00 36 52.5**	**-0.2**
BUAI	**Buenos Aires**	**1.04**	**61**	*e*P	**Pg**	**00 36 53.0**	**-0.5**
NYURE	**Nandayure**	**1.05**	**110**	*e*P	**Pg**	**00 36 53.5**	**-0.3**
CARN	**Rivas**	**1.09**	**41**	P	**Pg**	**00 36 54.1**	**-0.3**
CARN				S	**Sn**	**00 37 10.9**	**+1.6**
CARN	**Rivas**	**1.09**	**41**	*e*P	**Pg**	**00 36 54.0**	**-0.3**
CUI	**Cuipilapa**	**1.11**	**75**	*e*P	**Pg**	**00 36 53.9**	**-1.0**
HORNC	**Hornillas**	**1.11**	**72**	*e*P	**Pg**	**00 36 53.8**	**-1.1**
ARIN	**Rivas**	**1.16**	**21**	P	**Pb**	**00 36 52.7**	**-2.6**
ARIN	**Rivas**	**1.16**	**21

ellipse: s-maj=15.3km s-min=9.8km az=299.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.19; $M_{\theta\theta}$-2.05; $M_{\phi\phi}$1.86; $M_{r\theta}$1.87; $M_{r\phi}$9.06; $M_{\theta\phi}$1.35; Fault plane solution: $M_0$9.55000×10^{17} NP1: ϕ_s353.18000°,δ78.02000°,λ173.24000°. NP2: ϕ_s84.59000°,δ83.39000°,λ12.06000°. Principal axes: T 9.6926, Plg13.0000°, Azm309.0000°; N -0.2868, Plg76.0000°, Azm113.0000°; P -9.4057, Plg4.0000°, Azm218.0000°;

NOU ***06*** *00:39:11.1, 13°.61S×167°.78E, h11km, ML5.8/136, Vanuatu Islands*

GCMT ***06*** *00:39:14.3±0.1, 13°.58S×167°.83E, h12km, MW6.0/159, Moment Tensor Solution. s139,c294; s159,c536; Duration: 2s4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.05±.01; $M_{\theta\theta}$-0.62±.01; $M_{\phi\phi}$0.67±.01; $M_{r\theta}$-0.12±.02; $M_{\theta\phi}$1.02±.01; $M_{\phi r}$-0.12±.02; Best double couple: $M_0$1.21900×10^{18} NP1:ϕ_s164.00000°,δ83.00000°, λ176.00000°. NP2:ϕ_s254.00000°,δ86.00000°,λ7.00000°. Principal axes: T 1.2540, Plg7.0000°, Azm119.0000°; N -0.0700, Plg82.0000°, Azm281.0000°; P -1.1830, Plg2.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 06 00:39:11.0±0.5, 13°.66S±0°.03×167°.91E±0°.03, h22km±3km, h22km:pP-P,n1471,σ1§40/1063,mb6.0/432,MS5.8/415, 27C-19D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SANVU	**Saraoutou**	**1.91**	**201**	Pn	**Pn**		**00 39 39.3**	**-2.9**
SANVU				Sn	**Sn**		**00 40 02.7**	**-2.8**
SANVU	**Saraoutou**	**1.91**	**201**	P	**Pn**		**00 39 41.4**	**-0.8**
KOUNC	**Koumac, New Ca**	**7.68**	**206**	P	**Pn**		**00 41 03.2**	**+1.6**
KOUNC	**Koumac, New Ca**	**7.68**	**206**	S	**Sn**		**00 42 29.3**	**+1.4**
MARNC	**Mare, Loyalty**	**7.78**	**179**	Pn	**Pn**		**00 41 02.5**	**-0.4**
MARNC	**Mare, Loyalty**	**7.78**	**179**	P	**Pn**		**00 41 04.6**	**+1.6**
YATNC	**Mamie plateau,**	**8.41**	**186**	P	**Pn**		**00 41 11.9**	**+0.3**
DZM	**Mont Dzumac**	**8.48**	**189**	Pn	**Pn**		**00 41 12.9**	**+0.2**
	19nm,0.3s,baz=36,slow=16,SNR=106							
DZM				Sn	**Sn**		**00 42 49.7**	**+1.8**
	5.0nm,0.3s,baz=142,slow=22,SNR=4.1							
DZM				LR	LR		00 44 08.8	
	comp=Z,85μm,21.8s,baz=22,slow=35							
	138nm,0.6s							
ONTNC	**Ouen Toro**	**8.71**	**189**	Pn	**Pn**		**00 41 16.6**	**+0.8**
ONTNC	**Ouen Toro**	**8.71**	**189**	P	**Pn**		**00 41 17.1**	**+1.3**
OUENC	**Ouen Island, N**	**8.77**	**186**	P	**Pn**		**00 41 17.6**	**+1.0**
HNR	**Honiara**	**8.86**	**297**	Pn	**Pn**		**00 41 17.0**	**-0.8**
HNR	**Honiara**	**8.86**	**297**	Pn	**Pn**		**00 41 16.1**	**-1.6**
	89nm,0.3s,baz=215,slow=2.2,SNR=111							
HNR				Sn	**Sn**		**00 42 56.2**	**-0.8**
	22nm,0.3s,baz=220,slow=21,SNR=1.3							
HNR				LR	LR		00 44 44.1	
	comp=Z,44μm,21.1s,baz=143,slow=38							
	2μm,0.9s							
HNR	**Honiara**	**8.86**	**297**	P	**Pn**		**00 41 18.3**	**+0.5**
HNR	**Honiara**	**8.86**	**297**	P	**Pn**		**00 41 17.0**	**-0.8**
SAVO	**Savo Central**	**9.11**	**299**	P	**Pn**		**00 41 20.8**	**-0.5**
MSVF	**Nonsavu**	**10.57**	**114**	Pn	**Pn**		**00 41 45.4**	**+4.0**
MSVF	**Nonsavu**	**10.57**	**114**	P	**Pn**		**00 41 45.3**	**+4.0**
MSVF	**Nonsavu**	**10.57**	**114**	P	**Pn**		**00 41 45.4**	**+4.0**
FUNA	**Funafuti**	**12.19**	**66**	Pn	Pn		00 41 57.9	-5.6
FUNA	**Funafuti**	**12.19**	**66**	P	**Pn**		**00 42 06.1**	**+2.6**
NFK	**Norfolk Island**	**15.31**	**180**	P	**Pn**		**00 42 46.9**	**+1.0**
	comp=Z,269nm,1.8s							
NFK	**Norfolk Island**	**15.31**	**180**	P	**Pn**		**00 42 46.1**	**+0.3**
TARA	**Tarawa**	**15.72**	**19**	Pn	**Pn**		**00 42 50.2**	**-1.0**
TARA	**Tarawa**	**15.72**	**19**	P	**Pn**		**00 42 51.5**	**+0.3**
GD1S	**Gladstone Soft**	**18.79**	**235**	P	**Pn**		**00 43 30.1**	**+0.5**
AUWSH	**Wavell State H**	**19.49**	**223**	P	**Pn**		**00 43 38.7**	**+0.8**
LHI	**Lord Howe Isla**	**19.55**	**203**	P	**P**		**00 43 37.8**	**+0.6**
EIDS	**Eidsvold**	**19.65**	**231**	P	**Pn**		**00 43 40.2**	**+0.2**
	comp=Z,492nm,2.3s							
EIDS	**Eidsvold**	**19.65**	**231**		**Pn**		**00 43 39.9**	**-0.1**
EIDS	**Eidsvold**	**19.65**	**231**	P	**Pn**		**00 43 40.0**	**+0.1**
GC1S	**Gold Coast 1 S**	**19.70**	**221**	P	**Pn**		**00 43 41.3**	**+0.9**
AFI	**Afiamalu**	**19.73**	**93**		**Pn**		**00 43 41.3**	**+0.3**
AFI	**Afiamalu**	**19.73**	**93**	P	**Pn**		**00 43 42.5**	**+1.5**
AFI	**Afiamalu**	**19.73**	**93**	P	**Pn**		**00 43 41.3**	**+0.3**
AFI				pmax	pmax			
	comp=Z,237nm,1.2s							
TW1H	**Toowoomba 1 Ha**	**20.30**	**225**	P	**P**		**00 43 46.8**	**+1.3**
RIZ	**Raoul Island**	**20.32**	**142**	P	**P**		**00 43 45.5**	**-0.2**
RAO	**Raoul Island**	**20.34**	**142**	P	**P**		**00 43 45.9**	**+0.1**
RAO	**Raoul Island**	**20.34**	**142**	P	**P**		**00 43 46.0**	**+0.2**
	comp=Z,452nm,0.7s,baz=158,slow=10,SNR=7.6							
RAO				S	**S**		**00 47 35.4**	**+2.6**
	comp=Z,75nm,0.3s,baz=253,slow=22,SNR=1.1							
RAO				LR	LR		00 49 52.3	
	comp=Z,15μm,20.4s,baz=324,slow=32							
	comp=Z,452nm,0.7s							
RAO	**Raoul Island**	**20.34**	**142**	P	Pn		00 43 48.3	+0.4
PMG	**Port Moresby**	**20.76**	**280**	P	**P**		**00 43 50.2**	**-0.4**
PMG	**Port Moresby**	**20.76**	**280**	IAMs_20	IAMs_20		00 50 26.8	
	comp=Z,32μm,20.0s							
PMG	**Port Moresby**	**20.76**	**280**	P	**P**		**00 43 49.5**	**-1.0**
	comp=Z,109nm,1.0s,baz=81,slow=6.6,SNR=40							
PMG				S	Sn		00 47 45.7	-1.3
	comp=Z,4.5nm,0.3s,baz=156,slow=21,SNR=1.2							
PMG				LR	LR		00 50 48.1	
	comp=Z,30μm,20.4s,baz=54,slow=34							
	comp=Z,109nm,1.0s							
PMG	**Port Moresby**	**20.76**	**280**	P	**P**		**00 43 51.3**	**+0.7**
PMG	**Port Moresby**	**20.76**	**280**	*ce*P	**P**		**00 43 51.3**	**+0.7**
PMG				pmax	pmax			
	comp=Z,407nm,1.7s							
TV1H	**Townsville Har**	**20.99**	**252**	P	**P**		**00 43 53.3**	**+0.3**
NIUE	**Niue**	**21.93**	**107**	P	**P**		**00 44 02.5**	**-0.6**
	comp=Z,506nm,1.2s							
NIUE	**Niue**	**21.93**	**107**	P	**P**		**00 44 03.1**	**0.0**
NIUE				IAmb	IAmb		00 44 14.7	
	comp=Z,784nm,1.2s							
NIUE	**Niue**	**21.93**	**107**	P	**P**		**00 44 04.8**	**+1.7**
RMQ	**Roma**	**22.02**	**232**	P	**P**		**00 44 04.3**	**+0.3**
	comp=Z,341nm,1.9s							
RMQ	**Roma**	**22.02**	**232**	P	**P**		**00 44 04.8**	**+0.8**
OUZ	**Omahuta**	**22.08**	**168**	P	**P**		**00 44 06.2**	**+1.7**
ARMA	**Armidale**	**22.45**	**219**	P	**P**		**00 44 09.7**	**+1.0**
	comp=Z,0.0nmcomp=Z,317nm,2.1s							
ARMA	**Armidale**	**22.45**	**219**	P	**P**		**00 44 08.3**	**-0.4**
ARMA	**Armidale**	**22.45**	**219**	P	**P**		**00 44 10.2**	**+1.5**
PATS	**Pohnpei**	**22.48**	**334**	P	**P**		**00 44 08.0**	**-1.0**
	comp=Z,666nm,1.2s							
PATS	**Pohnpei**	**22.48**	**334**	P	**P**		**00 44 08.8**	**-0.2**
PATS				IAmb	IAmb		00 44 25.5	
	comp=Z,738nm,1.1s							
PATS	**Pohnpei**	**22.48**	**334**	P	**P**		**00 44 09.7**	**+0.7**
WCZ	**Waipu Caves**	**22.93**	**166**	P	**P**		**00 44 15.5**	**+2.0**
MTSU	**Mount Surprise**	**23.11**	**256**	P	**P**		**00 44 15.5**	**-0.3**
	comp=Z,214nm,0.9s							
MTSU	**Mount Surprise**	**23.11**	**256**	P	**P**		**00 44 15.7**	**0.0**
MANU	**Manus Island**	**23.36**	**298**	P	**P**		**00 44 16.7**	**-1.5**
MANU				IAmb	IAmb		00 44 22.5	
	comp=Z,560nm,1.1s							
AUPHS	**Peel High Scho**	**23.38**	**219**	P	**P**		**00 44 20.2**	**+2.0**
GRZ	**Great Barrier**	**23.50**	**165**	P	**P**		**00 44 20.1**	**+0.8**
COEN	**Coen**	**24.02**	**266**	P	**P**		**00 44 24.7**	**+0.2**
	comp=Z,330nm,2.8s							
COEN	**Coen**	**24.02**	**266**	P	**P**		**00 44 24.3**	**-0.2**
COEN				IAmb	IAmb		00 44 49.7	
	comp=Z,878nm,1.9s							
COEN	**Coen**	**24.02**	**266**	P	**P**		**00 44 25.2**	**+0.7**
KUZ	**Kuaotunu**	**24.03**	**164**	P	**P**		**00 44 27.4**	**+3.0**
KUZ	**Kuaotunu**	**24.03**	**164**	P	**P**		**00 44 26.1**	**+1.7**
MKAZ	**Moumakai**	**24.23**	**166**	P	**P**		**00 44 27.2**	**+0.9**
MGCD	**Mangrove Creek**	**24.76**	**215**	P	**P**		**00 44 32.0**	**+0.9**
	comp=Z,179nm,1.1s							
MGCD	**Mangrove Creek**	**24.76**	**215**	P	**P**		**00 44 32.9**	**+1.8**
AUKHS	**Kincumber High**	**24.80**	**215**	P	**P**		**00 44 33.4**	**+2.0**
TOZ	**Tahuroa Road**	**24.91**	**166**	P	**P**		**00 44 33.1**	**+0.7**
TOZ				IAmb	IAmb		00 44 47.1	
	comp=Z,428nm,1.4s							
TOZ	**Tahuroa Road**	**24.91**	**166**	P	**P**		**00 44 33.3**	**+0.8**
WIZ	**White Island**	**25.17**	**162**	P	**P**		**00 44 35.3**	**+0.6**
RIV	**Riverview**	**25.20**	**214**	P	**P**		**00 44 36.3**	**+1.3**
	comp=Z,351nm,1.2s							
RIV	**Riverview**	**25.20**	**214**	P	**P**		**00 44 37.2**	**+2.2**
RIV	**Riverview**	**25.20**	**214**	P	**P**		**00 44 36.8**	**+1.8**
RIV				pmax	pmax			
	comp=Z,351nm,1.2s							
SYDH	**Sydney Hard Ro**	**25.38**	**215**	P	**P**		**00 44 38.1**	**+1.4**
TLZ	**Tolley Road**	**25.49**	**166**	P	**P**		**00 44 39.0**	**+1.2**
HIZ	**Hauiti**	**25.51**	**167**	P	**P**		**00 44 38.9**	**+1.0**
HIZ				IAmb	IAmb		00 44 52.6	
	comp=Z,588nm,1.2s							
HIZ				IAMs_20	IAMs_20		00 53 21.5	
	comp=Z,22μm,20.0s							
HIZ	**Hauiti**	**25.51**	**167**	P	**P**		**00 44 41.6**	**+3.7**
MXZ	**Matakaoa Point**	**25.55**	**161**	P	**P**		**00 44 38.1**	**-0.1**
MXZ	**Matakaoa Point**	**25.55**	**161**	P	**P**		**00 44 41.2**	**+3.0**
MXZ	**Matakaoa Point**	**25.55**	**161**	P	**P**		**00 44 37.3**	**-0.9**
HAZ	**Te Kaha**	**25.56**	**162**	P	**P**		**00 44 37.8**	**-0.5**
QLP	**Quilpie**	**25.62**	**236**	P	**P**		**00 44 39.2**	**+0.2**
	comp=Z,613nm,2.3s							
QLP	**Quilpie**	**25.62**	**236**	P	**P**		**00 44 40.2**	**+1.2**
URZ	**Urewera**	**25.83**	**163**	P	**P**		**00 44 41.7**	**+1.0**
	comp=Z,108nm,1.1s,baz=4.7,slow=5.6,SNR=24							
URZ				LR	LR		00 52 47.2	
	comp=Z,17μm,20.9s,baz=342,slow=32							
	comp=Z,108nm,1.1s							
URZ	**Urewera**	**25.83**	**163**	P	**P**		**00 44 40.0**	**-0.7**
PUZ	**Puketiti**	**26.00**	**161**	P	**P**		**00 44 41.1**	**-1.2**
MWZ	**Matawai**	**26.02**	**163**	P	**P**		**00 44 40.7**	**-1.9**
VRZ	**Vera Road**	**26.08**	**168**	P	**P**		**00 44 46.5**	**+3.5**
KHEZ	**Kahui Hut**	**26.10**	**169**	P	**P**		**00 44 46.3**	**+3.0**
RTZ	**Ruatahuna**	**26.13**	**164**	P	**P**		**00 44 42.7**	**-0.8**
RTZ	**Ruatahuna**	**26.13**	**164**	P	**P**		**00 44 42.9**	**-0.6**
NGZ	**Ngauruhoe**	**26.31**	**166**	P	**P**		**00 44 45.8**	**+0.5**
BKZ	**Black Stump Fm**	**26.52**	**165**	P	**P**		**00 44 46.6**	**-0.4**
BKZ				IAMs_20	IAMs_20		00 53 22.2	
	comp=Z,21μm,21.0s							
BKZ	**Black Stump Fm**	**26.52**	**165**	P	**P**		**00 44 49.8**	**+2.8**
BKZ	**Black Stump Fm**	**26.52**	**165**	P	**P**		**00 44 45.8**	**-1.2**
KKZ	**Kokohu**	**26.70**	**163**	P	**P**		**00 44 50.0**	**+1.4**
CMSA	**Cobar Meteorol**	**27.06**	**225**	P	**P**		**00 44 52.4**	**+0.4**
	comp=Z,234nm,1.0s							
CMSA	**Cobar Meteorol**	**27.06**	**225**	P	**P**		**00 44 53.5**	**+1.5**
YNG	**Young**	**27.11**	**217**	P	**P**		**00 44 53.0**	**+0.6**
	comp=Z,98nm,1.2s							
TSZ	**Takapari Road**	**27.24**	**166**	P	**P**		**00 44 52.9**	**-0.6**
CNB	**Canberra Magne**	**27.29**	**215**	P	**P**		**00 44 54.4**	**+0.4**
	comp=Z,144nm,1.2s							
CNB	**Canberra Magne**	**27.29**	**215**	P	**P**		**00 44 55.3**	**+1.2**
AUMHS	**Melrose High S**	**27.47**	**215**	P	**P**		**00 44 57.6**	**+1.9**
AUMTS	**Mt Stromlo**	**27.49**	**215**	P	**P**		**00 44 57.2**	**+1.3**
CAN	**Canberra**	**27.49**	**215**	P	**P**		**00 44 56.4**	**+0.5**
	comp=Z,112nm,1.9s							
CAN	**Canberra**	**27.49**	**215**	P	**P**		**00 44 53.1**	**-2.8**
CAN				IAmb	IAmb		00 45 22.7	
	comp=Z,361nm,1.8s							
CAN	**Canberra**	**27.49**	**215**	P	**P**		**00 44 57.0**	**+1.1**
CAN	**Canberra**	**27.49**	**215**	P	**P**		**00 44 53.1**	**-2.8**
CAN				pmax	pmax			
	comp=Z,361nm,1.8s							
CAN				MLR	MLR			
	comp=Z,12μm,19.0s							
MRZ	**Mangatainoka R**	**27.73**	**167**	P	**P**		**00 44 56.4**	**-1.5**
MRZ				IAmb	IAmb		00 45 19.6	
	comp=Z,574nm,1.8s							
MRZ	**Mangatainoka R**	**27.73**	**167**	P	**P**		**00 44 58.5**	**+0.7**
QIS	**Mount Isa**	**27.88**	**252**	P	**P**		**00 44 58.6**	**-0.9**
	comp=Z,72nm,1.1s							
QIS	**Mount Isa**	**27.88**	**252**	P	**P**		**00 44 58.9**	**-0.6**
BFZ	**Birch Farm**	**27.90**	**166**	P	**P**		**00 44 58.0**	**-1.3**
BFZ				IAmb	IAmb		00 45 20.9	
	comp=Z,649nm,2.0s							
BFZ				IAMs_20	IAMs_20		00 54 49.3	
	comp=Z,29μm,20.0s							
BFZ	**Birch Farm**	**27.90**	**166**	P	**P**		**00 45 02.0**	**+2.7**
MILA	**Mila**	**28.70**	**212**	P	**P**		**00 45 07.2**	**+0.6**
	comp=Z,18nm,2.1s							
INKA	**Innaminka**	**28.93**	**237**	P	**P**		**00 45 09.0**	**+0.3**
KHZ	**Kahutara**	**29.07**	**171**	P	**P**		**00 45 13.4**	**+3.7**
JAY	**Jayapura**	**29.08**	**290**	LR	LR		00 57 38.6	
	comp=Z,9μm,18.4s,baz=102,slow=38							
JAY	**Jayapura**	**29.08**	**290**	P	**P**		**00 45 06.9**	**-3.3**
GENI	**Genyem**	**29.54**	**289**	P	**P**		**00 45 16.1**	**+1.9**
FOZ	**Fox Glacier**	**29.82**	**177**	IAMs_20	IAMs_20		00 55 04.6	
	comp=Z,18μm,22.0s							
RPZ	**Rata Peaks**	**30.08**	**175**	LR	LR		00 55 38.8	
	comp=Z,12μm,21.1s,baz=344,slow=33							
STKA	**Stephens Creek**	**30.16**	**229**	P	**P**		**00 45 20.3**	**+0.7**
	comp=Z,828nm,0.9s							
STKA	**Stephens Creek**	**30.16**	**229**	P	**P**		**00 45 19.4**	**-0.2**
STKA	**Stephens Creek**	**30.16**	**229**	P	**P**		**00 45 19.7**	**+0.1**
	comp=Z,44nm,0.8s,baz=41,slow=8.3,SNR=42							
STKA				S	**S**		**00 50 15.4**	**-2.2**
	comp=Z,10nm,1.1s,baz=14,slow=22,SNR=2.0							
STKA				LR	LR		00 56 55.7	
	comp=Z,18μm,18.3s,baz=54,slow=36							
	comp=Z,44nm,0.8s							
STKA	**Stephens Creek**	**30.16**	**229**	P	**P**		**00 45 21.1**	**+1.5**
STKA	**Stephens Creek**	**30.16**	**229**	*e*P	**P**		**00 45 19.6**	**0.0**
JCZ	**Jackson Bay**	**30.32**	**179**	P	**P**		**00 45 23.7**	**+2.7**
LBZ	**Lake Benmore**	**30.69**	**177**	P	**P**		**00 45 23.6**	**-0.5**
LBZ				IAMs_20	IAMs_20		00 55 32.6	
	comp=Z,18μm,22.0s							
TOO	**Toolangi**	**31.08**	**216**	P	**P**		**00 45 28.4**	**+0.7**
	comp=Z,53nm,1.5s							
TOO	**Toolangi**	**31.08**	**216**	P	**P**		**00 45 28.4**	**+0.7**
TOO	**Toolangi**	**31.08**	**216**	P	**P**		**00 45 28.4**	**+0.7**
TOO				pmax	pmax			
	comp=Z,69nm,1.3s							
WKZ	**Wanaka**	**31.08**	**178**	IAMs_20	IAMs_20		00 55 54.0	
	comp=Z,23μm,22.0s							
SMPI	**Sarmi**	**31.11**	**289**	P	**P**		**00 45 27.6**	**-0.6**
	comp=Z,6μmcomp=Z,416nm,1.4s							
MLZ	**Mavora Lakes**	**31.61**	**180**	IAMs_20	IAMs_20		00 56 28.8	
	comp=Z,20μm,21.0s							
RAR	**Rarotonga**	**31.69**	**108**	P	**P**		**00 45 33.5**	**+0.3**
RAR				IAmb	IAmb		00 45 37.7	
	comp=Z,373nm,1.6s							
RAR	**Rarotonga**	**31.69**	**108**	P	**P**		**00 45 33.7**	**+0.6**
	comp=Z,86nm,1.0s,baz=320,slow=8.5,SNR=5.7							
RAR				LR	LR		00 55 25.3	
	comp=Z,7μm,19.5s,baz=268,slow=31							
	comp=Z,86nm,1.0s							
RAR	**Rarotonga**	**31.69**	**108**	P	**P**		**00 45 35.7**	**+2.5**
BRAT	**Ballarat**	**31.97**	**218**	P	**P**		**00 45 36.7**	**+1.3**
WHZ	**Wether Hill Ro**	**32.13**	**180**	IAMs_20	IAMs_20		00 57 14.7	
	comp=Z,14μm,19.0s							
GLAD	**Gladstone**	**32.30**	**209**	P	**P**		**00 45 39.9**	**+1.6**
WR0	**Warramunga Arr**	**32.51**	**254**	P	**P**		**00 45 38.8**	**-1.6**
WR8	**Warramunga Arr**	**32.55**	**254**	IAmb	IAmb		00 45 53.5	
	comp=Z,310nm,1.9s							
WB0	**Warramunga Arr**	**32.63**	**255**	IAmb	IAmb		00 45 54.1	
	comp=Z,574nm,1.9s							
WRAB	**Tennant Creek**	**32.69**	**254**	P	**P**		**00 45 39.8**	**-2.2**
WRAB				IAmb	IAmb		00 45 54.8	
	comp=Z,364nm,1.9s							
WRAB	**Tennant Creek**	**32.69**	**254**	P	**P**		**00 45 41.6**	**-0.4**
WRAB	**Tennant Creek**	**32.69**	**254**	*ce*P	**P**		**00 45 40.7**	**-1.3**
WRAB				pmax	pmax			
	comp=Z,60nm,1.3s							
WRA	**Warramunga Arr**	**32.70**	**254**	P	**P**		**00 45 38.6**	**-3.5**
WRA	**Warramunga Arr**	**32.70**	**254**	P	**P**		**00 45 40.1**	**-2.0**
	comp=Z,34nm,0.8s,baz=85,slow=8.8,SNR=94							
WRA				PcP	**PcP**		**00 48 27.4**	**-0.3**
	comp=Z,9.0nm,1.0s,baz=91,slow=2.2,SNR=4.6							
WRA				S	**S**		**00 50 58.5**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=84,slow=17,SNR=1.8							
WRA				ScP	**ScP**		**00 52 13.5**	**+3.0**
	comp=Z,11nm,1.2s,baz=82,slow=3.9,SNR=5.1							
WRA				LR	LR		00 58 17.5	
	comp=Z,29μm,18.8s,baz=82,slow=35							
	comp=Z,34nm,0.8s							
ARPS	**Mount Arapiles**	**32.76**	**221**	P	**P**		**00 45 43.1**	**+0.7**
	comp=Z,50nm,0.9s							
SYZ	**Scrubby Hill**	**32.79**	**178**	P	**P**		**00 45 45.5**	**+3.0**
HTT	**Hallett**	**32.89**	**228**	P	**P**		**00 45 44.2**	**+0.5**
	comp=Z,94nm,1.2s							
HTT	**Hallett**	**32.89**	**228**	P	**P**		**00 45 45.0**	**+1.3**
HTT	**Hallett**	**32.89**	**228**	P	**P**		**00 45 44.1**	**+0.5**
SRPI	**Serui, Papua**	**33.43**	**288**	P	**P**		**00 45 48.6**	**0.0**
AUMBR	**Murray Bridge**	**33.51**	**225**	P	**P**		**00 45 50.2**	**+1.2**
ASAR	**Alice Springs**	**33.64**	**248**	P	**P**		**00 45 48.4**	**-2.0**
ASAR	**Alice Springs**	**33.64**	**248**	P	**P**		**00 45 48.8**	**-1.5**
	comp=Z,19nm,0.6s,baz=74,slow=9.3,SNR=105							
ASAR				PcP	**PcP**		**00 48 29.8**	**-0.5**
	comp=Z,4.8nm,0.8s,baz=75,slow=2.2,SNR=1.1							
ASAR				S	**S**		**00 51 13.5**	**+1.3**
	comp=Z,4.1nm,1.1s,baz=83,slow=15,SNR=2.8							
ASAR				ScP	**ScP**		**00 52 17.4**	**+3.6**
	comp=Z,7.3nm,1.1s,baz=82,slow=3.5,SNR=7.3							
ASAR				LR	LR		00 57 52.9	
	comp=Z,11μm,19.5s,baz=76,slow=34							
	comp=Z,19nm,0.6s							
WHYH	**Whyalla**	**33.69**	**230**	P	**P**		**00 45 51.9**	**+1.4**
BAKI	**Biak**	**33.82**	**289**	P	**P**		**00 45 53.1**	**+1.2**
	comp=Z,3μmcomp=Z,172nm,1.4s							
TAU	**Tasmania Unive**	**34.13**	**207**	IAMs_20	IAMs_20		00 57 06.1	
	comp=Z,17μm,22.0s							
KDU	**Kakadu**	**34.50**	**267**	P	**P**		**00 45 56.9**	**-0.9**
	comp=Z,32nm,1.1s							
BBOO	**Buckleboo**	**34.73**	**231**	P	**P**		**00 45 59.4**	**-0.2**
	comp=Z,232nm,1.2s							
BBOO	**Buckleboo**	**34.73**	**231**	IAmb	IAmb		00 46 13.1	
	comp=Z,156nm,0.8s							
BBOO	**Buckleboo**	**34.73**	**231**	P	**P**		**00 46 00.2**	**+0.6**
KMPI	**Kaimana, Papua**	**35.19**	**283**	P	**P**		**00 46 02.7**	**-1.1**
	comp=Z,4μmcomp=Z,347nm,1.9s							
GUMO	**Guam**	**35.41**	**319**	LR	LR		00 59 59.7	
	comp=Z,10μm,20.9s,baz=132,slow=35							
RKPI	**Ransiki, Papua**	**35.48**	**287**	P	**P**		**00 46 06.9**	**+0.6**
	comp=Z,339nm,1.3s							
AUCAS	**Cummins Area S**	**35.62**	**229**	P	**P**		**00 46 08.7**	**+1.4**
MTN	**Manton Dam**	**35.78**	**267**	P	**P**		**00 46 08.2**	**-0.7**
	comp=Z,96nm,1.9s							
MTN	**Manton Dam**	**35.78**	**267**	IAmb	IAmb		00 46 32.4	
	comp=Z,281nm,1.6s							
DRS	**Darwin Rock St**	**36.05**	**268**	P	**P**		**00 46 11.7**	**+0.5**
SAUI	**Saumlaki**	**36.37**	**275**	IAMs_20	IAMs_20		01 00 17.4	
	comp=Z,15μm,20.0s							
SAUI	**Saumlaki**	**36.37**	**275**	P	**P**		**00 46 13.2**	**-0.7**
FAKI	**Fak Fak**	**36.80**	**284**	P	**P**		**00 46 17.2**	**-0.4**
FAKI				IAmb	IAmb		00 46 24.4	
	comp=Z,470nm,1.6s							
FAKI				IAMs_20	IAMs_20		01 01 11.5	
	comp=Z,15μm,22.0s							
FAKI	**Fak Fak**	**36.80**	**284**	P	**P**		**00 46 18.0**	**+0.4**
FAKI	**Fak Fak**	**36.80**	**284**	P	**P**		**00 46 15.6**	**-2.0**
	comp=Z,3μmcomp=Z,143nm,1.4s							
JOHN	**Johnston Islan**	**37.53**	**37**	IAMs_20	IAMs_20		00 57 40.6	
	comp=Z,13μm,21.0s							
KNRA	**Kununurra**	**37.89**	**262**	P	**P**		**00 46 25.7**	**-1.1**
	comp=Z,205nm,1.1s							
KNRA	**Kununurra**	**37.89**	**262**	IAmb	IAmb		00 46 40.1	
	comp=Z,200nm,1.1s							
SWI	**Sorong**	**38.43**	**286**	P	**P**		**00 46 31.3**	**-0.1**
	comp=Z,4μmcomp=Z,323nm,1.4s							
SWI	**Sorong**	**38.43**	**286**	P	**P**		**00 46 31.5**	**+0.1**
BNDI	**Bandanaira**	**38.56**	**280**	P	**P**		**00 46 32.7**	**+0.3**
BNDI	**Bandanaira**	**38.56**	**280**	P	**P**		**00 46 30.5**	**-1.9**
WRKA	**Warakurna**	**38.92**	**247**	P	**P**		**00 46 34.8**	**-0.6**
	comp=Z,48nm,1.4s							
MSAI	**Masohi**	**39.83**	**281**	P	**P**		**00 46 43.4**	**+0.3**
	comp=Z,5μmcomp=Z,141nm,1.1s							
FORT	**Forrest**	**40.38**	**238**	P	**P**		**00 46 47.1**	**-0.3**
	comp=Z,88nm,1.0s							
FORT	**Forrest**	**40.38**	**238**	P	**P**		**00 46 46.6**	**-0.9**
AAI	**Ambon**	**40.43**	**280**	P	**P**		**00 46 46.4

KAPI **Kappang** 48.21 276 P **P** **00 47 51.5 +1.1**
KAPI **Kappang** 48.21 276 P **P** **00 47 49.9 -0.5**
KAPI pmax pmax
comp=Z,277nm,1.3s
KAPI MLR MLR
comp=Z,6µm,22.0s
KIP **Kipapa** 48.32 44 P **P** **00 47 50.9 -0.1**
KIP IAmb IAmb 00 47 59.2
comp=Z,323nm,1.5s
KIP **Kipapa** 48.32 44 P **P** **00 47 52.2 +1.2**
KIP **Kipapa** 48.32 44 P **P** **00 47 51.9 +0.9**
KIP **Kipapa** 48.32 44 *ce*P **P** **00 47 52.1 +1.1**
KIP pmax pmax
comp=Z,144nm,1.7s
SPSI **Sidrap Palu** 48.45 277 P **P** **00 47 51.0 -1.2**
comp=Z,2µmcomp=Z,101nm,1.2s
MWH **Mokuaweoweo** 48.74 48 IAmb IAmb 00 48 06.6
comp=Z,177nm,1.2s
MLH **Mauna Loa** 48.90 48 IAmb IAmb 00 47 57.4
comp=Z,134nm,0.9s
UWE **Uwekahuna** 48.92 49 IAmb IAmb 00 48 26.4
comp=Z,265nm,1.4s
BYL **Byron's Ledge** 48.94 49 IAmb IAmb 00 48 10.0
comp=Z,114nm,1.1s
PUH **Pauahi** 48.95 49 IAmb IAmb 00 47 57.4
comp=Z,120nm,1.1s
TOLI2 **Tolitoli** 48.95 284 P **P** **00 47 54.0 -2.0**
TOLI2 IAmb IAmb 00 48 08.9
comp=Z,429nm,2.0s
TOLI2 **Tolitoli** 48.95 284 P **P** **00 47 55.1 -1.0**
POHA **Pohakuloa** 48.96 48 P **P** **00 47 56.0 -0.3**
POHA IAmb IAmb 00 47 58.3
comp=Z,123nm,0.8s
POHA **Pohakuloa** 48.96 48 P **P** **00 47 58.1 +1.8**
HPAH **Hawaii Prepara** 49.02 48 IAmb IAmb 00 47 58.0
comp=Z,223nm,1.0s
KHLH **Kahului Airpor** 49.06 46 IAmb IAmb 00 47 59.5
comp=Z,287nm,1.1s
JOKA **Jonika Flow** 49.14 49 IAmb IAmb 00 48 08.1
comp=Z,332nm,1.5s
KLBR **Kellerberrin** 49.17 240 P **P** **00 47 56.5 -1.1**
comp=Z,237nm,0.9s
KLBR **Kellerberrin** 49.17 240 P **P** **00 47 57.3 -0.3**
PLAI **Plampang** 49.34 270 P **P** **00 47 58.8 -0.3**
PLAI **Plampang** 49.34 270 P **P** **00 47 58.4 -0.7**
comp=Z,4µmcomp=Z,240nm,1.1s
NWAO **Narrogin (SRO)** 49.83 238 P **P** **00 48 01.9 -0.7**
comp=Z,257nm,1.0s
NWAO **Narrogin (SRO)** 49.83 238 P **P** **00 48 01.0 -1.6**
NWAO IAmb IAmb 00 48 03.7
comp=Z,137nm,0.9s
NWAO **Narrogin (SRO)** 49.83 238 IAMs_20 IAMs_20 01 09 09.1
comp=Z,10µm,18.0s
NWAO **Narrogin (SRO)** 49.83 238 LR LR 01 08 55.8
comp=Z,8µm,18.2s,baz=78,slow=36
NWAO **Narrogin (SRO)** 49.83 238 P **P** **00 48 02.4 -0.2**
NWAO **Narrogin (SRO)** 49.83 238 P **P** **00 48 03.6 +1.0**
NWAO **Narrogin (SRO)** 49.83 238 P **P** **00 48 01.0 -1.6**
NWAO pmax pmax
comp=Z,137nm,1.0s
NWAO MLR MLR
comp=Z,10µm,18.0s
BLDU **Ballidu** 49.91 241 P **P** **00 48 02.3 -0.9**
comp=Z,50nm,1.3s
BLDU **Ballidu** 49.91 241 P **P** **00 48 04.6 +1.4**
TWSI **Taliwang, Sumb** 50.22 270 P **P** **00 48 05.1 -0.7**
comp=Z,4µmcomp=Z,269nm,1.1s
MORW **Morawa** 50.29 244 P **P** **00 48 05.3 -0.8**
comp=Z,145nm,0.8s
MORW **Morawa** 50.29 244 IAmb IAmb 00 48 07.0
comp=Z,100nm,0.8s
MORW **Morawa** 50.29 244 P **P** **00 48 06.1 -0.1**
RKGY **Rocky Gully** 50.36 236 P **P** **00 48 06.0 -0.6**
comp=Z,173nm,1.0s
MUN **Mundaring** 50.53 240 P **P** **00 48 07.0 -0.9**
comp=Z,161nm,1.0s
MUN **Mundaring** 50.53 240 P **P** **00 48 07.8 -0.1**
MUN **Mundaring** 50.53 240 P **P** **00 48 07.0 -0.9**
TAOE **Nuku Hiva Isla** 51.09 90 *e*S **S** **00 55 28.1 -1.4**
comp=Z,1µm,26.0s
TAOE *e*SS SS 00 58 53.8 -11
comp=Z,907nm,27.0s
TAOE *e*LQ LQ 01 00 27.1
comp=Z,5µm,24.1s
TAOE *e*LR LR 01 02 41.1
comp=Z,8µm,23.2s
DNP **Denpasar** 51.86 270 P **P** **00 48 17.7 -0.4**
BKB **Balikpapan** 51.93 279 P **P** **00 48 18.2 -0.5**
comp=Z,283nm,1.3s
SRBI **Singaraja** 51.97 270 P **P** **00 48 19.0 +0.1**
comp=Z,5µmcomp=Z,282nm,1.6s
MYLDM **Lahad Datu** 52.49 288 P **P** **00 48 23.5 +0.7**
MYLDM IAmb IAmb 00 48 43.2
comp=Z,231nm,1.3s
MYLDM **Lahad Datu** 52.49 288 P **P** **00 48 24.1 +1.3**
JAGI **Jajag, Banyuwa** 52.92 270 IAmb IAmb 00 48 31.4
comp=Z,233nm,1.2s
JAGI **Jajag, Banyuwa** 52.92 270 P **P** **00 48 26.8 +0.8**
JAGI **Jajag, Banyuwa** 52.92 270 P **P** **00 48 24.3 -1.7**
comp=Z,3µmcomp=Z,142nm,1.1s
ABJI **Asem Bagus** 52.97 270 P **P** **00 48 25.9 -0.5**
comp=Z,6µmcomp=Z,265nm,1.1s
BBKI **Banjar Baru** 53.34 276 P **P** **00 48 29.7 +0.6**
comp=Z,339nm,1.7s
KMMI **Kalianget** 53.38 271 P **P** **00 48 29.1 -0.3**
comp=Z,87nm,1.9s
BLJI **Banyuglugur** 53.60 270 P **P** **00 48 29.2 -1.8**
comp=Z,4µmcomp=Z,152nm,1.2s
MTKI **Muara Teweh, K** 53.94 279 P **P** **00 48 32.4 -1.1**
TGY **Tagaytay City** 54.07 299 LR LR 01 10 58.2
comp=Z,2µm,20.0s,baz=143,slow=35
RKT **Rikitea** 54.73 109 *e*S **S** **00 56 13.1 -5.5**
comp=Z,10µm,28.5s
RKT *e*SS **SS** **00 59 59.6 -2.3**
comp=Z,10µm,34.5s
RKT *e*LQ LQ 01 02 14.7
comp=Z,9µm,35.8s
RKT *e*LR LR 01 04 28.6
comp=Z,67µm,31.0s
TBJI **Tambak Boyo** 55.48 271 P **P** **00 48 45.1 +0.4**
comp=Z,5µmcomp=Z,221nm,1.7s
JOW **Kunigami** 55.69 316 LR LR 01 09 38.2
comp=Z,4µm,21.9s,baz=181,slow=33
JOW **Kunigami** 55.69 316 P **P** **00 48 46.6 +0.7**
NGJI **Ngawi** 55.75 270 P **P** **00 48 47.9 +1.3**
comp=Z,2µmcomp=Z,89nm,1.5s
PCJI **Pacitan** 55.87 269 P **P** **00 48 46.8 -0.6**
UGM **Wanagama** 56.56 269 IAmb IAmb 00 49 00.7
comp=Z,263nm,1.2s
UGM **Wanagama** 56.56 269 P **P** **00 48 52.9 +0.5**
UGM **Wanagama** 56.56 269 P **P** **00 48 49.6 -2.8**
comp=Z,4µmcomp=Z,213nm,1.2s
YOGI **Yogyakarta** 56.80 270 P **P** **00 48 53.1 -1.0**
SMRI **Semarang** 56.81 270 P **P** **00 48 53.1 -1.0**
SMRI **Semarang** 56.81 270 P **P** **00 48 55.5 +1.3**
SMRI **Semarang** 56.81 270 P **P** **00 48 54.4 +0.2**
comp=Z,270nm,1.7s
INU **Inuyama** 56.85 330 P **P** **00 48 53.9 -0.1**
INU IAmb IAmb 00 49 02.1
comp=Z,149nm,1.5s
INU **Inuyama** 56.85 330 P **P** **00 48 54.8 +0.8**
JGF **Kuroka** 56.89 330 IAmb IAmb 00 48 59.2
comp=Z,228nm,2.0s
JGF **Kuroka** 56.89 330 P **P** **00 48 55.5 +1.1**
JMN **Monobe** 57.20 326 P **P** **00 48 57.4 +0.8**
JMM **Marumori** 57.22 335 P **P** **00 48 58.1 +1.5**
JMM IAmb IAmb 00 49 21.2
comp=Z,189nm,1.6s
JMM **Marumori** 57.22 335 P **P** **00 48 58.0 +1.4**
MJAR **Matsushiro Arr** 57.25 332 P **P** **00 48 55.5 -1.4**
MJAR **Matsushiro Arr** 57.25 332 P **P** **00 48 55.8 -1.1**
comp=Z,17nm,1.0s,baz=162,slow=6.7,SNR=22
comp=Z,17nm,1.0s
MAJO **Matsushiro** 57.25 332 P **P** **00 48 56.7 -0.2**
MAJO IAmb IAmb 00 49 04.3
comp=Z,152nm,1.4s
MAJO **Matsushiro** 57.25 332 P **P** **00 48 58.0 +1.1**
MAJO **Matsushiro** 57.25 332 P **P** **00 48 56.7 -0.2**
MAJO pmax pmax
comp=Z,152nm,1.5s
MJB9 **Matsu-Tunnel** 57.26 332 IAmb IAmb 00 49 05.3
comp=Z,156nm,1.5s
SBUM **Sibu** 57.49 282 P **P** **00 49 00.3 +1.3**
KPJI **Karang Pucung** 58.22 270 P **P** **00 49 03.1 -1.0**
comp=Z,4µmcomp=Z,182nm,0.9s
JNU **Nakatsue** 58.42 324 IAmb IAmb 00 49 13.1
comp=Z,194nm,1.2s
JNU **Nakatsue** 58.42 324 P **P** **00 49 04.2 -0.9**
comp=Z,43nm,1.0s,baz=134,slow=4.9,SNR=12
JNU LR LR 01 10 50.6
comp=Z,960nm,20.3s,baz=124,slow=33
comp=Z,43nm,1.0s
JNU **Nakatsue** 58.42 324 P **P** **00 49 06.2 +1.0**
JSD **Sado** 58.46 333 P **P** **00 49 07.0 +1.7**
YULB **Yu-li** 58.61 309 IAMs_20 IAMs_20 01 11 23.7
comp=Z,6µm,20.0s
YULB **Yu-li** 58.61 309 P **P** **00 49 07.3 +0.7**
NACB **Ninganchiao** 58.82 309 IAmb IAmb 00 49 15.0
comp=Z,211nm,1.4s
NACB **Ninganchiao** 58.82 309 P **P** **00 49 08.8 +0.7**
KSM **Kuching** 59.02 280 IAmb IAmb 00 49 16.9
comp=Z,186nm,1.5s
KSM **Kuching** 59.02 280 P **P** **00 49 10.5 +0.8**
TPUB **Ta-pu** 59.06 308 IAMs_20 IAMs_20 01 11 58.8
comp=Z,6µm,20.0s
TPUB **Ta-pu** 59.06 308 P **P** **00 49 11.4 +1.6**
SSLB **Suanglung** 59.09 309 P **P** **00 49 11.5 +1.5**
YHNB **Yeheng** 59.27 310 IAmb IAmb 00 49 22.9
comp=Z,154nm,1.1s
YHNB IAMs_20 IAMs_20 01 11 01.3
comp=Z,7µm,21.0s
YHNB **Yeheng** 59.27 310 P **P** **00 49 12.0 +0.7**
TATO **Taipei** 59.36 310 IAMs_20 IAMs_20 01 09 36.5
comp=Z,6µm,21.0s
BBJI **Bungbulang** 59.44 269 P **P** **00 49 13.6 +0.9**
LEM **Lembang** 59.60 270 LR LR 01 16 30.6
comp=Z,3µm,19.0s,baz=96,slow=38
LEM **Lembang** 59.60 270 P **P** **00 49 11.7 -2.2**
comp=Z,4µmcomp=Z,317nm,1.7s
LEM **Lembang** 59.60 270 P **P** **00 49 13.2 -0.7**
CNJI **Cibinong** 59.97 269 P **P** **00 49 14.0 -2.3**
comp=Z,1µmcomp=Z,82nm,1.1s
TPI **Tanjungpandan** 60.47 275 P **P** **00 49 18.3 -1.4**
DBJI **Dramaga** 60.49 270 P **P** **00 49 19.0 -0.9**
comp=Z,400nm,1.6s
SKJI **Sukabumi** 60.59 270 P **P** **00 49 17.7 -2.8**
XMI **Christmas Isla** 60.79 266 P **P** **00 49 23.1 +1.2**
SBJI **Serang** 61.19 270 P **P** **00 49 23.3 -1.3**
comp=Z,229nm,2.0s
ASAJ **Asahikawa** 61.95 340 P **P** **00 49 28.7 -0.4**
comp=Z,31nm,1.0s,baz=257,slow=8.3,SNR=5.1
ASAJ LR LR 01 14 23.4
comp=Z,2µm,19.3s,baz=168,slow=34
comp=Z,31nm,1.0s
TJN **Taejon** 62.77 324 P **P** **00 49 34.7 0.0**
TJN **Taejon** 62.77 324 P **P** **00 49 35.9 +1.2**
TJN **Taejon** 62.77 324 P **P** **00 49 34.7 0.0**
TJN pmax pmax
comp=Z,398nm,1.4s
KASI **Kota Agung** 62.90 271 P **P** **00 49 33.2 -2.9**
comp=Z,2µmcomp=Z,125nm,1.4s
SSE **Sheshan** 63.19 316 P **P** **00 49 38.1 +0.5**
SSE S **S** **00 58 09.8 +1.8**
SSE pmax pmax
comp=Z,22nm,2.1s
SSE pmax pmax
comp=Z,230nm,4.1s
SSE LR LR
comp=Z,1µm,18.4s
SSE LR LR
comp=Z,770nm,18.6s
KSRS **Korea Array** 63.21 325 P **P** **00 49 36.8 -0.8**
comp=Z,8.9nm,1.1s,baz=147,slow=6.8,SNR=19
KSRS LR LR 01 16 45.8
comp=Z,527µm,18.2s,baz=125,slow=36
comp=Z,8.9nm,1.1s
KSAR **Wonju Array Be** 63.23 325 P **P** **00 49 36.7 -1.0**
KSAR **Wonju Array Be** 63.23 325 P **P** **00 49 36.7 -1.0**
KS19 **Wonju Array Si** 63.28 325 P **P** **00 49 37.3 -0.8**
LWLI **Liwa** 63.44 271 P **P** **00 49 38.0 -1.8**
comp=Z,183nm,0.9s
MDSI **Maura Dua** 63.44 272 P **P** **00 49 37.4 -2.3**
comp=Z,2µmcomp=Z,97nm,1.9s
VNDA **Vanda** 63.94 181 P **P** **00 49 41.1 -0.9**
VNDA **Vanda** 63.94 181 P **P** **00 49 41.8 -0.1**
comp=Z,5.0nm,0.9s,baz=348,slow=7.6,SNR=18
VNDA LR LR 01 13 45.3
comp=Z,3µm,20.7s,baz=16,slow=32
comp=Z,5.0nm,0.9s
INCN **Inchon** 63.96 324 P **P** **00 49 42.7 +0.1**
INCN **Inchon** 63.96 324 P **P** **00 49 44.1 +1.5**
INCN **Inchon** 63.96 324 P **P** **00 49 42.7 +0.1**
INCN pmax pmax
comp=Z,314nm,1.8s
DSRI **Dabo** 64.01 276 P **P** **00 49 42.8 -0.6**
comp=Z,3µmcomp=Z,68nm,1.1s
SBA **Scott Base** 64.20 180 P **P** **00 49 45.1 +1.5**
SBA IAmb IAmb 00 50 02.2
comp=Z,96nm,1.2s
SBA **Scott Base** 64.20 180 P **P** **00 49 45.1 +1.5**
SBA pmax pmax
comp=Z,97nm,1.2s
LHSI **Lahat** 64.22 272 P **P** **00 49 43.3 -1.5**
comp=Z,92nm,1.7s
YSS **Yuzhno-Sakhali** 64.41 341 P **P** **00 49 46.5 +1.2**
YSS IAmb IAmb 00 50 04.0
comp=Z,174nm,1.3s
YSS **Yuzhno-Sakhali** 64.41 341 P **P** **00 49 47.7 +2.4**
YSS **Yuzhno-Sakhali** 64.41 341 *e*P **P** **00 49 46.4 +1.1**
YSS *e**SP **pP** **00 49 50.6 -1.4**
YSS *e* 00 50 19.4
YSS *e*PPP PPP 00 53 39.0
YSS *e*S **S** **00 58 20.2 -2.5**
YSS *e*SSS SSS 01 05 17.4
YSS pmax pmax
comp=Z,500nm,6.8s
YSS pmax pmax
comp=Z,60nm,1.1s
YSS smax smax
comp=N,1µm,9.0s
YSS smax smax
comp=E,1µm,12.1s
TPRI **Tanjung Pinang** 64.42 278 P **P** **00 49 45.3 -0.8**
CASY **Casey** 64.75 202 P **P** **00 49 46.9 -0.4**
CASY IAmb IAmb 00 50 08.1
comp=Z,183nm,1.5s
CASY **Casey** 64.75 202 IAMs_20 IAMs_20 01 14 26.8
comp=Z,6µm,19.0s
SKR **Severo-Kuril's** 64.89 352 *ce*P **P** **00 49 49.4 +1.0**
TEY **Ternei** 64.95 336 ⇓*e*P **P** **00 49 50.4 +1.5**
TEY pmax pmax
comp=N,10.0nm,2.3s
TEY pmax pmax
comp=Z,10.0nm,2.3s
BTDF **Bukit Timah Da** 65.27 278 P **P** **00 49 52.5 +0.9**
MYKOM **Kota Tinggi** 65.31 278 P **P** **00 49 51.4 -0.5**
MYKOM IAmb IAmb 00 49 59.0
comp=Z,126nm,1.4s
MYKOM **Kota Tinggi** 65.31 278 P **P** **00 49 52.6 +0.7**
NJ2 **Nanjing** 65.35 315 ⇓P **P** **00 49 52.1 +0.3**
NJ2 sP **pP** **00 50 01.2 +2.7**
NJ2 PP **PP** **00 52 15.7 -0.2**
NJ2 S **S** **00 58 34.6 -0.2**
NJ2 pmax pmax
comp=Z,27nm,1.2s
NJ2 pmax pmax
comp=Z,770nm,3.8s
NJ2 LR LR
comp=Z,3µm,23.7s
NJ2 LR LR
comp=Z,3µm,21.8s
NJ2 LR LR
comp=Z,5µm,22.7s
MASI **Maura Aman, Be** 65.63 273 P **P** **00 49 52.8 -1.2**
comp=Z,4µmcomp=Z,103nm,0.8s
QIZ **Qiongzhong** 65.77 298 P **P** **00 49 54.4 -0.4**
QIZ S **S** **00 58 42.1 +1.7**
QIZ SS **SS** **01 02 50.1 -5.3**
QIZ pmax pmax
comp=Z,780nm,7.1s
QIZ LR LR
comp=Z,1µm,10.6s
QIZ LR LR
comp=Z,2µm,13.9s
QIZ LR LR
comp=Z,3µm,18.1s
USRK **Ussuriysk Ar.** 66.22 333 P **P** **00 49 56.6 -0.6**
comp=Z,30nm,1.1s,baz=132,slow=5.7,SNR=28
comp=Z,30nm,1.1s
SHEM **Shemya Is, Ala** 66.33 4 LR LR 01 12 55.3
comp=Z,4µm,21.8s,baz=175,slow=31
KIWB **Kanaga Island** 66.51 10 P **P** **00 49 59.0 +0.2**
KIWB IAmb IAmb 00 50 38.7
comp=Z,149nm,1.3s
ADK **Adak** 66.62 10 IAMs_20 IAMs_20 01 12 27.1
comp=Z,5µm,22.0s
PET **Petropavlovsk** 66.88 354 *e*P P 00 50 09.7 +8.6
PET *e*PS PnS 00 59 54.4 +39
PET pmax pmax
comp=Z,700nm,12.9s
PET pmax pmax
comp=Z,2µm,11.1s
PET MLR MLR
comp=Z,2µm,20.0s
PETK **Petropavlovsk-** 67.07 353 P **P** **00 50 02.3 -0.1**
PETK **Petropavlovsk-** 67.07 353 P **P** **00 50 01.9 -0.5**
comp=Z,30nm,1.0s,baz=163,slow=5.7,SNR=13
PETK LR LR 01 14 00.1
comp=Z,2µm,21.2s,baz=159,slow=31
comp=Z,30nm,1.0s
PETK **Petropavlovsk-** 67.07 353 P **P** **00 50 02.3 -0.1**
CNSH **ChangSha** 67.53 309 P **P** **00 50 05.9 +0.1**
CNSH S **S** **00 59 07.7 +6.3**
CNSH pmax pmax
comp=Z,36nm,2.1s
CNSH LR LR
comp=Z,3µm,20.1s
CNSH LR LR
comp=Z,3µm,23.3s
CNSH LR LR
comp=Z,5µm,20.6s
BKNI **Bangkinang** 67.63 276 P **P** **00 50 08.1 +1.3**
BKNI **Bangkinang** 67.63 276 P **P** **00 50 06.2 -0.6**
comp=Z,193nm,1.1s
MDJ **Mudanjiang** 67.64 331 IAmb IAmb 00 50 13.9
comp=Z,251nm,1.9s
MDJ **Mudanjiang** 67.64 331 P **P** **00 50 06.9 +0.8**
MDJ pP pP 00 50 10.3 -2.6
MDJ S **S** **00 59 07.9 +5.9**
MDJ pmax pmax
comp=Z,33nm,1.6s
MDJ LR LR
comp=Z,3µm,17.2s
MDJ LR LR
comp=Z,1µm,19.2s
MDJ LR LR
comp=Z,4µm,24.4s
MDJ **Mudanjiang** 67.64 331 P **P** **00 50 08.3 +2.2**
WHN **Wuhan** 67.69 311 P **P** **00 50 07.7 +0.9**
WHN pP **pP** **00 50 10.7 -2.8**
WHN S **S** **00 59 01.8 -1.5**
WHN pmax pmax
comp=Z,1µm,2.3s
WHN LR LR
comp=Z,11µm,19.0s
WHN LR LR
comp=Z,5µm,16.9s
WHN LR LR
comp=Z,16µm,21.7s
DL2 **Dalian** 67.82 322 P **P** **00 50 08.4 +1.0**
DL2 S **S** **00 59 08.8 +4.3**
DL2 pmax pmax
comp=Z,89nm,1.2s
DL2 pmax pmax
comp=Z,650nm,11.8s
DL2 LR LR
comp=Z,3µm,19.0s
DL2 LR LR
comp=Z,2µm,19.6s
DL2 LR LR
comp=Z,4µm,19.4s
PPSI **Pulau Pagai** 67.88 273 P **P** **00 50 06.5 -1.9**
comp=Z,4µmcomp=Z,260nm,1.5s
PDSI **Padang** 67.88 275 P **P** **00 50 06.7 -1.7**
TYV **Tymovskoe** 67.93 343 *e*P **P** **00 50 07.5 -0.4**
TYV *e*S **S** **00 58 59.8 -5.5**
TYV pmax pmax
comp=Z,600nm,2.8s
TYV pmax pmax
comp=Z,43nm,1.4s
TYV smax smax
comp=N,300nm,3.3s
TYV smax smax
comp=E,400nm,3.3s
PPI **Padang Panjang** 68.06 275 P **P** **00 50 09.3 -0.2**
comp=E,2µmcomp=E,54nm,1.1s
GULI **GuiLin** 68.12 305 P **P** **00 50 09.3 -0.3**
GULI S **S** **00 59 10.3 +1.6**
GULI pmax pmax
comp=E,56nm,2.5s
GULI pmax pmax
comp=E,760nm,3.8s
GULI LR LR
comp=E,2µm,20.7s
GULI LR LR
comp=E,1µm,20.6s
GULI LR LR
comp=E,3µm,23.0s
SNY **Shenyang** 68.67 326 ⇓P **P** **00 50 15.7 +3.1**
SNY S **S** **00 59 15.2 +0.8**
SNY pmax pmax
comp=E,23nm,2.1s
SNY pmax pmax
comp=E,270nm,3.5s
SNY LR LR
comp=E,2µm,19.2s
SNY LR LR
comp=E,1µm,22.8s
SNY LR LR
comp=E,2µm,23.1s
IPM **Ipoh** 68.76 280 P **P** **00 50 12.7 -1.1**
IPM IAmb IAmb 00 50 21.3
comp=Z,203nm,1.3s
IPM **Ipoh** 68.76 280 P **P** **00 50 14.7 +0.8**
TIA **Tai'an** 68.96 318 P **P** **00 50 14.2 -0.4**
TIA S **S** **00 59 20.0 +1.8**
TIA SKS **SKSac** **01 00 08.6 -4.6**
TIA SS **SS** **01 03 42.9 -1.5**
TIA pmax pmax
comp=Z,24nm,1.3s
TIA pmax pmax
comp=Z,820nm,8.8s
TIA LR LR
comp=Z,4µm,22.6s
TIA LR LR
comp=Z,5µm,26.5s
TIA LR LR
comp=Z,10µm,22.6s
COCO **West Island** 69.05 262 IAMs_20 IAMs_20 01 18 07.9
comp=Z,5µm,20.0s
CN2 **Changchun** 69.06 328 P **P** **00 50 16.0 +0.9**
CN2 PcP **PcP** **00 50 39.2 +0.2**
CN2 S **S** **00 59 19.7 +0.7**
CN2 SS **SS** **01 03 47.6 +2.0**
CN2 pmax pmax
comp=Z,50nm,1.8s
CN2 pmax pmax
comp=Z,500nm,3.0s
CN2 LR LR
comp=Z,2µm,21.0s
CN2 LR LR
comp=Z,2µm,21.0s
CN2 LR LR
comp=Z,3µm,23.0s
SISI **Saibi** 69.11 274 P **P** **00 50 15.8 -0.3**
comp=Z,2µmcomp=Z,97nm,1.3s
MNSI **Mandailing Nat** 69.16 276 P **P** **00 50 15.7 -0.7**
comp=Z,80nm,1.0s
NIKH **Nikolski High** 69.31 15 P **P** **00 50 15.8 -0.5**
NIKH IAMs_20 IAMs_20 01 14 03.2
comp=Z,5µm,21.0s
NIKH **Nikolski High** 69.31 15 P **P** **00 50 15.9 -0.5**
baz=204
KULM **Kulim** 69.35 281 P **P** **00 50 15.6 -1.9**
KULM IAmb IAmb 00 50 24.9
comp=Z,155nm,1.5s
KULM **Kulim** 69.35 281 P **P** **00 50 18.8 +1.3**
BNX **BinXian** 69.50 331 ⇑P **P** **00 50 18.5 +0.7**
BNX S **S** **00 59 26.3 +2.1**
BNX pmax pmax
comp=Z,67nm,1.8s
BNX pmax pmax
comp=Z,820nm,10.7s
BNX LR LR
comp=Z,2µm,19.9s
BNX LR LR
comp=Z,2µm,20.0s
BNX LR LR

comp=Z,3µm,25.0s
GRNR Gornyy 69.81 339 ⇓ *i* P P 00 50 21.6 +2.0
GRNR pmax pmax
comp=Z,40nm,1.1s
PBSI Pulau Batu 70.21 275 P P 00 50 23.0 +0.2
comp=Z,4µmcomp=Z,157nm,1.2s
RPSI Rantau Prapat 70.29 278 P P 00 50 20.8 -2.5
RPSI IAmb IAmb 00 50 42.4
comp=Z,137nm,1.4s
PSI Prapat 70.32 278 LR LR 01 23 11.1
comp=Z,3µm,20.2s,baz=124,slow=38
PSI Prapat 70.32 278 P P 00 50 24.0 +0.3
PSI Prapat 70.32 278 P P 00 50 20.8 -2.9
PSI pmax pmax
comp=Z,137nm,1.4s
PSI MLR MLR
comp=Z,4µm,20.0s
UNV Unalaska Valle 70.70 16 P P 00 50 23.6 -1.3
UNV IAMs_20 IAMs_20 01 13 37.1
comp=Z,7µm,22.0s
UNV Unalaska Valle 70.70 16 P P 00 50 24.7 -0.2
baz=206
ENH Enshi 71.17 309 P P 00 50 27.8 -0.6
ENH IAmb IAmb 00 50 35.3
comp=Z,195nm,1.4s
ENH Enshi 71.17 309 P P 00 50 30.1 +1.7
LYN LuoYang 71.17 314 ⇓ P P 00 50 28.4 +0.1
LYN S S **00 59 46.0 +1.8**
LYN pmax pmax
comp=Z,70nm,1.6s
LYN pmax pmax
comp=Z,940nm,6.2s
LYN LR LR
comp=Z,6µm,21.3s
LYN LR LR
comp=Z,6µm,24.0s
LYN LR LR
comp=Z,12µm,21.6s
HNS HongShan 71.22 318 ⇓ P P 00 50 29.0 +0.5
HNS S S **00 59 48.1 +3.5**
HNS pmax pmax
comp=Z,66nm,2.0s
HNS LR LR
comp=Z,3µm,24.3s
HNS LR LR
comp=Z,5µm,24.1s
HNS LR LR
comp=Z,8µm,22.4s
GSI Gunungsitoli 71.23 276 P P 00 50 28.0 -1.1
GSI IAmb IAmb 00 50 39.2
comp=Z,92nm,0.9s
GSI IAMs_20 IAMs_20 01 22 29.5
comp=Z,5µm,22.0s
GSI Gunungsitoli 71.23 276 P P 00 50 30.8 +1.7
GSI Gunungsitoli 71.23 276 P P 00 50 28.8 -0.3
comp=Z,4µmcomp=Z,112nm,0.9s
KCSI Kotacane, Aceh 71.62 278 P P 00 50 28.3 -3.1
GYA Guiyang 71.62 304 ⇓ P P 00 50 32.9 +1.6
GYA S S **00 59 52.2 +2.2**
GYA pmax pmax
comp=Z,38nm,1.9s
GYA pmax pmax
comp=Z,370nm,9.4s
GYA LR LR
comp=Z,1µm,17.9s
GYA LR LR
comp=Z,1µm,21.1s
GYA LR LR
comp=Z,2µm,19.9s
SLVN Son La 71.80 298 P P 00 50 32.9 +0.5
SLVN Son La 71.80 298 P P 00 50 33.6 +1.2
BJT Baijiatuau 71.82 321 P P 00 50 33.7 +1.7
BJI Beijing 71.83 321 P P 00 50 33.1 +1.0
BJI S S **00 59 55.2 +3.7**
BJI SS SS **01 04 29.6 +1.3**
BJI pmax pmax
comp=Z,17nm,2.3s
BJI LR LR
comp=Z,2µm,21.3s
BJI LR LR
comp=Z,980nm,21.0s
BJI LR LR
comp=Z,3µm,29.3s
FALS False Pass 72.44 17 IAMs_20 IAMs_20 01 15 23.1
comp=Z,6µm,21.0s
FALS False Pass 72.44 17 P P 00 50 34.7 -0.7
baz=209
P08K Saint George I 72.48 13 IAMs_20 IAMs_20 01 15 09.0
comp=Z,6µm,22.0s
P08K Saint George I 72.48 13 P P 00 50 35.5 -0.1
baz=203
SNSI Sinabang, Aceh 72.72 277 P P 00 50 35.9 -2.1
comp=Z,111nm,1.4s
HEH HeiHe 72.86 334 *e* P **P 00 50 39.1 +1.1**
HEH pP **pP 00 50 42.3 -2.5**
HEH S **SKiKP 01 00 05.4 -5.0**
HEH pmax pmax
comp=Z,52nm,2.2s
HEH pmax pmax
comp=Z,440nm,3.8s
HEH LR LR
comp=Z,2µm,18.6s
HEH LR LR
comp=Z,2µm,16.7s
HEH LR LR
comp=Z,3µm,21.1s
SPIA Saint Paul Isl 72.86 12 P P 00 50 37.7 -0.2
baz=202
LHMI Lhok Sumawe 72.87 280 P P 00 50 38.2 -0.6
LHMI IAmb IAmb 00 51 14.2
comp=Z,191nm,1.3s
LHMI Lhok Sumawe 72.87 280 P P 00 50 40.2 +1.3
LHMI Lhok Sumawe 72.87 280 P P 00 50 36.3 -2.6
comp=Z,3µmcomp=Z,100nm,1.4s
TIY Taiyuan 72.90 317 P P 00 50 39.2 +0.5
TIY PcP **PcP 00 50 54.7 -0.9**
TIY S **SKiKP 01 00 11.2 +0.2**
TIY SS **SS 01 04 45.2 +0.2**
TIY pmax pmax
comp=Z,54nm,1.9s
TIY LR LR
comp=Z,3µm,19.9s
TIY LR LR
comp=Z,3µm,20.9s
TIY LR LR
comp=Z,5µm,25.3s
MLSI Meulaboh, Aceh 73.13 279 P P 00 50 39.3 -1.1
XAN Xi'an 73.43 312 ⇓ P P 00 50 42.0 +0.2
XAN pP pP 00 50 45.3 -3.3
XAN PP **PP 00 53 27.3 +1.4**
XAN S **SKiKP 01 00 12.2 +0.4**
XAN SS **SS 01 04 56.9 +3.7**
XAN pmax pmax
comp=Z,28nm,1.4s
XAN pmax pmax
comp=Z,850nm,3.8s
XAN LR LR
comp=Z,3µm,19.8s
XAN LR LR
comp=Z,4µm,19.8s
XAN LR LR
comp=Z,8µm,21.1s
S12K Black Hills 73.56 17 IAmb IAmb 00 50 43.2
comp=Z,161nm,1.2s
S12K IAMs_20 IAMs_20 01 15 47.8
comp=Z,6µm,22.0s
S12K Black Hills 73.56 17 P P 00 50 41.7 -0.3
baz=210
CHNA Chernabura Isl 73.56 19 P P 00 50 41.7 -0.3
baz=213
SDPT Sand Point 73.72 18 P P 00 50 42.4 -0.6
baz=212
XLT XiLinHaoTe 74.21 324 *e* P **P 00 50 46.9 +0.7**
XLT S **S 01 00 20.2 +1.6**
XLT pmax pmax
comp=Z,39nm,1.2s
XLT pmax pmax
comp=Z,410nm,4.0s
XLT LR LR
comp=Z,2µm,19.7s
XLT LR LR
comp=Z,3µm,20.9s
KMI Kunming 74.28 301 ⇑ P P 00 50 47.9 +0.7
KMI S S **01 00 24.3 +3.9**
KMI pmax pmax
comp=Z,59nm,2.4s
KMI LR LR
comp=Z,540nm,18.3s
KMI LR LR
comp=Z,2µm,20.7s
KMI LR LR
comp=Z,3µm,22.9s
MA2 Magadan 74.29 351 LR LR 01 20 32.8
comp=Z,2µm,20.0s,baz=173,slow=34
S14K Fog Glacier 74.80 18 P P 00 50 49.4 0.0
baz=213
CMAR Chiang Mai Arr 75.09 294 P P 00 50 51.0 -0.8
CMAR Chiang Mai Arr 75.09 294 P P 00 50 51.9 +0.1
comp=Z,17nm,1.0s,baz=124,slow=4.2,SNR=46
CMAR LR LR 01 22 11.7
comp=Z,1µm,22.0s,baz=100,slow=34
comp=Z,17nm,1.0s
CMAR Chiang Mai Arr 75.09 294 *i* P **P 00 50 52.4 +0.6**
CMAR pmax pmax
comp=Z,16nm,1.0s
HHC Hu-ho-hao-te 75.18 319 ⇓ *i* P **P 00 50 52.8 +0.8**
HHC sP pP 00 50 59.3 +0.6
HHC S **S 01 00 33.8 +4.1**
HHC sS pS 01 00 39.7 +1.5
HHC pmax pmax
comp=Z,40nm,1.7s
HHC pmax pmax
comp=Z,530nm,5.3s
HHC LR LR
comp=Z,4µm,21.9s
HHC LR LR
comp=Z,5µm,23.3s
HHC LR LR
comp=Z,11µm,23.5s
CHTO Chiang Mai 75.21 294 P P 00 50 50.9 -1.6
CHTO Chiang Mai 75.21 294 P P 00 50 53.7 +1.2
CHTO Chiang Mai 75.21 294 P P 00 50 50.9 -1.6
CHTO pmax pmax
comp=Z,99nm,1.4s
ZEA Zeya 75.56 336 *e* P **P 00 50 55.0 +1.3**
ZEA *e* 00 51 05.8
ZEA eS **S 01 00 39.1 +6.0**
ZEA *e* 01 01 27.4
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA pmax pmax
comp=N,200nm,3.8s
ZEA pmax pmax
comp=Z,300nm,2.6s
ZEA smax smax
comp=E,500nm,5.2s
ZEA smax smax
comp=N,1µm,11.9s
PZH PanZhiHua 75.65 302 P P 00 50 55.9 +0.9
PZH S **S 01 00 36.1 +0.6**
PZH pmax pmax
comp=N,40nm,1.3s
PZH pmax pmax
comp=N,600nm,6.2s
PZH LR LR
comp=N,1µm,18.0s
PZH LR LR
comp=N,1µm,20.1s
PZH LR LR
comp=N,2µm,21.0s
CHIR Chirikof Islan 75.67 20 P P 00 50 54.1 -0.1
baz=217
HIA Hailar 75.67 330 P P 00 50 56.1 +1.6
CD2 Chengdu 75.86 307 P P 00 50 56.1 +0.1
CD2 S **S 01 00 37.6 +0.2**
CD2 pmax pmax
comp=N,20nm,0.6s
CD2 pmax pmax
comp=N,900nm,6.0s
CD2 LR LR
comp=N,5µm,17.3s
CD2 LR LR
comp=N,3µm,16.9s
HILR Hailar Array B 75.86 330 P P 00 50 55.2 -0.3
comp=N,2.3nm,0.5s,baz=120,slow=5.8,SNR=5.8
HILR LR LR 01 21 16.4
comp=N,823nm,21.9s,baz=115,slow=33
comp=N,2.3nm,0.5s
BTO Baotou 76.03 318 *e* P **P 00 50 58.8 +1.9**
BTO pP **pP 00 51 03.6 -0.1**
BTO sP **PcP 00 51 05.8 -3.3**
BTO S **S 01 00 44.6 +5.5**
BTO sS **pS 01 00 49.1 +1.4**
BTO SS **SS 01 05 36.1 +3.4**
BTO pmax pmax
comp=N,58nm,1.6s
BTO pmax pmax
comp=N,1µm,6.7s
BTO LR LR
comp=N,9µm,20.3s
BTO LR LR
comp=N,7µm,24.8s
BTO LR LR
comp=N,17µm,22.2s
QSPA South Pole Qui 76.36 180 P P 00 51 00.1 +1.7
QSPA South Pole Qui 76.36 180 P P 00 51 00.4 +2.0
comp=N,24nm,1.0s,baz=14,slow=1.8,SNR=14
comp=N,24nm,1.0s
R16K Pilot Point 76.47 18 P P 00 50 58.6 -0.1
baz=214
M11K Mekoryuk 76.66 13 IAMs_20 IAMs_20 01 18 54.6
comp=Z,4µm,20.0s
M11K Mekoryuk 76.66 13 P P 00 51 00.4 +0.6
baz=206
SII Sitkinak Islan 76.75 20 P P 00 51 00.7 +0.3
baz=218
O14K Tigyukauivet M 76.84 16 IAMs_20 IAMs_20 01 20 25.4
comp=Z,5µm,20.0s
O14K Tigyukauivet M 76.84 16 P P 00 51 01.5 +0.7
baz=211
R17L Mt. Peulik Vol 76.90 19 P P 00 51 01.3 0.0
baz=216
PLK4 Peulik 4 76.90 19 IAmb IAmb 00 51 02.3
comp=Z,122nm,1.0s
O15K Ungalikthiuk R 77.17 16 IAMs_20 IAMs_20 01 18 12.9
comp=Z,5µm,21.0s
O15K Ungalikthiuk R 77.17 16 P P 00 51 02.8 +0.1
baz=212
SEY Seymchan 77.30 353 P P 00 51 03.3 0.0
comp=Z,31nm,1.1s,baz=159,slow=6.6,SNR=12
SEY LR LR 01 20 59.9
comp=Z,2µm,20.8s,baz=170,slow=32
comp=Z,31nm,1.1s
SEY Seymchan 77.30 353 *e* P **P 00 51 02.5 -0.8**
SEY pmax pmax
comp=Z,96nm,1.7s
N14K Kuskokwak Cree 77.31 15 P P 00 51 03.4 -0.1
N14K IAmb IAmb 00 51 11.9
comp=Z,237nm,1.6s
N14K IAMs_20 IAMs_20 01 18 29.8
comp=Z,6µm,22.0s
N14K Kuskokwak Cree 77.31 15 P P 00 51 03.8 +0.4
baz=210
M13K Dall Lake 77.33 14 IAMs_20 IAMs_20 01 18 23.2
comp=Z,5µm,22.0s
M13K Dall Lake 77.33 14 P P 00 51 03.7 +0.2
baz=209
RPN Rapa Nui 77.55 115 LR LR 01 17 33.2
comp=Z,3µm,20.6s,baz=266,slow=30
P16K Nushagak River 77.56 17 IAmb IAmb 00 51 06.0
comp=Z,159nm,0.9s
P16K Nushagak River 77.56 17 P P 00 51 05.3 +0.4
baz=214
Q17K Contact Creek 77.56 19 P P 00 51 04.8 -0.2
baz=216
OHAK Old Harbor 77.57 20 IAmb IAmb 00 51 06.4
comp=Z,148nm,1.0s
OHAK Old Harbor 77.57 20 P P 00 51 06.3 +1.3
OHAK Old Harbor 77.57 20 P P 00 51 05.2 +0.3
baz=219
Q16K King Salmon 77.66 18 P P 00 51 05.9 +0.4
baz=215
TNCH TengChong 77.78 300 P P 00 51 06.6 -0.5
TNCH S **S 01 00 58.2 -0.7**
TNCH SS **SS 01 06 01.0 +1.3**
TNCH pmax pmax
comp=Z,87nm,2.0s
TNCH pmax pmax
comp=Z,420nm,3.9s
TNCH LR LR
comp=Z,1µm,21.3s
TNCH LR LR
comp=Z,1µm,23.9s
TNCH LR LR
comp=Z,4µm,25.0s
N15K Kwethluk River 77.94 16 IAmb IAmb 00 51 20.0
comp=Z,165nm,1.2s
N15K IAMs_20 IAMs_20 01 21 09.3
comp=Z,4µm,20.0s
N15K Kwethluk River 77.94 16 P P 00 51 07.4 +0.4
baz=212
M14K Bethel 77.96 15 IAmb IAmb 00 51 08.8
comp=Z,95nm,0.9s
M14K IAMs_20 IAMs_20 01 21 44.2
comp=Z,5µm,20.0s
M14K Bethel 77.96 15 P P 00 51 07.7 +0.6
baz=210,SNR=9.5
O16K Kokwok River B 78.00 17 P P 00 51 06.7 -0.7
baz=214,SNR=6.6
LZH Lanzhou 78.06 312 *e* P **P 00 51 09.8 +1.3**
LZH sP PcP 00 51 16.2 -1.9
LZH S **S 01 01 05.3 +3.7**
LZH pmax pmax
comp=Z,65nm,1.7s
LZH pmax pmax
comp=Z,680nm,4.6s
LZH LR LR
comp=Z,2µm,15.6s
LZH LR LR
comp=Z,3µm,17.1s
LZH LR LR
comp=Z,5µm,16.2s
LZDM Lanzhou Array 78.11 312 P P 00 51 08.2 -0.8
comp=Z,8.3nm,0.9s,baz=92,slow=12,SNR=10
LZDM LR LR 01 23 50.1
comp=Z,3µm,20.6s,baz=100,slow=34
comp=Z,8.3nm,0.9s
Q18K Katmai Hardscr 78.14 19 P P 00 51 08.2 -0.1
baz=217
M15K Kasigluk River 78.23 15 P P 00 51 08.4 -0.1
baz=211,SNR=7.9
KDAK Kodiak Island 78.25 20 P P 00 51 08.1 -0.7
KDAK IAmb IAmb 00 51 13.1
comp=Z,192nm,1.5s
KDAK Kodiak Island 78.25 20 LR LR 01 20 01.3
comp=Z,8µm,20.4s,baz=208,slow=31
KDAK Kodiak Island 78.25 20 P P 00 51 08.1 -0.7
KDAK pmax pmax
comp=Z,192nm,1.5s
KDAK Kodiak Island 78.25 20 P P 00 51 09.0 +0.2
baz=219
L14K Kuka Creek 78.31 14 IAMs_20 IAMs_20 01 19 26.2
comp=Z,5µm,22.0s
L14K Kuka Creek 78.31 14 P P 00 51 09.5 +0.6
baz=209
K13K Kusilvak Mount 78.38 13 P P 00 51 09.8 +0.4
baz=207
O17K Koliganek Bris 78.43 17 P P 00 51 09.8 +0.1
baz=215
N16K Nishlik Lake 78.55 16 P P 00 51 11.2 +0.8
baz=213,SNR=19
P18K Big Mountain, 78.67 18 P P 00 51 10.3 -0.9
P18K IAmb IAmb 00 51 12.3
comp=Z,141nm,0.8s
P18K Big Mountain, 78.67 18 P P 00 51 11.2 +0.1
baz=216
GAMB Gambell 78.78 9 P P 00 51 11.7 +0.3
baz=200
L15K Ungalak Mounta 78.88 14 P P 00 51 12.3 +0.2
baz=210
Q20K Shuyak Island 78.95 20 P P 00 51 13.1 +0.5
baz=219
M16K Timber Creek 78.96 16 IAmb IAmb 00 51 23.5
comp=Z,149nm,1.1s
M16K IAMs_20 IAMs_20 01 19 41.5
comp=Z,5µm,21.0s
M16K Timber Creek 78.96 16 P P 00 51 13.2 +0.6
baz=213,SNR=22
N17K Nushagak Hills 79.03 17 P P 00 51 13.6 +0.6
baz=215
O18K Koktuh Hills 79.05 18 P P 00 51 13.3 +0.1
baz=216
J14K Nanvaranak Lak 79.35 13 P P 00 51 15.0 +0.3
baz=208
K15K Wolf Creek Mou 79.41 14 IAmb IAmb 00 51 20.1
comp=Z,196nm,1.1s
K15K IAMs_20 IAMs_20 01 19 59.2
comp=Z,6µm,22.0s
K15K Wolf Creek Mou 79.41 14 P P 00 51 15.1 0.0
baz=210
L16K Owhat River 79.41 15 IAMs_20 IAMs_20 01 20 17.3
comp=Z,4µm,20.0s
L16K Owhat River 79.41 15 P P 00 51 15.2 +0.2
baz=212,SNR=8.6
P19K Oil Pt 79.50 19 IAmb IAmb 00 51 16.6
comp=Z,123nm,0.9s
P19K Oil Pt 79.50 19 P P 00 51 15.4 -0.2
baz=218
N18K Kilae Creek 79.52 17 P P 00 51 16.0 +0.3
baz=216
O19K Port Alsworth 79.59 18 P P 00 51 16.4 +0.4
baz=217
M17K Holitna River 79.68 16 IAMs_20 IAMs_20 01 19 19.6
comp=Z,5µm,22.0s
M17K Holitna River 79.68 16 P P 00 51 17.4 +0.8
baz=214
ILSW Iliamna Southw 79.79 19 IAmb IAmb 00 51 27.6
comp=Z,164nm,1.2s
HOM Homer 80.01 20 P P 00 51 18.7 +0.4
baz=220
O20K Slope Mountain 80.03 19 P P 00 51 18.8 +0.3
baz=219
N19K Bonanza Creek 80.04 18 P P 00 51 19.3 +0.6
baz=217
CNPM China Poot 80.04 20 IAmb IAmb 00 51 30.6
comp=Z,143nm,1.2s
L17K Donlin 80.07 15 P P 00 51 19.4 +0.8
baz=213
M18K Stony River 80.20 17 P P 00 51 19.8 +0.4
baz=216,SNR=11
RED Redoubt Volcan 80.24 19 P P 00 51 18.8 -1.0
BRLK Bradley Lake 80.34 20 IAmb IAmb 00 51 22.0
comp=Z,103nm,1.0s
BRSE Bradley Lake S 80.37 20 P P 00 51 21.0 +0.7
baz=221
CIT Chita 80.47 329 *e* P **P 00 51 22.0 +0.9**
CIT *e* 00 51 32.4
CIT *e* 00 54 30.8
CIT *e* 00 56 10.8
CIT pmax pmax
comp=Z,289nm,2.4s
J16K Anvik River 80.48 14 IAMs_20 IAMs_20 01 20 31.6
comp=Z,6µm,22.0s
J16K Anvik River 80.48 14 P P 00 51 21.5 +0.7
baz=211,SNR=9.7
K17K Iditarod 80.56 15 IAMs_20 IAMs_20 01 23 12.7
comp=Z,4µm,20.0s
K17K Iditarod 80.56 15 P P 00 51 21.7 +0.4
baz=213
L18K Granite Mounta 80.56 16 IAMs_20 IAMs_20 01 20 20.9
comp=Z,6µm,22.0s
L18K Granite Mounta 80.56 16 P P 00 51 21.9 +0.7
baz=215,SNR=13
ANM Nome 80.60 11 IAMs_20 IAMs_20 01 19 37.6
comp=Z,4µm,22.0s
ANM Nome 80.60 11 P P 00 51 22.3 +0.9
baz=206
LKP Lekhapani 80.84 301 *e* P **P 00 51 20.6 -3.0**
J17K VABM Dome 80.94 14 P P 00 51 24.3 +1.0
baz=212
M19K Big River Lodg 80.94 17 P P 00 51 24.4 +1.1
baz=217
I17K Unalakleet 80.98 13 IAMs_20 IAMs_20 01 20 58.8
comp=Z,4µm,21.0s
I17K Unalakleet 80.98 13 P P 00 51 24.4 +0.9
baz=211
CAPN Captain Cook N 81.02 19 P P 00 51 24.8 +1.1
baz=220
L19K White Mountain 81.03 17 P P 00 51 24.9 +1.0
baz=217
TNA Tin City 81.05 10 P P 00 51 25.2 +1.4
baz=204
SEW Seward 81.07 20 IAmb IAmb 00 51 35.9
comp=Z,133nm,1.3s
SEW Seward 81.07 20 P P 00 51 25.0 +1.0
baz=222
SLKM Skilak Lake 81.12 20 IAmb IAmb 00 51 25.7
comp=Z,111nm,1.1s
YAK Yakutsk 81.19 343 P P 00 51 24.5 -0.1
YAK Yakutsk 81.19 343 P P 00 51 24.9 +0.3
comp=Z,41nm,0.6s,baz=74,slow=2.2,SNR=11

comp=Z,41nm,0.6s
YAK Yakutsk 81.19 343 *e*P P **00 51 24.6 0.0**
YAK *e* 00 51 28.7
YAK *e* 00 54 33.4
YAK *e*PPP PPP 00 56 22.7
YAK *e*S **S 01 01 30.8 -2.4**
YAK *e**SS **SKKSac 01 01 43.7 -1.0**
YAK pmax pmax
comp=Z,91nm,1.4s
YAK pmax pmax
comp=E,12nm,1.0s
YAK pmax pmax
comp=N,33nm,1.5s
YAK pmax pmax
comp=Z,308nm,2.5s
YAK pmax pmax
comp=E,132nm,3.7s
YAK pmax pmax
comp=N,103nm,2.6s
YAK smax smax
comp=E,228nm,3.5s
YAK smax smax
comp=N,208nm,3.5s
YAK MLR MLR
comp=Z,2µm,20.0s
YAK MLR MLR
comp=E,672nm,15.0s
YAK MLR MLR
comp=N,810nm,16.0s
G15K Niukluk 81.24 12 P P **00 51 25.7 +0.9**
baz=208
F14K Arctic Creek 81.24 11 P P **00 51 25.8 +0.9**
baz=205
O22K Cooper Landing 81.27 20 P P **00 51 26.0 +1.0**
baz=222
M20K Styx River 81.29 18 P P **00 51 26.1 +0.8**
baz=218
H16K Elim 81.29 13 P P **00 51 25.2 +0.1**
baz=209
BILL Bilibino 81.48 359 P P **00 51 25.8 -0.3**
BILL IAmb IAmb 00 51 35.7
comp=Z,124nm,1.2s
BILL Bilibino 81.48 359 IAMs_20 IAMs_20 01 24 59.2
comp=Z,3µm,19.0s
BILL Bilibino 81.48 359 *c*e P **P 00 51 26.4 +0.3**
BILL pmax pmax
comp=Z,92nm,1.7s
L20K Farewell, AK 81.54 17 P P **00 51 26.7 +0.1**
baz=218
J18K Innoko River 81.58 15 IAMs_20 IAMs_20 01 23 43.6
comp=Z,3µm,20.0s
J18K Innoko River 81.58 15 P P **00 51 26.9 +0.1**
baz=215
IMP Imphal 81.60 298 *e*P P **00 51 27.1 -0.6**
IMP IAmb IAmb 00 51 35.6
comp=Z,35nm,0.7s
ULN Ulaanbaatar 81.64 324 P P **00 51 27.6 +0.1**
ULN Ulaanbaatar 81.64 324 *c*e P **P 00 51 28.7 +1.1**
ULN pmax pmax
comp=Z,94nm,1.7s
Q23K Middleton Isla 81.66 22 P P **00 51 27.3 +0.1**
baz=225
MID Middleton Isla 81.66 22 IAMs_20 IAMs_20 01 24 22.1
comp=Z,4µm,19.0s
SUA Susitna One 81.68 19 IAmb IAmb 00 51 38.8
comp=Z,140nm,1.1s
SUA Susitna One 81.68 19 P P **00 51 27.4 0.0**
baz=220,SNR=12
P23K Montague Islan 81.69 21 P P **00 51 27.1 -0.2**
baz=224
RC01 Rabbit Creek A 81.72 19 P P **00 51 27.1 -0.4**
baz=222
KOHI KOHIMA 81.76 299 *e*P P **00 51 27.2 -1.5**
KOHI IAmb IAmb 00 51 35.6
comp=Z,88nm,1.2s
F15K North Star Dit 81.76 11 IAmb IAmb 00 51 56.4
comp=Z,189nm,1.9s
F15K IAMs_20 IAMs_20 01 21 20.3
comp=Z,4µm,21.0s
F15K North Star Dit 81.76 11 P P **00 51 27.7 +0.1**
baz=207,SNR=5.9
SKT Skwentna 81.84 18 P P **00 51 27.7 -0.4**
baz=220
G16K Koyuk River 81.93 12 IAmb IAmb 00 51 43.6
comp=Z,170nm,1.6s
G16K IAMs_20 IAMs_20 01 22 30.7
comp=Z,4µm,21.0s
G16K Koyuk River 81.93 12 P P **00 51 28.0 -0.5**
baz=209
JORH JORHAT 81.97 300 *e*P P **00 51 29.0 -0.6**
PWL Port Wells 82.00 20 IAMs_20 IAMs_20 01 24 54.2
comp=Z,3µm,19.0s
PWL Port Wells 82.00 20 P P **00 51 28.5 -0.5**
baz=223,SNR=36
SONM Songino Array 82.01 323 P P **00 51 28.9 -0.6**
SONM IAmb IAmb 00 51 58.7
comp=Z,185nm,1.9s
SONM Songino Array 82.01 323 P P **00 51 29.8 +0.4**
comp=Z,8.9nm,1.0s,baz=135,slow=4.9,SNR=33
SONM LR LR 01 26 04.8
comp=Z,2µm,21.4s,baz=115,slow=34
comp=Z,8.9nm,1.0s
H17K Granite Mounta 82.06 13 IAMs_20 IAMs_20 01 21 44.2
comp=Z,4µm,21.0s
H17K Granite Mounta 82.06 13 P P **00 51 28.9 -0.3**
baz=212
M22K Willow 82.10 19 IAmb IAmb 00 51 31.0
comp=Z,179nm,0.9s
M22K Willow 82.10 19 P P **00 51 29.4 0.0**
baz=221,SNR=7.8
K20K Telida 82.19 16 P P **00 51 30.4 +0.4**
baz=217,SNR=6.4
PMR Palmer 82.29 19 IAmb IAmb 00 51 46.2
comp=Z,153nm,1.3s
PMR Palmer 82.29 19 P P **00 51 31.0 +0.6**
PMR Palmer 82.29 19 P P **00 51 30.5 +0.1**
baz=222,SNR=11
HIN Hinchinbrook I 82.29 21 IAMs_20 IAMs_20 01 25 00.8
comp=Z,5µm,19.0s
J19K Poorman 82.30 15 P P **00 51 30.7 +0.3**
baz=216,SNR=9.8
PPLA Purkeypile 82.36 17 P P **00 51 30.5 -0.4**
baz=219
KNK Knik Glacier 82.37 20 P P **00 51 30.5 -0.4**
KNK IAmb IAmb 00 51 42.8
comp=Z,192nm,1.4s
KNK IAMs_20 IAMs_20 01 22 59.9
comp=Z,4µm,20.0s
KNK Knik Glacier 82.37 20 P P **00 51 30.7 -0.2**
baz=223,SNR=16
GTA Gaotai 82.38 314 *e*P P **00 51 32.6 +1.0**
GTA PP **PP 00 54 38.4 -2.4**
GTA S **S 01 01 50.0 +3.2**
GTA pmax pmax
comp=Z,25nm,1.4s
GTA pmax pmax
comp=Z,460nm,4.0s
GTA LR LR
comp=Z,3µm,21.1s
GTA LR LR
comp=Z,4µm,22.5s
GTA LR LR
comp=Z,6µm,22.9s
G17K Kiwalik Mounta 82.38 13 P P **00 51 31.0 +0.2**
baz=211
FARB Farallon Islan 82.39 48 IAmb IAmb 00 51 36.8
comp=Z,217nm,1.4s
FARB IAMs_20 IAMs_20 01 18 16.7
comp=Z,5µm,22.0s
GLI Glacier Island 82.44 20 IAMs_20 IAMs_20 01 22 06.6
comp=Z,5µm,20.0s
GLI Glacier Island 82.44 20 P P **00 51 30.8 -0.4**
baz=224,SNR=7.7
GHO Glory Hole Cre 82.49 19 IAmb IAmb 00 51 36.1
comp=Z,312nm,1.7s
CUT Chulitna 82.55 18 IAmb IAmb 00 51 35.5
comp=Z,150nm,1.2s
CUT IAMs_20 IAMs_20 01 20 45.5
comp=Z,5µm,22.0s
CUT Chulitna 82.55 18 P P **00 51 31.4 -0.3**
baz=221,SNR=9.0
ITAN ITANAGAR 82.55 300 *e*P P **00 51 32.8 +0.1**
ZIRO ZIRO 82.57 301 *e*P P **00 51 32.0 -0.9**
H18K Honhosa River 82.59 14 IAMs_20 IAMs_20 01 21 59.4
comp=Z,5µm,21.0s
H18K Honhosa River 82.59 14 P P **00 51 32.0 0.0**
baz=213

GCSA Galena City Sc 82.60 14 P P **00 51 31.9 0.0**
baz=214
MCCM Marconi Confer 82.66 48 IAmb IAmb 00 51 38.0
comp=Z,264nm,1.6s
MCCM IAMs_20 IAMs_20 01 20 41.7
comp=Z,4µm,20.0s
EYAK Cordova Ski Ar 82.66 21 IAMs_20 IAMs_20 01 20 13.7
comp=Z,5µm,22.0s
EYAK Cordova Ski Ar 82.66 21 P P **00 51 34.6 +2.2**
EYAK Cordova Ski Ar 82.66 21 P P **00 51 31.9 -0.5**
baz=225,SNR=5.3
KAIM Kayak Island 82.70 22 IAMs_20 IAMs_20 01 24 43.8
comp=Z,5µm,19.0s
KAIM Kayak Island 82.70 22 P P **00 51 32.1 -0.5**
baz=226
SML Sawmill 82.70 19 P P **00 51 32.6 -0.1**
baz=223,SNR=13
KMPM Mount Pierce 82.71 46 IAMs_20 IAMs_20 01 18 47.0
comp=Z,5µm,22.0s
KCPM Cahto Peak 82.78 46 IAMs_20 IAMs_20 01 18 26.9
comp=Z,5µm,22.0s
J20K Nowinta River 82.83 16 P P **00 51 33.5 +0.3**
J20K IAMs_20 IAMs_20 01 21 41.6
comp=Z,5µm,21.0s
J20K Nowinta River 82.83 16 P P **00 51 33.3 +0.1**
baz=217,SNR=9.4
JRSC Jasper Ridge 82.83 49 IAMs_20 IAMs_20 01 20 11.3
comp=Z,5µm,21.0s
M23K Glacier View 82.89 20 P P **00 51 33.5 -0.1**
baz=223,SNR=10
KMRM Mail Ridge 82.92 46 IAMs_20 IAMs_20 01 19 37.2
comp=Z,5µm,22.0s
BRDH Bariadhala 82.92 295 LR LR 01 27 30.6
comp=Z,920nm,22.0s,baz=138,slow=35
GDXM Geysers 82.99 47 IAmb IAmb 00 51 41.3
comp=Z,138nm,1.4s
CVS Carnenet Viney 83.05 48 IAmb IAmb 00 51 40.0
comp=Z,166nm,1.4s
CVS IAMs_20 IAMs_20 01 18 58.9
comp=Z,6µm,22.0s
SCM Sheep Creek Mo 83.05 20 P P **00 51 34.3 -0.2**
baz=224,SNR=17
DIV Divide 83.07 21 IAmb IAmb 00 51 47.1
comp=Z,202nm,1.4s
DIV IAMs_20 IAMs_20 01 24 29.3
comp=Z,5µm,20.0s
F17K Baldwin Pennin 83.07 12 P P **00 51 34.6 +0.2**
F17K IAMs_20 IAMs_20 01 22 54.1
comp=Z,4µm,21.0s
F17K Baldwin Pennin 83.07 12 P P **00 51 34.6 +0.2**
baz=210
KRPM Rodgers 83.09 45 IAMs_20 IAMs_20 01 19 20.9
comp=Z,3µm,21.0s
CHUM Lake Minchumin 83.09 17 P P **00 51 33.9 -0.7**
baz=219,SNR=21
MAW Mawson 83.11 202 P P **00 51 35.5 +0.8**
comp=Z,23nm,1.1s,baz=98,slow=6.1,SNR=13
MAW LR LR 01 23 08.1
comp=Z,5µm,21.8s,baz=94,slow=32
comp=Z,23nm,1.1s
G18K Tagagawik 83.15 13 IAMs_20 IAMs_20 01 21 44.2
comp=Z,4µm,21.0s
G18K Tagagawik 83.15 13 P P **00 51 34.6 -0.2**
baz=213
TEZP TEZPUR 83.16 299 *e*P P **00 51 34.6 -1.2**
KHMM Horse Mountain 83.17 45 IAMs_20 IAMs_20 01 19 02.1
comp=Z,3µm,22.0s
SAO San Andreas Ge 83.17 50 IAmb IAmb 00 51 41.1
comp=Z,160nm,1.4s
SAO IAMs_20 IAMs_20 01 19 06.3
comp=Z,3µm,22.0s
I20K Naaghedeneel 83.24 15 IAmb IAmb 00 51 50.7
comp=Z,160nm,1.1s
I20K IAMs_20 IAMs_20 01 21 55.4
comp=Z,4µm,22.0s
I20K Naaghedeneel 83.24 15 P P **00 51 35.2 -0.1**
baz=217
MHC Mount Hamilton 83.25 49 IAmb IAmb 00 51 42.6
comp=Z,230nm,1.4s
MHC IAMs_20 IAMs_20 01 20 02.3
comp=Z,5µm,20.0s
BGLC Bering Glacier 83.25 22 P P **00 51 35.0 -0.4**
baz=228
BELO BELONIA 83.27 296 *e*P P **00 51 36.1 -0.3**
KLU Klutina 83.27 20 IAmb IAmb 00 51 52.6
comp=Z,184nm,1.4s
KLU IAMs_20 IAMs_20 01 23 04.7
comp=Z,5µm,21.0s
KLU Klutina 83.27 20 P P **00 51 35.6 -0.1**
baz=225,SNR=18
BERG Berg Lake 83.29 22 P P **00 51 35.6 0.0**
TRF Thorofare Moun 83.33 18 IAmb IAmb 00 51 48.0
comp=Z,185nm,1.4s
TRF Thorofare Moun 83.33 18 P P **00 51 35.6 -0.5**
baz=221,SNR=16
H19K Roundabout Mou 83.35 14 P P **00 51 36.2 +0.4**
baz=215,SNR=11
BMRM Bremner River 83.36 21 IAMs_20 IAMs_20 01 20 13.1
comp=Z,4µm,22.0s
BMRM Bremner River 83.36 21 P P **00 51 36.0 -0.1**
baz=226,SNR=20
WAT1 Susitna Watana 83.39 19 P P **00 51 35.9 -0.3**
baz=222
KHBM Hayfork Bally 83.44 46 IAmb IAmb 00 51 42.8
comp=Z,165nm,1.4s
KHBM IAMs_20 IAMs_20 01 19 21.2
comp=Z,5µm,22.0s
SNH Sunshine Point 83.46 22 P P **00 51 37.5 +0.9**
SNH IAMs_20 IAMs_20 01 21 08.7
comp=Z,5µm,22.0s
WAT6 Susitna Watana 83.46 19 P P **00 51 36.8 +0.1**
baz=223,SNR=44
KSXB Camp Six Broad 83.47 44 IAmb IAmb 00 51 43.0
comp=Z,156nm,1.3s
KSXB IAMs_20 IAMs_20 01 20 37.0
comp=Z,3µm,21.0s
E17K Hotham Inlet 83.51 11 P P **00 51 36.7 0.0**
baz=210,SNR=18
F18K Selawik 83.53 12 P P **00 51 37.3 +0.5**
baz=212,SNR=12
PKD Bear Valley Ra 83.54 51 IAmb IAmb 00 51 43.0
comp=Z,150nm,1.2s
KEBM Edson Butte 83.60 43 IAmb IAmb 00 51 47.0
comp=Z,142nm,1.3s
SHL Shillong 83.61 298 IAmb IAmb 00 51 45.7
comp=Z,149nm,1.5s
SHL Shillong 83.61 298 *e*P P **00 51 35.1 -3.2**
SHL IAmb IAmb 00 52 13.6
comp=Z,75nm,1.4s
M24K Tolsona, Glenn 83.63 20 P P **00 51 38.0 +0.5**
baz=225,SNR=16
BPAW Bear Paw Mtn. 83.63 17 IAmb IAmb 00 51 40.8
comp=Z,195nm,1.9s
BPAW Bear Paw Mtn. 83.63 17 P P **00 51 37.5 +0.1**
baz=220
AGT Agartala 83.63 296 *e*P P **00 51 37.6 -0.7**
WAX Waxell Ridge 83.64 22 IAMs_20 IAMs_20 01 21 57.4
comp=Z,4µm,21.0s
H20K Anotleneega Mo 83.70 15 P P **00 51 38.1 +0.4**
baz=216,SNR=14
CRQM Cirque 83.74 22 IAMs_20 IAMs_20 01 26 05.5
comp=Z,4µm,20.0s
CRQE Cirque 83.75 22 P P **00 51 38.1 -0.1**
baz=228,SNR=24
DIB Dawson Inlet, 83.78 31 IAmb IAmb 00 51 51.3
comp=Z,131nm,1.2s
BOD Bodaibo 83.78 334 *e*P P **00 51 38.5 +0.3**
BOD pmax pmax
comp=Z,15nm,1.6s
MESA MESA 83.79 23 IAMs_20 IAMs_20 01 20 57.5
comp=Z,4µm,22.0s
MESA MESA 83.79 23 P P **00 51 38.2 -0.3**
baz=229,SNR=9.3
L02F Cave Junction 83.80 44 IAmb IAmb 00 51 48.3
comp=Z,150nm,1.6s
N25K Chitina, Valde 83.81 21 IAMs_20 IAMs_20 01 21 01.8
comp=Z,5µm,22.0s
N25K Chitina, Valde 83.81 21 P P **00 51 38.5 +0.1**
baz=226,SNR=36
D17K Noatak River 83.82 11 P P **00 51 38.7 +0.5**
baz=208,SNR=7.7
TGL Tana Glacier 83.85 22 IAMs_20 IAMs_20 01 25 39.0
comp=Z,3µm,20.0s
SUTB Sutter Butte 83.88 47 IAMs_20 IAMs_20 01 19 35.8
comp=Z,4µm,22.0s
N02D Trinity Center 83.92 45 IAMs_20 IAMs_20 01 19 48.0
comp=Z,4µm,22.0s
ISLE Juniper Island 83.93 22 IAMs_20 IAMs_20 01 22 37.1
comp=Z,4µm,20.0s
DHY Denali Highway 83.94 19 IAmb IAmb 00 51 48.9
comp=Z,148nm,1.2s
DHY Denali Highway 83.94 19 P P **00 51 39.4 +0.3**
baz=224,SNR=34
VRDI Verde Repeater 83.95 21 IAmb IAmb 00 51 53.6
comp=Z,220nm,1.4s
VRDI IAMs_20 IAMs_20 01 22 53.5
comp=Z,3µm,21.0s
C16K Lisburne Hills 83.95 10 P P **00 51 39.2 +0.4**
baz=206
MCK McKinley 83.95 18 P P **00 51 38.8 -0.2**
baz=222,SNR=46
HG4B Hotspring 83.96 33 IAmb IAmb 00 51 49.8
comp=Z,139nm,1.4s
GLB Gilahina Butte 83.97 21 IAmb IAmb 00 51 43.5
comp=Z,145nm,1.2s
K02D Willamette Mer 83.97 44 IAmb IAmb 00 51 45.2
comp=Z,222nm,1.6s
M02C Callahan 83.99 45 IAMs_20 IAMs_20 01 19 39.7
comp=Z,3µm,22.0s
YAH Yahtse 83.99 23 P P **00 51 39.3 -0.3**
YAH IAMs_20 IAMs_20 01 21 47.5
comp=Z,4µm,21.0s
MOBC Moresby Island 84.01 32 IAmb IAmb 00 51 50.6
comp=Z,190nm,1.4s
E18K Tukpahlearik C 84.05 12 IAMs_20 IAMs_20 01 23 02.8
comp=Z,5µm,21.0s
E18K Tukpahlearik C 84.05 12 P P **00 51 39.3 -0.1**
baz=211,SNR=8.8
F19K Shaleruckik Mo 84.14 13 IAmb IAmb 00 51 54.0
comp=Z,122nm,1.4s
F19K IAMs_20 IAMs_20 01 24 01.2
comp=Z,4µm,20.0s
F19K Shaleruckik Mo 84.14 13 P P **00 51 40.0 +0.1**
baz=214,SNR=16
RDOG Red Dog Mine 84.17 11 IAmb IAmb 00 52 03.3
comp=Z,81nm,1.2s
RDOG Red Dog Mine 84.17 11 P P **00 51 39.9 -0.1**
baz=208
HARP HAARP 84.17 20 P P **00 51 40.0 -0.1**
baz=226,SNR=9.7
I21K Tanana 84.19 16 P P **00 51 40.6 +0.4**
baz=219,SNR=29
MCARA McCarthy VSAT 84.20 21 P P **00 51 40.2 -0.2**
MCARA IAmb IAmb 00 51 52.9
comp=Z,143nm,1.2s
MCARA McCarthy VSAT 84.20 21 P P **00 51 40.2 -0.2**
baz=228,SNR=24
ORV Oroville 84.21 47 IAmb IAmb 00 51 46.0
comp=Z,185nm,1.4s
ORV IAMs_20 IAMs_20 01 21 21.6
comp=Z,3µm,20.0s
YBH Yreka Blue Hor 84.22 45 IAmb IAmb 00 51 44.2
comp=Z,95nm,1.6s
YBH Yreka Blue Hor 84.22 45 LR LR 01 21 04.1
comp=Z,184nm,21.3s,baz=257,slow=30
GRNC Granite Creek 84.23 22 IAmb IAmb 00 51 51.2
comp=Z,201nm,1.4s
GRNC IAMs_20 IAMs_20 01 22 26.0
comp=Z,4µm,21.0s
TAWA Tawang 84.26 300 *e*P P **00 51 40.7 -1.2**
TAWA IAmb IAmb 00 51 46.7
comp=Z,252nm,1.9s
TABL Table Mountain 84.27 23 IAMs_20 IAMs_20 01 22 06.0
comp=Z,4µm,20.0s
O03E Paynes Creek 84.28 46 IAMs_20 IAMs_20 01 19 49.5
comp=Z,4µm,22.0s
WELL Weller Preserv 84.34 48 IAMs_20 IAMs_20 01 20 03.1
comp=Z,4µm,22.0s
H21K Melozitna Rive 84.36 15 IAmb IAmb 00 51 46.2
comp=Z,170nm,1.5s
H21K IAMs_20 IAMs_20 01 22 40.2
comp=Z,4µm,21.0s
H21K Melozitna Rive 84.36 15 P P **00 51 41.1 0.0**
baz=218,SNR=39
IMAR Indian Mountai 84.38 15 P P **00 51 41.1 0.0**
PCA Pinnacle 84.38 23 IAmb IAmb 00 51 43.1
comp=Z,91nm,0.9s
PCA IAMs_20 IAMs_20 01 22 57.1
comp=Z,4µm,20.0s
PINM Pinnacle 84.38 23 P P **00 51 41.3 -0.1**
baz=230,SNR=12
MLY Manley 84.42 16 P P **00 51 40.4 -1.0**
MLY IAmb IAmb 00 51 45.5
comp=Z,159nm,1.5s
MLY IAMs_20 IAMs_20 01 22 58.7
comp=Z,4µm,20.0s
MLY Manley 84.42 16 P P **00 51 41.4 0.0**
baz=220,SNR=12
CMB Columbia Colle 84.43 49 IAmb IAmb 00 51 47.3
comp=Z,121nm,1.4s
CMB IAMs_20 IAMs_20 01 21 49.6
comp=Z,4µm,20.0s
PNL Peninsula 84.44 24 P P **00 51 41.6 0.0**
baz=231
OSI Osito Audit: C 84.44 53 IAmb IAmb 00 51 48.8
comp=Z,239nm,1.6s
OSI IAMs_20 IAMs_20 01 18 43.0
comp=Z,4µm,22.0s
PAX Paxson 84.47 19 IAmb IAmb 00 51 53.0
comp=Z,204nm,1.8s
PAX IAMs_20 IAMs_20 01 25 45.4
comp=Z,3µm,20.0s
PAX Paxson 84.47 19 P P **00 51 41.6 -0.2**
baz=225,SNR=22
BARN Barnard Glacie 84.48 22 IAMs_20 IAMs_20 01 30 22.7
comp=Z,3µm,19.0s
C17K DeLong Mountai 84.49 10 P P **00 51 41.6 0.0**
baz=208
BCPM Bancas Point 84.53 24 IAmb IAmb 00 54 16.9
comp=Z,79nm,1.0s
BCPM IAMs_20 IAMs_20 01 26 13.0
comp=Z,4µm,20.0s
CTG Chitna Glacier 84.53 22 P P **00 51 42.4 +0.2**
baz=229,SNR=33
CTGM Chitina Glacie 84.54 22 IAmb IAmb 00 51 46.7
comp=Z,132nm,1.0s
CTGM IAMs_20 IAMs_20 01 22 36.2
comp=Z,3µm,20.0s
NEA2 Nenana 84.55 17 P P **00 51 42.3 +0.2**
baz=222
LOGN Logan Glacier 84.57 23 P P **00 51 41.6 -0.8**
LOGN IAMs_20 IAMs_20 01 22 36.0
comp=Z,3µm,20.0s
SIT Sitka 84.57 27 P P **00 51 41.7 -0.6**
baz=235
CRAG Craig 84.69 29 IAmb IAmb 00 51 48.0
comp=Z,195nm,1.6s
CRAG Craig 84.69 29 P P **00 51 46.1 +3.2**
CRAG Craig 84.69 29 P P **00 51 42.3 -0.6**
baz=237
L04D Klamath Falls 84.70 44 IAmb IAmb 00 51 46.2
comp=Z,141nm,1.0s
S31K Pelican 84.70 26 IAMs_20 IAMs_20 01 20 31.8
comp=Z,3µm,21.0s
S31K Pelican 84.70 26 P P **00 51 43.2 +0.4**
baz=234,SNR=6.2
PASC Pasadena Art C 84.71 53 IAmb IAmb 00 51 48.5
comp=Z,246nm,1.7s
PASC IAMs_20 IAMs_20 01 22 21.0
comp=Z,3µm,19.0s
BBOR Butler Butte 84.71 44 IAmb IAmb 00 51 54.2
comp=Z,88nm,1.2s
WRH Wood River Hil 84.75 18 P P **00 51 42.1 -0.9**
WRH IAmb IAmb 00 51 46.7
comp=Z,158nm,1.1s
F20K Avaraart Lake 84.77 14 IAmb IAmb 00 51 56.5
comp=Z,127nm,1.6s
F20K Avaraart Lake 84.77 14 P P **00 51 43.6 +0.6**
baz=215
E19K Redstone River 84.77 13 IAMs_20 IAMs_20 01 29 32.9
comp=Z,3µm,19.0s
E19K Redstone River 84.77 13 P P **00 51 43.7 +0.6**
baz=214
GOMU GeErMu 84.80 309 P P **00 51 45.6 +1.2**
GOMU S **S 01 02 13.9 +2.1**
GOMU pmax pmax
comp=Z,11nm,1.2s
GOMU LR LR
comp=Z,750nm,18.0s
GOMU LR LR
comp=Z,1µm,19.6s
MWC Mount Wilson 84.82 53 IAMs_20 IAMs_20 01 22 34.1
comp=Z,3µm,19.0s
O28M Mount Upton 84.84 23 IAmb IAmb 00 51 45.5
comp=Z,89nm,0.9s
O28M IAMs_20 IAMs_20 01 21 52.1

comp=Z,3µm,22.0s
O28M Mount Upton 84.84 23 P P 00 51 43.9 0.0
baz=230
G21K Allakaket 84.86 15 IAmb IAmb 00 51 48.5
comp=Z,138nm,1.4s
G21K IAMs_20 IAMs_20 01 25 48.2
comp=Z,4µm,20.0s
G21K Allakaket 84.86 15 P P 00 51 44.3 +0.7
baz=218
I23K Minto, Yukon-K 84.89 17 IAmb IAmb 00 51 56.9
comp=Z,184nm,1.6s
I23K Minto, Yukon-K 84.89 17 P P 00 51 43.8 +0.2
baz=222,SNR=24
M26K Nabesna, AK 84.90 21 IAmb IAmb 00 51 48.3
comp=Z,96nm,1.1s
M26K IAMs_20 IAMs_20 01 21 59.9
comp=Z,4µm,22.0s
M26K Nabesna, AK 84.90 21 P P 00 51 44.2 +0.3
baz=228,SNR=39
H22K Ishtalitna Cre 84.91 16 P P 00 51 44.4 +0.5
baz=220,SNR=47
COR Corvallis 85.00 42 P P 00 51 44.3 -0.4
COR IAmb IAmb 00 51 50.5
comp=Z,230nm,1.4s
COR Corvallis 85.00 42 P P 00 51 44.3 -0.4
COR pmax pmax
comp=Z,230nm,1.5s
C18K Utukok River 85.00 11 IAmb IAmb 00 51 56.5
comp=Z,147nm,1.6s
C18K IAMs_20 IAMs_20 01 22 39.7
comp=Z,4µm,22.0s
C18K Utukok River 85.00 11 P P 00 51 45.0 +0.7
baz=210
MENT Mentasta 85.02 20 P P 00 51 46.7 +2.2
HDA Harding Lake 85.04 18 P P 00 51 44.7 +0.2
baz=224,SNR=29
ZAK Zakamensk 85.04 325 eP P 00 51 43.7 -1.3
ZAK pmax pmax
comp=Z,87nm,2.0s
BUCK Buck Mountain 85.04 42 IAmb IAmb 00 51 50.7
comp=Z,204nm,1.4s
U33K Whale Pass 85.05 29 IAmb IAmb 00 51 55.6
comp=Z,210nm,1.5s
U33K IAMs_20 IAMs_20 01 20 55.1
comp=Z,4µm,22.0s
U33K Whale Pass 85.05 29 P P 00 51 44.2 -0.5
baz=237,SNR=6.0
P29M Windy Craggy 85.08 24 IAMs_20 IAMs_20 01 26 55.6
comp=Z,5µm,19.0s
P29M Windy Craggy 85.08 24 P P 00 51 44.8 -0.1
baz=232
COLA College 85.11 17 P P 00 51 43.9 -0.9
COLA IAmb IAmb 00 51 48.4
comp=Z,156nm,1.0s
COLA College 85.11 17 P P 00 51 46.3 +1.5
COLA College 85.11 17 i P P 00 51 43.6 -1.2
COLA pmax pmax
comp=Z,201nm,1.1s
COLA College 85.11 17 P P 00 51 45.1 +0.3
baz=223
CPE Camp Elliot 85.12 55 IAmb IAmb 00 51 50.9
comp=Z,218nm,1.5s
CPE IAMs_20 IAMs_20 01 23 52.9
comp=Z,4µm,19.0s
ELS Elsinore Mount 85.12 54 IAmb IAmb 00 51 51.9
comp=Z,224nm,1.6s
BEKR Beckworth 85.14 47 IAmb IAmb 00 51 51.0
comp=Z,219nm,1.4s
BFSC Mount Baldy Ra 85.14 53 IAmb IAmb 00 51 51.7
comp=Z,256nm,1.6s
S32K Killisnoo 85.14 27 IAmb IAmb 00 51 58.7
comp=Z,175nm,1.5s
S32K IAMs_20 IAMs_20 01 20 57.5
comp=Z,4µm,22.0s
S32K Killisnoo 85.14 27 P P 00 51 45.1 0.0
baz=235
O29M Mount Kennedy 85.16 24 IAmb IAmb 00 51 59.8
comp=Z,128nm,1.8s
O29M IAMs_20 IAMs_20 01 23 00.9
comp=Z,4µm,20.0s
O29M Mount Kennedy 85.16 24 P P 00 51 44.6 -0.7
baz=232
MPK Martis Peak 85.16 48 IAmb IAmb 00 51 51.5
comp=Z,181nm,1.2s
L26K Log Cabin Wild 85.21 20 P P 00 51 45.5 +0.1
baz=227,SNR=29
RIDG Independent Ri 85.21 19 P P 00 51 45.9 +0.5
baz=226
K04D Chiloquin, OR 85.23 44 IAmb IAmb 00 52 11.9
comp=Z,182nm,1.2s
MDPB Devils Postpil 85.25 50 IAmb IAmb 00 51 51.7
comp=Z,176nm,1.2s
I04A Tendick Farm, 85.26 43 IAmb IAmb 00 51 52.1
comp=Z,179nm,1.5s
M27K Edge Creek, AK 85.26 21 IAmb IAmb 00 51 50.6
comp=Z,90nm,1.2s
M27K Edge Creek, AK 85.26 21 P P 00 51 46.5 +0.7
baz=229
CBX Cerro Bola 85.28 55 IAmb IAmb 00 51 52.0
comp=Z,189nm,1.4s
DPP Dos Picos Cty 85.28 55 IAmb IAmb 00 51 51.7
comp=Z,209nm,1.4s
ILAR Eielson Array 85.32 18 P P 00 51 44.9 -1.0
ILAR Eielson Array 85.32 18 P P 00 51 46.0 +0.1
comp=Z,41nm,0.8s,baz=236,slow=5.8,SNR=251
ILAR LR LR 01 23 49.8
comp=Z,7µm,21.2s,baz=226,slow=31
comp=Z,41nm,0.8s
YUK8 Steele Glacier 85.33 23 P P 00 51 46.0 -0.3
baz=231,SNR=38
H23K Yukon River 85.35 16 IAMs_20 IAMs_20 01 22 45.4
comp=Z,5µm,22.0s
H23K Yukon River 85.35 16 P P 00 51 46.6 +0.5
baz=221
YUK3 Moose Creek 85.39 22 P P 00 51 46.4 -0.1
baz=230
IRK Irkutsk 85.39 326 eP P 00 51 45.0 -1.5
IRK pmax pmax
comp=Z,105nm,2.1s
BAR Barrett 85.39 55 IAmb IAmb 00 51 52.2
comp=Z,117nm,1.4s
BAR IAMs_20 IAMs_20 01 24 02.2
comp=Z,3µm,20.0s
F03A Seaside 85.39 41 IAmb IAmb 00 51 52.1
comp=Z,199nm,1.3s
DOT Dot Lake 85.40 19 IAmb IAmb 00 52 00.8
comp=Z,162nm,1.5s
POKR Poker Plat Res 85.41 17 IAmb IAmb 00 51 57.2
comp=Z,111nm,1.2s
POKR IAMs_20 IAMs_20 01 23 08.1
comp=Z,5µm,22.0s
POKR Poker Plat Res 85.41 17 P P 00 51 46.0 -0.4
baz=223,SNR=16
F21K Alatna River 85.43 14 IAmb IAmb 00 52 01.4
comp=Z,167nm,1.4s
F21K IAMs_20 IAMs_20 01 26 36.3
comp=Z,4µm,20.0s
F21K Alatna River 85.43 14 P P 00 51 46.6 +0.2
baz=218
D19K Kuna River 85.46 12 IAmb IAmb 00 52 02.6
comp=Z,115nm,1.2s
D19K IAMs_20 IAMs_20 01 27 51.1
comp=Z,3µm,20.0s
D19K Kuna River 85.46 12 P P 00 51 46.9 +0.3
baz=213,SNR=8.9
B18K Kokolik River 85.52 10 P P 00 51 47.0 +0.3
baz=210
LSA Lhasa 85.52 302 P P 00 51 42.4 -5.9
LSA LR LR
comp=Z,730nm,17.2s
LSA LR LR
comp=Z,1µm,20.8s
LSA LR LR
comp=Z,2µm,21.6s
OZB Mount Ozzard 85.53 37 IAmb IAmb 00 51 52.5
comp=Z,116nm,1.4s
PLBC Pleasant Camp 85.53 25 P P 00 51 46.9 -0.1
baz=234,SNR=9.9
BBB Bella Bella 85.54 34 P P 00 51 47.5 +0.3
BBB IAmb IAmb 00 52 05.0
comp=Z,208nm,1.7s
BBB Bella Bella 85.54 34 LR LR 01 21 32.0
comp=Z,5µm,21.7s,baz=268,slow=30
LRMC Laurel Mtn Rad 85.55 52 IAmb IAmb 00 51 53.4
comp=Z,222nm,1.5s
CWC Cottonwood Cre 85.57 51 IAmb IAmb 00 51 53.4
comp=Z,212nm,1.7s
WRAK Wrangell Islan 85.58 29 IAMs_20 IAMs_20 01 20 26.0
comp=Z,4µm,22.0s
WRAK Wrangell Islan 85.58 29 IAmb IAmb 00 52 02.9
comp=Z,251nm,1.6s
WRAK Wrangell Islan 85.58 29 P P 00 51 47.2 -0.1
baz=237,SNR=11
R32K Eaglecrest 85.63 27 IAmb IAmb 00 52 02.1
comp=Z,126nm,1.6s
R32K IAMs_20 IAMs_20 01 20 28.2
comp=Z,4µm,21.0s
R32K Eaglecrest 85.63 27 P P 00 51 47.6 0.0
baz=235
YUK6 Outpost Mounta 85.64 23 P P 00 51 47.5 -0.4
baz=232
SCRK Sand Creek 85.65 19 IAmb IAmb 00 52 02.4
comp=Z,170nm,1.4s
SCRK IAMs_20 IAMs_20 01 25 15.5
comp=Z,4µm,20.0s
SCRK Sand Creek 85.65 19 P P 00 51 47.6 -0.1
baz=227,SNR=18
BESE Bessie Mountai 85.66 26 IAmb IAmb 00 51 58.6
comp=Z,141nm,1.4s
BESE IAMs_20 IAMs_20 01 21 33.0
comp=Z,3µm,21.0s
E20K Nigu River 85.66 13 P P 00 51 47.8 +0.2
baz=215
J25K Salcha River, 85.67 18 IAmb IAmb 00 52 02.1
comp=Z,149nm,1.4s
J25K Salcha River, 85.67 18 P P 00 51 47.6 -0.1
baz=225,SNR=39
G22K Bettles 85.67 15 P P 00 51 47.7 +0.1
baz=219
TIN Tinemaha, Big 85.67 50 IAmb IAmb 00 51 51.5
comp=Z,152nm,1.0s
TIN IAMs_20 IAMs_20 01 20 09.5
comp=Z,3µm,22.0s
JIS Juneau Island 85.69 27 P P 00 51 50.8 +3.0
P30M Million Dollar 85.69 24 P P 00 51 48.4 +0.5
baz=233
C19K Lookout Ridge 85.69 11 P P 00 51 48.0 +0.3
C19K IAmb IAmb 00 52 04.2
comp=Z,219nm,1.5s
C19K IAMs_20 IAMs_20 01 23 57.0
comp=Z,5µm,22.0s
C19K Lookout Ridge 85.69 11 P P 00 51 47.8 +0.1
baz=212
DNR Dunn Ranch,Anz 85.72 54 IAmb IAmb 00 51 54.2
comp=Z,147nm,1.4s
L27K Beaver Creek, 85.75 21 IAMs_20 IAMs_20 01 25 25.1
comp=Z,4µm,20.0s
L27K Beaver Creek, 85.75 21 P P 00 51 48.0 -0.1
baz=229,SNR=31
ESJX Sierra Juarez 85.75 56 P P 00 51 49.9 +0.9
ESJX IAmb IAmb 00 51 54.9
comp=Z,196nm,1.6s
BCAR Beaver Creek A 85.76 21 P P 00 51 47.5 -0.7
H04A Detroit Lake 85.77 42 IAmb IAmb 00 51 59.6
comp=Z,162nm,1.4s
PAHR Pah Rah Range 85.78 48 IAmb IAmb 00 51 54.3
comp=Z,193nm,1.4s
YUK4 Talbot Arm 85.78 23 P P 00 51 48.5 0.0
baz=232
G04A Mulino 85.79 42 IAmb IAmb 00 51 53.0
comp=Z,134nm,1.0s
BORC Borrego Spring 85.79 54 IAmb IAmb 00 51 55.2
comp=Z,258nm,1.5s
CAL Calcutta 85.80 294 i eP P 00 51 47.7 -1.5
F04D Rainier, OR 85.81 41 P P 00 51 50.3 +1.6
H24K Noodor Dome 85.81 17 IAmb IAmb 00 52 01.8
comp=Z,144nm,1.8s
H24K IAMs_20 IAMs_20 01 25 52.7
comp=Z,5µm,20.0s
H24K Noodor Dome 85.81 17 P P 00 51 48.3 -0.1
baz=223
J05D Fort Rock, OR 85.84 44 IAmb IAmb 00 51 52.2
comp=Z,123nm,1.0s
K05A Summer Lake 85.86 44 IAmb IAmb 00 51 51.8
comp=Z,98nm,0.9s
PFO Pinyon Flats O 85.87 54 P P 00 51 49.9 +0.4
PFO IAmb IAmb 00 51 54.8
comp=Z,147nm,1.4s
PFO Pinyon Flats O 85.87 54 IAMs_20 IAMs_20 01 21 23.8
comp=Z,4µm,20.0s
PFO Pinyon Flats O 85.87 54 LR LR 01 24 56.3
comp=Z,4µm,18.5s,baz=268,slow=32
PFO Pinyon Flats O 85.87 54 P P 00 51 49.9 +0.4
PFO pmax pmax
comp=Z,147nm,1.5s
G23K Bananza Creek 85.89 15 IAmb IAmb 00 51 53.8
comp=Z,112nm,1.1s
G23K Bananza Creek 85.89 15 P P 00 51 48.6 -0.2
baz=221
LHV Little Huntoon 85.89 49 IAmb IAmb 00 51 56.0
comp=Z,226nm,1.3s
HYT Haines Junctio 85.90 24 P P 00 51 48.5 -0.5
baz=233,SNR=13
COBR COOCHBEHAR 85.91 298 i eP P 00 51 50.3 +0.6
PMD Palm Desert 85.94 54 IAmb IAmb 00 51 54.9
comp=Z,153nm,1.4s
D20K Etivluk River 85.95 12 IAmb IAmb 00 52 05.2
comp=Z,202nm,1.2s
D20K IAMs_20 IAMs_20 01 30 24.1
comp=Z,3µm,19.0s
D20K Etivluk River 85.95 12 P P 00 51 48.8 -0.1
baz=214
SKAG Skagway 85.96 25 P P 00 51 49.6 +0.4
SKAG Skagway 85.96 25 P P 00 51 48.7 -0.5
baz=235
F22K John River 85.97 14 P P 00 51 49.1 0.0
baz=219
DSP Deep Springs 85.98 50 IAmb IAmb 00 51 52.9
comp=Z,106nm,1.0s
RYN Ryan 86.01 49 IAmb IAmb 00 51 55.5
comp=Z,191nm,1.4s
CBB Campbell River 86.08 36 IAmb IAmb 00 52 01.5
comp=Z,208nm,1.4s
NVAR Mina Array Bea 86.10 49 P P 00 51 50.3 -0.4
NVAR Mina Array Bea 86.10 49 P P 00 51 51.8 +1.1
comp=Z,44nm,0.9s,baz=230,slow=8.1,SNR=139
NVAR LR LR 01 22 29.0
comp=Z,4µm,20.8s,baz=272,slow=30
comp=Z,44nm,0.9s
J26L Joseph Creek 86.15 19 IAmb IAmb 00 52 05.0
comp=Z,178nm,1.9s
J26L IAMs_20 IAMs_20 01 26 09.8
comp=Z,4µm,19.0s
J26L Joseph Creek 86.15 19 P P 00 51 50.2 0.0
baz=227,SNR=15
I05D Terrebonne, OR 86.18 43 IAmb IAmb 00 51 59.0
comp=Z,235nm,1.4s
NV11 Mina Array Sit 86.21 49 IAmb IAmb 00 51 56.5
comp=Z,217nm,1.6s
PINE Pine Mountain 86.24 43 IAmb IAmb 00 52 00.5
comp=Z,224nm,1.5s
COLD Coldfoot 86.24 15 IAmb IAmb 00 52 06.0
comp=Z,194nm,1.4s
COLD Coldfoot 86.24 15 P P 00 51 50.4 0.0
baz=221,SNR=40
CLRS Cowichan Lake 86.27 38 IAmb IAmb 00 51 56.2
comp=Z,117nm,1.3s
E21K Killik River 86.29 13 P P 00 51 50.6 -0.1
baz=217
K27K Chicken 86.31 20 IAMs_20 IAMs_20 01 24 41.9
comp=Z,4µm,20.0s
K27K Chicken 86.31 20 P P 00 51 50.6 -0.2
baz=228,SNR=26
B04A Port Angeles 86.32 39 IAmb IAmb 00 51 56.9
comp=Z,156nm,1.2s
QSM Queen of Sheba 86.33 52 P P 00 51 52.4 +0.7
QSM IAmb IAmb 00 51 56.8
comp=Z,163nm,1.4s
SFX San Felipe 86.34 57 IAmb IAmb 00 51 57.8
comp=Z,142nm,1.6s
BELC Belle Mtn. Jos 86.36 54 IAMs_20 IAMs_20 01 25 46.7
comp=Z,4µm,19.0s
HOOD Mount Hood Mea 86.37 42 IAmb IAmb 00 52 01.9
comp=Z,172nm,1.2s
A19K Wainwright 86.37 10 P P 00 51 51.1 +0.2
baz=210
U35K Hyder 86.42 30 IAMs_20 IAMs_20 01 20 53.3
comp=Z,4µm,22.0s
O30N Mendenhall 86.42 24 IAMs_20 IAMs_20 01 23 30.2
comp=Z,3µm,20.0s
O30N Mendenhall 86.42 24 P P 00 51 51.1 -0.4
baz=234,SNR=12
N30M Aishikik Lake 86.45 23 P P 00 51 51.3 -0.4
baz=233,SNR=5.7
GNW Green Mountain 86.53 39 P P 00 51 52.6 +0.3
M29M Somme Creek 86.54 22 IAMs_20 IAMs_20 01 27 35.1
comp=Z,4µm,20.0s
M29M Somme Creek 86.54 22 P P 00 51 52.1 -0.1
baz=232
E22K Anaktuvuk Pass 86.54 14 IAMs_20 IAMs_20 01 27 30.9
comp=Z,4µm,20.0s
E22K Anaktuvuk Pass 86.54 14 P P 00 51 51.9 -0.1
baz=219,SNR=28
GWY Greenwater Val 86.56 52 IAmb IAmb 00 51 58.0
comp=Z,155nm,1.4s
G24K Hadweenzic Riv 86.56 16 IAmb IAmb 00 51 57.4
comp=Z,128nm,1.3s
G24K Hadweenzic Riv 86.56 16 P P 00 51 52.3 +0.3
baz=223,SNR=24
JPG JALPAIGURI 86.62 298 i eP P 00 51 53.5 +0.3
BC3 Big Chuckawall 86.68 54 IAmb IAmb 00 51 59.2
comp=Z,221nm,1.5s
BC3 IAMs_20 IAMs_20 01 24 52.2
comp=Z,3µm,19.0s
C21K Knifeblade Rid 86.69 13 P P 00 51 53.0 +0.4
baz=216
H25L Birch Creek 86.71 17 P P 00 51 52.5 -0.1
baz=225
P32M Atlin 86.71 26 IAMs_20 IAMs_20 01 22 19.0
comp=Z,4µm,21.0s
P32M Atlin 86.71 26 P P 00 51 52.9 -0.1
baz=236,SNR=8.5
SHOC Shoshone, Teco 86.77 52 IAmb IAmb 00 52 02.5
comp=Z,102nm,1.0s
WCT Wildcat Mounta 86.79 51 IAmb IAmb 00 51 59.3
comp=Z,145nm,1.3s
I26K Coal Creek Min 86.83 18 IAmb IAmb 00 51 59.0
comp=Z,154nm,1.8s
I26K Coal Creek Min 86.83 18 P P 00 51 53.4 0.0
baz=227
LON Longmire 86.84 40 P P 00 51 53.8 -0.1
LON IAmb IAmb 00 52 19.2
comp=Z,108nm,1.4s
LON Longmire 86.84 40 P P 00 51 53.8 -0.1
LON pmax pmax
comp=Z,108nm,1.4s
WHY Whitehorse 86.84 24 P P 00 51 53.3 -0.3
baz=235,SNR=6.5
T35M Bob Quinn 86.86 29 IAMs_20 IAMs_20 01 22 33.9
comp=Z,4µm,21.0s
T35M Bob Quinn 86.86 29 P P 00 51 53.0 -0.7
baz=239,SNR=5.3
MOY Mondy 86.91 325 eP P 00 51 53.2 -1.0
MOY pmax pmax
comp=Z,91nm,2.6s
B20K Meade River 86.92 11 IAMs_20 IAMs_20 01 24 58.4
comp=Z,4µm,21.0s
B20K Meade River 86.92 11 P P 00 51 53.4 -0.2
baz=214
D22K Ayikyak River 86.93 13 P P 00 51 53.8 +0.1
baz=218
S34M Telegraph Cree 86.93 28 IAMs_20 IAMs_20 01 21 05.9
comp=Z,4µm,22.0s
S34M Telegraph Cree 86.93 28 P P 00 51 53.5 -0.5
baz=238,SNR=16
N31M Braeburn, Yuko 86.97 24 P P 00 51 54.0 -0.1
baz=234,SNR=9.4
GLA Glamis 86.98 55 IAmb IAmb 00 52 00.9
comp=Z,176nm,1.2s
GLA IAMs_20 IAMs_20 01 24 50.3
comp=Z,3µm,19.0s
G25K Bearman Lake 86.98 17 P P 00 51 53.8 -0.3
baz=224
Q32M Nakina River 86.99 27 IAMs_20 IAMs_20 01 21 21.2
comp=Z,4µm,22.0s
Q32M Nakina River 86.99 27 P P 00 51 54.1 -0.4
baz=237
G06A Carlson Farm, 87.00 42 IAmb IAmb 00 51 59.8
comp=Z,204nm,1.7s
E23K Chandalar 87.02 15 IAmb IAmb 00 52 00.3
comp=Z,198nm,1.6s
E23K Chandalar 87.02 15 P P 00 51 54.7 +0.4
baz=221
DANC Danby, Needles 87.05 53 IAMs_20 IAMs_20 01 27 48.9
comp=Z,3µm,18.0s
F24K Squaw Lake 87.05 16 P P 00 51 54.0 -0.5
F24K IAmb IAmb 00 52 10.0
comp=Z,141nm,1.4s
F24K Squaw Lake 87.05 16 P P 00 51 55.2 +0.8
baz=224,SNR=29
L29M L29M 87.07 22 IAMs_20 IAMs_20 01 24 09.1
comp=Z,4µm,21.0s
L29M L29M 87.07 22 P P 00 51 54.7 +0.1
baz=232
IRM Iron Mountain 87.08 54 IAMs_20 IAMs_20 01 22 51.8
comp=Z,3µm,20.0s
B21K Ikpikpuk River 87.11 12 IAMs_20 IAMs_20 01 24 36.5
comp=Z,4µm,21.0s
B21K Ikpikpuk River 87.11 12 P P 00 51 55.0 +0.5
baz=216
TPNV Topopah Spring 87.13 51 IAmb IAmb 00 52 02.0
comp=Z,124nm,1.4s
SHBG Sahibganj 87.14 297 eP P 00 51 54.3 -1.5
MTPC Mountain Pass 87.19 53 IAmb IAmb 00 52 01.4
comp=Z,148nm,1.3s
DAWY Dawson 87.23 20 P P 00 51 55.4 0.0
baz=231,SNR=18
M30M Minto, Yukon 87.23 22 IAMs_20 IAMs_20 01 23 31.5
comp=Z,4µm,22.0s
M30M Minto, Yukon 87.23 22 P P 00 51 55.2 -0.2
baz=233,SNR=17
I07A Izee 87.31 44 IAmb IAmb 00 52 01.7
comp=Z,209nm,1.6s
E24K Your Creek 87.31 15 P P 00 51 55.9 +0.2
baz=222
P33M Teslin, Yukon 87.44 25 IAMs_20 IAMs_20 01 23 03.0
comp=Z,3µm,21.0s
P33M Teslin, Yukon 87.44 25 P P 00 51 56.4 -0.1
baz=237
D23K Nanushuk River 87.45 14 P P 00 51 56.7 +0.4
baz=220
TOLK Toolik Lake Re 87.47 14 P P 00 51 56.2 -0.3
TOLK IAmb IAmb 00 52 11.8
comp=Z,142nm,1.5s
TOLK Toolik Lake Re 87.47 14 P P 00 51 56.7 +0.3
baz=221,SNR=10
I27K Kandik River 87.50 19 P P 00 51 56.8 +0.1
baz=229
PIX Pinacate 87.63 57 IAmb IAmb 00 52 03.3
comp=Z,176nm,1.6s
NEE2 Needles Airpor 87.68 54 IAMs_20 IAMs_20 01 27 32.8
comp=Z,3µm,19.0s
F25K Christian Rive 87.70 16 P P 00 51 58.0 +0.4
baz=225
F07A Phinny Hill Vi 87.71 42 IAmb IAmb 00 52 03.2
comp=Z,107nm,1.3s
DLBC Dease Lake 87.71 28 LR LR 01 23 52.4
comp=Z,3µm,20.7s,baz=236,slow=31
DLBC Dease Lake 87.71 28 P P 00 51 57.5 -0.3
baz=239
MXC Moxie City 87.73 41 IAmb IAmb 00 52 03.4
comp=Z,110nm,1.4s
BELA Belgrano 2 87.74 175 IAmb IAmb 00 52 22.0
comp=Z,99nm,1.5s
S11A Rachel 87.74 51 P P 00 51 59.0 +0.4
K29M Barlow Dome 87.74 21 P P 00 51 57.6 -0.4
baz=232
LTY Liberty 87.75 40 IAmb IAmb 00 52 03.2
comp=Z,117nm,1.3s
G26K Porcupine Rive 87.77 17 IAmb IAmb 00 52 00.4
comp=Z,49nm,0.9s
G26K IAMs_20 IAMs_20 01 29 27.4
comp=Z,5µm,20.0s
G26K Porcupine Rive 87.77 17 P P 00 51 57.8 0.0
baz=227
R33M Jennings River 87.79 27 IAMs_20 IAMs_20 01 27 29.5
comp=Z,3µm,20.0s
R33M Jennings River 87.79 27 P P 00 51 57.9 -0.4
baz=238
V12A Nelson 87.81 53 IAmb IAmb 00 52 04.4
comp=Z,176nm,1.5s
SHPR Sheep Range 87.81 52 IAmb IAmb 00 52 04.7
comp=Z,149nm,1.5s
N32M Quiet Lake 87.85 25 IAMs_20 IAMs_20 01 29 00.9
comp=Z,4µm,19.0s
N32M Quiet Lake 87.85 25 P P 00 51 58.0 -0.4
baz=236
BMAR Burnt Mountain 87.88 17 P P 00 51 58.4 0.0
M31M Drury Creek, Y 87.92 23 P P 00 51 58.2 -0.5
baz=235
B22K Teshekpuk Lake 87.93 12 IAMs_20 IAMs_20 01 26 17.5
comp=Z,3µm,21.0s
B22K Teshekpuk Lake 87.93 12 P P 00 51 58.1 -0.4
baz=218

I28M	**Miner Creek**	**87.93**	**19**	IAMs_20	IAMs_20	01 28 02.7			
	comp=Z,3µm,19.0s								
I28M	**Miner Creek**	**87.93**	**19**	P	**P**	**00 51 58.2**	**-0.6**		
	baz=230								
H27K	**Steamboat Moun**	**87.95**	**18**	P	**P**	**00 51 58.2**	**-0.6**		
	baz=229								
E07A	**Sunnyside**	**88.00**	**41**	IAmb	IAmb	00 52 10.8			
	comp=Z,154nm,1.4s								
D24K	**Happy Valley**	**88.03**	**14**	P	**P**	**00 51 58.6**	**-0.4**		
	baz=222								
E25K	**Arctic Village**	**88.10**	**16**	P	**P**	**00 51 59.4**	**-0.1**		
	baz=225,SNR=6.1								
A21K	**Barrow**	**88.11**	**11**	P	**P**	**00 51 59.2**	**-0.1**		
	baz=214								
C23K	**Itkillik River**	**88.14**	**13**	P	**P**	**00 51 59.1**	**-0.4**		
	baz=220								
A22K	**Sinclair Lake**	**88.16**	**11**	P	**P**	**00 51 59.2**	**-0.4**		
	baz=216								
F26K	**Sheenjek River**	**88.18**	**16**	IAMs_20	IAMs_20	01 27 17.4			
	comp=Z,4µm,20.0s								
F26K	**Sheenjek River**	**88.18**	**16**	P	**P**	**00 51 59.7**	**-0.2**		
	baz=226								
LPIG	**La Paz**	**88.18**	**65**	LR	LR	01 23 37.2			
	comp=Z,843nm,21.5s,baz=254,slow=30								
G27K	**Doyon Strip**	**88.29**	**18**	P	**P**	**00 52 00.0**	**-0.4**		
	baz=229,SNR=14								
BOK	**Bokaro**	**88.31**	**295**	*e*P	**P**	**00 52 01.2**	**-0.2**		
BOK				IAmb	IAmb	00 52 21.2			
	comp=Z,328µm,29.9s								
SLBS	**Sierra La Lagu**	**88.39**	**65**	P	**P**	**00 52 03.0**	**+1.1**		
SLBS				IAmb	IAmb	00 52 08.7			
	comp=Z,158nm,1.6s								
SLBS	**Sierra La Lagu**	**88.39**	**65**	IAMs_20	IAMs_20	01 29 04.8			
	comp=Z,3µm,18.0s								
C24K	**Franklin Bluff**	**88.49**	**14**	IAMs_20	IAMs_20	01 30 24.3			
	comp=Z,4µm,20.0s								
C24K	**Franklin Bluff**	**88.49**	**14**	P	**P**	**00 52 01.1**	**-0.1**		
	baz=222								
J30M	**Hart River**	**88.60**	**21**	P	**P**	**00 52 01.5**	**-0.5**		
	baz=234								
EVN	**Everest**	**88.64**	**299**	P	**P**	**00 52 01.8**	**-1.9**		
Y14A	**Wickenburg**	**88.70**	**55**	IAmb	IAmb	00 52 08.8			
	comp=Z,106nm,1.5s								
D25K	**Kavik River**	**88.75**	**15**	P	**P**	**00 52 02.3**	**-0.2**		
	baz=224								
LNOR	**Linnton Mounta**	**88.76**	**42**	IAmb	IAmb	00 52 08.1			
	comp=Z,79nm,1.4s								
H29M	**Whitestone**	**88.92**	**19**	P	**P**	**00 52 03.6**	**+0.3**		
H29M				IAMs_20	IAMs_20	01 25 34.0			
	comp=Z,4µm,21.0s								
H29M	**Whitestone**	**88.92**	**19**	P	**P**	**00 52 02.6**	**-0.8**		
	baz=232,SNR=10.0								
I30M	**Mount Dempster**	**88.97**	**20**	P	**P**	**00 52 02.7**	**-1.1**		
	baz=234								
HSIG		**88.98**	**60**	IAmb	IAmb	00 52 10.6			
	comp=Z,160nm,1.6s								
PALK	**Pallekele**	**89.00**	**278**	IAMs_20	IAMs_20	01 33 40.5			
	comp=Z,3µm,20.0s								
PALK	**Pallekele**	**89.00**	**278**	LR	LR	01 33 22.5			
	comp=Z,3µm,19.9s,baz=113,slow=37								
TIXI	**Tiksi**	**89.05**	**348**	P	**P**	**00 52 02.3**	**-1.4**		
TIXI	**Tiksi**	**89.05**	**348**	*ce*P	**P**	**00 52 03.7**	**-0.1**		
TIXI				pmax	pmax				
	comp=Z,38nm,1.7s								
BMO	**Blue Mountains**	**89.05**	**43**	IAMs_20	IAMs_20	01 24 54.6			
	comp=Z,3µm,21.0s								
VIS	**Vishakhapatnam**	**89.05**	**288**	*e*P	**P**	**00 52 04.4**	**-0.6**		
ELK	**Elko**	**89.11**	**48**	IAmb	IAmb	00 52 10.5			
	comp=Z,245nm,1.8s								
ELK				IAMs_20	IAMs_20	01 22 55.5			
	comp=Z,3µm,22.0s								
ELK	**Elko**	**89.11**	**48**	LR	LR	01 26 53.9			
	comp=Z,2µm,18.6s,baz=251,slow=32								
ELK	**Elko**	**89.11**	**48**	P	**P**	**00 52 06.3**	**+1.2**		
GAYA	**Gaya**	**89.16**	**296**	*e*P	**P**	**00 52 04.0**	**-1.4**		
SPR3	**Spring Creek 3**	**89.22**	**50**	IAmb	IAmb	00 52 11.9			
	comp=Z,183nm,1.4s								
E27K	**Coleen River**	**89.23**	**17**	IAMs_20	IAMs_20	01 30 31.7			
	comp=Z,3µm,20.0s								
E27K	**Coleen River**	**89.23**	**17**	P	**P**	**00 52 03.9**	**-0.9**		
	baz=229								
F28M	**Old Crow**	**89.35**	**18**	P	**P**	**00 52 04.4**	**-0.9**		
	baz=230								
MMPY	**Sheldon Lake,**	**89.37**	**24**	P	**P**	**00 52 05.1**	**-0.5**		
	baz=238								
LCMT	**Little Creek M**	**89.43**	**52**	P	**P**	**00 52 07.4**	**+0.8**		
C09A	**Chrisman Ranch**	**89.46**	**40**	IAmb	IAmb	00 52 17.5			
	comp=Z,209nm,1.7s								
G29M	**Pine Creek**	**89.46**	**19**	P	**P**	**00 52 05.1**	**-0.8**		
	baz=232,SNR=7.2								
SMAI	**San Martin Ant**	**89.50**	**162**	IAmb	IAmb	00 54 37.0			
	comp=Z,86nm,1.2s								
C26K	**Camden Bay**	**89.54**	**15**	P	**P**	**00 52 05.2**	**-0.9**		
	baz=226								
EPYK	**Eagle Plains**	**89.54**	**19**	IAmb	IAmb	00 52 20.5			
	comp=Z,200nm,1.9s								
EPYK				IAMs_20	IAMs_20	01 25 30.4			
	comp=Z,4µm,22.0s								
EPYK	**Eagle Plains**	**89.54**	**19**	P	**P**	**00 52 05.2**	**-1.1**		
	baz=233,SNR=7.2								
C27K	**Jago River**	**89.64**	**15**	P	**P**	**00 52 05.5**	**-1.1**		
	baz=227								
SYO	**Syowa Base**	**89.90**	**196**	⇓ *i*P	**P**	**00 52 08.4**	**+0.4**		
SYO	**Syowa Base**	**89.90**	**196**	⇑ *ep*P	**P**	**00 52 10.7**	**+2.7**		
SYO	**Syowa Base**	**89.90**	**196**	⇑ *i*sP	P	00 52 12.3	+4.3		
LIRD	**Liard River Hi**	**89.96**	**28**	P	**P**	**00 52 07.7**	**-0.6**		
	baz=243,SNR=8.8								
H31M	**Peel River**	**90.00**	**20**	IAMs_20	IAMs_20	01 26 43.5			
	comp=Z,4µm,21.0s								
H31M	**Peel River**	**90.00**	**20**	P	**P**	**00 52 08.1**	**-0.3**		
	baz=235								
PLID	**Pearl Lake**	**90.00**	**43**	IAmb	IAmb	00 52 35.1			
	comp=Z,97nm,1.2s								
PLID				IAMs_20	IAMs_20	01 25 23.8			
	comp=Z,3µm,20.0s								
TGTN	**Hyland Airport**	**90.02**	**25**	P	**P**	**00 52 07.9**	**-0.8**		
	baz=241								
TUC	**Tucson**	**90.02**	**57**	P	**P**	**00 52 10.6**	**+1.2**		
TUC				IAmb	IAmb	00 52 16.2			
	comp=Z,153nm,1.5s								
TUC	**Tucson**	**90.02**	**57**	P	**P**	**00 52 10.6**	**+1.2**		
TUC				pmax	pmax				
	comp=Z,153nm,1.5s								
G30M	**tAoh Zraii Nji**	**90.07**	**19**	IAMs_20	IAMs_20	01 25 33.3			
	comp=Z,4µm,22.0s								
G30M	**tAoh Zraii Nji**	**90.07**	**19**	P	**P**	**00 52 07.9**	**-0.9**		
	baz=234								
E28M	**Babbage River**	**90.08**	**17**	IAMs_20	IAMs_20	01 26 59.5			
	comp=Z,4µm,21.0s								
E28M	**Babbage River**	**90.08**	**17**	P	**P**	**00 52 08.0**	**-0.7**		
	baz=231								
X16A	**Lo Mia Camp, P**	**90.08**	**55**	IAmb	IAmb	00 52 15.6			
	comp=Z,271nm,1.9s								
D27M	**Malcolm River**	**90.10**	**16**	IAMs_20	IAMs_20	01 29 09.0			
	comp=Z,4µm,20.0s								
D27M	**Malcolm River**	**90.10**	**16**	P	**P**	**00 52 08.0**	**-0.8**		
	baz=229								
TOAD	**Toad River Com**	**90.10**	**29**	P	**P**	**00 52 08.0**	**-1.0**		
	baz=243,SNR=13								
NEW	**Newport**	**90.35**	**40**	IAMs_20	IAMs_20	01 28 57.8			
	comp=Z,3µm,19.0s								
NEW	**Newport**	**90.35**	**40**	IAmb	IAmb	00 52 15.3			
	comp=Z,110nm,1.4s								
NEW	**Newport**	**90.35**	**40**	LR	LR	01 29 18.1			
	comp=Z,2µm,18.0s,baz=272,slow=33								
NEW	**Newport**	**90.35**	**40**	P	**P**	**00 52 11.2**	**+0.7**		
E29M	**Blow River**	**90.41**	**17**	P	**P**	**00 52 09.5**	**-0.8**		
	baz=232								
WUAZ	**Wupatki**	**90.44**	**54**	IAMs_20	IAMs_20	01 25 08.9			
	comp=Z,3µm,20.0s								
F30M	**Barrier River**	**90.58**	**19**	P	**P**	**00 52 10.1**	**-0.9**		
	baz=234								
HLID	**Hailey**	**90.59**	**45**	P	**P**	**00 52 12.6**	**+0.7**		
HLID				IAmb	IAmb	00 52 17.4			
	comp=Z,126nm,1.6s								
HLID				IAMs_20	IAMs_20	01 26 02.4			
	comp=Z,3µm,20.0s								
G31M	**Satah River**	**90.66**	**19**	IAMs_20	IAMs_20	01 25 39.9			
	comp=Z,5µm,22.0s								
G31M	**Satah River**	**90.66**	**19**	P	**P**	**00 52 10.0**	**-1.3**		
	baz=235								
DUG	**Dugway, Tooele**	**90.70**	**49**	IAmb	IAmb	00 52 17.9			
	comp=Z,101nm,1.4s								
DUG				IAMs_20	IAMs_20	01 25 50.6			
	comp=Z,4µm,20.0s								
D28M	**Stokes Point**	**90.76**	**17**	P	**P**	**00 52 11.0**	**-0.8**		
	baz=231								
F31M	**Tsiigehtchic**	**91.12**	**19**	IAmb	IAmb	00 52 24.9			
	comp=Z,102nm,1.6s								
F31M	**Tsiigehtchic**	**91.12**	**19**	P	**P**	**00 52 12.1**	**-1.5**		
	baz=236								
KOTAN	**Kotaneelee Air**	**91.21**	**28**	P	**P**	**00 52 12.5**	**-1.7**		
	baz=244								
VAR	**Varanasi**	**91.22**	**296**	*e*P	**P**	**00 52 14.7**	**-0.3**		
VJD	**Vijayawada**	**91.24**	**287**	*e*P	**P**	**00 52 14.6**	**-0.6**		
X18A	**Snowflake**	**91.30**	**55**	IAmb	IAmb	00 52 21.1			
	comp=Z,147nm,1.5s								
BCYI	**Bear Canyon**	**91.51**	**45**	IAmb	IAmb	00 52 22.7			
	comp=Z,126nm,1.5s								
MPU	**Maple Canyon**	**91.52**	**49**	IAmb	IAmb	00 52 22.7			
	comp=Z,181nm,1.7s								
HMU	**Henry Mountain**	**91.61**	**51**	IAmb	IAmb	00 52 22.9			
	comp=Z,99nm,1.5s								
W18A	**Petrified Fore**	**91.62**	**54**	IAmb	IAmb	00 52 43.7			
	comp=Z,91nm,1.2s								
CTU	**Camp Tracy**	**91.62**	**49**	IAmb	IAmb	00 52 22.0			
	comp=Z,131nm,1.7s								
TMUT	**Trail Mountain**	**91.63**	**50**	IAmb	IAmb	00 52 26.5			
	comp=Z,99nm,1.6s								
INK	**Inuvik**	**91.68**	**19**	P	**P**	**00 52 16.7**	**+0.6**		
INK	**Inuvik**	**91.68**	**19**	P	**P**	**00 52 16.8**	**+0.7**		
	comp=Z,6.5nm,1.1s,baz=237,slow=4.5,SNR=6.5								
INK				LR	LR	01 28 48.7			
	comp=Z,4µm,20.1s,baz=212,slow=32								
	comp=Z,6.5nm,1.1s								
INK	**Inuvik**	**91.68**	**19**	P	**P**	**00 52 14.6**	**-1.5**		
	baz=236								
JLU	**Jordanelle**	**91.82**	**49**	IAmb	IAmb	00 52 24.1			
	comp=Z,196nm,1.8s								
MSO	**Missoula**	**91.92**	**42**	IAMs_20	IAMs_20	01 31 22.5			
	comp=Z,3µm,18.0s								
TCUT	**Toone Canyon**	**91.99**	**48**	IAmb	IAmb	00 52 24.8			
	comp=Z,110nm,1.5s								
SRU	**Sa Rafael Swe**	**92.09**	**50**	IAmb	IAmb	00 52 25.1			
	comp=Z,95nm,1.8s								
BSUT	**Blindstream Ca**	**92.30**	**49**	IAmb	IAmb	00 52 29.3			
	comp=Z,79nm,1.4s								
DLMT	**Dillon**	**92.38**	**44**	P	**P**	**00 52 20.8**	**+0.7**		
DLMT				IAmb	IAmb	00 52 26.2			
	comp=Z,137nm,1.4s								
DLMT				IAMs_20	IAMs_20	01 26 52.6			
	comp=Z,3µm,20.0s								
WMQ	**Urumqi**	**92.42**	**314**	*e*P	**P**	**00 52 21.8**	**+1.6**		
WMQ				SKS	**SKSac**	**01 02 55.1**	**+2.5**		
WMQ				SS	**SS**	**01 09 37.1**	**+2.5**		
WMQ				pmax	pmax				
	comp=Z,21nm,1.3s								
WMQ				LR	LR				
	comp=Z,2µm,16.7s								
WMQ				LR	LR				
	comp=Z,1µm,16.7s								
WMQ				LR	LR				
	comp=Z,3µm,19.5s								
P18A	**Preston Nutter**	**92.44**	**50**	IAmb	IAmb	00 52 26.0			
	comp=Z,100nm,1.9s								
121A	**Cookes Peak, D**	**92.53**	**57**	IAmb	IAmb	00 52 27.7			
	comp=Z,103nm,1.4s								
PMSA	**Palmer Station**	**92.56**	**160**	LR	LR	01 31 20.7			
	comp=Z,1µm,18.1s,baz=232,slow=34								
PMSA	**Palmer Station**	**92.56**	**160**	*e*P	**P**	**00 52 21.4**	**+0.9**		
AHID	**Auburn Hatcher**	**92.67**	**47**	IAmb	IAmb	00 52 34.1			
	comp=Z,113nm,1.8s								
AHID				IAMs_20	IAMs_20	01 24 46.6			
	comp=Z,3µm,22.0s								
WRGLY	**Wrigley**	**92.80**	**25**	P	**P**	**00 52 19.6**	**-1.7**		
	baz=245								
PV05	**Paradox Valley**	**92.89**	**52**	IAmb	IAmb	00 52 38.9			
	comp=Z,82nm,1.6s								
FXWY	**Fox Creek**	**92.96**	**46**	IAMs_20	IAMs_20	01 25 12.3			
	comp=Z,3µm,21.0s								
TPAW	**Teton Pass**	**92.98**	**46**	IAmb	IAmb	00 52 28.6			
	comp=Z,117nm,1.9s								
TPAW				IAMs_20	IAMs_20	01 25 11.5			
	comp=Z,3µm,22.0s								
PV10	**Paradox Valley**	**93.02**	**51**	IAmb	IAmb	00 52 38.8			
	comp=Z,146nm,1.6s								
PV19	**Morning Glory**	**93.04**	**51**	IAmb	IAmb	00 52 29.6			
	comp=Z,70nm,1.3s								
PV17	**East Wray Mesa**	**93.05**	**51**	P	**P**	**00 52 23.3**	**-0.2**		
PV23	**Carpenter Ridg**	**93.06**	**51**	IAmb	IAmb	00 52 39.4			
	comp=Z,132nm,1.5s								
PV20	**West Nyswonger**	**93.06**	**51**	IAmb	IAmb	00 52 39.2			
	comp=Z,75nm,1.3s								
PV18	**Skein Mesa, Pa**	**93.08**	**52**	IAmb	IAmb	00 53 06.4			
	comp=Z,91nm,1.5s								
BOZ	**Bozeman (W)**	**93.09**	**44**	IAmb	IAmb	00 52 28.7			
	comp=Z,130nm,1.6s								
BOZ				IAMs_20	IAMs_20	01 27 13.6			
	comp=Z,3µm,20.0s								
PV16	**Nyswonger Mesa**	**93.09**	**51**	IAmb	IAmb	00 52 28.9			
	comp=Z,85nm,1.8s								
SNOW	**Snow King Moun**	**93.11**	**46**	IAMs_20	IAMs_20	01 25 27.1			
	comp=Z,3µm,22.0s								
PV04	**Paradox Valley**	**93.12**	**51**	IAmb	IAmb	00 52 39.6			
	comp=Z,109nm,1.6s								
PV13	**Radium Mtn., P**	**93.13**	**52**	IAmb	IAmb	00 52 29.0			
	comp=Z,83nm,1.9s								
MVCO	**Mesa Verde**	**93.13**	**53**	P	**P**	**00 52 25.3**	**+1.4**		
MVCO				IAMs_20	IAMs_20	01 27 46.1			
	comp=Z,3µm,19.0s								
PV12	**Saucer Basin,**	**93.18**	**51**	IAmb	IAmb	00 52 39.9			
	comp=Z,109nm,1.3s								
RDMU	**Red Mountain**	**93.19**	**49**	IAmb	IAmb	00 52 29.2			
	comp=Z,66nm,1.6s								
YHL	**Hebgen Lake**	**93.19**	**45**	IAmb	IAmb	00 52 29.8			
	comp=Z,54nm,1.3s								
MOOW	**Moose Ponds**	**93.19**	**46**	IAMs_20	IAMs_20	01 26 35.3			
	comp=Z,3µm,21.0s								
PV02	**Paradox Valley**	**93.20**	**52**	IAmb	IAmb	00 52 41.6			
	comp=Z,62nm,1.3s								
LOHW	**Long Hollow**	**93.25**	**46**	IAmb	IAmb	00 52 29.5			
	comp=Z,74nm,1.8s								
LOHW				IAMs_20	IAMs_20	01 25 20.9			
	comp=Z,3µm,22.0s								
FLWY	**Flagg Ranch**	**93.31**	**46**	IAmb	IAmb	00 52 31.1			
	comp=Z,64nm,1.5s								
FLWY				IAMs_20	IAMs_20	01 25 57.5			
	comp=Z,3µm,21.0s								
SBM	**South Baldy**	**93.37**	**56**	P	**P**	**00 52 25.4**	**+0.1**		
HYBB	**Hyderabad (bro**	**93.40**	**287**	*e*P	**P**	**00 52 24.4**	**-0.9**		
HYBB				*e*PcP	**PcP**	**00 52 24.8**	**-1.0**		
HYBB				*e*PP	**PP**	**00 56 08.1**	**-1.7**		
HYBB				*e*SKSac	**SKSac**	**01 02 58.5**	**-0.5**		
HYBB				*e*SKKSac	**SKKSac**	**01 03 17.4**	**-1.0**		
LKN	**LUCKNOW**	**93.44**	**297**	*e*P	**P**	**00 52 23.2**	**-2.0**		
DGAR	**Diego Garcia**	**93.53**	**262**	IAMs_20	IAMs_20	01 37 27.6			
	comp=Z,4µm,18.0s								
BW06	**Boulder Array**	**93.77**	**47**	IAMs_20	IAMs_20	01 25 09.6			
	comp=Z,3µm,22.0s								
PDAR	**Pinedale Array**	**93.77**	**47**	P	**P**	**00 52 26.5**	**-0.2**		
PDAR	**Pinedale Array**	**93.77**	**47**	P	**P**	**00 52 27.5**	**+0.8**		
	comp=Z,5.6nm,1.0s,baz=206,slow=2.4,SNR=18								
PDAR				PP	**PP**	**00 56 06.7**	**-5.7**		
	comp=Z,2.4nm,1.1s,baz=240,slow=5.0,SNR=3.8								
PDAR				PKKPbc	**PKKPdf**	**01 09 31.2**	**-0.3**		
	comp=Z,0.8nm,1.0s,baz=67,slow=3.9,SNR=4.5								
PDAR				LR	LR	01 26 40.6			
	comp=Z,967nm,21.5s,baz=274,slow=30								
	comp=Z,5.6nm,1.0s								
TROLL	**Troll, Antarti**	**93.97**	**185**	⇓P	**P**	**00 52 26.2**	**-0.8**		
	comp=Z,1nm,1.0s								
O20A	**White River Ci**	**94.06**	**50**	IAmb	IAmb	00 52 49.6			
	comp=Z,85nm,1.6s								
O20A				IAMs_20	IAMs_20	01 28 04.4			
	comp=Z,3µm,20.0s								
TASM	**ASL Pad, Albuq**	**94.18**	**55**	IAmb	IAmb	00 52 45.0			
	comp=Z,28nm,1.2s								
TASM	**ASL Pad, Albuq**	**94.18**	**55**	IAmb	IAmb	00 52 45.0			
	comp=Z,29nm,1.2s								
ANMO	**Albuquerque**	**94.19**	**55**	P	**P**	**00 52 28.5**	**-0.2**		
ANMO	**Albuquerque**	**94.19**	**55**	IAMs_20	IAMs_20	01 24 56.0			
	comp=Z,3µm,22.0s								
ANMO	**Albuquerque**	**94.19**	**55**	LR	LR	01 28 42.7			
	comp=Z,2µm,19.2s,baz=356,slow=32								
ANMO	**Albuquerque**	**94.19**	**55**	*ce*P	**P**	**00 52 30.0**	**+1.3**		
ANMO				pmax	pmax				
	comp=Z,31nm,1.4s								
DGZ	**Jazzator, Alta**	**94.24**	**320**	*i*P	**P**	**00 52 27.0**	**-1.6**		
DGZ				pmax	pmax				
	comp=Z,27nm,1.4s								
MNTX	**Cornudas Mount**	**94.31**	**59**	IAMs_20	IAMs_20	01 38 16.3			
	comp=Z,3µm,18.0s								
VHRN	**Van Horn**	**94.43**	**60**	IAmb	IAmb	00 52 36.0			
	comp=Z,70nm,1.6s								
RLMT	**Red Lodge**	**94.57**	**45**	IAMs_20	IAMs_20	01 28 30.8			
	comp=Z,3µm,20.0s								
SNAA	**Sanae**	**94.65**	**183**	⇓P	**P**	**00 52 29.2**	**-0.8**		
	comp=Z,227nm,1.1s								
SNAA	**Sanae**	**94.65**	**183**	P	**P**	**00 52 28.7**	**-1.4**		
SNAA	**Sanae**	**94.65**	**183**	P	**P**	**00 52 29.6**	**-0.4**		
	comp=Z,9.5nm,1.0s,baz=179,slow=6.3,SNR=17								
	comp=Z,9.5nm,1.0s								
SNAA	**Sanae**	**94.65**	**183**	*ce*P	**P**	**00 52 29.8**	**-0.2**		
SNAA				pmax	pmax				
	comp=Z,34nm,1.5s								
ZAIG	**Zacatecas**	**94.75**	**68**	IAmb	IAmb	00 52 38.7			
	comp=Z,90nm,1.9s								
KAAM	**Kaadhehdhoo**	**94.89**	**269**	IAMs_20	IAMs_20	01 29 17.3			
	comp=Z,3µm,20.0s								
EGMT	**Eagleton**	**94.98**	**42**	IAmb	IAmb	00 52 36.9			
	comp=Z,111nm,1.7s								
C36M	**Paulatuk**	**95.18**	**19**	IAMs_20	IAMs_20	01 29 31.4			
	comp=Z,3µm,20.0s								
C36M	**Paulatuk**	**95.18**	**19**	P	**P**	**00 52 31.0**	**-1.2**		
	baz=245								
TX31	**Lajitas Ar. Si**	**95.22**	**61**	IAmb	IAmb	00 52 39.8			
	comp=Z,95nm,1.7s								
TXAR	**Lajitas Array**	**95.22**	**61**	P	**P**	**00 52 34.0**	**+0.5**		
	comp=Z,3.1nm,1.1s,baz=234,slow=4.2,SNR=18								
TXAR				PP	**PP**	**00 56 25.4**	**+1.5**		
	comp=Z,1.7nm,1.1s,baz=260,slow=6.0,SNR=4.8								
TXAR				LR	LR	01 29 08.8			
	comp=Z,1µm,19.3s,baz=274,slow=32								
	comp=Z,3.1nm,1.1s								
VNA3	**Neumayer Olymp**	**95.29**	**181**	⇓P	**P**	**00 52 31.7**	**-1.2**		
	comp=Z,10nm,0.7s								
ZSN	**Zaisan**	**95.30**	**317**	*e*P	**P**	**00 52 32.5**	**-0.9**		
	comp=Z,26nm,1.7s								
ZSN				*e*PP	**PP**	**00 56 22.0**	**-1.9**		
ZSN	**Zaisan**	**95.30**	**317**	*e*P	**P**	**00 52 32.4**	**-0.9**		
ZSN				*e*		00 56 22.0			
ZSN				pmax	pmax				
	comp=Z,26nm,1.7s								
VNA2	**Neumayer--Watz**	**95.56**	**182**	⇓P	**P**	**00 52 32.4**	**-1.8**		
	comp=Z,9.1nm,0.7s,baz=163,slow=4.8								
SDCO	**Great Sand Dun**	**95.58**	**53**	IAMs_20	IAMs_20	01 29 16.7			
	comp=Z,3µm,20.0s								
VNA1	**Neumayer--Stat**	**95.86**	**181**	⇑P	**P**	**00 52 34.3**	**-1.2**		
	comp=Z,12nm,1.1s								
ISCO	**Idaho Springs**	**95.94**	**51**	IAMs_20	IAMs_20	01 28 19.4			
	comp=Z,3µm,21.0s								
ISCO	**Idaho Springs**	**95.94**	**51**	P	**P**	**00 52 38.6**	**+1.8**		
A36M	**Sachs Harbour**	**95.97**	**17**	IAMs_20	IAMs_20	01 29 22.2			
	comp=Z,4µm,22.0s								
A36M	**Sachs Harbour**	**95.97**	**17**	P	**P**	**00 52 34.2**	**-1.5**		
	baz=244								
HMDM	**Hanimaadhoo**	**96.14**	**275**	IAMs_20	IAMs_20	01 36 31.8			
	comp=Z,2µm,19.0s								
YKA	**Yellowknife Ar**	**96.31**	**27**	P	**P**	**00 52 35.9**	**-1.6**		
YKA	**Yellowknife Ar**	**96.31**	**27**	P	**P**	**00 52 36.8**	**-0.8**		
	comp=Z,10nm,0.9s,baz=261,slow=5.2,SNR=16								
YKA				LR	LR	01 28 52.2			
	comp=Z,2µm,21.5s,baz=258,slow=31								
	comp=Z,10nm,0.9s								
YKAW3	**Yellowknife Wh**	**96.33**	**27**	IAmb	IAmb	00 52 41.1			
	comp=Z,70nm,1.4s								
YKAW1	**Yellowknife Wh**	**96.36**	**27**	IAmb	IAmb	00 52 41.3			
	comp=Z,50nm,1.3s								
MK31	**Makanchi Array**	**96.86**	**316**	*e*P	**P**	**00 52 39.4**	**-1.0**		
MKAR	**Makanchi Array**	**96.86**	**316**	P	**P**	**00 52 39.2**	**-1.2**		
MKAR	**Makanchi Array**	**96.86**	**316**	P	**P**	**00 52 39.4**	**-1.0**		
	comp=Z,3.2nm,0.7s,baz=92,slow=6.6,SNR=22								
MKAR				PP	**PP**	**00 56 33.7**	**-2.3**		
	comp=Z,4.2nm,1.1s,baz=100,slow=6.6,SNR=4.3								
MKAR				PKKPbc	**PKKPbc**	**01 09 22.4**	**-1.4**		
	comp=Z,0.7nm,0.8s,baz=241,slow=1.2,SNR=3.5								
	comp=Z,3.2nm,0.7s								
ZALV	**Zalesovo Beam**	**96.90**	**324**	P	**P**	**00 52 38.5**	**-1.9**		
ZALV	**Zalesovo Beam**	**96.90**	**324**	P	**P**	**00 52 39.9**	**-0.5**		
	comp=Z,3.0nm,1.0s,baz=106,slow=4.8,SNR=14								
	comp=Z,3.0nm,1.0s								
MSTX	**Muleshoe**	**96.94**	**57**	IAMs_20	IAMs_20	01 41 53.1			
	comp=Z,2µm,18.0s								
MAKZ	**Makanchi**	**97.07**	**316**	P	**P**	**00 52 41.1**	**-0.3**		
MAKZ				IAmb	IAmb	00 53 01.9			
	comp=Z,42nm,1.2s								

OK029	**Liberty Lake**	**101.57**	**56**	IAMs_20	IAMs_20	01 41 00.4			
	comp=Z,3µm,18.0s								
AAK	**Ala-Archa**	**101.60**	**311**	*i* P	**Pdif**	**00 53 01.5**	**-0.4**		
AAK				pmax	pmax				
	comp=Z,3.0nm,0.9s								
SGDS	**Sogindy**	**101.61**	**312**	*e*P	**Pdif**	**00 53 00.5**	**-1.4**		
HKT	**Hockley**	**102.03**	**62**	IAMs_20	IAMs_20	01 37 51.0			
	comp=Z,3µm,19.0s								
LR04	**Corral**	**102.06**	**136**	IAMs_20	IAMs_20	01 28 53.5			
	comp=Z,3µm,20.0s								
OK048	**Pawnee Station**	**102.06**	**55**	IAMs_20	IAMs_20	01 33 08.6			
	comp=Z,2µm,21.0s								
OK051	**E0350 and S346**	**102.16**	**55**	IAMs_20	IAMs_20	01 41 27.2			
	comp=Z,3µm,18.0s								
T35A	**Sooner Cattle**	**102.48**	**55**	IAMs_20	IAMs_20	01 41 36.5			
	comp=Z,2µm,19.0s								
KSU1	**Kansas State U**	**102.69**	**53**	IAMs_20	IAMs_20	01 34 45.9			
	comp=Z,3µm,20.0s								
LR05	**Currie**	**102.84**	**137**	IAMs_20	IAMs_20	01 29 05.8			
	comp=Z,2µm,21.0s								
LR03	**Panguipulli**	**102.91**	**137**	IAMs_20	IAMs_20	01 28 31.9			
	comp=Z,3µm,21.0s								
TUL3	**Leonard**	**102.92**	**56**	IAMs_20	IAMs_20	01 45 21.3			
	comp=Z,2µm,18.0s								
L34A	**Svendsen Farm,**	**103.21**	**50**	IAMs_20	IAMs_20	01 35 56.6			
	comp=Z,3µm,19.0s								
Z38A	**Mt. Pleasant**	**103.23**	**59**	IAMs_20	IAMs_20	01 34 13.5			
	comp=Z,3µm,20.0s								
ECSD	**EROS Data Cent**	**103.23**	**48**	IAMs_20	IAMs_20	01 37 15.1			
	comp=Z,2µm,18.0s								
NATX	**Nacogdoches**	**103.30**	**60**	IAMs_20	IAMs_20	01 33 37.4			
	comp=Z,2µm,19.0s								
PLCA	**Paso Flores**	**103.53**	**138**	*e*P	**Pdif**	**00 53 11.5**	**+0.9**		
BRZS	**Berezniki**	**103.67**	**319**	*e*Pdif	**Pdif**	**00 53 09.6**	**-1.2**		
BRZS	**Berezniki**	**103.67**	**319**	*i* P	**Pdif**	**00 53 09.6**	**-1.2**		
F33A	**5 Mile Ranch,**	**103.67**	**46**	IAMs_20	IAMs_20	01 33 53.7			
	comp=Z,3µm,21.0s								
BI05	**Punta Hualpn**	**103.75**	**134**	IAMs_20	IAMs_20	01 29 04.4			
	comp=Z,2µm,22.0s								
U38A	**Gravette**	**104.11**	**55**	IAMs_20	IAMs_20	01 43 02.9			
	comp=Z,2µm,18.0s								
AGMN	**Agassiz Nation**	**104.19**	**43**	IAMs_20	IAMs_20	01 33 47.1			
	comp=Z,2µm,21.0s								
IUG	**luzhnay**	**104.83**	**310**	*e*Pdif	**Pdif**	**00 53 14.6**	**-1.7**		
IUG	**luzhnay**	**104.83**	**310**	*i* P	**Pdif**	**00 53 14.5**	**-1.7**		
P38A	**Dawn**	**105.11**	**52**	IAMs_20	IAMs_20	01 34 32.2			
	comp=Z,3µm,21.0s								
BI02	**San Fabin de**	**105.13**	**134**	IAMs_20	IAMs_20	01 29 59.9			
	comp=Z,2µm,20.0s								
BVAR	**Borovoye Array**	**105.30**	**322**	Pdiff	**Pdif**	**00 53 17.7**	**-0.2**		
	comp=Z,0.8nm,0.7s,baz=74,slow=2.2,SNR=4.4								
BVAR				PKiKP	**PKiKP**	**00 57 31.8**	**-0.1**		
	comp=Z,5.2nm,1.2s,baz=75,slow=1.6,SNR=4.6								
N38A	**Joes South For**	**105.44**	**51**	IAMs_20	IAMs_20	01 36 09.9			
	comp=Z,3µm,20.0s								
I37A	**Lemond, Waseca**	**105.57**	**48**	IAMs_20	IAMs_20	01 33 13.0			
	comp=Z,2µm,22.0s								
R40A	**Maddies Statio**	**105.98**	**54**	IAMs_20	IAMs_20	01 35 02.1			
	comp=Z,3µm,20.0s								
SPMN	**Marine on St.**	**106.07**	**47**	IAMs_20	IAMs_20	01 33 48.2			
	comp=Z,3µm,21.0s								
BO01	**Tunca**	**106.39**	**132**	IAMs_20	IAMs_20	01 31 24.0			
	comp=Z,3µm,21.0s								
CCM	**Cathedral Cave**	**106.76**	**54**	IAMs_20	IAMs_20	01 33 52.2			
	comp=Z,2µm,21.0s								
BO04	**La Punta**	**106.93**	**132**	IAMs_20	IAMs_20	01 31 51.4			
	comp=Z,2µm,18.0s								
E38A	**The Farm, Brul**	**107.01**	**45**	IAMs_20	IAMs_20	01 35 37.0			
	comp=Z,3µm,20.0s								
EYMN	**Ely**	**107.09**	**44**	IAMs_20	IAMs_20	01 36 31.1			
	comp=Z,2µm,20.0s								
MT05	**Renca**	**107.14**	**132**	IAMs_20	IAMs_20	01 30 05.9			
	comp=Z,3µm,21.0s								
JFWS	**Jewell Farm**	**107.80**	**49**	IAMs_20	IAMs_20	01 38 04.4			
	comp=Z,3µm,20.0s								
Y45A	**Yeager Farm, C**	**107.81**	**59**	IAMs_20	IAMs_20	01 34 49.1			
	comp=Z,2µm,22.0s								
P43A	**Skaggs, Pawnee**	**108.21**	**53**	IAMs_20	IAMs_20	01 33 58.3			
	comp=Z,3µm,22.0s								
S44A	**Carbondale**	**108.31**	**55**	IAMs_20	IAMs_20	01 34 17.1			
	comp=Z,3µm,22.0s								
T45A	**Paducah**	**108.76**	**55**	IAMs_20	IAMs_20	01 46 38.0			
	comp=Z,2µm,18.0s								
I42A	**Draeger Farm,**	**108.80**	**48**	IAMs_20	IAMs_20	01 34 40.7			
	comp=Z,2µm,22.0s								
F42A	**Maple Grove Fa**	**109.37**	**46**	IAMs_20	IAMs_20	01 35 13.6			
	comp=Z,2µm,21.0s								
L44A	**Lake County Fo**	**109.51**	**50**	IAMs_20	IAMs_20	01 35 15.5			
	comp=Z,3µm,22.0s								
H43A	**Windswept, Lux**	**109.63**	**47**	IAMs_20	IAMs_20	01 37 18.6			
	comp=Z,2µm,20.0s								
T47A	**Sharon Grove**	**109.99**	**55**	IAMs_20	IAMs_20	01 38 05.6			
	comp=Z,3µm,20.0s								
TRQA	**Tornquist**	**110.51**	**140**	IAMs_20	IAMs_20	01 34 09.9			
	comp=Z,2µm,21.0s								
TRQA	**Tornquist**	**110.51**	**140**	*e*P	**Pdif**	**00 53 42.6**	**+1.1**		
WCI	**Wyandotte Cave**	**110.67**	**54**	IAMs_20	IAMs_20	01 36 12.6			
	comp=Z,3µm,21.0s								
L46A	**Eue Claire**	**110.71**	**50**	IAMs_20	IAMs_20	01 36 13.4			
	comp=Z,3µm,22.0s								
I45A	**Fountain**	**110.74**	**48**	IAMs_20	IAMs_20	01 38 16.9			
	comp=Z,2µm,21.0s								
U49A	**Red Boiling Sp**	**111.03**	**56**	IAMs_20	IAMs_20	01 38 29.4			
	comp=Z,3µm,21.0s								
P48A	**Milroy**	**111.37**	**53**	IAMs_20	IAMs_20	01 36 20.9			
	comp=Z,2µm,21.0s								
AC02	**Maricunga**	**111.55**	**126**	IAMs_20	IAMs_20	01 33 39.5			
	comp=Z,3µm,20.0s								
R49A	**Shelbyville**	**111.56**	**54**	IAMs_20	IAMs_20	01 37 43.0			
	comp=Z,3µm,21.0s								
E46A	**Sault Ste Mari**	**112.02**	**45**	IAMs_20	IAMs_20	01 36 44.6			
	comp=Z,2µm,20.0s								
AAM	**Ann Arbor**	**112.67**	**50**	IAMs_20	IAMs_20	01 40 49.1			
	comp=Z,2µm,19.0s								
S51A	**Beattyville**	**112.80**	**55**	IAMs_20	IAMs_20	01 37 18.0			
	comp=Z,3µm,22.0s								
Q51A	**Peebles**	**112.98**	**53**	IAMs_20	IAMs_20	01 42 12.8			
	comp=Z,2µm,19.0s								
M50A	**Fremont**	**113.16**	**51**	IAMs_20	IAMs_20	01 42 18.2			
	comp=Z,3µm,19.0s								
K50A	**Casco**	**113.41**	**49**	IAMs_20	IAMs_20	01 48 37.7			
	comp=Z,3µm,18.0s								
V53A	**Saluda**	**113.42**	**57**	IAMs_20	IAMs_20	01 36 17.7			
	comp=Z,2µm,22.0s								
U54A	**Nelsons Funny**	**114.22**	**56**	IAMs_20	IAMs_20	01 40 26.8			
	comp=Z,2µm,20.0s								
PB11	**IPOC Station P**	**114.34**	**119**	IAMs_20	IAMs_20	01 35 10.8			
	comp=Z,2µm,21.0s								
M52A	**Chesterland**	**114.42**	**50**	IAMs_20	IAMs_20	01 52 30.5			
	comp=Z,2µm,18.0s								
S54A	**Dingess, Beckl**	**114.61**	**55**	IAMs_20	IAMs_20	01 43 34.8			
	comp=Z,2µm,20.0s								
KMSC	**Kings Mountain**	**114.63**	**57**	IAMs_20	IAMs_20	01 42 05.7			
	comp=Z,2µm,20.0s								
V55A	**Taylorsville**	**114.72**	**57**	IAMs_20	IAMs_20	01 40 34.0			
	comp=Z,3µm,21.0s								
GO01	**Chusmiza**	**114.78**	**119**	IAMs_20	IAMs_20	01 33 52.2			
	comp=Z,2µm,20.0s								
BLA	**Blacksburg**	**115.33**	**55**	IAMs_20	IAMs_20	01 41 39.1			
	comp=Z,2µm,20.0s								
ERPA	**Erie**	**115.40**	**50**	IAMs_20	IAMs_20	01 42 11.4			
	comp=Z,2µm,20.0s								
Q56A	**Snyder Ridge,**	**116.22**	**53**	IAMs_20	IAMs_20	01 39 33.4			
	comp=Z,3µm,22.0s								
T57A	**Hurt**	**116.27**	**55**	IAMs_20	IAMs_20	01 43 07.0			
	comp=Z,2µm,20.0s								
S57A	**Dark Hollow, R**	**116.47**	**55**	IAMs_20	IAMs_20	01 39 31.3			
	comp=Z,2µm,22.0s								
LPAZ	**La Paz**	**117.14**	**116**		**PKPdf**	**00 57 54.3**	**-1.8**		
LPAZ	**La Paz**	**117.14**	**116**	PKP	**PKPdf**	**00 57 55.4**	**-0.7**		
LPAZ	comp=Z,1.1nm,0.5s,baz=252,slow=3.2,SNR=5.9			PKKPbc	**PKKPbc**	**01 08 19.2**	**-1.1**		
	comp=Z,1.0nm,0.7s,baz=34,slow=11,SNR=3.7								
LPAZ	**La Paz**	**117.14**	**116**	*e*P	**PKPdf**	**00 57 56.2**	**0.0**		
R58B	**Mineral**	**117.31**	**54**	IAMs_20	IAMs_20	01 53 25.4			
	comp=Z,2µm,18.0s								
M57A	**Sunshine Farm,**	**117.60**	**50**	IAMs_20	IAMs_20	01 39 55.8			
	comp=Z,3µm,22.0s								
T59A	**Double "B" Far**	**117.63**	**55**	IAMs_20	IAMs_20	01 44 04.8			
	comp=Z,2µm,20.0s								
N58A	**Sunbury**	**117.96**	**51**	IAMs_20	IAMs_20	01 47 12.4			
	comp=Z,2µm,18.0s								
LVZ	**Lovozero**	**117.98**	**342**	IAMs_20	IAMs_20	01 53 11.7			
	comp=Z,2µm,19.0s								
J57A	**Williamstown**	**118.18**	**48**	IAMs_20	IAMs_20	01 44 30.9			
	comp=Z,2µm,19.0s								
KEV	**Kevo**	**118.85**	**345**	IAMs_20	IAMs_20	01 49 01.5			
	comp=Z,2µm,22.0s								
L59A	**Walton**	**119.05**	**49**	IAMs_20	IAMs_20	01 41 09.9			
	comp=Z,3µm,20.0s								
BELG	**Belogornoye**	**119.06**	**323**	PKP	**PKPdf**	**00 57 57.1**	**-0.8**		
	comp=Z,15nm,1.0s,baz=139,slow=1.6,SNR=4.9								
S61A	**Accomac**	**119.08**	**54**	IAMs_20	IAMs_20	01 42 46.1			
	comp=Z,2µm,21.0s								
ARCES	**ARCESS Array B**	**119.37**	**346**	PKP	**PKPdf**	**00 57 56.6**	**-1.5**		
	comp=Z,3.1nm,0.7s,baz=37,slow=3.1,SNR=12								
KLMR	**Klimovskoe**	**120.01**	**334**	*e*PKIKP	**PKPdf**	**00 57 57.1**	**-2.4**		
KLMR				*e*		00 59 21.6			
KLMR				pmax	pmax				
	comp=Z,26nm,1.5s								
KLMR				MLR	MLR				
	comp=Z,2µm,20.0s								
PAL	**Palisades**	**120.05**	**50**	IAMs_20	IAMs_20	01 42 07.7			
	comp=Z,3µm,22.0s								
N62A	**Caumsett State**	**120.39**	**50**	IAMs_20	IAMs_20	01 42 05.7			
	comp=Z,3µm,22.0s								
WSPT	**Westport, CT**	**120.46**	**50**	IAMs_20	IAMs_20	01 41 55.5			
	comp=Z,3µm,22.0s								
MAK	**Makhachkala**	**121.36**	**312**	*c i*P	**Pdif**	**00 54 20.6**	**-8.9**		
MAK				*e*PPP	PPP	01 02 04.6			
MAK				*e*SS	SS	01 16 05.9	-1.3		
MAK				pmax	pmax				
	comp=Z,735nm,1.5s								
M63A	**Gales Ferry**	**121.38**	**50**	IAMs_20	IAMs_20	01 43 04.7			
	comp=Z,2µm,21.0s								
H62A	**Milan**	**121.42**	**46**	IAMs_20	IAMs_20	01 42 47.3			
	comp=Z,3µm,21.0s								
I63A	**Otisfield**	**121.93**	**46**	IAMs_20	IAMs_20	01 48 13.0			
	comp=Z,2µm,20.0s								
SDV	**Santo Domingo**	**122.50**	**88**	*e*P	**PKPdf**	**00 58 04.2**	**-1.8**		
VRH	**Novokhopyorsk**	**122.92**	**323**	*e*PKIKP	**PKPdf**	**00 58 04.4**	**-1.0**		
VRH				pmax	pmax				
	comp=Z,14nm,0.8s								
MURT	**Porto Murtinho**	**123.20**	**128**	*e*P	**PKiKP**	**00 58 07.5**	**+0.4**		
MOS	**Moscow**	**123.30**	**329**	*i* PKIKP	**PKPdf**	**00 58 04.7**	**-1.3**		
MOS				*e*		00 59 47.4			
MOS				MLR	MLR				
	comp=Z,2µm,20.0s								
G65A	**Princeton**	**123.74**	**44**	IAMs_20	IAMs_20	01 51 50.8			
	comp=Z,2µm,20.0s								
GNI	**Garni**	**123.94**	**309**	PKP	**PKPdf**	**00 58 08.0**	**0.0**		
	comp=Z,2.5nm,0.6s,baz=59,slow=5.9,SNR=4.0								
GNI	**Garni**	**123.94**	**309**	PKIKP	**PKPdf**	**00 58 08.0**	**0.0**		
LPSR	**Galich'ya Gora**	**123.98**	**325**	*e*PKIKP	**PKiKP**	**00 58 07.5**	**-0.2**		
LPSR				pmax	pmax				
	comp=Z,23nm,1.0s								
GOF	**Gofitskoye**	**124.01**	**315**	*ce*PKIKP	PKiKP	00 58 18.5	+11		
OBN	**Obninsk**	**124.12**	**329**	PKPdf	**PKPdf**	**00 58 06.7**	**-0.8**		
OBN				IAMs_20	IAMs_20	01 57 42.1			
	comp=Z,2µm,19.0s								
OBN	**Obninsk**	**124.12**	**329**	PKP	**PKiKP**	**00 58 08.3**	**+0.5**		
	comp=Z,7.0nm,0.4s,baz=153,slow=6.8,SNR=3.8								
OBN	**Obninsk**	**124.12**	**329**	*e*PKIKP	**PKiKP**	**00 58 07.8**	**0.0**		
OBN				*e*		00 59 50.9			
OBN				*e*PPP	PPP	01 02 29.6			
OBN				pmax	pmax				
	comp=Z,10.0nm,1.0s								
VSR	**Storozhevoye**	**124.40**	**324**	*e*PKIKP	**PKPdf**	**00 58 06.4**	**-1.9**		
VSR				pmax	pmax				
	comp=Z,7.0nm,1.0s								
BDQN	**Bodoquena, MS**	**124.54**	**127**	*e*P	**PKPdf**	**00 58 09.2**	**-0.3**		
KIV	**Kislovodsk**	**124.55**	**314**	*i* PKIKP	**PKPdf**	**00 58 07.3**	**-1.6**		
KIV				*e*		00 59 53.9			
KIV				*e*SS	SS	01 16 47.0	-0.9		
KIV				pmax	pmax				
	comp=Z,7.0nm,1.0s								
KIV				MLR	MLR				
	comp=Z,1µm,23.0s								
BOSA	**Boshof**	**124.59**	**220**	PKP	**PKPdf**	**00 58 08.9**	**-0.6**		
	comp=Z,6.2nm,1.2s,baz=225,slow=4.3,SNR=3.2								
RAYN	**Ar Rayn**	**124.84**	**289**	PKPdf	**PKPdf**	**00 58 08.5**	**-1.5**		
RAYN	**Ar Rayn**	**124.84**	**289**	||PKIKP	**PKiKP**	**00 58 10.4**	**+0.1**		
FINES	**FINESS Array B**	**124.96**	**339**	PKPdf	**PKPdf**	**00 58 07.2**	**-1.8**		
FINES	**FINESS Array B**	**124.96**	**339**	PKP	**PKPdf**	**00 58 08.1**	**-0.9**		
	comp=Z,6.4nm,0.9s,baz=76,slow=4.4,SNR=5.4								
TEFE	**Tefe**	**125.16**	**104**	*e*P	**PKPdf**	**00 58 10.8**	**0.0**		
PTLB	**Pontes e Lacer**	**125.22**	**120**	PKPdf	**PKPdf**	**00 58 10.3**	**-0.5**		
PTLB	**Pontes e Lacer**	**125.22**	**120**	*e*P	**PKPdf**	**00 58 10.8**	**0.0**		
AQDB	**Aquidauana**	**125.33**	**128**	*e*P	**PKiKP**	**00 58 12.5**	**+1.1**		
VILB	**Vilhena**	**125.49**	**117**	*e*P	**PKPdf**	**00 58 11.3**	**-0.1**		
ATD	**Arta Tunnel**	**126.43**	**274**	IAMs_20	IAMs_20	01 52 22.3			
	comp=Z,2µm,20.0s								
PP1B	**Ponte de Pedra**	**127.58**	**125**	*e*P	**PKPdf**	**00 58 15.6**	**+0.2**		
SALV	**Santo Antonio**	**127.84**	**123**	*e*P	**PKPdf**	**00 58 16.0**	**+0.1**		
ANN	**Anapa**	**127.88**	**317**	*i* PKIKP	**PKPdf**	**00 58 15.2**	**+0.1**		
ANN				*e*PP	**PKiKP**	**00 58 19.5**	**+3.8**		
ANN				*e*		01 05 24.0			
ANN				pmax	pmax				
	comp=Z,52nm,1.1s								
SJG	**San Juan**	**127.96**	**78**	PKP	**PKPdf**	**00 58 16.0**	**0.0**		
	comp=Z,16nm,0.9s,baz=320,slow=3.3,SNR=4.4								
FRTB	**Fartura**	**128.07**	**135**	*e*P	**PKiKP**	**00 58 16.8**	**0.0**		
C2SB	**Chapadao do Su**	**128.52**	**128**	*e*P	**PKPdf**	**00 58 16.8**	**-0.3**		
MNK	**Minsk**	**128.69**	**331**	*i* PKIKP	**PKPdf**	**00 58 15.9**	**-0.4**		
MNK				*i*		01 00 24.6			
MNK				*i* PPP	PPP	01 03 07.7			
MNK				*i*		01 05 24.4			
MNK				*i* PS	**PS**	**01 10 30.2**	**-0.6**		
MNK				*i* SSS	SSS	01 22 26.8			
MNK				pmax	pmax				
	comp=N,18nm,1.2s								
MNK				pmax	pmax				
	comp=Z,9.0nm,1.1s								
MNK				pmax	pmax				
	comp=E,10.0nm,1.0s								
MNK				MLR	MLR				
	comp=N,1µm,20.0s								
MNK				MLR	MLR				
	comp=Z,2µm,17.0s								
MNK				MLR	MLR				
	comp=E,1µm,21.0s								
SPB	**Sao Paulo**	**129.35**	**137**	IAMs_20	IAMs_20	01 45 42.1			
	comp=Z,2µm,22.0s								
NB2	**NORSAR Subarra**	**129.75**	**345**	PKPdf	**PKPdf**	**00 58 18.1**	**-0.2**		
	comp=Z,5.7nm,1.7s,baz=39,slow=1.9								
NOA	**NORSAR Array B**	**129.75**	**345**	PKP	**PKPdf**	**00 58 18.0**	**-0.2**		
	comp=Z,1.6nm,0.8s,baz=34,slow=2.0,SNR=4.4								
NOA	**NORSAR Array B**	**129.75**	**345**	PKIKP	**PKPdf**	**00 58 18.0**	**-0.2**		
FURI	**Furi**	**130.06**	**270**	IAMs_20	IAMs_20	01 49 35.3			
	comp=Z,2µm,21.0s								
AKASG	**Malin Array Be**	**130.19**	**327**	PKP	**PKPdf**	**00 58 18.8**	**-0.5**		
	comp=Z,0.6nm,0.5s,baz=49,slow=2.1,SNR=8.0								
AKBB	**Malin Array Si**	**130.19**	**327**	*i* PKIKP	**PKPdf**	**00 58 17.3**	**-2.0**		
KIEV	**Kiev**	**130.20**	**327**	PKPdf	**PKPdf**	**00 58 19.3**	**0.0**		
KIEV	**Kiev**	**130.20**	**327**	PKIKP	**PKPdf**	**00 58 19.3**	**0.0**		
CLDB	**Colider**	**130.26**	**117**	*e*P	**PKPdf**	**00 58 20.6**	**0.0**		
SUW	**Suwalki**	**131.13**	**333**	*e*P	PKiKP	00 58 29.3	+7.4		
SUW	**Suwalki**	**131.13**	**333**	IAMs_20	IAMs_20	01 57 25.3			
	comp=Z,2µm,21.0s								
ASF	**Jabal al Asfar**	**131.70**	**301**	PKP	**PKPdf**	**00 58 23.0**	**+0.1**		
	comp=Z,1.1nm,0.5s,baz=90,slow=2.0,SNR=3.6								
ASF				PP	**PP**	**01 00 45.6**	**+2.5**		
	comp=Z,1.0nm,0.6s,baz=326,slow=2.9,SNR=4.5								
KIRS	**Kirsehir-Merke**	**132.27**	**311**	||P	**PKPdf**	**00 58 22.3**	**-1.5**		
BRTR	**Keskin Array B**	**132.27**	**312**	PKP	**PKPdf**	**00 58 23.4**	**-0.4**		
	comp=Z,1.5nm,1.0s,baz=100,slow=5.1,SNR=5.9								
NPGB	**Novo Progresso**	**132.38**	**113**	*e*P	**PKPdf**	**00 58 24.8**	**+0.2**		
MILM	**Milestii Mici**	**132.41**	**323**	*e*PKP	**PKPdf**	**00 58 23.0**	**-0.6**		
MILM				*e*L	L	01 42 17.0			
MILM				LRM	MLR	01 59 55.0			
	comp=Z,1µm,18.5s								
IPMB	**Ipameri, GO**	**132.48**	**130**	*e*P	**PKiKP**	**00 58 25.7**	**-0.2**		
ITTB	**Itaituba**	**133.13**	**109**	*e*P	**PKPdf**	**00 58 26.5**	**+0.5**		
PMNB	**Patos De Minas**	**133.42**	**133**	*e*P	**PKPdf**	**00 58 26.9**	**+0.4**		
QNGWA	**Qangwa**	**133.52**	**226**	PKPdf	**PKPdf**	**00 58 24.6**	**-2.2**		
SNDB	**Serra Nova Dou**	**133.53**	**121**	*e*P	**PKPdf**	**00 58 27.4**	**+0.6**		
EIL	**Elat**	**133.79**	**298**	PKP	**PKPdf**	**00 58 27.1**	**+0.2**		
	comp=Z,9.8nm,1.0s,baz=327,slow=3.6,SNR=5.1								
TIRR	**Tirgusor**	**133.87**	**320**	IAMs_20	IAMs_20	02 02 52.4			
	comp=Z,2µm,20.0s								
CSS	**Mathiatis**	**133.97**	**306**	IAMs_20	IAMs_20	02 01 42.0			
	comp=Z,2µm,22.0s								
KWP	**Kalwaria Pacla**	**134.21**	**329**	*e*P	**PKiKP**	**00 58 31.5**	**+3.1**		
KWP				*e*PP	**PP**	**01 01 02.8**	**+4.9**		
MLR	**Muntele Rosu**	**134.85**	**322**	IAMs_20	IAMs_20	02 00 16.2			
	comp=Z,2µm,22.0s								
MLR	**Muntele Rosu**	**134.85**	**322**	PKP	**PKPdf**	**00 58 28.2**	**-0.3**		
	comp=Z,1.7nm,0.8s,baz=135,slow=7.1,SNR=3.1								
BMR	**Baia Mare**	**135.00**	**326**	||P	**PKPdf**	**00 58 27.4**	**-1.1**		
BMR	**Baia Mare**	**135.00**	**326**	||PKIKP	**PKPdf**	**00 58 27.4**	**-1.1**		
OJC	**Ojcow**	**135.24**	**331**	*e*P	**PKPdf**	**00 58 26.4**	**-2.5**		
OJC				*e*PP	**PP**	**01 01 04.9**	**+0.6**		
NIE	**Niedzica**	**135.54**	**330**	*e*P	**PKiKP**	**00 58 31.1**	**0.0**		
NIE				*e*PP	**PP**	**01 01 10.2**	**+3.9**		
ARR	**Arges**	**135.70**	**323**	||P	**PKPdf**	**00 58 30.3**	**+0.3**		
LANS	**Liptovska Anna**	**136.12**	**330**	*e*PKIKP	**PKiKP**	**00 58 32.5**	**+0.2**		
LANS	**Liptovska Anna**	**136.12**	**330**	*e*PKP	**PKiKP**	**00 58 32.5**	**+0.2**		
ELND	**Elena**	**136.23**	**319**	||P	**PKPdf**	**00 58 31.7**	**+0.8**		
OKC	**Ostrava-Krasne**	**136.27**	**332**	AMS	AMS	01 55 00.0			
	comp=Z,2µm,25.5s								
MORC	**Moravsky Berou**	**136.59**	**332**	*e*PKP	**PKPdf**	**00 58 31.9**	**+0.4**		
MORC				*e*		01 01 15.6			
OSTC	**Ostas**	**136.60**	**334**	*e*PKIKP	**PKPdf**	**00 58 31.8**	**+0.4**		
OSTC				MLR	MLR				
	comp=Z,2µm,21.5s								
OSTC	**Ostas**	**136.60**	**334**	*e*PKPDF	**PKPdf**	**00 58 31.8**	**+0.4**		
OSTC				AMS	AMS	01 58 10.0			
	comp=Z,2µm,21.5s								
CHVC	**Chvalec**	**136.65**	**334**	AMS	AMS	01 58 20.0			
	comp=Z,2µm,23.4s								
DPC	**Dobruska-Polom**	**136.71**	**334**	AMS	AMS	01 58 20.0			
	comp=Z,2µm,22.0s								
KRLC	**Kraliky**	**136.71**	**333**	AMS	AMS	01 56 00.0			
	comp=Z,2µm,24.9s								
UPC	**Upice**	**136.72**	**334**	AMS	AMS	01 57 50.0			
	comp=Z,2µm,28.1s								
PSZ	**Piszkesteto**	**136.74**	**329**	IAMs_20	IAMs_20	01 58 01.8			
	comp=Z,2µm,22.0s								
GZR	**Gura Zlata**	**136.76**	**324**	||P	**PKiKP**	**00 58 37.1**	**+3.4**		
GZR	**Gura Zlata**	**136.76**	**324**	||PKIKP	**PKiKP**	**00 58 37.1**	**+3.4**		
PLVB	**Pleven**	**136.78**	**320**	||P	PKiKP	00 58 41.0	+7.3		
JAVC	**Velka Javorina**	**137.18**	**331**	*e*PKP	**PKiKP**	**00 58 34.3**	**-0.2**		
BZS	**Buzias**	**137.28**	**325**	||P	**PKPdf**	**00 58 33.0**	**+0.2**		
BZS	**Buzias**	**137.28**	**325**	||PKIKP	**PKPdf**	**00 58 33.0**	**+0.2**		
PVCC	**Panska Ves**	**137.31**	**335**	AMS	AMS	02 03 00.0			
	comp=Z,2µm,20.6s								
CLL	**Collm**	**137.32**	**337**	IAMs_20	IAMs_20	02 01 33.9			
	comp=Z,2µm,20.0s								
CLL	**Collm**	**137.32**	**337**	*i* PKIKP	**PKPdf**	**00 58 33.1**	**+0.4**		
CLL				pmax	pmax				
	comp=Z,49nm,2.0s								
CLL				MLR	MLR				
	comp=Z,2µm,20.9s								
VRAC	**Vranov**	**137.35**	**332**	PKP	**PKPdf**	**00 58 32.7**	**-0.1**		
	comp=Z,1.4nm,0.5s,baz=34,slow=3.6,SNR=2.2								
VRAC				PP	**PP**	**01 01 21.4**	**+3.8**		
	comp=Z,0.7nm,0.3s,baz=66,slow=5.7,SNR=5

DBIC Dimbokro 170.06 226 PKP **PKPdf 00 59 18.9 +0.8**
comp=Z,8.3nm,1.1s,baz=279,slow=1.2,SNR=3.6

*IDC **06** 00:41:32.4±0.9,21°.26N×45°.86W,h0km,mb4.0/7, mbtmp4.0/7,MS4.9/4,Error ellipse: s-maj=32.3km s-min=21.1km az=140.0*
*NEIC **06** 00:41:35.4±2.8,21°.24N±0°.09×45°.8W±0°.1,h10km±1km, mb4.5/17,Error ellipse: s-maj=21.5km s-min=8.9km az=48.0*
ISC 06 00:41:34.5±0.6,21°.2N±0°.1×45°.7W±0°.1,h10km,n35, σ1$13/25,mb4.4/14,MS5.1/3,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H05S1	**Guadeloupe/Mar**	**15.87**	**247**	T	T	01 01 22.6	
SJG	**San Juan**	**19.47**	**265**	LR	LR	00 51 44.1	
	comp=Z,883nm,21.2s,baz=46,slow=32						
BOAV	**Boa Vista**	**23.59**	**220**	P	**P**	**00 46 46.1**	**+0.5**
BOAV				IAmb	IAmb	00 46 59.4	
	comp=Z,14nm,1.4s						
BAUV	**El Baul**	**24.70**	**244**	P	**P**	**00 46 54.8**	**-1.2**
BAUV				IAmb	IAmb	00 47 03.6	
	comp=Z,31nm,1.3s						
SDV	**Santo Domingo**	**26.93**	**247**	P	**P**	**00 47 16.3**	**-0.1**
SDV				IAmb	IAmb	00 47 24.8	
	comp=Z,14nm,1.2s						
RUSC	**La Rusia**	**30.55**	**244**	P	**P**	**00 47 49.9**	**+0.9**
OTAV	**Otavalo**	**38.13**	**241**	P	**P**	**00 48 54.7**	**0.0**
ESDC	**Sonseca Array**	**40.03**	**53**	P	**P**	**00 49 08.6**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=262,slow=8.4,SNR=4.6						
	comp=Z,0.9nm,0.8s						
DBIC	**Dimbokro**	**42.06**	**104**	P	**P**	**00 49 26.6**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=315,slow=7.1,SNR=4.2						
	comp=Z,5.7nm,0.9s						
H10N3	**ASCENSION HYDR**	**42.10**	**130**	T	T	01 34 12.0	
	baz=314,slow=75,SNR=511						
H10N2	**ASCENSION HYDR**	**42.10**	**130**	T	T	01 34 16.8	
	baz=314,slow=75,SNR=316						
H10N1	**ASCENSION HYDR**	**42.12**	**130**	T	T	01 34 11.1	
	baz=314,slow=75,SNR=610						
H10S3	**ASCENSION HYDR**	**42.76**	**131**	T	T	01 35 04.5	
	baz=312,slow=74						
H10S2	**ASCENSION HYDR**	**42.77**	**131**	T	T	01 35 17.9	
	baz=268,slow=74						
LPAZ	**La Paz**	**43.24**	**212**	P	**P**	**00 49 37.7**	**+0.7**
LPAZ				IAmb	IAmb	00 49 40.1	
	comp=Z,8.9nm,1.1s						
LPAZ	**La Paz**	**43.24**	**212**	P	**P**	**00 49 36.8**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=15,slow=9.1,SNR=11						
	comp=Z,3.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**45.87**	**92**	LR	LR	01 07 19.1	
	comp=Z,2μm,18.2s,baz=338,slow=34						
PB11	**IPOC Station P**	**46.95**	**212**	P	**P**	**00 50 04.5**	**-1.4**
TAM	**Tamanrasset**	**47.36**	**78**	P	**P**	**00 50 09.4**	**+0.2**
TAM				IAmb	IAmb	00 50 13.7	
	comp=Z,7.9nm,1.3s						
CPUP	**Villa Florida**	**48.55**	**194**	P	**P**	**00 50 19.4**	**+1.4**
CPUP	**Villa Florida**	**48.55**	**194**	P	**P**	**00 50 17.4**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=0.0,slow=3.0,SNR=4.9						
	comp=Z,0.7nm,0.8s						
KEST	**Kesra**	**49.94**	**61**	P	**P**	**00 50 29.1**	**+0.3**
	comp=Z,8.5nm,0.9s,baz=267,slow=9.2,SNR=5.4						
	comp=Z,8.5nm,0.9s						
CTI	**Castel Tesino**	**52.54**	**48**	P	**P**	**00 50 48.1**	**-0.2**
BW06	**Boulder Array**	**56.90**	**308**	P	**P**	**00 51 18.9**	**-1.2**
BW06				IAmb	IAmb	00 51 29.9	
	comp=Z,5.9nm,1.4s						
PD31	**Pinedale Array**	**56.90**	**308**	P	**P**	**00 51 18.5**	**-1.6**
PD31				IAmb	IAmb	00 51 29.9	
	comp=Z,5.9nm,1.4s						
PDAR	**Pinedale Array**	**56.90**	**308**	P	**P**	**00 51 18.3**	**-1.8**
PDAR	**Pinedale Array**	**56.90**	**308**	P	**P**	**00 51 18.1**	**-2.0**
	comp=Z,1.1nm,1.0s,baz=99,slow=9.2,SNR=7.2						
	comp=Z,1.1nm,1.0s						
YMR	**Madison River**	**57.95**	**310**	P	**P**	**00 51 29.1**	**+1.6**
YMR				IAmb	IAmb	00 51 30.5	
	comp=Z,14nm,1.5s						
FXWY	**Fox Creek**	**57.98**	**309**	P	**P**	**00 51 28.4**	**+0.7**
WUAZ	**Wupatki**	**58.55**	**299**	P	**P**	**00 51 30.8**	**-0.9**
NEW	**Newport**	**62.21**	**314**	P	**P**	**00 51 55.8**	**-0.7**
NEW				IAmb	IAmb	00 51 59.6	
	comp=Z,3.6nm,0.9s						
CWC	**Cottonwood Cre**	**63.86**	**301**	P	**P**	**00 52 08.8**	**+1.1**
BRTR	**Keskin Array B**	**68.81**	**54**	P	**P**	**00 52 40.6**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=290,slow=4.2,SNR=4.2						
	comp=Z,0.6nm,0.8s						
AAK	**Ala-Archa**	**95.98**	**40**	LR	LR	01 39 13.4	
	comp=Z,2μm,18.7s,baz=83,slow=36						
OPO	**Ambohidratompo**	**99.14**	**106**	LR	LR	01 36 36.5	
	comp=Z,667nm,20.8s,baz=150,slow=33						

*CATAC **06** 00:52:22.9±0.7,10°.N±3°.×8°.6W±°.,h12km±4km,M3.8/11, MLv3.8/11,Error ellipse: s-maj=7.8km s-min=4.8km az=51.4,confirmed*
*UCR **06** 00:52:25.4±0.6,10°.39N×86°.19W,h19km±3km,MW3.9*
ISC 06 00:52:24.0±1.7,10°.35N±0°.05×86°.23W±0°.08,h10km,n49, σ0$65/51,18C-1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAJU	**San Juanillo,**	**0.58**	**119**	*eP*	**Pg**	**00 52 36.4**	**+1.0**
DELF	**Filadelfia**	**0.67**	**82**	*eP*	**Pb**	**00 52 38.1**	**+0.2**
JUD3	**Juan Diaz 3**	**0.70**	**105**	*eP*	**Pg**	**00 52 38.4**	**+0.7**
ALIBA	**Liberia Airpor**	**0.71**	**70**	*eP*	**Pb**	**00 52 39.2**	**+0.6**
ELI1	**Hacienda Flor**	**0.73**	**66**	S	**Sn**	**00 52 51.4**	**-0.2**
ELI1	**Hacienda Flor**	**0.73**	**66**	P	**Pb**	**00 52 39.8**	**+1.0**
ELI1	**Hacienda Flor**	**0.73**	**66**	*eP*	**Pb**	**00 52 39.1**	**+0.3**
NICO	**Nicoya**	**0.80**	**105**	*eP*	**Pg**	**00 52 39.6**	**+0.1**
CMARA	**Lajas Hojancha**	**0.86**	**112**	S	**Sg**	**00 52 52.0**	**+0.1**
CMARA	**Lajas Hojancha**	**0.86**	**112**	P	**Pg**	**00 52 40.2**	**-0.4**
PLVR	**Palo Verde**	**0.86**	**90**	*eP*	**Pg**	**00 52 41.0**	**+0.2**
LAPC	**Finca la Perla**	**0.89**	**62**	*eP*	**Pg**	**00 52 41.2**	**0.0**
LCRUZ	**La Cruz**	**0.93**	**39**	*eP*	**Pg**	**00 52 42.2**	**+0.2**
VRLE	**La Escondida,**	**0.95**	**63**	*eP*	**Pg**	**00 52 42.3**	**-0.2**
GPS1	**Guardaparques**	**0.96**	**64**	*eP*	**Pg**	**00 52 42.5**	**-0.2**
BAGA	**Bagaces**	**0.97**	**79**	*eP*	**Pg**	**00 52 42.8**	**+0.1**
VORI	**VORI**	**0.98**	**62**	*eP*	**Pg**	**00 52 43.0**	**-0.1**
NYURE	**Nandayure**	**1.02**	**110**	*eP*	**Pg**	**00 52 44.1**	**+0.3**
BUAI	**Buenos Aires**	**1.03**	**59**	*eP*	**Pg**	**00 52 43.6**	**-0.2**
CARN	**Rivas**	**1.08**	**40**	P	**Pg**	**00 52 44.7**	**-0.3**
CARN				S	**Sn**	**00 53 01.6**	**+1.2**
CARN	**Rivas**	**1.08**	**40**	*eP*	**Pg**	**00 52 44.6**	**-0.3**
CUI	**Cuipilapa**	**1.09**	**74**	*eP*	**Pg**	**00 52 44.5**	**-0.5**
HORNC	**Hornillas**	**1.09**	**71**	*eP*	**Pg**	**00 52 44.4**	**-0.7**
CNAS	**Canas**	**1.12**	**86**	*eP*	**Pn**	**00 52 47.2**	**+1.4**
INVE	**Universidad In**	**1.16**	**84**	*eP*	**Pb**	**00 52 45.5**	**-0.6**
MOTZ	**Rio Naranjo**	**1.19**	**74**	*eP*	**Pb**	**00 52 46.0**	**-0.7**
VMAR	**Armenia, Volca**	**1.19**	**67**	*eP*	**Pb**	**00 52 46.1**	**-0.7**
JCR1	**Jicaral**	**1.21**	**114**	*eP*	**Pb**	**00 52 46.0**	**-1.1**
TIMP	**Tierras Morena**	**1.21**	**79**	*eP*	**Pb**	**00 52 46.1**	**-1.1**
JTS	**Las Juntas de**	**1.26**	**93**	P	**Pn**	**00 52 46.7**	**-1.1**
JTS				S	**Sn**	**00 53 06.0**	**+1.2**
JTS	**Las Juntas de**	**1.26**	**93**	*eP*	**Pn**	**00 52 46.7**	**-1.1**
TENO	**El Achiote**	**1.28**	**74**	*eP*	**Pn**	**00 52 46.6**	**-1.5**
MORN	**Al O del Volca**	**1.32**	**26**	P	**Pn**	**00 52 48.2**	**-0.4**
QUEB	**Quebradon, Cot**	**1.34**	**78**	*eP*	**Pn**	**00 52 48.4**	**-0.5**
CONN	**Concepcion**	**1.34**	**26**	P	**Pn**	**00 52 48.4**	**-0.6**
TABAC	**Tabacon**	**1.45**	**84**	*eP*	**Pn**	**00 52 50.5**	**+0.1**
CASO	**Castillo**	**1.47**	**87**	*eP*	**Pn**	**00 52 50.5**	**-0.2**
ARE1	**Arenal 1**	**1.49**	**86**	*eP*	**Pn**	**00 52 51.1**	**+0.1**
VARE2	**V. Arenal**	**1.49**	**86**	*eP*	**Pn**	**00 52 51.1**	**+0.1**
CEDE	**Laguna Cedeo**	**1.51**	**85**	*eP*	**Pn**	**00 52 51.3**	**+0.1**
NANN	**Nandasmo**	**1.58**	**4**	P	**Pn**	**00 52 52.8**	**+0.6**
SOCE	**Pocosol**	**1.59**	**89**	P	**Pn**	**00 52 52.0**	**-0.3**
SOCE	**Pocosol**	**1.59**	**89**	*eP*	**Pn**	**00 52 52.0**	**-0.3**
SABN	**Sabanita**	**1.60**	**2**	P	**Pn**	**00 52 52.7**	**+0.3**
VPL2	**V. Platanar**	**1.82**	**91**	*eP*	**Pn**	**00 52 55.8**	**+0.2**
COVE	**Coope Vega, Sa**	**1.83**	**78**	P	**Pn**	**00 52 56.3**	**+0.6**
COPN	**Copaltepe**	**1.85**	**349**	P	**Pn**	**00 52 55.5**	**-0.4**
COPN	**Copaltepe**	**1.85**	**349**	*eP*	**Pn**	**00 52 55.5**	**-0.4**
TCS1	**Tacares**	**1.93**	**99**	P	**Pn**	**00 52 56.1**	**-0.9**

*DSN **06** 00:59:19.2±1.2,27°.46N×55°.08E,h10km,ML2.6/7,Error ellipse: s-maj=16.6km s-min=7.6km az=28.0*
*TEH **06** 00:59:24.1,27°.33N×55°.06E,h8km±3km*
*OMAN **06** 00:59:24.8±0.1,26°.92N×55°.01E,h6km±1km,mb4.7/3, ml2.6/14,Error ellipse: s-maj=2.6km s-min=0.7km az=8.0*
ISC 06 00:59:22.9±1.2,27°.25N±0°.05×55°.08E±0°.03,h22km±15km, n47,σ1$44/61,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.75**	**303**	Pg	**Pn**	**00 59 37.7**	**-0.6**
BNDS	**Bandar-Abbas**	**0.98**	**81**	Pg	**Pn**	**00 59 43.1**	**+1.6**
GENO	**Geno**	**0.98**	**81**	Sg	**Sn**	**00 59 58.7**	**+3.9**
IBND	**Bandar-abas**	**1.31**	**81**	Pg	**Pb**	**00 59 48.6**	**+1.7**
SHME	**Shamm**	**1.53**	**141**	P	**Pn**	**00 59 49.1**	**+0.2**
SHME				S	**Sb**	**01 00 09.3**	**-0.3**
SHME	**Shamm**	**1.53**	**141**	P	**Pn**	**00 59 48.4**	**-0.5**
LMD1	**Lamerd**	**1.71**	**273**	Pg	**Pb**	**00 59 55.5**	**+1.8**
BANOM	**Banah**	**1.71**	**140**	P	**Pn**	**00 59 52.4**	**+0.8**
BANOM				S	**Sn**	**01 00 13.6**	**+0.8**
BANOM	**Banah**	**1.71**	**140**	P	**Pn**	**00 59 52.1**	**+0.6**
BANOM				S	**Sb**	**01 00 16.2**	**+1.3**
JHRM	**Jahrom**	**1.82**	**313**	Pg	**Pb**	**00 59 57.2**	**+1.5**
MASF	**Masafi**	**2.11**	**153**	P	**Pn**	**00 59 57.1**	**+0.2**
MASF				S	**Sn**	**01 00 22.5**	**-0.1**
MSFE	**Esma-Masafi**	**2.12**	**153**	P	**Pn**	**00 59 57.0**	**-0.1**
QIR1	**Qir**	**2.18**	**304**	Pn	**Pb**	**01 00 01.6**	**-0.1**
MDH	**Madha**	**2.23**	**150**	P	**Pn**	**00 59 59.1**	**+0.5**
MDH				S	**Sn**	**01 00 24.9**	**-0.6**
MDH	**Madha**	**2.23**	**150**	P	**Pn**	**00 59 58.4**	**-0.2**
NAZ	**Nazwa, Dubai**	**2.31**	**167**	P	**Pn**	**00 59 57.4**	**-2.3**
UOSS	**Minazif**	**2.51**	**156**	P	**Pn**	**01 00 03.8**	**+1.4**
UOSS	**Minazif**	**2.51**	**156**	P	**Pn**	**01 00 02.7**	**+0.2**
HATD	**Hatta, Dubai**	**2.60**	**158**	P	**Pn**	**01 00 04.7**	**+1.0**
HATD				S	**Sn**	**01 00 33.6**	**-0.9**
HATD	**Hatta, Dubai**	**2.60**	**158**	P	**Pn**	**01 00 04.6**	**+1.0**
ASUD	**Al Ashush, Dub**	**2.63**	**175**	P	**Pn**	**01 00 03.8**	**-0.2**
ASHO	**Ashiyiah**	**2.71**	**161**	P	**Pn**	**01 00 06.1**	**+0.9**
	SNR=37						
ASHO	**Ashiyiah**	**2.71**	**161**	P	**Pn**	**01 00 06.0**	**+0.9**
NGRK	**Negar Kerman**	**2.79**	**31**	Pn	**Pb**	**01 00 10.6**	**-1.7**
KRBR	**Kerman**	**3.09**	**28**	Pn	**Pb**	**01 00 15.4**	**-2.0**
ALNE	**Al Ain**	**3.24**	**169**	P	**Pn**	**01 00 13.7**	**+1.2**
ALNE				S	**Sn**	**01 00 51.2**	**+0.7**
KHGB	**Koh Gabri**	**3.34**	**21**	Pn	**Pb**	**01 00 18.0**	**-3.7**
SOHO	**SOHO**	**3.37**	**157**	P	**Pn**	**01 00 14.0**	**-0.2**
SOHO				S	**Sn**	**01 00 52.9**	**-0.7**
CHMN	**Cheshme madani**	**3.38**	**39**	Pn	**Pb**	**01 00 19.1**	**-3.3**
MZWR	**Madinat Zayed**	**3.64**	**198**	P	**Pn**	**01 00 18.3**	**+0.3**
KRM1	**Kerman Provinc**	**3.76**	**30**	Pn	**Pn**	**01 00 23.6**	**+3.7**
ARQ	**Araqi**	**4.11**	**161**	P	**Pn**	**01 00 24.4**	**-0.1**
	SNR=6.2						
ARQ				S	**Sn**	**01 01 10.7**	**-1.3**
TRNA	**Turayna**	**4.29**	**235**	P	**Pn**	**01 00 27.5**	**+0.6**
	SNR=5.0						
TRNA				S	**Sn**	**01 01 16.4**	**+0.1**
IBAF	**Bafgh**	**4.34**	**5**	Pn	Pn	01 00 30.9	+3.2
MZR	**Muzera**	**4.48**	**199**	P	**Pn**	**01 00 28.8**	**-0.7**
UMZA	**Um Al Zommool**	**4.52**	**179**	P	**Pn**	**01 00 30.5**	**+0.5**
UMZA				S	**Sn**	**01 01 19.4**	**-2.6**
SMRA	**Abu-Samra**	**4.58**	**238**	P	**Pn**	**01 00 31.3**	**+0.5**
SMRA				S	**Sn**	**01 01 23.0**	**-0.3**
SMDO	**Samad**	**4.97**	**147**	P	**Pn**	**01 00 37.3**	**+1.0**
SMDO				S	**Sn**	**01 01 33.5**	**+0.3**
WSAR	**Wadi Sarin**	**5.13**	**140**	P	**Pn**	**01 00 39.7**	**+1.3**
WSAR				S	**Sn**	**01 01 37.7**	**+0.7**
JMDO	**Jabal Madar**	**5.58**	**150**	P	**Pn**	**01 00 46.6**	**+1.9**
JMDO				S	**Sn**	**01 01 47.3**	**-0.9**
MHTO	**MHTO**	**6.77**	**157**	P	**Pn**	**01 01 00.8**	**-0.2**
DQM	**DQM**	**7.63**	**162**	P	**Pn**	**01 01 12.2**	**-0.7**
DOK	**Doka**	**8.64**	**186**	P	**Pn**	**01 01 25.2**	**-1.4**
SHAO	**Shalim**	**9.20**	**177**	P	**Pn**	**01 01 33.0**	**-1.4**
	SNR=8.4						
WHFO	**Wadi Hawf**	**9.37**	**188**	P	**Pn**	**01 01 35.6**	**-1.1**
	SNR=23						
DMTO	**DMTO**	**9.49**	**181**	P	**Pn**	**01 01 36.7**	**-1.7**
ABTO	**Aybut**	**9.99**	**190**	P	**Pn**	**01 01 43.8**	**-1.4**
	SNR=8.3						

*IDC **06** 01:24:55.3±1.5,1°.69N×127°.05E,h0km,mb3.9/5, mbtmp3.9/6,ML3.5/1,Error ellipse: s-maj=109.6km s-min=19.0km az=68.0*
*DJA **06** 01:25:07.6±0.5,2°.N±4°.×12°.7E±°,h103km±7km,M3.8/12, mB5.2/2,mb4.0/3,MLv3.8/12,Mw(mB)4.6/2*
ISC 06 01:25:07.5±1.2,1°.8N±0°.1×127°.3E±0°.2,h112km,n11, σ1$34/11,mb4.0/5,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.01**	**176**	P	**Pn**	**01 25 30.2**	**+1.2**
SGSI	**Sangihe**	**2.59**	**317**	P	**Pn**	**01 25 48.2**	**0.0**
SANI	**Sanana**	**4.03**	**199**	P	**Pn**	**01 26 08.0**	**+0.7**
NLAI	**Namlea**	**4.99**	**182**	P	**Pn**	**01 26 21.4**	**+1.1**
	0.1nm2μm13nm,0.6s						
MSAI	**Masohi**	**5.35**	**162**	P	**Pn**	**01 26 25.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.82**	**185**	P	**P**	**01 29 26.7**	**-2.8**
	0.1nm,0.3s,baz=12,slow=9.3,SNR=2.2						
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**22.67**	**163**	P	**P**	**01 29 58.9**	**-0.8**
	1.8nm,0.5s,baz=340,slow=11,SNR=9.1						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**26.10**	**166**	P	**P**	**01 30 30.8**	**-0.3**
	0.5nm,0.4s,baz=348,slow=7.3,SNR=9.3						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**36.12**	**159**	P	**P**	**01 31 58.6**	**-0.2**
	1.3nm,0.6s,baz=320,slow=7.5,SNR=2.9						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**59.47**	**326**	P	**P**	**01 35 00.3**	**+1.6**
	0.8nm,0.4s,baz=116,slow=8.1,SNR=13						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**63.68**	**328**	P	**P**	**01 35 27.2**	**+0.4**
	0.7nm,0.4s,baz=128,slow=6.0,SNR=1.7						
	0.7nm,0.4s						

*AEIC **06** 01:37:55.2±0.9,54°.09N±0°.10×163°.30W±0°.07, h46km±10km,Error ellipse: s-maj=14.8km s-min=2.5km az=160.0*
NEIC 06 01:37:55.5±1.0,54°.08N±0°.04×163°.28W±0°.06, h31km±10km,ML2.8/12,ML2.5(AEIC),Error ellipse: s-maj=6.5km s-min=4.4km az=159.0,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FALS	**False Pass**	**0.78**	**354**		Pn	01 38 10.0	-0.4
FALS					Sb	01 38 20.7	-0.1
ISNN	**Isanotski Nort**	**0.81**	**339**		Pn	01 38 10.6	-0.2
ISNN					Pb	01 38 11.3	+0.3
ISNN					Sn	01 38 22.6	+0.8
ISNN					Sb	01 38 23.1	+1.5
SSBA	**Shishaldin**	**0.85**	**325**		Pn	01 38 11.4	0.0
SSBA					Sb	01 38 23.2	+0.3
WEBT	**Westdahl Beart**	**1.00**	**301**		Pn	01 38 13.4	-0.1
WEBT					Sb	01 38 27.2	0.0
DT1	**Dutton Round H**	**1.18**	**29**		Pn	01 38 15.2	-0.7
DT1					Sn	01 38 30.1	-0.9
DOL	**Dolgoi Island**	**1.35**	**37**		Pn	01 38 17.7	-0.5
DOL					Sn	01 38 35.3	+0.2
AKSA	**Akutan Strait**	**1.43**	**273**		Pn	01 38 19.1	-0.2
AKSA					Sn	01 38 37.3	+0.4
AKUT	**Akutan**	**1.47**	**273**	Pn	Pn	01 38 19.7	-0.1
AKUT					Sn	01 38 37.5	-0.4
AKUT				IAML		01 38 38.5	
	comp=E,58nm,1.0s						
HAG	**Hague Volcano**	**1.47**	**32**		Pn	01 38 20.5	+0.6
PS4A	**Pavlof South-4**	**1.51**	**33**		Pn	01 38 20.6	+0.2
PS4A					Pb	01 38 21.2	-1.7
PS4A					Sn	01 38 40.3	+1.2
PS4A					Sb	01 38 40.4	-1.3
AKBBA	**Akutan Broad B**	**1.56**	**272**		Pn	01 38 21.5	+0.3
AKBBA					Sn	01 38 41.3	+0.9
AKLV	**Akutan Long Va**	**1.58**	**274**		Pn	01 38 21.4	0.0
AKLV					Sn	01 38 40.6	-0.2
ZRO	**Akutan Zero**	**1.59**	**271**		Pn	01 38 21.5	-0.1
ZRO					Sn	01 38 40.8	-0.2
PS1A	**Pavlof South-1**	**1.61**	**33**		Pn	01 38 21.9	+0.1
PS1A					Sn	01 38 42.7	+1.2
S12K	**Black Hills**	**1.77**	**23**	Pn	Pn	01 38 24.4	+0.4
S12K				Sn	Sn	01 38 45.4	-0.1
S12K				IAML		01 38 49.5	
	comp=N,83nm,0.7s						
S12K				IAML		01 38 51.5	
	comp=E,80nm,0.5s						
UNV	**Unalaska Valle**	**1.92**	**264**	Pn	Pn	01 38 25.6	-0.4
UNV				Sn	Sn	01 38 49.0	-0.1
MNAT	**Makushin Natee**	**2.02**	**266**		Pn	01 38 27.6	+0.2
SDPT	**Sand Point**	**2.06**	**51**	Pn	Pn	01 38 27.6	-0.4
SDPT				Sn	Sn	01 38 52.6	0.0
SDPT				IAML		01 38 54.2	
	comp=E,72nm,0.9s						
SDPT				IAML		01 39 04.8	
	comp=N,74nm,1.2s						
MREP	**Makushin Rep't**	**2.07**	**264**		Pn	01 38 27.8	-0.3
MGOD	**Makushin Gods**	**2.14**	**264**		Pn	01 38 28.7	-0.5
O14K	**Tigyukauivet M**	**5.30**	**11**	Pn	Pn	01 39 13.2	+0.8
O14K				IAML		01 42 20.0	
	comp=E,12nm,1.2s						
N14K	**Kuskokwak Cree**	**5.92**	**8**	Pn	Pn	01 39 22.3	+1.3
N15K	**Kwethluk River**	**6.34**	**15**	Pn	Pn	01 39 27.6	+0.8
M16K	**Timber Creek**	**7.34**	**17**	Pn	Pn	01 39 41.8	+1.4
M17K	**Holitna River**	**7.97**	**21**	Pn	Pn	01 39 47.9	-1.2

IDC 06 01:54:19.1±2.7,13°.14S×167°.71E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=166.0km s-min=29.3km az=147.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.66**	**254**	P	P	02 00 51.4	-1.8
	0.9nm,0.9s,baz=85,slow=8.5,SNR=4.2						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**33.66**	**247**	P	P	02 01 03.5	+1.5
	0.3nm,0.5s,baz=79,slow=9.3,SNR=4.9						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**84.89**	**18**	P	P	02 06 55.8	+0.3
	0.7nm,0.9s,baz=239,slow=5.8,SNR=5.3						
	0.7nm,0.9s						
NVAR	**Mina Array Bea**	**85.91**	**49**	P	P	02 07 01.2	-0.3
	0.3nm,0.7s,baz=256,slow=4.4,SNR=2.7						
	0.3nm,0.7s						

TRN 06 02:02:16.2,16°.73N×61°.20W,h24km,MD3.8,North-east of Guadeloupe.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSDZ	**La Diserade, G**	**0.44**	**163**	*eP*	Pn	02 02 27.2	+0.2
DSDZ				*eS*	Sn	02 02 35.6	+1.5
DHSZ	**Broadband at M**	**0.71**	**230**	*eP*	Pn	02 02 31.4	+0.7
DHSZ				*eS*	Sn	02 02 43.1	+2.1
ATGZ	**Broadband at L**	**0.81**	**219**	*eP*	Pn	02 02 33.8	+1.6
ATGZ				*eS*	Sn	02 02 45.8	+2.4
MMLZ	**Guadeloupe Bro**	**0.82**	**214**	*eP*	Pn	02 02 33.8	+1.5
MMLZ				*eS*	Sn	02 02 46.3	+2.6
MBWH	**Windy Hill**	**0.95**	**271**	*eP*	Pn	02 02 35.8	+1.6
MBWH				*eS*	Sn	02 02 49.6	+2.6
MBFL	**Flemmings, Mon**	**0.97**	**271**	*eP*	Pb	02 02 36.1	+1.7
MBFL				*eS*	Sn	02 02 50.0	+2.6
TBG	**Guadaloupe-3**	**0.98**	**206**	*eP*	Pb	02 02 36.0	+1.6
TBG				*eS*	Sn	02 02 50.0	+2.5
ANWB	**Willy Bob**	**1.09**	**329**	*eP*	Pb	02 02 37.0	+0.6
ANWB				*eS*	Sn	02 02 52.6	+2.4
DWS	**Wesley**	**1.16**	**185**	*eP*	Pb	02 02 38.7	+1.1
DWS				*eS*	Sb	02 02 55.4	+3.0
DSLB	**Salisbury**	**1.31**	**190**	*eP*	Pb	02 02 40.9	+0.8
DSLB				*eS*	Sb	02 02 59.4	+2.9
DLPL	**La Plaine**	**1.39**	**182**	*eS*	Sb	02 03 01.0	+2.0
SKOC	**St. Kitts, UWI**	**1.57**	**291**	*eP*	Pb	02 02 44.6	0.0
SKOC				*eS*	Sb	02 03 06.2	+2.1
SKI	**Saint Kitts**	**1.59**	**292**	*eP*	Pb	02 02 44.7	-0.3
SKI				*eS*	Sb	02 03 06.2	+1.4
BIM	**Bigot**	**2.21**	**177**	*eP*	Pn	02 02 53.1	+1.7
BIM				*eS*	Sb	02 03 20.6	-1.8
SLBI	**Saint Lucia, B**	**2.70**	**175**	*eP*	Pn	02 02 59.4	+1.2
SLBI				*eS*	Sn	02 03 32.1	+2.0
SVB	**Belmont**	**3.44**	**181**	*eP*	Pn	02 03 09.3	+0.9
SVB				*eS*	Sn	02 03 49.9	+1.5

*MEX **06** 02:12:36.5±0.5,15°.91N×98°.25W,h5km,MD4.8*
*IDC **06** 02:12:39.0±2.1,16°.48N×98°.02W,h0km,mb4.1/6, mbtmp4.1/10,ML3.8/3,MS3.7/1,Error ellipse: s-maj=42.7km s-min=13.4km az=18.0*
*NEIC **06** 02:12:43.0±1

PPPT eS Sn 02 13 59.7 -1.7
ARIG Puente Sto Nin 3.07 320 Sn 02 14 00.7 -0.8
ARIG Puente Sto Nin 3.07 320 eP Pn 02 13 24.8 +0.4
ARIG eS Sn 02 14 00.7 -0.8
PHPU Puebla 3.09 1 Pn 02 13 24.4 -0.5
PHPU Puebla 3.09 1 eP Pn 02 13 24.4 -0.5
PHPU eS Sn 02 14 00.8 -1.4
PPSX Xalitzintla 3.14 356 eP Pn 02 13 23.2 -2.4
PPSX eS Sn 02 14 01.5 -2.1
MAVM Malinalco, Edo 3.23 339 Pn 02 13 28.9 +2.1
MAVM Malinalco, Edo 3.23 339 eP Pn 02 13 28.9 +2.1
MAVM eS Sb 02 14 08.9 -4.0
MPVM San Francisco 3.33 348 Pn 02 13 29.0 +0.9
MPVM San Francisco 3.33 348 eP Pn 02 13 29.0 +0.9
MPVM eS Sn 02 14 08.0 -0.1
MZVM 3.37 344 Pn 02 13 29.1 +0.7
MZVM 3.37 344 eP Pn 02 13 29.1 +0.7
MZVM eS Sn 02 14 08.7 0.0
TLVM San Miguel Top 3.37 345 Pn 02 13 28.6 -0.1
TLVM San Miguel Top 3.37 345 eP Pn 02 13 28.6 -0.1
TLVM eS Sn 02 14 09.4 +0.2
XCVM Xochimilco 3.40 346 Pn 02 13 29.3 +0.2
XCVM Xochimilco 3.40 346 eP Pn 02 13 29.3 +0.2
XCVM eS Sn 02 14 09.4 -0.5
THVM De Xico 3.43 349 Pn 02 13 29.1 -0.4
THVM De Xico 3.43 349 eP Pn 02 13 29.1 -0.4
THVM eS Sn 02 14 09.1 -1.4
CMIG Matias Romero 3.43 70 Pn Pn 02 13 28.0 -1.4
15nm,0.3s,baz=237,slow=12,SNR=208
CMIG Sn Sn 02 14 03.8 -6.4
27nm,0.3s,baz=42,slow=13,SNR=5.7
CMIG Lg Lg 02 14 16.6
21nm,0.3s,baz=239,slow=14,SNR=6.1
32nm,0.2s
AOVM Tlapan 3.47 343 Pn 02 13 30.8 +0.5
AOVM Sn 02 14 10.2 -1.6
AOVM Tlapan 3.47 343 eP Pn 02 13 30.8 +0.5
AOVM eS Sn 02 14 10.2 -1.6
UNM Universidad Na 3.49 345 Pn 02 13 32.0 +1.6
UNM Universidad Na 3.49 345 eP Pn 02 13 30.1 -0.3
UNM eS Sn 02 14 10.9 -1.2
CUP5 Mexico City 3.49 345 Pn 02 13 29.9 -0.5
CUP5 Sn 02 14 10.7 -1.4
CUP5 Mexico City 3.49 345 eP Pn 02 13 29.9 -0.5
CUP5 eS Sn 02 14 10.7 -1.4
ZIIG Zihuatanejo 3.50 299 eP Pn 02 13 29.5 -0.7
ZIIG eS Sn 02 14 07.2 -4.7
MCRU Las Cruces 3.50 344 eP Pn 02 13 32.6 +2.0
MCRU eS Sn 02 14 11.1 -1.3
COVM Coyoacan 3.50 346 Pn 02 13 32.1 +1.5
COVM Sn 02 14 08.9 -3.5
COVM Coyoacan 3.50 346 eP Pn 02 13 32.0 +1.5
COVM eP Pb 02 13 32.1 -5.9
COVM eS Sn 02 14 08.9 -3.5
COVM eS Sb 02 14 12.7 -8.1
INVM La Marquesa 3.51 342 Pn 02 13 32.6 +1.9
INVM Sn 02 14 10.8 -1.9
INVM La Marquesa 3.51 342 eP Pn 02 13 32.6 +1.9
INVM eS Sn 02 14 10.8 -1.9
TXVM Universitario 3.54 350 eP Pn 02 13 28.4 -2.7
TXVM eS Sn 02 14 13.0 -0.3
CJVM Cuajimalpa 3.55 344 Pn 02 13 31.9 +0.8
CJVM Cuajimalpa 3.55 344 eP Pn 02 13 31.9 +0.8
CJVM eS Sn 02 14 12.7 -0.8
VRVM Mexico City 3.56 347 Pn 02 13 30.4 -1.0
VRVM Mexico City 3.56 347 eP Pn 02 13 30.4 -1.0
VRVM eS Sn 02 14 13.2 -0.6
MHVM Bosque de Chap 3.57 345 Pn 02 13 32.7 +1.2
MHVM Bosque de Chap 3.57 345 eP Pn 02 13 32.7 +1.2
MHVM eS Sn 02 14 13.8 -0.3
CTVM Cuauhtemoc 3.59 346 Sn 02 14 11.9 -2.8
CTVM Cuauhtemoc 3.59 346 eS Sn 02 14 11.9 -2.8
APVM Azcapotzalco 3.65 346 Pn 02 13 32.4 -0.2
APVM Azcapotzalco 3.65 346 eP Pn 02 13 32.4 -0.2
APVM eS Sn 02 14 15.6 -0.5
JAUV Jalcomulco 3.68 22 Pn 02 13 31.3 -1.6
JAUV Sn 02 14 17.3 +0.7
JAUV Jalcomulco 3.68 22 eP Pn 02 13 31.3 -1.6
JAUV eS Sn 02 14 17.3 +0.7
PMUV Sontecomapan 3.96 49 Sn 02 14 24.8 +1.3
PMUV Sontecomapan 3.96 49 eP Pn 02 13 31.7 -5.0
PMUV eS Sn 02 14 24.8 +1.3
LVIG Laguna Verde 4.15 25 Pn 02 13 38.4 -0.8
LVIG Laguna Verde 4.15 25 eP Pn 02 13 38.4 -0.8
LVIG eS Sn 02 14 28.8 +0.7
TUIG Tuzandepetl 4.22 60 Pn 02 13 38.3 -1.8
TUIG Tuzandepetl 4.22 60 eP Pn 02 13 38.3 -1.8
TUIG eS Sn 02 14 29.1 -0.6
CXUV Coxquihui 4.26 8 Pn 02 13 39.5 -1.3
CXUV Coxquihui 4.26 8 eP Pn 02 13 39.5 -1.3
CXUV eS Sn 02 14 30.7 -0.1
ACIG Acambay 4.31 339 eP Pn 02 13 45.7 +4.1
ACIG eS Sn 02 14 32.5 +0.3
MOIG Morelia 4.66 324 Pn Pn 02 13 49.5 +3.1
MOIG Sn Sn 02 14 44.3 +3.5
MOIG Morelia 4.66 324 eP Pn 02 13 46.1 -0.3
MOIG eS Sn 02 14 37.9 -2.9
PCIG 4.85 92 eP Pn 02 13 47.5 -1.4
PCIG eS Sn 02 14 38.5 -6.8
TGIG 5.00 80 Pn 02 13 48.8 -2.1
TGIG 5.00 80 eP Pn 02 13 48.8 -2.1
TGIG eS Sn 02 14 50.7 +1.7
JRQG Juriquilla Cam 5.18 337 Pn 02 13 52.9 -0.7
JRQG Juriquilla Cam 5.18 337 eP Pn 02 13 52.9 -0.7
JRQG eS Sn 02 14 54.0 +0.3
MMIG Aquila 5.40 296 eP Pn 02 13 55.6 -0.9
MMIG eS Sn 02 14 53.7 -5.2
CTUV Llano Grande 5.51 359 Pn 02 13 58.4 +0.5
CTUV Llano Grande 5.51 359 eP Pn 02 13 58.4 +0.5
CTUV eS Sn 02 15 01.2 -0.3
IGIG Irapuato, Guan 5.61 329 Sn 02 15 02.6 -1.7
IGIG Irapuato, Guan 5.61 329 eP Pn 02 13 58.5 -1.0
IGIG eS Sn 02 15 02.6 -1.7
PATR El Naranjo 5.86 97 Sn 02 15 06.6 -3.9
PATR El Naranjo 5.86 97 eP Pn 02 14 02.0 -1.0
PATR eS Sn 02 15 06.6 -3.9
CCIG Comitan 5.89 86 Pn Pn 02 14 03.7 +0.4
CCIG Comitan 5.89 86 eP Pn 02 14 02.4 -0.9
CCIG eS Sn 02 15 10.4 -0.8
PAVE Pavencul 5.90 96 Pn 02 14 03.0 -0.6
PAVE Pavencul 5.90 96 eP Pn 02 14 03.0 -0.6
PAVE eS Sn 02 15 06.7 -4.9
CHUJ Union Juarez 5.98 97 eP Pn 02 14 03.2 -1.5
CHUJ eS Sn 02 15 08.4 -5.2
RPIG Rio Verde 6.14 345 Pn 02 14 06.9 +0.2
RPIG Rio Verde 6.14 345 eP Pn 02 14 06.9 +0.2
RPIG eS Sn 02 15 17.7 +0.5
MNGA Volcan de Coli 6.20 305 eP Pn 02 14 09.5 +1.8
MNGA eS Sn 02 15 18.1 -0.9
INCO Volcan de Coli 6.22 306 eP Pn 02 14 10.4 +2.3
INCO eS Sn 02 15 20.0 +0.2
SOMAC Volcano de Col 6.24 306 eP Pn 02 14 10.4 +2.0
SOMAC eS Sn 02 15 19.7 -0.5
CDAR Ciudad de Arme 6.26 299 eP Pn 02 14 06.5 -1.7
CDAR eS Sn 02 15 16.0 -3.9
CEGR Campo Tres 6.35 304 eP Pn 02 14 12.4 +2.7
CEGR eS Sn 02 15 19.8 -2.8
RTAL Retalhuleu 6.48 102 eP Pn 02 14 09.6 -1.8
RTAL eS Sn 02 15 23.8 -1.8
HUEH Huehuetenango 6.53 94 Pn Pn 02 14 12.6 +0.4
HUEH Huehuetenango 6.53 94 eP Pn 02 14 10.9 -1.3
HUEH eS Sn 02 15 27.3 +0.2
GTIG Gomez Farias 7.15 353 Pn 02 14 21.9 +1.5
GTIG Gomez Farias 7.15 353 eP Pn 02 14 21.9 +1.5
GTIG eS Sn 02 15 41.5 -0.5
AAIG Aguscalientes 7.16 328 Pn 02 14 21.4 +0.6
AAIG Sn 02 15 42.1 -0.4
AAIG Aguscalientes 7.16 328 eP Pn 02 14 21.4 +0.6
AAIG eS Sn 02 15 42.1 -0.4
CJM Chamela 7.38 300 eP Pn 02 14 24.4 +0.8
CJM eS Sn 02 15 43.1 -4.5
SCIG Sabancuy 7.39 65 Pn 02 14 21.2 -2.5
SCIG Sabancuy 7.39 65 eP Pn 02 14 21.2 -2.5
APG El Apazote 7.57 96 Pn Pn 02 14 29.2 +2.8
baz=216,slow=18,SNR=6.0
APG Sn Sn 02 15 53.7 +1.1
0.1nm,0.3s,baz=67,slow=22,SNR=4.5
APG Lg Lg 02 16 37.7
baz=228,slow=20,SNR=3.9
ANIG Ahuacatlan 7.83 312 eP Pn 02 14 29.4 -0.4

ANIG eS Sn 02 15 55.8 -3.0
ZAIG Zacatecas 7.92 330 Sn 02 15 59.1 -2.3
ZAIG Zacatecas 7.92 330 Pn Pn 02 14 35.0 +3.6
ZAIG Zacatecas 7.92 330 eP Pn 02 14 31.4 0.0
ZAIG eS Sn 02 15 59.1 -2.3
PETF Flores 8.11 82 Pn Pn 02 14 31.8 -1.9
PETF Flores 8.11 82 eP Pn 02 14 32.1 -1.5
PETF eS Sn 02 16 05.6 +0.1
MTO3 Montecristo 8.72 99 Pn Pn 02 14 42.6 +0.3
LNIG Linares 8.99 353 Pn 02 14 44.3 -1.4
LNIG Linares 8.99 353 eP Pn 02 14 44.3 -1.4
LNIG eS Sn 02 16 27.4 +0.1
MYIG Merida 9.50 57 Pn 02 14 52.5 -0.2
MYIG Merida 9.50 57 eP Pn 02 14 52.5 -0.2
MYIG eS Sn 02 16 40.8 +1.0
TEIG Tepich 10.40 64 Pn Pn 02 15 03.9 -1.2
baz=307,slow=24,SNR=13
TEIG Sn Sn 02 16 53.1 -8.8
baz=311,slow=24,SNR=8.2
PDIG Papasquiaro 11.26 325 Pn 02 15 17.7 +0.7
PDIG Sn 02 17 24.7 +1.4
PDIG Papasquiaro 11.26 325 eP Pn 02 15 17.7 +0.7
PDIG eS Sn 02 17 24.7 +1.4
MCIG Muzquiz 12.26 346 Pn 02 15 32.8 +2.4
MCIG Muzquiz 12.26 346 eP Pn 02 15 32.8 +2.4
MCIG eS Sn 02 17 47.8 +0.4
HPIG 12.93 329 Pn Pn 02 15 41.9 +2.0
HNDO Hondo 13.56 356 Pn Pn 02 15 47.3 -1.0
DRIO Del Rio 13.60 351 Pn Pn 02 15 48.3 -0.5
JUD3 Juan Diaz 3 13.65 113 Pn Pn 02 15 54.0 +4.4
JTS Las Juntas de 14.11 112 Pn Pn 02 15 59.5 +3.6
JTS Las Juntas de 14.11 112 Pn P 02 16 02.4 -1.3
0.4nm,0.3s,baz=282,slow=15,SNR=5.8
8.3nm,0.7s
TX31 Lajitas Ar. Si 14.24 340 Pn Pn 02 15 58.9 +1.2
TXAR Lajitas Array 14.24 340 Pn Pn 02 15 59.8 +2.2
TXAR Lajitas Array 14.24 340 Pn Pn 02 15 57.5 -0.1
1.2nm,0.9s,baz=159,slow=14,SNR=8.7
TXAR Lg Lg 02 19 57.9
baz=197,slow=26,SNR=1.3
SAND Sanderson 14.40 346 Pn Pn 02 15 59.9 +0.1
JCT Junction City 14.55 355 Pn Pn 02 16 02.1 +0.3
435B Jarrell 14.79 2 Pn Pn 02 16 05.1 0.0
OZNA Ozona 15.15 351 Pn Pn 02 16 10.9 +1.0
ALPN Alpine 15.20 342 Pn Pn 02 16 12.2 +1.5
BRDY Brady 15.30 358 Pn Pn 02 16 12.0 +0.2
441A DeRidder 15.46 17 Pn Pn 02 16 13.4 -0.6
MNHN Monahans 15.88 346 Pn Pn 02 16 19.4 -0.1
WHTX Lake Whitney, 16.00 2 Pn Pn 02 16 20.5 -0.5
WHTX IAmb IAmb 02 16 30.4
comp=Z,38nm,0.9s
VHRN Van Horn 16.02 339 Pn Pn 02 16 22.4 +1.1
SGCY Sterling City 16.12 351 Pn Pn 02 16 22.5 -0.1
237A Washetta, Mont 16.15 7 Pn Pn 02 16 22.6 -0.3
237A IAmb IAmb 02 16 31.8
comp=Z,54nm,0.9s
ABTX Abilene, Hawle 16.66 356 IAmb IAmb 02 16 34.4
comp=Z,56nm,0.8s
PLPT Palo Pinto 16.80 360 Pn Pn 02 16 30.1 -1.1
TREL Terrell 16.84 6 Pn 02 16 32.1 +0.4
TREL IAmb IAmb 02 16 35.4
comp=Z,31nm,0.8s
FW06 Azle 16.98 2 Pn Pn 02 16 32.4 -1.1
FW06 IAmb IAmb 02 16 41.2
comp=Z,26nm,0.8s
MNTX Cornudas Mount 16.98 339 Pn Pn 02 16 34.3 +0.7
CLN7 Carlsbad 7 17.16 344 P 02 16 37.4 -0.1
SN07 Snyder 07 17.25 353 IAmb IAmb 02 16 40.7
comp=Z,28nm,0.8s
POST Post 17.31 351 Pn Pn 02 16 36.8 -0.8
POST IAmb IAmb 02 16 42.4
comp=Z,31nm,0.8s
Z35A Perchaven, San 17.34 3 IAmb IAmb 02 16 44.9
comp=Z,32nm,1.0s
APMT Aspermont 17.40 355 Pn 02 16 39.4 +0.7
Z38A Mt. Pleasant 17.50 9 IAmb IAmb 02 16 46.7
comp=Z,34nm,0.9s
VBMS Vicksburg 17.67 22 IAmb IAmb 02 16 47.6
comp=Z,36nm,0.8s
CPRX Cap Rock 17.76 344 P 02 16 45.2 +0.9
143A Socs Landing, 17.81 19 Pn 02 16 42.6 -1.2
143A IAmb IAmb 02 17 16.8
comp=Z,22nm,0.7s
DKNS Dickens 17.82 353 IAmb IAmb 02 16 47.2
comp=Z,37nm,0.9s
MSTX Muleshoe 18.41 348 Pn 02 16 50.1 -1.2
X34A Smith Ranch, M 18.59 1 P P 02 16 53.0 -0.2
X34A IAmb IAmb 02 16 58.4
comp=Z,35nm,1.3s
121A Cookes Peak, D 18.65 334 P Pn 02 16 56.3 +1.9
121A IAmb IAmb 02 17 05.0
comp=Z,41nm,1.2s
AMTX Amarillo 19.12 351 IAmb IAmb 02 17 10.0
comp=Z,21nm,0.8s
SMWD Samnorwood 19.17 355 P P 02 17 00.0 +0.4
DUN6 Lazy B Ranch 19.25 331 P Pn 02 17 03.3 +1.8
DUN6 IAmb IAmb 02 17 09.4
comp=Z,38nm,0.8s
Y45A Yeager Farm, C 19.50 22 IAmb IAmb 02 17 10.0
comp=Z,58nm,1.1s
TUC Tucson 19.88 327 P Pn 02 17 09.7 +0.6
DEOK Depew 19.89 4 IAmb IAmb 02 17 13.3
comp=Z,33nm,0.9s
WHAR Wooly Hollow 20.00 14 IAmb IAmb 02 17 26.8
comp=Z,35nm,1.5s
TUL3 Leonard 20.02 6 P P 02 17 07.5 -1.3
TUL3 IAmb IAmb 02 17 15.6
comp=Z,37nm,0.8s
OK052 Battle Ridge R 20.02 3 IAmb IAmb 02 17 09.8
comp=Z,25nm,0.9s
OXF Oxford 20.13 22 IAmb IAmb 02 17 10.6
comp=Z,30nm,0.9s
QUOK Quay 20.20 4 IAmb IAmb 02 17 24.5
comp=Z,37nm,1.3s
ANMO Albuquerque 20.31 340 P Pn 02 17 13.7 -0.5
ANMO Albuquerque 20.31 340 P Pn 02 17 13.6 -0.5
comp=Z,0.3nm,0.3s,baz=241,slow=12,SNR=37
comp=Z,17nm,1.0s
TASM ASL Pad, Albuq 20.31 340 IAmb IAmb 02 17 20.2
comp=Z,16nm,0.9s
TASM ASL Pad, Albuq 20.31 340 IAmb IAmb 02 17 20.2
comp=Z,17nm,0.9s
OK048 Pawnee Station 20.43 3 P P 02 17 11.8 -1.5
OK038 West end E0370 20.46 359 P P 02 17 13.1 -0.6
OK038 IAmb IAmb 02 17 19.8
comp=Z,39nm,1.0s
FCAR Ozark Folk Cen 20.61 14 P P 02 17 13.6 -1.7
NOKA Waynoka 20.62 358 P P 02 17 14.7 -0.7
NOKA IAmb IAmb 02 17 22.4
comp=Z,43nm,1.1s
U38A Gravette 20.71 9 P P 02 17 17.1 +0.7
U38A IAmb IAmb 02 17 20.9
comp=Z,26nm,0.9s
214A Organ Pipe Nat 20.73 323 IAmb IAmb 02 17 29.2
comp=Z,19nm,1.1s
RTBA Rita Blanca 20.81 350 P P 02 17 18.0 +0.5
RTBA IAmb IAmb 02 17 24.8
comp=Z,30nm,1.0s
PIX Pinacate 20.83 321 P Pn 02 17 19.9 -0.2
T35A Sooner Cattle 20.95 4 P P 02 17 16.9 -2.1
T35A IAmb IAmb 02 17 27.2
comp=Z,22nm,0.9s
X48A Hartselle 21.01 27 P P 02 17 18.6 -1.0
PLAL Pickwick Lake 21.05 24 IAmb IAmb 02 17 26.2
comp=Z,17nm,0.9s
KAN01 Argonia South 21.14 1 IAmb IAmb 02 17 51.1
comp=Z,21nm,1.1s
GNAR Gosnell 21.26 19 P P 02 17 23.2 +0.9
X18A Snowflake 21.29 333 IAmb IAmb 02 17 32.4
comp=Z,36nm,1.0s
SFX San Felipe 21.35 318 P P 02 17 25.7 +2.5
SFX IAmb IAmb 02 17 34.2
comp=Z,16nm,1.0s
MGMO Mountain Grove 21.79 13 IAmb IAmb 02 17 36.2
comp=Z,40nm,1.1s
113A Mohawk Valley, 21.88 323 P P 02 17 31.4 +2.5
X16A Lo Mia Camp, P 21.89 330 IAmb IAmb 02 17 40.3
comp=Z,27nm,0.9s
GOGA Godfrey 21.94 35 IAmb IAmb 02 17 53.0
comp=Z,22nm,1.4s
Y52A Lilburn 21.96 33 IAmb IAmb 02 17 29.1
comp=Z,12nm,0.8s
V48A Smith Brothers 22.21 25 IAmb IAmb 02 17 32.2
comp=Z,21nm,1.0s

Y14A Wickenburg 22.32 326 IAmb IAmb 02 17 42.9
comp=Z,20nm,1.2s
R32A Long Quarter, 22.41 359 IAmb IAmb 02 17 39.3
comp=Z,22nm,0.8s
W50A Signal Mountai 22.41 29 IAmb IAmb 02 17 52.2
comp=Z,20nm,1.0s
CGM3 Cape Girardeau 22.60 18 IAmb IAmb 02 17 43.0
comp=Z,22nm,1.0s
ESJX Sierra Juarez 22.69 318 P P 02 17 40.2 +2.3
GLA Glamis 22.70 322 IAmb IAmb 02 17 47.8
comp=Z,29nm,1.2s
WUAZ Wupatki 22.76 331 IAmb IAmb 02 17 43.2
comp=Z,37nm,1.2s
CCM Cathedral Cave 22.89 14 P P 02 17 38.9 -0.8
CCM IAmb IAmb 02 17 45.1
comp=Z,26nm,1.0s
W52A Murphy 23.00 31 IAmb IAmb 02 17 40.4
comp=Z,21nm,1.0s
BLYC Blythe 23.02 323 IAmb IAmb 02 17 50.7
comp=Z,21nm,1.2s
FVM French Village 23.02 16 IAmb IAmb 02 17 42.2
comp=Z,17nm,0.9s
S44A Carbondale 23.09 18 IAmb IAmb 02 17 43.0
comp=Z,29nm,1.0s
SIUC Southern Illin 23.12 18 IAmb IAmb 02 17 47.8
comp=Z,25nm,0.9s
T47A Sharon Grove 23.18 23 IAmb IAmb 02 17 43.6
comp=Z,16nm,0.9s
U49A Red Boiling Sp 23.30 26 IAmb IAmb 02 17 44.2
comp=Z,14nm,0.9s
KSCO Kaye Shedlock' 23.31 351 IAmb IAmb 02 17 51.5
comp=Z,20nm,0.8s
BC3 Big Chuckawall 23.50 322 IAmb IAmb 02 17 54.8
comp=Z,25nm,1.3s
TKL Tuckaleechee C 23.52 31 P P 02 17 45.2 -0.9
TKL IAmb IAmb 02 17 58.9
comp=Z,17nm,1.2s
W13A Hualapai Mount 23.67 327 IAmb IAmb 02 17 57.6
comp=Z,13nm,1.1s
IRM Iron Mountain 23.67 323 IAmb IAmb 02 17 55.6
comp=Z,20nm,1.4s
PV01 Paradox Valley 23.91 340 IAmb IAmb 02 17 59.3
comp=Z,23nm,1.0s
U15A North Rim 23.93 331 IAmb IAmb 02 17 59.6
comp=Z,18nm,0.9s
PV13 Radium Mtn., P 24.02 339 IAmb IAmb 02 17 58.6
comp=Z,14nm,0.9s
PV05 Paradox Valley 24.04 339 IAmb IAmb 02 17 58.4
comp=Z,13nm,0.9s
PMD Palm Desert 24.05 320 P P 02 17 53.7 +2.4
BELC Belle Mtn. Jos 24.06 322 IAmb IAmb 02 18 00.1
comp=Z,23nm,1.4s
PFO Pinyon Flats O 24.08 320 P P 02 17 53.5 +1.8
PFO IAmb IAmb 02 18 01.5
comp=Z,17nm,1.4s
PFO Pinyon Flats O 24.08 320 LR LR 02 26 19.0
comp=Z,183nm,20.7s,baz=320,slow=34
PV03 Paradox Valley 24.11 339 IAmb IAmb 02 17 59.5
comp=Z,13nm,0.9s
Y57A Sumter 24.14 39 P P 02 17 50.8 -1.4
Y57A IAmb IAmb 02 17 52.7
comp=Z,23nm,0.9s
PV11 David Mesa, Pa 24.16 339 IAmb IAmb 02 17 59.9
comp=Z,16nm,0.8s
PV17 East Wray Mesa 24.18 339 IAmb IAmb 02 17 59.6
comp=Z,14nm,0.8s
PV16 Nyswonger Mesa 24.19 339 IAmb IAmb 02 18 00.2
comp=Z,12nm,0.9s
PV07 Paradox Valley 24.21 340 P P 02 17 54.1 +1.1
PV07 IAmb IAmb 02 18 01.0
comp=Z,28nm,1.1s
PV20 West Nyswonger 24.23 339 IAmb IAmb 02 18 00.5
comp=Z,20nm,0.9s
PV04 Paradox Valley 24.26 339 IAmb IAmb 02 18 01.1
comp=Z,24nm,1.0s
PV22 Blue Mesa, Par 24.35 340 IAmb IAmb 02 18 02.0
comp=Z,22nm,1.1s
KMSC Kings Mountain 24.40 35 IAmb IAmb 02 18 00.0
comp=Z,14nm,1.1s
PV21 Cone Mtn., Par 24.43 339 P P 02 17 56.5 +1.4
PV21 IAmb IAmb 02 18 04.8
comp=Z,9.5nm,0.9s
WCI Wyandotte Cave 24.58 23 P P 02 17 54.9 -1.2
ISCO Idaho Springs 24.63 346 IAmb IAmb 02 18 04.7
comp=Z,17nm,0.8s
KNB Kanab 24.66 331 IAmb IAmb 02 18 06.8
comp=Z,13nm,1.0s
OGNE Ogallala 25.14 353 P P 02 18 01.9 +0.7
S51A Beattyville 25.20 28 IAmb IAmb 02 18 02.8
comp=Z,15nm,0.9s
R50A Paris 25.42 26 IAmb IAmb 02 18 04.0
comp=Z,16nm,1.1s
GSC Goldstone, Bar 25.45 323 IAmb IAmb 02 18 14.2
comp=Z,11nm,1.1s
SRU San Rafael Swe 25.47 337 P P 02 18 06.3 +1.9
SRU IAmb IAmb 02 18 13.8
comp=Z,16nm,1.2s
Q16A Castle Valley 25.55 336 P P 02 18 07.0 +2.0
HAYD Hayden 25.72 344 IAmb IAmb 02 18 15.6
comp=Z,11nm,1.0s
P18A Preston Nutter 25.83 338 P P 02 18 08.9 +1.1
TMUT Trail Mountain 25.89 337 P P 02 18 10.1 +1.8
TMUT IAmb IAmb 02 18 16.3
comp=Z,10nm,0.9s
SFIN Lafayette 26.22 20 IAmb IAmb 02 18 16.5
comp=Z,19nm,1.0s
TPNV Topopah Spring 26.32 326 IAmb IAmb 02 18 23.2
comp=Z,10.0nm,0.9s
RDMU Red Mountain 26.44 340 IAmb IAmb 02 18 22.9
comp=Z,26nm,1.2s
Q51A Peebles 26.46 27 IAmb IAmb 02 18 14.1
comp=Z,13nm,0.8s
RUSC La Rusia 26.62 109 P P 02 18 18.6 +3.2
RUSC IAmb IAmb 02 18 49.6
comp=Z,17nm,1.4s
MPU Maple Canyon 26.68 337 IAmb IAmb 02 18 23.2
comp=Z,11nm,0.9s
BSUT Blindstream Ca 26.82 339 IAmb IAmb 02 18 24.8
comp=Z,13nm,0.9s
T57A Hurt 26.91 35 IAmb IAmb 02 18 19.8
comp=Z,12nm,0.9s
O49A Covington 27.03 24 IAmb IAmb 02 18 21.3
comp=Z,17nm,0.8s
DUG Dugway, Tooele 27.30 335 IAmb IAmb 02 18 29.8
comp=Z,12nm,0.9s
K22A Casper 27.55 347 IAmb IAmb 02 18 55.9
comp=Z,15nm,1.3s
TCUT Toone Canyon 27.56 338 IAmb IAmb 02 18 31.5
comp=Z,20nm,1.2s
PDAR Pinedale Array 28.44 342 P P 02 18 31.4 +0.3
PDAR Pinedale Array 28.44 342 P P 02 18 32.3 +1.2
comp=Z,1.3nm,0.8s,baz=145,slow=8.1,SNR=11
comp=Z,1.3nm,0.8s
NVAR Mina Array Bea 28.52 326 P P 02 18 33.5 +1.7
NVAR Mina Array Bea 28.52 326 P P 02 18 35.0 +3.1
comp=Z,1.7nm,0.8s,baz=154,slow=9.9,SNR=19
comp=Z,1.7nm,0.8s
ELK Elko 28.78 333 P P 02 18 36.3 +2.1
comp=Z,1.3nm,1.0s,baz=151,slow=7.4,SNR=8.1
comp=Z,1.3nm,1.0s
SNOW Snow King Moun 29.43 341 P P 02 18 41.3 +1.3
SNOW IAmb IAmb 02 18 48.6
comp=Z,11nm,1.1s
LOHW Long Hollow 29.52 342 IAmb IAmb 02 18 49.1
comp=Z,7.7nm,1.0s
FXWY Fox Creek 29.68 341 P P 02 18 43.0 +0.9
MPK Martis Peak 30.08 325 IAmb IAmb 02 18 55.0
comp=Z,21nm,1.5s
YHH Holmes Hill 30.67 342 P P 02 18 52.2 +1.2
MCMT McKenzie Canyo 31.33 340 P P 02 18 59.0 +2.3
BOZ Bozeman (W) 31.63 342 IAmb IAmb 02 19 08.2
comp=Z,7.0nm,1.2s
LRM Limekiln Ridge 32.09 341 P P 02 19 05.0 +1.6
MSO Missoula 33.45 340 IAmb IAmb 02 19 17.1
comp=Z,11nm,1.4s
G08A Pilot Rock 34.05 334 IAmb IAmb 02 19 27.8
comp=Z,8.1nm,1.0s
E09A Wood Farm, Sta 34.70 336 IAmb IAmb 02 19 32.4
comp=Z,5.2nm,0.9s
MXC Moxie City 35.64 334 P P 02 19 36.6 +2.6
MXC IAmb IAmb 02 19 43.3
comp=Z,11nm,1.2s
C09A Chrisman Ranch 35.81 337 IAmb IAmb 02 19 43.1
comp=Z,8.5nm,0.9s
LON Longmire 36.44 332 IAmb IAmb 02 19 48.7
comp=Z,6.5nm,1.0s
B08A Colville Reser 36.68 336 IAmb IAmb 02 19 50.3

comp=Z,9.6nm,1.4s
B04A Port Angeles 38.18 332 IAmb IAmb 02 20 03.7
comp=Z,12nm,1.0s
FFC Flin Flon 38.82 357 P **P** **02 20 00.5 -0.3**
FFC IAmb IAmb 02 20 07.0
comp=Z,11nm,1.0s
LLLB Lillooet 39.48 336 IAmb IAmb 02 20 14.0
comp=Z,9.4nm,0.9s
SCHQ Schefferville 45.77 25 P **P** **02 20 56.6 -0.8**
SCHQ Schefferville 45.77 25 P **P** **02 20 56.8 -0.7**
comp=Z,5.3nm,0.8s,baz=199,slow=6.7,SNR=3.8
comp=Z,5.3nm,0.8s
YKA Yellowknife Ar 47.91 350 P **P** **02 21 14.2 +0.1**
comp=Z,1.8nm,0.9s,baz=119,slow=9.2,SNR=4.0
comp=Z,1.8nm,0.9s
WTLY Watson Lake, Y 49.37 340 P **P** **02 21 27.3 +1.9**
MMPY Sheldon Lake, 52.05 341 P **P** **02 21 48.0 +2.4**
GLB Gilahina Butte 55.74 335 IAmb IAmb 02 22 16.0
comp=Z,7.5nm,0.9s
BCAR Beaver Creek A 55.91 338 P **P** **02 22 16.0 +2.2**
SCRK Sand Creek 57.24 338 P **P** **02 22 24.6 +1.2**
F28M Old Crow 58.16 343 P **P** **02 22 30.3 +0.6**
IL31 58.73 338 P **P** **02 22 34.7 +1.1**
ILAR Eielson Array 58.73 338 P **P** **02 22 34.4 +0.7**
ILAR Eielson Array 58.73 338 P **P** **02 22 33.9 +0.2**
comp=Z,2.6nm,1.0s,baz=144,slow=5.0,SNR=22
comp=Z,2.6nm,1.0s
RND Reindeer 58.77 336 P **P** **02 22 35.1 +1.0**
TRF Thorofare Moun 59.36 336 P **P** **02 22 39.1 +0.9**
H24K Nodor Dome 59.66 339 IAmb IAmb 02 22 42.4
comp=Z,5.8nm,1.0s
I23K Minto, Yukon-K 59.83 338 P **P** **02 22 42.5 +1.3**
E23K Chandalar 61.41 340 **P** **02 22 53.1 +1.0**
L18K Granite Mounta 61.51 333 P **P** **02 22 54.0 +1.3**
TOLK Toolik Lake Re 61.70 341 P **P** **02 22 55.0 +1.0**
TOLK IAmb IAmb 02 22 55.6
comp=Z,3.6nm,0.8s
J19K Poorman 61.73 335 P **P** **02 22 54.9 +0.6**
D22K Ayikyak River 62.80 341 P **P** **02 23 02.5 +1.2**
E19K Redstone River 63.71 338 P **P** **02 23 08.8 +1.4**
E19K IAmb IAmb 02 23 15.5
comp=Z,7.3nm,1.1s
B20K Meade River 64.72 341 P **P** **02 23 14.5 +0.6**
DLV Lat 141.69 315 PKPdf **PKPdf** **02 32 09.8 +0.9**

*IDC **06** 02:16:12.6±1.0,0.°93N×122.°11E,h0km,mb3.8/6, mbtmp3.8/7,ML4.1/1,MS3.8/2,Error ellipse: s-maj=115.4km s-min=17.4km az=65.0*
*DJA **06** 02:16:17.7±0.6,1.°1N±3.°×12.°2E±.°,h12km±4km,M4.4/17, mB5.0/3,mb4.6/6,MLv4.3/17,Mw(mB)4.3/3*
ISC 06 02:16:18.8±0.9,**1.01N**±0.°08×**122.°12E**±0.°08,**h44**km,**n20,** σ1§**46**/19,**mb3.8/6,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.56**	**199**	P	**Pn**	**02 16 30.4**	**-0.1**
MRSI				S	**Sn**	**02 16 38.2**	**-0.6**
KMSI	**Cibinong**	**1.91**	**103**	P	**Pn**	**02 16 50.7**	**+1.8**
APSI	**Ampana**	**1.96**	**194**	P	**Pn**	**02 16 50.6**	**+0.9**
LUWI	**Luwuk**	**2.14**	**162**	P	**Pn**	**02 16 53.8**	**+1.7**
SGSI	**Sangihe**	**4.32**	**52**	P	**Pn**	**02 17 20.3**	**-1.7**
SANI	**Sanana**	**4.92**	**128**	P	**Pn**	**02 17 30.2**	**0.0**
KDI	**Kendari**	**4.96**	**174**	P	**Pn**	**02 17 32.3**	**+1.5**
SPSI	**Sidrap Palu** 0.1nm1μm38nm,0.8s	**5.47**	**205**	P	**Pn**	**02 17 39.5**	**+1.6**
BNSI	**Bone** 0.2nm47nm,0.7s	**5.74**	**201**	P	**Pn**	**02 17 43.2**	**+1.7**
NLAI	**Namlea** 40nm,0.5s	**6.52**	**130**	P	**Pn**	**02 17 54.0**	**+1.7**
BKSI	**Bulukumba**	**6.60**	**198**	P	**Pn**	**02 17 54.9**	**+1.6**
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=348,slow=8.4,SNR=10 1.9nm,0.5s	**19.30**	**170**	P	**P**	**02 20 37.7**	**-2.5**
WRA	**Warramunga Arr** 4.9nm,0.7s,baz=328,slow=10,SNR=41 4.9nm,0.7s	**24.02**	**151**	P	**P**	**02 21 28.3**	**-1.6**
ASAR	**Alice Springs** 0.5nm,0.4s,baz=341,slow=8.1,SNR=8.9 0.5nm,0.4s	**27.07**	**156**	P	**P**	**02 21 56.8**	**-0.7**
JCJ	**Chichijima** comp=Z,55nm,19.6s,baz=213,slow=39	**32.31**	**35**	LR	LR	02 37 24.9	
STKA	**Stephens Creek** 2.0nm,0.7s,baz=314,slow=15,SNR=3.3 2.0nm,0.7s	**37.55**	**152**	P	**P**	**02 23 29.1**	**+0.1**
SONM	**Songino Array** 0.8nm,0.7s,baz=162,slow=10.0,SNR=2.6 0.8nm,0.7s	**48.60**	**346**	P	**P**	**02 24 58.2**	**0.0**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=129,slow=7.2,SNR=4.2 0.4nm,0.5s	**57.30**	**328**	P	**P**	**02 26 03.2**	**+1.0**
KURBB	**Kurchatov Arra** 0.4nm,0.7s,baz=122,slow=7.2,SNR=4.8 0.4nm,0.7s	**61.66**	**330**	P	**P**	**02 26 32.5**	**+0.3**
TIXI	**Tiksi** comp=Z,230nm,21.5s,baz=14,slow=37	**70.67**	**2**	LR	LR	03 00 20.5	

*NOU **06** 02:16:39.5,43.°21S×170.°86E,h8km,MLv3.8/8,South Island, New Zealand*
*WEL **06** 02:16:39.2±0.4,43.°3S±3.°×17.°1E±.°,h5km,M3.6/27,ML3.6/8, MLv3.6/27,Error ellipse: s-maj=4.0km s-min=3.0km az=58.3,confirmed*
ISC 06 02:16:39.6±0.9,**43.°20S**±0.°02×**170.°85E**±0.°03,**h7**km±10km,**n66,** σ0§**89**/70,**South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	**Waitaha Valley**	**0.15**	**328**	P	**Pg**	**02 16 42.4**	**-0.2**
WVZ				S	**Sg**	**02 16 44.4**	**-0.4**
WVAS	**Waitaha Valley**	**0.15**	**328**	P	**Pg**	**02 16 42.4**	**-0.3**
WVAS				S	**Sg**	**02 16 44.7**	**-0.1**
HAFS	**Harihari Fire**	**0.22**	**283**	P	**Pg**	**02 16 44.2**	**+0.3**
HAFS				S	**Sg**	**02 16 47.4**	**+0.6**
KOKS	**Kokatahi**	**0.38**	**35**	P	**Pg**	**02 16 46.4**	**-0.5**
HMCS	**Hokitika Medic**	**0.49**	**10**	P	**Pg**	**02 16 49.1**	**+0.1**
HMCS				S	**Sg**	**02 16 56.0**	**+0.5**
FJDS	**Franz Josef DO**	**0.52**	**248**	P	**Pg**	**02 16 49.5**	**-0.1**
RPZ	**Rata Peaks**	**0.54**	**164**	P	**Pg**	**02 16 50.2**	**+0.3**
RPZ	**Rata Peaks**	**0.54**	**164**	P	**Pg**	**02 16 50.4**	**+0.5**
RPZ				S	**Sg**	**02 16 57.7**	**+0.8**
APPS	**Arthurs Pass P**	**0.59**	**65**	P	**Pg**	**02 16 50.4**	**-0.5**
MHCZ	**Mount Hutt**	**0.62**	**122**	P	**Pg**	**02 16 51.9**	**+0.3**
INZ	**Inchbonnie**	**0.65**	**43**	P	**Pg**	**02 16 51.1**	**-0.9**
ARCZ	**Arundel**	**0.79**	**162**	P	**Pg**	**02 16 54.9**	**+0.2**
FOZ	**Fox Glacier**	**0.82**	**246**	P	**Pg**	**02 16 55.1**	**-0.3**
OXZ	**Oxford**	**0.88**	**99**	P	**Pg**	**02 16 56.6**	**+0.2**
WACZ	**Wakanui South**	**1.04**	**136**	P	**Pb**	**02 16 59.9**	**+0.1**
RACZ	**Rakaia**	**1.08**	**120**	P	**Pb**	**02 17 00.7**	**+0.1**
LTZ	**Lake Taylor**	**1.13**	**69**	P	**Pg**	**02 17 00.8**	**-0.4**
TMZ	**Timaru**	**1.19**	**174**	P	**Pg**	**02 17 02.2**	**-0.2**
LBZ	**Lake Benmore**	**1.28**	**202**	P	**Pn**	**02 17 03.1**	**-0.7**
AMCZ	**Amberley**	**1.32**	**90**	P	**Pg**	**02 17 04.9**	**0.0**
MQZ	**McQueen's Vall**	**1.41**	**112**	P	**Pn**	**02 17 04.3**	**-1.3**
DSZ	**Denniston Nort**	**1.62**	**26**	P	**Pn**	**02 17 07.3**	**-1.2**
GVZ	**Greta Valley S**	**1.62**	**82**	P	**Pn**	**02 17 07.9**	**-0.7**
AKCZ	**Akaroa Harbour**	**1.65**	**115**	P	**Pn**	**02 17 08.4**	**-0.5**
OKCZ	**Okains Bay**	**1.69**	**109**	P	**Pn**	**02 17 09.3**	**-0.2**
JCZ	**Jackson Bay**	**1.73**	**239**	P	**Pn**	**02 17 09.4**	**-0.7**
JCZ	**Jackson Bay**	**1.73**	**239**	P	**Pn**	**02 17 09.5**	**-0.7**
ODZ	**Otahua Downs**	**1.85**	**184**	P	**Pn**	**02 17 11.5**	**-0.2**
ODZ	**Otahua Downs**	**1.85**	**184**	P	**Pn**	**02 17 11.7**	**+0.1**
THZ	**Tophouse**	**2.09**	**47**	P	**Pn**	**02 17 15.2**	**+0.1**
WKZ	**Wanaka**	**2.09**	**218**	P	**Pn**	**02 17 14.8**	**-0.3**
KHZ	**Kahutara**	**2.13**	**69**	P	**Pn**	**02 17 15.0**	**-0.5**
KHZ	**Kahutara**	**2.13**	**69**	P	**Pn**	**02 17 15.1**	**-0.5**
MRNZ	**Matariki Terra**	**2.29**	**39**	P	**Pn**	**02 17 16.2**	**+0.5**
EAZ	**Earnscleugh**	**2.31**	**208**	P	**Pn**	**02 17 17.5**	**-0.5**
MSZ	**Milford Sound**	**2.57**	**234**	P	**Pb**	**02 17 26.4**	**+0.4**
TKNZ	**Takaka Hill**	**2.68**	**37**	P	**Pn**	**02 17 22.9**	**-0.2**
QRZ	**Quartz Range**	**2.68**	**28**	P	**Pn**	**02 17 22.3**	**-0.8**
QRZ	**Quartz Range**	**2.68**	**28**	P	**Pn**	**02 17 22.3**	**-0.8**
BSWZ	**Blackbirch Sta**	**2.69**	**58**	P	**Pn**	**02 17 25.1**	**+1.9**
HHSZ	**Highcliff Hill**	**2.69**	**184**	P	**Pg**	**02 17 29.7**	**-1.4**
NNZ	**Nelson**	**2.73**	**44**	P	**Pn**	**02 17 24.7**	**+0.9**
TUZ	**Tuapeka**	**2.89**	**197**	P	**Pn**	**02 17 26.2**	**+0.3**
TUWZ	**Tuamarina**	**2.90**	**53**	P	**Pn**	**02 17 28.0**	**+1.9**
MLZ	**Mavora Lakes**	**2.92**	**221**	P	**Pn**	**02 17 27.2**	**+0.8**
TCW	**Tory Channel**	**3.23**	**53**	P	**Pn**	**02 17 32.2**	**+1.6**
DUWZ	**D'Urville Isla**	**3.32**	**45**	P	**Pn**	**02 17 33.6**	**+1.7**
SYZ	**Scrubby Hill**	**3.55**	**199**	P	**Pn**	**02 17 34.4**	**-0.6**
SYZ	**Scrubby Hill**	**3.55**	**199**	P	**Pn**	**02 17 34.5**	**-0.6**
MSWZ	**Moikau Station**	**3.72**	**63**	P	**Pn**	**02 17 36.0**	**-1.4**
KIW	**Kapiti Island**	**3.83**	**54**	P	**Pn**	**02 17 38.1**	**-0.8**
OGWZ	**Otaki Gorge**	**4.01**	**55**	P	**Pn**	**02 17 41.3**	**0.0**
APZ	**The Paps**	**4.16**	**208**	P	**Pn**	**02 17 41.8**	**-1.7**
PYZ	**Puysegur Point**	**4.20**	**224**	P	**Pn**	**02 17 44.0**	**+0.1**
MRZ	**Mangatainoka R**	**4.35**	**56**	P	**Pn**	**02 17 45.1**	**-0.9**
NBEZ	**Newall Road No**	**4.54**	**31**	P	**Pn**	**02 17 49.0**	**+0.4**
KHEZ	**Kahui Hut**	**4.58**	**33**	P	**Pn**	**02 17 49.9**	**+0.7**
KHEZ	**Kahui Hut**	**4.58**	**33**	P	**Pn**	**02 17 50.0**	**+0.8**
PREZ	**Palmer Road**	**4.59**	**34**	P	**Pn**	**02 17 50.3**	**+0.9**
NEZ	**North Egmont**	**4.63**	**33**	P	**Pn**	**02 17 51.5**	**+1.5**
PKE	**Pukeiti**	**4.65**	**32**	P	**Pn**	**02 17 51.0**	**+0.8**
VRZ	**Vera Road**	**5.03**	**37**	P	**Pn**	**02 17 56.5**	**+1.2**
WPHZ	**Waipukurau**	**5.23**	**55**	P	**Pn**	**02 17 58.5**	**+0.3**
TWVZ	**Taurewa**	**5.39**	**42**	P	**Pn**	**02 17 57.6**	**-2.8**
WTVZ	**West Tongariro**	**5.43**	**43**	P	**Pn**	02 18 05.6	+4.7
KRVZ	**Karewarewa**	**5.47**	**43**	P	**Pn**	**02 18 03.5**	**+2.0**

*PRE **06** 02:20:19.8±0.9,20.°75S×32.°74E,h5km,ML2.5*
ISC 06 02:20:24.6±3.6,**20.°8S**±0.°1×**32.°4E**±0.°1,**h10**km,**n7,** σ1§**40**/14,**Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUSN	**Musina, Limpop**	**2.77**	**238**	*e*P	**Pn**	**02 21 10.8**	**+1.6**
MUSN				*e*S	**Sb**	**02 21 47.0**	**-1.4**
MUSN				IAML		02 21 59.6	
	comp=Z,39nm,0.4s						
PILG	**Pilgrimsrest,**	**4.36**	**201**	*e*P	**Pn**	**02 21 30.5**	**-0.7**
PILG				*e*S	**Sn**	**02 22 22.5**	**+0.3**
PILG				IAML		02 22 55.7	
	comp=Z,8.6nm,0.5s						
BROLN	**Tlhalogang**	**4.75**	**266**	*i* P	**Pn**	**02 21 36.9**	**+0.5**
BROLN				*i* S	**Sn**	**02 22 30.0**	**-1.7**
BROLN				IAML		02 22 56.8	
	comp=N,32nm,0.8s						
MREMI	**Moremi**	**4.92**	**249**	*i* P	**Pn**	**02 21 39.4**	**+0.6**
MREMI				*i* S	**Sn**	**02 22 38.3**	**+2.4**
MREMI				IAML		02 23 05.7	
	comp=N,126nm,0.3s						
LEPH	**Lephalale, Lim**	**5.22**	**234**	*e*P	**Pn**	**02 21 43.6**	**+0.8**
LEPH				*e*S	**Sn**	**02 22 45.3**	**+2.1**
LEPH				IAML		02 23 18.7	
	comp=Z,14nm,0.5s						
LPHEP	**Lephephe**	**6.57**	**246**	*i* P	**Pn**	**02 22 00.6**	**-0.9**
LPHEP				*i* S	**Sn**	**02 23 15.3**	**-1.3**
LPHEP				IAML		02 24 00.3	
	comp=N,22nm,3.1s						
LBTB	**Lobatse**	**7.53**	**235**	*e*P	**Pn**	**02 22 14.9**	**+0.3**
LBTB				*e*S	**Sn**	**02 23 39.6**	**-0.5**
LBTB				IAML		02 24 34.2	
	comp=Z,3.6nm,0.6s						

*NEIC **06** 02:22:23.8±1.8,25.°12N±0.°08×122.°95E±0.°08, h171km±5km,mb4.2/35,Error ellipse: s-maj=12.2km s-min=9.6km az=216.0*
*JMA **06** 02:22:24.6±0.3,25.°N±3.°×122.°9E±0.°8,h169km±2km, MV4.2/17,NW OFF ISHIGAKIJIMA IS*
*IDC **06** 02:22:25.7±3.0,25.°23N×123.°07E,h199km±29km, mb3.6/26,mbtmp4.1/29,Error ellipse: s-maj=16.7km s-min=9.1km az=67.0*
ISC 06 02:22:23.3±0.6,**25.°09N**±0.°05×**122.°93E**±0.°03,**h176**km±5km, **n117,** σ0§**87**/131,**mb4.1**/43,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.63**	**174**		**Pn**	**02 22 48.5**	**+0.4**
YOJ				Sn	**Sn**	**02 23 06.5**	**-0.8**
YOJ	**Yonaguni jima**	**0.63**	**174**	P	**Pn**	**02 22 48.6**	**+0.4**
YOJ	**Yonaguni jima**	**0.63**	**174**	*e*P	**Pn**	**02 22 48.6**	**+0.4**
YOJ				*e*S	**Sn**	**02 23 07.0**	**-0.3**
JYNG	**Yonagunijimaku**	**0.63**	**179**	P	**Pn**	**02 22 48.7**	**+0.5**
JYNG				*e*S	**Sn**	**02 23 06.9**	**-0.5**
IRIF	**Iriomote-Funau**	**1.04**	**136**	P	**Pn**	**02 22 51.2**	**+0.4**
IRIF				*e*S	**Sn**	**02 23 11.0**	**-1.1**
JKRS	**Kuro-shima**	**1.29**	**131**	*e*P	**Pn**	**02 22 53.9**	**+0.9**
JKRS				*e*S	**Sn**	**02 23 15.2**	**-0.7**
HATJ	**Hateruma jima**	**1.30**	**142**	*e*P	**Pn**	**02 22 54.0**	**+1.0**
HATJ				*e*S	**Sn**	**02 23 16.1**	**+0.2**
JIJ	**Ishigaki jima**	**1.31**	**123**	P	**Pn**	**02 22 53.6**	**+0.4**
JIJ				*e*S	**Sn**	**02 23 14.5**	**-1.7**
TATO	**Taipei**	**1.32**	**265**	Pn	**Pn**	**02 22 54.1**	**+1.0**
TATO				Sn	**Sn**	**02 23 15.0**	**-1.2**
TATO	**Taipei**	**1.32**	**265**	P	**Pn**	**02 22 54.5**	**+1.4**
TATO	**Taipei**	**1.32**	**265**	S	**Sn**	**02 23 16.0**	**-0.2**
JISG	**Ishigakijimahi**	**1.35**	**111**	P	**Pn**	**02 22 53.9**	**+0.5**
JISG				*e*S	**Sn**	**02 23 15.6**	**-1.0**
YHNB	**Yeheng**	**1.48**	**254**	Pn	**Pn**	**02 22 55.5**	**-0.7**
YHNB	**Yeheng**	**1.48**	**254**	P	**Pn**	**02 22 55.6**	**+0.9**
YHNB	**Yeheng**	**1.48**	**254**	S	**Sn**	**02 23 18.8**	**-0.2**
NACB	**Ninganchiao**	**1.52**	**234**	Pn	**Pn**	**02 22 55.0**	**0.0**
NACB	**Ninganchiao**	**1.52**	**234**	P	**Pn**	**02 22 55.2**	**+0.1**
NACB	**Ninganchiao**	**1.52**	**234**	S	**Sn**	**02 23 19.1**	**-0.5**
JTJ	**Tarama**	**1.67**	**105**	P	**Pn**	**02 22 57.5**	**+1.0**
JTJ				*e*S	**Sn**	**02 23 21.6**	**-0.5**
JIRB	**Irabujima**	**2.05**	**97**	*e*S	**Sn**	**02 23 28.0**	**-1.4**
JIKM	**Ikemajima**	**2.10**	**94**	*e*P	**Pn**	**02 23 02.3**	**+1.1**
JIKM				*e*S	**Sn**	**02 23 29.8**	**-0.7**
JMJ	**Miyako jima 2**	**2.16**	**97**	P	**Pn**	**02 23 03.6**	**+1.8**
JMJ	**Miyako jima 2**	**2.16**	**97**	S	**Sn**	**02 23 32.0**	**+0.4**
JMJ2	**Miyako jima3**	**2.20**	**98**	*e*P	**Pn**	**02 23 03.2**	**+0.9**
JMJ2				*e*S	**Sn**	**02 23 31.7**	**-0.8**
SSLB	**Suanglung**	**2.22**	**235**	Pn	**Pn**	**02 23 03.3**	**+0.7**
SSLB	**Suanglung**	**2.22**	**235**	P	**Pn**	**02 23 03.7**	**+1.1**
YULB	**Yu-li**	**2.25**	**222**	Pn	**Pn**	**02 23 02.7**	**-0.2**
YULB	**Yu-li**	**2.25**	**222**	P	**Pn**	**02 23 02.7**	**-0.2**
JOGS	**Gusukube**	**2.27**	**98**	*e*S	**Sn**	**02 23 33.3**	**-0.6**
TPUB	**Ta-pu**	**2.75**	**230**	Pn	**Pn**	**02 23 09.8**	**+0.9**
TPUB	**Ta-pu**	**2.75**	**230**	P	**Pn**	**02 23 10.0**	**+1.2**
TPUB	**Ta-pu**	**2.75**	**230**	S	**Sn**	**02 23 43.5**	**-0.7**
TWGBT	**Beinan**	**2.82**	**217**	P	**Pn**	**02 23 09.9**	**+0.3**
TWGBT	**Beinan**	**2.82**	**217**	S	**Sn**	**02 23 44.7**	**-1.0**
TWG	**Pinlang**	**2.83**	**217**	Pn	**Pn**	**02 23 09.4**	**-0.3**
KNMB	**Chin-men Tao**	**4.18**	**262**	Pn	**Pn**	**02 23 27.2**	**+0.7**
KSAR	**Wonju Array Be**	**13.02**	**18**		**P**	**02 25 25.2**	**-0.4**
KSRS	**Korea Array** 26nm,0.6s,baz=198,slow=12,SNR=60	**13.04**	**18**	P	**Pn**	**02 25 22.8**	**+0.7**
KS19	**Wonju Array Si**	**13.07**	**18**	Pn	**Pn**	**02 25 22.7**	**+0.3**
LYN	**LuoYang**	**13.09**	**319**	P	**P**	**02 25 29.3**	**+2.9**
LYN				pmax	pmax		
	comp=Z,41nm,0.8s						
MJAR	**Matsushiro Arr**	**17.37**	**45**	P	**P**	**02 26 13.5**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=242,slow=9.6,SNR=4.9						
HHC	**Hu-ho-hao-te**	**18.36**	**332**	*e*P	**Pn**	**02 26 27.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,35nm,5.5s						
LZDM	**Lanzhou Array** 1.0nm,0.3s,baz=108,slow=14,SNR=1.6	**19.77**	**308**	P	**Pn**	**02 26 42.5**	**-1.2**
USRK	**Ussuriysk Ar.** comp=Z,9.9nm,0.7s,baz=205,slow=10,SNR=14	**20.45**	**19**	P	**P**	**02 26 46.4**	**-0.6**
	comp=Z,9.9nm,0.7s						
HILR	**Hailar Array B** comp=Z,2.5nm,0.5s,baz=165,slow=12,SNR=3.8	**24.55**	**355**	P	**P**	**02 27 24.5**	**-2.2**
	comp=Z,2.5nm,0.5s						
SONM	**Songino Array**	**26.20**	**334**	P	**P**	**02 27 41.8**	**+0.1**
SONM	**Songino Array** comp=Z,1.7nm,0.7s,baz=144,slow=10,SNR=7.7	**26.20**	**334**	P	**P**	**02 27 41.6**	**-0.2**
	comp=Z,1.7nm,0.7s						
WMQ	**Urumqi**	**34.21**	**312**	*e*P	P	02 28 57.5	+5.4
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				LR	LR		
	comp=Z,260nm,18.1s						
YAK	**Yakutsk**	**37.21**	**5**	P	**P**	**02 29 16.3**	**-1.1**
PETK	**Petropavlovsk-**	**38.23**	**34**	P	**P**	**02 29 25.7**	**-0.4**
PETK	**Petropavlovsk-** comp=Z,3.3nm,1.0s,baz=221,slow=5.7,SNR=1.1	**38.23**	**34**	P	**P**	**02 29 23.9**	**-2.1**
	comp=Z,3.3nm,1.0s						
MKAR	**Makanchi Array** comp=Z,2.7nm,0.4s,baz=100,slow=9.7,SNR=47	**38.82**	**314**	P	**P**	**02 29 31.4**	**+0.3**
	comp=Z,2.7nm,0.4s						
ZAA0	**Zalesovo Array**	**40.38**	**326**	P	**P**	**02 29 43.6**	**-0.1**
ZAA0				IAmb	IAmb	02 29 43.8	
	comp=Z,3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**40.38**	**326**	P	**P**	**02 29 43.5**	**-0.2**
ZALV	**Zalesovo Beam** comp=Z,3.4nm,0.5s,baz=118,slow=8.6,SNR=12	**40.38**	**326**	P	**P**	**02 29 43.1**	**-0.6**
	comp=Z,3.4nm,0.5s						
KDJ	**Kajisay**	**41.20**	**306**	P	**P**	**02 29 51.2**	**+0.3**
KDJ				IAmb	IAmb	02 30 12.9	
	comp=Z,15nm,1.1s						
KURK	**Kurchatov**	**42.44**	**319**	P	**P**	**02 30 00.4**	**-0.2**
KURK				IAmb	IAmb	02 30 01.9	
	comp=Z,7.6nm,1.1s						
KURBB	**Kurchatov Arra** comp=Z,2.5nm,0.7s,baz=111,slow=8.3,SNR=17	**42.47**	**319**	P	**P**	**02 30 00.2**	**-0.6**
	comp=Z,2.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**43.01**	**176**	P	**P**	**02 30 05.3**	**-0.2**
FITZ	**Fitzroy Crossi** comp=Z,1.3nm,0.4s,baz=3.6,slow=8.1,SNR=8.4	**43.01**	**176**	P	**P**	**02 30 06.5**	**+1.1**
	comp=Z,1.3nm,0.4s						
COEN	**Coen**	**43.54**	**151**	P	**P**	**02 30 11.1**	**+1.3**
COEN				IAmb	IAmb	02 30 12.3	
	comp=Z,9.4nm,1.0s						
WB0	**Warramunga Arr**	**45.96**	**165**	P	**P**	**02 30 29.4**	**+0.6**
WB0				IAmb	IAmb	02 30 37.3	
	comp=Z,6.4nm,1.1s						
MBWA	**Marble Bar**	**46.07**	**184**	P	**P**	**02 30 29.2**	**-0.5**
MBWA				IAmb	IAmb	02 30 30.1	
	comp=Z,4.9nm,0.5s						
WRA	**Warramunga Arr**	**46.11**	**165**	P	**P**	**02 30 29.3**	**-0.7**
WRA	**Warramunga Arr** comp=Z,4.0nm,0.5s,baz=348,slow=8.8,SNR=59	**46.11**	**165**	P	**P**	**02 30 31.1**	**+1.0**
	comp=Z,4.0nm,0.5s						
WR8	**Warramunga Arr**	**46.16**	**165**	P	**P**	**02 30 31.3**	**+0.8**
KK31	**Karatay Array**	**46.20**	**306**	P	**P**	**02 30 31.9**	**+1.2**
KK31				IAmb	IAmb	02 30 32.4	
	comp=Z,2.7nm,0.4s						
KKAR	**Karatay Array**	**46.20**	**306**	P	**P**	**02 30 31.6**	**+1.0**
PSA00	**Pilbara Seismi**	**46.48**	**184**	P	**P**	**02 30 32.5**	**-0.4**
PSA00				IAmb	IAmb	02 30 39.2	
	comp=Z,7.0nm,1.1s						
PSA00	**Pilbara Seismi**	**46.48**	**184**	P	**P**	**02 30 33.1**	**+0.2**
PSA00				IAmb	IAmb	02 30 33.6	
	comp=Z,2.2nm,0.8s						
TIXI	**Tiksi**	**46.72**	**3**	P	**P**	**02 30 33.6**	**-0.5**
TIXI				IAmb	IAmb	02 30 34.8	
	comp=Z,4.4nm,0.7s						
BVAR	**Borovoye Array** comp=Z,1.6nm,0.5s,baz=105,slow=8.4,SNR=7.7	**48.00**	**320**	P	**P**	**02 30 44.3**	**0.0**
BVAR				PcP	**PcP**	**02 32 09.4**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=116,slow=3.4,SNR=3.6 comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**49.62**	**167**	P	**P**	**02 30 57.5**	**+0.5**
ASAR					**PcP**	**02 32 15.7**	**-0.1**
ASAR	**Alice Springs** comp=Z,1.1nm,0.8s,baz=345,slow=7.3,SNR=9.7	**49.62**	**167**	P	**P**	**02 30 58.0**	**+1.0**
ASAR				PcP	**PcP**	**02 32 15.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=341,slow=3.3,SNR=4.1 comp=Z,1.1nm,0.8s						
AB31	**Akbulak array**	**53.96**	**314**	P	**P**	**02 31 29.5**	**+0.7**
AB31				IAmb	IAmb	02 31 30.2	
	comp=Z,3.5nm,0.7s						
ABKAR	**Akbulak array**	**53.96**	**314**	P	**P**	**02 31 29.2**	**+0.4**
AKTO	**Aktyubinsk** comp=Z,0.5nm,0.3s,baz=75,slow=7.5,SNR=5.8 comp=Z,0.5nm,0.3s	**55.25**	**315**	P	**P**	**02 31 37.5**	**-0.6**
ARTI	**Arti**	**55.45**	**322**	P	**P**	**02 31 38.9**	**-0.5**
ARTI				IAmb	IAmb	02 31 39.6	
	comp=Z,3.3nm,0.8s						
ARTI	**Arti** comp=Z,1.7nm,0.6s,baz=158,slow=5.4,SNR=3.9 comp=Z,1.7nm,0.6s	**55.45**	**322**	P	**P**	**02 31 38.5**	**-0.8**
SPIA	**Saint Paul Isl**	**56.77**	**37**	P	**P**	**02 31 47.1**	**-1.6**
BBOO	**Buckleboo**	**58.92**	**167**	P	**P**	**02 32 04.6**	**+0.7**
STKA	**Stephens Creek**	**59.38**	**162**	P	**P**	**02 32 08.0**	**+0.9**
STKA	**Stephens Creek** comp=Z,3.0nm,0.7s,baz=14,slow=4.3,SNR=3.2 comp=Z,3.0nm,0.7s	**59.38**	**162**	P	**P**	**02 32 07.6**	**+0.5**
L14K	**Kuka Creek**	**60.85**	**32**	P	**P**	**02 32 18.4**	**+1.6**
C19K	**Lookout Ridge**	**62.35**	**23**	P	**P**	**02 32 28.3**	**+1.5**
G18K	**Tagagawik**	**62.66**	**27**	P	**P**	**02 32 29.6**	**+0.8**
E19K	**Redstone River**	**63.21**	**25**	P	**P**	**02 32 33.7**	**+1.3**
E19K				IAmb	IAmb	02 33 06.5	
	comp=Z,6.2nm,1.1s						
J19K	**Poorman**	**64.03**	**29**	P	**P**	**02 32 39.2**	**+1.4**
D22K	**Ayikyak River**	**64.84**	**23**	P	**P**	**02 32 44.4**	**+1.3**

KRMR	Karymshinskiy	1.46	155	eP		Pn	02 45 13.9	+0.3
KRMR				eS		S	02 45 43.8	+0.4
DALK	Dalny	1.49	138	eP		Pn	02 45 14.1	+0.3
NLC	Nalytchevo	1.65	126	eP		Pn	02 45 15.0	-0.1
NLC				eS		S	02 45 45.9	-0.2
MTVR	Mutnovka	1.79	159	eP		Pn	02 45 17.6	+1.1
KZV	Kizimen	2.08	61	eP		Pn	02 45 21.6	+2.6
MKZ	Mys Kozlova	2.73	80	eP		Pn	02 45 24.9	-0.2
KBTR	Krutoberegovo	3.87	55	eP		Pn	02 45 38.9	+1.3
KBTR				eS		S	02 46 27.3	+0.3
ILAR	Eielson Array 0.4nm,0.8s,baz=274,slow=10.0,SNR=6.3 0.4nm,0.8s	29.35	46	P		P	02 50 13.7	-1.3
KURBB	Kurchatov Arra 1.6nm,0.2s,baz=51,slow=7.7,SNR=2.4 1.6nm,0.2s	45.77	299	P		P	02 52 31.7	-0.3
MKAR	Makanchi Array 0.3nm,0.4s,baz=57,slow=6.8,SNR=5.2 0.3nm,0.4s	46.10	293	P		P	02 52 34.2	-0.4
FINES	FINESS Array B 2.5nm,0.9s,baz=33,slow=6.9,SNR=1.5 2.5nm,0.9s	58.42	335	P		P	02 54 04.0	-0.6
TXAR	Lajitas Array 0.1nm,0.3s,baz=304,slow=5.9,SNR=5.1 0.1nm,0.3s	71.83	65	P		P	02 55 31.1	-0.1

*GCG **06** 02:52:59.9±1.6, 15.06N×94.38W, h35km±29km, MD4.1, ML4.2*
*CATAC **06** 02:53:00.1±1.1, 15°N±6°×9°4W±°, h18km±10km, M4.0/6, MLv4.0/6, Error ellipse: s-maj=16.0km s-min=6.0km az=43.7, confirmed*
*MEX **06** 02:53:03.4±0.9, 14.99N×94.06W, h12km±27km, MD4.4*
ISC 06 02:52:57.3±2.8, 14°90N±0.05°×94°15W±0.03, h11km±19km, n44, σ1s99/75, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCIG		1.20	48	eP			Pb	02 53 20.3	+0.2
PCIG				eS			Sb	02 53 34.1	-1.5
THIG		1.82	89	eP			Pn	02 53 29.7	+1.2
THIG				eS			Sn	02 53 50.1	-1.4
PATR	El Naranjo	1.86	83	eP			Pn	02 53 30.6	+1.3
PATR				eS			Sn	02 53 51.8	-1.2
PAVE	Pavencul	1.93	81	eP			Pn	02 53 31.9	+1.6
PAVE				eS			Sn	02 53 52.7	-1.9
CHUJ	Union Juarez	1.98	84	eP			Pn	02 53 32.6	+1.6
CHUJ				eS			Sn	02 53 54.6	-1.3
HUIG	Huatulco	2.08	295	eP			Pn	02 53 29.8	-2.3
HUIG				e				02 53 50.0	
HUIG	Huatulco	2.08	295	eP			Pn	02 53 29.6	-2.5
HUIG				eS			Sn	02 53 49.4	-8.6
TGIG		2.11	28	eP			Pn	02 53 33.5	+0.9
TGIG				eS			Sn	02 53 58.4	-0.6
TGIG		2.11	28	eP			Pn	02 53 33.5	+0.9
TGIG				eS			Sn	02 53 58.3	-0.6
TGIG				IAML				02 54 00.6	
	comp=E,1μm,0.4s								
TGBT	Tuxtla Gutierr	2.13	28	eP			Pn	02 53 33.3	+0.5
TGBT				eS			Sn	02 53 57.2	-1.9
CCIG	Comitan	2.38	54	eP			Pn	02 53 38.6	+2.2
CCIG				eS			Sn	02 54 04.3	-1.3
CCIG	Comitan	2.38	54	eP			Pb	02 53 39.0	-1.2
CCIG				eS			Sb	02 54 08.3	-1.3
CCIG				IAML				02 54 15.4	
	comp=N,566nm,0.4s								
CCIG	Comitan	2.38	54	P			Pb	02 53 39.3	-0.9
CCIG				S			Sb	02 54 08.6	-1.1
RTAL	Retalhuleu	2.40	99	eP			Pb	02 53 41.2	+0.6
RTAL				eS			Sn	02 54 05.6	-0.4
HUEH	Huehuetenango	2.59	80	eP			Pb	02 53 43.2	-0.7
HUEH				eS			Sn	02 54 13.1	+2.1
HUEH	Huehuetenango	2.59	80	eP			Pb	02 53 43.4	-0.4
HUEH				eS			Sb	02 54 15.7	0.0
HUEH				IAML				02 54 22.1	
	comp=E,1μm,0.7s								
QUIS	Sacapulas	2.98	82	eP			Pb	02 53 49.4	-1.1
PEIG	Puerto Escondi	3.09	291	eP			Pn	02 53 44.3	-1.8
PEIG				e				02 54 13.2	
TUIG	Tuzandepetl	3.13	355	eP			Pn	02 53 46.5	-1.2
TUIG				eS			Sn	02 54 22.4	-1.5
NEUV	Arroyo Zacate	3.22	331	eP			Pn	02 53 46.5	-1.2
NEUV				eS			Sn	02 54 24.7	-1.4
VHO	Vista Hermosa	3.29	311	eP			Pn	02 53 50.6	+1.6
VHO				eS			Sn	02 54 24.2	-4.1
APG	El Apazote	3.56	88	eP			Pn	02 53 56.4	+3.7
PMUV	Sontecomapan	3.74	346	eP			Pn	02 53 56.7	+1.6
PMUV				eS			Sn	02 54 37.3	-1.9
YOIG	Yosondua	3.81	301	eP			Pn	02 53 56.3	+0.2
YOIG				eS			Sn	02 54 43.2	+2.2
TXIG	Tlaxiaco	4.19	304	eP			Pn	02 54 03.6	+2.1
TXIG				eS			Sn	02 54 52.5	+1.9
TOIG	Toxpalan	4.24	319	eP			Pn	02 54 03.5	+1.7
TOIG				eS			Sn	02 54 50.4	-1.0
NUBE	Las Nubes	4.35	103	P			Pn	02 54 08.7	+5.2
NUBE				S			Sb	02 55 02.0	-4.4
HLIG	Huajuapan de L	4.56	310	eP			Pn	02 54 08.1	+1.7
HLIG				eS			Sn	02 55 01.5	+2.0
PETF	Flores	4.58	63	eP			Pn	02 54 09.0	+2.4
PETF				eS			Sn	02 54 59.6	-0.2
PETF	Flores	4.58	63	eP			Pn	02 54 09.6	+3.1
TPIG	Tehuac#an	4.66	319	eP			Pn	02 54 12.5	+4.7
TPIG				eS			Sn	02 55 04.0	+2.0
FTIG	Fresnillo de T	4.86	309	eP			Pn	02 54 12.2	+1.8
FTIG				eS			Sn	02 55 04.3	-2.4
MGIG	Malinaltepec	4.90	299	e			Sn	02 55 03.5	-4.4
SCIG	Sabancuy	4.94	35	eP			Pn	02 54 12.9	+1.4
SCIG				eS			Sn	02 55 07.0	-1.6
TLIG	Tlapa	5.00	303	eP			Pn	02 54 15.5	+3.0
TLIG				eS			Sn	02 55 13.2	+2.9
JAUV	Jalcomulco	5.12	331	eP			Pn	02 54 12.7	-1.2
CRIG	Cruz Grande	5.13	292	eP			Pn	02 54 16.9	+2.8
PPCL	Tochimilco	5.85	314	eP			Pn	02 54 26.1	+1.9
PPCL				eS			Sn	02 55 32.2	+0.7
PPPT	Popocatepetl	5.89	314	eP			Pn	02 54 27.1	+2.0
PPPT				eS			Sn	02 55 34.0	+1.1
MEIG	Mezcala	6.05	301	eP			Pn	02 54 29.0	+2.2
MEIG				eS			Sn	02 55 33.3	-2.9
YAIG	Yautepec	6.14	311	eP			Pn	02 54 31.6	+3.5
CXUV	Coxquihui	6.19	328	eP			Pn	02 54 31.2	+2.6
CXUV				eS			Sn	02 55 40.6	+1.2
CAIG	El Cayaco	6.26	291	eP			Pn	02 54 32.0	+2.4
ARIG	Puente Sto Nin	6.83	300	eP			Pn	02 54 40.2	+2.7
ARIG				eS			Sn	02 55 54.7	-0.6

*KRSC **06** 03:00:08.7±1.6, 55.65N×163.28E, h5km±25km, Ml4.5*
*IDC **06** 03:00:09.8±0.8, 55.71N×162.94E, h0km, mb3.7/13, mbtmp3.7/14, ML2.6/1, MS3.8/3, Error ellipse: s-maj=23.7km s-min=17.3km az=143.0*
*MOS **06** 03:00:11.0±0.9, 55.74N×163.24E, h16km, mb4.5/5, Error ellipse: s-maj=6.8km s-min=5.2km az=70.7*
*NEIC **06** 03:00:15.6±1.8, 55.8N±0.1°×162.9E±0.2, h40km±7km, mb4.3/29, Error ellipse: s-maj=20.4km s-min=8.8km az=144.0*
ISC 06 03:00:10.2±1.5, 55°79N±0.04°×163°28E±0.03, h2km±10km, n151, σ1s49/159, mb4.2/25, MS3.9/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.50	329	PN			Pb	03 00 20.8	-0.8
KBTR	Krutoberegovo	0.50	329	eP			Pb	03 00 20.8	-0.8
KBG	Krutoberegovo	0.57	326	PN			Pb	03 00 22.1	-0.7
KBG				S			Sb	03 00 31.3	-0.1
KBG	Krutoberegovo	0.57	326	eP			Pb	03 00 22.3	-0.6
KBG				eS			Sb	03 00 31.4	+0.1
SMKR	Semkarok	1.29	309	PN			Pg	03 00 34.4	-0.5
SMKR	Semkarok	1.29	309	eP			Pg	03 00 34.1	-0.8
SMKR				eS			Sn	03 00 53.4	+0.3
BDR	Baidarnaya	1.40	305	PN			Pb	03 00 36.9	-0.1
BDR	Baidarnaya	1.40	305	eP			Pb	03 00 37.0	0.0
ZLN	Zelenaya	1.42	280	PN			Pn	03 00 34.4	-2.6
ZLN	Zelenaya	1.42	280	eP			Pn	03 00 34.4	-2.6
CIRR	Tsirk	1.46	284	PN			Pn	03 00 36.8	-0.9
CIRR				S			Sn	03 00 55.2	-2.3
CIRR	Tsirk	1.46	284	eP			Pn	03 00 37.1	-0.5
BZGR	Bezymyannyi-Gr	1.47	277	PN			Pn	03 00 37.0	-0.7
BZGR	Bezymyannyi-Gr	1.47	277	eP			Pn	03 00 37.1	-0.6
SRKR	Sorokina	1.47	307	PN			Pn	03 00 37.1	-0.6
SRKR				S			Sg	03 00 58.5	+1.3
SRKR	Sorokina	1.47	307	eP			Pn	03 00 37.1	-0.6
MKZ	Mys Kozlova	1.52	216	PN			Pn	03 00 36.0	-2.3
KLY	Klyuchi	1.57	291	PN			Pn	03 00 36.7	-2.2
KLY				S			Sn	03 00 55.9	-3.9
KLY	Klyuchi	1.57	291	eP			Pn	03 00 36.4	-2.6
KLY				eS			Sn	03 00 56.6	-3.2
BZWR	Bezymyannyi-We	1.58	278	PN			Pn	03 00 38.2	-1.1
BZWR				S			Sn	03 01 00.1	-0.3
BZWR	Bezymyannyi-We	1.58	278	eP			Pn	03 00 38.8	-0.5
BZMR	Bezymyannaya	1.58	277	PN			Pn	03 00 37.9	-1.4
BZMR	Bezymyannaya	1.58	277	eP			Pn	03 00 38.0	-1.3
BKI	Bering	1.64	110	PN			Pb	03 00 39.7	-1.3
BKI				S			Sb	03 01 00.8	-1.3
BKI	Bering	1.64	110	eP			Pn	03 00 38.9	-1.0
BKI				eS			Sb	03 01 00.8	-1.3
KIRR	Kirishev	1.67	277	PN			Pn	03 00 39.5	-1.0
KIRR	Kirishev	1.67	277	eP			Pn	03 00 39.6	-0.9
KIRR				eS			Sn	03 01 01.6	-0.9
KMNR	Kamenistaya	1.72	270	PN			Pn	03 00 41.0	-0.2
KMNR	Kamenistaya	1.72	270	eP			Pn	03 00 41.4	+0.2
KMNR				eS			Sn	03 01 03.9	+0.2
KPT	Kopyto	1.73	277	PN			Pn	03 00 41.3	0.0
KPT	Kopyto	1.73	277	eP			Pn	03 00 40.7	-0.6
KPT				eS			Sn	03 01 03.5	-0.6
TUMD	Tumrok D	1.74	252	PN			Pn	03 00 39.8	-1.6
TUMD				S			Sn	03 01 02.9	-1.2
TUMD	Tumrok D	1.74	252	eP			Pn	03 00 39.8	-1.6
TUMD				eS			Sn	03 01 03.0	-1.2
KZV	Kizimen	1.83	250	PN			Pn	03 00 41.6	-1.2
KZV	Kizimen	1.83	250	eP			Pn	03 00 41.6	-1.2
TUMR	Tumrok	1.85	255	PN			Pn	03 00 43.6	+0.6
TUMR	Tumrok	1.85	255	eP			Pn	03 00 43.7	+0.6
KOZ	Kozyrevsk	1.94	279	PN			Pn	03 00 44.2	+0.2
KOZ				S			Sn	03 01 07.4	-1.6
KOZ	Kozyrevsk	1.94	279	eP			Pn	03 00 44.3	+0.2
KOZ				eS			Sn	03 01 10.5	+1.5
SRDR	Sredinnyy	2.07	286	PN			Pn	03 00 46.0	+0.1
SRDR	Sredinnyy	2.07	286	eP			Pn	03 00 46.2	+0.3
SRDR				eS			Sn	03 01 13.3	+1.0
ESO	Esso	2.59	275	PN			Pn	03 00 53.5	+0.5
ESO	Esso	2.59	275	eP			Pn	03 00 53.9	+0.9
KII	Karymskiy	2.82	233	PN			Pn	03 00 55.6	-0.7
KII	Karymskiy	2.82	233	eP			Pn	03 00 56.1	-0.2
NLC	Nalytchevo	3.48	223	PN			Pn	03 01 06.5	+1.2
SDLR	Sedlovina	3.59	227	PN			Pn	03 01 06.8	-0.1
SDLR	Sedlovina	3.59	227	eP			Pn	03 01 06.7	-0.2
KRER	Koryakskii	3.63	229	PN			Pn	03 01 07.7	+0.2
KRER	Koryakskii	3.63	229	eP			Pn	03 01 07.9	+0.4
KRX	Arik	3.63	230	PN			Pn	03 01 08.1	+0.6
KRX	Arik	3.63	230	eP			Pn	03 01 07.6	+0.2
SMAR	Somma	3.63	228	PN			Pn	03 01 07.3	-0.3
SMAR	Somma	3.63	228	eP			Pn	03 01 07.3	-0.3
AVH	Avacha	3.66	228	PN			Pn	03 01 08.0	+0.2
AVH	Avacha	3.66	228	eP			Pn	03 01 08.1	+0.3
UGLR	Uglovaya	3.66	227	PN			Pn	03 01 08.3	+0.4
UGLR	Uglovaya	3.66	227	eP			Pn	03 01 08.1	+0.2
KOK	Koryaka	3.68	229	PN			Pn	03 01 08.6	+0.4
KOK	Koryaka	3.68	229	eP			Pn	03 01 08.6	+0.4
PALN	Palana	3.77	333	PN			Pb	03 01 13.5	-3.7
PALN	Palana	3.77	333	eP			Pb	03 01 15.9	-1.3
DALK	Dalny	3.82	226	PN			Pn	03 01 09.3	-0.6
DALK	Dalny	3.82	226	eP			Pn	03 01 09.3	-0.6
PET	Petropavlovsk	3.87	226				Pn	03 01 10.2	-0.4
PET	Petropavlovsk	3.87	226	ePN			Pn	03 01 12.3	+1.7
PET				eS			Sn	03 01 58.7	+2.1
PET				pmax			pmax		
	comp=Z,184nm,0.6s								
PET				smax			smax		
	comp=N,243nm,0.7s								
PET				smax			smax		
	comp=E,299nm,0.9s								
PEA0B	Petropavlovsk-	4.22	233				Pn	03 01 15.7	+0.3
PEA0B	Petropavlovsk-	4.22	233	*i* PN			Pn	03 01 17.1	+1.7
PETK	Petropavlovsk-	4.22	233				Pn	03 01 16.6	+1.2
PETK							Sn	03 02 03.2	-2.1
PETK	Petropavlovsk-	4.22	233	Pn			Pn	03 01 14.4	-1.1
	comp=E,1.9nm,0.3s,baz=60,slow=15,SNR=15								
PETK				Sn			Sn	03 02 02.6	-2.7
	comp=E,1.5nm,0.3s,baz=25,slow=18,SNR=3.5 comp=E,5.8nm,0.7s								
KRMR	Karymshinskiy	4.23	228	PN			Pn	03 01 15.7	+0.2
KRMR	Karymshinskiy	4.23	228	eP			Pn	03 01 15.7	+0.2
GRL	Gorelyy	4.46	226	PN			Pn	03 01 20.2	+1.4
GRL	Gorelyy	4.46	226	eP			Pn	03 01 18.6	-0.2
MTVR	Mutnovka	4.47	224	PN			Pn	03 01 19.7	+0.8
MTVR	Mutnovka	4.47	224	eP			Pn	03 01 18.8	-0.1
APC	Apacha	4.59	234	eP			Pn	03 01 21.4	+1.0
ASAK	Asacha	4.65	225	PN			Pn	03 01 22.8	+1.3
ASAK	Asacha	4.65	225	eP			Pn	03 01 21.8	+0.3
PAU	Pauzhetka	5.79	224	eP			Pn	03 01 40.8	+3.8
SEY	Seymchan	9.06	327	LR			LR	03 06 11.6	
	comp=E,238nm,18.9s,baz=340,slow=40								
YAK	Yakutsk	18.28	304	*i* P			P	03 04 30.1	+5.3
S12K	Black Hills	19.39	76	P			Pn	03 04 38.5	+0.4
RDOG	Red Dog Mine	19.76	38	P			Pn	03 04 42.0	-0.5
RDOG				IAmb			IAmb	03 04 50.6	
	comp=Z,8.3nm,0.8s								
L16K	Owhat River	19.99	57	P			Pn	03 04 46.0	+0.8
L16K				IAmb			IAmb	03 04 52.5	
	comp=Z,21nm,1.5s								
M16K	Timber Creek	20.25	59	P			Pn	03 04 47.8	-0.4
M16K				IAmb			IAmb	03 05 20.6	
	comp=Z,18nm,1.4s								
K17K	Iditarod	20.56	55	P			Pn	03 04 52.6	+0.7
K17K				IAmb			IAmb	03 05 20.8	
	comp=Z,24nm,1.3s								
ZEA	Zeya	20.75	279	eP			Pn	03 04 53.6	-0.5
ZEA				pmax			pmax		
	comp=Z,10.0nm,0.6s								
M17K	Holitna River	20.97	58	P			Pn	03 04 55.6	-1.1
M17K				IAmb			IAmb	03 04 60.0	
	comp=Z,28nm,1.2s								
F19K	Shaleruckik Mo	21.30	43	P			P	03 05 00.3	+2.6
TIXI	Tiksi	21.52	331	P			P	03 04 59.2	-0.8
TIXI	Tiksi	21.52	331	*i* P			P	03 05 03.6	+3.6
TIXI				pmax			pmax		
	comp=Z,5.0nm,0.6s								
D19K	Kuna River	21.59	39	P			P	03 05 02.1	+1.3
D19K				IAmb			IAmb	03 05 31.2	
	comp=Z,15nm,1.2s								
D20K	Etivluk River	22.18	39	P			P	03 05 07.9	+0.7
D20K				IAmb			IAmb	03 05 36.2	
	comp=Z,12nm,1.2s								
B20K	Meade River	22.39	35	P			P	03 05 11.2	+1.9
IMAR	Indian Mountai	22.77	46	P			P	03 05 15.3	+1.9
F21K	Alatna River	23.03	43	P			P	03 05 18.3	+2.1
B21K	Ikpikpuk River	23.12	37	P			P	03 05 18.4	+1.4
Q19K	Cape Douglas,	23.14	64	P			P	03 05 19.0	+1.6
PPLA	Purkeypile	23.37	54	P			P	03 05 23.3	+3.5
PPLA				IAmb			IAmb	03 05 27.7	
	comp=Z,26nm,1.4s								
D22K	Ayikyak River	23.61	39	P			P	03 05 23.1	+1.1
D22K				IAmb			IAmb	03 05 57.1	
	comp=Z,22nm,1.4s								
STLK	Strandline Lak	23.65	58	P			P	03 05 24.2	+1.7
B22K	Teshekpuk Lake	23.70	35	P			P	03 05 23.2	+0.4
E22K	Anaktuvuk Pass	23.80	41	P			P	03 05 23.5	-0.3
I23K	Minto, Yukon-K	24.55	48	P			P	03 05 33.5	+2.7
TOLK	Toolik Lake Re	24.69	40	P			P	03 05 32.7	+0.6
TOLK				IAmb			IAmb	03 06 04.8	
	comp=Z,8.7nm,1.1s								
E24K	Your Creek	25.03	41	P			P	03 05 36.5	+1.3
ILAR	Eielson Array	25.61	49	P			P	03 05 42.3	+1.9
ILAR	Eielson Array	25.61	49	P			P	03 05 41.4	+0.9
	comp=Z,0.5nm,0.8s,baz=276,slow=9.8,SNR=4.9 comp=Z,0.5nm,0.8s								
MJA0	Matsu Arr-Jizo	25.66	232	eP			P	03 05 42.2	+1.0
MJA0				pmax			pmax		
	comp=Z,3.0nm,0.6s								
MJAR	Matsushiro Arr	25.68	232	P			P	03 05 39.3	-2.0
	comp=Z,2.6nm,0.6s,baz=26,slow=8.4,SNR=5.3 comp=Z,2.6nm,0.6s								
SKAG	Skagway	32.05	58	P			P	03 06 38.8	+1.1
SKAG				IAmb			IAmb	03 07 01.8	
	comp=Z,14nm,1.4s								
H11N2	WAKE ISLAND Hy baz=356,slow=76,SNR=168	36.10	174	T			T	03 45 33.3	
H11N3	WAKE ISLAND Hy baz=356,slow=76,SNR=152	36.12	174	T			T	03 45 48.9	
H11N1	WAKE ISLAND Hy baz=356,slow=76,SNR=135	36.12	174	T			T	03 46 04.5	
H11S1	WAKE ISLAND Hy baz=359,slow=76,SNR=14	37.30	175	T			T	03 47 56.9	
H11S3	WAKE ISLAND Hy baz=359,slow=76,SNR=11	37.32	175	T			T	03 48 02.3	
H11S2	WAKE ISLAND Hy baz=359,slow=76,SNR=13	37.32	175	T			T	03 48 15.3	
KURK	Kurchatov	47.90	301	P			P	03 08 47.8	-1.5
KURBB	Kurchatov Arra comp=Z,0.6nm,0.5s,baz=54,slow=8.1,SNR=5.7 comp=Z,0.6nm,0.5s	48.01	301	P			P	03 08 47.8	-2.3
MKAR	Makanchi Array	48.67	295	P			P	03 08 53.1	-2.3
MKAR	Makanchi Array comp=Z,0.3nm,0.7s,baz=60,slow=7.2,SNR=4.4 comp=Z,0.3nm,0.7s	48.67	295	P			P	03 08 53.5	-1.9
BVAR	Borovoye Array comp=Z,0.5nm,0.5s,baz=54,slow=7.4,SNR=3.8 comp=Z,0.5nm,0.5s	50.18	308	P			P	03 09 04.4	-2.3
NVAR	Mina Array Bea	53.14	74	P			P	03 09 30.3	+0.9
NVAR	Mina Array Bea comp=Z,0.1nm,0.5s,baz=305,slow=4.9,SNR=1.7 comp=Z,0.1nm,0.5s	53.14	74	P			P	03 09 30.5	+1.1
KLMR	Klimovskoe	55.54	330	eP			P	03 09 49.1	+2.9
KLMR				pmax			pmax		
	comp=Z,11nm,1.2s								
KKAR	Karatay Array	57.19	299	P			P	03 09 56.3	-2.0
KKAR	Karatay Array	57.19	299	P			P	03 09 56.3	-2.0
AB31	Akbulak array	57.45	311	P			P	03 09 57.9	-2.1
AB31				IAmb			IAmb	03 10 27.7	
	comp=Z,2.6nm,1.4s								
ABKAR	Akbulak array	57.45	311	P			P	03 09 57.9	-2.1
FINES	FINESS Array B	58.36	337	P			P	03 10 06.0	-0.2
FINES	FINESS Array B comp=Z,2.8nm,0.9s,baz=38,slow=7.1,SNR=4.4 comp=Z,2.8nm,0.9s	58.36	337	P			P	03 10 06.5	+0.3
FINES	FINESS Array B	58.36	337	P			P	03 10 06.0	-0.2
OBN	Obninsk	61.22	328	eP			P	03 10 28.0	+2.1
OBN				e				03 11 13.3	
OBN				e				03 12 45.3	
OBN				ePPP			PPP	03 14 08.2	
OBN				pmax			pmax		
	comp=Z,4.0nm,0.8s								
OBN				MLR			MLR		
	comp=Z,61nm,16.0s								
NOA	NORSAR Array B comp=Z,0.8nm,1.0s,baz=347,slow=14,SNR=2.1 comp=Z,0.8nm,1.0s	61.45	345	P			P	03 10 27.3	-0.2
HFS	Hagfors comp=Z,2.2nm,0.9s,baz=141,slow=7.3,SNR=1.5 comp=Z,2.2nm,0.9s	61.93	343	P			P	03 10 32.3	+1.6
AKASG	Malin Array Be	67.23	330	P			P	03 11 05.8	+0.4
AKASG				IAmb			IAmb	03 11 17.4	
	comp=Z,4.0nm,1.2s								
AKASG	Malin Array Be comp=Z,0.3nm,0.4s,baz=45,slow=0.4,SNR=1.8 comp=Z,0.3nm,0.4s	67.23	330	P			P	03 11 06.9	+1.5
AKASG	Malin Array Be	67.23	330	P			P	03 11 05.8	+0.4
AKASG				pmax			pmax		
	comp=Z,4.0nm,1.2s								
TX31	Lajitas Ar. Si	67.92	70	P			P	03 11 11.3	+1.1
TX31				IAmb			IAmb	03 11 18.7	
	comp=Z,2.3nm,0.9s								
TXAR	Lajitas Array	67.92	70	P			P	03 11 11.2	+1.0
TXAR	Lajitas Array comp=Z,0.6nm,0.6s,baz=305,slow=4.8,SNR=6.7 comp=Z,0.6nm,0.6s	67.92	70	P			P	03 11 11.8	+1.5
TXAR	Lajitas Array	67.92	70	P			P	03 11 11.2	+1.0
GNI	Garni comp=Z,58nm,18.1s,baz=75,slow=40	71.15	315	LR			LR	03 47 32.4	
PDG	Podgorica	77.51	334	P			P	03 12 04.9	-2.0
WR8	Warramunga Arr	79.30	207	P			P	03 12 17.3	+0.4
WR8				IAmb			IAmb	03 12 23.9	
	comp=Z,6.6nm,1.4s								
WRA	Warramunga Arr comp=Z,0.1nm,0.3s,baz=18,slow=5.7,SNR=1.8 comp=Z,0.1nm,0.3s	79.33	208	P			P	03 12 15.2	-1.9
ASAR	Alice Springs	83.00	207	P			P	03 12 35.5	-1.1
ASAR	Alice Springs comp=Z,0.3nm,0.7s,baz=19,slow=5.7,SNR=4.6 comp=Z,0.3nm,0.7s	83.00	207	P			P	03 12 36.2	-0.4
ASAR	Alice Springs	83.00	207	P			P	03 12 35.5	-1.1
URZ	Urewera comp=Z,118nm,19.8s,baz=98,slow=32	94.42	169	LR			LR	03 50 54.3	

*VIE **06** 03:13:41.2±0.5, 49.80N×18.58E, h0km, mb2.4/5, ml2.5/6, Error ellipse: s-maj=4.3km s-min=3.2km az=118.0 24 km E of Ostrava Suspected Mining induced.*
*PRU **06** 03:13:42.9, 49.85N×18.49E, h0km, Mining Induced Event Darkov, E=6.4e+05*
*IPEC **06** 03:13:42.4±0.3, 49.85N×18.52E, h1km, ML2.0/6, Error ellipse: s-maj=1.8km s-min=1.4km az=70.0*
**ISC 06 03:13:41.9±0.8, 49°

RONA	**Rosalia, Austr**	**2.58**	**216**	*e*Pn	**Pn**	**03 14 25.1 +0.2**
	3.0nm,0.2s					
RONA				Sn	**Sn**	**03 14 57.2 +0.3**
	2.0nm,0.3s					
PVCC	**Panska Ves**	**2.63**	**287**	*e*SG	**Sg**	**03 15 05.1 -1.4**
ZVC	**Zvikov**	**2.84**	**264**	*e*PG	**Pb**	**03 14 34.0 +0.6**
CKRC	**Cesky Krumlov**	**2.93**	**252**	*e*SG	**Sg**	**03 15 15.0 -0.9**
KHC	**Kasperske Hory**	**3.29**	**260**	*e*PN	**Pn**	**03 14 34.2 -0.5**
KHC				*e*PG	**Pb**	**03 14 41.2 0.0**
KHC				*e*SG	**Sg**	**03 15 26.4 -1.2**
	comp=Z,6.1nm,0.4s					
MOA	**Molln**	**3.43**	**237**	*i* Pn	**Pn**	**03 14 36.4 -0.2**
	0.5nm,0.2s					
CLL	**Collm**	**3.82**	**295**	*e*Pg	**Pb**	**03 14 51.0 +0.9**
CLL				*e*Sg	**Sg**	**03 15 43.0 -1.5**

*IDC **06** 03:19:35.2±1.5,36°.89N×21°.51E, h0km, mb3.9/7, mbtmp3.6/14, ML2.8/4, MS2.9/1, Error ellipse: s-maj=29.6km s-min=17.3km az=27.0*
*HLW **06** 03:19:35.1,36°.70N×21°.06E, h84km±4km, Ml3.5*
*THE **06** 03:19:36.6,37°N±4°×2°1E±°, h0km±16km, M3.2/42, MLh3.2/42*
*ATH **06** 03:19:37.6,36°.51N×21°.32E, h16km±1km, ML3.4/37, Manual Solution by N.Liadopoulou First location: 2019/11/06 03:20:45, This location: 2019/11/06 07:23:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*BEO **06** 03:19:39.8±0.8,36°.87N×20°.53E, h0km, ML3.9/6*

ISC 06 03:19:38.7±1.2**, 36°.58N**±0°.05×**21°.34E**±0°.04**, h38**km±1km**, n155**, σ2§12**/181**, mb4.0/7, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTHA	**Methoni**	**0.38**	**50**	P	**Pn**	**03 19 47.0**	**-0.4**
MTHA				S	**Sn**	**03 19 52.5**	**-1.7**
PYL1	**Pylos**	**0.44**	**40**	P	**Pn**	**03 19 47.2**	**-1.1**
PYL1				S	**Sn**	**03 19 54.6**	**-0.7**
PYL2	**Kinigos**	**0.45**	**43**	P	**Pn**	**03 19 47.8**	**-0.6**
PYL2				S	**Sn**	**03 19 55.3**	**-0.2**
ITM	**Ithomi**	**0.76**	**38**	P	**Pn**	**03 19 52.9**	**0.0**
ITM				S	**Sn**	**03 20 06.4**	**+3.1**
ITM	**Ithomi**	**0.76**	**38**	P	**Pn**	**03 19 53.0**	**0.0**
ITM				S	**Sn**	**03 20 05.0**	**+1.8**
ZARO	**Zacharo**	**0.94**	**15**	P	**Pn**	**03 19 55.9**	**+0.5**
ZARO				S	**Sn**	**03 20 09.8**	**+2.2**
AMT	**Artemida-Makis**	**1.00**	**17**	P	**Pn**	**03 19 57.2**	**+1.0**
AMT				S	**Sn**	**03 20 12.3**	**+3.3**
LTHK	**Lithakia**	**1.20**	**341**	P	**Pn**	**03 19 59.2**	**+0.3**
LTHK				S	**Sn**	**03 20 17.5**	**+3.6**
LTHK	**Lithakia**	**1.20**	**341**	P	**Pn**	**03 19 59.2**	**+0.3**
LTHK				S	**Sn**	**03 20 16.6**	**+2.7**
VLI	**Veliai**	**1.29**	**83**	P	**Pn**	**03 20 02.4**	**+2.2**
VLI	**Veliai**	**1.29**	**83**	P	**Pn**	**03 20 02.0**	**+1.9**
VLI				S	**Sn**	**03 20 18.8**	**+2.6**
KYPS	**Kipseli, Zakin**	**1.31**	**342**	P	**Pn**	**03 20 01.2**	**+0.8**
KYPS				S	**Sn**	**03 20 19.6**	**+3.1**
CLEM	**Kyllini,Ilia,G**	**1.32**	**353**	P	**Pn**	**03 20 00.9**	**+0.3**
LCHA	**Lechaina**	**1.36**	**357**	P	**Pn**	**03 20 02.9**	**+1.8**
MNVA	**Monemvasia**	**1.37**	**85**	P	**Pn**	**03 20 02.3**	**+1.1**
ORTH	**Orthonies,Zaky**	**1.37**	**338**	P	**Pn**	**03 20 02.4**	**+1.1**
ORTH				S	**Sn**	**03 20 22.8**	**+4.6**
ORTH	**Orthonies,Zaky**	**1.37**	**338**	P	**Pn**	**03 20 02.8**	**+1.5**
ORTH				S	**Sn**	**03 20 21.7**	**+3.5**
KRT2	**Ano Kourtesi L**	**1.39**	**360**	P	**Pn**	**03 20 03.0**	**+1.6**
KRT2				S	**Sn**	**03 20 22.9**	**+4.4**
DRO	**Drossia**	**1.40**	**12**	P	**Pn**	**03 20 03.7**	**+2.0**
DRO	**Drossia**	**1.40**	**12**	P	**Pn**	**03 20 03.4**	**+1.6**
DRO				S	**Sn**	**03 20 22.2**	**+3.2**
KTHA	**Kythira Island**	**1.43**	**102**	P	**Pn**	**03 20 04.3**	**+2.3**
RLS	**Riolos of Patr**	**1.48**	**4**	P	**Pn**	**03 20 04.9**	**+2.2**
RLS	**Riolos of Patr**	**1.48**	**4**	P	**Pn**	**03 20 04.8**	**+2.0**
RLS				S	**Sn**	**03 20 25.5**	**+4.6**
YRMI	**Loutra Irminis**	**1.52**	**0**	P	**Pn**	**03 20 05.0**	**+1.7**
NPLA	**Nafplio**	**1.53**	**49**	P	**Pn**	**03 20 05.6**	**+2.2**
NPLA				S	**Sn**	**03 20 25.1**	**+3.1**
ARS1	**Argos**	**1.53**	**46**	P	**Pn**	**03 20 05.5**	**+2.1**
RTZL	**Ratzakli, Kefa**	**1.56**	**343**	P	**Pn**	**03 20 05.6**	**+1.8**
RTZL				S	**Sn**	**03 20 28.0**	**+5.2**
GUR	**Goura**	**1.57**	**30**	P	**Pn**	**03 20 06.5**	**+2.3**
GUR	**Goura**	**1.57**	**30**	P	**Pn**	**03 20 06.2**	**+2.1**
KLV1	**Kalavrita**	**1.58**	**23**	P	**Pn**	**03 20 06.4**	**+2.2**
KLV	**Kalavryta, Ach**	**1.60**	**24**	P	**Pn**	**03 20 06.9**	**+2.4**
KLV	**Kalavryta, Ach**	**1.60**	**24**	P	**Pn**	**03 20 06.6**	**+2.1**
AXS	**Araxos**	**1.62**	**1**	P	**Pn**	**03 20 07.4**	**+2.7**
AXS	**Araxos**	**1.62**	**1**	P	**Pn**	**03 20 07.3**	**+2.7**
PSDA	**Pessada-Kefalo**	**1.65**	**339**	P	**Pn**	**03 20 06.7**	**+1.6**
VLS	**Valsamata**	**1.71**	**340**	P	**Pn**	**03 20 06.9**	**+1.0**
VLS	**Valsamata**	**1.71**	**340**	P	**Pn**	**03 20 07.3**	**+1.4**
PATC	**Patra C**	**1.72**	**11**	P	**Pn**	**03 20 08.5**	**+2.5**
AR2	**Argostoli**	**1.73**	**337**	P	**Pn**	**03 20 08.1**	**+1.9**
ANKY	**Antikythira Is**	**1.74**	**114**	P	**Pn**	**03 20 08.2**	**+2.0**
ANKY	**Antikythira Is**	**1.74**	**114**	P	**Pn**	**03 20 07.5**	**+1.3**
UPR	**University Cam**	**1.74**	**12**	P	**Pn**	**03 20 07.4**	**+1.1**
SMHA	**Samh**	**1.76**	**342**	P	**Pn**	**03 20 08.7**	**+2.2**
MSL1	**Messolongi**	**1.79**	**2**	P	**Pn**	**03 20 09.7**	**+2.6**
KIAA	**Kiato**	**1.82**	**38**	P	**Pn**	**03 20 09.4**	**+2.0**
DMLN	**Damoulianata-K**	**1.83**	**335**	P	**Pn**	**03 20 08.7**	**+1.2**
DMLN	**Damoulianata-K**	**1.83**	**335**	P	**Pn**	**03 20 09.3**	**+1.7**
YDRA	**Hydra**	**1.87**	**65**	P	**Pn**	**03 20 09.0**	**+1.0**
TRIZ	**Trizonia**	**1.88**	**18**	P	**Pn**	**03 20 10.6**	**+2.4**
MET2	**Kameni Chora,**	**1.90**	**56**	P	**Pn**	**03 20 09.9**	**+1.4**
EFP	**Efpalio**	**1.90**	**14**	P	**Pn**	**03 20 11.1**	**+2.6**
EFP	**Efpalio**	**1.90**	**14**	P	**Pn**	**03 20 10.9**	**+2.3**
MET6	**Megalochori,Me**	**1.90**	**57**	P	**Pn**	**03 20 09.9**	**+1.3**
LOUT	**Loutraki**	**1.92**	**42**	P	**Pn**	**03 20 10.8**	**+2.0**
KALE	**Kalithea**	**1.92**	**19**	P	**Pn**	**03 20 10.8**	**+1.9**
KALE	**Kalithea**	**1.92**	**19**	P	**Pn**	**03 20 11.1**	**+2.3**
SERG	**Sergoula**	**1.92**	**17**	P	**Pn**	**03 20 11.5**	**+2.7**
SERG	**Sergoula**	**1.92**	**17**	P	**Pn**	**03 20 11.0**	**+2.1**
MET5	**Makryloggos,Me**	**1.92**	**57**	P	**Pn**	**03 20 10.4**	**+1.5**
LTK	**Loutraki**	**1.94**	**41**	P	**Pn**	**03 20 10.8**	**+1.7**
LTK	**Loutraki**	**1.94**	**41**	P	**Pn**	**03 20 10.8**	**+1.7**
MET4	**Agioi Theodoro**	**1.95**	**57**	P	**Pn**	**03 20 10.5**	**+1.3**
FSK	**Fiskardo**	**1.98**	**342**	P	**Pn**	**03 20 11.6**	**+2.0**
FSK	**Fiskardo**	**1.98**	**342**	P	**Pn**	**03 20 11.8**	**+2.2**
PVO	**Paravola**	**2.04**	**4**	P	**Pn**	**03 20 13.2**	**+2.7**
PVO	**Paravola**	**2.04**	**4**	P	**Pn**	**03 20 12.8**	**+2.4**
ANX	**Ano Chora**	**2.06**	**13**	P	**Pn**	**03 20 14.1**	**+3.2**
ANX	**Ano Chora**	**2.06**	**13**	P	**Pn**	**03 20 13.9**	**+3.0**
EVGI	**Lefkada island**	**2.11**	**345**	P	**Pn**	**03 20 14.1**	**+2.6**
EVGI	**Lefkada island**	**2.11**	**345**	P	**Pn**	**03 20 14.2**	**+2.8**
VAS2	**Vassiliki, Lef**	**2.13**	**344**	P	**Pn**	**03 20 13.5**	**+1.8**
NYDR	**Nydri-Lefkada**	**2.19**	**347**	P	**Pn**	**03 20 14.6**	**+2.1**
NYDR	**Nydri-Lefkada**	**2.19**	**347**	P	**Pn**	**03 20 15.0**	**+2.5**
VILL	**Villia**	**2.23**	**44**	P	**Pn**	**03 20 13.8**	**+0.7**
VIL2	**Platees**	**2.24**	**43**	P	**Pn**	**03 20 13.8**	**+0.6**
MAGU	**Magoula**	**2.29**	**48**	P	**Pn**	**03 20 15.2**	**+1.3**
TSLK	**Tsoukalades, L**	**2.31**	**347**	P	**Pn**	**03 20 16.8**	**+2.7**
TSLK	**Tsoukalades, L**	**2.31**	**347**	P	**Pn**	**03 20 16.2**	**+2.0**
VLY	**Voula,Athens**	**2.34**	**56**	P	**Pn**	**03 20 15.0**	**+0.5**
AMPL	**Ampelaki**	**2.34**	**358**	P	**Pn**	**03 20 17.3**	**+2.7**
AMPL	**Ampelaki**	**2.34**	**358**	P	**Pn**	**03 20 16.8**	**+2.2**
ATH	**Athens Observa**	**2.35**	**53**	P	**Pn**	**03 20 16.5**	**+1.8**
EVR	**Evrytania**	**2.36**	**9**	P	**Pn**	**03 20 18.6**	**+3.6**
EVR	**Evrytania**	**2.36**	**9**	P	**Pn**	**03 20 18.1**	**+3.1**
STFN	**Stefani**	**2.37**	**47**	P	**Pn**	**03 20 16.3**	**+1.2**
ATHU	**Athens Univers**	**2.39**	**54**	P	**Pn**	**03 20 14.7**	**-0.6**
AXAR	**Agios Charalam**	**2.42**	**25**	P	**Pn**	**03 20 18.3**	**+2.5**
AXAR	**Agios Charalam**	**2.42**	**25**	P	**Pn**	**03 20 18.1**	**+2.4**
CHAN	**Chania**	**2.43**	**115**	P	**Pn**	**03 20 17.3**	**+1.4**
CHAN	**Chania**	**2.43**	**115**	P	**Pn**	**03 20 16.9**	**+1.1**
LKR	**Lokris**	**2.45**	**32**	P	**Pn**	**03 20 17.9**	**+1.8**
LKR	**Lokris**	**2.45**	**32**	P	**Pn**	**03 20 18.0**	**+1.8**
MHLO	**Agia Marina, M**	**2.46**	**86**	P	**Pn**	**03 20 16.9**	**+0.7**
PTL	**Penteli**	**2.49**	**53**	P	**Pn**	**03 20 17.6**	**+0.9**
PTL	**Penteli**	**2.49**	**53**	P	**Pn**	**03 20 17.3**	**+0.6**
ATAL	**Atalanti**	**2.50**	**32**	P	**Pn**	**03 20 18.5**	**+1.8**
ATAL	**Atalanti**	**2.50**	**32**	P	**Pn**	**03 20 18.6**	**+1.8**
MAKR	**Makrakomi, Fth**	**2.51**	**14**	P	**Pn**	**03 20 20.8**	**+3.8**
MAKR	**Makrakomi, Fth**	**2.51**	**14**	P	**Pn**	**03 20 19.9**	**+3.0**
DION	**Dionisos Attik**	**2.55**	**53**	P	**Pn**	**03 20 18.3**	**+0.8**
DION	**Dionisos Attik**	**2.55**	**53**	P	**Pn**	**03 20 18.0**	**+0.4**
AGG	**Agios Georgios**	**2.56**	**18**	P	**Pn**	**03 20 20.7**	**+3.0**
AGG	**Agios Georgios**	**2.56**	**18**	P	**Pn**	**03 20 20.2**	**+2.6**
ARTB	**Arta**	**2.59**	**354**	P	**Pn**	**03 20 20.0**	**+2.0**
TETR	**Tetrakomo, Epi**	**2.76**	**359**	P	**Pn**	**03 20 22.9**	**+2.4**
TETR	**Tetrakomo, Epi**	**2.76**	**359**	P	**Pn**	**03 20 22.6**	**+2.1**
GVD	**Gavdhos**	**2.83**	**127**	P	**Pn**	**03 20 21.6**	**+0.3**
GVD	**Gavdhos**	**2.83**	**127**	P	**Pn**	**03 20 21.2**	**-0.1**
KARY	**Karystos**	**2.86**	**59**	P	**Pn**	**03 20 22.2**	**+0.5**
KARY	**Karystos**	**2.86**	**59**	P	**Pn**	**03 20 22.1**	**+0.3**
PRMD	**Pramanda**	**2.95**	**356**	P	**Pn**	**03 20 25.3**	**+2.2**
KYMI	**Kymi, Euboea I**	**3.00**	**46**	P	**Pn**	**03 20 24.3**	**+0.6**
KYMI	**Kymi, Euboea I**	**3.00**	**46**	P	**Pn**	**03 20 24.1**	**+0.4**
THL	**Klokotos Trika**	**3.03**	**10**	P	**Pn**	**03 20 26.3**	**+2.2**
THL	**Klokotos Trika**	**3.03**	**10**	P	**Pn**	**03 20 25.8**	**+1.7**
IGT	**Igoumenitsa**	**3.06**	**345**	P	**Pn**	**03 20 25.2**	**+0.8**
NEO	**Neokhori**	**3.10**	**28**	P	**Pn**	**03 20 26.4**	**+1.3**
NEO	**Neokhori**	**3.10**	**28**	P	**Pn**	**03 20 26.4**	**+1.3**
IDI	**Anoyia**	**3.15**	**113**	Pn	**Pn**	**03 20 27.2**	**+1.4**
	2.7nm,0.3s,baz=311,slow=21,SNR=19					
IDI				Sn	**Sn**	**03 21 05.8**	**+3.5**
	12nm,0.3s,baz=303,slow=21,SNR=23					
IDI	**Anoyia**	**3.15**	**113**	P	**Pn**	**03 20 26.2**	**+0.3**
IDI	**Anoyia**	**3.15**	**113**	P	**Pn**	**03 20 26.8**	**+0.9**
AOS	**Alonnisos**	**3.28**	**37**	P	**Pn**	**03 20 28.2**	**+0.8**
APE	**Apeiranthos**	**3.40**	**80**	P	**Pn**	**03 20 29.0**	**-0.1**
NPS	**Neapolis**	**3.71**	**109**	P	**Pn**	**03 20 34.3**	**+0.9**
KZN	**Kozani**	**3.74**	**5**	P	**Pn**	**03 20 35.5**	**+1.7**
VAE	**Valguarnera**	**5.62**	**281**	Pn	**Pn**	**03 21 02.1**	**+2.5**
	10nm,0.8s,baz=28,slow=12,SNR=3.1					
VAE				Sn	**Sn**	**03 22 03.7**	**+0.8**
	2.8nm,0.3s,baz=171,slow=6.6,SNR=5.6					
BOSS	**Bosilegrad**	**5.98**	**8**	*e*Pn	**Pn**	**03 21 04.4**	**-0.1**
SLUM	**Salum**	**6.00**	**147**	P	**Pn**	**03 21 05.9**	**+1.0**
BARS	**Barje**	**6.24**	**3**	*e*Pn	**Pn**	**03 21 08.1**	**-0.1**
BARS				*e*Sn	**Sn**	**03 22 18.1**	**-0.1**
TREB	**Trebinje**	**6.55**	**340**	*e*Pn	**Pn**	**03 21 11.0**	**-1.4**
SELS	**Selova**	**6.64**	**359**	*e*Pn	**Pn**	**03 21 13.4**	**-0.2**
SELS				*e*Sn	**Sn**	**03 22 25.5**	**-2.4**
SJES	**Sjenica**	**6.76**	**351**	*e*Pn	**Pn**	**03 21 16.2**	**+0.8**
ZAPS	**Zavoj**	**6.76**	**8**	*e*Pn	Pn	03 21 19.8	+4.5
GOCS	**Kraljevo Serbi**	**6.99**	**357**	*e*Pn	**Pn**	**03 21 19.0**	**+0.5**
GOCS				*e*Sn	**Sn**	**03 22 33.0**	**-3.6**
BOVS	**Bovan**	**7.05**	**2**	*e*Pn	**Pn**	**03 21 19.8**	**+0.5**
MATC	**Matruh**	**7.15**	**135**	P	**Pn**	**03 21 19.5**	**-1.2**
GRUS	**Gruza**	**7.32**	**356**	*e*Pn	**Pn**	**03 21 22.2**	**-0.7**
GRUS				*e*Sn	**Sn**	**03 22 39.3**	**-5.4**
DIVS	**Divibare**	**7.58**	**353**	*e*Pn	**Pn**	**03 21 25.7**	**-0.9**
DIVS				*e*Sn	**Sn**	**03 22 45.7**	**-5.6**
TRUS	**Trudelj**	**7.67**	**355**	*e*Pn	**Pn**	**03 21 27.3**	**-0.5**
TRUS				*e*Sn	**Sn**	**03 22 47.1**	**-6.2**
TEKS	**Tekeris**	**8.08**	**351**	*e*Pn	**Pn**	**03 21 31.4**	**-2.0**
SWA2		**8.09**	**154**	P	**Pn**	**03 21 32.7**	**-0.9**
MLR	**Muntele Rosu**	**9.56**	**20**	Pn	**Pn**	**03 21 49.9**	**-3.8**
	0.1nm,0.3s,baz=252,slow=10,SNR=1.5						
	0.6nm,0.5s						
KEST	**Kesra**	**9.74**	**269**	Pn	**Pn**	**03 21 58.0**	**+1.7**
	0.1nm,0.3s,baz=332,slow=6.5,SNR=1.5						
KEST				Sn	**Sn**	**03 23 43.0**	**-1.3**
	baz=316,slow=13,SNR=1.5						
	2.7nm,0.9s						
BRTR	**Keskin Array B**	**10.18**	**68**	Pn	**Pn**	**03 22 01.8**	**-0.6**
	baz=287,slow=31,SNR=1.4						
BRTR				LR	LR	03 26 45.5	
	comp=Z,70nm,19.0s,baz=250,slow=43						
	0.1nm,0.3s						
RYAN	**Fayoum**	**10.60**	**132**	P	**Pn**	**03 22 08.2**	**+0.3**
HFRF	**Wahat Farafira**	**11.11**	**146**	P	**Pn**	**03 22 14.7**	**-0.2**
MMAI	**Mount Meron Ar**	**12.09**	**103**	Pn	**Pn**	**03 22 27.4**	**-1.1**
	0.3nm,0.3s,baz=293,slow=14,SNR=1.5						
GERES	**GERESS Array B**	**13.47**	**338**	Pn	**Pn**	**03 22 46.3**	**-0.9**
	baz=151,slow=14,SNR=1.6						
	0.1nm,0.3s						
HFS	**Hagfors**	**24.08**	**351**	P	**P**	**03 24 49.6**	**-0.7**
	4.7nm,1.0s,baz=148,slow=12,SNR=5.1						
	4.7nm,1.0s						
FINES	**FINESS Array B**	**25.07**	**5**	P	**P**	**03 24 57.8**	**-1.4**
	5.2nm,1.0s,baz=186,slow=9.6,SNR=4.4						
	5.2nm,1.0s						
NOA	**NORSAR Array B**	**25.31**	**348**	P	**P**	**03 25 00.6**	**-0.9**
	0.5nm,0.7s,baz=156,slow=8.8,SNR=3.3						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**42.67**	**52**	P	**P**	**03 27 31.4**	**-0.1**
	0.4nm,0.4s,baz=275,slow=8.8,SNR=4.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**45.60**	**57**	P	**P**	**03 27 54.1**	**-0.9**
	0.2nm,0.3s,baz=266,slow=7.7,SNR=6.9						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**46.29**	**47**	P	**P**	**03 28 00.9**	**+0.6**
	1.2nm,0.3s,baz=268,slow=8.4,SNR=5.1						
	1.2nm,0.3s						
USRK	**Ussuriysk Ar.**	**77.99**	**43**	P	**P**	**03 31 32.5**	**-0.5**
	2.2nm,0.7s,baz=29,slow=6.1,SNR=4.2						
	2.2nm,0.7s						

*SDD **06** 03:20:56.0±3.0, 19°.90N×73°.15W, h15km±32km, MD3.6, ML3.3, MW3.5*
*SSNC **06** 03:20:56.8±1.6, 19°.98N×73°.10W, h8km±8km, MD3.3, ML3.3, MW3.1*

ISC 06 03:20:54.9±1.3**, 20°.01N**±0°.06×**73°.12W**±0°.02**, h17**km±10km**, n27, σ1§34/46, 13C-6D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASC	**Masc**	**1.05**	**279**	⇓*e*Pg	**Pg**	**03 21 15.8**	**+0.5**
MASC				IAML		03 21 33.9	
	comp=N,2μm,0.5s						
MASC	**Masc**	**1.05**	**279**	*e*P	**Pn**	**03 21 15.3**	**+0.4**
MASC				*e*S	**Sn**	**03 21 29.5**	**+0.3**
MASC				IAML		03 21 33.3	
	comp=E,1μm,0.3s						
MASC				IAML		03 21 33.7	
	comp=N,1μm,0.3s						
MCDR	**Montecristi**	**1.39**	**95**	⇑*e*Pg	**Pn**	**03 21 20.4**	**+0.9**
MCDR				⇑*e*Sg	**Sg**	**03 21 40.1**	**+0.4**
MCDR				IAML		03 21 48.1	
	comp=N,1μm,0.2s						
QMBU	**Quimbuelo**	**1.60**	**277**	⇑*e*Pg	**Pn**	**03 21 23.1**	**+0.7**
QMBU				⇓*e*Sg	**Sg**	**03 21 45.7**	**-0.8**
QMBU				IAML		03 21 47.9	
	comp=N,1μm,0.2s						
QMBU	**Quimbuelo**	**1.60**	**277**	*e*P	**Pn**	**03 21 22.6**	**+0.2**
QMBU				*e*S	**Sb**	**03 21 43.6**	**-0.3**
QMBU				IAML		03 21 46.8	
	comp=E,1μm,0.3s						
QMBU				IAML		03 21 48.0	
	comp=N,1μm,0.2s						
NMDO	**Nuevo Mundo**	**1.83**	**288**	⇓*e*Pg	**Pn**	**03 21 26.5**	**+0.9**
NMDO				IAML		03 21 59.5	
	comp=N,237nm,0.5s						
NMDO	**Nuevo Mundo**	**1.83**	**288**	*e*P	**Pn**	**03 21 26.2**	**+0.6**
NMDO				*e*S	**Sb**	**03 21 50.2**	**-0.4**
NMDO				IAML		03 21 58.2	
	comp=N,137nm,0.2s						
NMDO				IAML		03 21 58.8	
	comp=E,294nm,0.2s						
REDR	**Restauracion**	**1.83**	**117**	⇑*e*Pg	Pn	03 21 21.1	-4.6
REDR				⇑*e*Sg	**Sn**	**03 21 43.1**	**-5.4**
REDR				IAML		03 21 45.7	
	comp=N,4μm,0.2s						
MOAC	**Moa**	**1.84**	**291**	*e*P	**Pn**	**03 21 26.4**	**+0.6**
MOAC				*e*S	**Sg**	**03 21 53.2**	**-1.0**
GTBY	**Guantanamo Bay**	**1.87**	**268**	⇑*e*Pg	**Pn**	**03 21 27.0**	**+0.8**
GTBY				⇑*e*Sg	**Sb**	**03 21 51.5**	**-0.2**
GTBY				IAML		03 21 54.1	
	comp=N,170nm,0.5s						
GTBY	**Guantanamo Bay**	**1.87**	**268**	*e*P	**Pn**	**03 21 26.1**	**0.0**
GTBY				*e*S	**Sn**	**03 21 49.1**	**-0.4**
GTBY				*e*Sg	**Sb**	**03 21 52.2**	**+0.4**
JIDR	**Jimani**	**1.93**	**141**	⇓*e*Pg	**Pn**	**03 21 28.1**	**+1.1**
JIDR				⇑*e*Sg	**Sn**	**03 21 51.7**	**+0.8**
JIDR				IAML		03 21 57.9	
	comp=N,175nm,0.3s						
SDDR	**Presa de Saban**	**2.01**	**120**	⇑*e*Pg	**Pn**	**03 21 28.9**	**+0.8**
SDDR				⇑*e*Sg	**Sb**	**03 21 56.8**	**+0.9**
SDDR				IAML		03 22 02.9	
	comp=N,330nm,0.3s						
SDDR	**Presa de Saban**	**2.01**	**120**	*e*P	**Pn**	**03 21 28.9**	**+0.8**
SDDR				*e*S	**Sn**	**03 21 53.8**	**+0.8**
SDDR				IAML		03 22 02.7	
	comp=N,285nm,0.4s						
SDDR				IAML		03 22 02.9	
	comp=N,337nm,0.3s						
SABCS	**La Quijada**	**2.09**	**280**	*e*P	**Pn**	**03 21 30.6**	**+1.4**
NEDR	**Neiba UASD**	**2.21**	**133**	⇓*e*Pg	**Pn**	**03 21 31.9**	**+1.0**
NEDR				IAML		03 22 08.3	
	comp=N,169nm,0.6s						
SC01	**Santiago de lo**	**2.33**	**104**	⇑*e*Pg	**Pn**	**03 21 34.2**	**+1.7**
SC01				⇑*e*Sg	**Sb**	**03 22 04.4**	**-0.7**
SC01				IAML		03 22 11.8	
	comp=N,334nm,0.8s						
GRTK	**Grand Turk**	**2.39**	**51**	*e*P	**Pn**	**03 21 34.3**	**+1.0**
GRTK				*e*S	**Sn**	**03 22 01.2**	**-1.0**
RCC	**Rio Carpintero**	**2.42**	**270**	*e*P	**Pn**	**03 21 33.6**	**-0.1**
RCC				*e*S	**Sn**	**03 22 02.5**	**-0.5**
PODR	**Polo**	**2.53**	**136**	⇓*e*Pg	**Pn**	**03 21 37.9**	**+2.5**
PODR				IAML		03 22 28.6	
	comp=N,114nm,0.3s						
PINC	**Pinares de May**	**2.55**	**281**	*e*P	**Pn**	**03 21 35.9**	**+0.4**
PINC				*e*S	**Sn**	**03 22 06.9**	**+0.7**
ABDR	**Alto Bandera**	**2.64**	**116**	⇑*e*Pg	**Pb**	**03 21 40.8**	**-1.2**
ABDR				IAML		03 23 00.2	
	comp=N,0.3nm,0.4s						
HLGC	**Holguin**	**2.89**	**288**	*e*P	**Pn**	**03 21 42.5**	**+2.3**
HLGC				*e*S	**Sn**	**03 22 17.8**	**+3.1**
YAR	**Yar**	**3.06**	**277**	*e*P	**Pn**	**03 21 43.3**	**+0.8**
YAR				*e*S	**Sn**	**03 22 17.7**	**-1.2**
YAR				IAML		03 22 31.2	
	comp=N,24nm,0.7s						
YAR				IAML		03 22 32.8	
	comp=E,23nm,1.5s						
CHIV	**Chivirico**	**3.10**	**270**	*e*P	**Pn**	**03 21 43.6**	**+0.6**
CHIV				*e*S	**Sn**	**03 22 19.2**	**-0.4**
LMGC	**Las Mercedes**	**3.65**	**272**	*e*P	**Pn**	**03 21 51.0**	**+0.4**
LMGC				*e*S	**Sn**	**03 22 32.2**	**-1.2**
LMGC				IAML		03 22 39.8	
	comp=E,32nm,0.2s						
LMGC				IAML		03 22 40.5	
	comp=N,34nm,0.1s						
CCCC	**Cccc**	**4.51**	**286**	*e*P	Pn	03 21 57.8	-4.6
CCCC				*e*S	Sn	03 22 44.2	-10
CCCC				IAML		03 22 54.8	
	comp=N,6.2nm,0.2s						
CCCC				IAML		03 22 55.5	
	comp=E,7.6nm,0.3s						

*IDC **06** 03:23:51.1±1.0, 13°.46S×167°.73E, h0km, mb3.9/8, mbtmp4.0/10, ML4.2/1, MS3.3/1, Error ellipse: s-maj=28.6km s-min=20.2km az=136.0*
*NEIC **06** 03:23:52.8±1.9, 13°.48S±0°.07×167°.8E±0°.1, h10km±1km, mb4.5/13, Error ellipse: s-maj=20.2km s-min=12.4km az=81.0*

ISC 06 03:23:55.8±0.6**, 13°.46S**±0°.07×**167°.70E**±0°.09**, h35**km**, n29, σ1§19/31, mb4.1/14, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.03**	**194**		**Pn**	**03 24 24.1**	**-3.5**
HNR	**Honiara**	**8.59**	**297**		**Pn**	**03 25 55.2**	**-2.5**
HNR	**Honiara**	**8.59**	**297**	Pn	**Pn**	**03 25 56.3**	**-1.4**
	45nm,0.4s,baz=183,slow=2.3,SNR=5.2						
HNR				Sn	**Sn**	**03 27 34.8**	**+1.4**
	34nm,0.3s,baz=214,slow=11,SNR=2.2						
DZM	**Mont Dzumac**	**8.65**	**188**	Pn	**Pn**	**03 25 58.2**

TA02				*i* S		**Sn**	**03 30 07.2**	**+2.0**	
TA02				IAML			03 30 07.3		
	comp=N,3μm,0.3s								
TA02	**Huaiquique**	**1.16**	**227**	*i* P		**Pn**	**03 29 47.5**	**+0.5**	
TA02				IAML			03 30 08.5		
	comp=Z,2μm,0.1s								
PB16	**IPOC Station P**	**1.17**	**347**	⇓*i* P		**Pn**	**03 29 49.8**	**+2.0**	
PB16				*i* S		**Sn**	**03 30 08.2**	**+1.7**	
PB16				IAML			03 30 09.7		
	comp=E,1μm,0.5s								
PB16	**IPOC Station P**	**1.17**	**347**	*i* P		**Pn**	**03 29 49.6**	**+1.9**	
PB16				IAML			03 30 09.6		
	comp=Z,348nm,0.6s								
PB12	**IPOC Station P**	**1.35**	**309**	⇓*i* P		**Pn**	**03 29 50.6**	**+1.4**	
PB12				*i* S		**Sn**	**03 30 09.9**	**+0.8**	
PB12				IAML			03 30 10.5		
	comp=E,2μm,0.5s								
PB12	**IPOC Station P**	**1.35**	**309**	*i* P		**Pn**	**03 29 49.9**	**+0.7**	
PB12				IAML			03 30 11.8		
	comp=Z,738nm,0.4s								
TA01	**Diego Aracena**	**1.40**	**220**	⇑*i* P		**Pn**	**03 29 51.0**	**+1.3**	
TA01				*i* S		**Sn**	**03 30 11.0**	**+1.1**	
TA01				IAML			03 30 14.0		
	comp=E,1μm,0.6s								
TA01	**Diego Aracena**	**1.40**	**220**	*i* P		**Pn**	**03 29 50.3**	**+0.6**	
TA01				IAML			03 30 13.7		
	comp=Z,605nm,0.3s								
AP01	**Chacalluta**	**1.53**	**316**	⇑*i* P		**Pn**	**03 29 53.1**	**+2.0**	
AP01				*i* S		**Sn**	**03 30 13.7**	**+1.4**	
AP01				IAML			03 30 14.9		
	comp=E,3μm,0.3s								
AP01	**Chacalluta**	**1.53**	**316**	*i* P		**Pn**	**03 29 52.5**	**+1.4**	
AP01				*i* S		**Sn**	**03 30 13.8**	**+1.4**	
AP01				IAML			03 30 14.8		
	comp=Z,1μm,0.2s								
PB01	**IPOC Station P**	**1.57**	**189**	⇑*i* P		**Pn**	**03 29 53.4**	**+1.7**	
PB01				*i* S		**Sn**	**03 30 14.7**	**+1.1**	
PB01				IAML			03 30 16.2		
	comp=E,7μm,0.5s								
PB01	**IPOC Station P**	**1.57**	**189**	*i* P		**Pn**	**03 29 52.8**	**+1.1**	
PB01				*i* S		**Sn**	**03 30 14.2**	**+0.7**	
PB01				IAML			03 30 15.8		
	comp=Z,2μm,0.2s								
PATCX	**Punta Patache**	**1.59**	**213**	⇑*i* P		**Pn**	**03 29 53.3**	**+1.4**	
PATCX				*i* S		**Sn**	**03 30 15.2**	**+1.3**	
PATCX				IAML			03 30 22.4		
	comp=E,1μm,0.3s								
PATCX	**Punta Patache**	**1.59**	**213**	*i* P		**Pn**	**03 29 53.0**	**+1.1**	
PATCX				*i* S		**Sn**	**03 30 14.6**	**+0.7**	
PATCX				IAML			03 30 21.7		
	comp=Z,774nm,0.5s								
PB18	**Visviri**	**1.90**	**353**	*e*P		**Pn**	**03 29 59.7**	**+3.7**	
PB02	**IPOC Station P**	**1.94**	**199**	⇑*i* P		**Pn**	**03 29 57.6**	**+1.6**	
PB02				*i* S		**Sn**	**03 30 22.6**	**+1.3**	
PB02				IAML			03 30 30.8		
	comp=E,2μm,0.3s								
PB02	**IPOC Station P**	**1.94**	**199**	*i* P		**Pn**	**03 29 57.2**	**+1.2**	
PB02				IAML			03 30 33.7		
	comp=Z,1μm,0.3s								
PB09	**IPOC Station P**	**2.30**	**180**	*e*P		**Pn**	**03 30 03.0**	**+2.2**	
PB09				IAML			03 30 41.7		
	comp=E,455nm,0.3s								
PB09	**IPOC Station P**	**2.30**	**180**	*i* P		**Pn**	**03 30 02.6**	**+1.9**	
PB09				*i* S		**Sn**	**03 30 30.7**	**+1.1**	
PB09				IAML			03 30 39.4		
	comp=Z,550nm,0.6s								
PB03	**IPOC Station P**	**2.60**	**191**	*e*P		**Pn**	**03 30 06.6**	**+2.1**	
PB03	**IPOC Station P**	**2.60**	**191**	*i* P		**Pn**	**03 30 06.2**	**+1.7**	
PB03				IAML			03 30 46.5		
	comp=Z,370nm,0.4s								
PB06	**IPOC Station P**	**3.23**	**186**	*i* P		**Pn**	**03 30 14.8**	**+2.2**	
PB06				IAML			03 31 17.5		
	comp=Z,268nm,0.5s								
LPAZ	**La Paz**	**3.34**	**18**	*i* P		**Pn**	**03 30 17.2**	**+2.6**	
LPAZ				IAML			03 31 10.0		
	comp=Z,9.3nm,1.6s								
LPAZ	**La Paz**	**3.34**	**18**	*e*P		Pn	03 30 03.8	-11	
PB05	**IPOC Station P**	**3.48**	**195**	*i* P		**Pn**	**03 30 17.5**	**+1.6**	
PB05				IAML			03 31 15.7		
	comp=Z,148nm,0.7s								
PB10	**IPOC Station P**	**4.20**	**197**	*i* P		**Pn**	**03 30 26.0**	**+0.7**	
PB10				IAML			03 31 37.7		
	comp=Z,60nm,0.6s								
HJA	**Humahuaca**	**5.14**	**137**	*i* P		**Pn**	**03 30 41.2**	**+2.9**	
HJA				IAML			03 31 54.2		
	comp=Z,4.4nm,2.2s								
PTLB	**Pontes e Lacer**	**10.43**	**69**	*e*P		**Pn**	**03 31 47.1**	**-2.2**	
VILB	**Vilhena**	**10.83**	**55**	*e*P		**Pn**	**03 31 52.5**	**-2.2**	
PDRB	**Porto dos Gac**	**14.35**	**59**	*e*P		**Pn**	**03 32 40.4**	**-0.2**	
CLDB	**Colider**	**15.52**	**58**	*e*P		**P**	**03 32 56.3**	**-0.7**	
PTGB	**Pitanga**	**16.73**	**111**	*e*P		**P**	**03 33 09.8**	**-0.7**	
NPGB	**Novo Progresso**	**18.28**	**49**	*e*P		**Pn**	**03 33 27.7**	**-1.2**	
SNDB	**Serra Nova Dou**	**18.79**	**69**	*e*P		**Pn**	**03 33 33.8**	**-1.1**	
BB19B	**Bebedouro**	**19.48**	**98**	*e*P		**P**	**03 33 41.5**	**+0.9**	
IPMB	**Ipameri, GO**	**19.96**	**89**	*e*P		**Pn**	**03 33 47.1**	**-1.5**	
ITTB	**Itaituba**	**19.97**	**43**	*e*P		**P**	**03 33 45.0**	**-0.8**	
VAO	**Valinhos**	**21.04**	**104**	*e*P		**P**	**03 33 57.2**	**-0.1**	
PMNB	**Patos De Minas**	**21.57**	**91**	*e*P		**P**	**03 34 03.1**	**+0.1**	
BSCB	**Bom Sucesso**	**22.99**	**98**	*e*P		**P**	**03 34 17.8**	**+0.4**	
PRPB	**Parauapebas**	**23.05**	**58**	*e*P		**P**	**03 34 17.7**	**-0.2**	
BOAV	**Boa Vista**	**23.36**	**22**	*e*P		**P**	**03 34 14.8**	**-5.9**	
SMTB	**Santa Maria do**	**23.45**	**66**	*e*P		**P**	**03 34 23.0**	**+1.4**	
DIAM	**Diamantina, MG**	**24.20**	**91**	*e*P		**P**	**03 34 29.2**	**+0.7**	
SDBA	**SAO DESIDERIO**	**24.40**	**77**	*e*P		**P**	**03 34 31.3**	**+1.1**	
NBAN	**Anadia - AL**	**33.29**	**78**	*e*P		**P**	**03 35 50.5**	**+1.4**	

*SJA **06** 03:34:06.3±0.8, 19°.48S×69°.20W, h120km±3km, ML3.7, MW3.7*
*GUC **06** 03:34:07.6±0.7, 19°.46S×69°.16W, h113km±2km, ML3.8*
ISC 06 03:34:08.2±1.4,**19°.50S**±0°.03×**69°.28W**±0°.06,**h113**km±7km, **n38,σ1°33/66,4C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.19**	**154**	⇓*i* P	**Pn**	**03 34 23.8**	**-0.8**
GO01				*i* S	**Sn**	**03 34 36.3**	**-0.4**
GO01	**Chusmiza**	**0.19**	**154**	*e*P	**Pn**	**03 34 23.7**	**-0.8**
GO01				*e*S	**Sn**	**03 34 37.3**	**+0.6**
GO01				IAML		03 34 38.1	
	comp=Z,2μm,0.3s						
PB11	**IPOC Station P**	**0.44**	**233**	⇑*i* P	**Pn**	**03 34 25.0**	**-0.1**
PB11				*i* S	**Sn**	**03 34 38.2**	**+0.3**
PB11	**IPOC Station P**	**0.44**	**233**	*e*P	**Pn**	**03 34 24.4**	**-0.8**
PB11				IAML		03 34 39.2	
	comp=Z,3μm,0.1s						
PB08	**IPOC Station P**	**0.65**	**169**	⇓*i* P	**Pn**	**03 34 26.5**	**-0.4**
PB08				*i* S	**Sn**	**03 34 40.8**	**-0.1**
PB08				IAML		03 34 41.4	
	comp=E,5μm,0.3s						
PB08	**IPOC Station P**	**0.65**	**169**	*e*P	**Pn**	**03 34 26.5**	**-0.4**
PB08				*e*S	**Sn**	**03 34 41.2**	**+0.3**
PB08				IAML		03 34 42.5	
	comp=Z,3μm,0.2s						
HMBC	**Humberstone**	**0.96**	**216**	⇑*i* P	**Pn**	**03 34 29.2**	**-0.2**
HMBC				*i* S	**Sn**	**03 34 45.8**	**+0.4**
HMBC				IAML		03 34 46.8	
	comp=E,2μm,0.6s						
HMBC	**Humberstone**	**0.96**	**216**	*e*P	**Pn**	**03 34 29.2**	**-0.2**
HMBC				*e*S	**Sn**	**03 34 46.5**	**+1.1**
HMBC				IAML		03 34 48.9	
	comp=Z,2μm,0.3s						
PX02	**IPOC Station P**	**1.02**	**301**	*i* P	**Pn**	**03 34 28.9**	**-1.0**
PX02				*i* S	**Sn**	**03 34 46.1**	**-0.1**
TA02	**Huaiquique**	**1.11**	**226**	*i* P	**Pn**	**03 34 30.9**	**+0.1**
TA02				*i* S	**Sn**	**03 34 48.5**	**+0.7**
TA02	**Huaiquique**	**1.11**	**226**	*e*P	**Pn**	**03 34 31.0**	**+0.3**
TA02				*e*S	**Sn**	**03 34 49.9**	**+2.1**
TA02				IAML		03 34 53.6	
	comp=Z,1μm,0.1s						
PB16	**IPOC Station P**	**1.18**	**349**	⇓*i* P	**Pn**	**03 34 32.1**	**0.0**
PB16				*i* S	**Sn**	**03 34 50.2**	**+0.1**
PB16	**IPOC Station P**	**1.18**	**349**	*e*P	**Pn**	**03 34 32.1**	**0.0**
PB16				*e*S	**Sn**	**03 34 50.8**	**+0.7**
PB16				IAML		03 34 52.2	
	comp=Z,361nm,0.7s						
PB12	**IPOC Station P**	**1.32**	**311**	*i* P	**Pn**	**03 34 32.9**	**-0.3**
PB12				*i* S	**Sn**	**03 34 51.9**	**-0.3**
PB12	**IPOC Station P**	**1.32**	**311**	*e*P	**Pn**	**03 34 32.9**	**-0.3**
PB12				*e*S	**Sn**	**03 34 52.7**	**+0.5**
PB12				IAML		03 34 55.0	
	comp=Z,407nm,0.1s						
TA01	**Diego Aracena**	**1.36**	**218**	*i* P	**Pn**	**03 34 33.2**	**-0.3**
TA01				*i* S	**Sn**	**03 34 53.0**	**+0.3**
TA01				IAML		03 34 53.9	
	comp=E,1μm,0.2s						
TA01	**Diego Aracena**	**1.36**	**218**	*e*P	**Pn**	**03 34 33.2**	**-0.3**
TA01				*e*S	**Sn**	**03 34 53.9**	**+1.1**
TA01				IAML		03 34 55.9	
	comp=Z,434nm,0.2s						
AP01	**Chacalluta**	**1.50**	**318**	*i* P	**Pn**	**03 34 35.0**	**-0.2**
AP01				*i* S	**Sn**	**03 34 55.7**	**-0.1**
AP01				IAML		03 35 00.2	
	comp=E,2μm,0.4s						
AP01	**Chacalluta**	**1.50**	**318**	*e*P	**Pn**	**03 34 35.5**	**+0.3**
AP01				*e*S	**Sn**	**03 34 56.6**	**+0.9**
AP01				IAML		03 35 00.9	
	comp=Z,964nm,0.2s						
PB01	**IPOC Station P**	**1.55**	**187**	⇑*i* P	**Pn**	**03 34 35.7**	**-0.1**
PB01				*i* S	**Sn**	**03 34 57.1**	**+0.2**
PB01	**IPOC Station P**	**1.55**	**187**	*e*P	**Pn**	**03 34 35.8**	**-0.1**
PB01				*e*S	**Sn**	**03 34 57.7**	**+0.8**
PB01				IAML		03 34 58.1	
	comp=Z,2μm,0.2s						
PATCX	**Punta Patache**	**1.55**	**212**	*i* P	**Pn**	**03 34 35.8**	**-0.1**
PATCX				*i* S	**Sn**	**03 34 56.9**	**0.0**
PATCX	**Punta Patache**	**1.55**	**212**	*e*P	**Pn**	**03 34 35.9**	**0.0**
PATCX				*e*S	**Sn**	**03 34 58.2**	**+1.3**
PATCX				IAML		03 35 03.9	
	comp=Z,484nm,0.7s						
PB02	**IPOC Station P**	**1.90**	**198**	⇑*i* P	**Pn**	**03 34 39.8**	**-0.4**
PB02				*i* S	**Sn**	**03 35 04.8**	**+0.2**
PB02				IAML		03 35 11.5	
	comp=N,790nm,0.3s						
PB02				IAML		03 35 12.1	
	comp=E,914nm,0.4s						
PB02	**IPOC Station P**	**1.90**	**198**	*e*P	**Pn**	**03 34 39.9**	**-0.3**
PB02				*e*S	**Sn**	**03 35 07.0**	**+2.4**
PB02				IAML		03 35 15.2	
	comp=Z,784nm,0.3s						
PB09	**IPOC Station P**	**2.29**	**179**	⇓*i* P	**Pn**	**03 34 45.1**	**-0.1**
PB09				*i* S	**Sn**	**03 35 12.1**	**-1.4**
PB09				IAML		03 35 19.6	
	comp=E,300nm,0.6s						
PB09	**IPOC Station P**	**2.29**	**179**	*e*P	**Pn**	**03 34 45.2**	**0.0**
PB09				*e*S	**Sn**	**03 35 14.1**	**+0.6**
PB09				IAML		03 35 17.6	
	comp=Z,329nm,0.9s						
PB03	**IPOC Station P**	**2.58**	**190**	*i* P	**Pn**	**03 34 48.2**	**-0.7**
PB03	**IPOC Station P**	**2.58**	**190**	*e*P	**Pn**	**03 34 48.7**	**-0.2**
PB03				*e*S	**Sn**	**03 35 28.3**	**+8.2**
PB03				IAML		03 35 30.5	
	comp=Z,268nm,0.2s						
PB06	**IPOC Station P**	**3.20**	**185**	*i* P	**Pn**	**03 34 56.3**	**-0.9**
PB06	**IPOC Station P**	**3.20**	**185**	*e*P	**Pn**	**03 34 56.5**	**-0.6**
PB06				*e*S	Sn	03 35 21.4	-14
PB06				IAML		03 35 59.7	
	comp=Z,137nm,0.6s						
LPAZ	**La Paz**	**3.37**	**19**	*e*P	**Pn**	**03 35 00.1**	**+0.3**
PB05	**IPOC Station P**	**3.45**	**194**	*i* P	**Pn**	**03 34 59.4**	**-1.0**
PB05	**IPOC Station P**	**3.45**	**194**	*e*P	**Pn**	**03 34 59.6**	**-0.7**
PB05				*e*S	Sn	03 35 53.2	+13
PB05				IAML		03 35 57.9	
	comp=Z,84nm,0.8s						
AF01	**San Pedro de A**	**3.59**	**164**	*e*P	Pn	03 35 16.8	+14
AF01				*e*S	Sn	03 35 31.2	-13
AF01				IAML		03 35 58.2	
	comp=Z,120nm,0.5s						
PB10	**IPOC Station P**	**4.17**	**196**	*e*P	**Pn**	**03 35 08.5**	**-1.4**
PB10				*e*S	**Sn**	**03 35 56.6**	**-1.2**
PB10				IAML		03 36 20.2	
	comp=Z,39nm,0.6s						
HJA	**Humahuaca**	**5.16**	**136**	*e*P	**Pn**	**03 35 24.0**	**+0.3**
HJA				*e*S	Sn	03 36 01.3	-21
PB14	**IPOC Station P**	**5.21**	**191**	*e*P	**Pn**	**03 35 22.4**	**-1.8**
PB14				*e*S	**Sn**	**03 36 20.3**	**-2.9**
PB14				IAML		03 36 45.6	
	comp=Z,32nm,1.0s						

DJA 06 03:43:54.8±0.6,**5°N**±5°×**12°6E**±°,**h194**km±5km,**M4.2/8, mB5.1/3,mb4.3/4,MLv4.1/8,Mw(mB)4.5/3,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.56**	**184**	P	Pn	03 44 28.9	+0.3
SGSI				S	Sn	03 44 55.1	+0.3
TNTI	**Ternate**	**4.77**	**159**	P	Pn	03 45 06.5	+0.4
SANI	**Sanana**	**7.26**	**177**	P	Pn	03 45 36.9	-1.5
	2μm38nm,0.8s						
NLAI	**Namlea**	**8.56**	**170**	P	Pn	03 45 55.7	+0.3
	2μm46nm,0.9s						

*IGQ **06** 04:11:23.6±0.8, 0°.N±3°×8°.1W±°, h5km±2km, MLv4.0/32*
*RSNC **06** 04:11:23.8±0.6, 0°.N±3°×8°.1W±°, h0km, M3.7, mB4.8, mb4.6, ML3.3, Mw(mB)4.0*
ISC 06 04:11:24.4±1.8,**0°.41N**±0°.05×**80°.65W**±0°.07,**h17**km±10km, **n98,σ1°82/108,24C-4D,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAB1	**Cabo Pasado-Ma**	**0.82**	**164**	⇑P	**Pb**	**04 11 40.0**	**-0.2**
CAB1				S	**Sn**	**04 11 53.8**	**+0.8**
ABH3	**Manabi, Bahia**	**1.02**	**167**	P	**Pg**	**04 11 44.2**	**-0.1**
ABH3				S	**Sn**	**04 11 59.1**	**+1.1**
AMA1	**Acelerografo,**	**1.06**	**60**	P	**Pn**	**04 11 44.6**	**0.0**
AMA1				S	**Sg**	**04 12 01.5**	**+2.4**
ABH2	**Ecuador-Univer**	**1.09**	**167**	P	**Pb**	**04 11 44.5**	**-0.4**
ABH2				S	**Sg**	**04 12 01.7**	**+1.3**
FLF1	**Flavio Alfaro-**	**1.11**	**133**	⇑P	**Pg**	**04 11 46.0**	**0.0**
AV21	**Acelerografo,**	**1.13**	**77**	P	**Pn**	**04 11 45.6**	**0.0**
AES2	**Ecuador-Puerto**	**1.16**	**60**	P	**Pn**	**04 11 45.6**	**-0.3**
AV18	**Acelerografo,**	**1.18**	**94**	P	**Pg**	**04 11 46.9**	**-0.3**
PECV	**Mancha de Ca P**	**1.32**	**153**	P	**Pn**	**04 11 47.3**	**-0.9**
RVRD	**Rio Verde**	**1.43**	**63**	⇑P	**Pn**	**04 11 49.9**	**+0.3**
BV15	**Puerto Quito-O**	**1.45**	**100**	S	**Sg**	**04 12 11.3**	**0.0**
BV15				⇑P	**Pn**	**04 11 49.8**	**-0.1**
PAC1	**Pacto, Paraso**	**1.86**	**94**	P	**Pn**	**04 11 56.4**	**+0.6**
PAC1	**Pacto, Paraso**	**1.86**	**94**	P	**Pn**	**04 11 55.8**	**0.0**
PAC1				S	**Sb**	**04 12 22.1**	**+0.8**
PAC1	**Pacto, Paraso**	**1.86**	**94**	P	**Pn**	**04 11 55.8**	**0.0**
PAC1				S	**Sb**	**04 12 21.0**	**-0.3**
SNLR	**San Lorenzo-Es**	**2.01**	**64**	P	**Pn**	**04 11 58.6**	**+1.0**
PINO	**Pino**	**2.12**	**105**	P	**Pn**	**04 11 59.6**	**-0.1**
GGPT	**Toaza - Volcan**	**2.12**	**107**	⇑P	**Pn**	**04 11 59.6**	**0.0**
TERV	**Terraza Guagua**	**2.13**	**106**	⇑P	**Pn**	**04 11 59.7**	**0.0**
GGPC	**Guagua Pichinc**	**2.13**	**106**	⇑P	**Pn**	**04 11 59.9**	**0.0**
JUA2	**San Juan 2**	**2.14**	**107**	⇑P	**Pn**	**04 12 00.1**	**+0.2**
YANA	**Yana**	**2.14**	**104**	⇑P	**Pn**	**04 12 00.3**	**+0.4**
PULU	**Pululahua**	**2.18**	**100**	⇑P	**Pn**	**04 12 00.7**	**+0.3**
OTAV	**Otavalo**	**2.21**	**94**	⇑P	**Pn**	**04 12 01.1**	**+0.3**
ILLI	**Illinizas Sur**	**2.22**	**120**	⇑P	**Pn**	**04 12 01.3**	**+0.3**
CUSE	**Cuicocha Este**	**2.25**	**93**	⇑P	**Pn**	**04 12 02.4**	**+1.0**
CUSE	**Cuicocha Este**	**2.25**	**93**	P	**Pn**	**04 12 02.3**	**+0.9**
CUSE	**Cuicocha Este**	**2.25**	**93**	P	**Pn**	**04 12 02.1**	**+0.7**
CUSE				S	**Sb**	**04 12 32.2**	**-0.6**
CUIC	**Cuicocha-Domo**	**2.29**	**93**	⇑P	**Pn**	**04 12 03.0**	**+1.1**
CUSW	**Cuicocha Oeste**	**2.30**	**93**	P	Pg	04 12 10.0	+1.3
TING	**Casa Alexandra**	**2.31**	**107**	P	**Pb**	**04 12 04.9**	**-0.9**
COTA	**Cotacachi**	**2.31**	**92**	P	**Pn**	**04 12 03.7**	**+1.4**
LITE1	**Lita**	**2.32**	**80**	⇓P	**Pn**	**04 12 02.2**	**+0.1**
ACOT	**Cotacachi (Cas**	**2.38**	**93**	P	**Pb**	**04 12 05.8**	**-1.2**
SUCR	**Mariscal Sucre**	**2.39**	**116**	P	**Pn**	**04 12 04.8**	**+1.4**
URCU	**Urcuqui**	**2.40**	**89**	⇑P	**Pn**	**04 12 04.9**	**+1.6**
PITA	**Cotopaxi Volc**	**2.42**	**113**	⇑P	**Pn**	**04 12 05.5**	**+1.8**
SLOR	**San Lorenzo -**	**2.43**	**118**	⇑P	**Pn**	**04 12 05.5**	**+1.6**
BREF	**Cotopaxi Volca**	**2.45**	**116**	P	**Pn**	**04 12 05.8**	**+1.5**
IMBA	**Imbabura, San**	**2.46**	**93**	⇑P	**Pb**	**04 12 06.8**	**-1.6**
BMOR	**Cotopaxi Volca**	**2.46**	**117**	⇑P	**Pn**	**04 12 05.7**	**+1.3**
BVC2	**Cotopaxi Volca**	**2.48**	**115**	⇑P	**Pn**	**04 12 06.1**	**+1.6**
VC1	**Cotopaxi 1**	**2.48**	**115**	P	**Pn**	**04 12 06.1**	**+1.5**
BTAM	**Cotopaxi Volca**	**2.50**	**115**	⇑P	**Pn**	**04 12 06.3**	**+1.5**
TAMB	**Tambo**	**2.53**	**116**	P	**Pn**	**04 12 07.0**	**+1.7**
VCES	**Cotopaxi**	**2.55**	**118**	⇑P	**Pn**	**04 12 07.2**	**+1.6**
ANTG	**Antisana-Guama**	**2.56**	**111**	P	**Pb**	**04 12 08.0**	**-2.3**
YAHU	**Yahuarcocha**	**2.58**	**91**	P	**Pn**	**04 12 07.7**	**+1.9**
CHSH	**Refugio Sur-Vo**	**2.59**	**137**	P	**Pb**	**04 12 10.1**	**-0.8**
ANTM	**Antisana-La Mi**	**2.60**	**111**	P	**Pb**	**04 12 08.9**	**-2.1**
CHMA	**Chilma**	**2.63**	**80**	⇓P	**Pn**	**04 12 06.9**	**+0.5**
ANTI	**Antisana**	**2.63**	**109**	P	**Pb**	**04 12 09.1**	**-2.4**
ANTS	**Antisana-Sarah**	**2.64**	**110**	P	**Pn**	**04 12 08.7**	**+1.9**
ANGU	**Angureal**	**2.67**	**98**	P	**Pb**	**04 12 10.4**	**-1.7**
LNGL	**El Ángel-Carch**	**2.67**	**83**	⇓P	**Pn**	**04 12 08.7**	**+1.5**
CAYR	**Refugio Cayamb**	**2.67**	**98**	P	**Pb**	**04 12 09.9**	**-2.4**
JSCH	**Cashca Tororas**	**2.69**	**142**	P	**Pb**	**04 12 11.1**	**-1.3**
PIS1	**Pisayambo**	**2.69**	**123**	P	**Pn**	**04 12 09.4**	**+1.9**
TAMH	**Tambohuasha Ch**	**2.69**	**136**	P	**Pn**	**04 12 08.7**	**+1.3**
ECEN	**Cerro Negro**	**2.71**	**81**	⇓P	**Pn**	**04 12 08.8**	**+1.0**
CHL1	**Volc¡n Chiles**	**2.73**	**82**	⇑P	**Pn**	**04 12 08.8**	**+0.7**
CHL2	**Volc¡n Chiles**	**2.76**	**82**	⇑P	**Pn**	**04 12 09.2**	**+0.7**
PIAT	**Ana Tenorio**	**2.77**	**120**	P	**Pn**	**04 12 10.2**	**+1.8**
PIAT	**Ana Tenorio**	**2.77**	**120**	P	**Pn**	**04 12 09.7**	**+1.3**
PIAT				S	**Sn**	**04 12 42.2**	**+0.6**
CMBC	**Cumbal**	**2.88**	**79**	P	**Pn**	**04 12 11.0**	**+1.1**
CMBC	**Cumbal**	**2.88**	**79**	P	**Pn**	**04 12 11.1**	**+1.1**
CMBC	**Cumbal**	**2.88**	**79**	P	**Pn**	**04 12 10.7**	**+0.7**
TULM	**Tulcn-Chalpat**	**2.88**	**84**	P	**Pn**	**04 12 12.5**	**+2.5**
TULM	**Tulcn-Chalpat**	**2.88**	**84**	P	**Pn**	**04 12 12.7**	**+2.6**
TULM	**Tulcn-Chalpat**	**2.88**	**84**	P	**Pn**	**04 12 12.6**	**+2.5**
BPAT	**Tungurahua Vol**	**2.92**	**131**	P	**Pb**	**04 12 15.2**	**-1.1**
ATUL	**Tulcn**	**2.95**	**83**	P	**Pn**	**04 12 13.7**	**+2.8**
BONI	**La Bonita**	**3.12**	**89**	P	**Pn**	**04 12 16.1**	**+2.9**
BONI	**La Bonita**	**3.12**	**89**	P	**Pn**	**04 12 16.2**	**+3.0**
BONI	**La Bonita**	**3.12**	**89**	P	**Pn**	**04 12 15.8**	**+2.6**
BONI				S	**Sb**	**04 12 54.8**	**-2.9**
ARDO	**Archidona, Ten**	**3.17**	**116**	P	**Pb**	**04 12 17.7**	**-2.8**
COHC	**Cochancay**	**3.17**	**154**	P	**Pn**	**04 12 16.1**	**+2.4**
COHC	**Cochancay**	**3.17**	**154**	P	**Pn**	**04 12 14.7**	**+1.0**
COHC				S	**Sb**	**04 12 55.3**	**-3.6**
CASC	**Dorado de Casc**	**3.32**	**95**	P	**Pb**	**04 12 20.4**	**-2.6**
GCUF	**Volcan Galeras**	**3.40**	**76**	P	**Pn**	**04 12 18.7**	**+1.4**
PKYU	**Pakayacu**	**3.67**	**124**	P	**Pb**	**04 12 25.9**	**-3.1**
CRUC	**La Cruz**	**3.88**	**73**	P	**Pn**	**04 12 26.5**	**+2.9**
CRUC	**La Cruz**	**3.88**	**73**	P	**Pn**	**04 12 25.9**	**+2.2**
ARNL	**Arenillas**	**3.97**	**172**	P	**Pn**	**04 12 25.3**	**+0.7**
BOSC	**San Juan Bosco**	**4.14**	**149**	P	**Pn**	**04 12 31.4**	**+4.3**
TAIS	**Taisha**	**4.19**	**131**	P	**Pn**	**04 12 31.4**	**+3.6**
POPC	**Popayan, Colom**	**4.50**	**62**	P	**Pn**	**04 12 32.4**	**+0.2**
POPC	**Popayan, Colom**	**4.50**	**62**	P	**Pn**	**04 12 31.2**	**-1.0**
GONZ	**Gonzanam**	**4.78**	**165**	P	**Pb**	**04 12 43.8**	**-4.3**
MCRA	**Macar, Loja**	**4.79**	**172**	P	**Pn**	**04 12 37.9**	**+1.9**
MCRA	**Macar, Loja**	**4.79**	**172**	P	**Pn**	**04 12 36.7**	**+0.7**
FLOC	**Florencia**	**5.13**	**77**	P	**Pn**	**04 12 43.9**	**+3.2**
FLOC	**Florencia**	**5.13**	**77**	P	**Pn**	**04 12 44.3**	**+3.6**
	0.2nm45nm,1.0s						
ZUMB	**Zumba**	**5.45**	**164**	P	**Pn**	**04 12 49.0**	**+3.9**
PTLC	**Puerto Leguiza**	**5.86**	**92**	P	**Pn**	**04 12 53.3**	**+2.7**
PTLC	**Puerto Leguiza**	**5.86**	**92**	P	**Pn**	**04 12 52.5**	**+1.9**
	59nm,0.8s						
PTLC	**Puerto Leguiza**	**5.86**	**92**	P	**Pn**	**04 12 53.3**	**+2.7**
	680nm59nm,0.8s						
MACC	**Macarena, Meta**	**7.02**	**76**	P	**Pn**	**04 13 08.4**	**+1.8**
MACC	**Macarena, Meta**	**7.02**	**76**	P	**Pn**	**04 13 09.2**	**+2.6**

*IDC **06** 04:11:27.8±1.2,54°.91N×111°.92E, h0km, mb3.5/6, mbtmp

OGRR	**Ongureny**	**2.79**	**244**	⇓*i*	Pn	**Pn**	**04 12 14.3**	**+0.6**
OGRR				*e*			04 12 17.8	
OGRR				*e*Pg		**Pb**	**04 12 18.3**	**-0.6**
OGRR				*e*Sn		**Sn**	**04 12 47.2**	**-0.1**
OGRR				*e*Sg		**Sb**	**04 12 53.5**	**+0.5**
OGRR				*e*			04 12 56.1	
OGRR				Pmax				
	comp=N,60nm,0.3s							
OGRR				max				
	comp=N,474nm,0.5s							
OGRR	**Ongureny**	**2.79**	**244**	*e*PN		**Pn**	**04 12 14.3**	**+0.6**
OGRR				*e*			04 12 17.6	
OGRR				*e*			04 12 52.3	
OGRR				pmax	pmax			
	comp=Z,62nm,0.4s							
OGRR				smax	smax			
	comp=N,474nm,0.6s							
GORB	**Goryachinsk**	**2.85**	**228**	*e*Pn		**Pn**	**04 12 14.9**	**+0.3**
GORB				*e*Pg		**Pb**	**04 12 19.1**	**-0.9**
GORB				*e*Sg		**Sb**	**04 12 56.2**	**+1.2**
UZR	**Uzur**	**2.88**	**238**	*e*Pn		**Pn**	**04 12 15.2**	**+0.1**
UZR				*e*Pg		**Pb**	**04 12 19.8**	**-0.8**
UZR				*e*Sn		**Sn**	**04 12 48.4**	**-1.4**
UZR				*e*Sg		**Sb**	**04 12 57.2**	**+1.3**
UZR				Pmax				
	comp=N,117nm,0.4s							
UZR				Smax				
	comp=N,374nm,0.7s							
KELR	**Kotokel**	**3.10**	**227**	*e*Pn		**Pn**	**04 12 17.9**	**-0.1**
KELR				*e*Pg		**Pb**	**04 12 24.4**	**+0.1**
KELR				*e*Sg		**Sb**	**04 13 03.3**	**+1.2**
CIT	**Chita**	**3.11**	**160**	*e*Pg		**Pb**	**04 12 24.2**	**-0.2**
CIT				*e*Sg		**Sb**	**04 13 04.4**	**+2.1**
CIT				*e*SgSg		**Sg**	**04 13 12.7**	**+4.0**
CIT				Pmax				
	comp=N,100nm,0.3s							
CIT				max				
	comp=N,1μm,0.4s							
CIT	**Chita**	**3.11**	**160**	*e*PN		**Pn**	**04 12 20.3**	**+2.2**
CIT				*e*			04 12 25.3	
CIT				*e*S		**Sn**	**04 12 54.9**	**-0.4**
CIT				*e*			04 13 03.5	
CIT				pmax	pmax			
	comp=Z,119nm,0.3s							
CIT				smax	smax			
	comp=E,1μm,0.4s							
BOD	**Bodaibo**	**3.14**	**22**	*e*Pn		**Pn**	**04 12 20.9**	**+2.4**
BOD				*e*Pg		**Pg**	**04 12 27.1**	**-2.0**
BOD				*e*Sg		**Sg**	**04 13 08.4**	**-1.3**
BOD				Pmax				
	comp=E,73nm,0.5s							
BOD				Smax				
	comp=E,266nm,0.8s							
BOD	**Bodaibo**	**3.14**	**22**	*e*PN		**Pn**	**04 12 20.4**	**+1.9**
BOD				*e*			04 12 27.2	
BOD				*e*			04 13 08.6	
BOD				pmax	pmax			
	comp=Z,32nm,0.4s							
BOD				smax	smax			
	comp=N,208nm,0.7s							
ZRHB	**Zarechye**	**3.65**	**231**	*e*Pg		**Pb**	**04 12 33.7**	**+0.1**
ZRHB				*e*Sg		**Sb**	**04 13 20.8**	**+2.9**
ZRHB				Pmax				
	comp=N,124nm,0.8s							
ZRHB				Smax				
	comp=N,904nm,1.4s							
TRG	**Tyrgan**	**3.90**	**238**	*e*Pn		**Pn**	**04 12 29.4**	**+0.4**
TRG				*e*Pg		**Pb**	**04 12 38.5**	**+0.7**
TRG				*e*Sn		**Sn**	**04 13 12.7**	**-2.1**
TRG				*e*Sg		**Sb**	**04 13 27.6**	**+2.6**
TRG				Pmax				
	comp=N,18nm,0.3s							
TRG				Smax				
	comp=N,213nm,1.2s							
TRG	**Tyrgan**	**3.90**	**238**	*e*PN		**Pn**	**04 12 29.0**	**0.0**
TRG				*e*			04 12 38.3	
TRG				*e*S		**Sn**	**04 13 13.6**	**-1.2**
TRG				*e*			04 13 27.4	
TRG				pmax	pmax			
	comp=Z,21nm,0.4s							
TRG				smax	smax			
	comp=N,215nm,1.2s							
CRS	**Chara**	**4.14**	**59**	*e*Pn		**Pn**	**04 12 35.2**	**+2.9**
CRS				*e*Pg		**Pg**	**04 12 45.5**	**-2.7**
CRS				*e*Sg		**Sb**	**04 13 40.0**	**-1.8**
CRS				Pmax				
	comp=N,56nm,0.9s							
CRS				Smax				
	comp=N,261nm,0.8s							
FFNB	**Fofonovo**	**4.17**	**228**	*e*Pn		**Pn**	**04 12 33.4**	**+0.6**
FFNB				*e*Pg		**Pb**	**04 12 43.1**	**+0.5**
FFNB				*e*Sg		**Sb**	**04 13 36.9**	**+3.9**
KAB	**Kabansk**	**4.22**	**229**	*e*Sg		**Sb**	**04 13 37.7**	**+3.4**
KAB				Smax				
	comp=N,750nm,1.5s							
HRMR	**Khuramsha**	**4.41**	**223**	*e*Pn		**Pn**	**04 12 36.5**	**+0.5**
HRMR				*e*Pg		**Pb**	**04 12 46.8**	**+0.2**
HRMR				*e*Sg		**Sb**	**04 13 42.7**	**+2.9**
HRMR				*e*			04 13 46.4	
HRMR				Pmax				
	comp=N,76nm,0.5s							
HRMR				max				
	comp=N,416nm,0.5s							
VTMR	**Vitim**	**4.53**	**5**	*e*Sg		**Sg**	**04 13 52.7**	**-1.7**
TUP	**Tupik**	**4.76**	**93**	⇓*i*	Pn	**Pn**	**04 12 42.6**	**+1.7**
TUP				*e*			04 12 51.8	
TUP				*e*Pg		**Pb**	**04 12 55.9**	**+3.3**
TUP				*e*Sn		**Sn**	**04 13 36.9**	**+0.8**
TUP				*e*Sg		**Sg**	**04 13 59.0**	**-2.8**
TUP				Pmax				
	comp=N,30nm,0.3s							
TUP				Smax				
	comp=N,624nm,0.7s							
TUP	**Tupik**	**4.76**	**93**	*e*PN		**Pn**	**04 12 42.6**	**+1.7**
TUP				*e*			04 12 55.8	
TUP				*e*S		**Sn**	**04 13 36.9**	**+0.8**
TUP				*e*			04 13 58.8	
TUP				pmax	pmax			
	comp=Z,30nm,0.3s							
TUP				smax	smax			
	comp=N,627nm,0.7s							
BGT	**Bolshoye Golou**	**4.79**	**235**	*e*Pn		**Pn**	**04 12 41.7**	**+0.4**
BGT				*e*Pg		**Pb**	**04 12 54.3**	**+1.2**
BGT				*e*Sg		**Sb**	**04 13 55.8**	**+5.0**
BGT				Pmax				
	comp=N,14nm,0.2s							
BGT				Smax				
	comp=N,131nm,0.9s							
KHNR	**Khani**	**5.01**	**63**	*e*Pn		**Pn**	**04 12 47.6**	**+3.3**
KHNR				*e*Pg		**Pg**	**04 13 01.5**	**-3.4**
KHNR				*e*Sg		**Sg**	**04 14 07.4**	**-2.4**
LSTR	**Listvyanka**	**5.18**	**236**	*e*Pn		**Pn**	**04 12 47.2**	**+0.6**
LSTR				*e*Pg		**Pb**	**04 13 01.3**	**+1.6**
LSTR				*e*Sg		**Sb**	**04 14 06.9**	**+5.0**
LSTR				Pmax				
	comp=N,14nm,0.4s							
LSTR				Smax				
	comp=N,106nm,1.3s							
IRK	**Irkutsk**	**5.23**	**242**	*e*Sg		**Sb**	**04 14 08.9**	**+5.4**
IRK				Smax				
	comp=N,425nm,0.5s							
KPC	**Khapcheranga**	**5.26**	**176**	*e*Pn		**Pn**	**04 12 47.4**	**-0.3**
KPC				*e*Pg		**Pb**	**04 13 01.8**	**+0.8**
KPC				*e*Sg		**Sb**	**04 14 09.9**	**+5.7**
KPC				Pmax				
	comp=N,28nm,0.6s							
KPC				Smax				
	comp=N,234nm,0.9s							
KPC	**Khapcheranga**	**5.26**	**176**	*e*PN		**Pn**	**04 12 47.6**	**-0.1**
KPC				*e*			04 13 03.2	
KPC				*e*			04 14 10.6	
KPC				pmax	pmax			
	comp=Z,28nm,1.2s							
KPC				smax	smax			
	comp=E,261nm,1.4s							
IVK	**Ivanovka**	**5.42**	**238**	*e*Pn		**Pn**	**04 12 50.7**	**+0.8**
IVK				*e*Pg		**Pb**	**04 13 05.5**	**+1.7**
IVK				*e*			04 14 12.2	
IVK				*e*Sg		**Sb**	**04 14 14.8**	**+5.9**
IVK				Pmax				
	comp=E,37nm,0.7s							
IVK				Smax				
	comp=E,219nm,0.9s							
YKLR	**Yuktali**	**5.80**	**69**	*e*Pn		**Pn**	**04 12 57.6**	**+2.4**
YKLR				*e*Pg			04 13 15.1	-5.0
YKLR				*e*Sg		**Sg**	**04 14 31.5**	**-3.8**
ARS	**Arshan**	**6.37**	**245**	*e*Pn		**Pn**	**04 13 02.3**	**-0.6**
ARS				*e*Pg		**Pb**	**04 13 21.6**	**+1.7**
ARS				*e*Sg		Sg	04 14 44.2	-9.1
ARS				Pmax				
	comp=E,26nm,0.4s							
ARS				Smax				
	comp=E,374nm,0.8s							
ZAK	**Zakamensk**	**6.90**	**232**	*e*Sg		**Sg**	**04 15 01.6**	**-8.9**
ZAK				Smax				
	comp=E,57nm,1.1s							
ZAK	**Zakamensk**	**6.90**	**232**	*e*PG		Pb	04 13 33.8	+4.7
ZAK				*e*			04 15 01.5	
ZAK				pmax	pmax			
	comp=Z,5.0nm,0.3s							
ZAK				smax	smax			
	comp=N,58nm,0.8s							
MOY	**Mondy**	**7.26**	**248**	*e*Pn		**Pn**	**04 13 17.1**	**+1.9**
MOY				*e*Pg		**Pb**	**04 13 38.0**	**+2.9**
MOY				*e*			04 14 38.1	
MOY				*e*Sg		Sb	04 15 10.6	+8.9
MOY				Pmax				
	comp=N,14nm,1.3s							
MOY				Smax				
	comp=N,120nm,1.0s							
MOY	**Mondy**	**7.26**	**248**	*e*PN		**Pn**	**04 13 17.9**	**+2.7**
MOY				*e*			04 13 40.7	
MOY				*e*			04 15 10.4	
MOY				pmax	pmax			
	comp=Z,13nm,0.6s							
MOY				smax	smax			
	comp=E,122nm,1.0s							
HILR	**Hailar Array B**	**7.27**	**135**	Pn		**Pn**	**04 13 14.4**	**-0.9**
	baz=326,slow=13							
HILR				Sn		**Sn**	**04 14 37.5**	**-0.4**
	baz=353,slow=10							
HILR				Lg	Lg		04 15 11.8	
	baz=328,slow=30							
	comp=E,1.8nm,0.3s							
HIA	**Hailar**	**7.49**	**136**	*e*Sg		**Sg**	**04 15 21.4**	**-8.0**
ORL	**Orlik**	**7.51**	**256**	*e*Pn		**Pn**	**04 13 20.3**	**+1.6**
ORL				*e*Pg		Pb	04 13 44.3	+5.0
ORL				*e*			04 14 43.7	
ORL				*e*Sg		Sg	04 15 20.0	-10
ORL				Pmax				
	comp=E,14nm,0.9s							
ORL				Smax				
	comp=E,169nm,1.1s							
ORL	**Orlik**	**7.51**	**256**	*e*PN		**Pn**	**04 13 20.2**	**+1.6**
ORL				*e*			04 13 44.4	
ORL				*e*			04 15 18.4	
ORL				pmax	pmax			
	comp=Z,17nm,0.8s							
ORL				smax	smax			
	comp=N,169nm,1.2s							
CLNS	**Chul'man**	**7.61**	**70**	*e*Sg		**Sg**	**04 15 26.8**	**-6.1**
ULN	**Ulaanbaatar**	**7.68**	**205**	*e*Pn		**Pn**	**04 13 22.8**	**+1.8**
ULN				*e*Pg		Pb	04 13 47.0	+4.7
ULN				*e*Sg		Sg	04 15 25.2	-10
ULN				Pmax				
	comp=N,12nm,0.8s							
ULN				Smax				
	comp=N,118nm,1.9s							
SONM	**Songino Array**	**7.87**	**208**	Pn		**Pn**	**04 13 24.2**	**+0.6**
	comp=N,1.7nm,0.3s,baz=28,slow=12,SNR=32							
SONM				Sn		**Sn**	**04 14 52.8**	**0.0**
	comp=N,1.2nm,0.3s,baz=351,slow=25,SNR=4.1							
SONM				Lg	Lg		04 15 32.8	
	comp=N,2.4nm,0.3s,baz=25,slow=27,SNR=16							
	comp=N,2.1nm,0.3s							
YAK	**Yakutsk**	**11.72**	**45**	Lg		Lg	04 17 30.5	
	comp=N,4.9nm,0.3s,baz=193,slow=19,SNR=1.4							
ZALV	**Zalesovo Beam**	**15.69**	**277**	Pn		**Pn**	**04 15 09.3**	**-0.7**
	comp=N,0.2nm,0.3s,baz=79,slow=11,SNR=6.7							
ZALV				Lg	Lg		04 19 41.1	
	baz=79,slow=26,SNR=1.8							
	comp=N,1.2nm,0.4s							
USRK	**Ussuriysk Ar.**	**16.87**	**121**	Lg		Lg	04 20 19.8	
	comp=N,0.3nm,0.3s,baz=357,slow=39,SNR=1.6							
NRIK	**Noril'sk**	**18.14**	**332**	P		**P**	**04 15 42.1**	**+1.1**
	comp=N,0.4nm,0.3s,baz=117,slow=12,SNR=4.7							
NRIK				Lg	Lg		04 21 01.2	
	comp=N,0.3nm,0.3s,baz=159,slow=17,SNR=1.3							
	comp=N,2.0nm,0.5s							
TIXI	**Tiksi**	**18.31**	**17**	P		**P**	**04 15 42.7**	**-0.1**
	comp=N,0.3nm,0.3s,baz=256,slow=7.5,SNR=3.6							
TIXI				Lg	Lg		04 21 07.3	
	comp=N,0.4nm,0.3s,baz=191,slow=10,SNR=3.6							
	comp=N,1.2nm,0.3s							
MKAR	**Makanchi Array**	**20.21**	**258**	P		Pn	04 16 05.6	-0.2
	comp=N,0.4nm,0.6s,baz=57,slow=8.0,SNR=4.0							
	comp=N,0.4nm,0.6s							
KURK	**Kurchatov**	**20.37**	**272**	P		**P**	**04 16 06.2**	**+0.7**
KURBB	**Kurchatov Arra**	**20.46**	**272**	P		**P**	**04 16 06.2**	**-0.3**
	comp=N,0.6nm,0.7s,baz=64,slow=11,SNR=4.1							
	comp=N,0.6nm,0.7s							
BVAR	**Borovoye Array**	**24.18**	**283**	P		**P**	**04 16 47.0**	**+1.8**
	comp=N,0.8nm,0.5s,baz=69,slow=8.1,SNR=4.2							
	comp=N,0.8nm,0.5s							
FINES	**FINESS Array B**	**42.53**	**315**	P		**P**	**04 19 25.1**	**+0.9**
	comp=N,1.9nm,0.7s,baz=82,slow=10,SNR=1.6							
	comp=N,1.9nm,0.7s							
HFS	**Hagfors**	**48.21**	**318**	P		**P**	**04 20 09.6**	**+0.3**
	comp=N,1.4nm,0.6s,baz=53,slow=9.9,SNR=1.6							
	comp=N,1.4nm,0.6s							
WRA	**Warramunga Arr**	**77.03**	**158**	P		**P**	**04 23 22.1**	**+0.1**
	comp=N,0.3nm,0.6s,baz=347,slow=6.5,SNR=2.1							
	comp=N,0.3nm,0.6s							

*BGSI **06** 04:14:32.5±1.2,24°.18S×26°.72E,h15km,ML2.5*
PRE 06 04:13:56.2±0.9,26°.43S×29°.16E,h0km,ML2.7,
Suspected explosion,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**1.43**	**292**	*e*P		Pb	04 14 24.0	+0.2
HRAO				*e*S		Sn	04 14 43.2	+0.2
HRAO				IAML			04 14 45.8	
	comp=Z,94nm,0.2s							
HOED	**Hoedspruit, Li**	**2.57**	**39**	*e*P		Pn	04 14 39.1	-0.1
HOED				*e*S		Sn	04 15 11.4	+0.2
HOED				IAML			04 15 21.2	
	comp=Z,66nm,0.4s							
LBTB	**Lobatse**	**3.51**	**293**	*i* P		Pb	04 14 55.7	-3.6
LBTB				IAML			04 15 47.1	
	comp=E,54nm,1.1s							
MAKGR	**Makgori**	**3.96**	**278**	*i* P		Pb	04 15 08.5	+1.5
MAKGR				IAML			04 16 05.7	
	comp=E,214nm,0.5s							
BOSA	**Boshof**	**4.09**	**237**	*e*P		Pn	04 15 01.6	+1.4
BOSA				*e*S		Sn	04 15 49.0	+0.3
BOSA				IAML			04 16 14.3	
	comp=Z,28nm,0.3s							
MREMI	**Moremi**	**4.15**	**338**	*i* P		Pn	04 15 01.0	+0.1
MREMI				IAML			04 16 07.6	
	comp=N,118nm,0.5s							
LPHEP	**Lephephe**	**4.28**	**315**	*i* P		Pn	04 14 52.1	-11
LPHEP				IAML			04 16 09.6	
	comp=N,44nm,1.2s							
KDWAN	**Kaudwane**	**5.09**	**306**	*i* P		Pn	04 15 05.0	-8.8
KDWAN				IAML			04 16 35.2	
	comp=E,65nm,0.4s							
BROLN	**Tlhalogang**	**5.56**	**342**	*i* P		Pn	04 15 19.3	-1.1
ALKP	**Alkanpan, Nort**	**7.03**	**239**	*e*P		Pn	04 15 41.4	+0.9
ALKP				*e*S		Sn	04 16 57.9	-3.3
ALKP				IAML			04 17 44.8	
	comp=Z,8.2nm,0.4s							
GRAF	**Camdeboo Natio**	**7.11**	**214**	*e*P		Pn	04 15 43.2	+1.6
GRAF				*e*S		Sn	04 16 59.6	-3.6
GRAF				IAML			04 17 08.2	
	comp=Z,3.3nm,0.7s							
BFON	**Badsfontein, M**	**7.17**	**221**	*e*P		Pn	04 15 44.1	+1.6
BFON				*e*S		Sn	04 17 01.7	-3.2
BFON				IAML			04 17 45.9	
	comp=Z,8.1nm,0.9s							
BRAK	**Brakfontein**	**7.64**	**224**	*e*P		Pn	04 15 50.7	+1.8
BRAK				*e*S		Sn	04 17 13.2	-3.1
BRAK				IAML			04 17 25.0	
	comp=Z,3.0nm,0.3s							
GRAN	**Grantham**	**8.45**	**225**	*e*P		Pn	04 16 01.1	+1.2
GRAN				*e*S		Sn	04 17 32.1	-3.9
GRAN				IAML			04 18 30.4	
	comp=Z,8.0nm,0.6s							
ARMS	**Ukamas**	**8.53**	**257**	*e*P		Pn	04 16 03.0	+1.8
ARMS				*e*S		Sn	04 17 34.4	-3.9
FRAZ	**Fraserburg**	**8.71**	**229**	*e*P		Pn	04 16 05.2	+1.6
FRAZ				*e*S		Sn	04 17 38.6	-4.0
FRAZ				IAML			04 17 43.0	
	comp=Z,3.5nm,0.4s							
CVNA	**Calvinia**	**9.64**	**236**	*e*P		Pn	04 16 18.4	+2.0
CVNA				*e*S		Sn	04 18 00.5	-5.1
CVNA				IAML			04 19 07.6	
	comp=Z,8.3nm,0.5s							

*IDC **06** 04:21:33.1±1.0,54°.81N×111°.99E,h0km,mb3.6/8,*
mbtmp3.8/14,ML3.8/6,MS3.2/2,Error ellipse:
s-maj=20.1km s-min=16.3km az=46.0
*BYKL **06** 04:21:34.8±0.1,54°.87N×111°.70E,h7km±2km*
ISC 06 04:21:34.2±0.5,54°.86N±0°.02×111°.89E±0°.02,h10km,n56,
σ2ᵉ95/110,mb3.7/6,3C-2D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.42**	**273**	⇑*i*	Pg	**Pg**	**04 21 40.2**	**-2.2**
YLYR				Pmax			04 21 40.4	
	4μm,0.3s							
YLYR				*e*Sg		**Sg**	**04 21 44.8**	**-3.2**
YLYR				Smax			04 21 45.1	
	18μm,0.4s							
KMO	**Kumora**	**1.10**	**340**	⇑*i*	Pg	**Pg**	**04 21 53.3**	**-2.1**
KMO				Pmax			04 21 54.4	
	453nm,0.4s							
KMO				*e*Sg		**Sg**	**04 22 08.0**	**-1.7**
KMO				Smax			04 22 19.8	
	1μm,1.2s							
UKT	**Uakit**	**1.18**	**57**	⇑*i*	Pn	**Pn**	**04 21 56.8**	**-0.1**
UKT				Pmax			04 22 03.2	
	225nm,0.5s							
UKT				*e*Sg		**Sn**	**04 22 14.1**	**+1.0**
UKT				*e*			04 22 19.3	
UKT				max			04 22 24.2	
	842nm,0.5s							
YOAB	**Uoyan, Buryati**	**1.29**	**356**	*e*Pg		**Pn**	**04 21 57.4**	**-0.9**
YOAB				Pmax			04 22 01.5	
	1.0nm,0.1s							
YOAB				*e*Sg		**Sn**	**04 22 14.4**	**-1.2**
YOAB				*e*			04 22 20.1	
YOAB				max			04 22 35.4	
	2μm,1.1s							
SVKR	**Severomuysk**	**1.58**	**36**	*e*Pg		**Pg**	**04 22 04.8**	**+0.3**
SVKR				Pmax			04 22 07.6	
	319nm,0.2s							
SVKR				*e*Sg		**Sg**	**04 22 26.3**	**+1.3**
SVKR				Smax			04 22 32.7	
	4μm,1.1s							
NIZB	**Nizh Angarsk**	**1.62**	**305**	*e*Pg		**Pn**	**04 22 01.8**	**-1.0**
NIZB				*e*			04 22 03.7	
NIZB				max			04 22 04.5	
	214nm,0.2s							
NIZB				*e*Sg		**Sb**	**04 22 23.1**	**-1.6**
NIZB				*e*			04 22 25.9	
NIZB				max			04 22 26.7	
	1μm,0.6s							
SYVR	**Suvo**	**1.63**	**223**	⇓*i*	Pg	**Pn**	**04 22 03.0**	**0.0**
SYVR				Pmax			04 22 06.1	
	566nm,0.5s							
SYVR				*e*Sg		**Sn**	**04 22 24.4**	**+0.3**
SYVR				*e*			04 22 27.3	
SYVR				max			04 22 27.5	
	2μm,0.6s							
MXMB	**Maximikha**	**2.45**	**230**	*e*Pg		**Pb**	**04 22 16.7**	**-1.5**
MXMB				*e*Sg		**Sb**	**04 22 47.8**	**-0.6**
MXMB				*e*			04 22 49.7	
NLYR	**Nelyaty**	**2.71**	**51**	⇓*i*	Pn	**Pb**	**04 22 20.3**	**-2.5**
NLYR				*e*Pg		**Pg**	**04 22 25.0**	**-1.1**
NLYR				Pmax			04 22 32.6	
	109nm,0.7s							
NLYR				*e*			04 22 55.1	
NLYR				*e*Sg		**Sg**	**04 23 01.3**	**+0.1**
NLYR				*e*SgSg		**SnSn**	**04 23 11.0**	**+10**
NLYR				max			04 23 14.4	
	1μm,1.0s							
OGRR	**Ongureny**	**2.80**	**246**	*e*Pn		**Pn**	**04 22 19.1**	**+0.1**
OGRR				*e*Pg		**Pb**	**04 22 22.6**	**-1.6**
OGRR				Pmax			04 22 25.2	
	101nm,0.2s							
OGRR				*e*Sn		**Sn**	**04 22 52.2**	**-0.6**
OGRR				*e*Sg		**Sb**	**04 22 58.5**	**0.0**
OGRR				Smax			04 23 01.4	
	660nm,0.3s							
GORB	**Goryachinsk**	**2.84**	**230**	*e*Pn		**Pn**	**04 22 19.8**	**+0.2**
GORB				*e*Pg		**Pb**	**04 22 23.5**	**-1.4**
GORB				*e*Sg		**Sb**	**04 23 00.6**	**+0.9**
UZR	**Uzur**	**2.88**	**239**	*e*Pn		**Pn**	**04 22 20.1**	**-0.1**
UZR				*e*Pg		**Pb**	**04 22 25.5**	**-0.2**
UZR				Pmax			04 22 27.8	
	107nm,0.6s							
UZR				*e*Sn		**Sn**	**04 22 54.8**	**-0.1**
UZR				*e*Sg		**Sb**	**04 23 02.1**	**+1.0**
UZR				Smax			04 23 04.6	
	700nm,0.3s							
CIT	**Chita**	**3.01**	**160**	*e*Pg		**Pb**	**04 22 29.3**	**+1.4**
CIT				Pmax			04 22 36.1	
	135nm,0.3s							
CIT				*e*Sg		**Sg**	**04 23 09.5**	**-1.4**
CIT				Smax			04 23 10.6	
	1μm,0.4s							
KELR	**Kotokel**	**3.08**	**229**	*e*Pn		**Pn**	**04 22 22.8**	**-0.1**
KELR				*e*Pg		**Pb**	**04 22 29.3**	**+0.2**
KELR				*e*Sn		**Sn**	**04 22 59.4**	**-0.4**
KELR				*e*Sg		**Sb**	**04 23 08.9**	**+2.1**
BOD	**Bodaibo**	**3.19**	**21**	*e*Pn		**Pn**	**04 22 20.5**	**+2.1**
BOD				*e*Pg		**Pg**	**04 22 32.3**	**-3.0**
BOD				Pmax			04 22 36.9	
	51nm,0.9s							
BOD				*e*Sn		**Sn**	**04 23 04.5**	**+2.0**
BOD				*e*Sg		**Sg**	**04 23 14.1**	**-2.6**
BOD				*e*SgSg		**SbSb**	**04 23 21.3**	**+6.3**
BOD				max			04 23 23.1	
	465nm,1.4s							
ZRHB	**Zarechye**	**3.64**	**233**	*e*Pg		**Pb**	**04 22 38.1**	**-0.5**
ZRHB				Pmax			04 22 45.9	
	161nm,0.8s							
ZRHB				*e*Sg		**Sb**	**04 23 25.3**	**+2.6**
ZRHB				Smax			04 23 58.8	
	2μm,1.1s							
TRG	**Tyrgan**	**3.90**	**240**	*e*		**Pn**	**04 22 30.9**	**-3.2**
TRG				*e*Pg		**Pb**	**04 22 42.9**	**-0.1**
TRG				Pmax			04 22 47.5	
	31nm,0.4s							
TRG				*e*Sg		**Sb**	**04 23 32.2**	**+2.0**
TRG				Smax			04 23 45.6	
	353nm,0.7s							
CRS	**Chara**	**4.14**	**58**	*e*Pn		**Pn**	**04 22 40.3**	**+2.9**
CRS				*e*Pg		**Pg**	**04 22 50.1**	**-3.3**
CRS				Pmax			04 23 02.5	
	57nm,1.0s							
CRS				*e*Sg		**Sg**	**04 23 45.8**	**-1.1**
CRS				Smax			04 24 04.7	
	325nm,1.4s							
FFNB	**Fofonovo**	**4.16**	**229**	*e*Pn		**Pn**	**04 22 38.1**	**+0.4**
FFNB				*e*Pg		**Pb**	**04 22 48.9**	**+1.5**
FFNB				*e*Sg		**Sb**	**04 23 41.9**	**+4.2**
KAB	**Kabansk**	**4.21**	**230**	*e*Sg		**Sb**	**04 23 42.2**	**+3.2**
KAB				Smax			04 24 08.5	
	1μm,1.2s							
HRMR	**Khuramsha**	**4.39**	**224**	*e*

BGT				*e*Pg	**Pb**	**04 22 59.1**	**+0.9**	
BGT				Pmax		04 23 03.5		
	22nm,0.5s							
BGT				*e*Sg	**Sb**	**04 24 00.7**	**+4.9**	
BGT				Smax		04 24 11.2		
	183nm,0.6s							
KHNR	**Khani**	**5.00**	**62**	*e*Pg	**Pg**	**04 23 06.4**	**-3.5**	
KHNR				*e*Sg	**Sg**	**04 24 12.1**	**-2.6**	
KPC	**Khapcheranga**	**5.17**	**176**	*e*Pn	**Pn**	**04 22 53.1**	**+1.4**	
KPC				*e*Pg	**Pb**	**04 23 07.7**	**+3.0**	
KPC				Pmax		04 23 18.1		
	39nm,0.7s							
KPC				*e*Sg	**Sg**	**04 24 14.6**	**-5.5**	
KPC				Smax		04 24 18.7		
	399nm,0.8s							
LSTR	**Listvyanka**	**5.18**	**238**	*e*Pn	**Pn**	**04 22 52.4**	**+0.7**	
LSTR				*e*Pg	**Pb**	**04 23 06.6**	**+1.8**	
LSTR				Pmax		04 23 46.9		
	22nm,0.6s							
LSTR				*e*		04 24 07.2		
LSTR				*e*Sg	**Sb**	**04 24 12.9**	**+5.9**	
LSTR				Smax		04 24 27.3		
	151nm,1.3s							
IRK	**Irkutsk**	**5.24**	**243**	*e*Sg	**Sb**	**04 24 13.2**	**+4.4**	
IRK				Smax		04 24 20.3		
	608nm,0.6s							
IVK	**Ivanovka**	**5.42**	**239**	*e*Pn	**Pn**	**04 22 56.6**	**+1.5**	
IVK				*e*Pg	**Pb**	**04 23 10.0**	**+1.0**	
IVK				Pmax		04 23 41.6		
	41nm,0.7s							
IVK				*e*		04 24 16.6		
IVK				*e*Sg	**Sb**	**04 24 19.8**	**+5.7**	
IVK				Smax		04 24 31.0		
	279nm,1.2s							
YKLR	**Yuktali**	**5.79**	**69**	*e*Pg	**Pg**	**04 23 20.9**	**-4.0**	
YKLR				*e*Sg	**Sg**	**04 24 36.8**	**-3.0**	
ARS	**Arshan**	**6.38**	**246**	*e*Pn	**Pn**	**04 23 08.5**	**+0.3**	
ARS				*e*Pg	**Pb**	**04 23 27.8**	**+2.5**	
ARS				Pmax		04 23 51.0		
	38nm,0.6s							
ARS				*e*Sg	**Sb**	**04 24 49.1**	**+7.5**	
ARS				Smax		04 24 52.3		
	654nm,0.8s							
ZAK	**Zakamensk**	**6.89**	**233**	*e*Pg	**Pb**	**04 23 36.9**	**+2.9**	
ZAK				Pmax		04 23 42.1		
	7.0nm,0.4s							
ZAK				*e*		04 24 37.6		
ZAK				*e*Sg	**Sg**	**04 25 06.3**	**-9.0**	
ZAK				Smax		04 25 23.3		
	89nm,1.0s							
HILR	**Hailar Array B**	**7.18**	**134**	Pn	**Pn**	**04 23 18.4**	**-0.8**	
	baz=281,slow=14							
HILR				Sn	**Sn**	**04 24 40.6**	**0.0**	
	baz=321,slow=16							
HILR				Lg	Lg	04 25 18.1		
	baz=334,slow=29							
	2.7nm,0.3s							
MOY	**Mondy**	**7.27**	**248**	*e*Pn	**Pn**	**04 23 20.8**	**+0.3**	
MOY				*e*Pg	**Pb**	**04 23 43.1**	**+2.6**	
MOY				Pmax		04 24 18.7		
	22nm,0.6s							
MOY				*e*		04 24 43.2		
MOY				*e*Sg	Sb	04 25 16.5	+9.2	
MOY				Smax		04 25 30.9		
	198nm,1.0s							
HIA	**Hailar**	**7.40**	**136**	*e*Sg	**Sg**	**04 25 25.4**	**-6.1**	
HIA				Smax		04 25 45.4		
	292nm,2.2s							
ORL	**Orlik**	**7.54**	**257**	*e*Pn	**Pn**	**04 23 25.4**	**+1.2**	
ORL				*e*Pg	**Pb**	**04 23 48.9**	**+3.9**	
ORL				Pmax		04 23 56.2		
	23nm,1.2s							
ORL				*e*		04 24 50.5		
ORL				*e*Sg	Sg	04 25 24.9	-11	
ORL				Smax		04 25 31.5		
	243nm,1.1s							
CLNS	**Chul'man**	**7.59**	**70**	*e*	Pg	04 24 46.3	+47	
CLNS				*e*Sg	**Sg**	**04 25 32.9**	**-4.5**	
ULN	**Ulaanbaatar**	**7.63**	**205**	*e*Pn	**Pn**	**04 23 26.4**	**+1.0**	
ULN				*e*Pg	Pb	04 23 52.6	+6.0	
ULN				Pmax		04 24 13.1		
	20nm,1.4s							
ULN				*e*		04 25 11.2		
ULN				*e*Sg	**Sg**	**04 25 30.5**	**-8.3**	
ULN				Smax		04 25 51.0		
	249nm,1.8s							
SONM	**Songino Array**	**7.83**	**208**	Pn	**Pn**	**04 23 28.7**	**+0.5**	
	2.2nm,0.3s,baz=24,slow=12,SNR=22							
SONM				Pg	Pb	04 23 56.3	+6.3	
	1.8nm,0.3s,baz=16,slow=16,SNR=6.2							
SONM				Sn	**Sn**	**04 24 57.5**	**+0.7**	
	1.7nm,0.3s,baz=33,slow=17,SNR=4.0							
SONM				Lg	Lg	04 25 37.5		
	4.7nm,0.3s,baz=20,slow=26,SNR=17							
	3.1nm,0.3s							
TDJR	**Todzha**	**9.70**	**262**	*e*Pn	**Pn**	**04 23 54.1**	**+0.4**	
TDJR				*e*Pg		04 24 28.1		
TDJR				*e*		04 26 02.3		
TDJR				*e*Sg	Sn	04 26 30.8	+48	
KNGR	**Kungurtug, Tuv**	**9.70**	**250**	*e*Sg	Sn	04 26 31.3	+49	
YAK	**Yakutsk**	**11.74**	**45**	Lg	Lg	04 27 34.4		
	2.7nm,0.3s,baz=195,slow=20,SNR=1.9							
ZALV	**Zalesovo Beam**	**15.75**	**278**	Pn	**Pn**	**04 25 15.2**	**-0.8**	
	0.2nm,0.3s,baz=80,slow=11,SNR=12							
ZALV				Lg	Lg	04 29 41.5		
	0.2nm,0.3s,baz=80,slow=25,SNR=1.5							
	4.0nm,0.8s							
USRK	**Ussuriysk Ar.**	**16.79**	**121**	Pn	**Pn**	**04 25 26.5**	**-2.7**	
	0.4nm,0.3s,baz=334,slow=19,SNR=2.2							
USRK				Lg	Lg	04 30 17.1		
	0.4nm,0.3s,baz=351,slow=32,SNR=1.9							
	0.7nm,0.4s							
NRIK	**Noril'sk**	**18.24**	**332**	P	**P**	**04 25 47.2**	**0.0**	
	0.3nm,0.3s,baz=126,slow=14,SNR=1.9							
NRIK				S	Sn	04 28 58.6	-12	
	2.3nm,0.5s,baz=106,slow=16,SNR=3.6							
NRIK				Lg	Lg	04 31 01.6		
	baz=185,slow=24							
	1.6nm,0.4s							
TIXI	**Tiksi**	**18.37**	**17**	P	**Pn**	**04 25 47.1**	**-1.5**	
	0.3nm,0.3s,baz=214,slow=7.3,SNR=3.9							
TIXI				S	Sn	04 29 01.8	-12	
	2.0nm,0.2s,baz=310,slow=5.5,SNR=0.8							
TIXI				Lg	Lg	04 31 10.2		
	0.2nm,0.3s,baz=180,slow=20,SNR=4.2							
	1.8nm,0.3s							
MKAR	**Makanchi Array**	**20.24**	**259**	P	Pn	04 26 11.1	-0.2	
	0.5nm,0.6s,baz=67,slow=11,SNR=4.0							
MKAR				Lg	Lg	04 32 04.6		
	baz=58,slow=29							
MKAR				LR	LR	04 34 11.1		
	comp=Z,51nm,21.0s,baz=67,slow=37							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**20.51**	**272**	P	**P**	**04 26 12.5**	**+0.3**	
	1.0nm,0.6s,baz=69,slow=11,SNR=4.5							
	1.0nm,0.6s							
BVAR	**Borovoye Array**	**24.24**	**283**	P	**P**	**04 26 51.9**	**+0.9**	
	1.1nm,0.6s,baz=69,slow=13,SNR=5.4							
	1.1nm,0.6s							
ARTI	**Arti**	**29.62**	**295**	LR	LR	04 41 19.8		
	comp=Z,64nm,18.1s,baz=181,slow=40							
FINES	**FINESS Array B**	**42.62**	**315**	P	**P**	**04 29 31.3**	**+1.2**	
	6.9nm,1.1s,baz=123,slow=7.0,SNR=3.3							
	6.9nm,1.1s							
ILAR	**Eielson Array**	**46.45**	**35**	P	**P**	**04 30 02.5**	**+1.9**	
	0.4nm,0.9s,baz=305,slow=5.5,SNR=2.7							
	0.4nm,0.9s							
HFS	**Hagfors**	**48.31**	**318**	P	**P**	**04 30 16.0**	**+0.9**	
	3.1nm,0.9s,baz=42,slow=8.8,SNR=1.7							
	3.1nm,0.9s							
NOA	**NORSAR Array B**	**48.65**	**320**	P	**P**	**04 30 19.0**	**+1.2**	
	0.6nm,0.7s,baz=52,slow=8.0,SNR=2.2							
	0.6nm,0.7s							
BRTR	**Keskin Array B**	**52.40**	**288**	P	**P**	**04 30 47.7**	**+1.1**	
	0.4nm,0.7s,baz=64,slow=6.6,SNR=2.5							
	0.4nm,0.7s							

*IDC **06** 04:31:11.3±2.2, 31°.40S×178°.08W, h0km, mb3.8/3, mbtmp3.7/4, ML2.8/1, Error ellipse: s-maj=52.9km s-min=36.7km az=59.0, Kermadec Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.90**	**209**	Pn	Pn	04 33 06.3	-1.2
	0.1nm,0.3s,baz=330,slow=20,SNR=1.4						
URZ				Sn	Sn	04 34 31.3	-6.2
	0.5nm,0.3s,baz=336,slow=16,SNR=2.7						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**42.99**	**268**	P	P	04 39 12.7	0.0
	0.3nm,0.3s,baz=106,slow=7.5,SNR=5.3						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.07**	**273**	P	P	04 39 21.2	-0.1
	0.8nm,0.3s,baz=112,slow=8.0,SNR=15						
	0.8nm,0.3s						
QSPA	**South Pole Qui**	**58.71**	**180**	P	P	04 41 10.9	+0.3
	1.0nm,0.7s,baz=88,slow=8.0,SNR=4.1						
	1.0nm,0.7s						
H03S2	**Juan Fernandez**	**79.97**	**123**	T	T	06 11 59.5	
	baz=242						
H03S1	**Juan Fernandez**	**79.99**	**123**	T	T	06 12 25.3	
	baz=242						
H03S3	**Juan Fernandez**	**79.99**	**123**	T	T	06 12 46.9	
	baz=242						
H03N3	**Juan Fernandez**	**80.17**	**123**	T	T	06 12 26.2	
	baz=241						
H03N2	**Juan Fernandez**	**80.17**	**123**	T	T	06 12 29.9	
	baz=241						
H03N1	**Juan Fernandez**	**80.19**	**123**	T	T	06 12 21.8	
	baz=241						
FINES	**FINESS Array B**	**146.05**	**339**	PKPbc	PKPdf	04 50 51.2	-0.4
	1.8nm,0.8s,baz=102,slow=12,SNR=1.4						

*IDC **06** 04:37:44.6±1.2, 4°.22N×123°.64E, h0km, mb3.9/7, mbtmp3.9/7, MS2.6/1, Error ellipse: s-maj=173.0km s-min=19.3km az=66.0*

ISC 06 04:37:49.6±1.2, 4°.2N±0°.5×12°4E±°, h35km, n8, σ1s17/7, mb3.9/7, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.20**	**157**	P	**P**	**04 43 21.8**	**+0.6**
	0.5nm,0.3s,baz=336,slow=9.7,SNR=7.4						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**29.45**	**160**	P	**P**	**04 43 50.0**	**-0.3**
	0.3nm,0.3s,baz=335,slow=7.1,SNR=4.1						
	0.3nm,0.3s						
JHJ	**Hachijo jima 2**	**32.53**	**26**	LR	LR	04 56 51.6	
	comp=Z,11nm,19.7s,baz=138,slow=35						
SONM	**Songino Array**	**45.94**	**344**	P	**P**	**04 46 08.9**	**-0.3**
	0.7nm,0.5s,baz=158,slow=8.0,SNR=1.4						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**55.43**	**327**	P	**P**	**04 47 22.1**	**+1.4**
	1.9nm,0.3s,baz=123,slow=7.7,SNR=27						
	1.9nm,0.3s						
ZALV	**Zalesovo Beam**	**58.80**	**334**	P	**P**	**04 47 45.0**	**+0.7**
	0.6nm,0.4s,baz=134,slow=6.2,SNR=1.8						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**59.70**	**329**	P	**P**	**04 47 50.5**	**0.0**
	1.7nm,0.4s,baz=130,slow=6.6,SNR=5.7						
	1.7nm,0.4s						
BVAR	**Borovoye Array**	**65.25**	**328**	P	**P**	**04 48 26.1**	**-1.6**
	0.6nm,0.6s,baz=134,slow=8.3,SNR=2.3						
	0.6nm,0.6s						

*IDC **06** 04:58:03.9±1.3, 21°.69S×173°.62W, h0km, mb3.7/5, mbtmp3.7/5, MS3.1/1, Error ellipse: s-maj=50.6km s-min=30.3km az=145.0*

ISC 06 04:58:09.5±1.1, 21°.7S±0°.3×173°.7W±0°.2, h38km, n8, σ0s63/7, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**28.12**	**292**	LR	LR	05 13 38.5	
	comp=Z,39nm,20.4s,baz=156,slow=33						
STKA	**Stephens Creek**	**40.95**	**246**	P	**P**	**05 05 48.2**	**-0.4**
	1.5nm,0.4s,baz=75,slow=19,SNR=2.8						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**48.18**	**257**	P	**P**	**05 06 47.4**	**+0.9**
	1.1nm,0.9s,baz=89,slow=8.0,SNR=8.8						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**48.43**	**262**	P	**P**	**05 06 47.9**	**-0.5**
	0.3nm,0.4s,baz=100,slow=7.6,SNR=5.2						
	0.3nm,0.4s						
VNDA	**Vanda**	**57.13**	**186**	P	**P**	**05 07 51.7**	**0.0**
	0.3nm,0.4s,baz=54,slow=8.7,SNR=2.3						
	0.3nm,0.4s						
NVAR	**Mina Array Bea**	**79.19**	**41**	P	**P**	**05 10 10.7**	**-0.1**
	0.1nm,0.4s,baz=213,slow=3.4,SNR=2.5						
	0.1nm,0.4s						
AKASG	**Malin Array Be**	**145.93**	**334**	PKPbc	**PKPdf**	**05 17 44.0**	**-0.1**
	1.0nm,0.5s,baz=39,slow=3.3,SNR=4.8						
BRTR	**Keskin Array B**	**150.59**	**314**	PKPbc	**PKiKP**	**05 17 59.0**	**+0.6**
	0.3nm,0.5s,baz=17,slow=1.5,SNR=2.5						

*IDC **06** 05:13:23.1±0.9, 16°.48S×174°.09W, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=44.0km s-min=22.2km az=142.0*

*NEIC **06** 05:13:36.6±1.8, 16°.74S±0°.08×174°.0W±0°.1, h106km±9km, mb4.2/9, Error ellipse: s-maj=17.1km s-min=11.2km az=83.0*

ISC 06 05:13:36.9±0.8, 16°.71S±0°.07×173°.89W±0°.10, h111km, n20, σ1s49/19, mb3.9/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.46**	**37**		**Pn**	**05 14 30.2**	**+1.1**
AFI					**Sn**	**05 15 08.1**	**-1.3**
NIUE	**Niue**	**4.45**	**122**	Pn	**Pn**	**05 14 43.2**	**+0.9**
NIUE				Sn	**Sn**	**05 15 30.6**	**-2.5**
RTZ	**Ruatahuna**	**23.24**	**198**	P	**P**	**05 18 34.2**	**-0.3**
RTZ				IAmb	IAmb	05 18 50.1	
	comp=Z,14nm,1.3s						
BKZ	**Black Stump Fm**	**23.89**	**199**	P	**P**	**05 18 40.7**	**+0.3**
BKZ				IAmb	IAmb	05 19 08.6	
	comp=Z,17nm,1.4s						
WR8	**Warramunga Arr**	**48.94**	**258**	P	**P**	**05 22 10.7**	**-1.6**
WR8				IAmb	IAmb	05 22 50.4	
	comp=Z,6.6nm,1.4s						
WB0	**Warramunga Arr**	**49.06**	**258**	P	**P**	**05 22 11.3**	**-1.8**
WRA	**Warramunga Arr**	**49.09**	**258**	P	**P**	**05 22 11.4**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=98,slow=6.9,SNR=5.8						
	comp=Z,0.5nm,0.7s						
AS31	**Alice Springs**	**49.26**	**253**	P	**P**	**05 22 13.2**	**-1.6**
AS31				IAmb	IAmb	05 22 13.9	
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**49.26**	**253**	P	**P**	**05 22 13.1**	**-1.6**
	comp=Z,5.4nm,0.6s,baz=89,slow=8.4,SNR=68						
	comp=Z,5.4nm,0.6s						
SBA	**Scott Base**	**61.91**	**185**	P	**P**	**05 23 45.1**	**+0.9**
VNDA	**Vanda**	**62.03**	**186**	P	**P**	**05 23 45.7**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=30,slow=5.8,SNR=2.8						
	comp=Z,0.8nm,0.9s						
QSPA	**South Pole Qui**	**73.34**	**180**	P	**P**	**05 24 57.6**	**+1.2**
QSPA				IAmb	IAmb	05 25 39.9	
	comp=Z,4.8nm,1.5s						
QSPA	**South Pole Qui**	**73.34**	**180**	P	**P**	**05 24 58.9**	**+2.5**
	comp=Z,1.0nm,0.9s,baz=28,slow=9.0,SNR=1.5						
	comp=Z,1.0nm,0.9s						
NVAR	**Mina Array Bea**	**75.62**	**42**	P	**P**	**05 25 10.2**	**+0.1**
NVAR	**Mina Array Bea**	**75.62**	**42**	P	**P**	**05 25 11.1**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=226,slow=10,SNR=11						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**81.73**	**56**	P	**P**	**05 25 43.1**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=309,slow=2.4,SNR=3.7						
	comp=Z,0.3nm,0.7s						
PDAR	**Pinedale Array**	**83.56**	**42**	P	**P**	**05 25 52.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=222,slow=2.0,SNR=6.5						
	comp=Z,0.8nm,0.8s						
H03S2	**Juan Fernandez**	**84.87**	**124**	T	T	06 59 13.4	
	baz=250,slow=75,SNR=6.3						
H03S1	**Juan Fernandez**	**84.89**	**124**	T	T	06 59 14.3	
	baz=250,slow=75,SNR=5.5						
H03S3	**Juan Fernandez**	**84.89**	**124**	T	T	06 59 13.0	
	baz=250,slow=75,SNR=6.8						

*IDC **06** 05:15:50.2±0.8, 30°.64N×141°.77E, h0km, mb3.8/16, mbtmp3.8/19, ML3.2/3, MS3.1/3, Error ellipse: s-maj=24.3km s-min=17.4km az=74.0*

*NEIC **06** 05:15:52.5±2.1, 30°.40N±0°.05×141°.9E±0°.2, h25km±6km, mb4.6/6, Error ellipse: s-maj=20.8km s-min=2.2km az=70.0*

*NIED **06** 05:15:54.0, 30°.74N×141°.89E, h50km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr5.84; Mθθ0.71; Mϕϕ-6.55; Mrθ3.66; Mθϕ-1.15; Mϕr6.46; Fault plane solution: M0 9.76000×10^14 NP1: ϕs171.00000°, δ23.00000°, λ59.00000°. NP2: ϕs25.00000°, δ71.00000°, λ102.00000°.*

*JMA **06** 05:15:54.0±0.2, 31°N±1°×14°2E±°, h50km, MV4.1/16, NEAR TORISHIMA IS*

ISC 06 05:15:54.0±0.6, 30°.62N±0°.05×141°.7E±0°.1, h28km, n48, σ1s79/44, mb4.0/20, MS3.2/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.97**	**327**	Pn	**Pn**	**05 16 40.0**	**+0.7**
JHJ2	**Mitsune**	**2.97**	**327**	*e*P	**Pn**	**05 16 39.9**	**+0.6**
JHJ2				*e*S	**Sn**	**05 17 13.1**	**-0.9**
JHJ	**Hachijo jima 2**	**3.00**	**327**	Pn	**Pn**	**05 16 39.9**	**+0.2**
	9.2nm,0.3s,baz=62,slow=19,SNR=1.3						
JHJ				Sn	**Sn**	**05 17 10.1**	**-4.5**
	20nm,0.3s,baz=105,slow=16,SNR=6.4						
	17nm,0.3s						
CBIJ	**Chichi jima**	**3.53**	**174**	*e*P	**Pn**	**05 16 49.5**	**+2.5**
CBIJ				*e*S	**Sn**	**05 17 29.5**	**+1.6**
JCJ	**Chichijima**	**3.53**	**174**	Pn	Pn	05 16 41.3	-5.7
	12nm,0.3s,baz=288,slow=21,SNR=5.3						
JCJ				Sn	**Sn**	**05 17 20.9**	**-7.0**
	24nm,0.3s,baz=80,slow=23,SNR=7.4						
BSO1	**Boso 1**	**4.07**	**351**	*e*P	**Pn**	**05 16 54.1**	**+0.2**
BSO1				*e*S	**Sn**	**05 17 39.9**	**-0.5**
BSO3	**Boso 3**	**4.30**	**346**	*e*P	**Pn**	**05 16 57.8**	**+0.6**
JRY	**Ryogami san**	**5.88**	**337**	*e*P	**Pn**	**05 17 20.3**	**+1.0**
JHO	**Hitachi**	**6.05**	**351**	*e*P	**Pn**	**05 17 20.7**	**-1.0**
JAG	**Ashikaga**	**6.09**	**342**	*e*P	**Pn**	**05 17 22.6**	**+0.4**
MJAR	**Matsushiro Arr**	**6.60**	**334**		**Pn**	**05 17 30.7**	**+1.5**
MJAR	**Matsushiro Arr**	**6.60**	**334**	Pn	**Pn**	**05 17 29.6**	**+0.4**
	0.4nm,0.3s,baz=151,slow=11,SNR=12						
MJAR				Sn	**Sn**	**05 18 38.5**	**-4.9**
	0.1nm,0.3s,baz=133,slow=16,SNR=1.5						
MJAR				LR	LR	05 20 04.8	
	comp=Z,90nm,19.8s,baz=150,slow=39						
	4.7nm,0.7s						
MAJO	**Matsushiro**	**6.60**	**334**	Pn	**Pn**	**05 17 30.6**	**+1.4**
MJB9	**Matsu-Tunnel**	**6.60**	**334**	Pn	**Pn**	**05 17 30.6**	**+1.4**
JMM	**Marumori**	**7.27**	**354**		**Pn**	**05 17 37.2**	**-1.1**
JSD	**Sado**	**7.94**	**340**	Pn	**Pn**	**05 17 47.7**	**+0.2**
JTM	**Tenmabayashi**	**10.16**	**357**	Pn	**Pn**	**05 18 15.9**	**-2.1**
JMZ	**Minamidaito 2**	**10.43**	**245**	Pn	Pn	05 18 12.8	-8.9
KSRS	**Korea Array**	**13.32**	**304**	Pn	**Pn**	**05 19 02.2**	**+1.0**
	0.2nm,0.3s,baz=100,slow=14,SNR=1.5						
	0.4nm,0.3s						
HILR	**Hailar Array B**	**25.15**	**325**	P	**P**	**05 21 17.4**	**+0.7**
	1.6nm,0.5s,baz=119,slow=12,SNR=2.1						
	1.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**25.16**	**110**	T	T	05 47 30.1	
	baz=307						
H11N1	**WAKE ISLAND Hy**	**25.17**	**110**	T	T	05 47 36.8	
	baz=307						
H11N3	**WAKE ISLAND Hy**	**25.18**	**110**	T	T	05 47 28.9	
	baz=307						
H11S3	**WAKE ISLAND Hy**	**25.64**	**112**	T	T	05 48 01.0	
	baz=304,slow=76,SNR=3.8						
H11S1	**WAKE ISLAND Hy**	**25.64**	**112**	T	T	05 48 05.2	
	baz=304,slow=76,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**25.66**	**112**	T	T	05 48 02.3	
	baz=304,slow=76,SNR=4.6						
CMAR	**Chiang Mai Arr**	**40.54**	**263**	P	**P**	**05 23 30.4**	**-0.7**
	0.8nm,0.3s,baz=51,slow=13,SNR=1.3						
CMAR				LR	LR	05 40 39.8	
	comp=Z,36nm,19.4s,baz=45,slow=37						
	0.8nm,0.3s						
COEN	**Coen**	**44.34**	**178**	P	**P**	**05 24 00.7**	**-1.1**
MKAR	**Makanchi Array**	**47.98**	**307**	P	**P**	**05 24 30.8**	**+0.5**
	0.9nm,0.6s,baz=90,slow=9.5,SNR=5.0						
MKAR				LR	LR	05 43 54.2	
	comp=Z,25nm,18.6s,baz=69,slow=35						
	0.9nm,0.6s						
KURK	**Kurchatov**	**50.28**	**313**	P	**P**	**05 24 47.8**	**0.0**
KURK	**Kurchatov**	**50.28**	**313**	IAmb	IAmb	05 24 49.3	
	comp=Z,7.4nm,1.3s						
KURBB	**Kurchatov Arra**	**50.34**	**312**	P	**P**	**05 24 47.8**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=91,slow=6.9,SNR=4.7						
	comp=Z,0.7nm,0.3s						
WB0	**Warramunga Arr**	**50.59**	**189**	P	**P**	**05 24 51.9**	**+1.5**
WB0				IAmb	IAmb	05 24 52.9	
	comp=Z,9.8nm,1.3s						
WR8	**Warramunga Arr**	**50.76**	**189**	P	**P**	**05 24 52.8**	**+1.1**
WR8				IAmb	IAmb	05 24 53.7	
	comp=Z,7.0nm,1.2s						
WB2	**Warramunga Arr**	**50.77**	**189**	P	**P**	**05 24 51.8**	**+0.1**
WB2				IAmb	IAmb	05 25 23.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**50.77**	**189**	P	**P**	**05 24 52.5**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=5.5,slow=7.6,SNR=18						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**54.50**	**189**	P	**P**	**05 25 20.6**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=3.6,slow=6.3,SNR=10						
	comp=Z,0.7nm,0.5s						
ILAR	**Eielson Array**	**54.84**	**30**	P	**P**	**05 25 21.9**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=271,slow=8.8,SNR=1.5						
	comp=Z,0.2nm,0.8s						
BVAR	**Borovoye Array**	**55.22**	**316**	P	**P**	**05 25 24.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=98,slow=8.9,SNR=2.1						
	comp=Z,0.6nm,0.6s						
BELG	**Belogornoye**	**68.74**	**319**	LR	LR	06 00 36.3	
	comp=Z,488nm,18.9s,baz=96,slow=39						
FINES	**FINESS Array B**	**74.63**	**333**	P	**P**	**05 27 31.3**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=72,slow=6.2,SNR=8.0						
	comp=Z,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**78.66**	**52**	P	**P**	**05 27 54.0**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=307,slow=6.6,SNR=2.4						
	comp=Z,0.2nm,0.5s						
AKASG	**Malin Array Be**	**79.56**	**323**	P	**P**	**05 27 59.3**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=82,slow=2.0,SNR=2.6						
	comp=Z,0.4nm,0.4s						
HFS	**Hagfors**	**80.05**	**336**	P	**P**	**05 28 01.4**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=101,slow=7.5,SNR=2.1						
	com

JOW	**Kunigami**	**2.92**	**51**	Pn	**Pn**	**05 16 50.5**	**-2.5**
	12nm,0.3s,baz=139,slow=17,SNR=3.4						
JOW				Sn	**Sn**	**05 17 26.9**	**0.0**
	24nm,0.3s,baz=225,slow=20,SNR=2.4						
	26nm,0.3s						
NACB	**Ninganchiao**	**3.86**	**259**	P	**Pn**	**05 17 06.4**	**+0.6**
YHNB	**Yeheng**	**3.98**	**266**	P	**Pn**	**05 17 10.6**	**+3.1**
YULB	**Yu-li**	**4.36**	**250**	P	**Pn**	**05 17 11.2**	**-1.5**
SSLB	**Suanglung**	**4.53**	**256**	P	**Pn**	**05 17 16.8**	**+1.8**
TPUB	**Ta-pu**	**4.97**	**251**	P	**Pn**	**05 17 21.7**	**+0.7**
MJAR	**Matsushiro Arr**	**15.71**	**40**	Pn	**P**	**05 19 48.3**	**-1.7**
	0.1nm,0.3s,baz=301,slow=5.6,SNR=0.8						
DAV	**Davao City (W)**	**17.82**	**181**	LR	LR	05 26 19.8	
	comp=Z,26nm,21.4s,baz=358,slow=34						
CMAR	**Chiang Mai Arr**	**25.70**	**261**	P	**P**	**05 21 35.5**	**+1.0**
	0.5nm,0.3s,baz=91,slow=14,SNR=1.6						
	0.5nm,0.3s						
SONM	**Songino Array**	**27.46**	**331**	P	**P**	**05 21 48.0**	**-2.1**
	0.5nm,0.5s,baz=150,slow=12,SNR=1.6						
SONM				LR	LR	05 34 45.8	
	comp=Z,51nm,19.1s,baz=98,slow=41						
	0.5nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**38.31**	**89**	T	T	06 04 03.3	
	baz=283,slow=74,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**38.31**	**89**	T	T	06 04 03.3	
	baz=283,slow=74,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**38.33**	**89**	T	T	06 04 08.3	
	baz=283,slow=74,SNR=4.5						
MKAR	**Makanchi Array**	**40.72**	**314**	P	**P**	**05 23 44.5**	**-0.1**
	0.4nm,0.5s,baz=101,slow=8.9,SNR=6.6						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**41.91**	**325**	P	**P**	**05 23 53.8**	**-0.4**
	2.0nm,0.6s,baz=108,slow=8.3,SNR=9.4						
	2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**44.23**	**318**	P	**P**	**05 24 13.1**	**+0.1**
	0.8nm,0.3s,baz=108,slow=8.1,SNR=1.4						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**45.44**	**169**	P	**P**	**05 24 24.0**	**+1.1**
	0.9nm,0.5s,baz=349,slow=8.8,SNR=11						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**49.01**	**170**	P	**P**	**05 24 52.1**	**+1.5**
	0.6nm,0.5s,baz=355,slow=7.7,SNR=12						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**49.73**	**319**	P	**P**	**05 24 55.6**	**-0.2**
	0.6nm,0.4s,baz=98,slow=9.1,SNR=4.1						
	0.6nm,0.4s						
KIRV	**Kirov**	**61.95**	**325**	LR	LR	05 54 09.4	
	comp=Z,36nm,18.8s,baz=70,slow=37						
ILAR	**Eielson Array**	**66.58**	**28**	P	**P**	**05 26 52.0**	**-1.4**
	0.2nm,0.5s,baz=260,slow=4.6,SNR=6.1						
	0.2nm,0.5s						
GNI	**Garni**	**67.75**	**305**	LR	LR	05 58 06.1	
	comp=Z,25nm,19.4s,baz=227,slow=37						
KBZ	**Khabaz**	**68.20**	**309**	P	**P**	**05 27 03.6**	**-0.3**
	2.8nm,0.9s,baz=111,slow=8.6,SNR=3.2						
	2.8nm,0.9s						
ARCES	**ARCESS Array B**	**70.33**	**338**	P	**P**	**05 27 17.5**	**+0.7**
	5.3nm,1.0s,baz=74,slow=5.1,SNR=5.7						
	5.3nm,1.0s						
AKASG	**Malin Array Be**	**75.00**	**319**	P	**P**	**05 27 43.0**	**-1.9**
	0.4nm,0.3s,baz=64,slow=6.5,SNR=2.5						
	0.4nm,0.3s						
BRTR	**Keskin Array B**	**76.01**	**307**	P	**P**	**05 27 49.2**	**-1.8**
	1.5nm,0.8s,baz=84,slow=5.0,SNR=7.3						
	1.5nm,0.8s						
NB2	**NORSAR Subarra**	**79.42**	**333**	P	**P**	**05 28 10.3**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=57,slow=5.6						
NOA	**NORSAR Array B**	**79.42**	**333**	P	**P**	**05 28 10.6**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=50,slow=6.3,SNR=2.3						
	comp=Z,0.9nm,0.6s						
GERES	**GERESS Array B**	**84.81**	**322**	P	**P**	**05 28 39.0**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=68,slow=4.6,SNR=3.4						
GERES				LR	LR	06 07 13.4	
	comp=Z,43nm,18.1s,baz=284,slow=36						
	comp=Z,0.3nm,0.5s						

ZUR 06 05:18:30.9,46°32N×7°35E,h4km,MLh0.4/8,6C-2D, Error ellipse: s-maj=1803.9km s-min=668.2km az=104.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.02**	**249**	↑Pg	Pg	05 18 32.3	+0.2
RAW2				Sg	Sg	05 18 33.2	+0.2
SENIN	**Lac Senin/Sane**	**0.05**	**320**	↓Pg	Pg	05 18 32.6	+0.2
SENIN				Sg	Sg	05 18 33.8	+0.3
SAYF2	**Ayent-Fortunoz**	**0.06**	**126**	↓Pg	Pg	05 18 32.6	+0.2
SAYF2				Sg	Sg	05 18 33.7	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**70**	↑Pg	Pg	05 18 32.8	+0.2
STSW2				Sg	Sg	05 18 34.0	+0.3
SIOV	**Sion-Valere**	**0.09**	**173**	Sg	Sg	05 18 34.4	+0.3
VET01	**Vtroz, Route**	**0.12**	**208**	↑Pg	Pg	05 18 33.4	+0.1
RAW1	**Lenk, BE**	**0.12**	**32**	↑Pg	Pg	05 18 33.6	+0.2
SIE01	**Sierre, Farmho**	**0.12**	**117**	↑Pg	Pg	05 18 33.7	+0.4
GRYON	**Gryon**	**0.18**	**246**	Sg	Sg	05 18 37.4	+0.5
LKBD2	**Leukerbad 2**	**0.21**	**76**	Sg	Sg	05 18 38.5	+0.5
FULLY	**Reservoir Maze**	**0.22**	**221**	Sg	Sg	05 18 38.5	+0.3
ILLEZ	**Chalet Vouargn**	**0.30**	**250**	Sg	Sg	05 18 41.3	+0.5
LAUCH	**Lauchernalp**	**0.31**	**72**	↑Pg	Pg	05 18 37.2	+0.2

*GEN **06** 05:19:28.3,46°31N×7°36E,h5km±1km,MI2.0*
*ZUR **06** 05:19:29.1,46°33N×7°35E,h5km,MLh2.2/123,Error ellipse: s-maj=1435.7km s-min=520.1km az=101.0*
*LDG **06** 05:19:29.5±0.1,46°29N×7°39E,h5km,MI2.6/20,Error ellipse: s-maj=1.0km s-min=0.9km az=89.0*
*ROM **06** 05:19:29.8±0.1,46°260N±0°006×7°391E±0°008, h13km±2km,ML1.9/19,Error ellipse: s-maj=0.7km s-min=0.3km az=337.0*

ISC 06 05:19:29.0±0.7,46°32N±0°01×7°35E±0°01,h9km±3km, n113,σ0.972/196,33C-7D,Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.02**	**268**	↓Pg	**Pg**	**05 19 30.5**	**-0.5**
RAW2				Sg	**Sg**	**05 19 31.5**	**-0.9**
SAYF2	**Ayent-Fortunoz**	**0.05**	**121**	↑Pg	**Pg**	**05 19 30.7**	**-0.3**
SAYF2				Sg	**Sg**	**05 19 31.8**	**-0.7**
SENIN	**Lac Senin/Sane**	**0.06**	**324**	↓Pg	**Pg**	**05 19 30.8**	**-0.5**
SENIN				Sg	**Sg**	**05 19 32.1**	**-0.8**
SENIN	**Lac Senin/Sane**	**0.06**	**324**	P	**Pg**	**05 19 30.8**	**-0.5**
SENIN				S	**Sg**	**05 19 32.0**	**-0.8**
STSW2	**Zeuzier, Staus**	**0.07**	**63**	↓Pg	**Pg**	**05 19 30.8**	**-0.4**
STSW2				Sg	**Sg**	**05 19 32.0**	**-0.9**
SIOV	**Sion-Valere**	**0.08**	**173**	↑Pg	**Pg**	**05 19 31.2**	**-0.1**
SIOV				Sg	**Sg**	**05 19 32.0**	**-0.3**
LEO01	**Saint Lonard,**	**0.08**	**141**	↑Pg	**Pg**	**05 19 31.3**	**0.0**
LEO01				Sg	**Sg**	**05 19 33.1**	**+0.1**
SIOO	**Sion-Ophtalmol**	**0.09**	**164**	↑Pg	**Pg**	**05 19 31.4**	**+0.1**
SIOO				Sg	**Sg**	**05 19 33.4**	**+0.4**
SIOM	**Sion-Mayennets**	**0.09**	**174**	Pg	**Pg**	**05 19 31.2**	**-0.1**
SIOM				↓Sg	**Sg**	**05 19 32.9**	**-0.1**
CON01	**Conthey, Agros**	**0.11**	**197**	Sg	**Sg**	**05 19 34.0**	**+0.5**
VET01	**Vtroz, Route**	**0.11**	**211**	↑Pg	**Pg**	**05 19 31.5**	**-0.1**
VET01				Sg	**Sg**	**05 19 33.5**	**0.0**
VET02	**Vtroz, Route**	**0.11**	**209**	↑Pg	**Pg**	**05 19 31.7**	**+0.1**
VET02				Sg	**Sg**	**05 19 34.1**	**+0.6**
SIE01	**Sierre, Farmho**	**0.11**	**114**	↑Pg	**Pg**	**05 19 31.7**	**0.0**
VET03	**Vtroz, Le Bot**	**0.12**	**205**	Sg	**Sg**	**05 19 34.7**	**+0.9**
RAW1	**Lenk, BE**	**0.12**	**30**	Pg	**Pg**	**05 19 31.6**	**-0.3**
RAW1				Sg	**Sg**	**05 19 33.5**	**-0.5**
SARC	**Ardon Commune,**	**0.12**	**211**	Pg	**Pg**	**05 19 31.9**	**0.0**
SARC				Sg	**Sg**	**05 19 34.1**	**+0.2**
SIEB	**Ecole de Borzu**	**0.13**	**99**	↑Pg	**Pg**	**05 19 32.0**	**-0.1**
SIEB				Sg	**Sg**	**05 19 34.0**	**-0.1**
SIEB	**Ecole de Borzu**	**0.13**	**99**	↑Pg	**Pg**	**05 19 31.9**	**-0.1**
SIEB				Sg	**Sg**	**05 19 34.0**	**-0.1**
SHER	**Hrmence, R**	**0.13**	**166**	↑Pg	**Pg**	**05 19 32.2**	**+0.1**
SHER				Sg	**Sg**	**05 19 34.5**	**+0.1**
RAW4	**Former Reservo**	**0.16**	**228**	↑Pg	**Pg**	**05 19 32.6**	**+0.1**
GRYON	**Gryon**	**0.18**	**249**	↑Pg	**Pg**	**05 19 32.8**	**0.0**
GRYON				Sg	**Sg**	**05 19 35.8**	**+0.3**
GRYON	**Gryon**	**0.18**	**249**	↑Pg	**Pg**	**05 19 32.8**	**0.0**
GRYON				Sg	**Sg**	**05 19 35.6**	**+0.1**
VANNI	**Vissoie, Val d**	**0.20**	**122**	↑Pg	**Pg**	**05 19 33.4**	**+0.2**
VANNI				Sg	**Sg**	**05 19 36.2**	**+0.1**
VANNI	**Vissoie, Val d**	**0.20**	**122**	P	**Pg**	**05 19 33.4**	**+0.2**
VANNI				S	**Sg**	**05 19 36.1**	**0.0**
LKBD2	**Leukerbad 2**	**0.21**	**74**	↑Pg	**Pg**	**05 19 33.4**	**-0.1**
LKBD2				Sg	**Sg**	**05 19 36.4**	**-0.1**
FULLY	**Reservoir Maze**	**0.22**	**223**	↑Pg	**Pg**	**05 19 33.6**	**+0.1**
FULLY				Sg	**Sg**	**05 19 36.7**	**+0.2**
SCOD	**Chcteau-dO**	**0.22**	**315**	↑Pg	**Pg**	**05 19 33.6**	**+0.1**
SCOD				Sg	**Sg**	**05 19 37.2**	**+0.6**
AGA01	**Agarn, Footbal**	**0.22**	**94**	Sg	**Sg**	**05 19 37.2**	**+0.5**
AGA01	**Agarn, Footbal**	**0.22**	**94**	Sg	**Sg**	**05 19 37.2**	**+0.5**
SZWD2	**Zweisimmen Kir**	**0.24**	**4**	Pg	**Pg**	**05 19 34.0**	**+0.1**
DIX	**Grande Dixence**	**0.24**	**170**	↑Pg	**Pg**	**05 19 34.2**	**+0.3**
DIX				Sg	**Sg**	**05 19 37.5**	**+0.2**
DIX	**Grande Dixence**	**0.24**	**170**	P	**Pg**	**05 19 34.2**	**+0.3**
DIX				S	**Sg**	**05 19 37.4**	**+0.2**
DIX	**Grande Dixence**	**0.24**	**170**	↑P	**Pg**	**05 19 34.2**	**+0.3**
DIX				S	**Sg**	**05 19 37.5**	**+0.2**
DIX				AML	AML		
	comp=E,3570μm,0.3s						
DIX				AML	AML		
	comp=N,5265μm,0.2s						
DIX				AML	AML		
	comp=E,3570μm,0.3s						
DIX				AML	AML		
	comp=N,5265μm,0.2s						
DIX				AML	AML		
	comp=N,5265μm,1.8s						
LAVEY	**Lavey les Bain**	**0.26**	**243**	Pg	**Pg**	**05 19 34.2**	**0.0**
LAVEY				Sg	**Sg**	**05 19 37.9**	**+0.3**
SGAK	**Gampel Kirche,**	**0.27**	**90**	↑Pg	**Pg**	**05 19 34.6**	**+0.1**
SGAK				Sg	**Sg**	**05 19 38.3**	**+0.2**
AIGLE	**Aigle**	**0.28**	**276**	Pg	**Pg**	**05 19 34.8**	**+0.2**
ILLEZ	**Chalet Vouargn**	**0.30**	**251**	↓Pg	**Pg**	**05 19 35.3**	**+0.2**
NIE01	**Niedergesteln,**	**0.30**	**90**	↑Pg	**Pg**	**05 19 35.0**	**0.0**
NIE01				Sg	**Sg**	**05 19 38.9**	**-0.1**
LAUCH	**Lauchernalp**	**0.31**	**71**	↑Pg	**Pg**	**05 19 35.2**	**0.0**
LAUCH				Sg	**Sg**	**05 19 39.4**	**0.0**
LAUCH	**Lauchernalp**	**0.31**	**71**	P	**Pg**	**05 19 35.3**	**0.0**
LAUCH				S	**Sg**	**05 19 39.4**	**0.0**
RAR01	**Raron, Gemeind**	**0.31**	**91**	Pg	**Pg**	**05 19 35.2**	**0.0**
SALAN	**Lac Salanfe**	**0.31**	**237**	↑Pg	**Pg**	**05 19 35.4**	**+0.1**
SALAN				Sg	**Sg**	**05 19 39.9**	**+0.4**
JAUN	**Jaun, Euschels**	**0.32**	**353**	↑Pg	**Pg**	**05 19 35.5**	**0.0**
RAR02	**Raron, Airdrom**	**0.33**	**92**	Pg	**Pg**	**05 19 35.5**	**0.0**
EMBD	**Embd, Matterta**	**0.35**	**106**	↑Pg	**Pg**	**05 19 35.9**	**0.0**
EMBD				Sg	**Sg**	**05 19 40.5**	**0.0**
EMBD	**Embd, Matterta**	**0.35**	**106**	P	**Pg**	**05 19 36.0**	**0.0**
EMBD				S	**Sg**	**05 19 40.5**	**0.0**
SVIO	**Visp Obere Sta**	**0.37**	**94**	↓Pg	**Pg**	**05 19 36.4**	**+0.1**
SVIO				Sg	**Sg**	**05 19 41.2**	**0.0**
SBUL	**Bulle cole,**	**0.37**	**327**	↑Pg	**Pg**	**05 19 36.9**	**+0.5**
WIMIS	**Wimmis**	**0.40**	**28**	Pg	**Pg**	**05 19 36.8**	**-0.1**
MFERR	**Prayon, Val Fe**	**0.40**	**204**	↑Pg	**Pg**	**05 19 36.9**	**0.0**
MFERR				Sg	**Sg**	**05 19 42.3**	**+0.2**
SIMPL	**Simplonpass**	**0.47**	**99**	P	**Pg**	**05 19 38.3**	**+0.1**
SIMPL				S	**Sg**	**05 19 44.3**	**-0.1**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	↑Pg	**Pg**	**05 19 38.7**	**0.0**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	P	**Pg**	**05 19 38.7**	**0.0**
REMY				S	**Sg**	**05 19 45.2**	**0.0**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	↑P	**Pg**	**05 19 38.7**	**0.0**
REMY				S	**Sg**	**05 19 45.4**	**+0.1**
REMY				AML	AML		
	comp=E,198μm,0.2s						
REMY				AML	AML		
	comp=N,234μm,0.3s						
REMY				AML	AML		
	comp=E,137μm,0.2s						
MMK	**Mattmark**	**0.50**	**122**	↑Pg	**Pg**	**05 19 38.5**	**-0.3**
MMK	**Mattmark**	**0.50**	**122**	P	**Pg**	**05 19 38.5**	**-0.3**
MMK				S	**Sg**	**05 19 45.2**	**-0.2**
MMK	**Mattmark**	**0.50**	**122**	P	**Pg**	**05 19 38.8**	**0.0**
MMK				S	**Sg**	**05 19 45.0**	**-0.4**
FIESA	**Fiescheralp**	**0.54**	**77**	P	**Pg**	**05 19 39.5**	**0.0**
FIESA				S	**Sg**	**05 19 46.4**	**-0.3**
SATI	**Passo dei Sala**	**0.57**	**140**	P	**Pg**	**05 19 39.9**	**-0.2**
SATI				S	**Sg**	**05 19 47.1**	**-0.6**
SATI	**Passo dei Sala**	**0.57**	**140**	↑P	**Pg**	**05 19 39.9**	**-0.2**
SATI				S	**Sg**	**05 19 47.0**	**-0.6**
SATI				AML	AML		
	comp=E,164μm,0.3s						
SATI				AML	AML		
	comp=N,208μm,0.2s						
SATI				AML	AML		
	comp=E,148μm,0.2s						
SATI				AML	AML		
	comp=E,148μm,1.8s						
MRGE	**Morge**	**0.58**	**200**	P	**Pg**	**05 19 40.2**	**-0.1**
MRGE				S	**Sg**	**05 19 48.2**	**+0.3**
MRGE	**Morge**	**0.58**	**200**	P	**Pg**	**05 19 40.1**	**-0.1**
MRGE				S	**Sg**	**05 19 48.2**	**+0.3**
MRGE				AML	AML		
	comp=N,206μm,0.3s						
MRGE				AML	AML		
	comp=E,252μm,0.4s						
MRGE				AML	AML		
	comp=N,207μm,0.3s						
CIRO	**Champorcher**	**0.73**	**168**	P	**Pg**	**05 19 42.6**	**-0.5**
CIRO				S	**Sg**	**05 19 52.4**	**-0.3**
CIRO	**Champorcher**	**0.73**	**168**	P	**Pg**	**05 19 43.4**	**+0.3**
CIRO				S	**Sg**	**05 19 52.2**	**-0.4**
CIRO				AML	AML		
	comp=N,67μm,1.3s						
CIRO				AML	AML		
	comp=E,81μm,1.5s						
GIMEL	**St. Georges /**	**0.78**	**287**	P	**Pb**	**05 19 45.0**	**+0.2**
GIMEL				S	**Sb**	**05 19 57.5**	**+2.0**
GIMEL				AML	AML		
	comp=N,166μm,1.1s						
GIMEL				AML	AML		
	comp=E,161μm,0.5s						
RSL	**Roselend**	**0.81**	**219**	P	**Pg**	**05 19 44.4**	**-0.1**
RSL				S	**Sg**	**05 19 54.6**	**-0.4**
TRAV	**Traversella**	**0.85**	**161**	P	**Pg**	**05 19 44.8**	**-0.6**
TRAV				S	**Sg**	**05 19 55.8**	**-0.6**
TRAV	**Traversella**	**0.85**	**161**	P	**Pg**	**05 19 44.7**	**-0.6**
TRAV				AML	AML		
	comp=E,158μm,0.2s						
TRAV				AML	AML		
	comp=N,168μm,1.6s						
TRAV				AML	AML		
	comp=E,95μm,0.3s						
LSD	**Lago del Serru**	**0.87**	**190**	P	**Pg**	**05 19 45.4**	**-0.4**
LSD				S	**Sg**	**05 19 56.7**	**-0.4**
LSD	**Lago del Serru**	**0.87**	**190**	↑P	**Pg**	**05 19 45.4**	**-0.4**
LSD				S	**Sg**	**05 19 56.4**	**-0.6**
LSD				AML	AML		
	comp=E,508nm,0.9s						
LSD				AML	AML		
	comp=N,48μm,0.2s						
LSD				AML	AML		
	comp=N,38μm,1.5s						
LSD				AML	AML		
	comp=N,38μm,0.5s						
LPL	**La Plagne**	**0.91**	**209**	*e*Pg	**Pg**	**05 19 46.3**	**-0.2**
LPL				*e*Sg	**Sg**	**05 19 58.2**	**-0.1**
	comp=N,11nm,0.3s						
LPG	**La Plagne**	**0.92**	**207**	*e*Pg	**Pg**	**05 19 46.7**	**0.0**
LPG				*e*Sg	**Sg**	**05 19 58.3**	**-0.3**
	comp=N,16nm,0.2s						
FUSIO	**Fusio**	**0.92**	**81**	P	**Pg**	**05 19 46.4**	**-0.3**
FUSIO				S	**Sg**	**05 19 58.2**	**-0.5**
FUSIO	**Fusio**	**0.92**	**81**	↑P	**Pg**	**05 19 46.4**	**-0.3**
FUSIO				S	**Sg**	**05 19 58.0**	**-0.6**
FUSIO				AML	AML		
	comp=E,58μm,1.3s						
FUSIO				AML	AML		
	comp=N,54μm,1.4s						
FUSIO				AML	AML		
	comp=N,45μm,2.8s						
FUSIO				AML	AML		
	comp=N,45μm,0.8s						
FUSIO				AML	AML		
	comp=E,58μm,0.7s						
FUSIO				AML	AML		
	comp=N,54μm,0.6s						
CABF	**La Chapelle**	**0.92**	**289**	*e*Pg	**Pg**	**05 19 47.0**	**+0.3**
CABF				*e*Sg	**Sg**	**05 19 59.6**	**+0.9**
	comp=N,25nm,0.3s						
BNALP	**Bannalp**	**0.93**	**53**	P	**Pg**	**05 19 46.8**	**0.0**
VARE	**Varese**	**1.08**	**114**	P	**Pg**	**05 19 49.5**	**-0.4**
VARE				S	**Sg**	**05 20 03.0**	**-0.9**
VARE	**Varese**	**1.08**	**114**	P	**Pg**	**05 19 49.4**	**-0.4**
MUGIO	**Muggio**	**1.24**	**108**	P	**Pb**	**05 19 52.4**	**-0.2**
MUGIO				S	**Sg**	**05 20 07.4**	**-1.5**
MUGIO	**Muggio**	**1.24**	**108**	↓P	**Pb**	**05 19 52.4**	**-0.2**
MUGIO				S	**Sg**	**05 20 08.3**	**-0.6**
MUGIO				AML	AML		
	comp=E,48μm,1.6s						
MUGIO				AML	AML		
	comp=N,58μm,1.2s						
MUGIO				AML	AML		
	comp=N,43μm,0.3s						
MUGIO				AML	AML		
	comp=E,48μm,0.4s						
HINF	**Hinteralfeld**	**1.54**	**347**	*e*Pn	**Pn**	**05 19 56.3**	**-0.3**
HINF	**Hinteralfeld**	**1.54**	**347**	*e*Pg	**Pb**	**05 19 58.4**	**+0.7**
HINF				*e*Sg	**Sb**	**05 20 18.3**	**+1.0**
	comp=E,11nm,0.2s						
MBDF	**Montbardon**	**1.64**	**195**	*e*Pg	**Pb**	**05 19 59.7**	**+0.3**
MBDF				*e*Sg	**Sb**	**05 20 20.8**	**+0.5**
	comp=E,6.8nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.74**	**217**	*e*Pn	**Pn**	**05 19 59.4**	**0.0**
ORIF	**Oris-en-Rattie**	**1.74**	**217**	*e*Pg	**Pb**	**05 20 01.9**	**+0.8**
ORIF				*e*Sg	**Sb**	**05 20 23.6**	**+0.6**
	comp=E,6.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.74**	**217**	P	**Pn**	**05 19 59.7**	**+0.4**
ORIF				S	**Sn**	**05 20 21.1**	**-0.5**
HAU	**Haudompre**	**1.82**	**338**	*e*Pn	**Pn**	**05 20 00.7**	**+0.2**
HAU	**Haudompre**	**1.82**	**338**	*e*Pg	**Pb**	**05 20 03.2**	**+0.7**
HAU				*e*Sg	**Sb**	**05 20 26.8**	**+1.4**
	comp=E,16nm,0.3s						
DAVA	**Damuels**	**1.99**	**60**	*e*Pg	**Pg**	**05 20 07.3**	**+0.2**
	comp=E,0.6nm,0.1s						
DAVA				Sg	**Sg**	**05 20 34.1**	**+1.1**
	comp=E,6.8nm,0.5s						
CDF	**Champ du Feu**	**2.10**	**359**	*e*Pn	**Pn**	**05 20 03.9**	**-0.4**
CDF	**Champ du Feu**	**2.10**	**359**	*e*Pg	**Pb**	**05 20 08.0**	**+0.8**
CDF				*e*Sg	**Sb**	**05 20 35.2**	**+1.8**
	comp=E,3.3nm,0.2s						
VIVF	**Saint-Julien-l**	**2.38**	**233**	*e*Pn	**Pn**	**05 20 08.2**	**0.0**
VIVF	**Saint-Julien-l**	**2.38**	**233**	*e*Pg	**Pg**	**05 20 13.8**	**-0.8**
VIVF				*e*Sg	**Sb**	**05 20 43.0**	**+1.6**
	comp=E,8.3nm,0.3s						
SMF	**Signal de Mont**	**2.45**	**279**	*e*Pn	**Pn**	**05 20 08.6**	**-0.5**
SMF	**Signal de Mont**	**2.45**	**279**	*e*Pg	**Pb**	**05 20 14.8**	**+1.7**
SMF				*e*Sn	**Sn**	**05 20 37.0**	**-2.1**
SMF				*e*Sg	**Sb**	**05 20 46.0**	**+2.7**
	comp=E,5.6nm,0.2s						
SBF	**Sospel**	**2.45**	**179**	*e*Pg	**Pb**	**05 20 12.7**	**-0.6**
SBF				*e*Sg	**Sb**	**05 20 44.3**	**+0.7**
	comp=E,23nm,0.6s						
SFTF	**Sexfontaines**	**2.46**	**321**	*e*Pn	**Pn**	**05 20 09.6**	**+0.4**
SFTF	**Sexfontaines**	**2.46**	**321**	*e*Pg	**Pg**	**05 20 17.5**	**+1.4**
SFTF				*e*Sg	**Sg**	**05 20 47.2**	**-0.8**
	comp=E,2.7nm,0.2s						
PAGF	**Fort de Pagny**	**2.50**	**334**	*e*Pn	**Pn**	**05 20 10.5**	**+0.8**
LOR	**Lormes**	**2.58**	**293**	*e*Pn	**Pn**	**05 20 11.2**	**+0.3**
	baz=106						
LOR	**Lormes**	**2.58**	**293**	*e*Pg	**Pb**	**05 20 17.3**	**+1.9**
	baz=112						
LOR				*e*Sn	**Sn**	**05 20 40.8**	**-1.6**
LOR				*e*Sg	**Sg**	**05 20 50.2**	**-1.6**
	comp=E,6.4nm,0.3s						
SSF	**Saint Saulge**	**2.75**	**287**	*e*Pg	**Pg**	**05 20 20.5**	**-1.1**
SSF				*e*Sg	**Sg**	**05 20 55.6**	**-1.6**
	comp=E,6.0nm,0.4s						
SAVF	**Savonnieres en**	**2.75**	**328**	*e*Pn	**Pn**	**05 20 12.9**	**-0.3**
SAVF	**Savonnieres en**	**2.75**	**328**	*e*Pg	**Pg**	**05 20 20.7**	**-1.0**
SAVF				*e*Sg	**Sg**	**05 20 56.2**	**-1.1**
	comp=E,5.7nm,0.3s						
AVF	**Avril sur Loir**	**2.80**	**281**	*e*Pn	**Pn**	**05 20 13.7**	**-0.2**
AVF	**Avril sur Loir**	**2.80**	**281**	*e*Pg	**Pg**	**05 20 21.6**	**-1.0**
AVF				*e*Sn	**Sn**	**05 20 45.9**	**-1.8**
AVF				*e*Sg	**Sg**	**05 20 57.8**	**-1.0**
	comp=E,1.5nm,0.2s						
LMR	**La Mourre**	**3.04**	**192**	*e*Pg	**Pb**	**05 20 25.1**	**+1.9**
BGF	**Bois d'Agland**	**3.12**	**276**	*e*Pn	**Pn**	**05 20 18.7**	**+0.3**
BGF	**Bois d'Agland**	**3.12**	**276**	*e*Pg	**Pg**	**05 20 27.6**	**-1.2**
BGF				*e*Sn	**Sn**	**05 20 54.6**	**-1.1**
BGF				*e*Sg	**Sg**	**05 21 08.0**	**-1.2**
	comp=E,4.2nm,0.3s						
CARD	**Cardoso**	**3.19**	**135**	P	**Pn**	**05 20 20.2**	**+1.0**
CARD				AML	AML		
	comp=E,202μm,0.1s						
CARD				AML	AML		
	comp=N,174μm,1.5s						
LASF	**Ste Croix**	**3.33**	**229**	*e*Pn	**Pn**	**05 20 21.4**	**+0.1**
LASF	**Ste Croix**	**3.33**	**229**	*e*Pg	**Pg**	**05 20 31.2**	**-1.6**
LASF				*e*Sg	**Sg**	**05 21 13.7**	**-2.3**
	comp=N,7.3nm,0.6s						
TCF	**Toulx Ste Croi**	**3.56**	**271**	*e*Pn	**Pn**	**

PNIG	Pinotepa	0.46	10⇑	eP	Pg	05 59 54.4	-1.8	CTVM	Cuauhtemoc	3.60	346	eP	Pn	06 00 42.9	+1.1				
PNIG				eS	Sg	06 00 01.6	-0.9	CTVM				eS	Sn	06 01 21.1	-2.9				
PNIG				eS	Sb	06 00 01.8	-0.9	APVM	Azcapotzalco	3.66	345		Pn	06 00 43.1	+0.6				
PEIG	Puerto Escondi	1.02	87		Pb	06 00 02.9	-3.0	APVM					Sn	06 01 27.9	+2.6				
PEIG					Sb	06 00 16.9	-2.1	APVM	Azcapotzalco	3.66	345	eP	Pn	06 00 43.1	+0.6				
PEIG	Puerto Escondi	1.02	87⇑	eP	Pb	06 00 02.9	-3.0	APVM				eS	Sn	06 01 27.9	+2.6				
PEIG				eS	Sb	06 00 16.9	-2.1	JAUV	Jalcomulco	3.66	21		Pn	06 00 40.2	-2.2				
YOIG	Yosondua	1.11	35		Pb	06 00 04.8	-2.8	JAUV					Sn	06 01 28.0	+2.9				
YOIG					Sb	06 00 22.1	+0.3	JAUV	Jalcomulco	3.66	21	eP	Pn	06 00 40.2	-2.2				
YOIG	Yosondua	1.11	35⇑	iP	Pb	06 00 04.8	-2.8	JAUV				eS	Sn	06 01 28.0	+2.9				
YOIG				eS	Sb	06 00 22.1	+0.3	PMUV	Sontecomapan	3.93	48		Pn	06 00 40.2	-5.8				
CRIG	Cruz Grande	1.19	312		Sb	06 00 18.2	-5.4	PMUV					Sn	06 01 33.4	+1.7				
CRIG	Cruz Grande	1.19	312	eP	Pn	06 00 04.3	-3.9	PMUV	Sontecomapan	3.93	48	eP	Pn	06 00 40.2	-5.8				
CRIG				eS	Sb	06 00 18.2	-5.4	PMUV				eS	Sn	06 01 33.4	+1.7				
MGIG	Malinaltepec	1.35	343		Pn	06 00 08.0	-2.8	LVIG	Laguna Verde	4.13	24		Pn	06 00 46.6	-2.2				
MGIG					Sn	06 00 24.7	-3.4	LVIG					Sn	06 01 39.9	+3.2				
MGIG	Malinaltepec	1.35	343⇑	eP	Pn	06 00 08.0	-2.8	LVIG	Laguna Verde	4.13	24	eP	Pn	06 00 46.6	-2.2				
MGIG				eS	Sn	06 00 24.7	-3.4	LVIG				eS	Sn	06 01 39.9	+3.2				
TXIG	Tlaxiaco	1.37	18		Pn	06 00 08.7	-2.5	TUIG	Tuzandepetl	4.18	60		Pn	06 00 46.7	-2.8				
TXIG					Sn	06 00 27.9	-1.1	TUIG					Sn	06 01 37.6	-0.2				
TXIG	Tlaxiaco	1.37	18	eP	Pn	06 00 08.7	-2.5	TUIG	Tuzandepetl	4.18	60	eP	Pn	06 00 46.7	-2.8				
TXIG				eS	Sn	06 00 27.9	-1.1	TUIG				eS	Sn	06 01 37.6	-0.2				
TLIG	Tlapa	1.65	348		Pn	06 00 12.1	-2.7	CXUV	Coxquihui	4.25	8		Pn	06 00 50.1	-0.4				
TLIG					Sn	06 00 34.7	-0.9	CXUV					Sn	06 01 44.0	+4.3				
TLIG	Tlapa	1.65	348⇑	eP	Pn	06 00 12.1	-2.7	CXUV	Coxquihui	4.25	8	eP	Pn	06 00 50.1	-0.4				
TLIG				eS	Sn	06 00 34.7	-0.9	CXUV				eS	Sn	06 01 44.0	+4.3				
DAIG	Los Arroyos	1.75	308		Sn	06 00 32.1	-5.8	ACIG	Acambay	4.32	339		Pn	06 00 54.6	+3.0				
DAIG	Los Arroyos	1.75	308	eP	Pn	06 00 12.1	-3.9	ACIG					Sn	06 01 40.3	-1.3				
DAIG				eS	Sn	06 00 32.1	-5.8	ACIG	Acambay	4.32	339	eP	Pn	06 00 54.6	+3.0				
OXIG	Oaxaca	1.81	51		Pn	06 00 15.0	-2.1	ACIG				eS	Sn	06 01 40.3	-1.3				
OXIG					Sb	06 00 41.0	-0.8	MOIG	Morelia	4.68	323		Sn	06 01 53.7	+3.3				
VHO	Vista Hermosa	1.81	51⇑	eP	Sb	06 00 41.0	-2.1	MOIG	Morelia	4.68	323		Pn	06 00 56.5	+0.5				
VHO				eS	Sb	06 00 41.0	-0.8	MOIG	Morelia	4.68	323	eP	Pn	06 00 56.5	0.0				
OXBJ	Oaxaca	1.81	52		Pn	06 00 17.0	-0.2	MOIG				eS	Sn	06 01 53.7	+3.3				
OXBJ	Oaxaca	1.81	52	eP	Pn	06 00 17.0	-0.2	PCIG		4.81	92		Pn	06 00 53.6	-4.5				
OXBJ				eS	Sb	06 00 43.0	+1.1	PCIG					Sn	06 01 49.9	-3.6				
OXLC	Oaxaca	1.83	52		Pn	06 00 15.1	-2.2	PCIG		4.81	92	eP	Pn	06 00 53.6	-4.5				
OXLC					Sn	06 00 41.2	+1.1	PCIG				eS	Sn	06 01 49.9	-3.6				
OXLC	Oaxaca	1.83	52	eP	Pn	06 00 15.1	-2.2	TGIG		4.96	80		Pn	06 00 58.9	-1.3				
OXLC				eS	Sn	06 00 41.2	+1.1	TGIG					Sn	06 01 53.3	-3.8				
HMTT	Tlapaneco	1.88	350		Pn	06 00 18.8	+0.9	TGIG		4.96	80	eP	Pn	06 00 58.9	-1.3				
HMTT					Sb	06 00 46.0	+2.4	TGIG				eS	Sn	06 01 53.3	-3.8				
HMTT	Tlapaneco	1.88	350	eP	Pn	06 00 18.8	+0.9	JRQG	Juriquilla Cam	5.19	336		Sn	06 02 06.7	+3.6				
HMTT				eS	Sb	06 00 46.0	+2.4	JRQG	Juriquilla Cam	5.19	336		Pn	06 01 04.9	+1.2				
HLIG	Huajuapan de L	1.92	12		Pn	06 00 16.7	-1.9	JRQG	Juriquilla Cam	5.19	336	eP	Pn	06 01 04.7	+1.0				
HLIG					Sn	06 00 41.6	-0.7	JRQG				eS	Sn	06 02 06.7	+3.6				
HLIG	Huajuapan de L	1.92	12	eP	Pn	06 00 16.7	-1.9	MMIG	Aquila	5.44	296		Sn	06 02 01.6	-7.2				
HLIG				eS	Sn	06 00 41.6	-0.7	MMIG	Aquila	5.44	296	eP	Pn	06 01 01.3	-5.5				
FTIG	Fresnillo de T	1.96	2		Pn	06 00 16.7	-2.4	MMIG				eS	Sn	06 02 01.6	-7.2				
FTIG					Sn	06 00 44.8	+1.7	CTUV	Llano Grande	5.50	359		Pn	06 01 06.1	-1.6				
FTIG	Fresnillo de T	1.96	2⇑	eP	Pn	06 00 16.7	-2.4	CTUV					Sn	06 02 18.3	+7.8				
FTIG				eS	Sn	06 00 44.8	+1.7	CTUV	Llano Grande	5.50	359	eP	Pn	06 01 06.1	-1.6				
HUIG	Huatulco	2.03	95		Pn	06 00 17.1	-2.8	CTUV				eS	Sn	06 02 18.3	+7.8				
HUIG					Sn	06 00 43.0	-1.8	IGIG	Irapuato, Guan	5.63	329		Pn	06 01 08.9	-0.7				
HUIG	Huatulco	2.03	95	eP	Pn	06 00 17.1	-2.8	IGIG					Sn	06 02 13.1	-0.8				
HUIG				eS	Sn	06 00 43.0	-1.8	IGIG	Irapuato, Guan	5.63	329	eP	Pn	06 01 08.9	-0.7				
CAIG	El Cayaco	2.26	299		Sn	06 00 43.2	-7.2	IGIG				eS	Sn	06 02 13.1	-0.8				
CAIG	El Cayaco	2.26	299	eP	Pn	06 00 19.0	-4.0	PATR	El Naranjo	5.82	97		Pn	06 01 10.5	-1.7				
CAIG				eS	Sn	06 00 43.2	-7.2	PATR					Sn	06 02 13.7	-4.9				
MEIG	Mezcala	2.39	326		Pn	06 00 22.2	-2.7	PATR	El Naranjo	5.82	97	eP	Pn	06 01 10.5	-1.7				
MEIG					Sn	06 00 52.2	-1.6	PATR				eS	Sn	06 02 13.7	-4.9				
MEIG	Mezcala	2.39	326⇑	eP	Pn	06 00 22.2	-2.7	THIG		5.83	99		Pn	06 01 13.1	+1.0				
MEIG				eS	Sn	06 00 52.2	-1.6	THIG					Sn	06 02 19.2	+0.8				
TOIG	Toxpalan	2.41	27		Pn	06 00 23.1	-2.1	THIG		5.83	99	eP	Pn	06 01 13.1	+1.0				
TOIG					Sn	06 00 54.7	+0.4	THIG				eS	Sn	06 02 19.2	+0.8				
TOIG	Toxpalan	2.41	27	eP	Pn	06 00 23.1	-2.1	CCIG	Comitan	5.85	86		Sn	06 02 13.5	-5.8				
TOIG				eS	Sn	06 00 54.7	+0.4	CCIG	Comitan	5.85	86		Pn	06 01 11.2	-1.4				
TPIG	Tehuac#an	2.60	18		Pn	06 00 25.9	-1.9	CCIG	Comitan	5.85	86	eP	Pn	06 01 13.0	+0.4				
TPIG					Sn	06 00 57.4	-1.6	CCIG				eS	Sn	06 02 13.5	-5.8				
TPIG	Tehuac#an	2.60	18	eP	Pn	06 00 25.9	-1.9	PAVE	Pavencul	5.86	96		Pn	06 01 12.7	-0.2				
TPIG				eS	Sn	06 00 57.4	-1.6	PAVE					Sn	06 02 15.2	-4.5				
NEUV	Arroyo Zacate	2.91	52		Pn	06 00 29.4	-2.5	PAVE	Pavencul	5.86	96	eP	Pn	06 01 12.7	-0.2				
NEUV					Sn	06 01 06.6	+0.3	PAVE				eS	Sn	06 02 15.2	-4.5				
NEUV	Arroyo Zacate	2.91	52	eP	Pn	06 00 29.4	-2.5	CHUJ	Union Juarez	5.94	97	eP	Pn	06 01 13.0	-1.0				
NEUV				eS	Sn	06 01 06.6	+0.3	CHUJ				eS	Sn	06 02 18.2	-3.4				
PPCL	Tochimilco	2.98	353	eP	Pn	06 00 30.4	-2.8	RPIG	Rio Verde	6.15	344		Pn	06 01 21.5	+4.9				
PPCL				eS	Sn	06 01 07.1	-1.5	RPIG	Rio Verde	6.15	344	eP	Pn	06 01 21.5	+4.9				
YAIG	Yautepec	3.02	344		Pn	06 00 32.6	-1.1	MNGA	Volcan de Coli	6.24	305	eP	Pn	06 01 18.2	+0.2				
YAIG	Yautepec	3.02	344	eP	Pn	06 00 32.6	-1.1	MNGA				eS	Sn	06 02 24.1	-4.8				
PPPT	Popocatepetl	3.04	353	eP	Pn	06 00 33.3	-1.0	INCO	Volcan de Coli	6.25	306	eP	Pn	06 01 19.6	+1.3				
PPPT				eS	Sn	06 01 11.2	+0.7	INCO				eS	Sn	06 02 30.8	+1.2				
ARIG	Puente Sto Nin	3.10	319		Pn	06 00 30.7	-3.9	SOMAC	Volcano de Col	6.27	305	eP	Pn	06 01 17.6	-1.1				
ARIG					Sn	06 01 12.9	+1.8	SOMAC				eS	Sn	06 02 30.9	+0.9				
ARIG	Puente Sto Nin	3.10	319	eP	Pn	06 00 30.7	-3.9	CDAR	Ciudad de Arme	6.29	299	eP	Pn	06 01 17.4	-1.1				
ARIG				eS	Sn	06 01 12.9	+1.8	CDAR				eS	Sn	06 02 27.0	-2.8				
PPSX	Xalitzintla	3.14	355	eP	Pn	06 00 33.4	-2.1	CEGR	Campo Tres	6.38	303	eP	Pn	06 01 20.4	+0.4				
PPSX				eS	Sn	06 01 16.4	+3.7	CEGR				eS	Sn	06 02 32.5	+0.1				
MAVM	Malinalco, Edo	3.24	338		Pn	06 00 40.5	+3.7	RTAL	Retalhuleu	6.45	102	eP	Pn	06 01 21.5	+0.9				
MAVM					Sn	06 01 18.7	+3.8	RTAL				eS	Sn	06 02 38.7	+5.0				
MAVM	Malinalco, Edo	3.24	338	eP	Pn	06 00 40.5	+3.7	HUEH	Huehuetenango	6.49	95		Sn	06 02 40.4	+5.1				
MAVM				eS	Sn	06 01 18.7	+3.8	HUEH	Huehuetenango	6.49	95		Pn	06 01 20.6	-0.9				
MPVM	San Francisco	3.33	347		Pn	06 00 37.1	-0.9	HUEH	Huehuetenango	6.49	95	eP	Pn	06 01 21.2	-0.3				
MPVM					Sn	06 01 20.6	+3.4	HUEH				eS	Sn	06 02 40.4	+5.1				
MPVM	San Francisco	3.33	347	eP	Pn	06 00 37.1	-0.9	CJM	Chamela	7.41	300	eP	Pn	06 01 32.8	-1.1				
MPVM				eS	Sn	06 01 20.6	+3.4	CJM				eS	Sn	06 02 51.6	-5.9				
MZVM		3.38	343		Pn	06 00 38.4	0.0	APG	El Apazote	7.53	96	Pn	Pn	06 01 35.7	0.0				
MZVM					Sn	06 01 19.7	+1.7		0.1nm,0.3s,baz=221,slow=17,SNR=8.5										
MZVM		3.38	343	eP	Pn	06 00 38.4	0.0	APG				Sn	Sn	06 02 57.8	-3.0				
MZVM				eS	Sn	06 01 19.7	+1.7		0.4nm,0.3s,baz=238,slow=19,SNR=4.8										
TLVM	San Miguel Top	3.38	345		Pn	06 00 36.9	-1.9	APG				Lg	Lg	06 03 33.4					
TLVM					Sn	06 01 17.6	-0.8		0.2nm,0.3s,baz=217,slow=17,SNR=3.9										
TLVM	San Miguel Top	3.38	345	eP	Pn	06 00 36.9	-1.9	ANIG	Ahuacatlan	7.85	311		Pn	06 01 38.8	-1.3				
TLVM				eS	Sn	06 01 17.6	-0.8	ANIG					Sn	06 03 02.9	-5.7				
CMIG	Matias Romero	3.39	70		Pn	06 00 36.1	-2.6	ANIG	Ahuacatlan	7.85	311	eP	Pn	06 01 38.8	-1.3				
CMIG					Sn	06 01 16.4	-2.0	ANIG				eS	Sn	06 03 02.9	-5.7				
CMIG	Matias Romero	3.39	70	Pn	Pn	06 00 36.5	-2.1	ZAIG	Zacatecas	7.94	330		Pn	06 01 35.1	-6.3				
	19nm,0.3s,baz=236,slow=11,SNR=238							ZAIG					Sn	06 03 13.9	+3.0				
CMIG				Sn	Sn	06 01 16.6	-1.8	ZAIG	Zacatecas	7.94	330	eP	Pn	06 01 35.1	-6.3				
	62nm,0.3s,baz=178,slow=17,SNR=7.3							ZAIG				eS	Sn	06 03 13.9	+3.0				
CMIG				LR	LR	06 01 21.0		PETF	Flores	8.07	82		Sn	06 03 08.8	-4.8				
	comp=Z,481nm,21.8s,baz=133,slow=30							PETF	Flores	8.07	82		Pn	06 01 40.9	-2.0				
CMIG				Lg	Lg	06 01 26.6		PETF	Flores	8.07	82	eP	Pn	06 01 39.9	-3.0				
	86nm,0.3s,baz=193,slow=19,SNR=4.1							PETF				eS	Sn	06 03 08.8	-4.8				
	45nm,0.3s							ESPE	Esquipulas	8.67	98		Pn	06 01 52.5	+1.2				
XCVM	Xochimilco	3.41	345		Pn	06 00 37.1	-2.0	MTO3	Montecristo	8.68	99		Pn	06 02 52.1	+0.5				
XCVM					Sn	06 01 15.8	-3.3	LNIG	Linares	8.99	353		Pn	06 01 54.0	-1.6				
XCVM	Xochimilco	3.41	345	eP	Pn	06 00 37.1	-2.0	LNIG					Sn	06 03 43.0	+6.7				
XCVM				eS	Sn	06 01 15.8	-3.3	LNIG	Linares	8.99	353	eP	Pn	06 01 54.0	-1.6				
THVM	De Xico	3.43	348		Pn	06 00 36.5	-2.9	LNIG				eS	Sn	06 03 43.0	+6.7				
THVM					Sn	06 01 16.7	-3.0	MNIG	Monterrey	9.82	349		Pn	06 02 10.8	+3.8				
THVM	De Xico	3.43	348	eP	Pn	06 00 36.5	-2.9	MNIG					Sn	06 03 56.8	+0.1				
THVM				eS	Sn	06 01 16.7	-3.0	MNIG	Monterrey	9.82	349	eP	Pn	06 02 10.8	+3.8				
AOVM	Tlapan	3.48	342		Pn	06 00 38.7	-1.5	MNIG				eS	Sn	06 03 56.8	+0.1				
AOVM					Sn	06 01 23.5	+2.4	TEIG	Tepich	10.37	64		Pn	06 02 10.7	-3.7				
AOVM	Tlapan	3.48	342	eP	Pn	06 00 38.7	-1.5	TEIG	Tepich	10.37	64	Pn	Pn	06 02 13.1	-1.3				
AOVM				eS	Sn	06 01 23.5	+2.4		baz=310,slow=24,SNR=21										
UNM	Universidad Na	3.50	345		Pn	06 00 40.0	-0.3	TEIG				Sn	Sn	06 04 00.3	-10				
UNM	Universidad Na	3.50	345	eP	Pn	06 00 39.9	-0.4		baz=310,slow=24,SNR=8.4										
UNM				eS	Sn	06 01 23.1	+1.8	TGUH	Tegucigalpa,Un	10.73	99	Pn	Pn	06 02 20.0	+0.4				
MCRU	Las Cruces	3.51	344	eP	Pn	06 00 42.9	+2.4	HBVL	Hebbronville	11.08	358		Pn	06 02 22.9	-1.3				
MCRU				eS	Sn	06 01 19.7	-2.0	PDIG	Papasquiaro	11.28	325		Pn	06 02 27.2	+0.1				
COVM	Coyoacan	3.51	345		Pn	06 00 40.7	+0.2	PDIG					Sn	06 04 28.6	-4.2				
COVM					Sn	06 01 28.4	+6.7	PDIG	Papasquiaro	11.28	325	eP	Pn	06 02 27.2	+0.1				
COVM	Coyoacan	3.51	345	eP	Pn	06 00 40.7	+0.2	PDIG				eS	Sn	06 04 28.6	-4.2				
COVM				eS	Sn	06 01 22.2	+0.5	MCIG	Muzquiz	12.26	346		Pn	06 02 38.7	-1.7				
COVM				eS	Sn	06 01 28.4	+6.7	MCIG	Muzquiz	12.26	346	eP	Pn	06 02 38.7	-1.7				
INVM	La Marquesa	3.52	342		Pn	06 00 40.0	-0.7	833A	Chaparral WMA,	12.37	355		Pn	06 02 42.3	+0.4				
INVM					Sn	06 01 21.9	-0.1	H06E1	SOCORRO T-PHAS	12.46	285	T	T	06 15 20.4					
INVM	La Marquesa	3.52	342	eP	Pn	06 00 40.0	-0.7		SNR=56										
INVM				eS	Sn	06 01 21.9	-0.1	H06S1	SOCORRO T	12.48	285	T	T	06 15 20.0					
ZIIG	Zihuatanejo	3.53	298		Pn	06 00 39.4	-1.1		SNR=10										
ZIIG					Sn	06 01 15.1	-6.6	H06N1	SOCORRO T-PHAS	12.54	285	T	T	06 15 27.2					
ZIIG	Zihuatanejo	3.53	298	eP	Pn	06 00 39.4	-1.1		SNR=8.8										
ZIIG				eS	Sn	06 01 15.1	-6.6	735A	Kenedy	12.86	2	Pn	Pn	06 02 48.0	-0.6				
TXVM	Universitario	3.54	349		Pn	06 00 41.7	+0.7	HPIG		12.95	329		Pn	06 02 51.4	+1.4				
TXVM					Sn	06 01 19.6	-2.8	HPIG		12.95	329	eP	Pn	06 02 40.1	-10				
TXVM	Universitario	3.54	349	eP	Sn	06 00 41.7	+0.7	BCIG	La Boquilla	13.34	331		Pn	06 02 53.1	-2.1				
TXVM				eS	Sn	06 01 19.6	-2.8	BCIG	La Boquilla	13.34	331	eP	Pn	06 02 53.1	-2.1				
CJVM	Cuajimalpa	3.55	343		Pn	06 00 40.9	-0.2	ALIBA	Liberia Airpor	13.42	112	eP	Pn	06 03 01.0	+4.7				
CJVM					Sn	06 01 18.9	-3.9	SLBS	Sierra La Lagu	13.46	307	Pn	Pn	06 02 58.0	+1.2				
CJVM	Cuajimalpa	3.55	343	eP	Pn	06 00 40.9	-0.2	DELF	Filadelfia	13.48	112	eP	P	06 03 03.3	-2.9				
CJVM				eS	Sn	06 01 18.9	-3.9	SAJU	San Juanillo,	13.50	114	eP	Pn	06 02 60.0	+2.5				
VRVM	Mexico City	3.56	346		Sn	06 01 25.7	+2.7	HNDO	Hondo	13.56	356		Pn	06 02 56.3	-1.8				
VRVM	Mexico City	3.56	346	eS	Sn	06 01 25.7	+2.7	DRIO	Del Rio	13.60	351		Pn	06 02 58.0	-0.7				
MHVM	Bosque de Chap	3.58	345		Pn	06 00 45.5	+4.1	JUD3	Juan Diaz 3	13.61	113		Pn	06 03 01.9	+3.0				
MHVM					Sn	06 01 24.4	+1.0	BAGA	Bagaces	13.70	112	eP	Pn	06 03 03.6	+3.5				
MHVM	Bosque de Chap	3.58	345	eP	Pn	06 00 45.5	+4.1	VMAR	Armenia, Volca	13.72	110	eP	Pn	06 03 02.4	+2.0				
MHVM				eS	Sn	06 01 24.4	+1.0	CUI	Cuipilapa	13.74	111	eP	Pn	06 02 59.6	-1.1				
CTVM	Cuauhtemoc	3.60	346		Pn	06 00 42.9	+1.1	MLDN	Muldoon	13.82	4		Pn	06 03 00.5	-1.1				
CTVM					Sn	06 01 21.1	-2.9	LPIG	La Paz	13.96	307	Pn	Pn	06 03 06.0	+2.4				

	0.7nm,0.3s,baz=60,slow=18,SNR=1.6								
LPIG				LR	LR	06 07 29.8			
	comp=Z,726nm,18.2s,baz=124,slow=33								
	7.8nm,0.5s								
JTS	Las Juntas de	14.08	112		Pn	06 03 07.6	+2.3		
JTS	Las Juntas de	14.08	112	Pn	Pn	06 03 06.4	+1.1		
	0.7nm,0.3s,baz=260,slow=5.4,SNR=8.1								
	12nm,0.8s								
HKT	Hockley	14.12	8		Pn	06 03 05.7	0.0		
CASO	Castillo	14.21	111	eP	Pn	06 03 10.9	+3.7		
ARE1	Arenal 1	14.22	111	eP	Pn	06 03 09.1	+1.9		
TXAR	Lajitas Array	14.25	340		Pn	06 03 07.8	+0.2		
TXAR	Lajitas Array	14.25	340	Pn	Pn	06 03 08.1	+0.5		
	0.1nm,0.3s,baz=161,slow=14,SNR=34								
TXAR				Lg	Lg	06 07 16.8			
	baz=150,slow=21,SNR=3.9								
TXAR				LR	LR	06 09 14.6			
	comp=Z,1µm,19.4s,baz=147,slow=40								
	3.2nm,0.8s								
TX31	Lajitas Ar. Si	14.25	340		Pn	06 03 08.1	+0.5		
SOCE	Pocosol	14.34	111		Pn	06 03 10.9	+2.0		
SOCE	Pocosol	14.34	111	eP	Pn	06 03 10.3	+1.4		
SAND	Sanderson	14.41	346		Pn	06 03 10.5	+0.7		
JCT	Junction City	14.55	355		Pn	06 03 10.5	-1.1		
CVIMO	Finca Echandi	15.09	111	eP	Pn	06 03 21.8	+2.5		
OZNA	Ozona	15.15	350		Pn	06 03 19.4	-0.5		
ALPN	Alpine	15.21	342	Pn	Pn	06 03 20.6	0.0		
CVTR	Volcan Turrial	15.26	111	eP	Pn	06 03 23.0	+1.4		
CVTV	Tajo	15.27	111	eP	Pn	06 03 23.0	+1.3		
BRDY	Brady	15.29	357		Pn	06 03 19.5	-2.1		
BUS1	Rivas	15.46	112	eP	Pn	06 03 23.4	-1.0		
PIRO	Carate, Puerto	16.35	116	Pn	Pn	06 03 36.1	+0.7		
PLPT	Palo Pinto	16.80	360		Pn	06 03 39.7	-1.3		
Z35A	Perchaven, San	17.34	3	IAmb	IAmb	06 03 54.6			
	comp=Z,75nm,0.8s								
Z38A	Mt. Pleasant	17.49	9	IAmb	IAmb	06 03 55.9			
	comp=Z,99nm,0.8s								
VBMS	Vicksburg	17.65	22	IAmb	IAmb	06 03 52.7			
	comp=Z,100nm,0.9s								
143A	Socs Landing,	17.80	19	IAmb	IAmb	06 03 54.6			
	comp=Z,80nm,1.0s								
DKNS	Dickens	17.82	353	IAmb	IAmb	06 03 56.3			
	comp=Z,112nm,0.9s								
X34A	Smith Ranch, M	18.59	1	IAmb	IAmb	06 04 07.5			
	comp=Z,103nm,1.3s								
121A	Cookes Peak, D	18.67	334	IAmb	IAmb	06 04 14.1			
	comp=Z,104nm,1.2s								
AMTX	Amarillo	19.12	351	IAmb	IAmb	06 04 13.7			
	comp=Z,68nm,0.9s								
BAHB	Baha de los	19.18	315	P	P	06 04 09.3	+0.1		
BAHB	Baha de los	19.18	315	eP	P	06 04 09.3	+0.1		
FNO	Franklin	19.25	2	IAmb	IAmb	06 04 23.5			
	comp=Z,87nm,0.8s								
DUN6	Lazy B Ranch	19.26	331	IAmb	IAmb	06 04 14.0			
	comp=Z,128nm,1.0s								
Y45A	Yeager Farm, C	19.49	22	IAmb	IAmb	06 04 19.6			
	comp=Z,127nm,1.0s								
OK029	Liberty Lake	19.79	2	IAmb	IAmb	06 04 26.9			
	comp=Z,59nm,0.9s								
DEOK	Depew	19.88	4	IAmb	IAmb	06 04 22.5			
	comp=Z,93nm,0.9s								
MTDJ	Mount Denham	19.90	80	P	P	06 04 16.4	-0.9		
MTDJ				IAmb	IAmb	06 04 18.0			
	comp=Z,76nm,1.0s								
TUC	Tucson	19.90	327	P	P	06 04 18.3	+1.0		
TUC	Tucson	19.90	327	eP	P	06 04 17.7	+0.4		
OK052	Battle Ridge R	20.01	3	IAmb	IAmb	06 04 23.4			
	comp=Z,71nm,1.0s								
OXF	Oxford	20.12	22	IAmb	IAmb	06 04 19.7			
	comp=Z,74nm,0.9s								
ANMO	Albuquerque	20.32	340		P	06 04 22.0	+0.1		
ANMO				IAmb

W13A Hualapai Mount 23.69 327 IAmb IAmb 06 05 06.8
comp=Z,36nm,1.1s
IRM Iron Mountain 23.69 323 IAmb IAmb 06 05 06.4
comp=Z,110nm,1.6s
USIN University of 23.83 21 IAmb IAmb 06 04 59.2
comp=Z,77nm,1.0s
BORC Borrego Spring 23.84 320 IAmb IAmb 06 05 06.6
comp=Z,32nm,1.1s
PV01 Paradox Valley 23.92 340 IAmb IAmb 06 05 08.4
comp=Z,62nm,1.0s
U15A North Rim 23.95 331 IAmb IAmb 06 05 08.6
comp=Z,46nm,0.9s
V53A Saluda 23.99 32 P P **06 04 58.6 -1.6**
PV13 Radium Mtn., P 24.03 339 IAmb IAmb 06 05 07.7
comp=Z,39nm,0.9s
PV05 Paradox Valley 24.05 339 IAmb IAmb 06 05 07.5
comp=Z,40nm,0.9s
PFO Pinyon Flats O 24.10 320 LR LR 06 14 48.8
comp=Z,458nm,18.0s,baz=135,slow=38
T50A Nancy 24.12 27 IAmb IAmb 06 05 01.4
comp=Z,136nm,1.9s
Y57A Sumter 24.12 38 IAmb IAmb 06 05 01.8
comp=Z,64nm,0.8s
PV03 Paradox Valley 24.12 339 IAmb IAmb 06 05 08.7
comp=Z,44nm,1.0s
DANC Danby, Needles 24.17 324 IAmb IAmb 06 05 10.0
comp=Z,57nm,1.0s
PV17 East Wray Mesa 24.18 339 IAmb IAmb 06 05 09.2
comp=Z,48nm,1.0s
KMSC Kings Mountain 24.38 35 IAmb IAmb 06 05 18.4
comp=Z,39nm,1.1s
KNB Kanab 24.67 331 IAmb IAmb 06 05 15.9
comp=Z,34nm,1.0s
ELS Elsinore Mount 24.73 319 P **06 05 09.4 +2.3**
V55A Taylorsville 24.97 34 IAmb IAmb 06 05 18.1
comp=Z,43nm,1.2s
OTAV Otavalo 24.97 127 P P **06 05 11.6 +1.8**
R49A Shelbyville 25.05 25 IAmb IAmb 06 05 10.5
comp=Z,32nm,1.0s
W57A Gilead 25.14 37 IAmb IAmb 06 05 16.0
comp=Z,60nm,1.1s
S51A Beattyville 25.18 28 IAmb IAmb 06 05 12.3
comp=Z,38nm,0.8s
BLO Bloomington 25.31 22 IAmb IAmb 06 05 13.1
comp=Z,43nm,0.8s
R50A Paris 25.39 26 IAmb IAmb 06 05 13.2
comp=Z,29nm,1.1s
GSC Goldstone, Bar 25.47 323 IAmb IAmb 06 05 23.3
comp=Z,28nm,1.1s
SRU San Rafael Swe 25.48 337 IAmb IAmb 06 05 22.9
comp=Z,42nm,1.1s
U56A King 25.79 35 IAmb IAmb 06 05 17.9
comp=Z,36nm,0.9s
P18A Preston Nutter 25.84 338 IAmb IAmb 06 05 26.9
comp=Z,48nm,1.0s
SDDR Presa de Saban 25.85 79 P P **06 05 17.0 -0.3**
ROSC El Rosal 25.92 113 P P **06 05 21.5 +3.1**
comp=Z,6.9nm,0.7s,baz=281,slow=12,SNR=5.6
CCCA Chr Cany lake 25.95 322 IAmb IAmb 06 05 28.0
comp=Z,24nm,0.9s
QSM Queen of Sheba 25.97 324 IAmb IAmb 06 05 28.4
comp=Z,28nm,1.0s
TPO Tropico Hills 26.03 320 IAmb IAmb 06 05 29.0
comp=Z,37nm,1.1s
PRN Pahroc Range 26.06 328 IAmb IAmb 06 05 29.1
comp=Z,31nm,1.0s
LRMC Laurel Mtn Rad 26.11 322 IAmb IAmb 06 05 29.5
comp=Z,26nm,1.0s
SFIN Lafayette 26.20 19 IAmb IAmb 06 05 21.7
comp=Z,41nm,0.8s
FURC Furnace Creek, 26.33 324 IAmb IAmb 06 05 30.2
comp=Z,40nm,1.6s
TPNV Topopah Spring 26.34 326 IAmb IAmb 06 05 32.3
comp=Z,28nm,0.9s
SC01 Santiago de lo 26.40 78 P P **06 05 23.1 +0.8**
BLA Blacksburg 26.41 33 IAmb IAmb 06 05 24.1
comp=Z,40nm,1.1s
Q51A Peebles 26.44 27 IAmb IAmb 06 05 23.6
comp=Z,42nm,0.8s
RDMU Red Mountain 26.45 340 IAmb IAmb 06 05 31.9
comp=Z,69nm,1.2s
RUSC La Rusia 26.58 109 P P **06 05 25.3 +0.8**
MPU Maple Canyon 26.69 337 IAmb IAmb 06 05 32.2
comp=Z,28nm,1.0s
L40A Anamosa 26.72 12 IAmb IAmb 06 05 29.7
comp=Z,50nm,0.9s
BSUT Blindstream Ca 26.83 338 IAmb IAmb 06 05 33.9
comp=Z,34nm,0.9s
M44A Midewin, Midew 26.84 17 IAmb IAmb 06 05 26.4
comp=Z,45nm,0.8s
Q52A Bidwell 26.86 28 IAmb IAmb 06 05 34.5
comp=Z,54nm,1.1s
T57A Hurt 26.88 35 IAmb IAmb 06 05 28.9
comp=Z,36nm,0.9s
P51A Williamsport 26.94 27 IAmb IAmb 06 05 35.6
comp=Z,39nm,0.9s
GRAC Grapevine Rang 26.99 325 IAmb IAmb 06 05 60.0
comp=Z,46nm,1.7s
O49A Covington 27.01 24 IAmb IAmb 06 05 30.8
comp=Z,36nm,0.7s
VES Vestal, Richgr 27.19 321 IAmb IAmb 06 05 39.0
comp=Z,74nm,1.4s
DUG Dugway, Tooele 27.31 335 IAmb IAmb 06 05 38.4
comp=Z,36nm,1.1s
P52A Corning 27.47 28 IAmb IAmb 06 05 40.4
comp=Z,28nm,1.1s
K22A Casper 27.56 347 IAmb IAmb 06 05 40.3
comp=Z,28nm,1.1s
TCUT Toone Canyon 27.57 338 IAmb IAmb 06 05 40.6
comp=Z,53nm,1.2s
S57A Dark Hollow, R 27.60 34 IAmb IAmb 06 05 34.0
comp=Z,28nm,1.0s
ACSO Alum Creek Sta 27.60 26 IAmb IAmb 06 05 41.9
comp=Z,26nm,0.9s
JFWS Jewell Farm 27.74 13 IAmb IAmb 06 05 39.1
comp=Z,39nm,0.9s
SDV Santo Domingo 27.81 101 P **06 05 35.0 -0.2**
SDV Santo Domingo 27.81 101 LR LR 06 17 34.3
comp=Z,196nm,18.6s,baz=20,slow=39
O52A Adamsville 28.00 27 IAmb IAmb 06 06 04.4
comp=Z,20nm,0.9s
I37A Lemond, Wassca 28.28 7 IAmb IAmb 06 05 40.7
comp=Z,17nm,0.9s
SUSD Miller 28.42 359 IAmb IAmb 06 05 47.9
comp=Z,20nm,0.8s
PDAR Pinedale Array 28.45 342 P P **06 05 40.0 -0.7**
PDAR Pinedale Array 28.45 342 P P **06 05 41.4 +0.7**
comp=Z,3.7nm,0.8s,baz=138,slow=10.0,SNR=28
PDAR PcP PcP **06 08 51.2 -1.4**
comp=Z,0.2nm,0.3s,baz=200,slow=1.3,SNR=2.8
PDAR LR LR 06 17 22.3
comp=Z,232nm,20.9s,baz=154,slow=37
comp=Z,3.7nm,0.8s
NV11 Mina Array Sit 28.45 326 IAmb IAmb 06 05 49.1
comp=Z,31nm,1.1s
RSSD Black Hills 28.52 351 P P **06 05 41.5 +0.2**
NVAR Mina Array Bea 28.53 326 P P **06 05 43.2 +1.8**
NVAR Mina Array Bea 28.53 326 P P **06 05 43.6 +2.1**
comp=Z,5.2nm,0.8s,baz=154,slow=9.7,SNR=50
NVAR PcP PcP **06 08 53.7 +0.8**
comp=Z,0.2nm,0.5s,baz=99,slow=2.1,SNR=2.9
NVAR LR LR 06 17 44.9
comp=Z,305nm,18.7s,baz=138,slow=38
comp=Z,5.2nm,0.8s
I40A Norwalk 28.60 12 IAmb IAmb 06 05 46.9
comp=Z,25nm,1.1s
ELK Elko 28.80 332 IAmb IAmb 06 05 51.7
comp=Z,62nm,1.8s
AAM Ann Arbor 29.10 23 IAmb IAmb 06 05 46.8
comp=Z,28nm,0.9s
SNOW Snow King Moun 29.44 341 IAmb IAmb 06 05 57.7
comp=Z,28nm,1.1s
TPAW Teton Pass 29.53 341 IAmb IAmb 06 06 00.5
comp=Z,18nm,1.0s
LOHW Long Hollow 29.53 342 IAmb IAmb 06 05 57.6
comp=Z,44nm,1.4s
SPMN Marine on St. 29.55 8 IAmb IAmb 06 05 50.7
comp=Z,24nm,0.8s
PNTR Pine Nut 29.71 325 IAmb IAmb 06 06 00.3
comp=Z,38nm,1.5s
G40A Rib Lake 30.01 11 IAmb IAmb 06 05 59.3
comp=Z,36nm,1.2s
MPK Martis Peak 30.10 325 IAmb IAmb 06 06 04.7
comp=Z,33nm,1.2s
RLMT Red Lodge 30.55 345 IAmb IAmb 06 06 06.2
comp=Z,16nm,0.8s
YMR Madison River 30.60 342 IAmb IAmb 06 06 07.5
comp=Z,35nm,1.4s

SJG San Juan 30.71 81 LR LR 06 18 58.8
comp=Z,162nm,21.1s,baz=254,slow=38
YHL Hebgen Lake 30.83 342 IAmb IAmb 06 06 10.7
comp=Z,35nm,1.5s
BCYI Bear Canyon 31.07 339 IAmb IAmb 06 06 11.9
comp=Z,16nm,1.1s
MNRC McLaughlin Min 31.20 322 IAmb IAmb 06 06 13.5
comp=Z,20nm,1.2s
MFID Camas Ranch 31.23 335 IAmb IAmb 06 06 18.2
comp=Z,23nm,1.2s
BOZ Bozeman (W) 31.64 342 IAmb IAmb 06 06 16.6
comp=Z,21nm,1.3s
KCPM Cahto Peak 32.40 322 IAmb IAmb 06 06 24.1
comp=Z,26nm,1.2s
SADO Sadowa 32.94 25 LR LR 06 22 30.3
comp=Z,145nm,18.8s,baz=286,slow=42
BMO Blue Mountains 33.02 335 IAmb IAmb 06 06 27.5
comp=Z,19nm,1.2s
KHMM Horse Mountain 33.25 323 IAmb IAmb 06 06 30.8
comp=Z,18nm,1.0s
YBH Yreka Blue Hor 33.26 326 LR LR 06 19 19.6
comp=Z,14nm,18.5s,baz=142,slow=35
L04D Klamath Falls 33.38 327 IAmb IAmb 06 06 31.7
comp=Z,45nm,1.5s
EGMT Eagleton 33.38 346 IAmb IAmb 06 06 30.9
comp=Z,44nm,1.4s
J05D Fort Rock, OR 33.59 329 IAmb IAmb 06 06 34.1
comp=Z,43nm,2.0s
F10A Beach Ranch, E 33.91 336 P P **06 06 29.7 +1.1**
G08A Pilot Rock 34.07 333 IAmb IAmb 06 06 36.9
comp=Z,26nm,1.1s
ULM Lac du Bonnet 34.27 3 IAmb IAmb 06 06 36.5
comp=Z,31nm,1.3s
ULM Lac du Bonnet 34.27 3 P P **06 06 30.4 -1.1**
comp=Z,4.9nm,0.6s,baz=196,slow=7.2,SNR=4.1
ULM LR LR 06 20 53.6
comp=Z,167nm,19.3s,baz=180,slow=37
comp=Z,4.9nm,0.6s
I05D Terrebonne, OR 34.42 330 IAmb IAmb 06 06 41.6
comp=Z,25nm,1.4s
E09A Wood Farm, Sta 34.72 336 IAmb IAmb 06 06 41.5
comp=Z,18nm,1.1s
E07A Sunnyside 35.45 334 IAmb IAmb 06 06 50.3
comp=Z,58nm,2.0s
MXC Moxie City 35.66 334 IAmb IAmb 06 06 52.4
comp=Z,23nm,1.1s
NEW Newport 35.79 338 LR LR 06 22 06.3
comp=Z,164nm,20.1s,baz=168,slow=38
LON Longmire 36.45 332 IAmb IAmb 06 06 59.3
comp=Z,14nm,0.9s
B08A Colville Reser 36.69 336 IAmb IAmb 06 06 59.4
comp=Z,36nm,1.4s
D05A Enumclaw 36.87 333 IAmb IAmb 06 07 02.0
comp=Z,39nm,1.0s
GNW Green Mountain 37.52 332 IAmb IAmb 06 07 06.0
comp=Z,23nm,1.0s
NLWA Neilton Lookou 37.87 331 IAmb IAmb 06 07 11.1
comp=Z,62nm,1.6s
B04A Port Angeles 38.19 332 IAmb IAmb 06 07 12.8
comp=Z,28nm,1.0s
FFC Flin Flon 38.82 357 P P **06 07 09.9 -0.3**
FFC IAmb IAmb 06 07 16.2
comp=Z,27nm,0.9s
LLLB Lillooet 39.49 336 IAmb IAmb 06 07 23.1
comp=Z,32nm,1.1s
OZB Mount Ozzard 39.76 332 IAmb IAmb 06 07 25.9
comp=Z,32nm,1.4s
CBB Campbell River 40.48 333 P P **06 07 25.4 +1.2**
MACA Manacapuru-AM 41.68 114 P P **06 07 33.9 -0.6**
LPAZ La Paz 43.66 136 P P **06 07 52.0 +0.8**
LPAZ La Paz 43.66 136 P P **06 07 51.8 +0.6**
comp=Z,1.5nm,0.7s,baz=311,slow=8.8,SNR=6.7
LPAZ LR LR 06 24 54.4
comp=Z,145nm,18.2s,baz=278,slow=35
comp=Z,1.5nm,0.7s
RPN Rapa Nui 44.15 194 LR LR 06 21 48.6
comp=Z,143nm,21.1s,baz=34,slow=30
SCHQ Schefferville 45.75 25 P P **06 08 06.3 -0.4**
SCHQ Schefferville 45.75 25 P P **06 08 05.0 -1.8**
comp=Z,21nm,0.9s,baz=226,slow=5.4,SNR=12
comp=Z,21nm,0.9s
MDP Montagnes des 45.98 98 LR LR 06 27 33.3
comp=Z,81nm,21.9s,baz=284,slow=36
U35K Hyder 46.70 336 P P **06 08 15.8 +1.7**
baz=135
TOAD Toad River Com 47.26 341 P P **06 08 20.0 +1.4**
baz=143,SNR=8.0
T35M Bob Quinn 47.56 337 IAmb IAmb 06 08 28.6
comp=Z,11nm,1.0s
T35M Bob Quinn 47.56 337 P P **06 08 22.8 +1.9**
baz=136
CRAG Craig 47.66 334 P P **06 08 23.4 +1.8**
baz=132
YKA Yellowknife Ar 47.91 350 P P **06 08 23.3 -0.2**
YKA Yellowknife Ar 47.91 350 P P **06 08 22.4 -1.2**
comp=Z,6.0nm,0.9s,baz=165,slow=6.9,SNR=14
YKA LR LR 06 30 48.8
comp=Z,159nm,20.2s,baz=136,slow=39
comp=Z,6.0nm,0.9s
KOTAN Kotaneelee Air 47.96 343 P P **06 08 25.5 +1.5**
baz=145
LIRD Liard River Hi 47.98 341 P P **06 08 25.4 +1.4**
baz=142
WRAK Wrangell Islan 47.98 335 P P **06 08 25.6 +1.5**
baz=133
U33K Whale Pass 48.09 334 P P **06 08 26.0 +1.1**
baz=132
BLKN Baker Lake 48.35 1 P P **06 08 26.8 -0.1**
SIV San Ignacio 48.48 129 LR LR 06 26 49.2
comp=Z,76nm,19.8s,baz=290,slow=34
DLBC Dease Lake 48.54 338 LR LR 06 28 38.4
comp=Z,572nm,18.2s,baz=108,slow=36
DLBC Dease Lake 48.54 338 P P **06 08 30.1 +1.6**
baz=137,SNR=9.9
S34M Telegraph Cree 48.56 337 P P **06 08 30.7 +2.1**
baz=135
WTLY Watson Lake, Y 49.38 340 P P **06 08 36.7 +1.8**
baz=140,SNR=18
R33M Jennings River 49.58 339 P P **06 08 38.1 +1.6**
baz=136
S32K Killisnoo 49.59 335 P P **06 08 38.4 +2.0**
baz=131
SIT Sitka 49.63 334 P P **06 08 38.6 +1.9**
baz=130
Q32M Nakina River 49.73 338 P P **06 08 39.7 +2.0**
baz=135
TGTN Hyland Airport 50.32 342 P P **06 08 43.7 +1.7**
baz=141
WRGLY Wrigley 50.40 345 P P **06 08 43.7 +1.2**
baz=148
S31K Pelican 50.59 335 P P **06 08 45.7 +1.8**
baz=130
P32M Atlin 50.70 338 P P **06 08 46.6 +1.7**
baz=133
P33M Teslin, Yukon 50.81 339 IAmb IAmb 06 08 54.0
comp=Z,31nm,1.3s
P33M Teslin, Yukon 50.81 339 P P **06 08 47.5 +1.6**
baz=135
SKAG Skagway 51.22 337 P P **06 08 50.7 +2.0**
baz=132
N32M Quiet Lake 51.58 339 IAmb IAmb 06 08 54.5
comp=Z,27nm,0.9s
N32M Quiet Lake 51.58 339 P P **06 08 53.4 +1.9**
baz=135
PLBC Pleasant Camp 51.61 336 P P **06 08 53.4 +1.7**
baz=130
WHY Whitehorse 51.86 338 IAmb IAmb 06 08 56.3
comp=Z,20nm,1.0s
WHY Whitehorse 51.86 338 P P **06 08 55.4 +1.7**
baz=133
FRB Frobisher Bay 51.96 16 LR LR 06 33 53.2
comp=Z,65nm,20.4s,baz=220,slow=40
MMPY Sheldon Lake, 52.06 341 P P **06 08 57.0 +1.9**
baz=138,SNR=20
P29M Windy Craggy 52.26 336 P P **06 08 58.9 +2.3**
baz=129
P30M Million Dollar 52.27 337 P P **06 08 58.8 +2.1**
baz=130
O30N Mendenhall 52.38 338 IAmb IAmb 06 09 05.7
comp=Z,30nm,1.4s
O30N Mendenhall 52.38 338 P P **06 08 59.5 +2.0**
baz=131,SNR=6.0
H03N2 Juan Fernandez 52.44 160 T T 07 05 31.3
baz=337,slow=77,SNR=770
H03N1 Juan Fernandez 52.45 160 T T 07 05 32.5
baz=337,slow=77,SNR=777
H03N3 Juan Fernandez 52.45 160 T T 07 05 34.3
baz=337,slow=77,SNR=746

N31M Braeburn, Yuko 52.75 338 IAmb IAmb 06 09 03.1
comp=Z,34nm,1.1s
N31M Braeburn, Yuko 52.75 338 P P **06 09 02.0 +1.9**
baz=132,SNR=7.8
M31M Drury Creek, Y 52.76 340 P P **06 09 02.0 +1.8**
baz=134,SNR=5.3
RKT Rikitea 52.91 224 eLR LR 06 24 21.7
comp=Z,3µm,42.5s
HYT Haines Junctio 52.94 337 IAmb IAmb 06 09 10.4
comp=Z,37nm,1.3s
HYT Haines Junctio 52.94 337 P P **06 09 04.0 +2.3**
baz=130
PNL Peninsula 52.94 335 P P **06 09 03.7 +2.1**
baz=127
O29M Mount Kennedy 53.01 336 IAmb IAmb 06 09 05.2
comp=Z,22nm,1.2s
O29M Mount Kennedy 53.01 336 P P **06 09 04.0 +1.7**
baz=128
N30M Aishikik Lake 53.20 338 IAmb IAmb 06 09 12.0
comp=Z,18nm,1.2s
N30M Aishikik Lake 53.20 338 P P **06 09 05.5 +2.0**
baz=131
YUK6 Outpost Mounta 53.33 337 P P **06 09 06.2 +1.5**
baz=129
PINM Pinnacle 53.55 335 P P **06 09 07.3 +1.2**
baz=126
YUK4 Talbot Arm 53.70 337 P P **06 09 09.8 +2.5**
baz=129,SNR=7.5
M30M Minto, Yukon 53.84 339 IAmb IAmb 06 09 16.0
comp=Z,16nm,1.2s
M30M Minto, Yukon 53.84 339 P P **06 09 09.8 +1.6**
baz=132,SNR=6.3
O28M Mount Upton 53.93 336 IAmb IAmb 06 09 17.1
comp=Z,35nm,1.4s
O28M Mount Upton 53.93 336 P P **06 09 10.1 +0.9**
baz=127
YUK8 Steele Glacier 54.08 337 P P **06 09 11.5 +1.3**
baz=128,SNR=9.7
MESA MESA 54.28 335 P P **06 09 13.2 +1.5**
baz=125
M29M Somme Creek 54.33 338 IAmb IAmb 06 09 15.0
comp=Z,16nm,0.8s
M29M Somme Creek 54.33 338 P P **06 09 13.2 +1.3**
baz=130,SNR=12
CTG Chitna Glacier 54.50 336 P P **06 09 14.5 +1.4**
baz=126
YUK3 Moose Creek 54.64 337 P P **06 09 15.5 +1.2**
baz=127,SNR=6.3
L29M L29M 54.65 339 P P **06 09 15.4 +1.3**
baz=130
K29M Barlow Dome 54.93 340 IAmb IAmb 06 09 24.5
comp=Z,29nm,1.4s
K29M Barlow Dome 54.93 340 P P **06 09 17.5 +1.3**
baz=132,SNR=7.7
J30M Hart River 55.05 341 IAmb IAmb 06 09 25.6
comp=Z,45nm,1.9s
J30M Hart River 55.05 341 P P **06 09 18.0 +0.9**
baz=133,SNR=6.3
CRQE Cirque 55.08 335 P P **06 09 18.6 +1.3**
baz=124
KAIM Kayak Island 55.17 334 P P **06 09 19.3 +1.5**
baz=122
H31M Peel River 55.33 343 P P **06 09 20.0 +1.1**
baz=136
MCARA McCarthy VSAT 55.41 336 IAmb IAmb 06 09 22.9
comp=Z,21nm,0.9s
MCARA McCarthy VSAT 55.41 336 P P **06 09 20.9 +1.4**
baz=124
I30M Mount Dempster 55.51 342 IAmb IAmb 06 09 27.4
comp=Z,30nm,1.4s
I30M Mount Dempster 55.51 342 P P **06 09 21.6 +1.2**
baz=134,SNR=7.0
M27K Edge Creek, AK 55.53 337 IAmb IAmb 06 09 22.9
comp=Z,17nm,1.2s
M27K Edge Creek, AK 55.53 337 P P **06 09 22.0 +1.4**
baz=126
DAWY Dawson 55.70 339 IAmb IAmb 06 09 28.7
comp=Z,39nm,1.8s
DAWY Dawson 55.70 339 P P **06 09 22.7 +1.1**
baz=130,SNR=5.9
GLB Gilahina Butte 55.75 335 IAmb IAmb 06 09 25.0
comp=Z,17nm,0.8s
Q23K Middleton Isla 55.76 333 P P **06 09 23.9 +1.8**
baz=120
C36M Paulatuk 55.78 349 P P **06 09 23.0 +0.9**
baz=149
BMRM Bremner River 55.81 335 P P **06 09 24.3 +1.8**
baz=122
L27K Beaver Creek, 55.93 338 IAmb IAmb 06 09 31.1
comp=Z,28nm,1.3s
L27K Beaver Creek, 55.93 338 P P **06 09 24.7 +1.4**
baz=126,SNR=12
M26K Nabesna, AK 55.98 337 IAmb IAmb 06 09 31.6
comp=Z,33nm,1.4s
M26K Nabesna, AK 55.98 337 P P **06 09 25.0 +1.3**
baz=125
EYAK Cordova Ski Ar 56.07 334 P P **06 09 26.1 +1.8**
baz=121
G31M Satah River 56.12 344 P P **06 09 25.5 +1.0**
baz=137,SNR=6.5
N25K Chitina, Valde 56.16 335 IAmb IAmb 06 09 33.4
comp=Z,30nm,1.2s
N25K Chitina, Valde 56.16 335 P P **06 09 26.0 +1.0**
baz=123
F31M Tsiigehtchic 56.37 344 IAmb IAmb 06 09 33.0
comp=Z,34nm,1.4s
F31M Tsiigehtchic 56.37 344 P P **06 09 26.7 +0.5**
baz=138
DIV Divide 56.38 335 IAmb IAmb 06 09 29.5
comp=Z,19nm,1.0s
EPYK Eagle Plains 56.41 342 P P **06 09 27.6 +0.9**
baz=134
L26K Log Cabin Wild 56.47 337 P P **06 09 28.7 +1.6**
baz=125,SNR=6.5
P23K Montague Islan 56.50 333 P P **06 09 29.1 +1.7**
baz=119
MENT Mentasta 56.56 337 IAmb IAmb 06 09 29.9
comp=Z,8.4nm,0.7s
K27K Chicken 56.60 339 P P **06 09 29.6 +1.6**
baz=127
KLU Klutina 56.63 335 IAmb IAmb 06 09 36.6
comp=Z,28nm,1.2s
KLU Klutina 56.63 335 P P **06 09 29.5 +1.1**
baz=121
G30M tAoh Zraii Nji 56.70 343 P P **06 09 29.1 +0.4**
baz=134
I28M Miner Creek 56.77 341 P P **06 09 30.5 +1.2**
baz=130
H29M Whitestone 56.80 342 P P **06 09 30.5 +1.1**
baz=132,SNR=6.1
GLI Glacier Island 56.80 334 P P **06 09 30.7 +1.2**
baz=120
HARP HAARP 56.81 336 P P **06 09 30.8 +1.2**
baz=122,SNR=5.6
INK Inuvik 56.96 345 IAmb IAmb 06 09 31.9
comp=Z,20nm,0.8s
INK Inuvik 56.96 345 LR LR 06 36 12.6
comp=Z,256nm,18.2s,baz=2.5,slow=38
INK Inuvik 56.96 345 P P **06 09 31.0 +0.6**
baz=138,SNR=11
F30M Barrier River 57.03 344 IAmb IAmb 06 09 32.7
comp=Z,14nm,0.8s
F30M Barrier River 57.03 344 P P **06 09 32.5 +1.5**
baz=135,SNR=5.4
M24K Tolsona, Glenn 57.06 335 P P **06 09 32.8 +1.4**
baz=121
G29M Pine Creek 57.16 343 P P **06 09 33.1 +1.1**
baz=132
PAX Paxson 57.24 336 IAmb IAmb 06 09 40.0
comp=Z,24nm,1.2s
PAX Paxson 57.24 336 P P **06 09 33.8 +1.1**
baz=122,SNR=8.4
SCRK Sand Creek 57.25 338 IAmb IAmb 06 09 35.5
comp=Z,15nm,1.0s
SCRK Sand Creek 57.25 338 P P **06 09 33.9 +1.1**
baz=125,SNR=11
PWL Port Wells 57.32 333 P P **06 09 34.6 +1.4**
baz=118
SCM Sheep Creek Mo 57.38 335 P P **06 09 34.6 +0.8**
baz=120
J26L Joseph Creek 57.41 339 P P **06 09 35.6 +1.8**
baz=125
I27K Kandik River 57.41 340 P P **06 09 34.9 +1.1**
baz=128
RIDG Independent Ri 57.43 337 P P **06 09 35.3 +1.3**
baz=124
SEW Seward 57.46 332 P P **06 09 35.1 +0.9**
baz=117

M23K **Glacier View** 57.53 335 P P 06 09 36.1 +1.5
baz=120
KNK **Knik Glacier** 57.64 334 P P 06 09 37.0 +1.5
baz=118
I26K **Coal Creek Min** 57.74 339 IAmb IAmb 06 09 43.9
comp=Z,39nm,1.7s
I26K **Coal Creek Min** 57.74 339 P P 06 09 37.1 +1.0
baz=126
O22K **Cooper Landing** 57.75 333 P P 06 09 37.8 +1.6
baz=117
H27K **Steamboat Moun** 57.78 341 IAmb IAmb 06 09 44.5
comp=Z,31nm,1.7s
H27K **Steamboat Moun** 57.78 341 P P 06 09 37.7 +1.3
baz=128
SML **Sawmill** 57.78 334 P P 06 09 38.1 +1.6
baz=119
CPUP **Villa Florida** 57.84 136 LR LR 06 36 10.4
comp=Z,11nm,18.9s,baz=192,slow=38
BRSE **Bradley Lake S** 57.88 332 P P 06 09 38.5 +1.3
baz=115
WAT6 **Susitna Watana** 57.93 335 P P 06 09 38.6 +0.9
baz=120,SNR=6.8
KDAK **Kodiak Island** 57.95 329 LR LR 06 31 46.1
comp=Z,85nm,21.8s,baz=120,slow=33
KDAK **Kodiak Island** 57.95 329 P P 06 09 39.3 +1.7
baz=112
POIN **Pond Inlet** 57.96 7 P P 06 09 37.7 +0.2
POIN IAmb IAmb 06 09 38.6
comp=Z,14nm,0.9s
PMR **Palmer** 58.01 334 P P 06 09 39.1 +1.1
baz=118,SNR=5.6
RC01 **Rabbit Creek A** 58.04 333 P P 06 09 39.3 +1.1
baz=117
DHY **Denali Highway** 58.04 336 P P 06 09 39.5 +1.1
baz=121
OHAK **Old Harbor** 58.09 328 P P 06 09 40.4 +1.8
baz=111
J25K **Salcha River,** 58.11 338 P P 06 09 39.9 +1.1
baz=124
E29M **Blow River** 58.15 344 P P 06 09 40.2 +1.3
baz=133
F28M **Old Crow** 58.17 343 IAmb IAmb 06 09 41.0
comp=Z,16nm,0.8s
F28M **Old Crow** 58.17 343 P P 06 09 40.0 +0.9
baz=131,SNR=19
G27K **Doyon Strip** 58.18 341 P P 06 09 40.1 +0.9
baz=129,SNR=5.1
HOM **Homer** 58.26 331 P P 06 09 41.0 +1.3
baz=114
A36M **Sachs Harbour** 58.27 350 P P 06 09 40.3 +0.7
baz=149
SII **Sitkinak Islan** 58.31 327 P P 06 09 41.9 +1.6
baz=110
WAT1 **Susitna Watana** 58.38 335 P P 06 09 41.7 +1.1
baz=119
M22K **Willow** 58.51 334 P P 06 09 42.5 +1.0
baz=117
HDA **Harding Lake** 58.57 338 P P 06 09 42.8 +0.9
baz=122
SUA **Susitna One** 58.64 333 P P 06 09 43.5 +0.9
baz=116
E28M **Babbage River** 58.74 344 P P 06 09 43.3 +0.3
baz=132,SNR=13
ILAR **Eielson Array** 58.74 338 P P 06 09 43.5 +0.4
comp=Z,7.0nm,1.0s,baz=137,slow=4.7,SNR=47
ILAR LR LR 06 37 44.0
comp=Z,209nm,20.8s,baz=102,slow=39
comp=Z,7.0nm,1.0s
RES **Resolute Bay** 58.78 1 IAmb IAmb 06 09 48.8
comp=Z,24nm,1.6s
RES **Resolute Bay** 58.78 1 LR LR 06 39 01.5
comp=Z,130nm,18.2s,baz=284,slow=40
CHIR **Chirikof Islan** 58.82 326 P P 06 09 44.9 +1.1
baz=108
CUT **Chulitna** 58.87 335 P P 06 09 44.8 +0.8
baz=117
O20K **Slope Mountain** 58.88 332 P P 06 09 45.0 +0.8
baz=114
G26K **Porcupine Rive** 58.93 341 IAmb IAmb 06 09 51.3
comp=Z,25nm,1.8s
G26K **Porcupine Rive** 58.93 341 P P 06 09 45.1 +0.7
baz=126
MCK **McKinley** 58.98 336 P P 06 09 46.0 +1.2
baz=119,SNR=6.5
P19K **Oil Pt** 58.99 331 P P 06 09 45.8 +0.9
baz=113
D28M **Stokes Point** 59.02 344 P P 06 09 45.9 +1.0
baz=133
E27K **Coleen River** 59.04 343 P P 06 09 45.9 +0.7
baz=129
POKR **Poker Plat Res** 59.13 338 P P 06 09 46.6 +0.8
baz=122
COLA **College** 59.15 338 P P 06 09 45.8 -0.1
COLA IAmb IAmb 06 09 47.4
comp=Z,19nm,1.1s
COLA **College** 59.15 338 P P 06 09 46.7 +0.8
baz=121
SPCR **Spurr Chakacha** 59.16 333 P P 06 09 47.3 +1.1
baz=115
H25L **Birch Creek** 59.20 340 P P 06 09 47.1 +0.9
baz=124,SNR=5.9
SKT **Skwentna** 59.21 334 P P 06 09 47.5 +1.2
baz=116,SNR=7.0
TRF **Thorofare Moun** 59.37 336 P P 06 09 48.6 +0.9
baz=118,SNR=15
NEA2 **Nenana** 59.46 337 P P 06 09 48.9 +0.9
baz=120
Q18K **Katmai Hardscr** 59.46 329 P P 06 09 49.3 +1.0
baz=110
BMAR **Burnt Mountain** 59.47 341 P P 06 09 48.8 +0.7
F26K **Sheenjek River** 59.49 341 IAmb IAmb 06 09 49.7
comp=Z,7.8nm,1.0s
F26K **Sheenjek River** 59.49 341 P P 06 09 49.5 +1.2
baz=126
D27M **Malcolm River** 59.55 344 IAmb IAmb 06 09 55.6
comp=Z,25nm,1.4s
D27M **Malcolm River** 59.55 344 P P 06 09 49.5 +0.8
baz=130
G25K **Bearman Lake** 59.57 340 P P 06 09 50.0 +1.2
baz=124
SFJD **Kangerlussuaq** 59.60 20 LR LR 06 37 05.8
comp=Z,83nm,18.4s,baz=222,slow=38
H24K **Noodor Dome** 59.67 339 P P 06 09 50.5 +1.0
baz=122,SNR=11
O19K **Port Alsworth** 59.71 331 P P 06 09 51.2 +1.4
baz=112
Q17K **Contact Creek** 59.76 329 P P 06 09 51.8 +1.4
baz=109
P18K **Big Mountain,** 59.84 330 P P 06 09 51.5 +0.7
baz=111
I23K **Minto, Yukon-K** 59.84 338 P P 06 09 51.7 +1.0
baz=120,SNR=12
M20K **Styx River** 59.85 333 P P 06 09 52.1 +1.2
baz=114
PPLA **Purkeypile** 59.88 335 P P 06 09 52.2 +1.0
baz=116
F25K **Christian Rive** 59.90 341 IAmb IAmb 06 09 59.4
comp=Z,19nm,1.4s
F25K **Christian Rive** 59.90 341 P P 06 09 51.6 +0.5
baz=125
BPAW **Bear Paw Mtn.** 59.95 336 IAmb IAmb 06 09 59.0
comp=Z,17nm,1.0s
BPAW **Bear Paw Mtn.** 59.95 336 P P 06 09 52.7 +1.2
baz=117
G24K **Hadweenzic Riv** 59.99 340 P P 06 09 52.6 +0.9
baz=122,SNR=6.9
N19K **Bonanza Creek** 60.02 332 P P 06 09 53.1 +1.0
baz=112
E25K **Arctic Village** 60.18 341 P P 06 09 53.9 +0.9
baz=125
H23K **Yukon River** 60.25 338 P P 06 09 54.5 +1.0
baz=120
Q16K **King Salmon** 60.28 329 P P 06 09 54.8 +1.1
baz=109
MLY **Manley** 60.29 337 P P 06 09 54.7 +0.8
MLY **Manley** 60.29 337 P P 06 09 54.7 +0.8
baz=118,SNR=7.5
P17K **Kvichak River** 60.35 330 P P 06 09 55.2 +0.9
baz=109
CHUM **Lake Minchumin** 60.37 336 P P 06 09 55.0 +0.7
baz=116
R16K **Pilot Point** 60.39 328 P P 06 09 55.9 +1.3
baz=108
M19K **Big River Lodg** 60.40 333 P P 06 09 55.7 +1.0
baz=113
L20K **Farewell, AK** 60.41 334 P P 06 09 55.7 +1.0
baz=114
C27K **Jago River** 60.54 343 P P 06 09 56.6 +1.2
baz=128
F24K **Squaw Lake** 60.57 340 P P 06 09 56.5 +0.7
baz=122
PPT **Papeete** 60.59 239 LR LR 06 30 08.3
comp=Z,65nm,20.6s,baz=306,slow=30
PPT2 **Papeete2** 60.60 239 eLR LR 06 27 50.9
comp=Z,89nm,21.5s
PPT2 eLR LR 06 27 56.8
comp=Z,98nm,22.5s
N18K **Kilae Creek** 60.61 331 P P 06 09 57.1 +1.1
baz=111
CHNA **Chernabura Isl** 60.71 324 P P 06 09 57.8 +1.0
baz=104
L19K **White Mountain** 60.71 333 P P 06 09 57.5 +0.8
baz=112
I21K **Tanana** 60.83 337 P P 06 09 58.9 +1.5
baz=117
K20K **Telida** 60.85 335 P P 06 09 58.3 +0.7
baz=114
O17K **Koliganek Bris** 60.86 330 P P 06 09 58.7 +1.0
baz=109
G23K **Bananza Creek** 60.86 339 P P 06 09 59.0 +1.3
baz=120
M18K **Stony River** 60.88 332 P P 06 09 58.7 +0.9
baz=111
H22K **Ishtalitna Cre** 60.94 338 P P 06 09 59.0 +0.8
baz=118
C26K **Camden Bay** 61.05 343 P P 06 09 59.9 +1.0
baz=126
E24K **Your Creek** 61.06 341 IAmb IAmb 06 10 01.3
comp=Z,13nm,1.1s
E24K **Your Creek** 61.06 341 P P 06 10 00.0 +0.9
baz=122
S14K **Fog Glacier** 61.06 326 P P 06 10 00.3 +1.0
baz=105
D25K **Kavik River** 61.12 342 IAmb IAmb 06 10 01.2
comp=Z,14nm,0.8s
D25K **Kavik River** 61.12 342 P P 06 09 59.7 +0.4
baz=125
N17K **Nushagak Hills** 61.16 331 P P 06 10 01.0 +1.2
baz=109
COLD **Coldfoot** 61.18 340 P P 06 10 01.2 +1.4
COLD **Coldfoot** 61.18 340 P P 06 10 00.8 +0.9
baz=120,SNR=6.7
J20K **Nowinta River** 61.23 336 P P 06 10 00.8 +0.7
baz=114
O16K **Kokwok River B** 61.28 330 P P 06 10 01.4 +0.8
baz=108
SDPT **Sand Point** 61.33 325 P P 06 10 01.6 +0.6
baz=104
H21K **Melozitna Rive** 61.35 337 IAmb IAmb 06 10 02.2
comp=Z,11nm,1.0s
H21K **Melozitna Rive** 61.35 337 P P 06 10 01.6 +0.6
baz=116
E23K **Chandalar** 61.41 340 P P 06 10 02.9 +1.4
baz=121
G22K **Bettles** 61.48 339 P P 06 10 03.0 +1.2
baz=118
L18K **Granite Mounta** 61.52 333 IAmb IAmb 06 10 03.3
comp=Z,17nm,1.0s
L18K **Granite Mounta** 61.52 333 P P 06 10 03.8 +1.6
baz=111
M17K **Holitna River** 61.57 332 P P 06 10 03.7 +1.2
baz=110
I20K **Naaghedeneel** 61.62 336 P P 06 10 03.8 +1.0
baz=114
TOLK **Toolik Lake Re** 61.70 341 P P 06 10 03.8 +0.4
TOLK IAmb IAmb 06 10 05.2
comp=Z,12nm,0.8s
TOLK **Toolik Lake Re** 61.70 341 P P 06 10 04.0 +0.6
baz=121
J19K **Poorman** 61.74 335 P P 06 10 04.6 +0.9
baz=113
D24K **Happy Valley** 61.75 342 P P 06 10 04.6 +1.0
baz=122
N16K **Nishlik Lake** 61.88 331 P P 06 10 05.8 +1.2
baz=108
PLCA **Paso Flores** 61.96 156 IAmb IAmb 06 10 15.0
comp=Z,23nm,1.6s
PLCA **Paso Flores** 61.96 156 P P 06 10 09.0 +3.5
comp=Z,1.8nm,0.8s,baz=300,slow=9.3,SNR=5.6
PLCA LR LR 06 30 33.5
comp=Z,117nm,21.8s,baz=318,slow=30
comp=Z,1.8nm,0.8s
F22K **John River** 61.99 339 P P 06 10 06.4 +1.1
baz=118
J18K **Innoko River** 61.99 334 IAmb IAmb 06 10 12.4
comp=Z,22nm,1.2s
J18K **Innoko River** 61.99 334 P P 06 10 06.2 +0.9
baz=111
G21K **Allakaket** 61.99 338 IAmb IAmb 06 10 06.8
comp=Z,15nm,1.2s
G21K **Allakaket** 61.99 338 P P 06 10 06.3 +0.9
baz=116
O15K **Ungalikthiuk R** 62.00 329 P P 06 10 05.6 +0.1
baz=106
C24K **Franklin Bluff** 62.02 342 P P 06 10 06.3 +0.9
baz=122
H20K **Anotleneega Mo** 62.06 337 P P 06 10 06.3 +0.5
baz=114,SNR=6.8
M16K **Timber Creek** 62.14 331 P P 06 10 07.6 +1.2
baz=108
E22K **Anaktuvuk Pass** 62.17 340 IAmb IAmb 06 10 08.2
comp=Z,12nm,1.0s
E22K **Anaktuvuk Pass** 62.17 340 P P 06 10 06.9 +0.4
baz=118
L17K **Donlin** 62.20 333 P P 06 10 08.1 +1.3
baz=109
D23K **Nanushuk River** 62.22 341 IAmb IAmb 06 10 15.3
comp=Z,18nm,1.1s
D23K **Nanushuk River** 62.22 341 P P 06 10 08.1 +1.3
baz=120
S12K **Black Hills** 62.29 325 P P 06 10 08.7 +1.2
baz=102
F21K **Alatna River** 62.30 339 P P 06 10 08.0 +0.6
baz=116
K17K **Iditarod** 62.40 333 P P 06 10 09.0 +0.9
baz=109
N15K **Kvethluk River** 62.42 330 P P 06 10 09.2 +1.0
baz=106
GCSA **Galena City Sc** 62.54 336 P P 06 10 10.0 +1.1
baz=112
L16K **Owhat River** 62.59 332 P P 06 10 10.3 +1.0
baz=108
C23K **Itkillik River** 62.64 342 P P 06 10 10.1 +0.5
baz=121
H19K **Roundabout Mou** 62.67 337 P P 06 10 10.6 +0.8
baz=113
O14K **Tigyukauivet M** 62.73 329 P P 06 10 10.6 +0.2
baz=105
D22K **Ayikyak River** 62.81 341 P P 06 10 11.4 +0.7
baz=118
M15K **Kasigluk River** 62.85 331 P P 06 10 11.8 +0.7
baz=106
J17K **VABM Dome** 62.96 334 P P 06 10 12.9 +1.0
baz=109
F20K **Avaraart Lake** 63.02 338 IAmb IAmb 06 10 20.1
comp=Z,20nm,1.2s
F20K **Avaraart Lake** 63.02 338 P P 06 10 12.9 +0.8
baz=114
E21K **Killik River** 63.02 340 P P 06 10 13.0 +0.9
baz=116
H18K **Honhosa River** 63.28 336 P P 06 10 14.9 +1.0
baz=111
M14K **Bethel** 63.47 331 P P 06 10 16.3 +1.1
baz=105
L15K **Ungalak Mounta** 63.50 332 P P 06 10 16.4 +1.0
baz=106
TBI **Tubuai** 63.52 233 eLR LR 06 29 23.7
comp=Z,858nm,26.2s
J16K **Anvik River** 63.58 333 P P 06 10 16.9 +1.0
baz=108
C21K **Knifeblade Rid** 63.61 341 P P 06 10 16.8 +0.8
baz=116
G18K **Tagagawik** 63.66 337 IAmb IAmb 06 12 20.7
comp=Z,29nm,1.6s
G18K **Tagagawik** 63.66 337 P P 06 10 17.6 +1.2
baz=111
F19K **Shaleruckik Mo** 63.67 338 P P 06 10 17.5 +1.1
baz=112,SNR=7.3
E20K **Nigu River** 63.68 339 P P 06 10 17.1 +0.5
baz=114
K15K **Wolf Creek Mou** 63.69 332 P P 06 10 17.4 +0.8
baz=106
E19K **Redstone River** 63.72 338 IAmb IAmb 06 10 24.5
comp=Z,14nm,1.1s
E19K **Redstone River** 63.72 338 P P 06 10 18.0 +1.2
baz=113
B22K **Teshekpuk Lake** 63.73 342 P P 06 10 17.9 +1.2
baz=118
B21K **Ikpikpuk River** 63.76 341 P P 06 10 17.8 +0.8
baz=116
I17K **Unalakleet** 63.80 334 P P 06 10 18.2 +0.8
baz=108
H17K **Granite Mounta** 63.82 335 P P 06 10 18.2 +0.7
baz=109
L14K **Kuka Creek** 63.96 331 P P 06 10 19.5 +1.1
baz=105
D20K **Etivluk River** 64.02 340 P P 06 10 19.3 +0.6
baz=114
M13K **Dall Lake** 64.05 330 P P 06 10 19.6 +0.6
baz=104
F18K **Selawik** 64.28 337 P P 06 10 21.0 +0.6
baz=110
G17K **Kiwalik Mounta** 64.30 336 P P 06 10 21.7 +1.1
baz=108
D19K **Kuna River** 64.43 339 P P 06 10 21.9 +0.4
baz=112
UNV **Unalaska Valle** 64.49 322 P P 06 10 23.0 +1.0
baz=98
A22K **Sinclair Lake** 64.50 342 P P 06 10 22.4 +0.7
baz=117
H16K **Elim** 64.67 335 P P 06 10 24.1 +1.0
baz=107
J14K **Nanvaranak Lak** 64.72 332 P P 06 10 24.6 +1.2
baz=104
B20K **Meade River** 64.73 341 P P 06 10 24.1 +0.8
baz=114
F17K **Baldwin Pennin** 64.84 337 P P 06 10 24.2 +0.2
baz=108
E18K **Tukpahlearik C** 64.92 338 IAmb IAmb 06 10 32.7
comp=Z,16nm,1.0s
E18K **Tukpahlearik C** 64.92 338 P P 06 10 24.6 0.0
baz=109
G16K **Koyuk River** 64.94 335 P P 06 10 25.2 +0.5
baz=107
K13K **Kusilvak Mount** 65.02 331 P P 06 10 26.0 +0.7
baz=103
C19K **Lookout Ridge** 65.16 340 P P 06 10 27.2 +0.9
baz=111
E17K **Hotham Inlet** 65.26 337 P P 06 10 27.3 +0.5
baz=108,SNR=7.6
M11K **Mekoryuk** 65.42 330 P P 06 10 28.4 +0.5
baz=101
G15K **Niukluk** 65.51 335 P P 06 10 28.8 +0.3
baz=105
C18K **Utukok River** 65.54 339 P P 06 10 28.9 +0.1
baz=109
NIKH **Nikolski High** 65.78 321 P P 06 10 31.6 +1.1
baz=95
NEEM **North Greenlan** 65.83 10 *i* P P 06 10 30.8 +0.1
NEEM IAmb IAmb 06 10 32.1
comp=Z,24nm,0.8s
D17K **Noatak River** 65.91 338 P P 06 10 31.7 +0.7
baz=107
F15K **North Star Dit** 65.95 335 P P 06 10 32.2 +0.8
baz=105
RDOG **Red Dog Mine** 65.95 338 P P 06 10 32.1 +0.8
baz=107
ANM **Nome** 65.96 334 P P 06 10 32.1 +0.7
baz=104
B18K **Kobuk River** 65.99 340 P P 06 10 32.3 +0.8
baz=109
SUMG **Summit** 66.03 17 *i* P P 06 10 32.4 +0.2
A19K **Wainwright** 66.04 341 P P 06 10 32.0 +0.2
baz=110
C17K **DeLong Mountai** 66.18 339 P P 06 10 33.6 +0.9
baz=107
F14K **Arctic Creek** 66.57 335 P P 06 10 35.7 +0.4
baz=103
P08K **Saint George I** 66.57 325 P P 06 10 36.5 +1.1
baz=96
SPIA **Saint Paul Isl** 67.02 326 P P 06 10 39.1 +0.9
baz=96
TNA **Tin City** 67.23 335 P P 06 10 39.8 +0.3
baz=102
BORG **Borgarnes** 70.11 26 LR LR 06 43 34.2
comp=Z,56nm,18.1s,baz=274,slow=38
DBG **Daneborg** 71.51 16 *i* P P 06 11 06.0 +0.1
DAG **Danmarks Havn** 72.20 14 *i* P P 06 11 09.4 -0.5
DAG IAmb IAmb 06 11 10.1
comp=Z,6.7nm,0.7s
NOR **Nord** 73.09 9 *i* P P 06 11 15.4 +0.2
NOR IAmb IAmb 06 11 16.2
comp=Z,9.0nm,1.0s
SHEM **Shemya Is, Ala** 76.10 321 LR LR 06 42 13.0
comp=Z,26nm,19.1s,baz=84,slow=34
SPITS **Spitsbergen Ar** 79.37 11 P P 06 11 51.3 +0.3
comp=Z,4.4nm,0.7s,baz=298,slow=3.1,SNR=1.7
SPITS LR LR 06 49 53.4
comp=Z,136nm,18.5s,baz=300,slow=38
comp=Z,4.4nm,0.7s
EKA **Eskdalemuir Ar** 79.89 35 P P 06 11 53.7 -0.4
comp=Z,3.0nm,0.8s,baz=280,slow=5.0,SNR=5.9
comp=Z,3.0nm,0.8s
ESDC **Sonseca Array** 83.19 51 P P 06 12 11.9 -0.2
ESDC **Sonseca Array** 83.19 51 P P 06 12 12.0 0.0
comp=Z,1.8nm,0.9s,baz=293,slow=4.2,SNR=6.4
ESDC LR LR 06 44 01.4
comp=Z,98nm,20.1s,baz=266,slow=32
comp=Z,1.8nm,0.9s
MD01 **Midelt array s** 84.34 58 P P 06 12 17.1 -1.0
SEY **Seymchan** 84.47 334 P P 06 12 17.1 -0.8
comp=Z,1.6nm,0.2s,baz=103,slow=14,SNR=2.1
comp=Z,1.6nm,0.2s
MDT **Midelt** 84.48 58 LR LR 06 49 10.5
comp=Z,71nm,18.5s,baz=280,slow=35
NB2 **NORSAR Subarra** 85.26 27 P P 06 12 23.3 +1.2
comp=Z,0.7nm,0.7s,baz=296,slow=5.1
NOA **NORSAR Array B** 85.26 27 P P 06 12 22.2 +0.1
comp=Z,1.2nm,0.8s,baz=297,slow=5.1,SNR=3.9
NOA LR LR 06 53 16.6
comp=Z,25nm,18.1s,baz=295,slow=38
comp=Z,1.2nm,0.8s
PETK **Petropavlovsk-** 85.61 324 P P 06 12 25.3 +1.4
comp=Z,6.5nm,1.0s,baz=40,slow=16,SNR=2.7
PETK LR LR 06 48 06.9
comp=Z,44nm,20.8s,baz=65,slow=34
comp=Z,6.5nm,1.0s
DOU **Dourbes** 85.90 39 *d*P P 06 12 25.7 +0.3
comp=Z,6.1nm,2.0s
BMRD **Maredsous** 85.94 39 *d*P P 06 12 26.1 +0.5
comp=Z,5.3nm,1.0s
ARCES **ARCESS Array B** 86.12 17 P P 06 12 25.2 -1.0
comp=Z,3.4nm,0.8s,baz=15,slow=14,SNR=4.0
ARCES LR LR 06 53 56.5
comp=Z,60nm,19.0s,baz=313,slow=38
comp=Z,3.4nm,0.8s
BCLA **Clavier** 86.22 39 *d*P P 06 12 31.3 +4.3
MA2 **Magadan** 86.60 332 LR LR 06 50 35.5
comp=Z,64nm,21.9s,baz=183,slow=35
WLF **Walferdange** 87.00 39 *d*P P 06 12 28.6 -2.2
TIXI **Tiksi** 87.06 347 LR LR 06 57 23.8
comp=Z,71nm,18.1s,baz=12,slow=40
DAVOX **Davos/Dischmat** 90.40 41 LR LR 06 56 09.4
comp=Z,40nm,18.2s,baz=271,slow=38
FINES **FINESS Array B** 91.21 23 LR LR 06 57 17.1
comp=Z,44nm,18.0s,baz=297,slow=38
GERES **GERESS Array B** 91.85 38 P P 06 12 52.9 -0.9
comp=Z,0.3nm,0.2s,baz=236,slow=7.0,SNR=1.4
GERES LR LR 06 57 45.1
comp=Z,52nm,18.0s,baz=270,slow=38
comp=Z,0.3nm,0.2s
YAK **Yakutsk** 93.64 339 LR LR 06 56 55.7
comp=Z,66nm,18.5s,baz=14,slow=37
NRIK **Noril'sk** 94.85 358 LR LR 06 59 22.5
comp=Z,67nm,18.1s,baz=354,slow=38
TORD **Torodi Ar. Bea** 95.71 75 P P 06 13 10.6 -1.5
comp=Z,1.6nm,0.5s,baz=305,slow=3.5,SNR=1.5
comp=Z,1.6nm,0.5s
VAE **Valguarnera** 97.42 48 LR LR 06 54 20.6
comp=Z,114nm,19.1s,baz=320,slow=34
HHC **Hu-ho-hao-te** 117.11 335 eP PKPdf 06 18 31.7 +0.7
WMQ **Urumqi** 120.29 355 ePKP PKPdf 06 18 38.9 +1.9
NJ2 **Nanjing** 120.51 324 eP PKiKP 06 18 40.3 +2.6
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
CD2 **Chengdu** 128.85 336 PKP PKPdf 06 18 53.5 -0.2
WRA **Warramunga Arr** 130.00 257 PKP PKPdf 06 18 56.2 +0.1
comp=Z,0.9nm,0.8s,baz=88,slow=2.7,SNR=7.2
ASAR **Alice Springs** 130.59 252 PKP PKPdf 06 18 57.6 +0.4
comp=Z,0.9nm,0.8s,baz=98,slow=1.9,SNR=5.2
PZH **PanZhiHua** 133.57 335 PKP PKPdf 06 19 03.3 +0.4
CMAR **Chiang Mai Arr** 141.87 333 PKP PKPdf 06 19 17.4 -0.7
comp=Z,0.9nm,0.3s,baz=315,slow=2.3,SNR=5.3
HYBB **Hyderabad (bro** 146.70 6 ePKiKP PKPab 06 19 31.7 +2.4

HYBB eSKSdf **SKSdf** **06 26 37.3 +2.3**

*BGR **06** 06:06:04.3,48°.15N×151°.50E,h33km,mb5.0*
*BJI **06** 06:06:08.1,47°.60N×152°.69E,h130km,mB4.8/11, mb4.8/55*
*NEIC **06** 06:06:11.5±1.5,47°.69N±0°.08×152°.4E±0°.1,h125km±4km, mb4.7/89,Error ellipse: s-maj=15.0km s-min=9.0km az=121.0*
*MOS **06** 06:06:11.9±1.1,47°.64N×152°.42E,h147km,mb4.6/41, Error ellipse: s-maj=7.5km s-min=4.8km az=99.7*
*JMA **06** 06:06:13.0±0.6,46°.N±5°×15°.3E±°,h154km,MV3.9/12, KURILE ISLANDS REGION*
*SKHL **06** 06:06:13.2±0.7,47°.60N×152°.60E,h147km±5km, mb4.8/4, mbv5.4/3,msh5.3/3,msha5.8/4*
*IDC **06** 06:06:13.1±0.5,47°.61N×152°.43E,h146km±4km, mb4.1/32, mbtmp4.6/39,MS2.8/3,Error ellipse: s-maj=10.6km s-min=8.0km az=156.0*

ISC 06 06:06:12.4±0.4,47°.58N±0°.04×152°.45E±0°.04,h141km±3km, h141km:pP-P,n467,σ1932/485,mb4.7/176,26C-32D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.93**	**36**	*e*PN		**Pn**		**06 07 11.3**	**-0.1**
SKR				*e*S		**Sn**		**06 07 55.3**	**-1.8**
SKR				pmax	pmax				
	comp=E,87nm,0.8s								
SKR				smax	smax				
	comp=N,487nm,1.0s								
SKR				smax	smax				
	comp=E,333nm,0.9s								
SKR	**Severo-Kuril's**	**3.93**	**36**	*e*P		**Pn**		**06 07 11.2**	**-0.1**
SKR				AMB	AMB			06 07 13.0	
	comp=E,700nm,2.5s								
SKR				AMB	AMB			06 07 15.4	
	comp=E,60nm,0.5s								
SKR				*e*S		**Sn**		**06 07 54.2**	**-2.9**
SKR				A	A			06 07 57.3	
	comp=E,230nm,0.2s								
SKR				A	A			06 07 57.3	
	comp=E,240nm,0.2s								
SKR				A	A			06 07 57.5	
	comp=E,1μm,2.0s								
SKR				A	A			06 07 57.5	
	comp=E,750nm,2.0s								
KUR	**Kuril'sk**	**3.95**	**235**	*e*PN		**Pn**		**06 07 11.2**	**-0.4**
KUR				*e*S		**Sn**		**06 07 58.3**	**+0.7**
KUR				pmax	pmax				
	comp=E,125nm,0.7s								
KUR				smax	smax				
	comp=E,319nm,0.8s								
KUR				smax	smax				
	comp=N,154nm,0.6s								
KUR	**Kuril'sk**	**3.95**	**235**	*e*P		**Pn**		**06 07 11.9**	**+0.3**
KUR				AMB	AMB			06 07 12.6	
	comp=N,740nm,2.0s								
KUR				AMB	AMB			06 07 12.9	
	comp=N,120nm,0.5s								
KUR				*e*S		**Sn**		**06 07 58.7**	**+1.1**
KUR				A	A			06 07 59.2	
	comp=N,2μm,2.0s								
KUR				A	A			06 07 59.2	
	comp=N,930nm,2.0s								
KUR				A	A			06 07 59.2	
	comp=N,210nm,0.7s								
KUR				A	A			06 07 59.2	
	comp=N,390nm,0.7s								
PAU	**Pauzhetka**	**4.81**	**34**	*e*P		**Pn**		**06 07 23.4**	**+0.4**
PAU				AMB	AMB			06 07 24.6	
	comp=N,50nm,0.4s								
PAU				AMB	AMB			06 07 25.8	
	comp=N,730nm,3.0s								
PAU				*e*S		**Sn**		**06 08 16.6**	**-1.5**
PAU				A	A			06 08 17.5	
	comp=N,710nm,2.0s								
PAU				A	A			06 08 17.5	
	comp=N,930nm,2.0s								
PAU				A	A			06 08 18.5	
	comp=N,320nm,0.3s								
PAU				A	A			06 08 18.5	
	comp=N,370nm,0.3s								
JRA	**Rausu**	**6.29**	**237**	*e*P		**Pn**		**06 07 42.1**	**-0.6**
NEM2	**Nemuro 2**	**6.33**	**231**	*e*P		Pn		06 07 39.9	-3.3
NEM2				*e*S		Sn		06 08 46.5	-7.9
PEA0B	**Petropavlovsk-**	**6.47**	**29**	Pn		**Pn**		**06 07 42.4**	**-2.7**
PEA0B	**Petropavlovsk-**	**6.47**	**29**	*i* PN		**Pn**		**06 07 44.8**	**-0.3**
PETK	**Petropavlovsk-**	**6.47**	**29**	Pn		**Pn**		**06 07 41.7**	**-3.4**
PETK	**Petropavlovsk-**	**6.47**	**29**	P		**Pn**		**06 07 45.2**	**+0.1**
	comp=N,15nm,0.7s,baz=201,slow=8.4,SNR=7.0								
YSS	**Yuzhno-Sakhali**	**6.63**	**268**	*e*PN		**Pn**		**06 07 50.6**	**+3.3**
YSS				*e*S		**Sn**		**06 09 05.1**	**+3.5**
YSS				pmax	pmax				
	comp=E,30nm,0.7s								
YSS				smax	smax				
	comp=N,30nm,1.0s								
YSS				MLR	MLR				
	comp=E,600nm,10.0s								
YSS	**Yuzhno-Sakhali**	**6.63**	**268**	*e*P		**Pn**		**06 07 50.0**	**+2.7**
JNK	**Nakash**	**6.74**	**236**	*e*P		**Pn**		**06 07 47.8**	**-1.0**
JNK				*e*S		**Sn**		**06 09 02.1**	**-2.1**
PET	**Petropavlovsk**	**6.74**	**34**	Pn		**Pn**		**06 07 46.7**	**-2.0**
PET	**Petropavlovsk**	**6.74**	**34**	*e*P		**Pn**		**06 07 47.8**	**-0.9**
PET				AMB	AMB			06 07 50.1	
	comp=E,20nm,0.7s								
PET				*e*S		**Sn**		**06 09 01.7**	**-2.5**
PET				A	A			06 09 02.5	
	comp=E,30nm,0.4s								
PET				A	A			06 09 02.5	
	comp=E,30nm,0.4s								
JAK	**Akkeshi**	**7.13**	**233**	*e*P		Pn		06 07 50.8	-3.3
JAK				*e*S		Sn		06 09 06.4	-7.4
TYV	**Tymovskoe**	**7.21**	**301**	*e*PN		**Pn**		**06 07 53.5**	**-1.5**
TYV				*e*S		**Sn**		**06 09 08.9**	**-6.5**
TYV				pmax	pmax				
	comp=E,200nm,3.4s								
TYV				pmax	pmax				
	comp=Z,14nm,0.9s								
TYV				smax	smax				
	comp=N,300nm,1.6s								
TYV				smax	smax				
	comp=E,100nm,1.6s								
TYV				smax	smax				
	comp=N,23nm,1.7s								
TYV				smax	smax				
	comp=E,15nm,1.7s								
TYV	**Tymovskoe**	**7.21**	**301**	*e*P		**Pn**		**06 07 57.3**	**+2.3**
TYV				*e*S		**Sn**		**06 09 15.1**	**-0.3**
JAR	**Ashorobuto**	**7.46**	**238**	*e*P		**Pn**		**06 07 58.0**	**-0.4**
JAR				*e*S		**Sn**		**06 09 19.5**	**-2.1**
JOB	**Onbets**	**7.67**	**236**	*e*P		**Pn**		**06 07 59.0**	**-2.2**
JOB				*e*S		**Sn**		**06 09 20.3**	**-6.4**
JKA	**Kamikawa-asahi**	**7.70**	**247**			**Pn**		**06 08 03.0**	**+1.3**
JKA	**Kamikawa-asahi**	**7.70**	**247**	*e*P		**Pn**		**06 08 03.0**	**+1.3**
ASAJ	**Asahikawa**	**7.70**	**247**	P		**Pn**		**06 08 03.4**	**+1.7**
	comp=E,51nm,0.6s,baz=63,slow=14,SNR=16								
ASAJ				LR		LR		06 11 42.1	
	comp=E,35nm,19.0s,baz=44,slow=43								
ASAJ	**Asahikawa**	**7.70**	**247**	PN		**Pn**		**06 08 03.0**	**+1.3**
JCH	**Churui**	**8.12**	**236**	*e*P		**Pn**		**06 08 04.8**	**-2.6**
JCH				*e*S		**Sn**		**06 09 31.5**	**-6.1**
ERM	**Erimo**	**8.64**	**233**	Pn		**Pn**		**06 08 12.9**	**-1.3**
ERM	**Erimo**	**8.64**	**233**	PN		**Pn**		**06 08 12.9**	**-1.3**
JNBK	**Urakawa-nobuka**	**8.68**	**236**	*e*P		Pn		06 08 09.6	-5.2
JNBK				*e*S		Sn		06 09 42.2	-8.9
NKL	**Nikolayevsk**	**9.36**	**311**	*e*P		**Pn**		**06 08 25.4**	**+1.7**
KBG	**Krutoberegovo**	**10.74**	**32**	*e*P		**Pn**		**06 08 41.7**	**-0.3**
MA2	**Magadan**	**12.06**	**356**	P		**Pn**		**06 08 58.9**	**-0.5**
	comp=E,4.7nm,0.4s,baz=174,slow=17,SNR=4.4								
MA2				LR		LR		06 14 36.5	
	comp=E,46nm,19.2s,baz=138,slow=42								
JSD	**Sado**	**14.10**	**233**	Pn		**Pn**		**06 09 25.2**	**-0.6**
USRK	**Uesuriysk Ar.**	**14.64**	**264**	P		**Pn**		**06 09 32.8**	**+0.2**
	comp=E,7.9nm,0.5s,baz=63,slow=14,SNR=9.4								
SHEM	**Shemya Is, Ala**	**14.78**	**62**	P		**Pn**		**06 09 35.2**	**+1.0**
	comp=E,192nm,1.0s,baz=270,slow=13,SNR=2.6								
SHEM				S		Sn		06 12 06.2	-12
	comp=E,63nm,0.8s,baz=290,slow=16,SNR=5.4								
MJAR	**Matsushiro Arr**	**15.26**	**229**	IAmb		IAmb		06 09 44.5	
	comp=Z,3.6nm,0.9s								
MJAR	**Matsushiro Arr**	**15.26**	**229**	P		**Pn**		**06 09 41.7**	**+1.4**
	comp=Z,2.8nm,0.5s,baz=17,slow=12,SNR=12								
MJB9	**Matsu-Tunnel**	**15.26**	**229**	P		**Pn**		**06 09 41.4**	**+1.1**
MAJO	**Matsushiro**	**15.26**	**229**			**Pn**		**06 09 40.9**	**+0.6**
MAJO	**Matsushiro**	**15.26**	**229**	P		**Pn**		**06 09 40.9**	**+0.6**
MAJO				pmax	pmax				
	comp=Z,14nm,0.8s								
SEY	**Seymchan**	**15.39**	**360**	P		**Pn**		**06 09 41.6**	**0.0**
	comp=Z,15nm,0.5s,baz=174,slow=10,SNR=21								
SEY	**Seymchan**	**15.39**	**360**	*ce*P		**Pn**		**06 09 41.7**	**+0.1**
SEY				pmax	pmax				
	comp=Z,35nm,2.5s								
SEY	**Seymchan**	**15.39**	**360**	*e*P		**Pn**		**06 09 41.7**	**+0.1**
MDJ	**Mudanjiang**	**16.12**	**268**	P		**Pn**		**06 09 48.2**	**-2.6**
MDJ				pmax	pmax				
	comp=Z,10.0nm,2.1s								
HEH	**HeiHe**	**16.65**	**289**	*e*P		**P**		**06 09 58.1**	**+0.9**
HEH				pmax	pmax				
	comp=Z,21nm,0.8s								
ZEA	**Zeya**	**17.07**	**301**	*e*P		**Pn**		**06 10 03.4**	**+1.1**
ZEA	**Zeya**	**17.07**	**301**	*e*P		**Pn**		**06 10 03.4**	**+1.1**
BNX	**BinXian**	**17.27**	**273**	⇓P		**P**		**06 10 02.6**	**-1.5**
BNX				pmax	pmax				
	comp=Z,8.0nm,0.9s								
AMKA	**Amchitka**	**17.81**	**68**	P		**P**		**06 10 11.0**	**+1.1**
YAK	**Yakutsk**	**19.38**	**327**			**P**		**06 10 26.1**	**-0.8**
YAK				IAmb		IAmb		06 10 31.7	
	comp=Z,29nm,0.6s								
YAK	**Yakutsk**	**19.38**	**327**	P		**P**		**06 10 26.6**	**-0.2**
	comp=Z,20nm,0.5s,baz=108,slow=2.4,SNR=5.9								
YAK	**Yakutsk**	**19.38**	**327**	*e*P		**Pn**		**06 10 28.7**	**-0.7**
YAK				*e*S		**S**		**06 13 59.9**	**+1.7**
YAK				pmax	pmax				
	comp=E,26nm,1.1s								
YAK				pmax	pmax				
	comp=N,16nm,1.3s								
YAK				pmax	pmax				
	comp=E,17nm,1.5s								
YAK				smax	smax				
	comp=N,188nm,2.7s								
YAK				smax	smax				
	comp=E,167nm,2.7s								
YAK	**Yakutsk**	**19.38**	**327**	*e*P		**Pn**		**06 10 28.7**	**-0.7**
KIWB	**Kanaga Island**	**20.03**	**66**	P		**P**		**06 10 33.0**	**-1.0**
KIWB				IAmb		IAmb		06 10 33.7	
	comp=Z,33nm,0.6s								
ADK	**Adak**	**20.32**	**66**	P		**P**		**06 10 35.5**	**-1.6**
ADK				IAmb		IAmb		06 10 39.9	
	comp=Z,37nm,0.8s								
ADK	**Adak**	**20.32**	**66**	P		**P**		**06 10 35.5**	**-1.6**
ADK				pmax	pmax				
	comp=Z,37nm,0.9s								
KSRS	**Korea Array**	**20.64**	**250**	P		**P**		**06 10 41.5**	**+0.9**
	comp=Z,26nm,0.8s,baz=57,slow=10,SNR=62								
	comp=Z,26nm,0.8s								
KS19	**Wonju Array Si**	**20.65**	**250**	P		**P**		**06 10 41.0**	**+0.3**
KS19				IAmb		IAmb		06 10 42.8	
	comp=Z,32nm,0.9s								
INCN	**Inchon**	**21.45**	**251**	P		**P**		**06 10 50.1**	**+0.8**
INCN				IAmb		IAmb		06 10 52.5	
	comp=Z,36nm,1.1s								
INCN	**Inchon**	**21.45**	**251**	P		**P**		**06 10 50.1**	**+0.8**
INCN				pmax	pmax				
	comp=Z,36nm,1.2s								
HILR	**Hailar Array B**	**21.64**	**287**	P		**P**		**06 10 49.8**	**-1.5**
	comp=Z,8.1nm,0.5s,baz=82,slow=9.8,SNR=14								
HILR				pP		**pwP**		**06 11 18.6**	**-1.4**
	comp=Z,9.8nm,0.7s,baz=90,slow=10,SNR=4.2								
	comp=Z,8.1nm,0.5s								
TJN	**Taejon**	**21.66**	**248**	*i* P		**P**		**06 10 52.0**	**+0.5**
BILL	**Bilibino**	**21.69**	**14**	P		**P**		**06 10 51.3**	**-0.3**
BILL				IAmb		IAmb		06 10 55.1	
	comp=Z,11nm,0.5s								
BILL	**Bilibino**	**21.69**	**14**	*i* P		**P**		**06 10 50.9**	**-0.7**
BILL				pmax	pmax				
	comp=Z,7.0nm,0.6s								
BILL	**Bilibino**	**21.69**	**14**	*e*P		**P**		**06 10 50.9**	**-0.7**
JNU	**Nakatsue**	**21.78**	**236**	P		**P**		**06 10 54.2**	**+1.3**
JNU	**Nakatsue**	**21.78**	**236**	P		**P**		**06 10 52.3**	**-0.7**
	comp=Z,12nm,0.9s,baz=39,slow=13,SNR=5.3								
	comp=Z,12nm,0.9s								
DL2	**Dalian**	**23.94**	**260**	P		**P**		**06 11 12.3**	**-1.0**
DL2				pmax	pmax				
	comp=Z,24nm,0.7s								
XLT	**XiLinHaoTe**	**25.50**	**275**	*e*P		**P**		**06 11 29.3**	**+1.8**
XLT				pmax	pmax				
	comp=Z,28nm,0.6s								
XLT				pmax	pmax				
	comp=Z,82nm,3.6s								
TIXI	**Tiksi**	**26.54**	**344**			**P**		**06 11 35.1**	**-1.3**
TIXI	**Tiksi**	**26.54**	**344**	*i* P		**P**		**06 11 34.1**	**-2.3**
TIXI				pmax	pmax				
	comp=Z,12nm,1.3s								
BJI	**Beijing**	**27.05**	**267**	P		**P**		**06 11 43.7**	**+2.4**
BJI				pmax	pmax				
	comp=Z,6.0nm,0.6s								
J14K	**Nanvaranak Lak**	**28.65**	**42**	P		**P**		**06 11 55.7**	**+0.4**
J14K				IAmb		IAmb		06 12 02.7	
	comp=Z,25nm,1.3s								
HNS	**HongShan**	**29.37**	**264**	⇓P		**P**		**06 12 03.0**	**+1.0**
HNS				pmax	pmax				
	comp=Z,12nm,0.6s								
HHC	**Hu-ho-hao-te**	**29.80**	**272**	*i* P		**P**		**06 12 07.4**	**+1.6**
HHC				pmax	pmax				
	comp=Z,23nm,1.4s								
HHC				pmax	pmax				
	comp=Z,170nm,4.9s								
NJ2	**Nanjing**	**29.83**	**251**	*e*P		**P**		**06 12 06.6**	**+0.6**
NJ2				pmax	pmax				
	comp=Z,8.0nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**30.16**	**152**	T		T		06 43 51.6	
	baz=341,slow=76,SNR=894								
H11N1	**WAKE ISLAND Hy**	**30.18**	**152**	T		T		06 44 17.9	
	baz=341,slow=76,SNR=666								
H11N3	**WAKE ISLAND Hy**	**30.18**	**152**	T		T		06 43 58.6	
	baz=341,slow=76,SNR=440								
ULN	**Ulaanbaatar**	**30.21**	**288**	*i* P		**P**		**06 12 11.8**	**+2.4**
ULN				pmax	pmax				
	comp=Z,12nm,2.5s								
ULN	**Ulaanbaatar**	**30.21**	**288**	*e*P		**P**		**06 12 11.8**	**+2.4**
SONM	**Songino Array**	**30.64**	**288**	P		**P**		**06 12 13.3**	**0.0**
	comp=Z,1.2nm,0.5s,baz=63,slow=8.7,SNR=7.8								
SONM				pP		**pwP**		**06 12 45.4**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=69,slow=8.3,SNR=2.8								
SONM				PcP		**PcP**		**06 15 07.5**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=151,slow=2.1,SNR=4.3								
	comp=Z,1.2nm,0.5s								
H11S1	**WAKE ISLAND Hy**	**31.25**	**153**	T		T		06 45 41.8	
	baz=343,slow=76,SNR=1104								
H11S3	**WAKE ISLAND Hy**	**31.26**	**153**	T		T		06 45 40.8	
	baz=343,slow=76,SNR=880								
H11S2	**WAKE ISLAND Hy**	**31.27**	**153**	T		T		06 45 40.3	
	baz=343,slow=76,SNR=871								
TLY	**Talaya**	**31.40**	**296**	*i* P		**P**		**06 12 19.3**	**-0.5**
TLY				pmax	pmax				
	comp=Z,7.0nm,0.6s								
TLY	**Talaya**	**31.40**	**296**	*e*P		**P**		**06 12 19.3**	**-0.5**
LYN	**LuoYang**	**32.47**	**261**	P		**P**		**06 12 30.4**	**+1.2**
LYN				pmax	pmax				
	comp=Z,27nm,0.6s								
D20K	**Etivluk River**	**32.76**	**32**	IAmb		IAmb		06 12 33.5	
	comp=Z,12nm,0.8s								
E22K	**Anaktuvuk Pass**	**34.39**	**33**			**P**		**06 12 46.7**	**+1.1**
E22K				IAmb		IAmb		06 12 47.5	
	comp=Z,9.3nm,0.8s								
COLD	**Coldfoot**	**34.90**	**35**			**P**		**06 12 50.6**	**+0.7**
XAN	**Xi'an**	**35.15**	**263**	P		**P**		**06 12 52.4**	**0.0**
XAN				pmax	pmax				
	comp=Z,37nm,0.8s								
E23K	**Chandalar**	**35.20**	**34**			**P**		**06 12 53.9**	**+1.3**
E23K				IAmb		IAmb		06 12 56.6	
	comp=Z,14nm,1.2s								
E24K	**Your Creek**	**35.63**	**34**	IAmb		IAmb		06 12 59.3	
	comp=Z,18nm,1.4s								
KNK	**Knik Glacier**	**35.66**	**45**	P		**P**		**06 12 57.1**	**+0.7**
KNK				IAmb		IAmb		06 13 03.7	
	comp=Z,35nm,1.4s								
SML	**Sawmill**	**35.69**	**44**	P		**P**		**06 12 55.7**	**-1.0**
SML				IAmb		IAmb		06 13 28.6	
	comp=Z,11nm,0.6s								
COLA	**College**	**35.77**	**39**	P		**P**		**06 12 57.5**	**+0.3**
COLA	**College**	**35.77**	**39**	*i* P		**P**		**06 12 54.7**	**-2.6**
COLA				pmax	pmax				
	comp=Z,26nm,2.0s								
CCB	**Clear Creek Bu**	**35.79**	**39**	P		**P**		**06 12 58.7**	**+1.2**
F24K	**Squaw Lake**	**35.82**	**35**	P		**P**		**06 12 58.9**	**+1.1**
F24K				IAmb		IAmb		06 13 28.6	
	comp=Z,13nm,1.5s								
IL31		**36.19**	**39**	P		**P**		**06 13 01.2**	**+0.4**
ILAR	**Eielson Array**	**36.19**	**39**	P		**P**		**06 13 01.3**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=264,slow=6.8,SNR=30								
	comp=Z,1.1nm,0.5s								
D25K	**Kavik River**	**36.49**	**32**	IAmb		IAmb		06 13 09.1	
	comp=Z,9.3nm,0.6s								
F26K	**Sheenjek River**	**37.26**	**34**	IAmb		IAmb		06 13 12.9	
	comp=Z,9.3nm,1.5s								
G26K	**Porcupine Rive**	**37.41**	**36**	IAmb		IAmb		06 13 14.1	
	comp=Z,12nm,1.4s								
LZH	**Lanzhou**	**37.42**	**270**	*e*P		**P**		**06 13 14.0**	**+2.1**
LZH				pP		pP		06 13 42.5	+0.9
LZH				sP		sP		06 13 58.1	+0.9
LZH				pmax	pmax				
	comp=Z,31nm,1.2s								
C27K	**Jago River**	**37.45**	**31**	IAmb		IAmb		06 13 13.9	
	comp=Z,8.3nm,1.1s								
LZDM	**Lanzhou Array**	**37.59**	**270**	P		**P**		**06 13 13.2**	**-0.3**
	comp=Z,12nm,0.7s,baz=72,slow=4.8,SNR=12								
	comp=Z,12nm,0.7s								
NRIK	**Noril'sk**	**37.81**	**328**	IAmb		IAmb		06 13 14.9	
	comp=Z,7.0nm,1.1s								
NRIK	**Noril'sk**	**37.81**	**328**	P		**P**		**06 13 12.5**	**-2.1**
	comp=Z,2.4nm,0.6s,baz=32,slow=7.7,SNR=4.6								
	comp=Z,2.4nm,0.6s								
NRIK	**Noril'sk**	**37.81**	**328**	*i* P		**P**		**06 13 12.1**	**-2.4**
NRIK				pmax	pmax				
	comp=Z,11nm,1.5s								
GTA	**Gaotai**	**38.40**	**278**	*e*P		**P**		**06 13 20.9**	**+0.9**
GTA				pmax	pmax				
	comp=Z,7.0nm,0.9s								
L27K	**Beaver Creek,**	**38.56**	**42**	P		**P**		**06 13 22.4**	**+1.5**
I30M	**Mount Dempster**	**40.58**	**38**	IAmb		IAmb		06 13 39.7	
	comp=Z,6.3nm,0.7s								
INK	**Inuvik**	**41.19**	**33**	P		**P**		**06 13 43.9**	**+1.4**
GYA	**Guiyang**	**41.47**	**256**	⇓P		**P**		**06 13 46.0**	**+0.6**
GYA				pmax	pmax				
	comp=Z,28nm,0.9s								
ZAA0	**Zalesovo Array**	**41.76**	**305**	P		**P**		**06 13 46.4**	**-0.9**
ZAA0				IAmb		IAmb		06 13 47.4	
	comp=Z,5.5nm,0.6s								
ZALV	**Zalesovo Beam**	**41.76**	**305**	P		**P**		**06 13 46.4**	**-0.9**
	comp=Z,5.5nm,0.4s,baz=61,slow=6.8,SNR=22								
ZALV				pP		**pwP**		**06 14 20.7**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=70,slow=9.8,SNR=2.3								
ZALV				PcP		**PcP**		**06 15 40.8**	**0.0**
	comp=Z,1.7nm,0.3s,baz=64,slow=3.4,SNR=8.8								
ZALV				LR		LR		06 33 36.3	
	comp=Z,23nm,20.3s,baz=36,slow=39								
	comp=Z,5.5nm,0.4s								
DGZ	**Jazzator, Alta**	**41.81**	**298**	*i* P		**P**		**06 13 48.6**	**+0.6**
DGZ				pmax	pmax				
	comp=Z,5.0nm,1.4s								
A36M	**Sachs Harbour**	**43.31**	**27**	P		**P**		**06 14 01.8**	**+2.2**
GOMU	**GeErMu**	**43.46**	**277**	P		**P**		**06 14 01.2**	**-0.5**
GOMU				pmax	pmax				
	comp=Z,12nm,0.9s								
WMQ	**Urumqi**	**44.21**	**290**	*e*P		**P**		**06 14 08.8**	**+1.5**
WMQ				pmax	pmax				
	comp=Z,19nm,0.8s								
KMI	**Kunming**	**44.96**	**258**	P		**P**		**06 14 14.6**	**+1.0**
KMI				pmax	pmax				
	comp=Z,19nm,1.1s								
MK31	**Makanchi Array**	**46.16**	**296**	*i* P		**P**		**06 14 21.9**	**-0.7**
MKAR	**Makanchi Array**	**46.16**	**296**			**P**		**06 14 22.3**	**-0.2**
MKAR	**Makanchi Array**	**46.16**	**296**	P		**P**		**06 14 22.0**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=67,slow=7.5,SNR=40								
MKAR				pP		**pwP**		**06 14 56.4**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=67,slow=9.3,SNR=3.6								
MKAR				PcP		**PcP**		**06 15 55.8**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=69,slow=6.6,SNR=4.7								
	comp=Z,2.8nm,0.5s								
MAKZ	**Makanchi**	**46.35**	**297**			**P**		**06 14 23.6**	**-0.4**
MAKZ	**Makanchi**	**46.35**	**297**	P		**P**		**06 14 23.6**	**-0.4**
MAKZ				pmax	pmax				
	comp=Z,10.0nm,1.3s								
KURK	**Kurchatov**	**46.53**	**303**			**P**		**06 14 24.9**	**-0.4**
KURK				IAmb		IAmb		06 14 26.1	
	comp=Z,13nm,0.7s								
KURK	**Kurchatov**	**46.53**	**303**	P		**P**		**06 14 25.5**	**+0.2**
KURK								06 15 57.4	
KURK	**Kurchatov**	**46.53**	**303**	*e*P		**P**		**06 14 24.9**	**-0.4**
KURBB	**Kurchatov Arra**	**46.62**	**303**	P		**P**		**06 14 25.4**	**-0.6**
	comp=Z,16nm,0.8s,baz=65,slow=8.3,SNR=48								
KURBB				PcP		**PcP**		**06 15 57.4**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=71,slow=3.2,SNR=4.4								
	comp=Z,16nm,0.8s								
TNCH	**TengChong**	**47.84**	**262**	*e*P		**P**		**06 14 37.3**	**+1.3**
TNCH				pmax	pmax				
	comp=Z,51nm,0.9s								
LSA	**Lhasa**	**49.79**	**272**	P		**P**		**06 14 49.1**	**-2.0**
LSA				pmax	pmax				
	comp=Z,33nm,0.6s								
BVA0	**Borovoye Array**	**49.98**	**309**	*i* P		**P**		**06 14 51.4**	**-0.4**
BVAR	**Borovoye Array**	**49.98**	**309**	P		**P**		**06 14 51.8**	**0.0**
	comp=Z,10nm,0.3s,baz=57,slow=8.0,SNR=55								
BVAR				PcP		**PcP**		**06 16 09.8**	**+0.2**
	comp=Z,2.4nm,0.4s,baz=66,slow=3.9,SNR=4.2								
BVAR				PP		**PP**		**06 16 42.5**	**-5.2**
	comp=Z,2.9nm,0.7s,baz=57,slow=11,SNR=3.8								
	comp=Z,10nm,0.3s								
BORK	**Borovoye**	**50.01**	**309**	*i* P		**P**

APA e*PP **pP** **06 16 10.4 +0.1**
KULLO Kullorsuaq 56.51 9 *i* P **P** **06 16 39.5 +0.4**
KULLO IAmb IAmb 06 15 39.6
comp=Z,19nm,0.7s
KIRV Kirov 56.84 322 *i* P **P** **06 15 41.0 -0.6**
ARA0 ARCESS Array S 56.92 340 *eP* **P** **06 15 41.7 -0.4**
ARCES ARCESS Array B 56.92 340 P **P** **06 15 41.1 -0.9**
comp=Z,2.0nm,0.4s,baz=32,slow=6.9,SNR=22
comp=Z,2.0nm,0.4s
AB31 Akbulak array 57.55 309 IAmb IAmb 06 15 47.6
comp=Z,19nm,1.4s
AB31 Akbulak array 57.55 309 *eP* **P** **06 15 46.4 -0.4**
ABKAR Akbulak array 57.55 309 **P** **06 15 46.5 -0.3**
GAR Garm 57.76 294 P **P** **06 15 48.5 0.0**
KTK1 Kautokeino 57.84 341 *eP* **P** **06 15 48.4 -0.1**
JETT Jettan, Norway 58.01 342 *eP* **P** **06 15 49.4 -0.4**
K05A Summer Lake 58.22 60 P **P** **06 15 53.1 +1.3**
K05A IAmb IAmb 06 16 29.5
comp=Z,13nm,1.4s
TRO Tromso 58.25 343 *eP* **P** **06 15 50.5 -0.8**
UPNV Upernavik 58.30 10 *i* P **P** **06 15 51.5 -0.1**
UPNV IAmb IAmb 06 15 51.9
comp=Z,16nm,0.7s
DBG Daneborg 58.30 358 *i* P **P** **06 15 51.5 -0.1**
CHGR Chuyangaron 58.69 294 P **P** **06 15 54.0 -1.0**
CHGR Chuyangaron 58.69 294 P **P** **06 15 54.0 -1.0**
CHGR pmax pmax
comp=Z,16nm,0.6s
KLMR Klimovskoe 59.16 328 *eP* **P** **06 15 55.5 -2.2**
KLMR pmax pmax
comp=Z,12nm,1.0s
O03E Paynes Creek 59.17 63 P **P** **06 15 58.3 +0.1**
O03E IAmb IAmb 06 16 32.5
comp=Z,12nm,1.4s
PLID Pearl Lake 59.57 55 P **P** **06 16 01.5 +0.4**
PLID IAmb IAmb 06 16 35.8
comp=Z,5.2nm,0.8s
SUMG Summit 59.90 4 **P** **06 16 03.7 +0.5**
SUMG Summit 59.90 4 P **P** **06 16 03.7 +0.5**
SUMG pmax pmax
comp=Z,50nm,0.8s
SUMG Summit 59.90 4 *i* P **P** **06 16 04.3 +1.1**
SUMG IAmb IAmb 06 16 05.0
comp=Z,57nm,0.9s
BEKR Beckworth 60.30 62 P **P** **06 16 06.8 +0.6**
FFC Flin Flon 60.39 40 P **P** **06 16 06.9 +0.6**
FFC IAmb IAmb 06 16 36.1
comp=Z,13nm,1.5s
FFC Flin Flon 60.39 40 P **P** **06 16 06.9 +0.6**
FFC pmax pmax
comp=Z,13nm,1.5s
STEI Steigen 60.42 343 *eP* **P** **06 16 03.5 -2.8**
LOF Lofoten 60.58 344 *eP* **P** **06 16 06.6 -0.7**
SAATT Saattut 60.65 9 *i* P **P** **06 16 08.4 +0.7**
SAATT IAmb IAmb 06 16 09.4
comp=Z,32nm,0.7s
FAUS Fauske 60.88 342 *eP* **P** **06 16 09.3 0.0**
PAHR Pah Rah Range 60.98 62 P **P** **06 16 11.1 +0.4**
PNTR Pine Nut 61.25 63 P **P** **06 16 13.2 +0.6**
PNTR IAmb IAmb 06 16 49.1
comp=Z,5.0nm,0.6s
KBL Kabul 61.34 291 P **P** **06 16 12.9 -0.4**
KBL pmax pmax
comp=Z,18nm,0.7s
BELG Belogornoye 61.61 318 *i* P **P** **06 16 13.1 -1.4**
BELG pmax pmax
comp=Z,4.0nm,0.8s
WAKR Walker 61.72 63 P **P** **06 16 16.3 +0.6**
VAGH Vaagaholmen 61.85 343 *eP* **P** **06 16 14.4 -1.4**
SCO Scoresbysund 62.18 358 *i* P **P** **06 16 18.7 +0.7**
SCO IAmb IAmb 06 16 19.8
comp=Z,9.4nm,0.8s
ILULI Ilulissat 62.23 9 *i* P **P** **06 16 19.3 +0.9**
ILULI IAmb IAmb 06 16 20.3
comp=Z,31nm,0.8s
STOK Stokkvaagen 62.24 343 *eP* **P** **06 16 17.2 -1.3**
LEIR Leirfjorden 62.42 343 *eP* **P** **06 16 18.6 -1.1**
NVAR Mina Array Bea 62.45 62 P **P** **06 16 21.1 +0.5**
comp=Z,1.3nm,0.7s,baz=294,slow=7.1,SNR=14
NVAR pP **pP** **06 16 55.2 +1.6**
comp=Z,1.4nm,0.5s,baz=300,slow=7.2,SNR=9.5
comp=Z,1.3nm,0.7s
FIA1 FINESS Array S 63.09 334 P **P** **06 16 23.8 -0.4**
FINES FINESS Array B 63.09 334 P **P** **06 16 24.0 -0.2**
comp=Z,13nm,0.4s,baz=34,slow=7.5,SNR=98
FINES PcP **PcP** **06 17 01.4 +0.8**
comp=Z,3.6nm,0.7s,baz=54,slow=3.5,SNR=1.9
comp=Z,13nm,0.4s
OBN Obninsk 64.37 325 *eP* **P** **06 16 31.7 -0.9**
OBN *e*PP **pwP** **06 17 12.0 +2.2**
OBN *e* 06 18 55.3
OBN *e*PPP PPP 06 20 28.2
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN Obninsk 64.37 325 *eP* **P** **06 16 31.7 -0.9**
SFJD Kangerlussuaq 64.41 10 *i* P **P** **06 16 34.1 +1.3**
PDAR Pinedale Array 64.62 54 P **P** **06 16 35.1 +0.3**
comp=Z,0.7nm,0.6s,baz=293,slow=1.6,SNR=8.1
PDAR PcP **PcP** **06 17 06.2 -1.4**
comp=Z,2.5nm,0.8s,baz=318,slow=2.0,SNR=8.5
comp=Z,0.7nm,0.6s
VRH Novokhopyorsk 65.08 320 *eP* **P** **06 16 34.4 -3.0**
VRH pmax pmax
comp=Z,8.0nm,0.8s
LPSR Galich'ya Gora 65.27 322 *eP* **P** **06 16 35.8 -2.7**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 66.18 321 *eP* **P** **06 16 41.4 -3.0**
VSR pmax pmax
comp=Z,5.0nm,0.8s
VORD Divnogorie 66.31 321 *eP* **P** **06 16 42.1 -3.1**
VORD pmax pmax
comp=Z,8.0nm,0.8s
MOL Molde 66.69 343 *eP* **P** **06 16 47.4 -0.1**
DOMB Dombas 66.86 342 *eP* **P** **06 16 47.1 -1.5**
AKN Aaknes 67.15 343 *eP* **P** **06 16 51.2 +0.8**
NC204 NORSAR Array S 67.18 341 P **P** **06 16 51.0 +0.3**
NC204 IAmb IAmb 06 16 52.2
comp=Z,15nm,0.8s
NB2 NORSAR Subarra 67.30 341 P **P** **06 16 51.2 -0.2**
comp=Z,30nm,1.4s,baz=26,slow=6.2
NB2 NORSAR Subarra 67.30 341 P **P** **06 16 48.2 -3.2**
NOA NORSAR Array B 67.30 341 P **P** **06 16 51.5 +0.1**
comp=Z,5.6nm,0.6s,baz=27,slow=6.3,SNR=28
comp=Z,5.6nm,0.6s
NORES NORESS Array B 67.49 340 P **P** **06 16 53.5 +0.9**
HFS Hagfors 67.52 339 P **P** **06 16 52.7 -0.1**
comp=Z,11nm,0.4s,baz=47,slow=6.5,SNR=56
comp=Z,11nm,0.4s
MNK Minsk 68.05 329 *i* P **P** **06 16 56.1 -0.1**
MNK *i* *PP **pwP** **06 17 32.2 -1.5**
MNK *i* *SP **sP** **06 17 48.7 +4.7**
MNK *i* 06 19 27.8
MNK *i* PPP PPP 06 21 11.0
MNK *i* S **S** **06 25 42.4 -1.5**
MNK *i* SS **SS** **06 30 09.7 +1.9**
MNK pmax pmax
comp=N,17nm,1.1s
MNK pmax pmax
comp=E,17nm,0.7s
MNK pmax pmax
comp=Z,23nm,0.8s
HYA Hoyanger 68.24 343 *eP* **P** **06 16 58.2 +1.1**
SUE Sulen 68.61 344 *eP* **P** **06 17 00.5 +1.0**
KONO Kongsberg 68.90 341 *ceP* **P** **06 17 02.0 +0.7**
KONO pmax pmax
comp=Z,63nm,2.3s
ASK Askoy 69.06 343 *eP* **P** **06 17 03.2 +1.0**
STRU Stroemstad 69.09 340 *i* P **P** **06 17 03.6 +1.1**
WRA Warramunga Arr 69.16 198 IAmb IAmb 06 17 10.9
comp=Z,0.3nm,1.3s
WRA Warramunga Arr 69.16 198 P **P** **06 17 02.6 -0.7**
comp=Z,1.0nm,0.8s,baz=22,slow=6.7,SNR=4.7
WRA pP **pP** **06 17 39.3 +1.9**
comp=Z,1.7nm,0.9s,baz=13,slow=6.7,SNR=5.4
comp=Z,1.0nm,0.8s
ODD1 Odda 69.30 342 *eP* **P** **06 17 04.5 +0.6**
BLS5 Blasjo 69.78 342 *eP* **P** **06 17 07.0 +0.2**
TJOU Tjoern 69.88 339 *i* P **P** **06 17 08.0 +0.6**
KIV Kislovodsk 69.90 314 *eP* **P** **06 17 07.0 -0.9**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 69.90 314 *eP* **P** **06 17 07.0 -0.9**
BORU Boraas 69.95 338 *i* P **P** **06 17 08.0 +0.1**
KBZ Khabaz 69.96 313 P **P** **06 17 08.6 +0.5**
comp=Z,9.0nm,0.7s,baz=104,slow=4.7,SNR=22
comp=Z,9.0nm,0.7s
KBZ Khabaz 69.96 313 *ceP* **P** **06 17 08.1 0.0**
KBZ pmax pmax
comp=Z,13nm,0.9s
KBZ Khabaz 69.96 313 *eP* **P** **06 17 08.1 0.0**
SHA1 Shidzhatmaz 70.07 313 *eP* **P** **06 17 09.2 +0.1**
KMY Karmoy 70.22 343 *eP* **P** **06 17 10.5 +1.0**
IVI Ivigtut 70.29 10 *i* P **P** **06 17 12.0 +2.2**
IVI IAmb IAmb 06 17 13.9
comp=Z,121nm,1.3s
ONAU Onsala 70.38 339 *i* P **P** **06 17 10.5 +0.1**
FABU Falkenberg 70.53 338 *i* P **P** **06 17 12.0 +0.7**
AK03 Malin Array Si 70.59 326 P **P** **06 17 11.2 -0.6**
AKASG Malin Array Be 70.61 326 IAmb IAmb 06 17 13.8
comp=Z,8.7nm,1.4s
AKASG Malin Array Be 70.61 326 P **P** **06 17 11.4 -0.5**
comp=Z,8.8nm,0.4s,baz=36,slow=6.1,SNR=44
comp=Z,8.8nm,0.4s
AKASG Malin Array Be 70.61 326 *i* P **P** **06 17 11.3 -0.6**
AKASG pmax pmax
comp=Z,9.0nm,0.4s
AKBB Malin Array Si 70.61 326 P **P** **06 17 11.4 -0.5**
AKBB Malin Array Si 70.61 326 *ceP* **P** **06 17 10.9 -1.0**
AKBB pmax pmax
comp=Z,11nm,0.6s
AKBB Malin Array Si 70.61 326 P **P** **06 17 11.6 -0.3**
AK04 Malin Array Si 70.61 326 P **P** **06 17 11.3 -0.6**
AK22 Malin Array Si 70.62 326 P **P** **06 17 11.0 -1.0**
AK01 Malin Array Si 70.62 326 P **P** **06 17 11.4 -0.6**
KIEV Kiev 70.62 326 ⇓P **P** **06 17 11.8 -0.1**
KIEV Kiev 70.62 326 P **P** **06 17 11.8 -0.1**
KIEV Kiev 70.62 326 P **P** **06 17 11.6 -0.4**
comp=Z,86nm,0.8s
SNART Snartemo 70.62 341 *eP* **P** **06 17 12.6 +0.8**
SNART Snartemo 70.62 341 *i* P **P** **06 17 12.9 +1.1**
DEL Delary 70.70 337 *i* P **P** **06 17 12.2 -0.2**
MI28 Mi28,Pidlybu 71.01 327 P **P** **06 17 14.0 -0.3**
BJUU Bjuv 71.27 337 *i* P **P** **06 17 16.3 +0.5**
GOET G??ttrup 71.35 340 *i* P **P** **06 17 17.3 +1.1**
GOET IAmb IAmb 06 17 18.6
comp=Z,62nm,0.9s
RNPP5 Staryi Chortor 71.42 328 P **P** **06 17 16.4 -0.4**
LUNU Lund 71.55 337 *i* P **P** **06 17 18.2 +0.7**
SOC Sochi 71.61 315 *eP* **P** **06 17 15.8 -2.3**
SOC *e* 06 19 57.1
SOC *e*PPP PPP 06 21 41.0
SOC *e*S **S** **06 26 21.5 -4.3**
SOC *e*SS **SS** **06 31 07.4 +4.5**
SOC pmax pmax
comp=Z,19nm,0.7s
GNI Garni 71.65 310 *ceP* **P** **06 17 20.1 +1.5**
GNI pmax pmax
comp=Z,27nm,1.8s
LUBAR Lubar, Ukraine 71.79 326 P **P** **06 17 17.8 -1.3**
MUD Monsted U'grnd 71.89 340 *i* P **P** **06 17 20.7 +1.2**
MUD IAmb IAmb 06 17 21.3
comp=Z,13nm,0.6s
SSRD Sdr. Stenderup 72.66 339 *i* P **P** **06 17 25.0 +0.9**
SSRD IAmb IAmb 06 17 29.4
comp=Z,69nm,1.0s
SCHQ Schefferville 72.72 23 P **P** **06 17 24.5 0.0**
comp=Z,2.5nm,0.5s,baz=307,slow=4.3,SNR=10
comp=Z,2.5nm,0.5s
ASAR Alice Springs 72.86 198 P **P** **06 17 26.3 +0.7**
comp=Z,2.1nm,0.8s,baz=16,slow=6.9,SNR=13
ASAR pP **pP** **06 18 00.6 +0.4**
comp=Z,0.6nm,0.6s,baz=9.4,slow=5.2,SNR=2.1
comp=Z,2.1nm,0.8s
HORU Horodok 72.87 326 P **P** **06 17 24.9 -0.6**
SORM Soroca 73.01 325 ⇓P **P** **06 17 26.4 0.0**
SORM Soroca 73.01 325 P **P** **06 17 26.3 0.0**
KMPD K-Podol'skiy 73.39 326 P **P** **06 17 28.1 -0.4**
MILM Milestii Mici 73.81 324 ⇑P **P** **06 17 30.2 -0.8**
MILM Milestii Mici 73.81 324 P **P** **06 17 30.2 -0.8**
KWP Kalwaria Pacla 73.88 329 P **P** **06 17 31.5 +0.1**
comp=Z,29nm,1.3s
BSEG Bad Segeberg 73.89 338 *eP* **P** **06 17 32.0 +0.7**
comp=Z,6.7nm,0.8s,baz=26,slow=5.7
SHIU Shidnytsya 73.99 328 P **P** **06 17 32.4 +0.3**
STNU Starunia 74.00 327 P **P** **06 17 32.1 0.0**
KSV Kosov 74.12 327 P **P** **06 17 32.6 -0.2**
OJC Ojcow 74.37 331 P **P** **06 17 34.4 +0.1**
comp=Z,14nm,1.2s
BUR08 Bucovina Ar. S 74.63 326 P **P** **06 17 36.3 +0.3**
BUR08 IAmb IAmb 06 17 37.4
comp=Z,21nm,1.2s
BURAR Bucovina Array 74.65 326 ⇑P **P** **06 17 36.2 +0.1**
BURAR Bucovina Array 74.65 326 P **P** **06 17 36.1 +0.1**
RAKU Rahkiv 74.70 327 P **P** **06 17 36.0 -0.2**
BRIU Brid 74.85 328 P **P** **06 17 37.4 +0.4**
NIE Niedzica 74.89 330 P **P** **06 17 37.4 +0.1**
comp=Z,5.8nm,1.0s
HOLU Holmets 74.92 328 P **P** **06 17 37.6 +0.2**
KORU Korolevo 74.97 328 P **P** **06 17 38.2 +0.5**
TESR Tescani 75.01 325 ⇑P **P** **06 17 38.4 +0.4**
TESR Tescani 75.01 325 P **P** **06 17 38.3 +0.3**
comp=Z,34nm,1.0s
BERU Beregovo 75.08 328 P **P** **06 17 38.6 +0.3**
TRSU Trosnyk 75.08 328 P **P** **06 17 39.4 +1.1**
FLTG Flechtingen 75.09 337 *eP* **P** **06 17 38.5 +0.2**
comp=Z,24nm,0.8s,baz=26,slow=5.7
RETH Rethem/Aller, 75.22 338 *eP* **P** **06 17 39.7 +0.7**
comp=Z,10nm,0.7s,baz=26,slow=5.7
ONER Baraj Valea Uz 75.25 325 ⇓P **P** **06 17 40.2 +0.8**
STEB Steborice 75.28 332 *eP* **P** **06 17 40.2 +0.7**
DPC Dobruska-Polom 75.38 333 *eP* **P** **06 17 41.3 +1.2**
DPC Dobruska-Polom 75.38 333 *eP* **P** **06 17 41.3 +1.2**
DPC Dobruska-Polom 75.38 333 P **P** **06 17 40.2 +0.1**
comp=Z,13nm,1.7s
LANS Liptovska Anna 75.40 330 *eP* **P** **06 17 41.9 +1.7**
LANS pmax pmax
comp=Z,11nm,0.8s
LANS Liptovska Anna 75.40 330 *eP* **P** **06 17 41.9 +1.7**
EKA Eskdalemuir Ar 75.42 346 P **P** **06 17 40.4 +0.3**
comp=Z,3.9nm,0.4s,baz=20,slow=5.2,SNR=50
comp=Z,3.9nm,0.4s
EKA Eskdalemuir Ar 75.42 346 P **P** **06 17 40.5 +0.3**
EKA pmax pmax
comp=Z,6.0nm,0.8s
KRLC Kraliky 75.47 332 *eP* **P** **06 17 41.5 +0.9**
KRLC Kraliky 75.47 332 *eP* **P** **06 17 41.5 +0.9**
MORC Moravsky Berou 75.49 332 ⇓P **P** **06 17 41.3 +0.5**
MORC Moravsky Berou 75.49 332 *eP* **P** **06 17 41.4 +0.6**
MORC Moravsky Berou 75.49 332 P **P** **06 17 41.2 +0.5**
VRI Vrincioaia 75.51 324 ⇓P **P** **06 17 40.8 -0.1**
VRI Vrincioaia 75.51 324 P **P** **06 17 40.7 -0.1**
VRI Vrincioaia 75.51 324 P **P** **06 17 41.1 +0.2**
comp=Z,9.7nm,1.1s
CLL Collm 75.52 335 P **P** **06 17 40.5 -0.3**
CLL Collm 75.52 335 *i* P **P** **06 17 41.0 +0.2**
CLL pmax pmax
comp=Z,33nm,0.6s
CLL Collm 75.52 335 *eP* **P** **06 17 41.0 +0.2**
comp=Z,32nm,0.6s,baz=26,slow=5.7
CLL Collm 75.52 335 P **P** **06 17 40.6 -0.2**
comp=Z,54nm,0.7s
CLL Collm 75.52 335 *i* P **P** **06 17 41.0 +0.2**
comp=Z,33nm,0.6s
PLOR Plostina 75.55 324 ⇓P **P** **06 17 42.1 +0.9**
PLOR Plostina 75.55 324 P **P** **06 17 42.0 +0.9**
BRG Berggiesshubel 75.64 334 *eP* **P** **06 17 41.8 +0.3**
comp=Z,5.8nm,0.6s,baz=26,slow=5.7
TPGR Topolog 75.65 323 ⇓P **P** **06 17 41.9 +0.2**
OZUR 75.69 325 ⇓P **P** **06 17 42.8 +0.9**
PVCC Panska Ves 75.76 334 *eP* **P** **06 17 43.1 +0.9**
PVCC Panska Ves 75.76 334 *eP* **P** **06 17 43.1 +0.9**
CLZ Clausthal 75.77 337 *eP* **P** **06 17 43.2 +1.0**
comp=Z,22nm,0.7s,baz=26,slow=5.7
DOPR Dopca 75.95 325 ⇑P **P** **06 17 44.7 +1.4**
TIRR Tirgusor 75.98 322 ⇓P **P** **06 17 44.4 +0.8**
TIRR Tirgusor 75.98 322 P **P** **06 17 44.3 +0.8**
HARR Harsova 75.99 323 ⇑P **P** **06 17 43.6 0.0**
HARR Harsova 75.99 323 P **P** **06 17 43.5 0.0**
IBBN Ibbenburen 76.02 339 *eP* **P** **06 17 44.3 +0.8**
comp=Z,22nm,0.7s,baz=26,slow=5.7
HSKC Hora Svate Kat 76.02 334 *eP* **P** **06 17 44.3 +0.6**
MLR Muntele Rosu 76.13 324 IAmb IAmb 06 17 46.9
comp=Z,26nm,1.1s
MLR Muntele Rosu 76.13 324 ⇑P **P** **06 17 45.6 +1.1**
MLR Muntele Rosu 76.13 324 P **P** **06 17 45.6 +1.1**
MLR Muntele Rosu 76.13 324 P **P** **06 17 44.9 +0.4**
comp=Z,28nm,0.8s
MDB Medias 76.19 326 ⇑P **P** **06 17 46.1 +1.4**
MDB Medias 76.19 326 P **P** **06 17 46.1 +1.4**
ISR Istrita 76.20 324 ⇓P **P** **06 17 46.0 +1.1**
ISR Istrita 76.20 324 P **P** **06 17 45.9 +1.1**
ISR Istrita 76.20 324 P **P** **06 17 45.1 +0.3**
comp=Z,58nm,0.9s
VRAC Vranov 76.20 332 ⇑P **P** **06 17 45.0 +0.2**
VRAC Vranov 76.20 332 *eP* **P** **06 17 45.6 +0.8**
VRAC Vranov 76.20 332 P **P** **06 17 44.9 +0.2**
MARR Marisel-Cluj 76.22 327 ⇓P **P** **06 17 45.9 +0.9**
PRU Pruhonice 76.24 334 *eP* **P** **06 17 45.6 +0.7**
PRU Pruhonice 76.24 334 *eP* **P** **06 17 45.6 +0.7**
JAVC Velka Javorina 76.25 331 *eP* **P** **06 17 46.7 +1.6**
DRGR 76.27 327 ⇓P **P** **06 17 45.8 +0.6**
DRGR 76.27 327 P **P** **06 17 45.8 +0.6**
PSZ Piszkesteto 76.32 329 ⇑P **P** **06 17 46.2 +0.7**
PSZ Piszkesteto 76.32 329 P **P** **06 17 46.1 +0.7**
TANN Tannenbergstha 76.47 335 *eP* **P** **06 17 46.8 +0.5**
comp=Z,4.7nm,0.8s,baz=26,slow=5.7
KRUC Moravsky 76.48 332 *eP* **P** **06 17 47.0 +0.7**
PLN Plauen 76.50 335 *eP* **P** **06 17 47.0 +0.7**
comp=Z,2.7nm,0.8s,baz=26,slow=5.7
MOX Moxa 76.51 336 *eP* **P** **06 17 47.0 +0.6**
comp=Z,16nm,1.0s,baz=26,slow=5.7
SMOL Smolenice 76.63 331 *eP* **P** **06 17 48.7 +1.5**
SMOL pmax pmax
comp=Z,9.0nm,0.7s
ARR Arges 76.74 325 ⇑P **P** **06 17 49.3 +1.3**
UBBA Unterbreizbach 76.79 337 *eP* **P** **06 17 48.4 +0.5**
comp=Z,8.7nm,0.6s,baz=26,slow=5.7
MODS Modra-Piesok 76.80 331 *eP* **P** **06 17 50.0 +1.9**
MODS pmax pmax
comp=Z,32nm,1.0s
MODS Modra-Piesok 76.80 331 *eP* **PKiKP** **06 17 50.0 +1.4**
ZVC Zvikov 76.83 333 *eP* **P** **06 17 49.0 +0.7**
KASTN Kahler Asten 76.86 338 *eP* **P** **06 17 49.2 +0.8**
comp=Z,18nm,0.9s,baz=26,slow=5.7
MANZ Manzenberg 76.96 335 *eP* **P** **06 17 49.5 +0.5**
comp=Z,2.1nm,0.8s,baz=26,slow=5.7
ZST Bratislava 77.01 331 *eP* **P** **06 17 52.4 +3.1**
ZST pmax pmax
comp=Z,6.0nm,1.1s
ZST Bratislava 77.01 331 *eP* **P** **06 17 52.4 +3.1**
SIRR Siria 77.10 327 ⇓P **P** **06 17 50.2 +0.4**
ROTZ Rotzenmuhle 77.13 335 *eP* **P** **06 17 50.7 +0.8**
comp=Z,2.3nm,0.8s,baz=26,slow=5.7
KHC Kasperske Hory 77.29 334 P **P** **06 17 51.4 +0.5**
KHC IAmb IAmb 06 17 52.8
comp=Z,18nm,0.8s
KHC Kasperske Hory 77.29 334 *eP* **P** **06 17 51.9 +1.0**
KHC Kasperske Hory 77.29 334 *eP* **P** **06 17 51.9 +1.0**
KHC Kasperske Hory 77.29 334 P **P** **06 17 51.3 +0.4**
comp=Z,30nm,1.1s
CKRC Cesky Krumlov 77.35 333 *eP* **P** **06 17 51.9 +0.7**
CKRC Cesky Krumlov 77.35 333 *eP* **P** **06 17 51.9 +0.7**
GZR Gura Zlata 77.43 326 ⇑P **P** **06 17 52.4 +0.7**
GZR Gura Zlata 77.43 326 P **P** **06 17 52.4 +0.7**
TX31 Lajitas Ar. Si 77.47 60 P **P** **06 17 52.6 +0.3**
TXAR Lajitas Array 77.47 60 P **P** **06 17 52.4 +0.1**
comp=Z,0.7nm,0.5s,baz=295,slow=4.7,SNR=19
TXAR pP **pP** **06 18 27.4 +0.3**
comp=Z,2.0nm,0.6s,baz=297,slow=3.8,SNR=11
comp=Z,0.7nm,0.5s
BR131 Keskin Array S 77.48 316 *i* P **P** **06 17 51.2 -1.0**
BRTR Keskin Array B 77.48 316 P **P** **06 17 52.6 +0.3**
BRTR Keskin Array B 77.48 316 P **P** **06 17 53.0 +0.7**
comp=Z,6.0nm,0.9s,baz=70,slow=4.1,SNR=23
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 77.48 316 *i* P **P** **06 17 53.2 +1.0**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
GRF Grafenberg Arr 77.48 335 *eP* **P** **06 17 53.1 +1.2**
comp=Z,32nm,0.7s,baz=26,slow=5.7
GRFO Grafenberg 77.48 335 P **P** **06 17 52.7 +0.9**
GRFO Grafenberg 77.48 335 P **P** **06 17 52.7 +0.9**
GRFO pmax pmax
comp=Z,31nm,0.7s
BR106 Keskin Array S 77.48 316 P **P** **06 17 52.6 +0.4**
comp=Z,53nmcomp=Z,8.1nm,1.0s
BR104 Keskin Array S 77.49 316 P **P** **06 17 52.6 +0.3**
comp=Z,59nmcomp=Z,8.6nm,0.9s
WET Wettzell 77.49 334 *eP* **P** **06 17 53.0 +1.0**
comp=Z,14nm,0.8s,baz=26,slow=5.7
BR105 Keskin Array S 77.49 316 P **P** **06 17 52.6 +0.3**
comp=Z,70nmcomp=Z,11nm,1.0s
GEC2 GERESS Array S 77.51 334 P **P** **06 17 52.6 +0.4**
GEC2 IAmb IAmb 06 17 53.1
comp=Z,7.2nm,0.6s
GEC2 GERESS Array S 77.51 334 *eP* **P** **06 17 52.5 +0.4**
comp=Z,3.3nm,1.9s,baz=26,slow=5.7
GERES GERESS Array B 77.51 334 P **P** **06 17 52.7 +0.4**
comp=Z,5.0nm,0.5s,baz=28,slow=6.0,SNR=34
comp=Z,5.0nm,0.5s
COPA Copaceanca 77.54 324 ⇓P **P** **06 17 52.7 +0.4**
LOZB Loznitsa 77.62 323 ⇑P **P** **06 17 53.6 +0.8**
CONA Conrad Observa 77.65 332 *eP* **P** **06 17 54.1 +1.1**
comp=Z,15nm,0.6s,SNR=6.8
BZS Buzias 77.67 327 ⇓P **P** **06 17 53.6 +0.6**
BZS Buzias 77.67 327 P **P** **06 17 53.5 +0.6**
RONA Rosalia, Austr 77.71 331 *eP* **P** **06 17 54.6 +1.4**
comp=Z,20nm,0.9s,SNR=6.6
TNS Taunus Mts 77.75 337 *eP* **P** **06 17 54.1 +0.7**
comp=Z,22nm,0.7s,baz=26,slow=5.7
ANTO Ankara 77.76 317 ⇑P **P** **06 17 54.1 +0.4**
ANTO Ankara 77.76 317 P **P** **06 17 54.0 +0.4**
ANTO Ankara 77.76 317 P **P** **06 17 54.0 +0.4**
comp=Z,14nm,0.8s
KIRS Kirsehir-Merke 77.81 316 ⇑P **P** **06 17 54.7 +0.6**
HERR Herculane 78.00 326 ⇑P **P** **06 17 54.6 -0.2**
BTNL Ternell 78.00 339 *dP* **P** **06 17 55.5 +0.7**
comp=Z,15nm,0.9s
MEM Memboch 78.01 339 *dP* **P** **06 17 55.5 +0.7**
comp=Z,19nm,0.9s
MORH Mrgy, Hungar 78.22 329 ⇑P **P** **06 17 55.9 -0.1**
MORH Mrgy, Hungar 78.22 329 P **P** **06 17 55.4 -0.6**
comp=Z,11nm,0.9s
MOA Molin 78.22 333 *eP* **P** **06 17 56.5 +0.4**
comp=Z,11nm,0.9s
BHOU Houvegnez 78.25 339 *dP* **P** **06 17 57.3 +1.2**
comp=Z,10nm,0.8s
MDVR Moldovita 78.35 327 ⇓P **P** **06 17 57.2 +0.4**
ARSA Arzberg 78.36 332 *i* P **P** **06 17 57.8 +1.0**
comp=Z,7.5nm,0.5s
BCLA Clavier 78.36 339 *dP* **P** **06 17 52.8 -3.9**
BCLA *d*PcP **PcP** **06 18 04.5 -0.9**
PLVB Pleven 78.40 324 ⇑P **P** **06 17 57.5 +0.5**
BGES Gesves 78.44 339 *dP* **P** **06 17 57.6 +0.4**
comp=Z,9.7nm,0.9s
BIOA Bad Ischl, Aus 78.56 333 *eP* **P** **06 17 59.4 +1.5**
comp=Z,13nm,0.7s
BMRD Maredsous 78.59 340 *dP* **P** **06 17 58.9 +0.9**
comp=Z,17nm,1.1s
RCHB Rochefort 78.62 339 *dP* **P** **06 17 58.8 +0.7**
comp=Z,8.8nm,1.1s
PHSR Pinarhisar 78.67 321 ⇓P **P** **06 17 59.3 +0.8**
DOU Dourbes 78.82 340 *dP* **P** **06 17 58.5 -0.7**
DOU *dx* x 06 18 35.1
BLKB Belogradchik 78.97 325 ⇑P **P** **06 17 60.0 -0.2**
SOKA Soboth 79.02 332 *i* P **P** **06 18 01.3 +0.8**
comp=Z,19nm,0.7s
PERS Pernice 79.03 332 *i* P **P** **06 18 01.1 +0.6**
GROS Grobnik 79.06 331 *eP* **P** **06 18 01.2 +0.5**
LESA Schwarzleotal 79.09 333 *i* P **P** **06 18 02.0 +1.2**
comp=Z,15nm,0.6s,SNR=6.5
KBA Koelnbreinsper 79.19 333 *eP* **P** **06 18 02.8 +1.3**
comp=Z,32nm,0.7s,SNR=11
BAND Balkesir-Ban 79.47 320 ⇑P **P** **06 18 04.0 +1.0**
WATA Walderalm 79.50 334 *eP* **P** **06 18 04.3 +1.1**
comp=Z,15nm,0.5s
MYKA Terra Mystica 79.50 333 *eP* **P** **06 18 03.7 +0.6**
comp=Z,7.0nm,0.8s
BFO Black Forest 79.51 337 P **P** **06 18 04.1 +1.0**
BFO Black Forest 79.51 337 *eP* **P** **06 18 03.6 +0.5**
comp=Z,15nm,0.9s,baz=26,slow=5.7
GCIS Gornji Cirnik 79.54 331 *i* P **P** **06 18 03.6 +0.3**
WTTA Wattenberg 79.54 334 *eP* **P** **06 18 04.6 +1.1**
comp=Z,19nm,0.5s,SNR=7.7
RETA Reutte 79.60 335 *eP* **P** **06 18 04.5 +0.9**
comp=Z,11nm,0.8s
MOTA Moosalm 79.63 334 *i* P **P** **06 18 04.8 +0.9**
comp=Z,36nm,1.2s,SNR=6.5
STKA Stephens Creek 79.69 189 *i* P **P** **06 18 05.0 +1.0**
SQTA Sankt Quirin 79.71 334 *eP* **P** **06 18 05.4 +1.1**
comp=Z,14nm,0.7s
RDO Rodhopi 79.90 322 P **P** **06 18 05.9 +0.6**
ECH Echery 79.93 337 P **P** **06 18 05.2 -0.1**

ECH				IAmb	IAmb	06 18 06.8		
	comp=Z,11nm,0.9s							
ECH	**Echery**	**79.93**	**337**	P	**P**	**06 18 05.2**	**-0.1**	
ECH				pmax	pmax			
	comp=Z,11nm,0.9s							
BOJS	**Bojanci**	**79.99**	**331**	*i* P	**P**	**06 18 05.8**	**+0.2**	
FETA	**Feichten**	**80.03**	**335**	*e*P	**P**	**06 18 06.9**	**+0.8**	
	comp=Z,4.8nm,0.5s							
DAVA	**Damuels**	**80.03**	**335**	*e*P	**P**	**06 18 06.8**	**+0.7**	
	comp=Z,16nm,0.9s							
FUORN	**Ofenpass-Fuorn**	**80.53**	**335**	P	**P**	**06 18 09.9**	**+1.1**	
FUORN				IAmb	IAmb	06 18 11.6		
	comp=Z,12nm,0.9s							
EZN	**Ezine**	**80.67**	**321**	⇓P	**P**	**06 18 09.4**	**0.0**	
EZN	**Ezine**	**80.67**	**321**	P	**P**	**06 18 09.4**	**0.0**	
MANT	**Manisa**	**80.80**	**319**	P	**P**	**06 18 11.0**	**+0.6**	
TUE	**Stuetta**	**80.93**	**335**	P	**P**	**06 18 11.8**	**+0.9**	
TUE				IAmb	IAmb	06 18 13.2		
	comp=Z,14nm,0.8s							
TUE	**Stuetta**	**80.93**	**335**	P	**P**	**06 18 11.0**	**+0.1**	
CSS	**Mathiatis**	**81.42**	**313**	P	**P**	**06 18 13.6**	**+0.1**	
CSS				IAmb	IAmb	06 18 15.1		
	comp=Z,18nm,0.8s							
MMAI	**Mount Meron Ar**	**81.93**	**311**	P	**P**	**06 18 17.6**	**+1.3**	
	comp=Z,11nm,0.5s,baz=33,slow=5.1,SNR=19							
	comp=Z,11nm,0.5s							
NRCA	**Norcia**	**83.06**	**331**	P	**P**	**06 18 22.3**	**+0.3**	
SSB	**Saint Sauveur**	**83.33**	**338**	P	**P**	**06 18 24.3**	**+1.1**	
RAYN	**Ar Rayn**	**83.63**	**298**	P	**P**	**06 18 26.1**	**+0.9**	
KARP	**Karpathos**	**83.86**	**318**	P	**P**	**06 18 25.9**	**-0.2**	
ESDC	**Sonseca Array**	**90.62**	**342**	P	**P**	**06 18 57.8**	**-0.8**	
	comp=Z,1.2nm,1.0s,baz=27,slow=4.2,SNR=2.2							
	comp=Z,1.2nm,1.0s							
KEST	**Kesra**	**90.72**	**331**	P	**P**	**06 19 00.0**	**+0.8**	
	comp=Z,6.5nm,0.6s,baz=114,slow=2.8,SNR=8.7							
	comp=Z,6.5nm,0.6s							
QSPA	**South Pole Qui**	**137.32**	**180**	PKP	**PKPdf**	**06 25 16.7**	**-1.0**	
	comp=Z,0.6nm,0.9s,baz=351,slow=3.4,SNR=1.1							
QSPA				SKPbc	**SKPbc**	**06 28 35.3**	**-2.3**	
	comp=Z,2.2nm,1.1s,baz=0.0,slow=2.0,SNR=4.0							
H03N2	**Juan Fernandez**	**139.20**	**89**	T	T	09 00 44.8		
	baz=309,slow=77,SNR=5.8							
H03N1	**Juan Fernandez**	**139.21**	**89**	T	T	09 00 46.3		
	baz=309,slow=77,SNR=20							
H03N3	**Juan Fernandez**	**139.21**	**89**	T	T	09 00 44.9		
	baz=309,slow=77,SNR=6.3							
CPUP	**Villa Florida**	**148.43**	**58**	PKPbc	**PKPbc**	**06 25 41.9**	**-0.2**	
	comp=Z,0.3nm,0.5s,baz=304,slow=0.9,SNR=3.7							
PLCA	**Paso Flores**	**148.72**	**93**	PKPbc	**PKPbc**	**06 25 42.6**	**+0.1**	
	comp=Z,2.9nm,1.1s,baz=333,slow=2.3,SNR=2.3							
SNAA	**Sanae**	**153.22**	**197**	PKPbc	**PKPbc**	**06 25 51.2**	**-0.9**	
	comp=Z,0.2nm,0.4s,baz=115,slow=19,SNR=1.7							

*IDC **06** 06:24:44.2±1.1, 44°.33S×38°.55E, h0km, mb3.9/6, mbtmp3.9/6, MS3.6/13, Error ellipse: s-maj=37.7km s-min=30.0km az=60.0*

ISC 06 06:24:46.1±1.1, 44°.4S±0°.2×38°.6E±0°.3, h10km, n19, σ0s77/7, mb3.8/5, MS3.6/12, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**18.99**	**321**	LR	LR	06 34 11.2	
	comp=Z,86nm,21.1s,baz=207,slow=30						
LBTB	**Lobatse**	**22.01**	**327**	LR	LR	06 36 44.2	
	comp=Z,148nm,19.3s,baz=136,slow=33						
MAW	**Mawson**	**26.61**	**159**	P	**P**	**06 30 23.4**	**-0.7**
	1.9nm,1.0s,baz=326,slow=18,SNR=1.7						
	1.9nm,1.0s						
LSZ	**Lusaka**	**30.30**	**340**	LR	LR	06 40 38.2	
	comp=Z,110nm,20.0s,baz=154,slow=32						
SNAA	**Sanae**	**33.81**	**202**	P	**P**	**06 31 28.5**	**+0.6**
	1.4nm,0.9s,baz=55,slow=6.6,SNR=3.8						
SNAA				LR	LR	06 44 12.2	
	comp=Z,74nm,18.2s,baz=9.0,slow=35						
	1.4nm,0.9s						
QSPA	**South Pole Qui**	**45.87**	**180**	P	**P**	**06 33 08.2**	**-0.1**
	0.8nm,0.7s,baz=235,slow=1.7,SNR=2.5						
QSPA				LR	LR	06 51 47.6	
	comp=Z,72nm,19.5s,baz=248,slow=35						
	0.8nm,0.7s						
FURI	**Furi**	**52.99**	**0**	LR	LR	06 54 38.0	
	comp=Z,39nm,19.6s,baz=148,slow=34						
VNDA	**Vanda**	**53.53**	**167**	LR	LR	06 56 07.8	
	comp=Z,70nm,18.0s,baz=206,slow=35						
H10S2	**ASCENSION HYDF**	**57.88**	**291**	T	T	07 36 31.4	
	baz=135,slow=74,SNR=135						
H10S3	**ASCENSION HYDF**	**57.90**	**291**	T	T	07 36 32.7	
	baz=85,slow=74,SNR=159						
TORD	**Torodi Ar. Bea**	**66.34**	**320**	P	**P**	**06 35 35.1**	**+0.1**
	1.0nm,0.4s,baz=141,slow=5.6,SNR=1.8						
	1.0nm,0.4s						
EIL	**Elat**	**73.73**	**357**	LR	LR	07 05 30.1	
	comp=Z,32nm,20.4s,baz=190,slow=33						
PLCA	**Paso Flores**	**74.11**	**228**	LR	LR	07 04 33.9	
	comp=Z,45nm,18.9s,baz=195,slow=32						
ASF	**Jabal al Asfar**	**76.17**	**358**	LR	LR	07 09 13.9	
	comp=Z,21nm,18.1s,baz=316,slow=35						
ASAR	**Alice Springs**	**77.44**	**111**	P	**P**	**06 36 42.2**	**+0.4**
	0.5nm,0.5s,baz=224,slow=5.8,SNR=9.9						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**80.27**	**108**	P	**P**	**06 36 57.7**	**+0.4**
	0.6nm,0.9s,baz=226,slow=4.7,SNR=3.1						
WRA				LR	LR	07 07 27.9	
	comp=Z,91nm,18.6s,baz=202,slow=32						
	0.6nm,0.9s						
KEST	**Kesra**	**84.02**	**336**	LR	LR	07 16 17.6	
	comp=Z,68nm,18.5s,baz=333,slow=37						
ESDC	**Sonseca Array**	**92.02**	**328**	LR	LR	07 19 50.4	
	comp=Z,54nm,18.7s,baz=154,slow=36						
TXAR	**Lajitas Array**	**146.63**	**256**	PKPbc	**PKPdf**	**06 44 25.3**	**-1.1**
	0.8nm,1.0s,baz=143,slow=3.1,SNR=5.5						

*ASRS **06** 06:27:37.0±0.7, 53°.81N×91°.09E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 06 06:27:41.5±6.9, 53°.77N×90°.85E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=72.3km s-min=31.9km az=40.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**3.57**	**275**	Pn	Pn	06 28 39.2	+1.1
	0.5nm,0.3s,baz=93,slow=15,SNR=4.1						
ZALV				Lg	Lg	06 29 34.5	
	0.8nm,0.3s,baz=86,slow=29,SNR=4.3						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**8.87**	**222**	Pn	Pn	06 29 51.3	+0.4
	0.1nm,0.3s,baz=44,slow=15,SNR=3.3						
	0.3nm,0.5s						
I34MN	**SONGINO INFRAS**	**11.51**	**115**	I	I	07 35 30.0	
	baz=309,slow=328,SNR=0.6						

*VIE **06** 06:28:58.1±0.3, 50°.24N×18°.59E, h0km, mb2.4/4, ml2.9/8, Error ellipse: s-maj=2.8km s-min=1.9km az=93.0 28 km W of Katowice Suspected Mining induced.*

*IPEC **06** 06:28:58.7±0.1, 50°.18N×18°.63E, h1km, ML2.7/6, Error ellipse: s-maj=1.5km s-min=0.6km az=169.0*

*IDC **06** 06:29:04.8±2.9, 50°.68N×18°.54E, h0km, mbtmp3.6/3, ML2.6/3, Error ellipse: s-maj=66.5km s-min=12.6km az=132.0*

ISC 06 06:28:57.5±0.8, 50°.16N±0°.03×18°.63E±0°.02, h0km, n34, σ1s34/58, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.29**	**254**	*e*PG	**Pb**	**06 29 05.5**	**0.0**
RAC				*e*SG	**Sb**	**06 29 10.3**	**-0.6**
OKC	**Ostrava-Krasne**	**0.45**	**224**	*e*PG	**Pb**	**06 29 08.0**	**-0.2**
OKC				*e*SG	**Sb**	**06 29 14.5**	**-1.0**
	comp=Z,176nm,0.5s						
STEB	**Steborice**	**0.60**	**248**	*e*PG	**Pb**	**06 29 10.7**	**-0.1**
STEB				*e*SG	**Sb**	**06 29 18.8**	**-0.9**
OJC	**Ojcow**	**0.76**	**85**	*e*Pg	**Pg**	**06 29 13.1**	**+1.2**
OJC				*e*Sg	**Sb**	**06 29 24.2**	**-0.1**
MORC	**Moravsky Berou**	**0.80**	**242**	*e*Pg	**Pb**	**06 29 14.0**	**-0.3**
	baz=60						
MORC				*e*Sg	**Sg**	**06 29 24.1**	**+1.0**
	135nm,0.4s,baz=60						
ANAC	**Anensky vrch**	**0.81**	**264**	*e*Pg	**Pb**	**06 29 14.2**	**-0.2**
	baz=82						
ANAC				*e*Sg	**Sg**	**06 29 24.0**	**+0.6**
	168nm,0.3s,baz=82						

LOSC	**Losov**	**0.97**	**237**	*e*Pg	**Pb**	**06 29 17.4**	**+0.2**
	baz=55						
LOSC				*e*Sg	**Sg**	**06 29 29.1**	**+0.3**
	101nm,0.3s,baz=55						
LANS	**Liptovska Anna**	**1.15**	**151**	*e*PG	**Pn**	**06 29 21.3**	**+0.4**
LANS				*e*SG	**Sn**	**06 29 38.6**	**+1.3**
LANS				*e*LG	Lg	06 29 39.9	
KRLC	**Kraliky**	**1.19**	**266**	*e*PG	**Pg**	**06 29 20.3**	**0.0**
KRLC				*e*SG	**Sb**	**06 29 36.3**	**-0.6**
	comp=Z,127nm,0.4s						
NIE	**Niedzica**	**1.32**	**124**	*e*Pg	**Pb**	**06 29 23.7**	**+0.7**
NIE				*e*Sg	**Sn**	**06 29 43.3**	**+1.9**
JAVC	**Velka Javorina**	**1.45**	**206**	*e*PG	**Pn**	**06 29 25.3**	**+0.3**
JAVC	**Velka Javorina**	**1.45**	**206**	*e*Pg	**Pn**	**06 29 25.2**	**+0.3**
	baz=25						
DPC	**Dobruska-Polom**	**1.49**	**278**	*e*PG	**Pb**	**06 29 26.3**	**+0.3**
DPC				*e*SG	**Sn**	**06 29 46.0**	**+0.3**
	comp=Z,65nm,0.5s						
VRAC	**Vranov**	**1.57**	**238**	*e*PN	**Pg**	**06 29 27.8**	**+0.2**
VRAC				*e*SG	**Sg**	**06 29 48.3**	**+0.3**
VRAC	**Vranov**	**1.57**	**238**	*e*Pn	**Pg**	**06 29 27.7**	**+0.2**
	baz=56						
VRAC				*e*Sg	**Sg**	**06 29 48.2**	**+0.3**
	59nm,0.5s,baz=56						
OSTC	**Ostas**	**1.59**	**285**	*e*PG	**Pb**	**06 29 28.1**	**+0.3**
OSTC				*e*SG	**Sg**	**06 29 49.2**	**+0.6**
	comp=Z,42nm,0.6s						
KSP	**Ksiaz**	**1.64**	**295**	*e*Pb	**Pn**	**06 29 27.7**	**+0.2**
KSP				*e*Pg	**Pg**	**06 29 29.5**	**+0.7**
KSP				*e*Sg	**Sg**	**06 29 51.2**	**+1.2**
KRUC	**Moravsky**	**1.82**	**234**	*e*Pn	**Pb**	**06 29 31.1**	**-0.6**
	baz=52						
KRUC				*e*Sg	**Sg**	**06 29 56.3**	**+0.4**
	57nm,0.7s,baz=52						
MODS	**Modra-Piesok**	**2.00**	**207**	*e*PN	**Pn**	**06 29 33.2**	**+0.7**
MODS				*e*SN	**Sb**	**06 30 00.2**	**+0.2**
MODS				*e*LG	Lg	06 30 07.1	
KECS	**Kecovo**	**2.08**	**143**	*e*PN	**Pn**	**06 29 34.1**	**+0.6**
KECS				*e*SN	**Sb**	**06 30 02.2**	**-0.1**
KECS				*e*LG	Lg	06 30 09.0	
TREC	**Trest**	**2.21**	**248**	*e*SG	**Sb**	**06 30 07.3**	**+1.0**
PVCC	**Panska Ves**	**2.62**	**280**	*e*PG	**Pg**	**06 29 47.2**	**-0.5**
PVCC				*e*SG	**Sg**	**06 30 23.2**	**+1.5**
	comp=Z,37nm,0.3s						
PRU	**Pruhonice**	**2.64**	**268**	*e*SG	**Sb**	**06 30 20.2**	**+1.7**
	comp=Z,26nm,0.8s						
CONA	**Conrad Observa**	**2.88**	**220**	Sn	**Sn**	**06 30 20.9**	**+0.8**
	5.1nm,0.5s						
RONA	**Rosalia, Austr**	**2.90**	**213**	Sn	**Sn**	**06 30 21.0**	**+0.5**
	0.2nm,0.2s						
CKRC	**Cesky Krumlov**	**3.12**	**246**	*e*PG	**Pg**	**06 29 56.3**	**-0.9**
CKRC				*e*SG	**Sg**	**06 30 35.1**	**-2.5**
KHC	**Kasperske Hory**	**3.44**	**254**	*e*PN	**Pn**	**06 29 52.9**	**+0.6**
KHC				*e*PG	**Pg**	**06 30 01.6**	**-1.7**
KHC				*e*SG	**Sg**	**06 30 46.8**	**-1.1**
	comp=Z,28nm,0.5s						
GERES	**GERESS Array B**	**3.47**	**250**	Pn	**Pg**	**06 30 02.6**	**-1.3**
	0.1nm,0.3s,baz=59,slow=17,SNR=11						
GERES				Sn	**Sb**	**06 30 45.0**	**+2.5**
	0.2nm,0.3s,baz=58,slow=28,SNR=4.5						
	2.0nm,0.4s						
MOA	**Molln**	**3.69**	**233**	*e*Pn	**Pn**	**06 29 56.5**	**+0.8**
	0.9nm,0.3s						
CLL	**Collm**	**3.75**	**290**	*e*Pg	**Pg**	**06 30 12.0**	**+2.7**
CLL				*e*Sg	**Sg**	**06 30 57.0**	**-0.9**
	comp=Z,34nm,1.4s						
BIOA	**Bad Ischl, Aus**	**4.11**	**235**	*e*Sg	**Sg**	**06 31 12.8**	**+3.3**
	comp=Z,14nm,0.5s						
AKASG	**Malin Array Be**	**6.79**	**81**	Sn	**Sn**	**06 31 50.6**	**-5.7**
	comp=Z,0.6nm,0.3s,baz=273,slow=23,SNR=2.4						
AKASG				Lg	Lg	06 32 30.3	
	comp=Z,0.8nm,0.3s,baz=272,slow=26,SNR=1.9						
FINES	**FINESS Array B**	**12.05**	**17**	Pn	Pn	06 31 45.5	-4.7
	comp=Z,0.3nm,0.3s,baz=201,slow=11,SNR=6.6						
	comp=Z,4.9nm,1.1s						
ARCES	**ARCESS Array B**	**19.71**	**7**	Pn	**P**	**06 33 26.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=190,slow=15,SNR=1.5						
	comp=Z,1.6nm,0.8s						

*UCR **06** 06:49:06.2±1.2, 8°.50N×83°.78W, h0km±2km, MW3.6*
*CATAC **06** 06:49:07.7±1.0, 9°.N±4°×8°.4W±°, h10km, M3.9/5, MLv3.9/5, Error ellipse: s-maj=13.1km s-min=5.0km az=53.5, confirmed*

ISC 06 06:49:05.6±1.4, 8°.46N±0°.04×83°.81W±0°.03, h5km±10km, n93, σ0s84/128, 6C-9D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	**Carate, Puerto**	**0.47**	**97**	P	**Pb**	**06 49 16.8**	**+0.4**
PIRO	**Carate, Puerto**	**0.47**	**97**	⇑*i*P	**Pb**	**06 49 16.9**	**+0.4**
PIRO				*e*S	**Sb**	**06 49 24.1**	**+0.4**
PTJ1	**Puerto Jimnez**	**0.51**	**82**	S	**Sb**	**06 49 24.4**	**-0.4**
PTJ1	**Puerto Jimnez**	**0.51**	**82**	P	**Pb**	**06 49 17.0**	**0.0**
PANP	**Palmar Norte**	**0.60**	**35**	⇓*i*P	**Pb**	**06 49 18.4**	**-0.3**
PANP				*e*S	**Sb**	**06 49 26.5**	**-1.0**
OCHAL	**Ojochal**	**0.65**	**15**	P	**Pg**	**06 49 19.0**	**+0.9**
OCHAL	**Ojochal**	**0.65**	**15**	S	**Sb**	**06 49 27.8**	**-1.1**
EDAD	**Golfito**	**0.67**	**74**	*e*P	**Pg**	**06 49 18.9**	**+0.5**
FITO	**Golfito**	**0.67**	**76**	*e*P	**Pg**	**06 49 19.0**	**+0.6**
FITO				*e*S	**Sb**	**06 49 28.2**	**-1.2**
FIMO	**Fila Mora**	**0.69**	**41**	⇓*i*P	**Pb**	**06 49 20.0**	**-0.3**
EDPE	**Pejibaye, P**	**0.73**	**19**	⇓*i*P	**Pg**	**06 49 20.4**	**+0.7**
EDPE				*e*S	**Sb**	**06 49 30.1**	**-1.1**
EDP2	**Potrero Grande**	**0.83**	**49**	*e*P	**Pg**	**06 49 22.1**	**+0.4**
EDP2				*e*S	**Sb**	**06 49 34.6**	**+0.4**
BURE	**Buenos Aires**	**0.84**	**34**	⇓*i*P	**Pg**	**06 49 22.4**	**+0.6**
BURE				*e*S	**Sb**	**06 49 34.2**	**-0.3**
NELY	**Ciudad Neily**	**0.88**	**78**	*e*P	**Pg**	**06 49 23.2**	**+0.8**
ZEDO	**Perez Zeledon**	**0.89**	**8**	*e*P	**Pg**	**06 49 23.3**	**+0.5**
ZEDO				*e*S	**Sb**	**06 49 35.2**	**-0.8**
VITO	**San Vito**	**0.90**	**67**	*e*P	**Pb**	**06 49 23.9**	**0.0**
VITO				*e*S	**Sb**	**06 49 36.6**	**+0.3**
SAJE	**San Jernim**	**0.93**	**19**	*e*P	**Pg**	**06 49 23.6**	**+0.2**
SAJE				*e*S	**Sb**	**06 49 35.9**	**-1.1**
DRK0	**Durika**	**0.97**	**35**	P	**Pg**	**06 49 24.5**	**+0.2**
DRK0	**Durika**	**0.97**	**35**	⇓*i*P	**Pg**	**06 49 24.4**	**+0.2**
DRK0				*e*S	**Sb**	**06 49 37.5**	**-0.7**
LMNES	**Limones**	**1.01**	**111**	*e*P	**Pg**	**06 49 25.1**	**+0.1**
QUEP	**Quepos**	**1.02**	**340**	*e*P	**Pg**	**06 49 25.6**	**+0.4**
QUEP				*e*S	**Sb**	**06 49 39.7**	**+0.1**
SVQ2	**Quepos**	**1.02**	**340**	⇑*i*P	**Pg**	**06 49 25.6**	**+0.4**
DMCAL	**E. de Neily**	**1.03**	**78**	*e*P	**Pg**	**06 49 25.3**	**-0.1**
DMCAL				*e*S	**Sg**	**06 49 38.2**	**-0.5**
LLNJ	**Naranjito**	**1.04**	**344**	*e*P	**Pg**	**06 49 26.0**	**+0.3**
LLNJ				*e*S	**Sb**	**06 49 40.4**	**+0.2**
ALCO	**Alturas Coton,**	**1.08**	**63**	*e*P	**Pg**	**06 49 26.2**	**-0.2**
ALCO				*e*S	**Sb**	**06 49 40.9**	**-0.5**
SCLRA	**Santa Clara, W**	**1.08**	**70**	*e*P	**Pb**	**06 49 27.2**	**+0.2**
BUS1	**Rivas**	**1.08**	**3**	⇑*i*P	**Pg**	**06 49 26.6**	**+0.2**
BUS1				*e*S	**Sb**	**06 49 41.2**	**-0.7**
BRU2	**Volcan**	**1.16**	**73**	*e*P	**Pg**	**06 49 27.4**	**-0.4**
BRU2				*e*S	**Sb**	**06 49 43.1**	**-0.5**
PIEC	**Cerro El Cedra**	**1.16**	**353**	⇑*e*P	**Pg**	**06 49 27.6**	**-0.3**
PAR1A	**Puntarenas Pro**	**1.21**	**339**	*e*P	**Pg**	**06 49 28.8**	**+0.1**
PAR1A				*e*S	**Sb**	**06 49 45.8**	**+0.9**
PITB	**Pirrs, San**	**1.21**	**350**	*e*P	**Pg**	**06 49 28.7**	**-0.1**
PITB				*e*S	**Sb**	**06 49 45.3**	**+0.2**
PICV	**PH. Pirrs**	**1.22**	**342**	*e*P	**Pg**	**06 49 28.5**	**-0.4**
REPA	**Paraso**	**1.36**	**358**	*e*P	**Pn**	**06 49 30.8**	**-0.6**
BQTLY	**Boquete Panama**	**1.37**	**78**	*e*P	**Pn**	**06 49 30.9**	**-0.6**
ACOS	**Acosta**	**1.37**	**345**	*e*P	**Pn**	**06 49 30.6**	**-1.0**
ACOS				*e*S	**Sg**	**06 49 48.7**	**-1.0**
TAGO	**Cartago**	**1.40**	**355**	*e*P	**Pn**	**06 49 31.9**	**-0.1**
VINA	**Juan Vinas**	**1.42**	**3**	⇑*e*P	**Pn**	**06 49 32.3**	**0.0**
VINA				*e*S	**Sb**	**06 49 50.8**	**-0.5**
CEUA	**Cerro Uatsi, L**	**1.44**	**37**	⇓*i*P	**Pg**	**06 49 33.8**	**+0.6**
CEUA				*e*S	**Sn**	**06 49 53.7**	**+1.9**
TURIB	**Turrialba**	**1.44**	**5**	*e*P	**Pn**	**06 49 31.5**	**-1.0**
TURIB				*e*S	**Sb**	**06 49 50.4**	**-1.3**
PCAYA	**Pacayas**	**1.44**	**0**	⇓*e*P	**Pn**	**06 49 32.5**	**-0.2**
PCAYA				*e*S	**Sb**	**06 49 51.9**	**-0.1**
PURI	**Puriscal**	**1.46**	**340**	⇑*e*P	**Pn**	**06 49 33.0**	**+0.2**
LUJA	**Lujan**	**1.48**	**350**	⇓*i*P	**Pn**	**06 49 33.0**	**0.0**
VERB	**Verbena**	**1.48**	**4**	*e*P	**Pn**	**06 49 32.8**	**-0.2**
ECI	**Escuela Centro**	**1.48**	**351**	*e*P	**Pn**	**06 49 32.9**	**-0.3**
LAES	**El Progreso Va**	**1.49**	**30**	*e*P	**Pn**	**06 49 33.1**	**-0.1**
LUPE	**Guadalupe**	**1.49**	**351**	*e*P	**Pn**	**06 49 32.2**	**-1.1**
SANTA	**Santa Ana**	**1.50**	**346**	*i* P	**Pn**	**06 49 32.4**	**-1.1**
BRIBI	**Bribri**	**1.51**	**40**	*e*P	**Pb**	**06 49 34.3**	**+0.1**
VICA	**Volcano Irazu**	**1.51**	**359**	*e*P	**Pn**	**06 49 34.0**	**+0.2**
CVTQ	**Turrialba Volc**	**1.53**	**2**	*e*P	**Pn**	**06 49 34.4**	**+0.4**

CVTV	**Tajo**	**1.53**	**2**	*e*P	**Pn**	**06 49 33.8**	**-0.2**
ABRB	**Las Abras (San**	**1.53**	**3**	*e*P	**Pn**	**06 49 33.5**	**-0.5**
ABRB				*e*S	**Sg**	**06 49 54.9**	**-0.1**
VTR0	**Volcan Turrial**	**1.54**	**2**	*e*P	**Pn**	**06 49 34.8**	**+0.6**
CVTR	**Volcan Turrial**	**1.55**	**2**	*e*P	**Pn**	**06 49 34.5**	**+0.2**
BELE	**Belen**	**1.55**	**346**	*e*P	**Pn**	**06 49 34.5**	**+0.5**
HEME	**Heredia, Merce**	**1.56**	**348**	*e*P	**Pn**	**06 49 35.2**	**+1.1**
HEME				*e*S	**Sb**	**06 49 55.6**	**+0.5**
CVIMO	**Finca Echandi**	**1.56**	**355**	*e*P	**Pn**	**06 49 34.0**	**-0.2**
CVIMO				*e*S	**Sn**	**06 49 54.7**	**-0.2**
HDC	**Heredia**	**1.56**	**349**	*e*P	**Pn**	**06 49 34.0**	**-0.1**
HDC				*e*S	**Sn**	**06 49 55.0**	**+0.2**
RESJ	**San Isidro (Tu**	**1.56**	**6**	*e*P	**Pn**	**06 49 34.4**	**+0.2**
VERH	**Veragua Rainfo**	**1.58**	**23**	*e*P	**Pn**	**06 49 34.1**	**-0.2**
VERH				*e*S	**Sn**	**06 49 54.6**	**-0.5**
ATEO	**Atenas**	**1.61**	**340**	*e*P	**Pn**	**06 49 33.6**	**-1.2**
LCOCO	**El Coco**	**1.63**	**9**	*e*P	**Pn**	**06 49 35.6**	**+0.6**
LCOCO				*e*S	**Sb**	**06 49 57.1**	**0.0**
TCS1	**Tacares**	**1.64**	**343**	*e*P	**Pn**	**06 49 35.8**	**+0.5**
IRES	**Siquirres**	**1.65**	**11**	*e*P	**Pn**	**06 49 36.1**	**+0.9**
RVLA	**Villa Bonita**	**1.65**	**8**	*e*P	**Pn**	**06 49 36.2**	**+0.9**
RVLA				*e*S	**Sb**	**06 49 57.6**	**-0.1**
PBNVO	**Pueblo Nuevo,**	**1.66**	**75**	*e*P	**Pn**	**06 49 34.6**	**-0.7**
POAS	**San Pedro de P**	**1.66**	**345**	⇓*e*P	**Pn**	**06 49 36.6**	**+1.1**
CVTG	**V. Turrialba,**	**1.67**	**1**	*e*P	**Pn**	**06 49 36.9**	**+1.2**
RBALA	**Bur**	**1.69**	**76**	*e*P	**Pn**	**06 49 35.4**	**-0.5**
PILE	**Guapiles**	**1.74**	**1**	*e*P	**Pn**	**06 49 36.9**	**+0.3**
EGUB	**Earth Gujpi**	**1.75**	**7**	*e*P	**Pn**	**06 49 37.7**	**+1.1**
EGUB				*e*S	**Sb**	**06 50 00.1**	**-0.5**
ZARE	**Zarcero**	**1.80**	**342**	*e*P	**Pb**	**06 49 39.8**	**+0.5**
VPL1	**V. Platanar**	**1.86**	**343**	*e*P	**Pn**	**06 49 40.1**	**+1.7**
VPL1				*e*S	**Sn**	**06 50 03.4**	**+0.9**
JCR1	**Jicaral**	**1.88**	**317**	*e*P	**Pn**	**06 49 39.0**	**+0.5**
CARI	**Cariari**	**1.89**	**2**	*e*P	**Pn**	**06 49 39.5**	**+0.9**
CARI				*e*S	**Sn**	**06 50 03.7**	**+0.8**
ARTO	**Ro Cuarto**	**1.91**	**348**	*e*P	**Pn**	**06 49 37.8**	**-1.1**
VPL2	**V. Platanar**	**1.92**	**343**	*e*P	**Pn**	**06 49 40.2**	**+1.1**
VPL2				*e*S	**Sn**	**06 50 04.8**	**+1.1**
KKNTU	**Kakinte**	**2.02**	**79**	*e*P	**Pn**	**06 49 40.9**	**+0.6**
SOCE	**Pocosol**	**2.07**	**337**	*e*P	**Pn**	**06 49 42.9**	**+1.9**
NYURE	**Nandayure**	**2.08**	**317**	*e*P	**Pn**	**06 49 40.3**	**-1.0**
JUNT	**Juntas**	**2.13**	**328**	*e*P	**Pn**	**06 49 43.6**	**+1.7**
JTS	**Las Juntas de**	**2.14**	**328**	*e*P	**Pn**	**06 49 43.8**	**+1.8**
CASO	**Castillo**	**2.16**	**335**	*e*P	**Pn**	**06 49 44.5**	**+2.1**
FORC	**Fortuna**	**2.16**	**337**	*e*P	**Pb**	**06 49 44.9**	**-0.5**
VACR	**Volcan Arenal**	**2.17**	**337**	*e*P	**Pb**	**06 49 45.3**	**-0.2**
ARE1	**Arenal 1**	**2.18**	**336**	*e*P	**Pb**	**06 49 45.2**	**-0.4**
VARE2	**V. Arenal**	**2.18**	**336**	*e*P	**Pb**	**06 49 45.5**	**-0.1**
QUEB	**Quebradon, Cot**	**2.40**	**334**	*e*P	**Pb**	**06 49 48.5**	**-0.8**
JUD3	**Juan Diaz 3**	**2.40**	**315**	*e*P	**Pn**	**06 49 46.3**	**+0.6**
SAJU	**San Juanillo,**	**2.46**	**310**	*e*P	**Pn**	**06 49 46.2**	**-0.2**
SAJU				*e

IL31		**70.68**	**25**	P	**P**	**07 16 07.9**	**-0.6**
IL31				IAmb	IAmb	07 16 50.0	
	comp=Z,4.2nm,1.4s						
ILAR	**Eielson Array**	**70.68**	**25**	P	**P**	**07 16 07.7**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=248,slow=5.8,SNR=20						
	comp=Z,0.7nm,0.5s						
E24K	**Your Creek**	**70.88**	**22**	P	**P**	**07 16 10.8**	**+1.0**
E24K				IAmb	IAmb	07 16 14.5	
	comp=Z,8.3nm,1.4s						
F25K	**Christian Rive**	**71.81**	**22**	P	**P**	**07 16 16.8**	**+1.3**
F25K				IAmb	IAmb	07 16 31.5	
	comp=Z,3.1nm,1.2s						
BMAR	**Burnt Mountain**	**72.17**	**23**	P	**P**	**07 16 19.1**	**+1.5**
H27K	**Steamboat Moun**	**73.15**	**24**	P	**P**	**07 16 24.1**	**+0.7**
H27K				IAmb	IAmb	07 16 58.6	
	comp=Z,4.5nm,1.4s						
NVAR	**Mina Array Bea**	**89.20**	**51**	P	**P**	**07 17 50.4**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=266,slow=5.4,SNR=4.3						
	comp=Z,0.4nm,0.6s						
FIA1	**FINESS Array S**	**91.83**	**335**	P	**P**	**07 18 00.8**	**0.0**
FINES	**FINESS Array B**	**91.83**	**335**	P	**P**	**07 18 00.5**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=22,slow=1.5,SNR=10						
	comp=Z,1.7nm,0.7s						

IDC 06 07:22:56.6±5.6, 64°42S×172°57E, h0km, mb3.7/3, mbtmp3.8/4, ML3.8/1, MS3.3/3, Error ellipse: s-maj=209.0km s-min=26.4km az=71.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.57**	**190**	Pn	Pn	07 26 09.7	-0.4
	0.5nm,0.3s,baz=27,slow=14,SNR=60						
VNDA				LR	LR	07 30 09.6	
	comp=Z,129nm,21.0s,baz=356,slow=32						
	4.8nm,0.6s						
QSPA	**South Pole Qui**	**25.67**	**180**	P	P	07 28 27.9	+0.1
	2.9nm,0.9s,baz=36,slow=3.4,SNR=11						
QSPA				LR	LR	07 36 49.6	
	comp=Z,63nm,18.9s,baz=40,slow=32						
	2.9nm,0.9s						
URZ	**Urewera**	**26.34**	**8**	LR	LR	07 36 49.4	
	comp=Z,67nm,18.6s,baz=174,slow=32						
H01W1	**Cape Leeuwin H**	**45.58**	**281**	T	T	08 21 24.4	
	baz=147,slow=76,SNR=32						
H01W2	**Cape Leeuwin H**	**45.59**	**281**	T	T	08 21 24.8	
	baz=147,slow=76,SNR=31						
H01W3	**Cape Leeuwin H**	**45.60**	**281**	T	T	08 21 25.7	
	baz=147,slow=76,SNR=32						
ASAR	**Alice Springs**	**47.90**	**309**	P	P	07 31 36.5	+0.1
	1.0nm,1.0s,baz=168,slow=8.6,SNR=4.1						
	1.0nm,1.0s						
WRA	**Warramunga Arr**	**51.23**	**312**	P	P	07 32 01.4	-0.3
	0.5nm,0.9s,baz=157,slow=7.7,SNR=1.9						
	0.5nm,0.9s						
H03S2	**Juan Fernandez**	**67.38**	**121**	T	T	08 46 59.4	
	baz=205,slow=74,SNR=14						
H03S1	**Juan Fernandez**	**67.38**	**121**	T	T	08 47 00.8	
	baz=205,slow=74,SNR=9.6						
H03S3	**Juan Fernandez**	**67.40**	**121**	T	T	08 46 57.5	
	baz=205,slow=74,SNR=15						
H03N3	**Juan Fernandez**	**67.72**	**121**	T	T	08 47 28.6	
	baz=217						
H03N2	**Juan Fernandez**	**67.73**	**121**	T	T	08 47 22.3	
	baz=217						
H03N1	**Juan Fernandez**	**67.74**	**121**	T	T	08 47 27.3	
	baz=217						
H08S2	**Diego Garcia H**	**87.49**	**258**	T	T	09 14 06.9	
	baz=154,slow=76,SNR=54						
H08S1	**Diego Carcia H**	**87.50**	**258**	T	T	09 14 07.1	
	baz=154,slow=76,SNR=42						
H08S3	**Diego Garcia H**	**87.51**	**258**	T	T	09 14 03.0	
	baz=154,slow=76,SNR=46						

*NNC **06** 07:39:52.7±4.1, 36°.80N×71°.01E, h122km±63km, mb3.3, mpv3.9, Error ellipse: s-maj=40.8km s-min=33.5km az=131.0*

ISC 06 07:39:49.7±3.4, 36°.6N±0°.2×71°.0E±0°.2, h100km, n9, σ0s75/11, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.22**	**25**	P	**Pn**	**07 41 19.5**	**+0.2**
	SNR=14						
EKS2	**Erkin-Say**	**6.40**	**19**	P	**Pn**	**07 41 22.2**	**+0.8**
	SNR=8.5						
KK31	**Karatay Array**	**6.48**	**357**	P	**Pn**	**07 41 23.3**	**+0.9**
	4.1nm,0.3s,baz=178,slow=12,SNR=68						
KK31				⇑S	**Sn**	**07 42 34.6**	**-0.1**
	4.1nm,0.3s,baz=188,slow=20,SNR=6.9						
AAK	**Ala-Archa**	**6.58**	**23**	P	**Pn**	**07 41 24.8**	**+0.8**
	SNR=9.7						
AAK	**Ala-Archa**	**6.58**	**23**	⇑P	**Pn**	**07 41 24.8**	**+0.8**
	4.7nm,0.5s						
AAK				⇑S	**Sn**	**07 42 37.2**	**-0.4**
	5.3nm,0.8s						
USP	**Ospenovka**	**7.16**	**21**	P	**Pn**	**07 41 31.9**	**+0.2**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.22**	**28**	P	**Pn**	**07 41 32.6**	**0.0**
	SNR=7.1						
AB31	**Akbulak array**	**14.96**	**331**	P	**Pn**	**07 43 14.7**	**-1.1**
	0.9nm,0.4s,baz=141,slow=13,SNR=41						
AKTO	**Aktyubinsk**	**16.66**	**330**	⇓P	**P**	**07 43 38.2**	**+0.6**
	2.1nm,0.8s						

*BJI **06** 07:40:36.8, 27°.30N×54°.38E, h10km, mB5.5/65, mb5.1/83, Ms5.4/88, Ms7 5.1/85*
*SGS **06** 07:40:39.7, 27°.19N×55°.58E, h6km, Ml5.3*
*OMAN **06** 07:40:40.0±0.3, 27°.58N×55°.10E, h11km±3km, mb5.6/11, ml5.3/23, Mwp5.7/29, Error ellipse: s-maj=8.2km s-min=2.1km az=7.0*
*MOS **06** 07:40:41.6±1.1, 27°.33N×55°.11E, h12km, mb5.5/68, MS4.9/27, Error ellipse: s-maj=4.4km s-min=2.8km az=113.0*
*IDC **06** 07:40:41.1±0.3, 27°.29N×55°.06E, h0km, mb5.0/37, mbtmp5.0/43, ML4.6/6, MS4.9/75, Error ellipse: s-maj=8.8km s-min=7.7km az=19.0*
*TEH **06** 07:40:42.6, 27°.16N×55°.07E, h16km±16km*
*DSN **06** 07:40:42.9±0.5, 27°.26N×55°.00E, h10km, mb6.0/4, ML5.0/17, Error ellipse: s-maj=7.6km s-min=4.7km az=47.0*
*NEIC **06** 07:40:43.3, 27°.25N×54°.92E, h12km*
*NEIC **06** 07:40:43.0±1.7, 27°.24N±0°.06×54°.96E±0°.07, h10km±1km, mb5.3/249, Mww5.4/13, Error ellipse: s-maj=11.2km s-min=10.7km az=235.0*
*THR **06** 07:40:43.5±0.0, 27°.23N×55°.09E, h23km±4km, ML5.4*
*NEIC **06** 07:40:43.3, 27°.15N×54°.58E, h12km, Moment Tensor Solution. Duration: 2s-4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.25; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$-0.10; $M_{r\theta}$0.81; $M_{\theta\phi}$0.29; $M_{\phi r}$-0.57; Fault plane solution: $M_0$1.58000×10^{17} NP1: ϕ_s273.78000°, δ27.41000°, λ69.32000°. NP2: ϕ_s116.81000°, δ64.49000°, λ100.38000°. Principal axes: T 1.6242, Plg69.0000°, Azm47.0000°; N -0.0863, Plg9.0000°, Azm292.0000°; P -1.5379, Plg19.0000°, Azm199.0000°;*
*GCMT **06** 07:40:44.0±0.1, 27°.09N±0°.01×54°.93E±0°.01, h12km, MW5.4/144, Moment Tensor Solution. s121,c209; s144,c294; Duration: 1s-2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.35±.01; $M_{\theta\theta}$-1.44±.01; $M_{\phi\phi}$0.09±.01; $M_{r\theta}$0.33±.04; $M_{\theta\phi}$0.42±.01; $M_{\phi r}$-0.32±.04; Best double couple: $M_0$1.52500×10^{17} NP1:ϕ_s274.00000°, δ38.00000°, λ73.00000°. NP2:ϕ_s114.00000°, δ54.00000°, λ103.00000°. Principal axes: T 1.4460, Plg77.0000°, Azm68.0000°; N 0.1590, Plg10.0000°, Azm287.0000°; P -1.6040, Plg8.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 07:40:42.9±0.4, 27°.29N±0°.02×54°.99E±0°.02, h10km±2km, h10km:pP-P, n1309, σ1s80/1410, mb5.3/328, MS5.0/132, 46C-51D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.67**	**305**	Pg	**Pb**	**07 40 57.7**	**+1.1**
LAR1				Sg	**Sn**	**07 41 09.4**	**+0.4**
BNDS	**Bandar-Abbas**	**1.06**	**84**	Pg	**Pg**	**07 41 01.5**	**-1.7**
BNDS	**Bandar-Abbas**	**1.06**	**84**	*e*Pg	**Pg**	**07 41 01.8**	**-1.4**
BNDS				IAML		07 41 18.3	
	comp=Z,24μm,1.0s						
GENO	**Geno**	**1.06**	**84**	Pg	**Pg**	**07 41 02.3**	**-1.0**
IBND	**Bandar-abas**	**1.39**	**83**	Pg	**Pn**	**07 41 07.9**	**-0.3**
SHME	**Shamm**	**1.61**	**140**	P	**Pn**	**07 41 10.0**	**-1.3**
	SNR=30						
SHME				P	**Pn**	**07 41 10.0**	**-1.3**
	SNR=30						
SHME				S	**Sb**	**07 41 33.3**	**+0.3**
SHME				S	**Sb**	**07 41 33.3**	**+0.3**
SHME	**Shamm**	**1.61**	**140**	*e*P	**Pn**	**07 41 09.9**	**-1.3**
	SNR=30						
LMD1	**Lamerd**	**1.63**	**272**	Pg	**Pb**	**07 41 13.6**	**+0.6**
JHRM	**Jahrom**	**1.74**	**314**	Pn	**Pb**	**07 41 15.8**	**+0.8**
BANOM	**Banah**	**1.80**	**139**	P	**Pn**	**07 41 13.0**	**-0.9**
BANOM				P	**Pn**	**07 41 13.0**	**-0.9**
BANOM				S	**Sg**	**07 41 39.2**	**-1.5**
BANOM				S	**Sg**	**07 41 39.2**	**-1.5**
BANOM	**Banah**	**1.80**	**139**	*e*P	**Pn**	**07 41 12.8**	**-1.1**
	SNR=95						
BANOM				S	**Sb**	**07 41 39.0**	**+0.6**
UMQ	**Umm Al-Quwin**	**1.86**	**161**	P	**Pb**	**07 41 16.3**	**-0.6**
	SNR=38						
UMQ				P	**Pb**	**07 41 16.3**	**-0.6**
	SNR=38						
UMQ				S	**Sg**	**07 41 45.5**	**+2.8**
UMQ				S	**Sg**	**07 41 45.5**	**+2.8**
UMQ	**Umm Al-Quwin**	**1.86**	**161**	*e*P	**Pn**	**07 41 13.5**	**-1.2**
	SNR=38						
MASF	**Masafi**	**2.18**	**151**	P	**Pn**	**07 41 17.0**	**-2.2**
	SNR=287						
MASF				P	**Pn**	**07 41 17.0**	**-2.2**
	SNR=287						
MASF				S	**Sb**	**07 41 50.1**	**+0.6**
MASF				S	**Sb**	**07 41 50.1**	**+0.6**
MSFE	**Esma-Masafi**	**2.19**	**151**	*e*P	**Pn**	**07 41 19.0**	**-0.3**
	SNR=293						
MDH	**Madha**	**2.31**	**149**	P	**Pn**	**07 41 20.4**	**-0.5**
	SNR=160						
MDH				P	**Pn**	**07 41 20.4**	**-0.5**
	SNR=160						
MDH				S	**Sb**	**07 41 52.5**	**-0.5**
MDH				S	**Sb**	**07 41 52.5**	**-0.5**
MDH	**Madha**	**2.31**	**149**	*e*P	**Pn**	**07 41 20.2**	**-0.7**
	SNR=161						
NAZ	**Nazwa, Dubai**	**2.37**	**165**	P	**Pn**	**07 41 22.6**	**+0.8**
	SNR=152						
NAZ				P	**Pn**	**07 41 22.6**	**+0.8**
	SNR=152						
NAZ				S	**Sb**	**07 41 55.8**	**+0.8**
NAZ				S	**Sb**	**07 41 55.8**	**+0.8**
NAZ	**Nazwa, Dubai**	**2.37**	**165**	*e*P	**Pn**	**07 41 22.3**	**+0.5**
	SNR=138						
KHNJ	**Kahnooj**	**2.50**	**74**	Pn	**Pn**	**07 41 23.6**	**0.0**
UOSS	**Minazif**	**2.58**	**155**		**Pn**	**07 41 23.6**	**-1.0**
UOSS	**Minazif**	**2.58**	**155**	P	**Pn**	**07 41 25.6**	**+1.0**
UOSS	**Minazif**	**2.58**	**155**	*e*P	**Pn**	**07 41 23.8**	**-0.9**
	SNR=174						
FAQ	**Al Faqa, Dubai**	**2.59**	**168**	P	**Pn**	**07 41 25.5**	**+0.7**
	SNR=17						
FAQ				P	**Pn**	**07 41 25.5**	**+0.7**
	SNR=17						
FAQ				S	**Sb**	**07 42 00.8**	**-0.5**
FAQ				S	**Sb**	**07 42 00.8**	**-0.5**
FAQ	**Al Faqa, Dubai**	**2.59**	**168**	*e*P	**Pn**	**07 41 25.2**	**+0.4**
	SNR=16						
HATD	**Hatta, Dubai**	**2.66**	**157**	P	**Pn**	**07 41 26.9**	**+1.1**
	SNR=286						
HATD				P	**Pn**	**07 41 26.9**	**+1.1**
	SNR=286						
HATD	**Hatta, Dubai**	**2.66**	**157**	*e*P	**Pn**	**07 41 25.1**	**-0.7**
	SNR=286						
ASUD	**Al Ashush, Dub**	**2.67**	**173**	P	**Pn**	**07 41 27.2**	**+1.3**
	SNR=69						
ASUD				P	**Pn**	**07 41 27.2**	**+1.3**
	SNR=69						
ASUD				S	**Sb**	**07 42 03.5**	**-0.1**
ASUD				S	**Sb**	**07 42 03.5**	**-0.1**
ASUD	**Al Ashush, Dub**	**2.67**	**173**	*e*P	**Pn**	**07 41 25.8**	**-0.1**
	SNR=70						
AJN	**Ajban**	**2.72**	**180**	P	**Pn**	**07 41 27.8**	**+1.3**
	SNR=34						
AJN				P	**Pn**	**07 41 27.8**	**+1.3**
	SNR=34						
AJN				P	**Pn**	**07 41 27.8**	**+1.3**
	SNR=34						
AJN				P	**Pn**	**07 41 27.8**	**+1.3**
	SNR=34						
AJN				S	**Sb**	**07 42 03.4**	**-1.5**
AJN				S	**Sb**	**07 42 03.4**	**-1.5**
AJN	**Ajban**	**2.72**	**180**	*e*P	**Pn**	**07 41 26.3**	**-0.2**
	SNR=34						
ASHO	**Ashiyiah**	**2.77**	**159**	P	**Pn**	**07 41 27.0**	**-0.3**
	SNR=662						
ASHO				P	Pb	07 41 27.1	-5.4
	SNR=662						
ASHO				S	**Sn**	**07 42 03.1**	**+2.3**
ASHO	**Ashiyiah**	**2.77**	**159**	*e*P	**Pn**	**07 41 27.0**	**-0.3**
	SNR=327						
NGRK	**Negar Kerman**	**2.80**	**33**	Pn	**Pn**	**07 41 29.2**	**+1.2**
JRN	**Qarnain Island**	**3.03**	**220**	P	**Pn**	**07 41 31.3**	**+0.5**
	SNR=27						
JRN				P	**Pn**	**07 41 31.3**	**+0.5**
	SNR=27						
JRN				⇓S	**Sb**	**07 42 12.6**	**-1.3**
JRN				⇓S	**Sb**	**07 42 12.6**	**-1.3**
KRBR	**Kerman**	**3.10**	**30**	Pn	**Pn**	**07 41 34.2**	**+2.0**
KRBR	**Kerman**	**3.10**	**30**	*e*Pn	**Pn**	**07 41 34.0**	**+1.9**
KRBR				IAML		07 42 47.5	
	comp=Z,5μm,1.0s						
SHI	**Shiraz**	**3.20**	**318**	Pn	**Pn**	**07 41 36.0**	**+2.6**
SHI	**Shiraz**	**3.20**	**318**	P	**Pb**	**07 41 36.9**	**-3.0**
ALNE	**Al Ain**	**3.29**	**168**	P	**Pn**	**07 41 34.7**	**+0.2**
	SNR=112						
ALNE				P	**Pn**	**07 41 34.7**	**+0.2**
	SNR=112						
ALNE				S	**Sn**	**07 42 17.3**	**+3.6**
ALNE				S	**Sn**	**07 42 17.3**	**+3.6**
ALNE	**Al Ain**	**3.29**	**168**	*i* P	**Pn**	**07 41 34.7**	**+0.2**
	SNR=91						
KHGB	**Koh Gabri**	**3.34**	**23**	Pn	**Pn**	**07 41 37.8**	**+2.5**
CHMN	**Cheshme madani**	**3.40**	**41**	Pn	**Pn**	**07 41 38.2**	**+1.9**
SOHO	**SOHO**	**3.44**	**156**	P	**Pn**	**07 41 36.6**	**+0.1**
SOHO				P	**Pn**	**07 41 36.6**	**+0.1**
SOHO				S	**Sb**	**07 42 21.5**	**-4.2**
SOHO				S	**Sb**	**07 42 21.5**	**-4.2**
SOHO	**SOHO**	**3.44**	**156**	*i* P	**Pn**	**07 41 34.4**	**-2.1**
	SNR=27						
DSBU	**Dashti - Bushe**	**3.47**	**289**	Pn	**Pn**	**07 41 39.7**	**+2.7**
KBAM	**BAM**	**3.56**	**58**	Pn	**Pn**	**07 41 39.5**	**+1.1**
MZWR	**Madinat Zayed**	**3.66**	**196**	P	**Pn**	**07 41 40.4**	**+0.9**
MZWR				P	**Pn**	**07 41 40.4**	**+0.9**
MZWR				S	**Sn**	**07 42 26.5**	**+3.9**
MZWR				S	**Sn**	**07 42 26.5**	**+3.9**
KAZ2	**Kazeron-Fars-I**	**3.73**	**309**	Pn	**Pn**	**07 41 43.5**	**+2.9**
KRM1	**Kerman Provinc**	**3.77**	**31**	Pn	**Pn**	**07 41 43.7**	**+2.4**
GHWR	**Ruwais**	**3.82**	**210**	P	**Pn**	**07 41 43.1**	**+1.3**
GHWR				P	**Pn**	**07 41 43.1**	**+1.3**
GHWR				S	**Sb**	**07 42 34.0**	**-2.8**
GHWR				S	**Sb**	**07 42 34.0**	**-2.8**
SHMA	**Al-Shehemyia**	**3.88**	**249**	P	**Pn**	**07 41 44.3**	**+1.7**
	SNR=52						
SHMA				S	**Sn**	**07 42 30.9**	**+2.8**
ZRDN	**Zarand Kerman**	**3.91**	**20**	Pn	**Pn**	**07 41 45.3**	**+2.2**
IMEH	**Mehriz**	**4.10**	**355**	Pn	**Pn**	**07 41 48.5**	**+2.7**
ARQ	**Araqi**	**4.17**	**160**	P	**Pn**	**07 41 47.6**	**+1.0**
	SNR=92						
ARQ				P	**Pn**	**07 41 47.6**	**+1.0**
	SNR=92						
ARQ				S	**Sn**	**07 42 39.8**	**+4.3**
ARQ				S	**Sn**	**07 42 39.8**	**+4.3**
HOQ	**Hoqain**	**4.25**	**150**	Pn	**Pn**	**07 41 46.2**	**-1.5**
HOQ	**Hoqain**	**4.25**	**150**	P	**Pn**	**07 41 48.4**	**+0.8**
	SNR=22						
HOQ				P	**Pn**	**07 41 48.4**	**+0.8**
	SNR=22						
HOQ				S	**Sn**	**07 42 39.2**	**+1.9**
HOQ				S	**Sn**	**07 42 39.2**	**+1.9**
TRNA	**Turayna**	**4.25**	**234**	P	**Pn**	**07 41 48.8**	**+1.2**
	SNR=49						
TRNA				S	**Sn**	**07 42 39.5**	**+2.3**
	SNR=10						
IBAF	**Bafgh**	**4.31**	**7**	Pn	**Pn**	**07 41 50.7**	**+2.0**
SLWR	**Sila**	**4.38**	**224**	P	**Pn**	**07 41 50.2**	**+0.8**
SLWR				P	**Pn**	**07 41 50.2**	**+0.8**
SLWR				S	**Sn**	**07 42 43.1**	**+2.7**
SLWR				S	**Sn**	**07 42 43.1**	**+2.7**
MZR	**Muzera**	**4.48**	**198**	P	**Pn**	**07 41 51.0**	**+0.1**
	SNR=27						
MZR				P	**Pn**	**07 41 51.0**	**+0.1**
	SNR=27						
MZR				S	**Sn**	**07 42 46.9**	**+3.8**
MZR				S	**Sn**	**07 42 46.9**	**+3.8**
MZR	**Muzera**	**4.48**	**198**	*i* P	**Pn**	**07 41 50.7**	**-0.2**
	SNR=22						
SMRA	**Abu-Samra**	**4.53**	**237**	P	**Pn**	**07 41 52.9**	**+1.5**
	SNR=86						
SMRA				S	**Sn**	**07 42 46.7**	**+2.6**
UMZA	**Um Al Zommool**	**4.56**	**178**	P	**Pn**	**07 41 51.9**	**0.0**
UMZA				P	**Pn**	**07 41 51.9**	**0.0**
UMZA				S	**Sn**	**07 42 47.8**	**+2.9**
UMZA				S	**Sn**	**07 42 47.8**	**+2.9**
SHBH2	**SHBH2**	**4.61**	**227**	S	**Sn**	**07 42 47.1**	**+1.1**
SHBH2	**SHBH2**	**4.61**	**227**	P	**Pn**	**07 41 52.4**	**-0.1**
KLNJ	**Kolanjah**	**4.75**	**322**	Pn	**Pn**	**07 41 57.6**	**+2.7**
KLNJ	**Kolanjah**	**4.75**	**322**	*e*PnA		07 41 56.3	
KLNJ				IAML		07 44 00.3	
	comp=Z,5μm,1.0s						
SHBH1	**SHBH1**	**4.86**	**220**	S	**Sn**	**07 42 52.7**	**+0.3**
SHBH1	**SHBH1**	**4.86**	**220**	P	**Pn**	**07 41 55.2**	**-0.9**
BTHS		**4.94**	**230**	S	**Sn**	**07 42 57.6**	**+3.2**
BTHS		**4.94**	**230**	P	**Pn**	**07 41 57.5**	**+0.3**
ICHK	**Chekchek**	**4.96**	**354**	Pn	**Pn**	**07 41 60.0**	**+2.3**
SMDO	**Samad**	**5.04**	**146**	P	**Pn**	**07 41 58.8**	**+0.1**
	SNR=112						
SMDO				P	**Pn**	**07 41 58.8**	**+0.1**
	SNR=112						
SMDO				S	**Sn**	**07 43 00.3**	**+3.3**
SMDO				S	**Sn**	**07 43 00.3**	**+3.3**
IRAM	**Ramesheh**	**5.04**	**334**	Pn	**Pn**	**07 42 01.5**	**+2.8**
YZKH	**Yazd**	**5.09**	**356**	*e*Pn	**Pn**	**07 42 01.7**	**+2.4**
YZKH				IAML		07 43 58.2	
	comp=Z,1μm,1.0s						
CHBR	**Chabahar**	**5.20**	**108**	Pn	**Pn**	**07 41 60.0**	**-0.8**
CHBR	**Chabahar**	**5.20**	**108**	*e*Pn	**Pn**	**07 42 00.4**	**-0.4**
CHBR				IAML		07 43 31.7	
	comp=Z,550nm,1.0s						
WSAR	**Wadi Sarin**	**5.21**	**140**	LR	LR	07 44 35.3	
	comp=Z,80nm,18.7s,baz=346,slow=45						
WSAR	**Wadi Sarin**	**5.21**	**140**	P	**Pn**	**07 42 01.2**	**+0.4**
	SNR=64						
WSAR				S	**Sn**	**07 43 03.3**	**+2.3**
SHOFU	**Shofu**	**5.22**	**245**	P	**Pn**	**07 42 01.5**	**+0.5**
ABEH	**Behbahan**	**5.30**	**310**	Pn	**Pn**	**07 42 04.2**	**+2.0**
NHFOF	**Ain Dar Gosp**	**5.40**	**253**	S	**Sn**	**07 43 07.1**	**+1.3**
NHFOF				P	**Pn**	**07 42 05.3**	**+1.8**
ARIRA	**AirJ**	**5.56**	**260**	P	**Pn**	**07 42 07.5**	**+1.9**
ARIRA	**AirJ**	**5.56**	**260**	S	**Sn**	**07 43 11.1**	**+1.5**
ZHSF	**Zahedan**	**5.59**	**64**	Pn	**Pb**	**07 42 18.7**	**-2.0**
IBRJ	**Brojen**	**5.63**	**326**	Pn	**Pn**	**07 42 09.7**	**+2.8**
JMDO	**Jabal Madar**	**5.66**	**149**	P	**Pn**	**07 42 07.2**	**+0.2**
	SNR=29						
JMDO				P	**Pn**	**07 42 07.2**	**+0.2**
	SNR=29						
JMDO				S	**Sn**	**07 43 13.7**	**+1.7**
JMDO				S	**Sn**	**07 43 13.7**	**+1.7**
IGAR	**Gharneh**	**5.70**	**334**	Pn	**Pn**	**07 42 10.3**	**+2.4**
NASN	**Na'in**	**5.81**	**342**	*e*Pn	**Pn**	**07 42 11.4**	**+2.1**
NASN				IAML		07 44 14.2	
	comp=Z,1μm,1.0s						
NGCH	**Negor - Chabah**	**5.84**	**108**	Pn	**Pn**	**07 42 08.9**	**-0.6**
NGCH	**Negor - Chabah**	**5.84**	**108**	P	**Pn**	**07 42 09.9**	**+0.4**
	SNR=14						
NGCH				S	**Sn**	**07 43 16.4**	**-0.1**
BSRN	**Basiran**	**5.89**	**37**	Pn	**Pn**	**07 42 12.0**	**+1.7**
BSRN	**Basiran**	**5.89**	**37**	*e*Pn	**Pn**	**07 42 11.7**	**+1.4**
BSRN				IAML		07 44 19.2	
	comp=Z,700nm,1.0s						
WBK	**Wadi Bani Khal**	**5.89**	**141**	P	**Pn**	**07 42 09.2**	**-1.1**
	SNR=22						
WBK				S	**Sn**	**07 43 18.4**	**+0.4**
TPRV	**Parvadeh(Tabas**	**5.90**	**14**	Pn	**Pn**	**07 42 12.9**	**+2.4**
ANAR	**Anarak**	**5.98**	**350**	Pn	**Pn**	**07 42 14.2**	**+2.7**
ZNGN	**Zangian**	**6.01**	**324**	Pn	**Pn**	**07 42 13.8**	**+1.7**
IKOO	**Kooshah**	**6.19**	**33**	Pn	**Pn**	**07 42 15.9**	**+1.4**
JHBN	**Jahan bin**	**6.20**	**324**	Pn	**Pn**	**07 42 17.6**	**+3.0**
IPIR	**Pirpir**	**6.44**	**328**	Pn	**Pn**	**07 42 20.1**	**+2.0**
ITEG	**Tejag**	**6.47**	**29**	Pn	**Pn**	**07 42 20.3**	**+2.0**
JLN	**Jalan Bani Buh**	**6.51**	**141**	P	**Pn**	**07 42 17.3**	**-1.4**
	SNR=56						
JLN				S	**Sn**	**07 43 33.7**	**+0.8**
TKDS	**Koohdasht(Taba**	**6.56**	**16**	Pn	**Pn**	**07 42 20.8**	**+1.2**
SRVN	**Saravan**	**6.59**	**87**	Pn	**Pn**	**07 42 20.6**	**+0.7**
SRVN	**Saravan**	**6.59**	**87**	*e*Pn	**Pn**	**07 42 20.8**	**+0.9**
SRVN				IAML		07 43 41.5	
	comp=Z,340nm,1.0s						
TABS	**Tabas**	**6.60**	**16**	*e*Pn	**Pn**	**07 42 22.1**	**+2.1**
TABS				IAML		07 44 43.7	
	comp=Z,920nm,1.0s						
IKLH	**Kolahrood**	**6.69**	**335**	Pn	**Pn**	**07 42 23.9**	**+2.5**
TNSJ	**Nastanj**	**6.80**	**11**	Pn	**Pn**	**07 42 23.7**	**+1.0**
MHTO	**MHTO**	**6.84**	**156**	P	**Pn**	**07 42 21.6**	**-1.6**
	SNR=103						
MHTO				P	**Pn**	**07 42 21.6**	**-1.6**
	SNR=103						
IDAH	**Dahanechah**	**6.88**	**37**	Pn	**Pn**	**07 42 25.9**	**+1.9**
AFRZ	**Afriz**	**7.03**	**29**	Pn	**Pn**	**07 42 27.8**	**+1.7**
QAMS	**Qamsar**	**7.13**	**335**	Pn	**Pn**	**07 42 29.8**	**+2.3**
ISFB	**Sefidab**	**7.42**	**342**	Pn	**Pn**	**07 42 32.6**	**+1.2**
DQM	**DQM**	**7.69**	**162**	P	**Pn**	**07 42 32.9**	**-2.0**
	SNR=22						
DQM				P	**Pn**	**07 42 32.9**	**-2.0**
	SNR=22						
KHMZ	**Khomeyn**	**7.75**	**327**	*e*Pn	**Pn**	**07 42 38.0**	**+2.0**
KHMZ				IAML		07 44 13.2	
	comp=Z,580nm,1.0s						
TAPT	**Tabas- Tapeh t**	**7.79**	**13**	Pn

KCHF	Cheshme Sefid,	9.76	317		Pn		Pn	07 43 04.8	+1.4	
RBK	Rabkut	9.77	184		P		Pn	07 43 01.4	-2.1	
	SNR=33									
RBK					P		Pn	07 43 01.4	-2.1	
	SNR=33									
IAKL	Akhelmad	9.82	18		Pn		Pn	07 43 06.8	+2.4	
SNQR	Sonqor, Kerman	9.83	322		Pn		Pn	07 43 05.6	+1.1	
IGZV	Ghazvin	9.93	337		Pn		Pn	07 43 06.9	+1.0	
IMND	Minoodasht	9.95	2		Pn		Pn	07 43 08.3	+2.5	
ABTO	Aybut	10.01	189		P		Pn	07 43 05.2	-1.7	
	SNR=30									
ABTO					P		Pn	07 43 05.2	-1.7	
	SNR=30									
IMYA	Miami	10.01	24		Pn		Pn	07 43 09.8	+2.9	
ISFR	Sfrayin	10.06	14		Pn		Pn	07 43 11.0	+3.3	
IGHG	Ghaleghazi	10.08	316		Pn		Pn	07 43 08.1	+0.2	
IKRD	Kardeh	10.21	21		Pn		Pn	07 43 13.1	+3.5	
GLG1	Gilan-e-Gharb	10.36	313		Pn		Pn	07 43 12.8	+1.2	
JIR1	Jirandeh	10.37	336		Pn		Pn	07 43 13.8	+2.1	
MRVT	Maraveh tapeh	10.38	5		Pn		Pn	07 43 14.4	+2.5	
MRVT	Maraveh tapeh	10.38	5	*e*	Pn		Pn	07 43 14.3	+2.5	
IDHR	Dehrash	10.44	317		Pn		Pn	07 43 12.8	0.0	
IEMG	Emamgholi	10.56	16		Pn		Pn	07 43 14.9	+0.4	
ZNJK	Zanjan	10.77	332		Pn		Pn	07 43 18.4	+1.1	
ZNJK	Zanjan	10.77	332	*e*	Pn		Pn	07 43 19.2	+1.8	
IHSH	Hashtrud	11.93	329		Pn		Pn	07 43 34.1	+0.9	
LKRN	Lenkeran, Azer	12.52	337		P		Pn	07 43 44.2	+3.2	
IAZR	Azarshahr	12.84	326		Pn		Pn	07 43 47.2	+1.5	
IHRS	Heris	12.86	331		Pn		Pn	07 43 47.8	+1.9	
GRMI	Germi	12.93	334		Pn		Pn	07 43 47.5	+0.7	
GRMI	Germi	12.93	334	*e*	Pn		Pn	07 43 49.3	+2.5	
ITBZ	Tabriz	13.20	328		Pn		Pn	07 43 52.3	+1.8	
ISHB	Shabestar	13.49	327		Pn		Pn	07 43 58.1	+3.5	
IMRD	Marand	13.79	328		Pn		Pn	07 44 01.9	+3.3	
CUKT	Cukurca	13.82	319		P		Pn	07 43 43.8	-15	
HAKT	HAKKARI	13.97	320		P		Pn	07 44 01.1	-0.1	
HAKT				*i*	IAML			07 44 19.0		
	comp=Z,89nm,0.6s									
HAKT				*i*	IAML			07 44 24.0		
	comp=Z,98nm,0.6s									
KBL	Kabul	14.05	56				Pn	07 44 03.0	+0.8	
KBL	Kabul	14.05	56		P		Pn	07 44 03.0	+0.8	
KBU	Kabul Universi	14.11	56		P		Pn	07 44 03.3	+0.3	
NAX	Nakhchivan	14.26	329		P		Pn	07 44 07.2	+2.3	
SIRN	Sırnak	14.70	317		P		Pn	07 44 09.2	-1.7	
SIRN					S		P	07 44 23.2	+6.1	
SIRN				*i*	IAML			07 44 30.0		
	comp=Z,162nm,0.6s									
SIRN				*i*	IAML			07 44 50.0		
	comp=Z,148nm,0.7s									
PERV	Siirt/Pervari-	14.91	319		P		Pn	07 44 15.8	+1.9	
PERV					S		P	07 44 23.2	+3.6	
MNGR	Mingechevir, A	14.95	336		P		P	07 44 19.6	-0.2	
GANJ	Ganja	15.13	334		P		P	07 44 21.3	-0.5	
MIDY	Mardin/Midyat-	15.27	315		P		Pn	07 44 19.1	+0.5	
MIDY					S		P	07 44 30.6	+7.1	
MIDY				*i*	IAML			07 44 44.0		
	comp=Z,211nm,0.6s									
MIDY				*i*	IAML			07 44 48.0		
	comp=Z,148nm,0.9s									
SEKA	Sheki	15.29	337		P		P	07 44 24.2	+0.5	
SRTM	Siirt_Merkez	15.31	317		P		Pn	07 44 18.3	-0.9	
SRTM					S		P	07 44 27.3	+3.3	
SRTM				*i*	IAML			07 44 43.0		
	comp=Z,130nm,0.5s									
SRTM				*i*	IAML			07 44 59.0		
	comp=Z,104nm,0.9s									
AKT	Akhty	15.36	339	*e*	P		Pn	07 44 18.8	-1.0	
AKT				*e*	S		Sn	07 47 10.1	+0.1	
AKT					pmax		pmax			
	comp=Z,6.0nm,0.6s									
AKT					smax		smax			
	comp=N,15nm,0.6s									
AKT					smax		smax			
	comp=E,13nm,0.6s									
AKT					MLR		MLR			
	comp=Z,5μm,9.0s									
GNI	Garni	15.39	329				Pn	07 44 20.1	0.0	
GNI	Garni	15.39	329		Pn		P	07 44 23.1	-1.7	
	comp=Z,1.0nm,0.3s,baz=171,slow=4.0,SNR=9.5									
GNI					Sn		Sn	07 47 11.5	+0.8	
	comp=Z,1.7nm,0.3s,baz=166,slow=8.3,SNR=0.9									
GNI					Lg		Lg	07 48 51.9		
	comp=Z,1.5nm,0.3s,baz=176,slow=20,SNR=1.5									
GNI					LR		LR	07 51 31.8		
	comp=Z,10μm,21.5s,baz=140,slow=42 comp=Z,16nm,0.4s									
GNI	Garni	15.39	329	*i*	P		Pn	07 44 19.1	-1.1	
ADCV	BITLIS_Adilcev	15.40	321		P		Pn	07 44 20.7	+0.4	
ADCV				*i*	IAML			07 44 47.0		
	comp=Z,38nm,1.0s									
ADCV				*i*	IAML			07 44 56.0		
	comp=Z,37nm,1.0s									
MARD	Mardin	15.61	313		P		Pn	07 44 20.7	-2.4	
MARD					S		P	07 44 34.7	+7.3	
MARD	Mardin	15.61	313				Pn	07 44 21.1	-2.0	
MARD					IAmb		IAmb	07 44 31.4		
	comp=Z,197nm,0.7s									
GURO	Guroymak-BITLI	15.62	319				Pn	07 44 21.7	-1.5	
BTMN	Batman	15.65	316		P		P	07 44 30.6	+2.9	
DORK	Agr/Tutak/Do	15.78	323		P		P	07 44 30.6	+1.3	
EATA	Eleskirt	16.28	324		P		P	07 44 33.8	-1.1	
CHGR	Chuyangaron	16.40	43				Pn	07 44 30.9	-2.3	
CHGR	Chuyangaron	16.40	43		P		Pn	07 44 30.9	-2.3	
CHGR					pmax		pmax			
	comp=Z,97nm,1.2s									
ASF	Jabal al Asfar	16.45	292		Pn		Pn	07 44 33.9	+0.1	
	comp=Z,2.1nm,0.3s,baz=119,slow=5.5,SNR=14									
ASF					Sn		Sn	07 47 29.6	-6.9	
	comp=Z,1.7nm,0.3s,baz=184,slow=23,SNR=6.3									
ASF					Lg		Lg	07 49 31.1		
	baz=128,slow=19									
ASF					LR		LR	07 52 47.7		
	comp=Z,2μm,18.9s,baz=111,slow=44 comp=Z,19nm,0.6s									
TBLG	Delisi	16.68	332		P		P	07 44 40.7	+1.7	
MAK	Makhachkala	16.78	341	*c*	*i* P		Pn	07 44 34.6	-3.2	
MAK				*e*	S		Sn	07 47 41.7	-2.5	
MAK					pmax		pmax			
	comp=Z,364nm,1.3s									
MAK					MLR		MLR			
	comp=Z,4μm,11.0s									
SURC	SANLIURFA_SURC	16.83	309		P		Pn	07 44 37.9	-0.7	
HANM	anlurfa/Hi	17.01	311		P		P	07 44 42.9	+0.1	
KOVA	Elazig, Kovanc	17.05	316		P		P	07 44 43.7	+0.4	
GAR	Garm	17.32	44		P		Pn	07 44 43.5	-1.4	
FKH	Fakeheh	17.40	298	*e*	P		P	07 44 46.9	-0.2	
GHAJ	Ghor Haditha	17.41	288				Pn	07 44 44.5	-1.4	
BALJ	Balqa	17.48	291		IAmb		IAmb	07 44 54.6		
	comp=Z,189nm,0.8s									
KOPT	Kop Dagi	17.48	320				Pn	07 44 46.6	-0.4	
RCY	Rachaya	17.64	295	*e*	P		P	07 44 49.9	+0.1	
BEIL	Beino	17.67	299	*e*	P		P	07 44 50.2	+0.1	
SHBL	Chebaa	17.67	295	*e*	P		P	07 44 50.4	+0.2	
HWQ	Hawqa	17.77	298	*e*	P		Pn	07 44 50.7	+0.2	
QRWL	Qaraoun	17.77	295	*e*	P		P	07 44 51.7	+0.4	
EIL	Elat	17.78	282		P		P	07 44 51.2	0.0	
	comp=Z,2.8nm,0.3s,baz=73,slow=4.3,SNR=31									
EIL					S		S	07 48 12.6	-3.1	
	comp=Z,106nm,1.2s,baz=192,slow=20,SNR=1.4									
EIL					Lg		Lg	07 50 11.2		
	baz=6.5,slow=15									
EIL					LR		LR	07 53 09.7		
	comp=Z,2μm,19.3s,baz=71,slow=42 comp=Z,73nm,0.9s									
MMAI	Mount Meron Ar	17.87	293		P		P	07 44 52.5	+0.2	
	comp=Z,4.2nm,0.3s,baz=107,slow=14,SNR=20									
MMAI					S		Sn	07 48 03.1	-7.8	
	comp=Z,13nm,0.6s,baz=110,slow=12,SNR=2.0									
MMAI					LR		LR	07 53 26.8		
	comp=Z,3μm,20.1s,baz=98,slow=43 comp=Z,46nm,0.7s									
BHL	Bhannes	17.89	296	*e*	P		P	07 44 52.7	+0.1	
GAZ	Gaziantep	17.95	308		P		Pn	07 44 52.1	-0.6	
DRK	Karamyk	18.53	45		P		Pn	07 45 00.1	+0.1	
DRK	Karamyk	18.53	45		P		Pn	07 45 00.1	+0.1	
DRK					pmax		pmax			
	comp=Z,85nm,0.8s									
NEUR	Neytrino	18.80	331	*i*	P		Pn	07 45 04.9	+1.9	
NEUR					pmax		pmax			
	comp=Z,59nm,2.0s									
KBZ	Khabaz	19.09	332		P		Pn	07 45 07.7	+1.3	
	comp=Z,0.8nm,0.3s,baz=135,slow=8.3,SNR=40									
KBZ					S		S	07 48 46.4	+4.3	
	comp=Z,5.9nm,0.9s,baz=64,slow=12,SNR=0.8									
	comp=Z,43nm,0.9s									
KBZ	Khabaz	19.09	332	*i*	P		Pn	07 45 06.9	+0.5	
CHM	Chimkent	19.16	35	*e*	P		P	07 45 05.6	-0.8	
CHM					LR		LR	07 53 36.8		
	comp=Z,3μm,15.5s									
CHM	Chimkent	19.16	35	*e*	P		P	07 45 05.6	-0.8	
CHM					MLR		MLR			
	comp=Z,3μm,15.0s									
SHA1	Shidzhatmaz	19.20	332	⇓	*i* P		Pn	07 45 09.5	+1.5	
IUG	luzhnay	19.26	36	*e*	P		P	07 45 06.7	-0.9	
IUG				*e*	S		Sn	07 48 43.3	-1.1	
IUG	luzhnay	19.26	36	*e*	P		P	07 45 06.6	-0.9	
IUG				*e*	S		Sn	07 48 43.3	-1.1	
KVAR	Kislovodsk Arr	19.36	332		P		Pn	07 45 10.6	+0.8	
	baz=90,slow=19									
KVAR					S		S	07 48 48.5	+0.7	
	comp=Z,21nm,0.9s,baz=151,slow=19,SNR=1.8 comp=Z,26nm,0.7s									
KIV	Kislovodsk	19.37	332		P		Pn	07 45 10.3	+0.5	
KIV	Kislovodsk	19.37	332	⇑	P		Pn	07 45 11.3	+1.5	
KIV	Kislovodsk	19.37	332	*i*	P		Pn	07 45 10.7	+0.9	
	SNR=18									
KIV	Kislovodsk	19.37	332	*e*	P		P	07 45 08.3	-0.4	
KIV				*e*	S		S	07 48 47.9	+0.1	
KIV					pmax		pmax			
	comp=Z,137nm,1.0s									
KIV					MLR		MLR			
	comp=Z,1μm,14.0s									
KIV	Kislovodsk	19.37	332		P		P	07 45 08.7	0.0	
	comp=Z,4μmcomp=Z,318nm,0.9s									
ATD	Arta Tunnel	19.39	218		P		P	07 45 08.7	-0.4	
ATD	Arta Tunnel	19.39	218		P		Pn	07 45 10.0	-0.3	
	comp=Z,1.2nm,0.8s,baz=4.8,slow=11,SNR=8.7									
ATD					S		S	07 48 50.0	+1.4	
	comp=Z,0.3nm,0.5s,baz=308,slow=19,SNR=1.4									
ATD					Lg		Lg	07 51 01.1		
	baz=30,slow=23,SNR=1.1									
ATD					LR		LR	07 54 12.8		
	comp=Z,387nm,21.3s,baz=36,slow=42									
ATD	Arta Tunnel	19.39	218		P		Pn	07 45 10.8	+0.6	
	SNR=11									
BNN	Bunyan	19.71	311		P		Pn	07 45 14.3	+0.2	
BNN					IAmb		IAmb	07 45 24.8		
	comp=Z,162nm,1.1s									
OHH	Osh	19.76	44		P		P	07 45 11.3	-1.7	
BRLS	Borolday	19.80	34	*e*	P		P	07 45 09.7	-3.7	
BRLS				*e*	S		S	07 48 49.9	-6.5	
BRLS	Borolday	19.80	34	*e*	P		P	07 45 09.7	-3.7	
BRLS				*e*	S		S	07 48 49.8	-6.5	
CSS	Mathiatis	20.03	298		P		P	07 45 16.0	0.0	
CSS					IAmb		IAmb	07 45 28.6		
	comp=Z,230nm,1.1s									
CSS	Mathiatis	20.03	298		P		P	07 45 15.8	-0.2	
	comp=Z,4μmcomp=Z,206nm,1.0s									
TOKA	Tokat	20.09	315		P		P	07 45 17.2	+0.7	
TOKA					IAmb		IAmb	07 45 26.6		
	comp=Z,384nm,1.7s									
GOF	Gofitskoye	20.14	335	*c*	*e* P		P	07 45 18.0	+0.9	
VSLR	Vesyoloye	20.17	327	*d*	*i* P		Pn	07 45 18.8	-0.5	
VSLR					pmax		pmax			
	comp=Z,112nm,0.8s									
KK31	Karatay Array	20.19	35				P	07 45 18.0	+0.4	
KK31	Karatay Array	20.19	35		P		P	07 45 18.0	+0.4	
KK31					pmax		pmax			
	comp=Z,95nm,1.1s									
KKAR	Karatay Array	20.19	35		P		P	07 45 16.9	-0.7	
KKAR	Karatay Array	20.19	35		P		P	07 45 16.9	-0.7	
ARSB	Arslanbob	20.36	42				P	07 45 19.9	+0.3	
ARSB					IAmb		IAmb	07 45 30.2		
	comp=Z,423nm,1.8s									
ARSB	Arslanbob	20.36	42		P		P	07 45 19.9	+0.3	
ARSB					pmax		pmax			
	comp=Z,423nm,1.8s									
SOC	Sochi	20.42	327	*e*	P		P	07 45 20.4	+0.3	
SOC				*e*	PPP		PPP	07 45 42.7		
SOC				*e*				07 49 10.6		
SOC				*e*	SS		Sn	07 49 28.6	+16	
SOC				*e*	SSS		SSS	07 49 42.5		
SOC					pmax		pmax			
	comp=Z,133nm,0.7s									
SOC					MLR		MLR			
	comp=Z,6μm,14.0s									
DZA	Taraz	20.46	36	*e*	P		P	07 45 19.7	-0.9	
DZA	Taraz	20.46	36	*e*	P		P	07 45 19.7	-0.9	
LABN	Labinsk	20.76	330	*e*	P		Pn	07 45 25.2	-0.9	
LABN				*e*	*PP		pP	07 45 27.6	+0.7	
LABN				*e*	S		Sn	07 49 20.3	-0.1	
LABN					pmax		pmax			
	comp=Z,287nm,0.9s									
LABN					MLR		MLR			
	comp=E,12μm,14.0s									
LABN					MLR		MLR			
	comp=Z,5μm,15.0s									
LABN					MLR		MLR			
	comp=N,4μm,13.0s									
KIRS	Kirsehir-Merke	21.17	309	⇑	P		P	07 45 30.6	+2.2	
KSH	Kashi	21.28	50		P		P	07 45 23.4	-6.2	
KSH					sP		pP	07 45 31.0	-1.7	
KSH					S		S	07 49 09.2	-17	
KSH					pmax		pmax			
	comp=N,49nm,0.8s									
KSH					LR		LR			
	comp=N,6μm,12.7s									
KSH					LR		LR			
	comp=N,7μm,12.4s									
KSH					LR		LR			
	comp=N,8μm,13.0s									
ARLS	Aral	21.49	42		P		P	07 45 32.0	+0.2	
BR104	Keskin Array S	21.62	310		P		P	07 45 33.1	-0.2	
	comp=N,1μmcomp=N,146nm,1.0s									
BR131	Keskin Array S	21.64	310				P	07 45 34.3	+0.9	
BR131					IAmb		IAmb	07 45 47.1		
	comp=Z,158nm,1.1s									
BR131	Keskin Array S	21.64	310	*d*	*i* P		P	07 45 34.1	+0.7	
BRTR	Keskin Array B	21.64	310		P		P	07 45 33.1	-0.3	
BRTR	Keskin Array B	21.64	310		P		P	07 45 34.4	+0.9	
	comp=Z,60nm,0.7s,baz=136,slow=9.7,SNR=98									
BRTR					S		S	07 49 34.1	+1.0	
	comp=Z,2.8nm,1.0s,baz=161,slow=10,SNR=1.4									
BRTR					LR		LR	07 55 21.7		
	comp=Z,3μm,18.0s,baz=114,slow=41 comp=Z,60nm,0.7s									
BR105	Keskin Array S	21.65	310		P		P	07 45 33.3	-0.2	
	comp=Z,1μmcomp=Z,147nm,1.1s									
BR106	Keskin Array S	21.65	310		P		P	07 45 33.4	-0.2	
	comp=Z,891nmcomp=Z,111nm,0.9s									
EKS2	Erkin-Say	21.66	40		P		P	07 45 34.3	+0.7	
	SNR=53									
ERBR	Yeremizino-Bor	21.71	332		*e* P		P	07 45 34.3	+0.3	
ERBR					*e**PP		pP	07 45 36.6	-0.5	
ERBR					*e*S		S	07 49 37.3	+3.1	
ERBR					pmax		pmax			
	comp=Z,92nm,1.1s									
ERBR					MLR		MLR			
	comp=N,6μm,12.0s									
ERBR					MLR		MLR			
	comp=E,2μm,12.0s									
ERBR					MLR		MLR			
	comp=Z,2μm,14.0s									
UCH	Uchtor	21.82	42		P		P	07 45 31.9	-3.8	
	SNR=40									
AAK	Ala-Archa	22.05	41		P		P	07 45 37.2	-0.7	
AAK					IAmb		IAmb	07 45 56.0		
	comp=Z,181nm,1.1s									
AAK	Ala-Archa	22.05	41		LR		LR	07 54 43.4		
	comp=Z,6μm,20.0s,baz=244,slow=38									
AAK	Ala-Archa	22.05	41		P		P	07 45 39.4	+1.5	
	SNR=13									
AAK	Ala-Archa	22.05	41	*i*	P		P	07 45 38.4	+0.5	
	SNR=14									
AAK	Ala-Archa	22.05	41	*i*	P		P	07 45 37.6	-0.3	
AAK					pmax		pmax			
	comp=Z,1μm,1.3s									
FRU1	Bishkek	22.24	41		P		P	07 45 43.4	+3.6	
ILGA	Ilgaz	22.25	314		P		P	07 45 40.6	+0.6	
ABKAR	Akbulak array	22.26	9				P	07 45 39.8	0.0	
ANTO	Ankara	22.28	310		P		P	07 45 39.0	-1.3	
ANTO	Ankara	22.28	310	⇑	P		P	07 45 42.2	+2.0	
ANTO	Ankara	22.28	310		P		P	07 45 42.2	+2.0	
ANTO	Ankara	22.28	310		P		P	07 45 40.0	-0.2	
	comp=Z,2μmcomp=Z,152nm,1.1s									
KBK	Karagaybulak	22.33	41		P		P	07 45 42.1	+1.1	
	SNR=22									
CHMS	Chumysh	22.43	41		P		P	07 45 44.6	+2.8	
	SNR=11									
ANN	Anapa	22.43	326	*e*	P		P	07 45 43.5	+1.8	
ANN				*e*	*PP		pP	07 45 45.5	+0.7	
ANN				*e*				07 46 06.8		
ANN				*e*	S		S	07 49 53.0	+5.1	
ANN				*e*	SS		SnSn	07 50 23.0	+6.8	
ANN					pmax		pmax			
	comp=Z,59nm,0.8s									
ANN					MLR		MLR			
	comp=Z,5μm,21.0s									
ANN					MLR		MLR			
	comp=E,4μm,16.0s									
ANN					MLR		MLR			
	comp=N,5μm,19.0s									
USP	Ospenovka	22.45	40		P		P	07 45 44.8	+2.8	
	SNR=25									
BZK	Bozkurt	22.55	316	⇑	P		P	07 45 46.1	+3.0	
SGDS	Sogindy	22.64	39	*e*	P		P	07 45 43.2	-0.8	
BOOM	Boomskoye usch	22.83	43		IAmb		IAmb	07 45 60.0		
	comp=Z,135nm,1.0s									
TKM2	Tokmak 2	22.87	42		P		P	07 45 46.6	0.0	
	SNR=28									
ULHL	Ulahol	22.88	44		P		P	07 45 49.8	+3.0	
	SNR=11									
ISP	Isparta	23.08	303	⇓	*i* P		P	07 45 50.6	+1.8	
ISP					pmax		pmax			
	comp=Z,45nm,0.9s									
CIDE	Kastamonu/Cide	23.17	315	⇑	P		P	07 45 51.9	+2.4	
ELL	Elmali	23.21	300		P		P	07 45 49.9	-0.2	
ELL					IAmb		IAmb	07 46 09.1		
	comp=Z,182nm,1.2s									
ELL	Elmali	23.21	300		P		P	07 45 49.9	-0.2	
ELL					pmax		pmax			
	comp=Z,182nm,1.2s									
AKTO	Aktyubinsk	23.23	5		LR		LR	07 56 46.2		
	comp=Z,13μm,18.6s,baz=194,slow=42									
AKTO	Aktyubinsk	23.23	5		P		P	07 45 49.6	-0.4	
AKAS	Kas	23.30	299		P		P	07 45 50.1	-1.0	
AKAS					IAmb		IAmb	07 46 09.3		
	comp=Z,114nm,0.8s									
KDJ	Kajisay	23.40	45		IAmb		IAmb	07 46 11.9		
	comp=Z,69nm,0.9s									
TARG	Taragay, Kyrgy	23.59	46		P		P	07 45 54.2	0.0	
TARG					IAmb		IAmb	07 46 00.9		
	comp=Z,157nm,1.5s									
TARG	Taragay, Kyrgy	23.59	46		P		P	07 45 54.2	0.0	
TARG					pmax		pmax			
	comp=Z,157nm,1.5s									
TNSS	Tian-Shan	23.75	43	*e*	P		P	07 45 54.7	-1.0	
TNSS	Tian-Shan	23.75	43	*e*	P		P	07 45 54.7	-1.0	
AAA	Alma-Ata	23.83	43	*e*	P		P	07 45 55.6	-0.6	
	comp=Z,62nm,1.1s									
AAA	Alma-Ata	23.83	43	*e*	P		P	07 45 55.5	-0.6	
AAA					pmax		pmax			
	comp=Z,62nm,1.1s									
HYBB	Hyderabad (bro	23.86	109	*e*	P		P	07 45 56.8	+0.1	
HYBB				*e*	sP		sP	07 46 01.2	0.0	
HYBB				*e*	S		S	07 50 13.9	+1.1	
MDOK	Medeo	23.88	43	*e*	P		P	07 45 55.8	-1.0	
MDOK				*e*	S		S	07 50 12.5	-0.5	
MDOK					LR		LR	07 55 59.7		
MDOK	Medeo	23.88	43	*e*	P		P	07 45 55.7	-1.0	
MDOK				*e*	S		S	07 50 12.4	-0.5	
BORA	Eskisehir	23.90	308		P		P	07 45 57.0	+0.1	
BORA					IAmb		IAmb	07 46 23.8		
	comp=Z,166nm,1.3s									
FURI	Furi	23.93	223		LR		LR	07 55 45.8		
	comp=Z,4μm,20.5s,baz=38,slow=38									
SAHE	Sakarya_HENDEK	24.04	310	⇓	P		P	07 46 00.7	+2.6	
SIM	Simferopol'	24.27	322	*e*	P		P	07 46 00.8	+0.6	
SIM				*e*	S		S	07 50 20.8	+2.0	
SIM					pmax		pmax			
	comp=Z,83nm,0.8s									
SIM					smax		smax			
	comp=N,70nm,16.0s									
ARG	Arkhangelos	24.45	298		P		P	07 46 00.8	-1.1	
ARG	Arkhangelos	24.45	298		P		P	07 46 00.8	-1.1	
ARG					pmax		pmax			
	comp=Z,182nm,1.1s									
SATY	Saty	24.66	44	*e*	P		P	07 46 03.3	-0.6	
SATY				*e*	S		S	07 50 25.2	-0.2	
SATY	Saty	24.66	44	*e*	P		P	07 46 03.2	-0.6	
SATY				*e*	S		S	07 50 25.1	-0.2	
MANT	Manisa	24.76	303		P		P	07 46 04.5	-0.5	
MANT					IAmb		IAmb	07 46 12.7		
	comp=Z,74nm,0.9s									
KARP	Karpathos	25.07	296		P		P	07 46 08.5	+0.9	
KARP	Karpathos	25.07	296		P		P	07 46 07.4	-0.2	
	comp=Z,5μmcomp=Z,428nm,0.9s									
UZB	Uzynbulak	25.09	45	*e*	P		P	07 46 07.0	-0.7	
	comp=Z,70nm,1.6s									
UZB	Uzynbulak	25.09	45	*e*	P		P	07 46 07.0	-0.7	
UZB					pmax		pmax			
	comp=Z,70nm,1.6s									
SHLS	Shalkode	25.37	45	*e*	P		P	07 46 11.1	+0.8	
	comp=Z,90nm,1.5s									
SHLS	Shalkode

HARR Harsova 27.76 316 ⇓P P 07 46 33.3 +1.7
HARR Harsova 27.76 316 P P 07 46 33.3 +1.7
RDO Rodhopi 27.85 307 P P 07 46 33.8 +1.3
RDO IAmb IAmb 07 47 01.5
comp=Z,58nm,1.0s
CFR Carcaliu 27.88 317 ⇑P P 07 46 34.7 +2.0
CFR Carcaliu 27.88 317 P P 07 46 34.7 +2.0
LPSR Galich'ya Gora 27.99 339 eP P 07 46 33.2 -0.4
LPSR eS S 07 51 16.2 -1.4
LPSR pmax pmax
comp=Z,170nm,0.8s
LPSR smax smax
comp=E,2μm,12.7s
LPSR MLR MLR
comp=Z,1μm,13.0s
RAZG Razgrad 28.14 313 ⇓P P 07 46 37.6 +2.5
BORK Borovoye 28.14 20 ⇑iP P 07 46 34.8 -0.2
BORK pmax pmax
comp=Z,73nm,2.0s
BVA0 Borovoye Array 28.15 20 P P 07 46 34.4 -0.6
BVAR Borovoye Array 28.15 20 P P 07 46 34.6 -0.4
comp=Z,28nm,0.7s,baz=214,slow=6.4,SNR=68
BVAR PcP PcP 07 49 50.0 +1.2
comp=Z,8.9nm,0.9s,baz=256,slow=0.7,SNR=3.0
BVAR S S 07 51 16.9 -3.2
comp=Z,2.4nm,1.0s,baz=116,slow=8.8,SNR=1.1
BVAR LR LR 07 59 33.6
comp=Z,12μm,18.4s,baz=207,slow=40
BVAR P3KPbc 08 18 53.2
comp=Z,2.1nm,0.8s,baz=29,slow=3.3,SNR=5.2
comp=Z,28nm,0.7s
EVN Everest 28.17 81 P P 07 46 35.3 -0.9
EVN IAmb IAmb 07 46 46.7
comp=Z,57nm,1.0s
ELND Elena 28.29 311 ⇑P P 07 46 38.8 +2.3
GHRR 28.77 318 ⇓P P 07 46 43.0 +2.3
MAKZ Makanchi 28.81 40 P P 07 46 40.5 -0.5
MAKZ Makanchi 28.81 40 P P 07 46 41.3 +0.2
ISR Istrita 28.83 316 ⇑P P 07 46 44.0 +2.8
ISR Istrita 28.83 316 P P 07 46 44.0 +2.8
VASR Vaslui 28.85 319 ⇑P P 07 46 43.7 +2.4
MK31 Makanchi Array 28.99 41 iP P 07 46 42.0 -0.6
MK31 pmax pmax
comp=Z,6.0nm,0.5s
MKAR Makanchi Array 28.99 41 P P 07 46 42.1 -0.5
comp=Z,2.5nm,0.3s,baz=226,slow=8.5,SNR=35
MKAR PcP PcP 07 49 53.2 +2.0
comp=Z,3.6nm,0.8s,baz=261,slow=2.9,SNR=2.6
MKAR LR LR 08 00 01.5
comp=Z,4μm,20.1s,baz=236,slow=40
MKAR P3KPbc 08 18 52.8
comp=Z,0.9nm,0.9s,baz=59,slow=7.2,SNR=5.1
comp=Z,2.5nm,0.3s
VRI Vrincioaia 29.08 317 ⇓P P 07 46 44.6 +1.2
VRI Vrincioaia 29.08 317 P P 07 46 44.6 +1.2
VRI Vrincioaia 29.08 317 P P 07 46 43.6 +0.2
comp=Z,966nmcomp=Z,32nm,0.8s
PLOR5 Plostina Array 29.11 317 P P 07 46 43.8 +0.1
comp=Z,3μmcomp=Z,47nm,0.7s
PLOR Plostina 29.12 317 ⇑P P 07 46 46.5 +2.7
PLOR Plostina 29.12 317 P P 07 46 46.5 +2.7
NEHR Nehoiu 29.13 316 ⇓P P 07 46 46.7 +2.8
ARTI Arti 29.18 4 P P 07 46 44.4 +0.2
ARTI IAmb IAmb 07 47 05.6
comp=Z,29nm,0.6s
ARTI Arti 29.18 4 LR LR 08 00 11.0
comp=Z,7μm,18.2s,baz=192,slow=40
ARTI Arti 29.18 4 P P 07 46 43.5 -0.7
ARTI 07 47 35.7
ARTI 07 49 45.8
ARTI S S 07 51 38.8 +2.5
ARTI SS SnSn 07 53 00.8 0.0
ARTI MLR MLR
comp=Z,6μm,16.0s
SRS Serrai 29.23 306 P P 07 46 46.1 +1.3
COPA Copaceanca 29.23 313 ⇑P P 07 46 46.0 +1.3
SOH Sokhos 29.31 306 P P 07 46 47.1 +1.5
SORM Soroca 29.37 322 ⇑P P 07 46 47.0 +1.0
SORM Soroca 29.37 322 P P 07 46 46.9 +1.0
MLR Muntele Rosu 29.37 316 P P 07 46 47.0 +0.8
MLR IAmb IAmb 07 47 37.4
comp=Z,68nm,1.1s
MLR Muntele Rosu 29.37 316 LR LR 08 00 24.7
comp=Z,4μm,21.4s,baz=122,slow=40
MLR Muntele Rosu 29.37 316 ⇓P P 07 46 48.9 +2.7
MLR Muntele Rosu 29.37 316 P P 07 46 48.9 +2.7
MLR Muntele Rosu 29.37 316 P P 07 46 46.2 0.0
comp=Z,1μmcomp=Z,63nm,0.9s
KURBB Kurchatov Arra 29.39 31 P P 07 46 46.3 +0.2
comp=Z,6.4nm,0.5s,baz=230,slow=8.7,SNR=35
KURBB PcP PcP 07 49 53.0 +1.0
comp=Z,2.5nm,0.3s,baz=230,slow=3.2,SNR=4.8
KURBB S S 07 51 44.4 +4.6
comp=Z,0.3nm,0.3s,baz=254,slow=6.6,SNR=0.8
KURBB LR LR 08 00 25.6
comp=Z,10μm,18.2s,baz=222,slow=40
comp=Z,6.4nm,0.5s
TESR Tescani 29.45 318 ⇑P P 07 46 47.7 +1.0
TESR Tescani 29.45 318 P P 07 46 46.7 0.0
comp=Z,1μmcomp=Z,73nm,0.8s
KURK Kurchatov 29.50 31 P P 07 46 46.8 -0.3
KURK Kurchatov 29.50 31 iP P 07 46 47.7 +0.6
KURK pmax pmax
comp=Z,28nm,0.9s
ONER Baraj Valea Uz 29.51 318 ⇑P P 07 46 49.0 +1.7
ITM Ithomi 29.53 298 P P 07 46 47.4 -0.2
ITM IAmb IAmb 07 47 21.5
comp=Z,64nm,1.3s
THE Thessaloniki 29.53 305 P P 07 46 49.4 +1.9
TURR Turia 29.60 317 ⇓P P 07 46 49.4 +1.3
LIT Litokhoron 29.73 304 P P 07 46 51.5 +2.2
KNT Kendrikon 29.74 306 P P 07 46 50.3 +1.0
SVE Sverdlovsk 29.79 6 eP P 07 46 51.0 +1.4
SVE eS S 07 51 49.0 +3.1
SVE pmax pmax
comp=Z,27nm,0.9s
SVE MLR MLR
comp=Z,9μm,13.0s
DOPR Dopca 29.94 316 ⇑P P 07 46 52.3 +1.2
VAY Valandovo 30.02 306 iP P 07 46 53.4 +1.6
ARR Arges 30.14 315 ⇓P P 07 46 54.1 +1.2
AK07 Malin Array Si 30.41 327 P P 07 46 55.4 +0.3
AK09 Malin Array Si 30.41 327 P P 07 46 55.4 +0.2
AK12 Malin Array Si 30.50 327 P P 07 46 56.1 +0.2
AKASG Malin Array Be 30.50 327 P P 07 46 55.0 -1.0
AKASG Malin Array Be 30.50 327 P P 07 46 55.4 -0.5
comp=Z,15nm,0.6s,baz=134,slow=8.4,SNR=52
AKASG PcP PcP 07 49 55.4 +0.6
comp=Z,2.7nm,0.6s,baz=88,slow=2.5,SNR=4.1
AKASG S S 07 51 56.8 -0.3
comp=Z,0.3nm,0.3s,baz=137,slow=15,SNR=1.9
AKASG LR LR 08 01 23.3
comp=Z,2μm,19.1s,baz=136,slow=41
comp=Z,15nm,0.6s
AKBB Malin Array Si 30.50 327 diP P 07 46 55.4 -0.5
AKBB pmax pmax
comp=Z,70nm,0.9s
AKBB Malin Array Si 30.50 327 P P 07 46 55.9 0.0
KIEV Kiev 30.50 327 P P 07 46 55.0 -0.9
KIEV Kiev 30.50 327 iP P 07 46 55.0 -0.9
SNR=39
KIEV Kiev 30.50 327 P P 07 46 55.0 -0.9
KIEV pmax pmax
comp=Z,83nm,1.0s
KIEV Kiev 30.50 327 P P 07 46 56.1 +0.2
comp=Z,5μmcomp=Z,394nm,1.0s
MALK Mahakanadarawa 30.62 123 P P 07 46 56.4 -0.9
MDB Medias 30.65 316 ⇑P P 07 46 59.9 +2.5
MDB Medias 30.65 316 P P 07 46 59.8 +2.5
KMPD K-Podol'skiy 30.65 322 P P 07 46 57.3 0.0
BLKB Belogradchik 30.71 311 ⇑P P 07 46 59.1 +1.1
LUBAR Lubar, Ukraine 30.74 325 P P 07 46 57.9 -0.2
SRE Strehaia 30.76 313 ⇓P P 07 47 00.2 +1.9
SRE Strehaia 30.76 313 P P 07 47 00.2 +1.9
ZSN Zaisan 30.83 41 eP P 07 46 58.5 -0.4
ZSN Zaisan 30.83 41 eP P 07 46 58.5 -0.4
BURAR Bucovina Array 30.86 319 P P 07 46 59.5 +0.3
BURAR Bucovina Array 30.86 319 ⇑P P 07 47 00.4 +1.2
BURAR Bucovina Array 30.86 319 P P 07 47 00.4 +1.2
OBN Obninsk 30.86 339 P P 07 46 58.5 -0.6
OBN Obninsk 30.86 339 LR LR 08 01 44.3
comp=Z,1μm,20.7s,baz=93,slow=41
OBN Obninsk 30.86 339 ⇓iP P 07 46 58.4 -0.6
OBN e 07 47 57.3
OBN e 07 49 57.2
OBN eS S 07 52 02.2 -0.5
OBN eSS SnSn 07 53 41.4 -0.4
OBN pmax pmax
comp=Z,202nm,0.7s
OBN MLR MLR
comp=Z,2μm,17.0s
OBN Obninsk 30.86 339 P P 07 46 59.1 +0.1
comp=Z,3μmcomp=Z,314nm,0.8s
HORU Horodok 31.03 323 P P 07 47 00.6 -0.1
MI30 MI30,Zelenitsa 31.04 326 P P 07 47 00.3 -0.3
comp=Z,74nm,0.9s
WMQ Urumqi 31.05 49 eP P 07 47 05.5 +4.5
WMQ sP sP 07 47 11.7 +6.1
WMQ S S 07 52 10.8 +4.7
WMQ PcS PcS 07 53 40.3 -0.3
WMQ pmax pmax
comp=Z,31nm,0.7s
WMQ pmax pmax
comp=Z,530nm,5.7s
WMQ LR LR
comp=Z,5μm,15.5s
WMQ LR LR
comp=Z,2μm,19.3s
WMQ LR LR
comp=Z,4μm,23.9s
MOS Moscow 31.07 341 eP P 07 46 59.9 -1.0
MOS e 07 47 07.7
MOS ePPP PPP 07 48 14.9
MOS eS S 07 52 07.0 +1.0
MOS pmax pmax
comp=Z,52nm,0.8s
MOS MLR MLR
comp=Z,2μm,16.0s
KBN Korca 31.13 304 P P 07 47 04.4 +2.7
OHR Ohrid 31.25 305 iP P 07 47 04.4 +1.7
KSV Kosov 31.30 320 P P 07 47 02.9 -0.2
GZR Gura Zlata 31.33 314 ⇓P P 07 47 04.3 +0.9
GZR Gura Zlata 31.33 314 P P 07 47 04.3 +0.9
HERR Herculane 31.36 313 ⇑P P 07 47 04.8 +1.2
CJR Cluj-Napoca 31.39 317 ⇑P P 07 47 06.2 +2.2
CJR Cluj-Napoca 31.39 317 P P 07 47 06.1 +2.2
MI28 Mi28,Pidlybu 31.41 326 P P 07 47 04.1 +0.2
PALK Pallekele 31.48 124 LR LR 08 00 01.2
comp=Z,831nm,18.4s,baz=308,slow=37
PALK Pallekele 31.48 124 P P 07 47 05.5 +0.5
KIRV Kirov 31.52 354 ⇓P P 07 47 04.7 -0.1
KIRV Kirov 31.52 354 ciP P 07 47 04.7 -0.1
comp=Z,2μm,18.8s,baz=173,slow=45
KIRV Kirov 31.52 354 ciP P 07 47 04.7 -0.1
MARR Marisel-Cluj 31.67 316 ⇓P P 07 47 08.7 +2.3
RAKU Rahkiv 31.67 319 P P 07 47 07.2 +0.9
MDVR Moldovita 31.79 312 ⇑P P 07 47 08.5 +1.1
LSA Lhasa 31.79 77 P P 07 47 06.2 -1.9
LSA S S 07 52 16.0 -2.7
LSA LR LR
comp=Z,1μm,13.7s
LSA LR LR
comp=Z,1μm,18.3s
LSA LR LR
comp=Z,2μm,16.5s
BMR Baia Mare 31.90 318 P P 07 47 13.4 +5.1
DRGR 31.97 316 ⇓P P 07 47 10.3 +1.2
DRGR 31.97 316 P P 07 47 10.2 +1.2
BZS Buzias 32.17 314 ⇑P P 07 47 11.8 +1.1
BZS Buzias 32.17 314 P P 07 47 11.8 +1.1
MEZ Mezhgor'ye 32.29 319 P P 07 47 11.7 -0.1
KORU Korolevo 32.34 319 P P 07 47 12.3 +0.1
MORS Morshin 32.39 321 P P 07 47 12.8 +0.2
SIRR Siria 32.40 315 ⇓P P 07 47 15.4 +2.6
RNPP5 Staryi Chortor 32.48 325 P P 07 47 13.6 +0.2
BRIU Brid 32.50 319 P P 07 47 14.0 +0.5
RNPP8 Varash 32.56 325 P P 07 47 14.3 +0.2
RNPP9 Sopachiv 32.59 326 P P 07 47 14.5 +0.2
BERU Beregovo 32.67 318 P P 07 47 15.1 +0.1
SHIU Shidnytsya 32.74 321 P P 07 47 15.7 0.0
MUKU Mukachevo 32.75 319 P P 07 47 15.8 +0.1
HOLU Holmets 32.96 319 P P 07 47 17.6 0.0
SHL Shillong 33.01 84 P 07 47 18.4 -0.1
SHL Shillong 33.01 84 P P 07 47 18.4 -0.1
SHL pmax pmax
comp=Z,21nm,0.9s
TREB Trebinje 33.43 307 eP P 07 47 22.3 +0.5
MNK Minsk 33.64 331 iP P 07 47 24.0 +0.5
comp=E,14nm,0.9s
MNK iP P 07 47 24.0 +0.5
comp=N,48nm,0.9s
MNK iP P 07 47 24.0 +0.5
comp=Z,79nm,0.9s,baz=132
MNK iPP PnPn 07 48 35.8 +0.7
MNK iPPP PPP 07 48 46.8
MNK iS S 07 52 48.7 +2.7
MNK iSS SnSn 07 54 52.7 +3.4
MNK iSSS SSS 07 55 11.2
MNK iLR LR 08 01 02.4
MNK iLRM MLR 08 02 13.3
comp=Z,2μm,18.9s
MNK iLRM MLR 08 02 19.1
comp=N,1μm,18.0s
MNK iLRM MLR 08 02 24.2
comp=E,875nm,16.1s
MNK Minsk 33.64 331 iP P 07 47 23.9 +0.5
MNK i 07 48 35.8
MNK iS S 07 52 48.7 +2.7
MNK iSS SnSn 07 54 52.7 +3.4
MNK iSSS SSS 07 55 11.1
MNK pmax pmax
comp=E,14nm,0.9s
MNK pmax pmax
comp=N,48nm,0.9s
MNK pmax pmax
comp=Z,79nm,0.9s
MNK MLR MLR
comp=Z,2μm,19.0s
MNK MLR MLR
comp=N,1μm,18.0s
MNK MLR MLR
comp=E,875nm,16.0s
KIBK Kibwezi 33.68 212 P P 07 47 25.0 +0.7
TIP Timpagrande 33.87 300 ⇑P P 07 47 27.4 +1.6
TIP Timpagrande 33.87 300 P P 07 47 25.6 -0.2
comp=E,980nmcomp=E,90nm,1.4s
STHS Stebnicka Huta 34.04 320 eP P 07 47 27.9 +0.9
STHS pmax pmax
comp=Z,7.0nm,0.8s
STHS Stebnicka Huta 34.04 320 eP P 07 47 27.9 +0.9
KECS Kecovo 34.06 318 eP P 07 47 29.3 +2.0
KECS pmax pmax
comp=Z,50nm,1.0s
KECS Kecovo 34.06 318 eP P 07 47 29.2 +2.0
MATE Matera 34.16 303 ⇑P P 07 47 29.7 +1.6
MATE Matera 34.16 303 eP P 07 47 27.8 -0.3
PSZ Piszkesteto 34.18 316 P P 07 47 27.4 -1.0
PSZ Piszkesteto 34.18 316 ⇑P P 07 47 30.6 +2.2
PSZ Piszkesteto 34.18 316 eP P 07 47 29.4 +1.0
PSZ Piszkesteto 34.18 316 P P 07 47 30.5 +2.2
MORH Mrgy, Hungar 34.32 313 eP P 07 47 30.1 +0.7
MORH Mrgy, Hungar 34.32 313 ⇑P P 07 47 30.5 +1.1
MORH Mrgy, Hungar 34.32 313 P P 07 47 29.4 0.0
comp=Z,702nmcomp=Z,27nm,0.8s
NACGM Naroch 34.39 331 ⇑iP P 07 47 32.1 +2.2
comp=Z,172nm,0.9s,baz=132
CEL Celeste 34.42 299 P P 07 47 29.3 -1.2
CEL IAmb IAmb 07 47 40.8
comp=Z,46nm,0.9s
CEL Celeste 34.42 299 P P 07 47 30.3 -0.2
comp=Z,801nmcomp=Z,58nm,1.1s
ZALV Zalesovo Beam 34.49 31 P P 07 47 30.4 -0.4
ZALV Zalesovo Beam 34.49 31 P P 07 47 30.1 -0.7
comp=Z,48nm,0.4s,baz=237,slow=9.5,SNR=86
ZALV S S 07 52 55.9 -3.3
comp=Z,0.6nm,0.3s,baz=232,slow=7.1,SNR=1.6
ZALV LR LR 08 03 45.2
comp=Z,7μm,18.8s,baz=228,slow=40
comp=Z,48nm,0.4s
ZALV Zalesovo Beam 34.49 31 iP P 07 47 30.1 -0.7
ZALV pmax pmax
comp=Z,49nm,0.4s
BUD Budapest 34.55 315 P P 07 47 31.3 -0.1
NIE Niedzica 34.59 319 eP P 07 47 31.3 -0.5
NIE Niedzica 34.59 319 P P 07 47 34.2 +2.4
NIE Niedzica 34.59 319 P P 07 47 31.7 -0.1
comp=Z,278nmcomp=Z,8.8nm,0.9s
CUC Castrocucco 34.72 302 P P 07 47 32.3 -0.7
GOMU GeErMu 34.81 65 P P 07 47 35.0 +0.7
GOMU PcP PcP 07 50 07.5 -0.1
GOMU S S 07 53 05.9 +0.6
GOMU pmax pmax
comp=Z,24nm,0.9s
GOMU LR LR
comp=Z,920nm,18.8s
GOMU LR LR
comp=Z,1μm,19.6s
GOMU LR LR
comp=Z,140μm,19.0s
BLY Banja Luka 34.81 310 eP P 07 47 32.8 -1.0
BLY Banja Luka 34.81 310 ⇑P P 07 47 36.0 +2.2
LANS Liptovska Anna 34.96 318 eP P 07 47 36.5 +1.5
LANS pmax pmax
comp=Z,39nm,0.8s
LANS Liptovska Anna 34.96 318 eP P 07 47 36.5 +1.5
SRO Srobarova 35.12 316 eP P 07 47 37.2 +0.9
SRO pmax pmax
comp=Z,44nm,0.8s
SRO Srobarova 35.12 316 eP P 07 47 37.2 +0.9
KLMR Klimovskoe 35.16 347 eP P 07 47 36.1 -0.4
KLMR pmax pmax
comp=Z,127nm,1.1s
KLMR MLR MLR
comp=Z,2μm,15.0s
OJC Ojcow 35.24 320 eP P 07 47 37.8 +0.4
OJC Ojcow 35.24 320 P P 07 47 38.0 +0.6
OJC Ojcow 35.24 320 P P 07 47 37.4 0.0
comp=Z,1μmcomp=Z,66nm,0.9s
SUW Suwalki 35.46 328 eP P 07 47 39.7 +0.5
SUW Suwalki 35.46 328 P P 07 47 38.4 -0.8
SUW Suwalki 35.46 328 eP P 07 47 40.2 +1.0
SUW Suwalki 35.46 328 P P 07 47 38.4 -0.8
BEL Belsk 35.48 323 eP P 07 47 40.4 +1.1
BEHE Becsehely 35.62 313 eP P 07 47 41.9 +1.2
JAVC Velka Javorina 35.92 317 eP P 07 47 44.0 +0.7
JAVC eS S 07 53 24.9 +3.5
SMOL Smolenice 35.93 316 eP P 07 47 45.2 +1.9
SMOL pmax pmax
comp=Z,19nm,1.5s
KOGS Kog 35.96 313 eP P 07 47 44.0 +0.4
MODS Modra-Piesok 35.97 316 eP P 07 47 44.6 +0.9
MODS pmax pmax
comp=Z,75nm,1.7s
MODS Modra-Piesok 35.97 316 eP P 07 47 44.6 +0.9
PTJ Puntijarka 35.98 312 P P 07 47 48.9 +5.0
PABE Paberze 36.01 330 eP P 07 47 43.9 +0.1
ZST Bratislava 36.01 316 eP P 07 47 45.7 +1.7
ZST Bratislava 36.01 316 eP P 07 47 45.6 +1.6
OKC Ostrava-Krasne 36.03 319 eP P 07 47 45.3 +1.1
OKC MLR MLR
comp=Z,2μm,15.6s
OKC Ostrava-Krasne 36.03 319 eP P 07 47 45.3 +1.1
OKC AMS AMS 08 05 00.0
comp=Z,2μm,15.6s
SOP Sopron 36.17 315 P P 07 47 47.5 +2.1
SOP pmax pmax
comp=Z,35nm,1.4s
STEB Steborice 36.29 319 eP P 07 47 47.8 +1.4
BOJS Bojanci 36.34 311 eP P 07 47 47.6 +0.7
RONA Rosalia, Austr 36.34 315 eP P 07 47 47.6 +0.7
comp=Z,8.6nm,0.6s
MORC Moravsky Berou 36.36 318 IAmb IAmb 07 47 54.0
comp=Z,93nm,1.5s
MORC Moravsky Berou 36.36 318 ⇑P P 07 47 47.8 +0.8
MORC Moravsky Berou 36.36 318 eP P 07 47 46.7 -0.4
MORC eS S 07 53 24.7 -3.5
MORC Moravsky Berou 36.36 318 P P 07 47 47.8 +0.8
ARSA Arzberg 36.69 314 epP pP 07 47 51.8 -1.5
comp=Z,4.3nm,0.5s
CONA Conrad Observa 36.70 315 eP P 07 47 50.4 +0.4
comp=Z,2.0nm,0.4s
VRAC Vranov 36.74 317 ⇓P P 07 47 52.5 +2.2
VRAC Vranov 36.74 317 eP P 07 47 50.2 -0.1
VRAC eS S 07 53 32.1 -1.8
VRAC Vranov 36.74 317 P P 07 47 52.5 +2.2
KRUC Moravsky 36.77 317 eP P 07 47 50.3 -0.2
KRUC eS S 07 53 36.1 +1.8
SOKA Soboth 36.83 312 epP pP 07 47 53.3 -1.2
comp=Z,1.2nm,0.2s
VSU Vasula 36.87 335 eP P 07 47 50.5 -0.6
VSU Vasula 36.87 335 ⇓iP P 07 47 50.5 -0.6
VSU pmax pmax
comp=Z,100nm,0.8s
AQU L'Aquila 36.92 305 P P 07 47 52.4 +0.5
AQU L'Aquila 36.92 305 eP P 07 47 53.6 +1.7
AQU L'Aquila 36.92 305 P P 07 47 56.1 +4.2
AQU pmax pmax
comp=Z,107nm,0.9s
AQU L'Aquila 36.92 305 P P 07 47 51.7 -0.2
comp=Z,1μmcomp=Z,139nm,1.0s
KRLC Kraliky 36.93 318 P P 07 47 52.1 +0.2
KRLC Kraliky 36.93 318 AMS AMS 08 05 30.0
comp=Z,2μm,16.5s
GBAS Gorenja Brezov 37.01 311 eP P 07 47 53.3 +0.7
DPC Dobruska-Polom 37.31 319 eP P 07 47 56.7 +1.5
DPC MLR MLR
comp=Z,2μm,15.2s
DPC Dobruska-Polom 37.31 319 eP P 07 47 56.7 +1.5
DPC AMS AMS 08 07 10.0
comp=Z,2μm,15.2s
DPC Dobruska-Polom 37.31 319 P P 07 47 54.9 -0.3
comp=Z,782nmcomp=Z,30nm,1.1s
TREC Trest 37.41 317 P P 07 47 57.4 +1.4
OSTC Ostas 37.46 319 eP P 07 47 57.2 +0.8
OSTC MLR MLR
comp=Z,2μm,17.2s
OSTC Ostas 37.46 319 eP P 07 47 57.2 +0.8
OSTC AMS AMS 08 05 30.0
comp=Z,2μm,17.2s
KSP Ksiaz 37.53 319 eP P 07 47 57.6 +0.7
KSP Ksiaz 37.53 319 P P 07 47 58.6 +1.7
KSP Ksiaz 37.53 319 P P 07 47 56.7 -0.2
comp=Z,36nm,1.0s
UPC Upice 37.56 319 eP P 07 47 58.4 +1.2
UPC MLR MLR
comp=Z,2μm,17.1s
UPC Upice 37.56 319 eP P 07 47 58.4 +1.2
UPC AMS AMS 08 05 50.0
comp=Z,2μm,17.1s
CHVC Chvalec 37.56 319 eP P 07 47 57.8 +0.5
CHVC MLR MLR
comp=Z,2μm,17.4s
CHVC Chvalec 37.56 319 eP P 07 47 57.8 +0.5
CHVC AMS AMS 08 05 30.0
comp=Z,2μm,17.4s
MOA Molln 37.69 314 epP pP 07 48 00.2 -1.6
comp=Z,8.8nm,0.7s,SNR=9.3
MYKA Terra Mystica 37.73 312 epP pP 07 48 00.6 -1.5
comp=Z,5.5nm,0.7s
CKRC Cesky Krumlov 37.97 316 eS S 07 53 50.8 -1.8
CKRC AMS AMS 08 05 00.0
comp=Z,1μm,17.2s
BIOA Bad Ischl, Aus 38.04 314 epP pP 07 48 03.1 +1.8
comp=Z,16nm,0.6s,SNR=5.9
KBA Koelnbreinsper 38.05 313 eP P 07 48 02.1 +0.5
comp=Z,17nm,0.7s,SNR=21
KBA Koelnbreinsper 38.05 313 P P 07 48 02.0 +0.4
SLIT Slitere, Latvi 38.06 332 eP P 07 48 01.3 0.0
GKP Gorka Klasztor 38.07 323 eP P 07 48 02.0 +0.6
PRU Pruhonice 38.24 317 eP P 07 48 04.3 +1.4
PRU eS S 07 53 55.8 -0.7
PRU MLR MLR
comp=Z,2μm,19.5s
PRU Pruhonice 38.24 317 eP P 07 48 04.3 +1.4
PRU eS S 07 53 55.8 -0.7
PRU AMS AMS 08 06 10.0
comp=Z,2μm,19.5s
STAL STALIGIAL 38.25 311 IAmb IAmb 07 48 10.9
comp=Z,61nm,1.3s
ZVC Zvikov 38.25 316 eS S 07 53 55.7 -1.2
ZVC AMS AMS 08 05 30.0
comp=Z,2μm,17.3s
PRA Prague 38.33 318 ePP PP 07 49 33.6 +2.3
PRA AMS AMS 08 06 20.0
comp=Z,2μm,15.9s
GERES GERESS Array B 38.36 315 P P 07 48 03.9 -0.2
comp=Z,6.2nm,0.8s,baz=110,slow=7.7,SNR=27
GERES ScP ScP 07 54 06.1 +0.5
comp=Z,1.2nm,0.9s,baz=101,slow=4.2,SNR=4.4
GERES LR LR 08 06 04.1
comp=Z,995nm,18.3s,baz=106,slow=40
comp=Z,6.2nm,0.8s
PVCC Panska Ves 38.42 318 eP P 07 48 06.2 +1.8

PVCC Panska Ves 38.42 318 *e*P **P 07 48 06.2 +1.8**
ABTA Abfaltersbach 38.51 312 *e*P **P 07 48 06.1 +0.7**
comp=Z,6.3nm,0.3s
KHC Kasperske Hory 38.53 316 IAmb IAmb 07 48 20.9
comp=Z,75nm,1.4s
KHC Kasperske Hory 38.53 316 *e*P **P 07 48 05.5 +0.1**
KHC *e* 07 49 38.9
KHC *e*S **S 07 54 01.4 +0.3**
KHC MLR MLR
comp=Z,2µm,13.3s
KHC Kasperske Hory 38.53 316 *e*P **P 07 48 05.5 +0.1**
KHC *e*PP **PnPn 07 49 38.9 +3.5**
KHC *e*S **S 07 54 01.4 +0.3**
KHC AMS AMS 08 08 20.0
comp=Z,2µm,13.3s
KHC Kasperske Hory 38.53 316 P **P 07 48 05.1 -0.3**
comp=Z,835nmcomp=Z,40nm,0.8s
LESA Schwarzleotal 38.59 313 *e*P **P 07 48 05.6 -0.4**
comp=Z,9.8nm,0.6s
LESA S **S 07 54 04.3 +2.2**
comp=Z,11nm,1.1s
RICC Richard 38.70 318 AMS AMS 08 06 00.0
comp=Z,2µm,20.1s
JOF Joensuu 38.87 343 *e*P **P 07 48 08.1 +0.1**
BRG Berggiesshubel 38.91 319 P **P 07 48 08.7 +0.1**
BRG Berggiesshubel 38.91 319 *e*P **P 07 48 08.7 +0.1**
comp=Z,34nm,1.1s,baz=107,slow=8.4
CTI Castel Tesino 38.92 310 IAmb IAmb 07 48 14.3
comp=Z,52nm,0.8s
MEF Metsahovi 38.96 336 *e*P **P 07 48 10.0 +1.2**
WET Wettzell 38.97 316 P **P 07 48 08.6 -0.5**
WET Wettzell 38.97 316 *e*P **P 07 48 08.6 -0.5**
comp=Z,14nm,0.8s,baz=107,slow=8.4
GTA Gaotai 38.98 60 *e*P **P 07 48 09.6 +0.2**
GTA S **S 07 54 07.4 -0.9**
GTA SS **SnSn 07 56 58.0 -1.0**
GTA pmax pmax
comp=Z,26nm,0.7s
GTA pmax pmax
comp=Z,670nm,5.5s
GTA LR LR
comp=Z,2µm,15.6s
GTA LR LR
comp=Z,2µm,14.9s
GTA LR LR
comp=Z,2µm,15.6s
TNCH TengChong 38.99 83 P **P 07 48 11.5 +1.7**
TNCH PP **PnPn 07 49 43.7 +2.2**
TNCH S **S 07 54 14.2 +5.3**
TNCH pmax pmax
comp=Z,140nm,0.9s
TNCH pmax pmax
comp=Z,890nm,4.3s
TNCH LR LR
comp=Z,2µm,13.1s
TNCH LR LR
comp=Z,2µm,16.9s
TNCH LR LR
comp=Z,1µm,17.0s
HSKC Hora Svate Kat 39.12 318 *e*P **P 07 48 11.7 +1.3**
HSKC AMS AMS 08 06 50.0
comp=Z,2µm,18.4s
WTTA Wattenberg 39.23 312 *e*P **P 07 48 10.9 -0.5**
comp=Z,36nm,0.7s,SNR=24
WTTA *e*S **S 07 54 10.5 -1.4**
comp=Z,71nm,1.3s
WTTA Wattenberg 39.23 312 P **P 07 48 11.1 -0.4**
FINES FINESS Array B 39.26 338 **P 07 48 11.5 +0.2**
FINES FINESS Array B 39.26 338 P **P 07 48 11.1 -0.2**
comp=Z,22nm,0.5s,baz=142,slow=9.5,SNR=81
FINES S **S 07 54 09.8 -1.8**
comp=Z,2.3nm,0.7s,baz=131,slow=28,SNR=1.4
FINES LR LR 08 07 19.2
comp=Z,2µm,19.8s,baz=138,slow=41
comp=Z,22nm,0.5s
FINES FINESS Array B 39.26 338 P **P 07 48 11.5 +0.2**
WATA Walderalm 39.28 312 *e*P **P 07 48 11.9 0.0**
comp=Z,62nm,1.5s,SNR=19
WATA *e*S **S 07 54 13.3 +0.5**
comp=Z,23nm,1.1s
SQTA Sankt Quirin 39.50 312 *e*P **P 07 48 13.4 -0.3**
comp=Z,42nm,0.6s,SNR=21
SQTA S **S 07 54 19.3 +3.4**
comp=Z,42nm,1.5s
KEST Kesra 39.52 294 P **P 07 48 15.2 +1.2**
comp=Z,40nm,0.9s,baz=22,slow=3.5,SNR=22
comp=Z,40nm,0.9s
ROTZ Rotzenmuhle 39.58 316 *e*P **P 07 48 14.2 0.0**
comp=Z,7.4nm,0.9s,baz=107,slow=8.4
MOTA Moosalm 39.60 312 *e*P **P 07 48 13.8 -0.7**
comp=Z,13nm,0.4s,SNR=20
MOTA S **S 07 54 15.3 -2.1**
comp=Z,42nm,1.5s
CLL Collm 39.62 319 *i*P **P 07 48 14.2 -0.3**
CLL *e*S **S 07 54 18.0 +0.6**
CLL pmax pmax
comp=Z,55nm,1.2s
CLL MLR MLR
comp=Z,2µm,25.9s
CLL Collm 39.62 319 *e*P **P 07 48 14.6 +0.1**
comp=Z,49nm,1.1s,baz=107,slow=8.4
CLL Collm 39.62 319 P **P 07 48 14.3 -0.3**
comp=Z,905nmcomp=Z,49nm,0.8s
CLL Collm 39.62 319 *i*P **P 07 48 14.2 -0.3**
comp=Z,55nm,1.2s
CLL *e*PP **PnPn 07 49 49.0 +0.6**
CLL *e*S **S 07 54 18.0 +0.6**
CLL *e*S **S 07 54 18.0 +0.6**
CLL *e*SS **SnSn 07 57 21.0 +6.9**
FUR Furstenfeldbru 39.70 314 P **P 07 48 15.6 +0.4**
FUR Furstenfeldbru 39.70 314 *e*P **P 07 48 14.9 -0.3**
comp=Z,82nm,1.1s,baz=107,slow=8.4
FETA Feichten 39.77 312 *e*P **P 07 48 15.5 -0.5**
comp=Z,36nm,0.8s,SNR=21
FETA S **S 07 54 17.0 -3.0**
comp=Z,16nm,1.1s
RETA Reutte 39.86 312 *e*P **P 07 48 16.8 +0.2**
comp=Z,10nm,0.6s,SNR=6.5
RETA S **S 07 54 24.3 +3.2**
comp=Z,40nm,1.5s
FUORN Ofenpass-Fuorn 39.98 311 **P 07 48 17.9 0.0**
GRA1 Grafenberg Arr 40.17 316 IAmb IAmb 07 48 34.6
comp=Z,48nm,0.8s
GRF Grafenberg Arr 40.17 316 *e*P **P 07 48 19.3 +0.2**
comp=Z,41nm,0.8s,baz=107,slow=8.4
GRF *e*L L 08 07 55.3
comp=Z,916nm,19.7s
GRFO Grafenberg 40.17 316 P **P 07 48 18.8 -0.3**
GRFO IAmb IAmb 07 48 34.6
comp=Z,46nm,0.9s
GRFO Grafenberg 40.17 316 P **P 07 48 18.8 -0.3**
GRFO pmax pmax
comp=Z,46nm,0.9s
KEF Keuruu 40.18 339 *e*P **P 07 48 18.9 0.0**
MOX Moxa 40.22 317 P **P 07 48 20.4 +0.9**
MOX Moxa 40.22 317 *e*P **P 07 48 21.0 +1.5**
comp=Z,18nm,1.2s,baz=107,slow=8.4
MOX *e*L L 08 07 23.7
comp=Z,2µm,20.2s
DAVOX Davos/Dischmat 40.28 311 LR LR 08 06 51.6
comp=Z,2µm,19.7s,baz=92,slow=39
UBR Ueberruh 40.33 313 *e*P **P 07 48 20.1 -0.4**
comp=Z,77nm,0.9s,baz=107,slow=8.4
DAVA Damuels 40.39 312 *e*P **P 07 48 20.7 -0.4**
comp=Z,86nm,0.9s,SNR=39
DAVA S **S 07 54 26.1 -3.2**
comp=Z,52nm,1.2s
RAF Rauma 40.46 336 *e*P **P 07 48 22.0 +0.7**
TUE Stuetta 40.57 311 P **P 07 48 22.1 -0.6**
comp=Z,217nm,0.8s
AAL Aland 40.59 334 *e*P **P 07 48 22.2 -0.1**
FLTG Flechtingen 41.01 320 *e*P **P 07 48 26.3 +0.4**
comp=Z,152nm,1.1s,baz=107,slow=8.4
LUNU Lund 41.12 325 *i*P **P 07 48 27.9 +1.2**
CHTO Chiang Mai 41.14 92 P **P 07 48 28.2 +0.7**
CHTO Chiang Mai 41.14 92 P **P 07 48 28.2 +0.7**
CHTO pmax pmax
comp=Z,32nm,1.1s
GORT1 Trebel 41.20 321 *e*P **P 07 48 28.2 +0.8**
comp=Z,166nm,1.1s,baz=107,slow=8.4
CMAR Chiang Mai Arr 41.27 93 **P 07 48 29.1 +0.6**
CMAR Chiang Mai Arr 41.27 93 P **P 07 48 28.8 +0.2**
comp=Z,11nm,0.8s,baz=283,slow=9.1,SNR=44
CMAR PcP **PcP 07 50 29.4 +2.1**
comp=Z,1.7nm,0.3s,baz=296,slow=5.4,SNR=4.7
CMAR ScP **ScP 07 54 19.9 +2.5**
comp=Z,1.1nm,0.3s,baz=287,slow=2.9,SNR=1.6
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 41.27 93*c*e**P P 07 48 31.1 +2.6**
CMAR pmax pmax
comp=Z,13nm,0.8s
ASSE Asse, Remlinge 41.27 319 *e*P **P 07 48 28.4 +0.3**
comp=Z,56nm,1.0s,baz=107,slow=8.4
DEL Delary 41.28 326 *i*P **P 07 48 28.6 +0.4**
CLZ Clausthal 41.35 319 *e*P **P 07 48 29.7 +0.9**
comp=Z,79nm,0.9s,baz=107,slow=8.4
SLE Schleitheim 41.41 312 P **P 07 48 28.7 -0.7**
PZH PanZhiHua 41.51 80 P **P 07 48 31.7 +1.1**
PZH PP **PP 07 50 07.9 +1.5**
PZH S **S 07 54 49.2 +2.8**
PZH SS **SS 07 57 53.7 +2.8**
PZH pmax pmax
comp=Z,40nm,1.0s
PZH pmax pmax
comp=Z,390nm,5.1s
PZH LR LR
comp=Z,1µm,22.2s
PZH LR LR
comp=Z,690nm,20.2s
PZH LR LR
comp=Z,890nm,20.8s
VAF Ylistaro 41.52 338 *e*P **P 07 48 30.4 +0.5**
BJUU Bjuv 41.53 326 *i*P **P 07 48 31.4 +1.3**
BFO Black Forest 41.65 313 P **P 07 48 30.4 -0.9**
BFO Black Forest 41.65 313 P **P 07 48 30.4 -0.9**
BFO pmax pmax
comp=Z,20nm,0.9s
COP Copenhagen 41.66 325 *i*P **P 07 48 33.5 +2.2**
COP IAmb IAmb 07 48 38.6
comp=Z,282nm,1.0s
ISO Isola 41.78 307 P **P 07 48 34.6 +2.1**
MSF Maaselka 41.90 344 P **P 07 48 34.8 +1.7**
LZDM Lanzhou Array 42.00 66 P **P 07 48 33.9 -0.9**
comp=Z,11nm,0.5s,baz=263,slow=7.3,SNR=16
LZDM LR LR 08 09 28.1
comp=Z,1µm,19.5s,baz=10.0,slow=41
comp=Z,11nm,0.5s
TNS Taunus Mts 42.04 316 *e*P **P 07 48 34.8 +0.3**
comp=Z,44nm,1.1s,baz=107,slow=8.4
OUL Oulu 42.05 342 P **P 07 48 34.3 0.0**
FABU Falkenberg 42.09 327 *i*P **P 07 48 35.7 +1.0**
BSEG Bad Segeberg 42.10 322 P **P 07 48 35.5 +0.7**
BSEG Bad Segeberg 42.10 322 *e*P **P 07 48 35.5 +0.7**
comp=Z,31nm,1.1s,baz=107,slow=8.4
MOY Mondy 42.11 42 *e*P **P 07 48 36.2 +1.0**
MOY pmax pmax
comp=Z,57nm,2.4s
LZH Lanzhou 42.12 65 *e*P **P 07 48 36.6 +1.1**
LZH sP sP 07 48 43.0 +2.8
LZH S **S 07 54 59.0 +3.7**
LZH pmax pmax
comp=Z,67nm,1.4s
LZH pmax pmax
comp=Z,620nm,4.8s
LZH LR LR
comp=Z,2µm,16.2s
LZH LR LR
comp=Z,1µm,15.2s
LZH LR LR
comp=Z,1µm,17.5s
BNI Bardonecchia 42.16 308 **P 07 48 35.7 0.0**
BNI IAmb IAmb 07 48 42.4
comp=Z,68nm,1.1s
BNI Bardonecchia 42.16 308 P **P 07 48 35.7 0.0**
BNI pmax pmax
comp=Z,68nm,1.1s
RETH Rethem/Aller, 42.23 320 *e*P **P 07 48 36.9 +1.0**
comp=Z,25nm,0.9s,baz=107,slow=8.4
KASTN Kahler Asten 42.32 317 *e*P **P 07 48 37.6 +0.8**
comp=Z,65nm,1.2s,baz=107,slow=8.4
BORU Boraas 42.36 328 *i*P **P 07 48 38.4 +1.4**
APA Apatity 42.38 348⇓ *i*P **P 07 48 37.6 +0.7**
APA *i* 07 50 14.1
APA *i* 07 50 35.3
APA *i*S **S 07 54 59.7 +1.8**
APA MLR MLR
comp=Z,4µm,17.7s
ECH Echery 42.39 313 IAmb IAmb 07 48 44.6
comp=Z,52nm,1.0s
ECH Echery 42.39 313 P **P 07 48 36.5 -0.9**
CD2 Chengdu 42.50 73 P **P 07 48 39.0 +0.5**
CD2 S **S 07 55 01.7 +0.9**
CD2 pmax pmax
comp=Z,430nm,6.2s
CD2 LR LR
comp=Z,2µm,14.7s
CD2 LR LR
comp=Z,2µm,19.0s
ONAU Onsala 42.66 327 *i*P **P 07 48 40.0 +0.6**
KMI Kunming 42.69 82⇑ P **P 07 48 40.2 -0.2**
KMI S **S 07 55 03.0 -1.1**
KMI pmax pmax
comp=Z,45nm,1.3s
KMI pmax pmax
comp=Z,630nm,4.2s
KMI LR LR
comp=Z,510nm,19.8s
KMI LR LR
comp=Z,990nm,19.1s
KMI LR LR
comp=Z,960nm,14.9s
IBBN Ibbenburen 43.03 319 *e*P **P 07 48 43.5 +1.0**
comp=Z,98nm,1.1s,baz=107,slow=8.4
SSRD Sdr. Stenderup 43.04 324 *i*P **P 07 48 45.0 +2.6**
SSRD IAmb IAmb 07 48 51.8
comp=Z,68nm,0.7s
BUG Bochum--Univer 43.08 317 P **P 07 48 43.8 +1.0**
BUG Bochum--Univer 43.08 317 *e*P **P 07 48 43.9 +1.0**
comp=Z,61nm,1.0s,baz=107,slow=8.4
TJOU Tjoern 43.08 328 *i*P **P 07 48 43.2 +0.5**
HFS Hagfors 43.16 331 P **P 07 48 43.4 0.0**
comp=Z,29nm,0.6s,baz=126,slow=7.7,SNR=69
HFS S **S 07 55 08.1 -1.5**
comp=Z,3.0nm,0.9s,baz=141,slow=9.3,SNR=1.8
HFS LR LR 08 10 05.1
comp=Z,2µm,18.9s,baz=124,slow=41
comp=Z,29nm,0.6s
ZAK Zakamensk 43.16 44 *e*P **P 07 48 43.4 -0.3**
ZAK pmax pmax
comp=Z,14nm,1.9s
WLF Walferdange 43.34 315 P **P 07 48 43.8 -1.2**
WLF Walferdange 43.34 315 P **P 07 48 44.7 -0.3**
WLF IAmb IAmb 07 48 52.8
comp=Z,73nm,0.9s
WLF Walferdange 43.34 315 *d*P **P 07 48 44.8 -0.2**
comp=Z,61nm,0.9s
WLF Walferdange 43.34 315 P **P 07 48 44.7 -0.3**
WLF pmax pmax
comp=Z,73nm,0.9s
MAHO Mahon 43.55 300 P **P 07 48 46.2 -0.6**
BTNL Ternell 43.56 316 *d*P **P 07 48 46.7 -0.1**
comp=Z,22nm,1.0s
BHOU Houvegnez 43.59 315 *d*P **P 07 48 47.6 +0.5**
comp=Z,21nm,0.8s
MUD Monsted U'grnd 43.64 325 *i*P **P 07 48 50.0 +2.7**
MUD IAmb IAmb 07 48 55.4
comp=Z,50nm,0.9s
MEM Membach 43.64 316 *d*P **P 07 48 48.8 +1.3**
comp=Z,30nm,0.9s
MEM Membach 43.64 316 P **P 07 48 49.2 +1.8**
SSB Saint Sauveur 43.69 308 IAmb IAmb 07 48 55.0
comp=Z,71nm,1.6s
SSB Saint Sauveur 43.69 308 P **P 07 48 47.9 -0.1**
STRU Stroemstad 43.74 329 *i*P **P 07 48 47.3 -0.8**
BEBN Eben Emael 43.89 316 *d*P **P 07 48 51.0 +1.6**
comp=Z,49nm,0.5s
BSTI Sart Tilman 43.91 316 *d*P **P 07 48 50.9 +1.3**
comp=Z,5.5nm,1.3s
RCHB Rochefort 44.03 315 *d*P **P 07 48 50.9 +0.3**
comp=Z,26nm,1.1s
BCLA Clavier 44.04 315 *d*P **P 07 48 51.4 +0.7**
comp=Z,29nm,1.1s
BGES Gesves 44.17 315 *d*P **P 07 48 52.3 +0.6**
comp=Z,44nm,1.0s
BMRD Maredsous 44.35 315 *d*P **P 07 48 53.6 +0.5**
comp=Z,25nm,1.3s
NC602 NORSAR Array S 44.38 331 IAmb IAmb 07 48 59.6
comp=Z,42nm,1.0s
NC602 NORSAR Array S 44.38 331 *e*P **P 07 48 53.1 -0.1**
NORES NORESS Array B 44.38 331 P **P 07 48 53.0 -0.2**
LOR Lormes 44.41 311 P **P 07 48 53.9 +0.2**
DOU Dourbes 44.42 315 *d*P **P 07 48 54.5 +0.9**
comp=Z,54nm,1.1s
DOU *d*PP **PP 07 50 35.3 -1.9**
NB201 NORSAR Array S 44.64 331 IAmb IAmb 07 49 01.7
comp=Z,59nm,1.0s
EJON La Jonquera 44.66 304 P **P 07 48 55.0 -0.8**
ETOS Mallorca 44.67 300 P **P 07 48 55.8 -0.1**
NB2 NORSAR Subarra 44.67 331 P **P 07 48 54.5 -1.1**
comp=Z,40nm,0.8s,baz=118,slow=7.9
NB2 NORSAR Subarra 44.67 331 P **P 07 48 52.0 -3.6**
NOA NORSAR Array B 44.67 331 P **P 07 48 54.7 -0.9**
comp=Z,20nm,0.7s,baz=118,slow=7.9,SNR=64
NOA S **S 07 55 36.8 +5.0**
NOA comp=Z,0.4nm,0.6s,baz=39,slow=9.8,SNR=2.8
LR LR 08 11 11.0
comp=Z,1µm,19.2s,baz=115,slow=41
comp=Z,20nm,0.7s
SONM Songino Array 44.68 48 **P 07 48 56.3 +0.3**
SONM Songino Array 44.68 48 P **P 07 48 55.9 -0.1**
comp=Z,5.4nm,0.7s,baz=259,slow=8.5,SNR=15
SONM LR LR 08 10 05.3
comp=Z,3µm,20.9s,baz=261,slow=40
comp=Z,5.4nm,0.7s
SONM Songino Array 44.68 48 P **P 07 48 56.3 +0.3**
SONM pmax pmax
comp=Z,15nm,1.2s
HOMB Homborsund 44.68 327 *i*P **P 07 48 58.7 +3.1**
NC303 NORSAR Array S 44.70 332 IAmb IAmb 07 49 02.8
comp=Z,46nm,1.0s
UCC Uccle 44.71 316 P **P 07 48 57.1 +1.2**
UCC IAmb IAmb 07 49 04.0
comp=Z,59nm,1.0s
UCC Uccle 44.71 316 *d*P **P 07 48 57.1 +1.2**
comp=Z,38nm,1.1s
UCC Uccle 44.71 316 P **P 07 48 57.2 +1.2**
UCC pmax pmax
comp=Z,59nm,1.0s
NAO01 NORSAR Array S 44.72 331 IAmb IAmb 07 49 02.4
comp=Z,66nm,0.9s
KONO Kongsberg 44.74 329 **P 07 48 56.2 +0.1**
KONO IAmb IAmb 07 49 02.1
comp=Z,39nm,0.9s
KONO Kongsberg 44.74 329 *e*P **P 07 48 52.0 -4.2**
KONO Kongsberg 44.74 329*c*e**P P 07 48 56.7 +0.6**
KONO pmax pmax
comp=Z,55nm,1.3s
TAM Tamanrasset 44.81 276 P **P 07 48 56.4 -1.0**
TAM IAmb IAmb 07 49 04.8
comp=Z,46nm,0.7s
TAM Tamanrasset 44.81 276 P **P 07 48 56.4 -1.0**
TAM pmax pmax
comp=Z,46nm,0.7s
NBO00 NORSAR Array S 44.85 331 IAmb IAmb 07 49 03.0
comp=Z,41nm,0.8s
NC204 NORSAR Array S 44.98 332 IAmb IAmb 07 49 11.3
comp=Z,29nm,0.8s
ULN Ulaanbaatar 45.12 49*c i*P **P 07 48 59.3 -0.2**
ULN pmax pmax
comp=Z,13nm,1.1s
VADS Vadso 45.33 348 *e*P **P 07 49 01.4 +0.7**
SNART Snartemo 45.34 327 *i*P **P 07 49 02.6 +1.7**
KEV Kevo 45.48 347 P **P 07 49 03.5 +1.6**
ARA0 ARCESS Array S 45.62 346 *e*P **P 07 49 03.5 +0.5**
ARCES ARCESS Array B 45.62 346 **P 07 49 04.1 +1.1**
ARCES IAmb IAmb 07 50 43.1
comp=Z,65nm,1.4s
ARCES ARCESS Array B 45.62 346 P **P 07 49 03.6 +0.6**
comp=Z,9.0nm,0.8s,baz=140,slow=5.9,SNR=24
ARCES PcP **PcP 07 50 42.3 +1.2**
comp=Z,8.8nm,0.9s,baz=143,slow=2.3,SNR=2.8
ARCES LR LR 08 11 17.2
comp=Z,1µm,19.5s,baz=146,slow=40
comp=Z,9.0nm,0.8s
ARCES ARCESS Array B 45.62 346 P **P 07 49 04.1 +1.1**
ARCES pmax pmax
comp=Z,65nm,1.5s
KTK1 Kautokeino 45.73 345 *e*P **P 07 49 03.8 0.0**
SKAR Skarslia 45.77 330 *e*P **P 07 49 04.9 +0.6**
EIBI Ibiza 45.82 299 P **P 07 49 06.6 +1.6**
GYA Guiyang 45.83 79⇑ P **P 07 49 06.6 +1.3**
GYA S **S 07 55 47.2 -2.3**
GYA pmax pmax
comp=Z,18nm,0.8s
GYA pmax pmax
comp=Z,440nm,5.7s
GYA LR LR
comp=Z,2µm,22.7s
GYA LR LR
comp=Z,800nm,22.2s
GYA LR LR
comp=Z,680nm,29.8s
CEST Esterri de Car 45.87 304 P **P 07 49 05.0 -0.5**
DOMB Dombas 46.05 332 *e*P **P 07 49 07.0 +0.4**
BLSS Blasjo 46.11 328 *e*P **P 07 49 06.3 -0.7**
NRIK Noril'sk 46.17 15 **P 07 49 06.9 -0.4**
NRIK IAmb IAmb 07 49 13.1
comp=Z,83nm,1.6s
NRIK Noril'sk 46.17 15 P **P 07 49 07.9 +0.7**
comp=Z,11nm,0.9s,baz=214,slow=6.7,SNR=21
NRIK LR LR 08 12 08.3
comp=Z,6µm,18.9s,baz=220,slow=41
comp=Z,11nm,0.9s
NRIK Noril'sk 46.17 15⇓ *i*P **P 07 49 07.7 +0.4**
OPO Ambohidratompo 46.21 190 LR LR 08 07 31.9
comp=Z,2µm,19.6s,baz=178,slow=35
ODD1 Odda 46.22 329 *e*P **P 07 49 07.1 -0.8**
XAN Xi'an 46.43 68 P **P 07 49 09.5 -0.5**
XAN PP **PP 07 51 03.0 +4.1**
XAN S **S 07 55 57.7 -0.2**
XAN ScS **ScS 07 59 04.0 -1.6**
XAN pmax pmax
comp=Z,42nm,0.9s
XAN pmax pmax
comp=Z,450nm,4.8s
XAN LR LR
comp=Z,2µm,14.6s
XAN LR LR
comp=Z,2µm,13.9s
XAN LR LR
comp=Z,3µm,18.2s
LEIR Leirfjorden 46.66 338 *e*P **P 07 49 11.2 +0.1**
FAUS Fauske 46.73 340 *e*P **P 07 49 12.3 +0.6**
JETT Jettan, Norway 46.81 344 *e*P **P 07 49 12.4 0.0**
STOK Stokkvaagen 46.82 338 *e*P **P 07 49 12.2 -0.2**
BTO Baotou 46.84 59⇓ *i*P **P 07 49 13.2 +0.1**
BTO pP **sP 07 49 17.9 0.0**
BTO sP **pP 07 49 20.2 +3.7**
BTO PP **PP 07 51 02.7 -0.5**
BTO S **S 07 56 02.6 -1.1**
BTO pmax pmax
comp=Z,68nm,1.9s
BTO pmax pmax
comp=Z,1µm,5.3s
BTO LR LR
comp=Z,4µm,17.3s
BTO LR LR
comp=Z,3µm,18.4s
BTO LR LR
comp=Z,2µm,16.5s
HAMF Hammerfest 46.88 346 *e*P **P 07 49 12.1 -0.8**
HYA Hoyanger 46.92 330 *e*P **P 07 49 12.0 -1.2**
MOL Molde 46.92 332 *e*P **P 07 49 13.2 -0.1**
VAGH Vaagaholmen 46.97 339 *e*P **P 07 49 12.0 -1.6**
AKN Aaknes 46.99 332 *e*P **P 07 49 14.8 +1.0**
STEI Steigen 47.09 341 *e*P **P 07 49 14.7 +0.2**
ASK Askoy 47.10 329 *e*P **P 07 49 14.4 -0.3**
ECHE Chera 47.59 300 P **P 07 49 19.2 +0.3**
LOF Lofoten 47.72 340 *e*P **P 07 49 17.2 -2.2**
CART Cartagena 47.74 297 P **P 07 49 20.2 +0.1**
EMUR La Murta 47.91 298 P **P 07 49 21.1 -0.3**
HHC Hu-ho-hao-te 48.01 58 *e*P **P 07 49 23.2 +1.0**
HHC pP sP 07 49 27.5 +0.6
HHC PP **PP 07 51 16.2 +2.0**
HHC S **S 07 56 20.6 +0.3**
HHC sS sS 07 56 28.8 +2.3
HHC pmax pmax
comp=Z,28nm,1.8s
HHC pmax pmax
comp=Z,140nm,6.5s
HHC LR LR
comp=Z,2µm,20.6s
HHC LR LR
comp=Z,940nm,16.8s
HHC LR LR
comp=Z,1µm,16.0s
ETOB Tobarra 48.10 299 P **P 07 49 24.2 +1.3**

WOL Wolverton 48.27 316 *e*P **P** **07 49 24.4 +0.5**
PSI Prapat 48.53 112 P **P** **07 49 26.3 -0.2**
PSI pmax pmax
comp=Z,12nm,0.8s
RPSI Rantau Prapat 48.59 112 **P** **07 49 26.3 -0.5**
EDA Edea 48.73 249 P **P** **07 49 26.5 -1.5**
EDA IAmb IAmb 07 49 36.5
comp=Z,28nm,0.8s
ENIJ Nijar 48.76 296 P **P** **07 49 28.5 +0.5**
LBWR Ladybower, Pea 48.87 318 *e*P **P** **07 49 29.1 +0.5**
LBWR IAmb IAmb 07 49 31.4
comp=Z,30nm,0.8s
TIY Taiyuan 48.88 63 *e*P **P** **07 49 31.2 +2.2**
TIY S **S** **07 56 35.5 +2.8**
TIY ScS **ScS** **07 59 20.8 -0.9**
TIY pmax pmax
comp=Z,68nm,0.8s
TIY LR LR
comp=Z,1μm,16.5s
TIY LR LR
comp=Z,980nm,15.8s
TIY LR LR
comp=Z,1μm,17.2s
EDMD Edmundbyers 49.25 320 *e*P **P** **07 49 31.5 +0.1**
EDMD IAmb IAmb 07 49 35.6
comp=Z,55nm,0.7s
LYN LuoYang 49.28 67 P **P** **07 49 32.9 +1.0**
LYN PP **PP** **07 51 29.6 +3.9**
LYN S **S** **07 56 42.0 +3.8**
LYN pmax pmax
comp=Z,66nm,0.9s
LYN pmax pmax
comp=Z,570nm,6.0s
LYN LR LR
comp=Z,2μm,21.0s
LYN LR LR
comp=Z,2μm,21.0s
LYN LR LR
comp=Z,2μm,15.1s
UCM Universidad Co 49.30 301 P **P** **07 49 31.8 -0.2**
MONM Monmouth 49.31 316 *e*P **P** **07 49 31.3 -0.6**
MONM IAmb IAmb 07 49 34.2
comp=Z,40nm,0.9s
GULI GuiLin 49.34 79 P **P** **07 49 35.6 +3.0**
GULI S **S** **07 56 42.0 +2.7**
GULI pmax pmax
comp=Z,24nm,1.3s
GULI LR LR
comp=Z,2μm,20.6s
GULI LR LR
comp=Z,690nm,20.6s
GULI LR LR
comp=Z,950nm,17.3s
HLM1 Long Mynd 49.44 317 *e*P **P** **07 49 32.9 0.0**
HLM1 IAmb IAmb 07 49 36.0
comp=Z,26nm,0.9s
MCH1 Michaelchurch 49.45 316 *e*P **P** **07 49 32.4 -0.6**
MCH1 IAmb IAmb 07 49 35.3
comp=Z,52nm,0.8s
VOI Vohitsoka 49.55 190 **P** **07 49 33.8 -0.3**
LSZ Lusaka 49.67 215 LR LR 08 11 46.8
comp=Z,2μm,18.4s,baz=31,slow=38
FOEL Foel Wylfa 49.68 318 *e*P **P** **07 49 35.0 +0.3**
FOEL IAmb IAmb 07 49 39.6
comp=Z,38nm,0.8s
CIT Chita 49.80 44 *e*P **P** **07 49 36.3 +0.5**
CIT *e* 07 49 44.7
CIT *e* 07 51 02.8
CIT pmax pmax
comp=Z,95nm,2.6s
KESW Keswick, Cumbr 49.86 320 *e*P **P** **07 49 36.3 +0.2**
ESBB Sonseca Array 49.89 300 IAmb IAmb 07 49 43.7
comp=Z,34nm,0.9s
ESDC Sonseca Array 49.89 300 **P** **07 49 35.5 -1.1**
ESDC IAmb IAmb 07 49 43.5
comp=Z,30nm,1.1s
ESDC Sonseca Array 49.89 300 P **P** **07 49 36.5 -0.2**
comp=Z,18nm,0.8s,baz=71,slow=6.9,SNR=43
ESDC S **S** **07 56 44.3 -2.5**
comp=Z,5.2nm,1.3s,baz=82,slow=14,SNR=4.6
comp=Z,18nm,0.8s
DRUM Mains of Drumt 49.93 323 *e*P **P** **07 49 36.6 +0.1**
DRUM IAmb IAmb 07 49 38.8
comp=Z,33nm,0.7s
LLW Llanuwychllyn 49.96 317 *e*P **P** **07 49 37.1 +0.3**
GUD Guadarrama 49.97 301 P **P** **07 49 37.9 +0.6**
EKA Eskdalemuir Ar 50.01 321 P **P** **07 49 36.5 -0.7**
comp=Z,31nm,1.0s,baz=100,slow=7.2,SNR=41
comp=Z,31nm,1.0s
ESK Eskdalemuir 50.04 321 P **P** **07 49 37.0 -0.3**
ESK IAmb IAmb 07 49 53.0
comp=Z,24nm,0.9s
ESK Eskdalemuir 50.04 321 *e*P **P** **07 49 36.3 -1.1**
ESK IAmb IAmb 07 49 39.3
comp=Z,8.5nm,0.9s
ESK Eskdalemuir 50.04 321 P **P** **07 49 37.1 -0.3**
ESK pmax pmax
comp=Z,24nm,0.9s
PAB San Pablo 50.20 300 **P** **07 49 39.2 +0.2**
PAB San Pablo 50.20 300 P **P** **07 49 39.2 +0.2**
PAB pmax pmax
comp=Z,75nm,1.0s
MCD Coleburn Disti 50.47 324 *e*P **P** **07 49 40.1 -0.5**
EMAL Malaga-Limoner 50.55 296 P **P** **07 49 41.0 -0.6**
INVG Invergeldie, C 50.69 322 *e*P **P** **07 49 42.2 -0.1**
HNS HongShan 50.71 63 ⇓P **P** **07 49 42.3 -0.5**
HNS S **S** **07 56 58.8 +0.7**
HNS pmax pmax
comp=Z,13nm,1.0s
HNS LR LR
comp=Z,2μm,19.4s
HNS LR LR
comp=Z,860nm,17.7s
HNS LR LR
comp=Z,2μm,18.8s
QIZ Qiongzhong 50.77 87 P **P** **07 49 42.9 -0.5**
QIZ S **S** **07 56 59.7 +0.4**
QIZ SS **SS** **08 00 33.6 -0.2**
QIZ LR LR
comp=Z,1μm,29.4s
QIZ LR LR
comp=Z,670nm,18.0s
QIZ LR LR
comp=Z,900nm,22.8s
GAL1 Galloway 50.83 320 *e*P **P** **07 49 43.5 +0.2**
GAL1 IAmb IAmb 07 49 46.1
comp=Z,25nm,0.8s
PGBU Glenifferbraes 50.83 321 *e*P **P** **07 49 44.7 +1.3**
PGBU IAmb IAmb 07 49 50.8
comp=Z,49nm,0.9s
CNSH ChangSha 50.86 75 P **P** **07 49 44.0 0.0**
CNSH S **S** **07 57 02.4 +2.1**
CNSH LR LR
comp=Z,1μm,15.8s
CNSH LR LR
comp=Z,1μm,20.8s
CNSH LR LR
comp=Z,1μm,17.1s
BOD Bodaibo 50.91 36 *e*P **P** **07 49 43.0 -1.0**
BOD pmax pmax
comp=Z,87nm,1.6s
BIGH Upper Bighouse 50.99 325 *e*P **P** **07 49 43.3 -1.2**
BIGH IAmb IAmb 07 49 46.6
comp=Z,12nm,0.7s
XLT XiLinHaoTe 51.23 54 *e*P **P** **07 49 47.8 +1.1**
XLT PP **PP** **07 51 47.0 +3.5**
XLT S **S** **07 57 09.6 +4.2**
XLT pmax pmax
comp=Z,22nm,1.0s
XLT pmax pmax
comp=Z,560nm,5.4s
XLT LR LR
comp=Z,210nm,14.1s
XLT LR LR
comp=Z,1μm,15.6s
XLT LR LR
comp=Z,2μm,17.0s
LAWE Loch Awe, Argy 51.40 322 *e*P **P** **07 49 47.5 -0.2**
MD01 Midelt array s 51.42 292 **P** **07 49 48.8 +0.4**
MD31 MD31 51.42 292 IAmb IAmb 07 49 56.1
comp=Z,38nm,1.1s
WHN Wuhan 51.54 71 P **P** **07 49 51.0 +1.9**
WHN pP **sP** **07 49 53.4 -0.5**
WHN S **S** **07 57 11.1 +1.3**
WHN pmax pmax
comp=Z,74nm,1.2s
WHN pmax pmax
comp=Z,1μm,4.6s
WHN LR LR
comp=Z,2μm,12.0s
WHN LR LR
comp=Z,3μm,15.6s
WHN LR LR
comp=Z,4μm,17.4s
BJT Baijiatuau 51.57 59 P **P** **07 49 49.1 -0.1**
BJT IAmb IAmb 07 49 54.0
comp=Z,33nm,1.1s
BJT Baijiatuau 51.57 59 P **P** **07 49 49.1 -0.1**
BJT pmax pmax
comp=Z,33nm,1.1s
BJI Beijing 51.57 59 P **P** **07 49 48.3 -0.9**
BJI S **S** **07 57 13.5 +3.6**
BJI SS **SS** **08 00 50.8 +5.0**
BJI pmax pmax
comp=Z,15nm,1.1s
BJI pmax pmax
comp=Z,180nm,6.2s
BJI LR LR
comp=Z,1μm,20.4s
BJI LR LR
comp=Z,680nm,21.0s
BJI LR LR
comp=Z,770nm,16.7s
LINV Loch Inver, As 51.59 324 *e*P **P** **07 49 49.1 +0.1**
TORD Torodi Ar. Bea 51.59 265 IAmb IAmb 07 49 56.1
comp=Z,87nm,1.2s
TORD Torodi Ar. Bea 51.59 265 P **P** **07 49 48.0 -1.7**
comp=Z,35nm,0.8s,baz=54,slow=9.0,SNR=25
TORD S **S** **07 57 06.2 -4.6**
comp=Z,1.4nm,0.3s,baz=67,slow=7.0,SNR=1.8
TORD LR LR 08 12 22.0
comp=Z,1μm,19.3s,baz=66,slow=37
comp=Z,35nm,0.8s
IFR Ifrane 51.60 292 P **P** **07 49 50.5 +0.7**
DSB Dublin 51.62 318 P **P** **07 49 48.6 -0.8**
DSB IAmb IAmb 07 49 56.3
comp=Z,49nm,1.0s
DSB Dublin 51.62 318 P **P** **07 49 49.9 +0.5**
DSB Dublin 51.62 318 *e*P **P** **07 49 49.5 +0.2**
CLGH Cloghs, Cushen 51.65 320 *e*P **P** **07 49 49.9 +0.3**
ILTH Belurgan, Co L 51.67 319 P **P** **07 49 50.0 +0.3**
KPL Plockton 51.70 323 *e*P **P** **07 49 48.7 -1.1**
IWEX Carrickbyrne, 51.80 317 P **P** **07 49 52.8 +2.1**
IWEX Carrickbyrne, 51.80 317 *e*P **P** **07 49 52.0 +1.3**
PBRG Braganca 51.83 303 *e*P **P** **07 49 52.5 +1.2**
CNIL Conil 51.90 296 P **P** **07 49 51.3 -0.5**
MVO Moncorvo 52.10 302 *e*P **P** **07 49 54.1 +0.9**
MVO *i* IAmb IAmb 07 50 01.2
comp=Z,78nm,1.9s
MVO *e*LR LR 08 12 52.1
MVO *i* IAMs_20 IAMs_20 08 17 26.3
comp=Z,684nm,18.0s
PBAR Barrancos 52.43 299 *e*P **P** **07 49 57.1 +1.4**
PBAR *i* IAmb IAmb 07 50 03.3
comp=Z,94nm,1.1s
IDGL Inch Island, C 52.45 320 P **P** **07 49 56.3 +0.8**
PMRV Marv??o 52.55 300 *e*P **P** **07 49 58.0 +1.4**
PMRV *i* IAmb IAmb 07 49 59.7
comp=Z,52nm,1.4s
PMRV *e*LR LR 08 13 13.8
PMRV *i* IAMs_20 IAMs_20 08 17 25.4
comp=Z,529nm,18.0s
MTE Manteigas 52.56 301 *i* IAmb IAmb 07 50 23.9
comp=Z,79nm,1.4s
MTE *e*LR LR 08 13 12.7
MTE *i* IAMs_20 IAMs_20 08 18 17.4
comp=Z,526nm,18.0s
PCBR Castelo Branco 52.57 301 *e*P **P** **07 49 59.1 +2.5**
PCBR *i* IAmb IAmb 07 50 04.6
comp=Z,107nm,1.4s
PVRL Vila Real 52.61 303 *e*P **P** **07 49 58.7 +1.8**
POLO Lamas de Olo 52.66 303 *e*P **P** **07 49 59.1 +1.7**
POLO *i* IAmb IAmb 07 50 11.4
comp=Z,45nm,1.1s
PESTR Estremoz 52.77 300 *e*P **P** **07 49 59.6 +1.4**
PESTR *i* IAmb IAmb 07 50 04.7
comp=Z,52nm,1.2s
TIA Tai'an 52.80 64 P **P** **07 49 57.6 -0.8**
TIA S **S** **07 57 29.2 +2.3**
TIA ScS **ScS** **07 59 47.7 -0.8**
TIA pmax pmax
comp=Z,55nm,0.5s
TIA pmax pmax
comp=Z,480nm,5.1s
TIA LR LR
comp=Z,2μm,16.7s
TIA LR LR
comp=Z,940nm,17.3s
TIA LR LR
comp=Z,2μm,22.6s
PVIS Viseu 52.80 302 *e*P **P** **07 50 00.6 +2.2**
PCAB Cabril 52.80 303 *e*P **P** **07 50 00.4 +2.0**
PCAB *i* IAmb IAmb 07 50 18.5
comp=Z,109nm,1.5s
PGAV Gavieira, Arco 52.95 303 *e*P **P** **07 50 01.2 +1.6**
PGAV *e*LR LR 08 12 36.7
PGAV *i* IAMs_20 IAMs_20 08 16 49.3
comp=Z,1μm,20.0s
PVAQ Vaqueiros 53.07 298 *e*P **P** **07 50 01.4 +1.0**
PVAQ *i* IAmb IAmb 07 50 07.6
comp=Z,84nm,1.5s
PVAQ *e*LR LR 08 13 25.5
PVAQ *i* IAMs_20 IAMs_20 08 16 15.1
comp=Z,409nm,18.0s
STS Santiago 53.08 305 P **P** **07 50 03.7 +3.3**
PBEJ Beja 53.10 299 *e*P **P** **07 50 01.3 +0.7**
PBEJ *i* IAmb IAmb 07 50 08.2
comp=Z,57nm,1.6s
PSARD Sardoal 53.12 300 *e*P **P** **07 50 01.8 +1.0**
PSARD *i* IAmb IAmb 07 50 08.0
comp=Z,96nm,1.2s
PARRA Arraiolos 53.13 300 *e*P P 07 50 01.7 -4.8
PARRA *i* IAmb IAmb 07 50 03.0
comp=Z,35nm,1.6s
EVO Evora 53.15 299 P **P** **07 50 01.0 +0.1**
EVO Evora 53.15 299 *e*P **P** **07 50 02.0 +1.1**
EVO *i* IAmb IAmb 07 50 08.6
comp=Z,79nm,1.6s
PMTG Montargil 53.24 300 *e*P **P** **07 50 01.4 -0.2**
PMTG *i* IAmb IAmb 07 50 09.0
comp=Z,78nm,1.6s
PBDV Barranco-do-Ve 53.27 298 *e*P **P** **07 50 03.3 +1.4**
PCVE Castro Verde 53.29 298 *e*P **P** **07 50 02.9 +0.9**
PCAS Casmilo, Conde 53.33 301 *e*P **P** **07 50 04.2 +2.0**
MESJ Messejana 53.40 298 *e*P **P** **07 50 03.9 +1.0**
IGLA Glengowla, Co 53.43 318 P **P** **07 50 03.2 +0.5**
IGLA Glengowla, Co 53.43 318 *e*P **P** **07 50 03.0 +0.2**
HIA Hailar 53.61 47 P **P** **07 50 04.3 +0.1**
HIA Hailar 53.61 47 P **P** **07 50 04.3 +0.1**
HIA pmax pmax
comp=Z,16nm,0.9s
HILR Hailar Array B 53.61 47 P **P** **07 50 03.6 -0.6**
comp=Z,7.4nm,0.5s,baz=268,slow=7.2,SNR=11
HILR S **S** **07 57 36.1 -1.6**
comp=Z,1.0nm,0.4s,baz=201,slow=21,SNR=1.7
HILR LR LR 08 15 51.8
comp=Z,2μm,18.1s,baz=95,slow=39
comp=Z,7.4nm,0.5s
PSBE So Bento 53.62 300 *e*P **P** **07 50 05.8 +1.3**
SPA0 Spitsbergen Ar 53.87 351 *e*P **P** **07 50 06.5 +0.8**
SPITS Spitsbergen Ar 53.87 351 P **P** **07 50 06.3 +0.6**
comp=Z,5.3nm,0.6s,baz=134,slow=13,SNR=11
SPITS LR LR 08 18 55.9
comp=Z,1μm,18.5s,baz=128,slow=43
comp=Z,5.3nm,0.6s
SPITS Spitsbergen Ar 53.87 351 P **P** **07 50 07.3 +1.6**
SPITS pmax pmax
comp=Z,90nm,1.4s
TIO Tiouine 53.89 290 P **P** **07 50 06.2 -0.5**
VAL Valentia 53.92 316 P **P** **07 50 04.5 -1.8**
VAL Valentia 53.92 316 P **P** **07 50 07.3 +1.0**
PFVI Vila Bisbo 53.99 298 *e*P **P** **07 50 07.9 +0.8**
PMAFR Mafra 54.07 300 *e*P **P** **07 50 07.9 +0.1**
NJ2 Nanjing 54.99 69 ⇓P **P** **07 50 16.0 +1.5**
NJ2 S **S** **07 57 59.4 +2.8**
NJ2 pmax pmax
comp=Z,36nm,0.8s
NJ2 LR LR
comp=Z,1μm,18.9s
NJ2 LR LR
comp=Z,930nm,19.4s
NJ2 LR LR
comp=Z,2μm,22.0s
KBS Kingsbay 55.03 351 *e*P **P** **07 50 13.9 -0.1**
BROLN Tlhalogang 55.05 212 *i* P **P** **07 50 14.2 -0.9**
PHDHD Phuduhudu 55.66 215 P **P** **07 50 18.7 -0.8**
PHDHD Phuduhudu 55.66 215 *i* P **P** **07 50 19.7 +0.3**
JMIC Jan Mayen 55.87 339 LR LR 08 16 58.2
comp=Z,868nm,20.5s,baz=110,slow=39
DL2 Dalian 55.90 60 P **P** **07 50 23.0 +2.1**
DL2 S **S** **07 58 12.7 +4.1**
DL2 pmax pmax
comp=Z,86nm,0.9s
DL2 pmax pmax
comp=Z,340nm,9.8s
DL2 LR LR
comp=Z,2μm,19.0s
DL2 LR LR
comp=Z,1μm,19.5s
DL2 LR LR
comp=Z,2μm,18.0s
MREMI Moremi 56.27 211 P **P** **07 50 23.1 -0.6**
MREMI IAmb IAmb 07 50 31.4
comp=Z,42nm,1.0s
MREMI Moremi 56.27 211 *i* P **P** **07 50 22.7 -1.1**
ACRG Accra 56.63 258 P **P** **07 50 25.6 -0.8**
SNY Shenyang 56.92 56 ⇓P **P** **07 50 27.2 -0.9**
SNY S **S** **07 58 25.8 +3.8**
SNY pmax pmax
comp=Z,12nm,0.8s
SNY pmax pmax
comp=Z,320nm,5.3s
SNY LR LR
comp=Z,1μm,15.7s
SNY LR LR
comp=Z,590nm,20.2s
SNY LR LR
comp=Z,1μm,20.8s
QNGWA Qangwa 56.92 219 IAmb IAmb 07 50 43.1
comp=Z,56nm,1.2s
QNGWA Qangwa 56.92 219 *i* P **P** **07 50 29.0 +0.5**
SSE Sheshan 57.15 69 P **P** **07 50 28.7 -1.2**
SSE S **S** **07 58 23.0 -2.3**
SSE pmax pmax
comp=Z,11nm,0.7s
SSE pmax pmax
comp=Z,130nm,6.7s
SSE LR LR
comp=Z,460nm,16.0s
SSE LR LR
comp=Z,510nm,19.0s
LPHEP Lephephe 57.69 212 P **P** **07 50 32.6 -1.2**
LPHEP Lephephe 57.69 212 *i* P **P** **07 50 33.6 -0.2**
CN2 Changchun 57.99 54 P **P** **07 50 35.3 -0.4**
CN2 PP **PP** **07 52 44.5 +0.6**
CN2 S **S** **07 58 32.9 -3.1**
CN2 pmax pmax
comp=Z,50nm,1.1s
CN2 pmax pmax
comp=Z,480nm,4.0s
CN2 LR LR
comp=Z,170nm,18.0s
CN2 LR LR
comp=Z,1μm,18.0s
CN2 LR LR
comp=Z,2μm,19.0s
ZEA Zeya 58.13 42 *e*P **P** **07 50 37.1 +0.6**
ZEA *e* 07 58 47.9
ZEA pmax pmax
comp=E,30nm,0.6s
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA pmax pmax
comp=Z,200nm,6.2s
ZEA MLR MLR
comp=E,400nm,14.0s
ZEA MLR MLR
comp=Z,800nm,16.0s
KDWAN Kaudwane 58.27 213 P **P** **07 50 37.4 -0.5**
KDWAN Kaudwane 58.27 213 *i* P **P** **07 50 39.1 +1.1**
GRTLG Ghanzi 58.37 217 P **P** **07 50 38.0 -0.7**
GRTLG Ghanzi 58.37 217 *i* P **P** **07 50 39.4 +0.7**
HEH HeiHe 58.52 46 *e*P **P** **07 50 38.7 -0.6**
HEH pP **pP** **07 50 41.7 -1.0**
HEH S **S** **07 58 42.4 -0.4**
HEH pmax pmax
comp=Z,23nm,1.1s
HEH pmax pmax
comp=Z,390nm,4.4s
HEH LR LR
comp=Z,1μm,16.6s
HEH LR LR
comp=Z,3μm,18.1s
HEH LR LR
comp=Z,6μm,16.4s
TSUM Tsumeb 58.74 222 **P** **07 50 41.5 +0.2**
TSUM IAmb IAmb 07 50 52.6
comp=Z,42nm,1.1s
TSUM Tsumeb 58.74 222 LR LR 08 16 58.5
comp=Z,3μm,18.1s,baz=37,slow=37
KGCAE Kacgae 59.07 216 *i* P **P** **07 50 43.9 +0.4**
BNX BinXian 59.08 51 ⇓P **P** **07 50 42.3 -0.9**
BNX pP **pP** **07 50 46.2 -0.5**
BNX S **S** **07 58 53.4 +3.2**
BNX pmax pmax
comp=Z,32nm,1.3s
BNX pmax pmax
comp=Z,440nm,5.7s
BNX LR LR
comp=Z,2μm,14.5s
BNX LR LR
comp=Z,2μm,15.5s
BNX LR LR
comp=Z,2μm,17.6s
YAK Yakutsk 59.14 32 P **P** **07 50 43.7 +0.3**
YAK IAmb IAmb 07 51 00.1
comp=Z,35nm,0.9s
YAK Yakutsk 59.14 32 LR LR 08 19 01.7
comp=Z,4μm,18.6s,baz=266,slow=39
YAK Yakutsk 59.14 32 *e*P **P** **07 50 42.0 -1.3**
YAK *e**PP **pP** **07 50 46.2 -0.6**
YAK *e* 07 51 38.1
YAK *e*S **S** **07 58 48.5 -1.9**
YAK *e**SS **sS** **07 58 56.5 +0.2**
YAK *e* 08 00 34.5
YAK pmax pmax
comp=Z,8.0nm,1.0s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,17nm,1.3s
YAK smax smax
comp=E,295nm,3.3s
YAK smax smax
comp=N,350nm,3.0s
YAK MLR MLR
comp=Z,5μm,16.0s
YAK MLR MLR
comp=N,1μm,14.0s
YAK MLR MLR
comp=E,2μm,11.0s
LBTB Lobatse 59.22 211 **P** **07 50 44.3 -0.2**
LBTB Lobatse 59.22 211 LR LR 08 16 48.4
comp=E,3μm,20.8s,baz=28,slow=37
LBTB Lobatse 59.22 211 P **P** **07 50 44.3 -0.2**
LBTB pmax pmax
comp=Z,40nm,0.9s
TIXI Tiksi 59.28 21 **P** **07 50 43.2 -0.9**
TIXI IAmb IAmb 07 51 01.2
comp=Z,23nm,0.8s
TIXI Tiksi 59.28 21 LR LR 08 19 56.2
comp=Z,2μm,19.3s,baz=287,slow=40
TIXI Tiksi 59.28 21 ⇓*i*P **P** **07 50 43.3 -0.9**
TIXI pmax pmax
comp=Z,27nm,1.0s
BORG Borgarnes 59.85 331 LR LR 08 17 49.6
comp=Z,711nm,19.8s,baz=100,slow=37
DAG Danmarks Havn 59.90 345 P **P** **07 50 48.0 -0.4**
DAG Danmarks Havn 59.90 345 *i* P **P** **07 50 48.0 -0.4**
DAG IAmb IAmb 07 50 50.4
comp=Z,8.7nm,0.9s
DBG Daneborg 59.95 342 *i* P **P** **07 50 50.2 +1.4**
DBG IAmb IAmb 07 50 56.7
comp=Z,13nm,0.9s

SCO	**Scoresbysund**	**60.19**	**338**	*i* P		**P**	**07 50 52.6**	**+2.1**
SCO				IAmb		IAmb	07 50 58.7	
	comp=Z,20nm,1.1s							
DBIC	**Dimbokro**	**60.22**	**262**			**P**	**07 50 51.1**	**-0.4**
DBIC	**Dimbokro**	**60.22**	**262**	P		**P**	**07 50 51.3**	**-0.3**
	comp=Z,36nm,1.0s,baz=84,slow=7.7,SNR=21							
DBIC				S		**S**	**07 59 03.5**	**-2.3**
	comp=Z,2.0nm,0.8s,baz=158,slow=19,SNR=1.5							
DBIC				LR		LR	08 17 41.6	
	comp=Z,920nm,18.3s,baz=77,slow=37							
	comp=Z,36nm,1.0s							
KOOLE	**Kule**	**60.24**	**217**	P		**P**	**07 50 50.5**	**-1.1**
KOOLE	**Kule**	**60.24**	**217**	*i* P		**P**	**07 50 54.8**	**+3.1**
NOR	**Nord**	**60.51**	**351**	*i* P		**P**	**07 50 52.6**	**+0.1**
NOR				IAmb		IAmb	07 50 59.7	
	comp=Z,19nm,1.2s							
LKGWB	**Lokgwabe**	**60.62**	**216**	P		**P**	**07 50 51.6**	**-2.5**
MDJ	**Mudanjiang**	**60.79**	**52**	P		**P**	**07 50 54.7**	**-0.3**
MDJ				pP		pP	07 50 58.3	-0.2
MDJ				PcP		**PcP**	**07 51 39.5**	**+0.6**
MDJ				PP		**PP**	**07 53 13.3**	**+4.5**
MDJ				S		**S**	**07 59 11.6**	**-0.7**
MDJ				pmax		pmax		
	comp=Z,11nm,1.9s							
MDJ				pmax		pmax		
	comp=Z,490nm,4.1s							
MDJ				LR		LR		
	comp=Z,1µm,11.7s							
MDJ				LR		LR		
	comp=Z,2µm,19.9s							
MDJ				LR		LR		
	comp=Z,3µm,17.2s							
TJN	**Taejon**	**60.87**	**62**	P		**P**	**07 50 55.4**	**-0.3**
TJN	**Taejon**	**60.87**	**62**	P		**P**	**07 50 55.4**	**-0.3**
TJN				pmax		pmax		
	comp=Z,131nm,1.1s							
KS19	**Wonju Array Si**	**61.00**	**60**	IAmb		IAmb	07 51 14.5	
	comp=Z,61nm,1.6s							
KSAR	**Wonju Array Be**	**61.02**	**60**	P		**P**	**07 50 56.0**	**-0.7**
KSAR	**Wonju Array Be**	**61.02**	**60**	P		**P**	**07 50 56.0**	**-0.7**
KSRS	**Korea Array**	**61.05**	**60**	P		**P**	**07 50 55.6**	**-1.3**
	comp=Z,18nm,0.9s,baz=277,slow=6.5,SNR=18							
	comp=Z,18nm,0.9s							
WIN	**Windhoek**	**61.63**	**220**	P		**P**	**07 51 04.3**	**+3.2**
BOSA	**Boshof**	**62.48**	**209**			**P**	**07 51 06.2**	**-0.4**
BOSA	**Boshof**	**62.48**	**209**	P		**P**	**07 51 06.0**	**-0.6**
	comp=Z,17nm,0.7s,baz=23,slow=5.9,SNR=33							
BOSA				LR		LR	08 17 57.1	
	comp=Z,2µm,21.4s,baz=28,slow=36							
	comp=Z,17nm,0.7s							
BOSA	**Boshof**	**62.48**	**209**	P		**P**	**07 51 06.2**	**-0.4**
BOSA				pmax		pmax		
	comp=Z,89nm,1.6s							
USRK	**Ussuriysk Ar.**	**62.56**	**52**	P		**P**	**07 51 05.4**	**-1.5**
	comp=Z,4.9nm,0.8s,baz=274,slow=4.6,SNR=6.2							
	comp=Z,4.9nm,0.8s							
JOW	**Kunigami**	**64.31**	**72**	LR		LR	08 22 45.8	
	comp=Z,907nm,18.1s,baz=226,slow=39							
JNU	**Nakatsu**	**64.52**	**64**	LR		LR	08 23 45.6	
	comp=Z,1µm,18.4s,baz=290,slow=40							
SUMG	**Summit**	**65.24**	**341**	P		**P**	**07 51 20.4**	**-4.3**
SUMG	**Summit**	**65.24**	**341**			**P**	**07 51 25.6**	**+0.9**
SUMG	**Summit**	**65.24**	**341**	P		**P**	**07 51 25.6**	**+0.9**
SUMG				pmax		pmax		
	comp=Z,72nm,1.1s							
SUMG	**Summit**	**65.24**	**341**	*i* P		**P**	**07 51 26.3**	**+1.7**
SUMG				IAmb		IAmb	07 51 32.5	
	comp=Z,70nm,1.1s							
NEEM	**North Greenlan**	**66.97**	**347**	*i* P		**P**	**07 51 37.1**	**+1.5**
NEEM				IAmb		IAmb	07 51 43.0	
	comp=Z,64nm,1.1s							
BBTS	**Babate**	**67.19**	**275**	LR		LR	08 24 30.4	
	comp=Z,378nm,18.6s,baz=260,slow=39							
TYV	**Tymovskoe**	**67.93**	**43**	*e*P		**P**	**07 51 44.1**	**+2.4**
TYV				*e*S		**S**	**08 00 40.3**	**0.0**
TYV				pmax		pmax		
	comp=Z,18nm,1.1s							
TYV				pmax		pmax		
	comp=Z,200nm,2.4s							
TYV				smax		smax		
	comp=N,200nm,4.2s							
TYV				smax		smax		
	comp=E,200nm,4.2s							
TYV				smax		smax		
	comp=N,20nm,1.4s							
TYV				smax		smax		
	comp=E,20nm,1.4s							
INU	**Inuyama**	**68.68**	**60**	P		**P**	**07 51 45.7**	**-0.9**
INU				IAmb		IAmb	07 52 16.3	
	comp=Z,42nm,1.3s							
YSS	**Yuzhno-Sakhali**	**69.14**	**47**	P		**P**	**07 51 48.7**	**-0.6**
YSS	**Yuzhno-Sakhali**	**69.14**	**47**	*e*P		**P**	**07 51 49.3**	**0.0**
YSS				*e*SP		**sP**	**07 51 53.7**	**-0.4**
YSS				*e*			07 52 08.7	
YSS				*e*S		**S**	**08 00 49.0**	**-5.9**
YSS				*e*PPS		PPS	08 01 32.2	
YSS				pmax		pmax		
	comp=Z,60nm,1.2s							
YSS				pmax		pmax		
	comp=Z,300nm,5.5s							
YSS				smax		smax		
	comp=N,500nm,6.9s							
YSS				MLR		MLR		
	comp=Z,2µm,12.0s							
YSS				MLR		MLR		
	comp=N,700nm,16.0s							
YSS				MLR		MLR		
	comp=E,2µm,16.0s							
MJAR	**Matsushiro Arr**	**69.21**	**59**			**P**	**07 51 48.6**	**-1.4**
MJAR	**Matsushiro Arr**	**69.21**	**59**	P		**P**	**07 51 48.6**	**-1.4**
	comp=E,4.0nm,0.9s,baz=285,slow=6.5,SNR=5.4							
MJAR				LR		LR	08 26 06.4	
	comp=E,432nm,19.8s,baz=302,slow=39							
	comp=E,4.0nm,0.9s							
SEY	**Seymchan**	**69.32**	**29**	LR		LR	08 26 14.6	
	comp=E,4µm,18.2s,baz=288,slow=39							
SEY	**Seymchan**	**69.32**	**29**	*e*P		**P**	**07 51 50.2**	**+0.1**
SEY				pmax		pmax		
	comp=Z,28nm,0.9s							
KULLO	**Kullorsuaq**	**69.55**	**345**	*i* P		**P**	**07 51 51.4**	**+0.1**
KULLO				IAmb		IAmb	07 51 59.0	
	comp=Z,36nm,1.1s							
DAV	**Davao City (W)**	**69.55**	**93**	LR		LR	08 26 00.5	
	comp=Z,352nm,19.6s,baz=330,slow=39							
MA2	**Magadan**	**69.70**	**33**	LR		LR	08 25 35.0	
	comp=Z,2µm,18.5s,baz=290,slow=39							
SAATT	**Saattut**	**69.74**	**340**	*i* P		**P**	**07 51 56.1**	**+3.5**
SAATT				IAmb		IAmb	07 51 57.2	
	comp=Z,55nm,1.1s							
ASAJ	**Asahikawa**	**69.93**	**50**	LR		LR	08 24 04.7	
	comp=Z,1µm,19.4s,baz=296,slow=37							
UPNV	**Upernavik**	**70.13**	**343**	*i* P		**P**	**07 51 55.5**	**+0.5**
UPNV				IAmb		IAmb	07 51 59.7	
	comp=Z,33nm,1.0s							
KAPI	**Kappang**	**70.22**	**107**			**P**	**07 51 54.5**	**-1.9**
KAPI	**Kappang**	**70.22**	**107**	LR		LR	08 23 41.5	
	comp=Z,190nm,21.7s,baz=284,slow=37							
KAPI	**Kappang**	**70.22**	**107**	P		**P**	**07 51 54.5**	**-1.9**
KAPI				pmax		pmax		
	comp=Z,102nm,1.6s							
SFJD	**Kangerlussuaq**	**71.02**	**336**	P		**P**	**07 51 59.0**	**-1.5**
	comp=Z,7.2nm,0.9s,baz=98,slow=8.7,SNR=2.5							
SFJD				LR		LR	08 27 01.0	
	comp=Z,607nm,18.5s,baz=68,slow=39							
	comp=Z,7.2nm,0.9s							
SFJD	**Kangerlussuaq**	**71.02**	**336**	P		**P**	**07 51 59.0**	**-1.5**
JHJ	**Hachijo jima 2**	**71.59**	**62**	LR		LR	08 26 26.4	
	comp=Z,573nm,18.7s,baz=302,slow=38							
BILL	**Bilibino**	**72.48**	**22**	P		**P**	**07 52 09.7**	**+0.4**
BILL				IAmb		IAmb	07 52 19.2	
	comp=Z,29nm,1.2s							
BILL	**Bilibino**	**72.48**	**22**	*i* P		**P**	**07 52 08.8**	**-0.5**
IVI	**Ivigtut**	**72.49**	**330**	*i* P		**P**	**07 52 13.8**	**+4.4**
SANI	**Sanana**	**74.13**	**101**	P		**P**	**07 52 16.3**	**-3.6**
PETK	**Petropavlovsk-**	**75.77**	**37**	P		**P**	**07 52 27.2**	**-1.6**
	comp=Z,10nm,1.0s,baz=288,slow=1.4,SNR=4.7							
PETK				LR		LR	08 29 17.3	
	comp=Z,828nm,18.7s,baz=298,slow=38							
	comp=Z,10nm,1.0s							
JCJ	**Chichijima**	**75.79**	**67**	LR		LR	08 31 12.0	
	comp=Z,253nm,18.9s,baz=333,slow=40							
BATI	**Baumata**	**76.21**	**109**	LR		LR	08 27 30.4	
	comp=Z,352nm,21.6s,baz=280,slow=37							
RES	**Resolute Bay**	**76.40**	**352**	P		**P**	**07 52 32.3**	**+0.4**
RES	**Resolute Bay**	**76.40**	**352**	LR		LR	08 31 38.1	
	comp=Z,758nm,18.1s,baz=18,slow=40							
RES	**Resolute Bay**	**76.40**	**352**	P		**P**	**07 52 32.3**	**+0.4**
RES				pmax		pmax		
	comp=Z,10.0nm,1.1s							
SOEI	**Soe**	**76.49**	**109**	P		**P**	**07 52 30.3**	**-3.2**
FRB	**Frobisher Bay**	**79.06**	**338**	P		**P**	**07 52 47.0**	**+0.1**
	comp=Z,14nm,0.8s,baz=100,slow=6.5,SNR=3.6							
FRB				LR		LR	08 30 05.0	
	comp=Z,814nm,19.6s,baz=56,slow=38							
	comp=Z,14nm,0.8s							
FRB	**Frobisher Bay**	**79.06**	**338**	P		**P**	**07 52 47.0**	**+0.1**
PSAD1	**Pilbara Seismi**	**79.24**	**121**	P		**P**	**07 52 49.3**	**+0.7**
	comp=Z,22nm,1.1s							
PSAC1	**Pilbara Seismi**	**79.27**	**121**	P		**P**	**07 52 49.2**	**+0.4**
	comp=Z,20nm,1.0s							
PSA00	**Pilbara Seismi**	**79.32**	**121**	P		**P**	**07 52 49.3**	**+0.3**
A19K	**Wainwright**	**79.42**	**12**	P		**P**	**07 52 46.0**	**-2.8**
	baz=328							
A22K	**Sinclair Lake**	**79.72**	**10**	P		**P**	**07 52 47.7**	**-2.7**
	baz=333							
B18K	**Kokolik River**	**79.99**	**12**	P		**P**	**07 52 49.8**	**-2.2**
	baz=327							
C16K	**Lisburne Hills**	**80.17**	**14**	P		**P**	**07 52 50.3**	**-2.6**
	baz=324							
B20K	**Meade River**	**80.26**	**11**	P		**P**	**07 52 51.1**	**-2.3**
	baz=331							
C17K	**DeLong Mountai**	**80.46**	**13**	P		**P**	**07 52 52.0**	**-2.5**
	baz=326							
B22K	**Teshekpuk Lake**	**80.55**	**9**	IAmb		IAmb	07 53 07.8	
	comp=Z,45nm,0.9s							
B22K	**Teshekpuk Lake**	**80.55**	**9**	P		**P**	**07 52 52.7**	**-2.1**
	baz=335							
C19K	**Lookout Ridge**	**80.63**	**12**	P		**P**	**07 52 53.2**	**-2.3**
	baz=329							
C18K	**Utukok River**	**80.72**	**13**	P		**P**	**07 52 53.6**	**-2.3**
	baz=328							
RDOG	**Red Dog Mine**	**80.87**	**14**	P		**P**	**07 52 54.5**	**-2.2**
	baz=326							
A36M	**Sachs Harbour**	**80.99**	**0**			**P**	**07 52 57.8**	**+0.6**
A36M	**Sachs Harbour**	**80.99**	**0**	P		**P**	**07 52 55.8**	**-1.5**
	baz=360							
B21K	**Ikpikpuk River**	**81.02**	**10**	IAmb		IAmb	07 53 11.3	
	comp=Z,57nm,1.2s							
B21K	**Ikpikpuk River**	**81.02**	**10**	P		**P**	**07 52 56.2**	**-1.3**
	baz=334							
D17K	**Noatak River**	**81.13**	**14**	P		**P**	**07 52 56.4**	**-1.7**
	baz=326							
C23K	**Itkillik River**	**81.40**	**9**	IAmb		IAmb	07 53 10.3	
	comp=Z,30nm,0.8s							
C23K	**Itkillik River**	**81.40**	**9**	P		**P**	**07 52 57.5**	**-1.9**
	baz=337							
C21K	**Knifeblade Rid**	**81.41**	**10**	P		**P**	**07 52 57.6**	**-2.0**
	baz=334							
D19K	**Kuna River**	**81.43**	**12**	IAmb		IAmb	07 54 01.8	
	comp=Z,25nm,1.1s							
D19K	**Kuna River**	**81.43**	**12**	P		**P**	**07 52 58.0**	**-1.8**
	baz=331							
D20K	**Etivluk River**	**81.50**	**11**	IAmb		IAmb	07 53 17.2	
	comp=Z,57nm,1.7s							
D20K	**Etivluk River**	**81.50**	**11**	P		**P**	**07 52 58.1**	**-2.0**
	baz=332							
TNA	**Tin City**	**81.75**	**17**	P		**P**	**07 52 59.9**	**-1.4**
	baz=322							
C24K	**Franklin Bluff**	**81.76**	**8**	P		**P**	**07 52 59.4**	**-1.9**
	baz=339							
E18K	**Tukpahlearik C**	**81.88**	**13**	IAmb		IAmb	07 53 13.8	
	comp=Z,27nm,1.1s							
E18K	**Tukpahlearik C**	**81.88**	**13**	P		**P**	**07 53 00.4**	**-1.7**
	baz=328							
E17K	**Hotham Inlet**	**81.92**	**14**	P		**P**	**07 53 00.3**	**-2.0**
	baz=328							
FITZ	**Fitzroy Crossi**	**81.97**	**115**			**P**	**07 53 03.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**81.97**	**115**	P		**P**	**07 53 02.2**	**-1.1**
	comp=Z,19nm,0.6s,baz=314,slow=4.5,SNR=50							
FITZ				LR		LR	08 32 52.0	
	comp=Z,140nm,18.6s,baz=316,slow=38							
	comp=Z,19nm,0.6s							
E20K	**Nigu River**	**81.98**	**11**	P		**P**	**07 53 01.4**	**-1.3**
	baz=332							
D22K	**Ayikyak River**	**81.99**	**10**	IAmb		IAmb	07 53 07.4	
	comp=Z,34nm,1.1s							
D22K	**Ayikyak River**	**81.99**	**10**	P		**P**	**07 53 01.2**	**-1.5**
	baz=335							
C26K	**Camden Bay**	**82.01**	**7**	P		**P**	**07 53 01.0**	**-1.7**
	baz=342							
GAMB	**Gambell**	**82.10**	**19**	P		**P**	**07 53 01.8**	**-1.4**
	baz=319							
E21K	**Killik River**	**82.18**	**10**	P		**P**	**07 53 02.4**	**-1.3**
	baz=334							
D23K	**Nanushuk River**	**82.20**	**9**	IAmb		IAmb	07 53 08.6	
	comp=Z,27nm,1.2s							
D23K	**Nanushuk River**	**82.20**	**9**	P		**P**	**07 53 02.5**	**-1.2**
	baz=337							
F14K	**Arctic Creek**	**82.22**	**16**	P		**P**	**07 53 02.3**	**-1.6**
	baz=324							
D24K	**Happy Valley**	**82.28**	**8**	P		**P**	**07 53 03.1**	**-1.0**
	baz=339							
C27K	**Jago River**	**82.42**	**7**	IAmb		IAmb	07 53 17.7	
	comp=Z,36nm,1.2s							
C27K	**Jago River**	**82.42**	**7**	P		**P**	**07 53 03.7**	**-1.2**
	baz=343							
D25K	**Kavik River**	**82.42**	**8**	P		**P**	**07 53 03.7**	**-1.3**
	baz=341							
F15K	**North Star Dit**	**82.43**	**15**	IAmb		IAmb	07 53 09.6	
	comp=Z,34nm,1.1s							
F15K	**North Star Dit**	**82.43**	**15**	P		**P**	**07 53 03.0**	**-2.0**
	baz=325							
E19K	**Redstone River**	**82.50**	**12**	P		**P**	**07 53 03.0**	**-2.3**
	baz=332							
F17K	**Baldwin Pennin**	**82.58**	**14**	P		**P**	**07 53 04.6**	**-1.1**
	baz=328							
TOLK	**Toolik Lake Re**	**82.66**	**9**	IAmb		IAmb	07 53 16.7	
	comp=Z,18nm,0.8s							
TOLK	**Toolik Lake Re**	**82.66**	**9**	P		**P**	**07 53 04.9**	**-1.3**
	baz=338							
KUQ	**Kuujjuuaa**	**82.74**	**333**			**P**	**07 53 06.5**	**-0.2**
KUQ				IAmb		IAmb	07 53 14.3	
	comp=Z,37nm,1.0s							
F18K	**Selawik**	**82.78**	**13**	P		**P**	**07 53 05.0**	**-1.7**
	baz=329,SNR=12							
E22K	**Anaktuvuk Pass**	**82.80**	**10**	IAmb		IAmb	07 53 17.7	
	comp=Z,29nm,1.4s							
E22K	**Anaktuvuk Pass**	**82.80**	**10**	P		**P**	**07 53 05.3**	**-1.7**
	baz=336							
F19K	**Shaleruckik Mo**	**82.95**	**12**	IAmb		IAmb	07 53 20.3	
	comp=Z,27nm,1.1s							
F19K	**Shaleruckik Mo**	**82.95**	**12**	P		**P**	**07 53 05.0**	**-2.6**
	baz=331							
D27M	**Malcolm River**	**83.05**	**6**	P		**P**	**07 53 05.6**	**-2.6**
	baz=346							
F20K	**Avaaart Lake**	**83.14**	**12**	P		**P**	**07 53 06.0**	**-2.6**
	baz=333							
D28M	**Stokes Point**	**83.14**	**5**	P		**P**	**07 53 06.3**	**-2.2**
	baz=348							
G15K	**Niukluk**	**83.17**	**16**	P		**P**	**07 53 06.0**	**-2.8**
	baz=326							
E23K	**Chandalar**	**83.19**	**9**	IAmb		IAmb	07 53 24.4	
	comp=Z,23nm,1.0s							
E23K	**Chandalar**	**83.19**	**9**	P		**P**	**07 53 06.9**	**-2.1**
	baz=338							
ANM	**Nome**	**83.19**	**16**	P		**P**	**07 53 06.4**	**-2.6**
	baz=325							
G16K	**Koyuk River**	**83.23**	**15**	P		**P**	**07 53 06.2**	**-2.9**
	baz=327							
KNRA	**Kunununra**	**83.28**	**111**			**P**	**07 53 09.6**	**-0.5**
F22K	**John River**	**83.32**	**10**	P		**P**	**07 53 07.1**	**-2.5**
	baz=336							
E24K	**Your Creek**	**83.33**	**9**	IAmb		IAmb	07 53 22.1	
	comp=Z,26nm,1.1s							
E24K	**Your Creek**	**83.33**	**9**	P		**P**	**07 53 07.7**	**-2.0**
	baz=339							
F21K	**Alatna River**	**83.37**	**11**	P		**P**	**07 53 07.5**	**-2.3**
	baz=335							
G17K	**Kiwalik Mounta**	**83.52**	**14**	P		**P**	**07 53 08.2**	**-2.4**
	baz=329							
G18K	**Tagagawik**	**83.59**	**13**	P		**P**	**07 53 08.7**	**-2.3**
	baz=330							
C36M	**Paulatuk**	**83.64**	**360**	P		**P**	**07 53 08.7**	**-2.5**
	baz=0.9							
E25K	**Arctic Village**	**83.66**	**8**	IAmb		IAmb	07 53 23.6	
	comp=Z,15nm,0.9s							
E25K	**Arctic Village**	**83.66**	**8**	P		**P**	**07 53 09.0**	**-2.3**
	baz=342							
GUMO	**Guam**	**83.78**	**78**	LR		LR	08 33 47.4	
	comp=Z,252nm,20.7s,baz=310,slow=38							
E28M	**Babbage River**	**83.79**	**5**	P		**P**	**07 53 09.7**	**-2.3**
	baz=347							
COLD	**Coldfoot**	**83.88**	**10**	IAmb		IAmb	07 53 26.2	
	comp=Z,22nm,1.0s							
COLD	**Coldfoot**	**83.88**	**10**	P		**P**	**07 53 10.3**	**-2.2**
	baz=338							
H16K	**Elim**	**83.89**	**15**	P		**P**	**07 53 10.0**	**-2.5**
	baz=327							
F24K	**Squaw Lake**	**83.94**	**9**	P		**P**	**07 53 10.7**	**-2.1**
	baz=340							
G22K	**Bettles**	**83.96**	**10**	P		**P**	**07 53 10.8**	**-2.0**
	baz=336							
G21K	**Allakaket**	**84.01**	**11**	IAmb		IAmb	07 53 24.7	
	comp=Z,19nm,1.1s							
G21K	**Allakaket**	**84.01**	**11**	P		**P**	**07 53 11.1**	**-2.1**
	baz=335							
E27K	**Coleen River**	**84.02**	**6**	IAmb		IAmb	07 53 27.8	
	comp=Z,40nm,1.6s							
E27K	**Coleen River**	**84.02**	**6**	P		**P**	**07 53 11.2**	**-2.0**
	baz=345							
E29M	**Blow River**	**84.13**	**5**	P		**P**	**07 53 11.7**	**-2.0**
	baz=348							
F25K	**Christian Rive**	**84.15**	**8**	IAmb		IAmb	07 53 20.0	
	comp=Z,24nm,1.4s							
F25K	**Christian Rive**	**84.15**	**8**	P		**P**	**07 53 11.8**	**-2.1**
	baz=342							
NWAO	**Narrogin (SRO)**	**84.16**	**132**	P		**P**	**07 53 13.0**	**-1.3**
	comp=Z,19nm,0.9s,baz=286,slow=1.9,SNR=5.4							
NWAO				LR		LR	08 25 47.3	
	comp=Z,185nm,19.6s,baz=261,slow=32							
	comp=Z,19nm,0.9s							
H17K	**Granite Mounta**	**84.16**	**14**	IAmb		IAmb	07 53 20.5	
	comp=Z,16nm,0.9s							
H17K	**Granite Mounta**	**84.16**	**14**	P		**P**	**07 53 11.9**	**-2.1**
	baz=329							
F26K	**Sheenjek River**	**84.23**	**7**	P		**P**	**07 53 12.5**	**-1.8**
	baz=343							
SCHQ	**Schefferville**	**84.23**	**330**	P		**P**	**07 53 13.8**	**-0.7**
	comp=Z,24nm,0.8s,baz=48,slow=3.5,SNR=17							
SCHQ				LR		LR	08 33 21.9	
	comp=Z,382nm,18.3s,baz=52,slow=38							
	comp=Z,24nm,0.8s							
H18K	**Honhosa River**	**84.30**	**14**	IAmb		IAmb	07 53 26.5	
	comp=Z,28nm,1.1s							
H18K	**Honhosa River**	**84.30**	**14**	P		**P**	**07 53 12.4**	**-2.2**
	baz=331							
SHEM	**Shemya Is, Ala**	**84.33**	**32**	LR		LR	08 34 23.2	
	comp=Z,596nm,18.5s,baz=298,slow=38							
H19K	**Roundabout Mou**	**84.36**	**13**	IAmb		IAmb	07 53 49.8	
	comp=Z,25nm,1.4s							
H19K	**Roundabout Mou**	**84.36**	**13**	P		**P**	**07 53 12.8**	**-2.0**
	baz=332							
G23K	**Bananza Creek**	**84.39**	**10**	IAmb		IAmb	07 53 19.9	
	comp=Z,17nm,1.1s							
G23K	**Bananza Creek**	**84.39**	**10**	P		**P**	**07 53 13.0**	**-2.1**
	baz=338							
BMAR	**Burnt Mountain**	**84.43**	**7**			**P**	**07 53 15.7**	**+0.4**
INK	**Inuvik**	**84.48**	**3**	IAmb		IAmb	07 53 27.2	
	comp=Z,19nm,1.1s							
INK	**Inuvik**	**84.48**	**3**	LR		LR	08 35 15.3	
	comp=Z,159nm,21.7s,baz=2.0,slow=39							
INK	**Inuvik**	**84.48**	**3**	P		**P**	**07 53 13.2**	**-2.3**
	baz=352							
H20K	**Anotleneega Mo**	**84.69**	**12**	P		**P**	**07 53 14.6**	**-2.0**
	baz=334							
F28M	**Old Crow**	**84.73**	**6**	IAmb		IAmb	07 53 21.4	
	comp=Z,20nm,1.0s							
F28M	**Old Crow**	**84.73**	**6**	P		**P**	**07 53 14.6**	**-2.2**
	baz=347,SNR=17							
G24K	**Hadweenzic Riv**	**84.76**	**9**	P		**P**	**07 53 14.6**	**-2.3**
	baz=340							
G25K	**Bearman Lake**	**84.88**	**8**	P		**P**	**07 53 16.0**	**-1.5**
	baz=341							
H21K	**Melozitna Rive**	**84.91**	**11**	IAmb		IAmb	07 53 22.3	
	comp=Z,19nm,1.0s							
H21K	**Melozitna Rive**	**84.91**	**11**	P		**P**	**07 53 15.1**	**-2.6**
	baz=335,SNR=8.7							
H22K	**Ishtalitna Cre**	**84.93**	**11**	P		**P**	**07 53 15.5**	**-2.4**
	baz=337,SNR=13							
GCSA	**Galena City Sc**	**84.97**	**13**	P		**P**	**07 53 16.1**	**-1.8**
	baz=332							
G26K	**Porcupine Rive**	**84.98**	**7**	IAmb		IAmb	07 54 30.8	
	comp=Z,23nm,1.4s							
G26K	**Porcupine Rive**	**84.98**	**7**	P		**P**	**07 53 15.0**	**-3.0**
	baz=343							
F30M	**Barrier River**	**85.05**	**4**	P		**P**	**07 53 15.7**	**-2.7**
	baz=350							
J14K	**Nanvaranak Lak**	**85.15**	**17**	P		**P**	**07 53 15.8**	**-3.1**
	baz=326							
H23K	**Yukon River**	**85.28**	**10**	P		**P**	**07 53 17.4**	**-2.3**
	baz=338							
F31M	**Tsiigehtchic**	**85.33**	**3**	P		**P**	**07 53 17.2**	**-2.6**
	baz=352,SNR=8.9							
G27K	**Doyon Strip**	**85.35**	**7**	IAmb		IAmb	07 53 24.5	
	comp=Z,17nm,1.0s							
G27K	**Doyon Strip**	**85.35**	**7**	P		**P**	**07 53 17.8**	**-2.1**
	baz=345							
I20K	**Naaghedeneel**	**85.39**	**12**	P		**P**	**07 53 17.2**	**-2.9**
	baz=334							
H25L	**Birch Creek**	**85.39**	**8**	P		**P**	**07 53 17.2**	**-2.9**
	baz=342							
J16K	**Anvik River**	**85.43**	**15**	IAmb		IAmb	07 53 24.5	
	comp=Z,36nm,1.1s							
J16K	**Anvik River**	**85.43**	**15**	P		**P**	**07 53 17.1**	**-3.2**
	baz=329							
I21K	**Tanana**	**85.49**	**11**	IAmb		IAmb	07 53 32.9	
	comp=Z,19nm,1.0s							
I21K	**Tanana**	**85.49**	**11**	P		**P**	**07 53 18.2**	**-2.3**
	baz=336							
H24K	**Noodor Dome**	**85.52**	**9**	IAmb		IAmb	07 53 26.7	
	comp=Z,50nm,1.8s							
H24K	**Noodor Dome**	**85.52**	**9**	P		**P**	**07 53 18.4**	**-2.4**
	baz=340,SNR=5.9							
K13K	**Kusilvak Mount**	**85.54**	**18**	P		**P**	**07 53 18.8**	**-2.1**
	baz=325							
G29M	**Pine Creek**	**85.58**	**5**	IAmb		IAmb	07 53 24.8	
	comp=Z,24nm,1.1s							
G29M	**Pine Creek**	**85.58**	**5**	P		**P**	**07 53 18.4**	**-2.7**
	baz=348							
G30M	**tAoh Zraii Nji**	**85.64**	**4**	P		**P**	**07 53 19.0**	**-2.4**
	baz=350							
J17K	**VABM Dome**	**85.68**	**15**	IAmb		IAmb	07 53 32.9	
	comp=Z,49nm,1.5s							
J17K	**VABM Dome**	**85.68**	**15**	P		**P**	**07 53 19.3**	**-2.2**

L15K	**Ungalak Mounta**	86.58	17	P	P	07 53 24.4	-1.7	
	baz=328							
CHUM	**Lake Minchumin**	86.62	12	P	P	07 53 24.7	-1.4	
	baz=336,SNR=19							
I26K	**Coal Creek Min**	86.64	8	IAmb	IAmb	07 53 54.5		
	comp=Z,21nm,1.2s							
I26K	**Coal Creek Min**	86.64	8	P	P	07 53 24.7	-1.6	
	baz=344							
BPAW	**Bear Paw Mtn.**	86.65	11		P	07 53 26.8	+0.4	
BPAW	**Bear Paw Mtn.**	86.65	11	P	P	07 53 24.8	-1.6	
	baz=337,SNR=9.4							
ILAR	**Eielson Array**	86.67	9	P	P	07 53 24.5	-1.9	
ILAR	**Eielson Array**	86.67	9	P	P	07 53 25.1	-1.3	
	comp=Z,3.5nm,0.8s,baz=322,slow=4.4,SNR=31							
ILAR				PKKPbc	**PKKPbc**	08 11 21.6	-1.1	
	comp=Z,0.8nm,0.8s,baz=192,slow=2.3,SNR=9.7							
ILAR				LR	LR	08 37 10.0		
	comp=Z,719nm,19.1s,baz=328,slow=39							
	comp=Z,3.5nm,0.8s							
K20K	**Telida**	86.77	13	P	P	07 53 25.1	-1.8	
	baz=334,SNR=14							
I28M	**Miner Creek**	86.84	6	P	P	07 53 23.6	-3.8	
	baz=347							
H31M	**Peel River**	86.93	4	P	P	07 53 24.7	-3.0	
	baz=352,SNR=8.1							
L17K	**Donlin**	86.96	15	P	P	07 53 25.1	-2.8	
	baz=331							
HDA	**Harding Lake**	87.00	9	P	P	07 53 25.4	-2.7	
	baz=341							
J25K	**Salcha River,**	87.03	9	P	P	07 53 24.4	-3.9	
	baz=342,SNR=12							
L16K	**Owhat River**	87.05	16		P	07 53 30.3	+2.0	
L16K				IAmb	IAmb	07 53 40.7		
	comp=Z,28nm,1.1s							
L16K	**Owhat River**	87.05	16	P	P	07 53 25.3	-3.0	
	baz=330							
M13K	**Dall Lake**	87.16	18	P	P	07 53 26.1	-2.8	
	baz=326							
KTH	**Kantishna Hill**	87.17	11	IAmb	IAmb	07 53 41.1		
	comp=Z,22nm,1.0s							
L18K	**Granite Mounta**	87.25	14	P	P	07 53 25.8	-3.5	
	baz=332							
M14K	**Bethel**	87.25	17	P	P	07 53 25.3	-4.0	
	baz=328							
JAY	**Jayapura**	87.33	94	LR	LR	08 33 24.7		
	comp=Z,66nm,21.9s,baz=340,slow=36							
MCK	**McKinley**	87.34	10	P	P	07 53 25.9	-3.8	
	baz=339,SNR=9.6							
J26L	**Joseph Creek**	87.37	8	P	P	07 53 25.8	-4.2	
	baz=344,SNR=26							
I30M	**Mount Dempster**	87.37	5	P	P	07 53 26.3	-3.7	
	baz=350							
TRF	**Thorofare Moun**	87.38	11	IAmb	IAmb	07 53 43.2		
	comp=Z,18nm,1.0s							
TRF	**Thorofare Moun**	87.38	11	P	P	07 53 26.1	-4.0	
	baz=338							
PPLA	**Purkeypile**	87.55	12	P	P	07 53 27.2	-3.7	
	baz=336							
L20K	**Farewell, AK**	87.60	13	P	P	07 53 28.0	-3.0	
	baz=335							
M15K	**Kasigluk River**	87.63	17	P	P	07 53 28.1	-3.1	
	baz=329							
SPIA	**Saint Paul Isl**	87.64	23	P	P	07 53 27.1	-4.2	
	baz=321							
L19K	**White Mountain**	87.67	14	IAmb	IAmb	07 53 44.5		
	comp=Z,21nm,1.1s							
L19K	**White Mountain**	87.67	14	P	P	07 53 28.5	-2.9	
	baz=334							
M16K	**Timber Creek**	87.77	16	P	P	07 53 29.3	-2.5	
	baz=330							
M17K	**Holitna River**	87.80	15	P	P	07 53 30.0	-2.0	
	baz=332							
SCRK	**Sand Creek**	87.82	8	IAmb	IAmb	07 53 45.4		
	comp=Z,23nm,1.0s							
SCRK	**Sand Creek**	87.82	8	P	P	07 53 29.3	-2.9	
	baz=343,SNR=18							
K27K	**Chicken**	88.00	7	P	P	07 53 29.9	-3.0	
	baz=345							
J30M	**Hart River**	88.01	5	IAmb	IAmb	07 54 08.0		
	comp=Z,31nm,1.4s							
J30M	**Hart River**	88.01	5	P	P	07 53 30.0	-3.2	
	baz=350							
M19K	**Big River Lodg**	88.02	13	IAmb	IAmb	07 53 42.3		
	comp=Z,36nm,1.5s							
M19K	**Big River Lodg**	88.02	13	P	P	07 53 30.8	-2.2	
	baz=334							
N14K	**Kuskokwak Cree**	88.02	18	P	P	07 53 30.3	-2.7	
	baz=328							
M18K	**Stony River**	88.08	14	P	P	07 53 29.5	-3.8	
	baz=333							
DOT	**Dot Lake**	88.12	8	P	P	07 53 33.7	+0.2	
DOT				IAmb	IAmb	07 53 45.4		
	comp=Z,14nm,1.0s							
DHY	**Denali Highway**	88.20	10	IAmb	IAmb	07 53 47.2		
	comp=Z,17nm,1.1s							
DHY	**Denali Highway**	88.20	10	P	P	07 53 30.6	-3.5	
	baz=340							
N15K	**Kwethluk River**	88.23	17	P	P	07 53 30.3	-3.8	
	baz=329							
WAT1	**Susitna Watana**	88.25	11	P	P	07 53 30.1	-4.1	
	baz=339							
DAWY	**Dawson**	88.25	6	IAmb	IAmb	07 53 46.0		
	comp=Z,19nm,1.1s							
DAWY	**Dawson**	88.25	6	P	P	07 53 30.3	-3.9	
	baz=347,SNR=9.0							
M20K	**Styx River**	88.29	13	P	P	07 53 30.7	-3.7	
	baz=335							
P08K	**Saint George I**	88.33	23	P	P	07 53 30.0	-4.6	
	baz=321							
CUT	**Chulitna**	88.35	11	P	P	07 53 30.5	-4.0	
	baz=338							
SKT	**Skwentna**	88.51	12	IAmb	IAmb	07 53 39.1		
	comp=Z,28nm,1.1s							
SKT	**Skwentna**	88.51	12	P	P	07 53 31.5	-3.8	
	baz=337							
PAX	**Paxson**	88.58	9	P	P	07 53 31.6	-4.2	
	baz=342							
WAT6	**Susitna Watana**	88.61	10	P	P	07 53 31.8	-4.2	
	baz=340							
N17K	**Nushagak Hills**	88.63	15	P	P	07 53 32.8	-3.1	
	baz=332							
K29M	**Barlow Dome**	88.64	6	IAmb	IAmb	07 53 40.4		
	comp=Z,14nm,1.0s							
K29M	**Barlow Dome**	88.64	6	P	P	07 53 32.6	-3.5	
	baz=349,SNR=16							
O14K	**Tigyukauivet M**	88.71	18	P	P	07 53 33.2	-3.1	
	baz=328							
N18K	**Kilae Creek**	88.79	15	P	P	07 53 33.0	-3.7	
	baz=333							
L26K	**Log Cabin Wild**	88.82	8	IAmb	IAmb	07 53 52.9		
	comp=Z,24nm,1.6s							
L26K	**Log Cabin Wild**	88.82	8	P	P	07 53 34.4	-2.4	
	baz=344							
L27K	**Beaver Creek,**	88.97	8	IAmb	IAmb	07 53 49.9		
	comp=Z,17nm,1.1s							
L27K	**Beaver Creek,**	88.97	8	P	P	07 53 34.9	-2.6	
	baz=345							
BCAR	**Beaver Creek A**	88.97	8		P	07 53 37.8	+0.3	
M22K	**Willow**	88.98	12	P	P	07 53 34.2	-3.3	
	baz=338							
N19K	**Bonanza Creek**	88.98	14	P	P	07 53 34.8	-2.9	
	baz=334							
MAYO	**Mayo, Yukon**	89.01	5	P	P	07 53 34.8	-2.9	
	baz=350							
N20K	**Mount Spurr**	89.10	13	P	P	07 53 36.1	-2.1	
	baz=336							
SPCR	**Spurr Chakacha**	89.10	13	P	P	07 53 36.2	-2.0	
	baz=336							
SUA	**Susitna One**	89.14	12	P	P	07 53 35.8	-2.6	
	baz=337							
O15K	**Ungalikthiuk R**	89.16	17	P	P	07 53 35.4	-3.0	
	baz=330							
GHO	**Glory Hole Cre**	89.17	11	IAmb	IAmb	07 54 00.3		
	comp=Z,27nm,1.2s							
HARP	**HAARP**	89.17	9	P	P	07 53 35.7	-2.8	
	baz=342							
O16K	**Kokwok River B**	89.23	16	P	P	07 53 36.6	-2.2	
	baz=331							
SML	**Sawmill**	89.24	11	P	P	07 53 40.6	+1.8	
SML	**Sawmill**	89.24	11	P	P	07 53 36.1	-2.8	
	baz=339							
M24K	**Tolsona, Glenn**	89.30	10	P	P	07 53 36.0	-3.1	
	baz=341							
PMR	**Palmer**	89.31	11	P	P	07 53 36.6	-2.4	
	baz=339							
L29M	**L29M**	89.31	6	IAmb	IAmb	07 53 56.3		
	comp=Z,18nm,1.2s							
L29M	**L29M**	89.31	6	P	P	07 53 36.5	-2.6	
	baz=348							
O17K	**Koliganek Bris**	89.32	16	P	P	07 53 36.3	-2.9	
	baz=332							
M23K	**Glacier View**	89.35	11	P	P	07 53 37.3	-2.0	
	baz=340							
SCM	**Sheep Creek Mo**	89.38	10	P	P	07 53 36.9	-2.7	
	baz=340							
M26K	**Nabesna, AK**	89.46	8	IAmb	IAmb	07 54 40.4		
	comp=Z,22nm,1.5s							
M26K	**Nabesna, AK**	89.46	8	P	P	07 53 37.7	-2.2	
	baz=344							
KNK	**Knik Glacier**	89.59	11	P	P	07 53 38.0	-2.5	
	baz=339							
M27K	**Edge Creek, AK**	89.64	8	IAmb	IAmb	07 53 53.8		
	comp=Z,17nm,1.1s							
M27K	**Edge Creek, AK**	89.64	8	P	P	07 53 38.1	-2.8	
	baz=345							
RC01	**Rabbit Creek A**	89.67	12	P	P	07 53 38.4	-2.4	
	baz=338							
KLU	**Klutina**	89.92	10	P	P	07 53 39.7	-2.4	
	baz=342							
M29M	**Somme Creek**	89.93	6	P	P	07 53 40.0	-2.2	
	baz=348							
M30M	**Minto, Yukon**	89.95	5	P	P	07 53 40.1	-2.0	
	baz=350							
WRA	**Warramunga Arr**	89.99	112		P	07 53 41.7	-1.3	
WRA	**Warramunga Arr**	89.99	112	P	P	07 53 41.3	-1.7	
	comp=Z,4.2nm,0.7s,baz=314,slow=4.0,SNR=42							
WRA				PKKPbc	**PKKPbc**	08 11 14.7	+0.7	
	comp=Z,0.6nm,0.8s,baz=118,slow=2.6,SNR=4.6							
WRA				LR	LR	08 36 12.8		
	comp=Z,111nm,21.9s,baz=284,slow=37							
	comp=Z,4.2nm,0.7s							
WRA	**Warramunga Arr**	89.99	112	*i* P	P	07 53 42.0	-1.0	
WRA				pmax	pmax			
	comp=Z,4.0nm,0.4s							
WRAB	**Tennant Creek**	90.00	112	⇑*i* P	P	07 53 44.4	+1.4	
WRAB				pmax	pmax			
	comp=Z,7.0nm,0.9s							
N25K	**Chitina, Valde**	90.01	9	P	P	07 53 40.6	-1.9	
	baz=343							
P18K	**Big Mountain,**	90.09	15	P	P	07 53 40.8	-2.1	
	baz=333							
PWL	**Port Wells**	90.13	11	P	P	07 53 40.5	-2.5	
	baz=339							
YKA	**Yellowknife Ar**	90.14	355		P	07 53 42.1	-0.8	
YKA	**Yellowknife Ar**	90.14	355	P	P	07 53 43.6	+0.7	
	comp=Z,4.8nm,0.8s,baz=355,slow=4.8,SNR=9.2							
YKA				LR	LR	08 39 12.8		
	comp=Z,694nm,21.4s,baz=1.5,slow=39							
	comp=Z,4.8nm,0.8s							
YKA	**Yellowknife Ar**	90.14	355	*i* P	P	07 53 44.5	+1.6	
YKA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
O22K	**Cooper Landing**	90.24	12	P	P	07 53 42.1	-1.3	
	baz=338							
MMPY	**Sheldon Lake,**	90.27	3	P	P	07 53 42.1	-1.5	
	baz=354							
YUK3	**Moose Creek**	90.38	7	P	P	07 53 42.5	-1.9	
	baz=346							
MCARA	**McCarthy VSAT**	90.44	9	P	P	07 53 42.2	-2.2	
	baz=344							
M31M	**Drury Creek, Y**	90.50	4	P	P	07 53 43.5	-1.2	
	baz=355							
FARO	**Faro, Yukon**	90.54	4	P	P	07 53 43.7	-1.2	
	baz=353							
BMRM	**Bremner River**	90.62	9	P	P	07 53 44.0	-1.3	
	baz=343							
SEW	**Seward**	90.64	12	P	P	07 53 43.6	-1.7	
	baz=338							
YUK8	**Steele Glacier**	90.93	7	P	P	07 53 45.4	-1.6	
	baz=347							
YUK4	**Talbot Arm**	90.99	7	P	P	07 53 45.3	-1.9	
	baz=348							
CTG	**Chitna Glacier**	91.06	8	P	P	07 53 45.5	-2.0	
	baz=346							
ASAR	**Alice Springs**	91.44	116		P	07 53 49.1	-0.6	
ASAR	**Alice Springs**	91.44	116	P	P	07 53 48.1	-1.5	
	comp=Z,3.7nm,0.5s,baz=303,slow=4.6,SNR=29							
ASAR				LR	LR	08 38 58.7		
	comp=Z,110nm,18.9s,baz=289,slow=38							
	comp=Z,3.7nm,0.5s							
ASAR	**Alice Springs**	91.44	116	P	P	07 53 49.1	-0.6	
HYT	**Haines Junctio**	91.61	6	IAmb	IAmb	07 54 02.9		
	comp=Z,19nm,1.0s							
HYT	**Haines Junctio**	91.61	6	P	P	07 53 48.4	-1.6	
	baz=349							
N32M	**Quiet Lake**	91.63	4	P	P	07 53 48.4	-1.6	
	baz=353							
KAIM	**Kayak Island**	91.65	10	P	P	07 53 48.5	-1.5	
	baz=343							
S14K	**Fog Glacier**	91.73	18	P	P	07 53 49.4	-1.2	
	baz=330							
O30N	**Mendenhall**	91.79	5	P	P	07 53 49.6	-1.1	
	baz=350							
KDAK	**Kodiak Island**	92.15	14	LR	LR	08 41 38.5		
	comp=Z,802nm,18.4s,baz=322,slow=40							
KDAK	**Kodiak Island**	92.15	14	P	P	07 53 51.3	-1.0	
	baz=336							
P30M	**Million Dollar**	92.36	6	P	P	07 53 52.0	-1.4	
	baz=349							
OHAK	**Old Harbor**	92.50	15	P	P	07 53 52.6	-1.4	
	baz=335							
PNL	**Peninsula**	92.55	7	P	P	07 53 52.8	-1.5	
	baz=347							
P33M	**Teslin, Yukon**	92.58	4	P	P	07 53 54.0	-0.4	
	baz=353							
SII	**Sitkinak Islan**	92.89	16	P	P	07 53 55.4	-0.4	
	baz=334							
PLBC	**Pleasant Camp**	93.07	6	P	P	07 53 56.0	-0.5	
	baz=350							
P32M	**Atlin**	93.14	4	P	P	07 53 56.7	-0.3	
	baz=352							
SKAG	**Skagway**	93.15	5	P	P	07 53 56.3	-0.6	
	baz=351							
CHIR	**Chirikof Islan**	93.19	17	P	P	07 53 56.6	-0.6	
	baz=333							
RCBR	**Riachuelo**	93.43	265	*e*P	P	07 54 01.1	+2.0	
R33M	**Jennings River**	93.50	3	P	P	07 53 58.5	-0.3	
	baz=355							
LIRD	**Lard River Hi**	93.62	1	P	P	07 53 58.7	-0.5	
	baz=359							
Q32M	**Nakina River**	93.86	4	P	P	07 54 00.7	+0.2	
	baz=354							
TOAD	**Toad River Com**	94.19	0	P	P	07 54 02.4	+0.6	
	baz=360							
DLBC	**Dease Lake**	94.50	3	LR	LR	08 41 26.4		
	comp=Z,415nm,21.6s,baz=321,slow=39							
DLBC	**Dease Lake**	94.50	3	P	P	07 54 03.4	+0.1	
	baz=356							
MAW	**Mawson**	94.79	177	P	P	07 54 04.9	+1.0	
	comp=Z,2.2nm,0.9s,baz=0.0,slow=5.1,SNR=2.4							
MAW				LR	LR	08 30 27.9		
	comp=Z,818nm,20.6s,baz=344,slow=32							
	comp=Z,2.2nm,0.9s							
S34M	**Telegraph Cree**	94.97	3	IAmb	IAmb	07 54 18.0		
	comp=Z,14nm,1.2s							
S34M	**Telegraph Cree**	94.97	3	P	P	07 54 05.6	+0.3	
	baz=355							
PMG	**Port Moresby**	96.16	97	LR	LR	08 42 26.2		
	comp=Z,55nm,21.4s,baz=298,slow=39							
SADO	**Sadowa**	96.97	329	LR	LR	08 39 60.0		
	comp=Z,424nm,18.7s,baz=48,slow=37							
ALF01	**Guarapari-ES**	104.05	254	*e*P	Pdif	07 54 48.9	+2.3	
PDAR	**Pinedale Array**	108.85	348	PKiKP	PKiKP	07 59 12.1	-0.7	
	comp=Z,0.7nm,0.7s,baz=85,slow=3.9,SNR=3.9							
PDAR				PKKPab	**PKKPdf**	08 10 33.0	-2.1	
	comp=Z,0.2nm,0.6s,baz=157,slow=9.4,SNR=2.3							
NVAR	**Mina Array Bea**	114.32	354	PKiKP	PKiKP	07 59 22.9	-0.5	
	comp=Z,2.5nm,0.9s,baz=7.5,slow=2.0,SNR=12							
U15A	**North Rim**	115.50	349		PKiKP	07 59 24.8	-0.9	
BELA	**Belgrano 2**	116.39	194		PKPdf	07 59 24.8	-0.9	
QSPA	**South Pole Qui**	117.13	180		PKiKP	07 59 28.8	+1.3	
QSPA	**South Pole Qui**	117.13	180	PKP	PKiKP	07 59 28.3	+0.9	
	comp=Z,5.7nm,0.9s,baz=266,slow=1.6,SNR=15							
QSPA				PKKPbc	**PKKPbc**	08 09 54.4	0.0	
	comp=Z,0.7nm,0.8s,baz=291,slow=5.6,SNR=1.8							
735A	**Kenedy**	118.38	333		PKPdf	07 59 30.4	-0.7	
MNTX	**Comunidas Mount**	118.43	341		PKPdf	07 59 31.1	-0.1	
VNDA	**Vanda**	120.09	166	PKP	PKiKP	07 59 33.2	+0.3	
	comp=Z,1.0nm,0.8s,baz=298,slow=9.1,SNR=5.4							
VNDA				PKKPbc	**PKKPbc**	08 09 42.4	-0.8	
	comp=Z,0.9nm,0.8s,baz=123,slow=2.8,SNR=3.6							
TXAR	**Lajitas Array**	120.10	338	PKP	PKPdf	07 59 33.8	-0.7	
	comp=Z,0.6nm,0.7s,baz=167,slow=1.3,SNR=6.8							
TXAR				PKKPbc	**PKKPbc**	08 09 40.9	-1.7	
	comp=Z,0.1nm,0.3s,baz=196,slow=4.9,SNR=5.7							
CPUP	**Villa Florida**	120.30	254	PKP	PKiKP	07 59 35.5	+0.7	
	comp=Z,0.8nm,0.9s,baz=84,slow=17,SNR=3.4							
LPAZ	**La Paz**	126.45	269	PKP	PKPdf	07 59 46.5	-1.0	
	comp=Z,1.3nm,0.7s,baz=1.5,slow=6.2,SNR=4.7							
CMIG	**Matias Romero**	127.08	323	PKP	PKiKP	07 59 48.4	-0.1	
	comp=Z,5.5nm,0.9s,baz=28,slow=4.7,SNR=5.5							
OTAV	**Otavalo**	127.59	294	*e*P	PKiKP	07 59 51.0	+0.8	
CFA	**Coronel Fontan**	130.84	251	PKP	PKiKP	07 59 55.9	+0.2	
	comp=Z,3.6nm,1.0s,baz=68,slow=5.4,SNR=5.5							
CFA				SKPbc	**SKPbc**	08 03 18.2	-0.7	
	comp=Z,1.7nm,1.0s,baz=126,slow=4.1,SNR=4.1							
USHA	**Ushuaia**	130.97	220	PKP	PKiKP	07 59 56.2	+1.1	
	comp=Z,4.2nm,0.7s,baz=27,slow=2.3,SNR=1.2							
PLCA	**Paso Flores**	133.60	239	PKP	PKiKP	08 00 00.6	-0.5	
	comp=Z,2.3nm,0.9s,baz=72,slow=3.2,SNR=4.3							
PLCA				SKPab	**SKPab**	08 03 31.2	+0.5	
	comp=Z,5.2nm,1.2s,baz=111,slow=1.1,SNR=3.8							
PPT2	**Papeete2**	155.37	72	*e*LQ	LQ	08 45 59.7		
	comp=Z,215nm,25.2s							
PPT2				*e*LR	LR	08 52 41.7		
	comp=Z,464nm,23.0s							
PPT2				*e*LR	LR	08 52 46.2		
	comp=Z,589nm,22.2s							
TAOE	**Nuku Hiva Isla**	156.74	41	*e*LR	LR	08 53 14.6		
	comp=Z,518nm,22.6s							
TBI	**Tubuai**	157.56	85	*e*SS	SS	08 24 47.6	-1.3	
	comp=Z,401nm,33.5s							
TBI	**Tubuai**	157.56	85	*e*LR	LR	08 53 32.7		
	comp=Z,959nm,25.5s							
TBI				*e*LR	LR	08 53 46.8		
	comp=Z,2µm,22.5s							
RKT	**Rikitea**	170.07	67	*e*LR	LR	08 59 21.7		
	comp=Z,11µm,34.8s							

IDC ***06*** *07:54:43.2±8.3,24°.35N×93°.28E,h59km±90km,mb3.2/3, mbtmp3.5/4,ML3.6/1,Error ellipse: s-maj=71.9km s-min=27.5km az=75.0*

ISC 06 07:54:44.1±1.3,24°.16N±0°.08×93°.4E±0°.1,h57km,n10, σ2s18/14,mb3.9/3,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	2.22	229	P	**Pn**	07 55 19.1	+0.6
	18nm,0.3s,baz=66,slow=20,SNR=1.2						
BRDH				S	**Sn**	07 55 45.0	+0.2
	98nm,0.3s,baz=53,slow=20,SNR=6.0						
	78nm,0.3s						
ODAN	**Odare**	6.09	297	Sn	**Sn**	07 57 20.3	0.0
	87nm,0.4s,baz=289,slow=0.0						
RAMN	**Ramite**	6.78	296	Pn	**Pn**	07 56 24.4	+3.2
	baz=288,slow=0.0						
RAMN				Sn	**Sn**	07 57 37.1	0.0
	25nm,0.3s,baz=288,slow=0.0						
PKI	**Pulchoki**	7.99	297	Pn	**Pn**	07 56 40.5	+2.6
	baz=291,slow=0.0						
PKI				Sn	**Sn**	07 58 05.3	-1.8
	21nm,0.3s,baz=291,slow=0.0						
PKIN	**Phulchoki**	8.01	297	Pn	**Pn**	07 56 40.4	+2.4
	baz=291,slow=0.0						
PKIN				Sn	**Sn**	07 58 06.6	-0.7
	22nm,0.4s,baz=291,slow=0.0						
GKN	**Gorkha**	8.79	298	Sn	**Sn**	07 58 24.5	-1.9
	30nm,0.4s,baz=292,slow=0.0						
DANN	**Dangsing**	9.64	298	Sn	**Sn**	07 58 44.4	-3.0
	12nm,0.3s,baz=293,slow=0.0						
MKAR	**Makanchi Array**	24.29	341	P	**P**	07 59 52.6	-3.5
	0.2nm,0.5s,baz=165,slow=9.9,SNR=1.9						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	59.23	134	P	**P**	08 04 39.9	+0.1
	0.5nm,0.5s,baz=321,slow=7.5,SNR=6.2						
	0.5nm,0.5s						
ASAR	**Alice Springs**	61.66	137	P	**P**	08 04 57.2	+0.9
	0.4nm,0.5s,baz=322,slow=7.0,SNR=8.4						
	0.4nm,0.5s						

ZUR 06 07:55:59.9,46°.33N×7°.35E,h5km±1km,MLh0.4/3,3C-2D, Error ellipse: s-maj=2128.8km s-min=850.2km az=245.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	0.03	248	⇓Pg	Pg	07 56 01.3	+0.2
RAW2				Sg	Sg	07 56 02.3	+0.3
SENIN	**Lac Senin/Sane**	0.05	317	⇓Pg	Pg	07 56 01.6	+0.2
SENIN				Sg	Sg	07 56 02.8	+0.3
SAYF2	**Ayent-Fortunoz**	0.06	129	⇑Pg	Pg	07 56 01.5	+0.1
SAYF2				Sg	Sg	07 56 02.8	+0.3
STSW2	**Zeuzier, Staus**	0.06	70	⇑Pg	Pg	07 56 01.7	+0.2
STSW2				Sg	Sg	07 56 02.9	+0.2
SIOV	**Sion-Valere**	0.09	174	⇑Pg	Pg	07 56 02.0	+0.2
SIOV				Sg	Sg	07 56 03.5	+0.3
RAW1	**Lenk, BE**	0.11	32	Sg	Sg	07 56 04.4	+0.4
SHER	**Hrmence, R**	0.14	168	Sg	Sg	07 56 05.3	+0.5
GRYON	**Gryon**	0.18	246	Pg	Pg	07 56 03.8	+0.3
GRYON				Sg	Sg	07 56 06.4	+0.5
DIX	**Grande Dixence**	0.25	171	Sg	Sg	07 56 08.4	+0.3

GEN ***06*** *07:56:44.4,46°.33N×7°.36E,h6km±1km,Ml1.6*
LDG ***06*** *07:56:45.5±0.1,46°.31N×7°.38E,h5km,Ml2.1/10,Error ellipse: s-maj=1.5km s-min=1.2km az=73.0*

ZUR 06 07:56:44.9,46°.32N×7°.36E,h5km,MLh1.8/44,11C-8D, Error ellipse: s-maj=1637.4km s-min=424.5km az=277.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	0.03	251	⇓Pg	Pg	07 56 46.4	+0.1
RAW2				Sg	Sg	07 56 47.4	+0.2
SENIN	**Lac Senin/Sane**	0.06	315	⇓Pg	Pg	07 56 46.7	+0.2
SENIN				Sg	Sg	07 56 48.0	+0.3
SENIN	**Lac Senin/Sane**	0.06	315	P	Pg	07 56 46.7	+0.2
SENIN				S	Sg	07 56 48.0	+0.3
SAYF2	**Ayent-Fortunoz**	0.06	130	⇑Pg	Pg	07 56 46.7

SIMPL	Simplonpass	0.47	100	P	Pg	07 56 54.2	+0.2
SIMPL				S	Sg	07 57 00.2	+0.1
MMK	Mattmark	0.50	123	P	Pg	07 56 54.7	+0.1
MMK				S	Sg	07 57 01.2	0.0
REMY	Saint-Rhmy-en	0.51	196	P	Pg	07 56 54.7	0.0
REMY				S	Sg	07 57 01.3	0.0
FIESA	Fiescheralp	0.53	78	P	Pg	07 56 55.4	+0.2
FIESA				S	Sg	07 57 02.2	0.0
SATI	Passo dei Sala	0.57	141	P	Pb	07 56 57.2	-0.5
SATI				S	Sg	07 57 02.9	-0.6
MRGE	Morge	0.59	200	P	Pg	07 56 56.1	-0.2
MRGE				S	Sg	07 57 04.3	+0.4
CIRO	Champorcher	0.74	168	P	Pb	07 56 59.9	-0.5
CIRO				S	Sg	07 57 08.0	-0.7
RSL	Roselend	0.81	219	P	Pg	07 57 00.2	-0.3
RSL				S	Sg	07 57 10.0	-1.1
FUSIO	Fusio	0.92	81	P	Sg	07 57 02.4	0.0
FUSIO				S	Sg	07 57 14.1	-0.2
LPL	La Plagne	0.92	209	*e*Pg	Pb	07 57 03.1	-0.3
LPL				*e*Sg	Sg	07 57 14.8	+0.4
	4.4nm,0.3s						
CABF	La Chapelle	0.92	289	*e*Pg	Pb	07 57 03.3	-0.1
CABF				*e*Sg	Sb	07 57 15.6	-0.4
	6.8nm,0.2s						
LPG	La Plagne	0.93	207	*e*Pg	Pg	07 57 02.9	+0.2
LPG				*e*Sg	Sg	07 57 15.4	+0.6
	3.0nm,0.2s						
VARE	Varese	1.08	114	P	Pb	07 57 06.4	+0.2
VARE				S	Sg	07 57 20.1	+0.3
MUGIO	Muggio	1.24	108	P	Pg	07 57 08.5	-0.2
MUGIO				S	Sg	07 57 23.2	-1.5
HINF	Hinteralfeld	1.53	347	*e*Pn	Pn	07 57 11.9	-1.1
HINF	Hinteralfeld	1.53	347	*e*Pg	Pb	07 57 13.8	0.0
HINF				*e*Sg	Sn	07 57 32.8	-0.5
	3.3nm,0.2s						
MBDF	Montbardon	1.65	195	*e*Pg	Pg	07 57 16.6	+0.1
MBDF				*e*Sg	Sb	07 57 37.3	+0.3
	1.8nm,0.3s						
ORIF	Oris-en-Rattie	1.75	217	*e*Pn	Pn	07 57 15.1	-0.8
ORIF	Oris-en-Rattie	1.75	217	*e*Pg	Pg	07 57 18.2	-0.2
ORIF				*e*Sg	Sg	07 57 41.2	+0.2
	1.4nm,0.2s						
HAU	Haudompre	1.82	338	*e*Pn	Pn	07 57 15.9	-1.0
HAU	Haudompre	1.82	338	*e*Pg	Pb	07 57 19.0	+0.3
HAU				*e*Sg	Sb	07 57 41.2	-0.5
	6.2nm,0.3s						
CDF	Champ du Feu	2.09	359	*e*Pn	Pn	07 57 19.4	-1.3
CDF	Champ du Feu	2.09	359	*e*Pg	Pb	07 57 23.4	+0.1
CDF				*e*Sn	Sn	07 57 44.5	-2.6
CDF				*e*Sg	Sg	07 57 50.9	-1.1
	1.8nm,0.2s						
LOR	Lormes	2.58	293	*e*Pg	Pg	07 57 33.1	-1.3
LOR				*e*Sn	Sn	07 57 56.6	-2.5
LOR				*e*Sg	Sg	07 58 06.2	-1.6
	1.9nm,0.2s						

DSN ***06*** *08:01:51.9±1.7,27.°58N×55.°09E,h10km,ML3.3/12,Error ellipse: s-maj=23.2km s-min=5.6km az=27.0*
IDC ***06*** *08:01:52.2±1.0,27.°24N×55.°00E,h0km,mb3.9/12, mbtmp3.9/12,Error ellipse: s-maj=23.3km s-min=20.9km az=99.0*
TEH ***06*** *08:01:55.7,27.°19N×55.°02E,h18km±11km*
OMAN ***06*** *08:01:57.9±0.8,27.°09N×55.°01E,h11km±8km, mb4.6/6, ml3.4/19,Error ellipse: s-maj=8.0km s-min=2.0km az=13.0*

ISC 06 08:01:55.6±1.1,**27.°22N**±0.°04×**55.°05E**±0.°03,**h18**km±4km, **n77,**σ1°**69**/101,**mb3.8**/11,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.75**	**307**	Pg	**Pg**	**08 02 10.4**	**0.0**
GENO	**Geno**	**1.01**	**79**	Pg	**Pg**	**08 02 15.6**	**+0.3**
IBND	**Bandar-abas**	**1.34**	**80**	Pg	**Pg**	**08 02 21.4**	**-0.1**
SHME	**Shamm**	**1.52**	**140**	P	**Pb**	**08 02 23.1**	**-0.1**
	SNR=5.7						
SHME				S	**Sg**	**08 02 45.9**	**+1.2**
SHME	**Shamm**	**1.52**	**140**	*e*P	**Pn**	**08 02 23.0**	**+1.2**
	SNR=18						
SHME				S	**Sg**	**08 02 45.0**	**+0.4**
LMD1	**Lamerd**	**1.69**	**275**	Pg	**Pb**	**08 02 26.5**	**+0.4**
BANOM	**Banah**	**1.71**	**139**	P	**Pb**	**08 02 26.1**	**-0.4**
BANOM				S	**Sb**	**08 02 49.5**	**+1.9**
BANOM	**Banah**	**1.71**	**139**	*e*P	**Pn**	**08 02 25.4**	**+0.9**
	SNR=25						
BANOM				S	**Sg**	**08 02 52.2**	**+1.5**
UMQ	**Umm Al-Quwin**	**1.77**	**162**	P	**Pn**	**08 02 26.8**	**+1.5**
JHRM	**Jahrom**	**1.83**	**315**	Pn	**Pg**	**08 02 29.7**	**-1.1**
MASF	**Masafi**	**2.09**	**151**	P	**Pb**	**08 02 32.2**	**-0.8**
	SNR=8.1						
MASF				S	**Sn**	**08 02 54.6**	**-0.7**
MSFE	**Esma-Masafi**	**2.10**	**152**	*e*P	**Pn**	**08 02 31.6**	**+1.7**
	SNR=10						
MDH	**Madha**	**2.21**	**149**	P	**Pb**	**08 02 33.8**	**-1.3**
	SNR=12						
MDH				S	**Sb**	**08 03 02.0**	**-0.2**
MDH	**Madha**	**2.21**	**149**	*e*P	**Pn**	**08 02 31.8**	**+0.4**
	SNR=12						
NAZ	**Nazwa, Dubai**	**2.29**	**166**	P	**Pb**	**08 02 35.3**	**-1.0**
NAZ				S	**Sb**	**08 03 05.1**	**+0.8**
NAZ	**Nazwa, Dubai**	**2.29**	**166**	P	**Pb**	**08 02 35.2**	**-1.1**
KHNJ	**Kahnooj**	**2.46**	**72**	Pn	**Pn**	**08 02 36.5**	**+1.6**
UOSS	**Minazif**	**2.49**	**155**	Pn	**Pn**	**08 02 37.0**	**+1.7**
UOSS	**Minazif**	**2.49**	**155**	P	**Pn**	**08 02 35.7**	**+0.4**
UOSS	**Minazif**	**2.49**	**155**	*e*P	**Pn**	**08 02 36.1**	**+0.9**
	SNR=6.0						
FAQ	**Al Faqa, Dubai**	**2.51**	**169**	P	**Pn**	**08 02 38.1**	**+2.6**
FAQ				S	**Sb**	**08 03 10.0**	**-0.7**
FAQ	**Al Faqa, Dubai**	**2.51**	**169**	P	**Pb**	**08 02 38.4**	**-1.8**
HATD	**Hatta, Dubai**	**2.57**	**158**	P	**Pn**	**08 02 39.1**	**+2.7**
	SNR=8.9						
HATD				S	**Sb**	**08 03 15.1**	**+2.6**
HATD	**Hatta, Dubai**	**2.57**	**158**	*e*P	**Pn**	**08 02 38.5**	**+2.1**
	SNR=9.5						
ASUD	**Al Ashush, Dub**	**2.59**	**174**	P	**Pn**	**08 02 37.1**	**+0.4**
AJN	**Ajban**	**2.65**	**181**	P	**Pn**	**08 02 40.3**	**+2.9**
AJN				S	**Sn**	**08 03 09.6**	**+0.7**
ASHO	**Ashiyiah**	**2.68**	**160**	P	**Pn**	**08 02 40.0**	**+2.1**
	SNR=28						
ASHO				S	**Sn**	**08 03 11.9**	**+2.0**
ASHO	**Ashiyiah**	**2.68**	**160**	P	**Pn**	**08 02 40.2**	**+2.3**
NGRK	**Negar Kerman**	**2.83**	**31**	Pn	**Pn**	**08 02 41.8**	**+1.6**
KRBR	**Kerman**	**3.14**	**28**	Pn	**Pn**	**08 02 46.7**	**+2.3**
ALNE	**Al Ain**	**3.21**	**169**	P	**Pn**	**08 02 47.4**	**+2.2**
ALNE	**Al Ain**	**3.21**	**169**	P	**Pn**	**08 02 47.5**	**+2.4**
SOHO	**SOHO**	**3.35**	**156**	P	**Pn**	**08 02 48.5**	**+1.4**
SOHO	**SOHO**	**3.35**	**156**	P	**Pn**	**08 02 47.9**	**+0.9**
KHGB	**Koh Gabri**	**3.38**	**21**	Pn	**Pn**	**08 02 50.5**	**+2.8**
CHMN	**Cheshme madani**	**3.42**	**39**	Pn	**Pn**	**08 02 50.9**	**+2.6**
KBAM	**BAM**	**3.56**	**57**	Pn	**Pn**	**08 02 52.3**	**+2.3**
SHMA	**Al-Shehemyia**	**3.91**	**251**	P	**Pn**	**08 02 56.7**	**+2.0**
SHMA				S	**Sn**	**08 03 42.6**	**+2.5**
ARQ	**Araqi**	**4.09**	**161**	P	**Pn**	**08 03 00.5**	**+3.3**
HOQ	**Hoqain**	**4.16**	**150**	P	**Pn**	**08 03 01.7**	**+3.5**
HOQ				S	**Sn**	**08 03 47.7**	**+1.4**
IMEH	**Mehriz**	**4.17**	**355**	Pn	**Pn**	**08 03 00.9**	**+2.3**
TRNA	**Turayna**	**4.25**	**235**	P	**Pn**	**08 03 01.4**	**+2.0**
TRNA				S	**Sn**	**08 03 50.9**	**+2.3**
SLWR	**Sila**	**4.36**	**225**	P	**Pn**	**08 03 01.9**	**+1.0**
SLWR				S	**Sn**	**08 03 52.8**	**+1.4**
IBAF	**Bafgh**	**4.38**	**6**	Pn	**Pn**	**08 03 03.4**	**+2.0**
MZR	**Muzera**	**4.43**	**199**	P	**Pn**	**08 03 02.8**	**+0.8**
MZR				S	**Sn**	**08 03 53.2**	**0.0**
UMZA	**Um Al Zommool**	**4.49**	**179**	P	**Pn**	**08 03 04.7**	**+2.0**
UMZA				S	**Sn**	**08 03 55.5**	**+1.1**
SMRA	**Abu-Samra**	**4.53**	**238**	P	**Pn**	**08 03 05.2**	**+1.9**
SMRA				S	**Sn**	**08 03 57.5**	**+1.9**
KLNJ	**Kolanjah**	**4.84**	**322**	Pn	**Pn**	**08 03 10.4**	**+2.5**
SMDO	**Samad**	**4.95**	**146**	P	**Pn**	**08 03 11.5**	**+2.4**
SMDO				S	**Sn**	**08 04 07.9**	**+1.8**
ICHK	**Chekchek**	**5.04**	**354**	Pn	**Pn**	**08 03 13.2**	**+2.7**
WSAR	**Wadi Sarin**	**5.12**	**140**	P	**Pn**	**08 03 13.2**	**+1.8**
WSAR				S	**Sn**	**08 04 09.0**	**-1.1**
IRAM	**Ramesheh**	**5.13**	**334**	Pn	**Pn**	**08 03 13.5**	**+1.7**
WBK	**Wadi Bani Khal**	**5.80**	**141**	P	**Pn**	**08 03 23.2**	**+2.4**
WBK				S	**Sn**	**08 04 30.3**	**+3.4**
JLN	**Jalan Bani Buh**	**6.42**	**141**	P	**Pn**	**08 03 32.2**	**+3.0**
SRVN	**Saravan**	**6.54**	**87**	Pn	**Pn**	**08 03 33.5**	**+2.5**
MHTO	**MHTO**	**6.75**	**156**	P	**Pn**	**08 03 35.2**	**+1.4**
	SNR=10						
MHTO				S	**Sn**	**08 04 50.4**	**+0.2**
KBD	**Kabd**	**6.78**	**288**	P	**Pn**	**08 03 35.1**	**+0.9**
KBD				S	**Sn**	**08 04 52.5**	**+1.5**
DQM	**DQM**	**7.61**	**162**	P	**Pn**	**08 03 45.7**	**+0.1**
DQM				S	**Sn**	**08 05 10.5**	**-0.8**
DOK	**Doka**	**8.60**	**186**	P	**Pn**	**08 03 60.0**	**+0.7**
	SNR=12						
SHAO	**Shalim**	**9.17**	**177**	P	**Pn**	**08 04 07.0**	**0.0**
	SNR=8.2						
WHFO	**Wadi Hawf**	**9.33**	**188**	P	**Pn**	**08 04 10.0**	**+0.7**
	SNR=26						
RAYN	**Ar Rayn**	**9.39**	**249**	P	**Pn**	**08 04 09.7**	**-0.3**
RAYN	**Ar Rayn**	**9.39**	**249**	P	**Pn**	**08 04 09.2**	**-0.8**
DMTO	**DMTO**	**9.46**	**181**	P	**Pn**	**08 04 10.6**	**-0.4**
ABTO	**Aybut**	**9.95**	**190**	P	**Pn**	**08 04 17.5**	**-0.3**
	SNR=10						
BRTR	**Keskin Array B**	**21.72**	**310**	P	**P**	**08 06 45.0**	**-1.0**
	0.8nm,0.7s,baz=134,slow=14,SNR=5.5 0.8nm,0.7s						
AKTO	**Aktyubinsk**	**23.29**	**5**	P	**P**	**08 07 02.9**	**+0.7**
	0.7nm,0.3s,baz=202,slow=10,SNR=2.7 0.7nm,0.3s						
BVAR	**Borovoye Array**	**28.20**	**20**	P	**P**	**08 07 47.2**	**+0.2**
	1.5nm,0.6s,baz=208,slow=3.2,SNR=5.9 1.5nm,0.6s						
MKAR	**Makanchi Array**	**29.00**	**40**	P	**P**	**08 07 53.8**	**-0.5**
	0.5nm,0.6s,baz=231,slow=7.7,SNR=5.1 0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**34.52**	**31**	P	**P**	**08 08 42.2**	**-0.4**
	2.7nm,0.6s,baz=239,slow=9.9,SNR=12 2.7nm,0.6s						
FINES	**FINESS Array B**	**39.35**	**338**	P	**P**	**08 09 22.5**	**-1.0**
	1.5nm,0.7s,baz=142,slow=9.6,SNR=6.1 1.5nm,0.7s						
HFS	**Hagfors**	**43.25**	**331**	P	**P**	**08 09 53.1**	**-2.5**
	4.4nm,1.1s,baz=112,slow=13,SNR=2.9 4.4nm,1.1s						
NOA	**NORSAR Array B**	**44.76**	**331**	P	**P**	**08 10 06.5**	**-1.3**
	0.5nm,0.6s,baz=120,slow=8.2,SNR=3.2 0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**51.65**	**265**	P	**P**	**08 11 00.7**	**-0.9**
	3.3nm,0.4s,baz=53,slow=8.6,SNR=3.5 3.3nm,0.4s						
BOSA	**Boshof**	**62.44**	**210**	P	**P**	**08 12 18.8**	**+0.9**
	2.7nm,1.0s,baz=30,slow=6.9,SNR=3.5 2.7nm,1.0s						
WRA	**Warramunga Arr**	**89.91**	**112**	P	**P**	**08 14 53.5**	**-0.5**
	0.4nm,0.6s,baz=312,slow=4.1,SNR=5.7 0.4nm,0.6s						
ASAR	**Alice Springs**	**91.36**	**116**	P	**P**	**08 14 59.5**	**-1.3**
	0.2nm,0.5s,baz=299,slow=3.8,SNR=4.6 0.2nm,0.5s						

GII 06 08:01:56.6±0.0,**32.°914N**±0.°002×**35.°495E**±0.°002,**h0**km, **confirmed,Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMID	**Amiad**	**0.04**	**70**	P	Pg	08 01 57.3	0.0
AMID	**Amiad**	**0.04**	**70**	S	Sg	08 01 58.6	+0.7
SPIR	**Sapir Facility**	**0.06**	**143**	P	Pg	08 01 57.9	+0.2
SPIR	**Sapir Facility**	**0.06**	**143**	S	Sg	08 01 59.7	+1.2
MGDL	**Migdal**	**0.07**	**172**	P	Pg	08 01 58.3	+0.3
MGDL	**Migdal**	**0.07**	**172**	S	Sg	08 02 00.6	+1.7
KNHM	**Kefar Nahum**	**0.08**	**113**	P	Pg	08 01 58.3	+0.3
KNHM	**Kefar Nahum**	**0.08**	**113**	S	Sg	08 02 00.5	+1.4
HDNS	**Had-Ness**	**0.12**	**83**	P	Pg	08 01 59.5	+0.5
HDNS	**Had-Ness**	**0.12**	**83**	S	Sg	08 02 02.9	+2.3
MMA0B	**Mount Meron ar**	**0.13**	**323**	P	Pg	08 01 59.8	+0.8
MMA0B	**Mount Meron ar**	**0.13**	**323**	S	Sg	08 02 03.0	+2.3
GOLA	**Golan Heights**	**0.24**	**147**	P	Pg	08 02 01.7	+0.6
GOLA	**Golan Heights**	**0.24**	**147**	S	Sg	08 02 06.8	+2.6

DSN ***06*** *08:20:30.9±1.0,27.°59N×55.°33E,h10km,ML3.2/7,Error ellipse: s-maj=18.3km s-min=6.3km az=46.0*
TEH ***06*** *08:20:33.2,27.°19N×55.°05E,h16km±24km*

ISC 06 08:20:32.9±0.9,**27.°06N**±0.°04×**54.°97E**±0.°05,**h17**km,**n23,** σ1°**22**/26,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.81**	**319**	Pg	**Pg**	**08 20 48.0**	**-0.6**
LAR1				Sg	**Sg**	**08 20 59.3**	**0.0**
GENO	**Geno**	**1.12**	**72**	Pg	**Pb**	**08 20 52.7**	**-1.2**
IBND	**Bandar-abas**	**1.45**	**74**	Pg	**Pb**	**08 20 58.9**	**-0.4**
SHME	**Shamm**	**1.45**	**134**	P	**Pg**	**08 21 00.3**	**-0.6**
SHME				S	**Sg**	**08 21 23.2**	**+3.4**
LMD1	**Lamerd**	**1.63**	**280**	Pg	**Pg**	**08 21 04.4**	**+0.1**
BANOM	**Banah**	**1.64**	**133**	P	**Pg**	**08 21 03.5**	**-1.0**
BANOM				S	**Sg**	**08 21 27.8**	**+1.9**
JHRM	**Jahrom**	**1.90**	**320**	Pn	**Pb**	**08 21 06.5**	**-0.6**
MSFE	**Esma-Masafi**	**2.00**	**148**	P	**Pg**	**08 21 09.3**	**-2.1**
NAZ	**Nazwa, Dubai**	**2.16**	**163**	P	**Pg**	**08 21 12.7**	**-1.7**
UOSS	**Minazif**	**2.38**	**152**	P	**Pb**	**08 21 15.2**	**-0.2**
ASUD	**Al Ashush, Dub**	**2.45**	**172**	P	**Pg**	**08 21 18.6**	**-1.3**
HATD	**Hatta, Dubai**	**2.46**	**155**	P	**Pb**	**08 21 16.8**	**+0.1**
ASHO	**Ashiyiah**	**2.56**	**157**	P	**Pb**	**08 21 17.6**	**-0.9**
KHNJ	**Kahnooj**	**2.58**	**69**	Pn	**Pn**	**08 21 13.7**	**-0.3**
NGRK	**Negar Kerman**	**3.00**	**31**	Pn	**Pn**	**08 21 20.1**	**+0.1**
KRBR	**Kerman**	**3.31**	**28**	Pn	**Pn**	**08 21 24.2**	**+0.1**
KHGB	**Koh Gabri**	**3.55**	**21**	Pn	**Pn**	**08 21 28.0**	**+0.5**
CHMN	**Cheshme madani**	**3.59**	**38**	Pn	**Pn**	**08 21 29.1**	**+1.1**
KBAM	**BAM**	**3.70**	**55**	Pn	**Pn**	**08 21 29.9**	**+0.5**
IMEH	**Mehriz**	**4.32**	**356**	Pn	**Pn**	**08 21 38.2**	**+0.2**
IBAF	**Bafgh**	**4.54**	**6**	Pn	**Pn**	**08 21 40.9**	**-0.1**
IRAM	**Ramesheh**	**5.24**	**335**	Pn	**Pn**	**08 21 52.5**	**+1.8**
SRVN	**Saravan**	**6.62**	**85**	Pn	**Pn**	**08 22 10.7**	**+1.2**

DJA ***06*** *08:23:52.2±0.4,4.°N±11.°×12.°7E±.°,h29km±13km,M4.0/6, mb4.1/3,MLv3.9/6*
IDC ***06*** *08:24:11.8±2.1,3.°05N×126.°09E,h216km±25km,mb3.1/6, mbtmp3.6/6,Error ellipse: s-maj=68.5km s-min=12.6km az=71.0*

ISC 06 08:23:54.4±1.3,**3.°5N**±0.°1×**126.°7E**±0.°1,**h53**km,**n9,**σ1°**13**/9, **mb3.6**/6,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.16**	**277**	P	**Pn**	**08 24 14.1**	**-0.4**
SGSI				S	**Sn**	**08 24 28.5**	**-0.9**
DAV	**Davao City (W)**	**3.68**	**343**	P	Pn	08 25 14.6	+26
	469nm,0.3s,baz=270,slow=6.6,SNR=11						
BNSI	**Bone**	**10.27**	**220**	P	**Pn**	**08 26 20.4**	**+1.2**
FITZ	**Fitzroy Crossi**	**21.52**	**183**	P	**P**	**08 28 38.5**	**-0.7**
	0.9nm,0.8s,baz=31,slow=14,SNR=1.9 0.9nm,0.8s						
WRA	**Warramunga Arr**	**24.52**	**162**	P	**P**	**08 29 09.3**	**+0.2**
	2.3nm,0.8s,baz=342,slow=10,SNR=13 2.3nm,0.8s						
ASAR	**Alice Springs**	**27.94**	**166**	P	**P**	**08 29 41.0**	**+1.0**
	0.3nm,0.6s,baz=341,slow=6.9,SNR=6.3 0.3nm,0.6s						
STKA	**Stephens Creek**	**37.97**	**159**	P	**P**	**08 31 05.8**	**-1.4**
	1.5nm,0.5s,baz=322,slow=12,SNR=4.1 1.5nm,0.5s						
MKAR	**Makanchi Array**	**57.69**	**325**	P	**P**	**08 33 39.5**	**-0.1**
	0.1nm,0.3s,baz=114,slow=8.4,SNR=2.4 0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**61.88**	**327**	P	**P**	**08 34 09.6**	**+1.3**
	0.3nm,0.2s,baz=131,slow=5.7,SNR=5.0 0.3nm,0.2s						

IDC ***06*** *08:37:01.5±1.7,27.°17N×55.°07E,h0km,mb3.6/6, mbtmp3.6/6,Error ellipse: s-maj=42.0km s-min=31.2km az=59.0*
DSN ***06*** *08:37:03.2±1.1,27.°44N×55.°22E,h10km,ML3.9/8,Error ellipse: s-maj=16.7km s-min=8.1km az=36.0*
TEH ***06*** *08:37:04.0,27.°18N×55.°04E,h20km±35km*

ISC 06 08:37:03.7±0.8,**27.°09N**±0.°04×**55.°00E**±0.°04,**h17**km,**n34,** σ0°**79**/35,**mb3.6**/6,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.80**	**316**	Pg	**Pb**	**08 37 19.1**	**-0.1**
GENO	**Geno**	**1.09**	**74**	Pg	**Pb**	**08 37 23.8**	**-0.5**
IBND	**Bandar-abas**	**1.42**	**75**	Pg	**Pb**	**08 37 29.6**	**-0.1**
SHME	**Shamm**	**1.46**	**135**	P	**Pg**	**08 37 31.6**	**-0.3**
SHME				S	**Sg**	**08 37 53.3**	**+2.4**
BANOM	**Banah**	**1.65**	**135**	P	**Pg**	**08 37 34.4**	**-1.1**
LMD1	**Lamerd**	**1.65**	**279**	Pg	**Pb**	**08 37 33.7**	**-0.1**
JHRM	**Jahrom**	**1.89**	**318**	Pn	**Pn**	**08 37 36.0**	**+0.6**
MSFE	**Esma-Masafi**	**2.02**	**149**	P	**Pb**	**08 37 40.5**	**+0.5**
MDH	**Madha**	**2.14**	**147**	P	**Pb**	**08 37 40.9**	**-1.1**
NAZ	**Nazwa, Dubai**	**2.18**	**164**	P	**Pg**	**08 37 43.9**	**-1.7**
UOSS	**Minazif**	**2.40**	**153**	P	**Pb**	**08 37 45.9**	**-0.6**
ASUD	**Al Ashush, Dub**	**2.48**	**173**	P	**Pb**	**08 37 47.9**	**+0.1**
HATD	**Hatta, Dubai**	**2.48**	**155**	P	**Pb**	**08 37 47.9**	**0.0**
KHNJ	**Kahnooj**	**2.55**	**70**	Pn	**Pn**	**08 37 44.9**	**+0.5**
ASHO	**Ashiyiah**	**2.58**	**158**	P	**Pb**	**08 37 48.7**	**-1.0**
NGRK	**Negar Kerman**	**2.96**	**31**	Pn	**Pn**	**08 37 50.2**	**-0.2**
KRBR	**Kerman**	**3.27**	**28**	Pn	**Pn**	**08 37 55.3**	**+0.8**
KHGB	**Koh Gabri**	**3.52**	**21**	Pn	**Pn**	**08 37 58.5**	**+0.6**
CHMN	**Cheshme madani**	**3.55**	**38**	Pn	**Pn**	**08 37 58.5**	**+0.1**
KBAM	**BAM**	**3.67**	**56**	Pn	**Pn**	**08 38 00.5**	**+0.7**
ZRDN	**Zarand Kerman**	**4.09**	**19**	Pn	**Pn**	**08 38 05.4**	**-0.3**
IMEH	**Mehriz**	**4.29**	**356**	Pn	**Pn**	**08 38 09.3**	**+0.7**
IBAF	**Bafgh**	**4.51**	**6**	Pn	**Pn**	**08 38 11.5**	**+0.1**
KLNJ	**Kolanjah**	**4.91**	**323**	Pn	**Pn**	**08 38 18.3**	**+1.2**
TPRV	**Parvadeh(Tabas**	**6.09**	**13**	Pn	**Pn**	**08 38 33.1**	**0.0**
ANAR	**Anarak**	**6.17**	**350**	Pn	**Pn**	**08 38 34.2**	**-0.1**
IKOO	**Kooshah**	**6.35**	**32**	Pn	**Pn**	**08 38 37.1**	**+0.3**
SRVN	**Saravan**	**6.59**	**86**	Pn	**Pn**	**08 38 41.1**	**+1.1**
BRTR	**Keskin Array B**	**21.77**	**311**	P	**P**	**08 41 54.9**	**+0.2**
	0.4nm,0.5s,baz=115,slow=13,SNR=3.5 0.4nm,0.5s						
BVAR	**Borovoye Array**	**28.33**	**20**	P	**P**	**08 42 55.8**	**-0.7**
	0.6nm,0.5s,baz=199,slow=7.2,SNR=4.4 0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**29.56**	**31**	P	**P**	**08 43 07.1**	**-0.4**
	0.2nm,0.3s,baz=229,slow=8.5,SNR=2.3 0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**34.65**	**31**	P	**P**	**08 43 51.5**	**-0.6**
	1.5nm,0.7s,baz=238,slow=8.3,SNR=5.6 1.5nm,0.7s						
WRA	**Warramunga Arr**	**89.91**	**112**	P	**P**	**08 50 02.6**	**+0.2**
	0.2nm,0.7s,baz=302,slow=4.5,SNR=3.0 0.2nm,0.7s						
ASAR	**Alice Springs**	**91.35**	**116**	P	**P**	**08 50 09.6**	**+0.6**
	0.2nm,0.5s,baz=304,slow=4.7,SNR=4.1 0.2nm,0.5s						

NEIC ***06*** *08:37:24.2±2.4,26.°73N±0.°06×55.°13E±0.°08,h10km±1km, mb4.5/32,Error ellipse: s-maj=12.1km s-min=9.8km az=91.0*
MOS ***06*** *08:37:24.7±1.0,26.°78N×55.°07E,h15km,mb4.7/25,Error ellipse: s-maj=7.3km s-min=4.6km az=100.8*
IDC ***06*** *08:37:25.8±0.7,27.°15N×54.°97E,h0km,mb4.1/19, mbtmp4.2/23,ML4.2/4,MS3.7/3,Error ellipse: s-maj=17.0km s-min=14.9km az=170.0*
THR ***06*** *08:37:26.8±0.0,27.°67N×55.°46E,h14km±21km,ML4.4*
SGS ***06*** *08:37:27.9,27.°29N×55.°42E,h18km,Ml4.5*
DSN ***06*** *08:37:30.5±0.8,27.°30N×54.°83E,h10km,mb5.0/1, ML4.1/17,Error ellipse: s-maj=8.9km s-min=5.3km az=10.0*

ISC 06 08:37:29.9±0.4,**27.°13N**±0.°04×**55.°05E**±0.°04,**h17**km,**n166,** σ2°**31**/152,**mb4.3**/56,**MS3.6**/5,**13C-12D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.04**	**75**	*i* P	Pb	08 37 40.2	-9.3
BNDS				IAML		08 38 08.3	
	comp=Z,3μm,1.0s						
SHME	**Shamm**	**1.46**	**137**	P	**Pg**	**08 38 00.2**	**+2.2**
BANOM	**Banah**	**1.65**	**137**	*e*P	**Pg**	**08 38 01.5**	**-0.1**
	SNR=7.6						
BANOM				S	**Sg**	**08 38 27.6**	**+4.5**
LMD1	**Lamerd**	**1.69**	**277**	*i* P	**Pb**	**08 38 02.9**	**+2.3**
LMD1				IAML		08 38 37.2	
	comp=Z,14μm,1.0s						
UMQ	**Umm Al-Quwin**	**1.69**	**161**	*e*P	**Pb**	**08 38 02.7**	**+2.0**
	SNR=5.8						
MSFE	**Esma-Masafi**	**2.03**	**150**	*e*P	**Pb**	**08 38 08.3**	**+1.9**
	SNR=11						
MDH	**Madha**	**2.15**	**148**	P	**Pb**	**08 38 10.3**	**+1.9**
NAZ	**Nazwa, Dubai**	**2.21**	**165**	*e*P	**Pb**	**08 38 09.5**	**+0.1**
	SNR=9.9						
UOSS	**Minazif**	**2.42**	**154**		Pn	08 37 55.6	-13
UOSS	**Minazif**	**2.42**	**154**	P	**Pb**	**08 38 14.0**	**+1.0**
FAQ	**Al Faqa, Dubai**	**2.43**	**168**	*e*P	**Pb**

KIV Kislovodsk 19.53 332 eP P 08 41 57.9 +1.3
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,28nm,14.0s
BNN Bunyan 19.85 311 P 08 41 58.0 -2.2
BNN IAmb IAmb 08 42 17.2
comp=Z,26nm,1.0s
ARK Arkit 20.16 39 P P 08 42 04.9 +1.4
ARK pmax pmax
comp=Z,16nm,1.3s
KK31 Karatay Array 20.29 34 P 08 42 03.5 -1.3
KK31 Karatay Array 20.29 34 P P 08 42 03.5 -1.3
KK31 pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 20.29 34 P 08 42 03.8 -1.1
KKAR Karatay Array 20.29 34 P P 08 42 03.8 -1.1
GOF Gofitskoye 20.31 335 *ce*P P **08 42 07.1 +2.1**
VSLR Vesyoloye 20.33 327⇑ *e*P Pn 08 42 09.0 +1.7
VSLR pmax pmax
comp=Z,27nm,0.9s
SOC Sochi 20.58 327 *e*P P **08 42 07.8 -0.1**
SOC *e*PPP PPP 08 42 32.4
SOC *e*S **S 08 46 00.7 +3.4**
SOC *e*SS **SnSn 08 46 22.5 +5.9**
SOC *e*SSS SSS 08 46 35.6
SOC pmax pmax
comp=Z,20nm,0.7s
SOC MLR MLR
comp=Z,270nm,17.0s
KSH Kashi 21.35 49 P P 08 42 11.2 -5.2
KSH pmax pmax
comp=Z,7.0nm,0.9s
ARLS Aral 21.57 42 P P 08 42 19.7 +0.9
ARLS pmax pmax
comp=Z,11nm,0.9s
BR131 Keskin Array S 21.77 311 P 08 42 19.9 -1.0
BR131 IAmb IAmb 08 42 28.9
comp=Z,20nm,0.8s
BR131 Keskin Array S 21.77 311 *d iP* **P 08 42 19.6 -1.4**
BRTR Keskin Array B 21.77 311 P 08 42 19.3 -1.7
BRTR Keskin Array B 21.77 311 P **P 08 42 20.1 -1.0**
comp=Z,6.6nm,0.9s,baz=126,slow=12,SNR=13
comp=Z,6.6nm,0.9s
AAK Ala-Archa 22.14 41 P 08 42 23.8 -1.2
AAK IAmb IAmb 08 42 43.9
comp=Z,21nm,1.3s
AAK Ala-Archa 22.14 41 P **P 08 42 25.0 +0.1**
comp=Z,2.5nm,0.6s,baz=233,slow=10,SNR=8.3
comp=Z,2.5nm,0.6s
AAK Ala-Archa 22.14 41 *i* P **P 08 42 26.8 +1.8**
SNR=5.2
ILGA Ilgaz 22.39 314 P P 08 42 24.9 -2.8
AB31 Akbulak array 22.41 8 P P 08 42 25.3 -2.3
AB31 IAmb IAmb 08 42 29.6
comp=Z,21nm,1.2s
ABKAR Akbulak array 22.41 8 P 08 42 25.9 -1.6
ANTO Ankara 22.41 310 P **P 08 42 24.2 -3.7**
ANTO IAmb IAmb 08 42 37.8
comp=Z,23nm,1.0s
ANTO Ankara 22.41 310 P **P 08 42 24.2 -3.7**
ANTO pmax pmax
comp=Z,23nm,1.0s
BOOM Boomskoye usch 22.91 43 P 08 42 31.8 -1.3
BOOM IAmb IAmb 08 42 52.1
comp=Z,19nm,1.2s
BOOM Boomskoye usch 22.91 43 P P **08 42 31.8 -1.3**
BOOM pmax pmax
comp=Z,19nm,1.2s
AKTO Aktyubinsk 23.38 5 P **P 08 42 37.0 -0.7**
comp=Z,1.6nm,0.4s,baz=190,slow=8.0,SNR=10
comp=Z,1.6nm,0.4s
AKTO Aktyubinsk 23.38 5 P P **08 42 37.0 -0.7**
KDJ Kajisay 23.47 45 P P **08 42 40.7 +1.8**
KDJ pmax pmax
comp=Z,13nm,1.6s
TARG Taragay, Kyrgy 23.66 46 P P **08 42 41.5 +0.5**
TARG pmax pmax
comp=Z,8.0nm,1.2s
BELG Belogornoye 25.84 350⇑ *e*P **P 08 43 03.5 +3.2**
BELG pmax pmax
comp=Z,7.0nm,1.0s
VRH Novokhopyorsk 26.08 341 *e*P **P 08 43 00.9 -1.6**
VRH pmax pmax
comp=Z,30nm,0.9s
LPSR Galich'ya Gora 28.15 339 *e*P **P 08 43 24.2 +3.1**
LPSR pmax pmax
comp=Z,17nm,0.8s
BORK Borovoye 28.28 20⇑ *e*P **P 08 43 21.1 -1.1**
BORK pmax pmax
comp=Z,5.0nm,1.0s
BVAR Borovoye Array 28.28 20 P **P 08 43 20.4 -1.8**
comp=Z,2.1nm,0.6s,baz=196,slow=8.6,SNR=7.2
comp=Z,2.1nm,0.6s
MAKZ Makanchi 28.90 40 P P **08 43 25.3 -2.6**
MAKZ Makanchi 28.90 40 P P **08 43 25.3 -2.6**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 29.07 40 P **P 08 43 26.9 -2.6**
MK31 Makanchi Array 29.07 40⇓ *e*P **P 08 43 28.6 -0.9**
MKAR Makanchi Array 29.07 40 P **P 08 43 25.8 -3.7**
MKAR Makanchi Array 29.07 40 P **P 08 43 30.9 +1.4**
comp=Z,1.0nm,0.6s,baz=235,slow=9.6,SNR=5.9
MKAR Makanchi Array 29.07 40 P **P 08 43 25.8 -3.7**
SRS Serrai 29.36 306 P **P 08 43 31.5 -0.5**
SRS pmax pmax
comp=Z,16nm,0.9s
KURBB Kurchatov Arra 29.50 31 P **P 08 43 32.2 -1.0**
comp=Z,0.8nm,0.7s,baz=228,slow=7.8,SNR=5.7
comp=Z,0.8nm,0.7s
KURBB Kurchatov Arra 29.50 31 ⇑Pg P 08 43 22.5 -11
comp=Z,2.3nm,0.7s
KURBB ⇑Lg Lg 08 43 54.5
comp=Z,12nm,0.6s,baz=302,slow=29
KURK Kurchatov 29.61 31 P **P 08 43 32.2 -1.9**
KURK Kurchatov 29.61 31 IAmb IAmb 08 43 57.8
comp=Z,5.2nm,0.7s
KURK Kurchatov 29.61 31 ⇑Pg P 08 43 22.5 -12
comp=Z,1.2nm,0.9s
KURK ⇓Lg Lg 08 43 52.7
comp=Z,3.1nm,0.7s
KURK Kurchatov 29.61 31⇑ *e*P **P 08 43 32.6 -1.5**
KURK pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 30.66 327 P P 08 43 39.7 -3.7
comp=Z,0.4nm,0.3s,baz=123,slow=8.3,SNR=6.0
comp=Z,0.4nm,0.3s
AKBB Malin Array Si 30.66 327 P P 08 43 39.9 -3.4
AKBB IAmb IAmb 08 43 48.7
comp=Z,15nm,1.2s
AKBB Malin Array Si 30.66 327⇑ *e*P **P 08 43 47.0 +3.6**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
KIEV Kiev 30.66 327 P P 08 43 40.5 -2.9
KIEV IAmb IAmb 08 43 48.6
comp=Z,13nm,1.2s
KIEV Kiev 30.66 327 P P 08 43 40.5 -2.9
KIEV pmax pmax
comp=Z,13nm,1.2s
BURAR Bucovina Array 31.01 319 P **P 08 43 44.8 -1.8**
OBN Obninsk 31.03 339 *de*P **P 08 43 48.3 +1.8**
OBN *e* 08 44 50.4
OBN *e*PPP PPP 08 44 59.8
OBN *e* 08 46 40.2
OBN *e*S **S 08 48 55.8 +5.2**
OBN *e*SS **SnSn 08 50 39.4 +7.8**
OBN pmax pmax
comp=Z,21nm,0.6s
OBN MLR MLR
comp=Z,119nm,19.0s
PALK Pallekele 31.35 124 LR LR 08 55 36.7
comp=Z,103nm,19.4s,baz=4.0,slow=35
KIRV Kirov 31.68 354⇑ *e*P **P 08 43 52.1 -0.2**
DGZ Jazzator, Alta 33.52 39⇓ *e*P **P 08 44 08.4 -0.4**
DGZ pmax pmax
comp=Z,4.0nm,0.7s
MNK Minsk 33.80 331 *i* P **P 08 44 11.9 +1.0**
comp=E,30nm,0.9s
MNK *i* P **P 08 44 11.9 +1.0**
comp=N,8.0nm,0.7s
MNK *i* P **P 08 44 11.9 +1.0**
comp=Z,16nm,0.6s,baz=132
MNK *i* PP **PnPn 08 45 25.0 +1.6**
MNK *i* PPP PPP 08 45 36.2
MNK *i* S **S 08 49 37.5 +3.5**
MNK *i* SS **SnSn 08 51 41.4 +2.3**
MNK *i* SSS SSS 08 52 01.2
MNK *i* LR LR 08 57 53.0
MNK *i* LRM MLR 08 58 56.1
comp=Z,85nm,19.4s
MNK Minsk 33.80 331 *i* P **P 08 44 11.9 +1.0**
MNK *i* 08 45 24.9
MNK *i* PPP PPP 08 45 36.2
MNK *i* S **S 08 49 37.4 +3.5**
MNK *i* SS **SnSn 08 51 41.3 +2.3**
MNK pmax pmax
comp=N,8.0nm,0.7s
MNK pmax pmax
comp=Z,16nm,0.6s
MNK pmax pmax
comp=E,30nm,0.9s
MNK MLR MLR
comp=Z,85nm,19.0s
KECS Kecovo 34.21 318 *e*P **P 08 44 19.0 +4.4**
KECS Kecovo 34.21 318 *e*P **P 08 44 19.0 +4.4**
NACGM Naroch 34.55 331 *e*P **P 08 44 16.5 -0.8**
comp=Z,8.0nm,0.9s,baz=132
ZAA0 Zalesovo Array 34.60 31 P **P 08 44 16.0 -1.8**
ZAA0 IAmb IAmb 08 44 21.9
comp=Z,6.3nm,0.6s
ZALV Zalesovo Beam 34.60 31 P **P 08 44 16.2 -1.6**
comp=Z,2.5nm,0.5s,baz=242,slow=9.3,SNR=8.3
comp=Z,2.5nm,0.5s
LANS Liptovska Anna 35.11 318 *e*P **P 08 44 21.0 -1.4**
LANS *e* 08 44 27.2
LANS Liptovska Anna 35.11 318 *e*P P 08 44 27.2 +4.8
KLMR Klimovskoe 35.32 347 *e*P **P 08 44 23.5 -0.4**
KLMR *e* 08 45 43.4
KLMR pmax pmax
comp=Z,16nm,1.3s
OJC Ojcow 35.39 320 P **P 08 44 29.0 +4.3**
OJC pmax pmax
comp=Z,16nm,0.8s
VSU Vasula 37.03 336 *de*P **P 08 44 40.1 +1.5**
VSU pmax pmax
comp=Z,84nm,2.1s
GERES GERESS Array B 38.51 316 P P 08 44 48.6 -2.7
comp=Z,0.3nm,0.4s,baz=83,slow=9.3,SNR=2.7
comp=Z,0.3nm,0.4s
KHC Kasperske Hory 38.68 316⇑ *e*P **P 08 44 55.8 +3.1**
KHC pmax pmax
comp=Z,23nm,3.1s
GTA Gaotai 39.01 60 *e*P **P 08 44 55.6 -0.2**
GTA pmax pmax
comp=Z,2.0nm,0.7s
GTA pmax pmax
comp=Z,6.0nm,0.6s
WTTA Wattenberg 39.37 312 *e*P **P 08 44 56.9 -1.8**
comp=Z,8.8nm,1.1s
FINES FINESS Array B 39.42 339 P **P 08 44 56.8 -1.9**
comp=Z,2.4nm,0.4s,baz=140,slow=9.6,SNR=12
comp=Z,2.4nm,0.4s
WATA Walderalm 39.43 313 *e*P **P 08 44 57.0 -2.1**
comp=Z,3.9nm,0.6s
SQTA Sankt Quirin 39.64 312 *e*P **P 08 45 00.1 -0.8**
comp=Z,3.2nm,0.4s
MOTA Moosalm 39.74 312 *e*P **P 08 45 01.6 -0.2**
comp=Z,2.3nm,0.4s
CLL Collm 39.77 319 *i* P **P 08 45 05.6 +3.8**
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 39.77 319 *i* Px Px 08 45 04.5
comp=Z,6.0nm,1.0s
FETA Feichten 39.91 312 *e*P **P 08 45 01.4 -1.8**
comp=Z,6.6nm,1.1s
DAVOX Davos/Dischmat 40.42 311 LR LR 09 03 34.8
comp=Z,118nm,19.0s,baz=78,slow=39
HFS Hagfors 43.32 331 P **P 08 45 28.8 -1.9**
comp=Z,3.2nm,0.5s,baz=138,slow=8.8,SNR=8.2
comp=Z,3.2nm,0.5s
NC405 NORSAR Array S 44.66 332 P **P 08 45 39.0 -2.5**
NB201 NORSAR Array S 44.80 331 P **P 08 45 40.1 -2.5**
NB2 NORSAR Subarra 44.83 331 P P 08 45 39.9 -3.0
comp=Z,7.3nm,0.8s,baz=119,slow=7.9
NB2 NORSAR Subarra 44.83 331 P **P 08 45 41.9 -1.0**
NOA NORSAR Array B 44.83 331 P **P 08 45 40.5 -2.4**
comp=Z,2.5nm,0.7s,baz=118,slow=7.8,SNR=17
comp=Z,2.5nm,0.7s
NRIK Noril'sk 46.30 15⇓ *e*P **P 08 45 54.9 +0.5**
NRIK pmax pmax
comp=Z,7.0nm,1.2s
XAN Xi'an 46.45 68 P **P 08 45 59.1 +3.0**
XAN pmax pmax
comp=Z,10.0nm,0.8s
MFF Saint Martin d 47.21 310 P **P 08 45 59.6 -2.2**
MFF pmax pmax
comp=Z,6.0nm,1.9s
ESDC Sonseca Array 50.01 300 IAmb IAmb 08 46 30.5
comp=Z,8.5nm,1.4s
ESDC Sonseca Array 50.01 300 P **P 08 46 21.4 -2.1**
comp=Z,1.1nm,0.6s,baz=68,slow=7.1,SNR=7.8
comp=Z,1.1nm,0.6s
EKA Eskdalemuir Ar 50.16 321 P **P 08 46 22.1 -2.3**
comp=Z,0.3nm,0.3s,baz=84,slow=7.4,SNR=5.6
comp=Z,0.3nm,0.3s
PAB San Pablo 50.32 300 P **P 08 46 25.4 -0.5**
PAB pmax pmax
comp=Z,359nm,0.7s
TORD Torodi Ar. Bea 51.63 265 P P 08 46 33.4 -2.6
comp=Z,3.8nm,0.5s,baz=62,slow=8.1,SNR=4.7
comp=Z,3.8nm,0.5s
DBIC Dimbokro 60.25 262 IAmb IAmb 08 47 42.1
comp=Z,8.9nm,0.9s
DBIC Dimbokro 60.25 262 P **P 08 47 35.9 -1.9**
comp=Z,4.7nm,0.7s,baz=78,slow=8.4,SNR=4.8
comp=Z,4.7nm,0.7s
KSRS Korea Array 61.09 60 P **P 08 47 41.3 -1.8**
comp=Z,0.6nm,0.4s,baz=281,slow=7.5,SNR=2.9
comp=Z,0.6nm,0.4s
BOSA Boshof 62.36 210 P P 08 47 48.1 -3.8
BOSA Boshof 62.36 210 P **P 08 47 51.4 -0.5**
comp=Z,3.5nm,0.6s,baz=31,slow=5.8,SNR=11
comp=Z,3.5nm,0.6s
BOSA Boshof 62.36 210 P P 08 47 48.1 -3.8
BOSA pmax pmax
comp=Z,11nm,1.2s
MAJO Matsushiro 69.24 59⇓ *e*P **P 08 48 37.3 +1.1**
SEY Seymchan 69.43 29 *e*P P 08 48 46.1 +9.3
SEY pmax pmax
comp=Z,19nm,1.6s
ILAR Eielson Array 86.81 9 P **P 08 50 14.8 +1.7**
comp=Z,0.4nm,0.6s,baz=319,slow=4.7,SNR=6.2
WRA Warramunga Arr 89.89 112 P **P 08 50 27.0 -1.5**
comp=Z,0.4nm,0.5s,baz=314,slow=4.0,SNR=9.0
comp=Z,0.4nm,0.5s
WRA Warramunga Arr 89.89 112 P **P 08 50 27.0 -1.5**
WB2 Warramunga Arr 89.90 112 P **P 08 50 25.9 -2.6**
WR8 Warramunga Arr 90.03 112 P P 08 50 23.7 -5.4
ASAR Alice Springs 91.33 116 P **P 08 50 33.8 -1.4**
comp=Z,0.6nm,0.6s,baz=302,slow=4.9,SNR=9.6
comp=Z,0.6nm,0.6s
DZM Mont Dzumac 3.41 266 Pn **Pn 08 52 03.6 +0.9**
7.9nm,0.3s,baz=126,slow=17,SNR=117
DZM Sn **Sn 08 52 44.0 +1.5**
10nm,0.3s,baz=125,slow=23,SNR=13
DZM LR LR 08 53 13.0
comp=Z,508nm,18.9s,baz=104,slow=36
15nm,0.3s
ONTNC Ouen Toro 3.42 262 Pn 08 52 03.6 +0.8
ONTNC Sn **Sn 08 52 42.5 0.0**
MSVF Nonsavu 8.53 63 Pn 08 53 14.6 +1.5
RAO Raoul Island 13.07 127 LR LR 08 57 13.6
comp=Z,153nm,20.3s,baz=326,slow=28
HNR Honiara 15.75 320 LR LR 09 00 06.6
comp=Z,320nm,21.2s,baz=106,slow=35
URZ Urewera 17.42 161 P **P 08 55 13.6 +0.1**
0.2nm,0.3s,baz=4.7,slow=6.8,SNR=16
URZ LR LR 09 00 05.0
comp=Z,439nm,21.1s,baz=320,slow=31
29nm,1.1s
RTZ Ruatahuna 17.72 162 P **Pn 08 55 15.7 -0.4**
RTZ IAmb IAmb 08 55 59.6
comp=Z,21nm,1.0s
BKZ Black Stump Fm 18.10 164 Pn 08 55 20.3 -0.5
BKZ IAmb IAmb 08 55 23.3
comp=Z,37nm,1.2s
ARMA Armidale 18.64 239 P **P 08 55 26.8 -0.3**
MRZ Mangatainoka R 19.31 167 P 08 55 33.8 -0.5
MRZ IAmb IAmb 08 55 36.8
comp=Z,34nm,0.9s
BFZ Birch Farm 19.48 166 P **P 08 55 34.8 -1.3**
BFZ IAmb IAmb 08 56 18.3
comp=Z,23nm,0.9s
TCW Tory Channel 19.61 171 P **P 08 55 38.3 +0.8**
RPZ Rata Peaks 21.81 178 LR LR 09 03 57.8
comp=Z,476nm,19.1s,baz=348,slow=35
STKA Stephens Creek 27.25 242 IAmb IAmb 08 56 58.0
comp=Z,36nm,1.2s
STKA Stephens Creek 27.25 242 P **P 08 56 52.6 -0.8**
comp=Z,4.1nm,1.1s,baz=86,slow=15,SNR=3.0
comp=Z,4.1nm,1.1s
WR8 Warramunga Arr 33.27 267 P **P 08 57 46.6 -0.2**
WR8 IAmb IAmb 08 57 57.3
comp=Z,5.0nm,1.1s
ASAR Alice Springs 33.38 260 P **P 08 57 47.8 +0.1**
comp=Z,1.0nm,0.7s,baz=85,slow=8.7,SNR=12
ASAR LR LR 09 10 38.5
comp=Z,145nm,18.8s,baz=268,slow=35
comp=Z,1.0nm,0.7s
WB0 Warramunga Arr 33.41 267 P **P 08 57 48.0 +0.1**
WB0 IAmb IAmb 08 58 01.6
comp=Z,6.7nm,1.1s
WB2 Warramunga Arr 33.41 267 P **P 08 57 47.7 -0.4**
WB2 IAmb IAmb 08 58 01.0
comp=Z,5.4nm,1.1s
WRA Warramunga Arr 33.43 267 P **P 08 57 47.8 -0.3**
comp=Z,0.7nm,0.7s,baz=97,slow=8.5,SNR=7.0
WRA LR LR 09 10 24.4
comp=Z,168nm,19.0s,baz=10,slow=35
comp=Z,0.7nm,0.7s
JAY Jayapura 34.45 300 LR LR 09 10 54.3
comp=Z,115nm,19.0s,baz=157,slow=34
FITZ Fitzroy Crossi 41.85 267 P **P 08 58 59.9 +0.5**
FITZ Fitzroy Crossi 41.85 267 LR LR 09 16 14.1
comp=Z,167nm,19.9s,baz=112,slow=36
GUMO Guam 43.06 323 LR LR 09 17 18.9
comp=Z,92nm,18.4s,baz=154,slow=37
BATI Baumata 45.95 277 LR LR 09 19 20.6
comp=Z,237nm,18.9s,baz=165,slow=37
NWAO Narrogin (SRO) 47.79 245 P **P 08 59 47.2 +0.6**
KAPI Kappang 51.49 281 LR LR 09 23 24.7
comp=Z,38nm,20.4s,baz=138,slow=38
JHJ Hachijo jima 2 61.86 331 LR LR 09 25 56.1
comp=Z,21nm,21.9s,baz=146,slow=34
MJAR Matsushiro Ar 65.44 332 LR LR 09 26 14.3
comp=Z,34nm,21.6s,baz=116,slow=32
QSPA South Pole Qui 68.21 180 P **P 09 02 09.0 -0.3**
QSPA South Pole Qui 68.21 180 P **P 09 02 11.2 +1.9**
comp=Z,0.8nm,0.8s,baz=253,slow=0.9,SNR=5.8
comp=Z,0.8nm,0.8s
ASAJ Asahikawa 70.33 339 LR LR 09 28 40.7
comp=Z,29nm,21.2s,baz=174,slow=32
PSI Prapat 73.66 280 LR LR 09 36 38.3
comp=Z,44nm,18.2s,baz=126,slow=37
PETK Petropavlovsk- 75.42 352 LR LR 09 33 05.7
comp=Z,60nm,18.7s,baz=143,slow=34
CMAR Chiang Mai Arr 80.32 294 P **P 09 03 17.6 -2.8**
CMAR Chiang Mai Arr 80.32 294 P **P 09 03 20.3 -0.2**
comp=Z,1.2nm,0.3s,baz=148,slow=3.7,SNR=5.1
comp=Z,1.2nm,0.3s
SNAA Sanae 86.59 182 IAmb IAmb 09 04 07.5
comp=Z,6.7nm,1.5s
SNAA Sanae 86.59 182 P **P 09 03 51.6 -0.4**
comp=Z,0.9nm,0.8s,baz=180,slow=13,SNR=4.5
comp=Z,0.9nm,0.8s
YAK Yakutsk 89.60 342 LR LR 09 45 12.6
comp=Z,23nm,18.0s,baz=78,slow=36
SONM Songino Array 89.79 323 LR LR 09 42 09.2
comp=Z,28nm,21.7s,baz=82,slow=34
LPIG La Paz 89.82 64 LR LR 09 37 11.5
comp=Z,103nm,19.2s,baz=184,slow=31
ANMO Albuquerque 97.11 55 LR LR 09 41 02.6
comp=Z,82nm,20.0s,baz=287,slow=31
GERES GERESS Array B 147.17 331 PKPbc **PKPbc 09 10 50.7 -1.4**
comp=Z,2.8nm,0.8s,baz=27,slow=3.3,SNR=13

ASRS 06 08:40:17.0±0.5, 53°51N×87°46E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 06 08:40:20.0±1.0, 54°40N×86°80E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

*IDC **06** 08:51:06.8±1.4, 21°.65S×170°.15E, h0km, mb4.0/6, mbtmp4.1/8, ML3.7/2, MS3.7/21, Error ellipse: s-maj=37.6km s-min=24.6km az=26.0*
*NEIC **06** 08:51:12.7±1.5, 21°.92S±0°.09×170°.10E±0°.07, h32km±7km, mb4.4/14, Error ellipse: s-maj=13.7km s-min=9.7km az=182.0*
ISC 06 08:51:11.1±0.8, 21°.9S±0°.1×170°.11E±0°.07, h25km, n45, σ0.9 96/30, mb4.3/9, MS3.7/17, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.97**	**281**		**Pn**	**08 51 42.6**	**-0.3**
MARNC				Sn	**Sn**	**08 52 07.2**	**+0.5**
PINNC	**Pines Island,**	**2.58**	**253**		**Pn**	**08 51 51.7**	**+0.5**
PINNC				Sn	**Sn**	**08 52 22.4**	**+0.6**

*NOU **06** 08:59:15.9, 22°.03S×169°.49E, h0km, MLv3.9/6, Southeast of Loyalty Islands*
*NEIC **06** 08:59:18.1±1.5, 21°.98S±0°.08×169°.37E±0°.05, h10km±1km, mb4.4/14, Error ellipse: s-maj=14.4km s-min=7.9km az=167.0*
*IDC **06** 08:59:20.6±0.7, 21°.75S×169°.41E, h40km±6km, mb3.9/7, mbtmp4.1/9, ML3.4/1, MS3.8/3, Error ellipse: s-maj=22.1km s-min=19.5km az=158.0*
ISC 06 08:59:18.9±0.6, 21°.96S±0°.08×169°.46E±0°.07, h25km, n39, σ1.9 01/41, mb4.4/14, MS3.6/3, 2D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.41**	**290**		**Pn**	**08 59 42.5**	**-0.5**
MARNC	**Mare, Loyalty**	**1.41**	**290**	P	**Pn**	**08 59 42.8**	**-0.1**
MARNC	**Mare, Loyalty**	**1.41**	**290**	S	**Sn**	**09 00 02.1**	**+1.4**
PINNC	**Pines Island,**	**1.97**	**250**		**Pn**	**08 59 50.1**	**-0.5**
PINNC	**Pines Island,**	**1.97**	**250**	P	**Pn**	**08 59 50.7**	**+0.1**
YATNC	**Mamie plateau,**	**2.38**	**267**	P	**Pn**	**08 59 56.0**	**-0.3**
OUENC	**Ouen Island, N**	**2.46**	**259**	P	**Pn**	**08 59 57.1**	**-0.4**
DZM	**Mont Dzumac**	**2.80**	**267**	Pn	**Pn**	**09 00 02.2**	**+0.1**
DZM	6.2nm,0.3s,baz=121,slow=13,SNR=161			Sn	**Sn**	**09 00 34.8**	**-0.3**
	65nm,0.3s,baz=235,slow=11,SNR=14						
	15nm,0.3s						
ONTNC	**Ouen Toro**	**2.80**	**262**		**Pn**	**09 00 02.6**	**+0.5**
ONTNC	**Ouen Toro**	**2.80**	**262**	P	**Pn**	**09 00 02.8**	**+0.7**
SANVU	**Saraoutou**	**6.82**	**341**	Pn	**Pn**	**09 00 58.6**	**+1.2**
URZ	**Urewera**	**17.53**	**160**	P	**P**	**09 03 23.2**	**+0.8**
	5.0nm,0.9s,baz=322,slow=8.7,SNR=4.1						
RTZ	**Ruatahuna**	**17.81**	**160**	P	**P**	**09 03 27.8**	**+2.2**
RTZ				IAmb	IAmb	09 03 30.1	
	comp=Z,17nm,1.0s						
COEN	**Coen**	**26.21**	**283**	P	**P**	**09 04 51.8**	**0.0**
COEN				IAmb	IAmb	09 05 14.4	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**26.66**	**242**	LR	LR	09 14 58.7	
	comp=Z,111nm,18.6s,baz=53,slow=35						
WR8	**Warramunga Arr**	**32.66**	**267**	P	**P**	**09 05 48.6**	**-0.6**
WR8				IAmb	IAmb	09 06 30.9	
	comp=Z,8.2nm,1.3s						
AS31	**Alice Springs**	**32.76**	**260**	P	**P**	**09 05 49.9**	**-0.3**
ASAR	**Alice Springs**	**32.76**	**260**	P	**P**	**09 05 50.0**	**-0.1**
ASAR	**Alice Springs**	**32.76**	**260**	P	**P**	**09 05 50.3**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=81,slow=9.0,SNR=20						
	comp=Z,2.0nm,0.8s						
WB0	**Warramunga Arr**	**32.80**	**267**	P	**P**	**09 05 50.2**	**-0.2**
WB0				IAmb	IAmb	09 06 31.8	
	comp=Z,6.9nm,1.3s						
WRA	**Warramunga Arr**	**32.81**	**267**	P	**P**	**09 05 49.7**	**-0.8**
WRA	**Warramunga Arr**	**32.81**	**267**	P	**P**	**09 05 50.2**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=97,slow=8.1,SNR=22						
	comp=Z,1.4nm,0.6s						
MTN	**Manton Dam**	**37.59**	**277**	P	**P**	**09 06 31.4**	**-0.3**
MTN				IAmb	IAmb	09 06 56.4	
	comp=Z,13nm,1.4s						
KNRA	**Kununurra**	**38.94**	**272**	P	**P**	**09 06 42.5**	**-0.5**
KNRA				IAmb	IAmb	09 06 59.4	
	comp=Z,14nm,1.4s						

FITZ	**Fitzroy Crossi**	**41.24 267**	P	**P**	**09 07 02.7 +0.5**	
PSA00	**Pilbara Seismi**	**45.91 261**	P	**P**	**09 07 39.8 +0.1**	
MBWA	**Marble Bar**	**46.09 261**	P	**P**	**09 07 41.7 +0.6**	
MBWA			IAmb	IAmb	09 07 53.7	
	comp=Z,6.1nm,0.8s					
TGY	**Tagaytay City**	**59.57 303**	LR	LR	09 35 56.2	
	comp=Z,44nm,18.2s,baz=7.5,slow=37					
QSPA	**South Pole Qui**	**68.10 180**	P	**P**	**09 10 18.8 +2.3**	
QSPA	**South Pole Qui**	**68.10 180**	P	**P**	**09 10 18.8 +2.3**	
	comp=Z,4.7nm,0.7s,baz=7.3,slow=1.2,SNR=31					
QSPA			pP	**pwP**	**09 10 29.9 +0.6**	
	comp=Z,2.5nm,0.7s,baz=14,slow=5.2,SNR=4.6					
	comp=Z,4.7nm,0.7s					
MAW	**Mawson**	**76.00 202**	P	**P**	**09 11 03.6 +0.2**	
	comp=Z,2.0nm,0.6s,baz=110,slow=10.0,SNR=4.9					
	comp=Z,2.0nm,0.6s					
BELA	**Belgrano 2**	**79.38 175**	P	**P**	**09 11 20.8 -1.4**	
BELA			IAmb	IAmb	09 11 21.6	
	comp=Z,2.7nm,1.1s					
TROLL	**Troll, Antarti**	**85.84 184**	⇓P	**P**	**09 11 54.8 -1.4**	
	comp=Z,132nm,0.6s					
SNAA	**Sanae**	**86.46 182**	⇓P	**P**	**09 11 58.1 -1.0**	
SNAA	**Sanae**	**86.46 182**	P	**P**	**09 11 57.8 -1.3**	
SNAA	**Sanae**	**86.46 182**	P	**P**	**09 11 58.0 -1.1**	
	comp=Z,2.3nm,1.0s,baz=162,slow=10,SNR=5.5					
	comp=Z,2.3nm,1.0s					
NVAR	**Mina Array Bea**	**90.45 48**	P	**P**	**09 12 18.1 -0.5**	
	comp=Z,0.6nm,0.7s,baz=233,slow=8.9,SNR=5.6					
NVAR			pP	**pwP**	**09 12 30.4 -1.5**	
	comp=Z,1.2nm,0.8s,baz=223,slow=9.0,SNR=6.9					
NVAR			LR	LR	09 45 22.0	
	comp=Z,112nm,21.3s,baz=170,slow=30					
	comp=Z,0.6nm,0.7s					
ILAR	**Eielson Array**	**92.76 17**	P	**P**	**09 12 26.6 -1.8**	
	comp=Z,0.2nm,0.6s,baz=221,slow=5.1,SNR=6.9					
ILAR			pP	**sP**	**09 12 38.2 +0.9**	
	comp=Z,0.7nm,1.0s,baz=234,slow=5.0,SNR=3.3					
	comp=Z,0.2nm,0.6s					
EKA	**Eskdalemuir Ar**	**146.22 352**	PKPbc	**PKPdf**	**09 18 56.2 +0.5**	
	comp=Z,0.6nm,0.5s,baz=2.6,slow=2.9,SNR=4.0					
EKA			pPKPbc	sPKPab	09 19 07.8 +1.7	
	comp=Z,3.8nm,0.8s,baz=348,slow=3.6,SNR=3.7					

*DSN **06** 09:06:34.0±0.9, 27.°40N×55.°07E, h10km, ML2.6/5, Error ellipse: s-maj=21.3km s-min=5.6km az=42.0*
*TEH **06** 09:06:33.3, 27.°13N×54.°93E, h18km±20km*
ISC 06 09:06:33.7±1.0, 27.°13N±0.°05×54.°92E±0.°05, h10km, n15, σ0.99/17, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.73**	**318**	Pg	**Pg**	**09 06 47.6**	**-0.3**
BNDS	**Bandar-Abbas**	**1.14**	**76**	Pg	**Pb**	**09 06 54.8**	**-0.9**
GENO	**Geno**	**1.15**	**76**	Pg	**Pg**	**09 06 55.2**	**-0.6**
IBND	**Bandar-abas**	**1.47**	**77**	Pg	**Pb**	**09 07 00.5**	**-0.7**
SHME	**Shamm**	**1.53**	**134**	P	**Pg**	**09 07 02.7**	**-0.4**
SHME				S	**Sg**	**09 07 25.0**	**+2.0**
BANOM	**Banah**	**1.72**	**134**	P	**Pb**	**09 07 05.4**	**0.0**
BANOM				S	**Sg**	**09 07 29.8**	**+0.7**
MSFE	**Esma-Masafi**	**2.08**	**147**	P	**Pb**	**09 07 11.5**	**-0.2**
MDH	**Madha**	**2.20**	**146**	P	**Pb**	**09 07 13.3**	**-0.3**
UOSS	**Minazif**	**2.46**	**152**	P	**Pb**	**09 07 17.0**	**-1.1**
ASHO	**Ashiyiah**	**2.64**	**157**	P	**Pb**	**09 07 19.1**	**-2.1**
KRBR	**Kerman**	**3.27**	**29**	Pn	**Pn**	**09 07 25.5**	**+0.2**
KHGB	**Koh Gabri**	**3.51**	**22**	Pn	**Pn**	**09 07 29.1**	**+0.4**
IMEH	**Mehriz**	**4.26**	**356**	Pn	**Pn**	**09 07 39.4**	**+0.5**
KLNJ	**Kolanjah**	**4.84**	**324**	Pn	**Pn**	**09 07 47.5**	**+0.5**
IRAM	**Ramesheh**	**5.16**	**335**	Pn	**Pn**	**09 07 52.1**	**+0.8**

*DSN **06** 09:10:14.6±2.8, 27.°56N×55.°04E, h10km, ML2.5/6, Error ellipse: s-maj=58.8km s-min=19.1km az=42.0*
*TEH **06** 09:10:16.8, 27.°29N×54.°98E, h8km±111km*
ISC 06 09:10:18.9±1.2, 27.°30N±0.°06×54.°98E±0.°07, h20km, n11, σ1.59/13, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.65**	**305**	Pg	**Pb**	**09 10 29.7**	**-1.9**
BNDS	**Bandar-Abbas**	**1.06**	**84**	Pg	**Pn**	**09 10 37.3**	**-1.5**
GENO	**Geno**	**1.07**	**84**	Pg	**Pn**	**09 10 37.9**	**-0.9**
GENO				Sg	**Sb**	**09 10 53.2**	**+0.8**
IBND	**Bandar-abas**	**1.40**	**84**	Pg	**Pn**	**09 10 43.4**	**+0.2**
SHME	**Shamm**	**1.62**	**140**	P	**Pn**	**09 10 45.1**	**-1.2**
BANOM	**Banah**	**1.81**	**139**	P	**Pn**	**09 10 47.6**	**-1.4**
BANOM				S	**Sn**	**09 11 14.1**	**+2.8**
MSFE	**Esma-Masafi**	**2.20**	**151**	P	**Pn**	**09 10 55.7**	**+1.3**
MDH	**Madha**	**2.32**	**149**	P	**Pn**	**09 10 57.0**	**+1.1**
HATD	**Hatta, Dubai**	**2.67**	**157**	P	**Pn**	**09 11 00.2**	**-0.6**
ASHO	**Ashiyiah**	**2.78**	**159**	P	**Pn**	**09 11 01.5**	**-0.8**
IRAM	**Ramesheh**	**5.03**	**334**	Pn	**Pn**	**09 11 35.2**	**+1.7**

IDC 06 09:13:42.7±1.3, 13.°36S×167.°59E, h0km, mb3.5/4, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=45.2km s-min=24.7km az=128.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.73**	**187**	Pn	Pn	09 15 49.6	-0.9
	1.2nm,0.3s,baz=159,slow=20,SNR=13						
DZM				Sn	Sn	09 17 31.4	+1.7
	0.7nm,0.3s,baz=144,slow=23,SNR=14						
	6.3nm,0.7s						
WRA	**Warramunga Arr**	**32.48**	**254**	P	P	09 20 15.8	+0.5
	0.6nm,0.8s,baz=85,slow=9.4,SNR=5.6						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**33.47**	**247**	P	P	09 20 23.8	-0.2
	0.4nm,0.7s,baz=75,slow=9.6,SNR=5.3						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**85.14**	**18**	P	P	09 26 19.5	-0.9
	0.3nm,0.8s,baz=230,slow=5.6,SNR=3.1						
	0.3nm,0.8s						
NVAR	**Mina Array Bea**	**86.14**	**49**	P	P	09 26 27.2	+0.9
	0.3nm,0.6s,baz=233,slow=9.4,SNR=4.5						
	0.3nm,0.6s						

*IDC **06** 09:23:24.7±1.4, 13.°62S×167.°42E, h0km, mb3.8/5, mbtmp3.9/6, ML3.9/1, MS3.1/2, Error ellipse: s-maj=51.5km s-min=24.7km az=135.0*
ISC 06 09:23:29.9±1.1, 13.°8S±0.°2×167.°5E±0.°2, h35km, n8, σ0.57/6, mb3.8/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.33**	**187**	Pn	**Pn**	**09 25 28.2**	**-0.2**
	1.3nm,0.3s,baz=24,slow=17,SNR=9.5						
	7.3nm,0.6s						
HNR	**Honiara**		**8.54 299**	LR	LR	09 29 04.1	
	comp=Z,106nm,19.3s,baz=38,slow=40						
JAY	**Jayapura**	**28.72**	**291**	LR	LR	09 41 45.7	
	comp=Z,51nm,19.0s,baz=180,slow=38						
STKA	**Stephens Creek**	**29.78**	**228**	P	**P**	**09 29 34.2**	**+0.7**
	2.6nm,0.7s,baz=35,slow=12,SNR=3.1						
	2.6nm,0.7s						
WRA	**Warramunga Arr**	**32.27**	**254**	P	**P**	**09 29 55.1**	**-0.5**
	0.9nm,0.7s,baz=84,slow=8.7,SNR=9.8						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**33.22**	**248**	P	**P**	**09 30 03.5**	**-0.4**
	0.6nm,0.7s,baz=78,slow=9.1,SNR=9.8						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**85.54**	**18**	P	**P**	**09 36 04.2**	**+0.2**
	0.4nm,0.7s,baz=211,slow=6.9,SNR=4.4						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**86.48**	**49**	P	**P**	**09 36 09.4**	**-0.2**
	0.6nm,0.8s,baz=232,slow=9.4,SNR=3.6						
	0.6nm,0.8s						

*IDC **06** 09:49:21.2±15.0, 26.°65N×55.°04E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=289.8km s-min=31.2km az=179.0*
*OMAN **06** 09:49:24.6±0.3, 27.°62N×55.°07E, h15km±5km, mb3.8/6, ml3.7/19, Error ellipse: s-maj=12.4km s-min=2.3km az=13.0*
*DSN **06** 09:49:28.4±1.5, 27.°20N×54.°99E, h10km, ML3.3/7, Error ellipse: s-maj=18.4km s-min=7.1km az=9.0*
*TEH **06** 09:49:28.9, 27.°25N×55.°08E, h17km±34km*
ISC 06 09:49:29.8±1.3, 27.°28N±0.°04×55.°06E±0.°03, h23km±12km, n66, σ1.47/86, mb3.5/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.72**	**303**	Pg	**Pb**	**09 49 42.8**	**-1.0**
GENO	**Geno**	**0.99**	**83**	Pg	**Pb**	**09 49 48.1**	**-0.3**
IBND	**Bandar-abas**	**1.32**	**82**	Pg	**Pn**	**09 49 53.7**	**+0.8**
SHME	**Shamm**	**1.56**	**141**	P	**Pn**	**09 49 55.8**	**-0.3**
	SNR=8.1						
SHME				S	**Sb**	**09 50 18.4**	**+1.1**
SHME	**Shamm**	**1.56**	**141**	P	**Pn**	**09 49 55.2**	**-0.9**
LMD1	**Lamerd**	**1.69**	**273**	Pg	**Pb**	**09 50 01.1**	**+0.8**
BANOM	**Banah**	**1.75**	**140**	P	**Pn**	**09 49 58.2**	**-0.5**
BANOM				S	**Sb**	**09 50 23.9**	**+1.3**
BANOM	**Banah**	**1.75**	**140**	P	**Pn**	**09 49 58.5**	**-0.3**
BANOM				S	**Sb**	**09 50 21.4**	**-1.3**
JHRM	**Jahrom**	**1.80**	**313**	Pn	**Pn**	**09 50 01.8**	**+2.4**
UMQ	**Umm Al-Quwin**	**1.83**	**163**	P	**Pn**	**09 49 57.3**	**-2.4**
UMQ				S	**Sb**	**09 50 27.9**	**+2.9**
MASF	**Masafi**	**2.14**	**152**	P	**Pn**	**09 50 04.4**	**+0.3**
	SNR=11						
MASF				S	**Sb**	**09 50 37.2**	**+3.2**
MSFE	**Esma-Masafi**	**2.15**	**153**	P	**Pn**	**09 50 04.2**	**-0.1**
MDH	**Madha**	**2.26**	**150**	P	**Pn**	**09 50 06.8**	**+1.0**
	SNR=13						
MDH				S	**Sb**	**09 50 37.9**	**+0.4**
MDH	**Madha**	**2.26**	**150**	P	**Pn**	**09 50 06.0**	**+0.2**
NAZ	**Nazwa, Dubai**	**2.34**	**167**	P	**Pn**	**09 50 07.8**	**+0.9**
	SNR=8.6						
NAZ	**Nazwa, Dubai**	**2.34**	**167**	P	**Pn**	**09 50 06.9**	**0.0**
KHNJ	**Kahnooj**	**2.44**	**74**	Pn	**Pn**	**09 50 08.7**	**+0.5**
UOSS	**Minazif**	**2.54**	**156**	Pn	**Pn**	**09 50 09.4**	**-0.2**
UOSS	**Minazif**	**2.54**	**156**	P	**Pn**	**09 50 09.6**	**0.0**
UOSS				S	**Sb**	**09 50 43.9**	**-1.7**
UOSS	**Minazif**	**2.54**	**156**	P	**Pn**	**09 50 09.1**	**-0.5**
FAQ	**Al Faqa, Dubai**	**2.57**	**169**	P	**Pn**	**09 50 11.5**	**+1.5**
FAQ				S	**Sb**	**09 50 43.9**	**-2.4**
HATD	**Hatta, Dubai**	**2.62**	**158**	P	**Pn**	**09 50 12.2**	**+1.4**
	SNR=24						
HATD				S	**Sb**	**09 50 47.1**	**-0.9**
HATD	**Hatta, Dubai**	**2.62**	**158**	P	**Pn**	**09 50 10.8**	**0.0**
ASUD	**Al Ashush, Dub**	**2.65**	**175**	P	**Pn**	**09 50 13.5**	**+2.4**
ASUD				S	**Sb**	**09 50 49.5**	**+0.7**
AJN	**Ajban**	**2.71**	**181**	P	**Pn**	**09 50 13.9**	**+2.0**
AJN				S	**Sb**	**09 50 46.5**	**-3.7**
ASHO	**Ashiyiah**	**2.73**	**161**	P	**Pn**	**09 50 12.0**	**-0.3**
	SNR=18						
KRBR	**Kerman**	**3.08**	**29**	Pn	**Pn**	**09 50 19.3**	**+2.0**
ALNE	**Al Ain**	**3.27**	**169**	P	**Pn**	**09 50 20.5**	**+0.8**
ALNE				S	**Sn**	**09 51 00.9**	**+3.1**
KHGB	**Koh Gabri**	**3.33**	**22**	Pn	**Pn**	**09 50 23.1**	**+2.5**
CHMN	**Cheshme madani**	**3.37**	**40**	Pn	**Pn**	**09 50 23.0**	**+1.6**
SOHO	**SOHO**	**3.40**	**157**	P	**Pn**	**09 50 21.4**	**0.0**
KBAM	**BAM**	**3.52**	**57**	Pn	**Pn**	**09 50 24.8**	**+1.7**
ZRDN	**Zarand Kerman**	**3.90**	**19**	Pn	**Pn**	**09 50 29.4**	**+0.9**
ARQ	**Araqi**	**4.14**	**161**	P	**Pn**	**09 50 33.0**	**+1.3**
	SNR=5.5						
HOQ	**Hoqain**	**4.20**	**151**	P	**Pn**	**09 50 33.0**	**+0.5**
HOQ				S	**Sn**	**09 51 22.8**	**+1.9**
TRNA	**Turayna**	**4.29**	**235**	P	**Pn**	**09 50 33.1**	**-0.6**
TRNA				S	**Sn**	**09 51 23.1**	**0.0**
IBAF	**Bafgh**	**4.32**	**6**	Pn	**Pn**	**09 50 35.7**	**+1.4**
SLWR	**Sila**	**4.41**	**224**	P	**Pn**	**09 50 33.3**	**-2.0**
SLWR				S	**Sn**	**09 51 25.9**	**-0.1**
MZR	**Muzera**	**4.49**	**199**	P	**Pn**	**09 50 35.1**	**-1.4**
UMZA	**Um Al Zommool**	**4.55**	**179**	P	**Pn**	**09 50 37.5**	**+0.3**
SMRA	**Abu-Samra**	**4.57**	**237**	P	**Pn**	**09 50 36.9**	**-0.7**
SMRA				S	**Sn**	**09 51 32.0**	**+2.0**
	SNR=7.9						
KLNJ	**Kolanjah**	**4.80**	**322**	Pn	**Pn**	**09 50 42.2**	**+1.2**
SMDO	**Samad**	**5.00**	**147**	P	**Pn**	**09 50 43.8**	**+0.3**
SMDO				S	**Sn**	**09 51 41.3**	**+0.7**
IRAM	**Ramesheh**	**5.08**	**333**	Pn	**Pn**	**09 50 46.2**	**+1.4**
WSAR	**Wadi Sarin**	**5.16**	**140**	P	**Pn**	**09 50 45.5**	**-0.2**
WSAR				S	**Sn**	**09 51 44.6**	**+0.1**
JMDO	**Jabal Madar**	**5.61**	**150**	P	**Pn**	**09 50 52.1**	**+0.2**
JMDO				S	**Sn**	**09 51 57.4**	**+1.7**
NGCH	**Negor - Chabah**	**5.78**	**108**	P	**Pn**	**09 50 52.2**	**-1.9**
NGCH				S	**Sn**	**09 51 56.5**	**-3.1**
WBK	**Wadi Bani Khal**	**5.85**	**142**	P	**Pn**	**09 50 56.8**	**+1.7**
JLN	**Jalan Bani Buh**	**6.46**	**141**	P	**Pn**	**09 51 02.2**	**-1.2**
SRVN	**Saravan**	**6.53**	**87**	Pn	**Pn**	**09 51 05.5**	**+1.0**
MHTO	**MHTO**	**6.80**	**156**	P	**Pn**	**09 51 07.4**	**-0.8**
	SNR=10.0						
AFRZ	**Afriz**	**7.01**	**28**	Pn	**Pn**	**09 51 12.7**	**+1.5**
ISFB	**Sefidab**	**7.46**	**342**	Pn	**Pn**	**09 51 18.0**	**+0.8**
DQM	**DQM**	**7.66**	**162**	P	**Pn**	**09 51 19.4**	**-0.6**
DOK	**Doka**	**8.66**	**186**	P	**Pn**	**09 51 32.2**	**-1.6**
	SNR=14						
SHAO	**Shalim**	**9.23**	**177**	P	**Pn**	**09 51 42.0**	**+0.5**
WHFO	**Wadi Hawf**	**9.39**	**188**	P	**Pn**	**09 51 41.9**	**-1.9**
	SNR=8.8						
DMTO	**DMTO**	**9.52**	**181**	P	**Pn**	**09 51 42.6**	**-2.9**
ABTO	**Aybut**	**10.01**	**190**	P	**Pn**	**09 51 50.4**	**-2.0**
	SNR=16						
BRTR	**Keskin Array B**	**21.69**	**310**	P	**P**	**09 54 18.9**	**-0.3**
	1.1nm,0.9s,baz=136,slow=15,SNR=5.3						
	1.1nm,0.9s						
AAK	**Ala-Archa**	**22.02**	**41**	P	**P**	**09 54 24.0**	**+1.3**
	0.8nm,0.4s,baz=215,slow=18,SNR=2.7						
	0.8nm,0.4s						
BVAR	**Borovoye Array**	**28.14**	**20**	P	**P**	**09 55 19.9**	**-0.1**
	0.8nm,0.5s,baz=202,slow=7.5,SNR=4.8						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**28.95**	**40**	P	**P**	**09 55 27.2**	**-0.2**
	0.5nm,0.7s,baz=221,slow=7.8,SNR=4.4						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**29.37**	**31**	P	**P**	**09 55 29.4**	**-1.6**
	1.0nm,1.1s,baz=232,slow=8.5,SNR=5.7						
	1.0nm,1.1s						
ZALV	**Zalesovo Beam**	**34.47**	**31**	P	**P**	**09 56 15.2**	**-0.5**
	1.9nm,0.6s,baz=236,slow=8.0,SNR=8.7						
	1.9nm,0.6s						
FINES	**FINESS Array B**	**39.29**	**338**	P	**P**	**09 56 55.8**	**-0.8**
	3.2nm,1.0s,baz=121,slow=13,SNR=3.1						
	3.2nm,1.0s						

*IDC **06** 09:56:38.6±1.4, 1.°45N×127.°20E, h0km, mb3.8/5, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=102.1km s-min=18.3km az=68.0*
*DJA **06** 09:56:52.1±0.5, 1.°N±3.°×12.°7E±.°, h118km±7km, M4.0/12, mb3.9/2, MLv4.1/12*
ISC 06 09:56:52.0±1.0, 1.°36N±0.°08×127.°0E±0.°1, h103km, n11, σ2.66/12, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.71**	**145**	P	**Pn**	**09 57 12.2**	**+2.4**
TNTI				S	**Sn**	**09 57 28.1**	**+5.0**
SGSI	**Sangihe**	**2.72**	**328**	P	**Pn**	**09 57 35.4**	**+1.3**
KMSI	**Cibinong**	**3.08**	**255**	P	**Pn**	**09 57 41.2**	**+2.4**
SANI	**Sanana**	**3.52**	**196**	P	**Pn**	**09 57 45.7**	**+0.9**
NLAI	**Namlea**	**4.57**	**178**	P	**Pn**	**09 58 00.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**19.38**	**184**	P	**P**	**10 01 08.3**	**-1.5**
	0.2nm,0.3s,baz=4.6,slow=5.4,SNR=7.7						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**22.37**	**161**	P	**P**	**10 01 38.1**	**-3.8**
	2.7nm,0.5s,baz=340,slow=11,SNR=49						
	2.7nm,0.5s						
ASAR	**Alice Springs**	**25.78**	**165**	P	**P**	**10 02 11.9**	**-1.5**
	0.2nm,0.3s,baz=343,slow=7.9,SNR=13						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**35.85**	**158**	P	**P**	**10 03 39.7**	**-2.2**
	2.5nm,0.7s,baz=353,slow=8.1,SNR=3.7						
	2.5nm,0.7s						
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**10 06 45.3**	**0.0**
	0.5nm,0.4s,baz=121,slow=8.5,SNR=7.2						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.85**	**328**	P	**P**	**10 07 13.0**	**-0.5**
	0.3nm,0.4s,baz=130,slow=6.4,SNR=3.3						
	0.3nm,0.4s						

HEL 06 10:06:32.5±0.3, 62.°32N×25.°69E, h0km, ML0.9, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAF	**Kangasniemi**	**0.35**	**125**	PG	Pg	10 06 38.5	-0.7
KAF				SG	Sg	10 06 43.2	-0.6
KEF	**Keuruu**	**0.41**	**249**	PG	Pg	10 06 39.4	-0.9
KEF				SG	Sg	10 06 44.6	-1.0
SUF	**Sumiainen**	**0.46**	**28**	PG	Pg	10 06 40.8	-0.5
SUF				SG	Sg	10 06 46.9	-0.4
SUF				smax	smax	10 06 47.6	
	comp=Z,1.1nm,0.2s						
FIA0	**FINESS Array S**	**0.89**	**168**	smax	smax	10 06 60.0	
	comp=Z,0.9nm,0.2s						
FIA0				SB	Sb	10 07 03.4	+0.1
VAF	**Ylistaro**	**1.57**	**299**	PG	Pn	10 07 01.3	-0.3
VAF				smax	smax	10 07 19.7	
	comp=Z,0.7nm,0.2s						
VAF				SN	Sb	10 07 22.8	0.0
RAF	**Rauma**	**2.27**	**237**	smax	smax	10 07 39.9	
	comp=Z,0.7nm,0.2s						
RAF				SG	Sb	10 07 42.6	-0.4
JOF	**Joensuu**	**2.67**	**74**	SG	Sb	10 07 53.4	-1.0
KU2	**Taivalkoski**	**3.59**	**17**	SN	Sn	10 08 09.2	-3.2

IDC 06 10:12:53.0±3.6, 19.°42S×173.°51W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=194.4km s-min=28.4km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.87**	**255**	P	P	10 21 41.5	+0.5
	2.5nm,0.9s,baz=99,slow=7.9,SNR=26						
	2.5nm,0.9s						
WRA	**Warramunga Arr**	**48.94**	**260**	P	P	10 21 40.8	-0.7
	0.4nm,0.5s,baz=98,slow=8.0,SNR=18						
	0.4nm,0.5s						
NVAR	**Mina Array Bea**	**77.38**	**41**	P	P	10 24 50.2	-0.1
	0.2nm,0.3s,baz=244,slow=9.0,SNR=3.7						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**86.39**	**11**	P	P	10 25 36.8	0.0
	0.5nm,0.7s,baz=215,slow=6.2,SNR=4.5						
	0.5nm,0.7s						

*FUNV **06** 10:24:22.2, 10.°61N×63.°19W, h5km, MW3.3*
*TRN **06** 10:24:22.4, 10.°39N×63.°18W, h106km, MD3.7, Venezuela.*
ISC 06 10:24:21.8±1.6, 10.°37N±0.°07×63.°16W±0.°05, h108km±19km, n19, σ1.51/31, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**1.46**	**263**	*eP*	**Pn**	**10 24 47.8**	**-0.3**
PCRV				*eS*	**Sn**	**10 25 07.5**	**-0.6**
PCRV	**Puerto La Cruz**	**1.46**	**263**	*eP*	**Pn**	**10 24 48.3**	**+0.2**
DMDM	**Guralp CMG5TDE**	**1.62**	**78**	*eP*	**Pn**	**10 24 50.6**	**+0.7**
DMDM				*eS*	**Sn**	**10 25 11.2**	**0.0**
PSMG	**Mucurapo Girls**	**1.63**	**79**	*eP*	**Pn**	**10 24 51.3**	**+1.3**
PSMG				*eS*	**Sn**	**10 25 11.2**	**-0.4**
TRN	**Trinidad (W)**	**1.75**	**81**	*eP*	**Pn**	**10 24 52.3**	**+0.7**
TRN				*eS*	**Sn**	**10 25 15.2**	**+1.0**
GRFF	**Grenada Fort F**	**2.18**	**40**	*eP*	**Pn**	**10 24 56.9**	**-0.1**
GRFF				*eS*	**Sn**	**10 25 22.9**	**-1.1**
GRGR	**Grenville**	**2.29**	**40**	*eP*	**Pn**	**10 24 58.4**	**-0.1**
GRGR				*eS*	**Sn**	**10 25 26.5**	**-0.1**
GRSS	**Sisters**	**2.45**	**38**	*eP*	**Pn**	**10 25 00.6**	**+0.1**
GRSS				*eS*	**Sn**	**10 25 30.0**	**-0.1**
GCMP	**Grenada, Carri**	**2.71**	**39**	*eP*	**Pn**	**10 25 04.1**	**+0.3**
GCMP				*eS*	**Sn**	**10 25 35.9**	**-0.3**
SVB	**Belmont**	**3.44**	**33**	*eP*	**Pn**	**10 25 15.5**	**+1.9**
TACV	**Tcata**	**3.81**	**267**	*eP*	**Pn**	**10 25 19.5**	**+0.8**
SLBI	**Saint Lucia, B**	**4.21**	**30**	*eP*	**Pn**	**10 25 23.9**	**-0.1**
SLBI				*eS*	**Sn**	**10 26 10.6**	**-1.7**
CACV	**CAICARA DEL OR**	**4.35**	**230**	*eP*	**Pn**	**10 25 24.8**	**-1.1**
CACV				*eS*	**Sn**	**10 26 11.2**	**-4.3**
BENV	**Beln**	**4.39**	**265**	*eP*	**Pn**	**10 25 28.7**	**+2.3**
BIM	**Bigot**	**4.60**	**26**	*eP*	**Pn**	**10 25 29.4**	**+0.1**
BIM				*eS*	**Sn**	**10 26 19.0**	**-2.7**
TURV	**Turiamo**	**4.60**	**271**	*eP*	**Pn**	**10 25 30.5**	**+1.2**
BAUV	**El Baul**	**5.02**	**254**	*eP*	**Pn**	**10 25 37.7**	**+2.8**
BAUV				*eS*	**Sn**	**10 26 32.5**	**+0.8**
BAUV	**El Baul**	**5.02**	**254**	*eP*	**Pn**	**10 25 36.2**	**+1.3**
MAPV	**Macapo**	**5.24**	**265**	*eP*	**Pn**	**10 25 40.2**	**+2.2**

*TAP **06** 10:38:06.5, 24.°82N×122.°39E, h14km, ML3.1, C*
*JMA **06** 10:38:07.2±0.1, 25.°N±1.°×122.°4E±0.°6, h38km±4km, MV2.5/7, NW OFF ISHIGAKIJIMA IS*
ISC 06 10:38:05.5±1.2, 24.°83N±0.°02×122.°44E±0.°02, h9km±9km, n76, σ0.64/137, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.45**	**205**	*eP*	**Pb**	**10 38 15.6**	**+0.2**
EOS2				*eS*	**Sb**	**10 38 22.4**	**+0.1**
TWB1	**Santiao Chiao**	**0.45**	**294**	*iP*	**Pb**	**10 38 15.9**	**-0.3**
TWB1				*iS*	**Sg**	**10 38 20.8**	**+0.5**
EGS		**0.47**	**272**	P	**Pb**	**10 38 15.7**	**-0.1**
EGS				S	**Sb**	**10 38 22.2**	**-0.7**
EOS3	**E

KSHI	**Guanxi Townshi**	**1.15**	**268**	*e*P	**Pn**	**10 38 29.8 +2.0**
KSHI				*e*S	**Sn**	**10 38 44.6 +0.9**
ETM	**Tongmen**	**1.22**	**226**	P	**Pn**	**10 38 28.6 -0.1**
ETM				*e*S	**Sn**	**10 38 45.3 -0.1**
NFF	**Wufeng Townshi**	**1.22**	**261**	*e*P	**Pg**	**10 38 28.9 -0.1**
NFF				*e*S	**Sg**	**10 38 45.1 +0.3**
LXIB	**Xiulin Townshi**	**1.23**	**230**	*e*P	**Pn**	**10 38 28.9 -0.1**
LXIB				*e*S	**Sb**	**10 38 45.3 +0.2**
FUSS	**Fushou**	**1.23**	**242**	*e*P	**Pg**	**10 38 29.5 +0.3**
FUSS				*e*S	**Sb**	**10 38 44.8 -0.5**
IRIF	**Iriomote-Funau**	**1.27**	**112**	P	**Pn**	**10 38 28.3 -1.1**
WHF	**Hehuan Shan**	**1.27**	**238**	*e*P	**Pb**	**10 38 29.9 0.0**
WHF				*e*S	**Sg**	**10 38 45.2 -1.2**
TWT	**Tachien**	**1.29**	**244**	*e*P	**Pg**	**10 38 32.1 +1.9**
TWT				*e*S	**Sn**	**10 38 48.1 +0.8**
TDCB	**Techi**	**1.30**	**244**	*e*S	**Sb**	**10 38 47.4 +0.3**
SHUL	**Shoufeng**	**1.31**	**218**	*e*P	**Pg**	**10 38 30.7 +0.1**
LIOB	**Emei**	**1.31**	**262**	*e*P	**Pb**	**10 38 30.3 0.0**
LIOB				*e*S	**Sb**	**10 38 47.4 +0.2**
NSTT	**Nanjuang**	**1.33**	**262**	*e*P	**Pg**	**10 38 32.4 +1.5**
NSTT				*e*S	**Sb**	**10 38 46.9 -0.8**
ESL	**Shilin**	**1.36**	**223**	*e*S	**Sn**	**10 38 49.1 +0.2**
OWD	**Renai**	**1.45**	**233**	*e*P	**Pg**	**10 38 33.1 -0.1**
OWD				*e*S	**Sn**	**10 38 51.1 -0.1**
WARBT	**Fenglin Townsh**	**1.47**	**221**	*e*P	**Pn**	**10 38 32.6 +0.4**
WARBT				*e*S	**Sg**	**10 38 52.8 +0.2**
WUSB	**Renai**	**1.47**	**236**	*e*P	**Pg**	**10 38 33.5 -0.2**
WUSB				*e*S	**Sn**	**10 38 51.8 +0.1**
WHP	**Taichung City**	**1.47**	**249**	*e*P	**Pg**	**10 38 34.0 +0.3**
WHP				*e*S	**Sb**	**10 38 52.4 +0.5**
WCS	**Beigang Elemen**	**1.59**	**242**	*e*P	**Pg**	**10 38 35.9 -0.1**
WCS				*e*S	**Sn**	**10 38 55.1 +0.6**
TWQ1	**Liyutan**	**1.59**	**253**	*e*P	**Pg**	**10 38 36.2 +0.2**
TWQ1				*e*S	**Sb**	**10 38 55.4 +0.1**
VWDT	**VWDT**	**1.60**	**228**	*e*P	**Pb**	**10 38 35.6 +0.4**
VWDT				*e*S	**Sn**	**10 38 54.5 -0.2**
HGSD	**Ruisui**	**1.62**	**215**	*e*P	**Pn**	**10 38 34.2 0.0**
HGSD				*e*S	**Sn**	**10 38 55.3 0.0**
SMLT	**Sun Moon Lake**	**1.69**	**237**	*e*P	**Pg**	**10 38 38.0 0.0**
SSLB	**Suanglung**	**1.71**	**233**	*e*P	**Pg**	**10 38 37.8 -0.4**
SSLB				*e*S	**Sg**	**10 39 00.3 0.0**
TYC	**Yuchr**	**1.71**	**238**	*e*P	**Pb**	**10 38 37.6 +0.5**
TYC				*e*S	**Sb**	**10 38 58.6 -0.2**
YULB	**Yu-li**	**1.77**	**217**	*e*P	**Pn**	**10 38 36.5 +0.2**
YULB				*e*S	**Sn**	**10 38 57.7 -1.3**
WHYT	**Xinyi Township**	**1.84**	**233**	*e*P	**Pg**	**10 38 40.3 -0.4**
FULB	**Fuli**	**1.93**	**213**	S	**Sn**	**10 39 03.5 +0.5**
EHD	**Haiduan**	**2.02**	**214**	*e*P	**Pn**	**10 38 40.0 +0.3**
CHN5	**Tsauling**	**2.02**	**233**	*e*P	**Pn**	**10 38 42.9 +0.4**
CHN5				*e*S	**Sb**	**10 39 09.1 +1.3**
WCKO	**Fanlu**	**2.17**	**231**	*e*S	**Sg**	**10 39 14.3 -1.1**
TPUB	**Ta-pu**	**2.25**	**228**	*e*P	**Pb**	**10 38 44.8 -1.5**
TPUB				*e*S	**Sb**	**10 39 14.2 -0.1**
TWGBT	**Beinan**	**2.36**	**212**	*e*P	**Pn**	**10 38 43.1 -1.3**
TWGBT				*e*S	**Sn**	**10 39 11.5 -1.9**
TWK	**Hsinying**	**2.37**	**229**	P	**Pb**	**10 38 47.0 -1.3**
MASBT	**Mashibuluo**	**2.76**	**217**	P	**Pn**	**10 38 52.2 +2.3**
MASBT				*e*S	**Sn**	**10 39 24.6 +1.2**

*JMA **06** 10:51:30.5±0.2,29°N±2°×13°9E±°, h530km, MV3.7/22, NEAR TORISHIMA IS*
*IDC **06** 10:51:34.1±1.4,29.07N×138.78E, h489km±16km, mb3.1/10, mbtmp3.9/13, Error ellipse: s-maj=21.2km s-min=12.7km az=94.0*
ISC 06 10:51:33.9±0.7,29°13N±0.07×139°11E±0.10, h500km, n25, σ2s44/29, mb3.3/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.39**	**126**	P	**P**	**10 52 46.2**	**-1.5**
CBIJ				*e*S	**S**	**10 53 43.8**	**-3.9**
JCJ	**Chichijima**	**3.39**	**126**	P	P	10 52 38.4	-9.3
	24nm,0.4s,baz=360,slow=19,SNR=17						
JCJ				S	S	10 53 35.1	-13
	70nm,0.4s,baz=286,slow=23,SNR=20						
JHH2	**Haha-jima-NKT2**	**3.69**	**132**	S	**S**	**10 53 49.3**	**-2.4**
JHJ2	**Mitsune**	**4.01**	**9**	P	**P**	**10 52 52.8**	**+0.5**
JHJ	**Hachijo jima 2**	**4.02**	**8**	P	**P**	**10 52 52.9**	**+0.5**
	33nm,0.3s,baz=128,slow=22,SNR=23						
JHJ				S	**S**	**10 53 50.6**	**-5.8**
	42nm,0.5s,baz=319,slow=20,SNR=2.2						
JMKN	**Mikurajimanish**	**4.76**	**5**	*e*P	**P**	**10 52 58.2**	**-0.4**
JMKN				*e*S	**S**	**10 54 07.9**	**-0.1**
JIE	**Ise**	**5.63**	**339**	P	**P**	**10 53 07.5**	**+1.0**
BSO1	**Boso 1**	**5.73**	**16**	*e*P	**P**	**10 53 07.6**	**+0.7**
BSO1				S	**S**	**10 54 22.5**	**-0.6**
JNY	**Yasuok**	**6.30**	**351**	*e*P	**P**	**10 53 13.3**	**+0.2**
JRY	**Ryogami san**	**6.87**	**359**	P	**P**	**10 53 18.2**	**-0.4**
JYT	**Yasato**	**7.14**	**7**	*e*S	**S**	**10 54 44.2**	**-5.1**
JAG	**Ashikaga**	**7.28**	**2**	*e*P	**P**	**10 53 21.2**	**-1.6**
JAG				*e*S	**S**	**10 54 46.2**	**-5.9**
MJAR	**Matsushiro Arr**	**7.43**	**354**	P	**P**	**10 53 23.0**	**-1.3**
	1.0nm,0.4s,baz=159,slow=10,SNR=4.1						
JNU	**Nakatsue**	**8.10**	**301**	P	**P**	**10 53 30.6**	**-0.7**
	3.6nm,0.8s,baz=269,slow=8.6,SNR=4.1						
JSJ	**Shimokoshiki**	**8.50**	**290**	P	**P**	**10 53 33.5**	**-1.9**
CMAR	**Chiang Mai Arr**	**38.09**	**263**	P	**P**	**10 58 08.5**	**-1.0**
	0.4nm,0.4s,baz=96,slow=6.7,SNR=2.5						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**49.00**	**186**	P	**P**	**10 59 34.7**	**+0.2**
	0.5nm,0.3s,baz=0.2,slow=7.7,SNR=32						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**49.67**	**313**	P	**P**	**10 59 38.6**	**-0.4**
	0.4nm,0.4s,baz=94,slow=7.6,SNR=6.6						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**52.73**	**186**	P	**P**	**11 00 01.8**	**+0.1**
	0.2nm,0.5s,baz=2.9,slow=14,SNR=2.8						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**57.26**	**29**	P	**P**	**11 00 34.9**	**+2.1**
	0.4nm,0.6s,baz=253,slow=5.7,SNR=16						
	0.4nm,0.6s						
SPITS	**Spitsbergen Ar**	**67.89**	**349**	P	**P**	**11 01 42.6**	**+1.1**
	7.9nm,1.0s,baz=83,slow=4.6,SNR=2.4						
	7.9nm,1.0s						
ARCES	**ARCESS Array B**	**70.72**	**340**	P	**P**	**11 01 59.8**	**+1.2**
	0.7nm,0.4s,baz=68,slow=7.7,SNR=8.9						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**74.91**	**333**	P	**P**	**11 02 23.5**	**+0.7**
	1.8nm,0.7s,baz=64,slow=3.2,SNR=6.1						
	1.8nm,0.7s						
HFS	**Hagfors**	**80.47**	**336**	P	**P**	**11 02 53.3**	**+0.3**
	2.0nm,0.7s,baz=90,slow=8.6,SNR=3.5						
	2.0nm,0.7s						
NVAR	**Mina Array Bea**	**81.37**	**51**	P	**P**	**11 03 02.3**	**+4.0**
	0.7nm,0.8s,baz=289,slow=5.7,SNR=5.1						
	0.7nm,0.8s						

DJA 06 10:52:28.1±0.5,3°S±7°×12°7E±°, h51km±6km, M3.5/6, mB4.9/2, mb4.1/3, MLv3.2/6, Mw(mB)4.2/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.22**	**342**	P	Pn	10 52 38.2	+1.5
NLAI				S	Sn	10 52 45.4	+2.6
AAI	**Ambon**	**1.05**	**103**	P	Pn	10 52 46.8	+0.3
SANI	**Sanana**	**1.82**	**320**	P	Pn	10 52 56.8	-0.3
BNDI	**Bandanaira**	**2.93**	**111**	P	Pn	10 53 11.9	-0.3
LUWI	**Luwuk**	**5.00**	**298**	P	Pn	10 53 40.5	-0.2
	0.2nm1μm39nm,0.7s						
APSI	**Ampana**	**6.07**	**294**	P	Pn	10 53 55.7	+0.4

*UPP **06** 11:12:37.2±0.9,56°17N×10°28E, h0km, ML2.8, Presumed earthquake*
*DNK **06** 11:12:38.6±1.6,56°20N×10°37E, h0km, ML2.2, Explosion*
*IDC **06** 11:12:39.3±2.2,56°32N×9°92E, h0km, mbtmp3.3/5, ML2.6/4, Error ellipse: s-maj=25.3km s-min=18.0km az=134.0*
ISC 06 11:12:37.7±0.8,56°23N±0°03×10°37E±0°03, h0km, n25, σ1s24/48, 1C, Denmark

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUD	**Monsted U'grnd**	**0.70**	**289⇑**	*i*P	**Pb**	**11 12 53.0**	**+0.2**
MUD				IAML		11 13 00.8	
	comp=Z,34nm,0.2s						
MUD				*i* S	**Sg**	**11 13 01.6**	**+1.4**
SSRD	**Sdr. Stenderup**	**0.86**	**209**	*i* P	**Pg**	**11 12 53.5**	**-0.5**
SSRD				*i* S	**Sg**	**11 13 05.2**	**0.0**
SSRD				IAML		11 13 08.4	
	comp=Z,45nm,0.4s						
COP	**Copenhagen**	**1.28**	**114**	*i* P	**Pg**	**11 13 02.3**	**+0.1**
COP				*i* S	**Sb**	**11 13 19.8**	**+0.1**
ONAU	**Onsala**	**1.45**	**35**	P	**Pn**	**11 13 05.7**	**+0.6**
ONAU				S	**Sn**	**11 13 26.1**	**+1.4**
ONAU	**Onsala**	**1.45**	**35**	*i* P	**Pn**	**11 13 05.6**	**+0.6**
ONAU				P	**Pn**	**11 13 05.7**	**+0.6**
ONAU				*e*S	**Sb**	**11 13 25.3**	**+0.9**
ONAU				S	**Sn**	**11 13 26.1**	**+1.4**
BJUU	**Bjuv**	**1.50**	**95**	P	**Pn**	**11 13 05.8**	**+0.1**
BJUU				S	**Sn**	**11 13 26.4**	**+0.5**
BJUU	**Bjuv**	**1.50**	**95**	*e*P	**Pn**	**11 13 04.9**	**-0.8**
BJUU				P	**Pn**	**11 13 05.8**	**+0.1**
BJUU				*e*S	**Sg**	**11 13 24.9**	**-0.8**
BJUU				S	**Sn**	**11 13 26.4**	**+0.5**
FABU	**Falkenberg**	**1.51**	**58**	P	**Pn**	**11 13 06.3**	**+0.3**
FABU	**Falkenberg**	**1.51**	**58**	*i* P	**Pn**	**11 13 06.2**	**+0.3**
FABU				P	**Pn**	**11 13 06.3**	**+0.3**
FABU				*i* S	**Sg**	**11 13 25.9**	**-0.3**
LUNU	**Lund**	**1.83**	**108**	P	**Pn**	**11 13 10.6**	**+0.3**
LUNU	**Lund**	**1.83**	**108**	P	**Pn**	**11 13 10.6**	**+0.3**
LUNU				*i* P	**Pn**	**11 13 10.7**	**+0.3**
LUNU				*i* S	**Sb**	**11 13 35.4**	**-0.2**
BORU	**Boraas**	**1.93**	**42**	P	**Pn**	**11 13 12.4**	**+0.7**
BORU	**Boraas**	**1.93**	**42**	P	**Pn**	**11 13 12.4**	**+0.7**
BORU				*i* P	**Pb**	**11 13 12.6**	**-1.1**
TJOU	**Tjoern**	**1.93**	**20**	P	**Pn**	**11 13 12.8**	**+1.0**
TJOU	**Tjoern**	**1.93**	**20**	P	**Pn**	**11 13 12.8**	**+1.0**
TJOU				*e*P	**Pb**	**11 13 12.9**	**-0.8**
TJOU				*i* S	**Sb**	**11 13 38.5**	**+0.1**
DEL	**Delary**	**1.96**	**81**	P	**Pn**	**11 13 12.8**	**+0.6**
DEL	**Delary**	**1.96**	**81**	*i* P	**Pn**	**11 13 12.1**	**-0.1**
DEL				P	**Pn**	**11 13 12.8**	**+0.6**
DEL				*i* S	**Sb**	**11 13 39.8**	**+0.5**
HOMB	**Homborsund**	**2.28**	**334**	*i* P	**Pn**	**11 13 17.3**	**+0.8**
HOMB				*i* S	**Sn**	**11 13 46.9**	**+1.5**
SNART	**Snartemo**	**2.72**	**322**	*i* P	**Pn**	**11 13 23.1**	**+0.5**
STRU	**Stroemstad**	**2.85**	**9**	*i* P	**Pn**	**11 13 25.7**	**+1.4**
HFS	**Hagfors**	**4.29**	**23**	Pn	**Pn**	**11 13 45.0**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=207,slow=15,SNR=24						
HFS				Pg	**Pb**	**11 13 55.8**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=207,slow=13,SNR=7.4						
HFS				Sn	**Sn**	**11 14 34.4**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=204,slow=27,SNR=6.1						
HFS				Lg	Lg	11 14 54.1	
	comp=Z,1.3nm,0.3s,baz=204,slow=31,SNR=5.8						
	comp=Z,1.4nm,0.3s						
NOA	**NORSAR Array B**	**4.85**	**5**	Pn	**Pn**	**11 13 49.4**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=4.0						
NOA				Sn	**Sn**	**11 14 43.1**	**-5.4**
	baz=205,slow=13,SNR=2.1						
	comp=Z,0.2nm,0.3s						
EKA	**Eskdalemuir Ar**	**7.68**	**269**	Pn	**Pn**	**11 14 27.9**	**-2.8**
	comp=Z,1.1nm,0.4s,baz=82,slow=13,SNR=18						
FINES	**FINESS Array B**	**9.66**	**51**	Pn	**Pn**	**11 14 57.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=243,slow=12,SNR=5.3						
FINES				Lg	Lg	11 17 44.8	
	comp=Z,0.1nm,0.3s,baz=233,slow=22,SNR=2.3						
	comp=Z,1.8nm,0.8s						
ARCES	**ARCESS Array B**	**14.96**	**21**	Pn	Pn	11 16 05.0	-5.0
	comp=Z,0.1nm,0.3s,baz=209,slow=14,SNR=9.0						
	comp=Z,0.4nm,0.3s						

*AEIC **06** 11:32:13.7±1.5,56°4N±0°1×148°21W±0°09, h8km±7km, Error ellipse: s-maj=15.5km s-min=6.8km az=177.0*
NEIC 06 11:32:09.3±1.1,56°35N±0°07×148°3W±0°1, h21km±9km, ML3.5/60, MLh3.2(AEIC)**, Error ellipse: s-maj=11.4km s-min=7.0km az=154.0, Gulf of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.76**	**303**		Pn	11 32 52.7	+0.5
KDAK					Sn	11 33 29.3	-1.0
KDAK	**Kodiak Island**	**2.76**	**303**	Pn	Pn	11 32 52.4	+0.2
KDAK				IAML		11 33 27.2	
	34nm,1.0s						
KDAK				IAML		11 33 35.3	
	29nm,1.1s						
OHAK	**Old Harbor**	**2.90**	**290**		Pn	11 32 54.1	0.0
OHAK					Sn	11 33 26.7	-1.5
SYI	**Shuyak Island**	**3.18**	**317**		Pn	11 32 58.2	+0.3
SYI					Sn	11 33 34.7	-0.4
SII	**Sitkinak Islan**	**3.29**	**276**		Pn	11 33 00.4	+0.9
SII				IAML		11 33 34.8	
	comp=E,78nm,1.2s						
SII					Sn	11 33 37.6	-0.4
SII				IAML		11 33 48.5	
	comp=N,80nm,1.0s						
CNPM	**China Poot**	**3.55**	**335**		Pn	11 33 03.0	-0.1
CNPM					Sn	11 33 43.0	-1.4
BRSE	**Bradley Lake S**	**3.64**	**340**		Pn	11 33 04.5	+0.1
P23K	**Montague Islan**	**3.68**	**7**	Pn	Pn	11 33 04.3	-0.6
P23K				IAML		11 33 57.4	
	comp=E,95nm,1.1s						
P23K				IAML		11 33 59.2	
	comp=N,84nm,1.1s						
HOM	**Homer**	**3.77**	**333**	Pn	Pn	11 33 07.1	+1.0
SEW	**Seward**	**3.81**	**351**		Pn	11 33 05.9	-0.7
KAWH	**Katmai**	**4.08**	**303**		Pn	11 33 10.9	+0.5
HIN	**Hinchinbrook I**	**4.16**	**12**		Pn	11 33 10.6	-0.9
HIN					Pn	11 33 11.5	+0.1
HIN				IAML		11 34 08.2	
	comp=E,87nm,1.1s						
O22K	**Cooper Landing**	**4.21**	**350**	Pn	Pn	11 33 11.3	-0.8
SLKM	**Skilak Lake**	**4.29**	**347**		Pn	11 33 12.7	-0.6
SLKM				IAML		11 34 02.2	
	comp=N,54nm,0.6s						
SLKM				IAML		11 34 04.0	
	comp=E,43nm,0.5s						
EYAK	**Cordova Ski Ar**	**4.41**	**16**		Pn	11 33 14.9	+0.1
EYAK				IAML		11 34 10.8	
	comp=E,53nm,0.8s						
IVE	**Iliamna Volcan**	**4.45**	**328**		Pn	11 33 15.2	-0.3
RAGM	**Ragged Mountai**	**4.46**	**24**	Pn	Pn	11 33 15.8	+0.2
FID	**Port Fidalgo**	**4.51**	**11**		Pn	11 33 15.7	-0.5
FID					Sn	11 34 04.4	-3.5
FID				IAML		11 34 11.0	
	comp=E,51nm,0.5s						
FID				IAML		11 34 25.0	
	comp=N,37nm,1.2s						
HMT	**Hamilton**	**4.51**	**26**	Pn	Pn	11 33 16.6	+0.2
PWL	**Port Wells**	**4.52**	**360**		Pn	11 33 16.1	-0.3
PWL				IAML		11 34 10.5	
	comp=E,47nm,0.8s						
PWL				IAML		11 34 15.2	
	comp=N,34nm,0.8s						
GLI	**Glacier Island**	**4.58**	**7**		Pn	11 33 16.4	-0.8
GLI				IAML		11 34 06.9	
	comp=E,48nm,1.0s						
GLI				IAML		11 34 15.4	
	comp=N,35nm,1.1s						
GOAT	**Goat Mountain**	**4.63**	**22**		Pn	11 33 18.5	+0.6
GOAT					Sn	11 34 08.2	-2.8
BERG	**Berg Lake**	**4.71**	**29**	Pn	Pn	11 33 18.6	-0.4
GRIN	**Grindle Hills**	**4.72**	**31**		Pn	11 33 19.4	+0.2
GRIN					Sn	11 34 09.6	-3.7
SNH	**Sunshine Point**	**4.79**	**34**		Pn	11 33 19.6	-0.5
SNH				IAML		11 35 35.2	
	comp=E,32nm,1.1s						
RDWB	**Redoubt West**	**4.79**	**332**		Pn	11 33 19.9	-0.4
RC01	**Rabbit Creek A**	**4.81**	**351**		Pn	11 33 20.5	+0.1
RC01				IAML		11 34 14.0	
	comp=E,45nm,0.9s						
RC01				IAML		11 34 20.2	
	comp=N,50nm,1.0s						
KHIT	**Khitrov Hills**	**4.87**	**31**		Pn	11 33 20.8	-0.5
KHIT					Sn	11 34 13.5	-3.6
DIV	**Divide**	**4.96**	**14**	Pn	Pn	11 33 24.5	+2.0
WAX	**Waxell Ridge**	**5.00**	**32**		Pn	11 33 22.7	-0.3
WAX					Sn	11 34 15.8	-4.2
BMRM	**Bremner River**	**5.00**	**21**		Pn	11 33 23.0	-0.1
BMRM				IAML		11 34 24.3	
	comp=E,25nm,0.7s						
BMRM				IAML		11 34 27.2	
	comp=N,25nm,1.1s						
BARK	**Barkley Ridge**	**5.07**	**34**		Pn	11 33 23.9	-0.1
BARK					Sn	11 34 18.6	-3.2
KNK	**Knik Glacier**	**5.08**	**359**	Pn	Pn	11 33 24.5	+0.5
KNK				IAML		11 34 27.4	
	comp=E,23nm,0.8s						
KNK				IAML		11 34 27.9	
	comp=N,23nm,0.7s						
CRQM	**Cirque**	**5.17**	**29**		Pn	11 33 25.2	-0.1
CRQM				IAML		11 34 26.0	
	comp=E,30nm,1.2s						
CRQM				IAML		11 34 28.4	
	comp=N,34nm,1.2s						
SPU	**Mount Spurr**	**5.23**	**339**	Pn	Pn	11 33 25.8	-0.3
TGL	**Tana Glacier**	**5.25**	**31**	Pn	Pn	11 33 26.3	-0.2
TGL					Pn	11 33 26.4	-0.1
TGL				IAML		11 34 28.8	
	comp=E,23nm,0.7s						
TGL				IAML		11 34 29.4	
	comp=N,20nm,1.0s						
BAGL	**Bagley Icefiel**	**5.26**	**35**		Pn	11 33 26.8	+0.2
ISLE	**Juniper Island**	**5.27**	**34**		Pn	11 33 26.9	+0.1
ISLE				IAML		11 34 54.9	
	comp=N,22nm,0.8s						
PMR	**Palmer**	**5.27**	**355**	Pn	Pn	11 33 26.5	-0.1
PMR				IAML		11 34 29.9	
	comp=N,19nm,0.8s						
YAH	**Yahtse**	**5.28**	**38**		Pn	11 33 26.9	-0.1
YAH				IAML		11 34 48.7	
	comp=N,23nm,0.8s						
KLU	**Klutina**	**5.29**	**12**	Pn	Pn	11 33 27.0	-0.1
KLU				IAML		11 34 27.7	
	comp=N,34nm,0.7s						
KLU				IAML		11 34 31.9	
	comp=E,34nm,0.7s						
RKAV	**Rock Avalanche**	**5.38**	**40**		Pn	11 33 28.6	+0.3
GHO	**Glory Hole Cre**	**5.45**	**357**	Pn	Pn	11 33 29.8	+0.7
SAMH	**Samovar Hills**	**5.47**	**43**		Pn	11 33 30.0	+0.5
SML	**Sawmill**	**5.47**	**360**	Pn	Pn	11 33 30.2	+0.7
STLK	**Strandline Lak**	**5.48**	**342**	Pn	Pn	11 33 30.2	+0.6
VRDI	**Verde Repeater**	**5.49**	**25**		Pn	11 33 29.7	-0.2
KIAG	**Kiagna River**	**5.52**	**31**		Pn	11 33 30.1	-0.2
N19K	**Bonanza Creek**	**5.53**	**327**	Pn	Pn	11 33 30.0	-0.3
TABL	**Table Mountain**	**5.55**	**39**		Pn	11 33 30.8	+0.1
GRNC	**Granite Creek**	**5.56**	**35**	Pn	Pn	11 33 30.8	0.0
GLB	**Gilahina Butte**	**5.60**	**22**		Pn	11 33 31.0	-0.2
PCA	**Pinnacle**	**5.65**	**45**		Pn	11 33 32.5	+0.5
PTPK	**Patty Peak**	**5.71**	**29**		Pn	11 33 32.9	+0.1
PNL	**Peninsula**	**5.76**	**51**		Pn	11 33 33.5	0.0
BCPM	**Bancas Point**	**5.82**	**48**		Pn	11 33 34.5	+0.3
BARN	**Barnard Glacie**	**5.84**	**33**		Pn	11 33 34.7	+0.1
CTGM	**Chitina Glacie**	**5.87**	**35**		Pn	11 33 35.0	0.0
LOGN	**Logan Glacier**	**5.87**	**37**		Pn	11 33 34.9	-0.1
M20K	**Styx River**	**6.08**	**338**	Pn	Pn	11 33 37.9	0.0
O28M	**Mount Upton**	**6.12**	**40**		Pn	11 33 39.0	+0.5
WAT6	**Susitna Watana**	**6.25**	**2**		Pn	11 33 40.4	+0.1
O29M	**Mount Kennedy**	**6.45**	**48**		Pn	11 33 43.7	+0.6
M18K	**Stony River**	**6.47**	**326**		Pn	11 33 42.2	-0.8
P29M	**Windy Craggy**	**6.49**	**55**		Pn	11 33 43.4	+0.1
L19K	**White Mountain**	**6.75**	**333**		Pn	11 33 46.5	-0.5
XUK6	**Outpost Mounta**	**6.91**	**44**		Pn	11 33 50.5	+1.1
M17K	**Holitna River**	**6.94**	**321**	Pn	Pn	11 33 49.4	-0.2
HYT	**Haines Junctio**	**7.19**	**47**	Pn	Pn	11 33 53.7	+0.6
M16K	**Timber Creek**	**7.27**	**314**	Pn	Pn	11 33 52.9	-1.3
L18K	**Granite Mounta**	**7.29**	**327**	Pn	Pn	11 33 54.0	-0.4
BCAR	**Beaver Creek A**	**7.48**	**23**	Pn	Pn	11 33 57.6	+0.6
S32K	**Killisnoo**	**7.58**	**76**	Pn	Pn	11 33 57.5	-0.8
N30M	**Aishikik Lake**	**7.72**	**44**		Pn	11 34 00.8	+0.5
O30N	**Mendenhall**	**7.75**	**50**	Pn	Pn	11 34 01.1	+0.5
M29M	**Somme Creek**	**7.88**	**35**		Pn	11 34 03.9	+1.2
BPAW	**Bear Paw Mtn.**	**7.89**	**351**	Pn	Pn	11 34 02.4	-0.2
SCRK	**Sand Creek**	**7.94**	**14**	Pn	Pn	11 34 03.1	-0.3
K17K	**Iditarod**	**8.16**	**326**	Pn	Pn	11 34 06.2	-0.1
J20K	**Nowinta River**	**8.37**	**342**	Pn	Pn	11 34 10.0	+0.8
P32M	**Atlin**	**8.38**	**61**	Pn	Pn	11 34 08.9	-0.5
M30M	**Minto, Yukon**	**8.54**	**38**	Pn	Pn	11 34 11.8	+0.4
I23K	**Minto, Yukon-K**	**8.84**	**357**	Pn	Pn	11 34 15.3	-0.2
M31M	**Drury Creek, Y**	**9.19**	**45**	Pn	Pn	11 34 20.9	+0.5
K29M	**Barlow Dome**	**9.22**	**31**	Pn	Pn	11 34 21.3	+0.4
H23K	**Yukon River**	**9.52**	**357**	Pn	Pn	11 34 25.4	+0.4
H21K	**Melozitna Rive**	**9.59**	**349**	Pn	Pn	11 34 24.4	-1.5
R33M	**Jennings River**	**9.70**	**65**	Pn	Pn	11 34 27.7	+0.2
G21K	**Allakaket**	**10.50**	**348**	Pn	Pn	11 34 38.0	-0.2

*DSN **06** 11:33:31.4±1.1,27°97N×57°64E, h15km, ML2.9/6, Error ellipse: s-maj=27.7km s-min=7.6km az=132.0*
*TEH **06** 11:33:34.2,27°96N×57°24E, h8km, 65km*
*OMAN **06** 11:33:35.0±0.1,27°82N×57°38E, h10km, ml3.3/15, Error ellipse: s-maj=2.4km s-min=1.4km az=343.0*
ISC 06 11:33:34.1±1.9,27°94N±0°06×57°33E±0°05, h17km±19km, n36, σ1s29/47, Southern Iran

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

comp=N,27µm,0.1s
CO02 Combarbal 0.71 33 eP **Pb 11 39 10.5 -3.6**
CO02 eS **Sn 11 39 26.1 +0.7**
CO02 IAML 11 39 29.4
comp=Z,10µm,0.1s
VA06 Catapilco 0.77 170 eP **Pn 11 39 17.3 +1.4**
VA06 eS **Sn 11 39 28.1 +1.3**
VA06 IAML 11 39 30.2
comp=E,15µm,0.3s
CO06 Fray Jorge 1.13 352⇑ eP **Pb 11 39 22.6 +1.4**
CO06 eS **Sb 11 39 38.8 +3.3**
CO06 IAML 11 39 42.7
comp=N,7µm,0.2s
CO03 El Pedregal 1.16 35⇓ eP **Pb 11 39 22.2 +0.5**
CO03 eS **Sb 11 39 36.9 +0.5**
CO03 El Pedregal 1.16 35 eP **Pb 11 39 22.1 +0.4**
CO03 eS **Sb 11 39 37.2 +0.8**
CO03 IAML 11 39 39.8
comp=Z,7µm,0.4s
ROCH El Roble 1.23 162 *i* P **Pb 11 39 23.7 +0.6**
ROCH *i* S **Sb 11 39 39.8 +1.2**
ROCH IAML 11 39 42.7
comp=N,6µm,0.3s
VA03 San Esteban 1.23 142⇑ eP **Pb 11 39 22.7 -0.2**
VA03 *i* S **Sn 11 39 38.3 0.0**
VA03 IAML 11 39 41.0
comp=E,7µm,0.2s
VA03 San Esteban 1.23 142 eP **Pb 11 39 22.8 -0.2**
VA03 eS **Sn 11 39 38.5 +0.2**
VA03 IAML 11 39 46.5
comp=Z,2µm,0.1s
ROC1 El Roble 1.23 163 eP **Pb 11 39 23.3 +0.2**
ROC1 eS **Sn 11 39 36.9 -1.6**
VA01 Torpederas 1.23 188 eP **Pb 11 39 24.1 +1.2**
VA01 eS **Sb 11 39 40.3 +1.9**
VA01 IAML 11 39 44.0
comp=E,3µm,0.3s
VA01 Torpederas 1.23 188 eP **Pb 11 39 23.8 +0.8**
VA01 IAML 11 39 44.4
comp=Z,1µm,0.5s
MT02 Curacav 1.48 170 eP **Pb 11 39 26.7 -0.5**
MT02 eS **Sb 11 39 45.5 -0.1**
MT02 IAML 11 39 48.6
comp=N,1µm,0.3s
MT02 Curacav 1.48 170 eP **Pb 11 39 26.9 -0.3**
MT02 eS **Sb 11 39 47.1 +1.5**
MT02 IAML 11 39 52.4
comp=Z,800nm,0.3s
PEL Peldehue 1.49 154 eP **Pb 11 39 26.7 -0.7**
PEL eS **Sn 11 39 44.4 -0.3**
PEL IAML 11 39 50.8
comp=E,2µm,0.1s
PEL Peldehue 1.49 154 eP **Pb 11 39 26.7 -0.7**
PEL eS **Sb 11 39 47.4 +1.5**
PEL IAML 11 39 50.1
comp=Z,1µm,0.3s
MT10 Hacienda Santa 1.66 153⇑ eP **Pb 11 39 29.2 -1.2**
MT10 *i* S **Sn 11 39 49.7 +0.7**
MT10 IAML 11 39 53.4
comp=E,4µm,0.4s
MT05 Renca 1.70 159 eP **Pb 11 39 29.8 -1.2**
MT05 eS **Sn 11 39 49.7 -0.1**
MT05 IAML 11 39 57.3
comp=N,4µm,0.3s
MT05 Renca 1.70 159 eP **Pb 11 39 29.9 -1.1**
MT05 eS **Sn 11 39 45.1 -4.7**
MT05 IAML 11 39 56.8
comp=Z,1µm,0.5s
GO04 Tololo Observa 1.71 19 eP **Pb 11 39 30.0 -1.3**
GO04 eS **Sb 11 39 51.5 -1.0**
GO04 IAML 11 39 55.6
comp=E,21µm,0.4s
GO04 Tololo Observa 1.71 19 eP **Pb 11 39 30.4 -1.0**
GO04 eS **Sb 11 39 53.2 +0.6**
MT14 Cerro Cal¡n 1.77 154 eP **Pb 11 39 30.5 -1.7**
MT14 eS **Sn 11 39 49.8 -1.8**
MT14 IAML 11 40 08.4
comp=N,3µm,0.5s
MT16 CCHEN 1.81 154 eP **Pb 11 39 31.0 -1.8**
MT16 eS **Sn 11 39 52.3 -0.1**
MT16 IAML 11 40 09.9
comp=E,757nm,0.5s
RTLS Leoncito 1.83 91 eP **Pb 11 39 32.7 -0.7**
RTLS eS **Sb 11 39 58.5 +2.4**
RTLS IAML 11 40 02.2
comp=Z,2µm,0.4s
MT03 Universidad Ad 1.87 155⇑ eP **Pb 11 39 32.1 -1.8**
MT03 eS **Sn 11 39 54.6 +0.6**
MT03 IAML 11 40 02.1
comp=E,3µm,0.2s
MT03 Universidad Ad 1.87 155 eP **Pb 11 39 32.5 -1.4**
MT03 eS **Sb 11 39 57.1 +0.3**
MT03 IAML 11 40 09.2
comp=Z,1µm,0.5s
CO05 La Serena 1.88 6 eP **Pb 11 39 32.8 -1.2**
CO05 eS **Sb 11 39 55.9 -1.2**
CO05 IAML 11 40 02.1
comp=N,3µm,0.2s
MT04 Ro Olivares 1.95 146 eP **Pn 11 39 33.4 +1.1**
MT04 eS **Sn 11 39 56.6 +0.4**
MT04 IAML 11 40 02.5
comp=E,1µm,0.4s
MT04 Ro Olivares 1.95 146 eP **Pb 11 39 33.6 -1.7**
MT04 eS **Sb 11 40 00.0 +0.7**
MT04 IAML 11 40 02.2
comp=Z,490nm,0.4s
MT15 Las Vizcachas 1.96 156 *i* P **Pn 11 39 32.9 +0.5**
MT15 *i* S **Sn 11 39 55.0 -1.3**
MT15 IAML 11 40 03.2
comp=N,3µm,0.2s
MT09 Talagante 2.01 169⇑ eP **Pb 11 39 34.7 -1.6**
MT09 eS **Sn 11 39 58.5 +0.9**
MT09 IAML 11 40 05.3
comp=N,2µm,0.4s
MT08 Bocatoma Ro 2.04 144 eP **Pb 11 39 35.6 -1.3**
MT08 eS **Sn 11 39 59.8 +1.4**
MT08 IAML 11 40 06.3
comp=N,751nm,0.6s
MT08 Bocatoma Ro 2.04 144 eP **Pb 11 39 36.0 -0.9**
MT08 eS **Sb 11 40 02.0 +0.1**
MT01 Popeta 2.07 175 eP **Pb 11 39 35.1 -2.1**
MT01 eS **Sn 11 39 59.4 +0.6**
MT01 IAML 11 40 07.8
comp=E,2µm,0.6s
MT01 Popeta 2.07 175 eP **Pb 11 39 35.4 -1.8**
MT01 eS **Sb 11 40 03.8 +1.3**
MT01 IAML 11 40 06.4
comp=Z,1µm,0.6s
MT12 Pirque 2.08 159⇑ eP **Pb 11 39 35.2 -2.2**
MT12 eS **Sn 11 39 59.3 +0.3**
MT12 IAML 11 40 16.7
comp=N,2µm,0.3s
CO01 Juntas del Tor 2.16 33 *i* P **Pb 11 39 37.1 -1.8**
CO01 *i* S **Sn 11 40 02.6 +1.2**
CO01 IAML 11 40 07.3
comp=N,2µm,0.2s
CO01 Juntas del Tor 2.16 33 eP **Pb 11 39 36.5 -2.4**
CO01 IAML 11 40 09.6
comp=Z,693nm,0.2s
LMEL Las Melosas 2.30 153⇓ *i* P **Pb 11 39 38.8 -2.5**
LMEL eS **Sn 11 40 04.1 -0.6**
LMEL IAML 11 40 14.9
comp=N,1µm,0.2s
LMEL Las Melosas 2.30 153 eP **Pb 11 39 38.8 -2.5**
LMEL eS **Sb 11 40 08.1 -1.2**
LMEL IAML 11 40 14.7
comp=Z,711nm,0.1s
AROD Rodeo 2.35 47 eP **Pb 11 39 41.0 -1.3**
AROD eS **Sn 11 40 05.0 -1.3**
ASAL Salagasta 2.36 110 eP **Pb 11 39 41.2 -1.0**
ASAL eS **Sb 11 40 12.2 +1.3**
ARCO CERRO ARCO 2.37 117 eP **Pb 11 39 41.4 -1.1**
ARCO eS **Sb 11 40 17.0 +5.6**
ARCO IAML 11 40 18.8
comp=Z,594nm,0.3s
ACCO Cerro Coronel 2.38 60 eP **Pb 11 39 41.2 -1.4**
ACCO eS **Sb 11 40 12.2 +0.5**
ACCO eS **Sn 11 40 14.1 +7.2**
ZON Zonda 2.38 85 eP **Pn 11 39 40.0 +2.0**
ZON eS **Sb 11 40 10.8 -0.6**
ZON IAML 11 40 13.8
comp=Z,448nm,0.3s
SJA San Juan 2.48 85 eP **Pb 11 39 43.7 -0.6**
SJA IAML 11 40 21.5
comp=Z,320nm,0.2s
AAGR Agrelo 2.56 121 eP **Pb 11 39 44.3 -1.4**
AAGR eS **Sb 11 40 22.0 +5.1**
AAGR IAML 11 40 22.8
comp=Z,624nm,0.3s
ACDV Cuesta del Vie 2.58 52 eP **Pb 11 39 44.3 -1.7**
ACDV IAML 11 40 26.7
comp=Z,237nm,0.6s
RTLL Cerro Villicun 2.58 80 eP **Pn 11 39 43.1 +2.2**
RTLL eS **Sb 11 40 18.0 +0.6**
RTLL IAML 11 40 21.8
comp=Z,693nm,0.2s
BO01 Tunca 2.60 173 eP **Pn 11 39 42.6 +1.5**
BO01 eS **Sn 11 40 13.6 +1.5**
BO01 IAML 11 40 21.4
comp=Z,351nm,0.6s
CFA Coronel Fontan 2.75 87 Pn **Pn 11 39 45.6 +2.5**
comp=Z,37nm,0.3s,baz=272,slow=10,SNR=50
CFA Sn **Sn 11 40 19.1 +3.5**
comp=Z,38nm,0.3s,baz=23,slow=16,SNR=8.3
comp=Z,73nm,0.3s
CFA Coronel Fontan 2.75 87 eP **Pn 11 39 45.2 +2.1**
CFA eS **Sb 11 40 20.2 -1.8**
LCO Las Campanas 2.85 13 eP **Pn 11 39 46.5 +1.7**
LCO eS **Sb 11 40 21.2 -4.2**
LCO IAML 11 40 24.4
comp=Z,2µm,0.2s
AVIZ Vizcacheras 2.99 125 eP Pn 11 39 37.7 -8.8
BO02 Sierra Bellavi 3.04 170 eP **Pn 11 39 49.2 +2.0**
BO02 eS **Sn 11 40 25.2 +2.3**
BO02 IAML 11 40 36.9
comp=Z,624nm,0.5s
GO05 Hualane 3.23 187 eP **Pn 11 39 50.3 +0.6**
GO05 eS **Sn 11 40 28.3 +0.8**
GO05 IAML 11 40 50.5
comp=Z,180nm,1.0s
AGUA GUANDACOL 3.44 49 eP **Pn 11 39 56.2 +3.5**
AGUA IAML 11 40 53.0
comp=Z,348nm,0.8s
AC04 Llanos de Chal 3.60 5 eP **Pn 11 39 55.7 +0.9**
AC04 eS **Sn 11 40 37.8 +1.3**
AC04 IAML 11 40 50.0
comp=Z,300nm,0.3s
AVFE Valle Fertil 3.61 73 eP **Pn 11 39 56.6 +1.6**
AVFE eS **Sn 11 40 39.5 +2.6**
AVFE IAML 11 40 47.2
comp=Z,567nm,0.4s
ACAN Cantantal 3.65 99 eP **Pn 11 39 56.7 +1.2**
ACAN IAML 11 41 03.4
comp=Z,751nm,0.5s
RFA San Rafael 3.88 141 eP **Pn 11 39 55.0 -3.7**
RFA eP Pb 11 40 00.4 -7.7
RFA IAML 11 41 12.7
comp=Z,77nm,0.6s
ACHE Chepes 4.14 82 eP **Pn 11 40 03.5 +1.1**
ACHE eS **Sn 11 40 56.7 +6.5**
VCA Vinchina 4.15 43 eP **Pn 11 40 06.4 +3.9**
VCA eS **Sn 11 40 53.6 +3.3**
VCA IAML 11 41 05.5
comp=Z,376nm,0.7s
GO03 Copiapo 4.32 14 eP **Pn 11 40 06.2 +1.4**
GO03 eS **Sb 11 41 08.7 +1.3**
GO03 IAML 11 41 20.0
comp=Z,288nm,0.5s
APLL PUNTA DE LOS L 4.45 73 eP **Pn 11 40 07.6 +1.1**
APLL eS **Sn 11 40 55.0 -2.7**
ACLC CERRO LA CRUZ 4.54 60 eP **Pn 11 40 09.6 +1.7**
ACLC eS **Sn 11 41 04.4 +4.3**
ACLC IAML 11 41 09.8
comp=Z,186nm,0.5s
BI02 San Fabin de 4.86 178 eP **Pn 11 40 14.1 +1.9**
BI02 IAML 11 41 36.2
comp=Z,84nm,1.0s
MRA San Martin 4.91 99 eP **Pn 11 40 13.7 +0.9**
MRA eS **Sn 11 41 06.3 -2.6**
MRA IAML 11 41 14.9
comp=Z,242nm,0.5s
AANI Anillaco 4.91 54 eP **Pn 11 40 15.4 +2.5**
AANI eS **Sn 11 41 09.0 -0.1**
BI05 Punta Hualpn 5.14 196 eP **Pn 11 40 16.8 +0.8**
BI05 IAML 11 41 56.5
comp=Z,53nm,1.6s
H03N1 Juan Fernandez 6.50 253 Pn Pn 11 40 37.3 +2.8
H03N1 T T 11 47 22.8
baz=79,slow=72,SNR=762
H03N3 Juan Fernandez 6.52 253 Pn Pn 11 40 37.0 +2.4
baz=61,slow=74
H03N3 T T 11 47 22.0
baz=79,slow=72,SNR=909
H03N2 Juan Fernandez 6.52 253 Pn Pn 11 40 37.6 +2.9
baz=86,slow=74
H03N2 T T 11 47 21.4
baz=79,slow=72,SNR=1023
H03S3 Juan Fernandez 6.59 250 Pn **Pn 11 40 37.0 +1.3**
H03S3 T T 11 47 21.5
baz=82,slow=75,SNR=44
H03S1 Juan Fernandez 6.60 250 Pn Pn 11 40 37.7 +2.0
baz=324,slow=74
H03S1 T T 11 47 20.2
baz=82,slow=75,SNR=28
H03S2 Juan Fernandez 6.61 250 Pn **Pn 11 40 37.6 +1.7**
baz=96,slow=74
H03S2 T T 11 47 21.1
baz=82,slow=75,SNR=40
PLCA Paso Flores 8.95 176 Pn **Pn 11 41 10.0 +1.7**
comp=Z,0.1nm,0.3s,baz=355,slow=16,SNR=1.3
comp=Z,0.6nm,0.7s
CPUP Villa Florida 13.50 70 Pn **Pn 11 42 08.5 -2.0**
comp=Z,0.1nm,0.3s,baz=98,slow=14,SNR=2.0
comp=Z,0.3nm,0.5s
LPAZ La Paz 15.73 12 Pn **Pn 11 42 41.3 +0.1**
comp=Z,0.1nm,0.3s,baz=181,slow=4.0,SNR=5.3
comp=Z,1.3nm,0.7s
SIV San Ignacio 18.36 33 P **P 11 43 11.6 -1.9**
baz=198,slow=9.4,SNR=13
comp=Z,2.0nm,0.6s
TXAR Lajitas Array 68.07 330 P **P 11 49 57.6 -0.7**
comp=Z,0.2nm,0.5s,baz=153,slow=7.7,SNR=4.1
comp=Z,0.2nm,0.5s

NEIC ***06*** *11:49:50.1±1.9,20.8S±0.1×178.4W±0.1,h518km±7km, mb4.2/127, Error ellipse: s-maj=18.5km s-min=16.7km az=109.0*
IDC ***06*** *11:49:53.4±2.4,20.62S×178.64W,h560km±26km, mb3.6/13, mbtmp4.5/14, Error ellipse: s-maj=16.4km s-min=11.7km az=144.0*
ISC 06 11:49:52.1±0.4,20.97S±0.06×178.49W±0.08,h550km, n208,σ1§98/165,mb4.3/71,22C-12D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
MSVF	**Nonsavu**	**4.58**	**314**	P		P		11 51 15.1			-3.6
RIZ	**Raoul Island**	**8.26**	**177**	P		P		**11 51 50.1**			**-2.1**
RAO	**Raoul Island**	**8.27**	**177**	P		P		**11 51 50.6**			**-1.8**
RAO	**Raoul Island**	**8.27**	**177**	P		P		**11 51 50.1**			**-2.3**
181nm,0.3s,baz=96,slow=6.6,SNR=5.4											
GLKZ	**Green Lake**	**8.28**	**177**	P		P		**11 51 50.0**			**-2.4**
GLKZ				S		S		**11 53 30.8**			**-0.5**
AFI	**Afiamalu**	**9.50**	**43**	P		P		11 51 58.1			-7.0
MARNC	**Mare, Loyalty**	**12.58**	**265**	P		P		**11 52 36.3**			**-0.4**
PINNC	**Pines Island,**	**13.17**	**260**	P		P		**11 52 43.5**			**+0.8**
DZM	**Mont Dzumac**	**14.07**	**263**	P		P		**11 52 51.0**			**-1.1**
18nm,1.0s,baz=80,slow=16,SNR=8.0											
SANVU	**Saraoutou**	**14.66**	**290**			P		**11 52 56.5**			**-1.6**
OUZ	**Onahuta**	**15.81**	**204**	P		P		**11 53 12.5**			**+2.9**
WCZ	**Waipu Caves**	**16.18**	**201**	P		P		**11 53 14.3**			**+1.0**
KUZ	**Kuaotunu**	**16.51**	**197**	P		P		**11 53 18.8**			**+2.5**
MKAZ	**Moumakai**	**17.00**	**198**	P		P		**11 53 22.1**			**+1.5**
HAZ	**Te Kaha**	**17.04**	**190**	P		P		**11 53 20.8**			**-0.2**
HAZ				S		S		**11 56 07.1**			**-4.3**
AWAZ	**Awhitu Peninsu**	**17.12**	**199**	P		P		**11 53 22.7**			**+1.0**
PUZ	**Puketiti**	**17.28**	**189**	P		P		**11 53 23.6**			**+0.4**
TGRZ	**Tauranga**	**17.31**	**194**	P		P		**11 53 25.5**			**+2.0**
TWGZ	**Tauwhareparae**	**17.42**	**189**	P		P		**11 53 25.8**			**+1.2**
KMRZ	**Kaimai**	**17.50**	**195**	P		P		**11 53 27.1**			**+1.9**
MWZ	**Matawai**	**17.65**	**190**	P		P		**11 53 26.0**			**-0.7**
URZ	**Urewera**	**17.65**	**191**	P		P		**11 53 24.6**			**-2.0**
6.4nm,0.6s,baz=295,slow=3.6,SNR=11											
URZ				S		S		**11 56 15.2**			**-6.1**
2.5nm,0.5s,baz=36,slow=22,SNR=6.9											
URZ	**Urewera**	**17.65**	**191**	P		P		**11 53 24.5**			**-2.0**
URZ				S		S		**11 56 14.8**			**-6.5**

MUGZ Murupara 17.93 192 P **P 11 53 28.2 -0.9**
TLZ Tolley Road 18.06 195 P **P 11 53 32.4 +2.0**
BKZ Black Stump Fm 18.64 192 P **P 11 53 34.7 -1.0**
TMVZ Te Maari 18.77 194 P **P 11 53 37.0 0.0**
ETVZ East Tongariro 18.78 194 P **P 11 53 37.1 0.0**
OTVZ Oturere 18.82 194 P **P 11 53 36.5 -1.0**
SNVZ South Ngauruho 18.85 194 P **P 11 53 34.9 -2.9**
MCHZ McNeill Hill 18.88 192 P **P 11 53 37.5 -0.3**
VRZ Vera Road 19.01 196 P **P 11 53 40.9 +2.0**
TSZ Takapari Road 19.61 193 P **P 11 53 44.8 +0.3**
BFZ Birch Farm 20.16 192 P **P 11 53 49.0 -0.4**
MRZ Mangatainoka R 20.27 193 P **P 11 53 48.4 -2.1**
EIDS Eidsvold 28.28 255 P **P 11 55 02.5 +0.7**
EIDS IAmb IAmb 11 55 19.4
comp=Z,15nm,1.4s
ARMA Armidale 28.45 245 P **P 11 55 04.7 +1.3**
CAN Canberra 31.87 236 P **P 11 55 33.7 +1.1**
TOO Toolangi 35.25 234 P **P 11 56 01.4 +0.4**
TOO IAmb IAmb 11 56 02.9
comp=Z,5.5nm,0.9s
COEN Coen 37.16 274 P **P 11 56 17.0 +0.1**
COEN IAmb IAmb 11 57 01.2
comp=Z,13nm,1.1s
STKA Stephens Creek 37.17 245 P **P 11 56 17.2 +0.3**
STKA Stephens Creek 37.17 245 P **P 11 56 17.8 +0.8**
comp=Z,3.6nm,0.5s,baz=82,slow=13,SNR=8.2
comp=Z,3.6nm,0.5s
INKA Innaminka 37.62 251 P **P 11 56 21.1 +0.5**
BBOO Buckleboo 41.93 244 P **P 11 56 55.3 +0.2**
WR8 Warramunga Arr 43.93 263 P **P 11 57 10.4 -0.5**
AS31 Alice Springs 43.97 257 P **P 11 57 10.5 -0.6**
ASAR Alice Springs 43.97 257 P **P 11 57 10.6 -0.6**
ASAR Alice Springs 43.97 257 P **P 11 57 10.9 -0.2**
comp=Z,13nm,0.7s,baz=97,slow=7.9,SNR=124
ASAR PcP **PcP 11 58 44.8 -0.1**
comp=Z,2.8nm,0.6s,baz=102,slow=3.9,SNR=14
ASAR S **S 12 03 02.8 -0.7**
comp=Z,1.4nm,0.8s,baz=94,slow=15,SNR=11
comp=Z,13nm,0.7s
WB0 Warramunga Arr 44.06 263 P **P 11 57 11.4 -0.5**
WRAB Tennant Creek 44.08 263 P **P 11 57 11.2 -0.8**
WRAB IAmb IAmb 11 57 11.5
comp=Z,6.3nm,0.8s
WRA Warramunga Arr 44.08 263 P **P 11 57 10.5 -1.5**
WRA Warramunga Arr 44.08 263 P **P 11 57 11.4 -0.6**
comp=Z,5.0nm,0.3s,baz=96,slow=7.0,SNR=288
comp=Z,5.0nm,0.3s
MTN Manton Dam 48.71 271 **P 11 57 46.4 -0.7**
MTN IAmb IAmb 11 57 47.2
comp=Z,10nm,0.8s
MTN Manton Dam 48.71 271 IAmb IAmb 11 57 47.2
comp=Z,10nm,0.8s
MTN Manton Dam 48.71 271 **P 11 57 46.8 -0.3**
KNRA Kununurra 50.17 267 **P 11 57 57.7 -0.1**
FITZ Fitzroy Crossi 52.51 263 **P 11 58 15.0 +0.3**
PSA00 Pilbara Seismi 57.12 257 P **P 11 58 46.6 -0.4**
PSA00 IAmb IAmb 11 58 47.2
comp=Z,8.3nm,0.7s
PSA00 Pilbara Seismi 57.12 257 P **P 11 58 46.5 -0.4**
PSA00 IAmb IAmb 11 58 47.3
comp=Z,4.7nm,1.0s
MBWA Marble Bar 57.31 258 P **P 11 58 48.0 -0.2**
MBWA IAmb IAmb 11 58 48.4
comp=Z,11nm,0.7s
SBA Scott Base 57.38 184 P **P 11 58 51.2 +3.5**
VNDA Vanda 57.41 185 P **P 11 58 50.3 +2.3**
VNDA Vanda 57.41 185 P **P 11 58 50.1 +2.2**
comp=Z,0.7nm,0.8s,baz=1.8,slow=7.4,SNR=8.6
comp=Z,0.7nm,0.8s
MORW Morawa 59.23 248 P **P 11 59 01.0 -0.1**
MORW IAmb IAmb 11 59 25.8
comp=Z,24nm,1.2s
CASY Casey 63.35 205 P **P 11 59 28.4 +1.1**
CASY IAmb IAmb 11 59 29.0
comp=Z,14nm,1.1s
QSPA South Pole Qui 69.10 180 P **P 12 00 07.2 +4.1**
QSPA IAmb IAmb 12 00 08.1
comp=Z,4.9nm,0.8s
QSPA South Pole Qui 69.10 180 P **P 12 00 06.9 +3.8**
comp=Z,4.3nm,0.7s,baz=326,slow=0.5,SNR=44
comp=Z,4.3nm,0.7s
KIWB Kanaga Island 72.51 1 P **P 12 00 21.7 -1.4**
ADK Adak 72.55 1 P **P 12 00 21.4 -1.9**
TPUB Ta-pu 73.84 303 P **P 12 00 30.5 -0.9**
PETK Petropavlovsk- 76.60 346 P **P 12 00 45.3 -0.7**
PETK Petropavlovsk- 76.60 346 P **P 12 00 44.7 -1.4**
comp=Z,2.9nm,0.9s,baz=132,slow=10,SNR=6.0
comp=Z,2.9nm,0.9s
CVS Carmenet Viney 79.00 42 P **P 12 00 58.9 -0.4**
CVS IAmb IAmb 12 01 31.4
comp=Z,22nm,1.4s
BELA Belgrano 2 79.16 173 P **P 12 00 60.0 +0.4**
KMPM Mount Pierce 79.28 39 P **P 12 01 01.1 +0.3**
KMPM IAmb IAmb 12 01 02.0
comp=Z,16nm,1.2s
MNRC McLaughlin Min 79.34 41 P **P 12 01 01.6 +0.4**
MNRC IAmb IAmb 12 01 03.2
comp=Z,9.1nm,1.0s
KMRM Mail Ridge 79.40 40 **P 12 01 02.1 +0.6**
O02D Mt. Diablo Mer 79.93 40 **P 12 01 04.6 +0.3**
O02D IAmb IAmb 12 01 05.2
comp=Z,6.9nm,0.7s
M02C Callahan 80.64 39 IAmb IAmb 12 01 09.2
comp=Z,5.6nm,0.8s
CWC Cottonwood Cre 80.69 45 **P 12 01 08.3 -0.1**
MAW Mawson 80.97 200 P **P 12 01 09.8 +0.6**
comp=Z,2.5nm,0.7s,baz=269,slow=9.8,SNR=4.1
comp=Z,2.5nm,0.7s
M03C McCloud 81.00 39 P **P 12 01 09.9 +0.1**
MPK Martis Peak 81.08 42 IAmb IAmb 12 01 11.2
comp=Z,17nm,1.4s
PNTR Pine Nut 81.23 42 IAmb IAmb 12 01 11.9
comp=Z,8.9nm,0.8s
PIX Pinacate 81.28 52 P **P 12 01 11.1 -0.3**
DSP Deep Springs 81.29 45 IAmb IAmb 12 01 12.0
comp=Z,7.8nm,1.3s
L04D Klamath Falls 81.48 39 IAmb IAmb 12 01 12.9
comp=Z,11nm,0.9s
DANC Danby, Needles 81.53 48 IAmb IAmb 12 01 13.6
comp=Z,6.0nm,1.0s
NVAR Mina Array Bea 81.68 44 P **P 12 01 13.2 -0.4**
NVAR Mina Array Bea 81.68 44 P **P 12 01 13.3 -0.2**
comp=Z,3.0nm,0.8s,baz=224,slow=8.8,SNR=26
comp=Z,3.0nm,0.8s
PAHR Pah Rah Range 81.73 42 **P 12 01 13.4 -0.3**
NV11 Mina Array Sit 81.77 44 IAmb IAmb 12 01 14.5
comp=Z,6.0nm,1.1s
K05A Summer Lake 82.61 39 IAmb IAmb 12 01 19.0
comp=Z,12nm,0.9s
PINE Pine Mountain 83.23 38 IAmb IAmb 12 01 22.2
comp=Z,11nm,0.9s
PRN Pahroc Range 83.25 46 IAmb IAmb 12 01 22.3
comp=Z,5.3nm,0.9s
I05D Terrebonne, OR 83.34 37 IAmb IAmb 12 01 22.2
comp=Z,9.2nm,0.9s
M17K Holitna River 83.81 10 P **P 12 01 23.4 0.0**
K15K Wolf Creek Mou 84.07 8 P **P 12 01 25.0 +0.3**
K15K IAmb IAmb 12 01 57.3
comp=Z,13nm,1.1s
I07A Izee 84.24 38 IAmb IAmb 12 01 26.9
comp=Z,5.4nm,0.9s
319A Douglas 84.29 53 IAmb IAmb 12 01 28.1
comp=Z,12nm,1.2s
KNB Kanab 84.55 47 IAmb IAmb 12 01 56.2
comp=Z,6.5nm,1.4s
U15A North Rim 84.61 48 IAmb IAmb 12 01 29.2
comp=Z,5.0nm,0.7s
G08A Pilot Rock 85.26 38 IAmb IAmb 12 01 31.6
comp=Z,4.2nm,0.7s
X18A Snowflake 85.32 50 IAmb IAmb 12 01 36.5
comp=Z,3.2nm,0.7s
HAWA Hanford 85.59 36 IAmb IAmb 12 01 33.1
comp=Z,5.8nm,0.9s
BMO Blue Mountains 85.96 39 IAmb IAmb 12 01 34.5
comp=Z,3.1nm,0.8s
D08A Wollman Farm, 86.33 36 IAmb IAmb 12 01 36.6
comp=Z,5.6nm,0.9s
E09A Wood Farm, Sta 86.44 37 IAmb IAmb 12 01 36.7
comp=Z,4.1nm,1.0s
SEY Seymchan 86.72 347 P **P 12 01 36.7 -0.7**
comp=Z,5.5nm,0.8s,baz=97,slow=3.6,SNR=4.7
comp=Z,5.5nm,0.8s
TMUT Trail Mountain 86.81 46 IAmb IAmb 12 01 39.8
comp=Z,6.0nm,1.2s
PLID Pearl Lake 86.86 39 IAmb IAmb 12 01 38.5
comp=Z,3.5nm,0.8s

B08A	**Colville Reser**	**86.87**	**35**	IAmb	IAmb	12 01 38.3		
	comp=Z,4.5nm,0.8s							
SRU	**San Rafael Swe**	**87.17**	**46**	IAmb	IAmb	12 01 40.7		
	comp=Z,4.6nm,0.8s							
TROLL	**Troll, Antarti**	**87.27**	**180**	⇑P	**P**	**12 01 40.1**	**-0.2**	
	comp=Z,99nm,0.5s							
VHRN	**Van Horn**	**87.30**	**56**	IAmb	IAmb	12 01 42.1		
	comp=Z,4.4nm,0.9s							
MNTX	**Cornudas Mount**	**87.39**	**55**	IAmb	IAmb	12 01 42.2		
	comp=Z,4.1nm,1.1s							
SNAA	**Sanae**	**87.56**	**179**	⇑P	**P**	**12 01 41.0**	**-0.5**	
	comp=Z,26nm,1.0s							
SNAA	**Sanae**	**87.56**	**179**	P	**P**	**12 01 41.3**	**-0.2**	
SNAA	**Sanae**	**87.56**	**179**	P	**P**	**12 01 40.6**	**-0.9**	
	comp=Z,0.9nm,0.9s,baz=226,slow=11,SNR=3.0							
TX31	**Lajitas Ar. Si**	**87.69**	**58**	IAmb	IAmb	12 01 44.1		
	comp=Z,5.6nm,1.1s							
TXAR	**Lajitas Array**	**87.69**	**58**	P	**P**	**12 01 43.2**	**+0.3**	
	comp=Z,2.5nm,0.9s,baz=221,slow=6.3,SNR=24							
	comp=Z,2.5nm,0.9s							
S34M	**Telegraph Cree**	**87.87**	**23**	P	**P**	**12 01 43.3**	**+0.4**	
S34M				IAmb	IAmb	12 01 43.7		
	comp=Z,4.9nm,0.8s							
TASM	**ASL Pad, Albuq**	**88.05**	**51**	IAmb	IAmb	12 01 44.9		
	comp=Z,2.5nm,1.1s							
ABQ	**Albuquerque**	**88.05**	**51**	IAmb	IAmb	12 01 45.0		
	comp=Z,3.0nm,1.0s							
ANMO	**Albuquerque**	**88.05**	**51**		**P**	**12 01 44.2**	**-0.4**	
ALPN	**Alpine**	**88.16**	**57**	IAmb	IAmb	12 01 45.8		
	comp=Z,4.0nm,0.8s							
H21K	**Melozitna Rive**	**88.55**	**10**	IAmb	IAmb	12 01 45.4		
	comp=Z,4.1nm,0.8s							
COLA	**College**	**88.76**	**13**	P	**P**	**12 01 45.0**	**-1.9**	
IL31		**88.87**	**13**	IAmb	IAmb	12 02 10.4		
	comp=Z,4.1nm,1.2s							
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**12 01 46.0**	**-1.4**	
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**12 01 45.5**	**-2.0**	
	comp=Z,1.8nm,0.4s,baz=218,slow=5.3,SNR=29							
	comp=Z,1.8nm,0.4s							
M29M	**Somme Creek**	**88.97**	**17**	P	**P**	**12 01 47.6**	**-0.5**	
J25K	**Salcha River,**	**89.06**	**14**	P	**P**	**12 01 47.3**	**-1.1**	
J25K				IAmb	IAmb	12 01 47.7		
	comp=Z,3.3nm,0.7s							
TPAW	**Teton Pass**	**89.09**	**42**	IAmb	IAmb	12 01 49.4		
	comp=Z,2.9nm,0.8s							
TPAW				P	**P**	**12 01 49.5**	**+0.2**	
HHC	**Hu-ho-hao-te**	**89.35**	**315**	*e*P	**P**	**12 01 50.6**	**+0.2**	
HHC				pmax	pmax			
	comp=Z,11nm,0.6s							
HHC				pmax	pmax			
	comp=Z,90nm,5.5s							
LOHW	**Long Hollow**	**89.37**	**42**	IAmb	IAmb	12 01 50.8		
	comp=Z,2.2nm,0.7s							
M30M	**Minto, Yukon**	**89.55**	**18**	IAmb	IAmb	12 01 51.0		
	comp=Z,4.6nm,0.8s							
BW06	**Boulder Array**	**89.61**	**43**	IAmb	IAmb	12 01 51.5		
	comp=Z,3.1nm,0.7s							
PD31	**Pinedale Array**	**89.61**	**43**	IAmb	IAmb	12 01 51.5		
	comp=Z,3.1nm,0.7s							
PDAR	**Pinedale Array**	**89.61**	**43**	P	**P**	**12 01 50.9**	**-0.8**	
	comp=Z,2.6nm,0.6s,baz=210,slow=3.5,SNR=27							
	comp=Z,2.6nm,0.6s							
YHL	**Hebgen Lake**	**89.63**	**41**	IAmb	IAmb	12 01 53.0		
	comp=Z,3.7nm,0.9s							
BOZ	**Bozeman (W)**	**89.74**	**40**	IAmb	IAmb	12 01 52.8		
	comp=Z,3.9nm,1.0s							
CMAR	**Chiang Mai Arr**	**89.84**	**290**	P	**P**	**12 01 54.1**	**+1.1**	
CMAR	**Chiang Mai Arr**	**89.84**	**290**	P	**P**	**12 01 53.9**	**+0.8**	
	comp=Z,1.5nm,0.9s,baz=117,slow=2.6,SNR=8.2							
	comp=Z,1.5nm,0.9s							
DAWY	**Dawson**	**90.03**	**16**		**P**	**12 01 52.2**	**-0.7**	
DAWY				IAmb	IAmb	12 01 52.8		
	comp=Z,4.4nm,0.9s							
DRIO	**Del Rio**	**90.14**	**59**	IAmb	IAmb	12 01 54.5		
	comp=Z,4.5nm,0.8s							
ZALV	**Zalesovo Beam**	**110.57**	**321**	PKiKP	**PKiKP**	**12 07 20.1**	**-1.9**	
	comp=Z,1.2nm,0.6s,baz=129,slow=0.6,SNR=6.5							
MKAR	**Makanchi Array**	**111.18**	**313**	PKiKP	**PKiKP**	**12 07 21.6**	**-1.8**	
	comp=Z,0.7nm,0.5s,baz=123,slow=0.4,SNR=9.9							
KURBB	**Kurchatov Arra**	**114.08**	**317**	PKiKP	PKPdf	12 07 26.8	-2.0	
	comp=Z,1.0nm,0.5s,baz=90,slow=1.8,SNR=11							
BVAR	**Borovoye Array**	**119.14**	**320**	PKP	**PKPdf**	**12 07 37.2**	**-1.3**	
	comp=Z,3.6nm,0.4s,baz=96,slow=1.1,SNR=17							
SPITS	**Spitsbergen Ar**	**122.30**	**356**	PKP	**PKPdf**	**12 07 42.8**	**-1.2**	
	comp=Z,5.7nm,0.7s,baz=70,slow=5.4,SNR=4.5							
ARCES	**ARCESS Array B**	**129.29**	**349**	PKP	**PKPdf**	**12 07 56.2**	**-1.3**	
	comp=Z,1.6nm,0.5s,baz=11,slow=2.3,SNR=16							
FINES	**FINESS Array B**	**136.09**	**343**	PKP	**PKPdf**	**12 08 07.5**	**-3.0**	
	comp=Z,2.0nm,0.7s,baz=159,slow=1.8,SNR=7.7							
NOA	**NORSAR Array B**	**139.38**	**353**	PKhKP	PKPpre	12 08 09.0		
	comp=Z,0.5nm,0.5s,baz=29,slow=3.2,SNR=3.6							
HFS	**Hagfors**	**139.92**	**351**	PKhKP	PKPpre	12 08 08.6		
	comp=Z,1.6nm,0.3s,baz=54,slow=2.6,SNR=16							
AKASG	**Malin Array Be**	**143.19**	**330**	PKhKP	PKPpre	12 08 20.0		
	comp=Z,9.3nm,0.4s,baz=44,slow=4.3,SNR=51							
KIEV	**Kiev**	**143.21**	**330**	⇓P	PKPab	12 08 20.0	-1.6	
SORM	**Soroca**	**145.36**	**328**	⇑P	**PKPdf**	12 08 27.3	-0.2	
EKA	**Eskdalemuir Ar**	**145.50**	**5**	PKPbc	**PKPdf**	**12 08 27.4**	**-0.1**	
	comp=Z,3.7nm,0.7s,baz=325,slow=2.5,SNR=8.9							
BNN	**Bunyan**	**145.57**	**309**		**PKPdf**	**12 08 28.7**	**+0.4**	
BR131	**Keskin Array S**	**146.81**	**311**		**PKPdf**	**12 08 32.1**	**+1.7**	
BRTR	**Keskin Array B**	**146.81**	**311**		**PKPdf**	**12 08 32.0**	**+1.7**	
BRTR	**Keskin Array B**	**146.81**	**311**	PKPbc	**PKPdf**	**12 08 32.2**	**+1.9**	
	comp=Z,3.8nm,0.7s,baz=134,slow=4.7,SNR=17							
KIRS	**Kirsehir-Merke**	**146.85**	**310**	⇑P	**PKPdf**	**12 08 32.5**	**+2.1**	
TLCR		**147.01**	**323**	⇑P	**PKPdf**	**12 08 32.9**	**+2.5**	
BUR08	**Bucovina Ar. S**	**147.22**	**330**		**PKPdf**	**12 08 33.8**	**+3.0**	
BURAR	**Bucovina Array**	**147.24**	**330**		**PKPdf**	**12 08 33.9**	**+3.1**	
BURAR	**Bucovina Array**	**147.24**	**330**	⇓P	**PKPdf**	**12 08 34.1**	**+3.3**	
TPGR	**Topolog**	**147.44**	**323**	⇑P	**PKPdf**	**12 08 34.3**	**+3.2**	
MMAI	**Mount Meron Ar**	**147.64**	**299**	PKPbc	**PKPdf**	**12 08 35.4**	**+3.6**	
	comp=Z,5.3nm,0.4s,baz=60,slow=5.1,SNR=9.6							
VRI	**Vrincioaia**	**147.70**	**326**	⇑P	**PKPdf**	**12 08 34.5**	**+3.0**	
HARR	**Harsova**	**147.81**	**323**	⇑P	PKPab	12 08 58.9	+19	
MANR	**Mangalia**	**147.97**	**322**	⇑P	**PKPdf**	**12 08 35.3**	**+3.4**	
STEB	**Steborice**	**148.35**	**340**	⇑*e*PKP	**PKPdf**	**12 08 35.9**	**+3.5**	
MLR	**Muntele Rosu**	**148.36**	**326**	⇓P	**PKPdf**	**12 08 36.0**	**+3.3**	
CLL	**Collm**	**148.41**	**346**		**PKPdf**	**12 08 35.9**	**+3.5**	
DPC	**Dobruska-Polom**	**148.43**	**342**	⇑*e*PKP	**PKPdf**	**12 08 36.6**	**+4.0**	
KRLC	**Kraliky**	**148.53**	**341**	⇑*e*PKP	**PKPdf**	**12 08 36.6**	**+3.9**	
MORC	**Moravsky Berou**	**148.56**	**340**	⇓P	**PKPdf**	**12 08 36.0**	**+3.3**	
MARR	**Marisel-Cluj**	**148.90**	**331**	⇓P	**PKPbc**	**12 08 38.2**	**0.0**	
DRGR		**149.00**	**331**	⇑P	**PKPdf**	**12 08 37.8**	**+4.2**	
ARR	**Arges**	**149.12**	**327**	⇑P	**PKPbc**	**12 08 39.1**	**+0.4**	
PRU	**Pruhonice**	**149.25**	**343**	⇑*e*PKP	**PKPdf**	**12 08 38.1**	**+4.3**	
ZVC	**Zvikov**	**149.84**	**343**	⇑*e*PKP	**PKPbc**	**12 08 40.1**	**-0.2**	
SIRR	**Siria**	**149.87**	**332**	⇑P	**PKPbc**	**12 08 39.9**	**-0.6**	
GZR	**Gura Zlata**	**150.01**	**329**	⇓P	**PKPdf**	**12 08 39.6**	**+4.4**	
SURR	**Surduc**	**150.05**	**330**	⇓P	**PKPdf**	**12 08 36.9**	**+1.7**	
ELND	**Elena**	**150.08**	**323**	⇑P	**PKPab**	**12 08 49.9**	**+0.6**	
VLAD	**Vladila**	**150.18**	**326**	⇓P	PKPdf	12 08 27.4	-8.0	
KHC	**Kasperske Hory**	**150.29**	**344**	⇑*e*PKP	**PKPbc**	**12 08 40.9**	**-0.5**	
KHC				*e*PKPAB	**PKPab**	**12 08 49.5**	**-0.5**	
CKRC	**Cesky Krumlov**	**150.38**	**343**	⇑*e*PKP	**PKPbc**	**12 08 40.9**	**-0.6**	
BZS	**Buzias**	**150.38**	**331**	⇓P	**PKPdf**	**12 08 40.6**	**+4.9**	
PLVB	**Pleven**	**150.48**	**325**	⇓P	**PKPbc**	**12 08 41.1**	**-0.8**	
GERES	**GERESS Array B**	**150.52**	**344**	PKPbc	**PKPdf**	**12 08 40.9**	**+4.9**	
	comp=Z,3.3nm,0.7s,baz=20,slow=4.3,SNR=14							
HERR	**Herculane**	**150.53**	**329**	⇑P	**PKPdf**	**12 08 41.1**	**+5.1**	
BMRD	**Maredsous**	**150.61**	**356**	*d*PKP	**PKPbc**	**12 08 42.1**	**+0.1**	
CONA	**Conrad Observa**	**150.71**	**340**	*e*PKP	**PKPbc**	**12 08 41.9**	**-0.6**	
	comp=Z,2.3nm,0.3s							
RONA	**Rosalia, Austr**	**150.77**	**339**	*e*PKP	**PKPbc**	**12 08 42.0**	**-0.5**	
	comp=Z,6.3nm,0.5s							
MOA	**Molln**	**151.27**	**342**	*e*PKP	**PKPbc**	**12 08 42.7**	**-1.0**	
	comp=Z,2.3nm,0.4s							
BLKB	**Belogradchik**	**151.34**	**327**	⇓P	**PKPbc**	**12 08 43.0**	**-0.9**	
EZN	**Ezine**	**151.67**	**317**	⇑P	**PKPdf**	**12 08 43.2**	**+5.4**	
LESA	**Schwarzleotal**	**152.10**	**344**	*i* PKP	**PKPbc**	**12 08 44.7**	**-0.8**	
	comp=Z,2.7nm,0.3s							
KBA	**Koelnbreinsper**	**152.23**	**342**	*e*PKP	**PKPbc**	**12 08 45.1**	**-0.9**	
	comp=Z,1.4nm,0.4s							
WTTA	**Wattenberg**	**152.51**	**345**	*e*PKP	**PKPbc**	**12 08 45.4**	**-1.2**	
	comp=Z,2.4nm,0.3s							
MOTA	**Moosalm**	**152.56**	**346**	*e*PKP	**PKPbc**	**12 08 45.6**	**-1.1**	
	comp=Z,1.5nm,0.3s							
ABTA	**Abfaltersbach**	**152.76**	**343**	*i* PKP	**PKPbc**	**12 08 45.4**	**-1.6**	
	comp=Z,4.7nm,0.6s							
ESDC	**Sonseca Array**	**160.77**	**13**	PKPab	**PKPab**	**12 09 34.3**	**-1.1**	
	comp=Z,1.0nm,1.0s,baz=336,slow=4.8,SNR=4.7							
TORD	**Torodi Ar. Bea**	**172.22**	**181**	PKPab	**PKPab**	**12 10 26.4**	**0.0**	
	comp=Z,0.8nm,0.8s,baz=149,slow=3.1,SNR=1.8							

*IDC **06** 11:49:52.7±1.3,28.˚51N×142.˚08E,h0km,mb4.1/11,*

mbtmp4.1/12,ML3.2/1,MS3.0/4,Error ellipse: s-maj=41.6km s-min=23.7km az=74.0

*NEIC **06** 11:49:56.7±1.2,28.˚42N±0.˚09×141.˚8E±0.˚3,h21km±7km, mb4.4/13,Error ellipse: s-maj=33.8km s-min=8.5km az=72.0*

ISC 06 11:49:54.1±0.8,28.˚39N±0.˚07×142.˚0E±0.˚2,h10km,n43, σ1§41/39,mb4.3/16,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.30**	**171**		**Pn**	**11 50 20.2**	**+1.9**
JCJ	**Chichijima**	**1.30**	**171**	Pn	Pn	11 50 13.2	-5.0
	20nm,0.3s,baz=275,slow=22,SNR=12						
JCJ				Sn	**Sb**	**11 50 32.0**	**-3.3**
	33nm,0.3s,baz=305,slow=22,SNR=23						
JHJ2	**Mitsune**	**5.06**	**339**	Pn	**Pn**	**11 51 10.1**	**+0.2**
MJAR	**Matsushiro Arr**	**8.72**	**340**	Pn	**Pn**	**11 51 58.5**	**-1.8**
	0.3nm,0.3s,baz=158,slow=13,SNR=14						
MJAR				LR	LR	11 54 56.9	
	comp=Z,55nm,19.8s,baz=156,slow=35						
	1.8nm,0.3s						
MAJO	**Matsushiro**	**8.73**	**340**	Pn	**Pn**	**11 51 59.6**	**-0.8**
MJB9	**Matsu-Tunnel**	**8.73**	**340**	Pn	**Pn**	**11 52 00.3**	**-0.1**
JMM	**Marumori**	**9.51**	**354**	Pn	Pn	11 52 05.6	-5.4
JNU	**Nakatsue**	**10.63**	**299**	LR	LR	11 56 24.5	
	comp=Z,85nm,19.8s,baz=98,slow=37						
KSRS	**Korea Array**	**14.84**	**311**	Pn	**Pn**	**11 53 27.9**	**+3.9**
	0.2nm,0.3s,baz=124,slow=10,SNR=5.2						
YULB	**Yu-li**	**19.23**	**260**	P	**P**	**11 54 15.7**	**-2.8**
YULB				IAmb	IAmb	11 54 32.8	
	comp=Z,15nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**24.32**	**105**	T	T	12 20 08.7	
	baz=297,slow=74,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**24.32**	**105**	T	T	12 20 12.7	
	baz=297						
H11N3	**WAKE ISLAND Hy**	**24.33**	**105**	T	T	12 20 09.9	
	baz=297,slow=74,SNR=6.8						
HILR	**Hailar Array B**	**27.11**	**327**	P	**P**	**11 55 39.2**	**+2.1**
	comp=Z,2.4nm,0.5s,baz=117,slow=12,SNR=4.0						
ULN	**Ulaanbaatar**	**33.26**	**315**	P	**P**	**11 56 30.5**	**-1.2**
ULN				IAmb	IAmb	11 56 34.4	
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**33.65**	**315**	P	**P**	**11 56 34.7**	**-0.4**
SONM	**Songino Array**	**33.65**	**315**	P	**P**	**11 56 34.8**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=103,slow=6.5,SNR=3.9						
SONM				LR	LR	12 10 45.4	
	comp=Z,31nm,18.6s,baz=113,slow=37						
	comp=Z,0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.50**	**265**	P	**P**	**11 57 32.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**40.50**	**265**	P	**P**	**11 57 35.4**	**+2.0**
	comp=Z,0.4nm,0.4s,baz=71,slow=8.6,SNR=4.7						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**48.39**	**318**	P	**P**	**11 58 35.1**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=112,slow=5.5,SNR=6.9						
ZALV				LR	LR	12 20 22.1	
	comp=Z,20nm,18.7s,baz=110,slow=38						
	comp=Z,1.2nm,0.5s						
WB0	**Warramunga Arr**	**48.42**	**190**	P	**P**	**11 58 37.0**	**+0.3**
WB0				IAmb	IAmb	11 58 49.1	
	comp=Z,3.5nm,0.8s						
WRA	**Warramunga Arr**	**48.60**	**190**	P	**P**	**11 58 37.6**	**-0.4**
WRA	**Warramunga Arr**	**48.60**	**190**	P	**P**	**11 58 39.0**	**+1.0**
	comp=Z,2.5nm,0.7s,baz=10,slow=8.4,SNR=11						
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**49.50**	**309**	P	**P**	**11 58 44.4**	**-0.4**
MKAR	**Makanchi Array**	**49.50**	**309**	P	**P**	**11 58 45.2**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=91,slow=9.8,SNR=16						
MKAR				PcP	**PcP**	**12 00 03.9**	**-2.8**
	comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=2.5						
	comp=Z,1.7nm,0.8s						
MAKZ	**Makanchi**	**49.72**	**309**	P	**P**	**11 58 45.2**	**-1.2**
KURK	**Kurchatov**	**51.94**	**314**	P	**P**	**11 59 02.4**	**-0.6**
KURK				IAmb	IAmb	11 59 03.8	
	comp=Z,5.9nm,0.9s						
KURBB	**Kurchatov Arra**	**52.00**	**314**	P	**P**	**11 59 03.5**	**0.0**
	comp=Z,1.4nm,0.3s,baz=89,slow=7.3,SNR=8.3						
	comp=Z,1.4nm,0.3s						
BVAR	**Borovoye Array**	**56.96**	**317**	P	**P**	**11 59 39.6**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=79,slow=7.0,SNR=7.4						
	comp=Z,1.9nm,0.5s						
KK31	**Karatay Array**	**58.17**	**305**	P	**P**	**11 59 48.5**	**+0.3**
KK31				IAmb	IAmb	11 59 49.5	
	comp=Z,2.9nm,0.6s						
KKAR	**Karatay Array**	**58.17**	**305**	P	**P**	**11 59 47.7**	**-0.6**
CHGR	**Chuyangaron**	**60.12**	**300**	P	**P**	**12 00 01.7**	**-0.2**
AB31	**Akbulak array**	**64.05**	**314**		**P**	**12 00 28.5**	**+0.5**
ABKAR	**Akbulak array**	**64.05**	**314**		**P**	**12 00 28.3**	**+0.3**
FINES	**FINESS Array B**	**76.70**	**334**	P	**P**	**12 01 46.0**	**+0.8**
FINES	**FINESS Array B**	**76.70**	**334**	P	**P**	**12 01 46.1**	**+1.0**
	comp=Z,3nm,0.8s,baz=77,slow=3.0,SNR=4.7						
	comp=Z,2.3nm,0.8s						
KBZ	**Khabaz**	**76.98**	**313**	P	**P**	**12 01 47.9**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=60,slow=6.2,SNR=5.6						
	comp=Z,1.3nm,0.5s						
RAYN	**Ar Rayn**	**84.44**	**294**	P	**P**	**12 02 26.6**	**-0.8**
BR131	**Keskin Array S**	**84.98**	**313**	P	**P**	**12 02 29.3**	**-0.6**
BR131				IAmb	IAmb	12 02 30.7	
	comp=Z,2.6nm,0.8s						
BRTR	**Keskin Array B**	**84.98**	**313**	P	**P**	**12 02 29.2**	**-0.8**
BRTR	**Keskin Array B**	**84.98**	**313**	P	**P**	**12 02 30.3**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=114,slow=5.5,SNR=5.7						
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**95.00**	**53**	P	**P**	**12 03 18.1**	**+0.7**
TXAR	**Lajitas Array**	**95.00**	**53**	P	**P**	**12 03 17.6**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=318,slow=4.6,SNR=2.4						
	comp=Z,0.3nm,0.7s						

*NEIC **06** 11:58:30.2±1.8, 11.˚15S±0.˚06×162.˚76E±0.˚08,h10km±1km, mb4.5/19,Error ellipse: s-maj=13.5km s-min=9.7km az=71.0*

*NOU **06** 11:58:32.2, 10.˚60S×163.˚18E,h85km,mb4.6/17,Solomon Islands*

*GCMT **06** 11:58:33.2±0.2, 11.˚18S±0.˚01×162.˚55E±0.˚01,h14km±1km, MW4.9/100,Moment Tensor Solution. s27,c34; s100,c147; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.10±.10; Mθθ=1.42±.09; Mϕϕ=1.33±.09; Mrθ=-0.09±.19; Mθϕ=2.46±.10; Mϕr=1.25±.24; Best double couple: Mo=3.08000×10¹⁶ NP1:ϕs=257.00000°,δ68.00000°, λ7.00000°. NP2:ϕs=164.00000°,δ84.00000°,λ158.00000°. Principal axes: T 3.1900, Plg20.0000°, Azm118.0000°; N -0.2120, Plg67.0000°, Azm329.0000°; P -2.9700, Plg11.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **06** 11:58:34.2±3.1, 11.˚35S×162.˚57E,h43km±28km,mb3.8/9, mbtmp4.1/11,ML4.0/2,MS4.1/47 Error ellipse: s-maj=27.9km s-min=23.5km az=130.0*

ISC 06 11:58:33.3±0.5,11.˚15S±0.˚07×162.˚75E±0.˚06,h34km,n101, σ1§49/63,mb4.4/20,MS4.1/46,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.25**	**301**		**Pn**	**11 59 21.6**	**-0.3**
HNR				Sn	**Sn**	**11 59 60.0**	**+0.6**
HNR	**Honiara**	**3.25**	**301**	P	**Pn**	**11 59 21.8**	**-0.1**
	72nm,0.3s,baz=253,slow=8.8,SNR=15						
HNR				S	**Sn**	**12 00 02.7**	**+3.3**
	2µm,1.0s,baz=49,slow=22,SNR=8.6						
	520nm,0.6s						
HNR	**Honiara**	**3.25**	**301**	P	**Pn**	**11 59 22.8**	**+0.9**
HNR	**Honiara**	**3.25**	**301**	S	**Sn**	**12 00 02.8**	**+3.4**
SAVO	**Savo Central**	**3.51**	**304**	P	**Pn**	**11 59 25.8**	**+0.2**
SANVU	**Saraoutou**	**6.08**	**135**		**Pn**	**12 00 00.6**	**-0.3**
SANVU	**Saraoutou**	**6.08**	**135**	P	**Pn**	**12 00 01.4**	**+0.5**
DZM	**Mont Dzumac**	**11.42**	**162**	P	**Pn**	**12 01 13.9**	**-0.3**
	0.2nm,0.3s,baz=342,slow=19,SNR=9.9						
DZM				LR	LR	12 04 28.0	
	comp=Z,827nm,19.9s,baz=354,slow=31						
	3.4nm,0.8s						
PMG	**Port Moresby**	**15.44**	**275**		**Pn**	**12 02 07.4**	**-1.4**
PMG	**Port Moresby**	**15.44**	**275**	P	**P**	**12 02 11.8**	**-1.2**
	14nm,0.9s,baz=357,slow=0.1,SNR=4.0						
PMG				LR	LR	12 07 19.6	
	comp=Z,1µm,21.3s,baz=122,slow=34						
TARA	**Tarawa**	**16.02**	**40**		**Pn**	**12 02 15.2**	**-1.1**
MSVF	**Nonsavu**	**16.19**	**116**	Pn	**Pn**	**12 02 17.1**	**-1.4**
GD1S	**Gladstone Soft**	**16.76**	**220**	P	**P**	**12 02 30.1**	**+2.6**
AUNRC	**North Rockhamp**	**16.82**	**222**	P	**P**	**12 02 31.1**	**+2.9**
EIDS	**Eidsvold**	**17.95**	**216**	P	**Pn**	**12 02 39.4**	**-1.0**
EIDS				IAmb	IAmb	12 03 06.0	
	comp=Z,17nm,0.9s						
EIDS	**Eidsvold**	**17.95**	**216**	P	**P**	**12 02 42.5**	**+1.8**
AUWSH	**Wavell State H**	**18.57**	**208**	P	**Pn**	**12 02 49.7**	**+1.8**
MTSU	**Mount Surprise**	**19.13**	**247**	P	**Pn**	**12 02 54.6**	**-0.2**
TW1H	**Toowoomba 1 Ha**	**19.20**	**210**	P	**Pn**	**12 02 56.8**	**+1.2**
COEN	**Coen**	**19.31**	**260**	P	**Pn**	**12 02 56.0**	**-1.0**
COEN				IAmb	IAmb	12 03 24.7	
	comp=Z,44nm,1.1s						
COEN	**Coen**	**19.31**	**260**	P	**Pn**	**12 02 56.5**	**-0.5**
ARMA	**Armidale**	**21.78**	**207**	P	**P**	**12 03 22.6**	**+0.1**
ARMA				IAmb	IAmb	12 03 36.7	
	comp=Z,20nm,1.1s						
ARMA	**Armidale**	**21.78**	**207**	P	**P**	**12 03 24.6**	**+2.1**
MMPI	**Merauke**	**22.20**	**275**	P	**P**	**12 03 26.3**	**-0.7**
AUPHS	**Peel High Scho**	**22.69**	**207**	P	**P**	**12 03 33.3**	**+1.2**
AULRC	**Lightning Ridg**	**22.82**	**215**	P	**P**	**12 03 34.7**	**+1.2**
QLP	**Quilpie**	**23.25**	**226**	P	**P**	**12 03 38.5**	**+0.7**
JAY	**Jayapura**	**23.49**	**290**	LR	LR	12 12 26.3	
	comp=Z,490nm,21.5s,baz=20,slow=36						
JAY	**Jayapura**	**23.49**	**290**	P	**P**	**12 03 40.1**	**-0.3**
GENI	**Genyem**	**23.96**	**289**	P	**P**	**12 03 44.6**	**-0.2**
	comp=Z,39nm,1.4s						
QIS	**Mount Isa**	**24.12**	**244**	P	**P**	**12 03 46.0**	**-0.3**
RAO	**Raoul Island**	**25.49**	**138**	LR	LR	12 12 26.5	
	comp=Z,675nm,18.1s,baz=17,slow=33						
SMPI	**Sarmi**	**25.54**	**289**	P	**P**	**12 03 57.3**	**-1.8**
	comp=Z,63nm,1.2s						
INKA	**Innaminka**	**26.44**	**228**	P	**P**	**12 04 06.5**	**-0.7**
STKA	**Stephens Creek**	**28.41**	**220**	LR	LR	12 15 06.5	
	comp=Z,1µm,18.4s,baz=37,slow=35						
WR8	**Warramunga Arr**	**28.55**	**249**		**P**	**12 04 23.9**	**-2.4**
WR8				IAmb	IAmb	12 04 37.3	
	comp=Z,9.7nm,1.1s						
WB0	**Warramunga Arr**	**28.61**	**249**	P	**P**	**12 04 25.4**	**-1.4**
WRAB	**Tennant Creek**	**28.69**	**249**	P	**P**	**12 04 27.3**	**-0.2**
WRAB				IAmb	IAmb	12 04 39.1	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**28.69**	**249**	P	**P**	**12 04 26.7**	**-0.8**
WRA	**Warramunga Arr**	**28.70**	**249**	P	**P**	**12 04 25.8**	**-1.8**
WRA	**Warramunga Arr**	**28.70**	**249**	P	**P**	**12 04 25.4**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=75,slow=8.2,SNR=8.2						
WRA				LR	LR	12 14 58.7	
	comp=Z,644nm,18.9s,baz=64,slow=35						
	comp=Z,0.5nm,0.5s						
URZ	**Urewera**	**29.90**	**157**	LR	LR	12 15 21.0	
	comp=Z,301nm,18.6s,baz=330,slow=34						
**A

comp=Z,51nm,18.2s,baz=266,slow=33
NEW Newport 91.75 41 LR LR 12 48 40.5
comp=Z,67nm,18.1s,baz=254,slow=33
MAKZ Makanchi 91.81 317 P **P** **12 11 38.1 +0.2**
MAKZ IAmb IAmb 12 11 59.5
comp=Z,2.8nm,1.1s
ZALV Zalesovo Beam 91.93 325 P **P** **12 11 36.0 -2.2**
ZALV Zalesovo Beam 91.93 325 LR LR 12 52 14.8
comp=Z,62nm,21.8s,baz=112,slow=35
KURBB Kurchatov Arra 94.89 321 LR LR 12 53 45.7
comp=Z,75nm,21.8s,baz=179,slow=35
PDAR Pinedale Array 95.79 48 LR LR 12 49 24.4
comp=Z,53nm,19.0s,baz=252,slow=32
YKA Yellowknife Ar 96.42 28 LR LR 12 50 14.0
comp=Z,84nm,19.4s,baz=291,slow=32
SNAA Sanae 96.80 185 LR LR 12 53 17.9
comp=Z,132nm,18.4s,baz=190,slow=34
ANMO Albuquerque 96.93 56 LR LR 12 50 33.9
comp=Z,134nm,18.8s,baz=1.5,slow=32
TXAR Lajitas Array 98.46 62 LR LR 12 50 40.6
comp=Z,102nm,19.2s,baz=265,slow=32

DJA 06 12:01:16.4±1.1,2°S±3°×12°8E±°,h21km±12km,M3.7/13, mb3.9/3,MLv3.5/13,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.60**	**157**	P	Pn	12 01 44.1	+0.6
AAI	**Ambon**	**1.82**	**184**	P	Pn	12 01 46.6	+0.1
NLAI	**Namlea**	**1.83**	**221**	P	Pn	12 01 46.8	+0.2
SANI	**Sanana**	**2.33**	**265**	P	Pn	12 01 53.7	+0.2
TNTI	**Ternate**	**2.78**	**340**	P	Pn	12 01 59.7	0.0
SWI	**Sorong**	**3.11**	**71**	P	Pn	12 02 04.4	+0.1
FAKI	**Fak Fak**	**4.07**	**105**	P	Pn	12 02 16.7	-0.8
KMSI	**Cibinong**	**4.96**	**299**	P	Pn	12 02 29.4	-0.3
LUWI	**Luwuk** 42nm,0.7s	**5.60**	**278**	P	Pn	12 02 37.7	-0.8
KDI	**Kendari** 0.3nm,0.7s	**6.05**	**250**	P	Pn	12 02 44.7	0.0
APSI	**Ampana** 0.1nm28nm,0.7s	**6.73**	**278**	P	Pn	12 02 54.4	+0.4
MRSI	**Marisa**	**6.78**	**290**	P	Pn	12 02 55.2	+0.5

*NNC **06** 12:15:18.9±3.6,36°.83N×70°.81E,h138km±71km,mb3.0, mpv3.6,Error ellipse: s-maj=34.3km s-min=33.7km az=79.0*
*IDC **06** 12:15:44.4±25.0,38°.17N×71°.43E,h301km±194km, mb3.5/1,mbtmp3.6/4,MS3.9/2,Error ellipse: s-maj=317.3km s-min=143.6km az=169.0*
ISC 06 12:15:17.5±3.1,36°.8N±0°.2×70°.7E±0°.2,h150km,n9, σ0.8s56/7,3C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 5.1nm,0.4s,baz=179,slow=53,SNR=6.3	**6.33**	**359**	⇓P	**Pn**	**12 16 48.5**	**0.0**
KK31	0.9nm,0.2s,baz=192,slow=24,SNR=3.4			⇑S	**Sn**	**12 18 00.5**	**+0.6**
AAK	**Ala-Archa** 1.0nm,0.5s	**6.55**	**25**	⇑P	**Pn**	**12 16 51.9**	**+0.2**
AAK	3.4nm,0.5s			⇑S	**Sn**	**12 18 04.6**	**-0.7**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=213,slow=12,SNR=4.8	**13.22**	**37**	P	**P**	**12 18 24.1**	**+0.3**
AB31	**Akbulak array** 1.1nm,0.4s,baz=142,slow=13,SNR=54	**14.74**	**331**	P	**P**	**12 18 40.1**	**-0.4**
KURBB	**Kurchatov Arra** 0.6nm,0.6s,baz=205,slow=10,SNR=3.6	**14.95**	**20**	P	**P**	**12 18 42.8**	**-0.1**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=206,slow=9.8,SNR=4.3	**19.77**	**25**	P	Pn	12 19 36.5	-2.3
ARCES	**ARCESS Array B** 4.1nm,1.1s,baz=142,slow=4.6,SNR=1.3 4.1nm,1.1s	**40.81**	**338**	P	P	12 22 47.8	+4.0
YAK	**Yakutsk** comp=Z,132nm,21.1s,baz=166,slow=38	**43.89**	**36**	LR	LR	12 42 56.8	
FRB	**Frobisher Bay** comp=Z,81nm,18.6s,baz=292,slow=38	**74.74**	**342**	LR	LR	13 02 33.0	

*MOS **06** 12:23:33.2±1.1,27°.11N×54°.93E,h12km,mb4.5/27,Error ellipse: s-maj=7.1km s-min=4.7km az=93.6*
*IDC **06** 12:23:33.7±0.6,27°.25N×54°.98E,h0km,mb4.1/23, mbtmp4.2/25,ML4.4/2,MS3.4/15,Error ellipse: s-maj=15.9km s-min=13.6km az=15.0*
*DSN **06** 12:23:34.0±1.6,27°.54N×54°.94E,h15km,ML4.0/14,Error ellipse: s-maj=20.1km s-min=6.2km az=19.0*
*NEIC **06** 12:23:35.6±1.4,27°.26N±0°.06×54°.82E±0°.06,h10km±1km, mb4.3/36,Error ellipse: s-maj=12.5km s-min=6.9km az=218.0*
*SGS **06** 12:23:35.1,27°.32N×55°.32E,h6km,Ml3.8*
*THR **06** 12:23:36.1±0.0,27°.24N×54°.95E,h14km±5km,ML4.2*
*TEH **06** 12:23:36.3,27°.16N×54°.97E,h18km±22km*
*OMAN **06** 12:23:37.1±0.1,27°.28N×55°.01E,h13km,mb4.7/10, ml4.2/22,Error ellipse: s-maj=1.0km s-min=0.5km az=19.0*
ISC 06 12:23:37.8±1.2,27°.26N±0°.04×54°.94E±0°.03,h23km±9km, n261,σ1.2s51/270,mb4.3/52,MS3.5/16,9C-5D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.65**	**309**	Pg	**Pn**	**12 23 50.8**	**-0.8**
BNDS	**Bandar-Abbas**	**1.10**	**83**	*e*Pg	**Pn**	**12 23 56.9**	**-1.1**
BNDS	comp=Z,8μm,1.0s			IAML		12 24 05.3	
GENO	**Geno**	**1.10**	**82**	Pg	**Pn**	**12 23 57.1**	**-1.0**
IBND	**Bandar-abas**	**1.43**	**82**	Pg	**Pn**	**12 24 03.0**	**+0.6**
IBND				Sg	**Sb**	**12 24 23.6**	**+1.9**
SHME	**Shamm** SNR=30	**1.61**	**138**	P	**Pn**	**12 24 04.5**	**-0.4**
SHME				S	**Sb**	**12 24 27.8**	**+0.9**
SHME	**Shamm** SNR=18	**1.61**	**138**	*e*P	**Pn**	**12 24 04.5**	**-0.4**
SHME				S	**Sb**	**12 24 28.6**	**+1.7**
JHRM	**Jahrom**	**1.73**	**316**	Pn	**Pb**	**12 24 09.8**	**+0.8**
BANOM	**Banah**	**1.80**	**137**	P	**Pn**	**12 24 07.1**	**-0.4**
BANOM				S	**Sn**	**12 24 31.2**	**+1.4**
BANOM	**Banah** SNR=96	**1.80**	**137**	*e*P	**Pn**	**12 24 07.3**	**-0.2**
UMQ	**Umm Al-Quwin** SNR=6.7	**1.84**	**159**	P	**Pn**	**12 24 08.0**	**-0.1**
UMQ	**Umm Al-Quwin**	**1.84**	**159**	P	**Pn**	**12 24 09.9**	**+1.9**
MASF	**Masafi** SNR=30	**2.18**	**150**	P	**Pn**	**12 24 13.8**	**+1.2**
MSFE	**Esma-Masafi** SNR=44	**2.19**	**150**	*e*P	**Pn**	**12 24 13.0**	**+0.1**
MDH	**Madha** SNR=56	**2.30**	**148**	P	**Pn**	**12 24 15.1**	**+0.7**
MDH				S	**Sn**	**12 24 43.7**	**+1.7**
MDH	**Madha** SNR=43	**2.30**	**148**	*e*P	**Pn**	**12 24 14.7**	**+0.3**
NAZ	**Nazwa, Dubai** SNR=28	**2.35**	**164**	P	**Pn**	**12 24 16.6**	**+1.5**
NAZ				S	**Sn**	**12 24 45.7**	**+2.4**
NAZ	**Nazwa, Dubai** SNR=12	**2.35**	**164**	*e*P	**Pn**	**12 24 16.4**	**+1.3**
KHNJ	**Kahnooj**	**2.55**	**74**	Pn	**Pn**	**12 24 17.7**	**-0.1**
UOSS	**Minazif**	**2.57**	**154**	Pn	**Pn**	**12 24 17.8**	**-0.3**
UOSS	**Minazif**	**2.57**	**154**		**Pn**	**12 24 17.7**	**-0.3**
UOSS	**Minazif**	**2.57**	**154**	P	**Pn**	**12 24 18.6**	**+0.6**
UOSS	**Minazif** SNR=23	**2.57**	**154**	*e*P	**Pn**	**12 24 18.3**	**+0.2**
FAQ	**Al Faqa, Dubai** SNR=16	**2.57**	**167**	P	**Pn**	**12 24 19.6**	**+1.5**
ASUD	**Al Ashush, Dub** SNR=11	**2.65**	**172**	P	**Pn**	**12 24 21.3**	**+2.2**
ASUD	**Al Ashush, Dub** SNR=10.0	**2.65**	**172**	*e*P	**Pn**	**12 24 21.0**	**+1.9**
HATD	**Hatta, Dubai** SNR=65	**2.65**	**156**	P	**Pn**	**12 24 21.0**	**+1.8**
HATD	**Hatta, Dubai** SNR=54	**2.65**	**156**	*e*P	**Pn**	**12 24 19.9**	**+0.7**
AJN	**Ajban** SNR=7.6	**2.69**	**179**	P	**Pn**	**12 24 22.4**	**+2.8**
ASHO	**Ashiyiah** SNR=44	**2.76**	**158**	P	**Pn**	**12 24 22.0**	**+1.3**
ASHO	**Ashiyiah** SNR=46	**2.76**	**158**	*i* P	**Pn**	**12 24 21.6**	**+1.0**
NGRK	**Negar Kerman**	**2.85**	**33**	Pn	**Pn**	**12 24 22.6**	**+0.4**
JRN	**Qarnain Island**	**2.98**	**220**	P	**Pn**	**12 24 23.8**	**+0.1**
KRBR	**Kerman**	**3.15**	**30**	Pn	**Pn**	**12 24 28.0**	**+1.7**
KRBR	**Kerman**	**3.15**	**30**	*i* P	**Pn**	**12 24 27.7**	**+1.4**
KRBR	comp=Z,460nm,1.0s			IAML		12 25 42.4	
ALNE	**Al Ain** SNR=11	**3.27**	**167**	P	**Pn**	**12 24 29.3**	**+1.5**
ALNE				S	**Sn**	**12 25 08.7**	**+2.6**
ALNE	**Al Ain** SNR=15	**3.27**	**167**	*i* P	**Pn**	**12 24 28.3**	**+0.5**
KHGB	**Koh Gabri**	**3.38**	**23**	Pn	**Pn**	**12 24 31.6**	**+2.1**
SOHO	**SOHO**	**3.43**	**155**	P	**Pn**	**12 24 29.8**	**-0.1**
SOHO	**SOHO** SNR=7.5	**3.43**	**155**	*i* P	**Pn**	**12 24 29.1**	**-0.8**
DSBU	**Dashti - Bushe**	**3.44**	**289**	Pn	**Pn**	**12 24 32.2**	**+2.2**
CHMN	**Cheshme madani**	**3.45**	**41**	Pn	**Pn**	**12 24 32.2**	**+1.7**
MZWR	**Madinat Zayed**	**3.61**	**196**	P	**Pn**	**12 24 34.0**	**+1.6**
MZWR				S	**Sn**	**12 25 16.3**	**+1.9**
KBAM	**BAM**	**3.62**	**58**	Pn	**Pn**	**12 24 34.1**	**+1.6**
GHWR	**Ruwais**	**3.78**	**210**	P	**Pn**	**12 24 35.6**	**+0.9**
KRM1	**Kerman Provinc**	**3.82**	**32**	Pn	**Pn**	**12 24 37.0**	**+1.5**
SHMA	**Al-Shehemyia**	**3.83**	**249**	P	**Pn**	**12 24 36.9**	**+1.6**
ZRDN	**Zarand Kerman**	**3.95**	**20**	Pn	**Pn**	**12 24 38.8**	**+1.6**
IMEH	**Mehriz**	**4.12**	**356**	Pn	**Pn**	**12 24 41.6**	**+2.0**
TRNA	**Turayna**	**4.19**	**234**	P	**Pn**	**12 24 41.5**	**+1.2**
TRNA				S	**Sn**	**12 25 31.6**	**+2.9**
HOQ	**Hoqain**	**4.24**	**149**	Pn	**Pn**	**12 24 39.8**	**-1.3**
HOQ	**Hoqain**	**4.24**	**149**	P	**Pn**	**12 24 39.5**	**-1.6**
SLWR	**Sila**	**4.32**	**223**	P	**Pn**	**12 24 42.8**	**+0.6**
SLWR				S	**Sn**	**12 25 34.8**	**+3.0**
IBAF	**Bafgh**	**4.35**	**7**	Pn	**Pn**	**12 24 44.4**	**+1.7**
MZR	**Muzera**	**4.44**	**198**	P	**Pn**	**12 24 44.4**	**+0.5**
MZR				S	**Sn**	**12 25 37.8**	**+3.0**
MZR	**Muzera** SNR=19	**4.44**	**198**	*i* P	**Pn**	**12 24 44.1**	**+0.3**
SMRA	**Abu-Samra**	**4.47**	**237**	P	**Pn**	**12 24 45.9**	**+1.7**
SMRA				S	**Sn**	**12 25 38.7**	**+3.2**
UMZA	**Um Al Zommool**	**4.53**	**177**	P	**Pn**	**12 24 46.2**	**+1.1**
UMZA				S	**Sn**	**12 25 38.8**	**+1.8**
KLNJ	**Kolanjah**	**4.75**	**323**	Pn	**Pn**	**12 24 50.4**	**+2.1**
KLNJ	**Kolanjah**	**4.75**	**323**	*e*Pn	**Pn**	**12 24 50.3**	**+2.0**
KLNJ	comp=Z,180nm,1.0s			IAML		12 26 48.6	
ICHK	**Chekchek**	**4.99**	**355**	Pn	**Pn**	**12 24 53.9**	**+2.4**
SMDO	**Samad** SNR=8.0	**5.04**	**145**	P	**Pn**	**12 24 53.2**	**+1.0**
SMDO				S	**Sn**	**12 25 51.7**	**+1.9**
IRAM	**Ramesheh**	**5.05**	**334**	Pn	**Pn**	**12 24 54.4**	**+2.0**
YZKH	**Yazd**	**5.12**	**357**	*e*Pn	**Pn**	**12 24 55.2**	**+2.0**
YZKH	comp=Z,61nm,1.0s			IAML		12 27 00.1	
WSAR	**Wadi Sarin**	**5.21**	**139**	P	**Pn**	**12 24 54.7**	**+0.2**
CHBR	**Chabahar**	**5.24**	**107**	Pn	**Pn**	**12 24 54.7**	**0.0**
CHBR	**Chabahar**	**5.24**	**107**	*e*Pn	**Pn**	**12 24 55.8**	**+1.1**
CHBR	comp=Z,43nm,1.0s			IAML		12 26 25.7	
IBRJ	**Brojen**	**5.63**	**326**	Pn	**Pn**	**12 25 03.1**	**+2.7**
JMDO	**Jabal Madar**	**5.65**	**149**	P	**Pn**	**12 25 01.0**	**+0.5**
WANAN	**Al Wanan**	**5.77**	**268**	P	**Pn**	**12 25 03.4**	**+1.3**
NASN	**Na'in**	**5.82**	**342**	*i* P	**Pn**	**12 25 04.1**	**+1.0**
NASN	comp=Z,39nm,1.0s			IAML		12 27 11.9	
NGCH	**Negor - Chabah**	**5.87**	**107**	P	**Pn**	**12 25 02.3**	**-1.2**
KFJS2	**Khafji**	**5.90**	**282**	P	**Pn**	**12 25 04.7**	**+0.9**
WBK	**Wadi Bani Khal**	**5.90**	**141**	P	**Pn**	**12 25 03.7**	**-0.2**
NHRD	**Haradh**	**5.90**	**246**	P	**Pn**	**12 25 05.4**	**+1.5**
BSRN	**Basiran**	**5.94**	**37**	Pn	**Pn**	**12 25 05.4**	**+0.9**
BSRN	**Basiran**	**5.94**	**37**	*e*Pn	**Pn**	**12 25 05.7**	**+1.2**
BSRN	comp=Z,65nm,1.0s			IAML		12 26 56.8	
TPRV	**Parvadeh(Tabas**	**5.94**	**14**	Pn	**Pn**	**12 25 06.0**	**+1.5**
ANAR	**Anarak**	**6.00**	**350**	Pn	**Pn**	**12 25 07.2**	**+1.8**
NHDN	**Nehbandan**	**6.07**	**46**	Pn	**Pn**	**12 25 08.0**	**+1.7**
JHBN	**Jahan bin**	**6.19**	**324**	Pn	**Pn**	**12 25 10.2**	**+2.1**
IKOO	**Kooshah**	**6.24**	**33**	Pn	**Pn**	**12 25 10.1**	**+1.4**
SMAN	**Sihmah**	**6.24**	**262**	P	**Pb**	12 25 40.7	+15
KFJS1	**Al Wafrah**	**6.27**	**280**	P	**Pn**	**12 25 11.0**	**+2.0**
IPIR	**Pirpir**	**6.45**	**328**	Pn	**Pn**	**12 25 13.4**	**+1.8**
JLN	**Jalan Bani Buh**	**6.51**	**140**	P	**Pn**	**12 25 11.3**	**-1.0**
TKDS	**Koohdasht(Taba**	**6.61**	**16**	Pn	**Pn**	**12 25 15.4**	**+1.7**
SRVN	**Saravan**	**6.63**	**87**	Pn	**Pn**	**12 25 15.1**	**+1.0**
SRVN	**Saravan**	**6.63**	**87**	*e*Pn	**Pn**	**12 25 14.7**	**+0.6**
SRVN	comp=Z,40nm,1.0s			IAML		12 25 28.2	
TABS	**Tabas**	**6.64**	**16**	*i* P	**Pn**	**12 25 15.9**	**+1.8**
TABS	comp=Z,47nm,1.0s			IAML		12 27 41.7	
KBD	**Kabd**	**6.67**	**288**	P	**Pn**	**12 25 16.2**	**+1.7**
IKLH	**Kolahrood**	**6.70**	**335**	Pn	**Pn**	**12 25 17.1**	**+2.0**
MHTO	**MHTO** SNR=11	**6.83**	**155**	P	**Pn**	**12 25 16.5**	**-0.1**
AFRZ	**Afriz**	**7.08**	**29**	Pn	**Pn**	**12 25 22.4**	**+2.2**
QAMS	**Qamsar**	**7.14**	**336**	Pn	**Pn**	**12 25 23.2**	**+2.0**
KHRJ	**Al Kharj**	**7.39**	**244**	P	**Pn**	**12 25 24.6**	**+0.2**
ISFB	**Sefidab**	**7.44**	**342**	Pn	**Pn**	**12 25 27.0**	**+1.9**
DQM	**DQM**	**7.68**	**161**	P	**Pn**	**12 25 27.5**	**-0.7**
KHMZ	**Khomeyn**	**7.76**	**328**	*e*Pn	**Pn**	**12 25 30.8**	**+1.3**
KHMZ	comp=Z,40nm,1.0s			IAML		12 27 05.9	
GHVR	**GHOM**	**7.85**	**337**	*e*Pn	**Pn**	**12 25 33.4**	**+2.7**
GHVR	comp=Z,32nm,1.0s			IAML		12 27 17.7	
SHRT	**Shahrakht**	**7.86**	**35**	*e*Pn	**Pn**	**12 25 33.1**	**+2.3**
SHRT	comp=Z,13nm,1.0s			IAML		12 28 01.0	
IVRN	**Varamin**	**8.19**	**341**	Pn	**Pn**	**12 25 36.5**	**+1.2**
IFIR	**Firoozkooh**	**8.56**	**348**	Pn	**Pn**	**12 25 43.5**	**+2.8**
DOK	**Doka** SNR=10	**8.63**	**185**	P	**Pn**	**12 25 40.6**	**-0.8**
DAMV	**Damavand**	**8.72**	**344**	*e*Pn	**Pn**	**12 25 44.5**	**+1.7**
SHAO	**Shalim** SNR=27	**9.22**	**176**	P	**Pn**	**12 25 48.5**	**-0.9**
SHAO	**Shalim** SNR=27	**9.22**	**176**	*i* P	**Pn**	**12 25 48.4**	**-1.0**
RAYN	**Ar Rayn**	**9.31**	**249**		**Pn**	**12 25 48.2**	**-2.5**
RAYN	**Ar Rayn**	**9.31**	**249**	P	**Pn**	**12 25 49.3**	**-1.4**
RAYN	**Ar Rayn** SNR=13	**9.31**	**249**	*i* P	**Pn**	**12 25 49.3**	**-1.4**
RAYN	**Ar Rayn**	**9.31**	**249**	P	**Pn**	**12 25 48.2**	**-2.5**
HRA	**Herat**	**9.48**	**40**		**Pn**	**12 25 52.9**	**-0.2**
DMTO	**DMTO**	**9.50**	**180**	P	**Pn**	**12 25 52.2**	**-1.1**
RBK	**Rabkut**	**9.73**	**184**	P	**Pn**	**12 25 57.4**	**+0.8**
KBL	**Kabul**	**14.11**	**56**		**Pn**	**12 26 55.4**	**-1.1**
KBL	**Kabul**	**14.11**	**56**	P	**Pn**	**12 26 55.4**	**-1.1**
AKT	**Akhty**	**15.37**	**339**	*e*P	**Pn**	**12 27 15.5**	**+2.1**
AKT	comp=Z,27nm,0.8s			pmax	pmax		
GNI	**Garni**	**15.39**	**329**		**Pn**	**12 27 12.4**	**-1.2**
GNI	**Garni** comp=Z,1.4nm,0.3s,baz=198,slow=9.6,SNR=1.8	**15.39**	**329**	Pn	**Pn**	**12 27 15.5**	**+1.8**
GNI	comp=Z,21nm,18.9s,baz=142,slow=36 comp=Z,5.5nm,0.5s			LR	LR	12 32 42.4	
GNI	**Garni**	**15.39**	**329**	P	**Pn**	**12 27 12.4**	**-1.2**
GNI	comp=Z,43nm,1.1s			pmax	pmax		
MARD	**Mardin**	**15.60**	**313**		**Pn**	**12 27 14.5**	**-1.9**
GURO	**Guroymak-BITLI**	**15.61**	**319**	Pn	**Pn**	**12 27 15.5**	**-1.0**
ASF	**Jabal al Asfar** comp=Z,0.8nm,0.3s,baz=26,slow=20,SNR=8.5	**16.42**	**292**	Pn	**Pn**	**12 27 23.4**	**-3.4**
CHGR	**Chuyangaron**	**16.45**	**43**	Pn	**Pn**	**12 27 26.2**	**-1.1**
CHGR	**Chuyangaron** comp=Z,10.0nm,1.1s	**16.45**	**43**	P	**Pn**	**12 27 26.2**	**-1.1**
CHGR				pmax	pmax		
BTLR	**Botlikh**	**16.93**	**337**	⇑*e*P	**Pn**	**12 27 34.1**	**+0.8**
BTLR	comp=Z,4.0nm,0.9s			pmax	pmax		
DVE	**Vedeno**	**17.22**	**338**	*e*P	**Pn**	**12 27 37.4**	**+0.5**
DVE	comp=Z,8.0nm,0.4s			pmax	pmax		
GAR	**Garm**	**17.38**	**44**		**Pn**	**12 27 37.4**	**-1.5**
GAR	comp=Z,18nm,1.1s			IAmb	IAmb	12 27 42.5	
BALJ	**Balqa**	**17.45**	**291**	P	**Pn**	**12 27 37.5**	**-2.3**
BALJ	comp=Z,19nm,0.9s			IAmb	IAmb	12 27 54.1	
MMAI	**Mount Meron Ar** comp=Z,1.4nm,0.3s,baz=104,slow=13,SNR=3.7 comp=Z,2.1nm,0.5s	**17.84**	**293**	Pn	**P**	**12 27 45.9**	**+0.6**
GAZ	**Gaziantep**	**17.94**	**308**		**Pn**	**12 27 43.3**	**-2.5**
ARPR	**Arapgir-MALATY**	**18.20**	**315**	P	**Pn**	**12 27 46.9**	**-2.2**
DRK	**Karamyk**	**18.58**	**45**	P	**P**	**12 27 53.8**	**+0.2**
DRK	**Karamyk**	**18.58**	**45**	P	**P**	**12 27 53.8**	**+0.2**
DRK	comp=Z,25nm,0.3s			pmax	pmax		
NEUR	**Neytrino**	**18.80**	**331**	*i* P	**Pn**	**12 27 58.6**	**+2.2**
KBZ	**Khabaz** comp=Z,7.6nm,0.9s,baz=149,slow=8.8,SNR=11	**19.10**	**332**	P	**Pn**	**12 28 01.1**	**+1.3**
KBZ	**Khabaz**	**19.10**	**332**	⇑*i*P	**Pn**	**12 28 01.3**	**+1.5**
KBZ	comp=Z,8.0nm,0.9s			pmax	pmax		
SHA1	**Shidzhatmaz**	**19.21**	**332**	*e*P	**P**	**12 28 00.1**	**-0.2**
ATD	**Arta Tunnel** comp=Z,5.8nm,20.5s,baz=50,slow=37	**19.34**	**218**	LR	LR	12 35 36.0	
KIV	**Kislovodsk**	**19.37**	**332**	P	**P**	**12 28 01.6**	**-0.4**
KIV	comp=Z,31nm,0.9s			IAmb	IAmb	12 28 26.2	
KIV	**Kislovodsk**	**19.37**	**332**	*e*P	**Pn**	**12 28 03.7**	**+0.5**
KIV	comp=Z,20nm,1.0s			pmax	pmax		
KIV	comp=Z,27nm,14.0s			MLR	MLR		
TRKS	**Terek-Say**	**19.48**	**39**	P	**P**	**12 28 02.6**	**-0.7**
TRKS	comp=Z,25nm,0.9s			pmax	pmax		
BNN	**Bunyan**	**19.70**	**311**	P	**P**	**12 28 03.9**	**-1.8**
BNN	comp=Z,10nm,0.8s			IAmb	IAmb	12 28 17.9	
CSS	**Mathiatis**	**20.01**	**298**	P	**P**	**12 28 07.0**	**-1.9**
CSS	comp=Z,12nm,0.9s			IAmb	IAmb	12 28 45.4	
GOF	**Gofitskoye**	**20.15**	**335**	*ce*P	Pn	12 28 11.8	-0.5
KK31	**Karatay Array**	**20.24**	**35**	P	**P**	**12 28 10.3**	**-1.0**
KK31	**Karatay Array**	**20.24**	**35**	*i* P	**P**	**12 28 11.2**	**-0.2**
KKAR	**Karatay Array**	**20.24**	**35**	P	**P**	**12 28 11.2**	**-0.2**
KKAR	**Karatay Array**	**20.24**	**35**	P	**P**	**12 28 11.2**	**-0.2**
RPOR	**Krasnaya Polya**	**20.24**	**328**	⇑*i*P	Pn	12 28 13.1	-0.4
ARSB	**Arslanbob** comp=Z,13nm,1.0s	**20.41**	**42**	P	**P**	**12 28 13.2**	**-0.1**
ARSB				IAmb	IAmb	12 28 23.9	
ARSB	**Arslanbob** comp=Z,13nm,1.0s	**20.41**	**42**	P	**P**	**12 28 13.3**	**-0.1**
ARSB				pmax	pmax		
SOC	**Sochi**	**20.42**	**327**	*e*P	**P**	**12 28 13.8**	**+0.5**
SOC				*e*		12 28 29.8	
SOC				*e*PPP	PPP	12 28 40.9	
SOC				*e*		12 32 05.2	
SOC				*e*SSS	SSS	12 32 32.6	
SOC	comp=Z,20nm,0.8s			pmax	pmax		
GUZR	**Guzeripl'**	**20.54**	**328**	⇑*i*P	Pn	12 28 16.3	-0.6
GUZR	comp=Z,295nm,0.7s			pmax	pmax		
KSH	**Kashi**	**21.34**	**50**	P	**P**	**12 28 16.9**	**-6.5**
KSH	comp=Z,7.0nm,0.7s			pmax	pmax		
ARLS	**Aral**	**21.54**	**42**	P	**P**	**12 28 28.2**	**+2.6**
ARLS	comp=Z,11nm,0.8s			pmax	pmax		
BR131	**Keskin Array S**	**21.62**	**310**	P	**P**	**12 28 24.2**	**-2.3**
BR131	comp=Z,8.3nm,0.8s			IAmb	IAmb	12 28 42.0	
BR131	**Keskin Array S**	**21.62**	**310**	P	**P**	**12 28 26.9**	**+0.5**
BR131	**Keskin Array S**	**21.62**	**310**	⇓*i*P	**P**	**12 28 27.2**	**+0.7**
BRTR	**Keskin Array B**	**21.62**	**310**		**P**	**12 28 25.8**	**-0.7**
BRTR	**Keskin Array B** comp=Z,6.2nm,1.0s,baz=133,slow=12,SNR=20	**21.62**	**310**	P	**P**	**12 28 27.6**	**+1.2**
BRTR	comp=Z,75nm,18.7s,baz=120,slow=42 comp=Z,6.2nm,1.0s			LR	LR	12 38 39.1	
AAK	**Ala-Archa**	**22.11**	**41**	P	**P**	**12 28 31.7**	**+0.1**
AAK	comp=Z,12nm,1.2s			IAmb	IAmb	12 28 40.2	
AAK	**Ala-Archa** comp=Z,3.6nm,0.6s,baz=230,slow=22,SNR=8.0	**22.11**	**41**	P	**P**	**12 28 32.5**	**+0.8**
AAK	comp=Z,97nm,18.6s,baz=244,slow=38 comp=Z,3.6nm,0.6s			LR	LR	12 37 33.1	
AAK	**Ala-Archa**	**22.11**	**41**	⇓*i*P	**P**	**12 28 31.8**	**+0.1**
AAK	comp=Z,5.0nm,1.0s			pmax	pmax		
AB31	**Akbulak array**	**22.30**	**9**		**P**	**12 28 33.4**	**-0.1**
AB31	comp=Z,18nm,1.4s			IAmb	IAmb	12 28 39.2	
AB31	**Akbulak array**	**22.30**	**9**	P	**P**	**12 28 32.8**	**-0.7**
ABKAR	**Akbulak array**	**22.30**	**9**		**P**	**12 28 33.1**	**-0.3**
ANN	**Anapa**	**22.43**	**326**	*e*P	**P**	**12 28 34.8**	**-0.1**
ANN				*e**PP	pP	12 28 37.8	-3.7
ANN				*e*S	**S**	**12 32 43.9**	**+3.9**
ANN	comp=Z,46nm,1.2s			pmax	pmax		
BOOM	**Boomskoye usch**	**22.88**	**43**	P	**P**	**12 28 40.1**	**+0.2**
BOOM	comp=Z,16nm,1.1s			IAmb	IAmb	12 29 16.1	
BOOM	**Boomskoye usch**	**22.88**	**43**	P	**P**	**12 28 40.1**	**+0.2**
BOOM	comp=Z,15nm,1.1s			pmax	pmax		
AKTO	**Aktyubinsk** comp=Z,176nm,19.5s,baz=166,slow=42	**23.26**	**5**	LR	LR	12 39 49.6	
AKTO	**Aktyubinsk**	**23.26**	**5**	P	**P**	**12 28 44.0**	**+0.5**
KDJ	**Kajisay**	**23.45**	**45**	P	**P**	**12 28 46.0**	**+0.3**
KDJ	comp=Z,17nm,1.8s			pmax	pmax		
TARG	**Taragay, Kyrgy**	**23.64**	**46**	P	**P**	**12 28 52.3**	**+4.5**
TARG	comp=Z,7.0nm,1.0s			pmax	pmax		
FURI	**Furi** comp=Z,75nm,20.5s,baz=98,slow=38	**23.88**	**223**	LR	LR	12 38 38.1	
VRH	**Novokhopyorsk**	**25.93**	**341**	*e*P	**P**	**12 29 07.4**	**-0.8**
VRH	comp=Z,10.0nm,0.9s			pmax	pmax		
BORK	**Borovoye**	**28.19**	**20**	⇓*i*P	**P**	**12 29 28.0**	**-0.5**
BORK	comp=Z,3.0nm,0.3s			pmax	pmax		
BVA0	**Borovoye Array**	**28.19**	**20**	*i* P	**P**	**12 29 28.2**	**-0.3**
BVAR	**Borovoye Array** comp=Z,2.0nm,0.3s,baz=192,slow=7.3,SNR=15	**28.19**	**20**	P	**P**	**12 29 28.3**	**-0.2**
BVAR	comp=Z,133nm,19.6s,baz=189,slow=41 comp=Z,2.0nm,0.3s			LR	LR	12 42 37.1	
EVN	**Everest**	**28.21**	**81**		**P**	**12 29 30.1**	**+0.4**
EVN	comp=Z,5.1nm,0.8s			IAmb	IAmb	12 29 37.0	
MAKZ	**Makanchi**	**28.86**	**

MNK				*i* P		**P**	**12 30 13.6**	**-3.0**
	comp=N,25nm,1.2s							
MNK				*i* P		**P**	**12 30 13.6**	**-3.0**
	comp=Z,13nm,0.7s,baz=132							
MNK				*i* PP		**PnPn**	**12 31 25.6**	**-3.0**
MNK				*i* PPP		PPP	12 31 36.6	
MNK				*i* S		**S**	**12 35 39.3**	**+1.3**
MNK				*i* SS		**SnSn**	**12 37 42.9**	**+0.7**
MNK				*i* SSS		SSS	12 37 58.6	
MNK				*i* LR		LR	12 43 57.1	
MNK	**Minsk**	**33.65**	**331**	*i* P		**P**	**12 30 13.5**	**-3.0**
MNK				*i*			12 31 25.5	
MNK				*i* S		**S**	**12 35 39.3**	**+1.3**
MNK				*i* SS		**SnSn**	**12 37 42.9**	**+0.7**
MNK				pmax		pmax		
	comp=E,21nm,0.8s							
MNK				pmax		pmax		
	comp=Z,13nm,0.7s							
MNK				pmax		pmax		
	comp=N,25nm,1.2s							
ZAA0	**Zalesovo Array**	**34.54**	**31**	P		**P**	**12 30 23.8**	**-0.5**
ZAA0				IAmb		IAmb	12 30 30.0	
	comp=Z,5.8nm,0.7s							
ZALV	**Zalesovo Beam**	**34.54**	**31**			**P**	**12 30 23.5**	**-0.7**
ZALV	**Zalesovo Beam**	**34.54**	**31**	P		**P**	**12 30 23.4**	**-0.9**
	comp=Z,2.9nm,0.4s,baz=239,slow=8.3,SNR=27							
	comp=Z,2.9nm,0.4s							
ZALV	**Zalesovo Beam**	**34.54**	**31**	*i* P		**P**	**12 30 23.6**	**-0.7**
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.4s							
LANS	**Liptovska Anna**	**34.95**	**318**	*e*P		**P**	**12 30 29.1**	**+1.1**
LANS	**Liptovska Anna**	**34.95**	**318**	*e*P		**P**	**12 30 29.1**	**+1.1**
KLMR	**Klimovskoe**	**35.18**	**347**	*e*P		**P**	**12 30 28.4**	**-1.3**
KLMR				pmax		pmax		
	comp=Z,25nm,1.6s							
MODS	**Modra-Piesok**	**35.96**	**316**	*e*P		**P**	**12 30 36.0**	**-0.7**
MODS	**Modra-Piesok**	**35.96**	**316**	*e*P		**P**	**12 30 36.0**	**-0.7**
VRAC	**Vranov**	**36.74**	**317**	LR		LR	12 48 01.5	
	comp=Z,38nm,20.2s,baz=115,slow=40							
GTA	**Gaotai**	**39.03**	**60**	*e*P		**P**	**12 31 03.4**	**+0.5**
GTA				pmax		pmax		
	comp=Z,16nm,1.1s							
GTA				LR		LR		
	comp=N,110nm,16.0s							
GTA				LR		LR		
	comp=E,170nm,17.1s							
GTA				LR		LR		
	comp=Z,230nm,18.5s							
FIA1	**FINESS Array S**	**39.27**	**339**	P		**P**	**12 31 04.0**	**-0.4**
FINES	**FINESS Array B**	**39.27**	**339**	P		**P**	**12 31 03.9**	**-0.6**
	comp=Z,4.0nm,0.9s,baz=143,slow=9.5,SNR=11							
	comp=Z,4.0nm,0.9s							
FINES	**FINESS Array B**	**39.27**	**339**	*i* P		**P**	**12 31 05.0**	**+0.6**
FINES				pmax		pmax		
	comp=Z,3.0nm,0.6s							
DAVOX	**Davos/Dischmat**	**40.26**	**311**	LR		LR	12 50 41.4	
	comp=Z,49nm,19.2s,baz=97,slow=40							
CMAR	**Chiang Mai Arr**	**41.31**	**93**	P		**P**	**12 31 22.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=283,slow=9.2,SNR=8.0							
	comp=Z,1.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**41.31**	**93**	*i* P		**P**	**12 31 22.2**	**+0.3**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
PZH	**PanZhiHua**	**41.56**	**80**	P		**P**	**12 31 25.4**	**+1.4**
BNI	**Bardonecchia**	**42.15**	**308**	P		**P**	**12 31 28.6**	**0.0**
LZH	**Lanzhou**	**42.17**	**65**	*e*P		**P**	**12 31 29.5**	**+0.5**
LZH				pP		pP	12 31 33.6	-2.5
LZH				sP		sP	12 31 36.2	-2.9
LZH				pmax		pmax		
	comp=Z,15nm,1.2s							
ECH	**Echery**	**42.37**	**313**	P		**P**	**12 31 28.9**	**-1.4**
ECH				pmax		pmax		
	comp=Z,8.0nm,1.2s							
KMI	**Kunming**	**42.74**	**82**	P		**P**	**12 31 34.4**	**+0.6**
KMI				pmax		pmax		
	comp=Z,11nm,0.9s							
HFS	**Hagfors**	**43.16**	**331**	P		**P**	**12 31 35.8**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=132,slow=8.6,SNR=13							
HFS				LR		LR	12 49 36.6	
	comp=Z,62nm,20.0s,baz=64,slow=36							
	comp=Z,1.4nm,0.4s							
NORES	**NORESS Array B**	**44.39**	**331**	P		**P**	**12 31 50.3**	**+4.0**
NB2	**NORSAR Subarra**	**44.68**	**331**	P		**P**	**12 31 47.4**	**-1.3**
	comp=Z,5.6nm,1.2s,baz=118,slow=8.6							
NOA	**NORSAR Array B**	**44.68**	**331**	P		**P**	**12 31 47.9**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=120,slow=7.6,SNR=4.9							
NOA				LR		LR	12 52 46.8	
	comp=Z,32nm,20.0s,baz=315,slow=39							
	comp=Z,1.1nm,0.6s							
SONM	**Songino Array**	**44.73**	**48**	P		**P**	**12 31 49.2**	**-0.2**
SONM	**Songino Array**	**44.73**	**48**	P		**P**	**12 31 48.6**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=269,slow=9.7,SNR=3.8							
	comp=Z,0.4nm,0.3s							
SONM	**Songino Array**	**44.73**	**48**	P		**P**	**12 31 49.2**	**-0.2**
SONM				pmax		pmax		
	comp=Z,3.0nm,1.3s							
ULN	**Ulaanbaatar**	**45.17**	**49**	⇑*i* P		**P**	**12 31 54.5**	**+1.5**
ULN				pmax		pmax		
	comp=Z,2.0nm,1.1s							
ARCES	**ARCESS Array B**	**45.64**	**346**	P		**P**	**12 31 55.9**	**-0.3**
ARCES	**ARCESS Array B**	**45.64**	**346**	P		P	12 32 01.4	+5.2
	comp=Z,2.0nm,0.9s,baz=161,slow=8.5,SNR=5.9							
ARCES	**ARCESS Array B**	**45.64**	**346**	P		**P**	**12 31 55.9**	**-0.3**
ARCES				pmax		pmax		
	comp=Z,15nm,1.3s							
NRIK	**Noril'sk**	**46.21**	**15**	*e*P		**P**	**12 32 00.1**	**-0.5**
NRIK				pmax		pmax		
	comp=Z,2.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**48.06**	**58**	*e*P		**P**	**12 32 16.4**	**+0.8**
HHC				pmax		pmax		
	comp=Z,13nm,0.7s							
HHC				pmax		pmax		
	comp=Z,110nm,7.0s							
ESDC	**Sonseca Array**	**49.87**	**300**	P		**P**	**12 32 27.7**	**-1.7**
ESDC				IAmb		IAmb	12 32 47.8	
	comp=Z,3.5nm,1.5s							
ESDC	**Sonseca Array**	**49.87**	**300**	P		**P**	**12 32 29.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=73,slow=7.1,SNR=4.6							
	comp=Z,0.5nm,0.5s							
EKA	**Eskdalemuir Ar**	**50.01**	**321**	P		**P**	**12 32 29.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=84,slow=7.2,SNR=4.8							
	comp=Z,0.3nm,0.3s							
TORD	**Torodi Ar. Bea**	**51.55**	**265**	P		**P**	**12 32 41.8**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=59,slow=8.1,SNR=4.1							
	comp=Z,2.0nm,0.4s							
SPITS	**Spitsbergen Ar**	**53.89**	**351**	P		**P**	**12 33 00.0**	**+1.2**
	comp=Z,15nm,1.1s,baz=128,slow=11,SNR=2.3							
	comp=Z,15nm,1.1s							
JMIC	**Jan Mayen**	**55.88**	**339**	LR		LR	12 58 02.4	
	comp=Z,52nm,20.8s,baz=316,slow=37							
ZEA	**Zeya**	**58.18**	**42**	*e*P		**P**	**12 33 30.5**	**+0.7**
YAK	**Yakutsk**	**59.19**	**32**	*e*P		**P**	**12 33 36.0**	**-0.7**
YAK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
TIXI	**Tiksi**	**59.32**	**21**	⇓*i* P		**P**	**12 33 38.4**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,1.0nm,1.0s							
DBIC	**Dimbokro**	**60.17**	**262**	P		**P**	**12 33 42.0**	**-2.2**
DBIC	**Dimbokro**	**60.17**	**262**	P		**P**	**12 33 43.1**	**-1.1**
	comp=Z,3.7nm,1.0s,baz=51,slow=4.5,SNR=2.3							
	comp=Z,3.7nm,1.0s							
KSRS	**Korea Array**	**61.10**	**60**	P		**P**	**12 33 48.0**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=268,slow=6.0,SNR=5.3							
	comp=Z,0.7nm,0.3s							
BOSA	**Boshof**	**62.43**	**209**	P		**P**	**12 33 58.9**	**-0.4**
BOSA	**Boshof**	**62.43**	**209**	P		**P**	**12 33 59.2**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=27,slow=8.3,SNR=7.5							
BOSA				LR		LR	13 01 54.9	
	comp=Z,88nm,18.1s,baz=110,slow=37							
	comp=Z,3.0nm,0.7s							
FITZ	**Fitzroy Crossi**	**82.00**	**115**	P		**P**	**12 35 55.7**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=319,slow=5.5,SNR=19							
	comp=Z,4.1nm,0.6s							
IMAR	**Indian Mountai**	**84.49**	**11**	P		**P**	**12 36 08.4**	**-0.1**
G31M	**Satah River**	**85.85**	**4**	P		**P**	**12 36 15.3**	**0.0**
ILAR	**Eielson Array**	**86.70**	**9**	P		**P**	**12 36 18.5**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=335,slow=4.0,SNR=2.7							
	comp=Z,0.4nm,0.9s							
WB0	**Warramunga Arr**	**89.98**	**112**	P		**P**	**12 36 35.3**	**-0.5**
WRA	**Warramunga Arr**	**90.02**	**112**	P		**P**	**12 36 35.0**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=313,slow=4.1,SNR=13							
	comp=Z,0.6nm,0.5s							
WRA	**Warramunga Arr**	**90.02**	**112**	*i* P		**P**	**12 36 35.2**	**-0.8**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.4s							
WR8	**Warramunga Arr**	**90.16**	**112**	P		**P**	**12 36 36.1**	**-0.6**
WR8				IAmb		IAmb	12 37 17.1	
	comp=Z,5.5nm,1.4s							
ASAR	**Alice Springs**	**91.47**	**116**	P		**P**	**12 36 41.8**	**-0.9**
ASAR	**Alice Springs**	**91.47**	**116**	P		**P**	**12 36 41.4**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=303,slow=4.7,SNR=14							
	comp=Z,0.9nm,0.5s							
ASAR	**Alice Springs**	**91.47**	**116**	P		**P**	**12 36 41.8**	**-0.9**
DLBC	**Dease Lake**	**94.53**		S		LR	13 26 49.5	
	comp=Z,27nm,18.3s,baz=312,slow=40							
QSPA	**South Pole Qui**	**117.10**	**180**	PKP		**PKiKP**	**12 42 21.9**	**+1.7**
	comp=Z,1.1nm,1.0s,baz=222,slow=2.5,SNR=2.4							

*NAO **06** 12:43:27.6±1.0, 79.˚50N×3.˚37E, h15km, ML2.9*
*BER **06** 12:43:27.7±3.1, 79.˚52N×3.˚29E, h10km, mb(Pn)3.8, ML2.0(DNK), Confirmed Earthquake*
*DNK **06** 12:43:28.7±3.4, 79.˚50N×3.˚24E, h35km±90km, ML2.0*
*FCIAR **06** 12:43:31.0, 79.˚30N×4.˚07E, h10km, station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.50*
*KOLA **06** 12:43:31.3, 79.˚41N×5.˚14E, h0km, ML2.3, Error ellipse: s-maj=34.8km s-min=25.3km az=20.0, Greenland sea, Knipovich ridge, north*

ISC 06 12:43:22.9±0.8, 79˚29N±0˚05×3˚34E±0˚04, h16km, n33, σ2s20/55, 3C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.68**	**98**	Pn	**Pg**	**12 43 56.2**	**+1.2**
KBS				Sn	**Sb**	**12 44 15.2**	**+1.2**
KBS	**Kingsbay**	**1.68**	**98**	P	**Pg**	**12 43 56.0**	**+1.0**
KBS				S	**Sb**	**12 44 14.1**	**+0.1**
KBS	**Kingsbay**	**1.68**	**98**	⇑*i* P	**Pg**	**12 43 56.1**	**+1.2**
KBS				*e*S	**Sb**	**12 44 15.1**	**+1.0**
KBS				IAML		12 44 25.7	
	comp=Z,49nm,0.2s						
KBS	**Kingsbay**	**1.68**	**98**	*i* P	**Pg**	**12 43 56.3**	**+1.2**
KBS				*i* S	**Sb**	**12 44 15.0**	**+1.0**
BRBB	**Barentsburg B**	**2.45**	**114**	Pn	**Pg**	**12 44 09.2**	**-0.7**
BRBB				Sn	**Sb**	**12 44 37.3**	**+0.9**
BRBB	**Barentsburg B**	**2.45**	**114**	P	**Pg**	**12 44 08.6**	**-1.3**
BRBB				S	**Sb**	**12 44 36.5**	**+0.1**
BRBB	**Barentsburg B**	**2.45**	**114**	*e*P	**Pg**	**12 44 08.3**	**-1.5**
BRBB				*e*S	**Sb**	**12 44 36.0**	**-0.4**
BRBA	**Barentsburg A**	**2.48**	**114**	Pn	**Pg**	**12 44 09.5**	**-0.8**
BRBA				Sn	**Sb**	**12 44 37.0**	**-0.1**
BRBA	**Barentsburg A**	**2.48**	**114**	*e*P	**Pg**	**12 44 09.4**	**-0.8**
BRBA				*e*S	**Sb**	**12 44 36.4**	**-0.7**
BRBA				IAML		12 44 44.0	
	comp=Z,30nm,0.7s						
SPA0	**Spitsbergen Ar**	**2.79**	**107**	Pn	**Pb**	**12 44 12.8**	**+0.5**
	baz=310,slow=12						
SPA0				Sn	**Sb**	**12 44 44.6**	**-1.5**
	baz=293,slow=14						
SPA0	**Spitsbergen Ar**	**2.79**	**107**	⇑*i* P	**Pb**	**12 44 12.7**	**+0.5**
SPA0				*i* S	**Sb**	**12 44 43.9**	**-2.1**
SPA0	**Spitsbergen Ar**	**2.79**	**107**	⇑*i* P	**Pb**	**12 44 12.7**	**+0.5**
SPA0				Pn	**Pb**	**12 44 12.8**	**+0.5**
	baz=310,slow=12						
SPA0				*e*S	**Sb**	**12 44 44.0**	**-2.1**
SPA0				Sn	**Sb**	**12 44 44.6**	**-1.5**
	baz=293,slow=14						
SPA0				IAML		12 44 51.8	
	comp=Z,26nm,0.5s						
SPITS	**Spitsbergen Ar**	**2.79**	**107**	P	**Pb**	**12 44 12.6**	**+0.4**
SPITS				S	**Sb**	**12 44 44.2**	**-1.9**
HSPB	**Hornsund (broa**	**3.40**	**126**	Pn	**Pb**	**12 44 22.0**	**-0.6**
HSPB				Sn	**Sb**	**12 44 58.6**	**-5.0**
HSPB	**Hornsund (broa**	**3.40**	**126**	P	**Pb**	**12 44 21.8**	**-0.9**
HSPB				S	**Sb**	**12 44 59.6**	**-4.0**
HSPB	**Hornsund (broa**	**3.40**	**126**	*e*P	**Pb**	**12 44 21.5**	**-1.2**
HSPB				*e*S	**Sb**	**12 44 59.3**	**-4.4**
HSPB	**Hornsund (broa**	**3.40**	**126**	*e*P	**Pb**	**12 44 22.0**	**-0.6**
HSPB				*e*S	**Sb**	**12 44 59.5**	**-4.1**
HSPB				IAML		12 45 01.6	
	comp=Z,14nm,0.5s						
NOR	**Nord**	**4.04**	**314**	Pn	**Pn**	**12 44 26.1**	**+2.1**
NOR	**Nord**	**4.04**	**314**	*i* P	**Pn**	**12 44 26.0**	**+2.1**
NOR				*i* S	**Sn**	**12 45 06.8**	**-4.0**
NOR				IAML		12 45 12.4	
	comp=Z,4.6nm,0.4s						
NOR	**Nord**	**4.04**	**314**	*i* P	**Pn**	**12 44 26.0**	**+2.1**
NOR				*i* S	**Sn**	**12 45 07.2**	**-3.7**
NOR				IAML		12 45 12.4	
	comp=Z,4.6nm,0.4s						
DAG	**Danmarks Havn**	**5.20**	**252**	*i* P	Pb	12 44 46.9	-6.3
DAG				*i* S	**Sn**	**12 45 38.9**	**-0.3**
DAG				IAML		12 45 44.7	
	comp=Z,5.9nm,0.7s						
DAG	**Danmarks Havn**	**5.20**	**252**	*i* P	**Pn**	**12 44 43.7**	**+3.9**
DAG				*e*S	**Sn**	**12 45 37.3**	**-1.9**
DAG				IAML		12 45 44.7	
	comp=Z,5.9nm,0.7s						
HOPEN	**Hopen**	**5.31**	**111**	Pn	Pn	12 44 47.4	+6.1
HOPEN				Sn	**Sn**	**12 45 44.2**	**+2.2**
HOPEN	**Hopen**	**5.31**	**111**	*e*P	Pn	12 44 46.8	+5.4
HOPEN				*e*S	**Sn**	**12 45 43.0**	**+0.9**
DBG	**Daneborg**	**7.28**	**239**	Pn	Pn	12 45 13.4	+5.0
DBG				Sn	**Sn**	**12 46 30.1**	**-0.4**
DBG	**Daneborg**	**7.28**	**239**	*i* P	Pn	12 45 14.3	+5.9
DBG				*i* S	**Sn**	**12 46 29.0**	**-1.5**
DBG				IAML		12 46 48.0	
	comp=Z,4.1nm,0.6s						
DBG	**Daneborg**	**7.28**	**239**	*i* P	Pn	12 45 13.3	+4.9
DBG				*i* S	**Sn**	**12 46 29.0**	**-1.5**
DBG				IAML		12 46 48.0	
	comp=Z,4.1nm,0.6s						
ZFI2	**Zemlya Franca-**	**7.66**	**57**	*e*P	**Pn**	**12 45 16.4**	**+2.9**
ZFI2				*e*S	**Sn**	**12 46 34.8**	**-4.9**
	comp=Z,13nm,2.7s						
OMEGA	**Omega**	**7.67**	**58**	*e*P	**Pn**	**12 45 16.5**	**+2.8**
OMEGA				*e*S	**Sn**	**12 46 35.2**	**-4.9**
	comp=Z,14nm,2.4s						
NEEM	**North Greenlan**	**10.77**	**288**	*i* P	**Pn**	**12 45 57.4**	**+0.9**
NEEM				*i* S	Sn	12 47 42.0	-15
NEEM				IAML		12 47 57.7	
	comp=Z,6.6nm,0.7s						
NEEM	**North Greenlan**	**10.77**	**288**	*i* P	**Pn**	**12 45 57.4**	**+0.9**
NEEM				*i* S	Sn	12 47 42.0	-15
NEEM				IAML		12 47 57.7	
	comp=Z,6.6nm,0.7s						
ARA0	**ARCESS Array S**	**11.33**	**138**	Pn	Pn	12 46 11.3	+7.5
	baz=336,slow=11						
ARA0	**ARCESS Array S**	**11.33**	**138**	Pn	Pn	12 46 11.3	+7.5
	baz=336,slow=11						

IDC 06 12:50:20.6±1.2, 20˚88S×176˚46W, h0km, mb3.9/4, mbtmp4.1/5, ML4.9/1, Error ellipse: s-maj=36.8km s-min=30.7km az=101.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.19**	**196**	P	Pn	12 54 33.1	-1.4
	4.1nm,0.3s,baz=355,slow=4.5,SNR=12						
	12nm,0.5s						
ASAR	**Alice Springs**	**45.84**	**257**	P	P	12 58 45.1	+0.4
	1.3nm,0.7s,baz=98,slow=7.5,SNR=17						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**45.98**	**262**	P	P	12 58 45.7	-0.2
	0.8nm,0.7s,baz=96,slow=7.9,SNR=14						
	0.8nm,0.7s						
QSPA	**South Pole Qui**	**69.19**	**180**	P	P	13 01 29.2	+0.3
	1.8nm,0.7s,baz=40,slow=1.0,SNR=17						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**88.37**	**12**	P	P	13 03 14.4	+0.5
	0.3nm,0.6s,baz=209,slow=5.9,SNR=6.9						
	0.3nm,0.6s						
AKASG	**Malin Array Be**	**144.03**	**332**	PKP	PKPab	13 09 55.5	+0.1
	1.5nm,0.3s,baz=43,slow=4.1,SNR=7.1						
BRTR	**Keskin Array B**	**148.16**	**313**	PKPbc	PKPbc	13 10 07.5	-1.3
	0.8nm,0.4s,baz=147,slow=5.6,SNR=5.0						

*WEL **06** 12:52:13.0±0.7, 32˚S±12˚×17˚8W±2˚6, h180km±18km, M3.8/14, mB4.3/12, MLv4.5/14, Mw(mB)3.4/12, Error ellipse: s-maj=37.7km s-min=5.3km az=113.7, confirmed*
*IDC **06** 12:52:15.5±9.2, 32˚50S×178˚51W, h100km±88km, mb3.7/2, mbtmp3.9/3, ML3.1/1, Error ellipse: s-maj=79.9km s-min=53.6km az=166.0*

ISC 06 12:52:12.0±1.7, 32˚4S±0˚1×178˚1W±0˚3, h100km, n38, σ1s84/64, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.15**	**3**	P	**Pn**	**12 53 01.0**	**+1.2**
GLKZ				S	**Sn**	**12 53 34.5**	**-2.0**
MXZ	**Matakaoa Point**	**5.92**	**209**	P	**Pn**	**12 53 37.1**	**-0.1**
MXZ				S	**Sn**	**12 54 43.8**	**+0.2**
WMGZ	**Waiomatatini S**	**6.10**	**207**	P	**Pn**	**12 53 42.0**	**+2.3**
WMGZ				S	**Sn**	**12 54 49.7**	**+1.7**
PKGZ	**Pakihiroa**	**6.28**	**209**	P	**Pn**	**12 53 43.1**	**+1.0**
PKGZ				S	**Sn**	**12 54 53.1**	**+0.8**
HAZ	**Te Kaha**	**6.31**	**211**	P	**Pn**	**12 53 44.5**	**+2.0**
HAZ				S	**Sn**	**12 54 55.5**	**+2.5**
PUZ	**Puketiti**	**6.38**	**207**	P	**Pn**	**12 53 44.9**	**+1.4**
PUZ				S	**Sn**	**12 54 55.0**	**+0.1**
RUGZ	**Raukumara Rang**	**6.53**	**211**	P	**Pn**	**12 53 46.7**	**+1.1**
RUGZ				S	**Sn**	**12 54 58.2**	**-0.4**
TWGZ	**Tauwhareparae**	**6.58**	**208**	P	**Pn**	**12 53 47.2**	**+1.0**
TWGZ				S	**Sn**	**12 55 01.4**	**+1.7**
TKGZ	**Te Karaka**	**6.86**	**208**	P	**Pn**	**12 53 51.3**	**+1.4**
TKGZ				S	**Sn**	**12 55 08.2**	**+1.8**
MWZ	**Matawai**	**6.90**	**210**	P	**Pn**	**12 53 50.8**	**+0.3**
MWZ				S	**Sn**	**12 55 08.6**	**+1.0**
URZ	**Urewera**	**7.02**	**213**	P	**Pn**	**12 53 52.5**	**+0.4**
	0.4nm,0.3s,baz=255,slow=4.6,SNR=11						
URZ				S	**Sn**	**12 55 08.0**	**-2.4**
	8.6nm,0.3s,baz=104,slow=22,SNR=12						
	1.1nm,0.3s						
URZ	**Urewera**	**7.02**	**213**	P	**Pn**	**12 53 52.5**	**+0.4**
URZ				S	**Sn**	**12 55 11.5**	**+1.1**
RAGZ	**Rawiri**	**7.09**	**210**	P	**Pn**	**12 53 54.2**	**+1.1**
RAGZ				S	**Sn**	**12 55 09.6**	**-2.5**
RIGZ	**Rimuhau**	**7.13**	**207**	P	**Pn**	**12 53 53.1**	**-0.5**
RIGZ				S	**Sn**	**12 55 13.8**	**+0.9**
WCZ	**Waipu Caves**	**7.18**	**239**	P	Pn	12 53 57.7	+3.3
MUGZ	**Murupara**	**7.36**	**213**	P	**Pn**	**12 53 56.1**	**-0.5**
MUGZ				S	**Sn**	**12 55 17.4**	**-1.2**
SNGZ	**Shannon Statio**	**7.36**	**209**	P	**Pn**	**12 53 57.6**	**+0.8**
SNGZ				S	**Sn**	**12 55 19.7**	**+1.0**
KNZ	**Kokohu**	**7.43**	**206**	P	**Pn**	**12 53 57.6**	**-0.1**
OUZ	**Omahuta**	**7.46**	**246**	P	Pn	12 54 04.9	+6.8
MHGZ	**Mahia Peninsul**	**7.46**	**205**	S	**Sn**	**12 55 18.0**	**-3.2**
RAHZ	**Arahi**	**7.58**	**210**	P	**Pn**	**12 54 00.1**	**+0.4**
RAHZ				S	**Sn**	**12 55 25.1**	**+1.1**
MTHZ	**Maungataniwha**	**7.63**	**211**	P	**Pn**	**12 54 00.7**	**+0.2**
MTHZ				S	**Sn**	**12 55 26.3**	**+1.0**
WHHZ	**Waihua**	**7.65**	**208**	P	**Pn**	**12 54 01.3**	**+0.6**
WHHZ				S	**Sn**	**12 55 27.3**	**+1.5**
NMHZ	**Naumai**	**7.85**	**210**	P	**Pn**	**12 54 03.2**	**-0.2**
NMHZ				S	**Sn**	**12 55 30.4**	**-0.3**
ARHZ	**Aropaoanui**	**7.91**	**209**	P	**Pn**	**12 54 04.2**	**0.0**
ARHZ				S	**Sn**	**12 55 30.9**	**-1.1**
BKZ	**Black Stump Fm**	**8.04**	**212**	P	**Pn**	**12 54 05.0**	**-1.0**
BKZ				S	**Sn**	**12 55 33.8**	**-1.5**
MCHZ	**McNeill Hill**	**8.19**	**210**	P	**Pn**	**12 54 07.4**	**-0.5**
MCHZ				S	**Sn**	**12 55 37.6**	**-1.1**
KWHZ	**Kaweka Forest**	**8.29**	**211**	P	**Pn**	**12 54 07.9**	**-1.4**
KWHZ				S	**Sn**	**12 55 38.0**	**-3.3**
KRHZ	**Kereru**	**8.49**	**210**	P	**Pn**	**12 54 09.5**	**-2.6**
KRHZ				S	**Sn**	**12 55 40.5**	**-5.7**
PXZ	**Pawanui**	**8.62**	**207**	P	**Pn**	**12 54 11.2**	**-2.6**
PXZ				S	**Sn**	**12 55 47.6**	**-1.7**
TSZ	**Takapari Road**	**9.01**	**211**	P	**Pn**	**12 54 16.0**	**-3.1**
DVHZ	**Dannevirke**	**9.12**	**209**	P	**Pn**	**12 54 19.8**	**-1.0**
DVHZ				S	**Sn**	**12 55 58.0**	**-3.6**
WAZ	**Wanganui**	**9.22**	**215**	S	**Sn**	**12 56 03.5**	**-0.3**
BFZ	**Birch Farm**	**9.42**	**207**	P	**Pn**	**12 54 21.8**	**-2.9**
BFZ				S	**Sn**	**12 56 03.5**	**-5.2**
EAZ	**Earnscleugh**	**16.10**	**214**	P	**P**	**12 55 55.8**	**+1.9**
ASAR	**Alice Springs**	**42.96**	**269**	P	**P**	**13 00 02.2**	**+0.8**
	0.5nm,0.4s,baz=109,slow=7.7,SNR=12						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**44.13**	**274**	P	**P**	**13 00 11.2**	**+0.4**
	1.8nm,0.3s,baz=112,slow=8.0,SNR=45						
	1.8nm,0.3s						
FINES	**FINESS Array B**	**147.00**	**339**	PKPbc	**PKPab**	**13 11 44.8**	**+0.8**
	2.5nm,0.9s,baz=46,slow=6.6,SNR=7.4						

JMA 06 12:52:40.0±0.2, 23˚9N×123˚4E±0˚4, h26km±2km, MV3.1/16, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.44**	**62**	P	Pb	12 52 49.1	-0.2
HATJ				S	Sb	12 52 55.6	0.0
IRIF	**Iriomote-Funau**	**0.57**	**34**	P	Pb	12 52 51.

Principal axes: T 1.9022, Plg57.0000°, Azm295.0000°; N 0.2099, Plg7.0000°, Azm195.0000°; P -2.1121, Plg32.0000°, Azm100.0000°;
JMA ***06*** *13:16:15.1±0.1,38˚.3N±0˚.3×141˚.9E±0˚.6,h46km,MD4.2/39, MV4.4/39,E OFF MIYAGI PREF .*
JMA Felt II J1 at E OFF MIYAGI PREF .
ISC 06 13:16:14.9±0.5,38˚.32N±0˚.04×141˚.87E±0˚.06,h46km±3km, h46km:pP-P,n232,σ1§28/228,mb4.5/79,MS3.5/23, 13C-35D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.32**	**268**	⇓*i*P		**Pn**		**13 16 23.9**	**+0.1**
JIKH				⇓S		**Sn**		**13 16 30.0**	**-0.2**
JIKH	**Ishinomakikobu**	**0.32**	**268**	A		A		13 16 23.9	
comp=N,56nm,0.7s,comp=E,79nm,0.9s									
JIO	**Ouri**	**0.43**	**288**	⇓*i*P		**Pn**		**13 16 25.2**	**+0.2**
JIO				⇓S		**Sn**		**13 16 32.3**	**0.0**
JIO	**Ouri**	**0.43**	**288**	A		A		13 16 25.2	
comp=N,20nm,1.2s,comp=E,25nm,1.1s									
JKMT	**Kesennumamotoy**	**0.58**	**328**	⇓*i*P		**Pn**		**13 16 27.2**	**+0.3**
JKMT				⇓S		**Sn**		**13 16 35.5**	**-0.1**
JKMT	**Kesennumamotoy**	**0.58**	**328**	A		A		13 16 27.2	
comp=N,11nm,1.0s,comp=E,29nm,0.9s									
OFUJ	**Ofunato**	**0.77**	**348**	⇓*i*P		**Pn**		**13 16 29.6**	**+0.1**
OFUJ				⇓S		**Sn**		**13 16 40.1**	**0.0**
OFUJ	**Ofunato**	**0.77**	**348**	A		A		13 16 29.6	
comp=N,15nm,0.7s,comp=E,15nm,0.4s,comp=Z,9.0nm,0.5s									
JOFO	**Osakifurukawao**	**0.80**	**291**	A		A		13 16 30.0	
comp=N,24nm,0.8s,comp=E,30nm,0.5s									
JMK	**Ichinoseki**	**0.81**	**321**	⇓*i*P		**Pn**		**13 16 30.4**	**+0.5**
JMK				⇓S		**Sn**		**13 16 41.0**	**+0.1**
JOU	**Okura**	**0.95**	**273**	⇓*i*P		**Pn**		**13 16 32.2**	**+0.4**
JOU				⇓S		**Sn**		**13 16 44.6**	**+0.3**
JOU	**Okura**	**0.95**	**273**	A		A		13 16 32.2	
comp=N,13nm,0.5s,comp=E,19nm,0.6s									
JMM	**Marumori**	**0.96**	**242**			**Pn**		**13 16 31.6**	**-0.4**
JMM	**Marumori**	**0.96**	**242**	P		**Pn**		**13 16 31.6**	**-0.4**
JMM	**Marumori**	**0.96**	**242**	S		**Sn**		**13 16 42.9**	**-1.7**
JMM	**Marumori**	**0.96**	**242**	⇓*i*P		**Pn**		**13 16 31.6**	**-0.4**
JMM				⇓*e*S		**Sn**		**13 16 43.7**	**-0.9**
JMM	**Marumori**	**0.96**	**242**	A		A		13 16 31.6	
comp=N,7.0nm,1.3s,comp=E,8.0nm,0.6s									
JMST	**Minamisoumatoc**	**0.98**	**233**	A		A		13 16 32.5	
comp=N,20nm,0.4s,comp=E,14nm,0.3s									
JFK	**Kawauchi**	**1.23**	**220**	⇓*i*P		**Pn**		**13 16 35.3**	**-0.5**
JFK				⇓S		**Sn**		**13 16 50.0**	**-1.3**
JFK	**Kawauchi**	**1.23**	**220**	A		A		13 16 35.3	
comp=N,6.0nm,1.3s,comp=E,6.0nm,0.7s									
JOM	**Ohasama**	**1.23**	**339**	⇓*i*P		**Pn**		**13 16 36.3**	**+0.6**
JOM	**Ohasama**	**1.23**	**339**	A		A		13 16 36.3	
comp=N,7.0nm,0.3s,comp=E,12nm,0.3s									
JYK	**Kaneyama**	**1.32**	**297**	⇓*i*P		**Pn**		**13 16 37.5**	**+0.5**
JYK	**Kaneyama**	**1.32**	**297**	A		A		13 16 37.5	
comp=N,5.0nm,3.2s,comp=E,5.0nm,0.9s									
JYAR	**Yonezawaarcadi**	**1.42**	**254**	A		A		13 16 38.9	
comp=N,13nm,1.0s,comp=E,10.0nm,0.8s									
JYS	**Shirataka**	**1.42**	**267**	⇓*i*P		**Pn**		**13 16 38.7**	**+0.4**
JYS	**Shirataka**	**1.42**	**267**	A		A		13 16 38.7	
comp=N,8.0nm,1.5s,comp=E,7.0nm,0.6s									
JOTO	**OTAMA OYAMA**	**1.43**	**238**	*i* P		**Pn**		**13 16 38.6**	**+0.2**
JRG	**Rokugo**	**1.44**	**318**	⇓*i*P		**Pn**		**13 16 39.3**	**+0.7**
JRG	**Rokugo**	**1.44**	**318**	A		A		13 16 39.3	
comp=N,9.0nm,1.0s,comp=E,6.0nm,0.3s									
ONAJ	**Iwakimizuishiy**	**1.48**	**215**	A		A		13 16 39.8	
comp=N,7.0nm,0.3s,comp=E,9.0nm,0.3s									
JYA	**Atsumi**	**1.71**	**280**	A		A		13 16 43.2	
comp=N,8.0nm,1.2s,comp=E,11nm,0.5s									
JYW	**Yuwa**	**1.78**	**314**	A		A		13 16 44.2	
comp=N,11nm,1.1s,comp=E,11nm,1.0s									
JKEN	**Kujiedanarisaw**	**1.89**	**356**	A		A		13 16 45.8	
comp=N,14nm,0.4s,comp=E,13nm,0.7s									
JTM	**Tenmabayashi**	**2.54**	**346**			**Pn**		**13 16 54.1**	**+0.6**
JTM	**Tenmabayashi**	**2.54**	**346**	P		**Pn**		**13 16 54.9**	**+1.3**
JTM	**Tenmabayashi**	**2.54**	**346**	S		**Sn**		**13 17 25.6**	**+2.3**
JSD	**Sado**	**2.86**	**265**			**Pn**		**13 16 57.7**	**-0.2**
JSD	**Sado**	**2.86**	**265**	P		**Pn**		**13 16 59.4**	**+1.5**
MJAR	**Matsushiro Arr**	**3.41**	**240**			**Pn**		**13 17 06.9**	**+1.3**
MJAR	**Matsushiro Arr**	**3.41**	**240**	P		**Pn**		**13 17 07.5**	**+1.9**
comp=E,13nm,0.3s,baz=33,slow=16,SNR=29									
MJAR					LR	LR		13 18 41.9	
comp=E,437nm,20.4s,baz=64,slow=43									
MJAR	**Matsushiro Arr**	**3.41**	**240**	P		**Pn**		**13 17 06.9**	**+1.3**
MAJO	**Matsushiro**	**3.41**	**240**			**Pn**		**13 17 07.7**	**+2.1**
MAJO	**Matsushiro**	**3.41**	**240**	P		**Pn**		**13 17 07.9**	**+2.3**
MAJO	**Matsushiro**	**3.41**	**240**	*d*P		**Pn**		**13 17 07.2**	**+1.6**
MJB9	**Matsu-Tunnel**	**3.41**	**240**			**Pn**		**13 17 07.8**	**+2.2**
ERM	**Erimo**	**3.82**	**15**	Pn		**Pn**		**13 17 11.7**	**+0.5**
ERM	**Erimo**	**3.82**	**15**	P		**Pn**		**13 17 11.6**	**+0.5**
ERM	**Erimo**	**3.82**	**15**	P		**Pn**		**13 17 11.7**	**+0.5**
JEM	**Erimo**	**3.82**	**15**	P		**Pn**		**13 17 11.7**	**+0.6**
JGF	**Kuroka**	**4.52**	**234**			**Pn**		**13 17 23.5**	**+2.7**
JGF	**Kuroka**	**4.52**	**234**	P		**Pn**		**13 17 23.3**	**+2.5**
INU	**Inuyama**	**4.89**	**234**			**Pn**		**13 17 27.8**	**+1.9**
INU	**Inuyama**	**4.89**	**234**	P		**Pn**		**13 17 28.9**	**+3.0**
JHJ2	**Mitsune**	**5.46**	**198**	Pn		**Pn**		**13 17 32.9**	**-0.7**
JHJ2	**Mitsune**	**5.46**	**198**	P		**Pn**		**13 17 34.5**	**+0.8**
JHJ	**Hachijo jima 2**	**5.46**	**199**	P		**Pn**		**13 17 33.0**	**-0.7**
comp=E,50nm,0.2s,baz=339,slow=20,SNR=22									
JHJ					S	**Sn**		**13 18 32.6**	**-2.5**
comp=E,119nm,0.3s,baz=242,slow=23,SNR=6.3									
JHJ					LR	LR		13 19 13.9	
comp=E,38nm,21.6s,baz=349,slow=33									
ASAJ	**Asahikawa**	**5.82**	**5**	P		**Pn**		**13 17 38.6**	**+0.1**
comp=E,16nm,0.3s,baz=213,slow=11,SNR=60									
ASAJ					S	**Sn**		**13 18 44.1**	**+0.2**
comp=E,28nm,0.7s,baz=248,slow=19,SNR=1.6									
JKA	**Kamikawa-asahi**	**5.82**	**5**			**Pn**		**13 17 37.9**	**-0.7**
NMR	**Nemuro--Hokkai**	**5.83**	**29**	⇓*i*P		**Pn**		**13 17 36.7**	**-2.0**
NMR				*i* S		**Sn**		**13 18 38.3**	**-5.9**
GLVR	**Golovnino**	**6.08**	**26**	⇓*i*P		**Pn**		**13 17 41.6**	**-0.5**
GLVR				*i* S		**Sn**		**13 18 47.3**	**-2.9**
GLVR					pmax	pmax			
comp=Z,30nm,0.1s									
GLVR					smax	smax			
comp=N,434nm,0.3s									
GLVR					smax	smax			
comp=E,87nm,0.3s									
RUSJ	**Misakicho**	**6.32**	**23**	*e*P		**Pn**		**13 17 45.2**	**-0.1**
RUSJ				*e*S		**Sn**		**13 18 53.3**	**-2.8**
YUK	**Yuzh-Kuril'sk**	**6.45**	**27**	*d i*P		**Pn**		**13 17 46.5**	**-0.7**
YUK				*i* S		**Sn**		**13 18 54.2**	**-5.3**
YUK					pmax	pmax			
comp=Z,63nm,0.3s									
YUK					pmax	pmax			
comp=N,8.0nm,0.1s									
YUK					smax	smax			
comp=N,426nm,0.4s									
YUK					smax	smax			
comp=E,70nm,0.4s									
TEY	**Ternei**	**7.78**	**331**	⇑*e*P		Pn		13 18 11.6	+6.2
TEY					pmax	pmax			
comp=Z,90nm,0.7s									
TEY					pmax	pmax			
comp=N,90nm,0.7s									
TEY					pmax	pmax			
comp=E,50nm,0.7s									
KUR	**Kuril'sk**	**8.23**	**31**	*de*P		**Pn**		**13 18 11.5**	**-0.1**
YSS	**Yuzhno-Sakhali**	**8.65**	**4**	Pn		**Pn**		**13 18 15.8**	**-1.6**
YSS	**Yuzhno-Sakhali**	**8.65**	**4**	*e*P		**Pn**		**13 18 15.4**	**-2.0**
YSS					MLR	MLR			
comp=Z,200nm,16.0s									
MSHR	**Mys Shultsa**	**9.21**	**301**	⇓*e*P		**Pn**		**13 18 27.4**	**+2.4**
MSHR					pmax	pmax			
comp=Z,36nm,0.8s									
PSTR	**Posyet**	**9.47**	**301**	⇑*i*P		**Pn**		**13 18 33.1**	**+4.5**
USRK	**Ussuriysk Ar.**	**9.47**	**311**	P		**Pn**		**13 18 30.0**	**+1.4**
comp=Z,14nm,0.5s,baz=126,slow=14,SNR=16									
USRK	**Ussuriysk Ar.**	**9.47**	**311**	P		**Pn**		**13 18 30.0**	**+1.4**
JNU	**Nakatsue**	**10.33**	**243**			**Pn**		**13 18 41.3**	**+0.9**
JNU	**Nakatsue**	**10.33**	**243**	P		**Pn**		**13 18 42.4**	**+2.0**
comp=Z,6.5nm,0.7s,baz=64,slow=4.3,SNR=8.7									
JNU					LR	LR		13 23 01.6	
comp=Z,236nm,20.5s,baz=48,slow=39									
JNU	**Nakatsue**	**10.33**	**243**	P		**Pn**		**13 18 43.5**	**+3.1**
KSRS	**Korea Array**	**11.06**	**270**	P		**Pn**		**13 18 52.5**	**+2.1**
comp=Z,1.2nm,0.5s,baz=80,slow=14,SNR=6.4									
MDJ	**Mudanjiang**	**11.15**	**308**	P		Pn		13 18 57.5	+6.0
MDJ					pmax	pmax			
comp=Z,18nm,1.2s									
HEH	**HeiHe**	**15.76**	**324**	*e*P		**Pn**		**13 19 48.8**	**-4.7**
HEH					pmax	pmax			
comp=Z,4.0nm,0.7s									
DL2	**Dalian**	**15.84**	**278**	P		**P**		**13 19 56.9**	**-0.7**
DL2					pmax	pmax			
comp=Z,33nm,1.0s									
DL2					LR	LR			
comp=Z,210nm,16.3s									
DL2					LR	LR			
comp=Z,190nm,18.0s									
DL2					LR	LR			
comp=Z,200nm,10.8s									
ZEA	**Zeya**	**18.40**	**332**	*e*P		**P**		**13 20 26.0**	**+0.1**
ZEA					pmax	pmax			
comp=Z,20nm,0.6s									
PET	**Petropavlovsk**	**18.74**	**33**	⇑*e*P		**Pn**		**13 20 30.5**	**+0.2**
PET					pmax	pmax			
comp=Z,62nm,1.9s									
HILR	**Hailar Array B**	**19.41**	**312**	P		**P**		**13 20 35.4**	**-1.7**
comp=Z,3.7nm,0.4s,baz=115,slow=9.9,SNR=6.9									
MA2	**Magadan**	**22.02**	**12**	P		**P**		**13 21 05.8**	**+0.7**
MA2	**Magadan**	**22.02**	**12**	P		**P**		**13 21 04.3**	**-0.8**
comp=Z,22nm,0.8s,baz=197,slow=8.9,SNR=6.2									
comp=Z,22nm,0.8s									
MA2	**Magadan**	**22.02**	**12**	P		**P**		**13 21 05.8**	**+0.7**
MA2					pmax	pmax			
comp=Z,55nm,1.0s									
YHNB	**Yeheng**	**22.08**	**238**	P		**P**		**13 21 05.6**	**-0.5**
HHC	**Hu-ho-hao-te**	**23.44**	**286**	*e*P		**P**		**13 21 20.8**	**+0.8**
HHC					pmax	pmax			
comp=Z,13nm,0.6s									
HHC					pmax	pmax			
comp=Z,87nm,4.9s									
TPUB	**Ta-pu**	**23.52**	**237**	P		**P**		**13 21 17.5**	**-3.3**
LYN	**LuoYang**	**23.90**	**270**	P		**P**		**13 21 24.0**	**-0.3**
LYN					pmax	pmax			
comp=Z,40nm,0.8s									
GUMO	**Guam**	**24.78**	**173**	LR		LR		13 31 36.8	
comp=Z,15nm,21.7s,baz=348,slow=37									
YAK	**Yakutsk**	**24.90**	**346**			**P**		**13 21 31.2**	**-1.8**
YAK					IAmb	IAmb		13 21 36.0	
comp=Z,21nm,0.8s									
YAK	**Yakutsk**	**24.90**	**346**	LR		LR		13 32 02.2	
comp=Z,40nm,20.0s,baz=246,slow=38									
YAK	**Yakutsk**	**24.90**	**346**	*e*P		**P**		**13 21 31.4**	**-1.7**
YAK				*e**PP		**pP**		**13 21 45.1**	**0.0**
YAK				*e*PPP		PPP		13 22 12.2	
YAK				*e*S		**S**		**13 25 51.5**	**-1.3**
YAK				*e*SSS		SSS		13 26 51.0	
YAK					pmax	pmax			
comp=Z,24nm,0.9s									
YAK					pmax	pmax			
comp=N,14nm,1.2s									
YAK					pmax	pmax			
comp=E,6.0nm,1.2s									
YAK					smax	smax			
comp=E,317nm,3.3s									
YAK					smax	smax			
comp=N,341nm,3.4s									
SEY	**Seymchan**	**25.46**	**11**	LR		LR		13 31 26.9	
comp=N,34nm,18.2s,baz=30,slow=36									
XAN	**Xi'an**	**26.85**	**271**	P		**P**		**13 21 50.6**	**-0.5**
XAN					pmax	pmax			
comp=N,18nm,0.6s									
ULN	**Ulaanbaatar**	**26.95**	**302**	P		**P**		**13 21 52.4**	**+0.4**
ULN	**Ulaanbaatar**	**26.95**	**302**	⇑*e*P		**P**		**13 21 53.2**	**+1.2**
ULN					pmax	pmax			
comp=Z,11nm,2.3s									
SONM	**Songino Array**	**27.39**	**302**	P		**P**		**13 21 56.2**	**+0.2**
SONM	**Songino Array**	**27.39**	**302**	P		**P**		**13 21 56.1**	**+0.2**
comp=Z,2.3nm,0.7s,baz=118,slow=8.0,SNR=10									
SONM					LR	LR		13 32 21.0	
comp=Z,63nm,18.4s,baz=192,slow=35									
comp=Z,2.3nm,0.7s									
SONM	**Songino Array**	**27.39**	**302**	P		**P**		**13 21 56.2**	**+0.2**
SONM					pmax	pmax			
comp=Z,5.0nm,1.4s									
H11N2	**WAKE ISLAND Hy**	**28.52**	**123**	T		T		13 52 19.6	
baz=316,slow=75,SNR=312									
H11N1	**WAKE ISLAND Hy**	**28.53**	**123**	T		T		13 52 20.1	
baz=316,slow=75,SNR=335									
H11N3	**WAKE ISLAND Hy**	**28.54**	**123**	T		T		13 52 20.8	
baz=316,slow=75,SNR=264									
H11S1	**WAKE ISLAND Hy**	**29.28**	**125**	T		T		13 53 14.2	
baz=317,slow=76,SNR=110									
H11S3	**WAKE ISLAND Hy**	**29.28**	**125**	T		T		13 53 14.3	
baz=317,slow=76,SNR=140									
H11S2	**WAKE ISLAND Hy**	**29.30**	**125**	T		T		13 53 15.5	
baz=317,slow=76,SNR=119									
ZAK	**Zakamensk**	**29.77**	**306**	*e*P		**P**		**13 22 15.5**	**-1.6**
ZAK					pmax	pmax			
comp=Z,7.0nm,1.1s									
TLY	**Talaya**	**29.78**	**309**	P		**P**		**13 22 16.8**	**-0.1**
TLY	**Talaya**	**29.78**	**309**	*ce*P		**P**		**13 22 17.5**	**+0.5**
TLY					pmax	pmax			
comp=Z,5.0nm,1.0s									
LZDM	**Lanzhou Array**	**30.38**	**277**	P		**P**		**13 22 22.1**	**-0.7**
comp=Z,10nm,0.6s,baz=132,slow=2.2,SNR=8.2									
comp=Z,10nm,0.6s									
KNGR	**Kungurtug, Tuv**	**33.46**	**306**	⇑*i*P		**P**		**13 22 50.4**	**+1.0**
KNGR					pmax	pmax			
comp=Z,11nm,1.2s									
TIXI	**Tiksi**	**34.06**	**353**	P		**P**		**13 22 53.9**	**-0.3**
TIXI	**Tiksi**	**34.06**	**353**	⇓*i*P		**P**		**13 22 53.9**	**-0.3**
DGZ	**Jazzator, Alta**	**39.95**	**305**	*c i*P		**P**		**13 23 45.9**	**+1.2**
DGZ					pmax	pmax			
comp=Z,33nm,0.8s									
WMQ	**Urumqi**	**40.60**	**296**	*e*P		**P**		**13 23 52.4**	**+2.4**
WMQ					pmax	pmax			
comp=Z,41nm,0.9s									
WMQ					LR	LR			
comp=Z,170nm,20.1s									
ZAA0	**Zalesovo Array**	**41.33**	**311**	P		**P**		**13 23 56.2**	**+0.4**
ZAA0					IAmb	IAmb		13 23 56.6	
comp=Z,7.7nm,0.7s									
ZALV	**Zalesovo Beam**	**41.33**	**311**			**P**		**13 23 56.3**	**+0.5**
ZALV	**Zalesovo Beam**	**41.33**	**311**	P		**P**		**13 23 56.0**	**+0.2**
comp=Z,6.5nm,0.4s,baz=86,slow=8.0,SNR=35									
ZALV					PcP	**PcP**		**13 25 52.8**	**-0.6**
comp=Z,1.0nm,0.4s,baz=98,slow=2.5,SNR=4.4									
ZALV					LR	LR		13 41 41.1	
comp=Z,61nm,18.4s,baz=40,slow=37									
comp=Z,6.5nm,0.4s									
ZALV	**Zalesovo Beam**	**41.33**	**311**	*i* P		**P**		**13 23 56.0**	**+0.2**
ZALV					pmax	pmax			
comp=Z,7.0nm,0.4s									
CHTO	**Chiang Mai**	**41.97**	**255**	P		**P**		**13 24 01.2**	**-0.3**
CHTO	**Chiang Mai**	**41.97**	**255**	P		**P**		**13 24 01.2**	**-0.3**
CHTO					pmax	pmax			
comp=Z,3.0nm,0.8s									
CMAR	**Chiang Mai Arr**	**42.18**	**254**	P		**P**		**13 24 03.2**	**+0.1**
comp=Z,1.5nm,0.8s,baz=41,slow=6.7,SNR=8.2									
comp=Z,1.5nm,0.8s									
CMAR	**Chiang Mai Arr**	**42.18**	**254**	*i* P		**P**		**13 24 03.5**	**+0.3**
CMAR					pmax	pmax			
comp=Z,1.0nm,0.5s									
NRIK	**Noril'sk**	**42.26**	**335**	P		**P**		**13 24 03.3**	**+0.2**
NRIK					IAmb	IAmb		13 24 03.9	
comp=Z,10nm,1.4s									
NRIK	**Noril'sk**	**42.26**	**335**	P		**P**		**13 24 02.6**	**-0.6**
comp=Z,1.7nm,0.5s,baz=144,slow=10,SNR=3.5									
NRIK					LR	LR		13 42 43.4	
comp=Z,78nm,18.4s,baz=142,slow=38									
comp=Z,1.7nm,0.5s									
NRIK	**Noril'sk**	**42.26**	**335**	*de*P		**P**		**13 24 03.0**	**-0.2**
NRIK					pmax	pmax			
comp=Z,9.0nm,1.5s									
MK31	**Makanchi Array**	**43.75**	**301**	*c i*P		**P**		**13 24 15.6**	**0.0**
MKAR	**Makanchi Array**	**43.75**	**301**			**P**		**13 24 15.9**	**+0.3**
MKAR	**Makanchi Array**	**43.75**	**301**	P		**P**		**13 24 15.7**	**+0.1**
comp=Z,6.6nm,0.7s,baz=86,slow=9.7,SNR=58									
MKAR					LR	LR		13 41 38.3	
comp=Z,36nm,19.5s,baz=101,slow=35									
comp=Z,6.6nm,0.7s									
MKAR	**Makanchi Array**	**43.75**	**301**	*i* P		**P**		**13 24 15.6**	**0.0**
MKAR					pmax	pmax			
comp=Z,6.0nm,0.6s									
MAKZ	**Makanchi**	**43.96**	**301**			**P**		**13 24 17.8**	**+0.5**
MAKZ					IAmb	IAmb		13 24 19.1	
comp=Z,6.9nm,0.8s									
MAKZ	**Makanchi**	**43.96**	**301**	P		**P**		**13 24 17.8**	**+0.5**
MAKZ					pmax	pmax			
comp=Z,7.0nm,0.8s									
KURK	**Kurchatov**	**45.43**	**307**			**P**		**13 24 29.0**	**+0.1**
KURK	**Kurchatov**	**45.43**	**307**	*c i*P		**P**		**13 24 28.8**	**-0.1**
KURK					pmax	pmax			
comp=Z,29nm,0.9s									
KURBB	**Kurchatov Arra**	**45.51**	**307**	P		**P**		**13 24 29.2**	**-0.2**
comp=Z,20nm,0.8s,baz=82,slow=8.2,SNR=179									
KURBB					LR	LR		13 44 22.5	
comp=Z,50nm,18.2s,baz=172,slow=37									
comp=Z,20nm,0.8s									
KDAK	**Kodiak Island**	**45.91**	**43**	LR		LR		13 50 17.9	
comp=Z,7.7nm,18.0s,baz=229,slow=44									
E22K	**Anaktuvuk Pass**	**46.30**	**28**	P		**P**		**13 24 37.1**	**+1.5**
E22K					IAmb	IAmb		13 24 39.1	
comp=Z,5.9nm,1.2s									
PDGK	**Podgornoye**	**46.50**	**297**	P		**P**		**13 24 36.5**	**-1.1**
EVN	**Everest**	**46.64**	**274**			**P**		**13 24 39.7**	**+0.2**
EVN					IAmb	IAmb		13 24 42.2	
comp=Z,16nm,1.1s									
TOLK	**Toolik Lake Re**	**47.16**	**28**	P		**P**		**13 24 43.3**	**+1.0**
TOLK					IAmb	IAmb		13 25 20.9	
comp=Z,5.9nm,1.2s									
TARG	**Taragay, Kyrgy**	**48.16**	**295**			**P**		**13 24 51.2**	**+0.3**
TARG					IAmb	IAmb		13 25 34.0	
comp=Z,9.8nm,1.0s									
TARG	**Taragay, Kyrgy**	**48.16**	**295**	P		**P**		**13 24 51.2**	**+0.3**
TARG					pmax	pmax			
comp=Z,10.0nm,1.0s									
ILAR	**Eielson Array**	**48.22**	**33**	P		**P**		**13 24 51.2**	**+0.8**
comp=Z,0.9nm,0.7s,baz=276,slow=7.0,SNR=12									
ILAR					pP	**pP**		**13 25 04.1**	**+1.0**
comp=Z,1.0nm,0.7s,baz=265,slow=6.4,SNR=5.8									
comp=Z,0.9nm,0.7s									
D25K	**Kavik River**	**48.34**	**27**	P		**P**		**13 24 52.0**	**+0.6**
D25K					IAmb	IAmb		13 24 53.7	
comp=Z,3.3nm,0.7s									
E25K	**Arctic Village**	**48.64**	**28**	P		**P**		**13 24 55.9**	**+2.2**
E25K					IAmb	IAmb		13 25 17.1	
comp=Z,4.3nm,1.3s									
BMAR	**Burnt Mountain**	**49.03**	**29**	P		**P**		**13 24 58.7**	**+2.0**
BOOM	**Boomskoye usch**	**49.24**	**297**	P		**P**		**13 25 00.5**	**+1.6**
BOOM	**Boomskoye usch**	**49.24**	**297**	P		**P**		**13 25 00.5**	**+1.6**
BOOM					pmax	pmax			
comp=Z,31nm,1.5s									
TKM2	**Tokmak 2**	**49.35**	**298**	P		**P**		**13 25 00.5**	**+0.8**
SNR=9.9									
SCRK	**Sand Creek**	**49.54**	**34**	P		**P**		**13 25 01.5**	**+0.7**
KULM	**Kulim**	**49.78**	**239**	P		**P**		**13 25 03.6**	**+0.5**
KULM					IAmb	IAmb		13 25 05.1	
comp=Z,4.8nm,0.8s									
BVAR	**Borovoye Array**	**49.98**	**312**	P		**P**		**13 25 04.2**	**0.0**
comp=Z,3.0nm,0.6s,baz=67,slow=8.3,SNR=15									
BVAR					pP	**pP**		**13 25 17.4**	**+0.5**
comp=Z,2.9nm,0.6s,baz=77,slow=8.3,SNR=6.1									
BVAR					PcP	**PcP**		**13 26 23.8**	**+0.2**
comp=Z,2.8nm,0.5s,baz=85,slow=3.4,SNR=7.1									
BVAR					LR	LR		13 47 09.0	
comp=Z,45nm,19.4s,baz=95,slow=37									
comp=Z,3.0nm,0.6s									
BORK	**Borovoye**	**50.02**	**312**	⇓*i*P		**P**		**13 25 04.7**	**+0.3**
BORK					pmax	pmax			
comp=Z,2.0nm,0.5s									
AAK	**Ala-Archa**	**50.20**	**298**	LR		LR		13 48 18.1	
comp=Z,51nm,18.5s,baz=96,slow=38									
H27K	**Steamboat Moun**	**50.33**	**31**	P		**P**		**13 25 08.7**	**+2.1**
H27K					IAmb	IAmb		13 25 34.6	
comp=Z,5.8nm,1.4s									
ARTI	**Arti**	**55.75**	**318**	P		**P**		**13 25 46.4**	**-0.2**
comp=Z,14nm,0.6s,baz=74,slow=4.0,SNR=23									
ARTI					LR	LR		13 52 00.8	
comp=Z,51nm,18.5s,baz=174,slow=38									
comp=Z,14nm,0.6s									
ARTI	**Arti**	**55.75**	**318**	*c i*P		**P**		**13 25 46.6**	**0.0**
ARTI					*PP	**pP**		**13 26 00.2**	**+0.7**
ARTI								13 26 44.2	
ARTI								13 27 51.2	
ARTI					pmax	pmax			
comp=Z,11nm,0.6s

comp=Z,54nm,18.8s,baz=73,slow=38
comp=Z,5.2nm,0.4s
NC204 NORSAR Array S 73.09 338 P **P** **13 27 40.4 +0.5**
NB2 NORSAR Subarra 73.14 337 P **P** **13 27 40.5 +0.3**
comp=Z,3.3nm,0.7s,baz=39,slow=6.2
NOA NORSAR Array B 73.14 337 P **P** **13 27 40.4 +0.2**
comp=Z,5.8nm,0.8s,baz=38,slow=6.0,SNR=22
NOA LR LR 14 02 13.8
comp=Z,34nm,22.0s,baz=25,slow=38
comp=Z,5.8nm,0.8s
AKASG Malin Array Be 73.50 322 IAmb IAmb 13 27 47.5
comp=Z,2.7nm,1.1s
AKASG Malin Array Be 73.50 322 P **P** **13 27 42.1 -0.3**
comp=Z,3.1nm,0.4s,baz=47,slow=6.1,SNR=16
AKASG LR LR 14 01 20.7
comp=Z,40nm,18.3s,baz=266,slow=37
comp=Z,3.1nm,0.4s
AKBB Malin Array Si 73.50 322 *d* iP **P** **13 27 42.5 +0.1**
AKBB pmax pmax
comp=Z,10.0nm,0.9s
KIEV Kiev 73.51 322 P **P** **13 27 41.9 -0.6**
KIEV pmax pmax
comp=Z,11nm,1.1s
NVAR Mina Array Bea 73.93 54 P **P** **13 27 47.5 +2.0**
comp=Z,0.2nm,0.5s,baz=310,slow=4.9,SNR=2.3
NVAR pP **PcP** **13 28 00.8 0.0**
comp=Z,1.5nm,0.9s,baz=296,slow=5.7,SNR=7.6
comp=Z,0.2nm,0.5s
BORG Borgarnes 76.42 353 *i* P **P** **13 28 00.6 +1.6**
PDAR Pinedale Array 76.51 46 P **P** **13 28 00.8 +0.5**
comp=Z,0.7nm,0.7s,baz=324,slow=0.6,SNR=8.3
PDAR pP **pP** **13 28 14.9 +1.3**
comp=Z,1.3nm,0.6s,baz=265,slow=2.4,SNR=11
comp=Z,0.7nm,0.7s
BUR08 Bucovina Ar. S 77.51 322 P **P** **13 28 05.9 +0.2**
BUR08 IAmb IAmb 13 28 32.9
comp=Z,6.5nm,1.1s
BURAR Bucovina Array 77.53 322 P **P** **13 28 05.9 +0.2**
BURAR IAmb IAmb 13 28 06.9
comp=Z,3.3nm,0.7s
BURAR Bucovina Array 77.53 322 P **P** **13 28 05.9 +0.2**
BURAR pmax pmax
comp=Z,3.0nm,0.7s
STHS Stebnicka Huta 78.11 325 *eP* **P** **13 28 09.3 +0.5**
STHS Stebnicka Huta 78.11 325 *eP* **P** **13 28 09.3 +0.5**
OJC Ojcow 78.17 326 P **P** **13 28 09.3 +0.2**
OJC Ojcow 78.17 326 P **P** **13 28 09.3 +0.2**
BR131 Keskin Array S 78.27 312 ⇓ *i* P **P** **13 28 10.4 +0.4**
BRTR Keskin Array B 78.27 312 P **P** **13 28 10.2 +0.2**
comp=Z,1.1nm,0.6s,baz=94,slow=4.0,SNR=7.2
comp=Z,1.1nm,0.6s
MLR Muntele Rosu 78.64 320 LR LR 14 05 46.8
comp=Z,46nm,18.0s,baz=41,slow=38
DRGR 79.32 322 P **P** **13 28 16.0 +0.4**
DRGR pmax pmax
comp=Z,2.0nm,0.9s
MORC Moravsky Berou 79.48 327 P **P** **13 28 16.7 +0.4**
MORC IAmb IAmb 13 28 18.4
comp=Z,6.5nm,1.0s
MORC Moravsky Berou 79.48 327 P **P** **13 28 16.7 +0.4**
MORC pmax pmax
comp=Z,7.0nm,1.0s
DPC Dobruska-Polom 79.56 328 P **P** **13 28 17.5 +0.7**
DPC pmax pmax
comp=Z,4.0nm,1.2s
KRLC Kraliky 79.58 328 P **P** **13 28 17.2 +0.3**
KRLC pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 80.16 330 *i* P **P** **13 28 20.0 +0.1**
CLL pmax pmax
comp=Z,6.0nm,0.8s
CLL Collm 80.16 330 *i* P **P** **13 28 20.0 +0.1**
comp=Z,6.0nm,0.8s
RAYN Ar Rayn 80.50 292 P **P** **13 28 21.7 -0.6**
RAYN pmax pmax
comp=Z,5.0nm,1.1s
KRUC Moravsky 80.51 327 P **P** **13 28 22.2 +0.3**
KRUC pmax pmax
comp=Z,6.0nm,1.2s
MODS Modra-Piesok 80.65 326 *eP* **P** **13 28 22.5 -0.1**
MODS Modra-Piesok 80.65 326 *eP* **P** **13 28 22.5 -0.1**
TREC Trest 80.72 328 P **P** **13 28 23.7 +0.7**
TREC pmax pmax
comp=Z,10.0nm,1.1s
RONA Rosalia, Austr 81.59 326 *eP* **P** **13 28 28.8 +1.1**
comp=Z,4.2nm,0.8s
KHC Kasperske Hory 81.64 329 ⇑ *iP* **P** **13 28 28.3 +0.4**
KHC pmax pmax
comp=Z,14nm,2.5s
GERES GERESS Array B 81.81 328 P **P** **13 28 28.6 -0.2**
comp=Z,1.6nm,0.8s,baz=22,slow=5.0,SNR=7.3
GERES LR LR 14 07 17.7
comp=Z,42nm,18.9s,baz=22,slow=38
comp=Z,1.6nm,0.8s
EKA Eskdalemuir Ar 82.04 341 P **P** **13 28 29.8 -0.1**
comp=Z,1.1nm,0.7s,baz=22,slow=6.5,SNR=3.8
comp=Z,1.1nm,0.7s
SOKA Soboth 82.93 326 *eP* **P** **13 28 35.1 +0.3**
comp=Z,4.2nm,0.8s
LESA Schwarzleotal 83.35 328 *eP* **P** **13 28 37.7 +0.8**
comp=Z,4.9nm,0.7s
RETA Reutte 84.09 329 *eP* **P** **13 28 41.1 +0.4**
comp=Z,9.1nm,1.1s
LIT Litokhoron 84.25 318 P **P** **13 28 41.3 -0.3**
LIT pmax pmax
comp=Z,16nm,1.1s
BFO Black Forest 84.36 331 P **P** **13 28 42.3 +0.3**
DAVA Damuels 84.60 329 *i* P **P** **13 28 44.2 +0.8**
comp=Z,13nm,1.1s
TXAR Lajitas Array 89.05 53 P **P** **13 29 06.2 +0.9**
comp=Z,0.3nm,0.6s,baz=289,slow=3.4,SNR=5.4
TXAR pP **pP** **13 29 19.9 +0.9**
comp=Z,1.4nm,0.7s,baz=296,slow=2.9,SNR=14
comp=Z,0.3nm,0.6s
QSPA South Pole Qui 128.06 180 PKP **PKiKP** **13 35 16.9 +1.6**
comp=Z,1.2nm,1.0s,baz=104,slow=0.7,SNR=2.3
NVL N'lazarevskaya 138.61 203 *e*PKIKP **PKPdf** **13 35 35.3 +1.0**
NVL *e* 13 38 26.5
NVL *e*PPP PPP 13 41 30.5
NVL *e*SS SS 13 56 39.2 +2.9
NVL *e*SSS SSS 14 01 49.2
NVL pmax pmax
comp=Z,10.0nm,0.8s
NVL MLR MLR
comp=Z,171nm,17.0s
LPAZ La Paz 145.72 58 PKPbc **PKPbc** **13 35 50.0 +0.2**
comp=Z,0.8nm,0.5s,baz=315,slow=3.7,SNR=4.0
LPAZ *e*PKPbc pPKPab 13 36 04.8 +0.7
comp=Z,3.4nm,1.0s,baz=100,slow=2.5,SNR=3.9
LPAZ La Paz 145.72 58 PKP2 **PKPbc** **13 35 50.0 +0.2**

*IDC **06** 13:23:09.2±1.2,36.15N×69.09E, h0km, mb3.9/8, mbtmp4.0/13, ML3.6/5, MS2.8/2, Error ellipse: s-maj=22.5km s-min=19.6km az=61.0*
*MOS **06** 13:23:15.3±1.0,36.45N×69.07E, h43km, mb4.3/8, Error ellipse: s-maj=11.6km s-min=5.1km az=75.0*
*NEIC **06** 13:23:17.3±2.1,36.46N±0.05×69.02E±0.07, h49km±10km, mb4.1/7, Error ellipse: s-maj=8.6km s-min=7.3km az=92.0*
ISC 06 13:23:16.3±0.6, 36.46N±0.05×69.05E±0.05, h43km, n84, σ1§85/91, mb4.0/13, 5C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KBL	**Kabul**	**1.92**	**180**			**Pn**	**13 23 46.4**	**-0.3**
KBL	**Kabul**	**1.92**	**180**	PN		**Pn**	**13 23 46.4**	**-0.3**
CHGR	**Chuyangaron**	**2.19**	**2**			**Pn**	**13 23 51.7**	**+1.3**
CHGR	**Chuyangaron**	**2.19**	**2**	PN		**Pn**	**13 23 51.7**	**+1.3**
GAR	**Garm**	**2.73**	**21**			**Pn**	**13 23 59.2**	**+1.5**
DRK	**Karamyk**	**3.72**	**35**			**Pn**	**13 24 13.4**	**+2.0**
DRK	**Karamyk**	**3.72**	**35**	PN		**Pn**	**13 24 13.5**	**+2.0**
OHH	**Osh**	**5.00**	**35**	PN		**Pn**	**13 24 29.3**	**+0.3**
OHH				pmax	pmax			
	comp=Z,41nm,1.7s							
TRKS	**Terek-Say**	**5.32**	**17**	PN		**Pn**	**13 24 34.2**	**+0.9**
TRKS				pmax	pmax			
	comp=Z,38nm,0.7s							
ARSB	**Arslanbob**	**5.74**	**31**			**Pn**	**13 24 40.0**	**+0.9**
ARSB	**Arslanbob**	**5.74**	**31**	PN		**Pn**	**13 24 40.0**	**+0.9**
ARK	**Arkit**	**5.79**	**22**	PN		**Pn**	**13 24 40.8**	**+1.0**
ARK				pmax	pmax			
	comp=Z,57nm,0.9s							
HRA	**Herat**	**5.93**	**252**			**Pn**	**13 24 43.3**	**+1.5**
JMU	**Jammu**	**6.10**	**126**	*eP*		**Pn**	**13 24 48.1**	**+4.2**
JMU				*eS*		**Sn**	**13 25 50.2**	**-2.2**
JMU					IAML		13 25 58.6	
	comp=N,203nm,0.6s							
JMU					IAML		13 25 58.7	
	comp=E,111nm,0.7s							
KSH	**Kashi**	**6.26**	**59**	Pn		**Pn**	**13 24 43.2**	**-3.1**
KSH				Sn		**Sn**	**13 25 50.9**	**-5.7**
KSH				smax	smax			
	comp=N,70nm,1.1s							
KSH				smax	smax			
	comp=E,54nm,1.2s							
KK31	**Karatay Array**	**6.73**	**9**			**Pn**	**13 24 53.7**	**+1.1**
KK31	**Karatay Array**	**6.73**	**9**	PN		**Pn**	**13 24 53.7**	**+1.1**
KKAR	**Karatay Array**	**6.73**	**9**			**Pn**	**13 24 53.2**	**+0.6**
KKAR	**Karatay Array**	**6.73**	**9**	PN		**Pn**	**13 24 53.2**	**+0.6**
TSSA	**Tissa**	**6.88**	**120**	*eP*		**Pn**	**13 24 59.2**	**+4.4**
TSSA				*eS*		**Sn**	**13 26 13.0**	**+1.2**
TSSA					IAML		13 26 17.9	
	comp=N,122nm,0.7s							
TSSA					IAML		13 26 20.0	
	comp=E,100nm,0.7s							
ALCI	**Alchi Leh**	**7.02**	**106**	*eP*		**Pn**	**13 24 59.8**	**+2.9**
ALCI				*eS*		**Sn**	**13 26 14.7**	**-0.8**
UCH	**Uchtor**	**7.15**	**35**	P		**Pn**	**13 25 00.0**	**+1.3**
	SNR=50							
EKS2	**Erkin-Say**	**7.19**	**29**	P		**Pn**	**13 25 00.2**	**+1.3**
	SNR=12							
DHRM	**DHARAMSHALA**	**7.32**	**123**	*eP*		**Pn**	**13 25 04.7**	**+3.8**
DHRM				*eS*		**Sn**	**13 26 21.6**	**-1.2**
DHRM					IAML		13 26 27.9	
	comp=N,74nm,0.3s							
DHRM					IAML		13 26 28.5	
	comp=E,151nm,0.7s							
AAK	**Ala-Archa**	**7.46**	**33**	Pn		**Pn**	**13 25 03.7**	**+0.9**
AAK	**Ala-Archa**	**7.46**	**33**	Pn		**Pn**	**13 25 04.0**	**+1.2**
	comp=E,4.9nm,0.3s,baz=205,slow=6.6,SNR=37							
AAK					Sn	**Sn**	**13 26 28.0**	**+1.9**
	baz=34,slow=16							
	comp=E,21nm,0.5s							
AAK	**Ala-Archa**	**7.46**	**33**	P		**Pn**	**13 25 04.0**	**+1.2**
	SNR=11							
AAK	**Ala-Archa**	**7.46**	**33**	P		**Pn**	**13 25 04.0**	**+1.2**
AAK	**Ala-Archa**	**7.46**	**33**	*c* *iP*		**Pn**	**13 25 03.6**	**+0.8**
FRU1	**Bishkek**	**7.66**	**32**			**Pn**	**13 25 07.0**	**+1.6**
FRU1	**Bishkek**	**7.66**	**32**	P		**Pn**	**13 25 07.0**	**+1.6**
CHMS	**Chumysh**	**7.87**	**32**	P		**Pn**	**13 25 09.3**	**+1.1**
	SNR=6.0							
USP	**Ospenovka**	**7.98**	**30**	P		**Pn**	**13 25 10.4**	**+0.6**
	SNR=10							
ULHL	**Ulahol**	**8.02**	**42**	P		**Pn**	**13 25 11.4**	**+0.9**
	SNR=6.7							
SMLA	**Simla**	**8.60**	**126**	*eP*		**Pn**	**13 25 20.7**	**+2.6**
SMLA				*eS*		**Sn**	**13 26 51.4**	**-2.3**
SMLA					IAML		13 26 57.5	
	comp=E,75nm,0.7s							
SMLA					IAML		13 26 59.4	
	comp=N,86nm,0.5s							
TARG	**Taragay, Kyrgy**	**8.60**	**50**	Pn		**Pn**	**13 25 18.6**	**0.0**
TARG	**Taragay, Kyrgy**	**8.60**	**50**	P		**Pn**	**13 25 18.6**	**0.0**
KUDL	**Kundal**	**10.41**	**141**	*eP*		**Pn**	**13 25 46.3**	**+3.3**
KUDL				*eS*		**Sn**	**13 27 33.6**	**-4.6**
KUDL					IAML		13 27 35.9	
	comp=N,52nm,0.5s							
KUDL					IAML		13 27 37.2	
	comp=E,61nm,0.9s							
PTH	**Pithoragarh**	**11.63**	**123**	*eP*		**Pn**	**13 26 02.6**	**+2.7**
MAKZ	**Makanchi**	**14.13**	**39**			**Pn**	**13 26 33.1**	**-0.7**
MAKZ	**Makanchi**	**14.13**	**39**	P		**Pn**	**13 26 33.1**	**-0.7**
MK31	**Makanchi Array**	**14.29**	**40**	*c* *iP**		**Pn**	**13 26 34.9**	**-0.9**
MKAR	**Makanchi Array**	**14.29**	**40**	Pn		**Pn**	**13 26 34.8**	**-1.1**
MKAR	**Makanchi Array**	**14.29**	**40**	Pn		**Pn**	**13 26 34.6**	**-1.1**
	comp=E,0.2nm,0.3s,baz=228,slow=16,SNR=7.3							
MKAR					LR	LR	13 31 53.9	
	comp=E,14nm,18.1s,baz=225,slow=36							
	comp=E,1.6nm,0.7s							
MKAR	**Makanchi Array**	**14.29**	**40**	*i* P		**Pn**	**13 26 34.7**	**-1.1**
MKAR					pmax	pmax		
	comp=Z,3.0nm,0.9s							
AB31	**Akbulak array**	**14.41**	**335**	Pn		**Pn**	**13 26 35.7**	**-1.7**
ABKAR	**Akbulak array**	**14.41**	**335**			**Pn**	**13 26 34.6**	**-2.8**
KURBB	**Kurchatov Arra**	**15.72**	**23**	Pn		**Pn**	**13 26 51.8**	**-2.8**
	baz=215,slow=12,SNR=6.0							
	comp=Z,1.4nm,0.6s							
KURK	**Kurchatov**	**15.82**	**23**	⇓ *i* P		**P**	**13 26 57.9**	**-1.3**
WMQ	**Urumqi**	**16.02**	**57**	*eP*		**Pn**	**13 27 00.1**	**+1.5**
AKTO	**Aktyubinsk**	**16.08**	**334**	Pn		**Pn**	**13 26 58.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=147,slow=12,SNR=3.9							
	comp=Z,4.4nm,0.8s							
BVAR	**Borovoye Array**	**16.59**	**3**	Pn		**Pn**	**13 27 05.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=180,slow=8.9,SNR=8.4							
	comp=Z,1.1nm,0.4s							
BORK	**Borovoye**	**16.61**	**3**	⇑ *eP*		**P**	**13 27 07.3**	**-0.5**
EVN	**Everest**	**17.24**	**114**	Pn		**Pn**	**13 27 11.8**	**-2.9**
EVN				IAmb	IAmb		13 27 20.5	
	comp=Z,6.2nm,0.6s							
MAK	**Makhachkala**	**17.78**	**298**	*eP*		**Pn**	**13 27 19.6**	**-0.9**
MAK				*eS*		**Sn**	**13 30 37.6**	**0.0**
MAK				pmax	pmax			
	comp=Z,135nm,1.0s							
MAK				MLR	MLR			
	comp=Z,80nm,12.0s							
DGZ	**Jazzator, Alta**	**18.79**	**39**	⇑ *eP*		**P**	**13 27 30.8**	**-1.2**
ZAA0	**Zalesovo Array**	**20.64**	**27**	P		**P**	**13 27 51.5**	**-0.4**
ZAA0				IAmb	IAmb		13 27 53.9	
	comp=Z,5.5nm,0.8s							
ZALV	**Zalesovo Beam**	**20.64**	**27**			**P**	**13 27 51.2**	**-0.7**
ZALV	**Zalesovo Beam**	**20.64**	**27**	P		**P**	**13 27 51.8**	**-0.2**
	comp=Z,7.1nm,0.8s,baz=215,slow=9.8,SNR=21							
	comp=Z,7.1nm,0.8s							
NCK	**Nalchik**	**20.68**	**298**	⇓ *eP*		**P**	**13 27 54.1**	**+1.5**
NCK				pmax	pmax			
	comp=Z,57nm,0.5s							
ARTI	**Arti**	**21.20**	**343**	IAmb	IAmb		13 28 04.4	
	comp=Z,7.3nm,1.1s							
ARTI	**Arti**	**21.20**	**343**	P		**P**	**13 27 58.4**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=166,slow=8.3,SNR=2.3							
	comp=Z,1.6nm,0.4s							
ARTI	**Arti**	**21.20**	**343**	*c* *iP*		**P**	**13 27 56.3**	**-1.7**
ARTI							13 28 17.5	
ARTI				S		**S**	**13 31 51.5**	**+0.4**
ARTI				SS		**SnSn**	**13 32 18.3**	**+3.2**
ARTI				pmax	pmax			
	comp=Z,9.0nm,1.7s							
BELG	**Belogornoye**	**21.96**	**323**	⇓ *eP*		**P**	**13 28 06.6**	**+0.5**
BELG				pmax	pmax			
	comp=Z,4.0nm,1.3s							
SHL	**Shillong**	**22.33**	**113**			**P**	**13 28 09.3**	**-1.3**
SHL				IAmb	IAmb		13 28 12.4	
	comp=Z,16nm,1.0s							
SHL	**Shillong**	**22.33**	**113**	P		**P**	**13 28 09.3**	**-1.3**
SHL				pmax	pmax			
	comp=Z,16nm,1.0s							
RAYN	**Ar Rayn**	**24.05**	**244**	P		P	13 28 20.4	-7.2
RAYN				pmax	pmax			
	comp=Z,5.0nm,1.1s							
KNGR	**Kungurtug, Tuv**	**24.82**	**46**	⇓ *eP*		**P**	**13 28 35.5**	**+1.0**
OBN	**Obninsk**	**28.95**	**320**	*eP*		**P**	**13 29 08.0**	**-3.3**
OBN				*e*			13 30 06.7	
OBN				*e*			13 32 18.8	
OBN				pmax	pmax			
	comp=Z,6.0nm,0.9s							
PZH	**PanZhiHua**	**29.47**	**100**	P		**P**	**13 29 17.9**	**+1.5**
SONM	**Songino Array**	**29.65**	**56**	IAmb	IAmb		13 29 20.3	
	comp=Z,2.7nm,1.2s							
SONM	**Songino Array**	**29.65**	**56**	P		**P**	**13 29 19.5**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=256,slow=10,SNR=5.7							
	comp=Z,1.5nm,0.8s							
ULN	**Ulaanbaatar**	**30.10**	**56**	⇓ *eP*		**P**	**13 29 22.5**	**+0.7**
ULN				pmax	pmax			
	comp=Z,19nm,3.3s							
AKASG	**Malin Array Be**	**31.75**	**309**	LR		LR	13 44 13.4	
	comp=Z,45nm,18.4s,baz=248,slow=40							
HHC	**Hu-ho-hao-te**	**33.25**	**69**	*eP*		**P**	**13 29 52.1**	**+2.6**
HHC				pmax	pmax			
	comp=Z,8.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,81nm,5.4s							
HFS	**Hagfors**	**42.13**	**322**	P		**P**	**13 31 04.5**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=88,slow=14,SNR=4.3							
	comp=Z,3.0nm,0.7s							
NB2	**NORSAR Subarra**	**43.47**	**323**	PP		**P**	**13 31 16.0**	**+1.0**
	comp=Z,3.8nm,0.9s,baz=97,slow=8.6							
NOA	**NORSAR Array B**	**43.47**	**323**	P		**P**	**13 31 16.1**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=98,slow=8.1,SNR=7.1							
	comp=Z,1.4nm,0.7s							
TIXI	**Tiksi**	**46.40**	**22**	P		**P**	**13 31 38.3**	**+0.2**
TIXI				IAmb	IAmb		13 31 40.6	
	comp=Z,7.0nm,1.1s							
TIXI	**Tiksi**	**46.40**	**22**	P		**P**	**13 31 38.3**	**+0.2**
TIXI				pmax	pmax			
	comp=Z,7.0nm,1.1s							
EKA	**Eskdalemuir Ar**	**51.22**	**316**	P		**P**	**13 32 15.4**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=84,slow=8.4,SNR=2.5							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**83.31**	**121**	P		**P**	**13 35 36.6**	**-2.2**
	comp=Z,0.5nm,0.8s,baz=323,slow=3.7,SNR=5.8							
	comp=Z,0.5nm,0.8s							
WRA	**Warramunga Arr**	**83.31**	**121**	*i* P		**P**	**13 35 37.2**	**-1.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ASAR	**Alice Springs**	**85.53**	**124**	P		**P**	**13 35 48.6**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=313,slow=4.7,SNR=12							
	comp=Z,0.4nm,0.6s							

CATAC 06 13:28:34.9±0.4, 12°N±3°×8°7W±°, h140km±3km, M2.5/18, MLv2.5/18, Error ellipse: s-maj=10.5km s-min=3.9km az=52.0, confirmed, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CNGA	**Al SSO del Vol**	**0.18**	**69**	P		Pn	13 28 54.5	+0.5
CNGN	**Cerro Negro**	**0.18**	**68**	S		Sn	13 29 10.3	+1.8
CNGN	**Cerro Negro**	**0.18**	**68**	P		Pn	13 28 54.6	+0.5
POLN	**Al Sur del Vol**	**0.22**	**15**	P		Pn	13 28 53.5	-0.6
POLN				S		Sn	13 29 09.6	+0.9
PKGN	**Cerro Pekin**	**0.26**	**336**	P		Pn	13 28 54.5	+0.4
PKGN				S		Sn	13 29 11.2	+2.3
CRIN	**San Cristobal**	**0.32**	**327**	P		Pn	13 28 55.1	+0.7
CRIN	**San Cristobal**	**0.32**	**327**	S		Sn	13 29 12.0	+2.6
MOM3	**MOM3**	**0.35**	**77**	P		Pn	13 28 55.0	+0.5
MOM3				S		Sn	13 29 11.2	+1.9
COPN	**Copaltepe**	**0.37**	**133**	P		Pn	13 28 54.9	+0.3
COPN				S		Sn	13 29 11.2	+1.8
MOM2	**El Cardon**	**0.38**	**89**	P		Pn	13 28 55.4	+0.8
MOM2				S		Sn	13 29 12.2	+2.8
APYN	**Apoyeque**	**0.55**	**111**	P		Pn	13 28 57.1	+1.7
APYN				S		Sn	13 29 13.6	+2.7
APQ2	**Apoyeque**	**0.58**	**114**	P		Pn	13 28 57.0	+1.4
APQ2				S		Sn	13 29 13.6	+2.3
UNAN	**Cigeo UNAN**	**0.67**	**118**	P		Pn	13 28 56.0	-0.2
UNAN				S		Sn	13 29 14.9	+2.6
LIMN	**Finca el Limon**	**0.80**	**38**	P		Pn	13 28 57.9	+0.6
LIMN				S		Sn	13 29 15.0	+0.9
POTN	**Potosi Cosigui**	**0.84**	**312**	P		Pn	13 28 57.4	0.0
POTN				S		Sn	13 29 16.3	+1.8
CSGN	**Cosiguina Volc**	**0.86**	**309**	P		Pn	13 28 57.8	+0.1
CSGN				S		Sn	13 29 17.7	+2.6
MATN	**Matagalpa**	**1.05**	**62**	P		Pn	13 28 58.8	-0.5
NADN	**Granada**	**1.06**	**130**	P		Pn	13 28 58.3	-1.1
NADN				S		Sn	13 29 19.1	+1.2
RCVN	**Varillal2**	**1.32**	**30**	P		Pn	13 29 03.0	+0.9
RCPN	**Sur Rio San Ju**	**1.32**	**35**	P		Pn	13 29 02.7	+0.7
YUSH	**Yuscaran**	**1.51**	**1**	P		Pn	13 29 04.5	+0.4
CARN	**Rivas**	**1.81**	**133**	P		Pn	13 29 07.8	+0.6
CARN				S		Sn	13 29 31.4	-0.6
ELI1	**Hacienda Flor**	**2.20**	**144**	P		Pn	13 29 13.5	+1.6
ELI1				S		Sn	13 29 41.2	+1.0
JTS	**Las Juntas de**	**2.84**	**138**	P		Pn	13 29 21.2	+1.2
JTS				S		Sn	13 29 54.1	-0.6

*NNC **06** 13:33:35.8±0.5, 42.88N×78.46E, h0km, mb3.4, mpv3.5, Error ellipse: s-maj=4.4km s-min=2.2km az=167.0*
*KRNET **06** 13:33:37.7±0.1, 42.80N×78.46E, h30km, mb3.0*
*SOME **06** 13:33:37.0, 42.92N×78.38E, h10km*
ISC 06 13:33:35.8±1.1, 42.86N±0.02×78.40E±0.02, h4km±9km, n45, σ1§19/83, 15C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SATY	**Saty**	**0.20**	**1**	P		**Pg**	**13 33 40.6**	**+0.9**
	372nm,0.1s							
SATY				S		**Sg**	**13 33 43.5**	**+1.2**
	6µm,0.1s							
PRZ	**Przheval'sk**	**0.38**	**180**	⇑ *iP*		**Pb**	**13 33 45.2**	**+0.1**
PRZ				⇑ *iS*		**Sb**	**13 33 51.3**	**-0.1**
UZB	**Uzynbulak**	**0.54**	**58**	P		**Pg**	**13 33 45.5**	**-0.6**
	72nm,0.1s							
UZB				S		**Sg**	**13 33 51.9**	**-1.2**
	385nm,0.1s							
UZB	**Uzynbulak**	**0.54**	**58**	*eP*		**Pg**	**13 33 45.5**	**-0.6**
	72nm,0.1s							
UZB				*eS*		**Sg**	**13 33 51.9**	**-1.2**
	385nm,0.1s							
KPKS	**Kokpek**	**0.64**	**19**	P		**Pg**	**13 33 47.9**	**-0.2**
	0.1nm,0.0s							
KPKS				S		**Sg**	**13 33 56.0**	**-0.4**
	343nm,0.2s							
KPKS	**Kokpek**	**0.64**	**19**	*eP*		**Pg**	**13 33 47.9**	**-0.2**
	0.1nm,0.0s							
KPKS				*eS*		**Sg**	**13 33 56.0**	**-0.4**
	343nm,0.2s							
KURS	**Kuram**	**0.65**	**345**	P		**Pg**	**13 33 48.6**	**+0.4**
	7.0nm,0.1s							
KURS				S		**Sg**	**13 33 57.3**	**+0.6**
	127nm,0.1s							
SHLS	**Shalkode**	**0.83**	**69**	P		**Pn**	**13 33 56.7**	**+2.4**
	65nm,0.1s							
SHLS				S		**Sn**	**13 34 11.1**	**+4.0**
	235nm,0.2s							
SHLS	**Shalkode**	**0.83**	**69**	*eP*		**Pn**	**13 33 56.7**	**+2.4**
	65nm,0.1s							
SHLS				*eS*		**Sn**	**13 34 11.1**	**+4.0**
	235nm,0.2s							
PDGK	**Podgornoye**	**0.92**	**59**	⇓ P		**Pb**	**13 33 52.2**	**-2.2**
	16nm,0.5s							
PDGK				⇓ S		**Sg**	**13 34 03.6**	**-1.9**
	67nm,0.6s							
KOTS	**Kotyrbulak**	**1.02**	**292**	P		**Pb**	**13 33 56.0**	**-0.1**
KOTS				S		**Sb**	**13 34 09.5**	**-0.3**
KOTS	**Kotyrbulak**	**1.02**	**292**	*eP*		**Pb**	**13 33 56.0**	**-0.1**
KOTS				*eS*		**Sb**	**13 34 09.5**	**-0.3**
MDOK	**Medeo**	**1.04**	**287**	Pg		**Pg**	**13 33 56.7**	**+0.9**
	4.2nm,0.1s							
MDOK				Lg		Lg	13 34 10.6	
	30nm,0.3s							
TNSS	**Tian-Shan**	**1.08**	**280**	P		**Pg**	**13 33 57.5**	**+0.9**
	1.1nm,0.1s							
TNSS				S		**Sg**	**13 34 12.2**	**+1.5**
	6.4nm,0.1s							
TNSS	**Tian-Shan**	**1.08**	**280**	*eP*		**Pg**	**13 33 57.5**	**+0.9**
	1.1nm,0.1s							
TNSS				*eS*		**Sg**	**13 34 12.2**	**+1.5**
	6.4nm,0.1s							

	3.3nm,0.1s									
MTBS					*e*S		**Sg**	**13 34 24.4**	**+1.3**
	26nm,0.3s									
KTBS	**Karatobe**	**1.52**	**305**		P		**Pb**	**13 34 04.9**	**+0.4**
	17nm,0.1s									
KTBS					S		**Sb**	**13 34 24.8**	**+0.7**
	92nm,0.2s									
ULHL	**Ulahol**	**1.71**	**250**	⇑	*i*P		**Pb**	**13 34 07.9**	**0.0**
ULHL				⇑	*i*S		**Sb**	**13 34 29.9**	**+0.1**
KST	**Kastek**	**1.80**	**277**		P		**Pg**	**13 34 10.4**	**+0.1**
	9.6nm,0.3s									
KST					S		**Sg**	**13 34 34.2**	**+0.5**
	31nm,0.3s									
KST	**Kastek**	**1.80**	**277**		*e*P		**Pg**	**13 34 10.4**	**+0.1**
	9.6nm,0.3s									
KST					*e*S		**Sg**	**13 34 34.2**	**+0.5**
	31nm,0.3s									
KUU	**Kurty**	**1.82**	**305**		P		**Pb**	**13 34 09.6**	**-0.1**
	3.2nm,0.1s									
KUU					S		**Sb**	**13 34 32.9**	**0.0**
	85nm,0.2s									
KUU	**Kurty**	**1.82**	**305**		*e*P		**Pb**	**13 34 09.7**	**-0.1**
	3.2nm,0.1s									
KUU					*e*S		**Sb**	**13 34 32.9**	**0.0**
	85nm,0.2s									
BOOM	**Boomskoye usch**	**1.85**	**259**	⇑	*i*P		**Pb**	**13 34 10.0**	**-0.3**
BOOM				⇑	*i*S		**Sb**	**13 34 33.4**	**-0.5**
TKM2	**Tokmak 2**	**2.06**	**273**	⇓	*i*P		**Pb**	**13 34 13.1**	**-0.8**
TKM2				⇓	*i*S		**Sb**	**13 34 38.8**	**-1.2**
TDK	**Taldyqorghan**	**2.14**	**0**		Pg		**Pb**	**13 34 14.8**	**-0.3**
	28nm,0.1s									
TDK					Lg		Lg	13 34 41.8		
	44nm,0.1s									
TDK	**Taldyqorghan**	**2.14**	**0**		*e*P		**Pb**	**13 34 14.8**	**-0.3**
	28nm,0.1s									
TDK					*e*S		**Sb**	**13 34 41.8**	**-0.2**
	44nm,0.1s									
KRBS	**Karabastau**	**2.16**	**294**		Pg		**Pb**	**13 34 16.0**	**+0.5**
	7.6nm,0.5s									
KRBS					Lg		Lg	13 34 44.2		
	33nm,0.2s									
KAPS	**Kapalarasan**	**2.52**	**16**		Pg		**Pb**	**13 34 21.6**	**0.0**
	7.3nm,0.1s									
KAPS					Lg		Lg	13 34 53.7		
	49nm,0.2s									
JNKS	**Jany-Kuch**	**2.73**	**230**	⇑	*e*P		**Pn**	**13 34 21.8**	**+1.2**
JNKS				⇑	*e*S		**Sn**	**13 34 53.8**	**-0.3**
AAK	**Ala-Archa**	**2.89**	**267**	⇑	Pg		**Pg**	**13 34 31.6**	**+0.4**
	1.1nm,0.5s									
AAK				⇓	Lg		Lg	13 35 07.1		
	1.8nm,0.4s									
ARLS	**Aral**	**3.19**	**253**	⇓	*e*P		**Pn**	**13 34 28.4**	**+1.6**
ARLS				⇓	*e*S		**Sn**	**13 35 04.9**	**-0.3**
MRKS	**Merke**	**3.81**	**270**		Pg		**Pg**	**13 34 46.6**	**-2.3**
	1.0nm,0.1s									
MRKS					Lg		Lg	13 35 36.3		
	6.6nm,0.3s									
MRKS	**Merke**	**3.81**	**270**		*e*P		**Pg**	**13 34 46.6**	**-2.3**
	1.0nm,0.1s									
MRKS					*e*S		**Sg**	**13 35 36.3**	**-1.9**
	6.6nm,0.3s									
MK31	**Makanchi Array**	**4.81**	**34**	⇑	Pn		**Pn**	**13 34 49.8**	**+0.9**
	0.8nm,0.2s,baz=214,slow=13,SNR=24									
MK31				⇑	Pg		**Pg**	**13 35 07.0**	**-0.9**
	0.8nm,0.3s,baz=212,slow=16,SNR=5.7									
MK31				⇑	Lg		Lg	13 36 02.9		
	0.3nm,0.2s,baz=214,slow=29,SNR=5.8									
KK31	**Karatay Array**	**5.79**	**275**	⇓	Pg		**Pg**	**13 35 25.2**	**-1.6**
	0.2nm,0.3s									
KK31				⇑	Lg		Lg	13 36 41.1		
	0.5nm,0.3s,baz=88,slow=28,SNR=6.1									

*DJA **06** 13:53:35.2±0.5,0˚N±2˚×9˚7E±˚, h17km±5km, M4.7/22, mb4.8/9, mB5.7/4, MLv4.5/22, Mw(mB)5.2/4*
*NEIC **06** 13:53:36.2±1.3,0.˚07N±0.˚07×96˚93E±0.˚04, h10km±1km, mb4.3/12, Error ellipse: s-maj=12.8km s-min=6.5km az=163.0*
*IDC **06** 13:53:37.0±1.3,0˚.09S×.96˚.77E, h34km±6km, mb3.7/6, mbtmp3.9/8, ML4.0/2, MS3.2/2, Error ellipse: s-maj=49.0km s-min=16.5km az=58.0*

ISC 06 13:53:37.4±0.8,0.05N±0.˚05×96.95E±0.˚06, h28km±4km, n55, σ1s51/58, mb4.3/13, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PBSI	**Pulau Batu**	**1.33**	**94**	P		**Pb**	**13 54 01.0**	**-0.8**
PBSI				S		**Sb**	**13 54 19.5**	**+1.0**
GSI	**Gunungsitoli**	**1.39**	**27**			**Pn**	**13 54 00.9**	**-0.1**
GSI	**Gunungsitoli**	**1.39**	**27**	P		**Pn**	**13 54 01.0**	**-0.1**
GSI				S		**Sb**	**13 54 20.4**	**+0.1**
SNSI	**Sinabang, Aceh**	**2.42**	**345**	P		**Pn**	**13 54 12.6**	**-2.6**
SNSI				Pg		**Pb**	**13 54 21.2**	**+0.8**
SNSI				S		**Sn**	**13 54 39.8**	**-4.2**
SISI	**Saibi**	**2.54**	**123**	P		**Pn**	**13 54 16.6**	**-0.2**
SISI				S		**Sn**	**13 54 45.1**	**-1.7**
MNSI	**Mandailing Nat**	**2.73**	**74**	P		**Pn**	**13 54 21.0**	**+1.6**
MNSI				S		**Sb**	**13 54 54.5**	**-4.2**
RPSI	**Rantau Prapat**	**3.29**	**37**			**Pn**	**13 54 27.6**	**+0.6**
RPSI	**Rantau Prapat**	**3.29**	**37**			**Pn**	**13 54 28.1**	**+1.0**
PSI	**Prapat**	**3.37**	**36**	Pn		**Pn**	**13 54 28.1**	**-0.3**
	4.9nm,0.3s,baz=300,slow=7.4,SNR=4.2							
	8.3nm,0.3s							
PPI	**Padang Panjang**	**3.48**	**98**	P		**Pn**	**13 54 30.2**	**+0.4**
PPI				S		**Sn**	**13 55 11.2**	**+1.1**
KCSI	**Kotacane, Aceh**	**3.54**	**13**	P		**Pn**	**13 54 29.5**	**-1.1**
KCSI				S		**Sn**	**13 55 11.3**	**-0.4**
PDSI	**Padang**	**3.64**	**105**	P		**Pn**	**13 54 34.0**	**+2.1**
PDSI				S		**Sn**	**13 55 14.2**	**+0.2**
BKNI	**Bangkinang**	**4.10**	**86**	Pn		**Pn**	**13 54 39.3**	**+1.1**
PPSI	**Pulau Pagai**	**4.14**	**132**	P		**Pn**	**13 54 37.2**	**-1.6**
PPSI				S		**Sn**	**13 55 22.6**	**-3.8**
MLSI	**Meulaboh, Aceh**	**4.22**	**353**	P		**Pn**	**13 54 40.1**	**+0.1**
MLSI				S		**Sn**	**13 55 25.7**	**-2.7**
KRJI	**Kerinci**	**4.99**	**115**	P		**Pn**	**13 54 52.5**	**+1.9**
LHMI	**Lhok Sumawe**	**5.14**	**360**	P		**Pn**	**13 54 52.1**	**-0.5**
	0.5nm52nm,0.5s							
IPM	**Ipoh**	**6.00**	**43**			**Pn**	**13 55 05.0**	**+0.7**
MASI	**Maura Aman, Be**	**6.16**	**121**	P		**Pn**	**13 55 05.9**	**-0.8**
	0.6nm31nm,0.4s							
KULM	**Kulim**	**6.38**	**35**			**Pn**	**13 55 09.4**	**-0.3**
KSI	**Kapahiang**	**6.73**	**123**	P		**Pn**	**13 55 16.9**	**+2.4**
	26µm41nm,0.4s							
MYKOM	**Kota Tinggi**	**7.11**	**76**			**Pn**	**13 55 20.3**	**+0.6**
MNAI	**Manna**	**7.43**	**126**	Pn		**Pn**	**13 55 23.7**	**-0.3**
MNAI	**Manna**	**7.43**	**126**	P		**Pn**	**13 55 22.9**	**-1.1**
	91nm,0.9s							
DSRI	**Dabo**	**7.65**	**94**	P		**Pn**	**13 55 24.9**	**-2.1**
SBUM	**Sibu**	**15.45**	**81**	Pn		**Pn**	**13 57 14.6**	**+1.1**
CM31	**Chiang Mai Arr**	**18.40**	**6**	P		**Pn**	**13 57 50.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**18.40**	**6**			**P**	**13 57 50.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**18.40**	**6**	P		**Pn**	**13 57 51.4**	**+0.8**
	0.3nm,0.3s,baz=196,slow=11,SNR=33							
CMAR					LR	LR	14 06 04.8	
	comp=Z,28nm,18.3s,baz=220,slow=40							
	5.5nm,0.8s							
CHTO	**Chiang Mai**	**18.75**	**6**	P		**P**	**13 57 54.2**	**-0.1**
SLVN	**Son La**	**22.22**	**17**			**P**	**13 58 31.2**	**-0.7**
SLVN				IAmb		IAmb	13 58 34.9	
	comp=Z,8.7nm,0.7s							
H08S2	**Diego Garcia H**	**25.55**	**252**	T		T	14 26 17.5	
	baz=72,slow=75,SNR=33							
H08S3	**Diego Garcia H**	**25.56**	**252**	T		T	14 26 21.6	
	baz=72,slow=75,SNR=13							
H08S1	**Diego Carcia H**	**25.57**	**252**	T		T	14 26 13.3	
	baz=72,slow=75,SNR=44							
SHL	**Shillong**	**25.84**	**349**			**P**	**13 59 06.7**	**0.0**
EVN	**Everest**	**29.40**	**342**	P		**P**	**13 59 40.4**	**+1.1**
EVN				IAmb		IAmb	14 00 25.0	
	comp=Z,7.0nm,1.4s							
H01W3	**Cape Leeuwin H**	**38.29**	**157**	T		T	14 41 53.6	
	baz=334,slow=76,SNR=5.4							
H01W2	**Cape Leeuwin H**	**38.30**	**157**	T		T	14 41 56.7	
	baz=334,slow=76,SNR=4.2							
H01W1	**Cape Leeuwin H**	**38.30**	**157**	T		T	14 41 56.1	
	baz=334,slow=76,SNR=5.7							
WRA	**Warramunga Arr**	**41.65**	**121**	P		**P**	**14 01 22.2**	**-1.5**
	comp=Z,1.0nm,0.8s,baz=300,slow=8.5,SNR=6.6							
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**42.92**	**126**	P		**P**	**14 01 33.6**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=300,slow=7.8,SNR=11							
ASAR				pP		**sP**	**14 01 44.1**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=299,slow=7.8,SNR=3.7							
	comp=Z,1.0nm,0.9s							
JNU	**Nakatsue**	**45.83**	**41**	P		**P**	**14 01 58.2**	**+1.0**
ARSB	**Arslanbob**	**46.47**	**335**	P		**P**	**14 02 04.0**	**+1.8**
ARSB				IAmb		IAmb	14 02 13.4	
	comp=Z,5.1nm,1.0s							
KSRS	**Korea Array**	**46.93**	**34**	P		P	14 02 10.4	+4.8
	comp=Z,3.2nm,0.7s,baz=221,slow=8.9,SNR=12							
MKAR	**Makanchi Array**	**48.29**	**347**	P		**P**	**14 02 15.8**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=166,slow=7.4,SNR=8.8							
MKAR				pP		**sP**	**14 02 26.0**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=160,slow=8.1,SNR=12							
	comp=Z,1.3nm,0.7s							
SONM	**Songino Array**	**48.30**	**9**	P		**P**	**14 02 17.5**	**+1.1**
SONM				IAmb		IAmb	14 02 28.0	
	comp=Z,2.7nm,1.4s							
SONM	**Songino Array**	**48.30**	**9**	P		**P**	**14 02 17.0**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=223,slow=5.9,SNR=2.4							
	comp=Z,0.3nm,0.4s							
KKAR	**Karatay Array**	**48.98**	**334**	P		**P**	**14 02 23.5**	**+2.0**
KURBB	**Kurchatov Arra**	**52.77**	**345**	pP		pP	14 02 59.5	+2.6
	comp=Z,0.4nm,0.3s,baz=172,slow=7.6,SNR=1.8							
ZALV	**Zalesovo Beam**	**54.65**	**351**	P		**P**	**14 03 03.1**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=180,slow=6.5,SNR=6.7							
ZALV				pP		**sP**	**14 03 13.3**	**0.0**
	comp=Z,2.7nm,0.5s,baz=174,slow=7.3,SNR=7.4							
	comp=Z,1.5nm,0.4s							
BVAR	**Borovoye Array**	**57.25**	**341**	pP		pP	14 03 30.8	+1.5
	comp=Z,1.2nm,0.7s,baz=143,slow=10,SNR=6.1							
IDI	**Amoyia**	**75.38**	**306**	LR		LR	14 42 18.0	
	comp=Z,39nm,19.5s,baz=119,slow=39							
FINES	**FINESS Array B**	**80.90**	**133**	P		**P**	**14 05 46.9**	**-1.8**
	comp=Z,3.2nm,1.0s,baz=140,slow=4.2,SNR=4.1							
	comp=Z,3.2nm,1.0s							
QSPA	**South Pole Qui**	**90.00**	**180**	P		**P**	**14 06 35.6**	**+1.3**
QSPA				IAmb		IAmb	14 07 06.6	
	comp=Z,3.9nm,1.4s							
TXAR	**Lajitas Array**	**144.77**	**32**	PKP		PKPbc	14 13 11.4	-0.1
	comp=Z,0.7nm,0.9s,baz=7.6,slow=3.5,SNR=4.1							
TXAR				pPKP		pPKPdf	14 13 21.6	+1.4
	comp=Z,0.4nm,0.6s,baz=226,slow=3.3,SNR=4.0							

*HEL **06** 13:55:41.4±0.6,59˚.96N×17˚.72E, h0km, ML1.6, Explosion*
*UPP **06** 13:55:42.0±0.0,59˚.92N×17˚.80E, h0km, ML1.9, Suspected explosion*
*DNK **06** 13:55:42.4±0.5,59˚.92N×17˚.80E, h0km, ML1.9(UPP), Explosion*
*IDC **06** 13:55:43.3±1.4,60˚.01N×17˚.69E, h0km, mbtmp2.8/4, ML1.6/4, Error ellipse: s-maj=23.2km s-min=5.9km az=173.0*

ISC 06 13:55:41.2±0.7,59.87N±0.˚02×17.88E±0.˚02, h0km, n47, σ1s28/72, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
UPP	**Uppsala**	**0.13**	**264**	P		**Pg**	**13 55 44.2**	**+0.5**
UPP				S		**Sg**	**13 55 45.8**	**+0.3**
UPP	**Uppsala**	**0.13**	**264**	P		**Pg**	**13 55 44.2**	**+0.5**
UPP				S		**Sg**	**13 55 45.8**	**+0.3**
FIBU	**Brunna**	**0.27**	**276**	P		**Pg**	**13 55 46.5**	**+0.1**
FIBU				S		**Sg**	**13 55 49.4**	**-0.5**
FIBU	**Brunna**	**0.27**	**276**	P		**Pg**	**13 55 46.5**	**+0.1**
FIBU				S		**Sg**	**13 55 49.4**	**-0.5**
BACU	**Backbrunna**	**0.39**	**268**	P		**Pg**	**13 55 48.8**	**+0.1**
BACU				S		**Sg**	**13 55 53.5**	**-0.3**
BACU	**Backbrunna**	**0.39**	**268**	P		**Pg**	**13 55 48.8**	**+0.1**
BACU				S		**Sg**	**13 55 53.5**	**-0.3**
NRTU	**Norrtaelje**	**0.43**	**117**	P		**Pb**	**13 55 51.2**	**-0.4**
NRTU				S		**Sb**	**13 55 58.0**	**-0.5**
NRTU	**Norrtaelje**	**0.43**	**117**	P		**Pb**	**13 55 51.2**	**-0.4**
NRTU				S		**Sb**	**13 55 58.0**	**-0.5**
OSTU	**Oestervaala**	**0.52**	**314**	P		**Pg**	**13 55 50.7**	**-0.5**
OSTU				S		**Sg**	**13 55 57.0**	**-1.0**
OSTU	**Oestervaala**	**0.52**	**314**	P		**Pg**	**13 55 50.7**	**-0.5**
OSTU				S		**Sg**	**13 55 57.0**	**-1.0**
FORU	**Forsmark**	**0.54**	**16**	P		**Pg**	**13 55 51.8**	**+0.2**
FORU				S		**Sg**	**13 55 58.6**	**+0.2**
FORU	**Forsmark**	**0.54**	**16**	P		**Pg**	**13 55 51.8**	**+0.2**
FORU				S		**Sg**	**13 55 58.6**	**+0.2**
GRAU	**Graesoe**	**0.57**	**35**	P		**Pg**	**13 55 52.6**	**+0.5**
GRAU				S		**Sg**	**13 56 00.2**	**+0.8**
GRAU	**Graesoe**	**0.57**	**35**	P		**Pg**	**13 55 52.6**	**+0.5**
GRAU				S		**Sg**	**13 56 00.2**	**+0.8**
NYNU	**Nynaeshamn**	**0.87**	**176**	P		**Pb**	**13 55 59.3**	**+0.1**
NYNU				S		**Sb**	**13 56 11.4**	**0.0**
NYNU	**Nynaeshamn**	**0.87**	**176**	P		**Pb**	**13 55 59.3**	**+0.1**
NYNU				S		**Sb**	**13 56 11.4**	**0.0**
IGGU	**Iggoen**	**1.04**	**345**	P		**Pg**	**13 56 00.6**	**-0.7**
IGGU	**Iggoen**	**1.04**	**345**	P		**Pg**	**13 56 00.6**	**-0.7**
AAL	**Aland**	**1.10**	**73**	P		**Pg**	**13 56 02.4**	**+0.1**
AAL	**Aland**	**1.10**	**73**	*e*P		**Pg**	**13 56 02.5**	**+0.1**
AAL	**Aland**	**1.10**	**73**	P		**Pg**	**13 56 02.4**	**+0.1**
AAL	**Aland**	**1.10**	**73**	PG		**Pg**	**13 56 02.4**	**+0.1**
	baz=255							
AAL				SG		**Sg**	**13 56 17.3**	**+0.7**
FALU	**Falun**	**1.20**	**302**	P		**Pg**	**13 56 03.2**	**-1.0**
FALU	**Falun**	**1.20**	**302**	P		**Pg**	**13 56 03.2**	**-1.0**
NRAU	**Nora**	**1.47**	**259**	P		**Pn**	**13 56 08.5**	**-0.5**
NRAU	**Nora**	**1.47**	**259**	P		**Pn**	**13 56 08.5**	**-0.5**
VIKU	**Vikbolandet**	**1.50**	**204**	P		**Pg**	**13 56 10.3**	**+0.3**
VIKU	**Vikbolandet**	**1.50**	**204**	P		**Pg**	**13 56 10.3**	**+0.3**
ARNU	**Arnoeviken**	**1.84**	**352**	P		**Pn**	**13 56 14.9**	**+0.9**
ARNU	**Arnoeviken**	**1.84**	**352**	P		**Pn**	**13 56 14.9**	**+0.9**
HFS	**Hagfors**	**2.12**	**279**	Pn		**Pn**	**13 56 19.2**	**+1.3**
	0.7nm,0.3s,baz=90,slow=16,SNR=24							
HFS				Lg		Lg	13 56 45.8	
	2.5nm,0.3s,baz=96,slow=30,SNR=26							
	5.6nm,0.6s							
RAF	**Rauma**	**2.24**	**57**	*e*P		**Pb**	**13 56 21.3**	**-1.2**
RAF	**Rauma**	**2.24**	**57**	PG		**Pb**	**13 56 21.6**	**-1.0**
RAF				smax		smax	13 56 48.5	
	comp=Z,4.0nm,0.2s							
RAF				SG		**Sb**	**13 56 50.2**	**-0.6**
TVF	**Tvarminne**	**2.71**	**88**	PG		**Pb**	**13 56 30.3**	**-0.1**
	baz=289							
TVF				smax		smax	13 57 03.5	
	comp=Z,1.0nm,0.2s							
TVF				SG		**Sg**	**13 57 06.9**	**-1.2**
HEMU	**Hemsoen**	**2.81**	**1**	PB		**Pn**	**13 56 28.6**	**+1.2**
	baz=179							
HEMU				SB		**Sn**	**13 57 03.5**	**+1.5**
BORU	**Boraas**	**3.48**	**232**	*i* P		**Pg**	**13 56 46.9**	**-1.0**
BORU				*i* S		**Sg**	**13 57 30.3**	**-2.7**
NOA	**NORSAR Array B**	**3.50**	**292**	Pn		**Pn**	**13 56 37.2**	**+0.2**
	baz=96,slow=14,SNR=2.0							
NOA				Lg		Lg	13 57 26.8	
	comp=Z,0.1nm,0.3s,baz=61,slow=12,SNR=8.1							
	comp=Z,0.3nm,0.6s							
STRU	**Stroemstad**	**3.52**	**259**	*i* P		**Pg**	**13 56 46.9**	**-1.8**
STRU				*i* S		**Sb**	**13 57 29.0**	**+1.4**
VAF	**Ylistaro**	**3.92**	**34**	*e*P		**Pn**	**13 56 44.1**	**+1.5**
FABU	**Falkenberg**	**3.96**	**226**	*i* P		**Pb**	**13 56 53.0**	**+1.3**
FABU				*i* S		**Sg**	**13 57 45.7**	**-2.6**
ONAU	**Onsala**	**3.99**	**234**	*i* S		**Sg**	**13 57 46.7**	**-2.5**
DEL	**Delary**	**4.02**	**214**	*i* S		**Sg**	**13 57 49.0**	**-1.2**
KEF	**Keuruu**	**4.11**	**53**	*e*P		**Pn**	**13 56 46.4**	**+1.2**
FIA0	**FINESS Array S**	**4.33**	**65**	PN		**Pn**	**13 56 50.9**	**+2.7**
FIA0				SG		**Sg**	**13 57 56.1**	**-4.1**
FINES	**FINESS Array B**	**4.33**	**65**	Pn		**Pn**	**13 56 50.6**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=253,slow=12,SNR=1.9							
FINES				Sn		**Sn**	**13 57 41.5**	**+2.2**
	comp=Z,0.7nm,0.3s,baz=258,slow=22,SNR=11							
FINES				Lg		Lg	13 57 57.7	
	comp=Z,1.2nm,0.3s,baz=249,slow=26,SNR=18							
	comp=Z,3.1nm,0.9s							
KAF	**Kangasniemi**	**4.68**	**58**	SG		**Sg**	**13 58 06.8**	**-4.4**
ARCES	**ARCESS Array B**	**10.22**	**15**	Pn		**Pn**	**13 58 06.7**	**-2.3**
	baz=199,slow=14,SNR=1.3							
	comp=Z,1.8nm,1.0s							

*CATAC **06** 14:04:03.4±0.2, 12˚N±1˚×8˚8W±˚, h15km, M4.1/41, MLv4.1/41, Error ellipse: s-maj=3.5km s-min=1.5km az=31.1, confirmed*
*NEIC **06** 14:04:05.5±1.1, 12˚.23N±0.˚08×88.˚06W±0.˚07, h40km±16km, mb4.5/35, Error ellipse: s-maj=13.1km s-min=8.7km az=210.0*
*IDC **06** 14:04:06.2±3.1, 12˚.59N×87˚.82W, h40km±26km, mb3.8/6, mbtmp4.0/7, ML2.7/2, MS3.5/22, Error ellipse: s-maj=45.5km s-min=23.3km az=46.0*
*UCR **06** 14:04:06.4±1.1, 12˚.17N×87˚.98W, h40km, MB4.5(NEIC)*

ISC 06 14:04:05.0±1.1, 12.13N±0.˚04×88.12W±0.˚03, h43km±12km, n178, σ1s04/180, mb4.5/16, MS3.6/21, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CSGN	**Cosiguina Volc**	**1.00**	**33**	P		**Pn**	**14 04 22.9**	**+0.1**
CSGN				S		**Sn**	**14 04 36.5**	**+0.8**
CSGN	**Cosiguina Volc**	**1.00**	**33**	*e*P		**Pn**	**14 04 22.8**	**+0.1**
POTN	**Potosi Cosigui**	**1.05**	**35**	P		**Pn**	**14 04 24.2**	**+1.0**
POTN				S		**Sn**	**14 04 36.5**	**-0.2**
POTN	**Potosi Cosigui**	**1.05**	**35**	⇑*e*P		**Pn**	**14 04 22.7**	**-0.5**
CNCH	**Conchagua**	**1.17**	**14**	S		**Sn**	**14 04 40.5**	**+0.6**
CNCH	**Conchagua**	**1.17**	**14**	P		**Pn**	**14 04 25.2**	**+0.2**
CRIN	**San Cristobal**	**1.19**	**62**			**Pn**	**14 04 24.5**	**-0.8**
CRIN	**San Cristobal**	**1.19**	**62**	S		**Sn**	**14 04 40.8**	**+0.5**
CRIN	**San Cristobal**	**1.19**	**62**	P		**Pn**	**14 04 26.2**	**+1.0**
CRIN	**San Cristobal**	**1.19**	**62**	*e*P		**Pn**	**14 04 25.7**	**+0.5**
LCND	**La Caada**	**1.19**	**11**	P		**Pn**	**14 04 25.4**	**+0.2**
LCND	**La Caada**	**1.19**	**11**	S		**Sn**	**14 04 40.6**	**+0.4**
PKGN	**Cerro Pekin**	**1.24**	**64**	P		**Pn**	**14 04 26.5**	**+0.7**
PKGN				S		**Sn**	**14 04 41.4**	**+0.1**
CNRM	**Centro Naciona**	**1.33**	**358**	S		**Sn**	**14 04 43.9**	**+0.2**
CNRM	**Centro Naciona**	**1.33**	**358**	P		**Pn**	**14 04 27.7**	**+0.6**
PACA	**Pacayal**	**1.34**	**352**	P		**Pn**	**14 04 27.4**	**0.0**
PACA	**Pacayal**	**1.34**	**352**	S		**Sn**	**14 04 44.9**	**+0.8**
HERN	**Volcan Telica**	**1.35**	**69**			**Pn**	**14 04 26.5**	**-0.8**
POLN	**Al Sur del Vol**	**1.38**	**68**	P		**Pn**	**14 04 27.8**	**+0.1**
POLN				S		**Sn**	**14 04 45.1**	**+0.3**
CNGA	**Al SSO del Vol**	**1.43**	**75**	P		**Pn**	**14 04 29.6**	**+1.0**
CNGA				S		**Sn**	**14 04 46.3**	**+0.1**
CNGN	**Cerro Negro**	**1.44**	**75**			**Pn**	**14 04 27.7**	**-0.9**
CNGN	**Cerro Negro**	**1.44**	**75**	P		**Pn**	**14 04 29.1**	**+0.5**
CNGN	**Cerro Negro**	**1.44**	**75**	S		**Sn**	**14 04 46.4**	**0.0**
CNGN	**Cerro Negro**	**1.44**	**75**	*e*P		**Pn**	**14 04 26.9**	**-1.7**
COPN	**Copaltepe**	**1.50**	**88**	P		**Pn**	**14 04 29.2**	**-0.2**
COPN	**Copaltepe**	**1.50**	**88**	*e*P		**Pn**	**14 04 29.0**	**-0.4**
TECO	**Alcaldia de Te**	**1.54**	**335**	P		**Pn**	**14 04 30.6**	**+0.7**
TECO	**Alcaldia de Te**	**1.54**	**335**	S		**Sn**	**14 04 49.6**	**+0.9**
PQSS	**Presa 15 de Se**	**1.54**	**344**	S		**Sn**	**14 04 49.8**	**+0.9**
PQSS	**Presa 15 de Se**	**1.54**	**344**	P		**Pn**	**14 04 30.4**	**+0.4**
MOM3	**MOM3**	**1.61**	**76**	P		**Pn**	**14 04 31.2**	**+0.2**
MOM3				S		**Sn**	**14 04 50.9**	**+0.3**
MOM2	**El Cardon**	**1.63**	**79**	P		**Pn**	**14 04 31.2**	**0.0**
MOM2				S		**Sn**	**14 04 51.8**	**+0.9**
UESV	**Universidad de**	**1.63**	**337**	S		**Sn**	**14 04 52.1**	**+1.1**
UESV	**Universidad de**	**1.63**	**337**	P		**Pn**	**14 04 31.5**	**+0.3**
COEG	**Centro de Oper**	**1.65**	**333**	S		**Sn**	**14 04 52.6**	**+0.9**
COEG	**Centro de Oper**	**1.65**	**333**	P		**Pn**	**14 04 32.5**	**+0.9**
AMTN	**Mateare**	**1.66**	**86**	S		**Sn**	**14 04 52.1**	**+0.4**
AMTN	**Mateare**	**1.66**	**86**	P		**Pn**	**14 04 32.1**	**+0.5**
AESN	**El Sauce Leon**	**1.72**	**64**	P		**Pn**	**14 04 32.7**	**+0.3**
AESN	**El Sauce Leon**	**1.72**	**64**	S		**Sn**	**14 04 52.8**	**-0.4**
APYN	**Apoyeque**	**1.73**	**86**	P		**Pn**	**14 04 33.4**	**+0.7**
APYN				S		**Sn**	**14 04 55.0**	**+1.4**
APQ2	**Apoyeque**	**1.76**	**88**	P		**Pn**	**14 04 34.0**	**+1.1**
APQ2				S		**Sn**	**14 04 55.2**	**+1.1**
APQ2	**Apoyeque**	**1.76**	**88**	P		**Pn**	**14 04 33.3**	**+0.4**
APQ2				S		**Sn**	**14 04 54.0**	**-0.1**
PAVA	**Las Pavas**	**1.76**	**333**	S		**Sn**	**

152A	**Waverly Hall**	**20.68**	**8**	P	**P**	**14 08 41.6**	**+0.3**
152A				IAmb	IAmb	14 08 46.2	
	comp=Z,16nm,1.0s						
DRIO	**Del Rio**	**20.77**	**328**		**P**	**14 08 41.4**	**-0.9**
DRIO				IAmb	IAmb	14 08 56.7	
	comp=Z,14nm,0.8s						
BRDY	**Brady**	**21.55**	**334**		**P**	**14 08 49.8**	**-1.0**
BRDY				IAmb	IAmb	14 09 02.5	
	comp=Z,15nm,0.8s						
GOGA	**Godfrey**	**21.61**	**11**	P	**P**	**14 08 50.2**	**-1.0**
GOGA				IAmb	IAmb	14 08 54.0	
	comp=Z,36nm,1.4s						
TREL	**Terrell**	**21.77**	**342**	P	**P**	**14 08 53.4**	**+0.4**
Z38A	**Mt. Pleasant**	**21.95**	**344**	P	**P**	**14 08 54.5**	**-0.4**
Z38A				IAmb	IAmb	14 08 56.4	
	comp=Z,17nm,0.9s						
OZNA	**Ozona**	**22.23**	**329**		**P**	**14 08 57.4**	**-0.7**
OZNA				IAmb	IAmb	14 09 00.0	
	comp=Z,22nm,0.9s						
TXAR	**Lajitas Array**	**22.41**	**322**	P	**P**	**14 09 00.1**	**-0.1**
TXAR	**Lajitas Array**	**22.41**	**322**	P	**P**	**14 09 00.3**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=142,slow=9.7,SNR=44						
TXAR				PcP	**PcP**	**14 12 57.7**	**+3.8**
	comp=Z,0.2nm,0.7s,baz=52,slow=4.0,SNR=2.2						
	comp=Z,3.2nm,0.6s						
TX31	**Lajitas Ar. Si**	**22.41**	**322**	P	**P**	**14 08 59.5**	**-0.6**
FPAL	**Fort Paine**	**22.42**	**5**	P	**P**	**14 08 59.0**	**-1.2**
PLPT	**Palo Pinto**	**22.61**	**337**	P	**P**	**14 09 01.6**	**-0.5**
Z35A	**Perchaven, San**	**22.70**	**340**	P	**P**	**14 09 03.0**	**+0.1**
Z35A				IAmb	IAmb	14 09 04.7	
	comp=Z,29nm,1.1s						
MIAR	**Mount Ida**	**22.86**	**348**		**P**	**14 09 04.0**	**-0.6**
UALR	**University of**	**22.87**	**351**	P	**P**	**14 09 04.1**	**-0.6**
UALR				IAmb	IAmb	14 09 16.0	
	comp=Z,15nm,0.9s						
ABTX	**Abilene, Hawle**	**22.97**	**334**		**P**	**14 09 04.5**	**-1.4**
ABTX				IAmb	IAmb	14 09 06.8	
	comp=Z,20nm,1.1s						
ALPN	**Alpine**	**23.16**	**324**	P	**P**	**14 09 06.6**	**-1.3**
W52A	**Murphy**	**23.17**	**9**	P	**P**	**14 09 07.2**	**-0.7**
W52A				IAmb	IAmb	14 09 10.0	
	comp=Z,9.8nm,0.5s						
MNHN	**Monahans**	**23.41**	**327**		**P**	**14 09 09.3**	**-0.9**
TKL	**Tuckaleechee C**	**23.75**	**9**	P	**P**	**14 09 13.2**	**-0.2**
TKL				IAmb	IAmb	14 09 16.1	
	comp=Z,27nm,1.2s						
TKL	**Tuckaleechee C**	**23.75**	**9**	LR	LR	14 17 58.6	
	comp=Z,76nm,19.9s,baz=174,slow=36						
FCAR	**Ozark Folk Cen**	**23.93**	**352**	P	**P**	**14 09 14.5**	**-0.5**
X34A	**Smith Ranch, M**	**24.05**	**340**	P	**P**	**14 09 16.2**	**0.0**
LPIG	**La Paz**	**24.17**	**303**	LR	LR	14 19 44.8	
	comp=Z,137nm,18.9s,baz=124,slow=39						
POST	**Post**	**24.17**	**332**	P	**P**	**14 09 16.2**	**-1.2**
SADO	**Sadowa**	**33.42**	**12**	LR	LR	14 24 56.5	
	comp=Z,96nm,18.6s,baz=156,slow=38						
PFO	**Pinyon Flats O**	**33.55**	**314**	LR	LR	14 25 24.7	
	comp=Z,98nm,18.2s,baz=133,slow=38						
LPAZ	**La Paz**	**34.47**	**145**	LR	LR	14 25 27.7	
	comp=Z,71nm,18.5s,baz=228,slow=37						
PDAR	**Pinedale Array**	**35.74**	**333**	P	**P**	**14 10 58.0**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=129,slow=12,SNR=5.6						
PDAR				PcP	**PcP**	**14 13 26.5**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=134,slow=3.0,SNR=3.7						
PDAR				LR	LR	14 29 23.3	
	comp=Z,22nm,19.1s,baz=110,slow=43						
	comp=Z,0.2nm,0.5s						
ELK	**Elko**	**37.14**	**325**	LR	LR	14 30 21.3	
	comp=Z,82nm,19.8s,baz=136,slow=43						
NVAR	**Mina Array Bea**	**37.51**	**320**	P	**P**	**14 11 15.9**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=134,slow=8.8,SNR=6.5						
NVAR				PcP	**PcP**	**14 13 34.1**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=91,slow=3.0,SNR=2.2						
NVAR				LR	LR	14 29 23.9	
	comp=Z,39nm,18.7s,baz=116,slow=41						
	comp=Z,0.8nm,0.9s						
YHL	**Hebgen Lake**	**38.11**	**333**	IAmb	IAmb	14 11 34.1	
	comp=Z,11nm,1.4s						
ULM	**Lac du Bonnet**	**38.54**	**352**	P	**P**	**14 11 21.4**	**-1.9**
	comp=Z,8.4nm,0.6s,baz=161,slow=9.9,SNR=8.0						
ULM				LR	LR	14 27 47.8	
	comp=Z,63nm,20.7s,baz=166,slow=37						
	comp=Z,8.4nm,0.6s						
RPN	**Rapa Nui**	**44.12**	**208**	LR	LR	14 25 40.1	
	comp=Z,38nm,18.4s,baz=160,slow=29						
SCHQ	**Schefferville**	**45.77**	**17**	P	**P**	**14 12 20.5**	**-1.6**
	comp=Z,6.6nm,0.7s,baz=211,slow=6.7,SNR=9.0						
SCHQ				LR	LR	14 32 44.8	
	comp=Z,99nm,18.9s,baz=178,slow=38						
	comp=Z,6.6nm,0.7s						
FRB	**Frobisher Bay**	**53.36**	**11**	LR	LR	14 37 08.6	
	comp=Z,102nm,19.1s,baz=135,slow=38						
YKA	**Yellowknife Ar**	**53.75**	**345**	LR	LR	14 39 27.0	
	comp=Z,47nm,18.2s,baz=272,slow=40						
SFJD	**Kangerlussuaq**	**60.20**	**16**	LR	LR	14 41 53.5	
	comp=Z,74nm,18.1s,baz=172,slow=38						
ILAR	**Eielson Array**	**66.05**	**336**	P	**P**	**14 14 45.6**	**-1.4**
	comp=Z,1.4nm,1.2s,baz=148,slow=2.8,SNR=6.1						
ILAR				LR	LR	14 47 31.6	
	comp=Z,39nm,18.1s,baz=88,slow=40						
	comp=Z,1.4nm,1.2s						
ESDC	**Sonseca Array**	**77.90**	**52**	LR	LR	14 48 35.5	
	comp=Z,28nm,18.2s,baz=202,slow=34						
SPITS	**Spitsbergen Ar**	**81.15**	**12**	LR	LR	14 52 59.4	
	comp=Z,30nm,18.6s,baz=282,slow=36						
DAVOX	**Davos/Dischmat**	**86.67**	**43**	LR	LR	14 50 32.7	
	comp=Z,42nm,18.5s,baz=264,slow=32						
ARCES	**ARCESS Array B**	**86.70**	**19**	LR	LR	14 54 42.9	
	comp=Z,19nm,18.8s,baz=232,slow=35						
VRAC	**Vranov**	**90.27**	**39**	LR	LR	14 53 52.7	
	comp=Z,30nm,18.1s,baz=288,slow=33						
NRIK	**Noril'sk**	**98.68**	**2**	LR	LR	15 03 28.5	
	comp=Z,25nm,21.2s,baz=338,slow=36						
ASAR	**Alice Springs**	**138.54**	**248**	PKP	**PKiKP**	**14 23 30.6**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=96,slow=1.9,SNR=5.3						
WRA	**Warramunga Arr**	**138.55**	**254**	PKP	**PKiKP**	**14 23 31.2**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=88,slow=2.1,SNR=6.4						
CMAR	**Chiang Mai Arr**	**148.81**	**347**	PKPbc	**PKPdf**	**14 23 47.1**	**+2.2**
	comp=Z,1.9nm,0.8s,baz=294,slow=1.7,SNR=11						

*UPP **06** 14:07:02.2±0.8, 56°.07N× 10°.35E, h0km, ML2.5, Presumed earthquake*
*BER **06** 14:07:03.2±0.7, 56°.04N× 10°.38E, h0km, ML1.5, Suspected explosion*
*DNK **06** 14:07:03.6±1.9, 56°.17N× 10°.42E, h0km, ML2.0, Explosion*
*IDC **06** 14:07:04.8±2.5, 56°.26N× 9°.93E, h0km, mbtmp3.3/5, ML2.7/5, Error ellipse: s-maj=33.6km s-min=19.0km az=143.0*

ISC 06 14:07:01.2±0.9, 56°.09N±0°.04× 10°.34E±0°.03, h0km, n48, σ1°.05/59, Denmark

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SSRD	**Sdr. Stenderup**	**0.73**	**213**	*i* P		**Pn**	**14 07 18.0**	**-0.7**
SSRD				IAML			14 07 33.1	
	comp=Z,34nm,0.2s							
MUD	**Monsted U'grnd**	**0.74**	**300**	*i* P		**Pn**	**14 07 18.3**	**-0.7**
MUD				IAML			14 07 43.2	
	comp=Z,48nm,0.5s							
STE05	**Stenlille05**	**0.87**	**125**	*i* P		**Pg**	**14 07 16.8**	**-1.0**
STE03	**Stenlille03**	**0.88**	**127**	*i* P		**Pn**	**14 07 21.1**	**+0.3**
STE01	**Stenlille01**	**0.92**	**126**	*i* P		**Pn**	**14 07 21.5**	**+0.2**
GOET	**G??ttrup**	**1.13**	**327**	*eP*		**Pb**	**14 07 24.5**	**+1.0**
GOET				IAML			14 07 50.7	
	comp=Z,16nm,0.2s							
COP	**Copenhagen**	**1.25**	**108**	*i* P		**Pn**	**14 07 26.5**	**+0.7**
SKMB	**Sankelmark Bun**	**1.47**	**201**	*eP*		**Pb**	**14 07 31.4**	**+2.1**
BJUU	**Bjuv**	**1.51**	**90**	P		**Pn**	**14 07 30.1**	**+0.7**
BJUU				S		**Sn**	**14 07 49.6**	**-0.1**
BJUU	**Bjuv**	**1.51**	**90**	P		**Pn**	**14 07 30.1**	**+0.7**
BJUU				*i* P		**Pb**	**14 07 30.6**	**+0.6**
BJUU				S		**Sn**	**14 07 49.6**	**-0.1**
ONAU	**Onsala**	**1.57**	**33**	P		**Pn**	**14 07 31.4**	**+1.1**
ONAU	**Onsala**	**1.57**	**33**	*i* P		**Pn**	**14 07 30.9**	**+0.6**
ONAU				P		**Pn**	**14 07 31.4**	**+1.1**
FABU	**Falkenberg**	**1.60**	**54**	P		**Pn**	**14 07 31.9**	**+1.1**
FABU	**Falkenberg**	**1.60**	**54**	*i* P		**Pn**	**14 07 30.9**	**+0.2**
FABU				P		**Pn**	**14 07 31.9**	**+1.1**
LUNU	**Lund**	**1.81**	**103**	P		**Pn**	**14 07 34.7**	**+1.1**
LUNU	**Lund**	**1.81**	**103**	P		**Pn**	**14 07 34.7**	**+1.1**
LUNU				*i* P		**Pb**	**14 07 35.1**	**0.0**
DEL	**Delary**	**2.01**	**78**	P		**Pn**	**14 07 37.4**	**+1.1**
DEL	**Delary**	**2.01**	**78**	*i* P		**Pn**	**14 07 37.0**	**+0.8**
DEL				P		**Pn**	**14 07 37.4**	**+1.1**
BORU	**Boraas**	**2.04**	**40**	P		**Pn**	**14 07 38.3**	**+1.5**
BORU	**Boraas**	**2.04**	**40**	*i* P		**Pn**	**14 07 37.8**	**+1.0**
BORU				P		**Pn**	**14 07 38.3**	**+1.5**
TJOU	**Tjoern**	**2.07**	**19**	P		**Pn**	**14 07 38.5**	**+1.4**
TJOU	**Tjoern**	**2.07**	**19**	*i* P		**Pn**	**14 07 38.4**	**+1.3**
TJOU				P		**Pn**	**14 07 38.5**	**+1.4**
GNOU	**Gnosjoe**	**2.24**	**56**	P		**Pn**	**14 07 41.0**	**+1.5**
GNOU	**Gnosjoe**	**2.24**	**56**	P		**Pn**	**14 07 41.0**	**+1.5**
HLG	**Helgoland**	**2.37**	**217**	*eP*		**Pg**	**14 07 46.7**	**+0.1**
HOMB	**Homborsund**	**2.40**	**336**	*eP*		**Pn**	**14 07 43.2**	**+1.5**
HOMB				*eS*		**Sn**	**14 08 11.6**	**-0.2**
HOMB				IAML			14 08 35.5	
	comp=Z,5.6nm,0.7s							
HOMB	**Homborsund**	**2.40**	**336**	*i* P		**Pn**	**14 07 42.2**	**+0.5**
VANU	**Vaenersborg**	**2.59**	**21**	P		**Pn**	**14 07 45.8**	**+1.6**
VANU	**Vaenersborg**	**2.59**	**21**	P		**Pn**	**14 07 45.8**	**+1.6**
SNART	**Snartemo**	**2.82**	**324**	*eP*		**Pn**	**14 07 48.3**	**+0.8**
SNART	**Snartemo**	**2.82**	**324**	*i* P		**Pn**	**14 07 48.2**	**+0.8**
STRU	**Stroemstad**	**2.99**	**8**	*eP*		**Pn**	**14 07 51.2**	**+1.5**
STRU	**Stroemstad**	**2.99**	**8**	*i* P		**Pn**	**14 07 51.0**	**+1.3**
BLS5	**Blasjo**	**3.94**	**330**	*eP*		**Pn**	**14 08 03.5**	**+0.7**
UDD	**Uddeholm**	**4.37**	**22**	P		**Pn**	**14 08 09.8**	**+1.1**
UDD	**Uddeholm**	**4.37**	**22**	P		**Pn**	**14 08 09.8**	**+1.1**
HFS	**Hagfors**	**4.43**	**22**	Pn		**Pn**	**14 08 10.7**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=207,slow=11,SNR=22							
HFS				Sn		**Sn**	**14 09 00.9**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=206,slow=26,SNR=6.4							
HFS				Lg		Lg	14 09 21.2	
	comp=Z,0.5nm,0.3s,baz=209,slow=26,SNR=2.4							
	comp=Z,1.4nm,0.4s							
NC602	**NORSAR Array S**	**4.70**	**7**	*eP*		**Pn**	**14 08 13.8**	**+0.5**
NAO01	**NORSAR Array S**	**4.78**	**3**	*eP*		**Pn**	**14 08 14.8**	**+0.4**
NBO00	**NORSAR Array S**	**4.96**	**2**	*eP*		**Pn**	**14 08 17.2**	**+0.4**
NOA	**NORSAR Array B**	**4.99**	**5**	Pn		**Pn**	**14 08 16.1**	**-1.1**
	baz=187,slow=13,SNR=6.9							
	comp=Z,0.3nm,0.4s							
NB201	**NORSAR Array S**	**5.00**	**5**	*eP*		**Pn**	**14 08 17.8**	**+0.4**
NC303	**NORSAR Array S**	**5.18**	**6**	*eP*		**Pn**	**14 08 20.2**	**+0.4**
NC204	**NORSAR Array S**	**5.21**	**2**	*eP*		**Pn**	**14 08 20.6**	**+0.4**
MOL	**Molde**	**6.65**	**349**	*eP*		**Pn**	**14 08 39.9**	**-0.1**
EKA	**Eskdalemuir Ar**	**7.66**	**270**	Pn		**Pn**	**14 08 53.8**	**-0.1**
	baz=78,slow=14							
	comp=Z,0.4nm,0.2s							
FINES	**FINESS Array B**	**9.77**	**50**	Pn		**Pn**	**14 09 23.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=241,slow=12,SNR=1.3							
FINES				Lg		Lg	14 12 12.8	
	comp=Z,0.1nm,0.3s,baz=250,slow=25,SNR=1.6							
	comp=Z,6.5nm,1.1s							
ARCES	**ARCESS Array B**	**15.09**	**21**	Pn		**Pn**	**14 10 33.0**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=6.4							
	comp=Z,1.9nm,0.8s							

*SNET **06** 14:08:03.6±14.0, 13°.28N× 89°.90W, h35km, ML3.4*
*CATAC **06** 14:08:24.7±0.7, 13°N±4°× 9°0W±°, h25km±3km, M3.4/10, MLv3.4/10, Error ellipse: s-maj=9.1km s-min=5.4km az=35.5, confirmed*
*GCG **06** 14:08:25.2±1.2, 13°.34N× 89°.93W, h33km±7km, MD4.1, ML3.8*

ISC 06 14:08:26.6±2.0, 13°.32N±0°.09× 89°.83W±0°.05, h33km±3km, n32, σ1°05/40, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JAYA	**Jayaque - finc**	**0.50**	**48**	*eP*		**Pn**	**14 08 37.0**	**-0.5**
JAYA				*eS*		**Sn**	**14 08 46.3**	**+1.2**
JAYA	**Jayaque - finc**	**0.50**	**48**	*eP*		**Pn**	**14 08 36.8**	**-0.7**
JAYA				*i* S		**Sn**	**14 08 45.7**	**+0.7**
JAYA	**Jayaque - finc**	**0.50**	**48**	P		**Pn**	**14 08 36.7**	**-0.9**
LALI	**Alcalda de L**	**0.52**	**71**	*eS*		**Sb**	**14 08 45.1**	**0.0**
LALI	**Alcalda de L**	**0.52**	**71**	P		**Pb**	**14 08 37.1**	**-0.4**
LALI	**Alcalda de L**	**0.52**	**71**	S		**Sn**	**14 08 45.6**	**+0.3**
CEVE	**Cerro Verde**	**0.54**	**21**	*eP*		**Pb**	**14 08 37.6**	**-0.5**
CEVE				*eS*		**Sn**	**14 08 48.4**	**+2.1**
CEVE	**Cerro Verde**	**0.54**	**21**	P		**Pb**	**14 08 37.8**	**-0.3**
FAME	**Alcaldia de Sa**	**0.55**	**341**	P		**Pn**	**14 08 36.5**	**-1.6**
NUBE	**Las Nubes**	**0.58**	**4**	*eP*		**Pb**	**14 08 37.6**	**-1.0**
NUBE				*eS*		**Sn**	**14 08 47.5**	**+0.4**
NUBE	**Las Nubes**	**0.58**	**4**	*i* P		**Pb**	**14 08 37.6**	**-1.0**
NUBE				*eS*		**Sn**	**14 08 46.7**	**-0.5**
NUBE	**Las Nubes**	**0.58**	**4**	P		**Pb**	**14 08 37.5**	**-1.2**
PMON	**Piamonte**	**0.63**	**52**	P		**Pb**	**14 08 38.6**	**-0.9**
PMON	**Piamonte**	**0.63**	**52**	S		**Sb**	**14 08 49.6**	**+1.4**
CEDA	**San Andres**	**0.64**	**41**	S		**Sb**	**14 08 49.6**	**+1.3**
BOQS	**Boqueron**	**0.67**	**52**	*eP*		**Pb**	**14 08 39.5**	**-0.7**
LOAL	**Lomas de Alarc**	**0.68**	**4**	*eP*		**Pb**	**14 08 39.2**	**-1.0**
LOAL				*eS*		**Sb**	**14 08 50.8**	**+1.4**
LOAL	**Lomas de Alarc**	**0.68**	**4**	P		**Pb**	**14 08 39.1**	**-1.0**
LOMA	**Loma Larga**	**0.71**	**63**	*eP*		**Pn**	**14 08 39.4**	**-1.1**
LOMA				*eS*		**Sb**	**14 08 51.8**	**+1.3**
LOMA	**Loma Larga**	**0.71**	**63**	P		**Pn**	**14 08 39.2**	**-1.3**
LFRS	**El Faro**	**0.80**	**68**	*eP*		**Pb**	**14 08 41.8**	**-0.5**
PAVA	**Las Pavas**	**0.95**	**65**	P		**Pb**	**14 08 43.7**	**-1.0**
PAVA	**Las Pavas**	**0.95**	**65**	S		**Sb**	**14 08 57.0**	**0.0**
PCG5	**San Vicente Pa**	**1.04**	**329**	*eP*		**Pb**	**14 08 46.5**	**+0.3**
PCG5				*eS*		**Sb**	**14 09 02.2**	**+2.5**
MTO3	**Montecristo**	**1.17**	**23**	*i* P		**Pn**	**14 08 46.1**	**-0.8**
MTO3	**Montecristo**	**1.17**	**23**	P		**Pn**	**14 08 46.0**	**-0.8**
MTO3	**Montecristo**	**1.17**	**23**	S		**Sn**	**14 09 01.5**	**-0.2**
ESQI	**Esquipulas**	**1.32**	**21**	P		**Pn**	**14 08 48.1**	**-0.7**
ESQI	**Esquipulas**	**1.32**	**21**	S		**Sn**	**14 09 05.5**	**+0.2**
APG	**El Apazote**	**1.79**	**340**	*i* P		**Pn**	**14 08 54.3**	**-1.0**
CNCH	**Conchagua**	**1.94**	**91**	P		**Pn**	**14 08 57.5**	**+0.2**
CNCH	**Conchagua**	**1.94**	**91**	S		**Sn**	**14 09 21.9**	**+1.2**

*NNC **06** 14:11:56.4±4.5, 41°.47N× 83°.11E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=46.3km s-min=28.2km az=16.0*
*SOME **06** 14:12:00.2, 41°.00N× 82°.40E, h10km*

ISC 06 14:11:54.7±2.9, 41°.4N±0°.2× 83°.17E±0°.10, h10km, n15, σ2992/20, 1C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SHLS	**Shalkode**	**3.27**	**304**	Pg		**Pb**	**14 12 53.4**	**+0.5**
	21nm,0.1s							
SHLS				Lg		Lg	14 13 32.2	
	182nm,0.3s							
SHLS	**Shalkode**	**3.27**	**304**	*eP*		**Pb**	**14 12 53.4**	**+0.5**
	21nm,0.1s							
SHLS				*eS*		**Sb**	**14 13 32.2**	**-0.6**
	182nm,0.3s							
PDGK	**Podgornoye**	**3.34**	**307**	⇑Pn		**Pn**	**14 12 43.6**	**-3.6**
	11nm,0.5s							
PDGK				⇓Lg		Lg	14 13 37.3	
	41nm,0.5s							
UZB	**Uzynbulak**	**3.54**	**301**	Pg		**Pg**	**14 13 00.4**	**-2.2**
	6.7nm,0.2s							
UZB				Lg		Lg	14 13 43.4	
	25nm,0.4s							
UZB	**Uzynbulak**	**3.54**	**301**	*eP*		**Pg**	**14 13 00.4**	**-2.2**
	6.7nm,0.2s							
UZB				*eS*		**Sb**	**14 13 43.4**	**+2.7**
	25nm,0.4s							
SATY	**Saty**	**3.91**	**297**	Pg		**Pg**	**14 13 08.2**	**-1.5**
	11nm,0.2s							
SATY				Lg		Lg	14 13 56.7	
	31nm,0.2s							
KPKS	**Kokpek**	**3.91**	**304**	Pg		**Pb**	**14 13 06.8**	**+2.9**
	0.3nm,0.1s							
KPKS				Lg		Lg	14 13 54.9	
	20nm,0.4s							
KURS	**Kuram**	**4.25**	**301**	Pg		**Pg**	**14 13 15.8**	**-0.4**
	7.5nm,0.5s							
KURS				Lg		Lg	14 14 10.4	
	15nm,0.6s							
ARXS	**Arharly**	**4.84**	**307**	Pg		**Pg**	**14 13 26.4**	**-0.9**
	3.6nm,0.3s							
ARXS				Lg		Lg	14 14 28.1	
	14nm,0.3s							
ARXS	**Arharly**	**4.84**	**307**	*eP*		**Pg**	**14 13 26.4**	**-0.9**
ARXS				*eS*		**Sg**	**14 14 28.1**	**-1.9**
KTBS	**Karatobe**	**5.32**	**298**	Pg		**Pg**	**14 13 34.6**	**-2.0**
	3.7nm,0.3s							
KTBS				Lg		Lg	14 14 42.9	
	13nm,0.4s							
MK31	**Makanchi Array**	**5.44**	**354**	Pn		**Pn**	**14 13 15.0**	**-0.9**
	0.5nm,0.4s,baz=181,slow=12,SNR=3.7							
MK31				⇓Pg		**Pb**	**14 13 32.8**	**+2.9**
	2.0nm,0.5s,baz=172,slow=15,SNR=5.0							
MK31				⇓Lg		Lg	14 14 49.1	
	4.8nm,0.5s							
KST	**Kastek**	**5.60**	**290**	Pg		**Pb**	**14 13 36.4**	**+3.8**
	1.2nm,0.2s							
KST				Lg		Lg	14 14 46.1	
	10nm,0.6s							
KST	**Kastek**	**5.60**	**290**	*eP*		**Pb**	**14 13 36.4**	**+3.8**
	1.2nm,0.2s							
KST				*eS*		**Sb**	**14 14 46.1**	**+6.3**
	10nm,0.6s							
KRBS	**Karabastau**	**5.99**	**295**	Pg		**Pg**	**14 13 45.5**	**-4.0**
	1.1nm,0.3s							
KRBS				Lg		Lg	14 15 01.1	
	6.5nm,0.3s							

Gll 06 14:17:04.9±0.0, 32°.99N±0°.01× 35°.183E±0°.008, h0km, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HNTI	**Hanita**	**0.10**	**356**	P		Pg	14 17 07.2	+0.5
HNTI	**Hanita**	**0.10**	**356**	S		Sg	14 17 09.3	+1.3
ZRT	**Zar'it**	**0.14**	**39**	P		Pg	14 17 08.4	+0.7
ZRT	**Zar'it**	**0.14**	**39**	S		Sg	14 17 11.7	+2.2
MMC7	**Mount Meron ar**	**0.18**	**79**	P		Pg	14 17 09.5	+1.2
MMA0B	**Mount Meron ar**	**0.19**	**82**	P		Pg	14 17 09.5	+1.0
MMA0B	**Mount Meron ar**	**0.19**	**82**	S		Sg	14 17 12.8	+1.9
HMDT	**Nahal Hemdat**	**0.79**	**158**	P		Pb	14 17 20.8	-0.7
HMDT				S		Sb	14 17 33.3	+0.6

IDC 06 14:19:00.4±4.8, 7°.47S× 129°.28E, h234km±49km, mb3.1/1, mbtmp3.6/5, Error ellipse: s-maj=56.4km s-min=21.0km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BATI	**Baumata**	**6.18**	**243**	P		Pn	14 20 31.4	+0.8
	8.2nm,0.3s,baz=108,slow=6.4,SNR=2.1							
FITZ	**Fitzroy Crossi**	**11.15**	**198**	P		Pn	14 21 34.4	+0.7
	0.8nm,0.2s,baz=26,slow=12,SNR=17							
FITZ				S		S	14 23 36.7	-0.7
	0.9nm,0.3s,baz=288,slow=20,SNR=2.5							
WRA	**Warramunga Arr**	**13.34**	**159**	P		Pn	14 21 59.7	-1.4
	0.7nm,1.0s,baz=342,slow=13,SNR=10							
WRA				S		S	14 24 27.3	-1.5
	0.6nm,0.4s,baz=331,slow=23,SNR=10.0							
ASAR	**Alice Springs**	**16.71**	**165**	P		P	14 22 40.6	+0.6
	0.3nm,0.5s,baz=345,slow=10.0,SNR=11							
ASAR				S		S	14 25 46.4	+3.8
	0.2nm,0.3s,baz=345,slow=25,SNR=4.9							
MKAR	**Makanchi Array**	**68.23**	**327**	P		P	14 29 35.7	-0.1
	0.3nm,0.4s,baz=142,slow=7.3,SNR=7.6							
	0.3nm,0.4s							

TRN 06 14:39:35.9, 18°.18N× 62°.41W, h7km, MD3.9, East of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ANWB	**Willy Bob**	**0.79**	**130**	*eP*		Pn	14 39 52.8	-0.6
ANWB				*eS*		Sn	14 40 07.1	+1.7
SKI	**Saint Kitts**	**0.90**	**200**	*eP*		Pn	14 39 56.7	+1.8
SKI				*eS*		Sn	14 40 11.7	+3.6
SKOC	**St. Kitts, UWI**	**0.93**	**199**	*eP*		Pn	14 39 57.3	+1.9
SKOC				*eS*		Sn	14 40 12.0	+3.0
MBFL	**Flemmings, Mon**	**1.44**	**172**	*eP*		Pg	14 40 04.9	+1.4
MBFL				*eS*		Sg	14 40 25.1	+3.0
DHSZ	**Broadband at M**	**2.00**	**162**	*eP*		Pb	14 40 12.3	-0.2
DHSZ				*eS*		Sb	14 40 33.4	+0.8
ATDZ	**Broadband at L**	**2.17**	**162**	*eP*		Pb	14 40 15.2	-0.4
ATGZ				*eS*		Sb	14 40 43.3	+0.5
MMLZ	**Guadeloupe Bro**	**2.24**	**161**	*eP*		Pb	14 40 15.9	-0.8
MMLZ				*eS*		Sb	14 40 45.0	+0.4
DSDZ	**La Diserade, G**	**2.26**	**145**	*eP*		Pb	14 40 16.3	-0.7
DSDZ				*eS*		Sb	14 40 44.9	-0.3
TBG	**Guadaloupe-3**	**2.43**	**162**	*eP*		Pb	14 40 18.8

CAN	Canberra	33.61	233	P	P	14 50 02.4	+0.8
CMSA	Cobar Meteorol	35.09	241	P	P	14 50 14.3	+0.3
MTSU	Mount Surprise	35.45	264	P	P	14 50 17.2	0.0
QLP	Quilpie	35.51	250	P	P	14 50 17.8	+0.2
COEN	Coen	37.18	271	P	P	14 50 32.1	+0.6
STKA	Stephens Creek	38.57	241		P	14 50 43.2	+0.6
STKA	Stephens Creek	38.57	241	P	P	14 50 43.2	+0.6
	comp=Z,8.8nm,0.5s,baz=93,slow=10.0,SNR=33						
	comp=Z,8.8nm,0.5s						
STKA	Stephens Creek	38.57	241	P	P	14 50 43.2	+0.6
INKA	Innaminka	38.72	248		P	14 50 44.6	+0.8
INKA				IAmb	IAmb	14 50 45.8	
	comp=Z,6.0nm,0.8s						
QIS	Mount Isa	39.68	260	P	P	14 50 51.7	0.0
HTT	Hallett	41.08	240	P	P	14 51 03.5	+0.8
BBOO	Buckleboo	43.35	241	P	P	14 51 20.8	+0.3
DHH	Diamond Head	44.04	28	P	P	14 51 25.4	-0.5
WR8	Warramunga Arr	44.51	260	P	P	14 51 28.9	-0.8
WR8				IAmb	IAmb	14 51 30.1	
	comp=Z,8.1nm,1.1s						
WB0	Warramunga Arr	44.63	260		P	14 51 29.8	-0.8
WRAB	Tennant Creek	44.65	260	P	P	14 51 29.9	-0.8
WRAB				IAmb	IAmb	14 51 30.7	
	comp=Z,5.9nm,0.7s						
WRAB	Tennant Creek	44.65	260	P	P	14 51 29.8	-0.9
WRA	Warramunga Arr	44.66	260		P	14 51 29.8	-1.0
WRA	Warramunga Arr	44.66	260	P	P	14 51 30.1	-0.7
	comp=Z,4.2nm,0.5s,baz=97,slow=6.7,SNR=143						
WRA				PcP	PcP	14 53 01.4	-0.2
	comp=Z,0.9nm,0.5s,baz=88,slow=3.3,SNR=6.6						
WRA				S	S	14 57 22.0	-5.6
	comp=Z,0.7nm,0.8s,baz=101,slow=14,SNR=2.1						
	comp=Z,4.2nm,0.5s						
AS31	Alice Springs	44.79	254		P	14 51 31.2	-0.6
ASAR	Alice Springs	44.79	254		P	14 51 31.0	-0.8
ASAR	Alice Springs	44.79	254	P	P	14 51 32.1	+0.3
	comp=Z,35nm,0.5s,baz=88,slow=8.6,SNR=1363						
ASAR				PcP	PcP	14 53 01.6	-0.4
	comp=Z,1.3nm,0.5s,baz=96,slow=4.2,SNR=4.7						
ASAR				S	S	14 57 27.9	-1.5
	comp=Z,3.9nm,1.0s,baz=90,slow=15,SNR=16						
	comp=Z,35nm,0.5s						
KNRA	Kununurra	50.54	264	P	P	14 52 13.7	-1.1
KNRA				IAmb	IAmb	14 52 15.4	
	comp=Z,6.3nm,0.7s						
MEEK	Meekatharra	58.41	249	P	P	14 53 09.4	-0.6
KLBR	Kellerberrin	58.78	244	P	P	14 53 12.2	-0.2
BLDU	Ballidu	59.74	245	P	P	14 53 18.2	-0.6
VNDA	Vanda	60.20	185	P	P	14 53 22.1	+1.2
	comp=Z,0.6nm,0.5s,baz=356,slow=7.7,SNR=9.2						
	comp=Z,0.6nm,0.5s						
MJAR	Matsushiro Arr	68.16	323		P	14 54 11.4	-0.7
MJAR	Matsushiro Arr	68.16	323	P	P	14 54 11.2	-0.9
	comp=Z,5.8nm,0.6s,baz=160,slow=5.7,SNR=20						
	comp=Z,5.8nm,0.6s						
MAJO	Matsushiro	68.16	323		P	14 54 11.5	-0.5
MAJO	Matsushiro	68.16	323	P	P	14 54 11.4	-0.7
MJB9	Matsu-Tunnel	68.16	323	P	P	14 54 11.8	-0.3
MJB9				IAmb	IAmb	14 54 12.8	
	comp=Z,8.7nm,0.6s						
ADK	Adak	69.76	1	P	P	14 54 20.0	-1.3
QSPA	South Pole Qui	71.89	180		P	14 54 36.2	+2.3
QSPA	South Pole Qui	71.89	180	P	P	14 54 37.1	+3.2
	comp=Z,4.9nm,0.8s,baz=318,slow=0.6,SNR=27						
	comp=Z,4.9nm,0.8s						
SSLB	Suanglung	72.44	303	P	P	14 54 36.2	-1.5
TPUB	Ta-pu	72.46	302	P	P	14 54 36.3	-1.5
PETK	Petropavlovsk-	73.94	345	P	P	14 54 44.5	-1.1
	comp=Z,7.3nm,0.6s,baz=104,slow=6.6,SNR=14						
	comp=Z,7.3nm,0.6s						
KSRS	Korea Array	74.94	318	P	P	14 54 52.1	+0.6
	comp=Z,1.2nm,0.6s,baz=130,slow=5.5,SNR=6.6						
	comp=Z,1.2nm,0.6s						
MHC	Mount Hamilton	76.76	43	P	P	14 55 01.4	-0.4
MHC				IAmb	IAmb	14 55 03.0	
	comp=Z,8.9nm,0.9s						
USRK	Ussuriysk Ar.	76.87	326	P	P	14 55 01.6	-0.5
	comp=Z,3.4nm,0.7s,baz=130,slow=4.2,SNR=4.1						
	comp=Z,3.4nm,0.7s						
KMRM	Mail Ridge	77.16	40	P	P	14 55 04.1	+0.2
O02D	Mt. Diablo Mer	77.70	40		P	14 55 07.3	+0.5
O02D				IAmb	IAmb	14 55 08.6	
	comp=Z,11nm,1.1s						
ISA	Isabella, Lake	77.94	46	P	P	14 55 07.9	-0.2
OHAK	Old Harbor	77.96	14	P	P	14 55 06.8	-0.8
BORC	Borrego Spring	78.12	49	P	P	14 55 08.9	-0.2
M02C	Callahan	78.38	39	P	P	14 55 09.6	-0.8
M02C				IAmb	IAmb	14 55 12.1	
	comp=Z,10nm,1.1s						
MDPB	Devils Postpil	78.61	44	P	P	14 55 11.4	-0.6
MDPB				IAmb	IAmb	14 55 12.9	
	comp=Z,9.6nm,0.9s						
PNTR	Pine Nut	79.08	43	P	P	14 55 14.3	-0.1
PNTR				IAmb	IAmb	14 55 15.5	
	comp=Z,16nm,0.9s						
NVAR	Mina Array Bea	79.56	44	P	P	14 55 17.1	+0.2
NVAR	Mina Array Bea	79.56	44	P	P	14 55 16.9	0.0
	comp=Z,4.6nm,0.7s,baz=225,slow=9.0,SNR=32						
	comp=Z,4.6nm,0.7s						
PINE	Pine Mountain	80.94	38		P	14 55 23.9	-0.1
L16K	Owhat River	81.01	9		P	14 55 23.5	-0.1
BELA	Belgrano 2	81.90	173		P	14 55 27.6	-0.6
I07A	Izee	81.96	39		P	14 55 29.0	-0.1
I07A				IAmb	IAmb	14 55 30.2	
	comp=Z,12nm,0.8s						
STLK	Strandline Lak	82.17	12	P	P	14 55 27.2	-2.4
STLK				IAmb	IAmb	14 55 28.9	
	comp=Z,10.0nm,1.0s						
CCUT	Cedar City	82.43	47		P	14 55 31.9	+0.1
U15A	North Rim	82.63	48		P	14 55 33.4	+0.6
U15A				IAmb	IAmb	14 55 34.4	
	comp=Z,12nm,0.9s						
J18K	Innoko River	83.10	10	P	P	14 55 33.5	-0.6
J18K				IAmb	IAmb	14 55 34.5	
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	86.07	58		P	14 55 50.1	+0.5
TXAR	Lajitas Array	86.07	58	P	P	14 55 50.8	+1.1
	comp=Z,4.4nm,0.8s,baz=218,slow=5.9,SNR=52						
	comp=Z,4.4nm,0.8s						
ILAR	Eielson Array	86.12	13	P	P	14 55 47.6	-1.2
ILAR	Eielson Array	86.12	13	P	P	14 55 47.4	-1.5
	comp=Z,2.2nm,0.5s,baz=222,slow=4.9,SNR=53						
	comp=Z,2.2nm,0.5s						
MCMT	McKenzie Canyo	86.38	40		P	14 55 50.8	-0.1
L29M	L29M	86.89	17	P	P	14 55 52.2	-0.4
PDAR	Pinedale Array	87.48	43		P	14 55 55.2	-0.9
PDAR	Pinedale Array	87.48	43	P	P	14 55 55.6	-0.6
	comp=Z,2.4nm,0.7s,baz=220,slow=3.1,SNR=25						
	comp=Z,2.4nm,0.7s						
BMAR	Burnt Mountain	88.89	12		P	14 56 01.1	-0.8
CMAR	Chiang Mai Arr	89.04	290	P	P	14 56 04.9	+1.3
	comp=Z,2.5nm,0.9s,baz=117,slow=3.0,SNR=15						
	comp=Z,2.5nm,0.9s						
SNAA	Sanae	90.34	179	P	P	14 56 07.0	-1.8
	comp=Z,0.8nm,0.7s,baz=245,slow=11,SNR=5.5						
MKAR	Makanchi Array	109.36	314	PKiKP	PKiKP	15 01 32.1	-2.3
	comp=Z,0.6nm,0.5s,baz=121,slow=1.0,SNR=8.7						
KURBB	Kurchatov Arra	112.12	318	PKiKP	PKiKP	15 01 38.0	-1.5
	comp=Z,0.9nm,0.7s,baz=98,slow=1.9,SNR=9.2						
BVAR	Borovoye Array	117.09	321	PKP	PKPdf	15 01 47.7	-1.3
	comp=Z,2.0nm,0.5s,baz=228,slow=0.2,SNR=9.6						
SPITS	Spitsbergen Ar	119.53	357	PKP	PKPdf	15 01 51.9	-1.1
	comp=Z,9.8nm,1.0s,baz=251,slow=4.4,SNR=2.2						
ARTI	Arti	123.21	326	PKP	PKPdf	15 01 59.7	-0.8
	comp=Z,0.9nm,0.3s,baz=166,slow=4.2,SNR=3.6						
AKTO	Aktyubinsk	125.11	319	PKP	PKPdf	15 02 03.7	-0.7
	comp=Z,1.6nm,0.8s,baz=106,slow=0.9,SNR=5.8						
ARCES	ARCESS Array B	126.58	350	PKP	PKPdf	15 02 05.7	-1.1
	comp=Z,1.4nm,0.5s,baz=354,slow=1.2,SNR=5.7						
AKASG	Malin Array Be	140.82	332	PKhKP	PKPpre	15 02 24.8	
	comp=Z,0.4nm,0.3s,baz=44,slow=3.7,SNR=6.2						
EKA	Eskdalemuir Ar	142.71	5	PKhKP	PKPpre	15 02 32.0	
	comp=Z,1.1nm,0.6s,baz=334,slow=3.1,SNR=4.5						
BURAR	Bucovina Array	144.87	332	⇓P	PKPdf	15 02 41.7	+0.6
BIZ	Bicaz	144.97	330	⇓P	PKPab	15 02 45.2	+2.4
BRTR	Keskin Array B	145.01	315	PKP	PKPdf	15 02 42.0	+0.3
	comp=Z,4.5nm,0.8s,baz=142,slow=4.6,SNR=20						
ONER	Baraj Valea Uz	145.26	329	⇓P	PKPdf	15 02 43.2	+1.4
VRI	Vrincioaia	145.44	329	⇑P	PKPdf	15 02 43.1	+1.0
HARR	Harsova	145.62	326	⇓P	PKPdf	15 02 44.2	+1.8
OSTC	Ostas	145.66	344	*e*PKP	PKPdf	15 02 44.1	+1.8
CLL	Collm	145.73	347	*i* PKPbc	PKPdf	15 02 43.4	+1.1
	comp=Z,23nm,0.9s						
OZUR		145.73	330	⇓P	PKPbc	15 02 46.4	+2.2
UPC	Upice	145.75	344	*e*PKP	PKPdf	15 02 43.9	+1.5
STEB	Steborice	145.77	341	*e*PKP	PKPdf	15 02 43.9	+1.4
DPC	Dobruska-Polom	145.81	343	*e*PKP	PKPdf	15 02 44.5	+1.9
KRLC	Kraliky	145.93	343	*e*PKP	PKPdf	15 02 44.3	+1.5
MORC	Moravsky Berou	145.97	342	*e*PKP	PKPdf	15 02 44.2	+1.3
DOPR	Dopca	146.01	330	⇑P	PKPdf	15 02 45.4	+2.3
MLR	Muntele Rosu	146.09	329	PKPbc	PKPdf	15 02 45.1	+1.7
	comp=Z,3.1nm,0.4s,baz=314,slow=6.2,SNR=4.2						
MLR	Muntele Rosu	146.09	329	⇓P	PKPdf	15 02 46.0	+2.6
PVCC	Panska Ves	146.10	345	*e*PKP	PKPdf	15 02 44.8	+1.8
HSKC	Hora Svate Kat	146.29	346	*e*PKP	PKPdf	15 02 45.1	+1.7
MMAI	Mount Meron Ar	146.34	303	PKPbc	PKPdf	15 02 46.4	+2.4
	comp=Z,4.3nm,0.5s,baz=63,slow=3.9,SNR=7.6						
MARR	Marisel-Cluj	146.51	333	⇑P	PKPdf	15 02 47.2	+3.2
DRGR		146.60	333	⇑P	PKPdf	15 02 46.3	+2.2
PRU	Pruhonice	146.61	345	*e*PKP	PKPdf	15 02 46.3	+2.4
VRAC	Vranov	146.67	342	*e*PKP	PKPdf	15 02 46.3	+2.3
JAVC	Velka Javorina	146.75	341	*e*PKP	PKPdf	15 02 47.2	+3.0
PSZ	Piszkesteto	146.80	337	⇓P	PKPdf	15 02 46.9	+2.6
ARR	Arges	146.81	330	⇑P	PKPdf	15 02 47.6	+3.2
KRUC	Moravsky	146.95	342	*e*PKP	PKPdf	15 02 46.9	+2.4
ZVC	Zvikov	147.20	345	*e*PKP	PKPdf	15 02 47.7	+2.8
ZVC				*ex*	x	15 02 51.1	
KHC	Kasperske Hory	147.64	345	*e*PKP	PKPdf	15 02 48.8	+3.1
KHC				*ex*	x	15 02 53.6	
GZR	Gura Zlata	147.66	332	⇓P	PKPdf	15 02 48.6	+2.7
CKRC	Cesky Krumlov	147.75	344	*e*PKP	PKPdf	15 02 49.0	+3.2
GERES	GERESS Array B	147.88	345	PKPbc	PKPdf	15 02 49.7	+3.6
	comp=Z,4.9nm,0.5s,baz=6.8,slow=3.4,SNR=12						
ELND	Elena	147.91	325	⇑P	PKiKP	15 02 54.9	+3.4
BZS	Buzias	147.99	333	⇑P	PKPdf	15 02 49.8	+3.5
CONA	Conrad Observa	148.13	342	*i* PKP	PKPdf	15 02 50.4	+3.8
	comp=Z,8.2nm,0.8s						
RONA	Rosalia, Austr	148.20	341	*i* PKP	PKPdf	15 02 50.6	+3.9
	comp=Z,7.7nm,0.8s						
HERR	Herculane	148.21	331	⇓P	PKPdf	15 02 50.2	+3.5
MORH	Mrgy, Hungar	148.69	337	⇑P	PKPdf	15 02 51.4	+4.0
LESA	Schwarzleotal	149.45	345	*e*PKP	PKPdf	15 02 53.3	+4.6
	comp=Z,6.9nm,0.9s						
SOKA	Soboth	149.50	342	*e*PKP	PKPdf	15 02 52.8	+4.0
	comp=Z,7.1nm,1.0s						
KBA	Koelnbreinsper	149.60	344	*i* PKP	PKPdf	15 02 53.5	+4.5
	comp=Z,10nm,1.0s						
EZN	Ezine	149.67	320	⇓P	PKPdf	15 02 53.7	+4.6
WATA	Walderalm	149.79	347	*e*PKP	PKPdf	15 02 54.3	+5.0
	comp=Z,6.2nm,0.5s						
RETA	Reutte	149.82	348	*e*PKP	PKPdf	15 02 54.6	+5.4
	comp=Z,12nm,1.5s						
WTTA	Wattenberg	149.84	346	*i* PKP	PKPdf	15 02 54.2	+4.7
	comp=Z,16nm,0.6s						
MOTA	Moosalm	149.88	347	*i* PKP	PKPdf	15 02 54.5	+5.0
	comp=Z,9.2nm,0.8s						
MYKA	Terra Mystica	149.94	343	*i* PKP	PKPdf	15 02 53.8	+4.3
	comp=Z,6.7nm,0.6s						
SQTA	Sankt Quirin	149.98	347	*e*PKP	PKPdf	15 02 54.7	+5.1
	comp=Z,9.2nm,0.7s						
ABTA	Abfaltersbach	150.12	345	*i* PKP	PKPdf	15 02 54.4	+4.7
	comp=Z,14nm,0.6s						
DAVA	Damuels	150.18	349	*e*PKP	PKPbc	15 02 55.6	0.0
	comp=Z,16nm,1.0s						
FETA	Feichten	150.27	347	*i* PKP	PKPdf	15 02 55.2	+5.1
	comp=Z,11nm,0.8s						
DAVOX	Davos/Dischmat	150.67	348	PKPbc	PKPbc	15 02 56.7	-0.2
	comp=Z,13nm,0.7s,baz=317,slow=3.5,SNR=16						
ESDC	Sonseca Array	158.01	12	PKPab	PKPab	15 03 36.5	-1.2
	comp=Z,1.3nm,0.9s,baz=339,slow=5.8,SNR=5.2						
TORD	Torodi Ar. Bea	175.01	180	PKP	PKPdf	15 03 14.5	+0.3
	comp=Z,1.5nm,0.3s,baz=202,slow=0.8,SNR=2.5						

IDC ***06*** *14:45:41.4±4.0, 17.°87S×178.°14W, h559*$^{km}_{\pm 46}$*, mb3.6/12, mbtmp4.5/13, Error ellipse: s-maj=20.4km s-min=16.1km az=92.0*

NEIC ***06*** *14:45:44.4±1.4, 18.°08S±0.°1×178.°2W±0.°1, h596*$^{km}_{\pm 8}$*, mb4.4/44, Error ellipse: s-maj=17.1km s-min=16.0km az=185.0*

ISC 06 14:45:44.1±0.5, 18.°08S±0.°09×178.°19W±0.°09, h600km, n110, σ1§48/107, mb4.2/31, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.60	275	P	P	14 47 05.9	-1.1
NIUE	Niue	7.90	98	P	P	14 47 42.4	-0.1
MARNC	Mare, Loyalty	13.40	253	P	P	14 48 35.6	-1.5
PINNC	Pines Island,	14.20	249	P	P	14 48 44.0	-0.9
SANVU	Saraoutou	14.23	278	P	P	14 48 46.5	+1.1
DZM	Mont Dzumac	14.97	252	P	P	14 48 50.2	-2.0
	5.4nm,0.6s,baz=90,slow=20,SNR=1.7						
TOZ	Tahuroa Road	20.34	195		P	14 49 40.7	0.0
URZ	Urewera	20.52	191	P	P	14 49 39.0	-3.3
	12nm,0.4s,baz=358,slow=5.4,SNR=10						
TLZ	Tolley Road	20.91	194	P	P	14 49 46.1	+0.2
ETVZ	East Tongariro	21.64	193	P	P	14 49 50.5	-2.1
MCHZ	McNeill Hill	21.75	191	P	P	14 49 52.7	-0.7
VRZ	Vera Road	21.85	195	P	P	14 49 54.9	+0.7
WNVZ	Wahianoa	21.85	193	P	P	14 49 51.6	-2.8
PXZ	Pawanui	22.29	190	P	P	14 49 56.1	-2.0
PNHZ	Pukenui	22.29	191	P	P	14 49 55.0	-3.2
TSZ	Takapari Road	22.48	192	P	P	14 49 56.4	-3.5
DVHZ	Dannevirke	22.67	191	P	P	14 49 58.5	-3.1
BFZ	Birch Farm	23.03	191	P	P	14 50 02.7	-2.1
MRZ	Maungatinoka R	23.13	192	P	P	14 50 02.2	-3.5
OGWZ	Otaki Gorge	23.37	193	P	P	14 50 04.8	-2.9
DUWZ	D'Urville Isla	23.64	195	P	P	14 50 07.5	-2.7
CAW	Cannon Point	23.67	193	P	P	14 50 06.9	-3.5
MSWZ	Moikau Station	23.93	192	P	P	14 50 10.6	-2.1
TCW	Tory Channel	23.94	194	P	P	14 50 09.7	-3.1
QRZ	Quartz Range	24.03	197	P	P	14 50 12.4	-1.2
PLWZ	Palliser	24.07	192	P	P	14 50 11.1	-3.0
TKNZ	Takaka Hill	24.11	197	P	P	14 50 12.5	-1.8
NNZ	Nelson	24.17	196	P	P	14 50 12.8	-1.9
THZ	Tophouse	24.80	196	P	P	14 50 18.2	-2.3
KHZ	Kahutara	25.26	194	P	P	14 50 20.8	-3.6
GVZ	Greta Valley S	25.90	195	P	P	14 50 27.3	-2.8
LTZ	Lake Taylor	25.92	196	P	P	14 50 27.4	-2.9
EIDS	Eidsvold	29.40	250	P	P	14 51 01.3	+0.5
EIDS				IAmb	IAmb	14 51 36.8	
	comp=Z,18nm,1.3s						
MLZ	Mavora Lakes	29.50	200	P	P	14 51 00.9	-0.5
CAN	Canberra	33.77	233	P	P	14 51 38.7	+0.9
TOO	Toolangi	37.22	231	P	P	14 52 07.7	+1.5
TOO				IAmb	IAmb	14 52 11.8	
	comp=Z,18nm,1.4s						
STKA	Stephens Creek	38.73	241	P	P	14 52 19.4	+0.9
STKA	Stephens Creek	38.73	241	P	P	14 52 19.7	+1.3
	comp=Z,2.9nm,0.5s,baz=89,slow=11,SNR=5.4						
	comp=Z,2.9nm,0.5s						
WRA	Warramunga Arr	44.81	260	IAmb	IAmb	14 53 07.1	
	comp=Z,0.4nm,1.3s						
WRA	Warramunga Arr	44.81	260	P	P	14 53 06.5	+0.2
	comp=Z,1.0nm,0.5s,baz=96,slow=7.1,SNR=7.3						
	comp=Z,1.0nm,0.5s						
AS31	Alice Springs	44.94	254	P	P	14 53 07.6	+0.3
ASAR	Alice Springs	44.95	254	P	P	14 53 07.2	-0.2
ASAR	Alice Springs	44.95	254	P	P	14 53 08.0	+0.6
	comp=Z,3.6nm,0.6s,baz=86,slow=8.8,SNR=6.6						
	comp=Z,3.6nm,0.6s						
SBA	Scott Base	60.26	184	P	P	14 54 57.1	+1.9
SBA				IAmb	IAmb	14 54 58.3	
	comp=Z,19nm,1.1s						
VNDA	Vanda	60.29	185		P	14 54 56.0	+0.6
VNDA	Vanda	60.29	185	P	P	14 54 56.4	+1.0
	comp=Z,2.8nm,0.9s,baz=0.4,slow=6.2,SNR=9.9						
	comp=Z,2.8nm,0.9s						
MJAR	Matsushiro Arr	68.17	323	IAmb	IAmb	14 55 46.8	
	comp=Z,2.2nm,0.8s						
MJAR	Matsushiro Arr	68.17	323	P	P	14 55 46.0	+0.2
	comp=Z,1.7nm,0.5s,baz=163,slow=5.7,SNR=7.5						
	comp=Z,1.7nm,0.5s						
ADK	Adak	69.68	1	P	P	14 55 54.2	-0.2
QSPA	South Pole Qui	71.97	180		P	14 56 10.6	+2.6
QSPA				IAmb	IAmb	14 56 12.3	
	comp=Z,14nm,0.9s						
QSPA	South Pole Qui	71.97	180	P	P	14 56 10.6	+2.6
	comp=Z,14nm,1.0s,baz=350,slow=1.2,SNR=21						
	comp=Z,14nm,1.0s						
SSLB	Suanglung	72.50	303	P	P	14 56 11.3	-0.3
SSLB				IAmb	IAmb	14 56 41.5	
	comp=Z,19nm,1.0s						
TPUB	Ta-pu	72.53	302	P	P	14 56 10.7	-1.1
PETK	Petropavlovsk-	73.90	345	P	P	14 56 18.6	-0.2
	comp=Z,6.1nm,0.8s,baz=130,slow=8.7,SNR=4.9						
	comp=Z,6.1nm,0.8s						
ESJX	Sierra Juarez	77.66	50	P	P	14 56 40.5	+0.2
ESJX				IAmb	IAmb	14 56 42.0	
	comp=Z,13nm,1.2s						
ISA	Isabella, Lake	77.79	46	P	P	14 56 40.7	0.0
ISA				IAmb	IAmb	14 56 42.1	
	comp=Z,11nm,1.0s						
N02D	Trinity Center	78.08	40	P	P	14 56 43.0	+0.8
N02D				IAmb	IAmb	14 56 45.0	
	comp=Z,12nm,1.1s						
O03E	Paynes Creek	78.23	41		P	14 56 42.5	-0.6
O03E				IAmb	IAmb	14 56 44.2	
	comp=Z,18nm,1.4s						
MDPB	Devils Postpil	78.45	44	P	P	14 56 44.6	0.0
MDPB				IAmb	IAmb	14 56 45.8	
	comp=Z,10nm,0.9s						
WAKR	Walker	78.70	43		P	14 56 46.0	+0.2
WAKR				IAmb	IAmb	14 56 47.3	
	comp=Z,12nm,0.9s						
BEKR	Beckworth	78.88	42		P	14 56 46.4	-0.3
DSP	Deep Springs	79.05	45		P	14 56 47.2	-0.1
NVAR	Mina Array Bea	79.40	44	P	P	14 56 49.9	+0.4
NVAR	Mina Array Bea	79.40	44	P	P	14 56 49.5	0.0
	comp=Z,4.6nm,0.7s,baz=225,slow=8.9,SNR=23						
	comp=Z,4.6nm,0.7s						
GMN	Gold Mountain	79.49	45	P	P	14 56 49.4	-0.6
J04A	Umpqua Nationa	79.79	38	P	P	14 56 51.7	+0.3
J05D	Fort Rock, OR	80.33	38		P	14 56 54.4	+0.3
J05D				IAmb	IAmb	14 56 55.7	
	comp=Z,19nm,0.8s						
I05D	Terrebonne, OR	80.89	37	P	P	14 56 57.0	+0.2
I05D				IAmb	IAmb	14 56 58.2	
	comp=Z,12nm,1.0s						
E03A	Lebam	80.98	35	P	P	14 56 57.7	+0.6
HOOD	Mount Hood Mea	81.29	37	P	P	14 56 58.8	-0.2
HOOD				IAmb	IAmb	14 56 60.0	
	comp=Z,18nm,1.1s						
TUC	Tucson	81.64	52		P	14 57 01.4	+0.4
TUC				IAmb	IAmb	14 57 03.2	
	comp=Z,10.0nm,0.9s						
X16A	Lo Mia Camp, P	82.13	50		P	14 57 04.5	+0.9
X16A				IAmb	IAmb	14 57 05.5	
	comp=Z,9.3nm,1.0s						
319A	Douglas	82.36	54	P	P	14 57 04.8	+0.1
319A				IAmb	IAmb	14 57 06.9	
	comp=Z,16nm,0.9s						
KNB	Kanab	82.39	47		P	14 57 05.3	+0.5
KNB				IAmb	IAmb	14 57 06.5	
	comp=Z,7.9nm,0.9s						
ELK	Elko	82.64	43		P	14 57 06.4	+0.3
TXAR	Lajitas Array	85.91	58	P	P	14 57 23.5	+1.4
	comp=Z,7.0nm,0.8s,baz=222,slow=5.9,SNR=46						
	comp=Z,7.0nm,0.8s						
ILAR	Eielson Array	86.01	13	P	P	14 57 20.4	-1.2
ILAR	Eielson Array	86.01	13	P	P	14 57 20.6	-1.0
	comp=Z,2.7nm,0.7s,baz=223,slow=5.1,SNR=15						
	comp=Z,2.7nm,0.7s						
TPAW	Teton Pass	86.77	42	P	P	14 57 26.3	+0.2
FXWY	Fox Creek	86.80	42	P	P	14 57 26.3	+0.1
QLMT	Earthquake Lak	87.11	41	P	P	14 57 28.4	+0.9
PDAR	Pinedale Array	87.33	43	P	P	14 57 28.6	-0.1
	comp=Z,2.8nm,0.8s,baz=219,slow=2.9,SNR=18						
	comp=Z,2.8nm,0.8s						
CMAR	Chiang Mai Arr	89.14	290	P	P	14 57 39.5	+2.2
	comp=Z,0.5nm,0.4s,baz=92,slow=4.0,SNR=5.1						
	comp=Z,0.5nm,0.4s						
G31M	Satah River	90.77	16	P	P	14 57 43.4	-0.3
C27K	Jago River	90.82	11	P	P	14 57 43.4	-0.5
C27K				IAmb	IAmb	14 57 45.6	
	comp=Z,4.2nm,0.9s						
E28M	Babbage River	90.83	13	P	P	14 57 43.9	-0.1
E28M				IAmb	IAmb	14 57 44.4	
	comp=Z,6.5nm,1.2s						
F31

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.66**	**208**	PG	**Pg**	**14 57 27.4**	**-0.1**
	baz=23						
RMF				smax	smax	14 57 32.0	
	comp=Z,46nm,0.2s						
KU1	**Kurvinen**	**0.89**	**330**	PG	**Pg**	**14 57 31.6**	**-0.3**
KU6	**Riekki**	**1.27**	**346**	PG	**Pg**	**14 57 38.2**	**-0.9**
KU6				smax	smax	14 57 54.8	
	comp=Z,12nm,0.2s						
KU6				SB	**Sg**	**14 57 55.9**	**+0.3**
MSF	**Maaselka**	**1.30**	**330**	PG	**Pg**	**14 57 38.9**	**-0.9**
	baz=151						
MSF				SG	**Sg**	**14 57 56.8**	**+0.2**
KU2	**Taivalkoski**	**1.36**	**313**	PN	**Pg**	**14 57 40.1**	**-0.9**
KU2				SN	**Sg**	**14 57 59.4**	**+0.8**
OLKF	**Oulanka, Finla**	**1.61**	**342**	PG	**Pn**	**14 57 44.3**	**-0.2**
OLKF				smax	smax	14 58 04.4	
	comp=Z,14nm,0.2s						
OLKF				SN	**Sg**	**14 58 06.7**	**+0.2**
JOF	**Joensuu**	**1.91**	**171**	*eP*	**Pn**	**14 57 48.2**	**-0.4**
JOF	**Joensuu**	**1.91**	**171**	PG	**Pn**	**14 57 48.0**	**-0.7**
	baz=351						
JOF				SG	**Sn**	**14 58 13.8**	**+0.5**
KVDA	**Kovda**	**2.11**	**25**	P	**Pn**	**14 57 51.3**	**-0.1**
KVDA				S	**Sn**	**14 58 18.3**	**0.0**
OBF4	**Vikkela, Lumij**	**2.37**	**273**	PG	**Pn**	**14 57 56.9**	**+2.0**
	baz=92						
OBF4				smax	smax	14 58 22.0	
	comp=Z,14nm,0.2s						
OUF	**Merijarvi**	**2.58**	**263**	PG	**Pn**	**14 57 59.1**	**+1.2**
OUF				smax	smax	14 58 27.9	
	comp=Z,13nm,0.2s						
RNF	**Rovaniemi**	**2.64**	**316**	PB	**Pn**	**14 57 59.5**	**+1.0**
	baz=131						
RNF				SG	**Sb**	**14 58 35.8**	**+0.1**
OBF0	**Syolatti, Pyha**	**2.77**	**267**	PG	**Pn**	**14 58 02.1**	**+1.7**
OBF0				smax	smax	14 58 33.4	
	comp=Z,9.0nm,0.2s						
SUF	**Sumiainen**	**2.89**	**226**	PG	**Pn**	**14 58 04.3**	**+2.3**
SUF				smax	smax	14 58 36.0	
	comp=Z,5.7nm,0.2s						
TOF	**Tornio**	**2.93**	**299**	PB	**Pn**	**14 58 04.5**	**+1.9**
TOF				smax	smax	14 58 39.6	
	comp=Z,4.3nm,0.2s						
TOF				SG	**Sb**	**14 58 43.3**	**-0.9**
APA0	**Apatity Array**	**2.98**	**18**	P	**Pn**	**14 58 04.0**	**+0.7**
APA0				S	**Sn**	**14 58 40.3**	**+0.7**
VRF	**Varrio**	**2.99**	**352**	PN	**Pn**	**14 58 04.5**	**+1.0**
	baz=171						
VRF				smax	smax	14 58 44.8	
	comp=Z,4.5nm,0.2s						
VRF				SG	**Sb**	**14 58 46.5**	**+0.5**
OBF8	**Ulkokalla**	**3.14**	**265**	PB	**Pn**	**14 58 06.3**	**+0.9**
	baz=78						
OBF8				smax	smax	14 58 44.0	
	comp=Z,4.4nm,0.2s						
KALU	**Kalix**	**3.23**	**292**	P	**Pn**	**14 58 08.6**	**+1.9**
KALU				S	**Sn**	**14 58 48.5**	**+2.6**
KALU	**Kalix**	**3.23**	**292**	PB	**Pn**	**14 58 08.3**	**+1.6**
KALU				SG	**Sb**	**14 58 52.4**	**-0.4**
KAF	**Kangasniemi**	**3.32**	**218**	PG	**Pn**	**14 58 10.0**	**+2.0**
RUF	**Ruokolahti**	**3.47**	**193**	PB	**Pn**	**14 58 10.5**	**+0.4**
LVZ	**Lovozero**	**3.51**	**26**	S	**Sn**	**14 58 52.2**	**-0.5**
LVZ	**Lovozero**	**3.51**	**26**	PN	**Pn**	**14 58 11.0**	**+0.4**
LVZ				SG	**Sg**	**14 59 05.7**	**-1.7**
KEF	**Keuruu**	**3.70**	**227**	*eP*	**Pn**	**14 58 15.2**	**+2.1**
KEF	**Keuruu**	**3.70**	**227**	PB	**Pn**	**14 58 15.6**	**+2.5**
	baz=40						
RAJF	**Raja-Jooseppi**	**3.81**	**347**	PN	**Pn**	**14 58 15.3**	**+0.7**
RAJF				SN	**Sn**	**14 59 00.3**	**+0.3**
PAJU	**Pajala**	**3.81**	**309**	P	**Pn**	**14 58 16.1**	**+1.4**
PAJU	**Pajala**	**3.81**	**309**	PB	**Pn**	**14 58 16.8**	**+2.1**
SJUU	**Sjulsmark**	**3.88**	**285**	P	**Pn**	**14 58 16.1**	**+0.5**
ERTU	**Ertsjaerv**	**3.91**	**301**	P	**Pn**	**14 58 17.8**	**+1.7**
VAF	**Ylistaro**	**3.93**	**247**	*eP*	**Pn**	**14 58 18.0**	**+1.6**
VAF	**Ylistaro**	**3.93**	**247**	PB	**Pn**	**14 58 18.2**	**+1.8**
	baz=59						
FIA0	**FINESS Array S**	**3.95**	**214**	PB	**Pn**	**14 58 17.5**	**+0.9**
	baz=24						
FIA0				SG	**Sb**	**14 59 12.6**	**-1.0**
FINES	**FINESS Array B**	**3.95**	**214**	Pn	**Pn**	**14 58 17.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=10						
FINES				Lg	Lg	14 59 18.6	
	comp=Z,2.8nm,0.3s,baz=30,slow=26,SNR=15						
	comp=Z,0.8nm,0.7s						
BURU	**Burvik**	**3.98**	**271**	P	**Pn**	**14 58 17.5**	**+0.5**
BURU	**Burvik**	**3.98**	**271**	PN	**Pn**	**14 58 15.0**	**-2.0**
HARU	**Harads**	**4.25**	**293**	P	**Pn**	**14 58 22.2**	**+1.5**
ODEU	**Stanfors**	**4.29**	**269**	P	**Pn**	**14 58 21.2**	**-0.1**
UMAU	**Umeaa**	**4.43**	**263**	P	**Pn**	**14 58 22.6**	**-0.4**
UMAU	**Umeaa**	**4.43**	**263**	PN	**Pn**	**14 58 22.8**	**-0.4**
HEF	**Hetta**	**4.56**	**326**	PN	**Pn**	**14 58 26.0**	**+0.9**
	baz=143						
HEF				SG	**Sb**	**14 59 36.0**	**+4.8**
LANU	**Lannavaara**	**4.76**	**317**	PN	**Pn**	**14 58 28.4**	**+0.7**
SVAU	**Svanoeiden**	**4.77**	**271**	P	**Pn**	**14 58 28.0**	**+0.2**
ARCES	**ARCESS Array B**	**5.16**	**340**	Pn	**Pn**	**14 58 33.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=155,slow=15,SNR=71						
ARCES				Sn	**Sn**	**14 59 30.9**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=150,slow=24,SNR=1.5						
ARCES				Lg	Lg	14 59 51.9	
	comp=Z,0.7nm,0.3s,baz=153,slow=26,SNR=8.3						
	comp=Z,0.9nm,0.3s						
ARCES	**ARCESS Array B**	**5.16**	**340**	P	**Pn**	**14 58 33.1**	**0.0**
ARCES				S	**Sn**	**14 59 31.4**	**-1.9**
VADS	**Vadso**	**5.37**	**355**	P	**Pn**	**14 58 35.8**	**-0.2**
VADS				S	**Sn**	**14 59 38.0**	**-0.5**
RAF	**Rauma**	**5.55**	**231**	*eP*	**Pn**	**14 58 39.0**	**+0.5**
FAUS	**Fauske**	**6.75**	**299**	S	**Sn**	**15 00 07.1**	**-5.3**
AAL	**Aland**	**6.76**	**232**	*eP*	**Pn**	**14 58 55.8**	**+0.6**
I43RU	**DUBNA INFRASON**	**8.72**	**155**	I	I	15 52 10.0	
	baz=346,slow=325,SNR=1.3						
HFS	**Hagfors**	**9.12**	**247**	Pn	**Pn**	**14 59 25.9**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=57,slow=12,SNR=5.5						
HFS				Lg	Lg	15 01 55.0	
	comp=Z,0.5nm,0.3s,baz=58,slow=27,SNR=6.2						
	comp=Z,1.6nm,0.8s						
NOA	**NORSAR Array B**	**9.61**	**256**	Pn	**Pn**	**14 59 32.2**	**-2.0**
	baz=63,slow=13,SNR=0.9						
NOA				Lg	Lg	15 02 09.6	
	baz=197,slow=15,SNR=3.3						
	comp=Z,0.3nm,0.6s						

IDC 06 15:30:50.6±1.4, 6°87N×125°22E, h0km, mb3.7/4, mbtmp3.7/4, MS3.0/7, Error ellipse: s-maj=28.5km s-min=8.2km az=140.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.41**	**60**	Pg	Pg	15 30 57.9	-0.6
	1μm,0.3s,baz=294,slow=1.8,SNR=40						
DAV				Lg	Lg	15 31 04.6	
	1μm,0.3s,baz=130,slow=22,SNR=25						
KAPI	**Kappang**	**13.00**	**205**	LR	LR	15 39 33.0	
	comp=Z,63nm,19.2s,baz=41,slow=40						
FITZ	**Fitzroy Crossi**	**24.81**	**179**	P	P	15 36 14.9	+0.3
	2.0nm,0.6s,baz=12,slow=7.0,SNR=7.7						
	2.0nm,0.6s						
JCJ	**Chichijima**	**25.78**	**37**	LR	LR	15 44 52.9	
	comp=Z,27nm,19.9s,baz=116,slow=33						
CMAR	**Chiang Mai Arr**	**28.06**	**297**	LR	LR	15 48 33.9	
	comp=Z,26nm,18.8s,baz=190,slow=38						
WRA	**Warramunga Arr**	**28.11**	**162**	P	P	15 36 44.5	0.0
	1.3nm,1.0s,baz=342,slow=10,SNR=5.7						
WRA				LR	LR	15 48 55.3	
	comp=Z,68nm,18.7s,baz=81,slow=39						
	1.3nm,1.0s						
JHJ	**Hachijo jima 2**	**29.41**	**25**	LR	LR	15 50 28.6	
	comp=Z,16nm,18.1s,baz=239,slow=40						
ASAR	**Alice Springs**	**31.51**	**165**	P	P	15 37 14.6	0.0
	0.7nm,0.5s,baz=346,slow=7.3,SNR=16						
	0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**31.83**	**20**	LR	LR	15 51 51.0	
	comp=Z,28nm,18.1s,baz=182,slow=40						
ASAJ	**Asahikawa**	**40.10**	**20**	LR	LR	15 52 57.3	
	comp=Z,25nm,20.8s,baz=132,slow=33						
MKAR	**Makanchi Array**	**54.14**	**325**	P	P	15 40 17.9	+0.2
	0.3nm,0.7s,baz=118,slow=8.8,SNR=2.5						
	0.3nm,0.7s						

*IDC **06** 15:37:15.0±2.2, 56°18N×10°00E, h0km, mbtmp3.3/5, ML2.5/4, Error ellipse: s-maj=26.6km s-min=19.9km az=129.0*

*UPP **06** 15:37:14.0±2.6, 56°11N×10°38E, h3km±10km, ML2.0, Presumed earthquake*

*DNK **06** 15:37:14.7±1.9, 56°16N×10°37E, h0km, ML2.5, Explosion*

ISC 06 15:37:13.0±0.9, 56°14N±0°04×10°37E±0°04, h0km, n23, σ1§07/38, 3C, Denmark

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUD	**Monsted U'grnd**	**0.74**	**296**	⇑*iP*	**Pb**	**15 37 29.3**	**+0.6**
SSRD	**Sdr. Stenderup**	**0.78**	**213**	⇑*iP*	**Pb**	**15 37 29.9**	**+0.4**
SSRD				*eS*	**Sb**	**15 37 40.7**	**+0.1**
SSRD				IAML		15 37 45.0	
	comp=Z,51nm,0.4s						
COP	**Copenhagen**	**1.25**	**111**	*i* P	**Pn**	**15 37 38.5**	**+0.8**
BJUU	**Bjuv**	**1.49**	**91**	P	**Pn**	**15 37 41.2**	**+0.3**
BJUU	**Bjuv**	**1.49**	**91**	P	**Pn**	**15 37 41.2**	**+0.3**
BJUU				*i* P	**Pn**	**15 37 41.3**	**+0.3**
BJUU				*i* S	**Sn**	**15 38 02.5**	**+1.4**
ONAU	**Onsala**	**1.52**	**33**	P	**Pn**	**15 37 42.2**	**+0.8**
ONAU				S	**Sn**	**15 38 03.0**	**+1.1**
ONAU	**Onsala**	**1.52**	**33**	⇑*iP*	**Pn**	**15 37 42.2**	**+0.8**
ONAU				P	**Pn**	**15 37 42.2**	**+0.8**
ONAU				*i* S	**Sn**	**15 38 02.7**	**+0.8**
ONAU				S	**Sn**	**15 38 03.0**	**+1.1**
FABU	**Falkenberg**	**1.56**	**55**	P	**Pn**	**15 37 42.7**	**+0.8**
FABU	**Falkenberg**	**1.56**	**55**	P	**Pn**	**15 37 42.7**	**+0.8**
FABU				*i* P	**Pn**	**15 37 42.8**	**+0.8**
FABU				*i* S	**Sn**	**15 38 02.7**	**-0.2**
LUNU	**Lund**	**1.81**	**105**	P	**Pn**	**15 37 46.1**	**+0.7**
LUNU	**Lund**	**1.81**	**105**	P	**Pn**	**15 37 46.1**	**+0.7**
LUNU				*i* P	**Pb**	**15 37 46.2**	**-0.7**
DEL	**Delary**	**1.98**	**79**	*i* P	**Pn**	**15 37 48.5**	**+0.8**
DEL				*i* S	**Sb**	**15 38 16.4**	**+1.3**
BORU	**Boraas**	**2.00**	**40**	P	**Pn**	**15 37 49.1**	**+1.1**
BORU	**Boraas**	**2.00**	**40**	*i* P	**Pn**	**15 37 49.0**	**+1.1**
BORU				P	**Pn**	**15 37 49.1**	**+1.1**
TJOU	**Tjoern**	**2.02**	**19**	*eP*	**Pn**	**15 37 49.5**	**+1.3**
HOMB	**Hombersund**	**2.36**	**335**	*i* P	**Pn**	**15 37 54.0**	**+1.0**
HOMB				*i* S	**Sn**	**15 38 23.4**	**+0.7**
SNART	**Snartemo**	**2.79**	**323**	*i* P	**Pn**	**15 37 59.9**	**+0.9**
STRU	**Stroemstad**	**2.94**	**8**	*i* P	**Pn**	**15 38 02.1**	**+1.2**
HFS	**Hagfors**	**4.38**	**22**	Pn	**Pn**	**15 38 21.5**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=203,slow=13,SNR=29						
HFS				Sn	**Sn**	**15 39 12.3**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=210,slow=28,SNR=5.1						
HFS				Lg	Lg	15 39 31.2	
	comp=Z,1.0nm,0.3s,baz=201,slow=27,SNR=4.6						
	comp=Z,1.5nm,0.3s						
NOA	**NORSAR Array B**	**4.93**	**5**	Pn	**Pn**	**15 38 27.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=7.6						
NOA				Sn	**Sn**	**15 39 25.5**	**-0.6**
	baz=209,slow=3.8,SNR=1.4						
	comp=Z,0.3nm,0.3s						
EKA	**Eskdalemuir Ar**	**7.68**	**270**	Pn	**Pn**	**15 39 05.0**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=82,slow=13,SNR=15						
FINES	**FINESS Array B**	**9.72**	**50**	Pn	**Pn**	**15 39 34.0**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=246,slow=13,SNR=6.8						
	comp=Z,2.7nm,0.9s						
ARCES	**ARCESS Array B**	**15.04**	**21**	Pn	**Pn**	**15 40 42.8**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=211,slow=14,SNR=9.5						
	comp=Z,2.1nm,0.8s						

*JMA **06** 15:40:57.8±0.9, 47°N±5°×15°0E±1°0, h433km, MV3.7/14, KURILE ISLANDS REGION*

*IDC **06** 15:41:00.0±1.6, 48°54N×148°95E, h391km±19km, mb2.7/4, mbtmp3.7/8, Error ellipse: s-maj=31.1km s-min=17.9km az=139.0*

ISC 06 15:41:02.7±1.3, 47°5N±0°2×149°7E±0°2, h400km, n19, σ2§01/23, mb3.1/4, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.95**	**215**	P	**Pn**	**15 42 23.7**	**-0.5**
NEM2				S	**S**	**15 43 30.7**	**+0.2**
JNK	**Nakash**	**5.22**	**224**	S	**S**	**15 43 40.2**	**+4.7**
JTKR	**Abashiri--Toko**	**5.35**	**231**	P	**Pn**	**15 42 29.5**	**+1.2**
JAK	**Akkeshi**	**5.69**	**220**	P	**Pn**	**15 42 31.3**	**-0.6**
JAK				S	**S**	**15 43 44.6**	**-0.1**
JAR	**Ashorobuto**	**5.89**	**227**	P	**Pn**	**15 42 34.3**	**+0.1**
JAR				S	**S**	**15 43 50.1**	**+1.5**
ASAJ	**Asahikawa**	**5.98**	**238**	P	**Pn**	**15 42 36.2**	**+1.1**
	32nm,0.6s,baz=49,slow=7.9,SNR=40						
JKK2	**Kamakawa 2**	**6.04**	**236**	*eP*	**Pn**	**15 42 36.5**	**+0.8**
JOB	**Onbets**	**6.16**	**224**	P	**Pn**	**15 42 36.3**	**-0.7**
JOB				S	**S**	**15 43 53.6**	**-0.2**
JAB	**Ashibetsu**	**6.57**	**236**	*eP*	**P**	**15 42 42.0**	**-0.2**
JCH	**Churui**	**6.60**	**225**	P	**Pn**	**15 42 40.8**	**-1.1**
JCH				S	**S**	**15 44 00.9**	**-2.0**
JNBK	**Urakawa-nobuka**	**7.15**	**226**	P	**Pn**	**15 42 46.4**	**-1.6**
PETK	**Petropavlovsk-**	**7.63**	**39**	P	Pn	15 42 44.6	-8.6
	5.7nm,0.7s,baz=225,slow=9.0,SNR=16						
JANG	**Nango**	**9.22**	**223**	P	**P**	**15 43 10.4**	**-1.1**
JANG				*eS*	**S**	**15 44 54.4**	**-3.1**
MJAR	**Matsushiro Arr**	**13.84**	**222**	P	**Pn**	**15 44 05.2**	**+0.1**
	1.6nm,0.4s,baz=14,slow=11,SNR=6.0						
KSRS	**Korea Array**	**18.86**	**246**	P	**P**	**15 44 53.9**	**-2.3**
	1.7nm,0.5s,baz=47,slow=9.8,SNR=10						
MKAR	**Makanchi Array**	**44.52**	**295**	P	P	15 48 27.4	-8.9
	0.2nm,0.4s,baz=66,slow=6.8,SNR=4.6						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**68.50**	**196**	P	**P**	**15 51 26.4**	**+3.1**
	0.3nm,0.6s,baz=8.5,slow=6.1,SNR=1.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**72.22**	**195**	P	**P**	**15 51 49.1**	**+3.7**
	0.5nm,0.9s,baz=9.2,slow=5.7,SNR=6.1						
	0.5nm,0.9s						
TXAR	**Lajitas Array**	**79.15**	**58**	P	**P**	**15 52 22.4**	**-2.0**
	0.3nm,0.5s,baz=296,slow=3.4,SNR=4.7						
	0.3nm,0.5s						

*KRNET **06** 15:56:04.9±0.1, 41°20N×70°55E, h14km, mb4.8*

*SOME **06** 15:56:05.3, 41°25N×70°68E, h10km, MS3.8*

*IDC **06** 15:56:05.2±0.8, 41°24N×70°54E, h0km, mb4.1/16, mbtmp4.2/25, ML3.8/9, MS3.1/7, Error ellipse: s-maj=15.6km s-min=9.1km az=176.0*

*MOS **06** 15:56:06.6±1.0, 41°30N×70°44E, h16km, mb4.6/17, Error ellipse: s-maj=4.5km s-min=3.8km az=49.9*

*ISU **06** 15:56:06, 41°24N×70°44E, h15km*

*NNC **06** 15:56:07.3±1.1, 41°30N×70°63E, h0km, mb4.6, mpv4.2, Error ellipse: s-maj=9.2km s-min=3.5km az=26.0*

*NEIC **06** 15:56:11.7±2.0, 41°28N±0°05×70°47E±0°08, h49km±6km, mb4.4/27, Error ellipse: s-maj=8.3km s-min=7.2km az=95.0*

ISC 06 15:56:06.6±0.9, 41°23N±0°02×70°44E±0°01, h10km±6km, n282, σ1§97/366, mb4.4/36, MS2.9/7, 48C-33D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRV	**Charvak**	**0.55**	**318**	P	**Pg**	**15 56 16.9**	**-0.4**
CHRV				S	**Sg**	**15 56 25.2**	**+0.6**
TRKS	**Terek-Say**	**0.60**	**60**	⇑*iP*	**Pg**	**15 56 15.2**	**-3.2**
TRKS				⇑*iS*	**Sg**	**15 56 23.2**	**-3.2**
TRKS	**Terek-Say**	**0.60**	**60**	*i* PG	**Pg**	**15 56 15.2**	**-3.2**
TRKS				*i* S	**Sg**	**15 56 23.2**	**-3.2**
TVKS	**Tavaksay**	**0.68**	**300**	P	**Pg**	**15 56 19.9**	**0.0**
TVKS				S	**Sb**	**15 56 30.0**	**-0.2**
PSK	**Pskem**	**0.69**	**356**	P	**Pg**	**15 56 18.9**	**-1.2**
PSK				S	**Sg**	**15 56 29.0**	**-0.2**
TGS	**TashGRES**	**0.72**	**286**	P	**Pn**	**15 56 22.6**	**-0.2**
TGS				S	**Sn**	**15 56 34.1**	**+0.2**
KSNS	**Kasansay**	**0.82**	**95**	P	**Pg**	**15 56 20.9**	**-1.6**
KSNS				S	**Sg**	**15 56 32.6**	**-0.6**
MINT	**Mingtut**	**0.87**	**152**	P	**Pg**	**15 56 23.1**	**-0.3**
MINT				S	**Sb**	**15 56 35.2**	**-0.3**
NAM	**Namangan**	**0.95**	**104**	P	**Pg**	**15 56 25.0**	**0.0**
NAM				S	**Sb**	**15 56 38.3**	**+0.4**
IUG	**Iuzhnay**	**0.96**	**342**	P	**Pg**	**15 56 24.4**	**-0.7**
	317nm,0.5s						
IUG				S	**Sg**	**15 56 37.9**	**+0.1**
	2μm,0.7s						
IUG	**Iuzhnay**	**0.96**	**342**	*eP*	**Pg**	**15 56 24.5**	**-0.7**
IUG	**Iuzhnay**	**0.96**	**342**	*e*PG	**Pg**	**15 56 24.5**	**-0.7**
CHM	**Chimkent**	**1.25**	**330**	*eP*	**Pb**	**15 56 30.6**	**+0.2**
CHM				*eS*	**Sn**	**15 56 48.2**	**+1.0**
CHM	**Chimkent**	**1.25**	**330**	*eP*	**Pg**	**15 56 30.9**	**+0.2**
CHM				*eS*	**Sn**	**15 56 47.5**	**+0.3**
CHM	**Chimkent**	**1.25**	**330**	*e*PG	**Pg**	**15 56 30.9**	**+0.2**
CHM				*eS*	**Sn**	**15 56 47.4**	**+0.3**
ARK	**Arkit**	**1.28**	**63**	⇑*iP*	**Pn**	**15 56 28.2**	**-2.4**
ARK				⇑*iS*	**Sb**	**15 56 45.4**	**-1.9**
ARK	**Arkit**	**1.28**	**63**	*i* PG	**Pn**	**15 56 28.2**	**-2.4**
ARK				*i* S	**Sb**	**15 56 45.4**	**-1.9**
FRG	**Fergana**	**1.33**	**130**	P	**Pn**	**15 56 31.4**	**+0.1**
FRG				S	**Sg**	**15 56 49.7**	**+0.1**
ANR	**Andizhan**	**1.53**	**108**	P	**Pb**	**15 56 35.9**	**+0.8**
ANR				S	**Sg**	**15 56 57.0**	**+1.1**
DZA	**Taraz**	**1.79**	**22**	*eP*	**Pb**	**15 56 39.4**	**0.0**
	333nm,0.4s						
DZA				*eS*	**Sb**	**15 57 03.8**	**+1.8**
	3μm,0.5s						
DZA	**Taraz**	**1.79**	**22**	*e*Pn	**Pn**	**15 56 38.4**	**+0.8**
DZA	**Taraz**	**1.79**	**22**	*e*PN	**Pn**	**15 56 38.4**	**+0.8**
BRLS	**Borolday**	**1.85**	**346**	P	**Pn**	**15 56 37.4**	**-1.0**
	110nm,0.5s						
BRLS				S	**Sn**	**15 57 01.2**	**-0.8**
	586nm,0.5s						
BRLS	**Borolday**	**1.85**	**346**	*eP*	**Pn**	**15 56 37.4**	**-1.0**
	110nm,0.5s						
BRLS				*eS*	**Sn**	**15 57 01.2**	**-0.8**
BRLS	**Borolday**	**1.85**	**346**	*e*Pn	**Pn**	**15 56 37.3**	**-1.2**
BRLS	**Borolday**	**1.85**	**346**	*e*PN	**Pn**	**15 56 37.2**	**-1.2**
KK31	**Karatay Array**	**1.87**	**2**			**15 56 39.9**	**+1.2**
KK31					Sn	**15 57 02.3**	**-0.1**
KK31	**Karatay Array**	**1.87**	**2**	⇑P		**15 56 40.3**	**-0.6**
	121nm,0.3s,baz=183,slow=14,SNR=1032						
KK31				⇑S	**Sb**	**15 57 04.6**	**+0.3**
	571nm,0.5s,baz=178,slow=24,SNR=16						
KK31	**Karatay Array**	**1.87**	**2**	*e*PN	**Pb**	**15 56 40.4**	**-0.5**
KK31						15 57 04.6	
KKAR	**Karatay Array**	**1.87**	**2**		**Pb**	**15 56 40.4**	**-0.5**
KKAR	**Karatay Array**	**1.87**	**2**	PN	**Pb**	**15 56 40.4**	**-0.5**
OHH	**Osh**	**1.92**	**111**	⇑*iP*	**Pn**	**15 56 38.6**	**-0.8**
OHH				⇑*iS*	**Sn**	**15 57 03.6**	**0.0**
OHH	**Osh**	**1.92**	**111**	*i* PN	**Pn**	**15 56 38.6**	**-0.8**
OHH				*i* S	**Sn**	**15 57 03.6**	**0.0**
ARSB	**Arslanbob**	**1.92**	**86**	Pn	**Pn**	**15 56 40.1**	**+0.6**
ARSB	**Arslanbob**	**1.92**	**86**	⇑*iP*	**Pn**	**15 56 39.9**	**-0.4**
ARSB				⇑*iS*	**Sn**	**15 57 04.2**	**+0.4**
ARSB	**Arslanbob**	**1.92**	**86**	PN	**Pn**	**15 56 40.1**	**+0.6**
DRK	**Karamyk**	**2.04**	**149**	Pn	**Pb**	**15 56 43.4**	**-0.5**
DRK	**Karamyk**	**2.04**	**149**	⇓*iP*	**Pn**	**15 56 41.4**	**+0.1**
DRK				⇓*iS*	**Sb**	**15 57 08.1**	**-1.3**
DRK	**Karamyk**	**2.04**	**149**	PN	**Pb**	**15 56 43.4**	**-0.5**
GAR	**Garm**	**2.23**	**182**	Pn	**Pb**	**15 56 46.3**	**-0.9**
GAR	**Garm**	**2.23**	**182**	⇑*iP*	**Pn**	**15 56 44.9**	**+1.1**
GAR				⇑*iS*	**Sb**	**15 57 14.0**	**-0.9**
GAR	**Garm**	**2.23**	**182**	*i* PN	**Pn**	**15 56 44.9**	**+1.1**
GAR				*i* S	**Sb**	**15 57 14.0**	**-0.9**
DZI	**Dzhizak**	**2.28**	**242**	P	**Pb**	**15 56 45.9**	**-2.0**
DZI				S	**Sb**	**15 57 16.6**	**+0.5**
BXML	**Bakhmal**	**2.40**	**231**	P	**Pg**	**15 56 51.5**	**-1.1**
BXML				S	**Sg**	**15 57 26.1**	**+2.3**
MRKS	**Merke**	**2.57**	**53**	Pg	**Pb**	**15 56 51.4**	**-1.5**
	393nm,0.5s						
MRKS				Lg	Lg	15 57 24.7	
	2μm,0.6s						
MRKS	**Merke**	**2.57**	**53**	*eP*	**Pb**	**15 56 51.4**	**-1.5**
	393nm,0.5s						
MRKS				*eS*	**Sb**	**15 57 24.8**	**+0.2**
	2μm,0.6s						
SALK	**Salom-Alik**	**2.58**	**97**	⇑*iP*	**Pn**	**15 56 48.9**	**+0.3**
SALK				⇑*iS*	**Sn**	**15 57 21.0**	**+0.9**
SALK	**Salom-Alik**	**2.58**	**97**	*i* PN	**Pn**	**15 56 48.9**	**+0.3**
SALK				*i* S	**Sn**	**15 57 21.0**	**+0.9**
SFK	**Sufi-Kurgan**	**2.63**	**117**	⇑*iP*	**Pn**	**15 56 49.6**	**+0.2**
SFK				⇑*iS*	**Sn**	**15 57 22.1**	**+0.6**
SFK	**Sufi-Kurgan**	**2.63**	**117**	*i* PN	**Pn**	**15 56 49.6**	**+0.2**
SFK				*i* S	**Sn**	**15 57 22.1**	**+0.6**
CHGR	**Chuyangaron**	**2.75**	**201**		**Pb**	**15 56 54.4**	**-1.6**
CHGR	**Chuyangaron**	**2.75**	**201**	⇑*iP*	**Pn**	**15 56 52.5**	**+1.6**
CHGR				⇑*iS*	**Sb**	**15 57 27.0**	**-2.9**
CHGR	**Chuyangaron**	**2.75**	**201**	PN	**Pb**	**15 56 54.4**	**-1.6**
EKS2	**Erkin-Say**	**2.87**	**59**	P	**Pn**	**15 56 54.9**	**+2.4**
	SNR=62						
EKS2	**Erkin-Say**	**2.87**	**59**	⇑*iP*	**Pn**	**15 56 53.3**	**+0.7**
EKS2	

431nm,0.4s
KST Kastek 4.49 64 *e*P **Pb** 15 57 26.3 +0.7
56nm,0.8s
KST *e*S **Sb** 15 58 24.7 +4.9
431nm,0.4s
KSH Kashi 4.56 110 Pn **Pn** 15 57 15.9 +0.1
KSH Sn **Sn** 15 58 09.8 +0.9
KSH smax smax
comp=N,240nm,0.6s
KSH smax smax
comp=E,280nm,0.7s
KRBS Karabastau 4.59 56 Pg **Pb** 15 57 28.3 +1.0
comp=E,46nm,1.0s
KRBS Lg Lg 15 58 27.6
comp=E,51nm,1.0s
BTLS Baital 4.63 34 *e*Pn **Pn** 15 57 18.1 +1.4
BTLS Baital 4.63 34 *e*PN **Pn** 15 57 18.0 +1.4
MTBS Maitube 4.84 65 Pg **Pb** 15 57 33.1 +1.6
comp=E,24nm,1.3s
MTBS Lg Lg 15 58 35.8
comp=E,238nm,0.6s
MTBS Maitube 4.84 65 *e*P **Pb** 15 57 33.1 +1.6
comp=E,24nm,1.3s
MTBS *e*S **Sb** 15 58 35.8 +6.0
comp=E,238nm,0.6s
IZV Izvestkoviy 4.93 67 Pg **Pb** 15 57 32.7 -0.5
comp=E,49nm,0.8s
IZV Lg Lg 15 58 35.7
comp=E,143nm,0.8s
IZV Izvestkoviy 4.93 67 *e*P **Pb** 15 57 32.6 -0.5
comp=E,49nm,0.8s
IZV *e*S **Sb** 15 58 35.6 +3.1
comp=E,143nm,0.8s
KUU Kurty 5.10 57 Pg **Pb** 15 57 35.9 0.0
comp=E,57nm,1.5s
KUU Lg Lg 15 58 41.5
comp=E,141nm,0.7s
KUU Kurty 5.10 57 *e*P **Pb** 15 57 36.0 0.0
comp=E,57nm,1.5s
KUU *e*S **Sb** 15 58 41.5 +4.2
comp=E,141nm,0.7s
KDJ Kajisay 5.13 78 Pn **Pn** 15 57 26.1 +2.5
KDJ Kajisay 5.13 78⇑*i*P **Pn** 15 57 24.6 +1.0
KDJ ⇑*i*S **Sn** 15 58 22.5 -0.4
KDJ Kajisay 5.13 78 PN **Pn** 15 57 26.1 +2.5
TNSS Tian-Shan 5.16 67 Pg **Pb** 15 57 39.1 +1.8
comp=E,8.9nm,0.5s
TNSS Lg Lg 15 58 47.0
comp=E,61nm,1.1s
TNSS Tian-Shan 5.16 67 *e*P **Pb** 15 57 39.1 +1.8
comp=E,8.9nm,0.5s
TNSS *e*S **Sg** 15 58 47.0 -5.5
comp=E,61nm,1.1s
TNSS Tian-Shan 5.16 67 *e*Pn **Pn** 15 57 26.2 +1.9
TNSS *e*Pg **Pb** 15 57 39.0 +1.8
TNSS *e*Sn **Sn** 15 58 22.2 -1.9
TNSS *e*Lg Lg 15 58 47.6
TNSS Tian-Shan 5.16 67 *e*PN **Pn** 15 57 26.1 +1.8
TNSS *e* 15 57 39.0
TNSS *e* 15 58 22.2
AAA Alma-Ata 5.20 66 Pg **Pb** 15 57 40.0 +2.4
comp=E,71nm,0.2s
AAA Lg Lg 15 58 48.1
comp=E,18nm,1.0s
AAA Alma-Ata 5.20 66 *e*P **Pb** 15 57 40.0 +2.4
comp=E,71nm,0.2s
AAA *e*S **Sg** 15 58 48.1 -5.4
comp=E,18nm,1.0s
AAA Alma-Ata 5.20 66 *e*Pn **Pn** 15 57 26.3 +1.8
AAA *e*Pg **Pb** 15 57 40.3 +2.6
AAA Alma-Ata 5.20 66 *e*PN **Pn** 15 57 26.3 +1.8
AAA *e* 15 57 40.2
KNDC Almaty 5.24 66⇓Pg **Pb** 15 57 42.3 +4.1
comp=E,242nm,0.8s
KNDC ⇓Lg Lg 15 58 48.7
comp=E,748nm,0.8s
KNDC Almaty 5.24 66 PN **Pb** 15 57 39.2 +0.9
KNDC 15 58 48.2
KTBS Karatobe 5.24 60 Pg **Pb** 15 57 39.8 +1.5
comp=E,50nm,0.8s
KTBS Lg Lg 15 58 47.3
comp=E,253nm,0.7s
MDOK Medeo 5.27 66 Pg **Pb** 15 57 40.6 +1.6
comp=E,28nm,0.9s
MDOK Lg Lg 15 58 49.6
comp=E,94nm,0.9s
MDOK Medeo 5.27 66 *e*Pn **Pn** 15 57 27.4 +1.8
MDOK *e*Pg **Pb** 15 57 41.4 +2.4
MDOK Medeo 5.27 66 *e*PN **Pn** 15 57 27.4 +1.8
MDOK *e* 15 57 41.3
KOTS Kotyrbulak 5.34 66 Pg **Pb** 15 57 42.9 +2.7
comp=E,80nm,1.1s
KOTS Lg Lg 15 58 53.2
comp=E,214nm,0.9s
KOTS Kotyrbulak 5.34 66 *e*P **Pb** 15 57 42.9 +2.7
comp=E,80nm,1.1s
KOTS *e*S **Sg** 15 58 53.2 -4.9
comp=E,214nm,0.9s
GZLY Gazly 5.43 261 S **Sn** 15 58 29.4 -0.7
CHKK Chushkaly 5.50 59 Pg **Pb** 15 57 44.4 +1.7
comp=E,15nm,0.7s
CHKK Lg Lg 15 58 55.9
comp=E,191nm,0.5s
CHKK Chushkaly 5.50 59 *e*P **Pb** 15 57 44.5 +1.7
comp=E,15nm,0.7s
CHKK *e*S **Sb** 15 58 55.9 +7.1
comp=E,191nm,0.5s
TARG Taragay, Kyrgy 5.55 82 Pn **Pn** 15 57 31.6 +1.9
TARG Taragay, Kyrgy 5.55 82⇓*i*P **Pn** 15 57 30.4 +0.7
TARG ⇓*i*S **Sn** 15 58 32.8 -1.0
TARG Taragay, Kyrgy 5.55 82 PN **Pn** 15 57 31.6 +1.9
PRZ Przheval'sk 6.08 76 Pn **Pn** 15 57 38.8 +2.1
PRZ Przheval'sk 6.08 76 PN **Pn** 15 57 38.8 +2.1
KURS Kuram 6.15 66 Pg **Pb** 15 57 56.8 +2.9
comp=E,23nm,1.0s
KURS Lg Lg 15 59 16.3
comp=E,80nm,0.9s
SATY Saty 6.20 70 Pg **Pb** 15 57 55.8 +1.1
comp=E,30nm,1.3s
SATY Lg Lg 15 59 15.4
comp=E,110nm,0.8s
SATY Saty 6.20 70 *e*Pn **Pn** 15 57 40.2 +1.9
SATY *e*Pg **Pb** 15 57 58.2 +3.6
SATY *e*Lg Lg 15 59 21.0
SATY Saty 6.20 70 *e*PN **Pn** 15 57 40.2 +1.9
SATY *e* 15 57 58.2
ARXS Arharly 6.20 59 Pg **Pb** 15 57 56.3 +1.6
comp=E,18nm,1.3s
ARXS Lg Lg 15 59 17.2
comp=E,149nm,0.7s
ARXS Arharly 6.20 59 *e*P **Pb** 15 57 56.3 +1.6
ARXS *e*S **Sb** 15 59 17.2 +8.2
ARXS Arharly 6.20 59 *e*PN **Pn** 15 57 39.7 +1.4
KPKS Kokpek 6.50 67 Pg **Pb** 15 58 03.0 +3.1
comp=E,0.5nm,0.9s
KPKS Lg Lg 15 59 27.1
comp=E,88nm,1.1s
BLB Baldybastay 6.58 62 Pg **Pb** 15 58 03.7 +2.5
comp=E,35nm,1.1s
BLB Lg Lg 15 59 29.4
comp=E,130nm,1.1s
UZB Uzynbulak 6.66 70 Pg **Pb** 15 58 05.3 +2.8
comp=E,18nm,1.4s
UZB Lg Lg 15 59 30.8
comp=E,118nm,0.9s
UZB Uzynbulak 6.66 70 *e*Pn **Pn** 15 57 45.4 +0.7
UZB *e*Pg **Pb** 15 58 06.3 +3.8
UZB *e*Lg Lg 15 59 35.1
UZB Uzynbulak 6.66 70 *e*PN **Pn** 15 57 45.3 +0.7
UZB *e* 15 58 06.2
KBL Kabul 6.77 190 Pn **Pn** 15 57 49.6 +3.4
KBL Kabul 6.77 190 PN **Pn** 15 57 49.6 +3.4
TDK Taldyqorghan 6.94 54 Pg **Pb** 15 58 10.6 +3.3
comp=E,41nm,1.0s
TDK Lg Lg 15 59 39.9
comp=E,273nm,2.6s
TDK Taldyqorghan 6.94 54 *e*Pn **Pn** 15 57 50.9 +2.6
TDK *e*Pg Pb 15 58 12.2 +5.0
TDK Taldyqorghan 6.94 54 *e*PN **Pn** 15 57 50.9 +2.6
TDK *e* 15 58 12.2
SHLS Shalkode 6.97 71 Pg **Pg** 15 58 17.0 -3.1
comp=E,47nm,1.4s
SHLS Lg Lg 15 59 51.0
comp=E,108nm,0.7s
SHLS Shalkode 6.97 71 *e*Pn Pn 15 57 54.9 +6.0
SHLS *e*Pg **Pg** 15 58 18.8 -1.3
SHLS Shalkode 6.97 71 *e*P Pn 15 57 54.8 +5.9
PDGK Podgornoye 7.03 70⇓Pn **Pn** 15 57 51.1 +1.4
comp=E,8.5nm,0.8s
PDGK ⇑Pg **Pg** 15 58 19.1 -2.2
comp=E,24nm,0.7s
PDGK ⇑Lg Lg 15 59 45.0
comp=E,92nm,0.7s
PDGK Podgornoye 7.03 70 PN **Pn** 15 57 51.1 +1.4
KAPS Kapalarasan 7.67 55 Pg **Pb** 15 58 23.4 +3.8
comp=E,5.6nm,0.8s
KAPS Lg Lg 16 00 02.1
comp=E,59nm,0.8s
KTMS Ketmen 7.67 70 Pg **Pb** 15 58 22.2 +2.4
comp=E,4.4nm,1.5s
KTMS Lg Lg 16 00 00.1
comp=E,11nm,0.8s
HRA Herat 9.42 226 Pn **Pn** 15 58 23.6 +1.1
MAKZ Makanchi 10.00 52 Pn **Pn** 15 58 30.4 +0.1
MAKZ Makanchi 10.00 52 P **Pn** 15 58 30.4 +0.1
MK31 Makanchi Array 10.18 53 Pn **Pn** 15 58 33.1 +0.3
comp=E,11nm,0.8s,baz=239,slow=13,SNR=106
MK31 ⇑Lg Lg 16 01 27.2
comp=E,30nm,0.8s,baz=241,slow=13,SNR=4.7
MK31 Makanchi Array 10.18 53*d* iP **Pn** 15 58 33.5 +0.7
MKAR Makanchi Array 10.18 53 Pn **Pn** 15 58 32.8 0.0
MKAR Makanchi Array 10.18 53 Pn **Pn** 15 58 33.0 +0.2
comp=E,0.5nm,0.3s,baz=240,slow=12,SNR=76
MKAR Lg Lg 16 01 23.2
comp=E,2.0nm,0.3s,baz=236,slow=27,SNR=5.5
comp=E,13nm,0.8s
MKAR Makanchi Array 10.18 53 *i* P **Pn** 15 58 33.5 +0.7
MKAR pmax pmax
comp=E,13nm,0.8s
AB31 Akbulak array 10.90 321 Pn **Pn** 15 58 41.4 -1.2
AB31 Akbulak array 10.90 321⇓Pn **Pn** 15 58 40.9 -1.7
comp=E,11nm,0.5s,baz=132,slow=12,SNR=284
AB31 ⇓Sn **Sn** 16 00 37.2 -7.4
comp=E,5.3nm,0.5s,baz=130,slow=26,SNR=6.1
AB31 Akbulak array 10.90 321 *e*P **Pn** 15 58 41.4 -1.2
ABKAR Akbulak array 10.90 321 Pn **Pn** 15 58 41.3 -1.4
KURBB Kurchatov Arra 10.94 28 Pn **Pn** 15 58 39.4 -3.8
comp=E,0.2nm,0.3s,baz=219,slow=13,SNR=6.9
KURBB Sn **Sn** 16 00 44.6 -1.0
comp=E,0.2nm,0.3s,baz=218,slow=16,SNR=4.3
KURBB Lg Lg 16 01 48.2
comp=E,0.3nm,0.3s,baz=216,slow=30,SNR=5.8
KURBB LR LR 16 02 58.8
comp=E,181nm,19.6s,baz=181,slow=38
comp=E,1.3nm,0.2s
KURK Kurchatov 11.05 28⇑*e*P **Pn** 15 58 44.5 -0.1
BVA0 Borovoye Array 11.80 360 Pn **Pn** 15 58 53.9 -0.9
comp=E,3.9nm,0.7s,baz=170,slow=10,SNR=26
BVA0 ⇑Sn **Sn** 16 01 04.3 -2.1
comp=E,6.6nm,0.7s,baz=162,slow=22,SNR=5.2
BVA0 Borovoye Array 11.80 360 P **Pn** 15 58 52.3 -2.5
BVAR Borovoye Array 11.80 360 Pn **Pn** 15 58 54.2 -0.7
comp=E,0.2nm,0.3s,baz=166,slow=13,SNR=39
BVAR Sn **Sn** 16 01 05.7 -0.7
comp=E,0.3nm,0.3s,baz=168,slow=21,SNR=6.8
BVAR Lg Lg 16 02 15.4
comp=E,0.1nm,0.3s,baz=174,slow=29,SNR=4.4
BVAR LR LR 16 03 32.5
comp=E,46nm,20.5s,baz=193,slow=38
comp=E,5.0nm,0.5s
BORK Borovoye 11.82 360*d* iP **Pn** 15 58 54.2 -0.9
AKTO Aktyubinsk 12.62 321 Pn **Pn** 15 59 05.5 -0.6
comp=E,0.9nm,0.3s,baz=131,slow=13,SNR=19
AKTO Sn **Sn** 16 01 20.0 -6.6
comp=E,0.4nm,0.3s,baz=223,slow=3.9,SNR=4.1
comp=E,7.1nm,0.6s
AKTO Aktyubinsk 12.62 321⇓Pn **Pn** 15 59 05.3 -0.8
comp=E,5.2nm,0.7s
AKTO Sn **Sn** 16 01 18.4 -8.2
comp=E,6.5nm,0.7s
WMQ Urumqi 12.99 73 *e*P **Pn** 15 59 15.5 +4.2
WMQ pmax pmax
comp=E,17nm,0.9s
DGZ Jazzator, Alta 14.60 49⇓*i*P **Pn** 15 59 33.2 -0.1
DGZ pmax pmax
comp=E,9.0nm,1.4s
ZAA0 Zalesovo Array 15.95 32 Pn **Pn** 15 59 50.0 -1.0
ZALV Zalesovo Beam 15.95 32 Pn **Pn** 15 59 49.4 -1.6
ZALV Zalesovo Beam 15.95 32 Pn **Pn** 15 59 48.7 -2.3
comp=E,0.5nm,0.3s,baz=228,slow=11,SNR=8.2
ZALV Sn **Sn** 16 02 46.6 -1.2
comp=E,0.2nm,0.3s,baz=216,slow=26,SNR=3.3
ZALV Lg Lg 16 04 29.1
comp=E,0.1nm,0.3s,baz=243,slow=26,SNR=2.3
comp=E,1.7nm,0.4s
ZALV Zalesovo Beam 15.95 32 *i* P **Pn** 15 59 50.5 -0.5
ZALV pmax pmax
comp=E,5.0nm,0.5s
LKRN Lenkeran, Azer 16.79 268 P **P** 16 00 03.4 -0.5
AKT Akhty 17.05 278 *e*P **Pn** 16 00 05.0 -0.1
AKT pmax pmax
comp=E,10.0nm,0.7s
ARTI Arti 17.08 337 Pn **Pn** 16 00 02.9 -2.4
ARTI lAmb lAmb 16 00 04.4
comp=E,22nm,0.7s
ARTI Arti 17.08 337 P **Pn** 16 00 03.8 -1.5
comp=E,1.1nm,0.3s,baz=151,slow=7.4,SNR=32
comp=E,17nm,0.7s
ARTI Arti 17.08 337*d* iP **Pn** 16 00 03.4 -1.9
ARTI S **Sn** 16 03 14.2 -0.8
ARTI pmax pmax
comp=E,17nm,0.7s
SEKA Sheki 17.48 278 P **P** 16 00 11.3 -0.4
MNGR Mingechevir, A 17.63 276 P **P** 16 00 14.0 +0.8
GANJ Ganja 18.22 276 P **P** 16 00 20.5 +0.7
DDFL Dedoflistskaro 18.25 279 P **P** 16 00 21.5 +1.3
EVN Everest 18.86 129 P **P** 16 00 24.4 -3.1
BELG Belogornoye 19.11 313 P **P** 16 00 28.1 -1.3
comp=E,1.7nm,0.3s,baz=181,slow=1.8,SNR=6.6
comp=E,4.4nm,0.4s
BELG Belogornoye 19.11 313⇑*e*P **Pn** 16 00 31.7 +1.5
BELG pmax pmax
comp=E,2.0nm,0.8s
NAX Nakhchivan 19.15 272 P **Pn** 16 00 31.0 +0.1
GNI Garni 19.50 275 Pn **Pn** 16 00 37.0 +1.8
GNI lAmb lAmb 16 00 45.5
comp=E,18nm,0.8s
GNI Garni 19.50 275 P **Pn** 16 00 35.9 +0.7
comp=E,0.6nm,0.3s,baz=26,slow=4.2,SNR=9.9
comp=E,16nm,0.8s
GNI Garni 19.50 275*c* iP **Pn** 16 00 39.4 +4.2
GNI pmax pmax
comp=E,19nm,0.8s
NCK Nalchik 19.93 285⇓*e*P **Pn** 16 00 42.4 +2.2
NCK pmax pmax
comp=E,21nm,0.8s
KBZ Khabaz 20.43 286 P **Pn** 16 00 46.0 0.0
comp=E,4.5nm,0.8s,baz=295,slow=4.7,SNR=10.0
comp=E,4.5nm,0.8s
KBZ Khabaz 20.43 286*ce*P **Pn** 16 00 48.8 +2.8
KBZ pmax pmax
comp=E,6.0nm,0.9s
KIV Kislovodsk 20.57 287 P **Pn** 16 00 47.1 -0.7
KIV lAmb lAmb 16 01 02.6
comp=E,16nm,0.6s
KIV Kislovodsk 20.57 287 *e*P **Pn** 16 00 47.3 -0.5
KIV pmax pmax
comp=E,9.0nm,0.9s
KIV MLR MLR
comp=E,5.0nm,14.0s
SHA1 Shidzhatmaz 20.61 286⇓*e*P **Pn** 16 00 47.7 -0.6
KNGR Kungurtug, Tuv 20.94 54*d* iP **P** 16 00 51.0 +1.5
KNGR pmax pmax
comp=E,24nm,0.9s
KIRV Kirov 21.86 330 P **P** 16 00 59.6 +0.5
comp=E,8.0nm,0.6s,baz=166,slow=8.3,SNR=3.8
comp=E,8.0nm,0.6s
VRH Novokhopyorsk 22.10 307 *e*P **P** 16 01 01.8 0.0
VRH pmax pmax
comp=E,14nm,0.5s
GTA Gaotai 22.43 85 *e*P **P** 16 01 06.3 +0.7
GTA pmax pmax
comp=E,3.0nm,1.1s
SOC Sochi 22.74 286 *e*P **P** 16 01 08.3 -0.5
SOC *e*PPP PPP 16 01 41.2
SOC *e*S **S** 16 05 18.2 +0.8
SOC *e*SSS SSS 16 06 06.8
SOC MLR MLR
comp=E,165nm,23.0s
LPSR Galich'ya Gora 24.14 309 *e*P **P** 16 01 23.4 +0.8
LPSR pmax pmax
comp=Z,10.0nm,0.6s
ANN Anapa 24.30 290 *e*P P 16 01 16.8 -7.3
ANN *e**PP pP 16 01 20.7 -7.0
ANN *e*S **S** 16 05 34.8 -8.0
ANN pmax pmax
comp=Z,52nm,1.2s
OBN Obninsk 26.20 314 *e*P **P** 16 01 43.2 +2.0
OBN *e* 16 02 20.6
OBN *e*PPP PPP 16 02 28.8
OBN pmax pmax
comp=Z,34nm,2.3s
OBN MLR MLR
comp=Z,29nm,15.0s
SONM Songino Array 26.29 63 P **P** 16 01 41.5 -0.8
SONM Songino Array 26.29 63 P **P** 16 01 42.7 +0.4
comp=Z,0.9nm,0.5s,baz=259,slow=8.9,SNR=7.4
SONM LR LR 16 12 48.6
comp=Z,32nm,18.7s,baz=297,slow=38
comp=Z,0.9nm,0.5s
ULN Ulaanbaatar 26.73 63⇓*e*P **P** 16 01 47.2 +0.9
ULN pmax pmax
comp=Z,11nm,3.4s
KLMR Klimovskoe 27.21 327 *e*P **P** 16 01 50.8 +0.5
KLMR pmax pmax
comp=Z,12nm,1.4s
BR131 Keskin Array S 27.90 279 P **P** 16 01 57.5 +0.7
BR131 lAmb lAmb 16 01 60.0
comp=Z,6.1nm,0.8s
BR131 Keskin Array S 27.90 279*de*P **P** 16 01 58.0 +1.1
BRTR Keskin Array B 27.90 279 P **P** 16 01 57.9 +1.0
BRTR Keskin Array B 27.90 279 P **P** 16 01 58.2 +1.4
comp=Z,4.4nm,0.7s,baz=91,slow=7.8,SNR=30
comp=Z,4.4nm,0.7s
BRTR Keskin Array B 27.90 279 *i* P **P** 16 01 58.0 +1.1
BRTR pmax pmax
comp=Z,5.0nm,0.7s
ASF Jabal al Asfar 28.23 262 LR LR 16 15 56.8
comp=Z,30nm,18.6s,baz=178,slow=42
NRIK Noril'sk 29.58 12 LR LR 16 15 36.0
comp=Z,31nm,19.4s,baz=178,slow=40
NRIK Noril'sk 29.58 12⇓*e*P **P** 16 02 12.6 +1.4
NRIK pmax pmax
comp=Z,5.0nm,1.5s
AKASG Malin Array Be 29.82 303 P **P** 16 02 12.8 -0.8
comp=Z,0.4nm,0.4s,baz=80,slow=7.6,SNR=5.4
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 29.82 303 *i* P **P** 16 02 13.3 -0.3
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 29.82 303 P **P** 16 02 13.7 0.0
AKBB lAmb lAmb 16 02 43.5
comp=Z,9.6nm,1.4s
AKBB Malin Array Si 29.82 303⇑*e*P **P** 16 02 14.3 +0.7
AKBB pmax pmax
comp=Z,8.0nm,1.6s
HHC Hu-ho-hao-te 30.82 77 *e*P **P** 16 02 22.5 -0.2
HHC pmax pmax
comp=Z,16nm,0.6s
HHC pmax pmax
comp=Z,81nm,4.8s
MNK Minsk 30.97 310 *i* P **P** 16 02 26.8 +3.0
comp=E,22nm,0.6s
MNK *i* P **P** 16 02 26.8 +3.0
comp=N,12nm,0.4s
MNK *i* P **P** 16 02 26.8 +3.0
comp=Z,14nm,0.5s,baz=97
MNK *i* PP **PnPn** 16 03 26.5 +2.1
MNK *i* PPP PPP 16 03 36.5
MNK *i* S **S** 16 07 29.3 +1.2
MNK *i* SS **SnSn** 16 09 15.3 +7.3
MNK *i* SSS SSS 16 09 29.2
MNK *i* LO LO 16 12 34.1
MNK *i* LR LR 16 14 55.7
MNK Minsk 30.97 310 *i* P **P** 16 02 26.7 +3.0
MNK *i* 16 03 26.5
MNK *i* PPP PPP 16 03 36.5
MNK *i* S **S** 16 07 29.3 +1.2
MNK *i* SS **SnSn** 16 09 15.2 +7.3
MNK *i* SSS SSS 16 09 29.2
MNK pmax pmax
comp=E,22nm,0.6s
MNK pmax pmax
comp=N,12nm,0.4s
MNK pmax pmax
comp=Z,14nm,0.5s
XAN Xi'an 31.12 91 P P 16 02 15.6 -10
XAN pmax pmax
comp=Z,8.0nm,1.2s
MLR Muntele Rosu 32.31 293 P **P** 16 02 35.5 -0.3
MLR lAmb lAmb 16 02 40.8
comp=Z,7.8nm,0.9s
MLR Muntele Rosu 32.31 293 P **P** 16 02 36.1 +0.3
comp=Z,6.1nm,0.8s,baz=149,slow=5.9,SNR=7.9
comp=Z,6.1nm,0.8s
APA Apatity 33.13 335 *e*P **P** 16 02 42.1 -0.5
APA MLR MLR
comp=Z,669nm,4.7s
FINES FINESS Array B 33.39 322 P **P** 16 02 45.6 +0.7
comp=Z,4.0nm,0.9s,baz=112,slow=9.7,SNR=9.6
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 36.63 335 P **P** 16 03 13.2 +0.4
comp=Z,2.2nm,0.9s,baz=108,slow=8.9,SNR=3.5
comp=Z,2.2nm,0.9s
WHN Wuhan 36.79 93 P **P** 16 03 13.1 -1.4
MODS Modra-Piesok 37.73 299 *e*P **P** 16 03 24.2 +1.8
MODS Modra-Piesok 37.73 299 *e*P **P** 16 03 24.2 +1.8
HFS Hagfors 39.15 318 P **P** 16 03 35.1 +1.0
comp=Z,5.3nm,0.5s,baz=96,slow=11,SNR=40
comp=Z,5.3nm,0.5s
GERES GERESS Array B 39.98 301 P **P** 16 03 41.9 +0.6
GERES GERESS Array B 39.98 301 P **P** 16 03 43.0 +1.7
comp=Z,1.6nm,0.7s,baz=61,slow=9.3,SNR=13
comp=Z,1.6nm,0.7s
CN2 Changchun 40.00 67 P **P** 16 03 43.0 +1.6
CLL Collm 40.01 305 *e*P **P** 16 03 42.0 +0.7
KHC Kasperske Hory 40.01 301⇓*e*P **P** 16 03 42.0 +0.5
KHC pmax pmax
comp=Z,15nm,2.3s
NC303 NORSAR Array S 40.34 320 P **P** 16 03 44.1 +0.1
NB2 NORSAR Subarra 40.41 320 P **P** 16 03 44.8 +0.2
comp=Z,0.6nm,0.5s,baz=89,slow=8.6
NOA NORSAR Array B 40.41 320 P **P** 16 03 44.6 0.0
comp=Z,0.9nm,0.5s,baz=90,slow=8.2,SNR=8.5
comp=Z,0.9nm,0.5s
YAK Yakutsk 40.45 39⇑*e*P **P** 16 03 43.7 -1.2
YAK pmax pmax
comp=Z,28nm,2.6s
NC204 NORSAR Array S 40.63 320 P **P** 16 03 46.0 -0.5
NC204 lAmb lAmb 16 04 16.6
comp=Z,18nm,1.4s
TIXI Tiksi 41.59 24 P **P** 16 03 54.7 +0.5
TIXI lAmb lAmb 16 04 19.7
comp=Z,5.2nm,1.1s
TIXI Tiksi 41.59 24 LR LR 16 23 44.7
comp=Z,26nm,19.8s,baz=182,slow=40
TIXI Tiksi 41.59 24⇑*e*P **P** 16 03 52.8 -1.3
TIXI pmax pmax
comp=Z,10.0nm,2.7s
MJAR Matsushiro Arr 51.75 72 P **P** 16 05 14.3 0.0
comp=Z,2.7nm,0.9s,baz=292,slow=8.7,SNR=5.1
comp=Z,2.7nm,0.9s
ESDC Sonseca Array 54.97 295 P **P** 16 05 37.8 -0.1
comp=Z,1.6nm,0.8s,baz=52,slow=6.9,SNR=7.7
comp=Z,1.6nm,0.8s
SUMG Summit 56.46 340 P **P** 16 05 47.5 -1.0
SUMG Summit 56.46 340 P **P** 16 05 49.9 +1.4
SUMG pmax pmax
comp=Z,7.0nm,0.8s
BBJI Bungbulang 59.27 136 P **P** 16 06 08.6 0.0
B21K Ikpikpuk River 64.64 16 P **P** 16 06 44.6 +0.8
E21K Killik River 65.73 16 P **P** 16 06 51.0 0.0
E21K lAmb lAmb 16 07 09.7
comp=Z,9.2nm,1.3s
TOLK Toolik Lake Re 66.46 15 P **P** 16 06 56.4 +0.7
E29M Blow River 68.66 11 P **P** 16 07 10.2 +0.7
E29M lAmb lAmb 16 07 49.8
comp=Z,4.0nm,1.3s
C36M Paulatuk 69.22 5 P **P** 16 07 12.6 -0.4
ILAR Eielson Array 70.35 16 P **P** 16 07 20.2 +0.2
ILAR Eielson Array 70.35 16 P **P** 16 07 19.8 -0.3
comp=Z,0.4nm,0.9s,baz=329,slow=3.6,SNR=4.1
comp=Z,0.4nm,0.9s
ILAR Eielson Array 70.35 16 P **P** 16 07 20.3 +0.2
H29M Whitestone 70.60 12 P **P** 16 07 22.1 +0.6
H29M lAmb lAmb 16 07 46.1
comp=Z,11nm,1.5s

I28M	**Miner Creek**	**71.05**	**13**	P		**P**	**16 07 23.7**	**-0.8**
H31M	**Peel River**	**71.58**	**10**	P		**P**	**16 07 26.8**	**-0.8**
SKT	**Skwentna**	**71.70**	**19**	P		**P**	**16 07 27.6**	**-0.7**
SKT				IAmb		IAmb	16 07 40.1	
	comp=Z,4.5nm,1.0s							
I30M	**Mount Dempster**	**71.83**	**12**	P		**P**	**16 07 29.9**	**+0.7**
KNRA	**Kununurra**	**78.16**	**123**	P		**P**	**16 08 05.1**	**-1.1**
KNRA				IAmb		IAmb	16 08 21.1	
	comp=Z,9.8nm,1.4s							
WRA	**Warramunga Arr**	**84.86**	**122**	P		**P**	**16 08 41.0**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=327,slow=5.1,SNR=11							
	comp=Z,0.7nm,0.5s							
WRA	**Warramunga Arr**	**84.86**	**122**	P		**P**	**16 08 41.0**	**-0.7**
WR8	**Warramunga Arr**	**84.98**	**122**	P		**P**	**16 08 41.4**	**-0.8**
WR8				IAmb		IAmb	16 09 07.4	
	comp=Z,5.6nm,1.2s							
AS31	**Alice Springs**	**87.31**	**125**	P		**P**	**16 08 52.6**	**-1.2**
ASAR	**Alice Springs**	**87.31**	**125**	P		**P**	**16 08 52.2**	**-1.5**
ASAR	**Alice Springs**	**87.31**	**125**	P		**P**	**16 08 53.1**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=319,slow=4.3,SNR=21							
	comp=Z,1.2nm,0.7s							

DJA 06 15:59:15.1±0.4,**0°S**±4°,**12°3E**±°,**h140**km±6km,**M3.6**/11, **mb4.0**/3,**MLv3.4**/11,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.95**	**44**	P	Pn	15 59 39.2	+0.7
KMSI				S	Sn	15 59 57.4	+1.2
LUWI	**Luwuk**	**1.08**	**211**	P	Pn	15 59 40.2	+0.6
LUWI				S	Sn	15 59 58.8	+0.5
MRSI	**Marisa**	**1.50**	**293**	P	Pn	15 59 43.4	-0.5
MRSI				S	Sn	16 00 04.2	-1.6
APSI	**Ampana**	**1.85**	**245**	P	Pn	15 59 49.2	+1.3
SANI	**Sanana**	**3.29**	**126**	P	Pn	16 00 04.4	-1.4
NLAI	**Namlea**	**4.89**	**129**	P	Pn	16 00 26.8	-0.1
FAKI	**Fak Fak**	**9.35**	**107**	P	Pn	16 01 25.9	-0.8

*IDC **06** 16:05:06.1±1.2,6.°01S×104.°10E,h0km,mb3.9/11, mbtmp3.9/12,ML4.8/2,MS2.7/1,Error ellipse: s-maj=45.4km s-min=13.6km az=47.0*
*DJA **06** 16:05:11.9±0.7,6.°3S×10.°4E±°,h12km±5km,M4.6/25, mb4.7/13,mB5.5/5,MLv4.4/25,Mw(mB)4.9/5,MwMwp5.4/1, Mwp5.6/1*
*NEIC **06** 16:05:14.8±2.2,5.°9S±0.°1×104.°25E±0.°10,h65km±6km, mb4.3/15,Error ellipse: s-maj=21.1km s-min=9.2km az=212.0*

ISC 06 16:05:12.5±0.5,**6.°14S**±0.°05×**104.°14E**±0.°06,**h42**km,**n95,** σ1s**60**/87,**mb4.1**/19,**Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**0.71**	**30**	P	**Pn**	**16 05 25.7**	**-0.5**
KASI				S	**Sn**	**16 05 34.7**	**-1.2**
LWLI	**Liwa**	**1.12**	**356**	P	**Pn**	**16 05 33.1**	**+1.2**
LWLI				S	**Sn**	**16 05 46.9**	**+0.7**
BLSI	**Bandar Lampung**	**1.34**	**55**	P	**Pn**	**16 05 34.8**	**0.0**
BLSI				S	**Sn**	**16 05 50.7**	**-0.7**
KLI	**Kotabumi**	**1.46**	**29**	P	**Pn**	**16 05 37.4**	**+1.0**
MDSI	**Maura Dua**	**1.65**	**1**	P	**Pn**	**16 05 40.2**	**+1.2**
SBJI	**Serang**	**1.98**	**89**	P	**Pn**	**16 05 45.1**	**+1.6**
MNAI	**Manna**	**2.13**	**326**		**Pn**	**16 05 47.3**	**+1.6**
MNAI	**Manna**	**2.13**	**326**	P	**Pn**	**16 05 47.6**	**+1.9**
MNAI	**Manna**	**2.13**	**326**	P	**Pn**	**16 05 47.3**	**+1.6**
LHSI	**Lahat**	**2.38**	**345**	P	**Pn**	**16 05 51.5**	**+2.4**
SKJI	**Sukabumi**	**2.54**	**110**	P	**Pn**	**16 05 53.3**	**+2.0**
DBJI	**Dramaga**	**2.62**	**99**	P	**Pn**	**16 05 54.0**	**+1.6**
KSI	**Kapahiang**	**2.92**	**328**	P	**Pn**	**16 06 00.1**	**+3.6**
CNJI	**Cibinong**	**3.18**	**111**	P	**Pn**	**16 06 00.4**	**+0.3**
LEM	**Lembang**	**3.52**	**101**	Pn	**Pn**	**16 06 05.0**	**+0.1**
	15nm,0.3s,baz=142,slow=24,SNR=9.3						
LEM				Sn	**Sn**	**16 06 45.6**	**+0.3**
	10nm,0.3s,baz=356,slow=20,SNR=1.4						
	36nm,0.5s						
LEM	**Lembang**	**3.52**	**101**	P	**Pn**	**16 06 06.7**	**+1.8**
LEM	**Lembang**	**3.52**	**101**	P	**Pn**	**16 06 05.0**	**+0.1**
MASI	**Maura Aman, Be**	**3.54**	**327**	P	**Pn**	**16 06 08.7**	**+3.7**
BBJI	**Bungbulang**	**3.72**	**111**	S	**Sn**	**16 06 49.9**	**-0.3**
PPBI	**Pangkal Pinang**	**4.43**	**27**	P	**Pn**	**16 06 17.6**	**+0.4**
XMI	**Christmas Isla**	**4.54**	**160**	P	**Pn**	**16 06 17.0**	**-1.8**
XMI	**Christmas Isla**	**4.54**	**160**	S	**Sn**	**16 07 07.3**	**-3.1**
KRJI	**Kerinci**	**4.83**	**326**	P	**Pn**	**16 06 26.3**	**+3.4**
TPI	**Tanjungpandan**	**4.86**	**46**	P	**Pn**	**16 06 22.8**	**-0.3**
KPJI	**Karang Pucung**	**4.90**	**104**	P	**Pn**	**16 06 26.4**	**+2.7**
PPSI	**Pulau Pagai**	**5.32**	**309**	P	**Pn**	**16 06 31.3**	**+1.9**
	25µm122nm,0.6s						
DSRI	**Dabo**	**5.64**	**4**	P	**Pn**	**16 06 35.5**	**+1.6**
	0.1nm21nm,0.5s						
PDSI	**Padang**	**6.37**	**325**	P	**Pn**	**16 06 46.6**	**+2.7**
UGM	**Wanagama**	**6.57**	**106**	Pn	**Pn**	**16 06 49.5**	**+2.8**
UGM	**Wanagama**	**6.57**	**106**	P	**Pn**	**16 06 47.0**	**+0.3**
UGM	**Wanagama**	**6.57**	**106**	P	**Pn**	**16 06 49.7**	**+3.0**
	0.4nm50nm,1.0s						
SISI	**Saibi**	**6.95**	**313**	P	**Pn**	**16 06 52.3**	**+0.4**
	0.2nm29nm,0.7s						
PCJI	**Pacitan**	**7.27**	**107**	P	**Pn**	**16 06 58.4**	**+2.1**
GSI	**Gunungsitoli**	**9.89**	**318**	Pn	**Pn**	**16 07 31.3**	**-0.9**
GSI	**Gunungsitoli**	**9.89**	**318**	P	**Pn**	**16 07 31.8**	**-0.4**
GSI	**Gunungsitoli**	**9.89**	**318**	P	**Pn**	**16 07 31.6**	**-0.6**
	18nm,1.0s						
ABJI	**Asem Bagus**	**10.15**	**100**	P	**Pn**	**16 07 37.5**	**+1.7**
JAGI	**Jajag, Banyuwa**	**10.19**	**104**	Pn	**Pn**	**16 07 36.6**	**+0.2**
JAGI	**Jajag, Banyuwa**	**10.19**	**104**	P	**Pn**	**16 07 36.7**	**+0.3**
JAGI	**Jajag, Banyuwa**	**10.19**	**104**	P	**Pn**	**16 07 36.6**	**+0.2**
	1µm89nm,0.6s						
SRBI	**Singaraja**	**11.15**	**101**	P	**Pn**	**16 07 49.4**	**-0.1**
	43nm,0.6s						
TWSI	**Taliwang, Sumb**	**12.89**	**102**	P	**Pn**	**16 08 10.9**	**-2.4**
BKB	**Balikpapan**	**13.62**	**70**	Pn	**Pn**	**16 08 25.8**	**+2.6**
PLAI	**Plampang**	**13.78**	**102**	P	**Pn**	**16 08 23.5**	**-1.9**
TOLI2	**Tolitoli**	**18.11**	**67**	P	**P**	**16 09 20.6**	**-0.4**
GIRL	**Giralia**	**19.07**	**150**	P	**Pn**	**16 09 34.4**	**+1.7**
BATI	**Baumata**	**19.73**	**103**	P	**P**	**16 09 39.0**	**+0.1**
	12nm,0.3s,baz=78,slow=3.3,SNR=14						
SOEI	**Soe**	**20.25**	**101**	P	**P**	**16 09 43.0**	**-1.6**
SOEI				IAmb	IAmb	16 10 03.0	
	comp=Z,16nm,0.6s						
SOEI	**Soe**	**20.25**	**101**	P	**P**	**16 09 45.1**	**+0.5**
PSA00	**Pilbara Seismi**	**21.59**	**137**	P	**P**	**16 09 59.5**	**+0.6**
PSA00				IAmb	IAmb	16 10 18.7	
	comp=Z,24nm,1.5s						
FITZ	**Fitzroy Crossi**	**24.11**	**121**	P	**P**	**16 10 23.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**24.11**	**121**	P	**P**	**16 10 24.5**	**0.0**
	comp=Z,3.1nm,0.6s,baz=302,slow=6.3,SNR=13						
	comp=Z,3.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.11**	**121**	P	**P**	**16 10 24.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**24.98**	**348**	P	**P**	**16 10 29.7**	**-2.7**
	comp=Z,1.0nm,0.6s,baz=184,slow=9.3,SNR=10						
CMAR				LR	LR	16 20 54.5	
	comp=Z,17nm,20.4s,baz=205,slow=38						
	comp=Z,1.0nm,0.6s						
KNRA	**Kununurra**	**25.93**	**113**	P	**P**	**16 10 39.4**	**-1.7**
KNRA				IAmb	IAmb	16 11 05.1	
	comp=Z,8.2nm,1.1s						
SLVN	**Son La**	**27.31**	**360**	P	**P**	**16 10 54.7**	**+1.2**
H01W3	**Cape Leeuwin H**	**30.05**	**163**	T	T	16 43 09.7	
	baz=342,slow=76,SNR=5.2						
H01W2	**Cape Leeuwin H**	**30.06**	**163**	T	T	16 42 56.5	
	baz=342,slow=76,SNR=6.0						
H01W1	**Cape Leeuwin H**	**30.07**	**163**	T	T	16 42 53.5	
	baz=342,slow=76,SNR=5.7						
H08S2	**Diego Garcia H**	**31.45**	**265**	T	T	16 44 58.9	
	baz=89,slow=76,SNR=34						
H08S3	**Diego Garcia H**	**31.46**	**265**	T	T	16 44 59.6	
	baz=89,slow=76,SNR=27						
H08S1	**Diego Garcia H**	**31.47**	**265**	T	T	16 45 02.5	
	baz=89,slow=76,SNR=84						
WB0	**Warramunga Arr**	**32.36**	**118**	P	**P**	**16 11 36.6**	**-1.7**
WB0				IAmb	IAmb	16 11 43.8	
	comp=Z,3.4nm,1.0s						
WRA	**Warramunga Arr**	**32.38**	**118**	P	**P**	**16 11 37.2**	**-1.2**
WRA	**Warramunga Arr**	**32.38**	**118**	P	**P**	**16 11 37.6**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=304,slow=9.0,SNR=20						
	comp=Z,0.4nm,0.3s						
WRAB	**Tennant Creek**	**32.38**	**118**	P	**P**	**16 11 38.0**	**-0.5**
WR8	**Warramunga Arr**	**32.52**	**118**	P	**P**	**16 11 39.0**	**-0.7**
WR8				IAmb	IAmb	16 12 16.1	
	comp=Z,6.4nm,1.2s						
AS31	**Alice Springs**	**33.50**	**124**	P	**P**	**16 11 48.0**	**-0.3**
AS31				IAmb	IAmb	16 11 56.4	
	comp=Z,1.4nm,0.3s						
ASAR	**Alice Springs**	**33.50**	**124**	P	**P**	**16 11 47.6**	**-0.6**
ASAR	**Alice Springs**	**33.50**	**124**	P	**P**	**16 11 48.3**	**0.0**
	comp=Z,0.9nm,0.3s,baz=298,slow=7.3,SNR=53						
	comp=Z,0.9nm,0.3s						
COEN	**Coen**	**39.16**	**105**	P	**P**	**16 12 34.0**	**-2.7**
COEN	**Coen**	**39.16**	**105**	P	**P**	**16 12 36.6**	**-0.1**
MTSU	**Mount Surprise**	**40.94**	**111**	P	**P**	**16 12 51.9**	**+0.5**
STKA	**Stephens Creek**	**43.33**	**131**	P	**P**	**16 13 11.3**	**+0.6**
STKA	**Stephens Creek**	**43.33**	**131**	P	**P**	**16 13 11.6**	**+0.9**
	comp=Z,4.6nm,0.6s,baz=317,slow=7.5,SNR=9.2						
	comp=Z,4.6nm,0.6s						
CMSA	**Cobar Meteorol**	**46.31**	**128**	P	**P**	**16 13 36.1**	**+1.7**
KSRS	**Korea Array**	**48.72**	**25**	P	**P**	**16 13 51.9**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=221,slow=9.1,SNR=2.2						
	comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**53.78**	**2**	P	**P**	**16 14 29.4**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=170,slow=8.4,SNR=3.7						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**56.16**	**342**	P	**P**	**16 14 46.0**	**-2.0**
MKAR	**Makanchi Array**	**56.16**	**342**	P	**P**	**16 14 46.2**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=151,slow=8.5,SNR=7.2						
	comp=Z,0.6nm,0.6s						
H04N2	**CROZET ISLANDS**	**60.09**	**219**	T	T	17 21 06.1	
	baz=63,slow=75,SNR=42						
H04N1	**CROZET ISLANDS**	**60.10**	**219**	T	T	17 21 10.7	
	baz=63,slow=75,SNR=312						
H04N3	**CROZET ISLANDS**	**60.11**	**219**	T	T	17 20 59.0	
	baz=63,slow=75,SNR=47						
H04S1	**CROZET ISLANDS**	**60.30**	**219**	T	T	17 21 38.0	
	baz=65,slow=76,SNR=10						
H04S3	**CROZET ISLANDS**	**60.32**	**219**	T	T	17 21 38.5	
	baz=65,slow=76,SNR=10						
H04S2	**CROZET ISLANDS**	**60.32**	**219**	T	T	17 21 35.3	
	baz=65,slow=76,SNR=14						
ZALV	**Zalesovo Beam**	**62.04**	**347**	P	**P**	**16 15 27.3**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=157,slow=7.8,SNR=3.1						
	comp=Z,0.5nm,0.3s						
BVAR	**Borovoye Array**	**65.50**	**338**	P	**P**	**16 15 49.5**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=138,slow=10.0,SNR=7.0						
	comp=Z,0.9nm,0.5s						
AB31	**Akbulak array**	**67.25**	**330**	P	**P**	**16 16 02.3**	**-0.3**
AB31				IAmb	IAmb	16 16 02.7	
	comp=Z,1.5nm,0.7s						
ABKAR	**Akbulak array**	**67.25**	**330**	P	**P**	**16 16 02.4**	**-0.2**
VNDA	**Vanda**	**77.33**	**169**	P	**P**	**16 17 02.9**	**+0.6**
VNDA				IAmb	IAmb	16 17 10.1	
	comp=Z,4.1nm,1.5s						
BRTR	**Keskin Array B**	**79.15**	**312**	P	**P**	**16 17 13.7**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=86,slow=7.4,SNR=2.5						
	comp=Z,0.4nm,0.8s						
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**16 17 41.3**	**+3.7**
QSPA				IAmb	IAmb	16 17 47.4	
	comp=Z,6.3nm,1.4s						
TXAR	**Lajitas Array**	**145.06**	**45**		**PKPbc**	**16 24 44.8**	**-0.9**
TXAR	**Lajitas Array**	**145.06**	**45**	PKPbc	**PKPbc**	**16 24 45.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=252,slow=1.8,SNR=3.9						

*IDC **06** 16:09:31.5±1.1,11.°56S×120.°52E,h0km,mb3.6/4, mbtmp3.8/7,ML4.0/3,MS2.5/1,Error ellipse: s-maj=36.4km s-min=21.9km az=65.0*
*DJA **06** 16:09:33.9±0.4,12.°3S±2.°×12.°1E±°,h18km±3km,M4.2/16, mb4.3/16,mB5.0/3,MLv4.2/14,Mw(mB)4.4/3*

ISC 06 16:09:32.7±0.8,**11.°55S**±0.°06×**120.°51E**±0.°05,**h10**km,**n28,** σ1s**80**/31,**mb3.6**/4,**South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**1.33**	**3**	P	**Pb**	**16 09 58.5**	**+0.8**
WSI	**Waingapu**	**1.88**	**354**	P	**Pn**	**16 10 06.3**	**+1.4**
WBSI	**Waikabubak, Su**	**2.20**	**330**	P	**Pn**	**16 10 11.1**	**+1.8**
WBSI				S	**Sn**	**16 10 36.2**	**-0.4**
EDFI	**Ende, Flores**	**3.02**	**23**	P	**Pn**	**16 10 20.0**	**-0.7**
EDFI				Pg	**Pg**	**16 10 29.5**	**-1.1**
EDFI				S	**Sn**	**16 10 53.2**	**-3.7**
MMRI	**Maumere**	**3.36**	**31**	P	**Pn**	**16 10 24.7**	**-0.6**
MMRI				S	**Sn**	**16 11 02.1**	**-3.2**
BATI	**Baumata**	**3.37**	**67**	Pn	**Pn**	**16 10 27.4**	**+2.0**
	16nm,0.3s,baz=171,slow=1.1,SNR=17						
BATI				Sn	**Sn**	**16 11 02.4**	**-3.2**
	36nm,0.3s,baz=0.1,slow=17,SNR=10						
	35nm,0.3s						
BATI	**Baumata**	**3.37**	**67**	P	**Pn**	**16 10 27.3**	**+1.8**
BATI				S	**Sn**	**16 11 06.2**	**+0.6**
PLAI	**Plampang**	**3.82**	**315**	P	**Pn**	**16 10 33.3**	**+1.7**
SOEI	**Soe**	**4.10**	**65**	P	**Pn**	**16 10 37.5**	**+1.9**
SOEI				S	**Sn**	**16 11 24.3**	**+0.6**
TWSI	**Taliwang, Sumb**	**4.54**	**308**	P	**Pn**	**16 10 42.9**	**+1.4**
TWSI				S	**Sn**	**16 11 31.6**	**-2.7**
BSSI	**Bau Bau, Buton**	**5.38**	**360**	P	**Pn**	**16 10 52.9**	**-0.1**
	0.2nm660nm29nm,0.9s						
DNP	**Denpasar**	**5.95**	**298**	S	**Sn**	**16 12 07.5**	**-1.7**
BKSI	**Bulukumba**	**6.20**	**356**	P	**Pn**	**16 11 04.3**	**-0.1**
	0.1nm15nm,0.6s						
KAPI	**Kappang**	**6.54**	**353**	LR	LR	16 13 44.2	
	comp=Z,35nm,18.9s,baz=91,slow=39						
JAGI	**Jajag, Banyuwa**	**6.97**	**295**	P	**Pn**	**16 11 13.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**8.18**	**143**	Pn	**Pn**	**16 11 29.8**	**-1.7**
	1.8nm,0.3s,baz=337,slow=12,SNR=42						
FITZ				Sn	Sn	16 12 54.6	-10
	5.0nm,0.3s,baz=186,slow=16,SNR=14						
	6.8nm,0.4s						
PCJI	**Pacitan**	**9.78**	**289**	P	**Pn**	**16 11 54.2**	**+0.7**
	39nm,1.5s						
UGM	**Wanagama**	**10.49**	**289**	P	**Pn**	**16 12 03.8**	**+0.5**
FAKI	**Fak Fak**	**14.45**	**54**	P	**Pn**	**16 13 00.3**	**+2.8**
	20nm,1.1s						
WRA	**Warramunga Arr**	**15.70**	**124**	Pn	Pn	16 13 08.0	-6.1
	0.3nm,0.3s,baz=297,slow=14,SNR=6.0						
WRA				Sn	Sn	16 15 53.6	-15
	0.4nm,0.3s,baz=298,slow=24,SNR=5.2						
ASAR	**Alice Springs**	**17.53**	**135**	P	**Pn**	**16 13 35.6**	**-1.8**
	0.5nm,0.3s,baz=312,slow=12,SNR=22						
ASAR				S	Sn	16 16 38.2	-15
	1.0nm,0.5s,baz=317,slow=26,SNR=8.2						
	2.7nm,0.5s						
NWAO	**Narrogin (SRO)**	**21.49**	**188**	P	**P**	**16 14 23.4**	**+1.8**
	5.2nm,0.8s,baz=14,slow=13,SNR=8.9						
NWAO				S	S	16 18 06.0	-14
	4.9nm,0.5s,baz=359,slow=1.5,SNR=6.3						
	5.2nm,0.8s						
H08S2	**Diego Garcia H**	**47.46**	**270**	T	T	17 09 04.5	
	baz=99						
H08S3	**Diego Garcia H**	**47.48**	**270**	T	T	17 09 14.7	
	baz=99						
H08S1	**Diego Carcia H**	**47.48**	**270**	T	T	17 08 58.4	
	baz=99						
MKAR	**Makanchi Array**	**67.39**	**333**	P	**P**	**16 20 28.4**	**+0.1**
	0.3nm,0.6s,baz=140,slow=7.4,SNR=6.3						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**71.90**	**333**	P	**P**	**16 20 57.0**	**+1.0**
	0.2nm,0.5s,baz=139,slow=5.3,SNR=2.4						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**71.94**	**339**	P	**P**	**16 20 56.1**	**0.0**
	0.2nm,0.4s,baz=149,slow=5.6,SNR=4.2						
	0.2nm,0.4s						

*BJI **06** 16:10:53.8,10.°19S×165.°96E,h93km,mB5.1/13,mb5.1/61*
*NEIC **06** 16:10:55.0±1.8,10.°73S±0.°05×166.°08E±0.°09,h104km±4km, mb5.1/362,Mww4.9/13,Error ellipse: s-maj=12.9km s-min=6.0km az=73.0*
*MOS **06** 16:10:54.7±1.0,10.°65S×165.°93E,h115km,mb5.2/35, Error ellipse: s-maj=9.0km s-min=7.1km az=123.2*
*IDC **06** 16:10:55.0±0.7,10.°73S×166.°09E,h110km±5km,mb4.7/28, mbtmp5.1/31,MS3.6/28,Error ellipse: s-maj=11.5km s-min=9.6km az=109.0*
*NEIC **06** 16:10:55.1,10.°83S×166.°07E,h100km,Moment Tensor Solution. Duration: 1s5 Moment tensor: Scale 10^{16}Nm; M_{rr}2.66; $M_{\theta\theta}$-2.17; $M_{\phi\phi}$-0.50; $M_{r\theta}$0.64; $M_{\theta\phi}$-1.53; $M_{\theta r}$-0.63; Fault plane solution: M_o3.03000×10^{16} NP1: ϕ_s221.36000°,δ45.71000°,λ63.29000°. NP2:ϕ_s77.13000°, δ50.25000°,λ114.74000°. Principal axes: T 2.9660, Plg71.0000°, Azm53.0000°; N 0.1172, Plg19.0000°, Azm241.0000°; P -3.0832, Plg2.0000°, Azm150.0000°;*
*NEIC **06** 16:10:55.1,10.°73S×166.°07E,h100km*
*GCMT **06** 16:10:56.1±0.2,10.°75S±0.°02×165.°92E±0.°02,h110km±2km, MW5.0/116,Moment Tensor Solution. s57,c68; s116,c170; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.29±.08; $M_{\theta\theta}$-2.51±.11; $M_{\phi\phi}$-0.78±.11; $M_{r\theta}$1.07±.09; $M_{\theta\phi}$-2.17±.09; $M_{\phi r}$-0.72±.08; Best double couple: M_o3.89800×10^{16} NP1:ϕ_s216.00000°,δ45.00000°, λ60.00000°. NP2:ϕ_s76.00000°,δ52.00000°,λ117.00000°. Principal axes: T 3.7810, Plg69.0000°, Azm47.0000°; N 0.2330, Plg21.0000°, Azm238.0000°; P -4.0140, Plg4.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **06** 16:11:26.4,13.°08S×166.°86E,h208km,mb4.8/18, Vanuatu Islands*

ISC 06 16:10:54.9±0.4,**10.°78S**±0.°04×**166.°09E**±0.°05,**h112**km±2km, **h113**km:**pP-P,n880,**σ1s**03**/772,**mb5.1**/280,**28C-6D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.77**	**167**		**Pn**	**16 12 05.0**	**+0.3**
HNR	**Honiara**	**6.20**	**282**		**Pn**	**16 12 24.4**	**+0.4**
HNR	**Honiara**	**6.20**	**282**	P	**Pn**	**16 12 24.5**	**+0.6**
	676nm,0.6s,baz=152,slow=3.0,SNR=92						
HNR				S	**Sn**	**16 13 32.8**	**-0.7**
	1µm,0.6s,baz=217,slow=23,SNR=11						
KOUNC	**Koumac, New Ca**	**9.87**	**190**	P	**Pn**	**16 13 15.7**	**+1.9**
MARNC	**Mare, Loyalty**	**10.81**	**170**		**Pn**	**16 13 24.7**	**-1.7**
MARNC	**Mare, Loyalty**	**10.81**	**170**	P	**Pn**	**16 13 24.9**	**-1.5**
DZM	**Mont Dzumac**	**11.24**	**178**	P	**Pn**	**16 13 33.3**	**+1.0**
	397nm,0.6s,baz=48,slow=4.5,SNR=690						
DZM				S	**Sn**	**16 15 32.0**	**-4.0**
	42nm,0.4s,baz=319,slow=22,SNR=2.5						
DZM				LR	LR	16 17 36.6	
	comp=Z,307nm,18.8s,baz=4.5,slow=36						
YATNC	**Mamie plateau,**	**11.25**	**176**	P	**Pn**	**16 13 32.0**	**-0.3**
ONTNC	**Ouen Toro**	**11.47**	**178**		**Pn**	**16 13 35.8**	**+0.5**
ONTNC	**Ouen Toro**	**11.47**	**178**	P	**Pn**	**16 13 35.8**	**+0.5**
PINNC	**Pines Island,**	**11.84**	**174**		**Pn**	**16 13 41.0**	**+0.8**
PINNC	**Pines Island,**	**11.84**	**174**	P	**Pn**	**16 13 40.2**	**0.0**
MSVF	**Nonsavu**	**13.49**	**122**		**P**	**16 14 08.6**	**+1.5**
MSVF	**Nonsavu**	**13.49**	**122**	P	**P**	**16 14 08.0**	**+0.8**
MSVF	**Nonsavu**	**13.49**	**122**	P	**P**	**16 14 08.6**	**+1.5**
TARA	**Tarawa**	**13.83**	**30**	P	**P**	**16 14 10.0**	**-0.9**
RABL	**Rabaul**	**15.28**	**294**		**Pn**	**16 14 24.2**	**-0.5**
PMG	**Port Moresby**	**18.69**	**272**	P	**P**	**16 15 04.6**	**0.0**
PMG	**Port Moresby**	**18.69**	**272**	P	**Pn**	**16 15 05.5**	**-0.8**
	26nm,1.0s,baz=53,slow=7.3,SNR=4.2						
PMG	**Port Moresby**	**18.69**	**272**	*c iP*	**Pn**	**16 15 05.9**	**-0.4**
PMG				pmax	pmax		
	comp=Z,30nm,1.0s						
PATS	**Pohnpei**	**19.13**	**336**	P	**P**	**16 15 08.3**	**-1.1**
EIDS	**Eidsvold**	**20.32**	**222**	P	**P**	**16 15 22.4**	**+0.2**
	comp=Z,29nm,0.8s						
EIDS	**Eidsvold**	**20.32**	**222**	P	**P**	**16 15 22.4**	**+0.2**
EIDS	**Eidsvold**	**20.32**	**222**	P	Pn	16 15 36.1	+11
MANU	**Manus Island**	**20.52**	**294**	P	**P**	**16 15 24.6**	**+0.3**
TW1H	**Toowoomba 1 Ha**	**21.32**	**217**	P	**P**	16 15 43.5	+11
MTSU	**Mount Surprise**	**22.30**	**248**	P	**P**	**16 15 44.3**	**+0.9**
	comp=Z,45nm,0.9s						
COEN	**Coen**	**22.61**	**260**	P	**P**	**16 15 46.4**	**0.0**
ARMA	**Armidale**	**23.73**	**212**	P	**P**	**16 15 58.7**	**+1.8**
ARMA	**Armidale**	**23.73**	**212**		**P**	**16 15 57.8**	**+0.9**
OUZ	**Omahuta**	**25.27**	**165**	P	**P**	**16 16 12.3**	**+1.6**
OUZ	**Omahuta**	**25.27**	**165**	P	**P**	**16 16 12.8**	**+2.1**
QLP	**Quilpie**	**25.93**	**230**	P	**P**	**16 16 17.6**	**+0.8**
	comp=Z,33nm,1.2s						
WCZ	**Waipu Caves**	**26.15**	**165**	P	**P**	**16 16 21.2**	**+2.5**
JAY	**Jayapura**	**26.50**	**286**	LR	LR	16 27 24.3	
	comp=Z,76nm,18.6s,baz=359,slow=37						
QIS	**Mount Isa**	**27.26**	**246**	P	**P**	**16 16 28.6**	**-0.2**
	comp=Z,18nm,1.1s						
KUZ	**Kuaotunu**	**27.28**	**163**	P	**P**	**16 16 30.2**	**+1.4**
MKAZ	**Moumakai**	**27.46**	**164**	P	**P**	**16 16 31.8**	**+1.5**
TOZ	**Tahuroa Road**	**28.14**	**164**	P	**P**	**16 16 38.1**	**+1.6**
TOZ	**Tah

ASAR Alice Springs 33.22 243 P **P** **16 17 20.8 -0.6**
comp=Z,34nm,0.8s,baz=73,slow=9.5,SNR=135
ASAR PcP **PcP** **16 20 02.0 +0.4**
comp=Z,12nm,0.9s,baz=71,slow=3.0,SNR=18
ASAR ScP **ScP** **16 23 37.1 +1.3**
comp=Z,0.8nm,0.8s,baz=63,slow=3.7,SNR=4.1
ASAR PKiKP **PKiKP** **16 27 26.8 -0.7**
comp=Z,0.6nm,0.8s,baz=100,slow=1.5,SNR=7.0
ASAR LR LR 16 30 45.3
comp=Z,93nm,18.3s,baz=70,slow=36
comp=Z,34nm,0.8s
MQZ McQueen's Vall 33.30 171 IAmb IAmb 16 17 51.2
comp=Z,22nm,0.9s
HTT Hallett 33.60 224 P **P** **16 17 24.9 +0.2**
comp=Z,26nm,0.9s
HTT Hallett 33.60 224 P **P** **16 17 24.9 +0.2**
MTN Manton Dam 34.27 263 P **P** **16 17 30.1 -0.5**
comp=Z,27nm,0.9s
MTN Manton Dam 34.27 263 P **P** **16 17 30.3 -0.3**
MTN IAmb IAmb 16 17 31.2
comp=Z,18nm,0.8s
RAR Rarotonga 34.34 112 LR LR 16 29 02.7
comp=Z,88nm,21.3s,baz=274,slow=32
ODZ Otahua Downs 34.37 174 P **P** **16 17 33.5 +2.5**
BBOO Buckleboo 35.26 227 P **P** **16 17 39.7 +0.8**
comp=Z,63nm,0.9s
MGBR Mount Gambier 35.28 216 P **P** **16 17 41.4 +2.4**
SWI Sorong 35.98 284 P **P** **16 17 44.5 -0.7**
comp=Z,18nm,1.1s
SWI Sorong 35.98 284 P **P** **16 17 44.6 -0.7**
BNDI Bandanaira 36.38 277 P **P** **16 17 46.1 -2.5**
KNRA Kununurra 36.63 258 P **P** **16 17 50.2 -0.5**
comp=Z,65nm,1.0s
WRKA Warakurna 38.51 243 P **P** **16 18 06.4 -0.2**
comp=Z,17nm,1.3s
NLAI Namlea 39.38 278 P **P** **16 18 13.9 0.0**
comp=Z,753nmcomp=Z,75nm,1.3s
FITZ Fitzroy Crossi 39.78 255 P **P** **16 18 16.9 -0.3**
comp=Z,20nm,0.8s
FITZ Fitzroy Crossi 39.78 255 P **P** **16 18 16.8 -0.3**
FITZ IAmb IAmb 16 18 18.0
comp=Z,14nm,0.6s
FITZ Fitzroy Crossi 39.78 255 P **P** **16 18 17.0 -0.1**
comp=Z,57nm,0.6s,baz=80,slow=7.2,SNR=151
comp=Z,57nm,0.6s
FORT Forrest 40.48 235 P **P** **16 18 23.7 +1.0**
comp=Z,41nm,1.1s
FORT Forrest 40.48 235 P **P** **16 18 22.8 0.0**
FORT IAmb IAmb 16 18 24.2
comp=Z,32nm,0.9s
SOEI Soe 41.15 267 P **P** **16 18 28.0 -0.6**
SOEI IAmb IAmb 16 18 48.7
comp=Z,35nm,1.0s
SOEI Soe 41.15 267 P **P** **16 18 28.9 +0.3**
comp=Z,36nm,1.1s
BATI Baumata 41.70 267 P **P** **16 18 33.8 +0.7**
comp=Z,71nm,0.6s,baz=161,slow=2.1,SNR=25
comp=Z,71nm,0.6s
BATI Baumata 41.70 267 P **P** **16 18 32.6 -0.4**
MMRI Maumere 43.25 269 P **P** **16 18 43.7 -1.9**
comp=Z,93nm,1.0s
KMSI Cibinong 43.36 282 P **P** **16 18 46.9 +0.4**
PPT Papeete 43.43 104 LR LR 16 33 46.3
comp=Z,128nm,21.7s,baz=281,slow=32
PPT2 Papeete2 43.43 104 *e*P P 16 18 37.7 -9.4
comp=Z,38nm,20.8s
PPT2 *e*S S 16 24 53.5 -14
comp=Z,54nm,21.2s
PPT2 *e*LQ LQ 16 29 07.1
comp=Z,303nm,24.0s
PPT2 *e*LR LR 16 30 53.2
comp=Z,212nm,32.8s
PPT2 *e*LR LR 16 30 59.4
comp=Z,166nm,23.0s
EDFI Ende, Flores 43.78 269 P **P** **16 18 47.0 -2.9**
comp=Z,32nm,0.9s
LUWI Luwuk 44.10 280 P **P** **16 18 52.1 -0.3**
LUWI Luwuk 44.10 280 P **P** **16 18 52.3 -0.1**
comp=Z,60nm,1.1s
TBI Tubuai 44.12 112 *e*S **S** **16 25 12.0 -5.0**
comp=Z,282nm,25.2s
TBI *e*LQ LQ 16 29 28.8
comp=Z,4μm,30.2s
TBI *e*LR LR 16 31 17.3
comp=Z,2μm,33.2s
APSI Ampana 45.22 279 P **P** **16 19 00.3 -1.0**
comp=Z,45nm,1.0s
BSSI Bau Bau, Buton 45.31 272 P **P** **16 19 00.5 -1.5**
comp=Z,47nm,0.9s
PSAB3 Pilbara Seismi 45.54 250 P **P** **16 19 05.0 +1.3**
comp=Z,102nm,0.9s
PSA00 Pilbara Seismi 45.54 250 P **P** **16 19 04.7 +1.0**
comp=Z,106nm,1.0s
PSA00 Pilbara Seismi 45.54 250 P **P** **16 19 03.9 +0.1**
PSA00 IAmb IAmb 16 19 05.5
comp=Z,31nm,0.8s
MBWA Marble Bar 45.61 251 P **P** **16 19 05.0 +0.7**
comp=Z,63nm,0.9s
MBWA Marble Bar 45.61 251 P **P** **16 19 04.6 +0.3**
MBWA Marble Bar 45.61 251 P **P** **16 19 04.9 +0.6**
MBWA PcP **PcP** **16 20 41.0 +0.1**
KMBL Kambalda 45.68 236 P **P** **16 19 05.2 +0.5**
comp=Z,25nm,1.0s
BKSI Bulukumba 45.80 273 P **P** **16 19 05.2 -0.7**
comp=Z,13nm,0.7s
BNSI Bone 45.98 274 P **P** **16 19 07.8 +0.5**
comp=Z,595nmcomp=Z,81nm,0.8s
TOLI2 Tolitoli 46.58 282 P **P** **16 19 10.6 -1.4**
MEEK Meekatharra 47.37 244 P **P** **16 19 19.0 +1.0**
comp=Z,177nm,1.5s
PLAI Plampang 47.61 268 P **P** **16 19 18.4 -1.6**
comp=Z,59nm,1.1s
HMH Humu'ula Sheep 48.41 52 P **P** **16 19 27.7 +1.3**
POHA Pohakuloa 48.46 51 P **P** **16 19 28.1 +1.5**
POHA Pohakuloa 48.46 51 P **P** **16 19 28.3 +1.6**
TWSI Taliwang, Sumb 48.50 268 P **P** **16 19 24.3 -2.5**
comp=Z,36nm,0.8s
KNHH Kane Nui o Ham 48.53 52 P **P** **16 19 27.6 +0.6**
JOKA Jonika Flow 48.68 52 P **P** **16 19 28.8 +0.7**
KLBR Kellerberrin 49.14 237 P **P** **16 19 28.1 -3.4**
NWAO Narrogin (SRO) 49.90 236 P **P** **16 19 38.0 +0.8**
comp=Z,60nm,1.2s
NWAO Narrogin (SRO) 49.90 236 P **P** **16 19 37.5 +0.3**
NWAO Narrogin (SRO) 49.90 236 P **P** **16 19 37.6 +0.4**
comp=Z,44nm,1.0s,baz=83,slow=6.8,SNR=8.3
NWAO LR LR 16 39 44.4
comp=Z,95nm,18.9s,baz=288,slow=35
comp=Z,44nm,1.0s
NWAO Narrogin (SRO) 49.90 236 P **P** **16 19 37.5 +0.3**
JHJ Hachijo jima 2 50.34 331 LR LR 16 42 16.8
comp=Z,18nm,18.4s,baz=127,slow=37
JAGI Jajag, Banyuwa 51.21 268 P **P** **16 19 46.2 -1.2**
comp=Z,65nm,0.9s
JOW Kunigami 52.40 316 P **P** **16 19 56.0 +0.1**
INU Inuyama 53.48 330 P **P** **16 20 03.9 +0.1**
JGF Kuroka 53.52 331 IAmb IAmb 16 20 04.7
comp=Z,13nm,0.7s
MJAR Matsushiro Arr 53.89 332 P **P** **16 20 05.8 -0.9**
MJAR Matsushiro Arr 53.89 332 P **P** **16 20 05.8 -0.9**
comp=Z,11nm,0.8s,baz=167,slow=8.4,SNR=31
MJAR pP **pP** **16 20 33.1 -0.2**
comp=Z,3.6nm,0.8s,baz=161,slow=7.7,SNR=3.2
MJAR PcP **PcP** **16 21 11.5 +0.6**
comp=Z,2.7nm,0.7s,baz=158,slow=3.8,SNR=5.0
MJAR LR LR 16 40 40.2
comp=Z,34nm,21.8s,baz=136,slow=33
comp=Z,11nm,0.8s
MAJO Matsushiro 53.89 332 P **P** **16 20 05.3 -1.4**
MAJO IAmb IAmb 16 20 07.1
comp=Z,20nm,0.8s
MAJO Matsushiro 53.89 332 *c i*P **P** **16 20 06.0 -0.7**
MAJO pmax pmax
comp=Z,24nm,1.0s
MAJO Matsushiro 53.89 332 P **P** **16 20 06.2 -0.5**
MJB9 Matsu-Tunnel 53.90 332 IAmb IAmb 16 20 08.0
comp=Z,20nm,0.9s
PCJI Pacitan 54.17 268 P **P** **16 20 08.1 -1.0**
comp=Z,90nm,0.9s
UGM Wanagama 54.85 268 P **P** **16 20 14.0 -0.1**
JNU Nakatsue 55.06 324 LR LR 16 43 13.2
comp=Z,42nm,18.9s,baz=44,slow=35
SBUM Sibu 55.19 281 P **P** **16 20 16.4 -0.1**
YHNB Yeheng 56.07 310 P **P** **16 20 22.5 -0.2**
JTM Tenmabayashi 56.28 337 P **P** **16 20 23.2 -0.5**
KPJI Karang Pucung 56.49 268 P **P** **16 20 26.0 +0.2**
comp=Z,37nm,0.8s
ERM Erimo 56.60 340 P **P** **16 20 26.9 +0.9**

ERM Erimo 56.60 340 P **P** **16 20 26.9 +0.9**
ERM pmax pmax
comp=Z,129nm,1.5s
KSM Kuching 56.80 279 IAmb IAmb 16 20 28.1
comp=Z,11nm,0.7s
LEM Lembang 57.85 269 P **P** **16 20 35.5 -0.1**
comp=Z,48nm,0.7s,baz=99,slow=7.8,SNR=12
comp=Z,48nm,0.7s
LEM Lembang 57.85 269 P **P** **16 20 35.3 -0.3**
comp=Z,76nm,1.0s
DRV Dumont d'Urvil 58.54 192 P **P** **16 20 39.8 +0.6**
DRV pP **pP** **16 21 06.1 +0.8**
JKA Kamikawa-asahi 58.65 340 P **P** **16 20 40.8 +0.5**
ASAJ Asahikawa 58.66 340 P **P** **16 20 40.8 +0.4**
ASAJ pmax pmax
comp=Z,34nm,0.8s
KSRS Korea Array 59.85 325 P **P** **16 20 49.0 +0.2**
comp=Z,4.7nm,0.8s,baz=134,slow=7.2,SNR=18
KSRS pP **pP** **16 21 15.9 +0.2**
comp=Z,1.8nm,0.7s,baz=131,slow=8.7,SNR=3.5
KSRS LR LR 16 46 38.5
comp=Z,8μm,18.6s,baz=150,slow=36
comp=Z,4.7nm,0.8s
KSAR Wonju Array Be 59.86 325 P **P** **16 20 48.7 -0.1**
KSAR Wonju Array Be 59.86 325 P **P** **16 20 48.7 -0.1**
YSS Yuzhno-Sakhali 61.14 342 P **P** **16 20 57.9 +0.6**
YSS Yuzhno-Sakhali 61.14 342 *e*P **P** **16 20 57.4 +0.1**
YSS *e*S **S** **16 29 05.0 -2.8**
YSS pmax pmax
comp=Z,30nm,0.9s
MDSI Maura Dua 61.60 271 P **P** **16 20 59.4 -1.7**
comp=Z,19nm,1.4s
DSRI Dabo 61.96 275 P **P** **16 21 03.2 -0.3**
comp=Z,20nm,0.9s
NJ2 Nanjing 62.07 315 ⇑P **P** **16 21 04.2 +0.3**
NJ2 pP **pP** **16 21 30.8 0.0**
NJ2 pmax pmax
comp=Z,27nm,0.7s
USRK Ussuriysk Ar. 62.86 333 P **P** **16 21 09.9 +1.1**
comp=Z,14nm,0.7s,baz=132,slow=6.2,SNR=33
USRK pP **pP** **16 21 37.5 +1.5**
comp=Z,5.4nm,0.9s,baz=148,slow=4.3,SNR=2.0
comp=Z,14nm,0.7s
MYKOM Kota Tinggi 63.15 278 P **P** **16 21 11.4 -0.1**
MYKOM IAmb IAmb 16 21 12.8
comp=Z,22nm,1.0s
SHEM Shemya Is, Ala 63.62 5 LR LR 16 42 47.5
comp=Z,48nm,21.0s,baz=283,slow=30
PET Petropavlovsk 63.86 355 *c e*P **P** **16 21 16.0 +0.7**
PET pmax pmax
comp=Z,45nm,1.5s
KIWB Kanaga Island 64.03 11 P **P** **16 21 17.4 +1.0**
PEA0B Petropavlovsk- 64.03 354 P **P** **16 21 17.1 +0.7**
PEA0B Petropavlovsk- 64.03 354 P **P** **16 21 17.1 +0.7**
PEA0B pmax pmax
comp=Z,115nm,1.7s
PETK Petropavlovsk- 64.03 354 P **P** **16 21 15.8 -0.6**
PETK Petropavlovsk- 64.03 354 P **P** **16 21 16.3 -0.1**
comp=Z,9.8nm,0.8s,baz=156,slow=4.3,SNR=18
PETK LR LR 16 43 13.0
comp=Z,45nm,21.6s,baz=168,slow=30
comp=Z,9.8nm,0.8s
MDJ Mudanjiang 64.27 332 IAmb IAmb 16 21 19.8
comp=Z,26nm,0.9s
MDJ Mudanjiang 64.27 332 P **P** **16 21 18.9 +0.7**
MDJ pmax pmax
comp=Z,36nm,1.0s
MDJ Mudanjiang 64.27 332 P **P** **16 21 18.8 +0.6**
DL2 Dalian 64.47 323 P **P** **16 21 18.3 -1.3**
DL2 pmax pmax
comp=Z,58nm,1.5s
CN2 Changchun 65.69 329 P **P** **16 21 27.7 +0.4**
CN2 sP sP 16 22 03.0 -3.8
CN2 S **S** **16 30 04.8 +0.3**
CN2 pmax pmax
comp=Z,30nm,0.8s
PPI Padang Panjang 66.05 274 P **P** **16 21 30.3 0.0**
comp=Z,42nm,0.9s
BNX BinXian 66.14 331 ⇑P **P** **16 21 30.2 0.0**
BNX pmax pmax
comp=Z,28nm,0.8s
IPM Ipoh 66.51 280 P **P** **16 21 32.9 -0.3**
CASY Casey 66.75 201 P **P** **16 21 34.2 +0.5**
CASY IAmb IAmb 16 21 35.4
comp=Z,37nm,1.1s
CASY Casey 66.75 201 P **P** **16 21 34.3 +0.5**
CASY PcP **PcP** **16 22 02.8 +0.9**
VNDA Vanda 66.77 181 P **P** **16 21 34.1 +0.3**
VNDA IAmb IAmb 16 22 31.4
comp=Z,15nm,0.6s
VNDA Vanda 66.77 181 P **P** **16 21 34.0 +0.3**
comp=Z,4.3nm,1.0s,baz=356,slow=7.8,SNR=18
comp=Z,4.3nm,1.0s
VNDA Vanda 66.77 181 P **P** **16 21 34.1 +0.3**
VNDA pmax pmax
comp=Z,15nm,0.6s
VNDA Vanda 66.77 181 P **P** **16 21 34.5 +0.8**
VNDA pP **pP** **16 21 60.0 -1.0**
VNDA PcP **PcP** **16 22 02.4 +0.6**
NIKH Nikolski High 67.02 16 P **P** **16 21 35.2 -0.4**
baz=207
SBA Scott Base 67.07 180 P **P** **16 21 37.0 +1.4**
SBA IAmb IAmb 16 22 05.0
comp=Z,24nm,1.0s
SBA Scott Base 67.07 180 P **P** **16 21 37.0 +1.4**
SBA pmax pmax
comp=Z,24nm,1.0s
SBA Scott Base 67.07 180 P **P** **16 21 37.2 +1.6**
SBA pP **PcP** **16 22 03.1 +0.1**
SBA sP **sP** **16 22 12.7 -2.2**
KULM Kulim 67.07 280 P **P** **16 21 36.1 -0.7**
MNSI Mandailing Nat 67.11 275 P **P** **16 21 36.1 -0.9**
comp=Z,3μmcomp=Z,46nm,0.8s
LYN LuoYang 67.91 314 P **P** **16 21 41.8 +0.2**
LYN pmax pmax
comp=Z,65nm,0.7s
HNS HongShan 67.91 318 ⇑P **P** **16 21 42.0 +0.4**
HNS pmax pmax
comp=Z,22nm,0.9s
ENH Enshi 67.99 309 P **P** **16 21 41.1 -1.2**
ENH IAmb IAmb 16 21 42.8
comp=Z,27nm,0.9s
RPSI Rantau Prapat 68.15 277 P **P** **16 21 42.6 -1.0**
RPSI IAmb IAmb 16 21 43.8
comp=Z,20nm,1.0s
PSI Prapat 68.17 277 P **P** **16 21 42.6 -1.3**
PSI pmax pmax
comp=Z,20nm,1.0s
UNV Unalaska Valle 68.45 17 P **P** **16 21 45.0 +0.4**
baz=209
BJT Baijiatuan 68.48 321 P **P** **16 21 45.3 +0.2**
BJT Baijiatuan 68.48 321 P **P** **16 21 45.3 +0.2**
BJT pmax pmax
comp=Z,10.0nm,0.7s
BJI Beijing 68.49 321 P **P** **16 21 45.2 +0.1**
BJI pmax pmax
comp=Z,7.0nm,0.9s
CCD Concordia, Ant 68.53 191 P **P** **16 21 45.6 +0.2**
CCD PcP **PcP** **16 22 09.2 -0.6**
GYA Guiyang 68.55 304 ⇓P **P** **16 21 46.4 +0.4**
GYA pmax pmax
comp=Z,19nm,1.0s
GSI Gunungsitoli 69.17 276 P **P** **16 21 49.6 -0.4**
GSI Gunungsitoli 69.17 276 P **P** **16 21 48.8 -1.2**
comp=Z,72nm,0.8s
KCSI Kotacane, Aceh 69.45 278 P **P** **16 21 50.2 -1.5**
comp=Z,13nm,1.0s
HEH HeiHe 69.51 335 *e*P **P** **16 21 51.1 -0.1**
HEH pmax pmax
comp=Z,22nm,0.9s
XAN Xi'an 70.19 312 P **P** **16 21 55.9 0.0**
XAN pP pP 16 22 22.9 -0.6
XAN pmax pmax
comp=Z,52nm,0.8s
SPIA Saint Paul Isl 70.47 13 P **P** **16 21 56.4 -0.5**
baz=205
XLT XiLinHaoTe 70.85 324 *e*P **P** **16 22 00.4 +0.7**
XLT pmax pmax
comp=Z,36nm,0.8s
XLT pmax pmax
comp=Z,81nm,3.5s
KMI Kunming 71.27 301 ⇑P **P** **16 22 03.8 +1.0**
KMI pP pP 16 22 31.1 +0.4
KMI pmax pmax
comp=Z,17nm,1.5s

S12K Black Hills 71.38 18 P **P** **16 22 02.8 +0.3**
baz=213
CHNA Chernabura Isl 71.45 20 P **P** **16 22 03.3 +0.4**
baz=216
SDPT Sand Point 71.58 19 P **P** **16 22 04.0 +0.3**
baz=215
HHC Hu-ho-hao-te 71.85 319 *e*P **P** **16 22 09.6 +3.8**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,78nm,5.5s
ZEA Zeya 72.23 337 *e*P **P** **16 22 08.8 +1.2**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.9s
HIA Hailar 72.31 330 P **P** **16 22 08.2 0.0**
HIA Hailar 72.31 330 *c i*P **P** **16 22 08.6 +0.4**
HIA pmax pmax
comp=Z,18nm,1.1s
CM31 Chiang Mai Arr 72.32 293 P **P** **16 22 09.4 +0.5**
CM31 IAmb IAmb 16 22 10.8
comp=Z,21nm,0.8s
CMAR Chiang Mai Arr 72.32 293 P **P** **16 22 08.7 -0.2**
CMAR Chiang Mai Arr 72.32 293 P **P** **16 22 09.6 +0.6**
comp=Z,13nm,0.9s,baz=119,slow=4.5,SNR=65
CMAR pP **pP** **16 22 36.2 -0.8**
comp=Z,4.4nm,0.8s,baz=123,slow=4.6,SNR=3.3
comp=Z,13nm,0.9s
CMAR Chiang Mai Arr 72.32 293 *i*P **P** **16 22 09.8 +0.9**
CMAR pmax pmax
comp=Z,15nm,0.9s
CHTO Chiang Mai 72.43 294 P **P** **16 22 09.6 +0.1**
CHTO IAmb IAmb 16 22 11.1
comp=Z,33nm,1.4s
CHTO Chiang Mai 72.43 294 P **P** **16 22 09.6 +0.1**
CHTO pmax pmax
comp=Z,33nm,1.4s
CHTO Chiang Mai 72.43 294 P **P** **16 22 09.8 +0.3**
HILR Hailar Array B 72.50 330 P **P** **16 22 09.7 +0.3**
comp=Z,8.1nm,0.6s,baz=133,slow=7.3,SNR=16
comp=Z,8.1nm,0.6s
PZH PanZhiHua 72.62 302 P **P** **16 22 12.7 +2.0**
S14K Fog Glacier 72.65 19 P **P** **16 22 10.3 +0.1**
baz=216
CD2 Chengdu 72.71 307 *e*P **P** **16 22 12.0 +0.9**
BTO Baotou 72.71 319 *e*P **P** **16 22 13.1 +2.2**
BTO pP **pP** **16 22 38.1 -0.7**
BTO sP **sP** **16 22 48.8 -2.0**
BTO pmax pmax
comp=Z,31nm,1.2s
BTO pmax pmax
comp=Z,290nm,5.5s
SEY Seymchan 74.25 354 *e*P **P** **16 22 17.6 -1.7**
SEY pmax pmax
comp=Z,26nm,1.5s
R16K Pilot Point 74.33 19 P **P** **16 22 18.7 -1.1**
baz=217
O14K Tigyukauivet M 74.59 17 P **P** **16 22 20.3 -1.0**
baz=213
SII Sitkinak Islan 74.71 22 P **P** **16 22 21.8 -0.3**
baz=221
TNCH TengChong 74.82 300 P **P** **16 22 24.2 +0.6**
TNCH pmax pmax
comp=Z,26nm,0.8s
LZDM Lanzhou Array 74.88 312 P **P** **16 22 24.9 +0.9**
comp=Z,2.2nm,0.3s,baz=101,slow=3.2,SNR=5.2
comp=Z,2.2nm,0.3s
O15K Ungalikthiuk R 74.94 17 P **P** **16 22 22.6 -0.8**
baz=215
M13K Dall Lake 75.01 15 P **P** **16 22 23.3 -0.4**
baz=211
N14K Kuskokwak Cree 75.03 16 P **P** **16 22 22.4 -1.4**
baz=213
P16K Nushagak River 75.37 18 P **P** **16 22 23.7 -2.1**
baz=216
Q17K Contact Creek 75.44 20 P **P** **16 22 25.6 -0.7**
baz=219
Q16K King Salmon 75.51 19 P **P** **16 22 25.8 -0.8**
baz=218
OHAK Old Harbor 75.53 21 P **P** **16 22 26.6 -0.2**
baz=221
M14K Bethel 75.66 16 IAmb IAmb 16 22 29.3
comp=Z,64nm,1.3s
M14K Bethel 75.66 16 P **P** **16 22 27.3 -0.1**
baz=212
N15K Kwethluk River 75.68 17 P **P** **16 22 27.8 +0.2**
baz=214
O16K Kokwok River B 75.80 18 P **P** **16 22 28.7 +0.5**
baz=216
M15K Kasigluk River 75.95 16 P **P** **16 22 29.0 -0.1**
baz=214
L14K Kuka Creek 75.98 15 P **P** **16 22 30.3 +1.1**
L14K IAmb IAmb 16 25 19.1
comp=Z,48nm,1.6s
L14K Kuka Creek 75.98 15 P **P** **16 22 29.0 -0.2**
baz=212
K13K Kusilvak Mount 76.01 14 P **P** **16 22 29.2 -0.2**
baz=210
Q18K Katmai Hardscr 76.03 20 P **P** **16 22 28.5 -1.2**
baz=219
KDAK Kodiak Island 76.20 21 LR LR 16 50 04.3
comp=Z,39nm,19.5s,baz=221,slow=31
KDAK Kodiak Island 76.20 21 P **P** **16 22 30.2 -0.4**
baz=222
GAMB Gambell 76.25 10 P **P** **16 22 31.4 +0.7**
baz=202
N16K Nishlik Lake 76.31 17 P **P** **16 22 31.3 +0.1**
baz=216,SNR=5.1
P18K Big Mountain, 76.53 19 P **P** **16 22 32.4 -0.1**
baz=219
L15K Ungalak Mounta 76.57 15 P **P** **16 22 32.2 -0.3**
baz=213
M16K Timber Creek 76.70 17 P **P** **16 22 33.5 +0.1**
baz=215
N17K Nushagak Hills 76.82 18 P **P** **16 22 34.0 0.0**
baz=217
Q20K Shuyak Island 76.89 21 P **P** **16 22 35.4 +0.9**
baz=222
O18K Koktuh Hills 76.90 19 P **P** **16 22 35.2 +0.7**
baz=219
J14K Nanvaranak Lak 76.97 14 P **P** **16 22 36.0 +1.2**
baz=211
K15K Wolf Creek Mou 77.08 15 P **P** **16 22 36.7 +1.3**
baz=213,SNR=5.9
L16K Owhat River 77.13 16 IAmb IAmb 16 22 37.8
comp=Z,36nm,1.4s
L16K Owhat River 77.13 16 P **P** **16 22 36.2 +0.5**
baz=215
N18K Kilae Creek 77.33 18 P **P** **16 22 37.6 +0.7**
N18K IAmb IAmb 16 25 23.6
comp=Z,52nm,1.7s
N18K Kilae Creek 77.33 18 P **P** **16 22 36.8 -0.1**
baz=218
P19K Oil Pt 77.39 20 P **P** **16 22 37.1 -0.1**
baz=221
O19K Port Alsworth 77.44 19 P **P** **16 22 38.6 +1.1**
baz=220
M17K Holitna River 77.44 17 IAmb IAmb 16 22 41.6
comp=Z,26nm,0.9s
M17K Holitna River 77.44 17 P **P** **16 22 38.9 +1.4**
baz=217
ILSW Iliamna Southw 77.67 20 P **P** **16 22 38.5 -0.5**
L17K Donlin 77.80 16 P **P** **16 22 41.1 +1.7**
baz=216
N19K Bonanza Creek 77.87 19 P **P** **16 22 40.2 +0.2**
baz=220
HOM Homer 77.93 20 P **P** **16 22 40.9 +0.7**
baz=222
YAK Yakutsk 77.94 343 P **P** **16 22 40.1 -0.1**
YAK Yakutsk 77.94 343 LR LR 16 52 22.9
comp=Z,28nm,21.3s,baz=226,slow=32
YAK Yakutsk 77.94 343 *c i*P **P** **16 22 40.1 -0.1**
YAK *e**PP **pP** **16 23 07.8 -0.4**
YAK *e* 16 25 38.8
YAK *e*S **S** **16 32 25.4 +1.3**
YAK *e**SS **sS** **16 33 18.8 +6.5**
YAK *e*SS **SS** **16 37 23.2 -4.5**
YAK pmax pmax
comp=Z,53nm,0.8s
YAK pmax pmax
comp=N,12nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax

comp=Z,366nm,4.1s
YAK pmax pmax
comp=N,351nm,3.5s
YAK pmax pmax
comp=E,445nm,3.6s
YAK smax smax
comp=N,232nm,3.3s
YAK smax smax
comp=E,275nm,5.2s
YAK Yakutsk 77.94 343 P P 16 22 40.1 -0.1
M18K Stony River 77.99 18 P P 16 22 41.7 +1.2
baz=218
J16K Anvik River 78.14 15 IAmb IAmb 16 22 43.9
comp=Z,39nm,0.9s
J16K Anvik River 78.14 15 P P 16 22 42.4 +1.1
baz=213
ANM Nome 78.16 12 P P 16 22 41.5 +0.1
baz=209
BRLK Bradley Lake 78.27 21 P P 16 22 41.8 -0.3
K17K Iditarod 78.27 16 P P 16 22 42.8 +0.7
baz=216
ULN Ulaanbaatar 78.28 324 P P 16 22 43.7 +1.0
ULN IAmb IAmb 16 22 44.3
comp=Z,29nm,0.8s
ULN Ulaanbaatar 78.28 324 *ce*P **P 16 22 43.3 +0.6**
ULN pmax pmax
comp=Z,32nm,0.8s
ULN Ulaanbaatar 78.28 324 P P 16 22 43.4 +0.7
BRSE Bradley Lake S 78.30 21 P P 16 22 43.5 +1.2
baz=223
L18K Granite Mounta 78.31 17 IAmb IAmb 16 22 44.9
comp=Z,50nm,1.0s
L18K Granite Mounta 78.31 17 P P 16 22 43.7 +1.4
baz=217
TNA Tin City 78.55 11 P P 16 22 44.7 +1.2
baz=206
BILL Bilibino 78.61 0 P P 16 22 44.2 +0.4
BILL IAmb IAmb 16 22 45.4
comp=Z,46nm,1.0s
BILL Bilibino 78.61 0 *ce*P **P 16 22 44.0 +0.2**
BILL pmax pmax
comp=Z,52nm,1.0s
BILL Bilibino 78.61 0 P P 16 22 44.3 +0.4
J17K VABM Dome 78.62 15 IAmb IAmb 16 22 46.4
comp=Z,30nm,0.8s
J17K VABM Dome 78.62 15 P P 16 22 45.2 +1.2
baz=215
I17K Unalakleet 78.62 14 P P 16 22 45.4 +1.5
baz=213
SONM Songino Array 78.65 324 P P 16 22 44.8 +0.2
SONM IAmb IAmb 16 22 46.2
comp=Z,27nm,1.2s
SONM Songino Array 78.65 324 P P 16 22 45.0 +0.3
comp=Z,7.7nm,0.5s,baz=145,slow=5.6,SNR=44
comp=Z,7.7nm,0.5s
SONM Songino Array 78.65 324 P P 16 22 45.0 +0.3
IMP Imphal 78.69 298 *eP* **P 16 22 44.3 -1.0**
IMP IAmb IAmb 16 22 46.3
comp=Z,37nm,0.9s
F14K Arctic Creek 78.77 11 P P 16 22 45.1 +0.3
baz=208
G15K Niukluk 78.81 12 P P 16 22 45.5 +0.6
baz=210
KOHI KOHIMA 78.82 299 *eP* **P 16 22 45.4 -0.7**
KOHI IAmb IAmb 16 22 47.5
comp=Z,52nm,1.3s
L19K White Mountain 78.82 18 IAmb IAmb 16 22 47.3
comp=Z,27nm,0.8s
L19K White Mountain 78.82 18 P P 16 22 45.8 +0.7
baz=219
N20K Mount Spurr 78.89 19 P P 16 22 46.1 +0.6
baz=222
H16K Elim 78.90 13 P P 16 22 46.6 +1.1
baz=212
SEW Seward 79.01 21 P P 16 22 46.8 +0.7
baz=224
SLKM Skilak Lake 79.04 20 IAmb IAmb 16 22 47.7
comp=Z,41nm,1.0s
M20K Styx River 79.11 18 P P 16 22 46.9 +0.1
baz=221
GTA Gaotai 79.12 314 P P 16 22 48.8 +1.4
GTA pP pP 16 23 12.8 -2.9
GTA pmax pmax
comp=Z,38nm,1.1s
GTA LR LR
comp=Z,130nm,13.8s
GTA LR LR
comp=Z,150nm,12.7s
GTA LR LR
comp=Z,130nm,11.6s
O22K Cooper Landing 79.19 21 P P 16 22 47.5 +0.4
baz=224
QSPA South Pole Qui 79.23 180 P P 16 22 50.0 +2.5
QSPA IAmb IAmb 16 22 52.3
comp=Z,28nm,0.9s
QSPA South Pole Qui 79.23 180 P P 16 22 50.0 +2.5
comp=Z,27nm,0.9s,baz=8.7,slow=2.0,SNR=62
comp=Z,27nm,0.9s
J18K Innoko River 79.30 16 IAmb IAmb 16 22 49.6
comp=Z,68nm,1.6s
J18K Innoko River 79.30 16 P P 16 22 48.6 +0.9
baz=217
F15K North Star Dit 79.31 12 P P 16 22 48.4 +0.8
baz=209
L20K Farewell, AK 79.34 18 P P 16 22 48.8 +0.9
baz=220
G16K Koyuk River 79.52 13 IAmb IAmb 16 22 51.0
comp=Z,32nm,0.8s
G16K Koyuk River 79.52 13 P P 16 22 49.9 +1.1
baz=212
SUA Susitna One 79.56 20 P P 16 22 49.4 +0.1
baz=223
ITAN ITANAGAR 79.58 300 *eP* **P 16 22 50.8 +0.8**
ITAN IAmb IAmb 16 22 51.7
comp=Z,48nm,0.9s
ZIRO ZIRO 79.59 301 *eP* **P 16 22 50.8 +0.5**
ZIRO IAmb IAmb 16 22 51.6
comp=Z,56nm,1.2s
RC01 Rabbit Creek A 79.62 20 P P 16 22 49.9 +0.4
baz=224
P23K Montague Islan 79.67 22 P P 16 22 50.1 +0.4
baz=226
H17K Granite Mounta 79.69 14 P P 16 22 50.9 +1.2
baz=214
PWL Port Wells 79.94 21 IAmb IAmb 16 22 52.1
comp=Z,32nm,0.7s
PWL Port Wells 79.94 21 P P 16 22 51.6 +0.4
baz=225,SNR=6.2
K20K Telida 79.96 17 P P 16 22 52.1 +0.9
baz=220
M22K Willow 79.97 20 P P 16 22 52.7 +1.4
baz=224
G17K Kiwalik Mounta 79.99 13 P P 16 22 52.6 +1.2
baz=213,SNR=5.1
J19K Poorman 80.02 16 P P 16 22 52.8 +1.2
baz=218
PPLA Purkeypile 80.16 18 P P 16 22 53.3 +0.8
baz=222
PMR Palmer 80.19 20 P P 16 22 52.7 +0.3
baz=225
TEZP TEZPUR 80.21 300 *eP* **P 16 22 52.9 -0.5**
TEZP IAmb IAmb 16 22 54.2
comp=Z,32nm,0.9s
H18K Honhosa River 80.24 14 P P 16 22 53.0 +0.2
H18K Honhosa River 80.24 14 P P 16 22 53.2 +0.5
baz=215
GCSA Galena City Sc 80.29 15 P P 16 22 53.7 +0.8
baz=217
KNK Knik Glacier 80.29 20 P P 16 22 53.6 +0.5
baz=225
RPN Rapa Nui 80.38 116 LR LR 16 53 18.2
comp=Z,30nm,19.7s,baz=192,slow=32
GLI Glacier Island 80.39 21 P P 16 22 53.9 +0.3
baz=227
J20K Nowinta River 80.57 16 P P 16 22 55.3 +0.8
baz=220
SML Sawmill 80.61 20 P P 16 22 55.5 +0.6
baz=225
EYAK Cordova Ski Ar 80.65 22 P P 16 22 55.5 +0.6
baz=228
F17K Baldwin Pennin 80.65 13 P P 16 22 56.1 +1.3
baz=212,SNR=9.5
SHL Shillong 80.69 298 IAmb IAmb 16 22 57.3
comp=Z,31nm,1.0s
KAIM Kayak Island 80.73 23 P P 16 22 56.3 +0.8
baz=229
G18K Tagagawik 80.78 14 IAmb IAmb 16 22 57.3
comp=Z,20nm,0.9s
G18K Tagagawik 80.78 14 P P 16 22 56.3 +0.7
baz=215
M23K Glacier View 80.80 20 P P 16 22 56.6 +0.8
baz=226
CHUM Lake Minchumin 80.87 17 P P 16 22 56.8 +0.8
baz=221
I20K Naaghedeneel 80.96 16 P P 16 22 57.6 +1.1
baz=219
SCM Sheep Creek Mo 80.97 20 IAmb IAmb 16 22 58.4
comp=Z,25nm,0.8s
SCM Sheep Creek Mo 80.97 20 P P 16 22 57.4 +0.6
baz=226
H19K Roundabout Mou 81.02 15 P P 16 22 57.9 +1.1
baz=217
DIV Divide 81.03 21 IAmb IAmb 16 22 58.6
comp=Z,35nm,0.8s
KTH Kantishna Hill 81.04 18 P P 16 22 56.0 -1.1
E17K Hotham Inlet 81.07 12 P P 16 22 58.4 +1.3
baz=212,SNR=20
F18K Selawik 81.14 13 P P 16 22 58.1 +0.7
baz=214,SNR=9.2
TRF Thorofare Moun 81.16 18 P P 16 22 58.6 +0.7
baz=223
KLU Klutina 81.22 21 IAmb IAmb 16 22 59.8
comp=Z,18nm,0.8s
KLU Klutina 81.22 21 P P 16 22 58.8 +0.7
baz=228,SNR=5.2
WAT1 Susitna Watana 81.26 19 P P 16 22 58.9 +0.6
baz=225
BMRM Bremner River 81.35 22 IAmb IAmb 16 23 00.3
comp=Z,28nm,0.9s
BMRM Bremner River 81.35 22 P P 16 22 59.2 +0.4
baz=229,SNR=5.8
WAT6 Susitna Watana 81.35 20 P P 16 22 59.4 +0.5
baz=226,SNR=5.4
D17K Noatak River 81.35 11 P P 16 22 59.6 +1.1
baz=211
H20K Anotleneega Mo 81.40 15 P P 16 22 59.6 +0.7
baz=219
BPAW Bear Paw Mtn. 81.42 18 IAmb IAmb 16 23 00.3
comp=Z,52nm,1.8s
BPAW Bear Paw Mtn. 81.42 18 P P 16 22 59.8 +0.7
baz=223
C16K Lisburne Hills 81.44 10 P P 16 23 00.1 +1.2
baz=208
M24K Tolsona, Glenn 81.55 21 P P 16 23 01.1 +1.3
baz=227,SNR=8.2
RND Reindeer 81.57 19 P P 16 22 59.8 -0.1
RND IAmb IAmb 16 23 02.5
comp=Z,21nm,0.8s
RND Reindeer 81.57 19 P P 16 22 59.8 -0.1
RND pmax pmax
comp=Z,21nm,0.8s
GOMU GeErMu 81.61 309 P P 16 23 01.9 +0.8
GOMU pmax pmax
comp=Z,14nm,1.1s
E18K Tukpahlearik C 81.62 12 IAmb IAmb 16 23 02.2
comp=Z,33nm,0.9s
E18K Tukpahlearik C 81.62 12 P P 16 23 01.1 +1.1
baz=213,SNR=12
ZAK Zakamensk 81.68 325 *eP* **P 16 23 00.3 -0.5**
ZAK pmax pmax
comp=Z,20nm,1.1s
RDOG Red Dog Mine 81.69 11 IAmb IAmb 16 23 02.5
comp=Z,31nm,0.9s
RDOG Red Dog Mine 81.69 11 P P 16 23 01.6 +1.2
baz=211,SNR=12
F19K Shaleruckik Mo 81.76 14 IAmb IAmb 16 23 02.6
comp=Z,35nm,1.0s
F19K Shaleruckik Mo 81.76 14 P P 16 23 01.7 +1.0
baz=216
CRQM Cirque 81.76 23 IAmb IAmb 16 23 02.8
comp=Z,35nm,0.8s
CRQE Cirque 81.77 23 P P 16 23 01.8 +0.7
baz=230,SNR=7.7
N25K Chitina, Valde 81.77 21 P P 16 23 01.9 +0.8
baz=229,SNR=17
MCK McKinley 81.78 19 IAmb IAmb 16 23 03.4
comp=Z,47nm,1.4s
MCK McKinley 81.78 19 P P 16 23 00.7 -0.2
baz=224,SNR=11
DHY Denali Highway 81.82 19 IAmb IAmb 16 23 02.8
comp=Z,48nm,1.7s
DHY Denali Highway 81.82 19 P P 16 23 01.6 +0.3
baz=226,SNR=5.4
MESA MESA 81.85 23 P P 16 23 02.7 +1.1
baz=231
TGL Tana Glacier 81.88 23 IAmb IAmb 16 23 02.8
comp=Z,28nm,0.9s
BWN Browne 81.93 18 P P 16 23 01.9 +0.1
I21K Tanana 81.94 17 P P 16 23 02.5 +0.8
baz=222,SNR=9.4
VRDI Verde Repeater 81.94 22 IAmb IAmb 16 23 03.1
comp=Z,24nm,0.7s
GLB Gilahina Butte 81.95 22 IAmb IAmb 16 23 03.5
comp=Z,35nm,0.7s
ISLE Juniper Island 81.97 23 IAmb IAmb 16 23 03.7
comp=Z,36nm,0.8s
C17K DeLong Mountai 82.01 11 P P 16 23 03.0 +0.9
baz=210
IMAR Indian Mountai 82.07 15 P P 16 23 03.1 +0.6
H21K Melozitna Rive 82.08 16 P P 16 23 03.5 +1.0
baz=221
TLY Talaya 82.09 326 P P 16 23 02.5 -0.3
TLY IAmb IAmb 16 23 03.9
comp=Z,22nm,0.8s
TLY Talaya 82.09 326 *c i*P **P 16 23 02.8 0.0**
TLY pmax pmax
comp=Z,26nm,0.8s
HARP HAARP 82.10 21 P P 16 23 03.5 +0.8
baz=228,SNR=8.3
MLY Manley 82.18 17 P P 16 23 03.2 +0.2
baz=225,SNR=8.4
MCARA McCarthy VSAT 82.20 22 IAmb IAmb 16 23 04.9
comp=Z,25nm,1.0s
MCARA McCarthy VSAT 82.20 22 P P 16 23 03.8 +0.6
baz=230
KMRM Mail Ridge 82.22 47 P P 16 23 04.1 +0.2
KMRM IAmb IAmb 16 23 06.1
comp=Z,25nm,0.9s
GRNC Granite Creek 82.27 23 P P 16 23 03.7 -0.1
GRNC IAmb IAmb 16 23 05.4
comp=Z,20nm,0.8s
NEA2 Nenana 82.36 18 P P 16 23 03.4 -0.6
baz=224,SNR=7.0
PAX Paxson 82.38 20 P P 16 23 04.4 +0.2
baz=228
E19K Redstone River 82.39 13 P P 16 23 05.4 +1.3
baz=216,SNR=28
F20K Avaraart Lake 82.41 14 P P 16 23 05.1 +1.0
F20K Avaraart Lake 82.41 14 P P 16 23 05.2 +1.1
baz=218,SNR=10
PINM Pinnacle 82.47 24 P P 16 23 05.2 +0.5
baz=233
BARN Barnard Glacie 82.51 23 IAmb IAmb 16 23 07.0
comp=Z,36nm,0.9s
C18K Utukok River 82.53 12 IAmb IAmb 16 23 06.7
comp=Z,47nm,1.2s
C18K Utukok River 82.53 12 P P 16 23 05.7 +0.8
baz=212,SNR=5.9
G21K Allakaket 82.55 15 P P 16 23 05.6 +0.7
baz=220
PNL Peninsula 82.56 25 P P 16 23 05.5 +0.4
baz=234
WRH Wood River Hil 82.57 18 IAmb IAmb 16 23 06.8
comp=Z,24nm,0.8s
CTG Chitna Glacier 82.58 23 P P 16 23 05.9 +0.6
baz=232,SNR=15
LOGN Logan Glacier 82.62 23 P P 16 23 06.0 +0.4
LOGN IAmb IAmb 16 23 07.3
comp=Z,33nm,0.9s
H22K Ishlalitna Cre 82.64 16 P P 16 23 06.3 +0.9
baz=222
I23K Minto, Yukon-K 82.67 17 P P 16 23 06.4 +0.9
baz=224,SNR=6.4
CCB Clear Creek Bu 82.78 18 P P 16 23 05.9 -0.2
CCB IAmb IAmb 16 23 07.6
comp=Z,18nm,0.6s
SIT Sitka 82.86 28 P P 16 23 07.2 +0.6
baz=238
O02D Mt. Diablo Mer 82.86 47 IAmb IAmb 16 23 09.9
comp=Z,19nm,0.9s
M26K Nabesna, AK 82.87 21 P P 16 23 07.5 +0.8
baz=230
HDA Harding Lake 82.88 19 P P 16 23 06.7 +0.1
baz=226,SNR=43
O28M Mount Upton 82.90 23 P P 16 23 07.3 +0.1
O28M Mount Upton 82.90 23 P P 16 23 07.9 +0.7
baz=233,SNR=12
COLA College 82.92 18 *c i*P **P 16 23 06.5 -0.3**
COLA pmax pmax
comp=Z,42nm,0.8s
COLA College 82.92 18 P P 16 23 07.2 +0.4
baz=225
COLA College 82.92 18 P P 16 23 06.5 -0.3
COLA pP **pP 16 23 35.2 -0.2**
S31K Pelican 82.94 27 P P 16 23 07.8 +0.8
baz=237
MENT Mentasta 82.96 21 IAmb IAmb 16 23 08.6
comp=Z,20nm,0.6s
B18K Kokolik River 83.03 11 P P 16 23 08.4 +1.1
baz=212
D19K Kuna River 83.04 13 P P 16 23 08.3 +1.0
D19K Kuna River 83.04 13 P P 16 23 08.4 +1.0
baz=215,SNR=19
F21K Alatna River 83.10 15 P P 16 23 08.5 +0.8
baz=220,SNR=12
RIDG Independent Ri 83.10 20 P P 16 23 08.7 +0.9
baz=228
H23K Yukon River 83.11 17 P P 16 23 08.1 +0.3
H23K IAmb IAmb 16 23 09.4
comp=Z,18nm,1.0s
H23K Yukon River 83.11 17 P P 16 23 08.9 +1.1
baz=224
K02D Willamette Mer 83.14 44 IAmb IAmb 16 23 10.8
comp=Z,23nm,1.0s
L26K Log Cabin Wild 83.14 21 P P 16 23 08.9 +0.9
baz=230,SNR=15
IL31 83.15 18 IAmb IAmb 16 23 08.8
comp=Z,21nm,0.9s
ILAR Eielson Array 83.15 18 P P 16 23 07.5 -0.5
comp=Z,15nm,0.6s,baz=233,slow=5.2,SNR=302
ILAR pP **pP 16 23 36.8 +0.2**
comp=Z,2.2nm,0.7s,baz=235,slow=6.9,SNR=2.2
ILAR PKKP **PKKPdf 16 41 27.0 +4.2**
comp=Z,0.4nm,0.5s,baz=2.7,slow=2.3,SNR=9.6
ILAR LR LR 16 58 39.9
comp=Z,22nm,18.0s,baz=306,slow=34
comp=Z,15nm,0.6s
POKR Poker Plat Res 83.22 18 IAmb IAmb 16 23 09.0
comp=Z,20nm,0.8s
POKR Poker Plat Res 83.22 18 P P 16 23 08.1 -0.3
baz=226,SNR=9.9
P29M Windy Craggy 83.22 25 IAmb IAmb 16 23 10.3
comp=Z,26nm,1.1s
P29M Windy Craggy 83.22 25 P P 16 23 09.2 +0.7
baz=235,SNR=7.2
C19K Lookout Ridge 83.24 12 P P 16 23 09.6 +1.2
baz=214
M02C Callahan 83.24 46 P P 16 23 10.2 +1.1
M27K Edge Creek, AK 83.24 22 P P 16 23 09.9 +1.2
baz=231
E20K Nigu River 83.27 13 P P 16 23 09.9 +1.3
baz=217,SNR=32
O29M Mount Kennedy 83.27 24 P P 16 23 09.5 +0.6
baz=234
G22K Bettles 83.38 16 P P 16 23 10.2 +1.1
baz=222
YUK8 Steele Glacier 83.38 23 P P 16 23 10.5 +0.9
baz=233,SNR=14
YUK3 Moose Creek 83.41 23 P P 16 23 10.7 +1.0
baz=233
U33K Whale Pass 83.41 29 P P 16 23 10.4 +1.0
baz=249
J25K Salcha River, 83.52 19 P P 16 23 10.6 +0.6
baz=228
D20K Etivluk River 83.54 13 P P 16 23 11.2 +1.2
baz=217
SCRK Sand Creek 83.55 20 P P 16 23 10.9 +0.7
baz=229,SNR=34
MOY Mondy 83.55 325 *eP* **P 16 23 10.6 +0.1**
MOY pmax pmax
comp=Z,18nm,2.0s
H24K Noodor Dome 83.60 17 P P 16 23 09.6 -0.8
H24K Noodor Dome 83.60 17 P P 16 23 11.0 +0.7
baz=225
O03E Paynes Creek 83.61 47 IAmb IAmb 16 23 13.0
comp=Z,40nm,1.1s
G23K Bananza Creek 83.62 16 P P 16 23 11.3 +0.9
baz=223
F22K John River 83.64 15 P P 16 23 11.5 +1.0
baz=221
L27K Beaver Creek, 83.70 21 IAmb IAmb 16 23 12.9
comp=Z,22nm,0.8s
L27K Beaver Creek, 83.70 21 P P 16 23 12.0 +1.0
baz=231
PLBC Pleasant Camp 83.71 26 P P 16 23 11.5 +0.5
baz=236
BCAR Beaver Creek A 83.72 21 P P 16 23 11.8 +0.7
YUK6 Outpost Mounta 83.73 24 P P 16 23 11.8 +0.4
baz=235
P30M Million Dollar 83.83 25 P P 16 23 12.1 +0.4
baz=236
YUK4 Talbot Arm 83.85 23 P P 16 23 13.3 +1.3
baz=234,SNR=9.5
R32K Eaglecrest 83.88 27 P P 16 23 12.5 +0.6
baz=238
A19K Wainwright 83.88 11 P P 16 23 12.7 +1.1
baz=212
L04D Klamath Falls 83.91 45 IAmb IAmb 16 23 14.7
comp=Z,26nm,1.0s
E21K Killik River 83.92 14 P P 16 23 12.9 +1.0
baz=219
WRAK Wrangell Islan 83.94 29 IAmb IAmb 16 23 13.8
comp=Z,36nm,0.9s
WRAK Wrangell Islan 83.94 29 P P 16 23 12.7 +0.5
baz=240
COLD Coldfoot 83.95 16 P P 16 23 13.2 +1.1
baz=223,SNR=14
HYT Haines Junctio 84.00 24 IAmb IAmb 16 23 14.3
comp=Z,16nm,0.8s
HYT Haines Junctio 84.00 24 P P 16 23 13.4 +0.8
baz=235,SNR=7.6
J26L Joseph Creek 84.03 20 P P 16 23 13.7 +1.0
baz=230,SNR=14
SKAG Skagway 84.15 26 IAmb IAmb 16 23 15.2
comp=Z,26nm,1.2s
SKAG Skagway 84.15 26 P P 16 23 14.8 +1.6
baz=237
BBB Bella Bella 84.16 34 LR LR 16 54 01.7
comp=Z,36nm,18.9s,baz=234,slow=31
E22K Anaktuvuk Pass 84.21 15 P P 16 23 14.4 +1.0
baz=221,SNR=6.6
K27K Chicken 84.23 20 P P 16 23 15.2 +1.7
baz=231
SHBG Sahibganj 84.27 297 *eP* **P 16 23 15.2 +0.7**
SHBG IAmb IAmb 16 23 16.2
comp=Z,48nm,0.7s
C21K Knifeblade Rid 84.30 13 P P 16 23 15.4 +1.6
baz=218,SNR=13
G24K Hadweenzic Riv 84.32 17 P P 16 23 14.7 +0.7
G24K IAmb IAmb 16 23 15.8
comp=Z,17nm,0.7s
G24K Hadweenzic Riv 84.32 17 P P 16 23 14.9 +0.9
baz=226
OZB Mount Ozzard 84.34 38 IAmb IAmb 16 23 16.0
comp=Z,22nm,1.0s
B20K Meade River 84.47 12 P P 16 23 15.5 +1.0
baz=216
H25L Birch Creek 84.50 18 P P 16 23 15.2 +0.4
baz=227
BEKR Beckworth 84.51 48 P P 16 23 16.1 +0.4
BEKR IAmb IAmb 16 23 17.7
comp=Z,28nm,1.3s
N30M Aishikik Lake 84.53 24 P P 16 23 15.7 +0.5
baz=236
O30N Mendenhall 84.55 25 P P 16 23 15.8 +0.5
baz=237,SNR=8.9
M29M Somme Creek 84.56 23 P P 16 23 16.8 +1.4
baz=234,SNR=6.1
D22K Ayikyak River 84.56 14 P P 16 23 16.4 +1.3
baz=221
MPK Martis Peak 84.57 48 IAmb IAmb 16 23 18.5
comp=Z,46nm,1.4s
TPO Tropico Hills 84.60 53 IAmb IAmb 16 23 18.5
comp=Z,45nm,1.4s
I26K Coal Creek Min 84.69 19 P P 16 23 16.8 +1.0
baz=230
B21K Ikpikpuk River 84.70 13 P P 16 23 17.2 +1.4
baz=219
E23K Chandalar 84.71 15 IAmb IAmb 16 23 18.7
comp=Z,32nm,1.6s
E23K Chandalar 84.71 15 P P 16 23 17.0 +1.0
baz=224,SNR=8.3
G25K Bearman Lake 84.76 17 P P 16 23 17.3 +1.2
baz=227

WAKR Walker 84.76 49 IAmb IAmb 16 23 19.6
comp=Z,35nm,1.3s
MDPB Devils Postpil 84.77 50 IAmb IAmb 16 23 19.2
comp=Z,25nm,1.2s
F24K Squaw Lake 84.78 16 P **P** **16 23 18.0 +1.6**
baz=225
PNTR Pine Nut 84.83 49 IAmb IAmb 16 23 19.7
comp=Z,41nm,1.4s
G04A Mulino 84.84 42 IAmb IAmb 16 23 20.2
comp=Z,30nm,0.8s
CBB Campbell River 84.84 37 IAmb IAmb 16 23 19.1
comp=Z,30nm,0.9s
BFSC Mount Baldy Ra 84.87 54 IAmb IAmb 16 23 19.3
comp=Z,22nm,1.2s
P32M Atlin 84.92 26 P **P** **16 23 17.4 +0.2**
baz=239
WHY Whitehorse 84.99 25 P **P** **16 23 17.0 -0.6**
baz=238
E24K Your Creek 85.02 16 P **P** **16 23 18.4 +0.9**
baz=225
J05D Fort Rock, OR 85.02 44 IAmb IAmb 16 23 20.4
comp=Z,23nm,0.9s
N31M Braeburn, Yuko 85.07 24 P **P** **16 23 17.7 -0.1**
N31M IAmb IAmb 16 23 19.5
comp=Z,16nm,0.8s
N31M Braeburn, Yuko 85.07 24 P **P** **16 23 17.8 -0.1**
baz=237,SNR=5.9
K05A Summer Lake 85.07 45 IAmb IAmb 16 23 20.8
comp=Z,26nm,1.0s
L29M L29M 85.08 22 IAmb IAmb 16 23 19.9
comp=Z,17nm,0.9s
L29M L29M 85.08 22 P **P** **16 23 18.4 +0.5**
baz=235,SNR=14
KNGR Kungurtug, Tuv 85.09 323*c iP* **P** **16 23 18.6 +0.3**
MAW Mawson 85.10 202 P **P** **16 23 18.6 +0.7**
comp=Z,21nm,0.8s,baz=112,slow=6.2,SNR=38
comp=Z,21nm,0.8s
D23K Nanushuk River 85.11 14 IAmb IAmb 16 23 20.9
comp=Z,42nm,1.6s
D23K Nanushuk River 85.11 14 P **P** **16 23 19.4 +1.6**
baz=222
CLRS Cowichan Lake 85.12 38 IAmb IAmb 16 23 20.3
comp=Z,19nm,0.9s
TOLK Toolik Lake Re 85.14 15 P **P** **16 23 19.2 +1.1**
baz=224,SNR=5.6
PAHR Pah Rah Range 85.18 48 IAmb IAmb 16 23 21.2
comp=Z,29nm,1.4s
DAWY Dawson 85.18 21 IAmb IAmb 16 23 20.3
comp=Z,19nm,0.8s
DAWY Dawson 85.18 21 P **P** **16 23 18.9 +0.5**
baz=233,SNR=12
T35M Bob Quinn 85.22 29 P **P** **16 23 19.0 +0.3**
baz=242
Q32M Nakina River 85.24 27 P **P** **16 23 18.7 -0.2**
baz=240
S34M Telegraph Cree 85.25 28 P **P** **16 23 18.7 0.0**
baz=241
M30M Minto, Yukon 85.27 23 P **P** **16 23 18.9 0.0**
baz=236,SNR=8.1
I05D Terrebonne, OR 85.31 43 IAmb IAmb 16 23 21.4
comp=Z,15nm,0.9s
CLC China Lake 85.36 52 P **P** **16 23 20.8 +0.8**
CLC IAmb IAmb 16 23 22.1
comp=Z,19nm,1.1s
CLC China Lake 85.36 52 P **P** **16 23 20.8 +0.8**
CLC pmax pmax
comp=Z,19nm,1.1s
I27K Kandik River 85.37 19 P **P** **16 23 20.0 +0.7**
baz=231,SNR=20
WSHM Spangler Hills 85.39 53 IAmb IAmb 16 23 22.3
comp=Z,22nm,1.2s
LHV Little Huntoon 85.39 50 IAmb IAmb 16 23 22.5
comp=Z,26nm,1.3s
PINE Pine Mountain 85.39 44 IAmb IAmb 16 23 22.4
comp=Z,21nm,0.9s
F25K Christian Rive 85.46 17 IAmb IAmb 16 23 22.4
comp=Z,24nm,1.1s
F25K Christian Rive 85.46 17 P **P** **16 23 21.1 +1.5**
baz=227
RYN Ryan 85.48 49 IAmb IAmb 16 23 22.7
comp=Z,28nm,1.4s
B22K Teshekpuk Lake 85.52 13 P **P** **16 23 20.8 +0.9**
baz=220
DSP Deep Springs 85.53 51 IAmb IAmb 16 23 23.1
comp=Z,23nm,1.2s
G26K Porcupine Rive 85.56 18 P **P** **16 23 21.7 +1.6**
baz=229
BORC Borrego Spring 85.59 55 IAmb IAmb 16 23 23.1
comp=Z,18nm,1.0s
NVAR Mina Array Bea 85.59 50 P **P** **16 23 21.4 +0.2**
NVAR Mina Array Bea 85.59 50 P **P** **16 23 22.2 +0.9**
comp=Z,11nm,1.0s,baz=233,slow=7.3,SNR=37
NVAR LR LR 16 58 03.0
comp=Z,25nm,18.1s,baz=266,slow=33
comp=Z,11nm,1.0s
P33M Teslin, Yukon 85.63 26 P **P** **16 23 21.9 +1.2**
baz=240
G05A Wamic 85.63 43 IAmb IAmb 16 23 22.4
comp=Z,22nm,1.1s
BMAR Burnt Mountain 85.65 17 P **P** **16 23 21.9 +1.2**
PFO Pinyon Flats O 85.65 55 P **P** **16 23 22.0 +0.5**
PFO Pinyon Flats O 85.65 55 LR LR 16 54 09.6
comp=Z,39nm,19.6s,baz=254,slow=30
PFO Pinyon Flats O 85.65 55 P **P** **16 23 22.0 +0.5**
PFO pmax pmax
comp=Z,10.0nm,1.2s
NV11 Mina Array Sit 85.70 50 IAmb IAmb 16 23 23.8
comp=Z,26nm,1.2s
D24K Happy Valley 85.70 15 IAmb IAmb 16 23 23.4
comp=Z,16nm,0.7s
D24K Happy Valley 85.70 15 P **P** **16 23 22.1 +1.3**
baz=224
K29M Barlow Dome 85.72 22 P **P** **16 23 21.7 +0.5**
baz=235,SNR=9.6
C23K Itkillik River 85.77 14 P **P** **16 23 22.5 +1.4**
baz=222
H27K Steamboat Moun 85.80 19 IAmb IAmb 16 23 23.7
comp=Z,41nm,1.4s
H27K Steamboat Moun 85.80 19 P **P** **16 23 22.4 +1.1**
baz=231,SNR=21
I28M Miner Creek 85.83 20 IAmb IAmb 16 23 23.3
comp=Z,13nm,0.7s
I28M Miner Creek 85.83 20 P **P** **16 23 21.8 +0.2**
baz=233,SNR=12
E25K Arctic Village 85.84 16 IAmb IAmb 16 23 24.2
comp=Z,23nm,1.1s
E25K Arctic Village 85.84 16 P **P** **16 23 22.9 +1.4**
baz=227,SNR=16
GSC Goldstone, Bar 85.84 53 IAmb IAmb 16 23 24.5
comp=Z,22nm,1.5s
D05A Emumclaw 85.86 41 IAmb IAmb 16 23 25.9
comp=Z,33nm,1.1s
TIXI Tiksi 85.89 349 P **P** **16 23 21.2 -0.5**
TIXI IAmb IAmb 16 23 22.7
comp=Z,35nm,1.4s
TIXI Tiksi 85.89 349⇑ *iP* **P** **16 23 21.3 -0.3**
TIXI pmax pmax
comp=Z,24nm,1.1s
F26K Sheenjek River 85.95 17 IAmb IAmb 16 23 24.9
comp=Z,54nm,1.9s
F26K Sheenjek River 85.95 17 P **P** **16 23 23.7 +1.6**
baz=229
M31M Drury Creek, Y 86.01 24 P **P** **16 23 23.7 +1.2**
baz=238
DLBC Dease Lake 86.01 28 LR LR 16 52 43.2
comp=Z,40nm,21.0s,baz=258,slow=29
DLBC Dease Lake 86.01 28 P **P** **16 23 23.5 +0.8**
baz=242
R33M Jennings River 86.04 27 P **P** **16 23 23.9 +1.1**
baz=241
G27K Doyon Strip 86.12 18 IAmb IAmb 16 23 25.3
comp=Z,30nm,1.4s
G27K Doyon Strip 86.12 18 P **P** **16 23 24.2 +1.2**
baz=231
FURC Furnace Creek, 86.12 52 IAmb IAmb 16 23 25.8
comp=Z,34nm,1.4s
BELC Belle Mtn. Jos 86.12 55 IAmb IAmb 16 23 26.0
comp=Z,30nm,1.3s
C24K Franklin Bluff 86.14 14 P **P** **16 23 24.2 +1.3**
baz=224
MAYO Mayo, Yukon 86.18 22 P **P** **16 23 24.1 +0.8**
baz=237
FARO Faro, Yukon 86.44 24 P **P** **16 23 24.9 +0.2**
baz=239
D25K Kavik River 86.44 15 IAmb IAmb 16 23 26.4
comp=Z,16nm,0.8s
D25K Kavik River 86.44 15 P **P** **16 23 25.3 +0.8**
baz=227,SNR=11

BC3 Big Chuckawall 86.47 55 IAmb IAmb 16 23 27.9
comp=Z,38nm,1.8s
WVOR Wild Horse Val 86.56 46 IAmb IAmb 16 23 28.0
comp=Z,21nm,1.2s
J30M Hart River 86.57 21 P **P** **16 23 25.7 +0.4**
baz=236
LTY Liberty 86.73 41 IAmb IAmb 16 23 27.9
comp=Z,16nm,1.2s
F07A Phinny Hill Vi 86.76 42 IAmb IAmb 16 23 28.5
comp=Z,16nm,1.0s
DANC Danby, Needles 86.78 54 IAmb IAmb 16 23 29.2
comp=Z,23nm,1.2s
H29M Whitestone 86.81 20 IAmb IAmb 16 23 58.5
comp=Z,29nm,1.6s
H29M Whitestone 86.81 20 P **P** **16 23 27.1 +0.9**
baz=234
IRM Iron Mountain 86.85 55 IAmb IAmb 16 23 29.7
comp=Z,25nm,1.2s
I30M Mount Dempster 86.91 21 IAmb IAmb 16 23 28.5
comp=Z,12nm,0.7s
I30M Mount Dempster 86.91 21 P **P** **16 23 27.4 +0.4**
baz=236
E27K Coleen River 87.01 17 P **P** **16 23 28.4 +1.1**
baz=231
E07A Sunnyside 87.03 42 IAmb IAmb 16 23 29.8
comp=Z,16nm,1.0s
F28M Old Crow 87.17 18 P **P** **16 23 30.3 +2.3**
baz=233,SNR=6.5
HAWA Hanford 87.18 42 IAmb IAmb 16 23 30.6
comp=Z,18nm,1.1s
G08A Pilot Rock 87.22 43 IAmb IAmb 16 23 30.8
comp=Z,18nm,1.1s
C26K Camden Bay 87.23 15 P **P** **16 23 30.1 +1.9**
baz=228,SNR=10.0
BLYC Blythe 87.24 55 IAmb IAmb 16 23 31.6
comp=Z,20nm,1.1s
G29M Pine Creek 87.33 19 IAmb IAmb 16 23 30.9
comp=Z,27nm,1.1s
G29M Pine Creek 87.33 19 P **P** **16 23 29.0 +0.2**
baz=234,SNR=11
WTLY Watson Lake, Y 87.34 27 P **P** **16 23 29.0 -0.1**
baz=243
C27K Jago River 87.35 16 IAmb IAmb 16 23 31.4
comp=Z,21nm,0.9s
C27K Jago River 87.35 16 P **P** **16 23 30.0 +1.1**
baz=229,SNR=11
EPYK Eagle Plains 87.44 20 IAmb IAmb 16 23 31.5
comp=Z,25nm,1.1s
EPYK Eagle Plains 87.44 20 P **P** **16 23 29.5 +0.1**
baz=236,SNR=6.6
MMPY Sheldon Lake, 87.47 24 P **P** **16 23 29.6 0.0**
baz=241
V12A Nelson 87.49 53 IAmb IAmb 16 23 32.7
comp=Z,37nm,1.8s
PRN Pahtoc Range 87.77 51 IAmb IAmb 16 23 34.3
comp=Z,26nm,1.2s
D27M Malcolm River 87.85 17 IAmb IAmb 16 23 34.2
comp=Z,21nm,0.8s
D27M Malcolm River 87.85 17 P **P** **16 23 32.5 +1.2**
baz=232
E28M Babbage River 87.87 17 IAmb IAmb 16 23 33.9
comp=Z,14nm,0.8s
E28M Babbage River 87.87 17 P **P** **16 23 32.2 +0.9**
baz=233,SNR=13
H31M Peel River 87.94 21 P **P** **16 23 31.7 -0.1**
baz=238
G30M tAoh Zraii Nji 87.95 19 IAmb IAmb 16 23 33.2
comp=Z,23nm,1.1s
G30M tAoh Zraii Nji 87.95 19 P **P** **16 23 31.7 -0.1**
baz=236,SNR=6.5
W13A Hualapai Mount 88.09 54 IAmb IAmb 16 23 35.9
comp=Z,21nm,1.3s
214A Organ Pipe Nat 88.20 57 P **P** **16 23 35.1 +1.3**
214A IAmb IAmb 16 23 36.6
comp=Z,21nm,1.1s
BMO Blue Mountains 88.20 44 IAmb IAmb 16 23 35.4
comp=Z,30nm,1.9s
TGTN Hyland Airport 88.21 26 P **P** **16 23 33.3 +0.1**
baz=244
E29M Blow River 88.22 18 IAmb IAmb 16 26 06.7
comp=Z,27nm,1.9s
E29M Blow River 88.22 18 P **P** **16 23 33.5 +0.5**
baz=235
F30M Barrier River 88.44 19 IAmb IAmb 16 25 00.0
comp=Z,30nm,1.6s
F30M Barrier River 88.44 19 P **P** **16 23 34.3 +0.3**
baz=237
ELK Elko 88.51 48 P **P** **16 23 36.2 +0.9**
D28M Stokes Point 88.53 17 P **P** **16 23 34.6 +0.3**
baz=234,SNR=18
G31M Satah River 88.56 20 P **P** **16 23 35.1 +0.6**
baz=238
LPIG La Paz 88.59 65 LR LR 16 56 11.6
comp=Z,26nm,18.4s,baz=231,slow=31
SPR3 Spring Creek 3 88.73 50 IAmb IAmb 16 23 38.6
comp=Z,25nm,1.4s
MFID Camas Ranch 88.81 45 IAmb IAmb 16 23 38.7
comp=Z,42nm,1.9s
F31M Tsiigehtchic 89.01 20 P **P** **16 23 37.4 +0.7**
baz=238
LCMT Little Creek M 89.07 52 P **P** **16 23 38.8 +0.9**
LCMT IAmb IAmb 16 23 40.3
comp=Z,17nm,1.2s
CCUT Cedar City 89.11 52 IAmb IAmb 16 23 40.8
comp=Z,20nm,1.2s
WMQ Urumqi 89.15 315 *eP* **P** **16 23 38.4 +0.4**
WMQ pmax pmax
comp=Z,14nm,0.9s
INK Inuvik 89.53 19 LR LR 17 01 43.1
comp=Z,31nm,18.1s,baz=104,slow=34
U15A North Rim 89.67 53 IAmb IAmb 16 23 43.5
comp=Z,18nm,0.9s
X16A Lo Mia Camp, P 89.89 55 IAmb IAmb 16 23 44.5
comp=Z,9.9nm,0.9s
TUC Tucson 89.95 57 P **P** **16 23 42.3 +0.2**
TUC Tucson 89.95 57 P **P** **16 23 42.3 +0.2**
TUC pmax pmax
comp=Z,8.0nm,1.1s
SALM Salem 90.11 282 *eP* **P** **16 23 43.5 +0.5**
SALM IAmb IAmb 16 23 44.3
comp=Z,16nm,0.6s
DUG Dugway, Tooele 90.17 49 IAmb IAmb 16 23 45.1
comp=Z,29nm,1.8s
KOD Kodaikanal 90.55 280 *eP* **P** **16 23 45.7 +0.2**
BCYI Bear Canyon 90.74 45 IAmb IAmb 16 23 47.8
comp=Z,34nm,2.0s
DGZ Jazzator, Alta 90.91 320*c iP* **P** **16 23 45.9 -0.3**
DGZ pmax pmax
comp=Z,19nm,0.7s
Q16A Castle Valley 91.11 51 IAmb IAmb 16 23 50.2
comp=Z,12nm,1.2s
HMU Henry Mountain 91.22 52 IAmb IAmb 16 26 30.5
comp=Z,5.4nm,0.6s
DUN6 Lazy B Ranch 91.40 57 P **P** **16 23 49.9 +1.1**
W18A Petrified Fore 91.41 55 IAmb IAmb 16 23 50.7
comp=Z,10nm,0.8s
TCUT Toone Canyon 91.42 49 IAmb IAmb 16 23 51.0
comp=Z,11nm,1.0s
LGTI Lohaghat 91.65 300 *eP* **P** **16 23 49.6 -0.3**
LGTI IAmb IAmb 16 23 50.6
comp=Z,24nm,1.1s
BSUT Blindstream Ca 91.77 49 IAmb IAmb 16 23 52.7
comp=Z,9.9nm,1.0s
P18A Preston Nutter 91.96 50 IAmb IAmb 16 23 53.5
comp=Z,27nm,1.8s
ZSN Zaisan 91.99 318 *eP* **P** **16 23 50.5 -0.6**
ZSN Zaisan 91.99 318 *eP* **P** **16 23 50.4 -0.6**
SYO Syowa Base 92.14 197⇑ *eP* **P** **16 23 51.2 -0.1**
SYO Syowa Base 92.14 197⇓ *eP* **PcP** **16 23 52.2 +0.1**
BOZ Bozeman (W) 92.27 44 IAmb IAmb 16 23 54.8
comp=Z,15nm,1.2s
YHL Hebgen Lake 92.41 45 P **P** **16 23 54.4 +1.0**
YHL IAmb IAmb 16 23 56.0
comp=Z,16nm,1.5s
JOSI Joshimath 92.45 300 *eP* **P** **16 23 53.6 -0.2**
JOSI IAmb IAmb 16 23 55.5
comp=Z,47nm,1.4s
LOHW Long Hollow 92.55 46 IAmb IAmb 16 23 56.1
comp=Z,14nm,1.6s
PV19 Morning Glory 92.65 52 IAmb IAmb 16 23 57.4
comp=Z,5.9nm,0.8s
PV23 Carpenter Ridg 92.66 52 IAmb IAmb 16 23 57.2
comp=Z,10.0nm,0.7s
PV20 West Nyswonger 92.67 52 IAmb IAmb 16 25 20.1
comp=Z,24nm,1.6s
PV18 Skein Mesa, Pa 92.70 52 IAmb IAmb 16 23 59.1
comp=Z,9.2nm,1.1s

NRDN NARMADA NAGAR 93.11 292 *eP* **P** **16 23 58.3 +1.5**
NRDN IAmb IAmb 16 23 59.2
comp=Z,9.3nm,0.8s
PDAR Pinedale Array 93.12 47 P **P** **16 23 56.3 -0.4**
PDAR Pinedale Array 93.12 47 P **P** **16 23 57.0 +0.4**
comp=Z,2.7nm,0.9s,baz=252,slow=3.0,SNR=15
PDAR PKKP **PKKPdf** **16 41 03.8 -1.2**
comp=Z,0.3nm,0.7s,baz=129,slow=4.0,SNR=4.4
comp=Z,2.7nm,0.9s
ZALV Zalesovo Beam 93.54 324 P **P** **16 23 56.4 -1.6**
ZALV Zalesovo Beam 93.54 324 P **P** **16 23 57.2 -0.8**
comp=Z,13nm,0.9s,baz=108,slow=4.8,SNR=42
ZALV PKKP **PKKPdf** **16 41 02.6 -1.6**
comp=Z,0.9nm,0.4s,baz=296,slow=3.9,SNR=4.6
comp=Z,13nm,0.9s
MK31 Makanchi Array 93.56 317*c iP* **P** **16 23 58.2 -0.1**
MKAR Makanchi Array 93.56 317 P **P** **16 23 58.0 -0.4**
MKAR Makanchi Array 93.56 317 P **P** **16 23 58.3 -0.1**
comp=Z,26nm,0.8s,baz=95,slow=6.2,SNR=185
MKAR PKKP **PKKPdf** **16 41 03.0 -1.1**
comp=Z,2.4nm,0.6s,baz=270,slow=3.2,SNR=22
comp=Z,26nm,0.8s
A36M Sachs Harbour 93.74 17 P **P** **16 23 59.5 +0.9**
baz=246
MAKZ Makanchi 93.77 317 P **P** **16 23 58.8 -0.5**
MAKZ Makanchi 93.77 317 P **P** **16 23 58.8 -0.5**
MAKZ pmax pmax
comp=Z,27nm,1.0s
ANMO Albuquerque 94.01 55 LR LR 16 56 30.1
comp=Z,23nm,21.7s,baz=1.5,slow=29
ANMO Albuquerque 94.01 55⇓ *iP* **P** **16 24 01.7 +0.8**
ANMO pmax pmax
comp=Z,13nm,3.0s
SMLA Simla 94.58 301 *eP* **P** **16 24 02.6 -0.7**
SMLA IAmb IAmb 16 24 04.4
comp=Z,25nm,1.2s
YKA Yellowknife Ar 94.58 27 P **P** **16 24 01.5 -1.1**
comp=Z,1.6nm,0.6s,baz=260,slow=5.0,SNR=7.2
YKA LR LR 17 01 30.1
comp=Z,25nm,18.9s,baz=284,slow=32
comp=Z,1.6nm,0.6s
SHLS Shalkode 94.84 313 *eP* **P** **16 24 02.3 -2.1**
comp=Z,8.0nm,0.9s
SHLS Shalkode 94.84 313 *eP* **P** **16 24 02.3 -2.1**
SHLS pmax pmax
comp=Z,8.0nm,0.9s
KAD Karad 94.94 287 *eP* **P** **16 24 04.3 -1.1**
UZB Uzynbulak 95.15 313 *eP* **P** **16 24 05.0 -0.9**
comp=Z,4.6nm,0.8s
UZB Uzynbulak 95.15 313 *eP* **P** **16 24 05.0 -0.9**
UZB pmax pmax
comp=Z,5.0nm,0.8s
TXAR Lajitas Array 95.40 61 P **P** **16 24 06.1 -1.2**
TXAR Lajitas Array 95.40 61 P **P** **16 24 07.5 +0.2**
comp=Z,0.5nm,0.6s,baz=226,slow=5.0,SNR=7.2
TXAR PP **PP** **16 27 57.8 -1.7**
comp=Z,3.3nm,1.2s,baz=224,slow=5.2,SNR=10
TXAR PKKP **PKKPdf** **16 41 00.8 +0.5**
comp=Z,0.4nm,0.5s,baz=117,slow=3.0,SNR=5.3
comp=Z,0.5nm,0.6s
DHRM DHARAMSHALA 95.49 302 *eP* **P** **16 24 05.8 -1.9**
DHRM IAmb IAmb 16 24 09.3
comp=Z,15nm,0.9s
TSSA Tissa 95.70 302 *eP* **P** **16 24 08.0 -0.7**
TSSA IAmb IAmb 16 24 10.0
comp=Z,12nm,0.9s
TDK Taldyqorghan 95.90 315 *eP* **P** **16 24 07.9 -1.2**
comp=Z,7.9nm,0.8s
TDK Taldyqorghan 95.90 315 *eP* **P** **16 24 07.9 -1.2**
TDK pmax pmax
comp=Z,8.0nm,0.8s
NRIK Noril'sk 95.99 340 P **P** **16 24 07.5 -1.3**
comp=Z,6.8nm,0.9s,baz=106,slow=4.0,SNR=11
comp=Z,6.8nm,0.9s
NRIK Noril'sk 95.99 340*c iP* **P** **16 24 08.1 -0.8**
NRIK pmax pmax
comp=Z,13nm,1.2s
MDOK Medeo 96.58 313 *eP* **P** **16 24 11.3 -1.1**
MDOK Medeo 96.58 313 *eP* **P** **16 24 11.3 -1.1**
TNSS Tian-Shan 96.64 312 *eP* **P** **16 24 11.7 -1.3**
TNSS Tian-Shan 96.64 312 *eP* **P** **16 24 11.6 -1.3**
KURK Kurchatov 96.65 320 P **P** **16 24 10.9 -1.3**
KURK Kurchatov 96.65 320 P **P** **16 24 11.6 -0.7**
TROLL Troll, Antarti 96.68 185 ⇑P **P** **16 24 12.0 -0.3**
comp=Z,383nm,0.7s
AAA Alma-Ata 96.69 313 *eP* **P** **16 24 11.9 -0.9**
AAA Alma-Ata 96.69 313 *eP* **P** **16 24 11.8 -0.9**
KURBB Kurchatov Arra 96.69 320 P **P** **16 24 11.6 -0.9**
comp=Z,1.1nm,0.5s,baz=97,slow=4.5,SNR=16
KURBB PKKPbc **PKKPbc** **16 40 54.6 -2.5**
comp=Z,1.5nm,0.7s,baz=280,slow=2.9,SNR=11
comp=Z,1.1nm,0.5s
KSH Kashi 96.85 309 P **P** **16 24 15.2 +1.5**
KSH pmax pmax
comp=Z,4.0nm,0.9s
SNAA Sanae 97.41 184 ⇑P **P** **16 24 14.8 -0.7**
comp=Z,58nm,0.7s
SNAA Sanae 97.41 184 IAmb IAmb 16 24 16.8
comp=Z,13nm,1.4s
SNAA Sanae 97.41 184 P **P** **16 24 14.2 -1.2**
comp=Z,2.4nm,0.7s,baz=196,slow=6.6,SNR=9.8
SNAA LR LR 17 06 15.2
comp=Z,66nm,18.4s,baz=18,slow=34
comp=Z,2.4nm,0.7s
SNAA Sanae 97.41 184⇑ *iP* Pdif 16 24 15.7 +0.2
SNAA pmax pmax
comp=Z,10.0nm,1.4s
SGDS Sogindy 98.37 313 *eP* **P** **16 24 19.4 -1.0**
AAK Ala-Archa 98.37 312 LR LR 17 07 57.2
comp=Z,22nm,21.9s,baz=115,slow=35
AAK Ala-Archa 98.37 312 *de*P Pdif 16 24 21.1 +0.6
AAK pmax pmax
comp=Z,4.0nm,0.8s
BRZS Berezniki 100.35 319 *eP* **Pdif** **16 24 28.3 -0.7**
BRZS Berezniki 100.35 319 *eP* **Pdif** **16 24 28.2 -0.7**
DZA Taraz 100.71 312 *eP* **Pdif** **16 24 29.8 -0.9**
DZA Taraz 100.71 312 *eP* **Pdif** **16 24 29.8 -0.9**
IUG Iuzhnay 101.61 311 *eP* **Pdif** **16 24 33.8 -1.1**
IUG Iuzhnay 101.61 311 *eP* **Pdif** **16 24 33.8 -1.1**
CHM Chimkent 101.94 311 *eP* **Pdif** **16 24 35.2 -1.0**
CHM Chimkent 101.94 311 *eP* **Pdif** **16 24 35.2 -1.0**
BVAR Borovoye Array 101.95 322 P **Pdif** **16 24 35.1 -0.8**
comp=Z,2.9nm,0.8s,baz=96,slow=4.5,SNR=13
BVAR PKKPbc **PKKPbc** **16 40 40.9 -1.5**
comp=Z,0.7nm,0.6s,baz=205,slow=2.5,SNR=3.7
BORK Borovoye 101.99 322*c iP* **Pdif** **16 24 34.8 -1.3**
BORK pmax pmax
comp=Z,4.0nm,1.0s
OPO Ambohidratompo 113.06 244 PKiKP **PKiKP** **16 29 20.4 +0.3**
comp=Z,4.8nm,0.8s,baz=19,slow=2.3,SNR=4.5
APA Apatity 115.29 342⇓ *e*PKIKP **PKPdf** **16 29 24.1 +1.4**
APA *e* 16 29 54.0
BELG Belogornoye 115.71 323⇑ *i*PKIKP **PKiKP** **16 29 23.6 -0.3**
ARCES ARCESS Array B 116.16 346 **PKPdf** **16 29 23.8 -0.6**
ARCES ARCESS Array B 116.16 346 PKP **PKPdf** **16 29 23.9 -0.5**
comp=Z,3.8nm,0.5s,baz=43,slow=1.5,SNR=60
ARCES PKKPbc **PKKPbc** **16 39 54.3 -3.1**
comp=Z,3.0nm,0.8s,baz=197,slow=2.8,SNR=7.1
LPAZ La Paz 119.99 116 **PKPdf** **16 29 33.8 -0.2**
LPAZ La Paz 119.99 116 PKP **PKiKP** **16 29 34.4 +0.2**
comp=Z,2.0nm,0.6s,baz=287,slow=1.7,SNR=8.6
GNI Garni 120.74 310 PKP **PKiKP** **16 29 35.0 +0.6**
comp=Z,2.2nm,0.4s,baz=17,slow=13,SNR=3.4
OBN Obninsk 120.75 329 *i*PKIKP **PKiKP** **16 29 34.6 +0.9**
OBN *e* 16 30 09.7
OBN *e* 16 31 03.4
OBN pmax pmax
comp=Z,9.0nm,1.4s
NCK Nalchik 120.77 314⇑ *i*PKIKP **PKiKP** **16 29 36.1 +1.9**
G62A West of Eustis 120.89 43 PKPdf **PKPdf** **16 29 33.6 -0.6**
KBZ Khabaz 121.19 315 PKP **PKPdf** **16 29 33.0 -1.7**
comp=Z,2.1nm,1.0s,baz=110,slow=5.0,SNR=3.8
KIV Kislovodsk 121.28 315 *i* PKIKP **PKPdf** **16 29 33.7 -1.4**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,20nm,22.0s
SHA1 Shidzhatmaz 121.36 315 *di*PKIKP **PKiKP** **16 29 35.7 +0.1**
FINES FINESS Array B 121.64 339 PKPdf **PKPdf** **16 29 34.4 -0.7**
FINES FINESS Array B 121.64 339 PKP **PKPdf** **16 29 33.6 -1.5**
comp=Z,2.9nm,0.6s,baz=46,slow=1.0,SNR=16
FINES FINESS Array B 121.64 339 PKIKP **PKPdf** **16 29 34.4 -0.7**
RAYN Ar Rayn 122.19 291 PKPdf **PKPdf** **16 29 36.9 -0.5**
RAYN Ar Rayn 122.19 291 PKIKP **PKPdf** **16 29 36.9 -0.5**
CPUP Villa Florida 123.95 132 PKP **PKPdf** **16 29 40.1 -0.6**
comp=Z,1.7nm,0.7s,baz=89,slow=2.3,SNR=12

SDV	Santo Domingo	124.14	87	PKPdf	PKPdf	16 29 40.7	-0.9	
MNK	Minsk	125.32	332	*i* PKIKP	PKPdf	16 29 40.5	-1.9	
MNK				*i*		16 30 10.4		
MNK				*i*		16 30 21.5		
MNK				*i*		16 31 31.7		
MNK				*i* PPP	PPP	16 34 13.4		
MNK				*i*		16 36 42.0		
MNK				*i* SS	SS	16 48 36.5	+14	
MNK				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BOSA	Boshof	125.55	223	PKP	PKiKP	16 29 44.5	+0.2	
	comp=Z,11nm,0.7s,baz=152,slow=2.1,SNR=16							
NB2	NORSAR Subarra	126.53	345	PKPdf	PKPdf	16 29 43.9	-0.6	
	comp=Z,7.4nm,1.2s,baz=31,slow=1.9							
NB2	NORSAR Subarra	126.53	345	PKIKP	PKPdf	16 29 44.0	-0.6	
NOA	NORSAR Array B	126.53	345	PKP	PKPdf	16 29 44.3	-0.3	
	comp=Z,1.9nm,0.7s,baz=35,slow=2.0,SNR=9.4							
HFS	Hagfors	126.63	343	PKP	PKPdf	16 29 43.7	-1.0	
	comp=Z,3.4nm,0.8s,baz=92,slow=5.2,SNR=6.7							
KIBK	Kibwezi	126.69	259	PKPdf	PKiKP	16 29 46.6	-0.2	
AKASG	Malin Array Be	126.82	327	PKP	PKPdf	16 29 45.2	-0.2	
	comp=Z,1.7nm,0.6s,baz=55,slow=1.7,SNR=6.6							
AKBB	Malin Array Si	126.82	327⇑	*e*PKIKP	PKPdf	16 29 44.7	-0.7	
AK09	Malin Array Si	126.84	327	PKP	PKPdf	16 29 44.6	-0.8	
AK02	Malin Array Si	126.86	327	PKP	PKPdf	16 29 45.1	-0.3	
AK10	Malin Array Si	126.86	327	PKP	PKPdf	16 29 45.3	-0.1	
AK11	Malin Array Si	126.87	327	PKP	PKPdf	16 29 45.3	-0.1	
AK05	Malin Array Si	126.88	327	PKP	PKPdf	16 29 45.3	-0.2	
AK18	Malin Array Si	126.90	327	PKP	PKPdf	16 29 45.4	-0.1	
LBTB	Lobatse	127.57	227	PKP	PKPdf	16 29 47.8	0.0	
	comp=Z,7.0nm,0.8s,baz=140,slow=4.1,SNR=8.1							
MAKGR	Makgori	127.64	225	*i* P	PKiKP	16 29 48.6	+0.2	
MREMI	Moremi	127.65	230	PKPdf	PKiKP	16 29 47.8	-0.2	
MREMI	Moremi	127.65	230	*i* P	PKiKP	16 29 48.8	+0.3	
BNN	Bunyan	127.72	311	PKPdf	PKiKP	16 29 46.7	-0.9	
LUBAR	Lubar, Ukraine	128.04	327	PKP	PKPdf	16 29 47.7	0.0	
PTLB	Pontes e Lacer	128.18	313	PKPdf	PKiKP	16 29 48.4	-0.6	
LPHEP	Lephephe	128.38	229	PKPdf	PKiKP	16 29 49.8	+0.1	
LPHEP	Lephephe	128.38	229	*i* P	PKiKP	16 29 50.1	+0.1	
AQDB	Aquidauana	128.48	127	PKPdf	PKiKP	16 29 49.4	-0.1	
BROLN	Tlhalogang	128.57	232	*i* P	PKiKP	16 29 50.0	+0.3	
ASF	Jabal al Asfar	128.69	303	PKP	PKiKP	16 29 50.2	-0.1	
	comp=Z,3.8nm,0.8s,baz=317,slow=1.6,SNR=6.1							
BR131	Keskin Array S	129.03	313*c*	*i* PKIKP	PKiKP	16 29 50.8	0.0	
BRTR	Keskin Array B	129.03	313	PKPdf	PKiKP	16 29 49.3	-0.8	
BRTR	Keskin Array B	129.03	313	PKP	PKiKP	16 29 50.6	-0.2	
	comp=Z,2.3nm,0.9s,baz=134,slow=3.6,SNR=12							
BR104	Keskin Array S	129.04	313	PKP	PKPdf	16 29 49.9	-0.2	
BR106	Keskin Array S	129.04	313	PKP	PKPdf	16 29 49.9	-0.3	
BR105	Keskin Array S	129.05	313	PKP	PKiKP	16 29 49.9	-0.3	
SKOMA	Sekoma	129.06	226	*i* P	PKiKP	16 29 51.5	+0.1	
KDWAN	Kaudwane	129.25	228	*i* P	PKiKP	16 29 52.2	+0.5	
KHWEE	KHWEE	129.52	230	PKPdf	PKPdf	16 29 51.9	+0.3	
MMAI	Mount Meron Ar	129.72	304	PKP	PKiKP	16 29 52.3	0.0	
	comp=Z,0.9nm,0.5s,baz=46,slow=4.2,SNR=5.1							
BURAR	Bucovina Array	130.73	326	PKPdf	PKiKP	16 29 53.6	-0.3	
BURAR	Bucovina Array	130.73	326	PKIKP	PKiKP	16 29 53.6	-0.3	
EIL	Elat	130.85	300	PKP	PKPdf	16 29 54.1	+0.4	
	comp=Z,9.4nm,0.8s,baz=343,slow=3.6,SNR=8.5							
LSZ	Lusaka	130.92	239	PKPdf	PKiKP	16 29 55.1	-0.2	
LSZ	Lusaka	130.92	239	PKP	PKPdf	16 29 54.6	+0.2	
	comp=Z,9.1nm,0.8s,baz=119,slow=2.2,SNR=18							
LSZ	Lusaka	130.92	239	PKIKP	PKiKP	16 29 55.1	-0.2	
KGCAE	Kacgae	131.34	226	*i* P	PKiKP	16 29 55.9	-0.1	
STHS	Stebnicka Huta	131.71	330	*e*PKIKP	PKiKP	16 29 56.6	+0.8	
STHS	Stebnicka Huta	131.71	330	*e*PKP	PKiKP	16 29 56.6	+0.8	
LANS	Liptovska Anna	132.75	331	*e*PKIKP	PKiKP	16 29 59.2	+1.3	
LANS	Liptovska Anna	132.75	331	*e*PKP	PKiKP	16 29 59.2	+1.3	
GRTLG	Ghanzi	132.99	227	*i* P	PKiKP	16 30 00.1	+0.8	
CHVC	Chvalec	133.29	334	*e*PKIKP	PKiKP	16 29 59.3	+0.3	
CHVC	Chvalec	133.29	334	*e*PKPDF	PKiKP	16 29 59.3	+0.3	
DPC	Dobruska-Polom	133.35	334	*e*PKIKP	PKiKP	16 29 59.5	+0.4	
DPC	Dobruska-Polom	133.35	334	*e*PKPDF	PKiKP	16 29 59.5	+0.4	
PVCC	Panska Ves	133.97	335	*e*PKIKP	PKiKP	16 30 01.1	+0.8	
PVCC	Panska Ves	133.97	335	*e*PKPDF	PKiKP	16 30 01.1	+0.8	
CLL	Collm	133.99	337	*i* PKPdf	PKPdf	16 29 59.2	+0.2	
	comp=Z,6.0nm,0.8s							
QNGWA	Qangwa	134.16	229	PKPdf	PKPdf	16 29 59.3	-1.1	
QNGWA	Qangwa	134.16	229	*i* P	PKiKP	16 30 01.4	-0.3	
MODS	Modra-Piesok	134.34	331	*e*PKIKP	PKiKP	16 30 02.0	+0.9	
MODS	Modra-Piesok	134.34	331	*e*PKP	PKiKP	16 30 02.0	+0.9	
EKA	Eskdalemuir Ar	134.75	351	PKP	PKPdf	16 29 59.5	-0.7	
	comp=Z,0.6nm,0.5s,baz=2.6,slow=1.8,SNR=5.3							
ZVC	Zvikov	134.95	334	*e*PKPDF	PKiKP	16 30 02.6	+0.3	
RONA	Rosalia, Austr	135.28	331	*e*PKP	PKPdf	16 30 02.1	+0.6	
	comp=Z,2.3nm,0.6s							
CONA	Conrad Observa	135.32	332	*e*PKP	PKPdf	16 30 02.2	+0.6	
	comp=Z,3.3nm,0.6s							
KHC	Kasperske Hory	135.45	334	*e*PKIKP	PKPdf	16 30 02.5	+0.7	
KHC	Kasperske Hory	135.45	334	*e*PKPDF	PKPdf	16 30 02.5	+0.7	
GERES	GERESS Array B	135.61	334	PKPdf	PKiKP	16 30 03.2	-0.5	
GERES	GERESS Array B	135.61	334	PKP	PKPdf	16 30 01.4	-0.8	
	comp=Z,1.4nm,0.6s,baz=38,slow=2.4,SNR=10							
GERES	GERESS Array B	135.61	334	PKIKP	PKiKP	16 30 03.3	-0.5	
TSUM	Tsumeb	136.98	226	PKP	PKPdf	16 30 05.9	+0.3	
	comp=Z,5.7nm,0.8s,baz=143,slow=8.1,SNR=5.7							
KBA	Koelnbreinsper	137.10	333	*e*PKiKP	PKiKP	16 30 07.1	+0.1	
	comp=Z,3.4nm,0.6s							
IDI	Anoyia	137.16	311	PKPdf	PKPdf	16 30 04.9	-0.6	
WATA	Walderalm	137.69	334	*e*PKiKP	PKiKP	16 30 08.0	-0.1	
	comp=Z,4.1nm,0.4s							
MOTA	Moosalm	137.88	335	*e*PKiKP	PKiKP	16 30 07.9	-0.7	
	comp=Z,1.9nm,0.4s							
SQTA	Sankt Quirin	137.93	334	*e*PKiKP	PKiKP	16 30 08.1	-0.6	
	comp=Z,2.0nm,0.3s							
FETA	Feichten	138.29	335	*e*PKP	PKPdf	16 30 06.8	-0.6	
	comp=Z,2.3nm,0.6s							
VSL	Villasalto	144.69	328	PKPdf	PKPbc	16 30 18.0	+0.1	
CEST	Esterri de Car	145.64	340	PKPdf	PKPab	16 30 21.3	0.0	
KEST	Kesra	147.41	323		PKPbc	16 30 26.7	+0.5	
KEST	Kesra	147.41	323	PKPbc	PKPbc	16 30 26.1	-0.1	
	comp=Z,42nm,0.9s,baz=352,slow=0.5,SNR=28							
PBRG	Braganca	148.46	350	*e*PKPbc	PKPbc	16 30 29.1	+0.3	
PGAV	Gavieira, Arco	148.54	352	*e*PKPbc	PKPbc	16 30 29.3	+0.3	
PCAB	Cabril	148.75	351	*e*PKPbc	PKPbc	16 30 29.6	+0.1	
POLO	Lamas de Olo	149.05	351	*e*PKPbc	PKPbc	16 30 30.7	+0.4	
MVO	Moncorvo	149.13	350	*e*PKPbc	PKPbc	16 30 31.1	+0.6	
PVRL	Vila Real	149.13	351	*e*PKPbc	PKiKP	16 30 31.1	-0.6	
PVIS	Viseu	149.71	351	*e*PKPbc	PKPbc	16 30 32.4	+0.4	
ESDC	Sonseca Array	149.89	345	PKPbc	PKPbc	16 30 32.4	0.0	
ESDC	Sonseca Array	149.89	345	PKPbc	PKPbc	16 30 32.1	-0.3	
	comp=Z,7.4nm,1.0s,baz=26,slow=3.8,SNR=4.0							
MTE	Manteigas	149.96	350	*e*PKPbc	PKiKP	16 30 33.3	-0.2	
PCAS	Casmilo, Conde	150.45	352	*e*PKPbc	PKPbc	16 30 33.8	+0.1	
PCBR	Castelo Branco	150.50	350	*e*PKPbc	PKPbc	16 30 34.1	+0.3	
PSARD	Sardoal	150.84	351	*e*PKPbc	PKiKP	16 30 35.0	-0.3	
PMRV	Marv??o	150.88	350	*e*PKPbc	PKiKP	16 30 35.0	-0.3	
PSBE	So Bento	151.02	352	*e*PKPab	PKPab	16 30 43.6	+0.8	
PMTG	Montargil	151.37	351	*e*PKPbc	PKPbc	16 30 35.8	0.0	
PMTG				*e*PKPab	PKPab	16 30 45.3	+1.1	
PESTR	Estremoz	151.46	350	*e*PKPbc	PKPbc	16 30 35.9	-0.2	
PESTR				*e*PKPab	PKPab	16 30 45.5	+0.8	
PARRA	Arraiolos	151.59	350	*e*PKPbc	PKPbc	16 30 36.3	-0.4	
PARRA				*e*PKPab	PKPab	16 30 46.5	+0.7	
EVO	Evora	151.86	350	*e*PKPbc	PKiKP	16 30 37.8	+0.4	
EVO				*e*PKPab	PKPab	16 30 47.6	+1.3	
PBAR	Barrancos	152.03	348	*e*PKPbc	PKiKP	16 30 37.9	+0.2	
PBAR				*e*PKPab	PKPab	16 30 48.1	+1.1	
PBEJ	Beja	152.33	350	*e*PKPab	PKPab	16 30 49.9	+1.6	
PCVE	Castro Verde	152.74	350	*e*PKPab	PKPab	16 30 51.4	+1.3	
PVAQ	Vaqueiros	152.91	349	*e*PKPbc	PKiKP	16 30 40.4	+0.9	
MD01	Midelt array s	156.45	340	PKPdf	PKPdf	16 30 37.8	+0.5	
DBIC	Dimbokro	170.17	246	PKP	PKPdf	16 30 50.4	-0.2	
	comp=Z,5.9nm,0.9s,baz=132,slow=4.1,SNR=4.2							

KRNET ***06*** *16:16:11.8±0.1, 41.24°N×70.52°E, h12km, mb2.8*
ISU ***06*** *16:16:12, 41.32°N×70.34°E, h21km*
SOME ***06*** *16:16:13.8, 41.27°N×70.67°E, h10km*
NNC ***06*** *16:16:16.6±4.1, 41.37°N×70.55°E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=32.2km s-min=11.0km az=20.0*

ISC 06 16:16:11.8±1.1, 41°29N±0.02×70°55E±0.03, h7km±10km, n31, σ2≤21/51, 22C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.50	61⇑	*i*P	Pg	16 16 22.1	+0.6
TRKS				*i*S	Sg	16 16 29.6	+1.5
CHRV	Charvak	0.57	308	S	Sg	16 16 30.9	+0.6
MINT	Mingtut	0.89	159	S	Sn	16 16 47.3	+3.6
IUG	Iuzhnay	0.94	336	P	Pn	16 16 33.1	+1.6
IUG				S	Sn	16 16 47.2	+2.0
ARK	Arkit	1.17	64⇑	*i*P	Pb	16 16 35.0	+0.6
ARK			⇑	*i*S	Sn	16 16 52.1	+1.1
CHMI	Chimion	1.26	144	P	Pg	16 16 37.9	+2.0
CHMI				S	Sg	16 16 57.7	+5.5
FRG	Fergana	1.31	134	S	Sg	16 16 55.2	+1.4
KK31	Karatay Array	1.81	359⇑	Pn	Pg	16 16 47.2	+0.7
	1.3nm,0.2s,baz=172,slow=15,SNR=14						
KK31			⇑	Sn	Sg	16 17 11.3	+1.3
	6.0nm,0.2s,baz=182,slow=29,SNR=17						
BRLS	Boroldav	1.82	343	P	Pn	16 16 44.2	+0.8
	5.8nm,0.2s						
BRLS				S	Sn	16 17 06.4	-0.3
	30nm,0.1s						
BRLS	Boroldav	1.82	343	*e*P	Pn	16 16 44.2	+0.8
	5.8nm,0.2s						
BRLS				*e*S	Sn	16 17 06.4	-0.3
	30nm,0.1s						
ARSB	Arslanbob	1.83	88⇑	*e*P	Pb	16 16 46.2	+0.6
ARSB			⇑	*e*S	Sg	16 17 11.8	+1.2
OHH	Osh	1.86	114⇑	*e*P	Pb	16 16 45.9	-0.1
OHH			⇑	*e*S	Sg	16 17 11.4	0.0
DRK	Karamyk	2.04	152⇑	*e*P	Pb	16 16 49.2	-0.2
DRK			⇑	*e*S	Sg	16 17 16.2	-1.3
MRKS	Merke	2.46	53	Pg	Pg	16 16 58.6	-0.4
	8.7nm,0.3s						
MRKS				Lg	Lg	16 17 31.0	
	50nm,0.3s						
MRKS	Merke	2.46	53	*e*P	Pg	16 16 58.6	-0.4
	8.7nm,0.3s						
MRKS				*e*S	Sg	16 17 31.0	+0.1
	50nm,0.3s						
SALK	Salom-Alik	2.50	98⇑	*e*P	Pb	16 16 56.2	-0.9
SALK			⇑	*e*S	Sb	16 17 28.0	-0.2
BXML	Bakhmal	2.50	231	S	Sg	16 17 35.4	+3.2
SFK	Sufi-Kurgan	2.58	119⇑	*i*P	Pb	16 16 57.0	-1.5
SFK			⇑	*i*S	Sb	16 17 29.9	-0.6
EKS2	Erkin-Say	2.77	59⇑	*i*P	Pb	16 17 00.2	-1.4
EKS2			⇑	*i*S	Sb	16 17 35.6	-0.1
CHGR	Chuyangaron	2.84	203⇓	*i*P	Pb	16 16 59.5	-3.3
CHGR			⇓	*i*S	Sb	16 17 34.0	-3.8
ARLS	Aral	2.88	77⇓	*e*P	Pb	16 17 01.5	-2.1
ARLS			⇓	*i*S	Sb	16 17 38.0	-1.1
UCH	Uchtor	3.11	71⇑	*e*P	Pb	16 17 05.0	-2.6
UCH			⇑	*i*S	Sb	16 17 43.5	-2.3
AAK	Ala-Archa	3.23	64	⇑Pn	Pb	16 17 12.0	+2.4
	1.6nm,0.6s						
AAK				⇑Sn	Sg	16 17 54.5	-1.0
	2.5nm,0.6s						
AGL	Agalyk	3.32	239	S	Sg	16 17 55.3	-3.0
SGDS	Sogindy	3.71	53	Pg	Pb	16 17 21.0	+3.3
	1.3nm,0.2s						
SGDS				Lg	Lg	16 18 09.2	
	4.0nm,0.3s						
KST	Kastek	4.38	65	Pg	Pg	16 17 33.5	-2.2
	1.3nm,0.2s						
KST				Lg	Lg	16 18 30.3	
	5.1nm,0.4s						
KST	Kastek	4.38	65	*e*P	Pg	16 17 33.5	-2.2
	1.3nm,0.2s						
KST				*e*S	Sg	16 18 30.3	-2.2
	5.1nm,0.4s						
KRBS	Karabastau	4.48	56	Pg	Pg	16 17 35.2	-2.5
	1.2nm,0.4s						
KRBS				Lg	Lg	16 18 33.3	
	4.0nm,0.4s						
KTBS	Karatobe	5.13	60	Pg	Pb	16 17 46.6	+4.7
	0.7nm,0.3s						
KTBS				Lg	Lg	16 18 52.9	
	4.6nm,0.4s						
ARXS	Arharly	6.10	59	Pg	Pg	16 18 04.8	-3.7
	0.8nm,0.3s						
ARXS				Lg	Lg	16 19 25.2	
	2.5nm,0.4s						
ARXS	Arharly	6.10	59	*e*P	Pg	16 18 04.8	-3.7
ARXS				*e*S	Sg	16 19 25.2	-2.3

DSN ***06*** *16:28:49.5±1.5, 27.50°N×54.99°E, h15km, ML4.3/15, Error ellipse: s-maj=18.5km s-min=4.5km az=21.0*
MOS ***06*** *16:28:50.5±0.9, 27.36°N×55.02°E, h13km, mb4.7/26, Error ellipse: s-maj=7.3km s-min=4.4km az=102.2*
IDC ***06*** *16:28:50.4±0.6, 27.45°N×55.04°E, h0km, mb4.2/29, mbtmp4.2/35, ML3.9/6, MS3.7/36, Error ellipse: s-maj=14.2km s-min=11.7km az=4.0*
NEIC ***06*** *16:28:51.5±1.5, 27.29°N±0.07°×54.90°E±0.07, h10km±1km, mb4.5/69, Error ellipse: s-maj=11.4km s-min=10.8km az=195.0*
TEH ***06*** *16:28:52.2, 27.09°N×54.99°E, h19km±25km*
GII ***06*** *16:28:53.5±0.0, 27.30°N×54.91°E, h10km, confirmed*
THR ***06*** *16:28:53.2±0.0, 27.30°N×55.08°E, h23km±5km, ML4.4*
OMAN ***06*** *16:28:54.3±0.1, 27.09°N×54.82°E, h13km, mb4.6/13, ml4.4/21, Mwp4.6/7, Error ellipse: s-maj=0.7km s-min=0.5km az=36.0*

ISC 06 16:28:52.2±0.8, 27°29N±0.03×54°94E±0.03, h16km±4km, n351, σ1≤69/369, mb4.5/80, MS3.7/40, 8C-12D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.63	308	Pg	Pn	16 29 06.6	+0.1
BNDS	Bandar-Abbas	1.10	84	*e*Pg	Pb	16 29 11.8	-1.2
BNDS				*e*Sg	Sb	16 29 24.6	-2.6
BNDS				IAML		16 29 48.3	
	comp=Z,3μm,1.0s						
GENO	Geno	1.10	84	Pg	Pb	16 29 12.2	-0.8
IBND	Bandar-abas	1.43	83	Pg	Pb	16 29 17.8	-0.7
IBND				Sg	Sg	16 29 39.5	+0.9
SHME	Shamm	1.64	139	P	Pn	16 29 20.6	+0.3
	SNR=33						
SHME				P	Pn	16 29 20.6	+0.3
	SNR=33						
SHME				S	Sb	16 29 42.3	0.0
SHME				S	Sb	16 29 42.3	0.0
SHME	Shamm	1.64	139	*e*P	Pn	16 29 19.5	-0.8
	SNR=23						
SHME				S	Sb	16 29 42.0	-0.3
JHRM	Jahrom	1.71	316	Pn	Pb	16 29 24.1	+0.8
BANOM	Banah	1.82	138	P	Pn	16 29 23.5	+0.6
BANOM				P	Pn	16 29 23.5	+0.6
BANOM				S	Sb	16 29 48.6	+0.8
BANOM				S	Sb	16 29 48.6	+0.8
BANOM	Banah	1.82	138	*e*P	Pn	16 29 22.0	-0.9
	SNR=163						
BANOM				S	Sb	16 29 48.5	+0.7
UMQ	Umm Al-Quwin	1.87	160	P	Pb	16 29 26.8	+0.9
	SNR=14						
UMQ				P	Pb	16 29 26.8	+0.9
	SNR=14						
UMQ				S	Sn	16 29 46.7	0.0
UMQ				S	Sn	16 29 46.7	0.0
UMQ	Umm Al-Quwin	1.87	160	*e*P	Pn	16 29 23.1	-0.4
	SNR=12						
MASF	Masafi	2.20	150	P	Pn	16 29 29.7	+1.6
	SNR=52						
MASF				P	Pn	16 29 29.7	+1.6
	SNR=52						
MASF				S	Sb	16 29 57.8	-0.8
MASF				S	Sb	16 29 57.8	-0.8
MSFE	Esma-Masafi	2.21	150	*e*P	Pn	16 29 28.4	+0.2
	SNR=108						
MDH	Madha	2.33	148	P	Pn	16 29 31.0	+1.2
	SNR=70						
MDH				P	Pn	16 29 31.0	+1.2
	SNR=70						
MDH				S	Sn	16 30 00.1	+2.1
MDH				S	Sn	16 30 00.1	+2.1
MDH	Madha	2.33	148	*e*P	Pn	16 29 29.9	+0.1
	SNR=51						
NAZ	Nazwa, Dubai	2.38	164	P	Pn	16 29 31.9	+1.4
	SNR=37						
NAZ	Nazwa, Dubai	2.38	164	*e*P	Pn	16 29 31.9	+1.4
	SNR=21						
KHNJ	Kahnooj	2.54	74	Pn	Pn	16 29 33.1	+0.3
UOSS	Minazif	2.59	154	Pn	Pn	16 29 33.6	+0.1
UOSS	Minazif	2.59	154		Pn	16 29 33.3	-0.2
UOSS	Minazif	2.59	154	P	Pn	16 29 34.9	+1.4
UOSS				S	Sn	16 30 05.7	+1.1
UOSS	Minazif	2.59	154	*e*P	Pn	16 29 33.6	+0.1
	SNR=16						
FAQ	Al Faqa, Dubai	2.60	167	P	Pn	16 29 34.8	+1.3
	SNR=32						
FAQ				P	Pn	16 29 34.8	+1.3
	SNR=32						
FAQ				S	Sn	16 30 04.0	-0.7
FAQ				S	Sn	16 30 04.0	-0.7
FAQ	Al Faqa, Dubai	2.60	167	*e*P	Pn	16 29 33.9	+0.3
	SNR=22						
ASUD	Al Ashush, Dub	2.67	172	P	Pn	16 29 36.8	+2.3
	SNR=26						
ASUD				S	Sn	16 30 06.1	-0.5
ASUD	Al Ashush, Dub	2.67	172	*e*P	Pn	16 29 35.5	+0.9
	SNR=19						
HATD	Hatta, Dubai	2.67	156	P	Pn	16 29 36.1	+1.5
	SNR=75						
HATD	Hatta, Dubai	2.67	156	*e*P	Pn	16 29 35.0	+0.4
	SNR=32						
AJN	Ajban	2.71	179	P	Pb	16 29 39.1	-1.3
	SNR=19						
ASHO	Ashiyiah	2.78	158	P	Pn	16 29 37.1	+1.0
	SNR=94						
ASHO				S	Sn	16 30 11.5	+2.1
ASHO	Ashiyiah	2.78	158	*e*P	Pn	16 29 36.4	+0.3
	SNR=105						
NGRK	Negar Kerman	2.83	33	Pn	Pn	16 29 38.5	+1.4
KRBR	Kerman	3.13	30	Pn	Pn	16 29 43.3	+2.1
KRBR	Kerman	3.13	30	*e*Pn	Pn	16 29 43.2	+2.1
KRBR				IAML		16 30 43.1	
	comp=Z,700nm,1.0s						
SHI	Shiraz	3.17	318	Pn	Pn	16 29 44.9	+3.3
SHI	Shiraz	3.17	318	P	Pn	16 29 44.1	+2.5
ALNE	Al Ain	3.30	167	P	Pn	16 29 44.1	+0.9
	SNR=22						
ALNE	Al Ain	3.30	167	*i* P	Pn	16 29 43.9	+0.7
	SNR=13						
KHGB	Koh Gabri	3.36	23	Pn	Pn	16 29 47.0	+2.7
DSBU	Dashti - Bushe	3.43	289	Pn	Pn	16 29 48.5	+3.4
CHMN	Cheshme madani	3.44	41	Pn	Pn	16 29 47.9	+2.5
SOHO	SOHO	3.45	155	P	Pn	16 29 46.3	+1.0
SOHO	SOHO	3.45	155	*i* P	Pn	16 29 44.9	-0.4
	SNR=16						
KBAM	BAM	3.61	58	Pn	Pn	16 29 49.2	+1.6
MZWR	Madinat Zayed	3.64	195	P	Pn	16 29 49.4	+1.6
GHWR	Ruwais	3.80	210	P	Pn	16 29 50.8	+0.8
KRM1	Kerman Provinc	3.80	32	Pn	Pn	16 29 52.7	+2.3
IMEH	Mehriz	4.10	356	Pn	Pn	16 29 57.5	+3.0
ARQ	Araqi	4.18	160	P	Pn	16 29 57.9	+2.5
TRNA	Turayna	4.21	234	P	Pn	16 29 57.5	+1.9
HOQ	Hoqain	4.27	149	Pn	Pn	16 29 56.6	+0.1
HOQ	Hoqain	4.27	149	P	Pn	16 29 56.9	+0.4
IBAF	Bafgh	4.32	7	Pn	Pn	16 30 00.0	+2.6
SLWR	Sila	4.34	223	P	Pn	16 29 58.1	+0.6
SLWR				S	Sn	16 30 43.7	-4.0
SMRA	Abu-Samra	4.48	237	P	Pn	16 30 01.6	+2.1
UMZA	Um Al Zommool	4.56	177	P	Pn	16 30 01.0	+0.5
UMZA				S	Sn	16 30 52.5	-0.6
KLNJ	Kolanjah	4.72	323	Pn	Pn	16 30 06.6	+3.5
KLNJ	Kolanjah	4.72	323	*e*Pn	Pn	16 30 05.9	+2.8
KLNJ				IAML		16 31 48.9	
	comp=Z,350nm,1.0s						
ICHK	Chekchek	4.96	355	Pn	Pn	16 30 08.9	+2.7
IRAM	Ramesheh	5.03	334	Pn	Pn	16 30 09.8	+2.7
SMDO	Samad	5.07	146	P	Pn	16 30 08.8	+1.3
SMDO				S	Sn	16 31 07.4	+1.6
YZKH	Yazd	5.10	357	*e*Pn	Pn	16 30 10.6	+2.6
YZKH				IAML		16 31 59.1	
	comp=Z,98nm,1.0s						
WSAR	Wadi Sarin	5.24	140	P	Pn	16 30 10.4	+0.6
CHBR	Chabahar	5.25	107	Pn	Pn	16 30 10.2	+0.3
CHBR	Chabahar	5.25	107	*e*Pn	Pn	16 30 10.5	+0.5
CHBR				IAML		16 31 54.0	
	comp=Z,66nm,1.0s						
IBRJ	Brojen	5.61	326	Pn	Pn	16 30 18.0	+2.8
JMDO	Jabal Madar	5.68	149	P	Pn	16 30 17.2	+1.3
IGAR	Gharneh	5.69

ASF Sn **Sn** **16 35 35.4 -8.3**
ASF LR LR 16 40 46.4
comp=Z,84nm,19.9s,baz=93,slow=44
comp=Z,3.4nm,0.4s
CHGR Chuyangaron 16.44 43 Pn **Pn** **16 32 41.5 -0.8**
CHGR Chuyangaron 16.44 43 P **Pn** **16 32 41.5 -0.8**
CHGR pmax pmax
comp=Z,18nm,1.0s
MAK Makhachkala 16.77 341*d* iP **Pn** **16 32 41.8 -4.5**
MAK *e*S **Sn** **16 35 45.7 -6.4**
MAK pmax pmax
comp=Z,118nm,0.9s
MAK MLR MLR
comp=Z,287nm,15.0s
GAR Garm 17.36 44 Pn **Pn** **16 32 52.0 -1.9**
GAR IAmb IAmb 16 33 01.5
comp=Z,25nm,0.8s
GHAJ Ghor Haditha 17.36 288 **Pn** **16 32 54.4 +0.6**
GHAJ IAmb IAmb 16 33 13.9
comp=Z,30nm,1.1s
GHAJ Ghor Haditha 17.36 288 P **P** **16 32 55.6 +0.5**
BALJ Balqa 17.43 291 **Pn** **16 32 55.3 +0.6**
KOPT Kop Dagi 17.46 320 **Pn** **16 32 55.7 +0.5**
HMDT Nahal Hemdat 17.56 291 P **P** **16 32 58.3 +1.0**
ZFRI Zfri 17.60 285 P **P** **16 32 58.9 +1.2**
GEM Giv'at Ha'Em 17.66 294 P **Pn** **16 32 58.4 +0.9**
HRFI Mount Harif 17.68 284 P **Pn** **16 32 59.1 +1.2**
EIL Elat 17.73 282 P **P** **16 33 00.9 +1.6**
comp=Z,0.4nm,0.3s,baz=44,slow=6.6,SNR=7.9
EIL S **Sn** **16 36 09.1 -6.7**
comp=Z,6.1nm,0.9s,baz=89,slow=11,SNR=1.8
EIL LR LR 16 40 53.7
comp=Z,100nm,20.3s,baz=338,slow=41
comp=Z,8.4nm,0.8s
EIL Elat 17.73 282 P **P** **16 33 00.6 +1.4**
PRNI Paran 17.73 285 P **P** **16 33 00.0 +0.8**
MBRI Mt Berech 17.77 283 P **Pn** **16 32 59.4 +0.4**
MMAI Mount Meron Ar 17.82 293 P **Pn** **16 33 00.1 +0.5**
comp=Z,0.6nm,0.3s,baz=93,slow=16,SNR=8.2
comp=Z,6.2nm,0.8s
GAZ Gaziantep 17.92 308 Pn **Pn** **16 32 59.0 -1.8**
KRMI Paran Flat 17.95 284 P **P** **16 33 03.3 +1.6**
ARPR Arapgir-MALATY 18.18 315 **Pn** **16 33 04.1 0.0**
ARPR IAmb IAmb 16 33 16.0
comp=Z,35nm,1.2s
DRK Karamyk 18.57 45 P **P** **16 33 07.9 -0.8**
DRK Karamyk 18.57 45 P **P** **16 33 07.9 -0.8**
DRK pmax pmax
comp=Z,12nm,0.9s
NCK Nalchik 18.60 333⇑*e*P **Pn** **16 33 12.0 +3.0**
NCK pmax pmax
comp=Z,10.0nm,0.4s
NEUR Neytrino 18.78 331⇓*e*P **Pn** **16 33 14.6 +3.3**
KBZ Khabaz 19.08 332 P **P** **16 33 12.8 -1.0**
comp=Z,0.4nm,0.3s,baz=147,slow=8.4,SNR=19
comp=Z,1.9nm,0.9s
KBZ Khabaz 19.08 332⇓*e*P **Pn** **16 33 16.5 +1.8**
KBZ pmax pmax
comp=Z,13nm,0.8s
SHA1 Shidzhatmaz 19.18 332⇓*e*P **P** **16 33 15.7 +0.4**
KVAR Kislovodsk Arr 19.35 332 P **P** **16 33 16.3 -0.7**
baz=105,slow=15
comp=Z,1.1nm,0.3s
KIV Kislovodsk 19.35 332 P **P** **16 33 17.3 +0.3**
KIV IAmb IAmb 16 33 47.8
comp=Z,26nm,0.7s
KIV Kislovodsk 19.35 332 *e*P **Pn** **16 33 19.1 +1.0**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,53nm,14.0s
ATD Arta Tunnel 19.36 218 LR LR 16 42 21.5
comp=Z,12nm,21.8s,baz=14,slow=42
BNN Bunyan 19.68 311 P **P** **16 33 21.3 +0.5**
BNN IAmb IAmb 16 33 55.6
comp=Z,19nm,1.0s
CSS Mathiatis 19.99 298 P **P** **16 33 25.2 +1.2**
CSS IAmb IAmb 16 33 30.1
comp=Z,19nm,0.8s
GOF Gofitskoye 20.13 335*ce*P Pn 16 33 28.2 +0.9
VSLR Vesyoloye 20.15 327⇑*e*P Pn 16 33 27.6 0.0
VSLR pmax pmax
comp=Z,22nm,0.8s
KK31 Karatay Array 20.22 35 *i* P Pn 16 33 28.0 -0.4
KKAR Karatay Array 20.22 35 P **P** **16 33 26.6 +0.2**
KKAR Karatay Array 20.22 35 P **P** **16 33 26.6 +0.2**
ARSB Arslanbob 20.39 42 P **P** **16 33 28.5 0.0**
ARSB IAmb IAmb 16 33 40.0
comp=Z,14nm,0.8s
ARSB Arslanbob 20.39 42 P **P** **16 33 28.5 0.0**
ARSB pmax pmax
comp=Z,14nm,0.8s
SOC Sochi 20.40 327 *e*P **P** **16 33 28.2 -0.1**
SOC *e* 16 33 44.9
SOC *e*PPP PPP 16 33 54.8
SOC *e*S Sn 16 37 20.3 +0.5
SOC *e*SS **SnSn** **16 37 38.6 +4.0**
SOC *e*SSS SSS 16 37 59.9
SOC pmax pmax
comp=Z,21nm,0.8s
SOC MLR MLR
comp=Z,218nm,14.0s
KSH Kashi 21.32 50 P **P** **16 33 34.4 -4.1**
KSH sP pP 16 33 41.8 -1.7
KSH PP **PnPn** **16 33 55.8 -2.6**
KSH pmax pmax
comp=Z,6.0nm,0.8s
KSH LR LR
comp=N,220nm,11.1s
KSH LR LR
comp=E,410nm,13.9s
KSH LR LR
comp=Z,380nm,11.7s
BRTR Keskin Array B 21.60 310 P **P** **16 33 41.6 +0.1**
BRTR Keskin Array B 21.60 310 P **P** **16 33 42.9 +1.4**
comp=Z,7.0nm,0.8s,baz=129,slow=12,SNR=26
comp=Z,7.0nm,0.8s
BR131 Keskin Array S 21.60 310 P **P** **16 33 41.8 +0.3**
BR131 IAmb IAmb 16 33 51.2
comp=Z,12nm,0.7s
BR131 Keskin Array S 21.60 310 P **P** **16 33 42.4 +0.9**
BR131 Keskin Array S 21.60 310*d* iP **P** **16 33 42.9 +1.4**
AAK Ala-Archa 22.09 41 P **P** **16 33 47.0 +0.3**
AAK IAmb IAmb 16 33 54.8
comp=Z,12nm,1.0s
AAK Ala-Archa 22.09 41 P **P** **16 33 45.9 -0.8**
comp=Z,2.9nm,0.6s,baz=248,slow=14,SNR=5.3
AAK LR LR 16 42 50.0
comp=Z,239nm,20.3s,baz=241,slow=38
comp=Z,2.9nm,0.6s
AAK Ala-Archa 22.09 41⇓*e*P **P** **16 33 46.8 0.0**
AAK pmax pmax
comp=Z,17nm,1.1s
ANTO Ankara 22.24 310 P **P** **16 33 48.7 +0.3**
ANTO IAmb IAmb 16 34 06.8
comp=Z,22nm,0.9s
ANTO Ankara 22.24 310 P **P** **16 33 48.7 +0.3**
ANTO pmax pmax
comp=Z,22nm,0.9s
AB31 Akbulak array 22.27 9 P **P** **16 33 48.3 -0.2**
AB31 IAmb IAmb 16 34 03.3
comp=Z,18nm,1.1s
AB31 Akbulak array 22.27 9 *i* P **P** **16 33 48.4 -0.1**
ABKAR Akbulak array 22.27 9 P **P** **16 33 47.9 -0.5**
ELL Elmali 23.17 300 P **P** **16 33 58.4 +0.2**
ELL IAmb IAmb 16 34 28.4
comp=Z,18nm,0.8s
ELL Elmali 23.17 300 P **P** **16 33 58.4 +0.2**
ELL pmax pmax
comp=Z,18nm,0.8s
AKTO Aktyubinsk 23.24 5 LR LR 16 45 11.0
comp=Z,247nm,20.0s,baz=298,slow=42
AKTO Aktyubinsk 23.24 5 P **P** **16 33 58.0 -0.6**
FURI Furi 23.89 223 LR LR 16 45 36.7
comp=Z,133nm,20.0s,baz=68,slow=42
PDGK Podgornoye 25.51 45 P **P** **16 34 20.7 +0.7**
BELG Belogornoye 25.67 350*ce*P **P** **16 34 22.8 +1.7**
BELG pmax pmax
comp=Z,4.0nm,1.0s
VRH Novokhopyorsk 25.90 341 *e*P **P** **16 34 23.4 +0.1**
VRH pmax pmax
comp=Z,22nm,0.7s
VORD Divnogorie 26.47 338 *e*P **P** **16 34 25.9 -2.5**
VORD pmax pmax
comp=Z,9.0nm,1.0s
VSR Storozhevoye 26.72 338 *e*P **P** **16 34 28.4 -2.3**
VSR pmax pmax
comp=Z,5.0nm,0.9s
IDI Anoyia 26.81 295 P **P** **16 34 32.4 +0.7**
IDI IAmb IAmb 16 35 01.2
comp=Z,14nm,0.9s
VORR Voronezh 27.09 338 *e*P **P** **16 34 34.1 +0.1**
VORR pmax pmax
comp=Z,19nm,1.4s
LPSR Galich'ya Gora 27.98 339 *e*P **P** **16 34 41.1 -0.8**
LPSR pmax pmax
comp=Z,9.0nm,0.9s
BORK Borovoye 28.16 20*c* iP **P** **16 34 43.7 +0.1**
BORK pmax pmax
comp=Z,6.0nm,0.8s
BVA0 Borovoye Array 28.17 20 P **P** **16 34 42.9 -0.7**
BVAR Borovoye Array 28.17 20 P **P** **16 34 43.4 -0.3**
comp=Z,4.4nm,0.5s,baz=213,slow=6.7,SNR=26
comp=Z,4.4nm,0.5s
EVN Everest 28.21 81 P **P** **16 34 45.4 +0.3**
EVN IAmb IAmb 16 34 55.5
comp=Z,6.0nm,0.7s
MAKZ Makanchi 28.85 40 P **P** **16 34 49.7 -0.1**
MAKZ IAmb IAmb 16 35 05.9
comp=Z,6.5nm,1.1s
MAKZ Makanchi 28.85 40 P **P** **16 34 49.7 -0.1**
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
MK31 Makanchi Array 29.02 41*d* iP **P** **16 34 51.2 -0.2**
MKAR Makanchi Array 29.02 41 P **P** **16 34 51.2 -0.2**
MKAR Makanchi Array 29.02 41 P **P** **16 34 51.0 -0.4**
comp=Z,1.1nm,0.6s,baz=224,slow=7.2,SNR=10
MKAR LR LR 16 48 24.9
comp=Z,179nm,18.1s,baz=232,slow=41
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 29.02 41 *i* P **P** **16 34 51.5 +0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MLR Muntele Rosu 29.34 316 LR LR 16 48 42.6
comp=Z,132nm,20.3s,baz=126,slow=41
KURBB Kurchatov Arra 29.42 31 P **P** **16 34 54.0 -0.7**
comp=Z,1.4nm,0.6s,baz=231,slow=8.8,SNR=7.1
KURBB LR LR 16 48 31.5
comp=Z,320nm,18.4s,baz=185,slow=40
comp=Z,1.4nm,0.6s
KURK Kurchatov 29.53 31 P **P** **16 34 55.1 -0.6**
KURK Kurchatov 29.53 31⇑*e*P **P** **16 34 56.0 +0.3**
KURK pmax pmax
comp=Z,5.0nm,1.0s
LODK Lodwar 30.22 222 P **P** **16 35 03.8 +1.5**
AKASG Malin Array Be 30.48 327 P **P** **16 35 03.0 -1.1**
comp=Z,2.1nm,0.7s,baz=133,slow=8.3,SNR=9.1
AKASG LR LR 16 49 31.0
comp=Z,75nm,18.5s,baz=106,slow=41
comp=Z,2.1nm,0.7s
AKASG Malin Array Be 30.48 327 *i* P **P** **16 35 03.7 -0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 30.48 327 P **P** **16 35 03.6 -0.5**
AKBB IAmb IAmb 16 35 06.9
comp=Z,10nm,1.1s
AKBB Malin Array Si 30.48 327⇓*i* P **P** **16 35 03.8 -0.3**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
KIEV Kiev 30.48 327 P **P** **16 35 03.4 -0.7**
KIEV IAmb IAmb 16 35 06.9
comp=Z,9.3nm,1.1s
KIEV Kiev 30.48 327 P **P** **16 35 03.4 -0.7**
KIEV pmax pmax
comp=Z,9.0nm,1.1s
BURAR Bucovina Array 30.83 319 P **P** **16 35 08.3 +0.8**
BUR08 Bucovina Ar. S 30.85 319 P **P** **16 35 07.8 +0.1**
OBN Obninsk 30.85 339 P **P** **16 35 07.6 +0.3**
OBN Obninsk 30.85 339 *e*P **P** **16 35 08.3 +1.0**
OBN *e* 16 36 10.4
OBN *e*PPP PPP 16 36 21.0
OBN *e* 16 38 02.3
OBN pmax pmax
comp=Z,12nm,0.5s
OBN MLR MLR
comp=Z,62nm,16.0s
WMQ Urumqi 31.09 49 *e*P **P** **16 35 12.3 +2.6**
WMQ LR LR
comp=Z,150nm,24.1s
KIRV Kirov 31.52 354 LR LR 16 52 13.8
comp=Z,59nm,19.2s,baz=174,slow=45
KIRV Kirov 31.52 354⇓*e*P **P** **16 35 15.4 +2.2**
DGZ Jazzator, Alta 33.47 39⇓*i* P **P** **16 35 30.8 +0.2**
DGZ pmax pmax
comp=Z,4.0nm,0.6s
MNK Minsk 33.62 331 *i* P **P** **16 35 31.7 0.0**
comp=E,12nm,0.8s
MNK *i* P **P** **16 35 31.7 0.0**
comp=N,9.0nm,0.8s
MNK *i* P **P** **16 35 31.7 0.0**
comp=Z,11nm,0.8s,baz=133
MNK *i* PP **PnPn** **16 36 43.3 -0.1**
MNK *i* PPP PPP 16 36 56.1
MNK *i* S **S** **16 40 57.6 +4.0**
MNK *i* SS **SnSn** **16 43 02.2 +5.1**
MNK *i* SSS SSS 16 43 18.0
MNK *i* LR LR 16 48 29.6
MNK *i* LRM MLR 16 50 19.8
comp=Z,63nm,17.3s
MNK Minsk 33.62 331 *i* P **P** **16 35 31.6 0.0**
MNK *i* 16 36 43.3
MNK *i* PPP PPP 16 36 56.1
MNK *i* S **S** **16 40 57.5 +4.0**
MNK *i* SS **SnSn** **16 43 02.2 +5.1**
MNK *i* SSS SSS 16 43 17.9
MNK pmax pmax
comp=N,9.0nm,0.8s
MNK pmax pmax
comp=E,12nm,0.8s
MNK pmax pmax
comp=Z,11nm,0.8s
MNK MLR MLR
comp=Z,63nm,17.0s
NACGM Naroch 34.37 331 *e*P **P** **16 35 40.4 +2.2**
comp=Z,16nm,0.9s,baz=132
ZAA0 Zalesovo Array 34.52 31 P **P** **16 35 37.9 -1.6**
ZAA0 IAmb IAmb 16 35 45.4
comp=Z,13nm,1.1s
ZALV Zalesovo Beam 34.52 31 P **P** **16 35 38.4 -1.1**
ZALV Zalesovo Beam 34.52 31 P **P** **16 35 39.2 -0.3**
comp=Z,7.2nm,0.6s,baz=241,slow=9.0,SNR=30
ZALV LR LR 16 51 50.9
comp=Z,226nm,18.9s,baz=226,slow=40
comp=Z,7.2nm,0.6s
GOMU GeErMu 34.86 65 P **P** **16 35 42.2 -0.9**
GOMU pmax pmax
comp=Z,4.0nm,0.9s
LANS Liptovska Anna 34.93 318 *e*P **P** **16 35 44.7 +1.5**
LANS Liptovska Anna 34.93 318 *e*P **P** **16 35 44.7 +1.5**
KLMR Klimovskoe 35.15 347 *e*P **P** **16 35 44.7 -0.1**
KLMR pmax pmax
comp=Z,14nm,1.4s
PABE Paberze 35.99 330 P **P** **16 35 51.8 -0.3**
CAMP Campotosto 36.91 305 P **P** **16 36 01.8 +1.5**
NRCA Norcia 37.18 306 P **P** **16 36 03.5 +1.0**
NRCA IAmb IAmb 16 36 36.0
comp=Z,12nm,0.9s
FDMO Fiordimonte 37.24 306 P **P** **16 36 04.6 +1.6**
DPC Dobruska-Polom 37.29 319 *e*P **P** **16 36 03.8 +0.5**
DPC Dobruska-Polom 37.29 319 *e*P **P** **16 36 03.8 +0.5**
CHVC Chvalec 37.54 319 *e*P **P** **16 36 05.5 +0.1**
CHVC Chvalec 37.54 319 *e*P **P** **16 36 05.5 +0.1**
KBA Koelnbreinsper 38.02 313 *e*P **P** **16 36 09.7 -0.1**
comp=Z,3.8nm,0.5s
ZVC Zvikov 38.23 316 *e*P **P** **16 36 11.9 +0.7**
GERES GERESS Array B 38.33 315 P **P** **16 36 11.4 -0.8**
GERES GERESS Array B 38.33 315 P **P** **16 36 10.9 -1.3**
comp=Z,0.3nm,0.4s,baz=80,slow=7.3,SNR=4.7
comp=Z,0.3nm,0.4s
GERES GERESS Array B 38.33 315 P **P** **16 36 11.4 -0.8**
ABTA Abfaltersbach 38.48 312 *e*P **P** **16 36 14.0 +0.5**
comp=Z,3.5nm,0.7s
KHC Kasperske Hory 38.50 316 P **P** **16 36 13.1 -0.5**
KHC Kasperske Hory 38.50 316 *e*P **P** **16 36 13.9 +0.3**
KHC Kasperske Hory 38.50 316 *e*P **P** **16 36 13.9 +0.3**
GTA Gaotai 39.02 60 *e*P **P** **16 36 18.3 +0.1**
GTA pmax pmax
comp=Z,11nm,0.8s
GTA LR LR
comp=N,130nm,13.8s
GTA LR LR
comp=E,150nm,13.4s
GTA LR LR
comp=Z,100nm,13.8s
WTTA Wattenberg 39.19 312 *e*P **P** **16 36 19.6 0.0**
comp=Z,4.7nm,0.5s
FIA1 FINESS Array S 39.25 338 P **P** **16 36 19.8 +0.2**
FINES FINESS Array B 39.25 338 P **P** **16 36 20.0 +0.5**
FINES FINESS Array B 39.25 338 P **P** **16 36 18.4 -1.2**
comp=Z,2.6nm,0.5s,baz=142,slow=10,SNR=20
FINES LR LR 16 53 26.0
comp=Z,35nm,21.5s,baz=130,slow=38
comp=Z,2.6nm,0.5s
FINES FINESS Array B 39.25 338 *i* P **P** **16 36 20.1 +0.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
SQTA Sankt Quirin 39.46 312 *e*P **P** **16 36 21.7 -0.1**
comp=Z,5.3nm,0.5s
KEST Kesra 39.48 294 IAmb IAmb 16 36 23.4
comp=Z,20nm,1.4s
KEST Kesra 39.48 294 P **P** **16 36 22.4 +0.4**
comp=Z,5.6nm,0.8s,baz=103,slow=2.7,SNR=4.7
comp=Z,5.6nm,0.8s
MOTA Moosalm 39.56 312 *i* P **P** **16 36 21.3 -1.4**
comp=Z,2.9nm,0.6s
CLL Collm 39.60 319 *i* P **P** **16 36 23.1 +0.4**
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 39.60 319 *i* P **P** **16 36 23.1 +0.4**
comp=Z,7.0nm,1.1s
CLL L L 16 57 00.0
comp=Z,100nm,20.6s
FETA Feichten 39.73 312 *e*P **P** **16 36 23.1 -1.0**
comp=Z,4.3nm,0.7s
KNGR Kungurtug, Tuv 39.73 42⇑*e*P **P** **16 36 22.3 -1.7**
FUORN Ofenpass-Fuorn 39.95 311 P **P** **16 36 26.3 +0.3**
DAVOX Davos/Dischmat 40.24 311 LR LR 16 54 59.0
comp=Z,82nm,18.4s,baz=95,slow=39
DAVA Damuels 40.36 312 *i* P **P** **16 36 29.3 0.0**
comp=Z,14nm,0.5s
CHTO Chiang Mai 41.19 92 P **P** **16 36 37.2 +0.9**
CHTO Chiang Mai 41.19 92 P **P** **16 36 37.2 +0.9**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CMAR Chiang Mai Arr 41.31 93 P **P** **16 36 38.4 +1.1**
comp=Z,1.2nm,0.8s,baz=282,slow=9.0,SNR=9.9
CMAR LR LR 16 56 58.1
comp=Z,35nm,21.0s,baz=115,slow=41
comp=Z,1.2nm,0.8s
LZH Lanzhou 42.16 65 *e*P **P** **16 36 44.0 -0.3**
LZH sP sP 16 36 52.1 +0.3
LZH pmax pmax
comp=Z,10.0nm,1.2s
KMI Kunming 42.74 82 P **P** **16 36 49.9 +0.7**
KMI pP pP 16 36 52.6 -1.8
KMI pmax pmax
comp=Z,9.0nm,0.9s
HFS Hagfors 43.14 331 P **P** **16 36 51.6 0.0**
comp=Z,10nm,1.0s,baz=139,slow=7.6,SNR=11
HFS LR LR 16 55 21.5
comp=Z,78nm,21.0s,baz=80,slow=37
comp=Z,10nm,1.0s
NORES NORESS Array B 44.37 331 P **P** **16 37 01.7 +0.2**
NC405 NORSAR Array S 44.48 332 P **P** **16 37 01.8 -0.6**
NC405 IAmb IAmb 16 37 09.1
comp=Z,12nm,0.9s
NB201 NORSAR Array S 44.62 331 P **P** **16 37 03.0 -0.6**
NB2 NORSAR Subarra 44.65 331 P **P** **16 37 03.0 -0.8**
comp=Z,2.2nm,0.7s,baz=116,slow=7.9
NB2 NORSAR Subarra 44.65 331 P **P** **16 37 01.6 -2.2**
NOA NORSAR Array B 44.65 331 P **P** **16 37 03.4 -0.4**
comp=Z,2.5nm,0.7s,baz=118,slow=8.0,SNR=11
comp=Z,2.5nm,0.7s
SONM Songino Array 44.72 48 P **P** **16 37 03.8 -0.9**
SONM Songino Array 44.72 48 P **P** **16 37 04.8 +0.2**
comp=Z,0.5nm,0.4s,baz=269,slow=10,SNR=5.4
SONM LR LR 16 58 11.7
comp=Z,127nm,20.2s,baz=208,slow=40
comp=Z,0.5nm,0.4s
ARCES ARCESS Array B 45.62 346 P **P** **16 37 11.4 +0.1**
ARCES IAmb IAmb 16 37 17.3
comp=Z,9.3nm,1.1s
ARCES ARCESS Array B 45.62 346 P **P** **16 37 11.4 +0.1**
comp=Z,4.4nm,1.0s,baz=57,slow=4.5,SNR=4.6
ARCES LR LR 16 59 48.9
comp=Z,100nm,18.5s,baz=106,slow=41
comp=Z,4.4nm,1.0s
NRIK Noril'sk 46.18 15 P **P** **16 37 14.6 -1.2**
NRIK IAmb IAmb 16 37 26.2
comp=Z,3.9nm,1.1s
NRIK Noril'sk 46.18 15 P **P** **16 37 15.6 -0.2**
comp=Z,1.6nm,0.8s,baz=235,slow=11,SNR=3.5
comp=Z,1.6nm,0.8s
NRIK Noril'sk 46.18 15 *i* P **P** **16 37 15.3 -0.5**
NRIK *e* 16 37 45.2
NRIK pmax pmax
comp=Z,8.0nm,1.7s
XAN Xi'an 46.48 68 P P 16 37 13.2 -5.5
XAN pmax pmax
comp=Z,8.0nm,1.3s
BTO Baotou 46.88 59 *e*P **P** **16 37 22.8 +0.9**
BTO pP **sP** **16 37 27.4 -2.0**
BTO sP **pP** **16 37 29.8 +2.5**
BTO pmax pmax
comp=Z,24nm,1.2s
BTO pmax pmax
comp=Z,270nm,4.3s
HHC Hu-ho-hao-te 48.05 58 *e*P **P** **16 37 31.7 +0.8**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,3.6s
ESDC Sonseca Array 49.85 300 P **P** **16 37 44.6 -0.2**
ESDC Sonseca Array 49.85 300 P **P** **16 37 45.1 +0.4**
comp=Z,1.9nm,0.8s,baz=80,slow=7.9,SNR=8.4
comp=Z,1.9nm,0.8s
EKA Eskdalemuir Ar 49.99 321 P **P** **16 37 44.6 -0.7**
comp=Z,0.6nm,0.4s,baz=101,slow=8.6,SNR=5.8
comp=Z,0.6nm,0.4s
TORD Torodi Ar. Bea 51.55 265 P **P** **16 37 55.8 -1.9**
TORD IAmb IAmb 16 38 03.8
comp=Z,6.6nm,1.2s
TORD Torodi Ar. Bea 51.55 265 P **P** **16 38 00.1 +2.3**
comp=Z,4.9nm,0.6s,baz=51,slow=9.4,SNR=4.2
comp=Z,4.9nm,0.6s
HILR Hailar Array B 53.65 47 P **P** **16 38 12.8 -0.1**
comp=Z,1.0nm,0.5s,baz=258,slow=7.3,SNR=3.7
comp=Z,1.0nm,0.5s
SPITS Spitsbergen Ar 53.87 351 P **P** **16 38 14.4 +0.4**
comp=Z,5.9nm,0.8s,baz=144,slow=5.4,SNR=1.8
comp=Z,5.9nm,0.8s
NJ2 Nanjing 55.03 69 *e*P **P** **16 38 22.8 -0.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
ZEA Zeya 58.17 42 *e*P P 16 38 50.4 +5.3
KDWAN Kaudwane 58.24 213 P **P** **16 38 47.8 +1.7**
HEH HeiHe 58.55 46 *e*P **P** **16 38 46.1 -1.8**
HEH pmax pmax
comp=Z,3.0nm,0.9s
TSUM Tsumeb 58.70 222 LR LR 17 04 18.3
comp=Z,114nm,19.7s,baz=144,slow=36
BNX BinXian 59.12 51⇑P **P** **16 38 49.9 -2.0**
BNX pmax pmax
comp=Z,8.0nm,1.6s
YAK Yakutsk 59.17 32 LR LR 17 06 48.9
comp=Z,150nm,18.3s,baz=236,slow=39
YAK Yakutsk 59.17 32⇓*e*P **P** **16 38 53.2 +1.3**
YAK pmax pmax
comp=Z,36nm,3.0s
LBTB Lobatse 59.19 211 P **P** **16 38 52.6 0.0**
LBTB Lobatse 59.19 211 P **P** **16 38 55.4 +2.8**
comp=Z,6.9nm,1.1s,baz=21,slow=6.0,SNR=4.9
LBTB LR LR 17 04 22.3
comp=Z,112nm,18.5s,baz=70,slow=36
comp=Z,6.9nm,1.1s
TIXI Tiksi 59.30 21 P **P** **16 38 52.8 +0.1**
TIXI IAmb IAmb 16 39 00.9
comp=Z,3.6nm,0.8s
TIXI Tiksi 59.30 21 P **P** **16 38 51.6 -1.1**
comp=Z,0.9nm,0.3s,baz=283,slow=6.4,SNR=9.0
TIXI LR LR 17 07 43.8
comp=Z,92nm,18.4s,baz=201,slow=40
comp=Z,0.9nm,0.3s
TIXI Tiksi 59.30 21⇓*e*P **P** **16 38 53.7 +1.0**
TIXI pmax pmax
comp=Z,8.0nm,1.2s
BORG Borgarnes 59.83 331 LR LR 17 07 23.4

comp=Z,57nm,18.2s,baz=68,slow=39
DBIC Dimbokro 60.17 262 P **P** **16 38 58.1 -1.5**
DBIC Dimbokro 60.17 262 P **P** **16 39 01.4 +1.8**
comp=Z,2.7nm,0.5s,baz=102,slow=4.4,SNR=3.7
comp=Z,2.7nm,0.5s
KSRS Korea Array 61.09 60 P **P** **16 39 03.9 -1.6**
comp=Z,0.9nm,0.6s,baz=279,slow=7.3,SNR=4.5
comp=Z,0.9nm,0.6s
BOSA Boshof 62.45 209 P **P** **16 39 14.3 -0.5**
BOSA Boshof 62.45 209 P **P** **16 39 18.0 +3.3**
comp=Z,3.3nm,0.6s,baz=34,slow=9.1,SNR=5.3
BOSA LR LR 17 06 25.0
comp=Z,110nm,18.2s,baz=36,slow=36
comp=Z,3.3nm,0.6s
SEY Seymchan 69.34 29 LR LR 17 14 21.1
comp=Z,137nm,18.5s,baz=302,slow=40
ASAJ Asahikawa 69.97 50 LR LR 17 12 22.0
comp=Z,34nm,20.0s,baz=122,slow=37
SFJD Kangerlussuaq 71.00 336 LR LR 17 12 52.0
comp=Z,40nm,19.4s,baz=330,slow=37
JHJ Hachijo jima 2 71.64 62 LR LR 17 15 42.0
comp=Z,44nm,19.4s,baz=2.5,slow=39
PETK Petropavlovsk- 75.80 37 LR LR 17 17 33.5
comp=Z,52nm,19.0s,baz=267,slow=39
BATI Baumata 76.25 109 P **P** **16 40 40.5 0.0**
comp=Z,16nm,0.9s,baz=297,slow=6.8,SNR=3.7
comp=Z,16nm,0.9s
C23K Itkillik River 81.42 9 P **P** **16 41 09.2 +1.3**
FITZ Fitzroy Crossi 82.01 115 P **P** **16 41 11.1 -0.8**
E22K Anaktuvuk Pass 82.81 10 P **P** **16 41 15.6 +0.3**
E22K IAmb IAmb 16 41 43.2
comp=Z,6.0nm,1.3s
E25K Arctic Village 83.67 8 P **P** **16 41 20.2 +0.5**
E25K IAmb IAmb 16 41 35.2
comp=Z,4.6nm,1.3s
BMAR Burnt Mountain 84.44 7 P **P** **16 41 23.6 -0.1**
G24K Hadweenzic Riv 84.77 9 P **P** **16 41 26.0 +0.6**
G24K IAmb IAmb 16 41 58.1
comp=Z,7.8nm,1.3s
H23K Yukon River 85.30 10 P **P** **16 41 28.6 +0.6**
H23K IAmb IAmb 16 41 58.7
comp=Z,9.1nm,1.4s
BPAW Bear Paw Mtn. 86.67 11 P **P** **16 41 34.6 -0.2**
ILAR Eielson Array 86.68 9 LR LR 17 24 10.4
comp=Z,34nm,19.4s,baz=302,slow=38
H31M Peel River 86.93 4 P **P** **16 41 35.6 -0.5**
I30M Mount Dempster 87.38 5 P **P** **16 41 38.1 -0.2**
I30M IAmb IAmb 16 41 48.8
comp=Z,4.4nm,1.2s
J26L Joseph Creek 87.38 8 P **P** **16 41 38.0 -0.3**
J26L IAmb IAmb 16 42 02.9
comp=Z,4.4nm,0.8s
SUA Susitna One 89.15 12 P **P** **16 41 46.6 -0.3**
WB0 Warramunga Arr 90.00 112 P **P** **16 41 50.6 -0.7**
WRA Warramunga Arr 90.03 112 P **P** **16 41 50.5 -1.1**
comp=Z,1.1nm,0.8s,baz=310,slow=4.4,SNR=7.4
comp=Z,1.1nm,0.8s
YKA Yellowknife Ar 90.14 355 LR LR 17 29 12.6
comp=Z,34nm,18.2s,baz=292,slow=40
AS31 Alice Springs 91.48 116 P **P** **16 41 57.3 -0.9**
ASAR Alice Springs 91.48 116 P **P** **16 41 57.6 -0.6**
ASAR Alice Springs 91.48 116 P **P** **16 41 57.2 -0.9**
comp=Z,1.6nm,1.0s,baz=304,slow=4.9,SNR=12
comp=Z,1.6nm,1.0s
ASAR Alice Springs 91.48 116 P **P** **16 41 57.6 -0.6**
KDAK Kodiak Island 92.16 14 LR LR 17 33 10.8
comp=Z,19nm,18.8s,baz=280,slow=42
DLBC Dease Lake 94.50 3 LR LR 17 29 42.8
comp=Z,32nm,19.9s,baz=279,slow=39
MAW Mawson 94.78 177 LR LR 17 18 31.8
comp=Z,60nm,18.7s,baz=277,slow=31
SADO Sadowa 96.95 329 LR LR 17 28 09.5
comp=Z,32nm,21.8s,baz=190,slow=37
ULM Lac du Bonnet 98.58 342 LR LR 17 30 11.6
comp=Z,40nm,18.2s,baz=41,slow=37

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*TEH **06** 16:34:19.3, 35°.86N × 45°.08E, h9km*
*ISN **06** 16:34:19.0 ± 1.2, 35°.90N × 45°.04E, h3km ± 6km, ML3.0*
ISC 06 16:34:19.7 ± 0.9, **35°.91N** ± 0°.04 × **45°.07E** ± 0°.05, **h10**km, **n11**, σ **1**° **66**/15, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**0.79**	**230**	*e*Pg		**Pb**		**16 34 35.0**	**-0.5**
IKRK				*e*Sg		**Sb**		**16 34 45.0**	**-1.2**
IKRK				AML		AML		16 34 49.5	
	comp=E,710nm,0.5s								
IKRK				AML		AML		16 34 49.7	
	comp=N,575nm,0.4s								
MAHB	**Mahabad**	**0.99**	**31**	Pg		**Pb**		**16 34 39.6**	**+0.4**
IDHR	**Dehrash**	**1.62**	**138**	Pg		**Pg**		**16 34 50.6**	**-0.2**
MSL	**Mosul**	**1.66**	**288**	*e*Pn		**Pb**		**16 34 50.0**	**-0.5**
MSL				*e*Sn		**Sg**		**16 35 13.0**	**-0.2**
IAZR	**Azarshahr**	**1.91**	**22**	Pn		**Pg**		**16 34 56.2**	**-0.2**
GLG1	**Gilan-e-Gharb**	**1.92**	**159**	Pn		**Pb**		**16 34 53.9**	**-1.0**
KCHF	**Cheshme Sefid,**	**2.29**	**135**	Pn		**Pb**		**16 35 00.5**	**-0.9**
ITBZ	**Tabriz**	**2.47**	**20**	Pn		**Pb**		**16 35 03.7**	**-0.7**
IMRD	**Marand**	**2.84**	**10**	Pn		**Pb**		**16 35 08.9**	**-1.8**
IBDR	**Badra**	**2.88**	**166**	*e*Pn		**Pn**		**16 35 07.0**	**+1.3**
IBDR				*e*Sn		**Sb**		**16 35 43.0**	**-3.5**
RAFI	**Al-Rafai**	**4.26**	**168**	*e*Pn		**Pn**		**16 35 27.0**	**+2.3**
RAFI				*e*Sn		**Sn**		**16 36 17.0**	**+2.5**

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*IDC **06** 16:42:12.0 ± 1.1, 2°.50S × 138°.31E, h0km, mb3.6/4, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=25.0km s-min=23.2km az=120.0*
*DJA **06** 16:42:15.7 ± 0.5, 2°.5 ± 6° × 13°.8E ± °, h10km, M3.2/5, MLv3.2/5*
ISC 06 16:42:16.5 ± 0.8, **2°.6S** ± 0°.1 × **138°.36E** ± 0°.06, **h32**km, **n11**, σ **0**° **92**/11, **mb3.8/4, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.70**	**30**	P		P	Pn	16 42 25.5	-4.7
GENI	**Genyem**	**1.81**	**90**	P		**P**	**Pb**	**16 42 47.4**	**-1.6**
JAY	**Jayapura**	**2.35**	**88**	Pn		**Pn**	**Pn**	**16 42 53.5**	**+0.6**
	3.2nm,0.3s,baz=232,slow=11,SNR=22								
JAY				Sn			**Sn**	**16 43 22.1**	**+1.4**
	0.6nm,0.3s,baz=305,slow=22,SNR=1.4								
	5.9nm,0.3s								
JAY	**Jayapura**	**2.35**	**88**	P		**P**	**Pn**	**16 42 53.6**	**+0.6**
BAKI	**Biak**	**2.65**	**302**	P		**P**	**Pn**	**16 42 57.5**	**+0.4**
WRA	**Warramunga Arr**	**17.68**	**193**	P		**P**	**P**	**16 46 21.8**	**+0.6**
	0.1nm,0.3s,baz=15,slow=12,SNR=5.2								
	0.5nm,0.6s								
FITZ	**Fitzroy Crossi**	**19.82**	**218**	P		**P**	**P**	**16 46 44.0**	**-0.6**
	baz=27,slow=9.0,SNR=1.4								
	1.2nm,0.9s								
ASAR	**Alice Springs**	**21.38**	**191**	P		**P**	**P**	**16 47 02.0**	**+0.4**
	0.6nm,0.7s,baz=11,slow=12,SNR=11								
	0.6nm,0.7s								
MKAR	**Makanchi Array**	**69.49**	**323**	P		**P**	**P**	**16 53 22.0**	**0.0**
	0.6nm,0.6s,baz=114,slow=6.5,SNR=6.7								
	0.6nm,0.6s								
BVAR	**Borovoye Array**	**79.02**	**325**	P		**P**	**P**	**16 54 17.8**	**+0.4**
	1.0nm,0.6s,baz=108,slow=9.3,SNR=5.4								
	1.0nm,0.6s								
ILAR	**Eielson Array**	**85.88**	**24**	P		**P**	**P**	**16 54 52.5**	**-0.4**
	0.5nm,1.1s,baz=272,slow=8.3,SNR=2.3								
	0.5nm,1.1s								

SJA 06 16:43:35.1 ± 0.7, **28°.78S** × **67°.13W**, **h148**km ± 3km, **ML3.5, MW3.4, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AANI	**Anillaco**	**0.17**	**101**	*e*P		P	Pn	16 43 55.9	+0.6
AANI				IAML				16 44 16.3	
	comp=Z,801nm,0.5s								
ACLC	**CERRO LA CRUZ**	**0.66**	**166**	*e*P		Pn		16 43 58.0	+0.6
ACLC				*e*S		Sn		16 44 13.2	-1.3
ACLC				IAML				16 44 14.0	
	comp=Z,413nm,0.2s								
VCA	**Vinchina**	**0.94**	**272**	*e*P		Pn		16 44 00.1	+0.7
VCA				*e*S		Sn		16 44 18.9	+1.0
VCA				IAML				16 44 20.4	
	comp=Z,689nm,0.7s								
CYA	**Choya**	**1.22**	**74**	*e*P		Pn		16 44 02.6	+0.9
CYA				*e*S		Sn		16 44 21.9	-0.1
AGUA	**GUANDACOL**	**1.38**	**239**	*e*S		Sn		16 44 25.2	+0.1
AGUA				IAML				16 44 26.6	
	comp=Z,612nm,0.7s								
APLL	**PUNTA DE LOS L**	**1.69**	**162**	*e*P		Pn		16 44 07.6	+0.9
APLL				*e*S		Sn		16 44 30.7	-0.3
AVFE	**Valle Fertil**	**1.89**	**189**	*e*P		Pn		16 44 09.7	+0.7
AVFE				*e*S		Sn		16 44 35.5	+0.4
ACDV	**Cuesta del Vie**	**2.22**	**231**	*e*P		Pn		16 44 14.2	+1.3
ACDV				*e*S		Sn		16 44 42.9	+0.9
ACDV				IAML				16 44 43.1	
	comp=Z,152nm,0.9s								
ACHE	**Chepes**	**2.41**	**170**	*e*P		Pn		16 44 16.4	+1.2
ACHE				*e*S		Sn		16 44 46.2	+0.2
ACCO	**Cerro Coronel**	**2.46**	**223**	*e*P		Pn		16 44 16.9	+0.9
ACCO				*e*S		Sn		16 44 48.3	+0.7
AROD	**Rodeo**	**2.47**	**235**	*e*P		Pn		16 44 17.5	+1.4
AROD				*e*S		Sn		16 44 48.4	+0.8
AHML	**Horco Molle**	**2.55**	**39**	*e*P		Pn		16 44 17.4	+0.6
AHML				*e*S		Sn		16 44 49.0	+0.1
AC02	**Maricunga**	**2.62**	**317**	*e*P		Pn		16 44 20.5	+2.3
AC02				*e*S		Sn		16 44 57.0	+5.7
RTLL	**Cerro Villicun**	**2.79**	**204**	*e*P		Pn		16 44 20.8	+1.0
RTLL				*e*S		Sn		16 44 54.6	+0.1
RTLL				IAML				16 44 55.9	
	comp=Z,88nm,0.3s								
CO01	**Juntas del Tor**	**2.85**	**245**	*e*P		Pn		16 44 22.7	+2.0
CO01				*e*S		Sn		16 44 57.8	+1.9
FSA	**Cafayete**	**2.85**	**21**	*e*P		Pn		16 44 22.5	+1.8
FSA				*e*P				16 44 22.6	
CFA	**Coronel Fontan**	**2.97**	**199**	*e*P		Pn		16 44 22.6	+0.6
CFA				*e*S		Sn		16 44 58.4	0.0
GO03	**Copiapo**	**2.98**	**293**	*e*P		Pn		16 44 23.0	+0.8
GO03				*e*S		Sn		16 44 57.6	-1.1
GO03				IAML				16 44 58.9	
	comp=Z,103nm,0.5s								
ZON	**Zonda**	**3.06**	**206**	*e*P		Pn		16 44 23.9	+0.6
ZON				*e*S		Sn		16 45 01.0	+0.4
LCO	**Las Campanas**	**3.14**	**265**	*e*P		Pn		16 44 24.9	+0.5
LCO				*e*S		Sn		16 45 02.3	-0.2
LCO				IAML				16 45 03.3	
	comp=Z,252nm,0.6s								
TCA	**Tanti**	**3.36**	**140**	*e*P		Pn		16 44 28.3	+1.1
TCA				*e*S		Sn		16 45 05.9	-1.6
TCA				IAML				16 45 08.2	
	comp=Z,34nm,0.2s								
ACAN	**Cantantal**	**3.48**	**181**	*e*P		Pn		16 44 29.1	+0.5
ACAN				IAML				16 45 12.9	
	comp=Z,170nm,0.3s								
GO04	**Tololo Observa**	**3.49**	**246**	*e*P		Pn		16 44 29.8	+1.0
GO04				IAML				16 45 13.2	
	comp=Z,236nm,0.2s								
AC04	**Llanos de Chal**	**3.52**	**278**	*e*P		Pn		16 44 17.4	-12
AC04				*e*P				16 44 17.7	
AC04				IAML				16 45 10.5	
	comp=Z,34nm,0.6s								
RTLS	**Leoncito**	**3.54**	**211**	*e*P		Pn		16 44 30.9	+1.2
RTLS				*e*S		Sn		16 45 12.7	+0.7
RTLS				IAML				16 45 16.0	
	comp=Z,76nm,0.3s								
CO03	**El Pedregal**	**3.71**	**236**	*e*P		Pn		16 44 32.6	+1.0
CO03				*e*S		Sn		16 45 16.4	+0.9
MRA	**San Martin**	**3.83**	**162**	*e*P		Pn		16 44 34.1	+1.0
MRA				*e*S		Sn		16 45 17.4	-0.7
AC01	**Pan de Azucar**	**4.05**	**310**	*e*S		Sn		16 45 21.9	-1.3
ASAL	**Salagasta**	**4.07**	**201**	*e*P		Pn		16 44 37.4	+1.1
ASAL				*e*S		Sn		16 45 23.6	-0.3
CO02	**Combarbal**	**4.13**	**233**	*e*S		Sn		16 45 25.4	0.0
CO02				IAML				16 45 26.2	
	comp=Z,92nm,0.2s								
GO02	**Mina Guanaco**	**4.22**	**328**	*e*P		Pn		16 44 39.8	+1.2
GO02				*e*P		Pn		16 44 39.8	+1.2
GO02				*e*S		Sn		16 45 27.1	-0.6
ARCO	**CERRO ARCO**	**4.33**	**201**	*e*P		Pn		16 44 41.2	+1.4
ARCO				*e*P		Pn		16 44 41.2	+1.4
VA03	**San Esteban**	**4.94**	**216**	*e*P		Pn		16 44 48.6	+0.9
MT08	**Bocatoma Ro**	**5.27**	**207**	*e*P		Pn		16 44 39.9	-12
MT08				IAML				16 45 55.3	
	comp=Z,9.3nm,0.6s								

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*FUNV **06** 16:51:49.2, 11°.05N × 62°.22W, h23km, MW3.9*
*TRN **06** 16:51:49.9, 10°.97N × 62°.15W, h88km, MD3.0, North of the Paria peninsula.*
ISC 06 16:51:46.0 ± 1.9, **10°.88N** ± 0°.06 × **62°.15W** ± 0°.08, **h120**km ± 17km, **n22**, σ **1**° **90**/41, **2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.62**	**107**	*e*P		**Pn**		**16 52 06.1**	**+1.4**
DMDM				*e*S		**Sn**		**16 52 17.6**	**-1.3**
PSMG	**Mucurapo Girls**	**0.65**	**109**	*e*P		**Pn**		**16 52 05.7**	**+0.8**
PSMG				*e*S		**Sn**		**16 52 17.8**	**-1.5**
PSKH	**Kent House, Po**	**0.65**	**108**	*e*P		**Pn**		**16 52 06.2**	**+1.2**
PSKH				*e*S		**Sn**		**16 52 17.8**	**-1.5**
PSWS	**West Secondary**	**0.66**	**109**	*e*P		**Pn**		**16 52 07.9**	**+2.9**
PSWS				*e*S		**Sn**		**16 52 17.9**	**-1.5**
TRN	**Trinidad (W)**	**0.77**	**107**	*e*P		**Pn**		**16 52 07.2**	**+1.3**
TRN				*e*S		**Sn**		**16 52 19.2**	**-1.8**
TPP	**Pointe-a-Pierr**	**0.89**	**129**	*e*S		**Sn**		**16 52 23.3**	**+0.4**
GRFF	**Grenada Fort F**	**1.23**	**19**	*e*P		**Pn**		**16 52 10.7**	**+0.2**
GRFF				*e*S		**Sn**		**16 52 27.3**	**-1.8**
GRGR	**Grenville**	**1.34**	**21**	*e*P		**Pn**		**16 52 12.2**	**+0.6**
GRGR				*e*S		**Sn**		**16 52 30.1**	**-1.0**
GRW	**Mount Saint Ca**	**1.36**	**21**	*e*P		**Pn**		**16 52 13.3**	**+1.3**
GRW				*e*S		**Sn**		**16 52 29.6**	**-2.1**
GRHS	**Sauteurs**	**1.43**	**21**	*e*P		**Pn**		**16 52 13.8**	**+1.2**
GRHS				*e*S		**Sn**		**16 52 31.0**	**-1.8**
GRSS	**Sisters**	**1.51**	**21**	*e*P		**Pn**		**16 52 14.6**	**+1.0**
GRSS				*e*S		**Sn**		**16 52 33.6**	**-0.9**
GCMP	**Grenada, Carri**	**1.75**	**24**	*e*P		**Pn**		**16 52 16.9**	**+0.5**
GCMP				*e*S		**Sn**		**16 52 37.6**	**-2.0**
SVB	**Belmont**	**2.54**	**20**	*e*P		**Pn**		**16 52 29.9**	**+3.6**
SVB				*e*S		**Sn**		**16 52 55.1**	**-2.2**
PCRV	**Puerto La Cruz**	**2.54**	**254**	*e*P		**Pn**		**16 52 28.0**	**+1.6**
PCRV				*e*S		**Sn**		**16 52 56.3**	**-1.1**
PCRV	**Puerto La Cruz**	**2.54**	**254**	*e*P		**Pn**		**16 52 29.8**	**+3.4**
PCRV				*e*S		**Sn**		**16 52 59.0**	**+1.6**
SLBI	**Saint Lucia, B**	**3.33**	**20**	*e*P		**Pn**		**16 52 38.4**	**+1.7**
SLBI				*e*S		**Sn**		**16 53 15.0**	**-0.8**
TACV	**Tcata**	**4.85**	**262**↓	*e*P		**Pn**		**16 52 59.1**	**+2.1**
TACV				*e*S		**Sn**		**16 53 50.8**	**-1.4**
BENV	**Beln**	**5.43**	**261**	*e*P		**Pn**		**16 53 06.7**	**+1.8**
CACV	**CAICARA DEL OR**	**5.44**	**233**↑	*e*P		**Pn**		**16 53 02.6**	**-2.3**
CACV				*e*S		Sn		16 53 58.0	-8.4
TURV	**Turiamo**	**5.61**	**266**↑	*e*P		**Pn**		**16 53 08.9**	**+1.7**
TURV				*e*S		**Sn**		**16 54 07.6**	**-2.8**
BAUV	**El Baul**	**6.11**	**252**	*e*P		**Pn**		**16 53 16.0**	**+1.9**
BAUV				*e*S		**Sn**		**16 54 20.2**	**-2.5**
MAPV	**Macapo**	**6.29**	**261**	*e*P		**Pn**		**16 53 17.8**	**+1.3**
MAPV				*e*S		**Sn**		**16 54 24.0**	**-3.0**

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*MOS **06** 17:06:15.1 ± 1.0, 46°.33N × 153°.27E, h42km, mb4.2/2, Error ellipse: s-maj=15.3km s-min=8.0km az=56.1*
*SKHL **06** 17:06:15.3 ± 0.5, 46°.90N × 152°.60E, h113km ± 3km, mb4.9/5, msha5.5/5*
*NEIC **06** 17:06:17.0 ± 1.5, 47°.1N ± 0°.1 × 152°.3E ± 0°.2, h102km ± 8km, mb4.4/20, Error ellipse: s-maj=18.8km s-min=12.6km az=138.0*
*IDC **06** 17:06:17.9 ± 2.5, 47°.15N × 152°.25E, h113km ± 23km, mb3.3/12, mbtmp3.8/17, Error ellipse: s-maj=19.8km s-min=14.5km az=137.0*
ISC 06 17:06:13.3 ± 0.7, **46°.91N** ± 0°.09 × **152°.62E** ± 0°.08, **h67**km, **n76**, σ **2**° **05**/71, **mb4.0**/21, **1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.71**	**245**	*e*PN		**Pn**		**17 07 10.3**	**+2.2**
KUR				*i* S		**Sn**		**17 07 53.7**	**+3.2**
KUR				smax		smax			
	comp=N,247nm,0.5s								
KUR				smax		smax			
	comp=E,185nm,0.5s								
KUR	**Kuril'sk**	**3.71**	**245**	*e*P		**Pn**		**17 07 11.2**	**+3.1**
KUR				AMB		AMB		17 07 11.4	
	comp=E,80nm,0.3s								
KUR				*i* S		**Sn**		**17 07 53.5**	**+3.0**
KUR				A		A		17 07 58.4	
	comp=E,320nm,0.6s								
KUR				A		A		17 07 58.4	
	comp=E,400nm,0.6s								
SKR	**Severo-Kuril's**	**4.43**	**30**	*e*PN		**Pn**		**17 07 21.6**	**+3.7**
SKR				pmax		pmax			
	comp=Z,27nm,0.7s								
SKR	**Severo-Kuril's**	**4.43**	**30**	*e*P		**Pn**		**17 07 21.1**	**+3.2**
SKR				AMB		AMB		17 07 25.8	
	comp=Z,20nm,0.4s								
SKR				*e*S		**Sn**		**17 08 10.1**	**+2.0**
SKR				A		A		17 08 12.6	
	comp=Z,60nm,0.3s								
SKR				A		A		17 08 12.6	
	comp=Z,60nm,0.3s								
SHO	**Shikotan**	**5.08**	**235**	*e*P		Pn		17 07 33.9	+7.0
SHO				AMB		AMB		17 07 35.6	
	comp=Z,40nm,0.6s								
SHO				*e*S		**Sn**		**17 08 28.1**	**+3.9**
SHO				A		A		17 08 29.5	
	comp=Z,30nm,0.4s								
SHO				A		A		17 08 29.5	
	comp=Z,50nm,0.4s								
PAU	**Pauzhetka**	**5.33**	**30**	*e*P		**Pn**		**17 07 34.2**	**+4.1**
PAU				AMB		AMB		17 07 35.0	
	comp=Z,20nm,0.3s								
PAU				*e*S		**Sn**		**17 08 32.4**	**+2.4**
PAU				A		A		17 08 34.1	
	comp=Z,30nm,0.2s								
PAU				A		A		17 08 34.1	
	comp=Z,70nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**5.55**	**241**	*d i*		PN	**Pn**	**17 07 35.2**	**+1.9**
YUK						*e*S	**Sn**	**17 08 37.6**	**+1.9**
YUK				pmax		pmax			
	comp=N,42nm,0.2s								
YUK				pmax		pmax			
	comp=E,36nm,0.2s								
YUK				pmax		pmax			
	comp=Z,197nm,0.2s								
YUK				smax		smax			
	comp=E,69nm,0.3s								
YUK				smax		smax			
	comp=N,104nm,0.6s								
YUK	**Yuzh-Kuril'sk**	**5.55**	**241**	*i* P		**Pn**		**17 07 35.2**	**+1.9**
YUK				AMB		AMB		17 07 35.9	
	comp=N,150nm,0.3s								
YUK				*e*S		**Sn**		**17 08 37.6**	**+1.9**
YUK				A		A		17 08 40.8	
	comp=N,100nm,0.4s								
YUK				A		A		17 08 40.8	
	comp=N,70nm,0.4s								
RUSJ	**Misakicho**	**5.89**	**244**	PN		**Pn**		**17 07 40.4**	**+2.5**
RUSJ				S		**Sn**		**17 08 44.1**	**+0.1**
NMR	**Nemuro--Hokkai**	**6.02**	**236**	*i*	P	PN	**Pn**	**17 07 39.1**	**-0.6**
NMR				*i*	S		**Sn**	**17 08 43.7**	**-3.5**
NMR	**Nemuro--Hokkai**	**6.02**	**236**	*i*	P		**Pn**	**17 07 39.2**	**-0.5**
AKK	**Akkeshi**	**6.75**	**238**	*e*P			**Pn**	**17 07 48.7**	**-1.0**
YSS	**Yuzhno-Sakhali**	**6.75**	**274**	Pn			**Pn**	**17 07 51.0**	**+1.3**
YSS	**Yuzhno-Sakhali**	**6.75**	**274**	*e*PN			Pn	17 07 54.9	+5.2
YSS	**Yuzhno-Sakhali**	**6.75**	**274**	*e*P			**Pn**	**17 07 52.2**	**+2.5**
PEA0B	**Petropavlovsk-**	**7.01**	**26**	Pn			**Pn**	**17 07 53.9**	**+0.7**
PEA0B	**Petropavlovsk-**	**7.01**	**26**	PN			**Pn**	**17 07 53.9**	**+0.7**
PETK	**Petropavlovsk-**	**7.01**	**26**	P			**Pn**	**17 07 55.9**	**+2.7**
	comp=N,4.5nm,0.8s,baz=180,slow=7.7,SNR=7.7								
JKA	**Kamikawa-asahi**	**7.57**	**252**				**Pn**	**17 08 03.5**	**+2.6**
JKA	**Kamikawa-asahi**	**7.57**	**252**	*e*P			**Pn**	**17 08 03.5**	**+2.6**
ASAJ	**Asahikawa**	**7.57**	**252**	P			**Pn**	**17 08 03.5**	**+2.6**
	comp=N,5.3nm,0.5s,baz=45,slow=11,SNR=11								
TYV	**Tymovskoe**	**7.67**	**305**	*e*P			**Pn**	**17 08 04.4**	**+2.3**
ERM	**Erimo**	**8.35**	**238**	Pn			**Pn**	**17 08 13.4**	**+1.9**
ERM	**Erimo**	**8.35**	**238**	PN			**Pn**	**17 08 13.4**	**+1.9**
NKL	**Nikolayevsk**	**9.89**	**314**	*e*P			**Pn**	**17 08 33.3**	**+0.8**
JTM	**Tenmabayashi**	**10.34**	**238**	Pn			**Pn**	**17 08 35.5**	**-3.3**
USRK	**Ussuriysk Ar.**	**14.70**	**267**	P			**Pn**	**17 09 37.0**	**-0.4**
	comp=N,1.7nm,0.4s,baz=70,slow=12,SNR=5.4								
MJAR	**Matsushiro Arr**	**14.91**	**231**	P			**Pn**	**17 09 42.2**	**+2.0**
	comp=N,0.8nm,0.5s,baz=46,slow=10,SNR=6.4								
JGF	**Kuroka**	**16.07**	**231**	Pn			**Pn**	**17 09 54.9**	**-0.1**
YAK	**Yakutsk**	**20.00**	**328**	IAmb		IAmb	IAmb	17 10 42.1	
	comp=Z,8.6nm,0.7s								
YAK	**Yakutsk**	**20.00**	**328**	P			**P**	**17 10 38.2**	**-1.9**
	comp=Z,6.7nm,0.6s,baz=131,slow=3.3,SNR=6.8								
KSRS	**Korea Array**	**20.52**	**252**	P			**P**	**17 10 47.0**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=55,slow=11,SNR=4.4								
	comp=Z,1.2nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**29.52**	**152**	T			T	17 43 41.6	
	baz=340,slow=76,SNR=76								
H11N1	**WAKE ISLAND Hy**	**29.53**	**152**	T			T	17 43 51.0	
	baz=340,slow=76,SNR=76								
H11N3	**WAKE ISLAND Hy**	**29.54**	**152**	T			T	17 43 42.8	
	baz=340,slow=76,SNR=63								
H11S1	**WAKE ISLAND Hy**	**30.60**	**153**	T			T	17 45 04.9	
	baz=341,slow=76,SNR=116								
H11S3	**WAKE ISLAND Hy**	**30.61**	**153**	T			T	17 45 04.5	
	baz=341,slow=76,SNR=116								
H11S2	**WAKE ISLAND Hy**	**30.62**	**153**	T			T	17 45 11.1	
	baz=341,slow=76,SNR=118								
C18K	**Utukok River**	**31.65**	**30**	P			**P**	**17 12 30.0**	**+0.3**
G18K	**Tagagawik**	**31.84**	**36**	P			**P**	**17 12 31.6**	**+0.3**
G18K				IAmb		IAmb	IAmb	17 12 52.7	
	comp=Z,9.0nm,1.3s								
D19K	**Kuna River**	**32.69**	**31**	P			**P**	**17 12 38.8**	**0.0**
D19K				IAmb		IAmb	IAmb	17 13 05.1	
	comp=Z,11nm,1.4s								
E19K	**Redstone River**	**32.74**	**33**	P	

comp=Z,0.1nm,0.4s
TXAR Lajitas Array 77.71 60 P P 17 18 03.1 +0.1
comp=Z,0.4nm,0.4s,baz=310,slow=4.6,SNR=8.4
comp=Z,0.4nm,0.4s
H03N2 Juan Fernandez 139.09 90 T T 20 01 01.3
baz=308,slow=77,SNR=13
H03N1 Juan Fernandez 139.11 90 T T 20 01 07.9
baz=308,slow=77,SNR=11
H03N3 Juan Fernandez 139.11 90 T T 20 01 02.0
baz=308,slow=77,SNR=11

DJA 06 17:09:26.9±1.0,1°N±3°×97°E±°,h20km±6km,M4.0/12, mb4.5/4,MLv3.7/12,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.55	70	P	Pn	17 09 38.9	-0.7
GSI				S	Sn	17 09 47.3	-0.8
SNSI	Sinabang, Aceh	1.48	330	P	Pn	17 09 52.4	0.0
PBSI	Pulau Batu	1.69	134	P	Pn	17 09 55.2	-0.1
KCSI	Kotacane, Aceh	2.49	17	P	Pn	17 10 06.7	+0.4
MNSI	Mandailing Nat	2.54	97	P	Pn	17 10 07.0	0.0
SISI	Saibi	3.17	140	P	Pn	17 10 15.5	-0.1
LHMI	Lhok Sumawe	4.08	358	P	Pn	17 10 27.7	-0.5
KRJI	Kerinci 63nm,0.6s	5.43	126	P	Pn	17 10 47.7	+0.8
MNAI	Manna	8.02	133	P	Pn	17 11 22.0	-0.4

*DSN **06** 17:16:35.0±0.9,27°.65N×55°.11E,h15km,ML2.9/6,Error ellipse: s-maj=19.1km s-min=5.8km az=46.0*
*TEH **06** 17:16:38.6,27°.13N×55°.00E,h18km±23km*
*OMAN **06** 17:16:42.7±0.2,26°.86N×54°.84E,h8km±1km,mb4.7/3, ml2.9/16,Error ellipse: s-maj=1.2km s-min=0.9km az=226.0*

ISC 06 17:16:38.6±1.4,27°.09N±0°.04×54°.97E±0°.05,h0km±12km, n42,σ1§64/48,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.78	318	Pg	Pg	17 16 53.9	+0.3
GENO	Geno	1.12	74	Pg	Pn	17 16 58.9	-2.8
IBND	Bandar-abas	1.45	75	Pg	Pb	17 17 04.9	-1.5
IBND				Sg	Sg	17 17 25.1	0.0
SHME	Shamm	1.48	134	P	Pg	17 17 07.2	+0.2
SHME				S	Sg	17 17 28.4	+2.2
SHME	Shamm	1.48	134	P	Pb	17 17 06.3	-0.7
BANOM	Banah	1.67	134	P	Pg	17 17 10.5	-0.2
BANOM				S	Sg	17 17 33.3	+1.0
BANOM	Banah	1.67	134	P	Pb	17 17 08.5	-1.7
BANOM				S	Sg	17 17 34.7	+2.4
JHRM	Jahrom	1.87	319	Pn	Pb	17 17 11.6	-2.2
MASF	Masafi	2.02	148	P	Pb	17 17 14.8	-1.5
MSFE	Esma-Masafi	2.03	148	P	Pb	17 17 14.6	-1.8
MDH	Madha	2.15	146	P	Pb	17 17 17.2	-1.3
MDH				S	Sb	17 17 43.7	-1.9
MDH	Madha	2.15	146	P	Pb	17 17 16.5	-2.0
NAZ	Nazwa, Dubai	2.19	163	P	Pb	17 17 17.5	-1.6
FAQ	Al Faqa, Dubai	2.41	166	P	Pb	17 17 21.6	-1.2
UOSS	Minazif	2.41	152	P	Pb	17 17 20.6	-2.3
UOSS	Minazif	2.41	152	P	Pb	17 17 20.1	-2.9
ASUD	Al Ashush, Dub	2.48	172	P	Pn	17 17 19.9	-0.3
HATD	Hatta, Dubai	2.49	155	P	Pb	17 17 22.7	-1.6
HATD	Hatta, Dubai	2.49	155	P	Pb	17 17 21.9	-2.3
AJN	Ajban	2.52	180	P	Pn	17 17 20.7	-0.2
KHNJ	Kahnooj	2.58	70	Pn	Pb	17 17 19.9	-1.8
ASHO	Ashiyiah SNR=11	2.59	157	P	Pb	17 17 23.4	-2.6
ASHO	Ashiyiah	2.59	157	P	Pb	17 17 23.2	-2.9
ALNE	Al Ain	3.11	167	P	Pn	17 17 30.3	+1.4
SOHO	SOHO	3.27	154	P	Pn	17 17 31.9	+0.7
CHMN	Cheshme madani	3.57	39	Pn	Pn	17 17 34.6	-1.0
KBAM	BAM	3.69	56	Pn	Pn	17 17 36.1	-0.9
ARQ	Araqi	4.00	159	P	Pn	17 17 42.8	+1.6
MZR	Muzera	4.29	199	P	Pn	17 17 45.4	+0.2
IMEH	Mehriz	4.29	356	Pn	Pn	17 17 44.0	-1.5
UMZA	Um Al Zommool	4.36	178	P	Pn	17 17 47.3	+1.1
SMDO	Samad	4.89	145	P	Pn	17 17 54.4	+0.8
SMDO				S	Sn	17 18 51.6	+0.6
IRAM	Ramesheh	5.21	335	Pn	Pn	17 17 57.2	+0.9
SRVN	Saravan	6.62	86	Pn	Pn	17 18 16.4	-1.0
MHTO	MHTO	6.67	155	P	Pn	17 18 18.3	+0.4
DOK	Doka	8.47	185	P	Pn	17 18 42.5	-0.1
WHFO	Wadi Hawf SNR=16	9.20	187	P	Pn	17 18 53.0	+0.4
RAYN	Ar Rayn	9.27	250	P	Pn	17 18 52.1	-1.6
DMTO	DMTO	9.33	180	P	Pn	17 18 54.7	+0.2
RBK	Rabkut	9.57	184	P	Pn	17 18 57.9	+0.2
KBL	Kabul	14.18	55	P	P	17 20 09.2	+0.5
KIV	Kislovodsk	19.53	333	P	Pn	17 21 12.7	+3.7

*NEIC **06** 17:24:16.4±1.0,57°.93N±0°.05×156°.32W±0°.09, h146km±4km,Error ellipse: s-maj=7.4km s-min=6.0km az=136.0*
*AEIC **06** 17:24:17.8±1.2,57°.96N±0°.03×156°.33W±0°.09, h142km±4km,ML3.3,ML3.2/92(NEIC),Error ellipse: s-maj=7.0km s-min=4.6km az=107.0*
*IDC **06** 17:24:20.5±4.6,58°.26N×155°.67W,h138km±20km,mb3.0/3, mbtmp3.6/5,Error ellipse: s-maj=53.0km s-min=19.5km az=75.0*

ISC 06 17:24:16.7±0.8,57°.96N±0°.04×156°.30W±0°.04, h144km±6km,n176,σ1§04/186,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLK1	Peulik 1	0.23	226		Pn	17 24 36.4	+0.2
PLK1					Sn	17 24 51.2	+0.2
PLK5	Peulik 5	0.31	277		Pn	17 24 36.6	+0.2
PLK5					Sn	17 24 51.5	+0.1
PLK4	Peulik 4	0.33	186	Pn	Pn	17 24 36.7	0.0
PLK4	Peulik 4	0.33	186		Sn	17 24 51.9	+0.1
CNTC	Contact Creek	0.38	36		Pn	17 24 37.0	+0.1
CNTC					Sn	17 24 51.9	-0.3
PLBL	Peulik Blue Cr	0.38	227		Pn	17 24 36.8	0.0
PLBL					Sn	17 24 52.0	+0.1
KJL	Kejulik	0.40	76		Pn	17 24 37.2	+0.3
ANCK	Angle Creek	0.49	60		Pn	17 24 37.7	+0.4
ACHA	Angle Creek He	0.57	64		Pn	17 24 37.8	0.0
ACHA	Angle Creek He	0.57	64		Sn	17 24 53.9	+0.1
KABU	Katmai Buttres	0.62	60		Pn	17 24 38.5	+0.4
KABU					Sn	17 24 54.6	+0.2
KAKN	Katmai Knife C	0.74	62		Pn	17 24 38.8	0.0
KAKN					Sn	17 24 56.2	+0.5
Q16K	King Salmon	0.74	346		Sn	17 24 55.9	+0.4
R16K	Pilot Point	0.79	241	Pn	Pn	17 24 38.6	-0.5
KAWH	Katmai	0.90	61		Pn	17 24 40.2	+0.1
KAWH					Sn	17 24 57.9	0.0
KAHC	Katmai Hardscr	0.97	44		Pn	17 24 40.9	+0.3
KAHC					Sn	17 24 58.6	-0.4
KARR	Katmai Rainbow	1.00	57		Pn	17 24 41.3	+0.4
KARR					Sn	17 24 59.8	+0.5
KAHG	Katmai Hook Gl	1.07	59		Pn	17 24 42.1	+0.6
KAHG					Sn	17 25 01.0	+0.5
P16K	Nushagak River	1.40	321		Pn	17 24 44.2	-0.3
P16K				IAML		17 25 06.6	
	comp=E,267nm,1.0s						
P16K				IAML		17 25 07.1	
	comp=N,155nm,1.0s						
ANNE	Aniakchak Nort	1.42	223		Pn	17 24 44.6	-0.2
ANPK	Aniakchak Peak	1.49	222		Pn	17 24 45.6	-0.2
P18K	Big Mountain,	1.54	21		Sn	17 25 08.5	-0.3
ANPB	Aniakchak Plen	1.58	224		Pn	17 24 46.3	-0.3
Q19K	Cape Douglas,	1.70	54		Pn	17 24 48.0	+0.1
Q19K				IAML		17 25 20.0	
	comp=N,342nm,0.7s						
OHAK	Old Harbor	1.78	113		Pn	17 24 48.5	-0.2
OHAK				IAML		17 25 13.0	
	comp=E,234nm,0.4s						
OHAK	Old Harbor	1.78	113	P	Pn	17 24 48.6	-0.2
SII	Sitkinak Islan	1.81	140		Pn	17 24 48.9	-0.3
SII				Sn	Sn	17 25 13.1	-1.0
SII	Sitkinak Islan	1.81	140	P	Pn	17 24 49.0	-0.3
O17K	Koliganek Bris	1.87	348		Pn	17 24 49.6	-0.1
O16K	Kokwok River B	1.89	331		Pn	17 24 49.3	-0.7
O16K				IAML		17 25 15.9	
	comp=E,164nm,1.1s						
O18K	Koktuh Hills	1.98	16		Pn	17 24 51.3	+0.1
O18K					Sn	17 25 17.6	-0.1
KDAK	Kodiak Island	1.99	94		Pn	17 24 51.4	+0.2
KDAK				IAML		17 25 18.7	
	comp=E,194nm,0.7s						
KDAK				IAML		17 25 23.4	
	comp=E,112nm,0.9s						
KDAK	Kodiak Island	1.99	94		Sn	17 25 16.8	-1.0
KDAK	Kodiak Island	1.99	94	P	Pn	17 24 51.6	+0.4
	comp=E,6.7nm,0.3s,baz=330,slow=0.5,SNR=29						
KDAK				S	Sn	17 25 15.1	-2.6
	comp=E,53nm,0.4s,baz=213,slow=24,SNR=35						
SYI	Shuyak Island	2.17	71		Pn	17 24 53.7	+0.4
SYI				IAML		17 25 22.0	
	comp=E,94nm,1.1s						
SYI				IAML		17 25 22.2	
	comp=N,170nm,0.9s						
CHIR	Chirikof Islan	2.17	170	Pn	Pn	17 24 52.3	-1.1
CHIR	Chirikof Islan	2.17	170		Sn	17 25 20.1	-1.6
CHIR	Chirikof Islan	2.17	170	P	Pn	17 24 52.5	-1.0
CHIR	Chirikof Islan	2.17	170	S	Sn	17 25 20.1	-1.6
O15K	Ungalikthiuk R	2.21	305		Pn	17 24 53.8	-0.1
O15K				IAML		17 25 22.3	
	comp=N,49nm,0.7s						
VNNF	Veniaminof 3	2.35	226		Pn	17 24 55.7	0.0
VNFG	Fog Glacier, M	2.44	228		Pn	17 24 56.9	0.0
VNFG	Fog Glacier, M	2.44	228	IAML		17 25 27.5	
	comp=N,184nm,1.1s						
O19K	Port Alsworth	2.46	24		Pn	17 24 56.7	-0.2
O19K				IAML		17 25 30.2	
	comp=N,78nm,1.0s						
O19K				IAML		17 25 52.2	
	comp=E,77nm,0.5s						
ILSW	Iliamna Southw	2.61	38		Pn	17 24 59.0	+0.2
ILSW				IAML		17 25 32.3	
	comp=N,53nm,1.0s						
N17K	Nushagak Hills	2.62	350		Pn	17 24 58.2	-0.7
N17K				IAML		17 25 31.9	
	comp=N,39nm,1.1s						
IVE	Iliamna Volcan	2.67	38		Pn	17 25 00.0	+0.4
N18K	Kilae Creek	2.74	4		Pn	17 25 00.6	+0.2
N16K	Nishlik Lake	2.83	334		Pn	17 25 01.1	-0.4
O14K	Tigyukauivet M	2.90	299		Pn	17 25 02.4	0.0
N15K	Kwethluk River	2.96	320		Pn	17 25 03.0	-0.1
N19K	Bonanza Creek	3.01	17		Pn	17 25 04.1	+0.2
N19K				IAML		17 25 41.4	
	comp=N,26nm,1.2s						
RED	Redoubt Volcan	3.06	35		Pn	17 25 05.0	+0.4
CNPM	China Poot	3.07	57	Pn	Pn	17 25 05.3	+0.7
CNPM				IAML		17 25 41.3	
	comp=N,59nm,0.6s						
CNPM				IAML		17 25 51.9	
	comp=E,37nm,0.8s						
RDWB	Redoubt West	3.10	34		Pn	17 25 05.2	+0.1
NCT	North Crescent	3.13	32		Pn	17 25 05.7	+0.2
DFR	Drift River	3.23	34		Pn	17 25 06.7	0.0
M16K	Timber Creek	3.36	337	Pn	Pn	17 25 08.6	+0.3
N14K	Kuskokwak Cree	3.42	307	Pn	Pn	17 25 08.8	-0.1
N14K				IAML		17 26 24.4	
	comp=N,34nm,1.1s						
N14K				IAML		17 26 37.3	
	comp=E,36nm,1.1s						
SDPT	Sand Point	3.49	223	Pn	Pn	17 25 08.9	-1.1
SDPT				IAML		17 25 49.3	
	comp=E,51nm,1.1s						
SDPT				IAML		17 25 52.2	
	comp=N,58nm,1.2s						
SDPT	Sand Point	3.49	223	P	Pn	17 25 08.9	-1.1
SDPT	Sand Point	3.49	223	S	Sn	17 25 48.1	-3.1
M17K	Holitna River	3.50	351		Pn	17 25 10.3	+0.2
M17K	Holitna River	3.50	351	IAML		17 26 05.7	
	comp=N,30nm,0.9s						
M17K				IAML		17 26 09.9	
	comp=E,38nm,1.1s						
M15K	Kasigluk River	3.55	323		Pn	17 25 10.2	-0.5
CHNA	Chernabura Isl	3.63	212	P	Pn	17 25 09.9	-1.9
CNBA	Chernabura Isl	3.64	212		Pn	17 25 09.8	-2.2
CNBA				IAML		17 25 54.1	
	comp=E,50nm,0.9s						
CNBA				IAML		17 26 00.2	
	comp=N,61nm,1.1s						
SPCR	Spurr Chakacha	3.86	31		Pn	17 25 15.3	+0.4
SPBG	Spurr Blockage	3.87	29		Pn	17 25 16.3	+1.3
SPU	Mount Spurr	3.89	32		Pn	17 25 15.6	+0.4
S12K	Black Hills	3.89	237	Pn	Pn	17 25 15.0	-0.2
S12K				IAML		17 26 32.4	
	comp=N,41nm,1.0s						
S12K				IAML		17 27 43.5	
	comp=E,31nm,1.2s						
PS1A	Pavlof South-1	3.93	232		Pn	17 25 15.5	-0.3
SPCG	Spurr Capps Gl	3.99	31		Pn	17 25 17.0	+0.4
M14K	Bethel	4.03	316	Pn	Pn	17 25 16.6	-0.4
M14K				IAML		17 27 03.5	
	comp=N,18nm,1.2s						
M14K				IAML		17 27 50.9	
	comp=E,16nm,1.1s						
PN7A	Pavlof North-7	4.04	234		Pn	17 25 16.9	-0.3
SLKM	Skilak Lake	4.04	48	Pn	Pn	17 25 17.7	+0.6
SLKM				IAML		17 26 01.2	
	comp=N,34nm,0.6s						
SLKM				IAML		17 26 07.6	
	comp=E,30nm,0.4s						
HAG	Hague Volcano	4.07	232		Pn	17 25 17.7	0.0
SEW	Seward	4.14	56	Pn	Pn	17 25 19.0	+0.5
SEW				IAML		17 26 07.4	
	comp=E,20nm,1.1s						
SEW				IAML		17 26 08.5	
	comp=N,30nm,0.7s						
DOL	Dolgoi Island	4.17	230		Pn	17 25 18.5	-0.5
STLK	Strandline Lak	4.21	31		Pn	17 25 19.8	+0.3
M20K	Styx River	4.25	21		Pn	17 25 20.9	+0.9
M20K	Styx River	4.25	21	IAML		17 26 11.4	
	comp=N,10nm,1.0s						
L19K	White Mountain	4.30	9		Pn	17 25 21.1	+0.5
L19K				IAML		17 26 52.6	
	comp=E,15nm,1.2s						
DT1	Dutton Round H	4.37	232		Pn	17 25 21.0	-0.6
SUA	Susitna One	4.50	36		Pn	17 25 23.4	+0.1
SUA				IAML		17 26 15.5	
	comp=N,29nm,1.0s						
RC01	Rabbit Creek A	4.58	44	Pn	Pn	17 25 23.7	-0.7
RC01				IAML		17 26 17.2	
	comp=N,44nm,0.4s						
SKT	Skwentna	4.69	29		Pn	17 25 26.6	+0.8
SKT				IAML		17 26 22.8	
	comp=N,8.5nm,0.4s						
SKT				IAML		17 26 22.8	
	comp=E,13nm,1.0s						
L20K	Farewell, AK	4.69	14		Pn	17 25 26.8	+1.0
K17K	Iditarod	4.88	349		Pn	17 25 28.5	+0.3
K17K	Iditarod	4.88	349	IAML		17 27 03.1	
	comp=N,10nm,1.1s						
K17K				IAML		17 28 50.9	
	comp=E,9.6nm,1.1s						
M22K	Willow	4.92	37		Pn	17 25 27.3	-1.4
PWL	Port Wells	5.00	51	Pn	Pn	17 25 28.9	-1.0
FALS	False Pass	5.03	235	P	Pn	17 25 27.5	-2.8
P23K	Montague Islan	5.04	62	Pn	Pn	17 25 30.3	0.0
K15K	Wolf Creek Mou	5.07	331	Pn	Pn	17 25 32.3	+1.5
K15K				IAML		17 26 33.5	
	comp=N,6.5nm,1.1s						
K15K				IAML		17 26 36.0	
	comp=E,6.6nm,1.1s						
KNK	Knik Glacier	5.27	46		Pn	17 25 32.2	-1.2
GHO	Glory Hole Cre	5.33	41		Pn	17 25 33.0	-1.3
PPLA	Purkeypike	5.36	21		Pn	17 25 36.9	+2.2
PPLA				IAML		17 26 43.0	
	comp=E,5.5nm,1.1s						
PPLA				IAML		17 27 36.7	
	comp=N,8.3nm,1.1s						
K20K	Telida	5.53	10		Pn	17 25 37.3	+0.5
J18K	Innoko River	5.53	358		Pn	17 25 37.5	+0.7
SML	Sawmill	5.56	43	Pn	Pn	17 25 35.7	-1.7
HIN	Hinchinbrook I	5.60	60	Pn	Pn	17 25 38.0	+0.2
J16K	Anvik River	5.75	340		Pn	17 25 40.5	+0.7
FID	Port Fidalgo	5.75	57		Pn	17 25 38.5	-1.3
SCM	Sheep Creek Mo	5.95	46		Pn	17 25 41.1	-1.5
EYAK	Cordova Ski Ar	6.00	60	P	Pn	17 25 42.6	-0.6
J19K	Poorman	6.07	3		Pn	17 25 44.6	+0.6
WAT7	Susitna Watana	6.12	34		Pn	17 25 43.4	-1.5
KTH	Kantishna Hill	6.20	23		Pn	17 25 45.4	-0.4
WAT1	Susitna Watana	6.21	35		Pn	17 25 44.5	-1.5
DIV	Divide	6.22	55		Pn	17 25 45.6	-0.7
TRF	Thorofare Moun	6.25	26		Pn	17 25 45.9	-0.7
WAT6	Susitna Watana	6.29	39		Pn	17 25 45.4	-1.8
J20K	Nowinta River	6.33	9		Pn	17 25 47.6	+0.1
GOAT	Goat Mountain	6.49	61		Pn	17 25 49.3	-0.4
AKSA	Akutan Strait	6.51	238		Pn	17 25 49.2	-0.8
AKUT	Akutan	6.54	238	P	Pn	17 25 50.2	-0.3
M24K	Tolsona, Glenn	6.56	46		Pn	17 25 49.9	-0.8
RND	Reindeer	6.57	31		Pn	17 25 49.6	-1.2
ZRO	Akutan Zero	6.67	239		Pn	17 25 51.6	-0.5
BMRM	Bremner River	6.68	58		Pn	17 25 51.8	-0.5
BPAW	Bear Paw Mtn.	6.68	20		Pn	17 25 51.5	-0.7
DHY	Denali Highway	6.76	37		Pn	17 25 51.6	-1.8
MCK	McKinley	6.81	29		Pn	17 25 52.7	-1.3
N25K	Chitina, Valde	6.94	53		Pn	17 25 55.6	-0.2
UNV	Unalaska Valle	7.06	239	P	Pn	17 25 55.7	-1.7
HARP	HAARP	7.12	47		Pn	17 25 57.3	-0.8
KHIT	Khitrov Hills	7.15	64		Pn	17 25 58.6	0.0
H17K	Granite Mounta	7.21	348		Pn	17 26 00.4	+1.1
GLB	Gilahina Butte	7.22	56		Pn	17 25 59.3	-0.1
WACK	Wrangell Chich	7.23	51		Pn	17 25 60.0	+0.1
MGOD	Makushin Gods	7.26	239		Pn	17 25 59.0	-1.1
CRQM	Cirque	7.29	62		Pn	17 26 00.6	+0.1
H18K	Honhosa River	7.29	353		Pn	17 26 00.1	-0.2
VRDI	Verde Repeater	7.29	58		Pn	17 26 00.2	-0.4
PAX	Paxson	7.34	42		Pn	17 26 00.2	-0.9
WAX	Waxell Ridge	7.34	64		Pn	17 26 01.1	-0.1
TGL	Tana Glacier	7.43	62		Pn	17 26 02.5	+0.1
BARK	Barkley Ridge	7.50	65		Pn	17 26 03.5	+0.1
MCARA	McCarthy VSAT	7.54	57		Pn	17 26 04.1	+0.3
H19K	Roundabout Mou	7.60	360		Pn	17 26 04.4	0.0
KIAG	Kiagna River	7.70	61		Pn	17 26 06.0	-0.1
BAGL	Bagley Icefiel	7.72	65		Pn	17 26 06.4	+0.3
BALM	Baldy	7.74	61		Pn	17 26 06.5	-0.1
CCB	Clear Creek Bu	7.85	28		Pn	17 26 05.3	-2.5
YAH	Yahtse	7.86	66		Pn	17 26 08.6	+0.3
I23K	Minto, Yukon-K	7.93	22		Pn	17 26 07.6	-1.3
GRNC	Granite Creek	7.94	63		Pn	17 26 09.3	0.0
RKAV	Rock Avalanche	8.04	67		Pn	17 26 11.2	+0.6
OKTU	Okmok Mt. Tuli	8.06	240		Pn	17 26 09.1	-1.7
BARN	Barnard Glacie	8.06	61		Pn	17 26 10.6	-0.4
IMAR	Indian Mountai	8.14	7		Pn	17 26 11.8	0.0
L26K	Log Cabin Wild	8.16	46		Pn	17 26 12.2	+0.2
TABL	Table Mountain	8.17	66		Pn	17 26 12.2	-0.2
IL31		8.19	29		Pn	17 26 09.7	-2.6
ILAR	Eielson Array comp=N,4.5nm,0.5s,baz=216,slow=14,SNR=103	8.19	29	P	Pn	17 26 10.2	-2.2
ILAR				S	Sn	17 27 37.4	-5.9
	comp=N,1.9nm,0.8s,baz=218,slow=21,SNR=9.7						
CTGM	Chitina Glacie	8.19	62		Pn	17 26 12.5	-0.2
M27K	Edge Creek, AK	8.43	52		Pn	17 26 15.8	0.0
J25K	Salcha River,	8.49	34	Pn	Pn	17 26 14.3	-2.2
G21K	Allakaket	8.69	7	Pn	Pn	17 26 19.6	+0.6
O28M	Mount Upton	8.69	64	Pn	Pn	17 26 19.9	+0.4
NIKH	Nikolski High	8.70	240		Pn	17 26 16.9	-2.5
NIKH	Nikolski High	8.70	240	P	Pn	17 26 18.1	-1.2
L27K	Beaver Creek,	8.77	48		Pn	17 26 20.0	-0.3
BCAR	Beaver Creek A	8.79	48		Pn	17 26 20.0	-0.5
PNL	Peninsula	8.94	72	P	Pn	17 26 23.0	+0.6
F21K	Alatna River	9.39	7	Pn	Pn	17 26 28.7	+0.3
M29M	Somme Creek	9.94	56	Pn	Pn	17 26 36.0	+0.2
DAWY	Dawson	10.21	46	Pn	Pn	17 26 39.1	-0.3
I28M	Miner Creek	10.77	39	Pn	Pn	17 26 44.9	-2.0
K29M	Barlow Dome	10.85	49	Pn	Pn	17 26 48.8	+0.8
J30M	Hart River	11.63	47	Pn	Pn	17 26 59.3	+1.1
INK	Inuvik comp=N,3.4nm,0.9s,baz=226,slow=9.2,SNR=5.5	14.50	35	P	Pn	17 27 32.4	-2.3
YKA	Yellowknife Ar comp=N,1.4nm,0.9s,baz=269,slow=9.4,SNR=2.5	20.91	60	P	P	17 28 47.4	0.0
	comp=N,1.4nm,0.9s						
PDAR	Pinedale Array comp=N,0.2nm,0.4s,baz=316,slow=4.1,SNR=4.0	32.71	97	P	P	17 30 37.8	+2.2
	comp=N,0.2nm,0.4s						
TXAR	Lajitas Array comp=N,0.2nm,0.4s,baz=308,slow=5.3,SNR=5.0	45.98	105	P	P	17 32 27.2	+1.8
	comp=N,0.2nm,0.4s						

*AFAD **06** 17:37:55.8,39°.65N×38°.80E,h7km±2km,ML2.2*
*ISK **06** 17:37:55.3,39°.68N×38°.81E,h10km,ML2.6/8*

ISC 06 17:37:55.9±1.1,39°.66N±0°.03×38°.79E±0°.03,h9km±9km, n18,σ1§19/33,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIC	ilic-Erzincan	0.27	221	Pg	Pg	17 38 01.7	+0.4
ILIC				Sg	Sg	17 38 06.3	+1.3
KELT	Kelkit	0.61	36	P	Pg	17 38 07.5	-0.2
KELT				S	Sb	17 38 16.2	-1.4
KELT				*i* IAML		17 38 17.0	
	comp=N,92nm,0.2s						
KELT				*i* IAML		17 38 17.0	
	comp=E,148nm,0.5s						
ARPR	Arapgir-MALATY	0.66	212	Pg	Pg	17 38 08.9	+0.1
ARPR				Sg	Sb	17 38 18.9	-0.2
ALUC	Giresun/Alucra	0.69	359	P	Pg	17 38 09.3	0.0
ALUC				S	Sb	17 38 19.5	-0.4
ALUC				*i* IAML		17 38 20.0	
	comp=E,140nm,0.5s						
ALUC				*i* IAML		17 38 22.0	
	comp=N,139nm,0.3s						
EUZM	Uzumlu	0.70	85	P	Pg	17 38 09.3	-0.1
EUZM				S	Sb	17 38 20.6	+0.5
EUZM				*i* IAML		17 38 22.0	
	comp=N,70nm,0.3s						
EUZM				*i* IAML		17 38 26.0	
	comp=E,73nm,0.3s						
SUSE	Susehri	0.71	321	P	Pb	17 38 09.9	-0.8
SUSE				*i* IAML		17 38 20.0	
	comp=E,64nm,0.3s						
SUSE				S	Sb	17 38 20.3	-0.4
SUSE				*i* IAML		17 38 22.0	
	comp=N,93nm,0.3s						
ERZN	Erzincan	0.72	95	Pg	Pg	17 38 09.6	-0.2
ERZN				Sg	Sb	17 38 19.9	-0.9
TNCL	Tunceli-Merkez	0.79	133	P	Pg	17 38 11.0	-0.2
TNCL				S	Sb	17 38 22.9	+0.1

KUR				A	A	17 43 48.0	
	240nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.11**	**250**	*i* P	Pn	17 43 40.2	+0.3
YUK				AMB	AMB	17 43 42.5	
	50nm,0.3s						
YUK				*e*S	Sn	17 44 25.6	-1.3
YUK				A	A	17 44 33.1	
	60nm,0.3s						
YUK				A	A	17 44 33.1	
	90nm,0.3s						
GLVR	**Golovnino**	**4.46**	**247**	*e*P	Pn	17 43 44.9	+0.2
GLVR				*e*S	Sn	17 44 33.4	-2.2
GLVR				A	A	17 44 38.9	
	150nm,0.3s						
GLVR				A	A	17 44 38.9	
	80nm,0.3s						
NEM2	**Nemuro 2**	**4.50**	**242**	*e*P	Pn	17 43 44.2	-1.0
NEM2				*e*S	Sn	17 44 32.7	-3.8
NMR	**Nemuro--Hokkai**	**4.51**	**242**	*e*P	Pn	17 43 45.5	+0.2
NMR				*e*S	Sn	17 44 34.6	-2.1
JRA	**Rausu**	**4.64**	**251**	*e*P	Pn	17 43 49.7	+2.6
JNK	**Nakash**	**5.05**	**249**	*e*P	Pn	17 43 54.5	+1.7
AKK	**Akkeshi**	**5.25**	**243**	*e*P	Pn	17 43 55.8	+0.3
JAK	**Akkeshi**	**5.35**	**243**	*e*P	Pn	17 43 55.6	-1.2
JAK				*e*S	Sn	17 44 53.1	-4.3
JTKR	**Abashiri--Toko**	**5.44**	**255**	*e*P	Pn	17 44 00.6	+2.4
JAR	**Ashorobuto**	**5.80**	**249**	*e*P	Pn	17 44 04.2	+1.1
JAR				*e*S	Sn	17 45 09.4	+0.9
JOB	**Onbets**	**5.94**	**246**	*e*P	Pn	17 44 04.4	-0.6
YSS	**Yuzhno-Sakhali**	**6.01**	**286**	*e*P	Pn	17 44 08.0	+2.0
JKK2	**Kamakawa 2**	**6.27**	**257**	*e*P	Pn	17 44 11.9	+2.4
JCH	**Churui**	**6.39**	**245**	*e*P	Pn	17 44 11.0	-0.1
JCH				*e*S	Sn	17 45 18.4	-4.6
JNBK	**Urakawa-nobuka**	**6.95**	**244**	*e*P	Pn	17 44 19.0	+0.2

IDC 06 17:55:33.6±6.7, 5°55S×146°32E, *h*44km±64km, mb2.9/2, mbtmp3.3/4, ML2.4/2, Error ellipse: s-maj=52.8km s-min=37.7km az=131.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.92**	**168**	P	Pn	17 56 32.7	+1.3
	3.7nm,0.3s,baz=311,slow=6.2,SNR=16						
PMG				S	Sn	17 57 16.4	+0.2
	13nm,0.5s,baz=162,slow=20,SNR=7.4						
	6.9nm,0.3s						
WRA	**Warramunga Arr**	**18.45**	**218**	P	Pn	17 59 46.4	+0.1
	baz=39,slow=11,SNR=2.4						
WRA				PcP	PcP	18 04 15.9	+0.8
	0.4nm,0.5s,baz=22,slow=1.7,SNR=7.2						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**21.62**	**212**	P	P	18 00 18.9	-1.3
	0.2nm,0.8s,baz=40,slow=10,SNR=5.7						
	0.2nm,0.8s						
ILAR	**Eielson Array**	**85.34**	**23**	P	P	18 08 05.2	-0.6
	0.4nm,0.5s,baz=257,slow=5.1,SNR=7.7						
	0.4nm,0.5s						

*ISK **06** 17:58:57.9, 39°.38N×28°.23E, h22km, ML1.6/4*
AFAD 06 17:58:58.6, 39°.40N×28°.26E, h7km±1km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.26**	**40**	P	Pg	17 59 03.9	+0.2
DURS				*i* IAML		17 59 08.0	
	comp=N,29nm,0.3s						
DURS				*i* IAML		17 59 08.0	
	comp=E,34nm,0.4s						
DURS				S	Sg	17 59 08.1	+1.0
BKES	**Balkesir-Mer**	**0.42**	**322**	P	Pg	17 59 07.0	+0.3
BKES				S	Sg	17 59 13.2	+0.9
BKES				*i* IAML		17 59 14.0	
	comp=E,25nm,0.5s						
BKES				*i* IAML		17 59 15.0	
	comp=N,14nm,0.7s						
STEP	**BALIKESIR_Sava**	**0.42**	**266**	P	Pg	17 59 07.2	+0.3
STEP				S	Sb	17 59 14.1	-0.9
STEP				*i* IAML		17 59 15.0	
	comp=E,58nm,0.4s						
STEP				*i* IAML		17 59 19.0	
	comp=N,33nm,0.6s						
GORD	**Gordes-Manisa**	**0.50**	**188**	Pg	Pg	17 59 08.2	0.0
GORD				Sg	Sg	17 59 15.3	+0.5
DEMI	**Demirci**	**0.50**	**136**	P	Pg	17 59 08.6	+0.3
DEMI				S	Sg	17 59 16.1	+1.2
DEMI				*i* IAML		17 59 17.0	
	comp=N,27nm,0.4s						
DEMI				*i* IAML		17 59 17.0	
	comp=E,29nm,0.2s						
TVSB	**Tavsanli**	**0.93**	**87**	Pg	Pg	17 59 16.6	+0.2
MANT	**Manisa**	**0.94**	**166**	P	Pg	17 59 16.9	+0.2
MANT				S	Sb	17 59 29.7	-0.4
MANT				*i* IAML		17 59 33.0	
	comp=N,17nm,0.8s						
MANT				*i* IAML		17 59 33.0	
	comp=E,23nm,0.9s						
KULA	**Kula-Manisa**	**0.94**	**161**	Pg	Pg	17 59 16.3	-0.4
KULA				Sg	Sg	17 59 29.1	+0.2
YAYO	**Edremit-Balk**	**0.94**	**283**	Pg	Pg	17 59 15.9	-0.8
YAYO				Sg	Sg	17 59 29.2	+0.2
GDZ	**Gediz**	**1.00**	**108**	P	Pg	17 59 17.6	-0.1
GDZ				S	Sb	17 59 32.3	+0.7
GDZ				*i* IAML		17 59 39.0	
	comp=N,4.1nm,0.6s						
GDZ				*i* IAML		17 59 51.0	
	comp=E,5.0nm,1.3s						

*ISK **06** 18:00:25.6, 34°.28N×33°.56E, h14km, ML3.2/18*
*NIC **06** 18:00:26.7, 34°.31N×33°.54E, h20km, Ml2.9/10*
*GII **06** 18:00:27.7±0.0, 34°.34N±0°.02×33°.635E±0°.005, h20km, Mws2.8, confirmed*
*GRAL **06** 18:00:28.3±0.3, 34°.28N×33°.75E, h3km±40km, MD3.4*
*AFAD **06** 18:00:28.2, 34°.58N×33°.50E, h15km±3km, ML2.3*
ISC 06 18:00:25.8±1.4, 34°33N±0°.02×33°.61E±0°.03, h8km±11km, n90, σ0°.94/117, 5C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.55**	**327**	*i*P	**Pb**	**18 00 37.5**	**-0.2**
ASGA				S	**Sb**	**18 00 46.1**	**+0.4**
ASGA				AML	AML	18 00 47.0	
	3.2nm,0.2s						
ASGA				AML	AML	18 00 47.6	
	2.3nm,0.3s						
CSS	**Mathiatis**	**0.67**	**340**	Pg	**Pb**	**18 00 40.0**	**+0.2**
CSS				Sg	**Sb**	**18 00 50.1**	**+0.8**
CSS	**Mathiatis**	**0.67**	**340**	P	**Pb**	**18 00 40.2**	**+0.4**
CSS				S	**Sb**	**18 00 50.6**	**+1.3**
CSS	**Mathiatis**	**0.67**	**340**	P	**Pb**	**18 00 39.8**	**-0.1**
CSS				S	**Sb**	**18 00 50.2**	**+0.9**
CSS				AML	AML	18 00 51.5	
	2.4nm,0.3s						
CSS				AML	AML	18 00 51.7	
	3.1nm,0.6s						
MVOU	**Mavrovouni**	**0.69**	**1**	*e*P	**Pb**	**18 00 40.1**	**+0.1**
MVOU				S	**Sn**	**18 00 51.6**	**-1.1**
MVOU				AML	AML	18 00 53.8	
	1.1nm,0.4s						
MVOU				AML	AML	18 00 54.3	
	1.2nm,0.3s						
APOL	**The Sanctuary**	**0.71**	**299**	*e*P	**Pb**	**18 00 40.1**	**-0.2**
APOL				S	**Sb**	**18 00 50.3**	**0.0**
APOL				AML	AML	18 00 50.9	
	3.5nm,0.5s						
APOL				AML	AML	18 00 52.3	
	2.9nm,0.2s						
PARAL	**Paralimni**	**0.75**	**28**	P	**Pn**	**18 00 42.4**	**-0.3**
PARAL				S	**Sn**	**18 00 54.0**	**-0.3**
PARAL				AML	AML	18 01 00.3	
	0.8nm,0.4s						
PARAL				AML	AML	18 01 00.9	
	0.7nm,0.5s						
ATHAL	**Athalassa**	**0.83**	**348**	P	**Pn**	**18 00 43.5**	**-0.3**
ATHAL				S	**Sn**	**18 00 55.9**	**-0.3**
ATHAL				AML	AML	18 01 00.5	
	3.0nm,0.6s						
ATHAL				AML	AML	18 01 01.0	
	4.6nm,0.5s						
TROD	**Troodos**	**0.87**	**315**	*e*P	**Pg**	**18 00 42.7**	**+0.1**
TROD				S	**Sb**	**18 00 55.5**	**+0.2**
TROD				AML	AML	18 01 02.0	
	1.1nm,0.3s						
TROD				AML	AML	18 01 05.1	
	0.6nm,0.5s						
LFK	**Lefkose**	**0.95**	**356**	Pg	**Pn**	**18 00 45.4**	**-0.1**
LFK				Sg	**Sn**	**18 00 59.5**	**+0.2**
NATA	**Nata**	**0.97**	**298**	P	**Pg**	**18 00 44.6**	**+0.1**
NATA				S	**Sb**	**18 00 58.1**	**+0.2**
NATA				AML	AML	18 01 02.4	
	2.1nm,0.7s						
NATA				AML	AML	18 01 05.8	
	2.1nm,0.5s						
ALFC	**Alefka**	**1.17**	**315**	P	**Pg**	**18 00 47.6**	**-0.8**
ALFC				S	**Sg**	**18 01 03.8**	**+0.2**
ALFC				AML	AML	18 01 04.2	
	4.2nm,0.6s						
ALFC				AML	AML	18 01 05.4	
	3.3nm,0.5s						
AKMS	**Akamas**	**1.26**	**304**	*e*P	**Pn**	**18 00 48.5**	**-1.2**
AKMS				S	**Sb**	**18 01 05.7**	**-0.5**
AKMS				AML	AML	18 01 07.9	
	1.8nm,0.3s						
AKMS				AML	AML	18 01 11.2	
	1.4nm,0.4s						
DQRL	**Deir Qamar**	**1.74**	**110**	*e*P	**Pn**	**18 00 56.6**	**+0.3**
BHL	**Bhannes**	**1.75**	**103**	*e*P	**Pn**	**18 00 56.6**	**+0.1**
HNTI	**Hanita**	**1.80**	**133**	P	**Pn**	**18 00 57.8**	**+0.7**
HNTI	**Hanita**	**1.80**	**133**	S	**Sn**	**18 01 19.3**	**-0.8**
AKK2	**Akkuyu-Mersin**	**1.81**	**358**	Pn	**Pb**	**18 00 58.2**	**-0.9**
YORU	**Yoruktepe-Mers**	**1.83**	**355**	Pn	**Pn**	**18 00 57.6**	**0.0**
TISA	**Tisan-Mersin**	**1.83**	**2**	Pn	**Pn**	**18 00 58.2**	**+0.7**
TISA				Sn	**Sb**	**18 01 22.0**	**-0.6**
GULN	**MERSIN_Gulnar**	**1.85**	**358**	P	**Pn**	**18 00 57.8**	**0.0**
GULN				S	**Sn**	**18 01 21.0**	**-0.4**
GULN				*i* IAML		18 01 27.0	
	comp=E,41nm,0.3s						
GULN				*i* IAML		18 01 29.0	
	comp=N,31nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.86**	**347**	Pn	**Pn**	**18 00 57.8**	**-0.1**
OREN	**Orenkoy-Mersin**	**1.88**	**356**	Pn	**Pn**	**18 00 58.9**	**+0.7**
QRWL	**Qaraoun**	**1.89**	**114**	*e*P	**Pn**	**18 00 58.6**	**+0.2**
HWQ	**Hawqa**	**1.93**	**91**	*e*P	**Pn**	**18 00 59.3**	**+0.3**
HWQ				*e*S	**Sn**	**18 01 22.4**	**-1.2**
ZAHL	**Zahle**	**1.94**	**103**	*e*P	**Pn**	**18 00 59.4**	**+0.2**
MMA0B	**Mount Meron ar**	**1.99**	**131**	P	**Pn**	**18 01 00.4**	**+0.6**
MMA0B	**Mount Meron ar**	**1.99**	**131**	S	**Sn**	**18 01 24.4**	**-0.5**
SHBL	**Chebaa**	**2.02**	**118**	*e*P	**Pn**	**18 01 00.7**	**+0.3**
RCY	**Rachaya**	**2.03**	**114**	*e*P	**Pn**	**18 01 00.4**	**0.0**
RCY				*e*S	**Sn**	**18 01 24.4**	**-1.6**
BERE	**Bereket-Mersin**	**2.04**	**351**	Pn	**Pn**	**18 01 00.8**	**+0.2**
GEM	**Giv'at Ha'Em**	**2.04**	**123**	P	**Pn**	**18 01 00.9**	**+0.5**
GEM	**Giv'at Ha'Em**	**2.04**	**123**	P	**Pn**	**18 01 00.9**	**+0.5**
GEM	**Giv'at Ha'Em**	**2.04**	**123**	S	**Sn**	**18 01 25.9**	**-0.2**
OFRI	**`Ofer**	**2.05**	**146**	P	**Pn**	**18 01 01.1**	**+0.5**
OFRI	**`Ofer**	**2.05**	**146**	S	**Sn**	**18 01 24.6**	**-1.8**
NATI	**Neve Ativ**	**2.06**	**120**	P	**Pn**	**18 01 01.4**	**+0.7**
NATI	**Neve Ativ**	**2.06**	**120**	P	**Pn**	**18 01 00.9**	**+0.2**
NATI	**Neve Ativ**	**2.06**	**120**	S	**Sn**	**18 01 25.4**	**-1.2**
TEVE	**Tevekalti-Mers**	**2.11**	**356**	Pn	**Pn**	**18 01 02.3**	**+0.9**
TEVE				Sn	**Sn**	**18 01 28.9**	**+1.0**
KEBE	**Keben-Mersin**	**2.12**	**2**	Pn	**Pn**	**18 01 02.4**	**+0.9**
BEIL	**Beino**	**2.14**	**84**	*e*P	**Pn**	**18 01 02.2**	**+0.4**
BEIL				*e*S	**Sn**	**18 01 27.3**	**-1.2**
GAZI	**Gazipasa**	**2.18**	**331**	P	**Pn**	**18 01 02.3**	**-0.1**
GAZI				S	**Sn**	**18 01 28.7**	**-0.8**
GAZI				*i* IAML		18 01 33.0	
	comp=E,51nm,0.3s						
GAZI				*i* IAML		18 01 38.0	
	comp=N,46nm,0.7s						
GAZI	**Gazipasa**	**2.18**	**331**	Pn	**Pn**	**18 01 02.0**	**-0.4**
KIZK	**Mersin**	**2.19**	**11**	P	**Pb**	**18 01 04.2**	**-1.5**
KIZK				S	**Sn**	**18 01 29.9**	**+0.1**
KIZK				*i* IAML		18 01 32.0	
	comp=N,27nm,0.9s						
KIZK				*i* IAML		18 01 35.0	
	comp=E,20nm,0.5s						
KIZK	**Mersin**	**2.19**	**11**	Pn	**Pn**	**18 01 03.3**	**+0.8**
KSHT	**Keshet**	**2.27**	**126**	P	**Pn**	**18 01 04.7**	**+1.0**
KSHT	**Keshet**	**2.27**	**126**	S	**Sn**	**18 01 31.9**	**0.0**
FKH	**Fakeheh**	**2.32**	**91**	*e*P	**Pn**	**18 01 04.7**	**+0.4**
ERMK	**Ermenek**	**2.38**	**346**	P	**Pn**	**18 01 06.6**	**+1.3**
ERMK				S	**Sb**	**18 01 37.3**	**-1.3**
ERMK				*i* IAML		18 01 43.0	
	comp=E,43nm,0.4s						
ERMK				*i* IAML		18 01 48.0	
	comp=N,40nm,0.6s						
SHMJ	**Saham**	**2.40**	**131**	P	**Pn**	**18 01 06.7**	**+1.2**
SHMJ				S	**Sn**	**18 01 35.2**	**+0.1**
MMLI	**Mount Malkishu**	**2.42**	**141**	Pn	**Pn**	**18 01 06.0**	**+0.3**
MMLI	**Mount Malkishu**	**2.42**	**141**	P	**Pn**	**18 01 06.9**	**+1.2**
MMLI	**Mount Malkishu**	**2.42**	**141**	P	**Pn**	**18 01 06.7**	**+1.0**
MMLI	**Mount Malkishu**	**2.42**	**141**	S	**Sn**	**18 01 35.1**	**-0.3**
QRNJ	**Al-Qirein**	**2.58**	**140**	P	**Sn**	**18 01 09.1**	**+1.3**
QRNJ				S	**Sn**	**18 01 38.7**	**-0.6**
SALP	**Salfit**	**2.61**	**149**	P	**Pn**	**18 01 09.9**	**+1.5**
SALP	**Salfit**	**2.61**	**149**	P	**Pn**	**18 01 09.8**	**+1.5**
HMDT	**Nahal Hemdat**	**2.62**	**142**	P	**Pn**	**18 01 09.3**	**+0.9**
HMDT	**Nahal Hemdat**	**2.62**	**142**	P	**Pn**	**18 01 09.5**	**+1.2**
HMDT	**Nahal Hemdat**	**2.62**	**142**	S	**Sn**	**18 01 39.9**	**-0.4**
MERS	**Mersin**	**2.64**	**16**	Pn	**Pn**	**18 01 09.4**	**+0.6**
HDMB	**Hadim**	**2.79**	**341**	Pn	**Pn**	**18 01 11.9**	**+1.0**
BALJ	**Balqa**	**2.81**	**142**	P	**Pn**	**18 01 12.3**	**+1.3**
UJAP	**Al Uja**	**2.83**	**146**	P	**Pn**	**18 01 13.4**	**+2.1**
TAHT	**Tahtakopru-Hat**	**2.93**	**45**	Pn	**Pn**	**18 01 14.3**	**+1.6**
KKBE	**Karaman, Kazim**	**2.94**	**349**	P	**Pn**	**18 01 14.6**	**+1.7**
KKBE				S	**Sn**	**18 01 49.0**	**+0.7**
KKBE				*i* IAML		18 01 52.0	
	comp=E,13nm,0.5s						
KKBE				*i* IAML		18 01 59.0	
	comp=N,15nm,0.6s						
YURE	**YUREGIR**	**2.99**	**33**	P	**Pn**	**18 01 15.4**	**+2.0**
YURE				S	**Sn**	**18 01 49.4**	**-0.1**
YURE				*i* IAML		18 01 55.0	
	comp=E,14nm,1.1s						
YURE				*i* IAML		18 02 17.0	
	comp=N,11nm,2.4s						
KERG	**Konya-Eregli**	**3.11**	**8**	P	**Pn**	**18 01 16.5**	**+1.3**
KERG				*i* IAML		18 03 01.0	
	comp=N,42nm,3.2s						
KERG				*i* IAML		18 03 01.0	
	comp=E,12nm,3.4s						
DSI	**Dead Sea**	**3.13**	**151**	P	**Pn**	**18 01 15.7**	**+0.3**
DSI	**Dead Sea**	**3.13**	**151**	P	**Pn**	**18 01 16.2**	**+0.8**
DSI	**Dead Sea**	**3.13**	**151**	S	**Sn**	**18 01 52.6**	**-0.2**
KARA	**Karaisali**	**3.15**	**21**	Pn	**Pn**	**18 01 16.2**	**+0.5**
YTIR	**Yattir**	**3.22**	**156**	S	**Sn**	**18 01 54.3**	**-0.9**
YTIR	**Yattir**	**3.22**	**156**	P	**Pn**	**18 01 18.5**	**+1.8**
MSBI	**Mazada**	**3.35**	**153**	P	**Pn**	**18 01 19.8**	**+1.4**
MSBI	**Mazada**	**3.35**	**153**	P	**Pn**	**18 01 20.1**	**+1.8**
SEYD	**Seydisehir-KON**	**3.39**	**335**	Pn	**Pn**	**18 01 20.3**	**+1.2**
GHAJ	**Ghor Haditha**	**3.44**	**151**	P	**Pn**	**18 01 22.6**	**+3.0**
KZIT	**Kziot**	**3.48**	**169**	P	**Pn**	**18 01 21.3**	**+1.1**
KZIT	**Kziot**	**3.48**	**169**	P	**Pn**	**18 01 21.3**	**+1.1**
KZIT	**Kziot**	**3.48**	**169**	S	**Sn**	**18 02 01.3**	**-0.3**
ASF	**Jabal al Asfar**	**3.49**	**127**	P	**Pn**	**18 01 22.4**	**+1.9**
CMRD	**Camardi-Nigde**	**3.51**	**18**	Pn	**Pn**	**18 01 22.3**	**+1.5**
RMNI	**Mount Ramon**	**3.85**	**165**	P	**Pn**	**18 01 26.1**	**+0.7**
RMNI	**Mount Ramon**	**3.85**	**165**	S	**Sn**	**18 02 10.2**	**-0.6**
PRNI	**Paran**	**4.14**	**163**	P	**Pn**	**18 01 29.2**	**-0.1**
KRMI	**Paran Flat**	**4.30**	**167**	P	**Pn**	**18 01 33.3**	**+1.7**
HRFI	**Mount Harif**	**4.45**	**164**	P	**Pn**	**18 01 33.7**	**+0.1**
HRFI				S	**Sn**	**18 02 24.6**	**-0.9**
MBRI	**Mt Berech**	**4.65**	**166**	P	**Pn**	**18 01 36.7**	**+0.2**

*IDC **06** 18:00:57.9±0.9, 67°.05N×21°.42E, h0km, mbtmp3.0/4, ML2.0/4, Error ellipse: s-maj=17.6km s-min=8.0km az=115.0*
*UPP **06** 18:00:58.1±0.1, 67°.08N×20°.94E, h0km, ML2.2, Suspected explosion*
ISC 06 18:00:57.1±0.8, 67°.06N±0°.04×20°.95E±0°.03, h0km, n13, σ1°27/21, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.16**	**294**	P	**Pg**	**18 01 01.1**	**+1.0**
	baz=76						
DUNU				S	**Sg**	**18 01 03.4**	**+1.1**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**18 01 08.5**	**+0.5**
MASU				S	**Sg**	**18 01 16.2**	**+0.8**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pb**	**18 01 11.7**	**-0.5**
ERTU				S	**Sg**	**18 01 21.4**	**+1.7**
PAJU	**Pajala**	**0.85**	**91**	P	**Pb**	**18 01 14.4**	**-0.3**
PAJU				S	**Sg**	**18 01 25.4**	**+1.0**
KUA	**Kurravaara**	**0.93**	**346**	P	**Pg**	**18 01 15.2**	**+0.3**
RATU	**Laukkuluspa**	**0.93**	**326**	P	**Pg**	**18 01 14.9**	**-0.1**
SALU	**Saltoluokta**	**1.00**	**290**	P	**Pb**	**18 01 16.9**	**-0.5**
LANU	**Lannavaara**	**1.07**	**22**	P	**Pg**	**18 01 17.8**	**+0.2**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**18 01 18.2**	**+0.1**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18 01 45.5**	**-0.4**
	0.3nm,0.3s,baz=218,slow=14,SNR=45						
ARCES				Sn	**Sn**	**18 02 22.4**	**-0.4**
	0.3nm,0.3s,baz=194,slow=19,SNR=5.2						
	1.6nm,0.2s						
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**18 02 27.8**	**0.0**
	0.2nm,0.3s,baz=347,slow=13,SNR=13						
FINES				Sn	**Sn**	**18 03 37.3**	**-0.4**
	0.4nm,0.3s,baz=349,slow=22,SNR=8.3						
	2.7nm,1.0s						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 02 47.0**	**+0.9**
	baz=311,slow=25,SNR=1.4						
NOA				Sn	**Sn**	**18 04 12.3**	**+1.8**
	baz=40,slow=12,SNR=1.9						
	0.5nm,0.8s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**18 02 49.4**	**-0.3**
	0.1nm,0.3s,baz=28,slow=13,SNR=6.2						
HFS				Sn	**Sn**	**18 04 13.0**	**-4.1**
	0.2nm,0.3s,baz=28,slow=26,SNR=6.0						
	0.4nm,0.3s						

*IDC **06** 18:06:36.7±2.6, 22°.74N×12°.05W, h0km, mb3.6/2, mbtmp3.9/3, ML4.4/1, MS3.5/2, Error ellipse: s-maj=84.0km s-min=55.5km az=85.0*
ISC 06 18:06:37.6±3.1, 22°.7N±0°.4×12°.1W±0°.6, h10km, n8, σ0°20/5, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.12**	**124**	Pn	**Pn**	**18 10 24.5**	**0.0**
	1.3nm,0.3s,baz=318,slow=12,SNR=3.9						
	3.8nm,0.3s						
I48TN	**KESRA INFRASON**	**22.74**	**50**	I	I	20 27 50.0	
	baz=238,slow=317,SNR=3.0						
MMAI	**Mount Meron Ar**	**42.91**	**65**	LR	LR	18 36 19.9	
	comp=Z,32nm,18.4s,baz=220,slow=42						
KURBB	**Kurchatov Arra**	**73.19**	**42**	P	**P**	**18 18 08.8**	**+0.1**
	0.3nm,0.5s,baz=284,slow=5.8,SNR=2.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**76.69**	**45**	P	**P**	**18 18 28.9**	**-0.2**
	0.2nm,0.5s,baz=286,slow=5.4,SNR=6.6						
	0.2nm,0.5s						
ELK	**Elko**	**84.91**	**312**	LR	LR	18 56 53.4	
	comp=Z,44nm,18.0s,baz=292,slow=36						
WRA	**Warramunga Arr**	**148.60**	**91**	PKPbc	**PKPbc**	**18 26 25.9**	**+0.1**
	0.2nm,0.6s,baz=291,slow=2.6,SNR=1.6						
ASAR	**Alice Springs**	**148.72**	**99**	PKPbc	**PKiKP**	**18 26 27.3**	**-0.1**
	0.7nm,1.1s,baz=287,slow=2.4,SNR=4.6						

*IDC **06** 18:07:56.5±0.9, 11°.18S×164°.91E, h0km, mb4.0/10, mbtmp4.1/12, ML4.6/2, MS3.6/26, Error ellipse: s-maj=23.3km s-min=21.4km az=88.0*
*NOU **06** 18:07:58.1, 10°.95S×165°.39E, h34km, mb4.6/15, Santa Cruz Islands*
*NEIC **06** 18:07:58.0±1.9, 11°.29S±0°.07×165°.00E±0°.05, h10km±1km, mb4.5/20, Error ellipse: s-maj=13.1km s-min=7.5km az=337.0*
ISC 06 18:07:57.7±0.7, 11°33S±0°.08×165°04E±0°.09, h10km, n77, σ1°61/52, mb4.4/18, MS3.7/23, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.61**	**153**		**Pn**	**18 09 07.4**	**0.0**
SANVU	**Saraoutou**	**4.61**	**153**	P	**Pn**	**18 09 08.3**	**+0.9**
HNR	**Honiara**	**5.35**	**290**	Pn	**Pn**	**18 09 16.1**	**-1.6**
HNR	**Honiara**	**5.35**	**290**	Pn	**Pn**	**18 09 17.1**	**-0.6**
	27nm,0.3s,baz=162,slow=4.3,SNR=12						
HNR				Sn	**Sn**	**18 10 18.4**	**-1.0**
	11nm,0.3s,baz=52,slow=20,SNR=6.2						
HNR				LR	LR	18 11 34.6	
	comp=Z,470nm,19.8s,baz=206,slow=42						
	50nm,0.3s						
HNR	**Honiara**	**5.35**	**290**	P	**Pn**	**18 09 18.7**	**+1.0**
SAVO	**Savo Central**	**5.58**	**292**	P	**Pn**	**18 09 21.6**	**+0.8**
MARNC	**Mare, Loyalty**	**10.49**	**165**	Pn	**Pn**	**18 10 27.6**	**-0.7**
MARNC	**Mare, Loyalty**	**10.49**	**165**	P	**Pn**	**18 10 29.9**	**+1.6**
DZM	**Mont Dzumac**	**10.77**	**173**	Pn	**Pn**	**18 10 33.5**	**+1.4**
	2.9nm,0.3s,baz=324,slow=8.0,SNR=74						
DZM				Sn	**Sn**	**18 12 27.2**	**-5.6**
	baz=185,slow=20						
DZM				LR	LR	18 13 54.3	
	comp=Z,191nm,18.5s,baz=14,slow=33						
	6.9nm,0.3s						
ONTNC	**Ouen Toro**	**11.00**	**173**	Pn	**Pn**	**18 10 36.3**	**+1.1**
ONTNC	**Ouen Toro**	**11.00**	**173**	P	**Pn**	**18 10 37.9**	**+2.7**
OUENC	**Ouen Island, N**	**11.16**	**171**	P	**Pn**	**18 10 39.9**	**+2.5**
PINNC	**Pines Island,**	**11.46**	**169**	Pn	**Pn**	**18 10 42.4**	**+1.0**
PINNC	**Pines Island,**	**11.46**	**169**	P	**Pn**	**18 10 43.5**	**+2.1**
PMG	**Port Moresby**	**17.69**	**275**	LR	LR	18 18 35.9	
	comp=Z,311nm,19.1s,baz=154,slow=36						
EIDS	**Eidsvold**	**19.22**	**222**	P	**Pn**	**18 12 25.0**	**+2.0**
MANU	**Manus Island**	**19.81**	**296**		**P**	**18 12 28.5**	**-0.1**
MTSU	**Mount Surprise**	**21.14**	**249**	P	**P**	**18 12 45.4**	**+2.4**
COEN	**Coen**	**21.49**	**261**		**P**	**18 12 46.7**	**-0.1**

RAR	**Rarotonga**	**35.11**	**111**	LR	LR	18 26 25.3		
	comp=Z,125nm,18.1s,baz=266,slow=31							
KNRA	**Kununurra**	**35.51**	**259**		**P**	**18 14 54.3**	**-0.7**	
FITZ	**Fitzroy Crossi**	**38.64**	**255**		**P**	**18 15 20.6**	**-1.0**	
FITZ	**Fitzroy Crossi**	**38.64**	**255**	LR	LR	18 30 46.0		
	comp=Z,146nm,19.1s,baz=50,slow=36							
BATI	**Baumata**	**40.64**	**267**	LR	LR	18 34 46.9		
	comp=Z,81nm,18.4s,baz=219,slow=40							
DAV	**Davao City (W)**	**43.31**	**293**	LR	LR	18 35 07.6		
	comp=Z,28nm,18.2s,baz=110,slow=38							
PSA00	**Pilbara Seismi**	**44.38**	**251**	P	**P**	**18 16 07.0**	**-1.8**	
PSA00				IAmb	IAmb	18 16 10.0		
	comp=Z,9.0nm,1.4s							
KAPI	**Kappang**	**45.22**	**274**	LR	LR	18 36 44.1		
	comp=Z,29nm,19.0s,baz=158,slow=38							
NWAO	**Narrogin (SRO)**	**48.73**	**236**	LR	LR	18 37 03.7		
	comp=Z,235nm,19.1s,baz=71,slow=36							
MORW	**Morawa**	**48.88**	**241**	P	**P**	**18 16 46.1**	**+2.1**	
LEM	**Lembang**	**56.81**	**269**	LR	LR	18 44 02.3		
	comp=Z,45nm,21.1s,baz=142,slow=38							
VNDA	**Vanda**	**66.20**	**181**	IAmb	IAmb	18 19 08.3		
	comp=Z,5.9nm,1.5s							
VNDA	**Vanda**	**66.20**	**181**	P	**P**	**18 18 45.8**	**+0.6**	
	comp=Z,1.0nm,1.0s,baz=353,slow=4.7,SNR=4.7							
	comp=Z,1.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**71.59**	**294**	P	**P**	**18 19 18.1**	**-1.7**	
	comp=Z,0.7nm,0.8s,baz=117,slow=4.2,SNR=5.5							
CMAR				LR	LR	18 48 33.9		
	comp=Z,7.9nm,21.5s,baz=180,slow=34							
	comp=Z,0.7nm,0.8s							
KDAK	**Kodiak Island**	**77.10**	**22**	LR	LR	18 50 11.8		
	comp=Z,30nm,18.6s,baz=234,slow=33							
SONM	**Songino Array**	**78.48**	**324**	P	**P**	**18 19 58.0**	**-1.2**	
	comp=Z,0.5nm,0.8s,baz=145,slow=5.3,SNR=2.0							
	comp=Z,0.5nm,0.8s							
QSPA	**South Pole Qui**	**78.68**	**180**	P	**P**	**18 19 58.5**	**-1.5**	
QSPA				IAmb	IAmb	18 20 04.5		
	comp=Z,5.7nm,1.1s							
QSPA	**South Pole Qui**	**78.68**	**180**	P	**P**	**18 20 02.0**	**+2.0**	
	comp=Z,3.3nm,1.0s,baz=13,slow=1.0,SNR=7.8							
	comp=Z,3.3nm,1.0s							
ILAR	**Eielson Array**	**84.00**	**19**	P	**P**	**18 20 28.8**	**+0.8**	
	comp=Z,0.2nm,0.6s,baz=242,slow=4.1,SNR=5.0							
	comp=Z,0.2nm,0.6s							
BBB	**Bella Bella**	**85.20**	**35**	LR	LR	18 50 59.4		
	comp=Z,33nm,20.8s,baz=216,slow=30							
PALK	**Pallekele**	**85.90**	**278**	LR	LR	19 01 19.7		
	comp=Z,11nm,19.5s,baz=146,slow=37							
NVAR	**Mina Array Bea**	**86.74**	**50**	P	**P**	**18 20 43.4**	**+0.9**	
	comp=Z,0.3nm,0.5s,baz=284,slow=3.8,SNR=4.3							
NVAR				LR	LR	18 53 56.1		
	comp=Z,65nm,18.2s,baz=266,slow=32							
	comp=Z,0.3nm,0.5s							
PFO	**Pinyon Flats O**	**86.81**	**55**	LR	LR	18 54 45.4		
	comp=Z,41nm,18.1s,baz=245,slow=32							
DLBC	**Dease Lake**	**86.99**	**28**	LR	LR	18 54 25.1		
	comp=Z,24nm,18.7s,baz=241,slow=32							
LPIG	**La Paz**	**89.76**	**65**	LR	LR	18 53 05.7		
	comp=Z,30nm,19.4s,baz=204,slow=30							
MKAR	**Makanchi Array**	**93.25**	**317**	P	**P**	**18 21 11.8**	**-0.9**	
	comp=Z,0.4nm,0.8s,baz=101,slow=5.1,SNR=3.8							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**94.25**	**47**	LR	LR	19 00 04.6		
	comp=Z,16nm,18.1s,baz=94,slow=33							
ANMO	**Albuquerque**	**95.18**	**56**	LR	LR	18 59 49.7		
	comp=Z,28nm,18.1s,baz=335,slow=33							
TXAR	**Lajitas Array**	**96.57**	**61**	LR	LR	18 58 11.3		
	comp=Z,42nm,19.1s,baz=216,slow=31							

*TAP **06** 18:30:07.5,24.40N×121.77E,h9km,ML2.8,B*
ISC 06 18:30:07.0±0.8,24.40N±0.01×121.84E±0.03,h10km±4km,
n94,σ0962/148,11C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.07**	**314**	⇑	*i*	P	**Pg**	**18 30 09.6**	**+0.3**
EWUT					*i*	S	**Sg**	**18 30 10.9**	**-0.1**
ENA	**Nanau**	**0.09**	**291**	⇑	*i*	P	**Pg**	**18 30 09.6**	**0.0**
ENA					*i*	S	**Sg**	**18 30 10.7**	**-0.7**
EAHA	**Aohua**	**0.11**	**234**		*i*	P	**Pg**	**18 30 09.9**	**+0.2**
EAHA						S	**Sg**	**18 30 11.5**	**-0.3**
EHP	**Heping Village**	**0.12**	**226**		*i*	P	**Pg**	**18 30 10.3**	**+0.3**
EHP					*i*	S	**Sg**	**18 30 12.2**	**+0.1**
ESAO	**Su ao**	**0.18**	**2**		P		**Pb**	**18 30 11.8**	**-0.6**
ESAO						S	**Sg**	**18 30 14.1**	**+0.5**
TWC	**Suao**	**0.21**	**3**	⇓	*i*	P	**Pb**	**18 30 12.4**	**-0.5**
TWC					*i*	S	**Sg**	**18 30 15.4**	**+0.9**
NDS	**Dongshan**	**0.26**	**335**	⇑	*i*	P	**Pb**	**18 30 13.1**	**-0.7**
NDS					*i*	S	**Sg**	**18 30 16.4**	**+0.4**
ETL	**Fush Village**	**0.30**	**220**	⇓	*i*	P	**Pg**	**18 30 13.2**	**0.0**
ETL						S	**Sg**	**18 30 17.3**	**0.0**
NACB	**Ninganchiao**	**0.31**	**225**	⇓	*i*	P	**Pg**	**18 30 13.1**	**-0.1**
NACB					*i*	S	**Sg**	**18 30 17.4**	**0.0**
LATG	**Datong**	**0.32**	**296**	⇑	*i*	P	**Pg**	**18 30 13.6**	**+0.2**
LATG					*i*	S	**Sg**	**18 30 17.2**	**-0.4**
ENTT	**Nioudou**	**0.35**	**315**	⇑	*i*	P	**Pg**	**18 30 14.4**	**+0.5**
ENTT					*i*	S	**Sg**	**18 30 19.3**	**+0.7**
TWE	**Neicheng**	**0.36**	**335**	⇑	*i*	P	**Pb**	**18 30 14.9**	**-0.6**
TWE					*i*	S	**Sg**	**18 30 18.9**	**0.0**
ETLH	**Xiulin Townshi**	**0.37**	**240**		*i*	P	**Pg**	**18 30 14.3**	**-0.2**
ETLH						S	**Sg**	**18 30 19.6**	**+0.1**
ILA	**Ilan**	**0.38**	**348**		*e*	P	**Pb**	**18 30 15.2**	**-0.6**
ILA					*e*	S	**Sb**	**18 30 21.0**	**-0.7**
TWD	**Chiawan**	**0.38**	**215**		*i*	P	**Pg**	**18 30 14.6**	**+0.1**
TWD					*i*	S	**Sg**	**18 30 19.9**	**+0.2**
NNSB	**Datong**	**0.41**	**275**	⇑	*i*	P	**Pg**	**18 30 15.2**	**0.0**
NNSB						S	**Sg**	**18 30 19.9**	**-0.9**
NNS	**Nan Shan**	**0.42**	**276**	⇑	*i*	P	**Pg**	**18 30 15.4**	**0.0**
NNS					*i*	S	**Sg**	**18 30 20.2**	**-0.8**
FUSB	**Fushanzhiwuyua**	**0.43**	**328**	⇑	*i*	P	**Pb**	**18 30 16.2**	**-0.5**
FUSB					*i*	S	**Sg**	**18 30 21.7**	**+0.5**
EGS		**0.46**	**11**		*e*	P	**Pb**	**18 30 16.2**	**-0.9**
EGS					*e*	S	**Sb**	**18 30 23.7**	**-0.2**
HWA	**Hwalien**	**0.47**	**207**		P		**Pb**	**18 30 17.0**	**-0.3**
HWA					*e*	S	**Sb**	**18 30 23.4**	**-0.7**
NWLT	**Wulai**	**0.49**	**321**		*i*	P	**Pb**	**18 30 17.2**	**-0.4**
NWLT					*e*	S	**Sg**	**18 30 23.0**	**0.0**
YHNB	**Yeheng**	**0.50**	**303**		P		**Pg**	**18 30 17.1**	**+0.3**
YHNB	**Yeheng**	**0.50**	**303**		S		**Sg**	**18 30 23.4**	**-0.1**
YHNB	**Yeheng**	**0.50**	**303**	⇑	*i*	P	**Pg**	**18 30 17.3**	**+0.5**
YHNB						S	**Sg**	**18 30 23.4**	**-0.1**
EOS4	**EOS4**	**0.52**	**122**		*e*	P	**Pn**	**18 30 18.7**	**-1.3**
EOS4					*e*	S	**Sb**	**18 30 27.1**	**+1.8**
NSK	**Sanguang**	**0.52**	**303**	⇑	*i*	P	**Pg**	**18 30 17.5**	**+0.4**
NSK						S	**Sg**	**18 30 23.6**	**-0.4**
ETM	**Tongmen**	**0.53**	**216**		*e*	P	**Pg**	**18 30 17.1**	**-0.2**
ETM					*e*	S	**Sg**	**18 30 24.0**	**-0.4**
LXIB	**Xiulin Townshi**	**0.54**	**226**	⇓	*i*	P	**Pg**	**18 30 17.1**	**-0.4**
LXIB					*e*	S	**Sg**	**18 30 25.0**	**+0.4**
FUSS	**Fushou**	**0.56**	**255**		P		**Pg**	**18 30 18.1**	**+0.2**
FUSS					S		**Sg**	**18 30 25.1**	**-0.4**
TEYL	**Yanliau Villag**	**0.57**	**203**		*e*	P	**Pb**	**18 30 18.5**	**-0.5**
TIPB	**Shuangxi**	**0.57**	**359**		*e*	P	**Pb**	**18 30 19.5**	**+0.4**
TIPB					*i*	S	**Sb**	**18 30 26.4**	**-0.9**
WHF	**Hehuan Shan**	**0.58**	**245**		*i*	P	**Pg**	**18 30 18.7**	**-0.2**
WHF					*i*	S	**Sg**	**18 30 25.9**	**-0.1**
TWT	**Tachien**	**0.62**	**257**		*e*	P	**Pb**	**18 30 19.9**	**-0.1**
TWT					S		**Sg**	**18 30 26.9**	**-0.3**
TWA	**Mucha**	**0.63**	**339**		P		**Pb**	**18 30 20.1**	**+0.1**
TWA					S		**Sg**	**18 30 27.6**	**+0.2**
TWB1	**Santiao Chiao**	**0.63**	**13**		P		**Pn**	**18 30 20.5**	**-1.4**
TWB1					*i*	S	**Sb**	**18 30 28.6**	**-0.2**
TDCB	**Techi**	**0.63**	**257**		*e*	P	**Pg**	**18 30 19.9**	**+0.6**
TDCB					S		**Sg**	**18 30 27.0**	**-0.7**
TATO	**Taipei**	**0.66**	**331**		P		**Pb**	**18 30 20.7**	**+0.1**
TATO	**Taipei**	**0.66**	**331**		S		**Sg**	**18 30 29.1**	**+0.6**
NWF	**Wu-fen Shan**	**0.68**	**356**		*e*	P	**Pn**	**18 30 22.9**	**+0.2**
NWF					*i*	S	**Sb**	**18 30 29.9**	**-0.4**
WFSB	**Wu-fen Shan**	**0.68**	**356**		*e*	P	**Pn**	**18 30 22.0**	**-0.6**
WFSB					*i*	S	**Sb**	**18 30 30.2**	**-0.1**
ESL	**Shilin**	**0.69**	**213**		P		**Pg**	**18 30 19.7**	**-0.6**
ESL					S		**Sb**	**18 30 30.1**	**-0.4**
NFF	**Wufeng Townshi**	**0.70**	**290**		*i*	P	**Pg**	**18 30 21.0**	**+0.5**
NFF					S		**Sg**	**18 30 29.5**	**-0.2**
SXI1	**Grass Mountain**	**0.70**	**3**		*e*	P	**Pn**	**18 30 22.8**	**-0.1**
SXI1					*e*	S	**Sb**	**18 30 31.0**	**0.0**
KSHI	**Guanxi Townshi**	**0.71**	**302**		*e*	P	**Pn**	**18 30 22.5**	**-0.6**
OWD	**Renai**	**0.75**	**234**		P		**Pg**	**18 30 21.2**	**-0.3**
OWD					*e*	S	**Sg**	**18 30 31.4**	**+0.2**
TNOU	**National Taiwa**	**0.75**	**356**		*e*	P	**Pn**	**18 30 22.6**	**-1.0**
WUSB	**Renai**	**0.77**	**239**		P		**Pg**	**18 30 21.9**	**0.0**
WUSB					S		**Sg**	**18 30 31.8**	**-0.2**

YM01	**YM01**	**0.79**	**342**		P		**Pn**	**18 30 23.7**	**-0.5**
YM01					*e*	S	**Sb**	**18 30 33.7**	**+0.2**
LIOB	**Emei**	**0.79**	**289**		*e*	P	**Pb**	**18 30 23.4**	**+0.6**
LIOB						S	**Sg**	**18 30 33.2**	**+0.7**
WARBT	**Fenglin Townsh**	**0.79**	**212**		*e*	P	**Pg**	**18 30 21.9**	**-0.3**
WARBT					*e*	S	**Sg**	**18 30 31.6**	**-1.0**
NSTT	**Nanjuang**	**0.80**	**287**		P		**Pb**	**18 30 23.2**	**+0.3**
NSTT					*e*	S	**Sg**	**18 30 32.8**	**0.0**
TWS1	**Kuangyinshan**	**0.80**	**332**		*i*	P	**Pn**	**18 30 23.8**	**-0.5**
ZUZH	**Zhuzihu**	**0.81**	**341**		S		**Sn**	**18 30 35.5**	**-1.1**
EGFH	**Guangfu**	**0.81**	**207**		*e*	P	**Pg**	**18 30 22.7**	**0.0**
WHP	**Taichung City**	**0.82**	**262**		*e*	P	**Pb**	**18 30 23.7**	**+0.3**
WHP					S		**Sg**	**18 30 33.4**	**-0.2**
YM08	**YM08**	**0.82**	**344**		*e*	P	**Pn**	**18 30 24.0**	**-0.6**
YM08					*e*	S	**Sn**	**18 30 36.1**	**-0.7**
NCUH	**Zhongli**	**0.82**	**314**		*e*	P	**Pn**	**18 30 24.2**	**-0.4**
NCUH					*e*	S	**Sn**	**18 30 37.7**	**+0.9**
ANP	**Anpu**	**0.84**	**340**		*e*	P	**Pn**	**18 30 24.5**	**-0.4**
NTST	**Danshui**	**0.84**	**335**		*e*	P	**Pn**	**18 30 25.8**	**+0.9**
NTST					S		**Sn**	**18 30 37.6**	**+0.3**
SBCB	**Hsinchu**	**0.87**	**297**		*e*	P	**Pn**	**18 30 26.1**	**+0.9**
HSN	**Hsinchu**	**0.89**	**297**		*e*	P	**Pg**	**18 30 24.2**	**+0.1**
VWDT	**VWDT**	**0.90**	**225**		*e*	P	**Pg**	**18 30 24.2**	**-0.2**
VWDT					*i*	S	**Sg**	**18 30 36.8**	**+0.7**
WCS	**Beigang Elemen**	**0.91**	**248**		*e*	P	**Pg**	**18 30 24.8**	**+0.3**
NMLH	**Miaoli**	**0.96**	**279**		*e*	P	**Pn**	**18 30 26.9**	**+0.4**
TWQ1	**Liyutan**	**0.97**	**267**		*e*	P	**Pn**	**18 30 27.6**	**+1.0**
HGSD	**Ruisui**	**0.97**	**203**		*e*	P	**Pn**	**18 30 27.4**	**+0.7**
SMLT	**Sun Moon Lake**	**1.00**	**239**		*e*	P	**Pg**	**18 30 26.2**	**0.0**
SMLT					*e*	S	**Sg**	**18 30 39.4**	**+0.2**
EHY	**Hungye**	**1.00**	**208**		*e*	P	**Pg**	**18 30 26.0**	**-0.3**
SSLB	**Suanglung**	**1.01**	**233**		P		**Pg**	**18 30 25.9**	**-0.5**
SSLB	**Suanglung**	**1.01**	**233**		*e*	P	**Pg**	**18 30 26.1**	**-0.3**
SSLB					*e*	S	**Sg**	**18 30 38.1**	**-1.5**
TYC	**Yuchr**	**1.02**	**242**		*e*	P	**Pb**	**18 30 26.5**	**-0.2**
YOJ	**Yonaguni jima**	**1.07**	**86**		P		**Pn**	**18 30 30.5**	**+2.5**
TCU	**Taichung**	**1.09**	**257**		*e*	P	**Pn**	**18 30 28.4**	**+0.2**
YULB	**Yu-li**	**1.11**	**206**		P		**Pb**	**18 30 27.9**	**-0.4**
YULB	**Yu-li**	**1.11**	**206**		S		**Sg**	**18 30 43.0**	**+0.1**
YULB	**Yu-li**	**1.11**	**206**		*e*	P	**Pb**	**18 30 28.0**	**-0.3**
WHYT	**Xinyi Township**	**1.14**	**232**		*e*	P	**Pb**	**18 30 28.7**	**0.0**
TWF1	**Yuli**	**1.15**	**206**		*e*	P	**Pg**	**18 30 29.4**	**+0.3**
WNT	**Mingjian**	**1.17**	**244**		*e*	P	**Pg**	**18 30 31.3**	**+1.7**
YUS	**Yu-Shan**	**1.21**	**222**		*e*	P	**Pb**	**18 30 30.2**	**-0.1**
ALS	**Alishan**	**1.29**	**227**		*e*	P	**Pg**	**18 30 32.4**	**+0.6**
CHN5	**Tsauling**	**1.32**	**233**		P		**Pg**	**18 30 33.7**	**+1.3**
CHN5					*i*	S	**Sg**	**18 30 51.9**	**+2.2**
CHKT	**Chengkung**	**1.36**	**199**		*e*	P	**Pb**	**18 30 32.2**	**-0.3**
CHKT					*i*	S	**Sb**	**18 30 49.3**	**-0.6**
WGK	**Gukeng**	**1.36**	**239**		*e*	P	**Pg**	**18 30 33.9**	**+0.7**
WDLH	**Douliu**	**1.38**	**240**		*e*	P	**Pg**	**18 30 34.0**	**+0.5**
ELDTW	**Lidau**	**1.42**	**212**		*e*	P	**Pg**	**18 30 34.1**	**-0.1**
WCKO	**Fanlu**	**1.48**	**230**		*e*	P	**Pg**	**18 30 35.7**	**+0.4**
WTK	**Tuku**	**1.50**	**242**		*e*	P	**Pg**	**18 30 36.5**	**+0.7**
TPUB	**Ta-pu**	**1.55**	**226**		P		**Pg**	**18 30 36.8**	**0.0**
TPUB	**Ta-pu**	**1.55**	**226**		S		**Sg**	**18 30 57.1**	**+0.2**
TPUB	**Ta-pu**	**1.55**	**226**		*e*	P	**Pg**	**18 30 36.6**	**-0.2**
STYH	**Taoyuan**	**1.56**	**219**		*i*	P	**Pg**	**18 30 36.7**	**-0.2**
STYH					S		**Sg**	**18 30 57.6**	**+0.5**
WTP	**Ta-pu**	**1.60**	**225**		*e*	P	**Pg**	**18 30 38.4**	**+0.7**
TWK	**Hsinying**	**1.67**	**228**		*e*	P	**Pg**	**18 30 39.3**	**+0.3**

*SJA **06** 18:30:09.5±0.7,29.74S×72.24W,h40km±18km,ML3.4,*
MW3.8
*GUC **06** 18:30:11.6±0.9,29.82S×71.97W,h43km±3km,ML3.2*
ISC 06 18:30:09.7±2.3,29.75S±0.03×72.14W±0.07,h14km±13km,
n25,σ1907/39,1C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.80**	**103**		*i*	P	**Pb**	**18 30 25.4**	**+0.1**
CO05					*i*	S	**Sg**	**18 30 35.5**	**-0.4**
CO05						IAML		18 30 37.4	
	comp=E,3μm,0.6s								
CO06	**Fray Jorge**	**1.02**	**155**		*e*	P	**Pb**	**18 30 28.7**	**-0.4**
CO06					*e*	S	**Sb**	**18 30 41.6**	**-0.8**
CO06						IAML		18 30 45.4	
	comp=E,1μm,0.5s								
GO04	**Tololo Observa**	**1.24**	**110**		*e*	P	**Pn**	**18 30 32.6**	**-0.2**
GO04					*e*	S	**Sb**	**18 30 47.7**	**-1.2**
GO04	**Tololo Observa**	**1.24**	**110**		*i*	P	**Pn**	**18 30 32.9**	**+0.1**
GO04					*i*	S	**Sg**	**18 30 50.6**	**+0.9**
GO04						IAML		18 30 52.6	
	comp=Z,2μm,0.7s								
LCO	**Las Campanas**	**1.45**	**60**		*e*	P	**Pn**	**18 30 36.7**	**+0.9**
LCO					*e*	S	**Sb**	**18 30 55.3**	**+0.2**
LCO	**Las Campanas**	**1.45**	**60**		*i*	P	**Pn**	**18 30 36.0**	**+0.2**
LCO					*i*	S	**Sg**	**18 30 56.0**	**-0.6**
LCO						IAML		18 31 03.9	
	comp=Z,684nm,0.6s								
CO03	**El Pedregal**	**1.66**	**131**	⇑	*e*	P	**Pn**	**18 30 39.4**	**+0.9**
CO03					*e*	S	**Sn**	**18 30 58.6**	**-1.0**
CO03						IAML		18 31 03.4	
	comp=E,748nm,0.3s								
CO03	**El Pedregal**	**1.66**	**131**		*i*	P	**Pn**	**18 30 39.3**	**+0.8**
CO03					*i*	S	**Sb**	**18 31 00.5**	**-0.4**
CO03						IAML		18 31 06.1	
	comp=Z,385nm,0.5s								
CO02	**Combarbal**	**1.75**	**146**		*e*	P	**Pn**	**18 30 40.1**	**+0.4**
CO02					*e*	S	**Sn**	**18 31 01.9**	**-0.1**
CO02	**Combarbal**	**1.75**	**146**		*i*	P	**Pn**	**18 30 40.2**	**+0.4**
CO02					*i*	S	**Sn**	**18 31 02.3**	**+0.3**
CO02						IAML		18 31 06.0	
	comp=Z,579nm,0.6s								
CO01	**Juntas del Tor**	**1.79**	**98**		*e*	P	**Pb**	**18 30 41.9**	**-0.6**
CO01					*e*	S	**Sb**	**18 31 03.2**	**-1.6**
CO01						IAML		18 31 08.2	
	comp=N,308nm,0.6s								
CO01	**Juntas del Tor**	**1.79**	**98**		*i*	P	**Pn**	**18 30 41.2**	**+0.8**
CO01					*i*	S	**Sb**	**18 31 04.0**	**-0.8**
CO01						IAML		18 31 04.3	
	comp=Z,379nm,0.4s								
AC04	**Llanos de Chal**	**1.80**	**32**		*e*	P	**Pn**	**18 30 41.0**	**+0.7**
AC04					*e*	S	**Sn**	**18 31 03.5**	**+0.6**
AC04	**Llanos de Chal**	**1.80**	**32**		*i*	P	**Pn**	**18 30 40.4**	**+0.1**
AC04						IAML		18 31 15.3	
	comp=Z,128nm,0.6s								
CO04	**Los Peladeros**	**2.50**	**157**		*i*	P	**Pn**	**18 30 51.2**	**+1.0**
CO04					*i*	S	**Sn**	**18 31 19.4**	**-1.2**
CO04						IAML		18 31 29.8	
	comp=N,216nm,0.2s								
GO03	**Copiapo**	**2.72**	**38**		*i*	P	**Pn**	**18 30 53.8**	**+0.8**
GO03						IAML		18 31 47.0	
	comp=Z,120nm,0.5s								
MT02	**Curacav**	**3.60**	**167**		*i*	P	**Pn**	**18 31 05.4**	**+0.3**
MT02						IAML		18 32 07.8	
	comp=Z,62nm,0.6s								
AC01	**Pan de Azucar**	**3.83**	**21**		*i*	P	**Pn**	**18 31 08.4**	**+0.1**
AC01						IAML		18 32 24.9	
	comp=Z,40nm,0.8s								
CFA	**Coronel Fontan**	**3.84**	**120**		*i*	P	**Pn**	**18 31 12.1**	**+3.7**
CFA						IAML		18 32 21.1	
	comp=Z,30nm,0.5s								
MT04	**Ro Olivares**	**4.03**	**155**		*i*	P	**Pn**	**18 31 12.5**	**+1.3**
MT04						IAML		18 32 25.5	
	comp=Z,30nm,0.5s								
AVFE	**Valle Fertil**	**4.15**	**104**		*i*	P	**Pn**	**18 31 14.6**	**+1.8**
AVFE						IAML		18 32 26.2	
	comp=Z,42nm,1.0s								
MT01	**Popeta**	**4.17**	**170**		*i*	P	**Pn**	**18 31 13.8**	**+0.8**
MT01						IAML		18 32 32.3	
	comp=Z,37nm,0.7s								
LMEL	**Las Melosas**	**4.41**	**159**		*i*	P	**Pn**	**18 31 17.7**	**+1.3**
LMEL						IAML		18 32 39.6	
	comp=Z,20nm,0.7s								
GO02	**Mina Guanaco**	**5.10**	**27**		*i*	P	**Pn**	**18 31 27.2**	**+1.3**
GO02						IAML		18 33 04.4	
	comp=Z,41nm,1.1s								
BO02	**Sierra Bellavi**	**5.16**	**167**		*i*	P	**Pn**	**18 31 27.9**	**+1.3**
BO02						IAML		18 32 57.5	
	comp=Z,22nm,0.7s								

SJA 06 18:44:30.6±0.7,31.97S×68.18W,h114km±2km,ML3.5,
MW3.6,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CFA	**Coronel Fontan**	**0.37**	**352**		*e*	P	Pn	18 44 47.9	+0.5
CFA					*e*	S	Sn	18 45 00.5	+0.7
SJA	**San Juan**	**0.55**	**323**		*e*	P	Pn	18 44 49.1	+0.8
SJA					*e*	S	Sn	18 45 02.5	+0.8
SJA						IAML		18 45 02.6	
	comp=Z,659nm,0.2s								
ZON	**Zonda**	**0.60**	**315**		*e*	P	Pn	18 44 49.0	+0.2
ZON					*e*	S	Sn	18 45 02.6	+0.3
ZON						IAML		18 45 03.3	
	comp=Z,1μm,0.3s								
RTLL	**Cerro Villicun**	**0.69**	**338**		*e*	P	Pn	18 44 49.8	+0.4
RTLL					*e*	S	Sn	18 45 04.4	+0.9
RTLL						IAML		18 45 06.2	
	comp=Z,905nm,0.4s								
ASAL	**Salagasta**	**0.83**	**222**		*e*	P	Pn	18 44 51.4	+0.7
ASAL					*e*	S	Sn	18 45 07.1	+1.3
ACAN	**Cantantal**	**0.89**	**110**		*e*	P	Pn	18 44 52.0	+0.8
RTLS	**Leoncito**	**0.97**	**280**		*e*	P	Pn	18 44 53.0	+0.8
RTLS					*e*	S	Sn	18 45 09.2	+0.8
ARCO	**CERRO ARCO**	**1.08**	**216**		*e*	P	Pn	18 44 53.9	+0.7
ARCO					*e*	S	Sn	18 45 11.3	+1.1
ARCO						IAML		18 45 13.5	
	comp=Z,926nm,0.2s								
AAGR	**Agrelo**	**1.24**	**206**		*e*	P	Pn	18 44 55.7	+0.9
AAGR					*e*	S	Sn	18 45 13.5	+0.3
AAGR						IAML		18 45 15.7	
	comp=Z,760nm,0.4s								
AVFE	**Valle Fertil**	**1.45**	**25**		*e*	P	Pn	18 44 58.3	+1.1
AVFE					*e*	S	Sn	18 45 18.7	+1.4
AVFE						IAML		18 45 19.5	
	comp=Z,301nm,0.2s								
ACHE	**Chepes**	**1.52**	**58**		*e*	P	Pn	18 44 55.0	-3.1
ACHE					*e*	S	Sn	18 45 15.2	-3.8
AVIZ	**Vizcacheras**	**1.52**	**191**		*e*	S	Sn	18 45 20.4	+1.5
ACCO	**Cerro Coronel**	**1.58**	**331**		*e*	P	Pn	18 45 00.2	+1.3
ACCO					*e*	S	Sn	18 45 22.5	+2.0
ACDV	**Cuesta del Vie**	**1.97**	**336**		*e*	P	Pn	18 45 05.0	+1.4
ACDV					*e*	S	Sn	18 45 29.8	+1.0
ACDV						IAML		18 45 30.3	
	comp=Z,146nm,0.4s								
APLL	**PUNTA DE LOS L**	**2.11**	**42**		*e*	P	Pn	18 45 06.3	+1.0
APLL					*e*	S	Sn	18 45 32.9	+1.1
AROD	**Rodeo**	**2.12**	**328**		*e*	P	Pn	18 45 07.1	+1.5
AROD					*e*	S	Sn	18 45 33.5	+1.2
MRA	**San Martin**	**2.13**	**103**		*e*	P	Pn	18 45 06.8	+1.2
MRA					*e*	S	Sn	18 45 31.4	-0.9
MRA						IAML		18 45 35.5	
	comp=Z,314nm,0.6s								
MT08	**Bocatoma Ro**	**2.14**	**226**		*e*	P	Pn	18 45 07.5	+1.8
MT08					*e*	S	Sn	18 45 34.7	+2.

ESQI	Esquipulas	2.31 241	eP	Pn	18 54 44.0	+1.9		
ESQI			eS	Sn	18 55 10.9	0.0		
ESQI	Esquipulas	2.31 241	P	Pn	18 54 42.1	0.0		
RCVN	Varillal2	2.34 154	P	Pn	18 54 43.2	+0.6		
RCVN	Varillal2	2.34 154	S	Sn	18 55 11.6	-0.3		
MTO3	Montecristo	2.40 238	P	Pn	18 54 44.2	+0.7		
MTO3	Montecristo	2.40 238	S	Sn	18 55 12.8	-0.8		
RCPN	Sur Rio San Ju	2.44 152	P	Pn	18 54 44.6	+0.8		
RCPN	Sur Rio San Ju	2.44 152	S	Sn	18 55 14.5	+0.3		
PACA	Pacayal	2.44 205	eP	Pb	18 54 47.6	-0.1		
PACA	comp=Z,1μm,0.4s		IAML		18 55 26.0			
PACA	Pacayal	2.44 205	S	Sn	18 55 14.5	+0.2		
RCON	San Juan de Ri	2.45 154	S	Sn	18 55 14.7	+0.2		
RCON	San Juan de Ri	2.45 154	P	Pn	18 54 45.0	+1.0		
LCND	La Caada	2.45 194	P	Pn	18 54 44.7	+0.7		
CNCH	Conchagua	2.47 193	S	Sn	18 55 15.6	+0.6		
CNCH	Conchagua	2.47 193	P	Pn	18 54 44.3	-0.1		
PAVA	Las Pavas	2.55 220	S	Sn	18 55 17.9	+0.9		
PAVA	Las Pavas	2.55 220	P	Pn	18 54 44.2	-1.3		
COEG	Centro de Oper	2.59 217	P	Pn	18 54 46.7	+0.7		
COEG	Centro de Oper	2.59 217	S	Sn	18 55 18.3	+0.3		
CSGN	Cosiguina Volc	2.72 186	P	Pn	18 54 47.7	0.0		
CSGN			S	Sn	18 55 20.5	-0.6		
LIMN	Finca el Limon	2.76 162	P	Pn	18 54 49.0	+0.7		
LIMN			S	Sn	18 55 22.9	+0.8		
PETF	Flores	2.78 296	P	Pn	18 54 50.1	+1.6		
PETF	Flores	2.78 296	S	Sn	18 55 22.6	0.0		
UNIC	Universidad Ca	2.79 233	S	Sn	18 55 23.5	+0.5		
RBJL	Robledal	2.82 236	eP	Pn	18 54 52.2	+2.9		
SNJE	San Jose	2.91 232	eP	Pn	18 54 53.2	+2.7		
JAYA	Jayaque - finc	2.93 226	P	Pn	18 54 50.3	-0.5		
NUBE	Las Nubes	3.02 234	eP	Pn	18 54 53.6	+1.6		
NUBE	Las Nubes	3.02 234	S	Sn	18 55 28.1	-0.6		
PKGN	Cerro Pekin	3.02 175	P	Pn	18 54 52.1	+0.2		
MATN	Matagalpa	3.04 155	P	Pn	18 54 53.9	+1.7		
MATN	Matagalpa	3.04 155	S	Sn	18 55 29.0	0.0		
POLN	Al Sur del Vol	3.06 172	P	Pn	18 54 51.6	-0.8		
POLN			S	Sn	18 55 29.5	0.0		
SIUN	Universidad Ur	3.11 129	P	Pn	18 54 51.6	-1.4		
SIUN			S	Sn	18 55 31.0	+0.4		
CNGN	Cerro Negro	3.22 170	S	Sn	18 55 33.8	+0.2		
MOM3	MOM3	3.25 167	P	Pn	18 54 55.6	+0.6		
MOM3			S	Sn	18 55 34.4	+0.3		
ESPN	Las Esperanzas	4.51 140	P	Pn	18 55 13.9	+1.5		
ESPN	Las Esperanzas	4.51 140	S	Sn	18 56 06.5	+1.2		
TEIG	Tepich	4.61 348	P	Pn	18 55 13.9	+0.2		
TEIG			S	Sn	18 56 07.2	-0.5		

*JMA **06** 19:08:25.3±0.1,24°.6N±0°.4×12°.1E±°, h0km,MV2.8/11, TAIWAN REGION*

TAP 06 19:08:24.9,24°.56N×121°.52E,h10km,ML3.1,22C-4D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LATG	Datong	0.03	162	⇑iP	Pg	19 08 27.5	+0.6
LATG				iS	Sg	19 08 28.8	+0.5
ENTT	Nioudou	0.09	30	⇑iP	Pg	19 08 27.9	+0.5
ENTT				S	Sg	19 08 30.0	+0.7
YHNB	Yeheng	0.17	310	P	Pg	19 08 29.1	+0.5
YHNB	Yeheng	0.17	310	⇓iP	Pg	19 08 29.1	+0.5
YHNB				iS	Sg	19 08 31.4	+0.2
NNS	Nan Shan	0.18	227	⇑iP	Pg	19 08 29.3	+0.5
NNS				iS	Sg	19 08 31.8	+0.3
NNSB	Datong	0.18	223	⇑iP	Pg	19 08 29.4	+0.5
NNSB				iS	Sg	19 08 31.8	+0.2
NSK	Sanguang	0.18	308	⇓iP	Pg	19 08 29.3	+0.5
NSK				iS	Sg	19 08 31.6	0.0
NDS	Dongshan	0.20	68	⇑iP	Pg	19 08 29.6	+0.6
FUSB	Fushanzhiwuyua	0.21	18	⇑iP	Pg	19 08 29.9	+0.6
FUSB				eS	Sg	19 08 32.3	+0.1
TWE	Neicheng	0.21	41	⇑iP	Pb	19 08 30.1	-0.6
TWE				S	Sg	19 08 33.4	+1.1
NWLT	Wulai	0.21	356	⇓iP	Pg	19 08 30.0	+0.6
NWLT				S	Sg	19 08 32.5	0.0
ENA	Nanau	0.24	123	P	Pb	19 08 30.9	-0.4
ENA				S	Sg	19 08 34.1	+0.9
ILA	Ilan	0.29	46	eP	Pg	19 08 31.4	+0.6
ESAO	Su ao	0.30	87	P	Pg	19 08 31.1	+0.3
TWC	Suao	0.31	81	⇑iP	Pg	19 08 31.6	+0.6
TWC				S	Sb	19 08 36.4	-1.1
EAHA	Aohua	0.31	139	P	Pb	19 08 32.0	-0.4
EAHA				eS	Sg	19 08 36.2	+1.0
ETLH	Xiulin Townshi	0.35	185	P	Pb	19 08 33.0	-0.3
ETLH				S	Sg	19 08 37.4	+0.7
NFF	Wufeng Townshi	0.37	281	eP	Pb	19 08 33.0	-0.6
NFF				S	Sg	19 08 37.4	+0.2
KSHI	Guanxi Townshi	0.38	305	eP	Pb	19 08 33.5	-0.2
KSHI				S	Sb	19 08 39.2	-0.3
NACB	Ninganchiao	0.39	170	P	Pb	19 08 33.5	-0.4
NACB	Ninganchiao	0.39	170	P	Pn	19 08 38.9	+2.3
NACB	Ninganchiao	0.39	170	P	Pb	19 08 33.5	-0.4
NAOB				eS	Sg	19 08 38.5	+1.0
NHDH	Xindian Distri	0.40	1	eP	Sg	19 08 33.9	-0.2
NHDH				S	Sg	19 08 38.9	+0.8
FUSS	Fushou	0.40	219	⇑eP	Pg	19 08 33.4	+0.5
FUSS				eS	Sg	19 08 38.8	+0.6
TATO	Taipei	0.41	356	P	Pb	19 08 34.4	+0.1
TATO	Taipei	0.41	356	P	Pb	19 08 34.0	-0.3
ETL	Fush Village	0.41	166	eP	Pb	19 08 33.9	-0.4
ETL				S	Sg	19 08 39.5	+1.0
TWA	Mucha	0.42	8	⇑iP	Pb	19 08 34.2	-0.3
TWA				S	Sg	19 08 39.5	+0.7
NJD	Zhudong	0.43	294	eP	Pb	19 08 34.8	+0.2
NJD				S	Sb	19 08 41.0	0.0
TWT	Tachien	0.44	225	P	Pg	19 08 33.9	+0.4
BACT	New Taipei Cit	0.44	351	eP	Pb	19 08 34.9	+0.1
TDCB	Techi	0.45	227	P	Pg	19 08 34.0	+0.3
LIOB	Emei	0.46	280	⇑iP	Pb	19 08 35.3	+0.2
LIOB				S	Sb	19 08 41.2	-0.9
EGS		0.47	53	P	Pb	19 08 35.0	-0.2
EGS				eS	Sb	19 08 42.3	0.0
NSTT	Nanjuang	0.47	278	P	Pb	19 08 35.2	-0.1
NSTT				S	Sg	19 08 41.2	+0.7
TAP	Taipei	0.47	359	eP	Pb	19 08 35.5	+0.2
TAP				eS	Sb	19 08 42.0	-0.4
WHF	Hehuan Shan	0.47	209	⇑iP	Pg	19 08 34.8	+0.5
WHF				eS	Sb	19 08 42.0	-0.8
NHY	Taipei	0.48	6	eP	Pb	19 08 35.0	-0.4
TWD	Chiawan	0.48	171	⇓iP	Pb	19 08 35.2	-0.3
TWD				eS	Sb	19 08 41.8	-0.9
TIPB	Shuangxi	0.49	34	⇑iP	Pg	19 08 35.1	+0.5
TIPB				S	Sg	19 08 41.0	-0.2
HSN1	Hsinchu	0.50	295	eP	Pb	19 08 35.9	+0.1
HSN1				eS	Sb	19 08 43.4	+0.3
NCUH	Zhongli	0.50	323	eP	Pb	19 08 36.2	+0.4
SBCB	Hsinchu	0.54	295	eP	Pb	19 08 36.7	+0.3
TWS1	Kuangyinshan	0.54	350	P	Pb	19 08 37.2	+0.7
TWS1				eS	Sb	19 08 44.6	+0.3
LXIB	Xiulin Townshi	0.55	190	P	Pb	19 08 36.3	-0.3
LXIB				eS	Sg	19 08 43.3	+0.5
HSN	Hsinchu	0.55	296	eP	Pb	19 08 36.7	+0.1
NWF	Wu-fen Shan	0.56	25	eP	Pb	19 08 36.7	-0.2
NWF				eS	Sg	19 08 44.0	+0.7
WFSB	Wu-fen Shan	0.56	25	eP	Pb	19 08 36.6	-0.2
WFSB				eS	Sg	19 08 43.7	+0.5
YM01	YM01	0.58	5	⇑iP	Pb	19 08 37.6	+0.4
YM01				eS	Sb	19 08 44.9	-0.7
HWA	Hwalien	0.59	172	eP	Pb	19 08 37.2	0.0
WHP	Taichung City	0.59	242	P	Pb	19 08 37.3	-0.1
WHP				eS	Sg	19 08 44.2	-0.1
ETM	Tongmen	0.59	182	eP	Pb	19 08 37.3	0.0
ETM				eS	Sg	19 08 44.7	+0.4
ZUZH	Zhuzihu	0.60	2	eP	Pb	19 08 38.0	+0.5
ZUZH				eS	Sg	19 08 44.9	+0.4
TWB1	Santiao Chiao	0.62	44	⇑iP	Pg	19 08 37.1	+0.2
ANP	Anpu	0.62	0	P	Pb	19 08 38.3	+0.4
SXI1	Grass Mountain	0.62	31	⇑iP	Pb	19 08 37.8	-0.1
YM08	YM08	0.63	6	⇑iP	Pb	19 08 38.1	+0.1
TNOU	National Taiwa	0.63	22	eP	Pb	19 08 37.8	-0.1
NMLH	Miaoli	0.66	268	eP	Pb	19 08 39.1	+0.6
EOS2	EOS2	0.67	102	eP	Pb	19 08 38.6	+0.1
WUSB	Renai	0.68	213	⇑iP	Pg	19 08 38.0	0.0
OWD	Renai	0.68	207	P	Pg	19 08 37.9	-0.2
NSY	Sanyi	0.70	258	P	Pn	19 08 40.4	-0.5
TWQ1	Liyutan	0.71	253	⇑iP	Pb	19 08 40.0	+0.7
WCS	Beigang Elemen	0.75	228	⇑eP	Pg	19 08 39.6	+0.2
ESL	Shilin	0.75	186	eP	Pb	19 08 40.0	0.0
SHUL	Shoufeng	0.77	177	eP	Pb	19 08 41.1	+0.7
EOS3	EOS3	0.78	110	eP	Pn	19 08 41.2	-0.6
WDJ	Dajia District	0.83	255	eP	Pn	19 08 43.0	+0.4
WARBT	Fenglin Townsh	0.85	188	eP	Pb	19 08 41.6	-0.1
WARBT				eS	Sg	19 08 51.8	-0.6
EOS4	EOS4	0.85	121	eP	Pn	19 08 42.4	-0.2
TCU	Taichung	0.87	242	eP	Pn	19 08 43.7	+0.5
VWDT	VWDT	0.88	203	eP	Pg	19 08 41.6	-0.1
SMLT	Sun Moon Lake	0.88	220	eP	Pg	19 08 41.9	+0.1
TYC	Yuchr	0.89	223	⇑P	Pg	19 08 42.0	-0.1
EGFH	Guangfu	0.89	185	eP	Pb	19 08 42.6	+0.1
SSLB	Suanglung	0.93	214	P	Pg	19 08 42.3	-0.4
SSLB	Suanglung	0.93	214	⇑iP	Pg	19 08 42.1	-0.7
WCHH	Zhanghua	1.00	241	eP	Pn	19 08 45.6	+0.7
WNT	Mingjian	1.02	228	eP	Pn	19 08 45.7	+0.5
WHYT	Xinyi Township	1.05	215	eP	Pn	19 08 45.8	+0.1
EHY	Hungye	1.07	190	eP	Pn	19 08 46.1	+0.3
HGSD	Ruisui	1.07	185	eP	Pn	19 08 46.2	+0.3
EHYH	Wanrong	1.07	188	eP	Pn	19 08 46.1	+0.1
PCYT	Pengchaiyu	1.18	25	eP	Pg	19 08 47.8	+0.3
YULB	Yu-li	1.18	190	P	Pg	19 08 48.1	+0.5
YULB	Yu-li	1.18	190	S	Sn	19 09 03.4	-0.2
YULB	Yu-li	1.18	190	eP	Pg	19 08 47.8	+0.2
YUS	Yu-Shan	1.19	206	eP	Pg	19 08 47.6	-0.2
TWF1	Yuli	1.22	190	eP	Pg	19 08 48.6	+0.2
CHN5	Tsauling	1.23	219	eP	Pg	19 08 49.5	+1.0
ALS	Alishan	1.23	212	eP	Pg	19 08 48.6	0.0
WDLH	Douliu	1.25	226	eP	Pg	19 08 49.9	+1.0
JYNG	Yonagunijimaku	1.31	95	P	Pg	19 08 50.3	+0.4
JYNG				eS	Sg	19 09 06.8	-0.1
YOJ	Yonaguni jima	1.36	94	P	Pg	19 08 51.4	+0.3
YOJ	Yonaguni jima	1.36	94	S	Sg	19 09 09.8	+1.0
YOJ	Yonaguni jima	1.36	94	eP	Pg	19 08 51.1	0.0
YOJ				eS	Sg	19 09 09.7	+0.9
YOJ	Yonaguni jima	1.36	94	eP	Pb	19 08 50.7	+0.2
FULB	Fuli	1.37	189	eP	Pg	19 08 51.3	+0.1
WCKO	Fanlu	1.40	217	eP	Pg	19 08 51.8	+0.1
EHD	Haiduan	1.44	192	eP	Pg	19 08 52.4	-0.1
ELDTW	Lidau	1.44	199	eP	Pb	19 08 51.8	-0.1
TPUB	Ta-pu	1.50	213	P	Pg	19 08 53.2	-0.4
TPUB	Ta-pu	1.50	213	eP	Pg	19 08 53.7	+0.1
STYH	Taoyuan	1.54	206	eP	Pg	19 08 54.2	-0.2
WTP	Ta-pu	1.55	212	eP	Pg	19 08 54.7	+0.1
WSL	Shuilin Townsh	1.57	229	eP	Pb	19 08 54.1	+0.2
TWK	Hsinying	1.60	216	eP	Pg	19 08 55.6	0.0
CHN1	Nanshi	1.64	214	eP	Pg	19 08 56.1	-0.3
TWG	Pinlang	1.78	193	eP	Pg	19 08 58.5	-0.5
TWGBT	Beinan	1.78	193	P	Pg	19 08 58.4	-0.7
TWGBT	Beinan	1.78	193	eP	Pg	19 08 58.5	-0.6
SSD	Sandimen	1.98	204	eP	Pb	19 09 01.3	+0.2
IRIF	Iriomote-Funau	2.03	96	P	Pn	19 09 01.4	+1.3
PHUB	P'eng-hu	2.06	240	eP	Pn	19 08 59.4	-0.1
MASBT	Mashibuluo	2.10	203	eP	Pb	19 09 03.9	+0.8
PTMZ	Houxiangcun	2.23	283	eP	Pn	19 09 01.0	-0.9
JKRS	Kuro-shima	2.29	98	eP	Pb	19 09 04.9	-1.5
JIJ	Ishigaki jima	2.40	94	eP	Pb	19 09 06.6	-1.6
JISG	Ishigakijimahi	2.54	89	eP	Pn	19 09 07.6	+1.4
JISG				eS	Sb	19 09 40.2	-1.8

*DSN **06** 19:11:23.5±0.8,27°.35N×55°.08E,h15km,ML2.6/7,Error ellipse: s-maj=11.1km s-min=4.8km az=30.0*
*OMAN **06** 19:11:24.9±1.1,27°.20N×55°.04E,h10km,mb4.0/4, ml2.8/14,Error ellipse: s-maj=11.5km s-min=5.4km az=9.0*
*TEH **06** 19:11:25.0,27°.56N×55°.08E,h10km±481km*

ISC 06 19:11:25.3±1.1,27°.28N±0°.06×55°.03E±0°.04,h20km,n40, σ1s16/54,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.70	304	Pg	Pb	19 11 37.6	-1.3
GENO	Geno	1.02	83	Pg	Pn	19 11 43.7	-1.0
IBND	Bandar-abas	1.35	83	Pg	Pb	19 11 49.0	-1.0
IBND				Sg	Sb	19 12 10.1	+3.3
SHME	Shamm	1.58	141	P	Pn	19 11 51.4	-0.8
SHME				S	Sb	19 12 13.2	-0.3
SHME	Shamm	1.58	141	P	Pn	19 11 50.9	-1.4
SHME				S	Sn	19 12 12.4	+0.3
BANOM	Banah	1.77	140	P	Pn	19 11 54.5	-0.3
BANOM				S	Sn	19 12 17.7	+0.9
BANOM	Banah	1.77	140	P	Pn	19 11 54.0	-0.9
BANOM				S	Sn	19 12 17.2	+0.4
UMQ	Umm Al-Quwin	1.84	162	P	Pn	19 11 57.2	+1.4
MASF	Masafi	2.16	152	P	Pn	19 12 00.8	+0.6
MSFE	SNR=5.1						
MSFE	Esma-Masafi	2.17	152	P	Pn	19 11 59.6	-0.7
MDH				S	Sn	19 12 27.6	+1.0
UOSS	Madha	2.28	150	P	Pn	19 12 02.4	+0.5
UOSS	Minazif	2.56	155	P	Pn	19 12 07.1	+1.4
HATD	Minazif	2.56	155	P	Pn	19 12 05.6	-0.1
HATD	Hatta, Dubai	2.64	158	P	Pn	19 12 08.3	+1.5
ASUD	Hatta, Dubai	2.64	158	P	Pn	19 12 07.1	+0.2
AJN	Al Ashush, Dub	2.66	174	P	Pn	19 12 08.9	+1.8
ASHO	Ajban	2.71	181	P	Pn	19 12 09.4	+1.6
ASHO	Ashiyiah	2.75	160	P	Pn	19 12 08.7	+0.4
ASHO	SNR=16						
ASHO	Ashiyiah	2.75	160	P	Pn	19 12 41.9	+0.8
NGRK	Negar Kerman	2.75	32	Pn	Pn	19 12 08.5	+0.1
ALNE	Al Ain	3.28	168	P	Pn	19 12 07.7	-1.5
ALNE				S	Sn	19 12 16.6	+0.9
ALNE	Al Ain	3.28	168	P	Pn	19 12 55.5	+1.5
SOHO	SOHO	3.42	156	P	Pn	19 12 14.9	-0.7
GHWR	Ruwais	3.84	211	P	Pn	19 12 17.3	-0.2
GHWR				S	Sn	19 12 23.4	+0.1
ARQ	Araqi	4.16	161	P	Pn	19 13 08.8	+1.1
ARQ				S	Sn	19 12 28.0	+0.3
TRNA	Turayna	4.27	234	P	Pn	19 13 16.3	+0.6
TRNA	SNR=6.9					19 12 29.1	-0.1
TRNA	SNR=8.5			S	Sn	19 13 19.3	+0.8
MZR	Muzera	4.49	199	P	Pn	19 12 31.8	-0.4
SMRA	Abu-Samra	4.55	237	P	Pn	19 12 32.9	-0.2
SMRA				S	Sn	19 13 26.2	+0.9
UMZA	Um Al Zommool	4.55	178	P	Pn	19 12 33.7	+0.7
KLNJ	Kolanjah	4.78	322	Pn	Pn	19 12 38.0	+1.5
SMDO	Samad	5.02	146	P	Pn	19 12 39.3	-0.2
SMDO				S	Sn	19 13 36.5	-0.5
WSAR	Wadi Sarin	5.18	140	P	Pn	19 12 41.6	-0.2
WSAR				S	Sn	19 13 39.2	-1.7
WBK	Wadi Bani Khal	5.87	142	P	Pn	19 12 50.6	-0.7
JLN	Jalan Bani Buh	6.48	141	P	Pn	19 12 58.9	-0.6
MHTO	MHTO	6.82	156	P	Pn	19 13 03.2	-1.1
DQM	SNR=8.1 DQM	7.67	162	P	Pn	19 13 14.4	-1.6
DOK	Doka	8.67	186	P	Pn	19 13 27.0	-2.6
WHFO	Wadi Hawf	9.39	187	P	Pn	19 13 38.0	-1.7
DMTO	SNR=15 DMTO	9.52	180	P	Pn	19 13 39.6	-1.8
ABTO	Aybut	10.01	190	P	Pn	19 13 46.7	-1.4
	SNR=8.2						

*IDC **06** 19:49:23.5±1.1,36°.58N×141°.91E,h0km,mb3.7/8, mbtmp3.7/13,ML3.3/5,MS3.2/4,Error ellipse: s-maj=22.5km s-min=20.5km az=160.0*
*NIED **06** 19:49:28.3,36°.79N×141°.64E,h53km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=2.03; Mθθ1.21; Mφφ0.82; Mrθ2.86; Mθφ-0.15; Mφr5.33; Fault plane solution: M06.21000×10^14^ NP1:φ≡36.00000°, δ7.00000°,λ-83.00000°. NP2:φ≡209.00000°,δ83.00000°, λ-91.00000°.*
*JMA **06** 19:49:28.3±0.3,36°.8N±0°.7×14°.2E±°, h53km±3km, MV3.5/32,E OFF FUKUSHIMA PREF*

ISC 06 19:49:24.5±2.1,36°.71N±0°.05×141°.85E±0°.08,h8km±12km, n30,σ1s81/30,mb3.6/8,MS3.2/3,8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.93	295	⇓P	Pg	19 49 42.6	+0.3
ONAJ				⇓eS	Sg	19 49 53.0	-1.4
JFK	Kawauchi	1.02	310	P	Pg	19 49 43.9	-0.2
JHO	Hitachi	1.03	265	P	Pb	19 49 44.4	-0.2
JHYU	Hitachinakayam	1.08	250	⇓P	Pg	19 49 45.7	-0.2
JHYU				⇓eS	Sg	19 49 58.3	-1.0
JFFD	Fukushimafurud	1.10	291	P	Pg	19 49 45.0	-0.5
JMM	Marumori	1.43	324	⇓P	Pn	19 49 50.1	-0.5
JMM				⇓eS	Sn	19 50 06.4	-3.1
JOTO	OTAMA OYAMA	1.48	305	P	Pn	19 49 51.6	+0.3
JOTO				S	Sn	19 50 08.4	-2.4
JIO	Ouri	1.79	347	⇓P	Pn	19 49 55.5	-0.1
JIO				⇓S	Sn	19 50 15.2	-3.2
JFY	Yanaizu	1.85	293	P	Pn	19 49 57.6	+1.2
MJAR	Matsushiro Arr	2.93	268	Pn	Pn	19 50 12.7	+1.3
MJAR	1.5nm,0.3s,baz=89,slow=15,SNR=84			Sn	Sn	19 50 47.2	+0.4
MJAR	1.3nm,0.3s,baz=194,slow=15,SNR=8.0			LR	LR	19 51 40.1	
JHJ	comp=Z,209nm,18.3s,baz=82,slow=46 14nm,0.4s Hachijo jima 2	3.96	206	Pn	Pn	19 50 25.3	-0.2
JHJ	10nm,0.3s,baz=346,slow=18,SNR=12			Sn	Sn	19 51 08.5	-3.7
ASAJ	28nm,0.3s,baz=283,slow=22,SNR=8.0 29nm,0.4s Asahikawa	7.42	4	Pn	Pn	19 51 14.4	+1.5
ASAJ	0.7nm,0.3s,baz=191,slow=16,SNR=6.0			Sn	Sn	19 52 34.1	-3.2
USRK	0.1nm,0.3s,baz=324,slow=22,SNR=2.0 4.6nm,0.8s Ussuriysk Ar.	10.60	318	Pn	Pn	19 51 59.3	+2.8
KSRS	0.3nm,0.3s,baz=123,slow=16,SNR=5.3 6.1nm,0.9s Korea Array	11.15	278	Pn	Pn	19 52 06.5	+2.4
MA2	0.1nm,0.3s,baz=80,slow=14,SNR=6.2 1.0nm,0.8s Magadan	23.60	11	LR	LR	20 04 30.4	
H11N2	comp=Z,38nm,21.6s,baz=127,slow=38 WAKE ISLAND Hy	27.68	121	T	T	20 24 31.0	
H11N1	baz=313,slow=75,SNR=12 WAKE ISLAND Hy	27.69	121	T	T	20 24 28.9	
H11N3	baz=313,slow=75,SNR=10 WAKE ISLAND Hy	27.70	121	T	T	20 24 24.6	
SONM	baz=313,slow=75,SNR=12 Songino Array	28.25	304	P	P	19 55 18.1	+0.1
H11S1	0.7nm,0.7s,baz=111,slow=10.0,SNR=5.9 0.7nm,0.7s WAKE ISLAND Hy	28.39	123	T	T	20 25 30.9	
H11S3	baz=316,slow=76,SNR=5.4 WAKE ISLAND Hy	28.39	123	T	T	20 25 42.6	
H11S2	baz=316,slow=76,SNR=5.0 WAKE ISLAND Hy	28.41	123	T	T	20 25 32.6	
ZALV	baz=316,slow=76,SNR=5.6 Zalesovo Beam	42.39	313	P	P	19 57 20.1	+1.1
ZALV	0.6nm,0.5s,baz=94,slow=7.3,SNR=3.9			LR	LR	20 15 04.2	
MKAR	comp=Z,32nm,18.3s,baz=100,slow=36 0.6nm,0.5s Makanchi Array	44.59	302	P	P	19 57 37.2	+0.3
KURBB	0.3nm,0.6s,baz=81,slow=8.9,SNR=3.2 0.3nm,0.6s Kurchatov Arra	46.48	308	P	P	19 57 54.3	+2.5
ILAR	1.8nm,0.2s,baz=84,slow=8.0,SNR=6.5 1.8nm,0.2s Eielson Array	49.58	32	P	P	19 58 16.2	+0.6
BVAR	0.6nm,0.9s,baz=262,slow=6.7,SNR=4.7 0.6nm,0.9s Borovoye Array	51.05	313	P	P	19 58 27.5	+0.7
ASAR	0.3nm,0.5s,baz=68,slow=5.0,SNR=2.1 0.3nm,0.5s Alice Springs	60.52	188	P	P	19 59 33.6	-1.4
GNI	0.4nm,0.6s,baz=348,slow=8.5,SNR=4.2 0.4nm,0.6s Garni	72.18	307	LR	LR	20 36 40.1	
NVAR	comp=Z,35nm,18.2s,baz=138,slow=39 Mina Array Bea	74.90	53	P	P	20 01 07.7	+1.6
	1.0nm,0.7s,baz=304,slow=5.1,SNR=4.1 1.0nm,0.7s						

*IDC **06** 20:00:51.2±11.0,0°.17N×127°.51E,h123km±122km, mb3.6/7,mbtmp4.0/8,ML4.0/1,Error ellipse: s-maj=45.9km s-min=26.9km az=88.0*
*NEIC **06** 20:00:54.2±1.8,0°.04N±0°.06×127°.47E±0°.08,h153km±6km, mb4.2/13,Error ellipse: s-maj=12.1km s-min=9.0km az=103.0*
*DJA **06** 20:00:55.5±0.2,0°.N±2°×12°.7E±°,h147km±3km,M4.2/19, mB5.5/2,mb4.1/13,MLv4.3/19,Mw(mB)5.0/2*

ISC 06 20:00:53.9±0.6,0°.06N±0°.06×127°.36E±0°.07,h150km,n46, σ1s36/46,mb4.1/12,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.70	1		Pn	20 01 16.7	+0.3
TNTI	Ternate	0.70	1	P	Pn	20 01 18.3	+1.8
TNTI				S	Sn	20 01 35.4	+1.7
SANI	Sanana	2.50	213	P	Pn	20 01 35.8	+0.7
NLAI	Namlea	3.29	184	P	Pn	20 01 46.9	+1.9
KMSI	Cibinong	3.41	279	P	Pn	20 01 47.8	+1.2
MSAI	Masohi	3.73	155	P	Pn	20 01 52.6	+1.9
AAI	Ambon	3.82	167	P	Pn	20 01 53.4	+1.6
SGSI	Sangihe	4.04	333	P	Pn	20 01 55.5	+0.8
LUWI	Luwuk	4.71	257		Pn	20 02 04.2	+0.7
LUWI				Sn	Sn	20 02 55.6	-2.2
LUWI	Luwuk	4.71

TIXI	**Tiksi**	**71.48**	**1**	IAmb	IAmb	20 12 06.6
	comp=Z,7.5nm,1.5s					
TIXI	**Tiksi**	**71.48**	**1**	P	**P**	**20 11 57.5 -0.1**
	comp=Z,1.3nm,0.4s,baz=188,slow=2.5,SNR=7.9					
	comp=Z,1.3nm,0.4s					

*IDC **06** 20:20:44.0±2.2, 34°.77S×179°.49W, h0km, mb3.9/3, mbtmp4.0/4, ML4.0/1, MS3.1/1, Error ellipse: s-maj=58.1km s-min=33.4km az=129.0*
*WEL **06** 20:20:50.9±1.1, 35°.5S±15°×18°.0W±1°.3, h192km±35km, M4.2/7, MLv4.2/7, Error ellipse: s-maj=21.2km s-min=14.1km az=33.9, confirmed*
ISC 06 20:20:49.5±1.5, 34°.80S±0°.08×179°.4W±0°.1, h43km, n36, σ1§12/41, mb3.9/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.32**	**213**	P	**Pn**	**20 21 39.3**	**+0.5**
MXZ				S	**Sn**	**20 22 14.6**	**-2.3**
WMGZ	**Waiomatatini S**	**3.49**	**210**	P	**Pn**	**20 21 42.7**	**+1.5**
WMGZ				S	**Sn**	**20 22 23.2**	**+2.1**
PKGZ	**Pakihiroa**	**3.67**	**213**	P	**Pn**	**20 21 44.5**	**+0.8**
PKGZ				S	**Sn**	**20 22 26.8**	**+1.1**
HAZ	**Te Kaha**	**3.72**	**217**	P	**Pn**	**20 21 44.6**	**+0.3**
HAZ				S	**Sn**	**20 22 26.8**	**-0.1**
PUZ	**Puketiti**	**3.77**	**209**	P	**Pn**	**20 21 45.9**	**+0.9**
PUZ				S	**Sn**	**20 22 27.9**	**-0.3**
RUGZ	**Raukumara Rang**	**3.94**	**216**	P	**Pn**	**20 21 47.5**	**0.0**
RUGZ				S	**Sn**	**20 22 33.6**	**+1.2**
TWGZ	**Tauwhareparae**	**3.97**	**211**	P	**Pn**	**20 21 48.1**	**+0.2**
TWGZ				S	**Sn**	**20 22 34.6**	**+1.4**
CNGZ	**Carnagh Station**	**4.14**	**207**	P	**Pn**	**20 21 50.6**	**+0.4**
CNGZ				S	**Sn**	**20 22 38.3**	**+0.9**
WHRZ	**Whale Island**	**4.22**	**223**	P	**Pn**	**20 21 53.4**	**+2.1**
WHRZ				S	**Sn**	**20 22 40.4**	**+1.1**
MWZ	**Matawai**	**4.30**	**214**	P	**Pn**	**20 21 52.6**	**+0.2**
MWZ				S	**Sn**	**20 22 42.0**	**+0.7**
KUZ	**Kuaotunu**	**4.41**	**242**	P	**Pn**	**20 21 54.6**	**+0.8**
GRZ	**Great Barrier**	**4.43**	**249**	P	**Pn**	**20 21 53.9**	**-0.2**
URZ	**Urewera**	**4.44**	**218**	Pn	**Pn**	**20 21 53.7**	**-0.6**
	7.0nm,0.3s,baz=266,slow=2.7,SNR=35						
URZ				Sn	**Sn**	**20 22 43.0**	**-1.7**
	7.7nm,0.3s,baz=158,slow=14,SNR=5.3 20nm,0.3s						
URZ	**Urewera**	**4.44**	**218**	P	**Pn**	**20 21 53.4**	**-0.9**
RAGZ	**Rawiri**	**4.48**	**214**	P	**Pn**	**20 21 54.5**	**-0.4**
SNGZ	**Shannon Station**	**4.75**	**212**	P	**Pn**	**20 21 58.8**	**+0.2**
SNGZ				S	**Sn**	**20 22 50.6**	**-1.8**
MUGZ	**Murupara**	**4.78**	**219**	P	**Pn**	**20 21 58.4**	**-0.6**
MUGZ				S	**Sn**	**20 22 50.2**	**-2.9**
KNZ	**Kokohu**	**4.82**	**208**	P	**Pn**	**20 21 58.1**	**-1.3**
WIAZ	**Waiheke Island**	**4.86**	**244**	P	**Pn**	**20 22 00.0**	**0.0**
MKAZ	**Moumakai**	**4.96**	**241**	P	**Pn**	**20 22 01.4**	**-0.1**
TOZ	**Tahuroa Road**	**5.04**	**233**	P	**Pn**	**20 22 02.3**	**-0.2**
WCZ	**Waipu Caves**	**5.22**	**256**	P	**Pn**	**20 22 06.4**	**+1.3**
OUZ	**Omahuta**	**5.75**	**264**	P	**Pn**	**20 22 12.3**	**0.0**
WAZ	**Wanganui**	**6.66**	**220**	P	Pn	20 22 19.9	-4.8
DZM	**Mont Dzumac**	**17.74**	**312**	LR	LR	20 30 12.3	
	comp=Z,64nm,19.7s,baz=270,slow=32						
ASAR	**Alice Springs**	**41.89**	**272**	P	**P**	**20 28 36.0**	**+0.1**
	1.0nm,0.4s,baz=115,slow=7.6,SNR=18 1.0nm,0.4s						
WRA	**Warramunga Arr**	**43.28**	**278**	P	**P**	**20 28 46.7**	**-0.4**
	1.5nm,0.8s,baz=118,slow=7.5,SNR=15 1.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.32**	**274**	P	**P**	**20 29 49.9**	**+0.3**
	1.4nm,0.9s,baz=124,slow=3.6,SNR=2.0 1.4nm,0.9s						
H03S2	**Juan Fernandez**	**79.03**	**124**	T	T	22 01 02.8	
	baz=233,slow=74,SNR=4.2						
H03S1	**Juan Fernandez**	**79.05**	**124**	T	T	22 01 04.2	
	baz=233,slow=74,SNR=4.8						
H03S3	**Juan Fernandez**	**79.05**	**124**	T	T	22 01 02.1	
	baz=233,slow=74,SNR=4.3						
H03N3	**Juan Fernandez**	**79.25**	**123**	T	T	22 01 21.9	
	baz=237,slow=72,SNR=4.6						
H03N2	**Juan Fernandez**	**79.25**	**123**	T	T	22 01 16.2	
	baz=237,slow=72,SNR=3.4						
H03N1	**Juan Fernandez**	**79.27**	**123**	T	T	22 01 32.1	
	baz=237,slow=72,SNR=3.5						
KURBB	**Kurchatov Arra**	**123.19**	**312**	PKP	**PKiKP**	**20 39 41.1**	**0.0**
	0.3nm,0.6s,baz=116,slow=2.2,SNR=4.1						
FINES	**FINESS Array B**	**148.78**	**336**	PKPbc	**PKiKP**	**20 40 32.2**	**-0.5**
	3.2nm,0.8s,baz=56,slow=5.2,SNR=9.2						

*WEL **06** 20:21:42.0±0.4, 42°S±2°×17°.4E±°, h12km±3km, M3.7/13, ML4.0/12, MLv3.7/13, Error ellipse: s-maj=3.6km s-min=2.5km az=140.0, confirmed*
*NOU **06** 20:21:41.1, 41°.95S×174°.37E, h16km, MLv3.9/10, Cook Strait, New Zealand*
ISC 06 20:21:41.6±0.9, 41°.81S±0°.03×174°.19E±0°.03, h18km±4km, n100, σ1§09/112, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.07**	**19**	P	**Pg**	**20 21 45.4**	**+0.4**
SDNS	**Seddon**	**0.15**	**347**	P	**Pg**	**20 21 45.8**	**-0.1**
SDNS				S	**Sg**	**20 21 49.0**	**+0.3**
SEDS	**Seddon Fire St**	**0.16**	**330**	P	**Pb**	**20 21 46.2**	**-0.2**
KEKS	**Kekerengu Vall**	**0.21**	**227**	P	**Pg**	**20 21 47.3**	**+0.6**
KEKS				S	**Sg**	**20 21 51.6**	**+1.5**
BSWZ	**Blackbirch Sta**	**0.25**	**293**	P	**Pg**	**20 21 46.6**	**-0.8**
BSWZ				S	**Sg**	**20 21 50.4**	**-0.9**
GLOS	**29 km south-we**	**0.28**	**261**	P	**Pg**	**20 21 47.6**	**-0.2**
MGCS	**Blenheim Marlb**	**0.35**	**329**	P	**Pg**	**20 21 48.4**	**-0.7**
TUWZ	**Tuamarina**	**0.42**	**335**	P	**Pg**	**20 21 49.9**	**-0.4**
TUWZ				S	**Sg**	**20 21 55.4**	**-0.7**
TCW	**Tory Channel**	**0.61**	**7**	P	**Pb**	**20 21 52.9**	**-0.8**
TCW				S	**Sg**	**20 22 01.1**	**-0.6**
SNZO	**South Karori**	**0.64**	**38**	P	**Pb**	**20 21 54.1**	**-0.1**
SNZO	**South Karori**	**0.64**	**38**	S	**Sn**	**20 22 05.1**	**-0.3**
BHW	**Baring Head**	**0.65**	**52**	P	**Pg**	**20 21 55.3**	**+0.7**
BHW				S	**Sn**	**20 22 07.0**	**+1.1**
WEL	**Wellington**	**0.69**	**40**	P	**Pg**	**20 21 55.4**	**+0.3**
WEL				S	**Sn**	**20 22 05.9**	**-0.7**
KHZ	**Kahutara**	**0.77**	**218**	P	**Pn**	**20 21 57.7**	**+0.1**
KHZ	**Kahutara**	**0.77**	**218**	P	**Pn**	**20 21 57.6**	**0.0**
KHZ				S	**Sn**	**20 22 10.3**	**+1.5**
PLWZ	**Palliser**	**0.84**	**73**	P	**Pn**	**20 21 58.6**	**0.0**
NNZ	**Nelson**	**0.85**	**314**	P	**Pb**	**20 21 56.8**	**-1.0**
MSWZ	**Moikau Station**	**0.89**	**64**	P	**Pn**	**20 21 59.4**	**+0.1**
MSWZ				S	**Sn**	**20 22 14.1**	**+2.3**
THZ	**Tophouse**	**0.96**	**273**	P	**Pb**	**20 21 59.4**	**-0.4**
THZ				S	**Sb**	**20 22 11.9**	**-0.2**
CAW	**Cannon Point**	**0.97**	**44**	P	**Pn**	**20 22 00.3**	**0.0**
PAWZ	**Paruwai Farm**	**1.03**	**66**	P	**Pb**	**20 22 01.0**	**+0.1**
PAWZ				S	**Sn**	**20 22 17.3**	**+2.1**
DUWZ	**D'Urville Isla**	**1.03**	**349**	P	**Pb**	**20 21 60.0**	**-0.9**
DUWZ				S	**Sb**	**20 22 13.0**	**-1.1**
KIW	**Kapiti Island**	**1.10**	**30**	P	**Pb**	**20 22 01.9**	**-0.2**
MRNZ	**Matariki Terra**	**1.15**	**291**	P	**Pn**	**20 22 02.6**	**-0.2**
MTW	**Mount Morrison**	**1.19**	**57**	P	**Pn**	**20 22 03.1**	**-0.3**
TRWZ	**Traveller**	**1.20**	**70**	P	**Pn**	**20 22 03.2**	**-0.4**
TKNZ	**Takaka Hill**	**1.21**	**310**	P	**Pn**	**20 22 03.0**	**-0.6**
OGWZ	**Otaki Gorge**	**1.24**	**37**	P	**Pn**	**20 22 04.4**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.36**	**48**	P	**Pn**	**20 22 05.4**	**-0.3**
GVZ	**Greta Valley S**	**1.43**	**216**	P	**Pn**	**20 22 06.9**	**+0.1**
TMWZ	**Te Maipa**	**1.46**	**62**	P	**Pn**	**20 22 06.6**	**-0.6**
MRZ	**Mangatainoka R**	**1.56**	**43**	P	**Pn**	**20 22 08.4**	**-0.1**
QRZ	**Quartz Range**	**1.59**	**308**	P	**Pn**	**20 22 09.5**	**+0.6**
QRZ	**Quartz Range**	**1.59**	**308**	P	**Pn**	**20 22 09.5**	**+0.6**
TIWZ	**Tintock**	**1.65**	**52**	P	**Pn**	**20 22 09.2**	**-0.5**
LTZ	**Lake Taylor**	**1.72**	**235**	P	**Pn**	**20 22 10.9**	**+0.2**
CPWZ	**Castlepoint**	**1.77**	**60**	P	**Pn**	**20 22 11.2**	**-0.1**
AMCZ	**Amberley**	**1.77**	**219**	P	**Pb**	**20 22 14.2**	**+0.6**
DSZ	**Denniston Nort**	**1.78**	**271**	P	**Pn**	**20 22 12.8**	**+1.2**
OHWZ	**Ohakea**	**1.82**	**28**	P	**Pb**	**20 22 15.0**	**+0.6**
PRWZ	**Pori Road**	**1.84**	**48**	P	**Pn**	**20 22 11.9**	**-0.5**
POWZ	**Post Office Ro**	**1.86**	**41**	P	**Pn**	**20 22 12.3**	**-0.3**
BFZ	**Birch Farm**	**1.92**	**55**	P	**Pn**	**20 22 12.4**	**-1.1**
BFZ	**Birch Farm**	**1.92**	**55**	P	**Pn**	**20 22 12.3**	**-1.2**
OKCZ	**Okains Bay**	**2.08**	**203**	P	**Pn**	**20 22 15.0**	**-0.7**
DVHZ	**Dannevirke**	**2.13**	**45**	P	**Pn**	**20 22 15.3**	**-1.0**
WAZ	**Wanganui**	**2.14**	**17**	P	**Pb**	**20 22 19.0**	**-0.9**
OXZ	**Oxford**	**2.19**	**226**	P	**Pn**	**20 22 16.2**	**-1.0**
ANWZ	**Angora Road**	**2.19**	**53**	P	**Pn**	**20 22 16.4**	**-0.8**
MQZ	**McQueen's Vall**	**2.20**	**210**	P	**Pn**	**20 22 15.9**	**-1.4**
TSZ	**Takapari Road**	**2.21**	**38**	P	**Pn**	**20 22 17.0**	**-0.4**
AKCZ	**Akaroa Harbour**	**2.26**	**204**	P	**Pn**	**20 22 17.2**	**-1.0**
LREZ	**Lake Rotokare**	**2.36**	**4**	P	**Pb**	**20 22 23.2**	**-0.4**
NMEZ	**Namu Road**	**2.41**	**354**	P	**Pb**	**20 22 25.8**	**+1.3**
PRHZ	**Porangahau**	**2.41**	**51**	P	**Pn**	**20 22 19.4**	**-0.8**
RACZ	**Rakaia**	**2.44**	**218**	P	**Pn**	**20 22 19.5**	**-1.0**
PNHZ	**Pukenui**	**2.44**	**40**	P	**Pn**	**20 22 19.2**	**-1.4**
PREZ	**Palmer Road**	**2.47**	**360**	P	**Pn**	**20 22 24.2**	**-1.3**
KHEZ	**Kahui Hut**	**2.52**	**357**	P	**Pb**	**20 22 24.7**	**-1.7**
KHEZ	**Kahui Hut**	**2.52**	**357**	P	**Pb**	**20 22 24.9**	**-1.5**
NEZ	**North Egmont**	**2.54**	**358**	P	**Pb**	**20 22 25.5**	**-1.3**
NBEZ	**Newall Road No**	**2.55**	**354**	P	**Pb**	**20 22 27.4**	**+0.5**
MHCZ	**Mount Hutt**	**2.58**	**227**	P	**Pn**	**20 22 21.4**	**-1.2**
MTVZ	**Mangateitei**	**2.62**	**22**	P	**Pn**	**20 22 27.0**	**-1.0**
PKE	**Pukeiti**	**2.62**	**357**	P	**Pn**	**20 22 25.4**	**+2.3**
DREZ	**Durham Road**	**2.62**	**0**	P	**Pn**	**20 22 29.0**	**+0.9**
PKVZ	**Pokaka**	**2.67**	**20**	P	**Pn**	**20 22 29.3**	**+0.3**
MOVZ	**Moawhango**	**2.68**	**27**	P	**Pn**	**20 22 26.1**	**+2.0**
PXZ	**Pawanui**	**2.70**	**50**	P	**Pn**	**20 22 22.3**	**-1.8**
WNVZ	**Wahianoa**	**2.71**	**24**	P	**Pn**	**20 22 25.3**	**+0.9**
TRVZ	**Turoa**	**2.72**	**23**	P	**Pb**	**20 22 29.5**	**-0.3**
VRZ	**Vera Road**	**2.72**	**9**	P	**Pn**	**20 22 26.3**	**+1.9**
WACZ	**Wakanui South**	**2.74**	**218**	P	**Pn**	**20 22 23.8**	**-0.9**
WHVZ	**Whangaehu Hut**	**2.74**	**23**	P	**Pb**	**20 22 30.0**	**-0.3**
MAVZ	**Matarangi**	**2.75**	**23**	P	**Pb**	**20 22 30.3**	**-0.2**
FWVZ	**Far West T-bar**	**2.76**	**23**	P	**Pn**	**20 22 26.5**	**+1.3**
TUVZ	**Tukino**	**2.78**	**24**	P	**Pb**	**20 22 30.3**	**-0.5**
COVZ	**Chateau Observ**	**2.81**	**22**	P	**Pb**	**20 22 30.4**	**-1.0**
WVZ	**Waitaha Valley**	**2.85**	**243**	P	**Pn**	**20 22 27.2**	**+1.0**
NGZ	**Ngauruhoe**	**2.85**	**23**	P	**Pb**	**20 22 31.3**	**-0.7**
SNVZ	**South Ngauruho**	**2.85**	**23**	P	**Pn**	**20 22 27.2**	**+0.8**
OTVZ	**Oturere**	**2.88**	**24**	P	**Pb**	**20 22 32.5**	**-0.1**
NNVZ	**North Ngauruho**	**2.89**	**23**	P	**Pn**	**20 22 28.2**	**+1.3**
WTVZ	**West Tongariro**	**2.90**	**22**	P	**Pn**	**20 22 28.4**	**+1.4**
TWVZ	**Taurewa**	**2.90**	**20**	P	**Pn**	**20 22 29.8**	**+2.8**
ETVZ	**East Tongariro**	**2.92**	**24**	P	**Pn**	**20 22 32.4**	**-0.8**
TMVZ	**Te Maari**	**2.93**	**24**	P	**Pn**	**20 22 32.7**	**-0.8**
KRVZ	**Karewarewa**	**2.93**	**23**	P	**Pn**	**20 22 32.3**	**-1.2**
NTVZ	**North Tongarir**	**2.94**	**23**	P	**Pn**	**20 22 32.0**	**-1.6**
RPZ	**Rata Peaks**	**2.99**	**229**	P	**Pn**	**20 22 27.5**	**-0.6**
RPZ	**Rata Peaks**	**2.99**	**229**	P	**Pb**	**20 22 27.6**	**-0.5**
KATZ	**Kakaramea**	**3.06**	**23**	P	**Pb**	**20 22 36.0**	**+0.3**
ARCZ	**Arundel**	**3.07**	**225**	P	**Pn**	**20 22 28.6**	**-0.7**
HIZ	**Hauiti**	**3.34**	**9**	P	**Pn**	**20 22 35.6**	**+2.7**
HIZ	**Hauiti**	**3.34**	**9**	P	**Pn**	**20 22 35.6**	**+2.7**
TMZ	**Timaru**	**3.47**	**221**	P	**Pn**	**20 22 33.8**	**-0.9**
TLZ	**Tolley Road**	**3.63**	**17**	P	**Pn**	**20 22 41.6**	**-3.7**
FOZ	**Fox Glacier**	**3.65**	**240**	P	**Pb**	**20 22 37.6**	**+0.4**
ODZ	**Otahua Downs**	**4.13**	**217**	P	**Pn**	**20 22 42.4**	**-1.4**
JCZ	**Jackson Bay**	**4.56**	**239**	P	**Pn**	**20 22 50.4**	**+0.6**

IDC 06 20:28:32.3±6.9, 19°.40S×177°.91W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=297.0km s-min=38.6km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.85**	**261**	P	P	20 36 49.1	+0.4
	0.8nm,0.3s,baz=97,slow=7.4,SNR=37 0.8nm,0.3s						
ASAR	**Alice Springs**	**44.86**	**256**	P	P	20 36 48.5	-0.3
	1.2nm,0.4s,baz=93,slow=7.7,SNR=28 1.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**53.26**	**262**	P	P	20 37 52.5	-0.7
	0.4nm,0.3s,baz=84,slow=9.2,SNR=1.3 0.4nm,0.3s						
ILAR	**Eielson Array**	**87.22**	**13**	P	P	20 41 20.1	0.0
	0.3nm,0.6s,baz=204,slow=4.2,SNR=4.1 0.3nm,0.6s						

*NEIC **06** 20:38:48.7±2.5, 11°.92N±0°.08×88°.16W±0°.06, h10km±1km, mb4.8/182, Error ellipse: s-maj=14.5km s-min=8.9km az=210.0*
*IDC **06** 20:38:48.2±1.0, 12°.43N×87°.64W, h0km, mb4.1/10, mbtmp4.2/12, ML2.6/4, MS3.7/12, Error ellipse: s-maj=34.3km s-min=14.7km az=39.0*
*CATAC **06** 20:38:50.7±0.6, 12°N±3°×8°.8W±°, h15km±4km, M4.4/19, MLv4.4/19, Error ellipse: s-maj=6.1km s-min=2.6km az=25.5, confirmed*
*SNET **06** 20:38:51.2±2.7, 12°.12N×88°.27W, h8km, ML4.3*
*UCR **06** 20:39:50.8±1.0, 9°.88N×84°.69W, h56km±22km, MW3.5*
ISC 06 20:38:47.6±2.1, 11°.77N±0°.04×88°.22W±0°.04, h16km±13km, n216, σ1§69/153, mb4.8/77, MS3.8/10, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.37**	**28**	P	**Pn**	**20 39 12.3**	**+0.2**
POTN	**Potosi Cosigui**	**1.41**	**30**	P	**Pb**	**20 39 13.6**	**-0.1**
POTN				S	**Sn**	**20 39 29.4**	**-1.6**
CRIN	**San Cristobal**	**1.48**	**51**		**Pb**	**20 39 15.0**	**+0.2**
CRIN	**San Cristobal**	**1.48**	**51**	P	**Pb**	**20 39 15.1**	**+0.4**
CRIN	**San Cristobal**	**1.48**	**51**	S	**Sb**	**20 39 33.9**	**+0.6**
PKGN	**Cerro Pekin**	**1.51**	**53**	P	**Pb**	**20 39 15.2**	**+0.2**
PKGN				S	**Sb**	**20 39 34.6**	**+0.3**
CNCH	**Conchagua**	**1.55**	**14**	iP	**Pn**	**20 39 14.6**	**-0.1**
CNCH	**Conchagua**	**1.55**	**14**	P	**Pn**	**20 39 14.6**	**-0.1**
CNCH	**Conchagua**	**1.55**	**14**	S	**Sn**	**20 39 31.1**	**-3.5**
LCND	**La Caada**	**1.57**	**12**	eP	**Pn**	**20 39 14.6**	**-0.3**
LCND	**La Caada**	**1.57**	**12**	P	**Pn**	**20 39 14.7**	**-0.1**
LCND	**La Caada**	**1.57**	**12**	S	**Sn**	**20 39 30.7**	**-4.2**
HERN	**Volcan Telica**	**1.60**	**58**		**Pn**	**20 39 15.1**	**-0.3**
POLN	**Al Sur del Vol**	**1.64**	**57**	P	**Pn**	**20 39 16.5**	**+0.7**
POLN				S	**Sb**	**20 39 38.4**	**+0.5**
LCY	**Lacayo**	**1.65**	**358**	eP	**Pn**	**20 39 15.8**	**-0.3**
COPN	**Copaltepe**	**1.65**	**75**	P	**Pb**	**20 39 18.5**	**+0.8**
CNGA	**Al SSO del Vol**	**1.66**	**64**	P	**Pb**	**20 39 18.2**	**+0.4**
CNGN	**Cerro Negro**	**1.66**	**64**		**Pn**	**20 39 17.2**	**+1.1**
CNGN	**Cerro Negro**	**1.66**	**64**	P	**Pb**	**20 39 17.5**	**-0.4**
CNGN	**Cerro Negro**	**1.66**	**64**	S	**Sb**	**20 39 40.0**	**+1.3**
BLLM	**Bellamira**	**1.67**	**360**	iP	**Pn**	**20 39 15.9**	**-0.3**
PACA	**Pacayal**	**1.69**	**357**	eP	**Pn**	**20 39 16.6**	**-0.1**
PACA				eS	**Sn**	**20 39 35.7**	**-2.5**
PACA	**Pacayal**	**1.69**	**357**	P	**Pn**	**20 39 16.7**	**-0.1**
MOM3	**MOM3**	**1.82**	**66**	P	**Pb**	**20 39 20.4**	**-0.3**
MOM3				S	**Sb**	**20 39 43.8**	**+0.4**
MOM2	**El Cardon**	**1.83**	**68**	P	**Pb**	**20 39 21.0**	**+0.2**
MOM2				S	**Sb**	**20 39 44.7**	**+1.3**
TECO	**Alcaldia de Te**	**1.84**	**343**	S	**Sn**	**20 39 38.8**	**-2.9**
UESV	**Universidad de**	**1.94**	**344**	S	**Sn**	**20 39 42.2**	**-1.9**
TISN	**Laguna Tiscapa**	**1.95**	**79**	P	**Pb**	**20 39 22.4**	**-0.4**
COEG	**Centro de Oper**	**1.95**	**341**	eP	**Pn**	**20 39 17.0**	**-3.2**
MGAN	**Managua**	**1.97**	**79**		**Pb**	**20 39 22.8**	**-0.4**
LALI	**Alcalda de L**	**2.02**	**328**	eP	**Pn**	**20 39 20.8**	**-0.3**
LALI				eS	**Sn**	**20 39 42.4**	**-3.7**
LFRS	**El Faro**	**2.02**	**336**	eP	**Pn**	**20 39 20.8**	**-0.4**
MAS3	**Al N del Volca**	**2.02**	**83**	P	**Pb**	**20 39 24.3**	**+0.3**
MAS3				S	**Sb**	**20 39 49.5**	**+0.5**
SABN	**Sabanita**	**2.03**	**84**	P	**Pb**	**20 39 24.7**	**+0.6**
WILN	**Americas 2**	**2.03**	**79**	P	**Pb**	**20 39 24.3**	**+0.1**
PAVA	**Las Pavas**	**2.06**	**340**	P	**Pn**	**20 39 21.7**	**0.0**
PAVA	**Las Pavas**	**2.06**	**340**	S	**Sn**	**20 39 45.6**	**-1.6**
NANN	**Nandasmo**	**2.06**	**85**	S	**Sg**	**20 39 53.2**	**-0.9**
LOMA	**Loma Larga**	**2.08**	**334**	eP	**Pn**	**20 39 21.8**	**-0.3**
LOMA				eS	**Sn**	**20 39 44.0**	**-3.8**
LOMA	**Loma Larga**	**2.08**	**334**	P	**Pn**	**20 39 21.9**	**-0.2**
PMON	**Piamonte**	**2.21**	**331**	P	**Pn**	**20 39 23.7**	**0.0**
PMON	**Piamonte**	**2.21**	**331**	S	**Sn**	**20 39 49.8**	**-1.1**
JAYA	**Jayaque - finc**	**2.23**	**328**	eP	**Pn**	**20 39 23.7**	**-0.4**
JAYA				eS	**Sn**	**20 39 47.9**	**-3.4**
JAYA	**Jayaque - finc**	**2.23**	**328**	P	**Pn**	**20 39 23.7**	**-0.4**
TGUH	**Tegucigalpa,Un**	**2.46**	**22**		**Pn**	**20 39 27.8**	**+0.5**
LLGN	**La Laguna**	**2.48**	**344**	P	**Pn**	**20 39 27.9**	**+0.4**
LLGN	**La Laguna**	**2.48**	**344**	S	**Sn**	**20 39 55.4**	**-2.3**
NUBE	**Las Nubes**	**2.61**	**325**	eP	**Pn**	**20 39 29.8**	**+0.5**
NUBE				eS	**Sn**	**20 39 58.2**	**-2.7**
NUBE	**Las Nubes**	**2.61**	**325**	P	**Pn**	**20 39 29.6**	**+0.3**
NUBE	**Las Nubes**	**2.61**	**325**	S	**Sn**	**20 39 57.8**	**-3.1**
MTO3	**Montecristo**	**2.84**	**337**		**Pn**	**20 39 32.4**	**-0.2**
ESQI	**Esquipulas**	**2.98**	**339**		**Pn**	**20 39 35.3**	**+0.8**
JUD3	**Juan Diaz 3**	**3.08**	**121**		**Pb**	**20 39 41.2**	**-0.9**
JTS	**Las Juntas de**	**3.53**	**114**		**Pn**	**20 39 45.0**	**+3.1**
JTS	**Las Juntas de**	**3.53**	**114**	Pn	**Pn**	**20 39 43.2**	**+1.3**
	2.4nm,0.3s,baz=124,slow=22,SNR=5.2						
JTS				Sn	**Sn**	**20 40 24.2**	**+0.8**
	12nm,0.3s,baz=159,slow=23,SNR=6.4						
SOCE	**Pocosol**	**3.80**	**111**	Pn	**Pn**	**20 39 48.0**	**+2.5**
ESPN	**Las Esperanzas**	**3.86**	**83**		**Pb**	**20 39 58.0**	**+2.5**
SIUN	**Universidad Ur**	**3.88**	**60**		**Pn**	**20 39 47.5**	**+0.7**
APG	**El Apazote**	**3.89**	**326**	Pn	**Pn**	**20 39 48.1**	**+1.1**
	0.2nm,0.3s,baz=142,slow=10.0,SNR=9.6						
APG				Sn	**Sn**	**20 40 32.9**	**+0.4**
	0.7nm,0.3s,baz=231,slow=21,SNR=7.8						
DOMI	**Santo Domingo**	**4.43**	**113**	eP	**Pb**	**20 40 08.4**	**+3.2**
ACOS	**Acosta**	**4.44**	**116**	eP	**Pb**	**20 40 02.4**	**-3.0**
PAR1A	**Puntarenas Pro**	**4.46**	**119**	eP	**Pb**	**20 40 02.5**	**-3.1**
PICV	**PH. Pirrs**	**4.49**	**118**	eP	**Pb**	**20 40 02.7**	**-3.5**
LLNJ	**Naranjito**	**4.65**	**119**	eP	Pb	20 40 04.5	-4.3
VICA	**Volcano Irazu**	**4.65**	**112**	eP	**Pb**	**20 40 08.1**	**-1.1**
PIEC	**Cerro El Cedra**	**4.70**	**117**	eP	**Pb**	**20 40 05.8**	**-4.1**
CVTR	**Volcan Turrial**	**4.71**	**111**	eP	**Pb**	**20 40 08.6**	**-1.7**
CVTV	**Tajo**	**4.73**	**111**	eP	**Pb**	**20 40 08.3**	**-2.1**
ABRB	**Las Abras (San**	**4.76**	**111**	eP	**Pb**	**20 40 08.6**	**-2.3**
VERB	**Verbena**	**4.80**	**112**	eP	**Pb**	**20 40 08.5**	**-3.1**
BUS1	**Rivas**	**4.92**	**116**	eP	Pb	20 40 08.6	-5.2
SAJE	**San Jernim**	**5.22**	**117**	eP	Pn	20 40 12.3	+7.0
EDPE	**Pejibaye, P**	**5.26**	**119**	eP	Pb	20 40 13.1	-6.2
VERH	**Veragua Rainfo**	**5.27**	**110**	eP	Pn	20 40 12.9	+7.0
PETF	**Flores**	**5.36**	**343**		**Pn**	**20 40 06.6**	**-0.5**
LAES	**El Progreso Va**	**5.46**	**111**	eP	Pb	20 40 16.8	-5.9
DRK0	**Durika**	**5.49**	**116**	e	Pn	20 40 16.1	+7.0
DRK0				eP	Pn	20 40 16.1	+7.0
FIMO	**Fila Mora**	**5.53**	**119**	eP	Pb	20 40 17.1	-6.8
CEUA	**Cerro Uatsi, L**	**5.61**	**112**	eP	Pb	20 40 19.3	-6.0
BRIBI	**Bribri**	**5.72**	**111**	eP	Pb	20 40 21.0	-6.2
PIRO	**Carate, Puerto**	**5.86**	**124**		**Pn**	**20 40 11.8**	**-2.1**
PIRO	**Carate, Puerto**	**5.86**	**124**	eP	Pn	20 40 21.9	+8.0
CCIG	**Comitan**	**5.88**	**320**		**Pn**	**20 40 17.4**	**+3.1**
ALCO	**Alturas Coton,**	**6.00**	**117**	eP	Pn	20 40 22.8	+6.8
BRU2	**Volcan**	**6.19**	**118**		**Pn**	**20 40 20.6**	**+1.9**
JEFFS	**S de V. Baru**	**6.39**	**118**	eP	Pn	20 40 29.1	+7.8
CMIG	**Matias Romero**	**8.34**	**310**	Pn	**Pn**	**20 40 50.0**	**+1.9**
	3.3nm,0.3s,baz=145,slow=9.0,SNR=16						
CMIG				Sn	**Sn**	**20 42 27.7**	**+5.6**
	0.6nm,0.3s,baz=311,slow=22

HHAR	**Hobbs**	**24.95**	**349**		IAmb	IAmb	20 44 12.5		
	comp=Z,18nm,0.9s								
PBMO	**Poplar Bluff**	**24.98**	**356**		IAmb	IAmb	20 44 10.8		
	comp=Z,16nm,0.8s								
TUL3	**Leonard**	**24.99**	**345**		IAmb	IAmb	20 44 11.8		
	comp=Z,28nm,0.9s								
RLO	**Rose Lookout**	**25.06**	**347**		IAmb	IAmb	20 44 13.5		
	comp=Z,19nm,0.8s								
T47A	**Sharon Grove**	**25.13**	**2**		IAmb	IAmb	20 44 12.0		
	comp=Z,21nm,0.8s								
U38A	**Gravette**	**25.19**	**348**		IAmb	IAmb	20 44 15.2		
	comp=Z,25nm,0.9s								
V58A	**Windy Hill, Pi**	**25.30**	**18**		IAmb	IAmb	20 44 14.5		
	comp=Z,16nm,0.7s								
MGMO	**Mountain Grove**	**25.54**	**352**		IAmb	IAmb	20 44 17.1		
	comp=Z,19nm,0.8s								
OK048	**Pawnee Station**	**25.77**	**344**		IAmb	IAmb	20 44 20.3		
	comp=Z,35nm,0.8s								
MSTX	**Muleshoe**	**25.79**	**331**		IAmb	IAmb	20 44 22.8		
	comp=Z,32nm,0.9s								
OK051	**E0350 and S346**	**25.83**	**344**		IAmb	IAmb	20 44 20.9		
	comp=Z,49nm,1.0s								
S44A	**Carbondale**	**25.83**	**358**		IAmb	IAmb	20 44 18.7		
	comp=Z,15nm,0.9s								
SIUC	**Southern Illin**	**25.85**	**358**		IAmb	IAmb	20 44 19.3		
	comp=Z,29nm,1.2s								
AMTX	**Amarillo**	**26.06**	**334**		IAmb	IAmb	20 44 24.4		
	comp=Z,30nm,0.8s								
T35A	**Sooner Cattle**	**26.13**	**345**		IAmb	IAmb	20 44 25.6		
	comp=Z,11nm,0.7s								
CROK	**Carrier**	**26.16**	**342**		IAmb	IAmb	20 44 21.6		
	comp=Z,23nm,0.8s								
CCM	**Cathedral Cave**	**26.32**	**355**			**P**	**20 44 21.1**	**-1.6**	
CCM					IAmb	IAmb	20 44 23.8		
	comp=Z,16nm,0.7s								
OK038	**West end E0376**	**26.37**	**341**		IAmb	IAmb	20 44 24.4		
	comp=Z,36nm,0.8s								
WCI	**Wyandotte Cave**	**26.41**	**3**	P		**P**	**20 44 22.5**	**-1.1**	
R40A	**Maddies Static**	**26.66**	**353**		IAmb	IAmb	20 44 26.6		
	comp=Z,42nm,1.5s								
Q51A	**Peebles**	**27.49**	**8**		IAmb	IAmb	20 44 34.4		
	comp=Z,15nm,0.7s								
RTBA	**Rita Blanca**	**27.84**	**334**		IAmb	IAmb	20 44 40.8		
	comp=Z,25nm,0.7s								
P40A	**Paris**	**27.86**	**354**		IAmb	IAmb	20 44 37.3		
	comp=Z,17nm,0.7s								
Q54A	**Coxs Mills**	**27.89**	**12**		IAmb	IAmb	20 44 41.7		
	comp=Z,14nm,0.8s								
Y22A	**Socorro**	**27.93**	**325**		IAmb	IAmb	20 44 42.7		
	comp=Z,20nm,1.5s								
P53A	**Whipple**	**28.27**	**11**		IAmb	IAmb	20 44 41.2		
	comp=Z,12nm,0.7s								
TASM	**ASL Pad, Albuq**	**28.41**	**327**		IAmb	IAmb	20 44 48.3		
	comp=Z,3.4nm,1.0s								
ECSD	**EROS Data Cent**	**32.67**	**349**		IAmb	IAmb	20 45 19.0		
	comp=Z,11nm,0.8s								
PFO	**Pinyon Flats O**	**33.74**	**315**		LR	LR	21 00 16.1		
	comp=Z,196nm,19.3s,baz=139,slow=38								
SADO	**Sadowa**	**33.80**	**12**		LR	LR	20 59 45.7		
	comp=Z,160nm,18.8s,baz=176,slow=38								
RSSD	**Black Hills**	**35.00**	**340**			**P**	**20 45 40.3**	**+0.6**	
RSSD					IAmb	IAmb	20 45 42.8		
	comp=Z,8.9nm,0.7s								
PDAR	**Pinedale Array**	**36.02**	**333**	P		**P**	**20 45 48.3**	**-0.2**	
	comp=Z,1.0nm,0.7s,baz=130,slow=11,SNR=5.6								
PDAR				PcP		**PcP**	**20 48 18.2**	**+3.4**	
	comp=Z,1.0nm,0.7s,baz=129,slow=4.7,SNR=5.7								
PDAR				LR		LR	21 03 11.7		
	comp=Z,35nm,18.2s,baz=120,slow=41								
	comp=Z,1.0nm,0.7s								
AGMN	**Agassiz Nation**	**36.97**	**352**		IAmb	IAmb	20 45 56.1		
	comp=Z,27nm,0.7s								
NVAR	**Mina Array Bea**	**37.73**	**320**	P		**P**	**20 46 04.8**	**+1.8**	
	comp=Z,1.2nm,0.8s,baz=127,slow=8.8,SNR=7.5								
NVAR				PcP		**PcP**	**20 48 22.9**	**+2.8**	
	comp=Z,1.8nm,0.7s,baz=127,slow=5.0,SNR=10								
	comp=Z,1.2nm,0.8s								
LHV	**Little Huntoon**	**37.75**	**320**	P		**P**	**20 46 04.3**	**+1.4**	
MDPB	**Devils Postpil**	**37.76**	**318**	P		**P**	**20 46 01.4**	**-2.0**	
ULM	**Lac du Bonnet**	**38.88**	**352**		IAmb	IAmb	20 46 11.6		
	comp=Z,26nm,0.7s								
ULM	**Lac du Bonnet**	**38.88**	**352**	P		**P**	**20 46 10.2**	**-2.1**	
	comp=Z,26nm,0.6s,baz=168,slow=8.9,SNR=17								
ULM				LR		LR	21 03 24.0		
	comp=Z,64nm,21.1s,baz=138,slow=38								
EGMT	**Eagleton**	**40.39**	**338**			**P**	**20 46 26.0**	**+1.0**	
EGMT					IAmb	IAmb	20 46 26.9		
	comp=Z,13nm,0.9s								
PLID	**Pearl Lake**	**40.82**	**330**			**P**	**20 46 29.6**	**+0.8**	
NEW	**Newport**	**43.65**	**332**	LR		LR	21 09 25.6		
	comp=Z,102nm,18.1s,baz=126,slow=42								
SCHQ	**Schefferville**	**46.15**	**17**	P		**P**	**20 47 08.7**	**-2.7**	
	comp=Z,14nm,0.7s,baz=215,slow=7.1,SNR=15								
SCHQ				LR		LR	21 07 43.6		
	comp=Z,224nm,18.1s,baz=225,slow=38								
	comp=Z,14nm,0.7s								
FRB	**Frobisher Bay**	**53.73**	**11**	LR		LR	21 11 28.2		
	comp=Z,207nm,19.1s,baz=221,slow=37								
YKA	**Yellowknife Ar**	**54.07**	**345**	P		**P**	**20 48 10.9**	**-0.4**	
	comp=Z,3.8nm,0.8s,baz=143,slow=7.2,SNR=9.4								
	comp=Z,3.8nm,0.8s								
MMPY	**Sheldon Lake,**	**59.30**	**338**	P		**P**	**20 48 49.1**	**+0.5**	
MMPY					IAmb	IAmb	20 48 50.5		
	comp=Z,5.9nm,0.9s								
SFJD	**Kangerlussuaq**	**60.58**	**16**	LR		LR	21 15 59.9		
	comp=Z,120nm,18.4s,baz=199,slow=37								
M29M	**Somme Creek**	**61.92**	**336**		IAmb	IAmb	20 49 12.1		
	comp=Z,8.5nm,1.1s								
I30M	**Mount Dempster**	**62.67**	**339**		IAmb	IAmb	20 49 13.4		
	comp=Z,5.8nm,1.1s								
RES	**Resolute Bay**	**63.01**	**358**	P		**P**	**20 49 12.2**	**-1.3**	
RES					IAmb	IAmb	20 49 13.7		
	comp=Z,5.7nm,0.7s								
F30M	**Barrier River**	**63.88**	**342**		IAmb	IAmb	20 49 20.9		
	comp=Z,8.7nm,0.8s								
H27K	**Steamboat Moun**	**65.01**	**339**		IAmb	IAmb	20 49 28.7		
	comp=Z,5.4nm,0.9s								
F28M	**Old Crow**	**65.17**	**341**			**P**	**20 49 28.0**	**+0.2**	
F28M					IAmb	IAmb	20 49 33.8		
	comp=Z,6.8nm,0.9s								
E28M	**Babbage River**	**65.60**	**342**			**P**	**20 49 30.3**	**-0.2**	
E28M					IAmb	IAmb	20 49 32.1		
	comp=Z,3.7nm,0.8s								
ILAR	**Eielson Array**	**66.34**	**336**	P		**P**	**20 49 35.8**	**+0.4**	
	comp=Z,1.6nm,1.0s,baz=105,slow=4.3,SNR=11								
	comp=Z,1.6nm,1.0s								
EKA	**Eskdalemuir Ar**	**77.62**	**36**	P		**P**	**20 50 41.5**	**-1.6**	
	comp=Z,1.0nm,0.7s,baz=259,slow=5.2,SNR=2.0								
	comp=Z,1.0nm,0.7s								
ESDC	**Sonseca Array**	**78.20**	**52**	P		**P**	**20 50 45.3**	**-1.6**	
	comp=Z,0.9nm,0.9s,baz=299,slow=5.9,SNR=3.1								
	comp=Z,0.9nm,0.9s								
DBIC	**Dimbokro**	**82.20**	**85**		IAmb	IAmb	20 51 12.6		
	comp=Z,34nm,1.6s								
DBIC	**Dimbokro**	**82.20**	**85**	P		**P**	**20 51 08.0**	**-0.8**	
	comp=Z,2.5nm,0.5s,baz=206,slow=1.9,SNR=5.5								
	comp=Z,2.5nm,0.5s								
NOA	**NORSAR Array B**	**84.33**	**29**	P		**P**	**20 51 17.1**	**-1.8**	
	comp=Z,0.5nm,0.7s,baz=285,slow=5.1,SNR=3.3								
	comp=Z,0.5nm,0.7s								
KURK	**Kurchatov**	**116.73**	**9**			**PKiKP**	**20 57 32.7**	**+1.3**	
KURBB	**Kurchatov Arra**	**116.81**	**9**	PKP		**PKiKP**	**20 57 32.7**	**+1.2**	
	comp=Z,0.3nm,0.5s,baz=325,slow=2.3,SNR=2.2								
SONM	**Songino Array**	**119.25**	**349**	PKP		**PKiKP**	**20 57 38.5**	**+1.9**	
	comp=Z,0.4nm,0.7s,baz=318,slow=3.9,SNR=3.3								
MKAR	**Makanchi Array**	**121.09**	**8**	PKP		**PKiKP**	**20 57 41.0**	**+1.0**	
	comp=Z,0.1nm,0.4s,baz=328,slow=3.4,SNR=4.1								
ASAR	**Alice Springs**	**138.31**	**248**	PKP		**PKiKP**	**20 58 16.1**	**+0.8**	
	comp=Z,0.6nm,0.7s,baz=96,slow=2.2,SNR=6.2								
WRA	**Warramunga Arr**	**138.35**	**253**	PKP		**PKiKP**	**20 58 16.1**	**+0.7**	
	comp=Z,0.5nm,0.8s,baz=91,slow=2.5,SNR=4.9								

CATAC ***06*** *20:43:18.0±0.6, 13˚N±3˚×8˚9W±˚, h23km±3km, M3.5/13, MLv3.5/13, Error ellipse: s-maj=7.4km s-min=5.3km az=27.7, confirmed*

SNET ***06*** *20:43:19.1±0.9, 13˚.04N×89˚.42W, h41km, ML3.3*

ISC 06 20:43:18.3±2.1, 13˚.00N±0˚.09×89˚.44W±0˚.06, h29km±12km, n41, σ0°35/54, 1C, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.50**	**13**		*eP*	**Pn**	**20 43 29.8**	**+0.4**
LALI					*eS*	**Sn**	**20 43 37.5**	**+0.4**
LALI	**Alcalda de L**	**0.50**	**13**	P		**Pn**	**20 43 29.6**	**+0.1**
JAYA	**Jayaque - finc**	**0.65**	**359**		*eP*	**Pn**	**20 43 31.6**	**-0.1**
JAYA					*eS*	**Sn**	**20 43 41.5**	**+0.4**
JAYA	**Jayaque - finc**	**0.65**	**359**	P		**Pn**	**20 43 31.5**	**-0.2**
PANCS	**Alcalda de**	**0.66**	**23**	P		**Pn**	**20 43 31.4**	**-0.3**
PANCS	**Alcalda de**	**0.66**	**23**	S		**Sn**	**20 43 40.9**	**-0.3**
LOMA	**Loma Larga**	**0.69**	**22**		*eP*	**Pn**	**20 43 31.8**	**-0.5**
LOMA					*eS*	**Sn**	**20 43 42.4**	**+0.3**
LOMA	**Loma Larga**	**0.69**	**22**	P		**Pn**	**20 43 31.7**	**-0.5**
PMON	**Piamonte**	**0.72**	**10**		*eP*	**Pb**	**20 43 32.5**	**+0.2**
PMON					*eS*	**Sn**	**20 43 43.1**	**+0.4**
PMON	**Piamonte**	**0.72**	**10**	P		**Pb**	**20 43 32.5**	**+0.2**
LFRS	**El Faro**	**0.72**	**31**		*eP*	**Pb**	**20 43 32.5**	**+0.2**
LFRS					*eS*	**Sn**	**20 43 42.8**	**0.0**
UEES	**Universidad Ev**	**0.74**	**15**		*eP*	**Pb**	**20 43 32.8**	**+0.1**
UEES					*eS*	**Sn**	**20 43 43.4**	**+0.2**
UEES	**Universidad Ev**	**0.74**	**15**	P		**Pb**	**20 43 32.6**	**0.0**
BOQS	**Boqueron**	**0.74**	**12**		*i* P	**Pb**	**20 43 33.2**	**+0.3**
BOQS					*eS*	**Sn**	**20 43 43.8**	**+0.2**
LFU	**La Fuente**	**0.81**	**23**		*eP*	**Pb**	**20 43 34.2**	**+0.4**
TECO	**Alcaldia de Te**	**0.83**	**50**		*eP*	**Pn**	**20 43 33.8**	**-0.4**
TECO					*eS*	**Sb**	**20 43 45.2**	**+0.1**
TECO	**Alcaldia de Te**	**0.83**	**50**	P		**Pn**	**20 43 33.6**	**-0.6**
SBLS	**San Blas**	**0.85**	**348**		*eP*	**Pb**	**20 43 34.7**	**+0.1**
PAVA	**Las Pavas**	**0.86**	**35**		*eP*	**Pb**	**20 43 34.6**	**-0.2**
PAVA					*eS*	**Sb**	**20 43 46.7**	**+0.7**
PAVA	**Las Pavas**	**0.86**	**35**	P		**Pb**	**20 43 34.5**	**-0.2**
SNJE	**San Jose**	**0.88**	**349**		*eP*	**Pn**	**20 43 34.8**	**-0.1**
UESV	**Universidad de**	**0.90**	**45**	P		**Pn**	**20 43 34.6**	**-0.4**
UESV	**Universidad de**	**0.90**	**45**	S		**Sb**	**20 43 46.6**	**-0.3**
NUBE	**Las Nubes**	**0.95**	**340**		*eP*	**Pn**	**20 43 35.7**	**-0.2**
NUBE					*eS*	**Sb**	**20 43 48.6**	**-0.1**
NUBE	**Las Nubes**	**0.95**	**340**	P		**Pn**	**20 43 35.7**	**-0.2**
FAME	**Alcaldia de Sa**	**1.01**	**326**	P		**Pn**	**20 43 36.4**	**-0.1**
TECA	**Tecapa**	**1.04**	**62**		*eP*	**Pn**	**20 43 36.8**	**-0.3**
LOAL	**Lomas de Alarc**	**1.04**	**342**	P		**Pn**	**20 43 37.2**	**+0.2**
RBDL	**Robledal**	**1.13**	**348**		*eP*	**Pb**	**20 43 39.1**	**-0.2**
PACA	**Pacayal**	**1.18**	**67**		*eP*	**Pn**	**20 43 39.4**	**+0.3**
PACA					*eS*	**Sb**	**20 43 54.6**	**-0.6**
PACA	**Pacayal**	**1.18**	**67**	P		**Pn**	**20 43 39.3**	**+0.3**
LCY	**Lacayo**	**1.19**	**69**		*eP*	**Pn**	**20 43 39.3**	**+0.2**
RANC	**El Ranchito**	**1.20**	**69**		*eP*	**Pn**	**20 43 39.4**	**+0.1**
RANC					*eS*	**Sb**	**20 43 55.5**	**-0.2**
BLLM	**Bellamira**	**1.25**	**69**		*eP*	**Pn**	**20 43 40.1**	**+0.2**
LLGN	**La Laguna**	**1.25**	**23**	S		**Sb**	**20 43 57.7**	**+0.6**
MTO3	**Montecristo**	**1.39**	**3**	P		**Pn**	**20 43 42.2**	**+0.2**
MTO3	**Montecristo**	**1.39**	**3**	S		**Sb**	**20 44 00.0**	**-1.2**
LCND	**La Caada**	**1.54**	**78**	P		**Pn**	**20 43 44.0**	**+0.1**
CNCH	**Conchagua**	**1.59**	**80**		*eP*	**Pn**	**20 43 44.5**	**-0.1**
CNCH					*eS*	**Sn**	**20 44 04.0**	**-0.3**
CNCH	**Conchagua**	**1.59**	**80**	P		**Pn**	**20 43 44.3**	**-0.3**
POTN	**Potosi Cosigui**	**1.88**	**90**	P		**Pn**	**20 43 48.9**	**+0.3**

NEIC ***06*** *20:48:23.6±0.6, 19˚.26N±0˚.02×155˚.46W±0˚.02, h37km±5km, Error ellipse: s-maj=2.9km s-min=2.5km az=205.0*

HVO 06 20:48:24.5±0.7, 19˚.22N±0˚.07×155˚.4W±0˚.1, h35km±2km, ML2.5/26, ML2.5/42(NEIC), Error ellipse: s-maj=17.0km s-min=8.7km az=113.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.03**	**51**			Pb	20 48 30.0	-0.3
HLP	**Hilina Pali**	**0.13**	**55**			Pb	20 48 30.4	-0.5
HLP						Sb	20 48 34.4	-0.7
HLP	**Hilina Pali**	**0.13**	**55**		IAML		20 48 37.1	
	comp=N,678nm,0.2s							
HLP					IAML		20 48 37.5	
	comp=E,660nm,0.2s							
AIN	**Ainahou**	**0.15**	**346**			Pb	20 48 30.6	-0.5
AIN						Sb	20 48 35.0	-0.7
AIN	**Ainahou**	**0.15**	**346**		IAML		20 48 35.6	
	comp=E,2μm,0.4s							
AIN					IAML		20 48 35.9	
	comp=N,4μm,0.4s							
HPO	**Honuapo**	**0.18**	**224**			Pb	20 48 30.8	-0.4
HPO						Sb	20 48 34.8	-0.9
KHU	**Kahuku**	**0.19**	**278**			Pn	20 48 30.5	+0.2
KHU						Sb	20 48 35.0	-1.2
SDHHI	**Sand Hill**	**0.20**	**35**			Pn	20 48 30.7	0.0
SDHHI						Sb	20 48 35.4	-0.9
WRMHI	**West Rim**	**0.22**	**31**			Pn	20 48 30.7	-0.2
WRMHI						Sn	20 48 35.4	+1.0
RIM	**Rim**	**0.22**	**38**			Pn	20 48 30.8	-0.2
RIM						Sn	20 48 35.5	+1.0
KKO	**Keanakako'i**	**0.23**	**39**			Pn	20 48 30.9	-0.2
KKO						Sn	20 48 35.5	+0.7
UWE	**Uwekahuna**	**0.23**	**31**			Pn	20 48 30.9	-0.4
UWE						Sn	20 48 35.8	+0.8
UWE	**Uwekahuna**	**0.23**	**31**		IAML		20 48 36.7	
	comp=N,635nm,0.3s							
UWE					IAML		20 48 41.7	
	comp=E,587nm,0.4s							
OBL	**Observatory Le**	**0.23**	**33**			Pn	20 48 30.9	-0.4
OBL						Sn	20 48 35.7	+0.7
BYL	**Byron's Ledge**	**0.24**	**38**			Pn	20 48 30.9	-0.5
BYL						Sn	20 48 35.9	+0.6
BYL	**Byron's Ledge**	**0.24**	**38**		IAML		20 48 40.3	
	comp=E,334nm,0.5s							
UWB	**Uwekahuna Bluf**	**0.24**	**33**			Pn	20 48 30.8	-0.6
UWB						Sn	20 48 35.6	+0.2
PUH	**Pauahi**	**0.24**	**52**			Pn	20 48 31.0	-0.5
PUH						Sn	20 48 35.8	+0.3
PUH	**Pauahi**	**0.24**	**52**		IAML		20 48 36.1	
	comp=E,489nm,0.2s							
PUH					IAML		20 48 36.1	
	comp=N,433nm,0.5s							
SBLHI	**Steaming Bluff**	**0.25**	**35**			Pn	20 48 30.9	-0.6
SBLHI						Sn	20 48 35.8	+0.1
HATHI	**Halema'uma'u T**	**0.25**	**37**			Pn	20 48 30.9	-0.6
HATHI						Sn	20 48 35.8	+0.1
HATHI	**Halema'uma'u T**	**0.25**	**37**		IAML		20 48 39.9	
	comp=E,312nm,0.6s							
HATHI					IAML		20 48 43.4	
	comp=N,246nm,0.3s							
MLH	**Mauna Loa**	**0.27**	**7**			Pn	20 48 31.5	-0.5
MLH						Sn	20 48 36.5	-0.1
MLH	**Mauna Loa**	**0.27**	**7**		IAML		20 48 36.9	
	comp=E,542nm,0.3s							
MLH					IAML		20 48 38.5	
	comp=N,414nm,0.2s							
RSD	**Rainshed**	**0.28**	**29**			Pn	20 48 31.2	-0.9
RSD						Sn	20 48 36.1	-0.5
RSD	**Rainshed**	**0.28**	**29**		IAML		20 48 39.1	
	comp=E,226nm,1.7s							
RSD					IAML		20 48 43.8	
	comp=N,396nm,3.6s							
KNHH	**Kane Nui o Ham**	**0.28**	**56**			Pn	20 48 31.4	-0.8
MWH	**Mokuaweoweo**	**0.31**	**327**			Pn	20 48 31.8	-1.2
MWH						Sn	20 48 37.1	-0.7
MWH	**Mokuaweoweo**	**0.31**	**327**		IAML		20 48 37.6	
	comp=E,857nm,0.6s							
MWH					IAML		20 48 38.7	
	comp=N,636nm,0.3s							
STCH	**Steam Cracks**	**0.32**	**59**			Pb	20 48 31.7	-1.1
STCH						Sn	20 48 37.1	-0.9
STCH	**Steam Cracks**	**0.32**	**59**		IAML		20 48 37.5	
	comp=E,5.6nm,0.1s							
STCH					IAML		20 48 37.6	
	comp=N,347nm,0.3s							
NPOC	**North of Pu'u**	**0.34**	**60**			Pb	20 48 31.9	-1.1
NPOC						Sn	20 48 37.4	-1.1
JCUZ	**Jacuzzi**	**0.34**	**62**			Pb	20 48 32.0	-1.0
JCUZ						Sn	20 48 37.6	-1.0
ALEP	**Alea Permanent**	**0.38**	**326**			Pb	20 48 32.3	-1.6
ALEP						Sn	20 48 38.5	-1.5
HMH	**Humu'ula Sheep**	**0.39**	**351**			Pb	20 48 32.9	-1.0
HMH						Sn	20 48 39.0	-1.0
HMH	**Humu'ula Sheep**	**0.39**	**351**		IAML		20 48 39.4	
	comp=N,354nm,0.1s							
HMH					IAML		20 48 47.9	
	comp=E,308nm,4.2s							
JOKA	**Jonika Flow**	**0.45**	**62**			Pb	20 48 33.0	-1.4
JOKA						Sb	20 48 39.4	-1.9
JOKA	**Jonika Flow**	**0.45**	**62**		IAML		20 48 40.1	
	comp=E,188nm,0.6s							
JOKA					IAML		20 48 43.5	
	comp=N,324nm,0.3s							
POHA	**Pohakuloa**	**0.54**	**349**			Pn	20 48 34.2	-1.8
POHA						Sb	20 48 41.9	-2.2
POHA	**Pohakuloa**	**0.54**	**349**		IAML		20 48 48.2	
	comp=N,211nm,3.5s							
HUH	**Hualalai**	**0.61**	**320**			Pn	20 48 35.4	-1.5
HUH						Sn	20 48 44.0	-1.7
HUH	**Hualalai**	**0.61**	**320**		IAML		20 48 44.4	
	comp=E,398nm,0.1s							
HUH					IAML		20 48 45.7	
	comp=N,558nm,0.2s							
KKH	**Kailua Kona**	**0.71**	**308**			Pn	20 48 36.1	-2.0
KKH						Sn	20 48 44.8	-3.1
MHA	**Mahukona**	**1.06**	**335**			Pn	20 48 41.1	-1.9

BJI ***06*** *20:52:53.4, 14˚.52N×122˚.80E, h27km, mB5.5/69, mb5.1/87, Ms5.6/98, Ms7 5.5/96*

ISC-PP ***06*** *20:52:54, 14˚.87N×122˚.80E, h13km, Mwppsm6.1, Moment Tensor Solution. s43 Moment tensor: Scale 10¹⁸Nm; Mrr-0.64±.07; Mθθ0.66±.18; Mϕϕ-0.04±.17; Mrθ0.18±.16; Mθϕ0.08±.15; Mϕr-0.20±.28; Fault plane solution: M₀1.58000×10¹⁸ NP1:ϕs273.60000°, δ52.40000°, λ255.50000°. NP2:ϕs116.60000°, δ39.90000°, λ-72.00000°.*

NEIC ***06*** *20:52:54.7±2.5, 14˚.87N±0˚.06×122˚.80E±0˚.07, h7km±3km, mb5.4/243, Ms_20 5.2/420, Mwb5.4/105, Mww5.6/36 Error ellipse: s-maj=9.9km s-min=8.7km az=91.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.64; Mθθ1.20; Mϕϕ0.44; Mrθ-0.38; Mθϕ0.19; Mϕr-1.06; Fault plane solution: M₀1.86000×10¹⁷ NP1: ϕs264.98000°, δ33.23000°, λ-58.50000°. NP2:ϕs48.76000°, δ62.14000°, λ-108.90000°. Principal axes: T 1.4144, Plg15.0000°, Azm152.0000°; N 0.6951, Plg17.0000°, Azm58.0000°; P -2.1094, Plg67.0000°, Azm283.0000°;*

NEIC ***06*** *20:52:55.2, 14˚.87N×122˚.74E, h30km*

NEIC ***06*** *20:52:55.2, 14˚.87N×122˚.74E, h30km, Moment Tensor Solution. Duration: 3ˢ1 Moment tensor: Scale 10¹⁷Nm; Mrr-2.67; Mθθ1.76; Mϕϕ0.91; Mrθ-0.98; Mθϕ1.56; Mϕr-0.91; Fault plane solution: M₀3.12000×10¹⁷ NP1: ϕs235.46000°, δ32.39000°, λ-85.50000°. NP2:ϕs50.13000°, δ57.72000°, λ-92.85000°. Principal axes: T 3.2502, Plg13.0000°, Azm142.0000°; N -0.2725, Plg2.0000°, Azm52.0000°; P -2.9776, Plg77.0000°, Azm311.0000°;*

IPGP ***06*** *20:52:55.0, 14˚.87N×122˚.74E, h23km, Mw5.7, Fault plane solution: NP1:ϕs246.00000°, δ29.00000°, λ-52.00000°. NP2:ϕs24.00000°, δ68.00000°, λ-109.00000°.*

NEIC ***06*** *20:52:55.3, 14˚.87N×122˚.73E, h10km*

MAN ***06*** *20:52:56.9, 14˚.96N×122˚.65E, h12km, mb5.9, ML5.0, MS5.5*

MAN INTENSITY V - ALABAT AND JOMALIG QUEZON; INTENSITY IV - GUINAYANGAN QUEZON; TALISAY AND VINZONS CAMARINES NORTE; INTENSITY III - GENERAL NAKAR LOPEZ AND REAL QUEZON; INTENSITY II - GUMACA AND LUCBAN QUEZON; ANTIPOLO CITY; MARIKINA CITY; NAVOTAS CITY; PASAY CITY; QUEZON CITY; PLARIDEL BULACAN; NAGCARLAN LAGUNA; INTENSITY I- MUNTINLUPA CITY; DINALUPIHAN BATAAN.

MOS ***06*** *20:52:57.0±1.0, 14˚.87N×122˚.76E, h34km, mb5.6/70, MS5.4/30, Error ellipse: s-maj=6.6km s-min=3.6km az=118.7*

DJA ***06*** *20:52:58.4±0.3, 15˚N±2˚×12˚.3E±˚, h27km±2km, M5.3/123, mb5.4/123, mB5.8/100, MLv5.5/1, Mw(mB)5.4/100, MwMwp5.3/55, Mwp5.5/55*

GCMT ***06*** *20:52:58.7±0.1, 14˚.98N±0˚.01×122˚.61E±0˚.01, h24km, MW5.6/151, Moment Tensor Solution. s133,c240; s151,c289; Duration: 1ˢ5 Moment tensor: Scale 10¹⁷ Nm; Mrr-2.41±.04; Mθθ1.75±.03; Mϕϕ0.66±.03; Mrθ-0.31±.04; Mθϕ1.57±.02; Mϕr-1.04±.05; Best double couple: M₀2.87200×10¹⁷ NP1:ϕs251.00000°, δ38.00000°, λ-64.00000°. NP2:ϕs39.00000°, δ56.00000°, λ-109.00000°. Principal axes: T 3.0090, Plg9.0000°, Azm143.0000°; N -0.2670, Plg16.0000°, Azm50.0000°; P -2.7350, Plg72.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***06*** *20:53:01.6±1.4, 14˚.82N×122˚.73E, h62km±12km, mb4.7/35, mbtmp5.0/38, MS5.2/70 Error ellipse: s-maj=11.0km s-min=7.3km az=98.0*

ISC 06 20:52:57.5±0.3, 14˚.88N±0˚.03×122˚.79E±0˚.03, h26km±2km, h27km:pP-P, n1493, σ1ˢ67/1307, mb5.4/351, MS5.3/331, 39C-100D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.96**

comp=Z,1μm,10.4s
QIZ LR LR
comp=Z,6μm,15.1s
QIZ LR LR
comp=Z,11μm,16.9s
QIZ LR LR
comp=Z,16μm,17.1s
QIZ Qiongzhong 13.06 290 P Pn 20 56 02.1 +0.6
TOLI2 Tolitoli 13.82 188 Pn 20 56 15.2 +3.2
TOLI2 Tolitoli 13.82 188 P Pn 20 56 15.3 +3.3
DLV Lat 14.22 260 P Pn 20 56 19.8 +2.2
DLV Lat 14.22 260 P Pn 20 56 18.5 +0.9
KMSI Cibinong 14.26 175 P P 20 56 22.3 -2.7
MRSI Marisa 14.33 183 P P 20 56 21.9 -3.9
comp=Z,7μmcomp=Z,4μmcomp=Z,113nm,1.2s
TNTI Ternate 14.73 162 Pn Pn 20 56 23.3 -1.0
TNTI Ternate 14.73 162 P P 20 56 27.0 -3.2
TNTI Ternate 14.73 162 P Pn 20 56 25.6 +1.3
comp=Z,5μmcomp=Z,3μmcomp=Z,226nm,1.6s
GULI GuiLin 15.59 314 P P 20 56 37.4 -2.3
GULI S S **20 59 38.0 -4.7**
GULI pmax pmax
comp=Z,210nm,1.1s
GULI pmax pmax
comp=Z,1μm,5.7s
GULI LR LR
comp=Z,14μm,17.4s
GULI LR LR
comp=Z,13μm,15.8s
GULI LR LR
comp=Z,18μm,16.4s
APSI Ampana 15.73 184 P P 20 56 41.4 +0.1
comp=Z,6μmcomp=Z,465nm,1.2s
LUWI Luwuk 15.82 180 Pn 20 56 36.2 -2.5
LUWI Luwuk 15.82 180 P P 20 56 44.5 +2.2
LUWI Luwuk 15.82 180 P P 20 56 42.4 +0.1
comp=Z,5μmcomp=Z,6μmcomp=Z,377nm,1.1s
CNSH ChangSha 16.09 327 P P 20 56 46.7 +1.4
CNSH S S **20 59 50.7 -2.2**
CNSH pmax pmax
comp=Z,88nm,1.1s
CNSH LR LR
comp=Z,24μm,16.8s
CNSH LR LR
comp=Z,10μm,16.5s
CNSH LR LR
comp=Z,26μm,16.4s
SBUM Sibu 16.16 221 Pn 20 56 41.2 -1.9
SBUM IAmb IAmb 20 56 49.6
comp=Z,287nm,1.1s
SBUM Sibu 16.16 221 P P 20 56 44.0 -2.1
SSE Sheshan 16.21 355 P Pn 20 56 44.7 +1.1
SSE S Sn **20 59 45.0 +2.3**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,490nm,11.9s
SSE LR LR
comp=Z,2μm,17.4s
SSE LR LR
comp=Z,4μm,19.0s
UBPT Khong Chiam 16.73 274 P Pn 20 56 50.1 -0.2
BKB Balikpapan 17.06 200 P Pn 20 56 54.4 -0.1
comp=Z,6μmcomp=Z,6μmcomp=Z,264nm,1.1s
SANI Sanana 17.11 169 P Pn 20 56 52.9 -2.2
comp=Z,5μmcomp=Z,102nm,0.9s
WHN Wuhan 17.41 335 P P 20 57 00.9 +1.0
WHN sP **sP 20 57 10.3 +0.8**
WHN S S **21 00 19.1 -0.7**
WHN sS **sS 21 00 25.0 -5.7**
WHN pmax pmax
comp=Z,160nm,1.2s
WHN pmax pmax
comp=Z,8μm,7.7s
WHN LR LR
comp=Z,58μm,17.4s
WHN LR LR
comp=Z,27μm,15.3s
WHN LR LR
comp=Z,70μm,16.7s
NJ2 Nanjing 17.47 349 ⇓P P 20 57 01.6 +1.1
NJ2 sP **sP 20 57 09.6 -0.4**
NJ2 PP **PnPn 20 57 19.0 +9.0**
NJ2 S **Sn 21 00 15.2 +2.0**
NJ2 pmax pmax
comp=Z,21nm,0.7s
NJ2 pmax pmax
comp=Z,1μm,4.1s
NJ2 LR LR
comp=Z,6μm,17.5s
NJ2 LR LR
comp=Z,7μm,16.1s
NJ2 LR LR
comp=Z,7μm,18.0s
MTKI Muara Teweh, K 17.55 207 P P 20 57 01.9 +0.4
comp=Z,4μmcomp=Z,145nm,0.6s
SWI Sorong 17.74 151 P P 20 57 05.7 +2.1
SWI Sorong 17.74 151 P P 20 57 06.6 +3.0
KSM Kuching 18.15 224 P 20 57 08.0 -0.2
KSM IAmb IAmb 20 57 13.6
comp=Z,509nm,1.5s
KSM Kuching 18.15 224 P P 20 57 08.7 +0.6
NLAI Namlea 18.50 166 P Pn 20 57 13.4 +1.2
comp=Z,5μmcomp=Z,112nm,1.0s
KDI Kendari 18.71 181 P Pn 20 57 14.7 -0.1
SPSI Sidrap Palu 18.96 189 P Pn 20 57 19.9 +2.1
comp=Z,3μmcomp=Z,96nm,1.3s
GYA Guiyang 18.96 310 ⇓P Pn 20 57 18.3 +0.4
GYA S Sn **21 00 49.6 0.0**
GYA pmax pmax
comp=Z,32nm,1.3s
GYA pmax pmax
comp=Z,2μm,4.2s
GYA LR LR
comp=Z,14μm,15.0s
GYA LR LR
comp=Z,15μm,16.2s
GYA LR LR
comp=Z,25μm,17.1s
SLVN Son La 19.06 292 P 20 57 17.1 -1.0
SLVN Son La 19.06 292 P P 20 57 17.9 -0.2
MSAI Masohi 19.10 161 P Pn 20 57 22.1 +2.6
comp=Z,7μmcomp=Z,5μmcomp=Z,177nm,0.8s
AAI Ambon 19.21 163 P Pn 20 57 22.6 +1.8
comp=Z,7μmcomp=Z,2μmcomp=Z,142nm,1.5s
BNSI Bone 19.34 188 P Pn 20 57 23.8 +1.5
comp=Z,4μmcomp=Z,4μmcomp=Z,128nm,1.1s
JNU Nakatsue 19.59 21 P 20 57 22.7 -1.2
JNU Nakatsue 19.59 21 P Pn 20 57 25.6 +0.2
comp=Z,47nm,1.1s,baz=167,slow=8.4,SNR=10
JNU LR LR 21 05 05.4
comp=Z,3μm,21.2s,baz=213,slow=37
JNU Nakatsue 19.59 21 P Pn 20 57 26.3 +1.0
ENH Enshi 19.61 324 P 20 57 23.6 -0.5
ENH Enshi 19.61 324 P Pn 20 57 25.1 -0.4
RKPI Ransiki, Papua 19.80 144 P Pn 20 57 27.4 -0.5
comp=Z,5μmcomp=Z,3μmcomp=Z,168nm,1.1s
BBKI Banjar Baru 19.85 204 P Pn 20 57 29.0 +0.5
comp=Z,8μmcomp=Z,93nm,0.7s
KAPI Kappang 19.99 189 P 20 57 25.5 -2.8
KAPI IAmb IAmb 20 57 42.7
comp=Z,303nm,1.6s
KAPI Kappang 19.99 189 P Pn 20 57 29.2 -0.9
comp=Z,22nm,0.8s,baz=23,slow=7.1,SNR=12
KAPI LR LR 21 05 43.5
comp=Z,4μm,21.4s,baz=5.0,slow=38
KAPI Kappang 19.99 189 P Pn 20 57 31.4 +1.3
KAPI P Pn **20 57 31.4 +1.3**
KAPI S S **21 01 12.5 +0.5**
KAPI S S **21 01 12.5 +0.5**
KAPI Kappang 19.99 189 P Pn 20 57 30.5 +0.4
KAPI Kappang 19.99 189*d i*P Pn 20 57 29.9 -0.2
FAKI Fak Fak 20.01 151 P 20 57 25.6 -3.0
FAKI Fak Fak 20.01 151 P Pn 20 57 31.0 +0.6
FAKI Fak Fak 20.01 151 P Pn 20 57 29.8 -0.6
comp=Z,4μmcomp=Z,2μmcomp=Z,126nm,0.8s
BBSI Bau Bau 20.23 181 P Pn 20 57 33.1 +0.1
comp=Z,7μmcomp=Z,186nm,1.1s
BKSI Bulukumba 20.24 188 P Pn 20 57 34.7 +1.6
JTU Tsushima 20.45 16 P Pn 20 57 38.6 +3.2
BNDI Bandanaira 20.52 159 P Pn 20 57 35.6 -0.8
BNDI Bandanaira 20.52 159 P Pn 20 57 35.5 -0.9
BAKI Biak 20.70 139 P Pn 20 57 39.1 +0.6
comp=Z,4μmcomp=Z,222nm,1.4s
BSSI Bau Bau, Buton 21.01 186 P P 20 57 38.9 -0.4

comp=Z,3μmcomp=Z,3μmcomp=Z,93nm,1.0s
JMN Monobe 21.29 26 P 20 57 43.9 +1.7
JMN IAmb IAmb 20 57 53.9
comp=Z,149nm,1.2s
JMN Monobe 21.29 26 P P 20 57 46.3 +4.1
KMPI Kaimana, Papua 21.36 149 P P 20 57 45.9 +2.8
comp=Z,4μmcomp=Z,453nm,1.0s
KMI Kunming 21.39 302 ⇓P P 20 57 45.4 +1.7
KMI S S **21 01 40.1 -0.1**
KMI pmax pmax
comp=Z,51nm,1.4s
KMI LR LR
comp=Z,4μm,13.1s
KMI LR LR
comp=Z,8μm,17.0s
KMI LR LR
comp=Z,12μm,22.1s
GUMO Guam 21.44 91 P 20 57 41.5 -2.5
GUMO Guam 21.44 91 P P 20 57 46.6 +2.6
comp=Z,46nm,0.7s,baz=134,slow=2.2,SNR=4.2
GUMO LR LR 21 04 08.5
comp=Z,5μm,21.8s,baz=274,slow=31
comp=Z,46nm,0.7s
GUMO Guam 21.44 91 P P 20 57 49.2 +5.2
LYN LuoYang 21.69 336 ⇓P P 20 57 48.0 +1.5
LYN sP sP 20 57 56.8 +0.6
LYN S S **21 01 46.0 +0.6**
LYN pmax pmax
comp=Z,260nm,1.1s
LYN pmax pmax
comp=Z,3μm,8.2s
LYN LR LR
comp=Z,13μm,16.1s
LYN LR LR
comp=Z,6μm,17.2s
LYN LR LR
comp=Z,16μm,16.5s
JCJ Chichijima 21.77 53 P P 20 57 42.4 -5.1
comp=Z,126nm,0.7s,baz=253,slow=6.4,SNR=4.6
JCJ LR LR 21 04 33.9
comp=Z,4μm,21.1s,baz=234,slow=32
TJN Taejon 21.80 10 P 20 57 47.2 -0.4
TJN IAmb IAmb 20 57 57.8
comp=Z,238nm,1.0s
TJN Taejon 21.80 10 P P 20 57 49.1 +1.5
TJN Taejon 21.80 10*de*P P 20 57 47.7 +0.1
TIA Tai'an 21.84 348 P P 20 57 47.8 -0.3
TIA S S **21 01 49.1 +0.7**
TIA pmax pmax
comp=Z,44nm,1.7s
TIA pmax pmax
comp=Z,2μm,7.8s
TIA LR LR
comp=Z,5μm,21.6s
TIA LR LR
comp=Z,5μm,15.7s
TIA LR LR
comp=Z,8μm,23.0s
TPRI Tanjung Pinang 22.76 234 P P 20 57 56.8 -1.3
comp=Z,3μmcomp=Z,248nm,1.2s
INCN Inchon 22.77 8 P P 20 57 58.4 +0.3
INCN IAmb IAmb 20 58 19.9
comp=Z,201nm,1.4s
INCN Inchon 22.77 8 P P 20 58 00.4 +2.3
INCN P P **20 58 00.4 +2.3**
INCN S S **21 02 06.2 +0.6**
INCN S S **21 02 06.2 +0.6**
INCN Inchon 22.77 8 P P 20 58 00.3 +2.3
INCN Inchon 22.77 8 P P 20 57 58.4 +0.3
INCN pmax pmax
comp=Z,201nm,1.4s
INCN MLR MLR
comp=Z,5μm,21.0s
MYKOM Kota Tinggi 22.78 237 P P 20 57 56.9 -1.4
MYKOM IAmb IAmb 20 58 00.1
comp=Z,208nm,1.2s
MYKOM Kota Tinggi 22.78 237 P P 20 57 58.1 -0.2
PZH PanZhiHua 22.80 304 P P 20 57 58.4 -0.2
PZH pP **pP 20 58 00.9 -4.6**
PZH sP **sP 20 58 05.7 -3.1**
PZH PP **PnPn 20 58 29.0 +5.9**
PZH S S **21 02 02.4 -4.0**
PZH sS **pS 21 02 14.0 -0.2**
PZH SS **SnSn 21 02 47.7 +10**
PZH pmax pmax
comp=Z,120nm,1.4s
PZH pmax pmax
comp=Z,610nm,5.8s
PZH LR LR
comp=Z,9μm,19.4s
PZH LR LR
comp=Z,7μm,16.3s
PZH LR LR
comp=Z,11μm,17.3s
XAN Xi'an 22.83 329 P P 20 57 58.4 -0.4
XAN pP pP 20 58 03.9 -1.5
XAN PP **PnPn 20 58 30.1 +6.6**
XAN S S **21 02 09.3 +2.6**
XAN pmax pmax
comp=Z,190nm,1.2s
XAN pmax pmax
comp=Z,2μm,3.8s
XAN LR LR
comp=Z,20μm,15.1s
XAN LR LR
comp=Z,9μm,14.4s
XAN LR LR
comp=Z,27μm,16.0s
KSRS Korea Array 22.94 11 P P 20 57 59.5 -0.4
comp=Z,7.0nm,0.7s,baz=194,slow=11,SNR=15
comp=Z,7.0nm,0.7s
KS19 Wonju Array Si 22.98 10 P P 20 58 01.8 +1.6
SMPI Sarmi 23.01 135 P P 20 58 01.6 +0.9
comp=Z,5μmcomp=Z,3μmcomp=Z,172nm,1.2s
TPI Tanjungpandan 23.06 222 P P 20 58 00.3 -0.9
comp=Z,3μmcomp=Z,3μmcomp=Z,164nm,1.4s
BTDF Bukit Timah Da 23.09 236 P P 20 58 00.9 -0.7
CM31 Chiang Mai Arr 23.12 282 P P 20 58 01.6 -0.2
CM31 Chiang Mai Arr 23.12 282 P P 20 58 01.7 -0.2
SNR=124
CM31 P P **20 58 01.7 -0.2**
SNR=124
CMAR Chiang Mai Arr 23.12 282 P P 20 58 01.4 -0.5
comp=Z,159nm,1.0s,baz=93,slow=7.1,SNR=411
CMAR PcP **PcP 21 01 51.9 +1.5**
comp=Z,3.4nm,0.7s,baz=128,slow=1.2,SNR=5.5
CMAR LR LR 21 07 25.7
comp=Z,6μm,18.8s,baz=95,slow=37
comp=Z,159nm,1.0s
CHTO Chiang Mai 23.15 283 P 20 58 00.8 -1.4
CHTO IAmb IAmb 20 58 02.8
comp=Z,117nm,1.1s
CHTO Chiang Mai 23.15 283 P P 20 58 01.6 -0.6
CHTO P P **20 58 01.6 -0.6**
CHTO P P **20 58 01.6 -0.6**
CHTO S S **21 02 09.0 -3.3**
CHTO S S **21 02 09.0 -3.3**
CHTO S S **21 02 09.0 -3.3**
CHTO Chiang Mai 23.15 283 P P 20 58 00.8 -1.4
CHTO Chiang Mai 23.15 283 P P 20 58 00.8 -1.4
CHTO pmax pmax
comp=Z,117nm,1.1s
CHTO MLR MLR
comp=Z,6μm,19.0s
MMRI Maumere 23.37 181 P 20 58 01.7 -2.6
MMRI Maumere 23.37 181 P P 20 58 07.3 +3.0
MMRI Maumere 23.37 181 P P 20 58 05.8 +1.5
comp=Z,3μmcomp=Z,3μmcomp=Z,258nm,1.6s
KMMI Kalianget 23.48 202 P P 20 58 05.1 -0.3
comp=Z,4μmcomp=Z,146nm,1.1s
EDFI Ende, Flores 23.50 183 P P 20 58 05.6 -0.1
comp=Z,3μmcomp=Z,199nm,0.8s
HNS HongShan 23.55 344 ⇓P P 20 58 06.3 +0.4
HNS S S **21 02 16.9 -1.6**
HNS pmax pmax
comp=Z,52nm,1.7s
HNS LR LR
comp=Z,5μm,20.8s
HNS LR LR
comp=Z,10μm,20.0s
HNS LR LR
comp=Z,13μm,17.3s
DSRI Dabo 23.61 231 P P 20 58 05.7 -1.0
comp=Z,3μmcomp=Z,6μmcomp=Z,453nm,1.3s
PPBI Pangkal Pinang 23.63 226 P P 20 58 06.8 -0.1
CD2 Chengdu 23.65 316 P P 20 58 06.7 -0.3
CD2 S S **21 02 16.6 -3.7**
CD2 pmax pmax
comp=Z,230nm,0.7s
CD2 pmax pmax
comp=Z,2μm,6.3s
CD2 LR LR
comp=Z,17μm,15.5s
CD2 LR LR
comp=Z,22μm,15.7s
CD2 LR LR
comp=Z,20μm,16.0s
KULM Kulim 23.77 249 P 20 58 06.7 -1.6
KULM Kulim 23.77 249 P P 20 58 08.2 0.0
IPM Ipoh 23.79 246 P 20 58 06.3 -2.1
IPM Ipoh 23.79 246 P P 20 58 07.0 -1.4
JHJ Hachijo jima 2 23.83 37 LR LR 21 06 48.6
comp=Z,6μm,18.6s,baz=243,slow=35
GRJI Gresik 23.94 206 P P 20 58 11.8 +2.0
comp=Z,4μmcomp=Z,4μmcomp=Z,164nm,0.9s
DL2 Dalian 23.96 358 P P 20 58 11.1 +1.3
DL2 S S **21 02 28.2 +3.3**
DL2 pmax pmax
comp=Z,88nm,1.5s
DL2 pmax pmax
comp=Z,2μm,5.7s
DL2 LR LR
comp=Z,7μm,19.3s
DL2 LR LR
comp=Z,7μm,18.8s
DL2 LR LR
comp=Z,9μm,18.4s
SRBI Singaraja 24.02 199 P P 20 58 11.2 +0.7
INU Inuyama 24.06 30 P 20 58 10.5 -0.3
INU IAmb IAmb 20 58 15.6
comp=Z,94nm,1.1s
INU Inuyama 24.06 30 P P 20 58 12.1 +1.3
PLAI Plampang 24.07 192 P P 20 58 12.9 +1.9
PLAI Plampang 24.07 192 P P 20 58 10.5 -0.5
comp=Z,4μmcomp=Z,332nm,1.2s
TWSI Taliwang, Sumb 24.18 194 P P 20 58 11.0 -1.1
comp=Z,2μmcomp=Z,65nm,0.8s
SAUI Saumlaki 24.23 159 P 20 58 13.4 +0.9
SAUI Saumlaki 24.23 159 P P 20 58 18.7 +6.2
SAUI Saumlaki 24.23 159 P P 20 58 14.1 +1.6
BLJI Banyuglugur 24.26 203 P P 20 58 14.4 +1.7
JGF Kuroka 24.42 30 IAmb IAmb 20 58 28.8
comp=Z,229nm,1.6s
JGF Kuroka 24.42 30 P P 20 58 15.1 +0.9
GENI Genyem 24.44 134 P P 20 58 19.4 +4.9
GENI Genyem 24.44 134 P P 20 58 17.6 +3.1
comp=Z,3μmcomp=Z,6μmcomp=Z,199nm,1.6s
WSI Waingapu 24.51 186 P P 20 58 14.6 -0.5
comp=Z,4μmcomp=Z,136nm,1.0s
SOEI Soe 24.52 176 P 20 58 14.0 -1.2
SOEI IAmb IAmb 20 58 30.6
comp=Z,146nm,0.9s
SOEI Soe 24.52 176 P P 20 58 15.7 +0.4
SOEI Soe 24.52 176 P P 20 58 15.1 -0.2
comp=Z,3μmcomp=Z,171nm,1.0s
TIY Taiyuan 24.53 340 *e*P P 20 58 15.7 +0.5
TIY S S **21 02 34.1 -0.3**
TIY pmax pmax
comp=Z,710nm,4.9s
TIY LR LR
comp=Z,5μm,18.5s
TIY LR LR
comp=Z,3μm,19.9s
TIY LR LR
comp=Z,6μm,19.9s
WBSI Waikabubak, Su 24.59 188 P P 20 58 15.0 -0.8
comp=Z,1μmcomp=Z,91nm,0.9s
JAGI Jajag, Banyuwa 24.73 201 P P 20 58 14.0 -3.0
JAGI IAmb IAmb 20 58 20.3
comp=Z,184nm,1.6s
JAGI Jajag, Banyuwa 24.73 201 P P 20 58 17.7 +0.7
JAGI Jajag, Banyuwa 24.73 201 P P 20 58 16.8 -0.2
comp=Z,2μmcomp=Z,64nm,1.1s
JAY Jayapura 24.77 133 LR LR 21 06 08.6
comp=Z,8μm,21.6s,baz=322,slow=32
JAY Jayapura 24.77 133 P P 20 58 19.2 +1.7
comp=Z,1μmcomp=Z,55nm,0.9s
NGJI Ngawi 24.79 208 P P 20 58 19.3 +1.7
comp=Z,71nm,1.5s
TNCH TengChong 24.91 298 ⇓P P 20 58 18.2 -0.7
TNCH PP **PnPn 20 58 54.2 +2.1**
TNCH PcP **PcP 21 01 55.4 +1.0**
TNCH S S **21 02 36.4 -4.6**
TNCH pmax pmax
comp=Z,120nm,1.2s
TNCH pmax pmax
comp=Z,1μm,7.8s
TNCH LR LR
comp=Z,3μm,16.1s
TNCH LR LR
comp=Z,4μm,16.6s
TNCH LR LR
comp=Z,9μm,17.7s
BATI Baumata 24.94 178 LR LR 21 10 29.1
comp=Z,3μm,20.4s,baz=326,slow=42
BATI Baumata 24.94 178 P P 20 58 18.1 -0.8
SMRI Semarang 24.99 210 P P 20 58 17.6 -1.8
SMRI IAmb IAmb 20 58 34.4
comp=Z,144nm,1.2s
SMRI Semarang 24.99 210 P P 20 58 21.8 +2.4
comp=Z,89nm,1.2s
BASI Baing, Sumba 25.03 185 P P 20 58 21.1 +1.3
comp=Z,2μmcomp=Z,177nm,1.6s
PMBI Palembang 25.13 227 P P 20 58 20.1 -0.6
PMBI IAmb IAmb 20 58 46.2
comp=Z,144nm,1.2s
MAJO Matsushiro 25.59 30 P 20 58 23.8 -0.9
MAJO Matsushiro 25.59 30 P P 20 58 28.6 +3.9
MAJO Matsushiro 25.59 30⇓*e*P P 20 58 24.8 +0.1
MAJO pmax pmax
comp=Z,53nm,1.9s
MJAR Matsushiro Arr 25.59 30 P P 20 58 24.2 -0.5
comp=Z,4.7nm,0.8s,baz=215,slow=7.2,SNR=13
MJAR PcP **PcP 21 01 56.7 +1.2**
comp=Z,3.9nm,0.8s,baz=163,slow=2.4,SNR=4.8
comp=Z,4.7nm,0.8s
PCJI Pacitan 25.65 207 P P 20 58 26.1 +0.7
comp=Z,2μmcomp=Z,85nm,1.0s
BJT Baijiatuau 25.71 348 P 20 58 25.2 -0.5
BJT IAmb IAmb 20 59 00.5
comp=Z,189nm,1.7s
BJT Baijiatuau 25.71 348 P P 20 58 27.0 +1.3
BJT Baijiatuau 25.71 348 P P 20 58 25.2 -0.5
BJT pmax pmax
comp=Z,189nm,1.7s
BJT MLR MLR
comp=Z,3μm,22.0s
BJI Beijing 25.73 348 P P 20 58 26.3 +0.4
BJI PcP **PcP 21 01 56.8 +1.2**
BJI S S **21 02 55.0 +1.7**
BJI sS **sS 21 03 04.8 +0.2**
BJI pmax pmax
comp=Z,22nm,1.2s
BJI pmax pmax
comp=Z,750nm,7.3s
BJI LR LR
comp=Z,1μm,22.3s
BJI LR LR
comp=Z,2μm,17.0s
BJI LR LR
comp=Z,2μm,23.6s
BKNI Bangkinang 25.91 238 P P 20 58 26.5 -1.3
BKNI Bangkinang 25.91 238 P P 20 58 28.5 +0.7
BKNI Bangkinang 25.91 238 P P 20 58 26.2 -1.6
KPJI Karang Pucung 26.00 213 P P 20 58 28.9 +0.4
LEM Lembang 26.29 216 LR LR 21 11 04.8
comp=Z,4μm,19.1s,baz=32,slow=41
LEM Lembang 26.29 216 P P 20 58 32.7 +1.3
LEM Lembang 26.29 216 P P 20 58 33.4 +2.0
PSI Prapat 26.42 245 LR LR 21 08 24.4
comp=Z,3μm,21.6s,baz=58,slow=35
PSI Prapat 26.42 245 P P 20 58 32.1 -0.5
PSI Prapat 26.42 245 P P 20 58 31.6 -1.0
PSI pmax pmax
comp=Z,314nm,1.2s
PSI MLR MLR
comp=Z,3μm,21.0s
KLI Kotabumi 26.47 224 P P 20 58 33.2 +0.3
comp=Z,3μmcomp=Z,166nm,0.7s
RPSI Rantau Prapat 26.47 245 P P 20 58 31.6 -1.3
DBJI Dramaga 26.58 218 P P 20 58 33.4 -0.4
comp=Z,2μmcomp=Z,72nm,0.9s

SBJI Serang 26.61 220 P **P** **20 58 34.2 +0.1**
comp=Z,4µmcomp=Z,167nm,1.0s
LHSI Lahat 26.64 227 P **P** **20 58 34.3 -0.1**
comp=Z,2µmcomp=Z,72nm,1.1s
MDSI Maura Dua 26.65 225 P **P** **20 58 33.1 -1.4**
comp=Z,1µmcomp=Z,64nm,1.5s
BBJI Bungbulang 26.80 215 P **P** **20 58 39.6 +3.7**
JSD Sado 26.82 28 P **P** **20 58 37.6 +1.8**
SNY Shenyang 26.86 1 ⇑P **P** **20 58 36.8 +0.7**
SNY S **S** **21 03 17.6 +6.5**
SNY pmax pmax
comp=Z,35nm,1.4s
SNY pmax pmax
comp=Z,710nm,12.0s
SNY LR LR
comp=Z,5µm,18.8s
SNY LR LR
comp=Z,4µm,15.5s
SNY LR LR
comp=Z,8µm,18.8s
MNSI Mandailing Nat 26.86 241 P **P** **20 58 35.6 -0.8**
PPI Padang Panjang 26.88 237 P **P** **20 58 35.2 -1.4**
comp=Z,3µmcomp=Z,213nm,1.5s
CNJI Cibinong 26.96 216 P **P** **20 58 38.1 +0.8**
comp=Z,45nm,0.9s
KRJI Kerinci 27.02 233 P **P** **20 58 37.1 -0.9**
LZDM Lanzhou Array 27.07 324 P **P** **20 58 38.5 +0.1**
comp=Z,6.7nm,0.5s,baz=141,slow=15,SNR=6.1
LZDM LR LR 21 10 04.2
comp=Z,15µm,18.3s,baz=115,slow=38
comp=Z,6.7nm,0.5s
LZH Lanzhou 27.08 325 ⇓P **P** **20 58 37.9 -0.5**
LZH pP pP 20 58 43.2 -2.5
LZH sP sP 20 58 45.7 -3.1
LZH PcP **PcP** **21 02 00.7 +1.6**
LZH S **S** **21 03 12.9 -2.2**
LZH SS **SnSn** **21 04 29.4 +6.8**
LZH pmax pmax
comp=Z,52nm,1.6s
LZH pmax pmax
comp=Z,710nm,4.5s
LZH LR LR
comp=Z,18µm,15.6s
LZH LR LR
comp=Z,13µm,16.8s
LZH LR LR
comp=Z,21µm,17.1s
PDSI Padang 27.09 237 P **P** **20 58 37.7 -0.8**
comp=Z,1µmcomp=Z,67nm,0.9s
MASI Maura Aman, Be 27.11 230 P **P** **20 58 38.5 -0.2**
KCSI Kotacane, Aceh 27.11 248 P **P** **20 58 36.5 -2.2**
comp=Z,41nm,1.1s
LWLI Liwa 27.12 225 P **P** **20 58 39.9 +1.1**
LHMI Lhok Sumawe 27.16 252 IAmb IAmb 20 58 41.1
comp=Z,121nm,1.0s
LHMI Lhok Sumawe 27.16 252 P **P** **20 58 39.6 +0.5**
LHMI Lhok Sumawe 27.16 252 P **P** **20 58 37.5 -1.6**
comp=Z,4µmcomp=Z,2µmcomp=Z,130nm,1.9s
KSI Kapahiang 27.19 229 P **P** **20 58 39.3 -0.1**
comp=Z,152nm,1.8s
KASI Kota Agung 27.20 223 P **P** **20 58 37.8 -1.6**
comp=Z,937nmcomp=Z,70nm,1.1s
HHC Hu-ho-hao-te 27.66 341 ⇓*i*P **P** **20 58 44.3 +0.8**
HHC sP sP 20 58 51.9 -1.9
HHC PP **PnPn** **20 59 36.7 +7.2**
HHC S **S** **21 03 24.6 +0.5**
HHC PcS **PcS** **21 05 41.6 -0.7**
HHC pmax pmax
comp=Z,18nm,1.6s
HHC pmax pmax
comp=Z,1µm,8.4s
HHC LR LR
comp=Z,8µm,17.7s
HHC LR LR
comp=Z,4µm,17.7s
HHC LR LR
comp=Z,10µm,16.8s
JMM Marumori 27.90 32 P **P** **20 58 48.8 +3.3**
BTO Baotou 27.95 339 *e*P **P** **20 58 48.2 +2.2**
BTO pP **sP** **20 58 57.5 +1.0**
BTO sP pP 20 59 01.8 +8.3
BTO PP **PnPn** **20 59 39.0 +5.6**
BTO S **S** **21 03 31.3 +2.8**
BTO SS **SnSn** **21 04 51.9 +8.2**
BTO pmax pmax
comp=Z,31nm,2.2s
BTO pmax pmax
comp=Z,2µm,12.8s
BTO LR LR
comp=Z,12µm,22.9s
BTO LR LR
comp=Z,9µm,17.1s
BTO LR LR
comp=Z,16µm,24.1s
LKP Lekhapani 27.95 301 IAmb IAmb 20 58 38.8
comp=Z,62nm,0.9s
AUDHS Darwin High Sc 28.29 163 P **P** **20 58 49.9 +0.8**
DRS Darwin Rock St 28.30 163 P **P** **20 58 51.9 +2.7**
GSI Gunungsitoli 28.32 244 P **P** **20 58 46.3 -3.2**
GSI Gunungsitoli 28.32 244 P **P** **20 58 48.0 -1.5**
GSI Gunungsitoli 28.32 244 P **P** **20 58 47.3 -2.2**
PBSI Pulau Batu 28.41 241 P **P** **20 58 48.3 -2.0**
comp=Z,3µmcomp=Z,231nm,1.3s
SISI Saibi 28.45 238 P **P** **20 58 48.4 -2.2**
PPSI Pulau Pagai 28.57 234 P **P** **20 58 51.2 -0.5**
comp=Z,106nm,0.8s
MTN Manton Dam 28.75 163 P **P** **20 58 52.7 -0.5**
comp=Z,36nm,0.8s
IMP Imphal 28.82 295 *e*P **P** **20 58 51.7 -2.3**
IMP IAmb IAmb 20 58 53.6
comp=Z,85nm,1.2s
SNSI Sinabang, Aceh 28.90 247 P **P** **20 58 52.0 -2.6**
comp=Z,90nm,1.3s
CN2 Changchun 28.92 4 P **P** **20 58 55.4 +0.9**
CN2 pP sP 20 59 04.9 0.0
CN2 S **S** **21 03 42.7 -0.8**
CN2 ScP **ScP** **21 05 41.4 -1.8**
CN2 LR LR
comp=Z,5µm,19.0s
CN2 LR LR
comp=Z,4µm,19.0s
CN2 LR LR
comp=Z,6µm,20.0s
KOHI KOHIMA 28.92 296 *e*P **P** **20 58 52.8 -2.2**
KOHI IAmb IAmb 20 58 54.8
comp=Z,88nm,1.5s
KDU Kakadu 29.02 160 P **P** **20 58 54.8 -0.8**
comp=Z,8.2nm,1.8s
JORH JORHAT 29.10 299 *e*P **P** **20 58 53.3 -3.0**
XLT XiLinHaoTe 29.49 350 *e*P **P** **20 59 00.0 +0.4**
XLT sP sP 20 59 14.4 +4.4
XLT S **S** **21 03 52.0 -0.7**
XLT pmax pmax
comp=Z,27nm,2.4s
XLT pmax pmax
comp=Z,900nm,7.0s
XLT LR LR
comp=Z,3µm,17.8s
XLT LR LR
comp=Z,3µm,15.4s
ITAN ITANAGAR 29.67 299 *e*P **P** **20 59 00.5 -0.9**
ITAN IAmb IAmb 20 59 03.1
comp=Z,68nm,0.9s
ZIRO ZIRO 29.69 300 *e*P **P** **20 59 01.2 -0.5**
ZIRO IAmb IAmb 20 59 02.8
comp=Z,71nm,0.8s
SILR SILCHAR 29.82 294 *e*P **P** **20 59 02.0 -0.7**
MDJ Mudanjiang 30.20 10 IAmb IAmb 20 59 11.4
comp=Z,59nm,1.2s
MDJ IAMs_20 IAMs_20 21 13 25.6
comp=Z,6µm,18.0s
MDJ Mudanjiang 30.20 10 P **P** **20 59 07.7 +1.9**
MDJ PP **PP** **21 00 09.1 -5.1**
MDJ S **S** **21 04 07.5 +3.9**
MDJ SS **ScP** **21 05 43.0 -4.3**
MDJ pmax pmax
comp=Z,52nm,1.4s
MDJ pmax pmax
comp=Z,750nm,10.3s
MDJ LR LR
comp=Z,4µm,23.4s
MDJ LR LR
comp=Z,5µm,20.6s
MDJ LR LR
comp=Z,9µm,17.9s
MDJ Mudanjiang 30.20 10 P **P** **20 59 08.3 +2.5**

USRK Ussuriysk Ar. 30.26 13 P **P** **20 59 07.5 +1.2**
comp=Z,13nm,0.6s,baz=195,slow=8.1,SNR=15
comp=Z,13nm,0.6s
TEZP TEZPUR 30.30 298 *e*P **P** **20 59 05.0 -2.0**
TEZP IAmb IAmb 20 59 08.4
comp=Z,89nm,0.9s
BRDH Bariadhala 30.45 289 LR LR 21 13 07.9
comp=Z,5µm,18.4s,baz=151,slow=40
BELO BELONIA 30.72 291 *e*P **P** **20 59 10.9 +0.3**
SHL Shillong 30.82 295 P **P** **20 59 10.5 -1.2**
SHL Shillong 30.82 295 P **P** **20 59 10.9 -0.9**
SNR=56
SHL Shillong 30.82 295 *e*P **P** **20 59 11.1 -0.7**
SHL IAmb IAmb 20 59 12.2
comp=Z,67nm,1.0s
SHL Shillong 30.82 295 P **P** **20 59 10.5 -1.2**
SHL pmax pmax
comp=Z,230nm,0.9s
KNRA Kununurra 30.93 169 P **P** **20 59 10.2 -2.3**
BNX BinXian 31.01 6 ⇑P **P** **20 59 14.0 +1.0**
BNX sP **sP** **20 59 26.3 +2.9**
BNX S **S** **21 04 17.8 +1.5**
BNX pmax pmax
comp=Z,38nm,2.2s
BNX pmax pmax
comp=Z,710nm,6.6s
BNX LR LR
comp=Z,3µm,21.5s
BNX LR LR
comp=Z,3µm,17.3s
BNX LR LR
comp=Z,3µm,20.1s
AGT Agartala 31.01 292 *e*P **P** **20 59 13.5 +0.2**
TAWA Tawang 31.38 299 *e*P **P** **20 59 17.2 +0.3**
TAWA IAmb IAmb 20 59 20.2
comp=Z,63nm,0.8s
GTA Gaotai 31.68 325 P **P** **20 59 20.2 +1.0**
GTA PcP **PcP** **21 02 11.9 +1.2**
GTA S **S** **21 04 29.3 +2.0**
GTA PcS **PcS** **21 05 55.3 0.0**
GTA ScS **ScS** **21 09 50.0 -0.6**
GTA pmax pmax
comp=Z,44nm,1.7s
GTA pmax pmax
comp=Z,870nm,11.3s
GTA LR LR
comp=Z,6µm,18.9s
GTA LR LR
comp=Z,8µm,18.5s
GTA LR LR
comp=Z,9µm,20.4s
TEY Ternei 32.26 18⇑*e*P **P** **20 59 24.0 +0.1**
TEY pmax pmax
comp=E,10.0nm,1.4s
TEY pmax pmax
comp=Z,10.0nm,1.8s
TEY pmax pmax
comp=Z,100nm,2.6s
LSA Lhasa 32.65 302 P **P** **20 59 27.4 -0.8**
LSA IAMs_20 IAMs_20 21 12 59.6
comp=Z,6µm,20.0s
LSA Lhasa 32.65 302 P **P** **20 59 25.0 -3.2**
LSA pmax pmax
comp=Z,140nm,1.0s
LSA LR LR
comp=Z,3µm,21.9s
LSA LR LR
comp=Z,2µm,21.6s
LSA LR LR
comp=Z,6µm,21.2s
LSA Lhasa 32.65 302 *i*P **P** **20 59 28.8 +0.6**
SNR=115
LSA Lhasa 32.65 302 P **P** **20 59 27.4 -0.8**
LSA pmax pmax
comp=Z,140nm,1.0s
LSA MLR MLR
comp=Z,6µm,20.0s
GOMU GeErMu 32.78 316 P **P** **20 59 29.2 +0.1**
GOMU PcP **PcP** **21 02 15.0 +0.9**
GOMU S **S** **21 04 46.2 +1.2**
GOMU pmax pmax
comp=Z,32nm,1.3s
GOMU LR LR
comp=Z,6µm,17.6s
GOMU LR LR
comp=Z,4µm,19.0s
GOMU LR LR
comp=Z,7µm,18.1s
FITZ Fitzroy Crossi 32.89 175 P **P** **20 59 29.0 -0.7**
ASAJ Asahikawa 33.67 26 P **P** **20 59 35.0 -1.3**
ASAJ pmax pmax
comp=Z,274nm,2.0s
JKA Kamikawa-asahi 33.67 26 P **P** **20 59 35.0 -1.4**
PMG Port Moresby 34.14 133 P **P** **20 59 39.9 -0.9**
PMG IAmb IAmb 20 59 56.0
comp=Z,57nm,1.0s
PMG Port Moresby 34.14 133 P **P** **20 59 43.3 +2.6**
PMG Port Moresby 34.14 133 P **P** **20 59 43.0 +2.3**
PMG Port Moresby 34.14 133⇑*e*P **P** **20 59 41.0 +0.3**
PMG pmax pmax
comp=Z,55nm,1.0s
HIA Hailar 34.38 356 IAMs_20 IAMs_20 21 14 23.0
comp=Z,4µm,21.0s
HIA Hailar 34.38 356 P **P** **20 59 43.1 +0.6**
SHBG Sahibganj 34.47 293 *e*P **P** **20 59 43.9 +0.4**
HILR Hailar Array B 34.67 357 P **P** **20 59 45.6 +0.6**
comp=Z,6.5nm,0.5s,baz=173,slow=12,SNR=11
HILR LR LR 21 14 53.9
comp=Z,4µm,21.7s,baz=125,slow=38
comp=Z,6.5nm,0.5s
RABL Rabaul 34.73 121 P **P** **20 59 44.7 -1.2**
RABL IAmb IAmb 21 00 03.2
comp=Z,90nm,1.4s
COEN Coen 35.04 144 P **P** **20 59 48.4 -0.1**
comp=Z,43nm,1.4s
COEN Coen 35.04 144 IAmb IAmb 21 00 10.0
comp=Z,79nm,1.2s
COEN Coen 35.04 144 P **P** **20 59 51.3 +2.8**
ULN Ulaanbaatar 35.38 342 P **P** **20 59 50.7 -0.6**
ULN IAmb IAmb 20 59 53.6
comp=Z,60nm,1.1s
ULN Ulaanbaatar 35.38 342 P **P** **20 59 52.1 +0.8**
ULN S **S** **21 05 24.8 +0.3**
ULN Ulaanbaatar 35.38 342*d* *i*P **P** **20 59 52.3 +1.0**
ULN pmax pmax
comp=Z,55nm,1.1s
HEH HeiHe 35.48 5 *e*P **P** **20 59 52.5 +0.6**
HEH sP **sP** **21 00 00.4 -1.9**
HEH S **S** **21 05 27.1 +1.5**
HEH SS **SS** **21 07 55.0 -5.4**
HEH pmax pmax
comp=Z,72nm,1.8s
HEH pmax pmax
comp=Z,790nm,4.4s
HEH LR LR
comp=Z,3µm,18.4s
HEH LR LR
comp=Z,3µm,19.8s
HEH LR LR
comp=Z,4µm,19.9s
SONM Songino Array 35.56 341 P **P** **20 59 53.3 +0.5**
comp=Z,23nm,0.9s,baz=160,slow=9.8,SNR=119
SONM LR LR 21 15 33.5
comp=Z,8µm,19.3s,baz=152,slow=38
comp=Z,23nm,0.9s
BWNR Bhubaneshwar 35.61 284 *e*P **P** **20 59 53.5 +0.1**
BOK Bokaro 35.85 290 *e*P **P** **20 59 55.3 -0.1**
BOK IAmb IAmb 20 59 57.2
comp=Z,75nm,0.7s
MBWA Marble Bar 35.94 185 P **P** **20 59 55.3 -0.8**
YSS Yuzhno-Sakhali 36.06 23 P **P** **20 59 56.4 -0.4**
YSS IAmb IAmb 21 00 38.7
comp=Z,152nm,1.6s
YSS Yuzhno-Sakhali 36.06 23 *e*P **P** **20 59 57.5 +0.6**
YSS *e**PP **sP** **21 00 05.8 -1.4**
YSS *e**SP pP 21 00 11.5 +7.3
YSS *e*S **S** **21 05 33.5 -0.9**
YSS *e**SS **sS** **21 05 48.4 +2.4**
YSS pmax pmax
comp=Z,400nm,5.5s
YSS pmax pmax
comp=Z,50nm,1.2s
YSS MLR MLR
comp=N,1µm,15.0s
WB0 Warramunga Arr 36.27 161 P **P** **20 59 58.9 -0.1**
WB0 IAmb IAmb 21 00 05.5
comp=Z,40nm,0.9s
PSAC1 Pilbara Seismi 36.30 185 P **P** **20 59 59.8 +0.6**
comp=Z,28nm,1.3s
PSAC2 Pilbara Seismi 36.33 185 P **P** **20 59 59.0 -0.4**
comp=Z,27nm,0.9s
PSA00 Pilbara Seismi 36.34 185 P **P** **20 59 58.9 -0.6**
comp=Z,34nm,1.1s
PSA00 Pilbara Seismi 36.34 185 P **P** **20 59 59.8 +0.3**
PSAB3 Pilbara Seismi 36.36 185 P **P** **20 59 56.6 -3.1**
WRAB Tennant Creek 36.41 161 P **P** **20 59 58.0 -2.2**
WRAB Tennant Creek 36.41 161 P **P** **21 00 00.7 +0.5**
WRAB Tennant Creek 36.41 161*c**e*P **P** **20 59 59.0 -1.2**
WRAB pmax pmax
comp=Z,46nm,0.9s
WRA Warramunga Arr 36.42 162 P **P** **21 00 00.1 -0.2**
comp=Z,27nm,0.8s,baz=342,slow=9.4,SNR=109
WRA S **S** **21 05 33.8 -6.8**
WRA comp=Z,2.4nm,0.9s,baz=342,slow=15,SNR=6.0
LR LR 21 18 37.8
comp=Z,2µm,18.6s,baz=345,slow=42
comp=Z,27nm,0.8s
GAYA Gaya 36.58 292 *e*P **P** **21 00 00.9 -0.8**
GAYA IAmb IAmb 21 00 02.8
comp=Z,68nm,1.7s
GRNR Gornyy 37.46 14⇓*i*P **P** **21 00 10.2 +1.4**
GRNR pmax pmax
comp=Z,7.0nm,0.8s
GRNR MLR MLR
comp=E,990nm,15.0s
JHSG JHARSUGUGA 37.59 286 *e*P **P** **21 00 10.0 -0.3**
JHSG IAmb IAmb 21 00 12.3
comp=Z,68nm,0.8s
CIT Chita 37.78 351 *e*P **P** **21 00 12.2 +0.6**
CIT *e* 21 00 22.0
CIT *e* 21 01 38.6
CIT *e* 21 02 31.2
CIT *e* 21 05 56.6
CIT pmax pmax
comp=Z,205nm,2.4s
RAGD RAYAGADA 37.80 282 *e*P **P** **21 00 11.5 -0.6**
ZAK Zakamensk 38.79 340 *e*P **P** **21 00 19.8 -0.3**
ZAK *e* 21 06 12.6
ZAK pmax pmax
comp=Z,43nm,1.3s
QIS Mount Isa 38.90 154 P **P** **21 00 20.7 -0.6**
comp=Z,41nm,0.9s
QIS Mount Isa 38.90 154 P **P** **21 00 22.9 +1.6**
ZEA Zeya 38.93 4 *e*P **P** **21 00 22.1 +1.0**
ZEA *e*S **S** **21 06 16.7 -1.2**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.1s
ZEA pmax pmax
comp=Z,300nm,8.8s
ZEA smax smax
comp=N,500nm,10.5s
MTSU Mount Surprise 39.07 146 P **P** **21 00 24.4 +1.6**
comp=Z,24nm,0.9s
MTSU Mount Surprise 39.07 146 P **P** **21 00 26.5 +3.8**
BLSP Bilaspur 39.13 287 *e*P **P** **21 00 22.6 -0.8**
BLSP IAmb IAmb 21 00 25.6
comp=Z,32nm,0.7s
TYV Tymovskoe 39.32 20 *e*P P 21 00 31.1 +6.7
TYV pmax pmax
comp=Z,30nm,1.5s
TYV pmax pmax
comp=Z,300nm,4.0s
TLY Talaya 39.79 341 P **P** **21 00 28.0 -0.4**
TLY Talaya 39.79 341 P **P** **21 00 29.9 +1.5**
TLY P **P** **21 00 29.9 +1.5**
TLY S **S** **21 06 30.1 -1.0**
TLY S **S** **21 06 30.1 -1.0**
TLY Talaya 39.79 341*d* *i*P **P** **21 00 29.3 +0.9**
TLY pmax pmax
comp=Z,105nm,1.9s
AS31 Alice Springs 39.82 164 P **P** **21 00 28.4 -0.5**
ASAR Alice Springs 39.82 164 P **P** **21 00 28.4 -0.5**
comp=Z,12nm,0.4s,baz=339,slow=7.3,SNR=90
ASAR S **S** **21 06 29.1 -2.8**
comp=Z,2.7nm,0.9s,baz=338,slow=12,SNR=5.3
ASAR LR LR 21 19 21.9
comp=Z,1µm,21.0s,baz=354,slow=40
comp=Z,12nm,0.4s
AUALC St Philip's Co 39.84 164 P **P** **21 00 31.3 +2.2**
WRKA Warakurna 40.03 172 P **P** **21 00 30.7 0.0**
comp=Z,39nm,1.2s
IRK Irkutsk 40.10 342 *e*P **P** **21 00 28.6 -2.3**
IRK *e* 21 06 40.9
IRK pmax pmax
comp=Z,113nm,2.3s
MOY Mondy 40.65 339 *e*P **P** **21 00 36.0 +0.4**
MOY pmax pmax
comp=Z,123nm,2.3s
KNGR Kungurtug, Tuv 41.08 336*d* *i*P **P** **21 00 40.0 +0.8**
TVTH Townsville Har 41.34 144 P **P** **21 00 44.7 +3.2**
MEEK Meekatharra 41.47 186 P **P** **21 00 41.3 -1.2**
comp=Z,52nm,1.3s
MEEK Meekatharra 41.47 186 P **P** **21 00 44.7 +2.2**
WMQ Urumqi 41.52 321 ⇓P **P** **21 00 44.0 +1.1**
WMQ PcP **PcP** **21 02 41.0 +0.9**
WMQ S **S** **21 06 59.3 +2.1**
WMQ pmax pmax
comp=Z,31nm,0.9s
WMQ pmax pmax
comp=Z,430nm,4.9s
WMQ LR LR
comp=Z,10µm,13.3s
WMQ LR LR
comp=Z,10µm,13.3s
WMQ LR LR
comp=Z,7µm,16.1s
LGTI Lohaghat 41.74 298 *e*P **P** **21 00 44.2 -0.6**
PALK Pallekele 41.93 264 IAMs_20 IAMs_20 21 18 57.4
comp=Z,2µm,18.0s
PALK Pallekele 41.93 264 LR LR 21 18 07.1
comp=Z,2µm,18.9s,baz=78,slow=36
PALK Pallekele 41.93 264 P **P** **21 00 46.1 -0.5**
PALK P **P** **21 00 46.3 -0.3**
PALK Pallekele 41.93 264 P **P** **21 00 46.8 +0.2**
H11S3 WAKE ISLAND Hy 42.13 79 T T 21 45 50.5
baz=271,slow=75,SNR=5706
H11S1 WAKE ISLAND Hy 42.14 79 T T 21 45 51.7
baz=271,slow=75,SNR=737
H11S2 WAKE ISLAND Hy 42.15 79 T T 21 45 52.3
baz=271,slow=75,SNR=2060
H11N1 WAKE ISLAND Hy 42.29 77 T T 21 46 15.8
baz=274,slow=74
H11N2 WAKE ISLAND Hy 42.30 77 T T 21 46 16.5
baz=274,slow=74
H11N3 WAKE ISLAND Hy 42.31 77 T T 21 46 16.8
baz=274
HYBB Hyderabad (bro 42.50 280 *e*P **P** **21 00 50.6 -0.6**
HYBB *ep*P **P** **21 00 52.6 +1.4**
HYBB *e*S **S** **21 07 13.3 +1.1**
JOSI Joshimath 42.54 299 *e*P **P** **21 00 51.1 -0.5**
JOSI IAmb IAmb 21 00 55.0
comp=Z,78nm,0.8s
JHNI Jhansi 42.68 291 *e*P **P** **21 00 50.4 -2.1**
JHNI IAmb IAmb 21 00 51.6
comp=Z,77nm,1.0s
BOD Bodaibo 43.37 353 *e*P **P** **21 00 57.8 +0.2**
BOD pmax pmax
comp=Z,44nm,1.9s
SALM Salem 43.47 271 *e*P **P** **21 00 58.8 -0.2**
BHPL Bhopal 43.53 288 *e*P **P** **21 00 58.5 -1.0**
GUNA GUNA 43.70 290 *e*P **P** **21 00 59.3 -1.5**
NRDN NARMADA NAGAR 43.75 287 *e*P **P** **21 01 05.1 +3.9**
SAVO Savo Central 43.78 121 P P 21 01 06.7 +5.2
AKL Akola 43.86 284 *e*P **P** **21 01 01.7 -0.4**
AKL IAmb IAmb 21 01 05.2
comp=Z,29nm,0.7s
HNR Honiara 44.05 121 P **P** **21 01 02.4 -1.2**
HNR IAmb IAmb 21 01 36.1
comp=Z,77nm,0.8s
HNR Honiara 44.05 121 LR LR 21 16 38.7
comp=Z,5µm,22.0s,baz=277,slow=32
HNR Honiara 44.05 121 P **P** **21 01 02.4 -1.2**
HNR pmax pmax
comp=Z,77nm,0.8s
HNR MLR MLR
comp=Z,5µm,22.0s
MORW Morawa 44.17 188 P **P** **21 01 03.5 -0.9**
comp=Z,37nm,1.1s
MORW Morawa 44.17 188 P **P** **21 01 03.2 -1.2**

MORW Morawa 44.17 188 P **P** **21 01 05.3 +0.9**
AYAN Aya Nagar 44.28 296 *e*P **P** **21 01 02.8 -2.6**
AYAN IAmb IAmb 21 01 04.0
comp=Z,60nm,0.9s
KOD Kodaikanal 44.42 270 *e*P **P** **21 01 06.6 -0.4**
KOD IAmb IAmb 21 01 08.1
comp=Z,68nm,1.1s
SMLA Simla 44.67 299 *e*P **P** **21 01 07.9 -0.5**
KUDL Kundal 44.80 295 *e*P **P** **21 01 07.2 -2.3**
KUDL IAmb IAmb 21 01 10.4
comp=Z,70nm,0.7s
DGZ Jazzator, Alta 45.09 328*d* iP **P** **21 01 12.4 +0.7**
DGZ pmax pmax
comp=Z,96nm,2.4s
ZSN Zaisan 45.17 324⇓ iP **P** **21 01 12.7 +0.5**
ZSN *e*S **S** **21 07 53.1 +2.7**
ZSN Zaisan 45.17 324*d* iP **P** **21 01 12.7 +0.5**
ZSN *e*S **S** **21 07 53.0 +2.7**
ALCI Alchi Leh 45.30 304 *e*P **P** **21 01 13.1 -0.8**
ALCI IAmb IAmb 21 01 15.8
comp=Z,24nm,0.6s
BHK Bhakra 45.36 300 *e*P **P** **21 01 13.7 -0.2**
BHK IAmb IAmb 21 01 16.4
comp=Z,60nm,1.0s
DHRM DHARAMSHALA 45.61 301 *e*P **P** **21 01 15.0 -1.2**
DHRM IAmb IAmb 21 01 18.8
comp=Z,45nm,0.5s
FORT Forrest 45.67 174 P **P** **21 01 16.9 +0.6**
comp=Z,29nm,0.6s
FORT Forrest 45.67 174 P **P** **21 01 16.6 +0.4**
INKA Innaminka 45.80 158 P **P** **21 01 17.6 +0.3**
INKA IAmb IAmb 21 01 22.3
comp=Z,44nm,0.8s
TSSA Tissa 45.85 301 *e*P **P** **21 01 16.6 -1.4**
KMBL Kambalda 45.99 181 P **P** **21 01 17.2 -1.5**
comp=Z,28nm,0.8s
QLP Quilpie 46.18 153 P **P** **21 01 22.3 +1.9**
MK31 Makanchi Array 46.33 322*d* iP **P** **21 01 21.6 +0.2**
MKAR Makanchi Array 46.33 322 P **P** **21 01 21.6 +0.2**
comp=Z,28nm,0.9s,baz=122,slow=8.0,SNR=165
MKAR PcP **PcP** **21 02 56.8 +0.5**
comp=Z,3.7nm,0.5s,baz=117,slow=4.1,SNR=4.3
MKAR LR LR 21 22 12.6
comp=Z,5μm,19.3s,baz=107,slow=38
comp=Z,28nm,0.9s
KLBR Kellerberrin 46.45 186 P **P** **21 01 23.9 +1.5**
SHLS Shalkode 46.48 316⇓ iP **P** **21 01 20.8 -2.0**
comp=Z,27nm,1.0s
SHLS Shalkode 46.48 316*d* iP **P** **21 01 20.7 -2.0**
SHLS pmax pmax
comp=Z,27nm,1.0s
MAKZ Makanchi 46.52 322 P **P** **21 01 22.4 -0.4**
MAKZ IAmb IAmb 21 01 35.7
comp=Z,48nm,1.2s
MAKZ Makanchi 46.52 322 P **P** **21 01 23.0 +0.1**
AUNRC North Rockhamp 46.69 144 P **P** **21 01 28.6 +4.2**
UZB Uzynbulak 46.77 316⇓ iP **P** **21 01 25.2 +0.1**
comp=Z,19nm,0.9s
UZB *e*S **S** **21 08 16.1 +2.2**
UZB Uzynbulak 46.77 316*d* iP **P** **21 01 25.2 +0.1**
UZB *e*S **S** **21 08 16.0 +2.2**
UZB pmax pmax
comp=Z,19nm,0.9s
JMU Jammu 46.86 301 *e*P **P** **21 01 25.5 -0.1**
POO Poona 46.91 282 *e*P **P** **21 01 24.6 -1.8**
MUN Mundaring 47.01 188 P **P** **21 01 31.0 +4.2**
PEA0B Petropavlovsk- 47.03 28⇓ *e*P **P** **21 01 27.0 +0.3**
PETK Petropavlovsk- 47.03 28 P **P** **21 01 27.5 +0.7**
comp=Z,21nm,0.8s,baz=217,slow=3.9,SNR=21
PETK LR LR 21 21 52.8
comp=Z,995nm,19.8s,baz=227,slow=37
comp=Z,21nm,0.8s
TARG Taragay, Kyrgy 47.07 314 P **P** **21 01 28.5 +0.7**
TARG IAmb IAmb 21 01 46.7
comp=Z,33nm,1.2s
TARG Taragay, Kyrgy 47.07 314 P **P** **21 01 28.5 +0.7**
TARG pmax pmax
comp=Z,33nm,1.2s
SATY Saty 47.15 316⇓ iP **P** **21 01 28.2 +0.1**
comp=Z,17nm,1.0s
SATY *e*S **S** **21 08 21.4 +2.2**
SATY Saty 47.15 316*d* iP **P** **21 01 28.1 +0.1**
SATY *e*S **S** **21 08 21.3 +2.1**
SATY pmax pmax
comp=Z,17nm,1.0s
YAK Yakutsk 47.35 4 P **P** **21 01 28.4 -0.6**
YAK IAMs_20 IAMs_20 21 23 40.9
comp=Z,4μm,20.0s
YAK Yakutsk 47.35 4 **P** **21 01 28.9 -0.1**
YAK Yakutsk 47.35 4 LR LR 21 24 08.0
comp=Z,3μm,19.0s,baz=191,slow=39
YAK Yakutsk 47.35 4 *e*P **P** **21 01 30.1 +1.1**
YAK *e**PP **sP** **21 01 40.5 +1.0**
YAK *e* 21 03 23.1
YAK *e*S **S** **21 08 21.9 +0.9**
YAK *e**SS **sS** **21 08 31.6 -1.3**
YAK *e*SSS SSS 21 12 49.2
YAK pmax pmax
comp=Z,61nm,0.9s
YAK pmax pmax
comp=N,47nm,1.4s
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=Z,371nm,3.0s
YAK pmax pmax
comp=E,183nm,2.7s
YAK pmax pmax
comp=N,429nm,3.5s
YAK smax smax
comp=E,332nm,3.7s
YAK smax smax
comp=N,347nm,3.2s
YAK MLR MLR
comp=Z,4μm,20.0s
YAK MLR MLR
comp=E,955nm,17.0s
YAK MLR MLR
comp=N,2μm,18.0s
PET Petropavlovsk 47.41 29 P **P** **21 01 31.8 +2.1**
PET Petropavlovsk 47.41 29 *e*P **P** **21 01 30.1 +0.4**
PET *e*S **S** **21 08 19.4 -2.9**
PET pmax pmax
comp=Z,49nm,1.3s
PET pmax pmax
comp=Z,400nm,7.8s
PET pmax pmax
comp=Z,600nm,8.9s
PET MLR MLR
comp=Z,900nm,17.0s
PET Petropavlovsk 47.41 29 P **P** **21 01 29.6 -0.1**
comp=Z,45nm,2.0s
GD1S Gladstone Soft 47.44 144 P **P** **21 01 33.9 +3.7**
KSH Kashi 47.66 310 P **P** **21 01 34.1 +2.1**
KSH sP sP 21 01 41.7 -0.8
KSH PP **PP** **21 03 26.2 +2.4**
KSH S **S** **21 08 27.1 +0.6**
KSH pmax pmax
comp=Z,25nm,1.2s
KSH pmax pmax
comp=Z,670nm,8.3s
KSH LR LR
comp=Z,3μm,17.5s
KSH LR LR
comp=Z,8μm,18.4s
KSH LR LR
comp=Z,7μm,17.5s
NWAO Narrogin (SRO) 47.83 186 P **P** **21 01 32.4 -0.7**
NWAO IAmb IAmb 21 02 04.2
comp=Z,62nm,1.1s
NWAO Narrogin (SRO) 47.83 186 LR LR 21 22 16.1
comp=Z,667nm,21.0s,baz=26,slow=37
NWAO Narrogin (SRO) 47.83 186 P **P** **21 01 33.8 +0.7**
NWAO Narrogin (SRO) 47.83 186 P **P** **21 01 34.2 +1.1**
NWAO Narrogin (SRO) 47.83 186 P **P** **21 01 32.4 -0.7**
NWAO pmax pmax
comp=Z,62nm,1.2s
TDK Taldyqorghan 47.93 318⇓ iP **P** **21 01 34.3 +0.3**
comp=Z,64nm,1.4s
TDK LR LR 21 22 15.7
comp=Z,4μm,13.9s
TDK Taldyqorghan 47.93 318*d* iP **P** **21 01 34.2 +0.3**
TDK pmax pmax
comp=Z,64nm,1.4s
TDK MLR MLR
comp=Z,4μm,14.0s
MDOK Medeo 48.11 315 *e*P **P** **21 01 35.7 +0.1**
MDOK *e*S **S** **21 08 34.8 +1.8**
MDOK LR LR 21 22 27.7
MDOK Medeo 48.11 315 *e*P **P** **21 01 35.6 +0.1**
MDOK *e*S **S** **21 08 34.7 +1.8**
TNSS Tian-Shan 48.14 315 *e*P **P** **21 01 35.8 -0.3**
TNSS Tian-Shan 48.14 315 *e*P **P** **21 01 35.7 -0.3**
AAA Alma-Ata 48.22 315 *e*P **P** **21 01 36.4 +0.2**
comp=Z,7μm,14.0s
AAA LR LR 21 22 23.5
comp=Z,6μm,12.5s
AAA Alma-Ata 48.22 315 *e*P **P** **21 01 36.3 +0.1**
AAA MLR MLR
comp=Z,6μm,13.0s
ULHL Ulahol 48.34 314 P **P** **21 01 37.6 +0.2**
SNR=8.5
EIDS Eidsvold 48.58 145 IAmb IAmb 21 01 43.8
comp=Z,46nm,0.9s
EIDS Eidsvold 48.58 145 P **P** **21 01 41.7 +2.6**
ZAA0 Zalesovo Array 48.98 331 P **P** **21 01 40.2 -1.6**
ZAA0 IAmb IAmb 21 01 44.4
comp=Z,40nm,1.1s
ZALV Zalesovo Beam 48.98 331 P **P** **21 01 41.6 -0.1**
comp=Z,22nm,0.8s,baz=124,slow=7.4,SNR=72
ZALV LR LR 21 23 52.8
comp=Z,6μm,18.5s,baz=122,slow=38
comp=Z,22nm,0.8s
TKM2 Tokmak 2 49.02 314 P **P** **21 01 43.2 +0.6**
SNR=14
BBOO Buckleboo 49.09 165 P **P** **21 01 44.9 +2.1**
MA2 Magadan 49.14 18 IAMs_20 IAMs_20 21 24 45.8
comp=Z,2μm,20.0s
MA2 Magadan 49.14 18 LR LR 21 25 44.2
comp=Z,1μm,18.2s,baz=232,slow=40
KBK Karagaybulak 49.38 314 P **P** **21 01 46.3 +1.0**
SNR=14
UCH Uchtor 49.55 313 P **P** **21 01 48.0 +1.0**
SNR=28
JASL Jaisalmer 49.63 293 *e*P **P** **21 01 46.3 -0.9**
FRU1 Bishkek 49.66 314 P **P** **21 01 45.4 -1.9**
FRU1 Bishkek 49.66 314 P **P** **21 01 45.4 -1.9**
FRU1 pmax pmax
comp=Z,20nm,1.0s
WHYH Whyalla 49.69 164 P **P** **21 01 49.7 +2.3**
AAK Ala-Archa 49.69 314 P **P** **21 01 44.8 -2.9**
AAK Ala-Archa 49.69 314 LR LR 21 24 17.9
comp=Z,6μm,19.6s,baz=98,slow=38
AAK Ala-Archa 49.69 314 P **P** **21 01 48.3 +0.6**
AAK P **P** **21 01 48.3 +0.6**
AAK S **S** **21 08 52.9 -2.3**
AAK S **S** **21 08 52.9 -2.3**
AAK Ala-Archa 49.69 314 P **P** **21 01 48.2 +0.6**
SNR=6.8
AAK Ala-Archa 49.69 314 *i* P **P** **21 01 48.3 +0.6**
SNR=7.9
AAK Ala-Archa 49.69 314*d* iP **P** **21 01 47.9 +0.2**
AAK pmax pmax
comp=Z,5.0nm,0.6s
STKA Stephens Creek 49.86 159 P **P** **21 01 48.8 0.0**
comp=Z,32nm,0.7s,baz=332,slow=7.2,SNR=34
STKA LR LR 21 26 06.8
comp=Z,2μm,20.1s,baz=326,slow=40
comp=Z,32nm,0.7s
STKA Stephens Creek 49.86 159 P **P** **21 01 51.3 +2.5**
STKA Stephens Creek 49.86 159⇑ *e*P **P** **21 01 49.1 +0.3**
SGDS Sogindy 49.87 315 *e*P **P** **21 01 48.9 0.0**
USP Ospenovka 49.90 315 P **P** **21 01 49.4 +0.3**
SNR=12
AUJCS Jamestown Cent 50.14 163 P **P** **21 01 53.6 +2.7**
EKS2 Erkin-Say 50.20 314 P **P** **21 01 52.1 +0.6**
SNR=13
AULRC Lightning Ridg 50.32 151 P **P** **21 01 55.9 +3.7**
KURK Kurchatov 50.37 325 P **P** **21 01 52.1 -0.3**
KURK Kurchatov 50.37 325 P **P** **21 01 53.1 +0.7**
KURK S **S** **21 09 03.2 -0.8**
KURK Kurchatov 50.37 325*d* iP **P** **21 01 52.5 +0.1**
KURK pmax pmax
comp=Z,186nm,1.3s
KURBB Kurchatov Arra 50.37 325 P **P** **21 01 52.7 +0.2**
comp=Z,48nm,0.6s,baz=121,slow=8.1,SNR=149
comp=Z,48nm,0.6s
HTT Hallett 50.45 162 P **P** **21 01 56.0 +2.8**
DRK Karamyk 50.76 309 IAmb IAmb 21 02 11.9
comp=Z,39nm,1.0s
TW1H Tooworoomba 1 Ha 50.79 146 P **P** **21 01 58.9 +3.0**
CMSA Cobar Meteorol 51.12 155 P **P** **21 02 01.1 +2.8**
KAAM Kaadhehdhoo 51.22 258 IAMs_20 IAMs_20 21 20 35.8
comp=Z,3μm,22.0s
AUWSH Wavell State H 51.26 145 P **P** **21 02 03.3 +3.9**
KBL Kabul 51.98 302 P **P** **21 02 04.2 -0.8**
KBL Kabul 51.98 302 P **P** **21 02 04.2 -0.8**
KBL pmax pmax
comp=Z,168nm,1.7s
DZA Taraz 51.99 313 *e*P **P** **21 02 05.0 +0.2**
DZA Taraz 51.99 313 *e*P **P** **21 02 05.0 +0.2**
SEY Seymchan 52.30 17 LR LR 21 25 17.4
comp=Z,2μm,19.4s,baz=224,slow=37
SEY Seymchan 52.30 17 *e*P **P** **21 02 06.7 0.0**
SEY pmax pmax
comp=Z,35nm,2.1s
CHGR Chuyangaron 52.58 307 P **P** **21 02 09.1 -0.2**
KK31 Karatay Array 52.63 313 P **P** **21 02 08.4 -1.0**
KK31 Karatay Array 52.63 313 P **P** **21 02 08.5 -1.0**
KK31 pmax pmax
comp=Z,25nm,0.9s
IUG Iuzhnay 52.72 312⇓ *i* P **P** **21 02 10.5 +0.1**
comp=Z,36nm,1.0s
IUG Iuzhnay 52.72 312*d* iP **P** **21 02 10.4 +0.1**
IUG pmax pmax
comp=Z,36nm,1.0s
ARMA Armidale 52.91 149 **P** **21 02 13.7 +2.0**
ARMA IAmb IAmb 21 02 16.9
comp=Z,46nm,1.1s
ARMA Armidale 52.91 149 P **P** **21 02 14.7 +3.0**
AUDCS Dubbo College 52.98 152 P **P** **21 02 15.1 +3.0**
CHM Chimkent 53.07 312 *e*P **P** **21 02 13.1 +0.2**
CHM LR LR 21 25 24.4
comp=Z,2μm,13.8s
CHM Chimkent 53.07 312 *e*P **P** **21 02 13.0 +0.2**
CHM MLR MLR
comp=Z,2μm,14.0s
BRLS Borolday 53.09 313 *e*P **P** **21 02 13.2 +0.3**
BRLS Borolday 53.09 313 *e*P **P** **21 02 13.2 +0.3**
AUPHS Peel High Scho 53.09 150 P **P** **21 02 16.4 +3.4**
BRZS Berezniki 53.48 322 *e*P **P** **21 02 16.1 +0.4**
BRZS Berezniki 53.48 322 *e*P **P** **21 02 16.0 +0.4**
SHEM Shemya Is, Ala 55.24 35 LR LR 21 22 06.4
comp=Z,527nm,21.7s,baz=284,slow=32
AUMTS Mt Stromlo 55.77 154 P **P** **21 02 35.8 +3.4**
CAN Canberra 55.77 154 **P** **21 02 32.4 0.0**
CAN Canberra 55.77 154 P **P** **21 02 35.9 +3.5**
CAN Canberra 55.77 154 P **P** **21 02 32.4 0.0**
CAN pmax pmax
comp=Z,133nm,1.6s
CNB Canberra Magne 55.92 154 P **P** **21 02 37.4 +3.9**
BVAR Borovoye Array 55.97 325 P **P** **21 02 33.8 +0.2**
comp=Z,11nm,0.6s,baz=99,slow=9.2,SNR=47
BVAR LR LR 21 28 19.5
comp=Z,2μm,20.0s,baz=119,slow=38
comp=Z,11nm,0.6s
BORK Borovoye 56.01 325*d* iP **P** **21 02 34.1 +0.2**
BORK pmax pmax
comp=Z,65nm,1.2s
TOO Toolangi 56.37 158 P **P** **21 02 35.2 -1.5**
TOO Toolangi 56.37 158 P **P** **21 02 35.2 -1.5**
TOO pmax pmax
comp=Z,20nm,1.1s
YATNC Mamie plateau, 56.71 129 P **P** **21 02 43.5 +4.2**
MIDW Midway 56.72 66 P **P** **21 02 36.5 -2.9**
TIXI Tiksi 56.87 2 P **P** **21 02 38.1 -1.6**
TIXI IAmb IAmb 21 02 40.8
comp=Z,46nm,0.8s
TIXI Tiksi 56.87 2 LR LR 21 29 32.9
comp=Z,6μm,19.8s,baz=203,slow=38
TIXI Tiksi 56.87 2*d* iP **P** **21 02 39.6 -0.1**
TIXI pmax pmax
comp=Z,61nm,1.0s
OUENC Ouen Island, N 56.89 130 P **P** 21 02 45.6 +5.0
PINNC Pines Island, 57.45 130 P **P** **21 02 44.0 -0.5**
PINNC Pines Island, 57.45 130 P **P** 21 02 49.6 +5.1
HRA Herat 57.55 301 P **P** **21 02 43.6 -1.8**
HRA IAmb IAmb 21 02 46.4
comp=Z,76nm,1.6s
NGCH Negor - Chabah 58.40 291 P **P** **21 02 51.0 -0.3**
NRIK Noril'sk 58.75 346 P **P** **21 02 52.6 -0.3**
comp=Z,43nm,0.9s,baz=132,slow=6.5,SNR=44
NRIK LR LR 21 30 18.1
comp=Z,4μm,18.4s,baz=141,slow=38
comp=Z,43nm,0.9s
NRIK Noril'sk 58.75 346*d* iP **P** **21 02 53.3 +0.4**
NRIK pmax pmax
comp=Z,80nm,1.1s
BILL Bilibino 59.98 17 P **P** **21 03 00.8 -0.7**
BILL IAmb IAmb 21 03 05.9
comp=Z,70nm,1.3s
BILL Bilibino 59.98 17 IAMs_20 IAMs_20 21 29 31.1
comp=Z,2μm,21.0s
BILL Bilibino 59.98 17*d* iP **P** **21 03 02.3 +0.8**
BILL pmax pmax
comp=Z,76nm,1.5s
JLN Jalan Bani Buh 60.18 287 P **P** **21 03 02.1 -1.6**
WBK Wadi Bani Khal 60.55 288 P **P** **21 03 05.1 -1.1**
WSAR Wadi Sarin 60.81 289 P **P** **21 03 06.9 -1.0**
AB31 Akbulak array 61.19 318 P **P** **21 03 09.4 -0.7**
AB31 IAmb IAmb 21 03 11.2
comp=Z,24nm,0.9s
SMDO Samad 61.36 288 P **P** **21 03 09.9 -1.9**
JMDO Jabal Madar 61.37 288 P **P** **21 03 10.1 -1.6**
MHTO MHTO 61.63 286 P **P** **21 03 11.7 -1.8**
SNR=7.5
HOQ Hoqain 61.99 289 P **P** **21 03 14.8 -1.1**
SNR=6.5
DQM DQM 62.14 285 P **P** **21 03 15.3 -1.7**
SVE Sverdlovsk 62.52 327*c* iP **P** **21 03 19.0 +0.1**
SVE pmax pmax
comp=Z,64nm,1.2s
SVE MLR MLR
comp=Z,3μm,17.0s
AKTO Aktyubinsk 62.63 319 LR LR 21 32 39.0
comp=Z,7μm,18.2s,baz=96,slow=38
SOHO SOHO 62.65 290 P **P** **21 03 19.6 -0.7**
SOHO SOHO 62.65 290 *i* P **P** **21 03 18.9 -1.4**
SNR=6.8
BANOM Banah 62.73 292 P **P** **21 03 20.5 -0.3**
BANOM Banah 62.73 292 *i* P **P** **21 03 20.2 -0.7**
SNR=27
ARQ Araqi 62.73 289 P **P** **21 03 19.9 -1.1**
MDH Madha 62.77 291 P **P** **21 03 19.7 -1.4**
SHME Shamm 62.86 292 P **P** **21 03 21.7 0.0**
SHME Shamm 62.86 292 *i* P **P** **21 03 21.2 -0.5**
SNR=5.8
UOSS Minazif 62.88 291 P **P** **21 03 19.4 -2.5**
UOSS Minazif 62.88 291 P **P** **21 03 20.8 -1.1**
UOSS Minazif 62.88 291 *i* P **P** **21 03 20.5 -1.4**
SNR=8.3
MASF Masafi 62.89 291 P **P** **21 03 22.6 +0.6**
MASF P **P** **21 03 22.6 +0.6**
MSFE Esma-Masafi 62.89 291 *i* P **P** **21 03 21.3 -0.7**
SNR=9.1
HATD Hatta, Dubai 62.96 290 P **P** **21 03 22.0 -0.4**
SNR=6.9
HATD P **P** **21 03 22.0 -0.4**
SNR=6.9
HATD Hatta, Dubai 62.96 290 *i* P **P** **21 03 21.4 -1.0**
SNR=14
ASHO Ashiyiah 63.04 290 P **P** **21 03 22.1 -0.8**
SNR=7.2
ASHO Ashiyiah 63.04 290 *i* P **P** **21 03 22.0 -1.0**
SNR=19
ALNE Al Ain 63.37 290 P **P** **21 03 24.4 -0.7**
SNR=7.6
ALNE P **P** **21 03 24.4 -0.7**
SNR=7.6
ALNE Al Ain 63.37 290 *i* P **P** **21 03 24.0 -1.2**
SNR=9.4
NAZ Nazwa, Dubai 63.37 291 P **P** **21 03 24.3 -0.8**
NAZ P **P** **21 03 24.3 -0.8**
NAZ Nazwa, Dubai 63.37 291 P **P** **21 03 24.2 -1.0**
MSVF Nonsavu 63.39 119 IAMs_20 IAMs_20 21 26 44.7
comp=Z,2μm,20.0s
MSVF Nonsavu 63.39 119 P P 21 03 29.9 +4.5
FAQ Al Faqa, Dubai 63.45 290 P **P** **21 03 24.8 -0.9**
FAQ P **P** **21 03 24.8 -0.9**
FAQ Al Faqa, Dubai 63.45 290 *i* P **P** **21 03 24.4 -1.3**
SNR=6.1
ARTI Arti 63.62 326 P **P** **21 03 24.2 -2.0**
ARTI IAmb IAmb 21 03 26.6
comp=Z,60nm,1.3s
ARTI Arti 63.62 326 LR LR 21 33 54.4
comp=Z,3μm,18.1s,baz=103,slow=38
ARTI Arti 63.62 326*d* iP **P** **21 03 25.2 -1.0**
ARTI 21 04 02.2
ARTI PPP PPP 21 07 18.2
ARTI S **S** **21 12 00.3 +1.8**
ARTI SS **SS** **21 16 12.3 +6.3**
ARTI SSS SSS 21 19 00.8
ARTI pmax pmax
comp=Z,42nm,1.1s
ARTI MLR MLR
comp=Z,5μm,17.0s
ASUD Al Ashush, Dub 63.70 290 P **P** **21 03 26.8 -0.5**
ASUD Al Ashush, Dub 63.70 290 *i* P **P** **21 03 26.6 -0.7**
SNR=9.6
AJN Ajban 64.02 290 P **P** **21 03 28.4 -1.0**
UMZA Um Al Zommool 64.04 288 P **P** **21 03 28.1 -1.4**
SHAO Shalim 64.18 283 P **P** **21 03 30.0 -0.5**
SHAO Shalim 64.18 283 *i* P **P** **21 03 29.6 -1.0**
SNR=9.6
DMTO DMTO 64.86 283 P **P** **21 03 34.2 -0.8**
MZWR Madinat Zayed 65.10 290 P **P** **21 03 35.3 -1.1**
SPIA Saint Paul Isl 65.16 34 P **P** **21 03 35.3 -0.9**
baz=259
NIKH Nikolski High 65.23 38 P **P** **21 03 36.2 -0.6**
baz=262
P08K Saint George I 65.43 34 P **P** **21 03 37.6 -0.4**
baz=260
DOK Doka 65.50 284 P **P** **21 03 38.1 -1.1**
SNR=7.7
MZR Muzera 65.55 289 P **P** **21 03 38.7 -0.7**
SNR=7.6
MZR Muzera 65.55 289 *i* P **P** **21 03 38.4 -1.0**
SNR=54
RBK Rabkut 65.60 283 P **P** **21 03 39.4 -0.4**
SNR=12
RBK P **P** **21 03 39.4 -0.4**
SNR=12
JRN Qarnain Island 65.92 291 P **P** **21 03 40.4 -1.3**
WHFO Wadi Hawf 65.94 283 P **P** **21 03 40.6 -1.5**
SNR=8.4
GHWR Ruwais 66.00 290 P **P** **21 03 41.4 -0.9**
GAMB Gambell 66.00 26 P **P** **21 03 41.4 -0.1**
baz=254
ABTO Aybut 66.48 283 P **P** **21 03 44.6 -1.0**
SNR=10
UNV Unalaska Valle 66.74 37 P **P** **21 03 46.6 +0.1**
baz=264
SLWR Sila 67.06 290 P **P** **21 03 48.6 -0.4**
TRNA Turayna 67.42 291 P **P** **21 03 50.9 -0.4**
SHMA Al-Shehemyia 67.52 292 P **P** **21 03 51.5 -0.4**
SMRA Abu-Samra 67.77 291 P **P** **21 03 53.2 -0.3**
M11K Mekoryuk 67.81 30 P **P** **21 03 52.9 -0.2**
baz=261
SAKB Bahrain 67.89 292 P **P** **21 03 53.8 -0.4**
TNA Tin City 68.02 25 P **P** **21 03 53.6 -0.7**
baz=257
LKRN Lenkeran, Azer 68.45 306 P **P** **21 03 56.8 -0.8**
FALS False Pass 68.64 37 P **P** **21 03 57.6 -0.8**
baz=266
F14K Arctic Creek 68.65 25 P **P** **21 03 57.6 -0.7**
baz=259
KIRV Kirov 68.76 327 LR LR 21 36 50.0
comp=Z,6μm,18.1s,baz=93,slow=38
KIRV Kirov 68.76 327*d* iP **P** **21 03 58.2 -0.9**
K13K Kusilvak Mount 68.78 29 P **P** **21 03 59.5 +0.3**
baz=262
ANM Nome 68.88 26 P **P** **21 03 59.9 +0.1**
baz=260
AKT Akhty 69.17 309 *e*P **P** **21 04 01.4 -0.8**
AKT *e* 21 04 23.9
AKT *e* 21 06 35.4
AKT *e*PPP PPP 21 08 22.0
AKT *e*S **S** **21 13 06.3 -0.3**
AKT pmax pmax
comp=Z,52nm,1.1s
AKT MLR MLR
comp=Z,4μm,20.0s
M13K Dall Lake 69.21 31 P **P** **21 04 02.5 +0.6**
baz=264
MAK Makhachkala 69.30 311 *e*P P 21 03 57.8 -4.9

MAK e 21 06 32.8
MAK ePPP PPP 21 08 11.2
MAK eS **S** **21 13 03.3 -4.5**
MAK eSS **SS** **21 17 31.5 -3.1**
MAK pmax pmax
comp=Z,91nm,1.1s
BELG Belogornoye 69.31 321 *d* iP **P** **21 04 02.0 -0.6**
BELG pmax pmax
comp=Z,28nm,1.3s
F15K North Star Dit 69.38 25 P **P** **21 04 02.5 -0.3**
baz=260
J14K Nanvaranak Lak 69.40 28 P **P** **21 04 02.7 -0.3**
baz=262
MSEY Mahe Island 69.45 259 P **P** **21 04 03.2 -1.0**
MSEY IAmb IAmb 21 04 04.9
comp=Z,63nm,1.4s
MSEY Mahe Island 69.45 259 IAMs_20 IAMs_20 21 32 19.8
comp=Z,1µm,19.0s
MSEY Mahe Island 69.45 259 P **P** **21 04 03.2 -1.0**
MSEY pmax pmax
comp=Z,63nm,1.4s
MSEY MLR MLR
comp=Z,1µm,19.0s
S12K Black Hills 69.47 36 P **P** **21 04 03.3 -0.3**
baz=266
G15K Niukluk 69.52 26 P **P** **21 04 04.1 +0.4**
baz=261
SEKA Sheki 69.58 309 P **P** **21 04 03.3 -1.3**
C16K Lisburne Hills 69.58 22 P **P** **21 04 04.3 +0.3**
baz=259
L14K Kuka Creek 69.64 30 IAmb IAmb 21 04 28.1
comp=Z,49nm,1.1s
L14K Kuka Creek 69.64 30 P **P** **21 04 04.6 +0.1**
baz=264
MNGR Mingechevir, A 69.68 308 P **P** **21 04 04.4 -0.8**
M14K Bethel 69.93 30 P **P** **21 04 05.9 -0.4**
baz=265
N14K Kuskokwak Cree 69.99 31 P **P** **21 04 07.7 +1.1**
baz=265
KBD Kabd 70.05 296 P **P** **21 04 06.9 -0.7**
O14K Tigyukauivet M 70.15 32 P **P** **21 04 07.9 +0.3**
baz=266
H16K Elim 70.23 26 P **P** **21 04 08.2 +0.1**
baz=263
GANJ Ganja 70.26 308 P **P** **21 04 07.9 -0.9**
G16K Koyuk River 70.28 25 P **P** **21 04 08.5 +0.1**
baz=263
K15K Wolf Creek Mou 70.28 29 P **P** **21 04 08.7 +0.2**
baz=264
D17K Noatak River 70.32 23 P **P** **21 04 09.4 +0.8**
baz=261,SNR=11
SDPT Sand Point 70.36 36 P **P** **21 04 09.4 +0.3**
baz=268
DDFL Dedoflistskaro 70.38 309 P **P** **21 04 08.6 -1.0**
C17K DeLong Mountai 70.41 22 P **P** **21 04 09.7 +0.6**
baz=261
RDOG Red Dog Mine 70.44 23 P **P** **21 04 08.0 -1.3**
RDOG IAmb IAmb 21 04 13.8
comp=Z,64nm,1.5s
RDOG Red Dog Mine 70.44 23 P **P** **21 04 09.8 +0.5**
baz=261
M15K Kasigluk River 70.55 30 P **P** **21 04 10.2 +0.1**
baz=266
E17K Hotham Inlet 70.71 24 P **P** **21 04 10.7 -0.3**
baz=263,SNR=10
J16K Anvik River 70.80 28 P **P** **21 04 12.0 +0.3**
baz=265
N15K Kwethluk River 70.81 31 P **P** **21 04 12.7 +1.0**
baz=267
I17K Unalakleet 70.82 27 P **P** **21 04 12.0 +0.4**
baz=265
CHNA Chernabura Isl 70.85 37 P **P** **21 04 12.4 +0.3**
baz=269
F17K Baldwin Pennin 70.86 24 P **P** **21 04 12.8 +1.0**
baz=263
O15K Ungalikthiuk R 70.89 32 P **P** **21 04 12.7 +0.5**
baz=267
S14K Fog Glacier 70.91 35 P **P** **21 04 13.0 +0.5**
baz=268
NAX Nakhchivan 70.98 307 P **P** **21 04 12.4 -0.9**
G17K Kiwalik Mounta 71.00 25 P **P** **21 04 14.4 +1.6**
baz=264
B18K Kokolik River 71.04 21 P **P** **21 04 13.1 +0.1**
baz=262
C18K Utukok River 71.16 22 P **P** **21 04 13.9 +0.1**
baz=263
L16K Owhat River 71.20 29 P **P** **21 04 14.1 0.0**
baz=267
E18K Tukpahlearik C 71.22 23 IAmb IAmb 21 04 18.8
comp=Z,56nm,1.6s
E18K Tukpahlearik C 71.22 23 P **P** **21 04 13.8 -0.3**
baz=264
H17K Granite Mounta 71.25 26 P **P** **21 04 14.3 0.0**
baz=265
A19K Wainwright 71.41 20 P **P** **21 04 15.5 +0.4**
baz=262
M16K Timber Creek 71.41 30 P **P** **21 04 15.3 0.0**
baz=267
N16K Nishlik Lake 71.48 31 P **P** **21 04 16.1 +0.3**
baz=268
J17K VABM Dome 71.50 28 IAmb IAmb 21 04 21.4
comp=Z,23nm,0.9s
J17K VABM Dome 71.50 28 P **P** **21 04 16.4 +0.6**
baz=266
GNI Garni 71.50 308 P **P** **21 04 16.4 -0.2**
GNI IAmb IAmb 21 04 49.2
comp=Z,33nm,1.1s
GNI Garni 71.50 308 LR LR 21 39 51.2
comp=Z,2µm,20.6s,baz=81,slow=39
GNI Garni 71.50 308 P **P** **21 04 16.8 +0.3**
GNI Garni 71.50 308 *d* iP **P** **21 04 16.8 +0.3**
GNI pmax pmax
comp=Z,49nm,1.5s
GNI Garni 71.50 308 P **P** **21 04 15.8 -0.7**
comp=Z,668nmcomp=Z,29nm,1.9s
F18K Selawik 71.51 24 P **P** **21 04 16.1 +0.3**
baz=265,SNR=9.9
GUDG Gudauri 71.55 310 P **P** **21 04 20.3 +3.5**
L17K Donlin 71.78 29 P **P** **21 04 17.3 -0.3**
baz=268
O16K Kokwok River B 71.79 32 P **P** **21 04 17.7 +0.1**
baz=268
C19K Lookout Ridge 71.79 22 IAMs_20 IAMs_20 21 41 31.6
comp=Z,1µm,18.0s
C19K Lookout Ridge 71.79 22 P **P** **21 04 18.8 +1.3**
baz=264
K17K Iditarod 71.81 28 P **P** **21 04 18.5 +0.8**
baz=267
P16K Nushagak River 71.83 32 P **P** **21 04 18.1 +0.2**
baz=269
G18K Tagagawik 71.85 25 IAmb IAmb 21 04 22.8
comp=Z,58nm,1.5s
G18K Tagagawik 71.85 25 P **P** **21 04 18.6 +0.6**
baz=266,SNR=7.9
TRLG Trialeti 71.89 309 P **P** **21 04 18.9 +0.1**
H18K Honhosa River 71.92 26 IAmb IAmb 21 04 23.3
comp=Z,25nm,1.0s
H18K Honhosa River 71.92 26 P **P** **21 04 18.1 -0.3**
baz=266
HIZ Hauiti 72.06 139 P P 21 04 25.5 +6.0
QRZ Quartz Range 72.06 143 **P** **21 04 16.9 -2.5**
QRZ IAmb IAmb 21 04 36.3
comp=Z,75nm,1.3s
QRZ IAMs_20 IAMs_20 21 39 20.1
comp=Z,2µm,20.0s
JCZ Jackson Bay 72.10 147 P P 21 04 24.5 +4.7
NCK Nalchik 72.13 311 ǁ *j* iP **P** **21 04 19.6 -0.4**
NCK pmax pmax
comp=Z,26nm,1.0s
M17K Holitna River 72.16 30 P **P** **21 04 16.9 -3.0**
M17K IAmb IAmb 21 04 25.6
comp=Z,54nm,1.2s
M17K Holitna River 72.16 30 P **P** **21 04 19.7 -0.1**
baz=268
DSZ Denniston Nort 72.22 144 IAMs_20 IAMs_20 21 33 58.4
comp=Z,1µm,22.0s
D19K Kuna River 72.26 22 IAmb IAmb 21 04 25.6
comp=Z,44nm,0.9s
D19K Kuna River 72.26 22 P **P** **21 04 21.3 +0.9**
baz=266,SNR=15
N17K Nushagak Hills 72.27 31 P **P** **21 04 20.6 +0.1**
baz=269
F19K Shaleruckik Mo 72.27 24 IAmb IAmb 21 04 24.3
comp=Z,51nm,1.8s
F19K Shaleruckik Mo 72.27 24 P **P** **21 04 20.6 +0.2**
baz=266
O17K Koliganek Bris 72.30 32 P **P** **21 04 20.4 -0.2**
baz=269
GOF Gofitskoye 72.42 313 *ce* P **P** **21 04 22.2 +0.4**
E19K Redstone River 72.52 23 IAmb IAmb 21 04 27.2
comp=Z,93nm,1.6s
E19K Redstone River 72.52 23 P **P** **21 04 21.8 -0.2**
baz=267,SNR=13
GCSA Galena City Sc 72.53 26 P **P** **21 04 22.7 +0.7**
baz=268
L18K Granite Mounta 72.54 29 P **P** **21 04 22.5 +0.4**
baz=269
J18K Innoko River 72.56 28 P **P** **21 04 23.2 +1.0**
baz=268
KBZ Khabaz 72.62 312 P **P** **21 04 21.1 -1.8**
comp=Z,25nm,1.0s,baz=92,slow=5.8,SNR=39
KBZ LR LR 21 40 06.6
comp=Z,3µm,18.0s,baz=76,slow=39
comp=Z,25nm,1.0s
KBZ Khabaz 72.62 312 *d* iP **P** **21 04 22.5 -0.4**
KBZ pmax pmax
comp=Z,49nm,1.1s
INZ Inchbonnie 72.65 145 IAMs_20 IAMs_20 21 35 12.7
comp=Z,1µm,20.0s
R17L Mt. Peulik Vol 72.67 34 P **P** **21 04 23.9 +0.9**
baz=271
B20K Meade River 72.72 21 IAMs_20 IAMs_20 21 39 45.1
comp=Z,1µm,20.0s
B20K Meade River 72.72 21 P **P** **21 04 23.7 +0.7**
baz=266
H19K Roundabout Mou 72.74 26 P **P** **21 04 23.9 +0.7**
baz=268
KVAR Kislovodsk Arr 72.75 312 LR LR 21 40 05.1
comp=Z,2µm,18.8s,baz=242,slow=39
RAYN Ar Rayn 72.75 290 P **P** **21 04 22.4 -1.7**
RAYN IAmb IAmb 21 04 24.6
comp=Z,45nm,0.8s
RAYN Ar Rayn 72.75 290 P **P** **21 04 23.9 -0.3**
RAYN Ar Rayn 72.75 290 *i* P **P** **21 04 23.5 -0.6**
SNR=84
RAYN Ar Rayn 72.75 290 P **P** **21 04 24.3 +0.1**
KIV Kislovodsk 72.75 312 P **P** **21 04 22.8 -1.1**
KIV Kislovodsk 72.75 312 P **P** **21 04 24.1 +0.2**
KIV Kislovodsk 72.75 312 ǁ P **P** **21 04 23.6 -0.3**
KIV Kislovodsk 72.75 312 *i* P **P** **21 04 24.0 +0.1**
SNR=13
KIV Kislovodsk 72.75 312 *e* P **P** **21 04 23.4 -0.5**
KIV *e* 21 07 05.6
KIV eS **S** **21 13 49.5 +1.3**
KIV pmax pmax
comp=Z,60nm,1.0s
KIV pmax pmax
comp=Z,52nm,4.0s
KIV MLR MLR
comp=Z,2µm,18.0s
KIV Kislovodsk 72.75 312 P **P** **21 04 23.3 -0.6**
comp=Z,766nmcomp=Z,68nm,1.3s
SHA1 Shidzhatmaz 72.79 312 *d* iP **P** **21 04 23.9 -0.4**
NEUR Neytrino 72.79 311 *i* P **P** **21 04 24.6 +0.4**
NNZ Nelson 72.81 142 P **P** **21 04 24.2 +0.3**
NNZ IAmb IAmb 21 04 38.2
comp=Z,27nm,0.9s
NNZ IAMs_20 IAMs_20 21 33 04.9
comp=Z,2µm,20.0s
D20K Etivluk River 72.83 22 P **P** **21 04 24.8 +1.1**
baz=267
THZ Tophouse 72.87 143 IAMs_20 IAMs_20 21 34 36.6
comp=Z,1µm,21.0s
N18K Kilae Creek 72.91 31 P **P** **21 04 25.2 +0.8**
baz=270
Q17K Contact Creek 72.92 33 P **P** **21 04 25.6 +1.0**
baz=271
M18K Stony River 72.94 30 P **P** **21 04 25.5 +1.0**
baz=270
E20K Nigu River 72.96 23 P **P** **21 04 25.9 +1.4**
baz=267
VRH Novokhopyorsk 72.98 319 *e* P **P** **21 04 23.8 -1.1**
VRH eS **S** **21 13 47.8 -2.4**
VRH pmax pmax
comp=Z,165nm,1.4s
VRH MLR MLR
comp=Z,1µm,21.0s
A21K Barrow 72.99 19 P **P** **21 04 25.4 +0.8**
baz=266
LBZ Lake Benmore 73.06 147 P **P** **21 04 26.2 +0.8**
LBZ IAmb IAmb 21 04 38.6
comp=Z,44nm,1.0s
J19K Poorman 73.06 27 P **P** **21 04 26.4 +1.2**
baz=269
RPZ Rata Peaks 73.08 146 P **P** **21 04 27.6 +2.0**
RPZ Rata Peaks 73.08 146 LR LR 21 38 58.0
comp=Z,704nm,18.2s,baz=306,slow=38
F20K Avaraart Lake 73.09 24 P **P** **21 04 26.6 +1.4**
baz=268
CHIR Chirikof Islan 73.11 36 P **P** **21 04 26.2 +0.6**
baz=272
LTZ Lake Taylor 73.15 144 **P** **21 04 26.6 +0.6**
LTZ IAMs_20 IAMs_20 21 34 53.0
comp=Z,2µm,22.0s
P18K Big Mountain, 73.25 32 P **P** **21 04 27.2 +0.8**
baz=271
O18K Koktuh Hills 73.25 31 P **P** **21 04 27.7 +1.3**
baz=271
URZ Urewera 73.34 138 LR LR 21 40 33.8
comp=Z,886nm,18.5s,baz=306,slow=39
Q18K Katmai Hardscr 73.38 33 P **P** **21 04 28.0 +0.8**
baz=271
H20K Anotleneega Mo 73.40 26 P **P** **21 04 28.7 +1.5**
baz=270
L19K White Mountain 73.40 29 IAmb IAmb 21 04 32.5
comp=Z,47nm,1.4s
L19K White Mountain 73.40 29 P **P** **21 04 28.2 +0.9**
baz=270
RTZ Ruatahuna 73.47 138 IAmb IAmb 21 04 46.6
comp=Z,36nm,1.1s
RTZ IAMs_20 IAMs_20 21 31 40.6
comp=Z,1µm,22.0s
BKZ Black Stump Fm 73.47 139 IAmb IAmb 21 04 32.5
comp=Z,32nm,0.9s
BKZ Black Stump Fm 73.47 139 P **P** **21 04 32.3 +4.3**
C21K Knifeblade Rid 73.51 22 P **P** **21 04 28.2 +0.5**
baz=268,SNR=6.7
I20K Naaghedeneel 73.56 26 P **P** **21 04 29.0 +0.9**
baz=270
B21K Ikpikpuk River 73.58 21 IAMs_20 IAMs_20 21 40 14.9
comp=Z,1µm,20.0s
B21K Ikpikpuk River 73.58 21 P **P** **21 04 29.2 +1.1**
baz=268
N19K Bonanza Creek 73.60 30 IAmb IAmb 21 04 33.1
comp=Z,45nm,1.4s
N19K Bonanza Creek 73.60 30 P **P** **21 04 29.6 +1.1**
baz=271
SNZO South Karori 73.65 142 IAMs_20 IAMs_20 21 36 40.3
comp=Z,1µm,20.0s
O19K Port Alsworth 73.69 31 P **P** **21 04 29.5 +0.6**
baz=272
GVZ Greta Valley S 73.70 144 IAMs_20 IAMs_20 21 33 32.0
comp=Z,1µm,21.0s
J20K Nowinta River 73.71 27 IAmb IAmb 21 04 34.4
comp=Z,70nm,1.5s
J20K Nowinta River 73.71 27 P **P** **21 04 29.5 +0.5**
baz=270
GURO Guroymak-BITLI 73.73 306 IAmb IAmb 21 04 31.7
comp=Z,48nm,1.2s
K20K Telida 73.75 28 P **P** **21 04 30.3 +1.0**
baz=271
MRZ Mangatainoka R 73.78 141 IAMs_20 IAMs_20 21 41 45.9
comp=Z,1µm,20.0s
E21K Killik River 73.79 22 P **P** **21 04 30.6 +1.1**
baz=269
L20K Farewell, AK 73.85 29 P **P** **21 04 30.8 +0.9**
baz=271
KLMR Klimovskoe 73.86 330 *e* P **P** **21 04 28.1 -1.8**
KLMR *e* 21 07 12.0
KLMR pmax pmax
comp=Z,115nm,1.4s
KLMR MLR MLR
comp=Z,6µm,17.0s
SII Sitkinak Islan 73.89 35 P **P** **21 04 31.8 +1.6**
baz=273
G21K Allakaket 73.96 24 P **P** **21 04 31.5 +1.1**
baz=270
F21K Alatna River 73.97 24 P **P** **21 04 31.6 +1.1**
baz=270,SNR=5.3
B22K Teshekpuk Lake 74.01 20 IAMs_20 IAMs_20 21 39 29.2
comp=Z,1µm,20.0s
B22K Teshekpuk Lake 74.01 20 P **P** **21 04 31.9 +1.4**
baz=269
LABN Labinsk 74.10 313 *e* P **P** **21 04 29.7 -2.0**
LABN eS **S** **21 14 03.2 0.0**
LABN pmax pmax
comp=Z,17nm,0.8s
LABN MLR MLR
comp=E,4µm,18.0s
LABN MLR MLR
comp=N,5µm,17.0s
LABN MLR MLR
comp=Z,5µm,17.0s
ERBR Yeremizino-Bor 74.17 314 *e* P **P** **21 04 30.7 -1.4**
ERBR eS **S** **21 14 05.2 +1.2**
ERBR pmax pmax
comp=Z,70nm,0.9s
ERBR MLR MLR
comp=Z,3µm,20.0s
ERBR MLR MLR
comp=N,4µm,17.0s
ERBR MLR MLR
comp=E,2µm,17.0s
BFZ Birch Farm 74.21 141 P **P** **21 04 36.1 +3.9**
M20K Styx River 74.22 29 P **P** **21 04 33.1 +0.9**
baz=272
P19K Oil Pt 74.26 32 P **P** **21 04 32.8 +0.5**
baz=273
H21K Melozitna Rive 74.26 25 P **P** **21 04 33.8 +1.6**
baz=271
D22K Ayikyak River 74.26 22 IAMs_20 IAMs_20 21 43 32.0
comp=Z,1µm,18.0s
D22K Ayikyak River 74.26 22 P **P** **21 04 33.7 +1.5**
baz=270
OHAK Old Harbor 74.35 34 P **P** **21 04 32.8 0.0**
baz=273
F22K John River 74.47 23 P **P** **21 04 34.6 +1.2**
baz=271
VORR Voronezh 74.52 320 *e* P **P** **21 04 32.7 -1.2**
VORR pmax pmax
comp=Z,95nm,0.6s
VORD Divnogorie 74.52 319 *e* P **P** **21 04 31.3 -2.6**
VORD pmax pmax
comp=Z,60nm,1.0s
CHUM Lake Minchumin 74.52 27 P **P** **21 04 33.7 0.0**
baz=272,SNR=9.1
O20K Slope Mountain 74.54 31 P **P** **21 04 34.1 +0.1**
baz=273
VSR Storozhevoye 74.58 320 *e* P **P** **21 04 31.3 -3.0**
VSR pmax pmax
comp=Z,90nm,1.2s
VSR pmax pmax
comp=Z,160nm,1.4s
VSR MLR MLR
comp=Z,2µm,15.0s
E22K Anaktuvuk Pass 74.59 23 IAmb IAmb 21 04 39.3
comp=Z,86nm,1.6s
E22K Anaktuvuk Pass 74.59 23 P **P** **21 04 35.0 +0.9**
baz=272,SNR=15
I21K Tanana 74.62 26 IAmb IAmb 21 04 39.7
comp=Z,42nm,1.0s
I21K Tanana 74.62 26 P **P** **21 04 35.4 +1.1**
baz=272,SNR=18
PPLA Purkeypile 74.62 28 P **P** **21 04 35.6 +1.1**
baz=273,SNR=6.4
LPSR Galich'ya Gora 74.62 321 *e* P **P** **21 04 33.4 -1.1**
LPSR eS **SKiKP** **21 14 02.9 +4.2**
LPSR pmax pmax
comp=Z,135nm,0.9s
LPSR MLR MLR
comp=Z,1µm,15.0s
N20K Mount Spurr 74.69 30 P **P** **21 04 35.8 +0.9**
baz=273
SPCR Spurr Chakacha 74.69 30 P **P** **21 04 35.7 +0.8**
baz=273
KDAK Kodiak Island 74.69 34 P **P** **21 04 35.2 +0.4**
baz=274
VSLR Vesyoloye 74.71 312 *d* iP **P** **21 04 34.4 -0.9**
VSLR pmax pmax
comp=Z,116nm,1.3s
Q20K Shuyak Island 74.74 33 P **P** **21 04 35.3 +0.2**
baz=274
G22K Bettles 74.75 24 P **P** **21 04 35.2 +0.2**
baz=272,SNR=30
H22K Ishtalitna Cre 74.84 25 P **P** **21 04 36.5 +0.9**
baz=273
SOC Sochi 74.93 312 *e* P **P** **21 04 34.7 -1.8**
SOC *e* 21 07 23.8
SOC ePPP PPP 21 09 07.5
SOC eS **S** **21 14 13.4 +0.9**
SOC eSS **SS** **21 18 57.7 -3.1**
SOC pmax pmax
comp=Z,34nm,0.8s
SOC MLR MLR
comp=Z,3µm,16.0s
SKT Skwentna 74.97 29 IAmb IAmb 21 04 40.2
comp=Z,36nm,1.3s
SKT Skwentna 74.97 29 P **P** **21 04 38.0 +1.6**
baz=274
C23K Itkillik River 74.98 21 IAMs_20 IAMs_20 21 40 49.7
comp=Z,1µm,20.0s
C23K Itkillik River 74.98 21 P **P** **21 04 36.3 +0.1**
baz=272
D23K Nanushuk River 74.98 22 IAMs_20 IAMs_20 21 41 46.0
comp=Z,1µm,19.0s
D23K Nanushuk River 74.98 22 P **P** **21 04 37.8 +1.5**
baz=272
HOM Homer 75.06 32 P **P** **21 04 37.4 +0.5**
baz=274
BPAW Bear Paw Mtn. 75.09 27 IAmb IAmb 21 04 42.0
comp=Z,69nm,1.1s
BPAW Bear Paw Mtn. 75.09 27 P **P** **21 04 38.3 +1.2**
baz=273,SNR=13
MOS Moscow 75.14 324 *eP* **P** **21 04 33.6 -3.8**
MOS pmax pmax
comp=Z,300nm,2.0s
MOS pmax pmax
comp=Z,99nm,1.5s
MOS MLR MLR
comp=E,2µm,19.0s
MOS MLR MLR
comp=Z,2µm,19.0s
MLY Manley 75.15 26 IAmb IAmb 21 04 42.5
comp=Z,49nm,1.2s
MLY Manley 75.15 26 P **P** **21 04 38.7 +1.3**
baz=273,SNR=28
KTH Kantishna Hill 75.16 28 IAmb IAmb 21 04 43.5
comp=Z,43nm,1.2s
CAPN Captain Cook N 75.23 30 P **P** **21 04 38.8 +1.0**
baz=274
COLD Coldfoot 75.25 24 P **P** **21 04 39.3 +1.4**
COLD IAmb IAmb 21 04 43.2
comp=Z,57nm,1.3s
COLD Coldfoot 75.25 24 P **P** **21 04 39.5 +1.6**
baz=273,SNR=16
G23K Bananza Creek 75.34 24 P **P** **21 04 40.2 +1.7**
baz=274
SUA Susitna One 75.38 30 P **P** **21 04 39.8 +0.9**
baz=274
TOLK Toolik Lake Re 75.40 22 IAmb IAmb 21 04 43.9
comp=Z,61nm,1.4s
TOLK Toolik Lake Re 75.40 22 P **P** **21 04 40.0 +1.2**
baz=274,SNR=11
E23K Chandalar 75.42 23 IAMs_20 IAMs_20 21 44 06.6
comp=Z,1µm,19.0s
E23K Chandalar 75.42 23 P **P** **21 04 40.2 +1.3**
baz=274
TRF Thorofare Moun 75.45 28 IAmb IAmb 21 05 01.3
comp=Z,53nm,1.3s
TRF Thorofare Moun 75.45 28 P **P** **21 04 39.6 +0.3**
baz=274
BRSE Bradley Lake S 75.51 31 P **P** **21 04 40.1 +0.5**
baz=275
CUT Chulitna 75.53 29 P **P** **21 04 40.3 +0.7**
baz=274
H23K Yukon River 75.60 25 P **P** **21 04 41.5 +1.6**
baz=274
LVZ Lovozero 75.64 337 *d* iP **P** **21 04 38.4 -1.7**
LVZ pmax pmax
comp=Z,53nm,1.6s
D24K Happy Valley 75.64 22 IAMs_20 IAMs_20 21 41 45.4
comp=Z,1µm,20.0s
D24K Happy Valley 75.64 22 P **P** **21 04 41.8 +1.7**
baz=274
C24K Franklin Bluff 75.64 21 IAMs_20 IAMs_20 21 41 20.4
comp=Z,1µm,20.0s
C24K Franklin Bluff 75.64 21 P **P** **21 04 41.6 +1.5**
baz=274
M22K Willow 75.65 29 P **P** **21 04 41.2 +0.9**
baz=275
I23K Minto, Yukon-K 75.72 26 P **P** **21 04 42.0 +1.4**

baz=275,SNR=15
BWN Browne 75.76 27 IAmb IAmb 21 05 22.8
comp=Z,46nm,1.1s
OBN Obninsk 75.79 324 LR LR 21 41 10.7
comp=Z,3µm,19.3s,baz=23,slow=38
OBN Obninsk 75.79 324 ⇑P P **21 04 40.5 -0.7**
OBN Obninsk 75.79 324 *de*P P **21 04 40.4 -0.7**
OBN *e* 21 04 54.4
OBN *e* 21 07 30.8
OBN *e*PPP PPP 21 09 17.4
OBN *e*SS SS 21 19 16.1 +2.8
OBN pmax pmax
comp=Z,106nm,1.4s
OBN MLR MLR
comp=Z,2µm,18.0s
OBN Obninsk 75.79 324 P P **21 04 40.3 -0.9**
comp=Z,935nmcomp=Z,73nm,1.4s
E24K Your Creek 75.84 23 IAMs_20 IAMs_20 21 44 02.8
comp=Z,1µm,19.0s
E24K Your Creek 75.84 23 P P **21 04 43.1 +1.8**
baz=275
NEA2 Nenana 75.89 26 IAmb IAmb 21 04 45.4
comp=Z,100nm,1.8s
NEA2 Nenana 75.89 26 P P **21 04 43.0 +1.4**
baz=275,SNR=9.3
RC01 Rabbit Creek A 75.89 30 P P **21 04 41.6 0.0**
baz=275
O22K Cooper Landing 75.95 31 P P **21 04 41.8 -0.2**
baz=275
MCK McKinley 76.03 27 P P **21 04 43.1 +0.6**
baz=275,SNR=23
RND Reindeer 76.09 28 IAmb IAmb 21 04 46.7
comp=Z,74nm,1.3s
F24K Squaw Lake 76.12 23 IAmb IAmb 21 04 47.6
comp=Z,28nm,0.7s
F24K Squaw Lake 76.12 23 P P **21 04 44.3 +1.4**
baz=275,SNR=28
SEW Seward 76.13 31 P P **21 04 44.4 +1.4**
baz=276
APA Apatity 76.14 337 ⇓*i*P P **21 04 41.8 -1.1**
APA *i* 21 04 50.3
APA *i*S S **21 14 25.0 0.0**
APA *i* 21 14 59.2
PMR Palmer 76.14 29 P P **21 04 43.4 +0.4**
baz=276
H24K Noodor Dome 76.28 25 P P **21 04 45.3 +1.4**
baz=276
WAT1 Susitna Watana 76.29 28 P P **21 04 43.8 -0.2**
baz=276
G24K Hadweenzic Riv 76.36 24 IAmb IAmb 21 04 49.6
comp=Z,47nm,1.1s
G24K Hadweenzic Riv 76.36 24 P P **21 04 45.7 +1.5**
baz=276
COLA College 76.39 26 P P **21 04 44.6 +0.2**
COLA College 76.39 26 P P **21 04 44.4 0.0**
COLA College 76.39 26 ⇓*e*P P **21 04 45.0 +0.6**
COLA pmax pmax
comp=Z,27nm,1.1s
COLA College 76.39 26 P P **21 04 44.2 -0.2**
baz=276
ANN Anapa 76.42 313 *e*P P **21 04 42.7 -2.2**
ANN *e*S S **21 14 28.3 -0.5**
ANN pmax pmax
comp=Z,67nm,1.0s
ANN MLR MLR
comp=E,4µm,17.0s
ANN MLR MLR
comp=N,3µm,19.0s
ANN MLR MLR
comp=Z,2µm,17.0s
KNK Knik Glacier 76.48 30 IAmb IAmb 21 04 49.3
comp=Z,53nm,1.2s
KNK Knik Glacier 76.48 30 P P **21 04 45.9 +0.9**
baz=276
SML Sawmill 76.49 29 IAmb IAmb 21 04 49.4
comp=Z,40nm,1.1s
SML Sawmill 76.49 29 P P **21 04 45.5 +0.4**
baz=276
D25K Kavik River 76.50 21 IAMs_20 IAMs_20 21 42 09.9
comp=Z,1µm,20.0s
D25K Kavik River 76.50 21 P P **21 04 46.0 +1.0**
baz=276
POKR Poker Plat Res 76.54 26 P P **21 04 45.1 -0.2**
baz=276
KHAM Kharkiv 76.55 319 P P **21 04 45.4 -0.3**
PWL Port Wells 76.60 30 P P **21 04 45.8 +0.1**
baz=276
WAT6 Susitna Watana 76.68 28 P P **21 04 46.8 +0.5**
baz=277,SNR=17
M23K Glacier View 76.78 29 P P **21 04 47.0 +0.3**
baz=277
DHY Denali Highway 76.79 28 IAmb IAmb 21 04 51.3
comp=Z,23nm,1.0s
DHY Denali Highway 76.79 28 P P **21 04 47.6 +0.7**
baz=277,SNR=6.2
IL31 76.81 26 P P **21 04 46.6 -0.1**
ILAR Eielson Array 76.81 26 P P **21 04 46.7 -0.1**
comp=Z,2.8nm,0.5s,baz=259,slow=4.0,SNR=28
comp=Z,2.8nm,0.5s
HDA Harding Lake 76.83 26 IAmb IAmb 21 04 50.2
comp=Z,51nm,1.4s
HDA Harding Lake 76.83 26 P P **21 04 46.8 -0.1**
baz=277,SNR=11
G25K Bearman Lake 76.89 24 P P **21 04 48.9 +1.7**
baz=277
E25K Arctic Village 76.93 23 IAmb IAmb 21 04 52.8
comp=Z,42nm,1.2s
E25K Arctic Village 76.93 23 P P **21 04 48.9 +1.4**
baz=277,SNR=14
C26K Camden Bay 76.93 21 P P **21 04 48.7 +1.3**
baz=278
SCM Sheep Creek Mo 76.96 29 IAmb IAmb 21 04 52.3
comp=Z,76nm,1.3s
SCM Sheep Creek Mo 76.96 29 P P **21 04 48.0 +0.2**
baz=277
F25K Christian Rive 76.97 23 IAMs_20 IAMs_20 21 44 50.5
comp=Z,1µm,20.0s
F25K Christian Rive 76.97 23 P P **21 04 48.8 +1.0**
baz=277
H25L Birch Creek 77.07 25 P P **21 04 49.6 +1.4**
baz=278,SNR=24
P23K Montague Islan 77.16 31 P P **21 04 49.9 +1.1**
baz=278
GLI Glacier Island 77.20 30 P P **21 04 49.5 +0.5**
baz=278
C27K Jago River 77.39 21 IAMs_20 IAMs_20 21 42 15.5
comp=Z,1µm,20.0s
C27K Jago River 77.39 21 P P **21 04 51.9 +1.9**
baz=279
M24K Tolsona, Glenn 77.47 29 P P **21 04 51.6 +0.9**
baz=278
J25K Salcha River, 77.48 26 P P **21 04 51.4 +0.8**
baz=278
ATD Arta Tunnel 77.52 279 P P **21 04 50.9 -0.9**
ATD Arta Tunnel 77.52 279 LR LR 21 37 43.6
comp=Z,12nm,21.4s,baz=68,slow=35
F26K Sheenjek River 77.52 23 P P **21 04 52.3 +1.5**
baz=279
PAX Paxson 77.67 28 IAmb IAmb 21 04 55.7
comp=Z,95nm,1.9s
PAX Paxson 77.67 28 P P **21 04 52.9 +1.1**
baz=279,SNR=7.8
KLU Klutina 77.67 29 P P **21 04 52.8 +1.0**
baz=278
GAZ Gaziantep 77.70 305 IAmb IAmb 21 04 54.0
comp=Z,33nm,1.2s
G26K Porcupine Rive 77.77 24 P P **21 04 54.0 +1.8**
baz=279
RIDG Independent Ri 77.83 27 IAMs_20 IAMs_20 21 41 44.6
comp=Z,931nm,20.0s
RIDG Independent Ri 77.83 27 P P **21 04 53.2 +0.6**
baz=279
HARP HAARP 77.90 28 P P **21 04 53.6 +0.6**
baz=279
EYAK Cordova Ski Ar 77.90 30 P P **21 04 53.8 +0.9**
baz=279
SCRK Sand Creek 78.17 27 IAmb IAmb 21 04 58.1
comp=Z,60nm,1.6s
SCRK Sand Creek 78.17 27 P P **21 04 55.3 +0.7**
baz=280,SNR=15
DOT Dot Lake 78.19 27 IAmb IAmb 21 04 58.8
comp=Z,32nm,1.2s
DOT IAMs_20 IAMs_20 21 44 54.0
comp=Z,851nm,19.0s
J26L Joseph Creek 78.26 26 P P **21 04 55.6 +0.5**
baz=280
N25K Chitina, Valde 78.28 29 P P **21 04 55.0 -0.2**
baz=280
I26K Coal Creek Min 78.30 25 P P **21 04 55.6 +0.5**
baz=280
BMRM Bremner River 78.39 30 P P **21 04 55.7 0.0**
baz=280
E27K Coleen River 78.39 22 IAMs_20 IAMs_20 21 46 27.0
comp=Z,893nm,18.0s
E27K Coleen River 78.39 22 P P **21 04 57.2 +1.6**
baz=281
D27M Malcolm River 78.41 21 P P **21 04 57.1 +1.3**
baz=281
PUL Pulkovo 78.52 329 *ce*P P **21 04 56.9 +0.5**
PUL pmax pmax
comp=Z,66nm,0.7s
L26K Log Cabin Wild 78.62 28 IAMs_20 IAMs_20 21 43 28.4
comp=Z,976nm,20.0s
L26K Log Cabin Wild 78.62 28 P P **21 04 56.9 -0.1**
baz=280
G27K Doyon Strip 78.62 24 P P **21 04 57.8 +0.8**
baz=281
KAIM Kayak Island 78.65 31 P P **21 04 57.6 +0.4**
baz=280
GLB Gilahina Butte 78.68 29 IAmb IAmb 21 05 02.1
comp=Z,58nm,1.4s
ARA0 ARCESS Array S 78.71 339 *e*P P **21 04 57.9 +0.5**
ARCES ARCESS Array B 78.71 339 P P **21 04 57.0 -0.3**
comp=Z,12nm,0.5s,baz=76,slow=7.0,SNR=60
ARCES LR LR 21 45 13.5
comp=Z,2µm,18.4s,baz=80,slow=40
comp=Z,12nm,0.5s
SIM Simferopol' 78.72 314 *e*P P **21 04 57.2 -0.7**
SIM *e*S S **21 14 51.4 -2.5**
SIM pmax pmax
comp=Z,81nm,1.0s
H27K Steamboat Moun 78.79 24 P P **21 04 59.0 +1.2**
H27K IAmb IAmb 21 05 03.4
comp=Z,69nm,1.5s
H27K Steamboat Moun 78.79 24 P P **21 04 59.6 +1.7**
baz=281,SNR=23
ASF Jabal al Asfar 78.82 300 LR LR 21 45 12.9
comp=Z,818nm,19.8s,baz=133,slow=40
SPA0 Spitsbergen Ar 78.85 348 *e*P P **21 04 58.9 +0.8**
SPITS Spitsbergen Ar 78.85 348 P P **21 04 58.3 +0.3**
comp=Z,17nm,0.6s,baz=88,slow=8.6,SNR=19
SPITS LR LR 21 45 00.1
comp=Z,3µm,18.2s,baz=55,slow=40
comp=Z,17nm,0.6s
I27K Kandik River 78.87 25 P P **21 05 00.2 +1.8**
baz=281
M26K Nabesna, AK 78.89 28 P P **21 04 59.4 +0.9**
baz=281
VRDI Verde Repeater 78.89 29 IAmb IAmb 21 05 04.5
comp=Z,43nm,1.3s
K27K Chicken 78.99 27 P P **21 05 00.7 +1.8**
baz=281
E28M Babbage River 79.05 22 IAMs_20 IAMs_20 21 43 42.4
comp=Z,1µm,20.0s
E28M Babbage River 79.05 22 P P **21 05 00.5 +1.3**
baz=283
MCARA McCarthy VSAT 79.07 29 P P **21 05 00.3 +0.8**
baz=281
HAMF Hammerfest 79.08 340 *e*P P **21 04 59.2 -0.1**
F28M Old Crow 79.14 23 IAmb IAmb 21 05 02.6
comp=Z,42nm,0.9s
F28M IAMs_20 IAMs_20 21 46 33.9
comp=Z,1µm,18.0s
F28M Old Crow 79.14 23 P P **21 05 00.8 +1.0**
baz=283,SNR=43
CRQE Cirque 79.15 30 P P **21 05 00.5 +0.4**
baz=281
D28M Stokes Point 79.17 21 P P **21 05 01.5 +1.7**
baz=283
L27K Beaver Creek, 79.29 27 P P **21 05 01.0 +0.3**
baz=282
M27K Edge Creek, AK 79.41 28 IAMs_20 IAMs_20 21 41 31.4
comp=Z,904nm,20.0s
M27K Edge Creek, AK 79.41 28 P P **21 05 01.7 +0.2**
baz=282
I28M Miner Creek 79.59 25 IAmb IAmb 21 05 07.7
comp=Z,82nm,1.2s
I28M IAMs_20 IAMs_20 21 46 02.0
comp=Z,974nm,21.0s
I28M Miner Creek 79.59 25 P P **21 05 04.3 +1.9**
baz=283,SNR=37
KTK1 Katokeino 79.62 339 *e*P P **21 05 02.5 +0.2**
E29M Blow River 79.69 22 IAMs_20 IAMs_20 21 44 02.3
comp=Z,895nm,20.0s
E29M Blow River 79.69 22 P P **21 05 04.1 +1.4**
baz=284
BARN Barnard Glacie 79.78 29 IAmb IAmb 21 05 07.9
comp=Z,94nm,1.8s
MESA MESA 79.82 30 P P **21 05 04.2 +0.4**
baz=282
BALJ Balqa 79.88 301 IAmb IAmb 21 05 05.5
comp=Z,47nm,1.3s
MMAI Mount Meron Ar 79.90 302 P P **21 05 04.8 +0.2**
comp=Z,4.2nm,0.8s,baz=87,slow=16,SNR=5.8
MMAI LR LR 21 44 15.3
comp=Z,740nm,20.2s,baz=72,slow=38
comp=Z,4.2nm,0.8s
KIRS Kirsehir-Merke 79.91 308 ⇑P P **21 05 04.2 -0.4**
CTG Chitna Glacier 79.95 30 P P **21 05 05.2 +0.7**
baz=282,SNR=7.4
CTGM Chitina Glacie 79.95 30 IAmb IAmb 21 05 08.9
comp=Z,102nm,1.6s
G29M Pine Creek 80.00 23 P P **21 05 05.1 +0.7**
baz=284
BR131 Keskin Array S 80.01 308 P P **21 05 04.6 -0.6**
SNR=7.7
BR131 Keskin Array S 80.01 308 *d*P P **21 05 03.9 -1.3**
BRTR Keskin Array B 80.01 308 P P **21 05 04.3 -0.9**
comp=Z,2.6nm,0.8s,baz=104,slow=5.2,SNR=13
BRTR PP **PP 21 08 05.3 -1.7**
comp=Z,2.4nm,1.1s,baz=94,slow=5.0,SNR=3.6
BRTR LR LR 21 46 10.3
comp=Z,1µm,19.1s,baz=76,slow=40
comp=Z,2.6nm,0.8s
BR104 Keskin Array S 80.01 308 P P **21 05 04.1 -1.1**
comp=Z,47nmcomp=Z,4.0nm,1.2s
BR106 Keskin Array S 80.03 308 P P **21 05 04.3 -1.0**
comp=Z,58nmcomp=Z,4.8nm,1.0s
BR105 Keskin Array S 80.03 308 P P **21 05 04.4 -0.9**
comp=Z,67nmcomp=Z,6.2nm,0.9s
H29M Whitestone 80.04 24 IAMs_20 IAMs_20 21 45 01.7
comp=Z,892nm,20.0s
H29M Whitestone 80.04 24 P P **21 05 06.0 +1.4**
baz=284
DAWY Dawson 80.14 26 P P **21 05 06.0 +0.7**
baz=284,SNR=18
LOGN Logan Glacier 80.14 30 IAmb IAmb 21 05 10.1
comp=Z,133nm,1.8s
YUK3 Moose Creek 80.19 29 P P **21 05 06.8 +1.0**
baz=283
FINES FINESS Array B 80.24 331 P P **21 05 05.2 -0.6**
comp=Z,19nm,0.7s,baz=56,slow=5.9,SNR=65
FINES LR LR 21 43 40.5
comp=Z,4µm,18.9s,baz=72,slow=38
comp=Z,19nm,0.7s
JETT Jettan, Norway 80.44 340 *e*P P **21 05 07.3 +0.5**
O28M Mount Upton 80.54 30 P P **21 05 09.4 +1.6**
baz=284
VSU Vasula 80.59 328 *d*iP P **21 05 06.5 -1.2**
VSU pmax pmax
comp=Z,194nm,1.2s
NE56 Odesa 80.62 316 P P **21 05 06.3 -1.8**
ANTO Ankara 80.62 309 P P **21 05 07.7 -0.7**
comp=Z,277nmcomp=Z,8.8nm,1.4s
YUK8 Steele Glacier 80.62 29 P P **21 05 08.4 +0.2**
baz=284
EPYK Eagle Plains 80.64 24 IAmb IAmb 21 05 10.1
comp=Z,39nm,0.9s
EPYK Eagle Plains 80.64 24 P P **21 05 08.2 +0.3**
baz=286,SNR=20
F30M Barrier River 80.66 22 IAmb IAmb 21 05 12.7
comp=Z,65nm,1.1s
F30M IAMs_20 IAMs_20 21 44 57.0
comp=Z,1µm,20.0s
F30M Barrier River 80.66 22 P P **21 05 09.1 +1.1**
baz=286
PINM Pinnacle 80.67 30 P P **21 05 09.7 +1.5**
baz=284
G30M tAoh Zraii Nji 80.67 23 IAMs_20 IAMs_20 21 47 24.4
comp=Z,924nm,18.0s
G30M tAoh Zraii Nji 80.67 23 P P **21 05 08.7 +0.6**
baz=286
MNK Minsk 80.85 324 *i*P P **21 05 09.1 -0.1**
MNK *i* 21 08 13.9
MNK *i*PPP PPP 21 10 03.9
MNK *i*S S **21 15 17.2 +1.3**
MNK *i*SS **SS 21 20 30.8 +1.5**
MNK *i*SSS SSS 21 23 58.1
MNK pmax pmax
comp=Z,117nm,0.9s
MNK pmax pmax
comp=E,18nm,0.8s
MNK pmax pmax
comp=N,32nm,0.8s
MNK MLR MLR
comp=N,1µm,16.0s
MNK MLR MLR
comp=E,959nm,16.0s
MNK MLR MLR
comp=Z,2µm,17.0s
AK09 Malin Array Si 80.85 320 P P **21 05 08.7 -0.6**
AK08 Malin Array Si 80.87 320 P P **21 05 08.8 -0.5**
AKASG Malin Array Be 80.87 320 P P **21 05 08.3 -1.1**
comp=Z,15nm,0.7s,baz=64,slow=5.3,SNR=45
AKASG LR LR 21 45 24.5
comp=Z,1µm,20.2s,baz=85,slow=39
comp=Z,15nm,0.7s
AKBB Malin Array Si 80.87 320 *d*iP P **21 05 08.3 -1.1**
AKBB pmax pmax
comp=Z,93nm,1.7s
AKBB Malin Array Si 80.87 320 P P **21 05 08.5 -0.9**
AK10 Malin Array Si 80.88 320 P P **21 05 08.5 -0.9**
AK01 Malin Array Si 80.88 320 P P **21 05 08.6 -0.8**
KIEV Kiev 80.88 320 P P **21 05 07.7 -1.7**
KIEV Kiev 80.88 320 ⇑P P **21 05 08.8 -0.6**
KIEV Kiev 80.88 320 *i*P P **21 05 08.5 -0.9**
SNR=25
KIEV Kiev 80.88 320 P P **21 05 08.8 -0.6**
KIEV Kiev 80.88 320 P P **21 05 08.5 -0.9**
comp=Z,3µmcomp=Z,216nm,1.3s
TRO Tromso 80.92 340 *e*P P **21 05 09.1 -0.1**
L29M L29M 80.92 27 P P **21 05 11.5 +2.1**
baz=285
M29M Somme Creek 80.94 28 P P **21 05 11.3 +1.7**
baz=285
EIL Elat 80.94 298 LR LR 21 45 14.0
comp=Z,2µm,21.6s,baz=80,slow=39
K29M Barlow Dome 80.99 26 P P **21 05 11.7 +1.8**
baz=285
I30M Mount Dempster 81.09 25 IAmb IAmb 21 05 14.3
comp=Z,30nm,1.0s
I30M Mount Dempster 81.09 25 P P **21 05 11.3 +0.8**
baz=286
YUK4 Talbot Arm 81.13 29 P P **21 05 10.5 -0.3**
baz=285
PNL Peninsula 81.19 31 P P **21 05 11.3 +0.3**
baz=284
CSS Mathiatis 81.20 304 IAmb IAmb 21 05 12.5
comp=Z,40nm,1.0s
CSS IAMs_20 IAMs_20 21 46 52.4
comp=Z,978nm,21.0s
BAL3X Bal3x, Balta 81.22 317 P P **21 05 10.6 -0.7**
INK Inuvik 81.27 21 IAmb IAmb 21 05 15.4
comp=Z,56nm,1.3s
INK Inuvik 81.27 21 LR LR 21 45 06.3
comp=Z,440nm,19.0s,baz=273,slow=38
INK Inuvik 81.27 21 P P **21 05 12.0 +0.8**
baz=288,SNR=24
J30M Hart River 81.29 25 P P **21 05 12.3 +0.7**
baz=286
PURM Purcari 81.34 316 ⇓P P **21 05 11.3 -0.6**
YUK6 Outpost Mounta 81.37 29 P P **21 05 11.5 -0.7**
baz=285
O29M Mount Kennedy 81.43 30 P P **21 05 14.1 +1.7**
baz=285
F31M Tsiigehtchic 81.46 22 IAMs_20 IAMs_20 21 45 22.2
comp=Z,874nm,19.0s
F31M Tsiigehtchic 81.46 22 P P **21 05 12.8 +0.6**
baz=288,SNR=15
OPO Ambohidratompo 81.53 248 P P **21 05 11.7 -1.9**
comp=Z,5.1nm,0.7s,baz=51,slow=5.8,SNR=5.8
comp=Z,5.1nm,0.7s
ABPO Ambohimpanom 81.64 248 P P **21 05 12.1 -2.1**
ABPO Ambohimpanom 81.64 248 P P **21 05 12.1 -2.1**
ABPO pmax pmax
comp=Z,23nm,1.2s
M30M Minto, Yukon 81.65 27 IAmb IAmb 21 05 18.1
comp=Z,44nm,1.4s
M30M Minto, Yukon 81.65 27 P P **21 05 14.0 +0.7**
baz=286,SNR=12
MDUB Mudurnu 81.69 310 IAmb IAmb 21 05 16.3
comp=Z,31nm,1.0s
NOR Nord 81.70 354 *i*P P **21 05 12.9 -0.3**
NOR IAmb IAmb 21 05 15.6
comp=Z,14nm,1.1s
H31M Peel River 81.73 24 P P **21 05 14.6 +0.8**
baz=288
MI28 Mi28,Pidlybu 81.78 320 P P **21 05 14.1 -0.1**
HYT Haines Junctio 81.80 29 P P **21 05 14.9 +0.6**
baz=286
N30M Aishikik Lake 81.82 29 IAMs_20 IAMs_20 21 43 25.3
comp=Z,960nm,20.0s
N30M Aishikik Lake 81.82 29 P P **21 05 15.8 +1.5**
baz=286
SAHE Sakarya_HENDEK 81.87 310 ⇓P P **21 05 14.3 -0.6**
KIS Kishinev 81.94 316 *e*P P **21 05 11.0 -4.1**
KIS *e*L L 21 42 50.0
KIS LRM MLR 21 45 23.0
comp=Z,600nm,21.0s
LUBAR Lubar, Ukraine 81.96 319 P P **21 05 13.6 -1.6**
MILM Milestii Mici 81.96 316 *e*P P **21 05 12.0 -3.2**
comp=Z,180nm,2.7s
MILM *e*L L 21 38 12.0
MILM LRM MLR 21 45 16.0
comp=Z,2µm,20.0s
SORM Soroca 81.99 318 ⇑P P **21 05 15.0 -0.3**
SORM Soroca 81.99 318 P P **21 05 15.0 -0.3**
P29M Windy Craggy 82.01 30 P P **21 05 17.0 +1.7**
baz=286
FURI Furi 82.11 277 IAMs_20 IAMs_20 21 43 33.2
comp=Z,833nm,18.0s
FURI Furi 82.11 277 LR LR 21 42 27.3
comp=Z,490nm,18.2s,baz=58,slow=36
P30M Million Dollar 82.26 30 P P **21 05 18.0 +1.3**
baz=286
TLCR 82.36 315 ⇓P P **21 05 16.5 -0.8**
TLCR 82.36 315 P P **21 05 16.5 -0.8**
JURR Jurilovca 82.41 314 ⇓P P **21 05 16.8 -0.8**
N31M Braeburn, Yuko 82.42 28 IAmb IAmb 21 05 51.6
comp=Z,25nm,1.1s
N31M IAMs_20 IAMs_20 21 44 04.0
comp=Z,898nm,20.0s
N31M Braeburn, Yuko 82.42 28 P P **21 05 17.9 +0.5**
baz=287
O30N Mendenhall 82.48 29 P P **21 05 18.2 +0.5**
baz=287
NDNU Novodnistrovsk 82.52 318 P P **21 05 17.3 -0.8**
A36M Sachs Harbour 82.53 17 IAMs_20 IAMs_20 21 44 28.1
comp=Z,1µm,22.0s
A36M Sachs Harbour 82.53 17 P P **21 05 18.1 +0.4**
baz=295
VLDR Vladesti 82.71 315 ⇓P P **21 05 18.5 -0.6**
TPGR Topolog 82.71 314 ⇑P P **21 05 19.3 +0.1**
VASR Vaslui 82.71 316 ⇓P P **21 05 18.8 -0.4**
PLBC Pleasant Camp 82.73 30 P P **21 05 19.4 +0.4**
baz=287
RNPP9 Sopachiv 82.75 321 P P **21 05 18.6 -0.7**
STEI Steigen 82.76 339 *e*P P **21 05 18.9 0.0**
PABE Paberze 82.79 325 P P **21 05 19.1 -0.3**
RNPP5 Staryi Chortor 82.80 321 P P **21 05 19.2 -0.3**
SCTR Scanteiesti 82.81 315 ⇓P P **21 05 20.0 +0.4**
TIRR Tirgusor 82.81 314 ⇓P P **21 05 20.0 +0.3**
TIRR Tirgusor 82.81 314 P P **21 05 20.0 +0.3**
TIRR Tirgusor 82.81 314 P P **21 05 19.1 -0.6**
comp=Z,408nmcomp=Z,19nm,1.3s
CFR Carcaliu 82.83 315 ⇑P P **21 05 19.8 0.0**
CFR Carcaliu 82.83 315 P P **21 05 19.7 0.0**
M31M Drury Creek, Y 82.83 27 IAMs_20 IAMs_20 21 44 31.8
comp=Z,780nm,19.0s
M31M Drury Creek, Y 82.83 27 P P **21 05 19.8 +0.3**
baz=288,SNR=13
VARL Varlezi 82.85 315 ⇓P P **21 05 20.3 +0.4**
FAUS Fauske 82.94 338 *e*P P **21 05 19.8 -0.2**
HORU Horodok 82.97 319 P P **21 05 19.9 -0.6**
TLBR Topalu 83.04 314 ⇑P P **21 05 20.9 0.0**
HARR Harsova 83.08 314 ⇓P P **21 05 21.0 -0.1**
HARR Harsova 83.08 314 P P **21 05 21.0 -0.1**
WHY Whitehorse 83.08 29 P P **21 05 21.9 +0.9**
baz=288,SNR=12
GHRR 83.11 316 ⇓P P **21 05 21.3 0.0**
KMPD K-Podol'skiy 83.11 318 P P **21 05 20.7 -0.5**
KMPD P P **21 05 20.0 -1.2**

ISK	Istanbul-Kandi	83.14	311	P		P		21 05 20.7	-0.8
S31K	Pelican	83.24	32	P		P		21 05 23.0	+1.3
	baz=287								
SKAG	Skagway	83.24	30	P		P		21 05 25.4	+3.8
SKAG	Skagway	83.24	30	P		P		21 05 22.5	+0.9
	baz=288								
LOF	Lofoten	83.27	339	*e*P		P		21 05 21.5	-0.1
FARO	Faro, Yukon	83.28	27	P		P		21 05 22.8	+0.9
	baz=289								
ICOR	Ion Corvin	83.31	314	⇑P		P		21 05 22.9	+0.6
PANC	Panciu	83.33	316	⇑P		P		21 05 22.8	+0.4
ODBI	Odobesti	83.42	315	⇑P		P		21 05 23.7	+0.9
TESR	Tescani	83.51	316	⇓P		P		21 05 22.9	-0.5
TESR	Tescani	83.51	316	P		P		21 05 23.3	0.0
	comp=Z,1µmcomp=Z,97nm,1.4s								
CTYL	Yalikoy Yolu	83.61	311	⇓P		P		21 05 23.5	-0.4
VRI	Vrincioaia	83.62	316	⇓P		P		21 05 23.9	0.0
VRI	Vrincioaia	83.62	316	P		P		21 05 23.9	0.0
SUW	Suwalki	83.64	324	*e*P		P		21 05 23.6	-0.2
PLOR5	Plostina Array	83.67	316	P		P		21 05 23.8	-0.4
	comp=Z,1µmcomp=Z,55nm,2.0s								
PLOR	Plostina	83.67	316	⇑P		P		21 05 24.7	+0.5
PLOR	Plostina	83.67	316	P		P		21 05 24.7	+0.5
BISRR	Bisoca	83.71	315	⇓P		P		21 05 24.7	+0.3
BISRR	Bisoca	83.71	315	P		P		21 05 24.0	-0.5
	comp=Z,2µmcomp=Z,174nm,1.2s								
MOR8	Moi Rana	83.72	337	*e*P		P		21 05 22.7	-1.3
ONER	Baraj Valea Uz	83.72	316	⇑P		P		21 05 25.2	+0.8
RAUS	Rausandaksla	83.76	337	*e*P		P		21 05 23.6	-0.6
N32M	Quiet Lake	83.76	28	P		P		21 05 24.4	+0.1
	baz=290								
VAGH	Vaagaholmen	83.93	338	*e*P		P		21 05 24.4	-0.6
ISR	Istrita	83.93	315	⇑P		P		21 05 26.5	+0.9
ISR	Istrita	83.93	315	P		P		21 05 26.4	+0.9
ISR	Istrita	83.93	315	P		P		21 05 25.3	-0.3
	comp=Z,1µmcomp=Z,44nm,1.2s								
SIT	Sitka	83.98	33	P		P		21 05 26.0	+0.5
	baz=288								
P32M	Atlin	83.98	30	P		P		21 05 26.1	+0.6
	baz=289								
RAR	Rarotonga	84.00	114	LR		LR		21 36 40.9	
	comp=Z,860nm,21.8s,baz=288,slow=31								
R32K	Eaglecrest	84.01	31	P		P		21 05 25.0	-0.6
	baz=289								
NEHR	Nehoiu	84.02	315	⇓P		P		21 05 26.2	+0.2
C36M	Paulatuk	84.04	19	P		P		21 05 25.9	+0.4
	baz=297								
TURR	Turia	84.05	316	⇓P		P		21 05 26.5	+0.4
MMPY	Sheldon Lake,	84.06	27	IAmb		IAmb		21 05 30.5	
	comp=Z,71nm,1.7s								
MMPY	Sheldon Lake,	84.06	27	P		P		21 05 27.0	+1.1
	baz=291,SNR=5.9								
JIS	Juneau Island	84.08	31	P		P		21 05 30.0	+4.1
PHSR	Pinarhisar	84.13	311	⇓P		P		21 05 27.0	+0.4
MANT	Manisa	84.14	308	IAmb		IAmb		21 05 27.4	
	comp=Z,21nm,1.1s								
BURAR	Bucovina Array	84.17	318	⇑P		P		21 05 27.2	+0.4
BURAR	Bucovina Array	84.17	318	P		P		21 05 27.2	+0.4
STOK	Stokkvaagen	84.18	338	*e*P		P		21 05 25.4	-0.9
FETY	Fethiye	84.19	306	P		P		21 05 16.4	-11
OZUR		84.19	316	⇑P		P		21 05 26.5	-0.4
P33M	Teslin, Yukon	84.20	29	IAmb		IAmb		21 05 32.0	
	comp=Z,36nm,1.2s								
P33M				IAMs_20		IAMs_20		21 44 32.1	
	comp=Z,788nm,20.0s								
P33M	Teslin, Yukon	84.20	29	P		P		21 05 27.4	+0.7
	baz=290								
LEIR	Leirfjorden	84.23	337	*e*P		P		21 05 25.8	-0.8
S32K	Killisnoo	84.23	32	P		P		21 05 28.0	+1.3
	baz=289								
MLR	Muntele Rosu	84.24	315	LR		LR		21 47 25.6	
	comp=Z,4µm,21.7s,baz=52,slow=39								
MLR	Muntele Rosu	84.24	315	⇓P		P		21 05 28.2	+0.9
MLR	Muntele Rosu	84.24	315	P		P		21 05 28.2	+0.9
MLR	Muntele Rosu	84.24	315	P		P		21 05 26.9	-0.4
	comp=Z,802nmcomp=Z,61nm,1.9s								
SULR		84.25	315	⇓P		P		21 05 27.7	+0.7
STNU	Starunia	84.33	319	P		P		21 05 27.3	-0.2
LOZB	Loznitsa	84.35	313	⇑P		P		21 05 28.7	+1.0
RAZG	Razgrad	84.36	313	⇓P		P		21 05 27.7	0.0
DOPR	Dopca	84.49	316	⇑P		P		21 05 28.8	+0.4
SGRR	Singureni	84.56	314	⇑P		P		21 05 29.7	+1.0
MORS	Morshin	84.60	319	P		P		21 05 28.7	-0.1
JMB	Yambol	84.62	312	P		P		21 05 28.2	-0.9
YER	Yerkesik	84.68	307	P		P		21 05 28.5	-1.1
RAKU	Rahkiv	84.73	318	P		P		21 05 29.1	-0.4
SZH	Strazhitsa	84.81	313	P		P		21 05 27.8	-2.2
ARCR	ARCALIA	84.87	317	⇓P		P		21 05 30.8	+0.6
Q32M	Nakina River	84.89	30	P		P		21 05 31.7	+1.3
	baz=290								
SHIU	Shidnytsya	84.91	320	P		P		21 05 30.2	-0.2
TGMR	Targu Mures	84.92	317	⇑P		P		21 05 31.2	+0.7
ELND	Elena	84.97	313	⇓P		P		21 05 30.7	-0.1
MEZ	Mezhgor'ye	85.01	319	P		P		21 05 30.9	0.0
ARG	Arkhangelos	85.04	306	P		P		21 05 28.5	-2.8
COPA	Copaceanca	85.11	314	⇓P		P		21 05 31.2	-0.2
HUMR	Humele	85.16	315	⇓P		P		21 05 31.2	-0.6
ARR	Arges	85.17	316	⇓P		P		21 05 32.0	+0.1
KWP	Kalwaria Pacla	85.19	320	*e*P		P		21 05 32.1	+0.3
KWP	Kalwaria Pacla	85.19	320	P		P		21 05 31.7	-0.1
	comp=Z,2µmcomp=Z,167nm,1.7s								
BMR	Baia Mare	85.27	318	⇓P		P		21 05 32.9	+0.7
BMR	Baia Mare	85.27	318	P		P		21 05 32.9	+0.7
BLCB	Balcova	85.31	308	P		P		21 05 30.4	-2.2
NSS	Namsos	85.33	336	*e*P		P		21 05 31.1	-1.1
R9F13	Warsaw-Wawer	85.35	323	*e*P		P		21 05 32.7	+0.2
KORU	Korolevo	85.36	319	P		P		21 05 32.6	0.0
R33M	Jennings River	85.36	30	P		P		21 05 33.7	+1.1
	baz=292								
BRIU	Brid	85.38	319	P		P		21 05 32.7	0.0
PVL	Pavlikeni	85.42	313	P		P		21 05 31.0	-2.0
DIM	Dimitrovgrad	85.42	312	P		P		21 05 32.4	-0.7
DIM	Dimitrovgrad	85.42	312	P		P		21 05 32.8	-0.3
U33K	Whale Pass	85.44	33	P		P		21 05 34.1	+1.3
	baz=290								
BODT	Bodrum	85.45	307	P		P		21 05 30.6	-2.8
EZN	Ezine	85.47	310	⇓P		P		21 05 32.6	-0.8
EZN	Ezine	85.47	310	P		P		21 05 32.5	-0.8
CJR	Cluj-Napoca	85.48	317	⇑P		P		21 05 33.4	+0.1
CJR	Cluj-Napoca	85.48	317	P		P		21 05 33.4	+0.1
KIBK	Kibwezi	85.52	266	IAmb		IAmb		21 05 36.1	
	comp=Z,42nm,1.2s								
KIBK				IAMs_20		IAMs_20		21 38 38.9	
	comp=Z,1µm,22.0s								
KIBK	Kibwezi	85.52	266	P		P		21 05 35.1	+0.9
	SNR=10								
MUKU	Mukachevo	85.56	319	P		P		21 05 33.6	0.0
BERU	Beregovo	85.65	319	P		P		21 05 34.0	-0.1
CRAG	Craig	85.66	34	P		P		21 05 34.8	+0.9
	baz=290								
BEL	Belsk	85.68	323	*e*P		P		21 05 34.8	+0.7
RDO	Rodhopi	85.70	311	IAmb		IAmb		21 05 34.7	
	comp=Z,28nm,1.2s								
RDO	Rodhopi	85.70	311	P		P		21 05 29.9	-4.5
KDZ	Kurdzhali	85.71	312	P		P		21 05 32.0	-2.5
VLAD	Vladila	85.71	314	⇑P		P		21 05 34.9	+0.5
HOLU	Holmets	85.73	319	P		P		21 05 34.4	0.0
LOT	Lotru	85.73	316	⇓P		P		21 05 34.8	+0.1
PLVB	Pleven	85.73	314	⇑P		P		21 05 34.9	+0.4
WRAK	Wrangell Islan	85.74	33	P		P		21 05 35.6	+1.3
	baz=291								
DAG	Danmarks Havn	85.75	352	*i* P		P		21 05 33.1	-0.9
DAG				IAmb		IAmb		21 05 34.9	
	comp=Z,34nm,1.2s								
UZHM	Uzhgorod	85.75	319	P		P		21 05 34.6	0.0
MESR	Meseseni	85.77	318	⇑P		P		21 05 34.7	-0.1
TGTN	Hyland Airport	85.78	27	P		P		21 05 35.5	+0.9
	baz=294,SNR=26								
MARR	Marisel-Cluj	85.80	317	⇑P		P		21 05 34.7	-0.3
S34M	Telegraph Cree	85.82	31	IAmb		IAmb		21 05 40.4	
	comp=Z,41nm,1.2s								
S34M	Telegraph Cree	85.82	31	P		P		21 05 35.6	+0.8
	baz=292								
CEI	Carei	85.93	318	⇑P		P		21 05 36.2	+0.7
CEI	Carei	85.93	318	P		P		21 05 36.2	+0.7
KMBO	Kilima Mbogo	85.97	268	P		P		21 05 36.6	0.0
	comp=Z,23nm,0.9s,baz=53,slow=6.6,SNR=24								
KMBO				LR		LR		21 43 39.8	
	comp=Z,878nm,18.0s,baz=102,slow=35								
	comp=Z,23nm,0.9s								
PLD	Plovdiv	85.99	312	P		P		21 05 35.0	-0.9
DRGR		86.04	317	⇓P		P		21 05 35.4	-0.7
DRGR		86.04	317	P		P		21 05 35.4	-0.7

WTLY	Watson Lake, Y	86.11	28	IAmb		IAmb		21 06 08.1	
	comp=E,39nm,1.2s								
WTLY	Watson Lake, Y	86.11	28	P		P		21 05 36.7	+0.6
	baz=293								
RZN	Rozhen	86.12	312	P		P		21 05 35.0	-1.8
STHS	Stebnicka Huta	86.17	320	*e*P		P		21 05 36.2	-0.5
STHS				pmax		pmax			
	comp=Z,56nm,1.7s								
STHS	Stebnicka Huta	86.17	320	*e*P		P		21 05 36.2	-0.5
DLBC	Dease Lake	86.17	30	P		P		21 05 37.8	+1.2
	baz=292,SNR=6.0								
DEV	Deva	86.18	316	⇑P		P		21 05 36.9	+0.1
DEV	Deva	86.18	316	P		P		21 05 36.9	+0.1
PGB	Panagyurishte	86.29	313	P		P		21 05 37.0	-0.4
MPEP	Malo Peshtene	86.35	314	P		P		21 05 37.1	-0.6
GZR	Gura Zlata	86.41	316	⇑P		P		21 05 38.4	+0.4
GZR	Gura Zlata	86.41	316	P		P		21 05 38.4	+0.4
HFS	Hagfors	86.41	332	P		P		21 05 37.4	-0.2
	comp=Z,45nm,0.8s,baz=90,slow=4.9,SNR=74								
HFS				LR		LR		21 47 20.6	
	comp=Z,5µm,19.0s,baz=66,slow=38								
	comp=Z,45nm,0.8s								
BAIL	Bailesti	86.43	315	⇓P		P		21 05 37.2	-0.9
VALD	Valchedram	86.47	314	P		P		21 05 38.0	-0.2
T35M	Bob Quinn	86.61	32	IAmb		IAmb		21 05 44.3	
	comp=Z,26nm,1.3s								
T35M	Bob Quinn	86.61	32	P		P		21 05 38.9	+0.2
	baz=292								
PUNG	Punghina	86.64	315	⇓P		P		21 05 39.4	+0.4
LODK	Lodwar	86.65	273	IAmb		IAmb		21 05 41.1	
	comp=Z,21nm,1.1s								
LODK				IAMs_20		IAMs_20		21 40 06.6	
	comp=Z,921nm,22.0s								
LODK	Lodwar	86.65	273	P		P		21 05 40.5	+0.7
NIE	Niedzica	86.75	320	*e*P		P		21 05 40.2	+0.6
NIE	Niedzica	86.75	320	P		P		21 05 39.6	0.0
	comp=Z,467nmcomp=Z,30nm,1.6s								
OJC	Ojcow	86.80	321	*e*P		P		21 05 39.7	0.0
OJC	Ojcow	86.80	321	P		P		21 05 39.3	-0.4
	comp=Z,764nmcomp=Z,52nm,1.3s								
HERR	Herculane	86.81	316	⇑P		P		21 05 39.8	-0.1
PLNA	Plana	86.83	313	P		P		21 05 39.4	-0.8
MMB	Musomishta	86.87	312	P		P		21 05 35.8	-4.5
SIRR	Siria	86.89	317	⇓P		P		21 05 39.7	-0.6
VTS	Vitosha	86.92	313	P		P		21 05 38.2	-2.5
VTS	Vitosha	86.92	313	*i* P		P		21 05 39.6	-1.1
KECS	Kecovo	86.94	319	*e*P		P		21 05 41.0	+0.6
KECS				pmax		pmax			
	comp=Z,60nm,0.8s								
KECS	Kecovo	86.94	319	*e*P		P		21 05 41.0	+0.6
BLKB	Belogradchik	87.01	314	⇑P		P		21 05 41.1	+0.2
OUR	Ouranopolis	87.06	311	P		P		21 05 38.2	-3.0
WRGLY	Wrigley	87.07	25	P		P		21 05 41.4	+0.6
	baz=298								
BZS	Buzias	87.12	316	⇓P		P		21 05 40.7	-0.8
BZS	Buzias	87.12	316	P		P		21 05 40.6	-0.8
NC602	NORSAR Array S	87.13	333	*e*P		P		21 05 39.4	-1.7
NB2	NORSAR Subarra	87.14	333	P		P		21 05 40.5	-0.8
	comp=Z,34nm,0.8s,baz=66,slow=4.8								
NOA	NORSAR Array B	87.14	333	P		P		21 05 40.4	-0.8
	comp=Z,16nm,0.7s,baz=65,slow=4.8,SNR=68								
NOA				LR		LR		21 48 06.4	
	comp=Z,3µm,18.2s,baz=60,slow=38								
	comp=Z,16nm,0.7s								
KKB	Krupnik	87.23	312	P		P		21 05 40.5	-1.5
MDVR	Moldovita	87.32	316	⇓P		P		21 05 41.6	-0.8
LANS	Liptovska Anna	87.36	320	*e*P		P		21 05 43.6	+1.1
LANS				pmax		pmax			
	comp=Z,14nm,1.5s								
LANS	Liptovska Anna	87.36	320	*e*P		P		21 05 43.6	+1.1
PSZ	Piszkesteto	87.50	319	IAmb		IAmb		21 05 46.7	
	comp=Z,46nm,1.2s								
PSZ	Piszkesteto	87.50	319	⇓P		P		21 05 43.1	-0.1
PSZ	Piszkesteto	87.50	319	P		P		21 05 43.1	-0.1
RES	Resolute Bay	87.56	9	LR		LR		21 48 51.3	
	comp=Z,954nm,19.7s,baz=353,slow=38								
KNT	Kendrikon	87.60	312	P		P		21 05 41.1	-2.7
LIRD	Liard River Hi	87.64	29	P		P		21 05 44.5	+0.9
	baz=296								
NEEM	North Greenlan	87.78	359	*i* P		P		21 05 44.0	-0.4
NEEM				IAmb		IAmb		21 05 46.1	
	comp=Z,26nm,0.8s								
IDI	Anoyia	87.82	306	LR		LR		21 51 00.8	
	comp=Z,747nm,19.6s,baz=66,slow=40								
OSL	Oslo	87.85	332	*e*P		P		21 05 45.4	+0.9
DBG	Daneborg	87.97	351	*i* P		P		21 05 43.8	-1.1
DBG				IAmb		IAmb		21 05 47.3	
	comp=Z,7.3nm,0.9s								
MOL	Molde	87.98	335	*e*P		P		21 05 44.8	-0.4
STEB	Steborice	88.12	321	*e*P		P		21 05 46.2	+0.1
JMIC	Jan Mayen	88.12	346	LR		LR		21 50 24.2	
	comp=Z,1µm,18.6s,baz=50,slow=39								
KOTAN	Kotaneelee Air	88.25	27	P		P		21 05 46.7	+0.2
	baz=297								
TOAD	Toad River Com	88.29	29	P		P		21 05 47.2	+0.5
	baz=296								
MAUC	Maruska	88.29	321	*e*P		P		21 05 47.6	+0.7
MORC	Moravsky Berou	88.31	321	⇓P		P		21 05 47.1	0.0
MORC	Moravsky Berou	88.31	321	*e*P		P		21 05 46.9	-0.2
MORC	Moravsky Berou	88.31	321	P		P		21 05 47.1	0.0
AKN	Aaknes	88.40	335	*e*P		P		21 05 46.5	-0.6
TULEG	Thule	88.50	3	IAMs_20		IAMs_20		21 49 15.2	
	comp=Z,1µm,19.0s								
TULEG	Thule	88.50	3	*i* P		P		21 05 44.5	-2.9
TULEG				IAmb		IAmb		21 05 47.5	
	comp=Z,11nm,0.9s								
SRO	Srobarova	88.53	319	*e*P		P		21 05 48.3	+0.2
SRO				pmax		pmax			
	comp=Z,25nm,1.3s								
SRO	Srobarova	88.53	319	*e*P		P		21 05 48.3	+0.2
JAVC	Velka Javorina	88.57	320	*e*P		P		21 05 49.4	+1.1
KRLC	Kraliky	88.66	322	*e*P		P		21 05 48.7	0.0
KRLC				*e*				21 16 29.0	
KRLC				MLR		MLR			
	comp=Z,2µm,15.7s								
KRLC				MLR		MLR			
	comp=E,1µm,15.6s								
KRLC	Kraliky	88.66	322	*e*P		P		21 05 48.7	0.0
KRLC				*e*S		S		21 16 29.0	-5.0
KRLC				AMS		AMS		21 48 10.0	
	comp=E,2µm,15.7s								
KSP	Ksiaz	88.67	323	*e*P		P		21 05 49.1	+0.5
KSP	Ksiaz	88.67	323	P		P		21 05 48.3	-0.4
	comp=E,36nm,0.9s								
OSTC	Ostas	88.82	322	*e*P		P		21 05 50.1	+0.7
OSTC				MLR		MLR			
	comp=Z,2µm,17.2s								
OSTC	Ostas	88.82	322	*e*P		P		21 05 50.1	+0.7
OSTC				AMS		AMS		21 48 10.0	
	comp=Z,2µm,17.2s								
DPC	Dobruska-Polom	88.84	322	*e*P		P		21 05 49.9	+0.4
DPC				*e*				21 16 28.0	
DPC				MLR		MLR			
	comp=Z,2µm,16.4s								
DPC	Dobruska-Polom	88.84	322	*e*P		P		21 05 49.9	+0.4
DPC				*ex*		x		21 16 28.0	
DPC				AMS		AMS		21 48 00.0	
	comp=Z,2µm,16.4s								
DPC	Dobruska-Polom	88.84	322	P		P		21 05 49.1	-0.4
	comp=Z,16nm,1.4s								
SMOL	Smolenice	88.84	320	*e*P		P		21 05 50.3	+0.8
SMOL				pmax		pmax			
	comp=Z,12nm,1.4s								
MORH	Mrgy, Hungar	88.88	318	⇑P		P		21 05 49.7	0.0
CHVC	Chvalec	88.91	322	*e*P		P		21 05 50.1	+0.3
CHVC				MLR		MLR			
	comp=Z,2µm,17.1s								
CHVC	Chvalec	88.91	322	*e*P		P		21 05 50.1	+0.3
CHVC				AMS		AMS		21 48 10.0	
	comp=Z,2µm,17.1s								
UPC	Upice	88.96	322	*e*P		P		21 05 50.3	+0.2
UPC				MLR		MLR			
	comp=Z,3µm,17.6s								
UPC	Upice	88.96	322	*e*P		P		21 05 50.3	+0.2
UPC				AMS		AMS		21 48 10.0	
	comp=Z,3µm,17.6s								
MODS	Modra-Piesok	88.98	320	*e*P		P		21 05 50.8	+0.6
MODS				pmax		pmax			
	comp=Z,33nm,1.4s								
MODS	Modra-Piesok	88.98	320	*e*P		P		21 05 50.8	+0.6
VRAC	Vranov	89.06	321	LR		LR		21 50 22.6	
	comp=Z,1µm,18.7s,baz=92,slow=39								
VRAC	Vranov	89.06	321	⇓P		P		21 05 50.8	+0.3
VRAC	Vranov	89.06	321	*e*P		P		21 05 50.6	0.0

VRAC	Vranov	89.06	321	P		P		21 05 50.8	+0.3
KRUC	Moravsky	89.27	321	*e*P		P		21 05 51.4	-0.1
PDG	Podgorica	89.77	314	IAMs_20		IAMs_20		21 51 24.5	
	comp=Z,973nm,20.0s								
PVCC	Panska Ves	89.80	323	AMS		AMS		21 48 50.0	
	comp=Z,3µm,17.6s								
RONA	Rosalia, Austr	89.84	320	*e*PcP		P		21 05 54.3	0.0
	comp=Z,10nm,1.3s								
CONA	Conrad Observa	90.03	320	*e*PcP		P		21 05 55.3	+0.1
	comp=Z,64nm,2.0s,SNR=8.3								
PRU	Pruhonice	90.03	322	*e*P		P		21 05 55.1	0.0
PRU				MLR		MLR			
	comp=Z,2µm,17.2s								
PRU	Pruhonice	90.03	322	*e*P		P		21 05 55.1	0.0
PRU				AMS		AMS		21 49 00.0	
	comp=Z,2µm,17.2s								
PRA	Prague	90.06	322	AMS		AMS		21 49 00.0	
	comp=Z,3µm,16.2s								
RICC	Richard	90.07	323	AMS		AMS		21 49 00.0	
	comp=Z,2µm,17.3s								
MUD	Monsted U'grnd	90.16	329	*i* P		P		21 05 54.4	-1.1
MUD				IAmb		IAmb		21 05 55.4	
	comp=Z,15nm,1.0s								
SSRD	Sdr. Stenderup	90.39	328	*i* P		P		21 05 54.6	-2.0
SSRD				IAmb		IAmb		21 05 57.2	
	comp=Z,23nm,0.8s								
CLL	Collm	90.39	324	*i* P		P		21 05 56.0	-0.7
CLL				pmax		pmax			
	comp=Z,11nm,1.0s								
CLL				MLR		MLR			
	comp=Z,3µm,21.3s								
CLL	Collm	90.39	324	P		P		21 05 56.3	-0.4
	comp=Z,12nm,1.2s								
CLL	Collm	90.39	324	*i* P		P		21 05 56.0	-0.7
	comp=Z,11nm,1.0s								
CLL				*i* x		x		21 05 59.0	
CLL				*e*Plp				21 06 03.0	
	comp=Z,200nm,20.5s								
CLL				*e*PP		PP		21 09 30.0	-0.7
	comp=Z,15nm,1.4s								
CLL				*e*PPlp				21 09 42.0	
	comp=Z,200nm,14.4s								
CLL				*e*SKSac		SKSac		21 16 22.0	-4.5
CLL				*e*(SKKSac)				21 16 44.0	
CLL				*e*S		ScS		21 16 55.0	+1.4
CLL				*e*PS		PnS		21 17 54.0	-5.4
CLL				*e*SS		SS		21 23 00.0	+10
CLL				*ex*		x		21 28 42.0	
CLL				AMS		AMS		21 49 00.0	
	comp=N,2µm,21.2s								
CLL				AMS		AMS		21 49 00.0	
	comp=E,2µm,21.5s								
CLL				AMS		AMS		21 49 00.0	
	comp=Z,3µm,21.3s								
HSKC	Hora Svate Kat	90.43	323	AMS		AMS		21 51 40.0	
	comp=Z,3µm,17.9s								
ZVC	Zvikov	90.46	322	*e*P		P		21 05 57.2	+0.1
ZVC				AMS		AMS		21 49 40.0	
	comp=Z,2µm,16.8s								
ARSA	Arzberg	90.50	319	*e*PcP		P		21 05 56.9	-0.4
	comp=Z,9.0nm,1.0s								
CKRC	Cesky Krumlov	90.64	321	*e*P		P		21 05 58.3	+0.4
CKRC				*e*				21 16 40.2	
CKRC				MLR		MLR			
	comp=Z,2µm,20.6s								
CKRC	Cesky Krumlov	90.64	321	*e*P		P		21 05 58.3	+0.4
CKRC				*e*PP		PP		21 09 26.3	-6.5
CKRC				*ex*		x		21 16 40.2	
CKRC				AMS		AMS		21 50 20.0	
	comp=Z,2µm,20.6s								
KULLO	Kullorsuaq	90.74	0	*i* P		P		21 05 55.6	-2.2
KULLO				IAmb		IAmb		21 05 59.1	
	comp=Z,50nm,1.3s								
YKA	Yellowknife Ar	90.91	23	P		P		21 06 00.3	+1.4
	comp=Z,5.2nm,0.6s,baz=311,slow=8.6,SNR=17								
	comp=Z,5.2nm,0.6s								
KHC	Kasperske Hory	90.95	322	*e*P		P		21 05 59.0	-0.4
KHC				*e*				21 09 30.6	
KHC				*e*				21 16 42.9	
KHC				MLR		MLR			
	comp=Z,2µm,17.5s								
KHC	Kasperske Hory	90.95	322	*e*P		P		21 05 59.0	-0.4
KHC				*e*PP		PP		21 09 30.6	-4.7
KHC				*ex*		x		21 16 42.9	
KHC				AMS	

BTNL	Ternell	94.59	325	*d*P		P		21 06 15.3	-0.8	
	comp=Z,5.5nm,1.1s									
MEM	Membach	94.64	325	*d*P		P		21 06 16.2	-0.2	
	comp=Z,7.6nm,1.2s									
TUE	Stuetta	94.67	320	IAmb		IAmb		21 06 17.9		
	comp=Z,21nm,1.2s									
TUE	Stuetta	94.67	320	P		P		21 06 16.2	-0.7	
BHOU	Houvegnez	94.77	325	*d*P		P		21 06 17.1	+0.1	
BSTI	Sart Tilman	94.90	325	*d*P		P		21 06 17.7	+0.1	
VNDA	Vanda	94.92	172	P		P		21 06 17.1	+0.2	
	comp=Z,1.6nm,0.7s,baz=323,slow=6.1,SNR=12									
VNDA				LR		LR		21 48 56.2		
	comp=Z,520nm,21.1s,baz=346,slow=35									
	comp=Z,1.6nm,0.7s									
WLF	Walferdange	95.03	324	*d*P		P		21 06 18.3	+0.1	
	comp=Z,16nm,1.2s									
VAE	Valguarnera	95.05	311	LR		LR		21 54 53.8		
	comp=Z,524nm,19.8s,baz=34,slow=39									
BGES	Gesves	95.26	325	*d*P		P		21 06 18.5	-0.7	
RCHB	Rochefort	95.30	325	*d*P		P		21 06 19.3	-0.1	
	comp=Z,7.6nm,1.1s									
BMRD	Maredsous	95.48	325	*d*P		P		21 06 19.8	-0.4	
	comp=Z,6.5nm,1.0s									
DOU	Dourbes	95.68	325	*d*P		P		21 06 20.9	-0.3	
	comp=Z,7.4nm,1.1s									
COR	Corvallis	95.82	41	IAMs_20		IAMs_20		21 40 54.7		
	comp=Z,943nm,22.0s									
KEBM	Edson Butte	95.93	43	IAMs_20		IAMs_20		21 53 28.7		
	comp=Z,910nm,19.0s									
BORG	Borgarnes	96.06	345	LR		LR		21 55 17.4		
	comp=Z,1μm,18.1s,baz=28,slow=39									
H04A	Detroit Lake	96.48	41	P		P		21 06 23.2	-1.8	
H04A				IAmb		IAmb		21 06 29.5		
	comp=Z,16nm,1.3s									
EKA	Eskdalemuir Ar	96.60	332	P		P		21 06 24.7	-0.5	
	comp=Z,1.2nm,0.5s,baz=105,slow=9.9,SNR=7.1									
	comp=Z,1.2nm,0.5s									
KSXB	Camp Six Broad	96.70	44	IAMs_20		IAMs_20		21 52 09.1		
	comp=Z,751nm,19.0s									
KRPM	Rodgers	96.90	44	IAMs_20		IAMs_20		21 47 14.5		
	comp=Z,905nm,18.0s									
WIFE	Three Sisters-	97.01	41	P		P		21 06 25.2	-2.4	
WIFE				IAmb		IAmb		21 06 32.6		
	comp=Z,8.2nm,1.0s									
JCC	Jacoby Creek,	97.05	45	IAMs_20		IAMs_20		21 44 51.5		
	comp=Z,829nm,21.0s									
KMPM	Mount Pierce	97.16	45	IAMs_20		IAMs_20		21 42 58.5		
	comp=Z,1μm,21.0s									
KHMM	Horse Mountain	97.23	45	IAMs_20		IAMs_20		21 46 56.1		
	comp=Z,947nm,20.0s									
YBH	Yreka Blue Hor	97.52	43	LR		LR		21 42 26.8		
	comp=Z,28nm,21.9s,baz=292,slow=30									
KMRM	Mail Ridge	97.53	45	IAMs_20		IAMs_20		21 43 10.6		
	comp=Z,1μm,21.0s									
M02C	Callahan	97.58	44	IAMs_20		IAMs_20		21 41 31.5		
	comp=Z,908nm,22.0s									
KHBM	Hayfork Bally	97.67	45	IAMs_20		IAMs_20		21 47 19.9		
	comp=Z,1μm,20.0s									
PINE	Pine Mountain	97.70	41	IAmb		IAmb		21 06 36.0		
	comp=Z,8.6nm,0.9s									
KCPM	Cahto Peak	97.86	46	IAMs_20		IAMs_20		21 50 49.0		
	comp=Z,845nm,19.0s									
N02D	Trinity Center	97.87	44	IAMs_20		IAMs_20		21 42 25.2		
	comp=Z,1000nm,22.0s									
LSZ	Lusaka	98.15	256	P		P		21 06 31.3	-1.7	
LSZ				IAmb		IAmb		21 06 40.4		
	comp=Z,24nm,1.7s									
LSZ	Lusaka	98.15	256	P		P		21 06 32.0	-1.1	
	comp=Z,3.1nm,0.8s,baz=60,slow=4.9,SNR=6.5									
LSZ				LR		LR		21 49 50.6		
	comp=Z,491nm,18.2s,baz=86,slow=35									
	comp=Z,3.1nm,0.8s									
LSZ	Lusaka	98.15	256	P		P		21 06 32.0	-1.1	
SFJD	Kangerlussuaq	98.22	357	LR		LR		21 53 22.3		
	comp=Z,382nm,18.5s,baz=8.5,slow=37									
K05A	Summer Lake	98.24	42	P		P		21 06 31.6	-1.6	
K05A				IAmb		IAmb		21 06 38.2		
	comp=Z,18nm,1.3s									
HOPS	Hopland Field	98.52	46	IAMs_20		IAMs_20		21 48 32.6		
	comp=Z,707nm,19.0s									
HATC	Hat Creek Radi	98.78	44	IAMs_20		IAMs_20		21 50 58.2		
	comp=Z,699nm,19.0s									
TAOE	Nuku Hiva Isla	99.00	97	*e*S		S		21 18 06.5	-0.3	
	comp=Z,301nm,28.5s									
TAOE	Nuku Hiva Isla	99.00	97	*e*LR		LR		21 38 41.8		
	comp=Z,972nm,22.3s									
MNRC	McLaughlin Min	99.01	46	IAMs_20		IAMs_20		21 54 53.6		
	comp=Z,686nm,18.0s									
KEST	Kesra	99.48	311	LR		LR		21 59 57.5		
	comp=Z,784nm,18.9s,baz=36,slow=40									
JRSC	Jasper Ridge	99.83	47	IAMs_20		IAMs_20		21 51 42.3		
	comp=Z,696nm,19.0s									
WVOR	Wild Horse Val	99.83	41	IAMs_20		IAMs_20		21 53 19.8		
	comp=Z,716nm,19.0s									
MHC	Mount Hamilton	100.28	47	IAMs_20		IAMs_20		21 51 56.2		
	comp=Z,655nm,18.0s									
HLID	Hailey	101.86	39	IAMs_20		IAMs_20		22 00 50.1		
	comp=Z,635nm,20.0s									
EGMT	Eagleton	101.86	33	IAMs_20		IAMs_20		21 56 00.6		
	comp=Z,579nm,20.0s									
NVAR	Mina Array Bea	102.07	45	P		Pdif		21 06 51.1	+0.7	
	comp=Z,0.5nm,0.5s,baz=280,slow=4.8,SNR=5.0									
TIN	Tinemaha, Big	102.81	46	IAMs_20		IAMs_20		21 53 59.0		
	comp=Z,625nm,19.0s									
ELK	Elko	102.89	41	IAMs_20		IAMs_20		21 54 56.7		
	comp=Z,751nm,19.0s									
CWC	Cottonwood Cre	103.22	46	IAMs_20		IAMs_20		21 53 48.9		
	comp=Z,620nm,19.0s									
OSI	Osito Audit: C	103.65	48	IAMs_20		IAMs_20		21 49 06.7		
	comp=Z,710nm,20.0s									
MPMC	Manual Prospec	103.82	46	IAMs_20		IAMs_20		21 51 14.9		
	comp=Z,707nm,20.0s									
FXWY	Fox Creek	103.83	37	IAMs_20		IAMs_20		22 02 18.0		
	comp=Z,577nm,20.0s									
RLMT	Red Lodge	103.93	35	IAMs_20		IAMs_20		22 02 02.5		
	comp=Z,601nm,19.0s									
LOHW	Long Hollow	104.09	37	IAMs_20		IAMs_20		22 00 27.9		
	comp=Z,596nm,21.0s									
TPNV	Topopah Spring	104.23	45	IAMs_20		IAMs_20		21 55 01.5		
	comp=Z,646nm,19.0s									
PASC	Pasadena Art C	104.26	48	IAMs_20		IAMs_20		21 47 17.7		
	comp=Z,780nm,21.0s									
AHID	Auburn Hatcher	104.30	38	IAMs_20		IAMs_20		22 02 52.6		
	comp=Z,624nm,19.0s									
MWC	Mount Wilson	104.33	48	IAMs_20		IAMs_20		21 47 00.5		
	comp=Z,763nm,20.0s									
DGMT	Dagmar	104.39	30	IAMs_20		IAMs_20		22 00 43.1		
	comp=Z,572nm,20.0s									
BFSC	Mount Baldy Ra	104.61	48	IAMs_20		IAMs_20		21 47 40.9		
	comp=Z,780nm,20.0s									
QSPA	South Pole Qui	104.72	180	IAMs_20		IAMs_20		21 53 50.5		
	comp=Z,935nm,21.0s									
DUG	Dugway, Tooele	104.73	41	IAMs_20		IAMs_20		21 56 16.5		
	comp=Z,784nm,20.0s									
CPE	Camp Elliot	105.67	49	IAMs_20		IAMs_20		21 46 50.3		
	comp=Z,778nm,22.0s									
PFO	Pinyon Flats O	105.78	48	IAMs_20		IAMs_20		21 55 15.1		
	comp=Z,645nm,20.0s									
BELC	Belle Mtn. Jos	105.92	48	IAMs_20		IAMs_20		21 48 25.5		
	comp=Z,719nm,20.0s									
BAR	Barrett	106.09	49	IAMs_20		IAMs_20		21 47 13.4		
	comp=Z,696nm,22.0s									
IRM	Iron Mountain	106.44	47	IAMs_20		IAMs_20		21 48 55.4		
	comp=Z,580nm,21.0s									
BC3	Big Chuckawall	106.48	48	IAMs_20		IAMs_20		21 50 09.5		
	comp=Z,588nm,20.0s									
RKT	Rikitea	106.75	110	*e*S		Sdif		21 19 06.6	-4.3	
RKT					*e*SS	SS		21 26 40.7	-0.8	
	comp=Z,744nm,26.2s									
	comp=Z,1μm,37.2s									
RKT	Rikitea	106.75	110	*e*LQ		LQ		21 37 41.9		
	comp=Z,2μm,43.5s									
RKT				*e*LR		LR		21 42 16.6		
	comp=Z,3μm,23.8s									
MDND	Maddock	107.00	28	IAMs_20		IAMs_20		21 58 42.0		
	comp=Z,648nm,21.0s									
GLA	Glamis	107.24	48	IAMs_20		IAMs_20		21 48 06.7		
	comp=Z,587nm,21.0s									
E28A	Huff	107.41	30	IAMs_20		IAMs_20		22 01 02.0		
	comp=Z,894nm,21.0s									
O20A	White River Ci	107.60	39	IAMs_20		IAMs_20		21 48 22.0		
	comp=Z,704nm,22.0s									
TAM	Tamanrasset	108.09	300	IAMs_20		IAMs_20		22 04 07.8		
	comp=Z,632nm,19.0s									
WUAZ	Wupatki	108.31	44	IAMs_20		IAMs_20		21 55 02.6		
	comp=Z,533nm,18.0s									
AGMN	Agassiz Nation	108.32	26	IAMs_20		IAMs_20		22 05 08.6		
	comp=Z,799nm,18.0s									
MVCO	Mesa Verde	109.22	41	IAMs_20		IAMs_20		22 03 38.4		
	comp=Z,552nm,20.0s									
ISCO	Idaho Springs	109.38	38	IAMs_20		IAMs_20		22 02 37.0		
	comp=Z,646nm,21.0s									
SUSD	Miller	109.80	30	IAMs_20		IAMs_20		22 02 55.2		
	comp=Z,576nm,20.0s									
S22A	4UR Ranch, Cre	109.94	40	IAMs_20		IAMs_20		22 06 46.1		
	comp=Z,605nm,20.0s									
F33A	5 Mile Ranch,	110.01	28	IAMs_20		IAMs_20		22 06 40.7		
	comp=Z,736nm,19.0s									
EYMN	Ely	110.38	24	IAMs_20		IAMs_20		22 00 18.9		
	comp=Z,982nm,22.0s									
TUC	Tucson	110.51	47	IAMs_20		IAMs_20		21 52 14.1		
	comp=Z,719nm,20.0s									
OGNE	Ogallala	110.67	35	IAMs_20		IAMs_20		22 07 42.1		
	comp=Z,541nm,20.0s									
K30B	Basset	110.75	32	IAMs_20		IAMs_20		22 07 16.5		
	comp=Z,762nm,20.0s									
SDCO	Great Sand Dun	110.76	39	IAMs_20		IAMs_20		22 03 51.7		
	comp=Z,562nm,20.0s									
EDA	Edea	110.77	280	IAMs_20		IAMs_20		21 54 15.6		
	comp=Z,836nm,22.0s									
NVL	N'lazarevskaya	110.81	199	*i* PKIKP		PKiKP		21 11 27.4	-0.2	
NVL				*e*				21 12 04.6		
NVL				*e*PPP		PPP		21 14 24.6		
NVL				*e*SS		SS		21 27 36.4	+2.9	
NVL				*e*SSS		SSS		21 31 44.4		
NVL				pmax		pmax				
	comp=Z,10.0nm,1.2s									
NVL				MLR		MLR				
	comp=Z,144nm,19.0s									
KSCO	Kaye Shedlock'	111.64	37	IAMs_20		IAMs_20		22 09 10.8		
	comp=Z,676nm,20.0s									
T25A	Trinidad	111.81	39	IAMs_20		IAMs_20		22 04 50.6		
	comp=Z,620nm,20.0s									
ANMO	Albuquerque	111.90	42	IAMs_20		IAMs_20		22 04 09.3		
	comp=Z,719nm,20.0s									
SPMN	Marine on St.	112.03	26	IAMs_20		IAMs_20		22 07 27.9		
	comp=Z,708nm,20.0s									
L34A	Svendsen Farm,	112.90	31	IAMs_20		IAMs_20		22 08 58.3		
	comp=Z,801nm,19.0s									
G40A	Rib Lake	113.08	25	IAMs_20		IAMs_20		22 02 51.5		
	comp=Z,750nm,21.0s									
F42A	Maple Grove Fa	113.48	23	IAMs_20		IAMs_20		22 07 03.0		
	comp=Z,777nm,20.0s									
EPT	El Paso	113.79	45	IAMs_20		IAMs_20		21 59 02.6		
	comp=Z,525nm,20.0s									
R32A	Long Quarter,	114.26	35	IAMs_20		IAMs_20		22 08 52.9		
	comp=Z,592nm,19.0s									
MNTX	Cornudas Mount	114.60	44	IAMs_20		IAMs_20		22 05 08.9		
	comp=Z,514nm,18.0s									
I42A	Draeger Farm,	114.74	25	IAMs_20		IAMs_20		22 03 52.3		
	comp=Z,936nm,21.0s									
SNAA	Sanae	114.85	196	IAMs_20		IAMs_20		22 08 20.1		
	comp=Z,567nm,18.0s									
MSTX	Muleshoe	114.88	41	IAMs_20		IAMs_20		22 05 58.0		
	comp=Z,520nm,20.0s									
KSU1	Kansas State U	114.90	33	IAMs_20		IAMs_20		22 10 07.7		
	comp=Z,679nm,20.0s									
AMTX	Amarillo	114.96	39	IAMs_20		IAMs_20		22 11 22.9		
	comp=Z,577nm,20.0s									
L40A	Anamosa	115.25	27	IAMs_20		IAMs_20		22 06 56.1		
	comp=Z,530nm,21.0s									
K43A	Burlington	115.96	25	IAMs_20		IAMs_20		22 04 14.7		
	comp=Z,873nm,21.0s									
P38A	Dan	116.08	31	IAMs_20		IAMs_20		22 05 33.5		
	comp=Z,533nm,21.0s									
N41A	Harden Midland	116.50	28	IAMs_20		IAMs_20		22 05 38.3		
	comp=Z,692nm,22.0s									
T35A	Sooner Cattle	116.55	35	IAMs_20		IAMs_20		22 04 57.6		
	comp=Z,672nm,21.0s									
WMOK	Wichita Mounta	116.81	38	IAMs_20		IAMs_20		22 07 17.7		
	comp=Z,630nm,21.0s									
OK029	Liberty Lake	116.83	36	IAMs_20		IAMs_20		22 11 33.1		
	comp=Z,652nm,20.0s									
OK052	Battle Ridge R	117.06	35	IAMs_20		IAMs_20		22 11 44.1		
	comp=Z,618nm,20.0s									
M44A	Midewin, Midew	117.17	26	IAMs_20		IAMs_20		22 10 29.8		
	comp=Z,821nm,20.0s									
TXAR	Lajitas Array	117.21	45	PKP		PKiKP		21 11 41.6	+0.2	
	comp=Z,1.1nm,0.5s,baz=258,slow=1.8,SNR=4.3									
TXAR				PKKPbc		PKKPbc		21 22 07.4	+1.6	
	comp=Z,0.6nm,0.7s,baz=119,slow=4.6,SNR=5.4									
TUL3	Leonard	117.68	35	IAMs_20		IAMs_20		22 11 19.5		
	comp=Z,666nm,20.0s									
ABTX	Abilene, Hawle	117.73	40	IAMs_20		IAMs_20		22 13 26.4		
	comp=Z,721nm,20.0s									
R40A	Maddies Statio	117.73	31	IAMs_20		IAMs_20		22 11 31.3		
	comp=Z,562nm,20.0s									
P43A	Skaggs, Pawnee	117.96	28	IAMs_20		IAMs_20		22 08 16.0		
	comp=Z,691nm,19.0s									
U38A	Gravette	118.06	34	IAMs_20		IAMs_20		22 11 18.2		
	comp=Z,855nm,22.0s									
AAM	Ann Arbor	118.11	22	IAMs_20		IAMs_20		22 04 02.3		
	comp=Z,818nm,22.0s									
Z35A	Perchaven, San	118.70	38	IAMs_20		IAMs_20		22 09 22.7		
	comp=Z,843nm,20.0s									
Q44A	Meyer Farm, Va	118.79	28	IAMs_20		IAMs_20		22 07 34.9		
	comp=Z,681nm,19.0s									
P46A	Rosedale	119.00	26	IAMs_20		IAMs_20		22 10 09.2		
	comp=Z,709nm,20.0s									
JCT	Junction City	119.06	42	IAMs_20		IAMs_20		22 10 45.9		
	comp=Z,506nm,20.0s									
M50A	Fremont	119.11	22	IAMs_20		IAMs_20		22 06 32.9		
	comp=Z,768nm,22.0s									
O48B	Farmland	119.30	24	IAMs_20		IAMs_20		22 06 42.1		
	comp=Z,934nm,22.0s									
WHTX	Lake Whitney,	119.51	39	IAMs_20		IAMs_20		22 07 45.4		
	comp=Z,461nm,20.0s									
M52A	Chesterland	119.59	21	IAMs_20		IAMs_20		22 02 34.3		
	comp=Z,889nm,22.0s									
N51A	Ashland	119.78	22	IAMs_20		IAMs_20		22 10 07.5		
	comp=Z,780nm,20.0s									
MIAR	Mount Ida	119.91	34	IAMs_20		IAMs_20		22 12 06.4		
	comp=Z,640nm,21.0s									
Z38A	Mt. Pleasant	120.07	36	IAMs_20		IAMs_20		22 13 14.9		
	comp=Z,660nm,20.0s									
N53A	Lisbon	120.42	21	IAMs_20		IAMs_20		22 06 47.3		
	comp=Z,731nm,20.0s									
T45A	Paducah	120.49	29	IAMs_20		IAMs_20		22 08 33.0		
	comp=Z,739nm,20.0s									
WCI	Wyandotte Cave	120.55	26	IAMs_20		IAMs_20		22 05 17.3		
	comp=Z,821nm,20.0s									
O52A	Adamsville	120.68	22	IAMs_20		IAMs_20		22 08 45.5		
	comp=Z,725nm,19.0s									
R49A	Shelbyville	120.97	25	IAMs_20		IAMs_20		22 06 21.3		
	comp=Z,712nm,22.0s									
NATX	Nacogdoches	121.35	37	IAMs_20		IAMs_20		22 13 42.8		
	comp=Z,663nm,20.0s									
P53A	Whipple	121.40	22	IAMs_20		IAMs_20		22 08 56.3		
	comp=Z,780nm,20.0s									
735A	Kenedy	121.43	42	IAMs_20		IAMs_20		21 57 57.7		
	comp=Z,724nm,20.0s									
OXF	Oxford	122.12	31	IAMs_20		IAMs_20		22 13 10.6		
	comp=Z,797nm,21.0s									
T50A	Nancy	122.19	26	IAMs_20		IAMs_20		22 08 52.6		
	comp=Z,770nm,20.0s									
PAL	Palisades	122.28	15	IAMs_20		IAMs_20		22 10 09.2		
	comp=Z,715nm,20.0s									
V48A	Smith Brothers	122.38	28	IAMs_20		IAMs_20		22 09 10.0		
	comp=Z,795nm,20.0s									
PLAL	Pickwick Lake	122.40	30	IAMs_20		IAMs_20		22 09 35.8		
	comp=Z,626nm,21.0s									
143A	Socs Landing,	122.49	34	IAMs_20		IAMs_20		22 09 38.6		
	comp=Z,725nm,20.0s									
P57A	Homestead Farm	122.54	19	IAMs_20		IAMs_20		22 11 18.3		
	comp=Z,639nm,19.0s									
Q56A	Snyder Ridge,	122.56	20	IAMs_20		IAMs_20		22 11 51.0		
	comp=Z,771nm,19.0s									
Y45A	Yeager Farm, C	122.56	32	IAMs_20		IAMs_20		22 13 46.4		
	comp=Z,645nm,20.0s									
S54A	Dingess, Beckl	122.92	23	IAMs_20		IAMs_20		22 11 55.6		
	comp=Z,756nm,19.0s									
P61A	Hammonton	123.31	16	IAMs_20		IAMs_20		22 06 49.4		
	comp=Z,829nm,22.0s									
X48A	Hartselle	123.33	29	IAMs_20		IAMs_20		22 09 36.3		
	comp=Z,601nm,21.0s									
VBMS	Vicksburg	123.34	34	IAMs_20		IAMs_20		22 15 42.0		
	comp=Z,685nm,18.0s									
BLA	Blacksburg	123.77	22	IAMs_20		IAMs_20		22 11 58.0		
	comp=Z,699nm,21.0s									
S57A	Dark Hollow, R	123.79	21	IAMs_20		IAMs_20		22 13 37.6		
	comp=Z,762nm,20.0s									
Z47A	Carrollton	123.84	31	IAMs_20		IAMs_20		22 09 00.0		
	comp=Z,628nm,21.0s									
DBIC	Dimbokro	123.86	289	PKP		PKPdf		21 11 53.8	-0.5	
	comp=Z,4.4nm,0.7s,baz=100,slow=1.9,SNR=3.6									
CBN	Corbin Frederi	123.91	19	IAMs_20		IAMs_20		22 11 45.6		
	comp=Z,678nm,20.0s									
Y49A	Blount Mountai	124.11	29	IAMs_20		IAMs_20		22 10 53.1		
	comp=Z,734nm,22.0s									
W52A	Murphy	124.21	26	IAMs_20		IAMs_20		22 13 19.2		
	comp=Z,793nm,20.0s									
T57A	Hurt	124.38	21	IAMs_20		IAMs_20		22 09 11.1		
	comp=Z,757nm,20.0s									
LRAL	Lakeview Retre	124.50	30	IAMs_20		IAMs_20		22 12 17.4		
	comp=Z,658nm,20.0s									
U56A	King	124.55	23	IAMs_20		IAMs_20		22 09 45.7		
	comp=Z,706nm,20.0s									
V55A	Taylorsville	124.67	24	IAMs_20		IAMs_20		22 12 16.0		
	comp=Z,674nm,21.0s									
T59A	Double "B" Far	124.98	20	IAMs_20		IAMs_20		22 11 35.0		
	comp=Z,703nm,20.0s									
W57A	Gilead	125.75	23	IAMs_20		IAMs_20		22 10 02.6		
	comp=Z,677nm,20.0s									
UNM	Universidad Na	126.51	52	IAMs_20		IAMs_20		22 04 56.4		
	comp=Z,690nm,19.0s									
Y57A	Sumter	126.60	24	IAMs_20		IAMs_20		22 07 58.2		
	comp=Z,808nm,22.0s									
154A	Montrose	126.67	27	IAMs_20		IAMs_20		22 10 52.5		
	comp=Z,709nm,20.0s									
352A	Blakely	126.78	30	IAMs_20		IAMs_20		22 11 27.9		
	comp=Z,784nm,21.0s									
Y60A	Bolivia	127.43	22	IAMs_20		IAMs_20		22 14 21.1		
	comp=Z,728nm,20.0s									
NHSC	New Hope	127.48	24	IAMs_20		IAMs_20		22 16 21.6		
	comp=Z,759nm,20.0s									
BBSR	BB Station	132.47	9	IAMs_20		IAMs_20		22 15 10.5		
	comp=Z,613nm,20.0s									
060A	Indiantown	132.66	28	IAMs_20		IAMs_20		22 18 16.2		
	comp=Z,611nm,19.0s									
TGUH	Tegucigalpa,Un	138.63	47	IAMs_20		IAMs_20		22 27 01.1		
	comp=Z,386nm,20.0s									
GTBY	Guantanamo Bay	141.19	27	IAMs_20		IAMs_20		22 21 55.1		
	comp=Z,583nm,19.0s									
MTDJ	Mount Denham	141.49	32	IAMs_20		IAMs_20		22 20 22.9		
	comp=Z,526nm,20.0s									
DR12	Loma Pena Alta	144.46	20			PKPdf		21 12 31.8	-0.8	
SJG	San Juan	146.06	15	IAMs_20		IAMs_20		22 17 46.8		
	comp=Z,637nm,21.0s									
COYC	Coyhaique	146.93	161			PKPab		21 12 38.3	-0.9	
LL02	Futaleuf	149.12	159			PKPbc		21 12 43.8	0.0	
LR05	Currie	151.62	156			PKiKP		21 12 51.3	+1.0	
PLCA	Paso Flores	151.74	158	PKPbc		PKPbc		21 12 48.5	-1.7	
	comp=Z,11nm,1.0s,baz=256,slow=0.8,SNR=9.1									
SDV	Santo Domingo	152.90	30			PKPdf		21 12 47.8	+1.3	
SDV	Santo Domingo	152.90	30	PKP		PKPdf		21 12 47.5	+0.9	
	comp=Z,22nm,0.8s,baz=84,slow=0.9,SNR=8.9									
SDV				PKPbc		PKiKP		21 12 54.6	+0.7	
	comp=Z,14nm,0.7s,baz=269,slow=5.4,SNR=8.5									
SDV	Santo Domingo	152.90	30	*e*P		PKPdf		21 12 45.2	-1.3	
OTAV	Otavalo	154.18	56	IAMs_20		IAMs_20		22 14 47.3		
	comp=Z,486nm,20.0s									
COHC	Cochancay	155.00	63			PKPab		21 13 14.1	+0.6	
CFA	Coronel Fontan	160.53	151	PKP		PKPdf		21 12 56.5	+0.7	
	comp

PB14 IPOC Station P 4.09 244 ⇑ *eP* **Pn 21 02 01.9 +0.3**
PB14 *eS* **S 21 02 50.4 -1.9**
PB14 IPOC Station P 4.09 244 *i* P **Pn 21 02 01.8 +0.3**
PB14 IAML 21 02 57.1
comp=Z,849nm,0.8s
PATCX Punta Patache 4.10 300 Pn 21 02 02.0 +0.6
PATCX Punta Patache 4.10 300 ⇓ *eP* **Pn 21 02 02.2 +0.7**
PATCX *eS* **S 21 02 49.7 -2.4**
PATCX Punta Patache 4.10 300 *i* P **Pn 21 02 02.1 +0.7**
GO01 Chusmiza 4.17 320 Pn 21 02 04.2 +1.4
GO01 Chusmiza 4.17 320 *i* P **Pn 21 02 04.2 +1.4**
GO01 IAML 21 03 00.5
comp=Z,1µm,0.7s
HMBC Humberstone 4.21 308 Pn 21 02 02.8 +0.1
HMBC Humberstone 4.21 308 ⇓ *eP* **Pn 21 02 02.9 +0.1**
HMBC *eS* **S 21 02 51.6 -2.9**
HMBC Humberstone 4.21 308 *eP* **Pn 21 02 03.0 +0.2**
TA01 Diego Aracena 4.26 302 Pn **Pn 21 02 03.5 +0.3**
TA01 Diego Aracena 4.26 302 *i* P **Pn 21 02 02.9 -0.4**
TA01 IAML 21 02 54.6
comp=Z,983nm,0.8s
TA02 Huaiquique 4.39 306 *eS* **S 21 02 54.5 -3.9**
TA02 Huaiquique 4.39 306 *i* P **Pn 21 02 05.2 +0.3**
PB11 IPOC Station P 4.39 315 Pn 21 02 05.4 +0.3
PB11 IPOC Station P 4.39 315 *i* P **Pn 21 02 05.6 +0.5**
PB11 IAML 21 02 59.8
comp=Z,1µm,0.3s
AC02 Maricunga 4.66 212 Pn 21 02 09.0 +0.4
AC02 Maricunga 4.66 212 *i* P **Pn 21 02 09.1 +0.5**
AC02 *eS* **S 21 02 57.8 -7.3**
AC02 IAML 21 03 11.1
comp=Z,177nm,0.5s
AC01 Pan de Azucar 5.04 229 Pn 21 02 11.9 -1.0
AC01 Pan de Azucar 5.04 229 *i* P **Pn 21 02 12.0 -0.9**
AC01 *eS* **S 21 03 06.9 -6.0**
AC01 IAML 21 03 13.8
comp=Z,517nm,0.6s
PB16 IPOC Station P 5.42 326 Pn 21 02 19.4 +1.1
PB12 IPOC Station P 5.67 318 Pn 21 02 19.4 -1.5
AC06 Mina Casimiro 5.73 219 Pn 21 02 20.2 -1.3
GO03 Copiapo 5.85 216 Pn 21 02 21.7 -1.3
PB18 Visviri 6.05 330 Pn 21 02 28.0 +1.8
AC04 Llanos de Chal 6.79 218 Pn 21 02 32.8 -2.1
LPAZ La Paz 6.79 345 Pn 21 02 36.6 +1.0
LPAZ La Paz 6.79 345 P **Pn 21 02 37.0 +1.4**
comp=Z,84nm,0.4s,baz=162,slow=11,SNR=205
LPAZ S **S 21 03 52.2 -2.1**
comp=Z,109nm,1.1s,baz=225,slow=5.7,SNR=7.8
LCO Las Campanas 7.23 212 Pn 21 02 38.9 -1.9
CO01 Juntas del Tor 7.80 205 Pn 21 02 47.8 -0.3
MURT Porto Murtinho 8.19 83 *eP* **Pn 21 02 51.8 -1.0**
CO05 La Serena 8.24 211 Pn **Pn 21 02 51.4 -2.1**
GO04 Tololo Observa 8.26 208 Pn 21 02 52.0 -1.9
SIV San Ignacio 8.49 37 P **Pn 21 02 55.4 -1.3**
comp=Z,113nm,0.7s,baz=222,slow=11,SNR=318
SIV S **S 21 04 31.5 -1.4**
comp=Z,8.8nm,0.8s,baz=214,slow=18,SNR=1.2
CO03 El Pedregal 8.80 205 Pn 21 02 58.8 -1.9
CFA Coronel Fontan 8.83 191 P **Pn 21 02 58.9 -2.0**
comp=Z,8.9nm,0.3s,baz=26,slow=14,SNR=130
CFA S S 21 04 27.6 -13
comp=Z,25nm,0.4s,baz=17,slow=14,SNR=3.8
ZON Zonda 8.85 193 Pn 21 02 59.8 -1.5
CPUP Villa Florida 8.88 114 P **Pn 21 02 57.8 -3.9**
comp=Z,1.7nm,0.7s,baz=350,slow=11,SNR=11
CO02 Combarbal 9.25 206 Pn 21 03 04.3 -2.1
BDQN Bodoquena, MS 9.25 76 *eP* **Pn 21 03 05.6 -0.9**
PTLB Pontes e Lacer 10.07 44 Pn 21 03 15.4 -1.5
PTLB Pontes e Lacer 10.07 44 *eP* **Pn 21 03 16.0 -0.9**
AQDB Aquidauana 10.19 78 Pn **Pn 21 03 16.4 -2.0**
AQDB Aquidauana 10.19 78 *eP* **Pn 21 03 18.9 +0.5**
AMBA Amambai (Brazi 10.47 92 *eP* **Pn 21 03 20.7 -1.3**
VA03 San Esteban 10.50 200 Pn 21 03 22.4 0.0
VA06 Catapilco 10.57 203 Pn **Pn 21 03 20.5 -2.5**
PEL Peldehue 10.89 200 Pn 21 03 25.9 -1.3
MT08 Bocatoma Ro 10.99 196 Pn 21 03 27.9 -0.7
MT16 CCHEN 11.11 198 Pn 21 03 29.1 -0.9
PSAL Palomas, Salto 11.27 138 *eP* **Pn 21 03 32.0 0.0**
VILB Vilhena 11.49 32 Pn 21 03 33.0 -2.0
VILB Vilhena 11.49 32 *eP* **Pn 21 03 34.6 -0.4**
MT09 Talagante 11.57 200 Pn 21 03 34.5 -1.5
PP1B Ponte de Pedra 11.98 66 *eP* **Pn 21 03 39.5 -1.6**
SALV Santo Antonio 12.23 57 *eP* **Pn 21 03 43.3 -0.8**
PTGB Pitanga 13.20 101 *eP* **Pn 21 03 56.5 +0.3**
C2SB Chapadao do Su 13.28 74 *eP* **Pn 21 03 57.9 +0.7**
ITAB Concordia 13.58 111 Pn 21 03 59.6 -1.3
ITAB Concordia 13.58 111 *eP* **Pn 21 04 01.1 +0.3**
CPSB Cacapava Do Su 13.74 126 *eP* **P 21 04 03.9 -0.2**
LDASE Londrina, Braz 14.02 95 *eP* **Pn 21 04 05.8 -0.4**
PLTB Pedras Altas 14.35 131 Pn 21 04 08.2 -2.0
PLTB Pedras Altas 14.35 131 *eP* **Pn 21 04 09.3 -0.8**
BI02 San Fabin de 14.36 196 Pn 21 04 09.9 -0.4
PDRB Porto dos Gac 14.50 41 *eP* **Pn 21 04 11.4 -0.8**
NNA Nana 14.76 316 P 21 04 16.4 +0.8
NNA Nana 14.76 316 P **P 21 04 17.3 +1.7**
comp=Z,50nm,0.6s,baz=54,slow=11,SNR=18
ITRB Iturama 15.24 81 *eP* **P 21 04 20.9 +0.1**
CNLB Canela 15.30 118 *eP* **P 21 04 21.0 -0.5**
VA04 Juan Fernndez 15.33 223 P **Pn 21 04 22.8 +0.8**
ARAG Araguaiana, MT 15.47 65 *eP* **Pn 21 04 23.7 -0.2**
TRQA Tornquist 15.56 167 P 21 04 22.8 -1.4
CLDB Colider 15.64 42 *eP* **P 21 04 25.1 -0.2**
CZSB Cruzeiro do Su 16.28 337 P **P 21 04 31.3 -1.0**
CZSB Cruzeiro do Su 16.28 337 *eP* **P 21 04 31.4 -0.9**
MAJ01 Sao Joao Batis 16.32 109 *eP* **P 21 04 31.3 -1.3**
BB19B Bebedouro 16.63 87 *eP* **P 21 04 35.1 -1.1**
RCLB Rio Claro- Sao 17.38 92 *eP* **P 21 04 44.0 -0.3**
SPB Sao Paulo 17.40 96 P **P 21 04 42.7 -1.7**
SPB Sao Paulo 17.40 96 *eP* **P 21 04 44.5 0.0**
PET01 Itanhaem-SP 17.54 98 *eP* **P 21 04 45.8 -0.2**
IPMB Ipameri, GO 17.68 77 *eP* **P 21 04 47.9 +0.2**
VAO Valinhos 17.85 94 P 21 04 48.2 -1.2
VAO Valinhos 17.85 94 *eP* **P 21 04 49.1 -0.4**
LR05 Currie 17.92 194 P 21 04 49.9 0.0
SNDB Serra Nova Dou 17.99 55 *eP* **P 21 04 50.2 -0.8**
PLCA Paso Flores 18.12 190 P **P 21 04 51.9 -0.4**
PLCA Paso Flores 18.12 190 P **P 21 04 52.5 +0.2**
comp=Z,6.1nm,0.8s,baz=20,slow=14,SNR=11
PLCA Paso Flores 18.12 190 *eP* **P 21 04 52.8 +0.6**
NPGB Novo Progresso 18.99 36 *eP* **P 21 04 59.7 -2.1**
PARB Paraibuna 19.07 95 *eP* **P 21 05 02.6 0.0**
PMNB Patos De Minas 19.12 81 *eP* **P 21 05 02.8 -0.4**
BSCB Bom Sucesso 20.10 89 *eP* **P 21 05 13.2 -0.5**
MACA Manacapuru-AM 20.38 16 P 21 05 14.1 -2.5
MACA Manacapuru-AM 20.38 16 *eP* **P 21 05 15.3 -1.3**
ITTB Itaituba 21.09 31 *eP* **P 21 05 22.1 -2.0**
VAS01 Vassouras-RJ 21.16 93 *eP* **P 21 05 24.7 0.0**
DIAM Diamantina, MG 21.71 82 *eP* **P 21 05 29.9 -0.3**
SMTB Santa Maria do 22.77 55 *eP* **P 21 05 38.6 -1.4**
CAM01 Campos-RJ 22.85 92 *eP* **P 21 05 40.0 -0.5**
SDBA SAO DESIDERIO 22.91 67 *eP* **P 21 05 39.9 -1.4**
PRPB Parauapebas 23.04 46 *eP* **P 21 05 40.7 -1.6**
SJMB Sao Joao De Ma 23.88 85 *eP* **P 21 05 48.5 -1.4**
MAL2 Monte Alegre, 23.89 31 P 21 05 48.2 -1.9
ALF01 Guarapari-ES 23.90 89 *eP* **P 21 05 49.9 -0.2**
BSFB Barra de Sao F 24.16 85 *eP* **P 21 05 51.6 -0.9**
RIB01 Linhares ES 24.46 86 *eP* **P 21 05 54.4 -0.8**
SLOR San Lorenzo - 25.01 330 P **P 21 06 02.6 +1.9**
GUA01 Guaratinga, BA 25.74 81 *eP* **P 21 06 05.9 -0.9**
BOAV Boa Vista 25.78 13 P 21 06 06.6 -0.5
BOAV Boa Vista 25.78 13 *eP* **P 21 06 06.5 -0.5**
OTAV Otavalo 25.84 331 *eP* **P 21 06 09.5 +1.3**
FLOC Florencia 25.98 338 P 21 06 08.9 0.0
FLOC IAmb IAmb 21 06 10.2
comp=Z,26nm,0.8s
CMC01 Camacan, BA 26.40 78 *eP* **P 21 06 11.8 -0.9**
RUSC La Rusia 29.37 346 P **P 21 06 39.4 -0.2**
MPGF Montagnes des 30.90 27 P **P 21 06 51.7 -0.7**
NBAN Anadia - AL 31.64 70 *eP* **P 21 06 57.0 -2.0**
BAUV El Baul 31.70 357 P 21 06 58.3 -1.0
BAUV IAmb IAmb 21 06 59.4
comp=Z,14nm,0.7s
SDV Santo Domingo 31.87 352 P 21 07 00.2 -0.9
SDV IAmb IAmb 21 07 01.4
comp=Z,18nm,1.1s
SDV Santo Domingo 31.87 352 P **P 21 07 00.6 -0.5**
comp=Z,7.5nm,0.3s,baz=234,slow=3.3,SNR=8.1
comp=Z,7.5nm,0.3s
SDV Santo Domingo 31.87 352 *eP* **P 21 07 00.6 -0.5**
RCBR Riachuelo 33.91 65 P **P 21 07 17.9 -0.7**
RCBR IAmb IAmb 21 07 19.0
comp=Z,30nm,0.7s
RCBR Riachuelo 33.91 65 *eP* **P 21 07 18.4 -0.4**
RCBR Riachuelo 33.91 65 P **P 21 07 18.3 -0.4**
OBIP Obispado Ponce 40.70 360 P **P 21 08 14.0 -1.4**
OBIP IAmb IAmb 21 09 11.8
comp=Z,76nm,1.6s
MTO3 Montecristo 43.39 327 P **P 21 08 38.8 +1.4**
MTO3 IAmb IAmb 21 08 39.9
comp=Z,28nm,0.8s
CCIG Comitan 46.41 325 P **P 21 09 01.4 +0.3**
CCIG IAmb IAmb 21 09 03.0
comp=Z,23nm,0.7s
TEIG Tepich 47.91 332 P **P 21 09 12.5 +0.1**
TEIG IAmb IAmb 21 09 13.5
comp=Z,38nm,1.0s
TEIG Tepich 47.91 332 P **P 21 09 12.8 +0.4**
SOR Soroa 48.23 339 P **P 21 09 15.0 +0.2**
SOR IAmb IAmb 21 09 16.4
comp=Z,24nm,0.9s
553A Crawfordville 55.58 341 P **P 21 10 09.7 +0.9**
BELA Belgrano 2 57.04 172 P **P 21 10 19.6 +1.1**
ZAIG Zacatecas 57.47 320 P 21 10 23.6 +0.9
ZAIG IAmb IAmb 21 10 25.8
comp=Z,16nm,1.0s
JSC Jenkinsville 58.61 346 P P 21 10 30.6 +0.6
Y52A Lilburn 58.92 343 P P 21 10 32.0 -0.1
Y52A IAmb IAmb 21 10 33.0
comp=Z,22nm,0.6s
LRAL Lakeview Retre 59.02 340 P 21 10 32.5 -0.2
LRAL IAmb IAmb 21 10 34.0
comp=Z,15nm,0.7s
FPAL Fort Paine 59.99 342 P **P 21 10 39.4 0.0**
FPAL IAmb IAmb 21 10 40.2
comp=Z,15nm,0.7s
833A Chaparral WMA, 60.08 326 P P 21 10 41.1 +1.0
V55A Taylorsville 60.11 346 P P 21 10 40.8 +0.6
SNAA Sanae 60.18 161 P P 21 10 41.3 +0.9
SNAA Sanae 60.18 161 P **P 21 10 40.3 0.0**
comp=Z,1.6nm,0.9s,baz=292,slow=11,SNR=5.3
comp=Z,1.6nm,0.9s
W50A Signal Mountai 60.52 342 P P 21 10 43.2 +0.1
TKL Tuckaleechee C 60.54 344 P P 21 10 43.0 0.0
TKL IAmb IAmb 21 10 44.0
comp=Z,25nm,0.8s
CPCT Cooper Cave 60.54 343 P P 21 10 43.0 0.0
CPCT IAmb IAmb 21 10 44.1
comp=Z,20nm,0.8s
PLAL Pickwick Lake 61.15 340 P P 21 10 46.5 -0.7
PLAL IAmb IAmb 21 12 01.2
comp=Z,19nm,0.9s
OXF Oxford 61.16 338 P 21 10 46.7 -0.6
MIAR Mount Ida 62.72 335 P P 21 10 57.6 0.0
MIAR IAmb IAmb 21 10 58.8
comp=Z,29nm,1.4s
SLBS Sierra La Lagu 62.77 315 P P 21 11 00.3 +2.0
SLBS IAmb IAmb 21 13 05.8
comp=Z,26nm,1.4s
TXAR Lajitas Array 63.15 324 P P 21 11 01.6 +0.9
comp=Z,2.2nm,0.5s,baz=143,slow=6.9,SNR=7.3
comp=Z,2.2nm,0.5s
LCAR Lake Charles 63.17 338 P P 21 11 00.5 -0.1
WCI Wyandotte Cave 63.63 343 P P 21 11 03.0 -0.6
WCI Wyandotte Cave 63.63 343 P P 21 11 03.3 -0.3
CGM3 Cape Girardeau 63.78 339 P P 21 11 04.4 -0.1
CGM3 IAmb IAmb 21 11 04.7
comp=Z,13nm,0.5s
WTFS Witchita Falls 64.12 331 P P 21 11 07.5 +0.6
ACSO Alum Creek Sta 64.70 346 P P 21 11 10.4 0.0
CCM Cathedral Cave 65.00 338 P 21 11 12.4 0.0
CCM Cathedral Cave 65.00 338 P **P 21 11 12.4 0.0**
CCM PcP **PcP 21 11 43.0 -0.3**
MNTX Cornudas Mount 65.91 324 P 21 11 18.6 +0.1
ERPA Erie 65.91 349 P P 21 11 18.4 +0.3
DBIC Dimbokro 66.89 72 P **P 21 11 23.5 -1.5**
DBIC IAmb IAmb 21 11 25.2
comp=Z,20nm,1.2s
DBIC Dimbokro 66.89 72 P **P 21 11 22.9 -2.1**
comp=Z,6.1nm,0.5s,baz=258,slow=6.1,SNR=9.5
comp=Z,6.1nm,0.5s
DBIC Dimbokro 66.89 72 P **P 21 11 23.7 -1.3**
QSPA South Pole Qui 67.29 180 P P 21 11 29.7 +2.9
QSPA South Pole Qui 67.29 180 P **P 21 11 30.7 +3.8**
comp=Z,3.5nm,0.8s,baz=97,slow=3.6,SNR=8.5
PKME Peaks-Kenny Pk 67.89 358 P P 21 11 31.0 +0.5
ANMO Albuquerque 68.98 325 P 21 11 39.1 +1.3
ANMO IAmb IAmb 21 11 40.5
comp=Z,11nm,0.9s
ANMO Albuquerque 68.98 325 P P 21 11 39.3 +1.5
ANMO PcP **PcP 21 12 00.5 +0.1**
ANMO Albuquerque 68.98 325 *d* IPKIKP **P 21 11 39.2 +1.4**
TUC Tucson 69.41 321 P P 21 11 41.8 +1.5
T25A Trinidad 69.67 328 P P 21 11 43.5 +1.5
PIX Pinicate 70.48 318 P P 21 11 48.0 +1.2
SDCO Great Sand Dun 70.68 328 P P 21 11 49.7 +1.5
ISCO Idaho Springs 72.35 329 P P 21 11 59.2 +1.0
DANC Danby, Needles 73.77 320 P **P 21 12 08.0 +1.8**
DANC IAmb IAmb 21 12 09.5
comp=Z,23nm,0.9s
KNB Kanab 73.96 323 P 21 12 09.6 +2.2
KNB IAmb IAmb 21 12 11.1
comp=Z,25nm,1.0s
V12A Nelson 74.21 321 P 21 12 10.5 +1.7
V12A IAmb IAmb 21 12 11.7
comp=Z,9.9nm,0.9s
TORD Torodi Ar. Bea 75.62 69 P **P 21 12 16.0 -1.2**
comp=Z,3.9nm,0.4s,baz=259,slow=4.1,SNR=4.0
comp=Z,3.9nm,0.4s
TPNV Topopah Spring 75.87 321 P **P 21 12 20.3 +1.9**
TPNV IAmb IAmb 21 12 21.8
comp=Z,12nm,0.9s
PD31 Pinedale Array 76.52 329 P P 21 12 22.9 +0.9
PDAR Pinedale Array 76.52 329 P **P 21 12 22.6 +0.7**
comp=Z,1.6nm,0.4s,baz=134,slow=6.8,SNR=18
comp=Z,1.6nm,0.4s
HWUT Hardware Ranch 76.64 327 P P 21 12 23.5 +0.9
AHID Auburn Hatcher 77.27 328 P P 21 12 27.2 +1.1
AHID IAmb IAmb 21 12 28.5
comp=Z,19nm,1.0s
SCHQ Schefferville 77.42 360 P P 21 12 26.6 +0.2
comp=Z,8.0nm,0.7s,baz=202,slow=5.4,SNR=8.2
comp=Z,8.0nm,0.7s
ELK Elko 77.94 324 P 21 12 30.9 +1.1
NVAR Mina Array Bea 78.07 321 P **P 21 12 32.5 +1.9**
comp=Z,3.6nm,0.7s,baz=131,slow=4.2,SNR=16
comp=Z,3.6nm,0.7s
RLMT Red Lodge 78.19 330 P P 21 12 32.5 +1.4
RLMT IAmb IAmb 21 12 33.5
comp=Z,37nm,1.8s
KOOLE Kule 78.37 110 P P 21 12 31.7 -0.9
KOOLE IAmb IAmb 21 15 25.4
comp=Z,44nm,1.9s
BOSA Boshof 80.69 117 P P 21 12 44.1 -1.0
BOSA IAmb IAmb 21 12 56.8
comp=Z,62nm,1.9s
BOSA Boshof 80.69 117 P **P 21 12 44.6 -0.4**
comp=Z,3.3nm,0.9s,baz=278,slow=3.3,SNR=1.8
comp=Z,3.3nm,0.9s
LBTB Lobatse 82.28 114 P **P 21 12 53.1 -0.3**
comp=Z,2.1nm,0.9s,baz=270,slow=6.1,SNR=1.4
comp=Z,2.1nm,0.9s
MAW Mawson 82.30 163 P P 21 12 53.4 +1.0
comp=Z,1.7nm,0.7s,baz=233,slow=10,SNR=2.3
comp=Z,1.7nm,0.7s
G08A Pilot Rock 83.04 326 P P 21 12 57.8 +1.0
ESDC Sonseca Array 85.19 43 P **P 21 13 07.6 0.0**
comp=Z,1.9nm,1.0s,baz=245,slow=4.5,SNR=5.2
comp=Z,1.9nm,1.0s
YKA Yellowknife Ar 93.31 340 P P 21 13 45.3 +0.1
comp=Z,1.8nm,0.6s,baz=140,slow=4.0,SNR=7.6
comp=Z,1.8nm,0.6s
CLL Collm 101.20 39 *e* Pdif **Pdif 21 14 24.0 +3.0**
ASAR Alice Springs 129.70 204 PKP **PKPdf 21 19 39.8 +0.3**
comp=Z,1.2nm,0.5s,baz=145,slow=1.7,SNR=13
ASAR SKPbc SKPbc 21 22 40.0 +0.3
comp=Z,0.7nm,0.7s,baz=152,slow=4.6,SNR=5.3
WRA Warramunga Arr 132.87 207 PKP **PKPdf 21 19 45.8 +0.3**
comp=Z,1.2nm,0.6s,baz=154,slow=1.7,SNR=26
WRA SKPbc **SKPbc 21 22 51.5 +0.3**
comp=Z,1.0nm,0.7s,baz=156,slow=3.4,SNR=8.1
WB0 Warramunga Arr 133.00 207 PKPdf **PKPdf 21 19 46.3 +0.5**
PETK Petropavlovsk- 135.10 324 PKP **PKPdf 21 19 48.7 +0.1**
comp=Z,4.8nm,1.0s,baz=33,slow=5.5,SNR=2.3
BVAR Borovoye Array 135.56 36 PKP **PKPdf 21 19 49.6 +0.2**
comp=Z,0.7nm,0.6s,baz=290,slow=4.2,SNR=3.9
FITZ Fitzroy Crossi 137.60 197 PKPdf **PKPdf 21 19 54.6 +0.3**
KURBB Kurchatov Arra 141.14 36 PKhKP PKPpre 21 19 56.4
comp=Z,0.9nm,0.8s,baz=302,slow=2.7,SNR=5.5
ZALV Zalesovo Beam 142.15 28 PKhKP PKPpre 21 19 57.3
comp=Z,2.0nm,0.5s,baz=318,slow=3.1,SNR=7.5
MKAR Makanchi Array 145.30 39 PKPbc **PKPab 21 20 08.2 +0.2**
comp=Z,5.8nm,0.8s,baz=305,slow=3.2,SNR=47
MKAR SKPbc **SKiKP 21 23 25.7 +0.4**
comp=Z,0.5nm,0.7s,baz=329,slow=2.5,SNR=4.1
JKA Kamikawa-asahi 148.17 319 PKPbc **PKPbc 21 20 15.9 +0.3**
HEH HeiHe 150.65 342 *eP* **PKPbc 21 20 21.6 +0.1**
HEH pmax pmax
comp=Z,10.0nm,0.7s
HILR Hailar Array B 152.97 351 PKPbc **PKiKP 21 20 27.2 +0.2**
comp=Z,0.8nm,0.3s,baz=15,slow=3.8,SNR=2.2
HILR PKPab **PKPab 21 20 39.3 +0.3**
comp=Z,4.9nm,0.5s,baz=18,slow=5.2,SNR=5.6
SONM Songino Array 154.46 11 PKP **PKPdf 21 20 22.3 +0.7**
comp=Z,1.0nm,0.8s,baz=304,slow=2.6,SNR=7.2
SONM PKPbc **PKiKP 21 20 30.9 +0.7**
comp=Z,1.0nm,0.4s,baz=333,slow=2.1,SNR=12
SONM PKPab **PKPab 21 20 46.3 +0.8**
comp=Z,1.2nm,0.7s,baz=344,slow=3.7,SNR=5.0
MJAR Matsushiro Ar 154.80 308 PKPbc **PKiKP 21 20 31.6 +0.4**
comp=Z,1.0nm,0.6s,baz=76,slow=2.1,SNR=4.6
MJAR PKPab **PKPab 21 20 47.2 -0.1**
comp=Z,1.2nm,0.6s,baz=63,slow=3.6,SNR=4.9
CMAR Chiang Mai Arr 165.54 105 PKPab **PKPab 21 21 34.0 -0.6**
comp=Z,0.4nm,0.3s,baz=284,slow=2.9,SNR=4.2
PZH PanZhiHua 168.60 69 PKP **PKPdf 21 20 35.8 -1.1**
NJ2 Nanjing 169.79 334 *eP* **PKPdf 21 20 37.5 +0.2**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s

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*IDC **06** 21:05:01.9±1.1, 12°.76N×87°.56W, h0km, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=45.1km s-min=22.6km az=55.0*
*CATAC **06** 21:05:03.3±0.4, 12°N±4°×8°8W±°, h51km±25km, M4.1/31, MLv4.1/31, Error ellipse: s-maj=10.0km s-min=2.6km az=27.1, confirmed*
*SNET **06** 21:05:04.2±1.3, 12°.13N×88°.25W, h15km, ML4.0*
*NEIC **06** 21:05:06.3±2.7, 12°.30N±0°.07×87°.99W±0°.03, h35km±2km, mb4.6/11, Error ellipse: s-maj=12.9km s-min=3.9km az=199.0*

ISC 06 21:05:06.0±1.1, **12°.12N**±0°.05×**88°.16W**±0°.04, **h50**km±10km, **n95**, σ1s**71**/113, **mb4.4**/11, **10C-1D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**1.03**	**34**	⇑P		**Pn**	**21 05 23.8**	**-0.5**
CSGN	**Cosiguina Volc**	**1.03**	**34**	*eP*		**Pn**	**21 05 23.7**	**-0.5**
POTN	**Potosi Cosigui**	**1.08**	**36**	⇑P		**Pn**	**21 05 24.3**	**-0.5**
POTN				S		**Sn**	**21 05 42.5**	**+3.8**
POTN	**Potosi Cosigui**	**1.08**	**36**	*eP*		**Pn**	**21 05 24.3**	**-0.5**
CNCH	**Conchagua**	**1.19**	**15**	⇑P		**Pn**	**21 05 26.2**	**-0.3**
LCND	**La Caada**	**1.21**	**12**	*eP*		**Pn**	**21 05 26.2**	**-0.4**
LCND				*eP*			21 05 26.7	
LCND	**La Caada**	**1.21**	**12**	⇑P		**Pn**	**21 05 26.1**	**-0.4**
CRIN	**San Cristobal**	**1.22**	**62**			**Pn**	**21 05 26.1**	**-0.7**
CRIN					Sn	**Sn**	**21 05 37.2**	**-5.1**
CRIN	**San Cristobal**	**1.22**	**62**	P		**Pn**	**21 05 26.7**	**-0.1**
CRIN	**San Cristobal**	**1.22**	**62**	*eP*		**Pn**	**21 05 26.6**	**-0.3**
PKGN	**Cerro Pekin**	**1.27**	**65**	⇑P		**Pn**	**21 05 26.8**	**-0.7**
PKGN				S		**Sn**	**21 05 47.2**	**+3.8**
BLLM	**Bellamira**	**1.32**	**356**	*eP*		**Pn**	**21 05 27.8**	**-0.3**
CNRM	**Centro Naciona**	**1.34**	**359**	P		**Pn**	**21 05 27.9**	**-0.6**
PACA	**Pacayal**	**1.35**	**353**	*eP*		**Pn**	**21 05 28.3**	**-0.3**
PACA				*eS*		**Sn**	**21 05 47.1**	**+1.7**
PACA	**Pacayal**	**1.35**	**353**	S		**Sn**	**21 05 46.9**	**+1.4**
PACA	**Pacayal**	**1.35**	**353**	P		**Pn**	**21 05 28.1**	**-0.5**
HERN	**Volcan Telica**	**1.38**	**69**			**Pn**	**21 05 26.2**	**-2.8**
HERN					Sn	**Sn**	**21 05 40.6**	**-5.6**
TECA	**Tecapa**	**1.41**	**346**	*i* P		**Pn**	**21 05 28.7**	**-0.8**
POLN	**Al Sur del Vol**	**1.41**	**68**	⇑P		**Pn**	**21 05 27.9**	**-1.4**
CNGA	**Al SSO del Vol**	**1.47**	**75**	P		**Pn**	**21 05 29.5**	**-0.6**
CNGN	**Cerro Negro**	**1.47**	**75**			**Pn**	**21 05 29.0**	**-1.2**
CNGN					Sn	**Sn**	**21 05 42.6**	**-5.8**
CNGN	**Cerro Negro**	**1.47**	**75**	P		**Pn**	**21 05 29.7**	**-0.5**
COPN	**Copaltepe**	**1.53**	**88**	⇑P		**Pn**	**21 05 30.2**	**-0.8**
COPN	**Copaltepe**	**1.53**	**88**	*eP*		**Pn**	**21 05 30.1**	**-0.8**
TECO	**Alcaldia de Te**	**1.53**	**337**	P		**Pn**	**21 05 30.2**	**-0.8**
UESV	**Universidad de**	**1.63**	**338**	P		**Pn**	**21 05 31.8**	**-0.5**
MOM3	**MOM3**	**1.65**	**76**	⇑P		**Pn**	**21 05 31.8**	**-0.7**
MOM3				S		**Sn**	**21 05 55.1**	**+2.5**
COEG	**Centro de Oper**	**1.65**	**335**	P		**Pn**	**21 05 32.7**	**+0.1**
MOM2	**El Cardon**	**1.66**	**79**	P		**Pn**	**21 05 31.9**	**-0.8**
MOM2				S		**Sn**	**21 05 55.4**	**+2.5**
LFRS	**El Faro**	**1.73**	**329**	*eP*		**Pn**	**21 05 32.7**	**-1.2**
PAVA	**Las Pavas**	**1.76**	**334**	P		**Pn**	**21 05 33.2**	**-1.0**
APYN	**Apoyeque**	**1.77**	**86**	P		**Pn**	**21 05 34.0**	**-0.2**
LALI	**Alcalda de L**	**1.77**	**320**	P		**Pn**	**21 05 31.7**	**-2.5**
APQ2	**Apoyeque**	**1.79**	**87**	P		**Pn**	**21 05 33.6**	**-0.9**
LOMA	**Loma Larga**	**1.81**	**327**	P		**Pn**	**21 05 33.4**	**-1.5**
LOMA	**Loma Larga**	**1.81**	**327**	S		**Sn**	**21 05 57.2**	**+0.5**
APQN	**BB Volcan Apoy**	**1.82**	**87**	P		**Pn**	**21 05 33.2**	**-1.7**
USIM	**UNAN**	**1.84**	**90**	Pn		**Pn**	**21 05 33.0**	**-2.2**
UNAN	**Cigeo UNAN**	**1.84**	**90**	P		**Pn**	**21 05 34.1**	**-1.1**
TISN	**Laguna Tiscapa**	**1.84**	**89**	P		**Pn**	**21 05 33.0**	**-2.3**
MGAN	**Managua**	**1.87**	**89**			**Pn**	**21 05 34.1**	**-1.4**
MGAN					Sn	**Sn**	**21 05 56.2**	**-1.7**
MGAN	**Managua**	**1.87**	**89**	P		**Pn**	**21 05 34.4**	**-1.1**
MGAN	**Managua**	**1.87**	**89**	S		**Sn**	**21 05 58.6**	**+0.7**
UEES	**Universidad Ev**	**1.91**	**326**	P		**Pn**	**21 05 34.7**	**-1.5**
WILN	**Americas 2**	**1.92**	**89**	P		**Pn**	**21 05 35.0**	**-0.7**
WILN				S		**Sn**	**21 05 59.4**	**0.0**
MAS3	**Al N del Volca**	**1.94**	**93**	P		**Pn**	**21 05 35.5**	**-1.0**
MAS3				S		**Sn**	**21 05 59.6**	**-0.2**
PMON	**Piamonte**	**1.94**	**325**	S		**Sn**	**21 05 59.3**	**-0.7**
PMON	**Piamonte**	**1.94**	**325**	P		**Pn**	**21 05 35.3**	**-1.4**
SABN	**Sabanita**	**1.96**	**95**	P		**Pn**	**21 05 36.3**	**-0.5**
MASN	**Masaya**	**1.96**	**94**	P		**Pn**	**21 05 36.2**	**-0.7**
JAYA	**Jayaque - finc**	**1.98**	**321**	*eP*		**Pn**	**21 05 36.2**	**-1.0**
JAYA				*eS*		**Sn**	**21 05 59.4**	**-1.5**
JAYA	**Jayaque - finc**	**1.98**	**321**	P		**Pn**	**21 05 35.3**	**-1.9**
LIMN	**Finca el Limon**	**1.98**	**62**	⇓P		**Pn**	**21 05 36.7**	**-0.5**
LIMN				S		**Sn**	**21 06 02.9**	**+2.0**
NANN	**Nandasmo**	**2.00**	**95**	P		**Pn**	**21 05 37.4**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.11**	**24**			**Pn**	**21 05 37.0**	**-2.0**
TGUH	**Tegucigalpa,Un**	**2.11**	**24**	P		**Pn**	**21 05 39.3**	**+0.4**
NADN	**Granada**	**2.11**	**100**	P		**Pn**	**21 05 37.2**	**-1.7**
NADN				S		**Sn**	**21 06 02.4**	**-1.5**
LLGN	**La Laguna**	**2.17**	**339**	P		**Pn**	**21 05 39.4**	**-0.4**
OCON	**Estacion meteo**	**2.22**	**47**	P		**Pn**	**21 05 40.6**	**+0.1**
OCON				S		**Sn**	**21 06 08.7**	**+2.0**
YUSH	**Yuscaran**	**2.23**	**35**	⇑P		**Pn**	**21 05 40.8**	**+0.3**
SNJE	**San Jose**	**2.24**	**321**	*eP*		**Pn**	**21 05 39.9**	**-0.9**
NUBE	**Las Nubes**	**2.38**	**318**	*eP*		**Pn**	**21 05 41

comp=Z,0.3nm,0.6s,baz=173,slow=3.0,SNR=2.7
comp=Z,0.4nm,0.7s
NVAR Mina Array Bea 37.50 320 P **P** **21 12 18.2 +2.8**
comp=Z,0.6nm,0.8s,baz=130,slow=8.2,SNR=2.8
NVAR PcP **PcP** **21 14 35.2 +2.3**
comp=Z,0.3nm,0.6s,baz=109,slow=3.8,SNR=2.3
comp=Z,0.6nm,0.8s
ULM Lac du Bonnet 38.54 352 P **P** **21 12 22.3 -1.4**
ULM IAmb IAmb 21 12 27.4
comp=Z,13nm,1.0s
ULM Lac du Bonnet 38.54 352 P **P** **21 12 21.8 -1.9**
comp=Z,7.2nm,0.5s,baz=162,slow=9.7,SNR=5.6
comp=Z,7.2nm,0.5s
SIV San Ignacio 38.71 136 P **P** **21 12 28.8 +3.3**
comp=Z,1.9nm,0.7s,baz=310,slow=16,SNR=5.5
comp=Z,1.9nm,0.7s
K02D Willamette Mer 43.29 321 P **P** **21 13 02.8 -0.1**
K02D IAmb IAmb 21 13 03.9
comp=Z,15nm,1.0s
SCHQ Schefferville 45.79 17 P **P** **21 13 21.0 -1.6**
SCHQ Schefferville 45.79 17 P **P** **21 13 20.1 -2.6**
comp=Z,4.2nm,0.6s,baz=210,slow=6.7,SNR=5.7
comp=Z,4.2nm,0.6s
RES Resolute Bay 62.66 358 P **P** **21 15 23.8 -1.2**
RES IAmb IAmb 21 15 24.1
comp=Z,13nm,1.4s
RES Resolute Bay 62.66 358 P **P** **21 15 22.9 -2.0**
comp=Z,1.7nm,0.6s,baz=185,slow=11,SNR=5.6
comp=Z,1.7nm,0.6s
EKA Eskdalemuir Ar 77.29 36 P **P** **21 16 53.0 -2.1**
comp=Z,0.8nm,0.7s,baz=272,slow=4.3,SNR=2.1
comp=Z,0.8nm,0.7s
HHC Hu-ho-hao-te 124.23 342 *eP* **Pdif** **21 20 30.7 -3.3**
ASAR Alice Springs 138.51 248 PKP **PKiKP** **21 24 31.4 +2.3**
comp=Z,0.2nm,0.6s,baz=71,slow=1.9,SNR=1.4
WRA Warramunga Arr 138.52 254 PKP **PKiKP** **21 24 31.7 +2.5**
comp=Z,0.4nm,0.7s,baz=86,slow=2.2,SNR=2.3
CMAR Chiang Mai Arr 148.82 347 PKP **PKPdf** **21 24 47.0 +1.9**
comp=Z,1.1nm,0.8s,baz=19,slow=2.7,SNR=5.9
CMAR PKPbc **PKiKP** **21 24 50.2 -0.2**
comp=Z,0.7nm,0.7s,baz=15,slow=2.2,SNR=5.4

NEIC ***06*** *21:24:43.2±1.6, 19°.26N±0°.03×67°.19W±0°.02, h10km±2km, ML2.4/9, Md3.0/11(RSPR), Error ellipse: s-maj=6.0km s-min=3.1km az=330.0*
SDD ***06*** *21:24:44.4±2.8, 19°.38N×67°.15W, h27km±85km, MD3.4, ML2.7, MW3.1*
RSPR ***06*** *21:24:47.9, 19°.16N×67°.20W, h7km±31km, MD3.0/11*
ISC 06 21:24:43.2±1.7, 19°.35N±0°.07×67°.18W±0°.03, h26km±13km, n38, σ0s83/53, 18C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.88**	**176**			**Pn**	**21 25 00.3**	**+0.4**
AGPR						**Sb**	**21 25 10.5**	**-0.8**
AGPR	**Aguadilla, PR**	**0.88**	**176**	↑*e*P	g	**Pn**	**21 24 59.8**	**-0.1**
AGPR				↑*e*S	g	**Sb**	**21 25 10.5**	**-0.8**
AGPR				IAML			21 25 11.2	
	comp=N,271nm,0.2s							
AGPR	**Aguadilla, PR**	**0.88**	**176**	↑*e*P		**Pn**	**21 25 00.3**	**+0.4**
AGPR	**Aguadilla, PR**	**0.88**	**176**	*e*S		**Sb**	**21 25 10.5**	**-0.8**
IDE	**Isla Desecheo**	**1.00**	**196**			**Pb**	**21 25 02.1**	**+0.2**
IDE						**Sb**	**21 25 14.6**	**-0.1**
IDE	**Isla Desecheo**	**1.00**	**196**	↓*i*P		**Pb**	**21 25 02.1**	**+0.2**
IDE	**Isla Desecheo**	**1.00**	**196**	*e*S		**Sb**	**21 25 14.6**	**-0.1**
EMPR	**Esperanza - Ma**	**1.06**	**145**			**Pb**	**21 25 04.3**	**+1.3**
EMPR						**Sb**	**21 25 16.7**	**+0.2**
EMPR	**Esperanza - Ma**	**1.06**	**145**	↓*e*P		**Pb**	**21 25 04.3**	**+1.3**
EMPR	**Esperanza - Ma**	**1.06**	**145**	*e*S		**Sb**	**21 25 16.7**	**+0.2**
AOPR	**Arecibo Observ**	**1.08**	**158**			**Pb**	**21 25 03.1**	**-0.1**
AOPR					Sg	**Sb**	**21 25 16.7**	**-0.2**
AOPR	**Arecibo Observ**	**1.08**	**158**	↑*e*P	g	**Pb**	**21 25 02.9**	**-0.4**
AOPR				↑*e*S	g	**Sn**	**21 25 17.7**	**+0.9**
AOPR				IAML			21 25 33.8	
	comp=N,1μm,1.9s							
AOPR	**Arecibo Observ**	**1.08**	**158**	↑*e*P		**Pb**	**21 25 03.1**	**-0.1**
LSP	**Las Mesas**	**1.17**	**176**			**Pb**	**21 25 04.4**	**-0.5**
LSP						**Sn**	**21 25 18.5**	**-0.7**
LSP	**Las Mesas**	**1.17**	**176**	↓*e*P		**Pb**	**21 25 04.4**	**-0.5**
LSP	**Las Mesas**	**1.17**	**176**	*e*S		**Sn**	**21 25 18.5**	**-0.7**
ECPR	**Experimental S**	**1.28**	**143**	↑*e*P		**Pb**	**21 25 06.9**	**+0.2**
ECPR	**Experimental S**	**1.28**	**143**	*e*S		**Sb**	**21 25 22.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.34**	**177**			**Pn**	**21 25 06.7**	**+0.5**
CRPR						**Sn**	**21 25 21.8**	**-1.4**
CRPR				IAML			21 25 25.2	
	comp=E,88nm,0.3s							
CRPR				IAML			21 25 25.2	
	comp=N,73nm,0.7s							
CRPR	**Cabo Rojo, PR**	**1.34**	**177**	↑*e*Pg		**Pn**	**21 25 06.8**	**+0.5**
CRPR				↑*e*Sg		**Sn**	**21 25 24.4**	**+1.2**
CRPR				IAML			21 25 24.6	
	comp=N,86nm,1.6s							
CRPR	**Cabo Rojo, PR**	**1.34**	**177**	↑*e*P		**Pb**	**21 25 07.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.34**	**177**	*e*S		**Sn**	**21 25 21.9**	**-1.4**
MLPR	**Magueyes Islan**	**1.38**	**175**	↓*e*Pg		**Pn**	**21 25 07.2**	**+0.5**
MLPR				↑↓*e*Sg		**Sn**	**21 25 20.0**	**+0.7**
MLPR				IAML			21 25 25.5	
	comp=N,13nm,0.4s							
MLPR	**Magueyes Islan**	**1.38**	**175**	↓*e*P		**Pn**	**21 25 07.3**	**+0.5**
MLPR	**Magueyes Islan**	**1.38**	**175**	*e*S		**Sn**	**21 25 23.6**	**-0.7**
OBIP	**Obispado Ponce**	**1.41**	**157**			**Pn**	**21 25 07.6**	**+0.4**
OBIP						**Sn**	**21 25 20.0**	**+0.1**
OBIP				IAML			21 25 27.9	
	comp=N,83nm,0.4s							
OBIP	**Obispado Ponce**	**1.41**	**157**	↑*e*P		**Pb**	**21 25 08.8**	**-0.1**
OBIP	**Obispado Ponce**	**1.41**	**157**	*e*S		**Sn**	**21 25 25.7**	**+0.7**
PCDR	**Punta Cana, DR**	**1.41**	**234**	↑*e*P		**Pb**	**21 25 09.8**	**+0.8**
PCDR				↑*e*Sg		**Sb**	**21 25 29.5**	**+3.0**
PCDR				IAML			21 25 33.8	
	comp=N,170nm,1.2s							
GCPR	**Guaynabo City**	**1.47**	**135**	Pn		**Pb**	**21 25 09.2**	**-0.6**
GCPR						**Sn**	**21 25 25.4**	**-0.9**
GCPR	**Guaynabo City**	**1.47**	**135**	*e*S		**Sb**	**21 25 27.6**	**-0.4**
HUMP	**Col San Antoni**	**1.74**	**134**			**Pb**	**21 25 13.2**	**-1.3**
HUMP						**Sn**	**21 25 33.1**	**0.0**
HUMP				IAML			21 25 37.5	
	comp=E,37nm,0.2s							
HUMP				IAML			21 25 44.0	
	comp=N,24nm,0.3s							
HUMP	**Col San Antoni**	**1.74**	**134**	↑*e*P		**Pb**	**21 25 14.5**	**0.0**
HUMP	**Col San Antoni**	**1.74**	**134**	*e*S		**Sn**	**21 25 33.9**	**+0.8**
MIDR	**Miches**	**1.81**	**259**	↑*e*P		**Pb**	**21 25 16.0**	**+0.3**
MIDR	**Miches**	**1.81**	**259**	*e*S		**Sb**	**21 25 37.7**	**-0.3**
DR12	**Loma Pena Alta**	**2.16**	**255**	Pn		**Pb**	**21 25 20.5**	**-1.2**
HATOM	**Hato Mayor del**	**2.16**	**255**	↑*e*Pg		**Pb**	**21 25 20.7**	**-1.0**
HATOM				↑*e*Sg		**Sb**	**21 25 46.8**	**-1.3**
HATOM				IAML			21 25 53.4	
	comp=N,31nm,1.9s							

IDC 06 21:28:18.4±2.3, 17°.96S×166°.62E, h0km, mb4.1/3, mbtmp4.1/3, ML2.6/1, Error ellipse: s-maj=49.7km s-min=29.5km az=96.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.09**	**182**	Pn		Pn	21 29 23.1	+0.8
	0.3nm,0.3s,baz=6.3,slow=18,SNR=6.5							
DZM				Sn		Sn	21 30 12.3	+1.3
	0.8nm,0.3s,baz=42,slow=18,SNR=1.8							
WRA	**Warramunga Arr**	**30.57**	**261**	P		P	21 34 34.6	+0.6
	0.3nm,0.4s,baz=95,slow=7.8,SNR=8.2							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**31.06**	**254**	P		P	21 34 37.6	-0.7
	2.1nm,0.5s,baz=88,slow=8.5,SNR=40							
	2.1nm,0.5s							
PETK	**Petropavlovsk-**	**71.19**	**354**	P		P	21 39 38.8	-0.1
	3.3nm,0.9s,baz=181,slow=7.2,SNR=2.5							
	3.3nm,0.9s							

IDC ***06*** *21:38:02.3±0.7, 0°.70S×84°.21E, h0km, mb4.0/13, mbtmp4.0/14, ML5.1/1, MS3.6/2, Error ellipse: s-maj=20.2km s-min=17.3km az=79.0*
NEIC ***06*** *21:38:04.4±1.1, 0°.65S±0°.06×84°.30E±0°.08, h10km±1km, mb4.6/26, Error ellipse: s-maj=14.2km s-min=9.6km az=105.0*
ISC 06 21:38:04.1±0.5, 0°.65S±0°.08×84°.24E±0°.07, h10km, n70, σ0s97/64, mb4.4/26, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**8.62**	**336**			**Pn**	**21 40 08.9**	**-0.2**

PALK	**Pallekele**	**8.62**	**336**			**Pn**	**21 40 08.3**	**-0.8**
	23nm,0.3s,baz=155,slow=15,SNR=146							
PALK						Sn	21 41 37.7	-8.8
	58nm,0.3s,baz=227,slow=18,SNR=10							
PALK						LR	21 43 44.9	
	comp=Z,454nm,18.3s,baz=273,slow=40							
KAAM	**Kaadhehdhoo**	**11.30**	**276**			**Pn**	**21 40 46.9**	**+1.2**
SNSI	**Sinabang, Aceh**	**12.46**	**76**	P		**Pn**	**21 41 03.4**	**+1.7**
MLSI	**Meulaboh, Aceh**	**13.10**	**68**	P		**Pn**	**21 41 10.3**	**-0.1**
	107nm,1.3s							
HMDM	**Hanimaadhoo**	**13.27**	**304**	Pn		**Pn**	**21 41 13.9**	**+1.2**
GSI	**Gunungsitoli**	**13.48**	**82**			**Pn**	**21 41 15.1**	**-0.5**
GSI	**Gunungsitoli**	**13.48**	**82**	P		**Pn**	**21 41 16.8**	**+1.2**
	91nm,1.1s							
DGAR	**Diego Garcia**	**13.53**	**240**	Pn		**Pn**	**21 41 15.9**	**-0.4**
H08S3	**Diego Garcia H**	**13.61**	**239**	Pn		**Pn**	**21 41 17.3**	**+0.2**
	baz=47,slow=20							
H08S3						Sn	21 43 32.4	-16
	baz=24							
H08S3						T	21 55 13.7	
	baz=59,slow=75,SNR=19							
H08S2	**Diego Garcia H**	**13.61**	**239**	Pn		**Pn**	**21 41 17.3**	**+0.2**
	baz=47,slow=20							
H08S2						Sn	21 43 32.4	-16
	baz=24							
H08S2						T	21 55 16.2	
	baz=59,slow=75,SNR=19							
H08S1	**Diego Garcia H**	**13.63**	**239**	Pn		**Pn**	**21 41 17.5**	**+0.2**
	baz=47,slow=20							
H08S1						Sn	21 43 32.9	-16
	baz=24							
H08S1						T	21 55 36.9	
	baz=59,slow=75,SNR=15							
PBSI	**Pulau Batu**	**14.06**	**88**	P		**Pn**	**21 41 25.2**	**+1.8**
	3μm355nm,1.0s							
KCSI	**Kotacane, Aceh**	**14.15**	**73**	P		**Pn**	**21 41 26.9**	**+2.2**
	53nm,0.7s							
RPSI	**Rantau Prapat**	**15.05**	**77**			**Pn**	**21 41 35.4**	**-1.7**
RPSI	**Rantau Prapat**	**15.05**	**77**			**Pn**	**21 41 36.1**	**-1.0**
PSI	**Prapat**	**15.08**	**77**	Pn		**Pn**	**21 41 35.4**	**-2.1**
	3.3nm,0.5s,baz=265,slow=11,SNR=1.0							
PSI						LR	21 46 50.4	
	comp=Z,206nm,19.3s,baz=337,slow=35							
MNSI	**Mandailing Nat**	**15.41**	**85**	P		**Pn**	**21 41 43.8**	**+2.0**
	2μm95nm,0.5s							
PDSI	**Padang**	**16.23**	**91**	P		**Pn**	**21 41 53.5**	**+1.1**
	42nm,0.8s							
BKNI	**Bangkinang**	**16.83**	**87**	Pn		**Pn**	**21 41 58.7**	**-1.4**
KULM	**Kulim**	**17.42**	**70**	Pn		**Pn**	**21 42 06.0**	**-1.4**
KULM						IAmb	IAmb	21 42 14.5
	comp=Z,50nm,1.5s							
HYBB	**Hyderabad (bro**	**18.80**	**343**	*e*P		**P**	**21 42 24.3**	**+0.3**
LHSI	**Lahat**	**19.53**	**100**	P		**Pn**	**21 42 34.3**	**+1.1**
	comp=Z,60nm,1.1s							
MYKOM	**Kota Tinggi**	**19.76**	**83**	P		**P**	**21 42 33.1**	**-1.4**
LWLI	**Liwa**	**20.26**	**103**	P		**P**	**21 42 40.3**	**+0.2**
MDSI	**Maura Dua**	**20.28**	**101**	P		**P**	**21 42 41.0**	**+0.9**
	comp=Z,25nm,1.5s							
DSRI	**Dabo**	**20.34**	**90**	P		**P**	**21 42 39.8**	**-1.0**
TPRI	**Tanjung Pinang**	**20.35**	**86**	P		**P**	**21 42 41.5**	**+0.6**
CM31	**Chiang Mai Arr**	**23.86**	**37**	P		**P**	**21 43 16.7**	**-1.2**
CM31						IAmb	IAmb	21 43 21.5
	comp=Z,13nm,0.9s							
CMAR	**Chiang Mai Arr**	**23.86**	**37**	P		**P**	**21 43 18.9**	**+1.0**
	comp=Z,6.2nm,0.8s,baz=216,slow=9.2,SNR=46							
	comp=Z,6.2nm,0.8s							
CHTO	**Chiang Mai**	**24.14**	**36**	P		**P**	**21 43 19.7**	**-0.8**
SHL	**Shillong**	**27.09**	**15**	P		**P**	**21 43 46.6**	**-0.7**
SHL						IAmb	IAmb	21 44 07.9
	comp=Z,12nm,0.8s							
LSA	**Lhasa**	**30.89**	**12**	P		**P**	**21 44 22.1**	**+0.6**
LSA						IAmb	IAmb	21 44 24.5
	comp=Z,6.5nm,0.7s							
GAR	**Garm**	**41.48**	**344**	P		**P**	**21 45 52.3**	**+0.9**
GAR						IAmb	IAmb	21 46 08.3
	comp=Z,24nm,1.3s							
GTA	**Gaotai**	**42.34**	**18**	*e*P		**P**	**21 46 00.1**	**+1.5**
GTA						pmax	pmax	
	comp=Z,4.0nm,0.7s							
AAK	**Ala-Archa**	**43.97**	**350**	P		**P**	**21 46 11.7**	**0.0**
H01W3	**Cape Leeuwin H**	**44.02**	**144**	T		T	22 33 06.7	
	baz=316,slow=73							
H01W2	**Cape Leeuwin H**	**44.03**	**144**	T		T	22 32 56.5	
	baz=316,slow=73							
H01W1	**Cape Leeuwin H**	**44.04**	**144**	T		T	22 32 59.1	
	baz=316,slow=73							
MKAR	**Makanchi Array**	**47.28**	**358**	P		**P**	**21 46 37.6**	**0.0**
	comp=Z,2.2nm,0.7s,baz=190,slow=8.8,SNR=22							
	comp=Z,2.2nm,0.7s							
MAKZ	**Makanchi**	**47.30**	**358**	P		**P**	**21 46 38.1**	**+0.3**
MAKZ						IAmb	IAmb	21 46 39.2
	comp=Z,4.2nm,0.9s							
LODK	**Lodwar**	**49.02**	**275**	P		**P**	**21 46 52.2**	**+0.5**
LODK						IAmb	IAmb	21 46 54.9
	comp=Z,4.3nm,1.0s							
KURBB	**Kurchatov Arra**	**51.31**	**355**	P		**P**	**21 47 08.7**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=182,slow=7.2,SNR=30							
	comp=Z,3.0nm,0.8s							
KURK	**Kurchatov**	**51.39**	**355**	P		**P**	**21 47 08.8**	**-0.2**
KURK						IAmb	IAmb	21 47 26.9
	comp=Z,5.9nm,0.9s							
SONM	**Songino Array**	**52.00**	**19**	P		**P**	**21 47 14.3**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=204,slow=7.6,SNR=11							
	comp=Z,1.7nm,0.7s							
WRA	**Warramunga Arr**	**52.61**	**115**	P		**P**	**21 47 18.6**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=293,slow=7.1,SNR=13							
	comp=Z,0.9nm,0.7s							
WB0	**Warramunga Arr**	**52.62**	**114**	P		**P**	**21 47 18.0**	**-0.7**
WB0						IAmb	IAmb	21 47 32.4
	comp=Z,6.0nm,1.1s							
ASAR	**Alice Springs**	**53.28**	**119**	P		**P**	**21 47 23.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=298,slow=8.1,SNR=8.9							
	comp=Z,0.6nm,0.6s							
H04N2	**CROZET ISLANDS**	**53.51**	**208**	T		T	22 45 00.7	
	baz=42							
H04N1	**CROZET ISLANDS**	**53.52**	**208**	T		T	22 44 58.9	
	baz=42							
H04N3	**CROZET ISLANDS**	**53.53**	**208**	T		T	22 44 56.4	
	baz=42,SNR=17							
AB31	**Akbulak array**	**53.94**	**341**	P		**P**	**21 47 27.7**	**-0.1**
ZAA0	**Zalesovo Array**	**54.41**	**0**	P		**P**	**21 47 30.8**	**-0.4**
ZAA0						IAmb	IAmb	21 47 32.1
	comp=Z,5.3nm,1.1s							
ZALV	**Zalesovo Beam**	**54.41**	**0**	P		**P**	**21 47 31.3**	**0.0**
	comp=Z,1.8nm,0.7s,baz=187,slow=8.3,SNR=11							
	comp=Z,1.8nm,0.7s							
BVAR	**Borovoye Array**	**54.72**	**350**	P		**P**	**21 47 33.1**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=162,slow=12,SNR=2.2							
	comp=Z,0.5nm,0.6s							
LSZ	**Lusaka**	**57.19**	**252**	P		**P**	**21 47 51.0**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=72,slow=6.4,SNR=2.1							
	comp=Z,1.2nm,0.5s							
KBZ	**Khabaz**	**57.55**	**325**	P		**P**	**21 47 53.1**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=117,slow=8.0,SNR=1.9							
	comp=Z,0.7nm,0.8s							
ARTI	**Arti**	**60.59**	**344**	P		**P**	**21 48 14.6**	**-0.1**
ARTI						IAmb	IAmb	21 48 34.2
	comp=Z,10nm,1.4s							
LPHEP	**Lephephe**	**60.91**	**244**	P		**P**	**21 48 17.6**	**-0.1**
BRTR	**Keskin Array B**	**61.16**	**317**	P		**P**	**21 48 20.3**	**+1.2**
	comp=Z,0.2nm,0.8s,baz=128,slow=9.3,SNR=3.7							
	comp=Z,0.2nm,0.8s							
LBTB	**Lobatse**	**61.52**	**242**	P		**P**	**21 48 21.1**	**-0.7**
LBTB	**Lobatse**	**61.52**	**242**	P		**P**	**21 48 21.2**	**-0.7**
	comp=Z,7.8nm,1.0s,baz=92,slow=7.7,SNR=5.7							
	comp=Z,7.8nm,1.0s							
KDWAN	**Kaudwane**	**61.98**	**244**	P		**P**	**21 48 23.8**	**-1.2**
QNGWA	**Qangwa**	**64.47**	**249**	P		**P**	**21 48 41.5**	**-0.1**
QNGWA						IAmb	IAmb	21 48 43.0
	comp=Z,3.7nm,0.8s							
TIXI	**Tiksi**	**77.60**	**13**	P		**P**	**21 49 59.2**	**-0.8**
TIXI						IAmb	IAmb	21 50 25.9
	comp=Z,5.7nm,1.1s							
SENIN	**Lac Senin/Sane**	**81.47**	**317**	P		**P**	**21 50 21.2**	**-0.8**
SNAA	**Sanae**	**88.47**	**198**	P		**P**	**21 50 56.5**	**+0.1**
SNAA						IAmb	IAmb	21 51 19.0
	comp=Z,5.2nm,1.4s							
SNAA	**Sanae**	**88.47**	**198**	P		**P**	**21 50 57.1**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=102,slow=2.1,SNR=3.9							
	comp=Z,1.2nm,0.9s							
LPAZ	**La Paz**	**147.96**	**237**	PKPbc		**PKPbc**	**21 57 50.5**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=117,slow=2.3,SNR=3.8							
TXAR	**Lajitas Array**	**150.49**	**14**	PKPbc		**PKPbc**	**21 57 56.2**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=329,slow=1.7,SNR=4.8							

CATAC ***06*** *21:40:18.0±0.6, 12°.N±3°×8°.8W±°, h1km, M3.3/10,*

MLv3.3/10, Error ellipse: s-maj=7.9km s-min=6.0km az=31.7, confirmed
SNET ***06*** *21:40:21.3±1.0, 12°.05N×88°.37W, h19km±8km, ML2.6*
ISC 06 21:40:18.0±3.4, 11°.93N±0°.10×88°.32W±0°.06, h9km±25km, n22, σ0s56/27, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.27**	**35**	P		**Pn**	**21 40 42.1**	**0.0**
CSGN				S		**Sn**	**21 41 00.1**	**+0.7**
CNCH	**Conchagua**	**1.42**	**19**	*e*P		**Pn**	**21 40 44.5**	**+0.4**
CNCH				*e*S		**Sn**	**21 41 03.4**	**+0.4**
CNCH	**Conchagua**	**1.42**	**19**	P		**Pn**	**21 40 44.2**	**0.0**
LCND	**La Caada**	**1.43**	**17**	*e*P		**Pb**	**21 40 45.5**	**+0.7**
LCND				IAML			21 41 11.3	
	comp=Z,149nm,0.3s							
LCND	**La Caada**	**1.43**	**17**	P		**Pb**	**21 40 45.0**	**+0.1**
CRIN	**San Cristobal**	**1.45**	**58**	P		**Pn**	**21 40 44.7**	**+0.1**
LCY	**Lacayo**	**1.48**	**1**	*e*P		**Pn**	**21 40 45.3**	**+0.3**
PKGN	**Cerro Pekin**	**1.50**	**61**	P		**Pn**	**21 40 45.6**	**+0.4**
BLLM	**Bellamira**	**1.50**	**3**	*e*P		**Pb**	**21 40 45.9**	**-0.3**
PACA	**Pacayal**	**1.53**	**360**	*e*P		**Pb**	**21 40 46.5**	**-0.1**
PACA				*e*S		**Sn**	**21 41 05.5**	**-0.3**
PACA	**Pacayal**	**1.53**	**360**	P		**Pb**	**21 40 46.5**	**-0.1**
PACA	**Pacayal**	**1.53**	**360**	S		**Sb**	**21 41 06.1**	**-0.1**
TECA	**Tecapa**	**1.56**	**353**	*e*P		**Pn**	**21 40 46.5**	**+0.3**
TECA				*e*S		**Sn**	**21 41 06.8**	**+0.1**
COPN	**Copaltepe**	**1.71**	**82**	P		**Pn**	**21 40 48.4**	**+0.4**
MOM3	**MOM3**	**1.85**	**72**	P		**Pb**	**21 40 51.6**	**-0.5**
MOM2	**El Cardon**	**1.86**	**74**	P		**Pn**	**21 40 50.4**	**+0.3**
LIMN	**Finca el Limon**	**2.21**	**59**	P		**Pb**	**21 40 58.2**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.34**	**26**	S		**Sb**	**21 41 28.6**	**-1.1**
NUBE	**Las Nubes**	**2.42**	**324**	*e*P		**Pn**	**21 40 57.5**	**-0.5**
NUBE				*e*S		**Sn**	**21 41 26.9**	**-1.0**
NUBE				IAML			21 41 37.5	
	comp=Z,25nm,0.4s							
NUBE	**Las Nubes**	**2.42**	**324**	P		**Pn**	**21 40 59.5**	**+1.5**
NUBE	**Las Nubes**	**2.42**	**324**	S		**Sn**	**21 41 27.9**	**0.0**
YUSH	**Yuscaran**	**2.47**	**35**	P		**Pn**	**21 40 59.3**	**+0.7**

IDC ***06*** *21:46:17.3±1.0, 28°.29N×104°.86E, h0km, mb3.7/6, mbtmp3.6/9, ML4.4/2, MS3.8/1, Error ellipse: s-maj=40.5km s-min=15.9km az=69.0*
ISC 06 21:46:20.4±1.1, 28°.31N±0°.08×104°.9E±0°.2, h19km, n10, σ0s87/10, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**7.69**	**353**	Pn		**Pn**	**21 48 13.4**	**+1.7**
	baz=174,slow=14							
LZDM				Sn		**Sn**	**21 49 37.2**	**-1.2**
	baz=176,slow=33							
LZDM				Lg		Lg	21 50 20.1	
	baz=175,slow=19							
	1.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**11.22**	**210**	Pn		**Pn**	**21 49 00.2**	**+0.4**
	0.7nm,0.3s,baz=27,slow=12,SNR=10							
	1.0nm,0.3s							
SONM	**Songino Array**	**19.53**	**3**	P		**Pn**	**21 50 48.0**	**-0.1**
	0.5nm,0.6s,baz=190,slow=12,SNR=2.4							
MKAR	**Makanchi Array**	**25.57**	**322**	P		**P**	**21 51 48.0**	**-0.1**
	0.8nm,0.7s,baz=129,slow=11,SNR=7.6							
	0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**29.53**	**336**	P		**P**	**21 52 23.4**	**-0.1**
	0.6nm,0.6s,baz=140,slow=9.2,SNR=2.6							
	0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**29.89**	**325**	P		**P**	**21 52 26.2**	**-0.6**
	0.3nm,0.2s,baz=131,slow=10,SNR=3.5							
	0.3nm,0.2s							
SHEM	**Shemya Is, Ala**	**55.61**	**44**	LR		LR	22 22 01.6	
	comp=Z,95nm,19.8s,baz=323,slow=38							
WRA	**Warramunga Arr**	**55.78**	**146**	P		**P**	**21 55 56.1**	**-0.3**
	1.2nm,0.7s,baz=335,slow=7.5,SNR=12							
	1.2nm,0.7s							
BRTR	**Keskin Array B**	**58.74**	**301**	P		**P**	**21 56 16.8**	**-0.5**
	0.1nm,0.3s,baz=69,slow=7.9,SNR=2.2							
	0.1nm,0.3s							
ASAR	**Alice Springs**	**58.76**	**149**	P		**P**	**21 56 17.0**	**-0.4**
	0.6nm,0.6s,baz=328,slow=6.6,SNR=7.2							
	0.6nm,0.6s							

JMA ***06*** *22:03:09.4±0.2, 40°.9N±0°.4×142°.7E±0°.6, h21km±4km, MD4.5/35, MW4.4/35, E OFF AOMORI P

JIAM **Iburiatsuma** **1.84 339** P **Pn** **22 03 41.1 +1.0**
JIAM *eS* **Sb** **22 04 05.0 -1.6**
JIAM **Iburiatsuma** **1.84 339** A A 22 03 41.1
comp=N,33nm,1.4s,comp=E,31nm,0.4s
JSZI **Iwateshizukuis** **1.84 231** A A 22 03 39.7
comp=N,16nm,1.2s,comp=E,13nm,1.4s
JOM **Ohasama** **1.85 220** P **Pn** **22 03 40.0 -0.3**
JOM S **Sn** **22 04 03.7 +1.2**
JOM **Ohasama** **1.85 220** A A 22 03 40.0
comp=N,8.0nm,0.5s,comp=E,12nm,0.3s
JHHS **Hirosakihyakuz** **1.88 263** A A 22 03 40.0
comp=N,18nm,0.8s,comp=E,9.0nm,2.3s
JBT2 **Biratori 2** **1.90 350** A A 22 03 41.1
comp=N,8.0nm,2.1s,comp=E,7.0nm,2.5s
JSR **Shiriuchi** **1.91 290**⇓ *i*P **Pn** **22 03 40.6 -0.6**
JSR **Shiriuchi** **1.91 290** A A 22 03 40.6
comp=N,7.0nm,3.0s,comp=E,6.0nm,2.2s
OFUJ **Ofunato** **2.03 206** A A 22 03 43.0
comp=N,5.0nm,1.6s,comp=E,5.0nm,2.4s
JNTW **Noshirotokiwa** **2.12 253** A A 22 03 43.5
comp=N,14nm,2.0s,comp=E,14nm,1.8s
JOB **Onbets** **2.13 21** A A 22 03 45.1
comp=N,8.0nm,3.8s,comp=E,8.0nm,0.7s
JIW **Iwasaki** **2.16 262** A A 22 03 44.0
comp=N,5.0nm,0.7s,comp=E,4.0nm,1.2s
JEW **Eniwo** **2.18 333** P **Pn** **22 03 45.1 +0.2**
JEW **Eniwo** **2.18 333** A A 22 03 45.1
comp=N,33nm,1.5s,comp=E,26nm,1.8s
JYM2 **Yakumo 2** **2.20 304** A A 22 03 44.6
comp=N,4.0nm,2.7s,comp=E,4.0nm,0.8s
JRG **Rokugo** **2.25 229** A A 22 03 45.7
comp=N,9.0nm,0.7s,comp=E,9.0nm,0.7s
JFR **Furan** **2.26 356** A A 22 03 46.4
comp=N,7.0nm,0.7s,comp=E,7.0nm,1.8s
JMK **Ichinoseki** **2.31 213** A A 22 03 46.9
comp=N,5.0nm,1.7s,comp=E,6.0nm,1.6s
JYW **Yuwa** **2.42 236** A A 22 03 48.0
comp=N,10.0nm,3.0s,comp=E,7.0nm,1.6s
JAR **Ashorobuto** **2.49 16** A A 22 03 50.2
comp=N,4.0nm,2.8s,comp=E,7.0nm,4.1s
JAB **Ashibetsu** **2.63 351** A A 22 03 51.6
comp=N,9.0nm,0.9s,comp=E,7.0nm,1.6s
JOFO **Osakifurukawao** **2.73 213** A A 22 03 53.0
comp=N,18nm,2.8s,comp=E,15nm,2.9s
JHR **Hokuryu** **2.94 344** A A 22 03 56.0
comp=N,7.0nm,1.9s,comp=E,9.0nm,3.3s
JOU **Okura** **3.04 214** A A 22 03 57.2
comp=N,3.0nm,4.4s,comp=E,4.0nm,2.8s
JKA **Kamikawa-asahi** **3.21 357** **Pn** **22 03 59.9 +0.8**
ASAJ **Asahikawa** **3.21 357** P **Pn** **22 04 00.6 +1.6**
comp=E,38nm,0.3s,baz=204,slow=12,SNR=91
ASAJ S **Sn** **22 04 37.7 +1.6**
comp=E,290nm,0.7s,baz=162,slow=20,SNR=8.8
comp=E,68nm,0.3s
NMR **Nemuro--Hokkai** **3.28 40**⇑ *i*P **Pn** **22 03 58.9 -1.0**
NMR *i* S **Sn** **22 04 35.1 -2.6**
JMM **Marumori** **3.42 208** **Pn** **22 04 02.5 +0.5**
JMM Sn **Sn** **22 04 43.1 +1.8**
JMM **Marumori** **3.42 208** P **Pn** **22 04 03.5 +1.6**
GLVR **Golovnino** **3.46 34**⇓ *i*P **Pn** **22 04 02.3 -0.2**
GLVR *eS* **Sn** **22 04 41.2 -1.2**
GLVR pmax pmax
comp=N,205nm,0.4s
GLVR pmax pmax
comp=E,78nm,0.4s
GLVR pmax pmax
comp=Z,894nm,0.4s
GLVR smax smax
comp=E,1μm,0.2s
GLVR smax smax
comp=N,983nm,0.3s
RUSJ **Misakicho** **3.66 29** *e*P **Pn** **22 04 04.7 -0.6**
RUSJ *eS* **Sn** **22 04 48.2 +0.9**
YUK **Yuzh-Kuril'sk** **3.85 35***d i*P **Pn** **22 04 06.9 -0.9**
YUK *i* S **Sn** **22 04 50.0 -1.9**
YUK pmax pmax
comp=N,344nm,0.3s
YUK pmax pmax
comp=Z,893nm,0.3s
YUK smax smax
comp=E,2μm,0.5s
YUK smax smax
comp=N,550nm,0.2s
JSD **Sado** **4.54 232** **Pn** **22 04 18.4 +1.0**
JSD **Sado** **4.54 232** P **Pn** **22 04 18.8 +1.4**
MJA0 **Matsu Arr-Jizo** **5.64 221** *e*P **Pn** **22 04 35.4 +2.9**
MJA0 pmax pmax
comp=Z,1.0nm,0.3s
MAJO **Matsushiro** **5.66 221** **Pn** **22 04 35.0 +2.3**
MAJO **Matsushiro** **5.66 221** P **Pn** **22 04 35.6 +2.9**
MAJO **Matsushiro** **5.66 221***c e*P **Pn** **22 04 35.7 +3.0**
MAJO pmax pmax
comp=Z,92nm,0.7s
MJAR **Matsushiro Arr** **5.66 221** P **Pn** **22 04 35.4 +2.7**
comp=Z,0.6nm,0.3s,baz=32,slow=12,SNR=78
comp=Z,25nm,0.7s
KUR **Kuril'sk** **5.69 39***c i*P **Pn** **22 04 32.3 -0.8**
KUR *eS* **Sn** **22 05 35.6 -1.5**
KUR pmax pmax
comp=N,203nm,0.5s
KUR pmax pmax
comp=Z,978nm,0.5s
KUR pmax pmax
comp=E,150nm,0.4s
KUR smax smax
comp=N,175nm,0.5s
KUR smax smax
comp=E,115nm,0.5s
YSS **Yuzhno-Sakhali** **6.04 360** Pn **Pn** **22 04 38.8 +0.8**
YSS **Yuzhno-Sakhali** **6.04 360** *e*P **Pn** **22 04 39.2 +1.3**
YSS *eS* **Sn** **22 05 48.3 +2.4**
YSS pmax pmax
comp=Z,50nm,1.0s
YSS smax smax
comp=N,40nm,0.9s
YSS smax smax
comp=E,50nm,1.3s
YSS MLR MLR
comp=N,400nm,15.0s
TEY **Ternei** **6.14 314** *e*P **Pn** **22 04 35.9 -3.4**
JGF **Kuroka** **6.82 221** **Pn** **22 04 50.6 +1.9**
JGF **Kuroka** **6.82 221** P **Pn** **22 04 51.7 +3.0**
INU **Inuyama** **7.19 221** **Pn** **22 04 52.8 -0.9**
INU **Inuyama** **7.19 221** P **Pn** **22 04 56.7 +3.0**
JHJ **Hachijo jima 2** **8.14 198** P **Pn** **22 05 05.5 -1.4**
comp=N,72nm,0.8s,baz=66,slow=10.0,SNR=16
JHJ S **Sn** **22 06 33.2 -4.5**
comp=N,35nm,0.2s,baz=60,slow=20,SNR=2.1
JHJ2 **Mitsune** **8.14 198** Pn **Pn** **22 05 07.8 +1.0**
USRK **Ussuriysk Ar.** **8.64 296** P **Pn** **22 05 13.4 -0.2**
comp=N,0.8nm,0.3s,baz=101,slow=14,SNR=5.0
comp=N,2.5nm,0.5s
USRK **Ussuriysk Ar.** **8.64 296** *e*P **Pn** **22 05 14.6 +1.0**
USRK pmax pmax
comp=Z,1.0nm,0.3s
TYV **Tymovskoe** **9.96 359** *e*P **Pn** **22 05 34.1 +2.5**
TYV *eS* **Sn** **22 07 28.2 +6.2**
TYV pmax pmax
comp=Z,15nm,1.2s
TYV pmax pmax
comp=Z,200nm,3.7s
TYV smax smax
comp=N,400nm,3.4s
TYV smax smax
comp=E,200nm,3.4s
TYV smax smax
comp=N,23nm,1.6s
TYV smax smax
comp=E,24nm,1.6s
JMN **Monobe** **10.10 228** Pn **Pn** **22 05 34.0 +0.3**
MDJ **Mudanjiang** **10.40 295** P **Pn** **22 05 40.8 +3.0**
MDJ S **Sn** **22 07 28.2 -4.9**
MDJ pmax pmax
comp=Z,21nm,1.2s
MDJ LR LR
comp=N,600nm,13.4s
MDJ LR LR
comp=E,340nm,13.4s
KSRS **Korea Array** **12.06 258** P **Pn** **22 06 03.5 +3.1**
comp=E,0.2nm,0.3s,baz=68,slow=14,SNR=1.9
KSRS S **Sn** **22 08 16.7 +3.0**
comp=E,1.8nm,0.4s,baz=67,slow=26,SNR=5.2
comp=E,0.8nm,0.4s
BNX **BinXian** **12.21 298** ⇑P **Pn** **22 06 01.6 -0.9**
BNX pmax pmax
comp=Z,8.0nm,2.1s

JNU **Nakatsue** **12.30 235** Pn **Pn** **22 06 03.9 +0.2**
JCJ **Chichijima** **13.79 182** P Pn 22 06 14.8 -9.3
comp=Z,140nm,1.1s,baz=101,slow=22,SNR=2.2
JCJ S Sn 22 08 44.1 -12
comp=Z,42nm,0.6s,baz=300,slow=20,SNR=1.5
HEH **HeiHe** **14.24 316** *e*P **Pn** **22 06 29.8 -0.4**
HEH pmax pmax
comp=Z,7.0nm,0.8s
HEH LR LR
comp=N,590nm,15.2s
HEH LR LR
comp=E,430nm,14.3s
HEH LR LR
comp=Z,420nm,15.6s
PETK **Petropavlovsk-** **15.83 35** P **Pn** **22 06 46.4 -4.8**
comp=Z,2.4nm,0.6s,baz=232,slow=11,SNR=2.5
PETK LR LR 22 12 34.9
comp=Z,194nm,18.5s,baz=305,slow=36
ZEA **Zeya** **16.56 326** *e*P **Pn** **22 07 01.5 +1.0**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
HILR **Hailar Array B** **18.34 306** P **P** **22 07 22.3 -0.2**
baz=111,slow=11
comp=Z,2.0nm,0.5s
TIA **Tai'an** **20.60 265** P Pn 22 07 55.7 +6.1
TIA pmax pmax
comp=Z,18nm,1.0s
TIA LR LR
comp=N,350nm,12.1s
TIA LR LR
comp=E,440nm,11.2s
TIA LR LR
comp=Z,510nm,14.1s
NJ2 **Nanjing** **21.15 253** *e*P **P** **22 07 52.9 -0.2**
NJ2 pP **pwP** **22 08 03.4 -0.3**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
YAK **Yakutsk** **22.59 344** P **P** **22 08 05.2 -3.0**
YAK IAmb IAmb 22 08 15.6
comp=Z,18nm,0.5s
YAK **Yakutsk** **22.59 344** *e*P **P** **22 08 07.0 -1.3**
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.3s
SEY **Seymchan** **22.78 11**⇓ *e*P **P** **22 08 07.4 -2.9**
SEY pmax pmax
comp=Z,87nm,4.0s
HHC **Hu-ho-hao-te** **23.57 280** *e*P **P** **22 08 17.6 -1.0**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,54nm,4.2s
ULN **Ulaanbaatar** **26.31 297**⇓ *e*P **P** **22 08 43.2 -0.4**
ULN pmax pmax
comp=Z,7.0nm,2.0s
SONM **Songino Array** **26.75 297** P **P** **22 08 47.3 -0.3**
comp=Z,1.5nm,0.7s,baz=90,slow=8.9,SNR=10
comp=Z,1.5nm,0.7s
SONM **Songino Array** **26.75 297** *e*P **P** **22 08 49.3 +1.8**
SONM pmax pmax
comp=Z,2.0nm,0.7s
H11N2 **WAKE ISLAND Hy** **29.45 129** T T 22 40 14.2
baz=321,slow=75,SNR=215
H11N1 **WAKE ISLAND Hy** **29.46 129** T T 22 40 14.9
baz=321,slow=75,SNR=227
H11N3 **WAKE ISLAND Hy** **29.47 129** T T 22 40 16.1
baz=321,slow=75,SNR=156
BILL **Bilibino** **30.01 17** P **P** **22 09 14.8 -1.3**
BILL IAmb IAmb 22 09 17.0
comp=Z,35nm,1.5s
BILL **Bilibino** **30.01 17***d i*P **P** **22 09 16.3 +0.2**
BILL pmax pmax
comp=Z,22nm,1.4s
H11S1 **WAKE ISLAND Hy** **30.29 130** T T 22 41 18.2
baz=323,slow=76
H11S3 **WAKE ISLAND Hy** **30.30 130** T T 22 41 33.1
baz=323,slow=76
H11S2 **WAKE ISLAND Hy** **30.31 130** T T 22 41 33.2
baz=323,slow=76
LZH **Lanzhou** **30.70 274** *e*P **P** **22 09 27.4 +4.6**
LZH pP sP 22 09 34.5 -1.6
LZH sP pP 22 09 39.5 +7.4
LZH pmax pmax
comp=Z,10.0nm,0.8s
TIXI **Tiksi** **31.60 352** P **P** **22 09 28.6 -1.5**
TIXI **Tiksi** **31.60 352** P **P** **22 09 28.6 -1.5**
TIXI pmax pmax
comp=Z,4.0nm,1.2s
CD2 **Chengdu** **32.94 265** *e*P **P** **22 09 42.0 -0.4**
PZH **PanZhiHua** **36.72 260** P **P** **22 10 16.7 +1.5**
M14K **Bethel** **38.69 40** P **P** **22 10 32.0 +0.8**
DGZ **Jazzator, Alta** **39.13 302**⇑ *e*P **P** **22 10 36.4 +1.1**
DGZ pmax pmax
comp=Z,4.0nm,0.7s
TNCH **TengChong** **39.95 261** *e*P **P** **22 10 43.9 +1.5**
TNCH pP pwP 22 10 54.6 +2.7
TNCH S **S** **22 16 44.9 -0.7**
TNCH pmax pmax
comp=Z,9.0nm,0.5s
TNCH LR LR
comp=N,300nm,10.0s
TNCH LR LR
comp=E,300nm,13.3s
TNCH LR LR
comp=Z,400nm,11.7s
ZAA0 **Zalesovo Array** **40.22 309** P **P** **22 10 43.4 -0.6**
ZAA0 IAmb IAmb 22 10 58.0
comp=Z,18nm,1.6s
ZALV **Zalesovo Beam** **40.22 309** P **P** **22 10 43.8 -0.3**
comp=Z,3.1nm,0.5s,baz=88,slow=8.2,SNR=14
comp=Z,3.1nm,0.5s
ZALV **Zalesovo Beam** **40.22 309** *e*P **P** **22 10 44.2 +0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
NRIK **Noril'sk** **40.26 333** P **P** **22 10 43.8 -0.4**
NRIK **Noril'sk** **40.26 333** P **P** **22 10 43.9 -0.3**
comp=Z,1.2nm,0.4s,baz=100,slow=8.9,SNR=4.3
comp=Z,1.2nm,0.4s
H19K **Roundabout Mou** **41.63 33** P **P** **22 10 56.5 +1.0**
LSA **Lhasa** **43.06 272** P **P** **22 11 07.0 -1.2**
LSA **Lhasa** **43.06 272** P **P** **22 11 07.1 -1.2**
LSA pmax pmax
comp=Z,12nm,1.5s
MK31 **Makanchi Array** **43.09 299***de*P **P** **22 11 07.2 -0.6**
MKAR **Makanchi Array** **43.09 299** P **P** **22 11 07.5 -0.3**
comp=Z,1.8nm,0.8s,baz=79,slow=9.7,SNR=12
comp=Z,1.8nm,0.8s
MKAR **Makanchi Array** **43.09 299** *e*P **P** **22 11 07.8 0.0**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MAKZ **Makanchi** **43.30 299** **P** **22 11 09.4 0.0**
MAKZ **Makanchi** **43.30 299** P **P** **22 11 09.4 0.0**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
SPU **Mount Spurr** **43.52 40** P **P** **22 11 12.2 +1.1**
KDAK **Kodiak Island** **43.53 45** P **P** **22 11 11.1 +0.1**
KDAK **Kodiak Island** **43.53 45** P **P** **22 11 09.7 -1.4**
comp=Z,7.1nm,0.7s,baz=270,slow=16,SNR=4.4
comp=Z,7.1nm,0.7s
KDAK **Kodiak Island** **43.53 45** P **P** **22 11 11.1 +0.1**
KDAK pmax pmax
comp=Z,168nm,1.7s
CMAR **Chiang Mai Arr** **43.62 252** P **P** **22 11 11.6 -0.7**
comp=Z,0.8nm,0.3s,baz=50,slow=8.5,SNR=1.9
comp=Z,0.8nm,0.3s
KURK **Kurchatov** **44.50 305** P **P** **22 11 17.7 -1.2**
KURK IAmb IAmb 22 11 32.9
comp=Z,6.0nm,0.8s
KURK **Kurchatov** **44.50 305**⇑ *e*P **P** **22 11 19.2 +0.3**
KURK pmax pmax
comp=Z,6.0nm,1.1s
KURBB **Kurchatov Arra** **44.57 305** P **P** **22 11 18.8 -0.8**
comp=Z,2.5nm,0.2s,baz=77,slow=8.6,SNR=9.2
comp=Z,2.5nm,0.2s
GHO **Glory Hole Cre** **44.98 39** P **P** **22 11 23.0 +0.3**
GHO IAmb IAmb 22 11 55.7
comp=Z,28nm,1.3s
ILAR **Eielson Array** **45.66 34** P **P** **22 11 28.3 +0.4**
comp=Z,3.9nm,0.9s,baz=272,slow=7.6,SNR=21
comp=Z,3.3nm,0.9s
ILAR **Eielson Array** **45.66 34** *e*P **P** **22 11 28.7 +0.7**
ILAR pmax pmax
comp=Z,4.0nm,0.9s

SCM **Sheep Creek Mo** **45.73 38** P **P** **22 11 29.0 +0.4**
SCM IAmb IAmb 22 11 30.6
comp=Z,22nm,1.1s
SCM **Sheep Creek Mo** **45.73 38** P **P** **22 11 29.0 +0.4**
SCM pmax pmax
comp=Z,22nm,1.1s
EVN **Everest** **47.22 272** **P** **22 11 41.8 +0.3**
EVN IAmb IAmb 22 12 04.2
comp=Z,10nm,0.9s
BOOM **Boomskoye usch** **48.76 295** P **P** **22 11 52.7 0.0**
BOOM IAmb IAmb 22 12 35.1
comp=Z,6.4nm,1.0s
BOOM **Boomskoye usch** **48.76 295** P **P** **22 11 52.7 0.0**
BOOM pmax pmax
comp=Z,6.0nm,1.0s
BVAR **Borovoye Array** **48.84 310** P **P** **22 11 52.9 0.0**
comp=Z,1.1nm,0.4s,baz=74,slow=8.6,SNR=4.7
comp=Z,1.1nm,0.4s
INK **Inuvik** **50.45 29** **P** **22 12 05.7 +0.8**
INK IAmb IAmb 22 12 07.0
comp=Z,8.8nm,1.1s
INK **Inuvik** **50.45 29** P **P** **22 12 05.5 +0.6**
comp=Z,5.6nm,0.8s,baz=292,slow=7.9,SNR=12
comp=Z,5.6nm,0.8s
INK **Inuvik** **50.45 29** P **P** **22 12 05.7 +0.8**
INK pmax pmax
comp=Z,9.0nm,1.1s
HYT **Haines Junctio** **50.56 39** **P** **22 12 08.1 +2.0**
ARSB **Arslanbob** **51.25 295** P **P** **22 12 12.1 +0.6**
ARSB IAmb IAmb 22 12 30.3
comp=Z,5.7nm,0.6s
ARSB **Arslanbob** **51.25 295** P **P** **22 12 12.1 +0.6**
ARSB pmax pmax
comp=Z,6.0nm,0.6s
KK31 **Karatay Array** **52.20 298** P **P** **22 12 18.1 -0.3**
KK31 **Karatay Array** **52.20 298** P **P** **22 12 18.1 -0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
C36M **Paulatuk** **53.47 26** P **P** **22 12 27.6 +0.3**
ARTI **Arti** **54.33 317** P **P** **22 12 34.0 +0.2**
ARTI IAmb IAmb 22 12 46.1
comp=Z,9.2nm,0.6s
ARTI **Arti** **54.33 317***c i*P **P** **22 12 35.6 +1.7**
ARTI *PP **sP** **22 12 47.8 +0.3**
ARTI 22 13 35.7
ARTI 22 14 36.1
ARTI S **S** **22 20 14.3 +5.0**
ARTI pmax pmax
comp=Z,3.0nm,1.0s
CHGR **Chuyangaron** **55.05 294** P **P** **22 12 39.7 +0.2**
CHGR pmax pmax
comp=Z,10.0nm,0.7s
KIRV **Kirov** **57.85 322**⇓ *e*P **P** **22 13 00.8 +1.9**
RES **Resolute Bay** **58.58 15** P **P** **22 13 03.9 0.0**
RES IAmb IAmb 22 13 27.8
comp=Z,15nm,1.4s
RES **Resolute Bay** **58.58 15** P **P** **22 13 03.8 0.0**
comp=Z,3.4nm,0.7s,baz=309,slow=7.3,SNR=6.9
comp=Z,3.4nm,0.7s
RES **Resolute Bay** **58.58 15** P **P** **22 13 03.9 0.0**
RES pmax pmax
comp=Z,15nm,1.4s
ARCES **ARCESS Array B** **60.77 339** P **P** **22 13 18.5 -0.4**
comp=Z,3.3nm,0.9s,baz=57,slow=5.8,SNR=1.7
comp=Z,3.3nm,0.9s
WB0 **Warramunga Arr** **60.87 189** P **P** **22 13 19.8 -0.4**
WB0 IAmb IAmb 22 13 34.8
comp=Z,4.6nm,0.8s
WRA **Warramunga Arr** **61.05 189** P **P** **22 13 21.2 -0.2**
comp=Z,1.2nm,0.6s,baz=8.6,slow=6.6,SNR=18
comp=Z,1.2nm,0.6s
DAG **Danmarks Havn** **62.01 355** *i* P **P** **22 13 27.0 -0.2**
ASAR **Alice Springs** **64.78 189** P **P** **22 13 46.5 +0.4**
comp=Z,1.1nm,0.9s,baz=7.8,slow=6.6,SNR=9.3
comp=Z,1.1nm,0.9s
OBN **Obninsk** **65.66 323** *e*P **P** **22 13 51.2 -0.3**
OBN *e* 22 14 23.9
OBN *e* 22 16 16.9
OBN *e*PPP PPP 22 17 49.0
OBN pmax pmax
comp=Z,2.0nm,0.9s
FIA1 **FINESS Array S** **65.90 332** P **P** **22 13 52.0 -1.0**
FINES **FINESS Array B** **65.91 332** P **P** **22 13 52.7 -0.3**
comp=Z,3.3nm,0.6s,baz=48,slow=6.6,SNR=20
comp=Z,3.3nm,0.6s
FINES **FINESS Array B** **65.91 332** *e*P **P** **22 13 52.8 -0.2**
FINES pmax pmax
comp=Z,3.0nm,0.6s
SUMG **Summit** **66.81 0** P **P** **22 13 59.5 +0.3**
SUMG IAmb IAmb 22 14 00.7
comp=Z,6.0nm,0.7s
SUMG **Summit** **66.81 0** P **P** **22 13 59.5 +0.3**
SUMG pmax pmax
comp=Z,6.0nm,0.7s
SUMG **Summit** **66.81 0** *i* P **P** **22 13 59.0 -0.2**
KIV **Kislovodsk** **69.21 310** P **P** **22 14 14.5 +0.2**
KIV IAmb IAmb 22 14 42.1
comp=Z,16nm,1.1s
KIV **Kislovodsk** **69.21 310** *e*P **P** **22 14 14.6 +0.2**
KIV pmax pmax
comp=Z,4.0nm,1.0s
KBZ **Khabaz** **69.22 310** P **P** **22 14 14.6 +0.3**
comp=Z,1.2nm,0.8s,baz=45,slow=4.3,SNR=3.8
comp=Z,1.2nm,0.8s
KBZ **Khabaz** **69.22 310**⇓ *e*P **P** **22 14 14.4 +0.1**
KBZ pmax pmax
comp=Z,10.0nm,2.3s
HFS **Hagfors** **71.01 336** P **P** **22 14 24.5 -0.5**
comp=Z,2.8nm,0.7s,baz=31,slow=3.4,SNR=9.9
comp=Z,2.8nm,0.7s
NB2 **NORSAR Subarra** **71.04 337** P **P** **22 14 24.8 -0.4**
comp=Z,0.8nm,0.6s,baz=37,slow=6.2
NOA **NORSAR Array B** **71.04 337** P **P** **22 14 24.6 -0.5**
comp=Z,1.4nm,0.7s,baz=37,slow=6.1,SNR=6.0
comp=Z,1.4nm,0.7s
NOA **NORSAR Array B** **71.04 337** *e*P **P** **22 14 24.8 -0.4**
NOA pmax pmax
comp=Z,1.0nm,0.7s
BOZ **Bozeman (W)** **71.23 46** P **P** **22 14 28.2 +1.5**
BOZ pmax pmax
comp=Z,14nm,1.7s
NVAR **Mina Array Bea** **71.83 55** P **P** **22 14 30.1 -0.5**
comp=Z,0.8nm,0.7s,baz=303,slow=5.9,SNR=4.8
comp=Z,0.8nm,0.7s
AKASG **Malin Array Be** **71.91 322** P **P** **22 14 30.2 -0.4**
comp=Z,1.2nm,0.6s,baz=46,slow=6.0,SNR=5.0
comp=Z,1.2nm,0.6s
AKASG **Malin Array Be** **71.91 322** *e*P **P** **22 14 31.0 +0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
PDAR **Pinedale Array** **74.20 47** P **P** **22 14 45.1 +0.6**
comp=Z,1.2nm,1.0s,baz=312,slow=6.7,SNR=6.6
comp=Z,1.2nm,1.0s
BRTR **Keskin Array B** **77.10 312** P **P** **22 15 00.9 -0.2**
comp=Z,0.1nm,0.3s,baz=54,slow=3.6,SNR=1.6
comp=Z,0.1nm,0.3s
CLL **Collm** **78.28 330** *i* P **P** **22 15 06.7 -0.5**
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL **Collm** **78.28 330** *i* P **P** **22 15 06.7 -0.5**
comp=Z,4.0nm,0.9s
EKA **Eskdalemuir Ar** **79.84 341** P **P** **22 15 15.6 -0.1**
comp=Z,0.5nm,0.6s,baz=27,slow=5.7,SNR=2.0
comp=Z,0.5nm,0.6s
GERES **GERESS Array B** **79.99 329** P **P** **22 15 16.0 -0.8**
comp=Z,0.4nm,0.7s,baz=35,slow=8.7,SNR=3.6
comp=Z,0.4nm,0.7s
GERES **GERESS Array B** **79.99 329** *e*P **P** **22 15 18.8 +2.0**
TXAR **Lajitas Array** **86.91 53** P **P** **22 15 51.3 -1.4**
comp=Z,0.5nm,0.8s,baz=304,slow=5.1,SNR=5.6
comp=Z,0.5nm,0.8s
SNAA **Sanae** **144.77 198** PKP PKPbc 22 22 42.6 +0.4
comp=Z,0.9nm,0.6s,baz=143,slow=2.9,SNR=3.0
H03N2 **Juan Fernandez** **146.16 91** T T 01 06 10.3
baz=300,slow=77,SNR=8.7
H03N3 **Juan Fernandez** **146.18 91** T T 01 06 11.2
baz=300,slow=77,SNR=6.4
H03N1 **Juan Fernandez** **146.18 91** T T 01 06 11.6
baz=300,slow=77,SNR=12

*IDC **06** 22:07:55.8≤0.8,36°.39N×142°.80E,h0ᵏᵐ,mb3.8/15, mbtmp3.8/19,ML3.6/3,MS3.7/4, Error ellipse: s-maj=19.0km s-min=18.7km az=165.0*
*MOS **06** 22:07:56.7≈1.4,36°.43N×142°.81E,h17ᵏᵐ,mb4.7/16,Error ellipse: s-maj=12.6km s-min=7.8km az=125.0*

NEIC ***06*** *22:07:57.4±1.1, 36.°42N±0.°06×142.°8E±0.°1, h10km±1km, mb4.6/22, Error ellipse: s-maj=14.0km s-min=10.5km az=90.0*

NIED ***06*** *22:07:58.8, 36.°37N×142.°66E, h63km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.22; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$-2.92; $M_{r\theta}$0.52; $M_{\theta\phi}$-1.09; $M_{\phi r}$0.32; Fault plane solution: $M_0$3.32000×10^{15} NP1: ϕ_s193.00000°, δ41.00000°, λ80.00000°. NP2:ϕ_s27.00000°, δ50.00000°, λ99.00000°.*

JMA ***06*** *22:07:58.8±0.3, 36.°4N±0.°6×14.°3E±.°, h63km, MV3.6/21, FAR E OFF KANTO*

ISC 06 22:07:57.1±0.6, **36.°39N**±0.°05×**142.°69E**±0.°06, **h10**km, **n96,** σ1§**67**/98, **mb4.5**/38, **MS4.0**/4, **6C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.68**	**296**	*eP*		**Pn**	**22 08 26.4**	**-0.2**
JHYU	**Hitachinakayam**	**1.70**	**269**	*eP*		**Pn**	**22 08 26.6**	**-0.2**
JHO	**Hitachi**	**1.73**	**278**	P		**Pn**	**22 08 26.6**	**-0.5**
JHO				*eS*		**Sn**	**22 08 47.9**	**-1.3**
JFK	**Kawauchi**	**1.75**	**304**	*eP*		**Pn**	**22 08 26.9**	**-0.6**
JMM	**Marumori**	**2.12**	**315**			**Pn**	**22 08 33.2**	**+0.7**
JMM				Sn		**Sn**	**22 08 55.4**	**-3.5**
BSO1	**Boso 1**	**2.22**	**219**	*eP*		**Pn**	**22 08 33.7**	**+0.2**
JAG	**Ashikaga**	**2.61**	**272**	*eP*		**Pn**	**22 08 39.5**	**+0.2**
JAG				*eS*		**Sn**	**22 09 09.4**	**-1.7**
JMK	**Ichinoseki**	**2.81**	**336**	*eS*		**Sn**	**22 09 15.0**	**-1.1**
JRY	**Ryogami san**	**3.09**	**264**	*eP*		**Pn**	**22 08 46.1**	**+0.2**
JYK	**Kaneyama**	**3.13**	**324**	P		**Pn**	**22 08 47.1**	**+0.6**
MJAR	**Matsushiro Arr**	**3.62**	**274**	Pn		**Pn**	**22 08 54.0**	**+0.9**
	0.6nm,0.3s,baz=103,slow=9.4,SNR=12							
MJAR				Sn		**Sn**	**22 09 33.7**	**-2.2**
	0.7nm,0.3s,baz=96,slow=7.3,SNR=4.2							
MJAR				LR		LR	22 10 27.8	
	comp=Z,670nm,20.0s,baz=76,slow=41 6.1nm,0.4s							
MAJO	**Matsushiro**	**3.62**	**274**			**Pn**	**22 08 53.6**	**+0.4**
MAJO	**Matsushiro**	**3.62**	**274**	*eP*		**Pn**	**22 08 54.4**	**+1.2**
JSD	**Sado**	**3.90**	**296**			**Pn**	**22 08 57.7**	**+0.7**
JHJ2	**Mitsune**	**4.03**	**217**			**Pn**	**22 08 59.5**	**+0.6**
JHJ	**Hachijo jima 2**	**4.04**	**217**	Pn		**Pn**	**22 08 59.0**	**-0.1**
	18nm,0.3s,baz=18,slow=19,SNR=5.9							
JHJ				Sn		**Sn**	**22 09 40.0**	**-6.4**
	25nm,0.3s,baz=60,slow=20,SNR=5.7 44nm,0.3s							
JANG	**Nango**	**4.09**	**347**	*eS*		**Sn**	**22 09 45.3**	**-2.1**
JGF	**Kuroka**	**4.40**	**261**			**Pn**	**22 09 05.0**	**+1.1**
JTM	**Tenmabayashi**	**4.57**	**344**			**Pn**	**22 09 06.2**	**0.0**
INU	**Inuyama**	**4.72**	**259**	Pn		**Pn**	**22 09 09.4**	**+1.0**
ERM	**Erimo**	**5.63**	**4**			**Pn**	**22 09 20.0**	**-0.8**
ERM	**Erimo**	**5.63**	**4**	P		**Pn**	**22 09 20.0**	**-0.8**
JMN	**Monobe**	**7.70**	**252**	Pn		**Pn**	**22 09 50.7**	**+1.5**
ASAJ	**Asahikawa**	**7.72**	**359**	Pn		**Pn**	**22 09 48.9**	**-0.6**
	1.8nm,0.3s,baz=183,slow=17,SNR=4.2							
ASAJ				Sn		**Sn**	**22 11 14.8**	**-2.2**
	0.4nm,0.3s,baz=217,slow=20,SNR=2.9 8.0nm,0.7s							
ASAJ	**Asahikawa**	**7.72**	**359**	P		**Pn**	**22 09 49.5**	**0.0**
JKA	**Kamikawa-asahi**	**7.72**	**360**			**Pn**	**22 09 49.5**	**0.0**
JCJ	**Chichijima**	**9.27**	**183**	Pn		Pn	22 09 58.8	-12
	2.3nm,0.3s,baz=272,slow=20,SNR=1.8							
JCJ				Sn		Sn	22 11 34.8	-20
	2.4nm,0.3s,baz=268,slow=24,SNR=1.5							
TEY	**Ternei**	**9.79**	**334**	*eP*		Pn	22 10 27.4	+10
JNU	**Nakatsue**	**10.25**	**255**	LR		LR	22 14 49.7	
	comp=Z,461nm,18.4s,baz=54,slow=40							
YSS	**Yuzhno-Sakhali**	**10.56**	**0**	*eP*		**Pn**	**22 10 28.2**	**-0.2**
YSS				*eS*		**Sn**	**22 12 19.4**	**-7.2**
YSS				pmax		pmax		
	comp=Z,30nm,0.9s							
KSRS	**Korea Array**	**11.87**	**280**	Pn		**Pn**	**22 10 47.6**	**+1.3**
	comp=Z,3.9nm,1.1s,baz=89,slow=15,SNR=4.4							
KSRS	**Korea Array**	**11.87**	**280**	*eP*		**Pn**	**22 10 50.2**	**+3.8**
GRNR	**Gornyy**	**15.07**	**345**	*iP*		**P**	**22 11 37.1**	**+1.8**
GRNR				pmax		pmax		
	comp=Z,8.0nm,1.1s							
GRNR				MLR		MLR		
	comp=E,440nm,14.0s							
GRNR				MLR		MLR		
	comp=Z,670nm,13.0s							
YAK	**Yakutsk**	**26.93**	**346**	P		**P**	**22 13 38.2**	**0.0**
YAK				IAmb		IAmb	22 13 56.9	
	comp=Z,18nm,0.9s							
YAK	**Yakutsk**	**26.93**	**346**	*eP*		**P**	**22 13 39.2**	**+1.0**
YAK				pmax		pmax		
	comp=Z,10.0nm,0.9s							
YAK				pmax		pmax		
	comp=N,10.0nm,1.5s							
YAK				pmax		pmax		
	comp=E,3.0nm,1.1s							
SEY	**Seymchan**	**27.24**	**10**	LR		LR	22 24 30.0	
	comp=E,164nm,18.6s,baz=312,slow=36							
XAN	**Xi'an**	**27.61**	**275**	P		**P**	**22 13 43.8**	**-0.9**
XAN				pmax		pmax		
	comp=Z,9.0nm,0.8s							
XAN				LR		LR		
	comp=N,470nm,14.4s							
XAN				LR		LR		
	comp=E,610nm,14.8s							
XAN				LR		LR		
	comp=Z,910nm,13.2s							
ENH	**Enshi**	**28.32**	**267**	P		**P**	**22 13 49.7**	**-1.3**
ENH				IAmb		IAmb	22 14 15.1	
	comp=Z,14nm,1.0s							
ULN	**Ulaanbaatar**	**28.57**	**305**			**P**	**22 13 51.9**	**-1.4**
ULN	**Ulaanbaatar**	**28.57**	**305**	*eP*		**P**	**22 13 54.5**	**+1.3**
ULN				pmax		pmax		
	comp=Z,8.0nm,1.4s							
SONM	**Songino Array**	**29.00**	**305**	P		**P**	**22 13 57.8**	**+0.8**
	comp=Z,3.5nm,1.2s,baz=101,slow=7.6,SNR=11 comp=Z,3.5nm,1.2s							
SONM	**Songino Array**	**29.00**	**305**	*eP*		**P**	**22 13 59.5**	**+2.5**
SONM				pmax		pmax		
	comp=Z,7.0nm,1.3s							
LZDM	**Lanzhou Array**	**31.34**	**281**	P		**P**	**22 14 19.9**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=67,slow=11,SNR=1.4 comp=Z,0.7nm,0.3s							
GTA	**Gaotai**	**33.74**	**288**	*eP*		**P**	**22 14 40.3**	**+1.5**
GTA				pmax		pmax		
	comp=Z,4.0nm,1.2s							
GTA				LR		LR		
	comp=N,230nm,12.7s							
GTA				LR		LR		
	comp=E,140nm,12.0s							
GTA				LR		LR		
	comp=Z,230nm,13.1s							
DGZ	**Jazzator, Alta**	**41.60**	**307**	*iP*		**P**	**22 15 47.4**	**+2.2**
DGZ				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**42.34**	**257**	P		**P**	**22 15 53.1**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=45,slow=6.2,SNR=1.9 comp=Z,0.8nm,0.3s							
ZALV	**Zalesovo Beam**	**43.11**	**313**	P		**P**	**22 15 58.3**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=79,slow=7.5,SNR=5.4 comp=Z,1.2nm,0.7s							
MK31	**Makanchi Array**	**45.33**	**303**	P		**P**	**22 16 14.3**	**-0.9**
MK31	**Makanchi Array**	**45.33**	**303**	*iP*		**P**	**22 16 18.9**	**+3.7**
MKAR	**Makanchi Array**	**45.33**	**303**	P		**P**	**22 16 16.5**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=82,slow=10,SNR=9.1 comp=Z,1.9nm,0.8s							
MKAR	**Makanchi Array**	**45.33**	**303**	*eP*		**P**	**22 16 19.7**	**+4.5**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
MAKZ	**Makanchi**	**45.54**	**303**	P		**P**	**22 16 16.3**	**-0.6**
MAKZ	**Makanchi**	**45.54**	**303**	P		**P**	**22 16 16.3**	**-0.6**
MAKZ				pmax		pmax		
	comp=Z,3.0nm,1.0s							
E19K	**Redstone River**	**45.56**	**28**	P		**P**	**22 16 15.6**	**-1.1**
E19K				IAmb		IAmb	22 16 21.2	
	comp=Z,11nm,1.3s							
KURK	**Kurchatov**	**47.14**	**309**	P		**P**	**22 16 29.2**	**0.0**
KURK	**Kurchatov**	**47.14**	**309**	*eP*		**P**	**22 16 30.0**	**+0.7**
KURK				pmax		pmax		
	comp=Z,4.0nm,0.6s							
KURBB	**Kurchatov Arra**	**47.21**	**309**	P		**P**	**22 16 30.4**	**+0.6**
	comp=Z,2.7nm,1.0s,baz=82,slow=8.0,SNR=9.9 comp=Z,2.7nm,1.0s							
C23K	**Itkillik River**	**48.34**	**25**	P		**P**	**22 16 38.0**	**-0.4**
C23K				IAmb		IAmb	22 16 45.3	
	comp=Z,8.2nm,1.1s							
ILAR	**Eielson Array**	**49.49**	**32**	P		**P**	**22 16 46.8**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=271,slow=8.0,SNR=4.5 comp=Z,0.2nm,0.5s							
ILAR	**Eielson Array**	**49.49**	**32**	*eP*		P	22 16 52.2	+4.9
ILAR				pmax		pmax		
	comp=Z,1.0nm,1.0s							
D25K	**Kavik River**	**49.78**	**26**	P		**P**	**22 16 49.5**	**0.0**
D25K				IAmb		IAmb	22 17 07.4	
	comp=Z,11nm,1.4s							
AAK	**Ala-Archa**	**51.70**	**299**	LR		LR	22 39 22.6	
	comp=Z,94nm,19.2s,baz=34,slow=36							
BVAR	**Borovoye Array**	**51.77**	**313**	P		**P**	**22 17 03.4**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=64,slow=16,SNR=2.4 comp=Z,0.6nm,0.7s							
ARSB	**Arslanbob**	**53.18**	**298**	P		**P**	**22 17 15.7**	**+0.2**
ARSB				IAmb		IAmb	22 17 19.2	
	comp=Z,13nm,1.4s							
ARSB	**Arslanbob**	**53.18**	**298**	P		**P**	**22 17 15.7**	**+0.2**
ARSB				pmax		pmax		
	comp=Z,13nm,1.4s							
KK31	**Karatay Array**	**54.34**	**301**	P		**P**	**22 17 23.8**	**0.0**
KK31				IAmb		IAmb	22 17 36.7	
	comp=Z,6.2nm,1.2s							
KK31	**Karatay Array**	**54.34**	**301**	P		**P**	**22 17 23.8**	**0.0**
KK31				pmax		pmax		
	comp=Z,6.0nm,1.3s							
DRK	**Karamyk**	**54.66**	**296**	P		**P**	**22 17 25.9**	**-0.6**
DRK				IAmb		IAmb	22 17 54.8	
	comp=Z,5.8nm,1.0s							
DRK	**Karamyk**	**54.66**	**296**	P		**P**	**22 17 25.9**	**-0.6**
DRK				pmax		pmax		
	comp=Z,6.0nm,1.0s							
WB0	**Warramunga Arr**	**56.40**	**189**	P		**P**	**22 17 39.1**	**+0.4**
WB0				IAmb		IAmb	22 18 01.7	
	comp=Z,7.5nm,1.2s							
FITZ	**Fitzroy Crossi**	**56.54**	**200**	P		**P**	**22 17 39.8**	**+0.2**
WRA	**Warramunga Arr**	**56.58**	**189**	P		**P**	**22 17 39.1**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=11,slow=7.2,SNR=6.4 comp=Z,1.4nm,1.0s							
CHGR	**Chuyangaron**	**56.87**	**296**			**P**	**22 17 42.5**	**+0.4**
CHGR	**Chuyangaron**	**56.87**	**296**	P		**P**	**22 17 42.5**	**+0.4**
CHGR				pmax		pmax		
	comp=Z,19nm,1.0s							
ARTI	**Arti**	**57.63**	**319**			**P**	**22 17 46.9**	**-0.2**
ARTI				IAmb		IAmb	22 18 02.5	
	comp=Z,5.5nm,0.8s							
ARTI	**Arti**	**57.63**	**319**	*diP*		**P**	**22 17 47.6**	**+0.5**
ARTI				S		**S**	**22 25 40.5**	**-4.6**
ARTI				pmax		pmax		
	comp=Z,7.0nm,1.3s							
KBL	**Kabul**	**58.61**	**292**	P		**P**	**22 17 54.5**	**0.0**
KBL	**Kabul**	**58.61**	**292**	P		**P**	**22 17 54.6**	**0.0**
KBL				pmax		pmax		
	comp=Z,5.0nm,1.2s							
AB31	**Akbulak array**	**59.14**	**311**	P		**P**	**22 17 57.3**	**-0.4**
AB31				IAmb		IAmb	22 17 59.3	
	comp=Z,5.7nm,1.4s							
ASAR	**Alice Springs**	**60.30**	**189**	P		**P**	**22 18 06.7**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=9.6,slow=6.9,SNR=3.4 comp=Z,0.8nm,0.9s							
KIRV	**Kirov**	**61.38**	**323**	*de*	P	**P**	**22 18 13.7**	**+0.8**
KLMR	**Klimovskoe**	**64.85**	**328**	*eP*		**P**	**22 18 35.0**	**-0.9**
KLMR				pmax		pmax		
	comp=Z,9.0nm,1.4s							
OBN	**Obninsk**	**69.23**	**324**	*eP*		**P**	**22 19 04.8**	**+1.0**
OBN				*e*			22 19 29.1	
OBN				*e*			22 21 37.2	
OBN				*e*	PPP	PPP	22 23 16.6	
OBN				pmax		pmax		
	comp=Z,4.0nm,1.0s							
KBZ	**Khabaz**	**72.10**	**311**	P		**P**	**22 19 21.5**	**0.0**
	comp=Z,2.1nm,1.0s,baz=97,slow=8.1,SNR=3.6 comp=Z,2.1nm,1.0s							
KBZ	**Khabaz**	**72.10**	**311**	*eP*		**P**	**22 19 22.8**	**+1.3**
KBZ				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KIV	**Kislovodsk**	**72.10**	**312**			**P**	**22 19 21.5**	**-0.2**
KIV				IAmb		IAmb	22 19 24.8	
	comp=Z,7.5nm,0.9s							
KIV	**Kislovodsk**	**72.10**	**312**	*eP*		**P**	**22 19 23.3**	**+1.6**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.0s							
NVAR	**Mina Array Bea**	**74.55**	**54**	P		**P**	**22 19 35.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=314,slow=6.4,SNR=1.5 comp=Z,0.1nm,0.3s							
AKASG	**Malin Array Be**	**75.43**	**323**	*iP*		**P**	**22 19 41.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=45,slow=5.4,SNR=4.4 comp=Z,0.2nm,0.4s							
AKASG	**Malin Array Be**	**75.43**	**323**	*iP*		**P**	**22 19 42.9**	**+1.9**
AKBB	**Malin Array Si**	**75.43**	**323**	*eP*		**P**	**22 19 40.7**	**-0.3**
AKBB				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ARPR	**Arpgir-MALATY**	**77.57**	**309**	P		**P**	**22 19 54.3**	**+0.8**
BRTR	**Keskin Array B**	**80.05**	**312**	P		**P**	**22 20 08.4**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=64,slow=6.6,SNR=3.7 comp=Z,0.5nm,0.8s							
ANMO	**Albuquerque**	**84.21**	**50**	*eP*		**P**	**22 20 29.0**	**-0.1**
ANMO				pmax		pmax		
	comp=Z,8.0nm,3.2s							
TXAR	**Lajitas Array**	**89.69**	**53**	P		**P**	**22 20 57.2**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=312,slow=5.7,SNR=6.2 comp=Z,0.5nm,0.7s							
LPAZ	**La Paz**	**146.11**	**62**	PKPbc		**PKPab**	**22 27 39.9**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=315,slow=4.3,SNR=2.7							

NEIC ***06*** *22:12:30.3±1.0, 16.°59S±0.°05×176.°96E±0.°09, h10km±1km, mb4.6/8, Error ellipse: s-maj=15.3km s-min=6.1km az=241.0*

IDC ***06*** *22:12:30.1±0.8, 16.°42S×176.°54E, h0km, mb4.0/13, mbtmp4.0/13, MS4.3/49, Error ellipse: s-maj=26.0km s-min=20.4km az=126.0*

GCMT ***06*** *22:12:35.3±0.1, 16.°54S±0.°01×176.°74E±0.°01, h21km, MW5.2/135, Moment Tensor Solution. s81,c126; s135,c232; Duration: 1§0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.46±.17; $M_{\theta\theta}$-0.77±.16; $M_{\phi\phi}$1.23±.14; $M_{r\theta}$0.16±.27; $M_{\theta\phi}$9.01±.14; $M_{\phi r}$-0.38±.25; Best double couple: $M_0$9.07500×10^{16} NP1:ϕ_s267.00000°, δ87.00000°, λ-1.00000°. NP2:ϕ_s357.00000°, δ89.00000°, λ-177.00000°. Principal axes: T 9.2980, Plg1.0000°, Azm132.0000°; N -0.4480, Plg87.0000°, Azm20.0000°; P -8.8520, Plg3.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 22:12:31.4±0.5, **16.°69S**±0.°08×**176.°72E**±0.°06, **h10**km, **n93,** σ2§**61**/49, **mb4.2**/16, **MS4.3**/48, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.64**	**130**	Pn		**Pn**	**22 12 57.7**	**-2.7**
MSVF				Sn		**Sn**	**22 13 18.1**	**-3.6**
SANVU	**Saraoutou**	**9.23**	**276**	Pn		**Pn**	**22 14 45.7**	**+0.9**
MARNC	**Mare, Loyalty**	**9.50**	**239**	Pn		**Pn**	**22 14 47.5**	**-0.9**
PINNC	**Pines Island,**	**10.54**	**235**	Pn		**Pn**	**22 15 04.3**	**+1.7**
DZM	**Mont Dzumac**	**11.08**	**239**	Pn		**Pn**	**22 15 14.1**	**+4.0**
DZM	0.1nm,0.3s,baz=81,slow=7.9,SNR=4.6							
				Sn		**Sn**	**22 17 13.1**	**-1.1**
	0.1nm,0.3s,baz=112,slow=19,SNR=1.5							
ONTNC	**Ouen Toro**	**11.18**	**238**	Pn		**Pn**	**22 15 13.4**	**+2.0**
RAO	**Raoul Island**	**13.44**	**159**	LR		LR	22 19 18.4	
	comp=Z,2μm,18.7s,baz=344,slow=30							
HNR	**Honiara**	**17.85**	**292**	LR		LR	22 22 53.5	
	comp=Z,2μm,18.1s,baz=131,slow=35							
TOZ	**Tahuroa Road**	**20.99**	**183**	P		**P**	**22 17 15.6**	**+0.7**
TOZ				IAmb		IAmb	22 17 37.8	
	comp=Z,37nm,1.2s							
URZ	**Urewera**	**21.49**	**179**	P		**P**	**22 17 22.9**	**+2.5**
	comp=Z,4.0nm,0.6s,baz=7.5,slow=6.5,SNR=5.3							
URZ				LR		LR	22 24 20.3	
	comp=Z,598nm,20.5s,baz=359,slow=33 comp=Z,4.0nm,0.6s							
RTZ	**Ruatahuna**	**21.85**	**179**			**P**	**22 17 23.8**	**-0.5**
RTZ				IAmb		IAmb	22 17 46.1	
	comp=Z,30nm,1.1s							
RAR	**Rarotonga**	**22.67**	**105**	LR		LR	22 26 08.6	
	comp=Z,157nm,18.1s,baz=279,slow=36							
RPZ	**Rata Peaks**	**27.37**	**189**	LR		LR	22 28 20.0	
	comp=Z,474nm,19.2s,baz=356,slow=34							
PMG	**Port Moresby**	**29.67**	**280**	LR		LR	22 28 48.3	
	comp=Z,672nm,18.4s,baz=74,slow=33							
PPT2	**Papeete2**	**32.19**	**97**	*eS*		S	22 23 57.8	-15
PPT2	comp=Z,171nm,25.8s							
				e	SS	**SnSn**	**22 26 06.6**	**+2.7**
	comp=Z,4μm,28.0s							
PPT2				*e*	LR	LR	22 27 09.5	
	comp=Z,2μm,29.5s							
PPT2				*e*	LR	LR	22 27 18.0	
	comp=Z,1μm,32.2s							
PPT	**Papeete**	**32.20**	**97**	LR		LR	22 30 18.2	
	comp=Z,191nm,20.3s,baz=272,slow=33							
TBI	**Tubuai**	**32.40**	**107**	*eP*		P	22 18 37.9	-24
	comp=Z,430nm,29.0s							
TBI				*e*	S	S	22 23 51.6	-25
	comp=Z,1μm,26.2s							
TBI				*e*	SS	**SnSn**	**22 26 16.5**	**+7.7**
	comp=Z,13μm,26.8s							
TBI				*e*	LR	LR	22 27 21.8	
	comp=Z,8μm,32.0s							
TBI				*e*	LR	LR	22 27 25.3	
	comp=Z,2μm,31.0s							
STKA	**Stephens Creek**	**35.23**	**238**	P		**P**	**22 19 27.0**	**+0.8**
	comp=Z,8.1nm,1.0s,baz=49,slow=11,SNR=4.2							
STKA				LR		LR	22 32 46.2	
	comp=Z,827nm,19.1s,baz=68,slow=34 comp=Z,8.1nm,1.0s							
H11S2	**WAKE ISLAND Hy**	**36.32**	**344**	T		T	22 57 49.3	
	baz=161,slow=76,SNR=18							
H11S3	**WAKE ISLAND Hy**	**36.33**	**344**	T		T	22 57 52.1	
	baz=161,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**36.34**	**344**	T		T	22 57 49.7	
	baz=161,slow=76,SNR=12							
H11N3	**WAKE ISLAND Hy**	**37.44**	**345**	T		T	22 59 05.9	
	baz=165,slow=76,SNR=31							
H11N1	**WAKE ISLAND Hy**	**37.44**	**345**	T		T	22 59 11.6	
	baz=165,slow=76,SNR=14							
H11N2	**WAKE ISLAND Hy**	**37.46**	**345**	T		T	22 59 07.1	
	baz=165,slow=76,SNR=12							
JAY	**Jayapura**	**38.10**	**288**	LR		LR	22 35 27.4	
	comp=Z,665nm,19.1s,baz=108,slow=36							
BBOO	**Buckleboo**	**39.99**	**239**	P		**P**	**22 20 06.2**	**-0.4**
WB0	**Warramunga Arr**	**40.25**	**259**	P		**P**	**22 20 06.9**	**-1.9**
WB0				IAmb		IAmb	22 20 13.8	
	comp=Z,20nm,1.4s							
WRA	**Warramunga Arr**	**40.29**	**259**	P		**P**	**22 20 07.7**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=92,slow=8.5,SNR=9.1							
WRA				LR		LR	22 34 57.6	
	comp=Z,345nm,18.5s,baz=92,slow=34 comp=Z,0.8nm,0.7s							
AS31	**Alice Springs**	**40.67**	**253**	P		**P**	**22 20 11.4**	**-0.9**
ASAR	**Alice Springs**	**40.67**	**253**	P		**P**	**22 20 11.8**	**-0.5**
	comp=Z,2.3nm,1.0s,baz=89,slow=8.8,SNR=7.8							
ASAR				LR		LR	22 36 48.1	
	comp=Z,423nm,18.2s,baz=86,slow=36 comp=Z,2.3nm,1.0s							
TAOE	**Nuku Hiva Isla**	**42.70**	**85**	*e*LR		LR	22 32 17.0	
	comp=Z,943nm,27.9s							
RKT	**Rikitea**	**45.70**	**106**	*e*S		S	22 27 15.1	-21
	comp=Z,1μm,25.0s							
RKT				*e*SS		ScS	22 30 37.8	-12
	comp=Z,2μm,25.5s							
RKT				*e*LR		LR	22 33 27.5	
	comp=Z,2μm,26.8s							
FITZ	**Fitzroy Crossi**	**48.64**	**260**	P		**P**	**22 21 16.4**	**+0.5**
BATI	**Baumata**	**51.89**	**270**	LR		LR	22 42 36.9	
	comp=Z,103nm,19.8s,baz=132,slow=35							
JCJ	**Chichijima**	**54.93**	**322**	LR		LR	22 40 42.5	
	comp=Z,310nm,21.3s,baz=126,slow=31							
NWAO	**Narrogin (SRO)**	**55.69**	**241**	LR		LR	22 44 03.5	
	comp=Z,870nm,21.9s,baz=88,slow=34							
DAV	**Davao City (W)**	**55.81**	**291**	LR		LR	22 44 51.4	
	comp=Z,250nm,19.0s,baz=102,slow=35							
JHJ	**Hachijo jima 2**	**60.81**	**325**	LR		LR	22 43 06.9	
	comp=Z,158nm,21.6s,baz=152,slow=30							
VNDA	**Vanda**	**61.31**	**184**	LR		LR	22 45 53.3	
	comp=Z,170nm,19.7s,baz=27,slow=32							
TGY	**Tagaytay City**	**63.02**	**296**	LR		LR	22 48 55.2	
	comp=Z,181nm,19.5s,baz=110,slow=35							
MJAR	**Matsushiro Arr**	**64.23**	**326**	P		**P**	**22 23 05.2**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=152,slow=5.5,SNR=5.9							
MJAR				LR		LR	22 45 27.7	
	comp=Z,162nm,21.6s,baz=128,slow=31 comp=Z,0.8nm,0.3s							
JNU	**Nakatsue**	**66.11**	**319**	LR		LR	22 46 36.7	
	comp=Z,163nm,21.2s,baz=132,slow=31							
ASAJ	**Asahikawa**	**68.07**	**334**	LR		LR	22 47 06.1	
	comp=Z,272nm,21.4s,baz=168,slow=31							
RPN	**Rapa Nui**	**68.55**	**113**	LR		LR	22 46 37.7	
	comp=Z,98nm,19.6s,baz=349,slow=30							
SHEM	**Shemya Is, Ala**	**69.16**	**358**	LR		LR	22 48 01.3	
	comp=Z,142nm,20.8s,baz=236,slow=31							
PETK	**Petropavlovsk-**	**71.42**	**348**	LR		LR	22 49 45.5	
	comp=Z,235nm,20.7s,baz=156,slow=31							
QSPA	**South Pole Qui**	**73.36**	**180**	P		**P**	**22 24 03.1**	**-0.3**
QSPA	**South Pole Qui**	**73.36**	**180**	P		**P**	**22 24 06.3**	**+2.9**
	comp=Z,4.2nm,1.0s,baz=25,slow=2.7,SNR=6.2 comp=Z,4.2nm,1.0s							
KDAK	**Kodiak Island**	**78.43**	**16**	LR		LR	22 51 49.9	
	comp=Z,146nm,20.5s,baz=203,slow=30							
MA2	**Madan**	**78.88**	**347**	LR		LR	22 54 01.0	
	comp=Z,126nm,20.2s,baz=122,slow=32							
PSI	**Prapat**	**79.14**	**276**	LR		LR	23 01 36.8	
	comp=Z,59nm,18.4s,baz=156,slow=37							
YBH	**Yreka Blue Hor**	**80.60**	**41**	LR		LR	22

comp=Z,13nm,1.7s
RONA Rosalia, Austr 145.13 337 *e*PKP **PKiKP 22 32 13.8 +0.6**
comp=Z,8.7nm,1.3s
MOA Molln 145.74 339 PKP **PKPab 22 32 10.7 -0.4**
comp=Z,14nm,1.2s
ARSA Arzberg 145.79 337 PKiKP **PKiKP 22 32 18.4 +3.8**
comp=Z,6.7nm,0.9s
SOKA Soboth 146.46 337 *e*PKP **PKiKP 22 32 14.5 -1.5**
comp=Z,6.9nm,1.4s
LESA Schwarzleotal 146.64 340 PKiKP **PKiKP 22 32 18.8 +2.4**
comp=Z,5.3nm,1.0s
KBA Koelnbreinsper 146.72 339 *e*PKiKP **PKiKP 22 32 20.8 +4.2**
comp=Z,3.6nm,0.6s
WATA Walderalm 147.07 341 *e*PKiKP **PKiKP 22 32 20.4 +3.1**
comp=Z,13nm,1.5s
WTTA Wattenberg 147.11 341 *e*PKP **PKiKP 22 32 20.0 +2.5**
comp=Z,12nm,1.2s
RETA Reutte 147.17 342 *e*PKiKP **PKiKP 22 32 22.3 +4.8**
comp=Z,12nm,1.2s
MOTA Moosalm 147.20 342 *e*PKP **PKiKP 22 32 19.9 +2.2**
comp=Z,12nm,1.2s
SQTA Sankt Quirin 147.28 342 *e*PKiKP **PKiKP 22 32 20.6 +2.8**
comp=Z,9.8nm,1.1s
ABTA Abfaltersbach 147.29 340 *e*PKiKP **PKiKP 22 32 21.9 +4.1**
comp=Z,9.2nm,1.1s
FETA Feichten 147.60 342 *e*PKiKP **PKiKP 22 32 23.1 +4.7**
comp=Z,11nm,1.6s
DAVA Damuels 147.61 343 *e*PKiKP **PKiKP 22 32 23.3 +4.9**

KRNET ***06*** *22:14:33.5±0.1, 41°.16N×78°.93E, h16km, mb2.8*
SOME ***06*** *22:14:35.6, 41°.18N×78°.68E, h10km*
NNC ***06*** *22:14:37.7±2.0, 41°.20N×78°.70E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=13.3km s-min=9.4km az=169.0*
ISC 06 22:14:33.5±2.9, 41°.1N±0°.1×78°.67E±0°.05, h4km±13km, n34, σ1§27/51, 7C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
TARG	**Taragay, Kyrgy**	**0.94**	**317**	⇓*i*P		**Pb**	**22 14 53.3 +0.7**
TARG				⇓*i*S		**Sn**	**22 15 07.5 -0.5**
PRZ	**Przheval'sk**	**1.45**	**352**	⇓*e*P		**Pn**	**22 14 59.9 -0.8**
PRZ				⇓*e*S		**Sg**	**22 15 19.5 -0.6**
KDJ	**Kajisay**	**1.56**	**315**	⇑*i*P		**Pb**	**22 15 03.9 +0.9**
KDJ				⇑*i*S		**Sg**	**22 15 26.0 +2.5**
SATY	**Saty**	**2.02**	**355**	P		**Pb**	**22 15 11.4 +0.6**
	4.0nm,0.2s						
SATY				S		**Sg**	**22 15 36.9 -1.5**
	20nm,0.2s						
UZB	**Uzynbulak**	**2.12**	**7**	Pg		**Pb**	**22 15 12.8 +0.4**
	4.1nm,0.3s						
UZB				Lg		Lg	22 15 39.3
	13nm,0.3s						
UZB	**Uzynbulak**	**2.12**	**7**	*e*P		**Pb**	**22 15 12.8 +0.4**
	4.1nm,0.3s						
UZB				*e*S		**Sb**	**22 15 39.3 +0.2**
	13nm,0.3s						
SHLS	**Shalkode**	**2.19**	**15**	Pg		**Pg**	**22 15 16.4 +0.9**
	11nm,0.3s						
SHLS				Lg		Lg	22 15 45.7
	56nm,0.5s						
SHLS	**Shalkode**	**2.19**	**15**	*e*P		**Pg**	**22 15 16.4 +0.9**
	11nm,0.3s						
SHLS				*e*S		**Sg**	**22 15 45.7 +1.8**
	56nm,0.5s						
PDGK	**Podgornoye**	**2.36**	**15**	⇓P		**Pb**	**22 15 16.2 -0.5**
	2.4nm,0.3s						
PDGK				⇑S		**Sg**	**22 15 47.2 -2.1**
	17nm,0.6s						
TNSS	**Tian-Shan**	**2.37**	**328**	Pg		**Pg**	**22 15 19.0 +0.1**
	2.7nm,0.1s						
TNSS				Lg		Lg	22 15 50.1
	2.8nm,0.4s						
TNSS	**Tian-Shan**	**2.37**	**328**	*e*P		**Pg**	**22 15 19.0 +0.1**
	2.7nm,0.1s						
TNSS				*e*S		**Sg**	**22 15 50.1 +0.6**
	2.8nm,0.4s						
KPKS	**Kokpek**	**2.42**	**0**	Pg		**Pb**	**22 15 18.3 +0.7**
	0.3nm,0.1s						
KPKS				Lg		Lg	22 15 49.0
	43nm,0.4s						
MDOK	**Medeo**	**2.44**	**331**	Pg		**Pb**	**22 15 19.6 +1.7**
	14nm,0.4s						
MDOK				Lg		Lg	22 15 51.2
	22nm,0.6s						
KURS	**Kuram**	**2.47**	**352**	Pg		**Pb**	**22 15 19.2 +0.7**
	6.4nm,0.4s						
KURS				Lg		Lg	22 15 50.2
	13nm,0.4s						
KOTS	**Kotyrbulak**	**2.47**	**333**	Pg		**Pb**	**22 15 20.2 +1.6**
	14nm,0.2s						
KOTS				Lg		Lg	22 15 51.9
	20nm,0.2s						
KOTS	**Kotyrbulak**	**2.47**	**333**	*e*P		**Pb**	**22 15 20.2 +1.6**
	14nm,0.2s						
KOTS				*e*S		**Sg**	**22 15 52.0 -1.0**
	20nm,0.2s						
BOOM	**Boomskoye usch**	**2.50**	**306**	⇑*i*P		**Pb**	**22 15 19.1 +0.1**
BOOM				⇑*i*S		**Sb**	**22 15 52.3 +2.1**
IZV	**Izvestkoviy**	**2.51**	**323**	Pg		**Pb**	**22 15 19.7 +0.5**
	9.6nm,0.3s						
IZV				Lg		Lg	22 15 51.2
	14nm,0.3s						
IZV	**Izvestkoviy**	**2.51**	**323**	*e*P		**Pb**	**22 15 19.7 +0.5**
	9.6nm,0.3s						
IZV				*e*S		**Sb**	**22 15 51.2 +0.7**
	14nm,0.3s						
KNDC	**Almaty**	**2.51**	**330**	⇑P		**Pb**	**22 15 20.3 +1.1**
	5.7nm,0.2s						
KNDC				⇑S		**Sg**	**22 15 54.5 +0.3**
	14nm,0.5s						
MTBS	**Maitube**	**2.67**	**322**	Pg		**Pg**	**22 15 24.4 -0.2**
	5.5nm,0.2s						
MTBS				Lg		Lg	22 15 59.3
	9.0nm,0.3s						
MTBS	**Maitube**	**2.67**	**322**	*e*P		**Pg**	**22 15 24.4 -0.2**
	5.5nm,0.2s						
MTBS				*e*S		**Sg**	**22 15 59.3 +0.1**
	9.0nm,0.3s						
KST	**Kastek**	**2.84**	**316**	Pg		**Pg**	**22 15 27.6 -0.2**
	4.3nm,0.3s						
KST				Lg		Lg	22 16 04.9
	6.8nm,0.6s						
KST	**Kastek**	**2.84**	**316**	*e*P		**Pg**	**22 15 27.6 -0.2**
	4.3nm,0.3s						
KST				*e*S		**Sg**	**22 16 04.9 +0.3**
	6.8nm,0.6s						
TKM2	**Tokmak 2**	**2.96**	**310**	⇓*e*P		**Pb**	**22 15 25.2 -1.7**
TKM2				⇓*i*S		**Sb**	**22 16 02.7 -0.8**
KTBS	**Karatobe**	**3.04**	**332**	Pg		**Pb**	**22 15 29.5 +1.3**
	10nm,0.3s						
KTBS				Lg		Lg	22 16 08.2
	7.1nm,0.3s						
BLB	**Baldybastay**	**3.05**	**357**	Pg		**Pb**	**22 15 29.7 +1.2**
	4.7nm,0.1s						
BLB				Lg		Lg	22 16 08.4
	23nm,0.4s						
CHKK	**Chushkaly**	**3.07**	**337**	Pg		**Pb**	**22 15 30.6 +1.9**
	5.8nm,0.2s						
CHKK				Lg		Lg	22 16 09.9
	20nm,0.4s						
CHKK	**Chushkaly**	**3.07**	**337**	*e*P		**Pb**	**22 15 30.6 +1.9**
	5.8nm,0.2s						
CHKK				*e*S		**Sg**	**22 16 09.9 -2.2**
	20nm,0.4s						
DGS	**Degeres**	**3.08**	**316**	Pg		**Pg**	**22 15 31.6 -0.9**
	5.0nm,0.5s						
DGS				Lg		Lg	22 16 11.4
	6.8nm,0.4s						
ARXS	**Arharly**	**3.23**	**349**	Pg		**Pb**	**22 15 32.7 +1.3**
	2.9nm,0.2s						
ARXS				Lg		Lg	22 16 13.6
	28nm,0.5s						
ARXS	**Arharly**	**3.23**	**349**	*e*P		**Pb**	**22 15 32.7 +1.3**
ARXS				*e*S		**Sg**	**22 16 13.6 -3.5**
KNOS	**Konyrlen**	**3.33**	**6**	Pg		**Pb**	**22 15 33.8 +0.6**
	3.1nm,0.2s						
KNOS				Lg		Lg	22 16 15.4
	13nm,0.3s						
KRBS	**Karabastau**	**3.45**	**321**	Pg		**Pg**	**22 15 38.5 -1.2**
	2.4nm,0.2s						
KRBS				Lg		Lg	22 16 23.5
	0.8nm,0.4s						

NEIC ***06*** *22:39:13.2±1.2, 11°.5N±0°.1×141°.9E±0°.1, h10km±1km, mb4.6/20, Error ellipse: s-maj=20.6km s-min=12.8km az=139.0*
IDC ***06*** *22:39:21.4±2.3, 11°.64N×141°.94E, h77km±21km, mb3.8/16, mbtmp4.2/18, MS3.4/2, Error ellipse: s-maj=17.9km s-min=13.7km az=112.0*
ISC 06 22:39:18.2±0.5, 11°.58N±0°.08×141°.86E±0°.07, h49km, n40, σ1§20/43, mb4.4/25, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
GUMO	**Guam**	**3.55**	**56**		**Pn**	**22 40 09.4 -1.5**
GUMO				Sn		**Sn**	**22 40 52.0 +0.5**
GUMO	**Guam**	**3.55**	**56**	P		**Pn**	**22 40 12.1 +1.3**
	117nm,0.3s,baz=187,slow=17,SNR=3.7						
GUMO				S		**Sn**	**22 40 53.8 +2.2**
	228nm,0.4s,baz=217,slow=20,SNR=8.8						
GUMO				LR	LR		22 41 26.9
	comp=Z,203nm,19.7s,baz=238,slow=36						
JAY	**Jayapura**	**14.05**	**185**	P		**Pn**	**22 42 37.4 +2.6**
	3.5nm,0.3s,baz=0.0,slow=1.0,SNR=6.9						
PATS	**Pohnpei**	**16.91**	**105**	Pn		**Pn**	**22 43 09.6 -2.0**
PATS				IAmb	IAmb		22 43 12.8
	comp=Z,71nm,1.1s						
LUWI	**Luwuk**	**22.74**	**238**			**P**	**22 44 14.1 -2.3**
TOLI2	**Tolitoli**	**23.36**	**245**	P		**P**	**22 44 21.1 -1.5**
YHNB	**Yeheng**	**23.37**	**307**	P		**P**	**22 44 22.8 +0.1**
JNU	**Nakatsue**	**23.69**	**337**	P		**P**	**22 44 25.1 -0.4**
JNU				IAmb	IAmb		22 44 27.4
	comp=Z,9.9nm,0.8s						
JSD	**Sado**	**26.54**	**354**	P		**P**	**22 44 52.1 +0.7**
JSD				IAmb	IAmb		22 45 05.3
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**32.01**	**193**	P		**P**	**22 45 38.5 -1.7**
WRA	**Warramunga Arr**	**32.19**	**193**	P		**P**	**22 45 41.8 +0.1**
	comp=Z,0.8nm,0.7s,baz=10,slow=9.1,SNR=10						
	comp=Z,0.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**33.56**	**209**	P		**P**	**22 45 51.9 -1.8**
USRK	**Ussuriysk Ar.**	**33.60**	**347**	P		**P**	**22 45 52.2 -1.5**
	comp=Z,4.2nm,0.8s,baz=167,slow=8.9,SNR=6.2						
	comp=Z,4.2nm,0.8s						
ENH	**Enshi**	**35.31**	**307**	P		**P**	**22 46 09.1 +0.2**
ENH				IAmb	IAmb		22 46 11.1
	comp=Z,10nm,0.9s						
ASAR	**Alice Springs**	**35.89**	**193**	P		**P**	**22 46 14.7 +0.9**
	comp=Z,0.3nm,0.4s,baz=15,slow=10,SNR=6.4						
ASAR				PcP		**PcP**	**22 48 41.4 +1.1**
	comp=Z,0.6nm,0.8s,baz=14,slow=5.2,SNR=3.0						
	comp=Z,0.3nm,0.4s						
CM31	**Chiang Mai Arr**	**41.93**	**285**	P		**P**	**22 47 05.5 +1.0**
CM31				IAmb	IAmb		22 47 08.3
	comp=Z,20nm,1.4s						
CMAR	**Chiang Mai Arr**	**41.93**	**285**	P		**P**	**22 47 06.4 +1.9**
	comp=Z,4.1nm,0.8s,baz=90,slow=8.1,SNR=28						
	comp=Z,4.1nm,0.8s						
LZDM	**Lanzhou Array**	**42.12**	**312**	P		**P**	**22 47 07.7 +1.5**
	comp=Z,0.7nm,0.3s,baz=116,slow=13,SNR=1.9						
	comp=Z,0.7nm,0.3s						
SONM	**Songino Array**	**46.75**	**328**	P		**P**	**22 47 44.1 +1.4**
	comp=Z,0.3nm,0.6s,baz=140,slow=9.3,SNR=2.7						
SONM				PcP		**PcP**	**22 49 15.5 0.0**
	comp=Z,1.3nm,0.6s,baz=140,slow=4.8,SNR=8.2						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**60.92**	**317**	P		**P**	**22 49 26.1 -0.2**
	comp=Z,0.7nm,0.8s,baz=100,slow=7.6,SNR=5.7						
	comp=Z,0.7nm,0.8s						
MAKZ	**Makanchi**	**61.14**	**317**	P		**P**	**22 49 27.9 +0.2**
ZALV	**Zalesovo Beam**	**61.57**	**326**	P		**P**	**22 49 30.3 -0.1**
	comp=Z,0.7nm,0.5s,baz=98,slow=8.9,SNR=4.8						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**64.25**	**321**	P		**P**	**22 49 48.5 +0.3**
KURK				IAmb	IAmb		22 49 49.8
	comp=Z,4.7nm,0.8s						
KURBB	**Kurchatov Arra**	**64.28**	**321**	P		**P**	**22 49 48.1 -0.3**
	comp=Z,3.0nm,0.8s,baz=106,slow=6.6,SNR=19						
	comp=Z,3.0nm,0.8s						
KDAK	**Kodiak Island**	**67.31**	**32**	LR	LR		23 16 34.7
	comp=Z,69nm,21.4s,baz=79,slow=33						
SLKM	**Skilak Lake**	**69.17**	**29**	P		**P**	**22 50 19.6 +0.1**
BVAR	**Borovoye Array**	**69.69**	**322**	P		**P**	**22 50 23.0 +0.2**
	comp=Z,2.3nm,0.6s,baz=96,slow=8.9,SNR=18						
	comp=Z,2.3nm,0.6s						
MLY	**Manley**	**70.09**	**25**	P		**P**	**22 50 25.6 +0.5**
MLY				IAmb	IAmb		22 50 26.8
	comp=Z,4.8nm,0.7s						
IL31		**71.63**	**25**	P		**P**	**22 50 33.8 -0.5**
IL31				IAmb	IAmb		22 50 34.5
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	**71.63**	**25**	P		**P**	**22 50 33.2 -1.1**
	comp=Z,2.8nm,0.7s,baz=257,slow=5.7,SNR=39						
	comp=Z,2.8nm,0.7s						
HRA	**Herat**	**75.04**	**303**	P		**P**	**22 50 55.2 -0.1**
HRA				IAmb	IAmb		22 50 56.8
	comp=Z,4.2nm,0.8s						
HYT	**Haines Junctio**	**75.40**	**30**	P		**P**	**22 50 57.0 +0.2**
HYT				IAmb	IAmb		22 51 07.4
	comp=Z,7.8nm,1.1s						
AB31	**Akbulak array**	**76.06**	**318**	P		**P**	**22 51 00.8 +0.2**
SPITS	**Spitsbergen Ar**	**85.53**	**350**	P		**P**	**22 51 50.6 0.0**
	comp=Z,14nm,1.1s,baz=72,slow=9.3,SNR=6.8						
	comp=Z,14nm,1.1s						
YKA	**Yellowknife Ar**	**85.97**	**27**	P		**P**	**22 51 53.8 +0.7**
	comp=Z,0.7nm,0.6s,baz=299,slow=8.3,SNR=4.7						
	comp=Z,0.7nm,0.6s						
ARCES	**ARCESS Array B**	**88.06**	**342**	P		**P**	**22 52 03.1 0.0**
	comp=Z,3.9nm,1.0s,baz=56,slow=5.6,SNR=5.5						
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	**90.46**	**51**	P		**P**	**22 52 13.3 -1.9**
	comp=Z,1.1nm,0.8s,baz=281,slow=8.0,SNR=5.5						
	comp=Z,1.1nm,0.8s						
FIA1	**FINESS Array S**	**91.71**	**334**	P		**P**	**22 52 18.7 -1.6**
FINES	**FINESS Array B**	**91.71**	**334**	P		**P**	**22 52 19.1 -1.1**
	comp=Z,1.4nm,0.4s,baz=64,slow=3.6,SNR=19						
	comp=Z,1.4nm,0.4s						
LPAZ	**La Paz**	**150.54**	**103**	PKPbc		**PKiKP**	**22 59 06.7 -0.3**
	comp=Z,3.4nm,0.8s,baz=203,slow=7.7,SNR=8.8						

SNET ***06*** *22:47:07.1±1.0, 12°.74N×88°.48W, h18km±14km, ML2.6*
CATAC 06 22:47:05.8±0.6, 13°N±4°×8°8W±°, h38km±9km, M3.0/7, MLv3.0/7, Error ellipse: s-maj=8.2km s-min=2.8km az=23.7, confirmed, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
RANC	**El Ranchito**	**0.78**	**7**	S		Sn	22 47 32.3 +1.4
RANC	**El Ranchito**	**0.78**	**7**	P		Pn	22 47 21.1 +0.6
LCND	**La Caada**	**0.81**	**37**	*e*P		Pn	22 47 21.1 +0.3
LCND				*e*S		Sn	22 47 31.2 -0.3
PACA	**Pacayal**	**0.81**	**4**	*e*P		Pn	22 47 21.5 +0.7
PACA				*e*S		Sn	22 47 31.7 0.0
PACA	**Pacayal**	**0.81**	**4**	P		Pn	22 47 21.6 +0.7
PACA	**Pacayal**	**0.81**	**4**	S		Sn	22 47 33.0 +1.3
CNCH	**Conchagua**	**0.82**	**41**	*e*P		Pn	22 47 22.4 +1.5
CNCH				*e*S		Sn	22 47 33.5 +1.6
CNRM	**Centro Naciona**	**0.84**	**15**	S		Sn	22 47 33.7 +1.4
TECA	**Tecapa**	**0.84**	**352**	*e*P		Pn	22 47 21.6 +0.3
TECA				*e*S		Sn	22 47 32.1 -0.5
CSGN	**Cosiguina Volc**	**0.87**	**69**	S		Sn	22 47 34.0 +0.9
POTN	**Potosi Cosigui**	**0.92**	**68**	P		Pn	22 47 22.4 +0.1
POTN				S		Sn	22 47 35.3 +0.9
TECO	**Alcaldia de Te**	**0.95**	**336**	S		Sn	22 47 35.2 0.0
POSS	**Presa 15 de Se**	**0.97**	**350**	S		Sn	22 47 36.5 +0.9
UESV	**Universidad de**	**1.05**	**338**	S		Sn	22 47 38.0 +0.5
LFRS	**El Faro**	**1.16**	**326**	*e*P		Pn	22 47 25.9 +0.2
PAVA	**Las Pavas**	**1.18**	**333**	S		Sn	22 47 41.3 +0.6
CRIN	**San Cristobal**	**1.30**	**88**	S		Sn	22 47 46.2 +2.3
PKGN	**Cerro Pekin**	**1.38**	**89**	P		Pn	22 47 28.3 -0.2
PKGN				S		Sn	22 47 46.4 +1.0
PMON	**Piamonte**	**1.38**	**319**	S		Sn	22 47 45.9 +0.1
JAYA	**Jayaque - finc**	**1.43**	**314**	S		Sn	22 47 48.1 +1.0
POLN	**Al Sur del Vol**	**1.54**	**90**	P		Pn	22 47 31.0 +0.3
POLN				S		Sn	22 47 49.8 +0.3
TGUH	**Tegucigalpa,Un**	**1.76**	**38**	S		Sn	22 47 56.0 +0.8
NUBE	**Las Nubes**	**1.83**	**312**	*e*P		Pn	22 47 35.8 +0.8
NUBE				*e*S		Sn	22 47 56.2 -0.8
NUBE	**Las Nubes**	**1.83**	**312**	P		Pn	22 47 35.4 +0.5
FAME	**Alcaldia de Sa**	**1.97**	**307**	S		Sn	22 48 01.1 +0.8
YUSH	**Yuscaran**	**1.98**	**49**	S		Sn	22 48 01.1 +0.6
LIMN	**Finca el Limon**	**2.01**	**78**	P		Pn	22 47 37.5 +0.2
LIMN				S		Sn	22 48 01.6 +0.3

THE ***06*** *23:02:14.9, 40°.5N±0°.9×2°.1E±°, h2km±1km, M2.9/12, MLh2.9/12*
BEO ***06*** *23:02:14.3±2.9, 40°.07N×21°.05E, h51km±9km, ML2.6/4*

ATH ***06*** *23:02:15.2, 40°.45N×20°.80E, h13km±1km, ML2.9/7, Manual Solution by K.Orfanogiannaki First location: 2019/11/06 23:03:24, This location: 2020/10/06 10:28:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
SKO ***06*** *23:02:16.9, 40°.51N×20°.73E, h19km, ML2.9*
ISC 06 23:02:15.6±0.9, 40°.45N±0°.02×20°.81E±0°.03, h19km±2km, n43, σ1§11/61, 1C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
KBN	**Korca**	**0.17**	**356**	P		**Pb**	**23 02 18.6 -0.8**
KBN				S		**Sb**	**23 02 21.4 -0.5**
NEST	**Nestorio**	**0.19**	**101**	P		**Pg**	**23 02 20.0 -0.6**
NEST				S		**Sg**	**23 02 23.5 -0.3**
NEST	**Nestorio**	**0.19**	**101**	P		**Pg**	**23 02 19.9 -0.6**
NEST				S		**Sb**	**23 02 22.2 -0.4**
PENT	**Pentalofos**	**0.36**	**135**	P		**Pg**	**23 02 22.8 -0.4**
PENT				S		**Sg**	**23 02 27.9 -0.5**
LMS2	**Laimos Florina**	**0.46**	**34**	P		**Pg**	**23 02 23.7 -1.3**
LMS2				S		**Sg**	**23 02 31.2 -0.2**
OHR	**Ohrid**	**0.66**	**360**	⇑*i*Pg		**Pg**	**23 02 28.4 -0.3**
OHR				*i* Sg		**Sg**	**23 02 38.3 +0.8**
OHR				*e*Lg		Lg	23 02 38.8
	comp=N,356nm,0.4s						
OHR				*e*Lg		Lg	23 02 38.9
	comp=E,927nm,0.5s						
MSVA	**Metsovo**	**0.74**	**157**	P		**Pb**	**23 02 29.1 -0.7**
MSVA				S		**Sb**	**23 02 39.0 -0.6**
KZN	**Kozani**	**0.75**	**101**	P		**Pb**	**23 02 29.8 -0.3**
KZN				S		**Sn**	**23 02 42.1 -0.1**
KZN	**Kozani**	**0.75**	**101**	P		**Pb**	**23 02 29.4 -0.7**
KZN				S		**Sg**	**23 02 40.4 +0.1**
JAN	**Janina**	**0.79**	**177**	P		**Pb**	**23 02 29.7 -1.1**
JAN				S		**Sg**	**23 02 41.6 0.0**
JAN	**Janina**	**0.79**	**177**	P		**Pb**	**23 02 29.7 -1.1**
JAN				S		**Sg**	**23 02 41.2 -0.4**
PRMD	**Pramanda**	**0.95**	**166**	P		**Pb**	**23 02 32.8 -0.6**
NASA	**Naoussa**	**0.98**	**79**	P		**Pn**	**23 02 34.1 -0.2**
IGT	**Igoumenitsa**	**0.98**	**202**	⇓*i*Pg		**Pg**	**23 02 34.7 0.0**
IGT				*i* Sg		**Sn**	**23 02 50.1 +2.2**
IGT	**Igoumenitsa**	**0.98**	**202**	P		**Pn**	**23 02 34.1 -0.3**
TETR	**Tetrakomo, Epi**	**1.16**	**162**	P		**Pb**	**23 02 36.9 -0.2**
TETR	**Tetrakomo, Epi**	**1.16**	**162**	P		**Pg**	**23 02 37.5 -0.6**
THL	**Klokotos Trika**	**1.28**	**133**	P		**Pg**	**23 02 39.0 -0.1**
THL	**Klokotos Trika**	**1.28**	**133**	P		**Pb**	**23 02 38.9 -0.2**
LIT	**Litokhoron**	**1.33**	**105**	P		**Pg**	**23 02 40.6 -0.8**
LIT	**Litokhoron**	**1.33**	**105**	*i* Pg		**Pg**	**23 02 40.9 -0.5**
LIT				*i* Sg		**Sg**	**23 03 00.8 +2.0**
VAY	**Valandovo**	**1.60**	**56**	*i* Pn		**Pb**	**23 02 44.4 -0.1**
VAY				*i* Sg		**Sg**	**23 03 08.4 +1.3**
VAY				*e*Lg		Lg	23 03 08.4
	comp=E,42nm,0.4s						
VAY				*e*Lg		Lg	23 03 09.0
	comp=N,80nm,0.6s						
THE	**Thessaloniki**	**1.66**	**83**	*i* Pn		**Pb**	**23 02 44.8 -0.6**
NYDR	**Nydri-Lefkada**	**1.74**	**183**	P		**Pg**	**23 02 48.6 -0.3**
KNT	**Kendrikon**	**1.74**	**65**	P		**Pb**	**23 02 46.2 -0.7**
KNT	**Kendrikon**	**1.74**	**65**	*i* Pn		**Pb**	**23 02 46.2 -0.7**
AGG	**Agios Georgios**	**1.85**	**140**	P		**Pb**	**23 02 47.7 -1.1**
PVO	**Paravola**	**1.91**	**163**	P		**Pg**	**23 02 51.0 -1.3**
SOH	**Sokhos**	**1.98**	**78**	*i* Pn		**Pb**	**23 02 49.7 -1.2**
KKB	**Krupnik**	**2.24**	**51**	*i* Pn		**Pb**	**23 02 54.0 -1.4**
SERG	**Sergoula**	**2.25**	**154**	P		**Pb**	**23 02 55.7 0.0**
BOSS	**Bosilegrad**	**2.40**	**31**	*e*Pn		**Pn**	**23 02 55.3 +1.4**
BARS	**Barje**	**2.48**	**17**	*e*Pn		**Pn**	**23 02 56.3 +1.3**
BARS				*e*Sn		**Sn**	**23 03 26.3 +1.4**
MMB	**Musomishta**	**2.48**	**63**	*i* Pn		**Pb**	**23 02 57.8 -1.8**
SJES	**Sjenica**	**2.88**	**348**	*e*Pn		**Pb**	**23 03 04.4 -2.0**
TREB	**Trebinje**	**2.92**	**322**	*e*Pn		**Pn**	**23 03 02.5 +1.5**
TREB				*e*Sn		**Sb**	**23 03 39.7 -2.6**
ZAPS	**Zavoj**	**3.13**	**25**	*e*Pn		**Pn**	**23 03 04.0 0.0**
IVAS	**Ivanjica**	**3.16**	**351**	*e*Pn		**Pn**	**23 03 06.4 +2.0**
BOVS	**Bovan**	**3.25**	**12**	*e*Pn		**Pn**	**23 03 06.7 +1.1**
BOVS				*e*Sn		**Sn**	**23 03 45.6 +1.8**
DION	**Dionisos Attik**	**3.39**	**133**	P		**Pn**	**23 03 09.0 +1.5**
GRUS	**Gruza**	**3.44**	**359**	*e*Pn		**Pn**	**23 03 09.3 +1.2**
ZAGS	**Zajecar**	**3.52**	**17**	*e*Pn		**Pn**	**23 03 10.2 +0.9**
ZAGS				*e*Sn		**Sn**	**23 03 51.4 +0.9**
TEKS	**Tekeris**	**4.20**	**347**	*e*Pn		**Pn**	**23 03 21.1 +2.4**

DJA ***06*** *23:05:02.4±0.8, 13°.N±5°.×12°.6E±°, h13km±4km, M4.5/16, mb4.5/16, mB4.8/2, Mw(mB)4.0/2*
NEIC ***06*** *23:05:07.6±1.1, 12°.42N±0°.07×125°.53E±0°.09, h35km±2km, mb4.5/30, Error ellipse: s-maj=18.9km s-min=3.3km az=125.0*
IDC ***06*** *23:05:11.5±3.4, 12°.38N×125°.68E, h75km±30km, mb3.9/19, mbtmp4.2/20, MS3.3/7, Error ellipse: s-maj=25.3km s-min=11.9km az=67.0*
ISC 06 23:05:08.5±0.5, 12°.39N±0°.06×125°.73E±0°.09, h50km, n75, σ1§61/65, mb4.5/39, MS3.2/5, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
TGY	**Tagaytay City**	**4.96**	**291**	P		**Pn**	**23 06 24.0 +3.4**
	105nm,0.3s,baz=107,slow=14,SNR=1.1						
TGY				S		**Sn**	**23 07 20.8 +4.1**
	129nm,0.4s,baz=50,slow=18,SNR=1.1						
TOLI2	**Tolitoli**	**12

WRA				PcP	**PcP**	**23 14 23.4**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=344,slow=3.1,SNR=2.6						
	comp=Z,1.2nm,0.8s						
ASAJ	**Asahikawa**	**34.78**	**21**	LR	LR	23 26 48.9	
	comp=Z,23nm,18.5s,baz=148,slow=37						
GTA	**Gaotai**	**35.35**	**324**	*e*P	**P**	**23 12 00.9**	**+1.6**
GTA				sP	pP	23 12 09.9	-1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AS31	**Alice Springs**	**36.72**	**167**	P	**P**	**23 12 11.6**	**+0.6**
ASAR	**Alice Springs**	**36.72**	**167**	P	**P**	**23 12 11.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=344,slow=8.3,SNR=8.7						
ASAR				PcP	**PcP**	**23 14 33.8**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=348,slow=3.0,SNR=1.9						
	comp=Z,0.8nm,0.6s						
SONM	**Songino Array**	**38.85**	**339**	P	**P**	**23 12 28.6**	**-0.4**
	comp=Z,3.2nm,1.1s,baz=140,slow=5.1,SNR=12						
	comp=Z,3.2nm,1.1s						
EVN	**Everest**	**39.47**	**299**	P	**P**	**23 12 33.2**	**-1.7**
H11S3	**WAKE ISLAND Hy**	**39.88**	**76**	T	T	23 55 28.0	
	baz=268,slow=74						
H11S1	**WAKE ISLAND Hy**	**39.89**	**76**	T	T	23 55 36.1	
	baz=268,slow=74						
H11S2	**WAKE ISLAND Hy**	**39.90**	**76**	T	T	23 55 29.4	
	baz=268,slow=74						
H11N1	**WAKE ISLAND Hy**	**40.15**	**74**	T	T	23 55 48.1	
	baz=266,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.15**	**74**	T	T	23 55 48.6	
	baz=266,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.16**	**74**	T	T	23 55 49.4	
	baz=266,slow=74						
MORW	**Morawa**	**42.27**	**193**	P	**P**	**23 12 56.2**	**-1.0**
FORT	**Forrest**	**42.98**	**177**	P	**P**	**23 13 03.5**	**+0.6**
FORT				IAmb	IAmb	23 13 25.7	
	comp=Z,8.8nm,0.8s						
BBOO	**Buckleboo**	**46.02**	**168**	P	**P**	**23 13 27.6**	**+0.4**
STKA	**Stephens Creek**	**46.57**	**161**	P	**P**	**23 13 32.3**	**+0.8**
STKA	**Stephens Creek**	**46.57**	**161**	P	**P**	**23 13 32.3**	**+0.8**
	comp=Z,7.7nm,0.8s,baz=324,slow=8.7,SNR=7.0						
	comp=Z,7.7nm,0.8s						
PETK	**Petropavlovsk-**	**47.95**	**25**	P	**P**	**23 13 43.3**	**+1.3**
	comp=Z,4.6nm,1.0s,baz=236,slow=4.4,SNR=2.5						
	comp=Z,4.6nm,1.0s						
MKAR	**Makanchi Array**	**50.03**	**322**	P	**P**	**23 13 58.6**	**+0.5**
	comp=Z,3.2nm,0.9s,baz=122,slow=7.8,SNR=17						
	comp=Z,3.2nm,0.9s						
MAKZ	**Makanchi**	**50.23**	**322**		**P**	**23 13 58.3**	**-1.2**
MAKZ				IAmb	IAmb	23 14 03.2	
	comp=Z,7.8nm,1.2s						
ZAA0	**Zalesovo Array**	**52.52**	**331**	P	**P**	**23 14 15.5**	**-1.0**
ZAA0				IAmb	IAmb	23 14 20.6	
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**52.52**	**331**	P	**P**	**23 14 16.8**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=114,slow=6.5,SNR=9.9						
	comp=Z,1.9nm,0.7s						
KURK	**Kurchatov**	**54.03**	**325**		**P**	**23 14 27.1**	**-0.6**
KURBB	**Kurchatov Arra**	**54.04**	**325**	P	**P**	**23 14 28.1**	**+0.4**
	comp=Z,8.2nm,1.1s,baz=120,slow=7.4,SNR=16						
	comp=Z,8.2nm,1.1s						
KK31	**Karatay Array**	**56.40**	**314**	P	**P**	**23 14 43.9**	**-1.1**
KK31				IAmb	IAmb	23 14 48.3	
	comp=Z,9.7nm,1.4s						
BVAR	**Borovoye Array**	**59.63**	**325**	P	**P**	**23 15 07.7**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=101,slow=7.8,SNR=14						
	comp=Z,2.6nm,0.7s						
HRA	**Herat**	**61.27**	**302**	P	**P**	**23 15 18.1**	**-1.1**
HRA				IAmb	IAmb	23 15 29.4	
	comp=Z,3.6nm,0.9s						
NRIK	**Noril'sk**	**61.84**	**346**	P	**P**	**23 15 21.8**	**-0.2**
NRIK	**Noril'sk**	**61.84**	**346**	P	**P**	**23 15 22.9**	**+0.9**
	comp=Z,4.4nm,1.0s,baz=135,slow=7.1,SNR=4.7						
	comp=Z,4.4nm,1.0s						
AB31	**Akbulak array**	**64.93**	**319**	P	**P**	**23 15 41.9**	**-1.0**
AB31				IAmb	IAmb	23 15 53.2	
	comp=Z,3.2nm,0.8s						
RAYN	**Ar Rayn**	**76.29**	**291**		**P**	**23 16 51.5**	**-1.2**
RAYN				IAmb	IAmb	23 17 02.6	
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**76.39**	**312**	P	**P**	**23 16 53.8**	**+1.1**
	comp=Z,4.6nm,1.2s,baz=97,slow=8.1,SNR=4.2						
	comp=Z,4.6nm,1.2s						
GURO	**Guroymak-BITLI**	**77.50**	**307**		**P**	**23 16 59.2**	**-0.1**
GURO				IAmb	IAmb	23 17 03.6	
	comp=Z,6.5nm,0.9s						
ILAR	**Eielson Array**	**77.78**	**26**	P	**P**	**23 17 01.0**	**+0.9**
ILAR	**Eielson Array**	**77.78**	**26**	P	**P**	**23 17 01.0**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=257,slow=6.9,SNR=2.6						
	comp=Z,0.3nm,0.8s						
INK	**Inuvik**	**82.52**	**22**	P	**P**	**23 17 26.4**	**+0.8**
INK				IAmb	IAmb	23 17 29.1	
	comp=Z,6.7nm,1.2s						
M30M	**Minto, Yukon**	**82.52**	**28**	P	**P**	**23 17 26.7**	**+0.9**
M30M				IAmb	IAmb	23 17 42.8	
	comp=Z,3.8nm,1.2s						
H31M	**Peel River**	**82.83**	**24**	P	**P**	**23 17 26.9**	**-0.4**
H31M				IAmb	IAmb	23 17 49.2	
	comp=Z,9.9nm,1.4s						
FINES	**FINESS Array B**	**83.78**	**332**	P	**P**	**23 17 32.6**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=76,slow=5.8,SNR=1.4						
	comp=Z,1.4nm,0.8s						
BRTR	**Keskin Array B**	**83.78**	**309**	P	**P**	**23 17 32.9**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=64,slow=3.4,SNR=4.1						
	comp=Z,0.3nm,0.6s						
AKASG	**Malin Array Be**	**84.59**	**321**	P	**P**	**23 17 35.4**	**-1.2**
	comp=Z,5.1nm,1.1s,baz=69,slow=5.1,SNR=6.3						
	comp=Z,5.1nm,1.1s						
KIEV	**Kiev**	**84.60**	**321**	P	**P**	**23 17 34.9**	**-1.7**
KIEV				IAmb	IAmb	23 17 39.8	
	comp=Z,8.9nm,1.2s						
CSS	**Mathiatis**	**84.94**	**305**	P	P	23 17 36.6	-2.1
VNDA	**Vanda**	**92.09**	**173**	P	**P**	**23 18 12.8**	**+1.0**
VNDA				IAmb	IAmb	23 18 15.5	
	comp=Z,4.8nm,1.3s						
VNDA	**Vanda**	**92.09**	**173**	P	**P**	**23 18 12.4**	**+0.7**
	comp=Z,2.0nm,1.1s,baz=323,slow=5.4,SNR=5.3						
	comp=Z,2.0nm,1.1s						

*NEIC **06** 23:18:59.1±1.2, 15.2S±0.1×174.9W±0.1, h231km±6km, mb4.3/21, Error ellipse: s-maj=19.9km s-min=14.9km az=116.0*

*IDC **06** 23:19:00.3±7.4, 15.07S×175.07W, h240km±67km, mb3.8/11, mbtmp4.4/11, Error ellipse: s-maj=22.4km s-min=16.6km az=101.0*

ISC 06 23:19:00.5±0.4, 15.17S±0.09×174.88W±0.10, h250km, n87, σ0.87/86, mb4.2/20, 13C-11D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.26**	**68**		**Pn**	**23 19 53.3**	**-2.6**
NIUE	**Niue**	**6.13**	**130**	Pn	**Pn**	**23 20 29.0**	**-1.2**
MSVF	**Nonsavu**	**7.24**	**248**		**Pn**	**23 20 44.1**	**-0.3**
TOZ	**Tahuroa Road**	**24.03**	**199**	P	**P**	**23 23 52.0**	**-0.9**
TOZ				IAmb	IAmb	23 23 53.6	
	comp=Z,12nm,1.1s						
RTZ	**Ruatahuna**	**24.43**	**196**	P	**P**	**23 23 55.6**	**-1.0**
RTZ				IAmb	IAmb	23 23 59.4	
	comp=Z,5.5nm,0.8s						
WHZ	**Wether Hill Ro**	**33.85**	**202**	P	**P**	**23 25 18.9**	**-0.6**
COEN	**Coen**	**40.57**	**266**	P	**P**	**23 26 16.6**	**+0.4**
COEN				IAmb	IAmb	23 26 22.5	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**42.92**	**239**	P	**P**	**23 26 33.8**	**-1.2**
	comp=Z,2.7nm,0.7s,baz=90,slow=6.1,SNR=3.1						
	comp=Z,2.7nm,0.7s						
BBOO	**Buckleboo**	**47.69**	**239**	P	**P**	**23 27 11.6**	**-0.8**
WB0	**Warramunga Arr**	**48.46**	**257**	P	**P**	**23 27 17.6**	**-0.9**
WRA	**Warramunga Arr**	**48.50**	**257**	P	**P**	**23 27 18.1**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=91,slow=8.0,SNR=31						
WRA				PcP	**PcP**	**23 28 41.2**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=90,slow=4.0,SNR=3.3						
	comp=Z,2.7nm,0.6s						
AS31	**Alice Springs**	**48.82**	**252**	P	**P**	**23 27 20.7**	**-0.4**
AS31				IAmb	IAmb	23 27 22.3	
	comp=Z,7.9nm,0.7s						
ASAR	**Alice Springs**	**48.82**	**252**	P	**P**	**23 27 20.8**	**-0.3**
	comp=Z,33nm,0.7s,baz=90,slow=7.5,SNR=283						
ASAR				PcP	**PcP**	**23 28 42.0**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=87,slow=4.0,SNR=2.9						
	comp=Z,33nm,0.7s						
MTN	**Manton Dam**	**52.32**	**265**	P	**P**	**23 27 46.9**	**-0.4**
FORT	**Forrest**	**54.24**	**243**	P	**P**	**23 28 00.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**56.86**	**258**	P	**P**	**23 28 19.4**	**-0.3**
PSA00	**Pilbara Seismi**	**61.90**	**253**	P	**P**	**23 28 52.6**	**-1.5**
PSA00				IAmb	IAmb	23 28 55.1	
	comp=Z,10.0nm,1.4s						

SBA	**Scott Base**	**63.37**	**184**	P	**P**	**23 29 04.5**	**+1.7**
SBA				IAmb	IAmb	23 29 05.1	
	comp=Z,3.5nm,0.8s						
VNDA	**Vanda**	**63.46**	**186**	P	**P**	**23 29 04.0**	**+0.5**
VNDA				IAmb	IAmb	23 29 05.2	
	comp=Z,3.8nm,1.0s						
VNDA	**Vanda**	**63.46**	**186**	P	**P**	**23 29 04.4**	**+1.0**
	comp=Z,2.8nm,0.9s,baz=16,slow=6.5,SNR=12						
	comp=Z,2.8nm,0.9s						
PEA0B	**Petropavlovsk-**	**71.98**	**343**	P	**P**	**23 29 57.1**	**+0.3**
PETK	**Petropavlovsk-**	**71.98**	**343**	P	**P**	**23 29 57.2**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=154,slow=5.3,SNR=5.1						
	comp=Z,4.1nm,0.7s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**23 30 16.3**	**+2.6**
QSPA				IAmb	IAmb	23 30 17.7	
	comp=Z,7.3nm,0.9s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**23 30 16.1**	**+2.4**
	comp=Z,5.1nm,0.8s,baz=53,slow=2.8,SNR=35						
	comp=Z,5.1nm,0.8s						
NVAR	**Mina Array Bea**	**75.12**	**43**	P	**P**	**23 30 17.3**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=254,slow=6.6,SNR=2.1						
	comp=Z,0.7nm,0.8s						
IL31		**82.50**	**12**	P	**P**	**23 30 54.7**	**0.0**
ILAR	**Eielson Array**	**82.50**	**12**	P	**P**	**23 30 55.0**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=208,slow=5.3,SNR=18						
	comp=Z,0.6nm,0.5s						
J25K	**Salcha River,**	**82.67**	**12**	P	**P**	**23 30 55.7**	**0.0**
F19K	**Shaleruckik Mo**	**82.75**	**7**	P	**P**	**23 30 56.4**	**+0.4**
F19K				IAmb	IAmb	23 30 58.3	
	comp=Z,5.3nm,0.9s						
PD31	**Pinedale Array**	**83.06**	**42**	P	**P**	**23 30 58.4**	**-0.1**
PDAR	**Pinedale Array**	**83.06**	**42**	P	**P**	**23 30 59.0**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=242,slow=5.2,SNR=17						
	comp=Z,1.8nm,0.7s						
E19K	**Redstone River**	**83.41**	**7**	P	**P**	**23 31 00.3**	**+0.9**
E19K				IAmb	IAmb	23 31 05.7	
	comp=Z,8.3nm,1.2s						
DAWY	**Dawson**	**83.56**	**15**	P	**P**	**23 31 01.1**	**+0.8**
DAWY				IAmb	IAmb	23 31 06.1	
	comp=Z,6.0nm,1.3s						
BELA	**Belgrano 2**	**84.42**	**172**	P	**P**	**23 31 03.6**	**-0.9**
MAW	**Mawson**	**87.55**	**199**	P	**P**	**23 31 20.4**	**+0.5**
	comp=Z,4.6nm,0.8s,baz=152,slow=5.2,SNR=9.4						
	comp=Z,4.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**91.19**	**289**	P	**P**	**23 31 38.9**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=95,slow=4.4,SNR=9.4						
	comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**108.17**	**322**	PKiKP	**PKiKP**	**23 36 58.3**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=70,slow=4.7,SNR=2.0						
MKAR	**Makanchi Array**	**109.65**	**315**	PKiKP	**PKiKP**	**23 37 01.0**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=111,slow=3.2,SNR=2.5						
KURBB	**Kurchatov Arra**	**112.09**	**319**	PKiKP	**PKiKP**	**23 37 05.4**	**-0.7**
	comp=Z,0.5nm,0.2s,baz=105,slow=1.7,SNR=5.6						
BVAR	**Borovoye Array**	**116.82**	**322**	PKP	**PKPdf**	**23 37 14.7**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=24,slow=3.9,SNR=5.8						
ARCES	**ARCES Array B**	**124.18**	**351**	PKP	**PKPdf**	**23 37 28.7**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=28,slow=4.1,SNR=6.1						
FINES	**FINESS Array B**	**131.40**	**347**	PKP	**PKiKP**	**23 37 43.6**	**-0.1**
	comp=Z,3.3nm,1.0s,baz=14,slow=2.3,SNR=4.4						
BURAR	**Bucovina Array**	**143.61**	**337**	‖P	PKPbc	23 38 04.4	+0.6
BIZ	**Bicaz**	**143.82**	**335**	‖P	PKPab	23 37 54.0	-10
MORC	**Moravsky Berou**	**144.03**	**346**	*e*PKP	PKPbc	23 38 05.3	+0.4
ILGA	**Ilgaz**	**144.22**	**322**	PKPdf	**PKPdf**	**23 38 07.2**	**+0.1**
CFR	**Carcaliu**	**144.33**	**332**	↑P	**PKPdf**	**23 38 06.4**	**-0.5**
ARCR	**ARCALIA**	**144.38**	**337**	↑P	**PKPdf**	**23 38 07.0**	**+0.1**
VRI	**Vrincioaia**	**144.42**	**334**	↑P	**PKPab**	**23 38 03.2**	**-2.7**
TPGR	**Topolog**	**144.44**	**331**	‖P	**PKPdf**	**23 38 07.6**	**+0.5**
PLOR	**Plostina**	**144.47**	**334**	↑P	**PKPdf**	**23 38 06.7**	**-0.4**
TURR	**Turia**	**144.57**	**335**	‖P	**PKPdf**	**23 38 07.7**	**+0.4**
VRAC	**Vranov**	**144.68**	**347**	↑P	**PKPdf**	**23 38 07.8**	**+0.5**
VRAC	**Vranov**	**144.68**	**347**	*e*PKP	**PKPdf**	**23 38 07.1**	**-0.3**
TIRR	**Tirgusor**	**144.75**	**331**	‖P	**PKPdf**	**23 38 08.4**	**+0.8**
HARR	**Harsova**	**144.80**	**331**	↑P	**PKPdf**	**23 38 08.5**	**+0.8**
JAVC	**Velka Javorina**	**144.86**	**346**	*e*PKP	**PKPdf**	**23 38 08.3**	**+0.5**
DOPR	**Dopca**	**144.90**	**335**	‖P	**PKPdf**	**23 38 08.8**	**+0.9**
NEHR	**Nehoiu**	**144.95**	**334**	↑P	**PKPab**	**23 38 08.2**	**+0.2**
KRUC	**Moravsky**	**144.96**	**347**	*e*PKP	**PKPab**	**23 38 07.9**	**0.0**
MLR	**Muntele Rosu**	**145.05**	**334**	PKPbc	**PKPab**	**23 38 08.5**	**0.0**
MLR	**Muntele Rosu**	**145.05**	**334**	‖P	**PKPab**	**23 38 09.5**	**+1.0**
BRTR	**Keskin Array B**	**145.07**	**320**	PKP	**PKPab**	**23 38 09.2**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=74,slow=2.7,SNR=15						
ISR	**Istrita**	**145.09**	**333**	↑P	**PKPab**	**23 38 09.3**	**+0.7**
MARR	**Marisel-Cluj**	**145.18**	**338**	↑P	**PKPab**	**23 38 10.2**	**+1.3**
DRGR		**145.22**	**339**	‖P	**PKPbc**	**23 38 08.8**	**+0.4**
KIRS	**Kirsehir-Merke**	**145.24**	**319**	‖P	**PKPab**	**23 38 09.7**	**+0.3**
GERES	**GERESS Array B**	**145.69**	**350**	PKPbc	**PKPab**	**23 38 10.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=6.3,slow=3.7,SNR=6.7						
ARR	**Arges**	**145.69**	**335**	↑P	**PKPab**	**23 38 11.9**	**+1.0**
LOT	**Lotru**	**145.97**	**336**	↑P	**PKPbc**	**23 38 11.0**	**0.0**
SIRR	**Siria**	**146.04**	**339**	↑P	**PKPab**	**23 38 11.9**	**-0.2**
CONA	**Conrad Observa**	**146.15**	**347**	*e*PKP	**PKPab**	**23 38 12.6**	**0.0**
	comp=Z,4.2nm,0.8s						
RONA	**Rosalia, Austr**	**146.27**	**346**	PKP	**PKPab**	**23 38 12.9**	**-0.1**
	comp=Z,5.6nm,1.2s						
SURR	**Surduc**	**146.32**	**338**	‖P	**PKPdf**	**23 38 09.2**	**-1.0**
GZR	**Gura Zlata**	**146.39**	**337**	↑P	**PKPbc**	**23 38 12.4**	**+0.1**
MOA	**Molln**	**146.54**	**349**	*e*PKP	**PKPab**	**23 38 13.4**	**-0.6**
	comp=Z,8.2nm,1.8s						
BZS	**Buzias**	**146.62**	**339**	‖P	**PKPbc**	**23 38 13.2**	**+0.4**
BIOA	**Bad Ischl, Aus**	**146.81**	**349**	PKP	**PKPab**	**23 38 14.8**	**-0.2**
	comp=Z,4.3nm,0.9s						
MMAI	**Mount Meron Ar**	**147.31**	**308**	PKPbc	**PKPbc**	**23 38 14.5**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=63,slow=3.5,SNR=5.7						
KBA	**Koelnbreinsper**	**147.46**	**350**	*e*PKP	**PKPbc**	**23 38 15.2**	**0.0**
	comp=Z,2.5nm,0.5s						
WATA	**Walderalm**	**147.48**	**352**	*e*PKP	**PKPbc**	**23 38 15.6**	**+0.3**
	comp=Z,3.2nm,0.7s						
SOKA	**Soboth**	**147.51**	**347**	PKP	**PKPbc**	**23 38 15.4**	**+0.1**
	comp=Z,5.7nm,1.2s						
WTTA	**Wattenberg**	**147.54**	**352**	*e*PKP	**PKPbc**	**23 38 16.2**	**+0.7**
	comp=Z,4.9nm,0.6s						
DAVA	**Damuels**	**147.73**	**354**	*e*PKP	**PKPbc**	**23 38 16.7**	**+0.8**
	comp=Z,6.9nm,0.8s						
FETA	**Feichten**	**147.90**	**353**	*e*PKP	**PKPbc**	**23 38 17.1**	**+0.7**
	comp=Z,4.2nm,1.1s						
ABTA	**Abfaltersbach**	**147.92**	**350**	*e*PKP	**PKPbc**	**23 38 16.4**	**+0.1**
	comp=Z,7.1nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**148.35**	**353**	PKPbc	**PKPbc**	**23 38 17.8**	**+0.1**

TRN 06 23:32:35.3, 16.77N×61.14W, h28km, MD3.6, South-east of Antigua., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSDZ	**La Diserade, G**	**0.46**	**171**	*e*P	Pn	23 32 46.8	+0.8
DSDZ				*e*S	Sn	23 32 54.7	+1.5
DHSZ	**Broadband at M**	**0.77**	**231**	*e*P	Pn	23 32 51.4	+1.0
DHSZ				*e*S	Sn	23 33 02.8	+1.6
ATGZ	**Broadband at L**	**0.87**	**220**	*e*P	Pb	23 32 53.4	+1.6
ATGZ				*e*S	Sn	23 33 06.2	+2.7
MMLZ	**Guadeloupe Bro**	**0.88**	**215**	*e*P	Pb	23 32 53.4	+1.4
MMLZ				*e*S	Sn	23 33 05.8	+2.2
MBFL	**Flemmings, Mon**	**1.03**	**269**	*e*P	Pb	23 32 55.1	+0.6
MBFL				*e*S	Sb	23 33 10.3	+2.7
TBG	**Guadaloupe-3**	**1.03**	**208**	*e*P	Pb	23 32 55.5	+1.0
TBG				*e*S	Sb	23 33 10.2	+2.5
ANWB	**Willy Bob**	**1.09**	**326**	*e*P	Pb	23 32 56.5	+0.9
ANWB				*e*S	Sb	23 33 10.8	+1.4
DWS	**Wesley**	**1.20**	**188**	*e*P	Pb	23 32 58.0	+0.5
DWS				*e*S	Sb	23 33 14.8	+2.2
DSLB	**Salisbury**	**1.35**	**192**	*e*P	Pb	23 33 00.5	+0.5
DSLB				*e*S	Sb	23 33 18.6	+1.9
SKI	**Saint Kitts**	**1.63**	**291**	*e*P	Pb	23 33 04.1	-0.7
SKI				*e*S	Sb	23 33 25.7	+0.8
BIM	**Bigot**	**2.24**	**178**	*e*P	Pn	23 33 11.4	+0.8
BIM				*e*S	Sn	23 33 39.5	+2.2
SLBI	**Saint Lucia, B**	**2.73**	**177**	*e*S	Sn	23 33 50.7	+1.3

*MOS **06** 23:37:21.8±1.1, 20.97S×174.48W, h10km, mb5.2/24, Error ellipse: s-maj=12.4km s-min=9.6km az=78.1*

*IDC **06** 23:37:21.5±0.4, 20.93S×174.46W, h0km, mb4.7/20, mbtmp4.7/22, ML5.0/2, MS4.3/50, Error ellipse: s-maj=19.4km s-min=14.6km az=114.0*

*BJI **06** 23:37:21.7, 20.77S×174.00W, h13km, mB5.5/6, mb5.4/37, Ms5.1/3, Ms7 4.8/6*

*NEIC **06** 23:37:23.2±1.5, 20.91S±0.07×174.33W±0.06, h10km±1km, mb5.1/84, Error ellipse: s-maj=12.0km s-min=9.5km az=191.0*

*NOU **06** 23:37:25.6, 20.97S×173.73W, h41km, mb5.0/17, Tonga Islands*

*BGR **06** 23:37:27.7, 20.76S×173.35W, h33km, Ms4.6*

*GCMT **06** 23:37:29.2±0.2, 21.19S±0.02×174.00W±0.01, h24km, MW5.1/95, Moment Tensor Solution. s62,c85; s95,c140; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.94±.17; Mθθ0.10±.13; Mϕϕ-4.04±.12; Mrθ1.94±.21; Mrϕ-1.27±.08; Mθϕ1.84±.14; Best double couple: Mo4.96800×10¹⁶ NP1:ϕs179.00000°, δ33.00000°, λ61.00000°. NP2: ϕs32.00000°, δ62.00000°, λ107.00000°. Principal axes: T 4.9240, Plg69.0000°, Azm337.0000°; N 0.0850, Plg15.0000°, Azm204.0000°; P -5.0120, Plg15.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 23:37:23.9±0.6, 20.98S±0.05×174.21W±0.06, h19km±2km, h20km:pP-P, n756, σ1.1/16/706, mb5.1/102, MS4.4/53, 66C-68D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.45**	**66**		Pn	23 38 25.8	-4.5
NIUE	**Niue**	**4.45**	**66**	P	Pn	23 38 26.1	-4.2
NIUE	**Niue**	**4.45**	**66**	S	Sn	23 39 11.4	-10
AFI	**Afiamalu**	**7.40**	**19**		**Pn**	**23 39 07.4**	**-3.6**
AFI	**Afiamalu**	**7.40**	**19**	P	**Pn**	**23 39 08.1**	**-2.9**
AFI	**Afiamalu**	**7.40**	**19**	P	**Pn**	**23 39 07.9**	**-3.1**
AFI				pmax	pmax		
	comp=Z,224nm,0.5s						
MSVF	**Nonsavu**	**7.99**	**293**		Pn	23 39 26.1	+7.0
MSVF	**Nonsavu**	**7.99**	**293**	P	Pn	23 39 26.0	+7.0
MSVF	**Nonsavu**	**7.99**	**293**	*d*P	Pn	23 39 24.5	+5.5
RAO	**Raoul Island**	**8.90**	**201**	Pn	**Pn**	**23 39 30.1**	**-1.3**
RAO	**Raoul Island**	**8.90**	**201**	Pn	**Pn**	**23 39 30.6**	**-0.8**
	comp=Z,40nm,0.3s,baz=53,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**23 41 06.2**	**-5.0**
	comp=Z,95nm,0.3s,baz=66,slow=19,SNR=4.9						
	comp=Z,124nm,0.3s						
GLKZ	**Green Lake**	**8.91**	**201**	P	**Pn**	**23 39 31.0**	**-0.5**
GLKZ				S	Sn	23 41 03.0	-8.3
RAR	**Rarotonga**	**13.48**	**94**		Pn	23 40 27.5	-6.6
RAR	**Rarotonga**	**13.48**	**94**	Pn	Pn	23 40 28.4	-5.7
	comp=Z,37nm,0.3s,baz=262,slow=12,SNR=24						
RAR				Sn	Sn	23 42 45.5	-18
	comp=Z,5.3nm,0.3s,baz=333,slow=18,SNR=3.5						
RAR	**Rarotonga**	**13.48**	**94**	P	Pn	23 40 28.0	-6.1
RAR	**Rarotonga**	**13.48**	**94**	P	Pn	23 40 28.1	-6.0
RAR	**Rarotonga**	**13.48**	**94**	P	Pn	23 40 29.5	-4.6
RAR				pmax	pmax		
	comp=Z,176nm,0.8s						
MARNC	**Mare, Loyalty**	**16.57**	**265**		**Pn**	**23 41 14.2**	**-1.0**
MARNC				IAmb	IAmb	23 41 22.4	
	comp=Z,99nm,1.0s						
MARNC	**Mare, Loyalty**	**16.57**	**265**	P	**P**	**23 41 19.9**	**+2.3**
PINNC	**Pines Island,**	**17.12**	**261**		**Pn**	**23 41 20.7**	**-1.4**
YATNC	**Mamie plateau,**	**17.62**	**263**	P	**P**	**23 41 31.6**	**+2.3**
DZM	**Mont Dzumac**	**18.04**	**263**	Pn	**P**	**23 41 35.3**	**+1.3**
	comp=Z,2.0nm,0.3s,baz=83,slow=19,SNR=23						
DZM				Sn	Sn	23 44 16.5	-38
	comp=Z,0.8nm,0.3s,baz=101,slow=16,SNR=1.4						
DZM				LR	LR	23 47 34.1	
	comp=Z,3μm,19.4s,baz=110,slow=34						
SANVU	**Saraoutou**	**18.49**	**284**		**Pn**	**23 41 37.4**	**-1.7**
SANVU				IAmb	IAmb	23 41 43.3	
	comp=Z,106nm,1.1s						
SANVU	**Saraoutou**	**18.49**	**

comp=Z,39nm,0.7s
AS31 Alice Springs 47.86 257 P P 23 45 59.1 -1.8
AS31 IAmb IAmb 23 46 00.2
comp=Z,7.5nm,0.7s
ASAR Alice Springs 47.86 257 P P 23 45 59.3 -1.6
comp=Z,25nm,0.7s,baz=96,slow=8.3,SNR=201
ASAR PcP PcP 23 47 28.9 -0.5
comp=Z,4.8nm,0.9s,baz=96,slow=3.5,SNR=4.9
ASAR LR LR 00 06 05.5
comp=Z,567nm,18.1s,baz=100,slow=36
comp=Z,25nm,0.7s
GENI Genyem 48.02 286 P P 23 46 01.0 -1.1
comp=Z,51nm,0.7s
WB0 Warramunga Arr 48.03 262 P P 23 45 59.8 -2.4
WB0 IAmb IAmb 23 46 05.0
comp=Z,11nm,0.6s
WRAB Tennant Creek 48.04 262 ⇓*i* P P **23 45 59.7 -2.5**
WRAB pmax pmax
comp=Z,13nm,0.9s
WRA Warramunga Arr 48.05 262 P P 23 45 59.5 -2.8
comp=Z,6.7nm,0.8s,baz=98,slow=8.3,SNR=52
WRA PcP PcP 23 47 30.2 +0.1
comp=Z,2.9nm,0.8s,baz=95,slow=3.1,SNR=5.4
WRA LR LR 00 05 39.5
comp=Z,602nm,18.7s,baz=96,slow=36
comp=Z,6.7nm,0.8s
FORT Forrest 52.37 247 P P 23 46 33.2 -1.7
FORT IAmb IAmb 23 46 51.7
comp=Z,14nm,0.9s
MTN Manton Dam 52.71 270 P P 23 46 35.6 -2.0
MTN IAmb IAmb 23 46 40.1
comp=Z,50nm,1.6s
GUMO Guam 52.88 307 LR LR 00 08 04.7
comp=Z,130nm,18.9s,baz=110,slow=35
KNRA Kununurra 54.16 265 P P 23 46 46.5 -1.8
KNRA IAmb IAmb 23 47 33.2
comp=Z,25nm,1.4s
FAKI Fak Fak 55.07 282 P P 23 46 53.2 -1.8
FAKI IAmb IAmb 23 47 21.2
comp=Z,22nm,1.1s
FITZ Fitzroy Crossi 56.48 262 P P 23 47 03.3 -1.7
SWI Sorong 56.80 283 P P 23 47 06.7 -0.6
SBA Scott Base 57.66 185 P P 23 47 12.5 +0.1
SBA IAmb IAmb 23 47 31.7
comp=Z,26nm,1.4s
SBA Scott Base 57.66 185 P P 23 47 12.5 +0.1
SBA pmax pmax
comp=Z,26nm,1.4s
VNDA Vanda 57.78 186 P P 23 47 15.7 +2.4
VNDA Vanda 57.78 186 P P 23 47 15.6 +2.3
comp=Z,2.8nm,0.8s,baz=34,slow=11,SNR=22
VNDA LR LR 00 12 26.7
comp=Z,112nm,18.7s,baz=11,slow=36
comp=Z,2.8nm,0.8s
VNDA Vanda 57.78 186 P P 23 47 15.7 +2.4
VNDA pmax pmax
comp=Z,5.0nm,1.0s
RPN Rapa Nui 59.00 110 LR LR 00 08 20.5
comp=Z,244nm,18.3s,baz=254,slow=31
NLAI Namlea 59.68 279 P P 23 47 26.0 -1.5
comp=Z,22nm,1.1s
SOEI Soe 60.06 271 P P 23 47 29.0 -1.2
SOEI Soe 60.06 271 P P 23 47 29.6 -0.6
comp=Z,37nm,0.6s
BATI Baumata 60.48 270 LR LR 00 13 53.6
comp=Z,428nm,18.6s,baz=130,slow=36
PSA00 Pilbara Seismi 61.01 256 P P 23 47 34.6 -1.9
PSA00 IAmb IAmb 23 47 37.2
comp=Z,18nm,0.8s
PSA00 Pilbara Seismi 61.01 256 P P 23 47 34.6 -1.9
PSA00 IAmb IAmb 23 48 24.1
comp=Z,7.3nm,1.0s
SANI Sanana 61.16 280 P P 23 47 34.7 -2.9
comp=Z,644nmcomp=Z,20nm,0.8s
MBWA Marble Bar 61.21 257 P P 23 47 36.0 -1.9
MBWA IAmb IAmb 23 47 37.7
comp=Z,16nm,0.7s
EDFI Ende, Flores 62.79 271 P P 23 47 46.7 -2.0
comp=Z,16nm,1.1s
JCJ Chichijima 63.77 317 LR LR 00 11 26.7
comp=Z,185nm,20.8s,baz=125,slow=32
LUWI Luwuk 64.51 279 P P 23 47 58.6 -1.4
CASY Casey 65.06 206 P P 23 48 03.6 +1.0
CASY IAmb IAmb 23 48 04.9
comp=Z,19nm,0.9s
DAV Davao City (W) 65.34 289 LR LR 00 14 53.6
comp=Z,148nm,19.1s,baz=93,slow=35
BKSI Bulukumba 65.41 274 P P 23 48 03.9 -1.9
comp=Z,9.8nm,0.9s
KAPI Kappang 65.86 274 LR LR 00 16 45.2
comp=Z,161nm,19.0s,baz=112,slow=36
PLAI Plampang 66.42 269 P P 23 48 09.9 -2.4
comp=Z,20nm,0.9s
TOLI2 Tolitoli 67.18 281 P P 23 48 15.1 -2.0
TOLI2 IAmb IAmb 23 48 21.3
comp=Z,13nm,0.9s
TWSI Taliwang, Sumb 67.29 269 P P 23 48 16.8 -1.0
comp=Z,21nm,0.9s
QSPA South Pole Qui 69.10 180 P P 23 48 29.9 +1.5
QSPA IAmb IAmb 23 48 59.3
comp=Z,18nm,1.1s
QSPA South Pole Qui 69.10 180 P P 23 48 33.0 +4.5
comp=Z,10nm,1.1s,baz=40,slow=2.8,SNR=16
QSPA LR LR 00 18 20.5
comp=Z,123nm,18.0s,baz=38,slow=36
JHJ Hachijo jima 2 69.44 320 LR LR 00 13 10.1
comp=Z,139nm,21.4s,baz=138,slow=31
JGF Kuroka 72.60 320 P P 23 48 50.4 +0.4
JGF IAmb IAmb 23 48 51.2
comp=Z,14nm,0.8s
MJAR Matsushiro Arr 72.74 321 P P 23 48 50.7 -0.1
comp=Z,27nm,0.8s,baz=153,slow=5.8,SNR=61
MJAR LR LR 00 16 26.5
comp=Z,117nm,20.2s,baz=127,slow=32
comp=Z,27nm,0.8s
MAJO Matsushiro 72.75 321 P P 23 48 49.6 -1.2
MAJO Matsushiro 72.75 321*c i* P P **23 48 50.9 0.0**
MAJO pmax pmax
comp=Z,29nm,0.7s
UGM Wanagama 73.50 268 P P 23 48 55.3 -0.5
JMN Monobe 73.52 317 P P 23 48 55.5 0.0
JSD Sado 73.75 323 P P 23 48 55.7 -1.0
JSD IAmb IAmb 23 48 58.4
comp=Z,22nm,0.7s
NIKH Nikolski High 73.78 3 P P 23 48 57.2 +0.7
baz=185
SHEM Shemya Is, Ala 74.10 353 LR LR 00 16 56.5
comp=Z,402nm,20.2s,baz=182,slow=32
UNV Unalaska Valle 74.81 5 P P 23 49 02.5 +0.1
baz=187
JNU Nakatsue 75.09 315 P 23 49 03.8 -0.9
JNU IAmb IAmb 23 49 06.2
comp=Z,17nm,0.9s
JNU Nakatsue 75.09 315 LR LR 00 17 49.5
comp=Z,66nm,19.3s,baz=128,slow=32
ASAJ Asahikawa 75.89 329 LR LR 00 16 34.5
comp=Z,315nm,21.9s,baz=157,slow=31
CHNA Chernabura Isl 76.53 9 P P 23 49 13.0 +0.7
baz=194
LEM Lembang 76.57 268 LR LR 00 23 50.5
comp=Z,223nm,18.6s,baz=151,slow=36
LEM Lembang 76.57 268 P P 23 49 13.8 0.0
comp=Z,37nm,0.9s
LPIG La Paz 76.63 58 LR LR 00 18 41.1
comp=Z,303nm,18.1s,baz=230,slow=32
YULB Yu-li 76.75 302 P P 23 49 12.7 -1.6
SDPT Sand Point 76.92 8 P P 23 49 14.4 -0.1
baz=193
KSM Kuching 76.99 277 P P 23 49 14.6 -1.4
KSM IAmb IAmb 23 49 19.5
comp=Z,16nm,0.8s
S12K Black Hills 77.07 7 P P 23 49 16.2 +0.8
baz=192
TPUB Ta-pu 77.24 301 P P 23 49 15.8 -1.3
PFO Pinyon Flats O 77.29 46 LR LR 00 17 33.3
comp=Z,191nm,18.4s,baz=245,slow=31
CMB Columbia Colle 77.45 41 P P 23 49 17.8 -0.2
CMB Columbia Colle 77.45 41 P P 23 49 17.8 -0.2
CMB pmax pmax
comp=Z,7.0nm,1.1s
PEA0B Petropavlovsk- 77.70 343 P P 23 49 19.1 +0.1
PEA0B Petropavlovsk- 77.70 343 P P 23 49 19.1 +0.1
PEA0B pmax pmax
comp=Z,166nm,1.9s
PETK Petropavlovsk- 77.70 343 P P 23 49 19.2 +0.2
comp=Z,11nm,0.8s,baz=154,slow=5.0,SNR=10.0
PETK LR LR 00 17 13.8
comp=Z,248nm,21.8s,baz=161,slow=31
comp=Z,11nm,0.8s
SPIA Saint Paul Isl 77.92 2 P P 23 49 19.9 -0.1
baz=184
TPI Tanjungpandan 77.94 272 P P 23 49 17.9 -3.4
comp=Z,17nm,1.5s
S14K Fog Glacier 77.95 8 P P 23 49 20.2 -0.2
baz=194
YSS Yuzhno-Sakhali 77.96 331 *eP* P **23 49 22.0 +1.5**
YSS *e* 23 52 17.7
YSS *eS* **S 23 59 15.5 +2.6**
YSS pmax pmax
comp=Z,40nm,1.1s
MDPB Devils Postpil 78.01 42 P P 23 49 20.8 -0.6
MDPB IAmb IAmb 23 49 35.5
comp=Z,19nm,1.5s
CHIR Chirikof Islan 78.11 11 P P 23 49 20.8 -0.3
baz=198
WAKR Walker 78.33 41 P 23 49 24.0 +0.9
WAKR IAmb IAmb 23 49 42.5
comp=Z,7.8nm,0.9s
YBH Yreka Blue Hor 78.50 37 LR LR 00 19 58.7
comp=Z,15nm,18.2s,baz=254,slow=32
PNTR Pine Nut 78.60 40 P P 23 49 24.2 -0.4
PNTR IAmb IAmb 23 49 43.9
comp=Z,16nm,0.9s
BELA Belgrano 2 78.61 172 P 23 49 24.7 +0.9
BELA IAmb IAmb 23 49 30.8
comp=Z,11nm,1.0s
HSIG 78.67 53 P P 23 49 24.7 -0.2
NVAR Mina Array Bea 78.98 41 P P 23 49 28.5 +1.8
comp=Z,5.3nm,0.8s,baz=243,slow=4.9,SNR=26
NVAR LR LR 00 20 08.4
comp=Z,287nm,18.0s,baz=256,slow=32
comp=Z,5.3nm,0.8s
SII Sitkinak Islan 79.06 11 P P 23 49 26.5 +0.1
baz=199
NV11 Mina Array Sit 79.07 42 P P 23 49 28.1 +1.0
NV11 IAmb IAmb 23 49 52.0
comp=Z,20nm,1.4s
TPNV Topopah Spring 79.39 44 P P 23 49 29.5 +0.6
TPNV Topopah Spring 79.39 44 P P 23 49 29.5 +0.6
TPNV pmax pmax
comp=Z,7.0nm,1.1s
PMSA Palmer Station 79.42 156 LR LR 00 22 21.8
comp=Z,187nm,18.9s,baz=252,slow=34
R16K Pilot Point 79.47 9 P P 23 49 29.1 +0.5
baz=196
KSRS Korea Array 79.63 317 P P 23 49 30.3 +0.4
comp=Z,15nm,1.0s,baz=126,slow=5.5,SNR=21
comp=Z,15nm,1.0s
R17L Mt. Peulik Vol 79.72 10 P P 23 49 30.2 +0.2
baz=197
Y14A Wickenburg 79.83 48 P 23 49 31.7 +0.4
SHPR Sheep Range 79.84 45 P 23 49 32.4 +1.0
W13A Hualapai Mount 79.88 46 P P 23 49 32.3 +0.6
KASI Kota Agung 79.93 268 P P 23 49 27.8 -4.4
comp=Z,35nm,0.9s
R18K Kaluk 79.97 11 P P 23 49 32.0 +0.7
baz=199
Q17K Contact Creek 80.40 10 P P 23 49 34.0 +0.2
baz=197
KDAK Kodiak Island 80.51 12 LR LR 00 17 28.7
comp=Z,196nm,21.1s,baz=203,slow=30
KDAK Kodiak Island 80.51 12 P P 23 49 34.9 +0.7
baz=200
TUC Tucson 80.52 50 P 23 49 35.8 +0.8
TUC Tucson 80.52 50 P P 23 49 35.8 +0.8
TUC pmax pmax
comp=Z,8.0nm,1.3s
MDSI Maura Dua 80.59 269 P P 23 49 33.9 -1.8
comp=Z,20nm,0.8s
O14K Tigyukauivet M 80.64 7 P P 23 49 35.3 +0.4
baz=192
Q16K King Salmon 80.68 9 P P 23 49 36.0 +0.9
baz=196
P16K Nushagak River 80.83 8 P P 23 49 36.6 +0.7
baz=195
Q18K Katmai Hardscr 80.91 10 P P 23 49 37.5 +1.0
baz=198
X16A Lo Mia Camp, P 81.18 48 P P 23 49 39.7 +1.0
X16A IAmb IAmb 23 50 00.7
comp=Z,25nm,2.0s
P17K Kvichak River 81.21 9 P P 23 49 38.4 +0.5
baz=197
N14K Kuskokwak Cree 81.25 6 P P 23 49 38.7 +0.5
baz=192
WVOR Wild Horse Val 81.26 38 P P 23 49 39.5 +0.7
WVOR Wild Horse Val 81.26 38 P P 23 49 39.5 +0.7
WVOR pmax pmax
comp=Z,9.0nm,1.2s
Q20K Shuyak Island 81.32 11 P P 23 49 38.7 +0.2
baz=200
M11K Mekoryuk 81.33 4 P P 23 49 38.8 +0.2
baz=187
O16K Kokwok River B 81.36 8 P P 23 49 39.5 +0.8
baz=195
USRK Ussuryk Ar. 81.39 324 P P 23 49 39.4 +0.1
comp=Z,6.7nm,0.9s,baz=115,slow=8.4,SNR=6.0
comp=Z,6.7nm,0.9s
LHSI Lahat 81.43 269 P P 23 49 36.5 -3.7
comp=Z,30nm,1.1s
M13K Dall Lake 81.58 5 P P 23 49 40.4 +0.6
baz=190
N15K Kwethluk River 81.67 7 P P 23 49 41.2 +0.8
baz=193
O17K Koliganek Bris 81.67 9 P P 23 49 41.4 +1.0
baz=196
HPIG 81.67 57 P P 23 49 42.0 +0.5
O18K Koktuh Hills 82.03 10 P P 23 49 43.0 +0.7
baz=198
M14K Bethel 82.04 6 P P 23 49 43.1 +0.9
baz=191
M15K Kasigluk River 82.12 7 P P 23 49 43.6 +0.9
baz=193
N16K Nishlik Lake 82.12 8 P P 23 49 43.5 +0.7
baz=194
P19K Oil Pt 82.16 11 P P 23 49 43.5 +0.6
baz=200
ELK Elko 82.26 41 P 23 49 44.4 +0.1
ELK Elko 82.26 41 LR LR 00 22 48.0
comp=Z,328nm,18.2s,baz=232,slow=33
ELK Elko 82.26 41 P P 23 49 44.4 +0.1
ELK pmax pmax
comp=Z,5.0nm,1.1s
MAW Mawson 82.29 199 P P 23 49 45.1 +1.3
comp=Z,5.7nm,0.8s,baz=130,slow=7.6,SNR=15
MAW LR LR 00 25 37.1
comp=Z,160nm,18.8s,baz=113,slow=35
comp=Z,5.7nm,0.8s
HOM Homer 82.44 11 P P 23 49 44.9 +0.5
baz=201
O19K Port Alsworth 82.49 10 P P 23 49 45.7 +1.1
baz=199
L14K Ku Creek 82.55 6 P P 23 49 45.3 +0.4
baz=191
M16K Timber Creek 82.63 7 P 23 49 47.3 +1.9
M16K Timber Creek 82.63 7 P P 23 49 46.6 +1.2
baz=194
O20K Slope Mountain 82.67 11 P P 23 49 46.6 +1.0
baz=200
BRSE Bradley Lake S 82.69 12 P P 23 49 47.1 +1.3
baz=202
N18K Kilae Creek 82.71 9 P P 23 49 46.8 +0.9
baz=197
H03S2 Juan Fernandez 82.78 123 T T 01 21 15.7
baz=248,SNR=186
H03S1 Juan Fernandez 82.80 123 T T 01 21 51.5
baz=248,slow=74,SNR=235
H03S3 Juan Fernandez 82.80 123 T T 01 21 50.2
baz=248,slow=74,SNR=186
H03N2 Juan Fernandez 82.91 123 T T 01 21 30.6
baz=258
H03N3 Juan Fernandez 82.92 123 T T 01 22 09.6
baz=258,slow=74
H03N1 Juan Fernandez 82.93 123 T T 01 22 18.8
baz=258,slow=74
NJ2 Nanjing 82.94 308 *eP* P **23 49 48.2 +0.5**
NJ2 pP **sP 23 49 51.2 -4.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
K13K Kusilvak Mount 82.97 5 P P 23 49 48.6 +1.4
baz=189
L15K Ungalak Mounta 83.00 6 P P 23 49 48.3 +1.0
baz=192
N19K Bonanza Creek 83.05 10 P P 23 49 49.0 +1.3
baz=198
MYKOM Kota Tinggi 83.11 275 P 23 49 48.6 -0.4
MYKOM IAmb IAmb 23 49 51.0
comp=Z,14nm,0.7s
BBB Bella Bella 83.19 27 LR LR 00 24 06.5
comp=Z,107nm,18.0s,baz=212,slow=34
L16K Owhat River 83.24 7 P P 23 49 49.3 +0.8
baz=194
SEW Seward 83.28 12 P P 23 49 49.5 +0.8
baz=203
Q23K Middleton Isla 83.31 14 P P 23 49 49.9 +1.0
baz=206
MFID Camas Ranch 83.50 39 P 23 49 50.9 +0.4
MFID IAmb IAmb 23 50 15.6
comp=Z,11nm,1.1s
M18K Stony River 83.50 9 P P 23 49 50.8 +1.0
baz=197
CAPN Captain Cook N 83.57 11 P P 23 49 50.9 +0.7
baz=202
O22K Cooper Landing 83.57 12 P P 23 49 50.1 -0.1
baz=203
K15K Wolf Creek Mou 83.60 6 P P 23 49 50.9 +0.6
baz=192,SNR=7.9
P23K Montague Islan 83.60 13 P P 23 49 51.4 +1.0
baz=205
N20K Mount Spurr 83.79 11 P P 23 49 51.7 +0.2
baz=200
SPCR Spurr Chakacha 83.79 11 P P 23 49 51.9 +0.5
baz=200
L17K Donlin 83.79 7 P P 23 49 51.4 +0.1
baz=195
J14K Nanvaranak Lak 83.87 5 P P 23 49 52.5 +0.8
baz=190
L18K Granite Mounta 84.08 8 P P 23 49 53.7 +0.8
baz=196
M19K Big River Lodg 84.10 9 P P 23 49 53.5 +0.6
baz=198
RC01 Rabbit Creek A 84.13 12 P P 23 49 53.0 -0.2
baz=203
PWL Port Wells 84.19 12 P P 23 49 53.8 +0.4
baz=204
U33K Whale Pass 84.28 22 P P 23 49 54.5 +0.5
baz=218
M20K Styx River 84.28 10 P P 23 49 54.7 +0.7
baz=200
SUA Susitna One 84.29 11 P P 23 49 54.6 +0.5
baz=202
SIT Sitka 84.30 20 P P 23 49 54.7 +0.7
baz=216
L19K White Mountain 84.30 9 P P 23 49 54.8 +0.8
baz=198
TXAR Lajitas Array 84.35 56 P P 23 49 56.7 +1.6
comp=Z,2.9nm,1.1s,baz=243,slow=5.3,SNR=12
TXAR LR LR 00 22 23.4
comp=Z,167nm,18.4s,baz=239,slow=32
comp=Z,2.9nm,1.1s
K17K Iditarod 84.36 7 P P 23 49 55.4 +1.2
baz=195
EYAK Cordova Ski Ar 84.45 14 P P 23 49 55.8 +1.1
baz=206
GLI Glacier Island 84.46 13 P P 23 49 55.5 +0.7
baz=205
GAMB Gambell 84.49 1 P P 23 49 55.5 +0.7
baz=182
SKT Skwentna 84.64 11 P P 23 49 56.5 +0.8
baz=201
BGLC Bering Glacier 84.64 15 P P 23 49 56.3 +0.6
baz=209
J16K Anvik River 84.66 6 P P 23 49 56.4 +0.6
baz=193
M22K Willow 84.67 11 P P 23 49 57.1 +1.3
baz=202
KNK Knik Glacier 84.67 12 P P 23 49 56.7 +0.8
baz=204
PMR Palmer 84.71 12 P P 23 49 56.7 +0.7
baz=203
L20K Farewell, AK 84.73 9 P P 23 49 57.1 +1.0
baz=199
S31K Pelican 84.75 19 P P 23 49 56.4 +0.1
baz=215
CN2 Changchun 84.88 321 P P 23 49 58.7 +1.4
CN2 pmax pmax
comp=Z,30nm,1.1s
BNX BinXian 84.89 323 ⇓*P* P **23 49 58.5 +1.2**
BNX pmax pmax
comp=Z,13nm,1.8s
J17K VABM Dome 84.93 7 P P 23 49 58.4 +1.3
baz=194
ANMO Albuquerque 84.97 50 P 23 49 59.4 +1.1
ANMO IAmb IAmb 23 50 06.8
comp=Z,19nm,1.4s
ANMO Albuquerque 84.97 50 LR LR 00 21 30.7
comp=Z,172nm,18.9s,baz=337,slow=31
ANMO Albuquerque 84.97 50‖ *eP* P **23 50 00.1 +1.9**
ANMO pmax pmax
comp=Z,17nm,1.5s
SML Sawmill 85.06 12 P P 23 49 58.9 +1.0
baz=204
BMRM Bremner River 85.08 14 P P 23 49 57.8 -0.2
baz=208
MA2 Magadan 85.23 343 LR LR 00 22 41.9
comp=Z,280nm,20.7s,baz=132,slow=32
CUT Chulitna 85.25 11 P P 23 49 58.1 -0.6
baz=202
PNL Peninsula 85.25 17 P P 23 49 59.6 +0.8
baz=212
KLU Klutina 85.27 13 P P 23 49 59.1 +0.1
baz=206
J18K Innoko River 85.28 8 P P 23 49 59.5 +0.7
baz=196,SNR=5.3
SCM Sheep Creek Mo 85.28 12 P P 23 49 59.4 +0.4
baz=205
PPLA Purkeypile 85.39 10 P P 23 50 00.1 +0.5
baz=200
PINM Pinnacle 85.39 16 P P 23 49 59.6 +0.1
baz=211
K20K Telida 85.53 9 P P 23 50 01.3 +1.1
baz=199
R32K Eaglecrest 85.54 20 P P 23 50 00.4 +0.2
baz=217
ANM Nome 85.54 4 P P 23 50 01.1 +1.0
baz=188
WHN Wuhan 85.61 305 P P 23 50 02.5 +1.3
WHN pmax pmax
comp=Z,46nm,0.8s
N25K Chitina, Valde 85.66 14 P P 23 50 01.4 +0.6
baz=207
P29M Windy Craggy 85.68 18 P P 23 50 01.1 +0.1
baz=214
NEW Newport 85.73 34 LR LR 00 24 41.4
comp=Z,252nm,18.2s,baz=233,slow=33
M24K Tolsona, Glenn 85.77 13 P P 23 50 02.2 +0.8
baz=206
MCARA McCarthy VSAT 85.82 14 P P 23 50 02.3 +0.7
baz=209
H16K Elim 85.84 5 P P 23 50 01.6 0.0
baz=191
CTG Chitna Glacier 85.86 15 P P 23 50 01.7 -0.3
baz=210
WAT6 Susitna Watana 85.88 12 P P 23 50 02.8 +0.7
baz=205
J19K Poorman 85.93 8 P P 23 50 02.3 +0.2
baz=197
PLBC Pleasant Camp 85.93 18 P P 23 50 02.6 +0.4
baz=215
WAT1 Susitna Watana 85.95 11 P P 23 50 03.1 +0.8
baz=204
O28M Mount Upton 85.98 16 P P 23 50 02.7 -0.1
baz=212
O29M Mount Kennedy 86.01 17 P P 23 50 02.5 -0.3
baz=213
G15K Niukluk 86.05 4 P P 23 50 02.3 -0.4
baz=189
TRF Thorofare Moun 86.22 11 P 23 50 03.6 -0.1
TRF Thorofare Moun 86.22 11 P P 23 50 04.4 +0.6
baz=202,SNR=8.9
HARP HAARP 86.24 13 P P 23 50 03.4 -0.3
baz=207
CHUM Lake Minchumin 86.29 10 P P 23 50 03.8 0.0
baz=200
J20K Nowinta River 86.30 9 P P 23 50 04.8 +0.9
baz=199,SNR=6.0
H17K Granite Mounta 86.34 6 P P 23 50 03.6 -0.6
baz=193
PLCA Paso Flores 86.35 132 P P 23 50 06.3 +1.2
PLCA IAmb IAmb 23 50 40.1
comp=Z,38nm,1.8s
PLCA Paso Flores 86.35 132 P P 23 50 07.5 +2.4
comp=Z,1.8nm,0.9s,baz=241,slow=9.6,SNR=3.1

PLCA LR LR 00 19 56.0
comp=Z,171nm,21.3s,baz=212,slow=30
comp=Z,1.8nm,0.9s
S34M Telegraph Cree 86.36 21 P P 23 50 04.6 +0.2
baz=220
TNA Tin City 86.40 3 P P 23 50 05.2 +0.9
baz=186
DHY Denali Highway 86.40 12 P P 23 50 05.1 +0.5
baz=205
RND Reindeer 86.43 11 P P 23 50 05.5 +0.8
RND Reindeer 86.43 11 P P 23 50 05.5 +0.8
RND pmax pmax
comp=Z,34nm,1.0s
CMIG Matias Romero 86.47 70 LR LR 00 19 15.6
comp=Z,171nm,21.4s,baz=188,slow=29
YUK8 Steele Glacier 86.53 16 P P 23 50 05.3 -0.1
baz=212
PAX Paxson 86.69 13 P P 23 50 06.5 +0.5
baz=207
BPAW Bear Paw Mtn. 86.71 10 P P 23 50 05.6 -0.3
baz=202
IPM Ipoh 86.71 276 P
IPM IAmb IAmb 23 50 12.3
comp=Z,27nm,1.2s
H18K Honhosa River 86.72 7 P P 23 50 07.4 +1.5
baz=195
MCK McKinley 86.72 11 P 23 50 06.4 +0.4
MCK McKinley 86.72 11 P P 23 50 06.4 +0.4
MCK pmax pmax
comp=Z,26nm,0.9s
MCK McKinley 86.72 11 P P 23 50 05.7 -0.3
baz=203,SNR=8.8
M26K Nabesna, AK 86.72 14 P P 23 50 06.6 +0.5
baz=209
HYT Haines Junctio 86.74 17 P P 23 50 06.5 +0.2
baz=214
DRIO Del Rio 86.77 57 P P 23 50 07.5 +0.4
DRIO IAmb IAmb 23 50 22.1
comp=Z,9.3nm,0.9s
YUK3 Moose Creek 86.77 15 P P 23 50 07.1 +0.5
baz=211
G17K Kiwalik Mounta 86.83 6 P P 23 50 06.9 +0.5
baz=193
P32M Atlin 86.84 19 P P 23 50 07.0 +0.3
baz=217
I20K Naaghedeneel 86.84 8 P P 23 50 07.4 +0.9
baz=198
YUK4 Talbot Arm 86.87 16 P P 23 50 07.9 +0.9
baz=213
BW06 Boulder Array 86.91 42 P P 23 50 06.6 -1.2
PDAR Pinedale Array 86.91 42 P P 23 50 08.3 +0.5
comp=Z,2.1nm,0.8s,baz=237,slow=5.4,SNR=15
PDAR LR LR 00 25 21.3
comp=Z,122nm,18.1s,baz=246,slow=33
comp=Z,2.1nm,0.8s
M27K Edge Creek, AK 86.94 14 P P 23 50 08.1 +0.9
baz=210
SYO Syowa Base 87.01 192⇑ *e*P P 23 50 07.8 +0.3
SYO Syowa Base 87.01 192⇓ *e*PcP PcP 23 50 10.4 +0.7
O30N Mendenhall 87.09 18 P P 23 50 08.5 +0.6
baz=215
DLBC Dease Lake 87.14 22 LR LR 00 23 03.1
comp=Z,79nm,18.1s,baz=215,slow=31
DLBC Dease Lake 87.14 22 P P 23 50 08.5 +0.2
baz=221
L26K Log Cabin Wild 87.19 14 P P 23 50 08.8 +0.5
baz=208
TROLL Troll, Antarti 87.23 179 ⇓P P 23 50 09.9 +1.1
comp=Z,132nm,0.5s
H19K Roundabout Mou 87.30 7 P P 23 50 09.7 +1.0
baz=196
WHY Whitehorse 87.35 18 P P 23 50 09.8 +0.6
baz=216
N30M Aishikik Lake 87.38 17 P P 23 50 10.0 +0.7
baz=214
VNA3 Neumayer Olymp 87.40 175 ⇓P P 23 50 11.4 +1.9
comp=Z,4.8nm,0.7s
SNAA Sanae 87.40 177 ⇓P P 23 50 10.3 +0.8
comp=Z,101nm,1.1s
SNAA Sanae 87.40 177 P
SNAA IAmb IAmb 23 50 13.6
comp=Z,10nm,1.2s
SNAA Sanae 87.40 177 P P 23 50 09.8 +0.2
comp=Z,6.4nm,1.1s,baz=202,slow=8.6,SNR=6.7
comp=Z,6.4nm,1.1s
SNAA Sanae 87.40 177 *ce*P P 23 50 10.0 +0.4
SNAA pmax pmax
comp=Z,9.0nm,1.2s
G18K Tagagawik 87.41 6 P P 23 50 09.9 +0.6
baz=194
H20K Anotleneega Mo 87.46 8 P P 23 50 10.2 +0.6
baz=198
NEA2 Nenana 87.48 11 P P 23 50 09.9 +0.2
baz=203
RIDG Independent Ri 87.50 13 P P 23 50 10.0 +0.1
baz=207
L27K Beaver Creek, 87.56 14 P P 23 50 10.7 +0.5
L27K IAmb IAmb 23 50 21.6
comp=Z,20nm,1.6s
L27K Beaver Creek, 87.56 14 P P 23 50 10.8 +0.6
baz=210
R33M Jennings River 87.56 21 P P 23 50 10.4 0.0
baz=220
I21K Tanana 87.56 9 P P 23 50 10.6 +0.6
baz=201
P33M Teslin, Yukon 87.61 19 P P 23 50 10.5 0.0
baz=218
HEH HeiHe 87.61 327 *e*P P 23 50 11.3 +0.7
HEH pmax pmax
comp=Z,12nm,1.3s
MLY Manley 87.61 10 P P 23 50 11.3 +1.0
baz=202
SEY Seymchan 87.69 345 LR LR 00 25 07.7
comp=Z,199nm,19.9s,baz=113,slow=33
SEY Seymchan 87.69 345 *e*P P 23 50 10.6 -0.1
SEY pmax pmax
comp=Z,20nm,1.4s
HDA Harding Lake 87.69 11 P P 23 50 11.4 +0.6
baz=205
F17K Baldwin Pennin 87.70 5 P P 23 50 11.0 +0.4
baz=192
N31M Braeburn, Yuko 87.76 17 P P 23 50 12.1 +1.0
baz=215
M29M Somme Creek 87.84 16 P P 23 50 12.7 +1.1
baz=213
SCRK Sand Creek 87.89 13 P P 23 50 13.0 +1.2
SCRK IAmb IAmb 23 52 39.0
comp=Z,16nm,1.5s
SCRK Sand Creek 87.89 13 P P 23 50 12.8 +1.0
baz=208
H21K Melozitna Rive 87.89 9 P P 23 50 12.5 +0.9
baz=200
I23K Minto, Yukon-K 87.95 10 P P 23 50 11.9 0.0
baz=203
COLA College 87.95 11 ⇓ *i*P P 23 50 12.9 +1.0
COLA pmax pmax
comp=Z,18nm,1.1s
COLA College 87.95 11 P P 23 50 12.6 +0.7
baz=204
F18K Selawik 88.00 6 P P 23 50 12.9 +0.9
baz=194
RPSI Rantau Prapat 88.03 274 P 23 50 12.3 -1.2
RPSI IAmb IAmb 23 50 14.4
comp=Z,13nm,0.9s
ILAR Eielson Array 88.03 11 P P 23 50 12.6 +0.3
comp=Z,1.6nm,0.8s,baz=203,slow=5.1,SNR=12
ILAR PP PP 23 53 37.9 -1.5
comp=Z,0.7nm,0.8s,baz=202,slow=5.6,SNR=4.0
ILAR LR LR 00 23 28.9
comp=Z,82nm,20.6s,baz=191,slow=31
comp=Z,1.6nm,0.8s
PSI Prapat 88.07 274 LR LR 00 31 35.3
comp=Z,205nm,18.2s,baz=127,slow=37
PSI Prapat 88.07 274 P P 23 50 12.3 -1.5
PSI pmax pmax
comp=Z,13nm,0.9s
VNA1 Neumayer--Stat 88.09 175 ⇓P P 23 50 15.1 +2.4
comp=Z,14nm,1.2s
J25K Salcha River, 88.18 12 P P 23 50 13.3 +0.2
J25K Salcha River, 88.18 12 P P 23 50 13.7 +0.6
baz=207
POKR Poker Plat Res 88.25 11 P P 23 50 14.5 +1.2
baz=205
N32M Quiet Lake 88.27 19 P P 23 50 14.4 +0.8
baz=218
E17K Hotham Inlet 88.28 5 P P 23 50 14.2 +0.8
baz=191
H22K Ishtalitna Cre 88.32 9 P P 23 50 14.7 +1.0
baz=201
K27K Chicken 88.34 14 P P 23 50 14.5 +0.7
baz=210
M30M Minto, Yukon 88.38 16 P P 23 50 14.7 +0.7
baz=214
F19K Shaleruckik Mo 88.41 6 P P 23 50 14.3 +0.3
baz=195
J26L Joseph Creek 88.44 13 P P 23 50 14.7 +0.4
baz=206,SNR=11
L29M L29M 88.48 16 P P 23 50 15.2 +0.6
baz=213,SNR=5.7
HNS HongShan 88.51 311 ⇓P P 23 50 17.1 +1.9
HNS pmax pmax
comp=Z,18nm,1.0s
H23K Yukon River 88.54 10 P P 23 50 16.2 +1.4
baz=203
G21K Allakaket 88.61 8 P P 23 50 15.0 0.0
baz=199
MT01 Popeta 88.68 126 P P 23 50 17.3 +1.0
E18K Tukpahlearik C 88.71 5 P P 23 50 16.1 +0.6
baz=193
M31M Drury Creek, Y 88.73 17 P P 23 50 15.6 -0.1
baz=217
BJT Baijiatuau 88.74 314 P P 23 50 16.7 +0.5
BJT Baijiatuau 88.74 314 P P 23 50 16.7 +0.5
BJT pmax pmax
comp=Z,49nm,1.8s
BJI Beijing 88.75 314 P P 23 50 17.8 +1.6
BJI sP sP 23 50 23.7 -0.1
BJI pmax pmax
comp=Z,8.0nm,2.6s
GSI Gunungsitoli 88.80 272 P 23 50 17.5 +0.4
GSI Gunungsitoli 88.80 272 P P 23 50 18.1 +1.0
D17K Noatak River 88.80 4 P P 23 50 16.7 +0.9
baz=190
WTLY Watson Lake, Y 88.83 21 P P 23 50 16.2 0.0
baz=222
H24K Noodor Dome 88.83 11 P P 23 50 16.1 0.0
baz=204
LYN LuoYang 88.83 308 P P 23 50 18.8 +2.0
LYN pmax pmax
comp=Z,48nm,0.8s
LYN LR LR
comp=Z,290nm,14.8s
LYN LR LR
comp=Z,410nm,15.5s
F20K Avaraart Lake 88.84 7 P P 23 50 16.9 +0.9
baz=197
DAWY Dawson 88.98 15 P P 23 50 17.3 +0.5
DAWY Dawson 88.98 15 P P 23 50 17.4 +0.5
baz=212,SNR=6.4
E19K Redstone River 89.07 6 P P 23 50 18.3 +1.2
baz=196
TOAD Toad River Com 89.15 23 P P 23 50 18.6 +0.8
baz=225
RDOG Red Dog Mine 89.16 4 P P 23 50 18.5 +1.0
baz=190
C16K Lisburne Hills 89.23 3 P P 23 50 18.3 +0.5
baz=188
I26K Coal Creek Min 89.23 13 P P 23 50 18.9 +0.9
baz=209
LIRD Liard River Hi 89.24 22 P P 23 50 18.7 +0.5
baz=224
K29M Barlow Dome 89.25 15 P P 23 50 18.5 +0.2
baz=214,SNR=7.7
ENH Enshi 89.26 303 P 23 50 19.2 +0.2
F21K Alatna River 89.28 8 P P 23 50 18.7 +0.5
baz=199
G23K Bananza Creek 89.29 9 P P 23 50 18.2 -0.1
baz=202
C17K DeLong Mountai 89.56 4 P P 23 50 20.3 +0.8
baz=190
H25L Birch Creek 89.58 11 P P 23 50 19.2 -0.4
baz=206
G24K Hadweenzic Riv 89.69 10 P P 23 50 19.8 -0.3
baz=205
COLD Coldfoot 89.74 9 P P 23 50 21.4 +1.1
baz=202
ZEA Zeya 89.80 330 *e*P P 23 50 23.2 +2.3
ZEA pmax pmax
comp=Z,10.0nm,1.1s
I27K Kandik River 89.81 13 P P 23 50 21.2 +0.5
baz=210
C18K Utukok River 89.87 5 P P 23 50 21.1 +0.2
baz=192
BILL Bilibino 89.91 353⇑ *e*P P 23 50 20.5 -0.6
BILL pmax pmax
comp=Z,17nm,2.2s
E20K Nigu River 89.95 7 P P 23 50 22.1 +0.7
baz=197
MMPY Sheldon Lake, 89.96 18 P P 23 50 21.8 +0.3
baz=219
G25K Bearman Lake 89.98 11 P P 23 50 21.6 +0.2
baz=206
GYA Guiyang 89.98 298 ⇑P P 23 50 24.7 +2.1
GYA pmax pmax
comp=Z,18nm,1.3s
D19K Kuna River 89.98 6 P P 23 50 22.1 +0.7
baz=195
I28M Miner Creek 90.04 14 P P 23 50 22.5 +0.6
baz=212
TGTN Hyland Airport 90.05 20 P P 23 50 22.2 +0.3
baz=222
J30M Hart River 90.15 15 P P 23 50 22.4 0.0
baz=215
SLVN Son La 90.33 293 P P 23 50 23.9 -0.3
SLVN IAmb IAmb 23 50 27.4
comp=Z,9.3nm,1.0s
D20K Etivluk River 90.35 6 P P 23 50 24.4 +1.2
baz=196
E22K Anaktuvuk Pass 90.36 8 P P 23 50 24.4 +1.2
baz=201
F24K Squaw Lake 90.37 10 P P 23 50 24.3 +1.0
baz=204
H27K Steamboat Moun 90.37 13 P P 23 50 24.5 +1.2
baz=210
E21K Killik River 90.38 7 P P 23 50 24.4 +1.1
baz=199
C19K Lookout Ridge 90.45 5 P P 23 50 24.6 +1.0
baz=194
KOTAN Kotaneelee Air 90.48 23 P P 23 50 24.5 +0.6
baz=226
B18K Kokolik River 90.53 4 P P 23 50 25.1 +1.2
baz=192
G26K Porcupine Rive 90.56 12 P P 23 50 25.1 +1.0
baz=208
E23K Chandalar 90.60 9 P P 23 50 25.4 +1.0
baz=203
I30M Mount Dempster 90.67 15 P P 23 50 25.6 +0.8
baz=215
E24K Your Creek 90.78 9 P P 23 50 26.0 +0.8
baz=204
F25K Christian Rive 90.81 11 P P 23 50 26.1 +0.8
baz=206
G27K Doyon Strip 90.85 12 P P 23 50 26.6 +1.1
baz=210
D22K Ayikyak River 90.95 8 P P 23 50 26.9 +1.0
baz=200
C21K Knifeblade Rid 90.97 7 P P 23 50 27.1 +1.1
baz=198
H29M Whitestone 91.04 14 P P 23 50 27.1 +0.7
baz=213
TOLK Toolik Lake Re 91.14 9 P P 23 50 27.8 +0.9
baz=203
F26K Sheenjek River 91.16 11 P P 23 50 28.0 +1.1
baz=208
XAN Xi'an 91.26 306 ⇑P P 23 50 29.6 +1.4
XAN pmax pmax
comp=Z,65nm,1.0s
E25K Arctic Village 91.29 10 P P 23 50 28.6 +1.0
baz=206
D23K Nanushuk River 91.29 8 P P 23 50 28.7 +1.2
baz=202
HILR Hailar Array B 91.31 323 P P 23 50 28.7 +0.6
comp=Z,0.8nm,0.4s,baz=130,slow=5.8,SNR=4.0
comp=Z,0.8nm,0.4s
A19K Wainwright 91.41 4 P P 23 50 29.3 +1.3
baz=192
B21K Ikpikpuk River 91.43 7 P P 23 50 29.3 +1.3
baz=198
EPYK Eagle Plains 91.54 14 P P 23 50 30.0 +1.2
baz=215
B20K Meade River 91.54 6 P P 23 50 29.6 +1.1
baz=196
H31M Peel River 91.64 15 P P 23 50 30.0 +0.8
baz=217
G29M Pine Creek 91.69 13 P P 23 50 30.0 +0.6
baz=213
F28M Old Crow 91.90 12 P P 23 50 30.9 +0.5
baz=212
E27K Coleen River 92.06 12 P P 23 50 31.7 +0.6
baz=210
C23K Itkillik River 92.11 8 P P 23 50 31.9 +0.7
baz=202
G30M tAoh Zraii Nji 92.15 14 P P 23 50 32.0 +0.4
baz=215
D25K Kavik River 92.24 10 P P 23 50 32.1 +0.2
baz=206
B22K Teshekpuk Lake 92.25 7 P P 23 50 32.3 +0.5
baz=199
HHC Hu-ho-hao-te 92.25 313 *e*P P 23 50 32.4 -0.3
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,69nm,3.8s
C24K Franklin Bluff 92.26 9 P P 23 50 32.2 +0.3
baz=204
A22K Sinclair Lake 92.71 6 P P 23 50 34.1 +0.1
baz=198
KMI Kunming 92.74 296 ⇑P P 23 50 37.2 +1.7
KMI pmax pmax
comp=Z,22nm,1.1s
KMI LR LR
comp=Z,180nm,14.3s
KMI LR LR
comp=Z,260nm,22.5s
KMI LR LR
comp=Z,290nm,20.4s
F30M Barrier River 92.77 14 P P 23 50 34.3 -0.1
baz=215
E28M Babbage River 92.81 12 P P 23 50 35.1 +0.5
baz=212
JTS Las Juntas de 92.94 80 LR LR 00 22 23.0
comp=Z,88nm,21.7s,baz=230,slow=29
C27K Jago River 92.94 10 P P 23 50 35.2 +0.1
baz=208
E29M Blow River 92.96 13 P P 23 50 34.9 -0.3
baz=214
C26K Camden Bay 93.01 10 P P 23 50 35.4 0.0
baz=207
D27M Malcolm River 93.09 11 P P 23 50 36.2 +0.3
baz=211
F31M Tsiigehtchic 93.10 15 P 23 50 36.3 +0.5
F31M Tsiigehtchic 93.10 15 P P 23 50 36.7 +0.8
baz=217
BTO Baotou 93.20 312 *e*P P 23 50 40.1 +3.0
BTO pP sP 23 50 45.0 +0.3
BTO sP pP 23 50 47.0 +4.4
BTO pmax pmax
comp=Z,16nm,0.9s
BTO pmax pmax
comp=Z,220nm,9.6s
D28M Stokes Point 93.58 12 P P 23 50 38.9 +0.9
baz=213
CMAR Chiang Mai Arr 93.63 288 P P 23 50 40.8 +1.3
comp=Z,10.0nm,0.9s,baz=111,slow=4.2,SNR=53
CMAR LR LR 00 30 30.2
comp=Z,42nm,20.6s,baz=105,slow=34
comp=Z,10.0nm,0.9s
CMAR Chiang Mai Arr 93.63 288 *ce*P P 23 50 41.5 +2.0
CMAR pmax pmax
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 93.75 289 P P 23 50 40.0 0.0
CHTO Chiang Mai 93.75 289 P P 23 50 40.0 0.0
CHTO pmax pmax
comp=Z,15nm,0.9s
INK Inuvik 93.84 14 P P 23 50 40.1 +0.9
INK IAmb IAmb 23 50 50.8
comp=Z,6.4nm,1.1s
INK Inuvik 93.84 14 LR LR 00 25 49.2
comp=Z,113nm,21.4s,baz=308,slow=31
INK Inuvik 93.84 14 P P 23 50 40.1 +0.9
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 93.84 14 P P 23 50 40.2 +0.9
baz=218
YAK Yakutsk 93.91 337 LR LR 00 28 45.2
comp=Z,89nm,19.8s,baz=134,slow=33
CD2 Chengdu 94.05 301 *e*P P 23 50 41.0 -0.2
PZH PanZhiHua 94.08 297 P P 23 50 41.8 +0.3
PZH pmax pmax
comp=Z,20nm,1.0s
YKA Yellowknife Ar 95.49 24 P P 23 50 46.3 -0.6
comp=Z,1.2nm,0.8s,baz=251,slow=3.8,SNR=3.4
YKA LR LR 00 28 58.3
comp=Z,124nm,18.7s,baz=259,slow=32
comp=Z,1.2nm,0.8s
LZDM Lanzhou Array 95.96 306 P P 23 50 50.1 -0.1
comp=Z,1.2nm,0.3s,baz=107,slow=1.5,SNR=2.2
comp=Z,1.2nm,0.3s
SONM Songino Array 98.46 318 P P 23 51 00.7 -0.2
comp=Z,0.8nm,0.8s,baz=134,slow=6.2,SNR=4.4
SONM LR LR 00 31 41.2
comp=Z,98nm,21.4s,baz=128,slow=33
comp=Z,0.8nm,0.8s
LPAZ La Paz 98.59 111 LR LR 00 25 47.4
comp=Z,150nm,21.9s,baz=232,slow=29
ULM Lac du Bonnet 98.72 39 LR LR 00 32 08.6
comp=Z,231nm,18.5s,baz=250,slow=33
TIXI Tiksi 100.14 344⇑ *e*P Pdif 23 51 09.7 +2.0
TIXI pmax pmax
comp=Z,14nm,3.0s
WMQ Urumqi 109.93 310 *e*PKP PKiKP 23 55 53.6 -0.4
WMQ LR LR
comp=Z,120nm,21.1s
ZALV Zalesovo Beam 113.09 321 PKiKP PKiKP 23 55 59.0 -0.5
comp=Z,2.2nm,0.6s,baz=102,slow=1.6,SNR=12
MK31 Makanchi Array 114.11 313 *d i*PKiKP PKiKP 23 56 01.8 0.0
MKAR Makanchi Array 114.11 313 PKiKP PKiKP 23 56 01.6 -0.2
comp=Z,1.1nm,0.6s,baz=75,slow=3,1,SNR=16
MAKZ Makanchi 114.33 313 ⇑PKiKP PKPdf 23 56 02.0 -0.2
KURK Kurchatov 116.75 317 PKPdf 23 56 06.1 -0.6
KURK Kurchatov 116.75 317 *d i*PKiKP PKPdf 23 56 06.6 -0.1
KURK pmax pmax
comp=Z,3.0nm,1.3s
KURBB Kurchatov Arra 116.81 317 PKP PKPdf 23 56 07.2 +0.4
comp=Z,1.5nm,0.3s,baz=98,slow=2.0,SNR=9.5
BVAR Borovoye Array 121.72 320 PKP PKPdf 23 56 16.7 +0.5
comp=Z,4.4nm,0.5s,baz=79,slow=1.7,SNR=28
BORK Borovoye 121.76 320 *c i*PKiKP PKPdf 23 56 16.5 +0.2
SPITS Spitsbergen Ar 122.53 357 PKP PKPdf 23 56 17.8 +0.7
comp=Z,7.9nm,0.8s,baz=66,slow=3.5,SNR=2.2
BOSA Boshof 127.24 202 PKP PKPdf 23 56 29.0 +1.1
comp=Z,4.3nm,1.0s,baz=181,slow=4.9,SNR=2.8
BOSA Boshof 127.24 202 PKiKP PKPdf 23 56 29.0 +1.1
ARTI Arti 127.70 326 PKPdf 23 56 27.4 -0.2
ARTI Arti 127.70 326 *i* PKiKP PKPdf 23 56 27.9 +0.3
ARTI 23 58 28.6
ARTI 00 03 38.7
ARTI SP SP 00 08 26.0 -5.9
LVZ Lovozero 129.73 346⇓ *e*PKiKP PKPdf 23 56 31.7 +0.5
ARCES ARCESS Array B 129.98 351 PKP PKPdf 23 56 32.0 +0.4
comp=Z,3.1nm,0.5s,baz=22,slow=1.7,SNR=28
comp=Z,1.5nm,0.8s,baz=14,slow=2.4,SNR=4.9
KIRV Kirov 131.11 331⇓ *e*PKiKP PKPdf 23 56 34.6 +0.7
KLMR Klimovskoe 133.69 338 *e*PKiKP PKPdf 23 56 38.1 -0.7
KLMR pmax pmax
comp=Z,11nm,1.3s
BELG Belogornoye 135.07 325 *de*PKiKP PKPdf 23 56 42.4 +0.8
FINES FINESS Array B 137.16 346 PKP PKPdf 23 56 45.9 +0.6
comp=Z,6.7nm,1.1s,baz=25,slow=3.7,SNR=5.7
OBN Obninsk 138.82 333 *e*PKiKP PKPdf 23 56 48.5 +0.1
OBN *e* 23 59 44.4
OBN *e*PPP PPP 00 02 45.1
OBN pmax pmax
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra 139.79 356 PKP PKPpre 23 56 42.3
comp=Z,2.2nm,0.8s,baz=12,slow=4.1
NOA NORSAR Array B 139.79 356 PKP PKPdf 23 56 50.6 +0.5
comp=Z,1.5nm,0.8s,baz=14,slow=2.4,SNR=4.9
HFS Hagfors 140.48 354 PKhKP PKPpre 23 56 44.5
comp=Z,2.1nm,0.6s,baz=42,slow=2.3,SNR=6.5
HFS PKP PKPdf 23 56 50.2 -1.1
comp=Z,3.9nm,0.9s,baz=45,slow=0.6,SNR=3.8
KBZ Khabaz 141.76 315 PKP PKPdf 23 56 52.6 -1.5
comp=Z,1.9nm,0.8s,baz=45,slow=4.1,SNR=5.7
KBZ Khabaz 141.76 315⇓ *e*PKiKP PKPdf 23 56 51.2 -3.0
GNI Garni 141.78 309⇑ *e*PKiKP PKPdf 23 56 55.6 +1.0
KIV Kislovodsk 141.81 315 *i* PKiKP PKPdf 23 56 52.7 -1.7
KIV pmax pmax
comp=Z,3.0nm,1.0s
SHA1 Shidzhatmaz 141.92 315⇓ *e*PKiKP PKPdf 23 56 53.5 -1.3
NEUR Neytrino 142.08 314⇓ *e*PKiKP PKPdf 23 56 55.6 +0.6
NACGM Naroch 142.60 340 *e*PKP PKiKP 23 56 57.8 -0.6
comp=Z,13nm,0.8s,baz=34

RAYN	Ar Rayn	143.24	282			PKPbc		23 56 56.4	+1.9
RAYN	Ar Rayn	143.24	282		PKIKP	PKPbc		23 56 56.4	+1.9
FABU	Falkenberg	143.66	354	*i* P		PKPab		23 56 54.6	+0.9
VSLR	Vesyoloye	143.75	316	⇓*e*	PKIKP	**PKPdf**		**23 56 58.1**	**+0.3**
LAWE	Loch Awe, Argy	143.79	11	*e*	P	PKPbc		23 56 55.7	+0.7
DEL	Delary	144.05	352	*i* P		PKPab		23 56 55.6	+0.4
GURO	Guroymak-BITLI	144.28	307			PKPbc		23 56 58.3	+1.0
PGBU	Glenifferbraes	144.38	10	*e*	P	**PKPab**		**23 56 56.9**	**+0.4**
SUW	Suwalki	144.45	342	*e*	PKP	PKPbc		23 56 58.0	+0.9
SUW	Suwalki	144.45	342			PKPbc		23 56 57.6	+0.5
SUW	Suwalki	144.45	342		PKIKP	PKPbc		23 56 57.6	+0.5
EDI	Edinburgh	144.46	9	*e*	P	**PKPab**		**23 56 57.5**	**+0.7**
MUD	Monsted U'grnd	144.48	357	*i*	P	**PKPab**		**23 56 56.0**	**-0.8**
BJUU	Bjuv	144.54	353	*i*	P	**PKPab**		**23 56 56.9**	**-0.2**
CLGH	Cloghs, Cushen	144.78	12	*e*	P	**PKPab**		**23 56 58.8**	**+0.7**
KOPT	Kop Dagi	144.88	311		PKPdf	**PKPab**		**23 56 59.7**	**+0.4**
LUNU	Lund	144.92	352	*i*	P	**PKPab**		**23 56 58.0**	**-0.5**
EKB	Eskdalemuir	145.03	9		PKPdf	**PKPab**		**23 56 59.4**	**+0.5**
EKA	Eskdalemuir Ar	145.04	9		PKPbc	**PKPab**		**23 56 59.4**	**+0.4**
	comp=Z,16nm,0.7s,baz=348,slow=3.1,SNR=35								
ESK	Eskdalemuir	145.05	9		PKPbc	**PKPab**		**23 56 58.5**	**-0.5**
ESK	Eskdalemuir	145.05	9	*e*	P	**PKPab**		**23 56 59.5**	**+0.5**
ESK	Eskdalemuir	145.05	9		PKP2	**PKPab**		**23 56 58.5**	**-0.5**
AK03	Malin Array Si	145.06	334		PKP	**PKPab**		**23 56 59.1**	**-0.1**
AKASG	Malin Array Be	145.08	334		PKP	**PKPab**		**23 56 59.4**	**+0.1**
	comp=Z,9.8nm,0.5s,baz=42,slow=4.3,SNR=54								
AKBB	Malin Array Si	145.08	334	*c*	*i* PKIKP	**PKPab**		**23 56 58.9**	**-0.4**
AKBB	Malin Array Si	145.08	334		PKP	**PKPab**		**23 56 58.8**	**-0.5**
NEWG	New Galloway	145.08	10	*e*	P	**PKPbc**		**23 56 59.5**	**+0.4**
AK01	Malin Array Si	145.09	334		PKP	**PKPab**		**23 56 59.0**	**-0.3**
KIEV	Kiev	145.09	334		PKPdf	**PKPab**		**23 56 59.3**	**0.0**
KIEV	Kiev	145.09	334	⇑	P	**PKPab**		**23 56 59.5**	**+0.2**
KIEV	Kiev	145.09	334	⇑	PKIKP	**PKPab**		**23 56 59.5**	**+0.2**
KIEV	Kiev	145.09	334		PKP	**PKPab**		**23 56 58.8**	**-0.5**
AK13	Malin Array Si	145.21	334		PKP	**PKPbc**		**23 56 59.7**	**0.0**
GAL1	Galloway	145.24	11	*e*	P	**PKPab**		**23 57 00.5**	**+0.8**
SSRD	Sdr. Stenderup	145.43	356	*i*	P	**PKPbc**		**23 57 00.4**	**+0.2**
MI28	Mi28,Pidlybu	145.52	335		PKP	**PKPbc**		**23 57 00.6**	**0.0**
EDMD	Edmundbyers	145.69	8	*e*	P	**PKPbc**		**23 57 01.9**	**+0.8**
ILTH	Belurgan, Co L	145.73	13	*e*	P	**PKPbc**		**23 57 01.9**	**+0.8**
RNPP8	Varash	145.88	337		PKP	**PKPdf**		**23 57 01.2**	**+0.1**
LUBAR	Lubar, Ukraine	146.28	334		PKP	**PKPdf**		**23 57 01.9**	**0.0**
GKP	Gorka Klaszto	146.58	348	*e*	PKP	**PKPbc**		**23 57 04.4**	**+0.6**
SIM	Simferopol'	146.59	322	*e*	PKP2	**PKPbc**		**23 57 04.9**	**+0.8**
R9F13	Warsaw-Wawer	146.61	343	*e*	PKPdf	**PKPab**		**23 57 05.6**	**+0.6**
WIME	Mynydd Eilian	146.72	11	*e*	P	**PKPbc**		**23 57 05.1**	**+0.9**
WLF1	Llynfaes	146.81	11	*e*	P	**PKPbc**		**23 57 05.2**	**+0.8**
HLG	Helgoland	146.81	358	*e*	PKPbc	**PKPab**		**23 57 05.7**	**+0.1**
	baz=8.8,slow=2.5								
BSEG	Bad Segeberg	146.91	355	*e*	PKPbc	**PKPab**		**23 57 06.0**	**0.0**
	baz=8.8,slow=2.5								
BEL	Belsk	147.06	343	*e*	PKP	**PKPab**		**23 57 07.0**	**+0.3**
LBWR	Ladybower, Pea	147.12	8	*e*	P	**PKPbc**		**23 57 05.8**	**+0.4**
HORU	Horodok	147.37	335		PKP	**PKPdf**		**23 57 02.4**	**-1.4**
SORM	Soroca	147.39	332	⇓	P	**PKPbc**		**23 57 06.8**	**+0.6**
SORM	Soroca	147.39	332	⇓	PKP2	**PKPbc**		**23 57 06.8**	**+0.6**
FOEL	Foel Wylfa	147.40	10	*e*	P	**PKPbc**		**23 57 07.1**	**+0.9**
GORT1	Trebel	147.76	354	*e*	PKPbc	**PKPbc**		**23 57 08.6**	**+1.6**
	baz=8.8,slow=2.5								
HLM1	Long Mynd	147.81	10	*e*	P	**PKPbc**		**23 57 08.0**	**+0.7**
PURM	Purcari	147.84	328	⇓	P	**PKPbc**		**23 57 09.0**	**+1.5**
RUE	Ruedersdorf	147.95	351	*e*	PKPbc	**PKPbc**		**23 57 08.8**	**+1.2**
	baz=8.8,slow=2.5								
MILM	Milestii Mici	148.07	330	⇑	P	**PKPbc**		**23 57 07.9**	**-0.2**
MILM	Milestii Mici	148.07	330	⇑	PKP2	**PKPbc**		**23 57 07.9**	**-0.2**
DRBR	Darabani	148.09	333	⇓	P	**PKPbc**		**23 57 09.2**	**+1.1**
RETH	Rethem/Aller,	148.18	356	*e*	PKPbc	**PKPbc**		**23 57 09.0**	**+0.9**
	baz=8.8,slow=2.5								
MCH1	Michaelchurch	148.29	10	*e*	P	**PKPbc**		**23 57 09.2**	**+0.6**
BZK	Bozkurt	148.35	318	⇓	P	**PKiKP**		**23 57 10.6**	**0.0**
KWP	Kalwaria Pacla	148.40	339	*e*	PKP	**PKPbc**		**23 57 10.4**	**+1.4**
FLTG	Flechtingen	148.42	354	*e*	PKPbc	**PKPbc**		**23 57 09.5**	**+0.7**
	baz=8.8,slow=2.5								
MONM	Monmouth	148.47	10	*e*	P	**PKPbc**		**23 57 09.8**	**+0.8**
BNN	Bunyan	148.64	311		PKPbc	**PKPbc**		**23 57 10.3**	**+0.2**
ASSE	Asse, Remlinge	148.67	354	*e*	PKPbc	**PKPbc**		**23 57 10.5**	**+1.0**
	baz=8.8,slow=2.5								
IBBN	Ibbenburen	148.69	358	*e*	PKPbc	**PKPbc**		**23 57 10.7**	**+1.2**
	baz=8.8,slow=2.5								
VASR	Vaslui	148.75	330	⇓	P	**PKiKP**		**23 57 11.5**	**+0.1**
OJC	Ojcow	148.78	343	*e*	PKP	**PKPbc**		**23 57 10.9**	**+1.0**
CLZ	Clausthal	148.99	354	*e*	PKPbc	**PKPbc**		**23 57 11.7**	**+1.3**
	baz=8.8,slow=2.5								
ILGA	Ilgaz	149.02	317			**PKPbc**		**23 57 11.4**	**+0.3**
STHS	Stebnicka Huta	149.07	340	*e*	PKP2	**PKPbc**		**23 57 11.4**	**+0.7**
STHS	Stebnicka Huta	149.07	340	*e*	PKP	**PKPbc**		**23 57 11.4**	**+0.7**
KSP	Ksiaz	149.07	347	*e*	PKP	**PKiKP**		**23 57 12.5**	**+0.6**
BURAR	Bucovina Array	149.13	334	⇑	P	**PKiKP**		**23 57 12.7**	**+0.4**
BURAR	Bucovina Array	149.13	334	⇑	PKP2	**PKiKP**		**23 57 12.7**	**+0.4**
VLDR	Vladesti	149.20	329	⇓	P	**PKiKP**		**23 57 12.8**	**+0.5**
CLL	Collm	149.21	351	*i*	PKP2	**PKPbc**		**23 57 12.1**	**+1.2**
CLL					pmax	pmax			
	comp=Z,32nm,0.7s								
CLL	Collm	149.21	351	*e*	PKPbc	**PKPbc**		**23 57 12.1**	**+1.2**
	baz=8.8,slow=2.5								
CLL	Collm	149.21	351	*i*	PKPbc	**PKPbc**		**23 57 12.1**	**+1.2**
	comp=Z,32nm,0.7s								
CLL				*i*	PKPab	**pPKPab**		**23 57 17.5**	**-3.3**
	comp=Z,44nm,1.5s								
CLL					L	L		01 02 00.0	
	comp=Z,100nm,21.7s								
VARL	Varlezi	149.27	329	⇓	P	**PKiKP**		**23 57 13.1**	**+0.6**
TLCR		149.30	327	⇑	P	**PKiKP**		**23 57 12.9**	**+0.4**
TLCR		149.30	327	⇑	PKP2	**PKiKP**		**23 57 12.9**	**+0.4**
GTTG	Gottingen	149.32	355	*e*	PKPbc	**PKPbc**		**23 57 12.2**	**+1.1**
	baz=8.8,slow=2.5								
OSTC	Ostas	149.36	347	*e*	PKP2	**PKiKP**		**23 57 13.4**	**+0.9**
OSTC	Ostas	149.36	347	⇑*e*	PKP	**PKiKP**		**23 57 13.4**	**+0.9**
NIE	Niedzica	149.36	341	*e*	PKP	**PKiKP**		**23 57 13.5**	**+0.9**
CHVC	Chvalec	149.36	347	*e*	PKP2	**PKiKP**		**23 57 13.1**	**+0.6**
CHVC	Chvalec	149.36	347	⇑*e*	PKP	**PKiKP**		**23 57 13.1**	**+0.6**
GHRR		149.36	330	⇑	P	**PKiKP**		**23 57 13.5**	**+0.9**
SCTR	Scanteiesti	149.36	329	⇑	P	**PKiKP**		**23 57 13.2**	**+0.6**
TESR	Tescani	149.37	331	⇓	P	**PKPbc**		**23 57 12.7**	**+1.2**
UPC	Upice	149.44	347	*e*	PKP2	**PKiKP**		**23 57 13.4**	**+0.7**
UPC	Upice	149.44	347	⇑*e*	PKP	**PKiKP**		**23 57 13.4**	**+0.7**
BRG	Berggiesshubel	149.48	350	*e*	PKPbc	**PKiKP**		**23 57 12.9**	**+0.2**
	baz=8.8,slow=2.5								
NEGRR	Negrea	149.52	329	⇑	P	**PKiKP**		**23 57 13.5**	**+0.6**
DPC	Dobruska-Polom	149.53	347	*e*	PKHKP	PKPpre		23 57 08.7	
DPC				*e*				23 57 13.5	
DPC	Dobruska-Polom	149.53	347	*e*	PKPDF	**PKPdf**		**23 57 08.7**	**+1.4**
DPC				⇑*e*	PKP	**PKiKP**		**23 57 13.5**	**+0.6**
IZVR	Izvoarele	149.57	329	⇓	P	**PKiKP**		**23 57 13.7**	**+0.6**
SCHL	Schela	149.57	329	⇑	P	**PKPab**		**23 57 16.5**	**-0.5**
BUG	Bochum--Univer	149.57	358	*e*	PKPbc	**PKPbc**		**23 57 12.6**	**+0.8**
	baz=8.8,slow=2.5								
OKC	Ostrava-Krasne	149.58	344	*e*	PKP2	**PKiKP**		**23 57 13.2**	**+0.3**
OKC	Ostrava-Krasne	149.58	344	⇑*e*	PKP	**PKiKP**		**23 57 13.2**	**+0.3**
STEB	Steborice	149.58	345	⇑*e*	PKP	**PKiKP**		**23 57 13.5**	**+0.5**
SCHLR	Schela	149.59	329	⇑	P	**PKiKP**		**23 57 13.4**	**+0.3**
ONER	Baraj Valea Uz	149.62	331	⇓	P	**PKiKP**		**23 57 14.2**	**+1.0**
CFR	Carcaliu	149.65	328	⇑	P	**PKiKP**		**23 57 13.4**	**+0.1**
KRLC	Kraliky	149.69	346	*e*	PKP2	**PKiKP**		**23 57 13.8**	**+0.6**
KRLC	Kraliky	149.69	346	⇑*e*	PKP	**PKiKP**		**23 57 13.8**	**+0.6**
PVCC	Panska Ves	149.71	349	*e*	PKP2	**PKiKP**		**23 57 14.0**	**+0.8**
PVCC	Panska Ves	149.71	349	⇑*e*	PKP	**PKiKP**		**23 57 14.0**	**+0.8**
TPGR	Topolog	149.73	327	⇑	P	**PKiKP**		**23 57 13.7**	**+0.2**
BR131	Keskin Array S	149.75	314	*c*	*i* PKP2	**PKPbc**		**23 57 13.2**	**+0.4**
BRTR	Keskin Array B	149.75	314		PKPbc	**PKPbc**		**23 57 13.2**	**+0.4**
	comp=Z,9.2nm,0.8s,baz=124,slow=4.6,SNR=57								
KASTN	Kahler Asten	149.76	357	*e*	PKPbc	**PKPbc**		**23 57 13.5**	**+1.2**
	baz=8.8,slow=2.5								
BMR	Baia Mare	149.77	336	⇑	P	**PKiKP**		**23 57 13.8**	**+0.4**
BMR	Baia Mare	149.77	336	⇑	PKP2	**PKiKP**		**23 57 13.8**	**+0.4**
RICC	Richard	149.77	349	⇑*e*	PKP	**PKiKP**		**23 57 14.3**	**+1.0**
MORC	Moravsky Berou	149.78	345	⇓	P	**PKiKP**		**23 57 14.2**	**+0.8**
MORC	Moravsky Berou	149.78	345	*e*	PKP	**PKiKP**		**23 57 13.7**	**+0.2**
VRI	Vrincioaia	149.82	330	⇓	P	**PKPbc**		**23 57 13.7**	**+1.0**
VRI	Vrincioaia	149.82	330	⇓	PKP2	**PKPbc**		**23 57 13.7**	**+1.0**
LANS	Liptovska Anna	149.84	342	*e*	PKP2	**PKiKP**		**23 57 15.1**	**+1.5**
LANS	Liptovska Anna	149.84	342	*e*	PKP	**PKiKP**		**23 57 15.1**	**+1.5**
LANS				*e*				23 57 22.6	
KIRS	Kirsehir-Merke	149.85	313	⇓	P	**PKiKP**		**23 57 14.3**	**+0.3**
PLOR	Plostina	149.87	330	⇓	P	**PKPbc**		**23 57 13.6**	**+0.8**
PLOR	Plostina	149.87	330	⇓	PKP2	**PKPbc**		**23 57 13.6**	**+0.8**
ARCR	ARCALIA	149.91	334	⇑	P	**PKiKP**		**23 57 14.4**	**+0.6**
FKH	Fakeheh	149.95	303	*e*	P	**PKiKP**		**23 57 14.8**	**+0.4**
TURR	Turia	150.01	331	⇑	P	**PKiKP**		**23 57 15.6**	**+1.5**
BEIL	Beino	150.03	303	*e*	P	**PKiKP**		**23 57 14.3**	**+0.7**
UBBA	Unterbreizbach	150.03	355	*e*	PKPbc	**PKPbc**		**23 57 13.9**	**+1.1**
	baz=8.8,slow=2.5								
MOX	Moxa	150.04	353	*e*	L	L		01 04 58.8	
	comp=Z,90nm,19.5s								
MOX					*e*	PKPbc	**PKPbc**	**23 57 14.1**	**+1.1**
	baz=8.8,slow=2.5								
OZUR		150.08	332	⇓	P	**PKiKP**		**23 57 14.9**	**+0.7**
MAUC	Maruska	150.09	344	⇑*e*	PKP	**PKiKP**		**23 57 15.3**	**+1.2**
HARR	Harsova	150.10	327	⇑	P	**PKiKP**		**23 57 15.1**	**+0.9**
HARR	Harsova	150.10	327	⇑	PKP2	**PKiKP**		**23 57 15.1**	**+0.9**
PLN	Plauen	150.13	352	*e*	PKPbc	**PKiKP**		**23 57 14.5**	**+0.5**
	baz=8.8,slow=2.5								
TLBR	Tomalu	150.14	327	⇑	P	**PKiKP**		**23 57 15.2**	**+1.0**
TANN	Tannenbergstha	150.15	351	*e*	PKPbc	**PKPbc**		**23 57 14.4**	**+1.0**
	baz=8.8,slow=2.5								
PRA	Prague	150.17	349	*e*	PKiKP	**PKiKP**		**23 57 14.9**	**+0.7**
PRA	Prague	150.17	349	⇑*e*	PKP	**PKiKP**		**23 57 14.9**	**+0.7**
MFTR	Murfatlar	150.20	326	⇑	P	**PKiKP**		**23 57 15.6**	**+1.2**
PRU	Pruhonice	150.23	349	*e*	PKiKP	**PKiKP**		**23 57 14.9**	**+0.6**
PRU	Pruhonice	150.23	349	⇑*e*	PKP	**PKiKP**		**23 57 14.9**	**+0.6**
ANTO	Ankara	150.24	315	⇑	P	**PKiKP**		**23 57 15.3**	**+0.5**
ANTO	Ankara	150.24	315	⇑	PKIKP	**PKiKP**		**23 57 15.3**	**+0.5**
DOPR	Dopca	150.35	332	⇓	P	**PKiKP**		**23 57 16.1**	**+1.3**
NEHR	Nehoiu	150.35	330	⇓	P	**PKiKP**		**23 57 16.4**	**+1.7**
MANR	Mangalia	150.36	325	⇑	P	**PKiKP**		**23 57 15.2**	**+0.4**
MESR	Meseseni	150.41	336	⇑	P	**PKiKP**		**23 57 16.2**	**+1.5**
MEM	Membach	150.43	360	*e*	PKP	**PKiKP**		**23 57 15.2**	**+0.5**
VRAC	Vranov	150.45	346	⇓	P	**PKiKP**		**23 57 15.8**	**+1.0**
VRAC	Vranov	150.45	346	*e*	PKP	**PKiKP**		**23 57 15.3**	**+0.5**
VRAC	Vranov	150.45	346	⇓	PKIKP	**PKiKP**		**23 57 15.8**	**+1.0**
BSTI	Sart Tilman	150.45	0	*d*	PKP	**PKiKP**		**23 57 15.6**	**+0.9**
ISR	Istrita	150.47	329	⇓	P	**PKPbc**		**23 57 15.1**	**+0.8**
ISR	Istrita	150.47	329	⇓	PKIKP	**PKPbc**		**23 57 15.1**	**+0.8**
MLR	Muntele Rosu	150.47	331		PKPbc	**PKPbc**		**23 57 14.7**	**+0.3**
MLR	Muntele Rosu	150.47	331	⇓	P	**PKiKP**		**23 57 15.4**	**+1.0**
MLR	Muntele Rosu	150.47	331		PKIKP	**PKPbc**		**23 57 14.7**	**+0.3**
CJR	Cluj-Napoca	150.51	335	⇓	P	**PKiKP**		**23 57 16.1**	**+1.0**
JAVC	Velka Javorina	150.60	344	*e*	PKP	**PKiKP**		**23 57 16.9**	**+1.7**
MANZ	Manzenberg	150.62	352	*e*	PKPbc	**PKiKP**		**23 57 15.9**	**+0.8**
	baz=8.8,slow=2.5								
BHL	Bhannes	150.65	302	*e*	P	**PKPbc**		**23 57 15.8**	**+0.6**
MDB	Medias	150.65	333	⇓	P	**PKiKP**		**23 57 15.4**	**+1.1**
TREC	Trest	150.70	347	*e*	PKIKP	**PKiKP**		**23 57 16.1**	**+0.8**
TREC	Trest	150.70	347	⇑*e*	PKP	**PKiKP**		**23 57 16.1**	**+0.8**
KRUC	Moravsky	150.72	346	*e*	PKP	**PKPbc**		**23 57 15.7**	**+1.0**
BMRD	Maredsous	150.72	1	*d*	PKP	**PKiKP**		**23 57 16.1**	**+0.9**
MARR	Marisel-Cluj	150.74	335	⇓	P	**PKiKP**		**23 57 17.3**	**+1.7**
QRWL	Qaraoun	150.74	302	*e*	P	**PKiKP**		**23 57 16.6**	**+0.6**
SHBL	Chebaa	150.75	301	*e*	P	**PKPbc**		**23 57 16.2**	**+0.8**
DQRL	Deir Qamar	150.78	302	*e*	P	**PKiKP**		**23 57 16.7**	**+0.7**
DRGR		150.80	336	⇑	P	**PKiKP**		**23 57 16.7**	**+1.0**
DRGR		150.80	336	⇑	PKIKP	**PKiKP**		**23 57 16.7**	**+1.0**
PSZ	Piszkesteto	150.81	340	⇓	P	**PKiKP**		**23 57 16.5**	**+0.8**
PSZ	Piszkesteto	150.81	340	⇓	PKIKP	**PKiKP**		**23 57 16.5**	**+0.8**
ZVC	Zvikov	150.82	349	⇑*e*	PKP	**PKiKP**		**23 57 16.5**	**+1.0**
ROTZ	Rotzenmuhle	150.82	351	*e*	PKPbc	**PKiKP**		**23 57 16.1**	**+0.6**
	baz=8.8,slow=2.5								
DOU	Dourbes	150.93	2	*d*	PKP	**PKiKP**		**23 57 16.7**	**+1.0**
SAHE	Sakarya_HENDEK	150.93	319	⇓	P	**PKPbc**		**23 57 16.1**	**+0.6**
GRA1	Grafenberg Arr	151.02	353		PKPbc	**PKPbc**		**23 57 16.2**	**+0.8**
GRF	Grafenberg Arr	151.02	353		PKIKP	**PKPbc**		**23 57 16.2**	**+0.8**
GRF	Grafenberg Arr	151.02	353	*e*	L	L		01 05 48.9	
	comp=Z,104nm,21.8s								
GRF					*e*	PKPbc	**PKiKP**	**23 57 16.8**	**+0.9**
	baz=8.8,slow=2.5								
TNR	Turnu Rosu	151.09	333	⇓	P	**PKiKP**		**23 57 17.2**	**+1.0**
MMAI	Mount Meron Ar	151.12	301		PKPbc	**PKPbc**		**23 57 16.9**	**+0.6**
	comp=Z,12nm,0.7s,baz=67,slow=3.7,SNR=27								
MODS	Modra-Piesok	151.15	344	*e*	PKP	**PKiKP**		**23 57 17.7**	**+1.4**
ARR	Arges	151.15	332	⇓	P	**PKiKP**		**23 57 16.0**	**+1.5**
KHC	Kasperske Hory	151.23	349		PKPbc	**PKiKP**		**23 57 17.1**	**+0.7**
KHC	Kasperske Hory	151.23	349	*e*	PKIKP	**PKPdf**		**23 57 11.6**	**+1.6**
KHC					*e*			23 57 17.4	
KHC	Kasperske Hory	151.23	349	*e*	PKPDF	**PKPdf**		**23 57 11.6**	**+1.6**
KHC				⇑*e*	PKP	**PKiKP**		**23 57 17.4**	**+1.0**
WLF	Walferdange	151.37	360	*d*	PKP	**PKiKP**		**23 57 17.3**	**+0.6**
WLF	Walferdange	151.37	360	*e*	PKPbc	**PKiKP**		**23 57 17.8**	**+1.2**
	baz=8.8,slow=2.5								
SRO	Srobarova	151.38	342	*e*	PKP	**PKiKP**		**23 57 18.4**	**+1.7**
SRO					*e*			23 57 24.7	
CKRC	Cesky Krumlov	151.39	348	*e*	PKIKP	**PKPdf**		**23 57 11.8**	**+1.6**
CKRC					*e*			23 57 17.5	
CKRC	Cesky Krumlov	151.39	348	*e*	PKPDF	**PKPdf**		**23 57 11.8**	**+1.6**
CKRC				⇑*e*	PKP	**PKiKP**		**23 57 17.5**	**+0.7**
LOT	Lotru	151.46	333	⇓	P	**PKPbc**		**23 57 17.3**	**+0.6**
DEV	Deva	151.47	335	⇓	P	**PKiKP**		**23 57 17.9**	**+0.9**
GEC2	GERESS Array S	151.48	349	*e*	PKPbc	**PKiKP**		**23 57 17.6**	**+0.5**
	baz=8.8,slow=2.5								
GERES	GERESS Array B	151.48	349		PKP	**PKPdf**		**23 57 11.2**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=34,slow=5.6,SNR=4.1								
GERES					PKPbc	**PKPbc**		**23 57 17.4**	**+0.8**
	comp=Z,7.1nm,0.7s,baz=20,slow=3.3,SNR=56								
SIRR	Siria	151.63	336	⇑	P	**PKiKP**		**23 57 18.4**	**+1.0**
HUMR	Humele	151.64	330	⇓	P	**PKPbc**		**23 57 17.8**	**+0.9**
LOZB	Loznitsa	151.71	327	⇑	P	**PKPbc**		**23 57 17.2**	**0.0**
BORA	Eskisehir	151.74	317		PKPbc	**PKPbc**		**23 57 17.8**	**+0.4**
SURR	Surduc	151.88	335	⇓	P	**PKPbc**		**23 57 15.5**	**-1.9**
CONA	Conrad Observa	151.91	346	*i*	pPKP	**PKiKP**		**23 57 19.0**	**+1.1**
	comp=Z,35nm,1.2s,SNR=7.6								
GZR	Gura Zlata	151.92	334	⇓	P	**PKiKP**		**23 57 18.6**	**+0.6**
RONA	Rosalia, Austr	152.02	345	*i*	pPKP	**PKiKP**		**23 57 19.1**	**+0.9**
	comp=Z,16nm,0.7s,SNR=8.0								
BZS	Buzias	152.20	336	⇓	P	**PKiKP**		**23 57 19.5**	**+1.0**
MOA	Molln	152.33	348	*e*	pPKP	**PKiKP**		**23 57 19.5**	**+0.7**
	comp=Z,9.3nm,0.9s								
HERR	Herculane	152.49	334	⇓	P	**PKiKP**		**23 57 20.0**	**+0.8**
FUR	Furstenfeldbru	152.52	352	*e*	PKPbc	**PKiKP**		**23 57 20.1**	**+0.9**
	baz=8.8,slow=2.5								
BIOA	Bad Ischl, Aus	152.60	348	*e*	PKiKP	**PKiKP**		**23 57 19.9**	**+0.6**
	comp=Z,20nm,1.3s								
PLVB	Pleven	152.68	329	⇓	P	**PKiKP**		**23 57 20.1**	**+0.6**
RJOB	Jochberg	152.71	350	*e*	PKPbc	**PKPbc**		**23 57 20.1**	**+0.8**
	baz=8.8,slow=2.5								
MORH	Mrgy, Hungar	152.72	340	⇑	P	**PKiKP**		**23 57 20.2**	**+0.7**
MDVR	Moldovita	152.85	335	⇓	P	**PKiKP**		**23 57 21.0**	**+1.0**
LESA	Schwarzleotal	153.03	350	*e*	PKiKP	**PKPbc**		**23 57 20.9**	**+0.8**
	comp=Z,15nm,1.3s								
UBR	Ueberruh	153.13	354	*e*	PKPbc	**PKiKP**		**23 57 21.2**	**+0.7**
	baz=8.8,slow=2.5								
KBA	Koenbreinsper	153.25	348	*e*	PKiKP	**PKPbc**		**23 57 20.9**	**+0.1**
	comp=Z,5.1nm,0.7s								
SOKA	Soboth	153.28	346	*e*	PKiKP	**PKPbc**		**23 57 21.0**	**+0.3**
WATA	Walderalm	153.29	351	*i*	PKiKP	**PKPbc**		**23 57 21.4**	**+0.6**
	comp=Z,3.2nm,0.6s								
MOTA	Moosalm	153.34	352	*e*	PKiKP	**PKPbc**		**23 57 21.6**	**+0.7**
	comp=Z,19nm,1.1s								
WTTA	Wattenberg	153.35	351	*i*	pPKP	**PKiKP**		**23 57 21.9**	**+0.8**
	comp=Z,16nm,0.8s,SNR=5.5								
BLKB	Belogradchik	153.39	332	⇓	P	**PKPbc**		**23 57 20.6**	**-0.3**
SQTA	Sankt Quirin	153.45	352	*i*	pPKP	**PKiKP**		**23 57 21.9**	**+0.7**
	comp=Z,17nm,1.0s								
DAVA	Damuels	153.54	354	*e*	pPKP	**PKiKP**		**23 57 22.3**	**+0.8**
	comp=Z,26nm,1.2s								
FETA	Feichten	153.71	352	*e*	pPKP	**PKiKP**		**23 57 22.6**	**+0.8**
	comp=Z,179nm,3.5s								
ABTA	Abfaltersbach	153.72	350	*i*	PKiKP	**PKPbc**		**23 57 22.0**	**+0.3**
	comp=Z,27nm,1.1s								
STAL	STALIGIAL	154.15	349			**PKPbc**		**23 57 21.2**	**-1.3**
FUORN	Ofenpass-Fuorn	154.16	353			**PKPbc**		**23 57 23.1**	**+0.3**
EZN	Ezine	154.29	321	⇑	P	**PKPbc**		**23 57 19.8**	**-3.1**
EZN	Ezine	154.29	321	⇑	PKIKP	**PKPbc**		**23 57 19.8**	**-3.1**
TORD	Torodi Ar. Bea	171.28	153		PKP	**PKPdf**		**23 57 31.4**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=256,slow=1.3,SNR=0.9								
TORD					PKPab	**PKPab**		**23 58 51.8**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=213,slow=2.3,SNR=2.7								

*IDC **06** 23:43:45.0±1.3,2.57S×68.50E,h0km,mb3.8/11, mbtmp3.9/12,ML4.3/1,MS3.5/7,Error ellipse: s-maj=39.0km s-min=22.7km az=40.0*
*NEIC **06** 23:43:47.3±1.2,2.57S±0.06×68.6E±0.1,h10km±1km, mb4.5/14,

	2.5nm,0.3s						
KTMS				Lg	Lg	00 02 52.5	
	11nm,0.7s						
KTMS	**Ketmen**	**2.47**	**28**	*e*P	**Pb**	**00 02 18.9**	**-1.4**
	2.5nm,0.3s						
KTMS				*e*S	**Sg**	**00 02 52.5**	**-1.9**
	11nm,0.7s						
MTBS	**Maitube**	**2.53**	**318**	Pg	**Pb**	**00 02 21.0**	**-0.3**
	5.2nm,0.2s						
MTBS				Lg	Lg	00 02 56.3	
	5.1nm,0.3s						
MTBS	**Maitube**	**2.53**	**318**	*e*P	**Pb**	**00 02 21.0**	**-0.3**
	5.2nm,0.2s						
MTBS				*e*S	**Sg**	**00 02 56.3**	**-0.1**
	5.1nm,0.3s						
KST	**Kastek**	**2.73**	**311**	Pg	**Pb**	**00 02 24.2**	**-0.4**
	3.2nm,0.2s						
KST				Lg	Lg	00 03 01.7	
	8.1nm,0.4s						
KST	**Kastek**	**2.73**	**311**	*e*P	**Pb**	**00 02 24.2**	**-0.4**
	3.2nm,0.2s						
KST				*e*S	**Sg**	**00 03 01.8**	**-0.8**
	8.1nm,0.4s						
BLB	**Baldybastay**	**2.83**	**356**	Pg	**Pb**	**00 02 26.6**	**+0.2**
	8.7nm,0.1s						
BLB				Lg	Lg	00 03 05.6	
	25nm,0.4s						
TKM2	**Tokmak 2**	**2.87**	**306**	⇑*i*P	**Pn**	**00 02 22.4**	**+0.3**
TKM2			⇑	*e*S	**Sn**	**00 02 59.2**	**+1.8**
KTBS	**Karatobe**	**2.88**	**329**	Pg	**Pb**	**00 02 26.6**	**-0.6**
	7.6nm,0.4s						
KTBS				Lg	Lg	00 03 05.8	
	8.1nm,0.4s						
ARXS	**Arharly**	**3.01**	**347**	Pg	**Pb**	**00 02 29.2**	**-0.3**
	2.5nm,0.2s						
ARXS				Lg	Lg	00 03 10.1	
	22nm,0.3s						
ARXS	**Arharly**	**3.01**	**347**	*e*P	**Pb**	**00 02 29.2**	**-0.3**
ARXS				*e*S	**Sg**	**00 03 10.1**	**-1.7**
KNOS	**Konyrlen**	**3.10**	**6**	Pg	**Pb**	**00 02 31.9**	**+0.9**
	3.2nm,0.3s						
KNOS				Lg	Lg	00 03 15.0	
	17nm,0.8s						
KRBS	**Karabastau**	**3.32**	**318**	Pg	**Pb**	**00 02 35.3**	**+0.6**
	2.2nm,0.2s						
KRBS				Lg	Lg	00 03 20.8	
	2.2nm,0.3s						
ARLS	**Aral**	**3.38**	**281**	⇑*e*P	**Pn**	**00 02 29.1**	**+0.1**
ARLS			⇑	*e*S	**Sn**	**00 03 10.9**	**+1.1**
SALK	**Salom-Alik**	**3.75**	**266**	⇓*e*P	**Pn**	**00 02 34.3**	**+0.1**
SALK			⇓	*i*S	**Sn**	**00 03 19.5**	**+0.4**

*IDC **07** 00:08:08.0±1.4,8°.23S×158°.58E, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=32.1km s-min=26.7km az=52.0*

ISC 07 00:08:12.9±1.2,8°.4S±0°.2×158°.7E±0°.1,h35km,n6,σ0ˢ85/7, mb3.9/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.66**	**130**	Pn	**Pn**	**00 08 40.2**	**+0.6**
	177nm,0.3s,baz=193,slow=5.4,SNR=36						
HNR				Sn	**Sn**	**00 08 59.2**	**-0.6**
	385nm,0.3s,baz=317,slow=20,SNR=18						
WRA	**Warramunga Arr**	**26.20**	**241**	P	**P**	**00 13 45.5**	**+0.9**
	1.8nm,0.9s,baz=65,slow=9.4,SNR=6.5						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**28.17**	**234**	P	**P**	**00 14 02.4**	**0.0**
	0.9nm,0.5s,baz=60,slow=9.8,SNR=19						
	0.9nm,0.5s						
STKA	**Stephens Creek**	**28.27**	**212**	P	**P**	**00 14 02.8**	**-0.3**
	1.8nm,0.5s,baz=44,slow=13,SNR=3.9						
	1.8nm,0.5s						
SONM	**Songino Array**	**72.46**	**326**	P	**P**	**00 19 36.7**	**+0.6**
	0.9nm,0.6s,baz=143,slow=5.7,SNR=3.7						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**86.83**	**318**	P	**P**	**00 20 53.0**	**-1.0**
	0.8nm,0.7s,baz=100,slow=5.5,SNR=5.5						
	0.8nm,0.7s						

*DSN **07** 00:09:07.9±0.8,27°.91N×55°.28E, h30km, ML3.1/8, Error ellipse: s-maj=20.5km s-min=6.1km az=60.0*
*OMAN **07** 00:09:10.2±0.1,26°.50N×58°.42E, h10km, ml3.3/12, Error ellipse: s-maj=2.1km s-min=1.5km az=16.0*
*TEH **07** 00:09:13.8,27°.20N×55°.03E, h18km±23km*

ISC 07 00:09:14.3±1.0,27°.25N±0°.04×55°.12E±0°.05,h10km,n41, σ2ˢ19/51,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.78**	**302**	Pg	**Pg**	**00 09 28.0**	**-1.3**
GENO	**Geno**	**0.95**	**81**	Pg	**Pb**	**00 09 33.9**	**+0.9**
IBND	**Bandar-abas**	**1.28**	**81**	Pg	**Pn**	**00 09 39.2**	**+1.0**
SHME	**Shamm**	**1.51**	**142**	P	**Pn**	**00 09 40.1**	**-1.3**
SHME				S	**Sg**	**00 10 03.7**	**+0.9**
BANOM	**Banah**	**1.70**	**141**	P	**Pn**	**00 09 44.3**	**+0.3**
BANOM				S	**Sg**	**00 10 09.0**	**+0.2**
BANOM	**Banah**	**1.70**	**141**	P	**Pn**	**00 09 42.6**	**-1.4**
BANOM				S	**Sg**	**00 10 09.4**	**+0.6**
JHRM	**Jahrom**	**1.85**	**313**	Pn	**Pn**	**00 09 46.6**	**+0.4**
MASF	**Masafi**	**2.10**	**153**	P	**Pn**	**00 09 50.0**	**+0.5**
	SNR=8.5						
MASF				S	**Sb**	**00 10 18.6**	**+0.1**
MSFE	**Esma-Masafi**	**2.10**	**153**	P	**Pn**	**00 09 48.8**	**-0.8**
MSFE				S	**Sb**	**00 10 20.8**	**+2.0**
MDH	**Madha**	**2.22**	**151**	P	**Pn**	**00 09 47.6**	**-3.5**
MDH				S	**Sn**	**00 10 13.1**	**-5.5**
MDH	**Madha**	**2.22**	**151**	P	**Pn**	**00 09 49.9**	**-1.3**
NAZ	**Nazwa, Dubai**	**2.31**	**168**	P	**Pb**	**00 09 56.1**	**+0.1**
NAZ				S	**Sg**	**00 10 32.1**	**+3.6**
KHNJ	**Kahnooj**	**2.40**	**73**	Pn	**Pn**	**00 09 54.1**	**+0.4**
UOSS	**Minazif**	**2.50**	**157**	Pn	**Pn**	**00 09 55.1**	**0.0**
UOSS	**Minazif**	**2.50**	**157**	P	**Pn**	**00 09 52.8**	**-2.2**
UOSS	**Minazif**	**2.50**	**157**	P	**Pn**	**00 09 54.9**	**-0.1**
HATD	**Hatta, Dubai**	**2.58**	**159**	P	**Pn**	**00 09 53.6**	**-2.6**
HATD				S	**Sn**	**00 10 27.2**	**-0.5**
HATD	**Hatta, Dubai**	**2.58**	**159**	P	**Pn**	**00 09 55.8**	**-0.4**
ASUD	**Al Ashush, Dub**	**2.62**	**176**	P	**Pb**	**00 10 03.1**	**+1.7**
ASUD				S	**Sg**	**00 10 44.3**	**+5.7**
ASUD	**Al Ashush, Dub**	**2.62**	**176**	P	**Pn**	**00 09 57.5**	**+0.7**
AJN	**Ajban**	**2.68**	**183**	P	**Pn**	**00 10 04.9**	**-0.8**
AJN				S	**Sg**	**00 10 45.5**	**+5.0**
ASHO	**Ashiyiah**	**2.69**	**161**	P	**Pn**	**00 09 57.8**	**0.0**
	SNR=16						
ASHO	**Ashiyiah**	**2.69**	**161**	P	**Pn**	**00 09 57.6**	**-0.2**
NGRK	**Negar Kerman**	**2.77**	**30**	Pn	**Pn**	**00 09 59.2**	**0.0**
KRBR	**Kerman**	**3.08**	**28**	Pn	**Pn**	**00 10 04.6**	**+1.3**
ALNE	**Al Ain**	**3.23**	**170**	P	**Pn**	**00 10 03.4**	**-1.8**
ALNE				S	**Sn**	**00 10 46.2**	**+2.4**
KHGB	**Koh Gabri**	**3.33**	**21**	Pn	**Pn**	**00 10 08.2**	**+1.5**
SOHO	**SOHO**	**3.36**	**157**	P	Pn	00 09 57.5	-9.4
SOHO	**SOHO**	**3.36**	**157**	P	**Pn**	**00 10 05.4**	**-1.4**
CHMN	**Cheshme madani**	**3.36**	**39**	Pn	**Pn**	**00 10 09.2**	**+2.0**
KBAM	**BAM**	**3.49**	**57**	Pn	**Pn**	**00 10 10.0**	**+1.2**
MZWR	**Madinat Zayed**	**3.65**	**198**	P	**Pg**	**00 10 23.1**	**-1.2**
KRM1	**Kerman Provinc**	**3.75**	**30**	Pn	**Pn**	**00 10 13.9**	**+1.4**
IMEH	**Mehriz**	**4.15**	**354**	Pn	**Pn**	**00 10 18.9**	**+0.9**
IBAF	**Bafgh**	**4.34**	**5**	Pn	**Pn**	**00 10 21.0**	**+0.5**
UMZA	**Um Al Zommool**	**4.52**	**179**	P	**Pn**	**00 10 22.4**	**-0.5**
SRVN	**Saravan**	**6.48**	**87**	Pn	**Pn**	**00 10 51.2**	**+1.3**
DOK	**Doka**	**8.64**	**186**	P	**Pn**	**00 11 17.6**	**-1.8**
WHFO	**Wadi Hawf**	**9.37**	**188**	P	**Pn**	**00 11 27.8**	**-1.8**
	SNR=5.7						
DMTO	**DMTO**	**9.49**	**181**	P	Pn	00 11 25.1	-6.0
DMTO				S	**Sn**	**00 13 11.2**	**-6.8**
ABTO	**Aybut**	**9.99**	**190**	P	**Pn**	**00 11 35.4**	**-2.7**

*IDC **07** 00:11:44.9±2.1,38°.45N×142°.78E, h0km, mb3.7/5, mbtmp3.8/7, ML3.1/2, MS4.0/7, Error ellipse: s-maj=58.0km s-min=23.0km az=71.0*
*JMA **07** 00:11:50.5±0.1,38°.4N±0°.4×142°.3E±0°.7, h33km±1km, MV3.9/37, E OFF MIYAGI PREF*
*NEIC **07** 00:11:52.2±2.0,38°.32N±0°.02×142°.2E±0°.1, h35km±11km, mb4.2/3, Error ellipse: s-maj=12.3km s-min=2.4km az=92.0*

ISC 07 00:11:48.3±1.9,38°29N±0°.03×142°22E±0°.07,h14km±11km, n40,σ1ˢ37/41,mb4.0/8,MS4.2/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.59**	**272**	P	**Pn**	**00 12 02.7**	**+0.3**
JIKH				S	**Sn**	**00 12 10.9**	**-0.9**
JIO	**Ouri**	**0.70**	**283**	P	**Pn**	**00 12 04.3**	**+0.4**
JIO				S	**Sn**	**00 12 13.8**	**-0.7**
JKMT	**Kesennumamotoy**	**0.78**	**312**	P	**Pn**	**00 12 04.8**	**-0.1**
JKMT				S	**Sb**	**00 12 14.9**	**+0.8**
OFUJ	**Ofunato**	**0.90**	**331**	P	**Pn**	**00 12 05.9**	**-0.6**
OFUJ				S	**Sb**	**00 12 16.7**	**-0.8**
JMK	**Ichinoseki**	**1.02**	**310**	P	**Pn**	**00 12 08.5**	**+0.3**
JMK				*e*S	**Sn**	**00 12 21.9**	**-0.4**
JMM	**Marumori**	**1.21**	**250**	Pn	**Pg**	**00 12 11.5**	**0.0**
JMM				Sn	**Sb**	**00 12 26.6**	**+0.3**
JMM	**Marumori**	**1.21**	**250**	P	**Pg**	**00 12 11.6**	**0.0**
JMM				S	**Sb**	**00 12 27.1**	**+0.8**
JOU	**Okura**	**1.23**	**274**	*e*P	**Pg**	**00 12 12.5**	**+0.6**
JOU				S	**Sn**	**00 12 28.4**	**+1.0**
JOM	**Ohasama**	**1.38**	**329**	P	**Pb**	**00 12 13.4**	**-0.5**
JOM				S	**Sb**	**00 12 30.6**	**-0.9**
JFK	**Kawauchi**	**1.41**	**229**	*e*P	**Pn**	**00 12 14.2**	**+0.6**
JFK				*e*S	**Sn**	**00 12 31.2**	**-0.8**
JYK	**Kaneyama**	**1.59**	**294**	*e*P	**Pb**	**00 12 17.2**	**-0.2**
JTM	**Tenmabayashi**	**2.65**	**341**		**Pn**	**00 12 32.4**	**+1.9**
JTM				Sn	**Sn**	**00 13 00.8**	**-1.6**
JSD	**Sado**	**3.13**	**267**		**Pn**	**00 12 39.5**	**+2.3**
MJAR	**Matsushiro Arr**	**3.64**	**243**	Pn	**Pb**	**00 12 49.1**	**-3.3**
	0.3nm,0.3s,baz=68,slow=12,SNR=6.8						
MJAR				Sn	**Sb**	**00 13 34.2**	**-2.3**
	0.4nm,0.3s,baz=324,slow=19,SNR=4.5						
	2.5nm,0.3s						
MAJO	**Matsushiro**	**3.64**	**243**		**Pn**	**00 12 45.9**	**+1.7**
MJB9	**Matsu-Tunnel**	**3.64**	**243**	Pn	**Pn**	**00 12 46.4**	**+2.1**
ERM	**Erimo**	**3.79**	**11**	Pn	**Pn**	**00 12 45.9**	**-0.3**
JGF	**Kuroka**	**4.73**	**237**		**Pn**	**00 13 03.0**	**+3.8**
JHJ2	**Mitsune**	**5.53**	**201**	Pn	**Pn**	**00 13 10.4**	**+0.3**
JHJ	**Hachijo jima 2**	**5.53**	**202**	Pn	**Pn**	**00 13 12.3**	**+2.1**
	7.6nm,0.3s,baz=260,slow=19,SNR=2.2						
JHJ				Sn	**Sn**	**00 14 11.1**	**-2.5**
	7.4nm,0.3s,baz=90,slow=22,SNR=1.7						
	24nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.28**	**124**	T	T	00 47 18.0	
	baz=317,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.29**	**124**	T	T	00 47 19.8	
	baz=317,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.30**	**124**	T	T	00 47 16.6	
	baz=317,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.04**	**126**	T	T	00 48 23.1	
	baz=318,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.04**	**126**	T	T	00 48 25.7	
	baz=318,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.06**	**126**	T	T	00 48 20.4	
	baz=318						
ZALV	**Zalesovo Beam**	**41.55**	**311**	P	**P**	**00 19 35.8**	**+0.6**
	0.3nm,0.3s,baz=107,slow=8.3,SNR=2.3						
ZALV				LR	LR	00 38 37.0	
	comp=Z,100nm,20.6s,baz=92,slow=39						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.01**	**301**	P	**P**	**00 19 56.3**	**+1.1**
	0.4nm,0.7s,baz=87,slow=7.0,SNR=2.8						
	0.4nm,0.7s						
KURK	**Kurchatov**	**45.67**	**307**	P	**P**	**00 20 08.4**	**+0.1**
KURK				IAmb	IAmb	00 20 19.0	
	comp=Z,3.4nm,1.0s						
KURBB	**Kurchatov Arra**	**45.74**	**307**	P	**P**	**00 20 09.3**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=81,slow=8.1,SNR=7.6						
	comp=Z,0.9nm,0.3s						
ARTI	**Arti**	**55.95**	**318**	LR	LR	00 48 49.2	
	comp=Z,160nm,20.9s,baz=52,slow=40						
AB31	**Akbulak array**	**57.62**	**310**	P	**P**	**00 21 37.8**	**0.0**
AB31				IAmb	IAmb	00 22 05.8	
	comp=Z,0.5nm,0.8s						
WB0	**Warramunga Arr**	**58.22**	**189**	P	**P**	**00 21 41.6**	**-0.5**
WB0				IAmb	IAmb	00 21 46.6	
	comp=Z,6.1nm,1.2s						
WRA	**Warramunga Arr**	**58.40**	**189**	P	**P**	**00 21 43.5**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=5.2,slow=7.1,SNR=7.0						
	comp=Z,1.1nm,0.7s						
KIRV	**Kirov**	**59.63**	**323**	LR	LR	00 51 11.4	
	comp=Z,196nm,21.2s,baz=56,slow=40						
ASAR	**Alice Springs**	**62.12**	**189**	P	**P**	**00 22 09.5**	**+0.7**
	comp=Z,6.0nm,0.6s,baz=17,slow=6.2,SNR=6.5						
	comp=Z,0.6nm,0.6s						
GNI	**Garni**	**71.47**	**307**	LR	LR	00 58 33.0	
	comp=Z,60nm,22.0s,baz=47,slow=39						
MLR	**Muntele Rosu**	**78.84**	**320**	LR	LR	01 02 36.8	
	comp=Z,180nm,21.6s,baz=36,slow=39						
ASF	**Jabal al Asfar**	**81.33**	**304**	LR	LR	01 06 15.0	
	comp=Z,107nm,19.5s,baz=115,slow=40						
EIL	**Elat**	**84.23**	**303**	LR	LR	01 07 22.8	
	comp=Z,85nm,18.3s,baz=160,slow=40						

*HEL **07** 00:22:02.8±0.4,67°.86N×20°.00E, h0km, ML1.7, Suspected explosion*

UPP 07 00:22:03.6±0.0,67°.83N×20°.20E,h0km,ML2.0, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	00 22 06.4	+0.2
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	00 22 06.8	+0.6
	baz=224						
RATU	**Laukkuluspa**	**0.23**	**269**	P	Pg	00 22 08.2	+0.2
RATU	**Laukkuluspa**	**0.23**	**269**	P	Pg	00 22 08.6	+0.5
RATU				S	Sg	00 22 12.1	+1.1
KOVU	**Salmi**	**0.40**	**358**	P	Pg	00 22 11.1	0.0
KOVU				S	Sg	00 22 16.7	+0.4
KOVU	**Salmi**	**0.40**	**358**	P	Pg	00 22 11.5	+0.3
KOVU				S	Sg	00 22 17.0	+0.7
NIKU	**Nikkaluokta**	**0.45**	**275**	P	Pg	00 22 12.1	0.0
NIKU				S	Sg	00 22 18.3	+0.4
NIKU	**Nikkaluokta**	**0.45**	**275**	P	Pg	00 22 12.7	+0.6
NIKU				S	Sg	00 22 18.7	+0.9
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 22 17.0	-0.2
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 22 17.8	+0.5
LANU	**Lannavaara**	**0.71**	**71**	PG	Pg	00 22 17.0	-0.2
LANU				SB	Sg	00 22 27.1	+0.7
DUNU	**Dundret**	**0.73**	**169**	P	Pg	00 22 17.2	-0.3
DUNU	**Dundret**	**0.73**	**169**	P	Pg	00 22 17.7	+0.2
MASU	**Masugnsbyn**	**0.78**	**118**	P	Pg	00 22 18.4	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 22 18.4	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	*e*P	Pg	00 22 18.1	-0.6
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pb	00 22 27.1	-0.1
KIF	**Kilpisjarvi**	**1.20**	**10**	PN	Pg	00 22 26.5	0.0
KIF				smax	smax	00 22 39.9	
	comp=Z,8.5nm,0.2s						
KIF				SN	Sb	00 22 43.2	0.0
PAJU	**Pajala**	**1.39**	**124**	P	Pg	00 22 29.0	-1.1
PAJU	**Pajala**	**1.39**	**124**	PG	Pg	00 22 28.8	-1.2
	baz=303						
PAJU				SG	Sg	00 22 47.6	-0.4
HEF	**Hetta**	**1.42**	**64**	PG	Pn	00 22 29.7	-0.9
	baz=246						
HEF				smax	smax	00 22 47.1	
	comp=Z,7.2nm,0.2s						
HEF				SN	Sn	00 22 50.7	+0.7
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	00 22 31.0	-0.6
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	Pn	00 22 31.1	-0.6
ERTU				SN	Sn	00 22 52.6	+0.7
KTK1	**Kautokeino**	**1.63**	**42**	PN	Pn	00 22 33.3	-0.2
KTK1				SN	Sg	00 22 57.3	+1.3
HARU	**Harads**	**1.70**	**169**	P	Pn	00 22 34.5	+0.1
KALU	**Kalix**	**2.34**	**146**	PG	Pn	00 22 44.6	+1.4
KALU				SG	Sb	00 23 16.7	+0.8
TOF	**Tornio**	**2.39**	**135**	PB	Pn	00 22 45.6	+1.7
TOF				smax	smax	00 23 15.9	
	comp=Z,2.2nm,0.2s						
TOF				SG	Sb	00 23 18.4	+0.9
RNF	**Rovaniemi**	**2.57**	**116**	PB	Pn	00 22 48.4	+1.9
RNF				SG	Sb	00 23 23.2	+0.6
ARA0	**ARCESS Array S**	**2.59**	**46**	PB	Pn	00 22 47.9	+1.3
ARA0				SG	Sb	00 23 21.9	-1.2
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PB	Pn	00 22 55.6	+2.0
RAJF				SG	Sb	00 23 39.0	+1.2
KEV	**Kevo**	**3.14**	**49**	PG	Pb	00 22 59.5	-0.6
KEV				SB	Sn	00 23 35.4	+3.1
OUL	**Oulu**	**3.58**	**138**	SG	Sb	00 23 54.8	+3.2
OLKF	**Oulanka, Finla**	**3.90**	**109**	PG	Pg	00 23 16.0	-2.3
KU6	**Riekki**	**4.22**	**111**	PG	Pb	00 23 20.6	+2.0
	baz=298						
KU6				SG	Sg	00 24 18.0	-1.0

UPP 07 00:22:06.1±0.0,67°.86N×20°.15E,h0km,ML2.2, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**36**	P	Pg	00 22 08.7	+0.3
	baz=151						
KUA				S	Sg	00 22 10.4	+0.4
KUA	**Kurravaara**	**0.12**	**36**	S	Pg	00 22 08.8	+0.4
KUA	**Kurravaara**	**0.12**	**36**	S	Pg	00 22 08.4	0.0
RATU	**Laukkuluspa**	**0.21**	**262**	P	Pg	00 22 10.3	+0.2
RATU				S	Sg	00 22 13.4	+0.5
KOVU	**Salmi**	**0.37**	**1**	P	Pg	00 22 13.2	0.0
NIKU	**Nikkaluokta**	**0.42**	**272**	P	Pg	00 22 14.3	+0.1
LANU	**Lannavaara**	**0.72**	**74**	P	Pg	00 22 19.6	-0.4
DUNU	**Dundret**	**0.76**	**167**	P	Pg	00 22 20.3	-0.2
SALU	**Saltoluokta**	**0.79**	**234**	P	Pg	00 22 20.8	-0.4
MASU	**Masugnsbyn**	**0.81**	**119**	P	Pg	00 22 21.5	-0.1
PAJU	**Pajala**	**1.42**	**125**	P	Pn	00 22 32.1	-1.0
ERTU	**Ertsjaerv**	**1.53**	**148**	P	Pn	00 22 34.4	-0.3
HARU	**Harads**	**1.73**	**169**	P	Pn	00 22 37.9	+0.6

*IDC **07** 00:32:33.3±2.6,56°.42S×149°.09E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=246.0km s-min=26.2km az=76.0, West of Macquarie Island*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**21.66**	**173**	P	P	00 37 24.9	0.0
	0.7nm,0.7s,baz=338,slow=10,SNR=5.6						
	0.7nm,0.7s						
STKA	**Stephens Creek**	**25.09**	**345**	P	P	00 37 59.7	+0.4
	5.8nm,1.0s,baz=153,slow=11,SNR=4.0						
	5.8nm,1.0s						
H01W1	**Cape Leeuwin H**	**32.01**	**297**	T	T	01 11 45.6	
	baz=143,slow=75						
H01W2	**Cape Leeuwin H**	**32.02**	**297**	T	T	01 11 46.7	
	baz=143,slow=75						
H01W3	**Cape Leeuwin H**	**32.03**	**297**	T	T	01 11 47.8	
	baz=143,slow=75						
ASAR	**Alice Springs**	**34.56**	**335**	P	P	00 39 23.4	0.0
	1.0nm,0.8s,baz=168,slow=10,SNR=6.4						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**38.05**	**337**	P	P	00 39 53.0	-0.4
	1.5nm,0.6s,baz=166,slow=7.6,SNR=14						
	1.5nm,0.6s						
H04S2	**CROZET ISLANDS**	**56.16**	**235**	T	T	01 42 39.6	
	baz=138,slow=75,SNR=12						
H04S1	**CROZET ISLANDS**	**56.16**	**235**	T	T	01 42 40.3	
	baz=138,slow=75,SNR=15						
H04S3	**CROZET ISLANDS**	**56.17**	**235**	T	T	01 42 36.7	
	baz=138,slow=75,SNR=16						
H08S2	**Diego Garcia H**	**76.25**	**277**	T	T	02 06 46.1	
	baz=147,slow=76,SNR=59						
H08S1	**Diego Carcia H**	**76.27**	**277**	T	T	02 06 48.0	
	baz=147,slow=76,SNR=89						
H08S3	**Diego Garcia H**	**76.28**	**277**	T	T	02 06 48.7	
	baz=147,slow=76,SNR=65						
H03S2	**Juan Fernandez**	**81.29**	**141**	T	T	02 15 48.1	
	baz=202,slow=74,SNR=8.5						
H03S1	**Juan Fernandez**	**81.29**	**141**	T	T	02 15 53.0	
	baz=202,slow=74,SNR=8.7						
H03S3	**Juan Fernandez**	**81.31**	**141**	T	T	02 15 52.4	
	baz=202,slow=74,SNR=7.0						

*DJA **07** 00:49:58.3±0.5,10°.S±4°.×11°.9E±°, h11km±3km, M4.3/19, mb4.2/6, mB5.3/4, MLv4.2/19, Mw(mB)4.7/4*
*IDC **07** 00:49:59.8±3.9,9°.92S×119°.20E, h52km±37km, mb3.3/3, mbtmp3.6/7, ML3.6/5, Error ellipse: s-maj=36.3km s-min=13.0km az=59.0*

ISC 07 00:49:57.8±0.8,10°.02S±0°.06×119°.24E±0°.06,h33km,n28, σ2ˢ46/31,mb3.7/3,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.41**	**21**	P	**Pb**	**00 50 06.1**	**-1.0**
WBSI				S	**Sb**	**00 50 11.4**	**-2.0**
WSI	**Waingapu**	**1.10**	**71**	P	**Pn**	**00 50 17.6**	**+0.7**
WSI				S	**Sn**	**00 50 31.7**	**+0.7**
BASI	**Baing, Sumba**	**1.33**	**99**	P	**Pn**	**00 50 22.4**	**+2.3**
PLAI	**Plampang**	**1.87**	**309**	P	**Pn**	**00 50 27.7**	**+0.2**
TWSI	**Taliwang, Sumb**	**2.65**	**299**	P	**Pn**	**00 50 40.7**	**+2.4**
EDFI	**Ende, Flores**	**2.73**	**63**	P	**Pn**	**00 50 40.8**	**+1.4**
MMRI	**Maumere**	**3.26**	**65**	P	**Pn**	**00 50 49.6**	**+2.9**
BSSI	**Bau Bau, Buton**	**4.05**	**18**	P	**Pn**	**00 50 59.6**	**+2.1**
DNP	**Denpasar**	**4.20**	**288**	P	**Pn**	**00 51 02.9**	**+3.4**
BATI	**Baumata**	**4.36**	**93**	P	**Pn**	**00 51 04.2**	**+2.5**
	20nm,0.3s,baz=101,slow=2.8,SNR=4.2						
BATI				S	**Sn**	**00 51 55.1**	**+3.6**
	46nm,0.4s,baz=61,slow=20,SNR=9.6						
BATI	**Baumata**	**4.36**	**93**	P	**Pn**	**00 51 04.3**	**+2.5**
SRBI	**Singaraja**	**4.42**	**296**	P	**Pn**	**00 51 06.4**	**+3.8**
SOEI	**Soe**	**4.96**	**87**	P	**Pn**	**00 51 12.9**	**+2.7**
KAPI	**Kappang**	**5.00**	**6**	P	**Pn**	**00 51 12.0**	**+1.4**
	3.8nm,0.3s,baz=192,slow=6.9,SNR=9.0						
KAPI				S	**Sn**	**00 52 06.7**	**-0.6**

BANOM				S	Sb	00 52 43.5	+0.2		
MASF	**Masafi**	**2.25**	**153**	P	Pn	**00 52 24.3**	**+0.6**		
	SNR=8.2								
MASF				S	Sn	**00 52 53.1**	**+1.3**		
MSFE	**Esma-Masafi**	**2.26**	**153**	P	Pn	**00 52 22.6**	**-1.2**		
MDH	**Madha**	**2.37**	**151**	P	Pn	**00 52 26.0**	**+0.6**		
MDH	**Madha**	**2.37**	**151**	P	Pn	**00 52 24.1**	**-1.2**		
KHNJ	**Kahnooj**	**2.42**	**76**	Pn	Pb	**00 52 28.4**	**-1.6**		
NAZ	**Nazwa, Dubai**	**2.46**	**167**	P	Pn	**00 52 27.5**	**+0.9**		
UOSS	**Minazif**	**2.65**	**157**	Pn	Pn	**00 52 29.3**	**0.0**		
UOSS	**Minazif**	**2.65**	**157**	P	Pn	**00 52 29.2**	**0.0**		
UOSS	**Minazif**	**2.65**	**157**	P	Pn	**00 52 28.9**	**-0.4**		
FAQ	**Al Faqa, Dubai**	**2.68**	**169**	P	Pn	**00 52 30.4**	**+0.8**		
FAQ				S	Sn	**00 53 03.2**	**+0.7**		
NGRK	**Negar Kerman**	**2.69**	**33**	Pn	Pb	**00 52 33.6**	**-1.1**		
HATD	**Hatta, Dubai**	**2.73**	**159**	P	Pn	**00 52 30.6**	**+0.2**		
HATD				S	Sn	**00 53 04.0**	**+0.2**		
HATD	**Hatta, Dubai**	**2.73**	**159**	P	Pn	**00 52 30.3**	**-0.1**		
ASUD	**Al Ashush, Dub**	**2.77**	**175**	P	Pn	**00 52 31.7**	**+0.9**		
ASUD				S	Sn	**00 53 04.3**	**-0.2**		
ASUD	**Al Ashush, Dub**	**2.77**	**175**	P	Pn	**00 52 31.5**	**+0.7**		
AJN	**Ajban**	**2.82**	**181**	P	Pn	**00 52 32.3**	**+0.7**		
ASHO	**Ashiyiah**	**2.84**	**161**	P	Pn	**00 52 32.4**	**+0.4**		
	SNR=13								
ASHO				S	Sn	**00 53 08.3**	**+1.7**		
ASHO	**Ashiyiah**	**2.84**	**161**	P	Pn	**00 52 31.7**	**-0.2**		
KRBR	**Kerman**	**2.99**	**30**	Pn	Pb	**00 52 38.6**	**-1.3**		
KHGB	**Koh Gabri**	**3.23**	**23**	Pn	Pb	**00 52 42.2**	**-1.6**		
CHMN	**Cheshme madani**	**3.30**	**41**	Pn	Pb	**00 52 43.2**	**-1.8**		
ALNE	**Al Ain**	**3.38**	**169**	P	Pn	**00 52 39.5**	**+0.2**		
	SNR=7.1								
ALNE				S	Sn	**00 53 19.9**	**+0.1**		
ALNE	**Al Ain**	**3.38**	**169**	P	Pn	**00 52 39.1**	**-0.2**		
KBAM	**BAM**	**3.47**	**59**	Pn	Pb	**00 52 44.7**	**-3.2**		
SOHO	**SOHO**	**3.51**	**157**	P	Pn	**00 52 40.3**	**-0.7**		
KRM1	**Kerman Provinc**	**3.66**	**32**	Pn	Pb	**00 52 47.8**	**-3.4**		
MZWR	**Madinat Zayed**	**3.76**	**196**	P	Pn	**00 52 44.4**	**-0.2**		
GHWR	**Ruwais**	**3.93**	**210**	P	Pn	**00 52 46.1**	**-0.8**		
SHMA	**Al-Shehemyia**	**3.96**	**248**	P	Pn	**00 52 46.8**	**-0.5**		
SHMA				S	Sn	**00 53 34.3**	**+0.3**		
IMEH	**Mehriz**	**4.00**	**355**	Pn	Pb	**00 52 52.7**	**-4.4**		
IBAF	**Bafgh**	**4.21**	**6**	Pn	Pb	00 52 55.0	-5.5		
ARQ	**Araqi**	**4.25**	**161**	P	Pn	**00 52 51.3**	**0.0**		
	SNR=7.7								
HOQ	**Hoqain**	**4.31**	**151**	P	Pn	**00 52 50.8**	**-1.3**		
TRNA	**Turayna**	**4.34**	**233**	P	Pn	**00 52 52.6**	**0.0**		
MZR	**Muzera**	**4.59**	**198**	P	Pn	**00 52 54.8**	**-1.2**		
MZR	**Muzera**	**4.59**	**198**	P	Pn	**00 52 54.7**	**-1.3**		
SMRA	**Abu-Samra**	**4.62**	**236**	P	Pn	**00 52 56.5**	**+0.2**		
KLNJ	**Kolanjah**	**4.70**	**321**	Pn	Pn	00 53 01.7	+3.9		
SMDO	**Samad**	**5.10**	**147**	P	Pn	**00 53 01.3**	**-1.7**		
WSAR	**Wadi Sarin**	**5.25**	**141**	P	Pn	**00 53 02.0**	**-3.1**		
JMDO	**Jabal Madar**	**5.72**	**150**	P	Pn	**00 53 11.9**	**+0.5**		
IKOO	**Kooshah**	**6.08**	**33**	Pn	Pn	00 53 20.6	+3.9		
SRVN	**Saravan**	**6.54**	**88**	Pn	Pn	**00 53 25.5**	**+2.7**		
JLN	**Jalan Bani Buh**	**6.55**	**142**	P	Pn	**00 53 21.1**	**-1.8**		
JLN				S	Sn	**00 54 35.0**	**-3.1**		
MHTO	**MHTO**	**6.91**	**157**	P	Pn	**00 53 26.9**	**-0.9**		
	SNR=10								
DQM	**DQM**	**7.77**	**162**	P	Pn	**00 53 38.5**	**-1.1**		
DOK	**Doka**	**8.77**	**186**	P	Pn	**00 53 51.3**	**-2.1**		
RAYN	**Ar Rayn**	**9.44**	**248**	P	Pn	**00 54 00.1**	**-2.5**		
WHFO	**Wadi Hawf**	**9.50**	**187**	P	Pn	**00 54 02.0**	**-1.4**		
	SNR=17								
DMTO	**DMTO**	**9.63**	**181**	P	Pn	**00 54 02.5**	**-2.7**		
ABTO	**Aybut**	**10.12**	**190**	P	Pn	**00 54 09.2**	**-2.7**		
	SNR=12								
MMAI	**Mount Meron Ar**	**17.87**	**293**	P	**P**	**00 55 55.4**	**-0.6**		
	0.2nm,0.3s,baz=100,slow=12,SNR=2.4								
	1.2nm,0.8s								
KBZ	**Khabaz**	**19.03**	**332**	P	Pn	**00 56 11.3**	**+2.0**		
	baz=130,slow=9.9,SNR=2.2								
	0.7nm,0.8s								
BRTR	**Keskin Array B**	**21.61**	**310**	P	**P**	**00 56 38.8**	**+2.0**		
	0.6nm,0.8s,baz=136,slow=12,SNR=5.5								
	0.6nm,0.8s								
BVAR	**Borovoye Array**	**28.04**	**20**	P	**P**	**00 57 38.5**	**+0.8**		
	0.8nm,0.5s,baz=215,slow=7.0,SNR=5.6								
	0.8nm,0.5s								
MKAR	**Makanchi Array**	**28.88**	**41**	P	**P**	**00 57 46.2**	**+0.7**		
	0.3nm,0.7s,baz=224,slow=8.1,SNR=2.2								
	0.3nm,0.7s								
ZALV	**Zalesovo Beam**	**34.38**	**31**	P	**P**	**00 58 34.5**	**+0.9**		
	1.2nm,0.4s,baz=246,slow=9.4,SNR=6.8								
	1.2nm,0.4s								
FINES	**FINESS Array B**	**39.18**	**338**	P	**P**	**00 59 15.1**	**+0.7**		
	2.5nm,0.8s,baz=117,slow=8.0,SNR=6.2								
	2.5nm,0.8s								
ESDC	**Sonseca Array**	**49.88**	**300**	P	**P**	**01 00 39.6**	**-0.8**		
	1.2nm,1.1s,baz=84,slow=7.6,SNR=2.9								
	1.2nm,1.1s								

*IDC **07** 01:06:08.1±7.2, 30.′85N×73.′69E, h0km, mb3.7/8, mbtmp3.6/10, ML3.4/2, Error ellipse: s-maj=133.5km s-min=34.6km az=144.0*

ISC 07 01:06:20.1±2.1, 31.′6N±0.′2×73.′1E±0.′2, h35km, n13, σ1s51/15, mb3.9/7, 2C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**11.07**	**5**	Pn		**Pn**	**01 08 58.5**	**+2.5**
	0.4nm,0.3s,baz=180,slow=8.1,SNR=1.7							
AAK					Sn	**Sn**	**01 10 56.4**	**-2.1**
	0.2nm,0.3s,baz=49,slow=23,SNR=1.3							
	2.3nm,0.6s							
AAK	**Ala-Archa**	**11.07**	**5**	⇑P		Pn	01 09 00.7	+4.7
	2.2nm,0.9s							
AAK				⇓S		**Sn**	**01 11 01.1**	**+2.6**
	2.4nm,0.8s							
KK31	**Karatay Array**	**11.66**	**351**	⇑P		**Pn**	**01 09 05.2**	**+1.2**
	2.5nm,0.3s,baz=180,slow=13,SNR=62							
KK31				⇓S		**Sn**	**01 11 10.7**	**-2.2**
	3.3nm,0.5s,baz=168,slow=21,SNR=12							
MKAR	**Makanchi Array**	**16.73**	**22**	P		**Pn**	**01 10 10.9**	**-0.8**
	0.1nm,0.3s,baz=206,slow=12,SNR=2.1							
	0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**19.42**	**10**	P		**P**	**01 10 42.3**	**-0.9**
	0.2nm,0.3s,baz=202,slow=9.7,SNR=2.6							
	0.2nm,0.3s							
BVAR	**Borovoye Array**	**21.50**	**356**	P		**P**	**01 11 06.1**	**+0.5**
	0.5nm,0.4s,baz=154,slow=8.4,SNR=4.5							
	0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**23.86**	**17**	P		**P**	**01 11 28.9**	**-1.1**
	0.6nm,0.4s,baz=204,slow=8.3,SNR=2.5							
	0.6nm,0.4s							
BRTR	**Keskin Array B**	**32.87**	**295**	P		**P**	**01 12 50.9**	**+0.1**
	0.7nm,0.9s,baz=108,slow=8.2,SNR=4.1							
	0.7nm,0.9s							
FINES	**FINESS Array B**	**42.54**	**329**	P		**P**	**01 14 12.4**	**+0.5**
	4.9nm,1.1s,baz=108,slow=8.6,SNR=3.6							
	4.9nm,1.1s							
ARCES	**ARCESS Array B**	**46.33**	**339**	P		**P**	**01 14 41.4**	**-0.8**
	1.1nm,0.7s,baz=113,slow=5.8,SNR=4.3							
	1.1nm,0.7s							
HFS	**Hagfors**	**48.03**	**325**	P		**P**	**01 14 55.9**	**+0.4**
	1.8nm,0.6s,baz=106,slow=7.9,SNR=7.5							
	1.8nm,0.6s							
NB2	**NORSAR Subarra**	**49.37**	**326**	P		**P**	**01 15 05.7**	**-0.2**
	comp=Z,3.7nm,1.0s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**49.37**	**326**	P		**P**	**01 15 05.7**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=97,slow=7.6,SNR=5.2							
	comp=Z,1.0nm,0.7s							

*NEIC **07** 01:12:14.9±1.0, 19.′4N±0.′2×155.′3W±0.′1, h5km±2km, Error ellipse: s-maj=32.7km s-min=2.5km az=33.0*

HV 07 01:12:14.3±0.7, 19.′42N±0.′07×155.′25W±0.′06, h1km±9km, ML2.4/16, ML2.0/30(NEIC), Error ellipse: s-maj=12.5km s-min=0.7km az=218.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HATHI	**Halema'uma'u T**	**0.01**	**288**			Pg	01 12 15.0	+0.2
HATHI						Sg	01 12 15.6	+0.5
HATHI	**Halema'uma'u T**	**0.01**	**288**	IAML			01 12 18.6	
	comp=E,70μm,0.7s							
HATHI				IAML			01 12 18.6	
	comp=N,63μm,0.7s							
BYL	**Byron's Ledge**	**0.01**	**236**			Pg	01 12 15.2	+0.4
BYL						Sg	01 12 15.9	+0.8
BYL	**Byron's Ledge**	**0.01**	**236**	IAML			01 12 16.3	
	comp=E,15μm,0.7s							
BYL				IAML			01 12 20.3	
	comp=N,15μm,0.6s							
SBLHI	**Steaming Bluff**	**0.02**	**293**			Pg	01 12 15.2	+0.3
SBLHI						Sg	01 12 15.8	+0.6
KKO	**Keanakako'i**	**0.03**	**217**			Pg	01 12 15.6	+0.7
KKO						Sg	01 12 16.5	+1.2
UWB	**Uwekahuna Bluf**	**0.03**	**281**			Pg	01 12 15.5	+0.6
UWB						Sg	01 12 16.4	+1.1
OBL	**Observatory Le**	**0.03**	**267**			Pg	01 12 15.8	+0.7
OBL						Sg	01 12 17.0	+1.5
RIM	**Rim**	**0.03**	**225**			Pg	01 12 15.8	+0.7
RIM						Sg	01 12 16.8	+1.2
UWE	**Uwekahuna**	**0.04**	**272**			Pg	01 12 16.0	+0.8
UWE						Sg	01 12 17.3	+1.5
UWE	**Uwekahuna**	**0.04**	**272**	IAML			01 12 20.3	
	comp=N,5μm,0.6s							
UWE				IAML			01 12 20.5	
	comp=E,8μm,0.7s							
WRMHI	**West Rim**	**0.05**	**255**			Pg	01 12 16.2	+0.9
WRMHI						Sg	01 12 17.6	+1.6
RSD	**Rainshed**	**0.05**	**328**			Pg	01 12 16.1	+0.7
RSD						Sg	01 12 17.5	+1.4
RSD	**Rainshed**	**0.05**	**328**	IAML			01 12 20.4	
	comp=N,3μm,0.4s							
RSD				IAML			01 12 21.0	
	comp=E,3μm,0.8s							
SDHHI	**Sand Hill**	**0.05**	**235**			Pg	01 12 16.3	+0.9
SDHHI						Sg	01 12 17.6	+1.5
PUH	**Pauahi**	**0.06**	**146**			Pg	01 12 16.4	+1.0
PUH						Sg	01 12 17.8	+1.6
PUH	**Pauahi**	**0.06**	**146**	IAML			01 12 18.1	
	comp=E,4μm,0.5s							
PUH				IAML			01 12 21.0	
	comp=N,3μm,0.9s							
KNHH	**Kane Nui o Ham**	**0.09**	**118**			Pg	01 12 17.1	+1.1
STCH	**Steam Cracks**	**0.12**	**106**			Pg	01 12 17.6	+0.9
STCH						Sg	01 12 20.0	+1.7
STCH	**Steam Cracks**	**0.12**	**106**	IAML			01 12 20.4	
	comp=N,412nm,0.4s							
STCH				IAML			01 12 22.1	
	comp=E,9.1nm,0.6s							
NPOC	**North of Pu'u**	**0.13**	**101**			Pg	01 12 17.8	+0.9
NPOC						Sg	01 12 20.4	+1.7
HLP	**Hilina Pali**	**0.14**	**205**			Pg	01 12 18.0	+1.0
HLP						Sg	01 12 20.6	+1.9
HLP	**Hilina Pali**	**0.14**	**205**	IAML			01 12 20.9	
	comp=N,567nm,2.4s							
HLP				IAML			01 12 23.0	
	comp=E,510nm,1.1s							
JCUZ	**Jacuzzi**	**0.14**	**104**			Pg	01 12 18.0	+0.9
JCUZ						Sg	01 12 20.7	+1.7
MLH	**Mauna Loa**	**0.15**	**300**			Pg	01 12 18.4	+1.1
MLH				IAML			01 12 21.3	
	comp=E,289nm,3.6s							
MLH	**Mauna Loa**	**0.15**	**300**			Sg	01 12 21.2	+1.9
MLH	**Mauna Loa**	**0.15**	**300**	IAML			01 12 18.8	
	comp=N,256nm,3.5s							
AIN	**Ainahou**	**0.20**	**257**	Pg	Pg		01 12 19.0	+0.8
AIN				IAML			01 12 21.9	
	comp=E,263nm,3.4s							
AIN				IAML			01 12 23.2	
	comp=N,332nm,3.5s							
JOKA	**Jonika Flow**	**0.23**	**86**	Pg	Pg		01 12 19.2	+0.4
HMH	**Humu'ula Sheep**	**0.29**	**310**	Pg	Pg		01 12 20.7	+0.9
HMH				IAML			01 12 21.3	
	comp=N,120nm,2.9s							
HMH				IAML			01 12 23.1	
	comp=E,224nm,3.9s							
MWH	**Mokuaweoweo**	**0.34**	**281**	Pg	Pg		01 12 21.6	+0.8
MWH				IAML			01 12 26.5	
	comp=N,182nm,3.4s							
MWH				IAML			01 12 28.5	
	comp=E,250nm,3.9s							

*MOS **07** 01:12:54.3±1.0, 38.′25N×73.′01E, h138km, mb4.4/7, Error ellipse: s-maj=8.7km s-min=5.3km az=81.1*

*IDC **07** 01:12:55.2±5.1, 38.′19N×73.′21E, h142km±31km, mb3.5/7, mbtmp4.1/13, MS3.5/3, Error ellipse: s-maj=53.1km s-min=24.7km az=151.0*

*NEIC **07** 01:12:55.0±1.4, 38.′19N±0.′04×72.′93E±0.′08, h138km±8km, mb4.4/13, Error ellipse: s-maj=8.7km s-min=6.5km az=88.0*

*NNC **07** 01:12:59.6±2.2, 38.′62N×72.′73E, h200km±23km, mb3.4, mpv4.4, Error ellipse: s-maj=22.7km s-min=12.9km az=20.0*

*SOME **07** 01:13:00.6, 38.′55N×72.′83E, h35km*

ISC 07 01:12:52.1±0.5, 38.′03N±0.′04×73.′10E±0.′05, h127km, n110, σ2s35/133, mb4.3/16, 5C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.77**	**326**			**Pn**	**01 13 25.0**	**+1.6**
DRK					Sn	**Sn**	**01 13 47.1**	**-0.3**
DRK	**Karamyk**	**1.77**	**326**	PN		**Pn**	**01 13 25.0**	**+1.6**
GAR	**Garm**	**2.39**	**295**			**Pn**	**01 13 31.6**	**+0.8**
KSH	**Kashi**	**2.70**	**56**	Pn		**Pn**	**01 13 33.4**	**-1.4**
KSH					Sn	**Sn**	**01 14 02.6**	**-5.1**
KSH					smax	smax		
	comp=N,2μm,0.6s							
KSH					smax	smax		
	comp=E,950nm,0.9s							
CHGR	**Chuyangaron**	**3.16**	**283**			**Pn**	**01 13 40.9**	**+0.1**
CHGR	**Chuyangaron**	**3.16**	**283**	PN		**Pn**	**01 13 40.9**	**+0.1**
ARSB	**Arslanbob**	**3.30**	**359**			**Pn**	**01 13 43.1**	**+0.5**
ARSB	**Arslanbob**	**3.30**	**359**	PN		**Pn**	**01 13 43.1**	**+0.5**
UCH	**Uchtor**	**4.34**	**14**	P		**Pn**	**01 13 58.3**	**+1.7**
	SNR=62							
EKS2	**Erkin-Say**	**4.66**	**6**	P		**Pn**	**01 14 02.2**	**+1.6**
	SNR=81							
MRKS	**Merke**	**4.72**	**1**	*e*P		**Pn**	**01 14 02.6**	**+1.2**
	comp=E,123nm,0.4s							
MRKS				*e*S		**Sn**	**01 14 52.5**	**-2.8**
	comp=E,98nm,0.4s							
AAK	**Ala-Archa**	**4.73**	**13**			**Pn**	**01 14 02.9**	**+1.3**
AAK	**Ala-Archa**	**4.73**	**13**	P		**Pn**	**01 14 03.4**	**+1.8**
	comp=E,25nm,0.3s,baz=185,slow=5.5,SNR=72							
AAK				S		**Sn**	**01 14 55.8**	**+0.1**
	comp=E,69nm,0.6s,baz=339,slow=22,SNR=15							
AAK	**Ala-Archa**	**4.73**	**13**	P		**Pn**	**01 14 03.6**	**+2.0**
	SNR=28							
AAK	**Ala-Archa**	**4.73**	**13**	⇓P		**Pn**	**01 14 03.6**	**+2.0**
	comp=E,11nm,0.5s							
AAK				⇓S		**Sn**	**01 14 56.1**	**+0.4**
	comp=E,39nm,0.5s							
KBL	**Kabul**	**4.78**	**224**	Pn		**Pn**	**01 14 05.9**	**+3.5**
KBL	**Kabul**	**4.78**	**224**	PN		**Pn**	**01 14 05.9**	**+3.5**
KBK	**Karagaybulak**	**4.84**	**16**	P		**Pn**	**01 14 05.0**	**+1.9**
	SNR=11							
ULHL	**Ulahol**	**4.86**	**29**	P		**Pn**	**01 14 05.4**	**+2.1**
	SNR=16							
FRU1	**Bishkek**	**4.92**	**13**	Pn		**Pn**	**01 14 06.5**	**+2.4**
FRU1	**Bishkek**	**4.92**	**13**	PN		**Pn**	**01 14 06.5**	**+2.4**
BOOM	**Boomskoye usch**	**4.96**	**25**			**Pn**	**01 14 06.5**	**+1.8**
BOOM	**Boomskoye usch**	**4.96**	**25**	PN		**Pn**	**01 14 06.5**	**+1.8**
ALCI	**Alchi Leh**	**5.04**	**138**	*e*P		**Pn**	**01 14 09.3**	**+3.3**
ALCI				*e*S		**Sn**	**01 15 05.3**	**+1.7**
ALCI				IAML			01 15 06.8	
	comp=N,231nm,0.6s							
ALCI				IAML			01 15 07.0	
	comp=E,290nm,0.8s							
DZA	**Taraz**	**5.04**	**345**	*e*P		**Pn**	**01 14 06.5**	**+0.8**
	comp=E,242nm,0.5s							
DZA				*e*S		**Sn**	**01 14 58.6**	**-4.5**
	comp=E,229nm,0.5s							
CHM	**Chimkent**	**5.05**	**329**	*e*P		**Pn**	**01 14 07.1**	**+1.2**
	comp=E,114nm,0.2s							
CHM				*e*S		**Sn**	**01 14 59.1**	**-4.1**
	comp=E,252nm,0.4s							
CHMS	**Chumysh**	**5.13**	**14**	P		**Pn**	**01 14 09.1**	**+2.3**
	SNR=9.5							
KDJ	**Kajisay**	**5.16**	**36**	Pn		**Pn**	**01 14 10.4**	**+3.0**
KDJ	**Kajisay**	**5.16**	**36**	PN		**Pn**	**01 14 10.4**	**+3.0**
TARG	**Taragay, Kyrgy**	**5.18**	**43**			**Pn**	**01 14 09.7**	**+1.9**
TARG	**Taragay, Kyrgy**	**5.18**	**43**	PN		**Pn**	**01 14 09.7**	**+1.9**
TKM2	**Toknak 2**	**5.25**	**21**	P		**Pn**	**01 14 10.4**	**+1.7**
	SNR=12							
USP	**Ospenovka**	**5.34**	**11**	P		**Pn**	**01 14 11.2**	**+1.4**
	SNR=18							
KK31	**Karatay Array**	**5.44**	**340**	Pn		**Pn**	**01 14 11.6**	**+0.6**
KK31	**Karatay Array**	**5.44**	**340**	⇑P		**Pn**	**01 14 11.5**	**+0.5**
	comp=E,92nm,0.3s,baz=151,slow=11,SNR=2578							
KK31				⇓S		**Sn**	**01 15 08.0**	**-4.6**
	comp=E,141nm,0.7s,baz=159,slow=25,SNR=15							
KK31	**Karatay Array**	**5.44**	**340**	PN		**Pn**	**01 14 11.5**	**+0.4**
JMU	**Jammu**	**5.50**	**164**	*e*P		**Pn**	**01 14 14.7**	**+2.9**
JMU				*e*S		**Sn**	**01 15 13.5**	**-0.4**
JMU				IAML			01 15 14.6	
	comp=E,136nm,0.8s							
JMU				IAML			01 15 15.5	
	comp=N,144nm,0.3s							
BRLS	**Boroldaу**	**5.58**	**335**	*e*P		**Pn**	**01 14 10.5**	**-2.5**
	comp=N,211nm,0.1s							
BRLS				*e*S		Sn	01 15 05.9	-10
	comp=N,60nm,0.5s							
TSSA	**Tissa**	**5.75**	**153**	*e*P		**Pn**	**01 14 17.7**	**+2.4**
TSSA				*e*S		**Sn**	**01 15 19.8**	**-0.4**
TSSA				IAML			01 15 22.2	
	comp=E,328nm,0.2s							
TSSA				IAML			01 15 23.3	
	comp=N,299nm,0.3s							
PRZ	**Przheval'sk**	**6.02**	**41**	Pn		**Pn**	**01 14 19.9**	**+1.0**
PRZ	**Przheval'sk**	**6.02**	**41**	PN		**Pn**	**01 14 20.0**	**+1.0**
DHRM	**DHARAMSHALA**	**6.33**	**155**	*e*P		**Pn**	**01 14 25.6**	**+2.4**
DHRM				*e*S		**Sn**	**01 15 34.5**	**+0.1**
DHRM				IAML			01 15 39.0	
	comp=N,227nm,0.0s							
DHRM				IAML			01 15 44.8	
	comp=E,212nm,0.3s							
TLWR	**Talawar**	**6.49**	**158**	*e*P		**Pn**	**01 14 28.4**	**+3.1**
TLWR				*e*S		**Sn**	**01 15 35.7**	**-2.3**
TLWR				IAML			01 15 41.1	
	comp=N,240nm,0.3s							
BHK	**Bhakra**	**7.14**	**157**	*e*P		**Pn**	**01 14 38.3**	**+4.4**
BHK				*e*S		**Sn**	**01 15 53.4**	**-0.2**
BHK				IAML			01 15 58.7	
	comp=E,62nm,0.1s							
BHK				IAML			01 15 59.7	
	comp=N,75nm,0.1s							
PDGK	**Podgornoye**	**7.19**	**41**	PN		**Pn**	**01 14 36.3**	**+1.7**
SMLA	**Simla**	**7.65**	**153**	*e*P		**Pn**	**01 14 42.2**	**+1.4**
SMLA				*e*S		**Sn**	**01 16 00.9**	**-5.2**
SMLA				IAML			01 16 04.3	
	comp=E,128nm,0.5s							
SMLA				IAML			01 16 07.6	
	comp=N,117nm,0.2s							
JOSI	**Joshimath**	**9.17**	**142**	*e*P		**Pn**	**01 15 04.2**	**+2.7**
JOSI				*e*S		**Sn**	**01 16 36.9**	**-6.2**
JOSI				IAML			01 16 38.0	
	comp=E,124nm,0.7s							
JOSI				IAML			01 16 44.4	
	comp=N,99nm,0.5s							
HRA	**Herat**	**9.49**	**251**	Pn		**Pn**	**01 15 06.2**	**+0.4**
NDI	**New Delhi**	**9.93**	**159**	*e*P		**Pn**	**01 15 13.1**	**+1.5**
KUDL	**Kundal**	**10.26**	**163**	*e*P		**Pn**	**01 15 15.7**	**-0.2**
KUDL				*e*S		**Sn**	**01 17 01.8**	**-7.2**
KUDL				IAML			01 17 07.3	
	comp=E,18nm,0.5s							
MAKZ	**Makanchi**	**10.95**	**34**			**Pn**	**01 15 25.0**	**-0.1**
MAKZ	**Makanchi**	**10.95**	**34**	P		**Pn**	**01 15 25.0**	**-0.1**
MK31	**Makanchi Array**	**11.08**	**35**	*d* iP		**Pn**	**01 15 28.2**	**+1.3**
MKAR	**Makanchi Array**	**11.08**	**35**	P		**Pn**	**01 15 28.0**	**+1.2**
	comp=E,1.7nm,0.7s,baz=220,slow=14,SNR=12							
WMQ	**Urumqi**	**12.46**	**58**	*e*P		**Pn**	**01 15 46.1**	**+1.0**
KURBB	**Kurchatov Arra**	**13.18**	**15**	P		**Pn**	**01 15 52.4**	**-1.7**
	comp=E,4.2nm,1.0s,baz=207,slow=12,SNR=22							
KURK	**Kurchatov**	**13.28**	**15**			**Pn**	**01 15 54.2**	**-1.3**
KURK	**Kurchatov**	**13.28**	**15**	*c* iP		**Pn**	**01 15 53.5**	**-2.0**
AB31	**Akbulak array**	**14.70**	**324**	Pn		**Pn**	**01 16 12.7**	**-0.8**
AB31	**Akbulak array**	**14.70**	**324**	P		**Pn**	**01 16 11.8**	**-1.8**
	comp=E,3.4nm,0.3s,baz=135,slow=13,SNR=181							
AB31				⇓S		Sn	01 18 46.5	-9.4
	comp=E,9.1nm,0.7s,baz=137,slow=24,SNR=13							
AB31	**Akbulak array**	**14.70**	**324**	P		**Pn**	**01 16 11.8**	**-1.8**
BVAR	**Borovoye Array**	**15.12**	**354**	P		**Pn**	**01 16 17.4**	**-1.4**
	comp=E,3.2nm,0.6s,baz=164,slow=12,SNR=18							
BORK	**Borovoye**	**15.15**	**354**	*d* iP		**Pn**	**01 16 18.1**	**-1.1**
BORK				pmax		pmax		
	comp=Z,15nm,1.0s							
BHPL	**Bhopal**	**15.20**	**165**	*e*P		**Pn**	**01 16 21.1**	**+1.0**
BHPL				IAmb		IAmb	01 16 23.0	
	comp=Z,8.2nm,0.5s							
BHPL				*e*S		**Sn**	**01 18 59.6**	**-8.9**
EVN	**Everest**	**15.26**	**127**	Pn		**Pn**	**01 16 21.2**	**-0.2**
EVN				IAmb		IAmb	01 16 25.1	
	comp=Z,8.3nm,0.6s							
DGZ	**Jazzator, Alta**	**15.56**	**37**	⇑*

comp=N,123nm,21.0s
MNK MLR MLR
comp=E,61nm,21.0s
MNK MLR MLR
comp=Z,21nm,13.0s
WHN Wuhan 34.67 90 P **P** **01 19 30.2 +0.7**
HIA Hailar 35.05 56 P **P** **01 19 33.7 +1.1**
HIA Hailar 35.05 56 P **P** **01 19 33.7 +1.1**
HIA pmax pmax
comp=Z,6.0nm,0.4s
VSU Vasula 36.07 320 *eP* **P** **01 19 40.5 -0.6**
VSU pmax pmax
comp=Z,30nm,1.2s
FIA1 FINESS Array S 37.18 324 P **P** **01 19 50.0 -0.5**
FINES FINESS Array B 37.19 324 P **P** **01 19 51.8 +1.2**
comp=Z,6.2nm,1.0s,baz=119,slow=9.9,SNR=22
comp=Z,6.2nm,1.0s
FINES FINESS Array B 37.19 324 *i* P **P** **01 19 51.7 +1.2**
FINES pmax pmax
comp=Z,7.0nm,1.0s
ARCES ARCESS Array B 40.40 336 P **P** **01 20 18.6 +1.4**
comp=Z,1.3nm,0.5s,baz=118,slow=7.8,SNR=20
comp=Z,1.3nm,0.5s
HFS Hagfors 42.92 321 P **P** **01 20 39.0 +1.1**
comp=Z,1.5nm,0.4s,baz=98,slow=11,SNR=20
comp=Z,1.5nm,0.4s
HFS Hagfors 42.92 321 P **P** **01 20 39.0 +1.1**
NC405 NORSAR Array S 43.95 322 P **P** **01 20 46.1 0.0**
NC405 IAmb IAmb 01 20 49.8
comp=Z,7.9nm,1.2s
NORES NORESS Array B 44.02 322 P **P** **01 20 47.9 +1.3**
NC303 NORSAR Array S 44.12 322 P **P** **01 20 48.6 +1.1**
NC303 IAmb IAmb 01 21 06.7
comp=Z,18nm,1.4s
NB201 NORSAR Array S 44.15 322 P **P** **01 20 48.3 +0.6**
NB201 IAmb IAmb 01 21 01.4
comp=Z,24nm,1.4s
NB2 NORSAR Subarra 44.19 322 P **P** **01 20 48.9 +0.8**
comp=Z,0.4nm,0.4s,baz=92,slow=8.6
NOA NORSAR Array B 44.19 322 P **P** **01 20 48.8 +0.7**
comp=Z,0.6nm,0.5s,baz=101,slow=7.3,SNR=6.1
comp=Z,0.6nm,0.5s
NC204 NORSAR Array S 44.42 322 P **P** **01 20 50.3 +0.4**
NC204 IAmb IAmb 01 20 52.6
comp=Z,11nm,1.2s
MD31 MD31 61.89 291 P **P** **01 22 57.4 -0.8**
MD31 IAmb IAmb 01 23 01.4
comp=Z,7.6nm,1.5s
RES Resolute Bay 67.29 357 LR LR 01 55 54.8
comp=Z,32nm,18.2s,baz=12,slow=38
BBTS Babate 80.84 281 LR LR 02 06 48.7
comp=Z,62nm,18.2s,baz=260,slow=40

*CATAC **07** 01:14:31.8±0.8,8˚N±3˚×7˚7W±˚, h18km±6km, M4.5/18, mb4.8/3, mB4.6/1, MLv4.3/18, Mw(mB)3.9/1, Error ellipse: s-maj=7.2km s-min=3.1km az=40.4, confirmed*
*RSNC **07** 01:14:32.0±0.0,8˚N±1˚×7˚7W±˚, h4km±3km, M3.9, mB5.1, mb4.6, ML3.5, Mw(mB)4.4*
*NEIC **07** 01:14:33.8±2.0, 7˚.67N±0˚.06×77˚.10W±0˚.06, h35km±1km, mb4.4/13, Error ellipse: s-maj=11.6km s-min=9.3km az=34.0*
*IDC **07** 01:14:33.5±2.2, 7˚.64N×77˚.33W, h44km±20km, mb3.8/11, mbtmp4.1/14, ML3.0/3, MS3.3/14, Error ellipse: s-maj=22.6km s-min=16.4km az=46.0*
ISC 07 01:14:33.1±0.5,**7˚.66N**±0˚.03×**77˚.10W**±0˚.03,**h39**km±4km, **n113,σ1ᵎ92**/140,**mb4.3**/19,**MS3.3**/10,**Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.87**	**234**	P	P		**Pn**	**01 14 47.5**	**-1.5**
PTAC				S	S		**Sn**	**01 14 59.4**	**-1.1**
CAPC	**Capurgana**	**1.00**	**345**	P	P		**Pn**	**01 14 49.5**	**-1.2**
CAPC				S	S		**Sn**	**01 15 06.9**	**+3.4**
CAP2	**Capurgana**	**1.01**	**345**	P	P		**Pn**	**01 14 49.6**	**-1.3**
CAP2				S	S		**Sn**	**01 15 04.1**	**+0.1**
DBBC	**Dabeiba**	**1.09**	**126**	P	P		**Pn**	**01 14 51.2**	**-0.8**
DBBC				S	S		**Sn**	**01 15 06.1**	**+0.2**
LCBC	**Los crdobas,**	**1.39**	**31**	P	P		**Pn**	**01 14 57.3**	**+1.3**
LCBC				S	S		**Sn**	**01 15 16.6**	**+3.5**
SOLC	**Bahia Solano**	**1.46**	**192**	P	P		**Pn**	**01 14 56.7**	**-0.3**
SOLC				S	S		**Sn**	**01 15 13.2**	**-1.8**
UREC	**San Jos de Ur**	**1.55**	**87**	P	P		**Pn**	**01 14 58.0**	**-0.3**
UREC				S	S		**Sn**	**01 15 14.2**	**-3.0**
MEDEC	**Medelln, Ant**	**2.03**	**133**	P	P		**Pn**	**01 15 06.5**	**+1.4**
MEDEC				S	S		**Sn**	**01 15 34.2**	**+4.8**
CBOC	**Ciudad Bolivar**	**2.09**	**149**	P	P		**Pn**	**01 15 04.7**	**-1.1**
CBOC				S	S		**Sn**	**01 15 32.0**	**+1.3**
HELC	**Santa Helena**	**2.14**	**133**	P	P		**Pn**	**01 15 07.3**	**+0.6**
HELC				S	S		**Sn**	**01 15 33.6**	**+1.5**
HELC	**Santa Helena**	**2.14**	**133**	P	P		**Pn**	**01 15 07.2**	**+0.6**
HELC				S	S		**Sn**	**01 15 35.7**	**+3.6**
PTBC	**PUERTO BERRIO,**	**2.85**	**113**	P	P		**Pn**	**01 15 16.3**	**+0.2**
PTBC				S	S		**Sn**	**01 15 49.8**	**+0.6**
SJCC	**San Jacinto, C**	**2.92**	**40**	P	P		**Pn**	**01 15 17.0**	**-0.1**
SJCC	**San Jacinto, C**	**2.92**	**40**	P	P		**Pn**	**01 15 17.5**	**+0.4**
SJCC				S	S		**Sn**	**01 15 48.5**	**-2.5**
GUY2C	**Guyana, Caldas**	**2.97**	**145**	P	P		**Pn**	**01 15 18.7**	**+0.5**
GUY2C				S	S		**Sn**	**01 15 55.1**	**+2.2**
BCIP	**Isla Barro Col**	**3.10**	**299**				**Pn**	**01 15 20.6**	**+1.1**
BCIP	**Isla Barro Col**	**3.10**	**299**	P	P		**Pn**	**01 15 19.7**	**+0.1**
BCIP				S	S		**Sn**	**01 15 55.6**	**+0.3**
BCIP	**Isla Barro Col**	**3.10**	**299**	P	P		**Pn**	**01 15 20.7**	**+1.2**
BCIP				S	S		**Sn**	**01 16 00.8**	**+5.5**
BRJC	**Barrancabermej**	**3.39**	**101**	P	P		**Pn**	**01 15 24.6**	**+1.0**
BRJC				S	S		**Sn**	**01 16 03.4**	**+0.7**
ARGC	**Ariguani, Magd**	**3.56**	**52**	P	P		**Pn**	**01 15 28.2**	**+2.3**
ARGC				S	S		**Sn**	**01 16 07.9**	**+1.1**
SPBC	**San Pablo de B**	**3.61**	**123**	P	P		**Pn**	**01 15 28.4**	**+1.8**
SPBC				S	S		**Sn**	**01 16 10.9**	**+2.8**
YOTC	**Yotoco, Valle**	**3.73**	**168**	P	P		**Pn**	**01 15 26.1**	**-2.3**
YOTC				S	S		**Sn**	**01 16 06.2**	**-5.0**
OCAC	**Ocana**	**3.78**	**81**	P	P		**Pn**	**01 15 30.3**	**+1.2**
OCAC				S	S		**Sn**	**01 16 11.5**	**-1.0**
ROSC	**El Rosal**	**3.94**	**135**				**Pn**	**01 15 32.5**	**+1.1**
ROSC							**Sn**	**01 16 16.1**	**-0.5**
ROSC	**El Rosal**	**3.94**	**135**	P	P		**Pn**	**01 15 35.1**	**+3.7**
	11nm,0.3s,baz=330,slow=18,SNR=15								
ROSC				S	S		**Sn**	**01 16 21.4**	**+4.8**
	92nm,0.4s,baz=344,slow=23,SNR=3.7								
	55nm,0.3s								
ROSC	**El Rosal**	**3.94**	**135**	P	P		**Pn**	**01 15 34.1**	**+2.7**
BARC	**Barichara**	**4.03**	**105**	P	P		**Pn**	**01 15 33.6**	**+1.1**
ORTC	**Ortega, Tolima**	**4.16**	**154**	P	P		**Pn**	**01 15 35.7**	**+1.5**
ORTC				S	S		**Sn**	**01 16 27.4**	**+5.8**
CVER	**Cruz Verde, Cu**	**4.33**	**136**	P	P		**Pn**	**01 15 40.8**	**+3.8**
RUSC	**La Rusia**	**4.36**	**114**				**Pn**	**01 15 38.1**	**+0.9**
RUSC	**La Rusia**	**4.36**	**114**	P	P		**Pn**	**01 15 38.1**	**+0.9**
RUSC	**La Rusia**	**4.36**	**114**	P	P		**Pn**	**01 15 38.2**	**+0.9**
RUSC				S	S		**Sn**	**01 16 28.2**	**+1.1**
PAMC	**Pamplona, Colo**	**4.37**	**94**	P	P		**Pn**	**01 15 38.7**	**+1.2**
PAMC				S	S		**Sn**	**01 16 26.8**	**-0.6**
SMRC	**Santa Marta, M**	**4.49**	**39**	Pn	P		**Pn**	**01 15 41.1**	**+2.5**
PRAC	**Prado**	**4.50**	**151**	P	P		**Pn**	**01 15 39.9**	**+1.1**
PRAC	**Prado**	**4.50**	**151**	P	P		**Pn**	**01 15 40.9**	**+2.0**
CHIC	**Chingaza**	**4.50**	**132**	P	P		**Pn**	**01 15 42.4**	**+3.2**
CHIC				S	S		**Sn**	**01 16 33.2**	**+2.6**
POPC	**Popayan, Colom**	**5.11**	**175**	P	P		**Pn**	**01 15 47.4**	**0.0**
	850nm62nm,1.1s								
POPC				S	S		**Sn**	**01 16 45.1**	**-0.2**
	850nm62nm,1.1s								
URMC	**La Uribe, Meta**	**5.15**	**148**	P	P		**Pn**	**01 15 49.1**	**+1.2**
	727nm57nm,0.8s								
CRJC	**Cerrejon, Guaj**	**5.33**	**51**	P	P		**Pn**	**01 15 50.0**	**-0.3**
CRJC				S	S		**Sn**	**01 16 46.0**	**-4.5**
CRUC	**La Cruz**	**6.06**	**179**	P	P		**Pn**	**01 16 03.3**	**+2.7**
FLOC	**Florencia**	**6.21**	**167**				**Pn**	**01 16 03.2**	**+0.8**
FLOC	**Florencia**	**6.21**	**167**	P	P		**Pn**	**01 16 03.2**	**+0.8**
	34nm,1.5s								
DRK0	**Durika**	**6.29**	**285**	P	P		**Pn**	**01 16 02.9**	**-0.6**
DRK0				S	S		**Sn**	**01 17 15.9**	**+1.7**
MACC	**Macarena, Meta**	**6.37**	**149**	P	P		**Pn**	**01 16 04.1**	**-0.4**
	513nm72nm,0.7s								
MACC				S	S		**Sn**	**01 17 18.4**	**+2.4**
	513nm72nm,0.7s								
GCUF	**Volcan Galeras**	**6.40**	**182**	P	P		**Pn**	**01 16 06.3**	**+0.9**
	28nm,1.0s								
URIC	**Uribia, Colomb**	**6.43**	**51**	P	P		**Pn**	**01 16 05.4**	**0.0**
URIC				S	S		**Sn**	**01 17 15.3**	**-2.3**
SDV	**Santo Domingo**	**6.51**	**79**	P	P		**Pn**	**01 16 07.3**	**+0.6**
SDV	**Santo Domingo**	**6.51**	**79**	P	P		**Pn**	**01 16 08.4**	**+1.8**
	7.4nm,0.3s,baz=284,slow=9.5,SNR=25								
SDV				S	S		**Sn**	**01 17 17.2**	**-2.6**
	83nm,0.3s,baz=41,slow=17,SNR=12								
SDV				LR	LR			01 19 11.2	
	comp=Z,296nm,20.9s,baz=277,slow=41								
	32nm,0.5s								
SDV	**Santo Domingo**	**6.51**	**79**	P	P		**Pn**	**01 16 08.0**	**+1.4**
	2μm62nm,0.7s								
SDV				S	S		**Sn**	**01 17 17.1**	**-2.6**
	2μm62nm,0.7s								
GUVC	**San Jose del G**	**6.76**	**139**	P	P		**Pn**	**01 16 10.5**	**+0.6**
	20μm122nm,2.7s								
PRVC	**Isla de Provid**	**7.06**	**324**	P	P		**Pn**	**01 16 13.9**	**0.0**
PRVC				S	S		**Sn**	**01 17 33.8**	**+0.8**
CUSE	**Cuicocha Este**	**7.42**	**190**	P	P		**Pn**	**01 16 20.9**	**+1.5**
CUSE				S	S		**Sn**	**01 17 43.3**	**+0.6**
OTAV	**Otavalo**	**7.50**	**190**				**Pn**	**01 16 21.3**	**+0.8**
OTAV	**Otavalo**	**7.50**	**190**	P	P		**Pn**	**01 16 21.2**	**+0.7**
	38nm,1.0s								
OTAV				S	S		**Sn**	**01 17 42.5**	**-2.0**
	38nm,1.0s								
PAC1	**Pacto, Paraso**	**7.54**	**193**	P	P		**Pn**	**01 16 21.1**	**+0.3**
PTLC	**Puerto Leguiza**	**7.79**	**163**	P	P		Pn	01 16 29.0	+5.0
JTS	**Las Juntas de**	**8.19**	**289**				**Pn**	**01 16 28.9**	**-0.6**
JTS	**Las Juntas de**	**8.19**	**289**	P	P		**Pn**	**01 16 26.2**	**-3.3**
	0.2nm,0.3s,baz=110,slow=15,SNR=2.5								
JTS				LR	LR			01 19 55.8	
	comp=Z,207nm,18.4s,baz=60,slow=40								
	6.9nm,0.9s								
SLOR	**San Lorenzo -**	**8.46**	**190**				**Pn**	**01 16 37.5**	**+3.9**
BAUV	**El Baul**	**9.05**	**81**				**Pn**	**01 16 39.6**	**-1.7**
SIUN	**Universidad Ur**	**9.65**	**309**				**Pn**	**01 16 50.1**	**+0.6**
STH	**Stony Hill**	**10.35**	**2**	*i* P			**Pn**	**01 17 00.9**	**+1.7**
MTDJ	**Mount Denham**	**10.51**	**358**	Pn			**Pn**	**01 17 02.6**	**+1.3**
MTDJ	**Mount Denham**	**10.51**	**358**	*i* P			**Pn**	**01 17 03.5**	**+2.1**
MTDJ				*i* S			**Sn**	**01 18 56.7**	**-1.2**
MTDJ	**Mount Denham**	**10.51**	**358**	P			**Pn**	**01 17 03.5**	**+2.1**
	82nm,1.4s								
CHIV	**Chivirico**	**12.26**	**3**	Pn			**Pn**	**01 17 26.1**	**+0.9**
GTBY	**Guantanamo Bay**	**12.34**	**9**	P			**Pn**	**01 17 29.3**	**+2.9**
SDDR	**Presa de Saban**	**12.59**	**26**				**Pn**	**01 17 31.8**	**+2.1**
NMDO	**Nuevo Mundo**	**12.98**	**9**	Pn			**Pn**	**01 17 35.4**	**+0.3**
DR12	**Loma Pena Alta**	**13.36**	**33**	Pn			**Pn**	**01 17 40.0**	**-0.3**
AOPR	**Arecibo Observ**	**14.63**	**42**	Pn			**Pn**	**01 17 56.4**	**-1.2**
SJG	**San Juan**	**14.88**	**45**	P			**Pn**	**01 17 56.8**	**-4.0**
	4.5nm,0.3s,baz=231,slow=14,SNR=2.3								
SJG				LR	LR			01 24 24.8	
	comp=Z,86nm,21.4s,baz=190,slow=39								
GCPR	**Guaynabo City**	**15.06**	**44**	Pn			**Pn**	**01 18 00.2**	**-3.0**
GCPR				IAmb	IAmb			01 18 25.1	
	comp=Z,14nm,0.9s								
BOAV	**Boa Vista**	**17.31**	**107**	Pn			**Pn**	**01 18 30.3**	**-1.7**
CMIG	**Matias Romero**	**19.72**	**300**	LR			LR	01 27 08.9	
	comp=Z,78nm,21.4s,baz=176,slow=39								
MDP	**Montagnes des**	**24.43**	**95**	LR			LR	01 30 00.5	
	comp=Z,110nm,19.5s,baz=242,slow=38								
LPAZ	**La Paz**	**25.40**	**160**	P			**P**	**01 19 56.8**	**-1.0**
LPAZ	**La Paz**	**25.40**	**160**	P			**P**	**01 19 58.0**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=9.5,slow=6.1,SNR=2.3								
	comp=Z,1.0nm,0.8s								
Z47A	**Carrollton**	**27.37**	**340**	P			**P**	**01 20 14.9**	**+0.2**
Z47A				IAmb	IAmb			01 20 55.9	
	comp=Z,18nm,1.1s								
PB06	**IPOC Station P**	**31.07**	**166**	P			**P**	**01 20 49.3**	**+1.5**
FCAR	**Ozark Folk Cen**	**31.28**	**336**	P			**P**	**01 20 49.8**	**+0.4**
FCAR				IAmb	IAmb			01 21 06.9	
	comp=Z,5.9nm,1.5s								
HHAR	**Hobbs**	**32.37**	**334**	P			**P**	**01 21 01.0**	**+1.9**
HHAR				IAmb	IAmb			01 21 08.7	
	comp=Z,8.6nm,1.4s								
CCM	**Cathedral Cave**	**32.85**	**339**	P			**P**	**01 21 03.8**	**+0.5**
CCM				IAmb	IAmb			01 21 04.3	
	comp=Z,4.3nm,0.8s								
TXAR	**Lajitas Array**	**33.00**	**314**	P			**P**	**01 21 03.1**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=101,slow=7.8,SNR=2.6								
TXAR				PcP			**PcP**	**01 23 48.4**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=84,slow=3.2,SNR=5.5								
	comp=Z,0.3nm,0.8s								
R40A	**Maddies Statio**	**33.43**	**338**	P			**P**	**01 21 08.3**	**0.0**
R40A				IAmb	IAmb			01 21 18.9	
	comp=Z,3.9nm,0.9s								
LPIG	**La Paz**	**35.75**	**301**	LR			LR	01 35 22.1	
	comp=Z,32nm,19.2s,baz=150,slow=35								
SADO	**Sadowa**	**37.01**	**358**	LR			LR	01 37 43.8	
	comp=Z,49nm,18.1s,baz=82,slow=38								
ANMO	**Albuquerque**	**38.26**	**319**	LR			LR	01 40 17.5	
	comp=Z,39nm,18.6s,baz=214,slow=40								
CPUP	**Villa Florida**	**38.86**	**151**	LR			LR	01 37 48.9	
	comp=Z,30nm,18.6s,baz=60,slow=36								
SDCO	**Great Sand Dun**	**39.48**	**324**	P			**P**	**01 21 59.0**	**-1.2**
PFO	**Pinyon Flats O**	**44.56**	**311**	LR			LR	01 44 07.1	
	comp=Z,25nm,21.2s,baz=86,slow=40								
ULM	**Lac du Bonnet**	**45.25**	**343**	LR			LR	01 42 16.7	
	comp=Z,11nm,18.1s,baz=102,slow=37								
RPN	**Rapa Nui**	**46.60**	**221**	LR			LR	01 38 25.6	
	comp=Z,68nm,19.0s,baz=147,slow=31								
DLBC	**Dease Lake**	**64.73**	**332**	LR			LR	01 57 55.3	
	comp=Z,28nm,18.6s,baz=106,slow=40								
SUMG	**Summit**	**68.93**	**12**	P			**P**	**01 25 34.7**	**+0.5**
SUMG	**Summit**	**68.93**	**12**	*i* P			**P**	**01 25 34.9**	**+0.7**
SUMG				IAmb	IAmb			01 25 35.5	
	comp=Z,8.2nm,0.7s								
NEEM	**North Greenlan**	**71.09**	**6**	*i* P			**P**	**01 25 48.2**	**+1.0**
NEEM				IAmb	IAmb			01 25 49.1	
	comp=Z,7.2nm,0.7s								
ESDC	**Sonseca Array**	**72.17**	**51**	P			**P**	**01 25 55.1**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=266,slow=6.2,SNR=7.7								
	comp=Z,1.7nm,0.8s								
ILAR	**Eielson Array**	**74.55**	**335**	P			**P**	**01 26 07.5**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=112,slow=4.6,SNR=10								
	comp=Z,0.9nm,0.8s								
EKA	**Eskdalemuir Ar**	**74.61**	**35**	P			**P**	**01 26 08.2**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=279,slow=7.5,SNR=3.8								
	comp=Z,2.1nm,0.8s								
DAG	**Danmarks Havn**	**75.62**	**12**	*i* P			**P**	**01 26 13.4**	**-0.2**
DAG				IAmb	IAmb			01 26 14.5	
	comp=Z,3.5nm,0.7s								
NB2	**NORSAR Subarra**	**82.53**	**29**	P			**P**	**01 26 53.1**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=269,slow=5.3								
NOA	**NORSAR Array B**	**82.53**	**29**	P			**P**	**01 26 53.1**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=272,slow=5.3,SNR=4.6								
	comp=Z,1.2nm,0.8s								
HFS	**Hagfors**	**83.81**	**30**	P			**P**	**01 26 58.4**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=204,slow=6.0,SNR=4.1								
	comp=Z,1.7nm,0.8s								
GERES	**GERESS Array B**	**84.82**	**42**	P			**P**	**01 27 04.3**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=276,slow=3.9,SNR=7.8								
	comp=Z,1.2nm,0.9s								
VRAC	**Vranov**	**86.65**	**41**	LR			LR	02 02 51.6	
	comp=Z,12nm,19.1s,baz=262,slow=33								
ARCES	**ARCESS Array B**	**87.25**	**20**	P			**P**	**01 27 15.1**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=279,slow=4.2,SNR=21								
	comp=Z,1.7nm,0.5s								
FINES	**FINESS Array B**	**89.56**	**28**	P			**P**	**01 27 26.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=240,slow=3.8,SNR=6.4								
	comp=Z,1.6nm,0.7s								
SNAA	**Sanae**	**92.33**	**162**	P			**P**	**01 27 38.6**	**-0.3**
SNAA				IAmb	IAmb			01 27 50.4	
	comp=Z,4.3nm,1.3s								
SNAA	**Sanae**	**92.33**	**162**	P			**P**	**01 27 37.8**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=278,slow=6.4,SNR=3.8								
	comp=Z,1.2nm,0.8s								
ASAR	**Alice Springs**	**146.29**	**238**	PKPbc			**PKPdf**	**01 34 09.2**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=119,slow=3.6,SNR=34								
WRA	**Warramunga Arr**	**147.20**	**245**	PKPbc			**PKPdf**	**01 34 10.4**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=101,slow=2.3,SNR=13								

*IDC **07** 01:58:33.3±1.4, 17˚.01S×27˚.96E, h0km, mb3.8/3, mbtmp4.0/6, ML4.3/2, Error ellipse: s-maj=46.6km s-min=14.0km az=102.0*
*PRE **07** 01:58:34.3±0.8, 17˚.12S×28˚.04E, h5km, ML3.2*
*NEIC **07** 01:58:34.3±1.8, 16˚.99S±0˚.05×27˚.96E±0˚.07, h5km±4km, mb4.5/6, Error ellipse: s-maj=12.0km s-min=3.7km az=127.0*
*BGSI **07** 01:58:39.9±1.9, 16˚.93S×28˚.11E, h23km±83km, ML3.7*
ISC 07 01:58:34.8±0.5,**17˚.07S**±0˚.03×**27˚.93E**±0˚.04,**h13**km,**n68,σ2ᵎ77**/83,**mb4.3/5**,**Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**1.80**	**8**	Pn	Pn		**Pn**	**01 59 05.9**	**+0.3**
LSZ				S	Sn		**Sn**	**01 59 27.3**	**-1.1**
LSZ	**Lusaka**	**1.80**	**8**	Pg	**Pb**		**Pb**	**01 59 06.7**	**-0.9**
	26nm,0.3s,baz=192,slow=18,SNR=276								
LSZ				LR	LR			01 59 22.7	
	comp=Z,31nm,21.6s,baz=160,slow=28								
LSZ				Lg	Lg			01 59 28.7	
	28nm,0.3s,baz=254,slow=20,SNR=6.9								
LSZ	**Lusaka**	**1.80**	**8**	*eP*	**Pb**		**01 59 07.7**	**+0.1**
LSZ				IAML				01 59 30.8	
	comp=Z,974nm,0.2s								
LSZ				*eS*	**Sg**		**01 59 30.8**	**-1.8**
KSANE	**Kasane**	**2.74**	**254**	Pn	**Pn**		**01 59 19.6**	**+1.0**
KSANE	**Kasane**	**2.74**	**254**	*i* P	**Pb**		**01 59 23.1**	**-0.6**
KSANE				*i* S	**Sb**		**01 59 56.3**	**-1.1**
KSANE				IAML			02 00 09.8	
	comp=N,2μm,0.2s								
BROLN	**Tlhalogang**	**4.05**	**188**	*i* P	Pn		01 59 40.6	+4.0
BROLN				*i* S	**Sn**		**02 00 26.2**	**+2.2**
BROLN				IAML			02 00 47.6	
	comp=E,225nm,0.4s								
PHDHD	**Phuduhudu**	**4.48**	**225**				**Pn**	**01 59 43.4**	**+0.9**
PHDHD	**Phuduhudu**	**4.48**	**225**	*i* P	Pn		01 59 47.7	+5.2
PHDHD				IAML			02 01 07.9	
	comp=N,389nm,0.8s								
KHWEE	**KHWEE**	**5.39**	**205**				**Pn**	**01 59 56.3**	**+1.2**
KHWEE	**KHWEE**	**5.39**	**205**	*i* P	Pn		01 59 59.9	+4.8
KHWEE				IAML			02 01 30.9		
	comp=N,638nm,0.5s								
MREMI	**Moremi**	**5.49**	**185**	Pn	**Pn**		**01 59 59.7**	**+3.3**
MREMI	**Moremi**	**5.49**	**185**	*i* P	Pn		02 00 00.2	+3.8
MREMI				IAML			02 01 33.9		
	comp=N,554nm,0.3s								
MUSN	**Musina, Limpop**	**5.50**	**161**	*eP*	**Pn**		**01 59 57.5**	**+1.0**
MUSN				*eS*	**Sn**		**02 00 56.3**	**-3.4**
MUSN				IAML			02 01 39.9		
	comp=Z,76nm,0.7s								
GMARE	**Gumare**	**5.95**	**246**	Pn	**Pn**		**02 00 03.7**	**+1.0**
GMARE	**Gumare**	**5.95**	**246**	*i* P	Pn		02 00 09.2	+6.5
GMARE				*i* S	**Sn**		**02 01 12.4**	**+1.6**
GMARE				IAML			02 02 08.7		
	comp=N,232nm,1.1s								
LPHEP	**Lephephe**	**6.56**	**197**	Pn	**Pn**		**02 00 13.9**	**+2.8**
LPHEP	**Lephephe**	**6.56**	**197**	*i* P	Pn		02 00 15.2	+4.1
LPHEP				*i* S	**Sn**		**02 01 24.6**	**-1.2**
LPHEP				IAML			02 02 10.0		
	comp=N,42nm,0.7s								
LEPH	**Lephalale, Lim**	**6.76**	**181**	*eP*	**Pn**		**02 00 15.3**	**+1.4**
LEPH				*eS*	**Sn**		**02 01 27.1**	**-3.6**
LEPH				IAML			02 02 19.4		
	comp=Z,69nm,0.4s								
QNGWA	**Qangwa**	**6.87**	**248**	Pn	**Pn**		**02 00 18.9**	**+3.5**
QNGWA	**Qangwa**	**6.87**	**248**	*i* P	**Pn**		**02 00 19.0**	**+3.5**
QNGWA				IAML			02 02 25.0		
	comp=E,32nm,0.7s								
KDWAN	**Kaudwane**	**6.99**	**206**				**Pn**	**02 00 18.3**	**+1.3**
KDWAN	**Kaudwane**	**6.99**	**206**	*i* P	Pn		02 00 21.4	+4.4
KDWAN				*i* S	**Sn**		**02 01 36.9**	**+0.4**
KDWAN				IAML			02 02 23.5		
	comp=E,104nm,0.9s								
GRTLG	**Ghanzi**	**7.65**	**235**				**Pn**	**02 00 27.9**	**+1.8**
GRTLG	**Ghanzi**	**7.65**	**235**	*i* P	**Pn**		**02 00 30.0**	**+3.9**
GRTLG				*i* S	**Sn**		**02 01 50.6**	**-2.2**
GRTLG				IAML			02 02 56.9		
	comp=N,32nm,0.3s								
KGCAE	**Kacgae**	**7.88**	**222**				**Pn**	**02 00 30.6**	**+1.3**
KGCAE	**Kacgae**	**7.88**	**222**	*i* P	Pn		02 00 34.0	+4.7
KGCAE				IAML			02 03 00.7		
	comp=N,102nm,0.7s								
LBTB	**Lobatse**	**8.20**	**195**				**Pn**	**02 00 34.6**	**+0.9**
LBTB	**Lobatse**	**8.20**	**195**	Pn	**Pn**		**02 00 36.5**	**+2.8**
	comp=N,4.1nm,0.3s,baz=16,slow=14,SNR=76								
LBTB				Sn	**Sn**		**02 02 02.7**	**-3.6**
	comp=N,8.3nm,0.3s,baz=285,slow=19,SNR=11								
LBTB				Lg	Lg			02 02 49.2	
	comp=N,7.2nm,0.3s,baz=

ABKAR	**Akbulak array**	71.88	21	P		**P**	02 09 57.4	0.0	
MKAR	**Makanchi Array**	80.15	35	P		**P**	02 10 44.4	-0.3	
	comp=Z,0.6nm,0.9s,baz=240,slow=6.8,SNR=4.2								
	comp=Z,0.6nm,0.9s								
ARCES	**ARCESS Array B**	86.39	359	P		**P**	02 11 17.5	+1.2	
ARCES	**ARCESS Array B**	86.39	359	P		**P**	02 11 16.7	+0.4	
	comp=Z,2.0nm,1.0s,baz=163,slow=4.3,SNR=4.0								
	comp=Z,2.0nm,1.0s								
NVAR	**Mina Array Bea**	143.62	313			**PKPdf**	02 18 09.6	-0.5	
NVAR	**Mina Array Bea**	143.62	313	PKP		**PKPdf**	02 18 10.8	+0.7	
	comp=Z,0.7nm,0.7s,baz=45,slow=5.0,SNR=8.8								

*ISK **07** 02:08:14.8, 38°.10N×41°.40E, h5km, ML2.7/11*
*AFAD **07** 02:08:16.0, 38°.17N×41°.32E, h7km±3km, ML2.5*
ISC 07 02:08:16.4±0.9, **38°.12N**±0°.03×**41°.37E**±0°.03, **h14**km±8km, **n21**, σ1**9**73/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTMN	**Batman**	**0.24**	**199**	P	**Pg**	**02 08 21.5**	**-0.2**
BTMN				S	**Sg**	**02 08 26.8**	**+1.5**
BTMN				*i* IAML		02 08 27.0	
	comp=E,1μm,0.4s						
BTMN				*i* IAML		02 08 30.0	
	comp=N,3μm,0.5s						
SRTM	**Siirt_Merkez**	**0.46**	**107**	P	**Pg**	**02 08 24.6**	**-0.9**
SRTM				S	**Sb**	**02 08 33.7**	**+0.7**
MUSM	**Mu-Merkez**	**0.61**	**10**	P	**Pg**	**02 08 26.8**	**-1.7**
MUSM				S	**Sg**	**02 08 35.9**	**-0.7**
MUSM				*i* IAML		02 08 37.0	
	comp=E,239nm,0.5s						
MUSM				*i* IAML		02 08 38.0	
	comp=N,211nm,0.7s						
BLIS	**Bitlis-Merkez**	**0.66**	**63**	P	**Pg**	**02 08 27.7**	**-1.6**
BLIS				S	**Sb**	**02 08 38.6**	**-0.3**
GURO	**Guroymak-BITLI**	**0.67**	**50**	Pg	**Pg**	**02 08 28.2**	**-1.4**
GURO				Sg	**Sg**	**02 08 38.3**	**-0.3**
SLHN	**Bingol, Solhan**	**0.88**	**342**	P	**Pg**	**02 08 32.1**	**-1.3**
SLHN				S	**Sn**	**02 08 46.1**	**-1.1**
SLHN				*i* IAML		02 08 52.0	
	comp=N,156nm,0.6s						
SLHN				*i* IAML		02 08 56.0	
	comp=E,165nm,0.8s						
PERV	**Siirt/Pervari-**	**0.94**	**100**	P	**Pb**	**02 08 34.6**	**0.0**
PERV				S	**Sn**	**02 08 50.0**	**+1.2**
PERV				*i* IAML		02 08 51.0	
	comp=N,289nm,0.5s						
PERV				*i* IAML		02 08 52.0	
	comp=E,449nm,0.5s						
DYBB	**Diyarbakir**	**0.99**	**261**	Pg	**Pb**	**02 08 34.7**	**-0.7**
BNGB	**Bingl**	**1.02**	**328**	Pg	**Pg**	**02 08 35.0**	**-1.2**
BNGB				Sg	**Sn**	**02 08 50.8**	**0.0**
VRTB	**Varto-Mus**	**1.04**	**4**	Pg	**Pb**	**02 08 35.8**	**-0.6**
AKDM	**Akdamar-Van**	**1.28**	**80**	Pn	**Pb**	**02 08 39.6**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.37**	**42**	Pn	**Pb**	**02 08 41.6**	**-0.5**
YEDI	**Yedisu-Bingol**	**1.46**	**334**	Pn	**Pb**	**02 08 43.0**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.65**	**280**	Pn	**Pn**	**02 08 45.3**	**+0.1**
SVRC				Sn	**Sg**	**02 09 07.9**	**-1.5**
DORK	**Agr/Tutak/Do**	**1.68**	**41**	P	**Pb**	**02 08 47.0**	**-0.2**
DORK				S	**Sg**	**02 09 10.8**	**+0.4**
DORK				*i* IAML		02 09 19.0	
	comp=E,38nm,0.7s						
DORK				*i* IAML		02 09 24.0	
	comp=N,45nm,1.0s						
ETEKE	**Tekederesi - E**	**1.68**	**354**	P	**Pg**	**02 08 50.9**	**+2.1**
ETEKE				S	**Sg**	**02 09 17.7**	**+7.1**
EJDE	**Erzurum, Palan**	**1.71**	**358**	P	**Pg**	**02 08 47.7**	**-1.6**
EJDE				*i* IAML		02 09 20.0	
	comp=E,92nm,0.7s						
EJDE				*i* IAML		02 09 25.0	
	comp=N,56nm,0.9s						
ERZM	**Erzurum**	**1.78**	**360**	P	**Pg**	**02 08 49.0**	**-1.6**
ERZM				S	**Sg**	**02 09 15.6**	**+1.8**
KOPR	**Koprukoy-ERZUR**	**1.90**	**11**	Pn	**Pn**	**02 08 49.2**	**+0.5**
AGRB	**Hanur-Agry**	**1.93**	**41**	Pn	**Pn**	**02 08 49.6**	**+0.6**
SENK	**Senkaya-Erzuru**	**2.55**	**17**	Pn	**Pn**	**02 08 58.6**	**+0.9**

*UCR **07** 02:11:05.2±1.4, 10°.12N×84°.26W, h76km±2km, MW4.1*
*CATAC **07** 02:11:06.7±0.3, 10°.N±3°×8°.4W±°, h48km±4km, M3.9/13, MLv3.9/13, Error ellipse: s-maj=6.7km s-min=2.9km az=41.4, confirmed*
ISC 07 02:11:06.5±1.2, **10°.08N**±0°.03×**84°.27W**±0°.02, **h69**km±5km, **n146**, σ0**9**71/214, **46C-32D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POAS	**San Pedro de P**	**0.03**	**95**	*i* P	**Pn**	**02 11 16.3**	**-0.4**
POAS				eS	**Sn**	**02 11 24.8**	**+0.7**
TCS1	**Tacares**	**0.05**	**219**	P	**Pn**	**02 11 16.2**	**-0.5**
TCS1	**Tacares**	**0.05**	**219**	*e* P	**Pn**	**02 11 16.2**	**-0.5**
TCS1				eS	**Sn**	**02 11 24.8**	**+0.7**
SARCI	**Sarchi**	**0.07**	**279**	*e* P	**Pn**	**02 11 16.4**	**-0.4**
SARCI				eS	**Sn**	**02 11 24.8**	**+0.7**
UELA	**Alajuela**	**0.08**	**135**	*i* P	**Pn**	**02 11 16.3**	**-0.5**
UELA				eP		02 11 16.4	
UELA				eS	**Sn**	**02 11 24.6**	**+0.4**
VPS8	**V Poas**	**0.10**	**16**	eP	**Pn**	**02 11 16.6**	**-0.5**
VPS8				eS	**Sn**	**02 11 24.8**	**0.0**
NARAN	**Naranjo de Ala**	**0.11**	**280**	eP	**Pn**	**02 11 16.4**	**-0.4**
VPS5	**V. Poas**	**0.12**	**19**	eP	**Pn**	**02 11 16.2**	**-1.0**
BELE	**Belen**	**0.13**	**141**	*i* P	**Pn**	**02 11 16.2**	**-0.6**
BELE				eS	**Sn**	**02 11 24.5**	**+0.1**
ATEO	**Atenas**	**0.15**	**228**	eP	**Pn**	**02 11 16.1**	**-0.8**
ATEO				eS	**Sn**	**02 11 24.2**	**-0.2**
HEME	**Heredia, Merce**	**0.15**	**122**	*i* P	**Pn**	**02 11 17.5**	**+0.5**
HEME				eS	**Sn**	**02 11 25.8**	**+1.2**
PALD	**Palmares**	**0.16**	**261**	*e* P	**Pn**	**02 11 16.2**	**-0.8**
PALD				eS	**Sn**	**02 11 24.6**	**0.0**
SANTA	**Santa Ana**	**0.17**	**150**	*i* P	**Pn**	**02 11 16.2**	**-0.8**
SANTA				eS	**Sn**	**02 11 24.4**	**-0.2**
RAMO	**San Ramon**	**0.19**	**273**	eP	**Pn**	**02 11 16.2**	**-0.9**
RAMO				eS	**Sn**	**02 11 24.9**	**0.0**
VPL1	**V. Platanar**	**0.20**	**332**	eP	**Pn**	**02 11 16.8**	**-0.5**
DOMI	**Santo Domingo**	**0.20**	**118**	*i* P	**Pn**	**02 11 16.8**	**-0.4**
DOMI				eS	**Sn**	**02 11 25.6**	**+0.7**
PAVB	**Pavas, San Jos**	**0.20**	**133**	*i* P	**Pn**	**02 11 16.6**	**-0.6**
PAVB				eS	**Sn**	**02 11 25.0**	**+0.1**
TIBA	**Tibas**	**0.23**	**121**	*i* P	**Pn**	**02 11 17.9**	**+0.5**
TIBA				eS	**Sn**	**02 11 26.8**	**+1.6**
PURI	**Puriscal**	**0.23**	**190**	*i* P	**Pn**	**02 11 16.6**	**-0.7**
PURI				eS	**Sn**	**02 11 24.9**	**-0.3**
CENT	**San Jose**	**0.24**	**128**	*i* P	**Pn**	**02 11 17.9**	**+0.5**
CENT				eS	**Sn**	**02 11 26.6**	**+1.4**
LUJA	**Lujan**	**0.25**	**128**	*i* P	**Pn**	**02 11 16.9**	**-0.5**
LUJA				eS	**Sn**	**02 11 25.8**	**+0.4**
LUPE	**Guadalupe**	**0.25**	**121**	*i* P	**Pn**	**02 11 16.7**	**-0.7**
LUPE				eS	**Sn**	**02 11 25.7**	**+0.4**
VPL2	**V. Platanar**	**0.25**	**334**	*i* P	**Pn**	**02 11 17.2**	**-0.3**
VPL2				eS	**Sn**	**02 11 26.0**	**+0.5**
SJS	**Escuela Geolog**	**0.25**	**123**	*i* P	**Pn**	**02 11 16.9**	**-0.5**
SJS				eS	**Sn**	**02 11 26.1**	**+0.7**
ECI	**Escuela Centro**	**0.26**	**123**	*i* P	**Pn**	**02 11 17.0**	**-0.5**
ECI				eS	**Sn**	**02 11 26.0**	**+0.6**
SJS3	**Mercedes San J**	**0.26**	**123**	*i* P	**Pn**	**02 11 17.2**	**-0.3**
SJS3				eS	**Sn**	**02 11 26.2**	**+0.7**
ARTO	**Ro Cuarto**	**0.27**	**12**	eP	**Pn**	**02 11 16.9**	**-0.6**
ARTO				eS	**Sn**	**02 11 25.9**	**+0.5**
VPL3	**V. Platanar**	**0.27**	**352**	*e* P	**Pn**	**02 11 17.1**	**-0.4**
VPL3				eS	**Sn**	**02 11 26.4**	**+0.9**
AMPA	**Desamparados**	**0.27**	**131**	*i* P	**Pn**	**02 11 16.8**	**-0.8**
AMPA				eS	**Sn**	**02 11 25.7**	**+0.1**
CORON	**Coronado**	**0.28**	**112**	*i* P	**Pn**	**02 11 17.3**	**-0.4**
CORON				eS	**Sn**	**02 11 26.9**	**+1.1**
ACOS	**Acosta**	**0.30**	**160**	*i* P	**Pn**	**02 11 17.0**	**-0.8**
ACOS				eS	**Sn**	**02 11 25.9**	**0.0**
OROT	**Orotina**	**0.30**	**237**	*e* P	**Pn**	**02 11 16.9**	**-0.7**
TRIO	**Tres Rios**	**0.32**	**122**	*i* P	**Pn**	**02 11 17.2**	**-0.7**
TRIO				eS	**Sn**	**02 11 26.5**	**+0.2**
CVIMO	**Finca Echandi**	**0.33**	**99**	*i* P	**Pn**	**02 11 17.4**	**-0.6**
CVIMO				eS	**Sn**	**02 11 26.6**	**+0.2**
ITAL	**Pital**	**0.37**	**360**	eP	**Pn**	**02 11 17.4**	**-0.7**
ARZA	**Esparza**	**0.40**	**258**	*e* P	**Pn**	**02 11 17.7**	**-0.7**
TAGO	**Cartago**	**0.40**	**122**	*i* P	**Pn**	**02 11 18.0**	**-0.6**
TAGO				eS	**Sn**	**02 11 27.7**	**+0.4**
VICA	**Volcano Irazu**	**0.43**	**103**	*i* P	**Pn**	**02 11 18.4**	**-0.7**
VICA				eS	**Sn**	**02 11 27.5**	**-0.7**
PICV	**PH. Pirrs**	**0.46**	**171**	*e* P	**Pn**	**02 11 17.9**	**-1.1**
PICV				eS	**Sn**	**02 11 27.9**	**-0.1**
SOCE	**Pocosol**	**0.46**	**312**	P	**Pn**	**02 11 18.5**	**-0.5**
SOCE	**Pocosol**	**0.46**	**312**	*i* S	**Sn**	**02 11 28.0**	**0.0**
SOCE	**Pocosol**	**0.46**	**312**	*i* P	**Pn**	**02 11 18.4**	**-0.5**
SOCE				eS	**Sn**	**02 11 28.3**	**+0.3**
REPA	**Paraso**	**0.47**	**122**	*i* P	**Pn**	**02 11 18.7**	**-0.4**
REPA				eS	**Sn**	**02 11 28.8**	**+0.5**
ROBF	**Roble, Puntare**	**0.47**	**258**	eP	**Pn**	**02 11 17.8**	**-1.1**
PAR1A	**Puntarenas Pro**	**0.48**	**178**	eP	**Pn**	**02 11 18.6**	**-0.4**
PCAYA	**Pacayas**	**0.48**	**109**	*e* P	**Pn**	**02 11 18.9**	**-0.4**
PITB	**Pirrs, San**	**0.48**	**150**	eP	**Pn**	**02 11 18.6**	**-0.7**
RAZU	**San Marcos de**	**0.48**	**150**	eP	**Pn**	**02 11 18.4**	**-0.9**
PILE	**Guapiles**	**0.49**	**74**	*i* P	**Pn**	**02 11 18.7**	**-0.5**
PILE				eS	**Sn**	**02 11 29.1**	**+0.6**
CVTQ	**Turrialba Volc**	**0.50**	**98**	*i* P	**Pn**	**02 11 19.2**	**-0.5**
VTR0	**Volcan Turrial**	**0.51**	**97**	*i* P	**Pn**	**02 11 19.0**	**-0.7**
VTR0				eS	**Sn**	**02 11 31.1**	**+1.7**
CVTR	**Volcan Turrial**	**0.51**	**97**	*i* P	**Pn**	**02 11 19.0**	**-0.8**
CVTR				eS	**Sn**	**02 11 29.6**	**+0.2**
CVTV	**Tajo**	**0.52**	**98**	*i* P	**Pn**	**02 11 19.2**	**-0.6**
CVTV				eS	**Sn**	**02 11 31.1**	**+1.6**
PIEC	**Cerro El Cedra**	**0.55**	**146**	*i* eP	**Pn**	**02 11 19.0**	**-1.1**
PIEC				eS	**Sn**	**02 11 30.4**	**+0.5**
VINA	**Juan Vinas**	**0.55**	**109**	*i* eP	**Pn**	**02 11 19.4**	**-0.5**
ABRB	**Las Abras (San**	**0.55**	**98**	*i* P	**Pn**	**02 11 19.7**	**-0.3**
ABRB				eS	**Sn**	**02 11 32.0**	**+2.1**
FORC	**Fortuna**	**0.55**	**314**	*i* P	**Pn**	**02 11 19.4**	**-0.4**
FORC				eS	**Sn**	**02 11 30.1**	**+0.6**
VACR	**Volcan Arenal**	**0.56**	**314**	*i* P	**Pn**	**02 11 19.4**	**-0.5**
VACR				eS	**Sn**	**02 11 30.5**	**+0.8**
BITO	**Garabito Jaco**	**0.57**	**217**	eP	**Pn**	**02 11 20.1**	**+0.2**
CASO	**Castillo**	**0.58**	**308**	*i* P	**Pn**	**02 11 19.6**	**-0.5**
ARE1	**Arenal 1**	**0.58**	**311**	*i* P	**Pn**	**02 11 19.8**	**-0.3**
VERB	**Verbena**	**0.58**	**103**	*i* eP	**Pn**	**02 11 19.8**	**-0.3**
VERB				eS	**Sn**	**02 11 31.0**	**+0.8**
VARE2	**V. Arenal**	**0.58**	**311**	*i* P	**Pn**	**02 11 19.9**	**-0.3**
CEDE	**Laguna Cedeo**	**0.59**	**314**	*i* P	**Pn**	**02 11 19.8**	**-0.4**
CEDE				eS	**Sn**	**02 11 31.2**	**+0.9**
CARI	**Cariari**	**0.60**	**62**	*i* P	**Pn**	**02 11 19.8**	**-0.5**
CARI				eS	**Sn**	**02 11 31.3**	**+1.0**
MTEVE	**Monteverde**	**0.60**	**294**	*i* P	**Pn**	**02 11 19.9**	**-0.5**
MTEVE				eS	**Sn**	**02 11 31.2**	**+0.5**
TURIB	**Turrialba**	**0.60**	**106**	*i* eP	**Pn**	**02 11 19.6**	**-0.7**
TURIB				eS	**Sn**	**02 11 30.2**	**-0.2**
REZ	**Monterrey de S**	**0.61**	**317**	*i* P	**Pn**	**02 11 20.2**	**-0.2**
RESJ	**San Isidro (Tu**	**0.62**	**94**	*i* P	**Pn**	**02 11 20.2**	**-0.3**
RESJ				eS	**Sn**	**02 11 32.0**	**+1.2**
LLNJ	**Naranjito**	**0.62**	**164**	*i* eP	**Pn**	**02 11 20.0**	**-0.5**
LLNJ				eS	**Sn**	**02 11 31.3**	**+0.5**
TABAC	**Tabacon**	**0.64**	**311**	*i* P	**Pn**	**02 11 20.5**	**-0.3**
TABAC				eS	**Sn**	**02 11 32.5**	**+1.2**
COVE	**Coope Vega, Sa**	**0.65**	**349**	P	**Pn**	**02 11 19.7**	**-1.1**
COVE	**Coope Vega, Sa**	**0.65**	**349**	S	**Sn**	**02 11 30.6**	**-0.8**
SVQ2	**Quepos**	**0.65**	**171**	*i* eP	**Pn**	**02 11 20.1**	**-0.7**
SVQ2				eS	**Sn**	**02 11 31.5**	**+0.2**
QUEP	**Quepos**	**0.65**	**171**	eP	**Pn**	**02 11 20.2**	**-0.7**
RVLA	**Villa Bonita**	**0.67**	**87**	*i* P	**Pn**	**02 11 20.8**	**-0.3**
RVLA				eS	**Sn**	**02 11 33.0**	**+1.3**
EGUB	**Earth Gu¡pi**	**0.68**	**79**	*i* P	**Pn**	**02 11 20.8**	**-0.3**
EGUB				eS	**Sn**	**02 11 32.5**	**+0.6**
LCOCO	**El Coco**	**0.70**	**90**	eP	**Pn**	**02 11 20.9**	**-0.5**
LCOCO				eS	**Sn**	**02 11 32.8**	**+0.4**
PAQE	**Paquera**	**0.70**	**249**	eP	**Pn**	**02 11 21.2**	**-0.1**
PAQE				eS	**Sn**	**02 11 33.8**	**+1.5**
JTS	**Las Juntas de**	**0.70**	**288**	*i* P	**Pn**	**02 11 20.7**	**-0.7**
JUNT	**Juntas**	**0.71**	**287**	*i* P	**Pn**	**02 11 20.8**	**-0.7**
CHIK	**Chiripa**	**0.72**	**300**	*i* eP	**Pn**	**02 11 21.4**	**-0.3**
BUS1	**Rivas**	**0.73**	**135**	*i* P	**Pn**	**02 11 21.1**	**-1.1**
BUS1				eS	**Sn**	**02 11 33.0**	**-0.7**
IRES	**Siquirres**	**0.75**	**89**	*i* eP	**Pn**	**02 11 21.7**	**-0.3**
IRES				eS	**Sn**	**02 11 34.4**	**+1.0**
TILA	**Tilaran**	**0.79**	**299**	*i* eP	**Pn**	**02 11 21.9**	**-0.6**
TILA				eS	**Sn**	**02 11 35.0**	**+0.8**
QUEB	**Quebradon, Cot**	**0.82**	**311**	*i* eP	**Pn**	**02 11 21.9**	**-0.9**
JCR1	**Jicaral**	**0.86**	**255**	eP	**Pn**	**02 11 22.6**	**-0.7**
INVE	**Universidad In**	**0.87**	**297**	*i* P	**Pn**	**02 11 23.0**	**-0.5**
CNAS	**Canas**	**0.88**	**293**	eP	**Pn**	**02 11 23.8**	**+0.3**
TIMP	**Tierras Morena**	**0.89**	**304**	*i* eP	**Pn**	**02 11 23.0**	**-0.7**
TIMP				eS	**Sn**	**02 11 36.6**	**+0.2**
ZEDO	**Perez Zeledon**	**0.92**	**141**	*i* P	**Pn**	**02 11 23.8**	**-0.3**
ZEDO				eS	**Sn**	**02 11 37.3**	**+0.2**
TENO	**El Achiote**	**0.93**	**312**	eP	**Pn**	**02 11 23.5**	**-0.7**
CBL1	**Cabuya**	**0.94**	**239**	*i* P	**Pn**	**02 11 23.6**	**-0.6**
CBL1				eS	**Sn**	**02 11 37.8**	**+0.4**
NYURE	**Nandayure**	**0.97**	**265**	*i* P	**Pn**	**02 11 24.5**	**-0.1**
NYURE				eS	**Sn**	**02 11 39.2**	**+1.1**
MOTZ	**Rio Naranjo**	**0.99**	**307**	*i* P	**Pn**	**02 11 24.7**	**-0.2**
SAJE	**San Jermim**	**1.05**	**134**	eP	**Pn**	**02 11 24.8**	**-1.0**
LCHIL	**Los Chiles**	**1.05**	**335**	eP	**Pn**	**02 11 24.3**	**-1.3**
CUI	**Cuipilapa**	**1.05**	**303**	*i* P	**Pn**	**02 11 25.1**	**-0.6**
BAGA	**Bagaces**	**1.07**	**295**	eP	**Pn**	**02 11 25.3**	**-0.6**
VERH	**Veragua Rainfo**	**1.07**	**98**	eP	**Pn**	**02 11 25.0**	**-1.0**
HORNC	**Hornillas**	**1.09**	**305**	*i* P	**Pn**	**02 11 25.6**	**-0.7**
HORNC				eS	**Sn**	**02 11 40.9**	**-0.1**
UPAL	**Upala**	**1.09**	**318**	*i* P	**Pn**	**02 11 25.2**	**-0.9**
UPAL				eS	**Sn**	**02 11 40.5**	**-0.3**
PLVR	**Palo Verde**	**1.10**	**284**	eP	**Pn**	**02 11 26.5**	**+0.1**
VMAR	**Armenia, Volca**	**1.10**	**311**	*i* P	**Pn**	**02 11 25.5**	**-0.9**
VMAR				eS	**Sn**	**02 11 42.0**	**+0.8**
CMARA	**Lajas Hojancha**	**1.14**	**267**	P	**Pn**	**02 11 26.3**	**-0.6**
CMARA	**Lajas Hojancha**	**1.14**	**267**	S	**Sn**	**02 11 42.3**	**+0.4**
CMARA	**Lajas Hojancha**	**1.14**	**267**	*e* P	**Pn**	**02 11 26.2**	**-0.6**
EDPE	**Pejibaye, P**	**1.15**	**143**	eP	**Pn**	**02 11 26.4**	**-0.5**
OCHAL	**Ojochal**	**1.15**	**148**	P	**Pn**	**02 11 26.4**	**-0.5**
OCHAL	**Ojochal**	**1.15**	**148**	S	**Sn**	**02 11 42.5**	**+0.3**
NICO	**Nicoya**	**1.16**	**273**	*i* eP	**Pn**	**02 11 26.9**	**-0.1**
LAES	**El Progreso Va**	**1.24**	**105**	*i* eP	**Pn**	**02 11 28.0**	**-0.1**
GPS2	**Hotel Rincn d**	**1.26**	**302**	eP	**Pn**	**02 11 27.3**	**-1.0**
GPS3	**Bodega del ICE**	**1.27**	**302**	*i* P	**Pn**	**02 11 28.5**	**0.0**
GPS3				eS	**Sn**	**02 11 46.2**	**+1.2**
BURE	**Buenos Aires**	**1.29**	**134**	eP	**Pn**	**02 11 28.0**	**-0.7**
VRLE	**La Escondida,**	**1.29**	**303**	eP	**Pn**	**02 11 27.9**	**-0.9**
VORI	**VORI**	**1.29**	**305**	eP	**Pn**	**02 11 28.1**	**-0.7**
DRK0	**Durika**	**1.30**	**129**	P	**Pn**	**02 11 28.3**	**-0.6**
DRK0	**Durika**	**1.30**	**129**	S	**Sn**	**02 11 45.4**	**-0.4**
DRK0	**Durika**	**1.30**	**129**	*e* P	**Pn**	**02 11 28.0**	**-0.9**
BUAI	**Buenos Aires**	**1.31**	**307**	*i* eP	**Pn**	**02 11 28.1**	**-0.9**
BUAI				eS	**Sn**	**02 11 45.1**	**-0.7**
DELF	**Filadelfia**	**1.31**	**286**	eP	**Pn**	**02 11 28.7**	**-0.3**
LAPC	**Finca la Perla**	**1.33**	**301**	*i* eP	**Pn**	**02 11 28.3**	**-1.0**
ALIBA	**Liberia Airpor**	**1.35**	**292**	eP	**Pn**	**02 11 29.1**	**-0.5**
PANP	**Palmar Norte**	**1.37**	**144**	eP	**Pn**	**02 11 28.1**	**-1.6**
ELI1	**Hacienda Flor**	**1.38**	**294**	P	**Pn**	**02 11 29.9**	**0.0**
ELI1	**Hacienda Flor**	**1.38**	**294**	S	**Sn**	**02 11 48.3**	**+0.8**
ELI1	**Hacienda Flor**	**1.38**	**294**	*e* P	**Pn**	**02 11 29.3**	**-0.6**
CEUA	**Cerro Uatsi, L**	**1.39**	**109**	eP	**Pn**	**02 11 30.7**	**+0.7**
FIMO	**Fila Mora**	**1.41**	**140**	eP	**Pn**	**02 11 30.0**	**-0.4**
EDP2	**Potrero Grande**	**1.51**	**134**	eP	**Pn**	**02 11 31.2**	**-0.4**
CARN	**Rivas**	**1.65**	**312**	P	**Pn**	**02 11 33.0**	**-0.5**
CARN				S	**Sn**	**02 11 53.9**	**0.0**
LCRUZ	**La Cruz**	**1.67**	**307**	*i* P	**Pn**	**02 11 33.1**	**-0.6**
ALCO	**Alturas Coton,**	**1.81**	**128**	eP	**Pn**	**02 11 35.0**	**-0.7**
PIRO	**Carate, Puerto**	**1.90**	**151**	P	**Pn**	**02 11 38.1**	**+1.3**
PIRO	**Carate, Puerto**	**1.90**	**151**	S	**Sn**	**02 12 01.0**	**+1.1**
CONN	**Concepcion**	**1.99**	**318**	P	**Pn**	**02 11 37.0**	**-1.0**
BRU2	**Volcan**	**2.01**	**129**	P	**Pn**	**02 11 38.0**	**-0.6**
BRU2	**Volcan**	**2.01**	**129**	*e* P	**Pn**	**02 11 37.9**	**-0.6**
ESPN	**Las Esperanzas**	**2.10**	**359**	eP	**Pn**	**02 11 38.5**	**-1.1**
JEFFS	**S de V. Baru**	**2.21**	**129**	eP	**Pn**	**02 11 40.4**	**-0.8**
BOTLY	**Boquete Panama**	**2.22**	**126**	eP	**Pn**	**02 11 41.1**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**2.37**	**120**	eP	**Pn**	**02 11 42.5**	**-0.6**
RBALA	**Bur**	**2.41**	**120**	eP	**Pn**	**02 11 42.7**	**-0.9**
KKNTU	**Kakint²**	**2.73**	**117**	eP	**Pn**	**02 11 46.6**	**-1.4**
RCPN	**Sur Rio San Ju**	**3.86**	**333**	P	**Pn**	**02 12 04.8**	**+1.1**

*IDC **07** 02:20:02.8±2.6, 29°.51N×131°.01E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=132.5km s-min=30.5km az=66.0*
*NEIC **07** 02:20:08.3±0.8, 29°.25N±0°.08×130°.7E±0°.1, h35km±2km, mb4.5/12, Error ellipse: s-maj=22.6km s-min=11.5km az=113.0*
*JMA **07** 02:20:09.3±0.2, 29°.3N±0°.6×13°.0E±°, h71km±3km, MV3.0/30, NEAR AMAMI-OSHIMA ISLAND*
ISC 07 02:20:10.1±1.2, **29°.24N**±0°.05×**130°.52E**±0°.08, **h51**km±11km, **n43**, σ1**9**04/49, **mb4.2**/12, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.82**	**317**	P	**Pn**	**02 20 24.1**	**-1.4**
JYAK	**Yakushimahirau**	**1.00**	**359**	P	**Pn**	**02 20 27.4**	**-0.4**
JYAK				S	**Sn**	**02 20 42.6**	**+1.7**
JZK	**Kikaishima**	**1.04**	**208**	P	**Pn**	**02 20 28.4**	**0.0**
JAM	**Amami Oshima**	**1.15**	**225**	P	**Pn**	**02 20 29.0**	**-0.9**
JAM				eS	**Sn**	**02 20 45.1**	**+0.5**
JTAJ	**Takarajima**	**1.16**	**266**	P	**Pn**	**02 20 28.5**	**-1.5**
JTAJ				eS	**Sn**	**02 20 45.3**	**+0.6**
JMTN	**Minamitane**	**1.20**	**16**	eP	**Pn**	**02 20 30.4**	**-0.3**
JKC	**Kuchinoerabu**	**1.25**	**347**	P	**Pn**	**02 20 30.9**	**-0.4**
JTN	**Tanegashima 3**	**1.47**	**16**	eP	**Pn**	**02 20 34.1**	**-0.2**
JAMN	**Amaminishikomi**	**1.54**	**230**	P	**Pn**	**02 20 34.4**	**-0.8**
JAMN				eS	**Sn**	**02 20 54.6**	**+0.5**
JTSR	**Tashiro 2**	**1.95**	**10**	P	**Pn**	**02 20 41.1**	**+0.2**
JTSR				eS	**Sn**	**02 21 05.3**	**+1.1**
JTK	**Tokunoshima**	**2.00**	**224**	P	**Pn**	**02 20 40.8**	**-0.7**
JTK				eS	**Sn**	**02 21 06.2**	**+0.8**
JSU	**Suzuyama**	**2.26**	**359**	P	**Pn**	**02 20 44.9**	**-0.3**
JNAR	**Kushima--Naru**	**2.37**	**16**	P	**Pn**	**02 20 47.7**	**+1.1**
JSJ	**Shimokoshiki**	**2.53**	**344**	P	**Pn**	**02 20 48.1**	**-0.7**
JOW	**Kunigami**	**3.11**	**220**	Pn	**Pn**	**02 20 55.8**	**-0.9**
JNU	**Nakatsue**	**3.88**	**4**	Pn	**Pn**	**02 21 05.3**	**-2.1**
JMN	**Monobe**	**5.32**	**32**	Pn	**Pn**	**02 21 23.5**	**-3.5**
MKAR	**Makanchi Array**	**41.14**	**309**	P	**P**	**02 27 49.4**	**+0.1**
MKAR	**Makanchi Array**	**41.14**	**309**	P	**P**	**02 27 49.8**	**+0.4**
	0.2nm,0.4s,baz=99,slow=8.9,SNR=4.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**41.17**	**320**	P	**P**	**02 27 49.1**	**-0.3**
KURBB	**Kurchatov Arra**	**44.16**	**314**	P	**P**	**02 28 13.9**	**+0.3**
	1.4nm,0.5s,baz=98,slow=9.0,SNR=14						
	1.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**47.29**	**186**	P	**P**	**02 28 38.1**	**-0.5**
WB0	**Warramunga Arr**	**48.86**	**175**	P	**P**	**02 28 51.1**	**+0.4**
WB0				IAmb	IAmb	02 28 58.5	
	comp=Z,4.6nm,1.4s						
WRA	**Warramunga Arr**	**49.03**	**175**	P	**P**	**02 28 53.3**	**+1.2**
	comp=Z,0.5nm,1.1s,baz=355,slow=8.0,SNR=2.0						
	comp=Z,0

PB16 IPOC Station P 36.64 116 P P 02 37 38.8 +0.3
PB16 IAmb IAmb 02 37 41.9
comp=Z,13nm,0.9s
SN07 Snyder 07 36.90 4 P P 02 37 40.6 +0.8
SN07 IAmb IAmb 02 37 42.3
comp=Z,8.6nm,1.1s
PB11 IPOC Station P 36.99 118 P P 02 37 40.5 -0.5
APMT Aspermont 37.19 5 P P 02 37 43.8 +1.5
APMT IAmb IAmb 02 37 45.8
comp=Z,12nm,1.3s
LPAZ La Paz 37.30 112 P P 02 37 44.7 +0.5
LPAZ La Paz 37.30 112 P P 02 37 43.1 -1.1
comp=Z,2.5nm,1.0s,baz=273,slow=6.4,SNR=5.9
LPAZ LR LR 02 50 21.5
comp=Z,1µm,20.1s,baz=280,slow=32
comp=Z,2.5nm,1.0s
ESJX Sierra Juarez 37.47 343 P P 02 37 45.4 +0.5
H03N2 Juan Fernandez 37.55 144 T T 03 17 35.3
baz=318,slow=77,SNR=84
H03N1 Juan Fernandez 37.56 144 T T 03 17 34.4
baz=318,slow=77,SNR=85
H03N3 Juan Fernandez 37.57 145 T T 03 17 37.8
baz=318,slow=77,SNR=53
113A Mohawk Valley, 37.62 346 P 02 37 47.5 +1.5
113A IAmb IAmb 02 37 49.4
comp=Z,7.9nm,1.2s
MSTX Muleshoe 37.67 2 P P 02 37 47.9 +1.4
MSTX IAmb IAmb 02 37 51.0
comp=Z,14nm,1.2s
Y22A Socorro 37.73 356 P 02 37 48.0 +0.9
Y22A IAmb IAmb 02 38 01.2
comp=Z,9.9nm,1.2s
SBM South Baldy 37.78 356 P P 02 37 48.5 +0.7
LENM Lemitar 37.96 356 P P 02 37 49.5 +0.5
BAUV El Baul 38.02 70 P P 02 37 48.5 -1.2
Y14A Wickenburg 38.58 348 P P 02 37 54.4 +0.2
X18A Snowflake 38.63 352 P P 02 37 54.9 +0.3
ABQ Albuquerque 38.70 357 P P 02 37 55.3 +0.1
ANMO Albuquerque 38.70 357 P P 02 37 55.9 +0.6
ANMO Albuquerque 38.70 357 LR LR 02 51 47.4
comp=Z,351nm,19.6s,baz=272,slow=33
TASM ASL Pad, Albuq 38.70 357 P P 02 37 55.4 +0.1
TASM ASL Pad, Albuq 38.70 357 P P 02 37 55.1 -0.2
TASM IAmb IAmb 02 37 58.6
comp=Z,3.6nm,1.1s
TASM ASL Pad, Albuq 38.70 357 P P 02 37 55.6 +0.3
TASM IAmb IAmb 02 37 58.6
comp=Z,3.1nm,1.0s
BLYC Blythe 38.74 346 P 02 37 56.1 +0.7
X16A Lo Mia Camp, P 38.75 350 P 02 37 55.9 +0.2
BC3 Big Chuckawall 38.89 345 P 02 37 57.2 +0.5
SMWD Samnorwood 38.95 5 P P 02 37 57.3 +0.1
SMWD IAmb IAmb 02 38 00.3
comp=Z,18nm,1.3s
PFO Pinyon Flats O 39.12 343 P 02 37 59.6 +0.9
PFO Pinyon Flats O 39.12 343 LR LR 02 50 26.1
comp=Z,1µm,18.1s,baz=154,slow=31
PMD Palm Desert 39.13 344 P P 02 37 59.7 +1.0
IRM Iron Mountain 39.28 345 P 02 38 00.3 +0.3
BELC Belle Mtn. Jos 39.36 344 P 02 38 00.8 0.0
MIAR Mount Ida 39.47 14 P 02 38 00.9 -0.6
MIAR IAmb IAmb 02 38 25.7
comp=Z,26nm,1.5s
DANC Danby, Needles 39.80 345 P P 02 38 05.2 +1.0
DANC IAmb IAmb 02 38 07.8
comp=Z,8.9nm,1.0s
WUAZ Wupatki 39.81 351 P 02 38 04.7 +0.2
W13A Hualapai Mount 39.89 347 P P 02 38 05.5 +0.3
V12A Nelson 40.71 346 P 02 38 11.1 -0.8
V12A IAmb IAmb 02 38 15.2
comp=Z,9.4nm,1.1s
GSC Goldstone, Bar 40.81 344 P P 02 38 12.4 -0.3
GSC IAmb IAmb 02 38 16.2
comp=Z,7.5nm,0.9s
T25A Trinidad 40.82 359 P 02 38 13.2 +0.3
T25A IAmb IAmb 02 38 18.1
comp=Z,16nm,1.2s
U15A North Rim 40.86 350 P 02 38 14.0 +0.7
MVCO Mesa Verde 41.11 355 P 02 38 14.6 -0.7
MVCO IAmb IAmb 02 38 22.9
comp=Z,14nm,1.1s
LRMC Laurel Mtn Rad 41.22 343 P P 02 38 15.6 -0.6
SHOC Shoshone, Teco 41.23 345 P P 02 38 16.1 +0.1
SHOC IAmb IAmb 02 38 20.0
comp=Z,10nm,1.0s
WSHM Spangler Hills 41.28 343 P P 02 38 16.6 +0.1
WSHM IAmb IAmb 02 38 30.2
comp=Z,9.2nm,1.3s
QSM Queen of Sheba 41.45 344 P P 02 38 16.9 -1.0
QSM IAmb IAmb 02 38 21.3
comp=Z,11nm,1.0s
SDCO Great Sand Dun 41.45 358 P 02 38 17.9 -0.3
S22A 4UR Ranch, Cre 41.51 357 P P 02 38 18.9 +0.2
CLC China Lake 41.51 343 P P 02 38 18.3 -0.2
SHPR Sheep Range 41.52 346 P P 02 38 18.3 -0.3
KNB Kanab 41.52 349 P 02 38 18.3 -0.4
KNB IAmb IAmb 02 38 25.0
comp=Z,13nm,1.3s
LCAR Lake Charles 41.52 16 P 02 38 17.6 -0.9
LCAR IAmb IAmb 02 38 21.2
comp=Z,7.4nm,1.0s
GWY Greenwater Val 41.60 344 P 02 38 19.5 +0.2
GWY IAmb IAmb 02 38 22.6
comp=Z,13nm,1.1s
LCMT Little Creek M 41.60 349 P P 02 38 19.5 +0.2
FURC Furnace Creek, 41.92 344 IAmb IAmb 02 38 25.9
comp=Z,9.0nm,1.0s
VES Vestal, Richgr 41.98 342 IAmb IAmb 02 38 28.7
comp=Z,16nm,1.3s
PV05 Paradox Valley 42.03 354 IAmb IAmb 02 38 26.3
comp=Z,11nm,1.1s
PV13 Radium Mtn., P 42.08 354 IAmb IAmb 02 38 26.4
comp=Z,7.6nm,1.0s
HMU Henry Mountain 42.09 352 IAmb IAmb 02 38 28.8
comp=Z,13nm,1.2s
PV02 Paradox Valley 42.12 354 IAmb IAmb 02 38 26.7
comp=Z,13nm,1.0s
WCT Wildcat Mounta 42.16 345 IAmb IAmb 02 38 28.3
comp=Z,14nm,1.1s
PV18 Skein Mesa, Pa 42.17 354 IAmb IAmb 02 38 44.0
comp=Z,15nm,1.2s
TPNV Topopah Spring 42.21 345 IAmb IAmb 02 38 28.4
comp=Z,8.5nm,1.1s
PV19 Morning Glory 42.24 354 IAmb IAmb 02 38 30.0
comp=Z,17nm,1.4s
PV20 West Nyswonger 42.27 354 IAmb IAmb 02 38 37.1
comp=Z,17nm,1.2s
PV10 Paradox Valley 42.32 354 IAmb IAmb 02 38 27.6
comp=Z,15nm,1.2s
PV04 Paradox Valley 42.32 354 IAmb IAmb 02 38 28.5
comp=Z,21nm,1.5s
PRN Pahroc Range 42.36 347 IAmb IAmb 02 38 29.4
comp=Z,9.2nm,1.0s
PBMO Poplar Bluff 42.39 16 IAmb IAmb 02 38 32.6
comp=Z,24nm,1.4s
GRAC Grapevine Rang 42.55 344 IAmb IAmb 02 38 30.8
comp=Z,17nm,1.0s
V48A Smith Brothers 42.58 21 IAmb IAmb 02 38 32.2
comp=Z,9.0nm,1.0s
S11A Rachel 42.75 346 IAmb IAmb 02 39 09.0
comp=Z,8.9nm,0.7s
SJG San Juan 43.22 58 LR LR 02 53 39.4
comp=Z,429nm,19.2s,baz=227,slow=32
CCM Cathedral Cave 43.38 15 P P 02 38 34.0 +0.5
CCM IAmb IAmb 02 38 37.0
comp=Z,15nm,1.3s
R11B Troy Canyon, C 43.38 347 IAmb IAmb 02 38 37.6
comp=Z,9.1nm,1.1s
CFA Coronel Fontan 43.44 134 LR LR 02 52 32.8
comp=Z,725nm,18.1s,baz=336,slow=30
TKL Tuckaleechee C 43.66 24 LR LR 02 57 09.9
comp=Z,425nm,18.5s,baz=216,slow=37
SIV San Ignacio 43.83 109 LR LR 02 54 26.3
comp=Z,3µm,21.3s,baz=297,slow=33
O20A White River Ci 43.99 355 IAmb IAmb 02 38 48.4
comp=Z,18nm,1.3s
LHV Little Huntoon 44.04 343 IAmb IAmb 02 38 43.4
comp=Z,12nm,1.2s
NVAR Mina Array Bea 44.15 344 P P 02 38 39.5 -0.5
NVAR Mina Array Bea 44.15 344 P P 02 38 40.2 +0.2
comp=Z,2.3nm,0.9s,baz=171,slow=9.0,SNR=15
NVAR LR LR 02 53 15.6
comp=Z,695nm,18.2s,baz=163,slow=31
comp=Z,2.3nm,0.9s
MPU Maple Canyon 44.26 352 IAmb IAmb 02 38 44.4
comp=Z,9.0nm,1.0s

BI02 San Fabin de 44.34 142 P P 02 38 41.3 -0.1
BI02 IAmb IAmb 02 38 43.4
comp=Z,15nm,1.1s
RYN Ryan 44.40 344 IAmb IAmb 02 38 45.4
comp=Z,6.7nm,1.0s
CMB Columbia Colle 44.41 341 IAmb IAmb 02 38 46.7
comp=Z,7.4nm,1.2s
RDMU Red Mountain 44.54 354 IAmb IAmb 02 38 48.1
comp=Z,12nm,1.3s
WAKR Walker 44.55 343 IAmb IAmb 02 38 53.2
comp=Z,19nm,1.5s
DUG Dugway, Tooele 44.62 350 IAmb IAmb 02 38 52.5
comp=Z,11nm,1.4s
BSUT Blindstream Ca 44.65 353 IAmb IAmb 02 39 02.8
comp=Z,7.1nm,1.1s
V55A Taylorsville 44.92 26 P P 02 38 45.6 -0.3
TCUT Toone Canyon 45.30 352 IAmb IAmb 02 38 53.1
comp=Z,7.6nm,0.9s
PTLB Pontes e Lacer 45.57 108 P P 02 38 49.6 -1.8
PTLB IAmb IAmb 02 38 56.9
comp=Z,12nm,1.1s
ELK Elko 45.60 348 LR LR 02 55 06.8
comp=Z,642nm,19.0s,baz=168,slow=32
PAHR Pah Rah Range 45.64 343 IAmb IAmb 02 38 55.5
comp=Z,9.8nm,1.1s
HWUT Hardware Ranch 45.81 352 IAmb IAmb 02 38 56.3
comp=Z,8.8nm,1.0s
BEKR Beckworth 46.08 342 IAmb IAmb 02 38 59.6
comp=Z,4.0nm,1.0s
ORV Oroville 46.15 341 IAmb IAmb 02 38 59.2
comp=Z,12nm,1.1s
PPT Papeete 46.67 250 LR LR 02 53 52.7
comp=Z,436nm,18.1s,baz=68,slow=30
PPT2 Papeete2 46.68 250 *e*P **P 02 38 59.1 -1.1**
comp=Z,39nm,23.0s
PPT2 Papeete2 46.68 250 *e*PP **PP 02 40 52.5 +2.3**
comp=Z,59nm,23.5s
PPT2 *e*S **S 02 45 44.8 -4.5**
comp=Z,122nm,23.2s
PPT2 *e*SS **SS 02 49 16.0 +0.2**
comp=Z,2µm,32.0s
PPT2 *e*LR LR 02 52 04.3
comp=Z,1µm,25.0s
PPT2 *e*LR LR 02 52 11.1
comp=Z,871nm,28.5s
BW06 Boulder Array 46.72 354 IAmb IAmb 02 39 08.7
comp=Z,8.1nm,1.1s
PD31 Pinedale Array 46.72 354 IAmb IAmb 02 39 08.7
comp=Z,8.7nm,1.1s
PDAR Pinedale Array 46.72 354 P P **02 38 60.0 -0.3**
PDAR Pinedale Array 46.72 354 P P **02 38 59.2 -1.1**
comp=Z,2.7nm,0.8s,baz=165,slow=6.2,SNR=18
PDAR LR LR 02 56 19.6
comp=Z,310nm,18.0s,baz=170,slow=33
comp=Z,2.7nm,0.8s
PLCA Paso Flores 47.42 145 P P 02 39 04.7 -1.0
PLCA Paso Flores 47.42 145 P P 02 39 04.1 -1.6
comp=Z,4.3nm,1.1s,baz=290,slow=11,SNR=4.2
PLCA LR LR 02 54 17.6
comp=Z,1µm,19.2s,baz=324,slow=30
comp=Z,4.3nm,1.1s
TPAW Teton Pass 47.58 353 IAmb IAmb 02 39 26.0
comp=Z,5.4nm,1.1s
LOHW Long Hollow 47.66 353 IAmb IAmb 02 39 24.1
comp=Z,6.9nm,1.1s
FXWY Fox Creek 47.74 353 IAmb IAmb 02 39 24.5
comp=Z,11nm,1.3s
RSSD Black Hills 47.79 360 P 02 39 08.2 -0.5
MOOW Moose Ponds 47.81 353 IAmb IAmb 02 39 14.7
comp=Z,8.9nm,1.3s
N02D Trinity Center 47.82 341 IAmb IAmb 02 39 25.1
comp=Z,7.8nm,1.1s
TBI Tubuai 47.98 242 *e*P **P 02 39 11.2 +1.0**
comp=Z,308nm,41.5s
TBI *e*S **S 02 46 06.9 -0.6**
comp=Z,892nm,25.2s
TBI *e*SS **SS 02 49 35.2 -1.3**
comp=Z,3µm,34.2s
TBI *e*LR LR 02 52 38.0
comp=Z,6µm,28.2s
TBI *e*LR LR 02 52 39.3
comp=Z,1µm,43.8s
WVOR Wild Horse Val 47.99 345 IAmb IAmb 02 39 15.1
comp=Z,13nm,1.4s
HLID Hailey 48.17 350 IAmb IAmb 02 39 14.7
comp=Z,6.9nm,1.1s
MFID Camas Ranch 48.29 348 IAmb IAmb 02 39 15.4
comp=Z,8.9nm,1.2s
YPP Pitchstone Pla 48.34 353 IAmb IAmb 02 39 22.1
comp=Z,8.4nm,1.3s
YBH Yreka Blue Hor 48.51 341 LR LR 02 55 18.2
comp=Z,61nm,21.1s,baz=159,slow=31
BCYI Bear Canyon 48.73 351 IAmb IAmb 02 39 19.2
comp=Z,8.8nm,1.0s
K05A Summer Lake 48.87 343 P 02 39 17.2 +0.3
YNE Yellowstone No 48.98 354 IAmb IAmb 02 39 37.1
comp=Z,10nm,1.2s
RLMT Red Lodge 49.02 355 IAmb IAmb 02 39 20.4
comp=Z,10nm,1.0s
PINE Pine Mountain 49.87 344 P 02 39 24.9 +0.3
CPUP Villa Florida 49.88 121 P 02 39 25.0 +0.3
CPUP Villa Florida 49.88 121 P P **02 39 23.3 -1.5**
comp=Z,2.0nm,1.0s,baz=137,slow=8.1,SNR=11
CPUP LR LR 02 57 12.1
comp=Z,244nm,20.5s,baz=149,slow=32
comp=Z,2.0nm,1.0s
PLID Pearl Lake 49.93 349 IAmb IAmb 02 39 33.2
comp=Z,7.0nm,1.2s
G08A Pilot Rock 50.76 346 IAmb IAmb 02 39 35.8
comp=Z,6.5nm,1.3s
F10A Beach Ranch, E 51.03 348 IAmb IAmb 02 39 53.8
comp=Z,7.9nm,1.2s
G06A Carlson Farm, 51.12 345 IAmb IAmb 02 39 36.7
comp=Z,6.3nm,1.0s
HAWA Hanford 51.93 346 IAmb IAmb 02 39 42.7
comp=Z,6.5nm,1.1s
WAH2 Wahluke Slope 52.28 346 IAmb IAmb 02 39 58.5
comp=Z,14nm,1.4s
LON Longmire 52.83 345 IAmb IAmb 02 39 48.8
comp=Z,8.3nm,1.2s
LTY Liberty 53.02 346 IAmb IAmb 02 40 18.6
comp=Z,9.2nm,1.3s
NEW Newport 53.20 349 IAmb IAmb 02 40 06.6
comp=Z,12nm,1.2s
NEW Newport 53.20 349 LR LR 02 59 50.2
comp=Z,867nm,18.7s,baz=176,slow=33
SADO Sadowa 53.30 22 LR LR 03 02 52.5
comp=Z,431nm,18.2s,baz=224,slow=37
B08A Colville Reser 53.74 347 IAmb IAmb 02 40 00.0
comp=Z,14nm,1.4s
NLWA Neilton Lookou 53.99 343 IAmb IAmb 02 39 59.5
comp=Z,13nm,1.2s
ULM Lac du Bonnet 54.38 6 LR LR 03 02 02.1
comp=Z,781nm,19.0s,baz=190,slow=35
RAR Rarotonga 56.80 247 LR LR 02 59 00.5
comp=Z,196nm,19.3s,baz=96,slow=30
USHA Ushuaia 58.35 157 LR LR 02 59 43.9
comp=Z,1µm,20.9s,baz=275,slow=30
BBB Bella Bella 59.51 343 LR LR 03 03 22.5
comp=Z,316nm,19.2s,baz=174,slow=33
DLBC Dease Lake 65.53 345 LR LR 03 07 03.3
comp=Z,448nm,19.1s,baz=130,slow=34
SCHQ Schefferville 66.10 22 LR LR 03 09 32.4
comp=Z,804nm,19.4s,baz=256,slow=36
YKA Yellowknife Ar 66.70 355 P **P 02 41 20.7 -0.9**
comp=Z,4.1nm,0.9s,baz=172,slow=5.9,SNR=6.5
YKA LR LR 03 08 03.1
comp=Z,513nm,20.8s,baz=186,slow=34
comp=Z,4.1nm,0.9s
PMSA Palmer Station 67.12 163 LR LR 03 03 16.5
comp=Z,1µm,19.5s,baz=300,slow=29
K29M Barlow Dome 72.05 345 P 02 41 54.7 -0.3
K29M IAmb IAmb 02 41 59.0
comp=Z,4.1nm,0.8s
FRB Frobisher Bay 72.47 16 LR LR 03 15 07.1
comp=Z,296nm,19.0s,baz=212,slow=37
BCAR Beaver Creek A 72.61 343 P **P 02 41 58.6 +0.4**
L27K Beaver Creek, 72.61 343 IAmb IAmb 02 42 14.1
comp=Z,9.7nm,1.4s
KDAK Kodiak Island 72.75 335 LR LR 03 06 03.2
comp=Z,878nm,20.6s,baz=138,slow=29
DOT Dot Lake 73.72 343 IAmb IAmb 02 42 08.3
comp=Z,5.6nm,0.9s
I28M Miner Creek 73.97 345 P 02 42 06.8 +0.6
I28M IAmb IAmb 02 42 12.1
comp=Z,9.9nm,1.2s
RAO Raoul Island 74.10 241 LR LR 03 06 10.6
comp=Z,85nm,21.9s,baz=116,slow=29

INK Inuvik 74.92 349 LR LR 03 13 27.9
comp=Z,699nm,18.1s,baz=140,slow=34
IL31 75.39 342 IAmb IAmb 02 42 17.5
comp=Z,11nm,1.2s
ILAR Eielson Array 75.39 342 P P 02 42 13.3 -1.0
ILAR Eielson Array 75.39 342 P P 02 42 12.9 -1.4
comp=Z,3.2nm,0.8s,baz=149,slow=5.0,SNR=24
comp=Z,3.2nm,0.8s
F28M Old Crow 75.68 347 IAmb IAmb 02 42 31.8
comp=Z,13nm,1.5s
H24K Noodor Dome 76.44 343 P P 02 42 21.1 +0.7
F26K Sheenjek River 76.78 345 IAmb IAmb 02 42 24.7
comp=Z,10nm,1.3s
F25K Christian Rive 77.09 345 IAmb IAmb 02 42 43.9
comp=Z,11nm,1.2s
D27M Malcolm River 77.22 347 IAmb IAmb 02 42 32.1
comp=Z,5.8nm,1.1s
RES Resolute Bay 78.65 2 LR LR 03 16 39.3
comp=Z,441nm,18.2s,baz=190,slow=35
URZ Urewera 78.89 232 LR LR 03 12 11.5
comp=Z,357nm,18.0s,baz=120,slow=32
SFJD Kangerlussuaq 80.09 19 LR LR 03 18 02.7
comp=Z,397nm,19.2s,baz=237,slow=36
RPZ Rata Peaks 83.69 227 LR LR 03 13 12.7
comp=Z,673nm,18.3s,baz=138,slow=30
SBA Scott Base 86.07 192 P P 02 43 13.1 +1.8
SBA IAmb IAmb 02 43 42.0
comp=Z,7.6nm,1.1s
QSPA South Pole Qui 86.16 180 P P 02 43 13.7 +1.6
QSPA South Pole Qui 86.16 180 P P 02 43 12.6 +0.5
comp=Z,3.4nm,0.7s,baz=166,slow=2.2,SNR=8.1
QSPA LR LR 03 15 06.8
comp=Z,356nm,19.4s,baz=122,slow=31
comp=Z,3.4nm,0.7s
VNDA Vanda 87.13 193 P P 02 43 18.6 +2.0
comp=Z,0.2nm,0.4s,baz=117,slow=3.6,SNR=4.7
VNDA LR LR 03 15 00.1
comp=Z,132nm,18.3s,baz=98,slow=31
comp=Z,0.2nm,0.4s
DZM Mont Dzumac 88.17 248 LR LR 03 14 21.6
comp=Z,87nm,20.6s,baz=272,slow=30
SHEM Shemya Is, Ala 88.18 323 LR LR 03 14 25.2
comp=Z,788nm,21.0s,baz=110,slow=30
BBTS Babate 88.50 75 LR LR 03 17 17.3
comp=Z,104nm,21.0s,baz=78,slow=32
SNAA Sanae 89.83 162 LR LR 03 15 26.1
comp=Z,231nm,21.6s,baz=200,slow=30
BORG Borgarnes 90.35 25 LR LR 03 23 43.7
comp=Z,175nm,18.0s,baz=264,slow=35
H11N3 WAKE ISLAND Hy 90.46 290 T T 04 23 33.9
baz=96,slow=75,SNR=25
H11N2 WAKE ISLAND Hy 90.48 290 T T 04 23 34.7
baz=96,slow=75,SNR=21
H11N1 WAKE ISLAND Hy 90.48 290 T T 04 23 34.7
baz=96,slow=75,SNR=17
H11S2 WAKE ISLAND Hy 90.57 288 T T 04 23 40.1
baz=95,slow=75,SNR=86
H11S1 WAKE ISLAND Hy 90.58 288 T T 04 23 40.6
baz=95,slow=75,SNR=46
H11S3 WAKE ISLAND Hy 90.59 288 T T 04 23 41.5
baz=95,slow=75,SNR=55
HNR Honiara 95.35 260 LR LR 03 16 26.6
comp=Z,128nm,21.8s,baz=336,slow=29
JMIC Jan Mayen 95.44 19 LR LR 03 25 27.8
comp=Z,382nm,21.8s,baz=281,slow=35
PETK Petropavlovsk- 98.10 323 LR LR 03 19 48.5
comp=Z,442nm,21.0s,baz=56,slow=30
DBIC Dimbokro 99.49 84 LR LR 03 28 38.7
comp=Z,176nm,19.4s,baz=294,slow=35
SEY Seymchan 99.65 333 LR LR 03 24 06.2
comp=Z,272nm,18.1s,baz=84,slow=32
SPITS Spitsbergen Ar 99.78 10 LR LR 03 29 42.1
comp=Z,330nm,18.5s,baz=287,slow=36
MDT Middelt 99.97 58 LR LR 03 23 49.4
comp=Z,141nm,19.8s,baz=286,slow=32
ESDC Sonseca Array 100.18 51 LR LR 03 22 09.0
comp=Z,192nm,20.9s,baz=268,slow=31
WRA Warramunga Arr 118.05 245 PKP **PKiKP 02 49 20.8 +1.9**
comp=Z,0.1nm,0.5s,baz=104,slow=2.2,SNR=1.2
BVAR Borovoye Array 130.81 4 PKP **PKPdf 02 49 41.4 -0.9**
comp=Z,1.1nm,0.7s,baz=343,slow=4.5,SNR=2.6
NJ2 Nanjing 131.07 310 *e*P **PKPdf 02 49 43.8 +0.4**
NJ2 pmax pmax
comp=Z,11nm,0.9s
HHC Hu-ho-hao-te 131.28 324 *e*P **PKPdf 02 49 40.9 -2.9**
KURK Kurchatov 133.29 358 PKPdf 02 49 46.9 -0.2
KURBB Kurchatov Arra 133.38 358 PKP **PKPdf 02 49 45.7 -1.6**
comp=Z,0.3nm,0.3s,baz=27,slow=1.8,SNR=1.3
MKAR Makanchi Array 136.92 354 PKPdf 02 49 54.7 +0.6
MKAR Makanchi Array 136.92 354 PKP **PKPdf 02 49 54.4 +0.3**
comp=Z,0.3nm,0.6s,baz=29,slow=2.8,SNR=3.6
KSH Kashi 144.54 0 PKPbc **PKPdf 02 50 08.4 +0.3**
KSH LR LR
comp=N,180nm,18.6s
KSH LR LR
comp=E,160nm,18.1s
KSH LR LR
comp=Z,440nm,21.8s
PZH PanZhiHua 146.66 315 P PKPdf 02 50 12.6 +0.5
CMAR Chiang Mai Arr 153.31 305 PKiKP 02 50 31.1 +0.8
CMAR Chiang Mai Arr 153.31 305 PKPbc **PKiKP 02 50 31.6 +1.3**
comp=Z,1.1nm,0.3s,baz=33,slow=2.0,SNR=5.0

*ISK **07** 02:34:04.1,37.08N×31.08E,h108km±1km,ML2.3/12*
*GII **07** 02:34:05.8±0.0,36.749N±0.005×31.512E±0.002,*
h5km,Mws2.5,confirmed
*NIC **07** 02:34:05.5,37.10N×31.53E,h45km±20km,Ml2.1/7*
*AFAD **07** 02:34:08.2,36.86N×31.24E,h7km±3km,ML1.7*
ISC 07 02:34:06.3±1.3,36.81N±0.03×31.24E±0.02,h9km±11km,
n42,σ2s48/50,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANTB	**Antalya**	**0.48**	**282**	Pg	**Pn**	**02 34 20.4**	**+1.1**
KORT	**Korkueli**	**0.74**	**286**	P	**Pb**	**02 34 23.0**	**+1.6**
KORT				S	**Sn**	**02 34 37.2**	**+2.7**
KORT				*i* IAML		02 34 39.0	
	comp=N,58nm,0.6s						
KORT				*i* IAML		02 34 40.0	
	comp=E,58nm,0.8s						
KORT	**Korkueli**	**0.74**	**286**	Pg	**Pg**	**02 34 22.2**	**+1.7**
BUCA	**Burdur, Bucak-**	**0.75**	**314**	P	**Pg**	**02 34 21.7**	**+1.0**
BUCA				S	**Sn**	**02 34 35.4**	**+0.6**
BUCA				*i* IAML		02 34 36.0	
	comp=N,29nm,0.6s						
BUCA				*i* IAML		02 34 38.0	
	comp=E,42nm,0.3s						
SEDI	**Konya, Seydise**	**0.77**	**33**	P	**Pg**	**02 34 22.3**	**+1.3**
SEDI				S	**Sn**	**02 34 35.8**	**+0.6**
SEDI				*i* IAML		02 34 36.0	
	comp=N,28nm,0.3s						
SEDI				*i* IAML		02 34 36.0	
	comp=E,43nm,0.4s						
SEYD	**Seydisehir-KON**	**0.77**	**39**	Pg	**Pb**	**02 34 22.8**	**+0.9**
BCK	**Bucak**	**0.83**	**322**	Pg	**Pg**	**02 34 21.4**	**-0.9**
AKUM	**Antalya-Kumluc**	**0.86**	**236**	P	**Pg**	**02 34 25.5**	**+2.6**
AKUM				S	**Sn**	**02 34 42.7**	**+5.3**
AKUM				*i* IAML		02 34 52.0	
	comp=E,20nm,0.7s						
AKUM				*i* IAML		02 34 53.0	
	comp=N,14nm,0.6s						
HDMB	**Hadim**	**1.02**	**81**	Pn	**Pg**	**02 34 27.2**	**+1.4**
HDMB				Sn	**Sn**	**02 34 44.2**	**+2.7**
GAZI	**Gazipasa**	**1.04**	**123**	P	**Pg**	**02 34 28.9**	**+2.6**
GAZI				S	**Sn**	**02 34 47.6**	**+5.8**
GAZI				*i* IAML		02 34 48.0	
	comp=E,71nm,0.4s						
GAZI				*i* IAML		02 34 50.0	
	comp=N,34nm,0.4s						
GAZI	**Gazipasa**	**1.04**	**123**	Pn	**Pg**	**02 34 28.8**	**+2.6**
GAZI				Sn	**Sn**	**02 34 47.4**	**+5.6**
ELL	**Elmali**	**1.07**	**267**	Pg	**Pg**	**02 34 26.1**	**-0.7**
ELL	**Elmali**	**1.07**	**267**	P	**Pg**	**02 34 27.2**	**+0.5**
ELL				S	**Sn**	**02 34 45.5**	**+2.9**
ELL				AML	AML	02 34 46.3	
	0.5nm,0.5s						
ELL				AML	AML	02 34 47.8	
	0.5nm,0.9s						
ISP	**Isparta**	**1.16**	**331**	Pg	Pg	02 34 24.3	-4.3
ISP				Sg	**Sg**	**02 34 39.1**	**-4.7**
ERMK	**Ermenek**	**1.36**	**96**	P	**Pn**	**02 34 32.0**	**+0.4**
ERMK				S	**Sn**	**02 34 52.9**	**+3.0**
KKBE	**Karaman, Kazim**	**1.43**	**73**	P	**Pn**	**02 34 31.0**	**-1.5**
KKBE				S	**Sb**	**02 34 51.7**	**+0.2**
AKAS	**Kas**	**1.43**	**247**	Pn	**Pn**	**02 34 30.8**	**-1.8**

AKAS				Sn	**Sn**	**02 34 50.8**	**-0.8**
KONT	**Konya--Tatoy**	**1.45**	**38**	P	Pn	02 34 29.2	-3.5
BASM	**Basmaki-Afyon**	**1.46**	**320**	Pn	Pn	02 34 27.5	-5.4
CAME	**Cameli-Denizli**	**1.56**	**276**	Pn	Pn	02 34 30.9	-3.4
KRMN	**Karaman**	**1.67**	**77**	Pn	**Pn**	**02 34 34.6**	**-1.2**
APMY	**Acipayam-Deniz**	**1.68**	**294**	Pn	Pn	02 34 31.5	-4.5
GULN	**MERSIN_Gulnar**	**1.96**	**108**	P	**Pn**	**02 34 39.5**	**-0.3**
GULN				S	**Sn**	**02 35 06.2**	**+1.7**
ALFC	**Alefka**	**1.98**	**146**	P	**Pn**	**02 34 39.7**	**-0.4**
ALFC				S	**Sn**	**02 35 04.8**	**-0.3**
ALFC				AML	AML	02 35 10.2	
ALFC				AML	AML	02 35 10.2	
AKMS	**Akamas**	**1.99**	**153**	P	**Pn**	**02 34 39.9**	**-0.3**
AKMS				S	**Sn**	**02 35 06.1**	**+0.8**
AKMS				AML	AML	02 35 08.6	
	0.1nm,0.4s						
AKMS				AML	AML	02 35 10.2	
TROD	**Troodos**	**2.28**	**144**	P	**Pn**	**02 34 42.7**	**-1.6**
TROD				S	**Sn**	**02 35 11.6**	**-1.1**
TROD				AML	AML	02 35 12.9	
TROD				AML	AML	02 35 19.5	
XYLS	**Xyliatos**	**2.32**	**140**	P	**Pn**	**02 34 42.7**	**-2.0**
XYLS				S	**Sn**	**02 35 12.9**	**-0.4**
XYLS				AML	AML	02 35 13.9	
XYLS				AML	AML	02 35 17.1	
KIZK	**Mersin**	**2.36**	**97**	P	**Pn**	**02 34 44.7**	**-0.6**
KIZK				S	**Sn**	**02 35 16.3**	**+1.9**
CSS	**Mathiatis**	**2.50**	**137**	P	Pn	02 34 45.1	-2.1
CSS				S	**Sn**	**02 35 16.7**	**-1.3**
CSS				AML	AML	02 35 17.4	
CSS				AML	AML	02 35 18.1	
ASGA	**Asgata**	**2.59**	**140**	P	**Pn**	**02 34 47.4**	**-1.1**
MVOU	**Mavrovouni**	**2.64**	**132**	P	Pn	02 34 46.6	-2.5
MVOU				S	**Sn**	**02 35 18.8**	**-2.4**
MVOU				AML	AML	02 35 20.3	
MVOU				AML	AML	02 35 22.3	
MMC7	**Mount Meron ar**	**5.09**	**137**	P	Pn	02 35 20.4	-2.5
GEM	**Giv'at Ha'Em**	**5.11**	**133**	P	Pn	02 35 20.4	-2.6
GEM	**Giv'at Ha'Em**	**5.11**	**133**	S	**Sn**	**02 36 17.9**	**-4.2**
NATI	**Neve Ativ**	**5.11**	**132**	P	Pn	02 35 20.9	-2.2
OFRI	**`Ofer**	**5.19**	**142**	P	Pn	02 35 20.9	-3.4
MMLI	**Mount Malkishu**	**5.56**	**140**	P	Pn	02 35 26.9	-2.4
MMLI	**Mount Malkishu**	**5.56**	**140**	S	**Sn**	**02 36 29.2**	**-4.1**
HMDT	**Nahal Hemdat**	**5.76**	**141**	P	**Pn**	**02 35 29.9**	**-2.1**
HMDT	**Nahal Hemdat**	**5.76**	**141**	S	**Sn**	**02 36 34.2**	**-4.0**
MSBI	**Mazada**	**6.46**	**147**	P	**Pn**	**02 35 40.1**	**-1.4**
MSBI	**Mazada**	**6.46**	**147**	S	**Sn**	**02 36 51.9**	**-3.4**

NEIC ***07*** *02:35:26.9±1.0, 41.°62N±0.°06×142.°1E±0.°1, h111km±6km, mb4.7/11, Error ellipse: s-maj=14.6km s-min=7.2km az=109.0*

MOS ***07*** *02:35:26.4±1.1, 41.°69N×142.°03E, h121km, mb4.4/20, Error ellipse: s-maj=7.8km s-min=5.9km az=103.8*

NIED ***07*** *02:35:27.5, 41.°65N×141.°94E, h110km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.90; Mθθ=0.20; Mϕϕ 1.10; Mrθ 0.74; Mθϕ 0.28; Mϕr 0.61; Fault plane solution: M₀ 1.42000×10¹⁵ NP1: ϕs 346.00000°, δ 32.00000°, λ -136.00000°. NP2: ϕs 217.00000°, δ 68.00000°, λ -65.00000°.*

IDC ***07*** *02:35:27.1±1.6, 41.°59N×141.°92E, h109km±14km, mb3.8/20, mbtmp4.2/26 Error ellipse: s-maj=15.2km s-min=11.6km az=80.0*

JMA ***07*** *02:35:27.5±0.1, 41.°7N±0.°4×141.°9E±0.°5, h110km±1km, MD4.1/33, MV4.1/33, E OFF AOMORI PREF*

JMA Felt II J1 at E OFF AOMORI PREF .

ISC 07 02:35:27.0±0.6,**41.°61**N±0.°04×**141.°99E**±0.°04,**h115**km±4km, **n149,**σ1§**42**/150,**mb4.4**/41,**13C-26D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.60**	**235**	⇓	*iP*	**Pn**	**02 35 45.4**	**+0.3**
JAHD				⇓	S	**Sn**	**02 35 58.8**	**+0.1**
JAHD	**Aomorihigashid**	**0.60**	**235**	A		A	02 35 45.4	
	comp=N,30nm,0.3s,comp=E,28nm,0.5s							
JOT	**Ohata**	**0.74**	**252**	⇓	*iP*	**Pn**	**02 35 46.2**	**0.0**
JOT				⇓	S	**Sn**	**02 36 00.1**	**-0.5**
JOT	**Ohata**	**0.74**	**252**	A		A	02 35 46.2	
	comp=N,7.0nm,0.3s,comp=E,7.0nm,0.2s							
JARK	**Aomorirokkasho**	**0.76**	**218**	⇓	*iP*	**Pn**	**02 35 46.6**	**+0.2**
JARK				⇓	S	**Sn**	**02 36 00.8**	**-0.2**
JKB	**Kayabe**	**0.77**	**291**	⇓	*iP*	**Pn**	**02 35 45.9**	**-0.5**
JKB				⇓	S	**Sn**	**02 35 59.9**	**-1.1**
JKB	**Kayabe**	**0.77**	**291**	A		A	02 35 45.9	
	comp=N,4.0nm,2.4s,comp=E,5.0nm,1.7s							
JSHD	**Hidakashinhida**	**0.88**	**24**	A		A	02 35 47.5	
	comp=N,13nm,0.6s,comp=E,26nm,0.6s							
JNBK	**Urakawa-nobuka**	**0.88**	**40**	⇓	P	**Pn**	**02 35 47.6**	**+0.2**
JNBK				⇓	S	**Sn**	**02 36 03.4**	**+0.5**
JNBK	**Urakawa-nobuka**	**0.88**	**40**	A		A	02 35 47.6	
	comp=N,23nm,0.4s,comp=E,34nm,0.4s							
JEM	**Erimo**	**0.96**	**65**	*i*	P	**Pn**	**02 35 48.6**	**+0.4**
JEM					S	**Sn**	**02 36 03.7**	**-0.6**
JEM	**Erimo**	**0.96**	**65**	A		A	02 35 48.6	
	comp=N,7.0nm,3.5s,comp=E,6.0nm,3.2s							
JIAM	**Iburiatsuma**	**1.01**	**357**	*i*	P	**Pn**	**02 35 49.2**	**+0.5**
JIAM	**Iburiatsuma**	**1.01**	**357**	A		A	02 35 49.2	
	comp=N,14nm,0.3s,comp=E,16nm,0.3s							
JTM	**Tenmabayashi**	**1.08**	**220**	Pn		**Pn**	**02 35 49.6**	**+0.2**
JTM				Sn		**Sn**	**02 36 06.3**	**-0.1**
JTM	**Tenmabayashi**	**1.08**	**220**	*i*	P	**Pn**	**02 35 49.7**	**+0.2**
JTM					S	**Sn**	**02 36 06.1**	**-0.2**
JNB	**Noboribetsu**	**1.11**	**321**	⇓	*iP*	**Pn**	**02 35 49.4**	**-0.4**
JNB				⇓	S	**Sn**	**02 36 05.8**	**-1.1**
JNB	**Noboribetsu**	**1.11**	**321**	A		A	02 35 49.4	
	comp=N,7.0nm,0.2s,comp=E,14nm,1.5s							
JSR	**Shiriuchi**	**1.18**	**267**	⇓	*iP*	**Pn**	**02 35 50.5**	**+0.1**
JSR				⇓	S	**Sn**	**02 36 07.1**	**-1.2**
JSR	**Shiriuchi**	**1.18**	**267**	A		A	02 35 50.5	
	comp=N,2.0nm,0.3s,comp=E,3.0nm,0.8s							
JTHR	**Tokachihiroo**	**1.19**	**55**	A		A	02 35 51.1	
	comp=N,7.0nm,0.6s,comp=E,10.0nm,0.6s							
JBT2	**Biratori 2**	**1.20**	**13**	⇓	*iP*	**Pn**	**02 35 50.9**	**+0.2**
JBT2				⇓	S	**Sn**	**02 36 09.0**	**+0.3**
JBT2	**Biratori 2**	**1.20**	**13**	A		A	02 35 50.9	
	comp=N,7.0nm,0.8s,comp=E,9.0nm,0.4s							
JANG	**Nango**	**1.29**	**196**	*i*	P	**Pn**	**02 35 51.4**	**-0.3**
JANG					eS	**Sn**	**02 36 09.9**	**-0.5**
JEW	**Eniwo**	**1.29**	**342**	*i*	P	**Pn**	**02 35 51.5**	**-0.2**
JEW					eS	**Sn**	**02 36 09.8**	**-0.7**
JEW	**Eniwo**	**1.29**	**342**	A		A	02 35 51.5	
	comp=N,5.0nm,4.6s,comp=E,5.0nm,0.8s							
JSI2	**Shiura 2**	**1.31**	**246**	A		A	02 35 52.1	
	comp=N,5.0nm,3.6s,comp=E,5.0nm,1.5s							
JKEN	**Kujiedanarisaw**	**1.42**	**189**	A		A	02 35 54.0	
	comp=N,14nm,0.3s,comp=E,17nm,0.3s							
JCH	**Churui**	**1.43**	**45**	*i*	P	**Pn**	**02 35 53.4**	**+0.1**
JCH					S	**Sn**	**02 36 12.2**	**-1.1**
JCH	**Churui**	**1.43**	**45**	A		A	02 35 53.4	
	comp=N,4.0nm,0.9s,comp=E,5.0nm,0.4s							
JOMM	**Oshimamatsumae**	**1.49**	**267**	*i*	P	**Pn**	**02 35 54.4**	**+0.5**
JOMM					S	**Sn**	**02 36 14.2**	**-0.2**
JISS	**Ishikarishitsu**	**1.72**	**346**	A		A	02 35 56.7	
	comp=N,6.0nm,3.5s,comp=E,7.0nm,0.7s							
JOB	**Onbets**	**1.88**	**46**	A		A	02 35 59.4	
	comp=N,8.0nm,1.2s,comp=E,6.0nm,0.4s							
JAB	**Ashibetsu**	**1.90**	**5**	A		A	02 35 59.2	
	comp=N,15nm,0.8s,comp=E,5.0nm,0.4s							
JOSM	**Okushiri--Mats**	**1.93**	**285**	*i*	P	**Pn**	**02 35 59.2**	**-0.2**
JOSM					S	**Sn**	**02 36 23.4**	**-0.7**
JAR	**Ashorobuto**	**2.14**	**37**	A		A	02 36 02.6	
	comp=N,6.0nm,1.0s,comp=E,9.0nm,0.4s							
JHR	**Hokuryu**	**2.14**	**355**	A		A	02 36 02.2	
	comp=N,4.0nm,1.1s,comp=E,5.0nm,0.5s							
JAK	**Akkeshi**	**2.44**	**55**	A		A	02 36 06.8	
	comp=N,5.0nm,1.0s,comp=E,5.0nm,0.3s							
ASAJ	**Asahikawa**	**2.54**	**10**	P		**Pn**	**02 36 07.3**	**+0.2**
	comp=E,125nm,0.4s,baz=226,slow=10,SNR=72							
ASAJ				S		**Sn**	**02 36 36.2**	**-1.8**
	comp=E,126nm,0.4s,baz=284,slow=31,SNR=9.6							
JKA	**Kamikawa-asahi**	**2.54**	**10**			**Pn**	**02 36 07.0**	**-0.2**
JKA						**Sn**	**02 36 36.6**	**-1.4**
NMR	**Nemuro--Hokkai**	**3.28**	**56**	⇑	*iP*	**Pn**	**02 36 15.0**	**-1.8**
NMR					*i* S	**Sn**	**02 36 50.3**	**-4.9**
GLVR	**Golovnino**	**3.36**	**50**	⇑	*iP*	**Pn**	**02 36 17.2**	**-0.7**
GLVR					*i* S	**Sn**	**02 36 55.0**	**-2.2**
GLVR					pmax	pmax		
	comp=Z,632nm,0.1s							
GLVR					smax	smax		
	comp=N,1μm,0.2s							
GLVR					smax	smax		
	comp=E,3μm,0.5s							
RUSJ	**Misakicho**	**3.46**	**43**	⇓	*iP*	**Pn**	**02 36 19.2**	**0.0**
RUSJ					*i* S	**Sn**	**02 37 00.8**	**+1.3**
YUK	**Yuzh-Kuril'sk**	**3.74**	**48**	*d*	*iP*	**Pn**	**02 36 22.5**	**-0.4**
YUK					*i* S	**Sn**	**02 37 03.5**	**-2.7**
YUK					pmax	pmax		
	comp=Z,568nm,0.3s							
YUK					pmax	pmax		
	comp=N,106nm,0.1s							
YUK					pmax	pmax		
	comp=E,98nm,0.1s							
YUK					smax	smax		
	comp=E,3μm,0.4s							
YUK					smax	smax		
	comp=N,1μm,0.2s							
JMM	**Marumori**	**3.85**	**194**			**Pn**	**02 36 24.0**	**-0.5**
TEY	**Ternei**	**5.21**	**313**	⇑	*eP*	**Pn**	**02 36 42.7**	**+0.1**
TEY					pmax	pmax		
	comp=Z,30nm,0.9s							
TEY					pmax	pmax		
	comp=E,30nm,1.0s							
TEY					pmax	pmax		
	comp=N,20nm,0.9s							
YSS	**Yuzhno-Sakhali**	**5.37**	**6**			**Pn**	**02 36 44.5**	**-0.3**
YSS	**Yuzhno-Sakhali**	**5.37**	**6**	*eP*		**Pn**	**02 36 44.2**	**-0.6**
YSS					*eS*	**Sn**	**02 37 42.3**	**-3.1**
YSS					pmax	pmax		
	comp=Z,60nm,0.8s							
YSS					smax	smax		
	comp=N,30nm,0.5s							
YSS					smax	smax		
	comp=E,20nm,0.4s							
KUR	**Kuril'sk**	**5.61**	**48**	*eP*		**Pn**	**02 36 49.2**	**+1.2**
KUR					*i* S	**Sn**	**02 37 50.2**	**-0.9**
KUR					pmax	pmax		
	comp=Z,71nm,0.5s							
KUR					smax	smax		
	comp=N,141nm,0.4s							
KUR					smax	smax		
	comp=E,183nm,0.4s							
MJA0	**Matsu Arr-Jizo**	**5.84**	**211**	*eP*		**Pn**	**02 36 54.7**	**+3.4**
MJA0					pmax	pmax		
	comp=Z,9.0nm,0.4s							
MAJO	**Matsushiro**	**5.85**	**211**			**Pn**	**02 36 51.4**	**-0.1**
MAJO	**Matsushiro**	**5.85**	**211**	⇓	*eP*	**Pn**	**02 36 54.1**	**+2.7**
MJAR	**Matsushiro Arr**	**5.85**	**211**	P		**Pn**	**02 36 51.5**	**+0.1**
	comp=Z,9.7nm,0.4s,baz=32,slow=12,SNR=14							
JGF	**Kuroka**	**7.01**	**213**			**Pn**	**02 37 08.0**	**+0.9**
INU	**Inuyama**	**7.37**	**214**			**Pn**	**02 37 12.8**	**+0.9**
VLA	**Vladivostok**	**7.63**	**285**	*c*	*iP*	**Pn**	**02 37 17.6**	**+2.2**
USRK	**Ussuriysk Ar.**	**7.78**	**293**	P		**Pn**	**02 37 18.8**	**+1.3**
	comp=Z,22nm,0.6s,baz=93,slow=15,SNR=21							
JHJ	**Hachijo jima 2**	**8.66**	**192**	P		**Pn**	**02 37 27.6**	**-1.8**
	comp=Z,42nm,0.3s,baz=339,slow=17,SNR=23							
JHJ				S		**Sn**	**02 38 58.2**	**-7.0**
	comp=Z,73nm,0.3s,baz=347,slow=23,SNR=6.9							
KSRS	**Korea Array**	**11.62**	**254**	P		**Pn**	**02 38 08.8**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=69,slow=12,SNR=2.8							
CN2	**Changchun**	**12.36**	**286**	*eP*		**Pn**	**02 38 21.1**	**+2.1**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
JCJ	**Chichijima**	**14.48**	**179**	Pn		**Pn**	**02 38 44.9**	**-1.6**
JCJ	**Chichijima**	**14.48**	**179**	P		Pn	02 38 35.8	-11
	comp=Z,52nm,0.5s,baz=268,slow=23,SNR=4.9							
JCJ				S		Sn	02 41 04.5	-22
	comp=Z,43nm,0.6s,baz=246,slow=20,SNR=1.4							
ZEA	**Zeya**	**15.63**	**326**	*eP*		**Pn**	**02 38 59.1**	**-1.6**
ZEA					pmax	pmax		
	comp=Z,10.0nm,0.7s							
HILR	**Hailar Array B**	**17.43**	**305**	P		**P**	**02 39 21.4**	**-1.0**
	comp=Z,4.2nm,0.4s,baz=108,slow=12,SNR=8.1							
BJT	**Baijiatuan**	**19.59**	**274**	P		**P**	**02 39 45.4**	**-0.6**
BJT					pmax	pmax		
	comp=Z,11nm,0.7s							
YAK	**Yakutsk**	**21.74**	**344**	*eP*		**P**	**02 40 06.1**	**-2.7**
YAK					pmax	pmax		
	comp=Z,12nm,0.7s							
YAK					pmax	pmax		
	comp=N,4.0nm,0.9s							
YAK					pmax	pmax		
	comp=E,5.0nm,1.0s							
ULN	**Ulaanbaatar**	**25.44**	**296**	*ce*	P	**P**	**02 40 44.4**	**+0.3**
ULN					pmax	pmax		
	comp=Z,19nm,3.6s							
SONM	**Songino Array**	**25.88**	**296**	P		**P**	**02 40 48.2**	**+0.2**
SONM	**Songino Array**	**25.88**	**296**	P		**P**	**02 40 48.7**	**+0.6**
	comp=Z,2.7nm,0.5s,baz=84,slow=8.8,SNR=11							
	comp=Z,2.7nm,0.5s							
TLY	**Talaya**	**27.89**	**304**	⇓	*eP*	**P**	**02 41 07.3**	**+1.5**
TLY					pmax	pmax		
	comp=Z,4.0nm,0.8s							
BILL	**Bilibino**	**29.53**	**18**	⇑	*eP*	**P**	**02 41 18.8**	**-1.4**
BILL					pmax	pmax		
	comp=Z,24nm,2.6s							
H11N2	**WAKE ISLAND Hy**	**30.38**	**128**		T	T	03 12 52.9	
	baz=323,slow=75							
H11N1	**WAKE ISLAND Hy**	**30.39**	**128**		T	T	03 13 06.7	
	baz=323,slow=75							
H11N3	**WAKE ISLAND Hy**	**30.40**	**128**		T	T	03 13 02.5	
	baz=323,slow=75							
TIXI	**Tiksi**	**30.81**	**352**	⇓	*eP*	**P**	**02 41 32.5**	**+1.1**
TIXI					pmax	pmax		
	comp=Z,1.0nm,1.0s							
H11S1	**WAKE ISLAND Hy**	**31.22**	**130**		T	T	03 14 05.1	
	baz=325,slow=76							
H11S3	**WAKE ISLAND Hy**	**31.23**	**130**		T	T	03 13 59.0	
	baz=325,slow=76							
H11S2	**WAKE ISLAND Hy**	**31.24**	**130**		T	T	03 14 04.7	
	baz=325,slow=76							
KNGR	**Kungurtug, Tuv**	**31.70**	**302**	⇓	*eP*	**P**	**02 41 40.9**	**+1.3**
DGZ	**Jazzator, Alta**	**38.23**	**301**	⇑	*eP*	**P**	**02 42 37.0**	**+1.3**
DGZ					pmax	pmax		
	comp=Z,7.0nm,0.7s							
ZAA0	**Zalesovo Array**	**39.29**	**308**	P		**P**	**02 42 44.5**	**+0.2**
ZAA0					IAmb	IAmb	02 42 45.3	
	comp=Z,5.8nm,0.8s							
ZALV	**Zalesovo Beam**	**39.29**	**308**			**P**	**02 42 44.3**	**0.0**
ZALV	**Zalesovo Beam**	**39.29**	**308**	P		**P**	**02 42 44.8**	**+0.5**
	comp=Z,4.6nm,0.4s,baz=92,slow=7.8,SNR=18							
	comp=Z,4.6nm,0.4s							
NRIK	**Noril'sk**	**39.35**	**333**	P		**P**	**02 42 44.3**	**-0.2**
NRIK	**Noril'sk**	**39.35**	**333**	P		**P**	**02 42 44.9**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=105,slow=16,SNR=2.5							
	comp=Z,1.5nm,0.4s							
NRIK	**Noril'sk**	**39.35**	**333**	⇓	*eP*	**P**	**02 42 45.0**	**+0.4**
NRIK					pmax	pmax		
	comp=Z,9.0nm,1.8s							
MK31	**Makanchi Array**	**42.21**	**298**	*ce*	P	**P**	**02 43 08.6**	**+0.2**
MKAR	**Makanchi Array**	**42.21**	**298**			**P**	**02 43 08.6**	**+0.2**
MKAR	**Makanchi Array**	**42.21**	**298**	P		**P**	**02 43 08.7**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=84,slow=9.6,SNR=22							
	comp=Z,2.7nm,0.6s							
MAKZ	**Makanchi**	**42.41**	**298**	P		**P**	**02 43 10.3**	**+0.2**
MAKZ					IAmb	IAmb	02 43 15.9	
	comp=Z,5.9nm,0.8s							
MAKZ	**Makanchi**	**42.41**	**298**	P		**P**	**02 43 10.3**	**+0.2**
MAKZ					pmax	pmax		
	comp=Z,6.0nm,0.9s							
KURK	**Kurchatov**	**43.58**	**304**			**P**	**02 43 19.4**	**0.0**
KURK					IAmb	IAmb	02 43 20.1	
	comp=Z,12nm,0.7s							
KURK	**Kurchatov**	**43.58**	**304**	*c*	*iP*	**P**	**02 43 19.4**	**0.0**
KURK					pmax	pmax		
	comp=Z,11nm,0.6s							
KURBB	**Kurchatov Arra**	**43.66**	**304**	P		**P**	**02 43 20.2**	**+0.3**
	comp=Z,11nm,0.4s,baz=78,slow=8.8,SNR=64							
	comp=Z,11nm,0.4s							
ILAR	**Eielson Array**	**45.44**	**35**	P		**P**	**02 43 34.4**	**+0.5**
ILAR	**Eielson Array**	**45.44**	**35**	P		**P**	**02 43 35.1**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=272,slow=5.5,SNR=4.2							
	comp=Z,0.4nm,0.8s							
TARG	**Taragay, Kyrgy**	**46.91**	**293**	P		**P**	**02 43 47.9**	**+1.6**
TARG					pmax	pmax		
	comp=Z,9.0nm,1.1s							
BOOM	**Boomskoye usch**	**47.90**	**294**	P		**P**	**02 43 54.6**	**+0.9**
BVAR	**Borovoye Array**	**47.91**	**309**	P		**P**	**02 43 53.9**	**+0.5**
	comp=Z,3.4nm,0.3s,baz=75,slow=8.9,SNR=22							
	comp=Z,3.4nm,0.3s							
BORK	**Borovoye**	**47.95**	**309**	⇑	*eP*	**P**	**02 43 54.0**	**+0.4**
BORK					pmax	pmax		
	comp=Z,5.0nm,0.6s							
KSH	**Kashi**	**49.07**	**291**	P		**P**	**02 44 07.2**	**+4.6**
KSH					pmax	pmax		
	comp=Z,3.0nm,0.5s							
ARSB	**Arslanbob**	**50.39**	**294**			**P**	**02 44 12.6**	**0.0**
ARSB	**Arslanbob**	**50.39**	**294**	P		**P**	**02 44 12.6**	**0.0**
ARSB					pmax	pmax		
	comp=Z,11nm,0.6s							
ARK	**Arkit**	**50.89**	**295**	P		**P**	**02 44 17.0**	**+0.7**
ARK					pmax	pmax		
	comp=Z,6.0nm,1.3s							
KK31	**Karatay Array**	**51.32**	**297**			**P**	**02 44 19.1**	**-0.2**
KK31					IAmb	IAmb	02 44 19.8	
	comp=Z,3.8nm,0.6s							
KK31	**Karatay Array**	**51.32**	**297**	P		**P**	**02 44 19.2**	**-0.2**
KK31					pmax	pmax		
	comp=Z,4.0nm,0.6s							
KKAR	**Karatay Array**	**51.32**	**297**			**P**	**02 44 19.6**	**+0.2**
KKAR	**Karatay Array**	**51.32**	**297**	P		**P**	**02 44 19.6**	**+0.2**
TRKS	**Terek-Say**	**51.56**	**295**	P		**P**	**02 44 21.7**	**+0.4**
TRKS					pmax	pmax		
	comp=Z,7.0nm,1.1s							
ARTI	**Arti**	**53.40**	**316**			**P**	**02 44 34.7**	**+0.2**
ARTI					IAmb	IAmb	02 44 35.4	
	comp=Z,7.7nm,0.8s							
ARTI	**Arti**	**53.40**	**316**	*c*	*iP*	**P**	**02 44 34.5**	**+0.1**
ARTI					*PP	**pP**	**02 45 00.7**	**-0.9**
ARTI							02 45 38.8	
ARTI					S	**S**	**02 51 59.3**	**+1.9**
ARTI					SS	**SS**	**02 55 31.0**	**-7.3**
ARTI					pmax	pmax		
	comp=Z,4.0nm,0.7s							
CHGR	**Chuyangaron**	**54.20**	**293**			**P**	**02 44 40.8**	**+0.1**
CHGR	**Chuyangaron**	**54.20**	**293**	P		**P**	**02 44 40.8**	**+0.1**
CHGR					pmax	pmax		
	comp=Z,13nm,0.7s							
AB31	**Akbulak array**	**55.40**	**308**			**P**	**02 44 49.4**	**+0.3**
AB31					IAmb	IAmb	02 44 50.2	
	comp=Z,5.9nm,0.5s							
ABKAR	**Akbulak array**	**55.40**	**308**			**P**	**02 44 49.6**	**+0.6**
KIRV	**Kirov**	**56.91**	**321**	*de*	P	**P**	**02 45 00.0**	**+0.4**
ARCES	**ARCESS Array B**	**59.89**	**339**	P		**P**	**02 45 21.1**	**+1.0**
ARCES					IAmb	IAmb	02 45 24.8	
	comp=Z,11nm,1.3s							
ARCES	**ARCESS Array B**	**59.89**	**339**	P		**P**	**02 45 20.9**	**+0.8**
	comp=Z,3.9nm,1.1s,baz=39,slow=7.8,SNR=4.3							
	comp=Z,3.9nm,1.1s							
BELG	**Belogornoye**	**60.80**	**316**	⇑	*eP*	**P**	**02 45 26.8**	**+0.2**
BELG					pmax	pmax		
	comp=Z,1.0nm,1.0s							
WRA	**Warramunga Arr**	**61.65**	**188**	P		**P**	**02 45 32.5**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=6.7,slow=6.9,SNR=18							
	comp=Z,3.2nm,0.8s							
FINES	**FINESS Array B**	**64.99**	**332**	P		**P**	**02 45 54.2**	**+0.1**
FINES	**FINESS Array B**	**64.99**	**332**	P		**P**	**02 45 54.4**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=34,slow=9.1,SNR=18							
	comp=Z,3.1nm,0.6s							
ASAR	**Alice Springs**	**65.38**	**188**	P		**P**	**02 45 57.4**	**+0.3**
ASAR	**Alice Springs**	**65.38**	**188**	P		**P**	**02 45 57.6**	**+0.5**
	comp=Z,8.8nm,0.5s,baz=4.2,slow=7.2,SNR=15							
	comp=Z,0.8nm,0.5s							
KIV	**Kislovodsk**	**68.28**	**310**	*eP*		**P**	**02 46 16.8**	**+1.3**
KIV					pmax	pmax		
	comp=Z,7.0nm,1.0s							
KBZ	**Khabaz**	**68.30**	**310**	P		**P**	**02 46 16.6**	**+1.1**
	comp=Z,2.9nm,0.9s,baz=34,slow=4.0,SNR=6.3							
	comp=Z,2.9nm,0.9s							
KBZ	**Khabaz**	**68.30**	**310**	⇓	*iP*	**P**	**02 46 16.6**	**+1.1**
KBZ					pmax	pmax		
	comp=Z,4.0nm,0.9s							
SHA1	**Shidzhatmaz**	**68.43**	**310**	⇓	*eP*	**P**	**02 46 19.1**	**+2.5**
MNK	**Minsk**	**68.97**	**325**	*i*	P	**P**	**02 46 17.7**	**-1.8**
MNK				*i*	*PP	**pP**	**02 46 49.5**	**+1.7**
MNK				*i*			02 48 51.7	
MNK				*i*	PPP	PPP	02 50 33.5	
MNK				*i*	S	**S**	**02 55 13.0**	**-1.7**
MNK				*i*	*SS	**SKSac**	**02 56 08.5**	**+0.4**
MNK				*i*	SS	**SS**	**02 59 42.5**	**+1.1**
MNK					pmax	pmax		
	comp=Z,6.0nm,0.7s							
MNK					pmax	pmax		
	comp=E,15nm,0.9s							
MNK					pmax	pmax		
	comp=N,3.0nm,0.6s							
MNK					MLR	MLR		
	comp=Z,17nm,12.0s							
MNK					MLR	MLR		
	comp=E,127nm,23.0s							
MNK					MLR	MLR		
	comp=N,104nm,18.0s			

CHUJ	**Union Juarez**	**1.56**	**65**	*eP*		**Pn**	**03 05 02.2**	**-0.7**
CHUJ				*eS*		**Sg**	**03 05 22.6**	**-1.5**
RTAL	**Retalhuleu**	**1.82**	**87**			**Pn**	**03 05 06.5**	**+0.3**
RTAL	**Retalhuleu**	**1.82**	**87**	*eP*		**Pn**	**03 05 04.8**	**-1.4**
RTAL				*eS*		**Sn**	**03 05 26.6**	**-3.4**
RTAL	**Retalhuleu**	**1.82**	**87**	P		**Pn**	**03 05 04.8**	**-1.4**
RTAL	**Retalhuleu**	**1.82**	**87**	S		**Sn**	**03 05 28.0**	**-2.0**
QUEO	**Labor Ovalle**	**2.04**	**77**	IAML			03 05 46.3	
	comp=N,2µm,0.8s							
SOKI	**Kika Raxquin**	**2.14**	**79**	*eP*		**Pn**	**03 05 11.1**	**+0.2**
HUEH	**Huehuetenango**	**2.19**	**66**			**Pn**	**03 05 12.4**	**+0.9**
HUEH						**Sn**	**03 05 38.3**	**-1.0**
HUEH	**Huehuetenango**	**2.19**	**66**	*eP*		**Pn**	**03 05 12.4**	**+0.9**
HUEH				*eS*		**Sn**	**03 05 38.3**	**-1.0**
HUEH	**Huehuetenango**	**2.19**	**66**	*eP*		**Pb**	**03 05 13.1**	**-1.2**
HUEH				IAML			03 05 51.8	
	comp=N,2µm,0.6s							
HUEH	**Huehuetenango**	**2.19**	**66**	P		**Pb**	**03 05 13.0**	**-1.2**
CCIG	**Comitan**	**2.31**	**37**			**Pb**	**03 05 14.9**	**-1.3**
CCIG						**Sb**	**03 05 44.7**	**-0.6**
CCIG	**Comitan**	**2.31**	**37**	*eP*		**Pb**	**03 05 14.9**	**-1.3**
CCIG				*eS*		**Sb**	**03 05 44.7**	**-0.6**
CCIG	**Comitan**	**2.31**	**37**	*eP*		**Pb**	**03 05 15.1**	**-1.1**
CCIG	**Comitan**	**2.31**	**37**	P		**Pb**	**03 05 15.1**	**-1.1**
CCIG	**Comitan**	**2.31**	**37**	S		**Sg**	**03 05 46.1**	**-1.8**
TGIG		**2.37**	**11**			**Pn**	**03 05 15.3**	**+1.5**
TGIG						**Sn**	**03 05 45.0**	**+1.4**
TGIG		**2.37**	**11**	*eP*		**Pn**	**03 05 15.3**	**+1.5**
TGIG				*eS*		**Sn**	**03 05 45.0**	**+1.4**
TGIG		**2.37**	**11**	*eP*		**Pn**	**03 05 15.4**	**+1.5**
QUIS	**Sacapulas**	**2.55**	**70**	*eP*		**Pb**	**03 05 18.4**	**-1.9**
QUIS				IAML			03 06 03.5	
	comp=E,1µm,0.5s							
HUIG	**Huatulco**	**2.78**	**299**			**Pn**	03 05 16.9	-2.5
HUIG						Sn	03 05 45.1	-8.5
HUIG	**Huatulco**	**2.78**	**299**	*eP*		Pn	03 05 16.9	-2.5
HUIG				*eS*		Sn	03 05 45.1	-8.5
CMIG	**Matias Romero**	**2.93**	**335**			**Pn**	**03 05 20.9**	**-0.5**
CMIG						**Sn**	**03 05 51.9**	**-5.4**
CMIG	**Matias Romero**	**2.93**	**335**	Pn		**Pn**	**03 05 21.0**	**-0.5**
	comp=E,5.9nm,0.3s,baz=172,slow=13,SNR=53							
CMIG				Sn		**Sn**	**03 05 53.3**	**-4.0**
	comp=E,13nm,0.3s,baz=338,slow=22,SNR=6.8							
	comp=E,40nm,0.6s							
APG	**El Apazote**	**3.06**	**79**	Pn		**Pn**	**03 05 24.2**	**+0.7**
	comp=E,0.3nm,0.3s,baz=205,slow=17,SNR=23							
APG				Sn		**Sn**	**03 06 01.8**	**+0.9**
	comp=E,0.3nm,0.3s,baz=189,slow=12,SNR=5.9							
APG	**El Apazote**	**3.06**	**79**	*eP*		**Pn**	**03 05 24.4**	**+0.9**
FAME	**Alcaldia de Sa**	**3.50**	**99**	P		**Pn**	**03 05 28.9**	**-0.4**
SLOZ	**Alcaldia de Sa**	**3.70**	**96**	P		**Pn**	**03 05 30.0**	**-2.1**
NUBE	**Las Nubes**	**3.72**	**98**	*eP*		**Pn**	**03 05 32.3**	**-0.1**
NUBE	**Las Nubes**	**3.72**	**98**	S		**Sn**	**03 06 14.8**	**-2.2**
NUBE	**Las Nubes**	**3.72**	**98**	P		**Pn**	**03 05 31.8**	**-0.6**
PEIG	**Puerto Escondi**	**3.78**	**295**			**Pn**	**03 05 31.6**	**-1.6**
PEIG						Sn	03 06 08.5	-10
PEIG	**Puerto Escondi**	**3.78**	**295**	*eP*		**Pn**	**03 05 31.6**	**-1.6**
PEIG				*eS*		Sn	03 06 08.5	-10
NEUV	**Arroyo Zacate**	**3.90**	**327**			**Pn**	**03 05 33.8**	**-1.0**
NEUV						**Sn**	**03 06 16.7**	**-4.6**
NEUV	**Arroyo Zacate**	**3.90**	**327**	*eP*		**Pn**	**03 05 33.8**	**-1.0**
NEUV				*eS*		**Sn**	**03 06 16.7**	**-4.6**
JAYA	**Jayaque - finc**	**4.08**	**100**	P		**Pn**	**03 05 36.8**	**-0.6**
MTO3	**Montecristo**	**4.08**	**90**			**Pn**	**03 05 41.3**	**+3.8**
PMON	**Piamonte**	**4.20**	**99**	P		**Pn**	**03 05 38.1**	**-0.9**
YOIG	**Yosondua**	**4.52**	**303**			**Pn**	**03 05 44.8**	**+1.2**
YOIG						**Sn**	**03 06 31.4**	**-5.5**
YOIG	**Yosondua**	**4.52**	**303**	*eP*		**Pn**	**03 05 44.8**	**+1.2**
YOIG				*eS*		**Sn**	**03 06 31.4**	**-5.5**
PNIG	**Pinotepa**	**4.80**	**295**			**Pn**	**03 05 45.7**	**-1.5**
PNIG						Sn	03 06 33.5	-10
PNIG	**Pinotepa**	**4.80**	**295**	*eP*		**Pn**	**03 05 45.7**	**-1.5**
PNIG				*eS*		Sn	03 06 33.5	-10
TXIG	**Tlaxiaco**	**4.91**	**305**			**Pn**	**03 05 49.4**	**+0.4**
TXIG						Sn	03 06 37.0	-10
TXIG	**Tlaxiaco**	**4.91**	**305**	*eP*		**Pn**	**03 05 49.4**	**+0.4**
TXIG				*eS*		Sn	03 06 37.0	-10
TOIG	**Toxpalan**	**4.95**	**318**			**Pn**	**03 05 51.9**	**+2.5**
TOIG						**Sn**	**03 06 49.2**	**+1.9**
TOIG	**Toxpalan**	**4.95**	**318**	*eP*		**Pn**	**03 05 51.9**	**+2.5**
TOIG				*eS*		**Sn**	**03 06 49.2**	**+1.9**
SCIG	**Sabancuy**	**5.06**	**27**			**Pn**	**03 05 52.4**	**+1.7**
SCIG						**Sn**	**03 06 48.6**	**-1.2**
SCIG	**Sabancuy**	**5.06**	**27**	*eP*		**Pn**	**03 05 52.4**	**+1.7**
SCIG				*eS*		**Sn**	**03 06 48.6**	**-1.2**
SCIG	**Sabancuy**	**5.06**	**27**	P		**Pn**	**03 05 52.4**	**+1.7**
HLIG	**Huajuapan de L**	**5.28**	**310**			**Pn**	**03 05 54.4**	**+0.4**
HLIG						**Sn**	**03 06 50.8**	**-4.9**
HLIG	**Huajuapan de L**	**5.28**	**310**	*eP*		**Pn**	**03 05 54.4**	**+0.4**
HLIG				*eS*		**Sn**	**03 06 50.8**	**-4.9**
TPIG	**Tehuac#an**	**5.38**	**318**			**Sn**	**03 06 57.6**	**-0.3**
TPIG	**Tehuac#an**	**5.38**	**318**	*eS*		**Sn**	**03 06 57.6**	**-0.3**
FTIG	**Fresnillo de T**	**5.58**	**309**			**Pn**	**03 05 58.4**	**+0.4**
FTIG						Sn	03 06 55.6	-7.2
FTIG	**Fresnillo de T**	**5.58**	**309**	*eP*		**Pn**	**03 05 58.4**	**+0.4**
FTIG				*eS*		Sn	03 06 55.6	-7.2
MGIG	**Malinaltepec**	**5.61**	**300**			**Pn**	**03 05 59.4**	**+0.9**
MGIG						Sn	03 06 56.4	-7.3
MGIG	**Malinaltepec**	**5.61**	**300**	*eP*		**Pn**	**03 05 59.4**	**+0.9**
MGIG				*eS*		Sn	03 06 56.4	-7.3
TLIG	**Tlapa**	**5.72**	**304**			**Pn**	**03 06 01.5**	**+1.6**
TLIG	**Tlapa**	**5.72**	**304**			Sn	03 06 59.9	-6.4
TLIG	**Tlapa**	**5.72**	**304**	*eP*		**Pn**	**03 06 01.1**	**+1.1**
TLIG				*eS*		Sn	03 06 59.9	-6.4
TLIG	**Tlapa**	**5.72**	**304**	P		**Pn**	**03 06 01.2**	**+1.2**
CRIG	**Cruz Grande**	**5.82**	**294**			**Pn**	**03 06 01.2**	**0.0**
CRIG						Sn	03 06 57.6	-11
CRIG	**Cruz Grande**	**5.82**	**294**	*eP*		**Pn**	**03 06 01.2**	**0.0**
CRIG				*eS*		Sn	03 06 57.6	-11
YUSH	**Yuscaran**	**6.55**	**93**	P		**Pn**	**03 06 10.7**	**-0.6**
PPCL	**Tochimilco**	**6.57**	**313**	*eP*		**Pn**	**03 06 15.4**	**+3.6**
PPSX	**Xalitzintla**	**6.61**	**315**	*eP*		**Pn**	**03 06 16.0**	**+3.7**
PPPT	**Popocatepetl**	**6.62**	**314**	*eP*		**Pn**	**03 06 16.1**	**+3.5**
MEIG	**Mezcala**	**6.76**	**302**			**Pn**	**03 06 14.4**	**+0.1**
MEIG	**Mezcala**	**6.76**	**302**	*eP*		**Pn**	**03 06 14.4**	**+0.1**
YAIG	**Yautepec**	**6.86**	**311**			**Pn**	**03 06 18.3**	**+2.7**
YAIG						**Sn**	**03 07 28.3**	**-6.2**
YAIG	**Yautepec**	**6.86**	**311**	*eP*		**Pn**	**03 06 18.3**	**+2.7**
YAIG				*eS*		**Sn**	**03 07 28.3**	**-6.2**
LIMN	**Finca el Limon**	**7.14**	**100**	P		**Pn**	**03 06 19.2**	**-0.2**
ARIG	**Puente Sto Nin**	**7.54**	**301**			**Pn**	**03 06 26.8**	**+1.9**
ARIG	**Puente Sto Nin**	**7.54**	**301**	*eP*		**Pn**	**03 06 26.8**	**+1.9**
TEIG	**Tepich**	**7.67**	**41**			**Pn**	**03 06 27.4**	**+0.8**
TEIG	**Tepich**	**7.67**	**41**	Pn		**Pn**	**03 06 27.0**	**+0.5**
	baz=136,slow=24,SNR=1.7							
TEIG				Sn		**Sn**	**03 07 45.4**	**-8.7**
	baz=312,slow=24,SNR=1.7							
JTS	**Las Juntas de**	**9.38**	**115**			**Pn**	**03 06 52.2**	**+2.1**
JTS	**Las Juntas de**	**9.38**	**115**	Pn		**Pn**	**03 06 50.1**	**0.0**
	comp=E,0.3nm,0.3s,baz=308,slow=18,SNR=1.7							
	comp=E,3.3nm,0.8s							
833A	**Chaparral WMA,**	**14.84**	**340**	Pn		**Pn**	**03 08 07.9**	**+3.1**
HNDO	**Hondo**	**15.92**	**342**	Pn		**Pn**	**03 08 20.5**	**+1.4**
DRIO	**Del Rio**	**16.28**	**338**	Pn		**Pn**	**03 08 25.3**	**+1.6**
JCT	**Junction City**	**16.97**	**341**	Pn		**Pn**	**03 08 33.5**	**+1.0**
SAND	**Sanderson**	**17.34**	**334**			**Pn**	**03 08 38.9**	**+1.7**
TX31	**Lajitas Ar. Si**	**17.52**	**329**			**Pn**	**03 08 41.1**	**+1.7**
TXAR	**Lajitas Array**	**17.52**	**329**			**Pn**	**03 08 41.1**	**+1.7**
TXAR	**Lajitas Array**	**17.52**	**329**	P		**Pn**	**03 08 40.9**	**+1.4**
	baz=158,slow=10,SNR=8.6							
	comp=E,1.2nm,0.9s							
OZNA	**Ozona**	**17.82**	**338**			**Pn**	**03 08 44.0**	**+0.8**
OZNA				IAmb		IAmb	03 08 53.5	
	comp=Z,16nm,1.1s							
ALPN	**Alpine**	**18.37**	**331**			**P**	**03 08 51.8**	**+1.7**
SGCY	**Sterling City**	**18.72**	**340**			**P**	**03 08 55.0**	**+1.1**
SGCY				IAmb		IAmb	03 09 06.3	
	comp=Z,14nm,0.9s							
MNHN	**Monahans**	**18.82**	**335**			**P**	**03 08 56.6**	**+1.7**
Z47A	**Carrollton**	**19.34**	**14**	P		**Pn**	**03 09 02.0**	**+0.4**
VHRN	**Van Horn**	**19.36**	**329**			**P**	**03 09 02.2**	**+1.2**
APMT	**Aspermont**	**19.73**	**344**			**P**	**03 09 06.1**	**+1.3**
APMT				IAmb		IAmb	03 09 11.7	
	comp=Z,8.6nm,1.0s							
POST	**Post**	**19.90**	**340**	P		**P**	**03 09 08.4**	**+1.6**
POST				IAmb		IAmb	03 09 18.1	
	comp=Z,8.7nm,1.0s							
CLNB	**Carlsbad**	**20.09**	**334**	P		**P**	**03 09 09.6**	**+0.7**
DKNS	**Dickens**	**20.28**	**342**	P		**P**	**03 09 12.6**	**+1.7**
DKNS				IAmb		IAmb	03 09 35.9	
	comp=Z,14nm,1.2s							

MNTX	**Cornudas Mount**	**20.30**	**330**			**P**	**03 09 13.0**	**+1.9**
CPRX	**Cap Rock**	**20.75**	**335**	P		Pn	03 09 19.0	+0.6
FNO	**Franklin**	**21.02**	**351**	P		**P**	**03 09 19.8**	**+0.9**
MSTX	**Muleshoe**	**21.16**	**338**			**P**	**03 09 21.4**	**+1.0**
SMWD	**Samnorwood**	**21.44**	**345**	P		**P**	**03 09 24.1**	**+0.7**
AMTX	**Amarillo**	**21.64**	**342**	P		**P**	**03 09 25.0**	**-0.6**
AMTX				IAmb		IAmb	03 09 34.9	
	comp=Z,9.1nm,0.8s							
HHAR	**Hobbs**	**21.76**	**359**			**P**	**03 09 27.2**	**+0.4**
HHAR				IAmb		IAmb	03 09 29.4	
	comp=Z,8.0nm,1.1s							
RUSC	**La Rusia**	**21.87**	**111**	P		**P**	**03 09 31.6**	**+2.9**
RUSC				IAmb		IAmb	03 09 33.8	
	comp=Z,13nm,1.2s							
121A	**Cookes Peak, D**	**22.19**	**327**			**P**	**03 09 33.8**	**+2.1**
Y22A	**Socorro**	**22.89**	**330**	P		**P**	**03 09 40.5**	**+1.4**
Y22A				IAmb		IAmb	03 09 53.3	
	comp=Z,8.8nm,1.0s							
BNM	**Barren Site**	**22.91**	**331**			**P**	**03 09 40.7**	**+1.3**
TUC	**Tucson**	**23.73**	**322**			**P**	**03 09 48.5**	**+0.9**
TUC				IAmb		IAmb	03 09 50.5	
	comp=Z,7.1nm,1.1s							
T25A	**Trinidad**	**24.59**	**339**			**P**	**03 09 55.9**	**+0.3**
X18A	**Snowflake**	**24.88**	**326**	P		**P**	**03 09 59.4**	**+1.1**
SDCO	**Great Sand Dun**	**25.52**	**338**			**P**	**03 10 04.0**	**-0.1**
SJG	**San Juan**	**26.57**	**78**	LR		LR	03 19 25.3	
	comp=Z,34nm,21.2s,baz=190,slow=34							
PV01	**Paradox Valley**	**27.09**	**333**	P		**P**	**03 10 19.5**	**+1.2**
PV01				IAmb		IAmb	03 10 22.9	
	comp=Z,4.4nm,1.0s							
ISCO	**Idaho Springs**	**27.39**	**340**			**P**	**03 10 21.3**	**+0.2**
BC3	**Big Chuckawall**	**27.56**	**318**	P		**P**	**03 10 24.1**	**+1.7**
BC3				IAmb		IAmb	03 10 25.1	
	comp=Z,2.6nm,0.8s							
V12A	**Nelson**	**28.53**	**322**	P		**P**	**03 10 32.2**	**+1.2**
V12A				IAmb		IAmb	03 10 33.5	
	comp=Z,3.0nm,1.0s							
PDAR	**Pinedale Array**	**31.41**	**337**	P		**P**	**03 10 56.2**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=124,slow=7.9,SNR=7.3							
	comp=Z,1.0nm,0.9s							
NVAR	**Mina Array Bea**	**32.38**	**322**	P		**P**	**03 11 05.7**	**+0.5**
NVAR	**Mina Array Bea**	**32.38**	**322**	P		**P**	**03 11 07.0**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=138,slow=8.5,SNR=11							
	comp=Z,1.3nm,0.7s							
SNOW	**Snow King Moun**	**32.46**	**336**	P		**P**	**03 11 06.1**	**+0.2**
LOHW	**Long Hollow**	**32.53**	**337**	P		**P**	**03 11 07.0**	**+0.5**
TPAW	**Teton Pass**	**32.56**	**336**	P		**P**	**03 11 08.1**	**+1.3**
FLWY	**Flagg Ranch**	**32.97**	**337**	P		**P**	**03 11 11.9**	**+1.6**
HLID	**Hailey**	**34.08**	**333**			**P**	**03 11 20.8**	**+0.9**
HLID				IAmb		IAmb	03 11 21.9	
	comp=Z,2.4nm,0.9s							
PLID	**Pearl Lake**	**35.98**	**333**	P		**P**	**03 11 36.8**	**+0.4**
F10A	**Beach Ranch, E**	**37.21**	**332**	P		**P**	**03 11 47.2**	**+0.5**
LON	**Longmire**	**39.94**	**330**	P		**P**	**03 12 10.3**	**+0.8**
LON				IAmb		IAmb	03 12 11.3	
	comp=Z,2.7nm,0.9s							
SCHQ	**Schefferville**	**45.37**	**21**	LR		LR	03 32 54.6	
	comp=Z,83nm,18.2s,baz=198,slow=38							
YKA	**Yellowknife Ar**	**50.27**	**347**	P		**P**	**03 13 31.1**	**-0.2**
YKA	**Yellowknife Ar**	**50.27**	**347**	P		**P**	**03 13 30.4**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=162,slow=6.8,SNR=5.5							
	comp=Z,1.4nm,0.7s							
ILAR	**Eielson Array**	**61.84**	**337**	P		**P**	**03 14 54.5**	**+0.3**
ILAR	**Eielson Array**	**61.84**	**337**	P		**P**	**03 14 53.9**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=142,slow=5.1,SNR=14							
	comp=Z,1.4nm,0.9s							
ESDC	**Sonseca Array**	**80.65**	**51**	P		**P**	**03 16 49.2**	**+0.6**
ESDC				IAmb		IAmb	03 16 55.5	
	comp=Z,4.3nm,1.5s							
ESDC	**Sonseca Array**	**80.65**	**51**	P		**P**	**03 16 46.6**	**-2.0**
	comp=Z,0.4nm,0.7s,baz=269,slow=4.3,SNR=1.5							
	comp=Z,0.4nm,0.7s							
NB2	**NORSAR Subarra**	**84.49**	**28**	P		**P**	**03 17 08.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=292,slow=5.1							
NOA	**NORSAR Array B**	**84.49**	**28**	P		**P**	**03 17 07.3**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=296,slow=5.1,SNR=6.3							
	comp=Z,1.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**145.07**	**339**	PKPbc		**PKPbc**	**03 24 12.4**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=342,slow=3.0,SNR=11							

*IDC **07** 03:11:52.7±3.4,46.61N×152.61E,h0km,mb3.9/9, mbtmp3.9/10,ML3.0/1,Error ellipse: s-maj=82.4km s-min=33.7km az=152.0*
*NEIC **07** 03:11:57.5±1.7,46.5N±0.1×152.6E±0.2,h35km±2km, mb4.3/17,Error ellipse: s-maj=22.8km s-min=13.3km az=130.0*

ISC 07 03:11:56.9±0.7,46.5N±0.1×152.7E±0.1,h35km,n35,
σ0.673/35,mb4.2/17,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PEA0B	**Petropavlovsk-**	**7.41**	**24**	Pn		**Pn**	**03 13 41.3**	**-1.0**
ERM	**Erimo**	**8.16**	**240**	Pn		**Pn**	**03 13 51.6**	**-1.1**
MJAR	**Matsushiro Arr**	**14.67**	**233**	Pn		**Pn**	**03 15 22.3**	**+0.6**
	0.1nm,0.3s,baz=54,slow=11,SNR=2.4							
	0.6nm,0.3s							
C16K	**Lisburne Hills**	**30.46**	**29**	P		**P**	**03 18 06.2**	**+0.4**
D20K	**Etivluk River**	**33.64**	**31**	P		**P**	**03 18 34.2**	**+0.5**
D20K				IAmb		IAmb	03 19 10.3	
	comp=Z,8.2nm,1.5s							
E22K	**Anaktuvuk Pass**	**35.25**	**32**	P		**P**	**03 18 48.3**	**+0.7**
E22K				IAmb		IAmb	03 19 19.7	
	comp=Z,6.2nm,1.4s							
ILAR	**Eielson Array**	**36.96**	**38**	P		**P**	**03 19 01.4**	**-0.9**
ILAR	**Eielson Array**	**36.96**	**38**	P		**P**	**03 19 01.8**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=272,slow=8.7,SNR=2.4							
	comp=Z,0.2nm,0.6s							
L27K	**Beaver Creek,**	**39.29**	**41**	P		**P**	**03 19 22.5**	**+0.5**
L27K				IAmb		IAmb	03 19 40.6	
	comp=Z,5.7nm,1.4s							
BCAR	**Beaver Creek A**	**39.31**	**41**	P		**P**	**03 19 22.9**	**+0.7**
I28M	**Miner Creek**	**39.86**	**37**	P		**P**	**03 19 26.4**	**-0.4**
G29M	**Pine Creek**	**40.50**	**35**	P		**P**	**03 19 32.4**	**+0.5**
K29M	**Barlow Dome**	**41.10**	**39**	P		**P**	**03 19 38.1**	**+1.1**
H31M	**Peel River**	**42.12**	**36**	P		**P**	**03 19 45.4**	**+0.2**
H31M				IAmb		IAmb	03 19 46.4	
	comp=Z,4.9nm,1.2s							
U33K	**Whale Pass**	**45.24**	**49**	P		**P**	**03 20 09.8**	**-0.5**
MKAR	**Makanchi Array**	**46.82**	**297**	P		**P**	**03 20 22.2**	**-0.8**
MKAR	**Makanchi Array**	**46.82**	**297**	P		**P**	**03 20 21.8**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=61,slow=6.8,SNR=2.6							
	comp=Z,0.5nm,0.8s							
KURK	**Kurchatov**	**47.29**	**304**	P		**P**	**03 20 25.6**	**-0.9**
KURK				IAmb		IAmb	03 21 09.6	
	comp=Z,1.3nm,0.7s							
KURBB	**Kurchatov Arra**	**47.38**	**304**	P		**P**	**03 20 26.8**	**-0.4**
	comp=Z,1.2nm,0.2s,baz=66,slow=9.2,SNR=2.0							
	comp=Z,1.2nm,0.2s							
RABL	**Rabaul**	**50.43**	**181**	P		**P**	**03 20 50.6**	**-0.3**
TARG	**Taragay, Kyrgy**	**52.12**	**294**	P		**P**	**03 21 02.7**	**-1.2**
TARG				IAmb		IAmb	03 21 39.2	
	comp=Z,8.7nm,1.3s							
AB31	**Akbulak array**	**58.40**	**310**	P		**P**	**03 21 48.8**	**+0.4**
AB31				IAmb		IAmb	03 22 26.9	
	comp=Z,3.3nm,1.4s							
ABKAR	**Akbulak array**	**58.40**	**310**	P		**P**	**03 21 48.9**	**+0.4**
N02D	**Trinity Center**	**58.59**	**62**	P		**P**	**03 21 49.6**	**-0.5**
FINES	**FINESS Array B**	**64.19**	**335**	P		**P**	**03 22 27.2**	**-0.2**
FINES	**FINESS Array B**	**64.19**	**335**	P		**P**	**03 22 27.9**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=35,slow=5.1,SNR=5.7							
	comp=Z,2.7nm,0.9s							
WB2	**Warramunga Arr**	**68.14**	**199**	P		**P**	**03 22 53.9**	**+0.7**
WB2				IAmb		IAmb	03 23 12.1	
	comp=Z,7.4nm,1.3s							
WRA	**Warramunga Arr**	**68.14**	**199**	P		**P**	**03 22 52.9**	**-0.3**
NB201	**NORSAR Array S**	**68.39**	**341**	P		**P**	**03 22 55.0**	**+0.6**
NOA	**NORSAR Array B**	**68.42**	**341**	P		**P**	**03 22 55.4**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=30,slow=6.6,SNR=4.9							
	comp=Z,0.2nm,0.4s							
HFS	**Hagfors**	**68.63**	**339**	P		**P**	**03 22 56.4**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=45,slow=4.7,SNR=6.3							
	comp=Z,2.7nm,0.9s							
KBZ	**Khabaz**	**70.86**	**314**	P		**P**	**03 23 10.9**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=36,slow=8.7,SNR=4.2							
	comp=Z,0.9nm,0.6s							
AKASG	**Malin Array Be**	**71.63**	**326**	P		**P**	**03 23 13.7**	**-0.7**
AKASG				IAmb		IAmb	03 23 17.4	
	comp=Z,4.0nm,1.2s							
AKASG	**Malin Array Be**	**71.63**	**326**	P		**P**	**03 23 14.1**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=36,slow=6.3,SNR=4.1							
	comp=Z,1.0nm,0.5s							
MMAI	**Mount Meron Ar**	**82.80**	**311**	P		**P**	**03 24 18.5**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=14,slow=6.4,SNR=2.0							
	comp=Z,1.1nm,0.6s							

*IDC **07** 03:17:36.9±0.6,46.18N×152.93E,h0km,mb4.2/28, mbtmp4.2/34,ML3.7/5,MS3.9/6,Error ellipse: s-maj=15.6km s-min=12.7km az=153.0*
*SKHL **07** 03:17:38.9±0.5,45.90N×153.20E,h37km±7km,mb5.0/4*
*NEIC **07** 03:17:39.5±1.6,46.2N±0.1×152.9E±0.1,h12km±4km, mb4.6/42,Error ellipse: s-maj=17.0km s-min=10.2km az=141.0*
*MOS **07** 03:17:39.2±1.2,46.17N×152.86E,h26km,mb4.7/32, MS3.9/8,Error ellipse: s-maj=7.8km s-min=5.7km az=86.7*

ISC 07 03:17:41.4±0.5,46.15N±0.06×152.98E±0.05,h31km,n263,
σ1923/264,mb4.5/85,MS4.1/16,17C-21D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.70**	**258**	*eP*N		**Pn**	**03 18 36.9**	**+0.5**
KUR				*i* S		**Sn**	**03 19 23.7**	**+4.8**
KUR				pmax		pmax		
	comp=Z,258nm,0.4s							
KUR				pmax		pmax		
	comp=N,95nm,0.3s							
KUR				pmax		pmax		
	comp=E,60nm,0.3s							
KUR				smax		smax		
	comp=E,319nm,1.0s							
KUR				smax		smax		
	comp=N,209nm,0.9s							
KUR	**Kuril'sk**	**3.70**	**258**	*eP*		**Pn**	**03 18 36.0**	**-0.4**
KUR				AMB		AMB	03 18 38.9	
	comp=N,310nm,0.6s							
KUR				*i* S		**Sn**	**03 19 18.5**	**-0.4**
KUR				A		A	03 19 30.7	
	comp=N,180nm,0.7s							
KUR				A		A	03 19 30.7	
	comp=N,640nm,0.7s							
SHO	**Shikotan**	**4.92**	**245**	*eP*		Pn	03 18 58.8	+5.6
SHO				AMB		AMB	03 19 02.3	
	comp=N,70nm,0.3s							
SHO				*eS*		**Sn**	**03 19 54.1**	**+5.1**
SHO				A		A	03 19 55.5	
	comp=N,100nm,0.4s							
SHO				A		A	03 19 55.5	
	comp=N,100nm,0.4s							
SKR	**Severo-Kuril's**	**5.00**	**24**	*e*PN		**Pn**	**03 18 56.4**	**+2.2**
SKR				*eS*		**Sn**	**03 19 52.9**	**+2.0**
SKR				pmax		pmax		
	comp=Z,140nm,0.4s							
SKR				smax		smax		
	comp=N,131nm,0.5s							
SKR				smax		smax		
	comp=E,82nm,0.6s							
SKR				MLR		MLR		
	comp=Z,900nm,13.0s							
SKR	**Severo-Kuril's**	**5.00**	**24**	*eP*		**Pn**	**03 18 55.2**	**+1.0**
SKR				AMB		AMB	03 18 56.5	
	comp=Z,130nm,0.6s							
SKR				*eS*		**Sn**	**03 19 52.8**	**+1.9**
S

baz=341,slow=76
H11S2 WAKE ISLAND Hy 29.83 153 T T 03 56 37.9
baz=341,slow=76
ULN Ulaanbaatar 31.02 290⇓ *e*P **P** **03 23 57.8 +1.6**
ULN pmax pmax
comp=Z,16nm,3.6s
ULN Ulaanbaatar 31.02 290 *e*P **P** **03 23 57.8 +1.6**
SONM Songino Array 31.45 290 P **P** **03 24 00.1 +0.1**
SONM Songino Array 31.45 290 P **P** **03 23 59.7 -0.4**
comp=Z,0.6nm,0.5s,baz=91,slow=20,SNR=3.6
comp=Z,0.6nm,0.5s
SONM Songino Array 31.45 290 P **P** **03 24 00.2 +0.1**
SONM pmax pmax
comp=Z,3.0nm,1.4s
D20K Etivluk River 33.80 30 P **P** **03 24 21.0 +0.7**
D20K IAmb IAmb 03 24 37.0
comp=Z,6.9nm,0.8s
H21K Melozitna Rive 34.65 36 P **P** **03 24 28.3 +0.7**
H21K IAmb IAmb 03 24 30.5
comp=Z,6.8nm,1.1s
E22K Anaktuvuk Pass 35.41 32 P **P** **03 24 35.0 +0.9**
E22K IAmb IAmb 03 24 51.0
comp=Z,5.1nm,0.7s
COLA College 36.67 38⇓ *e*P **P** **03 24 45.7 +0.9**
COLA pmax pmax
comp=Z,19nm,2.3s
G24K Hadweenzic Riv 36.90 35 P **P** **03 24 48.2 +1.3**
G24K IAmb IAmb 03 24 49.4
comp=Z,8.9nm,1.1s
ILAR Eielson Array 37.08 38 P **P** **03 24 48.3 -0.1**
ILAR Eielson Array 37.08 38 P **P** **03 24 48.4 0.0**
comp=Z,3.2nm,1.2s,baz=265,slow=8.6,SNR=7.3
comp=Z,3.2nm,1.2s
ILAR Eielson Array 37.08 38 P **P** **03 24 48.3 -0.1**
D25K Kavik River 37.54 31 P **P** **03 24 51.3 -0.9**
D25K IAmb IAmb 03 24 57.8
comp=Z,6.9nm,0.9s
LZDM Lanzhou Array 37.99 272 P **P** **03 24 57.9 +1.1**
comp=Z,0.8nm,0.3s,baz=56,slow=13,SNR=3.6
comp=Z,0.8nm,0.3s
GTA Gaotai 38.98 280 *e*P **P** **03 25 06.3 +1.5**
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA LR LR
comp=N,210nm,17.1s
GTA LR LR
comp=E,200nm,17.8s
GTA LR LR
comp=Z,400nm,19.6s
K27K Chicken 39.20 39 P **P** **03 25 06.7 +0.5**
NRIK Noril'sk 39.23 329 P **P** **03 25 06.4 0.0**
NRIK Noril'sk 39.23 329 P **P** **03 25 06.2 -0.2**
comp=Z,1.1nm,0.3s,baz=100,slow=6.1,SNR=2.3
comp=Z,1.1nm,0.3s
NRIK Noril'sk 39.23 329 P **P** **03 25 06.4 0.0**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
L27K Beaver Creek, 39.40 41 P **P** **03 25 08.8 +0.8**
E29M Blow River 40.59 32 P **P** **03 25 18.8 +1.1**
I30M Mount Dempster 41.50 37 P **P** **03 25 26.0 +0.6**
ZALV Zalesovo Beam 42.89 306 P **P** **03 25 35.9 -0.8**
ZALV Zalesovo Beam 42.89 306 P **P** **03 25 35.4 -1.3**
comp=Z,0.9nm,0.5s,baz=64,slow=6.6,SNR=2.3
comp=Z,0.9nm,0.5s
ZALV Zalesovo Beam 42.89 306 P **P** **03 25 35.9 -0.8**
MK31 Makanchi Array 47.14 298⇑ *e*P **P** **03 26 09.8 -0.8**
MKAR Makanchi Array 47.14 298 **P** **03 26 10.1 -0.5**
MKAR Makanchi Array 47.14 298 P **P** **03 26 09.4 -1.2**
comp=Z,2.8nm,0.8s,baz=68,slow=7.8,SNR=13
comp=Z,2.8nm,0.8s
MKAR Makanchi Array 47.14 298 *i* P **P** **03 26 10.1 -0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 47.14 298 *e*P **P** **03 26 10.1 -0.5**
KURK Kurchatov 47.62 304⇓ *e*P **P** **03 26 13.3 -1.0**
KURK pmax pmax
comp=Z,4.0nm,0.9s
KURK MLR MLR
comp=Z,208nm,19.0s
KURK Kurchatov 47.62 304 *e*P **P** **03 26 13.3 -1.0**
KURBB Kurchatov Arra 47.72 304 P **P** **03 26 13.8 -1.2**
comp=Z,3.7nm,0.9s,baz=69,slow=8.5,SNR=11
KURBB LR LR 03 48 04.3
comp=Z,268nm,21.2s,baz=199,slow=38
comp=Z,3.7nm,0.9s
BVAR Borovoye Array 51.17 310 P **P** **03 26 40.8 -0.5**
comp=Z,2.7nm,0.6s,baz=37,slow=7.6,SNR=10.0
comp=Z,2.7nm,0.6s
BORK Borovoye 51.20 310 *d i*P **P** **03 26 40.9 -0.6**
BORK pmax pmax
comp=Z,7.0nm,1.2s
BORK MLR MLR
comp=Z,219nm,20.0s
RES Resolute Bay 51.44 18 LR LR 03 50 53.2
comp=Z,48nm,18.4s,baz=4.0,slow=39
YKA Yellowknife Ar 51.46 36 P **P** **03 26 43.3 -0.1**
YKA Yellowknife Ar 51.46 36 P **P** **03 26 42.8 -0.6**
comp=Z,1.7nm,0.9s,baz=294,slow=7.9,SNR=3.0
comp=Z,1.7nm,0.9s
YKA Yellowknife Ar 51.46 36 P **P** **03 26 43.3 -0.1**
CMAR Chiang Mai Arr 52.14 257 P **P** **03 26 48.6 -0.3**
CMAR Chiang Mai Arr 52.14 257 P **P** **03 26 49.0 0.0**
comp=Z,1.1nm,0.3s,baz=33,slow=7.9,SNR=7.1
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 52.14 257 *i* P **P** **03 26 50.7 +1.7**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SPITS Spitsbergen Ar 53.19 350 P **P** **03 26 55.2 -0.8**
comp=Z,5.9nm,0.9s,baz=53,slow=7.4,SNR=5.3
comp=Z,5.9nm,0.9s
AAK Ala-Archa 54.02 297 *d i*P **P** **03 27 03.1 +0.3**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK MLR MLR
comp=Z,190nm,18.0s
AAK Ala-Archa 54.02 297 *e*P **P** **03 27 03.1 +0.3**
EVN Everest 54.29 275 **P** **03 27 05.9 +0.5**
EVN IAmb IAmb 03 27 08.6
comp=Z,6.1nm,0.8s
KSH Kashi 54.80 293 P P 03 27 13.5 +5.1
KSH pmax pmax
comp=Z,8.0nm,0.6s
KSH LR LR
comp=N,180nm,15.8s
KSH LR LR
comp=E,170nm,18.1s
KSH LR LR
comp=Z,430nm,21.6s
ARTI Arti 55.50 318 *c i*P **P** **03 27 12.0 -1.0**
ARTI 03 28 09.2
ARTI S **S** **03 34 56.3 +0.4**
ARTI SS **SS** **03 38 34.7 -5.5**
ARTI pmax pmax
comp=Z,10.0nm,1.4s
KK31 Karatay Array 56.21 299 **P** **03 27 17.9 -0.5**
KK31 Karatay Array 56.21 299 P **P** **03 27 17.9 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 56.21 299 **P** **03 27 18.3 -0.1**
KKAR Karatay Array 56.21 299 P **P** **03 27 18.3 -0.1**
KIRV Kirov 58.20 323⇓ *e*P **P** **03 27 31.9 -0.2**
ARCES ARCESS Array B 58.39 341 P **P** **03 27 32.8 -0.5**
ARCES IAmb IAmb 03 27 55.4
comp=Z,7.4nm,1.1s
ARCES ARCESS Array B 58.39 341 P **P** **03 27 32.8 -0.5**
comp=Z,1.4nm,0.8s,baz=23,slow=6.6,SNR=6.3
comp=Z,1.4nm,0.8s
AB31 Akbulak array 58.74 310 **P** **03 27 35.3 -0.8**
AB31 IAmb IAmb 03 27 36.3
comp=Z,4.0nm,0.6s
ABKAR Akbulak array 58.74 310 **P** **03 27 35.4 -0.7**
PLID Pearl Lake 60.09 55 **P** **03 27 45.4 -0.4**
PLID IAmb IAmb 03 28 01.9
comp=Z,5.2nm,0.8s
KLMR Klimovskoe 60.58 329 *e*P **P** **03 27 46.7 -1.8**
KLMR pmax pmax
comp=Z,12nm,1.1s
SUMG Summit 61.31 4 **P** **03 27 53.9 +0.1**
SUMG Summit 61.31 4 P **P** **03 27 53.9 +0.1**
SUMG pmax pmax
comp=Z,12nm,0.9s
LHV Little Huntoon 62.78 62 P **P** **03 28 04.7 +1.0**
LHV IAmb IAmb 03 28 18.1
comp=Z,4.6nm,0.9s
NVAR Mina Array Bea 62.80 62 P **P** **03 28 03.7 -0.4**
NVAR Mina Array Bea 62.80 62 P **P** **03 28 05.0 +0.9**
comp=Z,1.5nm,0.9s,baz=288,slow=7.3,SNR=10
comp=Z,1.5nm,0.9s
BELG Belogornoye 62.92 318 *d i*P **P** **03 28 04.1 -0.3**
BELG pmax pmax
comp=Z,3.0nm,0.8s
PSI Prapat 63.74 244 LR LR 03 57 23.8
comp=Z,144nm,20.6s,baz=142,slow=37
TPAW Teton Pass 63.93 54 P **P** **03 28 12.4 +0.7**
TPAW IAmb IAmb 03 28 25.0
comp=Z,3.3nm,1.0s
FINES FINESS Array B 64.55 335 P **P** **03 28 14.7 -0.3**
FINES FINESS Array B 64.55 335 P **P** **03 28 14.5 -0.5**
comp=Z,2.0nm,0.5s,baz=36,slow=6.4,SNR=20
comp=Z,2.0nm,0.5s
FINES FINESS Array B 64.55 335 *i* P **P** **03 28 15.1 +0.1**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FURC Furnace Creek, 64.92 63 P **P** **03 28 18.3 +0.5**
FURC IAmb IAmb 03 28 19.7
comp=Z,5.1nm,1.1s
DUG Dugway, Tooele 64.97 57 P **P** **03 28 18.0 -0.3**
DUG IAmb IAmb 03 28 32.2
comp=Z,3.8nm,1.2s
DUG Dugway, Tooele 64.97 57 P **P** **03 28 18.0 -0.3**
DUG pmax pmax
comp=Z,4.0nm,1.2s
PDAR Pinedale Array 65.18 54 P **P** **03 28 19.3 -0.4**
PDAR Pinedale Array 65.18 54 P **P** **03 28 20.0 +0.3**
comp=Z,0.8nm,0.8s,baz=301,slow=0.9,SNR=5.9
comp=Z,0.8nm,0.8s
VRH Novokhopyorsk 66.41 320 *e*P **P** **03 28 24.6 -2.6**
VRH pmax pmax
comp=Z,9.0nm,0.9s
LPSR Galich'ya Gora 66.62 323 *e*P **P** **03 28 25.7 -2.8**
LPSR pmax pmax
comp=Z,9.0nm,0.8s
VSU Vasula 66.71 333 *c e*P **P** **03 28 29.2 +0.3**
VSU pmax pmax
comp=Z,27nm,1.0s
VSR Storozhevoye 67.53 321 *e*P **P** **03 28 31.8 -2.5**
VSR pmax pmax
comp=Z,5.0nm,0.9s
VORD Divnogorie 67.65 321 *e*P **P** **03 28 33.8 -1.3**
VORD pmax pmax
comp=Z,9.0nm,0.9s
WRA Warramunga Arr 67.91 199 P **P** **03 28 38.1 +1.1**
WRA Warramunga Arr 67.91 199 P **P** **03 28 37.0 0.0**
comp=Z,0.6nm,0.6s,baz=17,slow=6.7,SNR=6.4
comp=Z,0.6nm,0.6s
WRA Warramunga Arr 67.91 199 P **P** **03 28 37.0 0.0**
PV10 Paradox Valley 68.38 57 P **P** **03 28 41.6 +1.4**
PV18 Skein Mesa, Pa 68.54 57 P **P** **03 28 41.2 +0.1**
PV18 IAmb IAmb 03 28 55.0
comp=Z,8.4nm,1.1s
NB2 NORSAR Subarra 68.77 341 P **P** **03 28 42.1 +0.2**
comp=Z,1.7nm,0.5s,baz=30,slow=6.5
NB2 NORSAR Subarra 68.77 341 P **P** **03 28 42.8 +0.8**
NOA NORSAR Array B 68.77 341 P **P** **03 28 42.2 +0.2**
comp=Z,1.3nm,0.5s,baz=29,slow=6.6,SNR=21
NOA LR LR 04 03 25.7
comp=Z,44nm,18.4s,baz=30,slow=40
comp=Z,1.3nm,0.5s
NORES NORESS Array B 68.97 341 P **P** **03 28 43.0 -0.1**
HFS Hagfors 68.99 340 P **P** **03 28 43.2 -0.1**
comp=Z,6.6nm,0.7s,baz=61,slow=7.0,SNR=26
comp=Z,6.6nm,0.7s
MNK Minsk 69.47 329 *i* P **P** **03 28 45.9 -0.4**
MNK *i* 03 29 09.2
MNK *i* 03 31 18.8
MNK *i* PPP PPP 03 32 59.3
MNK *i* S **S** **03 37 53.1 +1.7**
MNK *i* 03 38 46.9
MNK *i* SS **SS** **03 42 20.8 +2.9**
MNK *i* SSS SSS 03 45 29.9
MNK pmax pmax
comp=E,12nm,0.9s
MNK pmax pmax
comp=N,16nm,0.9s
MNK pmax pmax
comp=Z,20nm,0.8s
MNK MLR MLR
comp=N,138nm,19.0s
MNK MLR MLR
comp=Z,58nm,16.0s
MNK MLR MLR
comp=E,101nm,23.0s
NCK Nalchik 71.03 313⇑ *e*P **P** **03 28 58.1 +1.9**
NCK pmax pmax
comp=Z,5.0nm,0.4s
KIV Kislovodsk 71.16 314 **P** **03 28 57.4 +0.4**
KIV Kislovodsk 71.16 314 *e*P **P** **03 28 57.5 +0.5**
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV MLR MLR
comp=Z,70nm,18.0s
KIV Kislovodsk 71.16 314 *e*P **P** **03 28 57.5 +0.5**
KBZ Khabaz 71.21 314 P **P** **03 28 58.5 +1.3**
comp=Z,5.2nm,0.7s,baz=137,slow=1.4,SNR=19
comp=Z,5.2nm,0.7s
KBZ Khabaz 71.21 314⇑ *e*P **P** **03 28 58.3 +1.1**
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KBZ Khabaz 71.21 314 *e*P **P** **03 28 58.3 +1.1**
SHA1 Shidzhatmaz 71.33 314⇓ *i*P **P** **03 28 59.5 +1.3**
ASAR Alice Springs 71.61 198 P **P** **03 29 00.4 +0.7**
ASAR Alice Springs 71.61 198 P **P** **03 29 00.6 +0.9**
comp=Z,0.5nm,0.6s,baz=14,slow=5.9,SNR=7.5
comp=Z,0.5nm,0.6s
ASAR Alice Springs 71.61 198 P **P** **03 29 00.4 +0.7**
AKASG Malin Array Be 72.00 326 P **P** **03 29 02.0 +0.2**
AKASG IAmb IAmb 03 29 02.8
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 72.00 326 P **P** **03 29 01.6 -0.1**
comp=Z,6.5nm,0.5s,baz=36,slow=6.2,SNR=25
comp=Z,6.5nm,0.5s
AKBB Malin Array Si 72.00 326 **P** **03 29 01.3 -0.5**
AKBB Malin Array Si 72.00 326 *c i*P **P** **03 29 01.5 -0.3**
AKBB pmax pmax
comp=Z,11nm,0.7s
AKBB MLR MLR
comp=Z,83nm,18.0s
AKBB Malin Array Si 72.00 326 P **P** **03 29 01.3 -0.5**
AK04 Malin Array Si 72.00 326 P **P** **03 29 01.6 -0.2**
AK21 Malin Array Si 72.01 326 P **P** **03 29 01.6 -0.2**
AK22 Malin Array Si 72.01 326 P **P** **03 29 01.6 -0.3**
KIEV Kiev 72.01 326 **P** **03 29 01.5 -0.3**
KIEV Kiev 72.01 326⇓ P **P** **03 29 01.5 -0.3**
KIEV Kiev 72.01 326⇓ P **P** **03 29 01.5 -0.3**
KIEV Kiev 72.01 326 P **P** **03 29 01.4 -0.4**
comp=Z,60nm,0.7s
AK01 Malin Array Si 72.01 326 P **P** **03 29 01.6 -0.3**
AK11 Malin Array Si 72.04 326 P **P** **03 29 01.7 -0.3**
AK02 Malin Array Si 72.04 326 P **P** **03 29 01.7 -0.3**
AK15 Malin Array Si 72.04 326 P **P** **03 29 01.7 -0.3**
AK10 Malin Array Si 72.07 326 P **P** **03 29 02.1 -0.1**
AK16 Malin Array Si 72.07 326 P **P** **03 29 02.1 -0.1**
AK13 Malin Array Si 72.13 326 P **P** **03 29 02.5 -0.1**
MI28 Mi28,Pidlybu 72.41 327 P **P** **03 29 04.6 +0.4**
RNPP9 Sopachiv 72.68 328 P **P** **03 29 06.1 +0.3**
RNPP8 Varash 72.75 328 P **P** **03 29 06.6 +0.3**
RNPP5 Staryi Chortor 72.83 328 P **P** **03 29 06.6 -0.1**
GNI Garni 72.85 310 LR LR 04 04 57.3
comp=Z,102nm,18.6s,baz=64,slow=39
GNI Garni 72.85 310⇓ *e*P **P** **03 29 09.7 +2.4**
GNI pmax pmax
comp=Z,8.0nm,1.1s
LUBAR Lubar, Ukraine 73.19 327 P **P** **03 29 08.9 0.0**
BAL3X Bal3x, Balta 74.05 324 P **P** **03 29 14.3 +0.3**
HORU Horodok 74.27 327 P **P** **03 29 15.6 +0.3**
SORM Soroca 74.39 325⇑ P **P** **03 29 15.9 -0.1**
SORM Soroca 74.39 325⇑ P **P** **03 29 15.9 -0.1**
NDNU Novodnistrovsk 74.41 326 P **P** **03 29 14.9 -1.2**
KMPD K-Podol'skiy 74.79 326 P **P** **03 29 17.9 -0.3**
KOPT Kop Dagi 75.16 313 **P** **03 29 21.2 +0.3**
KOPT IAmb IAmb 03 29 25.1
comp=Z,4.7nm,0.9s
MORS Morshin 75.28 328 P **P** **03 29 21.5 +0.4**
KWP Kalwaria Pacla 75.29 329 P **P** **03 29 21.6 +0.4**
comp=Z,26nm,1.0s
SHIU Shidnytsya 75.40 329 P **P** **03 29 22.1 +0.3**
STNU Starunia 75.41 328 P **P** **03 29 22.2 +0.3**
GURO Guroymak-BITLI 75.45 311 **P** **03 29 23.2 +0.7**
GURO IAmb IAmb 03 29 25.3
comp=Z,8.2nm,1.0s
KSV Kosov 75.52 327 P **P** **03 29 22.9 +0.4**
BUR08 Bucovina Ar. S 76.02 327 **P** **03 29 26.2 +0.7**
BUR08 IAmb IAmb 03 29 27.2
comp=Z,7.8nm,0.8s
BURAR Bucovina Array 76.04 327 **P** **03 29 26.2 +0.6**
BURAR Bucovina Array 76.04 327⇑ P **P** **03 29 26.0 +0.4**
BURAR Bucovina Array 76.04 327⇑ P **P** **03 29 26.0 +0.4**
RAKU Rahkiv 76.10 327 P **P** **03 29 25.5 -0.3**
BRIU Brid 76.26 328 P **P** **03 29 27.2 +0.5**
HOLU Holmets 76.34 329 P **P** **03 29 27.2 +0.1**
VLDR Vladesti 76.35 324⇓ P **P** **03 29 28.0 +0.7**
TESR Tescani 76.39 325⇑ P **P** **03 29 28.2 +0.7**
TESR Tescani 76.39 325 P **P** **03 29 27.8 +0.3**
comp=Z,17nm,0.8s
GHRR 76.45 324 P **P** **03 29 28.2 +0.4**
BERU Beregovo 76.49 328 P **P** **03 29 28.2 +0.2**
TRSU Trosnyk 76.49 328 P **P** **03 29 29.9 +1.9**
ONER Baraj Valea Uz 76.63 325⇓ P **P** **03 29 30.3 +1.4**
LANS Liptovska Anna 76.83 331 *e*P **P** **03 29 31.0 +1.0**
LANS pmax pmax
comp=Z,2.0nm,0.7s
LANS Liptovska Anna 76.83 331 *e*P **P** **03 29 31.0 +1.0**
EKA Eskdalemuir Ar 76.90 346 P **P** **03 29 32.0 +1.8**
comp=Z,1.8nm,0.6s,baz=22,slow=5.0,SNR=9.8
comp=Z,1.8nm,0.6s
KRLC Kraliky 76.92 333 *e*P **P** **03 29 31.4 +0.9**
KRLC Kraliky 76.92 333 *e*P **P** **03 29 31.4 +0.9**
ARPR Arapgir-MALATY 76.95 313 P **P** **03 29 32.1 +1.1**
CLL Collm 76.98 336 *i* P **P** **03 29 30.2 -0.5**
CLL pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 76.98 336 *i* P **P** **03 29 30.2 -0.5**
comp=Z,3.0nm,0.6s
TPGR Topolog 77.01 323⇓ P **P** **03 29 32.5 +1.4**
TURR Turia 77.01 325⇑ P **P** **03 29 32.5 +1.4**
MARD Mardin 77.03 311 P **P** **03 29 32.8 +1.4**
MARD IAmb IAmb 03 29 35.8
comp=Z,6.8nm,0.8s
OZUR 77.07 325⇓ P **P** **03 29 32.9 +1.5**
BISRR Bisoca 77.15 324 P **P** **03 29 32.2 +0.3**
comp=Z,16nm,1.0s
HSKC Hora Svate Kat 77.47 335 *e*P P 03 29 40.9 +7.3
MLR Muntele Rosu 77.51 325 **P** **03 29 34.5 +0.5**
MLR IAmb IAmb 03 29 51.1
comp=Z,7.5nm,1.2s
MLR Muntele Rosu 77.51 325⇑ P **P** **03 29 35.4 +1.5**
MLR Muntele Rosu 77.51 325 P **P** **03 29 34.5 +0.5**
MLR pmax pmax
comp=Z,7.0nm,1.2s
MLR Muntele Rosu 77.51 325 P **P** **03 29 34.2 +0.2**
comp=Z,4.9nm,0.6s
VRAC Vranov 77.64 332 LR LR 04 08 55.2
comp=Z,60nm,18.4s,baz=30,slow=40
ILGA Ilgaz 77.69 318 **P** **03 29 35.4 +0.2**
TX31 Lajitas Ar. Si 77.87 60 P **P** **03 29 35.7 -0.5**
TXAR Lajitas Array 77.87 60 P **P** **03 29 36.0 -0.2**
TXAR Lajitas Array 77.87 60 P **P** **03 29 35.2 -1.0**
comp=Z,0.8nm,0.5s,baz=305,slow=4.4,SNR=6.4
comp=Z,0.8nm,0.5s
ARR Arges 78.13 326⇓ P **P** **03 29 39.1 +1.8**
MODS Modra-Piesok 78.23 332 *e*P **P** **03 29 39.1 +1.3**
MODS pmax pmax
comp=Z,11nm,1.2s
MODS Modra-Piesok 78.23 332 *e*P **P** **03 29 39.1 +1.3**
ZST Bratislava 78.45 332 *e*PP PP 03 32 32.6 -3.1
KHC Kaspersky Hory 78.74 334 P **P** **03 29 41.3 +0.7**
KHC IAmb IAmb 03 29 42.4
comp=Z,4.6nm,0.9s
KHC Kasperske Hory 78.74 334 *e*P **P** **03 29 41.0 +0.3**
KHC Kasperske Hory 78.74 334 *e*P **P** **03 29 41.0 +0.3**
KHC Kasperske Hory 78.74 334 P **P** **03 29 40.9 +0.3**
BR131 Keskin Array S 78.77 317 **P** **03 29 41.9 +0.8**
BR131 Keskin Array S 78.77 317⇓ *e*P **P** **03 29 42.3 +1.2**
BRTR Keskin Array B 78.77 317 **P** **03 29 41.0 -0.1**
BRTR Keskin Array B 78.77 317 P **P** **03 29 41.3 +0.2**
comp=Z,2.2nm,1.0s,baz=58,slow=3.1,SNR=12
comp=Z,2.2nm,1.0s
BRTR Keskin Array B 78.77 317 *i* P **P** **03 29 42.9 +1.8**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
SURR Surduc 78.77 327⇑ P **P** **03 29 38.9 -1.9**
BR106 Keskin Array S 78.77 317 P **P** **03 29 41.8 +0.7**
comp=Z,2.9nm,1.0s
BR104 Keskin Array S 78.78 317 P **P** **03 29 41.9 +0.8**
comp=Z,2.9nm,1.0s
BR105 Keskin Array S 78.78 317 P **P** **03 29 41.9 +0.7**
comp=Z,3.3nm,1.1s
GZR Gura Zlata 78.83 327⇓ P **P** **03 29 41.5 +0.3**
GZR Gura Zlata 78.83 327⇓ P **P** **03 29 41.5 +0.3**
GERES GERESS Array B 78.96 334 P **P** **03 29 42.4 +0.5**
comp=Z,1.1nm,0.7s,baz=38,slow=5.0,SNR=8.3
comp=Z,1.1nm,0.7s
CONA Conrad Observa 79.09 332 *e*pP **P** **03 29 43.9 +1.3**
comp=Z,2.4nm,0.6s
RONA Rosalia, Austr 79.14 332 *e*pP **P** **03 29 44.5 +1.7**
comp=Z,1.6nm,0.5s
SOKA Soboth 80.45 332 *e*pP **P** **03 29 51.2 +1.1**
comp=Z,3.5nm,0.9s
LESA Schwarzleotal 80.54 334 *e*pP **P** **03 29 52.0 +1.5**
comp=Z,4.2nm,0.7s
KBA Koelnbreinsper 80.64 333 *e*pP **P** **03 29 52.7 +1.6**
comp=Z,4.7nm,0.6s
WATA Walderalm 80.95 335 *e*pP **P** **03 29 54.5 +1.8**
comp=Z,4.5nm,0.6s
WTTA Wattenberg 81.00 334 *e*pP **P** **03 29 54.7 +1.6**
comp=Z,6.0nm,0.6s
MOTA Moosalm 81.08 335 *e*pP **P** **03 29 54.9 +1.4**
comp=Z,6.5nm,1.0s
SQTA Sankt Quirin 81.16 335 *e*pP **P** **03 29 55.7 +1.9**
comp=Z,3.0nm,0.7s
FETA Feichten 81.48 335 *e*PcP **P** **03 29 58.0 +2.4**
comp=Z,1.1nm,0.6s
MMAI Mount Meron Ar 83.14 311 P **P** **03 30 05.8 +1.4**
comp=Z,2.9nm,0.5s,baz=28,slow=5.7,SNR=8.7
comp=Z,2.9nm,0.5s
LPAZ La Paz 134.70 63 **PKPdf** **03 36 57.4 -0.4**
LPAZ La Paz 134.70 63 PKP **PKPdf** **03 36 58.3 +0.4**
comp=Z,0.5nm,0.4s,baz=217,slow=5.1,SNR=2.5
LPAZ La Paz 134.70 63 PKIKP **PKPdf** **03 36 57.4 -0.4**
PLCA Paso Flores 148.24 96 **PKPbc** **03 37 24.1 +0.2**
PLCA Paso Flores 148.24 96 PKPbc **PKiKP** **03 37 24.9 -0.7**
comp=Z,2.2nm,0.8s,baz=279,slow=3.4,SNR=4.8
PLCA Paso Flores 148.24 96 PKP2 **PKPbc** **03 37 24.1 +0.2**
CPUP Villa Florida 148.84 61 PKPbc **PKPbc** **03 37 25.9 +0.1**
comp=Z,0.2nm,0.4s,baz=164,slow=3.8,SNR=3.7
SNAA Sanae 151.95 196 PKPbc **PKPbc** **03 37 31.6 -0.4**
comp=Z,0.9nm,0.8s,baz=33,slow=24,SNR=4.1

*DSN **07** 03:20:32.6± 1.3, 27.30N×55.02E, h15km, ML3.0/8, Error ellipse: s-maj=16.0km s-min=6.7km az=13.0*
*TEH **07** 03:20:33.5, 27.18N×55.07E, h20km± 17km*
ISC 07 03:20:34.1±1.0, **27.17N**±0.04×**55.12E**±0.04, **h17**km, **n26, s18/28, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.83**	**307**	Pg	**Pb**	**03 20 48.5**	**-1.7**
BNDS	**Bandar-Abbas**	**0.96**	**76**	Pg	**Pn**	**03 20 52.8**	**-0.2**
GENO	**Geno**	**0.96**	**76**	Pg	**Pn**	**03 20 52.8**	**-0.2**
GENO				Sg	**Sn**	**03 21 07.8**	**+1.4**
IBND	**Bandar-abas**	**1.29**	**77**	Pg	**Pg**	**03 20 58.6**	**-0.4**
SHME	**Shamm**	**1.44**	**141**	P	**Pg**	**03 21 00.7**	**-1.2**
SHME				S	**Sg**	**03 21 21.3**	**+0.6**
BANOM	**Banah**	**1.63**	**139**	P	**Pb**	**03 21 02.6**	**-1.2**
LMD1	**Lamerd**	**1.75**	**276**	Pg	**Pn**	**03 21 05.4**	**+1.7**
JHRM	**Jahrom**	**1.91**	**314**	Pn	**Pn**	**03 21 06.8**	**+0.8**
MSFE	**Esma-Masafi**	**2.03**	**152**	P	**Pn**	**03 21 08.6**	**+1.0**
MDH	**Madha**	**2.14**	**150**	P	**Pn**	**03 21 09.4**	**+0.3**
NAZ	**Nazwa, Dubai**	**2.23**	**167**	P	**Pn**	**03 21 11.8**	**+1.5**
KHNJ	**Kahnooj**	**2.42**	**71**	Pn	**Pn**	**03 21 13.6**	**+0.7**
UOSS	**Minazif**	**2.42**	**156**	Pn	**Pn**	**03 21 14.2**	**+1.3**
UOSS	**Minazif**	**2.42**	**156**	P	**Pn**	**03 21 13.7**	**+0.8**
HATD	**Hatta, Dubai**	**2.51**	**159**	P	**Pn**	**03 21 15.6**	**+1.4**
ASHO	**Ashiyiah**	**2.62**	**161**	P	**Pn**	**03 21 16.1**	**+0.4**
NGRK	**Negar Kerman**	**2.84**	**30**	Pn	**Pn**	**03 21 19.6**	**+0.6**
KRBR	**Kerman**	**3.15**	**27**	Pn	**Pn**	**03 21 24.6**	**+1.4**
KHGB	**Koh Gabri**	**3.41**	**20**	Pn	**Pn**	**03 21 27.9**	**+1.2**
CHMN	**Cheshme madani**	**3.42**	**38**	Pn	**Pn**	**03 21 29.0**	**+2.0**
KBAM	**BAM**	**3.53**	**56**	Pn	**Pn**	**03 21 29.4**	**+1.1**
ZRDN	**Zarand Kerman**	**3.98**	**18**	Pn	**Pn**	**03 21 35.5**	**+1.0**
IMEH	**Mehriz**	**4.23**	**354**	Pn	**Pn**	**03 21 38.9**	**+0.9**
IBAF	**Bafgh**	**4.42**	**5**	Pn	**Pn**	**03 21 40.9**	**+0.3**
KLNJ	**Kolanjah**	**4.92**	**322**	Pn	**Pn**	**03 21 48.0**	**+0.4**
SRVN	**Saravan**	**6.48**	**86**	Pn	**Pn**	**03 22 10.8**	**+2.0**

IDC 07 03:22:42.3±1.8, 51°.61N×82°.56E, h0km, mbtmp2.4/2, ML2.0/2, Error ellipse: s-maj=19.6km s-min=16.2km az=145.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**2.72**	**29**	Pn	Pn	03 23 26.8	-0.4
	0.7nm,0.3s,baz=218,slow=15,SNR=4.8						
ZALV				Sn	Sn	03 24 01.0	+0.3
	0.6nm,0.3s,baz=221,slow=26,SNR=2.7						
	1.2nm,0.3s						
I46RU	**ZALESOVO INFRA**	**2.72**	**29**	I	I	03 37 19.6	
	baz=207,slow=317,SNR=2.9						
KURBB	**Kurchatov Arra**	**2.73**	**250**	Pg	Pb	03 23 31.4	-0.4
	0.1nm,0.3s,baz=69,slow=16,SNR=1.6						
KURBB				Lg	Lg	03 24 06.2	
	0.2nm,0.3s,baz=74,slow=35,SNR=2.5						
MKAR	**Makanchi Array**	**4.82**	**182**	Pn	Pn	03 23 57.4	+1.3
	0.2nm,0.3s,baz=2.8,slow=10,SNR=4.4						
MKAR				Lg	Lg	03 25 14.7	
	0.2nm,0.3s,baz=5.0,slow=29,SNR=5.2						
	0.4nm,0.5s						

TRN 07 03:32:08.9, 17°.46N×61°.16W, h11km, MD3.5, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.64**	**289**	*eP*	Pn	03 32 24.4	+0.6
ANWB				*eS*	Sn	03 32 34.4	+0.4
DSDZ	**La Diserade, G**	**1.14**	**176**	*eP*	Pg	03 32 31.8	+1.0
DSDZ				*eS*	Sn	03 32 49.6	+3.3
MBFL	**Flemmings, Mon**	**1.23**	**235**	*eP*	Pg	03 32 33.6	+1.1
MBFL				*eS*	Sn	03 32 51.6	+3.0
DHSZ	**Broadband at M**	**1.31**	**207**	*eP*	Pg	03 32 35.5	+1.3
DHSZ				*eS*	Sg	03 32 53.9	+2.7
ATGZ	**Broadband at L**	**1.46**	**202**	*eP*	Pg	03 32 37.2	+0.2
ATGZ				*eS*	Sg	03 32 58.2	+2.3
MMLZ	**Guadeloupe Bro**	**1.49**	**199**	*eP*	Pg	03 32 38.0	+0.6
MMLZ				*eS*	Sg	03 32 58.4	+1.6
SKI	**Saint Kitts**	**1.52**	**266**	*eP*	Pg	03 32 37.7	-0.3
SKI				*eS*	Sg	03 32 59.7	+1.9
TBG	**Guadaloupe-3**	**1.66**	**197**	*eP*	Pb	03 32 39.0	-0.5
TBG				*eS*	Sg	03 33 02.3	-0.1
DWS	**Wesley**	**1.88**	**185**	*eS*	Sb	03 33 07.7	+0.9
DSLB	**Salisbury**	**2.02**	**187**	*eP*	Pb	03 32 45.4	-0.3
DSLB				*eS*	Sb	03 33 11.6	+0.7

*KRNET **07** 03:32:35.2±0.1, 41°.12N×76°.28E, h15km, mb3.3*
*SOME **07** 03:32:35.3, 41°.12N×76°.43E, h10km*
*NNC **07** 03:32:36.5±1.6, 41°.12N×76°.36E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=11.9km s-min=6.7km az=168.0*
*KNET **07** 03:32:38.6±0.5, 41°.30N×76°.15E, h0km, ml2.8, Error ellipse: s-maj=3.8km s-min=2.5km az=137.0*
ISC 07 03:32:34.7±1.2, 41°.09N±0°.04×76°.25E±0°.03, h17km±10km, n50, σ1°39/78, 28C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**0.46**	**266**	⇑*iP*	**Pg**	**03 32 44.2**	**+0.2**
JNKS				⇑*iS*	**Sg**	**03 32 51.2**	**+0.9**
ULHL	**Ulahol**	**1.15**	**360**	⇑P	**Pb**	**03 32 56.5**	**+0.2**
	25nm,0.1s,SNR=69						
ULHL				⇓S	**Sb**	**03 33 11.2**	**+0.1**
	143nm,0.1s						
ULHL	**Ulahol**	**1.15**	**360**	⇑*iP*	**Pb**	**03 32 56.5**	**+0.2**
ULHL				⇑*iS*	**Sg**	**03 33 11.5**	**-0.7**
KDJ	**Kajisay**	**1.25**	**33**	⇑*iP*	**Pb**	**03 32 58.1**	**+0.2**
KDJ				⇑*iS*	**Sn**	**03 33 14.2**	**+0.1**
TARG	**Taragay, Kyrgy**	**1.33**	**61**	⇓*iP*	**Pb**	**03 32 59.5**	**+0.1**
TARG				⇓*iS*	**Sn**	**03 33 16.8**	**+0.4**
BOOM	**Boomskoye usch**	**1.42**	**351**	⇑*iP*	**Pb**	**03 33 01.3**	**+0.5**
BOOM				⇑*iS*	**Sg**	**03 33 20.1**	**-0.4**
ARLS	**Aral**	**1.64**	**299**	⇑*eP*	**Pb**	**03 33 05.7**	**+1.1**
ARLS				⇑*iS*	**Sg**	**03 33 27.7**	**0.0**
UCH	**Uchtor**	**1.73**	**312**	⇑P	**Pb**	**03 33 07.6**	**+1.4**
	21nm,0.2s,SNR=25						
UCH				⇓S	**Sg**	**03 33 31.1**	**+0.6**
	83nm,0.3s						
KBK	**Karagaybulak**	**1.84**	**328**	⇓P	**Pg**	**03 33 10.1**	**0.0**
	26nm,0.1s,SNR=8.9						
KBK				⇓S	**Sg**	**03 33 34.5**	**+0.4**
	198nm,0.3s						
SALK	**Salom-Alik**	**1.85**	**264**	⇑*eP*	**Pb**	**03 33 09.5**	**+1.3**
SALK				⇑*eS*	**Sg**	**03 33 34.8**	**+0.4**
TKM2	**Tokmak 2**	**1.89**	**345**	⇑P	**Pg**	**03 33 10.3**	**-0.8**
	20nm,0.1s,SNR=70						
TKM2				⇑S	**Sg**	**03 33 35.5**	**-0.2**
	70nm,0.1s						
KST	**Kastek**	**1.96**	**354**	Pg	**Pg**	**03 33 12.0**	**-0.3**
	15nm,0.2s						
KST				Lg	Lg	03 33 38.2	
	148nm,0.2s						
KST	**Kastek**	**1.96**	**354**	*eP*	**Pg**	**03 33 12.1**	**-0.3**
	15nm,0.2s						
KST				*eS*	**Sg**	**03 33 38.2**	**+0.3**
	148nm,0.2s						
TNSS	**Tian-Shan**	**2.01**	**15**	Pg	**Pb**	**03 33 12.0**	**+0.9**
	5.7nm,0.2s						
TNSS				Lg	Lg	03 33 39.0	
	12nm,0.2s						
TNSS	**Tian-Shan**	**2.01**	**15**	*eP*	**Pb**	**03 33 12.0**	**+0.9**
	5.7nm,0.2s						
TNSS				*eS*	**Sg**	**03 33 39.0**	**-0.6**
	12nm,0.2s						
AAK	**Ala-Archa**	**2.03**	**320**	⇓P	**Pg**	**03 33 13.2**	**-0.4**
	34nm,0.3s,SNR=25						
AAK				⇑S	**Sg**	**03 33 39.4**	**-0.6**
	45nm,0.3s						
AAK	**Ala-Archa**	**2.03**	**320**	⇑Pn	**Pg**	**03 33 13.4**	**-0.2**
	9.7nm,0.5s						
AAK				⇑Sn	**Sg**	**03 33 40.0**	**0.0**
	14nm,0.6s						
MTBS	**Maitube**	**2.04**	**4**	Pg	**Pg**	**03 33 13.1**	**-0.8**
	17nm,0.3s						
MTBS				Lg	Lg	03 33 40.4	
	47nm,0.3s						
MTBS	**Maitube**	**2.04**	**4**	*eP*	**Pg**	**03 33 13.1**	**-0.8**
	17nm,0.3s						
MTBS				*eS*	**Sg**	**03 33 40.4**	**0.0**
	47nm,0.3s						
PRZ	**Przheval'sk**	**2.12**	**48**	⇓*eP*	**Pb**	**03 33 12.9**	**+0.1**
PRZ				⇓*eS*	**Sb**	**03 33 39.8**	**+0.8**
MDOK	**Medeo**	**2.15**	**16**	Pg	**Pb**	**03 33 14.4**	**+1.1**
	15nm,0.3s						
MDOK				Lg	Lg	03 33 42.6	
	20nm,0.4s						
KNDC	**Almaty**	**2.19**	**14**	⇑Pn	**Pb**	**03 33 15.2**	**+1.3**
	30nm,0.3s						
KNDC				⇑Sn	**Sg**	**03 33 45.0**	**-0.1**
	64nm,0.3s						
CHMS	**Chumysh**	**2.21**	**330**	⇓P	**Pg**	**03 33 16.4**	**-0.7**
	9.1nm,0.1s,SNR=12						
CHMS				⇑S	**Sg**	**03 33 45.6**	**-0.2**
	37nm,0.1s						
SFK	**Sufi-Kurgan**	**2.36**	**244**	⇑*eP*	**Pb**	**03 33 16.8**	**0.0**
SFK				⇑*eS*	**Sb**	**03 33 46.7**	**+1.0**
EKS2	**Erkin-Say**	**2.43**	**311**	⇑P	**Pb**	**03 33 19.8**	**+1.8**
	8.7nm,0.2s,SNR=14						
EKS2				⇑S	**Sg**	**03 33 51.1**	**-1.6**
	22nm,0.2s						
USP	**Ospenovka**	**2.54**	**330**	⇑P	**Pb**	**03 33 21.2**	**+1.4**
	16nm,0.2s,SNR=16						
SATY	**Saty**	**2.54**	**38**	Pg	**Pb**	**03 33 20.6**	**+0.8**
	30nm,0.4s						
SATY				Lg	Lg	03 33 53.3	
	41nm,0.2s						
KRBS	**Karabastau**	**2.64**	**351**	Pg	**Pg**	**03 33 23.8**	**-1.4**
	35nm,0.3s						
KRBS				Lg	Lg	03 33 58.8	
	66nm,0.4s						
KTBS	**Karatobe**	**2.64**	**7**	Pg	**Pg**	**03 33 23.5**	**-1.8**
	18nm,0.3s						
KTBS				Lg	Lg	03 33 58.2	
	31nm,0.3s						
KURS	**Kuram**	**2.79**	**30**	Pg	**Pb**	**03 33 24.6**	**+0.6**
	7.1nm,0.3s						
KURS				Lg	Lg	03 34 00.2	
	21nm,0.2s						
MRKS	**Merke**	**2.80**	**307**	Pg	**Pb**	**03 33 26.6**	**+2.2**
	9.6nm,0.5s						
MRKS				Lg	Lg	03 34 03.5	
	24nm,0.4s						
MRKS	**Merke**	**2.80**	**307**	*eP*	**Pb**	**03 33 26.6**	**+2.2**
	9.6nm,0.5s						
MRKS				*eS*	**Sg**	**03 34 03.5**	**-1.2**
	24nm,0.4s						
KUU	**Kurty**	**2.80**	**1**	Pg	**Pb**	**03 33 26.4**	**+2.1**
	7.4nm,0.1s						
KUU				Lg	Lg	03 34 03.2	
	90nm,0.3s						
KUU	**Kurty**	**2.80**	**1**	*eP*	**Pb**	**03 33 26.4**	**+2.1**
	7.4nm,0.1s						
KUU				*eS*	**Sg**	**03 34 03.2**	**-1.5**
	90nm,0.3s						
CHKK	**Chushkaly**	**2.81**	**11**	Pg	**Pb**	**03 33 26.3**	**+1.8**
	11nm,0.5s						
CHKK				Lg	Lg	03 34 02.8	
	41nm,0.2s						
CHKK	**Chushkaly**	**2.81**	**11**	*eP*	**Pb**	**03 33 26.3**	**+1.8**
	11nm,0.5s						
CHKK				*eS*	**Sg**	**03 34 02.8**	**-2.3**
	41nm,0.2s						
UZB	**Uzynbulak**	**2.91**	**44**	Pg	**Pb**	**03 33 26.1**	**-0.1**
	38nm,0.4s						
UZB				Lg	Lg	03 34 03.0	
	20nm,0.4s						
UZB	**Uzynbulak**	**2.91**	**44**	*eP*	**Pb**	**03 33 26.1**	**-0.1**
	38nm,0.4s						
UZB				*eS*	**Sb**	**03 34 03.0**	**+1.4**
	20nm,0.4s						
KPKS	**Kokpek**	**2.98**	**36**	Pg	**Pb**	**03 33 28.4**	**+1.1**
	9.3nm,0.4s						
KPKS				Lg	Lg	03 34 06.7	
	29nm,0.5s						
SHLS	**Shalkode**	**3.15**	**48**	Pg	**Pg**	**03 33 35.2**	**0.0**
	5.0nm,0.3s						
SHLS				Lg	Lg	03 34 18.5	
	25nm,0.5s						
SHLS	**Shalkode**	**3.15**	**48**	*eP*	**Pg**	**03 33 35.2**	**0.0**
	5.0nm,0.3s						
SHLS				*eS*	**Sg**	**03 34 18.5**	**+2.4**
	25nm,0.5s						
PDGK	**Podgornoye**	**3.28**	**46**	⇓Pn	**Pb**	**03 33 30.7**	**-1.8**
	4.9nm,0.5s						
PDGK				⇑Lg	Lg	03 34 23.0	
	21nm,0.7s						
ARXS	**Arharly**	**3.33**	**20**	Pg	**Pb**	**03 33 35.0**	**+1.7**
	5.5nm,0.3s						
ARXS				Lg	Lg	03 34 18.1	
	25nm,0.2s						
ARXS	**Arharly**	**3.33**	**20**	*eP*	**Pb**	**03 33 35.0**	**+1.7**
ARXS				*eS*	**Sg**	**03 34 18.1**	**-3.5**
BLB	**Baldybastay**	**3.42**	**28**	Pg	**Pb**	**03 33 36.7**	**+1.8**
	4.9nm,0.1s						
BLB				Lg	Lg	03 34 20.7	
	25nm,0.4s						
KNOS	**Konyrlen**	**3.91**	**32**	Pg	**Pb**	**03 33 45.4**	**+2.1**
	2.2nm,0.5s						
KNOS				Lg	Lg	03 34 35.5	
	4.8nm,0.3s						
KK31	**Karatay Array**	**4.72**	**297**	⇓Pg	**Pg**	**03 34 02.9**	**-2.2**
	0.5nm,0.3s,baz=115,slow=15,SNR=11						
KK31				⇓Lg	Lg	03 35 04.6	
	5.2nm,0.6s,baz=116,slow=28,SNR=7.7						
IUG	**Iuzhnay**	**4.78**	**285**	Pg	**Pg**	**03 34 04.3**	**-2.0**
	4.7nm,0.7s						
IUG				Lg	Lg	03 35 07.9	
	17nm,0.4s						
BRLS	**Borolday**	**5.16**	**294**	Pg	**Pg**	**03 34 09.9**	**-3.4**
	1.8nm,0.6s						
BRLS				Lg	Lg	03 35 17.6	
	2.8nm,0.6s						
BRLS	**Borolday**	**5.16**	**294**	*eP*	**Pg**	**03 34 09.9**	**-3.4**
	1.8nm,0.6s						
BRLS				*eS*	**Sg**	**03 35 17.6**	**-2.5**
	2.8nm,0.6s						

*AEIC **07** 03:37:10.1±1.6, 52°.66N±0°.03×168°.74W±0°.07, h46km±8km, Error ellipse: s-maj=7.1km s-min=0.7km az=121.0*
NEIC 07 03:37:09.8±1.6, 52°.64N±0°.09×168°.81W±0°.10, h60km±10km, mb3.7/22, ML3.7/16, ML3.1(AEIC), Error ellipse: s-maj=14.7km s-min=4.3km az=148.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.34**	**355**		Pn	03 37 19.4	-0.8
NIKH					Sn	03 37 26.5	-1.2
NIKH				IAML		03 37 27.2	
	comp=E,5μm,0.3s						
CLCO	**Concord Point,**	**0.58**	**285**		Pn	03 37 22.6	+0.1
CLCO					Sn	03 37 32.2	+0.3
CLES	**Cleveland East**	**0.69**	**286**		Pn	03 37 24.1	+0.2
CLES				IAML		03 37 37.4	
	comp=N,5μm,0.2s						
CLES	**Cleveland East**	**0.69**	**286**		Sn	03 37 35.2	+1.0
OKTU	**Okmok Mt. Tuli**	**0.88**	**31**		Pn	03 37 26.0	-0.3
OKCE	**Okmok Cone E**	**0.88**	**26**		Pn	03 37 25.9	-0.5
OKNC	**Okmok New Cone**	**0.92**	**26**		Pn	03 37 26.7	-0.1
OKNC					Sn	03 37 40.2	+0.8
OKFG	**Magazine Ridge**	**0.95**	**35**		Pn	03 37 26.8	-0.4
MGOD	**Makushin Gods**	**1.64**	**44**		Pn	03 37 36.2	-0.3
MREP	**Makushin Rep't**	**1.71**	**46**		Pn	03 37 37.3	0.0
MSW	**Makushin Switc**	**1.77**	**43**		Pn	03 37 38.0	-0.1
MSW					Sn	03 37 58.9	-0.6
MNAT	**Makushin Natee**	**1.79**	**45**		Pn	03 37 38.4	0.0
UNV	**Unalaska Vale**	**1.84**	**48**		Pn	03 37 39.3	+0.3
UNV				IAML		03 38 02.4	
	comp=N,313nm,0.4s						
UNV				IAML		03 38 02.5	
	comp=E,178nm,0.3s						
UNV	**Unalaska Valle**	**1.84**	**48**		Sn	03 38 01.2	0.0
AKMO	**Akutan Morgan**	**2.22**	**48**		Pn	03 37 44.7	+0.5
ZRO	**Akutan Zero**	**2.24**	**48**		Pn	03 37 44.8	+0.4
LVA	**Lava Point**	**2.26**	**46**	Pn	Pn	03 37 45.6	+0.9
LVA				IAML		03 38 16.2	
	comp=N,411nm,0.7s						
LVA				IAML		03 38 24.2	
	comp=E,172nm,0.7s						
AKBBA	**Akutan Broad B**	**2.26**	**49**		Pn	03 37 45.5	+0.7
AKV	**Akutan Volcano**	**2.27**	**48**		Pn	03 37 45.5	+0.6
AHB	**Akutan Harbor**	**2.33**	**49**		Pn	03 37 46.5	+0.8
AKUT	**Akutan**	**2.36**	**49**	Pn	Pn	03 37 47.0	+0.9
ATKA	**Atka Island**	**3.33**	**265**	Pn	Pn	03 38 00.8	+1.5
FALS	**False Pass**	**3.90**	**53**	Pn	Pn	03 38 07.5	+0.5
FALS				IAML		03 39 08.7	
	comp=N,205nm,0.7s						
FALS				IAML		03 39 09.3	
	comp=E,182nm,0.9s						
SPIA	**Saint Paul Isl**	**4.62**	**350**		Pn	03 38 17.4	+0.4
SDPT	**Sand Point**	**5.62**	**58**	Pn	Pn	03 38 30.9	+0.3
O14K	**Tigyukauivet M**	**7.86**	**30**	Pn	Pn	03 39 02.6	+1.2
M11K	**Mekoryuk**	**7.90**	**9**	Pn	Pn	03 39 02.6	+0.8
N14K	**Kuskokwak Cree**	**8.30**	**26**	Pn	Pn	03 39 08.8	+1.5
M14K	**Bethel**	**8.96**	**22**	Pn	Pn	03 39 18.4	+2.1
L14K	**Kuka Creek**	**9.34**	**18**	Pn	Pn	03 39 23.6	+2.1
N17K	**Nushagak Hills**	**10.16**	**34**	Pn	Pn	03 39 33.9	+1.1
K15K	**Wolf Creek Mou**	**10.44**	**19**	Pn	Pn	03 39 38.0	+1.6
K17K	**Iditarod**	**11.54**	**25**	Pn	Pn	03 39 52.1	+0.5
L18K	**Granite Mounta**	**11.59**	**29**	Pn	Pn	03 39 51.9	-0.3
M24K	**Tolsona, Glenn**	**15.37**	**43**	Pn	Pn	03 40 39.2	-3.6
MLY	**Manley**	**15.46**	**30**		Pn	03 40 45.5	+1.6
MLY				IAmb	IAmb	03 41 25.7	
	comp=Z,5.8nm,1.4s						
CCB	**Clear Creek Bu**	**16.15**	**34**	Pn	Pn	03 40 50.8	-1.7
H23K	**Yukon River**	**16.38**	**29**		P	03 40 56.5	-0.9
H23K				IAmb	IAmb	03 41 13.9	
	comp=Z,6.2nm,1.5s						
L26K	**Log Cabin Wild**	**16.96**	**42**	Pn	Pn	03 41 02.2	-0.6
L26K				IAmb	IAmb	03 41 11.6	
	comp=Z,8.7nm,1.4s						
J25K	**Salcha River,**	**16.98**	**36**	Pn	Pn	03 41 01.1	-1.9
YKU2	**Yakutat**	**17.55**	**55**		P	03 41 10.3	0.0
J26L	**Joseph Creek**	**17.58**	**38**		Pn	03 41 09.2	-1.1
I26K	**Coal Creek Min**	**18.15**	**36**	P	P	03 41 14.2	-2.6
I26K				IAmb	IAmb	03 41 48.6	
	comp=Z,9.3nm,1.4s						
F25K	**Christian Rive**	**18.73**	**28**	P	P	03 41 21.8	-1.4
HYT	**Haines Junctio**	**18.87**	**52**	Pn	Pn	03 41 26.1	0.0
BMAR	**Burnt Mountain**	**18.93**	**29**	P	P	03 41 24.7	-0.8
DAWY	**Dawson**	**19.00**	**42**	P	P	03 41 25.0	-1.3
DAWY				IAmb	IAmb	03 41 35.3	
	comp=Z,5.1nm,1.3s						
E25K	**Arctic Village**	**19.10**	**27**	P	P	03 41 27.1	-0.3
L29M	**L29M**	**19.18**	**45**	P	P	03 41 28.3	0.0
L29M				IAmb	IAmb	03 41 33.9	
	comp=Z,9.5nm,1.5s						
F26K	**Sheenjek River**	**19.23**	**29**	P	P	03 41 28.0	-0.7
F26K				IAmb	IAmb	03 42 08.7	
	comp=Z,5.3nm,1.4s						
I28M	**Miner Creek**	**19.39**	**37**	P	P	03 41 28.3	-2.2
I28M				IAmb	IAmb	03 41 35.8	
	comp=Z,7.7nm,1.3s						
H29M	**Whitestone**	**20.32**	**36**	P	P	03 41 38.6	-1.9
H29M				IAmb	IAmb	03 41 43.3	
	comp=Z,4.2nm,0.9s						
F28M	**Old Crow**	**20.50**	**32**	P	P	03 41 41.0	-1.6
F28M				IAmb	IAmb	03 41 53.2	
	comp=Z,6.5nm,1.5s						
C27K	**Jago River**	**20.62**	**25**	P	P	03 41 43.7	-0.1
C27K				IAmb	IAmb	03 41 47.9	
	comp=Z,4.4nm,1.2s						
I30M	**Mount Dempster**	**20.65**	**40**	P	P	03 41 42.4	-1.8
I30M				IAmb	IAmb	03 41 45.0	
	comp=Z,4.8nm,1.4s						
G29M	**Pine Creek**	**20.76**	**35**	P	P	03 41 43.7	-1.6
H31M	**Peel River**	**21.65**	**39**	P	P	03 41 52.5	-2.3

ROM 07 03:38:04.1±0.1, 41°.779N±0°.003×13°.601E±0°.004, h13km, ML1.0/12, 3C-1D, Error ellipse: s-maj=0.3km s-min=0.0km az=248.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VVLD	**Villa Vallelon**	**0.09**	**10**	⇓P	Pg	03 38 07.4	+0.3
VVLD				S	Sg	03 38 09.6	+0.4
VVLD				AML	AML		
	comp=N,188μm,0.4s						
VVLD				AML	AML		
	comp=E,169μm,0.2s						
VVLD				AML	AML		
	comp=N,188μm,1.6s						
VVLD				AML	AML		
	comp=N,151μm,0.1s						
VVLD				AML	AML		
	comp=E,167μm,0.1s						
POFI	**Posta Fibreno**	**0.10**	**126**	P	Pg	03 38 07.5	+0.3
POFI				S	Sg	03 38 09.7	+0.4
POFI				AML	AML		
	comp=E,54μm,1.5s						
POFI				AML	AML		
	comp=N,48μm,0.3s						
POFI				AML	AML		
	comp=E,54μm,0.5s						
LRP	**Arpino**	**0.13**	**185**	⇑P	Pg	03 38 07.8	+0.4
LRP				S	Sg	03 38 10.6	+0.7
LRP				AML	AML		
	comp=E,138μm,0.7s						
LRP				AML	AML		
	comp=N,134μm,1.4s						
LRP				AML	AML		
	comp=N,134μm,0.6s						
LRP				AML	AML		
	comp=E,138μm,1.3s						
OPI	**Opi**	**0.17**	**91**	P	Pg	03 38 08.4	+0.3
OPI				S	Sg	03 38 11.4	+0.4
GUAR	**Guarcino**	**0.22**	**274**	P	Pg	03 38 09.2	+0.4
GUAR				S	Sb	03 38 13.1	-0.8
LIK	**San Giovanni I**	**0.28**	**187**	P	Pg	03 38 10.3	+0.5
LIK				S	Sb	03 38 15.3	-0.2
PTQR	**Pietraquaria**	**0.28**	**328**	⇑P	Pg	03 38 10.4	+0.3
PTQR				S	Sb	03 38 15.2	-0.7
PTQR				AML	AML		
	comp=E,50μm,0.3s						
PTQR				AML	AML		
	comp=N,23μm,0.2s						
INTR	**Introdacqua**	**0.33**	**44**	⇑P	Pg	03 38 10.8	+0.1
INTR				S	Sg	03 38 15.9	+0.7
INTR				AML	AML		
	comp=N,30μm,0.2s						
INTR				AML	AML		
	comp=E,31μm,0.4s						
MCI	**Monte Cassino**	**0.34**	**151**	P	Pg	03 38 11.1	+0.1
MCI				S	Sb	03 38 16.5	-0.8
CERA	**Filignano**	**0.36**	**120**	P	Pg	03 38 11.4	0.0
CERA				S	Sb	03 38 17.2	-0.9
RNI2	**Rionero Sannit**	**0.42**	**100**	P	Pb	03 38 13.0	-0.5
RNI2				S	Sb	03 38 19.6	-0.2
T0110	**Collepietro**	**0.47**	**16**	P	Pg	03 38 13.5	+0.2
T0110				S	Sb	03 38 20.9	-0.3
CERT	**Cerreto**	**0.49**	**290**	P	Pg	03 38 13.6	-0.2
CERT				S	Sg	03 38 21.1	+0.7

ROM 07 03:39:03.4±0.0, 41°.778N±0°.002×13°.602E±0°.002, h14km, ML2.5/56, 16C-2D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VVLD	**Villa Vallelon**	**0.09**	**9**	⇓P	Pg	03 39 07.0	+0.4
VVLD				S	Sg	03 39 09.2	+0.4
VVLD				AML	AML		
	comp=E,6695μm,0.2s						
VVLD				AML	AML		
	comp=E,6690μm,0.2s						
VVLD				AML	AML		
	comp=N,8340μm,0.3s						
VVLD				AML	AML		
	comp=E,7155μm,0.2s						
VVLD				AML	AML		
	comp=N,8800μm,0.3s						
POFI	**Posta Fibreno**	**0.10**	**126**	⇑P	Pb	03 39 07.0	-0.3
POFI				S	Sg	03 39 09.1	+0.3
POFI				AML	AML		
	comp=E,2065μm,1.5s						
POFI				AML	AML		
	comp=N,2775μm,0.4s						
POFI				AML	AML		
	comp=E,1685μm,1.5s						
POFI				AML	AML		
	comp=N,2230μm,0.4s						
POFI				AML	AML		
	comp=E,2065μm,1.5s						
LRP	**Arpino**	**0.13**	**185**	⇑P	Pb	03 39 07.4	-0.3
LRP				S	Sb	03 39 10.1	-0.5
LRP				AML	AML		
	comp=N,3410μm,1.4s						
LRP				AML	AML		
	comp=E,5005μm,0.3s						
LRP				AML	AML		
	comp=N,3410μm,0.6s						
GUAR	**Guarcino**	**0.22**	**274**	⇑P	Pb	03 39 08.8	-0.4
GUAR				S	Sb	03 39 12.5	-0.6
GUAR				AML	AML		
	comp=N,5025μm,0.3s						
GUAR				AML	AML		
	comp=N,5025μm,1.7s						
GUAR				AML	AML		
	comp=E,1805μm,0.2s						
LIK	**San Giovanni I**	**0.28**	**187**	⇑P	Pb	03 39 09.8	-0.4
LIK				S	Sb	03 39 14.6	-0.1
PTQR	**Pietraquaria**	**0.29**	**328**	⇓P	Pg	03 39 09.9	+0.5
PTQR				S	Sb	03 39 14.6	-0.5
PTQR				AML	AML		
	comp=N,1170μm,0.2s						
PTQR				AML	AML		
	comp=E,2350μm,0.3s						
INTR	**Introdacqua**	**0.33**	**44**	⇑P	Pg	03 39 10.4	+0.3
INTR				S	Sg	03 39 15.4	+0.7
INTR				AML	AML		
	comp=E,1705μm,0.8s						
INTR				AML

CERA				AML	AML			
	comp=E,1255μm,0.4s							
CERA				AML	AML			
	comp=N,984μm,0.3s							
CERA				AML	AML			
	comp=E,1255μm,1.6s							
CERA				AML	AML			
	comp=E,1224μm,1.7s							
CERA				AML	AML			
	comp=N,945μm,0.3s							
RNI2	**Rionero Sannit**	**0.42**	**100**	⇑P	Pb	03 39 12.4	-0.3	
RNI2				S	Sb	03 39 18.6	-0.3	
RNI2				AML	AML			
	comp=E,585μm,1.3s							
RNI2				AML	AML			
	comp=N,748μm,0.7s							
RNI2				AML	AML			
	comp=E,592μm,1.3s							
RNI2				AML	AML			
	comp=N,766μm,0.7s							
RNI2				AML	AML			
	comp=E,585μm,0.7s							
RNI2				AML	AML			
	comp=E,592μm,0.7s							
T0110	**Collepietro**	**0.47**	**16**	⇑P	Pg	03 39 12.8	+0.1	
T0110				S	Sb	03 39 19.9	-0.4	
T0110				AML	AML			
	comp=E,880μm,0.3s							
T0110				AML	AML			
	comp=N,1150μm,1.5s							
FAGN	**Fagnano**	**0.49**	**358**	P	Pg	03 39 13.0	-0.1	
FAGN				S	Sb	03 39 20.4	-0.6	
FAGN				AML	AML			
	comp=E,1905μm,1.6s							
FAGN				AML	AML			
	comp=N,1715μm,0.5s							
FAGN				AML	AML			
	comp=E,1905μm,0.4s							
CERT	**Cerreto**	**0.49**	**290**	⇑P	Pg	03 39 13.2	0.0	
CERT				S	Sb	03 39 20.5	-0.5	
CERT				AML	AML			
	comp=N,1190μm,1.0s							
CERT				AML	AML			
	comp=N,1190μm,1.0s							
CERT				AML	AML			
	comp=E,956μm,0.2s							
RCAV	**Rocca di Cave**	**0.50**	**278**	⇑P	Pg	03 39 13.1	-0.1	
RCAV				S	Sb	03 39 20.5	-0.6	
RCAV				AML	AML			
	comp=E,622μm,1.0s							
RCAV				AML	AML			
	comp=N,662μm,0.3s							
RCAV				AML	AML			
	comp=E,622μm,1.0s							
MIDA	**Miranda**	**0.51**	**105**	⇑P	Pg	03 39 13.3	-0.1	
MIDA				S	Sb	03 39 21.0	-0.5	
MIDA				AML	AML			
	comp=E,480μm,0.3s							
MIDA				AML	AML			
	comp=N,508μm,1.3s							
MIDA				AML	AML			
	comp=E,462μm,0.4s							
MIDA				AML	AML			
	comp=E,462μm,1.6s							
MIDA				AML	AML			
	comp=N,498μm,0.3s							
MIDA				AML	AML			
	comp=N,508μm,0.7s							
LPEL	**Lama dei Pelig**	**0.51**	**58**	⇑P	Pg	03 39 13.2	-0.3	
LPEL				S	Sg	03 39 20.6	+0.3	
LPEL				AML	AML			
	comp=E,464μm,0.2s							
LPEL				AML	AML			
	comp=E,386μm,0.4s							
LATB	**Latina**	**0.56**	**240**	⇑P	Pg	03 39 13.9	-0.4	
LATB				S	Sg	03 39 21.9	+0.2	
LATB				AML	AML			
	comp=E,119μm,1.2s							
LATB				AML	AML			
	comp=N,106μm,0.5s							
LATB				AML	AML			
	comp=E,119μm,0.8s							
LATB				AML	AML			
	comp=N,106μm,1.5s							
AQU	**L'Aquila**	**0.59**	**346**	P	Pg	03 39 14.9	-0.2	
FIAM	**Fiamignano**	**0.61**	**324**	P	Pg	03 39 15.1	-0.3	
VIVA	**Pratoni del Vi**	**0.62**	**268**	P	Pg	03 39 15.4	-0.2	
VIVA				S	Sb	03 39 24.5	-0.2	
VIVA				AML	AML			
	comp=N,1815μm,0.3s							
VIVA				AML	AML			
	comp=E,1270μm,0.4s							
VCEL	**Villa Celiera**	**0.64**	**16**	⇑P	Pg	03 39 16.0	0.0	
VCEL				S	Sb	03 39 25.4	0.0	
VCEL				AML	AML			
	comp=E,700μm,0.3s							
VCEL				AML	AML			
	comp=N,436μm,0.8s							
RDP	**Rocca di Papa**	**0.66**	**269**	P	Pg	03 39 16.4	+0.1	
RDP				S	Sb	03 39 25.9	0.0	
GIGS	**Gran Sasso**	**0.67**	**358**	P	Pg	03 39 16.2	-0.3	
GIGS				S	Sb	03 39 26.3	+0.1	
GIGS				AML	AML			
	comp=E,106μm,1.5s							
GIGS				AML	AML			
	comp=N,98μm,0.6s							
GIGS				AML	AML			
	comp=E,106μm,0.5s							
RMP	**Rome, Mte Porz**	**0.67**	**273**	⇑P	Pg	03 39 16.2	-0.3	
RMP				S	Sb	03 39 26.0	-0.2	
RMP				AML	AML			
	comp=E,638μm,1.4s							
RMP				AML	AML			
	comp=N,576μm,0.2s							
RMP				AML	AML			
	comp=E,638μm,0.6s							
LAV9	**Lanuvio**	**0.68**	**262**	P	Pg	03 39 16.3	-0.4	
MTCE	**Montecelio**	**0.69**	**291**	P	Pg	03 39 16.2	-0.6	
MTCE				S	Sg	03 39 25.7	-0.1	
MTCE				AML	AML			
	comp=E,260μm,1.2s							
MTCE				AML	AML			
	comp=N,196μm,0.6s							
MTCE				AML	AML			
	comp=N,196μm,1.4s							
TRIV	**Trivento**	**0.71**	**91**	P	Pg	03 39 16.8	-0.5	
SAMA	**S.Maria delle**	**0.76**	**271**	P	Pg	03 39 17.5	-0.6	
SAMA				S	Sb	03 39 28.6	+0.1	
CAMP	**Campotosto**	**0.77**	**349**	P	Pg	03 39 18.4	-0.1	
RM33	**Pellescritta (**	**0.79**	**339**	P	Pg	03 39 17.9	-0.8	
TERO	**Teramo**	**0.84**	**0**	P	Pg	03 39 19.1	-0.6	
VITU	**Vitulano (BN)**	**0.97**	**127**	P	Pb	03 39 21.6	-0.6	

*IDC **07** 03:42:27.8±0.9,3.˚86S×104.˚46W,h0km,mb3.7/10, mbtmp3.7/10,MS4.1/42,Error ellipse: s-maj=44.8km s-min=18.7km az=64.0*

*GCMT **07** 03:42:30.9±0.3,3.˚91S±0.˚02×103.˚95W±0.˚02,h12km, MW4.8/102,Moment Tensor Solution. s25,c28; s102,c143; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.14±.07; Mθθ0.49±.06; Mϕϕ-0.62±.07; Mrθ0.57±.20; Mθϕ2.07±.05; Mrϕ0.18±.18; Best double couple: M₀2.22900×10¹⁶ NP1:ϕ₁7.00000°,δ76.00000°, λ173.00000°. NP2:ϕ₂98.00000°,δ83.00000°,λ14.00000°. Principal axes: T 2.2270, Plg15.0000°, Azm323.0000°; N 0.0040, Plg74.0000°, Azm124.0000°; P -2.2300, Plg5.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 03:42:30.9±1.6,4.˚2S±0.˚1×103.˚9W±0.˚2,h10km±1km, mb4.4/43 Error ellipse: s-maj=26.9km s-min=19.4km az=255.0*

ISC 07 03:42:28.7±0.6,**4.˚20S**±0.˚09×**104.˚3W**±0.˚1,**h10**km,**n100, σ2s27/58, mb4.3**/29,**MS4.2**/43,**Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**22.36**	**15**	P	**P**	**03 47 27.5**	**+0.3**
TLIG				IAmb	IAmb	03 47 54.1	
	comp=Z,16nm,1.4s						
RTAL	**Retalhuleu**	**22.42**	**34**	P	**P**	**03 47 26.7**	**-1.1**
CMIG	**Matias Romero**	**23.12**	**24**	LR	LR	03 54 23.7	
	comp=Z,682nm,19.9s,baz=184,slow=31						

RPN	**Rapa Nui**	**23.30**	**191**	LR	LR	03 54 18.6		
	comp=Z,168nm,18.4s,baz=15,slow=30							
VA02	**Isla de Pascua**	**23.35**	**192**	P	**P**	**03 47 35.8**	**-1.6**	
APG	**El Apazote**	**23.51**	**35**	LR	LR	03 54 40.6		
	comp=Z,70nm,19.1s,baz=270,slow=31							
CCIG	**Comitan**	**23.65**	**30**	P	**P**	**03 47 38.0**	**-2.7**	
JTS	**Las Juntas de**	**24.07**	**53**	LR	LR	03 54 26.5		
	comp=Z,1μm,20.8s,baz=264,slow=30							
TGUH	**Tegucigalpa,Un**	**24.80**	**43**	P	**P**	**03 47 49.0**	**-2.3**	
SLOR	**San Lorenzo -**	**26.03**	**83**	P	**P**	**03 48 01.0**	**-1.9**	
SLOR				IAmb	IAmb	03 48 30.4		
	comp=Z,15nm,1.3s							
OTAV	**Otavalo**	**26.23**	**81**	P	**P**	**03 48 01.2**	**-3.5**	
NNA	**Nana**	**28.27**	**108**	LR	LR	03 56 53.2		
	comp=Z,364nm,20.1s,baz=286,slow=30							
LPIG	**La Paz**	**28.72**	**349**	LR	LR	03 56 52.8		
	comp=Z,393nm,20.8s,baz=162,slow=30							
ROSC	**El Rosal**	**31.29**	**74**	LR	LR	03 58 54.4		
	comp=Z,273nm,20.3s,baz=233,slow=32							
TXAR	**Lajitas Array**	**33.34**	**1**	LR	LR	04 00 32.0		
	comp=Z,256nm,21.4s,baz=163,slow=33							
VHRN	**Van Horn**	**34.79**	**359**	P	**P**	**03 49 22.9**	**+3.1**	
VHRN				IAmb	IAmb	03 49 27.0		
	comp=Z,5.7nm,1.4s							
RKT	**Rikitea**	**35.08**	**235**	*e*LR	LR	03 58 45.5		
	comp=Z,3μm,27.5s							
MNTX	**Cornudas Mount**	**35.71**	**358**		**P**	**03 49 29.9**	**+2.3**	
TAOE	**Nuku Hiva Isla**	**35.88**	**261**	*e*LR	LR	03 59 07.2		
	comp=Z,469nm,24.1s							
SDV	**Santo Domingo**	**36.02**	**69**	LR	LR	04 01 32.8		
	comp=Z,376nm,20.3s,baz=248,slow=32							
SGCY	**Sterling City**	**36.04**	**5**		**P**	**03 49 32.0**	**+1.5**	
SGCY				IAmb	IAmb	03 49 35.4		
	comp=Z,10nm,1.0s							
PB16	**IPOC Station P**	**36.83**	**115**		**P**	**03 49 36.5**	**-1.4**	
PB16				IAmb	IAmb	03 49 51.6		
	comp=Z,11nm,1.0s							
PLPT	**Palo Pinto**	**37.24**	**8**	P	**P**	**03 49 42.2**	**+1.5**	
LPAZ	**La Paz**	**37.51**	**111**	P	**P**	**03 49 41.6**	**-2.3**	
LPAZ				IAmb	IAmb	03 49 48.3		
	comp=Z,7.8nm,1.4s							
LPAZ	**La Paz**	**37.51**	**111**	P	**P**	**03 49 46.9**	**+3.0**	
	comp=Z,1.2nm,0.8s,baz=273,slow=7.7,SNR=5.0							
LPAZ				LR	LR	04 02 26.2		
	comp=Z,154nm,18.5s,baz=272,slow=32							
	comp=Z,1.2nm,0.8s							
ANMO	**Albuquerque**	**38.98**	**357**	LR	LR	04 03 35.8		
	comp=Z,110nm,18.5s,baz=270,slow=33							
PFO	**Pinyon Flats O**	**39.31**	**344**	LR	LR	04 02 33.5		
	comp=Z,317nm,18.4s,baz=152,slow=31							
MVCO	**Mesa Verde**	**41.38**	**355**		**P**	**03 50 16.6**	**+1.2**	
MVCO				IAmb	IAmb	03 50 24.7		
	comp=Z,6.3nm,1.1s							
SHOC	**Shoshone, Teco**	**41.43**	**345**	P	**P**	**03 50 17.6**	**+2.0**	
SHOC				IAmb	IAmb	03 50 26.1		
	comp=Z,7.4nm,1.1s							
S22A	**4UR Ranch, Cre**	**41.79**	**357**	P	**P**	**03 50 21.7**	**+2.8**	
WCT	**Wildcat Mounta**	**42.36**	**345**	P	**P**	**03 50 26.6**	**+3.3**	
PV02	**Paradox Valley**	**42.39**	**355**	P	**P**	**03 50 25.5**	**+1.9**	
PV02				IAmb	IAmb	03 50 31.8		
	comp=Z,11nm,1.2s							
PRN	**Pahroc Range**	**42.58**	**347**	P	**P**	**03 50 28.1**	**+3.0**	
PRN				IAmb	IAmb	03 50 44.2		
	comp=Z,6.6nm,1.3s							
R11B	**Troy Canyon, C**	**43.60**	**347**		**P**	**03 50 36.5**	**+3.1**	
SJG	**San Juan**	**43.68**	**58**	LR	LR	04 05 45.6		
	comp=Z,133nm,18.7s,baz=220,slow=32							
ISCO	**Idaho Springs**	**43.79**	**359**		**P**	**03 50 36.8**	**+1.7**	
P18A	**Preston Nutter**	**43.95**	**353**	P	**P**	**03 50 39.0**	**+2.6**	
P18A				IAmb	IAmb	03 50 44.9		
	comp=Z,7.0nm,1.4s							
SIV	**San Ignacio**	**44.07**	**109**	LR	LR	04 06 32.1		
	comp=Z,459nm,19.6s,baz=290,slow=33							
TKL	**Tuckaleechee C**	**44.08**	**24**	LR	LR	04 08 57.9		
	comp=Z,103nm,18.3s,baz=197,slow=36							
O20A	**White River Ci**	**44.26**	**356**		**P**	**03 50 42.4**	**+3.7**	
NVAR	**Mina Array Bea**	**44.34**	**344**	P	**P**	**03 50 42.5**	**+3.0**	
NVAR	**Mina Array Bea**	**44.34**	**344**	P	**P**	**03 50 38.6**	**-0.9**	
	comp=Z,0.2nm,0.4s,baz=162,slow=10,SNR=3.9							
NVAR				LR	LR	04 05 04.3		
	comp=Z,238nm,21.9s,baz=172,slow=31							
	comp=Z,0.2nm,0.4s							
PNTR	**Pine Nut**	**45.32**	**343**	P	**P**	**03 50 49.1**	**+1.8**	
PNTR				IAmb	IAmb	03 51 03.5		
	comp=Z,7.1nm,1.1s							
PTLB	**Pontes e Lacer**	**45.81**	**107**	P	**P**	**03 50 49.8**	**-1.4**	
ELK	**Elko**	**45.83**	**348**	P	**P**	**03 50 53.4**	**+2.2**	
ELK	**Elko**	**45.83**	**348**	P	**P**	**03 50 50.5**	**-0.8**	
	comp=Z,0.2nm,0.3s,baz=198,slow=7.4,SNR=3.1							
ELK				LR	LR	04 07 04.7		
	comp=Z,210nm,19.2s,baz=161,slow=32							
	comp=Z,0.2nm,0.3s							
PAHR	**Pah Rah Range**	**45.83**	**344**	P	**P**	**03 50 53.1**	**+1.9**	
HWUT	**Hardware Ranch**	**46.06**	**352**		**P**	**03 50 54.7**	**+1.7**	
HWUT				IAmb	IAmb	03 51 05.9		
	comp=Z,3.4nm,0.8s							
PPT	**Papeete**	**46.24**	**250**	LR	LR	04 04 56.5		
	comp=Z,233nm,21.8s,baz=106,slow=29							
PPT2	**Papeete2**	**46.25**	**250**	*e*S	**S**	**03 57 37.4**	**-4.4**	
	comp=Z,88nm,23.8s							
PPT2				*e*LR	LR	04 04 03.2		
	comp=Z,422nm,24.5s							
PPT2				*e*LR	LR	04 04 09.8		
	comp=Z,370nm,27.8s							
PDAR	**Pinedale Array**	**46.98**	**355**	P	**P**	**03 50 57.8**	**-2.5**	
	comp=Z,0.4nm,0.6s,baz=152,slow=4.2,SNR=4.0							
PDAR				LR	LR	04 08 08.9		
	comp=Z,70nm,20.2s,baz=160,slow=33							
	comp=Z,0.4nm,0.6s							
PLCA	**Paso Flores**	**47.37**	**145**	LR	LR	04 05 54.2		
	comp=Z,492nm,18.9s,baz=294,slow=30							
TBI	**Tubuai**	**47.52**	**242**	*e*S	**S**	**03 57 58.3**	**-1.5**	
	comp=Z,263nm,26.5s							
TBI				*e*LR	LR	04 04 51.2		
	comp=Z,2μm,27.8s							
LOHW	**Long Hollow**	**47.92**	**354**	P	**P**	**03 51 09.7**	**+2.1**	
LOHW				IAmb	IAmb	03 51 16.5		
	comp=Z,6.2nm,1.4s							
FXWY	**Fox Creek**	**48.00**	**353**	P	**P**	**03 51 09.9**	**+1.7**	
WVOR	**Wild Horse Val**	**48.20**	**346**	P	**P**	**03 51 12.2**	**+2.6**	
WVOR				IAmb	IAmb	03 51 23.1		
	comp=Z,6.4nm,1.3s							
HLID	**Hailey**	**48.40**	**350**		**P**	**03 51 12.3**	**+1.1**	
HLID				IAmb	IAmb	03 51 20.3		
	comp=Z,3.1nm,1.1s							
YBH	**Yreka Blue Hor**	**48.68**	**342**	P	**P**	**03 51 10.2**	**-3.1**	
	baz=160,slow=9.9,SNR=2.0							
YBH				LR	LR	04 07 16.5		
	comp=Z,16nm,21.0s,baz=164,slow=31							
BCYI	**Bear Canyon**	**48.97**	**351**	P	**P**	**03 51 17.9**	**+2.3**	
BCYI				IAmb	IAmb	03 51 24.2		
	comp=Z,4.5nm,1.1s							
YMR	**Madison River**	**49.01**	**354**	P	**P**	**03 51 17.6**	**+1.7**	
YMR				IAmb	IAmb	03 51 25.3		
	comp=Z,7.6nm,1.2s							
YHH	**Holmes Hill**	**49.11**	**354**		**P**	**03 51 17.4**	**+0.6**	
YHL	**Hebgen Lake**	**49.21**	**354**		**P**	**03 51 19.5**	**+1.9**	
RLMT	**Red Lodge**	**49.30**	**355**	P	**P**	**03 51 19.2**	**+1.1**	
RLMT				IAmb	IAmb	03 51 30.6		
	comp=Z,5.3nm,1.0s							
I07A	**Izee**	**49.96**	**346**		**P**	**03 51 25.6**	**+2.6**	
I07A				IAmb	IAmb	03 51 34.2		
	comp=Z,5.2nm,1.0s							
CPUP	**Villa Florida**	**50.02**	**121**	P	**P**	**03 51 23.9**	**+0.1**	
CPUP	**Villa Florida**	**50.02**	**121**	P	**P**	**03 51 26.3**	**+2.5**	
	comp=Z,0.7nm,0.9s,baz=157,slow=9.0,SNR=4.3							
CPUP				LR	LR	04 08 57.8		
	comp=Z,62nm,20.5s,baz=143,slow=32							
	comp=Z,0.7nm,0.9s							
MDP	**Montagnes des**	**52.45**	**80**	LR	LR	04 11 50.3		
	comp=Z,210nm,20.3s,baz=266,slow=34							
NEW	**Newport**	**53.43**	**349**	P	**P**	**03 51 51.5**	**+2.7**	
NEW				IAmb	IAmb	03 52 00.9		
	comp=Z,3.6nm,1.0s							
NEW	**Newport**	**53.43**	**349**	P	**P**	**03 51 46.8**	**-2.0**	
	comp=Z,0.9nm,0.7s,baz=189,slow=9.3,SNR=1.7							
NEW				LR	LR	04 11 57.7		
	comp=Z,197nm,18.4s,baz=212,slow=33							
	comp=Z,0.9nm,0.7s							
SADO	**Sadowa**	**53.71**	**22**	LR	LR	04 14 57.9		
	comp=Z,140nm,18.0s,baz=210,slow=36							
ULM	**Lac du Bonnet**	**54.72**	**7**	LR	LR	04 14 00.0		
	comp=Z,262nm,18.3s,baz=193,slow=35							
USHA	**Ushuaia**	**58.22**	**156**	LR	LR	04 11 26.7		
	comp=Z,490nm,20.3s,baz=265,slow=30							
BBB	**Bella Bella**	**59.69**	**343**	LR	LR	04 15 20.5		
	comp=Z,125nm,19.1s,baz=196,slow=33							

DLBC	**Dease Lake**	**65.74**	**346**	LR	LR	04 19 02.0		
	comp=Z,131nm,18.4s,baz=128,slow=34							
SCHQ	**Schefferville**	**66.51**	**23**	LR	LR	04 21 29.3		
	comp=Z,224nm,19.3s,baz=196,slow=35							
PMSA	**Palmer Station**	**66.94**	**162**	LR	LR	04 15 02.5		
	comp=Z,372nm,18.4s,baz=289,slow=29							
YKA	**Yellowknife Ar**	**66.97**	**355**	P	**P**	**03 53 18.9**	**-2.4**	
	comp=Z,1.1nm,0.8s,baz=176,slow=7.0,SNR=4.1							
YKA				LR	LR	04 19 39.7		
	comp=Z,178nm,21.9s,baz=219,slow=34							
	comp=Z,1.1nm,0.8s							
FRB	**Frobisher Bay**	**72.86**	**16**	LR	LR	04 27 04.3		
	comp=Z,86nm,18.2s,baz=165,slow=37							
KDAK	**Kodiak Island**	**72.88**	**335**	LR	LR	04 18 01.0		
	comp=Z,233nm,19.2s,baz=143,slow=29							
INK	**Inuvik**	**75.15**	**349**	LR	LR	04 24 59.8		
	comp=Z,152nm,18.1s,baz=315,slow=34							
ILAR	**Eielson Array**	**75.57**	**343**	P	**P**	**03 54 11.9**	**-1.5**	
ILAR	**Eielson Array**	**75.57**	**343**	P	**P**	**03 54 11.7**	**-1.7**	
	comp=Z,1.2nm,0.8s,baz=155,slow=5.8,SNR=14							
	comp=Z,1.2nm,0.8s							
URZ	**Urewera**	**78.43**	**232**	LR	LR	04 20 49.9		
	comp=Z,128nm,20.6s,baz=110,slow=29							
RES	**Resolute Bay**	**78.97**	**3**	LR	LR	04 28 04.4		
	comp=Z,142nm,19.5s,baz=202,slow=35							
SFJD	**Kangerlussuaq**	**80.49**	**19**	LR	LR	04 29 40.7		
	comp=Z,124nm,19.9s,baz=234,slow=35							
QSPA	**South Pole Qui**	**85.86**	**180**	P	**P**	**03 55 11.0**	**+2.4**	
	comp=Z,2.6nm,1.0s,baz=118,slow=4.2,SNR=4.0							
QSPA				LR	LR	04 27 14.7		
	comp=Z,105nm,18.7s,baz=118,slow=31							
	comp=Z,2.6nm,1.0s							
VNDA	**Vanda**	**86.76**	**193**	P	**P**	**03 55 14.6**	**+1.9**	
VNDA				IAmb	IAmb	03 55 51.3		
	comp=Z,2.3nm,1.4s							
VNDA	**Vanda**	**86.76**	**193**	P	**P**	**03 55 15.2**	**+2.5**	
	comp=Z,0.7nm,0.9s,baz=77,slow=4.9,SNR=3.5							
	comp=Z,0.7nm,0.9s							
SHEM	**Shemya Is, Ala**	**88.21**	**323**	LR	LR	04 26 23.7		
	comp=Z,192nm,20.8s,baz=112,slow=30							
SNAA	**Sanae**	**89.65**	**162**	LR	LR	04 26 35.8		
	comp=Z,106nm,21.5s,baz=196,slow=29							
H11N3	**WAKE ISLAND Hy**	**90.23**	**290**	T	T	05 35 31.6		
	baz=96,slow=74,SNR=19							
H11N2	**WAKE ISLAND Hy**	**90.25**	**290**	T	T	05 35 33.6		
	baz=96,slow=74,SNR=16							
H11N1	**WAKE ISLAND Hy**	**90.25**	**290**	T	T	05 35 35.3		
	baz=96,slow=74,SNR=11							
H11S2	**WAKE ISLAND Hy**	**90.34**	**288**	T	T	05 35 43.8		
	baz=95,slow=75,SNR=28							
H11S1	**WAKE ISLAND Hy**	**90.34**	**288**	T	T	05 35 37.6		
	baz=95,slow=75,SNR=24							
H11S3	**WAKE ISLAND Hy**	**90.35**	**288**	T	T	05 35 45.2		
	baz=95,slow=75,SNR=25							
BORG	**Borgarnes**	**90.77**	**25**	LR	LR	04 34 47.9		
	comp=Z,59nm,18.1s,baz=287,slow=35							
JMIC	**Jan Mayen**	**95.84**	**19**	LR	LR	04 37 13.5		
	comp=Z,87nm,21.9s,baz=278,slow=34							
CMAR	**Chiang Mai Arr**	**153.19**	**304**	PKPdf	**PKPdf**	**04 02 21.7**	**+1.2**	
CMAR	**Chiang Mai Arr**	**153.19**	**304**	PKPbc	**PKPbc**	**04 02 28.1**	**+0.2**	
	comp=Z,1.3nm,0.3s,baz=288,slow=1.4,SNR=4.2							

*OMAN **07** 03:46:21.1±0.4,27.˚33N×54.˚71E,h10km,mb4.3/4, ml3.0/10,Error ellipse: s-maj=10.6km s-min=6.6km az=27.0*

*TEH **07** 03:46:23.8,27.˚28N×55.˚02E,h22km±20km*

*DSN **07** 03:46:24.1±1.1,27.˚19N×54.˚94E,h15km,ML2.6/5,Error ellipse: s-maj=14.6km s-min=5.1km az=15.0*

ISC 07 03:46:22.6±2.2,**27.˚26N**±0.˚06×**54.˚93E**±0.˚04,**h5**km±17km, **n33,σ1s15/45,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.64**	**309**	Pg	**Pb**	**03 46 37.4**	**+1.1**
BNDS	**Bandar-Abbas**	**1.11**	**83**	Pg	**Pb**	**03 46 43.2**	**-1.2**
GENO	**Geno**	**1.11**	**83**	Pg	**Pb**	**03 46 43.1**	**-1.4**
IBND	**Bandar-abas**	**1.44**	**82**	Pg	**Pn**	**03 46 49.2**	**-0.2**
LMD1	**Lamerd**	**1.57**	**273**	Pg	**Pb**	**03 46 53.0**	**+0.8**
SHME	**Shamm**	**1.62**	**138**	P	**Pb**	**03 46 53.0**	**0.0**
SHME				S	**Sb**	**03 47 15.1**	**+1.3**
SHME	**Shamm**	**1.62**	**138**	P	**Pn**	**03 46 51.2**	**-0.7**
SHME				S	**Sn**	**03 47 12.8**	**-0.3**
BANOM	**Banah**	**1.81**	**137**	P	**Pn**	**03 46 54.6**	**+0.1**
BANOM				S	**Sg**	**03 47 21.3**	**+0.5**
BANOM	**Banah**	**1.81**	**137**	P	**Pn**	**03 46 54.6**	**+0.1**
BANOM				S	**Sn**	**03 47 16.5**	**-1.3**
MASF	**Masafi**	**2.18**	**149**	P	**Pn**	**03 47 00.2**	**+0.6**
MASF				S	**Sb**	**03 47 29.4**	**-0.6**
MDH	**Madha**	**2.31**	**148**	P	**Pn**	**03 47 01.5**	**+0.2**
MDH				S	**Sb**	**03 47 34.2**	**+0.6**
UOSS	**Minazif**	**2.58**	**153**	P	**Pn**	**03 47 05.1**	**+0.1**
UOSS				S	**Sn**	**03 47 37.1**	**+0.4**
UOSS	**Minazif**	**2.58**	**153**	P	**Pn**	**03 47 04.5**	**-0.5**
FAQ	**Al Faqa, Dubai**	**2.58**	**166**	P	**Pn**	**03 47 06.1**	**+1.1**
HATD	**Hatta, Dubai**	**2.66**	**156**	P	**Pn**	**03 47 05.9**	**-0.2**
HATD				S	**Sb**	**03 47 43.5**	**-0.1**
HATD	**Hatta, Dubai**	**2.66**	**156**	P	**Pn**	**03 47 05.4**	**-0.7**
ASHO	**Ashiyiah**	**2.76**	**158**	P	**Pn**	**03 47 08.0**	**+0.4**
	SNR=19						
ASHO				S	**Sn**	**03 47 43.2**	**+1.9**
ASHO	**Ashiyiah**	**2.76**	**158**	P	**Pn**	**03 47 06.6**	**-1.0**
NGRK	**Negar Kerman**	**2.85**	**33**	Pn	**Pn**	**03 47 09.0**	**-0.1**
KHGB	**Koh Gabri**	**3.38**	**23**	Pn	**Pn**	**03 47 16.7**	**+0.4**
SOHO	**SOHO**	**3.44**	**155**	P	**Pn**	**03 47 16.2**	**-0.6**
SOHO				S	**Sn**	**03 48 00.7**	**+2.8**
IMEH	**Mehriz**	**4.12**	**356**	Pn	**Pn**	**03 47 27.2**	**+0.8**
MZR	**Muzera**	**4.44**	**198**	P	**Pn**	**03 47 30.6**	**0.0**
MZR				S	**Sn**	**03 48 21.8**	**-0.9**
SMRA	**Abu-Samra**	**4.47**	**237**	P	**Pn**	**03 47 27.6**	**-3.4**
SMDO	**Samad**	**5.05**	**145**	P	**Pn**	**03 47

JNKS				⇓eS		Sg	03 55 00.1	+0.6	
TNSS	**Tian-Shan**	**2.31**	**327**	Pg		**Pg**	**03 54 29.7**	**-0.8**	
	2.3nm,0.3s								
TNSS				Lg		Lg	03 55 02.3		
	2.9nm,0.5s								
TNSS	**Tian-Shan**	**2.31**	**327**	*e*P		**Pg**	**03 54 29.7**	**-0.8**	
	2.3nm,0.3s								
TNSS				*e*S		**Sg**	**03 55 02.3**	**+1.8**	
	2.9nm,0.5s								
KPKS	**Kokpek**	**2.35**	**0**	Pg		**Pb**	**03 54 28.6**	**0.0**	
	2.5nm,0.2s								
KPKS				Lg		Lg	03 54 59.8		
	5.5nm,0.4s								
MDOK	**Medeo**	**2.37**	**330**	Pg		**Pg**	**03 54 30.4**	**-1.4**	
	6.8nm,0.5s								
MDOK				Lg		Lg	03 55 03.0		
	9.4nm,0.7s								
BOOM	**Boomskoye usch**	**2.46**	**305**	⇑eP		**Pb**	**03 54 31.1**	**+0.7**	
BOOM				⇑eS		**Sb**	**03 55 03.4**	**+2.7**	
KST	**Kastek**	**2.79**	**315**	Pg		**Pg**	**03 54 37.9**	**-1.8**	
	2.6nm,0.3s								
KST				Lg		Lg	03 55 15.7		
	3.3nm,0.7s								
KST	**Kastek**	**2.79**	**315**	*e*P		**Pg**	**03 54 37.9**	**-1.8**	
	2.6nm,0.3s								
KST				*e*S		**Sg**	**03 55 15.7**	**0.0**	
	3.3nm,0.7s								
KTBS	**Karatobe**	**2.98**	**331**	Pg		**Pg**	**03 54 41.2**	**-2.2**	
	3.9nm,0.3s								
KTBS				Lg		Lg	03 55 21.5		
	5.4nm,0.3s								
BLB	**Baldybastay**	**2.98**	**357**	Pg		**Pb**	**03 54 40.2**	**+0.8**	
	3.0nm,0.1s								
BLB				Lg		Lg	03 55 19.8		
	9.9nm,0.4s								
ARXS	**Arharly**	**3.16**	**349**	Pg		**Pb**	**03 54 43.0**	**+0.7**	
	1.6nm,0.2s								
ARXS				Lg		Lg	03 55 24.6		
	14nm,0.5s								
ARXS	**Arharly**	**3.16**	**349**	*e*P		**Pb**	**03 54 43.0**	**+0.7**	
ARXS				*e*S		**Sg**	**03 55 24.6**	**-3.1**	
KNOS	**Konyrlen**	**3.26**	**6**	Pg		**Pb**	**03 54 44.3**	**+0.1**	
	1.3nm,0.4s								
KNOS				Lg		Lg	03 55 26.7		
	6.6nm,0.3s								
ARLS	**Aral**	**3.34**	**284**	⇑eP		**Pb**	**03 54 43.6**	**-2.0**	
ARLS				⇑eS		**Sb**	**03 55 25.5**	**-0.8**	
KRBS	**Karabastau**	**3.40**	**320**	Pg		**Pg**	**03 54 48.9**	**-2.5**	
	1.3nm,0.3s								
KRBS				Lg		Lg	03 55 34.6		
	1.5nm,0.4s								

NEIC ***07*** *04:04:40.4,31°.65N×104°.32W,h12km*
IDC ***07*** *04:04:40.5±1.0,31°.62N×104°.32W,h0km,mb3.3/2,*
mbtmp3.1/4,ML3.5/2,Error ellipse: s-maj=34.1km
s-min=7.8km az=71.0
TXNET ***07*** *04:04:40.4,31°.7N±0°.7×104°.3W±1°.0,h6km±1km,ML3.9/19,*
Error ellipse: s-maj=1.5km s-min=1.0km az=68.4,final
NEIC ***07*** *04:04:40.1±1.8,31°.65N±0°.01×104°.32W±0°.02,h5km±1km,*
mb_Lg3.5/166,ML3.9/77,Mwr3.6/15,Error ellipse:
s-maj=3.0km s-min=2.8km az=251.0,Moment Tensor
Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.07;
$M_{\theta\theta}$2.05; $M_{\phi\phi}$0.03; $M_{r\theta}$-1.92; $M_{\theta\phi}$-0.32; $M_{r\phi}$0.17; Fault
plane solution: $M_0$2.84000×10^{14} NP1:$\phi_0$281.55000°,
δ23.69000°,λ-85.16000°. NP2:$\phi_0$96.27000°,δ66.40000°,
λ-92.12000°. Principal axes: T 2.8511, Plg21.0000°,
Azm188.0000°; N -0.0210, Plg2.0000°, Azm97.0000°; P
-2.8301, Plg69.0000°, Azm2.0000°;

ISC 07 04:04:40.6±0.9,31°.65N±0°.02×104°.32W±0°.02,h9km±6km,
n131,σ0s81/116,15C-1D,Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.12**	**6**	⇑P	**Pg**	**04 04 43.9**	**+0.3**
TPB09				S	**Sg**	**04 04 45.8**	**+0.1**
TPB11	**China Draw**	**0.37**	**40**	⇑P	**Pg**	**04 04 48.1**	**+0.1**
TPB11				S	**Sg**	**04 04 53.0**	**+0.1**
TPB13	**Reeves - Culbe**	**0.41**	**103**	P	**Pb**	**04 04 49.3**	**-0.8**
PECS	**Pecos**	**0.47**	**126**		**Pg**	**04 04 49.8**	**-0.1**
PECS				Sg	**Sg**	**04 04 56.2**	**+0.1**
PECS				IAML		04 04 56.8	
	8μm,0.4s						
PECS				IAML		04 04 58.8	
	6μm,0.5s						
PECS	**Pecos**	**0.47**	**126**	⇑P	**Pg**	**04 04 50.1**	**+0.2**
PECS				S	**Sg**	**04 04 56.6**	**+0.5**
TPB12	**Southwest of T**	**0.53**	**145**	⇑P	**Pg**	**04 04 51.2**	**+0.2**
TPB12				S	**Sg**	**04 04 58.4**	**+0.4**
TPB07	**Mentone**	**0.56**	**97**	P	**Pb**	**04 04 52.0**	**-0.5**
TPB07				S	**Sg**	**04 04 59.6**	**+0.8**
TPB10	**Southeast of T**	**0.60**	**127**	⇑P	**Pg**	**04 04 52.6**	**+0.3**
TPB10				S	**Sg**	**04 05 00.8**	**+0.6**
CLNB	**Carlsbad**	**0.72**	**31**		**Pg**	**04 04 54.3**	**-0.2**
CLNB					**Sg**	**04 05 03.9**	**+0.1**
CLNB	**Carlsbad**	**0.72**	**31**	⇑P	**Pg**	**04 04 54.3**	**-0.2**
CLNB				S	**Sg**	**04 05 04.4**	**+0.5**
PCOS	**Crockett Middl**	**0.73**	**109**		**Pb**	**04 04 55.4**	**-0.1**
PCOS					**Sb**	**04 05 04.9**	**-0.7**
PCOS	**Crockett Middl**	**0.73**	**109**	P	**Pb**	**04 04 55.4**	**-0.1**
PCOS				S	**Sb**	**04 05 04.9**	**-0.7**
CBET	**Carlsbad E Tow**	**0.82**	**20**		**Pg**	**04 04 56.3**	**-0.1**
CBET	**Carlsbad E Tow**	**0.82**	**20**	P	**Pg**	**04 04 56.3**	**-0.1**
TPB01	**Permian Basin**	**0.84**	**147**	⇑P	**Pg**	**04 04 56.3**	**-0.5**
TPB01				S	**Sg**	**04 05 07.3**	**-0.5**
CLN7	**Carlsbad 7**	**0.88**	**29**		**Pg**	**04 04 57.0**	**-0.5**
CLN7					**Sg**	**04 05 08.7**	**-0.2**
CLN7	**Carlsbad 7**	**0.88**	**29**	P	**Pg**	**04 04 57.2**	**-0.3**
TPB03	**Saragosa**	**0.89**	**129**	⇑P	**Pg**	**04 04 57.8**	**+0.1**
TPB03				S	**Sg**	**04 05 09.6**	**+0.3**
MNTX	**Cornudas Mount**	**0.91**	**273**	Pg	**Pg**	**04 04 58.1**	**0.0**
MNTX				Sg	**Sg**	**04 05 10.0**	**0.0**
MNTX	**Cornudas Mount**	**0.91**	**273**	⇓P	**Pg**	**04 04 58.2**	**0.0**
MNTX				S	**Sb**	**04 05 10.5**	**-0.3**
TPB06	**Permian Basin**	**0.94**	**90**	P	**Pg**	**04 04 58.7**	**+0.1**
TPB06				S	**Sb**	**04 05 11.3**	**-0.3**
HTMS	**Hat Mesa**	**1.00**	**35**	⇑P	**Pg**	**04 04 59.4**	**-0.5**
HTMS				S	**Sg**	**04 05 13.4**	**+0.4**
TPB04	**Verhalen**	**1.01**	**117**	⇑P	**Pg**	**04 04 59.8**	**-0.1**
TPB04				S	**Sb**	**04 05 13.4**	**-0.2**
TPB27	**North of Pyote**	**1.01**	**94**	P	**Pg**	**04 05 00.0**	**-0.1**
TPB27				S	**Sb**	**04 05 13.7**	**-0.2**
VHRN	**Van Horn**	**1.03**	**214**		**Pg**	**04 04 59.9**	**-0.6**
VHRN					**Sb**	**04 05 14.3**	**-0.1**
VHRN	**Van Horn**	**1.03**	**214**	⇑P	**Pg**	**04 05 00.3**	**-0.2**
VHRN				S	**Sb**	**04 05 14.3**	**-0.1**
TPB16	**Coyonosa**	**1.05**	**120**	⇑P	**Pg**	**04 05 00.7**	**-0.1**
TPB16				S	**Sb**	**04 05 14.6**	**-0.2**
NM01	**Eunice**	**1.05**	**48**	P	**Pg**	**04 05 00.4**	**-0.4**
NM01				S	**Sg**	**04 05 14.3**	**-0.2**
TPB19	**West of Imperi**	**1.09**	**108**	P	**Pg**	**04 05 01.3**	**-0.4**
TPB19				S	**Sb**	**04 05 17.1**	**+0.9**
TPB05	**Hovey Rd**	**1.12**	**130**	⇑P	**Pg**	**04 05 01.7**	**-0.4**
TPB05				S	**Sg**	**04 05 16.6**	**-0.1**
TPB15	**Southwest of C**	**1.14**	**112**	P	**Pg**	**04 05 02.2**	**-0.4**
TPB15				S	**Sg**	**04 05 17.1**	**-0.3**
MNHN	**Monahans**	**1.36**	**103**		**Pn**	**04 05 05.3**	**-0.5**
MNHN					**Sn**	**04 05 24.6**	**+0.5**
MNHN				IAML		04 05 27.9	
	1μm,0.4s						
MNHN				IAML		04 05 33.2	
	1μm,0.3s						
MNHN	**Monahans**	**1.36**	**103**	P	**Pn**	**04 05 05.5**	**-0.3**
MNHN				S	**Sn**	**04 05 24.6**	**+0.5**
ALPN	**Alpine**	**1.40**	**155**		**Pn**	**04 05 05.8**	**-0.7**
ALPN					**Sb**	**04 05 24.1**	**-0.8**
ALPN				IAML		04 05 32.4	
	2μm,0.4s						
ALPN				IAML		04 05 32.4	
	2μm,0.4s						
ALPN	**Alpine**	**1.40**	**155**	⇑P	**Pn**	**04 05 05.9**	**-0.5**
ALPN				S	**Sb**	**04 05 24.1**	**-0.8**
TPB08	**Permian Basin**	**1.42**	**122**	⇑P	**Pn**	**04 05 07.0**	**+0.3**
TPB08				S	**Sn**	**04 05 26.8**	**+1.2**
CPRX	**Cap Rock**	**1.43**	**15**		**Pn**	**04 05 07.0**	**+0.2**
CPRX	**Cap Rock**	**1.43**	**15**	P	**Pn**	**04 05 07.0**	**+0.2**
ODSA	**Odessa**	**1.57**	**72**		**Pn**	**04 05 08.8**	**0.0**
ODSA					**Sn**	**04 05 29.6**	**+0.3**
ODSA				IAML		04 05 33.7	
	2μm,0.4s						
ODSA	**Odessa**	**1.57**	**72**	P	**Pn**	**04 05 09.4**	**+0.6**
ODSA				S	**Sn**	**04 05 29.6**	**+0.3**
TMB04	**Seminole**	**1.83**	**57**	P	**Pb**	**04 05 13.7**	**-0.6**
TMB04				S	**Sg**	**04 05 38.6**	**-0.8**
EPT	**El Paso**	**1.87**	**274**	Pn	**Pn**	**04 05 13.2**	**+0.3**
EPT					**Sg**	**04 05 41.2**	**+0.4**
EPT	**El Paso**	**1.87**	**274**	S	**Sg**	**04 05 41.2**	**+0.4**
EPT	**El Paso**	**1.87**	**274**	P	**Pb**	**04 05 14.8**	**-0.2**
TMB01	**Midkiff**	**1.90**	**89**	P	**Pb**	**04 05 15.1**	**-0.4**
TMB01				S	**Sb**	**04 05 40.3**	**+0.9**
TMB02	**Rankin**	**2.00**	**102**	P	**Pb**	**04 05 16.4**	**-0.7**
TMB02				S	**Sb**	**04 05 42.8**	**+0.6**
TMB06	**Greenwood**	**2.17**	**81**	P	**Pb**	**04 05 18.8**	**-1.3**
TMB06				S	**Sb**	**04 05 47.4**	**+0.3**
TMB05	**Klondike**	**2.30**	**64**	P	**Pb**	**04 05 20.9**	**-1.4**
TMB05				S	**Sb**	**04 05 51.2**	**+0.3**
TX31	**Lajitas Ar. Si**	**2.38**	**166**		**Pn**	**04 05 19.8**	**0.0**
TX31				Sg	**Sg**	**04 05 56.0**	**-0.9**
TX31	**Lajitas Ar. Si**	**2.38**	**166**	P	**Pn**	**04 05 21.4**	**+1.6**
TX31				Pg	**Pb**	**04 05 23.3**	**-0.3**
TXAR	**Lajitas Array**	**2.38**	**166**		**Pn**	**04 05 19.4**	**-0.4**
TXAR	**Lajitas Array**	**2.38**	**166**	Pn	**Pn**	**04 05 21.3**	**+1.5**
	91nm,0.3s,baz=343,slow=13,SNR=496						
TXAR				Lg	Lg	04 05 54.0	
	158nm,0.3s,baz=346,slow=28,SNR=14						
SAND	**Sanderson**	**2.53**	**131**		**Pn**	**04 05 22.3**	**+0.3**
SAND				IAML		04 06 01.1	
	688nm,0.6s						
SAND	**Sanderson**	**2.53**	**131**	P	**Pn**	**04 05 24.0**	**+2.0**
SAND				Pg	**Pb**	**04 05 25.8**	**-0.5**
MSTX	**Muleshoe**	**2.65**	**29**		**Pn**	**04 05 24.2**	**+0.5**
MSTX				IAmb_Lg		04 06 07.5	
	comp=Z,176nm,0.7s						
SGCY	**Sterling City**	**2.73**	**84**		**Pn**	**04 05 24.8**	**+0.1**
SGCY				IAML		04 06 07.8	
	comp=Z,456nm,0.5s						
SGCY				IAML		04 06 07.9	
	comp=Z,705nm,0.7s						
SGCY	**Sterling City**	**2.73**	**84**	P	**Pn**	**04 05 26.0**	**+1.4**
POST	**Post**	**2.77**	**59**		**Pn**	**04 05 24.9**	**-0.3**
POST				IAmb_Lg		04 06 15.6	
	comp=Z,305nm,0.7s						
OZNA	**Ozona**	**2.83**	**104**		**Pn**	**04 05 27.0**	**+1.0**
OZNA				IAML		04 06 11.8	
	comp=Z,398nm,0.5s						
OZNA				IAML		04 06 14.7	
	comp=Z,415nm,0.6s						
OZNA				IAmb_Lg		04 06 17.5	
	comp=E,170nm,0.8s						
OZNA	**Ozona**	**2.83**	**104**	P	**Pn**	**04 05 27.6**	**+1.6**
CRNM	**Carthage**	**3.07**	**319**		**Pn**	**04 05 31.5**	**+2.1**
121A	**Cookes Peak, D**	**3.07**	**288**		**Pn**	**04 05 30.1**	**+0.6**
121A				IAmb_Lg		04 06 19.7	
	comp=Z,206nm,1.0s						
121A				IAML		04 06 30.9	
	comp=E,264nm,0.8s						
BNM	**Barren Site**	**3.16**	**323**		**Pn**	**04 05 31.9**	**+1.2**
Y22A	**Socorro**	**3.19**	**316**		**Pn**	**04 05 31.5**	**+0.4**
Y22A				IAML		04 06 21.7	
	comp=N,367nm,0.5s						
Y22A				IAmb_Lg		04 06 22.9	
	comp=Z,195nm,0.8s						
Y22A				IAML		04 06 23.0	
	comp=E,438nm,0.3s						
SN07	**Snyder 07**	**3.23**	**63**		**Pn**	**04 05 31.1**	**-0.4**
SBM	**South Baldy**	**3.35**	**315**		**Pn**	**04 05 33.8**	**+0.4**
LENM	**Lemitar**	**3.36**	**319**		**Pn**	**04 05 34.0**	**+0.5**
DKNS	**Dickens**	**3.50**	**54**		**Pn**	**04 05 35.2**	**0.0**
DKNS				IAmb_Lg		04 06 36.2	
	comp=Z,234nm,0.8s						
ABQ	**Albuquerque**	**3.74**	**332**		**Pn**	**04 05 39.0**	**+0.3**
ABQ				IAML		04 06 36.0	
	comp=Z,241nm,0.6s						
ABQ				IAML		04 06 37.0	
	comp=Z,280nm,0.5s						
ABQ				IAmb_Lg		04 06 37.2	
	comp=Z,160nm,0.7s						
ANMO	**Albuquerque**	**3.74**	**332**	IAML		04 06 37.0	
	comp=Z,199nm,0.6s						
TASM	**ASL Pad, Albuq**	**3.75**	**332**	IAML		04 06 36.1	
	comp=Z,206nm,0.6s						
TASM				IAML		04 06 37.1	
	comp=Z,236nm,0.6s						
TASM	**ASL Pad, Albuq**	**3.75**	**332**	IAML		04 06 36.1	
	comp=Z,217nm,0.6s						
TASM				IAML		04 06 37.1	
	comp=Z,225nm,0.5s						
TASM				IAmb_Lg		04 06 39.6	
	comp=Z,240nm,1.0s						
TASM	**ASL Pad, Albuq**	**3.75**	**332**	IAML		04 06 37.1	
	comp=Z,208nm,0.5s						
TASM				IAML		04 06 38.0	
	comp=Z,205nm,0.5s						
TASM				IAmb_Lg		04 06 39.6	
	comp=Z,254nm,1.0s						
DRIO	**Del Rio**	**3.88**	**124**	IAmb_Lg		04 06 51.7	
	comp=Z,211nm,0.8s						
JCT	**Junction City**	**4.04**	**106**	IAmb_Lg		04 06 53.3	
	comp=Z,173nm,0.7s						
DUN6	**Lazy B Ranch**	**4.15**	**284**	IAmb_Lg		04 06 54.4	
	comp=Z,142nm,1.0s						
319A	**Douglas**	**4.25**	**268**	IAML		04 07 01.1	
	comp=N,171nm,0.8s						
319A				IAML		04 07 07.8	
	comp=E,174nm,0.5s						
BRDY	**Brady**	**4.56**	**93**	IAmb_Lg		04 07 13.4	
	comp=Z,140nm,1.0s						
HPIG		**4.84**	**194**	IAML		04 07 17.0	
	comp=E,79nm,0.5s						
PLPT	**Palo Pinto**	**5.21**	**76**	IAmb_Lg		04 07 28.3	
	comp=Z,98nm,0.8s						
WTFS	**Witchita Falls**	**5.36**	**65**	IAmb_Lg		04 07 30.8	
	comp=Z,45nm,0.8s						
833A	**Chaparral WMA,**	**5.41**	**127**	IAmb_Lg		04 07 38.6	
	comp=Z,56nm,0.9s						
WMOK	**Wichita Mounta**	**5.57**	**55**	IAmb_Lg		04 07 43.6	
	comp=Z,97nm,0.7s						
WHTX	**Lake Whitney,**	**5.85**	**85**	IAmb_Lg		04 07 56.3	
	comp=Z,121nm,1.0s						
FW13	**Cleburne**	**5.89**	**81**	IAmb_Lg		04 08 00.9	
	comp=Z,121nm,1.2s						
ELIS	**Ellis County**	**6.00**	**41**	IAmb_Lg		04 08 00.5	
	comp=Z,126nm,0.8s						
SDCO	**Great Sand Dun**	**6.16**	**351**	IAmb_Lg		04 07 56.7	
	comp=Z,53nm,1.1s						
MVCO	**Mesa Verde**	**6.54**	**329**	IAmb_Lg		04 08 24.7	
	comp=Z,35nm,0.7s						
OK038	**West end E0370**	**6.68**	**42**	IAmb_Lg		04 08 21.6	
	comp=Z,99nm,0.8s						
NOKA	**Waynoka**	**6.68**	**40**	IAmb_Lg		04 08 15.5	
	comp=Z,88nm,0.8s						
HBVL	**Hebbronville**	**6.72**	**131**	IAmb_Lg		04 08 24.8	
	comp=Z,35nm,1.1s						
OK029	**Liberty Lake**	**7.05**	**52**	IAmb_Lg		04 08 36.8	
	comp=Z,66nm,0.8s						
CROK	**Carrier**	**7.14**	**46**	IAmb_Lg		04 08 37.4	
	comp=Z,61nm,0.9s						
237A	**Washetta, Mont**	**7.25**	**85**	IAmb_Lg		04 08 42.8	
	comp=Z,87nm,0.7s						
PV01	**Paradox Valley**	**7.35**	**333**	IAmb_Lg		04 08 37.6	
	comp=Z,30nm,1.0s						
KSCO	**Kaye Shedlock'**	**7.47**	**10**	IAmb_Lg		04 08 42.8	
	comp=Z,94nm,0.8s						
PV13	**Radium Mtn., P**	**7.47**	**332**	IAmb_Lg		04 08 46.0	
	comp=Z,55nm,1.1s						
PV02	**Paradox Valley**	**7.48**	**332**	IAmb_Lg		04 08 46.7	
	comp=Z,55nm,0.9s						
PV15	**Paradox Valley**	**7.50**	**334**	IAmb_Lg		04 08 44.1	
	comp=Z,50nm,1.2s						
PV05	**Paradox Valley**	**7.52**	**330**	IAmb_Lg		04 08 53.6	
	comp=Z,46nm,0.9s						
PV03	**Paradox Valley**	**7.57**	**332**	IAmb_Lg		04 08 43.7	
	comp=Z,40nm,1.0s						
PV18	**Skein Mesa, Pa**	**7.58**	**331**	IAmb_Lg		04 08 53.1	
	comp=Z,92nm,1.0s						
OK052	**Battle Ridge R**	**7.61**	**53**	IAmb_Lg		04 08 58.1	
	comp=Z,32nm,0.7s						
PV11	**David Mesa, Pa**	**7.61**	**332**	IAmb_Lg		04 08 46.7	
	comp=Z,66nm,0.7s						
HNVL	**Huntsville, TX**	**7.63**	**94**	IAmb_Lg		04 08 57.3	
	comp=Z,49nm,1.1s						
PV17	**East Wray Mesa**	**7.63**	**331**	IAmb_Lg		04 08 38.3	
	comp=Z,28nm,0.9s						
PV16	**Nyswonger Mesa**	**7.64**	**332**	IAmb_Lg		04 08 45.4	
	comp=Z,41nm,0.8s						
PV19	**Morning Glory**	**7.67**	**331**	IAmb_Lg		04 08 43.7	
	comp=Z,50nm,0.7s						
PV20	**West Nyswonger**	**7.69**	**332**	IAmb_Lg		04 08 43.8	
	comp=Z,75nm,0.7s						
DEOK	**Depew**	**7.74**	**55**	IAmb_Lg		04 08 59.9	
	comp=Z,31nm,0.7s						
OK048	**Pawnee Station**	**7.75**	**50**	IAmb_Lg		04 09 03.2	
	comp=Z,48nm,1.1s						
PV10	**Paradox Valley**	**7.75**	**331**	IAmb_Lg		04 08 54.4	
	comp=Z,79nm,0.9s						
QUOK	**Quay**	**7.77**	**52**	IAmb_Lg		04 08 58.1	
	comp=Z,26nm,0.7s						
OK051	**E0350 and S346**	**7.87**	**50**	IAmb_Lg		04 08 49.5	
	comp=Z,30nm,0.8s						
Z38A	**Mt. Pleasant**	**8.05**	**76**	IAmb_Lg		04 09 12.6	
	comp=Z,63nm,0.7s						
HMU	**Henry Mountain**	**8.20**	**322**	IAmb_Lg		04 09 09.0	
	comp=Z,42nm,0.8s						
NATX	**Nacogdoches**	**8.23**	**87**	IAmb_Lg		04 09 20.5	
	comp=Z,47nm,0.9s						
TUL3	**Leonard**	**8.27**	**57**	IAmb_Lg		04 09 14.6	
	comp=Z,59nm,0.9s						
T35A	**Sooner Cattle**	**8.32**	**49**	IAmb_Lg		04 09 13.0	
	comp=Z,73nm,1.1s						
KNB	**Kanab**	**8.84**	**310**	IAmb_Lg		04 09 31.4	
	comp=Z,22nm,1.0s						
RLO	**Rose Lookout**	**8.94**	**57**	IAmb_Lg		04 09 28.1	
	comp=Z,36nm,0.8s						
SRU	**San Rafael Swe**	**9.00**	**327**	IAmb_Lg		04 09 33.1	
	comp=Z,25nm,1.0s						
Q16A	**Castle Valley**	**9.16**	**324**	IAmb_Lg		04 09 33.4	
	comp=Z,41nm,1.2s						
P18A	**Preston Nutter**	**9.31**	**330**	IAmb_Lg		04 09 57.3	
	comp=Z,21nm,1.1s						
P17A	**Butcher Ranch,**	**9.39**	**328**	IAmb_Lg		04 09 36.0	
	comp=Z,25nm,1.0s						
TMUT	**Trail Mountain**	**9.47**	**326**	IAmb_Lg		04 09 41.9	
	comp=Z,29nm,0.9s						
U38A	**Gravette**	**9.52**	**57**	IAmb_Lg		04 09 48.7	
	comp=Z,32nm,0.7s						
PDAR	**Pinedale Array**	**11.85**	**341**	Pn	**Pn**	**04 07 32.4**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=3.9						
PDAR				Pg		04 08 17.9	
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=3.7						
PDAR				Lg	Lg	04 10 49.0	
	baz=114,slow=24						
	comp=Z,0.1nm,0.4s						
NVAR	**Mina Array Bea**	**13.30**	**304**	Pn	**P**	**04 07 55.4**	**-4.3**
	baz=123,slow=9.3,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**42.19**	**334**	P	**P**	**04 12 35.1**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=123,slow=9.8,SNR=4.9						
	comp=Z,0.2nm,0.7s						
CPUP	**Villa Florida**	**73.04**	**137**	P	**P**	**04 16 12.6**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=332,slow=1.3,SNR=4.6						
	comp=Z,0.4nm,0.7s						

NEIC ***07*** *04:18:20.8±1.4,19°.20N±0°.09×121°.2E±0°.1,h35km±2km,*
mb4.5/14,Error ellipse: s-maj=22.5km s-min=14.4km
az=87.0
BJI ***07*** *04:18:21.3,19°.41N×120°.83E,h8km,mB4.6/5,mb4.3/21,*
Ms3.9/4,Ms7.3/76
IDC ***07*** *04:18:24.8±5.3,19°.20N×121°.37E,h88km±50km,mb3.6/11,*
mbtmp4.0/13,ML3.9/2,MS3.3/2,Error ellipse:
s-maj=26.9km s-min=16.3km az=68.0

ISC 07 04:18:20.0±0.7,19°.17N±0°.07×121°.27E±0°.08,h35km,n60,
σ1s59/62,mb4.3/23,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWGBT	**Beinan**	**3.64**	**357**	P	**Pn**	**04 19 13.4**	**-0.5**
TWG	**Pinlang**	**3.64**	**357**		**Pn**	**04 19 12.7**	**-1.3**
TWG				Sn	**Sn**	**04 19 54.8**	**-1.0**
TPUB	**Ta-pu**	**4.16**	**352**		**Pn**	**04 19 19.7**	**-1.4**
TPUB	**Ta-pu**	**4.16**	**352**	P	**Pn**	**04 19 21.8**	**+0.7**
YULB	**Yu-li**	**4.21**	**0**		**Pn**	**04 19 21.2**	**-0.5**
YULB	**Yu-li**	**4.21**	**0**	P	**Pn**	**04 19 23.5**	**+1.8**
SSLB	**Suanglung**	**4.61**	**356**		**Pn**	**04 19 27.4**	**+0.1**
SSLB	**Suanglung**	**4.61**	**356**	P	**Pn**	**04 19 28.6**	**+1.3**
NACB	**Ninganchiao**	**4.99**	**3**		**Pn**	**04 19 32.5**	**0.0**
NACB					**Sn**	**04 20 27.8**	**-1.2**
TGY	**Tagaytay City**	**5.04**	**184**	LR	LR	04 21 44.4	
	comp=Z,484nm,18.8s,baz=62,slow=39						
YHNB	**Yeheng**	**5.48**	**1**		**Pn**	**04 19 40.2**	**+0.9**
YHNB	**Yeheng**	**5.48**	**1**	P	**Pn**	**04 19 40.6**	**+1.3**
QIZ	**Qiongzhong**	**10.80**	**271**	P	**Pn**	**04 20 53.2**	**+0.9**
QIZ				S	**Sn**	**04 22 51.8**	**-0.2**
QIZ				LR	LR		
	comp=N,450nm,11.3s						
QIZ				LR	LR		
	comp=E,240nm,10.7s						
QIZ				LR	LR		
	comp=Z,260nm,13.5s						
NJ2	**Nanjing**	**13.02**	**351**	*e*P	**Pn**	**04 21 23.2**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JNU	**Nakatsue**	**16.35**	**30**	Pn	**Pn**	**04 22 07.6**	**+0.7**
JNU	**Nakatsue**	**16.35**	**30**	P	**Pn**	**04 22 07.9**	**+1.0**
	0.3nm,0.3s,baz=151,slow=13,SNR=3.7						
	11nm,0.9s						
XAN	**Xi'an**	**18.45**	**326**	P	**Pn**	**04 22 37.2**	**+4.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s					

comp=Z,1.6nm,0.7s,baz=116,slow=9.4,SNR=12
comp=Z,1.6nm,0.7s
H11N1 WAKE ISLAND Hy 42.93 81 T T 05 12 13.4
baz=277,slow=75
H11N2 WAKE ISLAND Hy 42.93 81 T T 05 12 14.1
baz=277,slow=75
H11N3 WAKE ISLAND Hy 42.95 81 T T 05 12 14.6
baz=277,slow=75
KSH Kashi 43.85 307 P **P** **04 26 26.2 +3.1**
KSH pmax pmax
comp=Z,4.0nm,0.7s
ASAR Alice Springs 44.32 163 P **P** **04 26 25.8 -1.0**
ASAR Alice Springs 44.32 163 P **P** **04 26 26.2 -0.7**
comp=Z,0.2nm,0.3s,baz=342,slow=9.0,SNR=3.4
comp=Z,0.2nm,0.3s
ZALV Zalesovo Beam 44.55 330 P **P** **04 26 28.1 -0.2**
comp=Z,2.6nm,0.8s,baz=121,slow=8.6,SNR=7.0
comp=Z,2.6nm,0.8s
KURK Kurchatov 46.06 323 **P** **04 26 40.8 +0.5**
KURK IAmb IAmb 04 26 42.3
comp=Z,7.0nm,1.1s
KURBB Kurchatov Arra 46.07 323 P **P** **04 26 41.0 +0.6**
comp=Z,3.9nm,0.7s,baz=121,slow=7.8,SNR=26
comp=Z,3.9nm,0.7s
GAR Garm 48.04 306 **P** **04 26 56.0 -0.2**
GAR IAmb IAmb 04 26 57.2
comp=Z,10nm,0.9s
KKAR Karatay Array 48.69 311 **P** **04 27 01.3 +0.3**
KKAR PcP **PcP** **04 28 25.7 -0.2**
TIXI Tiksi 52.68 3 P **P** **04 27 30.4 -0.1**
TIXI IAmb IAmb 04 27 31.5
comp=Z,6.5nm,1.1s
AB31 Akbulak array 57.06 317 **P** **04 28 02.5 -0.1**
AB31 IAmb IAmb 04 28 04.1
comp=Z,3.6nm,1.0s
ABKAR Akbulak array 57.06 317 P **P** **04 28 02.5 -0.1**
ARTI Arti 59.28 325 P **P** **04 28 17.7 -0.4**
ARTI IAmb IAmb 04 28 18.6
comp=Z,5.9nm,0.8s
BRLK Bradley Lake 72.58 32 P **P** **04 29 44.9 +1.4**
BWN Browne 72.62 27 P **P** **04 29 44.8 +1.1**
RND Reindeer 73.00 28 P **P** **04 29 46.8 +0.8**
RND IAmb IAmb 04 29 56.2
comp=Z,8.6nm,1.1s
ILAR Eielson Array 73.63 27 P **P** **04 29 48.9 -0.8**
ILAR Eielson Array 73.63 27 P **P** **04 29 47.4 -2.2**
comp=Z,0.3nm,0.6s,baz=270,slow=5.7,SNR=5.4
comp=Z,0.3nm,0.6s
ARCES ARCESS Array B 74.21 339 P **P** **04 29 52.9 0.0**
ARCES ARCESS Array B 74.21 339 P **P** **04 29 50.5 -2.5**
comp=Z,2.2nm,0.8s,baz=63,slow=5.3,SNR=4.7
comp=Z,2.2nm,0.8s
HFS Hagfors 81.97 331 P **P** **04 30 34.3 -1.8**
comp=Z,2.5nm,0.8s,baz=83,slow=12,SNR=2.6
comp=Z,2.5nm,0.8s

NIED ***07*** *04:31:07.4, 35˚.48N×141˚.21E, h34km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.39; Mθθ0.39; Mφφ-0.78; Mrθ-0.35; Mθφ0.04; Mφr1.18; Fault plane solution: M0 1.38000×10^15 NP1: φs211.00000°, δ17.00000°, λ138.00000°. NP2: φs341.00000°, δ79.00000°, λ77.00000°.*

JMA ***07*** *04:31:07.4±0.2, 35˚.5N±0.5˚×141˚.1E±˚, h34km±1km, MV3.6/39, NEAR CHOSHI CITY*

NEIC ***07*** *04:31:10.0±1.7, 35˚.49N±0˚.03×141˚.16E±0˚.08, h35km±2km, mb4.3/9, Error ellipse: s-maj=12.5km s-min=3.0km az=114.0*

IDC ***07*** *04:31:12.1±1.9, 35˚.37N×141˚.00E, h58km±18km, mb3.5/15, mbtmp3.8/18, ML4.1/2, MS3.0/5, Error ellipse: s-maj=19.1km s-min=10.2km az=72.0*

ISC 07 04:31:07.8±1.7, 35˚.46N±0˚.04×141˚.18E±0˚.06, h23km±12km, n83, σ1s15/74, mb3.9/20, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSMT	**Sammumatsuo**	**0.62**	**287**	P	**Pb**	**04 31 20.5**	**+0.5**
JSMT				*eS*	**Sn**	**04 31 30.2**	**-0.2**
JIHU	**Itakohorinouch**	**0.73**	**313**	*eP*	**Pb**	**04 31 21.9**	**0.0**
KTR	**Katsuura**	**0.77**	**246**	*eP*	**Pb**	**04 31 22.3**	**-0.3**
BSO1	**Boso 1**	**0.82**	**192**	*eP*	**Pb**	**04 31 22.9**	**-0.3**
BSO4	**Boso 4**	**0.84**	**236**	*eP*	**Pb**	**04 31 23.3**	**-0.3**
BSO3	**Boso 3**	**0.86**	**220**	⇓P	**Pb**	**04 31 23.6**	**-0.3**
JYT	**Yasato**	**1.10**	**314**	*eP*	**Pn**	**04 31 26.8**	**-1.1**
JIM2	**Oshima 3**	**1.61**	**243**	*eP*	**Pn**	**04 31 33.4**	**-1.5**
JIM2				*eS*	**Sn**	**04 31 52.0**	**-3.0**
JAG	**Ashikaga**	**1.70**	**305**	*eP*	**Pn**	**04 31 35.9**	**-0.2**
JOD2	**Odawara 2**	**1.72**	**264**	*eP*	**Pn**	**04 31 35.1**	**-1.3**
JMM	**Marumori**	**2.42**	**353**		**Pn**	**04 31 46.2**	**+0.3**
JMM	**Marumori**	**2.42**	**353**	P	**Pn**	**04 31 46.5**	**+0.6**
JMM	**Marumori**	**2.42**	**353**	S	**Sn**	**04 32 16.3**	**+1.5**
JSG	**Sagara**	**2.58**	**253**	Pn	**Pn**	**04 31 49.3**	**+1.2**
JHJ2	**Mitsune**	**2.60**	**206**	Pn	**Pn**	**04 31 50.0**	**+1.5**
JHJ2					**Sn**	**04 32 21.3**	**+1.9**
JHJ2	**Mitsune**	**2.60**	**206**	P	**Pn**	**04 31 49.6**	**+1.1**
JHJ	**Hachijo jima 2**	**2.61**	**207**	P	**Pn**	**04 31 49.3**	**+0.7**
	21nm,0.3s,baz=317,slow=18,SNR=11						
JHJ				S	**Sn**	**04 32 19.2**	**-0.3**
	160nm,0.3s,baz=241,slow=23,SNR=8.2						
JHJ				LR	LR	04 32 57.5	
	comp=Z,211nm,21.8s,baz=78,slow=43						
	58nm,0.3s						
MJAR	**Matsushiro Arr**	**2.64**	**295**		**Pn**	**04 31 49.8**	**+0.8**
MJAR	**Matsushiro Arr**	**2.64**	**295**	P	**Pn**	**04 31 49.5**	**+0.5**
	10nm,0.4s,baz=94,slow=14,SNR=20						
MJAR				S	**Sn**	**04 32 21.0**	**+0.8**
	23nm,0.5s,baz=134,slow=14,SNR=3.4						
MJAR				LR	LR	04 33 02.7	
	comp=Z,214nm,21.5s,baz=134,slow=43						
MAJO	**Matsushiro**	**2.64**	**295**		**Pn**	**04 31 50.4**	**+1.4**
MAJO	**Matsushiro**	**2.64**	**295**	P	**Pn**	**04 31 51.1**	**+2.1**
MJB9	**Matsu-Tunnel**	**2.64**	**295**		**Pn**	**04 31 51.3**	**+2.3**
JGF	**Kuroka**	**3.12**	**274**		**Pn**	**04 31 57.0**	**+1.4**
JGF	**Kuroka**	**3.12**	**274**	P	**Pn**	**04 31 57.3**	**+1.7**
INU	**Inuyama**	**3.40**	**269**		**Pn**	**04 32 00.2**	**+0.7**
INU	**Inuyama**	**3.40**	**269**	P	**Pn**	**04 32 02.1**	**+2.6**
JSD	**Sado**	**3.48**	**318**	Pn	**Pn**	**04 32 01.4**	**+1.0**
JSD	**Sado**	**3.48**	**318**	P	**Pn**	**04 32 02.4**	**+1.9**
JTM	**Tenmabayashi**	**5.32**	**359**	Pn	**Pn**	**04 32 26.4**	**+0.6**
JTM	**Tenmabayashi**	**5.32**	**359**	P	**Pn**	**04 32 26.2**	**+0.5**
ERM	**Erimo**	**6.72**	**13**	Pn	**Pn**	**04 32 42.6**	**-2.4**
ERM	**Erimo**	**6.72**	**13**	P	**Pn**	**04 32 43.8**	**-1.2**
JEM	**Erimo**	**6.72**	**13**	P	**Pn**	**04 32 43.8**	**-1.3**
JCJ	**Chichijima**	**8.39**	**174**	Pn	**Pn**	**04 33 08.9**	**+0.9**
JCJ	**Chichijima**	**8.39**	**174**	P	Pn	04 33 00.7	-7.3
	56nm,0.5s,baz=341,slow=14,SNR=23						
JCJ				S	Sn	04 34 22.3	-20
	64nm,0.9s,baz=279,slow=16,SNR=1.4						
JCJ	**Chichijima**	**8.39**	**174**	P	**Pn**	**04 33 08.8**	**+0.9**
ASAJ	**Asahikawa**	**8.71**	**7**	P	Pn	04 33 18.1	+5.7
	4.1nm,0.3s,baz=172,slow=15,SNR=5.2						
	9.4nm,0.3s						
JNU	**Nakatsue**	**8.84**	**258**	LR	LR	04 36 15.3	
	comp=Z,110nm,20.8s,baz=28,slow=35						
YOJ	**Yonaguni jima**	**19.15**	**240**	P	**P**	**04 35 29.6**	**0.0**
PETK	**Petropavlovsk-**	**21.15**	**28**	LR	LR	04 44 00.9	
	comp=Z,35nm,19.4s,baz=245,slow=36						
H11N2	**WAKE ISLAND Hy 27.55**	**118**		T	T	05 06 05.8	
	baz=310,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy 27.55**	**118**		T	T	05 06 04.3	
	baz=310,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy 27.56**	**118**		T	T	05 06 10.1	
	baz=310,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy 28.20**	**120**		T	T	05 06 45.4	
	baz=312,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy 28.20**	**120**		T	T	05 06 41.8	
	baz=312,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy 28.22**	**120**		T	T	05 06 47.9	
	baz=312,slow=76,SNR=33						
SONM	**Songino Array**	**28.53**	**306**	P	**P**	**04 37 00.4**	**-1.4**
SONM	**Songino Array**	**28.53**	**306**	P	**P**	**04 37 03.2**	**+1.5**
	0.5nm,0.6s,baz=122,slow=11,SNR=2.3						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**42.84**	**314**	P	**P**	**04 39 03.5**	**-0.4**
ZALV	**Zalesovo Beam**	**42.84**	**314**	P	**P**	**04 39 03.2**	**-0.7**
	0.9nm,0.3s,baz=91,slow=7.6,SNR=2.3						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**44.81**	**303**	P	**P**	**04 39 19.1**	**-0.7**
MKAR	**Makanchi Array**	**44.81**	**303**	P	**P**	**04 39 18.9**	**-1.0**
	0.7nm,0.8s,baz=87,slow=9.9,SNR=5.2						
	0.7nm,0.8s						
KURK	**Kurchatov**	**46.76**	**309**	P	**P**	**04 39 34.5**	**-0.7**
KURK				IAmb	IAmb	04 39 42.3	
	comp=Z,2.3nm,0.6s						
KURBB	**Kurchatov Arra**	**46.83**	**309**	P	**P**	**04 39 34.9**	**-0.8**
	comp=Z,2.6nm,0.2s,baz=84,slow=8.1,SNR=5.4						
	comp=Z,2.6nm,0.2s						
ILAR	**Eielson Array**	**50.92**	**32**	P	**P**	**04 40 07.8**	**+0.9**
ILAR	**Eielson Array**	**50.92**	**32**	P	**P**	**04 40 07.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=268,slow=6.0,SNR=10.0						
	comp=Z,0.5nm,0.6s						
BVAR	**Borovoye Array**	**51.50**	**313**	P	**P**	**04 40 12.2**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=82,slow=7.5,SNR=2.5						
	comp=Z,0.7nm,0.4s						
E27K	**Coleen River**	**52.90**	**27**	P	**P**	**04 40 23.0**	**+1.4**
I28M	**Miner Creek**	**53.81**	**31**	P	**P**	**04 40 29.9**	**+1.5**
I28M				IAmb	IAmb	04 41 11.4	
	comp=Z,3.3nm,1.3s						
M29M	**Somme Creek**	**54.91**	**34**	P	**P**	**04 40 37.7**	**+1.3**
M29M				IAmb	IAmb	04 40 56.0	
	comp=Z,11nm,1.5s						
L29M	**L29M**	**54.94**	**33**	P	**P**	**04 40 36.8**	**+0.2**
I30M	**Mount Dempster**	**55.32**	**31**	P	**P**	**04 40 40.4**	**+1.0**
I30M				IAmb	IAmb	04 40 52.4	
	comp=Z,3.5nm,1.1s						
AB31	**Akbulak array**	**58.81**	**311**	P	**P**	**04 41 03.5**	**-0.7**
AB31				IAmb	IAmb	04 41 04.1	
	comp=Z,2.3nm,1.1s						
ABKAR	**Akbulak array**	**58.81**	**311**	P	**P**	**04 41 03.5**	**-0.7**
FINES	**FINESS Array B**	**70.11**	**332**	P	**P**	**04 42 17.5**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=22,slow=7.0,SNR=3.7						
	comp=Z,1.8nm,0.8s						
KBZ	**Khabaz**	**71.78**	**311**	P	**P**	**04 42 27.1**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=18,slow=6.4,SNR=4.3						
	comp=Z,1.5nm,0.7s						
AKASG	**Malin Array Be**	**75.42**	**322**	P	**P**	**04 42 48.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=56,slow=1.7,SNR=1.6						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**75.44**	**336**	P	**P**	**04 42 50.6**	**+1.1**
	comp=Z,4.5nm,1.1s,baz=352,slow=4.4,SNR=1.8						
	comp=Z,4.5nm,1.1s						
NOA	**NORSAR Array B**	**75.56**	**337**	P	**P**	**04 42 50.2**	**0.0**
	comp=Z,0.7nm,0.8s,baz=40,slow=5.8,SNR=3.6						
	comp=Z,0.7nm,0.8s						
NVAR	**Mina Array Bea**	**76.08**	**53**	P	**P**	**04 42 53.8**	**-0.1**
NVAR	**Mina Array Bea**	**76.08**	**53**	P	**P**	**04 42 55.2**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=304,slow=7.8,SNR=1.5						
	comp=Z,0.1nm,0.3s						
PDAR	**Pinedale Array**	**78.90**	**45**	P	**P**	**04 43 09.0**	**-0.6**
PDAR	**Pinedale Array**	**78.90**	**45**	P	**P**	**04 43 10.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=278,slow=4.8,SNR=4.1						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**79.75**	**312**	P	**P**	**04 43 13.5**	**-0.7**
BRTR	**Keskin Array B**	**79.75**	**312**	P	**P**	**04 43 14.3**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=64,slow=3.4,SNR=2.6						
	comp=Z,0.4nm,0.8s						
PFO	**Pinyon Flats O**	**80.07**	**56**	LR	LR	05 13 05.2	
	comp=Z,24nm,19.3s,baz=305,slow=31						
TXAR	**Lajitas Array**	**91.23**	**52**	P	**P**	**04 44 11.0**	**-0.6**
TXAR	**Lajitas Array**	**91.23**	**52**	P	**P**	**04 44 12.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=347,slow=5.9,SNR=3.4						
	comp=Z,0.1nm,0.3s						
H03N2	**Juan Fernandez**	**147.02**	**98**	T	T	07 35 21.0	
	baz=289,slow=76,SNR=3.3						
H03N3	**Juan Fernandez**	**147.03**	**98**	T	T	07 35 19.0	
	baz=289,slow=78,SNR=4.6						
H03N1	**Juan Fernandez**	**147.03**	**98**	T	T	07 35 27.0	
	baz=289,slow=76,SNR=4.1						
LPAZ	**La Paz**	**147.63**	**61**		**PKPbc**	**04 50 52.5**	**+0.8**
LPAZ	**La Paz**	**147.63**	**61**	PKPbc	**PKPbc**	**04 50 52.3**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=37,slow=5.1,SNR=4.2						

DJA ***07*** *04:35:34.6±0.2, 2˚N±2˚×12˚6E±˚, h10km, M4.8/16, mB5.2/7, mb5.0/12, MLv4.8/16, Mw(mB)4.6/7*

BJI ***07*** *04:35:35.1, 1˚.97N×126˚.33E, h49km, mB5.3/6, mb4.8/33*

NEIC ***07*** *04:35:37.0±2.0, 1˚.90N±0˚.06×126˚.52E±0˚.07, h53km±6km, mb4.8/45, Error ellipse: s-maj=10.2km s-min=7.9km az=57.0*

IDC ***07*** *04:35:37.4±1.9, 1˚.90N×126˚.46E, h65km±17km, mb4.2/26, mbtmp4.5/29, MS3.4/21, Error ellipse: s-maj=20.2km s-min=8.0km az=82.0*

ISC 07 04:35:36.8±0.6, 1˚.95N±0˚.04×126˚.52E±0˚.06, h56km±5km, n144, σ1s31/145, mb4.7/53, MS3.4/19, 1C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.45**	**144**		**Pn**	**04 36 00.3**	**-0.5**
TNTI	**Ternate**	**1.45**	**144**	P	**Pn**	**04 36 00.4**	**-0.4**
SGSI	**Sangihe**	**1.98**	**330**	P	**Pn**	**04 36 06.9**	**-1.2**
SGSI				S	**Sn**	**04 36 30.7**	**-1.1**
KMSI	**Cibinong**	**2.88**	**242**	P	**Pn**	**04 36 21.6**	**+1.3**
SANI	**Sanana**	**4.01**	**188**	P	**Pn**	**04 36 34.8**	**-1.0**
LUWI	**Luwuk**	**4.78**	**232**		**Pn**	**04 36 46.4**	**0.0**
LUWI	**Luwuk**	**4.78**	**232**	P	**Pn**	**04 36 48.0**	**+1.6**
MRSI	**Marisa**	**4.80**	**252**	P	**Pn**	**04 36 47.7**	**+1.0**
DAV	**Davao City (W)**	**5.17**	**350**		**Pn**	**04 36 52.1**	**+0.4**
DAV	**Davao City (W)**	**5.17**	**350**	P	**Pn**	**04 36 53.2**	**+1.5**
	450nm,0.5s,baz=262,slow=8.3,SNR=1.9						
DAV				S	**Sn**	**04 37 51.6**	**+1.6**
	214nm,0.4s,baz=174,slow=23,SNR=1.5						
DAV				LR	LR	04 39 05.2	
	comp=Z,436nm,18.9s,baz=122,slow=40						
NLAI	**Namlea**	**5.19**	**174**	P	**Pn**	**04 36 52.3**	**+0.3**
	0.5nm1μm73nm,0.4s						
APSI	**Ampana**	**5.63**	**240**	P	**Pn**	**04 36 57.0**	**-1.1**
	4μm301nm,1.0s						
MSAI	**Masohi**	**5.79**	**155**	P	**Pn**	**04 37 03.6**	**+3.4**
	0.5nm108nm,0.6s						
TOLI2	**Toli**	**5.79**	**262**		**Pn**	**04 36 59.0**	**-1.3**
FAKI	**Fak Fak**	**7.50**	**130**		**Pn**	**04 37 22.4**	**-1.3**
FAKI	**Fak Fak**	**7.50**	**130**	P	**Pn**	**04 37 24.1**	**+0.4**
MYLDM	**Lahad Datu**	**8.62**	**292**		**Pn**	**04 37 39.7**	**+0.8**
SPSI	**Sidrap Palu**	**8.94**	**229**	P	**Pn**	**04 37 44.8**	**+1.4**
	46nm,0.7s						
BNSI	**Bone**	**8.99**	**225**	P	**Pn**	**04 37 45.0**	**+0.9**
	49nm,0.7s						
BKSI	**Bulukumba**	**9.64**	**221**	P	**Pn**	**04 37 54.1**	**+1.1**
	552nm31nm,0.6s						
KAPI	**Kappang**	**9.67**	**224**		**Pn**	**04 37 53.0**	**-0.4**
KAPI	**Kappang**	**9.67**	**224**	P	**Pn**	**04 37 53.5**	**+0.1**
	3.8nm,0.3s,baz=11,slow=8.2,SNR=4.6						
KAPI				S	**Sn**	**04 39 40.8**	**+0.1**
	2.7nm,0.3s,baz=85,slow=20,SNR=1.2						
BSSI	**Bau Bau, Buton**	**10.04**	**217**	P	**Pn**	**04 38 00.3**	**+1.8**
	45nm,0.5s						
EDFI	**Ende, Flores**	**11.67**	**204**	P	**Pn**	**04 38 22.6**	**+1.8**
BATI	**Baumata**	**12.41**	**193**	LR	LR	04 43 43.0	
	comp=Z,84nm,18.5s,baz=228,slow=39						
SBUM	**Sibu**	**14.29**	**272**		**Pn**	**04 38 58.0**	**+1.6**
JAY	**Jayapura**	**14.86**	**107**	P	**P**	**04 39 09.1**	**+0.7**
	37nm,0.8s,baz=348,slow=16,SNR=9.8						
MTN	**Manton Dam**	**15.40**	**163**		**Pn**	**04 39 09.2**	**-1.5**
MTN				IAmb	IAmb	04 39 17.3	
	comp=Z,23nm,0.5s						
JAGI	**Jajag, Banyuwa**	**16.10**	**230**	Pn	**Pn**	**04 39 19.7**	**+0.1**
KSM	**Kuching**	**16.21**	**269**	P	**P**	**04 39 23.4**	**+0.1**
KNRA	**Kununurra**	**17.66**	**173**		**Pn**	**04 39 37.4**	**-1.6**
KNRA				IAmb	IAmb	04 39 41.1	
	comp=Z,31nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.94**	**182**	P	**P**	**04 40 03.1**	**-1.3**
FITZ	**Fitzroy Crossi**	**19.94**	**182**	P	**P**	**04 40 03.0**	**-1.4**
	comp=Z,11nm,0.4s,baz=9.8,slow=8.3,SNR=70						
GUMO	**Guam**	**21.52**	**57**	LR	LR	04 47 32.3	
	comp=Z,53nm,22.0s,baz=282,slow=33						
TPUB	**Ta-pu**	**21.98**	**345**	P	**P**	**04 40 23.5**	**-2.7**
MYKOM	**Kota Tinggi**	**22.65**	**270**	P	**P**	**04 40 33.8**	**+0.2**
WB0	**Warramunga Arr**	**22.93**	**161**	P	**P**	**04 40 34.2**	**-2.1**
WB0				IAmb	IAmb	04 40 35.5	
	comp=Z,42nm,0.6s						
WRAB	**Tennant Creek**	**23.07**	**161**	P	**P**	**04 40 36.2**	**-1.6**
WRAB				IAmb	IAmb	04 40 38.8	
	comp=Z,35nm,0.8s						
WRA	**Warramunga Arr**	**23.07**	**161**	P	**P**	**04 40 35.3**	**-2.5**
WRA					**PcP**	**04 44 24.7**	**-0.8**
WRA	**Warramunga Arr**	**23.07**	**161**	P	**P**	**04 40 36.2**	**-1.6**
	comp=Z,24nm,0.5s,baz=339,slow=11,SNR=6.4						
WRA				PcP	**PcP**	**04 44 25.4**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=318,slow=2.9,SNR=5.2						
WRA				S	**S**	**04 44 43.5**	**-1.2**
	comp=Z,2.2nm,1.0s,baz=341,slow=17,SNR=4.5						
	comp=Z,24nm,0.5s						
WR8	**Warramunga Arr**	**23.14**	**161**	P	**P**	**04 40 36.5**	**-2.0**
MBWA	**Marble Bar**	**23.91**	**196**	P	**P**	**04 40 44.0**	**-1.7**
MBWA				IAmb	IAmb	04 40 45.4	
	comp=Z,11nm,0.6s						
PSA00	**Pilbara Seismi**	**24.27**	**195**	P	**P**	**04 40 48.5**	**-0.4**
JOW	**Kunigami**	**24.80**	**4**	P	**P**	**04 40 54.5**	**+0.8**
JOW				IAmb	IAmb	04 40 59.0	
	comp=Z,35nm,0.7s						
JOW	**Kunigami**	**24.80**	**4**	P	**P**	**04 40 55.0**	**+1.3**
	comp=Z,27nm,0.6s,baz=177,slow=9.3,SNR=7.1						
	comp=Z,27nm,0.6s						
AS31	**Alice Springs**	**26.46**	**165**		**P**	**04 41 08.2**	**-0.7**
ASAR	**Alice Springs**	**26.46**	**165**	P	**P**	**04 41 08.1**	**+0.8**
ASAR	**Alice Springs**	**26.46**	**165**		**P**	**04 41 08.1**	**-0.7**
ASAR					**PcP**	**04 44 33.1**	**+0.1**
ASAR	**Alice Springs**	**26.46**	**165**	P	**P**	**04 41 08.0**	**-0.9**
	comp=Z,7.2nm,0.6s,baz=346,slow=8.0,SNR=133						
ASAR				PcP	**PcP**	**04 44 32.9**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=350,slow=1.5,SNR=6.7						
ASAR				S	**S**	**04 45 38.4**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=338,slow=19,SNR=3.8						
	comp=Z,7.2nm,0.6s						
PSI	**Prapat**	**27.58**	**272**	LR	LR	04 54 02.5	
	comp=Z,88nm,19.8s,baz=95,slow=40						
NJ2	**Nanjing**	**30.80**	**347**	*eP*	**P**	**04 41 48.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
GYA	**Guiyang**	**30.94**	**324**	⇓P	**P**	**04 41 51.5**	**+2.7**
GYA				pmax	pmax		
	comp=Z,30nm,0.6s						
JNU	**Nakatsue**	**31.28**	**7**	LR	LR	04 59 47.6	
	comp=Z,24nm,18.4s,baz=212,slow=46						
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**04 41 55.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**04 41 54.9**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=110,slow=8.8,SNR=4.9						
CMAR				LR	LR	04 56 44.1	
	comp=Z,41nm,19.0s,baz=90,slow=40						
	comp=Z,0.8nm,0.3s						
FORT	**Forrest**	**32.58**	**178**		**P**	**04 42 02.7**	**-0.2**
FORT				IAmb	IAmb	04 42 03.2	
	comp=Z,16nm,0.7s						
JHJ	**Hachijo jima 2**	**33.41**	**20**	LR	LR	04 54 06.0	
	comp=Z,34nm,20.0s,baz=78,slow=33						
PZH	**PanZhiHua**	**34.09**	**318**	P	**P**	**04 42 18.5**	**+2.2**
KSRS	**Korea Array**	**35.35**	**2**	P	**P**	**04 42 28.1**	**+1.2**
	comp=Z,4.3nm,0.7s,baz=181,slow=10,SNR=11						
	comp=Z,4.3nm,0.7s						
XAN	**Xi'an**	**35.91**	**335**	P	**P**	**04 42 28.6**	**-3.2**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
MJAR	**Matsushiro Arr**	**36.08**	**16**	P	**P**	**04 42 31.9**	**-1.3**
MJAR	**Matsushiro Arr**	**36.08**	**16**	P	**P**	**04 42 32.7**	**-0.6**
	comp=Z,3.6nm,0.7s,baz=188,slow=9.4,SNR=7.1						
MJAR				LR	LR	04 59 53.4	
	comp=Z,20nm,18.3s,baz=218,slow=40						
	comp=Z,3.6nm,0.7s						
EIDS	**Eidsvold**	**36.11**	**140**		**P**	**04 42 33.1**	**-0.5**
EIDS				IAmb	IAmb	04 42 35.5	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**36.56**	**158**		**P**	**04 42 37.0**	**-0.4**
STKA	**Stephens Creek**	**36.56**	**158**	P	**P**	**04 42 36.5**	**-0.9**
	comp=Z,8.9nm,0.5s,baz=346,slow=7.3,SNR=26						
STKA				LR	LR	04 59 27.0	
	comp=Z,126nm,18.3s,baz=263,slow=39						
	comp=Z,8.9nm,0.5s						
HNS	**HongShan**	**36.91**	**344**	⇓P	**P**	**04 42 41.2**	**+0.9**
HNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LZH	**Lanzhou**	**39.93**	**331**	*eP*	**P**	**04 43 06.0**	**+0.1**
LZH				pP	pP	04 43 19.2	-0.7
LZH				sP	sP	04 43 26.4	+0.2
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
ARMA	**Armidale**	**40.12**	**145**		**P**	**04 43 07.5**	**0.0**
SHL	**Shillong**	**40.77**	**308**		**P**	**04 43 12.6**	**-0.4**
SHL				IAmb	IAmb	04 43 18.4	
	comp=Z,13nm,0.6s						
HHC	**Hu-ho-hao-te**	**41.02**	**343**	*eP*	**P**	**04 43 17.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
BTO	**Baotou**	**41.28**	**341**	*eP*	**P**	**04 43 20.2**	**+3.4**
BTO				pmax	pmax		
	comp=Z,16nm,0.8s						
BTO				pmax	pmax		
	comp=Z,380nm,5.2s						
USRK	**Ussuriysk Ar.**	**42.35**	**6**	P	**P**	**04 43 26.0**	**+0.6**
	comp=Z,6.3nm,0.8s,baz=138,slow=3.9,SNR=5.0						
	comp=Z,6.3nm,0.8s						
CAN	**Canberra**	**42.63**	**153**	P	**P**	**04 43 28.9**	**+0.9**
ASAJ	**Asahikawa**	**44.34**	**17**	LR	LR	05 02 08.2	
	comp=Z,31nm,19.8s,baz=250,slow=36						
GTA	**Gaotai**	**44.51**	**330**	*eP

VNDA					LR	LR	05 21 31.9		
	comp=Z,29nm,21.1s,baz=326,slow=34								
	comp=Z,3.0nm,0.5s								
VNDA	**Vanda**	**81.70**	**173**		P	**P**	**04 47 48.9**	**+0.2**	
MAW	**Mawson**	**82.02**	**200**		P	**P**	**04 47 50.9**	**+0.4**	
	comp=Z,3.0nm,0.7s,baz=92,slow=7.5,SNR=11								
	comp=Z,3.0nm,0.7s								
D19K	**Kuna River**	**82.85**	**21**		P	**P**	**04 47 56.0**	**+1.0**	
H19K	**Roundabout Mou**	**82.87**	**24**		P	**P**	**04 47 56.5**	**+1.5**	
J19K	**Poorman**	**82.94**	**26**			**P**	**04 47 56.0**	**+0.6**	
J19K					IAmb	IAmb	04 47 58.1		
	comp=Z,15nm,1.1s								
E19K	**Redstone River**	**82.95**	**22**		P	**P**	**04 47 56.7**	**+1.2**	
E19K					IAmb	IAmb	04 48 00.6		
	comp=Z,15nm,1.0s								
D20K	**Etivluk River**	**83.43**	**21**		P	**P**	**04 47 59.0**	**+1.1**	
D20K					IAmb	IAmb	04 48 00.5		
	comp=Z,21nm,1.1s								
KBZ	**Khabaz**	**84.04**	**314**		P	**P**	**04 48 00.7**	**-0.8**	
	comp=Z,1.0nm,0.5s,baz=151,slow=5.7,SNR=3.9								
KBZ					LR	LR	05 31 16.3		
	comp=Z,44nm,18.4s,baz=4.5,slow=40								
	comp=Z,1.0nm,0.5s								
B21K	**Ikpikpuk River**	**84.30**	**20**		P	**P**	**04 48 04.1**	**+1.7**	
GURO	**Guroymak-BITLI**	**84.47**	**308**			**P**	**04 48 04.8**	**+0.8**	
GURO					IAmb	IAmb	04 48 07.0		
	comp=Z,6.9nm,0.8s								
COLD	**Coldfoot**	**85.60**	**23**		P	**P**	**04 48 09.6**	**+0.6**	
COLD					IAmb	IAmb	04 49 16.2		
	comp=Z,26nm,2.0s								
BWN	**Browne**	**85.64**	**26**		P	**P**	**04 48 09.8**	**+0.6**	
E23K	**Chandalar**	**85.90**	**22**		P	**P**	**04 48 11.7**	**+1.2**	
E23K					IAmb	IAmb	04 49 43.5		
	comp=Z,14nm,1.4s								
ILAR	**Eielson Array**	**86.79**	**25**		P	**P**	**04 48 14.0**	**-0.9**	
ILAR	**Eielson Array**	**86.79**	**25**		P	**P**	**04 48 13.8**	**-1.0**	
	comp=Z,0.4nm,0.6s,baz=247,slow=4.7,SNR=8.8								
	comp=Z,0.4nm,0.6s								
ARPR	**Arapgir-MALATY**	**87.37**	**309**		P	**P**	**04 48 18.9**	**+0.5**	
ARPR					IAmb	IAmb	04 48 27.6		
	comp=Z,5.2nm,0.9s								
E25K	**Arctic Village**	**87.42**	**22**			**P**	**04 48 18.6**	**+0.7**	
E25K					IAmb	IAmb	04 51 32.0		
	comp=Z,20nm,1.8s								
MMAI	**Mount Meron Ar**	**89.88**	**303**		P	**P**	**04 48 30.3**	**0.0**	
	comp=Z,0.6nm,0.3s,baz=39,slow=9.3,SNR=2.1								
	comp=Z,0.6nm,0.3s								
SYO	**Syowa Base**	**90.70**	**201**	⇑*e*	pP	pP	04 48 48.8	0.0	
BRTR	**Keskin Array B**	**90.98**	**310**		P	**P**	**04 48 34.4**	**-1.0**	
BRTR	**Keskin Array B**	**90.98**	**310**		P	**P**	**04 48 34.2**	**-1.1**	
	comp=Z,0.4nm,0.4s,baz=126,slow=7.3,SNR=5.1								
	comp=Z,0.4nm,0.4s								
QSPA	**South Pole Qui**	**91.87**	**180**		P	**P**	**04 48 40.4**	**+1.5**	
QSPA	**South Pole Qui**	**91.87**	**180**		P	**P**	**04 48 40.8**	**+2.0**	
	comp=Z,1.6nm,0.6s,baz=325,slow=0.4,SNR=16								
ARCES	**ARCESS Array B**	**92.03**	**340**		P	**P**	**04 48 38.3**	**-1.1**	
	comp=Z,4.4nm,1.0s,baz=63,slow=5.6,SNR=8.4								
	comp=Z,4.4nm,1.0s								
SPITS	**Spitsbergen Ar**	**92.17**	**349**		P	**P**	**04 48 39.0**	**-0.9**	
	comp=Z,5.1nm,0.8s,baz=91,slow=12,SNR=4.7								
	comp=Z,5.1nm,0.8s								
FINES	**FINESS Array B**	**93.29**	**332**		P	**P**	**04 48 43.6**	**-1.7**	
	comp=Z,0.7nm,0.4s,baz=33,slow=4.5,SNR=6.7								
	comp=Z,0.7nm,0.4s								
BUR08	**Bucovina Ar. S**	**96.18**	**318**			**P**	**04 48 58.5**	**-0.6**	
BUR08					IAmb	IAmb	04 49 19.9		
	comp=Z,4.7nm,1.1s								
BBB	**Bella Bella**	**97.84**	**37**		LR	LR	05 28 02.9		
	comp=Z,19nm,19.5s,baz=192,slow=32								
HFS	**Hagfors**	**99.48**	**332**		P	**Pdif**	**04 49 12.7**	**-0.8**	
	comp=Z,1.9nm,0.8s,baz=119,slow=5.1,SNR=4.9								
HFS					LR	LR	05 37 32.7		
	comp=Z,22nm,19.4s,baz=72,slow=37								
	comp=Z,1.9nm,0.8s								
TXAR	**Lajitas Array**	**122.84**	**53**			**PKPdf**	**04 54 26.9**	**-0.6**	
TXAR	**Lajitas Array**	**122.84**	**53**		PKP	**PKiKP**	**04 54 27.7**	**0.0**	
	comp=Z,0.3nm,0.7s,baz=306,slow=4.3,SNR=3.9								
TORD	**Torodi Ar. Bea**	**123.25**	**287**			**PKPdf**	**04 54 27.6**	**-0.8**	
TORD	**Torodi Ar. Bea**	**123.25**	**287**		PKP	**PKPdf**	**04 54 27.9**	**-0.5**	
	comp=Z,2.4nm,0.3s,baz=60,slow=4.0,SNR=2.3								
CPUP	**Villa Florida**	**155.48**	**172**		PKPbc	**PKPdf**	**04 55 32.3**	**+7.3**	
	comp=Z,0.3nm,0.6s,baz=198,slow=3.7,SNR=3.3								
LPAZ	**La Paz**	**159.73**	**136**			**PKPdf**	**04 55 29.3**	**-1.9**	
LPAZ	**La Paz**	**159.73**	**136**		PKP	**PKPdf**	**04 55 30.9**	**-0.4**	
	comp=Z,0.9nm,0.9s,baz=141,slow=6.5,SNR=3.6								

IDC 07 04:55:57.5±2.4, 18°91S×174°93W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=58.6km s-min=39.1km az=48.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.49**	**198**	P	P	05 00 36.0	-1.0
	1.6nm,0.3s,baz=353,slow=8.1,SNR=2.5						
	1.6nm,0.3s						
WRA	**Warramunga Arr**	**47.70**	**260**	P	P	05 04 36.1	-0.2
	0.9nm,0.5s,baz=97,slow=8.1,SNR=18						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**47.71**	**255**	P	P	05 04 36.6	+0.2
	2.0nm,0.5s,baz=90,slow=8.3,SNR=32						
	2.0nm,0.5s						
QSPA	**South Pole Qui**	**71.15**	**180**	P	P	05 07 18.5	+0.5
	1.4nm,1.1s,baz=55,slow=20,SNR=6.2						
	1.4nm,1.1s						
BRTR	**Keskin Array B**	**147.81**	**316**	PKPbc	PKPbc	05 15 43.6	-1.4
	0.4nm,0.5s,baz=43,slow=4.8,SNR=2.1						

CATAC 07 05:04:29.5±0.4, 10°N±2°×8°5W±°, h9km±2km, M3.5/13, MLv3.5/13, 1C, Error ellipse: s-maj=6.0km s-min=2.8km az=34.8, confirmed, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMARA	**Lajas Hojancha**	**0.66**	**307**	S	Sb	05 04 53.2	+0.6
CMARA	**Lajas Hojancha**	**0.66**	**307**	⇑P	Pg	05 04 42.5	+0.2
JTS	**Las Juntas de**	**0.67**	**354**	P	Pg	05 04 42.1	-0.3
TCS1	**Tacares**	**0.71**	**54**	P	Pg	05 04 43.5	+0.2
QUEP	**Quepos**	**0.74**	**105**	S	Sb	05 04 55.4	+0.7
QUEP	**Quepos**	**0.74**	**105**	P	Pg	05 04 43.9	+0.1
SOCE	**Pocosol**	**0.80**	**19**	S	Sg	05 04 56.0	+0.6
SOCE	**Pocosol**	**0.80**	**19**	P	Pg	05 04 44.8	-0.2
LCR2	**La Lucha 2**	**0.88**	**82**	S	Sb	05 04 59.0	0.0
COVE	**Coope Vega, Sa**	**1.19**	**24**	P	Pb	05 04 51.3	-1.0
COVE	**Coope Vega, Sa**	**1.19**	**24**	S	Sg	05 05 08.1	+0.2
OCHAL	**Ojochal**	**1.33**	**113**	P	Pn	05 04 52.4	-1.9
OCHAL	**Ojochal**	**1.33**	**113**	S	Sg	05 05 12.9	+0.6
DRK0	**Durika**	**1.66**	**102**	S	Sn	05 05 20.3	-0.3
DRK0	**Durika**	**1.66**	**102**	P	Pn	05 04 57.8	-1.2
CARN	**Rivas**	**1.68**	**338**	P	Pn	05 04 59.4	+0.4
CARN				S	Sb	05 05 21.7	-0.1
CDITO	**Canoas**	**2.25**	**117**	P	Pn	05 05 06.7	-0.2
ESPN	**Las Esperanzas**	**2.62**	**13**	P	Pn	05 05 12.1	0.0

*NEIC **07** 05:24:01.8±1.3, 19°.33N±0°.04×67°.47W±0°.07, h10km±2km, ML2.2/11, Md3.3/7(RSPR), Error ellipse: s-maj=12.0km s-min=4.3km az=242.0*

*SDD **07** 05:24:05.2±1.7, 19°.26N×67°.14W, h23km±78km, MD3.4, ML2.3, MW2.7*

*RSPR **07** 05:24:05.3, 19°.28N×67°.51W, h7km±13km, MD3.3/7*

ISC 07 05:24:05.1±1.5, 19°.16N±0°.07×67°.28W±0°.03, h8km±11km, n32, σ1§02/40, 18C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.70**	**167**		**Pn**	**05 24 20.7**	**-0.7**
AGPR					**Sn**	**05 24 33.6**	**+1.2**
AGPR	**Aguadilla, PR**	**0.70**	**167**	⇑*e*Pg	**Pb**	**05 24 19.2**	**-0.5**
AGPR				⇑*e*Sg	**Sb**	**05 24 29.7**	**+0.2**
AGPR				IAML		05 24 34.4	
	comp=N,126nm,1.0s						
AGPR	**Aguadilla, PR**	**0.70**	**167**	⇑*e*P	**Pn**	**05 24 20.7**	**-0.7**
AGPR	**Aguadilla, PR**	**0.70**	**167**	*e*S	**Sn**	**05 24 33.6**	**+1.2**
IDE	**Isla Desecheo**	**0.79**	**194**		**Pn**	**05 24 21.6**	**-0.9**
IDE					**Sb**	**05 24 32.6**	**+0.6**
IDE	**Isla Desecheo**	**0.79**	**194**	⇑*e*P	**Pn**	**05 24 21.6**	**-0.9**
IDE	**Isla Desecheo**	**0.79**	**194**	*e*S	**Sb**	**05 24 32.6**	**+0.6**
PRSN	**Puerto Rico Se**	**0.94**	**172**		**Pb**	**05 24 23.2**	**-0.5**
PRSN	**Puerto Rico Se**	**0.94**	**172**	⇑*e*Pg	**Pb**	**05 24 23.2**	**-0.5**
PRSN				⇓*e*Sg	**Sn**	**05 24 37.9**	**-0.5**
PRSN				IAML		05 24 40.6	
	comp=N,253nm,0.2s						
PRSN	**Puerto Rico Se**	**0.94**	**172**	⇑*e*P	**Pb**	**05 24 23.2**	**-0.5**
AOPR	**Arecibo Observ**	**0.95**	**148**	Pn	**Pn**	**05 24 23.9**	**-0.9**
AOPR	**Arecibo Observ**	**0.95**	**148**	⇓*e*Pg	**Pn**	**05 24 24.0**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.16**	**172**		**Pb**	**05 24 25.9**	**-1.5**
CRPR				IAML		05 24 48.2	
	comp=N,44nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.16**	**172**	⇑*e*Pg	**Pb**	**05 24 26.0**	**-1.3**
CRPR				⇓*e*Sg	**Sg**	**05 24 42.4**	**0.0**
CRPR				IAML		05 24 48.1	
	comp=N,52nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.16**	**172**	⇑*e*P	**Pg**	**05 24 27.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.16**	**172**	*e*S	**Sn**	**05 24 43.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.20**	**169**	⇑*e*Pg	**Pb**	**05 24 27.0**	**-1.2**
MLPR				⇑*e*Sg	**Sn**	**05 24 44.1**	**-0.6**
MLPR				IAML		05 24 50.1	
	comp=N,8.1nm,0.2s						
ECPR	**Experimental S**	**1.20**	**134**	⇑*e*P	**Pg**	**05 24 28.8**	**+0.5**
ECPR	**Experimental S**	**1.20**	**134**	*e*S	**Sn**	**05 24 47.5**	**+2.8**
OBIP	**Obispado Ponce**	**1.28**	**150**		**Pb**	**05 24 29.0**	**-0.5**
OBIP				IAML		05 24 50.8	
	comp=E,33nm,0.7s						
OBIP	**Obispado Ponce**	**1.28**	**150**	⇑*e*P	**Pg**	**05 24 29.5**	**-0.2**
OBIP	**Obispado Ponce**	**1.28**	**150**	*e*S	**Sg**	**05 24 47.5**	**+1.2**
GCPR	**Guaynabo City**	**1.41**	**127**		**Pb**	**05 24 31.3**	**-0.4**
GCPR				IAML		05 24 52.4	
	comp=N,25nm,2.0s						
GCPR				IAML		05 25 01.6	
	comp=E,26nm,1.9s						
GCPR	**Guaynabo City**	**1.41**	**127**	⇑*e*P	**Pg**	**05 24 31.6**	**-0.6**
GCPR	**Guaynabo City**	**1.41**	**127**	*e*S	**Sg**	**05 24 52.7**	**+2.1**
HIDR	**Higuey Centro**	**1.47**	**248**	⇓*e*Pg	**Pg**	**05 24 33.0**	**-0.5**
HIDR				⇑*e*Sg	**Sg**	**05 24 54.6**	**+2.0**
HIDR				IAML		05 24 57.9	
	comp=N,40nm,0.2s						
SJG	**San Juan**	**1.49**	**134**	Pn	**Pb**	**05 24 32.1**	**-1.0**
SJG				IAML		05 24 52.4	
	comp=N,29nm,2.4s						
SJG				IAML		05 25 03.2	
	comp=N,24nm,0.2s						
MIDR	**Miches**	**1.69**	**264**	⇑*e*Pg	**Pg**	**05 24 37.0**	**-0.5**
MIDR				IAML		05 25 08.2	
	comp=N,29nm,1.5s						
HUMP	**Col San Antoni**	**1.69**	**126**		**Pn**	**05 24 34.9**	**-0.1**
HUMP				IAML		05 25 06.0	
	comp=N,18nm,0.2s						
HUMP	**Col San Antoni**	**1.69**	**126**	⇑*e*P	**Pb**	**05 24 35.0**	**-1.5**
HUMP	**Col San Antoni**	**1.69**	**126**	*e*S	**Sg**	**05 24 58.9**	**-0.6**
HATOM	**Hato Mayor del**	**2.02**	**260**	⇑*e*Pg	**Pb**	**05 24 42.4**	**+0.2**
HATOM				⇑*e*Sg	**Sg**	**05 25 10.6**	**+0.4**
HATOM				IAML		05 25 22.3	
	comp=N,17nm,1.8s						

*MDD **07** 05:35:36.2±1.2, 43°.59N×13°.92W, h0km, Mb4.5/9, M_mb3.9/9, Error ellipse: s-maj=9.5km s-min=6.8km az=98.0*

*INMG **07** 05:35:39.0±1.2, 43°.68N×14°.26W, h10km, ML2.5, Error ellipse: s-maj=9.3km s-min=5.5km az=86.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Abissal Iberica*

ISC 07 05:35:39.9±3.6, 43°.29N±0°.09×13°.6W±0°.2, h10km, n29, σ1§74/48, 7C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMAZ	**Mazaricos**	**3.38**	**94**	Pn	**Pn**	**05 36 33.0**	**+0.2**
EMAZ				⇑*i*lVmb_VC		05 36 33.1	
	644nm,SNR=1.2						
EMAZ				Sn	**Sn**	**05 37 13.3**	**+0.3**
EAGO	**Agolada(Pontev**	**4.05**	**95**	Pn	**Pn**	**05 36 42.1**	**+0.1**
EAGO				⇑*i*lVmb_VC		05 36 43.1	
	505nm,SNR=1.4						
EAGO				Sn	**Sn**	**05 37 29.5**	**+0.1**
PGAV	**Gavieira, Arco**	**4.13**	**107**	*e*P	**Pn**	**05 36 44.4**	**+1.2**
PGAV				*e*S	**Sn**	**05 37 33.8**	**+2.2**
PGAV				*i* IAML		05 37 37.1	
PGAV				*i* IAML		05 37 38.1	
PGAV				*i* IAML		05 37 39.0	
ELOB	**Lobios**	**4.31**	**107**	Pn	**Pn**	**05 36 46.8**	**+1.2**
ELOB				⇑*i*lVmb_VC		05 36 47.3	
	309nm,SNR=1.5						
ELOB				Sn	**Sn**	**05 37 38.9**	**+2.9**
PCAB	**Cabril**	**4.40**	**109**	*e*P	**Pn**	**05 36 48.2**	**+1.5**
PCAB				*e*S	**Sn**	**05 37 40.4**	**+2.5**
PCAB				*i* IAML		05 37 42.9	
PCAB				*i* IAML		05 37 44.1	
PCAB				*i* IAML		05 37 44.2	
EPON	**Pontenova**	**4.69**	**87**	Pn	**Pn**	**05 36 50.4**	**-0.3**
EPON				⇑*i*lVmb_VC		05 37 00.4	
	426nm,SNR=1.1						
EPON				Sn	**Sn**	**05 37 43.9**	**-1.3**
POLO	**Lamas de Olo**	**4.69**	**112**	*e*P	**Pn**	**05 36 52.8**	**+1.9**
POLO				*e*S	**Sn**	**05 37 48.3**	**+2.8**
POLO				*i* IAML		05 37 50.0	
POLO				*i* IAML		05 37 51.0	
POLO				*i* IAML		05 37 51.8	
PVIS	**Viseu**	**4.95**	**119**	*e*S	**Sn**	**05 37 53.9**	**+2.1**
PCAS	**Casmilo, Conde**	**4.99**	**129**	*i* IAML	**Sn**	**05 37 55.0**	**+2.4**
PCAS				*e*S	**Sn**	**05 37 55.0**	**+2.4**
PCAS				*i* IAML		05 37 56.1	
PCAS				*i* IAML		05 38 04.6	
ECAL	**Calabor**	**5.22**	**103**	Pn	**Pn**	**05 36 58.9**	**+0.8**
ECAL				⇑*i*lVmb_VC		05 37 07.9	
	270nm,SNR=1.0						
ECAL				Sn	**Sn**	**05 37 59.8**	**+1.3**
PBRG	**Braganca**	**5.26**	**104**	*e*S	**Sn**	**05 38 00.8**	**+1.5**
PBRG				*i* IAML		05 38 04.1	
PBRG				*i* IAML		05 38 04.5	
PBRG				*i* IAML		05 38 18.7	
MVO	**Moncorvo**	**5.30**	**111**	*e*P	**Pn**	**05 37 00.9**	**+1.7**
MVO				*e*S	**Sn**	**05 38 02.9**	**+2.5**
MVO				*i* IAML		05 38 04.3	
MVO				*i* IAML		05 38 08.8	
MVO				*i* IAML		05 38 14.2	
MTE	**Manteigas**	**5.35**	**121**	*e*P	**Pn**	**05 37 01.5**	**+1.7**
MTE				*e*S	**Sn**	**05 38 03.3**	**+1.8**
MTE				*i* IAML		05 38 06.6	
MTE				*i* IAML		05 38 06.8	
PMAFR	**Mafra**	**5.41**	**142**	*e*S	**Sn**	**05 38 03.7**	**+0.8**
PMAFR				*i* IAML		05 38 04.5	
PMAFR				*i* IAML		05 38 11.5	
PSARD	**Sardoal**	**5.49**	**130**	*e*S	**Sn**	**05 38 06.3**	**+1.4**
PSARD				*i* IAML		05 38 08.8	
PSARD				*i* IAML		05 38 09.0	
PSARD				*i* IAML		05 38 10.4	
PCBR	**Castelo Branco**	**5.73**	**125**	*e*S	**Sn**	**05 38 11.9**	**+1.2**
PCBR				*i* IAML		05 38 14.6	
PCBR				*i* IAML		05 38 14.8	
PCBR				*i* IAML		05 38 15.2	
PMTG	**Montargil**	**5.84**	**134**	*e*P	**Pn**	**05 37 08.0**	**+1.6**
PMTG				*e*S	**Sn**	**05 38 13.9**	**+0.5**
PMTG				*i* IAML		05 38 18.9	
PMTG				*i* IAML		05 38 20.0	
PMTG				*i* IAML		05 38 32.3	
PMRV	**Marv??o**	**6.04**	**128**	*e*P	**Pn**	**05 37 10.6**	**+1.3**
PMRV				*e*S	**Sn**	**05 38 19.4**	**+0.9**
PMRV				*i* IAML		05 38 21.3	
PMRV				*i* IAML		05 38 21.7	
PMRV				*i* IAML		05 38 22.0	
EARI	**Arriondas**	**6.11**	**87**	Pn	**Pn**	**05 37 09.8**	**-0.4**
EARI				⇑*i*lVmb_VC		05 37 11.2	
	448nm,SNR=1.1						
EARI				Sn	**Sn**	**05 38 20.4**	**+0.3**
PARRA	**Arraiolos**	**6.12**	**135**	*e*P	Pn	05 37 11.6	+7.9
PARRA				*e*S	**Sb**	**05 38 20.1**	**-5.7**
PARRA				*i* IAML		05 38 22.8	
PARRA				*i* IAML		05 38 25.6	
PESTR	**Estremoz**	**6.32**	**132**	*e*S	**Sn**	**05 38 26.0**	**+0.6**
EPLA	**Plasencia**	**6.47**	**117**	Pn	**Pn**	**05 37 16.1**	**+0.8**
EPLA				⇑*i*lVmb_VC		05 37 18.9	
	191nm,SNR=1.5						
EPLA				Sn	**Sn**	**05 38 28.4**	**-0.7**
EBAD	**Badajoz**	**6.72**	**130**	Pn	**Pn**	**05 37 19.6**	**+1.1**
EBAD				Sn	**Sn**	**05 38 35.7**	**+0.6**
MESJ	**Messejana**	**6.80**	**141**	*e*S	**Sn**	**05 38 37.4**	**+0.3**
MESJ				*i* IAML		05 38 41.6	
MESJ				*i* IAML		05 38 41.9	
MESJ				*i* IAML		05 38 42.2	
MORF	**Marmelete**	**7.06**	**146**	*e*S	**Sn**	**05 38 44.3**	**+0.7**
PBAR	**Barrancos**	**7.12**	**134**	*e*P	**Pn**	**05 37 25.4**	**+1.3**
PBAR				*e*S	**Sn**	**05 38 45.0**	**0.0**
PBAR				*i* IAML		05 38 47.8	
PBAR				*i* IAML		05 38 49.6	
PBAR				*i* IAML		05 39 02.6	
PVAQ	**Vaqueiros**	**7.39**	**141**	*e*S	**Sn**	**05 38 49.1**	**-2.4**
PVAQ				*i* IAML		05 38 56.1	
PVAQ				*i* IAML		05 38 57.4	
PVAQ				*i* IAML		05 38 57.8	
ELAN	**Lanestosa**	**7.41**	**87**	Pn	**Pn**	**05 37 27.5**	**-0.5**
ELAN				Sn	**Sn**	**05 38 54.4**	**+2.3**
PBDV	**Barranco-do-Ve**	**7.42**	**143**	*e*P	**Pn**	**05 37 29.8**	**+1.6**
PBDV				*e*S	**Sn**	**05 38 51.5**	**-1.0**

*NEIC **07** 05:56:33.5±1.7, 59°.7S±0°.1×27°.1W±0°.2, h109km±5km, mb4.7/47, Error ellipse: s-maj=18.4km s-min=11.2km az=197.0*

*IDC **07** 05:56:36.4±4.9, 59°.59S×27°.13W, h141km±45km, mb3.9/9, mbtmp4.3/10, MS2.7/1, Error ellipse: s-maj=22.5km s-min=14.4km az=52.0*

ISC 07 05:56:37.1±0.5, 59°.72S±0°.08×27°.17W±0°.10, h150km, n83, σ1§00/73, mb4.5/30, 5C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.45**	**152**	⇑P	**Pn**	**05 59 41.2**	**-0.4**
	comp=Z,10nm,0.3s						
VNA3	**Neumayer Olymp**	**13.57**	**156**	S	Sn	06 02 02.2	-11
VNA3	**Neumayer Olymp**	**13.57**	**156**	⇑P	**Pn**	**05 59 40.4**	**-2.8**
	comp=Z,7.5nm,0.3s						
SNAA	**Sanae**	**15.45**	**151**	S	Sn	06 02 47.1	-11
SNAA	**Sanae**	**15.45**	**151**	⇑P	**Pn**	**06 00 05.2**	**-1.5**
	comp=Z,89nm,0.4s						
SNAA	**Sanae**	**15.45**	**151**	P	**Pn**	**06 00 06.2**	**-0.6**
SNAA	**Sanae**	**15.45**	**151**	P	**Pn**	**06 00 06.1**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=276,slow=11,SNR=29						
SNAA				S	Sn	06 02 47.0	-11
	comp=Z,1.7nm,0.6s,baz=291,slow=16,SNR=5.1						
TROLL	**Troll, Antarti**	**17.02**	**148**	⇑P	**P**	**06 00 24.5**	**-0.9**
	comp=Z,741nm,0.6s						
TROLL	**Troll, Antarti**	**17.02**	**148**	⇑S	S	06 03 24.4	-10
	comp=E,40nm,0.4s						
BELA	**Belgrano 2**	**18.41**	**185**	P	**P**	**06 00 38.8**	**-1.5**
MG02	**Cerro Sombrero**	**24.02**	**268**	P	**P**	**06 01 36.1**	**-1.7**
QSPA	**South Pole Qui**	**30.52**	**180**	P	**P**	**06 02 39.0**	**+3.2**
QSPA	**South Pole Qui**	**30.52**	**180**	P	**P**	**06 02 38.8**	**+2.9**
	comp=E,2.2nm,0.5s,baz=187,slow=1.1,SNR=48						
	comp=E,2.2nm,0.5s						
TRQA	**Tornquist**	**30.94**	**299**	P	**P**	**06 02 39.5**	**-0.2**
TRQA				IAmb	IAmb	06 02 40.3	
	comp=Z,7.4nm,0.7s						
LL02	**Futaleuf**	**31.63**	**281**	P	**P**	**06 02 46.2**	**+0.6**
LL02				IAmb	IAmb	06 03 15.6	
	comp=Z,17nm,1.4s						
PLCA	**Paso Flores**	**32.83**	**286**	P	**P**	**06 02 55.4**	**-0.9**
PLCA	**Paso Flores**	**32.83**	**286**	P	**P**	**06 02 55.1**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=154,slow=8.4,SNR=7.4						
	comp=Z,2.0nm,0.6s						
PLTB	**Pedras Altas**	**33.05**	**316**	P	**P**	**06 02 58.5**	**+0.3**
PLTB				IAmb	IAmb	06 02 59.1	
	comp=Z,19nm,0.6s						
LL06	**Loncomilla**	**33.23**	**281**	P	**P**	**06 03 00.4**	**+0.8**
LR05	**Currie**	**33.93**	**285**	P	**P**	**06 03 04.7**	**-1.0**
LR05				IAmb	IAmb	06 03 06.2	
	comp=Z,14nm,1.0s						
BI05	**Punta Hualpn**	**37.23**	**287**	P	**P**	**06 03 33.6**	**-0.2**
MAW	**Mawson**	**37.24**	**141**	P	**P**	**06 03 33.7**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=245,slow=9.9,SNR=3.0						
	comp=Z,1.0nm,0.5s						
LMEL	**Las Melosas**	**38.17**	**293**	P	**P**	**06 03 41.5**	**-0.4**
LMEL				IAmb	IAmb	06 04 00.6	
	comp=Z,10.0nm,1.0s						
BO04	**La Punta**	**38.24**	**293**	P	**P**	**06 03 42.0**	**-0.4**
BO04				IAmb	IAmb	06 03 43.1	
	comp=Z,9.0nm,0.7s						
MT08	**Bocatoma Ro**	**38.41**	**294**	P	**P**	**06 03 44.3**	**+0.2**
MT08				IAmb	IAmb	06 03 52.6	
	comp=Z,12nm,1.2s						
MT09	**Talagante**	**38.59**	**292**	P	**P**	**06 03 44.8**	**-0.6**
MT09				IAmb	IAmb	06 03 45.4	
	comp=Z,24nm,0.8s						
MT03	**Universidad Ad**	**38.60**	**293**	P	**P**	**06 03 45.4**	**0.0**
MT01	**Popeta**	**38.64**	**292**	P	**P**	**06 03 45.0**	**-0.7**
MT01				IAmb	IAmb	06 03 45.5	
	comp=Z,11nm,0.8s						
MT16	**CCHEN**	**38.66**	**293**	P	**P**	**06 03 46.3**	**+0.

BOAV	**Boa Vista**	**67.22**	**323**	P	**P**	**06 07 13.7**	**-1.4**
DBIC	**Dimbokro**	**68.52**	**24**	P	**P**	**06 07 23.1**	**+0.1**
DBIC				IAmb	IAmb	06 07 47.9	
	comp=Z,16nm,1.5s						
DBIC	**Dimbokro**	**68.52**	**24**	P	**P**	**06 07 23.4**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=205,slow=7.3,SNR=4.7						
	comp=Z,1.4nm,0.3s						
COHC	**Cochancay**	**69.64**	**303**	P	**P**	**06 07 30.4**	**+0.3**
SACV	**Santiago Islan**	**74.48**	**4**	P	**P**	**06 07 59.7**	**+0.9**
TORD	**Torodi Ar. Bea**	**76.26**	**29**	P	**P**	**06 08 10.1**	**+1.2**
	comp=Z,8.0nm,0.4s,baz=189,slow=4.0,SNR=4.0						
	comp=Z,8.0nm,0.4s						
NVAR	**Mina Array Bea**	**122.79**	**291**	PKP	**PKPdf**	**06 15 13.8**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=112,slow=2.1,SNR=2.0						
FINES	**FINESS Array B**	**127.61**	**29**		**PKiKP**	**06 15 23.0**	**-0.3**
FINES	**FINESS Array B**	**127.61**	**29**	PKP	**PKiKP**	**06 15 22.6**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=186,slow=3.5,SNR=14						
FIA1	**FINESS Array S**	**127.61**	**29**	PKPdf	**PKiKP**	**06 15 22.8**	**-0.5**
ARCES	**ARCESS Array B**	**134.34**	**23**		**PKiKP**	**06 15 35.8**	**-0.9**
ARCES	**ARCESS Array B**	**134.34**	**23**	PKP	**PKiKP**	**06 15 35.1**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=205,slow=2.9,SNR=13						
ZALV	**Zalesovo Beam**	**143.85**	**68**	PKhKP	PKPpre	06 15 49.8	
	comp=Z,2.1nm,0.3s,baz=242,slow=4.2,SNR=5.3						
H31M	**Peel River**	**147.90**	**312**		**PKPbc**	**06 16 02.0**	**-0.9**
M29M	**Somme Creek**	**148.08**	**305**	PKPdf	**PKPbc**	**06 16 02.8**	**-0.7**
L29M	**L29M**	**148.24**	**306**		**PKPbc**	**06 16 03.5**	**-0.3**
SONM	**Songino Array**	**150.73**	**93**		**PKiKP**	**06 16 10.8**	**-0.4**
SONM	**Songino Array**	**150.73**	**93**	PKPbc	**PKiKP**	**06 16 10.5**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=209,slow=3.2,SNR=7.5						
ILAR	**Eielson Array**	**152.44**	**306**	PKPbc	**PKPbc**	**06 16 13.0**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=145,slow=3.5,SNR=30						

IDC 07 05:56:56.8±3.2, 10°.95N×127°.14E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=288.0km s-min=27.9km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.04**	**169**	P	P	06 03 51.5	0.0
	0.2nm,0.4s,baz=344,slow=7.8,SNR=5.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.01**	**322**	P	P	06 06 08.6	+0.5
	0.7nm,0.7s,baz=120,slow=7.2,SNR=4.0						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**56.01**	**325**	P	P	06 06 37.0	-0.1
	0.5nm,0.4s,baz=122,slow=7.2,SNR=5.4						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**85.70**	**332**	P	P	06 09 37.0	-0.5
	4.1nm,1.0s,baz=66,slow=5.4,SNR=4.9						
	4.1nm,1.0s						

RSNC 07 06:06:42.1±0.0, 7°N±2°×77°.3W±°, h144km±2km, M1.6, ML1.6, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**178**	P	Pn	06 07 01.5	-0.6
BARC				S	Sn	06 07 16.5	-0.8
RUSC	**La Rusia**	**0.96**	**174**	P	Pn	06 07 05.4	-1.1
PTBC	**PUERTO BERRIO,**	**1.29**	**256**	P	Pn	06 07 08.8	-0.3
SPBC	**San Pablo de B**	**1.48**	**216**	P	Pn	06 07 11.3	+0.2
SPBC				S	Sn	06 07 32.7	-0.6
CHIC	**Chingaza**	**2.27**	**194**	P	Pn	06 07 19.7	-0.9
CHIC				S	Sn	06 07 50.3	+0.2
PRAC	**Prado**	**3.54**	**209**	P	Pn	06 07 34.7	-1.6
PRAC				S	Sn	06 08 17.3	-1.0

*NOU **07** 06:24:06.5, 32°.54S×177°.12W, h0km, mb4.6/8, South of Kermadec Islands*
*IDC **07** 06:24:22.5±0.8, 33°.00S×178°.81W, h0km, mb4.0/5, mbtmp4.1/7, ML4.3/2, MS3.3/6, Error ellipse: s-maj=32.3km s-min=21.3km az=115.0*
*WEL **07** 06:24:23.6±0.9, 33°.S±6°×17°.8W±1°.7, h12km, M4.7/12, mB5.2/6, ML4.8/13, MLv4.7/12, Mw(mB)4.6/6, Error ellipse: s-maj=23.0km s-min=4.0km az=107.7, confirmed*
*NEIC **07** 06:24:28.5±1.5, 33°.08S±0°.07×178°.8W±0°.2, h35km±2km, mb4.2/15, Error ellipse: s-maj=22.8km s-min=11.2km az=88.0*

ISC 07 06:24:27.3±0.6, 33°.15S±0°.05×178°.67W±0°.10, h32km, n87, σ1§39/79, mb4.1/14, MS3.1/5, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.93**	**10**	P	**Pn**	**06 25 24.6**	**-0.8**
GLKZ				S	**Sn**	**06 26 09.2**	**-1.2**
RAO	**Raoul Island**	**3.94**	**10**		**Pn**	**06 25 24.2**	**-1.3**
RAO	**Raoul Island**	**3.94**	**10**	Pn	**Pn**	**06 25 23.9**	**-1.6**
	24nm,0.3s,baz=79,slow=22,SNR=1.4						
RAO				Sn	**Sn**	**06 26 09.6**	**-1.0**
	39nm,0.3s,baz=85,slow=22,SNR=1.7						
	82nm,0.3s						
RIZ	**Raoul Island**	**3.94**	**9**	P	**Pn**	**06 25 25.0**	**-0.6**
RIZ				S	**Sn**	**06 26 10.3**	**-0.5**
MXZ	**Matakaoa Point**	**5.05**	**208**		**Pn**	**06 25 39.5**	**-1.2**
MXZ	**Matakaoa Point**	**5.05**	**208**	P	**Pn**	**06 25 40.5**	**-0.3**
MXZ	**Matakaoa Point**	**5.05**	**208**	P	**Pn**	**06 25 39.7**	**-1.1**
MXZ				S	**Sn**	**06 26 35.9**	**-2.1**
WMGZ	**Waiomatatini S**	**5.23**	**206**	P	**Pn**	**06 25 44.0**	**+0.8**
WMGZ				S	**Sn**	**06 26 42.9**	**+0.4**
PKGZ	**Pakihiroa**	**5.40**	**208**	P	**Pn**	**06 25 45.2**	**-0.4**
PKGZ				S	**Sn**	**06 26 45.6**	**-1.1**
HAZ	**Te Kaha**	**5.43**	**211**	P	**Pn**	**06 25 45.6**	**-0.5**
PUZ	**Puketiti**	**5.51**	**206**	P	**Pn**	**06 25 48.4**	**+1.2**
RUGZ	**Raukumara Rang**	**5.65**	**211**	P	**Pn**	**06 25 49.1**	**-0.1**
TWGZ	**Tauwhareparae**	**5.71**	**208**	P	**Pn**	**06 25 49.9**	**0.0**
TWGZ				S	**Sn**	**06 26 53.8**	**-0.6**
KUZ	**Kuaotunu**	**5.84**	**231**	P	**Pn**	**06 25 53.5**	**+1.9**
KUZ	**Kuaotunu**	**5.84**	**231**	P	**Pn**	**06 25 52.6**	**+1.0**
WHRZ	**Whale Island**	**5.89**	**216**	P	**Pn**	**06 25 54.5**	**+2.1**
CNGZ	**Carnagh Statio**	**5.90**	**205**	P	**Pn**	**06 25 52.5**	**0.0**
MWZ	**Matawai**	**6.03**	**210**	P	**Pn**	**06 25 54.1**	**-0.1**
OPRZ	**Ohinepanea**	**6.09**	**218**	P	**Pn**	**06 25 56.5**	**+1.4**
URZ	**Urewera**	**6.15**	**213**	Pn	**Pn**	**06 25 55.4**	**-0.4**
	5.8nm,0.3s,baz=28,slow=2.8,SNR=36						
URZ				Sn	**Sn**	**06 27 02.9**	**-2.2**
	14nm,0.3s,baz=196,slow=18,SNR=12						
	35nm,0.4s						
URZ	**Urewera**	**6.15**	**213**	P	**Pn**	**06 25 55.2**	**-0.7**
URZ	**Urewera**	**6.15**	**213**	P	**Pn**	**06 25 54.8**	**-1.0**
RAGZ	**Rawiri**	**6.21**	**210**	P	**Pn**	**06 25 58.0**	**+1.2**
RIGZ	**Rimuhau**	**6.26**	**207**	P	**Pn**	**06 25 56.6**	**-0.8**
WCZ	**Waipu Caves**	**6.40**	**242**	P	**Pn**	**06 26 01.9**	**+2.5**
PRGZ	**Paritu Road**	**6.40**	**205**	P	**Pn**	**06 25 58.1**	**-1.3**
MKAZ	**Moumakai**	**6.41**	**230**	P	**Pn**	**06 26 02.8**	**+3.3**
SNGZ	**Shannon Statio**	**6.49**	**209**	P	**Pn**	**06 26 01.3**	**+0.8**
KNZ	**Kokohu**	**6.57**	**206**	P	Pn	06 25 58.7	-2.8
TOZ	**Tahuroa Road**	**6.60**	**225**	P	**Pn**	**06 26 03.1**	**+1.0**
OUZ	**Omahuta**	**6.74**	**250**	P	**Pn**	**06 26 05.7**	**+1.8**
OUZ	**Omahuta**	**6.74**	**250**	P	**Pn**	**06 26 05.9**	**+2.0**
BKZ	**Black Stump Fm**	**7.17**	**212**	P	**Pn**	**06 26 08.9**	**-1.0**
HIZ	**Hauiti**	**7.50**	**223**	P	**Pn**	**06 26 16.6**	**+2.1**
NGZ	**Ngauruhoe**	**7.59**	**216**	P	**Pn**	**06 26 15.7**	**-0.2**
PXZ	**Pawanui**	**7.75**	**206**	P	**Pn**	**06 26 16.0**	**-1.9**
BFZ	**Birch Farm**	**8.55**	**207**	P	Pn	06 26 25.6	-3.2
BFZ	**Birch Farm**	**8.55**	**207**	P	Pn	06 26 25.3	-3.5
MRZ	**Mangatainoka R**	**8.80**	**210**	P	**Pn**	**06 26 29.9**	**-2.4**
THZ	**Tophouse**	**10.89**	**215**	P	Pn	06 26 56.2	-4.8
KHZ	**Kahutara**	**11.11**	**211**	P	Pn	06 26 59.6	-4.2
ODZ	**Otahua Downs**	**14.47**	**212**	P	**Pn**	**06 27 50.1**	**+0.3**
DZM	**Mont Dzumac**	**17.18**	**306**	LR	LR	06 33 24.0	
	comp=Z,196nm,19.2s,baz=204,slow=32						
RAR	**Rarotonga**	**20.55**	**59**	LR	LR	06 37 58.2	
	comp=Z,30nm,18.6s,baz=290,slow=40						
ARMA	**Armidale**	**25.36**	**268**	P	**P**	**06 29 50.0**	**-1.7**
ARMA				IAmb	IAmb	06 30 14.7	
	comp=Z,5.2nm,1.1s						
COEN	**Coen**	**39.57**	**290**	P	**P**	**06 31 54.0**	**-1.7**
COEN				IAmb	IAmb	06 32 21.7	
	comp=Z,6.1nm,1.0s						
AS31	**Alice Springs**	**42.47**	**270**	P	**P**	**06 32 18.8**	**-0.8**
ASAR	**Alice Springs**	**42.47**	**270**	P	**P**	**06 32 18.5**	**-1.1**
ASAR	**Alice Springs**	**42.47**	**270**	P	**P**	**06 32 19.3**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=108,slow=7.1,SNR=18						
	comp=Z,1.9nm,0.7s						
WR8	**Warramunga Arr**	**43.57**	**275**	P	**P**	**06 32 27.3**	**-1.2**
WR8				IAmb	IAmb	06 32 41.9	
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**43.71**	**275**	P	**P**	**06 32 28.6**	**-1.0**
WRA	**Warramunga Arr**	**43.71**	**275**	P	**P**	**06 32 28.3**	**-1.3**
	comp=Z,2.2nm,0.7s,baz=116,slow=8.0,SNR=20						
WRA				LR	LR	06 48 21.1	
	comp=Z,69nm,18.8s,baz=164,slow=33						
	comp=Z,2.2nm,0.7s						
WB0	**Warramunga Arr**	**43.74**	**276**	P	**P**	**06 32 28.9**	**-1.0**
WB0				IAmb	IAmb	06 32 43.0	
	comp=Z,7.2nm,1.1s						
FORT	**Forrest**	**44.85**	**258**	P	**P**	**06 32 37.6**	**-1.0**
VNDA	**Vanda**	**45.31**	**186**	P	**P**	**06 32 42.3**	**+0.7**
VNDA				IAmb	IAmb	06 33 08.9	
	comp=Z,1.5nm,1.1s						
MTN	**Manton Dam**	**49.91**	**282**	P	**P**	**06 33 16.0**	**-2.2**
KNRA	**Kununurra**	**50.41**	**277**	P	**P**	**06 33 19.9**	**-2.0**
KNRA				IAmb	IAmb	06 33 40.4	
	comp=Z,4.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.84**	**272**	P	**P**	**06 33 31.9**	**-0.7**
CASY	**Casey**	**52.46**	**209**	P	**P**	**06 33 36.2**	**-0.3**
CASY				IAmb	IAmb	06 33 59.9	
	comp=Z,5.2nm,1.0s						
QSPA	**South Pole Qui**	**56.97**	**180**	P	**P**	**06 34 11.3**	**+1.8**
QSPA	**South Pole Qui**	**56.97**	**180**	P	P	06 34 15.0	+5.6
	comp=Z,5.4nm,0.7s,baz=16,slow=0.8,SNR=45						
RPN	**Rapa Nui**	**59.29**	**104**	LR	LR	06 57 04.1	
	comp=Z,10nm,18.2s,baz=254,slow=33						
KAPI	**Kappang**	**63.58**	**282**	LR	LR	07 01 14.4	
	comp=Z,12nm,18.4s,baz=313,slow=35						
BELA	**Belgrano 2**	**67.15**	**172**	P	**P**	**06 35 19.1**	**+1.7**
BELA				IAmb	IAmb	06 35 20.1	
	comp=Z,2.0nm,0.8s						
MAW	**Mawson**	**69.54**	**201**	P	**P**	**06 35 34.0**	**+1.5**
	comp=Z,2.0nm,1.0s,baz=58,slow=9.5,SNR=2.5						
MAW				LR	LR	07 03 17.8	
	comp=Z,44nm,19.7s,baz=159,slow=34						
	comp=Z,2.0nm,1.0s						
TROLL	**Troll, Antarti**	**75.13**	**180**	⇑P	**P**	**06 36 07.6**	**+1.7**
	comp=Z,87nm,0.8s						
SNAA	**Sanae**	**75.43**	**179**	⇑P	**P**	**06 36 09.2**	**+1.6**
	comp=Z,25nm,0.6s						
SNAA	**Sanae**	**75.43**	**179**	P	**P**	**06 36 09.4**	**+1.8**
SNAA				IAmb	IAmb	06 36 23.5	
	comp=Z,3.6nm,1.1s						
SNAA	**Sanae**	**75.43**	**179**	P	**P**	**06 36 09.0**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=172,slow=16,SNR=5.2						
	comp=Z,1.1nm,0.8s						
H03S2	**Juan Fernandez**	**79.43**	**123**	T	T	08 05 00.5	
	baz=235,slow=74,SNR=9.8						
H03S1	**Juan Fernandez**	**79.44**	**123**	T	T	08 04 59.3	
	baz=235,slow=74,SNR=8.7						
H03S3	**Juan Fernandez**	**79.44**	**123**	T	T	08 05 02.4	
	baz=235,slow=74,SNR=8.7						
H03N3	**Juan Fernandez**	**79.63**	**123**	T	T	08 05 13.5	
	baz=239,slow=72,SNR=13						
H03N2	**Juan Fernandez**	**79.64**	**123**	T	T	08 05 14.5	
	baz=239,slow=72,SNR=8.6						
H03N1	**Juan Fernandez**	**79.65**	**123**	T	T	08 05 11.9	
	baz=239,slow=72,SNR=10						
NVAR	**Mina Array Bea**	**90.63**	**43**	P	**P**	**06 37 28.7**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=253,slow=4.7,SNR=2.7						
	comp=Z,0.2nm,0.5s						
NRIK	**Noril'sk**	**121.90**	**335**		**PKPdf**	**06 43 16.2**	**-1.0**
NRIK	**Noril'sk**	**121.90**	**335**	PKP	**PKPdf**	**06 43 15.0**	**-2.2**
	comp=Z,2.4nm,0.6s,baz=141,slow=6.5,SNR=4.4						
KURBB	**Kurchatov Arra**	**122.55**	**313**	PKP	**PKPdf**	**06 43 17.9**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=114,slow=1.5,SNR=6.0						
BVAR	**Borovoye Array**	**127.94**	**314**	PKP	**PKPdf**	**06 43 29.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=95,slow=1.6,SNR=3.8						
FINES	**FINESS Array B**	**147.50**	**338**		**PKPdf**	**06 44 06.4**	**+1.7**
FINES	**FINESS Array B**	**147.50**	**338**	PKPbc	**PKPdf**	**06 44 07.1**	**+2.4**
	comp=Z,3.6nm,0.6s,baz=40,slow=4.4,SNR=27						
NB2	**NORSAR Subarra**	**151.36**	**350**	PKP	**PKPbc**	**06 44 17.1**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.36**	**350**	PKPbc	**PKPbc**	**06 44 16.1**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=14,slow=4.1,SNR=4.0						
HFS	**Hagfors**	**151.80**	**347**	PKPbc	**PKPbc**	**06 44 17.2**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=100,slow=6.6,SNR=4.4						
AKASG	**Malin Array Be**	**153.07**	**319**	PKPbc	**PKPbc**	**06 44 20.0**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=62,slow=2.4,SNR=1.8						
BRTR	**Keskin Array B**	**153.29**	**294**	PKPbc	**PKPbc**	**06 44 22.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=74,slow=2.9,SNR=2.9						

KRSC 07 06:35:34.5±2.1, 48°.57N×157°.40E, h16km±37km, MI4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.93**	**353**	*eP*	Pn	06 36 22.6	+2.3
KDTR	**Khodutka, Kamc**	**3.27**	**7**	*eP*	Pn	06 36 28.5	+3.5
KDTR				*eS*	Sb	06 37 07.9	-3.8
ASAK	**Asacha**	**3.83**	**5**	*eP*	Pn	06 36 36.1	+3.3
RUS	**Russkaya**	**3.93**	**10**	*eP*	Pn	06 36 37.7	+3.6
RUS				*eS*	Sn	06 37 23.9	+4.1
MTVR	**Mutnovka**	**3.95**	**7**	*eP*	Pn	06 36 37.9	+3.4
MTVR				*eS*	Sn	06 37 25.6	+5.1
GRL	**Gorelyy**	**4.01**	**6**	*eP*	Pn	06 36 38.4	+3.1
KRMR	**Karymshinskiy**	**4.29**	**6**	*eP*	Pn	06 36 43.1	+4.0
PET	**Petropavlovsk**	**4.53**	**10**	*eP*	Pn	06 36 45.9	+3.6
DALK	**Dalny**	**4.55**	**10**	*eP*	Pn	06 36 46.6	+4.1
UGLR	**Uglovaya**	**4.73**	**10**	*eP*	Pn	06 36 48.6	+3.4
AVH	**Avacha**	**4.78**	**10**	*eP*	Pn	06 36 50.9	+5.1
SMAR	**Somma**	**4.78**	**10**	*eP*	Pn	06 36 51.1	+5.1
KOK	**Koryaka**	**4.79**	**9**	*eP*	Pn	06 36 50.6	+4.5
SDLR	**Sedlovina**	**4.81**	**11**	*eP*	Pn	06 36 49.9	+3.7
KRER	**Koryakskii**	**4.82**	**10**	*eP*	Pn	06 36 51.9	+5.5
KRX	**Arik**	**4.86**	**9**	*eP*	Pn	06 36 51.4	+4.4
MKZ	**Mys Kozlova**	**6.58**	**23**	*eP*	Pn	06 37 15.4	+5.1
KZV	**Kizimen**	**6.79**	**14**	*eP*	Pn	06 37 20.1	+6.5
KBTR	**Krutoberegovo**	**8.34**	**21**	*eP*	Pn	06 37 39.4	+4.9

*IDC **07** 06:45:34.8±6.1, 17°.88S×178°.68W, h652km±73km, mb3.0/7, mbtmp4.0/7, Error ellipse: s-maj=66.4km s-min=23.4km az=141.0*

ISC 07 06:45:28.6±1.2, 18°.0S±0°.4×178°.4W±0°.2, h579km, n8, σ1§12/10, mb3.6/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**22.68**	**289**	P	**P**	**06 49 49.1**	**+1.5**
	75nm,0.5s,baz=98,slow=7.1,SNR=1.9						
STKA	**Stephens Creek**	**38.58**	**241**	P	**P**	**06 52 03.6**	**+0.5**
	3.9nm,1.0s,baz=81,slow=13,SNR=2.1						
	3.9nm,1.0s						
WRA	**Warramunga Arr**	**44.62**	**260**	P	**P**	**06 52 50.0**	**-0.8**
	1.4nm,0.5s,baz=96,slow=7.1,SNR=47						
WRA				PcP	**PcP**	**06 54 19.9**	**-1.0**
	0.6nm,1.1s,baz=92,slow=3.0,SNR=1.8						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**44.77**	**254**	P	**P**	**06 52 51.6**	**-0.3**
	8.1nm,0.6s,baz=87,slow=8.6,SNR=127						
ASAR				PcP	**PcP**	**06 54 20.6**	**-0.8**
	0.3nm,0.5s,baz=95,slow=4.1,SNR=2.1						
	8.1nm,0.6s						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	**P**	**06 56 36.8**	**+0.5**
	0.4nm,0.7s,baz=243,slow=4.7,SNR=4.2						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**86.00**	**13**	P	**P**	**06 57 06.5**	**-1.5**
	0.1nm,0.4s,baz=211,slow=4.4,SNR=6.3						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**86.05**	**58**	P	**P**	**06 57 10.4**	**+1.2**
	0.6nm,0.8s,baz=224,slow=7.0,SNR=7.6						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**87.43**	**43**	P	**P**	**06 57 15.3**	**-0.2**
	0.4nm,0.6s,baz=278,slow=4.0,SNR=3.8						
	0.4nm,0.6s						

*IDC **07** 06:55:09.0±6.5, 17°.73S×178°.28W, h588km±80km, mb3.0/8, mbtmp3.9/9, Error ellipse: s-maj=30.4km s-min=21.3km az=107.0*

ISC 07 06:55:08.0±0.8, 17°.8S±0°.2×178°.3W±0°.2, h579km, n9, σ0§92/10, mb3.3/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.98**	**251**	P	**P**	**06 58 16.5**	**-0.3**
	3.7nm,0.6s,baz=167,slow=16,SNR=2.6						
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**07 02 31.9**	**+0.6**
	0.5nm,0.5s,baz=95,slow=7.2,SNR=17						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**07 02 33.4**	**+0.8**
	1.6nm,0.6s,baz=86,slow=8.7,SNR=24						
ASAR				PcP	**PcP**	**07 04 00.4**	**-0.9**
	0.1nm,0.4s,baz=95,slow=5.0,SNR=1.5						
	1.6nm,0.6s						
VNDA	**Vanda**	**60.59**	**185**	P	**P**	**07 04 21.6**	**-1.3**
	0.5nm,0.5s,baz=11,slow=5.8,SNR=3.0						
	0.5nm,0.5s						
QSPA	**South Pole Qui**	**72.28**	**180**	P	**P**	**07 05 36.6**	**+1.3**
	2.1nm,0.6s,baz=48,slow=2.3,SNR=23						
	2.1nm,0.6s						
NVAR	**Mina Array Bea**	**79.25**	**44**	P	**P**	**07 06 14.5**	**+0.2**
	0.8nm,0.7s,baz=226,slow=8.1,SNR=7.3						
	0.8nm,0.7s						
ILAR	**Eielson Array**	**85.73**	**13**	P	**P**	**07 06 45.5**	**-0.5**
	0.2nm,0.4s,baz=223,slow=5.2,SNR=10.0						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**85.83**	**58**	P	**P**	**07 06 48.0**	**+0.6**
	0.7nm,0.7s,baz=223,slow=5.4,SNR=10.0						
	0.7nm,0.7s						
PDAR	**Pinedale Array**	**87.17**	**43**	P	**P**	**07 06 53.4**	**-0.3**
	0.4nm,0.7s,baz=238,slow=4.4,SNR=3.8						
	0.4nm,0.7s						

*IDC **07** 07:09:41.2±6.6, 36°.44N×70°.73E, h201km±56km, mb3.3/5, mbtmp3.8/9, MS3.0/2, Error ellipse: s-maj=54.8km s-min=24.7km az=37.0*

ISC 07 07:09:35.8±1.3, 36°.3N±0°.1×70°.3E±0°.1, h150km, n13, σ2§10/14, mb3.5/4, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.80**	**2**	⇓P	**Pn**	**07 11 11.7**	**-1.3**
	2.0nm,0.3s,baz=192,slow=16,SNR=29						
KK31				⇓S	**Sn**	**07 12 25.0**	**-4.4**
	2.7nm,0.4s,baz=197,slow=24,SNR=5.0						
AAK	**Ala-Archa**	**7.13**	**26**	P	**Pn**	**07 11 19.9**	**+2.4**
	7.1nm,0.3s,baz=173,slow=3.9,SNR=28						
AAK				S	**Sn**	**07 12 36.3**	**-1.1**
	13nm,0.8s,baz=325,slow=19,SNR=16						
AAK	**Ala-Archa**	**7.13**	**26**	⇑P	**Pn**	**07 11 19.2**	**+1.6**
	1.2nm,0.4s						
AAK				⇑S	**Sn**	**07 12 38.9**	**+1.5**
	3.9nm,0.5s						
MKAR	**Makanchi Array**	**13.81**	**37**	P	**Pn**	**07 12 46.2**	**+1.1**
	0.9nm,0.7s,baz=204,slow=13,SNR=6.9						
KURBB	**Kurchatov Arra**	**15.51**	**20**	P	**Pn**	**07 13 05.1**	**-1.1**
	0.5nm,0.8s,baz=211,slow=11,SNR=2.5						
AKTO	**Aktyubinsk**	**16.67**	**332**	P	**Pn**	**07 13 22.3**	**+1.9**
	1.1nm,0.3s,baz=143,slow=9.2,SNR=4.9						
ZALV	**Zalesovo Beam**	**20.35**	**25**	P	**Pn**	**07 13 59.4**	**-0.8**
	1.0nm,0.3s,baz=221,slow=11,SNR=3.6						
	1.0nm,0.3s						
KBZ	**Khabaz**	**22.17**	**298**	LR	LR	07 25 07.0	
	comp=Z,21nm,20.4s,baz=64,slow=41						
ARCES	**ARCESS Array B**	**41.11**	**338**	P	**P**	**07 17 04.8**	**+0.4**
	2.3nm,0.9s,baz=112,slow=8.2,SNR=4.5						
	2.3nm,0.9s						
HFS	**Hagfors**	**42.86**	**322**	P	**P**	**07 17 20.2**	**+1.5**
	4.3nm,1.2s,baz=79,slow=9.4,SNR=1.8						
	4.3nm,1.2s						
MJAR	**Matsushiro Arr**	**53.58**	**68**	LR	LR	07 42 51.5	
	comp=Z,21nm,18.3s,baz=235,slow=37						
WRA	**Warramunga Arr**	**82.39**	**121**	P	**P**	**07 21 39.3**	**-1.9**
	0.4nm,1.0s,baz=318,slow=5.5,SNR=1.7						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**84.63**	**124**	P	**P**	**07 21 51.0**	**-1.6**
	0.3nm,0.6s,baz=312,slow=4.8,SNR=2.3						
	0.3nm,0.6s						

*NEIC **07** 07:17:12.0±1.1, 61°.59N±0°.02×149°.92W±0°.03, h49km±5km, Error ellipse: s-maj=3.6km s-min=0.5km az=140.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=9.51; Mθθ=3.44; Mφφ=6.06; Mrθ=-1.88; Mrφ=3.88; Mθφ=0.42; Fault plane solution: M0=9.39000×10^14 NP1:ϕs=45.27000°, δ=48.16000°, λ=-77.12000°. NP2:ϕs=206.36000°, δ=43.43000°, λ=-103.97000°. Principal axes: T 8.8776, Plg2.0000°, Azm126.0000°; N 0.9581, Plg10.0000°, Azm217.0000°; P -9.8358, Plg80.0000°, Azm22.0000°;*
*AEIC **07** 07:17:12.5±0.9, 61°.55N±0°.03×149°.92W±0°.05, h46km±4km, ML3

comp=E,1µm,0.8s
DFR Drift River 1.65 235 Pn 07 17 38.7 +0.1
PPLA Purkeypile 1.70 323 Pn 07 17 39.4 +0.2
PPLA IAML 07 18 02.0
comp=E,1µm,0.8s
PPLA IAML 07 18 17.7
comp=N,1µm,0.8s
RDSO Redoubt South 1.76 232 Pn 07 17 40.1 +0.1
NCT North Crescent 1.77 237 Pn 07 17 40.4 +0.3
RED Redoubt Volcan 1.79 231 Pn 07 17 40.3 -0.1
RED IAML 07 18 08.7
comp=N,671nm,0.5s
RED IAML 07 18 11.5
comp=E,653nm,0.6s
BRLK Bradley Lake 1.86 195 Pn 07 17 42.1 +0.7
BRLK IAML 07 18 09.5
comp=N,583nm,0.5s
BRLK IAML 07 18 09.8
comp=E,660nm,0.5s
FID Port Fidalgo 1.87 114 Pn **Pn 07 17 40.4 -1.0**
FID IAML 07 18 13.0
comp=N,819nm,0.7s
FID IAML 07 18 14.5
comp=E,898nm,0.3s
M24K Tolsona, Glenn 1.87 71 Pn 07 17 41.8 +0.3
M24K IAML 07 18 09.7
comp=N,1µm,0.8s
BRSE Bradley Lake S 1.87 192 Pn 07 17 41.0 -0.5
TRF Thorofare Moun 1.90 355 Pn 07 17 41.9 -0.1
TRF IAML 07 18 09.1
comp=E,912nm,0.6s
RND Reindeer 1.92 15 Pn 07 17 42.4 +0.3
KLU Klutina 1.93 90 Pn 07 17 41.6 -0.7
KLU IAML 07 18 09.9
comp=N,571nm,0.3s
KLU IAML 07 18 17.6
comp=E,580nm,0.9s
DHY Denali Highway 1.93 37 Pn 07 17 42.4 0.0
O20K Slope Mountain 1.98 223 Pn 07 17 43.7 +0.7
P23K Montague Islan 2.01 140 Pn 07 17 42.0 -1.2
P23K IAML 07 18 15.5
comp=N,993nm,0.7s
P23K IAML 07 18 18.8
comp=E,995nm,0.7s
KTH Kantishna Hill 2.05 348 Pn 07 17 44.2 +0.3
KTH IAML 07 18 11.2
comp=N,685nm,0.8s
KTH IAML 07 18 12.7
comp=E,743nm,0.6s
HIN Hinchinbrook I 2.05 123 Pn 07 17 43.4 -0.4
HIN IAML 07 18 27.6
comp=E,669nm,1.0s
HIN IAML 07 18 27.8
comp=N,751nm,1.0s
DIV Divide 2.06 100 Pn 07 17 43.5 -0.5
DIV IAML 07 18 17.1
comp=N,1µm,0.9s
L20K Farewell, AK 2.07 298 Pn 07 17 44.3 +0.2
HOM Homer 2.09 204 Pn 07 17 44.6 +0.2
CNPM China Poot 2.14 198 Pn 07 17 45.0 -0.1
CNPM IAML 07 18 31.8
comp=E,408nm,0.9s
IVE Iliamna Volcan 2.16 225 Pn 07 17 46.0 +0.5
ILS Iliamna Low So 2.22 225 Pn 07 17 46.9 +0.6
MCK McKinley 2.23 12 Pn 07 17 47.1 +0.8
MCK IAML 07 18 27.4
comp=N,542nm,1.0s
ILSW Iliamna Southw 2.23 226 Pn 07 17 46.7 +0.3
EYAK Cordova Ski Ar 2.28 115 Pn 07 17 46.5 -0.5
EYAK IAML 07 18 23.5
comp=N,455nm,0.8s
EYAK Cordova Ski Ar 2.28 115 P **Pn 07 17 46.3 -0.7**
L19K White Mountain 2.41 287 Pn 07 17 49.5 +0.7
L19K White Mountain 2.41 287 IAML 07 18 38.0
comp=E,412nm,0.8s
HARP HAARP 2.41 68 Pn 07 17 49.6 +0.8
P19K Oil Pt 2.51 222 Pn 07 17 50.5 +0.3
PAX Paxson 2.52 54 Pn 07 17 51.3 +0.9
O19K Port Alsworth 2.54 239 Pn 07 17 50.4 -0.1
O19K IAML 07 18 27.7
comp=N,648nm,0.4s
O19K IAML 07 18 48.2
comp=E,566nm,0.5s
N25K Chitina, Valde 2.56 87 Pn 07 17 50.7 -0.2
N25K IAML 07 18 30.9
comp=N,335nm,0.7s
CHUM Lake Minchumin 2.57 336 Pn 07 17 51.0 0.0
BPAW Bear Paw Mtn. 2.59 350 Pn 07 17 51.2 -0.1
BPAW IAML 07 18 38.0
comp=N,273nm,0.8s
BWN Browne 2.63 5 Pn 07 17 52.4 +0.6
BMRM Bremner River 2.65 101 Pn 07 17 51.2 -0.9
BMRM IAML 07 18 32.8
comp=N,507nm,0.8s
BMRM IAML 07 18 43.5
comp=E,388nm,0.8s
WACK Wrangell Chich 2.70 79 Pn 07 17 53.1 +0.1
GOAT Goat Mountain 2.72 109 Pn 07 17 52.3 -0.8
WASW Wrangell South 2.77 80 Pn 07 17 54.0 +0.1
WAZA Wrangell Mount 2.80 77 Pn 07 17 55.0 +0.6
M18K Stony River 2.82 271 Pn 07 17 54.5 +0.2
RAGM Ragged Mountai 2.83 112 Pn 07 17 53.2 -1.3
GLB Gilahina Butte 2.94 90 Pn 07 17 55.3 -0.8
GLB IAML 07 18 41.0
comp=N,418nm,0.8s
HMT Hamilton 3.04 111 Pn 07 17 55.9 -1.5
WRH Wood River Hil 3.04 15 Pn 07 17 57.8 +0.5
WRH IAML 07 18 50.2
comp=N,176nm,0.9s
NEA2 Nenana 3.07 7 Pn 07 17 57.8 +0.1
O18K Koktuh Hills 3.10 239 Pn 07 17 58.0 -0.2
VRDI Verde Repeater 3.14 93 Pn 07 17 57.8 -1.2
HDA Harding Lake 3.17 24 Pn 07 18 00.2 +1.1
HDA IAML 07 18 53.2
comp=N,272nm,0.7s
HDA IAML 07 18 54.8
comp=E,250nm,0.7s
SYI Shuyak Island 3.21 204 Pn 07 18 00.1 +0.5
RIDG Independent Ri 3.21 45 Pn 07 17 59.7 -0.1
RIDG IAML 07 18 48.9
comp=E,250nm,0.8s
RIDG IAML 07 18 54.5
comp=N,221nm,0.8s
Q19K Cape Douglas, 3.22 217 Pn 07 17 59.4 -0.6
CCB Clear Creek Bu 3.24 17 Pn 07 17 59.7 -0.4
CCB IAML 07 18 54.0
comp=E,153nm,1.1s
J20K Nowinta River 3.25 326 Pn 07 17 60.0 -0.3
J20K IAML 07 19 02.2
comp=E,321nm,0.8s
BERG Berg Lake 3.26 108 Pn 07 17 59.0 -1.5
MCARA McCarthy VSAT 3.33 90 Pn 07 18 01.7 +0.4
M26K Nabesna, AK 3.39 73 Pn 07 18 02.2 0.0
M26K IAML 07 18 58.2
comp=N,150nm,0.7s
CRQM Cirque 3.40 101 Pn 07 18 01.8 -0.6
DOT Dot Lake 3.43 50 Pn 07 18 03.8 +1.0
DOT IAML 07 19 03.9
comp=E,187nm,0.7s
KHIT Khitrov Hills 3.45 106 Pn 07 18 02.2 -0.9
COLA College 3.46 15 Pn 07 18 03.3 +0.3
COLA College 3.46 15 P **Pn 07 18 04.0 +1.0**
MLY Manley 3.50 354 Pn 07 18 03.4 -0.3
IL31 3.50 22 Pn 07 18 03.5 -0.2
ILAR Eielson Array 3.50 22 P **Pn 07 18 04.2 +0.4**
comp=E,1.2nm,0.3s,baz=210,slow=14,SNR=53
ILAR S **Sn 07 18 44.1 +0.2**
comp=E,19nm,0.5s,baz=200,slow=26,SNR=6.4
comp=E,5.8nm,0.6s
TGL Tana Glacier 3.54 100 Pn 07 18 04.2 -0.2
TGL IAML 07 19 09.4
comp=N,259nm,1.0s
TGL IAML 07 19 16.6
comp=E,184nm,1.1s
J19K Poorman 3.57 316 Pn 07 18 04.2 -0.4
J19K IAML 07 19 02.1
comp=N,208nm,0.6s
J19K IAML 07 19 06.9
comp=E,178nm,0.9s
M17K Holitna River 3.60 271 Pn 07 18 05.1 +0.1
I23K Minto, Yukon-K 3.61 4 Pn 07 18 04.7 -0.5
I23K IAML 07 19 07.1
comp=N,127nm,0.8s
PTPK Patty Peak 3.62 93 Pn 07 18 05.1 -0.4

WAX Waxell Ridge 3.63 105 Pn 07 18 04.7 -0.8
WAX IAML 07 19 06.2
comp=E,252nm,1.2s
SCRK Sand Creek 3.66 46 Pn 07 18 06.5 +0.5
N17K Nushagak Hills 3.67 257 Pn 07 18 05.3 -0.7
N17K IAML 07 19 07.1
comp=N,115nm,0.7s
J18K Innoko River 3.67 304 Pn 07 18 06.0 -0.1
J18K IAML 07 19 05.4
comp=E,134nm,1.0s
J18K IAML 07 19 06.4
comp=N,148nm,0.9s
J25K Salcha River, 3.70 32 Pn 07 18 07.2 +0.7
J25K Salcha River, 3.70 32 IAML 07 18 57.3
comp=E,142nm,0.7s
BALM Baldy 3.71 95 Pn 07 18 05.9 -0.7
POKR Poker Plat Res 3.74 17 Pn 07 18 07.3 +0.3
POKR IAML 07 19 17.2
comp=E,111nm,0.9s
I21K Tanana 3.74 347 Pn 07 18 07.3 +0.3
SNH Sunshine Point 3.74 109 Pn 07 18 06.3 -0.8
SNH Sunshine Point 3.74 109 IAML 07 19 11.6
comp=E,121nm,1.4s
SNH IAML 07 19 23.4
comp=N,115nm,1.3s
BARK Barkley Ridge 3.81 104 Pn 07 18 07.5 -0.6
O17K Koliganek Bris 3.95 246 Pn 07 18 09.9 +0.1
BAGL Bagley Icefiel 3.97 102 Pn 07 18 09.4 -0.7
L17K Donlin 4.00 282 Pn 07 18 10.5 0.0
KAWH Katmai 4.01 220 Pn 07 18 10.4 -0.4
KDAK Kodiak Island 4.02 201 Pn **Pn 07 18 10.0 -0.8**
KDAK Kodiak Island 4.02 201 P **Pn 07 18 09.1 -1.7**
comp=N,7.9nm,0.6s,baz=36,slow=4.8,SNR=17
KDAK S **Sn 07 18 52.8 -3.8**
comp=N,26nm,0.5s,baz=1.9,slow=15,SNR=5.1
KDAK LR LR 07 19 56.2
comp=N,87nm,19.1s,baz=32,slow=39
BARN Barnard Glacie 4.03 94 Pn 07 18 09.7 -1.4
BARN IAML 07 19 20.5
comp=E,93nm,0.7s
BARN IAML 07 19 23.8
comp=N,100nm,0.9s
GRNC Granite Creek 4.06 98 Pn 07 18 11.0 -0.5
GRNC IAML 07 19 15.1
comp=E,90nm,0.7s
GRNC IAML 07 19 25.8
comp=N,102nm,0.7s
J26L Joseph Creek 4.14 42 Pn 07 18 12.4 -0.1
J26L Joseph Creek 4.14 42 IAML 07 19 08.8
comp=E,88nm,0.7s
J26L IAML 07 19 24.7
comp=N,99nm,0.7s
MESA MESA 4.15 106 Pn 07 18 11.9 -0.9
MESA MESA 4.15 106 IAML 07 19 18.9
comp=N,161nm,0.7s
MESA IAML 07 19 27.5
comp=E,166nm,0.9s
KAKN Katmai Knife C 4.17 220 Pn 07 18 12.6 -0.3
YAH Yahtse 4.18 103 Pn 07 18 12.9 -0.3
YAH IAML 07 19 21.1
comp=E,83nm,0.8s
YAH IAML 07 19 25.9
comp=N,128nm,0.9s
CTGM Chitina Glacie 4.20 94 Pn 07 18 12.6 -0.9
CTGM IAML 07 19 18.5
comp=N,78nm,0.8s
H23K Yukon River 4.28 2 Pn 07 18 15.0 +0.6
H21K Melozitna Rive 4.30 344 Pn 07 18 14.6 0.0
H21K IAML 07 19 40.1
comp=N,66nm,0.7s
YUK2 White River 4.34 83 Pn 07 18 15.1 -0.2
M16K Timber Creek 4.38 267 Pn 07 18 16.0 +0.2
M16K Timber Creek 4.38 267 IAML 07 19 40.4
comp=N,83nm,0.9s
LOGN Logan Glacier 4.39 96 Pn 07 18 14.7 -1.3
LOGN IAML 07 19 35.5
comp=E,70nm,0.8s
N16K Nishlik Lake 4.43 260 Pn 07 18 16.7 +0.2
TABL Table Mountain 4.43 101 Pn **Pn 07 18 16.2 -0.5**
TABL IAML 07 19 30.5
comp=N,92nm,0.7s
TABL IAML 07 19 40.5
comp=E,83nm,1.0s
O16K Kokwok River B 4.48 247 Pn 07 18 17.2 +0.1
O16K Kokwok River B 4.48 247 IAML 07 19 36.2
comp=N,65nm,1.5s
O16K IAML 07 19 42.8
comp=E,67nm,1.1s
GCSA Galena City Sc 4.48 318 Pn 07 18 17.5 +0.5
H20K Anotleneega Mo 4.52 333 Pn 07 18 17.4 -0.2
YUK3 Moose Creek 4.53 83 Pn 07 18 17.8 -0.2
L16K Owhat River 4.55 276 Pn 07 18 17.9 -0.1
L16K Owhat River 4.55 276 IAML 07 19 41.4
comp=N,96nm,1.0s
L16K IAML 07 19 44.7
comp=E,70nm,0.9s
OHAK Old Harbor 4.68 203 P **Pn 07 18 20.2 +0.4**
IMAR Indian Mountai 4.75 341 Pn 07 18 20.6 -0.2
O28M Mount Upton 4.79 95 Pn 07 18 20.7 -0.9
O28M IAML 07 19 36.5
comp=N,51nm,0.7s
O28M IAML 07 19 43.5
comp=E,60nm,1.1s
H19K Roundabout Mou 4.93 327 Pn 07 18 22.7 -0.5
H19K Roundabout Mou 4.93 327 IAML 07 19 55.1
comp=E,57nm,0.8s
H19K IAML 07 19 58.8
comp=N,93nm,1.2s
PCA Pinnacle 4.96 103 Pn 07 18 22.6 -1.2
N15K Kwethluk River 5.15 259 Pn 07 18 26.8 +0.5
G23K Bananza Creek 5.17 360 Pn 07 18 27.5 +0.9
H18K Honhosa River 5.22 317 Pn 07 18 27.5 +0.2
H18K Honhosa River 5.22 317 IAML 07 19 58.4
comp=N,44nm,0.9s
H18K IAML 07 20 12.4
comp=E,58nm,1.4s
J16K Anvik River 5.24 294 Pn 07 18 27.4 -0.2
J16K Anvik River 5.24 294 IAML 07 20 01.1
comp=N,49nm,1.0s
J16K IAML 07 20 05.6
comp=E,35nm,1.1s
DAWY Dawson 5.45 58 Pn **Pn 07 18 31.3 +0.8**
I17K Unalakleet 5.46 300 Pn **Pn 07 18 30.8 +0.2**
SII Sitkinak Islan 5.47 205 P **Pn 07 18 29.8 -1.0**
G25K Bearman Lake 5.49 16 Pn 07 18 32.0 +1.2
L15K Ungalak Mounta 5.51 276 Pn 07 18 31.0 -0.2
K15K Wolf Creek Mou 5.52 283 Pn 07 18 31.0 -0.4
PNL Peninsula 5.53 105 P **Pn 07 18 31.2 -0.4**
COLD Coldfoot 5.69 359 Pn 07 18 34.6 +1.0
G18K Tagagawik 5.81 322 Pn 07 18 35.4 +0.1
G26K Porcupine Rive 6.03 24 Pn 07 18 39.1 +0.8
N30M Aishikik Lake 6.16 85 Pn 07 18 39.1 -1.1
G17K Kiwalik Mounta 6.20 314 Pn 07 18 41.2 +0.5
BMAR Burnt Mountain 6.33 19 Pn 07 18 42.5 +0.1
F25K Christian Rive 6.33 15 Pn 07 18 42.4 -0.1
BM01 Burnt Mountain 6.35 19 Pn 07 18 43.3 +0.5
H16K Elim 6.37 304 Pn 07 18 42.6 -0.3
F18K Selawik 6.60 324 Pn 07 18 46.5 +0.5
F26K Sheenjek River 6.64 20 Pn 07 18 47.0 +0.4
O30N Mendenhall 6.75 91 Pn **Pn 07 18 46.7 -1.6**
E25K Arctic Village 6.84 14 Pn 07 18 49.6 +0.2
TOLK Toolik Lake Re 7.11 1 Pn **Pn 07 18 54.5 +1.4**
E17K Hotham Inlet 7.56 322 Pn 07 18 59.8 +0.6
F14K Arctic Creek 8.29 305 Pn 07 19 10.5 +1.2
JIS Juneau Island 8.48 106 P **Pn 07 19 11.3 -0.5**
SIT Sitka 8.73 115 P **Pn 07 19 14.4 -0.8**
INK Inuvik 9.68 39 P **Pn 07 19 29.2 +1.1**
comp=E,0.1nm,0.3s,baz=240,slow=14,SNR=4.6
INK S **Sn 07 21 18.1 +2.9**
comp=E,2.1nm,0.8s,baz=324,slow=23,SNR=1.6
comp=E,1.1nm,0.8s
DLBC Dease Lake 10.44 99 P **Pn 07 19 38.5 -0.3**
comp=E,2.0nm,1.0s,baz=259,slow=10,SNR=2.2
DLBC LR LR 07 23 50.3
comp=E,71nm,20.8s,baz=254,slow=37
BBB Bella Bella 15.11 119 LR LR 07 26 29.9
comp=E,15nm,20.9s,baz=108,slow=36
NEW Newport 22.78 111 LR LR 07 31 18.3
comp=E,32nm,18.2s,baz=332,slow=37
NVAR Mina Array Bea 30.29 125 P **P 07 23 19.9 +1.9**
comp=E,0.2nm,0.4s,baz=337,slow=12,SNR=2.6
NVAR PcP **PcP 07 26 17.4 +0.2**
comp=E,0.4nm,0.7s,baz=342,slow=2.1,SNR=3.7
comp=E,0.2nm,0.4s
PDAR Pinedale Array 30.40 109 P **P 07 23 20.6 +1.7**
comp=E,0.2nm,0.5s,baz=357,slow=9.0,SNR=1.4
comp=E,0.2nm,0.5s
ULM Lac du Bonnet 31.41 86 LR LR 07 36 42.4
comp=E,30nm,18.5s,baz=198,slow=37
TXAR Lajitas Array 44.21 115 P **P 07 25 16.8 +1.2**
comp=E,0.2nm,0.6s,baz=350,slow=7.6,SNR=2.6
comp=E,0.2nm,0.6s
HILR Hailar Array B 48.34 299 P **P 07 25 46.2 -1.5**
comp=E,5.1nm,0.7s,baz=36,slow=8.8,SNR=5.0
comp=E,5.1nm,0.7s
ARCES ARCESS Array B 49.15 2 P **P 07 25 53.4 -0.2**
comp=E,2.6nm,0.9s,baz=356,slow=7.5,SNR=2.1
comp=E,2.6nm,0.9s
SONM Songino Array 55.06 307 P **P 07 26 38.1 +0.2**
comp=E,2.0nm,0.7s,baz=31,slow=7.9,SNR=9.9
comp=E,2.0nm,0.7s
BVAR Borovoye Array 61.36 334 P **P 07 27 20.0 -1.6**
comp=E,1.3nm,0.6s,baz=38,slow=7.3,SNR=6.6
comp=E,1.3nm,0.6s
KURBB Kurchatov Arra 61.66 327 P P 07 27 21.6 -2.0
comp=E,0.8nm,0.3s,baz=29,slow=6.7,SNR=3.4
comp=E,0.8nm,0.3s
MKAR Makanchi Array 64.11 323 P P 07 27 37.7 -2.4
comp=E,0.5nm,0.6s,baz=38,slow=6.1,SNR=4.3
MKAR LR LR 07 57 27.5
comp=E,20nm,18.0s,baz=143,slow=38
comp=E,0.5nm,0.6s
AKASG Malin Array Be 68.08 1 P **P 07 28 04.0 -1.3**
comp=E,1.0nm,0.4s,baz=1.8,slow=5.9,SNR=7.9
comp=E,1.0nm,0.4s
CMAR Chiang Mai Arr 83.53 297 P **P 07 29 32.6 -1.3**
comp=E,0.7nm,0.3s,baz=35,slow=4.4,SNR=5.0
comp=E,0.7nm,0.3s
QSPA South Pole Qui 151.37 180 PKPbc **PKiKP 07 36 59.6 +1.3**
comp=E,1.6nm,0.7s,baz=91,slow=0.5,SNR=15

*JMA **07** 07:41:06.2±0.1, 23°.7N±0°.7×122°.9E±0°.5, h50km, MV2.3/12, NEAR ISHIGAKIJIMA ISLAND*
*TAP **07** 07:41:06.5, 23°.74N×122°.89E, h47km±1km, ML2.8, D*
ISC 07 07:41:05.4±1.3, 23°.64N±0°.05×122°.89E±0°.03, h30km±12km, n43, σ8°97/77, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS4	**EOS4**	**0.71**	**313**	*e*P	**Pb**	**07 41 19.7**	**+0.6**
EOS4				*e*S	**Sb**	**07 41 28.0**	**-0.4**
JYNG	**Yonagunijimaku**	**0.81**	**4**	*e*P	**Pb**	**07 41 20.9**	**-0.2**
JYNG				*e*S	**Sb**	**07 41 30.9**	**-0.8**
YOJ	**Yonaguni jima**	**0.83**	**8**	P	**Pb**	**07 41 20.8**	**-0.5**
YOJ				*e*S	**Sb**	**07 41 31.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.83**	**8**	P	**Pb**	**07 41 20.7**	**-0.5**
YOJ				S	**Sb**	**07 41 31.7**	**-0.4**
EOS3	**EOS3**	**0.83**	**321**	*e*P	**Pb**	**07 41 21.8**	**+0.5**
EOS3				*e*S	**Sb**	**07 41 32.1**	**+0.1**
HATJ	**Hateruma jima**	**0.94**	**63**	P	**Pb**	**07 41 23.1**	**+0.6**
HATJ				*e*S	**Sb**	**07 41 35.2**	**+0.1**
EOS2	**EOS2**	**0.98**	**322**	*e*P	**Pn**	**07 41 24.3**	**+1.2**
EOS2				*e*S	**Sn**	**07 41 37.0**	**+1.0**
IRIF	**Iriomote-Funau**	**1.03**	**48**	*e*P	**Pn**	**07 41 24.5**	**+0.6**
IRIF				S	**Sn**	**07 41 37.4**	**0.0**
JKRS	**Kuro-shima**	**1.19**	**60**	P	**Pn**	**07 41 26.9**	**+0.9**
JKRS				*e*S	**Sn**	**07 41 41.8**	**+0.7**
NACB	**Ninganchiao**	**1.30**	**294**	P	**Pn**	**07 41 27.5**	**-0.1**
NACB				*e*S	**Sn**	**07 41 42.4**	**-1.6**
ETM	**Tongmen**	**1.32**	**285**	P	**Pn**	**07 41 27.7**	**-0.2**
ETM				S	**Sn**	**07 41 43.2**	**-1.3**
HGSD	**Ruisui**	**1.35**	**264**	*i* P	**Pn**	**07 41 28.6**	**+0.2**
HGSD				S	**Sn**	**07 41 44.0**	**-1.3**
JIJ	**Ishigaki jima**	**1.35**	**58**	P	**Pn**	**07 41 28.8**	**+0.5**
JIJ				*e*S	**Sn**	**07 41 45.0**	**-0.3**
TWC	**Suao**	**1.36**	**316**	S	**Sn**	**07 41 43.2**	**-2.2**
WARBT	**Fenglin Townsh**	**1.38**	**274**	P	**Pn**	**07 41 28.6**	**-0.1**
WARBT				*e*S	**Sn**	**07 41 44.2**	**-1.8**
LXIB	**Xiulin Townshi**	**1.41**	**286**	P	**Pn**	**07 41 29.1**	**-0.1**
LXIB				S	**Sn**	**07 41 45.8**	**-1.0**
ETLH	**Xiulin Townshi**	**1.41**	**294**	P	**Pn**	**07 41 29.2**	**0.0**
ETLH				S	**Sn**	**07 41 45.5**	**-1.3**
EHYH	**Wanrong**	**1.43**	**265**	*e*P	**Pn**	**07 41 30.1**	**+0.8**
EHYH				S	**Sn**	**07 41 47.0**	**-0.1**
EHY	**Hungye**	**1.45**	**265**	P	**Pn**	**07 41 30.4**	**+0.8**
EHY				*e*S	**Sn**	**07 41 46.6**	**-1.0**
YULB	**Yu-li**	**1.48**	**261**	*e*P	**Pn**	**07 41 30.8**	**+0.7**
YULB				S	**Sn**	**07 41 48.2**	**-0.3**
TWF1	**Yuli**	**1.49**	**259**	P	**Pn**	**07 41 30.9**	**+0.7**
FULB	**Fuli**	**1.53**	**254**	*e*P	**Pn**	**07 41 31.2**	**+0.4**
FULB				*e*S	**Sn**	**07 41 48.5**	**-1.3**
LATG	**Datong**	**1.53**	**306**	P	**Pn**	**07 41 31.5**	**+0.6**
LATG				*e*S	**Sn**	**07 41 48.4**	**-1.5**
ENTT	**Nioudou**	**1.57**	**310**	*e*P	**Pn**	**07 41 32.1**	**+0.8**
WHF	**Hehuan Shan**	**1.57**	**289**	P	**Pn**	**07 41 32.1**	**+0.4**
WHF				*e*S	**Sn**	**07 41 50.7**	**-0.6**
NNSB	**Datong**	**1.59**	**300**	*e*P	**Pn**	**07 41 32.3**	**+0.6**
NNSB				*e*S	**Sn**	**07 41 50.3**	**-0.9**
NNS	**Nan Shan**	**1.60**	**300**	S	**Sn**	**07 41 51.0**	**-0.6**
EDH	**Donghe**	**1.60**	**246**	S	**Sn**	**07 41 50.3**	**-1.2**
OWD	**Renai**	**1.60**	**282**	*e*P	**Pn**	**07 41 33.0**	**+1.1**
OWD				S	**Sn**	**07 41 51.0**	**-0.6**
JISG	**Ishigakijimahi**	**1.60**	**54**	*e*P	**Pn**	**07 41 31.9**	**+0.1**
JISG				*e*S	**Sn**	**07 41 50.1**	**-1.4**
VWDT	**VWDT**	**1.61**	**274**	*e*P	**Pn**	**07 41 32.9**	**+1.0**
VWDT				*e*S	**Sn**	**07 41 50.9**	**-0.6**
EHD	**Haiduan**	**1.62**	**253**	P	**Pn**	**07 41 32.9**	**+0.8**
EHD				*e*S	**Sn**	**07 41 51.9**	**-0.1**
LDUT	**Ludao**	**1.62**	**234**	*e*S	**Sn**	**07 41 50.6**	**-1.3**
WUSB	**Renai**	**1.66**	**283**	*e*P	**Pn**	**07 41 33.4**	**+0.7**
WUSB				S	**Sn**	**07 41 53.0**	**-0.1**
NWLT	**Wulai**	**1.70**	**312**	*e*P	**Pn**	**07 41 34.3**	**+1.1**
NWLT				*e*S	**Sn**	**07 41 53.1**	**-0.9**
SXI1	**Grass Mountain**	**1.72**	**328**	P	**Pn**	**07 41 35.7**	**+2.2**
SXI1				S	**Sn**	**07 41 53.3**	**-1.2**
YHNB	**Yeheng**	**1.72**	**307**	P	**Pn**	**07 41 34.4**	**+0.9**
YHNB				S	**Sn**	**07 41 54.1**	**-0.4**
NSK	**Sanguang**	**1.74**	**307**	*e*P	**Pn**	**07 41 34.4**	**+0.6**
NSK				*e*S	**Sn**	**07 41 53.9**	**-1.1**
SSLB	**Suanglung**	**1.78**	**275**	*e*P	**Pn**	**07 41 35.2**	**+1.0**
YUS	**Yu-Shan**	**1.79**	**266**	P	**Pn**	**07 41 36.0**	**+1.2**
SMLT	**Sun Moon Lake**	**1.84**	**278**	*e*P	**Pn**	**07 41 36.4**	**+1.3**
WHP	**Taichung City**	**1.89**	**290**	*e*P	**Pn**	**07 41 38.4**	**+2.6**
WHP				*e*S	**Sn**	**07 41 59.1**	**+0.4**
ALS	**Alishan**	**1.92**	**267**	*e*P	**Pn**	**07 41 37.8**	**+1.4**
ALS				*e*S	**Sn**	**07 42 01.2**	**+1.5**

*AZER **07** 07:45:00.3, 40°.45N×51°.89E, h24km, ml3.6*
ISC 07 07:44:56.4±1.2, 40°.65N±0°.06×52°.37E±0°.07, h35km, n27, σ2°38/52, 1C-3D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBS	**Qobustan**	**2.62**	**269**	Pg	**Pn**	**07 45 39.5**	**+3.4**
GBS				Sg	**Sn**	**07 46 10.3**	**+3.5**
ATGJ	**Altiaghaj**	**2.62**	**276**	Pn	**Pn**	**07 45 38.5**	**+2.2**
ATGJ				Sn	**Sn**	**07 46 07.1**	**+0.3**
ALIB	**&Aumlli-Bayram**	**2.67**	**256**	Pg	**Pn**	**07 45 40.8**	**+4.0**
ALIB				Sg	**Sn**	**07 46 13.4**	**+5.6**
SIZA	**Siyzn**	**2.67**	**280**	Pn	**Pn**	**07 45 39.7**	**+2.8**
SIZA				Sn	**Sn**	**07 46 08.8**	**+0.7**
QUBA	**Quba, Azerbaij**	**3.02**	**285**	Pn	**Pn**	**07 45 44.3**	**+2.6**
QUBA				Sn	**Sn**	**07 46 15.9**	**-0.8**
SAAT	**Saatly**	**3.12**	**257**	Sn	**Sn**	**07 46 19.9**	**+0.8**
IML	**Ismayilli**	**3.19**	**274**	Pn	**Pn**	**07 45 45.6**	**+1.6**
IML				Sn	**Sn**	**07 46 20.3**	**-0.5**
QSAR	**Qusar**	**3.23**	**287**	Pn	**Pn**	**07 45 46.7**	**+2.2**
QSAR				Sn	**Sn**	**07 46 20.7**	**-1.1**
XNQ	**Khinaliq**	**3.25**	**281**	Pn	**Pn**	**07 45 46.5**	**+1.5**
XNQ				Sn	**Sn**	**07 46 20.6**	**-2.0**
GLBA	**Clilabad**	**3.37**	**247**	Pn	**Pn**	**07 45 48.1**	**+1.7**
GLBA				Sn	**Sn**	**07 46 23.2**	**-2.0**
LKRN	**Lenkeran, Azer**	**3.38**	**236**	Pn	**Pn**	**07 45 48.2**	**+1.6**
LKRN				Sn	**Sn**	**07 46 23.9**	**-1.6**
QBL	**Gabala**	**3.46**	**276**	Sn	**Sn**	**07 46 24.9**	**-2.5**
ASTR	**Astara**	**3.47**	**234**	Pn	**Pn**	**07 45 49.2**	**+1.5**
ASTR				Sn	**Sn**	**07 46 25.1**	**-2.5**
YRD	**Yardimli**	**3.62**	**243**	Pn	**Pn**	**07 45 50.9**	**+0.7**
YRD				Sn	**Sn**	**07 46 28.8**	**-3.0**
LRK	**Lerik**	**3.70**	**239**	Pn	**Pn**	**07 45 52.2**	**+1.0**
LRK				Sn	**Sn**	**07 46 30.9**	**-2.9**
BLQ	**Beylaqan**	**3.80**	**257**	Pn	**Pn**	**07 45 53.3**	**+0.8**
BLQ				Sn	**Sn**	**07 46 32.8**	**-3.1**
SEKA	**Sheki**	**3.96**	**280**	Pn	**Pn**	**07 45 56.1**	**+1.4**
SEKA				Sn	**Sn**	**07 46 38.5**	**-1.4**

BRDA	**Brd**	**3.98**	**266**	Pn	**Pn**	**07 45 56.5**	**+1.6**
BRDA				Sn	**Sn**	**07 46 41.0**	**+0.7**
QRD	**Qoradiz**	**4.06**	**255**	Pn	**Pn**	**07 45 56.7**	**+0.8**
QRD				Sn	**Sn**	**07 46 39.7**	**-2.5**
AGDM	**Agdam**	**4.06**	**264**	Pn	**Pn**	**07 45 56.5**	**+0.5**
AGDM				Sn	**Sn**	**07 46 39.8**	**-2.4**
ZKTA	**Zakatala**	**4.45**	**285**	Pn	**Pn**	**07 46 02.6**	**+1.2**
ZKTA				Sn	**Sn**	**07 46 50.9**	**-1.1**
GANJ	**Ganja**	**4.60**	**272**	Pn	**Pn**	**07 46 03.2**	**-0.2**
GANJ				Sn	**Sn**	**07 46 51.1**	**-4.6**
GDB	**GEDABAY**	**5.03**	**273**	Pn	**Pn**	**07 46 09.1**	**-0.4**
GDB				Sn	**Sn**	**07 47 01.5**	**-5.0**
ORD	**Ordubad**	**5.21**	**253**	Pn	**Pn**	**07 46 13.5**	**+1.7**
ORD				Sn	**Sn**	**07 47 08.7**	**-2.0**
QZX	**Qazax, Azerbai**	**5.33**	**277**	Pn	**Pn**	**07 46 13.4**	**0.0**
QZX				Sn	**Sn**	**07 47 09.4**	**-4.1**
AB31	**Akbulak array**	**10.13**	**29** ⇓Pn		**Pn**	**07 47 20.2**	**+1.0**
	0.2nm,0.5s,baz=206,slow=12,SNR=9.1						
AB31				⇑Sn	**Sn**	**07 49 09.2**	**-2.4**
	0.7nm,0.5s,baz=212,slow=23,SNR=5.0						
AKTO	**Aktyubinsk**	**10.55**	**20** ⇓Pn		**Pn**	**07 47 27.3**	**+2.3**
	0.6nm,0.7s						
AKTO				⇓Sn	**Sn**	**07 49 18.6**	**-3.2**
	1.3nm,0.5s						

IDC 07 07:49:05.4±1.5,**3°.69S**×**139°.10E**,**h0**km,**mb3.1**/2,
mbtmp3.3/4,**ML3.4**/2,**Error ellipse: s-maj=41.8km**
s-min=14.2km az=138.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.98**	**54**	Pg	Pg	07 49 42.9	-0.5
	12nm,0.3s,baz=210,slow=12,SNR=27						
JAY				Lg	Lg	07 50 06.8	
	6.9nm,0.3s,baz=107,slow=18,SNR=6.7						
WRA	**Warramunga Arr**	**16.81**	**196**	Pn	Pn	07 53 01.8	-0.6
	0.1nm,0.3s,baz=16,slow=12,SNR=5.3						
WRA				Sn	Sn	07 55 55.0	-15
	0.1nm,0.3s,baz=15,slow=22,SNR=4.8						
	0.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.46**	**222**	P	P	07 53 32.5	-1.4
	0.1nm,0.3s,baz=50,slow=12,SNR=1.6						
FITZ				S	Sn	07 57 02.7	-11
	1.4nm,0.7s,baz=116,slow=19,SNR=1.4						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**20.49**	**194**	P	P	07 53 45.8	+0.8
	0.2nm,0.5s,baz=21,slow=10,SNR=5.6						
ASAR				S	S	07 57 25.2	-10
	0.5nm,0.7s,baz=12,slow=28,SNR=3.1						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**70.79**	**322**	P	P	08 00 24.0	+0.2
	0.2nm,0.5s,baz=119,slow=5.3,SNR=2.2						
	0.2nm,0.5s						

*TXNET **07** 07:51:21.1,31°.7N±0°.9×10°.4W±°,h6km±1km,ML2.9/12,*
Error ellipse: s-maj=1.9km s-min=1.3km az=81.1,final
NEIC 07 07:51:21.4±0.9,**31°.66N**±0°.01×**104°.31W**±0°.01,**h5**km±1km,
mb_Lg2.8/57,**ML2.7**/48,**6C**,**Error ellipse: s-maj=2.9km**
s-min=2.2km az=225.0,Western Texas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPB09	**Culberson Coun**	**0.12**	**2**	⇑P	Pg	07 51 24.7	+0.7
TPB09				S	Sg	07 51 26.6	+1.0
TPB11	**China Draw**	**0.36**	**40**	⇑P	Pg	07 51 28.7	+0.2
TPB11				S	Sg	07 51 33.7	+0.4
TPB13	**Reeves - Culbe**	**0.41**	**104**	P	Pg	07 51 29.8	+0.5
PECS	**Pecos**	**0.47**	**127**		Pg	07 51 30.8	+0.2
PECS					Sg	07 51 37.0	+0.3
PECS				IAML		07 51 37.5	
	610nm,0.3s						
PECS	**Pecos**	**0.47**	**127**	⇑P	Pg	07 51 30.8	+0.3
PECS				S	Sg	07 51 37.0	+0.3
TPB12	**Southwest of T**	**0.53**	**146**	⇑P	Pg	07 51 31.8	+0.1
TPB12				S	Sg	07 51 39.0	+0.3
TPB07	**Mentone**	**0.55**	**98**	P	Pg	07 51 32.7	+0.7
TPB07				S	Sg	07 51 40.4	+1.1
TPB10	**Southeast of T**	**0.60**	**128**	P	Pg	07 51 33.3	+0.3
TPB10				S	Sg	07 51 41.3	+0.5
CLNB	**Carlsbad**	**0.71**	**31**		Pg	07 51 34.9	-0.1
CLNB	**Carlsbad**	**0.71**	**31**	P	Pg	07 51 34.9	-0.1
CLNB				S	Sg	07 51 44.8	+0.5
PCOS	**Crockett Middl**	**0.72**	**110**		Pg	07 51 35.9	+0.6
PCOS					Sg	07 51 45.6	+0.9
PCOS	**Crockett Middl**	**0.72**	**110**	P	Pg	07 51 35.9	+0.6
PCOS				S	Sg	07 51 45.6	+0.9
CBET	**Carlsbad E Tow**	**0.81**	**19**		Pg	07 51 37.0	0.0
CBET	**Carlsbad E Tow**	**0.81**	**19**	P	Pg	07 51 37.0	0.0
TPB01	**Permian Basin**	**0.84**	**147**	⇑P	Pg	07 51 37.0	-0.6
TPB01				S	Sg	07 51 47.6	-0.9
CLN7	**Carlsbad 7**	**0.87**	**29**		Pg	07 51 37.7	-0.4
CLN7	**Carlsbad 7**	**0.87**	**29**	P	Pg	07 51 37.8	-0.3
TPB03	**Saragosa**	**0.89**	**130**	P	Pg	07 51 38.4	-0.1
TPB03				S	Sg	07 51 50.1	+0.1
MNTX	**Cornudas Mount**	**0.92**	**273**		Pg	07 51 39.0	0.0
MNTX					Sg	07 51 51.2	+0.3
MNTX	**Cornudas Mount**	**0.92**	**273**	⇑P	Pg	07 51 39.0	0.0
MNTX				S	Sg	07 51 51.1	+0.2
TPB06	**Permian Basin**	**0.93**	**90**	P	Pg	07 51 38.8	-0.5
TPB06				S	Sg	07 51 51.8	+0.5
HTMS	**Hat Mesa**	**0.99**	**35**	P	Pg	07 51 40.2	-0.3
HTMS				S	Sg	07 51 54.0	+0.5
TPB04	**Verhalen**	**1.00**	**118**	P	Pg	07 51 40.5	-0.1
TPB04				S	Sb	07 51 54.6	-0.2
TPB27	**North of Pyote**	**1.01**	**94**	P	Pg	07 51 40.4	-0.3
TPB27				S	Sb	07 51 54.4	-0.6
NM01	**Eunice**	**1.04**	**48**	P	Pg	07 51 40.9	-0.5
NM01				S	Sg	07 51 54.8	-0.1
VHRN	**Van Horn**	**1.04**	**214**		Pg	07 51 41.0	-0.5
VHRN					Sg	07 51 55.1	+0.1
VHRN				IAML		07 52 01.2	
	183nm,0.3s						
VHRN				IAML		07 52 01.2	
	157nm,0.2s						
VHRN	**Van Horn**	**1.04**	**214**	P	Pg	07 51 40.9	-0.5
VHRN				S	Sg	07 51 55.1	+0.1
TPB16	**Coyonosa**	**1.05**	**120**	P	Pg	07 51 41.3	-0.2
TPB16				S	Sg	07 51 55.2	+0.1
TPB19	**West of Imperi**	**1.09**	**109**	S	Sg	07 51 56.8	+0.3
TPB05	**Hovey Rd**	**1.12**	**131**	P	Pg	07 51 42.3	-0.6
TPB05				S	Sg	07 51 56.9	-0.4
TPB15	**Southwest of C**	**1.14**	**113**	P	Pg	07 51 42.9	-0.4
TPB15				S	Sb	07 51 58.3	-0.4
MNHN	**Monahans**	**1.36**	**103**		Pn	07 51 46.3	-0.9
MNHN					Sg	07 52 04.1	-1.0
MNHN				IAML		07 52 08.6	
	166nm,0.5s						
MNHN	**Monahans**	**1.36**	**103**	P	Pn	07 51 46.1	-1.0
MNHN				S	Sg	07 52 04.1	-1.0
ALPN	**Alpine**	**1.40**	**156**		Pn	07 51 46.5	-1.2
ALPN					Sb	07 52 04.6	-1.8
ALPN	**Alpine**	**1.40**	**156**	P	Pn	07 51 46.5	-1.3
ALPN				S	Sb	07 52 04.6	-1.8
CPRX	**Cap Rock**	**1.42**	**15**		Pn	07 51 47.9	-0.1
CPRX	**Cap Rock**	**1.42**	**15**	P	Pn	07 51 47.9	-0.2
TPB08	**Permian Basin**	**1.42**	**122**	P	Pn	07 51 47.9	-0.1
TPB08				S	Sn	07 52 07.4	+0.2
ODSA	**Odessa**	**1.56**	**72**		Pn	07 51 49.4	-0.6
ODSA					Sn	07 52 10.1	-0.6
ODSA	**Odessa**	**1.56**	**72**	P	Pn	07 51 50.1	+0.1
ODSA				S	Sn	07 52 10.1	-0.6
TMB04	**Seminole**	**1.82**	**57**	P	Pn	07 51 54.2	+0.7
TMB04				S	Sb	07 52 18.7	+0.2
EPT	**El Paso**	**1.88**	**274**		Pn	07 51 53.5	-0.8
EPT				IAML		07 52 23.6	
	comp=N,83nm,0.5s						
EPT				IAML		07 52 26.5	
	comp=E,72nm,0.4s						
EPT	**El Paso**	**1.88**	**274**	S	Sg	07 52 22.2	+0.4
EPT	**El Paso**	**1.88**	**274**	P	Pb	07 51 55.9	-0.4
TMB01	**Midkiff**	**1.90**	**89**	P	Pn	07 51 55.6	+1.0
TMB01				S	Sb	07 52 20.9	+0.3
TMB02	**Rankin**	**1.99**	**103**	P	Pn	07 51 56.8	+1.0
TMB02				S	Sb	07 52 23.7	+0.3
TMB06	**Greenwood**	**2.16**	**81**	P	Pn	07 51 59.3	+1.2
TMB06				S	Sb	07 52 27.4	-0.8
TMB05	**Klondike**	**2.29**	**64**	P	Pn	07 52 01.4	+1.5
TMB05				S	Sb	07 52 31.7	-0.3
TX31	**Lajitas Ar. Si**	**2.38**	**166**		Pn	07 52 02.0	+0.8
TX31	**Lajitas Ar. Si**	**2.38**	**166**	P	Pn	07 52 02.0	+0.8
TX31				Pg	Pb	07 52 03.9	-0.9
TXAR	**Lajitas Array**	**2.38**	**166**		Pn	07 52 01.3	+0.1
SAND	**Sanderson**	**2.53**	**132**		Pn	07 52 05.0	+1.7
SAND				IAmb_Lg		07 52 45.3	
	comp=Z,42nm,0.7s						
SAND	**Sanderson**	**2.53**	**132**	P	Pn	07 52 04.9	+1.7
SAND				Pg	Pb	07 52 06.5	-0.9
MSTX	**Muleshoe**	**2.64**	**29**		Pn	07 52 05.9	+1.0
SGCY	**Sterling City**	**2.72**	**84**		Pn	07 52 05.9	0.0
SGCY				IAmb_Lg		07 52 48.3	
	comp=Z,34nm,0.7s						
SGCY	**Sterling City**	**2.72**	**84**	P	Pn	07 52 06.9	+1.0
OZNA	**Ozona**	**2.82**	**104**		Pn	07 52 07.8	+0.6
OZNA				IAmb_Lg		07 52 54.4	
	comp=Z,21nm,0.9s						
OZNA	**Ozona**	**2.82**	**104**	P	Pn	07 52 07.8	+0.6
121A	**Cookes Peak, D**	**3.08**	**287**		Pn	07 52 11.2	+0.3
121A				IAML		07 53 03.1	
	comp=E,27nm,0.5s						
121A				IAML		07 53 06.9	
	comp=N,30nm,0.5s						
Y22A	**Socorro**	**3.19**	**316**		Pn	07 52 13.9	+1.4
SN07	**Snyder 07**	**3.22**	**63**	IAmb_Lg		07 53 05.8	
	comp=Z,29nm,0.8s						
DKNS	**Dickens**	**3.49**	**54**	IAmb_Lg		07 53 19.3	
	comp=Z,29nm,0.9s						
ANMO	**Albuquerque**	**3.74**	**332**	IAmb_Lg		07 53 18.0	
	comp=Z,15nm,0.7s						
TASM	**ASL Pad, Albuq**	**3.74**	**332**	IAmb_Lg		07 53 19.9	
	comp=Z,16nm,0.8s						
TASM	**ASL Pad, Albuq**	**3.74**	**332**	IAmb_Lg		07 53 25.0	
	comp=Z,19nm,1.0s						
DRIO	**Del Rio**	**3.88**	**124**	IAmb_Lg		07 53 28.4	
	comp=Z,21nm,0.8s						
AMTX	**Amarillo**	**3.90**	**34**	IAmb_Lg		07 53 35.7	
	comp=Z,25nm,0.8s						
APMT	**Aspermont**	**3.91**	**64**		Pn	07 52 22.5	+0.3
APMT				IAmb_Lg		07 53 28.1	
	comp=Z,27nm,0.7s						
JCT	**Junction City**	**4.04**	**106**	Pn	Pn	07 52 23.4	-0.6
ABTX	**Abilene, Hawle**	**4.07**	**75**		Pn	07 52 25.2	+0.7
ABTX				IAmb_Lg		07 53 36.2	
	comp=Z,17nm,0.7s						
BRDY	**Brady**	**4.55**	**93**		Pn	07 52 30.5	-0.5
BRDY				IAmb_Lg		07 53 54.0	
	comp=Z,18nm,0.8s						
HNDO	**Hondo**	**4.82**	**115**	IAmb_Lg		07 54 04.5	
	comp=Z,19nm,0.7s						
RTBA	**Rita Blanca**	**4.94**	**15**	IAmb_Lg		07 54 10.1	
	comp=Z,13nm,0.9s						
PLPT	**Palo Pinto**	**5.21**	**76**	IAmb_Lg		07 54 12.9	
	comp=Z,10nm,0.8s						
WMOK	**Wichita Mounta**	**5.56**	**55**	IAmb_Lg		07 54 25.0	
	comp=Z,17nm,0.8s						
FW13	**Cleburne**	**5.88**	**81**	IAmb_Lg		07 54 41.4	
	comp=Z,12nm,1.0s						
Z35A	**Perchaven, San**	**6.19**	**72**	IAmb_Lg		07 54 53.4	
	comp=Z,15nm,1.0s						
237A	**Washetta, Mont**	**7.24**	**85**	IAmb_Lg		07 55 25.8	
	comp=Z,13nm,0.8s						
KSCO	**Kaye Shedlock'**	**7.46**	**10**	IAmb_Lg		07 55 23.8	
	comp=Z,10nm,0.7s						

*UCR **07** 08:07:26.3±1.0,10°.94N×85°.22W,h183km±4km,MW3.9*
*CATAC **07** 08:07:30.0±0.6,11°.N±5°×8°.5W±°,h154km±5km,M3.4/14,*
MLv3.4/14,Error ellipse: s-maj=15.4km s-min=4.4km
az=43.5,confirmed
ISC 07 08:07:29.2±1.6,**10°.83N**±0°.06×**85°.16W**±0°.06,**h168**km±9km,
n100,σ0§47/107,**40C**,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HORNC	**Hornillas**	**0.12**	**189**	⇑iP	**Pn**	**08 07 51.7**	**-0.1**
HORNC				eS	**Sn**	**08 08 10.2**	**+1.2**
UPAL	**Upala**	**0.16**	**64**	⇑eP	**Pn**	**08 07 51.4**	**-0.3**
PEJA	**Penjamo Buenos**	**0.17**	**294**	⇑eP	**Pn**	**08 07 51.4**	**-0.3**
CUI	**Cuipilapa**	**0.17**	**181**	⇑eP	**Pn**	**08 07 51.6**	**-0.2**
BUAI	**Buenos Aires**	**0.18**	**286**	⇑eP	**Pn**	**08 07 51.5**	**-0.3**
VORI	**VORI**	**0.18**	**267**	eP	**Pn**	**08 07 52.1**	**+0.1**
GPS2	**Hotel Rincn d**	**0.20**	**249**	eP	**Pn**	**08 07 51.4**	**-0.5**
VRLE	**La Escondida,**	**0.20**	**259**	⇑eP	**Pn**	**08 07 51.5**	**-0.4**
VRLE				eS	**Sn**	**08 08 10.2**	**+1.0**
TENO	**El Achiote**	**0.22**	**124**	⇑eP	**Pn**	**08 07 52.0**	**+0.1**
LAPC	**Finca la Perla**	**0.27**	**258**	⇑eP	**Pn**	**08 07 51.3**	**-0.7**
TIMP	**Tierras Morena**	**0.28**	**150**	⇑eP	**Pn**	**08 07 51.8**	**-0.3**
TIMP				eS	**Sn**	**08 08 09.5**	**0.0**
BAGA	**Bagaces**	**0.31**	**198**	⇑eP	**Pn**	**08 07 51.6**	**-0.5**
QUEB	**Quebradon, Cot**	**0.33**	**128**	⇑eP	**Pn**	**08 07 51.9**	**-0.2**
ERIA	**Liberia**	**0.34**	**235**	⇑iP	**Pn**	**08 07 51.8**	**-0.3**
INVE	**Universidad In**	**0.36**	**165**	eP	**Pn**	**08 07 52.0**	**-0.3**
CNAS	**Canas**	**0.40**	**170**	⇑iP	**Pn**	**08 07 53.1**	**+0.8**
TILA	**Tilaran**	**0.40**	**150**	⇑iP	**Pn**	**08 07 52.2**	**-0.2**
ELI1	**Hacienda Flor**	**0.43**	**245**	eP	**Pn**	**08 07 52.1**	**-0.3**
ALIBA	**Liberia Airpor**	**0.44**	**238**	⇑iP	**Pn**	**08 07 52.2**	**-0.3**
CHIK	**Chiripa**	**0.46**	**147**	eP	**Pn**	**08 07 52.8**	**+0.1**
LCHIL	**Los Chiles**	**0.48**	**65**	⇑iP	**Pn**	**08 07 52.3**	**-0.3**
CARN	**Rivas**	**0.51**	**315**	P	**Pn**	**08 07 52.6**	**-0.1**
CARN	**Rivas**	**0.51**	**315**	⇑iP	**Pn**	**08 07 52.5**	**-0.1**
TABAC	**Tabacon**	**0.51**	**130**	⇑eP	**Pn**	**08 07 53.1**	**+0.3**
PLVR	**Palo Verde**	**0.51**	**202**	eP	**Pn**	**08 07 52.9**	**-0.1**
LCRUZ	**La Cruz**	**0.53**	**299**	⇑iP	**Pn**	**08 07 52.4**	**-0.4**
LCRUZ				eS	**Sn**	**08 08 11.0**	**+0.1**
DELF	**Filadelfia**	**0.54**	**226**	⇑eP	**Pn**	**08 07 52.7**	**-0.2**
CEDE	**Laguna Cedeo**	**0.56**	**127**	⇑iP	**Pn**	**08 07 53.4**	**+0.3**
ARE1	**Arenal 1**	**0.57**	**130**	⇑iP	**Pn**	**08 07 53.5**	**+0.4**
VARE2	**V. Arenal**	**0.57**	**130**	⇑iP	**Pn**	**08 07 53.5**	**+0.3**
JTS	**Las Juntas de**	**0.57**	**159**	⇑eP	**Pn**	**08 07 52.7**	**-0.4**
CASO	**Castillo**	**0.57**	**133**	⇑iP	**Pn**	**08 07 53.3**	**+0.2**
JUNT	**Juntas**	**0.58**	**160**	⇑eP	**Pn**	**08 07 52.6**	**-0.5**
VACR	**Volcan Arenal**	**0.59**	**127**	⇑iP	**Pn**	**08 07 53.5**	**+0.3**
FORC	**Fortuna**	**0.60**	**127**	⇑iP	**Pn**	**08 07 53.5**	**+0.3**
MTEVE	**Monteverde**	**0.60**	**147**	⇑iP	**Pn**	**08 07 53.2**	**-0.2**
SOCE	**Pocosol**	**0.69**	**130**	P	**Pn**	**08 07 53.8**	**0.0**
SOCE	**Pocosol**	**0.69**	**130**	⇑eP	**Pn**	**08 07 53.7**	**0.0**
SACU	**Santa Cruz**	**0.70**	**217**	⇑iP	**Pn**	**08 07 53.3**	**-0.4**
NICO	**Nicoya**	**0.74**	**202**	eP	**Pn**	**08 07 53.4**	**-0.6**
COVE	**Coope Vega, Sa**	**0.75**	**98**	P	**Pn**	**08 07 53.6**	**-0.4**
COVE	**Coope Vega, Sa**	**0.75**	**98**	S	**Sn**	**08 08 11.8**	**-1.3**
JUD3	**Juan Diaz 3**	**0.76**	**210**	⇑iP	**Pn**	**08 07 53.7**	**-0.5**
NYURE	**Nandayure**	**0.83**	**186**	⇑iP	**Pn**	**08 07 54.1**	**-0.5**
CMARA	**Lajas Hojancha**	**0.84**	**198**	⇑iP	**Pn**	**08 07 54.1**	**-0.6**
MORN	**Al O del Volca**	**0.86**	**326**	P	**Pn**	**08 07 54.7**	**-0.1**
CONN	**Concepcion**	**0.86**	**328**	P	**Pn**	**08 07 54.7**	**-0.1**
QUEU	**Ciudad Quesada**	**0.87**	**125**	⇑iP	**Pn**	**08 07 55.0**	**+0.1**
SAJU	**San Juanillo,**	**0.93**	**216**	⇑iP	**Pn**	**08 07 54.5**	**-0.8**
ROBF	**Roble, Puntare**	**0.94**	**154**	eP	**Pn**	**08 07 55.2**	**-0.2**
ITAL	**Pital**	**0.95**	**113**	eP	**Pn**	**08 07 55.2**	**-0.3**
ARZA	**Esparza**	**0.96**	**150**	eP	**Pn**	**08 07 55.3**	**-0.6**
RAMO	**San Ramon**	**1.00**	**137**	eP	**Pn**	**08 07 55.4**	**-0.6**
PAQE	**Paquera**	**1.03**	**167**	eP	**Pn**	**08 07 55.6**	**-0.4**
ARTO	**Ro Cuarto**	**1.04**	**117**	eP	**Pn**	**08 07 56.0**	**-0.3**
PALD	**Palmares**	**1.05**	**137**	⇑eP	**Pn**	**08 07 55.9**	**-0.4**
SARCI	**Sarchi**	**1.08**	**132**	eP	**Pn**	**08 07 56.7**	**+0.1**
OROT	**Orotina**	**1.10**	**145**	eP	**Pn**	**08 07 56.4**	**-0.2**
ATEO	**Atenas**	**1.14**	**138**	eP	**Pn**	**08 07 56.7**	**-0.3**
TCS1	**Tacares**	**1.15**	**133**	eP	**Pn**	**08 07 57.0**	**-0.2**
CBL1	**Cabuya**	**1.23**	**177**	⇑iP	**Pn**	**08 07 57.2**	**-0.6**
NADN	**Granada**	**1.25**	**317**	P	**Pn**	**08 07 57.1**	**-0.9**
NADN	**Granada**	**1.25**	**317**	eP	**Pn**	**08 07 56.9**	**-1.0**
BELE	**Belen**	**1.28**	**131**	⇑iP	**Pn**	**08 07 58.0**	**-0.2**
PURI	**Puriscal**	**1.28**	**139**	eP	**Pn**	**08 07 58.1**	**-0.2**
SANTA	**Santa Ana**	**1.31**	**133**	⇑iP	**Pn**	**08 07 58.1**	**-0.4**
BITO	**Garabito Jaco**	**1.31**	**156**	eP	**Pn**	**08 07 58.4**	**-0.1**
ACOS	**Acosta**	**1.42**	**136**	eP	**Pn**	**08 07 59.5**	**-0.1**
NANN	**Nandasmo**	**1.45**	**320**	P	**Pn**	**08 08 00.7**	**+0.9**
NANN	**Nandasmo**	**1.45**	**320**	S	**Sn**	**08 08 24.4**	**+0.9**
PILE	**Guapiles**	**1.48**	**114**	eP	**Pn**	**08 08 00.1**	**+0.1**
PAR1A	**Puntarenas Pro**	**1.52**	**144**	eP	**Pn**	**08 08 01.0**	**+0.6**
PICV	**PH. Pirrs**	**1.52**	**141**	eP	**Pn**	**08 08 00.8**	**+0.2**
ESPN	**Las Esperanzas**	**1.60**	**32**	P	**Pn**	**08 08 00.7**	**-0.5**
PITB	**Pirrs, San**	**1.61**	**136**	eP	**Pn**	**08 08 01.8**	**+0.2**
UNAN	**Cigeo UNAN**	**1.68**	**320**	P	**Pn**	**08 08 01.9**	**-0.1**
UNAN				S	**Sn**	**08 08 28.6**	**+1.2**
TISN	**Laguna Tiscapa**	**1.70**	**320**	P	**Pn**	**08 08 01.0**	**-1.3**
LLNJ	**Naranjito**	**1.70**	**142**	eP	**Pn**	**08 08 02.8**	**+0.5**
BUS1	**Rivas**	**1.88**	**132**	eP	**Pn**	**08 08 04.5**	**-0.2**
COPN	**Copaltepe**	**1.94**	**314**	P	**Pn**	**08 08 04.7**	**-0.1**
COPN	**Copaltepe**	**1.94**	**314**	eP	**Pn**	**08 08 04.4**	**-0.5**
VERH	**Veragua Rainfo**	**2.13**	**115**	eP	**Pn**	**08 08 06.6**	**-0.5**
MOM3	**MOM3**	**2.14**	**322**	P	**Pn**	**08 08 06.9**	**-0.2**
MOM3				S	**Sn**	**08 08 36.5**	**+0.1**
SAJE	**San Jernim**	**2.19**	**132**	*eP*	**Pn**	**08 08 07.7**	**-0.2**
CNGA	**Al SSO del Vol**	**2.24**	**318**	P	**Pn**	**08 08 08.6**	**+0.3**
CNGA				S	**Sn**	**08 08 38.3**	**-0.4**
CNGN	**Cerro Negro**	**2.24**	**318**	S	**Sn**	**08 08 38.6**	**0.0**
CNGN	**Cerro Negro**	**2.24**	**318**	P	**Pn**	**08 08 08.5**	**+0.2**
OCHAL	**Ojochal**	**2.28**	**139**	P	**Pn**	**08 08 09.6**	**+0.9**
OCHAL	**Ojochal**	**2.28**	**139**	S	**Sn**	**08 08 39.1**	**-0.1**
EDPE	**Pejibaye, P**	**2.28**	**137**	*eP*	**Pn**	**08 08 09.3**	**+0.5**
LAES	**El Progreso Va**	**2.33**	**117**	*eP*	**Pn**	**08 08 09.1**	**-0.2**
DRK0	**Durika**	**2.44**	**129**	*eP*	**Pn**	**08 08 10.7**	**-0.1**
LIMN	**Finca el Limon**	**2.52**	**332**	P	**Pn**	**08 08 11.5**	**-0.1**
EDP2	**Potrero Grande**	**2.66**	**132**	*eP*	**Pn**	**08 08 13.7**	**+0.5**
ALCO	**Alturas Coton,**	**2.96**	**129**	*eP*	**Pn**	**08 08 16.6**	**-0.4**
BRU2	**Volcan**	**3.16**	**129**	*eP*	**Pn**	**08 08 19.7**	**+0.2**
DMCAL	**E. de Neily**	**3.17**	**132**	*eP*	**Pn**	**08 08 19.4**	**-0.2**
JEFFS	**S de V. Baru**	**3.36**	**129**	*eP*	**Pn**	**08 08 22.1**	**+0.1**
PBNVO	**Pueblo Nuevo,**	**3.50**	**123**	*eP*	**Pn**	**08 08 23.4**	**-0.3**
RBALA	**Bur**	**3.54**	**123**	*eP*	**Pn**	**08 08 23.7**	**-0.4**

*NOU **07** 08:11:09.0,38°.41S×176°.14E,h176km,MLv4.3/22,North*
Island, New Zealand
*NEIC **07** 08:11:09.5±1.5,38°.39S±0°.05×176°.11E±0°.06,h175km±5km,*
mb4.1/8,Error ellipse: s-maj=8.4km s-min=6.0km
az=147.0
*WEL **07** 08:11:12.1±1.2,38°.S±5°×17°.6E±°,h153km±11km,M3.0/36,*
ML2.5/8,MLv3.0/36,Error ellipse: s-maj=8.8km
s-min=5.2km az=55.7,confirmed
ISC 07 08:11:09.5±0.7,**38°.35S**±0°.04×**176°.06E**±0°.04,**h182**km±5km,
n221,σ1§15/231,**mb4.2**/4,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRRZ	**Galatos Road**	**0.04**	**84**	P	**Pn**	**08 11 33.5**	**0.0**
HSRZ	**Hossack Road**	**0.15**	**74**	P	**Pn**	**08 11 33.5**	**0.0**
HRRZ	**Handcock Road**	**0.18**	**102**	P	**Pn**	**08 11 33.5**	**-0.1**
WPRZ	**Whakapapataran**	**0.18**	**154**	P	**Pn**	**08 11 33.6**	**0.0**
UTU	**Utuhina**	**0.21**	**31**	P	**Pn**	**08 11 33.7**	**0.0**
KUTZ	**Kaahu Road**	**0.23**	**234**	P	**Pn**	**08 11 33.8**	**+0.1**
HLRZ	**Highlands Stat**	**0.25**	**66**	P	**Pn**	**08 11 34.1**	**+0.3**
NGRZ	**Ngongotaha**	**0.27**	**22**	P	**Pn**	**08 11 33.6**	**-0.3**
PRRZ	**Plateau Road**	**0.30**	**119**	P	**Pn**	**08 11 33.8**	**0.0**
ALRZ	**Allen Road**	**0.30**	**133**	P	**Pn**	**08 11 33.8**	**0.0**
WHTZ	**Whakaora**	**0.32**	**194**	P	**Pn**	**08 11 34.6**	**+0.6**
OMRZ	**Omania**	**0.35**	**45**	P	**Pn**	**08 11 33.6**	**-0.4**
RRRZ	**Republican Roa**	**0.36**	**88**	P	**Pn**	**08 11 33.8**	**-0.3**
KARZ	**Kaharoa**	**0.36**	**24**	P	**Pn**	**08 11 33.6**	**-0.5**
TARZ	**Mount Tarawera**	**0.37**	**72**	P	**Pn**	**08 11 34.3**	**+0.2**
MKRZ	**Makatiti**	**0.39**	**56**	P	**Pn**	**08 11 34.4**	**+0.2**
TLZ	**Tolley Road**	**

MXZ	**Matakaoa Point**	**1.94**	**67**	P		**Pn**	**08 11 45.7**	**-0.4**
RVAZ	**Riverhead Bore**	**1.97**	**323**	P		**Pn**	**08 11 46.4**	**+0.1**
NMEZ	**Namu Road**	**2.00**	**237**	P		**Pn**	**08 11 48.1**	**+1.5**
POWZ	**Post Office Ro**	**2.05**	**186**	P		**Pn**	**08 11 47.9**	**+0.8**
ANWZ	**Angora Road**	**2.13**	**171**	P		**Pn**	**08 11 49.2**	**+1.2**
GRZ	**Great Barrier**	**2.15**	**347**	P		**Pn**	**08 11 47.9**	**-0.5**
PRWZ	**Pori Road**	**2.20**	**182**	P		**Pn**	**08 11 49.8**	**+1.0**
BFZ	**Birch Farm**	**2.33**	**177**			**Pn**	**08 11 50.3**	**0.0**
BFZ					Sn	**Sn**	**08 12 20.1**	**-2.1**
BFZ	**Birch Farm**	**2.33**	**177**	P		**Sn**	**08 12 20.9**	**-1.3**
BFZ	**Birch Farm**	**2.33**	**177**	P		**Pn**	**08 11 50.6**	**+0.3**
BFZ	**Birch Farm**	**2.33**	**177**	P		**Pn**	**08 11 50.9**	**+0.7**
MRZ	**Mangatainoka R**	**2.33**	**189**			**Pn**	**08 11 50.7**	**+0.3**
MRZ	**Mangatainoka R**	**2.33**	**189**	P		**Pn**	**08 11 50.8**	**+0.5**
TIWZ	**Tintock**	**2.42**	**183**	P		**Pn**	**08 11 51.9**	**+0.6**
OGWZ	**Otaki Gorge**	**2.55**	**195**	P		**Pn**	**08 11 53.3**	**+0.5**
HOWZ	**Holdsworth Sta**	**2.58**	**189**	P		**Pn**	**08 11 53.3**	**+0.2**
KIW	**Kapiti Island**	**2.66**	**199**	P		**Pn**	**08 11 54.1**	**0.0**
TMWZ	**Te Maipa**	**2.75**	**183**	P		**Pn**	**08 11 55.4**	**+0.1**
WCZ	**Waipu Caves**	**2.77**	**330**	P		**Pn**	**08 11 55.4**	**-0.1**
MTW	**Mount Morrison**	**2.83**	**189**	P		**Pn**	**08 11 56.1**	**-0.1**
CAW	**Cannon Point**	**2.85**	**195**	P		**Pn**	**08 11 56.4**	**0.0**
DUWZ	**D'Urville Isla**	**2.95**	**213**	P		**Pn**	**08 11 57.4**	**-0.2**
TRWZ	**Traveller**	**3.05**	**185**	P		**Pn**	**08 11 58.7**	**-0.1**
PAWZ	**Paruwai Farm**	**3.06**	**189**	P		**Pn**	**08 11 58.7**	**-0.2**
WEL	**Wellington**	**3.09**	**198**	P		**Pn**	**08 11 59.0**	**-0.2**
MSWZ	**Moikau Station**	**3.12**	**191**			**Pn**	**08 11 58.7**	**-0.9**
MSWZ					Sn	**Sn**	**08 12 35.7**	**-3.2**
MSWZ	**Moikau Station**	**3.12**	**191**	P		**Pn**	**08 11 59.3**	**-0.4**
SNZO	**South Karori**	**3.13**	**199**			**Pn**	**08 11 58.7**	**-1.0**
SNZO	**South Karori**	**3.13**	**199**	P		**Pn**	**08 11 59.2**	**-0.5**
SNZO	**South Karori**	**3.13**	**199**	P		**Sn**	**08 12 36.2**	**-2.9**
TCW	**Tory Channel**	**3.17**	**205**			**Pn**	**08 11 59.2**	**-1.0**
TCW	**Tory Channel**	**3.17**	**205**	P		**Pn**	**08 11 59.8**	**-0.4**
BHW	**Baring Head**	**3.19**	**196**			**Pn**	**08 11 59.7**	**-0.7**
BHW	**Baring Head**	**3.19**	**196**	P		**Pn**	**08 11 60.0**	**-0.4**
PLWZ	**Palliser**	**3.27**	**191**			**Pn**	**08 12 00.7**	**-0.8**
PLWZ	**Palliser**	**3.27**	**191**	P		**Pn**	**08 12 00.9**	**-0.6**
TUWZ	**Tuamarina**	**3.48**	**207**			**Pn**	**08 12 03.9**	**-0.1**
TUWZ	**Tuamarina**	**3.48**	**207**	P		**Pn**	**08 12 03.7**	**-0.3**
NNZ	**Nelson**	**3.53**	**215**			**Pn**	**08 12 03.8**	**-0.9**
NNZ	**Nelson**	**3.53**	**215**	P		**Pn**	**08 12 03.9**	**-0.7**
TKNZ	**Takaka Hill**	**3.59**	**221**			**Pn**	**08 12 03.6**	**-1.8**
TKNZ	**Takaka Hill**	**3.59**	**221**	P		**Pn**	**08 12 04.4**	**-1.0**
CMWZ	**Cape Campbell**	**3.67**	**202**			**Pn**	**08 12 06.3**	**-0.2**
CMWZ	**Cape Campbell**	**3.67**	**202**	P		**Pn**	**08 12 06.6**	**+0.2**
QRZ	**Quartz Range**	**3.68**	**227**			**Pn**	**08 12 05.0**	**-1.5**
QRZ	**Quartz Range**	**3.68**	**227**	P		**Pn**	**08 12 05.2**	**-1.3**
QRZ	**Quartz Range**	**3.68**	**227**	S		**Sn**	**08 12 49.5**	**-1.7**
QRZ	**Quartz Range**	**3.68**	**227**	P		**Pn**	**08 12 05.3**	**-1.3**
OUZ	**Omahuta**	**3.70**	**327**	P		**Pn**	**08 12 07.5**	**+0.6**
OUZ	**Omahuta**	**3.70**	**327**	P		**Pn**	**08 12 07.3**	**+0.4**
BSWZ	**Blackbirch Sta**	**3.75**	**206**			**Pn**	**08 12 06.8**	**-0.6**
BSWZ	**Blackbirch Sta**	**3.75**	**206**	P		**Pn**	**08 12 06.9**	**-0.6**
MRNZ	**Matariki Terra**	**3.96**	**219**			**Pn**	**08 12 08.6**	**-1.6**
MRNZ	**Matariki Terra**	**3.96**	**219**	P		**Pn**	**08 12 08.9**	**-1.2**
THZ	**Tophouse**	**4.18**	**214**			**Pn**	**08 12 11.6**	**-1.3**
THZ	**Tophouse**	**4.18**	**214**	P		**Pn**	**08 12 11.7**	**-1.2**
KHZ	**Kahutara**	**4.49**	**205**			**Pn**	**08 12 16.2**	**-0.6**
KHZ	**Kahutara**	**4.49**	**205**	P		**Pn**	**08 12 16.2**	**-0.6**
KHZ	**Kahutara**	**4.49**	**205**	P		**Pn**	**08 12 16.1**	**-0.7**
DSZ	**Denniston Nort**	**4.70**	**223**	P		**Pn**	**08 12 18.4**	**-1.3**
GVZ	**Greta Valley S**	**5.15**	**206**			**Pn**	**08 12 24.0**	**-1.4**
GVZ	**Greta Valley S**	**5.15**	**206**	P		**Pn**	**08 12 24.2**	**-1.1**
LTZ	**Lake Taylor**	**5.28**	**212**			**Pn**	**08 12 26.0**	**-1.1**
LTZ	**Lake Taylor**	**5.28**	**212**	P		**Pn**	**08 12 25.7**	**-1.4**
AMCZ	**Amberley**	**5.47**	**207**			**Pn**	**08 12 27.9**	**-1.5**
AMCZ	**Amberley**	**5.47**	**207**	P		**Pn**	**08 12 28.3**	**-1.1**
INZ	**Inchbonnie**	**5.61**	**217**			**Pn**	**08 12 28.4**	**-2.8**
INZ	**Inchbonnie**	**5.61**	**217**	P		**Pn**	**08 12 29.5**	**-1.8**
OKCZ	**Okains Bay**	**5.82**	**202**	P		**Pn**	**08 12 32.7**	**-1.5**
OXZ	**Oxford**	**5.83**	**210**			**Pn**	**08 12 31.7**	**-2.5**
MQZ	**McQueen's Vall**	**5.93**	**205**			**Pn**	**08 12 33.0**	**-2.5**
MQZ	**McQueen's Vall**	**5.93**	**205**	P		**Pn**	**08 12 33.3**	**-2.3**
AKCZ	**Akaroa Harbour**	**6.00**	**202**	P		**Pn**	**08 12 34.8**	**-1.7**
RACZ	**Rakaia**	**6.13**	**208**	P		**Pn**	**08 12 36.0**	**-2.1**
MHCZ	**Mount Hutt**	**6.19**	**212**	P		**Pn**	**08 12 37.0**	**-1.9**
WVZ	**Waitaha Valley**	**6.21**	**219**	P		**Pn**	**08 12 38.6**	**-0.5**
RPZ	**Rata Peaks**	**6.56**	**214**			**Pn**	**08 12 42.5**	**-1.2**
RPZ	**Rata Peaks**	**6.56**	**214**	P		**Pn**	**08 12 42.3**	**-1.4**
RPZ	**Rata Peaks**	**6.56**	**214**	P		**Pn**	**08 12 42.0**	**-1.7**
ARCZ	**Arundel**	**6.69**	**212**	P		**Pn**	**08 12 43.5**	**-2.0**
LBZ	**Lake Benmore**	**7.47**	**214**	P		**Pn**	**08 12 53.6**	**-2.1**
ODZ	**Otahua Downs**	**7.81**	**209**			**Pn**	**08 12 58.7**	**-1.5**
ODZ	**Otahua Downs**	**7.81**	**209**	P		**Pn**	**08 12 58.8**	**-1.5**
ODZ	**Otahua Downs**	**7.81**	**209**	P		**Pn**	**08 12 58.3**	**-1.9**
JCZ	**Jackson Bay**	**7.92**	**222**	P		**Pn**	**08 13 00.2**	**-1.5**
JCZ	**Jackson Bay**	**7.92**	**222**	P		**Pn**	**08 13 00.4**	**-1.3**
HHSZ	**Highcliff Hill**	**8.55**	**207**	P		**Pn**	**08 13 08.9**	**-1.0**
MSZ	**Milford Sound**	**8.78**	**221**	P		**Pn**	**08 13 12.6**	**-0.3**
TUZ	**Tuapeka**	**8.97**	**210**	P		**Pn**	**08 13 14.3**	**-1.0**
MLZ	**Mavora Lakes**	**9.17**	**218**	P		**Pn**	**08 13 16.7**	**-1.4**
SYZ	**Scrubby Hill**	**9.64**	**210**	P		**Pn**	**08 13 23.0**	**-1.1**
SYZ	**Scrubby Hill**	**9.64**	**210**	P		**Pn**	**08 13 23.2**	**-0.9**
WHZ	**Wether Hill Ro**	**9.64**	**216**	P		**Pn**	**08 13 22.4**	**-1.8**
APZ	**The Paps**	**10.35**	**212**	P		**Pn**	**08 13 31.4**	**-2.0**
RAO	**Raoul Island**	**10.37**	**31**	Pn		**Pn**	**08 13 30.8**	**-3.0**
LHI	**Lord Howe Isla**	**15.51**	**291**	P		**P**	**08 14 39.9**	**+0.8**
ARMA	**Armidale**	**21.62**	**284**	P		**P**	**08 15 46.0**	**+0.6**
VNDA	**Vanda**	**39.74**	**185**	P		**P**	**08 18 22.3**	**-1.5**
WR8	**Warramunga Arr**	**40.27**	**285**	P		**P**	**08 18 29.0**	**+0.1**
WR8				IAmb		IAmb	08 18 32.3	
	comp=Z,4.5nm,1.2s							
WB0	**Warramunga Arr**	**40.46**	**285**	P		**P**	**08 18 31.1**	**+0.7**
WB0				IAmb		IAmb	08 18 32.8	
	comp=Z,11nm,1.4s							
CASY	**Casey**	**45.82**	**211**	P		**P**	**08 19 14.5**	**+1.7**
CASY				IAmb		IAmb	08 19 35.9	
	comp=Z,12nm,1.4s							
FITZ	**Fitzroy Crossi**	**48.14**	**280**	P		**P**	**08 19 32.5**	**+1.2**
BELA	**Belgrano 2**	**62.55**	**173**	P		**P**	**08 21 16.7**	**+3.4**
BELA				IAmb		IAmb	08 21 17.9	
	comp=Z,2.1nm,0.7s							

*BJI **07** 08:28:18.2,55˚.14N×111˚.86E,h9km,mB4.9/6,mb4.3/18, Ms4.1/10,Ms7 3.8/11*

*IDC **07** 08:28:19.6±0.5,54˚.86N×111˚.90E,h0km,mb3.9/18, mbtmp4.0/23,ML4.6/4,MS3.4/32,Error ellipse: s-maj=13.9km s-min=12.6km az=39.0*

*MOS **07** 08:28:19.5±1.4,54˚.89N×111˚.69E,h6km,mb4.4/15,Error ellipse: s-maj=8.1km s-min=5.6km az=79.7*

*BYKL **07** 08:28:20.6±0.1,54˚.85N×111˚.71E,h6km±2km, Mw4.3/10(IEC),#STATIONS AAK KIV KIEV BORK YSS KEV KUEK MAJO PET VSU*

*NEIC **07** 08:28:21.7±2.2,55˚.01N±0˚.07×111˚.5E±0˚.1,h10km±1km, mb4.4/28,Error ellipse: s-maj=15.3km s-min=7.2km az=221.0*

ISC 07 08:28:20.6±0.9,54˚93N±0˚02×111˚59E±0˚02,h1km±5km, n179,σ2ϟ37/247,mb4.2/36,MS3.3/29,18C-7D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.26**	**258**	⇑*i*	*e*Pg	**Pg**		**08 28 26.4**	**+0.9**
YLYR					Pmax			08 28 26.6	
	15μm,0.4s								
YLYR					*e*Sg	**Sg**		**08 28 31.0**	**+2.2**
YLYR					Smax			08 28 33.3	
	28μm,0.6s								
YLYR	**Ulyunkhan**	**0.26**	**258**	⇑*i*	*e*PG	**Pg**		**08 28 26.4**	**+0.9**
YLYR					*e*			08 28 31.1	
YLYR					pmax	pmax			
	comp=Z,15μm,0.3s								
YLYR					smax	smax			
	comp=N,28μm,0.3s								
KMO	**Kumora**	**0.98**	**347**	⇑*i*	*e*Pg	**Pb**		**08 28 39.8**	**-0.6**
KMO					*e*Pb	**Pn**		**08 28 42.2**	**+0.7**
KMO					max			08 28 42.6	
	comp=N,1μm,0.4s								
KMO					*e*Sg	**Sn**		**08 28 53.9**	**-2.2**
KMO					Smax			08 28 54.8	
	comp=N,5μm,0.7s								
KMO	**Kumora**	**0.98**	**347**	⇑*i*	*e*PG	**Pb**		**08 28 39.8**	**-0.6**
KMO					*e*			08 28 53.9	
KMO					pmax	pmax			
	comp=Z,1μm,0.4s								
KMO					smax	smax			
	comp=N,5μm,0.6s								
YOAB	**Uoyan, Buryati**	**1.21**	**3**		*e*Pg	**Pn**		**08 28 44.7**	**0.0**
YOAB					Pmax			08 28 49.5	
	comp=N,8.0nm,0.1s								
YOAB					*e*Sg	**Sn**		**08 29 01.3**	**-0.5**
YOAB					Smax			08 29 34.0	
	comp=N,8μm,0.8s								
UKT	**Uakit**	**1.29**	**64**	⇑*i*	*e*Pg	**Pn**		**08 28 43.2**	**-2.6**
UKT					Pmax			08 28 49.1	
	comp=N,2μm,0.8s								
UKT					*e*Sg	**Sb**		**08 29 00.2**	**-2.6**
UKT					*e*			08 29 04.8	
UKT					max			08 29 05.9	
	comp=N,15μm,0.6s								
UKT	**Uakit**	**1.29**	**64**	⇑*i*	*e*PG	**Pn**		**08 28 43.2**	**-2.6**
UKT					*e*			08 29 00.3	
UKT					pmax	pmax			
	comp=Z,339nm,0.2s								
UKT					smax	smax			
	comp=N,15μm,0.5s								
NIZB	**Nizh Angarsk**	**1.44**	**307**		*e*Pg	**Pg**		**08 28 48.1**	**-0.1**
NIZB					Pmax			08 28 49.1	
	comp=N,1μm,0.7s								
NIZB					*e*Sg	**Sg**		**08 29 08.5**	**+1.7**
NIZB					*e*			08 29 11.9	
NIZB					max			08 29 13.2	
	comp=N,7μm,0.5s								
NIZB	**Nizh Angarsk**	**1.44**	**307**		*e*PG	**Pg**		**08 28 48.7**	**+0.5**
NIZB					*e*			08 29 09.2	
NIZB					pmax	pmax			
	comp=Z,1μm,0.9s								
NIZB					smax	smax			
	comp=E,6μm,0.7s								
SYVR	**Suvo**	**1.58**	**217**		*e*Pg	**Pn**		**08 28 49.0**	**-0.8**
SYVR					Pmax			08 28 52.3	
	comp=E,2μm,0.8s								
SYVR					*e*Sg	**Sn**		**08 29 10.2**	**-0.6**
SYVR					Smax			08 29 14.5	
	comp=E,8μm,0.8s								
SYVR	**Suvo**	**1.58**	**217**	⇑*i*	PG	**Pn**		**08 28 48.9**	**-0.8**
SYVR					*e*			08 29 10.0	
SYVR					pmax	pmax			
	comp=Z,3μm,0.8s								
SYVR					smax	smax			
	comp=E,18μm,0.9s								
SVKR	**Severomuysk**	**1.63**	**42**		*e*Pg	**Pb**		**08 28 51.0**	**-0.5**
SVKR					Pmax			08 28 53.8	
	comp=E,2μm,0.3s								
SVKR					*e*Sg	**Sg**		**08 29 13.2**	**+0.3**
SVKR					Smax			08 29 21.9	
	comp=E,14μm,0.5s								
SVKR					*e*			08 29 24.8	
SVKR	**Severomuysk**	**1.63**	**42**		*e*PG	**Pb**		**08 28 51.4**	**-0.1**
SVKR					*e*			08 29 13.2	
SVKR					pmax	pmax			
	comp=Z,2μm,0.6s								
SVKR					smax	smax			
	comp=N,9μm,1.4s								
MXMB	**Maximikha**	**2.37**	**226**		*e*Pn	**Pn**		**08 28 59.9**	**-0.7**
MXMB					*e*Pg	**Pb**		**08 29 02.7**	**-1.3**
MXMB					*e*Sn	**Sn**		**08 29 29.0**	**-1.2**
MXMB					*e*Sg	**Sb**		**08 29 34.8**	**+1.1**
MXMB					*e*			08 29 35.2	
OGRR	**Ongureny**	**2.68**	**243**	⇑*i*	*e*Pn	**Pn**		**08 29 05.2**	**+0.4**
OGRR					*e*Pg	**Pb**		**08 29 08.1**	**-1.2**
OGRR					Pmax			08 29 13.7	
	comp=N,546nm,0.7s								
OGRR					*e*Sn	**Sn**		**08 29 37.2**	**-0.6**
OGRR					*e*Sg	**Sb**		**08 29 43.9**	**+1.3**
OGRR					Smax			08 29 47.9	
	comp=N,3μm,0.9s								
OGRR	**Ongureny**	**2.68**	**243**	⇑*i*	PN	**Pn**		**08 29 05.1**	**+0.3**
OGRR					*e*			08 29 08.3	
OGRR					*e*			08 29 43.8	
OGRR					pmax	pmax			
	comp=Z,543nm,0.5s								
OGRR					smax	smax			
	comp=E,3μm,1.0s								
GORB	**Goryachinsk**	**2.76**	**226**		*e*Pn	**Pn**		**08 29 05.9**	**0.0**
GORB					*e*Pg	**Pb**		**08 29 09.7**	**-1.0**
GORB					*e*			08 29 36.1	
GORB					*e*Sg	**Sb**		**08 29 46.4**	**+1.4**
UZR	**Uzur**	**2.78**	**236**		*e*Pn	**Pn**		**08 29 06.1**	**-0.1**
UZR					*e*Pg	**Pb**		**08 29 09.8**	**-1.3**
UZR					Pmax			08 29 12.6	
	comp=E,456nm,0.6s								
UZR					*e*Sn	**Sn**		**08 29 39.8**	**-0.6**
UZR					*e*Sg	**Sb**		**08 29 46.7**	**+1.1**
UZR					Smax			08 29 52.4	
	comp=E,3μm,0.8s								
NLYR	**Nelyaty**	**2.80**	**54**	⇓	*i*Pn	**Pn**		**08 29 06.6**	**0.0**
NLYR					*e*Pg	**Pb**		**08 29 10.9**	**-0.5**
NLYR					*e*PgPg	**Pg**		**08 29 15.5**	**+1.3**
NLYR					max			08 29 18.3	
	comp=E,722nm,0.7s								
NLYR					*e*Sn	**Sn**		**08 29 38.3**	**-2.6**
NLYR					*e*Sg	**Sb**		**08 29 47.4**	**+1.2**
NLYR					*e*SgSg	**Sg**		**08 29 57.4**	**+6.9**
NLYR					max			08 29 58.9	
	comp=E,7μm,0.5s								
NLYR	**Nelyaty**	**2.80**	**54**	⇓	*i*PN	**Pn**		**08 29 06.5**	**0.0**
NLYR					*e*			08 29 10.9	
NLYR					*e*			08 29 47.4	
NLYR					pmax	pmax			
	comp=Z,619nm,0.5s								
NLYR					smax	smax			
	comp=N,7μm,1.0s								
KELR	**Kotokel**	**3.01**	**225**		*e*Pn	**Pn**		**08 29 09.2**	**-0.2**
KELR					*e*Pg	**Pb**		**08 29 14.4**	**-0.6**
KELR					*e*Sn	**Sn**		**08 29 45.5**	**-0.6**
KELR					*e*Sg	**Sb**		**08 29 54.5**	**+2.3**
CIT	**Chita**	**3.14**	**157**		*e*Pg	**Pn**		**08 29 15.3**	**+4.1**
CIT					Pmax			08 29 21.4	
	comp=N,630nm,0.6s								
CIT					*e*			08 29 41.1	
CIT					*e*Sg	**Sb**		**08 29 55.1**	**-0.9**
CIT					Smax			08 29 57.2	
	comp=N,6μm,0.6s								
CIT	**Chita**	**3.14**	**157**		*e*PN	**Pn**		**08 29 11.2**	**0.0**
CIT					*e*			08 29 16.7	
CIT					*e*S	**Sn**		**08 29 46.3**	**-3.1**
CIT					*e*			08 29 54.4	
CIT					pmax	pmax			
	comp=Z,670nm,1.2s								
CIT					smax	smax			
	comp=E,6μm,1.4s								
BOD	**Bodaibo**	**3.19**	**24**	⇓	*i*Pn	**Pn**		**08 29 12.0**	**+0.2**
BOD					*e*Pg	**Pb**		**08 29 18.2**	**+0.2**
BOD					Pmax			08 29 24.8	
	comp=E,322nm,1.0s								
BOD					*e*Sn	**Sn**		**08 29 50.9**	**+0.5**
BOD					*e*Sg	**Sg**		**08 29 59.4**	**-3.6**
BOD					*e*			08 30 07.6	
BOD					max			08 30 10.6	
	comp=E,2μm,1.5s								
BOD	**Bodaibo**	**3.19**	**24**		*e*PN	**Pn**		**08 29 11.6**	**-0.2**
BOD					*e*			08 29 18.3	
BOD					*e*			08 29 59.8	
BOD					pmax	pmax			
	comp=Z,270nm,0.9s								
BOD					smax	smax			
	comp=N,2μm,0.6s								
ZRHB	**Zarechye**	**3.55**	**230**		*e*Pg	**Pb**		**08 29 24.6**	**+0.4**
ZRHB					*e*			08 29 28.9	
ZRHB					max			08 29 29.8	
	comp=N,725nm,0.6s								
ZRHB					*e*			08 29 56.0	
ZRHB					*e*Sg	**Sb**		**08 30 11.5**	**+3.7**
ZRHB					Smax			08 30 21.8	
	comp=N,5μm,1.0s								
TRG	**Tyrgan**	**3.79**	**237**		*e*Pn	**Pn**		**08 29 20.1**	**-0.1**
TRG					*e*			08 29 25.3	
TRG					*e*Pg	**Pb**		**08 29 29.3**	**+1.0**
TRG					Pmax			08 29 30.3	
	comp=N,195nm,0.9s								
TRG					*e*Sn	**Sn**		**08 30 03.9**	**-1.5**
TRG					*e*Sg	**Sb**		**08 30 18.0**	**+3.3**
TRG					Smax			08 30 26.6	
	comp=N,877nm,0.8s								
TRG	**Tyrgan**	**3.79**	**237**		*e*PN	**Pn**		**08 29 20.6**	**+0.4**
TRG					*e*			08 29 29.6	
TRG					*e*S	**Sn**		**08 30 04.6**	**-0.8**
TRG					*e*			08 30 18.0	
TRG					pmax	pmax			
	comp=Z,196nm,0.6s								
TRG					smax	smax			
	comp=N,895nm,0.7s								
KAB	**Kabansk**	**4.13**	**228**		*e*Pg	**Pb**		**08 29 35.4**	**+1.4**
KAB					Pmax			08 29 41.4	
	comp=N,575nm,1.0s								
KAB					*e*Sg	**Sb**		**08 30 29.3**	**+5.0**
KAB					Smax			08 30 55.1	
	comp=N,6μm,1.3s								
STDB	**Stepnoy Dvoret**	**4.17**	**231**		*e*Pn	**Pn**		**08 29 25.4**	**+0.1**
STDB					*e*Pg	**Pb**		**08 29 36.4**	**+1.7**
STDB					*e*Sn	**Sn**		**08 30 14.0**	**-0.6**
STDB					*e*Sg	**Sg**		**08 30 31.3**	**-3.1**
CRS	**Chara**	**4.24**	**60**		*e*Pn	**Pn**		**08 29 26.4**	**+0.1**
CRS					*e*Pg	**Pb**		**08 29 36.9**	**+1.0**
CRS					Pmax			08 29 42.1	
	comp=N,575nm,0.9s								
CRS					*e*			08 30 18.7	
CRS					*e*Sg	**Sb**		**08 30 31.2**	**+3.6**
CRS					Smax			08 30 36.0	
	comp=N,2μm,1.4s								
CRS	**Chara**	**4.24**	**60**		*e*PN	**Pb**		**08 29 37.7**	**+1.8**
CRS					*e*			08 30 31.9	
CRS					pmax	pmax			
	comp=Z,584nm,0.9s								
CRS					smax	smax			
	comp=E,1μm,1.0s								
HRMR	**Khuramsha**	**4.32**	**222**		*e*Pn	**Pn**		**08 29 27.4**	**0.0**
HRMR					*e*Pg	**Pb**		**08 29 37.9**	**+0.6**
HRMR					Pmax			08 29 40.7	
	comp=E,413nm,0.8s								
HRMR					*e*			08 29 45.9	
HRMR					*e*Sn	**Sn**		**08 30 14.9**	**-3.6**
HRMR					*e*Sg	**Sb**		**08 30 33.8**	**+3.8**
HRMR					Smax			08 30 43.2	
	comp=E,3μm,1.0s								
VTMR	**Vitim**	**4.55**	**6**		*e*Pn	**Pn**		**08 29 31.9**	**+1.4**
VTMR					*e*Pg	Pg		08 29 44.0	-3.7
VTMR					*e*Sn	**Sn**		**08 30 23.6**	**-0.3**
VTMR					*e*Sg	**Sg**		**08 30 43.5**	**-3.1**
BGT	**Bolshoye Golou**	**4.69**	**234**		*e*Pn	**Pn**		**08 29 32.3**	**-0.2**
BGT					*e*Pg	**Pb**		**08 29 44.8**	**+1.2**
BGT					Pmax			08 29 51.3	
	comp=E,115nm,0.7s								
BGT					*e*Sn	**Sn**		**08 30 25.1**	**-2.4**
BGT					*e*Sg	**Sg**		**08 30 46.7**	**-4.5**
BGT					Smax			08 30 54.8	
	comp=E,576nm,0.6s								
TUP	**Tupik**	**4.88**	**93**		*e*Pn	**Pn**		**08 29 33.9**	**-1.1**
TUP					*e*Pg	**Pb**		**08 29 46.9**	**+0.1**
TUP					Pmax			08 29 50.0	
	comp=E,65nm,0.6s								
TUP					*e*Sn	**Sn**		**08 30 27.5**	**-4.6**
TUP					*e*Sg	**Sb**		**08 30 49.0**	**+3.1**
TUP					Smax			08 30 56.9	
	comp=E,3μm,0.8s								
TUP	**Tupik**	**4.88**	**93**		*e*PN	**Pn**		**08 29 33.8**	**-1.2**
TUP					*e*			08 29 46.7	
TUP					*e*S	**Sn**		**08 30 27.8**	**-4.3**
TUP					*e*			08 30 49.0	
TUP					pmax	pmax			
	comp=Z,58nm,0.8s								
TUP					smax	smax			
	comp=N,3μm,0.8s								
LSTR	**Listvyanka**	**5.08**	**236**		*e*Pn	**Pn**		**08 29 37.1**	**-0.7**
LSTR					*e*			08 29 43.6	
LSTR					*e*Pg	**Pb**		**08 29 51.4**	**+1.2**
LSTR					Pmax			08 29 55.4	
	comp=N,68nm,1.2s								
LSTR					*e*Sn	**Sn**		**08 30 35.2**	**-1.8**
LSTR					*e*Sg	**Sb**		**08 30 57.2**	**+5.6**
LSTR					Smax			08 31 12.7	
	comp=N,650nm,1.0s								
IRK	**Irkutsk**	**5.13**	**241**		*e*Sn	**Sn**		**08 30 36.5**	**-1.7**
IRK					*e*Sg	**Sg**		**08 31 00.1**	**-5.0**
IRK					Smax			08 31 14.5	
	comp=N,2μm,0.9s								
IRK	**Irkutsk**	**5.13**	**241**		*e*PN	**Pb**		**08 29 52.4**	**+1.4**
IRK					*e*			08 30 58.4	
IRK					pmax	pmax			
	comp=Z,136nm,0.2s								
IRK					smax	smax			
	comp=N,2μm,0.7s								
KPC	**Khapcheranga**	**5.26**	**174**		*e*Pn	**Pn**		**08 29 38.4**	**-1.9**
KPC					*e*			08 29 47.0	
KPC					*e*Pg	**Pb**		**08 29 53.1**	**-0.2**
KPC					Pmax			08 29 59.8	
	comp=N,86nm,0.8s								
KPC					*e*Sn	**Sn**

HILR LR LR 08 33 12.6
comp=E,212nm,20.3s,baz=45,slow=41
comp=E,8.1nm,0.3s
ORL Orlik 7.39 256 *e*Pn **Pn** **08 30 10.0 +0.4**
ORL *e*Pg Pb 08 30 35.1 +5.5
ORL Pmax 08 30 40.2
comp=E,91nm,0.8s
ORL *e*Sn **Sn** **08 31 30.5 -3.6**
ORL *e*Sg **Sg** **08 32 10.6 -7.1**
ORL Smax 08 32 21.0
comp=E,699nm,1.4s
ORL Orlik 7.39 256 *e*PN **Pn** **08 30 11.0 +1.4**
ORL *e* 08 30 35.1
ORL *e*S **Sn** **08 31 32.7 -1.4**
ORL *e* 08 32 08.4
ORL pmax pmax
comp=Z,97nm,0.9s
ORL smax smax
comp=N,727nm,0.9s
HIA Hailar 7.57 135 *e*Pg **Pb** **08 30 34.8 +2.2**
HIA Pmax 08 31 02.4
comp=N,35nm,0.9s
HIA *e*Sn **Sn** **08 31 32.9 -5.5**
HIA *e*Sg **Sb** **08 32 10.4 +7.1**
HIA Smax 08 32 31.5
comp=N,1μm,2.0s
ULN Ulaanbaatar 7.62 204 **Pn** **08 30 12.6 -0.3**
ULN Ulaanbaatar 7.62 204 *e*Pn **Pn** **08 30 12.5 -0.3**
ULN *e*Pg **Pb** **08 30 36.6 +3.0**
ULN Pmax 08 30 41.3
comp=N,129nm,1.5s
ULN *e* 08 31 52.9
ULN *e*Sg Sb 08 32 15.7 +11
ULN Smax 08 32 38.3
comp=N,871nm,1.9s
ULN Ulaanbaatar 7.62 204⇑ *i*PN **Pn** **08 30 12.4 -0.4**
CLNS Chul'man 7.72 70 *e*Pn **Pn** **08 30 14.4 +0.4**
CLNS *e*Pg **Pb** **08 30 38.5 +3.4**
CLNS *e*Sn **Sn** **08 31 37.8 -4.2**
CLNS *e*Sg Sb 08 32 18.3 +11
SONM Songino Array 7.81 207 **Pn** **08 30 15.8 +0.4**
SONM Songino Array 7.81 207 Pn **Pn** **08 30 15.5 +0.1**
comp=N,3.4nm,0.3s,baz=21,slow=12,SNR=24
SONM Pg Pb 08 30 42.6 +5.8
comp=N,2.5nm,0.3s,baz=14,slow=15,SNR=5.6
SONM Lg Lg 08 32 24.9
comp=N,13nm,0.3s,baz=32,slow=25,SNR=8.0
SONM LR LR 08 33 38.6
comp=N,79nm,20.7s,baz=44,slow=41
comp=N,5.8nm,0.4s
ZEA Zeya 9.23 91 *e*P **Pn** **08 30 35.9 +1.3**
ZEA *e* 08 32 23.2
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA MLR MLR
comp=E,400nm,6.0s
ZEA MLR MLR
comp=Z,600nm,4.0s
TDJR Todzha 9.54 261 *e*Pn **Pn** **08 30 40.6 +1.6**
TDJR *e* 08 30 46.1
TDJR *e*Pg 08 31 13.6
TDJR *e* 08 32 32.8
TDJR *e*Sg Sn 08 33 16.5 +50
KNGR Kungurtug, Tuv 9.57 249 *e* Pn 08 30 55.0 +16
KNGR *e*Sg Sn 08 33 16.9 +49
HEH HeiHe 10.70 109 *e*P **Pn** **08 30 54.8 0.0**
HEH S Sn 08 32 45.5 -10
ARDR Aradan 11.01 265 *e*Pn **Pn** **08 31 00.9 +1.8**
ARDR *e* 08 31 14.3
ARDR *e* 08 33 16.6
ARDR *e*Sg 08 34 02.9
ARDR *e* 08 34 14.2
YAK Yakutsk 11.81 46 Pn Pn 08 31 02.4 -7.5
comp=Z,2.3nm,0.3s,baz=214,slow=3.7,SNR=1.5
YAK Lg Lg 08 34 21.5
comp=Z,3.6nm,0.3s,baz=200,slow=20,SNR=12
YAK LR LR 08 34 51.9
comp=Z,19nm,21.0s,baz=287,slow=33
comp=Z,12nm,0.5s
YAK Yakutsk 11.81 46⇑ *i*P **Pn** **08 31 09.2 -0.7**
YAK pmax pmax
comp=Z,6.0nm,0.8s
BNX BinXian 13.63 126 ⇑P **Pn** **08 31 33.7 -1.2**
BNX S **Sn** **08 34 04.8 -2.0**
BNX pmax pmax
comp=Z,6.0nm,0.8s
BNX pmax pmax
comp=Z,150nm,4.6s
BNX LR LR
comp=Z,450nm,5.8s
BNX LR LR
comp=Z,430nm,5.2s
BNX LR LR
comp=Z,510nm,8.9s
HHC Hu-ho-hao-te 14.09 180 *e*P **Pn** **08 31 43.8 +2.5**
HHC S **Sn** **08 34 20.1 +1.8**
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,120nm,5.1s
HHC LR LR
comp=Z,440nm,7.2s
HHC LR LR
comp=Z,360nm,7.7s
HHC LR LR
comp=Z,460nm,8.9s
ZALV Zalesovo Beam 15.58 277 Pn **Pn** **08 32 01.0 -0.1**
comp=Z,13nm,0.9s,baz=76,slow=9.3,SNR=18
ZALV Lg Lg 08 36 38.7
baz=87,slow=26
ZALV LR LR 08 38 11.3
comp=Z,130nm,20.8s,baz=48,slow=38
ZALV Zalesovo Beam 15.58 277 *i*P **Pn** **08 32 01.2 +0.1**
ZALV pmax pmax
comp=Z,22nm,1.0s
HNS HongShan 17.67 172 ⇑P **P** **08 32 31.1 +2.4**
HNS pmax pmax
comp=Z,10.0nm,1.1s
NRIK Noril'sk 18.09 332 Pn **Pn** **08 32 30.0 -2.8**
NRIK IAmb IAmb 08 32 37.5
comp=Z,13nm,0.6s
NRIK Noril'sk 18.09 332 P **Pn** **08 32 27.6 -5.2**
comp=Z,13nm,0.7s,baz=138,slow=14,SNR=15
NRIK S Sn 08 35 42.6 -12
comp=Z,9.6nm,0.9s,baz=150,slow=18,SNR=3.1
NRIK Lg Lg 08 37 50.1
baz=203,slow=14
NRIK LR LR 08 40 12.3
comp=Z,82nm,21.4s,baz=136,slow=39
NRIK Noril'sk 18.09 332*d i*P **P** **08 32 32.2 -1.1**
TIXI Tiksi 18.35 17 P **Pn** **08 32 33.5 -2.4**
TIXI Tiksi 18.35 17 P **Pn** **08 32 31.6 -4.3**
comp=Z,6.2nm,0.7s,baz=232,slow=13,SNR=12
TIXI S Sn 08 35 45.6 -15
comp=Z,2.1nm,0.5s,baz=6.5,slow=24,SNR=1.1
TIXI Lg Lg 08 37 54.5
comp=Z,0.5nm,0.3s,baz=0.9,slow=15,SNR=5.4
TIXI Tiksi 18.35 17⇑ *i*P **Pn** **08 32 34.0 -1.9**
TIXI pmax pmax
comp=Z,5.0nm,0.6s
WMQ Urumqi 19.02 244 *e*P **Pn** **08 32 46.1 +1.7**
WMQ LR LR
comp=Z,110nm,13.9s
LZDM Lanzhou Array 19.75 199 P **P** **08 32 50.7 -1.2**
baz=30,slow=6.7
comp=Z,1.2nm,0.3s
MK31 Makanchi Array 20.09 258⇑ *i*P Pn 08 32 58.6 +1.5
MKAR Makanchi Array 20.09 258 **P** **08 32 54.0 -1.3**
MKAR Makanchi Array 20.09 258 P Pn 08 32 57.4 +0.3
comp=Z,4.2nm,0.9s,baz=68,slow=8.4,SNR=5.5
MKAR Lg Lg 08 39 00.8
baz=47,slow=28,SNR=5.5
MKAR LR LR 08 41 32.8
comp=Z,75nm,18.8s,baz=68,slow=39
comp=Z,4.2nm,0.9s
KURK Kurchatov 20.25 272 **P** **08 32 55.2 -1.8**
KURK IAmb IAmb 08 33 17.9
comp=Z,8.6nm,0.9s
KURK Kurchatov 20.25 272*ce*P Pn 08 32 59.5 +0.6
KURK pmax pmax
comp=Z,12nm,1.3s
KURBB Kurchatov Arra 20.34 271 P Pn 08 32 58.6 -1.4
comp=Z,2.6nm,0.7s,baz=68,slow=11,SNR=11
KURBB Lg Lg 08 39 06.4
baz=70,slow=33,SNR=4.1
KURBB LR LR 08 41 02.1
comp=Z,106nm,20.6s,baz=147,slow=37
comp=Z,2.6nm,0.7s
KSAR Wonju Array Be 20.72 141 P **P** **08 33 02.4 +0.2**
KSAR Wonju Array Be 20.72 141 P **P** **08 33 02.4 +0.2**
KSRS Korea Array 20.73 141 P **P** **08 33 04.2 +2.0**
comp=Z,2.9nm,0.9s,baz=344,slow=12,SNR=5.4
KSRS Lg Lg 08 39 13.1
comp=Z,0.1nm,0.3s,baz=336,slow=24,SNR=4.6
XAN Xi'an 20.97 186 P **P** **08 33 05.2 +0.2**
XAN pmax pmax
comp=Z,17nm,1.1s
MA2 Magadan 21.46 61 LR LR 08 42 35.0
comp=Z,64nm,18.1s,baz=146,slow=40
MA2 Magadan 21.46 61 *i*P **P** **08 33 12.1 +2.1**
MA2 pmax pmax
comp=Z,58nm,1.2s
SEY Seymchan 22.17 52 LR LR 08 42 29.5
comp=Z,61nm,19.1s,baz=348,slow=38
ASAJ Asahikawa 22.66 106 LR LR 08 42 49.2
comp=Z,139nm,18.1s,baz=148,slow=39
BVAR Borovoye Array 24.06 283 P **P** **08 33 39.4 +2.3**
comp=Z,3.5nm,0.8s,baz=67,slow=11,SNR=9.1
BVAR LR LR 08 43 54.5
comp=Z,131nm,20.5s,baz=77,slow=39
comp=Z,3.5nm,0.8s
BORK Borovoye 24.09 283⇓ *i*P **P** **08 33 39.7 +2.4**
BORK pmax pmax
comp=Z,10.0nm,0.9s
JNU Nakatsue 25.67 140 P **P** **08 33 56.1 +4.2**
JNU Nakatsue 25.67 140 LR LR 08 44 18.7
comp=Z,79nm,18.4s,baz=331,slow=38
MJAR Matsushiro Arr 25.89 124 LR LR 08 44 16.5
comp=Z,73nm,18.6s,baz=326,slow=37
PETK Petropavlovsk- 26.77 75 LR LR 08 44 56.0
comp=Z,78nm,20.8s,baz=315,slow=37
AAK Ala-Archa 27.02 258 P **P** **08 34 03.8 -0.4**
AAK IAmb IAmb 08 34 41.9
comp=Z,4.7nm,1.1s
AAK Ala-Archa 27.02 258 LR LR 08 45 09.6
comp=Z,174nm,18.8s,baz=38,slow=37
AAK Ala-Archa 27.02 258 P **P** **08 34 03.8 -0.4**
AAK pmax pmax
comp=Z,5.0nm,1.1s
JYT Yasato 27.10 122 P **P** **08 34 05.5 +0.8**
JSG Sagara 27.40 127 P **P** **08 34 08.4 +1.0**
BILL Bilibino 28.09 41 *i*P **P** **08 34 15.2 +1.9**
BILL pmax pmax
comp=Z,20nm,2.2s
ARSB Arslanbob 28.73 258 P **P** **08 34 17.2 -2.2**
ARSB IAmb IAmb 08 34 50.1
comp=Z,9.5nm,1.4s
ARSB Arslanbob 28.73 258 P **P** **08 34 17.2 -2.2**
ARSB pmax pmax
comp=Z,10.0nm,1.4s
KK31 Karatay Array 29.00 263 P **P** **08 34 21.8 +0.2**
KK31 Karatay Array 29.00 263 P **P** **08 34 21.8 +0.2**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 29.00 263 P **P** **08 34 21.3 -0.3**
KKAR Karatay Array 29.00 263 P **P** **08 34 21.3 -0.3**
PZH PanZhiHua 29.31 198 P **P** **08 34 23.9 -0.7**
ARTI Arti 29.43 295 LR LR 08 48 06.2
comp=Z,159nm,18.2s,baz=75,slow=40
ARTI Arti 29.43 295 P **P** **08 34 26.6 +1.3**
ARTI 08 35 16.1
ARTI S **S** **08 39 23.7 +3.8**
ARTI SS **SnSn** **08 40 47.2 +1.5**
YOJ Yonaguni jima 31.59 160 P **P** **08 34 45.2 +0.6**
YOJ Yonaguni jima 31.59 160 P **P** **08 34 45.2 +0.6**
AB31 Akbulak array 31.62 281 **P** **08 34 42.7 -2.0**
ABKAR Akbulak array 31.62 281 P **P** **08 34 43.1 -1.5**
GAR Garm 31.81 257 P **P** **08 34 46.2 -0.4**
AKTO Aktyubinsk 32.12 285 LR LR 08 49 02.7
comp=Z,94nm,19.9s,baz=46,slow=38
KIRV Kirov 33.20 302 LR LR 08 49 50.6
comp=Z,62nm,21.5s,baz=73,slow=39
JCJ Chichijima 35.62 129 LR LR 08 51 16.8
comp=Z,8.5nm,19.5s,baz=348,slow=39
KBL Kabul 35.72 253 P **P** **08 35 21.0 +0.3**
KBL Kabul 35.72 253 P **P** **08 35 21.0 +0.3**
KBL pmax pmax
comp=Z,9.0nm,0.8s
SHEM Shemya Is, Ala 35.87 67 LR LR 08 50 30.9
comp=Z,52nm,20.1s,baz=99,slow=37
KLMR Klimovskoe 36.96 309 *e*P **P** **08 35 29.0 -1.8**
KLMR pmax pmax
comp=Z,9.0nm,1.3s
ARCES ARCESS Array B 38.89 326 P **P** **08 35 46.4 -0.7**
comp=Z,0.8nm,0.5s,baz=62,slow=11,SNR=6.8
ARCES LR LR 08 53 52.0
comp=Z,32nm,20.2s,baz=31,slow=39
comp=Z,0.8nm,0.5s
FINES FINESS Array B 42.45 315 P **P** **08 36 16.3 -0.2**
comp=Z,3.6nm,0.6s,baz=49,slow=5.8,SNR=13
comp=Z,3.6nm,0.6s
FINES FINESS Array B 42.45 315 *i*P **P** **08 36 15.1 -1.4**
FINES pmax pmax
comp=Z,4.0nm,0.6s
E24K Your Creek 43.98 32 P **P** **08 36 28.3 -0.6**
E24K IAmb IAmb 08 37 09.7
comp=Z,6.7nm,1.5s
KIV Kislovodsk 44.37 286 *e*P **P** **08 36 35.2 +2.9**
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,30nm,16.0s
KBZ Khabaz 44.40 285*de*P **P** **08 36 35.0 +2.6**
KBZ pmax pmax
comp=Z,2.0nm,1.1s
C27K Jago River 44.47 29 P **P** **08 36 32.4 -0.3**
C27K IAmb IAmb 08 36 34.9
comp=Z,7.1nm,1.3s
I23K Minto, Yukon-K 45.43 36 P **P** **08 36 40.9 +0.5**
I23K IAmb IAmb 08 36 45.0
comp=Z,8.8nm,1.3s
MNK Minsk 45.55 306 *i*P **P** **08 36 41.1 -0.3**
comp=E,17nm,0.8s
MNK *i*P **P** **08 36 41.1 -0.3**
comp=N,7.0nm,0.6s
MNK *i*P **P** **08 36 41.1 -0.3**
comp=Z,4.0nm,0.6s,baz=54
MNK *i*PP **PP** **08 38 28.4 +0.7**
MNK *i*PPP PPP 08 39 08.2
MNK *i*S **S** **08 43 25.3 +1.2**
MNK *i*SS **SS** **08 46 51.0 +4.0**
MNK *i*SSS SSS 08 47 39.9
MNK *i*LR LR 08 55 38.9
MNK *i*LRM MLR 08 57 42.3
comp=N,84nm,19.7s
MNK *i*LRM MLR 08 58 04.5
comp=E,191nm,19.8s
MNK *i*LRM MLR 08 58 08.3
comp=Z,78nm,17.8s
MNK Minsk 45.55 306 *i*P **P** **08 36 41.1 -0.3**
MNK *i* 08 38 18.6
MNK *i* 08 38 28.3
MNK *i*PPP PPP 08 38 08.2
MNK *i*S **S** **08 43 25.2 +1.2**
MNK *i* 08 46 37.3
MNK *i*SSS SSS 08 47 39.9
MNK pmax pmax
comp=Z,4.0nm,0.6s
MNK pmax pmax
comp=E,17nm,0.8s
MNK pmax pmax
comp=N,7.0nm,0.6s
MNK MLR MLR
comp=N,84nm,20.0s
MNK MLR MLR
comp=E,191nm,20.0s
MNK MLR MLR
comp=Z,78nm,18.0s
BMAR Burnt Mountain 45.56 32 P **P** **08 36 42.4 +0.9**
GNI Garni 45.70 280 LR LR 08 58 19.7
comp=Z,60nm,19.9s,baz=58,slow=39
TRF Thorofare Moun 46.14 38 P **P** **08 36 45.4 -0.8**
TRF IAmb IAmb 08 36 53.6
comp=Z,9.0nm,1.2s
IL31 46.49 35 **P** **08 36 48.0 -0.7**
IL31 IAmb IAmb 08 36 50.6
comp=Z,5.4nm,0.9s
ILAR Eielson Array 46.49 35 P **P** **08 36 48.8 0.0**
comp=Z,3.0nm,0.8s,baz=294,slow=5.8,SNR=32
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 47.23 301 IAmb IAmb 08 37 27.5
comp=Z,2.6nm,1.1s
AKASG Malin Array Be 47.23 301 P **P** **08 36 54.6 -0.1**
comp=Z,0.5nm,0.4s,baz=49,slow=9.1,SNR=5.3
AKASG LR LR 08 58 42.3
comp=Z,80nm,19.3s,baz=11,slow=38
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 47.23 301*ce*P **P** **08 36 57.7 +3.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 48.14 318 P **P** **08 37 01.3 -0.3**
comp=Z,2.3nm,0.6s,baz=60,slow=8.8,SNR=12
HFS LR LR 08 58 45.3
comp=Z,28nm,18.2s,baz=320,slow=38
comp=Z,2.3nm,0.6s
NB2 NORSAR Subarra 48.49 320 P **P** **08 37 04.7 +0.3**
comp=Z,0.8nm,0.5s,baz=49,slow=7.4
NOA NORSAR Array B 48.49 320 P **P** **08 37 04.2 -0.1**
comp=Z,0.9nm,0.6s,baz=50,slow=7.9,SNR=5.5
NOA LR LR 08 58 35.8
comp=Z,19nm,19.3s,baz=260,slow=37
comp=Z,0.9nm,0.6s
BR131 Keskin Array S 52.21 287 *i*P **P** **08 37 33.3 +0.3**
BRTR Keskin Array B 52.21 287 P **P** **08 37 35.1 +2.2**
comp=Z,0.3nm,0.3s,baz=51,slow=7.7,SNR=3.7
BRTR LR LR 09 04 41.6
comp=Z,18nm,19.1s,baz=71,slow=42
comp=Z,0.3nm,0.3s
BRTR Keskin Array B 52.21 287*ce*P **P** **08 37 36.2 +3.2**
MLR Muntele Rosu 52.32 298 LR LR 09 02 05.2
comp=Z,70nm,19.2s,baz=44,slow=39
VRAC Vranov 54.23 307 LR LR 09 03 22.0
comp=Z,64nm,18.7s,baz=44,slow=39
CLL Collm 54.44 310 *i*P **P** **08 37 47.1 -1.9**
CLL Collm 54.44 310 *i*P **P** **08 37 47.1 -1.9**
KHC Kasperske Hory 55.74 308⇓ *i*P **P** **08 37 59.4 +0.9**
KHC pmax pmax
comp=Z,2.0nm,1.0s
ASF Jabal al Asfar 55.81 279 LR LR 09 04 51.0
comp=Z,35nm,18.2s,baz=116,slow=39
GERES GERESS Array B 55.89 308 LR LR 09 04 15.0
comp=Z,59nm,20.1s,baz=59,slow=38
MMAI Mount Meron Ar 56.04 280 LR LR 09 04 01.6
comp=Z,52nm,19.8s,baz=7.5,slow=38
EKA Eskdalemuir Ar 57.85 322 P **P** **08 38 13.6 +0.3**
comp=Z,1.5nm,0.7s,baz=50,slow=6.6,SNR=4.1
comp=Z,1.5nm,0.7s
DAVOX Davos/Dischmat 59.16 308 LR LR 09 04 39.6
comp=Z,51nm,18.7s,baz=64,slow=37
ESDC Sonseca Array 70.91 313 P **P** **08 39 39.0 -0.1**
comp=Z,1.4nm,0.9s,baz=36,slow=5.9,SNR=3.2
comp=Z,1.4nm,0.9s
BMO Blue Mountains 72.29 34 **P** **08 39 47.0 -0.5**
BMO IAmb IAmb 08 39 48.6
comp=Z,3.5nm,0.9s
BMO Blue Mountains 72.29 34 P **P** **08 39 47.0 -0.5**
BMO pmax pmax
comp=Z,4.0nm,1.0s
J05D Fort Rock, OR 72.34 38 **P** **08 39 47.1 -0.8**
FITZ Fitzroy Crossi 73.72 166 IAmb IAmb 08 39 58.7
comp=Z,1.6nm,1.4s
FITZ Fitzroy Crossi 73.72 166 P **P** **08 39 54.2 -1.7**
comp=Z,1.6nm,0.9s,baz=27,slow=4.5,SNR=2.1
comp=Z,1.6nm,0.9s
PDAR Pinedale Array 76.56 30 P **P** **08 40 11.6 -0.9**
comp=Z,0.9nm,0.8s,baz=22,slow=2.8,SNR=8.9
comp=Z,0.9nm,0.8s
WB0 Warramunga Arr 76.91 158 P **P** **08 40 12.3 -2.0**
WB0 IAmb IAmb 08 40 55.2
comp=Z,7.0nm,1.3s
WRA Warramunga Arr 77.07 158 P **P** **08 40 11.8 -3.3**
WRA Warramunga Arr 77.07 158 P **P** **08 40 13.3 -1.8**
comp=Z,0.9nm,0.5s,baz=350,slow=6.3,SNR=16
comp=Z,0.9nm,0.5s
NVAR Mina Array Bea 77.67 38 P **P** **08 40 18.5 -0.3**
comp=Z,0.8nm,0.7s,baz=315,slow=4.4,SNR=9.0
comp=Z,0.8nm,0.7s
ECSD EROS Data Cent 78.82 20 P **P** **08 40 23.6 -1.2**
ECSD IAmb IAmb 08 40 25.9
comp=Z,3.8nm,1.1s
ASAR Alice Springs 80.58 159 P **P** **08 40 33.1 -1.3**
comp=Z,0.5nm,0.7s,baz=352,slow=5.3,SNR=6.9
comp=Z,0.5nm,0.7s
TXAR Lajitas Array 90.77 30 P **P** **08 41 25.6 +0.2**
comp=Z,0.2nm,0.6s,baz=28,slow=3.2,SNR=3.5
comp=Z,0.2nm,0.6s
QSPA South Pole Qui 144.69 180 PKP **PKPdf** **08 47 57.0 -0.4**
comp=Z,4.3nm,0.8s,baz=289,slow=1.3,SNR=24
SNAA Sanae 148.24 213 PKPbc **PKPbc** **08 48 05.2 -1.5**
comp=Z,0.8nm,0.7s,baz=45,slow=4.9,SNR=4.0
CPUP Villa Florida 150.29 340 PKPbc **PKPbc** **08 48 11.1 -2.0**
comp=Z,0.8nm,0.9s,baz=157,slow=3.1,SNR=4.8

*IDC **07** 08:30:03.4±1.8, 0.°56N×125.°46E, h0km, mb3.6/4, mbtmp3.6/4, MS3.1/1, Error ellipse: s-maj=215.3km s-min=22.2km az=65.0*
*DJA **07** 08:30:09.4±1.4, 1.°N±5.°×12.°6E±.°, h12km±13km, M3.7/9, MLv3.7/9*
ISC 07 08:30:11.9±1.1, **0.°48N**±0.°09×**125.°62E**±0.°07, **h73**km, **n10,** σ**1°00/10, mb3.6/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.65**	**273**	P	**P**	**Pn**	**08 30 38.0**	**-0.9**
TNTI	**Ternate**	**1.77**	**80**	P	**P**	**Pn**	**08 30 40.2**	**-0.3**
SANI	**Sanana**	**2.54**	**172**	P	**P**	**Pn**	**08 30 49.7**	**-1.2**
LUWI	**Luwuk**	**3.23**	**242**	P	**P**	**Pn**	**08 31 00.5**	**+0.2**
NLAI	**Namlea**	**3.97**	**158**	P	**P**	**Pn**	**08 31 10.3**	**-0.2**
APSI	**Ampana**	**4.21**	**251**	P	**P**	**Pn**	**08 31 13.5**	**-0.2**
WRA	**Warramunga Arr**	**22.02**	**158**	P	**P**		**08 35 00.2**	**-0.2**
	0.8nm,0.5s,baz=336,slow=10,SNR=16							
WRA					LR	LR	08 44 04.8	
	comp=Z,49nm,18.4s,baz=1.0,slow=38							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**25.31**	**162**	P	**P**		**08 35 33.8**	**+1.8**
	0.5nm,0.5s,baz=336,slow=8.4,SNR=11							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**59.62**	**327**	P	**P**		**08 40 07.6**	**-0.8**
	0.5nm,0.6s,baz=123,slow=7.2,SNR=4.5							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**63.90**	**329**	P	**P**		**08 40 37.7**	**+0.7**
	0.6nm,0.5s,baz=126,slow=7.0,SNR=2.4							
	0.6nm,0.5s							

*IDC **07** 08:45:48.5±8.2, 16.°63S×174.°94W, h240km±76km, mb3.6/8, mbtmp4.2/9, Error ellipse: s-maj=29.2km s-min=21.7km az=101.0*
*NEIC **07** 08:45:49.6±1.7, 16.°76S±0.°10×174.°8W±0.°1, h255km±9km, mb4.3/18, Error ellipse: s-maj=16.2km s-min=12.8km az=119.0*
ISC 07 08:45:53.4±0.7, **16.°70S**±0.°09×**175.°0W**±0.°1, **h288**km, **n52,** σ**1°33/56, mb4.1/18, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.17**	**49**			Pn	08 46 53.0	-8.0
NIUE	**Niue**	**5.37**	**117**	Pn	Pn	Pn	08 47 04.9	-10
MSVF	**Nonsavu**	**6.72**	**260**			**Pn**	**08 47 33.1**	**+1.8**
MARNC	**Mare, Loyalty**	**16.73**	**251**	P	**P**	**P**	**08 49 29.1**	**-1.0**
PINNC	**Pines Island,**	**17.54**	**248**	P	**P**	**P**	**08 49 38.1**	**-0.9**
DZM	**Mont Dzumac**	**18.30**	**250**	P	**P**	**P**	**08 49 45.9**	**-1.3**
	6.4nm,0.7s,baz=92,slow=18,SNR=7.0							
WCZ	**Waipu Caves**	**21.38**	**204**	P	**P**	**P**	**08 50 18.2**	**-0.5**
KUZ	**Kuaotunu**	**21.59**	**201**	P	**P**	**P**	**08 50 19.6**	**-1.0**
MXZ	**Matakaoa Point**	**21.60**	**195**	P	**P**	**P**	**08 50 20.8**	**+0.1**
WMGZ	**Waiomatatini S**	**21.82**	**194**	P	**P**	**P**	**08 50 24.7**	**+2.1**
HAZ	**Te Kaha**	**21.92**	**195**	P	**P**	**P**	**08 50 23.0**	**-0.5**
PKGZ	**Pakihiroa**	**21.95**	**195**	P	**P**	**P**	**08 50 24.6**	**+0.7**
PUZ	**Puketiti**	**22.10**	**194**	P	**P**	**P**	**08 50 25.0**	**-0.2**
PUZ					S	**S**	**08 54 06.0**	**-1.5**
MKAZ	**Moumakai**	**22.11**	**201**	P	**P**	**P**	**08 50 24.5**	**-0.8**
RUGZ	**Raukumara Rang**	**22.14**	**196**	P	**P**	**P**	**08 50 26.0**	**+0.3**
RUGZ					S	**S**	**08 54 07.0**	**-1.4**
WTAZ	**Waiatarua**	**22.16**	**203**	P	**P**	**P**	**08 50 24.7**	**-1.1**
AWAZ	**Awhitu Peninsu**	**22.25**	**202**	P	**P**	**P**	**08 50 25.9**	**-0.7**
TWGZ	**Tauwhareparae**	**22.27**	**195**	P	**P**	**P**	**08 50 27.5**	**+0.7**
TWGZ					S	**S**	**08 54 11.9**	**+1.6**
MWZ	**Matawai**	**22.53**	**195**	P	**P**	**P**	**08 50 27.4**	**-1.7**
MWZ					S	**S**	**08 54 18.6**	**+4.2**
TKGZ	**Te Karaka**	**22.55**	**195**	P	**P**	**P**	**08 50 29.9**	**+0.7**
TOZ	**Tahuroa Road**	**22.56**	**200**	P	**P**	**P**	**08 50 28.5**	**-0.8**
TOZ					IAmb	IAmb	08 50 29.9	
	comp=Z,15nm,1.0s							
URZ	**Urewera**	**22.57**	**196**	P	**P**	**P**	**08 50 27.6**	**-1.8**
RAGZ	**Rawiri**	**22.71**	**196**	P	**P**	**P**	**08 50 30.2**	**-0.6**

RIGZ	**Rimuhau**	**22.82**	**195**	P	**P**	**08 50 33.4**	**+1.6**
MUGZ	**Murupara**	**22.86**	**197**	P	**P**	**08 50 30.6**	**-1.6**
TMVZ	**Te Maari**	**23.76**	**198**	P	**P**	**08 50 39.3**	**-1.1**
ETVZ	**East Tongariro**	**23.78**	**198**	P	**P**	**08 50 38.1**	**-2.5**
OTVZ	**Oturere**	**23.82**	**198**	P	**P**	**08 50 37.6**	**-3.4**
SNVZ	**South Ngauruho**	**23.85**	**198**	P	**P**	**08 50 37.9**	**-3.4**
ARMA	**Armidale**	**33.36**	**240**	P	**P**	**08 52 04.7**	**-0.6**
STKA	**Stephens Creek**	**42.06**	**241**	P	**P**	**08 53 17.7**	**+0.1**
	comp=Z,8.9nm,0.8s,baz=99,slow=9.8,SNR=14						
	comp=Z,8.9nm,0.8s						
BBOO	**Buckleboo**	**46.84**	**241**	P	**P**	**08 53 54.9**	**-0.3**
BBOO				IAmb	IAmb	08 53 58.0	
	comp=Z,10nm,0.9s						
WB0	**Warramunga Arr**	**48.03**	**258**	P	**P**	**08 54 04.2**	**-0.3**
WRA	**Warramunga Arr**	**48.06**	**258**	P	**P**	**08 54 04.1**	**-0.7**
WRA	**Warramunga Arr**	**48.06**	**258**	P	**P**	**08 54 04.7**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=95,slow=6.9,SNR=27						
WRA				PcP	**PcP**	**08 55 27.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=97,slow=3.4,SNR=1.5						
	comp=Z,0.8nm,0.4s						
AS31	**Alice Springs**	**48.26**	**253**	P	**P**	**08 54 05.6**	**-0.7**
AS31				IAmb	IAmb	08 54 06.9	
	comp=Z,3.3nm,0.6s						
ASAR	**Alice Springs**	**48.26**	**253**	P	**P**	**08 54 06.2**	**0.0**
	comp=Z,12nm,0.6s,baz=88,slow=8.3,SNR=257						
ASAR				PcP	**PcP**	**08 55 29.2**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=88,slow=4.9,SNR=2.6						
	comp=Z,12nm,0.6s						
FORT	**Forrest**	**53.46**	**244**	P	**P**	**08 54 43.5**	**-1.2**
FORT				IAmb	IAmb	08 54 44.7	
	comp=Z,9.6nm,0.9s						
MBWA	**Marble Bar**	**61.53**	**255**	P	**P**	**08 55 40.7**	**-0.1**
MBWA				IAmb	IAmb	08 55 54.7	
	comp=Z,6.5nm,1.1s						
VNDA	**Vanda**	**61.93**	**186**	P	**P**	**08 55 42.3**	**-0.2**
VNDA	**Vanda**	**61.93**	**186**	P	**P**	**08 55 42.0**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=3.2,slow=5.8,SNR=5.3						
	comp=Z,0.8nm,0.7s						
JOW	**Kunigami**	**70.03**	**307**	P	**P**	**08 56 35.6**	**+0.9**
UNV	**Unalaska Valle**	**70.64**	**5**	P	**P**	**08 56 37.4**	**-0.3**
UNV				IAmb	IAmb	08 57 02.4	
	comp=Z,7.2nm,0.9s						
QSPA	**South Pole Qui**	**73.35**	**180**	P	**P**	**08 56 54.8**	**+1.0**
QSPA	**South Pole Qui**	**73.35**	**180**	P	**P**	**08 56 55.1**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=31,slow=3.6,SNR=7.9						
	comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**73.41**	**343**	P	**P**	**08 56 53.8**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=160,slow=5.4,SNR=2.0						
	comp=Z,2.6nm,0.7s						
NVAR	**Mina Array Bea**	**76.32**	**42**	P	**P**	**08 57 10.7**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=240,slow=4.2,SNR=2.2						
	comp=Z,0.4nm,0.8s						
L18K	**Granite Mounta**	**79.98**	**9**	P	**P**	**08 57 31.7**	**+1.2**
L18K				IAmb	IAmb	08 57 47.8	
	comp=Z,3.4nm,1.1s						
SUA	**Susitna One**	**80.27**	**12**	P	**P**	**08 57 32.9**	**+0.7**
SUA				IAmb	IAmb	08 58 12.4	
	comp=Z,10nm,1.2s						
J16K	**Anvik River**	**80.52**	**7**	P	**P**	**08 57 34.0**	**+0.7**
J16K				IAmb	IAmb	08 58 16.6	
	comp=Z,9.7nm,1.1s						
GHO	**Glory Hole Cre**	**80.91**	**12**	P	**P**	**08 57 35.3**	**-0.2**
GHO				IAmb	IAmb	08 58 07.3	
	comp=Z,11nm,1.2s						
ILAR	**Eielson Array**	**84.02**	**12**	P	**P**	**08 57 51.4**	**+0.1**
	comp=Z,4.2nm,1.3s,baz=232,slow=6.2,SNR=8.2						
	comp=Z,4.2nm,1.3s						

*SOME **07** 09:25:56.9,41°.65N×84°.10E,h0km*
*NNC **07** 09:26:05.2±3.0,41°.16N×83°.04E,h0km,mb4.0,mpv3.6,*
Error ellipse: s-maj=25.2km s-min=18.7km az=7.0

ISC 07 09:26:12.0±2.8,41°.9N±0°.1×83°.3E±0°.1,h10km,n18,
σ1§24/23,3C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.12**	**295**	Pg	**Pn**	**09 27 00.9**	**-0.5**
	24nm,0.3s						
SHLS				Lg	Lg	09 27 46.3	
	267nm,0.4s						
SHLS	**Shalkode**	**3.12**	**295**	*e*P	**Pn**	**09 27 00.9**	**-0.5**
	24nm,0.3s						
SHLS				*e*S	**Sb**	**09 27 46.3**	**+0.5**
	267nm,0.4s						
PDGK	**Podgornoye**	**3.17**	**298**	⇓Pn	**Pn**	**09 27 00.3**	**-1.7**
	18nm,0.6s						
PDGK				⇑Lg	Lg	09 27 51.3	
	89nm,0.7s						
UZB	**Uzynbulak**	**3.42**	**293**	Pg	**Pb**	**09 27 10.5**	**-2.3**
	4.5nm,0.5s						
UZB				Lg	Lg	09 28 01.8	
	86nm,0.5s						
UZB	**Uzynbulak**	**3.42**	**293**	*e*P	**Pb**	**09 27 10.5**	**-2.3**
	4.5nm,0.5s						
UZB				*e*S	**Sg**	**09 28 01.8**	**0.0**
	86nm,0.5s						
KPKS	**Kokpek**	**3.77**	**296**	Pg	**Pb**	**09 27 19.1**	**+0.5**
	0.4nm,0.2s						
KPKS				Lg	Lg	09 28 17.4	
	75nm,0.5s						
KNOS	**Konyrlen**	**3.90**	**310**	Pg	**Pb**	**09 27 19.5**	**-1.4**
	3.8nm,0.4s						
KNOS				Lg	Lg	09 28 17.9	
BLB	**Baldybastay**	**4.18**	**303**	Pg	**Pb**	**09 27 25.2**	**-0.5**
	12nm,0.4s						
BLB				Lg	Lg	09 28 27.3	
	37nm,0.4s						
KAPS	**Kapalarasan**	**4.44**	**321**	Pg	**Pb**	**09 27 29.0**	**-1.0**
	4.6nm,0.3s						
KAPS				Lg	Lg	09 28 34.2	
	15nm,0.3s						
ARXS	**Arharly**	**4.65**	**301**	Pg	**Pb**	**09 27 33.9**	**+0.3**
	4.5nm,0.7s						
ARXS				Lg	Lg	09 28 42.5	
	36nm,0.5s						
ARXS	**Arharly**	**4.65**	**301**	*e*P	**Pb**	**09 27 33.9**	**+0.3**
ARXS				*e*S	**Sg**	**09 28 42.5**	**+1.4**
KOTS	**Kotyrbulak**	**4.78**	**288**	Pg	**Pb**	**09 27 36.2**	**+0.2**
	8.0nm,0.5s						
KOTS				Lg	Lg	09 28 45.9	
	95nm,0.7s						
KOTS	**Kotyrbulak**	**4.78**	**288**	*e*P	**Pb**	**09 27 36.2**	**+0.2**
	8.0nm,0.5s						
KOTS				*e*S	**Sg**	**09 28 45.9**	**+0.3**
	95nm,0.7s						
MK31	**Makanchi Array**	**4.93**	**352**	⇓Pg	**Pg**	**09 27 48.4**	**+2.0**
	3.4nm,0.5s,baz=177,slow=16,SNR=9.3						
MK31				⇑Lg	Lg	09 29 04.4	
	16nm,0.6s,baz=180,slow=27,SNR=4.1						
MAKZ	**Makanchi**	**4.99**	**349**	⇓Pg	**Pg**	**09 27 47.9**	**+0.4**
	4.6nm,0.6s						
MAKZ				⇑Lg	Lg	09 29 03.6	
	16nm,1.1s						
CHKK	**Chushkaly**	**5.05**	**295**	Pg	**Pb**	**09 27 40.2**	**-0.3**
	2.6nm,0.3s						
CHKK				Lg	Lg	09 28 52.9	
	13nm,0.3s						
CHKK	**Chushkaly**	**5.05**	**295**	*e*P	**Pb**	**09 27 40.2**	**-0.3**
	2.6nm,0.3s						
CHKK				*e*S	**Sg**	**09 28 52.9**	**-1.3**
	13nm,0.3s						
DGS	**Degeres**	**5.74**	**286**	Pg	**Pb**	**09 27 54.5**	**+2.2**
	3.5nm,0.6s						
DGS				Lg	Lg	09 29 17.3	
	18nm,0.5s						

*ASRS **07** 09:39:31.0±0.7,54°.66N×83°.66E,h0km,M2.5,The*
earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p +
CD-ROM, 2021.

IDC 07 09:39:33.8±2.3,54°.56N×83°.87E,h0km,mbtmp2.6/2,
ML2.3/2,Error ellipse: s-maj=17.2km s-min=10.3km
az=162.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**137**	I	I	09 45 00.0	
	0.1nm,0.8s,baz=318,slow=334,SNR=6.9						
ZALV	**Zalesovo Beam**	**0.83**	**137**	Pg	Pg	09 39 49.1	-0.5
	1.5nm,0.3s,baz=317,slow=16,SNR=12						
ZALV				Lg	Lg	09 40 01.8	
	1.4nm,0.3s,baz=320,slow=30,SNR=9.1						
ZALV				I	I	09 45 05.9	
	baz=329,slow=45,SNR=5.4						
KURBB	**Kurchatov Arra**	**5.11**	**222**	Pn	Pn	09 40 52.4	+0.9
	0.1nm,0.3s,baz=39,slow=13,SNR=2.1						
KURBB				Lg	Lg	09 42 12.7	
	0.1nm,0.3s,baz=45,slow=32,SNR=6.9						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**7.84**	**188**	Pn	Pn	09 41 28.8	-0.2
	0.1nm,0.3s,baz=10,slow=11,SNR=2.9						
MKAR				Sn	Sn	09 42 57.5	-0.9
	0.1nm,0.3s,baz=13,slow=22,SNR=2.1						
MKAR				Lg	Lg	09 43 43.4	
	0.1nm,0.3s,baz=6.3,slow=28,SNR=5.9						
	0.2nm,0.4s						

*IDC **07** 09:42:30.8±1.5,58°.92N×154°.38W,h88km±16km,mb3.3/6,*
mbtmp3.6/9,Error ellipse: s-maj=22.9km s-min=17.2km
az=44.0
*NEIC **07** 09:42:32.1±0.8,58°.82N±0°.04×154°.19W±0°.07,*
h108km±5km,Error ellipse: s-maj=5.3km s-min=5.0km
az=143.0
*AEIC **07** 09:42:33.7±1.2,58°.84N±0°.04×154°.21W±0°.08,h99km±5km,*
ML3.3,ML3.4/144(NEIC),Error ellipse: s-maj=6.4km
s-min=4.8km az=125.0

ISC 07 09:42:32.2±0.7,58°.87N±0°.03×154°.16W±0°.04,
h106km±5km,n189,σ0§87/177,mb3.5/6,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Q19K	**Cape Douglas,**	**0.27**	**77**		**Pn**	**09 42 47.6**	**+0.1**
Q19K				IAML		09 43 01.7	
	comp=E,2μm,0.8s						
Q19K				IAML		09 43 05.5	
	comp=N,931nm,1.0s						
KAPH	**Katmai Pasha**	**0.29**	**200**		**Pn**	**09 42 47.5**	**-0.1**
KAPH					**Sn**	**09 42 58.6**	**-0.5**
KAHG	**Katmai Hook Gl**	**0.43**	**208**		**Pn**	**09 42 48.2**	**0.0**
KAHG					**Sn**	**09 43 00.1**	**-0.2**
KARR	**Katmai Rainbow**	**0.47**	**218**		**Pn**	**09 42 48.4**	**-0.1**
KARR					**Sn**	**09 43 00.4**	**-0.3**
KAHC	**Katmai Hardscr**	**0.49**	**244**		**Pn**	**09 42 48.4**	**-0.4**
KAHC					**Sn**	**09 42 60.0**	**-1.2**
KAWH	**Katmai**	**0.59**	**215**		**Pn**	**09 42 49.0**	**-0.3**
KAWH					**Sn**	**09 43 01.4**	**-0.8**
AUCH	**Augustine Cone**	**0.62**	**36**		**Pn**	**09 42 50.2**	**+0.6**
AUJK	**Augustine Jueg**	**0.62**	**38**		**Pn**	**09 42 50.0**	**+0.5**
AU22	**Augustine Moun**	**0.65**	**39**		**Pn**	**09 42 50.5**	**+0.7**
KAKN	**Katmai Knife C**	**0.74**	**220**		**Sn**	**09 43 03.6**	**-0.9**
P18K	**Big Mountain,**	**0.76**	**314**		**Pn**	**09 42 50.3**	**-0.5**
P18K				IAML		09 43 03.9	
	comp=E,869nm,0.9s						
P18K				IAML		09 43 04.0	
	comp=N,813nm,0.5s						
P18K	**Big Mountain,**	**0.76**	**314**		**Sn**	**09 43 03.6**	**-1.2**
ACHA	**Angle Creek He**	**0.90**	**223**		**Pn**	**09 42 52.1**	**-0.1**
OPT	**Oil Point**	**0.92**	**31**		**Pn**	**09 42 53.1**	**+0.8**
P19K	**Oil Pt**	**0.92**	**31**		**Pn**	**09 42 53.1**	**+0.8**
P19K	**Oil Pt**	**0.92**	**31**		**Sn**	**09 43 08.3**	**+0.9**
SYI	**Shuyak Island**	**0.96**	**105**		**Pn**	**09 42 53.0**	**+0.4**
SYI				IAML		09 43 09.3	
	comp=N,984nm,0.6s						
SYI				IAML		09 43 10.2	
	comp=E,1μm,0.5s						
ANCK	**Angle Creek**	**0.97**	**227**		**Pn**	**09 42 52.7**	**-0.1**
CNTC	**Contact Creek**	**1.09**	**237**		**Pn**	**09 42 53.8**	**-0.3**
CNTC					**Sn**	**09 43 09.8**	**-0.9**
O18K	**Koktuh Hills**	**1.12**	**332**		**Pn**	**09 42 54.3**	**-0.2**
O18K					**Sn**	**09 43 10.6**	**-0.7**
ILS	**Iliamna Low So**	**1.23**	**27**		**Pn**	**09 42 56.3**	**+0.6**
ILSW	**Iliamna Southw**	**1.23**	**25**		**Sn**	**09 43 13.9**	**+0.3**
ILSW	**Iliamna Southw**	**1.23**	**25**		**Pn**	**09 42 56.3**	**+0.6**
ILSW				IAML		09 43 14.9	
	comp=N,390nm,1.3s						
ILSW				IAML		09 43 15.4	
	comp=E,514nm,0.7s						
Q16K	**King Salmon**	**1.31**	**263**		**Pn**	**09 42 56.5**	**0.0**
R18K	**Karluk**	**1.32**	**187**		**Pn**	**09 42 55.8**	**-0.7**
O19K	**Port Alsworth**	**1.33**	**357**		**Sn**	**09 43 15.2**	**-0.1**
O19K	**Port Alsworth**	**1.33**	**357**		**Pn**	**09 42 56.9**	**+0.2**
KDAK	**Kodiak Island**	**1.37**	**142**		**Pn**	**09 42 57.3**	**+0.1**
KDAK	**Kodiak Island**	**1.37**	**142**	P	**Pn**	**09 42 57.2**	**0.0**
	comp=E,197nm,0.3s,baz=41,slow=3.4,SNR=1692						
KDAK				S	**Sn**	**09 43 15.0**	**-1.1**
	comp=E,91nm,0.3s,baz=106,slow=20,SNR=11						
HOM	**Homer**	**1.52**	**57**		**Pn**	**09 42 60.0**	**+1.1**
CNPM	**China Poot**	**1.64**	**65**		**Pn**	**09 43 00.9**	**+0.4**
CNPM				IAML		09 43 23.3	
	comp=E,435nm,0.5s						
CNPM				IAML		09 43 23.6	
	comp=N,486nm,0.6s						
PLK1	**Peulik 1**	**1.68**	**231**		**Pn**	**09 43 01.1**	**+0.2**
PLK4	**Peulik 4**	**1.70**	**224**		**Pn**	**09 43 01.4**	**+0.1**
RED	**Redoubt Volcan**	**1.71**	**24**		**Pn**	**09 43 02.1**	**+0.8**
RED				IAML		09 43 25.1	
	comp=N,208nm,1.1s						
RED				IAML		09 43 25.3	
	comp=E,211nm,0.8s						
OHAK	**Old Harbor**	**1.71**	**164**		**Pn**	**09 43 00.9**	**-0.4**
OHAK				IAML		09 43 24.9	
	comp=E,340nm,0.3s						
OHAK	**Old Harbor**	**1.71**	**164**	P	**Pn**	**09 43 00.7**	**-0.7**
O17K	**Koliganek Bris**	**1.76**	**302**		**Pn**	**09 43 01.5**	**-0.4**
PLBL	**Peulik Blue Cr**	**1.83**	**231**		**Pn**	**09 43 03.3**	**+0.4**
BRLK	**Bradley Lake**	**1.90**	**60**		**Pn**	**09 43 03.7**	**0.0**
BRLK				IAML		09 43 28.2	
	comp=E,410nm,0.1s						
N19K	**Bonanza Creek**	**1.96**	**355**		**Pn**	**09 43 05.0**	**+0.4**
N19K				IAML		09 43 45.6	
	comp=E,124nm,1.1s						
P16K	**Nushagak River**	**1.99**	**276**		**Pn**	**09 43 04.9**	**+0.1**
P16K				IAML		09 43 30.6	
	comp=E,304nm,0.9s						
P16K				IAML		09 43 31.0	
	comp=N,500nm,0.8s						
N18K	**Kilae Creek**	**2.02**	**335**		**Pn**	**09 43 05.3**	**+0.1**
O16K	**Kokwok River B**	**2.15**	**291**		**Pn**	**09 43 06.7**	**-0.2**
N17K	**Nushagak Hills**	**2.26**	**319**		**Pn**	**09 43 08.3**	**-0.1**
SII	**Sitkinak Islan**	**2.32**	**180**		**Pn**	**09 43 08.6**	**-0.5**
SII				IAML		09 43 46.0	
	comp=E,347nm,0.4s						
SII	**Sitkinak Islan**	**2.32**	**180**	P	**Pn**	**09 43 08.1**	**-1.0**
SPCR	**Spurr Chakacha**	**2.54**	**22**		**Pn**	**09 43 12.5**	**+0.6**
SPU	**Mount Spurr**	**2.55**	**24**		**Pn**	**09 43 12.9**	**+0.8**
SPBG	**Spurr Blockage**	**2.56**	**20**		**Pn**	**09 43 13.3**	**+1.0**
SLKM	**Skilak Lake**	**2.59**	**49**		**Pn**	**09 43 13.2**	**+0.6**
SLKM				IAML		09 43 44.8	
	comp=N,280nm,0.2s						
SLKM				IAML		09 43 46.7	
	comp=E,186nm,0.2s						
SEW	**Seward**	**2.70**	**61**		**Pn**	**09 43 13.9**	**-0.2**
SEW				IAML		09 43 46.6	
	comp=N,83nm,0.2s						
SEW				IAML		09 43 54.0	
	comp=E,88nm,0.6s						
M18K	**Stony River**	**2.76**	**343**		**Pn**	**09 43 15.3**	**+0.5**
STLK	**Strandline Lak**	**2.88**	**23**		**Pn**	**09 43 18.1**	**+1.6**
O15K	**Ungalikthiuk R**	**2.95**	**278**		**Pn**	**09 43 17.5**	**+0.2**
O15K				IAML		09 43 52.2	
	comp=E,53nm,1.4s						
M17K	**Holitna River**	**3.02**	**329**	IAML		09 44 17.7	
	comp=N,112nm,0.7s						
M17K				IAML		09 44 23.0	
	comp=E,75nm,0.9s						
M20K	**Styx River**	**3.07**	**9**		**Pn**	**09 43 19.9**	**+0.9**
SUA	**Susitna One**	**3.11**	**32**	IAML		09 43 57.8	
	comp=E,126nm,0.9s						
SUA				IAML		09 43 58.7	
	comp=N,105nm,0.6s						
RC01	**Rabbit Creek A**	**3.15**	**43**		**Pn**	**09 43 20.3**	**+0.4**
RC01	**Rabbit Creek A**	**3.15**	**43**	IAML		09 43 58.1	
	comp=N,167nm,0.5s						
CHIR	**Chirikof Islan**	**3.16**	**195**		**Pn**	**09 43 19.1**	**-1.0**
CHIR	**Chirikof Islan**	**3.16**	**195**	IAML		09 43 54.9	
	comp=E,143nm,1.3s						
CHIR				IAML		09 43 55.5	
	comp=N,126nm,1.3s						
CHIR	**Chirikof Islan**	**3.16**	**195**	P	**Pn**	**09 43 19.0**	**-1.1**
M16K	**Timber Creek**	**3.24**	**314**		**Pn**	**09 43 21.8**	**+0.6**
N15K	**Kwethluk River**	**3.29**	**296**		**Pn**	**09 43 22.7**	**+0.8**
N15K	**Kwethluk River**	**3.29**	**296**	IAML		09 44 02.5	
	comp=E,46nm,0.9s						
N15K				IAML		09 44 02.7	
	comp=N,53nm,1.2s						
L19K	**White Mountain**	**3.34**	**354**		**Pn**	**09 43 23.2**	**+0.6**
SKT	**Skwentna**	**3.38**	**22**		**Pn**	**09 43 24.0**	**+0.9**
PWL	**Port Wells**	**3.55**	**53**		**Pn**	**09 43 25.1**	**-0.3**
L18K	**Granite Mounta**	**3.59**	**341**		**Pn**	**09 43 26.1**	**+0.2**
L18K				IAML		09 44 27.0	
	comp=N,31nm,0.7s						
L20K	**Farewell, AK**	**3.62**	**2**		**Pn**	**09 43 27.0**	**+0.6**
O14K	**Tigyukauivet M**	**3.69**	**279**		**Pn**	**09 43 27.5**	**+0.3**
PMR	**Palmer**	**3.71**	**40**		**Pn**	**09 43 26.9**	**-0.5**
PMR	**Palmer**	**3.71**	**40**	IAML		09 44 09.8	
	comp=N,47nm,0.4s						
PMR				IAML		09 44 10.6	
	comp=E,52nm,0.4s						
PMR	**Palmer**	**3.71**	**40**	P	**Pn**	**09 43 26.9**	**-0.5**
M15K	**Kasigluk River**	**3.77**	**302**		**Pn**	**09 43 28.6**	**+0.3**
KNK	**Knik Glacier**	**3.83**	**46**	IAML		09 44 11.8	
	comp=N,78nm,0.5s						
KNK				IAML		09 44 13.7	
	comp=E,98nm,0.9s						
L17K	**Donlin**	**3.86**	**330**		**Pn**	**09 43 29.7**	**+0.2**
L16K	**Owhat River**	**3.89**	**319**		**Pn**	**09 43 30.3**	**+0.4**
GHO	**Glory Hole Cre**	**3.91**	**40**		**Pn**	**09 43 30.2**	**0.0**
GHO				IAML		09 44 15.6	
	comp=E,67nm,0.5s						
GHO				IAML		09 44 20.0	
	comp=N,63nm,0.6s						
N14K	**Kuskokwak Cree**	**3.99**	**289**		**Pn**	**09 43 31.9**	**+0.7**
N14K	**Kuskokwak Cree**	**3.99**	**289**	IAML		09 45 01.4	
	comp=E,51nm,1.3s						
N14K				IAML		09 45 02.5	
	comp=N,54nm,1.0s						
CUT	**Chulitna**	**4.03**	**27**		**Pn**	**09 43 32.7**	**+0.9**
CUT	**Chulitna**	**4.03**	**27**	IAML		09 44 19.5	
	comp=N,68nm,0.4s						
CUT				IAML		09 44 20.4	
	comp=E,66nm,0.3s						
MID	**Middleton Isla**	**4.07**	**79**		**Pn**	**09 43 32.3**	**+0.1**
GLI	**Glacier Island**	**4.09**	**57**		**Pn**	**09 43 31.4**	**-1.2**
GLI	**Glacier Island**	**4.09**	**57**	IAML		09 44 20.9	
	comp=N,89nm,0.4s						
SML	**Sawmill**	**4.13**	**42**		**Pn**	**09 43 32.6**	**-0.6**
SML	**Sawmill**	**4.13**	**42**	IAML		09 44 20.1	
	comp=N,59nm,0.8s						
SML				IAML		09 44 30.8	
	comp=E,47nm,1.0s						
HIN	**Hinchinbrook I**	**4.18**	**65**	Pn	**Pn**	**09 43 34.1**	**+0.3**
FID	**Port Fidalgo**	**4.31**	**61**		**Pn**	**09 43 34.4**	**-1.2**
K17K	**Iditarod**	**4.36**	**334**		**Pn**	**09 43 36.8**	**+0.6**
K17K	**Iditarod**	**4.36**	**334**	IAML		09 45 02.5	
	comp=E,37nm,1.4s						
K17K				IAML		09 45 12.2	
	comp=N,24nm,1.2s						
M14K	**Bethel**	**4.37**	**299**		**Pn**	**09 43 37.2**	**+0.9**
M14K				IAML		09 45 25.5	
	comp=N,23nm,1.5s						
M14K				IAML		09 45 36.6	
	comp=E,26nm,1.4s						
SCM	**Sheep Creek Mo**	**4.51**	**46**		**Pn**	**09 43 38.2**	**-0.1**
SCM	**Sheep Creek Mo**	**4.51**	**46**	IAML		09 44 29.2	
	comp=E,59nm,0.8s						
SCM				IAML		09 44 32.6	
	comp=N,40nm,0.2s						
EYAK	**Cordova Ski Ar**	**4.58**	**65**	Pn	**Pn**	**09 43 39.1**	**0.0**
EYAK				IAML		09 44 30.6	
	comp=E,29nm,0.8s						
EYAK				IAML		09 44 32.5	
	comp=N,38nm,1.4s						
EYAK	**Cordova Ski Ar**	**4.58**	**65**	P	**Pn**	**09 43 38.6**	**-0.6**
L15K	**Ungalak Mounta**	**4.61**	**311**		**Pn**	**09 43 39.7**	**+0.2**
WAT7	**Susitna Watana**	**4.75**	**31**		**Pn**	**09 43 41.4**	**-0.2**
J18K	**Innoko River**	**4.78**	**346**		**Pn**	**09 43 42.7**	**+0.9**
J18K	**Innoko River**	**4.78**	**346**	IAML		09 45 14.7	
	comp=E,15nm,1.3s						
DIV	**Divide**	**4.78**	**58**		**Pn**	**09 43 41.6**	**-0.4**
DIV	**Divide**	**4.78**	**58**	IAML		09 44 34.5	
	comp=N,40nm,0.3s						
DIV				IAML		09 44 37.1	
	comp=E,34nm,0.3s						
M13K	**Dall Lake**	**4.91**	**292**		**Pn**	**09 43 44.6**	**+1.0**
M13K	**Dall Lake**	**4.91**	**292**	IAML		09 45 13.2	
	comp=E,24nm,1.2s						
M13K				IAML		09 45 27.2	
	comp=N,25nm,1.4s						
SDPT	**Sand Point**	**4.93**	**227**	P	**Pn**	**09 43 42.5**	**-1.4**
L14K	**Kuka Creek**	**4.93**	**304**		**Pn**	**09 43 44.7**	**+0.8**
L14K	**Kuka Creek**	**4.93**	**304**	IAML		09 45 16.8	
	comp=N,25nm,1.4s						
L14K				IAML		09 45 49.7	
	comp=E,21nm,1.5s						
KTH	**Kantishna Hill**	**4.95**	**17**		**Pn**	**09 43 44.9**	**+0.6**
KTH	**Kantishna Hill**	**4.95**	**17**	IAML		09 44 41.1	
	comp=E,12nm,1.0s						
TRF	**Thorofare Moun**	**4.96**	**21**		**Pn**	**09 43 44.8**	**+0.3**
TRF	**Thorofare Moun**	**4.96**	**21**	IAML		09 44 45.6	
	comp=N,22nm,1.0s						
TRF				IAML		09 44 51.0	
	comp=E,14nm,1.5s						
K15K	**Wolf Creek Mou**	**5.00**	**317**		**Pn**	**09 43 45.2**	**+0.4**
K15K				IAML		09 46 51.7	
	comp=N,12nm,1.5s						
CHNA	**Chernabura Isl**	**5.03**	**219**	P	**Pn**	**09 43 43.9**	**-1.3**
GOAT	**Goat Mountain**	**5.07**	**66**		**Pn**	**09 43 45.7**	**-0.2**
KAIM	**Kayak Island**	**5.09**	**74**		**Pn**	**09 43 46.7**	**+0.6**
M24K	**Tolsona, Glenn**	**5.11**	**47**		**Pn**	**09 43 46.5**	**0.0**
M24K	**Tolsona, Glenn**	**5.11**	**47**	IAML		09 44 47.5	
	comp=N,38nm,0.7s						
J17K	**VABM Dome**	**5.13**	**334**		**Pn**	**09 43 47.2**	**+0.7**
J17K				IAML		09 45 30.0	
	comp=E,12nm,0.7s						
J17K				IAML		09 45 32.8	
	comp=N,15nm,0.9s						
J19K	**Poorman**	**5.19**	**353**		**Pn**	**09 43 48.0**	**+0.5**
RND	**Reindeer**	**5.23**	**27

PNL	**Peninsula**	**7.61**	**78**			**Pn**	**09 44 20.4**	**+0.1**
PNL	**Peninsula**	**7.61**	**78**	P		**Pn**	**09 44 20.5**	**+0.3**
AKUT	**Akutan**	**7.98**	**239**	P		**Pn**	**09 44 23.3**	**-2.0**
O29M	**Mount Kennedy**	**8.04**	**73**			**Pn**	**09 44 26.5**	**+0.3**
F17K	**Baldwin Pennin**	**8.27**	**340**			**Pn**	**09 44 29.9**	**+0.8**
M29M	**Somme Creek**	**8.49**	**58**			**Pn**	**09 44 32.5**	**+0.2**
N30M	**Aishikik Lake**	**8.89**	**66**			**Pn**	**09 44 37.3**	**-0.4**
M30M	**Minto, Yukon**	**9.27**	**59**			**Pn**	**09 44 42.7**	**-0.1**
SKAG	**Skagway**	**9.69**	**78**	P		**Pn**	**09 44 48.5**	**+0.2**
SIT	**Sitka**	**10.17**	**92**	P		**Pn**	**09 44 54.9**	**0.0**
JIS	**Juneau Island**	**10.34**	**85**	P		**Pn**	**09 44 57.3**	**+0.1**
DLBC	**Dease Lake**	**12.55**	**82**	P		**Pn**	**09 45 28.3**	**+1.4**
	comp=N,1.8nm,0.3s,baz=222,slow=6.3,SNR=21							
DLBC				S		**Sn**	**09 47 42.7**	**-2.1**
	comp=N,0.9nm,0.5s,baz=115,slow=18,SNR=1.6							
INK	**Inuvik**	**13.10**	**35**	P		**Pn**	**09 45 36.5**	**+2.7**
	comp=N,0.4nm,0.3s,baz=239,slow=15,SNR=9.5							
YKA	**Yellowknife Ar**	**19.48**	**62**	P		**P**	**09 46 51.2**	**+0.8**
	comp=N,0.7nm,0.7s,baz=245,slow=10,SNR=1.4							
PETK	**Petropavlovsk-**	**27.04**	**279**	P		**P**	**09 48 03.5**	**-0.6**
	comp=N,3.0nm,0.9s,baz=82,slow=10,SNR=2.2							
	comp=N,3.0nm,0.9s							
PDAR	**Pinedale Array**	**31.74**	**101**	P		**P**	**09 48 48.5**	**+2.4**
	comp=N,0.3nm,0.6s,baz=320,slow=9.4,SNR=4.0							
	comp=N,0.3nm,0.6s							
TXAR	**Lajitas Array**	**45.17**	**108**	P		**P**	**09 50 38.8**	**+0.6**
	comp=N,0.2nm,0.8s,baz=331,slow=7.4,SNR=2.0							
	comp=N,0.2nm,0.8s							
SONM	**Songino Array**	**54.97**	**306**	P		**P**	**09 51 52.8**	**+0.7**
	comp=N,2.0nm,0.8s,baz=28,slow=6.7,SNR=6.7							
	comp=N,2.0nm,0.8s							
KURBB	**Kurchatov Arra**	**62.74**	**325**	P		**P**	**09 52 43.5**	**-1.9**
	comp=N,0.3nm,0.3s,baz=33,slow=7.7,SNR=1.7							
	comp=N,0.3nm,0.3s							
MKAR	**Makanchi Array**	**64.94**	**321**	P		**P**	**09 52 58.9**	**-1.1**
	comp=N,0.4nm,0.8s,baz=22,slow=4.8,SNR=2.6							
	comp=N,0.4nm,0.8s							
LBTB	**Lobatse**	**146.17**	**0**	PKPbc	**PKPdf**		**10 01 59.6**	**+1.0**
	comp=N,1.0nm,0.3s,baz=346,slow=8.3,SNR=1.4							
QSPA	**South Pole Qui**	**148.66**	**180**	PKPbc	**PKPbc**		**10 02 06.3**	**+1.0**
	comp=N,0.6nm,0.5s,baz=135,slow=2.9,SNR=8.2							
BOSA	**Boshof**	**149.75**	**1**	PKPbc	**PKPbc**		**10 02 08.4**	**-0.8**
	comp=N,3.9nm,0.9s,baz=45,slow=2.9,SNR=3.8							

*SOME **07** 09:42:49.8,40°.13N×76°.70E,h10km*
*NNC **07** 09:42:53.4±1.5,40°.30N×76°.75E,h0km,mb4.0,mpv3.6,*
Error ellipse: s-maj=10.3km s-min=7.4km az=161.0
*KNET **07** 09:42:55.8±0.7,40°.44N×76°.80E,h5km±10km,ml3.4,Error*
ellipse: s-maj=17.0km s-min=6.6km az=105.0
*KRNET **07** 09:42:57.6±0.1,40°.46N×76°.61E,h19km,mb3.9*
ISC 07 09:42:54.4±1.1,**40°.32N**±0°.04×**76°.61E**±0°.03,**h10**km,**n66,**
σ1♀**66**/104,**44C-22D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.04**	**316**	⇓*eP*	**Pn**	**09 43 15.6**	**+0.3**
JNKS				⇓*eS*	**Sb**	**09 43 28.6**	**+0.2**
TARG	**Taragay, Kyrgy**	**1.68**	**32**	⇑*eP*	**Pg**	**09 43 26.4**	**-0.2**
TARG				⇓*eS*	**Sg**	**09 43 47.4**	**-0.9**
KDJ	**Kajisay**	**1.86**	**13**	⇑*eP*	**Pg**	**09 43 29.3**	**-0.8**
KDJ				⇑*eS*	**Sg**	**09 43 52.5**	**-1.8**
ULHL	**Ulahol**	**1.95**	**352**	⇑P	**Pg**	**09 43 31.6**	**-0.1**
	31nm,0.3s,SNR=11						
ULHL				⇑S	**Sg**	**09 43 56.9**	**-0.1**
	190nm,0.4s						
ULHL	**Ulahol**	**1.95**	**352**	⇑*eP*	**Pg**	**09 43 30.9**	**-0.8**
ULHL				⇑*eS*	**Sg**	**09 43 55.0**	**-2.0**
SALK	**Salom-Alik**	**2.20**	**286**	⇑*eP*	**Pg**	**09 43 36.1**	**-0.4**
SALK				⇑*eS*	**Sg**	**09 44 04.2**	**-0.8**
BOOM	**Boomskoye usch**	**2.23**	**347**	⇑*eP*	**Pb**	**09 43 35.0**	**+0.1**
BOOM				⇑*eS*	**Sb**	**09 44 02.4**	**-0.2**
ARLS	**Aral**	**2.32**	**312**	⇑*eP*	**Pb**	**09 43 36.8**	**+0.4**
ARLS				⇑*eS*	**Sb**	**09 44 05.3**	**+0.2**
SFK	**Sufi-Kurgan**	**2.40**	**264**	⇑*eP*	**Pg**	**09 43 39.6**	**-0.8**
SFK				⇑*eS*	**Sg**	**09 44 10.4**	**-1.1**
UCH	**Uchtor**	**2.48**	**321**	⇑P	**Pb**	**09 43 39.6**	**+0.3**
	42nm,0.4s,SNR=39						
UCH				⇓S	**Sg**	**09 44 14.8**	**+0.8**
	103nm,0.5s						
UCH	**Uchtor**	**2.48**	**321**	⇑*eP*	**Pb**	**09 43 39.1**	**-0.2**
UCH				⇑*eS*	**Sb**	**09 44 09.4**	**-0.6**
PRZ	**Przheval'sk**	**2.55**	**31**	⇓*eP*	**Pb**	**09 43 39.8**	**-0.6**
PRZ				⇓*eS*	**Sb**	**09 44 10.7**	**-1.1**
KBK	**Karagaybulak**	**2.65**	**332**	⇑P	**Pb**	**09 43 42.2**	**+0.2**
	234nm,0.4s,SNR=11						
KBK				⇓S	**Sg**	**09 44 18.0**	**-1.6**
	236nm,0.4s						
KBK	**Karagaybulak**	**2.65**	**332**	⇑*eP*	**Pb**	**09 43 41.1**	**-1.0**
KBK				⇑*eS*	**Sb**	**09 44 12.8**	**-1.9**
TKM2	**Tokmak 2**	**2.71**	**344**	⇑P	**Pb**	**09 43 42.2**	**-0.9**
	24nm,0.3s,SNR=31						
TKM2				⇓S	**Sb**	**09 44 18.0**	**+1.5**
	86nm,0.4s						
TKM2	**Tokmak 2**	**2.71**	**344**	⇑*eP*	**Pb**	**09 43 41.8**	**-1.3**
TKM2				⇑*eS*	**Sb**	**09 44 14.1**	**-2.4**
TNSS	**Tian-Shan**	**2.73**	**5**	Pg	**Pb**	**09 43 42.7**	**-0.9**
	9.6nm,0.5s						
TNSS				Lg	Lg	09 44 21.4	
	39nm,0.8s						
TNSS	**Tian-Shan**	**2.73**	**5**	*eP*	**Pb**	**09 43 42.7**	**-0.9**
	9.6nm,0.5s						
TNSS				*eS*	**Sg**	**09 44 21.4**	**-0.7**
	39nm,0.8s						
KST	**Kastek**	**2.77**	**350**	Pg	**Pb**	**09 43 43.8**	**-0.2**
	18nm,0.6s						
KST				Lg	Lg	09 44 24.0	
	178nm,0.9s						
KST	**Kastek**	**2.77**	**350**	*eP*	**Pb**	**09 43 43.8**	**-0.2**
	18nm,0.6s						
KST				*eS*	**Sg**	**09 44 23.4**	**+0.1**
	178nm,0.9s						
AAK	**Ala-Archa**	**2.81**	**326**	⇑P	**Pb**	**09 43 44.5**	**-0.3**
	16nm,0.3s,SNR=19						
AAK				⇓S	**Sg**	**09 44 22.6**	**-2.1**
	87nm,0.4s						
AAK	**Ala-Archa**	**2.81**	**326**	⇑Pg	**Pg**	**09 43 47.6**	**-0.7**
	7.1nm,0.7s						
AAK				⇑Lg	Lg	09 44 24.5	
	83nm,1.0s						
AAK	**Ala-Archa**	**2.81**	**326**	⇑*eP*	**Pb**	**09 43 43.5**	**-1.3**
AAK				⇑*eS*	**Sb**	**09 44 16.9**	**-2.4**
MTBS	**Maitube**	**2.81**	**357**	Pg	**Pb**	**09 43 44.2**	**-0.6**
	19nm,0.5s						
MTBS				Lg	Lg	09 44 24.2	
	77nm,0.5s						
MTBS	**Maitube**	**2.81**	**357**	*eP*	**Pb**	**09 43 44.2**	**-0.6**
	19nm,0.5s						
MTBS				*eS*	**Sg**	**09 44 24.2**	**-0.6**
	77nm,0.5s						
MDOK	**Medeo**	**2.86**	**6**	Pg	**Pb**	**09 43 44.8**	**-0.9**
	14nm,0.4s						
MDOK				Lg	Lg	09 44 25.2	
	66nm,0.8s						
AAA	**Alma-Ata**	**2.90**	**4**	Pg	**Pb**	**09 43 46.4**	**+0.2**
	40nm,0.2s						
AAA				Lg	Lg	09 44 27.8	
	16nm,0.6s						
AAA	**Alma-Ata**	**2.90**	**4**	*eP*	**Pb**	**09 43 46.4**	**+0.2**
	40nm,0.2s						
AAA				*eS*	**Sg**	**09 44 27.8**	**+0.3**
	16nm,0.6s						
FRU1	**Bishkek**	**2.90**	**330**	⇑*eP*	**Pb**	**09 43 44.9**	**-1.4**
FRU1				⇑*eS*	**Sb**	**09 44 19.4**	**-2.4**
KNDC	**Almaty**	**2.91**	**5**	⇓Pg	**Pg**	**09 43 49.5**	**-0.7**
	36nm,0.5s						
KNDC				⇓Lg	Lg	09 44 27.2	
	513nm,0.7s						
OHH	**Osh**	**2.93**	**275**	⇑*eP*	**Pb**	**09 43 46.4**	**-0.3**
OHH				⇑*eS*	**Sb**	**09 44 22.1**	**-0.5**
ARSB	**Arslanbob**	**2.93**	**291**	⇓*eP*	**Pb**	**09 43 45.9**	**-0.9**
ARSB				⇓*eS*	**Sb**	**09 44 21.3**	**-1.5**
KOTS	**Kotyrbulak**	**2.94**	**7**	Pg	**Pb**	**09 43 46.5**	**-0.5**
	14nm,0.4s						
KOTS				Lg	Lg	09 44 28.6	
	358nm,0.7s						
KOTS	**Kotyrbulak**	**2.94**	**7**	*eP*	**Pb**	**09 43 46.5**	**-0.5**
	14nm,0.4s						
KOTS				*eS*	**Sg**	**09 44 27.8**	**-1.0**
	358nm,0.7s						
DGS	**Degeres**	**2.99**	**348**	Pg	**Pb**	**09 43 46.9**	**-0.9**
	14nm,0.7s						
DGS				Lg	Lg	09 44 29.9	
	117nm,0.6s						
CHMS	**Chumysh**	**3.02**	**333**	⇑P	**Pb**	**09 43 46.7**	**-1.6**
	20nm,0.4s,SNR=10						
CHMS	**Chumysh**	**3.02**	**333**	⇓*eP*	**Pb**	**09 43 46.0**	**-2.3**
CHMS				⇓*eS*	**Sb**	**09 44 21.6**	**-3.6**
SATY	**Saty**	**3.05**	**26**	Pg	**Pb**	**09 43 47.3**	**-1.6**
	14nm,0.1s						
SATY				Lg	Lg	09 44 29.3	
	102nm,0.6s						
EKS2	**Erkin-Say**	**3.16**	**319**	⇓P	**Pb**	**09 43 49.8**	**-1.0**
	14nm,0.5s,SNR=15						
EKS2	**Erkin-Say**	**3.16**	**319**	⇓*eP*	**Pb**	**09 43 48.4**	**-2.4**
EKS2				⇓*eS*	**Sb**	**09 44 25.7**	**-3.8**
USP	**Ospenovka**	**3.34**	**333**	⇑P	**Pb**	**09 43 51.1**	**-2.7**
	11nm,0.3s,SNR=8.0						
USP	**Ospenovka**	**3.34**	**333**	⇑*eP*	**Pb**	**09 43 50.5**	**-3.3**
USP				⇑*eS*	**Sn**	**09 44 29.2**	**+2.7**
UZB	**Uzynbulak**	**3.35**	**32**	Pg	**Pb**	**09 43 53.3**	**-0.8**
	15nm,0.5s						
UZB				Lg	Lg	09 44 39.5	
	42nm,0.9s						
UZB	**Uzynbulak**	**3.35**	**32**	*eP*	**Pb**	**09 43 53.3**	**-0.8**
	15nm,0.5s						
UZB				*eS*	**Sg**	**09 44 39.5**	**-2.6**
	42nm,0.9s						
KURS	**Kuram**	**3.38**	**20**	Pg	**Pb**	**09 43 53.2**	**-1.1**
	7.1nm,0.7s						
KURS				Lg	Lg	09 44 40.5	
	24nm,0.8s						
KTBS	**Karatobe**	**3.39**	**1**	Pg	**Pb**	**09 43 54.4**	**-0.2**
	13nm,0.5s						
KTBS				Lg	Lg	09 44 41.8	
	106nm,0.5s						
KRBS	**Karabastau**	**3.45**	**349**	Pg	**Pb**	**09 43 55.7**	**+0.1**
	7.5nm,0.5s						
KRBS				Lg	Lg	09 44 44.1	
	61nm,0.5s						
SGDS	**Sogindy**	**3.46**	**335**	Pg	**Pb**	**09 43 56.1**	**+0.2**
	3.8nm,0.6s						
SGDS				Lg	Lg	09 44 44.4	
	82nm,0.5s						
KPKS	**Kokpek**	**3.51**	**26**	Pg	**Pb**	**09 43 55.9**	**-0.7**
	0.4nm,0.2s						
KPKS				Lg	Lg	09 44 44.4	
	42nm,0.5s						
MRKS	**Merke**	**3.51**	**315**	Pg	**Pb**	**09 43 57.4**	**+0.7**
	12nm,0.6s						
MRKS				Lg	Lg	09 44 46.7	
	50nm,0.3s						
MRKS	**Merke**	**3.51**	**315**	*eP*	**Pb**	**09 43 57.4**	**+0.7**
	12nm,0.6s						
MRKS				*eS*	**Sg**	**09 44 46.7**	**-0.5**
	50nm,0.3s						
CHKK	**Chushkaly**	**3.54**	**4**	Pg	**Pb**	**09 43 56.9**	**-0.3**
	18nm,0.5s						
CHKK				Lg	Lg	09 44 46.3	
	41nm,0.5s						
CHKK	**Chushkaly**	**3.54**	**4**	*eP*	**Pb**	**09 43 56.9**	**-0.3**
	18nm,0.5s						
CHKK				*eS*	**Sg**	**09 44 46.3**	**-1.9**
	41nm,0.5s						
SHLS	**Shalkode**	**3.55**	**36**	Pg	**Pg**	**09 44 01.4**	**-1.0**
	9.3nm,0.5s						
SHLS				Lg	Lg	09 44 53.5	
	89nm,0.6s						
SHLS	**Shalkode**	**3.55**	**36**	*eP*	**Pg**	**09 44 01.4**	**-1.0**
	9.3nm,0.5s						
SHLS				*eS*	**Sg**	**09 44 53.5**	**+5.1**
	89nm,0.6s						
KUU	**Kurty**	**3.58**	**357**	Pg	**Pb**	**09 43 57.6**	**-0.2**
	4.1nm,0.1s						
KUU				Lg	Lg	09 44 47.1	
	72nm,0.7s						
KUU	**Kurty**	**3.58**	**357**	*eP*	**Pb**	**09 43 57.6**	**-0.2**
	4.1nm,0.1s						
KUU				*eS*	**Sg**	**09 44 47.1**	**-2.2**
	72nm,0.7s						
PDGK	**Podgornoye**	**3.70**	**35**	⇓Pg	**Pg**	**09 44 02.7**	**-2.6**
	26nm,0.8s						
PDGK				⇓Lg	Lg	09 44 49.9	
	64nm,0.8s						
DRK	**Karamyk**	**3.79**	**259**	⇑*eP*	**Pb**	**09 43 59.1**	**-2.5**
DRK				⇑*eS*	**Sb**	**09 44 44.1**	**-3.6**
ARK	**Arkit**	**3.81**	**294**	⇓*eP*	**Pb**	**09 43 58.2**	**-3.6**
ARK				⇑*eS*	**Sn**	**09 44 42.3**	**+4.1**
ARXS	**Arharly**	**4.00**	**13**	Pg	**Pb**	**09 44 04.8**	**-0.2**
	8.0nm,0.5s						
ARXS				Lg	Lg	09 44 59.5	
	62nm,0.5s						
ARXS	**Arharly**	**4.00**	**13**	*eP*	**Pb**	**09 44 04.8**	**-0.2**
ARXS				*eS*	**Sg**	**09 44 59.5**	**-3.2**
BLB	**Baldybastay**	**4.02**	**20**	Pg	**Pb**	**09 44 05.0**	**-0.4**
	20nm,0.5s						
BLB				Lg	Lg	09 44 59.9	
	68nm,0.5s						
TRKS	**Terek-Say**	**4.32**	**288**	⇑*eP*	**Pn**	**09 44 04.9**	**+4.6**
TRKS				⇑*eS*	**Sn**	**09 44 54.0**	**+3.3**
KNOS	**Konyrlen**	**4.46**	**24**	Pg	**Pb**	**09 44 13.4**	**+0.4**
	3.3nm,0.4s						
KNOS				Lg	Lg	09 45 14.6	
	19nm,0.5s						
KK31	**Karatay Array**	**5.34**	**303**	⇓Pn	Pn	09 44 19.0	+4.8
	0.4nm,0.3s,baz=154,slow=15,SNR=7.0						
KK31				⇑Pg	**Pg**	**09 44 36.8**	**0.0**
	5.8nm,0.7s,baz=124,slow=16,SNR=9.3						
KK31				⇑Lg	Lg	09 45 43.6	
	3.5nm,0.4s,baz=123,slow=28,SNR=2.8						

*TRN **07** 10:13:39.3,10°.83N×62°.20W,h94km,MD2.9,North of the*
Paria peninsula.
*FUNV **07** 10:13:40.3,10°.74N×62°.18W,h36km,MW3.5*
ISC 07 10:13:38.4±2.6,**10°.81N**±0°.08×**62°.3W**±0°.1,**h93**km±34km,
n13,σ1♀**14**/21,**Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMDM	**Guralp CMG5TDE**	**0.72**	**99**	*eP*	**Pn**	**10 13 54.9**	**-0.5**
DMDM				*eS*	**Sn**	**10 14 08.0**	**-0.1**
TRN	**Trinidad (W)**	**0.88**	**101**	*eP*	**Pn**	**10 13 58.1**	**+1.1**
TRN				*eS*	**Sn**	**10 14 10.6**	**-0.3**
GRFF	**Grenada Fort F**	**1.34**	**23**	*eP*	**Pn**	**10 14 02.7**	**+0.3**
GRFF				*eS*	**Sn**	**10 14 20.0**	**-0.4**
GRGR	**Grenville**	**1.45**	**25**	*eP*	**Pn**	**10 14 04.2**	**+0.5**
GRGR				*eS*	**Sn**	**10 14 22.6**	**-0.2**
GRW	**Mount Saint Ca**	**1.47**	**24**	*eS*	**Sn**	**10 14 23.3**	**-0.2**
GRHS	**Sauteurs**	**1.54**	**24**	*eP*	**Pn**	**10 14 04.8**	**0.0**
GRHS				*eS*	**Sn**	**10 14 24.0**	**-0.8**
GRSS	**Sisters**	**1.62**	**24**	*eP*	**Pn**	**10 14 06.7**	**+0.9**
GRSS				*eS*	**Sn**	**10 14 26.0**	**-0.5**
GCMP	**Grenada, Carri**	**1.86**	**27**	*eP*	**Pn**	**10 14 09.4**	**+0.4**
GCMP				*eS*	**Sn**	**10 14 31.4**	**-0.8**
PCRV	**Puerto La Cruz**	**2.40**	**255**	*eP*	**Pn**	**10 14 16.8**	**+0.7**
PCRV				*eS*	**Sn**	**10 14 44.0**	**-1.0**
PCRV	**Puerto La Cruz**	**2.40**	**255**	*eP*	**Pn**	**10 14 18.4**	**+2.3**
CACV	**CAICARA DEL OR**	**5.30**	**233**	*eP*	Pn	10 14 51.0	-4.2
CACV				*eS*	Sn	10 15 42.2	-13
BENV	**Beln**	**5.30**	**261**	*eP*	**Pn**	**10 14 56.9**	**+1.6**
BAUV	**El Baul**	**5.97**	**252**	*eP*	**Pn**	**10 15 04.4**	**0.0**
BAUV				*eS*	**Sn**	**10 16 08.7**	**-2.8**

*NNC **07** 10:21:55.9±2.4,51°.85N×75°.87E,h0km±25km,mb3.1,*
mpv2.7,Error ellipse: s-maj=69.5km s-min=18.6km
az=28.0,Suspected Mining explosion.
*IDC **07** 10:21:57.2±1.0,51°.47N×75°.78E,h0km,mbtmp2.6/3,*
ML2.2/3,Error ellipse: s-maj=34.5km s-min=8.2km
az=27.0
ISC 07 10:21:56.8±1.2,**51°.4N**±0°.1×**75°.59E**±0°.08,**h0**km,**n9,**
σ0♀**55**/12,**4C-3D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.02**	**112**	Pg	**Pn**	**10 22 31.6**	**-0.4**
	0.8nm,0.3s,baz=301,slow=18,SNR=26						
KURBB				Lg	Lg	10 22 59.2	
	0.8nm,0.3s,baz=304,slow=28,SNR=9.8						
KURBB	**Kurchatov Arra**	**2.02**	**112**	⇓Pn	**Pn**	**10 22 32.1**	**+0.1**
	6.7nm,0.3s						
KURBB				⇓Sn	**Sb**	**10 22 59.6**	**-0.2**
	21nm,0.5s						
KURK	**Kurchatov**	**2.03**	**109**	⇑Pn	**Pn**	**10 22 32.0**	**-0.2**
	1.3nm,0.5s						
KURK				⇑Sn	**Sn**	**10 22 58.6**	**+0.3**
	1.8nm,0.5s						
BVA0	**Borovoye Array**	**3.59**	**299**	⇑Pg	**Pb**	**10 23 00.5**	**-0.6**
	0.4nm,0.3s,baz=103,slow=17,SNR=5.0						
BVA0				⇓Lg	Lg	10 23 48.4	
	1.9nm,0.4s,baz=108,slow=28,SNR=4.0						
BVAR	**Borovoye Array**	**3.59**	**299**	Pn	**Pn**	**10 22 54.8**	**+1.1**
	0.1nm,0.3s,baz=109,slow=16,SNR=5.8						
BVAR				Pg	**Pb**	**10 23 01.0**	**-0.1**
	0.1nm,0.3s,baz=108,slow=16,SNR=5.0						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**6.17**	**62**	Pn	**Pn**	**10 23 29.2**	**+0.2**
	0.3nm,0.3s,baz=252,slow=14,SNR=3.3						
ZALV				Sn	**Sn**	**10 24 39.8**	**-0.4**
	0.3nm,0.3s,baz=235,slow=23,SNR=2.8						
	1.1nm,0.4s						
I46RU	**ZALESOVO INFRA**	**6.17**	**62**	I	I	10 59 40.0	
	baz=249,slow=312,SNR=3.0						
MK31	**Makanchi Array**	**6.37**	**134**	⇑Lg	Lg	10 25 21.4	
	0.7nm,0.4s,baz=234,slow=12,SNR=8.5						
MKAR	**Makanchi Array**	**6.37**	**134**	Pn	**Pn**	**10 23 32.5**	**+0.6**
	0.1nm,0.3s,baz=321,slow=15,SNR=1.7						
MKAR				Sn	**Sn**	**10 24 45.7**	**+0.4**
	0.2nm,0.3s,baz=327,slow=24,SNR=2.2						
MKAR				Lg	Lg	10 25 12.9	
	0.4nm,0.3s,baz=322,slow=28,SNR=6.4						
	0.1nm,0.3s						

*IDC **07** 10:43:32.2±1.4,18°.05S×177°.53E,h0km,mb4.2/7,*
mbtmp4.2/7,MS3.3/9,Error ellipse: s-maj=39.7km
s-min=33.4km az=37.0
ISC 07 10:43:37.6±1.2,**18°.1S**±0°.2×**177°.5E**±0°.3,**h35**km,**n17,**
σ1♀**28/9,mb4.1/7,MS3.4/8,2C,Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**19.08**	**295**	LR	LR	10 54 39.8	
	comp=Z,35nm,18.5s,baz=198,slow=35						
RAR	**Rarotonga**	**21.63**	**102**	LR	LR	10 56 01.8	
	comp=Z,26nm,18.9s,baz=269,slow=35						
PPT	**Papeete**	**31.34**	**94**	LR	LR	10 59 06.1	
	comp=Z,44nm,19.4s,baz=278,slow=30						
STKA	**Stephens Creek**	**35.13**	**240**	LR	LR	11 03 11.0	
	comp=Z,50nm,18.2s,baz=182,slow=34						
WRA	**Warramunga Arr**	**40.75**	**260**	P	**P**	**10 51 15.5**	**0.0**
	1.7nm,1.0s,baz=96,slow=8.1,SNR=6.4						
WRA				LR	LR	11 06 11.5	
	comp=Z,59nm,20.1s,baz=86,slow=33						
	1.7nm,1.0s						
ASAR	**Alice Springs**	**40.98**	**255**	P	**P**	**10 51 18.0**	**+0.6**
	3.5nm,0.8s,baz=88,slow=8.1,SNR=28						
	3.5nm,0.8s						
NWAO	**Narrogin (SRO)**	**55.67**	**242**	LR	LR	11 16 06.3	
	comp=Z,64nm,18.1s,baz=68,slow=35						
JOW	**Kunigami**	**65.38**	**312**	LR	LR	11 19 40.7	
	comp=Z,45nm,21.4s,baz=314,slow=33						
RPN	**Rapa Nui**	**67.33**	**112**	LR	LR	11 16 30.6	
	comp=Z,21nm,21.3s,baz=266,slow=29						
QSPA	**South Pole Qui**	**71.95**	**180**	P	**P**	**10 54 59.1**	**+1.8**
	5.1nm,1.0s,baz=36,slow=3.6,SNR=13						
	5.1nm,1.0s						
MAW	**Mawson**	**82.33**	**201**	P	**P**	**10 55 55.0**	**-0.3**
	7.4nm,1.1s,baz=107,slow=4.3,SNR=7.8						
	7.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**85.29**	**291**	P	**P**	**10 56 11.0**	**-0.4**
	0.7nm,0.7s,baz=110,slow=4.8,SNR=1.5						
	0.7nm,0.7s						
ELK	**Elko**	**85.50**	**45**	LR	LR	11 31 18.8	
	comp=Z,34nm,18.8s,baz=123,slow=34						
ILAR	**Eielson Array**	**87.00**	**14**	P	**P**	**10 56 19.2**	**+0.5**
	0.4nm,0.8s,baz=208,slow=4.9,SNR=2.2						
	0.4nm,0.8s						
TROLL	**Troll, Antarti**	**90.05**	**182**	⇑P	**P**	**10 56 32.0**	**-1.5**
	comp=Z,191nm,0.8s						
SNAA	**Sanae**	**90.46**	**180**	⇑P	**P**	**10 56 34.0**	**-1.3**
	comp=Z,26nm,0.8s						
SNAA	**Sanae**	**90.46**	**180**	P	**P**	**10 56 33.9**	**-1.3**
	comp=Z,1.9nm,1.1s,baz=207,slow=2.3,SNR=3.9						
	comp=Z,1.9nm,1.1s						

*JMA **07** 10:59:00.2±0.1,24°.1N±0°.8×123°.1E±0°.3,h32km±2km,*
MV2.7/9,NEAR ISHIGAKIJIMA ISLAND
ISC 07 10:59:00.3±1.1,**24°.11N**±0°.08×**123°.15E**±0°.03,**h30**km±11km,
n16,σ0♀**94**/23,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**341**	P	**Pb**	**10 59 08.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.37**	**341**	S	**Sb**	**10 59 14.5**	**+0.1**
YOJ	**Yonaguni jima**	**0.37**	**341**	P	**Pb**	**10 59 08.6**	**-0.1**
YOJ				S	**Sb**	**10 59 14.5**	**+0.1**
JYNG	**Yonagunijimaku**	**0.38**	**332**	P	**Pb**	**10 59 08.7**	**-0.3**
JYNG				*eS*	**Sb**	**10 59 14.5**	**-0.3**
IRIF	**Iriomote-Funau**	**0.58**	**67**	P	**Pb**	**10 59 11.8**	**-0.1**
IRIF				*eS*	**Sb**	**10 59 20.3**	**+0.4**
HATJ	**Hateruma jima**	**0.60**	**95**	*eP*	**Pb**	**10 59 12.2**	**-0.2**
HATJ		

MW3.7

*GUC **07** 11:02:12.7±0.8, 35°.22S×72°.41W, h40km±2km, ML3.6*
ISC 07 11:02:12.1±1.3, **35°.22S**±0°.03×**72°.46W**±0°.05, **h28**km±11km, **n52**, σ1§**40**/73, **2C**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GO05	**Hualane**	**0.49**	**64**	⇑*iP*		**Pb**	**11 02 22.5**	**+0.2**
GO05				*eS*		**Sb**	**11 02 29.2**	**+0.1**
GO05				IAML			11 02 30.7	
	comp=N,8μm,0.2s							
GO05	**Hualane**	**0.49**	**64**	*eP*		**Pb**	**11 02 21.6**	**-0.7**
GO05				IAML			11 02 30.2	
	comp=Z,3μm,0.6s							
BO03	**Pichilemu**	**0.83**	**30**	⇑*iP*		**Pn**	**11 02 27.6**	**-0.4**
BO03				*eS*		**Sb**	**11 02 38.9**	**+0.1**
ML02	**Panimavida**	**1.01**	**123**	*eP*		**Pn**	**11 02 29.8**	**-0.7**
ML02				*eS*		**Sn**	**11 02 42.5**	**-1.2**
ML02				IAML			11 02 43.1	
	comp=E,8μm,0.2s							
ML02	**Panimavida**	**1.01**	**123**	*eP*		**Pn**	**11 02 30.1**	**-0.3**
ML02				*eS*		**Sn**	**11 02 43.0**	**-0.7**
ML02				IAML			11 02 45.5	
	comp=Z,2μm,0.3s							
BO01	**Tunca**	**1.40**	**54**	*eP*		**Pn**	**11 02 35.7**	**-0.1**
BO01				*eS*		**Sn**	**11 02 53.4**	**0.0**
BO01				IAML			11 02 54.1	
	comp=N,1μm,0.4s							
BO01	**Tunca**	**1.40**	**54**	*eP*		**Pn**	**11 02 35.9**	**0.0**
BO01				*eS*		**Sn**	**11 02 53.9**	**+0.4**
BO01				IAML			11 02 56.0	
	comp=Z,689nm,0.6s							
BO02	**Sierra Bellavi**	**1.45**	**73**	*eP*		**Pn**	**11 02 36.0**	**-0.4**
BO02				*eS*		**Sn**	**11 02 54.3**	**-0.2**
BO02	**Sierra Bellavi**	**1.45**	**73**	*eP*		**Pn**	**11 02 36.5**	**0.0**
BO02				*eS*		**Sn**	**11 02 55.0**	**+0.4**
BO02				IAML			11 02 57.7	
	comp=Z,3μm,0.2s							
BI05	**Punta Hualpn**	**1.63**	**201**	*eP*		**Pn**	**11 02 39.6**	**+0.6**
BI05				IAML			11 03 07.6	
	comp=E,599nm,0.2s							
BI05	**Punta Hualpn**	**1.63**	**201**	*eP*		**Pb**	**11 02 40.2**	**-1.4**
BI05				IAML			11 03 09.4	
	comp=Z,232nm,0.3s							
MT01	**Popeta**	**1.68**	**37**	*eP*		**Pn**	**11 02 39.3**	**-0.4**
MT01				IAML			11 03 08.6	
	comp=E,783nm,0.2s							
MT01	**Popeta**	**1.68**	**37**	*eP*		**Pn**	**11 02 39.4**	**-0.4**
MT01				*eS*		**Sb**	**11 03 07.6**	**+4.4**
MT01				IAML			11 03 08.5	
	comp=Z,276nm,0.1s							
BI02	**San Fabin de**	**1.73**	**146**	*eP*		**Pn**	**11 02 41.0**	**+0.6**
BI02				*eS*		**Sn**	**11 03 02.2**	**+0.5**
BI02				IAML			11 03 03.9	
	comp=N,700nm,0.4s							
BI02	**San Fabin de**	**1.73**	**146**	*eP*		**Pn**	**11 02 40.5**	**0.0**
BI02				IAML			11 03 06.2	
	comp=Z,378nm,0.2s							
MT09	**Talagante**	**1.89**	**41**	*eP*		**Pn**	**11 02 42.9**	**+0.3**
MT09				IAML			11 03 12.6	
	comp=N,1μm,0.4s							
BO04	**La Punta**	**1.96**	**52**	*eP*		**Pn**	**11 02 43.7**	**+0.1**
BO04				IAML			11 03 15.2	
	comp=E,629nm,0.4s							
MT12	**Pirque**	**2.17**	**47**	*eP*		**Pn**	**11 02 46.6**	**+0.2**
MT12				IAML			11 03 18.9	
	comp=N,1μm,0.6s							
MT02	**Curacav**	**2.25**	**30**	*eP*		**Pn**	**11 02 46.9**	**-0.5**
MT02				IAML			11 03 22.3	
	comp=E,235nm,0.3s							
MT02	**Curacav**	**2.25**	**30**	*eP*		**Pn**	**11 02 47.2**	**-0.2**
MT02				*eS*		**Sn**	**11 03 14.0**	**-0.2**
MT02				IAML			11 03 29.9	
	comp=Z,169nm,0.3s							
MT15	**Las Vizcachas**	**2.29**	**46**	*eP*		**Pn**	**11 02 48.5**	**+0.5**
VA01	**Torpederas**	**2.29**	**17**	*eP*		**Pn**	**11 02 48.5**	**+0.4**
LMEL	**Las Melosas**	**2.31**	**54**	*eP*		**Pn**	**11 02 49.3**	**+0.8**
LMEL				IAML			11 03 24.2	
	comp=N,722nm,0.1s							
LMEL	**Las Melosas**	**2.31**	**54**	*eP*		**Pn**	**11 02 49.6**	**+1.0**
LMEL				*eS*		**Sn**	**11 03 14.6**	**-1.5**
LMEL				IAML			11 03 23.8	
	comp=Z,315nm,0.7s							
MT05	**Renca**	**2.32**	**39**	IAML			11 03 27.6	
	comp=E,805nm,0.2s							
MT05	**Renca**	**2.32**	**39**	*eP*		**Pn**	**11 02 49.1**	**+0.7**
MT05				*eS*		**Sn**	**11 03 17.5**	**+1.5**
MT05				IAML			11 03 40.0	
	comp=Z,178nm,0.5s							
MT03	**Universidad Ad**	**2.36**	**44**	*eP*		**Pn**	**11 02 49.4**	**+0.3**
MT03				IAML			11 03 26.0	
	comp=N,877nm,0.5s							
MT03	**Universidad Ad**	**2.36**	**44**	*eP*		**Pn**	**11 02 49.8**	**+0.7**
MT03				*eS*		**Sb**	**11 03 22.3**	**-0.5**
MT03				IAML			11 03 24.9	
	comp=Z,431nm,0.5s							
MT16	**CCHEN**	**2.40**	**42**	IAML			11 03 30.2	
	comp=N,231nm,0.5s							
MT14	**Cerro Calan**	**2.42**	**42**	*eP*		**Pn**	**11 02 50.3**	**+0.4**
MT14				IAML			11 03 33.9	
	comp=E,974nm,0.4s							
MT10	**Hacienda Santa**	**2.52**	**40**	*eP*		**Pn**	**11 02 51.6**	**+0.3**
MT10				IAML			11 03 31.6	
	comp=N,783nm,0.4s							
ROC1	**El Roble**	**2.54**	**29**	*eP*		**Pn**	**11 02 52.0**	**+0.3**
ROC1				*eS*		**Sn**	**11 03 23.5**	**+1.6**
PEL	**Peldehue**	**2.54**	**36**	*eP*		**Pn**	**11 02 52.0**	**+0.4**
PEL				IAML			11 03 39.3	
	comp=E,306nm,0.4s							
PEL	**Peldehue**	**2.54**	**36**	*eP*		**Pn**	**11 02 52.5**	**+0.9**
PEL				IAML			11 03 36.4	
	comp=Z,209nm,0.5s							
ROCH	**El Roble**	**2.55**	**29**	*eP*		**Pn**	**11 02 51.9**	**+0.1**
ROCH				IAML			11 03 43.0	
	comp=N,501nm,0.3s							
EDS3	**Malargue**	**2.56**	**103**	*eP*		**Pn**	**11 02 51.3**	**-0.6**
MT04	**Ro Olivares**	**2.64**	**47**	*eP*		**Pn**	**11 02 53.4**	**+0.3**
MT04				IAML			11 03 34.8	
	comp=N,250nm,0.2s							
MT04	**Ro Olivares**	**2.64**	**47**	*eP*		**Pn**	**11 02 53.8**	**+0.7**
MT04				*eS*		**Sn**	**11 03 25.0**	**+0.6**
MT04				IAML			11 03 39.7	
	comp=Z,128nm,0.3s							
MT08	**Bocatoma Ro**	**2.69**	**49**	*eP*		**Pn**	**11 02 54.5**	**+0.8**
MT08				IAML			11 03 45.2	
	comp=N,195nm,0.5s							
MT08	**Bocatoma Ro**	**2.69**	**49**	*eP*		**Pn**	**11 02 55.6**	**+1.8**
MT08				*eS*		**Sn**	**11 03 25.6**	**+0.1**
MT08				IAML			11 03 35.7	
	comp=Z,121nm,0.3s							
VA06	**Catapilco**	**2.83**	**20**	*eP*		**Pn**	**11 02 55.4**	**0.0**
VA06				IAML			11 04 01.3	
	comp=E,248nm,0.5s							
CANA	**Caviahue**	**2.89**	**157**	*eP*		**Pb**	**11 03 00.5**	**-2.6**
CANA				*eS*		**Sb**	**11 03 41.6**	**+3.6**
VA03	**San Esteban**	**2.92**	**33**	*eP*		**Pn**	**11 02 57.2**	**+0.4**
VA03				IAML			11 03 51.9	
	comp=Z,159nm,0.6s							
RFA	**San Rafael**	**3.31**	**83**	*eP*		**Pn**	**11 03 03.2**	**+1.1**
RFA				*eS*		**Sb**	**11 03 53.0**	**+2.9**
RFA				IAML			11 03 59.0	
	comp=Z,71nm,0.9s							
CO02	**Combarbal**	**4.19**	**17**	*eP*		**Pn**	**11 03 14.3**	**0.0**
CO02				*eS*		**Sn**	**11 04 04.1**	**+1.7**
CO02				IAML			11 04 30.6	
	comp=Z,67nm,0.8s							
RTLS	**Leoncito**	**4.32**	**39**	*eP*		**Pn**	**11 03 18.2**	**+2.0**
RTLS				*eS*		**Sb**	**11 04 19.2**	**-0.1**
RTLS				IAML			11 04 31.1	
	comp=Z,94nm,0.8s							
GO06	**Curarrehue**	**4.42**	**170**	*eP*		**Pn**	**11 03 19.1**	**+1.6**
GO06				IAML			11 04 55.4	
	comp=Z,45nm,0.8s							
CO03	**El Pedregal**	**4.62**	**19**	*eP*		**Pn**	**11 03 21.2**	**+1.1**
CO03				*eS*		**Sn**	**11 04 12.6**	**-0.3**
CO03				IAML			11 04 53.9	
	comp=Z,30nm,0.5s							
CFA	**Coronel Fontan**	**5.05**	**46**	*eP*		**Pn**	**11 03 27.3**	**+1.3**
RTLL	**Cerro Villicun**	**5.12**	**42**	*eP*		**Pn**	**11 03 28.2**	**+1.2**
RTLL				*eS*		**Sb**	**11 04 35.1**	**-6.9**
RTLL				IAML			11 04 37.7	
	comp=Z,25nm,1.2s							
GO04	**Tololo Observa**	**5.23**	**16**	*eP*		**Pn**	**11 03 28.4**	**-0.3**
GO04				*eS*		**Sn**	**11 04 27.9**	**-0.2**
GO04				IAML			11 05 06.4	
	comp=Z,44nm,0.6s							
ACAN	**Cantantal**	**5.29**	**58**	IAML			11 04 58.7	
	comp=Z,50nm,0.9s							

*CATAC **07** 11:04:29.7±0.4, 12°.N±3°×8°.8W±°, h14km, M3.8/24, MLv3.8/24, Error ellipse: s-maj=6.4km s-min=2.7km az=28.7, confirmed*
*SNET **07** 11:04:30.7±2.0, 12°.07N×88°.30W, h10km, ML3.7*
*GCG **07** 11:04:32.4±1.4, 12°.05N×88°.62W, h8km±999km, MD4.2, ML3.4*
*NEIC **07** 11:04:33.6±2.3, 12°.06N±0°.07×87°.98W±0°.04, h35km±2km, mb4.4/19, Error ellipse: s-maj=12.2km s-min=6.0km az=13.0*
*IDC **07** 11:04:34.3±1.9, 11°.80N×88°.12W, h78km±18km, mb3.6/6, mbtmp3.8/8, MS3.2/4, Error ellipse: s-maj=50.8km s-min=11.8km az=34.0*
*UCR **07** 11:04:34.7±1.3, 12°.07N×88°.04W, h36km, MB4.4(NEIC)*
ISC 07 11:04:30.6±1.5, **11°.97N**±0°.04×**88°.23W**±0°.03, **h27**km±11km, **n131**, σ1§**70**/146, **mb4.3**/13, **MS3.1**/4, **15C-1D**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CSGN	**Cosiguina Volc**	**1.20**	**33**	P		**Pn**	**11 04 52.4**	**+0.7**
CSGN				S		**Sb**	**11 05 09.6**	**+1.8**
CSGN	**Cosiguina Volc**	**1.20**	**33**	⇑*eP*		**Pn**	**11 04 51.7**	**0.0**
POTN	**Potosi Cosigui**	**1.24**	**35**	P		**Pn**	**11 04 52.6**	**+0.4**
POTN	**Potosi Cosigui**	**1.24**	**35**	*eP*		**Pn**	**11 04 53.0**	**+0.8**
POTN				*eS*		**Sn**	**11 05 07.9**	**-0.3**
CNCH	**Conchagua**	**1.35**	**17**	*iP*		**Pn**	**11 04 54.3**	**+0.4**
CRIN	**San Cristobal**	**1.36**	**58**			**Pn**	**11 04 53.7**	**-0.2**
CRIN	**San Cristobal**	**1.36**	**58**	P		**Pb**	**11 04 55.2**	**-0.3**
CRIN	**San Cristobal**	**1.36**	**58**	*eP*		**Pn**	**11 04 54.8**	**+0.9**
LCND	**La Caada**	**1.37**	**14**	*eP*		**Pn**	**11 04 54.3**	**+0.3**
LCND				*eP*		**Pb**	**11 04 54.4**	**-1.2**
LCND	**La Caada**	**1.37**	**14**	⇑P		**Pn**	**11 04 54.3**	**+0.3**
PKGN	**Cerro Pekin**	**1.41**	**60**	⇑P		**Pn**	**11 04 54.8**	**+0.3**
PKGN				S		**Sb**	**11 05 13.8**	**0.0**
VSM	**San Miguel**	**1.45**	**358**	*eP*		**Pn**	**11 04 56.1**	**+0.8**
RANC	**El Ranchito**	**1.45**	**358**	*eP*		**Pn**	**11 04 55.8**	**+0.5**
PACA	**Pacayal**	**1.49**	**357**	*eP*		**Pn**	**11 04 56.4**	**+0.6**
PACA				*eS*		**Sn**	**11 05 14.2**	**-0.2**
PACA	**Pacayal**	**1.49**	**357**	P		**Pn**	**11 04 56.4**	**+0.6**
PACA	**Pacayal**	**1.49**	**357**	S		**Sn**	**11 05 15.3**	**+0.9**
HERN	**Volcan Telica**	**1.51**	**65**	Pn		**Pn**	**11 04 54.8**	**-1.2**
TECA	**Tecapa**	**1.54**	**350**	*iP*		**Pn**	**11 04 56.7**	**+0.3**
POLN	**Al Sur del Vol**	**1.54**	**64**	⇑P		**Pn**	**11 04 55.1**	**-1.3**
CNGA	**Al SSO del Vol**	**1.58**	**71**	P		**Pn**	**11 04 57.1**	**+0.1**
CNGN	**Cerro Negro**	**1.59**	**71**			**Pn**	**11 04 57.3**	**+0.2**
CNGN	**Cerro Negro**	**1.59**	**71**	⇑P		**Pn**	**11 04 57.2**	**+0.1**
CNGN	**Cerro Negro**	**1.59**	**71**	*eP*		**Pn**	**11 04 57.2**	**+0.2**
COPN	**Copaltepe**	**1.62**	**83**	⇑P		**Pn**	**11 04 58.0**	**+0.6**
COPN	**Copaltepe**	**1.62**	**83**	⇑*iP*		**Pn**	**11 04 58.0**	**+0.6**
TECO	**Alcaldia de Te**	**1.65**	**341**	*eP*		**Pn**	**11 04 58.4**	**+0.6**
TECO	**Alcaldia de Te**	**1.65**	**341**	P		**Pn**	**11 04 58.3**	**+0.5**
TECO	**Alcaldia de Te**	**1.65**	**341**	S		**Sb**	**11 05 19.7**	**-0.9**
UESV	**Universidad de**	**1.74**	**342**	S		**Sn**	**11 05 21.3**	**+0.8**
UESV	**Universidad de**	**1.74**	**342**	P		**Pn**	**11 04 60.0**	**+0.8**
MOM3	**MOM3**	**1.76**	**72**	⇑P		**Pn**	**11 04 59.5**	**+0.1**
MOM3				S		**Sn**	**11 05 22.3**	**+1.4**
MOM2	**El Cardon**	**1.77**	**75**	⇑P		**Pn**	**11 04 60.0**	**+0.5**
MOM2				S		**Sn**	**11 05 22.4**	**+1.2**
LFRS	**El Faro**	**1.83**	**334**	*eP*		**Pn**	**11 05 00.6**	**+0.2**
LALI	**Alcalda de L**	**1.84**	**325**	*eP*		**Pn**	**11 05 00.5**	**0.0**
PAVA	**Las Pavas**	**1.86**	**338**	*eP*		**Pn**	**11 05 01.8**	**+1.0**
PAVA	**Las Pavas**	**1.86**	**338**	S		**Sn**	**11 05 24.9**	**+1.3**
PAVA	**Las Pavas**	**1.86**	**338**	P		**Pn**	**11 05 01.4**	**+0.6**
APQ2	**Apoyeque**	**1.88**	**83**	⇑P		**Pn**	**11 05 01.6**	**+0.6**
APQ2				S		**Sn**	**11 05 25.0**	**+1.1**
LOMA	**Loma Larga**	**1.90**	**331**	*eP*		**Pn**	**11 05 01.3**	**0.0**
LOMA				*eS*		**Sn**	**11 05 23.5**	**-1.0**
LOMA	**Loma Larga**	**1.90**	**331**	P		**Pn**	**11 05 01.4**	**0.0**
TISN	**Laguna Tiscapa**	**1.93**	**85**	⇑P		**Pn**	**11 05 01.4**	**-0.3**
MGAN	**Managua**	**1.95**	**85**			**Pn**	**11 05 02.4**	**+0.4**
MGAN	**Managua**	**1.95**	**85**	P		**Pn**	**11 05 03.0**	**+1.0**
MGAN	**Managua**	**1.95**	**85**	*eP*		**Pn**	**11 05 02.2**	**+0.2**
WILN	**Americas 2**	**2.01**	**84**	P		**Pn**	**11 05 03.6**	**+0.8**
MAS3	**Al N del Volca**	**2.01**	**88**	P		**Pn**	**11 05 03.7**	**+0.8**
PMON	**Piamonte**	**2.02**	**329**	P		**Pn**	**11 05 03.6**	**+0.5**
BOQS	**Boqueron**	**2.03**	**330**	*eP*		**Pn**	**11 05 03.9**	**+0.7**
JAYA	**Jayaque - finc**	**2.05**	**325**	*eP*		**Pn**	**11 05 01.2**	**-2.2**
JAYA				*eS*		**Sn**	**11 05 26.8**	**-1.5**
LIMN	**Finca el Limon**	**2.12**	**59**	⇑P		**Pn**	**11 05 04.7**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.27**	**24**			**Pn**	**11 05 06.9**	**+0.4**
CEVE	**Cerro Verde**	**2.29**	**324**	*eP*		**Pn**	**11 05 08.4**	**+1.5**
CEVE				*eS*		**Sn**	**11 05 35.8**	**+1.5**
SNJE	**San Jose**	**2.31**	**325**	*eP*		**Pn**	**11 05 07.8**	**+0.6**
SNJE				*eS*		**Sn**	**11 05 34.5**	**-0.3**
YUSH	**Yuscaran**	**2.39**	**34**	⇑P		**Pn**	**11 05 08.9**	**+0.8**
NUBE	**Las Nubes**	**2.44**	**322**	*eP*		**Pn**	**11 05 09.4**	**+0.5**
NUBE				*eS*		**Sn**	**11 05 37.4**	**-0.5**
NUBE	**Las Nubes**	**2.44**	**322**	*eP*		**Pn**	**11 05 09.3**	**+0.5**
NUBE				*eS*		**Sn**	**11 05 37.2**	**-0.7**
NUBE	**Las Nubes**	**2.44**	**322**	P		**Pn**	**11 05 09.4**	**+0.5**
MATN	**Matagalpa**	**2.45**	**67**	P		**Pn**	**11 05 10.1**	**+1.2**
SLOZ	**Alcaldia de Sa**	**2.54**	**324**	*eP*		**Pn**	**11 05 10.7**	**+0.5**
SLOZ				*eS*		**Sn**	**11 05 40.4**	**+0.1**
FAME	**Alcaldia de Sa**	**2.54**	**317**	P		**Pn**	**11 05 11.7**	**+1.5**
FAME	**Alcaldia de Sa**	**2.54**	**317**	S		**Sn**	**11 05 41.4**	**+1.1**
RCVN	**Varillal2**	**2.56**	**51**	P		**Pn**	**11 05 11.5**	**+1.0**
CONN	**Concepcion**	**2.59**	**99**	P		**Pn**	**11 05 11.4**	**+0.7**
CONN				S		**Sn**	**11 05 41.2**	**-0.1**
RCPN	**Sur Rio San Ju**	**2.60**	**53**	⇑P		**Pn**	**11 05 12.0**	**+1.0**
RCPN	**Sur Rio San Ju**	**2.60**	**53**	S		**Sn**	**11 05 43.5**	**+1.7**
MTO3	**Montecristo**	**2.65**	**336**			**Pn**	**11 05 13.1**	**+1.3**
MTO3	**Montecristo**	**2.65**	**336**	*eP*		**Pn**	**11 05 13.0**	**+1.1**
LCRUZ	**La Cruz**	**2.70**	**109**	*eP*		**Pn**	**11 05 13.8**	**+1.5**
LCRUZ				*eS*		**Sn**	**11 05 44.4**	**+0.2**
ESQI	**Esquipulas**	**2.79**	**337**			**Pn**	**11 05 15.5**	**+1.9**
ESQI	**Esquipulas**	**2.79**	**337**	P		**Pn**	**11 05 16.3**	**+2.7**
ELI1	**Hacienda Flor**	**2.94**	**116**	*eP*		**Pn**	**11 05 17.4**	**+1.8**
ALIBA	**Liberia Airpor**	**2.97**	**117**	*eP*		**Pn**	**11 05 17.7**	**+1.7**
LAPC	**Finca la Perla**	**3.00**	**113**	*eP*		**Pn**	**11 05 17.9**	**+1.5**
SAJU	**San Juanillo,**	**3.12**	**127**	⇓*iP*		**Pn**	**11 05 19.1**	**+1.1**
JUD3	**Juan Diaz 3**	**3.20**	**124**			**Pn**	**11 05 20.6**	**+1.4**
JUD3	**Juan Diaz 3**	**3.20**	**124**	*eP*		**Pn**	**11 05 20.6**	**+1.4**
VMAR	**Armenia, Volca**	**3.27**	**110**	*eP*		**Pn**	**11 05 21.6**	**+1.4**
VMAR				*eS*		**Sn**	**11 05 58.9**	**+0.7**
CUI	**Cuipilapa**	**3.28**	**113**	*eP*		**Pn**	**11 05 22.7**	**+2.3**
CUI				*eS*		**Sn**	**11 05 58.5**	**-0.1**
CMARA	**Lajas Hojancha**	**3.37**	**125**	*eP*		**Pn**	**11 05 22.7**	**+1.1**
NYURE	**Nandayure**	**3.52**	**124**	*eP*		**Pn**	**11 05 24.8**	**+1.2**
QUEB	**Quebradon, Cot**	**3.54**	**112**	*eP*		**Pn**	**11 05 26.3**	**+2.5**
JTS	**Las Juntas de**	**3.63**	**117**	P		**Pn**	**11 05 27.1**	**+2.0**
	4.0nm,0.3s,baz=306,slow=19,SNR=10.0							
JTS				S		**Sn**	**11 06 05.8**	**-1.3**
	16nm,0.3s,baz=284,slow=19,SNR=6.4							
JTS	**Las Juntas de**	**3.63**	**117**	*eP*		**Pn**	**11 05 27.6**	**+2.5**
APG	**El Apazote**	**3.71**	**324**	P		**Pb**	**11 05 33.0**	**-2.6**
	0.5nm,0.5s,baz=93,slow=9.5,SNR=5.9							
ARE1	**Arenal 1**	**3.76**	**113**	*eP*		**Pn**	**11 05 29.7**	**+2.8**
VARE2	**V. Arenal**	**3.76**	**113**	*eP*		**Pn**	**11 05 29.8**	**+2.8**
CEDE	**Laguna Cedeo**	**3.77**	**113**	*eP*		**Pn**	**11 05 29.0**	**+2.0**
VPL2	**V. Platanar**	**4.13**	**113**	*eP*		Pn	11 05 37.1	+5.1
ACOS	**Acosta**	**4.54**	**118**	*eP*		**Pn**	**11 05 41.7**	**+3.9**
PAR1A	**Puntarenas Pro**	**4.57**	**121**	*eP*		**Pn**	**11 05 41.5**	**+3.5**
PICV	**PH. Pirrs**	**4.60**	**120**	*eP*		**Pn**	**11 05 42.2**	**+3.6**
REPA	**Paraso**	**4.79**	**116**	*eP*		**Pn**	**11 05 45.6**	**+4.4**
CVTQ	**Turrialba Volc**	**4.80**	**114**	*eP*		Pn	11 05 47.5	+6.0
PIEC	**Cerro El Cedra**	**4.81**	**119**	⇑*eP*		**Pn**	**11 05 44.9**	**+3.4**
VERB	**Verbena**	**4.89**	**114**	*eP*		Pn	11 05 48.2	+5.6
SAJE	**San Jernim**	**5.33**	**119**	*eP*		**Pn**	**11 05 51.5**	**+3.0**
VERH	**Veragua Rainfo**	**5.35**	**112**	*eP*		**Pn**	**11 05 50.8**	**+2.0**
EDPE	**Pejibaye, P**	**5.37**	**121**	*eP*		**Pn**	**11 05 52.7**	**+3.7**
DRK0	**Durika**	**5.59**	**118**	*eP*		**Pn**	**11 05 55.4**	**+3.2**
EDAD	**Golfito**	**5.98**	**123**	*eP*		**Pn**	**11 06 01.1**	**+3.6**
PIRO	**Carate, Puerto**	**5.98**	**126**			**Pn**	**11 06 00.3**	**+2.9**
PIRO	**Carate, Puerto**	**5.98**	**126**	*eP*		**Pn**	**11 06 00.4**	**+2.9**
CMIG	**Matias Romero**	**8.21**	**309**	P		**Pn**	**11 06 31.4**	**+3.4**
	1.3nm,0.3s,baz=153,slow=11,SNR=8.4							
CMIG				S		**Sn**	**11 08 08.2**	**+8.3**
	2.3nm,0.7s,baz=103,slow=19,SNR=1.8							
HBVL	**Hebbronville**	**17.93**	**328**			**P**	**11 08 41.3**	**+2.8**
833A	**Chaparral WMA,**	**19.33**	**329**	P		**Pn**	**11 08 55.7**	**+0.6**
833A				IAmb		IAmb	11 08 57.0	
	comp=Z,26nm,0.7s							
BAUV	**El Baul**	**20.08**	**97**	P		**P**	**11 09 00.8**	**-1.4**
BAUV				IAmb		IAmb	11 09 32.8	
	comp=Z,26nm,1.4s							
HNDO	**Hondo**	**20.27**	**331**	P		Pn	11 09 05.7	-0.6
HNDO				IAmb		IAmb	11 09 06.0	
	comp=Z,10nm,0.7s							
JCT	**Junction City**	**21.31**	**332**	P		**P**	**11 09 16.2**	**+0.7**
BRDY	**Brady**	**21.64**	**334**	P		**P**	**11 09 20.1**	**+1.2**
GOGA	**Godfrey**	**21.78**	**11**	P		**P**	**11 09 21.4**	**+1.0**
GOGA				IAmb		IAmb	11 09 32.7	
	comp=Z,19nm,1.5s							
OZNA	**Ozona**	**22.31**	**330**	P		**P**	**11 09 28.1**	**+1.9**
OZNA				IAmb		IAmb	11 09 29.5	
	comp=Z,14nm,1.1s							
TXAR	**Lajitas Array**	**22.47**	**323**	P		**P**	**11 09 29.4**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=146,slow=12,SNR=19							
	comp=Z,1.2nm,0.7s							
TX31	**Lajitas Ar. Si**	**22.47**	**323**	P		**P**	**11 09 30.6**	**+2.6**
PLPT	**Palo Pinto**	**22.71**	**338**	P		**P**	**11 09 31.1**	**+0.7**
PLPT				IAmb		IAmb	11 09 32.9	
	comp=Z,5.3nm,0.6s							
MIAR	**Mount Ida**	**22.99**	**349**	P		**P**	**11 09 34.6**	**+1.3**
MIAR				IAmb		IAmb	11 09 35.9	
	comp=Z,11nm,0.8s							
WHAR	**Wooly Hollow**	**23.50**	**352**	P		**P**	**11 09 39.4**	**+1.0**
WHAR				IAmb		IAmb	11 09 39.8	
	comp=Z,10nm,1.0s							
TKL	**Tuckaleechee C**	**23.93**	**9**	P		**P**	**11 09 44.0**	**+1.5**
TKL				IAmb		IAmb	11 10 25.0	
	comp=Z,12nm,1.2s							
TKL	**Tuckaleechee C**	**23.93**	**9**	P		**P**	**11 09 43.5**	**+1.1**
	comp=Z,4.9nm,0.9s,baz=206,slow=14,SNR=3.9							
TKL					LR	LR	11 19 46.1	
	comp=Z,35nm,21.3s,baz=156,slow=38							
	comp=Z,4.9nm,0.9s							
FNO	**Franklin**	**24.63**	**342**	P		**P**	**11 09 49.8**	**+0.9**
SADO	**Sadowa**	**33.60**	**12**	LR		LR	11 25 35.7	
	comp=Z,34nm,18.4s,baz=14,slow=37							
F33A	**5 Mile Ranch,**	**34.44**	**350**	P		**P**	**11 11 15.0**	**-0.9**
PDAR	**Pinedale Array**	**35.84**	**333**	P		**P**	**11 11 28.7**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=137,slow=8.8,SNR=3.8							
	comp=Z,0.2nm,0.6s							
SNOW	**Snow King Moun**	**36.92**	**332**	P		**P**	**11 11 38.6**	**+1.0**
SNOW				IAmb		IAmb	11 11 44.4	
	comp=Z,7.4nm,1.3s							
PB02	**IPOC Station P**	**37.67**	**151**	P		**P**	**11 11 41.0**	**-3.0**
ULM	**Lac du Bonnet**	**38.68**	**352**	P		**P**	**11 11 50.5**	**-1.5**
	comp=Z,6.0nm,0.6s,baz=159,slow=11,SNR=4.2							
ULM					LR	LR	11 29 51.2	
	comp=Z,30nm,19.0s,baz=173,slow=39							
	comp=Z,6.0nm,0.6s							
SCHQ	**Schefferville**	**45.95**	**17**	P		**P**	**11 12 49.9**	**-1.3**
	comp=Z,3.9nm,0.8s,baz=261,slow=12,SNR=3.9							
	comp=Z,3.9nm,0.8s							
RES	**Resolute Bay**	**62.81**	**358**	LR		LR

ENTT	**Nioudou**	**0.82**	**254**	*eP*	**Pb**	**11**	**24**	**15.5 +0.5**
ENTT				*eS*	**Sb**	**11**	**24**	**26.3 +0.4**
EAHA	**Aohua**	**0.83**	**230**	*eP*	**Pg**	**11**	**24**	**15.0 -0.1**
EAHA				*eS*	**Sb**	**11**	**24**	**26.3 +0.2**
PCYT	**Pengchaiyu**	**0.83**	**337**	*eP*	**Pg**	**11**	**24**	**14.2 -1.0**
NHDH	**Xindian Distri**	**0.83**	**277**	*eP*	**Pn**	**11**	**24**	**16.0 -0.2**
NHDH				*eS*	**Sg**	**11**	**24**	**26.1 -0.1**
YM08	**YM08**	**0.83**	**293**	P	**Pg**	**11**	**24**	**14.8 -0.5**
YM08				S	**Sg**	**11**	**24**	**26.0 -0.2**
YM01	**YM01**	**0.83**	**290**	*eP*	**Pg**	**11**	**24**	**15.2 -0.1**
YM01				*eS*	**Sg**	**11**	**24**	**25.9 -0.4**
NWLT	**Wulai**	**0.85**	**264**	*eP*	**Pb**	**11**	**24**	**15.9 +0.3**
NWLT				*eS*	**Sg**	**11**	**24**	**26.3 -0.5**
TWY	**Chenhua**	**0.86**	**299**	*eP*	**Pb**	**11**	**24**	**15.4 -0.3**
TWY				*eS*	**Sg**	**11**	**24**	**26.9 -0.3**
ZUZH	**Zhuzihu**	**0.86**	**290**	*eP*	**Pb**	**11**	**24**	**16.2 +0.5**
TATO	**Taipei**	**0.86**	**278**	P	**Pg**	**11**	**24**	**16.3 +0.4**
LATG	**Datong**	**0.89**	**249**	*eP*	**Pg**	**11**	**24**	**16.3 -0.1**
LATG				*eS*	**Sb**	**11**	**24**	**28.3 +0.3**
ANP	**Anpu**	**0.89**	**291**	*eP*	**Pg**	**11**	**24**	**16.7 +0.4**
NTST	**Danshui**	**0.94**	**289**	*eP*	**Pn**	**11**	**24**	**19.2 +1.5**
TWS1	**Kuangyinshan**	**0.95**	**285**	P	**Pg**	**11**	**24**	**17.6 +0.1**
TWS1				S	**Sg**	**11**	**24**	**30.4 +0.4**
YHNB	**Yeheng**	**0.98**	**259**	P	**Pn**	**11**	**24**	**18.3 -0.1**
YHNB	**Yeheng**	**0.98**	**259**	*eP*	**Pb**	**11**	**24**	**17.8 -0.1**
YHNB				*eS*	**Sb**	**11**	**24**	**30.0 -0.6**
NSK	**Sanguang**	**0.99**	**259**	*eP*	**Pb**	**11**	**24**	**18.2 +0.1**
NSK				*eS*	**Sb**	**11**	**24**	**30.4 -0.6**
ETL	**Fush Village**	**1.02**	**227**	P	**Pg**	**11**	**24**	**18.8 0.0**
ETL				S	**Sb**	**11**	**24**	**31.7 0.0**
NACB	**Ninganchiao**	**1.03**	**228**	P	**Pb**	**11**	**24**	**18.3 -0.3**
NACB	**Ninganchiao**	**1.03**	**228**	*eP*	**Pb**	**11**	**24**	**18.2 -0.3**
NACB				*eS*	**Sb**	**11**	**24**	**31.4 -0.5**
NNSB	**Datong**	**1.05**	**246**	*eP*	**Pb**	**11**	**24**	**18.8 -0.3**
NNSB				*eS*	**Sb**	**11**	**24**	**32.4 -0.3**
NNS	**Nan Shan**	**1.05**	**247**	*eP*	**Pb**	**11**	**24**	**19.0 -0.1**
NNS				S	**Sg**	**11**	**24**	**33.0 -0.3**
ETLH	**Xiulin Townshi**	**1.09**	**233**	*eP*	**Pb**	**11**	**24**	**19.5 -0.1**
TWD	**Chiawan**	**1.09**	**224**	*eP*	**Pn**	**11**	**24**	**19.8 0.0**
TWD				*eS*	**Sg**	**11**	**24**	**34.3 -0.2**
NCUH	**Zhongli**	**1.14**	**275**	*eS*	**Sg**	**11**	**24**	**35.9 -0.1**
KSHI	**Guanxi Townshi**	**1.15**	**266**	*eP*	**Pg**	**11**	**24**	**23.4 +2.2**
KSHI				*eS*	**Sn**	**11**	**24**	**37.1 +1.1**
NFF	**Wufeng Townshi**	**1.22**	**259**	*eP*	**Pb**	**11**	**24**	**22.1 +0.2**
NFF				*eS*	**Sb**	**11**	**24**	**37.5 +0.1**
ETM	**Tongmen**	**1.24**	**224**	*eP*	**Pb**	**11**	**24**	**22.4 +0.2**
ETM				*eS*	**Sg**	**11**	**24**	**39.1 -0.1**
FUSS	**Fushou**	**1.25**	**241**	*eS*	**Sg**	**11**	**24**	**39.1 -0.4**
LXIB	**Xiulin Townshi**	**1.25**	**228**	*eP*	**Pb**	**11**	**24**	**22.8 +0.3**
LXIB				*eS*	**Sg**	**11**	**24**	**40.6 +0.9**
WHF	**Hehuan Shan**	**1.28**	**236**	*eP*	**Pb**	**11**	**24**	**23.5 +0.3**
WHF				*eS*	**Sn**	**11**	**24**	**40.0 +0.1**
IRIF	**Iriomote-Funau**	**1.29**	**114**	*eP*	**Pg**	**11**	**24**	**24.2 +0.2**
NSTT	**Nanjuang**	**1.32**	**260**	*i S*	**Sb**	**11**	**24**	**40.1 -0.3**
SHUL	**Shoufeng**	**1.33**	**217**	*eP*	**Pb**	**11**	**24**	**23.8 0.0**
SHUL				*eS*	**Sg**	**11**	**24**	**44.5 +2.3**
ESL	**Shilin**	**1.39**	**221**	*eP*	**Pb**	**11**	**24**	**24.4 -0.3**
OWD	**Renai**	**1.46**	**232**	*eP*	**Pb**	**11**	**24**	**26.1 0.0**
OWD				*eS*	**Sb**	**11**	**24**	**44.9 +0.4**
WHP	**Taichung City**	**1.48**	**247**	*eP*	**Pg**	**11**	**24**	**27.0 -0.5**
WHP				S	**Sb**	**11**	**24**	**45.1 +0.3**
WUSB	**Renai**	**1.48**	**234**	*eP*	**Pb**	**11**	**24**	**26.7 +0.3**
WUSB				*eS*	**Sg**	**11**	**24**	**45.9 -1.0**
WARBT	**Fenglin Townsh**	**1.49**	**220**	*eP*	**Pn**	**11**	**24**	**25.3 0.0**
WARBT				*eS*	**Sn**	**11**	**24**	**44.4 -0.1**
VWDT	**VWDT**	**1.62**	**227**	*eP*	**Pb**	**11**	**24**	**28.2 -0.4**
VWDT				*eS*	**Sb**	**11**	**24**	**49.2 +0.4**
HGSD	**Ruisui**	**1.65**	**214**	*eP*	**Pb**	**11**	**24**	**29.2 +0.1**
HGSD				*eS*	**Sg**	**11**	**24**	**51.5 -0.7**
EHYH	**Wanrong**	**1.69**	**216**	*eP*	**Pn**	**11**	**24**	**28.8 +0.7**
EHYH				*eS*	**Sn**	**11**	**24**	**47.1 -2.3**
EHY	**Hungye**	**1.69**	**217**	*eS*	**Sn**	**11**	**24**	**50.1 +0.6**
SMLT	**Sun Moon Lake**	**1.71**	**235**	*eP*	**Pb**	**11**	**24**	**30.9 +0.7**
SSLB	**Suanglung**	**1.72**	**232**	P	**Pb**	**11**	**24**	**30.3 -0.2**
SSLB	**Suanglung**	**1.72**	**232**	*eP*	**Pb**	**11**	**24**	**30.1 -0.3**
SSLB				*eS*	**Sb**	**11**	**24**	**52.9 +1.0**
TYC	**Yuchr**	**1.73**	**237**	*eP*	**Pb**	**11**	**24**	**31.1 +0.6**
YULB	**Yu-li**	**1.80**	**216**	P	**Pg**	**11**	**24**	**32.7 -0.9**
YULB	**Yu-li**	**1.80**	**216**	*eP*	**Pn**	**11**	**24**	**30.4 +0.9**
YULB				*eS*	**Sn**	**11**	**24**	**51.5 -0.6**
WHYT	**Xinyi Township**	**1.85**	**231**	*eP*	**Pb**	**11**	**24**	**32.2 -0.5**
WHYT				*eS*	**Sg**	**11**	**24**	**58.3 -0.5**
TPUB	**Ta-pu**	**2.27**	**227**	P	**Pb**	**11**	**24**	**38.2 -1.6**
TPUB	**Ta-pu**	**2.27**	**227**	*eP*	**Pb**	**11**	**24**	**38.3 -1.4**
TPUB				*eS*	**Sb**	**11**	**25**	**07.9 +0.3**
WTP	**Ta-pu**	**2.31**	**226**	*eP*	**Pb**	**11**	**24**	**39.5 -1.1**

*IDC **07** 11:31:56.8±1.9,29.°15S×75.°03E,h0km, mb3.8/6, mbtmp3.8/6, MS3.5/11, Error ellipse: s-maj=53.6km s-min=31.3km az=81.0*

ISC 07 11:31:58.4±1.8,29.°2S±0.°2×75.°0E±0.°4,h10km,n27, σ0s52/6,mb3.7/6,MS3.5/11,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**21.53**	**353**	T	T	11 59 13.1	
	baz=175,slow=76,SNR=52						
H08S1	**Diego Garcia H**	**21.53**	**353**	T	T	11 59 06.5	
	baz=175,slow=76,SNR=47						
H08S3	**Diego Garcia H**	**21.55**	**353**	T	T	11 59 02.5	
	baz=175,slow=76,SNR=48						
H04N2	**CROZET ISLANDS**	**24.89**	**221**	T	T	12 03 12.4	
	baz=56,slow=74,SNR=276						
H04N1	**CROZET ISLANDS**	**24.91**	**221**	T	T	12 03 08.8	
	baz=56,slow=74,SNR=252						
H04N3	**CROZET ISLANDS**	**24.91**	**221**	T	T	12 03 15.3	
	baz=56,slow=74,SNR=228						
H04S1	**CROZET ISLANDS**	**25.23**	**219**	T	T	12 03 36.2	
	baz=53,slow=76,SNR=25						
H04S3	**CROZET ISLANDS**	**25.24**	**219**	T	T	12 03 35.2	
	baz=53,slow=76,SNR=32						
H04S2	**CROZET ISLANDS**	**25.25**	**219**	T	T	12 03 34.2	
	baz=53,slow=76,SNR=34						
H01W2	**Cape Leeuwin H**	**33.48**	**110**	T	T	12 13 52.3	
	baz=269,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**33.48**	**110**	T	T	12 13 49.8	
	baz=269,slow=74,SNR=13						
H01W1	**Cape Leeuwin H**	**33.50**	**110**	T	T	12 13 52.7	
	baz=269,slow=74,SNR=12						
PALK	**Pallekele**	**36.63**	**9**	LR	LR	11 52 18.0	
	comp=Z,52nm,18.1s,baz=202,slow=33						
MAW	**Mawson**	**39.16**	**187**	LR	LR	11 52 00.4	
	comp=Z,47nm,18.0s,baz=329,slow=31						
PSI	**Prapat**	**39.17**	**40**	LR	LR	11 51 42.9	
	comp=Z,87nm,19.6s,baz=183,slow=30						
BOSA	**Boshof**	**43.33**	**258**	LR	LR	11 54 43.5	
	comp=Z,70nm,18.5s,baz=34,slow=32						
LBTB	**Lobatse**	**43.96**	**263**	LR	LR	11 55 20.8	
	comp=Z,56nm,18.4s,baz=86,slow=32						
LSZ	**Lusaka**	**45.23**	**277**	LR	LR	11 55 50.6	
	comp=Z,56nm,19.2s,baz=150,slow=32						
ASAR	**Alice Springs**	**52.54**	**99**	P	**P**	**11 41 12.4**	**0.0**
	1.1nm,1.1s,baz=251,slow=8.0,SNR=3.6						
ASAR				LR	LR	12 00 33.1	
	comp=Z,43nm,19.1s,baz=192,slow=33 1.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**52.66**	**29**	P	**P**	**11 41 13.7**	**+0.6**
	0.3nm,0.3s,baz=194,slow=7.7,SNR=1.4						
CMAR				LR	LR	12 00 42.5	
	comp=Z,24nm,19.9s,baz=175,slow=33 0.3nm,0.3s						
BRDH	**Bariadhala**	**53.96**	**19**	LR	LR	11 59 52.7	
	comp=Z,61nm,20.9s,baz=215,slow=31						
WRA	**Warramunga Arr**	**54.23**	**95**	P	**P**	**11 41 24.6**	**-0.1**
	1.4nm,1.0s,baz=252,slow=7.4,SNR=6.2 1.4nm,1.0s						
STKA	**Stephens Creek**	**56.58**	**111**	P	**P**	**11 41 41.2**	**-0.3**
	4.1nm,0.8s,baz=278,slow=7.1,SNR=4.5 4.1nm,0.8s						
SNAA	**Sanae**	**58.81**	**201**	LR	LR	12 02 13.6	
	comp=Z,34nm,20.3s,baz=14,slow=31						
VNDA	**Vanda**	**61.07**	**166**	P	**P**	**11 42 12.3**	**+0.3**
	0.6nm,0.9s,baz=283,slow=9.3,SNR=6.3 0.6nm,0.9s						
MKAR	**Makanchi Array**	**75.88**	**5**	P	**P**	**11 43 44.3**	**-0.5**
	0.5nm,0.8s,baz=182,slow=7.2,SNR=2.7 0.5nm,0.8s						
JNU	**Nakatsue**	**81.45**	**45**	LR	LR	12 17 04.4	
	comp=Z,37nm,21.4s,baz=238,slow=33						

*SDD **07** 11:34:06.7±1.5, 19.°15N×67.°21W, h31km±45km, MD3.5, ML2.5, MW2.9*

*RSPR **07** 11:34:08.7, 19.°07N×67.°23W, h10km±31km*

ISC 07 11:34:07.5±1.5,19.°06N±0.°07×67.°24W±0.°04,h31km±11km, n33,σ0s88/40,17C-10D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.60**	**168**	*eP*	**Pb**	**11 34 19.2**	**-0.6**
AGPR				*eS*	**Sb**	**11 34 28.9**	**+0.8**
AGPR				IAML		11 34 32.6	
	comp=N,208nm,0.2s						
AGPR	**Aguadilla, PR**	**0.60**	**168**	*eP*	**Pb**	**11 34 18.9**	**-0.8**
AGPR	**Aguadilla, PR**	**0.60**	**168**	*eS*	**Sb**	**11 34 28.5**	**+0.5**
IDE	**Isla Desecheo**	**0.71**	**198**	*eP*	**Pn**	**11 34 21.1**	**-0.4**
IDE	**Isla Desecheo**	**0.71**	**198**	*eS*	**Sb**	**11 34 32.5**	**+1.6**
PRSN	**Puerto Rico Se**	**0.85**	**174**	*eP*	**Pn**	**11 34 22.2**	**-1.1**
PRSN				*eSg*	**Sn**	**11 34 35.5**	**+0.7**
PRSN				IAML		11 34 43.1	
	comp=N,304nm,0.2s						
AOPR	**Arecibo Observ**	**0.85**	**147**	*eP*	**Pn**	**11 34 22.0**	**-1.5**
AOPR				*eSg*	**Sn**	**11 34 35.0**	**+0.1**
AOPR	**Arecibo Observ**	**0.85**	**147**	*eP*	**Pn**	**11 34 22.0**	**-1.5**
AOPR	**Arecibo Observ**	**0.85**	**147**	*eS*	**Sn**	**11 34 34.5**	**-0.4**
EMPR	**Esperanza - Ma**	**0.89**	**131**	*eP*	**Pb**	**11 34 24.6**	**+0.1**
EMPR	**Esperanza - Ma**	**0.89**	**131**	*eS*	**Sn**	**11 34 36.1**	**+0.2**
LSP	**Las Mesas**	**0.90**	**171**	*eP*	**Pn**	**11 34 23.5**	**-0.6**
LSP	**Las Mesas**	**0.90**	**171**	*eS*	**Sn**	**11 34 36.1**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.94**	**149**	*eP*	**Pb**	**11 34 25.7**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.94**	**149**	*eS*	**Sn**	**11 34 37.9**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.06**	**173**	*eP*	**Pn**	**11 34 25.4**	**-0.9**
CRPR				*eSg*	**Sn**	**11 34 40.4**	**+0.4**
CRPR				IAML		11 34 49.5	
	comp=N,68nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.06**	**173**	*eP*	**Pn**	**11 34 25.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.06**	**173**	*eS*	**Sn**	**11 34 40.4**	**+0.4**
MLPR	**Magueyes Islan**	**1.10**	**170**	*eP*	**Pn**	**11 34 26.9**	**0.0**
MLPR				*eSg*	**Sn**	**11 34 41.5**	**+0.3**
MLPR				IAML		11 34 41.8	
	comp=N,20nm,0.4s						
MLPR	**Magueyes Islan**	**1.10**	**170**	*eP*	**Pn**	**11 34 26.5**	**-0.4**
MLPR	**Magueyes Islan**	**1.10**	**170**	*eS*	**Sn**	**11 34 42.0**	**+0.8**
ECPR	**Experimental S**	**1.11**	**132**	*eP*	**Pn**	**11 34 27.2**	**+0.1**
ECPR	**Experimental S**	**1.11**	**132**	*eS*	**Sb**	**11 34 42.7**	**+0.3**
OBIP	**Obispado Ponce**	**1.18**	**149**	*eP*	**Pn**	**11 34 27.5**	**-0.5**
OBIP	**Obispado Ponce**	**1.18**	**149**	*eS*	**Sn**	**11 34 43.4**	**+0.4**
GCPR	**Guaynabo City**	**1.33**	**124**	*eP*	**Pn**	**11 34 28.9**	**-1.1**
GCPR	**Guaynabo City**	**1.33**	**124**	*eS*	**Sn**	**11 34 47.0**	**+0.4**
HIDR	**Higuey Centro**	**1.48**	**252**	*eP*	**Pn**	**11 34 31.8**	**-0.2**
HIDR				*eSg*	**Sn**	**11 34 51.6**	**+1.3**
HIDR				IAML		11 35 24.3	
	comp=N,147nm,0.1s						
HUMP	**Col San Antoni**	**1.60**	**125**	*eP*	**Pn**	**11 34 34.1**	**+0.3**
HUMP	**Col San Antoni**	**1.60**	**125**	*eS*	**Sn**	**11 34 54.8**	**+1.3**
MIDR	**Miches**	**1.71**	**268**	*eP*	**Pn**	**11 34 36.1**	**+0.8**
MIDR				IAML		11 35 21.1	
	comp=N,41nm,1.9s						
MIDR	**Miches**	**1.71**	**268**	*eP*	**Pb**	**11 34 37.1**	**-1.3**
HATOM	**Hato Mayor del**	**2.05**	**263**	*eP*	**Pn**	**11 34 41.5**	**+1.5**
HATOM				*eSg*	**Sb**	**11 35 07.3**	**-1.9**
HATOM				IAML		11 35 30.6	
	comp=N,24nm,1.7s						

*IDC **07** 11:43:50.4±11.0, 0.°82N×98.°49E, h153km±67km, mb3.3/3, mbtmp3.8/3, MS3.6/1, Error ellipse: s-maj=240.5km s-min=22.5km az=55.0*

*DJA **07** 11:43:55.3±0.6, 2.°N±4.°×10.°0E±.°, h171km±5km, M3.6/10, MLv3.6/10*

ISC 07 11:43:55.3±1.0,1.°64N±0.°07×99.°6E±0.°1,h166km,n16, σ1s14/14,mb3.4/3,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.84**	**184**	P	**Pn**	**11 44 22.3**	**+1.9**
MNSI				S	**Sn**	**11 44 41.4**	**+1.6**
PSI	**Prapat**	**1.36**	**328**	P	**Pn**	**11 44 24.9**	**0.0**
	15nm,0.3s,baz=187,slow=12,SNR=8.8						
PSI				S	**Sn**	**11 44 45.7**	**-2.0**
	10nm,0.5s,baz=359,slow=21,SNR=3						
GSI	**Gunungsitoli**	**2.09**	**261**	P	**Pn**	**11 44 33.0**	**+0.6**
PBSI	**Pulau Batu**	**2.16**	**219**	P	**Pn**	**11 44 33.2**	**-0.1**
KCSI	**Kotacane, Aceh**	**2.65**	**315**	P	**Pn**	**11 44 39.4**	**+0.4**
SISI	**Saibi**	**2.99**	**191**	P	**Pn**	**11 44 42.4**	**-0.8**
SNSI	**Sinabang, Aceh**	**3.40**	**283**	P	**Pn**	**11 44 48.4**	**+0.1**
MLSI	**Meulaboh, Aceh**	**4.16**	**309**	P	**Pn**	**11 44 58.3**	**+0.3**
PPSI	**Pulau Pagai**	**4.38**	**175**	P	**Pn**	**11 44 59.4**	**-1.6**
H08S2	**Diego Garcia H**	**28.61**	**251**	T	T	12 16 54.6	
	baz=71,slow=75,SNR=3.9						
H08S3	**Diego Garcia H**	**28.61**	**251**	T	T	12 17 19.8	
	baz=71,slow=75,SNR=4.3						
H08S1	**Diego Garcia H**	**28.63**	**251**	T	T	12 17 00.3	
	baz=71,slow=75,SNR=4.6						
WRA	**Warramunga Arr**	**40.22**	**124**	P	**P**	**11 51 16.4**	**+0.4**
	1.4nm,0.3s,baz=299,slow=8.1,SNR=39 1.4nm,0.3s						
ASAR	**Alice Springs**	**41.74**	**129**	P	**P**	**11 51 28.1**	**-0.2**
	0.2nm,0.4s,baz=300,slow=7.3,SNR=6.9 0.2nm,0.4s						
MKAR	**Makanchi Array**	**47.46**	**344**	P	**P**	**11 52 13.3**	**0.0**
	0.4nm,0.4s,baz=161,slow=9.1,SNR=5.5 0.4nm,0.4s						
HILR	**Hailar Array B**	**50.74**	**17**	LR	LR	12 15 34.7	
	comp=Z,63nm,20.8s,baz=210,slow=37						

*UPP **07** 11:44:08.6±2.9, 63.°02N×27.°43E, h0km, ML1.8, Presumed earthquake*

HEL 07 11:44:06.7±0.1,63.°10N×27.°70E,h0km,ML1.8, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.29**	**9**	PG	Pg	11 44 11.9	-0.4
NIF				SG	Sg	11 44 14.4	-1.6
SUF	**Sumiainen**	**0.81**	**242**	PG	Pg	11 44 22.2	0.0
	baz=60						
SUF				smax	smax	11 44 31.9	
	comp=Z,6.5nm,0.2s						
SUF				SB	Sg	11 44 32.8	+0.2
KAF	**Kangasniemi**	**1.19**	**214**	PG	Pg	11 44 26.2	-3.1
KAF				smax	smax	11 44 42.7	
	comp=Z,23nm,0.2s						
RMF	**Romuvaara**	**1.50**	**41**	PG	Pn	11 44 33.9	-0.9
RMF				smax	smax	11 44 51.5	
	comp=Z,9.1nm,0.2s						
RMF				SN	Sb	11 44 54.9	0.0
KEF	**Keuruu**	**1.61**	**236**	*eP*	Pn	11 44 28.4	-7.9
KEF	**Keuruu**	**1.61**	**236**	PG	Pn	11 44 34.8	-1.5
KEF				smax	smax	11 44 54.9	
	comp=Z,8.7nm,0.2s						
JOF	**Joensuu**	**1.66**	**95**	*eP*	Pn	11 44 36.2	-0.7
JOF	**Joensuu**	**1.66**	**95**	PG	Pn	11 44 36.4	-0.6
	baz=275						
JOF				SN	Sn	11 44 57.6	-1.3
RUF	**Ruokolahti**	**1.78**	**160**	PG	Pn	11 44 38.7	0.0
	baz=341						
RUF				smax	smax	11 44 59.8	
	comp=Z,5.3nm,0.2s						
FIA0	**FINESS Array S**	**1.83**	**205**	PB	Pn	11 44 36.8	-2.6
FIA0				smax	smax	11 45 01.1	
	comp=Z,7.7nm,0.2s						
FIA0				SG	Sb	11 45 04.7	+0.3
OUF	**Merijarvi**	**1.83**	**315**	PG	Pn	11 44 39.8	+0.4
	baz=132						
OUF				smax	smax	11 45 01.4	
	comp=Z,6.3nm,0.2s						
OBF4	**Vikkela, Lumij**	**2.07**	**327**	PG	Pb	11 44 44.2	-0.8
OBF4				smax	smax	11 45 08.1	
	comp=Z,4.8nm,0.2s						
OBF0	**Syolatti, Pyha**	**2.08**	**314**	PG	Pb	11 44 44.1	-1.1
OBF0				smax	smax	11 45 08.4	
	comp=Z,5.2nm,0.2s						
OUL	**Oulu**	**2.14**	**339**	PG	Pn	11 44 44.9	+1.2
	baz=156						
OUL				SG	Sb	11 45 13.2	-0.2
OBF8	**Ulkokalla**	**2.26**	**305**	PG	Pb	11 44 46.9	-1.4
	baz=126						
OBF8				smax	smax	11 45 13.6	
	comp=Z,4.8nm,0.2s						
OBF8				SG	Sg	11 45 18.4	-0.8
VAF	**Ylistaro**	**2.29**	**271**	*eP*	Pn	11 44 43.0	-2.6
VAF	**Ylistaro**	**2.29**	**271**	PG	Pb	11 44 47.8	-1.1
	baz=89						
VAF				SN	Sn	11 45 11.6	-3.0
VAF				smax	smax	11 45 14.6	
	comp=Z,5.9nm,0.2s						
VJF	**Virojoki**	**2.58**	**182**	SB	Sn	11 45 21.9	+0.4
VJF				smax	smax	11 45 22.6	
	comp=Z,5.4nm,0.2s						
KU1	**Kurvinen**	**2.60**	**17**	PB	Pn	11 44 51.7	+1.7
KU1				SG	Sb	11 45 25.4	-1.2
KU2	**Taivalkoski**	**2.63**	**5**	PG	Pb	11 44 52.9	-1.7
KU2				SG	Sb	11 45 26.6	-0.8
MSF	**Maaselka**	**2.88**	**11**	PB	Pn	11 44 55.0	+1.3
MSF				SB	Sn	11 45 30.6	+1.5
KPF	**Kankaanpaa**	**2.91**	**247**	PN	Pn	11 44 53.2	-1.0
KPF				smax	smax	11 45 32.2	
	comp=Z,2.3nm,0.2s						
KU6	**Riekki**	**3.08**	**17**	PB	Pn	11 44 58.4	+1.9
	baz=194						
KU6				smax	smax	11 45 37.4	
	comp=Z,1.6nm,0.2s						
KU6				SB	Sb	11 45 38.5	-1.9
BURU	**Burvik**	**3.17**	**301**	P	Pn	11 44 59.3	+1.5
	baz=79						
BURU				S	Sn	11 45 36.4	+0.1
BURU	**Burvik**	**3.17**	**301**	PG	Pb	11 45 03.4	-0.4
HEL1	**Helsinki**	**3.23**	**206**	SN	Sn	11 45 36.0	-1.7
UMAU	**Umeaa**	**3.25**	**287**	P	Pn	11 44 59.5	+0.7
UMAU	**Umeaa**	**3.25**	**287**	PN	Pn	11 45 00.2	+1.4
UMAU				SB	Sn	11 45 41.6	+3.5
MEF	**Metsahovi**	**3.30**	**210**	*eP*	Pn	11 44 54.4	-5.1
OLKF	**Oulanka, Finla**	**3.31**	**12**	PB	Pb	11 45 03.3	-3.0
OLKF				SG	Sb	11 45 47.2	+0.2
TOF	**Tornio**	**3.33**	**336**	SB	Sn	11 45 43.1	+3.1
KALU	**Kalix**	**3.35**	**328**	P	Pn	11 45 02.0	+1.9
KALU	**Kalix**	**3.35**	**328**	SB	Sn	11 45 43.8	+3.2
ODEU	**Stanfors**	**3.37**	**296**	P	Pn	11 45 01.2	+0.7
RAF	**Rauma**	**3.49**	**236**	*eP*	Pn	11 44 57.2	-4.9
RAF	**Rauma**	**3.49**	**236**	PN	Pn	11 45 01.7	-0.4
RNF	**Rovaniemi**	**3.59**	**349**	SG	Sb	11 45 54.3	-0.8
PAJU	**Pajala**	**4.39**	**336**	PN	Pn	11 45 16.1	+1.6

*KOLA **07** 11:45:46.9, 68.°13N×33.°19E, h0km, ML1.9, Error ellipse: s-maj=2.6km s-min=1.8km az=80.0, Olenegorsk City, Mines*

HEL 07 11:45:46.1±0.3,68.°19N×33.°19E,h0km,ML1.4, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.59**	**187**	P	Pg	11 45 56.1	-1.2
APA0				S	Sg	11 46 03.4	-1.6
APA0	**Apatity Array**	**0.59**	**187**	P	Pg	11 45 57.3	0.0
LVZ	**Lovozero**	**0.62**	**117**	P	Pg	11 45 57.3	-0.7
LVZ				S	Sg	11 46 05.0	-0.9
LVZ	**Lovozero**	**0.62**	**117**	PG	Pg	11 45 57.8	-0.2
LVZ				SG	Sg	11 46 04.6	-1.5
APA	**Apatity**	**0.63**	**172**	S	Sg	11 46 04.8	-1.3
TERR	**Teriberka**	**1.24**	**34**	P	Pg	11 46 09.0	-0.8
TERR				S	Sb	11 46 27.0	+0.3
VRF	**Varrio**	**1.42**	**254**	PG	Pn	11 46 11.8	-1.3
	baz=68						
VRF				smax	smax	11 46 28.9	
	comp=Z,4.1nm,0.2s						
VRF				SG	Sg	11 46 29.8	-1.8
KVDA	**Kovda**	**1.51**	**185**	P	Pn	11 46 13.7	-0.6
KVDA				S	Sg	11 46 32.0	-2.5
RAJF	**Raja-Jooseppi**	**1.83**	**281**	PG	Pn	11 46 18.0	+0.1
RAJF				SG	Sn	11 46 42.2	-0.4
VADS	**Vadso**	**2.38**	**327**	P	Pb	11 46 28.0	-1.7
VADS				S	Sb	11 46 58.2	-1.2
KU6	**Riekki**	**2.53**	**212**	smax	smax	11 47 00.7	
	comp=Z,1.2nm,0.2s						
KU6				SG	Sb	11 47 02.6	-1.2
KEV	**Kevo**	**2.73**	**308**	PB	Pn	11 46 32.5	+1.4
KEV				SG	Sb	11 47 09.3	-0.3
MSF	**Maaselka**	**2.81**	**217**	SB	Sb	11 47 10.3	-1.5
ARA0	**ARCESS Array S**	**3.09**	**299**	PN	Pn	11 46 36.6	+0.

TVF	**Tvarminne**	**0.98**	**106**	*e*P		**Pg**	**12 00 23.4**	**+0.1**
TVF					smax	smax	12 00 37.5	
	comp=Z,11nm,0.1s							
EE06	**Soera, Palade,**	**1.38**	**147**	*e*P		**Pg**	**12 00 30.6**	**-0.3**
GRAU	**Graesoe**	**1.43**	**280**	P		**Pg**	**12 00 32.2**	**+0.4**
GRAU	**Graesoe**	**1.43**	**280**	P		**Pg**	**12 00 32.2**	**+0.4**
NRTU	**Norrtaelje**	**1.46**	**253**	P		**Pg**	**12 00 32.6**	**+0.3**
NRTU	**Norrtaelje**	**1.46**	**253**	P		**Pg**	**12 00 32.6**	**+0.3**
NRTU	**Norrtaelje**	**1.46**	**253**	*e*P		**Pg**	**12 00 32.6**	**+0.3**
NRTU					smax	smax	12 00 56.0	
	comp=Z,24nm,0.1s							
MEF	**Metsahovi**	**1.51**	**85**	*e*P		**Pg**	**12 00 33.8**	**+0.4**
MEF	**Metsahovi**	**1.51**	**85**	*e*P		**Pb**	**12 00 33.6**	**+0.3**
FORU	**Forsmark**	**1.62**	**281**	P		**Pb**	**12 00 35.2**	**+0.1**
FORU	**Forsmark**	**1.62**	**281**	P		**Pb**	**12 00 35.2**	**+0.1**
NUR	**Nurmijarvi**	**1.67**	**75**	*e*P		**Pb**	**12 00 36.2**	**+0.2**
KPF	**Kankaanpaa**	**1.75**	**11**	*e*P		**Pg**	**12 00 38.3**	**+0.4**
KPF				*e*SN		**Sg**	**12 01 02.3**	**+1.9**
NYNU	**Nynaeshamn**	**2.06**	**238**	P		**Pb**	**12 00 42.6**	**+0.1**
NYNU	**Nynaeshamn**	**2.06**	**238**	P		**Pb**	**12 00 42.6**	**+0.1**
IGGU	**Iggoen**	**2.15**	**292**	P		**Pb**	**12 00 44.9**	**+0.7**
IGGU	**Iggoen**	**2.15**	**292**	P		**Pb**	**12 00 44.9**	**+0.7**
PVF	**Pernaja**	**2.27**	**77**	*e*PG		**Pb**	**12 00 46.6**	**+0.5**
ARNU	**Arnoeviken**	**2.51**	**310**	*e*P		**Pb**	**12 00 49.8**	**-0.4**
SLIT	**Slitere, Latvi**	**2.55**	**169**	*e*P		**Pn**	**12 00 48.7**	**+1.7**
SLIT	**Slitere, Latvi**	**2.55**	**169**	*e*P		**Pn**	**12 00 48.5**	**+1.5**
FINES	**FINESS Array B**	**2.66**	**58**	Pn		**Pb**	**12 00 52.6**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=246,slow=14,SNR=30							
FINES				Sn		**Sb**	**12 01 25.5**	**-0.3**
	comp=Z,2.5nm,0.3s,baz=247,slow=21,SNR=19							
	comp=Z,2.5nm,0.2s							
KEF	**Keuruu**	**2.66**	**38**	*e*P		**Pn**	**12 00 50.1**	**+1.6**
VAF	**Ylistaro**	**2.99**	**11**	*e*P		**Pn**	**12 00 54.6**	**+1.6**
HFS	**Hagfors**	**3.84**	**273**	Pn		**Pn**	**12 01 07.4**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=89,slow=17,SNR=9.6							
HFS				Lg		Lg	12 02 04.6	
	comp=Z,0.6nm,0.3s,baz=87,slow=31,SNR=7.5							
	comp=Z,2.1nm,1.1s							
NOA	**NORSAR Array B**	**5.09**	**285**	Pn		**Pn**	**12 01 23.8**	**+1.8**
	baz=98,slow=13,SNR=1.5							
NOA				Sn		**Sn**	**12 02 18.7**	**-2.8**
	baz=112,slow=19,SNR=1.4							
NOA				Lg		Lg	12 02 40.5	
	comp=Z,0.1nm,0.3s,baz=79,slow=18,SNR=4.2							
	comp=Z,0.2nm,0.4s							
ARCES	**ARCESS Array B**	**9.61**	**9**	Pn		**Pn**	**12 02 24.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=13							
ARCES				Sn		**Sn**	**12 04 05.8**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=191,slow=23,SNR=1.4							
	comp=Z,0.5nm,0.5s							

*IDC **07** 12:23:28.8±6.8, 20.°70S×178.°40W, h457km±68km, mb3.1/5, mbtmp3.9/6, Error ellipse: s-maj=45.1km s-min=26.3km az=39.0*
*NEIC **07** 12:23:39.7±1.0, 21.°2S±0.°3×178.°7W±0.°1, h553km±23km, mb4.1/18, Error ellipse: s-maj=39.4km s-min=14.3km az=195.0*
ISC 07 12:23:39.7±1.0, 21.°2S±0.°1×178.°7W±0.°1, h579km, n31, σ1§66/33, mb4.1/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**317**	P	**P**	**12 25 06.1**	**-2.7**
MARNC	**Mare, Loyalty**	**12.42**	**266**	P	**P**	**12 26 21.2**	**-1.5**
PINNC	**Pines Island,**	**12.99**	**261**	P	**P**	**12 26 27.5**	**-1.0**
DZM	**Mont Dzumac**	**13.89**	**264**	P	**P**	**12 26 36.5**	**-1.4**
	5.0nm,0.9s,baz=16,slow=12,SNR=2.5						
URZ	**Urewera**	**17.39**	**191**	P	**P**	**12 27 08.4**	**-2.1**
	2.8nm,0.7s,baz=6.5,slow=5.6,SNR=2.3						
URZ				S	**S**	**12 29 56.9**	**-5.1**
	0.7nm,0.3s,baz=122,slow=18,SNR=3.3						
THZ	**Tophouse**	**21.71**	**197**	P	**P**	**12 27 49.4**	**-0.2**
EIDS	**Eidsvold**	**28.08**	**256**	P	**P**	**12 28 46.5**	**+0.4**
EIDS				IAmb	IAmb	12 28 47.6	
	comp=Z,6.8nm,1.3s						
ARMA	**Armidale**	**28.22**	**245**	P	**P**	**12 28 48.1**	**+0.8**
ARMA				IAmb	IAmb	12 28 57.5	
	comp=Z,12nm,1.1s						
TOO	**Toolangi**	**35.00**	**234**	P	**P**	**12 29 44.5**	**-0.2**
STKA	**Stephens Creek**	**36.94**	**245**	P	**P**	**12 30 01.6**	**+0.8**
COEN	**Coen**	**37.03**	**275**	P	**P**	**12 30 03.2**	**+1.4**
INKA	**Innaminka**	**37.41**	**252**	P	**P**	**12 30 05.9**	**+1.2**
INKA				IAmb	IAmb	12 30 26.2	
	comp=Z,3.5nm,1.1s						
WR0	**Warramunga Arr**	**43.72**	**263**	P	**P**	**12 30 54.9**	**0.0**
WR0				IAmb	IAmb	12 31 12.4	
	comp=Z,8.5nm,1.4s						
WR8	**Warramunga Arr**	**43.76**	**263**	P	**P**	**12 30 55.2**	**0.0**
WR8				IAmb	IAmb	12 31 05.2	
	comp=Z,8.9nm,1.4s						
AS31	**Alice Springs**	**43.77**	**258**	P	**P**	**12 30 55.9**	**+0.6**
ASAR	**Alice Springs**	**43.77**	**258**	P	**P**	**12 30 55.4**	**+0.1**
	comp=Z,3.4nm,0.6s,baz=95,slow=7.9,SNR=72						
ASAR				PcP	**PcP**	**12 32 29.9**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=99,slow=3.5,SNR=5.5						
	comp=Z,3.4nm,0.6s						
WB0	**Warramunga Arr**	**43.89**	**263**	P	**P**	**12 30 56.5**	**+0.2**
WB0				IAmb	IAmb	12 31 20.8	
	comp=Z,9.3nm,1.4s						
WB2	**Warramunga Arr**	**43.90**	**263**	P	**P**	**12 30 56.3**	**0.0**
WB2				IAmb	IAmb	12 31 30.3	
	comp=Z,8.3nm,1.4s						
WRAB	**Tennant Creek**	**43.90**	**263**	P	**P**	**12 30 56.3**	**0.0**
WRAB				IAmb	IAmb	12 31 04.1	
	comp=Z,5.6nm,1.4s						
WRA	**Warramunga Arr**	**43.91**	**263**	P	**P**	**12 30 56.3**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=97,slow=7.5,SNR=89						
WRA				PcP	**PcP**	**12 32 29.8**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=105,slow=3.2,SNR=1.4						
	comp=Z,0.9nm,0.3s						
MTN	**Manton Dam**	**48.57**	**271**	P	**P**	**12 31 31.8**	**+0.1**
MTN				IAmb	IAmb	12 32 12.4	
	comp=Z,9.1nm,1.1s						
KNRA	**Kununurra**	**50.02**	**267**	P	**P**	**12 31 42.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**52.34**	**263**	P	**P**	**12 31 59.8**	**+0.8**
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**12 33 49.7**	**+2.7**
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**12 33 50.6**	**+3.7**
	comp=Z,0.4nm,0.6s,baz=169,slow=0.4,SNR=6.5						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**89.13**	**13**	P	**P**	**12 35 32.3**	**-1.3**
	comp=Z,0.2nm,0.9s,baz=203,slow=4.2,SNR=1.8						
	comp=Z,0.2nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.78**	**290**	P	**P**	**12 35 40.2**	**+2.5**
	comp=Z,0.4nm,0.4s,baz=124,slow=3.3,SNR=4.1						
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**129.50**	**349**	PKP	**PKPdf**	**12 41 42.5**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=75,slow=3.8,SNR=2.4						
HFS	**Hagfors**	**140.13**	**350**	PKhKP	PKPpre	12 41 56.7	
	comp=Z,0.6nm,0.3s,baz=45,slow=2.2,SNR=1.6						
AKASG	**Malin Array Be**	**143.32**	**330**	PKP	**PKPdf**	**12 42 06.6**	**-2.0**
	comp=Z,2.3nm,0.5s,baz=48,slow=3.9,SNR=8.4						
BRTR	**Keskin Array B**	**146.85**	**311**	PKPbc	**PKPbc**	**12 42 18.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=344,slow=2.9,SNR=2.4						

IDC 07 12:27:15.2±2.3, 50.°34N×27.°66E, h0km, mbtmp3.8/3, ML2.8/3, Error ellipse: s-maj=22.2km s-min=11.3km az=21.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**1.06**	**69**	Pg	Pg	12 27 35.5	-0.1
	14nm,0.3s,baz=252,slow=18,SNR=25						
AKASG				Lg	Lg	12 27 50.9	
	13nm,0.3s,baz=250,slow=31,SNR=18						
AKASG				Rg	Rg	12 27 55.4	
	54nm,1.0s,baz=253,slow=36,SNR=9.0						
FINES	**FINESS Array B**	**11.17**	**356**	Pn	Pn	12 29 50.5	-5.5
	0.1nm,0.3s,baz=174,slow=14,SNR=4.7						
	15nm,1.3s						
HFS	**Hagfors**	**12.61**	**326**	Pn	Pn	12 30 09.3	-6.4
	0.1nm,0.3s,baz=134,slow=14,SNR=1.4						
	0.8nm,0.6s						
ARCES	**ARCESS Array B**	**19.29**	**358**	Pn	P	12 31 33.8	-7.4
	0.1nm,0.3s,baz=170,slow=11,SNR=1.8						
	1.1nm,0.8s						

*NEIC **07** 12:38:59.0±1.2, 35.°744N×0.°010×117.°59W±0.°02, h10km±1km, Error ellipse: s-maj=2.9km s-min=2.6km az=218.0*
PAS 07 12:38:59.6±1.1, 35.°748N×0.°006×117.°59W±0.°01, h9km±6km, ML3.5/147, ML3.2/148(NEIC), Error ellipse: s-maj=1.6km s-min=0.8km az=108.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLC	**China Lake**	**0.07**	**357**	Pg	Pg	12 39 01.8	+0.1
CLC				IAML		12 39 03.6	
	comp=N,23μm,0.2s						
GPO	**China Lake**	**0.11**	**210**		Pg	12 39 02.5	+0.2
GPO					Sg	12 39 05.2	+1.0
SRTC	**Snort**	**0.14**	**246**		Pg	12 39 03.1	+0.4
SRTC					Sg	12 39 06.3	+1.5
TOW	**Tower One**	**0.15**	**294**		Pg	12 39 03.4	+0.4
TOW					Sg	12 39 06.8	+1.6
WSHM	**Spangler Hills**	**0.17**	**151**		Pg	12 39 03.2	0.0
WSHM					Sg	12 39 06.0	+0.4
WSHM	**Spangler Hills**	**0.17**	**151**	IAML		12 39 06.3	
	comp=N,14μm,0.2s						
WSHM				IAML		12 39 07.2	
	comp=N,14μm,0.1s						
WNMM	**Nine Mile Cany**	**0.27**	**291**		Pg	12 39 05.0	0.0
WNMM					Sg	12 39 09.1	+0.4
WVPM	**Volcano Peak E**	**0.27**	**318**		Pg	12 39 05.0	-0.2
WVPM					Sg	12 39 09.1	+0.3
LRMC	**Laurel Mtn Rad**	**0.28**	**195**	Pg	Pg	12 39 05.1	-0.1
LRMC				IAML		12 39 09.8	
	comp=N,6μm,0.2s						
LRMC				IAML		12 39 10.0	
	comp=E,6μm,0.2s						
CCCA	**Chr Cany lake**	**0.29**	**140**		Pg	12 39 05.7	+0.3
CCCA					Sg	12 39 10.3	+1.0
CCCA	**Chr Cany lake**	**0.29**	**140**	IAML		12 39 10.6	
	comp=N,14μm,0.2s						
CCCA				IAML		12 39 12.6	
	comp=E,14μm,0.3s						
JRC2	**Joshua Ridge**	**0.29**	**323**		Sg	12 39 09.5	+0.1
WCSM	**Coso Springs S**	**0.31**	**333**		Pg	12 39 05.7	-0.2
WCSM					Sg	12 39 10.0	0.0
WRVM	**Rose V. Centra**	**0.35**	**317**		Pg	12 39 06.4	-0.2
WRVM					Sg	12 39 11.3	0.0
MFS	**McCloud Flat S**	**0.43**	**330**		Pg	12 39 07.8	-0.3
MFS					Sg	12 39 12.9	-0.8
WBSM	**Bird Springs**	**0.49**	**245**		Sg	12 39 15.7	0.0
DTP	**Desert Tortois**	**0.52**	**203**		Pg	12 39 09.2	-0.5
DTP					Sg	12 39 16.3	-0.3
WORM	**Onyx Ranch**	**0.53**	**265**		Pg	12 39 09.4	-0.5
WORM					Sg	12 39 16.4	-0.5
WHFM	**Hanning Flat**	**0.62**	**265**		Pg	12 39 11.1	-0.5
WHFM					Sg	12 39 19.5	-0.2
QSM	**Queen of Sheba**	**0.63**	**70**		Pg	12 39 11.2	-0.5
QSM					Sg	12 39 19.7	-0.3
QSM	**Queen of Sheba**	**0.63**	**70**	IAML		12 39 20.4	
	comp=E,3μm,0.2s						
QSM				IAML		12 39 21.0	
	comp=N,3μm,0.2s						
CCAC	**Calif City Air**	**0.69**	**210**		Pg	12 39 12.5	-0.4
CCAC					Sg	12 39 21.9	0.0
ISA	**Isabella, Lake**	**0.72**	**263**		Pg	12 39 13.0	-0.6
ISA					Sg	12 39 22.4	-0.5
ISA	**Isabella, Lake**	**0.72**	**263**	IAML		12 39 23.3	
	comp=E,2μm,0.5s						
ISA				IAML		12 39 23.4	
	comp=N,2μm,0.6s						
GSC	**Goldstone, Bar**	**0.78**	**125**		Pg	12 39 14.1	-0.5
GSC				IAML		12 39 24.9	
	comp=N,2μm,0.4s						
GSC	**Goldstone, Bar**	**0.78**	**125**		Sg	12 39 24.3	-0.6
WASM	**Alta Sierra Ca**	**0.79**	**270**		Pg	12 39 14.2	-0.6
WASM					Sg	12 39 24.8	-0.2
CWC	**Cottonwood Cre**	**0.80**	**330**		Pg	12 39 14.4	-0.6
CWC					Sg	12 39 25.2	-0.2
CGO	**Cerro Gordo**	**0.82**	**348**		Pg	12 39 14.8	-0.7
CGO					Sg	12 39 26.4	+0.2
GWY	**Greenwater Val**	**0.87**	**59**		Pg	12 39 15.7	-0.6
GWY					Sg	12 39 27.1	-0.5
GWY	**Greenwater Val**	**0.87**	**59**	IAML		12 39 30.3	
	comp=N,1μm,0.5s						
HYS	**Haystack Butte**	**0.88**	**179**		Pg	12 39 15.9	-0.7
HYS					Sg	12 39 27.6	-0.5
EDW2	**Edwards Air Fo**	**0.93**	**201**		Sg	12 39 28.6	-0.9
FURC	**Furnace Creek,**	**0.93**	**39**		Pg	12 39 17.1	-0.4
FURC					Sg	12 39 29.7	+0.1
FURC	**Furnace Creek,**	**0.93**	**39**	IAML		12 39 41.0	
	comp=N,1μm,0.6s						
TPO	**Tropico Hills**	**1.01**	**211**		Pg	12 39 18.3	-0.7
TPO				IAML		12 39 34.5	
	comp=N,1μm,0.7s						
TPO				IAML		12 39 38.0	
	comp=E,1μm,0.7s						
SPG2	**Springville 2**	**1.05**	**296**		Pg	12 39 18.8	-1.1
SHOC	**Shoshone, Teco**	**1.08**	**82**		Pg	12 39 19.1	-1.3
VES	**Vestal, Richgr**	**1.22**	**275**		Pb	12 39 21.9	-1.0
GRAC	**Grapevine Rang**	**1.26**	**8**	IAML		12 39 41.0	
	comp=E,472nm,0.3s						
GRAC				IAML		12 39 43.4	
	comp=N,551nm,0.7s						
WCT	**Wildcat Mounta**	**1.30**	**37**		Pn	12 39 22.8	-1.4
WCT				IAML		12 39 42.9	
	comp=N,353nm,0.5s						
WCT				IAML		12 39 43.2	
	comp=E,394nm,0.4s						
TUQ	**Turquoise Moun**	**1.40**	**102**		Pn	12 39 23.6	-1.8
TIN	**Tinemaha, Big**	**1.40**	**339**		Pn	12 39 25.4	-0.1
TIN				IAML		12 39 52.1	
	comp=E,222nm,1.1s						
TIN				IAML		12 39 54.7	
	comp=N,226nm,0.5s						
OSI	**Osito Audit: C**	**1.46**	**220**		Pn	12 39 26.0	-0.3
OSI				IAML		12 39 49.0	
	comp=E,477nm,0.6s						
OSI				IAML		12 39 50.3	
	comp=N,273nm,0.5s						
BFSC	**Mount Baldy Ra**	**1.51**	**182**		Pn	12 39 26.2	-0.8
BFSC				IAML		12 39 50.9	
	comp=E,216nm,0.9s						
MWC	**Mount Wilson**	**1.57**	**194**		Pn	12 39 27.5	-0.4
MWC				IAML		12 39 51.4	
	comp=E,394nm,0.3s						
MWC				IAML		12 39 54.2	
	comp=N,477nm,0.7s						
TPNV	**Topopah Spring**	**1.62**	**42**		Pn	12 39 27.5	-1.1
TPNV				IAML		12 39 52.9	
	comp=N,317nm,0.6s						
TPNV				IAML		12 39 53.6	
	comp=N,434nm,0.6s						
PASC	**Pasadena Art C**	**1.65**	**197**		Pn	12 39 28.2	-0.6
PASC				IAML		12 39 53.3	
	comp=N,199nm,0.5s						
PASC				IAML		12 39 55.4	
	comp=E,331nm,0.5s						
DSP	**Deep Springs**	**1.65**	**349**		Pn	12 39 28.4	-0.4
MTPC	**Mountain Pass**	**1.68**	**98**		Pn	12 39 27.7	-1.7
MTPC				IAML		12 39 53.6	
	comp=N,260nm,0.5s						
MTPC				IAML		12 39 56.1	
	comp=E,318nm,0.3s						
MTUM	**Tungsten Hills**	**1.78**	**334**		Pb	12 39 32.7	+0.1
ELS	**Elsinore Mount**	**2.10**	**176**		Pn	12 39 34.3	-0.8
SHPR	**Sheep Range**	**2.11**	**68**		Pn	12 39 34.4	-0.9
BELC	**Belle Mtn. Jos**	**2.18**	**143**	IAML		12 40 10.7	
	comp=E,132nm,0.5s						
BELC				IAML		12 40 12.1	
	comp=N,133nm,0.3s						
MDPB	**Devils Postpil**	**2.23**	**328**		Pn	12 39 37.3	+0.2
MDPB				IAML		12 40 14.7	
	comp=E,109nm,0.7s						
V12A	**Nelson**	**2.23**	**90**		Pn	12 39 35.3	-1.6
V12A				IAML		12 40 13.3	
	comp=E,142nm,0.4s						
V12A				IAML		12 40 18.2	
	comp=N,133nm,0.6s						
DNR	**Dunn Ranch,Anz**	**2.32**	**160**	IAML		12 40 18.1	
	comp=N,246nm,0.6s						
PFO	**Pinyon Flats O**	**2.33**	**156**		Pn	12 39 37.0	-1.3
PKD	**Bear Valley Ra**	**2.40**	**276**		Pn	12 39 39.0	-0.2
PKD				IAML		12 40 16.0	
	comp=E,107nm,0.8s						
PKD				IAML		12 40 19.1	
	comp=N,91nm,0.8s						
S11A	**Rachel**	**2.41**	**38**		Pn	12 39 38.7	-0.7
S11A				IAML		12 40 20.1	
	comp=E,182nm,1.0s						
S11A				IAML		12 40 23.6	
	comp=N,162nm,1.0s						
IRM	**Iron Mountain**	**2.56**	**128**		Pn	12 39 39.2	-2.3
IRM				IAML		12 40 20.3	
	comp=N,74nm,0.3s						
IRM				IAML		12 40 22.5	
	comp=E,92nm,0.3s						
PMLM	**Mount Lospe**	**2.61**	**252**		Pn	12 39 40.6	-1.4
NEE2	**Needles Airpor**	**2.62**	**111**		Pn	12 39 40.2	-2.0
PRN	**Pahroc Range**	**2.63**	**50**		Pn	12 39 41.8	-0.7
PRN				IAML		12 40 32.8	
	comp=N,129nm,0.5s						
PRN				IAML		12 40 41.3	
	comp=E,91nm,0.7s						
PMPB	**Monarch Peak**	**2.64**	**281**	Pn	Pn	12 39 42.3	-0.2
NV11	**Mina Array Sit**	**2.72**	**351**	Pn	Pn	12 39 43.9	+0.2
BC3	**Big Chuckawall**	**2.73**	**139**		Pn	12 39 41.7	-2.1
BC3				IAML		12 40 28.4	
	comp=E,66nm,0.7s						
BC3				IAML		12 40 28.8	
	comp=N,95nm,0.7s						
NVAR	**Mina Array Bea**	**2.74**	**348**	Pn	Pn	12 39 44.3	+0.3
BBGB	**Big Mountain B**	**2.91**	**288**	Pn	Pn	12 39 49.0	+2.7
HULI	**Fort Hunter Li**	**2.97**	**276**	Pn	Pn	12 39 46.4	-0.6
HULI				IAML		12 40 34.8	
	comp=E,81nm,0.7s						
HULI				IAML		12 40 36.1	
	comp=N,84nm,0.7s						
R11B	**Troy Canyon, C**	**3.05**	**31**		Pn	12 39 47.5	-0.8
W13A	**Hualapai Mount**	**3.10**	**101**		Pn	12 39 47.7	-1.2
W13A				IAML		12 40 40.9	
	comp=E,45nm,0.7s						
W13A				IAML		12 40 43.4	
	comp=N,48nm,0.5s						
BAR	**Barrett**	**3.15**	**166**		Pn	12 39 49.2	-0.4
BAR				IAML		12 40 38.0	
	comp=N,51nm,0.5s						
BAR				IAML		12 40 39.3	
	comp=E,56nm,0.4s						
BLYC	**Blythe**	**3.22**	**127**		Pn	12 39 48.4	-2.0
BLYC				IAML		12 40 42.3	
	comp=N,78nm,0.5s						
BLYC				IAML		12 40 42.3	
	comp=E,95nm,0.5s						
U15A	**North Rim**	**4.35**	**79**	IAML		12 41 23.4	
	comp=E,25nm,1.0s						
U15A				IAML		12 41 27.5	
	comp=N,16nm,1.1s						
X16A	**Lo Mia Camp, P**	**5.22**	**103**	IAML		12 41 53.0	
	comp=E,8.4nm,1.1s						

IDC 07 12:45:07.1±1.9, 6.°51N×125.°83E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=199.2km s-min=9.4km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.61**	**336**	Pg	Pg	12 45 18.2	-0.6
	1μm,0.3s,baz=135,slow=1.4,SNR=46						
DAV				Lg	Lg	12 45 27.6	
	703nm,0.3s,baz=296,slow=22,SNR=11						
DAV				LR	LR	12 45 48.3	
	comp=Z,504nm,20.7s,baz=346,slow=67						
WRA	**Warramunga Arr**	**27.59**	**163**	P	P	12 50 56.1	-0.2
	0.8nm,0.9s,baz=342,slow=9.9,SNR=6.1						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**31.01**	**166**	P	P	12 51 26.2	-0.4
	0.3nm,0.5s,baz=340,slow=7.3,SNR=6.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**54.78**	**325**	P	P	12 54 40.4	+1.6
	0.3nm,0.6s,baz=109,slow=9.1,SNR=2.5						
	0.3nm,0.6s						

IDC 07 12:45:12.6±4.5, 15.°79S×175.°72W, h0km, mb4.1/4, mbtmp4.1/4, MS2.8/1, Error ellipse: s-maj=202.5km s-min=30.5km az=137.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**17.98**	**247**	LR	LR	12 54 56.9	
	comp=Z,37nm,21.5s,baz=10.0,slow=32						
STKA	**Stephens Creek**	**41.91**	**240**	P	P	12 53 05.2	+0.1
	2.0nm,0.7s,baz=80,slow=6.1,SNR=1.7						
	2.0nm,0.7s						
WRA	**Warramunga Arr**	**47.58**	**257**	P	P	12 53 50.3	-0.2
	1.1nm,0.6s,baz=92,slow=7.8,SNR=17						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**47.86**	**252**	P	P	12 53 52.6	-0.1
	3.7nm,0.4s,baz=94,slow=7.3,SNR=80						
	3.7nm,0.4s						
ILAR	**Eielson Array**	**83.27**	**12**	P	P	12 57 40.7	0.0
	0.5nm,0.5s,baz=204,slow=4.9,SNR=18						
	0.5nm,0.5s						

*IDC **07** 12:50:31.7±0.5, 10.°05N×125.°92E, h0km, mb4.2/24, mbtmp4.2/24, MS3.2/14, Error ellipse: s-maj=26.1km s-min=12.0km az=68.0*
*NEIC **07** 12:50:42.7±1.8, 10.°09N±0.°07×125.°9E±0.°1, h77km±6km, mb4.5/59, Error ellipse: s-maj=19.4km s-min=9.9km az=84.0*
ISC 07 12:50:44.1±0.4, 10.°03N±0.°06×125.°9E±0.°1, h100km, n105, σ1§10/91, mb4.3/56, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.96**	**186**	Pn	Pn	**12 51 28.7**	**-0.7**
DAV	**Davao City (W)**	**2.96**	**186**	Lg	Lg	12 52 06.3	
	118nm,0.3s,baz=135,slow=20,SNR=3.7						
TGY	**Tagaytay City**	**6.33**	**310**	LR	LR	12 55 19.4	
	comp=Z,269nm,21.6s,baz=112,slow=46						
YULB	**Yu-li**	**14.00**	**342**	Pn	Pn	**12 53 55.7**	**-2.4**
FAKI	**Fak Fak**	**14.33**	**154**	Pn	Pn	**12 53 59.9**	**-2.4**
KAPI	**Kappang**	**16.15**	**203**	LR	LR	13 00 49.8	
	comp=Z,70nm,20.9s,baz=350,slow=38						
GUMO	**Guam**	**18.89**	**77**	LR	LR	13 00 16.3	
	comp=Z,123nm,20.8s,baz=251,slow=31						
MTN	**Manton Dam**	**23.31**	**167**		P	**12 55 43.4**	**0.0**
MTN				IAmb	IAmb	12 55 46.7	
	comp=Z,16nm,1.1s						
KNRA

FORT	**Forrest**	**40.62**	**177**	P	**P**		**12 58 15.1**	**+0.8**
H11N1	**WAKE ISLAND Hy**	**40.66**	**71**	T	T		13 41 32.8	
	baz=264,slow=74,SNR=67							
H11N2	**WAKE ISLAND Hy**	**40.67**	**71**	T	T		13 41 30.1	
	baz=264,slow=74,SNR=58							
H11N3	**WAKE ISLAND Hy**	**40.68**	**71**	T	T		13 41 31.0	
	baz=264,slow=74,SNR=70							
EVN	**Everest**	**40.81**	**301**	P	**P**		**12 58 16.9**	**+0.2**
ULN	**Ulaanbaatar**	**40.93**	**341**		**P**		**12 58 17.1**	**+0.2**
ULN				IAmb	IAmb		12 58 17.7	
	comp=Z,6.6nm,0.6s							
SONM	**Songino Array**	**41.12**	**340**	IAmb	IAmb		12 58 19.0	
	comp=Z,1.4nm,0.7s							
SONM	**Songino Array**	**41.12**	**340**	P	**P**		**12 58 18.2**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=160,slow=9.9,SNR=6.1							
SONM				LR	LR		13 16 52.0	
	comp=Z,45nm,18.6s,baz=144,slow=38							
	comp=Z,1.7nm,0.6s							
NWAO	**Narrogin (SRO)**	**43.51**	**191**	P	**P**		**12 58 37.9**	**+0.1**
BBOO	**Buckleboo**	**43.68**	**168**	P	**P**		**12 58 39.6**	**+0.5**
STKA	**Stephens Creek**	**44.29**	**161**	P	**P**		**12 58 43.8**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=318,slow=12,SNR=3.1							
	comp=Z,1.2nm,0.4s							
PALK	**Pallekele**	**44.75**	**270**	LR	LR		13 17 09.0	
	comp=Z,31nm,20.5s,baz=98,slow=36							
PETK	**Petropavlovsk-**	**50.00**	**24**	P	**P**		**12 59 28.4**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=215,slow=5.4,SNR=7.2							
PETK				LR	LR		13 18 59.3	
	comp=Z,22nm,21.8s,baz=235,slow=34							
	comp=Z,1.6nm,0.7s							
DZM	**Mont Dzumac**	**50.97**	**129**	P	**P**		**12 59 36.8**	**+0.8**
	comp=Z,5.7nm,0.8s,baz=318,slow=14,SNR=5.4							
	comp=Z,5.7nm,0.8s							
MKAR	**Makanchi Array**	**52.01**	**323**	P	**P**		**12 59 43.2**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=120,slow=8.8,SNR=31							
MKAR				PcP	**PcP**		**13 00 55.0**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=115,slow=5.6,SNR=2.0							
	comp=Z,4.3nm,0.7s							
MAKZ	**Makanchi**	**52.20**	**323**		**P**		**12 59 44.5**	**-0.2**
MAKZ				IAmb	IAmb		12 59 45.5	
	comp=Z,5.1nm,1.0s							
ZAA0	**Zalesovo Array**	**54.67**	**332**	IAmb	IAmb		13 00 02.5	
	comp=Z,2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**54.67**	**332**	P	**P**		**13 00 01.8**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=121,slow=6.8,SNR=11							
ZALV				PcP	**PcP**		**13 01 03.9**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=151,slow=3.3,SNR=2.0							
ZALV				LR	LR		13 24 18.3	
	comp=Z,23nm,18.6s,baz=31,slow=37							
	comp=Z,1.9nm,0.4s							
AAK	**Ala-Archa**	**55.25**	**315**	LR	LR		13 25 23.2	
	comp=Z,66nm,21.8s,baz=100,slow=38							
KURK	**Kurchatov**	**56.07**	**326**		**P**		**13 00 12.6**	**-0.1**
KURK				IAmb	IAmb		13 00 13.6	
	comp=Z,6.6nm,0.8s							
KURBB	**Kurchatov Arra**	**56.07**	**326**	P	**P**		**13 00 12.3**	**-0.4**
	comp=Z,3.2nm,0.2s,baz=126,slow=6.9,SNR=18							
	comp=Z,3.2nm,0.2s							
SEY	**Seymchan**	**56.14**	**14**	LR	LR		13 23 30.2	
	comp=Z,9.0nm,19.3s,baz=311,slow=35							
KKAR	**Karatay Array**	**58.17**	**315**	P	**P**		**13 00 27.4**	**-0.3**
TIXI	**Tiksi**	**61.60**	**1**		**P**		**13 00 50.7**	**+0.1**
TIXI				IAmb	IAmb		13 00 51.6	
	comp=Z,6.2nm,0.8s							
BVAR	**Borovoye Array**	**61.66**	**326**	P	**P**		**13 00 51.2**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=115,slow=11,SNR=6.9							
BVAR				PcP	**PcP**		**13 01 32.4**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=90,slow=4.3,SNR=4.4							
	comp=Z,2.1nm,0.6s							
NRIK	**Noril'sk**	**64.16**	**346**	P	**P**		**13 01 07.7**	**0.0**
	comp=Z,1.2nm,0.4s,baz=145,slow=9.2,SNR=2.4							
	comp=Z,1.2nm,0.4s							
AB31	**Akbulak array**	**66.83**	**319**		**P**		**13 01 24.7**	**-0.5**
ABKAR	**Akbulak array**	**66.83**	**319**	P	**P**		**13 01 25.0**	**-0.2**
D19K	**Kuna River**	**75.59**	**22**	P	**P**		**13 02 19.1**	**+1.3**
E19K	**Redstone River**	**75.76**	**23**	P	**P**		**13 02 20.3**	**+1.6**
E19K				IAmb	IAmb		13 02 23.5	
	comp=Z,13nm,1.4s							
B20K	**Meade River**	**76.17**	**20**	P	**P**		**13 02 22.4**	**+1.5**
CASY	**Casey**	**76.94**	**186**	P	**P**		**13 02 26.3**	**+1.1**
CASY				IAmb	IAmb		13 02 28.8	
	comp=Z,5.5nm,1.0s							
IMAR	**Indian Mountai**	**76.97**	**24**	P	**P**		**13 02 26.6**	**+1.1**
B21K	**Ikpikpuk River**	**76.99**	**21**	P	**P**		**13 02 27.4**	**+1.8**
B21K				IAmb	IAmb		13 02 28.0	
	comp=Z,7.7nm,0.6s							
H21K	**Melozitna Rive**	**77.33**	**25**	P	**P**		**13 02 28.6**	**+1.0**
B22K	**Teshekpuk Lake**	**77.48**	**20**	P	**P**		**13 02 29.7**	**+1.5**
D22K	**Ayikyak River**	**77.61**	**22**	P	**P**		**13 02 30.6**	**+1.5**
D22K				IAmb	IAmb		13 02 45.5	
	comp=Z,7.5nm,1.1s							
SKT	**Skwentna**	**77.72**	**29**	P	**P**		**13 02 29.9**	**+0.2**
SKT				IAmb	IAmb		13 03 01.3	
	comp=Z,12nm,1.4s							
KBZ	**Khabaz**	**78.11**	**313**	P	**P**		**13 02 32.9**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=113,slow=3.3,SNR=4.3							
	comp=Z,1.1nm,0.7s							
TRF	**Thorofare Moun**	**78.33**	**27**	P	**P**		**13 02 34.0**	**+0.7**
TRF				IAmb	IAmb		13 02 40.6	
	comp=Z,11nm,1.4s							
D23K	**Nanushuk River**	**78.34**	**21**	P	**P**		**13 02 35.2**	**+2.1**
D23K				IAmb	IAmb		13 02 35.7	
	comp=Z,3.5nm,0.7s							
C23K	**Itkillik River**	**78.40**	**21**	P	**P**		**13 02 35.0**	**+1.7**
TOLK	**Toolik Lake Re**	**78.73**	**22**	P	**P**		**13 02 36.9**	**+1.6**
TOLK				IAmb	IAmb		13 02 37.4	
	comp=Z,3.2nm,0.6s							
PMR	**Palmer**	**78.85**	**29**	P	**P**		**13 02 36.2**	**+0.2**
PMR				IAmb	IAmb		13 02 42.3	
	comp=Z,8.2nm,1.2s							
MCK	**McKinley**	**78.93**	**27**	P	**P**		**13 02 37.0**	**+0.6**
MCK				IAmb	IAmb		13 02 57.0	
	comp=Z,5.2nm,1.1s							
RND	**Reindeer**	**78.97**	**27**	P	**P**		**13 02 36.7**	**0.0**
RND				IAmb	IAmb		13 02 37.2	
	comp=Z,15nm,1.5s							
D24K	**Happy Valley**	**79.01**	**21**	P	**P**		**13 02 38.4**	**+1.7**
D24K				IAmb	IAmb		13 02 38.9	
	comp=Z,5.9nm,0.5s							
C24K	**Franklin Bluff**	**79.06**	**21**	P	**P**		**13 02 38.5**	**+1.5**
SML	**Sawmill**	**79.23**	**29**	P	**P**		**13 02 39.3**	**+1.1**
F24K	**Squaw Lake**	**79.35**	**23**	P	**P**		**13 02 40.6**	**+1.9**
F24K				IAmb	IAmb		13 02 41.8	
	comp=Z,3.3nm,0.8s							
CCB	**Clear Creek Bu**	**79.42**	**26**	P	**P**		**13 02 39.4**	**+0.4**
CCB				IAmb	IAmb		13 02 51.4	
	comp=Z,7.5nm,1.5s							
G24K	**Hadweenzic Riv**	**79.52**	**24**		**P**		**13 02 38.9**	**-0.6**
G24K				IAmb	IAmb		13 02 39.6	
	comp=Z,8.3nm,0.9s							
ILAR	**Eielson Array**	**79.81**	**26**	P	**P**		**13 02 40.6**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=241,slow=4.6,SNR=17							
	comp=Z,0.7nm,0.8s							
D25K	**Kavik River**	**79.88**	**21**	P	**P**		**13 02 43.0**	**+1.4**
D25K				IAmb	IAmb		13 02 46.9	
	comp=Z,4.0nm,1.1s							
E25K	**Arctic Village**	**80.22**	**22**	P	**P**		**13 02 45.3**	**+2.0**
J25K	**Salcha River,**	**80.47**	**26**	P	**P**		**13 02 44.3**	**-0.5**
BMAR	**Burnt Mountain**	**80.63**	**23**	P	**P**		**13 02 47.6**	**+2.1**
SCRK	**Sand Creek**	**81.11**	**27**	P	**P**		**13 02 49.5**	**+1.2**
MENT	**Mentasta**	**81.32**	**28**	P	**P**		**13 02 50.9**	**+1.6**
MENT				IAmb	IAmb		13 03 14.1	
	comp=Z,6.3nm,1.3s							
I26K	**Coal Creek Min**	**81.36**	**25**	P	**P**		**13 02 50.0**	**+0.6**
I26K				IAmb	IAmb		13 03 09.9	
	comp=Z,4.2nm,1.2s							
GLB	**Gilahina Butte**	**81.41**	**29**	P	**P**		**13 02 51.1**	**+1.2**
GLB				IAmb	IAmb		13 02 52.9	
	comp=Z,14nm,1.3s							
VRDI	**Verde Repeater**	**81.60**	**29**	P	**P**		**13 02 52.1**	**+1.0**
K27K	**Chicken**	**81.95**	**26**	IAmb	IAmb		13 03 10.5	
	comp=Z,6.3nm,1.2s							
TGL	**Tana Glacier**	**81.95**	**30**	P	**P**		**13 02 53.8**	**+1.1**
F28M	**Old Crow**	**82.41**	**23**	IAmb	IAmb		13 03 38.2	
	comp=Z,8.0nm,1.1s							
BARN	**Barnard Glacie**	**82.48**	**29**	P	**P**		**13 02 58.0**	**+2.3**
OPO	**Ambohidratompo**	**82.65**	**250**	LR	LR		13 36 42.0	
	comp=Z,234nm,21.1s,baz=54,slow=34							
I28M	**Miner Creek**	**82.68**	**25**	P	**P**		**13 02 58.6**	**+2.1**
I28M				IAmb	IAmb		13 02 59.2	
	comp=Z,4.0nm,0.7s							
SPITS	**Spitsbergen Ar**	**84.18**	**349**	P	**P**		**13 03 04.5**	**+0.6**
	comp=Z,3.0nm,0.6s,baz=103,slow=6.5,SNR=5.0							
	comp=Z,3.0nm,0.6s							
ARCES	**ARCESS Array B**	**84.30**	**340**	IAmb	IAmb		13 03 29.9	
	comp=Z,13nm,1.3s							
ARCES	**ARCESS Array B**	**84.30**	**340**	P	**P**		**13 03 04.5**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=76,slow=6.4,SNR=13							
	comp=Z,1.7nm,0.7s							
MMAI	**Mount Meron Ar**	**85.04**	**303**	P	**P**		**13 03 10.4**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=43,slow=2.8,SNR=1.3							
	comp=Z,0.5nm,0.3s							
BRTR	**Keskin Array B**	**85.41**	**309**	P	**P**		**13 03 10.7**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=103,slow=4.7,SNR=8.7							
	comp=Z,1.6nm,0.7s							
FIA1	**FINESS Array S**	**85.94**	**332**	P	**P**		**13 03 12.6**	**-0.2**
FINES	**FINESS Array B**	**85.94**	**332**	P	**P**		**13 03 12.8**	**0.0**
	comp=Z,1.4nm,0.4s,baz=68,slow=4.1,SNR=20							
	comp=Z,1.4nm,0.4s							
AKASG	**Malin Array Be**	**86.53**	**321**	P	**P**		**13 03 15.0**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=70,slow=3.8,SNR=4.6							
	comp=Z,0.5nm,0.3s							
MAW	**Mawson**	**89.35**	**200**	P	**P**		**13 03 29.6**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=65,slow=12,SNR=3.6							
	comp=Z,1.9nm,0.8s							
VNDA	**Vanda**	**89.73**	**173**	P	**P**		**13 03 31.5**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=314,slow=6.3,SNR=6.5							
	comp=Z,1.0nm,0.8s							
PLCA	**Paso Flores**	**146.12**	**157**	PKPbc	**PKiKP**		**13 10 14.3**	**-2.0**
	comp=Z,1.0nm,0.6s,baz=243,slow=6.3,SNR=5.5							

*NEIC **07** 12:58:41.0±2.6,34°.30N±0°.02×119°.28W±0°.02,h10km±2km, Error ellipse: s-maj=3.7km s-min=3.0km az=218.0*
PAS 07 12:58:41.6±2.5,34°.27N±0°.02×119°.29W±0°.02,h11km±4km, ML3.2/154,**ML3.0**/111(NEIC),**Error ellipse: s-maj=3.1km s-min=1.6km az=214.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCC	**Santa Clara**	**0.09**	**71**		Pg	12 58 44.9	+0.6
STCC					Sg	12 58 48.0	+1.8
SBC	**Santa Barbara**	**0.39**	**296**		Pg	12 58 49.5	+0.2
SBC					Sb	12 58 56.0	-0.5
AGOC	**Agoura**	**0.45**	**106**		Sg	12 58 57.2	+0.7
BLCC	**Black Canyon**	**0.51**	**93**		Pg	12 58 51.5	-0.1
BLCC					Sb	12 58 59.4	-0.7
MPI	**Mount Pinos, F**	**0.55**	**13**		Sg	12 58 59.5	-0.4
OAT	**Oat Mountain**	**0.56**	**83**		Pg	12 58 52.9	+0.3
OAT					Sb	12 59 02.2	+0.5
OSI	**Osito Audit: C**	**0.58**	**54**		Pg	12 58 52.6	-0.3
OSI				IAML		12 59 02.1	
	comp=E,1μm,0.5s						
OSI				IAML		12 59 03.7	
	comp=N,708nm,0.7s						
OSI	**Osito Audit: C**	**0.58**	**54**		Sg	12 59 01.0	+0.4
SYP	**Santa Ynez Pea**	**0.62**	**294**		Sg	12 59 02.5	+0.5
BCW	**Bitter Crk WRg**	**0.67**	**351**		Pg	12 58 54.3	-0.4
BCW					Sg	12 59 03.9	+0.3
DJJ	**Donna J Jenkin**	**0.71**	**103**		Pg	12 58 54.4	-1.1
DJJ					Sg	12 59 04.0	-0.7
BTPC	**Burnt Peak**	**0.72**	**55**		Pg	12 58 54.7	-0.9
FIGC	**Figueroa Mtn.**	**0.73**	**308**		Sb	12 59 06.4	-0.2
PKM	**Mcpherson Peak**	**0.75**	**325**		Sg	12 59 05.5	-0.5
NJQ	**Nojoqui County**	**0.78**	**290**		Sg	12 59 06.6	-0.2
DECC	**Green Verdugo**	**0.79**	**91**		Pg	12 58 56.0	-0.9
DECC					Sg	12 59 07.4	0.0
LCGC	**La Cienega, Cu**	**0.80**	**110**		Sb	12 59 09.4	+0.9
THC	**Tehachapi Micr**	**0.82**	**39**		Pg	12 58 56.5	-1.0
THC					Sg	12 59 08.0	-0.2
BHPC	**Baldwin Hills**	**0.82**	**110**		Sb	12 59 09.6	+0.7
SBI	**Santa Barbara**	**0.82**	**165**		Pg	12 58 57.1	-0.4
GR2C	**Griffith Obs.**	**0.83**	**100**		Pg	12 58 56.5	-1.3
GR2C					Sg	12 59 07.6	-1.1
USC	**University of**	**0.87**	**107**		Sb	12 59 10.3	-0.1
TJR	**Tejon Ranch**	**0.88**	**31**		Pg	12 58 57.3	-1.3
TJR					Sg	12 59 09.3	-0.7
LEOC	**Leona Valley**	**0.89**	**66**		Pg	12 58 57.5	-1.3
RPV	**Rancho Palos V**	**0.91**	**125**		Pg	12 58 58.1	-1.1
BSM	**San Miguel Isl**	**0.91**	**255**		Pg	12 58 57.5	-1.7
ALPC	**Antelope**	**0.92**	**63**		Pg	12 58 58.0	-1.3
ALPC					Sg	12 59 10.4	-0.9
PASC	**Pasadena Art C**	**0.92**	**96**		Pg	12 58 58.1	-1.3
PASC				IAML		12 59 11.8	
	comp=E,294nm,0.5s						
PASC				IAML		12 59 13.2	
	comp=N,316nm,0.5s						
PASC	**Pasadena Art C**	**0.92**	**96**		Sg	12 59 10.1	-1.3
PASC	**Pasadena Art C**	**0.92**	**96**		Pg	12 58 57.8	-1.6
MWC	**Mount Wilson**	**1.02**	**92**		Pg	12 58 59.8	-1.6
MWC				IAML		12 59 15.1	
	comp=N,465nm,0.3s						
MWC				IAML		12 59 17.7	
	comp=E,458nm,0.2s						
TPO	**Tropico Hills**	**1.06**	**55**		Pb	12 59 00.7	-1.4
TPO				IAML		12 59 17.5	
	comp=E,525nm,0.5s						
CIAC	**Catalina I. Ai**	**1.14**	**140**		Pb	12 59 01.4	-1.8
BFSC	**Mount Baldy Ra**	**1.35**	**91**		Pn	12 59 05.3	-1.3
BFSC				IAML		12 59 25.2	
	comp=N,228nm,0.4s						
BFSC				IAML		12 59 25.9	
	comp=E,273nm,0.6s						
ISA	**Isabella, Lake**	**1.54**	**26**		Pn	12 59 08.1	-0.9
ISA				IAML		12 59 31.6	
	comp=N,113nm,0.4s						
ISA				IAML		12 59 32.0	
	comp=E,113nm,0.5s						
VES	**Vestal, Richgr**	**1.57**	**6**		Pn	12 59 07.9	-1.5
VES				IAML		12 59 35.6	
	comp=E,221nm,0.6s						
ELS	**Elsinore Mount**	**1.67**	**111**		Pn	12 59 09.2	-1.7
LRMC	**Laurel Mtn Rad**	**1.79**	**47**		Pn	12 59 11.4	-1.1
LRMC				IAML		12 59 40.8	
	comp=N,105nm,0.6s						
LRMC				IAML		12 59 41.2	
	comp=E,99nm,0.3s						
PKD	**Bear Valley Ra**	**1.96**	**329**		Pn	12 59 12.8	-1.9
PKD				IAML		12 59 44.2	
	comp=N,116nm,0.5s						
PKD				IAML		12 59 46.2	
	comp=E,128nm,0.5s						
WSHM	**Spangler Hills**	**1.98**	**48**	IAML		12 59 38.8	
	comp=E,185nm,0.2s						
CCCA	**Chr Cany lake**	**2.02**	**51**	IAML		12 59 48.4	
	comp=E,173nm,0.5s						
GSC	**Goldstone, Bar**	**2.29**	**63**	IAML		12 59 57.0	
	comp=E,110nm,0.5s						
GSC				IAML		12 59 59.0	
	comp=N,58nm,0.4s						
PMPB	**Monarch Peak**	**2.30**	**328**		Pn	12 59 18.2	-1.3
DNR	**Dunn Ranch,Anz**	**2.32**	**107**		Pn	12 59 20.2	+0.3
DPP	**Dos Picos Cty**	**2.34**	**122**		Pn	12 59 18.0	-1.9
DPP				IAML		13 00 02.3	
	comp=E,49nm,0.5s						
HULI	**Fort Hunter Li**	**2.36**	**318**		Pn	12 59 18.4	-1.9
HULI				IAML		13 00 06.0	
	comp=N,124nm,0.8s						
HULI				IAML		13 00 08.2	
	comp=E,114nm,0.9s						
PCCM	**Crazy Canyon**	**2.37**	**320**		Pn	12 59 18.4	-2.1
CWC	**Cottonwood Cre**	**2.38**	**24**		Pn	12 59 20.8	+0.2
CWC				IAML		12 59 57.9	
	comp=N,59nm,0.3s						
CWC				IAML		12 59 58.9	
	comp=E,63nm,0.3s						
PFO	**Pinyon Flats O**	**2.44**	**105**		Pn	12 59 21.5	-0.1
QSM	**Queen of Sheba**	**2.60**	**49**		Pn	12 59 22.3	-1.3
QSM				IAML		13 00 06.7	
	comp=E,46nm,0.8s						
QSM				IAML		13 00 10.0	
	comp=N,39nm,0.8s						
BAR	**Barrett**	**2.71**	**125**		Pn	12 59 23.8	-1.3
BAR				IAML		13 00 08.5	
	comp=N,48nm,0.5s						
BAR				IAML		13 00 09.4	
	comp=E,42nm,0.2s						
BBGB	**Big Mountain B**	**2.71**	**329**		Pn	12 59 23.8	-1.3
BELC	**Belle Mtn. Jos**	**2.74**	**95**		Pn	12 59 25.5	-0.2
BELC				IAML		13 00 17.2	
	comp=E,62nm,0.6s						
BELC				IAML		13 00 19.4	
	comp=N,44nm,0.7s						
GWY	**Greenwater Val**	**2.87**	**48**		Pn	12 59 26.1	-1.4
GWY				IAML		13 00 18.2	
	comp=E,33nm,0.5s						
GWY				IAML		13 00 20.3	
	comp=N,29nm,0.5s						
CBX	**Cerro Bola**	**2.94**	**131**		Pn	12 59 29.5	+1.1
CBX				IAML		13 00 21.8	
	comp=N,70nm,1.0s						
SAO	**San Andreas Ge**	**3.04**	**325**		Pn	12 59 27.7	-1.9
DSP	**Deep Springs**	**3.27**	**19**		Pn	12 59 33.5	+0.7
DSP				IAML		13 00 26.2	
	comp=E,23nm,0.7s						
MDPB	**Devils Postpil**	**3.36**	**3**		Pn	12 59 34.5	+0.2
MDPB				IAML		13 00 27.1	
	comp=E,47nm,0.5s						
ESJX	**Sierra Juarez**	**3.60**	**128**		Pn	12 59 36.2	-1.3
MHC	**Mount Hamilton**	**3.61**	**329**		Pn	12 59 35.5	-2.1
MHC				IAML		13 00 49.8	
	comp=N,22nm,0.8s						
TPNV	**Topopah Spring**	**3.64**	**42**	IAML		13 00 44.0	
	comp=N,18nm,1.0s						
TPNV				IAML		13 00 46.0	
	comp=N,16nm,0.8s						
CMB	**Columbia Colle**	**3.86**	**347**		Pn	12 59 41.0	+0.1
CMB				IAML		13 00 47.0	
	comp=E,14nm,0.8s						
CMB				IAML		13 00 50.0	
	comp=N,15nm,0.6s						
LHV	**Little Huntoon**	**4.02**	**9**		Pn	12 59 44.3	+1.3
WAKR	**Walker**	**4.22**	**358**	IAML		13 00 55.1	
	comp=E,26nm,0.7s						
WAKR				IAML		13 00 56.0	
	comp=N,21nm,1.2s						
W13A	**Hualapai Mount**	**4.53**	**78**	IAML		13 01 14.9	
	comp=N,9.2nm,1.9s						
PNTR	**Pine Nut**	**4.81**	**357**	IAML		13 01 23.6	
	comp=E,18nm,0.8s						
KNB	**Kanab**	**5.94**	**61**		Pn	13 00 10.1	+0.5

*NEIC **07** 13:05:39.1±3.7,34°.30N±0°.01×119°.30W±0°.01,h10km±1km, Error ellipse: s-maj=2.9km s-min=2.3km az=187.0*
PAS 07 13:05:39.4±2.3,34°.28N±0°.02×119°.29W±0°.01,h15km±2km, ML3.4/180,**ML3.2**/126(NEIC),**Error ellipse: s-maj=2.4km s-min=1.4km az=203.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCC	**Santa Clara**	**0.09**	**73**		Pg	13 05 42.8	+0.2
STCC					Sg	13 05 45.9	+1.3
SBC	**Santa Barbara**	**0.38**	**296**		Pg	13 05 47.4	+0.2
SBC					Sb	13 05 53.8	+0.1
AGOC	**Agoura**	**0.46**	**106**		Pg	13 05 48.1	-0.4
AGOC					Sg	13 05 55.0	+0.4
BLCC	**Black Canyon**	**0.52**	**93**		Pg	13 05 49.4	-0.2
BLCC					Sb	13 05 57.2	-0.3
MPI	**Mount Pinos, F**	**0.55**	**13**		Pg	13 05 49.8	-0.6
MPI					Sg	13 05 57.8	+0.1
OAT	**Oat Mountain**	**0.57**	**83**		Pg	13 05 50.7	+0.1
OAT					Sb	13 05 60.0	+0.9
OSI	**Osito Audit: C**	**0.58**	**54**		Pg	13 05 50.4	-0.5
OSI				IAML		13 06 00.0	
	comp=E,2μm,0.5s						
OSI				IAML		13 06 01.5	
	comp=N,1μm,0.7s						
OSI	**Osito Audit: C**	**0.58**	**54**		Sg	13 05 58.8	+0.2
PDE	**Pardee, Santa**	**0.61**	**74**		Pg	13 05 51.6	+0.2
PDE					Sb	13 06 00.4	+0.1
BCW	**Bitter Crk WRg**	**0.67**	**352**		Pg	13 05 52.0	-0.5
DJJ	**Donna J Jenkin**	**0.72**	**103**		Sg	13 06 01.9	-0.9
BTPC	**Burnt Peak**	**0.72**	**56**		Pg	13 05 52.9	-0.6
BTPC					Sb	13 06 03.8	+0.2
FIGC	**Figueroa Mtn.**	**0.73**	**308**		Sb	13 06 04.2	+0.4
PKM	**Mcpherson Peak**	**0.75**	**325**		Pg	13 05 53.4	-0.6
PKM					Sg	13 06 03.9	0.0
NJQ	**Nojoqui County**	**0.78**	**290**		Sg	13 06 03.9	-0.8
HLLC	**North Hollywoo**	**0.78**	**97**		Pg	13 05 53.1	-1.5
HLLC					Sg	13 06 04.6	-0.3
DECC	**Green Verdugo**	**0.80**	**91**		Pg	13 05 53.8	-1.1
DECC					Sg	13 06 05.1	-0.3
THC	**Tehachapi Micr**	**0.82**	**39**		Sg	13 06 06.2	0.0
SBI	**Santa Barbara**	**0.82**	**164**		Pg	13 05 54.9	-0.5
GR2C	**Griffith Obs.**	**0.84**	**101**		Pg	13 05 54.3	-1.4
GR2C					Sg	13 06 05.6	-1.1
USC	**University of**	**0.87**	**107**		Sb	13 06 07.8	0.0
TJR	**Tejon Ranch**	**0.88**	**31**		Sg	13 06 07.2	-0.7
LEOC	**Leona Valley**	**0.89**	**66**		Sg	13 06 07.8	-0.6
BSM	**San Miguel Isl**	**0.91**	**255**		Pb	13 05 55.5	-1.4
BSM					Sb	13 06 07.6	-1.2
RPV	**Rancho Palos V**	**0.91**	**125**		Pb	13 05 55.7	-1.2
RPV					Sg	13 06 09.3	+0.4
ALPC	**Antelope**	**0.92**	**63**		Pb	13 05 55.9	-1.2
ALPC					Sb	13 06 08.2	-0.9
WTT2	**Watts, South G**	**0.92**	**110**		Pn	13 06 10.8	+13
PASC	**Pasadena Art C**	**0.92**	**96**		Pb	13 05 55.5	-1.7
PASC				IAML		13 06 11.1	
	comp=N,449nm,0.5s						
PASC	**Pasadena Art C**	**0.92**	**96**		Sb	13 06 07.3	-2.0
ARVC	**Arvin**	**0.93**	**24**		S

GWY					IAML			13 07 18.2	
	comp=N,54nm,0.5s								
CBX	**Cerro Bola**	**2.95**	**131**			Pn		13 06 25.1	-0.7
FURC	**Furnace Creek,**	**2.95**	**42**			Pn		13 06 25.4	-0.4
FURC					IAML			13 07 26.7	
	comp=N,85nm,0.8s								
FURC					IAML			13 07 37.8	
	comp=E,96nm,1.1s								
SAO	**San Andreas Ge**	**3.04**	**325**			Pn		13 06 25.4	-1.7
GRAC	**Grapevine Rang**	**3.13**	**29**		IAML			13 07 24.6	
	comp=N,86nm,0.6s								
GRAC					IAML			13 07 29.3	
	comp=E,68nm,0.6s								
BC3	**Big Chuckawall**	**3.25**	**100**		IAML			13 07 39.4	
	comp=N,38nm,1.1s								
DSP	**Deep Springs**	**3.27**	**19**			Pn		13 06 31.3	+1.1
DSP					IAML			13 07 20.9	
	comp=N,42nm,0.6s								
DSP					IAML			13 07 35.5	
	comp=E,57nm,1.1s								
MDPB	**Devils Postpil**	**3.35**	**3**		IAML			13 07 24.9	
	comp=E,97nm,0.5s								
IRM	**Iron Mountain**	**3.44**	**91**			Pn		13 06 31.8	-0.8
GMN	**Gold Mountain**	**3.44**	**28**			Pn		13 06 33.2	+0.4
MHC	**Mount Hamilton**	**3.61**	**329**		IAML			13 07 47.6	
	comp=N,48nm,0.8s								
MHC					IAML			13 07 54.9	
	comp=E,33nm,1.2s								
ESJX	**Sierra Juarez**	**3.61**	**128**			Pn		13 06 34.7	-0.3
TPNV	**Topopah Spring**	**3.64**	**42**		IAML			13 07 41.9	
	comp=E,33nm,1.0s								
TPNV					IAML			13 07 43.8	
	comp=E,32nm,0.8s								
CMB	**Columbia Colle**	**3.85**	**347**		IAML			13 07 44.8	
	comp=E,36nm,0.8s								
CMB					IAML			13 07 46.9	
	comp=N,34nm,0.9s								
V12A	**Nelson**	**3.92**	**67**		IAML			13 07 52.5	
	comp=N,25nm,1.4s								
SHPR	**Sheep Range**	**4.04**	**55**			Pn		13 06 41.8	+0.9
W13A	**Hualapai Mount**	**4.53**	**78**		IAML			13 08 12.8	
	comp=N,20nm,1.2s								

*IDC **07** 13:07:30.1±0.5,28.95S×12.83W,h0km,mb4.3/16, mbtmp4.3/16,MS4.2/43,Error ellipse: s-maj=21.2km s-min=15.2km az=110.0*

*NEIC **07** 13:07:32.6,29.05S×12.93W,h12km,Moment Tensor Solution. Duration: 18 Moment tensor: Scale 10^{16}Nm; Mrr-1.70; Mθθ-0.03; Mφφ1.73; Mrθ-1.30; Mθφ4.28; Mφr1.08; Fault plane solution: Mo4.91000×10^{16} NP1:φs79.82000°, δ68.59000°,λ-22.82000°. NP2:φs178.55000°,δ68.84000°, λ-156.95000°. Principal axes: T 5.2192, Plg0.0000°, Azm309.0000°; N -0.6888, Plg59.0000°, Azm219.0000°; P -4.5304, Plg31.0000°, Azm39.0000°;*

*NEIC **07** 13:07:32.5±1.8,29.05S±0.01×12.9W±0.1,h10km±1km, mb5.0/50,Mww5.1/8 Error ellipse: s-maj=19.8km s-min=16.8km az=142.0*

*INMG **07** 13:07:32.0±1.6,29.04S×12.87W,h10km,M4.9, #DIST_RANGE: DISTANT*

*NEIC **07** 13:07:32.6,29.05S×12.93W,h12km*

*GCMT **07** 13:07:34.5±0.2,28.95S±0.01×12.89W±0.01,h21km±1km, MW5.2/131,Moment Tensor Solution. s70,c99; s131,c214; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-0.60±.17; Mθθ-3.63±.17; Mφφ4.23±.16; Mrθ-0.97±.29; Mθφ5.91±.14; Mφr0.09±.27; Best double couple: Mo7.17100×10^{16} NP1:φs163.00000°,δ82.00000°, λ-176.00000°. NP2:φs73.00000°,δ86.00000°,λ-8.00000°. Principal axes: T 7.4160, Plg3.0000°, Azm118.0000°; N -0.4910, Plg81.0000°, Azm227.0000°; P -6.9250, Plg8.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 13:07:32.2±0.4,28.97S±0.07×12.96W±0.07,h11km,n159, σ1s37/112,mb4.9/50,MS4.2/46,5C-1D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H09N1	**TRISTAN DA CUN**	**8.10**	**176**	T		T	13 17 55.6	
	SNR=15							
H10S2	**ASCENSION HYDRI**	**9.97**	**355**	T		T	13 32 31.8	
	baz=45,slow=74,SNR=1650							
H10S3	**ASCENSION HYDRI**	**9.98**	**355**	T		T	13 32 30.2	
	baz=175,slow=74,SNR=1354							
SJMB	**Sao Joao De Ma**	**27.71**	**285**	*e*P		**P**	**13 13 19.7**	**-1.0**
WIN	**Windhoek**	**27.76**	**84**	P		**P**	**13 13 19.5**	**-1.9**
WIN				IAmb		IAmb	13 13 24.5	
	comp=Z,30nm,1.1s							
NBAN	**Anadia - AL**	**29.10**	**307**	*e*P		**P**	**13 13 32.3**	**-0.8**
SUR	**Sutherland**	**29.17**	**105**	P		**P**	**13 13 34.5**	**+0.6**
TSUM	**Tsumeb**	**29.45**	**78**	LR		LR	13 22 45.1	
	comp=Z,277nm,18.4s,baz=149,slow=31							
KOOLE	**Kule**	**30.32**	**86**	P		**P**	**13 13 43.1**	**-1.0**
KOOLE				IAmb		IAmb	13 13 43.8	
	comp=Z,41nm,1.4s							
GRTLG	**Ghanzi**	**31.76**	**84**	P		**P**	**13 13 55.5**	**-1.2**
GRTLG				IAmb		IAmb	13 13 59.0	
	comp=Z,16nm,0.8s							
KGCAE	**Kacgae**	**32.13**	**87**	P		**P**	**13 13 59.0**	**-0.9**
KGCAE				IAmb		IAmb	13 14 03.6	
	comp=Z,35nm,1.4s							
QNGWA	**Qangwa**	**32.41**	**81**	P		**P**	**13 14 02.0**	**-0.4**
QNGWA				IAmb		IAmb	13 14 05.2	
	comp=Z,45nm,1.8s							
FRTB	**Fartura**	**33.24**	**271**	*e*P		**P**	**13 14 10.9**	**+1.3**
BOSA	**Boshof**	**33.39**	**99**	P		**P**	**13 14 10.2**	**-0.8**
BOSA				IAmb		IAmb	13 14 17.0	
	comp=Z,44nm,1.6s							
BOSA	**Boshof**	**33.39**	**99**	P		**P**	**13 14 08.6**	**-2.4**
BOSA				LR		LR	13 25 42.2	
	comp=Z,2.8nm,0.7s,baz=229,slow=9.6,SNR=6.4							
	comp=Z,874nm,18.5s,baz=258,slow=33							
	comp=Z,2.8nm,0.7s							
SDBA	**SAO DESIDERIO**	**33.98**	**292**	*e*P		**P**	**13 14 14.8**	**-1.2**
KDWAN	**Kaudwane**	**34.12**	**89**	P		**P**	**13 14 15.9**	**-1.4**
LBTB	**Lobatse**	**34.48**	**93**	P		**P**	**13 14 19.2**	**-1.2**
LBTB				IAmb		IAmb	13 14 20.2	
	comp=Z,39nm,1.4s							
LBTB	**Lobatse**	**34.48**	**93**	LR		LR	13 26 00.2	
	comp=Z,382nm,21.4s,baz=250,slow=32							
PLTB	**Pedras Altas**	**35.04**	**255**			**P**	**13 14 25.8**	**+0.6**
PLTB				IAmb		IAmb	13 14 33.8	
	comp=Z,28nm,1.3s							
PHDHD	**Phuduhudu**	**35.08**	**84**	P		**P**	**13 14 24.0**	**-1.6**
PHDHD				IAmb		IAmb	13 14 25.3	
	comp=Z,16nm,0.7s							
LPHEP	**Lephephe**	**35.17**	**90**	P		**P**	**13 14 25.4**	**-1.0**
LPHEP				IAmb		IAmb	13 14 26.7	
	comp=Z,40nm,1.3s							
ITRB	**Iturama**	**35.18**	**277**	*e*P		**P**	**13 14 26.4**	**-0.1**
DBIC	**Dimbokro**	**36.28**	**14**	P		**P**	**13 14 35.2**	**-0.6**
DBIC				IAmb		IAmb	13 14 37.7	
	comp=Z,16nm,0.8s							
DBIC	**Dimbokro**	**36.28**	**14**	P		**P**	**13 14 34.4**	**-1.4**
	comp=Z,13nm,0.8s,baz=219,slow=8.6,SNR=12							
	comp=Z,13nm,0.8s							
KSANE	**Kasane**	**36.56**	**81**	P		**P**	**13 14 37.3**	**-1.1**
KSANE				IAmb		IAmb	13 14 41.5	
	comp=Z,21nm,1.1s							
ARAG	**Araguaiana, MT**	**38.11**	**282**	*e*P		**P**	**13 14 50.8**	**-0.6**
AMBA	**Amambai (Brazi**	**38.13**	**269**	*e*P		**P**	**13 14 53.1**	**+1.6**
SMTB	**Santa Maria do**	**38.16**	**295**	*e*P		**P**	**13 14 51.4**	**-0.5**
CPUP	**Villa Florida**	**39.23**	**263**	IAmb		IAmb	13 15 09.3	
	comp=Z,5.3nm,1.4s							
CPUP	**Villa Florida**	**39.23**	**263**	P		**P**	**13 15 00.9**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=186,slow=14,SNR=4.5							
CPUP				LR		LR	13 28 09.7	
	comp=Z,124nm,20.8s,baz=327,slow=32							
	comp=Z,0.5nm,0.7s							
SNDB	**Serra Nova Dou**	**39.48**	**287**	*e*P		**P**	**13 15 02.3**	**-0.7**
AQDB	**Aquidauana**	**39.56**	**272**	P		**P**	**13 15 05.2**	**+1.7**
AQDB	**Aquidauana**	**39.56**	**272**	*e*P		**P**	**13 15 02.5**	**-1.1**
PP1B	**Ponte de Pedra**	**39.95**	**277**	*e*P		**P**	**13 15 07.9**	**+1.1**
LSZ	**Lusaka**	**40.27**	**79**	P		**P**	**13 15 09.2**	**-0.4**
LSZ	**Lusaka**	**40.27**	**79**	LR		LR	13 28 44.3	
	comp=Z,388nm,21.1s,baz=272,slow=32							
BDQN	**Bodoquena, MS**	**40.49**	**272**	*e*P		**P**	**13 15 11.6**	**+0.3**
SALV	**Santo Antonio**	**41.37**	**279**	*e*P		**P**	**13 15 18.2**	**-0.4**
TRQA	**Tornquist**	**41.46**	**244**	P		**P**	**13 15 18.9**	**-0.3**
TRQA				IAmb		IAmb	13 15 19.7	
	comp=Z,34nm,1.4s							
PRPB	**Paraiapebas**	**41.53**	**296**	*e*P		**P**	**13 15 19.4**	**-0.6**
VNA2	**Neumayer--Watz**	**42.12**	**177**	⇑P		**P**	**13 15 24.1**	**+0.1**
	comp=Z,35nm,0.8s,baz=347,slow=12							
VNA3	**Neumayer Olymp**	**42.36**	**178**	⇑P		**P**	**13 15 25.4**	**-0.6**
	comp=Z,12nm,0.7s							
SNAA	**Sanae**	**43.11**	**175**	⇑P		**P**	**13 15 32.0**	**-0.2**
	comp=Z,101nm,0.9s							
SNAA	**Sanae**	**43.11**	**175**			**P**	**13 15 31.5**	**-0.7**
SNAA	**Sanae**	**43.11**	**175**	P		**P**	**13 15 31.5**	**-0.7**
	comp=Z,3.4nm,0.9s,baz=328,slow=8.6,SNR=9.8							
	comp=Z,3.4nm,0.9s							
BBTS	**Babate**	**43.51**	**355**	LR		LR	13 30 38.2	
	comp=Z,410nm,18.6s,baz=80,slow=32							
CLDB	**Colider**	**43.83**	**285**	*e*P		**P**	**13 15 38.4**	**-0.2**
TROLL	**Troll, Antarti**	**43.91**	**173**	⇑P		**P**	**13 15 39.0**	**+0.3**
	comp=Z,386nm,0.7s							
TORD	**Torodi Ar. Bea**	**44.20**	**21**	P		**P**	**13 15 39.7**	**-1.7**
	comp=Z,4.7nm,0.6s,baz=193,slow=5.4,SNR=5.0							
TORD				LR		LR	13 30 13.0	
	comp=Z,633nm,20.6s,baz=156,slow=31							
	comp=Z,4.7nm,0.6s							
PDRB	**Porto dos Gac**	**44.25**	**284**	*e*P		**P**	**13 15 43.3**	**+1.3**
PTLB	**Pontes e Lacer**	**44.55**	**277**			**P**	**13 15 44.8**	**+0.4**
PTLB	**Pontes e Lacer**	**44.55**	**277**	*e*P		**P**	**13 15 45.0**	**+0.6**
NPGB	**Novo Progresso**	**45.50**	**290**	*e*P		**P**	**13 15 51.0**	**-1.0**
SIV	**San Ignacio**	**46.01**	**276**	LR		LR	13 33 49.6	
	comp=Z,557nm,18.7s,baz=116,slow=34							
USHA	**Ushuaia**	**47.13**	**221**	LR		LR	13 34 06.0	
	comp=Z,148nm,19.1s,baz=84,slow=34							
ITTB	**Itaituba**	**47.33**	**293**	*e*P		**P**	**13 16 06.0**	**-0.3**
PMSA	**Palmer Station**	**47.84**	**207**	P		**P**	**13 16 09.9**	**+0.3**
PMSA	**Palmer Station**	**47.84**	**207**	LR		LR	13 31 29.2	
	comp=Z,130nm,21.6s,baz=60,slow=30							
PLCA	**Paso Flores**	**47.93**	**240**			**P**	**13 16 10.8**	**0.0**
PLCA				IAmb		IAmb	13 16 11.8	
	comp=Z,8.1nm,0.9s							
PLCA	**Paso Flores**	**47.93**	**240**	P		**P**	**13 16 10.4**	**-0.4**
	comp=Z,7.5nm,0.9s,baz=96,slow=7.2,SNR=12							
PLCA				LR		LR	13 34 42.8	
	comp=Z,168nm,19.3s,baz=88,slow=34							
	comp=Z,7.5nm,0.9s							
PLCA	**Paso Flores**	**47.93**	**240**	*e*P		**P**	**13 16 11.4**	**+0.6**
MT08	**Bocatoma Ro**	**48.50**	**250**	P		**P**	**13 16 15.7**	**+0.2**
LMEL	**Las Melosas**	**48.57**	**249**	P		**P**	**13 16 15.6**	**-0.3**
LL02	**Futaleuf**	**48.72**	**236**			**P**	**13 16 16.1**	**-0.7**
BO02	**Sierra Bellavi**	**48.88**	**248**			**P**	**13 16 17.4**	**-0.8**
LL01	**San Ignacio de**	**49.19**	**237**	P		**P**	**13 16 19.7**	**-0.7**
LL01				IAmb		IAmb	13 16 20.5	
	comp=Z,24nm,1.1s							
BO01	**Tunca**	**49.19**	**248**			**P**	**13 16 19.3**	**-1.3**
BELA	**Belgrano 2**	**49.98**	**186**	P		**P**	**13 16 24.7**	**-1.2**
BELA				IAmb		IAmb	13 16 26.1	
	comp=Z,11nm,0.9s							
SYO	**Syowa Base**	**50.10**	**158**	⇑*e*P		**P**	**13 16 25.2**	**-1.6**
SYO	**Syowa Base**	**50.10**	**158**	⇓*e*pP		**P**	**13 16 27.2**	**+0.4**
MDP	**Montagnes des**	**51.02**	**305**	LR		LR	13 35 32.8	
	comp=Z,670nm,21.9s,baz=102,slow=33							
PB03	**IPOC Station P**	**51.32**	**264**	IAmb		IAmb	13 16 56.8	
	comp=Z,27nm,1.0s							
PB01	**IPOC Station P**	**51.44**	**265**	IAmb		IAmb	13 16 47.0	
	comp=Z,12nm,0.8s							
GO01	**Chusmiza**	**51.68**	**267**	IAmb		IAmb	13 16 54.9	
	comp=Z,28nm,1.4s							
LPAZ	**La Paz**	**52.06**	**271**	P		**P**	**13 16 43.6**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=161,slow=4.3,SNR=7.2							
LPAZ				LR		LR	13 36 41.8	
	comp=Z,243nm,20.5s,baz=109,slow=34							
	comp=Z,2.0nm,0.8s							
LPAZ	**La Paz**	**52.06**	**271**	*e*P		**P**	**13 16 43.7**	**+0.6**
PB16	**IPOC Station P**	**52.45**	**268**	IAmb		IAmb	13 17 01.6	
	comp=Z,19nm,1.3s							
LODK	**Lodwar**	**56.42**	**63**	P		**P**	**13 17 14.9**	**+0.7**
MAW	**Mawson**	**58.18**	**154**	P		**P**	**13 17 25.7**	**-0.1**
	comp=Z,5.2nm,0.9s,baz=265,slow=5.9,SNR=8.1							
	comp=Z,5.2nm,0.9s							
CZSB	**Cruzeiro do Su**	**59.88**	**278**	P		**P**	**13 17 38.0**	**-0.4**
QSPA	**South Pole Qui**	**61.26**	**180**	P		**P**	**13 17 49.7**	**+2.4**
QSPA	**South Pole Qui**	**61.26**	**180**	P		**P**	**13 17 50.1**	**+2.8**
	comp=Z,11nm,1.0s,baz=215,slow=2.3,SNR=25							
QSPA				LR		LR	13 41 47.6	
	comp=Z,150nm,18.3s,baz=207,slow=34							
MDT	**Midelt**	**61.95**	**8**	LR		LR	13 40 40.5	
	comp=Z,262nm,21.8s,baz=227,slow=32							
MD31	**MD31**	**61.99**	**8**	P		**P**	**13 17 51.1**	**-1.3**
MD31				IAmb		IAmb	13 18 10.7	
	comp=Z,17nm,1.4s							
FURI	**Furi**	**62.39**	**61**	LR		LR	13 42 24.7	
	comp=Z,185nm,21.9s,baz=176,slow=34							
SDV	**Santo Domingo**	**67.11**	**295**	P		**P**	**13 18 26.5**	**+0.1**
SDV				IAmb		IAmb	13 18 47.9	
	comp=Z,13nm,0.8s							
SDV	**Santo Domingo**	**67.11**	**295**	LR		LR	13 46 35.6	
	comp=Z,525nm,18.3s,baz=110,slow=35							
SDV	**Santo Domingo**	**67.11**	**295**	*e*P		**P**	**13 18 25.1**	**-1.4**
ATD	**Arta Tunnel**	**67.23**	**62**	LR		LR	13 46 11.4	
	comp=Z,5.4nm,19.7s,baz=45,slow=35							
KEST	**Kesra**	**67.70**	**19**	P		**P**	**13 18 29.7**	**+0.1**
	comp=Z,7.9nm,0.8s,baz=198,slow=3.2,SNR=6.2							
KEST				LR		LR	13 45 23.8	
	comp=Z,543nm,21.1s,baz=224,slow=34							
	comp=Z,7.9nm,0.8s							
ROSC	**El Rosal**	**67.79**	**289**	LR		LR	13 47 05.9	
	comp=Z,576nm,19.5s,baz=127,slow=35							
ESDC	**Sonseca Array**	**68.80**	**7**	P		**P**	**13 18 35.3**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=193,slow=7.0,SNR=4.3							
ESDC				LR		LR	13 46 50.9	
	comp=Z,133nm,18.7s,baz=172,slow=34							
	comp=Z,0.9nm,0.8s							
SJG	**San Juan**	**69.49**	**306**	LR		LR	13 48 37.4	
	comp=Z,279nm,19.7s,baz=160,slow=36							
MVO	**Moncorvo**	**70.00**	**5**	*e*P		**P**	**13 18 47.6**	**+3.9**
PBRG	**Braganca**	**70.65**	**5**	*e*P		**P**	**13 18 48.7**	**+1.0**
SBA	**Scott Base**	**73.42**	**180**	P		**P**	**13 19 04.1**	**+0.2**
SBA				IAmb		IAmb	13 19 12.1	
	comp=Z,16nm,1.2s							
VNDA	**Vanda**	**73.71**	**179**	P		**P**	**13 19 06.0**	**+0.4**
VNDA	**Vanda**	**73.71**	**179**	P		**P**	**13 19 05.5**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=212,slow=4.7,SNR=6.7							
VNDA				LR		LR	13 47 01.4	
	comp=Z,184nm,21.7s,baz=180,slow=32							
	comp=Z,1.4nm,0.9s							
EIL	**Elat**	**74.10**	**42**	LR		LR	13 50 26.7	
	comp=Z,133nm,18.2s,baz=174,slow=35							
RAYN	**Ar Rayn**	**76.73**	**53**	P		**P**	**13 19 24.8**	**+1.0**
MMAI	**Mount Meron Ar**	**76.83**	**40**	LR		LR	13 49 57.3	
	comp=Z,106nm,21.5s,baz=194,slow=33							
ASF	**Jabal al Asfar**	**77.07**	**42**	LR		LR	13 52 02.7	
	comp=Z,50nm,18.2s,baz=284,slow=35							
CTI	**Castel Tesino**	**77.93**	**17**	P		**P**	**13 19 32.1**	**+2.0**
CTI				IAmb		IAmb	13 19 35.2	
	comp=Z,8.0nm,0.8s							
FETA	**Feichten**	**78.60**	**16**	*e*P		**P**	**13 19 36.9**	**+3.1**
	comp=Z,8.4nm,1.0s							
DAVA	**Damuels**	**78.65**	**16**	*e*P		**P**	**13 19 36.0**	**+1.9**
	comp=Z,9.8nm,0.9s							
ABTA	**Abfaltersbach**	**78.80**	**18**	*i* P		**P**	**13 19 36.6**	**+1.7**
	comp=Z,6.0nm,0.7s							
MYKA	**Terra Mystica**	**79.00**	**18**	*i* P		**P**	**13 19 39.9**	**+4.0**
	comp=Z,5.8nm,1.1s							
WTTA	**Wattenberg**	**79.06**	**17**	*e*P		**P**	**13 19 38.3**	**+1.9**
	comp=Z,11nm,1.3s							
KBA	**Koelnbreinsper**	**79.33**	**18**	*e*P		**P**	**13 19 39.3**	**+1.4**
	comp=Z,5.2nm,1.0s							
SOKA	**Soboth**	**79.44**	**19**	*i* P		**P**	**13 19 41.0**	**+2.7**
	comp=Z,5.0nm,1.2s							
JTS	**Las Juntas de**	**79.57**	**288**	LR		LR	13 53 52.4	
	comp=Z,581nm,19.8s,baz=127,slow=35							
RONA	**Rosalia, Austr**	**80.73**	**20**	*e*P		**P**	**13 19 48.3**	**+3.1**
	comp=Z,12nm,1.6s							
CONA	**Conrad Observa**	**80.81**	**19**	*e*P		**P**	**13 19 48.3**	**+2.6**
	comp=Z,6.9nm,1.2s							
BR131	**Keskin Array S**	**80.93**	**35**	P		**P**	**13 19 47.6**	**+1.0**
BRTR	**Keskin Array B**	**80.93**	**35**	P		**P**	**13 19 47.8**	**+1.1**
BRTR	**Keskin Array B**	**80.93**	**35**	P		**P**	**13 19 45.5**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=187,slow=6.1,SNR=6.9							
	comp=Z,1.2nm,0.8s							
GERES	**GERESS Array B**	**81.05**	**17**	LR		LR	13 53 08.7	
	comp=Z,138nm,21.6s,baz=230,slow=34							
MODS	**Modra-Piesok**	**81.62**	**20**	*e*P		**P**	**13 19 52.2**	**+2.2**
PSZ	**Piszkesteto**	**82.03**	**22**	P		**P**	**13 19 53.2**	**+1.0**
PSZ				IAmb		IAmb	13 20 01.3	
	comp=Z,9.3nm,0.9s							
MLR	**Muntele Rosu**	**82.11**	**26**	P		**P**	**13 19 54.3**	**+1.5**
MLR				IAmb		IAmb	13 20 02.6	
	comp=Z,15nm,1.1s							
MLR	**Muntele Rosu**	**82.11**	**26**	LR		LR	13 56 20.6	
	comp=Z,119nm,20.1s,baz=216,slow=36							
VRAC	**Vranov**	**82.26**	**19**	LR		LR	13 55 15.9	
	comp=Z,294nm,19.2s,baz=214,slow=35							
RPN	**Rapa Nui**	**82.43**	**243**	LR		LR	13 51 47.6	
	comp=Z,49nm,20.6s,baz=85,slow=32							
LANS	**Liptovska Anna**	**82.98**	**21**	*e*P		**P**	**13 19 59.6**	**+2.5**
LANS				*e*PP		**PP**	**13 23 09.4**	**+1.1**
CLL	**Collm**	**83.14**	**16**	*e*P		**P**	**13 19 59.0**	**+1.2**
CLL				L		L	13 55 00.0	
	comp=Z,100nm,19.3s							
EKA	**Eskdalemuir Ar**	**84.38**	**6**	P		**P**	**13 20 02.6**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=198,slow=5.2,SNR=5.4							
	comp=Z,0.8nm,0.7s							
GNI	**Garni**	**87.16**	**40**	LR		LR	14 00 25.3	
	comp=Z,75nm,18.2s,baz=224,slow=36							
AKASG	**Malin Array Be**	**87.65**	**25**	P		**P**	**13 20 20.5**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=223,slow=5.3,SNR=6.2							
AKASG				LR		LR	13 58 49.8	
	comp=Z,60nm,21.1s,baz=220,slow=35							
	comp=Z,0.7nm,0.3s							
KBZ	**Khabaz**	**88.59**	**37**	LR		LR	14 02 29.5	
	comp=Z,33nm,18.0s,baz=208,slow=37							
HFS	**Hagfors**	**91.44**	**13**	P		**P**	**13 20 38.0**	**+0.1**
	comp=Z,4.7nm,0.8s,baz=193,slow=4.6,SNR=5.9							
HFS				LR		LR	14 00 04.5	
	comp=Z,103nm,20.7s,baz=238,slow=34							
	comp=Z,4.7nm,0.8s							
NB2	**NORSAR Subarra**	**91.82**	**12**	P		**P**	**13 20 43.0**	**+3.3**
	comp=Z,5.7nm,1.2s,baz=202,slow=5.1							
NOA	**NORSAR Array B**	**91.82**	**12**	P		**P**	**13 20 39.9**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=202,slow=4.8,SNR=5.4							
NOA				LR		LR	14 01 29.7	
	comp=Z,61nm,18.4s,baz=200,slow=35							
	comp=Z,0.8nm,0.7s							
BORG	**Borgarnes**	**93.63**	**356**	LR		LR	13 55 49.4	
	comp=Z,87nm,18.9s,baz=173,slow=31							
OBN	**Obninsk**	**93.88**	**26**	LR		LR	14 03 06.0	
	comp=Z,81nm,21.0s,baz=204,slow=36							
SADO	**Sadowa**	**94.94**	**319**	LR		LR	13 56 18.5	
	comp=Z,116nm,19.9s,baz=160,slow=31							
SCHQ	**Schefferville**	**95.40**	**332**	LR		LR	13 55 40.6	
	comp=Z,76nm,21.4s,baz=122,slow=30							
FINES	**FINESS Array B**	**95.48**	**18**	LR		LR	14 02 31.6	
	comp=Z,100nm,20.3s,baz=209,slow=35							
PALK	**Pallekele**	**96.66**	**85**	LR		LR	13 58 42.2	
	comp=Z,136nm,18.8s,baz=232,slow=32							
H01W2	**Cape Leeuwin H**	**99.20**	**138**	T		T	15 12 43.4	
	baz=222,slow=75,SNR=12							
H01W3	**Cape Leeuwin H**	**99.21**	**138**	T		T	15 12 38.5	
	baz=222,slow=75,SNR=12							
H01W1	**Cape Leeuwin H**	**99.22**	**138**	T		T	15 12 44.5	
	baz=222,slow=75,SNR=14							
JMIC	**Jan Mayen**	**99.72**	**1**	LR		LR	14 01 53.6	
	comp=Z,26nm,20.4s,baz=244,slow=33							
SFJD	**Kangerlussuaq**	**99.81**	**346**	LR		LR	13 56 45.2	
	comp=Z,120nm,20.7s,baz=162,slow=30							
TBI	**Tubuai**	**113.22**	**224**	*e*LR		LR	13 59 55.8	
	comp=Z,934nm,33.8s							
TBI				*e*LR		LR	14 00 02.9	
	comp=Z,899nm,31.2s							
WMQ	**Urumqi**	**116.72**	**53**	*e*PKP		**PKiKP**	**13 26 17.9**	**+1.3**
WMQ				LR		LR		
	comp=Z,140nm,18.9s							
TAOE	**Nuku Hiva Isla**	**116.73**	**242**	*e*LR		LR	14 01 41.9	
	comp=Z,164nm,24.6s							
PPT2	**Papeete2**	**117.57**	**228**	*e*SS		SS	13 43 34.2	-7.5
	comp=Z,67nm,26.0s							
PPT2	**Papeete2**	**117.57**	**228**	*e*LR		LR	14 01 51.3	
	comp=Z,146nm,33.0s							
PPT2				*e*LR		LR	14 01 58.5	
	comp=Z,189nm,34.0s							
ASAR	**Alice Springs**	**118.71**	**145**	PKP		**PKPdf**	**13 26 20.4**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=189,slow=0.7,SNR=5.3							
NVAR	**Mina Array Bea**	**118.71**	**300**	PKP		**PKPdf**	**13 26 20.8**	**+0.1**
	comp=Z,0.1nm,0.2s,baz=67,slow=1.9,SNR=5.8							
WRA	**Warramunga Arr**	**122.02**	**143**	PKP		**PKPdf**	**13 26 26.8**	**-0.7**
	comp=

PANCS				*e*S		**Sn**	**13 16 34.0**	**0.0**
PANCS	**Alcalda de**	**0.66**	**349**	P		**Pn**	**13 16 24.3**	**-0.4**
SNVI	**San Vicente**	**0.68**	**18**	*e*P		**Pn**	**13 16 24.8**	**-0.2**
LOMA	**Loma Larga**	**0.69**	**350**	*e*P		**Pn**	**13 16 24.6**	**-0.7**
LOMA	**Loma Larga**	**0.69**	**350**	P		**Pn**	**13 16 24.5**	**-0.7**
UESV	**Universidad de**	**0.72**	**21**	*e*P		**Pn**	**13 16 24.9**	**-0.5**
UESV	**Universidad de**	**0.72**	**21**	S		**Sn**	**13 16 35.9**	**+0.5**
UESV	**Universidad de**	**0.72**	**21**	P		**Pn**	**13 16 25.3**	**-0.2**
UTEC	**Universidad Te**	**0.75**	**349**	*e*P		**Pn**	**13 16 25.4**	**-0.6**
UTEC	**Universidad Te**	**0.75**	**349**	S		**Sn**	**13 16 36.9**	**+0.7**
UTEC	**Universidad Te**	**0.75**	**349**	P		**Pn**	**13 16 25.8**	**-0.1**
TECA	**Tecapa**	**0.76**	**45**	*e*P		**Pn**	**13 16 26.0**	**0.0**
MAGS	**Ministerio de**	**0.76**	**342**	*e*P		**Pn**	**13 16 25.7**	**-0.4**
MAGS				*e*S		**Sn**	**13 16 36.6**	**+0.2**
PAVA	**Las Pavas**	**0.76**	**8**	*e*P		**Pn**	**13 16 25.7**	**-0.3**
PAVA				*e*S		**Sn**	**13 16 36.7**	**+0.3**
PAVA	**Las Pavas**	**0.76**	**8**	P		**Pn**	**13 16 25.8**	**-0.3**
IGN	**Direccin Gen**	**0.76**	**351**	*e*P		**Pn**	**13 16 25.7**	**-0.3**
IGN				*e*S		**Sn**	**13 16 36.4**	**+0.1**
IGN	**Direccin Gen**	**0.76**	**351**	P		**Pn**	**13 16 25.9**	**-0.1**
UDBS	**Universidad Do**	**0.76**	**352**	*e*P		**Pn**	**13 16 25.5**	**-0.5**
UESS	**Universidad de**	**0.77**	**349**	*e*P		**Pn**	**13 16 25.6**	**-0.5**
UESS				*e*S		**Sn**	**13 16 36.5**	**-0.2**
LBRS	**Las Brisas**	**0.78**	**1**	*e*P		**Pn**	**13 16 26.2**	**-0.1**
UEES	**Universidad Ev**	**0.78**	**346**	*e*P		**Pn**	**13 16 25.7**	**-0.6**
UEES				*e*S		**Sn**	**13 16 36.6**	**-0.2**
UEES	**Universidad Ev**	**0.78**	**346**	P		**Pn**	**13 16 26.0**	**-0.2**
LFU	**La Fuente**	**0.79**	**356**	*e*P		**Pn**	**13 16 26.4**	**-0.1**
PMON	**Piamonte**	**0.79**	**341**	*e*P		**Pn**	**13 16 26.4**	**-0.1**
PMON				*e*S		**Sn**	**13 16 37.2**	**0.0**
PMON	**Piamonte**	**0.79**	**341**	P		**Pn**	**13 16 26.4**	**-0.1**
JAYA	**Jayaque - finc**	**0.79**	**331**	*e*P		**Pn**	**13 16 26.4**	**-0.5**
JAYA				*e*S		**Sn**	**13 16 36.7**	**-0.6**
JAYA	**Jayaque - finc**	**0.79**	**331**	*i* P		**Pn**	**13 16 26.3**	**-0.2**
JAYA				*e*S		**Sn**	**13 16 36.9**	**-0.4**
JAYA	**Jayaque - finc**	**0.79**	**331**	P		**Pn**	**13 16 26.4**	**-0.2**
BOQS	**Boqueron**	**0.80**	**344**	*e*P		**Pn**	**13 16 26.7**	**-0.1**
PIC2	**El Picacho**	**0.81**	**346**	*e*P		**Pn**	**13 16 26.8**	**0.0**
PQSS	**Presa 15 de Se**	**0.82**	**36**	*e*P		**Pn**	**13 16 26.5**	**-0.2**
PQSS				*e*S		**Sn**	**13 16 37.5**	**-0.1**
PQSS	**Presa 15 de Se**	**0.82**	**36**	P		**Pn**	**13 16 26.8**	**+0.1**
LCY	**Lacayo**	**0.87**	**58**	*e*P		**Pn**	**13 16 27.5**	**0.0**
PACA	**Pacayal**	**0.87**	**54**	*e*P		**Pn**	**13 16 27.9**	**+0.3**
PACA	**Pacayal**	**0.87**	**54**	P		**Pn**	**13 16 27.9**	**+0.3**
RANC	**El Ranchito**	**0.88**	**57**	*e*P		**Pn**	**13 16 27.8**	**+0.1**
VSM	**San Miguel**	**0.89**	**58**	*e*P		**Pn**	**13 16 28.0**	**+0.1**
QUEZ	**Alcaldia de Qu**	**0.90**	**346**	*e*P		**Pn**	**13 16 27.9**	**0.0**
CEDA	**San Andres**	**0.91**	**338**	*e*P		**Pn**	**13 16 27.7**	**-0.3**
BLLM	**Bellamira**	**0.93**	**59**	*e*P		**Pn**	**13 16 28.3**	**0.0**
CEVE	**Cerro Verde**	**1.03**	**327**	*e*P		**Pn**	**13 16 29.8**	**-0.1**
CEVE				*e*S		**Sn**	**13 16 43.6**	**+0.4**
CEVE	**Cerro Verde**	**1.03**	**327**	P		**Pn**	**13 16 29.9**	**0.0**
SBLS	**San Blas**	**1.04**	**328**	*e*P		**Pn**	**13 16 29.9**	**0.0**
SNJE	**San Jose**	**1.05**	**329**	*e*P		**Pn**	**13 16 30.1**	**-0.1**
UNIC	**Universidad Ca**	**1.13**	**335**	P		**Pn**	**13 16 31.1**	**+0.1**
UNIC	**Universidad Ca**	**1.13**	**335**	S		**Sn**	**13 16 46.2**	**+0.8**
NUBE	**Las Nubes**	**1.18**	**323**	*e*P		**Pn**	**13 16 31.6**	**-0.1**
NUBE				*e*S		**Sn**	**13 16 46.6**	**-0.1**
NUBE	**Las Nubes**	**1.18**	**323**	*i* P		**Pn**	**13 16 31.7**	**-0.1**
NUBE				*e*S		**Sn**	**13 16 46.8**	**+0.1**
NUBE	**Las Nubes**	**1.18**	**323**	S		**Sn**	**13 16 47.1**	**+0.4**
NUBE	**Las Nubes**	**1.18**	**323**	P		**Pn**	**13 16 31.7**	**-0.1**
LCND	**La Caada**	**1.18**	**73**	*e*P		**Pn**	**13 16 31.8**	**0.0**
LCND	**La Caada**	**1.18**	**73**	P		**Pn**	**13 16 32.0**	**+0.3**
LLGN	**La Laguna**	**1.20**	**5**	*e*P		**Pn**	**13 16 31.6**	**-0.6**
LLGN	**La Laguna**	**1.20**	**5**	P		**Pn**	**13 16 31.8**	**-0.3**
CNCH	**Conchagua**	**1.23**	**75**	*e*P		**Pn**	**13 16 32.4**	**-0.1**
CNCH				*e*S		**Sn**	**13 16 47.9**	**0.0**
CNCH	**Conchagua**	**1.23**	**75**	P		**Pn**	**13 16 32.4**	**-0.1**
LOAL	**Lomas de Alarc**	**1.25**	**326**	*e*P		**Pn**	**13 16 33.0**	**+0.2**
LOAL				*e*S		**Sn**	**13 16 49.1**	**+0.6**
LOAL	**Lomas de Alarc**	**1.25**	**326**	P		**Pn**	**13 16 33.2**	**+0.4**
LOAL	**Lomas de Alarc**	**1.25**	**326**	S		**Sn**	**13 16 50.7**	**+2.2**
FAME	**Alcaldia de Sa**	**1.29**	**313**	P		**Pn**	**13 16 33.0**	**-0.1**
FAME	**Alcaldia de Sa**	**1.29**	**313**	S		**Sn**	**13 16 49.3**	**+0.1**
RBDL	**Robledal**	**1.30**	**332**	*e*P		**Pn**	**13 16 33.6**	**0.0**
CSGN	**Cosiguina Volc**	**1.45**	**89**	P		**Pn**	**13 16 36.0**	**+0.4**
CSGN				S		**Sn**	**13 16 55.9**	**+2.4**
MTO3	**Montecristo**	**1.46**	**348**	*e*P		**Pn**	**13 16 35.3**	**-0.5**
MTO3	**Montecristo**	**1.46**	**348**	*i* P		**Pn**	**13 16 35.5**	**-0.3**
MTO3	**Montecristo**	**1.46**	**348**	P		**Pn**	**13 16 35.5**	**-0.3**
MTO3	**Montecristo**	**1.46**	**348**	S		**Sn**	**13 16 53.0**	**-0.9**
POTN	**Potosi Cosigui**	**1.51**	**88**	P		**Pn**	**13 16 36.6**	**+0.5**
POTN				S		**Sn**	**13 16 56.4**	**+1.9**
JUAM	**Asuncion Mita**	**1.51**	**335**	*e*P		**Pn**	**13 16 36.2**	**-0.1**
ESQI	**Esquipulas**	**1.62**	**350**	*e*P		**Pn**	**13 16 37.8**	**0.0**
ESQI	**Esquipulas**	**1.62**	**350**	S		**Sn**	**13 16 57.4**	**-0.1**
ESQI	**Esquipulas**	**1.62**	**350**	P		**Pn**	**13 16 37.8**	**0.0**
PKGN	**Cerro Pekin**	**2.04**	**98**	P		**Pn**	**13 16 43.3**	**-0.3**
PKGN				S		**Sn**	**13 17 07.7**	**-0.1**
POLN	**Al Sur del Vol**	**2.20**	**98**	P		**Pn**	**13 16 44.0**	**-1.8**
POLN				S		**Sn**	**13 17 09.3**	**-2.6**
YUSH	**Yuscaran**	**2.37**	**65**	P		**Pn**	**13 16 47.9**	**-0.2**
APG	**El Apazote**	**2.45**	**326**	*i* P		**Pn**	**13 16 49.8**	**+0.3**
COPN	**Copaltepe**	**2.52**	**108**	P		**Pn**	**13 16 49.6**	**-0.5**
LIMN	**Finca el Limon**	**2.62**	**87**	P		**Pn**	**13 16 51.8**	**+0.2**

***IDC 07** 13:29:13.2±8.7, 5.°61S×151.°72E, h108km±59km, mb3.5/3, mbtmp3.8/4, MS3.9/2, Error ellipse: s-maj=103.2km s-min=57.9km az=125.0, New Britain region*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.89**	**230**	P	Pn	13 30 38.1	0.0
	4.5nm,0.6s,baz=33,slow=17,SNR=1.4						
PMG				S	Sn	13 31 44.7	+0.3
	9.0nm,0.5s,baz=166,slow=19,SNR=5.3						
WRA	**Warramunga Arr**	**22.11**	**228**	P	P	13 33 59.5	-0.4
	1.0nm,0.5s,baz=53,slow=9.9,SNR=9.9						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**24.84**	**222**	P	P	13 34 26.1	+0.4
	2.0nm,0.7s,baz=58,slow=9.0,SNR=33						
	2.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**28.33**	**242**	P	P	13 34 57.3	+0.2
	0.9nm,0.5s,baz=50,slow=7.4,SNR=1.7						
	0.9nm,0.5s						
KAPI	**Kappang**	**31.84**	**270**	LR	LR	13 50 33.5	
	comp=Z,70nm,18.1s,baz=20,slow=40						
PSI	**Prapat**	**53.39**	**278**	LR	LR	14 05 22.4	
	comp=Z,248nm,18.6s,baz=234,slow=41						
TORD	**Torodi Ar. Bea**	**149.52**	**286**	PKPbc	PKPbc	13 48 50.4	-0.6
	0.2nm,0.4s,baz=52,slow=3.9,SNR=1.9						

*IDC **07** 13:54:06.7±3.1, 23.°50S×179.°95E, h500km±31km, mb3.3/10, mbtmp4.1/10, Error ellipse: s-maj=33.8km s-min=19.4km az=164.0*

ISC 07 13:54:07.2**±0.8, **24.°0S**±0.°1×**179.°9W**±0.°1, **h518**km, **n15**, σ**0**§**99**/15, **mb3.8**/10, **South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.44**	**190**	P	**P**	**13 57 11.6**	**+0.6**
	2.7nm,0.5s,baz=267,slow=0.9,SNR=6.7						
URZ				S	**S**	**13 59 41.5**	**-1.2**
	3.4nm,0.7s,baz=248,slow=23,SNR=6.6						
PMG	**Port Moresby**	**34.63**	**289**	P	**P**	**14 00 12.1**	**-0.9**
	13nm,0.8s,baz=77,slow=7.7,SNR=4.0						
	13nm,0.8s						
STKA	**Stephens Creek**	**34.78**	**248**	P	**P**	**14 00 15.0**	**+0.8**
	1.0nm,0.5s,baz=94,slow=13,SNR=1.3						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**42.12**	**261**	P	**P**	**14 01 13.7**	**-0.3**
	2.7nm,0.4s,baz=96,slow=7.6,SNR=68						
ASAR				ScP	**ScP**	**14 06 00.0**	**+2.2**
	1.0nm,0.8s,baz=111,slow=4.5,SNR=9.9						
	2.7nm,0.4s						
WRA	**Warramunga Arr**	**42.50**	**266**	P	**P**	**14 01 16.2**	**-0.8**
	3.9nm,0.4s,baz=96,slow=8.4,SNR=78						
	3.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**50.92**	**266**	P	**P**	**14 02 20.8**	**0.0**
	3.1nm,0.6s,baz=82,slow=6.4,SNR=13						
	3.1nm,0.6s						
QSPA	**South Pole Qui**	**66.08**	**180**	P	P	14 04 07.3	+4.9
	0.4nm,0.7s,baz=56,slow=3.6,SNR=1.3						
	0.4nm,0.7s						
NVAR	**Mina Array Bea**	**84.76**	**44**	P	**P**	**14 05 46.7**	**-0.2**
	0.2nm,0.5s,baz=257,slow=5.1,SNR=1.3						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.66**	**290**	P	**P**	**14 06 11.1**	**+0.9**
	0.5nm,0.3s,baz=96,slow=4.4,SNR=1.7						
	0.5nm,0.3s						

TXAR	**Lajitas Array**	**90.40**	**58**	P		**P**	**14 06 13.9**	**+0.4**
	0.5nm,0.7s,baz=244,slow=4.5,SNR=7.3							
	0.5nm,0.7s							
PDAR	**Pinedale Array**	**92.69**	**44**	P		**P**	**14 06 23.4**	**-0.5**
	0.3nm,0.7s,baz=288,slow=5.3,SNR=2.2							
	0.3nm,0.7s							
HFS	**Hagfors**	**142.67**	**349**	PKhKP	PKPpre		14 12 36.3	
	0.7nm,0.3s,baz=62,slow=4.1,SNR=1.8							
AKASG	**Malin Array Be**	**145.12**	**327**	PKP	**PKPdf**		**14 12 44.3**	**-0.9**
	0.4nm,0.3s,baz=56,slow=3.9,SNR=2.7							
BRTR	**Keskin Array B**	**147.72**	**307**	PKPbc	**PKPbc**		**14 12 53.0**	**-0.9**
	0.9nm,0.6s,baz=81,slow=4.7,SNR=4.8							
MMAI	**Mount Meron Ar**	**147.84**	**294**	PKPbc	**PKPbc**		**14 12 53.9**	**-0.3**
	0.6nm,0.3s,baz=108,slow=9.3,SNR=2.0							

*IDC **07** 14:09:16.6±1.4, 2.°29N×127.°06E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=129.6km s-min=20.4km az=68.0*

ISC 07 14:09:24.5**±1.7, **2.°2N**±0.°6×**12.°7E**±, **h63**km, **n6**, σ**0**§**52**/6, **mb3.6**/6, **Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.13**	**162**	P	**P**	**14 14 25.6**	**+0.1**
	0.3nm,0.3s,baz=342,slow=10,SNR=4.9						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.55**	**166**	P	**P**	**14 14 56.6**	**-0.1**
	0.2nm,0.5s,baz=351,slow=7.6,SNR=4.9						
	0.2nm,0.5s						
SONM	**Songino Array**	**48.85**	**342**	P	**P**	**14 18 03.9**	**+0.1**
	0.3nm,0.4s,baz=148,slow=6.0,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**14 19 18.4**	**+0.7**
	0.4nm,0.4s,baz=114,slow=8.0,SNR=7.0						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.20**	**328**	P	**P**	**14 19 45.6**	**-0.4**
	0.6nm,0.4s,baz=128,slow=6.1,SNR=6.3						
	0.6nm,0.4s						
BVAR	**Borovoye Array**	**68.77**	**327**	P	**P**	**14 20 21.6**	**-0.3**
	0.3nm,0.5s,baz=64,slow=6.6,SNR=2.2						
	0.3nm,0.5s						

*IDC **07** 14:21:46.4±0.6, 4.°01S×104.°23W, h0km, mb4.2/14, mbtmp4.2/14, MS4.8/46, Error ellipse: s-maj=22.0km s-min=15.2km az=77.0*

*NEIC **07** 14:21:48.6, 3.°96S×104.°02W, h22km*

*NEIC **07** 14:21:48.6±2.2, 4.°0S±0.°1×104.°0W±0.°1, h10km±1km, mb4.8/157, Mwb5.4/21, Mww5.4/24, Error ellipse: s-maj=23.0km s-min=17.1km az=255.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.15; $M_{\theta\theta}$=0.02; $M_{\phi\phi}$=0.17; $M_{r\theta}$=0.20; $M_{\theta\phi}$=1.53; $M_{\phi r}$=0.18; Fault plane solution: $M_0$1.56000×10^{17} NP1:ϕ_s88.56000°, δ84.57000°, λ6.72000°. NP2:ϕ_s357.92000°, δ83.31000°, λ174.54000°. Principal axes: T 1.6503, Plg9.0000°, Azm313.0000°; N -0.1875, Plg81.0000°, Azm127.0000°; P -1.4628, Plg1.0000°, Azm223.0000°;*

*NEIC **07** 14:21:48.6, 3.°97S×104.°02W, h10km*

*NEIC **07** 14:21:48.6, 4.°26S×104.°92W, h22km, Moment Tensor Solution. Duration: 2≥4 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.13; $M_{\theta\theta}$=0.34; $M_{\phi\phi}$=-0.22; $M_{r\theta}$=-0.38; $M_{\theta\phi}$=1.54; $M_{\phi r}$=-0.47; Fault plane solution: $M_0$1.68000×10^{17} NP1: ϕ_s276.55000°, δ74.03000°, λ8.45000°. NP2:ϕ_s184.21000°, δ81.88000°, λ163.86000°. Principal axes: T 1.8113, Plg17.0000°, Azm140.0000°; N -0.3006, Plg72.0000°, Azm338.0000°; P -1.5107, Plg5.0000°, Azm231.0000°;*

*GCMT **07** 14:21:51.6±0.1, 3.°89S±0.°01×104.°00W±0.°01, h12km, MW5.3/144, Moment Tensor Solution. s101,c183; s144,c274; Duration: 1≥1 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.05±.01; $M_{\theta\theta}$=0.32±.01; $M_{\phi\phi}$=-0.26±.02; $M_{r\theta}$=0.22±.04; $M_{\theta\phi}$=1.23±.01; $M_{\phi r}$=0.18±.04; Best double couple: $M_0$1.29400×10^{17} NP1:ϕ_s97.00000°, δ82.00000°, λ8.00000°. NP2:ϕ_s6.00000°, δ82.00000°, λ171.00000°. Principal axes: T 1.3480, Plg12.0000°, Azm322.0000°; N -0.1090, Plg78.0000°, Azm144.0000°; P -1.2390, Plg1.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 14:21:49.1**±0.4, **3.°96S**±0.°08×**104.°03W**±0.°07, **h18**km, **n205**, σ1§**28**/108, **mb4.8**/87, **MS4.9**/50, **1C**, **Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYG	**Puerto Ayora**	**14.12**	**77**	Pn	**Pn**	**14 25 06.1**	**-2.3**
CMIG	**Matias Romero**	**22.79**	**23**	P	**P**	**14 26 53.2**	**+2.3**
	2.8nm,0.8s,baz=201,slow=6.3,SNR=3.5						
	2.8nm,0.8s						
APG	**El Apazote**	**23.15**	**35**	P	**P**	**14 26 57.0**	**+2.1**
	0.3nm,0.6s,baz=213,slow=16,SNR=7.0						
APG				LR	LR	14 33 52.5	
	comp=Z,489nm,21.2s,baz=260,slow=31						
CCIG	**Comitan**	**23.30**	**30**	P	**P**	**14 26 55.4**	**-1.0**
MTO3	**Montecristo**	**23.34**	**38**	P	**P**	**14 26 58.5**	**+1.6**
JTS	**Las Juntas de**	**23.70**	**53**	P	**P**	**14 27 02.4**	**+2.1**
JTS	**Las Juntas de**	**23.70**	**53**	P	**P**	**14 27 01.9**	**+1.7**
	1.8nm,0.3s,baz=255,slow=6.2,SNR=4.9						
	1.8nm,0.3s						
COHC	**Cochancay**	**24.79**	**87**		**P**	**14 27 10.9**	**+0.6**
OTAV	**Otavalo**	**25.90**	**81**	P	**P**	**14 27 16.4**	**-4.5**
OTAV	**Otavalo**	**25.90**	**81**	*e*P	**P**	**14 27 21.9**	**+1.0**
NNA	**Nana**	**28.06**	**108**	LR	LR	14 36 05.3	
	comp=Z,2µm,18.3s,baz=288,slow=30						
ROSC	**El Rosal**	**30.95**	**74**	LR	LR	14 38 16.7	
	comp=Z,2µm,21.5s,baz=251,slow=32						
RUSC	**La Rusia**	**32.42**	**73**		**P**	**14 28 17.8**	**-1.3**
TXAR	**Lajitas Array**	**33.11**	**1**	P	**P**	**14 28 24.9**	**+0.5**
	1.2nm,1.1s,baz=179,slow=12,SNR=5.2						
TXAR				LR	LR	14 40 22.0	
	comp=Z,1µm,18.4s,baz=177,slow=34						
	1.2nm,1.1s						
VHRN	**Van Horn**	**34.57**	**359**	P	**P**	**14 28 38.2**	**+1.2**
MNTX	**Cornudas Mount**	**35.49**	**358**		**P**	**14 28 45.3**	**+0.4**
MNTX				IAmb	IAmb	14 28 59.5	
	comp=Z,14nm,1.6s						
SDV	**Santo Domingo**	**35.66**	**69**		**P**	**14 28 45.6**	**-1.2**
SDV				IAmb	IAmb	14 29 07.2	
	comp=Z,28nm,1.3s						
SDV	**Santo Domingo**	**35.66**	**69**	P	**P**	**14 28 48.2**	**+1.3**
	comp=Z,7.9nm,0.6s,baz=258,slow=6.4,SNR=8.2						
SDV				LR	LR	14 40 54.3	
	comp=Z,2µm,20.5s,baz=244,slow=32						
	comp=Z,7.9nm,0.6s						
SDV	**Santo Domingo**	**35.66**	**69**	*e*P	**P**	**14 28 47.5**	**+0.7**
TAOE	**Nuku Hiva Isla**	**36.20**	**260**	*e*SS	SS	14 37 04.5	-4.8
	comp=Z,1µm,25.2s						
TAOE				*e*LR	LR	14 38 34.1	
	comp=Z,3µm,24.1s						
PIX	**Pinacate**	**36.45**	**346**	P	**P**	**14 28 51.2**	**-1.8**
PIX				IAmb	IAmb	14 29 05.8	
	comp=Z,17nm,1.2s						
121A	**Cookes Peak, D**	**36.47**	**355**		**P**	**14 28 53.3**	**-0.2**
DUN6	**Lazy B Ranch**	**36.63**	**353**	P	**P**	**14 28 55.4**	**+0.7**
PB16	**IPOC Station P**	**36.66**	**116**	P	**P**	**14 28 55.5**	**-0.3**
PB16				IAmb	IAmb	14 28 59.1	
	comp=Z,23nm,0.9s						
PB11	**IPOC Station P**	**37.01**	**118**	P	**P**	**14 28 58.0**	**-0.3**
LPAZ	**La Paz**	**37.33**	**112**	P	**P**	**14 29 02.9**	**+1.4**
LPAZ	**La Paz**	**37.33**	**112**	P	**P**	**14 29 02.4**	**+0.9**
	comp=Z,3.0nm,0.9s,baz=301,slow=5.6,SNR=10						
LPAZ				LR	LR	14 41 38.5	
	comp=Z,1µm,19.9s,baz=280,slow=32						
	comp=Z,3.0nm,0.9s						
LPAZ	**La Paz**	**37.33**	**112**	*e*P	**P**	**14 29 01.8**	**+0.3**
ESJX	**Sierra Juarez**	**37.52**	**343**	P	**P**	**14 29 03.1**	**+0.7**
H03N2	**Juan Fernandez**	**37.53**	**144**	T	T	15 08 55.8	
	baz=317,slow=77,SNR=51						
H03N1	**Juan Fernandez**	**37.54**	**144**	T	T	15 09 03.1	
	baz=317,slow=77,SNR=88						
H03N3	**Juan Fernandez**	**37.54**	**144**	T	T	15 08 56.4	
	baz=317,slow=77,SNR=52						
PB01	**IPOC Station P**	**37.62**	**120**	P	**P**	**14 29 03.6**	**+0.3**
PB01				IAmb	IAmb	14 29 06.6	
	comp=Z,25nm,1.0s						
113A	**Mohawk Valley,**	**37.68**	**347**	IAmb	IAmb	14 29 07.7	
	comp=Z,26nm,1.8s						
CRNM	**Carthage**	**37.80**	**356**	P	**P**	**14 29 05.2**	**+0.5**
Y22A	**Socorro**	**37.80**	**356**	P	**P**	**14 29 02.5**	**-2.2**
Y22A				IAmb	IAmb	14 29 33.1	
	comp=Z,36nm,1.7s						

SBM	**South Baldy**	**37.85**	**356**	P		**P**	**14 29 03.9**	**-1.5**
LENM	**Lemitar**	**38.02**	**356**	P		**P**	**14 29 05.6**	**-1.1**
PB09	**IPOC Station P**	**38.12**	**121**	P		**P**	**14 29 08.7**	**+1.1**
GLA	**Glamis**	**38.21**	**345**	IAmb	IAmb		14 29 21.0	
	comp=Z,19nm,1.4s							
ANMO	**Albuquerque**	**38.77**	**357**	LR	LR		14 43 05.8	
	comp=Z,533nm,19.2s,baz=272,slow=33							
BC3	**Big Chuckawall**	**38.94**	**345**	IAmb	IAmb		14 29 29.9	
	comp=Z,21nm,1.6s							
PFO	**Pinyon Flats O**	**39.17**	**343**	P	**P**	**14 29 15.7**	**-0.6**	
PFO	**Pinyon Flats O**	**39.17**	**343**	LR	LR		14 41 36.1	
	comp=Z,2µm,21.2s,baz=152,slow=30							
DNR	**Dunn Ranch,Anz**	**39.18**	**343**	IAmb	IAmb		14 29 32.0	
	comp=Z,20nm,1.2s							
GO02	**Mina Guanaco**	**39.23**	**126**	P	**P**	**14 29 19.0**	**+1.9**	
MIAR	**Mount Ida**	**39.55**	**14**	IAmb	IAmb		14 29 39.7	
	comp=Z,24nm,1.2s							
AC06	**Mina Casimiro**	**39.67**	**129**	P	**P**	**14 29 19.9**	**-0.5**	
AC06				IAmb	IAmb		14 29 23.8	
	comp=Z,28nm,1.0s							
BFSC	**Mount Baldy Ra**	**40.11**	**342**	IAmb	IAmb		14 29 39.5	
	comp=Z,23nm,1.5s							
V12A	**Nelson**	**40.76**	**346**	P	**P**	**14 29 29.3**	**-0.1**	
GSC	**Goldstone, Bar**	**40.86**	**344**	P	**P**	**14 29 31.0**	**+0.8**	
U15A	**North Rim**	**40.92**	**350**	IAmb	IAmb		14 29 59.4	
	comp=Z,31nm,1.9s							
MVCO	**Mesa Verde**	**41.17**	**355**	P	**P**	**14 29 32.6**	**-0.3**	
MVCO				IAmb	IAmb		14 30 01.7	
	comp=Z,12nm,1.1s							
QSM	**Queen of Sheba**	**41.50**	**344**	IAmb	IAmb		14 29 44.3	
	comp=Z,9.0nm,0.8s							
PLAL	**Pickwick Lake**	**41.55**	**20**	P	**P**	**14 29 36.9**	**+1.2**	
PLAL				IAmb	IAmb		14 29 44.7	
	comp=Z,37nm,1.3s							
SHPR	**Sheep Range**	**41.58**	**346**	P	**P**	**14 29 36.0**	**-0.1**	
FURC	**Furnace Creek,**	**41.97**	**344**	IAmb	IAmb		14 29 55.0	
	comp=Z,20nm,1.3s							
PV02	**Paradox Valley**	**42.18**	**354**	IAmb	IAmb		14 30 03.7	
	comp=Z,14nm,1.1s							
WCT	**Wildcat Mounta**	**42.21**	**345**	IAmb	IAmb		14 29 57.5	
	comp=Z,13nm,1.2s							
PV18	**Skein Mesa, Pa**	**42.24**	**354**	IAmb	IAmb		14 30 28.0	
	comp=Z,38nm,1.6s							
TPNV	**Topopah Spring**	**42.27**	**345**	IAmb	IAmb		14 29 48.9	
	comp=Z,23nm,1.6s							
PV12	**Saucer Basin,**	**42.30**	**354**	IAmb	IAmb		14 30 29.5	
	comp=Z,46nm,1.7s							
PV19	**Morning Glory**	**42.31**	**354**	IAmb	IAmb		14 29 55.7	
	comp=Z,23nm,1.4s							
PRN	**Pahroc Range**	**42.42**	**347**	IAmb	IAmb		14 29 55.8	
	comp=Z,13nm,1.1s							
PBMO	**Poplar Bluff**	**42.47**	**16**	P	**P**	**14 29 43.2**	**0.0**	
PBMO				IAmb	IAmb		14 30 07.8	
	comp=Z,31nm,1.2s							
S11A	**Rachel**	**42.80**	**346**	IAmb	IAmb		14 30 31.9	
	comp=Z,30nm,1.4s							
ZON	**Zonda**	**43.08**	**134**	IAmb	IAmb		14 29 51.2	
	comp=Z,35nm,1.3s							
DSP	**Deep Springs**	**43.12**	**344**	P	**P**	**14 29 47.9**	**-0.5**	
HODGE	**Hodges**	**43.19**	**27**	IAmb	IAmb		14 29 50.5	
	comp=Z,27n

MFID	**Camas Ranch**	**48.35**	**349**	IAmb	IAmb	14 30 52.4	
	comp=Z,16nm,1.3s						
NPGB	**Novo Progresso**	**48.53**	**96**	*eP*	**P**	**14 30 30.1**	**-1.6**
YBH	**Yreka Blue Hor**	**48.56**	**341**	IAmb	IAmb	14 30 33.2	
	comp=Z,4.9nm,0.9s						
YBH	**Yreka Blue Hor**	**48.56**	**341**	LR	LR	14 46 37.5	
	comp=Z,93nm,21.5s,baz=160,slow=31						
BCYI	**Bear Canyon**	**48.79**	**351**	IAmb	IAmb	14 31 01.7	
	comp=Z,21nm,1.5s						
SALV	**Santo Antonio**	**48.95**	**108**	*eP*	**P**	**14 30 35.8**	**+0.9**
J05D	**Fort Rock, OR**	**49.53**	**344**	IAmb	IAmb	14 30 41.3	
	comp=Z,13nm,1.2s						
AQDB	**Aquidauana**	**49.78**	**113**	P	**P**	**14 30 40.7**	**-0.4**
AQDB				IAmb	IAmb	14 30 42.9	
	comp=Z,9.6nm,0.9s						
AQDB	**Aquidauana**	**49.78**	**113**	*eP*	**P**	**14 30 42.0**	**+0.9**
I07A	**Izee**	**49.81**	**345**	IAmb	IAmb	14 30 54.1	
	comp=Z,11nm,0.9s						
CPUP	**Villa Florida**	**49.89**	**121**	P	**P**	**14 30 39.7**	**-2.2**
CPUP				IAmb	IAmb	14 30 45.0	
	comp=Z,9.7nm,1.4s						
CPUP	**Villa Florida**	**49.89**	**121**	P	**P**	**14 30 42.7**	**+0.8**
	comp=Z,2.6nm,1.1s,baz=0.0,slow=1.0,SNR=7.9						
CPUP				LR	LR	14 48 29.7	
	comp=Z,321nm,20.6s,baz=145,slow=32						
	comp=Z,2.6nm,1.1s						
PINE	**Pine Mountain**	**49.92**	**344**	IAmb	IAmb	14 30 55.0	
	comp=Z,15nm,1.2s						
PP1B	**Ponte de Pedra**	**49.99**	**110**	*eP*	**P**	**14 30 43.3**	**+0.5**
WIFE	**Three Sisters-**	**50.41**	**343**	IAmb	IAmb	14 30 57.9	
	comp=Z,8.1nm,0.8s						
G08A	**Pilot Rock**	**50.81**	**346**	IAmb	IAmb	14 31 19.5	
	comp=Z,26nm,1.7s						
AMBA	**Amambai (Brazi**	**50.99**	**116**	*eP*	**P**	**14 30 50.4**	**+0.1**
H04A	**Detroit Lake**	**51.09**	**343**	IAmb	IAmb	14 30 58.0	
	comp=Z,6.6nm,0.9s						
G06A	**Carlson Farm,**	**51.17**	**345**	IAmb	IAmb	14 31 03.4	
	comp=Z,16nm,1.3s						
HOOD	**Mount Hood Mea**	**51.52**	**344**	IAmb	IAmb	14 31 04.8	
	comp=Z,14nm,0.9s						
HAWA	**Hanford**	**51.99**	**346**	IAmb	IAmb	14 31 09.2	
	comp=Z,11nm,1.1s						
MDP	**Montagnes des**	**52.12**	**80**	LR	LR	14 51 01.6	
	comp=Z,1µm,19.6s,baz=271,slow=34						
D08A	**Wollman Farm,**	**52.48**	**347**	IAmb	IAmb	14 31 12.3	
	comp=Z,32nm,2.0s						
ARAG	**Araguaiana, MT**	**52.62**	**107**	*eP*	**P**	**14 31 00.7**	**-1.9**
SNDB	**Serra Nova Dou**	**52.76**	**102**	*eP*	**P**	**14 31 03.8**	**+0.2**
NEW	**Newport**	**53.26**	**349**	IAmb	IAmb	14 31 09.5	
	comp=Z,13nm,1.3s						
NEW	**Newport**	**53.26**	**349**	LR	LR	14 51 09.2	
	comp=Z,1µm,18.8s,baz=174,slow=33						
SADO	**Sadowa**	**53.39**	**22**	LR	LR	14 53 52.9	
	comp=Z,372nm,18.0s,baz=218,slow=36						
PTGB	**Pitanga**	**54.02**	**118**	*eP*	**P**	**14 31 13.8**	**+0.9**
CPSB	**Cacapava Do Su**	**54.43**	**125**	*eP*	**P**	**14 31 16.0**	**+0.4**
SMTB	**Santa Maria do**	**56.26**	**98**	*eP*	**P**	**14 31 31.0**	**+1.9**
IPMB	**Ipameri, GO**	**56.33**	**109**	*eP*	**P**	**14 31 29.9**	**+0.3**
RAR	**Rarotonga**	**56.72**	**247**	LR	LR	14 50 03.2	
	comp=Z,412nm,18.8s,baz=78,slow=30						
USHA	**Ushuaia**	**58.31**	**157**	LR	LR	14 51 11.1	
	comp=Z,2µm,19.5s,baz=300,slow=30						
BBB	**Bella Bella**	**59.56**	**343**	LR	LR	14 54 50.4	
	comp=Z,528nm,18.0s,baz=166,slow=33						
GUA01	**Guaratinga, BA**	**64.19**	**106**	*eP*	**P**	**14 32 24.2**	**+0.8**
DLBC	**Dease Lake**	**65.59**	**345**	LR	LR	14 58 12.6	
	comp=Z,702nm,19.8s,baz=122,slow=33						
SCHQ	**Schefferville**	**66.19**	**22**	LR	LR	15 00 50.3	
	comp=Z,1µm,19.3s,baz=228,slow=30						
YKA	**Yellowknife Ar**	**66.76**	**355**	P	**P**	**14 32 39.1**	**0.0**
	comp=Z,2.1nm,0.8s,baz=175,slow=5.2,SNR=4.7						
YKA				LR	LR	14 59 11.9	
	comp=Z,1µm,22.0s,baz=207,slow=34						
	comp=Z,2.1nm,0.8s						
PMSA	**Palmer Station**	**67.07**	**163**	LR	LR	14 54 14.2	
	comp=Z,1µm,20.7s,baz=306,slow=29						
K29M	**Barlow Dome**	**72.11**	**345**	IAmb	IAmb	14 33 24.0	
	comp=Z,8.3nm,0.9s						
BCAR	**Beaver Creek A**	**72.66**	**343**		**P**	**14 33 15.4**	**-0.1**
KDAK	**Kodiak Island**	**72.79**	**335**	LR	LR	14 57 22.3	
	comp=Z,1µm,21.0s,baz=150,slow=29						
RAO	**Raoul Island**	**74.02**	**241**	LR	LR	15 00 03.5	
	comp=Z,211nm,18.1s,baz=92,slow=31						
I28M	**Miner Creek**	**74.02**	**345**	IAmb	IAmb	14 33 27.9	
	comp=Z,12nm,1.4s						
J26L	**Joseph Creek**	**74.27**	**343**	IAmb	IAmb	14 33 44.3	
	comp=Z,9.1nm,1.2s						
INK	**Inuvik**	**74.98**	**349**	LR	LR	15 04 46.8	
	comp=Z,1µm,18.0s,baz=155,slow=34						
ILAR	**Eielson Array**	**75.44**	**342**	P	**P**	**14 33 30.2**	**-1.5**
ILAR	**Eielson Array**	**75.44**	**342**	P	**P**	**14 33 30.9**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=155,slow=4.9,SNR=51						
	comp=Z,4.6nm,0.8s						
H24K	**Noodor Dome**	**76.49**	**343**		**P**	**14 33 38.2**	**+0.5**
H24K				IAmb	IAmb	14 33 56.6	
	comp=Z,17nm,1.2s						
MLY	**Manley**	**76.81**	**342**		**P**	**14 33 39.6**	**0.0**
MLY				IAmb	IAmb	14 33 50.8	
	comp=Z,10.0nm,0.8s						
RES	**Resolute Bay**	**78.72**	**2**	LR	LR	15 07 15.1	
	comp=Z,732nm,20.5s,baz=198,slow=35						
F20K	**Avaraart Lake**	**79.67**	**342**	IAmb	IAmb	14 34 15.1	
	comp=Z,16nm,1.4s						
SFJD	**Kangerlussuaq**	**80.18**	**19**	LR	LR	15 09 11.5	
	comp=Z,678nm,19.5s,baz=234,slow=35						
BELA	**Belgrano 2**	**81.88**	**168**		**P**	**14 34 06.7**	**-0.3**
BELA				IAmb	IAmb	14 34 24.0	
	comp=Z,7.3nm,1.2s						
RPZ	**Rata Peaks**	**83.60**	**227**	LR	LR	15 05 08.9	
	comp=Z,1µm,18.2s,baz=133,slow=31						
QSPA	**South Pole Qui**	**86.09**	**180**	P	**P**	**14 34 30.4**	**+1.6**
QSPA	**South Pole Qui**	**86.09**	**180**	P	**P**	**14 34 29.8**	**+1.0**
	comp=Z,6.0nm,1.0s,baz=95,slow=2.6,SNR=13						
QSPA				LR	LR	15 06 15.0	
	comp=Z,657nm,19.8s,baz=121,slow=31						
	comp=Z,6.0nm,1.0s						
VNDA	**Vanda**	**87.05**	**193**		**P**	**14 34 34.0**	**+0.9**
VNDA				IAmb	IAmb	14 34 50.9	
	comp=Z,5.5nm,1.2s						
VNDA	**Vanda**	**87.05**	**193**	P	**P**	**14 34 34.1**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=81,slow=13,SNR=4.9						
VNDA				LR	LR	15 06 19.9	
	comp=Z,305nm,18.8s,baz=96,slow=31						
	comp=Z,0.6nm,0.7s						
DZM	**Mont Dzumac**	**88.09**	**248**	LR	LR	15 06 31.7	
	comp=Z,205nm,20.1s,baz=88,slow=31						
SHEM	**Shemya Is, Ala**	**88.20**	**323**	LR	LR	15 05 55.0	
	comp=Z,1µm,21.0s,baz=110,slow=30						
BBTS	**Babate**	**88.58**	**75**	LR	LR	15 09 53.5	
	comp=Z,179nm,19.2s,baz=148,slow=32						
SNAA	**Sanae**	**89.78**	**162**	LR	LR	15 06 43.9	
	comp=Z,433nm,21.6s,baz=216,slow=30						
H11N3	**WAKE ISLAND Hy**	**90.43**	**290**	T	T	16 14 52.7	
	baz=96,slow=75,SNR=26						
BORG	**Borgarnes**	**90.44**	**25**	LR	LR	15 15 01.9	
	comp=Z,309nm,18.1s,baz=258,slow=35						
H11N2	**WAKE ISLAND Hy**	**90.44**	**290**	T	T	16 14 53.0	
	baz=96,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**90.45**	**290**	T	T	16 14 53.8	
	baz=96,slow=75,SNR=18						
H11S2	**WAKE ISLAND Hy**	**90.54**	**288**	T	T	16 15 02.6	
	baz=94,slow=75,SNR=36						
H11S1	**WAKE ISLAND Hy**	**90.55**	**288**	T	T	16 15 01.5	
	baz=94,slow=75,SNR=27						
H11S3	**WAKE ISLAND Hy**	**90.56**	**288**	T	T	16 15 03.1	
	baz=94,slow=75,SNR=33						
TROLL	**Troll, Antarti**	**91.33**	**163**	⇑P	**P**	**14 34 54.4**	**+0.8**
	comp=Z,83nm,1.1s						
HNR	**Honiara**	**95.28**	**260**	LR	LR	15 08 15.4	
	comp=Z,224nm,21.8s,baz=41,slow=29						
JMIC	**Jan Mayen**	**95.53**	**19**	LR	LR	15 16 46.2	
	comp=Z,531nm,22.0s,baz=250,slow=34						
PETK	**Petropavlovsk-**	**98.12**	**323**	LR	LR	15 11 39.0	
	comp=Z,635nm,20.3s,baz=87,slow=30						
DBIC	**Dimbokro**	**99.55**	**84**	LR	LR	15 19 38.2	
	comp=Z,259nm,19.5s,baz=286,slow=35						
SEY	**Seymchan**	**99.69**	**333**	LR	LR	15 15 25.7	
	comp=Z,421nm,18.5s,baz=80,slow=32						
SPITS	**Spitsbergen Ar**	**99.86**	**10**	LR	LR	15 22 42.9	
	comp=Z,517nm,18.1s,baz=288,slow=37						
ASAR	**Alice Springs**	**117.27**	**241**	PKP	**PKPdf**	**14 40 34.5**	**+0.1**
	comp=Z,0.4nm,1.0s,baz=89,slow=2.1,SNR=1.8						
WRA	**Warramunga Arr**	**117.96**	**245**	PKP	**PKPdf**	**14 40 34.1**	**-1.7**
	comp=Z,0.5nm,0.9s,baz=105,slow=2.0,SNR=2.8						
BRTR	**Keskin Array B**	**127.77**	**41**	PKP	**PKPdf**	**14 40 54.5**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=310,slow=1.1,SNR=2.4						
SONM	**Songino Array**	**129.07**	**334**	PKP	**PKPdf**	**14 40 56.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=42,slow=2.3,SNR=2.5						
BVAR	**Borovoye Array**	**130.88**	**4**	PKP	**PKiKP**	**14 41 01.8**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=151,slow=3.3,SNR=2.6						
NJ2	**Nanjing**	**131.07**	**310**	*eP*	**PKPdf**	**14 40 59.1**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NJ2				LR	LR		
	comp=N,300nm,17.1s						
NJ2				LR	LR		
	comp=E,600nm,19.9s						
NJ2				LR	LR		
	comp=Z,890nm,19.4s						
HHC	**Hu-ho-hao-te**	**131.31**	**324**	*eP*	**PKPdf**	**14 40 56.9**	**-4.0**
MKAR	**Makanchi Array**	**136.98**	**354**	PKP	**PKPdf**	**14 41 11.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=14,slow=2.2,SNR=2.8						
WMQ	**Urumqi**	**138.97**	**347**	*e*PKP	**PKPdf**	**14 41 16.1**	**+1.1**
WMQ				LR	LR		
	comp=N,410nm,19.9s						
WMQ				LR	LR		
	comp=E,330nm,21.5s						
WMQ				LR	LR		
	comp=Z,370nm,21.5s						
CD2	**Chengdu**	**142.53**	**319**	PKP	**PKPdf**	**14 41 20.5**	**-1.3**
CD2				PP	PP	14 44 19.7	-9.0
CD2				SKS	**SKSdf**	**14 48 30.5**	**-0.7**
CD2				AMB	AMB		
	comp=Z,240nm,8.7s						
CD2				LR	LR		
	comp=N,600nm,17.3s						
CD2				LR	LR		
	comp=E,750nm,15.9s						
CD2				LR	LR		
	comp=Z,61nm,17.8s						
GAR	**Garm**	**144.75**	**8**	PKPdf	**PKPab**	**14 41 23.8**	**-0.5**
PZH	**PanZhiHua**	**146.67**	**315**	PKPbc	**PKPdf**	**14 41 28.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**153.31**	**304**	PKP	**PKPdf**	**14 41 38.0**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=3.8,slow=0.2,SNR=5.9						
CMAR				PKPbc	**pPKPdf**	**14 41 46.3**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=66,slow=2.9,SNR=3.3						
HYBB	**Hyderabad (bro**	**166.39**	**349**	*e*PKPdf	**PKPdf**	**14 41 53.5**	**-1.0**
HYBB				*e*PP	**PP**	**14 46 43.4**	**+1.8**
HYBB				*e*SKSdf	**SKSdf**	**14 48 57.8**	**-0.5**

DJA 07 14:24:50.4±0.4,**10°S**±5°×**12°0E**±°,**h46**km±7km,**M3.6**/13,
mb3.8/1,**MLv3.5**/13,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.13**	**243**	P	Pn	14 24 58.6	+0.6
WBSI				S	Sn	14 25 05.5	+2.2
WSI	**Waingapu**	**0.78**	**97**	P	Pn	14 25 05.6	+0.5
BASI	**Baing, Sumba**	**1.23**	**121**	P	Pn	14 25 11.4	+0.2
BASI				S	Sn	14 25 27.0	+0.4
PLAI	**Plampang**	**1.87**	**293**	P	Pn	14 25 19.4	-0.5
EDFI	**Ende, Flores**	**2.31**	**69**	P	Pn	14 25 25.6	-0.4
TWSI	**Taliwang, Sumb**	**2.73**	**288**	P	Pn	14 25 31.7	0.0
MMRI	**Maumere**	**2.85**	**71**	P	Pn	14 25 33.6	+0.1
BSSI	**Bau Bau, Buton**	**3.55**	**16**	P	Pn	14 25 43.1	0.0
BATI	**Baumata**	**4.14**	**99**	P	Pn	14 25 52.0	+0.8
BKSI	**Bulukumba**	**4.27**	**8**	P	Pn	14 25 53.8	+0.8
SOEI	**Soe**	**4.69**	**93**	P	Pn	14 25 59.9	+1.0
BNSI	**Bone**	**5.18**	**7**	P	Pn	14 26 04.3	-1.1

*NEIC **07** 14:27:53.9±2.9,4.°0S±0.°1×104.°3W±0.°2,h10km±1km,*
mb4.4/14,Error ellipse: s-maj=35.7km s-min=9.3km
az=237.0
*IDC **07** 14:27:54.4±1.0,3.°96S×104.°72W,h0km,mb3.9/7,*
mbtmp3.9/7,MS4.5/1,Error ellipse: s-maj=58.4km
s-min=23.4km az=74.0
*GCMT **07** 14:27:56.9±0.4,3.°94S±0.°02×104.°07W±0.°02,h14km±2km,*
MW4.9/88,Moment Tensor Solution. s8,c9; s88,c121;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.12±.11;
Mθθ1.23±.12; Mϕϕ-1.11±.12; Mrθ1.59±.38; Mrϕ2.28±.11;
Mθϕ-0.17±.23; Best double couple: M=3.01400×10¹⁶
NP1:φs13.00000°,δ58.00000°,λ179.00000°. NP2:
φs103.00000°,δ89.00000°,λ32.00000°. Principal axes: T
3.1440, Plg22.0000°, Azm333.0000°; N -0.2580,
Plg58.0000°, Azm104.0000°; P -2.8840, Plg21.0000°,
Azm233.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function

ISC 07 14:27:54.6±0.9,**3.9S**±0.°1×**104.°1W**±0.°2,**h10**km,**n38,**
σ1s48/27,mb4.2/14,**Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**22.02**	**14**	P	**P**	**14 32 48.8**	**-0.8**
MTO3	**Montecristo**	**23.33**	**38**	P	**P**	**14 33 05.4**	**+2.0**
MTO3				IAmb	IAmb	14 33 33.0	
	comp=Z,16nm,1.4s						
SOCE	**Pocosol**	**24.03**	**54**	P	**P**	**14 33 07.9**	**-2.3**
OTAV	**Otavalo**	**25.95**	**81**	P	**P**	**14 33 28.5**	**+0.4**
OTAV				IAmb	IAmb	14 33 45.4	
	comp=Z,4.8nm,0.9s						
RUSC	**La Rusia**	**32.46**	**73**	P	**P**	**14 34 27.5**	**+1.5**
TXAR	**Lajitas Array**	**33.06**	**1**	P	**P**	**14 34 31.0**	**+0.3**
TXAR	**Lajitas Array**	**33.06**	**1**	P	**P**	**14 34 32.2**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=186,slow=9.1,SNR=4.0						
	comp=Z,0.4nm,0.8s						
PB12	**IPOC Station P**	**36.08**	**117**	P	**P**	**14 34 57.4**	**+0.3**
H03N2	**Juan Fernandez**	**37.60**	**144**	T	T	15 14 58.6	
	baz=318,slow=77,SNR=25						
H03N1	**Juan Fernandez**	**37.61**	**144**	T	T	15 14 56.3	
	baz=318,slow=77,SNR=28						
H03N3	**Juan Fernandez**	**37.61**	**144**	T	T	15 14 57.2	
	baz=318,slow=77,SNR=23						
113A	**Mohawk Valley,**	**37.62**	**347**	P	**P**	**14 35 09.2**	**-0.5**
PB01	**IPOC Station P**	**37.69**	**120**	P	**P**	**14 35 11.1**	**+0.4**
PB01				IAmb	IAmb	14 35 19.6	
	comp=Z,7.7nm,0.8s						
BAUV	**El Baul**	**38.13**	**70**	P	**P**	**14 35 14.2**	**-0.2**
BAUV				IAmb	IAmb	14 35 16.1	
	comp=Z,14nm,1.1s						
BAR	**Barrett**	**38.30**	**343**	P	**P**	**14 35 13.4**	**-2.2**
BAR				IAmb	IAmb	14 35 19.5	
	comp=Z,5.4nm,0.9s						
AC06	**Mina Casimiro**	**39.74**	**129**	P	**P**	**14 35 25.6**	**-2.1**
AC06				IAmb	IAmb	14 35 44.8	
	comp=Z,9.0nm,1.0s						
SIV	**San Ignacio**	**43.93**	**109**	LR	LR	14 51 38.1	
	comp=Z,552nm,20.4s,baz=314,slow=32						
NVAR	**Mina Array Bea**	**44.14**	**344**	P	**P**	**14 36 04.0**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=166,slow=7.8,SNR=2.8						
	comp=Z,0.8nm,0.7s						
PTLB	**Pontes e Lacer**	**45.66**	**108**		**P**	**14 36 15.4**	**-0.6**
PD31	**Pinedale Array**	**46.73**	**354**		**P**	**14 36 20.8**	**-3.4**
PD31				IAmb	IAmb	14 36 27.2	
	comp=Z,3.5nm,1.1s						
PDAR	**Pinedale Array**	**46.73**	**354**	P	**P**	**14 36 22.9**	**-1.3**
PDAR	**Pinedale Array**	**46.73**	**354**	P	**P**	**14 36 25.6**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=194,slow=5.9,SNR=9.5						
	comp=Z,1.9nm,0.8s						
I07A	**Izee**	**49.75**	**345**		**P**	**14 36 45.5**	**-1.9**
I07A				IAmb	IAmb	14 36 51.5	
	comp=Z,6.0nm,0.9s						
CPUP	**Villa Florida**	**49.96**	**121**	P	P	14 36 54.1	+4.9
	comp=Z,1.7nm,1.2s,baz=310,slow=8.1,SNR=4.1						
	comp=Z,1.7nm,1.2s						
YKA	**Yellowknife Ar**	**66.71**	**355**	P	**P**	**14 38 46.7**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=178,slow=7.2,SNR=2.2						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**75.38**	**342**	P	**P**	**14 39 37.7**	**-0.5**
ILAR	**Eielson Array**	**75.38**	**342**	P	**P**	**14 39 39.0**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=156,slow=6.0,SNR=21						
	comp=Z,1.7nm,0.7s						
BMAR	**Burnt Mountain**	**76.68**	**345**	P	**P**	**14 39 46.5**	**+0.9**
IMAR	**Indian Mountai**	**78.32**	**341**	P	**P**	**14 39 54.3**	**-0.5**
QSPA	**South Pole Qui**	**86.14**	**180**	P	**P**	**14 40 38.1**	**+2.2**
	comp=Z,1.4nm,0.8s,baz=101,slow=2.0,SNR=4.2						
	comp=Z,1.4nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**90.37**	**290**	T	T	16 21 13.5	
	baz=96,slow=74,SNR=15						
H11N2	**WAKE ISLAND Hy**	**90.38**	**290**	T	T	16 21 09.0	
	baz=96,slow=74,SNR=13						
H11N1	**WAKE ISLAND Hy**	**90.39**	**290**	T	T	16 21 15.2	
	baz=96,slow=74,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	**90.48**	**288**	T	T	16 21 19.0	
	baz=95,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**90.48**	**288**	T	T	16 21 07.9	
	baz=95,slow=75,SNR=18						
H11S3	**WAKE ISLAND Hy**	**90.49**	**288**	T	T	16 21 13.1	
	baz=95,slow=75,SNR=23						
ASAR	**Alice Springs**	**117.25**	**241**	PKP	**PKiKP**	**14 46 41.0**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=98,slow=1.3,SNR=1.1						
WRA	**Warramunga Arr**	**117.94**	**245**	PKP	**PKPdf**	**14 46 41.5**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=96,slow=2.3,SNR=2.3						

DJA 07 14:29:51.7±0.3,**10°S**±4°×**11°9E**±°,**h26**km±3km,**M3.8**/16,
mb4.1/6,**MLv3.6**/16,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.09**	**242**	P	Pb	14 29 57.1	+0.6
WBSI				S	Sb	14 30 01.2	+1.5
WSI	**Waingapu**	**0.82**	**95**	P	Pn	14 30 08.3	+0.7
BASI	**Baing, Sumba**	**1.25**	**119**	P	Pb	14 30 14.4	-0.3
PLAI	**Plampang**	**1.84**	**295**	P	Pn	14 30 22.0	+0.4
EDFI	**Ende, Flores**	**2.35**	**69**	P	Pn	14 30 28.5	-0.2
TWSI	**Taliwang, Sumb**	**2.69**	**288**	P	Pn	14 30 34.3	+0.9
MMRI	**Maumere**	**2.90**	**71**	P	Pn	14 30 35.9	-0.3
BSSI	**Bau Bau, Buton**	**3.58**	**16**	P	Pn	14 30 44.7	-0.9
BATI	**Baumata**	**4.17**	**99**	P	Pn	14 30 54.0	+0.2
BKSI	**Bulukumba**	**4.30**	**9**	P	Pn	14 30 56.5	+1.0
SOEI	**Soe**	**4.73**	**92**	P	Pn	14 31 02.6	+1.0
BNSI	**Bone**	**5.20**	**7**	P	Pn	14 31 07.8	-0.1
	0.1nm15nm,0.7s						
JAGI	**Jajag, Banyuwa**	**5.37**	**282**	P	Pn	14 31 09.6	-0.6
	16nm,0.4s						
SPSI	**Sidrap Palu**	**5.61**	**3**	P	Pn	14 31 12.9	-0.6
	0.0nm7.3nm,0.5s						
BLJI	**Banyuglugur**	**6.09**	**287**	P	Pn	14 31 19.6	-0.6

*IDC **07** 14:36:29.3±0.9,27.°10N×55.°13E,h0km,mb3.8/14,*
mbtmp3.8/15,ML3.4/1,Error ellipse: s-maj=23.7km
s-min=18.9km az=41.0
*TEH **07** 14:36:33.2,27.°16N×55.°03E,h18km±23km*
*DSN **07** 14:36:34.0±1.4,27.°23N×55.°09E,h15km,ML3.3/12,Error*
ellipse: s-maj=16.6km s-min=5.0km az=15.0
*OMAN **07** 14:36:39.0±0.1,26.°73N×54.°92E,h18km,mb3.8/5,*
ml3.3/21,Error ellipse: s-maj=1.8km s-min=0.6km az=13.0

ISC 07 14:36:34.2±1.1,**27.11N**±0.°03×**55.°03E**±0.°03,**h32**km±9km,
n90,σ1s77/107,**mb3.8**/14,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.81**	**314**	Pg	**Pb**	**14 36 48.1**	**-1.8**
GENO	**Geno**	**1.06**	**74**	Pg	**Pn**	**14 36 52.8**	**-0.2**
GENO				Sg	**Sn**	**14 37 09.0**	**+2.3**
IBND	**Bandar-abas**	**1.39**	**75**	Pg	**Pb**	**14 36 58.5**	**-1.0**
IBND				Sg	**Sb**	**14 37 18.4**	**+1.5**
SHME	**Shamm**	**1.45**	**136**	P	**Pb**	**14 36 59.9**	**-0.7**
SHME				S	**Sb**	**14 37 19.0**	**+0.4**
SHME	**Shamm**	**1.45**	**136**	*e*P	**Pb**	**14 36 59.5**	**-1.0**
	SNR=7.1						
SHME				S	**Sb**	**14 37 19.7**	**+1.1**
BANOM	**Banah**	**1.64**	**136**	P	**Pb**	**14 37 02.9**	**-0.9**
BANOM				S	**Sb**	**14 37 25.4**	**+1.4**
BANOM	**Banah**	**1.64**	**136**	*e*P	**Pb**	**14 37 02.7**	**-1.1**
	SNR=38						
BANOM				S	**Sb**	**14 37 25.8**	**+1.8**
UMQ	**Umm Al-Quwin**	**1.67**	**160**	P	**Pb**	**14 37 03.2**	**-1.2**
LMD1	**Lamerd**	**1.68**	**278**	Pg	**Pb**	**14 37 04.6**	**+0.1**
JHRM	**Jahrom**	**1.90**	**318**	Pn	**Pb**	**14 37 06.2**	**-2.1**
MASF	**Masafi**	**2.00**	**149**	P	**Pb**	**14 37 09.0**	**-1.0**
	SNR=11						
MSFE	**Esma-Masafi**	**2.01**	**150**	*e*P	**Pb**	**14 37 07.8**	**-2.4**
	SNR=12						
MDH	**Madha**	**2.13**	**147**	P	**Pb**	**14 37 10.8**	**-1.4**
MDH	**Madha**	**2.13**	**147**	P	**Pb**	**14 37 10.2**	**-1.9**
NAZ	**Nazwa, Dubai**	**2.18**	**165**	P	**Pb**	**14 37 12.2**	**-0.9**
NAZ	**Nazwa, Dubai**	**2.18**	**165**	P	**Pb**	**14 37 11.8**	**-1.2**
UOSS	**Minazif**	**2.40**	**154**	Pn	**Pb**	**14 37 13.9**	**-2.8**
UOSS	**Minazif**	**2.40**	**154**	P	**Pb**	**14 37 13.8**	**-2.9**
UOSS	**Minazif**	**2.40**	**154**	*e*P	**Pb**	**14 37 14.0**	**-2.7**
	SNR=24						
FAQ	**Al Faqa, Dubai**	**2.40**	**168**	P	Pn	**14 37 12.7**	**+1.3**
FAQ	**Al Faqa, Dubai**	**2.40**	**168**	P	Pn	**14 37 15.2**	**-1.6**
HATD	**Hatta,

0.7nm,0.3s
MKAR Makanchi Array 29.11 40 P **P 14 42 31.9 -0.1**
0.2nm,0.5s,baz=230,slow=9.0,SNR=4.8
0.2nm,0.5s
ZALV Zalesovo Beam 34.63 31 P **P 14 43 20.1 -0.2**
2.0nm,0.5s,baz=229,slow=8.5,SNR=7.1
2.0nm,0.5s
FINES FINESS Array B 39.44 339 P **P 14 44 00.7 -0.4**
3.1nm,0.9s,baz=126,slow=9.7,SNR=5.6
3.1nm,0.9s
CMAR Chiang Mai Arr 41.22 93 P **P 14 44 13.6 -2.8**
0.3nm,0.6s,baz=308,slow=6.5,SNR=1.9
0.3nm,0.6s
HFS Hagfors 43.34 331 P **P 14 44 32.1 -0.9**
0.5nm,0.4s,baz=134,slow=6.4,SNR=6.1
0.5nm,0.4s
NOA NORSAR Array B 44.85 331 P **P 14 44 44.3 -1.0**
0.4nm,0.5s,baz=114,slow=10.0,SNR=2.4
0.4nm,0.5s
KSRS Korea Array 61.11 60 P **P 14 46 44.5 -1.0**
1.0nm,0.8s,baz=262,slow=6.9,SNR=1.9
1.0nm,0.8s
BOSA Boshof 62.33 210 P **P 14 46 54.6 +0.9**
2.2nm,1.0s,baz=23,slow=7.7,SNR=1.5
2.2nm,1.0s
SCHQ Schefferville 84.41 330 P **P 14 49 03.0 -0.4**
4.2nm,0.7s,baz=14,slow=4.2,SNR=1.8
4.2nm,0.7s
WRA Warramunga Arr 89.89 112 P **P 14 49 30.6 +0.1**
0.4nm,0.7s,baz=310,slow=3.9,SNR=6.1
0.4nm,0.7s
ASAR Alice Springs 91.33 116 P **P 14 49 37.3 +0.1**
0.4nm,0.5s,baz=304,slow=4.5,SNR=13
0.4nm,0.5s

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*SDD **07** 14:37:51.5±1.5, 19.20N×67.23W, h22km±50km, MD3.3, ML2.4, MW2.5*
*NEIC **07** 14:37:52.3±1.2, 19.06N±0.01×67.18W±0.03, h10km±2km, ML2.2/10, Md2.5/12(RSPR), Error ellipse: s-maj=5.0km s-min=3.0km az=257.0*
*RSPR **07** 14:37:54.3, 19.12N×67.24W, h47km±10km, MD2.5/12*

ISC 07 14:37:53.3±1.7, 19°08N±0°07×67°25W±0°04, h29km±12km, n40, r0°58/49, 8C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.62**	**168**	⇓*e*P*g*	**Pb**	**14 38 05.1**	**-0.6**
AGPR				*e*S*g*	**Sn**	**14 38 15.2**	**0.0**
AGPR				IAML		14 38 17.6	
	comp=N,104nm,0.2s						
AGPR	**Aguadilla, PR**	**0.62**	**168**	⇑*e*P	**Pb**	**14 38 05.1**	**-0.6**
AGPR	**Aguadilla, PR**	**0.62**	**168**	*e*S	**Sn**	**14 38 15.4**	**+0.2**
IDE	**Isla Desecheo**	**0.72**	**197**		**Pb**	**14 38 06.7**	**-0.7**
IDE					**Sn**	**14 38 18.6**	**+0.8**
IDE	**Isla Desecheo**	**0.72**	**197**	⇑*e*P	**Pb**	**14 38 06.7**	**-0.7**
IDE	**Isla Desecheo**	**0.72**	**197**	*e*S	**Sn**	**14 38 18.6**	**+0.8**
AOPR	**Arecibo Observ**	**0.86**	**147**		**Pn**	**14 38 08.0**	**-1.6**
AOPR	**Arecibo Observ**	**0.86**	**147**	*e*P*g*	**Pn**	**14 38 09.1**	**-0.5**
AOPR				*e*S*g*	**Sn**	**14 38 21.5**	**+0.3**
AOPR				IAML		14 38 32.1	
	comp=N,1µm,1.1s						
EMPR	**Esperanza - Ma**	**0.91**	**131**		**Pn**	**14 38 10.1**	**-0.1**
EMPR					**Sb**	**14 38 22.8**	**+0.7**
EMPR	**Esperanza - Ma**	**0.91**	**131**	⇑*e*P	**Pn**	**14 38 10.1**	**-0.1**
EMPR	**Esperanza - Ma**	**0.91**	**131**	*e*S	**Sb**	**14 38 22.8**	**+0.7**
LSP	**Las Mesas**	**0.91**	**170**		**Pb**	**14 38 11.0**	**+0.4**
LSP	**Las Mesas**	**0.91**	**170**	⇓*e*P	**Pb**	**14 38 11.0**	**+0.4**
LSP				*e*S	**Sb**	**14 38 23.5**	**+1.1**
UUPR	**Utuado, UPR, P**	**0.96**	**149**		**Pn**	**14 38 11.1**	**+0.1**
UUPR					**Sb**	**14 38 24.1**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.96**	**149**	⇑*e*P	**Pn**	**14 38 11.1**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.96**	**149**	*e*S	**Sb**	**14 38 24.1**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.07**	**173**		**Pn**	**14 38 12.0**	**-0.4**
CRPR					**Sb**	**14 38 27.6**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.07**	**173**	IAML		14 38 30.5	
	comp=E,70nm,1.5s						
CRPR				IAML		14 38 32.9	
	comp=N,63nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.07**	**173**	*e*P*g*	**Pn**	**14 38 12.0**	**-0.4**
CRPR				*e*S*g*	**Sb**	**14 38 27.5**	**+0.6**
CRPR				IAML		14 38 32.8	
	comp=N,72nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.07**	**173**	⇓*e*P	**Pn**	**14 38 12.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.07**	**173**	*e*S	**Sb**	**14 38 27.6**	**+0.6**
MLPR	**Magueyes Islan**	**1.12**	**170**	*e*P*g*	**Pn**	**14 38 12.4**	**-0.7**
MLPR				*e*S*g*	**Sb**	**14 38 28.5**	**+0.2**
MLPR				IAML		14 38 32.1	
	comp=N,12nm,1.2s						
MLPR	**Magueyes Islan**	**1.12**	**170**	⇑*i*P	**Pn**	**14 38 12.4**	**-0.7**
MLPR	**Magueyes Islan**	**1.12**	**170**	*e*S	**Sb**	**14 38 28.1**	**-0.1**
ECPR	**Experimental S**	**1.13**	**132**	⇑*e*P	**Pn**	**14 38 13.0**	**-0.2**
ECPR	**Experimental S**	**1.13**	**132**	*e*S	**Sb**	**14 38 28.3**	**-0.3**
OBIP	**Obispado Ponce**	**1.20**	**149**		**Pn**	**14 38 13.9**	**-0.3**
OBIP					**Sn**	**14 38 29.5**	**+0.1**
OBIP	**Obispado Ponce**	**1.20**	**149**	IAML		14 38 33.0	
	comp=E,47nm,0.3s						
OBIP				IAML		14 38 40.8	
	comp=N,38nm,0.8s						
OBIP	**Obispado Ponce**	**1.20**	**149**	⇑*e*P	**Pn**	**14 38 13.9**	**-0.3**
OBIP	**Obispado Ponce**	**1.20**	**149**	*e*S	**Sn**	**14 38 29.5**	**+0.1**
GCPR	**Guaynabo City**	**1.34**	**125**		**Pn**	**14 38 16.8**	**+0.6**
GCPR					**Sn**	**14 38 32.8**	**-0.2**
GCPR	**Guaynabo City**	**1.34**	**125**	⇑*e*P	**Pn**	**14 38 16.8**	**+0.6**
GCPR	**Guaynabo City**	**1.34**	**125**	*e*S	**Sn**	**14 38 32.8**	**-0.2**
HUMP	**Col San Antoni**	**1.62**	**125**		**Pn**	**14 38 20.4**	**+0.4**
HUMP					**Sn**	**14 38 39.0**	**-0.9**
HUMP	**Col San Antoni**	**1.62**	**125**	IAML		14 38 44.1	
	comp=E,32nm,0.2s						
HUMP				IAML		14 38 46.1	
	comp=N,39nm,0.2s						
HUMP	**Col San Antoni**	**1.62**	**125**	⇑*e*P	**Pn**	**14 38 20.4**	**+0.4**
HUMP	**Col San Antoni**	**1.62**	**125**	*e*S	**Sn**	**14 38 39.0**	**-0.9**
DR12	**Loma Pena Alta**	**2.04**	**262**	Pn	**Pn**	**14 38 26.2**	**+0.3**
HATOM	**Hato Mayor del**	**2.04**	**262**	*e*P*g*	**Pn**	**14 38 26.4**	**+0.6**
HATOM				*e*S*g*	**Sb**	**14 38 54.0**	**-0.8**
HATOM				IAML		14 39 13.0	
	comp=N,23nm,2.7s						
ABDR	**Alto Bandera**	**3.21**	**266**	*e*	Pb	14 39 00.8	+11

IDC 07 14:49:39.3±8.4, 19.17S×175.81W, h0km, mb3.7/3, mbtmp3.7/3, MS4.2/6, Error ellipse: s-maj=363.6km s-min=41.8km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.84**	**255**	P	P	14 58 11.9	+0.5
	0.7nm,0.4s,baz=91,slow=8.5,SNR=12						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**46.84**	**260**	P	P	14 58 10.7	-0.8
	0.5nm,0.5s,baz=97,slow=8.2,SNR=13						
	0.5nm,0.5s						
GUMO	**Guam**	**50.60**	**307**	LR	LR	15 17 27.4	
	comp=Z,226nm,22.0s,baz=68,slow=33						
NWAO	**Narrogin (SRO)**	**60.81**	**242**	LR	LR	15 25 43.1	
	comp=Z,289nm,18.9s,baz=106,slow=36						
DAV	**Davao City (W)**	**63.34**	**289**	LR	LR	15 26 06.8	
	comp=Z,114nm,21.9s,baz=83,slow=34						
TGY	**Tagaytay City**	**70.51**	**293**	LR	LR	15 29 47.3	
	comp=Z,178nm,21.1s,baz=100,slow=34						
QSPA	**South Pole Qui**	**70.89**	**180**	LR	LR	15 26 22.1	
	comp=Z,102nm,21.4s,baz=142,slow=31						
ILAR	**Eielson Array**	**86.58**	**12**	P	P	15 02 23.9	-0.1
	0.2nm,0.5s,baz=204,slow=4.1,SNR=1.3						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**91.63**	**289**	LR	LR	15 42 30.1	
	comp=Z,160nm,21.1s,baz=70,slow=35						

IDC 07 14:57:49.5±1.7, 19.61S×173.09W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=45.9km s-min=41.6km az=165.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**49.21**	**255**	P	P	15 06 40.5	+0.6
	4.2nm,0.6s,baz=105,slow=8.3,SNR=39						
	4.2nm,0.6s						
WRA	**Warramunga Arr**	**49.30**	**260**	P	P	15 06 39.9	-0.8
	1.0nm,0.4s,baz=96,slow=8.3,SNR=29						
	1.0nm,0.4s						
QSPA	**South Pole Qui**	**70.45**	**180**	P	P	15 09 05.7	0.0
	0.4nm,0.6s,baz=47,slow=7.1,SNR=5.6						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**86.50**	**11**	P	P	15 10 33.8	0.0
	0.2nm,0.6s,baz=202,slow=5.1,SNR=2.0						
	0.2nm,0.6s						

IDC 07 14:59:06.2±3.0, 33.46S×178.65W, h0km, mb3.6/2, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=74.7km s-min=45.0km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.90**	**214**	Pn	Pn	15 00 33.7	-1.1
	2.6nm,0.3s,baz=330,slow=20,SNR=24						
URZ				Sn	Sn	15 01 38.8	-4.4
	3.1nm,0.3s,baz=127,slow=20,SNR=8.9						
	7.4nm,0.3s						
ASAR	**Alice Springs**	**42.49**	**271**	P	P	15 07 03.5	+0.1
	0.5nm,0.6s,baz=114,slow=8.1,SNR=2.3						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**43.75**	**276**	P	P	15 07 13.6	0.0
	0.3nm,0.3s,baz=115,slow=8.2,SNR=6.6						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**147.79**	**338**	PKPbc	PKPbc	15 18 51.5	-0.7
	1.5nm,0.7s,baz=27,slow=3.4,SNR=6.9						

ROM 07 15:00:48.3±0.1, 42.719N±0.003×13.245E±0.006, h14km, ML1.4/18, 1D, Error ellipse: s-maj=0.5km s-min=0.2km az=76.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.11**	**143**	⇓P	Pg	15 00 52.0	+0.3
SMA1				S	Sg	15 00 54.4	+0.4
SMA1				AML	AML		
	comp=E,303µm,1.6s						
SMA1				AML	AML		
	comp=N,224µm,1.1s						
SMA1				AML	AML		
	comp=N,224µm,0.9s						
SMA1				AML	AML		
	comp=E,303µm,0.4s						
NRCA	**Norcia**	**0.15**	**320**	P	Pg	15 00 52.4	+0.2
NRCA				S	Sg	15 00 55.2	+0.3
NRCA				AML	AML		
	comp=N,652µm,0.7s						
NRCA				AML	AML		
	comp=E,1000µm,0.7s						
NRCA				AML	AML		
	comp=E,881µm,0.1s						
NRCA				AML	AML		
	comp=N,731µm,0.2s						
MMO1	**Montemonaco**	**0.19**	**18**	P	Pg	15 00 53.0	+0.2
MMO1				S	Sg	15 00 56.3	+0.5
MC2	**Monte Cornacci**	**0.20**	**348**	P	Pg	15 00 53.2	+0.2
MC2				S	Sb	15 00 57.0	-0.7
RM33	**Pellescritta (**	**0.21**	**186**	P	Pg	15 00 53.6	+0.5
RM33				S	Sb	15 00 57.4	-0.4
RM33				AML	AML		
	comp=E,118µm,0.3s						
RM33				AML	AML		
	comp=N,125µm,0.3s						
CAMP	**Campotosto**	**0.22**	**147**	P	Pg	15 00 53.5	+0.2
CAMP				S	Sg	15 00 57.1	+0.5
CAMP				AML	AML		
	comp=E,61µm,0.4s						
CAMP				AML	AML		
	comp=N,96µm,0.5s						
FEMA	**Monte Fema**	**0.28**	**329**	P	Pg	15 00 54.6	+0.3
FEMA				S	Sb	15 00 59.2	-0.7
TERO	**Teramo**	**0.28**	**110**	P	Pg	15 00 54.4	+0.1
TERO				S	Sg	15 00 58.8	+0.4
TERO				AML	AML		
	comp=E,65µm,0.4s						
TERO				AML	AML		
	comp=N,55µm,0.4s						
TERO				AML	AML		
	comp=N,55µm,1.6s						
TERO				AML	AML		
	comp=E,65µm,1.6s						
MF5	**Montefalcone A**	**0.31**	**30**	P	Pb	15 00 55.4	-0.4
MF5				S	Sb	15 01 00.8	+0.1
MTCL	**Monte Cavallo**	**0.33**	**327**	P	Pg	15 00 55.2	+0.1
MTCL				S	Sg	15 01 00.4	+0.7
FDMO	**Fiordimonte**	**0.34**	**340**	P	Pg	15 00 55.4	+0.1
FDMO				S	Sb	15 01 00.8	-0.6
FDMO				AML	AML		
	comp=E,88µm,0.2s						
FDMO				AML	AML		
	comp=N,152µm,0.2s						
FDMO				AML	AML		
	comp=N,152µm,1.8s						
FDMO				AML	AML		
	comp=E,88µm,1.8s						
GUMA	**Gualdo di Mace**	**0.35**	**11**	P	Pb	15 00 56.0	-0.4
GIGS	**Gran Sasso**	**0.36**	**138**	P	Pg	15 00 55.7	+0.1
GIGS				AML	AML		
	comp=E,20µm,1.2s						
GIGS				AML	AML		
	comp=N,24µm,1.4s						
GIGS				AML	AML		
	comp=N,24µm,0.6s						
CSP1	**Cessapalombo**	**0.37**	**355**	P	Pg	15 00 56.1	+0.1
CSP1				S	Sb	15 01 02.1	-0.5
CSP1				AML	AML		
	comp=N,73µm,0.1s						
CSP1				AML	AML		
	comp=E,55µm,0.3s						

IDC 07 15:00:58.6±11.0, 18.08S×178.27W, h624km±145km, mb2.8/4, mbtmp3.9/5, Error ellipse: s-maj=154.2km s-min=58.3km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.90**	**252**	P	P	15 04 05.5	+0.5
	4.6nm,1.0s,baz=112,slow=16,SNR=2.3						
STKA	**Stephens Creek**	**38.66**	**241**	P	P	15 07 31.1	+0.2
	3.8nm,1.0s,baz=90,slow=12,SNR=2.3						
	3.8nm,1.0s						
WRA	**Warramunga Arr**	**44.73**	**260**	P	P	15 08 18.3	-0.3
	0.4nm,0.5s,baz=97,slow=6.8,SNR=7.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**44.87**	**254**	P	P	15 08 19.8	+0.1
	2.3nm,0.6s,baz=88,slow=8.8,SNR=16						
	2.3nm,0.6s						
ILAR	**Eielson Array**	**86.03**	**13**	P	P	15 12 34.0	0.0
	0.2nm,0.7s,baz=206,slow=4.4,SNR=4.8						
	0.2nm,0.7s						

ROM 07 15:01:10.8±0.1, 42.717N±0.004×13.242E±0.006, h14km±1km, ML2.0/56, 2C, Error ellipse: s-maj=0.5km s-min=0.3km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMA1	**SAN MARTINO**	**0.11**	**142**	P	Pg	15 01 14.3	+0.2
SMA1				S	Sg	15 01 16.7	+0.3
SMA1				AML	AML		
	comp=E,1975µm,0.3s						
SMA1				AML	AML		
	comp=E,1975µm,1.7s						
SMA1				AML	AML		
	comp=N,1925µm,0.3s						
NRCA	**Norcia**	**0.15**	**321**	⇑P	Pg	15 01 14.7	+0.1
NRCA				S	Sg	15 01 17.4	+0.2
NRCA				AML	AML		
	comp=E,3955µm,0.7s						
NRCA				AML	AML		
	comp=N,2250µm,0.1s						
NRCA				AML	AML		
	comp=E,4315µm,0.7s						
NRCA				AML	AML		
	comp=N,2470µm,0.1s						
MMO1	**Montemonaco**	**0.19**	**19**	P	Pg	15 01 15.2	0.0
MMO1				S	Sg	15 01 18.5	+0.2
MC2	**Monte Cornacci**	**0.20**	**349**	⇑P	Pg	15 01 15.5	0.0
MC2				S	Sg	15 01 19.2	+0.5
RM33	**Pellescritta (**	**0.21**	**186**	P	Pg	15 01 15.9	+0.4
RM33				S	Sb	15 01 19.8	-0.4
RM33				AML	AML		
	comp=E,697µm,0.2s						
RM33				AML	AML		
	comp=E,668µm,0.2s						
RM33				AML	AML		
	comp=N,754µm,0.2s						
RM33				AML	AML		
	comp=N,765µm,0.2s						
RM33				AML	AML		
	comp=N,754µm,1.8s						
RM33				AML	AML		
	comp=N,765µm,1.8s						
CAMP	**Campotosto**	**0.22**	**146**	P	Pg	15 01 15.8	+0.2
CAMP				S	Sg	15 01 19.6	+0.5
CAMP				AML	AML		
	comp=E,314µm,0.3s						
CAMP				AML	AML		
	comp=N,519µm,0.3s						
FEMA	**Monte Fema**	**0.28**	**330**	P	Pg	15 01 16.9	+0.1
FEMA				S	Sg	15 01 21.4	+0.5
TERO	**Teramo**	**0.28**	**109**	P	Pg	15 01 16.7	-0.1
TERO				S	Sg	15 01 21.1	+0.4
TERO				AML	AML		
	comp=E,634µm,0.1s						
TERO				AML	AML		
	comp=N,447µm,1.2s						
MF5	**Montefalcone A**	**0.32**	**30**	P	Pg	15 01 17.6	+0.3
MF5				S	Sb	15 01 23.1	-0.2
MF5				AML	AML		
	comp=N,641µm,0.7s						
MF5				AML	AML		
	comp=E,307µm,0.2s						
FDMO	**Fiordimonte**	**0.34**	**340**	P	Pg	15 01 17.6	-0.1
FDMO				S	Sg	15 01 23.1	+0.6
FDMO				AML	AML		
	comp=E,240µm,0.2s						
FDMO				AML	AML		
	comp=N,370µm,0.2s						
GUMA	**Gualdo di Mace**	**0.35**	**11**	P	Pg	15 01 18.2	+0.3
GUMA				S	Sb	15 01 24.2	-0.1
GUMA				AML	AML		
	comp=E,328µm,0.8s						
GUMA				AML	AML		
	comp=N,408µm,0.7s						
GIGS	**Gran Sasso**	**0.36**	**138**	P	Pg	15 01 18.1	0.0
GIGS				S	Sg	15 01 23.8	+0.7
GIGS				AML	AML		
	comp=N,117µm,0.9s						
GIGS				AML	AML		
	comp=E,76µm,0.9s						
GIGS				AML	AML		
	comp=N,117µm,1.1s						
GIGS				AML	AML		
	comp=E,76µm,1.1s						
CSP1	**Cessapalombo**	**0.38**	**356**	P	Pg	15 01 18.3	-0.1
CSP1				S	Sb	15 01 24.4	-0.7
ARRO	**Arrone**	**0.38**	**249**	P	Pb	15 01 18.8	-0.4
ARRO				S	Sb	15 01 24.8	-0.1
ARRO				AML	AML		
	comp=N,246µm,1.0s						
ARRO				AML	AML		
	comp=E,196µm,0.2s						
CESI	**CESI - Serrava**	**0.38**	**319**	P	Pg	15 01 18.5	+0.1
CESI				S	Sb	15 01 24.5	-0.6
CESI				AML	AML		
	comp=N,523µm,0.3s						
CESI				AML	AML		
	comp=E,305µm,0.2s						
OFFI	**Offida**	**0.39**	**56**	P	Pb	15 01 19.6	+0.1
OFFI				S	Sb	15 01 26.8	+1.4
OFFI				AML	AML		
	comp=E,816µm,0.8s						
OFFI				AML	AML		
	comp=N,1270µm,0.7s						
OFFI				AML	AML		
	comp=E,816µm,1.2s						
SAP2	**Sant'Angelo in**	**0.40**	**17**	P	Pg	15 01 19.0	+0.2
SAP2				S	Sb	15 01 26.0	+0.5
SAP2				AML	AML		
	comp=E,206µm,0.5s						
SAP2				AML	AML		
	comp=N,926µm,0.3s						
SAP2				AML	AML		
	comp=E,206µm,1.5s						
MNTT	**Montottone**	**0.43**	**37**	P	Pb	15 01 20.1	-0.1
MNTT				AML	AML		
	comp=E,420µm,0.5s						
MNTT				AML	AML		
	comp=N,536µm,1.1s						
MNTT				AML	AML		
	comp=E,420µm,0.5s						
MNTT				AML	AML		
	comp=N,536µm,1.1s						
FIAM	**Fiamignano**	**0.46**	**192**	P	Pg	15 01 20.0	+0.1
FIAM				AML	AML		
	comp=E,30µm,1.5s						
FIAM				AML	AML		
	comp=E,30µm,0.5s						
FIAM				AML	AML		
	comp=N,36µm,0.7s						
CESX	**Cesi**	**0.50**	**258**	AML	AML		
	comp=E,92µm,1.3s						
CESX				AML	AML		
	comp=N,107µm,0.6s						
CESX				AML	AML		
	comp=E,92µm,0.7s						
CESX				AML	AML		
	comp=N,107µm,1.4s						
MOMA	**Monte Martano**	**0.50**	**280**	P	Pg	15 01 21.0	+0.2
MOMA				S	Sb	15 01 29.1	+0.4
MOMA				AML	AML		
	comp=N,155µm,0.5s						
MOMA				AML	AML		
	comp=E,183µm,0.2s						
MOMA				AML	AML		
	comp=N,787µm,1.6s						
MOMA				AML	AML		
	comp=E,203µm,0.3s						
FAGN	**Fagnano**	**0.52**	**151**	P	Pg	15 01 21.1	+0.1
FAGN				AML	AML		
	comp=N,280µm,0.6s						
FAGN				AML	AML		
	comp=E,242µm,0.6s						
VCEL	**Villa Celiera**	**0.55**	**126**	P	Pg	15 01 21.7	+0.1
VCEL				AML	AML		
	comp=N,216µm,0.2s						
VCEL				AML	AML		
	comp=N,216µm,1.8s						
VCEL				AML	AML		
	comp=E,204µm,0.7s						
SNTG	**Esanatoglia**	**0.58**	**338**	P	Pg	15 01 21.8	-0.4
SNTG				AML	AML		
	comp=N,76µm,1.3s						
SNTG				AML	AML		
	comp=N,76µm,0.7s						
SNTG				AML	AML		
	comp=E,94µm,0.7s						
EL6	**Elcito**	**0.62**	**350**	P	Pg	15 01 22.6	-0.3
EL6				AML	AML		
	comp=N,126µm,0.4s						
EL6				AML	AML		
	comp=E,136µm,0.2s						
T0110	**Collepietro**	**0.63**	**141**	P	Pg	15 01 22.9	-0.2
T0110				AML	AML		
	comp=E,220µm,0.5s						
T0110				AML	AML		
	comp=E,220µm,1.5s						
T0110				AML	AML		
	comp=N,142µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.64**	**317**	P	Pg	15 01 23.3	-0.1
ATCC				AML	AML		
	comp=E,134µm,1.6s						
ATCC				AML	AML		
	comp=N,121µm,0.2s						
ATCC				AML	AML		
	comp=N,121µm,0.2s						
MURB	**Monte Urbino**	**0.76**	**316**	AML	AML		
	comp=E,198µm,0.3s						
MURB				AML	AML		
	comp=N,174µm,1.1s						
MURB				AML	AML		
	comp=N,174µm,0.9s						
MGAB	**Montegabbione**	**0.85**	**284**	AML	AML		
	comp=N,34µm,0.5s						
MGAB				AML	AML		
	comp=E,44µm,1.3s						
MGAB				AML	AML		
	comp=E,44µm,0.7s						
PIEI	**Pieia**	**0.97**	**328**	AML	AML		
	comp=E,32µm,1.2s						
PIEI				AML	AML		
	comp=N,27µm,1.4s						

PIEI			AML	AML
	comp=N,27µm,0.6s			
PIEI			AML	AML
	comp=E,32µm,0.8s			

*IDC **07** 15:15:37.0±5.1,20°.37S×179°.00W,h573km±60km,mb3.0/8, mbtmp3.9/9,Error ellipse: s-maj=32.6km s-min=24.9km az=140.0*
*NEIC **07** 15:15:38.2±1.7,20°.5S±0°.2×178°.9W±0°.2,h592km±9km, mb4.1/10,Error ellipse: s-maj=29.5km s-min=19.8km az=155.0*

ISC 07 15:15:38.3±0.7,20°.6S±0°.1×179°.0W±0°.1,h600km,n30, σ1831/29,mb3.8/13,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.01**	**315**	P	**P**	**15 17 03.2**	**-0.8**
MARNC	**Mare, Loyalty**	**12.16**	**264**	P	**P**	**15 18 18.4**	**-0.3**
DZM	**Mont Dzumac**	**13.66**	**261**	P	**P**	**15 18 32.5**	**-1.5**
	2.7nm,0.6s,baz=64,slow=18,SNR=1.9						
URZ	**Urewera**	**17.91**	**190**	P	**P**	**15 19 08.3**	**-4.5**
	1.4nm,0.3s,baz=20,slow=15,SNR=8.3						
TOO	**Toolangi**	**35.09**	**233**	P	**P**	**15 21 44.6**	**+1.7**
TOO				IAmb	IAmb	15 22 20.5	
	comp=Z,9.6nm,1.4s						
COEN	**Coen**	**36.68**	**274**	P	**P**	**15 21 57.6**	**+1.4**
COEN				IAmb	IAmb	15 22 32.4	
	comp=Z,8.1nm,1.1s						
STKA	**Stephens Creek**	**36.92**	**244**	P	**P**	**15 21 57.6**	**-0.3**
STKA	**Stephens Creek**	**36.92**	**244**	P	**P**	**15 21 58.0**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=79,slow=12,SNR=3.7 comp=Z,3.3nm,1.0s						
WR8	**Warramunga Arr**	**43.53**	**262**	P	**P**	**15 22 50.8**	**+0.1**
WR8				IAmb	IAmb	15 22 55.3	
	comp=Z,9.1nm,1.4s						
ASAR	**Alice Springs**	**43.60**	**257**	P	**P**	**15 22 52.1**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=89,slow=8.2,SNR=8.7 comp=Z,0.5nm,0.4s						
WB0	**Warramunga Arr**	**43.66**	**263**	P	**P**	**15 22 52.2**	**+0.6**
WB0				IAmb	IAmb	15 23 13.1	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**43.68**	**262**	P	**P**	**15 22 52.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=96,slow=7.6,SNR=38 comp=Z,0.5nm,0.3s						
MTN	**Manton Dam**	**48.25**	**271**	P	**P**	**15 23 25.9**	**-0.5**
KNRA	**Kununurra**	**49.74**	**267**	P	**P**	**15 23 37.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.11**	**263**	P	**P**	**15 23 55.2**	**+0.8**
QSPA	**South Pole Qui**	**69.46**	**180**	P	**P**	**15 25 49.4**	**+2.1**
QSPA	**South Pole Qui**	**69.46**	**180**	P	**P**	**15 25 49.8**	**+2.4**
	comp=Z,0.9nm,0.8s,baz=59,slow=5.9,SNR=6.0 comp=Z,0.9nm,0.8s						
NVAR	**Mina Array Bea**	**81.74**	**44**	P	**P**	**15 26 55.5**	**-0.2**
NVAR	**Mina Array Bea**	**81.74**	**44**	P	**P**	**15 26 56.1**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=225,slow=7.9,SNR=5.2 comp=Z,0.9nm,0.8s						
J05D	**Fort Rock, OR**	**82.76**	**38**	P	**P**	**15 27 01.5**	**+0.9**
J05D				IAmb	IAmb	15 27 02.7	
	comp=Z,3.4nm,0.8s						
TXAR	**Lajitas Array**	**87.89**	**58**	P	**P**	**15 27 24.9**	**-0.6**
TXAR	**Lajitas Array**	**87.89**	**58**	P	**P**	**15 27 26.1**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=217,slow=6.1,SNR=4.9 comp=Z,0.4nm,0.8s						
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**15 27 26.8**	**-1.2**
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**15 27 27.6**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=219,slow=4.8,SNR=6.1 comp=Z,0.9nm,0.9s						
PDAR	**Pinedale Array**	**89.67**	**44**	P	**P**	**15 27 33.3**	**-0.4**
PDAR	**Pinedale Array**	**89.67**	**44**	P	**P**	**15 27 34.1**	**+0.5**
	comp=Z,1.2nm,1.0s,baz=239,slow=3.7,SNR=6.2 comp=Z,1.2nm,1.0s						
BVAR	**Borovoye Array**	**118.58**	**320**	PKP	**PKPdf**	**15 33 18.6**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=122,slow=3.3,SNR=4.8						
AKASG	**Malin Array Be**	**142.66**	**330**	PKhKP	PKPpre	15 34 01.4	
	comp=Z,0.7nm,0.3s,baz=44,slow=4.5,SNR=8.3						
BRTR	**Keskin Array B**	**146.23**	**312**		**PKPbc**	**15 34 12.8**	**-0.2**
BRTR	**Keskin Array B**	**146.23**	**312**	PKPbc	**PKPbc**	**15 34 13.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=112,slow=4.8,SNR=3.5						

*AEIC **07** 15:21:55.6±0.6,52°.1N±0°.1×165°.3W±0°.1,h7km±9km,Error ellipse: s-maj=18.3km s-min=9.7km az=171.0*
NEIC 07 15:21:53.9±0.6,52°.26N±0°.08×165°.37W±0°.07,h10km±2km, ML2.9/16,ML2.7(AEIC),Error ellipse: s-maj=13.9km s-min=6.3km az=164.0,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Vale**	**1.73**	**337**		Pn	15 22 23.8	-0.3
UNV					Sn	15 22 44.4	-1.7
MREP	**Makushin Rep't**	**1.76**	**332**		Pn	15 22 24.5	-0.1
MGOD	**Makushin Gods**	**1.79**	**330**		Pn	15 22 24.9	+0.1
MNAT	**Makushin Natee**	**1.81**	**335**		Pn	15 22 25.1	-0.1
MSW	**Makushin Switc**	**1.87**	**333**		Pn	15 22 26.0	0.0
MSW					Sn	15 22 49.0	-0.5
ZRO	**Akutan Zero**	**1.87**	**349**		Pn	15 22 26.1	+0.1
ZRO					Sn	15 22 49.5	-0.2
AKBBA	**Akutan Broad B**	**1.88**	**350**		Pn	15 22 26.1	+0.1
AKMO	**Akutan Morgan**	**1.88**	**348**		Pn	15 22 26.3	+0.3
AKMO					Sn	15 22 49.9	+0.1
AHB	**Akutan Harbor**	**1.88**	**352**		Pn	15 22 26.2	0.0
AHB					Sn	15 22 50.3	+0.4
AKSA	**Akutan Strait**	**1.89**	**354**		Pn	15 22 25.9	-0.3
AKSA					Sn	15 22 49.6	-0.6
AKUT	**Akutan**	**1.90**	**353**	Pn	Pn	15 22 25.7	-0.6
AKRB	**Akutan Reef Bi**	**1.92**	**348**		Pn	15 22 27.0	+0.4
AKLV	**Akutan Long Va**	**1.94**	**350**		Pn	15 22 26.8	-0.1
LVA	**Lava Point**	**1.95**	**348**	Pn	Pn	15 22 27.0	-0.1
LVA				IAML		15 22 53.8	
	comp=E,61nm,0.7s						
LVA				IAML		15 22 55.3	
	comp=N,102nm,0.8s						
OKTU	**Okmok Mt. Tuli**	**1.98**	**306**		Pn	15 22 27.6	+0.2
NIKH	**Nikolski High**	**2.24**	**290**	Pn	Pn	15 22 31.1	0.0
NIKH					Sn	15 22 55.9	-2.9
NIKH				IAML		15 22 58.3	
	comp=E,44nm,1.1s						
NIKH				IAML		15 23 08.3	
	comp=N,48nm,1.1s						
WEBT	**Westdahl Beart**	**2.37**	**9**		Pn	15 22 33.0	+0.2
WEBT					Sn	15 23 01.4	-0.6
SSBA	**Shishaldin**	**2.63**	**16**		Pn	15 22 36.3	-0.1
SSBA					Sn	15 23 07.9	-0.5
ISNN	**Isanotski Nort**	**2.75**	**20**		Pn	15 22 38.0	0.0
ISNN					Sn	15 23 10.6	-0.8
FALS	**False Pass**	**2.85**	**23**		Pn	15 22 39.0	-0.4
DT1	**Dutton Round H**	**3.40**	**32**		Pn	15 22 46.2	-0.6
PS1A	**Pavlof South-1**	**3.83**	**33**		Pn	15 22 52.8	-0.1
S12K	**Black Hills**	**3.97**	**28**	Pn	Pn	15 22 55.1	+0.3
S12K				IAML		15 23 41.1	
	comp=N,22nm,1.0s						
S12K				IAML		15 25 19.8	
	comp=E,18nm,1.2s						
SDPT	**Sand Point**	**4.24**	**41**		Pn	15 22 58.3	-0.2
CNBA	**Chernabura Isl**	**4.30**	**51**	Pn	Pn	15 22 58.4	-0.9
CNBA				IAML		15 23 41.8	
	comp=E,14nm,1.2s						
CNBA				IAML		15 23 45.3	
	comp=N,14nm,1.0s						

*JSO **07** 15:29:02.6±0.4,33°.3N±2°.×3°.6E±°.,h1km±3km,M2.4/8, Md2.8/8,ML2.3/6,MLv2.2/8,MLv2.2/8*
GII 07 15:29:02.2±0.0,32°.883N±0°.001×35°.572E±0°.001, h2km,Mws2.2,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHM	**Kefar Nahum**	**0.01**	**85**	P	Pg	15 29 02.8	+0.1
KNHM	**Kefar Nahum**	**0.01**	**85**	S	Sg	15 29 03.8	+0.9
SPIR	**Sapir Facility**	**0.03**	**236**	P	Pg	15 29 03.0	+0.1
SPIR	**Sapir Facility**	**0.03**	**236**	S	Sg	15 29 03.8	+0.4
AMID	**Amiad**	**0.05**	**328**	P	Pg	15 29 03.6	+0.3
AMID	**Amiad**	**0.05**	**328**	S	Sg	15 29 05.1	+1.1
MGDL	**Migdal**	**0.07**	**232**	P	Pg	15 29 03.8	+0.2
MGDL	**Migdal**	**0.07**	**232**	S	Sg	15 29 05.3	+0.8
HDNS	**Had-Ness**	**0.07**	**53**	P	Pg	15 29 03.8	+0.1
HDNS	**Had-Ness**	**0.07**	**53**	S	Sg	15 29 05.4	+0.8
RMOT	**Ramot**	**0.08**	**112**	P	Pg	15 29 03.8	-0.1
RMOT	**Ramot**	**0.08**	**112**	S	Sg	15 29 05.6	+0.6
TVER	**Teveria**	**0.10**	**195**	P	Pg	15 29 04.3	0.0
TVER	**Teveria**	**0.10**	**195**	S	Sg	15 29 06.5	+0.9
ENGV	**Ein-Gev**	**0.12**	**151**	P	Pg	15 29 04.8	+0.4
ENGV	**Ein-Gev**	**0.12**	**151**	S	Sg	15 29 06.6	+0.6
GOLA	**Golan Heights**	**0.18**	**159**	P	Pg	15 29 06.2	+0.5
GOLA	**Golan Heights**	**0.18**	**159**	S	Sg	15 29 09.5	+1.4
MMA0B	**Mount Meron ar**	**0.19**	**313**	P	Pg	15 29 06.3	+0.3
MMA0B	**Mount Meron ar**	**0.19**	**313**	S	Sg	15 29 09.8	+1.2
SHGL	**Shaar Hagolan**	**0.20**	**172**	P	Pg	15 29 06.7	+0.6
KSHT	**Keshet**	**0.22**	**64**	P	Pg	15 29 06.6	0.0
KSHT	**Keshet**	**0.22**	**64**	S	Sg	15 29 11.0	+1.5
SHMJ	**Saham**	**0.23**	**134**	P	Pg	15 29 06.3	-0.2
GEM	**Giv'at Ha'Em**	**0.34**	**13**	P	Pg	15 29 09.0	+0.3
GEM	**Giv'at Ha'Em**	**0.34**	**13**	P	Pg	15 29 09.2	+0.6
GEM	**Giv'at Ha'Em**	**0.34**	**13**	S	Sg	15 29 14.7	+1.7
BLGI	**Bet Lehem HaGe**	**0.35**	**245**	P	Pg	15 29 09.4	+0.4
BLGI	**Bet Lehem HaGe**	**0.35**	**245**	S	Sg	15 29 15.0	+1.4
IZRL	**Izrael**	**0.38**	**213**	P	Pg	15 29 10.2	+0.6
IZRL	**Izrael**	**0.38**	**213**	S	Sg	15 29 16.2	+1.7
HNTI	**Hanita**	**0.39**	**301**	P	Pg	15 29 10.2	+0.5
HNTI	**Hanita**	**0.39**	**301**	S	Sg	15 29 16.5	+1.7
NATI	**Neve Ativ**	**0.40**	**20**	P	Pg	15 29 10.4	+0.4
NATI	**Neve Ativ**	**0.40**	**20**	P	Pg	15 29 10.4	+0.4
NATI	**Neve Ativ**	**0.40**	**20**	S	Sg	15 29 16.6	+1.4
MMLI	**Mount Malkishu**	**0.46**	**196**	P	Pg	15 29 11.0	-0.1
MMLI				S	Sb	15 29 18.8	-1.6
MMLI	**Mount Malkishu**	**0.46**	**196**	P	Pg	15 29 11.3	+0.3
MMLI	**Mount Malkishu**	**0.46**	**196**	S	Sb	15 29 19.0	-1.4
OFRI	**`Ofer**	**0.56**	**242**	P	Pg	15 29 13.7	+0.8
OFRI	**`Ofer**	**0.56**	**242**	S	Sb	15 29 22.0	-1.2
HMDT	**Nahal Hemdat**	**0.63**	**184**	P	Pg	15 29 14.0	-0.3
HMDT	**Nahal Hemdat**	**0.63**	**184**	P	Pg	15 29 14.9	+0.6
HMDT	**Nahal Hemdat**	**0.63**	**184**	S	Sg	15 29 23.7	+1.3
SLTI	**Sal'it**	**0.78**	**215**	P	Pg	15 29 17.7	+0.5
SLTI	**Sal'it**	**0.78**	**215**	S	Sb	15 29 28.9	-0.7
DSI	**Dead Sea**	**1.32**	**187**	P	Pg	15 29 27.0	-0.6
DSI	**Dead Sea**	**1.32**	**187**	S	Sg	15 29 44.6	0.0
AMAZ	**Amatzia**	**1.46**	**203**	P	Pn	15 29 29.2	-0.4
AMAZ	**Amatzia**	**1.46**	**203**	S	Sn	15 29 49.5	+0.3
YTIR	**Yattir**	**1.56**	**194**	P	Pn	15 29 31.2	+0.1
YTIR	**Yattir**	**1.56**	**194**	S	Sn	15 29 51.9	-0.1
GHAJ	**Ghor Haditha**	**1.57**	**180**	P	Pn	15 29 31.1	-0.1
GHAJ	**Ghor Haditha**	**1.57**	**180**	P	Pn	15 29 30.8	-0.4
GHAJ	**Ghor Haditha**	**1.57**	**180**	S	Sn	15 29 52.1	0.0
MSBI	**Mazada**	**1.58**	**187**	P	Pn	15 29 30.5	-0.7
MSBI				S	Sn	15 29 51.5	-0.6
MSBI	**Mazada**	**1.58**	**187**	P	Pn	15 29 30.9	-0.3
PRNI	**Paran**	**2.57**	**191**	P	Pn	15 29 45.7	+0.8
PRNI	**Paran**	**2.57**	**191**	P	Pn	15 29 44.9	+0.1

*KRNET **07** 15:39:07.9±0.1,40°.97N×72°.56E,h13km,mb2.3*
*ISU **07** 15:39:08,40°.93N×72°.74E,h15km*
*NNC **07** 15:39:08.6±2.0,41°.03N×72°.59E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=15.8km s-min=6.4km az=169.0*
*SOME **07** 15:39:08.2,41°.07N×72°.57E,h5km*
ISC 07 15:39:07.9±1.1,41°.00N±0°.02×72°.66E±0°.03,h9km±10km, n19,σ0887/32,15C-9D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.40**	**37**	⇓*eP*	**Pb**	**15 39 17.2**	**-0.1**
ARSB				⇓*eS*	**Sb**	**15 39 24.0**	**+0.4**
OHH	**Osh**	**0.49**	**169**	⇓*eP*	**Pg**	**15 39 17.0**	**-0.5**
OHH				⇓*eS*	**Sg**	**15 39 23.6**	**-0.3**
SALK	**Salom-Alik**	**0.89**	**97**	⇑*eP*	**Pn**	**15 39 26.2**	**-0.5**
SALK				⇑*eS*	**Sn**	**15 39 39.5**	**-0.3**
FRG	**Fergana**	**0.92**	**227**	S	**Sb**	**15 39 38.5**	**+0.3**
ARK	**Arkit**	**0.95**	**327**	⇑*eP*	**Pg**	**15 39 25.8**	**-0.4**
ARK				⇑*eS*	**Sb**	**15 39 38.9**	**-0.4**
CHMI	**Chimion**	**1.13**	**230**	S	**Sg**	**15 39 44.9**	**+0.5**
SFK	**Sufi-Kurgan**	**1.18**	**147**	⇑*eP*	**Pg**	**15 39 30.6**	**0.0**
SFK				⇑*eS*	**Sg**	**15 39 46.9**	**+0.9**
ARLS	**Aral**	**1.52**	**55**	⇓*eP*	**Pg**	**15 39 37.8**	**+0.8**
ARLS				⇓*eS*	**Sg**	**15 39 59.5**	**+2.8**
DRK	**Karamyk**	**1.66**	**204**	⇑*eP*	**Pn**	**15 39 37.6**	**+0.2**
DRK				⇑*eS*	**Sn**	**15 39 59.0**	**+0.1**
MRKS	**Merke**	**1.79**	**14**	P	**Pg**	**15 39 41.5**	**-0.7**
	4.0nm,0.4s						
MRKS				S	**Sg**	**15 40 05.3**	**-0.2**
	17nm,0.4s						
MRKS	**Merke**	**1.79**	**14**	*eP*	**Pg**	**15 39 41.5**	**-0.7**
	4.0nm,0.4s						
MRKS				*eS*	**Sg**	**15 40 05.3**	**-0.2**
	17nm,0.4s						
EKS2	**Erkin-Say**	**1.85**	**26**	⇓*eP*	**Pg**	**15 39 43.5**	**0.0**
EKS2				⇓*eS*	**Sg**	**15 40 09.4**	**+1.8**
AAK	**Ala-Archa**	**2.13**	**39**	⇑Pg	**Pb**	**15 39 46.8**	**0.0**
	0.3nm,0.4s						
AAK				⇓Lg	Lg	15 40 16.8	
	2.3nm,0.6s						
JNKS	**Jany-Kuch**	**2.27**	**88**	⇑*eP*	**Pb**	**15 39 49.4**	**+0.3**
JNKS				⇑*eS*	**Sg**	**15 40 19.7**	**-1.1**
IUG	**luzhnay**	**2.28**	**301**	Pg	**Pb**	**15 39 49.4**	**+0.1**
	7.4nm,0.2s						
IUG				Lg	Lg	15 40 18.5	
	23nm,0.6s						
KBK	**Karagaybulak**	**2.38**	**45**	⇑*eP*	**Pb**	**15 39 50.9**	**-0.1**
KBK				⇑*eS*	**Sg**	**15 40 22.4**	**-1.9**
KK31	**Karatay Array**	**2.64**	**323**	⇑Pg	**Pb**	**15 39 56.1**	**+0.8**
	2.8nm,0.8s,baz=142,slow=16,SNR=3.8						
KK31				⇑Lg	Lg	15 40 29.5	
	1.2nm,0.3s,baz=136,slow=29,SNR=5.1						
BRLS	**Borolday**	**2.92**	**315**	Pg	**Pb**	**15 39 59.9**	**-0.2**
	1.0nm,0.3s						
BRLS				Lg	Lg	15 40 36.5	
	2.5nm,0.3s						
BRLS	**Borolday**	**2.92**	**315**	*eP*	**Pb**	**15 39 59.9**	**-0.2**
	1.0nm,0.3s						
BRLS				*eS*	**Sb**	**15 40 36.5**	**+0.6**
	2.5nm,0.3s						

*IDC **07** 15:40:23.7±2.5,22°.83N×11°.78W,h0km,mb3.8/4, mbtmp4.0/6,ML3.9/2,Error ellipse: s-maj=84.2km s-min=30.7km az=84.0*
ISC 07 15:40:26.1±1.8,22°.8N±0°.2×11°.4W±0°.3,h10km,n9,σ060/9, mb3.8/4,Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**15.67**	**125**	Pn	**P**	**15 44 11.1**	**-0.1**
	0.4nm,0.3s,baz=321,slow=12,SNR=1.3						
TORD				Sn	**Sn**	**15 47 00.8**	**-0.1**
	1.2nm,0.3s,baz=323,slow=22,SNR=2.5 3.4nm,0.4s						
DBIC	**Dimbokro**	**17.19**	**158**	P	**Pn**	**15 44 26.2**	**-0.3**
	0.4nm,0.3s,baz=356,slow=11,SNR=1.9 1.5nm,0.4s						
I48TN	**KESRA INFRASON**	**22.17**	**50**	I	I	17 56 20.0	
	0.1nm,1.1s,baz=239,slow=327,SNR=1.2 1.4nm,0.7s						
HFS	**Hagfors**	**41.27**	**19**	P	**P**	**15 48 10.3**	**-0.9**
	1.4nm,0.7s,baz=224,slow=6.2,SNR=1.8						
FINES	**FINESS Array B**	**46.40**	**24**	P	**P**	**15 48 52.1**	**-0.3**
	2.7nm,1.0s,baz=236,slow=9.8,SNR=4.9 2.7nm,1.0s						
KURBB	**Kurchatov Arra**	**72.68**	**42**	P	**P**	**15 51 55.0**	**+0.9**
	0.6nm,0.8s,baz=280,slow=6.2,SNR=3.9 0.6nm,0.8s						
MKAR	**Makanchi Array**	**76.16**	**45**	P	**P**	**15 52 14.8**	**+0.3**
	0.6nm,0.8s,baz=274,slow=8.4,SNR=3.9 0.6nm,0.8s						
WRA	**Warramunga Arr**	**147.97**	**92**	PKPbc	**PKPbc**	**16 00 12.7**	**+0.2**
	0.4nm,0.6s,baz=299,slow=2.1,SNR=2.0						
ASAR	**Alice Springs**	**148.11**	**99**	PKPbc	**PKPbc**	**16 00 13.1**	**+0.3**
	0.4nm,0.7s,baz=288,slow=2.1,SNR=6.8						

*TIR **07** 16:24:26.0,39°.05N×20°.52E,h19km±2km,Ml3.2/1*
*THE **07** 16:24:27.8,39°.2N±0°.5×2°.1E±°.,h16km±3km,M3.1/14, MLh3.1/14*
*ATH **07** 16:24:28.3,39°.13N×20°.61E,h9km±1km,ML3.1/9,Manual Solution by A.Moschou First location: 2019/11/07 16:25:31, This location: 2019/11/07 17:10:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
ISC 07 16:24:28.0±0.9,39°.13N±0°.02×20°.60E±0°.03,h13km±9km, n36,σ0874/58,1D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRGA	**Parga**	**0.22**	**316**	P	**Pg**	**16 24 33.0**	**+0.1**
PRGA				S	**Sb**	**16 24 37.1**	**-0.8**
TSLK	**Tsoukalades, L**	**0.30**	**172**	P	**Pb**	**16 24 35.2**	**-0.1**
TSLK				S	**Sb**	**16 24 41.1**	**+0.9**
NYDR	**Nydri-Lefkada**	**0.42**	**170**	P	**Pb**	**16 24 37.1**	**-0.1**
NYDR				S	**Sb**	**16 24 44.2**	**+0.8**
IGT	**Igoumenitsa**	**0.46**	**333**	⇓Pg	**Pg**	**16 24 36.0**	**-1.1**
IGT				Sg	**Sb**	**16 24 43.9**	**-0.8**
IGT	**Igoumenitsa**	**0.46**	**333**	P	**Pg**	**16 24 36.0**	**-1.1**
IGT				S	**Sg**	**16 24 42.4**	**-0.9**
EVGI	**Lefkada island**	**0.51**	**175**	P	**Pb**	**16 24 38.4**	**-0.3**
AMPL	**Ampelaki**	**0.52**	**113**	P	**Pg**	**16 24 38.2**	**0.0**
LFKM	**Lefkimmi**	**0.53**	**308**	P	**Pg**	**16 24 38.3**	**-0.1**
PRMD	**Pramanda**	**0.56**	**43**	P	**Pg**	**16 24 38.2**	**-0.8**
PRMD				S	**Sg**	**16 24 46.1**	**-0.2**
JAN	**Janina**	**0.56**	**20**	P	**Pg**	**16 24 37.9**	**-1.3**
JAN				S	**Sg**	**16 24 46.2**	**-0.4**
JAN	**Janina**	**0.56**	**20**	P	**Pg**	**16 24 38.2**	**-0.9**
JAN				S	**Sg**	**16 24 46.7**	**0.0**
TETR	**Tetrakomo, Epi**	**0.57**	**67**	P	**Pg**	**16 24 38.2**	**-1.0**
TETR	**Tetrakomo, Epi**	**0.57**	**67**	P	**Pg**	**16 24 38.2**	**-1.0**
TETR				S	**Sb**	**16 24 47.6**	**-0.3**
FSK	**Fiskardo**	**0.67**	**183**	P	**Pb**	**16 24 41.5**	**0.0**
FSK	**Fiskardo**	**0.67**	**183**	P	**Pb**	**16 24 41.4**	**-0.1**
FSK				S	**Sg**	**16 24 49.9**	**+0.1**
PVO	**Paravola**	**0.88**	**125**	P	**Pg**	**16 24 45.1**	**+0.1**
PVO	**Paravola**	**0.88**	**125**	P	**Pn**	**16 24 45.3**	**-0.8**
PVO				S	**Sb**	**16 24 56.1**	**-0.7**
DMLN	**Damoulianata-K**	**0.90**	**192**	P	**Pn**	**16 24 46.0**	**-0.4**
VLS	**Valsamata**	**0.95**	**181**	P	**Pg**	**16 24 46.1**	**-0.2**
VLS	**Valsamata**	**0.95**	**181**	P	**Pn**	**16 24 46.4**	**-0.7**
VLS				S	**Sn**	**16 25 00.1**	**-0.4**
EVR	**Evrytania**	**0.96**	**102**	P	**Pb**	**16 24 46.2**	**-0.4**
EVR	**Evrytania**	**0.96**	**102**	P	**Pn**	**16 24 46.9**	**-0.4**
EVR				S	**Sg**	**16 24 59.3**	**+0.3**
RTZL	**Ratzakli, Kefa**	**1.06**	**173**	P	**Pn**	**16 24 48.0**	**+0.5**
AXS	**Araxos**	**1.11**	**147**	P	**Pn**	**16 24 48.9**	**-0.3**
ANX	**Ano Chora**	**1.16**	**117**	P	**Pg**	**16 24 50.8**	**+0.5**
ANX				S	**Sg**	**16 25 06.5**	**+1.0**
THL	**Klokotos Trika**	**1.18**	**68**	P	**Pg**	**16 24 50.6**	**-0.1**
THL				S	**Sg**	**16 25 06.6**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.20**	**95**	P	**Pg**	**16 24 51.2**	**+0.2**
MAKR				S	**Sg**	**16 25 06.6**	**0.0**
EFP	**Efpalio**	**1.23**	**124**	P	**Pb**	**16 24 51.2**	**0.0**
EFP				S	**Sg**	**16 25 07.6**	**-0.2**
RLS	**Riolos of Patr**	**1.26**	**147**	P	**Pb**	**16 24 51.6**	**0.0**
RLS				S	**Sg**	**16 25 08.9**	**+0.2**
ORTH	**Orthonies,Zaky**	**1.27**	**177**	P	**Pg**	**16 24 52.5**	**-0.1**
ORTH				S	**Sg**	**16 25 09.9**	**+0.8**
NEST	**Nestorio**	**1.33**	**15**	Pn	**Pb**	**16 24 52.7**	**-0.3**
NEST				Sn	**Sg**	**16 25 12.5**	**+1.5**
NEST				AML	AML	16 25 18.5	
	1.3nm,0.4s						
DRO	**Drossia**	**1.46**	**143**	P	**Pb**	**16 24 54.9**	**-0.1**
DRO				S	**Sg**	**16 25 14.6**	**-0.4**
KBN	**Korca**	**1.50**	**5**	Pn	**Pg**	**16 24 58.5**	**+1.6**
KBN				Sn	**Sg**	**16 25 16.7**	**+0.3**
OHR	**Ohrid**	**1.99**	**4**	*i* Pn	**Pb**	**16 25 04.6**	**+0.5**
VAY	**Valandovo**	**2.66**	**34**	*i* Pn	**Pb**	**16 25 15.1**	**-0.4**
PEHC	**Pehcevo**	**3.18**	**33**	*i* Pn	**Pn**	**16 25 20.5**	**+2.7**

IDC 07 16:32:39.2±5.7,6°.20S×150°.02E,h73km±49km,mb3.6/4, mbtmp4.0/5,ML1.9/1,Error ellipse: s-maj=78.9km s-min=33.3km az=119.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.27**	**221**	P	Pn	16 33 41.9	+0.1
	4.8nm,0.3s,baz=34,slow=13,SNR=21						
PMG				S	Sn	16 34 30.5	+0.2
	38nm,0.7s,baz=36,slow=18,SNR=6.6 40nm,0.8s						
WRA	**Warramunga Arr**	**20.46**	**227**	P	P	16 37 11.8	+0.6
	5.7nm,0.8s,baz=51,slow=11,SNR=28 5.7nm,0.8s						
ASAR	**Alice Springs**	**23.28**	**220**	P	P	16 37 41.4	+0.5
	3.0nm,1.1s,baz=59,slow=8.2,SNR=14 3.0nm,1.1s						
STKA	**Stephens Creek**	**26.74**	**196**	P	P	16 38 11.4	-0.6
	3.7nm,1.0s,baz=0.4,slow=14,SNR=3.1 3.7nm,1.0s						
ILAR	**Eielson Array**	**84.49**	**23**	P	P	16 45 03.8	-0.1
	0.4nm,0.8s,baz=261,slow=5.1,SNR=3.3 0.4nm,0.8s						

*CATAC **07** 16:43:13.0±0.5,14°.N±3°.×9°.2W±°.,h36km±4km,M4.0/13, MLv4.0/13,Error ellipse: s-maj=7.1km s-min=3.4km az=36.2,confirmed*
*GCG **07** 16:43:13.8±

n61,σ0.68/80,3C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.53**	**120**	*i* P		**Pb**	**16 50 36.6**	**+0.2**
CO04				*e*S		**Sb**	**16 50 44.4**	**+0.4**
CO04				IAML			16 50 46.3	
	comp=N,10μm,0.2s							
CO02	**Combarbal**	**0.73**	**38**⇑	*i* P		**Pb**	**16 50 39.2**	**-0.4**
CO02				*e*S		**Sb**	**16 50 48.7**	**-0.6**
CO02	**Combarbal**	**0.73**	**38**	*i* P		**Pb**	**16 50 39.4**	**-0.2**
CO02				*i* S		**Sb**	**16 50 50.1**	**+0.9**
CO02				IAML			16 50 50.4	
	comp=Z,2μm,0.1s							
VA06	**Catapilco**	**0.80**	**167**	*i* P		**Pb**	**16 50 41.0**	**+0.3**
VA06				*e*S		**Sb**	**16 50 52.5**	**+1.3**
VA06				IAML			16 50 54.2	
	comp=E,9μm,0.5s							
CO06	**Fray Jorge**	**1.11**	**355**	*e*P		**Pn**	**16 50 45.6**	**+0.7**
CO06				*e*S		**Sn**	**16 51 01.2**	**+2.0**
CO03	**El Pedregal**	**1.18**	**37**⇓	*i* P		**Pn**	**16 50 45.3**	**-0.6**
CO03				*e*S		**Sb**	**16 50 59.6**	**-2.4**
CO03				IAML			16 51 00.8	
	comp=E,3μm,0.1s							
CO03	**El Pedregal**	**1.18**	**37**	*i* P		**Pn**	**16 50 45.6**	**-0.3**
CO03				*i* S		**Sb**	**16 51 00.9**	**-1.1**
CO03				IAML			16 51 02.9	
	comp=Z,941nm,0.5s							
VA01	**Torpederas**	**1.24**	**185**	*i* P		**Pn**	**16 50 46.3**	**-0.5**
VA01				IAML			16 51 07.6	
	comp=Z,888nm,0.4s							
ROCH	**El Roble**	**1.26**	**160**	*e*P		**Pn**	**16 50 47.6**	**+0.3**
ROCH				*e*S		**Sb**	**16 51 04.1**	**-0.5**
ROCH				IAML			16 51 07.3	
	comp=N,3μm,0.3s							
VA03	**San Esteban**	**1.28**	**140**⇓	*i* P		**Pn**	**16 50 46.5**	**-0.8**
VA03				*e*S		**Sn**	**16 51 02.2**	**-1.4**
VA03				IAML			16 51 04.0	
	comp=N,3μm,0.4s							
VA03	**San Esteban**	**1.28**	**140**	*i* P		**Pn**	**16 50 46.7**	**-0.6**
VA03				*i* S		**Sn**	**16 51 03.6**	**+0.1**
VA03				IAML			16 51 06.0	
	comp=Z,1μm,0.3s							
MT02	**Curacav**	**1.51**	**168**	*e*P		**Pn**	**16 50 50.4**	**0.0**
MT02				IAML			16 51 12.4	
	comp=E,688nm,0.2s							
MT02	**Curacav**	**1.51**	**168**	*i* P		**Pn**	**16 50 49.9**	**-0.5**
MT02				*i* S		**Sn**	**16 51 09.6**	**+0.5**
MT02				IAML			16 51 12.1	
	comp=Z,762nm,0.5s							
PEL	**Peldehue**	**1.53**	**153**	*e*P		**Pn**	**16 50 50.4**	**-0.4**
PEL				*e*S		**Sn**	**16 51 09.1**	**-0.7**
PEL				IAML			16 51 11.5	
	comp=E,835nm,0.2s							
MT10	**Hacienda Santa**	**1.70**	**151**	*e*P		**Pn**	**16 50 53.0**	**-0.2**
MT10				*e*S		**Sn**	**16 51 13.3**	**-0.8**
MT10				IAML			16 51 16.0	
	comp=N,3μm,0.3s							
GO04	**Tololo Observa**	**1.72**	**21**	*e*P		**Pn**	**16 50 53.7**	**+0.1**
GO04				*e*S		**Sn**	**16 51 14.8**	**+0.2**
GO04	**Tololo Observa**	**1.72**	**21**	*i* P		**Pn**	**16 50 53.3**	**-0.3**
GO04				*i* S		**Sn**	**16 51 15.0**	**+0.4**
GO04				IAML			16 51 17.9	
	comp=Z,1μm,0.2s							
MT05	**Renca**	**1.74**	**158**	*e*P		**Pn**	**16 50 53.7**	**+0.1**
MT05				*e*S		**Sn**	**16 51 14.8**	**-0.1**
MT05				IAML			16 51 18.1	
	comp=E,2μm,0.3s							
MT05	**Renca**	**1.74**	**158**	*i* P		**Pn**	**16 50 53.4**	**-0.2**
MT05				IAML			16 51 19.2	
	comp=Z,768nm,0.4s							
MT14	**Cerro Cal¡n**	**1.81**	**153**	*e*P		**Pn**	**16 50 54.4**	**-0.2**
MT14				*e*S		**Sn**	**16 51 16.3**	**-0.4**
MT14				IAML			16 51 32.1	
	comp=E,1μm,0.5s							
MT16	**CCHEN**	**1.84**	**153**	*e*P		**Pn**	**16 50 55.4**	**+0.3**
MT16				*e*S		**Sn**	**16 51 17.9**	**+0.4**
MT16				IAML			16 51 32.8	
	comp=E,490nm,0.6s							
CO05	**La Serena**	**1.87**	**7**	IAML			16 51 34.3	
	comp=N,559nm,0.4s							
RTLS	**Leoncito**	**1.89**	**91**	*i* P		**Pn**	**16 50 56.3**	**+0.3**
RTLS				IAML			16 51 27.1	
	comp=Z,781nm,0.6s							
MT03	**Universidad Ad**	**1.91**	**154**	*e*P		**Pn**	**16 50 56.3**	**+0.2**
MT03				IAML			16 51 23.5	
	comp=E,2μm,0.2s							
MT03	**Universidad Ad**	**1.91**	**154**	*i* P		**Pn**	**16 50 56.0**	**0.0**
MT03				IAML			16 51 33.6	
	comp=Z,576nm,0.4s							
MT04	**Ro Olivares**	**2.00**	**145**	*e*P		**Pn**	**16 50 57.5**	**+0.2**
MT04				IAML			16 51 27.7	
	comp=N,521nm,0.2s							
MT04	**Ro Olivares**	**2.00**	**145**	*i* P		**Pn**	**16 50 57.1**	**-0.3**
MT04				IAML			16 51 28.7	
	comp=Z,368nm,0.7s							
MT15	**Las Vizcachas**	**2.00**	**155**	*e*P		**Pn**	**16 50 57.2**	**-0.1**
MT15				IAML			16 51 27.2	
	comp=N,2μm,0.3s							
MT09	**Talagante**	**2.04**	**168**⇑	*i* P		**Pn**	**16 50 58.5**	**+0.7**
MT09				IAML			16 51 30.3	
	comp=E,906nm,0.4s							
MT08	**Bocatoma Ro**	**2.09**	**143**	*e*P		**Pn**	**16 50 59.6**	**+1.0**
MT08				IAML			16 51 31.9	
	comp=N,484nm,0.5s							
MT08	**Bocatoma Ro**	**2.09**	**143**	*i* P		**Pn**	**16 50 59.5**	**+1.0**
MT08				IAML			16 51 35.8	
	comp=Z,222nm,0.5s							
MT01	**Popeta**	**2.09**	**174**	*e*P		**Pn**	**16 50 58.8**	**+0.4**
MT01				IAML			16 51 30.4	
	comp=N,801nm,0.2s							
MT01	**Popeta**	**2.09**	**174**	*i* P		**Pn**	**16 50 58.2**	**-0.2**
MT01				IAML			16 51 32.8	
	comp=Z,301nm,0.2s							
MT12	**Pirque**	**2.11**	**158**	*e*P		**Pn**	**16 50 58.8**	**0.0**
MT12				IAML			16 51 32.5	
	comp=N,998nm,0.4s							
CO01	**Juntas del Tor**	**2.18**	**35**	*e*P		**Pn**	**16 51 00.1**	**+0.2**
CO01				IAML			16 51 27.4	
	comp=N,373nm,0.3s							
CO01	**Juntas del Tor**	**2.18**	**35**	*i* P		**Pn**	**16 51 00.0**	**+0.2**
CO01				*i* S		**Sn**	**16 51 26.7**	**+0.7**
CO01				IAML			16 51 27.4	
	comp=Z,421nm,0.1s							
BO04	**La Punta**	**2.33**	**161**	*e*P		**Pn**	**16 51 02.3**	**+0.5**
BO04				IAML			16 51 34.0	
	comp=E,634nm,0.3s							
LMEL	**Las Melosas**	**2.34**	**152**	*e*P		**Pn**	**16 51 02.9**	**+0.9**
LMEL				IAML			16 51 37.7	
	comp=E,706nm,0.1s							
LMEL	**Las Melosas**	**2.34**	**152**	*i* P		**Pn**	**16 51 02.4**	**+0.4**
LMEL				IAML			16 51 41.0	
	comp=Z,296nm,0.5s							
ASAL	**Salagasta**	**2.41**	**110**	*i* P		**Pn**	**16 51 05.0**	**+2.0**
ASAL				IAML			16 51 42.3	
	comp=Z,0.2nm,0.3s							
ACCO	**Cerro Coronel**	**2.42**	**61**	*i* P		**Pn**	**16 51 04.1**	**+0.9**
ARCO	**CERRO ARCO**	**2.43**	**116**	*i* P		**Pn**	**16 51 03.9**	**+0.6**
ARCO				IAML			16 51 42.1	
	comp=Z,270nm,0.4s							
ZON	**Zonda**	**2.43**	**85**	*i* P		**Pn**	**16 51 03.6**	**+0.5**
ZON				IAML			16 51 43.2	
	comp=Z,107nm,0.5s							
AAGR	**Agrelo**	**2.62**	**120**	*i* P		**Pn**	**16 51 06.3**	**+0.5**
AAGR				IAML			16 51 48.9	
	comp=Z,215nm,0.4s							
BO01	**Tunca**	**2.63**	**172**	*e*P		**Pn**	**16 51 06.0**	**+0.1**
BO01				IAML			16 51 46.8	
	comp=N,230nm,0.4s							
BO01	**Tunca**	**2.63**	**172**	*i* P		**Pn**	**16 51 05.9**	**+0.1**
BO01				IAML			16 51 54.5	
	comp=Z,144nm,0.5s							
RTLL	**Cerro Villicun**	**2.64**	**81**	*i* P		**Pn**	**16 51 06.7**	**+0.7**
RTLL				IAML			16 51 49.2	
	comp=Z,165nm,0.4s							
BO03	**Pichilemu**	**2.73**	**188**	*e*P		**Pn**	**16 51 07.0**	**-0.3**
BO03				IAML			16 51 53.9	
	comp=N,170nm,0.4s							
CFA	**Coronel Fontan**	**2.80**	**87**	*i* P		**Pn**	**16 51 08.8**	**+0.5**
CFA				IAML			16 52 11.1	
	comp=Z,296nm,0.6s							
LCO	**Las Campanas**	**2.85**	**15**	*e*P		**Pn**	**16 51 09.4**	**+0.3**
LCO	**Las Campanas**	**2.85**	**15**	*i* P		**Pn**	**16 51 09.0**	**-0.2**
LCO				IAML			16 51 57.4	
	comp=Z,282nm,0.3s							
BO02	**Sierra Bellavi**	**3.07**	**169**	*e*P		**Pn**	**16 51 12.3**	**+0.4**
BO02	**Sierra Bellavi**	**3.07**	**169**	*i* P		**Pn**	**16 51 12.1**	**+0.2**
BO02				IAML			16 52 02.1	
	comp=Z,218nm,0.3s							
AC05	**El Transito**	**3.13**	**20**	*e*P		**Pn**	**16 51 13.5**	**+0.7**
AC05				IAML			16 52 03.8	
	comp=N,219nm,0.6s							
AC05	**El Transito**	**3.13**	**20**	*i* P		**Pn**	**16 51 12.9**	**+0.1**
AC05				IAML			16 52 13.1	
	comp=Z,374nm,0.8s							
GO05	**Hualane**	**3.24**	**186**	*e*P		**Pn**	**16 51 13.8**	**-0.4**
GO05				IAML			16 52 08.2	
	comp=E,167nm,0.4s							
GO05	**Hualane**	**3.24**	**186**	*i* P		**Pn**	**16 51 14.4**	**+0.2**
GO05				*i* S		**Sn**	**16 51 51.5**	**-0.3**
GO05				IAML			16 52 15.9	
	comp=Z,85nm,1.2s							
AVFE	**Valle Fertil**	**3.66**	**73**	*i* P		**Pn**	**16 51 20.0**	**0.0**
AVFE				IAML			16 52 25.2	
	comp=Z,65nm,0.4s							
ACAN	**Cantantal**	**3.71**	**99**	*i* P		**Pn**	**16 51 21.2**	**+0.4**
ACAN				IAML			16 52 29.7	
	comp=Z,313nm,0.5s							
ACHE	**Chepes**	**4.19**	**83**	*i* P		**Pn**	**16 51 26.8**	**-0.7**
GO03	**Copiapo**	**4.32**	**15**	*e*P		**Pn**	**16 51 28.4**	**-0.7**

*IDC **07** 16:51:19.6±1.9,26˚45N×129˚84E,h0km,mb3.5/4, mbtmp3.4/5,ML3.0/1,Error ellipse: s-maj=109.6km s-min=24.3km az=73.0*
*JMA **07** 16:51:23.0±0.1,26˚3N±0˚9×129˚6E±0˚6,h44km,MV3.3/16, NEAR MINAMI-DAITOJIMA IS*

ISC 07 16:51:19.7±2.8,26˚34N±0˚05×129˚61E±0˚04,h4km±18km, n19,σ1.38/29,mb3.4/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.23**	**304**	P		**Pn**	**16 51 44.5**	**+0.7**
JYRO				*e*S		**Sg**	**16 51 58.7**	**-0.8**
JOW	**Kunigami**	**1.29**	**293**	LR		LR	16 52 24.7	
	comp=Z,194nm,18.1s,baz=152,slow=45							
JOW	**Kunigami**	**1.29**	**293**	P		**Pn**	**16 51 45.3**	**+0.8**
JOW				*e*S		**Sb**	**16 52 00.3**	**-1.1**
JOKE	**Okinoerabujima**	**1.37**	**318**	P		**Pn**	**16 51 46.7**	**+1.0**
JOKE				*e*S		**Sb**	**16 52 02.4**	**-1.5**
JNTH	**Nagotoyohara**	**1.43**	**277**	P		**Pn**	**16 51 46.9**	**+0.4**
JNTH				S		**Sn**	**16 52 03.5**	**-2.2**
JMZ	**Minamidaito 2**	**1.55**	**109**	P		**Pn**	**16 51 48.4**	**+0.3**
JMZ				S		**Sn**	**16 52 06.0**	**-2.6**
JTK	**Tokunoshima**	**1.55**	**338**	P		**Pn**	**16 51 49.4**	**+1.2**
JKDJ	**Kitadaitoujima**	**1.57**	**104**	*e*P		**Pn**	**16 51 49.2**	**+0.8**
JKDJ				*e*S		**Sn**	**16 52 07.2**	**-2.0**
JIH	**Iheya**	**1.62**	**296**	P		**Pn**	**16 51 50.1**	**+1.0**
JIH				S		**Sn**	**16 52 08.7**	**-1.7**
JJT3	**Tamagusuku3**	**1.65**	**263**	*e*P		**Pn**	**16 51 50.9**	**+1.4**
JJT3				S		**Sn**	**16 52 10.4**	**-0.7**
JAMN	**Amaminishikomi**	**1.93**	**349**	P		**Pn**	**16 51 54.4**	**+1.0**
JZK	**Kikaishima**	**1.99**	**9**	*e*P		**Pn**	**16 51 56.0**	**+1.8**
JZK				S		**Sn**	**16 52 19.6**	**+0.1**
JAM	**Amami Oshima**	**2.06**	**0**	P		**Pn**	**16 51 56.0**	**+0.8**
JAM				*e*S		**Sn**	**16 52 19.0**	**-2.3**
JAGN	**Aguni-jima**	**2.13**	**277**	P		**Pn**	**16 51 57.3**	**+1.1**
JAGN				S		**Sn**	**16 52 21.6**	**-1.4**
KSRS	**Korea Array**	**11.17**	**353**	Pn		**Pn**	**16 53 59.6**	**-0.6**
	0.1nm,0.3s,baz=164,slow=12,SNR=1.7 0.6nm,0.8s							
MKAR	**Makanchi Array**	**42.38**	**311**	P		**P**	**16 59 15.6**	**+0.4**
	0.3nm,0.6s,baz=97,slow=9.9,SNR=3.6 0.3nm,0.6s							
WRA	**Warramunga Arr**	**46.24**	**174**	P		**P**	**16 59 47.2**	**+0.9**
	0.2nm,0.5s,baz=355,slow=8.1,SNR=1.8 0.2nm,0.5s							
ASAR	**Alice Springs**	**49.89**	**175**	P		**P**	**17 00 15.5**	**+1.0**
	0.4nm,1.0s,baz=0.0,slow=6.2,SNR=1.6 0.4nm,1.0s							
FINES	**FINESS Array B**	**73.37**	**331**	P		**P**	**17 02 53.5**	**+1.0**
	1.1nm,0.8s,baz=63,slow=5.2,SNR=6.4 1.1nm,0.8s							

*NEIC **07** 17:05:55.8±2.5,6˚22S±0˚05×148˚09E±0˚04,h57km±10km, mb4.4/22,Error ellipse: s-maj=8.9km s-min=3.6km az=218.0*
*IDC **07** 17:06:04.7±2.7,7˚06S×148˚30E,h83km±23km,mb4.0/7, mbtmp4.3/8,MS2.9/5,Error ellipse: s-maj=32.3km s-min=15.1km az=106.0*

ISC 07 17:05:55.8±0.6,6˚20S±0˚06×148˚06E±0˚07,h60km,n47, σ1.60/48,mb4.4/17,MS3.0/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.31**	**196**			**Pn**	**17 06 45.6**	**+0.4**
PMG				Sn		**Sn**	**17 07 25.0**	**+1.5**
PMG	**Port Moresby**	**3.31**	**196**	P		**Pn**	**17 06 45.8**	**+0.6**
	145nm,0.5s,baz=40,slow=6.1,SNR=67							
PMG				S		**Sn**	**17 07 25.6**	**+2.2**
	157nm,0.5s,baz=35,slow=16,SNR=7.0							
PMG				LR		LR	17 07 53.7	
	comp=Z,59nm,20.1s,baz=29,slow=42							
PMG	**Port Moresby**	**3.31**	**196**	P		**Pn**	**17 06 46.2**	**+0.9**
MANU	**Manus Island**	**4.18**	**350**	Pn		**Pn**	**17 06 58.0**	**+0.8**
RABL	**Rabaul**	**4.54**	**64**	Pn		**Pn**	**17 07 02.5**	**+0.4**
RABL				Sn		**Sn**	**17 07 50.7**	**-3.0**
JAY	**Jayapura**	**8.20**	**296**	P		**Pn**	**17 07 54.4**	**+2.2**
	7.4nm,0.5s,baz=128,slow=7.2,SNR=9.4							
COEN	**Coen**	**9.09**	**212**	Pn		**Pn**	**17 08 03.7**	**-0.7**
COEN				Sn		**Sn**	**17 09 42.3**	**-3.0**
QIS	**Mount Isa**	**16.47**	**209**	P		**Pn**	**17 09 43.4**	**+0.3**
MTN	**Manton Dam**	**17.95**	**247**			**P**	**17 09 59.9**	**-1.4**
WB0	**Warramunga Arr**	**18.93**	**223**	P		**P**	**17 10 10.7**	**-1.4**
WRAB	**Tennant Creek**	**19.08**	**223**	P		**P**	**17 10 12.1**	**-1.5**
WRA	**Warramunga Arr**	**19.09**	**223**			**P**	**17 10 12.2**	**-1.6**
WRA	**Warramunga Arr**	**19.09**	**223**	P		**P**	**17 10 12.8**	**-1.0**
	6.1nm,0.4s,baz=48,slow=11,SNR=104							
WRA				S		**S**	**17 13 42.4**	**-5.0**
	3.6nm,1.1s,baz=49,slow=21,SNR=6.8							
EIDS	**Eidsvold**	**19.28**	**172**			**P**	**17 10 15.7**	**-0.1**
EIDS				IAmb		IAmb	17 10 20.6	
	comp=Z,37nm,1.5s							
EIDS	**Eidsvold**	**19.28**	**172**	P		**Pn**	**17 10 18.8**	**+1.5**
QLP	**Quilpie**	**20.60**	**190**	P		**P**	**17 10 31.7**	**+1.6**
SANVU	**Saraoutou**	**20.91**	**118**	P		**P**	**17 10 33.2**	**-0.3**
SANVU				IAmb		IAmb	17 11 11.9	
	comp=Z,13nm,1.0s							
KNRA	**Kununurra**	**21.14**	**242**			**P**	**17 10 34.4**	**-1.7**
KNRA				IAmb		IAmb	17 10 39.0	
	comp=Z,20nm,1.4s							
AS31	**Alice Springs**	**22.07**	**217**	P		**P**	**17 10 45.6**	**-0.4**
AS31				IAmb		IAmb	17 10 47.1	
	comp=Z,7.5nm,0.5s							
ASAR	**Alice Springs**	**22.07**	**217**	P		**P**	**17 10 45.0**	**-1.0**
ASAR						**S**	**17 14 44.0**	**-2.1**
ASAR	**Alice Springs**	**22.07**	**217**	P		**P**	**17 10 45.9**	**-0.2**
	comp=Z,9.5nm,0.4s,baz=49,slow=9.4,SNR=276							
ASAR				S		**S**	**17 14 43.0**	**-3.1**
	comp=Z,1.4nm,0.8s,baz=33,slow=21,SNR=6.4							
ASAR				LR		LR	17 20 32.9	
	comp=Z,51nm,20.1s,baz=130,slow=40 comp=Z,9.5nm,0.4s							
AUALC	**St Philip's Co**	**22.10**	**217**	P		**P**	**17 10 46.3**	**0.0**
INKA	**Innaminka**	**22.53**	**197**			**P**	**17 10 49.6**	**-1.1**
INKA				IAmb		IAmb	17 10 57.3	
	comp=Z,13nm,1.2s							
AULRC	**Lightning Ridg**	**23.11**	**180**	P		**P**	**17 10 57.4**	**+0.6**
ARMA	**Armidale**	**24.33**	**173**	P		**P**	**17 11 08.4**	**+0.3**
ARMA				IAmb		IAmb	17 11 10.6	
	comp=Z,10.0nm,1.1s							
FITZ	**Fitzroy Crossi**	**24.87**	**240**			**P**	**17 11 12.4**	**-0.7**
FITZ				IAmb		IAmb	17 11 13.5	
	comp=Z,8.3nm,0.7s							
STKA	**Stephens Creek**	**26.25**	**193**	P		**P**	**17 11 25.7**	**+0.2**
STKA	**Stephens Creek**	**26.25**	**193**	P		**P**	**17 11 24.4**	**-1.1**
	comp=Z,9.4nm,0.5s,baz=358,slow=8.6,SNR=20 comp=Z,9.4nm,0.5s							
STKA	**Stephens Creek**	**26.25**	**193**	P		**P**	**17 11 27.8**	**+2.3**
BBOO	**Buckleboo**	**28.74**	**201**	P		**P**	**17 11 48.8**	**+1.1**
CAN	**Canberra**	**29.00**	**178**	P		**P**	**17 11 50.3**	**+0.3**
CAN				IAmb		IAmb	17 12 03.7	
	comp=Z,35nm,1.5s							
FORT	**Forrest**	**30.83**	**215**	P		**P**	**17 12 07.3**	**+1.1**
FORT				IAmb		IAmb	17 12 08.8	
	comp=Z,10nm,0.8s							
MBWA	**Marble Bar**	**31.20**	**239**	P		**P**	**17 12 08.7**	**-1.0**
MBWA				IAmb		IAmb	17 12 08.9	
	comp=Z,10nm,1.1s							
PSA00	**Pilbara Seismi**	**31.28**	**238**	P		**P**	**17 12 08.5**	**-1.9**
PSA00				IAmb		IAmb	17 12 28.3	
	comp=Z,6.6nm,1.3s							
JCJ	**Chichijima**	**33.58**	**350**	LR		LR	17 23 55.4	
	comp=Z,23nm,18.7s,baz=336,slow=31							
MORW	**Morawa**	**37.84**	**229**	P		**P**	**17 13 06.2**	**-0.7**
JOW	**Kunigami**	**38.02**	**331**	P		**P**	**17 13 09.0**	**+0.6**
NWAO	**Narrogin (SRO)**	**39.10**	**223**	P		**P**	**17 13 16.6**	**-0.9**
JHJ	**Hachijo jima 2**	**39.88**	**349**	LR		LR	17 28 03.1	
	comp=Z,27nm,21.6s,baz=79,slow=32							
MJAR	**Matsushiro Arr**	**43.51**	**348**	LR		LR	17 30 58.7	
	comp=Z,21nm,20.5s,baz=93,slow=34							
HILR	**Hailar Array B**	**60.75**	**339**	P		P	17 16 13.4	+12
	comp=Z,1.3nm,0.4s,baz=141,slow=5.5,SNR=3.7 comp=Z,1.3nm,0.4s							
SONM	**Songino Array**	**65.09**	**330**	P		P	17 16 42.9	+13
	comp=Z,1.4nm,1.1s,baz=133,slow=6.3,SNR=4.6 comp=Z,1.4nm,1.1s							
CASY	**Casey**	**65.35**	**196**	P		**P**	**17 16 31.3**	**-0.2**
CASY				IAmb		IAmb	17 16 47.6	
	comp=Z,18nm,1.4s							
VNDA	**Vanda**	**71.66**	**177**	P		**P**	**17 17 11.3**	**+0.6**
VNDA	**Vanda**	**71.66**	**177**	P		**P**	**17 17 11.2**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=330,slow=6.7,SNR=15 comp=Z,0.9nm,0.6s							
QSPA	**South Pole Qui**	**83.77**	**180**	P		**P**	**17 18 21.1**	**+2.7**
	comp=Z,5.7nm,0.6s,baz=305,slow=0.7,SNR=74 comp=Z,5.7nm,0.6s							
BVAR	**Borovoye Array**	**87.55**	**324**	P		P	17 18 46.9	+10
	comp=Z,0.8nm,0.9s,baz=142,slow=5.4,SNR=2.6 comp=Z,0.8nm,0.9s							

*IDC **07** 17:10:22.8±13.0,5˚96N×94˚50E,h156km±114km,mb3.2/8, mbtmp3.7/9,Error ellipse: s-maj=110.7km s-min=16.4km az=56.0*

ISC 07 17:10:14.3±1.5,6˚0N±0˚2×94˚6E±0˚3,h73km,n18,σ0.52/9, mb3.5/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.08**	**19**	P		**P**	**17 13 24.2**	**-0.5**
	0.7nm,0.7s,baz=217,slow=12,SNR=6.1							
H08S3	**Diego Garcia H**	**25.86**	**239**	T		T	17 41 14.1	
	baz=61,slow=74							
H08S2	**Diego Garcia H**	**25.86**	**239**	T		T	17 41 16.8	
	baz=61,slow=74							
H08S1	**Diego Garcia H**	**25.87**	**239**	T		T	17 41 15.3	
	baz=61							
MKAR	**Makanchi Array**	**41.98**	**347**	P		**P**	**17 17 58.6**	**+0.5**
	0.2nm,0.4s,baz=148,slow=8.8,SNR=4.3 0.2nm,0.4s							
SONM	**Songino Array**	**42.88**	**12**	P		**P**	**17 18 06.1**	**+0.5**
	0.4nm,0.7s,baz=187,slow=9.9,SNR=3.2 0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**46.44**	**346**	P		**P**	**17 18 34.1**	**+0.5**
	0.3nm,0.4s,baz=175,slow=6.9,SNR=10 0.3nm,0.4s							
WRA	**Warramunga Arr**	**46.87**	**124**	P		**P**	**17 18 38.0**	**+0.4**
	0.4nm,0.7s,baz=307,slow=9.3,SNR=9.5 0.4nm,0.7s							
ASAR	**Alice Springs**	**48.42**	**129**	P		**P**	**17 18 49.2**	**-0.4**
	0.3nm,0.8s,baz=301,slow=7.8,SNR=4.4 0.3nm,0.8s							
BVAR	**Borovoye Array**	**50.87**	**341**	P		**P**	**17 19 07.3**	**-0.4**
	0.6nm,0.5s,baz=104,slow=6.3,SNR=3.9 0.6nm,0.5s							
H04N2	**CROZET ISLANDS**	**64.36**	**212**	T		T	18 30 55.8	
	baz=53,slow=75,SNR=8.2							
H04N1	**CROZET ISLANDS**	**64.37**	**212**	T		T	18 30 56.1	
	baz=53,slow=75,SNR=12							
H04N3	**CROZET ISLANDS**	**64.38**	**212**	T		T	18 30 59.2	
	baz=53,slow=75,SNR=5.1							
H04S1	**CROZET ISLANDS**	**64.76**	**211**	T		T	18 31 19.4	
	baz=51,slow=75,SNR=5.0							
H04S3	**CROZET ISLANDS**	**64.77**	**211**	T		T	18 31 31.1	
	baz=51,slow=75,SNR=7.1							
H04S2	**CROZET ISLANDS**	**64.78**	**211**	T		T	18 31 30.9	
	baz=51,slow=75,SNR=2.7							
FINES	**FINESS Array B**	**74.53**	**332**	P		**P**	**17 21 44.6**	**-0.3**
	2.3nm,0.9s,baz=124,slow=6.9,SNR=4.2 2.3nm,0.9s							
ARCES	**ARCESS Array B**	**77.14**	**340**	P		**P**	**17 21 59.4**	**-0.3**
	4.6nm,1.1s,baz=114,slow=8.3,SNR=1.9 4.6nm,1.1s							

VIE 07 17:13:16.4±0.2,46˚53N×15˚05E,h3km,ml-0.2/1,Error ellipse: s-maj=2.3km s-min=1.3km az=89.0 14 km SSE of Lavamnd,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SOKA	**Soboth**	**0.15**	**356**	*i* Pg		Pg	17 13 19.6	+0.2
	0.1nm,0.0s							
SOKA				*i* Sg		Sg	17 13 21.4	0.0
	0.5nm,0.1s							

*LJU **07** 17:14:07.4,46˚32N×13˚60E,h9km,ML0.8*

ROM 07 17:14:07.2±0.2,46˚322N±0.003×13˚584E±0˚005, h6km±2km,ML0.9/12,1C-4D,Error ellipse: s-maj=0.5km s-min=0.0km az=244.0,Austria

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

BOO	**Bordano**	**0.34**	**270**	*e*Pg	Pg	17 14 14.3	+0.6
BOO				*e*Sg	Sg	17 14 19.4	+1.3
BOO	**Bordano**	**0.34**	**270**	P	Pb	17 14 14.6	-0.9
BOO				S	Sb	17 14 19.7	-1.4
SABO	**M.te Sabotino**	**0.34**	**178**	*e*Pg	Pg	17 14 14.6	+0.8
SABO				*e*Sg	Sg	17 14 19.4	+1.0
SABO	**M.te Sabotino**	**0.34**	**178**	P	Pb	17 14 14.8	-0.8
SABO				S	Sb	17 14 20.7	-0.6
SABO				AML	AML		
	comp=E,130μm,0.3s						
SABO				AML	AML		
	comp=N,133μm,0.5s						
SABO				AML	AML		
	comp=E,28μm,0.3s						
SABO				AML	AML		
	comp=N,28μm,0.3s						
VOJS	**Vojsko**	**0.36**	**144**	*i* Pg	Pg	17 14 14.5	+0.4
VOJS				*e*Sg	Sg	17 14 19.9	+1.1
VOJS				IAML		17 14 21.0	
	comp=Z,1.4nm,0.1s						

NAO ***07*** *17:34:48.2,38˚.57N×15˚.41E,h10km,MB4.6*

IDC ***07*** *17:35:19.4±0.6,41˚.83N×13˚.42E,h0km,mb4.1/29, mbtmp4.1/39,ML3.9/10,MS4.0/49,Error ellipse: s-maj=11.2km s-min=9.1km az=93.0*

MOS ***07*** *17:35:20.2±1.0,41˚.80N×13˚.63E,h9km,mb4.7/31, MS4.0/20,Error ellipse: s-maj=3.6km s-min=2.5km az=75.4*

MED_RC ***07*** *17:35:21.0±0.3,41˚.70N×13˚.41E,h14km,MW4.6/35, Moment Tensor Solution.Mantle waves: s35,c58; Duration: 1s0 Moment tensor: Scale 10¹⁶Nm; Mrr~0.77±.04; Mθθ0.25±.03; Mϕϕ0.52±.03; Mrθ0.12±.04; Mθϕ~0.59±.02; Mϕr0.37±.05; Best double couple: M₀0.98000×10¹⁶ NP1:ϕ₁299.00000°,δ43.00000°, λ-126.00000°. NP2:ϕ₂163.00000°,δ56.00000°, λ-61.00000°. Principal axes: T 1.0200, Plg7.0000°, Azm233.0000°; N -0.0800, Plg24.0000°, Azm326.0000°; P -0.9400, Plg65.0000°, Azm127.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

NEIC ***07*** *17:35:21.8±1.6,41.86N±0.02×13.60E±0.05,h10km±1km, mb4.7/59,Mwr4.6/51 Error ellipse: s-maj=6.1km s-min=3.4km az=111.0*

ROM ***07*** *17:35:21.2±0.0,41˚.776N±0˚.002×13˚.604E±0˚.001, h16km,ML4.4/439,Mw4.4,Error ellipse: s-maj=0.2km s-min=0.1km az=21.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-4.02; Mθθ1.21; Mϕϕ2.81; Mrθ2.19; Mθϕ-3.56; Mϕr~0.14; Fault plane solution: M₀5.44703×10¹⁵ NP1:ϕ₁299.00000°,δ58.00000°, λ-120.00000°. NP2:ϕ₂166.00000°,δ42.00000°, λ-51.00000°.*

PDG ***07*** *17:35:22.1±1.1,41˚.75N×13˚.56E,h19km,MD4.5/3, ML4.4/12 Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*

GCMT ***07*** *17:35:22.8±0.4,41˚.74N±0˚.03×13˚.53E±0˚.04,h23km±1km, MW4.8/64,Moment Tensor Solution. s20,c22; s64,c82; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~1.69±.14; Mθθ0.70±.09; Mϕϕ0.98±.09; Mrθ0.21±.11; Mθϕ~0.93±.04; Mϕr~0.02±.12; Best double couple: M₀1.75100×10¹⁶ NP1:ϕ₁144.00000°,δ43.00000°,λ-83.00000°. NP2: ϕ₂314.00000°,δ48.00000°,λ-97.00000°. Principal axes: T 1.7930, Plg2.0000°, Azm49.0000°; N -0.0830, Plg5.0000°, Azm319.0000°; P -1.7090, Plg84.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

LDG ***07*** *17:35:23.6±0.3,41˚.71N×13˚.71E,h15km,Ml3.8/36 Error ellipse: s-maj=7.2km s-min=5.5km az=44.0*

MCSM ***07*** *17:35:25.5±0.5,42˚.N±4˚×1˚4E±˚,h31km±5km,mb4.7, mB5.2,MLv4.8,Mw(mB)4.6*

PRU ***07*** *17:35:26.2,42˚.01N×13˚.44E,h10km,M4.7*

ISC 07 17:35:22.1±0.6,41.77N±0.02×13.58E±0.01,h15km±3km, n633,σ2s01/683,mb4.6/77,MS4.0/47,77C-47D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VVLD	**Villa Vallelon**	**0.10**	**16**	⇓P	**Pg**	**17 35 24.8**	**-0.8**
VVLD				S	**Sg**	**17 35 27.1**	**-0.7**
VVLD				AML	AML		
VVLD				AML	AML		
VVLD				AML	AML		
VVLD				AML	AML		
VVLD				AML	AML		
POFI	**Posta Fibreno**	**0.11**	**121**	⇑P	**Pg**	**17 35 24.7**	**-0.9**
POFI				S	**Sg**	**17 35 27.1**	**-0.8**
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
POFI				AML	AML		
LRP	**Arpino**	**0.13**	**179**	⇑P	**Pg**	**17 35 25.2**	**-0.5**
LRP				S	**Sg**	**17 35 28.0**	**-0.1**
LRP				AML	AML		
LRP				AML	AML		
LRP				AML	AML		
LRP				AML	AML		
LRP				AML	AML		
LRP				AML	AML		
OPI	**Opi**	**0.18**	**89**	⇑P	**Pg**	**17 35 25.7**	**-0.9**
OPI				S	**Sg**	**17 35 28.8**	**-0.8**
GUAR	**Guarcino**	**0.20**	**276**	⇑P	**Pg**	**17 35 26.6**	**-0.3**
GUAR				S	**Sg**	**17 35 30.2**	**+0.1**
GUAR				AML	AML		
LIK	**San Giovanni I**	**0.27**	**184**	⇑P	**Pg**	**17 35 27.6**	**-0.3**
LIK				S	**Sb**	**17 35 32.8**	**-0.2**
PTQR	**Pietraquaria**	**0.28**	**331**	⇓P	**Pg**	**17 35 27.7**	**-0.5**
PTQR				S	**Sg**	**17 35 32.7**	**+0.4**
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
PTQR				AML	AML		
GIUL	**Giuliano Di Ro**	**0.33**	**229**	⇑P	**Pg**	**17 35 28.6**	**-0.3**
GIUL				S	**Sg**	**17 35 34.0**	**+0.5**
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
GIUL				AML	AML		
INTR	**Introdacqua**	**0.34**	**45**		**Pg**	**17 35 28.1**	**-1.1**
INTR				Sg	**Sg**	**17 35 33.3**	**-0.6**
INTR	**Introdacqua**	**0.34**	**45**	⇑P	**Pg**	**17 35 28.2**	**-0.9**
INTR				S	**Sg**	**17 35 33.3**	**-0.6**
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
INTR				AML	AML		
	comp=N,155μm,0.9s						
INTR				AML	AML		
INTR				AML	AML		
	comp=E,131μm,0.7s						
MCI	**Monte Cassino**	**0.34**	**149**	*e*Pg	**Pg**	**17 35 28.2**	**-0.9**
MCI	**Monte Cassino**	**0.34**	**149**	⇑P	**Pg**	**17 35 28.2**	**-0.9**
MCI				S	**Sg**	**17 35 33.8**	**-0.1**
MCI				AML	AML		
MCI				AML	AML		
MCI				AML	AML		
MCI				AML	AML		
CERA	**Filignano**	**0.37**	**118**	⇓P	**Pg**	**17 35 28.7**	**-1.0**
CERA				S	**Sg**	**17 35 34.4**	**-0.4**
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
CERA				AML	AML		
SULP	**Sulmona Polizi**	**0.40**	**39**	⇑P	**Pg**	**17 35 29.2**	**-1.1**
SULP				S	**Sg**	**17 35 35.7**	**-0.1**
RNI2	**Rionero Sannit**	**0.43**	**99**	⇑P	**Pg**	**17 35 30.2**	**-0.6**
RNI2				S	**Sg**	**17 35 37.1**	**+0.4**
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
RNI2				AML	AML		
VNF1	**Venafro**	**0.46**	**130**	P	**Pg**	**17 35 30.3**	**-0.9**
VNF1				S	**Sg**	**17 35 37.2**	**-0.2**
T0110	**Collepietro**	**0.47**	**18**	⇑P	**Pg**	**17 35 30.6**	**-1.0**
T0110				S	**Sg**	**17 35 38.1**	**+0.1**
T0110				AML	AML		
T0110				AML	AML		
T0110				AML	AML		
T0110				AML	AML		
CERT	**Cerreto**	**0.48**	**291**	⇑P	**Pg**	**17 35 30.9**	**-0.9**
CERT				S	**Sg**	**17 35 38.4**	**+0.2**
CERT				AML	AML		
CERT				AML	AML		
CERT				AML	AML		
CERT				AML	AML		
CERT				AML	AML		
RCAV	**Rocca di Cave**	**0.48**	**279**	⇑P	**Pg**	**17 35 30.9**	**-0.9**
RCAV				S	**Sg**	**17 35 38.2**	**-0.1**
RCAV				AML	AML		
RCAV				AML	AML		
RCAV				AML	AML		
RCAV				AML	AML		
RCAV				AML	AML		
RCAV				AML	AML		
RCAV				AML	AML		
FAGN	**Fagnano**	**0.49**	**0**	P	**Pg**	**17 35 31.1**	**-0.9**
FAGN				S	**Sg**	**17 35 38.8**	**+0.3**
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
FAGN				AML	AML		
CSO1	**Carsoli**	**0.49**	**312**	⇓P	**Pg**	**17 35 31.2**	**-0.8**
CSO1				S	**Sg**	**17 35 38.8**	**+0.2**
MIDA	**Miranda**	**0.52**	**105**	⇓P	**Pg**	**17 35 31.1**	**-1.3**
MIDA				AML	AML		
	comp=E,75800μm,0.4s						
MIDA				AML	AML		
	comp=N,73350μm,0.4s						
MIDA				AML	AML		
	comp=E,77450μm,0.4s						
MIDA				AML	AML		
	comp=N,79600μm,0.4s						
MIDA				AML	AML		
	comp=E,77450μm,1.6s						
MIDA				AML	AML		
	comp=N,73350μm,1.6s						
MIDA				AML	AML		
	comp=E,75836μm,0.4s						
MIDA				AML	AML		
	comp=N,73363μm,0.4s						
MIDA				AML	AML		
	comp=N,79612μm,0.4s						
MIDA				AML	AML		
	comp=E,77438μm,0.4s						
LPEL	**Lama dei Peligi**	**0.52**	**58**	⇑P	**Pg**	**17 35 31.0**	**-1.5**
LPEL				AML	AML		
	comp=E,77200μm,0.7s						
LPEL				AML	AML		
	comp=N,56750μm,0.6s						
LPEL				AML	AML		
	comp=E,77550μm,0.7s						
LPEL				AML	AML		
	comp=N,60500μm,0.7s						
LPEL				AML	AML		
	comp=E,77200μm,0.7s						
LPEL				AML	AML		
	comp=N,60500μm,1.3s						
LPEL				AML	AML		
	comp=N,56772μm,0.6s						
LPEL				AML	AML		
	comp=E,67616μm,0.5s						
LPEL				AML	AML		
	comp=N,60536μm,0.7s						
LPEL				AML	AML		
	comp=E,77050μm,0.7s						
LATB	**Latina**	**0.54**	**239**	⇑P	**Pg**	**17 35 31.7**	**-1.1**
LATB				S	**Sg**	**17 35 40.0**	**-0.1**
LATB				AML	AML		
	comp=N,28100μm,0.9s						
LATB				AML	AML		
	comp=N,28150μm,0.9s						
LATB				AML	AML		
	comp=E,27300μm,0.5s						
LATB				AML	AML		
	comp=N,28108μm,0.9s						
AQU	**L'Aquila**	**0.59**	**347**	P	**Pg**	**17 35 33.3**	**-0.6**
AQU				S	**Sn**	**17 35 44.5**	**-1.1**
AQU	**L'Aquila**	**0.59**	**347**	⇓P	**Pg**	**17 35 32.5**	**-1.4**
AQU				S	**Sb**	**17 35 43.0**	**+0.4**
AQU	**L'Aquila**	**0.59**	**347**	P	**Pn**	**17 35 38.0**	**+1.9**
FIAM	**Fiamignano**	**0.60**	**325**	⇓P	**Pg**	**17 35 32.9**	**-1.1**
FIAM				AML	AML		
	comp=E,92000μm,0.6s						
FIAM				AML	AML		
	comp=N,81700μm,0.5s						
FIAM				AML	AML		
	comp=N,44850μm,0.5s						
FIAM				AML	AML		
	comp=E,44500μm,0.6s						
FIAM				AML	AML		
	comp=E,44519μm,0.6s						
FIAM				AML	AML		
	comp=E,92237μm,0.6s						
FIAM				AML	AML		
	comp=N,81689μm,0.5s						
FIAM				AML	AML		
	comp=N,44858μm,0.5s						
VAGA	**Valle Agricola**	**0.60**	**126**	⇓P	**Pg**	**17 35 32.6**	**-1.5**
VAGA				AML	AML		
	comp=E,39600μm,1.0s						
VAGA				AML	AML		
	comp=N,62850μm,0.4s						
VAGA				AML	AML		
	comp=E,41050μm,1.0s						
VAGA				AML	AML		
	comp=N,65300μm,0.4s						
VAGA				AML	AML		
	comp=E,41050μm,1.0s						
VAGA				AML	AML		
	comp=E,39600μm,1.0s						
VAGA				AML	AML		
	comp=N,65303μm,0.4s						
VAGA				AML	AML		
	comp=N,62846μm,0.4s						
VAGA				AML	AML		
	comp=E,38195μm,0.3s						
VAGA				AML	AML		
	comp=E,36730μm,0.3s						
VIVA	**Pratoni del Vi**	**0.61**	**268**	⇑P	**Pg**	**17 35 33.3**	**-0.8**
VIVA				S	**Sb**	**17 35 42.9**	**0.0**
VIVA				AML	AML		
VIVA				AML	AML		
VIVA				AML	AML		
VIVA				AML	AML		
RDP	**Rocca di Papa**	**0.65**	**269**	⇑P	**Pg**	**17 35 34.1**	**-0.8**
RDP				S	**Sb**	**17 35 44.5**	**+0.4**
RDP	**Rocca di Papa**	**0.65**	**269**	⇑P	**Pg**	**17 35 34.1**	**-0.8**
RDP				S	**Sb**	**17 35 44.2**	**+0.1**
RDP				AML	AML		
RDP				AML	AML		
RDP				AML	AML		
RDP				AML	AML		
RDP				AML	AML		
VCEL	**Villa Celiera**	**0.65**	**17**	⇑P	**Pg**	**17 35 33.7**	**-1.2**
VCEL				S	**Sg**	**17 35 43.5**	**-0.1**
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
VCEL				AML	AML		
	comp=N,98681μm,0.5s						
VCEL				AML	AML		
RMP	**Rome, Mte Porz**	**0.66**	**273**	⇑P	**Pg**	**17 35 33.9**	**-1.1**
RMP				S	**Sb**	**17 35 45.2**	**+0.8**
RMP	**Rome, Mte Porz**	**0.66**	**273**	⇑P	**Pg**	**17 35 34.0**	**-1.1**
RMP				S	**Sg**	**17 35 44.2**	**+0.4**
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
LAV9	**Lanuvio**	**0.67**	**262**	⇑P	**Pg**	**17 35 34.4**	**-0.9**
LAV9				S	**Sb**	**17 35 45.2**	**+0.6**
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
GIGS	**Gran Sasso**	**0.68**	**359**	⇑P	**Pg**	**17 35 34.0**	**-1.4**
GIGS				S	**Sg**	**17 35 44.2**	**-0.1**
GIGS				AML	AML		
	comp=E,21100μm,0.5s						
GIGS				AML	AML		
	comp=N,33900μm,0.5s						
GIGS				AML	AML		
	comp=E,21112μm,0.6s						
GIGS				AML	AML		
	comp=N,33901μm,0.5s						
MTCE	**Montecelio**	**0.68**	**292**	⇑P	**Pg**	**17 35 34.0**	**-1.4**
MTCE				S	**Sg**	**17 35 44.1**	**-0.2**
MTCE				AML	AML		
	comp=E,69300μm,1.4s						
MTCE				AML	AML		
	comp=N,58050μm,0.6s						
MTCE				AML	AML		
	comp=E,69300μm,0.6s						
MTCE				AML	AML		
	comp=E,62886μm,0.5s						
MTCE				AML	AML		
	comp=N,58042μm,0.6s						
MA9	**Marino**	**0.69**	**270**	⇑P	**Pg**	**17 35 34.4**	**-1.2**
MA9				S	**Sg**	**17 35 45.0**	**+0.2**
TRIV	**Trivento**	**0.72**	**90**	⇑P	**Pg**	**17 35 34.7**	**-1.5**
TRIV				AML	AML		
	comp=E,31250μm,0.7s						
TRIV				AML	AML		
	comp=N,22050μm,0.9s						
TRIV				AML	AML		
	comp=E,32150μm,0.7s						
TRIV				AML	AML		
	comp=N,22050μm,0.9s						
TRIV				AML	AML		
	comp=N,26850μm,0.8s						
TRIV				AML	AML		
	comp=E,32150μm,1.3s						
TRIV				AML	AML		
	comp=E,31250μm,1.3s						
TRIV				AML	AML		
	comp=N,27650μm,0.8s						
TRIV				AML	AML		
	comp=N,22049μm,0.9s						
TRIV				AML	AML		
	comp=E,31273μm,0.7s						
TRIV				AML	AML		
	comp=E,32142μm,0.7s						
TRIV				AML	AML		
	comp=N,22036μm,0.9s						
PIGN	**Pignataro Magg**	**0.73**	**142**	P	**Pg**	**17 35 35.0**	**-1.4**
PIGN				AML	AML		
	comp=E,27300μm,0.9s						
PIGN				AML	AML		
	comp=N,31500μm,0.6s						
PIGN				AML	AML		
	comp=E,28850μm,0.9s						
PIGN				AML	AML		
	comp=N,31200μm,0.6s						
PIGN				AML	AML		
	comp=N,31200μm,0.6s						
PIGN				AML	AML		
	comp=N,31500μm,0.6s						
PIGN				AML	AML		
	comp=E,27300μm,0.9s						
PIGN				AML	AML		
	comp=N,31193μm,0.6s						
PIGN				AML	AML		
	comp=N,31458μm,0.6s						
PIGN				AML	AML		
	comp=E,21104μm,0.3s						
PIGN				AML	AML		
	comp=E,21329μm,0.3s						
SAMA	**S.Maria delle**	**0.74**	**271**	⇑P	**Pg**	**17 35 35.2**	**-1.4**
CAMP	**Campotosto**	**0.77**	**350**		**Pg**	**17 35 35.6**	**-1.6**
CAMP	**Campotosto**	**0.77**	**350**	⇑P	**Pg**	**17 35 35.7**	**-1.5**
CAMP				AML	AML		
	comp=E,35050μm,0.9s						
CAMP				AML	AML		
	comp=N,44250μm,0.9s						
CAMP				AML	AML		
	comp=E,35050μm,1.1s						
CAMP				AML	AML		
	comp=N,44250μm,1.1s						
CAMP				AML	AML		
	comp=E,35048μm,0.9s						
CAMP				AML	AML		
	comp=N,44219μm,0.9s						
MMP1	**Mompeo**	**0.78**	**308**	P	**Pg**	**17 35 35.7**	**-1.6**
RM33	**Pellescritta (**	**0.78**	**340**	⇓P	**Pg**	**17 35 35.7**	**-1.7**
RM33				AML	AML		
	comp=N,62100μm,0.9s						
RM33				AML	AML		
	comp=N,62350μm,0.9s						
RM33				AML	AML		
	comp=N,62100μm,0.9s						
RM33				AML	AML		
	comp=N,62300μm,0.9s						
RM33				AML	AML		
	comp=N,62100μm,1.1s						
RM33				AML	AML		
	comp=N,62300μm,1.1s						
RM33				AML	AML		
	comp=E,48250μm,0.6s						
RM33				AML	AML		
	comp=E,50000μm,0.6s						
RM33				AML	AML		
	comp=N,62341μm,0.9s						
RM33				AML	AML		
	comp=E,50027μm,0.6s						
RM33				AML	AML		
	comp=E,48249μm,0.6s						
RM33				AML	AML		
	comp=N,62116μm,0.9s						
BSSO	**Busso**	**0.79**	**106**	⇑P	**Pg**	**17 35 36.3**	**-1.2**
BSSO				AML	AML		
	comp=N,14145μm,1.0s						
BSSO				AML	AML		
	comp=E,15150μm,1.6s						
BSSO				AML	AML		
	comp=E,15150μm,0.4s						
BSSO				AML	AML		
	comp=N,14145μm,1.0s						
BSSO				AML	AML		
	comp=E,14390μm,0.8s						
BSSO				AML	AML		
	comp=N,12222μm,0.8s						
PTRJ	**Pietraroja**	**0.82**	**120**	P	**Pg**	**17 35 36.5**	**-1.6**
PTRJ				AML	AML		
	comp=E,27600μm,0.6s						
PTRJ				AML	AML		
	comp=N,33450μm,0.7s						
PTRJ				AML	AML		
	comp=N,33550μm,0.7s						
PTRJ				AML	AML		
	comp=N,33550μm,1.3s						
PTRJ				AML	AML		
	comp=N,33450μm,1.3s						
PTRJ				AML	AML		
	comp=E,86μm,0.6s						
PTRJ				AML	AML		
	comp=E,27575μm,0.6s						
PTRJ				AML	AML		
	comp=N,33437μm,0.7s						
PTRJ				AML	AML		
	comp=N,33579μm,0.7s						
PTRJ				AML	AML		
	comp=E,86μm,0.6s						
FRES	**Fresagrandinar**	**0.83**	**76**	P	**Pb**	**17 35 36.2**	**-2.2**
FRES				AML	AML		
	comp=N,18350μm,0.6s						
FRES				AML	AML		
	comp=E,28400μm,1.5s						
FRES				AML	AML		

comp=N,18350µm,1.4s
FRES AML AML
comp=E,28400µm,0.5s
FRES AML AML
comp=E,28229µm,0.6s
FRES AML AML
comp=N,18380µm,0.6s
RMVT Roma DPC Vitor 0.84 283 P Pb 17 35 37.1 -1.3
TERO Teramo 0.85 1 P Pb 17 35 36.9 -1.7
TERO AML AML
comp=E,32850µm,1.2s
TERO AML AML
comp=N,38300µm,0.8s
TERO AML AML
comp=E,32850µm,0.8s
TERO AML AML
comp=N,38323µm,0.8s
TERO AML AML
comp=E,32715µm,0.5s
RMMM Roma Monte Mar 0.86 280 P Pb 17 35 37.5 -1.2
SMA1 SAN MARTINO 0.88 348 ⇓P Pb 17 35 37.4 -1.7
SMA1 AML AML
comp=N,60350µm,0.6s
SMA1 AML AML
comp=E,92500µm,0.8s
SMA1 AML AML
comp=N,60350µm,1.4s
SMA1 AML AML
comp=N,60349µm,0.6s
SMA1 AML AML
comp=E,92516µm,0.8s
SACR S. Croce Del S 0.92 114 P Pb 17 35 38.1 -1.8
SACR AML AML
comp=N,21550µm,0.9s
SACR AML AML
comp=E,19100µm,1.1s
SACR AML AML
comp=N,22200µm,0.9s
SACR AML AML
comp=N,22200µm,1.1s
SACR AML AML
comp=N,21550µm,1.1s
SACR AML AML
comp=E,19100µm,1.2s
SACR AML AML
comp=N,21550µm,0.9s
SACR AML AML
comp=E,19089µm,1.2s
SACR AML AML
comp=N,22171µm,0.9s
MCLF Montecilfone 0.94 82 P Pb 17 35 38.1 -2.2
VITU Vitulano (BN) 0.98 127 P Pb 17 35 39.6 -1.3
VITU AML AML
comp=N,28300µm,0.5s
VITU AML AML
comp=N,29200µm,0.5s
VITU AML AML
comp=E,8175µm,0.8s
VITU AML AML
comp=E,27950µm,0.5s
VITU AML AML
comp=N,28300µm,1.5s
VITU AML AML
comp=E,8175µm,1.2s
VITU AML AML
comp=N,29200µm,1.5s
VITU AML AML
comp=N,29199µm,0.5s
VITU AML AML
comp=E,27943µm,0.5s
VITU AML AML
comp=N,28269µm,0.5s
CIGN Sant'Elia a Pi 1.00 96 P Pb 17 35 39.6 -1.5
CIGN AML AML
comp=N,11265µm,1.4s
CIGN AML AML
comp=E,14100µm,1.5s
CIGN AML AML
comp=N,11260µm,1.4s
CIGN AML AML
comp=E,14100µm,0.5s
CIGN AML AML
comp=N,9448µm,1.3s
CIGN AML AML
comp=E,14140µm,1.5s
GLNS Guglionesi 1.01 82 P Pb 17 35 39.3 -1.9
ARRO Arrone 1.01 323 P Pb 17 35 39.9 -1.4
ARRO AML AML
comp=E,27800µm,1.2s
ARRO AML AML
comp=E,27800µm,0.8s
ARRO AML AML
comp=N,31650µm,1.1s
ARRO AML AML
comp=E,24125µm,0.8s
ARRO AML AML
comp=N,28971µm,0.9s
CFMN Campi Flegrei 1.01 158 P Pb 17 35 40.2 -1.2
CFMN AML AML
comp=E,27700µm,1.4s
CFMN AML AML
comp=N,40200µm,0.9s
CFMN AML AML
comp=E,27700µm,0.6s
CFMN AML AML
comp=E,25169µm,0.8s
CFMN AML AML
comp=N,40192µm,0.9s
GATE Gambatesa 1.03 104 P Pb 17 35 40.4 -1.2
GATE AML AML
comp=E,13500µm,0.7s
GATE AML AML
comp=N,11100µm,1.4s
GATE AML AML
comp=E,13400µm,0.7s
GATE AML AML
comp=N,11000µm,1.4s
GATE AML AML
comp=E,13500µm,1.3s
GATE AML AML
comp=N,11000µm,0.6s
GATE AML AML
comp=E,13400µm,1.3s
GATE AML AML
comp=N,11100µm,0.6s
GATE AML AML
comp=E,13488µm,0.7s
GATE AML AML
comp=N,10544µm,0.7s
GATE AML AML
comp=E,13404µm,0.7s
GATE AML AML
comp=N,10711µm,0.6s
PAOL Paolisi 1.05 135 Pb 17 35 40.8 -1.2
PAOL Paolisi 1.05 135 ⇓P Pb 17 35 40.9 -1.1
PAOL AML AML
comp=E,8915µm,1.3s
PAOL AML AML
comp=N,11205µm,0.5s
PAOL AML AML
comp=E,9155µm,1.3s
PAOL AML AML
comp=E,8915µm,0.7s
PAOL AML AML
comp=N,10815µm,0.5s
PAOL AML AML
comp=E,9155µm,0.7s
PAOL AML AML
comp=N,10821µm,0.5s
PAOL AML AML
comp=N,11201µm,0.5s
PAOL AML AML
comp=E,8840µm,0.8s
PAOL AML AML
comp=E,8596µm,0.8s
NRCA Norcia 1.11 342 Pb 17 35 41.5 -1.7
CESX Cesi 1.12 319 Pb 17 35 41.5 -1.7
GUMA Gualdo di Mace 1.30 352 Pn 17 35 44.5 -1.3
FDMO Fiordimonte 1.31 344 Pn 17 35 45.1 -0.9
SGRT San Giovanni R 1.62 90 Pn 17 35 49.6 -0.6
CLT3 Calitri 1.62 122 AML AML
comp=E,5817µm,0.7s
CLT3 AML AML
comp=E,6820µm,1.0s
CLT3 AML AML
comp=N,7445µm,0.5s
CLT3 AML AML
comp=E,6820µm,1.0s
CLT3 AML AML
comp=N,7445µm,0.5s
MURB Monte Urbino 1.68 333 Pn 17 35 51.9 +0.8
ACER Acerenza 2.03 118 Pn 17 35 55.5 -0.4
CRE Caprese Michel 2.20 327 P Pn 17 35 56.7 -1.6
CASP Castiglione de 2.26 298 Pn 17 35 59.0 +0.1
CUC Castrocucco 2.46 136 Pn 17 36 01.7 0.0
OSSC Osservatorio P 2.46 316 Pn 17 36 02.3 +0.6
SFI Santa Sofia 2.48 330 P Pn 17 36 02.9 +0.8
IMOL Imola, Italy 2.92 333 AML AML
comp=E,8009µm,1.1s
IMOL AML AML
comp=N,6965µm,1.6s
IMOL AML AML
comp=E,8005µm,1.1s
IMOL AML AML
comp=N,6965µm,0.4s
IMOL AML AML
comp=N,5424µm,1.0s
BDI Bagni Di Lucca 3.17 317 P Pn 17 36 13.0 +1.5
ZCCA Zocca 3.21 324 Pn 17 36 13.2 +1.1
PGF Pioggiola 3.50 284 ePn Pn 17 36 16.3 +0.3
PGF eSn **Sn 17 36 55.6 -1.6**
comp=N,207nm,0.5s
PGF Pioggiola 3.50 284 ⇑P Pn 17 36 16.3 +0.3
TIP Timpagrande 3.55 136 Pn 17 36 18.0 +1.3
TIP Timpagrande 3.55 136 ⇓P Pn 17 36 19.7 +3.0
TIP Timpagrande 3.55 136 Pn Pn 17 36 18.0 +1.3
TREB Trebinje 3.66 74 ePn Pn 17 36 18.1 -0.1
NDIM Novi di Modena 3.68 329 AML AML
comp=N,3050µm,0.9s
NDIM AML AML
comp=E,2240µm,1.0s
NDIM AML AML
comp=E,2240µm,1.0s
NDIM AML AML
comp=N,2480µm,1.5s
NDIM AML AML
comp=E,2007µm,1.1s
NDIM AML AML
comp=E,1712µm,0.9s
HCY Herceg Novi 3.71 78 ⇑i Pn Pn 17 36 20.0 +1.1
SKDS Skadanscina 3.78 5 i Pn Pn 17 36 19.1 -0.9
SKDS i Sn **Sn 17 37 03.4 -0.8**
BRY Bratogost 3.84 71 ⇓i Pn Pn 17 36 21.5 +0.7
BRY eSn **Sn 17 37 07.3 +1.5**
TEOL Teolo 3.84 339 Pn 17 36 20.6 -0.1
SICLA Scilla 3.88 154 AML AML
comp=N,372µm,0.7s
SICLA AML AML
comp=E,2250µm,0.4s
SICLA AML AML
comp=N,371µm,0.7s
MSSA Maissana 3.92 312 Pn 17 36 23.2 +1.4
VSL Villasalto 3.93 236 Pn 17 36 20.3 -1.6
CEL Celeste 3.93 152 Pn 17 36 21.7 -0.3
CEL Celeste 3.93 152 Pn Pn 17 36 23.3 +1.3
TRI Trieste 3.94 2 Pn 17 36 19.9 -2.1
TRI Trieste 3.94 2 P Pn 17 36 19.9 -2.1
KLINJ Klinje 3.95 68 ePn Pn 17 36 23.3 +1.0
BLY Banja Luka 3.97 40 ePn Pn 17 36 23.4 +1.0
BLY Banja Luka 3.97 40 ⇓P Pn 17 36 23.9 +1.5
BUM Brajici-Budva 3.99 81 ⇑i Pn Pn 17 36 23.8 +1.0
BUM eSn **Sn 17 37 10.8 +1.5**
CEME Cevo 4.04 77 ⇑i Pn Pn 17 36 24.5 +1.0
CEME eSn **Sn 17 37 12.0 +1.5**
SLATY Slatina 4.08 40 ePn Pn 17 36 20.8 -3.2
NKME Niksic 4.11 74 ePn Pn 17 36 25.2 +0.8
NKME eSn **Sn 17 37 13.5 +1.3**
UPM Unac-Piva 4.19 68 ⇓i Pn Pn 17 36 26.2 +0.6
UPM eSn **Sn 17 37 15.1 +0.8**
DRME Dracevica, Mon 4.20 82 ⇑i Pn Pn 17 36 27.0 +1.4
DRME eSn **Sn 17 37 15.5 +1.2**
SABO M.te Sabotino 4.21 0 Pn 17 36 24.2 -1.5
ULC Ulcinj 4.23 86 ⇑i Pn Pn 17 36 26.7 +0.6
ULC eSn **Sn 17 37 16.9 +1.7**
PDG Podgorica 4.27 79 Pn 17 36 26.9 +0.3
PDG Podgorica 4.27 79 ⇑P Pn 17 36 28.5 +2.0
PDG Podgorica 4.27 79 ⇓i Pn Pn 17 36 27.5 +0.9
PDG eSn **Sn 17 37 17.8 +1.7**
LJU Ljubljana 4.32 9 ⇑P Pn 17 36 29.2 +1.9
VAE Valguarnera 4.34 171 Pn Pn 17 36 31.0 +3.4
comp=N,3.6nm,0.3s,baz=66,slow=6.3,SNR=17
VAE LR LR 17 37 59.1
comp=N,2µm,18.9s,baz=94,slow=36
MBAL Monte Baldo - 4.39 334 AML AML
comp=E,489µm,0.9s
MBAL AML AML
comp=E,489µm,1.1s
MBAL AML AML
comp=N,502µm,0.8s
MBAL AML AML
comp=E,446µm,0.8s
MBAL AML AML
comp=N,436µm,0.6s
MBAL AML AML
comp=E,446µm,1.2s
MBAL AML AML
comp=E,489µm,1.1s
MBAL AML AML
comp=E,447µm,0.8s
MBAL AML AML
comp=N,437µm,0.6s
ZAG Zagreb 4.41 22 P Pn 17 36 28.6 +0.1
PTJ Puntijarka 4.48 22 P Pn 17 36 29.5 0.0
CTI Castel Tesino 4.50 343 Pn 17 36 28.8 -1.0
CTI Castel Tesino 4.50 343 P Pn 17 36 28.8 -1.0
CTI Castel Tesino 4.50 343 AML AML
comp=E,888µm,0.6s
CTI AML AML
comp=N,922µm,0.5s
CTI AML AML
comp=E,889µm,0.6s
CTI AML AML
comp=N,923µm,0.5s
KOME Kolasin 4.53 74 ⇓i Pn Pn 17 36 31.2 +1.0
KOME i Sn **Sn 17 37 23.8 +1.2**
MAGA Magasa 4.54 333 AML AML
comp=N,926µm,0.4s
MAGA AML AML
comp=E,2095µm,0.9s
MAGA AML AML
comp=E,2095µm,1.1s
MAGA AML AML
comp=N,927µm,0.4s
MAGA AML AML
comp=E,2095µm,0.9s
PLE Pljevlja 4.56 68 ePn Pn 17 36 32.1 +1.4
PLE eSn **Sn 17 37 24.3 +0.8**
PANI Panarotta 4.57 340 AML AML
comp=N,567µm,0.8s
PANI AML AML
comp=E,454µm,0.6s
PANI AML AML
comp=E,454µm,0.6s
PANI AML AML
comp=N,567µm,0.8s
RAFF Raffo Rosso 4.58 172 Pn 17 36 33.1 +2.2
LUSI Trento, Gardas 4.60 336 AML AML
comp=N,834µm,1.0s
LUSI AML AML
comp=E,725µm,1.3s
LUSI AML AML
comp=N,797µm,1.0s
LUSI AML AML
comp=E,725µm,1.3s
CIMO Cimolais 4.61 350 AML AML
comp=E,259µm,0.9s
CIMO AML AML
comp=E,263µm,1.1s
CIMO AML AML
comp=N,342µm,0.7s
CIMO AML AML
comp=E,259µm,1.1s
CIMO AML AML
comp=N,343µm,0.7s
CIMO AML AML
comp=E,263µm,0.9s
CIMO AML AML
comp=N,343µm,0.7s
CIMO AML AML
comp=N,342µm,0.7s
CIMO AML AML
comp=E,259µm,1.1s
CIMO AML AML
comp=E,263µm,1.1s
PTCC Patocco-Chiusa 4.63 358 AML AML
comp=E,371µm,0.6s
PTCC AML AML
comp=N,348µm,0.5s
PTCC AML AML
comp=N,348µm,0.5s
PTCC AML AML
comp=E,371µm,0.6s
RUDO Rudo 4.64 65 ePn Pn 17 36 32.6 +0.9
ACOM Acomizza, Ital 4.77 359 AML AML
comp=N,1034µm,1.4s
ACOM AML AML
comp=E,1135µm,1.0s
ACOM AML AML
comp=N,986µm,0.5s
ACOM AML AML
comp=E,1120µm,1.0s
ACOM AML AML
comp=N,1032µm,1.4s
ACOM AML AML
comp=E,1137µm,1.0s
ACOM AML AML
comp=E,1117µm,1.0s
ACOM AML AML
comp=N,985µm,0.6s
OBKA Obir 4.79 8 i Pn Pn 17 36 35.3 +1.5
comp=N,30nm,0.2s,SNR=42
IVA Berane 4.80 75 ePn Pn 17 36 35.4 +1.4
IVA eSn **Sn 17 37 30.7 +1.3**
PVY Plav 4.81 78 ePn Pn 17 36 35.3 +1.2
PVY eSn **Sn 17 37 30.9 +1.3**
MYKA Terra Mystica 4.86 0 i Pn Pn 17 36 35.5 +0.8
comp=N,21nm,0.3s,SNR=20
MYKA i Sn **Sn 17 37 34.5 +3.9**
comp=N,124nm,0.4s
SBF Sospel 4.98 297 ePn Pn 17 36 36.4 0.0
SBF eSn **Sn 17 37 32.5 -1.2**
comp=N,103nm,0.5s
SBF Sospel 4.98 297 P Pn 17 36 37.3 +0.9
SOKA Soboth 5.01 11 i Pn Pn 17 36 37.5 +0.7
comp=N,30nm,0.4s,SNR=25
SOKA i Sn **Sb 17 37 55.0 +5.3**
comp=N,69nm,0.6s
ABTA Abfaltersbach 5.03 352 i Pn Pn 17 36 37.2 +0.1
comp=N,80nm,0.5s,SNR=48
ABTA eSn **Sn 17 37 37.5 +2.5**
comp=N,267nm,1.0s
BEHE Becsehely 5.23 25 Pn 17 36 39.1 -0.6
BEHE Becsehely 5.23 25 ePn Pn 17 36 38.7 -1.0
KBA Koelnbreinsper 5.31 358 i Pn Pn 17 36 41.1 +0.1
comp=N,22nm,0.4s,SNR=24
KBA eSn **Sn 17 37 45.2 +3.3**
comp=N,174nm,0.5s
KBA Koelnbreinsper 5.31 358 P Pn 17 36 42.1 +1.1
KBA pmax pmax
comp=Z,214nm,0.8s
ISO Isola 5.36 299 P Pn 17 36 44.1 +2.4
ISO pmax pmax
comp=Z,56nm,0.6s
LMR La Mourre 5.45 289 ePn Pn 17 36 41.8 -1.0
LMR eSn **Sn 17 37 42.9 -2.4**
comp=Z,17nm,0.2s
LMR La Mourre 5.45 289 P Pn 17 36 42.7 -0.1
OHR Ohrid 5.46 95 i Pn Pn 17 36 44.6 +1.6
KBN Korca 5.55 100 P Pn 17 36 47.8 +3.5
KBN pmax pmax
comp=Z,400nm,1.0s
TUE Quetta 5.60 328 Pn Pn 17 36 46.8 +1.8
comp=Z,2.2nmcomp=Z,6µmcomp=Z,518nm,0.8s
IGT Igoumenitsa 5.60 111 P Pn 17 36 46.0 +1.1
FETA Feichten 5.63 340 ePn Pn 17 36 46.8 +1.4
comp=Z,4.6nm,0.7s,SNR=20
FETA eSn **Sn 17 37 53.8 +3.9**
comp=Z,47nm,0.7s
ARSA Arzberg 5.65 14 i Pn Pn 17 36 46.0 +0.5
comp=Z,20nm,0.4s,SNR=19
WTTA Wattenberg 5.66 346 i Pn Pn 17 36 47.8 +1.9
comp=Z,29nm,0.5s,SNR=19
WTTA eSn **Sn 17 37 50.3 -0.3**
comp=Z,89nm,0.6s
WTTA Wattenberg 5.66 346 P Pn 17 36 48.6 +2.7
WTTA pmax pmax
comp=Z,160nm,0.8s
DAVOX Davos/Dischmat 5.67 333 Pn Pn 17 36 46.2 +0.3
comp=Z,3.0nm,0.3s,baz=350,slow=20,SNR=22
DAVOX Sn **Sn 17 37 49.8 -1.0**
comp=Z,5.8nm,0.3s,baz=106,slow=19,SNR=3.1
LESA Schwarzleotal 5.69 354 i Pn Pn 17 36 46.1 0.0
comp=Z,5.4nm,0.4s,SNR=30
LESA i Sn **Sn 17 37 53.7 +2.5**
comp=Z,81nm,0.5s
SQTA Sankt Quirin 5.70 343 i Pn Pn 17 36 48.5 +2.1
comp=Z,31nm,0.3s,SNR=25
SQTA eSn **Sn 17 37 54.6 +3.0**
comp=Z,81nm,0.4s
WATA Walderalm 5.74 346 i Pn Pn 17 36 48.1 +1.1
comp=Z,3.7nm,0.2s,SNR=21
WATA eSn **Sn 17 37 56.1 +3.5**
comp=Z,47nm,0.3s
MORH Mrgy, Hungar 5.75 38 ePn Pn 17 36 46.2 -0.6
MBDF Montbardon 5.78 303 ePn Pn 17 36 49.3 +1.8
MBDF eSn **Sn 17 37 51.8 -1.9**
comp=Z,60nm,0.6s
MBDF Montbardon 5.78 303 P Pn 17 36 48.9 +1.4
NEST Nestorio 5.80 101 P Pn 17 36 49.6 +1.9
MOTA Moosalm 5.84 343 i Pn Pn 17 36 49.9 +1.5
comp=Z,72nm,0.8s,SNR=23
MOTA eSn **Sn 17 38 00.5 +5.4**
comp=Z,89nm,0.7s
BIOA Bad Ischl, Aus 5.92 0 i Pn Pn 17 36 50.3 +1.1
comp=Z,26nm,0.3s,SNR=27
BIOA eSn **Sn 17 37 59.9 +3.1**
comp=Z,193nm,0.5s
PENT Pentalofos 5.93 103 P Pn 17 36 51.4 +1.9
RJOB Jochberg 5.99 355 ePn Pn 17 36 50.4 +0.2
RETA Reutte 6.06 342 ePn Pn 17 36 53.2 +2.0
comp=Z,30nm,0.5s,SNR=14
RETA eSn **Sn 17 38 00.2 0.0**
comp=Z,37nm,0.6s
MOA Molln 6.09 4 ePn Pn 17 36 52.5 +0.8
comp=Z,21nm,0.5s,SNR=66
MOA eSn **Sn 17 38 04.3 +3.2**
comp=Z,121nm,0.5s
DAVA Damuels 6.11 336 i Pn Pn 17 36 54.7 +2.7
comp=Z,27nm,0.6s,SNR=13
PRMD Pramanda 6.14 109 P Pn 17 36 56.0 +3.7
LPG La Plagne 6.20 309 ePn Pn 17 36 58.5 +5.2
LPG La Plagne 6.20 309 P Pn 17 36 57.7 +4.4
LPL La Plagne 6.22 309 ePn Pn 17 36 58.1 +4.5
LPL La Plagne 6.22 309 P Pn 17 36 57.9 +4.3
RONA Rosalia, Austr 6.23 17 ePn Pn 17 36 54.1 +0.5
comp=Z,16nm,0.4s,SNR=16
NYDR Nydri-Lefkada 6.24 117 P Pn 17 36 54.5 +0.8
SOP Sopron 6.28 19 P Pn 17 36 54.4 +0.3
SOP pmax pmax
comp=Z,63nm,0.8s
SMRF Simiane la Rot 6.28 293 ePn Pn 17 36 55.7 +1.4
SMRF eSn **Sn 17 38 02.0 -3.8**
comp=Z,28nm,0.6s
FSK Fiskardo 6.29 119 P Pn 17 36 55.2 +0.9
KZN Kozani 6.36 101 P Pn 17 36 56.9 +1.5
CONA Conrad Observa 6.36 14 i Pn Pn 17 36 55.5 +0.1
comp=Z,35nm,0.5s,SNR=37
CONA eSn **Sn 17 38 05.8 -1.9**
comp=Z,55nm,0.6s
UBR Ueberruh 6.40 338 ePn Pn 17 36 58.6 +2.7
ORIF Oris-en-Rattie 6.43 302 ePn Pn 17 37 01.2 +4.8
ORIF eSn **Sn 17 38 06.4 -3.2**
comp=Z,17nm,0.5s
ORIF Oris-en-Rattie 6.43 302 P Pn 17 37 01.2 +4.8
VLS Valsamata 6.47 121 P Pn 17 36 56.8 0.0
AMPL Ampelaki 6.49 114 P Pn 17 36 58.1 +1.0
MDVR Moldovita 6.65 60 ⇓P Pn 17 37 00.1 +0.8
VAY Valandovo 6.76 91 i Pn Pn 17 37 02.2 +1.5
THL Klokotos Trika 6.78 106 P Pn 17 37 02.6 +1.6
PVO Paravola 6.85 115 P Pn 17 37 03.4 +1.4
KEST Kesra 6.88 210 Pn 17 37 04.7 +2.1
KEST Kesra 6.88 210 Pn Pn 17 37 05.2 +2.7
comp=Z,20nm,0.3s,baz=18,slow=3.5,SNR=135
KEST Sn **Sn 17 38 18.8 -1.9**
comp=Z,2.6nm,0.3s,baz=46,slow=18,SNR=6.0
KEST LR LR 17 39 52.0
comp=Z,2µm,18.2s,baz=8.7,slow=40
ZST Bratislava 6.89 20 ePN Pb 17 37 19.5 -1.9

ZST ePG Pg 17 37 36.2 +2.3
EVR Evrytania 6.90 112 P Pn 17 37 05.4 +2.6
SRO Srobarova 6.91 28 eP Pn 17 37 03.3 +0.5
SRO Srobarova 6.91 28 ePN Pn 17 37 03.3 +0.5
SRO ePG Pg 17 37 32.5 -1.8
SRO eSN Sn 17 38 04.0 -17
BLKB Belogradchik 6.95 72 ⇓P Pn 17 37 04.8 +1.4
LIT Litokhoron 6.95 101 Pn 17 37 03.2 -0.1
LIT Litokhoron 6.95 101 P Pn 17 37 04.2 +0.8
LIT Litokhoron 6.95 101 P Pn 17 37 03.3 -0.1
PEHC Pehcevo 6.96 87 *i* Pn Pn 17 37 04.0 +0.3
BZS Buzias 6.97 54 P Pn 17 37 03.7 0.0
BZS pmax pmax
comp=Z,46nm,0.8s
SLE Schleitheim 7.00 331 P Pn 17 37 05.8 +1.7
SLE pmax pmax
comp=Z,31nm,0.7s
KNT Kendrikon 7.02 92 P Pn 17 37 06.1 +1.7
KNT pmax pmax
comp=Z,42nm,0.8s
CKRC Cesky Krumlov 7.07 4 eP Pn 17 37 05.1 +0.1
CKRC MLR MLR
comp=Z,2µm,14.7s
CKRC Cesky Krumlov 7.07 4 ePN Pn 17 37 05.1 +0.1
CKRC AMS AMS 17 40 10.0
comp=Z,2µm,14.7s
GEC2 GERESS Array S 7.07 1 P Pn 17 37 05.2 +0.1
GEC2 pmax pmax
comp=Z,39nm,0.9s
GEC2 GERESS Array S 7.07 1 ePn Pn 17 37 05.1 0.0
GERES GERESS Array B 7.07 1 Pn Pn 17 37 04.3 -0.8
comp=Z,0.5nm,0.3s,baz=175,slow=13,SNR=47
GERES Sn Sn 17 38 23.2 -2.0
comp=Z,1.3nm,0.3s,baz=176,slow=24,SNR=9.6
GERES LR LR 17 39 59.9
comp=Z,258nm,19.2s,baz=182,slow=40
comp=Z,8.2nm,0.4s
MODS Modra-Piesok 7.10 20 P Pn 17 37 05.6 +0.2
MODS pmax pmax
comp=Z,65nm,0.9s
MODS Modra-Piesok 7.10 20 ePN Pb 17 37 17.2 -7.8
MODS ePG Pg 17 37 42.3 +4.4
MODS eSN Sn 17 38 02.9 -23
MODS eSG Sg 17 39 01.7 -8.0
KKB Krupnik 7.13 86 P Pn 17 37 06.9 +1.0
KKB Krupnik 7.13 86 P Pn 17 37 06.3 +0.4
HERR Herculane 7.15 61 ⇓P Pn 17 37 07.2 +1.1
THE Thessaloniki 7.17 96 P Pn 17 37 07.7 +1.4
THE pmax pmax
comp=Z,43nm,0.7s
VIVF Saint-Julien-I 7.19 298 ePn Pn 17 37 07.0 +0.3
VIVF eSn Sn 17 38 25.0 -3.1
comp=Z,8.7nm,0.5s
VIVF Saint-Julien-I 7.19 298 P Pn 17 37 08.2 +1.5
EFP Efpalio 7.20 115 P Pn 17 37 08.8 +1.9
VTS Vitosha 7.22 80 P Pn 17 37 07.6 +0.4
VTS Vitosha 7.22 80 P Pn 17 37 07.2 0.0
AGG Agios Georgios 7.22 110 P Pn 17 37 09.7 +2.6
AGG Agios Georgios 7.22 110 P Pn 17 37 09.9 +2.8
AGG S Sn 17 38 27.8 -1.0
AGG pmax pmax
comp=Z,109nm,0.9s
CABF La Chapelle 7.24 314 ePn Pn 17 37 07.7 +0.3
CABF eSn Sn 17 38 24.7 -4.6
comp=Z,78nm,1.0s
BLSH Balsha 7.27 78 P Pn 17 37 09.7 +1.9
BSZH Besenyszg 7.30 39 ⇓P Pn 17 37 09.6 +1.5
SERG Sergoula 7.31 115 P Pn 17 37 10.6 +2.2
SIRR Siria 7.35 50 ⇑P Pn 17 37 10.1 +1.2
PLNA Plana 7.35 81 P Pn 17 37 10.6 +1.6
KHC Kasperske Hory 7.36 360 *ce*P Pn 17 37 08.2 -0.8
KHC pmax pmax
comp=Z,22nm,1.3s
KHC Kasperske Hory 7.36 360 ePN Pn 17 37 08.4 -0.6
KHC eSN Sn 17 38 27.7 -4.5
KHC AMS AMS 17 40 20.0
comp=Z,1µm,17.7s
GRC1 Grafenberg Arr 7.37 349 P Pn 17 37 10.8 +1.7
WET Wettzell 7.39 356 P Pn 17 37 09.4 0.0
WET pmax pmax
comp=Z,33nm,0.9s
WET Wettzell 7.39 356 ePn Pn 17 37 08.7 -0.7
SOH Sokhos 7.42 94 P Pn 17 37 10.9 +1.0
SOH pmax pmax
comp=Z,42nm,0.8s
LASF Ste Croix 7.50 291 ePn Pn 17 37 09.9 -1.1
LASF eSn Sn 17 38 31.3 -4.4
comp=Z,16nm,0.7s
BFO Black Forest 7.54 332 Pn 17 37 11.6 +0.2
BFO Black Forest 7.54 332 P Pn 17 37 11.6 +0.2
SRS Serrai 7.55 92 P Pn 17 37 12.6 +1.0
SRS pmax pmax
comp=Z,32nm,0.6s
KRUC Moravsky 7.55 14 ePN Pn 17 37 11.6 0.0
KRUC Moravsky 7.55 14 P Pn 17 37 12.0 +0.4
KRUC pmax pmax
comp=Z,27nm,0.9s
KLV Kalavryta, Ach 7.56 117 P Pn 17 37 14.1 +2.2
GZR Gura Zlata 7.59 58 ⇑P Pn 17 37 13.1 +0.9
GZR Gura Zlata 7.59 58 P Pn 17 37 13.1 +0.9
SRE Strehaia 7.60 64 ⇑P Pn 17 37 13.8 +1.6
SRE Strehaia 7.60 64 P Pn 17 37 13.8 +1.6
PSZ Piszkesteto 7.60 34 Pn 17 37 10.8 -1.6
PSZ Piszkesteto 7.60 34 ⇓P Pn 17 37 14.7 +2.2
PSZ Piszkesteto 7.60 34 eP Pn 17 37 13.4 +1.0
PSZ Piszkesteto 7.60 34 P Pn 17 37 14.6 +2.2
MMB Musomishta 7.62 88 P Pn 17 37 13.2 +0.6
MMB Musomishta 7.62 88 P Pn 17 37 13.0 +0.4
JAVC Velka Javorina 7.65 21 ePN Pn 17 37 12.3 -0.7
MPEP Malo Peshtene 7.66 75 P Pn 17 37 14.7 +1.5
ZVC Zvikov 7.68 3 ePN Pn 17 37 13.0 -0.3
ZVC AMS AMS 17 40 40.0
comp=Z,2µm,11.3s
HINF Hinteralfeld 7.71 324 ePn Pn 17 37 12.9 -0.9
HINF eSn Sn 17 38 36.1 -4.7
comp=Z,35nm,0.5s
GRB1 Grafenberg Arr 7.74 351 P Pn 17 37 17.3 +3.1
GRB1 pmax pmax
comp=Z,52nm,1.0s
GUR Goura 7.75 117 P Pn 17 37 16.4 +1.9
VRAC Vranov 7.82 15 Pn Pn 17 37 15.7 +0.3
comp=Z,1.7nm,0.3s,baz=202,slow=13,SNR=12
VRAC Sn Sn 17 38 41.9 -1.7
comp=Z,1.2nm,0.3s,baz=145,slow=15,SNR=1.2
VRAC LR LR 17 41 17.9
comp=Z,1µm,18.0s,baz=202,slow=46
comp=Z,6.5nm,0.4s
VRAC Vranov 7.82 15 ⇑P Pn 17 37 17.2 +1.8
VRAC Vranov 7.82 15 ePN Pn 17 37 14.3 -1.1
ECH Echery 7.88 327 P Pn 17 37 20.1 +3.9
ECH pmax pmax
comp=Z,39nm,1.0s
DEV Deva 7.89 55 ⇓P Pn 17 37 18.7 +2.4
DEV Deva 7.89 55 P Pn 17 37 18.6 +2.4
PGB Panagyurishte 7.91 81 P Pn 17 37 18.4 +1.9
PGB Panagyurishte 7.91 81 P Pn 17 37 17.9 +1.4
CDF Champ du Feu 8.00 328 ePn Pn 17 37 16.7 -1.1
CDF eSn Sn 17 38 43.6 -4.4
comp=Z,61nm,0.7s
ROTZ Rotzenmuhle 8.05 354 ePn Pn 17 37 19.9 +1.4
HAU Haudompre 8.07 323 ePn Pn 17 37 18.4 -0.4
HAU eSn Sn 17 38 44.4 -5.4
comp=Z,126nm,0.9s
GRF Grafenberg Arr 8.09 349 P Pn 17 37 22.8 +3.8
GRF pmax pmax
comp=Z,43nm,0.7s
MAUC Maruska 8.15 20 ePN Pn 17 37 22.4 +2.5
PRU Pruhonice 8.24 4 eP Pn 17 37 21.6 +0.5
PRU MLR MLR
comp=Z,2µm,12.1s
PRU Pruhonice 8.24 4 ePN Pn 17 37 21.6 +0.5
PRU AMS AMS 17 40 50.0
comp=Z,2µm,12.1s
DRGR 8.25 49 ⇑P Pn 17 37 23.2 +1.9
DRGR 8.25 49 P Pn 17 37 23.1 +1.9
VLAD Vladila 8.25 71 ⇓P Pn 17 37 24.3 +3.1
LOT Lotru 8.25 60 ⇑P Pn 17 37 23.2 +1.8
PLVB Pleven 8.30 75 ⇑P Pn 17 37 24.0 +2.0
PRA Prague 8.32 4 AMS AMS 17 41 00.0
comp=Z,2µm,11.9s
PLD Plovdiv 8.33 84 P Pn 17 37 23.6 +1.3
RZN Rozhen 8.34 87 P Pn 17 37 24.2 +1.5
RZN Rozhen 8.34 87 P Pn 17 37 23.8 +1.1

MARR Marisel-Cluj 8.42 51 ⇑P Pn 17 37 26.0 +2.4
LANS Liptovska Anna 8.45 27 P Pn 17 37 28.1 +4.1
MORC Moravsky Berou 8.47 18 ⇑P Pn 17 37 26.5 +2.2
MORC Moravsky Berou 8.47 18 ePN Pn 17 37 23.7 -0.5
MORC Moravsky Berou 8.47 18 P Pn 17 37 26.4 +2.2
SMF Signal de Mont 8.52 308 ePn Pn 17 37 26.7 +1.7
SMF eSn Sn 17 38 55.0 -5.8
comp=Z,12nm,0.5s
SMF Signal de Mont 8.52 308 P Pn 17 37 28.5 +3.5
MTLF Montolieu 8.54 284 ePn Pn 17 37 24.5 -0.6
MTLF eSn Sn 17 38 54.9 -6.3
comp=Z,14nm,0.5s
MESR Meseseni 8.58 48 ⇓P Pn 17 37 29.1 +3.3
KRLC Kraliky 8.60 14 eP Pn 17 37 27.3 +1.3
KRLC MLR MLR
comp=Z,2µm,12.4s
KRLC Kraliky 8.60 14 ePN Pn 17 37 27.3 +1.3
KRLC AMS AMS 17 41 00.0
comp=Z,2µm,12.4s
CORI Orista 8.61 275 Pn 17 37 26.4 +0.3
STEB Steborice 8.67 18 ePN Pn 17 37 28.7 +1.8
OKC Ostrava-Krasne 8.67 20 P Pn 17 37 30.2 +3.3
OKC pmax pmax
comp=Z,26nm,1.2s
OKC Ostrava-Krasne 8.67 20 AMS AMS 17 41 40.0
comp=Z,3µm,14.9s
PVL Pavlikeni 8.68 77 P Pn 17 37 28.4 +1.4
PVL Pavlikeni 8.68 77 P Pn 17 37 28.0 +1.0
TANN Tannenbergstha 8.68 355 ePn Pn 17 37 28.7 +1.6
CJR Cluj-Napoca 8.72 52 ⇑P Pn 17 37 30.5 +2.9
CJR Cluj-Napoca 8.72 52 P Pn 17 37 30.5 +2.9
PAGF Fort de Pagny 8.76 323 ePn Pn 17 37 29.3 +1.1
PAGF eSn Sn 17 38 59.2 -7.4
comp=Z,39nm,0.6s
HUMR Humele 8.77 68 ⇑P Pn 17 37 30.6 +2.2
RICC Richard 8.78 2 ePN Pn 17 37 29.2 +0.8
PVCC Panska Ves 8.78 4 P Pn 17 37 29.3 +0.8
PVCC pmax pmax
comp=Z,46nm,0.7s
DPC Dobruska-Polom 8.79 12 eP Pn 17 37 29.0 +0.4
DPC MLR MLR
comp=Z,3µm,13.2s
DPC Dobruska-Polom 8.79 12 ePN Pn 17 37 29.0 +0.4
DPC AMS AMS 17 41 10.0
comp=Z,3µm,13.2s
DPC Dobruska-Polom 8.79 12 Pn Pn 17 37 31.4 +2.8
comp=Z,10.0nm,0.8s
ARR Arges 8.79 62 ⇑P Pn 17 37 30.8 +2.1
SFTF Sexfontaines 8.83 320 ePn Pn 17 37 30.1 +1.0
SFTF eSn Sn 17 39 04.0 -4.3
comp=Z,1.4nm,0.2s
HSKC Hora Svate Kat 8.84 359 ePN Pn 17 37 28.7 -0.5
LOR Lormes 8.85 312 ePn Pn 17 37 29.2 -0.3
LOR eSn Sn 17 39 04.0 -4.9
comp=Z,8.3nm,0.5s
LOR Lormes 8.85 312 P Pn 17 37 34.3 +4.8
LOR pmax pmax
comp=Z,35nm,0.9s
AVF Avril sur Loir 8.89 308 ePn Pn 17 37 34.9 +5.0
AVF eSn Sn 17 39 06.5 -3.2
comp=Z,2.3nm,0.3s
UPC Upice 8.90 10 P Pn 17 37 31.8 +1.8
UPC pmax pmax
comp=Z,31nm,1.0s
UPC Upice 8.90 10 AMS AMS 17 41 20.0
comp=Z,3µm,14.2s
MDB Medias 8.93 57 ⇓P Pn 17 37 32.0 +1.5
MDB Medias 8.93 57 P Pn 17 37 32.0 +1.5
SSF Saint Saulge 8.94 310 ePn Pn 17 37 31.8 +1.2
SSF eSn Sn 17 39 05.6 -5.4
comp=Z,5.1nm,0.4s
CAF Calviac 8.96 294 ePn Pn 17 37 31.9 +0.9
CAF eSn Sn 17 39 07.0 -4.7
comp=Z,0.8nm,0.2s
CAF Calviac 8.96 294 P Pn 17 37 32.3 +1.3
OSTC Ostas 8.97 11 eP Pn 17 37 31.5 +0.4
OSTC MLR MLR
comp=Z,3µm,14.1s
OSTC Ostas 8.97 11 ePN Pn 17 37 31.5 +0.4
OSTC AMS AMS 17 41 10.0
comp=Z,3µm,14.1s
NIE Niedzica 8.97 29 P Pn 17 37 34.5 +3.4
NIE Niedzica 8.97 29 Pn Pn 17 37 32.9 +1.8
comp=Z,13nm,1.4s
MOX Moxa 8.98 352 P Pn 17 37 32.6 +1.4
MOX pmax pmax
comp=Z,29nm,1.0s
MOX Moxa 8.98 352 ePn Pn 17 37 32.4 +1.2
CHVC Chvalec 8.98 10 eP Pn 17 37 31.4 +0.2
CHVC Chvalec 8.98 10 ePN Pn 17 37 31.4 +0.2
RDO Rodhopi 9.00 90 Pn 17 37 33.0 +1.5
MTUR Matau 9.03 64 ⇑P Pn 17 37 34.9 +3.0
MTUR Matau 9.03 64 P Pn 17 37 34.9 +3.0
MEZF Maizieres J'vi 9.03 321 ePn Pn 17 37 34.1 +2.2
MEZF eSn Sn 17 39 09.2 -4.0
comp=Z,6.8nm,0.4s
BGF Bois d'Agland 9.08 305 ePn Pn 17 37 35.4 +2.9
BGF eSn Sn 17 39 09.3 -5.1
comp=Z,4.1nm,0.3s
SAVF Savonnieres en 9.08 322 ePn Pn 17 37 32.8 +0.3
SAVF eSn Sn 17 39 11.0 -3.4
comp=Z,8.6nm,0.3s
VOIR 9.09 62 ⇓P Pn 17 37 35.0 +2.2
VOIR 9.09 62 P Pn 17 37 34.9 +2.2
VOIR 9.09 62 Pn Pn 17 37 34.9 +2.2
comp=Z,661nmcomp=Z,72nm,1.0s
BERU Beregovo 9.10 42 Pn Pn 17 37 35.4 +2.6
BRG Berggiesshubel 9.11 1 P Pn 17 37 33.2 +0.3
BRG pmax pmax
comp=Z,15nm,0.6s
TRSU Trosnyk 9.17 43 Pn Pn 17 37 33.1 -0.6
TNS Taunus Mts 9.17 339 P Pn 17 37 37.8 +3.9
TNS pmax pmax
comp=Z,30nm,0.8s
HOLU Holmets 9.17 40 Pn Pn 17 37 35.7 +1.9
ELND Elena 9.18 79 ⇑P Pn 17 37 35.4 +1.5
CEST Esterri de Cor 9.19 279 Pn 17 37 34.6 +0.3
KSP Ksiaz 9.26 11 P Pn 17 37 37.6 +2.5
KSP Ksiaz 9.26 11 Pn Pn 17 37 37.7 +2.6
comp=Z,15nm,1.1s
MUKU Mukachevo 9.27 41 Pn Pn 17 37 37.1 +1.9
KORU Korolevo 9.30 43 Pn Pn 17 37 38.0 +2.5
STHS Stebnicka Huta 9.34 32 eP Pn 17 37 38.6 +2.5
STHS Stebnicka Huta 9.34 32 ePN Pn 17 37 38.6 +2.5
STHS ePG 17 38 10.1
STHS eSN Sn 17 39 01.1 -20
TCF Toulx Ste Croi 9.35 303 ePn Pn 17 37 36.1 -0.2
TCF eSn Sn 17 39 15.1 -6.1
comp=Z,0.9nm,0.2s
BRIU Brid 9.36 42 Pn Pn 17 37 38.5 +2.1
WLF Walferdange 9.44 329 dPP Pn 17 37 45.4 +7.8
RJF Les Rejaudoux 9.45 296 ePn Pn 17 37 39.6 +2.0
RJF eSn Sn 17 39 18.7 -4.8
comp=Z,1.4nm,0.3s
OJC Ojcow 9.48 25 Pn Pn 17 37 40.4 +2.3
comp=Z,6.7nm,0.8s
DOPR Dopca 9.50 60 ⇑P Pn 17 37 40.0 +1.7
CLL Collm 9.54 358 *i* P Pn 17 37 38.3 -0.6
CLL pmax pmax
comp=Z,17nm,1.4s
CLL Collm 9.54 358 *i* Pn Pn 17 37 38.3 -0.6
comp=Z,17nm,1.4s
CLL eSn Sn 17 39 36.0 +10
CLL eSg 17 40 46.0
CLL eAMS AMS 17 40 59.0
CLL L L 17 41 00.0
comp=Z,600nm,20.3s
HYF Humbligny 9.55 309 ePn Pn 17 37 39.7 +0.7
HYF eSn Sn 17 39 20.4 -5.6
RAZG Razgrad 9.69 75 ⇑P Pn 17 37 42.7 +1.8
MLR Muntele Rosu 9.70 63 Pn 17 37 42.0 +0.8
MLR Muntele Rosu 9.70 63 Pn Pn 17 37 43.3 +2.1
comp=Z,1.5nm,0.3s,baz=201,slow=4.2,SNR=52
MLR Sn Sn 17 39 34.4 +4.4
comp=Z,0.3nm,0.3s,baz=300,slow=14,SNR=1.1
MLR LR LR 17 42 15.3
comp=Z,1µm,18.8s,baz=258,slow=42
MLR Muntele Rosu 9.70 63 ⇑P Pn 17 37 43.7 +2.5
MLR Muntele Rosu 9.70 63 P Pn 17 37 43.7 +2.5
MLR Muntele Rosu 9.70 63 Pn Pn 17 37 43.2 +2.0
comp=Z,1µmcomp=Z,124nm,1.2s
LOZB Loznitsa 9.73 76 ⇓P Pn 17 37 43.5 +2.0
RAKU Rahkiv 9.76 47 Pn Pn 17 37 44.1 +2.1
OZUR 9.80 60 ⇓P Pn 17 37 44.6 +2.0

EZN Ezine 9.86 97 ⇑P Pn 17 37 45.1 +1.8
EZN Ezine 9.86 97 P Pn 17 37 45.0 +1.8
LFF La Frestale 9.88 293 ePn Pn 17 37 46.1 +2.6
LFF eSn Sn 17 39 28.0 -6.0
comp=Z,3.1nm,0.3s
EPF Esparros 9.88 282 ePn Pn 17 37 40.9 -2.7
EPF eSn Sn 17 39 29.6 -4.6
comp=Z,2.6nm,0.3s
NEHR Nehoiu 9.92 64 ⇑P Pn 17 37 46.9 +2.9
TURR Turia 9.94 60 ⇓P Pn 17 37 46.6 +2.2
ISR Istrita 10.00 66 Pn Pn 17 37 46.7 +1.5
comp=Z,53nm,1.6s
BHOU Houvegnez 10.06 331 dPP Pn 17 38 17.8 +32
BURAR Bucovina Array 10.13 51 Pn 17 37 48.3 +1.2
BURAR Bucovina Array 10.13 51 ⇑P Pn 17 37 49.8 +2.8
BURAR Bucovina Array 10.13 51 P Pn 17 37 49.8 +2.8
BUR08 Bucovina Ar. S 10.13 51 Pn Pn 17 37 49.0 +1.8
NEF NEVSHA 10.22 77 P Pn 17 37 50.3 +2.1
BISRR Bisoca 10.23 64 ⇓P Pn 17 37 51.2 +2.8
BISRR Bisoca 10.23 64 Pn Pn 17 37 50.9 +2.5
comp=Z,7µmcomp=Z,252nm,1.1s
ONER Baraj Valea Uz 10.28 59 ⇓P Pn 17 37 51.8 +2.8
PLOR Plostina 10.28 62 ⇑P Pn 17 37 50.8 +1.7
PLOR Plostina 10.28 62 P Pn 17 37 50.8 +1.7
PLOR5 Plostina Array 10.29 62 Pn Pn 17 37 50.2 +1.0
comp=Z,697nmcomp=Z,52nm,1.1s
PRD Provadia 10.31 78 P Pn 17 37 50.9 +1.5
PRD Provadia 10.31 78 P Pn 17 37 51.2 +1.8
VRI Vrincioaia 10.34 62 ⇓P Pn 17 37 51.5 +1.6
VRI Vrincioaia 10.34 62 P Pn 17 37 51.5 +1.6
VRI Vrincioaia 10.34 62 Pn Pn 17 37 50.8 +0.9
comp=Z,32nm,1.1s
APE Apeiranthos 10.37 113 *i* P Pn 17 37 50.8 +0.5
DOU Dourbes 10.41 326 dPP Pn 17 38 23.0 +32
PHSR Pinarhisar 10.43 86 ⇑P Pn 17 37 53.5 +2.5
TESR Tescani 10.51 59 ⇓P Pn 17 37 54.9 +2.7
TESR Tescani 10.51 59 Pn Pn 17 37 53.7 +1.5
comp=Z,35nm,1.2s
ODBI Odobesti 10.53 63 ⇓P Pn 17 37 54.6 +2.2
ODBI Odobesti 10.53 63 Pn Pn 17 37 54.5 +2.2
comp=Z,473nmcomp=Z,25nm,1.2s
ETSF Etsaut 10.53 281 ePn Pn 17 37 51.5 -1.1
ETSF eSn Sn 17 39 44.4 -5.9
comp=Z,2.6nm,0.3s
PANC Panciu 10.62 63 ⇓P Pn 17 37 55.4 +1.7
ICOR Ion Corvin 10.68 73 ⇑P Pn 17 37 56.1 +1.6
HARR Harsova 10.87 70 ⇑P Pn 17 37 58.2 +1.1
HARR Harsova 10.87 70 P Pn 17 37 58.1 +1.1
TLBR Topalu 10.92 70 ⇑P Pn 17 37 59.6 +1.8
IDI Anoyia 10.96 123 Pn Pn 17 37 58.1 -0.4
comp=Z,5.9nm,0.8s,baz=73,slow=10,SNR=3.3
IDI Sn Sn 17 39 52.9 -8.0
comp=Z,0.4nm,0.3s,baz=334,slow=10,SNR=1.5
MFF Saint Martin d 10.97 301 ePn Pn 17 37 57.7 -0.8
MFF Saint Martin d 10.97 301 ePn Pn 17 38 01.5 +3.0
MFF eSn Sn 17 39 57.6 -3.3
comp=Z,3.2nm,0.4s
CTYL Yalikoy Yolu 11.02 87 ⇓P Pn 17 38 01.8 +2.7
SJPF Ste Jean 11.03 282 ePn Pn 17 38 01.4 +2.1
CFR Carcaliu 11.11 67 ⇑P Pn 17 38 03.0 +2.7
CFR Carcaliu 11.11 67 P Pn 17 38 03.0 +2.7
TIRR Tirgusor 11.17 71 Pn 17 38 00.8 -0.3
TIRR Tirgusor 11.17 71 ⇑P Pn 17 38 02.3 +1.1
TIRR Tirgusor 11.17 71 P Pn 17 38 02.2 +1.1
TPGR Topolog 11.24 69 ⇑P Pn 17 38 05.0 +2.9
VASR Vaslui 11.29 60 ⇓P Pn 17 38 05.2 +2.3
KMPD K-Podol'skiy 11.34 49 Pn Pn 17 38 05.6 +2.2
KMPD Pn Pn 17 38 05.1 +1.7
TLCR 11.58 68 ⇓P Pn 17 38 08.9 +2.1
TLCR 11.58 68 P Pn 17 38 08.9 +2.1
HORU Horodok 11.68 46 Pn Pn 17 38 09.9 +1.8
MILM Milestii Mici 12.05 60 ⇓P Pn 17 38 14.1 +0.8
MILM Milestii Mici 12.05 60 P Pn 17 38 14.0 +0.8
SORM Soroca 12.23 54 ⇓P Pn 17 38 16.9 +1.1
SORM Soroca 12.23 54 P Pn 17 38 16.8 +1.1
KARP Karpathos 12.29 116 eP Pn 17 38 14.6 -2.0
ARG Arkhangelos 12.60 111 P Pn 17 38 22.7 +2.0
ARG pmax pmax
comp=Z,32nm,1.4s
RNPP8 Varash 12.74 37 Pn Pn 17 38 25.1 +2.5
LUBAR Lubar, Ukraine 12.79 46 Pn Pn 17 38 24.1 +0.8
RNPP9 Sopachiv 12.81 37 Pn Pn 17 38 25.5 +1.9
BAL3X Bal3x, Balta 12.92 56 Pn Pn 17 38 26.5 +1.5
ESDC Sonseca Array 13.48 267 Pn Pn 17 38 31.6 -1.2
comp=Z,0.1nm,0.3s,baz=75,slow=14,SNR=9.2
ESDC LR LR 17 44 17.6
comp=Z,232nm,18.2s,baz=102,slow=40
comp=Z,2.9nm,0.9s
AK07 Malin Array Si 13.91 46 Pn Pn 17 38 40.7 +2.1
AK20 Malin Array Si 13.92 45 Pn Pn 17 38 40.5 +1.8
AK06 Malin Array Si 13.93 45 Pn Pn 17 38 40.7 +1.9
KIEV Kiev 13.99 45 Pn 17 38 39.3 -0.4
KIEV Kiev 13.99 45 P Pn 17 38 39.3 -0.4
AKASG Malin Array Be 14.01 45 Pn Pn 17 38 39.3 -0.6
comp=Z,0.4nm,0.3s,baz=230,slow=13,SNR=6.8
AKASG LR LR 17 44 56.7
comp=Z,564nm,21.0s,baz=238,slow=41
comp=Z,0.2nm,0.3s
AKBB Malin Array Si 14.01 45 Pn 17 38 39.4 -0.5
AKBB Malin Array Si 14.01 45 *de*P Pn 17 38 39.6 -0.3
ILGA Ilgaz 15.13 86 P P 17 39 00.1 -0.4
SIM Simferopol' 15.26 71 eP Pn 17 38 57.3 +0.3
SIM pmax pmax
comp=Z,13nm,1.1s
SIM MLR MLR
comp=Z,380nm,15.0s
PABE Paberze 15.33 23 Pn 17 38 56.4 -1.4
PABE Paberze 15.33 23 eP Pn 17 38 57.3 -0.5
BR131 Keskin Array S 15.34 91 *i* P Pn 17 38 58.7 +0.6
BRTR Keskin Array B 15.34 91 Pn 17 38 57.3 -0.8
BRTR Keskin Array B 15.34 91 Pn Pn 17 38 59.5 +1.4
comp=Z,0.2nm,0.3s,baz=297,slow=8.2,SNR=7.9
BRTR LR LR 17 45 37.1
comp=Z,233nm,19.3s,baz=282,slow=40
comp=Z,0.7nm,0.9s
MVO Moncorvo 15.47 275 *i* IAMs_20 IAMs_20 17 46 04.2
comp=Z,445nm,14.0s
KIRS Kirsehir-Merke 15.70 93 ⇑P P 17 39 04.8 -2.0
NACGM Naroch 15.76 29 eP Pn 17 39 02.8 -0.6
MNK Minsk 15.87 32 *i* P Pn 17 39 01.8 -3.0
comp=E,57nm,1.0s
MNK *i* P Pn 17 39 01.8 -3.0
comp=N,43nm,1.0s
MNK *i* P Pn 17 39 01.8 -3.0
comp=Z,43nm,1.0s,baz=223
MNK *i* PP P 17 39 10.2 +1.7
MNK *i* PPP PPP 17 39 17.8
MNK *i* S Sn 17 41 56.3 -4.1
MNK *i* SS SnSn 17 42 10.4 -2.7
MNK *i* SSS SSS 17 42 23.0
MNK *i* LQ LQ 17 43 42.4
MNK *i* LR LR 17 44 40.8
MNK *i* LRM MLR 17 46 15.1
comp=N,460nm,16.0s
MNK *i* LRM MLR 17 46 22.8
comp=E,708nm,15.7s
MNK *i* LRM MLR 17 46 29.2
comp=Z,997nm,16.0s
MNK Minsk 15.87 32 *i* P Pn 17 39 01.7 -3.0
MNK *i* S Sn 17 41 56.2 -4.1
MNK pmax pmax
comp=Z,43nm,1.0s
MNK pmax pmax
comp=N,43nm,1.0s
MNK pmax pmax
comp=E,57nm,1.0s
MNK MLR MLR
comp=N,460nm,16.0s
MNK MLR MLR
comp=E,708nm,16.0s
MNK MLR MLR
comp=Z,997nm,16.0s
MTE Manteigas 15.99 272 *e*LR LR 17 45 09.8
MTE *i* IAMs_20 IAMs_20 17 46 07.6
comp=Z,377nm,16.0s
PMRV Marv??o 16.10 269 *e*LR LR 17 44 25.3
PMRV *i* IAMs_20 IAMs_20 17 45 10.4
comp=Z,182nm,20.0s
PBAR Barrancos 16.21 264 eP P 17 39 14.8 +2.4
PBAR *i* IAmb IAmb 17 39 28.8
comp=Z,53nm,1.7s
PESTR Estremoz 16.40 267 eP P 17 39 18.2 +3.7
PESTR *i* IAmb IAmb 17 39 22.2
comp=Z,37nm,1.2s

PARRA Arraiolos 16.76 267 *e*P **Pn** 17 39 21.5 -4.0
PARRA *i* IAmb IAmb 17 39 33.7
comp=Z,41nm,1.7s
EVO Evora 16.82 266 *e*P **P** 17 39 23.4 +4.3
EVO *i* IAmb IAmb 17 39 41.6
comp=Z,31nm,2.6s
PVAQ Vaqueiros 16.98 262 *e*LR LR 17 44 45.3
PVAQ *i* IAMs_20 IAMs_20 17 46 06.2
comp=Z,256nm,18.0s
MDT Midelt 16.99 244 Pn **Pn** 17 39 19.2 -0.1
comp=Z,0.2nm,0.3s,baz=42,slow=13,SNR=3.8
MDT LR LR 17 44 59.4
comp=Z,209nm,20.1s,baz=52,slow=34
comp=Z,1.4nm,0.6s
BNN Bunyan 17.22 92 **P** 17 39 24.5 +0.8
ANN Anapa 17.61 72 *e*P **P** 17 39 28.3 +0.5
ANN *e*S **Sn** 17 42 44.9 +2.3
ANN pmax pmax
comp=Z,57nm,1.2s
HFS Hagfors 18.38 0 P **P** 17 39 33.4 -2.8
comp=Z,0.3nm,0.3s,baz=198,slow=8.9,SNR=7.5
HFS LR LR 17 47 48.4
comp=Z,514nm,19.3s,baz=184,slow=41
comp=Z,3.1nm,0.9s
VSU Vasula 18.65 22 *e*P **P** 17 39 37.3 -1.8
VSU Vasula 18.65 22*ce*P **Pn** 17 39 39.4 -0.1
VSU pmax pmax
comp=Z,35nm,0.8s
NC602 NORSAR Array S 19.03 357 P **P** 17 39 42.8 -0.5
NB2 NORSAR Subarra 19.35 357 P **Pn** 17 39 48.5 +0.6
comp=Z,55nm,2.5s,baz=171,slow=10
NOA NORSAR Array B 19.35 357 P **P** 17 39 44.2 -2.6
baz=190,slow=9.9,SNR=8.6
NOA LR LR 17 48 27.5
comp=Z,317nm,18.1s,baz=175,slow=41
comp=Z,3.7nm,1.0s
MMAI Mount Meron Ar 19.38 110 P **P** 17 39 47.6 +0.2
comp=Z,0.6nm,0.3s,baz=290,slow=11,SNR=6.0
comp=Z,14nm,1.1s
NC405 NORSAR Array S 19.40 357 P **P** 17 39 44.6 -2.8
NC204 NORSAR Array S 19.61 356 **P** 17 39 46.4 -3.2
ERBR Yeremizino-Bor 19.79 69 *e*P **P** 17 39 52.1 +0.4
ERBR *e*S **Sn** 17 43 35.3 0.0
ERBR pmax pmax
comp=Z,29nm,1.7s
VORD Divnogorie 19.89 54 *e*P **P** 17 39 50.0 -2.8
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 19.89 53 *e*P **P** 17 39 51.9 -0.9
VSR pmax pmax
comp=Z,20nm,1.5s
VSR MLR MLR
comp=Z,520nm,10.0s
LABN Labinsk 19.96 73 *e*P **Pn** 17 39 55.2 -0.1
LABN *e*S **S** 17 43 36.7 -0.8
LABN pmax pmax
comp=Z,21nm,0.6s
VORR Voronezh 20.07 52 *e*P **P** 17 39 53.1 -1.6
VORR pmax pmax
comp=Z,20nm,0.9s
TAM Tamanrasset 20.10 202 P Pn 17 39 56.6 -0.6
TAM Tamanrasset 20.10 202 P Pn 17 39 56.6 -0.6
TAM pmax pmax
comp=Z,53nm,0.3s
OBN Obninsk 20.14 41 P **P** 17 39 54.1 -1.3
OBN IAmb IAmb 17 40 01.7
comp=Z,51nm,1.0s
OBN Obninsk 20.14 41 P **P** 17 39 54.7 -0.7
comp=Z,12nm,0.5s,baz=184,slow=6.2,SNR=8.6
OBN LR LR 17 48 50.1
comp=Z,509nm,18.5s,baz=196,slow=40
comp=Z,12nm,0.5s
OBN Obninsk 20.14 41*c i*P **P** 17 39 54.6 -0.8
OBN *e* 17 40 14.1
OBN *e*S **S** 17 43 40.5 -0.4
OBN pmax pmax
comp=Z,63nm,1.7s
OBN MLR MLR
comp=Z,611nm,14.0s
LPSR Galich'ya Gora 20.24 49 *e*P **P** 17 39 53.9 -2.6
LPSR pmax pmax
comp=Z,20nm,0.9s
LPSR MLR MLR
comp=Z,380nm,12.0s
KOPT Kop Dagi 20.39 86 **P** 17 39 58.9 +0.2
KOPT IAmb IAmb 17 40 10.8
comp=Z,38nm,1.2s
GHAJ Ghor Haditha 20.47 114 IAmb IAmb 17 40 25.8
comp=Z,27nm,1.1s
ASF Jabal al Asfar 20.89 110 P **P** 17 40 04.9 +1.0
comp=Z,4.5nm,1.1s,baz=95,slow=1.5,SNR=5.4
comp=Z,4.5nm,1.1s
MOS Moscow 20.98 40 *e*P **P** 17 40 03.7 -0.8
MOS *e* 17 40 21.4
MOS *e*SS Sn 17 44 12.6 +8.9
MOS pmax pmax
comp=Z,68nm,0.9s
MOS MLR MLR
comp=Z,500nm,13.0s
EIL Elat 21.07 118 P **P** 17 40 06.9 +1.1
comp=Z,2.4nm,0.5s,baz=337,slow=7.3,SNR=7.3
EIL LR LR 17 51 21.8
comp=Z,87nm,19.7s,baz=344,slow=45
comp=Z,2.4nm,0.5s
FINES FINESS Array B 21.10 17 **P** 17 40 04.7 -1.0
FINES FINESS Array B 21.10 17 P **P** 17 40 05.9 +0.1
comp=Z,8.7nm,0.7s,baz=192,slow=8.9,SNR=23
FINES LR LR 17 49 21.5
comp=Z,656nm,19.8s,baz=206,slow=40
comp=Z,8.7nm,0.7s
FIA1 FINESS Array S 21.10 17 P **P** 17 40 05.1 -0.6
SHA1 Shidzhatmaz 21.39 75 *i* P **P** 17 40 10.1 +0.7
KIV Kislovodsk 21.40 74 **P** 17 40 08.9 -0.4
KIV IAmb IAmb 17 40 27.9
comp=Z,22nm,0.9s
KIV Kislovodsk 21.40 74 *e*P **P** 17 40 10.5 +1.2
KIV *e*S **S** 17 44 08.0 +1.7
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,119nm,14.0s
MARD Mardin 21.40 93 **P** 17 40 08.7 -0.7
MARD IAmb IAmb 17 40 19.9
comp=Z,25nm,0.9s
KVAR Kislovodsk Arr 21.40 74 P **P** 17 40 10.1 +0.7
comp=Z,0.9nm,0.4s,baz=270,slow=17,SNR=1.4
comp=Z,0.9nm,0.4s
VRH Novokhopyorsk 21.43 54 *e*P **P** 17 40 07.3 -2.1
VRH pmax pmax
comp=Z,30nm,0.8s
VRH MLR MLR
comp=Z,560nm,11.0s
NEUR Neytrino 21.47 76 *i* P **P** 17 40 11.8 +1.6
KEF Keuruu 21.51 15 *e*P **P** 17 40 07.8 -2.4
KBZ Khabaz 21.57 75 P **P** 17 40 12.4 +1.4
comp=Z,6.8nm,1.0s,baz=296,slow=7.4,SNR=14
KBZ LR LR 17 51 28.6
comp=Z,183nm,18.4s,baz=284,slow=45
comp=Z,6.8nm,1.0s
KBZ Khabaz 21.57 75*ce*P **P** 17 40 11.9 +1.0
KBZ pmax pmax
comp=Z,9.0nm,1.1s
GURO Guroymak-BITLI 21.94 89 IAmb IAmb 17 40 28.9
comp=Z,25nm,1.2s
VAF Ylistaro 21.97 11 *e*P **P** 17 40 12.2 -2.9
GNI Garni 23.52 84 **P** 17 40 29.5 -2.2
GNI IAmb IAmb 17 40 59.6
comp=Z,15nm,0.9s
GNI Garni 23.52 84*ce*P **P** 17 40 31.3 -0.5
GNI pmax pmax
comp=Z,30nm,2.5s
JOF Joensuu 23.62 20 *e*P **P** 17 40 29.6 -2.6
OUL Oulu 24.39 13 P **P** 17 40 41.0 +1.6
OUL pmax pmax
comp=Z,12nm,1.5s
KLMR Klimovskoe 24.77 31 *e*P **P** 17 40 41.5 -1.4
KLMR pmax pmax
comp=Z,42nm,0.9s
KLMR MLR MLR
comp=Z,719nm,14.0s
MAK Makhachkala 25.00 76*d i*P **P** 17 40 40.2 -5.0
MAK *e*S **S** 17 45 01.0 -7.4
MAK pmax pmax
comp=Z,106nm,1.2s
MAK MLR MLR
comp=Z,387nm,15.0s

BELG Belogornoye 25.27 53 P **P** 17 40 47.9 +0.4
comp=Z,120nm,1.1s,baz=72,slow=3.5,SNR=10.0
BELG Belogornoye 25.27 53 *i* P **P** 17 40 48.7 +1.2
BELG pmax pmax
comp=Z,23nm,1.2s
AKT Akhty 25.43 79 *e*P **P** 17 40 48.4 -0.9
AKT *e*PPP PPP 17 41 31.5
AKT pmax pmax
comp=Z,6.0nm,0.4s
AKT MLR MLR
comp=Z,198nm,16.0s
MSF Maaselka 25.69 15 P **P** 17 40 51.2 -0.1
MSF pmax pmax
comp=Z,17nm,0.9s
KIRV Kirov 27.99 41 P **P** 17 41 12.0 0.0
comp=Z,6.8nm,0.7s,baz=294,slow=11,SNR=4.8
KIRV LR LR 17 53 04.9
comp=Z,275nm,20.2s,baz=251,slow=38
comp=Z,6.8nm,0.7s
KIRV Kirov 27.99 41 *i* P **P** 17 41 13.2 +1.2
APA Apatity 28.00 16 *e*P **P** 17 41 09.8 -2.2
ARCES ARCESS Array B 28.51 9 IAmb IAmb 17 41 30.3
comp=Z,17nm,1.2s
ARCES ARCESS Array B 28.51 9 P **P** 17 41 16.1 -0.5
comp=Z,3.3nm,0.8s,baz=193,slow=5.0,SNR=13
ARCES LR LR 17 53 13.8
comp=Z,244nm,20.0s,baz=202,slow=38
comp=Z,3.3nm,0.8s
TORD Torodi Ar. Bea 30.34 203 P **P** 17 41 32.9 -0.4
comp=Z,1.6nm,0.3s,baz=23,slow=12,SNR=3.5
TORD LR LR 17 55 03.3
comp=Z,375nm,18.2s,baz=2.5,slow=39
comp=Z,1.6nm,0.3s
BORG Borgarnes 30.38 331 LR LR 17 55 23.0
comp=Z,247nm,18.6s,baz=140,slow=40
ARTI Arti 32.14 47 P **P** 17 41 47.0 -1.8
ARTI Arti 32.14 47 P **P** 17 41 48.8 +0.1
comp=Z,7.8nm,0.7s,baz=246,slow=4.6,SNR=10
ARTI LR LR 17 55 51.2
comp=Z,343nm,19.4s,baz=228,slow=38
comp=Z,7.8nm,0.7s
ARTI Arti 32.14 47*c i*P **P** 17 41 48.3 -0.4
ARTI 17 42 49.7
ARTI S **S** 17 47 03.1 +2.6
ARTI SS **SnSn** 17 48 52.3 +1.5
ARTI pmax pmax
comp=Z,16nm,1.0s
ARTI MLR MLR
comp=Z,450nm,17.0s
RAYN Ar Rayn 32.20 114 P **P** 17 41 48.8 -0.9
RAYN Ar Rayn 32.20 114 P **P** 17 41 48.8 -0.9
RAYN pmax pmax
comp=Z,4.0nm,1.3s
AB31 Akbulak array 32.90 61 P **P** 17 41 55.4 -0.1
ABKAR Akbulak array 32.90 61 **P** 17 41 55.1 -0.4
SVE Sverdlovsk 33.43 47 *e*P **P** 17 42 01.9 +1.9
SVE pmax pmax
comp=Z,14nm,0.8s
SCO Scoresbysund 33.94 340 *i* P P 17 42 09.8 +5.6
SPITS Spitsbergen Ar 36.53 1 P **P** 17 42 25.8 -0.8
comp=Z,8.9nm,1.0s,baz=128,slow=9.3,SNR=1.7
comp=Z,8.9nm,1.0s
DAG Danmarks Havn 37.67 348 P **P** 17 42 37.2 +1.0
DAG Danmarks Havn 37.67 348 *i* P **P** 17 42 36.5 +0.3
DAG IAmb IAmb 17 42 41.8
comp=Z,5.4nm,1.0s
DBIC Dimbokro 38.61 210 IAmb IAmb 17 43 11.2
comp=Z,19nm,1.4s
DBIC Dimbokro 38.61 210 P **P** 17 42 44.5 -0.2
comp=Z,3.4nm,0.8s,baz=39,slow=8.7,SNR=6.6
DBIC LR LR 17 59 31.0
comp=Z,144nm,18.5s,baz=36,slow=38
comp=Z,3.4nm,0.8s
BORK Borovoye 39.03 53 *i* P **P** 17 42 48.5 +0.6
BORK pmax pmax
comp=Z,8.0nm,0.9s
BVAR Borovoye Array 39.08 53 P **P** 17 42 48.7 +0.3
comp=Z,4.5nm,0.9s,baz=276,slow=5.8,SNR=13
BVAR LR LR 18 00 49.9
comp=Z,349nm,18.7s,baz=283,slow=39
comp=Z,4.5nm,0.9s
SUMG Summit 39.51 338 *i* P **P** 17 42 55.7 +3.5
IVI Ivigtut 41.23 320 *i* P P 17 43 13.2 +7.2
IVI IAmb IAmb 17 43 15.1
comp=Z,153nm,1.4s
NOR Nord 41.28 354 *i* P **P** 17 43 04.8 -1.5
KKAR Karatay Array 41.34 68 **P** 17 43 06.3 -0.9
KKAR Karatay Array 41.34 68 P **P** 17 43 06.3 -0.9
GAR Garm 42.63 74 IAmb IAmb 17 43 29.2
comp=Z,14nm,1.0s
LODK Lodwar 42.88 147 **P** 17 43 20.4 +0.3
SAATT Saattut 43.11 334 *i* P **P** 17 43 25.4 +4.1
SAATT IAmb IAmb 17 43 26.4
comp=Z,9.7nm,0.7s
ARSB Arslanbob 43.66 70 IAmb IAmb 17 43 34.2
comp=Z,24nm,1.4s
NEEM North Greenlan 44.14 344 *i* P **P** 17 43 33.1 +3.3
NEEM IAmb IAmb 17 43 35.6
comp=Z,18nm,1.0s
AAK Ala-Archa 44.25 68 **P** 17 43 31.8 +0.7
AAK IAmb IAmb 17 43 41.0
comp=Z,15nm,1.3s
AAK Ala-Archa 44.25 68 LR LR 18 04 50.8
comp=Z,116nm,20.4s,baz=299,slow=40
AAK Ala-Archa 44.25 68*ce*P **P** 17 43 32.1 +1.1
AAK pmax pmax
comp=Z,18nm,2.5s
KURBB Kurchatov Arra 44.49 55 P **P** 17 43 32.2 -0.4
comp=Z,0.7nm,0.7s,baz=293,slow=9.9,SNR=7.1
comp=Z,0.7nm,0.7s
KURK Kurchatov 44.52 55 **P** 17 43 32.1 -0.7
KURK Kurchatov 44.52 55 *i* P **P** 17 43 34.0 +1.2
KURK pmax pmax
comp=Z,4.0nm,1.0s
NRIK Noril'sk 46.07 28 **P** 17 43 44.8 -0.1
NRIK IAmb IAmb 17 43 50.8
comp=Z,12nm,1.1s
NRIK Noril'sk 46.07 28 P **P** 17 43 44.6 -0.3
comp=Z,1.5nm,0.6s,baz=274,slow=5.5,SNR=6.9
NRIK LR LR 18 06 11.2
comp=Z,361nm,18.8s,baz=270,slow=40
comp=Z,1.5nm,0.6s
NRIK Noril'sk 46.07 28*ce*P **P** 17 43 45.0 +0.1
NRIK pmax pmax
comp=Z,11nm,1.1s
KSH Kashi 46.47 71 P **P** 17 43 48.5 -0.1
KSH sP pP 17 43 54.6 +1.0
KSH pmax pmax
comp=Z,5.0nm,0.9s
TARG Taragay, Kyrgy 46.87 67 P **P** 17 43 53.7 +1.6
ZALV Zalesovo Beam 47.35 50 **P** 17 43 53.9 -1.2
ZALV Zalesovo Beam 47.35 50 P **P** 17 43 55.0 -0.1
comp=Z,1.9nm,0.8s,baz=296,slow=8.1,SNR=7.7
ZALV LR LR 18 05 59.7
comp=Z,436nm,18.4s,baz=354,slow=39
comp=Z,1.9nm,0.8s
ZALV Zalesovo Beam 47.35 50 *i* P **P** 17 43 58.2 +3.1
ZALV pmax pmax
comp=Z,1.0nm,0.4s
MK31 Makanchi Array 48.02 59*ce*P **P** 17 44 01.4 +0.9
MKAR Makanchi Array 48.02 59 **P** 17 44 00.1 -0.4
MKAR Makanchi Array 48.02 59 P **P** 17 44 00.4 -0.1
comp=Z,1.8nm,0.6s,baz=282,slow=7.2,SNR=24
MKAR LR LR 18 07 32.4
comp=Z,139nm,19.6s,baz=282,slow=40
comp=Z,1.8nm,0.6s
MKAR Makanchi Array 48.02 59 *i* P **P** 17 44 00.7 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.6s
DGZ Jazzator, Alta 50.22 54 *i* P **P** 17 44 18.4 +1.0
DGZ pmax pmax
comp=Z,3.0nm,1.2s
SCHQ Schefferville 52.16 314 P **P** 17 44 31.0 -0.8
comp=Z,4.3nm,0.8s,baz=210,slow=1.2,SNR=5.9
SCHQ LR LR 18 05 24.9
comp=Z,90nm,18.6s,baz=100,slow=35
comp=Z,4.3nm,0.8s
WMQ Urumqi 52.69 61 *e*P **P** 17 44 38.9 +3.0
WMQ LR LR
comp=Z,75nm,19.5s
RES Resolute Bay 54.77 342 LR LR 18 10 01.3
comp=Z,124nm,18.5s,baz=36,slow=38
TIXI Tiksi 58.11 20 LR LR 18 14 03.9
comp=Z,232nm,18.6s,baz=13,slow=40
TIXI Tiksi 58.11 20 *i* P **P** 17 45 16.0 +1.6
TIXI pmax pmax
comp=Z,4.0nm,1.6s

LSZ Lusaka 58.35 163 **P** 17 45 16.8 0.0
LSZ IAmb IAmb 17 45 18.5
comp=Z,11nm,1.1s
LSZ Lusaka 58.35 163 LR LR 18 11 42.6
comp=Z,64nm,19.0s,baz=12,slow=37
LSZ Lusaka 58.35 163 P **P** 17 45 16.8 0.0
LSZ pmax pmax
comp=Z,11nm,1.1s
TLY Talaya 58.74 47*ce*P **P** 17 45 20.4 +1.2
TLY pmax pmax
comp=Z,20nm,1.7s
GOMU GeErMu 61.15 66 P **P** 17 45 39.4 +3.0
GOMU S **S** 17 54 02.2 +6.6
GOMU pmax pmax
comp=Z,3.0nm,1.0s
LSA Lhasa 62.14 74 P **P** 17 45 42.4 -0.9
LSA Lhasa 62.14 74 P **P** 17 45 39.4 -3.9
LSA pmax pmax
comp=Z,7.0nm,1.3s
LSA Lhasa 62.14 74 P **P** 17 45 42.4 -0.9
LSA pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 62.24 50 IAmb IAmb 17 45 49.4
comp=Z,7.3nm,1.2s
SONM Songino Array 62.24 50 P **P** 17 45 43.9 +0.6
comp=Z,3.7nm,1.0s,baz=293,slow=8.7,SNR=18
SONM LR LR 18 15 13.0
comp=Z,316nm,18.2s,baz=328,slow=38
comp=Z,3.7nm,1.0s
ULN Ulaanbaatar 62.60 49*ce*P **P** 17 45 46.4 +0.7
ULN pmax pmax
comp=Z,6.0nm,1.7s
GTA Gaotai 62.76 60 *e*P **P** 17 45 46.8 0.0
GTA sP sP 17 45 55.3 +1.4
GTA pmax pmax
comp=Z,4.0nm,1.0s
YAK Yakutsk 64.52 28 LR LR 18 18 18.1
comp=Z,90nm,18.6s,baz=302,slow=40
YAK Yakutsk 64.52 28 *e*P **P** 17 45 57.8 -0.1
YAK pmax pmax
comp=Z,8.0nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.5s
YAK pmax pmax
comp=E,2.0nm,1.3s
BRDH Bariadhala 66.59 80 LR LR 18 21 49.5
comp=E,85nm,18.1s,baz=316,slow=42
LBTB Lobatse 67.38 168 LR LR 18 17 43.5
comp=E,59nm,19.8s,baz=354,slow=38
C27K Jago River 67.67 352 P **P** 17 46 18.5 +0.5
YKA Yellowknife Ar 68.09 337 LR LR 18 16 46.7
comp=E,115nm,20.0s,baz=308,slow=37
HILR Hailar Array B 68.41 42 LR LR 18 20 05.1
comp=E,306nm,18.2s,baz=85,slow=39
BILL Bilibino 68.59 11 *i* P **P** 17 46 26.9 +3.0
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,90nm,18.0s
MDP Montagnes des 68.96 258 LR LR 18 11 46.6
comp=Z,43nm,19.2s,baz=51,slow=32
ZEA Zeya 69.17 36 *e*P P 17 46 33.3 +5.6
HHC Hu-ho-hao-te 69.29 53 *e*P **P** 17 46 29.9 +1.1
HHC pmax pmax
comp=Z,27nm,0.9s
SEY Seymchan 70.56 19 LR LR 18 22 36.7
comp=Z,121nm,20.0s,baz=328,slow=40
BOSA Boshof 70.86 169 IAmb IAmb 17 47 04.0
comp=Z,13nm,1.5s
BOSA Boshof 70.86 169 P **P** 17 46 39.1 +0.7
comp=Z,3.0nm,0.8s,baz=0.0,slow=10,SNR=2.3
BOSA LR LR 18 20 55.6
comp=Z,73nm,19.2s,baz=12,slow=39
comp=Z,3.0nm,0.8s
F20K Avaraart Lake 71.20 356 IAmb IAmb 17 46 49.3
comp=Z,12nm,1.4s
HEH HeiHe 71.64 38 *e*P **P** 17 46 42.9 +0.1
HEH pmax pmax
comp=Z,10.0nm,1.2s
XAN Xi'an 71.82 60 P **P** 17 46 44.6 +0.3
XAN pmax pmax
comp=Z,12nm,0.9s
TKL Tuckaleechee C 72.11 302 LR LR 18 15 41.5
comp=Z,63nm,21.9s,baz=47,slow=34
DAWY Dawson 72.36 348 **P** 17 46 47.1 +0.2
DAWY IAmb IAmb 17 46 54.7
comp=Z,11nm,1.2s
ILAR Eielson Array 72.69 351 P **P** 17 46 48.4 -0.5
comp=Z,0.9nm,0.8s,baz=3.5,slow=5.9,SNR=18
ILAR LR LR 18 21 22.9
comp=Z,38nm,19.3s,baz=34,slow=38
comp=Z,0.9nm,0.8s
K27K Chicken 72.79 349 IAmb IAmb 17 46 57.1
comp=Z,4.8nm,1.0s
MA2 Magadan 73.02 21 LR LR 18 23 18.4
comp=Z,263nm,18.3s,baz=314,slow=39
CMAR Chiang Mai Arr 74.56 79 **P** 17 46 58.8 -1.8
CMAR Chiang Mai Arr 74.56 79 P **P** 17 46 59.6 -1.0
comp=Z,2.7nm,0.9s,baz=304,slow=6.9,SNR=11
CMAR LR LR 18 27 33.0
comp=Z,28nm,18.2s,baz=275,slow=42
comp=Z,2.7nm,0.9s
CMAR Chiang Mai Arr 74.56 79 *i* P **P** 17 47 02.2 +1.6
CMAR pmax pmax
comp=Z,3.0nm,0.9s
BNX BinXian 74.80 42 ⇓P **P** 17 47 02.0 +0.4
BNX pmax pmax
comp=Z,8.0nm,1.0s
DLBC Dease Lake 75.66 341 LR LR 18 23 02.5
comp=Z,106nm,18.5s,baz=46,slow=38
USRK Ussuriysk Ar. 78.16 40 P **P** 17 47 20.0 -0.6
comp=Z,1.9nm,0.8s,baz=298,slow=3.1,SNR=2.3
comp=Z,1.9nm,0.8s
USRK Ussuriysk Ar. 78.16 40 P **P** 17 47 20.0 -0.6
NJ2 Nanjing 79.44 56 *e*P **P** 17 47 28.2 +0.3
NJ2 pmax pmax
comp=Z,6.0nm,1.1s
PETK Petropavlovsk- 80.55 21 P **P** 17 47 34.3 +0.8
comp=Z,1.6nm,0.8s,baz=352,slow=3.1,SNR=1.2
PETK LR LR 18 28 25.6
comp=Z,118nm,18.9s,baz=331,slow=40
comp=Z,1.6nm,0.8s
YSS Yuzhno-Sakhali 80.80 33 *e*P **P** 17 47 39.5 +4.6
YSS pmax pmax
comp=Z,30nm,0.9s
KSRS Korea Array 80.99 47 P **P** 17 47 35.5 -0.6
comp=Z,2.4nm,1.1s,baz=328,slow=4.4,SNR=4.8
comp=Z,2.4nm,1.1s
PDAR Pinedale Array 81.50 321 P **P** 17 47 37.5 -1.6
comp=Z,0.6nm,0.8s,baz=31,slow=4.3,SNR=3.7
comp=Z,0.6nm,0.8s
RDMU Red Mountain 83.20 320 IAmb IAmb 17 47 54.2
comp=Z,6.3nm,0.8s
BMO Blue Mountains 83.21 327 **P** 17 47 47.2 -0.6
BMO IAmb IAmb 17 47 54.2
comp=Z,4.8nm,0.8s
BMO Blue Mountains 83.21 327 P **P** 17 47 47.2 -0.6
BMO pmax pmax
comp=Z,5.0nm,0.8s
SDCO Great Sand Dun 83.32 316 IAmb IAmb 17 47 50.0
comp=Z,6.1nm,1.2s
HWUT Hardware Ranch 83.33 322 P **P** 17 47 48.6 0.0
HWUT IAmb IAmb 17 47 55.4
comp=Z,4.4nm,0.8s
S22A 4UR Ranch, Cre 84.01 317 IAmb IAmb 17 47 53.9
comp=Z,5.8nm,1.1s
PV22 Blue Mesa, Par 84.39 318 IAmb IAmb 17 48 01.0
comp=Z,5.5nm,0.8s
PV16 Nyswonger Mesa 84.63 318 P **P** 17 47 54.6 -0.7
PV16 IAmb IAmb 17 48 04.6
comp=Z,5.7nm,0.8s
PV03 Paradox Valley 84.64 318 P **P** 17 47 54.8 -0.6
PV03 IAmb IAmb 17 47 56.8
comp=Z,5.6nm,1.2s
PV18 Skein Mesa, Pa 84.68 318 P **P** 17 47 55.6 0.0
SRU San Rafael Swe 84.80 320 IAmb IAmb 17 48 14.3
comp=Z,5.2nm,0.9s
JNU Nakatsue 85.81 48 LR LR 18 29 21.9
comp=Z,95nm,19.8s,baz=351,slow=38
MJAR Matsushiro Arr 87.07 42 IAmb IAmb 17 48 39.4
comp=Z,6.5nm,1.4s
MJAR Matsushiro Arr 87.07 42 P **P** 17 48 05.6 -1.6
comp=Z,1.1nm,0.9s,baz=306,slow=5.3,SNR=4.5
MJAR LR LR 18 31 03.1
comp=Z,119nm,18.8s,baz=338,slow=38
comp=Z,1.1nm,0.9s
TXAR Lajitas Array 88.60 309 P **P** 17 48 13.7 -1.0

comp=Z,0.3nm,0.7s,baz=63,slow=2.6,SNR=2.0
comp=Z,0.3nm,0.7s
JOW Kunigami 88.92 54 LR LR 18 31 23.1
comp=Z,72nm,20.0s,baz=100,slow=38
NVAR Mina Array Bea 88.94 324 P **P 17 48 15.6 -0.7**
comp=Z,0.1nm,0.3s,baz=57,slow=4.5,SNR=1.7
comp=Z,0.1nm,0.3s
JHJ Hachijo jima 2 90.56 43 LR LR 18 31 50.4
comp=Z,58nm,19.0s,baz=95,slow=37
WRA Warramunga Arr 125.80 85 PKP **PKPdf 17 54 21.3 -2.2**
comp=Z,0.2nm,0.9s,baz=310,slow=1.9,SNR=1.5

ROM 07 17:47:31.2±0.1, 41.773N±0.003×13.594E±0.004, h13km, ML1.2/8, 1D, Error ellipse: s-maj=0.3km s-min=0.1km az=4.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VVLD	**Villa Vallelon**	**0.10**	**12**	⇓P	Pg	17 47 34.6	+0.2
VVLD				S	Sg	17 47 36.8	+0.2
VVLD				AML	AML		
	comp=E,272μm,0.5s						
VVLD				AML	AML		
	comp=N,210μm,0.3s						
VVLD				AML	AML		
	comp=N,155μm,0.1s						
VVLD				AML	AML		
	comp=N,157μm,0.4s						
VVLD				AML	AML		
	comp=E,238μm,0.2s						
VVLD				AML	AML		
	comp=E,207μm,0.2s						
POFI	**Posta Fibreno**	**0.10**	**122**	P	Pg	17 47 34.6	+0.2
POFI				S	Sg	17 47 37.0	+0.3
POFI				AML	AML		
	comp=E,87μm,0.4s						
POFI				AML	AML		
	comp=N,76μm,0.4s						
POFI				AML	AML		
	comp=E,60μm,0.1s						
POFI				AML	AML		
	comp=N,60μm,0.2s						
LRP	**Arpino**	**0.13**	**182**	P	Pb	17 47 35.1	-0.4
LRP				S	Sb	17 47 37.7	-0.5
LRP				AML	AML		
	comp=E,246μm,0.7s						
LRP				AML	AML		
	comp=N,204μm,0.1s						
LRP				AML	AML		
	comp=E,246μm,0.7s						
LRP				AML	AML		
	comp=E,241μm,0.2s						
LRP				AML	AML		
	comp=N,204μm,0.1s						
OPI	**Opi**	**0.18**	**89**	P	Pg	17 47 35.7	+0.2
OPI				S	Sg	17 47 38.9	+0.5
GUAR	**Guarcino**	**0.21**	**276**	P	Pg	17 47 36.3	+0.3
GUAR				S	Sb	17 47 40.0	-0.8
PTQR	**Pietraquaria**	**0.29**	**330**	P	Pg	17 47 37.8	+0.5
PTQR				S	Sb	17 47 42.4	-0.6
GIUL	**Giuliano Di Ro**	**0.33**	**230**	P	Pg	17 47 38.4	+0.4
GIUL				S	Sb	17 47 43.8	-0.4
INTR	**Introdacqua**	**0.33**	**44**	P	Pg	17 47 38.1	0.0
INTR				S	Sb	17 47 43.7	-0.6
CERA	**Filignano**	**0.36**	**119**	P	Pg	17 47 38.7	+0.1
CERA				S	Sb	17 47 44.5	-0.6
T0110	**Collepietro**	**0.47**	**17**	P	Pb	17 47 41.3	-0.2
T0110				S	Sb	17 47 48.3	-0.1
T0110				AML	AML		
	comp=E,68μm,0.3s						
T0110				AML	AML		
	comp=N,71μm,1.4s						
CERT	**Cerreto**	**0.49**	**291**	P	Pg	17 47 40.5	-0.4
CERT				S	Sg	17 47 48.0	+0.5

ROM 07 17:47:53.2±0.1, 41.776N±0.003×13.613E±0.004, h14km, ML2.1/46, 9C-3D, Error ellipse: s-maj=0.3km s-min=0.2km az=33.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POFI	**Posta Fibreno**	**0.09**	**128**	⇑P	Pg	17 47 56.6	+0.1
POFI				S	Sg	17 47 59.1	+0.5
POFI				AML	AML		
	comp=E,714μm,0.8s						
POFI				AML	AML		
	comp=N,526μm,0.6s						
POFI				AML	AML		
	comp=E,668μm,0.8s						
POFI				AML	AML		
	comp=N,640μm,0.6s						
POFI				AML	AML		
	comp=E,611μm,0.3s						
POFI				AML	AML		
	comp=N,595μm,0.2s						
POFI				AML	AML		
	comp=E,499μm,0.1s						
POFI				AML	AML		
	comp=N,502μm,0.2s						
VVLD	**Villa Vallelon**	**0.10**	**4**	⇓P	Pg	17 47 56.8	+0.2
VVLD				S	Sg	17 47 59.0	+0.3
VVLD				AML	AML		
	comp=E,2955μm,0.8s						
VVLD				AML	AML		
	comp=N,4495μm,0.5s						
VVLD				AML	AML		
	comp=E,3305μm,0.8s						
VVLD				AML	AML		
	comp=N,4800μm,0.5s						
VVLD				AML	AML		
	comp=N,4038μm,0.2s						
VVLD				AML	AML		
	comp=N,3704μm,0.1s						
VVLD				AML	AML		
	comp=E,2767μm,0.2s						
VVLD				AML	AML		
	comp=E,3042μm,0.1s						
LRP	**Arpino**	**0.13**	**189**	⇑P	Pg	17 47 57.1	+0.3
LRP				S	Sb	17 47 59.8	-0.5
LRP				AML	AML		
	comp=E,3320μm,0.1s						
LRP				AML	AML		
	comp=N,3230μm,0.7s						
LRP				AML	AML		
	comp=E,3319μm,0.1s						
LRP				AML	AML		
	comp=N,2774μm,0.1s						
OPI	**Opi**	**0.16**	**90**	⇑P	Pg	17 47 57.5	+0.2
OPI				S	Sg	17 48 00.5	+0.4
GUAR	**Guarcino**	**0.23**	**275**	⇑P	Pg	17 47 58.6	+0.4
GUAR				S	Sg	17 48 02.4	+0.7
GUAR				AML	AML		
	comp=E,805μm,1.1s						
GUAR				AML	AML		
	comp=E,805μm,0.9s						
GUAR				AML	AML		
	comp=N,1750μm,0.2s						
GUAR				AML	AML		
	comp=N,1318μm,0.1s						
GUAR				AML	AML		
	comp=E,643μm,0.1s						
LIK	**San Giovanni I**	**0.27**	**189**	P	Pb	17 47 59.6	-0.3
LIK				S	Sb	17 48 04.6	+0.2
PTQR	**Pietraquaria**	**0.29**	**327**	⇓P	Pg	17 47 59.8	+0.3
PTQR				S	Sb	17 48 04.7	-0.3
PTQR				AML	AML		
	comp=N,595μm,1.4s						
PTQR				AML	AML		
	comp=E,924μm,0.7s						
PTQR				AML	AML		
	comp=N,595μm,0.6s						
PTQR				AML	AML		
	comp=E,757μm,0.1s						
PTQR				AML	AML		
	comp=N,576μm,0.2s						
INTR	**Introdacqua**	**0.32**	**43**	⇑P	Pg	17 48 00.2	+0.2
INTR				S	Sb	17 48 05.3	-0.6
INTR				AML	AML		
	comp=E,676μm,0.8s						
INTR				AML	AML		
	comp=E,676μm,1.2s						
INTR				AML	AML		
	comp=N,800μm,0.7s						
INTR				AML	AML		
	comp=E,626μm,0.3s						
INTR				AML	AML		
	comp=N,647μm,0.4s						
MCI	**Monte Cassino**	**0.33**	**152**	P	Pg	17 48 00.1	+0.1
MCI				S	Sb	17 48 05.4	-0.7
MCI				AML	AML		
	comp=N,1230μm,1.0s						
MCI				AML	AML		
	comp=E,1210μm,1.1s						
MCI				AML	AML		
	comp=N,1230μm,1.0s						
MCI				AML	AML		
	comp=E,1183μm,0.2s						
MCI				AML	AML		
	comp=N,1174μm,0.2s						
GIUL	**Giuliano Di Ro**	**0.34**	**231**	⇑P	Pg	17 48 00.6	+0.3
GIUL				S	Sb	17 48 06.3	-0.3
GIUL				AML	AML		
	comp=E,182μm,1.4s						
GIUL				AML	AML		
	comp=N,221μm,1.1s						
GIUL				AML	AML		
	comp=E,182μm,0.6s						
GIUL				AML	AML		
	comp=E,149μm,0.1s						
GIUL				AML	AML		
	comp=N,189μm,0.3s						
CERA	**Filignano**	**0.35**	**120**	P	Pg	17 48 00.6	+0.1
CERA				S	Sg	17 48 06.0	+0.6
CERA				AML	AML		
	comp=N,616μm,0.4s						
CERA				AML	AML		
	comp=N,640μm,0.4s						
CERA				AML	AML		
	comp=E,642μm,0.3s						
CERA				AML	AML		
	comp=E,668μm,0.3s						
CERA				AML	AML		
	comp=N,617μm,0.4s						
CERA				AML	AML		
	comp=N,639μm,0.4s						
CERA				AML	AML		
	comp=E,668μm,0.3s						
CERA				AML	AML		
	comp=E,642μm,0.3s						
SULP	**Sulmona Polizi**	**0.39**	**37**	P	Pg	17 48 01.2	+0.1
RNI2	**Rionero Sannit**	**0.41**	**100**	P	Pb	17 48 02.1	-0.3
T0110	**Collepietro**	**0.47**	**15**	P	Pg	17 48 02.6	+0.1
T0110				S	Sb	17 48 10.1	0.0
T0110				AML	AML		
	comp=N,285μm,1.4s						
T0110				AML	AML		
	comp=N,285μm,0.6s						
T0110				AML	AML		
	comp=E,360μm,0.8s						
T0110				AML	AML		
	comp=E,301μm,0.2s						
T0110				AML	AML		
	comp=N,267μm,0.2s						
FAGN	**Fagnano**	**0.49**	**358**	P	Pb	17 48 03.5	-0.2
FAGN				AML	AML		
	comp=N,458μm,0.4s						
FAGN				AML	AML		
	comp=E,486μm,0.9s						
FAGN				AML	AML		
	comp=N,458μm,0.4s						
FAGN				AML	AML		
	comp=E,461μm,0.3s						
MIDA	**Miranda**	**0.50**	**105**	P	Pg	17 48 03.1	-0.1
MIDA				AML	AML		
	comp=E,206μm,0.4s						
MIDA				AML	AML		
	comp=N,170μm,0.2s						
MIDA				AML	AML		
	comp=E,206μm,1.6s						
MIDA				AML	AML		
	comp=N,170μm,0.2s						
MIDA				AML	AML		
	comp=E,206μm,0.4s						
MIDA				AML	AML		
	comp=N,194μm,0.3s						
MIDA				AML	AML		
	comp=E,178μm,0.2s						
CERT	**Cerreto**	**0.50**	**290**	⇑P	Pg	17 48 03.0	-0.2
CERT				S	Sb	17 48 10.6	-0.5
CERT				AML	AML		
	comp=E,422μm,1.2s						
CERT				AML	AML		
	comp=N,381μm,1.0s						
CERT				AML	AML		
	comp=N,381μm,1.0s						
CERT				AML	AML		
	comp=E,422μm,0.8s						
CERT				AML	AML		
	comp=N,347μm,0.4s						
CERT				AML	AML		
	comp=E,421μm,0.2s						
RCAV	**Rocca di Cave**	**0.50**	**278**	⇓P	Pg	17 48 03.1	-0.1
RCAV				S	Sb	17 48 10.9	-0.2
RCAV				AML	AML		
	comp=E,192μm,0.6s						
RCAV				AML	AML		
	comp=N,210μm,0.5s						
RCAV				AML	AML		
	comp=E,188μm,0.4s						
RCAV				AML	AML		
	comp=N,181μm,0.1s						
LPEL	**Lama dei Pelig**	**0.51**	**57**	⇑P	Pg	17 48 03.0	-0.3
LPEL				AML	AML		
	comp=N,181μm,0.4s						
LPEL				AML	AML		
	comp=E,151μm,0.8s						
LPEL				AML	AML		
	comp=N,181μm,1.6s						
LPEL				AML	AML		
	comp=E,148μm,0.3s						
LPEL				AML	AML		
	comp=N,170μm,0.2s						
LPEL				AML	AML		
	comp=N,141μm,0.1s						
LPEL				AML	AML		
	comp=E,148μm,0.6s						
LATB	**Latina**	**0.56**	**240**	⇑P	Pg	17 48 03.8	-0.5
LATB				S	Sg	17 48 12.2	+0.4
LATB				AML	AML		
	comp=E,36μm,1.6s						
LATB				AML	AML		
	comp=E,36μm,0.4s						
LATB				AML	AML		
	comp=N,38μm,0.6s						
LATB				AML	AML		
	comp=N,32μm,0.3s						
LATB				AML	AML		
	comp=E,28μm,0.3s						
VAGA	**Valle Agricola**	**0.59**	**127**	P	Pb	17 48 05.6	+0.3
VCEL	**Villa Celiera**	**0.64**	**15**	P	Pg	17 48 05.7	-0.1
VCEL				AML	AML		
	comp=N,186μm,0.4s						
VCEL				AML	AML		
	comp=E,298μm,0.6s						
VCEL				AML	AML		
	comp=E,259μm,0.4s						
VCEL				AML	AML		
	comp=N,187μm,0.4s						
GIGS	**Gran Sasso**	**0.68**	**357**	P	Pg	17 48 06.2	-0.3
MTCE	**Montecelio**	**0.69**	**291**	P	Pg	17 48 06.2	-0.6
TERO	**Teramo**	**0.85**	**360**	P	Pg	17 48 08.9	-0.8
TERO				AML	AML		
	comp=E,46μm,0.6s						
TERO				AML	AML		
	comp=N,46μm,0.5s						
TERO				AML	AML		
	comp=N,46μm,1.5s						
TERO				AML	AML		
	comp=E,46μm,0.6s						
TERO				AML	AML		
	comp=N,46μm,0.5s						
TOLF	**Tolfa**	**1.24**	**284**	P	Pb	17 48 16.4	0.0

*IDC **07** 17:48:44.9±1.9, 26.88N×54.96E, h0km, mb3.6/9, mbtmp3.7/9, Error ellipse: s-maj=41.0km s-min=26.2km az=17.0*
*DSN **07** 17:48:47.2±1.5, 27.49N×55.04E, h10km, ML3.1/13, Error ellipse: s-maj=17.9km s-min=6.9km az=18.0*
*TEH **07** 17:48:51.0, 27.22N×55.05E, h18km±28km*

ISC 07 17:48:50.3±0.7, 27.20N±0.04×55.05E±0.04, h17km, n37, σ1§69/40, mb3.3/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.76**	**308**	Pg	**Pb**	**17 49 05.4**	**+0.3**
GENO	**Geno**	**1.02**	**79**	Pg	**Pb**	**17 49 10.2**	**+0.7**
IBND	**Bandar-abas**	**1.35**	**79**	Pg	**Pn**	**17 49 16.1**	**+1.8**
IBND				Sg	**Sg**	**17 49 36.0**	**+2.2**
SHME	**Shamm**	**1.51**	**139**	P	**Pn**	**17 49 16.9**	**+0.4**
SHME				S	**Sg**	**17 49 40.1**	**+1.2**
LMD1	**Lamerd**	**1.69**	**275**	Pg	**Pb**	**17 49 22.5**	**+1.6**
BANOM	**Banah**	**1.69**	**138**	P	**Pn**	**17 49 20.3**	**+1.1**
BANOM				S	**Sg**	**17 49 45.8**	**+0.9**
JHRM	**Jahrom**	**1.84**	**315**	Pn	**Pn**	**17 49 23.6**	**+2.4**
MSFE	**Esma-Masafi**	**2.09**	**151**	P	**Pn**	**17 49 26.5**	**+1.9**
MDH	**Madha**	**2.20**	**149**	P	**Pn**	**17 49 27.6**	**+1.5**
NAZ	**Nazwa, Dubai**	**2.27**	**166**	P	**Pn**	**17 49 29.7**	**+2.6**
KHNJ	**Kahnooj**	**2.47**	**72**	Pn	**Pn**	**17 49 31.0**	**+1.2**
UOSS	**Minazif**	**2.47**	**155**	P	**Pn**	**17 49 30.3**	**+0.4**
HATD	**Hatta, Dubai**	**2.56**	**157**	P	**Pn**	**17 49 32.9**	**+1.9**
ASUD	**Al Ashush, Dub**	**2.58**	**174**	P	**Pn**	**17 49 34.0**	**+2.7**
ASHO	**Ashiyiah**	**2.67**	**160**	P	**Pn**	**17 49 34.9**	**+2.4**
KRBR	**Kerman**	**3.15**	**28**	Pn	**Pn**	**17 49 41.1**	**+1.6**
ALNE	**Al Ain**	**3.19**	**168**	P	**Pn**	**17 49 41.9**	**+2.2**
SOHO	**SOHO**	**3.33**	**156**	P	**Pn**	**17 49 42.5**	**+0.8**
KHGB	**Koh Gabri**	**3.40**	**21**	Pn	**Pn**	**17 49 44.5**	**+1.6**
CHMN	**Cheshme madani**	**3.44**	**39**	Pn	**Pn**	**17 49 45.6**	**+2.1**
KBAM	**BAM**	**3.57**	**57**	Pn	**Pn**	**17 49 46.9**	**+1.9**
IMEH	**Mehriz**	**4.19**	**355**	Pn	**Pn**	**17 49 55.7**	**+2.0**
IBAF	**Bafgh**	**4.40**	**6**	Pn	**Pn**	**17 49 57.9**	**+1.5**
MZR	**Muzera**	**4.42**	**199**	P	**Pn**	**17 49 57.4**	**+0.8**
KLNJ	**Kolanjah**	**4.85**	**322**	Pn	**Pn**	**17 50 04.5**	**+1.7**
NHDN	**Nehbandan**	**6.04**	**45**	Pn	**Pn**	**17 50 20.8**	**+1.8**
IKOO	**Kooshah**	**6.24**	**32**	Pn	**Pn**	**17 50 23.5**	**+1.7**
SRVN	**Saravan**	**6.54**	**87**	Pn	**Pn**	**17 50 28.0**	**+2.1**
BRTR	**Keskin Array B**	**21.73**	**310**	P	**P**	**17 53 40.6**	**-0.3**
	0.6nm,0.7s,baz=122,slow=12,SNR=5.2 0.6nm,0.7s						
BVAR	**Borovoye Array**	**28.21**	**20**	P	**P**	**17 54 41.9**	**-0.2**
	0.9nm,0.5s,baz=213,slow=7.9,SNR=4.0 0.9nm,0.5s						
MKAR	**Makanchi Array**	**29.02**	**40**	P	**P**	**17 54 49.1**	**-0.3**
	0.5nm,0.8s,baz=229,slow=7.9,SNR=3.4 0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**29.44**	**31**	P	**P**	**17 54 52.9**	**0.0**
	0.3nm,0.5s,baz=234,slow=8.8,SNR=3.4 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**34.54**	**31**	P	**P**	**17 55 37.3**	**-0.4**
	1.5nm,0.5s,baz=249,slow=10,SNR=7.3 1.5nm,0.5s						
GERES	**GERESS Array B**	**38.46**	**315**	P	**P**	**17 56 09.2**	**-2.1**
	0.2nm,0.4s,baz=142,slow=5.0,SNR=1.9 0.2nm,0.4s						
FINES	**FINESS Array B**	**39.36**	**338**	P	**P**	**17 56 17.6**	**-0.9**
	0.9nm,0.5s,baz=143,slow=6.7,SNR=7.1 0.9nm,0.5s						
SONM	**Songino Array**	**44.70**	**48**	P	**P**	**17 57 03.0**	**+0.5**
	0.2nm,0.5s,baz=292,slow=7.3,SNR=2.6 0.2nm,0.5s						
WRA	**Warramunga Arr**	**89.91**	**112**	P	**P**	**18 01 46.0**	**-3.0**
	0.4nm,0.6s,baz=91,slow=8.3,SNR=9.2 0.4nm,0.6s						

*UCR **07** 17:54:12.7±1.1, 11.49N×85.99W, h169km±12km, MW3.6*
*CATAC **07** 17:54:13.2±0.5, 11.4×8.6W±., h168km±3km, M3.2/26, MLv3.2/26, Error ellipse: s-maj=10.8km s-min=3.8km az=49.6, confirmed*

ISC 07 17:54:13.1±2.0, 11.43N±0.07×86.00W±0.09, h175km±12km, n62, σ0§73/73, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**0.32**	**354**	P	**Pn**	**17 54 36.6**	**-0.1**
MORN	**Al O del Volca**	**0.36**	**72**	P	**Pn**	**17 54 37.1**	**+0.2**
LCRUZ	**La Cruz**	**0.51**	**134**	*e*P	**Pn**	**17 54 37.2**	**-0.1**
LCRUZ				*e*S	**Sn**	**17 54 56.7**	**+0.6**
CARN	**Rivas**	**0.53**	**117**	P	**Pn**	**17 54 37.6**	**+0.2**
CARN				S	**Sn**	**17 54 57.2**	**+1.0**
CARN	**Rivas**	**0.53**	**117**	*e*P	**Pn**	**17 54 37.2**	**-0.2**
MAS3	**Al N del Volca**	**0.61**	**344**	P	**Pn**	**17 54 37.9**	**-0.1**
UNAN	**Cigeo UNAN**	**0.72**	**339**	P	**Pn**	**17 54 38.3**	**-0.2**
UNAN				S	**Sn**	**17 54 58.7**	**+0.5**
WILN	**Americas 2**	**0.75**	**346**	P	**Pn**	**17 54 38.5**	**-0.1**
WILN				S	**Sn**	**17 54 59.0**	**+0.6**
TISN	**Laguna Tiscapa**	**0.75**	**340**	P	**Pn**	**17 54 38.4**	**-0.3**
APQ2	**Apoyeque**	**0.82**	**337**	P	**Pn**	**17 54 38.6**	**-0.5**
APQ2				S	**Sn**	**17 54 59.8**	**+0.5**
BUAI	**Buenos Aires**	**0.86**	**130**	*e*P	**Pn**	**17 54 39.4**	**+0.1**
PEJA	**Penjamo Buenos**	**0.86**	**128**	*e*P	**Pn**	**17 54 39.5**	**+0.1**
PEJA				*e*S	**Sn**	**17 54 59.8**	**+0.2**
LAPC	**Finca la Perla**	**0.86**	**140**	*e*P	**Pn**	**17 54 39.1**	**-0.3**
LAPC				*e*S	**Sn**	**17 54 58.9**	**-0.8**
VRLE	**La Escondida,**	**0.89**	**136**	*e*P	**Pn**	**17 54 39.8**	**+0.1**
ELI1	**Hacienda Flor**	**0.90**	**151**	P	**Pn**	**17 54 40.1**	**+0.5**
ELI1	**Hacienda Flor**	**0.90**	**151**	S	**Sn**	**17 54 59.8**	**-0.3**
ELI1	**Hacienda Flor**	**0.90**	**151**	*e*P	**Pn**	**17 54 40.1**	**+0.5**
APQ3	**Volcan Apoyequ**	**0.91**	**337**	P	**Pn**	**17 54 39.4**	**-0.2**
GPS1	**Guardaparques**	**0.91**	**136**	*e*P	**Pn**	**17 54 40.1**	**+0.3**
GPS3	**Bodega del ICE**	**0.92**	**137**	*e*P	**Pn**	**17 54 41.2**	**+1.4**
GPS2	**Hotel Rincn d**	**0.93**	**137**	*e*P	**Pn**	**17 54 39.9**	**0.0**
COPN	**Copaltepe**	**0.94**	**322**	P	**Pn**	**17 54 39.4**	**-0.5**
COPN	**Copaltepe**	**0.94**	**322**	*e*P	**Pn**	**17 54 39.0**	**-0.9**
ALIBA	**Liberia Airpor**	**0.95**	**152**	*e*P	**Pn**	**17 54 40.4**	**+0.4**
VMAR	**Armenia, Volca**	**1.07**	**125**	*e*P	**Pn**	**17 54 40.9**	**0.0**
DELF	**Filadelfia**	**1.07**	**156**	*e*P	**Pn**	**17 54 40.6**	**-0.3**
HORNC	**Hornillas**	**1.08**	**131**	*e*P	**Pn**	**17 54 41.1**	**+1.0**
MOM2	**El Cardon**	**1.11**	**335**	P	**Pn**	**17 54 41.0**	**-0.1**
UPAL	**Upala**	**1.11**	**119**	P	**Pn**	**17 54 40.3**	**-0.8**
CUI	**Cuipilapa**	**1.13**	**133**	*e*P	**Pn**	**17 54 41.5**	**+0.1**
MOM3	**MOM3**	**1.19**	**335**	P	**Pn**	**17 54 41.6**	**-0.2**
TENO	**El Achiote**	**1.24**	**126**	*e*P	**Pn**	**17 54 42.7**	**+0.4**
CNGA	**Al SSO del Vol**	**1.26**	**327**	P	**Pn**	**17 54 42.4**	**-0.1**
CNGA				S	**Sn**	**17 55 04.5**	**-0.8**
CNGN	**Cerro Negro**	**1.26**	**327**	P	**Pn**	**17 54 42.6**	**+0.1**
CNGN	**Cerro Negro**	**1.26**	**327**	S	**Sn**	**17 55 06.1**	**+0.7**
CNGN	**Cerro Negro**	**1.26**	**327**	*e*P	**Pn**	**17 54 42.0**	**-0.5**
TIMP	**Tierras Morena**	**1.28**	**131**	*e*P	**Pn**	**17 54 42.8**	**+0.1**
INVE	**Universidad In**	**1.32**	**136**	*e*P	**Pn**	**17 54 42.3**	**-0.7**
JUD3	**Juan Diaz 3**	**1.34**	**160**	*e*P	**Pn**	**17 54 43.5**	**+0.2**
QUEB	**Quebradon, Cot**	**1.35**	**126**	*e*P	**Pn**	**17 54 43.5**	**+0.2**
TILA	**Tilaran**	**1.39**	**133**	*e*P	**Pn**	**17 54 43.8**	**+0.1**
POLN	**Al Sur del Vol**	**1.45**	**327**	P	**Pn**	**17 54 44.1**	**0.0**
POLN				S	**Sn**	**17 55 08.6**	**+0.2**
CMARA	**Lajas Hojancha**	**1.51**	**158**	P	**Pn**	**17 54 45.1**	**+0.2**
CMARA	**Lajas Hojancha**	**1.51**	**158**	S	**Sn**	**17 55 08.7**	**-0.9**
CMARA	**Lajas Hojancha**	**1.51**	**158**	*e*P	**Pn**	**17 54 45.1**	**+0.2**
JTS	**Las Juntas de**	**1.53**	**138**	P	**Pn**	**17 54 44.4**	**-0.6**
JTS				S	**Sn**	**17 55 08.1**	**-1.6**
JTS	**Las Juntas de**	**1.53**	**138**	*e*P	**Pn**	**17 54 42.6**	**-2.4**
JUNT	**Juntas**	**1.53**	**138**	*e*P	**Pn**	**17 54 45.5**	**+0.5**
PKGN	**Cerro Pekin**	**1.56**	**322**	P	**Pn**	**17 54 45.3**	**+0.1**
PKGN				S	**Sn**	**17 55 10.5**	**+0.3**
CEDE	**Laguna Cedeo**	**1.58**	**126**	*e*P	**Pn**	**17 54 49.2**	**+3.7**
ARE1	**Arenal 1**	**1.59**	**127**	*e*P	**Pn**	**17 54 45.3**	**-0.2**
VARE2	**V. Arenal**	**1.59**	**127**	*e*P	**Pn**	**17 54 45.3**	**-0.3**
NYURE	**Nandayure**	**1.60**	**153**	*e*P	**Pn**	**17 54 45.8**	**+0.1**
CRIN	**San Cristobal**	**1.62**	**321**	P	**Pn**	**17 54 46.1**	**+0.1**
CRIN	**San Cristobal**	**1.62**	**321**	S	**Sn**	**17 55 11.2**	**-0.3**
CRIN	**San Cristobal**	**1.62**	**321**	*e*P	**Pn**	**17 54 45.5**	**-0.5**
SOCE	**Pocosol**	**1.71**	**127**	P	**Pn**	**17 54 46.9**	**+0.1**
ESPN	**Las Esperanzas**	**1.83**	**65**	P	**Pn**	**17 54 47.0**	**-1.0**
RCPN	**Sur Rio San Ju**	**2.08**	**358**	P	**Pn**	**17 54 51.1**	**+0.2**
PIEC	**Cerro El Cedra**	**2.70**	**132**	*e*P	**Pn**	**17 54 58.6**	**+0.5**
BUS1	**Rivas**	**2.90**	**130**	*e*P	**Pn**	**17 55 01.3**	**+0.6**
DRK0	**Durika**	**3.46**	**128**	*e*P	**Pn**	**17 55 07.9**	**+0.5**

*NEIC **07** 17:57:01.1±1.4, 53.7S±0.1×133.7W±0.1, h10km±1km, mb4.7/23, Error ellipse: s-maj=22.6km s-min=10.9km az=13.0*
*IDC **07** 17:57:01.8±0.9, 53.90S×133.83W, h0km, mb4.3/8, mbtmp4.3/8, MS4.1/33, Error ellipse: s-maj=28.6km s-min=23.9km az=110.0*
*GCMT **07** 17:57:09.1±0.3, 54.07S±0.02×133.02W±0.03, h26km±1km, MW5.0/77, Moment Tensor Solution. s23,c23; s77,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.27±.17; $M_{\theta\theta}$4.41±.20; $M_{\theta\phi}$-3.14±.15; $M_{r\theta}$1.36±.28; $M_{\phi\phi}$-0.02±.11; $M_{\phi r}$1.32±.27; Best double couple: $M_0$4.30200×10^{16}*

NP1:ϕ_s133.00000°,δ60.00000°,λ-12.00000°. NP2: ϕ_s229.00000°,δ80.00000°,λ-149.00000°. Principal axes: T 4.7290, Plg13.0000°, Azm358.0000°; N -0.8540, Plg58.0000°, Azm246.0000°; P -3.8750, Plg29.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 07 17:57:01.1±0.6,**53.60S**±0.09×**134.0W**±0.1,**h10**km,**n75,** σ2.9**11/35, mb4.6/20, MS4.2/33, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKT	**Rikitea**	**30.44**	**358**	*e*LR	LR	18 11 12.2	
	5μm,31.2s						
SBA	**Scott Base**	**31.86**	**200**		**P**	**18 03 25.6**	**-0.1**
SBA				IAmb	IAmb	18 03 30.8	
	comp=Z,12nm,1.4s						
RPN	**Rapa Nui**	**32.12**	**44**	LR	LR	18 12 56.7	
	comp=Z,311nm,18.4s,baz=209,slow=30						
TBI	**Tubuai**	**32.40**	**333**	*e*S	**S**	**18 08 41.6**	**-3.4**
	comp=Z,269nm,36.5s						
TBI				*e*SS	**SS**	**18 10 58.1**	**-6.0**
	comp=Z,716nm,30.2s						
TBI				*e*LR	LR	18 11 54.5	
	comp=Z,3μm,28.2s						
TBI				*e*LR	LR	18 12 13.7	
	comp=Z,908nm,24.0s						
VNDA	**Vanda**	**32.83**	**201**		**P**	**18 03 32.8**	**-1.4**
VNDA	**Vanda**	**32.83**	**201**	P	**P**	**18 03 36.1**	**+2.0**
	comp=Z,2.0nm,1.2s,baz=33,slow=3.7,SNR=3.9						
VNDA				LR	LR	18 13 38.1	
	comp=Z,320nm,18.2s,baz=86,slow=31						
	comp=Z,2.0nm,1.2s						
PMSA	**Palmer Station**	**35.60**	**136**	P	**P**	**18 03 56.4**	**-1.8**
PMSA	**Palmer Station**	**35.60**	**136**	LR	LR	18 14 19.2	
	comp=Z,204nm,18.4s,baz=278,slow=29						
URZ	**Urewera**	**36.52**	**275**	LR	LR	18 15 36.1	
	comp=Z,364nm,20.8s,baz=134,slow=30						
QSPA	**South Pole Qui**	**36.57**	**180**	P	**P**	**18 04 08.4**	**+1.5**
QSPA	**South Pole Qui**	**36.57**	**180**	P	**P**	**18 04 08.4**	**+1.5**
	comp=Z,18nm,1.0s,baz=82,slow=4.0,SNR=32						
QSPA				LR	LR	18 16 53.1	
	comp=Z,278nm,19.1s,baz=84,slow=33						
	comp=Z,18nm,1.0s						
RAR	**Rarotonga**	**37.85**	**319**	LR	LR	18 14 42.0	
	comp=Z,181nm,21.5s,baz=144,slow=28						
PPT2	**Papeete2**	**37.93**	**335**	*e*S	S	18 09 55.5	-15
	comp=Z,37nm,27.5s						
PPT2				*e*LR	LR	18 14 33.2	
	comp=Z,597nm,27.5s						
PPT2				*e*LR	LR	18 14 56.8	
	comp=Z,773nm,25.2s						
PPT	**Papeete**	**37.95**	**335**	LR	LR	18 17 09.7	
	comp=Z,374nm,18.1s,baz=170,slow=32						
BELA	**Belgrano 2**	**40.15**	**161**	P	**P**	**18 04 34.8**	**-1.8**
BELA				IAmb	IAmb	18 04 45.7	
	comp=Z,12nm,1.3s						
H03S2	**Juan Fernandez**	**43.18**	**86**	T	T	18 50 57.1	
	baz=222,slow=74,SNR=83						
H03S1	**Juan Fernandez**	**43.19**	**86**	T	T	18 50 50.4	
	baz=222,slow=74,SNR=110						
H03S3	**Juan Fernandez**	**43.20**	**86**	T	T	18 50 49.6	
	baz=222,slow=74,SNR=69						
H03N3	**Juan Fernandez**	**43.45**	**85**	T	T	18 50 58.9	
	baz=226,slow=72,SNR=36						
H03N2	**Juan Fernandez**	**43.46**	**85**	T	T	18 50 57.9	
	baz=226,slow=72,SNR=67						
H03N1	**Juan Fernandez**	**43.47**	**85**	T	T	18 50 58.5	
	baz=226,slow=72,SNR=38						
PLCA	**Paso Flores**	**43.57**	**100**	LR	LR	18 18 17.4	
	comp=Z,339nm,21.9s,baz=230,slow=29						
TAOE	**Nuku Hiva Isla**	**44.90**	**351**	*e*LR	LR	18 17 58.3	
	comp=Z,611nm,25.3s						
SNAA	**Sanae**	**50.38**	**162**	P	**P**	**18 05 55.8**	**-2.0**
SNAA	**Sanae**	**50.38**	**162**	P	**P**	**18 05 55.8**	**-2.0**
	comp=Z,2.0nm,0.6s,baz=222,slow=8.3,SNR=19						
SNAA				LR	LR	18 25 02.8	
	comp=Z,322nm,20.6s,baz=193,slow=34						
	comp=Z,2.0nm,0.6s						
CASY	**Casey**	**50.90**	**208**	P	**P**	**18 06 01.5**	**-0.2**
CASY				IAmb	IAmb	18 06 06.2	
	comp=Z,9.5nm,0.8s						
MAW	**Mawson**	**58.46**	**187**	P	**P**	**18 06 55.9**	**-0.6**
	comp=Z,5.1nm,0.9s,baz=166,slow=7.0,SNR=10						
MAW				LR	LR	18 31 39.8	
	comp=Z,115nm,18.1s,baz=161,slow=36						
	comp=Z,5.1nm,0.9s						
GO01	**Chusmiza**	**59.48**	**82**	P	**P**	**18 07 04.5**	**-0.3**
NNA	**Nana**	**61.18**	**70**	LR	LR	18 26 50.0	
	comp=Z,219nm,21.3s,baz=194,slow=29						
CPUP	**Villa Florida**	**61.47**	**96**	LR	LR	18 29 11.1	
	comp=Z,64nm,21.8s,baz=83,slow=32						
STKA	**Stephens Creek**	**61.88**	**254**	LR	LR	18 30 59.6	
	comp=Z,114nm,18.6s,baz=196,slow=33						
LPAZ	**La Paz**	**62.75**	**80**	P	**P**	**18 07 25.6**	**-1.5**
LPAZ				IAmb	IAmb	18 07 38.8	
	comp=Z,5.0nm,1.1s						
LPAZ	**La Paz**	**62.75**	**80**	P	**P**	**18 07 28.9**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=225,slow=5.1,SNR=4.2						
LPAZ				LR	LR	18 28 60.0	
	comp=Z,42nm,21.6s,baz=222,slow=31						
	comp=Z,1.4nm,0.8s						
OTAV	**Otavalo**	**70.49**	**61**	P	**P**	**18 08 15.9**	**-0.5**
OTAV				IAmb	IAmb	18 08 31.7	
	comp=Z,7.4nm,1.1s						
AS31	**Alice Springs**	**72.52**	**254**	P	**P**	**18 08 28.2**	**+0.1**
ASAR	**Alice Springs**	**72.52**	**254**	P	**P**	**18 08 28.3**	**+0.2**
ASAR	**Alice Springs**	**72.52**	**254**	P	**P**	**18 08 29.9**	**+1.8**
	comp=Z,3.4nm,0.9s,baz=142,slow=5.9,SNR=13						
ASAR				LR	LR	18 37 24.3	
	comp=Z,166nm,18.1s,baz=146,slow=33						
	comp=Z,3.4nm,0.9s						
H01W1	**Cape Leeuwin H**	**74.05**	**233**	T	T	19 30 31.3	
	baz=144,slow=76,SNR=196						
H01W2	**Cape Leeuwin H**	**74.05**	**232**	T	T	19 30 31.6	
	baz=144,slow=76,SNR=202						
H01W3	**Cape Leeuwin H**	**74.06**	**233**	T	T	19 30 32.5	
	baz=144,slow=76,SNR=160						
NWAO	**Narrogin (SRO)**	**74.15**	**236**	LR	LR	18 33 23.4	
	comp=Z,116nm,18.8s,baz=271,slow=30						
WRA	**Warramunga Arr**	**75.17**	**257**	IAmb	IAmb	18 08 52.3	
	comp=Z,0.5nm,1.3s						
WRA	**Warramunga Arr**	**75.17**	**257**	P	**P**	**18 08 46.0**	**+2.3**
	comp=Z,3.1nm,1.0s,baz=141,slow=5.4,SNR=8.2						
WRA				LR	LR	18 38 57.8	
	comp=Z,171nm,19.3s,baz=336,slow=34						
	comp=Z,3.1nm,1.0s						
PMG	**Port Moresby**	**75.87**	**273**	LR	LR	18 38 44.9	
	comp=Z,74nm,18.2s,baz=149,slow=33						
JTS	**Las Juntas de**	**75.99**	**50**	LR	LR	18 33 59.8	
	comp=Z,60nm,21.4s,baz=186,slow=29						
LPIG	**La Paz**	**80.05**	**22**	LR	LR	18 36 52.7	
	comp=Z,137nm,18.4s,baz=208,slow=30						
FITZ	**Fitzroy Crossi**	**81.61**	**251**	LR	LR	18 43 09.3	
	comp=Z,171nm,18.1s,baz=184,slow=34						
TXAR	**Lajitas Array**	**86.68**	**26**	P	**P**	**18 09 49.0**	**+4.2**
	comp=Z,0.8nm,0.7s,baz=189,slow=7.4,SNR=5.3						
TXAR				LR	LR	18 40 39.5	
	comp=Z,71nm,20.7s,baz=172,slow=30						
	comp=Z,0.8nm,0.7s						
DRIO	**Del Rio**	**87.61**	**29**	P	**P**	**18 09 49.5**	**+0.4**
DRIO				IAmb	IAmb	18 09 55.4	
	comp=Z,4.1nm,0.9s						
SAND	**Sanderson**	**87.69**	**27**	P	**P**	**18 09 53.2**	**+3.7**
VHRN	**Van Horn**	**87.73**	**25**	P	**P**	**18 09 51.3**	**+1.5**
VHRN				IAmb	IAmb	18 09 57.3	
	comp=Z,2.7nm,0.8s						
DNR	**Dunn Ranch,Anz**	**88.10**	**14**	P	**P**	**18 09 50.5**	**-1.0**
PFO	**Pinyon Flats O**	**88.17**	**15**	P	**P**	**18 09 52.8**	**+1.0**
PFO				IAmb	IAmb	18 10 00.8	
	comp=Z,4.3nm,1.1s						
PFO	**Pinyon Flats O**	**88.17**	**15**	LR	LR	18 41 03.3	
	comp=Z,127nm,18.9s,baz=202,slow=30						
MNTX	**Cornudas Mount**	**88.50**	**24**	P	**P**	**18 09 54.0**	**+0.7**
MNTX				IAmb	IAmb	18 10 03.0	
	comp=Z,6.4nm,1.4s						
BFSC	**Mount Baldy Ra**	**88.62**	**13**	P	**P**	**18 09 54.5**	**+0.6**
BFSC				IAmb	IAmb	18 10 05.9	
	comp=Z,4.0nm,1.0s						
H11N3	**WAKE ISLAND Hy**	**88.91**	**306**	T	T	19 49 12.5	
	baz=148,slow=76,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**88.92**	**306**	T	T	19 49 08.1	
	baz=148,slow=76,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**88.93**	**306**	T	T	19 49 10.0	
	baz=148,slow=76,SNR=3.8						
MDP	**Montagnes des**	**88.95**	**80**	LR	LR	18 45 35.5	
	comp=Z,47nm,18.3s,baz=163,slow=33						
BATI	**Baumata**	**89.09**	**254**	LR	LR	18 47 09.7	
	comp=Z,133nm,19.5s,baz=162,slow=34						
LRMC	**Laurel Mtn Rad**	**89.83**	**13**	P	**P**	**18 10 00.2**	**+0.6**
LRMC				IAmb	IAmb	18 10 09.2	
	comp=Z,5.4nm,1.3s						
W13A	**Hualapai Mount**	**90.04**	**16**	P	**P**	**18 10 00.3**	**-0.4**
TASM	**ASL Pad, Albuq**	**91.36**	**22**	P	**P**	**18 10 06.4**	**-0.4**
TASM				IAmb	IAmb	18 10 33.4	
	comp=Z,1.8nm,0.7s						
ANMO	**Albuquerque**	**91.36**	**22**	LR	LR	18 44 54.0	
	comp=Z,104nm,18.1s,baz=282,slow=31						
U15A	**North Rim**	**91.61**	**17**	P	**P**	**18 10 10.1**	**+2.1**
U15A				IAmb	IAmb	18 10 18.3	
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	**92.66**	**12**	LR	LR	18 43 22.9	
	comp=Z,150nm,19.4s,baz=118,slow=30						
ELK	**Elko**	**95.35**	**14**	LR	LR	18 44 02.4	
	comp=Z,108nm,21.0s,baz=7.5,slow=30						
YBH	**Yreka Blue Hor**	**95.45**	**8**	LR	LR	18 44 29.5	
	comp=Z,12nm,19.6s,baz=156,slow=30						
KAPI	**Kappang**	**95.54**	**254**	LR	LR	18 51 27.5	
	comp=Z,36nm,18.5s,baz=136,slow=34						
BOSA	**Boshof**	**96.17**	**162**	LR	LR	18 48 31.2	
	comp=Z,77nm,20.2s,baz=199,slow=32						
PDAR	**Pinedale Array**	**98.26**	**18**	LR	LR	18 47 42.1	
	comp=Z,98nm,19.0s,baz=184,slow=31						
LBTB	**Lobatse**	**99.74**	**161**	LR	LR	18 50 35.6	
	comp=Z,80nm,19.3s,baz=192,slow=32						
ILAR	**Eielson Array**	**118.46**	**354**	PKP	**PKiKP**	**18 15 51.2**	**+3.8**
	comp=Z,0.7nm,0.6s,baz=214,slow=1.2,SNR=8.8						
SONM	**Songino Array**	**142.36**	**286**	PKP	**PKPdf**	**18 16 33.1**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=129,slow=2.6,SNR=4.3						

IDC 07 17:59:38.6±1.8,**6.51S**×**129.34E,h0**km,**mb3.7/2, mbtmp3.7/5, ML3.7/3, Error ellipse: s-maj=83.4km s-min=25.5km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.07**	**197**	Pn	Pn	18 02 33.2	+1.2
	0.6nm,0.3s,baz=142,slow=12,SNR=8.3						
FITZ				Sn	Sn	18 04 41.3	-6.2
	0.2nm,0.3s,baz=152,slow=15,SNR=0.9						
	3.1nm,0.6s						
WRA	**Warramunga Arr**	**14.21**	**160**	Pn	Pn	18 03 00.4	-0.9
	0.3nm,0.3s,baz=338,slow=12,SNR=7.0						
WRA				Sn	Sn	18 05 24.9	-15
	0.6nm,0.3s,baz=333,slow=22,SNR=10						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**17.61**	**166**	P	Pn	18 03 45.5	-0.2
	0.2nm,0.3s,baz=344,slow=10,SNR=13						
ASAR				S	Sn	18 06 49.7	-13
	0.4nm,0.6s,baz=228,slow=12,SNR=4.4						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	18 10 37.0	+0.6
	0.3nm,0.4s,baz=121,slow=6.8,SNR=7.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**71.75**	**329**	P	P	18 11 01.9	-0.7
	0.3nm,0.5s,baz=129,slow=4.9,SNR=5.4						
	0.3nm,0.5s						

*MOS **07** 18:00:54.3±1.2,26°.98N×55°.10E,h10km,mb4.3/16, Error ellipse: s-maj=8.0km s-min=5.4km az=95.1*
*DSN **07** 18:00:56.9±1.8,27°.26N×55°.08E,h10km,ML3.5/17, Error ellipse: s-maj=22.0km s-min=5.0km az=18.0*
*NEIC **07** 18:00:56.5±1.5,27°.29N±0°.07×55°.04E±0°.05,h10km±1km, mb4.2/32, Error ellipse: s-maj=11.8km s-min=7.0km az=203.0*
*THR **07** 18:00:56.5±0.0,27°.17N×55°.03E,h15km±5km,ML4.0*
*TEH **07** 18:00:57.2,27°.15N×55°.08E,h17km±15km*
*OMAN **07** 18:00:58.4±0.1,27°.13N×55°.07E,h11km,mb4.6/14, ml3.8/23, Error ellipse: s-maj=0.9km s-min=0.5km az=22.0*
*IDC **07** 18:01:05.9±4.5,27°.29N×54°.98E,h94km±41km,mb3.7/26, mbtmp4.0/32,MS3.4/5, Error ellipse: s-maj=18.2km s-min=11.7km az=161.0*

ISC 07 18:00:56.4±1.2,**27.15N**±0°.03×**55.05E**±0°.03,**h9**km±7km, **n236,**σ1.**877**/251,**mb4.1**/50,**MS3.1**/6,**11C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.80**	**311**	Pg	**Pb**	**18 01 12.9**	**+0.4**
BNDS	**Bandar-Abbas**	**1.03**	**76**	*e*Pg	**Pg**	**18 01 15.9**	**-0.3**
BNDS				IAML		18 01 27.2	
	comp=Z,1μm,1.0s						
GENO	**Geno**	**1.03**	**76**	Pg	**Pg**	**18 01 16.3**	**+0.1**
IBND	**Bandar-abas**	**1.36**	**77**	Pg	**Pg**	**18 01 22.6**	**+0.1**
SHME	**Shamm**	**1.47**	**138**	P	**Pb**	**18 01 24.2**	**+0.3**
SHME				S	**Sg**	**18 01 44.2**	**+0.6**
SHME	**Shamm**	**1.47**	**138**	*e*P	**Pb**	**18 01 24.1**	**+0.2**
	SNR=14						
SHME				S	**Sg**	**18 01 44.0**	**+0.5**
BANOM	**Banah**	**1.65**	**137**	P	**Pb**	**18 01 27.3**	**+0.1**
BANOM				S	**Sb**	**18 01 49.4**	**+1.3**
BANOM	**Banah**	**1.65**	**137**	*e*P	**Pb**	**18 01 27.0**	**-0.1**
	SNR=86						
BANOM				S	**Sg**	**18 01 50.1**	**+0.5**
LMD1	**Lamerd**	**1.69**	**277**	Pg	**Pg**	**18 01 29.1**	**+0.2**
UMQ	**Umm Al-Quwin**	**1.71**	**161**	P	**Pg**	**18 01 30.0**	**+0.9**
UMQ				S	**Sb**	**18 01 50.2**	**+0.6**
UMQ	**Umm Al-Quwin**	**1.71**	**161**	P	**Pb**	**18 01 28.7**	**+0.7**
JHRM	**Jahrom**	**1.88**	**316**	Pn	**Pb**	**18 01 31.2**	**+0.2**
MASF	**Masafi**	**2.03**	**150**	P	**Pb**	**18 01 33.4**	**-0.1**
	SNR=12						
MASF				S	**Sb**	**18 01 58.8**	**-0.1**
MSFE	**Esma-Masafi**	**2.04**	**151**	*e*P	**Pb**	**18 01 33.4**	**-0.4**
	SNR=20						
MDH	**Madha**	**2.15**	**148**	P	**Pb**	**18 01 34.9**	**-0.8**
MDH	**Madha**	**2.15**	**148**	*e*P	**Pn**	**18 01 34.4**	**+1.8**
	SNR=17						
NAZ	**Nazwa, Dubai**	**2.22**	**166**	P	**Pb**	**18 01 36.6**	**-0.2**
NAZ				S	**Sb**	**18 02 03.5**	**-0.8**
NAZ	**Nazwa, Dubai**	**2.22**	**166**	*e*P	**Pb**	**18 01 36.2**	**-0.5**
	SNR=14						
UOSS	**Minazif**	**2.43**	**154**	Pn	**Pn**	**18 01 37.9**	**+1.6**
UOSS	**Minazif**	**2.43**	**154**		**Pn**	**18 01 37.2**	**+0.9**
UOSS	**Minazif**	**2.43**	**154**	P	**Pn**	**18 01 38.4**	**+2.1**
UOSS				S	**Sn**	**18 02 07.8**	**+1.6**
UOSS	**Minazif**	**2.43**	**154**	*e*P	**Pn**	**18 01 37.9**	**+1.6**
	SNR=16						
FAQ	**Al Faqa, Dubai**	**2.44**	**168**	P	**Pb**	**18 01 39.4**	**-1.1**
FAQ	**Al Faqa, Dubai**	**2.44**	**168**	*e*P	**Pb**	**18 01 39.4**	**-1.1**
	SNR=7.0						
KHNJ	**Kahnooj**	**2.49**	**71**	Pn	**Pn**	**18 01 37.7**	**+0.5**
HATD	**Hatta, Dubai**	**2.51**	**157**	P	**Pn**	**18 01 39.8**	**+2.3**
HATD	**Hatta, Dubai**	**2.51**	**157**	*e*P	**Pn**	**18 01 39.7**	**+2.3**
	SNR=17						
ASUD	**Al Ashush, Dub**	**2.52**	**174**	P	**Pb**	**18 01 41.4**	**-0.6**
ASUD	**Al Ashush, Dub**	**2.52**	**174**	*e*P	**Pb**	**18 01 40.5**	**-1.4**
	SNR=6.0						
AJN	**Ajban**	**2.58**	**181**	P	**Pn**	**18 01 41.1**	**+2.7**
AJN				S	**Sn**	**18 02 12.0**	**+2.2**
ASHO	**Ashiyiah**	**2.62**	**160**	P	**Pn**	**18 01 41.4**	**+2.5**
	SNR=154						
ASHO				S	**Sn**	**18 02 13.6**	**+2.7**
ASHO	**Ashiyiah**	**2.62**	**160**	*e*P	**Pn**	**18 01 41.4**	**+2.5**
	SNR=154						
NGRK	**Negar Kerman**	**2.89**	**30**	Pn	**Pn**	**18 01 43.6**	**+0.6**
JRN	**Qarnain Island**	**2.96**	**223**	P	**Pn**	**18 01 45.1**	**+1.5**
JRN				S	**Sn**	**18 02 21.9**	**+2.6**
ALNE	**Al Ain**	**3.14**	**168**	P	**Pn**	**18 01 49.0**	**+2.8**
ALNE	**Al Ain**	**3.14**	**168**	*i* P	**Pn**	**18 01 48.4**	**+2.2**
	SNR=8.1						
KRBR	**Kerman**	**3.20**	**28**	Pn	**Pn**	**18 01 48.5**	**+1.3**
KRBR	**Kerman**	**3.20**	**28**	*e*Pn	**Pn**	**18 01 48.8**	**+1.6**
KRBR				IAML		18 02 44.0	
	comp=Z,230nm,1.0s						
SOHO	**SOHO**	**3.29**	**156**	P	**Pn**	**18 01 49.3**	**+1.2**
SOHO	**SOHO**	**3.29**	**156**	*i* P	**Pn**	**18 01 49.3**	**+1.2**
	SNR=9.3						
KHGB	**Koh Gabri**	**3.45**	**21**	Pn	**Pn**	**18 01 52.2**	**+1.5**
CHMN	**Cheshme madani**	**3.48**	**38**	Pn	**Pn**	**18 01 52.6**	**+1.5**
MZWR	**Madinat Zayed**	**3.54**	**198**	P	**Pn**	**18 01 54.3**	**+2.8**
DSBU	**Dashti - Bushe**	**3.57**	**291**	Pn	**Pn**	**18 01 54.3**	**+2.2**
KBAM	**BAM**	**3.60**	**56**	Pn	**Pn**	**18 01 54.0**	**+1.5**
GHWR	**Ruwais**	**3.73**	**212**	P	**Pn**	**18 01 55.6**	**+1.3**
KRM1	**Kerman Provinc**	**3.87**	**30**	Pn	**Pn**	**18 01 57.5**	**+1.2**
SHMA	**Al-Shehemyia**	**3.88**	**252**	P	**Pn**	**18 01 59.0**	**+2.7**
	SNR=16						
SHMA				S	**Sn**	**18 02 44.9**	**+2.9**
ARQ	**Araqi**	**4.02**	**160**	P	**Pn**	**18 02 00.5**	**+2.2**
	SNR=19						
ARQ				S	**Sn**	**18 02 46.9**	**+1.3**
ZRDN	**Zarand Kerman**	**4.02**	**18**	Pn	**Pn**	**18 01 59.8**	**+1.4**
HOQ	**Hoqain**	**4.10**	**150**	Pn	**Pn**	**18 02 00.2**	**+0.9**
HOQ	**Hoqain**	**4.10**	**150**	P	**Pn**	**18 02 00.7**	**+1.4**
SAKB	**Bahrain**	**4.21**	**255**	P	**Pn**	**18 02 04.1**	**+3.2**
SAKB				S	**Sn**	**18 02 52.5**	**+2.4**
TRNA	**Turayna**	**4.21**	**236**	P	**Pn**	**18 02 03.0**	**+2.2**
	SNR=38						
TRNA				S	**Sn**	**18 02 52.8**	**+2.6**
IMEH	**Mehriz**	**4.25**	**355**	Pn	**Pn**	**18 02 03.2**	**+1.7**
SLWR	**Sila**	**4.31**	**225**	P	**Pn**	**18 02 03.3**	**+1.1**
SLWR				S	**Sn**	**18 02 55.5**	**+2.8**
MZR	**Muzera**	**4.37**	**199**	P	**Pn**	**18 02 04.6**	**+1.6**
MZR	**Muzera**	**4.37**	**199**	*i* P	**Pn**	**18 02 04.4**	**+1.4**
	SNR=8.7						
UMZA	**Um Al Zommool**	**4.42**	**179**	P	**Pn**	**18 02 05.6**	**+1.9**
UMZA				S	**Sn**	**18 02 58.0**	**+2.7**
IBAF	**Bafgh**	**4.45**	**6**	Pn	**Pn**	**18 02 05.5**	**+1.2**
SMRA	**Abu-Samra**	**4.50**	**239**	P	**Pn**	**18 02 06.9**	**+2.1**
SMRA				S	**Sn**	**18 03 00.3**	**+3.0**
SMDO	**Samad**	**4.89**	**146**	P	**Pn**	**18 02 12.6**	**+2.2**
	SNR=12						
SMDO				S	**Sn**	**18 03 08.9**	**+1.7**
KLNJ	**Kolanjah**	**4.89**	**323**	Pn	**Pn**	**18 02 11.9**	**+1.3**
KLNJ	**Kolanjah**	**4.89**	**323**	*e*Pn	**Pn**	**18 02 12.0**	**+1.4**
KLNJ				IAML		18 03 16.0	
	comp=Z,87nm,1.0s						
WSAR	**Wadi Sarin**	**5.07**	**139**	P	**Pn**	**18 02 14.2**	**+1.6**
CHBR	**Chabahar**	**5.11**	**106**	Pn	**Pn**	**18 02 14.8**	**+1.6**
ICHK	**Chekchek**	**5.11**	**354**	Pn	**Pn**	**18 02 14.6**	**+1.1**
IRAM	**Ramesheh**	**5.20**	**334**	Pn	**Pn**	**18 02 15.8**	**+1.2**
YZKH	**Yazd**	**5.24**	**356**	*e*Pn	**Pn**	**18 02 16.4**	**+1.3**
YZKH				IAML		18 04 04.0	
	comp=Z,25nm,1.0s						
JMDO	**Jabal Madar**	**5.51**	**149**	P	**Pn**	**18 02 20.6**	**+1.9**
NGCH	**Negor - Chabah**	**5.75**	**107**	Pn	**Pn**	**18 02 23.6**	**+1.6**
NGCH	**Negor - Chabah**	**5.75**	**107**	P	**Pn**	**18 02 23.8**	**+1.9**
WBK	**Wadi Bani Khal**	**5.75**	**141**	Pn	**Pn**	**18 02 23.5**	**+1.4**
WBK	**Wadi Bani Khal**	**5.75**	**141**	P	**Pn**	**18 02 23.3**	**+1.2**
	SNR=12						
IBRJ	**Brojen**	**5.78**	**326**	Pn	**Pn**	**18 02 24.3**	**+1.7**
IGAR	**Gharneh**	**5.86**	**334**	Pn	**Pn**	**18 02 24.4**	**+0.8**
NASN	**Na'in**	**5.96**	**341**	*e*Pn	**Pn**	**18 02 25.8**	**+0.6**
NASN				IAML		18 04 07.2	
	comp=Z,15nm,1.0s						
BSRN	**Basiran**	**5.97**	**35**	Pn	**Pn**	**18 02 26.4**	**+1.2**
TPRV	**Parvadeh(Tabas**	**6.03**	**13**	Pn	**Pn**	**18 02 26.9**	**+1.0**
NHDN	**Nehbandan**	**6.08**	**45**	Pn	**Pn**	**18 02 27.6**	**+1.0**
ZNGN	**Zangian**	**6.15**	**325**	Pn	**Pn**	**18 02 29.5**	**+1.7**
IKOO	**Kooshah**	**6.28**	**32**	Pn	**Pn**	**18 02 30.5**	**+1.0**
JHBN	**Jahan bin**	**6.34**	**324**	Pn	**Pn**	**18 02 31.8**	**+1.4**
JLN	**Jalan Bani Buh**	**6.36**	**141**	P	**Pn**	**18 02 30.4**	**0.0**
SRVN	**Saravan**	**6.54**	**86**	Pn	**Pn**	**18 02 34.4**	**+1.4**
SRVN	**Saravan**	**6.54**	**86**	*e*Pn	**Pn**	**18 02 34.8**	**+1.8**
SRVN				IAML		18 02 52.7	
	comp=Z,16nm,1.0s						
ITEG	**Tejag**	**6.56**	**28**	Pn	**Pn**	**18 02 34.2**	**+0.8**
IPIR	**Pirpir**	**6.59**	**328**	Pn	**Pn**	**18 02 34.6**	**+0.7**
MHTO	**MHTO**	**6.69**	**156**	P	**Pn**	**18 02 35.8**	**+0.9**
MHTO				S	**Sn**	**18 03 49.0**	**-2.3**
TKDS	**Koohdasht(Taba**	**6.69**	**15**	Pn	**Pn**	**18 02 36.3**	**+1.3**
TABS	**Tabas**	**6.72**	**15**	*e*Pn	**Pn**	**18 02 36.7**	**+1.3**
TABS				IAML		18 04 51.9	
	comp=Z,20nm,1.0s						
KBD	**Kabd**	**6.80**	**289**	P	**Pn**	**18 02 37.9**	**+1.4**
KBD				S	**Sn**	**18 03 53.7**	**-0.4**
IKLH	**Kolahrood**	**6.84**	**335**	Pn	**Pn**	**18 02 38.2**	**+0.9**
AFRZ	**Afriz**	**7.13**	**28**	Pn	**Pn**	**18 02 42.3**	**+1.1**
DQM	**DQM**	**7.54**	**162**	P	**Pn**	**18 02 46.6**	**0.0**
ISFB	**Sefidab**	**7.58**	**342**	Pn	**Pn**	**18 02 48.0**	**+0.8**
SHRT	**Shahrakht**	**7.90**	**34**	*e*Pn	**Pn**	**18 02 53.1**	**+1.5**
SHRT				IAML		18 05 22.5	
	comp=Z,6.3nm,1.0s						
DOK	**Doka**	**8.53**	**186**	P	**Pn**	**18 03 00.7**	**+0.5**
BDRS	**Dareh Seyedi**	**8.62**	**323**	Pn	**Pn**	**18 03 03.3**	**+1.7**
SHRO	**Shahrood**	**8

SOC					*e*S	Sn	18 09 29.4	-0.3
SOC					*e*SS	**SnSn**	**18 09 49.3**	**+4.9**
SOC					*e*SSS	SSS	18 10 01.0	
SOC					MLR	MLR		
	comp=Z,57nm,15.0s							
KSH	**Kashi**	**21.33**	**49**	P	P		18 05 36.6	-7.4
KSH				pmax	pmax			
	comp=Z,7.0nm,0.8s							
BRTR	**Keskin Array B**	**21.77**	**311**		**P**		**18 05 46.9**	**-1.8**
BRTR	**Keskin Array B**	**21.77**	**311**	P	**P**		**18 05 48.4**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=138,slow=13,SNR=9.9							
	comp=Z,1.7nm,0.8s							
BR131	**Keskin Array S**	**21.77**	**311**		**P**		**18 05 46.6**	**-2.0**
BR131				IAmb	IAmb		18 06 00.9	
	comp=Z,5.1nm,0.8s							
BR131	**Keskin Array S**	**21.77**	**311**	P	**P**		**18 05 50.7**	**+2.1**
BR131	**Keskin Array S**	**21.77**	**311**	*i* P	**P**		**18 05 51.0**	**+2.4**
AAK	**Ala-Archa**	**22.13**	**41**		**P**		**18 05 51.5**	**-0.9**
AAK				IAmb	IAmb		18 06 03.1	
	comp=Z,6.3nm,0.9s							
AAK	**Ala-Archa**	**22.13**	**41**	P	**P**		**18 05 52.6**	**+0.1**
AAK	**Ala-Archa**	**22.13**	**41**	*i* P	**P**		**18 05 55.7**	**+3.2**
AAK				pmax	pmax			
	comp=Z,6.0nm,1.2s							
AB31	**Akbulak array**	**22.39**	**8**		**P**		**18 05 53.4**	**-1.7**
AB31				IAmb	IAmb		18 05 58.5	
	comp=Z,9.0nm,0.8s							
ABKAR	**Akbulak array**	**22.39**	**8**		**P**		**18 05 53.8**	**-1.3**
AKTO	**Aktyubinsk**	**23.36**	**5**	LR	LR		18 17 15.1	
	comp=Z,41nm,20.3s,baz=94,slow=42							
BELG	**Belogornoye**	**25.82**	**350**	*i* P	**P**		**18 06 29.0**	**+1.1**
BELG				pmax	pmax			
	comp=Z,2.0nm,1.1s							
VRH	**Novokhopyorsk**	**26.07**	**341**	*e*P	**P**		**18 06 30.4**	**+0.3**
VRH				pmax	pmax			
	comp=Z,9.0nm,0.8s							
VSR	**Storozhevoye**	**26.89**	**338**	*e*P	**P**		**18 06 40.6**	**+3.0**
VSR				pmax	pmax			
	comp=Z,2.0nm,0.9s							
BORK	**Borovoye**	**28.26**	**20**	*i* P	**P**		**18 06 52.2**	**+2.4**
BORK				pmax	pmax			
	comp=Z,3.0nm,0.6s							
BVAR	**Borovoye Array**	**28.26**	**20**	P	**P**		**18 06 49.0**	**-0.9**
	comp=Z,3.8nm,0.5s,baz=209,slow=8.5,SNR=22							
BVAR				LR	LR		18 19 44.2	
	comp=Z,54nm,18.6s,baz=206,slow=40							
	comp=Z,3.8nm,0.5s							
BVAR	**Borovoye Array**	**28.26**	**20**	P	**P**		**18 06 49.0**	**-0.9**
MK31	**Makanchi Array**	**29.06**	**40**	*ce*P	**P**		**18 06 59.8**	**+2.7**
MKAR	**Makanchi Array**	**29.06**	**40**	P	**P**		**18 06 55.6**	**-1.5**
MKAR	**Makanchi Array**	**29.06**	**40**	P	**P**		**18 06 56.3**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=226,slow=8.4,SNR=10							
	comp=Z,1.2nm,0.7s							
MKAR	**Makanchi Array**	**29.06**	**40**	*ce*P	**P**		**18 06 56.5**	**-0.6**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ARTI	**Arti**	**29.32**	**4**	*c i*P	**P**		**18 07 00.9**	**+1.7**
ARTI							18 07 50.4	
ARTI				S	**S**		**18 11 55.1**	**+2.7**
ARTI				pmax	pmax			
	comp=Z,5.0nm,1.3s							
KURBB	**Kurchatov Arra**	**29.49**	**31**	P	**P**		**18 06 59.9**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=233,slow=8.7,SNR=17							
	comp=Z,1.4nm,0.7s							
KURK	**Kurchatov**	**29.59**	**31**	P	**P**		**18 06 59.9**	**-1.8**
KURK	**Kurchatov**	**29.59**	**31**	IAmb	IAmb		18 07 05.5	
	comp=Z,2.4nm,1.1s							
KURK	**Kurchatov**	**29.59**	**31**	P	**P**		**18 07 01.2**	**-0.5**
KURK	**Kurchatov**	**29.59**	**31**	*i* P	**P**		**18 07 04.9**	**+3.2**
KURK				pmax	pmax			
	comp=Z,2.0nm,1.1s							
AKASG	**Malin Array Be**	**30.65**	**327**	IAmb	IAmb		18 07 44.2	
	comp=Z,3.5nm,1.3s							
AKASG	**Malin Array Be**	**30.65**	**327**	P	**P**		**18 07 08.8**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=133,slow=8.6,SNR=4.7							
	comp=Z,0.6nm,0.5s							
AKASG	**Malin Array Be**	**30.65**	**327**	*ce*P	**P**		**18 07 14.1**	**+3.1**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKBB	**Malin Array Si**	**30.65**	**327**	P	**P**		**18 07 09.6**	**-1.5**
AKBB				IAmb	IAmb		18 07 10.2	
	comp=Z,5.6nm,1.1s							
AKBB	**Malin Array Si**	**30.65**	**327**	*i* P	**P**		**18 07 12.5**	**+1.5**
AKBB				pmax	pmax			
	comp=Z,4.0nm,1.0s							
OBN	**Obninsk**	**31.02**	**339**	*e*P	**P**		**18 07 18.0**	**+3.8**
OBN				*e*			18 08 19.6	
OBN				*e*SS	SS		18 14 10.2	-21
OBN				pmax	pmax			
	comp=Z,5.0nm,0.7s							
OBN				MLR	MLR			
	comp=Z,30nm,14.0s							
WMQ	**Urumqi**	**31.10**	**49**	*e*P	**P**		**18 07 16.7**	**+1.5**
PALK	**Pallekele**	**31.36**	**124**	*ce*P	**P**		**18 07 18.9**	**+1.2**
PALK				pmax	pmax			
	comp=Z,13nm,1.1s							
DGZ	**Jazzator, Alta**	**33.51**	**39**	*i* P	**P**		**18 07 39.8**	**+3.4**
DGZ				pmax	pmax			
	comp=Z,2.0nm,0.9s							
ZALV	**Zalesovo Beam**	**34.58**	**31**		**P**		**18 07 43.9**	**-1.5**
ZALV	**Zalesovo Beam**	**34.58**	**31**	P	**P**		**18 07 44.1**	**-1.3**
	comp=Z,5.2nm,0.4s,baz=239,slow=9.1,SNR=22							
	comp=Z,5.2nm,0.4s							
RONA	**Rosalia, Austr**	**36.48**	**315**	*e*P	**P**		**18 08 03.0**	**+1.1**
	comp=Z,1.1nm,0.4s							
KBA	**Koelnbreinsper**	**38.19**	**313**	*i* P	**P**		**18 08 16.2**	**-0.4**
	comp=Z,1.4nm,0.5s							
ZVC	**Zvikov**	**38.40**	**317**	*e*P	**P**		**18 08 17.6**	**-0.5**
GERES	**GERESS Array B**	**38.50**	**315**	P	**P**		**18 08 17.4**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=116,slow=6.1,SNR=4.7							
	comp=Z,0.6nm,0.7s							
KHC	**Kasperske Hory**	**38.67**	**316**	*e*P	**P**		**18 08 19.1**	**-1.3**
KHC	**Kasperske Hory**	**38.67**	**316**	*e*P	**P**		**18 08 19.1**	**-1.3**
GTA	**Gaotai**	**39.00**	**60**	*e*P	**P**		**18 08 23.7**	**+0.3**
GTA				pmax	pmax			
	comp=Z,8.0nm,0.7s							
FINES	**FINESS Array B**	**39.41**	**338**	P	**P**		**18 08 25.1**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=141,slow=9.7,SNR=14							
	comp=Z,1.0nm,0.3s							
KEST	**Kesra**	**39.63**	**294**	IAmb	IAmb		18 09 11.5	
	comp=Z,7.2nm,0.9s							
KEST	**Kesra**	**39.63**	**294**	P	**P**		**18 08 28.3**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=84,slow=10,SNR=1.9							
	comp=Z,2.6nm,0.7s							
SQTA	**Sankt Quirin**	**39.63**	**312**	*i* P	**P**		**18 08 27.4**	**-1.2**
	comp=Z,2.4nm,0.3s							
MOTA	**Moosalm**	**39.73**	**312**	*i* P	**P**		**18 08 28.6**	**-0.8**
	comp=Z,1.2nm,0.4s							
FETA	**Feichten**	**39.90**	**312**	*i* P	**P**		**18 08 29.8**	**-1.1**
	comp=Z,2.3nm,0.6s							
DAVA	**Damuels**	**40.53**	**312**	*i* P	**P**		**18 08 34.7**	**-1.3**
	comp=Z,8.3nm,0.5s							
CMAR	**Chiang Mai Arr**	**41.20**	**93**	P	**P**		**18 08 42.9**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=286,slow=7.5,SNR=3.0							
	comp=Z,0.5nm,0.7s							
PZH	**PanZhiHua**	**41.48**	**80**	P	**P**		**18 08 44.0**	**-0.2**
HFS	**Hagfors**	**43.31**	**331**	P	**P**		**18 08 56.5**	**-1.9**
	comp=Z,1.4nm,0.4s,baz=120,slow=8.8,SNR=12							
	comp=Z,1.4nm,0.4s							
NORES	**NORESS Array B**	**44.53**	**331**	P	**P**		**18 09 07.8**	**-0.5**
NC405	**NORSAR Array S**	**44.65**	**332**	P	**P**		**18 09 07.2**	**-1.9**
NC405				IAmb	IAmb		18 09 16.3	
	comp=Z,5.7nm,0.8s							
SONM	**Songino Array**	**44.73**	**48**	P	**P**		**18 09 09.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=269,slow=7.4,SNR=4.1							
	comp=Z,0.6nm,0.7s							
SONM	**Songino Array**	**44.73**	**48**	P	**P**		**18 09 09.0**	**-1.2**
NB201	**NORSAR Array S**	**44.79**	**331**	P	**P**		**18 09 08.6**	**-1.8**
NB2	**NORSAR Subarra**	**44.82**	**331**	P	**P**		**18 09 08.9**	**-1.7**
	comp=Z,1.3nm,0.5s,baz=116,slow=7.9							
NOA	**NORSAR Array B**	**44.82**	**331**	P	**P**		**18 09 08.9**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=124,slow=7.8,SNR=9.2							
	comp=Z,1.6nm,0.7s							
KEV	**Kevo**	**45.63**	**347**	P	**P**		**18 09 16.4**	**-0.5**
KEV	**Kevo**	**45.63**	**347**	P	**P**		**18 09 16.4**	**-0.5**
KEV				pmax	pmax			
	comp=Z,41nm,1.4s							
ARCES	**ARCESS Array B**	**45.77**	**346**	P	**P**		**18 09 17.0**	**-1.0**
ARCES	**ARCESS Array B**	**45.77**	**346**	P	**P**		**18 09 17.0**	**-1.0**
	comp=Z,2.4nm,1.0s,baz=132,slow=8.6,SNR=6.5							
	comp=Z,2.4nm,1.0s							
ARCES	**ARCESS Array B**	**45.77**	**346**	P	**P**		**18 09 17.0**	**-1.0**
CEST	**Esterri de Car**	**46.00**	**304**	P	**P**		**18 09 18.2**	**-2.1**
NRIK	**Noril'sk**	**46.29**	**15**	IAmb	IAmb		18 09 24.1	
	comp=Z,3.6nm,1.2s							
NRIK	**Noril'sk**	**46.29**	**15**	P	**P**		**18 09 20.9**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=189,slow=3.8,SNR=1.7							
	comp=Z,0.9nm,0.3s							
NRIK	**Noril'sk**	**46.29**	**15**	*i* P	**P**		**18 09 24.8**	**+2.8**
NRIK				pmax	pmax			
	comp=Z,3.0nm,1.1s							
ESDC	**Sonseca Array**	**50.01**	**300**	P	**P**		**18 09 49.8**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=69,slow=7.3,SNR=5.6							
	comp=Z,0.5nm,0.4s							
EKA	**Eskdalemuir Ar**	**50.16**	**321**	P	**P**		**18 09 50.5**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=99,slow=6.9,SNR=6.2							
	comp=Z,0.4nm,0.3s							
TORD	**Torodi Ar. Bea**	**51.64**	**265**	IAmb	IAmb		18 10 02.4	
	comp=Z,2.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**51.64**	**265**	P	**P**		**18 10 02.1**	**-1.7**
	comp=Z,1.3nm,0.3s,baz=51,slow=9.1,SNR=2.2							
	comp=Z,1.3nm,0.3s							
SPITS	**Spitsbergen Ar**	**54.02**	**351**	P	**P**		**18 10 19.3**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=132,slow=12,SNR=4.0							
	comp=Z,3.4nm,0.7s							
TIXI	**Tiksi**	**59.39**	**21**	*ce*P	**P**		**18 11 02.8**	**+4.0**
TIXI				pmax	pmax			
	comp=Z,5.0nm,1.3s							
DBIC	**Dimbokro**	**60.26**	**262**	P	**P**		**18 11 04.5**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=39,slow=6.5,SNR=2.1							
	comp=Z,2.0nm,0.6s							
KSRS	**Korea Array**	**61.07**	**60**	P	**P**		**18 11 09.6**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=276,slow=7.3,SNR=4.8							
	comp=Z,1.3nm,0.6s							
BOSA	**Boshof**	**62.38**	**210**	P	**P**		**18 11 19.7**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=23,slow=6.1,SNR=6.0							
	comp=Z,1.3nm,0.4s							
BILL	**Bilibino**	**72.59**	**22**	*i* P	**P**		**18 12 27.5**	**+3.8**
BILL				pmax	pmax			
	comp=Z,2.0nm,0.9s							
PETK	**Petropavlovsk-**	**75.85**	**37**	P	**P**		**18 12 39.9**	**-3.1**
	comp=Z,6.7nm,1.1s,baz=310,slow=9.2,SNR=2.3							
	comp=Z,6.7nm,1.1s							
SHEM	**Shemya Is, Ala**	**84.42**	**32**	LR	LR		18 52 32.0	
	comp=Z,92nm,21.5s,baz=58,slow=37							
ILAR	**Eielson Array**	**86.80**	**9**	P	**P**		**18 13 38.9**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=327,slow=4.9,SNR=5.0							
	comp=Z,0.3nm,0.7s							
WRA	**Warramunga Arr**	**89.89**	**112**	IAmb	IAmb		18 13 56.8	
	comp=Z,0.4nm,1.3s							
WRA	**Warramunga Arr**	**89.89**	**112**	P	**P**		**18 13 55.2**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=312,slow=3.9,SNR=6.3							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**89.89**	**112**	*ce*P	**P**		**18 13 56.7**	**+0.4**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
YKA	**Yellowknife Ar**	**90.29**	**355**	LR	LR		19 02 07.8	
	comp=Z,44nm,18.0s,baz=302,slow=41							
ASAR	**Alice Springs**	**91.33**	**116**	P	**P**		**18 14 02.1**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=304,slow=4.6,SNR=10							
	comp=Z,0.7nm,0.9s							
NNA	**Nana**	**132.52**	**279**	*c i*PKIKP	**PKiKP**		**18 20 15.6**	**+2.2**

*CATAC **07** 18:16:55.0±0.4, 11°N±3°×8°6W±°, h40km±4km, M3.7/24, MLv3.7/24, Error ellipse: s-maj=8.1km s-min=3.7km az=42.3, confirmed*
*UCR **07** 18:16:54.2±0.9, 11°.36N×86°.25W, h56km±9km, MW3.6*

ISC 07 18:16:55.1±1.4, 11°.33N±0°.06×86°.28W±0°.07, h48km±19km, n62, σ0°84/78, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIN	**Rivas**	**0.46**	**75**	S	**Sn**	**18 17 12.4**	**-0.9**
ARIN	**Rivas**	**0.46**	**75**	P	**Pn**	**18 17 03.6**	**-2.1**
NADN	**Granada**	**0.48**	**31**	*e*P	**Pn**	**18 17 06.0**	**0.0**
NADN				*e*S	**Sn**	**18 17 15.2**	**+1.4**
MORN	**Al O del Volca**	**0.66**	**71**	P	**Pn**	**18 17 07.8**	**-0.5**
MORN				S	**Sn**	**18 17 18.5**	**+0.7**
MASN	**Masaya**	**0.66**	**11**	P	**Pn**	**18 17 08.6**	**+0.2**
MASN				S	**Sn**	**18 17 18.5**	**+0.6**
LCRUZ	**La Cruz**	**0.69**	**112**	*e*P	**Pn**	**18 17 08.7**	**0.0**
LCRUZ				*e*S	**Sn**	**18 17 20.0**	**+1.5**
MAS3	**Al N del Volca**	**0.69**	**9**	P	**Pn**	**18 17 08.6**	**-0.2**
MAS3				S	**Sn**	**18 17 19.1**	**+0.5**
CARN	**Rivas**	**0.76**	**101**	P	**Pn**	**18 17 09.3**	**-0.3**
CARN				S	**Sn**	**18 17 21.0**	**+0.9**
CARN	**Rivas**	**0.76**	**101**	*e*P	**Pn**	**18 17 09.2**	**-0.3**
CARN				*e*S	**Sn**	**18 17 20.7**	**+0.6**
UNAN	**Cigeo UNAN**	**0.77**	**1**	P	**Pn**	**18 17 09.5**	**-0.3**
UNAN				S	**Sn**	**18 17 20.6**	**+0.2**
TISN	**Laguna Tiscapa**	**0.80**	**1**	P	**Pn**	**18 17 09.8**	**-0.5**
MGAN	**Managua**	**0.81**	**3**	*e*P	**Pn**	**18 17 09.8**	**-0.5**
WILN	**Americas 2**	**0.83**	**7**	P	**Pn**	**18 17 09.8**	**-0.7**
WILN				S	**Sn**	**18 17 22.1**	**+0.4**
APQ2	**Apoyeque**	**0.86**	**357**	P	**Pn**	**18 17 10.5**	**-0.4**
APQ2				S	**Sn**	**18 17 23.1**	**+0.7**
APQN	**BB Volcan Apoy**	**0.88**	**359**	P	**Pn**	**18 17 09.5**	**-1.7**
APQN	**BB Volcan Apoy**	**0.88**	**359**	S	**Sn**	**18 17 22.0**	**-1.0**
COPN	**Copaltepe**	**0.89**	**340**	P	**Pn**	**18 17 11.0**	**-0.5**
COPN	**Copaltepe**	**0.89**	**340**	*e*P	**Pn**	**18 17 10.8**	**-0.6**
APYN	**Apoyeque**	**0.90**	**356**	P	**Pn**	**18 17 12.6**	**+1.1**
APYN				S	**Sn**	**18 17 24.4**	**+1.0**
APQ3	**Volcan Apoyequ**	**0.94**	**355**	P	**Pn**	**18 17 14.0**	**+2.0**
APQ3				S	**Sn**	**18 17 26.8**	**+2.5**
ELI1	**Hacienda Flor**	**0.99**	**134**	*e*P	**Pn**	**18 17 13.4**	**+0.7**
LAPC	**Finca la Perla**	**1.01**	**124**	*e*P	**Pn**	**18 17 12.5**	**-0.5**
ALIBA	**Liberia Airpor**	**1.03**	**135**	*e*P	**Pn**	**18 17 13.8**	**+0.5**
PEJA	**Penjamo Buenos**	**1.05**	**115**	*e*P	**Pn**	**18 17 13.1**	**-0.4**
VRLE	**La Escondida,**	**1.05**	**121**	*e*P	**Pn**	**18 17 13.9**	**+0.2**
GPS2	**Hotel Rincn d**	**1.08**	**122**	*e*P	**Pn**	**18 17 13.8**	**-0.2**
MOM2	**El Cardon**	**1.11**	**350**	P	**Pn**	**18 17 13.7**	**-0.7**
MOM2				S	**Sn**	**18 17 28.9**	**+0.3**
DELF	**Filadelfia**	**1.14**	**141**	*e*P	**Pn**	**18 17 15.1**	**+0.5**
MOM3	**MOM3**	**1.19**	**349**	P	**Pn**	**18 17 14.4**	**-1.0**
MOM3				S	**Sn**	**18 17 30.4**	**-0.1**
CNGA	**Al SSO del Vol**	**1.22**	**341**	P	**Pn**	**18 17 15.2**	**-0.7**
CNGN	**Cerro Negro**	**1.23**	**341**	P	**Pn**	**18 17 15.2**	**-0.7**
CNGN	**Cerro Negro**	**1.23**	**341**	*e*P	**Pn**	**18 17 15.3**	**-0.7**
HORNC	**Hornillas**	**1.25**	**120**	*e*P	**Pn**	**18 17 15.7**	**-0.6**
VMAR	**Armenia, Volca**	**1.26**	**114**	*e*P	**Pn**	**18 17 15.6**	**-0.9**
BAGA	**Bagaces**	**1.28**	**128**	*e*P	**Pn**	**18 17 16.3**	**-0.4**
CUI	**Cuipilapa**	**1.29**	**121**	*e*P	**Pn**	**18 17 16.3**	**-0.5**
JUD3	**Juan Diaz 3**	**1.37**	**148**	*e*P	**Pn**	**18 17 15.4**	**-2.5**
POLN	**Al Sur del Vol**	**1.41**	**338**	P	**Pn**	**18 17 17.5**	**-0.9**
TENO	**El Achiote**	**1.43**	**116**	*e*P	**Pn**	**18 17 18.0**	**-0.8**
TIMP	**Tierras Morena**	**1.45**	**121**	*e*P	**Pn**	**18 17 18.4**	**-0.6**
INVE	**Universidad In**	**1.47**	**125**	*e*P	**Pn**	**18 17 18.7**	**-0.6**
PKGN	**Cerro Pekin**	**1.49**	**333**	P	**Pn**	**18 17 19.4**	**-0.1**
PKGN				S	**Sn**	**18 17 38.3**	**+0.4**
QUEB	**Quebradon, Cot**	**1.54**	**117**	*e*P	**Pn**	**18 17 19.5**	**-0.7**
CRIN	**San Cristobal**	**1.55**	**331**	S	**Sn**	**18 17 40.2**	**+0.8**
CRIN	**San Cristobal**	**1.55**	**331**	P	**Pn**	**18 17 20.0**	**-0.4**
CRIN	**San Cristobal**	**1.55**	**331**	*e*P	**Pn**	**18 17 19.9**	**-0.5**
CMARA	**Lajas Hojancha**	**1.56**	**147**	*e*P	**Pn**	**18 17 20.2**	**-0.3**
JTS	**Las Juntas de**	**1.67**	**128**	*e*P	**Pn**	**18 17 21.1**	**-0.9**
JUNT	**Juntas**	**1.67**	**129**	*e*P	**Pn**	**18 17 21.1**	**-0.8**
NYURE	**Nandayure**	**1.67**	**143**	*e*P	**Pn**	**18 17 21.5**	**-0.5**
LIMN	**Finca el Limon**	**1.72**	**357**	P	**Pn**	**18 17 21.7**	**-1.0**
ARE1	**Arenal 1**	**1.77**	**119**	*e*P	**Pn**	**18 17 23.1**	**-0.2**
VARE2	**V. Arenal**	**1.77**	**119**	*e*P	**Pn**	**18 17 23.2**	**-0.1**
CASO	**Castillo**	**1.77**	**120**	*e*P	**Pn**	**18 17 22.8**	**-0.5**
FORC	**Fortuna**	**1.81**	**118**	*e*P	**Pn**	**18 17 23.9**	**+0.1**
SOCE	**Pocosol**	**1.89**	**120**	*e*P	**Pn**	**18 17 24.8**	**-0.2**
POTN	**Potosi Cosigui**	**2.04**	**324**	P	**Pn**	**18 17 26.7**	**-0.3**
POTN				S	**Sn**	**18 17 51.7**	**+0.4**
POTN	**Potosi Cosigui**	**2.04**	**324**	*e*P	**Pn**	**18 17 26.7**	**-0.3**
RCON	**San Juan de Ri**	**2.14**	**3**	P	**Pn**	**18 17 28.0**	**-0.6**
RCPN	**Sur Rio San Ju**	**2.19**	**5**	P	**Pn**	**18 17 28.8**	**-0.4**
RCVN	**Varillal2**	**2.24**	**2**	P	**Pn**	**18 17 29.2**	**-0.7**
PIEC	**Cerro El Cedra**	**2.85**	**126**	*e*P	**Pn**	**18 17 37.8**	**-0.7**

IDC 07 18:24:15.7±782.0, 53°.95N×5°.93E, h0km, Error ellipse: s-maj=338.5km s-min=137.0km az=128.0, The Netherlands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**7.05**	**133**	I	I	19 08 30.0	
	0.1nm,0.6s,baz=323,slow=319,SNR=1.7						
I43RU	**DUBNA INFRASON**	**17.93**	**68**	I	I	20 15 25.1	
	0.1nm,0.8s,baz=275,slow=323,SNR=3.8						
I48TN	**KESRA INFRASON**	**18.30**	**171**	I	I	20 05 21.6	
	baz=353,slow=279,SNR=0.9						

*NOU **07** 18:26:52.8, 30°.70S×178°.60W, h393km, mb4.1/11, Kermadec Islands, New Zealand*

*NEIC **07** 18:26:55.4±1.7, 30°.6S±0°.1×179°.5W±0°.2, h328km±3km, mb4.0/15, Error ellipse: s-maj=24.1km s-min=12.8km az=109.0*
*IDC **07** 18:26:56.6±1.1, 30°.32S×179°.61W, h341km±11km, mb3.4/8, mbtmp4.2/9, Error ellipse: s-maj=18.6km s-min=14.6km az=72.0*

ISC 07 18:26:56.0±0.6, 30°.68S±0°.06×179°.41W±0°.10, h350km, n155, σ2s02/156, mb3.8/15, 3C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.91**	**43**	P	**Pn**	**18 27 45.6**	**-1.2**
RAO	**Raoul Island**	**1.92**	**43**		**Pn**	**18 27 45.7**	**-1.1**
RAO	**Raoul Island**	**1.92**	**43**	P	**Pn**	**18 27 45.9**	**-0.9**
	1μm,0.3s,baz=94,slow=10,SNR=35						
RAO				S	S	18 28 09.2	-18
	584nm,0.3s,baz=321,slow=23,SNR=5.6						
RAO	**Raoul Island**	**1.92**	**43**	P	**Pn**	**18 27 45.7**	**-1.1**
GRZ	**Great Barrier**	**7.02**	**216**	P	**Pn**	**18 28 42.3**	**+3.8**
MXZ	**Matakaoa Point**	**7.12**	**195**	Pn	**Pn**	**18 28 40.1**	**+0.4**
MXZ	**Matakaoa Point**	**7.12**	**195**	P	**Pn**	**18 28 40.1**	**+0.4**
MXZ	**Matakaoa Point**	**7.12**	**195**	P	**Pn**	**18 28 40.8**	**+1.1**
MXZ				S	**S**	**18 30 00.5**	**-3.6**
WMGZ	**Waiomatatini S**	**7.35**	**194**	P	**Pn**	**18 28 43.2**	**+0.9**
WCZ	**Waipu Caves**	**7.41**	**223**	P	Pn	18 28 47.6	+4.5
OUZ	**Omahuta**	**7.42**	**231**	P	**Pn**	**18 28 47.1**	**+3.9**
OUZ	**Omahuta**	**7.42**	**231**	P	Pn	18 29 47.2	+3.9
HAZ	**Te Kaha**	**7.44**	**197**	P	**Pn**	**18 28 44.2**	**+0.9**
PKGZ	**Pakihiroa**	**7.47**	**195**	P	**Pn**	**18 28 44.2**	**+0.4**
PUZ	**Puketiti**	**7.62**	**194**	P	**Pn**	**18 28 45.5**	**-0.1**
PUZ				S	**S**	**18 30 10.5**	**-4.4**
RUGZ	**Raukumara Rang**	**7.66**	**198**	P	**Pn**	**18 28 45.3**	**-0.9**
WHRZ	**Whale Island**	**7.76**	**202**	P	**Pn**	**18 28 51.2**	**+3.9**
WHRZ				S	**S**	**18 30 19.7**	**+1.8**
TWGZ	**Tauwhareparae**	**7.79**	**195**	P	**Pn**	**18 28 50.8**	**+3.2**
OPRZ	**Ohinepanea**	**7.89**	**204**	P	**Pn**	**18 28 51.0**	**+2.2**
MARZ	**Manawahe**	**7.98**	**203**	P	**Pn**	**18 28 52.8**	**+3.0**
CNGZ	**Carnagh Statio**	**8.03**	**194**	P	**Pn**	**18 28 50.6**	**+0.2**
MWZ	**Matawai**	**8.05**	**197**	P	**Pn**	**18 28 50.1**	**-0.6**
TKGZ	**Te Karaka**	**8.07**	**196**	P	**P**	**18 28 52.7**	**-1.1**
URZ	**Urewera**	**8.09**	**200**	P	**Pn**	**18 28 51.1**	**0.0**
	63nm,0.3s,baz=267,slow=3.7,SNR=69						
URZ				S	**S**	**18 30 22.0**	**-2.9**
	120nm,0.5s,baz=240,slow=23,SNR=18						
URZ	**Urewera**	**8.09**	**200**	P	**Pn**	**18 28 51.1**	**0.0**
URZ	**Urewera**	**8.09**	**200**	P	**Pn**	**18 28 50.0**	**-1.1**
TOZ	**Tahuroa Road**	**8.20**	**210**	Pn	**Pn**	**18 28 50.0**	**-2.4**
TARZ	**Mount Tarawera**	**8.26**	**203**	P	**P**	**18 28 57.3**	**+1.2**
RIGZ	**Rimuhau**	**8.34**	**195**	P	**Pn**	**18 28 54.2**	**+0.1**
RRRZ	**Republican Roa**	**8.35**	**203**	P	**P**	**18 28 57.5**	**+0.5**
MUGZ	**Murupara**	**8.39**	**201**	P	**Pn**	**18 28 54.0**	**-0.7**
HSRZ	**Hossack Road**	**8.42**	**204**	P	**P**	**18 28 58.9**	**+1.1**
RTZ	**Ruatahuna**	**8.46**	**200**		**Pn**	**18 28 53.8**	**-1.7**
**HRRZ

WRA				ScP	**ScP**	**18 39 24.0**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=105,slow=3.8,SNR=5.2							
	comp=Z,1.2nm,0.3s							
SBA	**Scott Base**	**47.67**	**184**	P	**P**	**18 34 59.9**	**+2.1**
SBA				IAmb	IAmb	18 35 04.2		
	comp=Z,3.3nm,0.8s							
VNDA	**Vanda**	**47.70**	**185**	IAmb	IAmb	18 35 13.8		
	comp=Z,2.0nm,1.4s							
VNDA	**Vanda**	**47.70**	**185**	P	**P**	**18 35 01.2**	**+3.1**
	comp=Z,0.5nm,0.6s,baz=6.9,slow=7.6,SNR=11							
	comp=Z,0.5nm,0.6s							
KNRA	**Kununurra**	**49.52**	**275**	P	**P**	**18 35 13.5**	**+0.9**
KNRA				IAmb	IAmb	18 35 36.4		
	comp=Z,13nm,1.4s							
FITZ	**Fitzroy Crossi**	**51.15**	**271**	P	**P**	**18 35 24.9**	**+0.2**
CASY	**Casey**	**54.33**	**208**	P	**P**	**18 35 47.7**	**+0.7**
CASY				IAmb	IAmb	18 35 49.1		
	comp=Z,13nm,1.2s							
HATHI	**Halema'uma'u T**	**54.96**	**28**	P	**P**	**18 35 52.6**	**+0.4**
QSPA	**South Pole Qui**	**59.43**	**180**		P	18 36 29.2	+6.6
QSPA				IAmb	IAmb	18 36 30.3		
	comp=Z,14nm,0.8s							
QSPA	**South Pole Qui**	**59.43**	**180**	P	P	18 36 28.4	+5.7
	comp=Z,13nm,0.6s,baz=323,slow=0.4,SNR=138							
	comp=Z,13nm,0.6s							
BELA	**Belgrano 2**	**69.67**	**173**	P	**P**	**18 37 30.2**	**+2.3**
BELA				IAmb	IAmb	18 37 31.4		
	comp=Z,4.5nm,0.8s							
MAW	**Mawson**	**71.62**	**201**	P	**P**	**18 37 41.7**	**+2.0**
	comp=Z,0.8nm,0.6s,baz=98,slow=7.1,SNR=1.8							
	comp=Z,0.8nm,0.6s							
TROLL	**Troll, Antarti**	**77.59**	**181**	⇑P	**P**	**18 38 16.6**	**+2.7**
	comp=Z,356nm,0.6s							
SNAA	**Sanae**	**77.91**	**179**	⇑P	**P**	**18 38 17.9**	**+2.4**
	comp=Z,36nm,0.4s							
SNAA	**Sanae**	**77.91**	**179**	P	**P**	**18 38 17.7**	**+2.1**
SNAA				IAmb	IAmb	18 38 18.9		
	comp=Z,4.4nm,1.1s							
SNAA	**Sanae**	**77.91**	**179**	P	**P**	**18 38 17.6**	**+2.1**
	comp=Z,2.3nm,0.6s,baz=206,slow=8.7,SNR=23							
	comp=Z,2.3nm,0.6s							
VNA3	**Neumayer Olymp**	**78.11**	**177**	⇑P	**P**	**18 38 19.0**	**+2.5**
	comp=Z,7.6nm,0.4s							
PETK	**Petropavlovsk-**	**85.79**	**346**	P	**P**	**18 38 55.7**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=119,slow=7.7,SNR=9.8							
	comp=Z,1.7nm,0.5s							
KURK	**Kurchatov**	**120.36**	**314**		**PKiKP**	**18 45 05.8**	**0.0**
KURBB	**Kurchatov Arra**	**120.40**	**314**	PKP	**PKiKP**	**18 45 05.8**	**0.0**
	comp=Z,0.6nm,0.6s,baz=108,slow=2.0,SNR=6.4							
BVAR	**Borovoye Array**	**125.76**	**316**	PKP	**PKiKP**	**18 45 16.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=198,slow=0.9,SNR=4.1							
ARCES	**ARCESS Array B**	**138.59**	**347**	PKhKP	PKPpre	18 45 32.4		
	comp=Z,1.2nm,0.8s,baz=29,slow=2.9,SNR=4.8							
ARCES				PKP	**PKiKP**	**18 45 42.1**	**+0.3**
	comp=Z,4.1nm,1.0s,baz=95,slow=3.1,SNR=5.3							
KBZ	**Khabaz**	**144.25**	**303**	PKP	**PKPdf**	**18 45 51.4**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=96,slow=3.2,SNR=3.8							
FINES	**FINESS Array B**	**144.98**	**339**	PKP	**PKPab**	**18 45 51.5**	**-0.2**
	comp=Z,9.8nm,0.5s,baz=49,slow=3.9,SNR=75							
NB2	**NORSAR Subarra**	**148.83**	**350**	PKP	**PKPbc**	**18 46 02.1**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=16,slow=4.1							
NOA	**NORSAR Array B**	**148.83**	**350**	PKPbc	**PKPbc**	**18 46 02.0**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=16,slow=4.2,SNR=8.5							
HFS	**Hagfors**	**149.26**	**347**	PKPbc	**PKiKP**	**18 46 03.2**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=76,slow=2.0,SNR=13							
MMAI	**Mount Meron Ar**	**150.42**	**284**	PKPbc	**PKiKP**	**18 46 08.8**	**+1.4**
	comp=Z,1.4nm,0.5s,baz=96,slow=2.9,SNR=5.0							
AKASG	**Malin Array Be**	**150.77**	**321**	PKPbc	**PKPbc**	**18 46 06.3**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=52,slow=2.4,SNR=5.9							
BRTR	**Keskin Array B**	**151.66**	**298**	PKPbc	**PKiKP**	**18 46 09.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=132,slow=3.9,SNR=4.9							

*MOS **07** 18:31:28.8±1.5,54.82N×111.71E,h4km,mb3.8/1,Error ellipse: s-maj=12.7km s-min=7.8km az=70.7*
*IDC **07** 18:31:29.3±1.0,54.72N×112.00E,h0km,mb3.4/7, mbtmp3.6/9,ML4.0/2,MS3.3/2,Error ellipse: s-maj=20.8km s-min=18.3km az=12.0*
*BYKL **07** 18:31:29.7±0.1,54.87N×111.71E,h7km±2km*

ISC 07 18:31:29.1±0.5,54.86N±0.02×111.73E±0.02,h10km,n70, σ2s64/128,mb3.6/5,7C-1D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.33**	**274**	⇑*i*Pg		**Pg**	**18 31 35.6**	**0.0**
YLYR				Pmax			18 31 35.7	
	4μm,0.3s							
YLYR				*e*Sg		**Sg**	**18 31 40.0**	**0.0**
YLYR				Smax			18 31 40.3	
	11μm,0.4s							
YLYR	**Ulyunkhan**	**0.33**	**274**	⇑*i*PG		**Pg**	**18 31 35.6**	**0.0**
YLYR				*e*			18 31 40.1	
YLYR				pmax	pmax			
	comp=Z,4μm,0.2s							
YLYR				smax	smax			
	comp=N,11μm,0.4s							
KMO	**Kumora**	**1.07**	**344**	⇑*i*Pg		**Pg**	**18 31 48.8**	**-0.9**
KMO				Pmax			18 31 49.2	
	comp=N,530nm,0.4s							
KMO				*e*Sg		**Sb**	**18 32 03.1**	**-0.8**
KMO				Smax			18 32 16.4	
	comp=N,4μm,0.9s							
KMO	**Kumora**	**1.07**	**344**	⇑*i*PG		**Pg**	**18 31 48.8**	**-0.9**
KMO				*e*			18 32 03.0	
KMO				pmax	pmax			
	comp=Z,532nm,0.3s							
KMO				smax	smax			
	comp=N,1μm,0.6s							
UKT	**Uakit**	**1.26**	**59**	⇑*i*Pg		**Pn**	**18 31 52.3**	**-0.5**
UKT				Pmax			18 31 57.8	
	comp=N,268nm,0.7s							
UKT				*e*Sg		**Sb**	**18 32 09.3**	**+0.1**
UKT				*e*			18 32 14.4	
UKT				max			18 32 15.3	
	comp=N,2μm,0.2s							
UKT	**Uakit**	**1.26**	**59**	⇑*i*PG		**Pn**	**18 31 52.3**	**-0.5**
UKT				*e*			18 32 09.9	
UKT				pmax	pmax			
	comp=Z,266nm,0.7s							
UKT				smax	smax			
	comp=E,2μm,0.5s							
YOAB	**Uoyan, Buryati**	**1.29**	**360**	*e*		**Pg**	**18 31 54.1**	**+0.4**
YOAB				*e*Sg		**Sb**	**18 32 09.2**	**-0.7**
YOAB				Smax			18 32 22.5	
	comp=E,2μm,0.4s							
NIZB	**Nizh Angarsk**	**1.55**	**307**	⇑*i*Pg		**Pb**	**18 31 57.2**	**-0.6**
NIZB				*e*Pb		**Pg**	**18 31 57.7**	**-1.0**
NIZB				*e*			18 32 00.9	
NIZB				max			18 32 01.9	
	comp=E,222nm,0.5s							
NIZB				*e*Sg		**Sg**	**18 32 18.3**	**-0.5**
NIZB				Smax			18 32 21.9	
	comp=E,1μm,0.4s							
NIZB				*e*			18 32 23.5	
NIZB	**Nizh Angarsk**	**1.55**	**307**	*e*PG		**Pg**	**18 31 57.8**	**-1.0**
NIZB				*e*			18 32 17.9	
NIZB				pmax	pmax			
	comp=Z,221nm,0.5s							
NIZB				smax	smax			
	comp=E,1μm,0.4s							
SYVR	**Suvo**	**1.57**	**221**	*e*Pg		**Pb**	**18 31 58.5**	**+0.2**
SYVR				*e*			18 32 00.4	
SYVR				max			18 32 01.1	
	comp=E,506nm,0.6s							
SYVR				*e*Sg		**Sb**	**18 32 18.9**	**+0.8**
SYVR				*e*			18 32 22.4	
SYVR				max			18 32 22.7	
	comp=E,1μm,0.3s							
SYVR	**Suvo**	**1.57**	**221**	*e*PG		**Pb**	**18 31 58.4**	**+0.2**
SYVR				*e*			18 32 18.8	
SYVR				pmax	pmax			
	comp=Z,509nm,0.7s							
SYVR				smax	smax			
	comp=N,2μm,0.6s							
SVKR	**Severomuysk**	**1.64**	**39**	*e*Pg		**Pg**	**18 32 00.2**	**-0.2**
SVKR				*e*			18 32 01.3	
SVKR				max			18 32 08.6	
	comp=N,378nm,0.4s							
SVKR				*e*Sg		**Sg**	**18 32 22.2**	**+0.5**
SVKR				*e*			18 32 25.7	
SVKR				max			18 32 28.4	
	comp=N,3μm,0.6s							
SVKR	**Severomuysk**	**1.64**	**39**	*e*PG		**Pg**	**18 32 01.2**	**+0.8**
SVKR				*e*			18 32 23.0	
SVKR				pmax	pmax			
	comp=Z,383nm,0.5s							
SVKR				smax	smax			
	comp=N,3μm,0.9s							
MXMB	**Maximikha**	**2.38**	**229**	*e*Pn		**Pn**	**18 32 08.4**	**+0.3**
MXMB				*e*Pg		**Pb**	**18 32 12.3**	**+0.4**
MXMB				*e*			18 32 38.9	
MXMB				*e*Sg		**Sg**	**18 32 43.6**	**-1.7**
OGRR	**Ongureny**	**2.71**	**245**	*e*Pn		**Pn**	**18 32 14.3**	**+1.6**
OGRR				*e*			18 32 16.1	
OGRR				*e*Pg		**Pb**	**18 32 17.9**	**+0.3**
OGRR				Pmax			18 32 22.5	
	comp=N,99nm,0.6s							
OGRR				*e*Sn		**Sn**	**18 32 46.6**	**+1.1**
OGRR				*e*Sg		**Sg**	**18 32 53.9**	**-2.2**
OGRR				Smax			18 32 56.6	
	comp=N,587nm,0.6s							
OGRR	**Ongureny**	**2.71**	**245**	*e*PN		**Pn**	**18 32 14.5**	**+1.8**
OGRR				*e*			18 32 18.8	
OGRR				*e*			18 32 52.5	
OGRR				pmax	pmax			
	comp=Z,100nm,0.8s							
OGRR				smax	smax			
	comp=E,585nm,0.9s							
GORB	**Goryachinsk**	**2.77**	**229**	*e*Pn		**Pn**	**18 32 15.2**	**+1.8**
GORB				*e*Pg		**Pb**	**18 32 19.4**	**+0.8**
GORB				*e*Sn		**Sn**	**18 32 47.3**	**+0.4**
GORB				*e*Sg		**Sg**	**18 32 55.8**	**-2.1**
NLYR	**Nelyaty**	**2.78**	**52**	⇓*i*Pn		**Pn**	**18 32 15.7**	**+2.1**
NLYR				*e*Pg		**Pb**	**18 32 19.4**	**+0.5**
NLYR				*e*			18 32 28.7	
NLYR				max			18 32 29.9	
	comp=E,93nm,0.6s							
NLYR				*e*Sn		**Sn**	**18 32 47.3**	**0.0**
NLYR				*e*Sg		**Sg**	**18 32 56.4**	**-2.0**
NLYR				Smax			18 33 11.9	
	comp=E,1μm,1.3s							
NLYR	**Nelyaty**	**2.78**	**52**	*e*PN		**Pn**	**18 32 15.8**	**+2.1**
NLYR				*e*			18 32 19.5	
NLYR				*e*			18 32 56.3	
NLYR				pmax	pmax			
	comp=Z,82nm,0.7s							
NLYR				smax	smax			
	comp=E,1μm,1.7s							
UZR	**Uzur**	**2.81**	**238**	*e*Pn		**Pn**	**18 32 15.5**	**+1.5**
UZR				*e*Pg		**Pb**	**18 32 20.0**	**+0.8**
UZR				*e*PgPg		**Pg**	**18 32 23.7**	**+0.9**
UZR				max			18 32 26.7	
	comp=E,91nm,0.6s							
UZR				*e*Sn		**Sn**	**18 32 49.6**	**+1.7**
UZR				*e*Sg		**Sb**	**18 32 56.1**	**+2.5**
UZR				Smax			18 33 00.0	
	comp=E,587nm,0.4s							
KELR	**Kotokel**	**3.02**	**227**	*e*Pn		**Pn**	**18 32 18.6**	**+1.8**
KELR				*e*			18 32 22.3	
KELR				*e*Pg		**Pb**	**18 32 24.5**	**+1.7**
KELR				*e*Sn		**Sn**	**18 32 53.7**	**+0.7**
KELR				*e*Sg		**Sg**	**18 33 03.1**	**-2.7**
CIT	**Chita**	**3.04**	**158**	*e*Pn		**Pn**	**18 32 18.2**	**+0.9**
CIT				*e*Pg		**Pb**	**18 32 24.7**	**+1.4**
CIT				Pmax			18 32 30.7	
	comp=E,124nm,0.4s							
CIT				*e*Sn		**Sn**	**18 32 55.7**	**+1.9**
CIT				*e*Sg		**Sb**	**18 33 04.4**	**+3.9**
CIT				Smax			18 33 07.0	
	comp=E,1μm,0.3s							
CIT	**Chita**	**3.04**	**158**	*e*PN		**Pn**	**18 32 20.7**	**+3.4**
CIT				*e*			18 32 26.1	
CIT				*e*S		**Sn**	**18 32 55.7**	**+1.9**
CIT				*e*			18 33 04.4	
CIT				pmax	pmax			
	comp=Z,157nm,1.4s							
CIT				smax	smax			
	comp=E,2μm,0.5s							
BOD	**Bodaibo**	**3.23**	**22**	*e*Pn		**Pn**	**18 32 20.9**	**+1.2**
BOD				*e*Pg		**Pb**	**18 32 27.8**	**+1.4**
BOD				Pmax			18 32 32.4	
	comp=E,62nm,1.0s							
BOD				*e*Sn		**Sn**	**18 32 59.7**	**+1.5**
BOD				*e*Sg		**Sb**	**18 33 08.4**	**+2.7**
BOD				Smax			18 33 19.3	
	comp=E,422nm,1.2s							
ZRHB	**Zarechye**	**3.57**	**232**	*e*Pn		**Pn**	**18 32 26.3**	**+1.9**
ZRHB				*e*			18 32 35.2	
ZRHB				max			18 32 46.0	
	comp=E,136nm,0.6s							
ZRHB				*e*Sn		**Sn**	**18 33 07.0**	**+0.4**
ZRHB				*e*Sg		**Sg**	**18 33 20.0**	**-3.5**
ZRHB				Smax			18 33 41.6	
	comp=E,883nm,1.0s							
TRG	**Tyrgan**	**3.82**	**239**	*e*Pn		**Pn**	**18 32 29.5**	**+1.6**
TRG				*e*Pg		**Pb**	**18 32 37.7**	**+1.2**
TRG				Pmax			18 32 41.5	
	comp=E,29nm,0.7s							
TRG				*e*Sn		**Sn**	**18 33 13.5**	**+0.6**
TRG				*e*Sg		**Sb**	**18 33 26.9**	**+4.1**
TRG				Smax			18 33 34.2	
	comp=E,320nm,0.7s							
TRG	**Tyrgan**	**3.82**	**239**	*e*PN		**Pn**	**18 32 27.9**	**0.0**
TRG				*e*			18 32 38.2	
TRG				*e*S		**Sn**	**18 33 13.5**	**+0.6**
TRG				*e*			18 33 26.7	
TRG				pmax	pmax			
	comp=Z,28nm,0.3s							
TRG				smax	smax			
	comp=E,292nm,0.4s							
FFNB	**Fofonovo**	**4.09**	**229**	*e*Pn		**Pn**	**18 32 32.8**	**+1.2**
FFNB				*e*Pg		**Pb**	**18 32 42.7**	**+1.6**
FFNB				*e*Sn		**Sn**	**18 33 19.0**	**-0.5**
FFNB				*e*Sg		**Sg**	**18 33 36.1**	**-4.2**
KAB	**Kabansk**	**4.14**	**229**	*e*Pg		**Pb**	**18 32 43.6**	**+1.7**
KAB				Pmax			18 32 47.4	
	comp=E,100nm,0.3s							
KAB				*e*Sn		**Sn**	**18 33 20.9**	**+0.3**
KAB				*e*Sg		**Sg**	**18 33 38.3**	**-3.5**
KAB				Smax			18 34 03.7	
	comp=E,1μm,1.3s							
STDB	**Stepnoy Dvoret**	**4.18**	**232**	*e*Pn		**Pn**	**18 32 35.0**	**+2.1**
STDB				*e*Pg		**Pb**	**18 32 45.3**	**+2.6**
STDB				*e*Sn		**Sn**	**18 33 20.9**	**-0.9**
STDB				*e*Sg		**Sg**	**18 33 39.9**	**-3.4**
CRS	**Chara**	**4.21**	**58**	*e*Pn		**Pn**	**18 32 35.4**	**+2.1**
CRS				*e*Pg		**Pb**	**18 32 45.6**	**+2.4**
CRS				Pmax			18 32 51.2	
	comp=E,92nm,0.9s							
CRS				*e*Sg		**Sg**	**18 33 39.9**	**-4.3**
CRS				Smax			18 34 00.2	
	comp=E,348nm,1.3s							
CRS	**Chara**	**4.21**	**58**	*e*PN		**Pn**	**18 32 35.8**	**+2.5**
CRS				*e*			18 32 46.6	
CRS				*e*			18 33 41.1	
CRS				pmax	pmax			
	comp=Z,76nm,1.0s							
CRS				smax	smax			
	comp=E,185nm,0.6s							
HRMR	**Khuramsha**	**4.32**	**223**	*e*Pn		**Pn**	**18 32 36.7**	**+1.9**
HRMR				*e*Pg		**Pb**	**18 32 47.4**	**+2.3**
HRMR				Pmax			18 32 50.2	
	comp=E,96nm,0.5s							
HRMR				*e*Sn		**Sn**	**18 33 24.4**	**-0.8**
HRMR				*e*Sg		**Sg**	**18 33 44.3**	**-3.4**
HRMR				Smax			18 33 51.8	
	comp=E,470nm,0.6s							
VTMR	**Vitim**	**4.62**	**5**	*e*Sg		**Sg**	**18 33 51.1**	**-6.0**
BGT	**Bolshoye Golou**	**4.71**	**236**	*e*Pg		**Pb**	**18 32 54.3**	**+2.6**
BGT				Pmax			18 33 00.3	
	comp=E,23nm,0.6s							
BGT				*e*Sn		**Sn**	**18 33 35.3**	**+0.5**
BGT				*e*Sg		**Sg**	**18 33 55.7**	**-4.5**
BGT				Smax			18 34 07.4	
	comp=E,181nm,0.9s							
TUP	**Tupik**	**4.80**	**92**	Smax			18 32 43.1	
TUP				*e*Sn		**Sn**	**18 33 36.9**	**-0.1**
TUP				*e*Sg		**Sg**	**18 33 58.8**	**-4.2**
TUP				Smax			18 34 14.1	
	comp=E,569nm,0.7s							
LSTR	**Listvyanka**	**5.10**	**237**	*e*Pn		**Pn**	**18 32 46.7**	**+1.2**
LSTR				max			18 33 21.6	
	comp=E,10.0nm,0.5s							
LSTR				*e*Sn		**Sn**	**18 33 43.8**	**-0.6**
LSTR				*e*Sg		**Sg**	**18 34 07.2**	**-5.5**
LSTR				*e*			18 34 12.3	
LSTR				max			18 34 13.5	
	comp=E,131nm,0.6s							
IRK	**Irkutsk**	**5.16**	**243**	*e*PN		**Pb**	**18 33 02.4**	**+3.1**
IRK				*e*			18 34 08.8	
IRK				pmax	pmax			
	comp=Z,38nm,0.5s							
IRK				smax	smax			
	comp=N,449nm,0.7s							
KPC	**Khapcheranga**	**5.18**	**175**	*e*Pn		**Pn**	**18 32 48.0**	**+1.4**
KPC				*e*Pg		**Pb**	**18 33 03.5**	**+3.8**
KPC				Pmax			18 33 08.3	
	comp=N,23nm,0.5s							
KPC				*e*			18 33 49.8	
KPC				*e*Sg		**Sg**	**18 34 10.3**	**-4.9**
KPC				Smax			18 34 14.1	
	comp=N,401nm,1.0s							
KPC	**Khapcheranga**	**5.18**	**175**	*e*PN		**Pn**	**18 32 48.0**	**+1.4**
KPC				*e*			18 33 02.7	
KPC				*e*			18 34 08.7	
KPC				pmax	pmax			
	comp=Z,23nm,0.5s							
KPC				smax	smax			
	comp=E,401nm,1.3s							
TLY	**Talaya**	**5.80**	**240**	*e*Pg		**Pb**	**18 33 13.6**	**+3.4**
TLY				Pmax			18 33 24.8	
	comp=E,10.0nm,0.4s							
TLY				*e*Sg		**Sg**	**18 34 27.7**	**-7.4**
TLY				Smax			18 34 39.0	
	comp=E,94nm,0.8s							
YKLR	**Yuktali**	**5.87**	**69**	*e*Pn		**Pn**	**18 32 57.2**	**+1.1**
YKLR				*e*Pg		**Pb**	**18 33 14.9**	**+3.5**
YKLR				*e*Sn		**Sn**	**18 34 02.5**	**-0.9**
YKLR				*e*Sg		**Sg**	**18 34 31.7**	**-5.7**
ZAK	**Zakamensk**	**6.82**	**232**	*e*Pn		**Pn**	**18 33 11.2**	**+2.0**
ZAK				*e*			18 33 15.8	
ZAK				max			18 33 34.8	
	comp=E,12nm,0.7s							
ZAK				*e*Sg		**Sg**	**18 35 01.0**	**-6.8**
ZAK				Smax			18 35 32.4	
	comp=E,81nm,1.7s							
ZAK	**Zakamensk**	**6.82**	**232**	*e*PG		Pb	18 33 33.5	+5.9
ZAK				*e*			18 35 00.4	
ZAK				pmax	pmax			
	comp=Z,18nm,1.3s							
ZAK				smax	smax			
	comp=N,80nm,1.6s							
MOY	**Mondy**	**7.19**	**248**	*e*Pn		**Pn**	**18 33 16.6**	**+2.4**
MOY				*e*			18 33 27.5	
MOY				max			18 33 57.9	
	comp=N,17nm,1.4s							
MOY				*e*			18 34 36.7	
MOY				*e*Sg		Sg	18 35 10.2	-9.4
MOY				Smax			18 35 19.4	
	comp=N,154nm,1.2s							
MOY	**Mondy**	**7.19**	**248**	*e*PN		**Pn**	**18 33 18.6**	**+4.4**
MOY				*e*			18 33 37.0	
MOY				*e*S		**Sn**	**18 34 37.0**	**+1.1**
HILR	**Hailar Array B**	**7.24**	**134**	Pn		**Pn**	**18 33 15.1**	**+0.2**
	baz=335,slow=13							
HILR				Lg		Lg	18 35 13.6	
	baz=334,slow=30							
	comp=N,1.8nm,0.3s							
ORL	**Orlik**	**7.45**	**257**	*e*Pn		**Pn**	**18 33 19.7**	**+1.9**
ORL				max			18 33 25.7	
	comp=N,25nm,1.2s							
ORL				*e*Sn		**Sn**	**18 34 41.8**	**-0.5**
ORL				*e*Sg		**Sg**	**18 35 19.6**	**-8.3**
ORL				Smax			18 35 26.8	
	comp=N,158nm,1.2s							
ORL	**Orlik**	**7.45**	**257**	*e*PN		**Pn**	**18 33 20.2**	**+2.4**
ORL				*e*			18 33 44.2	
ORL				*e*S		**Sn**	**18 34 42.1**	**-0.2**
ORL				*e*			18 35 19.7	
ORL				pmax	pmax			
	comp=Z,28nm,0.8s							
ORL				smax	smax			
	comp=N,161nm,1.5s							
HIA	**Hailar**	**7.46**	**135**	*e*Pg		Pb	18 33 43.7	+5.2
HIA				Pmax			18 33 49.6	
	comp=N,18nm,0.9s							
HIA				*e*Sn		**Sn**	**18 34 40.2**	**-2.4**
HIA				*e*Sg		**Sg**	**18 35 20.6**	**-7.8**
HIA				Smax			18 35 26.3	
	comp=N,174nm,1.6s							
CLNS	**Chul'man**	**7.67**	**70**	*e*		Pn	18 33 31.0	+10
CLNS				*e*Sn		**Sn**	**18 34 46.0**	**-1.7**
CLNS				*e*Sg		**Sg**	**18 35 26.9**	**-8.1**
SONM	**Songino Array**	**7.78**	**208**	Pn		**Pn**	**18 33 24.1**	**+1.7**
	comp=N,2.0nm,0.3s,baz=25,slow=13,SNR=32							
SONM				Lg		Lg	18 35 35.3	
	comp=N,3.7nm,0.3s,baz=28,slow=24,SNR=6.7							
	comp=N,3.0nm,0.3s							
TDJR	**Todzha**	**9.61**	**262**	*e*		Pn	18 33 54.8	+7.5
TDJR				*e*Pg			18 34 22.1	
TDJR				*e*			18 35 44.1	
TDJR				*e*Sg		Sn	18 36 25.7	+50
KNGR	**Kungurtug, Tuv**	**9.61**	**250**	*e*			18 35 46.6	
KNGR				*e*Sg		Sn	18 36 26.2	+51
ARDR	**Aradan**	**11.08**	**266**	*e*		Pn	18 34 14.4	+6.9
ARDR				*e*Sg			18 37 11.9	
YAK	**Yakutsk**	**11.80**	**45**	Lg		Lg	18 37 30.9	
	comp=N,0.4nm,0.3s,baz=16,slow=23,SNR=4.2							
ZALV	**Zalesovo Beam**	**15.66**	**278**	Pn		**Pn**	**18 35 10.3**	**+0.8**
	comp=N,0.2nm,0.3s,baz=79,slow=7.9,SNR=11							
ZALV				Lg		Lg	18 39 43.3	
	comp=N,0.2nm,0.3s,baz=93,slow=22,SNR=5.9							
USRK	**Ussuriysk Ar.**	**16.87**	**121**	Lg		Lg	18 40 16.2	
	comp=N,0.1nm,0.3s,baz=324,slow=30,SNR=4.3							
NRIK	**Noril'sk**	**18.20**	**332**	P		**P**	**18 35 41.5**	**-0.1**
	comp=N,2.5nm,0.6s,baz=128,slow=14,SNR=4.5							
NRIK				S		Sn	18 38 51.6	-13
	comp=N,2.2nm,0.5s,baz=39,slow=16,SNR=5.1							
NRIK				Lg		Lg	18 41 02.2	
	comp=N,0.1nm,0.3s,baz=255,slow=16,SNR=4.1							
TIXI	**Tiksi**	**18.40**	**17**	P		**Pn**	**18 35 42.4**	**-1.4**
	comp=N,0.7nm,0.3s,baz=224,slow=7.2,SNR=5.5							
TIXI				S		Sn	18 38 53.4	-16
	comp=N,1.5nm,0.3s,baz=295,slow=0.8,SNR=1.0							
TIXI				Lg		Lg	18 41 00.7	
	comp=N,0.8nm,0.3s,baz=332,slow=12,SNR=6.8							
MKAR	**Makanchi Array**	**20.15**	**259**	P		Pn	18 36 05.5	+0.4
	comp=N,0.6nm,0.5s,baz=51,slow=8.0,SNR=7.5							
	comp=N,0.6nm,0.5s							
KURK	**Kurchatov**	**20.33**	**272**	P		Pn	18 36 08.7	+1.6
KURBB	**Kurchatov Arra**	**20.42

RAW1					Sg		Sg	18 35 30.8	+0.2
RAW4	**Former Reservo**	**0.16**	**225**	⇑Pg			**Pg**	**18 35 29.8**	**0.0**

GEN ***07*** *18:35:37.9,46°.31N×7°.35E,h6km±1km,MI2.8*
LDG ***07*** *18:35:38.7±0.1,46°.31N×7°.36E,h5km,MI3.4/46,Error ellipse: s-maj=1.0km s-min=1.0km az=83.0*
ZUR ***07*** *18:35:38.7,46°.32N×7°.35E,h4km,MLh3.2/141,Error ellipse: s-maj=1408.0km s-min=303.0km az=80.0*
ROM ***07*** *18:35:39.1±0.1,46°.264N±0°.004×7°.385E±0°.006, h13km,ML3.0/70,Error ellipse: s-maj=0.5km s-min=0.2km az=306.0*
PRU ***07*** *18:35:40.9,46°.31N×7°.53E,h10km*
BGR ***07*** *18:35:40.2±0.6,46°.36N×7°.31E,h10km,ML3.2/10,Error ellipse: s-maj=7.8km s-min=7.8km az=7.0*

ISC 07 18:35:38.2±0.7,46°.320N±0°.009×7°.353E±0°.009,h8km±3km, n300,σ1§48/524,101C-53D,Switzerland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**259**	⇓Pg		**Pg**	**Pg**	**18 35 40.0**	**-0.1**
RAW2					Sg		**Sg**	**18 35 40.8**	**-0.5**
RAW2	**Sanetsch, VS**	**0.03**	**259**	⇓Pg		**Pg**	**Pg**	**18 35 39.9**	**-0.1**
RAW2					Sg		**Sg**	**18 35 40.8**	**-0.5**
SAYF2	**Ayent-Fortunoz**	**0.05**	**126**	⇓Pg		**Pg**	**Pg**	**18 35 40.3**	**+0.2**
SAYF2					Sg		**Sg**	**18 35 41.3**	**-0.1**
SAYF2	**Ayent-Fortunoz**	**0.05**	**126**	⇓Pg		**Pg**	**Pg**	**18 35 40.3**	**+0.2**
SENIN	**Lac Senin/Sane**	**0.06**	**320**	⇓Pg		**Pg**	**Pg**	**18 35 40.3**	**0.0**
SENIN					Sg		**Sg**	**18 35 41.4**	**-0.4**
SENIN	**Lac Senin/Sane**	**0.06**	**320**	⇓Pg		**Pg**	**Pg**	**18 35 40.3**	**0.0**
SENIN					Sg		**Sg**	**18 35 41.4**	**-0.4**
SENIN	**Lac Senin/Sane**	**0.06**	**320**	P		**Pg**	**Pg**	**18 35 40.3**	**0.0**
SENIN					S		**Sg**	**18 35 41.4**	**-0.4**
STSW2	**Zeuzier, Staus**	**0.06**	**65**	⇑Pg		**Pg**	**Pg**	**18 35 40.4**	**+0.1**
STSW2					Sg		**Sg**	**18 35 41.6**	**-0.1**
STSW2	**Zeuzier, Staus**	**0.06**	**65**	⇑Pg		**Pg**	**Pg**	**18 35 40.4**	**+0.1**
STSW2					Sg		**Sg**	**18 35 41.6**	**-0.1**
SIOV	**Sion-Valere**	**0.09**	**175**	⇑Pg		**Pg**	**Pg**	**18 35 40.7**	**+0.3**
SIOV					Sg		**Sg**	**18 35 42.1**	**+0.1**
SIOV	**Sion-Valere**	**0.09**	**175**	⇑Pg		**Pg**	**Pg**	**18 35 40.7**	**+0.3**
SIOV					Sg		**Sg**	**18 35 42.1**	**+0.1**
LEO01	**Saint Lonard,**	**0.09**	**144**	⇓Pg		**Pg**	**Pg**	**18 35 40.8**	**+0.4**
LEO01	**Saint Lonard,**	**0.09**	**144**	⇓Pg		**Pg**	**Pg**	**18 35 40.8**	**+0.4**
LEO01					Sg		**Sg**	**18 35 42.8**	**+0.9**
SIOO	**Sion-Ophtalmol**	**0.09**	**166**	⇑Pg		**Pg**	**Pg**	**18 35 41.0**	**+0.5**
SIOO					Sg		**Sg**	**18 35 42.8**	**+0.8**
SIOO	**Sion-Ophtalmol**	**0.09**	**166**	⇑Pg		**Pg**	**Pg**	**18 35 41.0**	**+0.5**
SIOO					Sg		**Sg**	**18 35 42.8**	**+0.8**
SIOM	**Sion-Mayennets**	**0.09**	**176**	⇑Pg		**Pg**	**Pg**	**18 35 40.8**	**+0.4**
SIOM					Sg		**Sg**	**18 35 42.4**	**+0.3**
SIOM	**Sion-Mayennets**	**0.09**	**176**	⇑Pg		**Pg**	**Pg**	**18 35 40.8**	**+0.4**
SIOM					Sg		**Sg**	**18 35 42.4**	**+0.3**
SIE01	**Sierre, Farmho**	**0.11**	**117**	⇓Pg		**Pg**	**Pg**	**18 35 41.4**	**+0.6**
SIE01	**Sierre, Farmho**	**0.11**	**117**	⇓Pg		**Pg**	**Pg**	**18 35 41.3**	**+0.5**
SIE01					Sg		**Sg**	**18 35 43.6**	**+1.0**
CON01	**Conthey, Agros**	**0.11**	**198**		Sg		**Sg**	**18 35 43.3**	**+0.7**
VET01	**Vtroz, Route**	**0.11**	**211**	⇑Pg		**Pg**	**Pg**	**18 35 41.1**	**+0.3**
VET01					Sg		**Sg**	**18 35 42.9**	**+0.3**
VET01	**Vtroz, Route**	**0.11**	**211**	⇑Pg		**Pg**	**Pg**	**18 35 41.0**	**+0.2**
VET01					Sg		**Sg**	**18 35 42.9**	**+0.3**
VET02	**Vtroz, Route**	**0.12**	**209**	⇑Pg		**Pg**	**Pg**	**18 35 41.3**	**+0.4**
VET02	**Vtroz, Route**	**0.12**	**209**	⇑Pg		**Pg**	**Pg**	**18 35 41.3**	**+0.4**
RAW1	**Lenk, BE**	**0.12**	**30**	⇑Pg		**Pg**	**Pg**	**18 35 41.2**	**+0.3**
RAW1					Sg		**Sg**	**18 35 43.2**	**+0.3**
RAW1	**Lenk, BE**	**0.12**	**30**	⇑Pg		**Pg**	**Pg**	**18 35 41.2**	**+0.3**
RAW1					Sg		**Sg**	**18 35 43.1**	**+0.2**
VET03	**Vtroz, Le Bot**	**0.12**	**205**	⇑Pg		**Pg**	**Pg**	**18 35 41.5**	**+0.6**
VET03					Sg		**Sg**	**18 35 44.1**	**+1.3**
VET03	**Vtroz, Le Bot**	**0.12**	**205**	⇑Pg		**Pg**	**Pg**	**18 35 41.5**	**+0.6**
VET03					Sg		**Sg**	**18 35 44.1**	**+1.3**
SIEB	**Ecole de Borzu**	**0.13**	**101**	⇓Pg		**Pg**	**Pg**	**18 35 41.6**	**+0.6**
SIEB					Sg		**Sg**	**18 35 43.6**	**+0.6**
SIEB	**Ecole de Borzu**	**0.13**	**101**	⇓Pg		**Pg**	**Pg**	**18 35 41.6**	**+0.5**
SIEB					Sg		**Sg**	**18 35 43.6**	**+0.6**
SARC	**Ardon Commune,**	**0.13**	**211**	⇑Pg		**Pg**	**Pg**	**18 35 41.4**	**+0.3**
SARC					Sg		**Sg**	**18 35 43.6**	**+0.6**
SARC	**Ardon Commune,**	**0.13**	**211**	⇑Pg		**Pg**	**Pg**	**18 35 41.3**	**+0.3**
SARC					Sg		**Sg**	**18 35 43.6**	**+0.6**
SHER	**Hrmence, R**	**0.14**	**168**	⇑Pg		**Pg**	**Pg**	**18 35 41.8**	**+0.5**
SHER					Sg		**Sg**	**18 35 44.0**	**+0.6**
SHER	**Hrmence, R**	**0.14**	**168**	⇑Pg		**Pg**	**Pg**	**18 35 41.8**	**+0.5**
SHER					Sg		**Sg**	**18 35 44.0**	**+0.6**
RAW4	**Former Reservo**	**0.17**	**227**	⇑Pg		**Pg**	**Pg**	**18 35 42.1**	**+0.4**
RAW4	**Former Reservo**	**0.17**	**227**	⇑Pg		**Pg**	**Pg**	**18 35 42.1**	**+0.4**
GRYON	**Gryon**	**0.18**	**248**	⇑Pg		**Pg**	**Pg**	**18 35 42.2**	**+0.2**
GRYON					Sg		**Sg**	**18 35 45.0**	**+0.3**
GRYON	**Gryon**	**0.18**	**248**	⇑Pg		**Pg**	**Pg**	**18 35 42.2**	**+0.2**
GRYON					Sg		**Sg**	**18 35 44.9**	**+0.3**
VANNI	**Vissoie, Val d**	**0.20**	**123**	⇓Pg		**Pg**	**Pg**	**18 35 43.0**	**+0.7**
VANNI	**Vissoie, Val d**	**0.20**	**123**	⇓Pg		**Pg**	**Pg**	**18 35 43.0**	**+0.7**
VANNI					Sg		**Sg**	**18 35 45.9**	**+0.7**
VANNI	**Vissoie, Val d**	**0.20**	**123**	P		**Pg**	**Pg**	**18 35 43.0**	**+0.7**
VANNI					S		**Sg**	**18 35 46.1**	**+0.9**
LKBD2	**Leukerbad 2**	**0.21**	**75**	⇑Pg		**Pg**	**Pg**	**18 35 43.0**	**+0.4**
LKBD2					Sg		**Sg**	**18 35 46.1**	**+0.6**
LKBD2	**Leukerbad 2**	**0.21**	**75**	⇑Pg		**Pg**	**Pg**	**18 35 43.0**	**+0.4**
LKBD2					Sg		**Sg**	**18 35 46.1**	**+0.6**
SCOD	**Cheteau-dO**	**0.22**	**314**	⇓Pg		**Pg**	**Pg**	**18 35 43.1**	**+0.5**
SCOD					Sg		**Sg**	**18 35 46.6**	**+1.0**
SCOD	**Cheteau-dO**	**0.22**	**314**	⇓Pg		**Pg**	**Pg**	**18 35 43.1**	**+0.5**
SCOD					Sg		**Sg**	**18 35 46.6**	**+1.0**
AGA01	**Agarn, Footbal**	**0.22**	**95**	⇑Pg		**Pg**	**Pg**	**18 35 43.4**	**+0.8**
AGA01					Sg		**Sg**	**18 35 46.9**	**+1.2**
AGA01	**Agarn, Footbal**	**0.22**	**95**	⇓Pg		**Pg**	**Pg**	**18 35 43.3**	**+0.7**
AGA01					Sg		**Sg**	**18 35 46.9**	**+1.2**
FULLY	**Reservoir Maze**	**0.22**	**223**	⇑Pg		**Pg**	**Pg**	**18 35 43.1**	**+0.4**
FULLY	**Reservoir Maze**	**0.22**	**223**	⇑Pg		**Pg**	**Pg**	**18 35 43.1**	**+0.4**
FULLY					Sg		**Sg**	**18 35 46.2**	**+0.5**
SZWD2	**Zweisimmen Kir**	**0.23**	**3**	⇑Pg		**Pg**	**Pg**	**18 35 43.4**	**+0.5**
SZWD2					Sg		**Sg**	**18 35 47.0**	**+0.9**
SZWD2	**Zweisimmen Kir**	**0.23**	**3**	⇑Pg		**Pg**	**Pg**	**18 35 43.4**	**+0.5**
SZWD2					Sg		**Sg**	**18 35 47.0**	**+0.9**
DIX	**Grande Dixence**	**0.24**	**171**	Pg		**Pg**	**Pg**	**18 35 43.8**	**+0.6**
DIX					Sg		**Sg**	**18 35 47.0**	**+0.6**
DIX	**Grande Dixence**	**0.24**	**171**	⇑Pg		**Pg**	**Pg**	**18 35 43.8**	**+0.6**
DIX					Sg		**Sg**	**18 35 47.1**	**+0.6**
DIX	**Grande Dixence**	**0.24**	**171**	P		**Pg**	**Pg**	**18 35 43.8**	**+0.6**
DIX					S		**Sg**	**18 35 47.1**	**+0.6**
DIX	**Grande Dixence**	**0.24**	**171**	⇑P		**Pg**	**Pg**	**18 35 43.8**	**+0.6**
DIX					S		**Sg**	**18 35 47.0**	**+0.6**
DIX					AML		AML		
	comp=N,21750μm,0.8s								
DIX					AML		AML		
	comp=E,38250μm,0.3s								
LAVEY	**Lavey les Bain**	**0.26**	**243**	⇑Pg		**Pg**	**Pg**	**18 35 43.7**	**+0.3**
LAVEY					Sg		**Sg**	**18 35 47.3**	**+0.5**
LAVEY	**Lavey les Bain**	**0.26**	**243**	⇑Pg		**Pg**	**Pg**	**18 35 43.7**	**+0.3**
LAVEY					Sg		**Sg**	**18 35 47.3**	**+0.5**
SAIG	**Aigle Rue de l**	**0.27**	**270**	⇑Pg		**Pg**	**Pg**	**18 35 44.1**	**+0.5**
SAIG					Sg		**Sg**	**18 35 48.0**	**+0.9**
SAIG	**Aigle Rue de l**	**0.27**	**270**	Pg		**Pg**	**Pg**	**18 35 44.0**	**+0.4**
SAIG					Sg		**Sg**	**18 35 48.0**	**+0.9**
SGAK	**Gampel Kirche,**	**0.27**	**91**	⇑Pg		**Pg**	**Pg**	**18 35 44.3**	**+0.7**
SGAK					Sg		**Sg**	**18 35 48.0**	**+0.8**
SGAK	**Gampel Kirche,**	**0.27**	**91**	⇓Pg		**Pg**	**Pg**	**18 35 44.2**	**+0.6**
SGAK					Sg		**Sg**	**18 35 48.0**	**+0.8**
AIGLE	**Aigle**	**0.28**	**275**	⇓Pg		**Pg**	**Pg**	**18 35 44.1**	**+0.3**
AIGLE					Sg		**Sg**	**18 35 48.3**	**+0.8**
AIGLE	**Aigle**	**0.28**	**275**	⇓Pg		**Pg**	**Pg**	**18 35 44.1**	**+0.3**
AIGLE					Sg		**Sg**	**18 35 48.2**	**+0.8**
NIE01	**Niedergesteln,**	**0.30**	**91**	⇓Pg		**Pg**	**Pg**	**18 35 44.7**	**+0.5**
NIE01					Sg		**Sg**	**18 35 48.7**	**+0.5**
NIE01	**Niedergesteln,**	**0.30**	**91**	⇓Pg		**Pg**	**Pg**	**18 35 44.7**	**+0.5**
NIE01					Sg		**Sg**	**18 35 48.7**	**+0.5**
ILLEZ	**Chalet Vouargn**	**0.30**	**251**	⇑Pg		**Pg**	**Pg**	**18 35 44.6**	**+0.3**
ILLEZ					Sg		**Sg**	**18 35 49.0**	**+0.7**
ILLEZ	**Chalet Vouargn**	**0.30**	**251**	⇑Pg		**Pg**	**Pg**	**18 35 44.6**	**+0.3**
ILLEZ					Sg		**Sg**	**18 35 49.0**	**+0.7**
LAUCH	**Lauchernalp**	**0.30**	**72**	⇑Pg		**Pg**	**Pg**	**18 35 44.8**	**+0.5**
LAUCH					Sg		**Sg**	**18 35 49.1**	**+0.7**
LAUCH	**Lauchernalp**	**0.30**	**72**	⇑Pg		**Pg**	**Pg**	**18 35 44.8**	**+0.5**
LAUCH					Sg		**Sg**	**18 35 49.1**	**+0.7**
LAUCH	**Lauchernalp**	**0.30**	**72**	P		**Pg**	**Pg**	**18 35 44.8**	**+0.5**
LAUCH					S		**Sg**	**18 35 49.2**	**+0.7**
RAR01	**Raron, Gemeind**	**0.31**	**92**	Sg		**Sg**	**Sg**	**18 35 49.3**	**+0.9**
JAUN	**Jaun, Euschels**	**0.32**	**352**	Pg		**Pg**	**Pg**	**18 35 45.1**	**+0.6**
JAUN					Sg		**Sg**	**18 35 50.1**	**+1.3**
JAUN	**Jaun, Euschels**	**0.32**	**352**	⇑Pg		**Pg**	**Pg**	**18 35 45.1**	**+0.6**
JAUN					Sg		**Sg**	**18 35 50.1**	**+1.3**
SALAN	**Lac Salanfe**	**0.32**	**236**	⇑Pg		**Pg**	**Pg**	**18 35 44.9**	**+0.4**
SALAN					Sg		**Sg**	**18 35 49.4**	**+0.6**
SALAN	**Lac Salanfe**	**0.32**	**236**	⇑Pg		**Pg**	**Pg**	**18 35 44.9**	**+0.4**
SALAN					Sg		**Sg**	**18 35 49.4**	**+0.6**
RAR02	**Raron, Airdrom**	**0.33**	**93**	Pg		**Pg**	**Pg**	**18 35 45.3**	**+0.7**
RAR02					Sg		**Sg**	**18 35 49.9**	**+0.9**
RAR02	**Raron, Airdrom**	**0.33**	**93**	Pg		**Pg**	**Pg**	**18 35 45.2**	**+0.6**
RAR02					Sg		**Sg**	**18 35 50.0**	**+1.0**
NVL3	**Port Valais, L**	**0.34**	**279**	⇓Pg		**Pg**	**Pg**	**18 35 45.2**	**+0.4**
NVL3					Sg		**Sg**	**18 35 50.2**	**+1.0**
SNIB	**St. Niklaus Ba**	**0.34**	**114**	⇓Pg		**Pg**	**Pg**	**18 35 45.5**	**+0.5**
SNIB					Sg		**Sg**	**18 35 50.1**	**+0.5**
SNIB	**St. Niklaus Ba**	**0.34**	**114**	⇓Pg		**Pg**	**Pg**	**18 35 45.5**	**+0.5**
SNIB					Sg		**Sg**	**18 35 50.0**	**+0.5**
EMBD	**Embd, Matterta**	**0.35**	**107**	⇓Pg		**Pg**	**Pg**	**18 35 45.6**	**+0.5**
EMBD					Sg		**Sg**	**18 35 50.1**	**+0.5**
EMBD	**Embd, Matterta**	**0.35**	**107**	⇓Pg		**Pg**	**Pg**	**18 35 45.6**	**+0.5**
EMBD					Sg		**Sg**	**18 35 50.1**	**+0.5**
EMBD	**Embd, Matterta**	**0.35**	**107**	P		**Pg**	**Pg**	**18 35 45.6**	**+0.5**
EMBD					S		**Sg**	**18 35 50.2**	**+0.5**
SVISP	**Visp, Lonza VS**	**0.36**	**93**	⇓Pg		**Pg**	**Pg**	**18 35 45.9**	**+0.6**
SVISP					Sg		**Sg**	**18 35 50.8**	**+0.6**
SVISP	**Visp, Lonza VS**	**0.36**	**93**	⇓Pg		**Pg**	**Pg**	**18 35 45.9**	**+0.6**
SVISP					Sg		**Sg**	**18 35 50.8**	**+0.6**
SVIO	**Visp Obere Sta**	**0.37**	**94**	⇓Pg		**Pg**	**Pg**	**18 35 45.9**	**+0.5**
SVIO					Sg		**Sg**	**18 35 50.9**	**+0.6**
SVIO	**Visp Obere Sta**	**0.37**	**94**	⇓Pg		**Pg**	**Pg**	**18 35 45.9**	**+0.5**
SVIO					Sg		**Sg**	**18 35 50.9**	**+0.6**
SBUL	**Bulle cole,**	**0.37**	**326**	⇓Pg		**Pg**	**Pg**	**18 35 46.4**	**+0.9**
SBUL					Sg		**Sg**	**18 35 52.3**	**+2.0**
SBUL	**Bulle cole,**	**0.37**	**326**	⇓Pg		**Pg**	**Pg**	**18 35 46.4**	**+0.9**
SBUL					Sg		**Sg**	**18 35 52.4**	**+2.0**
SVIT	**Visp-Terbiners**	**0.37**	**94**	⇓Pg		**Pg**	**Pg**	**18 35 46.0**	**+0.6**
SVIT					Sg		**Sg**	**18 35 51.0**	**+0.6**
SVIT	**Visp-Terbiners**	**0.37**	**94**	⇓Pg		**Pg**	**Pg**	**18 35 46.0**	**+0.5**
SVIT					Sg		**Sg**	**18 35 51.0**	**+0.6**
SEMOS	**Emosson Stauma**	**0.38**	**229**	⇑Pg		**Pg**	**Pg**	**18 35 46.1**	**+0.3**
SEMOS	**Emosson Stauma**	**0.38**	**229**	⇑Pg		**Pg**	**Pg**	**18 35 46.1**	**+0.3**
SEMOS					Sg		**Sg**	**18 35 51.3**	**+0.4**
WIMIS	**Wimmis**	**0.39**	**28**	⇑Pg		**Pg**	**Pg**	**18 35 46.4**	**+0.5**
WIMIS	**Wimmis**	**0.39**	**28**	⇑Pg		**Pg**	**Pg**	**18 35 46.4**	**+0.5**
WIMIS					Sg		**Sg**	**18 35 52.4**	**+1.3**
BIBA	**Brigerbad**	**0.40**	**92**	⇓Pg		**Pg**	**Pg**	**18 35 46.6**	**+0.6**
BIBA					Sg		**Sg**	**18 35 51.8**	**+0.5**
BIBA	**Brigerbad**	**0.40**	**92**	⇓Pg		**Pg**	**Pg**	**18 35 46.6**	**+0.5**
BIBA					Sg		**Sg**	**18 35 51.9**	**+0.6**
MFERR	**Prayon, Val Fe**	**0.41**	**205**	⇑Pg		**Pg**	**Pg**	**18 35 46.4**	**+0.3**
MFERR					Sg		**Sg**	**18 35 51.9**	**+0.4**
MFERR	**Prayon, Val Fe**	**0.41**	**205**	⇑Pg		**Pg**	**Pg**	**18 35 46.4**	**+0.3**
MFERR					Sg		**Sg**	**18 35 51.8**	**+0.3**
SZEK	**Zermatt, Kirch**	**0.41**	**137**	⇓Pg		**Pg**	**Pg**	**18 35 46.5**	**+0.4**
SZEK	**Zermatt, Kirch**	**0.41**	**137**	⇓Pg		**Pg**	**Pg**	**18 35 46.5**	**+0.4**
SZEK					Sg		**Sg**	**18 35 52.1**	**+0.5**
SNTZ	**Naters, Zentru**	**0.44**	**89**	⇑Pg		**Pg**	**Pg**	**18 35 47.3**	**+0.5**
SNTZ					Sg		**Sg**	**18 35 53.3**	**+0.7**
SNTZ	**Naters, Zentru**	**0.44**	**89**	Pg		**Pg**	**Pg**	**18 35 47.3**	**+0.5**
SNTZ					Sg		**Sg**	**18 35 53.2**	**+0.7**
STHK	**Thun, Kantonss**	**0.47**	**24**	Pg		**Pg**	**Pg**	**18 35 48.2**	**+0.9**
SIMPL	**Simplonpass**	**0.47**	**100**	⇓Pg		**Pg**	**Pg**	**18 35 47.8**	**+0.5**
SIMPL					Sg		**Sg**	**18 35 54.0**	**+0.5**
SIMPL	**Simplonpass**	**0.47**	**100**	⇓Pg		**Pg**	**Pg**	**18 35 47.8**	**+0.5**
SIMPL					Sg		**Sg**	**18 35 54.0**	**+0.5**
SIMPL	**Simplonpass**	**0.47**	**100**	P		**Pg**	**Pg**	**18 35 47.8**	**+0.5**
SIMPL					S		**Sg**	**18 35 54.1**	**+0.6**
OGSI	**Sixt**	**0.49**	**239**	⇑Pg		**Pg**	**Pg**	**18 35 48.0**	**+0.4**
OGSI					Sg		**Sg**	**18 35 54.8**	**+0.7**
OGSI	**Sixt**	**0.49**	**239**	⇑Pg		**Pg**	**Pg**	**18 35 48.0**	**+0.4**
OGSI					Sg		**Sg**	**18 35 54.7**	**+0.7**
STAF	**Tafers**	**0.49**	**349**	Pg		**Pg**	**Pg**	**18 35 49.0**	**+1.2**
STAF					Sg		**Sg**	**18 35 56.3**	**+2.0**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	⇑Pg		**Pg**	**Pg**	**18 35 48.3**	**+0.3**
REMY					Sg		**Sg**	**18 35 55.0**	**+0.5**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	⇑Pg		**Pg**	**Pg**	**18 35 48.3**	**+0.3**
REMY					Sg		**Sg**	**18 35 54.8**	**+0.3**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	P		**Pg**	**Pg**	**18 35 48.3**	**+0.3**
REMY					S		**Sg**	**18 35 54.9**	**+0.3**
REMY	**Saint-Rhmy-en**	**0.50**	**196**	⇑P		**Pg**	**Pg**	**18 35 48.3**	**+0.3**
REMY					S		**Sg**	**18 35 54.9**	**+0.3**
REMY					AML		AML		
	comp=E,1525μm,0.9s								
REMY					AML		AML		
	comp=N,1805μm,1.4s								
MMK	**Mattmark**	**0.50**	**122**	⇓Pg		**Pg**	**Pg**	**18 35 48.1**	**+0.2**
MMK	**Mattmark**	**0.50**	**122**	⇓Pg		**Pg**	**Pg**	**18 35 48.1**	**+0.2**
MMK					Sg		**Sg**	**18 35 54.8**	**+0.2**
MMK	**Mattmark**	**0.50**	**122**	P		**Pg**	**Pg**	**18 35 48.2**	**+0.2**
MMK					S		**Sg**	**18 35 54.8**	**+0.2**
MMK	**Mattmark**	**0.50**	**122**	P		**Pg**	**Pg**	**18 35 48.1**	**+0.2**
MMK					S		**Sg**	**18 35 54.7**	**+0.2**
MMK					AML		AML		
	comp=N,200μm,0.6s								
MMK					AML		AML		
	comp=E,114μm,0.3s								
MMK					AML		AML		
	comp=N,200μm,1.4s								
SMOE	**Moudon cole,**	**0.52**	**313**	Pg		**Pg**	**Pg**	**18 35 49.0**	**+0.8**
TORNY	**Torny/Romont**	**0.53**	**329**	⇓Pg		**Pg**	**Pg**	**18 35 49.4**	**+0.9**
TORNY					Sg		**Sg**	**18 35 57.3**	**+1.9**
TORNY	**Torny/Romont**	**0.53**	**329**	⇓Pg		**Pg**	**Pg**	**18 35 49.4**	**+0.9**
TORNY					Sg		**Sg**	**18 35 57.2**	**+1.7**
FIESA	**Fiescheralp**	**0.54**	**77**	⇑Pg		**Pg**	**Pg**	**18 35 49.1**	**+0.5**
FIESA					Sg		**Sg**	**18 35 56.1**	**+0.4**
FIESA	**Fiescheralp**	**0.54**	**77**	⇑Pg		**Pg**	**Pg**	**18 35 49.1**	**+0.5**
FIESA					Sg		**Sg**	**18 35 56.0**	**+0.4**
FIESA	**Fiescheralp**	**0.54**	**77**	P		**Pg**	**Pg**	**18 35 49.1**	**+0.5**
FIESA					S		**Sg**	**18 35 56.1**	**+0.4**
BLANC	**P.ta Helbronne**	**0.56**	**212**	⇑Pg		**Pg**	**Pg**	**18 35 49.6**	**+0.5**
BLANC	**P.ta Helbronne**	**0.56**	**212**	⇑Pg		**Pg**	**Pg**	**18 35 49.6**	**+0.5**
BLANC					Sg		**Sg**	**18 35 56.9**	**+0.4**
SCOU	**Cournillens**	**0.56**	**342**	Sg		**Sg**	**Sg**	**18 35 58.3**	**+1.8**
SATI	**Passo dei Sala**	**0.57**	**141**	⇓Pg		**Pg**	**Pg**	**18 35 49.5**	**+0.2**
SATI					Sg		**Sg**	**18 35 56.6**	**-0.2**
SATI	**Passo dei Sala**	**0.57**	**141**	P		**Pg**	**Pg**	**18 35 49.5**	**+0.2**
SATI					S		**Sg**	**18 35 56.6**	**-0.2**
SATI	**Passo dei Sala**	**0.57**	**141**	⇓P		**Pg**	**Pg**	**18 35 49.5**	**+0.2**
SATI					S		**Sg**	**18 35 56.9**	**+0.1**
SATI					AML		AML		
	comp=E,726μm,0.5s								
SATI					AML		AML		
	comp=N,478μm,1.2s								
MRGE	**Morge**	**0.59**	**200**	⇑Pg		**Pg**	**Pg**	**18 35 49.7**	**+0.2**
MRGE					Sg		**Sg**	**18 35 57.3**	**+0.1**
MRGE	**Morge**	**0.59**	**200**	P		**Pg**	**Pg**	**18 35 49.7**	**+0.2**
MRGE					S		**Sg**	**18 35 57.4**	**+0.1**
MRGE	**Morge**	**0.59**	**200**	⇑P		**Pg**	**Pg**	**18 35 49.7**	**+0.2**
MRGE					S		**Sg**	**18 35 57.4**	**+0.1**
MRGE					AML		AML		
	comp=N,1285μm,0.4s								
MRGE					AML		AML		
	comp=E,1545μm,0.5s								
WOLEN	**Wohlen bei Ber**	**0.68**	**1**	⇑Pg		**Pg**	**Pg**	**18 35 52.3**	**+1.0**
WOLEN					PmP			18 35 55.4	
WOLEN					Sg		**Sb**	**18 36 02.3**	**+0.4**
WOLEN					SmS			18 36 06.9	
HASLI	**Hasliberg/Brie**	**0.70**	**51**	⇑Pg		**Pg**	**Pg**	**18 35 52.0**	**+0.2**
GRIMS	**Grimsel Gerste**	**0.72**	**68**	⇑Pg		**Pg**	**Pg**	**18 35 52.4**	**+0.3**
GRIMS					Sg		**Sg**	**18 36 01.7**	**+0.3**
BTNF	**Ladstafel, Nuf**	**0.72**	**77**	⇑Pg		**Pg**	**Pg**	**18 35 52.5**	**+0.4**
BTNF					Sg		**Sg**	**18 36 01.6**	**+0.1**
CIRO	**Champorcher**	**0.73**	**168**	P		**Pg**	**Pg**	**18 35 52.2**	**-0.1**
CIRO					S		**Sg**	**18 36 01.9**	**-0.1**
CIRO	**Champorcher**	**0.73**	**168**	P		**Pg**	**Pg**	**18 35 52.2**	**-0.1**
CIRO					S		**Sg**	**18 36 01.1**	**-0.8**
CIRO					AML		AML		
	comp=E,660μm,0.8s								
CIRO					AML		AML		
	comp=N,596μm,0.5s								
CIRO					AML		AML		
	comp=E,660μm,1.2s								
RA43	**Rhonegletscher**	**0.76**	**69**	⇑Pg		**Pg**	**Pg**	**18 35 53.2**	**+0.4**
RA43					Sg		**Sg**	**18 36 02.8**	**0.0**
GSF03	**Obergoms, Fort**	**0.76**	**70**	⇑Pg		**Pg**	**Pg**	**18 35 53.3**	**+0.4**
GSF03					Sg		**Sg**	**18 36 03.2**	**+0.3**
GIMEL	**St. Georges /**	**0.78**	**286**	Pg		**Pg**	**Pg**	**18 35 54.4**	**+1.2**
GIMEL					Sg		**Sb**	**18 36 06.3**	**+1.4**
GIMEL	**St. Georges /**	**0.78**	**286**	⇓P		**Pg**	**Pg**	**18 35 54.5**	**+1.3**
GIMEL					AML		AML		
	comp=E,504μm,0.8s								
GIMEL					AML		AML		
	comp=N,572μm,0.6s								
A060B	**Romoos, Napf,**	**0.80**	**32**	⇑Pg		**Pg**	**Pg**	**18 35 54.6**	**+1.0**
RSL	**Roselend**	**0.81**	**219**	⇑Pg		**Pg**	**Pg**	**18 35 53.8**	**0.0**
RSL					Sg		**Sg**	**18 36 04.4**	**+0.1**
RSL	**Roselend**	**0

DAVA				*e*Sn		**Sg**	**18 36 44.8**	**+2.7**
	comp=E,186nm,0.3s							
FUORN	**Ofenpass-Fuorn**	**2.03**	**80**	⇓Pn		**Pb**	**18 36 16.4**	**+0.8**
ROTE	**Rottweil**	**2.04**	**26**	⇑Pn		**Pn**	**18 36 12.4**	**-0.5**
CDF	**Champ du Feu**	**2.09**	**359**	*e*Pn		**Pn**	**18 36 13.6**	**-0.1**
CDF	**Champ du Feu**	**2.09**	**359**	*e*Pg		**Pb**	**18 36 17.9**	**+1.4**
CDF				*e*Sg		**Sb**	**18 36 44.4**	**+1.7**
	comp=E,51nm,0.2s							
BFO	**Black Forest**	**2.12**	**18**	⇑Pn		**Pn**	**18 36 13.4**	**-0.5**
BFO	**Black Forest**	**2.12**	**18**	*e*Pn		**Pn**	**18 36 13.4**	**-0.5**
BFO				*e*Pg		**Pg**	**18 36 18.9**	**+0.2**
BFO				*e*Sg		**Sb**	**18 36 45.3**	**+2.1**
CADC	**Capriano del C**	**2.12**	**113**	AML		AML		
	comp=N,454μm,0.8s							
CADC				AML		AML		
	comp=E,577μm,1.3s							
CADC				AML		AML		
	comp=E,577μm,0.7s							
GUT	**Gutenstein**	**2.12**	**34**	⇑Pn		**Pn**	**18 36 13.7**	**-0.3**
A037A	**Kartellspeiche**	**2.14**	**68**	Pn		**Pb**	**18 36 16.9**	**-0.4**
A102A	**Sigmaringen, J**	**2.21**	**34**	⇑Pn		**Pn**	**18 36 14.9**	**-0.3**
OBER	**Oberstdorf**	**2.29**	**61**	*e*Sg		**Sg**	**18 36 52.6**	**+0.7**
VIVF	**Saint-Julien-l**	**2.38**	**233**	*e*P		**Pn**	**18 36 18.4**	**+0.8**
VIVF	**Saint-Julien-l**	**2.38**	**233**	*e*Pg		**Pb**	**18 36 22.9**	**+1.5**
VIVF				*e*Sn		**Sn**	**18 36 45.0**	**-2.0**
VIVF				*e*Sg		**Sb**	**18 36 52.8**	**+1.9**
	comp=E,68nm,0.4s							
FETA	**Feichten**	**2.43**	**72**	Pn		**Pb**	**18 36 21.5**	**-0.7**
	comp=E,2.0nm,0.3s,SNR=16							
FETA				*e*Sn		**Sg**	**18 36 57.7**	**+1.5**
	comp=E,22nm,0.4s							
SMF	**Signal de Mont**	**2.45**	**279**	*e*P		**Pn**	**18 36 19.1**	**+0.7**
SMF	**Signal de Mont**	**2.45**	**279**	*e*Pg		**Pb**	**18 36 24.4**	**+2.0**
SMF				*e*Sn		**Sn**	**18 36 46.6**	**-1.9**
SMF				*e*Sg		**Sb**	**18 36 55.2**	**+2.4**
	comp=E,28nm,0.2s							
SBF	**Sospel**	**2.46**	**179**	*e*P		**Pn**	**18 36 20.4**	**+1.8**
SBF	**Sospel**	**2.46**	**179**	*e*Pg		**Pb**	**18 36 24.1**	**+1.5**
SBF				*e*Sg		**Sb**	**18 36 54.7**	**+1.6**
	comp=E,54nm,0.3s							
SFTF	**Sexfontaines**	**2.46**	**321**	*e*P		**Pn**	**18 36 19.9**	**+1.3**
SFTF	**Sexfontaines**	**2.46**	**321**	*e*Pg		**Pg**	**18 36 26.6**	**+1.3**
SFTF				*e*Sn		**Sn**	**18 36 46.6**	**-2.2**
SFTF				*e*Sg		**Sb**	**18 36 56.0**	**+3.0**
	comp=E,54nm,0.3s							
PAGF	**Fort de Pagny**	**2.50**	**334**	*e*P		**Pn**	**18 36 20.6**	**+1.5**
PAGF				*e*Sn		**Sn**	**18 36 47.9**	**-1.8**
PAGF				*e*Sg		**Sb**	**18 36 56.7**	**+2.6**
	comp=E,40nm,0.3s							
LOR	**Lormes**	**2.58**	**293**	*e*P		**Pn**	**18 36 20.9**	**+0.6**
LOR	**Lormes**	**2.58**	**293**	*e*Pg		**Pb**	**18 36 25.8**	**+1.1**
LOR				*e*Sg		**Sb**	**18 36 59.0**	**+2.4**
	comp=E,36nm,0.3s							
RETA	**Reutte**	**2.61**	**62**	*e*Pn		**Pg**	**18 36 28.0**	**-0.2**
	comp=E,15nm,0.3s							
RETA				*e*Sn		**Sg**	**18 37 02.5**	**+0.4**
	comp=E,16nm,0.2s							
SMRF	**Simiane la Rot**	**2.66**	**209**	*e*P		**Pn**	**18 36 22.9**	**+1.5**
SMRF	**Simiane la Rot**	**2.66**	**209**	*e*Pg		**Pg**	**18 36 28.5**	**-0.7**
SMRF				*e*Sg		**Sg**	**18 37 02.1**	**-1.5**
	comp=E,20nm,0.4s							
MEZF	**Maizieres J'vi**	**2.69**	**325**	*e*P		**Pn**	**18 36 23.2**	**+1.5**
MEZF	**Maizieres J'vi**	**2.69**	**325**	*e*Pg		**Pb**	**18 36 28.1**	**+1.6**
MEZF				*e*Sn		**Sn**	**18 36 52.5**	**-1.8**
MEZF				*e*Sg		**Sb**	**18 37 02.5**	**+3.0**
	comp=E,55nm,0.4s							
ZUGS	**Zugspitze, Sch**	**2.72**	**65**	*e*Pn		**Pn**	**18 36 24.7**	**+2.3**
ZUGS				*e*Sg		**Sg**	**18 37 05.8**	**+0.3**
SAVF	**Savonnieres en**	**2.75**	**327**	*e*P		**Pn**	**18 36 24.1**	**+1.5**
SAVF	**Savonnieres en**	**2.75**	**327**	*e*Pg		**Pb**	**18 36 30.0**	**+2.4**
SAVF				*e*Sn		**Sn**	**18 36 52.0**	**-3.9**
SAVF				*e*Sn		**Sb**	**18 36 53.3**	**-8.1**
SAVF				*e*Sg		**Sg**	**18 37 04.0**	**-2.5**
	comp=E,29nm,0.3s							
SAVF				*e*Sg		Sg	18 37 04.4	-2.1
	comp=E,53nm,0.4s							
SSF	**Saint Saulge**	**2.75**	**287**	*e*P		**Pn**	**18 36 23.5**	**+0.9**
SSF	**Saint Saulge**	**2.75**	**287**	*e*Pg		**Pb**	**18 36 30.0**	**+2.4**
SSF				*e*Sg		**Sb**	**18 37 04.4**	**+3.0**
	comp=E,26nm,0.3s							
MOTA	**Moosalm**	**2.77**	**67**	*e*Pn		**Pn**	**18 36 25.6**	**+2.6**
	comp=E,5.0nm,0.2s,SNR=11							
MOTA				*e*Sn		**Sn**	**18 36 58.6**	**+1.9**
	comp=E,4.6nm,0.2s							
MOTA				*e*Sg		**Sg**	**18 37 09.1**	**+1.9**
	comp=E,33nm,0.4s							
SQTA	**Sankt Quirin**	**2.80**	**70**	*i* Pn		**Pn**	**18 36 26.6**	**+3.3**
	comp=E,3.7nm,0.2s,SNR=7.9							
SQTA				*e*Sn		**Sg**	**18 37 09.9**	**+1.8**
	comp=E,24nm,0.3s							
AVF	**Avril sur Loir**	**2.80**	**281**	*e*P		**Pn**	**18 36 24.1**	**+0.9**
AVF				*e*Sn		**Sn**	**18 36 55.1**	**-2.1**
AVF				*e*Sg		**Sg**	**18 37 06.8**	**-1.3**
	comp=E,11nm,0.3s							
LMR	**La Mourre**	**3.04**	**192**	*e*P		**Pn**	**18 36 28.6**	**+2.0**
LMR	**La Mourre**	**3.04**	**192**	*e*Pg		**Pb**	**18 36 34.2**	**+1.6**
LMR				*e*Sn		**Sn**	**18 37 00.6**	**-2.6**
LMR				*e*Sg		**Sb**	**18 37 12.9**	**+3.0**
	comp=E,25nm,0.4s							
WATA	**Walderalm**	**3.07**	**69**	*e*Pn		**Pn**	**18 36 29.7**	**+2.6**
	comp=E,3.1nm,0.2s,SNR=4.9							
WATA				*e*Sn		**Sg**	**18 37 18.6**	**+1.8**
	comp=E,30nm,0.4s							
BE1	**Monatshausen**	**3.08**	**58**	*e*Pn		**Pn**	**18 36 29.0**	**+1.8**
WTTA	**Wattenberg**	**3.09**	**71**	Pn		**Pn**	**18 36 30.4**	**+3.0**
	comp=E,4.8nm,0.2s,SNR=13							
WTTA				*e*Sn		**Sn**	**18 37 08.3**	**+3.7**
	comp=E,24nm,0.5s							
WTTA	**Wattenberg**	**3.09**	**71**	AML		AML		
	comp=E,136μm,0.8s							
WTTA				AML		AML		
	comp=N,129μm,0.9s							
BGF	**Bois d'Agland**	**3.12**	**276**	*e*P		**Pn**	**18 36 28.6**	**+0.9**
BGF				*e*Sn		**Sn**	**18 37 02.4**	**-2.8**
BGF				*e*Sg		**Sb**	**18 37 16.1**	**+3.9**
	comp=N,28nm,0.3s							
LASF	**Ste Croix**	**3.34**	**229**	*e*P		**Pn**	**18 36 31.8**	**+1.1**
LASF	**Ste Croix**	**3.34**	**229**	*e*Pg		**Pb**	**18 36 39.7**	**+2.1**
LASF				*e*Sg		**Sb**	**18 37 22.1**	**+3.7**
	comp=N,12nm,0.3s							
HYF	**Humbligny**	**3.37**	**288**	*e*P		**Pn**	**18 36 32.7**	**+1.5**
HYF				*e*Sn		**Sn**	**18 37 06.3**	**-5.1**
HYF				*e*Sg		**Sg**	**18 37 24.2**	**-2.3**
	comp=N,134nm,0.4s							
TCF	**Toulx Ste Croi**	**3.56**	**271**	*e*P		**Pn**	**18 36 34.8**	**+1.0**
TCF	**Toulx Ste Croi**	**3.56**	**271**	*e*Pg		**Pg**	**18 36 45.0**	**-1.5**
TCF				*e*Sn		**Sn**	**18 37 14.2**	**-1.9**
TCF				*e*Sg		**Sg**	**18 37 30.7**	**-1.9**
	comp=N,22nm,0.5s							
ABTA	**Abfaltersbach**	**3.59**	**81**	*i* Pn		**Pb**	**18 36 40.6**	**-1.3**
	comp=N,0.4nm,0.2s							
ABTA				*e*Pg		**Pg**	**18 36 46.2**	**-0.7**
	comp=N,3.8nm,0.4s							
ABTA				*e*Sn		**Sb**	**18 37 24.1**	**-1.5**
	comp=N,6.4nm,0.4s							
LESA	**Schwarzleotal**	**3.81**	**71**	*i* Pn		**Pn**	**18 36 39.8**	**+2.5**
	comp=N,3.3nm,0.2s,SNR=9.7							
LESA				*i* Sn		**Sn**	**18 37 23.4**	**+1.0**
	comp=N,6.2nm,0.3s							
PGF	**Pioggiola**	**3.95**	**162**	*e*Pn		**Pn**	**18 36 40.8**	**+1.6**
PGF				*e*Sn		**Sn**	**18 37 21.5**	**-4.2**
	comp=N,2.5nm,0.3s							
CAF	**Calviac**	**3.96**	**251**	*e*P		**Pn**	**18 36 40.7**	**+1.4**
CAF				*e*Sn		**Sn**	**18 37 23.0**	**-2.9**
CAF				*e*Sg		**Sb**	**18 37 41.7**	**+5.3**
	comp=N,15nm,0.5s							
TNS	**Taunus Mts**	**3.97**	**10**	*e*Pn		**Pn**	**18 36 39.1**	**-0.4**
GIVF	**Givet**	**4.15**	**337**	*e*Pn		**Pn**	**18 36 39.7**	**-2.0**
GIVF				*e*Sn		**Sn**	**18 37 26.1**	**-4.3**
GIVF				*e*Sg		**Sg**	**18 37 48.1**	**-3.2**
	comp=N,9.0nm,0.3s							
KBA	**Koelnbreinsper**	**4.19**	**77**	*i* Pn		**Pn**	**18 36 46.0**	**+3.4**
	comp=N,1.8nm,0.2s,SNR=10							
KBA				*e*Pg		**Pg**	**18 37 00.1**	**+1.6**
	comp=N,5.6nm,0.4s							
KBA				*e*Sn		**Sn**	**18 37 36.5**	**+4.8**
	comp=N,3.4nm,0.4s							
KBA				*e*Sg		**Sg**	**18 37 53.3**	**+0.6**
	comp=N,8.7nm,0.6s							
RJF	**Les Rejaudoux**	**4.21**	**258**	*e*Sg		**Sg**	**18 37 50.2**	**-3.0**
	comp=N,8.5nm,0.3s							
CRE	**Caprese Michel**	**4.23**	**128**	AML		AML		
	comp=N,103μm,1.1s							
CRE				AML		AML		
	comp=E,64μm,0.1s							

GRF	**Grafenberg Arr**	**4.26**	**36**	*e*Pg		**Pg**	**18 36 59.0**	**-0.7**
BAIF	**Baives**	**4.29**	**332**	*e*P		**Pn**	**18 36 44.9**	**+1.2**
BAIF				*e*Sn		**Sn**	**18 37 30.0**	**-4.0**
BAIF				*e*Sg		**Sg**	**18 37 52.5**	**-3.5**
	comp=E,8.8nm,0.4s							
BIOA	**Bad Ischl, Aus**	**4.51**	**70**	*e*Pn		**Pg**	**18 37 03.4**	**-1.2**
	comp=E,2.9nm,0.2s							
WET	**Wettzell**	**4.68**	**51**	*e*Pn		**Pn**	**18 36 49.0**	**-0.1**
MTLF	**Montolieu**	**4.71**	**233**	*e*Pn		**Pn**	**18 36 49.3**	**-0.2**
MTLF	**Montolieu**	**4.71**	**233**	*e*Pg		**Pb**	**18 37 04.9**	**+3.9**
MTLF				*e*Sg		**Sg**	**18 38 05.6**	**-3.9**
	comp=E,11nm,0.4s							
LFF	**La Frestale**	**4.84**	**256**	*e*Pn		**Pn**	**18 36 51.0**	**-0.3**
LFF				*e*Sn		**Sn**	**18 37 44.5**	**-3.0**
LFF				*e*Sg		**Sg**	**18 38 10.1**	**-3.4**
	comp=E,12nm,0.5s							
KHC	**Kasperske Hory**	**5.05**	**54**	*e*PN		**Pn**	**18 36 55.3**	**+1.0**
KHC				*e*PG		**Pg**	**18 37 15.0**	**0.0**
KHC				*e*SN		**Sn**	**18 37 51.5**	**-1.3**
KHC				*e*SG		**Sg**	**18 38 18.1**	**-2.3**
	comp=E,16nm,0.4s							
MFF	**Saint Martin d**	**5.19**	**276**	*e*P		**Pn**	**18 36 57.3**	**+1.2**
MFF	**Saint Martin d**	**5.19**	**276**	*e*P		**Pn**	**18 36 57.5**	**+1.4**
MFF				*e*Sn		**Sn**	**18 37 52.7**	**-3.4**
	comp=E,3.1nm,0.2s							
CKRC	**Cesky Krumlov**	**5.33**	**59**	*e*SG		**Sg**	**18 38 27.6**	**-1.7**
	comp=E,8.0nm,0.5s							
LDF	**La Druitiere**	**5.56**	**297**	*e*Pn		**Pn**	**18 36 59.6**	**-1.5**
LDF				*e*Sn		**Sn**	**18 38 00.4**	**-4.7**
LDF				*e*Sg		**Sg**	**18 38 33.8**	**-2.7**
	comp=E,5.4nm,0.3s							
ZVC	**Zvikov**	**5.56**	**53**	*e*SG		**Sg**	**18 38 35.6**	**-1.0**
	comp=E,7.0nm,0.6s							
FLN	**La Foliniere**	**5.84**	**298**	*e*Pn		**Pn**	**18 37 05.7**	**+0.7**
FLN				*e*Sn		**Sn**	**18 38 06.9**	**-5.2**
FLN				*e*Sg		**Sg**	**18 38 41.6**	**-4.0**
	comp=E,7.5nm,0.3s							
GRR	**Gorron**	**5.95**	**293**	*e*P		**Pn**	**18 37 07.5**	**+1.0**
GRR				*e*Sn		**Sn**	**18 38 10.8**	**-4.0**
	comp=E,8.8nm,0.3s							
EPF	**Esparros**	**5.98**	**239**	*e*Pg		**Pg**	**18 37 29.3**	**-3.5**
EPF				*e*Sg		**Sg**	**18 38 46.2**	**-4.0**
	comp=E,3.0nm,0.3s							
CONA	**Conrad Observa**	**6.03**	**71**	*i* Pn		**Pn**	**18 37 08.9**	**+1.3**
	comp=E,0.8nm,0.2s							
CONA				*e*Sn		**Sn**	**18 38 15.0**	**-1.8**
	comp=E,4.1nm,0.3s							
PRU	**Pruhonice**	**6.05**	**50**	*e*SG		**Sg**	**18 38 50.5**	**-1.8**
CLL	**Collm**	**6.23**	**35**	*e*(Pg)		**Pg**	**18 37 35.0**	**-2.4**
CLL				*e*Sg		**Sg**	**18 39 02.0**	**+3.9**
	comp=Z,14nm,1.0s							
RONA	**Rosalia, Austr**	**6.27**	**74**	*i* Pn		**Pn**	**18 37 12.8**	**+1.8**
	comp=Z,1.6nm,0.2s,SNR=4.6							
KRUC	**Moravsky**	**6.69**	**63**	*e*PN		**Pn**	**18 37 17.1**	**+0.4**
KRUC				*e*SN		**Sn**	**18 38 29.5**	**-3.6**
VRAC	**Vranov**	**6.90**	**61**	*e*PN		**Pn**	**18 37 20.5**	**+0.9**
SGMF	**Saint Gilles**	**7.01**	**290**	*e*Pn		**Pn**	**18 37 18.6**	**-2.5**
SGMF				*e*Sn		**Sn**	**18 38 35.1**	**-5.9**
	comp=E,4.1nm,0.2s							
UPC	**Upice**	**7.12**	**51**	*e*SG		**Sg**	**18 39 23.0**	**-3.7**
DPC	**Dobruska-Polom**	**7.21**	**53**	*e*SG		**Sg**	**18 39 25.7**	**-3.8**
QUIF	**Quistinic**	**7.35**	**286**	*e*Pn		**Pn**	**18 37 24.2**	**-1.6**
QUIF				*e*Sn		**Sn**	**18 38 44.1**	**-5.2**
	comp=E,2.3nm,0.2s							
ROSF	**Rostrenen**	**7.50**	**289**	*e*Pn		**Pn**	**18 37 26.6**	**-1.2**
ROSF				*e*Sn		**Sn**	**18 38 47.3**	**-5.6**
	comp=E,2.9nm,0.3s							
MORC	**Moravsky Berou**	**7.65**	**59**	*e*PN		**Pn**	**18 37 30.0**	**+0.1**

CATAC ***07*** *19:03:01.3±0.3, 13˚N±2˚×8˚1W±˚, h10km±2km, M4.6/17, mb4.8/4, mB5.7/3, MLv4.4/17, Mw(mB)5.2/3, Error ellipse: s-maj=4.0km s-min=3.5km az=59.1, confirmed*
RSNC ***07*** *19:03:03.4±0.0, 13˚N±1˚×8˚1W±˚, h1km±2km, ML3.2*
ISC 07 19:03:02.1±1.2, 13.20N±0.05×81.17W±0.05, h13km±9km, n27, σ0s68/33, 1C-1D, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PRVC	**Isla de Provid**	**0.26**	**314**	⇑P		**Pg**		**19 03 07.9**	**+0.3**
PRVC				S		**Sg**		**19 03 11.6**	**+0.3**
PRVC	**Isla de Provid**	**0.26**	**314**	P		**Pg**		**19 03 07.8**	**+0.2**
PRVC				S		**Sg**		**19 03 11.4**	**+0.1**
SAIC	**Isla e San And**	**0.84**	**219**	P		**Pb**		**19 03 18.2**	**-0.4**
SAIC				S		**Sb**		**19 03 30.2**	**+0.4**
SERC	**Banco Serrana,**	**1.34**	**36**	P		**Pg**		**19 03 27.3**	**-0.6**
SERC				S		**Sn**		**19 03 45.5**	**+1.2**
BILN	**Bilwi Airport**	**2.30**	**292**	⇓P		**Pn**		**19 03 39.4**	**-0.5**
BILN				S		**Sn**		**19 04 09.0**	**+1.0**
ESPN	**Las Esperanzas**	**3.21**	**252**	P		**Pn**		**19 03 52.3**	**0.0**
ESPN	**Las Esperanzas**	**3.21**	**252**	S		**Sn**		**19 04 30.9**	**+0.4**
ESPN	**Las Esperanzas**	**3.21**	**252**	P		**Pb**		**19 03 57.9**	**-1.1**
SIUN	**Universidad Ur**	**3.54**	**279**	P		**Pn**		**19 03 56.5**	**-0.3**
DRK0	**Durika**	**4.40**	**208**	P		**Pn**		**19 04 08.8**	**-0.1**
DRK0	**Durika**	**4.40**	**208**	S		**Sn**		**19 04 59.0**	**-1.3**
LCR2	**La Lucha 2**	**4.41**	**219**	S		**Sn**		**19 05 00.9**	**+0.4**
BRU2	**Volcan**	**4.62**	**199**	S		**Sn**		**19 05 05.1**	**-0.4**
MATN	**Matagalpa**	**4.64**	**267**	P		**Pn**		**19 04 11.3**	**-0.8**
JTS	**Las Juntas de**	**4.69**	**232**	P		**Pn**		**19 04 12.7**	**0.0**
JTS				S		**Sn**		**19 05 06.4**	**-0.7**
OCHAL	**Ojochal**	**4.74**	**211**	P		**Pn**		**19 04 14.4**	**+1.1**
OCHAL	**Ojochal**	**4.74**	**211**	S		**Sn**		**19 05 08.4**	**+0.1**
RCPN	**Sur Rio San Ju**	**4.80**	**274**	P		**Pn**		**19 04 14.6**	**+0.3**
RCON	**San Juan de Ri**	**4.86**	**274**	P		**Pn**		**19 04 15.6**	**+0.4**
CDITO	**Canoas**	**4.89**	**200**	S		**Sn**		**19 05 12.8**	**+0.9**
RCVN	**Varillal2**	**4.90**	**275**	P		**Pn**		**19 04 16.1**	**+0.4**
OCON	**Estacion meteo**	**5.18**	**275**	P		**Pn**		**19 04 19.4**	**-0.1**
PIRO	**Carate, Puerto**	**5.21**	**204**	P		**Pn**		**19 04 20.3**	**+0.4**
PIRO	**Carate, Puerto**	**5.21**	**204**	S		**Sn**		**19 05 20.9**	**+1.0**
CMARA	**Lajas Hojancha**	**5.22**	**233**	P		**Pn**		**19 04 21.2**	**+1.1**
MOM3	**MOM3**	**5.26**	**263**	P		**Pn**		**19 04 20.8**	**+0.3**
YUSH	**Yuscaran**	**5.56**	**278**	P		**Pn**		**19 04 24.9**	**+0.1**

IDC ***07*** *19:08:25.9±1.7, 6˚82S×129˚34E, h0km, mb3.7/2, mbtmp3.7/5, ML3.8/3, Error ellipse: s-maj=52.3km s-min=28.1km az=79.0*
ISC 07 19:08:40.2±1.4, 7.69S±0.10×128.9E±0.1, h131km, n6, σ2s24/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.72**	**244**	Pn		**Pn**		**19 10 03.3**	**+0.3**
	8.8nm,0.3s,baz=83,slow=1.8,SNR=15								
BATI				Sn		**Sn**		**19 11 07.2**	**-0.4**
	7.0nm,0.3s,baz=335,slow=24,SNR=9.9								
	22nm,0.4s								
FITZ	**Fitzroy Crossi**	**10.81**	**197**	Pn		**Pn**		**19 11 11.7**	**+0.2**
	0.8nm,0.3s,baz=13,slow=10,SNR=45								
FITZ				Sn		**Sn**		**19 13 09.6**	**-1.1**
	0.7nm,0.3s,baz=69,slow=11,SNR=4.7								
WRA	**Warramunga Arr**	**13.28**	**157**	Pn		**Pn**		**19 11 44.7**	**+0.9**
	0.4nm,0.3s,baz=343,slow=13,SNR=18								
WRA				Sn		**Sn**		**19 14 06.6**	**-3.9**
	0.6nm,0.3s,baz=332,slow=22,SNR=7.1								
	0.3nm,0.3s								
ASAR	**Alice Springs**	**16.60**	**164**	P		**P**		**19 12 29.4**	**+3.8**
	0.2nm,0.3s,baz=337,slow=9.7,SNR=14								
ASAR				S		**Sn**		**19 15 29.7**	**-0.7**
	0.6nm,0.5s,baz=317,slow=16,SNR=6.1								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**68.19**	**327**	P		**P**		**19 19 25.6**	**-0.9**
	0.4nm,0.4s,baz=117,slow=8.0,SNR=11								
	0.4nm,0.4s								
KURBB	**Kurchatov Arra**	**72.52**	**329**	P		**P**		**19 19 51.1**	**-1.5**
	0.4nm,0.6s,baz=131,slow=5.0,SNR=5.9								
	0.4nm,0.6s								

SJA ***07*** *19:13:39.6±0.7, 20˚48S×69˚00W, h116km±4km, ML4.4, MW4.2*
NEIC ***07*** *19:13:40.8±1.5, 20˚46S±0˚02×68˚92W±0˚06, h99km±5km, mb4.3/13, ML4.3(GUC), Error ellipse: s-maj=9.1km s-min=2.3km az=104.0*
GUC ***07*** *19:13:40.8±0.9, 20˚49S×69˚05W, h108km±5km, ML4.4*
IDC ***07*** *19:13:41.6±2.2, 20˚44S×68˚61W, h100km±19km, mb3.9/7, mbtmp4.3/10, MS3.3/1, Error ellipse: s-maj=33.2km s-min=15.4km az=94.0*
VAO ***07*** *19:13:42.0±0.9, 20˚39S×68˚77W, h113km±7km, mb4.6*
ISC 07 19:13:40.5±0.6, 20.50S±0.03×69.00W±0.05, h107km±5km, n106, σ1s70/128, mb4.1/8, 7C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.39**	**338**	Pn		**Pn**		**19 13 57.3**	**+0.5**
PB08				Sn		**Sn**		**19 14 08.1**	**-0.9**
PB01	**IPOC Station P**	**0.71**	**220**			**Pn**		**19 13 59.3**	**+0.5**
PB01	**IPOC Station P**	**0.71**	**220**	⇑*e*P		**Pn**		**19 13 59.2**	**+0.5**
PB01				*e*S		**Sn**		**19 14 12.8**	**+0.4**
PB01				IAML				19 14 14.0	
	comp=E,11μm,0.2s								
PB01	**IPOC Station P**	**0.71**	**220**	*e*P		**Pn**		**19 13 59.1**	**+0.3**
PB01				IAML				19 14 14.2	
	comp=Z,5μm,0.2s								
PB01				*e*S		**Sn**		**19 14 14.2**	**+1.7**
GO01	**Chusmiza**	**0.85**	**347**			**Pn**		**19 14 01.3**	**+0.8**
GO01	**Chusmiza**	**0.85**	**347**	⇓*e*P		**Pn**		**19 14 01.0**	**+0.5**
GO01				*e*S		**Sn**		**19 14 16.3**	**+0.9**
GO01				IAML				19 14 19.1	
	comp=E,17μm,0.1s								
GO01	**Chusmiza**	**0.85**	**347**	*e*P		**Pn**		**19 14 01.2**	**+0.7**
GO01				*e*S		**Sn**		**19 14 16.9**	**+1.4**
GO01				IAML				19 14 17.9	
	comp=Z,5μm,0.7s								
HMBC	**Humberstone**	**0.87**	**285**			**Pn**		**19 14 00.6**	**+0.3**
HMBC				Sn		**Sn**		**19 14 15.5**	**+0.4**
HMBC	**Humberstone**	**0.87**	**285**	⇑*e*P		**Pn**		**19 14 00.5**	**+0.3**
HMBC				*e*S		**Sn**		**19 14 15.2**	**+0.1**
HMBC				IAML				19 14 17.9	
	comp=N,12μm,0.5s								
HMBC	**Humberstone**	**0.87**	**285**	*e*P		**Pn**		**19 13 59.8**	**-0.5**
HMBC				IAML				19 14 17.7	
	comp=Z,9μm,0.5s								
PB11	**IPOC Station P**	**0.96**	**320**			**Pn**		**19 14 01.6**	**+0.3**
PB11	**IPOC Station P**	**0.96**	**320**	*e*P		**Pn**		**19 14 01.8**	**+0.5**
PB11				*e*S		**Sn**		**19 14 17.3**	**+0.4**
PB11	**IPOC Station P**	**0.96**	**320**	*e*P		**Pn**		**19 14 01.6**	**+0.3**
PB11				*e*S		**Sn**		**19 14 17.5**	**+0.7**
PB11				IAML				19 14 18.2	
	comp=Z,5μm,0.2s								
TA02	**Huaiquique**	**1.09**	**282**	⇑*e*P		**Pn**		**19 14 03.2**	**+0.8**
TA02				*e*S		**Sn**		**19 14 18.9**	**0.0**
TA02				IAML				19 14 23.7	
	comp=N,14μm,0.2s								
TA02	**Huaiquique**	**1.09**	**282**	*e*P		**Pn**		**19 14 03.0**	**+0.7**
TA02				*e*S		**Sn**		**19 14 20.1**	**+1.2**
TA02				IAML				19 14 25.4	
	comp=Z,5μm,0.3s								
TA01	**Diego Aracena**	**1.11**	**266**			**Pn**		**19 14 02.9**	**+0.3**
TA01	**Diego Aracena**	**1.11**	**266**	⇑*e*P		**Pn**		**19 14 03.0**	**+0.3**
TA01				*e*S		**Sn**		**19 14 19.5**	**+0.1**
TA01				IAML				19 14 20.4	
	comp=E,3μm,0.4s								
TA01	**Diego Aracena**	**1.11**	**266**	*e*P		**Pn**		**19 14 02.2**	**-0.4**
TA01				*e*S		**Sn**		**19 14 20.8**	**+1.4**
PATCX	**Punta Patache**	**1.13**	**253**			**Pn**		**19 14 03.4**	**+0.4**
PB02	**IPOC Station P**	**1.17**	**226**			**Pn**		**19 14 04.3**	**+0.9**
PB02	**IPOC Station P**	**1.17**	**226**	⇑*e*P		**Pn**		**19 14 04.2**	**+0.7**
PB02				*e*S		**Sn**		**19 14 22.1**	**+1.4**
PB02				IAML				19 14 24.8	
	comp=E,13μm,0.3

PDRB	**Porto dos Gac**	**14.72**	**55**	*eP*		**Pn**	**19 16 59.6**	**-4.0**
ML02	**Panimavida**	**15.35**	**187**	Pn		**Pn**	**19 17 08.7**	**-2.6**
ML02				IAmb		IAmb	19 17 16.6	
	comp=Z,40nm,1.1s							
CLDB	**Colider**	**15.90**	**55**	*eP*		**Pn**	**19 17 17.5**	**-0.8**
ARAG	**Araguaiana, MT**	**17.01**	**77**	*eP*		**Pn**	**19 17 30.9**	**-1.1**
FRTB	**Fartura**	**18.25**	**102**	*eP*		**P**	**19 17 45.6**	**-0.2**
TRQA	**Tornquist**	**18.52**	**162**			**P**	**19 17 49.0**	**+0.4**
TRQA				IAmb		IAmb	19 17 50.2	
	comp=Z,12nm,0.7s							
NPGB	**Novo Progresso**	**18.80**	**47**	*eP*		**P**	**19 17 49.4**	**-2.5**
SNDB	**Serra Nova Dou**	**18.98**	**66**	*eP*		**P**	**19 17 53.2**	**-0.6**
MACA	**Manacapuru-AM**	**19.05**	**26**	P		**P**	**19 17 53.0**	**-1.4**
BB19B	**Bebedouro**	**19.15**	**95**	*eP*		**P**	**19 17 55.1**	**-0.5**
IPMB	**Ipameri, GO**	**19.78**	**86**	*eP*		**P**	**19 18 01.6**	**-0.9**
LR05	**Currie**	**19.83**	**187**			**P**	**19 18 03.7**	**+0.9**
RCLB	**Rio Claro- Sao**	**20.07**	**99**	*eP*		**P**	**19 18 04.9**	**-0.7**
PLCA	**Paso Flores**	**20.21**	**183**			**P**	**19 18 08.2**	**+1.2**
PLCA				IAmb		IAmb	19 18 09.3	
	comp=Z,14nm,0.9s							
PLCA	**Paso Flores**	**20.21**	**183**	P		**P**	**19 18 08.5**	**+1.5**
	comp=Z,9.1nm,0.9s,baz=8.8,slow=12,SNR=17							
	comp=Z,9.1nm,0.9s							
PLCA	**Paso Flores**	**20.21**	**183**	*eP*		**P**	**19 18 08.5**	**+1.5**
ITTB	**Itaituba**	**20.58**	**41**	*eP*		**P**	**19 18 09.0**	**-2.2**
MAL2	**Monte Alegre,**	**23.38**	**40**			**P**	**19 18 37.4**	**-2.6**
MAL2				IAmb		IAmb	19 18 39.2	
	comp=Z,12nm,0.7s							
SMTB	**Santa Maria do**	**23.69**	**64**	*eP*		**P**	**19 18 41.5**	**-1.2**
BOAV	**Boa Vista**	**24.22**	**21**			**P**	**19 18 46.6**	**-0.9**
BOAV	**Boa Vista**	**24.22**	**21**	*eP*		**P**	**19 18 47.6**	**+0.1**
SDBA	**SAO DESIDERIO**	**24.44**	**75**	*eP*		**P**	**19 18 48.7**	**-0.9**
RUSC	**La Rusia**	**26.54**	**351**			**P**	**19 19 09.3**	**+0.4**
RUSC				IAmb		IAmb	19 19 10.8	
	comp=Z,12nm,0.8s							
MDP	**Montagnes des**	**30.09**	**34**	LR		LR	19 31 32.0	
	comp=Z,51nm,19.5s,baz=114,slow=36							
SNAA	**Sanae**	**63.24**	**161**	IAmb		IAmb	19 23 59.4	
	comp=Z,1.6nm,0.7s							
SNAA	**Sanae**	**63.24**	**161**	P		**P**	**19 23 58.4**	**+1.1**
	comp=Z,1.6nm,0.6s,baz=272,slow=8.0,SNR=17							
	comp=Z,1.6nm,0.6s							
DBIC	**Dimbokro**	**68.53**	**74**	P		**P**	**19 24 31.5**	**-0.6**
DBIC	**Dimbokro**	**68.53**	**74**	P		**P**	**19 24 31.5**	**-0.6**
	comp=Z,11nm,0.8s,baz=259,slow=5.5,SNR=13							
	comp=Z,11nm,0.8s							
QSPA	**South Pole Qui**	**69.69**	**180**	P		**P**	**19 24 42.6**	**+4.1**
	comp=Z,0.7nm,0.4s,baz=223,slow=2.3,SNR=1.7							
	comp=Z,0.7nm,0.4s							
TORD	**Torodi Ar. Bea**	**77.10**	**71**	IAmb		IAmb	19 25 23.4	
	comp=Z,3.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**77.10**	**71**	P		**P**	**19 25 22.1**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=276,slow=4.0,SNR=5.0							
	comp=Z,2.3nm,0.5s							
ESDC	**Sonseca Array**	**85.18**	**45**	IAmb		IAmb	19 26 15.4	
	comp=Z,4.7nm,1.5s							
ESDC	**Sonseca Array**	**85.18**	**45**	P		**P**	**19 26 06.1**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=238,slow=6.0,SNR=4.2							
	comp=Z,1.5nm,0.9s							
MAW	**Mawson**	**85.31**	**163**	P		**P**	**19 26 06.2**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=236,slow=11,SNR=2.3							
	comp=Z,1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**141.09**	**25**	PKP		**PKiKP**	**19 33 00.4**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=346,slow=3.0,SNR=4.0							
MKAR	**Makanchi Array**	**144.87**	**35**	PKP		**PKPdf**	**19 33 05.5**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=343,slow=3.8,SNR=12							
SONM	**Songino Array**	**152.48**	**7**	PKPbc		**PKiKP**	**19 33 26.0**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=51,slow=0.9,SNR=1.9							

IDC 07 19:29:11.7±2.1, 6°26S×129°73E, h0km, mb3.4/1, mbtmp3.6/5, ML3.7/4, Error ellipse: s-maj=53.8km s-min=28.5km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.17**	**236**	Pn	Pn	19 31 00.1	+2.2
	5.6nm,0.3s,baz=130,slow=2.7,SNR=10						
BATI				Sn	Sn	19 32 08.7	-12
	5.6nm,0.3s,baz=106,slow=12,SNR=6.9						
	19nm,0.4s						
FITZ	**Fitzroy Crossi**	**12.43**	**198**	Pn	Pn	19 32 08.7	-1.3
	0.2nm,0.3s,baz=12,slow=9.7,SNR=16						
FITZ				Sn	Sn	19 34 07.4	-22
	0.8nm,0.3s,baz=142,slow=19,SNR=9.1						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**14.32**	**162**	Pn	Pn	19 32 35.0	-0.9
	0.3nm,0.3s,baz=340,slow=13,SNR=9.1						
WRA				Sn	Sn	19 35 04.0	-12
	0.4nm,0.3s,baz=317,slow=26,SNR=6.8						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**17.77**	**167**	P	Pn	19 33 21.1	+0.4
	0.2nm,0.3s,baz=339,slow=9.7,SNR=20						
ASAR				S	Sn	19 36 28.2	-11
	0.4nm,0.7s,baz=346,slow=24,SNR=5.2						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**67.46**	**327**	P	P	19 40 09.2	-0.2
	0.2nm,0.6s,baz=122,slow=8.1,SNR=4.3						
	0.2nm,0.6s						

*ISN **07** 19:52:51.1±1.8, 35°.19N×45°.93E, h14km±12km, ML2.7*
*TEH **07** 19:52:52.0, 35°.21N×45°.82E, h6km±33km*
ISC 07 19:52:51.6±1.0, 35°.23N±0°.06×45°.88E±0°.05, h10km, n9, σ1°28/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.67**	**142**	Pg	**Pn**	**19 53 06.3**	**-1.1**
IGHG	**Ghaleghazi**	**1.06**	**148**	Pg	**Pn**	**19 53 14.6**	**+1.8**
GLG1	**Gilan-e-Gharb**	**1.12**	**179**	Pg	**Pn**	**19 53 14.7**	**+1.3**
IKRK	**Kirkuk**	**1.27**	**278**	*e*Pg	**Pg**	**19 53 16.0**	**0.0**
IKRK				*e*Sg	**Sb**	**19 53 32.0**	**0.0**
IKRK				AML	AML	19 53 35.7	
	comp=N,188nm,0.5s						
IKRK				AML	AML	19 53 36.7	
	comp=E,130nm,0.7s						
SNQR	**Sonqor, Kerman**	**1.48**	**104**	Pg	**Pg**	**19 53 20.7**	**+0.7**
MAHB	**Mahabad**	**1.54**	**355**	Pg	**Pg**	**19 53 21.3**	**+0.1**
IBDR	**Badra**	**2.12**	**179**	*e*Pg	**Pn**	**19 53 28.0**	**+1.0**
IBDR				*e*Sg	**Sb**	**19 53 56.0**	**-0.4**
BHD	**Baghdad**	**2.32**	**213**	*e*Pn	**Pn**	**19 53 31.0**	**+1.2**
BHD				*e*Sn	**Sb**	**19 54 00.0**	**-2.2**
HAGD	**Aghdareh**	**2.71**	**98**	Pn	**Pb**	**19 53 39.4**	**-0.9**

*CATAC **07** 19:57:16.9±0.6, 14°.N×3°.9°1W±°, h29km±3km, M3.7/12, MLv3.7/12, Error ellipse: s-maj=8.3km s-min=2.9km az=31.1, confirmed*
*GCG **07** 19:57:17.8±1.6, 14°.04N×91°.29W, h53km±14km, MD3.8, ML4.1*
*SNET **07** 19:57:18.2±1.0, 14°.12N×91°.17W, h21km±5km, ML3.7*
ISC 07 19:57:15.9±2.2, 13°.92N±0°.06×91°.22W±0°.05, h11km±15km, n36, σ1°09/50, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG2	**El Palmar, Qui**	**0.54**	**343**	*e*P	**Pn**	**19 57 32.6**	**+3.0**
STG2				*e*S	**Sn**	**19 57 43.0**	**+4.3**
ESSG	**Sabana Grande**	**0.59**	**39**	*e*P	**Pn**	**19 57 30.3**	**0.0**
ESSG				*e*S	**Sn**	**19 57 39.9**	**-0.2**
RTAL	**Retalhuleu**	**0.76**	**322**	*e*P	**Pb**	**19 57 30.9**	**-0.2**
RTAL				*e*S	**Sb**	**19 57 39.5**	**-1.9**
RTAL	**Retalhuleu**	**0.76**	**322**	S	**Sb**	**19 57 41.1**	**-0.4**
RTAL	**Retalhuleu**	**0.76**	**322**	P	**Pb**	**19 57 30.9**	**-0.2**
FG16	**Alotenango, Sa**	**0.77**	**63**	*i* P	**Pb**	**19 57 31.2**	**-0.2**
FG16				*e*S	**Sb**	**19 57 41.5**	**-0.4**
FG16				IAML		19 57 42.4	
	comp=N,42μm,0.2s						
ESSJ	**San Jos, E**	**0.78**	**117**	*i* P	**Pb**	**19 57 29.6**	**-1.8**
PCG5	**San Vicente Pa**	**0.87**	**70**	*e*P	**Pb**	**19 57 32.4**	**-0.6**
PCG5				*e*S	**Sb**	**19 57 43.4**	**-1.3**
SOKI	**Kika Raxquin**	**0.91**	**349**	*e*P	**Pb**	**19 57 33.4**	**-0.6**
SOKI				*e*S	**Sb**	**19 57 45.8**	**-0.5**
SOKI				IAML		19 57 50.0	
	comp=E,3μm,0.9s						
QUEO	**Labor Ovalle**	**0.99**	**343**	*e*P	**Pn**	**19 57 35.5**	**-0.4**
QUEO				*e*S	**Sg**	**19 57 48.6**	**+0.7**
FAME	**Alcaldia de Sa**	**1.17**	**94**	P	**Pb**	**19 57 38.3**	**+0.2**
FAME	**Alcaldia de Sa**	**1.17**	**94**	S	**Sn**	**19 57 53.2**	**-0.9**
APG	**El Apazote**	**1.30**	**34**	*e*P	**Pn**	**19 57 39.7**	**-0.5**
QUIS	**Sacapulas**	**1.37**	**5**	*e*P	**Pn**	**19 57 40.5**	**-0.6**
QUIS				*e*S	**Sb**	**19 57 58.6**	**-0.6**
QUIS				IAML		19 58 00.1	
	comp=E,575nm,0.4s						
NUBE	**Las Nubes**	**1.40**	**91**	*e*P	**Pb**	**19 57 42.0**	**-0.1**
NUBE				*e*S	**Sb**	**19 58 00.3**	**+0.4**
NUBE	**Las Nubes**	**1.40**	**91**	*e*P	**Pb**	**19 57 42.2**	**+0.2**
NUBE				*i* S	**Sb**	**19 58 00.0**	**+0.1**
NUBE	**Las Nubes**	**1.40**	**91**	P	**Pb**	**19 57 42.2**	**+0.2**
SLOZ	**Alcaldia de Sa**	**1.40**	**85**	S	**Sb**	**19 57 59.7**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.40**	**85**	P	**Pn**	**19 57 40.7**	**-0.6**
LOAL	**Lomas de Alarc**	**1.40**	**87**	*e*P	**Pb**	**19 57 42.5**	**+0.5**
LOAL				*e*S	**Sb**	**19 58 00.5**	**+0.6**
LOAL	**Lomas de Alarc**	**1.40**	**87**	P	**Pb**	**19 57 42.4**	**+0.4**
HUEH	**Huehuetenango**	**1.42**	**349**	P	**Pn**	**19 57 40.4**	**-1.4**
HUEH	**Huehuetenango**	**1.42**	**349**	S	**Sn**	**19 57 58.3**	**-2.3**
RBDL	**Robledal**	**1.50**	**82**	*e*P	**Pn**	**19 57 43.0**	**+0.2**
CEVE	**Cerro Verde**	**1.55**	**93**	*e*P	**Pb**	**19 57 44.8**	**+0.1**
CEVE				*e*S	**Sb**	**19 58 05.3**	**+0.9**
CEVE	**Cerro Verde**	**1.55**	**93**	P	**Pb**	**19 57 44.6**	**-0.1**
SBLS	**San Blas**	**1.55**	**93**	*e*P	**Pb**	**19 57 44.9**	**+0.2**
SNJE	**San Jose**	**1.56**	**92**	*e*P	**Pb**	**19 57 45.2**	**+0.3**
UNIC	**Universidad Ca**	**1.62**	**88**	S	**Sb**	**19 58 06.6**	**+0.3**
JAYA	**Jayaque - finc**	**1.74**	**99**	*e*P	**Pn**	**19 57 46.4**	**+0.3**
JAYA				*e*S	**Sb**	**19 58 09.4**	**-0.4**
JAYA				IAML		19 58 12.6	
	comp=Z,718nm,0.2s						
JAYA	**Jayaque - finc**	**1.74**	**99**	*e*P	**Pb**	**19 57 47.3**	**-0.5**
JAYA	**Jayaque - finc**	**1.74**	**99**	S	**Sb**	**19 58 08.6**	**-1.1**
JAYA	**Jayaque - finc**	**1.74**	**99**	P	**Pb**	**19 57 47.8**	**-0.1**
PMON	**Piamonte**	**1.86**	**96**	*e*S	**Sb**	**19 58 12.5**	**-0.8**
MTO3	**Montecristo**	**1.86**	**75**	P	**Pn**	**19 57 47.5**	**-0.4**
CNCH	**Conchagua**	**3.35**	**101**	P	**Pn**	**19 58 09.1**	**+0.8**
CNCH				S	**Sn**	**19 58 49.6**	**+1.5**

*NEIC **07** 20:24:35.8±0.8, 35°.836N±0°.005×117°.67W±0°.02, h9km±6km, Error ellipse: s-maj=1.9km s-min=0.7km az=78.0*
PAS 07 20:24:36.3±0.7, 35°.830N±0°.007×117°.66W±0°.01, h4km±3km, ML3.0/19, ML2.8/116(NEIC), Error ellipse: s-maj=1.3km s-min=1.0km az=57.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLC	**China Lake**	**0.06**	**105**		Pg	20 24 37.8	+0.1
CLC	**China Lake**	**0.06**	**105**	IAML		20 24 39.2	
	comp=N,6μm,0.5s						
CLC				IAML		20 24 39.4	
	comp=E,7μm,0.2s						
TOW	**Tower One**	**0.09**	**256**		Pg	20 24 38.8	+0.6
TOW					Sg	20 24 41.1	+1.7
SRTC	**Snort**	**0.15**	**207**		Pg	20 24 39.8	+0.4
WVPM	**Volcano Peak E**	**0.17**	**314**		Pg	20 24 39.9	+0.1
GPO	**China Lake**	**0.18**	**180**		Pg	20 24 40.0	+0.1
GPO					Sg	20 24 43.5	+1.2
JRC2	**Joshua Ridge**	**0.19**	**322**		Pg	20 24 40.3	+0.1
WNMM	**Nine Mile Cany**	**0.20**	**274**		Pg	20 24 40.3	+0.2
WCSM	**Coso Springs S**	**0.21**	**337**		Pg	20 24 40.6	+0.1
WCSM					Sg	20 24 43.7	+0.4
WRVM	**Rose V. Centra**	**0.26**	**314**		Pg	20 24 41.4	0.0
MPMC	**Manual Prospec**	**0.27**	**32**		Pg	20 24 41.5	-0.1
MPMC				IAML		20 24 45.8	
	comp=E,926nm,0.5s						
WSHM	**Spangler Hills**	**0.27**	**149**		Pg	20 24 41.4	-0.1
WSHM				IAML		20 24 46.1	
	comp=E,2μm,0.2s						
LRMC	**Laurel Mtn Rad**	**0.35**	**183**		Pg	20 24 43.0	-0.2
CCCA	**Chr Cany lake**	**0.39**	**141**		Pg	20 24 44.1	+0.2
QSM	**Queen of Sheba**	**0.66**	**78**		Pg	20 24 48.5	-0.5
QSM				IAML		20 24 59.4	
	comp=N,558nm,0.6s						
QSM				IAML		20 25 02.4	
	comp=E,420nm,0.5s						
ISA	**Isabella, Lake**	**0.68**	**256**		Pg	20 24 49.0	-0.4
ISA				IAML		20 24 58.7	
	comp=E,451nm,0.3s						
ISA				IAML		20 24 58.8	
	comp=N,588nm,0.4s						
CWC	**Cottonwood Cre**	**0.70**	**331**		Pg	20 24 49.4	-0.3
CWC				IAML		20 24 59.5	
	comp=E,371nm,0.3s						
CWC				IAML		20 25 00.5	
	comp=N,289nm,0.2s						
GSC	**Goldstone, Bar**	**0.88**	**127**	IAML		20 25 07.3	
	comp=N,276nm,0.5s						
GSC				IAML		20 25 09.4	
	comp=E,214nm,0.5s						
GWY	**Greenwater Val**	**0.88**	**66**		Pg	20 24 52.8	-0.5
GWY				IAML		20 25 07.6	
	comp=E,409nm,0.3s						
GWY				IAML		20 25 09.7	
	comp=N,262nm,0.4s						
FURC	**Furnace Creek,**	**0.91**	**45**		Pg	20 24 53.6	-0.2
FURC				IAML		20 25 12.2	
	comp=N,391nm,0.7s						
TPO	**Tropico Hills**	**1.06**	**206**		Pg	20 24 55.6	-1.0
TPO				IAML		20 25 13.0	
	comp=N,280nm,1.0s						
TPO				IAML		20 25 13.2	
	comp=E,173nm,0.6s						
SHOC	**Shoshone, Teco**	**1.13**	**86**		Pg	20 24 56.9	-1.1
VES	**Vestal, Richgr**	**1.16**	**271**		Pg	20 24 57.7	-0.8
GRAC	**Grapevine Rang**	**1.19**	**12**		Pg	20 24 58.4	-0.7
WCT	**Wildcat Mounta**	**1.27**	**41**		Pg	20 24 59.6	-1.2
TIN	**Tinemaha, Big**	**1.30**	**340**		Pg	20 25 00.9	-0.5
TIN				IAML		20 25 20.6	
	comp=N,226nm,0.6s						
TIN				IAML		20 25 22.8	
	comp=E,250nm,0.5s						
OSI	**Osito Audit: C**	**1.49**	**216**		Pn	20 25 03.1	-0.8
GMN	**Gold Mountain**	**1.50**	**12**		Pn	20 25 03.5	-0.8
GMN				IAML		20 25 27.4	
	comp=N,84nm,0.7s						
DSP	**Deep Springs**	**1.56**	**351**		Pn	20 25 04.2	-0.6
DSP				IAML		20 25 27.2	
	comp=N,76nm,0.5s						
DSP				IAML		20 25 27.3	
	comp=E,185nm,0.4s						
BFSC	**Mount Baldy Ra**	**1.59**	**180**		Pn	20 25 05.4	+0.1
BFSC				IAML		20 25 27.6	
	comp=N,61nm,0.3s						
BFSC				IAML		20 25 29.2	
	comp=E,59nm,0.5s						
TPNV	**Topopah Spring**	**1.60**	**45**		Pn	20 25 04.3	-1.2
TPNV				IAML		20 25 30.2	
	comp=E,70nm,0.5s						
TPNV				IAML		20 25 30.5	
	comp=E,73nm,0.5s						
MWC	**Mount Wilson**	**1.64**	**192**		Pn	20 25 05.7	-0.3
MWC				IAML		20 25 30.5	
	comp=N,161nm,0.5s						
MWC				IAML		20 25 31.5	
	comp=E,100nm,0.5s						
PASC	**Pasadena Art C**	**1.71**	**195**		Pn	20 25 06.2	-0.7
MDPB	**Devils Postpil**	**2.13**	**328**		Pb	20 25 15.2	-0.5
MDPB				IAML		20 25 43.7	
	comp=E,51nm,0.2s						
MDPB				IAML		20 25 46.1	
	comp=N,44nm,0.4s						
SHPR	**Sheep Range**	**2.13**	**71**		Pn	20 25 12.5	-0.4
ELS	**Elsinore Mount**	**2.19**	**175**		Pn	20 25 12.6	-0.9
DANC	**Danby, Needles**	**2.21**	**122**		Pn	20 25 13.6	-0.3
DANC				IAML		20 25 52.3	
	comp=E,84nm,0.6s						
DANC				IAML		20 25 55.3	
	comp=N,76nm,0.6s						
BELC	**Belle Mtn. Jos**	**2.28**	**143**		Pn	20 25 13.6	-1.3
BELC				IAML		20 25 50.1	
	comp=E,28nm,0.4s						
V12A	**Nelson**	**2.29**	**92**		Pn	20 25 14.6	-0.4
V12A				IAML		20 25 51.8	
	comp=N,40nm,1.1s						
PKD	**Bear Valley Ra**	**2.34**	**274**		Pn	20 25 15.3	-0.3
PKD				IAML		20 25 57.7	
	comp=N,36nm,1.0s						
PKD				IAML		20 25 59.1	
	comp=E,30nm,0.6s						
S11A	**Rachel**	**2.38**	**40**		Pb	20 25 19.3	-0.5
S11A				IAML		20 26 04.0	
	comp=E,60nm,0.7s						
S11A				IAML		20 26 04.5	
	comp=N,48nm,0.9s						
PFO	**Pinyon Flats O**	**2.42**	**156**		Pn	20 25 17.1	+0.2
LHV	**Little Huntoon**	**2.51**	**345**		Pn	20 25 18.2	+0.3
LHV				IAML		20 25 59.8	
	comp=E,24nm,0.5s						
PRN	**Pahroc Range**	**2.62**	**52**		Pn	20 25 18.9	-0.8
PRN				IAML		20 26 10.8	
	comp=E,33nm,0.9s						
PRN				IAML		20 26 15.5	
	comp=N,34nm,0.9s						
NVAR	**Mina Array Bea**	**2.65**	**349**		Pb	20 25 25.4	+1.0
IRM	**Iron Mountain**	**2.66**	**128**		Pn	20 25 19.1	-0.9
IRM				IAML		20 26 01.0	
	comp=E,26nm,0.4s						
BORC	**Borrego Spring**	**2.75**	**158**	IAML		20 26 08.3	
	comp=E,19nm,0.8s						
BBGB	**Big Mountain B**	**2.83**	**286**		Pn	20 25 22.4	0.0
DPP	**Dos Picos Cty**	**2.89**	**168**		Pb	20 25 28.8	+0.4
DPP				IAML		20 27 05.7	
	comp=N,28nm,0.5s						
DPP				IAML		20 27 05.8	
	comp=E,22nm,0.1s						
R11B	**Troy Canyon, C**	**3.01**	**33**		Pb	20 25 30.7	0.0
WAKR	**Walker**	**3.02**	**333**		Pb	20 25 31.8	+0.9
BAR	**Barrett**	**3.25**	**165**	IAML		20 26 17.7	
	comp=E,26nm,0.7s						
BAR				IAML		20 26 17.9	
	comp=N,26nm,0.5s						
SPR3	**Spring Creek 3**	**4.13**	**39**		Pb	20 25 50.9	+1.1
U15A	**North Rim**	**4.39**	**81**		Pb	20 25 56.9	+2.7

*SKO **07** 20:30:13.9, 42°.38N×21°.60E, h8km, ML2.3*
*SOF **07** 20:30:13.9, 42°.33N±0°.02×21°.58E±0°.03, h6km±5km, MD2.7/4*
*BEO **07** 20:30:15.1±0.4, 42°.44N×21°.53E, h0km, ML1.9/17*
ISC 07 20:30:14.1±1.1, 42°.39N±0°.02×21°.57E±0°.02, h5km±9km, n32, σ0°87/60, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.43**	**193**	*i*Pg	**Pg**	**20 30 22.5**	**+0.1**
SKO				*i* Sg	**Sg**	**20 30 28.5**	**+0.5**
BARS	**Barje**	**0.46**	**23**	*i*Pg	**Pg**	**20 30 22.8**	**-0.3**
BARS				*i* Sg	**Sg**	**20 30 29.3**	**+0.3**
BARS	**Barje**	**0.46**	**23**	*e*Pg	**Pg**	**20 30 22.7**	**-0.3**
BARS				*e*Sg	**Sg**	**20 30 29.3**	**+0.3**
BOSS	**Bosilegrad**	**0.68**	**81**	*e*Pg	**Pg**	**20 30 27.4**	**+0.2**
BOSS				*e*Sg	**Sg**	**20 30 36.6**	**+0.6**
PEHC	**Pehcevo**	**1.16**	**121**	*i*Pg	**Pg**	**20 30 35.2**	**-1.2**
PEHC				*i* Sg	**Sn**	**20 30 52.4**	**-1.1**
PEHC				*e*Lg	Lg	20 30 52.6	
	comp=N,51nm,0.5s						
PEHC				*e*Lg	Lg	20 30 53.1	
	comp=E,52nm,0.3s						
ZAPS	**Zavoj**	**1.18**	**41**	*e*Pg	**Pn**	**20 30 36.9**	**-0.4**
ZAPS				*e*Sg	**Sn**	**20 30 52.9**	**-0.8**
BOVS	**Bovan**	**1.25**	**4**	*e*Pg	**Pn**	**20 30 36.6**	**-1.6**
BOVS				*e*Sg	**Sg**	**20 30 53.6**	**-0.6**
VTS	**Vitosha**	**1.25**	**79**	P	**Pn**	**20 30 38.1**	**-0.3**
VTS				S	**Sn**	**20 30 55.0**	**-0.7**
VTS	**Vitosha**	**1.25**	**79**	*e*Pg	**Pb**	**20 30 37.9**	**-0.4**
VTS				*e*Sg	**Sb**	**20 30 54.5**	**-0.2**
GOCS	**Kraljevo Serbi**	**1.28**	**337**	*e*Pg	**Pn**	**20 30 37.4**	**-1.3**
GOCS				*e*Sg	**Sg**	**20 30 54.3**	**-0.9**
KKB	**Krupnik**	**1.28**	**115**	P	**Pg**	**20 30 38.4**	**-0.2**
KKB				S	**Sn**	**20 30 55.8**	**-0.5**
KKB	**Krupnik**	**1.28**	**115**	*i* Pg	**Pg**	**20 30 38.5**	**-0.2**
KKB				*i* Sg	**Sn**	**20 30 57.0**	**+0.8**
VAY	**Valandovo**	**1.30**	**145**	*i* Pg	**Pg**	**20 30 39.0**	**-0.1**
VAY				*i* Sg	**Sn**	**20 30 58.1**	**+1.4**
VAY				*e*Lg	Lg	20 30 59.9	
	comp=N,33nm,0.8s						
VAY				*e*Lg	Lg	20 31 01.4	
	comp=E,45nm,0.9s						
BLSH	**Balsha**	**1.34**	**69**	P	**Pg**	**20 30 40.8**	**+0.9**
BLSH				S	**Sn**	**20 30 59.2**	**+1.4**
PLNA	**Plana**	**1.38**	**86**	P	**Pg**	**20 30 40.4**	**-0.1**
PLNA				S	**Sn**	**20 30 59.0**	**+0.3**
OHR	**Ohrid**	**1.40**	**205**	*i* Pg	**Pg**	**20 30 40.9**	**-0.2**
OHR				*i* Sg	**Sg**	**20 31 00.5**	**+1.3**
OHR				*e*Lg	Lg	20 31 02.0	
	comp=N,38nm,0.5s						
OHR				*e*Lg	Lg	20 31 02.7	
	comp=E,66nm,0.6s						
SJES	**Sjenica**	**1.46**	**307**	*e*Pg	**Pn**	**20 30 40.2**	**-1.0**
SJES				*e*Sg	**Sn**	**20 30 59.3**	**-1.5**
ZAGS	**Zajecar**	**1.50**	**19**	*e*Pg	**Pn**	**20 30 41.4**	**-0.3**
ZAGS				*e*Sg	**Sn**	**20 31 00.7**	**-0.9**
IVAS	**Ivanjica**	**1.58**	**319**	*e*Pg	**Pn**	**20 30 41.2**	**-1.6**
IVAS				*e*Sg	**Sn**	**20 31 03.8**	**+0.2**
KNT	**Kendrikon**	**1.58**	**141**	*i* Pn	**Pb**	**20 30 43.0**	**-0.7**
GRUS	**Gruza**	**1.62**	**338**	*e*Pg	**Pn**	**20 30 43.5**	**+0.2**
GRUS				*e*Sg	**Sb**	**20 31 05.6**	**+0.3**
BORS2	**Bor- Borsko je**	**1.73**	**11**	*e*Pg	**Pn**	**20 30 44.8**	**0.0**
BORS2				*e*Sg	**Sb**	**20 31 08.2**	**-0.2**

ML2.8(DNK),Confirmed Earthquake
*DNK **07** 21:05:59.0±2.1,79.08N×3.00E,h36km±17km,ML2.8*
*FCIAR **07** 21:06:00.0,78.83N×3.52E,h10km,station ZFI2 has station magnitude of 4.20 station OMEGA has station magnitude of 3.90*
*KOLA **07** 21:06:01.6,78.84N×4.92E,h0km,ML2.6,Error ellipse: s-maj=27.4km s-min=13.8km az=140.0,Greenland sea,Knipovich ridge, north*
ISC 07 21:05:57.5±0.7,78.94N±0.06×2.83E±0.05,h10km,n79,
σ3ŝ14/80,mb3.6/8,MS3.2/24,5C,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.76**	**86**	Op		**Pn**	**21 06 25.9**	**-2.0**
KBS				Sn		**Sn**	**21 06 45.1**	**-5.2**
KBS	**Kingsbay**	**1.76**	**86**	P		**Pn**	**21 06 25.4**	**-2.5**
KBS				S		**Sn**	**21 06 44.8**	**-5.5**
KBS	**Kingsbay**	**1.76**	**86**	i P		**Pn**	**21 06 25.9**	**-2.0**
KBS				*e*S		**Sn**	**21 06 44.7**	**-5.5**
KBS				IAML			21 06 49.4	
	comp=Z,210nm,0.2s							
KBS	**Kingsbay**	**1.76**	**86**	i P		**Pn**	**21 06 25.9**	**-2.0**
KBS				*i* S		**Sn**	**21 06 44.7**	**-5.5**
BRBB	**Barentsburg B**	**2.43**	**105**	Pn		**Pn**	**21 06 36.4**	**-0.7**
BRBB				Sn		**Sn**	**21 07 03.4**	**-3.4**
BRBB	**Barentsburg B**	**2.43**	**105**	P		**Pn**	**21 06 36.1**	**-1.0**
BRBB				S		**Sn**	**21 07 04.4**	**-2.4**
BRBB	**Barentsburg B**	**2.43**	**105**	*e*P		**Pn**	**21 06 36.0**	**-1.1**
BRBB				*e*S		**Sn**	**21 07 02.9**	**-3.9**
BRBA	**Barentsburg A**	**2.45**	**106**	Pn		**Pn**	**21 06 36.7**	**-0.6**
BRBA				Sn		**Sn**	**21 07 03.8**	**-3.4**
BRBA	**Barentsburg A**	**2.45**	**106**	Pn		**Pn**	**21 06 36.7**	**-0.6**
BRBA				Sn		**Sn**	**21 07 03.8**	**-3.4**
SPA0	**Spitsbergen Ar**	**2.80**	**99**	Pn		**Pn**	**21 06 41.8**	**-0.5**
	baz=293,slow=10							
SPA0				Sn		**Sn**	**21 07 12.8**	**-3.3**
	baz=291,slow=16							
SPA0	**Spitsbergen Ar**	**2.80**	**99**	i P		**Pn**	**21 06 41.7**	**-0.5**
SPA0				*i* S		**Sn**	**21 07 12.5**	**-3.5**
SPA0	**Spitsbergen Ar**	**2.80**	**99**	Pn		**Pn**	**21 06 41.8**	**-0.5**
	baz=293,slow=10							
SPA0				Sn		**Sn**	**21 07 12.8**	**-3.3**
	baz=291,slow=16							
SPA0				IAML			21 07 17.3	
	comp=Z,178nm,0.9s							
SPITS	**Spitsbergen Ar**	**2.80**	**99**	Pn		**Pn**	**21 06 41.7**	**-0.5**
	comp=Z,99nm,0.5s,baz=290,slow=9.7,SNR=1398							
SPITS				Sn		**Sn**	**21 07 13.8**	**-2.3**
	baz=262,slow=12							
SPITS	**Spitsbergen Ar**	**2.80**	**99**	P		**Pn**	**21 06 41.2**	**-1.0**
SPITS				S		**Sn**	**21 07 13.0**	**-3.0**
HSPB	**Hornsund (broa**	**3.29**	**120**	Pn		**Pn**	**21 06 48.9**	**0.0**
HSPB				Sn		**Sn**	**21 07 26.3**	**-1.7**
HSPB	**Hornsund (broa**	**3.29**	**120**	P		**Pn**	**21 06 48.4**	**-0.5**
HSPB				S		**Sn**	**21 07 22.1**	**-5.9**
HSPB	**Hornsund (broa**	**3.29**	**120**	*e*P		**Pn**	**21 06 48.3**	**-0.6**
HSPB				*e*S		**Sn**	**21 07 24.1**	**-3.9**
HSPB	**Hornsund (broa**	**3.29**	**120**	*e*P		**Pn**	**21 06 48.9**	**0.0**
HSPB				*e*S		**Sn**	**21 07 25.0**	**-3.0**
HSPB				IAML			21 07 32.3	
	comp=Z,27nm,0.8s							
NOR	**Nord**	**4.23**	**318**	Pn		Pn	21 06 58.1	-3.7
NOR				Sn		Sn	21 07 42.3	-8.8
NOR	**Nord**	**4.23**	**318**	i P		Pn	21 06 58.4	-3.4
NOR				*i* S		Sn	21 07 42.3	-8.8
NOR				IAML			21 07 45.2	
	comp=Z,39nm,1.0s							
NOR	**Nord**	**4.23**	**318**	i P		Pn	21 06 58.4	-3.4
NOR				*i* S		Sn	21 07 42.3	-8.8
NOR				IAML			21 07 45.2	
	comp=Z,39nm,1.0s							
DAG	**Danmarks Havn**	**5.01**	**255**	*i* P		**Pn**	**21 07 10.5**	**-2.0**
DAG				*e*S		**Sn**	**21 08 03.2**	**-7.1**
DAG				IAML			21 08 18.6	
	comp=Z,46nm,0.4s							
DAG	**Danmarks Havn**	**5.01**	**255**	*i* P		**Pn**	**21 07 10.5**	**-2.0**
DAG				*e*S		**Sn**	**21 08 03.2**	**-7.1**
DAG				IAML			21 08 18.6	
	comp=Z,46nm,0.4s							
HOPEN	**Hopen**	**5.29**	**106**	Pn		**Pn**	**21 07 15.0**	**-1.4**
HOPEN				Sn		**Sn**	**21 08 11.2**	**-6.0**
HOPEN	**Hopen**	**5.29**	**106**	*e*P		**Pn**	**21 07 14.7**	**-1.6**
HOPEN				*e*S		**Sn**	**21 08 11.1**	**-6.2**
HOPEN	**Hopen**	**5.29**	**106**	*e*P		**Pn**	**21 07 15.2**	**-1.1**
HOPEN				*e*S		**Sn**	**21 08 12.0**	**-5.2**
BEA6	**Bear Island, N**	**5.79**	**132**	Pn		**Pn**	**21 07 25.2**	**+2.0**
	baz=326,slow=18							
DBG	**Daneborg**	**7.02**	**241**	*i* P		**Pn**	**21 07 38.2**	**-2.0**
DBG				*i* S		Sn	21 08 51.6	-8.2
DBG				IAML			21 08 56.2	
	comp=Z,26nm,0.6s							
DBG	**Daneborg**	**7.02**	**241**	*i* P		**Pn**	**21 07 38.2**	**-2.0**
DBG				*i* S		Sn	21 08 51.6	-8.2
DBG				IAML			21 08 56.2	
	comp=Z,26nm,0.6s							
ZFI2	**Zemlya Franca-**	**7.93**	**55**	*e*P		**Pn**	**21 07 50.2**	**-2.3**
ZFI2				*e*S		Sn	21 09 11.9	-10
	comp=Z,60nm,0.6s							
OMEGA	**Omega**	**7.95**	**55**	*e*P		**Pn**	**21 07 50.3**	**-2.4**
OMEGA				*e*S		Sn	21 09 12.3	-10
	comp=Z,35nm,0.5s							
JNW	**Jan Mayen West**	**8.45**	**206**	*e*P		**Pn**	**21 08 00.4**	**+0.8**
JNW				*e*S		**Sn**	**21 09 29.4**	**-5.4**
JNE	**Jan Mayen East**	**8.47**	**205**	*e*P		**Pn**	**21 08 00.8**	**+0.9**
JNE				*e*S		**Sn**	**21 09 30.6**	**-4.8**
JMIC	**Jan Mayen**	**8.49**	**206**	Pn		**Pn**	**21 08 00.1**	**-0.2**
	comp=Z,43nm,0.3s,baz=201,slow=3.9,SNR=19							
JMIC				Sn		**Sn**	**21 09 29.1**	**-6.9**
	comp=Z,9.0nm,0.3s,baz=176,slow=23,SNR=6.5							
JMIC	**Jan Mayen**	**8.49**	**206**	*e*P		**Pn**	**21 08 01.0**	**+0.7**
JMIC				*e*S		**Sn**	**21 09 31.4**	**-4.5**
JMI	**Jan Mayen**	**8.57**	**206**	*e*P		**Pn**	**21 08 02.2**	**+0.9**
NEEM	**North Greenlan**	**10.79**	**289**	*i* P		Pn	21 08 25.7	-6.3
NEEM	**North Greenlan**	**10.79**	**289**	*i* P		Pn	21 08 25.7	-6.3
ARA0	**ARCESS Array S**	**11.14**	**135**	Pn		**Pn**	**21 08 38.3**	**+1.8**
	baz=344,slow=12							
ARA0	**ARCESS Array S**	**11.14**	**135**	Pn		**Pn**	**21 08 38.3**	**+1.8**
	baz=344,slow=12							
ARCES	**ARCESS Array B**	**11.14**	**135**	Pn		**Pn**	**21 08 37.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=342,slow=12,SNR=5.2							
ARCES				Sn		**Sn**	**21 10 35.7**	**-5.2**
	baz=358,slow=17,SNR=1.5							
ARCES				LR		LR	21 12 49.4	
	comp=Z,68nm,18.9s,baz=32,slow=37							
	comp=Z,1.1nm,0.7s							
SUMG	**Summit**	**11.68**	**259**	*i* P		Pn	21 08 40.9	-3.2
SUMG	**Summit**	**11.68**	**259**	*i* P		Pn	21 08 40.9	-3.2
BORG	**Borgarnes**	**15.87**	**220**	Pn		**Pn**	**21 09 40.1**	**-0.4**
	comp=Z,18nm,0.9s,baz=354,slow=11,SNR=1.8							
NOA	**NORSAR Array B**	**18.18**	**167**	P		**P**	**21 10 10.7**	**+0.9**
	baz=352,slow=13,SNR=3.6							
NOA				LR		LR	21 16 09.5	
	comp=Z,68nm,19.4s,baz=355,slow=34							
	comp=Z,0.5nm,0.8s							
SFJD	**Kangerlussuaq**	**18.66**	**261**	LR		LR	21 16 38.0	
	comp=Z,82nm,18.9s,baz=20,slow=34							
FINES	**FINESS Array B**	**18.96**	**144**	P		**Pn**	**21 10 19.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=358,slow=9.7,SNR=4.5							
FINES				LR		LR	21 17 13.4	
	comp=Z,89nm,21.4s,baz=14,slow=36							
	comp=Z,4.0nm,1.0s							
HFS	**Hagfors**	**19.20**	**163**	P		**Pn**	**21 10 24.0**	**+2.0**
	baz=357,slow=10							
HFS	**Hagfors**	**19.20**	**163**	P		**P**	**21 10 20.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=347,slow=5.9,SNR=6.8							
HFS				LR		LR	21 16 20.9	
	comp=Z,101nm,20.8s,baz=62,slow=33							
	comp=Z,1.9nm,0.8s							
HFS	**Hagfors**	**19.20**	**163**	P		**Pn**	**21 10 24.0**	**+2.0**
	baz=357,slow=10							
RES	**Resolute Bay**	**20.12**	**310**	P		**P**	**21 10 28.4**	**-2.4**
	comp=Z,1.4nm,0.4s,baz=48,slow=7.6,SNR=7.0							
NRIK	**Noril'sk**	**22.54**	**67**	P		**P**	**21 10 57.6**	**+0.7**
	comp=Z,5.7nm,0.8s,baz=347,slow=6.0,SNR=8.5							
NRIK				LR		LR	21 21 58.7	
	comp=Z,56nm,18.2s,baz=346,slow=42							
	comp=Z,5.7nm,0.8s							
AKASG	**Malin Array Be**	**29.86**	**145**	P		**P**	**21 12 05.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=348,slow=8.5,SNR=1.7							
AKASG				LR		LR	21 23 43.6	
	comp=Z,86nm,19.7s,baz=353,slow=36							
	comp=Z,0.2nm,0.3s							
VRAC	**Vranov**	**30.17**	**162**	LR		LR	21 23 32.4	
	comp=Z,52nm,18.3s,baz=341,slow=35							
GERES	**GERESS Array B**	**30.47**	**166**	LR		LR	21 24 34.0	
	comp=Z,10nm,21.6s,baz=340,slow=37							
DAVOX	**Davos/Dischmat**	**32.39**	**171**	LR		LR	21 24 40.5	
	comp=Z,68nm,18.1s,baz=332,slow=35							
SCHQ	**Schefferville**	**32.95**	**266**	LR		LR	21 25 03.0	
	comp=Z,42nm,20.4s,baz=34,slow=35							
YKA	**Yellowknife Ar**	**34.14**	**313**	LR		LR	21 27 18.1	
	comp=Z,29nm,19.7s,baz=286,slow=38							
BVAR	**Bovoye Array**	**34.26**	**97**	LR		LR	21 29 39.5	
	comp=Z,60nm,18.8s,baz=333,slow=41							
MLR	**Muntele Rosu**	**34.68**	**151**	LR		LR	21 26 26.9	
	comp=Z,56nm,19.8s,baz=2.5,slow=36							
ILAR	**Eielson Array**	**35.41**	**338**	P		**P**	**21 12 54.1**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=2.7,slow=7.1,SNR=9.5							
	comp=Z,1.1nm,1.0s							
ZALV	**Zalesovo Beam**	**36.16**	**83**	LR		LR	21 30 18.1	
	comp=Z,23nm,19.4s,baz=23,slow=40							
SEY	**Seymchan**	**37.22**	**23**	LR		LR	21 27 25.1	
	comp=Z,22nm,20.9s,baz=354,slow=34							
KURBB	**Kurchatov Arra**	**38.12**	**91**	P		**P**	**21 13 17.5**	**+1.6**
	comp=Z,2.4nm,1.0s,baz=337,slow=8.1,SNR=7.5							
KURBB				LR		LR	21 32 06.4	
	comp=Z,28nm,18.8s,baz=181,slow=41							
	comp=Z,2.4nm,1.0s							
KBZ	**Khabaz**	**38.47**	**131**	P		**P**	**21 13 20.4**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=345,slow=5.0,SNR=5.5							
	comp=Z,0.9nm,0.8s							
DLBC	**Dease Lake**	**40.06**	**323**	LR		LR	21 29 43.0	
	comp=Z,38nm,20.4s,baz=66,slow=36							
MA2	**Magadan**	**40.42**	**25**	LR		LR	21 29 00.2	
	comp=Z,18nm,19.4s,baz=126,slow=34							
BRTR	**Keskin Array B**	**41.20**	**143**	P		**P**	**21 13 44.5**	**+2.6**
	comp=Z,0.5nm,0.7s,baz=335,slow=5.5,SNR=4.2							
	comp=Z,0.5nm,0.7s							
GNI	**Garni**	**42.24**	**130**	LR		LR	21 32 54.9	
	comp=Z,41nm,18.1s,baz=226,slow=38							
MKAR	**Makanchi Array**	**42.51**	**89**	P		**P**	**21 13 56.1**	**+3.7**
	comp=Z,1.2nm,0.8s,baz=341,slow=7.1,SNR=3.6							
MKAR				LR		LR	21 35 21.4	
	comp=Z,41nm,18.2s,baz=331,slow=41							
	comp=Z,1.2nm,0.8s							
SADO	**Sadowa**	**44.94**	**273**	LR		LR	21 35 07.1	
	comp=Z,35nm,19.7s,baz=60,slow=39							
AAK	**Ala-Archa**	**45.01**	**98**	LR		LR	21 35 00.7	
	comp=Z,47nm,18.8s,baz=353,slow=39							
SONM	**Songino Array**	**46.01**	**66**	P		**P**	**21 14 24.1**	**+3.5**
	comp=Z,0.2nm,0.5s,baz=342,slow=8.2,SNR=5.6							
SONM				LR		LR	21 35 36.8	
	comp=Z,58nm,18.4s,baz=16,slow=39							
	comp=Z,0.2nm,0.5s							
MDT	**Midelt**	**46.34**	**189**	LR		LR	21 31 34.3	
	comp=Z,32nm,21.0s,baz=54,slow=33							
PETK	**Petropavlovsk-**	**47.35**	**20**	LR		LR	21 34 06.2	
	comp=Z,26nm,19.3s,baz=317,slow=36							
MMAI	**Mount Meron Ar**	**48.03**	**143**	LR		LR	21 37 17.8	
	comp=Z,20nm,18.1s,baz=3.0,slow=39							
NEW	**Newport**	**48.27**	**309**	LR		LR	21 34 52.1	
	comp=Z,58nm,20.3s,baz=18,slow=36							
EIL	**Elat**	**51.28**	**144**	LR		LR	21 38 16.7	
	comp=Z,26nm,19.2s,baz=355,slow=38							
TORD	**Torodi Ar. Bea**	**65.81**	**181**	P		**P**	**21 16 42.5**	**0.0**
	comp=Z,0.2nm,0.6s,baz=10,slow=7.8,SNR=2.0							
	comp=Z,0.2nm,0.6s							

*IDC **07** 21:06:20.5±4.4,2.42S×101.95E,h0km,mb3.5/3, mbtmp3.5/3,MS3.9/1,Error ellipse: s-maj=195.4km s-min=30.4km az=57.0*
*DJA **07** 21:06:45.0±0.5,2.5S±4.4×10.2E±.5,h223km±6km,M3.7/12, mb3.8/2,MLv3.6/12*
ISC 07 21:06:45.3±0.9,2.11S±0.07×102.49E±0.07,h200km,n15,
σ1ŝ79/16,mb3.2/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**1.05**	**194**	P		**Pn**	**21 07 18.2**	**+2.6**
MASI				S		**Sn**	**21 07 43.3**	**+4.2**
MNAI	**Manna**	**2.29**	**168**	P		**Pn**	**21 07 27.4**	**+0.5**
MNAI				S		**Sn**	**21 07 59.5**	**+0.1**
PDSI	**Padang**	**2.35**	**300**	P		**Pn**	**21 07 28.6**	**+1.0**
PPSI	**Pulau Pagai**	**2.56**	**255**	P		**Pn**	**21 07 30.9**	**+1.0**
DSRI	**Dabo**	**2.64**	**52**	P		**Pn**	**21 07 33.2**	**+2.3**
MDSI	**Maura Dua**	**2.90**	**144**	P		**Pn**	**21 07 34.6**	**+0.8**
LWLI	**Liwa**	**3.29**	**152**	P		**Pn**	**21 07 39.7**	**+1.2**
SISI	**Saibi**	**3.48**	**283**	P		**Pn**	**21 07 41.0**	**+0.2**
KLI	**Kotabumi**	**3.62**	**139**	P		**Pn**	**21 07 42.7**	**+0.3**
KASI	**Kota Agung**	**3.94**	**149**	P		**Pn**	**21 07 46.5**	**+0.1**
PBSI	**Pulau Batu**	**4.68**	**296**	P		**Pn**	**21 07 56.3**	**+0.7**
ASAR	**Alice Springs**	**37.20**	**128**	P		**P**	**21 13 35.8**	**-1.9**
	0.2nm,0.5s,baz=307,slow=8.5,SNR=4.5							
	0.2nm,0.5s							
LZDM	**Lanzhou Array**	**37.88**	**2**	LR		LR	21 30 38.2	
	comp=Z,196nm,21.5s,baz=215,slow=38							
SONM	**Songino Array**	**49.85**	**3**	P		**P**	**21 15 18.3**	**0.0**
	0.3nm,0.4s,baz=188,slow=9.0,SNR=3.7							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**51.84**	**342**	P		**P**	**21 15 31.3**	**-1.7**
	0.4nm,0.4s,baz=154,slow=9.2,SNR=7.8							
	0.4nm,0.4s							

*IDC **07** 21:11:24.4±0.9,4.67N×127.66E,h0km,mb4.0/7, mbtmp4.0/7,MS3.7/1,Error ellipse: s-maj=66.8km s-min=16.8km az=65.0*
*NEIC **07** 21:11:31.8±1.3,4.65N±0.07×127.62E±0.08,h46km±9km, mb4.4/20,Error ellipse: s-maj=12.9km s-min=8.8km az=58.0*
*DJA **07** 21:11:36.0±0.5,5.5N±5.5×12.8E±.5,h104km±8km,M4.5/13, mB5.2/5,mb4.5/8,MLv4.5/13,Mw(mB)4.6/5*
ISC 07 21:11:36.7±0.6,4.52N±0.07×127.59E±0.07,h104km,n45,
σ1ŝ54/44,mb4.2/14,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.21**	**248**	P		**Pn**	**21 12 12.8**	**+0.6**
SGSI				S		**Sn**	**21 12 39.9**	**+0.6**
DAV	**Davao City (W)**	**3.23**	**322**	Pn		Pn	21 12 17.9	-7.7
DAV	**Davao City (W)**	**3.23**	**322**	LR		LR	21 13 34.4	
	comp=Z,73nm,19.2s,baz=124,slow=41							
TNTI	**Ternate**	**3.73**	**183**	Pn		**Pn**	**21 12 29.1**	**-3.2**
TNTI	**Ternate**	**3.73**	**183**	P		**Pn**	**21 12 35.1**	**+2.8**
KMSI	**Cibinong**	**5.32**	**223**	P		**Pn**	**21 12 56.6**	**+2.8**
SWI	**Sorong**	**6.49**	**145**	P		**Pn**	**21 13 11.1**	**+1.5**
	0.2nm31nm,0.5s							
SANI	**Sanana**	**6.72**	**194**	P		**Pn**	**21 13 12.7**	**-0.1**
	0.2nm26nm,0.8s							
LUWI	**Luwuk**	**7.32**	**221**			Pn	21 13 16.2	-4.8
LUWI	**Luwuk**	**7.32**	**221**	P		**Pn**	**21 13 22.2**	**+1.2**
	52nm,0.8s							
TOLI2	**Tolitoli**	**7.59**	**244**			**Pn**	**21 13 21.0**	**-3.6**
TOLI2				Sn		**Sn**	**21 14 46.2**	**-3.0**
NLAI	**Namlea**	**7.72**	**184**	P		**Pn**	**21 13 28.0**	**+1.6**
	0.1nm27nm,0.4s							
FAKI	**Fak Fak**	**8.73**	**148**	Pn		**Pn**	**21 13 37.2**	**-3.0**
FAKI				Sn		**Sn**	**21 15 13.8**	**-3.2**
FAKI	**Fak Fak**	**8.73**	**148**	P		**Pn**	**21 13 42.1**	**+1.9**
	33nm,0.9s							
MYLDM	**Lahad Datu**	**9.08**	**275**	Pn		Pn	21 13 38.7	-6.2
GENI	**Genyem**	**14.42**	**119**	P		**Pn**	**21 14 55.8**	**-0.2**
MTN	**Manton Dam**	**17.61**	**168**	P		**P**	**21 15 35.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**18.60**	**226**	Pn		**Pn**	**21 15 47.9**	**+0.5**
JAGI				IAmb		IAmb	21 15 54.4	
	comp=Z,16nm,1.0s							
TPUB	**Ta-pu**	**19.84**	**341**	P		**P**	**21 15 57.0**	**-2.5**
KNRA	**Kununurra**	**20.10**	**177**			**P**	**21 16 03.9**	**+1.7**
KNRA				IAmb		IAmb	21 16 08.9	
	comp=Z,10nm,0.6s							
NACB	**Ninganchiao**	**20.38**	**344**	P		**P**	**21 16 05.2**	**0.0**
NACB				IAmb		IAmb	21 16 36.1	
	comp=Z,51nm,1.3s							
FITZ	**Fitzroy Crossi**	**22.55**	**185**	P		**P**	**21 16 29.9**	**+1.6**
WB0	**Warramunga Arr**	**25.05**	**165**	P		**P**	**21 16 51.9**	**+0.5**
WB0				IAmb		IAmb	21 16 52.8	
	comp=Z,6.9nm,0.6s							
WRAB	**Tennant Creek**	**25.19**	**165**	P		**P**	**21 16 53.9**	**+1.2**
WRA	**Warramunga Arr**	**25.20**	**165**	P		**P**	**21 16 53.5**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=343,slow=10,SNR=27							
	comp=Z,3.3nm,0.7s							
WR8	**Warramunga Arr**	**25.25**	**165**	P		**P**	**21 16 54.1**	**+0.8**
WR8				IAmb		IAmb	21 17 11.8	
	comp=Z,15nm,1.4s							
AS31	**Alice Springs**	**28.68**	**168**	P		**P**	**21 17 25.0**	**+1.0**
ASAR	**Alice Springs**	**28.68**	**168**	P		**P**	**21 17 24.9**	**+0.9**
ASAR	**Alice Springs**	**28.68**	**168**	P		**P**	**21 17 25.0**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=354,slow=7.8,SNR=40							
ASAR				PcP		**PcP**	**21 20 32.2**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=355,slow=2.2,SNR=2.6							
	comp=Z,1.5nm,0.5s							
INKA	**Innaminka**	**34.49**	**159**	P		**P**	**21 18 15.8**	**+0.9**
INKA				IAmb		IAmb	21 18 36.3	
	comp=Z,6.5nm,1.4s							
MORW	**Morawa**	**35.19**	**198**	P		**P**	**21 18 21.8**	**+1.0**
BBOO	**Buckleboo**	**37.98**	**168**	P		**P**	**21 18 45.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.51**	**194**	P		**P**	**21 18 49.3**	**+0.3**
STKA	**Stephens Creek**	**38.57**	**161**	P		**P**	**21 18 50.1**	**+0.6**
STKA	**Stephens Creek**	**38.57**	**161**	P		**P**	**21 18 50.2**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=350,slow=7.1,SNR=8.1							
	comp=Z,1.8nm,0.4s							
ARMA	**Armidale**	**41.67**	**148**	P		**P**	**21 19 15.5**	**+0.3**
ARMA				IAmb		IAmb	21 19 16.8	
	comp=Z,6.0nm,0.8s							
EVN	**Everest**	**45.22**	**306**	P		**P**	**21 19 44.5**	**0.0**
EVN				IAmb		IAmb	21 20 24.1	
	comp=Z,8.8nm,1.4s							
DZM	**Mont Dzumac**	**46.30**	**126**	P		**P**	**21 19 52.0**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=285,slow=16,SNR=5.1							
	comp=Z,2.5nm,0.6s							
SONM	**Songino Array**	**46.84**	**340**	P		**P**	**21 19 56.2**	**-0.1**
SONM	**Songino Array**	**46.84**	**340**	P		**P**	**21 19 56.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=152,slow=7.5,SNR=2.4							
	comp=Z,0.3nm,0.5s							
MK31	**Makanchi Array**	**57.40**	**325**	P		**P**	**21 21 14.6**	**+0.1**
MK31				IAmb		IAmb	21 21 38.9	
	comp=Z,3.1nm,1.2s							
MKAR	**Makanchi Array**	**57.40**	**325**	P		**P**	**21 21 14.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=113,slow=7.9,SNR=9.4							
	comp=Z,0.4nm,0.3s							
KURK	**Kurchatov**	**61.54**	**327**	P		**P**	**21 21 42.6**	**-0.1**
KURK				IAmb		IAmb	21 21 49.3	
	comp=Z,2.9nm,0.9s							
KURBB	**Kurchatov Arra**	**61.54**	**327**	P		**P**	**21 21 42.6**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=129,slow=6.1,SNR=5.5							
	comp=Z,0.6nm,0.5s							
YKA	**Yellowknife Ar**	**98.43**	**25**	LR		LR	22 12 48.0	
	comp=Z,37nm,20.9s,baz=266,slow=38							

*AFAD **07** 21:28:47.8,37.66N×38.57E,h8km±1km,MW3.6*
*ISK **07** 21:28:47.9,37.67N×38.55E,h5km,ML3.7/25*
ISC 07 21:28:48.2±1.0,37.67N±0.02×38.55E±0.02,h7km±8km,
n72,σ1ŝ26/99,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NARI	**Adyaman-Kaht**	**0.28**	**38**	P		**Pg**	**21 28 53.5**	**-0.2**
NARI				S		**Sg**	**21 28 57.4**	**0.0**
AZEY	**Adyaman-Merk**	**0.28**	**302**	SPECP			21 28 54.0	
AZEY				P		**Pg**	**21 28 54.1**	**+0.4**
AZEY				S		**Sg**	**21 28 58.7**	**+1.2**
HANM	**anlurfa/Hi**	**0.28**	**108**	SPECP			21 28 53.0	
HANM				P		**Pg**	**21 28 53.6**	**-0.1**
HANM				S		**Sg**	**21 28 57.1**	**-0.3**
ATAB	**Bozova**	**0.28**	**226**	SPECP			21 28 54.0	
ATAB				P		**Pg**	**21 28 54.2**	**+0.4**
ATAB				S		**Sg**	**21 28 58.5**	**+1.0**
SANL	**SANLIURFA_Merk**	**0.61**	**144**	SPECP			21 28 59.0	
SANL				P		**Pg**	**21 28 59.9**	**0.0**
SANL				S		**Sg**	**21 29 07.6**	**-0.2**
MAYA	**Malatya/Merkez**	**0.67**	**352**	SPECP			21 29 00.0	
MAYA				P		**Pg**	**21 29 00.8**	**-0.3**
MAYA				S		**Sg**	**21 29 09.6**	**-0.2**
AKCA	**Adyaman/G¶l**	**0.69**	**281**	SPECP			21 29 01.0	
AKCA				P		**Pg**	**21 29 01.7**	**+0.1**
AKCA				S		**Sn**	**21 29 15.1**	**-0.5**
SURC	**SANLIURFA_SURC**	**0.79**	**176**	SPECP			21 29 03.0	
SURC				P		**Pb**	**21 29 03.4**	**-0.8**
SURC				S		**Sb**	**21 29 14.1**	**-0.9**
AKCD	**Akcadag**	**0.80**	**322**	SPECP			21 29 03.0	
AKCD				P		**Pg**	**21 29 03.6**	**0.0**
AKCD				S		**Sg**	**21 29 14.2**	**+0.2**

KOPR	**Koprukoy-ERZUR**	**3.47**	**47**	Pn	**Pn**	**21**	**29**	**45.5**	**+2.7**
MLAZ	**Malazgirt-MUS**	**3.47**	**64**	Pn	**Pn**	**21**	**29**	**45.7**	**+2.9**
AKDM	**Akdamar-Van**	**3.56**	**78**	Pn	**Pn**	**21**	**29**	**47.2**	**+3.2**
BEIL	**Beino**	**3.66**	**212**	*e*P	**Pn**	**21**	**29**	**46.3**	**+1.1**
FKH	**Fakeheh**	**3.83**	**208**	*e*P	**Pn**	**21**	**29**	**49.0**	**+1.4**
AGRB	**Hanur-Agry**	**3.97**	**60**	Pn	**Pn**	**21**	**29**	**52.4**	**+2.8**
HWQ	**Hawqa**	**3.98**	**213**	*e*P	**Pn**	**21**	**29**	**50.6**	**+0.8**
ZAHL	**Zahle**	**4.37**	**210**	*e*P	**Pn**	**21**	**29**	**56.5**	**+1.3**
BHL	**Bhannes**	**4.43**	**213**	*e*P	**Pn**	**21**	**29**	**57.7**	**+1.8**
DQRL	**Deir Qamar**	**4.63**	**212**	*e*P	**Pn**	**21**	**30**	**02.1**	**+3.4**
RCY	**Rachaya**	**4.71**	**209**	*e*P	**Pn**	**21**	**30**	**00.1**	**+0.3**
QRWL	**Qaraoun**	**4.72**	**210**	*e*P	**Pn**	**21**	**30**	**03.4**	**+3.5**
SHBL	**Chebaa**	**4.88**	**209**	*e*P	**Pn**	**21**	**30**	**03.2**	**+1.1**

SDD 07 21:30:04.7±2.5, 19°83N×71°50W, h23km±17km, MD3.1, ML2.5, MW2.7, 1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
MCDR	**Montecristi**	**0.16**	**292**	*e*Pg		Pb	21	30	08.6	-1.1
MCDR				IAML			21	30	17.8	
	comp=N,278nm,0.1s									
MCDR				IAML			21	30	17.8	
	comp=E,282nm,0.2s									
MCDR	**Montecristi**	**0.16**	**292**	*e*Pg		Pb	21	30	08.5	-1.2
MCDR				*e*Sg		Sb	21	30	13.1	0.0
MCDR				IAML			21	30	17.8	
	comp=N,278nm,0.1s									
LUDR	**Luperon**	**0.52**	**83**	*e*Pg		Pb	21	30	14.6	-0.6
LUDR				*e*Sg		Sb	21	30	21.9	-0.3
SDDR	**Presa de Saban**	**0.87**	**167**	⇓*e*Sg		Sb	21	30	30.9	-1.5
SDDR				IAML			21	30	32.3	
	comp=N,50nm,0.5s									
SDDR	**Presa de Saban**	**0.87**	**167**	*e*Pg		Pb	21	30	19.0	-2.2
SDDR				*e*Sg		Sb	21	30	30.8	-1.6
SDDR				IAML			21	30	32.8	
	comp=N,56nm,0.3s									
JIDR	**Jimani**	**1.38**	**194**	*e*Sg		Sb	21	30	48.9	+2.0
JIDR				IAML			21	30	49.4	
	comp=E,26nm,0.3s									
JIDR				IAML			21	31	19.4	
	comp=N,32nm,3.7s									
JIDR	**Jimani**	**1.38**	**194**	*e*Pg		Pb	21	30	29.4	-0.3
JIDR				*e*Sg		Sn	21	30	45.1	-0.8
JIDR				IAML			21	31	19.4	
	comp=N,32nm,3.7s									
DR08	**Loma La Naviza**	**1.64**	**122**	*e*Pg		Pn	21	30	30.7	-1.5
DR08				IAML			21	30	58.2	
	comp=N,481nm,0.1s									
DR08	**Loma La Naviza**	**1.64**	**122**	*e*Pg		Pn	21	30	30.7	-1.5
DR08				*e*Sg		Sn	21	30	52.9	+0.3
DR08				IAML			21	30	58.2	
	comp=N,481nm,0.1s									
PODR	**Polo**	**1.67**	**173**	*e*Pg		Pb	21	30	34.0	-0.9
PODR				*e*Sg		Sb	21	30	57.5	+2.0
PODR				IAML			21	30	59.0	
	comp=E,32nm,0.3s									
PODR				IAML			21	31	23.2	
	comp=N,59nm,3.6s									
PODR	**Polo**	**1.67**	**173**	*e*Pg		Pn	21	30	32.7	0.0
PODR				*e*Sg		Sn	21	30	53.4	-0.1
PODR				IAML			21	31	23.2	
	comp=N,59nm,3.6s									
GRTK	**Grand Turk**	**1.71**	**12**	*e*Pg		Pn	21	30	31.4	-1.6
GRTK				*e*Sg		Sb	21	30	55.5	-0.9
GRTK				IAML			21	31	21.1	
	comp=N,61nm,0.1s									
BANI	**BANI**	**1.79**	**143**	*e*Pg		Pb	21	30	35.6	-1.3
BANI				*e*Sg		Sn	21	30	56.0	-0.5
BANI				IAML			21	31	34.7	
	comp=N,43nm,1.7s									
HATOM	**Hato Mayor del**	**2.25**	**117**	*e*Pg		Pn	21	30	40.8	+0.2
HATOM				*e*Sg		Sb	21	31	10.2	-2.1
HATOM				IAML			21	31	11.0	
	comp=N,22nm,1.1s									
HATOM				IAML			21	31	15.2	
	comp=E,11nm,0.4s									
HATOM	**Hato Mayor del**	**2.25**	**117**	*e*Pg		Pn	21	30	40.4	-0.2
HATOM				*e*Sg		Sb	21	31	10.0	-2.2
HATOM				IAML			21	31	11.0	
	comp=N,22nm,1.1s									
MIDR	**Miches**	**2.46**	**110**	*e*Pg		Pn	21	30	44.7	+1.3
MIDR				*e*Sg		Sn	21	31	14.0	+1.2
MIDR				IAML			21	31	45.3	
	comp=N,29nm,3.5s									

CATAC 07 21:36:22.9±0.4, 13°N±3°×8°8W±°, h28km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=7.6km s-min=3.3km az=17.5, confirmed, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
CNCH	**Conchagua**	**0.77**	**28**	P		Pn	21	36	38.2	+0.1
CNCH	**Conchagua**	**0.77**	**28**	S		Sn	21	36	49.8	+1.0
LCND	**La Caada**	**0.78**	**23**	P		Pn	21	36	38.1	0.0
POTN	**Potosi Cosigui**	**0.79**	**59**	P		Pn	21	36	38.6	+0.3
POTN				S		Sn	21	36	50.2	+1.1
PACA	**Pacayal**	**0.88**	**352**	P		Pb	21	36	39.7	0.0
PACA	**Pacayal**	**0.88**	**352**	S		Sn	21	36	51.9	+0.4
CRIN	**San Cristobal**	**1.13**	**84**	P		Pb	21	36	43.7	-0.2
PKGN	**Cerro Pekin**	**1.20**	**86**	P		Pn	21	36	44.3	+0.5
PKGN				S		Sb	21	36	59.9	-0.2
COEG	**Centro de Oper**	**1.22**	**327**	P		Pb	21	36	45.0	-0.4
POLN	**Al Sur del Vol**	**1.36**	**87**	P		Pn	21	36	45.0	-1.1
POLN				S		Sn	21	37	03.1	-0.1
CNGA	**Al SSO del Vol**	**1.47**	**94**	P		Pn	21	36	47.8	+0.2
CNGA				S		Sn	21	37	05.3	-0.7
LIMN	**Finca el Limon**	**1.85**	**75**	P		Pn	21	36	52.8	-0.2
LIMN				S		Sn	21	37	15.1	-0.4
NUBE	**Las Nubes**	**2.01**	**310**	S		Sn	21	37	19.3	-0.3
NUBE	**Las Nubes**	**2.01**	**310**	P		Pn	21	36	53.5	-1.8
FAME	**Alcaldia de Sa**	**2.16**	**305**	P		Pn	21	36	58.0	+0.9
FAME	**Alcaldia de Sa**	**2.16**	**305**	S		Sn	21	37	23.1	+0.1
RCON	**San Juan de Ri**	**2.18**	**66**	P		Pn	21	36	57.8	+0.2
RCON	**San Juan de Ri**	**2.18**	**66**	S		Sn	21	37	23.7	0.0
RCVN	**Varillal2**	**2.19**	**63**	P		Pn	21	36	57.5	-0.1
RCVN	**Varillal2**	**2.19**	**63**	S		Sn	21	37	23.7	-0.2
RCPN	**Sur Rio San Ju**	**2.25**	**65**	P		Pn	21	36	58.6	+0.1

ROM 07 21:39:37.4±0.0, 41°777N±0°002×13°589E±0°002, h13km, ML2.6/68, 14C-4D, Error ellipse: s-maj=0.2km s-min=0.0km az=316.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
VVLD	**Villa Vallelon**	**0.10**	**15**	⇓P		Pg	21	39	40.9	+0.4
VVLD				S		Sg	21	39	42.9	+0.2
VVLD				AML		AML				
	comp=E,18450µm,0.4s									
VVLD				AML		AML				
	comp=E,20200µm,0.4s									
VVLD				AML		AML				
	comp=N,20500µm,0.3s									
VVLD				AML		AML				
	comp=N,21800µm,0.3s									
VVLD				AML		AML				
	comp=N,21780µm,0.3s									
VVLD				AML		AML				
	comp=N,20512µm,0.3s									
VVLD				AML		AML				
	comp=E,14234µm,0.1s									
VVLD				AML		AML				
	comp=E,14672µm,0.1s									
POFI	**Posta Fibreno**	**0.11**	**123**	⇓P		Pg	21	39	40.8	+0.3
POFI				S		Sg	21	39	43.1	+0.3
POFI				AML		AML				
	comp=E,4435µm,0.6s									
POFI				AML		AML				
	comp=N,3320µm,0.4s									
POFI				AML		AML				
	comp=N,3325µm,0.4s									
POFI				AML		AML				
	comp=E,3850µm,0.6s									
POFI				AML		AML				
	comp=N,2880µm,0.4s									
POFI				AML		AML				
	comp=E,4435µm,0.7s									
POFI				AML		AML				
	comp=N,2880µm,1.6s									
POFI				AML		AML				
	comp=N,3325µm,1.6s									
POFI				AML		AML				
	comp=N,3688µm,0.3s									
POFI				AML		AML				
	comp=N,2622µm,0.3s									
POFI				AML		AML				
	comp=E,3351µm,0.3s									
POFI				AML		AML				
	comp=N,2229µm,0.4s									
LRP	**Arpino**	**0.13**	**181**	⇑P		Pb	21	39	41.2	-0.5
LRP				S		Sg	21	39	43.8	+0.7
LRP				AML		AML				
	comp=E,19600µm,0.2s									
LRP				AML		AML				
	comp=N,20350µm,0.2s									
LRP				AML		AML				
	comp=E,19607µm,0.2s									
LRP				AML		AML				
	comp=N,16699µm,0.1s									
OPI	**Opi**	**0.18**	**90**	⇑P		Pg	21	39	41.8	+0.2
OPI				S		Sg	21	39	45.0	+0.5
GUAR	**Guarcino**	**0.21**	**275**	⇓P		Pb	21	39	42.5	-0.5
GUAR				S		Sg	21	39	45.9	+0.7
GUAR				AML		AML				
	comp=N,6735µm,0.8s									
GUAR				AML		AML				
	comp=E,4345µm,1.1s									
GUAR				AML		AML				
	comp=N,6403µm,0.3s									
GUAR				AML		AML				
	comp=E,4254µm,0.3s									
LIK	**San Giovanni I**	**0.27**	**185**	⇑P		Pb	21	39	43.6	-0.5
LIK				S		Sb	21	39	48.7	+0.1
PTQR	**Pietraquaria**	**0.28**	**330**	⇓P		Pg	21	39	43.7	+0.4
PTQR				S		Sb	21	39	48.4	-0.6
PTQR				AML		AML				
	comp=E,1865µm,0.3s									
PTQR				AML		AML				
	comp=N,1895µm,0.8s									
PTQR				AML		AML				
	comp=N,1895µm,1.2s									
PTQR				AML		AML				
	comp=E,1865µm,0.3s									
PTQR				AML		AML				
	comp=N,1872µm,0.3s									
GIUL	**Giuliano Di Ro**	**0.33**	**229**	⇑P		Pg	21	39	44.6	+0.4
GIUL				S		Sb	21	39	50.0	-0.4
GIUL				AML		AML				
	comp=E,935µm,0.7s									
GIUL				AML		AML				
	comp=N,1100µm,0.6s									
GIUL				AML		AML				
	comp=E,935µm,1.3s									
GIUL				AML		AML				
	comp=E,758µm,0.1s									
GIUL				AML		AML				
	comp=N,974µm,0.2s									
INTR	**Introdacqua**	**0.33**	**45**	⇑P		Pg	21	39	44.4	+0.2
INTR				S		Sb	21	39	49.7	-0.8
INTR				AML		AML				
	comp=N,2700µm,0.4s									
INTR				AML		AML				
	comp=E,2780µm,0.3s									
INTR				AML		AML				
	comp=E,2778µm,0.3s									
INTR				AML		AML				
	comp=N,2697µm,0.4s									
MCI	**Monte Cassino**	**0.34**	**150**	⇑P		Pg	21	39	44.2	0.0
MCI				S		Sb	21	39	49.9	-0.7
MCI				AML		AML				
	comp=E,4840µm,0.4s									
MCI				AML		AML				
	comp=N,2945µm,0.5s									
MCI				AML		AML				
	comp=N,2945µm,1.5s									
MCI				AML		AML				
	comp=E,4840µm,1.6s									
MCI				AML		AML				
	comp=E,3968µm,0.2s									
MCI				AML		AML				
	comp=N,2515µm,0.3s									
CERA	**Filignano**	**0.37**	**119**	⇑P		Pg	21	39	45.0	+0.1
CERA				S		Sg	21	39	50.5	+0.7
CERA				AML		AML				
	comp=E,882µm,1.5s									
CERA				AML		AML				
	comp=N,886µm,1.1s									
CERA				AML		AML				
	comp=E,929µm,1.5s									
CERA				AML		AML				
	comp=N,930µm,1.0s									
CERA				AML		AML				
	comp=N,930µm,1.0s									
CERA				AML		AML				
	comp=N,886µm,0.9s									
CERA				AML		AML				
	comp=E,882µm,0.5s									
CERA				AML		AML				
	comp=E,929µm,0.5s									
CERA				AML		AML				
	comp=N,799µm,0.5s									
CERA				AML		AML				
	comp=N,858µm,0.5s									
CERA				AML		AML				
	comp=E,918µm,0.3s									
CERA				AML		AML				
	comp=E,870µm,0.3s									
SULP	**Sulmona Polizi**	**0.40**	**39**	⇑P		Pg	21	39	45.4	+0.1
SULP				S		Sb	21	39	52.4	+0.1
RNI2	**Rionero Sannit**	**0.43**	**100**	⇑P		Pb	21	39	46.4	-0.4
RNI2				S		Sb	21	39	53.4	+0.2
RNI2				AML		AML				
	comp=E,1070µm,0.7s									
RNI2				AML		AML				
	comp=N,986µm,0.9s									
RNI2				AML		AML				
	comp=N,941µm,0.6s									
RNI2				AML		AML				
	comp=E,1005µm,0.7s									
RNI2				AML		AML				
	comp=N,941µm,1.4s									
RNI2				AML		AML				
	comp=N,768µm,0.3s									
RNI2				AML		AML				
	comp=E,913µm,0.2s									
RNI2				AML		AML				
	comp=N,802µm,0.3s									
RNI2				AML		AML				
	comp=E,984µm,0.2s									
T0110	**Collepietro**	**0.47**	**18**	⇑P		Pg	21	39	46.8	+0.1
T0110				S		Sb	21	39	54.0	-0.5
T0110				AML		AML				
	comp=N,1425µm,0.2s									
T0110				AML		AML				
	comp=E,1675µm,0.3s									
T0110				AML		AML				
	comp=E,1678µm,0.3s									
T0110				AML		AML				
	comp=N,1425µm,0.2s									
CERT	**Cerreto**	**0.48**	**291**	⇑P		Pg	21	39	46.9	0.0
CERT				S		Sb	21	39	54.2	-0.6
CERT				AML		AML				
	comp=N,908µm,1.3s									
CERT				AML		AML				
	comp=E,1715µm,1.2s									
CERT				AML		AML				
	comp=N,908µm,0.7s									
CERT				AML		AML				
	comp=E,1715µm,0.8s									
CERT				AML		AML				
	comp=E,1541µm,0.2s									
CERT				AML		AML				
	comp=N,814µm,0.2s									
RCAV	**Rocca di Cave**	**0.49**	**278**	P		Pg	21	39	46.9	-0.1
RCAV				S		Sb	21	39	54.4	-0.5
RCAV				AML		AML				
	comp=E,1050µm,0.4s									
RCAV				AML		AML				
	comp=N,786µm,0.4s									
RCAV				AML		AML				
	comp=E,1002µm,0.3s									
RCAV				AML		AML				
	comp=N,729µm,0.1s									
FAGN	**Fagnano**	**0.49**	**360**	P		Pg	21	39	46.8	-0.2
FAGN				AML		AML				
	comp=E,1570µm,0.4s									
FAGN				AML		AML				
	comp=N,1285µm,0.4s									
FAGN				AML		AML				
	comp=N,1286µm,0.4s									
FAGN				AML		AML				
	comp=E,1568µm,0.4s									
CSO1	**Carsoli**	**0.49**	**311**	P		Pg	21	39	47.2	+0.1
MIDA	**Miranda**	**0.52**	**105**	⇑P		Pg	21	39	47.4	-0.2
MIDA				AML		AML				
	comp=E,579µm,1.5s									
MIDA				AML		AML				
	comp=N,614µm,1.3s									
MIDA				AML		AML				
	comp=E,579µm,0.5s									
MIDA				AML		AML				
	comp=N,614µm,0.7s									
MIDA				AML		AML				
	comp=N,661µm,0.5s									
MIDA				AML		AML				
	comp=N,592µm,0.4s									
MIDA				AML		AML				
	comp=E,573µm,0.5s									
LPEL	**Lama dei Pelig**	**0.52**	**59**	⇑P		Pg	21	39	47.3	-0.3
LPEL				S		Sb	21	39	55.3	-0.5
LPEL				AML		AML				
	comp=E,694µm,0.3s									
LPEL				AML		AML				
	comp=N,600µm,1.2s									
LPEL				AML		AML				
	comp=E,742µm,0.3s									
LPEL				AML		AML				
	comp=N,652µm,1.3s									
LPEL				AML		AML				
	comp=N,600µm,1.2s									
LPEL				AML		AML				
	comp=N,600µm,0.8s									
LPEL				AML		AML				
	comp=N,652µm,0.7s									
LPEL				AML		AML				
	comp=E,694µm,0.3s									
LPEL				AML		AML				
	comp=E,742µm,0.3s									
LPEL				AML		AML				
	comp=N,581µm,0.3s									
LPEL				AML		AML				
	comp=N,526µm,0.1s									
LATB	**Latina**	**0.55**	**239**	⇑P		Pg	21	39	47.8	-0.3
LATB				S		Sg	21	39	55.8	+0.4
LATB				AML		AML				
	comp=E,227µm,0.3s									
LATB				AML		AML				
	comp=N,143µm,0.4s									
LATB				AML		AML				
	comp=N,143µm,0.4s									
LATB				AML		AML				
	comp=E,227µm,0.3s									
FIAM	**Fiamignano**	**0.60**	**325**	P		Pg	21	39	49.1	-0.1
FIAM				AML		AML				
	comp=N,163µm,0.6s									
FIAM				AML		AML				
	comp=N,163µm,1.4s									
FIAM				AML		AML				
	comp=E,153µm,0.4s									
FIAM				AML		AML				
	comp=E,153µm,0.4s									
FIAM				AML		AML				
	comp=N,163µm,0.6s									
FIAM				AML		AML				
	comp=N,469µm,0.6s									
VAGA	**Valle Agricola**	**0.60**	**127**	P		Pg	21	39	49.4	+0.2
VAGA				AML		AML				
	comp=E,364µm,1.1s									
VAGA				AML		AML				
	comp=N,815µm,0.4s									
VAGA				AML		AML				
	comp=E,376µm,1.1s									
VAGA				AML		AML				
	comp=N,848µm,0.4s									
VAGA				AML		AML				
	comp=E,346µm,0.4s									
VAGA				AML		AML				
	comp=E,368µm,0.4s									
VAGA				AML		AML				
	comp=N,847µm,0.4s									
VAGA				AML		AML				
	comp=N,815µm,0.4s									
VIVA	**Pratoni del Vi**	**0.61**	**268**	P		Pg	21	39	49.1	-0.2
VIVA				AML		AML				
	comp=E,1770µm,0.3s									
VIVA				AML		AML				
	comp=N,1815µm,0.6s									
VIVA				AML		AML				
	comp=E,1770µm,1.7s									
VIVA				AML		AML				
	comp=E,1771µm,0.3s									
VIVA				AML		AML				
	comp=N,1705µm,0.2s									

ROM 07 21:40:07.7±0.1, 41°779N±0°003×13°600E±0°004, h14km, ML2.1/22, 5C, Error ellipse: s-maj=0.3km s-min=0.1km az=177.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
VVLD	**Villa Vallelon**	**0.09**	**10**	⇑P		Pg	21	40	11.2	+0.3
VVLD				S		Sg	21	40	13.4	+0.3
VVLD				AML		AML				
	comp=E,4505µm,0.2s									
VVLD				AML		AML				
	comp=E,4965µm,0.2s									
VVLD				AML		AML				
	comp=E,4505µm,0.2s									
VVLD				AML		AML				
	comp=N,4865µm,0.3s									
VVLD				AML		AML				
	comp=E,4510µm,0.2s									
VVLD				AML		AML				
	comp=E,4960µm,0.2s									
VVLD				AML		AML				
	comp=N,4860µm,0.3s									
VVLD				AML		AML				
	comp=N,4590µm,0.3s									
VVLD				AML		AML				
	comp=E,4505µm,0.2s									
VVLD				AML		AML				
	comp=E,4962µm,0.2s									
VVLD				AML		AML				
	comp=N,4448µm,0.1s									
VVLD				AML		AML				
	comp=N,4239µm,0.1s									
POFI	**Posta Fibreno**	**0.10**	**126**	P		Pg	21	40	11.2	+0.2
POFI				S		Sg	21	40	13.5	+0.3
POFI				AML		AML				
	comp=E,557µm,0.1s									
POFI				AML		AML				
	comp=N,547µm,0.2s									
POFI				AML		AML				
	comp=E,607µm,0.1s									
POFI				AML		AML				
	comp=N,646µm,0.2s									
POFI				AML		AML				
	comp=N,646µm,0.2s									
POFI				AML		AML				
	comp=E,607µm,0.1s									
POFI				AML		AML				
	comp=E,557µm,0.2s									
POFI				AML		AML				
	comp=N,547µm,0.1s									
LRP	**Arpino**	**0.13**	**184**	⇑P		Pb	21	40	11.6	-0.4
LRP				S		Sb	21	40	14.4	-0.5
LRP				AML		AML				
	comp=E,3450µm,0.2s									
LRP				AML		AML				
	comp=N,3520µm,0.3s									
LRP				AML		AML				
	comp=E,3450µm,0.2s									
LRP				AML		AML				
	comp=N,3245µm,0.2s									
OPI	**Opi**	**0.17**	**91**	⇑P		Pg	21	40	12.1	+0.2
OPI				S		Sg	21	40	15.3	+0.6
GUAR	**Guarcino**	**0.22**	**274**	P		Pg	21	40	13.0	+0.4
GUAR				S		Sg	21	40	16.4	+0.6
GUAR				AML		AML				
	comp=N,1511µm,0.1s									
GUAR				AML		AML				
	comp=N,1511µm,0.1s									
GUAR				AML		AML				
	comp=E,1436µm,0.2s									

LIK	**San Giovanni I**	**0.28**	**187**	P	Pb	21 40 14.1	-0.3
LIK				S	Sb	21 40 19.2	+0.3
PTQR	**Pietraquaria**	**0.28**	**329**	P	Pg	21 40 14.0	+0.3
PTQR				S	Sb	21 40 18.8	-0.5
PTQR				AML	AML		
	comp=E,399μm,0.1s						
PTQR				AML	AML		
	comp=E,399μm,0.1s						
PTQR				AML	AML		
	comp=N,465μm,0.3s						
INTR	**Introdacqua**	**0.33**	**44** ⇑P	Pg	21 40 14.6	+0.1	
INTR				S	Sb	21 40 20.3	-0.3
INTR				AML	AML		
	comp=N,478μm,0.1s						
INTR				AML	AML		
	comp=E,411μm,0.2s						
MCI	**Monte Cassino**	**0.34**	**151**	P	Pg	21 40 14.5	-0.1
MCI				S	Sb	21 40 20.2	-0.5
GIUL	**Giuliano Di Ro**	**0.34**	**230** ⇑P	Pg	21 40 15.0	+0.3	
GIUL				S	Sb	21 40 20.6	-0.3
GIUL				AML	AML		
	comp=N,212μm,0.2s						
GIUL				AML	AML		
	comp=E,185μm,0.2s						
CERA	**Filignano**	**0.36**	**120**	P	Pg	21 40 15.2	+0.1
CERA				S	Sg	21 40 20.5	+0.4
SULP	**Sulmona Polizi**	**0.39**	**39**	P	Pg	21 40 15.6	0.0
SULP				S	Sb	21 40 22.7	+0.4
RNI2	**Rionero Sannit**	**0.42**	**100**	P	Pb	21 40 16.7	-0.3
T0110	**Collepietro**	**0.47**	**17**	P	Pg	21 40 17.3	+0.3
CERT	**Cerreto**	**0.49**	**290**	P	Pg	21 40 17.3	-0.1
CERT				S	Sg	21 40 24.6	+0.6
CERT				AML	AML		
	comp=N,381μm,0.1s						
CERT				AML	AML		
	comp=E,674μm,0.2s						
RCAV	**Rocca di Cave**	**0.49**	**278**	P	Pg	21 40 17.3	-0.2
RCAV				S	Sb	21 40 24.9	-0.5
MIDA	**Miranda**	**0.51**	**105**	P	Pg	21 40 17.8	0.0
LPEL	**Lama dei Pelig**	**0.51**	**58**	P	Pg	21 40 17.5	-0.4
LATB	**Latina**	**0.56**	**239**	P	Pg	21 40 18.1	-0.5
LATB				S	Sb	21 40 26.9	-0.1
LATB				AML	AML		
	comp=N,38μm,0.4s						
LATB				AML	AML		
	comp=E,60μm,0.4s						
VIVA	**Pratoni del Vi**	**0.62**	**268**	P	Pg	21 40 19.8	-0.1
RMP	**Rome, Mte Porz**	**0.67**	**273**	P	Pg	21 40 20.6	-0.2

*KNET **07** 21:45:34.9±0.5, 43.˚22N×76.˚22E, h19km±2km, ml1.4, Error ellipse: s-maj=4.6km s-min=2.3km az=16.0*
*KRNET **07** 21:45:34.6±0.1, 43.˚25N×76.˚23E, h20km, mb2.6*
*SOME **07** 21:45:34.7, 43.˚23N×76.˚20E, h1 km*

NNC 07 21:45:35.5±0.5, 43.˚30N×76.˚22E, h0km, mb2.4, mpv2.7, 24C-21D, Error ellipse: s-maj=5.2km s-min=3.0km az=177.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTBS	**Maitube**	**0.23**	**137**	P	Pg	21 45 38.9	-1.0
	16nm,0.1s						
MTBS				S	Sg	21 45 41.6	-1.2
	69nm,0.2s						
MTBS	**Maitube**	**0.23**	**137**	P	Pg	21 45 40.6	+0.7
	33nm,0.1s						
MTBS				S	Sg	21 45 43.3	+0.5
	370nm,0.2s						
MTBS	**Maitube**	**0.23**	**137**	*e*P	Pg	21 45 38.9	-1.0
MTBS				*e*S	Sg	21 45 41.5	-1.3
MTBS	**Maitube**	**0.23**	**137**	*e*P	Pg	21 45 38.9	-1.0
	16nm,0.1s						
MTBS				*e*S	Sg	21 45 41.5	-1.4
	69nm,0.2s						
KST	**Kastek**	**0.32**	**216**	P	Pg	21 45 40.7	-0.8
	8.7nm,0.1s						
KST				S	Sg	21 45 44.6	-1.0
	33nm,0.2s						
KST	**Kastek**	**0.32**	**216**	P	Pg	21 45 42.4	+0.9
	24nm,0.1s						
KST				S	Sg	21 45 46.4	+0.8
	81nm,0.3s						
KST	**Kastek**	**0.32**	**216**	*e*P	Pg	21 45 40.7	-0.8
KST				*e*S	Sg	21 45 44.6	-1.0
KST	**Kastek**	**0.32**	**216**	*e*P	Pg	21 45 40.7	-0.8
	8.7nm,0.1s						
KST				*e*S	Sg	21 45 44.6	-1.0
	33nm,0.2s						
DGS	**Degeres**	**0.33**	**260**	P	Pg	21 45 41.8	-0.1
	25nm,0.1s						
DGS				S	Sg	21 45 46.4	+0.3
	22nm,0.3s						
DGS	**Degeres**	**0.33**	**260**	P	Pb	21 45 43.3	-1.1
	66nm,0.1s						
DGS				S	Sg	21 45 47.8	+1.7
	61nm,0.3s						
DGS	**Degeres**	**0.33**	**260**	*e*P	Pg	21 45 41.8	0.0
DGS				*e*S	Sg	21 45 46.4	+0.3
KTBS	**Karatobe**	**0.54**	**39**	P	Pg	21 45 46.0	+0.2
	2.2nm,0.1s						
KTBS				S	Sg	21 45 53.4	+0.6
	12nm,0.3s						
KTBS	**Karatobe**	**0.54**	**39**	P	Pb	21 45 47.7	-0.2
	2.1nm,0.1s						
KTBS				S	Sb	21 45 55.4	-0.8
	43nm,0.3s						
KTBS	**Karatobe**	**0.54**	**39**	*e*P	Pg	21 45 46.0	+0.2
KTBS				*e*S	Sg	21 45 53.3	+0.6
KNDC	**Almaty**	**0.55**	**98** ⇑P	Pb	21 45 47.2	-0.9	
	16nm,0.7s						
KNDC				⇓S	Sg	21 45 54.9	+1.6
	18nm,0.6s						
KRBS	**Karabastau**	**0.56**	**315**	P	Pg	21 45 46.6	+0.4
	6.9nm,0.2s						
KRBS				S	Sg	21 45 54.5	+1.0
	12nm,0.2s						
KRBS	**Karabastau**	**0.56**	**315**	P	Pb	21 45 48.2	-0.1
	17nm,0.2s						
KRBS				S	Sb	21 45 56.3	-0.6
	36nm,0.2s						
KRBS	**Karabastau**	**0.56**	**315**	*e*P	Pg	21 45 46.6	+0.3
KRBS				*e*S	Sg	21 45 54.5	+1.0
TKM2	**Tokmak 2**	**0.59**	**231** ⇑P	Pg	21 45 45.8	-1.0	
	3.6nm,0.1s,SNR=34						
TKM2				⇑S	Sg	21 45 54.7	+0.2
	12nm,0.1s						
TKM2	**Tokmak 2**	**0.59**	**231** ⇓*i*P	Pg	21 45 45.6	-1.2	
TKM2				⇓*i*S	Sg	21 45 53.9	-0.6
TNSS	**Tian-Shan**	**0.59**	**116**	P	Pg	21 45 46.1	-0.8
	0.6nm,0.1s						
TNSS				S	Sg	21 45 53.8	-0.8
	4.8nm,0.2s						
TNSS	**Tian-Shan**	**0.59**	**116**	P	Pg	21 45 47.7	+0.8
	1.6nm,0.1s						
TNSS				S	Sg	21 45 55.5	+0.8
	12nm,0.2s						
TNSS	**Tian-Shan**	**0.59**	**116**	*e*P	Pg	21 45 46.1	-0.8
TNSS				*e*S	Sg	21 45 53.8	-0.8
TNSS	**Tian-Shan**	**0.59**	**116**	*e*P	Pg	21 45 46.1	-0.8
	0.6nm,0.1s						
TNSS				*e*S	Sg	21 45 53.8	-0.8
	4.8nm,0.2s						
KUU	**Kurty**	**0.60**	**8**	P	Pg	21 45 47.0	-0.1
	2.9nm,0.1s						
KUU				S	Sg	21 45 55.3	+0.4
	7.1nm,0.1s						
KUU	**Kurty**	**0.60**	**8**	P	Pb	21 45 49.0	+0.1
	5.0nm,0.1s						
KUU				S	Sb	21 45 57.7	-0.3
	24nm,0.1s						
KUU	**Kurty**	**0.60**	**8**	*e*P	Pg	21 45 47.0	-0.1
	2.9nm,0.1s						
KUU				*e*S	Sg	21 45 55.3	+0.4
	7.1nm,0.1s						
MDOK	**Medeo**	**0.62**	**102**	Pg	Pg	21 45 46.5	-0.9
	1.4nm,0.1s						
MDOK				Lg	Lg	21 45 54.5	
	11nm,0.3s						
MDOK	**Medeo**	**0.62**	**102**	Pg	Pg	21 45 48.4	+0.9
	3.9nm,0.2s						
MDOK				Lg	Lg	21 45 56.4	
	11nm,0.3s						
MDOK	**Medeo**	**0.62**	**102**	*e*P	Pg	21 45 46.5	-0.9
MDOK				*e*S	Sg	21 45 54.4	-1.1
KOTS	**Kotyrbulak**	**0.66**	**95**	P	Pg	21 45 47.5	-0.6
	1.5nm,0.1s						
KOTS				S	Sg	21 45 56.2	-0.5
	11nm,0.4s						
KOTS	**Kotyrbulak**	**0.66**	**95**	*e*P	Pg	21 45 47.5	-0.6
KOTS				*e*S	Sg	21 45 56.2	-0.4
KOTS	**Kotyrbulak**	**0.66**	**95**	*e*P	Pg	21 45 47.5	-0.6
	1.5nm,0.1s						
KOTS				*e*S	Sg	21 45 56.2	-0.5
	11nm,0.4s						
CHKK	**Chushkaly**	**0.79**	**45**	P	Pg	21 45 50.6	-0.1
	5.0nm,0.2s						
CHKK				S	Sg	21 46 01.5	+0.6
	9.9nm,0.2s						
CHKK	**Chushkaly**	**0.79**	**45**	*e*P	Pg	21 45 50.6	-0.1
CHKK				*e*S	Sg	21 46 01.5	+0.6
CHKK	**Chushkaly**	**0.79**	**45**	*e*P	Pg	21 45 50.6	-0.1
	5.0nm,0.2s						
CHKK				*e*S	Sg	21 46 01.5	+0.6
	9.9nm,0.2s						
BOOM	**Boomskoye usch**	**0.83**	**194** ⇓*i*P	Pg	21 45 49.6	-1.9	
BOOM				⇓*i*S	Sg	21 46 00.3	-1.9
ULHL	**Ulahol**	**1.05**	**179** ⇑P	Pg	21 45 53.1	-2.5	
	1.4nm,0.1s,SNR=6.6						
ULHL	**Ulahol**	**1.05**	**179** ⇓*i*P	Pg	21 45 53.3	-2.4	
ULHL				⇓*i*S	Sg	21 46 06.9	-2.4
CHMS	**Chumysh**	**1.11**	**255** ⇑P	Pg	21 45 55.2	-1.6	
	4.0nm,0.1s,SNR=5.4						
CHMS				⇑S	Sg	21 46 11.2	-0.1
	4.7nm,0.1s						
CHMS	**Chumysh**	**1.11**	**255** ⇑*i*P	Pg	21 45 55.1	-1.8	
CHMS				⇑*i*S	Sg	21 46 09.9	-1.4
KBK	**Karagaybulak**	**1.13**	**236** ⇓P	Pg	21 45 56.0	-1.2	
	2.7nm,0.1s,SNR=16						
KBK	**Karagaybulak**	**1.13**	**236** ⇑*i*P	Pg	21 45 55.2	-2.0	
KBK				⇑*i*S	Sg	21 46 10.3	-1.5
USP	**Ospenovka**	**1.25**	**269** ⇓P	Pg	21 45 58.2	-1.4	
	3.4nm,0.2s,SNR=8.2						
USP				⇑S	Sg	21 46 15.7	-0.1
	8.7nm,0.1s						
USP	**Ospenovka**	**1.25**	**269** ⇑*i*P	Pg	21 45 57.8	-1.8	
USP				⇑*i*S	Sg	21 46 14.7	-1.1
KDJ	**Kajisay**	**1.37**	**148** ⇑*i*P	Pg	21 45 58.8	-2.9	
KDJ				⇑*i*S	Sg	21 46 17.1	-2.3
AAK	**Ala-Archa**	**1.43**	**243** ⇑P	Pn	21 46 00.6	-2.3	
	1.9nm,0.2s						
AAK	**Ala-Archa**	**1.43**	**243** ⇑P	Pn	21 46 00.8	-2.0	
	0.6nm,0.6s						
AAK				⇑S	Sn	21 46 23.3	+0.9
	0.8nm,0.6s						
AAK	**Ala-Archa**	**1.43**	**243** ⇓*i*P	Pn	21 46 00.5	-2.3	
AAK				⇓*i*S	Sg	21 46 19.5	-1.8
UCH	**Uchtor**	**1.65**	**230** ⇓P	Pn	21 46 04.6	-1.6	
	1.6nm,0.2s						
UCH	**Uchtor**	**1.65**	**230** ⇓*i*P	Pn	21 46 04.3	-1.9	
UCH				⇓*i*S	Sn	21 46 26.2	-2.1
PRZ	**Przheval'sk**	**1.80**	**116** ⇑*e*P	Pn	21 46 06.3	-1.7	
PRZ				⇑*e*S	Sn	21 46 29.9	-1.7
EKS2	**Erkin-Say**	**1.90**	**251** ⇑P	Pn	21 46 09.5	+0.2	
	1.9nm,0.2s,SNR=5.8						
EKS2	**Erkin-Say**	**1.90**	**251** ⇓*i*P	Pn	21 46 08.3	-1.0	
EKS2				⇓*i*S	Sn	21 46 33.1	-0.9
ARLS	**Aral**	**2.00**	**225** ⇓*i*P	Pn	21 46 09.6	-1.2	
ARLS				⇓*i*S	Sn	21 46 35.3	-1.3
JNKS	**Jany-Kuch**	**2.28**	**191** ⇓*e*P	Pn	21 46 13.8	-0.8	
JNKS				⇓*e*S	Sn	21 46 41.9	-1.6
PDGK	**Podgornoye**	**2.39**	**88** ⇓Pg	Pb	21 46 18.5	-1.0	
	1.1nm,0.4s						
PDGK				⇑Lg	Lg	21 46 49.6	
	1.8nm,0.7s						
KK31	**Karatay Array**	**4.18**	**269** ⇑Pg	Pg	21 46 53.9	-1.7	
	0.2nm,0.3s,baz=84,slow=15,SNR=5.0						
KK31				⇑Lg	Lg	21 47 49.2	
	0.7nm,0.4s,baz=76,slow=28,SNR=4.8						

*IDC **07** 21:48:41.7±0.5, 55.˚23N×158.˚22W, h0km, mb4.8/34, mbtmp4.8/37, ML4.6/3, MS4.4/48, Error ellipse: s-maj=14.6km s-min=10.1km az=171.0*
*BJI **07** 21:48:42.0, 54.˚94N×158.˚56W, h21km, mB5.2/20, mb5.0/61, Ms5.0/38, Ms7 4.7/38*
*NEIC **07** 21:48:44.6, 55.˚01N×157.˚97W, h36km*
*NEIC **07** 21:48:44.6, 55.˚01N×157.˚97W, h36km, Moment Tensor Solution. Duration: 1s5 Moment tensor: Scale 10^16Nm; Mrr1.72; Mθθ-1.37; Mφφ-0.35; Mrθ2.08; Mθφ-1.22; Mφr0.46; Fault plane solution: M0 2.92000×10^16 NP1: φs216.04000°, δ24.91000°, λ55.65000°. NP2: φs73.04000°, δ69.65000°, λ104.68000°. Principal axes: T 2.7755, Plg63.0000°, Azm6.0000°; N 0.2668, Plg14.0000°, Azm248.0000°; P -3.0423, Plg23.0000°, Azm152.0000°;*
*AEIC **07** 21:48:44.4±1.1, 54.˚98N±0.˚06×157.˚96W±0.˚03, h10km±4km, ML5.0, mb5.0/211(NEIC), ML5.2/52(NEIC), Mww4.9/42(NEIC) Error ellipse: s-maj=9.4km s-min=2.4km az=168.0*
*NEIC **07** 21:48:45.1±1.6, 54.˚93N±0.˚08×157.˚99W±0.˚05, h35km±8km, Error ellipse: s-maj=11.2km s-min=3.8km az=170.0*
*MOS **07** 21:48:46.0±1.0, 55.˚32N×158.˚22W, h37km, mb5.2/80, MS4.6/10, Error ellipse: s-maj=9.8km s-min=4.1km az=96.0*
*GCMT **07** 21:48:46.6±0.3, 54.˚86N±0.˚02×157.˚69W±0.˚03, h45km±1km, MW5.0/90, Moment Tensor Solution. s61,c74; s90,c118; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.62±.17; Mθθ-2.35±.13; Mφφ-0.27±.14; Mrθ2.42±.12; Mθφ-1.73±.10; Mφr0.62±.11; Best double couple: M0 3.89900×10^16 NP1: φs226.00000°, δ27.00000°, λ66.00000°. NP2: φs72.00000°, δ65.00000°, λ102.00000°. Principal axes: T 3.6060, Plg67.0000°, Azm4.0000°; N 0.5840, Plg10.0000°, Azm247.0000°; P -4.1930, Plg20.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 21:48:45.0±0.5, 54.˚99N±0.˚04×157.˚98W±0.˚03, h32km±3km, h32km:pP-P, n973, σ1s24/880, mb5.0/231, MS4.5/65, 67C-38D, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNA	**Chernabura Isl**	**0.94**	**261**	P	**Pn**	**21 49 01.7**	**-0.3**
CHNA	**Chernabura Isl**	**0.94**	**261**	S	**Sn**	**21 49 15.0**	**+0.6**
CHNA	**Chernabura Isl**	**0.94**	**261**	P	**Pn**	**21 49 01.7**	**-0.3**
	baz=74						
CHNA				S	**Sn**	**21 49 13.9**	**-0.5**
	baz=74						
CNBA	**Chernabura Isl**	**0.94**	**260**		**Pn**	**21 49 01.6**	**-0.4**
CNBA					**Sn**	**21 49 14.4**	**0.0**
VNSG	**Veniaminof 6**	**1.30**	**332**		**Pn**	**21 49 06.7**	**-0.3**
VNKR	**Veniaminof 5**	**1.31**	**323**		**Pn**	**21 49 06.7**	**-0.4**
VNSW	**Veniaminof 7**	**1.41**	**321**		**Pn**	**21 49 08.3**	**-0.2**
SDPT	**Sand Point**	**1.48**	**285**		**Sn**	**21 49 27.5**	**-0.1**
SDPT						21 49 29.4	
SDPT	**Sand Point**	**1.48**	**285**		**Pn**	**21 49 09.0**	**-0.3**
SDPT				IAML		21 49 37.5	
	comp=E,26μm,1.1s						
SDPT				IAML		21 49 41.5	
	comp=N,33μm,1.2s						
SDPT	**Sand Point**	**1.48**	**285**	P	**Pn**	**21 49 09.2**	**-0.2**
SDPT	**Sand Point**	**1.48**	**285**	S	**Sn**	**21 49 29.3**	**+1.7**
SDPT	**Sand Point**	**1.48**	**285**	P	**Pn**	**21 49 09.1**	**-0.3**
	baz=100						
SDPT				S	**Sn**	**21 49 27.2**	**-0.4**
	baz=100						
VNNF	**Veniaminof 3**	**1.50**	**330**		**Pn**	**21 49 10.1**	**+0.3**
VNNF						21 49 10.5	
S14K	**Fog Glacier**	**1.58**	**326**	P	**Pn**	**21 49 11.2**	**+0.4**
	baz=144						
VNFG	**Fog Glacier, M**	**1.58**	**326**		**Pn**	**21 49 11.5**	**+0.6**
VNFG					**Sn**	**21 49 32.4**	**+2.2**
VNFG	**Fog Glacier, M**	**1.58**	**326**		**Pn**	**21 49 11.2**	**+0.4**
CHIR	**Chirikof Islan**	**1.58**	**57**		**Sn**	**21 49 31.3**	**+1.2**
CHIR						21 49 34.8	
CHIR	**Chirikof Islan**	**1.58**	**57**		**Pn**	**21 49 10.8**	**0.0**
CHIR				IAML		21 49 45.1	
	comp=E,19μm,0.9s						
CHIR	**Chirikof Islan**	**1.58**	**57**	P	**Pn**	**21 49 10.9**	**0.0**
CHIR	**Chirikof Islan**	**1.58**	**57**	P	**Pn**	**21 49 10.9**	**0.0**
	baz=243						
BPBCA	**Veniaminof**	**1.63**	**351**		**Pn**	**21 49 11.4**	**-0.1**
ANPB	**Aniakchak Plen**	**1.83**	**355**		**Pn**	**21 49 14.0**	**-0.3**
ANPK	**Aniakchak Peak**	**1.86**	**357**		**Pn**	**21 49 14.7**	**-0.1**
ANNE	**Aniakchak Nort**	**1.93**	**359**		**Pn**	**21 49 15.6**	**-0.1**
ANNW	**Aniakchak Nort**	**1.99**	**356**		**Pn**	**21 49 16.4**	**-0.1**
ANNW						21 49 17.1	
PS1A	**Pavlof South-1**	**2.20**	**283**		**Pn**	**21 49 19.3**	**0.0**
PS1A					**Sn**	**21 49 47.4**	**+2.0**
PS1A						21 49 49.2	
DOL	**Dolgoi Island**	**2.24**	**276**		**Pn**	**21 49 19.9**	**0.0**
DOL						21 49 20.1	
PS4A	**Pavlof South-4**	**2.25**	**281**		**Pn**	**21 49 20.1**	**0.0**
PS4A					**Sn**	**21 49 47.5**	**+0.8**
PS4A						21 49 48.4	
HAG	**Hague Volcano**	**2.28**	**280**		**Pn**	**21 49 20.5**	**+0.1**
HAG	**Hague Volcano**	**2.28**	**280**	P	**Pn**	**21 49 20.5**	**+0.1**
S12K	**Black Hills**	**2.44**	**289**		**Sn**	**21 49 53.0**	**+1.7**
S12K	**Black Hills**	**2.44**	**289**		**Pn**	**21 49 22.6**	**0.0**
S12K				IAML		21 50 01.3	
	comp=E,15μm,0.4s						
S12K	**Black Hills**	**2.44**	**289**	P	**Pn**	**21 49 22.8**	**+0.2**
	baz=104						
S12K				Sb	**Sb**	**21 49 57.3**	**-0.5**
	baz=104						
R16K	**Pilot Point**	**2.60**	**5**		**Pn**	**21 49 23.8**	**-1.0**
R16K				IAML		21 50 14.8	
	comp=E,13μm,0.9s						
R16K				IAML		21 50 19.6	
	comp=N,11μm,1.1s						
R16K	**Pilot Point**	**2.60**	**5**	P	**Pn**	**21 49 24.5**	**-0.2**
	baz=186						
R16K				Sb	**Sb**	**21 50 01.2**	**-1.1**
	baz=186						
SII	**Sitkinak Islan**	**2.66**	**52**		**Pn**	**21 49 25.2**	**-0.4**
SII	**Sitkinak Islan**	**2.66**	**52**	P	**Pn**	**21 49 25.7**	**+0.1**
	baz=237						
R17L	**Mt. Peulik Vol**	**2.80**	**18**	P	**Pn**	**21 49 28.1**	**+0.6**
	baz=201						
R17L				Sb	**Sb**	**21 50 07.6**	**-0.6**
	baz=201						
PLK4	**Peulik 4**	**2.80**	**18**		**Sn**	**21 50 02.0**	**+1.6**
PLK4						21 50 04.8	
PLK4	**Peulik 4**	**2.80**	**18**		**Pn**	**21 49 26.9**	**-0.7**
PLK4				IAML		21 50 27.2	
	comp=N,13μm,1.1s						
PLK5	**Peulik 5**	**3.08**	**11**		**Pn**	**21 49 31.3**	**-0.1**
FALS	**False Pass**	**3.14**	**270**		**Pn**	**21 49 32.6**	**+0.4**
FALS						21 49 33.0	
FALS	**False Pass**	**3.14**	**270**	P	**Pn**	**21 49 33.6**	**+1.4**
FALS	**False Pass**	**3.14**	**270**	P	**Pn**	**21 49 32.8**	**+0.6**
	baz=84						
FALS				Sb	**Sb**	**21 50 16.5**	**-1.4**
	baz=84						
R18K	**Karluk**	**3.25**	**36**		**Pn**	**21 49 33.5**	**-0.2**
R18K	**Karluk**	**3.25**	**36**	IAML		21 50 37.0	
	comp=E,7μm,0.5s						
R18K				IAML		21 50 42.6	
	comp=N,5μm,0.7s						
R18K	**Karluk**	**3.25**	**36**	P	**Pn**	**21 49 33.6**	**-0.1**
	baz=220						
KJL	**Kejulik**	**3.35**	**22**		**Pn**	**21 49 35.3**	**+0.1**
ISNN	**Isanotski Nort**	**3.35**	**270**		**Pn**	**21 49 36.1**	**+1.0**
CAHL	**Cahill**	**3.41**	**25**		**Pn**	**21 49 36.0**	**0.0**
OHAK	**Old Harbor**	**3.45**	**48**		**Pn**	**21 49 36.3**	**-0.2**
OHAK	**Old Harbor**	**3.45**	**48**	P	**Pn**	**21 49 36.3**	**-0.2**
OHAK	**Old Harbor**	**3.45**	**48**	P	**Pn**	**21 49 36.3**	**-0.2**
	baz=233						
Q17K	**Contact Creek**	**3.48**	**19**	P	**Pn**	**21 49 36.8**	**-0.2**
	baz=201						
CNTC	**Contact Creek**	**3.48**	**19**		**Pn**	**21 49 36.9**	**-0.2**
SSLS	**Shishaldin Sou**	**3.49**	**268**		**Pn**	**21 49 38.0**	**+0.9**
ACHA	**Angle Creek He**	**3.55**	**23**		**Pn**	**21 49 37.3**	**-0.6**
SSBA	**Shishaldin**	**3.56**	**269**		**Pn**	**21 49 38.5**	**+0.5**
KABU	**Katmai Buttres**	**3.61**	**23**		**Pn**	**21 49 39.1**	**+0.3**
Q16K	**King Salmon**	**3.77**	**11**		**Sn**	**21 50 25.2**	**+1.1**
Q16K	**King Salmon**	**3.77**	**11**	P	**Pn**	**21 49 40.8**	**-0.1**
	baz=192						
WEBT	**Westdahl Beart**	**3.94**	**267**		**Pn**	**21 49 44.0**	**+0.7**
KAHG	**Katmai Hook Gl**	**3.99**	**27**		**Pn**	**21 49 44.0**	**0.0**
Q18K	**Katmai Hardscr**	**4.02**	**23**	P	**Pn**	**21 49 44.0**	**-0.3**
	baz=206						
P16K	**Nushagak River**	**4.05**	**360**		**Pn**	**21 49 43.9**	**-0.9**
P16K	**Nushagak River**	**4.05**	**360**	P	**Pn**	**21 49 44.7**	**0.0**
	baz=180						
KDAK	**Kodiak Island**	**4.10**	**45**		**Pn**	**21 49 44.9**	**-0.5**
KDAK	**Kodiak Island**	**4.10**	**45**	IAML		21 51 05.0	
	comp=N,2μm,1.1s						
KDAK				IAML		21 51 06.3	
	comp=N,2μm,1.2s						
KDAK	**Kodiak Island**	**4.10**	**45**	Pn	**Pn**	**21 49 44.5**	**-1.0**
	comp=N,27nm,0.3s,baz=223,slow=6.7,SNR=132						
KDAK				Sn	**Sn**	**21 50 27.7**	**-4.6**
	comp=N,78nm,0.3s,baz=300,slow=20,SNR=5.9						
	comp=N,132nm,0.6s						
KDAK	**Kodiak Island**	**4.10**	**45**	P	**Pn**	**21 49 44.9**	**-0.5**
KDAK	**Kodiak Island**	**4.10**	**45**	P	**Pn**	**21 49 45.0**	**-0.4**
	baz=230						
P17K	**Kvichak River**	**4.30**	**11**	P	**Pn**	**21 49 47.8**	**-0.3**
	baz=193						
O15K	**Ungalikthiuk R**	**4.32**	**347**		**Pn**	**21 49 48.0**	**-0.4**
O15K	**Ungalikthiuk R**	**4.32**	**347**	IAML		21 50 41.3	
	comp=N,1μm,0.9s						
O15K				IAML		21 50 41.4	
	comp=E,2μm,0.8s						
O15K	**Ungalikthiuk R**	**4.32**	**347**	P	**Pn**	**21 49 48.2**	**-0.3**
	baz=166						
AKSA	**Akutan Strait**	**4.57**	**262**		**Pn**	**21 49 52.8**	**+0.9**
Q19K	**Cape Douglas,**	**4.61**	**29**		**Pn**	**21 49 52.4**	**0.0**
AKUT	**Akutan**	**4.62**	**263**		**Pn**	**21 49 53.2**	**+0.8**
AKUT				IAML		21 51 16.4	
	comp=N,2μm,1.1s						
AKUT				IAML		21 51 17.9	
	comp=E,1μm,0.8s						
AKUT	**Akutan**	**4.62**	**263**	P	**Pn**	**21 49 53.7**	**+1.2**
O16K	**Kokwok River B**	**4.62**	**359**		**Pn**	**21 49 51.8**	**-0.7**
O16K	**Kokwok River B**	**4.62**	**359**	P	**Pn**	**21 49 51.9**	**-0.6**
	baz=180						
O14K	**Tigyukauivet M**	**4.64**	**339**		**Pn**	**21 49 52.8**	**0.0**
O14K						21 49 53.0	
O14K	**Tigyukauivet M**	**4.64**	**339**	IAML		21 51 17.4	
	comp=N,3μm,1.0s						
O14K				IAML		21 51 19.9	
	comp=E,2μm,1.1s						
O14K	**Tigyukauivet M**	**4.64**	**339**	P	**Pn**	**21 49 52.5**	**-0.2**
	baz=156						
AHB	**Akutan Harbor**	**4.65**	**262**		**Pn**	**21 49 53.6**	**+0.6**
P18K	**Big Mountain,**	**4.66**	**18**		**Pn**	**21

N14K Kuskokwak Cree 5.34 340 Pn 21 50 02.2 -0.2
N14K Kuskokwak Cree 5.34 340 IAML 21 51 31.8
comp=E,2µm,1.1s
N14K Kuskokwak Cree 5.34 340 P Pn 21 50 02.2 -0.2
baz=156
N16K Nishlik Lake 5.52 356 Pn 21 50 04.9 0.0
N16K Nishlik Lake 5.52 356 P Pn 21 50 04.8 0.0
baz=176
N17K Nushagak Hills 5.57 4 Pn 21 50 05.3 -0.3
N17K Nushagak Hills 5.57 4 P Pn 21 50 05.1 -0.5
baz=185
O19K Port Alsworth 5.58 19 Pn 21 50 05.3 -0.4
O19K Port Alsworth 5.58 19 P Pn 21 50 05.7 0.0
baz=203
ILS Iliamna Low So 5.64 26 Pn 21 50 06.7 +0.1
HOM Homer 5.80 34 Pn Pn 21 50 08.5 -0.3
HOM Homer 5.80 34 P Pn 21 50 08.6 -0.1
baz=220
N18K Kilae Creek 5.82 10 P Pn 21 50 08.8 -0.1
baz=192
O20K Slope Mountain 5.86 27 Pn 21 50 09.8 +0.1
O20K Slope Mountain 5.86 27 P Pn 21 50 09.7 0.0
baz=212
M15K Kasigluk River 5.90 347 Pn 21 50 10.0 -0.1
M15K Kasigluk River 5.90 347 P Pn 21 50 09.9 -0.1
baz=165
M16K Timber Creek 6.08 355 Pn 21 50 12.5 0.0
M16K Timber Creek 6.08 355 P Pn 21 50 12.6 0.0
baz=175
OKTU Okmok Mt. Tuli 6.12 259 Pn 21 50 13.5 +0.3
N19K Bonanza Creek 6.13 16 P Pn 21 50 13.4 0.0
baz=200
BRLK Bradley Lake 6.13 36 Pn 21 50 11.9 -1.4
OKNC Okmok New Cone 6.15 260 Pn 21 50 13.5 0.0
M13K Dall Lake 6.15 334 Pn 21 50 13.6 +0.1
M13K Dall Lake 6.15 334 P Pn 21 50 13.8 +0.2
baz=150
RDSO Redoubt South 6.16 25 Pn 21 50 13.6 -0.1
M14K Bethel 6.16 341 P Pn 21 50 13.0 -0.6
baz=158
RDWB Redoubt West 6.16 24 Pn 21 50 13.3 -0.6
BRSE Bradley Lake S 6.17 36 P Pn 21 50 13.1 -0.7
baz=223
M17K Holitna River 6.44 2 P Pn 21 50 16.7 -0.8
baz=183
M18K Stony River 6.62 9 P Pn 21 50 19.2 -0.8
baz=191,SNR=69
NIKH Nikolski High 6.73 257 Pn Pn 21 50 21.1 -0.3
NIKH Nikolski High 6.73 257 P Pn 21 50 23.1 +1.6
NIKH Nikolski High 6.73 257 P Pn 21 50 21.6 +0.1
baz=67
L16K Owhat River 6.79 354 Pn 21 50 21.9 -0.4
L16K Owhat River 6.79 354 P Pn 21 50 21.7 -0.6
baz=173
L14K Kuka Creek 6.84 341 Pn 21 50 22.1 -0.9
L14K Kuka Creek 6.84 341 P Pn 21 50 22.2 -0.7
baz=157
SEW Seward 6.88 38 Pn 21 50 21.2 -2.3
SEW Seward 6.88 38 P Pn 21 50 22.1 -1.4
baz=226
CKL Chakachamna La 6.90 23 Pn 21 50 23.9 -0.1
SLKM Skilak Lake 6.92 34 Pn 21 50 22.6 -1.5
N20K Mount Spurr 6.94 24 P Pn 21 50 23.6 -0.8
baz=209
SPCR Spurr Chakacha 6.94 24 Pn 21 50 23.8 -0.6
SPCR Spurr Chakacha 6.94 24 P Pn 21 50 23.6 -0.8
baz=209
L15K Ungalak Mounta 6.96 346 P Pn 21 50 23.6 -1.0
baz=163
SPU Mount Spurr 6.96 24 Pn 21 50 23.4 -1.2
M11K Mekoryuk 6.98 324 Pn Pn 21 50 22.1 -2.7
M11K Mekoryuk 6.98 324 P Pn 21 50 23.9 -1.0
baz=137
SPNN North Nagishla 6.98 21 Pn 21 50 25.1 +0.1
O22K Cooper Landing 7.06 35 Pn 21 50 26.0 0.0
O22K Cooper Landing 7.06 35 P Pn 21 50 25.6 -0.4
baz=223
SPCG Spurr Capps Gl 7.06 24 Pn 21 50 26.1 -0.1
L17K Donlin 7.17 359 Pn 21 50 27.1 -0.4
L17K Donlin 7.17 359 P Pn 21 50 26.9 -0.6
baz=179
M19K Big River Lodg 7.19 14 P Pn 21 50 28.0 +0.2
baz=197
SPIA Saint Paul Isl 7.21 293 Pn 21 50 28.5 +0.5
SPIA Saint Paul Isl 7.21 293 P Pn 21 50 27.9 -0.1
baz=102
L18K Granite Mounta 7.29 5 P Pn 21 50 28.4 -0.7
baz=186
STLK Strandline Lak 7.29 24 Pn 21 50 28.7 -0.5
M20K Styx River 7.37 18 Pn 21 50 30.4 +0.2
M20K Styx River 7.37 18 P Pn 21 50 30.6 +0.3
baz=203
L19K White Mountain 7.40 11 Pn 21 50 30.5 -0.1
L19K White Mountain 7.40 11 P Pn 21 50 30.4 -0.3
baz=195,SNR=78
RC01 Rabbit Creek A 7.52 32 Pn 21 50 31.6 -0.7
RC01 Rabbit Creek A 7.52 32 P Pn 21 50 31.4 -0.9
baz=220
SUA Susitna One 7.53 27 Pn 21 50 31.9 -0.6
SUA Susitna One 7.53 27 P Pn 21 50 32.0 -0.6
baz=214
K15K Wolf Creek Mou 7.56 347 Pn 21 50 32.5 -0.3
K15K Wolf Creek Mou 7.56 347 P Pn 21 50 31.8 -1.0
baz=164
P23K Montague Islan 7.59 44 P Pn 21 50 33.7 +0.4
baz=234
Q23K Middleton Isla 7.72 50 P Pn 21 50 35.1 0.0
baz=240
MID Middleton Isla 7.72 50 Pn 21 50 34.4 -0.7
K17K Iditarod 7.75 359 Pn 21 50 35.1 -0.4
K17K Iditarod 7.75 359 P Pn 21 50 35.1 -0.4
baz=179
SKT Skwentna 7.78 23 Pn 21 50 35.0 -0.9
SKT Skwentna 7.78 23 P Pn 21 50 35.5 -0.4
baz=209
K13K Kusilvak Mount 7.79 336 Pn 21 50 36.1 +0.1
K13K Kusilvak Mount 7.79 336 P Pn 21 50 36.0 0.0
baz=150
PWL Port Wells 7.80 37 Pn 21 50 34.7 -1.5
PWL Port Wells 7.80 37 P Pn 21 50 35.0 -1.3
baz=226,SNR=76
L20K Farewell, AK 7.81 14 Pn 21 50 36.6 +0.3
L20K Farewell, AK 7.81 14 P Pn 21 50 36.7 +0.3
baz=198,SNR=86
M22K Willow 7.94 28 P Pn 21 50 36.9 -1.1
baz=215
KNK Knik Glacier 8.16 34 Pn 21 50 39.8 -1.4
KNK Knik Glacier 8.16 34 P Pn 21 50 39.7 -1.5
baz=223,SNR=16
HIN Hinchinbrook I 8.19 44 Pn 21 50 40.3 -1.2
GLI Glacier Island 8.26 40 Pn 21 50 40.6 -2.0
GLI Glacier Island 8.26 40 P Pn 21 50 40.5 -2.0
baz=230
GHO Glory Hole Cre 8.29 31 Pn 21 50 41.9 -1.1
J14K Nanvaranak Lak 8.30 342 Pn 21 50 42.1 -0.9
J14K Nanvaranak Lak 8.30 342 P Pn 21 50 42.2 -0.7
baz=157,SNR=14
J16K Anvik River 8.43 352 Pn 21 50 44.3 -0.5
J16K Anvik River 8.43 352 P Pn 21 50 44.1 -0.7
baz=170
CUT Chulitna 8.45 25 Pn 21 50 43.9 -1.1
CUT Chulitna 8.45 25 P Pn 21 50 44.2 -0.8
baz=212
J17K VABM Dome 8.45 357 P Pn 21 50 43.5 -1.6
baz=176,SNR=19
PPLA Purkeypile 8.47 18 Pn 21 50 44.8 -0.8
PPLA Purkeypile 8.47 18 P Pn 21 50 45.2 -0.3
baz=204,SNR=78
SML Sawmill 8.50 33 Pn 21 50 44.9 -0.9
SML Sawmill 8.50 33 P Pn 21 50 44.6 -1.2
baz=221,SNR=12
J18K Innoko River 8.53 4 Pn 21 50 45.6 -0.6
J18K Innoko River 8.53 4 P Pn 21 50 45.5 -0.6
baz=185
EYAK Cordova Ski Ar 8.58 45 Pn 21 50 46.1 -0.8
EYAK Cordova Ski Ar 8.58 45 P Pn 21 50 45.7 -1.1
EYAK Cordova Ski Ar 8.58 45 P Pn 21 50 45.5 -1.3
baz=236,SNR=18
K20K Telida 8.63 12 Pn 21 50 47.1 -0.4
K20K Telida 8.63 12 P Pn 21 50 46.9 -0.6
baz=196,SNR=11
M23K Glacier View 8.68 34 P Pn 21 50 47.1 -1.2
baz=223,SNR=30
KAIM Kayak Island 8.82 50 Pn 21 50 50.3 +0.2
KAIM Kayak Island 8.82 50 P Pn 21 50 50.6 +0.4
baz=242,SNR=12
SCM Sheep Creek Mo 8.84 35 P Pn 21 50 49.3 -1.2
baz=224,SNR=54
DIV Divide 8.92 41 Pn 21 50 50.6 -1.0
RAGM Ragged Mountai 8.94 47 Pn 21 50 51.5 -0.3
GOAT Goat Mountain 9.02 46 Pn 21 50 51.8 -1.2
I17K Unalakleet 9.03 352 Pn 21 50 52.8 -0.2
I17K Unalakleet 9.03 352 P Pn 21 50 52.6 -0.4
baz=170,SNR=12
KLU Kluane 9.10 39 P Pn 21 50 52.9 -1.1
baz=230,SNR=51
J19K Poorman 9.11 7 P Pn 21 50 53.4 -0.7
baz=189,SNR=23
NICHA Nichawak Mount 9.17 49 Pn 21 50 54.2 -0.7
WAT7 Susitna Watana 9.17 27 Pn 21 50 52.5 -2.5
SUCK Suckling Hills 9.17 50 Pn 21 50 55.2 +0.3
WAT1 Susitna Watana 9.24 28 Pn 21 50 53.6 -2.4
WAT1 Susitna Watana 9.24 28 P Pn 21 50 53.6 -2.4
baz=216
WAT6 Susitna Watana 9.27 31 Pn 21 50 54.4 -2.1
WAT6 Susitna Watana 9.27 31 P Pn 21 50 54.1 -2.4
baz=220,SNR=30
BMRM Bremner River 9.28 44 Pn 21 50 54.9 -1.6
BMRM Bremner River 9.28 44 P Pn 21 50 55.0 -1.6
baz=236,SNR=20
TRF Thorofare Moun 9.35 22 P Pn 21 50 56.5 -1.0
baz=209,SNR=26
BERG Berg Lake 9.36 49 Pn 21 50 56.6 -0.9
CHUM Lake Minchumin 9.37 16 P Pn 21 50 57.0 -0.7
baz=201,SNR=8.4
J20K Nowinta River 9.42 10 P Pn 21 50 56.7 -1.6
baz=194,SNR=26
M24K Tolsona, Glenn 9.42 36 Pn 21 50 57.5 -0.9
M24K Tolsona, Glenn 9.42 36 P Pn 21 50 57.2 -1.2
baz=227,SNR=16
GRIN Grindle Hills 9.47 50 Pn 21 50 58.5 -0.6
KHIT Khitrov Hills 9.58 49 Pn 21 51 00.2 -0.4
RND Reindeer 9.64 25 Pn 21 50 59.4 -2.0
RND Reindeer 9.64 25 P Pn 21 50 59.4 -2.0
SNH Sunshine Point 9.64 51 Pn 21 51 00.8 -0.6
N25K Chitina, Valde 9.66 41 P Pn 21 51 00.4 -1.3
baz=233,SNR=16
WAX Waxell Ridge 9.76 50 Pn 21 51 01.8 -1.3
DHY Denali Highway 9.77 30 Pn 21 51 01.6 -1.6
DHY Denali Highway 9.77 30 P Pn 21 51 02.0 -1.3
baz=219,SNR=20
CRQM Cirque 9.78 48 Pn 21 51 02.5 -0.9
BPAW Bear Paw Mtn. 9.80 18 P Pn 21 51 02.1 -1.5
baz=205,SNR=10.0
CRQE Cirque 9.80 48 P Pn 21 51 02.7 -0.9
baz=241,SNR=34
GCSA Galena City Sc 9.81 3 P Pn 21 51 02.7 -0.9
baz=184,SNR=6.0
GLB Gidahina Butte 9.87 43 Pn 21 51 03.4 -1.2
VRDI Verde Repeater 9.89 45 Pn 21 51 03.5 -1.5
BARK Barkley Ridge 9.90 50 Pn 21 51 03.4 -1.5
MCK McKinley 9.90 24 P Pn 21 51 03.7 -1.2
baz=212,SNR=25
TGL Tana Glacier 9.91 48 Pn 21 51 04.2 -1.0
H16K Elim 9.91 349 Pn 21 51 04.0 -1.1
H16K Elim 9.91 349 P Pn 21 51 03.7 -1.4
baz=166,SNR=19
HARP HAARP 9.97 37 Pn 21 51 04.4 -1.5
HARP HAARP 9.97 37 P Pn 21 51 04.9 -1.0
baz=228,SNR=13
I20K Naaghedeneel 9.99 9 P Pn 21 51 04.7 -1.5
baz=192
WACK Wrangell Chich 10.00 40 Pn 21 51 05.1 -1.3
WASW Wrangell South 10.02 40 Pn 21 51 05.6 -1.1
H17K Granite Mounta 10.03 355 P Pn 21 51 05.6 -1.0
baz=174
ATKA Atka Island 10.04 261 P Pn 21 51 07.4 +0.6
MESA MESA 10.04 52 Pn 21 51 06.0 -1.0
MESA MESA 10.04 52 P Pn 21 51 06.2 -0.9
baz=246,SNR=7.7
ISLE Juniper Island 10.05 50 Pn 21 51 06.2 -1.0
MCARA McCarthy VSAT 10.15 45 P Pn 21 51 07.7 -0.7
baz=205,SNR=14
H18K Honhosa River 10.20 359 P Pn 21 51 08.0 -1.0
baz=179,SNR=53
PAX Paxson 10.26 34 P Pn 21 51 09.4 -0.5
baz=225,SNR=55
ANM Nome 10.29 342 P Pn 21 51 09.2 -1.0
baz=156
G15K Niukluk 10.48 346 P Pn 21 51 12.7 -0.1
baz=161,SNR=12
H19K Roundabout Mou 10.60 3 P Pn 21 51 13.9 -0.5
baz=185
NEA2 Nenana 10.61 21 P Pn 21 51 12.3 -2.3
baz=209,SNR=24
G17K Kiwalik Mounta 10.63 354 P Pn 21 51 14.0 -0.9
baz=172
I21K Tanana 10.65 14 P Pn 21 51 14.2 -0.9
baz=199,SNR=6.4
H20K Anotleneega Mo 10.65 7 P Pn 21 51 14.3 -0.9
baz=190
CTG Chitna Glacier 10.65 49 P Pn 21 51 15.1 -0.3
baz=244,SNR=28
G16K Koyuk River 10.66 350 P Pn 21 51 15.0 -0.3
baz=166,SNR=9.8
MLY Manley 10.70 17 P Pn 21 51 14.6 -1.2
baz=203
M26K Nabesna, AK 10.75 40 P Pn 21 51 16.0 -0.5
baz=234,SNR=24
PINM Pinnacle 10.80 55 P Pn 21 51 17.5 +0.3
baz=250,SNR=27
HDA Harding Lake 10.95 26 P Pn 21 51 16.6 -2.6
baz=216,SNR=37
G18K Tagagawik 10.95 359 P Pn 21 51 19.6 +0.4
baz=178,SNR=36
H21K Melozitna Rive 11.00 11 P Pn 21 51 19.4 -0.6
baz=196,SNR=42
L26K Log Cabin Wild 11.01 37 P Pn 21 51 20.5 +0.4
baz=230,SNR=36
RIDG Independent Ri 11.02 32 P Pn 21 51 19.9 -0.3
baz=224,SNR=14
I23K Minto, Yukon-K 11.05 19 P Pn 21 51 18.3 -2.3
baz=207,SNR=9.4
PNL Peninsula 11.07 57 P Pn 21 51 21.4 +0.5
PNL Peninsula 11.07 57 P Pn 21 51 20.8 -0.1
baz=254,SNR=21
O28M Mount Upton 11.08 51 P Pn 21 51 20.6 -0.7
baz=247
COLA College 11.12 23 P Pn 21 51 20.1 -1.5
COLA College 11.12 23 P Pn 21 51 19.9 -1.6
baz=212
M27K Edge Creek, AK 11.14 42 P Pn 21 51 21.6 -0.4
baz=236,SNR=9.3
GAMB Gambell 11.22 327 P Pn 21 51 22.0 -1.0
baz=135
F15K North Star Dit 11.24 346 P Pn 21 51 22.9 -0.3
baz=160,SNR=14
ILAR Eielson Array 11.26 25 Pn Pn 21 51 19.8 -3.8
comp=E,2.3nm,0.3s,baz=217,slow=14,SNR=73
ILAR Sn Sn 21 53 20.1 -7.9
comp=E,1.6nm,0.3s,baz=338,slow=24,SNR=4.7
ILAR LR LR 21 55 52.2
comp=E,2µm,21.6s,baz=213,slow=39
F14K Arctic Creek 11.29 342 P Pn 21 51 22.9 -1.0
baz=155
H22K Ishtalitna Cre 11.41 14 P Pn 21 51 24.5 -1.1
baz=200,SNR=6.4
YUK3 Moose Creek 11.41 46 P Pn 21 51 25.5 -0.3
baz=242,SNR=23
POKR Poker Plat Res 11.42 23 P Pn 21 51 22.5 -3.3
baz=212,SNR=15
SCRK Sand Creek 11.45 32 P Pn 21 51 25.1 -1.2
baz=225,SNR=24
YUK8 Steele Glacier 11.48 49 P Pn 21 51 26.4 -0.4
baz=245,SNR=36
J25K Salcha River, 11.53 28 P Pn 21 51 25.3 -1.9
baz=233,SNR=78
L27K Beaver Creek, 11.57 39 P Pn 21 51 27.3 -0.5
baz=233
ADK Adak 11.58 262 P Pn 21 51 29.6 +1.7
ADK Adak 11.58 262 P Pn 21 51 29.1 +1.2
F17K Baldwin Pennin 11.60 353 P Pn 21 51 26.5 -1.6
baz=171
H23K Yukon River 11.63 17 P Pn 21 51 27.5 -1.0
baz=205
O29M Mount Kennedy 11.66 55 P Pn 21 51 29.4 +0.3
baz=252
TNA Tin City 11.68 339 P Pn 21 51 28.5 -0.6
baz=151
F18K Selawik 11.68 357 P Pn 21 51 28.5 -0.7
baz=175,SNR=20
G21K Allakaket 11.77 9 P Pn 21 51 29.5 -0.9
baz=193,SNR=17
P29M Windy Craggy 11.87 59 P Pn 21 51 32.1 +0.2
baz=256,SNR=22
F19K Shaleruckik Mo 11.89 0 P Pn 21 51 30.7 -1.3
baz=181,SNR=26
H24K Noodor Dome 11.95 20 P Pn 21 51 30.4 -2.6
baz=210,SNR=6.3
J26L Joseph Creek 11.96 31 P Pn 21 51 32.4 -0.7
baz=224
YUK6 Outpost Mounta 11.97 52 P Pn 21 51 34.4 +1.0
baz=249,SNR=6.6
YUK4 Talbot Arm 12.00 50 P Pn 21 51 34.9 +1.1
baz=247,SNR=24
K27K Chicken 12.10 35 P Pn 21 51 34.8 -0.2
baz=229
F20K Avaraart Lake 12.15 4 P Pn 21 51 34.3 -1.3
baz=186
E17K Hotham Inlet 12.28 353 P Pn 21 51 37.0 -0.3
baz=170,SNR=6.0
HYT Haines Junctio 12.33 53 P Pn 21 51 39.1 +0.9
baz=251,SNR=12
G22K Bettles 12.37 12 P Pn 21 51 37.7 -0.9
baz=198
G23K Bananza Creek 12.37 15 P Pn 21 51 37.1 -1.5
baz=202
S31K Pelican 12.37 67 P Pn 21 51 38.2 -0.4
baz=266
P30M Million Dollar 12.38 57 P Pn 21 51 39.4 +0.6
baz=255,SNR=11
F21K Alatna River 12.46 8 P Pn 21 51 38.3 -1.6
baz=192,SNR=11
PLBC Pleasant Camp 12.51 60 P Pn 21 51 40.5 -0.1
baz=259,SNR=12
E19K Redstone River 12.52 1 P Pn 21 51 40.0 -0.6
baz=182
E18K Tukpahlearik C 12.54 355 P Pn 21 51 40.0 -0.9
baz=173,SNR=6.8
M29M Somme Creek 12.55 46 P Pn 21 51 40.6 -0.6
baz=243
I26K Coal Creek Min 12.67 29 P Pn 21 51 41.5 -1.2
baz=223
N30M Aishikik Lake 12.74 51 P Pn 21 51 43.5 -0.3
baz=249
H25L Birch Creek 12.76 23 P Pn 21 51 41.2 -2.6
baz=214,SNR=5.7
G24K Hadweenzic Riv 12.79 19 P Pn 21 51 42.7 -1.7
baz=209
SIT Sitka 12.83 71 P Pn 21 51 45.9 +1.0
COLD Coldfoot 12.83 14 P Pn 21 51 42.5 -2.3
baz=201
F22K John River 12.86 10 P Pn 21 51 44.9 -0.4
baz=195
O30N Mendenhall 12.97 55 P Pn 21 51 47.4 +0.5
baz=254,SNR=10
D17K Noatak River 12.98 351 P Pn 21 51 46.7 -0.2
baz=167
L29M L29M 13.01 43 P Pn 21 51 47.4 0.0
baz=241
SKAG Skagway 13.03 61 P Pn 21 51 48.8 +1.1
SKAG Skagway 13.03 61 P Pn 21 51 49.0 +1.3
baz=260,SNR=13
DAWY Dawson 13.05 38 P Pn 21 51 48.0 0.0
baz=235,SNR=24
S32K Killisnoo 13.23 70 P Pn 21 51 50.5 +0.1
baz=270
R32K Eaglecrest 13.30 66 Pn Pn 21 51 51.3 -0.1
R32K Eaglecrest 13.30 66 P Pn 21 51 52.6 +1.2
baz=266
M30M Minto, Yukon 13.31 47 P Pn 21 51 50.7 -0.8
baz=245,SNR=5.9
RDOG Red Dog Mine 13.31 352 P Pn 21 51 51.5 0.0
baz=168,SNR=17
I27K Kandik River 13.33 31 P Pn 21 51 50.1 -1.6
baz=225
N31M Braeburn, Yuko 13.34 52 Pn 21 51 52.7 +0.8
N31M Braeburn, Yuko 13.34 52 P Pn 21 51 51.5 -0.4
baz=251,SNR=12
E20K Nigu River 13.34 3 P Pn 21 51 51.3 -0.7
baz=185,SNR=18
F24K Squaw Lake 13.45 17 P Pn 21 50 50.3 -3.0
baz=206
E22K Anaktuvuk Pass 13.50 10 P Pn 21 51 52.6 -1.5
baz=196
WHY Whitehorse 13.51 56 P Pn 21 51 54.9 +0.6
baz=256,SNR=18
D19K Kuna River 13.56 360 Pn 21 51 54.6 -0.2
D19K Kuna River 13.56 360 P Pn 21 51 54.4 -0.5
baz=180,SNR=17
E21K Killik River 13.63 6 P Pn 21 51 54.3 -1.5
baz=190
E23K Chandalar 13.69 13 P Pn 21 51 54.4 -2.3
baz=201
I28M Miner Creek 13.73 33 P Pn 21 51 56.0 -1.3
baz=229
C17K DeLong Mountai 13.75 352 P Pn 21 51 56.9 -0.5
baz=167
C16K Lisburne Hills 13.77 348 Pn 21 51 57.3 -0.3
C16K Lisburne Hills 13.77 348 P Pn 21 51 56.7 -1.0
baz=162
G26K Porcupine Rive 13.78 24 P Pn 21 51 56.7 -1.1
baz=217
C18K Utukok River 13.79 355 P Pn 21 51 56.6 -1.4
baz=172
D20K Etivluk River 13.79 2 P Pn 21 51 57.0 -1.1
baz=184,SNR=6.0
H27K Steamboat Moun 13.80 29 Pn 21 51 57.1 -1.2
H27K Steamboat Moun 13.80 29 P Pn 21 51 57.9 -0.4
baz=224,SNR=8.4
E24K Your Creek 13.86 15 P Pn 21 51 58.4 -0.6
baz=204
P32M Atlin 13.87 61 Pn 21 51 59.0 -0.1
P32M Atlin 13.87 61 P Pn 21 51 59.4 +0.3
baz=262
F25K Christian Rive 13.92 20 P Pn 21 51 55.6 -4.3
baz=211
AMKA Amchitka 14.07 264 Pn Pn 21 52 01.6 -0.4
U33K Whale Pass 14.09 75 P Pn 21 52 01.7 -0.5
baz=276
MAYO Mayo, Yukon 14.13 44 P Pn 21 52 03.2 +0.6
baz=243,SNR=11
D22K Ayikyak River 14.15 8 P Pn 21 52 02.1 -0.9
baz=193
CRAG Craig 14.17 78 Pn Pn 21 52 02.0 -1.2
CRAG Craig 14.17 78 P Pn 21 52 02.2 -1.0
baz=279
C19K Lookout Ridge 14.19 358 P Pn 21 52 02.2 -1.3
baz=176,SNR=12
M31M Drury Creek, Y 14.20 50 Pn 21 52 02.9 -0.7
M31M P P 21 52 11.8 +1.2
M31M Drury Creek, Y 14.20 50 P Pn 21 52 02.3 -1.3
baz=250,SNR=7.3
G27K Doyon Strip 14.20 27 P Pn 21 52 01.3 -2.3
baz=222
TOLK Toolik Lake Re 14.24 13 P Pn 21 52 02.2 -2.0
baz=200,SNR=18
C21K Knifeblade Rid 14.30 5 P Pn 21 52 03.3 -1.6
baz=188
F26K Sheenjek River 14.31 22 P Pn 21 52 04.2 -1.0
baz=214
E25K Arctic Village 14.39 19 P Pn 21 52 02.0 -4.3
baz=210
P33M Teslin, Yukon 14.41 59 P Pn 21 52 06.8 +0.1
baz=260,SNR=6.8
D23K Nanushuk River 14.42 11 P Pn 21 52 04.9 -1.7
baz=197,SNR=11
J30M Hart River 14.44 40 P Pn 21 52 07.5 +0.4
baz=239,SNR=26
N32M Quiet Lake 14.49 55 P Pn 21 52 06.6 -1.0
baz=256
WRAK Wrangell Islan 14.49 74 P P 21 52 13.8 -0.1
Q32M Nakina River 14.53 64 P Pn 21 52 08.0 -0.3
baz=266
B18K Kokolik River 14.54 355 P Pn 21 52 07.9 -0.2
baz=171,SNR=8.1
H29M Whitestone 14.72 32 P Pn 21 52 09.9 -0.8
baz=230
B21K Ikpikpuk River 14.77 5 P Pn 21 52 09.9 -1.4
baz=188
I30M Mount Dempster 14.78 37 P Pn 21 52 10.4 -1.1
baz=237
D24K Happy Valley 14.82 13 P Pn 21 52 10.8 -1.2
baz=201
B20K Meade River 15.08 1 P Pn 21 52 14.6 -0.8
baz=182
S34M Telegraph Cree 15.09 68 P P 21 52 21.8 +1.3
S34M Telegraph Cree 15.09 68 P Pn 21 52 16.1 +0.5
baz=271,SNR=20

R33M **Jennings River** 15.23 62 P Pn 21 52 16.6 -1.0
baz=265
F28M **Old Crow** 15.27 27 P Pn 21 52 14.8 -3.1
baz=223,SNR=13
C23K **Itkillik River** 15.27 10 P Pn 21 52 16.6 -1.3
baz=196
E27K **Coleen River** 15.28 24 P Pn 21 52 15.7 -2.4
baz=218
G29M **Pine Creek** 15.29 31 P Pn 21 52 16.4 -1.8
baz=228
D25K **Kavik River** 15.32 16 P Pn 21 52 16.5 -2.2
baz=206
EPYK **Eagle Plains** 15.34 34 P Pn 21 52 18.2 -0.7
baz=232,SNR=22
C24K **Franklin Bluff** 15.37 12 IAmb IAmb 21 52 23.4
comp=Z,44nm,0.8s
C24K **Franklin Bluff** 15.37 12 P Pn 21 52 18.0 -1.2
baz=201,SNR=12
B22K **Teshekpuk Lake** 15.54 6 IAmb IAmb 21 52 26.0
comp=Z,91nm,1.0s
B22K **Teshekpuk Lake** 15.54 6 P Pn 21 52 18.9 -2.6
baz=190,SNR=6.5
T35M **Bob Quinn** 15.60 71 P P 21 52 26.2 -0.1
DLBC **Dease Lake** 15.67 66 Pn P 21 52 25.8 -1.3
comp=Z,0.9nm,0.3s,baz=240,slow=12,SNR=24
DLBC Sn Sn 21 55 10.4 -5.3
comp=Z,0.1nm,0.3s,baz=136,slow=24,SNR=1.7
comp=Z,4.8nm,0.5s
H31M **Peel River** 15.81 37 P Pn 21 52 23.5 -1.5
baz=238
G30M **tAoh Zraii Nji** 15.87 32 P Pn 21 52 24.4 -1.4
baz=232,SNR=72
C27K **Jago River** 16.04 18 P Pn 21 52 27.3 -0.6
baz=211
C26K **Camden Bay** 16.09 16 P Pn 21 52 27.4 -1.0
baz=208
E28M **Babbage River** 16.09 25 P Pn 21 52 27.4 -1.1
baz=221
A22K **Sinclair Lake** 16.13 4 P Pn 21 52 28.2 -0.8
baz=186
D27M **Malcolm River** 16.26 22 P Pn 21 52 30.3 -0.4
baz=217
E29M **Blow River** 16.34 27 P Pn 21 52 29.9 -1.8
baz=225
WTLY **Watson Lake, Y** 16.39 60 P P 21 52 34.7 -0.4
baz=265
F30M **Barrier River** 16.40 31 P Pn 21 52 31.2 -1.3
baz=231,SNR=50
A21K **Barrow** 16.41 2 P Pn 21 52 31.2 -1.3
baz=183
D28M **Stokes Point** 16.83 24 P Pn 21 52 36.9 -0.9
baz=221
TGTN **Hyland Airport** 16.83 55 P Pn 21 52 38.6 +0.5
baz=261,SNR=48
F31M **Tsiigehtchic** 16.92 33 IAmb IAmb 21 52 42.4
comp=Z,145nm,1.0s
F31M **Tsiigehtchic** 16.92 33 P Pn 21 52 36.5 -2.4
baz=235,SNR=38
INK **Inuvik** 17.51 31 IAmb IAmb 21 52 48.4
comp=Z,107nm,0.6s
INK **Inuvik** 17.51 31 P Pn 21 52 45.1 -1.1
comp=Z,3.0nm,0.3s,baz=228,slow=10,SNR=83
INK S Sn 21 55 58.2 -1.7
comp=Z,9.3nm,0.8s,baz=59,slow=32,SNR=15
comp=Z,80nm,0.5s
INK **Inuvik** 17.51 31 P Pn 21 52 45.2 -1.1
baz=233,SNR=62
TOAD **Toad River Com** 18.18 64 P P 21 52 55.5 +0.8
baz=272
KOTAN **Kotaneelee Air** 18.77 60 P P 21 53 01.0 -0.2
baz=269
WRGLY **Wrigley** 19.32 51 P P 21 53 06.3 -0.8
WRGLY IAmb IAmb 21 53 15.0
comp=Z,107nm,1.2s
WRGLY **Wrigley** 19.32 51 P P 21 53 06.1 -1.0
baz=261
C36M **Paulatuk** 20.97 34 P P 21 53 22.7 -2.3
C36M **Paulatuk** 20.97 34 P P 21 53 24.3 -0.7
baz=244,SNR=8.0
BILL **Bilibino** 21.07 322 P P 21 53 23.6 -2.6
BILL **Bilibino** 21.07 322 *ce*P P 21 53 25.0 -1.1
BILL pmax pmax
comp=Z,46nm,1.1s
CLRS **Cowichan Lake** 21.62 92 P P 21 53 33.1 +0.9
C03A **Quillayute Air** 21.81 95 P P 21 53 35.7 +1.5
A36M **Sachs Harbour** 21.95 27 IAmb IAmb 21 53 50.5
comp=Z,83nm,0.8s
A36M **Sachs Harbour** 21.95 27 P P 21 53 34.2 -1.3
baz=237,SNR=6.2
LLLB **Lillooet** 22.09 86 P P 21 53 39.0 +1.7
PGC **Sidney** 22.10 92 P P 21 53 37.2 -0.1
B04A **Port Angeles** 22.37 94 P P 21 53 40.1 -0.1
NLWA **Neilton Lookou** 22.51 96 P P 21 53 40.6 -1.1
WISH **Wishkah** 22.71 96 P P 21 53 43.8 0.0
WISH IAmb IAmb 21 54 05.5
comp=Z,54nm,1.3s
YKAW3 **Yellowknife Wh** 23.32 53 IAmb IAmb 21 54 12.0
comp=Z,29nm,1.0s
YKA **Yellowknife A** 23.32 54 P P 21 53 50.2 +0.3
comp=Z,7.8nm,0.7s,baz=273,slow=9.8,SNR=13
YKA LR LR 22 03 33.7
comp=Z,927nm,19.6s,baz=270,slow=38
comp=Z,7.8nm,0.7s
YKA **Yellowknife Ar** 23.32 54 *ce*P P 21 53 50.2 +0.3
YKA pmax pmax
comp=Z,10.0nm,0.8s
MXC **Moxie City** 25.00 94 P P 21 54 05.2 -0.5
H04A **Detroit Lake** 25.02 99 IAmb IAmb 21 54 21.1
comp=Z,29nm,1.0s
PET **Petropavlovsk** 25.26 284 *e*P P 21 54 08.1 +0.2
PET *e*S S 21 58 25.3 -6.0
PEA0B **Petropavlovsk-** 25.77 284 *ce*P P 21 54 11.9 -0.7
PETK **Petropavlovsk-** 25.77 284 P P 21 54 11.3 -1.2
comp=Z,37nm,0.8s,baz=80,slow=12,SNR=29
PETK LR LR 22 04 43.1
comp=Z,374nm,21.1s,baz=76,slow=38
comp=Z,37nm,0.8s
NEW **Newport** 25.94 88 P P 21 54 16.4 +2.2
comp=Z,2.5nm,0.7s,baz=296,slow=8.9,SNR=5.0
NEW LR LR 22 03 09.3
comp=Z,689nm,19.4s,baz=292,slow=33
comp=Z,2.5nm,0.7s
SEY **Seymchan** 26.18 308 LR LR 22 05 37.0
comp=Z,2µm,18.6s,baz=87,slow=39
SEY **Seymchan** 26.18 308 *e*P P 21 54 13.8 -2.4
SEY pmax pmax
comp=Z,16nm,0.8s
YBH **Yreka Blue Hor** 26.60 105 LR LR 22 02 35.9
comp=Z,134nm,20.6s,baz=294,slow=31
MA2 **Magadan** 27.50 301 LR LR 22 05 39.6
comp=Z,535nm,21.9s,baz=97,slow=37
O03E **Paynes Creek** 28.08 106 P P 21 54 33.2 -0.3
O03E IAmb IAmb 21 54 58.8
comp=Z,25nm,1.1s
WVOR **Wild Horse Val** 28.43 100 P 21 54 35.9 -0.9
WVOR **Wild Horse Val** 28.43 100 P P 21 54 35.9 -0.9
WVOR pmax pmax
comp=Z,7.0nm,1.0s
PNTR **Pine Nut** 30.14 106 P P 21 54 53.9 +1.9
PNTR IAmb IAmb 21 55 12.7
comp=Z,16nm,0.9s
EGMT **Eagleton** 30.29 83 P P 21 54 53.8 +0.7
WAKR **Walker** 30.64 106 P P 21 54 57.3 +0.9
RES **Resolute Bay** 31.00 27 P P 21 54 59.0 +0.1
RES IAmb IAmb 21 55 16.1
comp=Z,75nm,1.8s
RES **Resolute Bay** 31.00 27 P P 21 54 59.1 +0.1
comp=Z,7.8nm,0.7s,baz=267,slow=10,SNR=17
RES LR LR 22 08 38.2
comp=Z,749nm,18.3s,baz=260,slow=39
comp=Z,7.8nm,0.7s
NVAR **Mina Array Bea** 31.32 105 P P 21 55 05.5 +3.1
comp=Z,0.9nm,0.5s,baz=304,slow=8.4,SNR=6.7
NVAR LR LR 22 05 41.0
comp=Z,1µm,19.3s,baz=294,slow=32
comp=Z,0.9nm,0.5s
BLKN **Baker Lake** 31.40 48 P P 21 55 03.4 +0.8
BLKN IAmb IAmb 21 55 04.5
comp=Z,32nm,0.8s
ELK **Elko** 31.47 99 LR LR 22 06 28.1
comp=Z,970nm,18.7s,baz=302,slow=34
YMR **Madison River** 31.47 89 IAmb IAmb 21 55 21.9
comp=Z,78nm,1.9s
YNR **Norris Junctio** 31.60 89 IAmb IAmb 21 55 32.2
comp=Z,23nm,1.3s
DUG **Dugway, Tooele** 33.22 97 P P 21 55 22.8 +3.9
DUG pmax pmax
comp=Z,11nm,1.0s
BW06 **Boulder Array** 33.43 91 IAmb IAmb 21 55 35.3
comp=Z,24nm,1.9s
PD31 **Pinedale Array** 33.43 91 IAmb IAmb 21 55 35.3
comp=Z,24nm,1.9s
PDAR **Pinedale Array** 33.43 91 P P 21 55 23.9 +2.9
comp=Z,0.9nm,0.7s,baz=320,slow=5.0,SNR=6.0
TPNV **Topopah Spring** 33.52 105 IAmb IAmb 21 55 50.8
comp=Z,36nm,1.4s
GWY **Greenwater Val** 33.84 106 IAmb IAmb 21 55 53.4
comp=Z,32nm,1.5s
CCCA **Chr Cany lake** 33.94 108 IAmb IAmb 21 55 37.9
comp=Z,20nm,0.9s
TIXI **Tiksi** 34.10 327 IAmb IAmb 21 55 25.8
comp=Z,28nm,0.8s
TIXI **Tiksi** 34.10 327 LR LR 22 11 19.0
comp=Z,2µm,18.3s,slow=40
TIXI **Tiksi** 34.10 327 *ce*P P 21 55 24.4 -1.7
TIXI pmax pmax
comp=Z,33nm,0.8s
BSUT **Blindstream Ca** 34.16 95 IAmb IAmb 21 55 44.7
comp=Z,14nm,0.9s
GSC **Goldstone, Bar** 34.41 108 IAmb IAmb 21 55 43.2
comp=Z,22nm,1.5s
CCUT **Cedar City** 34.71 101 IAmb IAmb 21 55 47.2
comp=Z,26nm,1.8s
TMUT **Trail Mountain** 34.73 97 IAmb IAmb 21 55 51.5
comp=Z,25nm,1.5s
V12A **Nelson** 35.18 105 IAmb IAmb 21 55 50.1
comp=Z,17nm,1.2s
SRU **San Rafael Swe** 35.25 97 IAmb IAmb 21 55 55.2
comp=Z,20nm,0.9s
PFO **Pinyon Flats O** 35.87 109 LR LR 22 08 01.7
comp=Z,1µm,19.3s,baz=328,slow=32
O20A **White River Ci** 35.88 93 IAmb IAmb 21 56 01.5
comp=Z,27nm,0.8s
HMU **Henry Mountain** 35.93 98 IAmb IAmb 21 56 21.6
comp=Z,17nm,1.0s
POIN **Pond Inlet** 35.94 30 IAmb IAmb 21 56 10.9
comp=Z,63nm,1.8s
IRM **Iron Mountain** 36.18 107 IAmb IAmb 21 55 57.4
comp=Z,19nm,1.2s
YAK **Yakutsk** 36.57 311 LR LR 22 11 50.5
comp=Z,821nm,21.3s,baz=76,slow=38
YAK **Yakutsk** 36.57 311 *e*P P 21 55 45.3 -2.1
YAK *e**PP pP 21 55 54.9 -1.8
YAK *e* 21 57 08.4
YAK *e*PPP PPP 21 57 25.7
YAK *e* 21 58 08.1
YAK *e*S S 22 01 26.3 -1.2
YAK *e**SS sS 22 01 42.9 +0.1
YAK *e*SSS SSS 22 04 16.8
YAK *e* 22 05 55.6
YAK pmax pmax
comp=Z,78nm,1.0s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,15nm,1.2s
YAK pmax pmax
comp=Z,86nm,3.1s
YAK pmax pmax
comp=N,162nm,4.2s
YAK pmax pmax
comp=E,156nm,3.4s
YAK smax smax
comp=N,411nm,4.9s
YAK smax smax
comp=E,238nm,4.6s
YAK MLR MLR
comp=Z,1µm,25.0s
YAK MLR MLR
comp=N,612nm,21.0s
PV02 **Paradox Valley** 36.89 96 IAmb IAmb 21 56 07.9
comp=Z,18nm,0.9s
ULM **Lac du Bonnet** 36.90 71 IAmb IAmb 21 56 15.3
comp=Z,22nm,1.3s
ULM **Lac du Bonnet** 36.90 71 P P 21 55 51.7 +1.3
comp=Z,5.4nm,0.8s,baz=287,slow=11,SNR=2.4
ULM LR LR 22 11 04.6
comp=Z,546nm,18.4s,baz=299,slow=36
comp=Z,5.4nm,0.8s
YSS **Yuzhno-Sakhali** 37.15 283 *e*P P 21 55 51.8 -0.7
YSS *e*S S 22 01 37.3 +0.7
YSS *e* 22 04 28.9
YSS pmax pmax
comp=Z,30nm,1.2s
YSS MLR MLR
comp=Z,500nm,13.0s
ASAJ **Asahikawa** 38.92 279 LR LR 22 11 56.3
comp=Z,92nm,20.4s,baz=319,slow=36
TUC **Tucson** 39.97 105 P P 21 56 21.9 +5.4
TUC pmax pmax
comp=Z,6.0nm,2.1s
NEEM **North Greenlan** 40.47 19 *i*P P 21 56 20.8 +0.4
NEEM IAmb IAmb 21 56 21.4
comp=Z,106nm,0.9s
ANMO **Albuquerque** 40.48 98 LR LR 22 12 17.8
comp=Z,781nm,18.1s,baz=34,slow=35
ANMO **Albuquerque** 40.48 98 P P 21 56 24.4 +3.6
ANMO pmax pmax
comp=Z,6.0nm,2.3s
EYMN **Ely** 40.57 71 IAmb IAmb 21 56 49.7
comp=Z,30nm,1.1s
KULLO **Kullorsuaq** 40.66 24 *i*P P 21 56 22.3 +0.8
KULLO IAmb IAmb 21 56 24.8
comp=Z,28nm,1.1s
ZEA **Zeya** 41.64 300 *e*P P 21 56 28.5 -1.4
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
I37A **Lemond, Waseca** 41.90 77 IAmb IAmb 21 56 54.3
comp=Z,59nm,1.3s
NOR **Nord** 42.08 8 P P 21 56 31.9 -1.3
NOR pmax pmax
comp=Z,29nm,2.8s
NOR **Nord** 42.08 8 *i*P P 21 56 33.1 -0.1
NOR IAmb IAmb 21 56 34.2
comp=Z,17nm,1.0s
FRB **Frobisher Bay** 42.74 41 P P 21 56 38.4 -0.2
comp=Z,27nm,0.8s,baz=274,slow=5.6,SNR=5.6
FRB LR LR 22 15 11.6
comp=Z,1µm,19.3s,baz=295,slow=37
comp=Z,27nm,0.8s
I40A **Norwalk** 43.53 76 IAmb IAmb 21 56 58.2
comp=Z,20nm,0.9s
H11N2 **WAKE ISLAND Hy** 44.09 231 T T 22 43 53.9
baz=28,slow=76,SNR=5.9
H11N3 **WAKE ISLAND Hy** 44.09 231 T T 22 44 01.1
baz=28,slow=76,SNR=5.2
H11N1 **WAKE ISLAND Hy** 44.10 231 T T 22 44 14.8
baz=28,slow=76,SNR=4.2
GDH **Godhavn** 44.58 29 *i*P P 21 56 56.8 +3.5
GDH IAmb IAmb 21 56 58.9
comp=Z,84nm,1.2s
P38A **Dawn** 44.67 82 IAmb IAmb 21 57 04.5
comp=Z,20nm,0.7s
POST **Post** 44.68 95 IAmb IAmb 21 57 05.8
comp=Z,12nm,0.9s
WMOK **Wichita Mounta** 45.04 91 IAmb IAmb 21 57 09.2
comp=Z,21nm,1.2s
WMOK **Wichita Mounta** 45.04 91 P P 21 56 59.6 +2.0
WMOK pmax pmax
comp=Z,18nm,1.0s
H11S1 **WAKE ISLAND Hy** 45.24 231 T T 22 45 41.6
baz=28,slow=76,SNR=26
H11S2 **WAKE ISLAND Hy** 45.26 231 T T 22 45 44.3
baz=28,slow=76,SNR=37
H11S3 **WAKE ISLAND Hy** 45.26 231 T T 22 45 43.2
baz=28,slow=76,SNR=12
BOD **Bodaibo** 45.49 311 *e*P P 21 56 59.1 -1.7
BOD pmax pmax
comp=Z,68nm,1.3s
P40A **Paris** 45.59 81 IAmb IAmb 21 57 12.0
comp=Z,24nm,1.0s
MDJ **Mudanjiang** 45.87 288 P P 21 57 02.6 -1.4
MDJ pmax pmax
comp=Z,10.0nm,0.8s
DAG **Danmarks Havn** 46.01 12 P P 21 57 04.7 +0.1
DAG pmax pmax
comp=Z,132nm,0.9s
DAG **Danmarks Havn** 46.01 12 *i*P P 21 57 04.9 +0.3
DAG IAmb IAmb 21 57 05.5
comp=Z,86nm,0.8s
SUMG **Summit** 46.08 21 P P 21 57 05.6 -0.1
SUMG pmax pmax
comp=Z,45nm,1.9s
SUMG **Summit** 46.08 21 *i*P P 21 57 06.2 +0.5
SUMG IAmb IAmb 21 57 07.1
comp=Z,15nm,0.7s
KBS **Kingsbay** 46.20 3 *i*P P 21 57 07.3 +1.2
TX31 **Lajitas Ar. Si** 46.22 101 IAmb IAmb 21 57 19.4
comp=Z,24nm,1.4s
TXAR **Lajitas Array** 46.22 101 P P 21 57 10.2 +3.2
comp=Z,2.9nm,0.8s,baz=308,slow=5.2,SNR=17
TXAR LR LR 22 15 35.3
comp=Z,1µm,18.7s,baz=308,slow=35
comp=Z,2.9nm,0.8s
R40A **Maddies Statio** 46.30 83 IAmb IAmb 21 57 16.9
comp=Z,22nm,1.3s
MSHR **Mys Shultsa** 46.33 285 *ce*P P 21 57 08.0 +0.4
MSHR pmax pmax
comp=Z,36nm,2.5s
BNX **BinXian** 46.34 291 ⇓P P 21 57 07.3 -0.3
BNX pmax pmax
comp=Z,19nm,1.1s
U38A **Gravette** 46.37 86 IAmb IAmb 21 57 18.2
comp=Z,18nm,1.2s
MAJO **Matsushiro** 46.43 274 IAmb IAmb 21 57 18.1
comp=Z,23nm,1.1s
MJAR **Matsushiro Arr** 46.43 274 P P 21 57 08.1 -0.4
comp=Z,7.2nm,1.1s,baz=39,slow=7.6,SNR=9.9
MJAR LR LR 22 15 32.9
comp=Z,249nm,20.7s,baz=58,slow=35
comp=Z,7.2nm,1.1s
MJB9 **Matsu-Tunnel** 46.43 274 IAmb IAmb 21 57 19.1
comp=Z,22nm,1.1s
LPIG **La Paz** 46.65 112 LR LR 22 14 26.6
comp=Z,244nm,18.6s,baz=342,slow=33
SFJD **Kangerlussuaq** 46.85 31 P P 21 57 11.4 0.0
comp=Z,18nm,0.8s,baz=306,slow=7.2,SNR=6.1
SFJD LR LR 22 16 46.6
comp=Z,379nm,21.9s,baz=314,slow=36
comp=Z,18nm,0.8s
SFJD **Kangerlussuaq** 46.85 31 *i*P P 21 57 11.8 +0.4
SPITS **Spitsbergen Ar** 47.05 2 P P 21 57 12.7 -0.1
comp=Z,10.0nm,0.7s,baz=350,slow=3.4,SNR=10
SPITS LR LR 22 17 00.3
comp=Z,565nm,19.2s,baz=344,slow=36
comp=Z,10.0nm,0.7s
NRIK **Noril'sk** 47.21 334 P P 21 57 13.9 -0.2
comp=Z,40nm,0.7s,baz=54,slow=7.2,SNR=41
NRIK LR LR 22 20 38.6
comp=Z,834nm,18.2s,baz=48,slow=41
comp=Z,40nm,0.7s
NRIK **Noril'sk** 47.21 334 *ce*P P 21 57 13.7 -0.4
NRIK pmax pmax
comp=Z,55nm,1.0s
BRDY **Brady** 47.42 95 IAmb IAmb 21 57 31.5
comp=Z,14nm,1.2s
JCT **Junction City** 47.56 96 IAmb IAmb 21 57 28.2
comp=Z,18nm,0.7s
HILR **Hailar Array B** 47.88 300 P P 21 57 18.5 -1.2
comp=Z,1.5nm,0.5s,baz=55,slow=7.6,SNR=2.3
comp=Z,1.5nm,0.5s
DRIO **Del Rio** 47.89 98 IAmb IAmb 21 57 30.6
comp=Z,11nm,1.1s
DBG **Daneborg** 47.91 14 *i*P P 21 57 19.4 -0.1
DBG IAmb IAmb 21 57 20.4
comp=Z,46nm,0.9s
JHJ **Hachijo jima 2** 47.96 270 LR LR 22 16 53.4
comp=Z,74nm,20.6s,baz=114,slow=35
FCAR **Ozark Folk Cen** 48.06 85 IAmb IAmb 21 57 30.5
comp=Z,24nm,1.4s
MIAR **Mount Ida** 48.18 87 IAmb IAmb 21 57 33.0
comp=Z,17nm,1.1s
MIAR **Mount Ida** 48.18 87 P P 21 57 23.1 +1.0
MIAR pmax pmax
comp=Z,17nm,1.9s
P46A **Rosedale** 48.27 78 IAmb IAmb 21 57 33.1
comp=Z,17nm,0.9s
NUUK **Nuuk** 48.39 34 *i*P P 21 57 24.3 +1.0
NUUK IAmb IAmb 21 57 26.1
comp=Z,94nm,1.2s
SCHQ **Schefferville** 48.71 50 P P 21 57 26.5 +0.5
comp=Z,11nm,0.7s,baz=318,slow=8.3,SNR=9.9
SCHQ LR LR 22 19 29.1
comp=Z,1µm,18.3s,baz=288,slow=38
comp=Z,11nm,0.7s
HOPEN **Hopen** 48.76 359 *e*P P 21 57 25.7 -0.3
O48B **Farmland** 48.98 76 IAmb IAmb 21 57 39.4
comp=Z,20nm,0.8s
N49A **Columbus Grove** 49.07 74 IAmb IAmb 21 57 41.0
comp=Z,28nm,0.9s
P48A **Milroy** 49.38 77 IAmb IAmb 21 57 43.2
comp=Z,18nm,0.9s
T47A **Sharon Grove** 50.15 80 IAmb IAmb 21 57 49.5
comp=Z,29nm,1.1s
HKT **Hockley** 50.23 93 P P 21 57 41.8 +4.0
HKT pmax pmax
comp=Z,14nm,1.4s
WVT **Waverly** 50.34 82 IAmb IAmb 21 57 49.3
comp=Z,29nm,1.1s
WVT **Waverly** 50.34 82 P P 21 57 39.6 +1.0
R50A **Paris** 50.81 77 IAmb IAmb 21 57 54.7
comp=Z,22nm,1.0s
SCO **Scoresbysund** 50.93 17 *i*P P 21 57 43.0 +0.5
SCO IAmb IAmb 21 57 44.6
comp=Z,9.8nm,0.5s
PLAL **Pickwick Lake** 51.02 83 IAmb IAmb 21 57 54.8
comp=Z,61nm,1.6s
JCJ **Chichijima** 51.07 262 LR LR 22 16 50.2
comp=Z,93nm,21.9s,baz=24,slow=33
CLTN **Cedars of Leba** 51.23 80 IAmb IAmb 21 57 56.8
comp=Z,34nm,1.4s
ANGG **Ammassalik, Gr** 51.49 27 *i*P P 21 57 44.6 -2.3
ANGG IAmb IAmb 21 57 47.5
comp=Z,88nm,1.0s
KSRS **Korea Array** 51.65 283 P P 21 57 49.2 +0.8
comp=Z,10nm,0.9s,baz=52,slow=6.7,SNR=20
KSRS LR LR 22 19 07.9
comp=Z,61µm,21.9s,baz=65,slow=36
comp=Z,10nm,0.9s
IVI **Ivigtut** 51.65 36 *i*P P 21 57 48.8 +0.7
O54A **Avella** 51.68 72 IAmb IAmb 21 57 58.1
comp=Z,17nm,0.8s
L56A **Greenwood** 51.86 69 IAmb IAmb 21 57 52.1
comp=Z,29nm,0.9s
Z47A **Carrollton** 52.31 84 IAmb IAmb 21 58 20.7
comp=Z,18nm,0.7s
W50A **Signal Mountai** 52.44 80 IAmb IAmb 21 58 05.1
comp=Z,18nm,1.1s
JMIC **Jan Mayen** 52.46 12 LR LR 22 21 18.8
comp=Z,416nm,20.2s,baz=346,slow=38
SSPA **Standing Stone** 52.73 70 IAmb IAmb 21 57 57.7
comp=Z,15nm,0.9s
FPAL **Fort Paine** 52.75 81 IAmb IAmb 21 58 15.2
comp=Z,30nm,1.7s
TKL **Tuckaleechee C** 52.98 79 LR LR 22 20 20.7
comp=Z,488nm,18.5s,baz=328,slow=36
JNU **Nakatsue** 53.08 277 LR LR 22 20 12.0
comp=Z,279nm,21.2s,baz=51,slow=36
IRK **Irkutsk** 53.37 311 *e*P P 21 57 57.1 -3.9
IRK pmax pmax
comp=Z,63nm,1.5s
P57A **Homestead Farm** 53.47 72 IAmb IAmb 21 58 11.8
comp=Z,19nm,1.0s
V53A **Saluda** 53.52 78 IAmb IAmb 21 58 15.7
comp=Z,18nm,1.0s
XLT **XiLinHaoTe** 53.55 296 *e*P P 21 58 03.0 +0.5
XLT pP pP 21 58 13.6 +1.5
XLT sP sP 21 58 15.6 -0.3
XLT pmax pmax
comp=Z,58nm,0.9s
XLT pmax pmax
comp=Z,230nm,7.3s
XLT LR LR
comp=Z,320nm,13.0s
XLT LR LR
comp=Z,420nm,15.2s
TLY **Talaya** 54.04 310 IAmb IAmb 21 58 15.0
comp=Z,15nm,0.9s
TLY **Talaya** 54.04 310 *ce*P P 21 58 06.0 +0.1
TLY pmax pmax
comp=Z,17nm,0.9s
BATG **Bathurst New B** 54.17 57 IAmb IAmb 21 58 08.1
comp=Z,25nm,0.8s
HAMF **Hammerfest** 54.67 359 *e*P P 21 58 09.4 -0.7
VADS **Vadso** 55.08 357 *e*P P 21 58 12.5 -0.6
ZAK **Zakamensk** 55.13 310 *e*P P 21 58 13.2 -0.7
ZAK pmax pmax
comp=Z,20nm,1.6s
MOY **Mondy** 55.20 312 *e*P P 21 58 14.4 0.0
MOY pmax pmax

comp=Z,24nm,2.2s
ULN Ulaanbaatar 55.21 305 IAmb IAmb 21 58 26.9
comp=Z,34nm,1.6s
ULN Ulaanbaatar 55.21 305*ce*P **P** **21 58 14.4 -0.2**
ULN pmax pmax
comp=Z,12nm,1.0s
KEV Kevo 55.51 358 P **P** **21 58 15.8 -0.4**
SONM Songino Array 55.54 306 IAmb IAmb 21 58 30.4
comp=Z,23nm,1.0s
SONM Songino Array 55.54 306 P **P** **21 58 17.2 +0.3**
comp=Z,14nm,0.8s,baz=44,slow=7.1,SNR=81
SONM PcP **PcP** **21 59 17.6 +1.0**
comp=Z,6.0nm,0.8s,baz=71,slow=1.4,SNR=6.6
SONM LR LR 22 23 47.6
comp=Z,811nm,19.4s,baz=38,slow=38
comp=Z,14nm,0.8s
TRO Tromso 55.67 1 *e*P **P** **21 58 17.3 0.0**
TRO Tromso 55.67 1 P **P** **21 58 17.7 +0.4**
JETT Jettan, Norway 55.76 1 *e*P **P** **21 58 18.6 +0.5**
ARA0 ARCESS Array S 55.76 359 *e*P **P** **21 58 17.6 -0.5**
ARCES ARCESS Array B 55.76 359 P **P** **21 58 17.2 -0.8**
comp=Z,14nm,0.8s,baz=24,slow=7.6,SNR=35
ARCES LR LR 22 23 29.7
comp=Z,269nm,18.6s,baz=12,slow=38
comp=Z,14nm,0.8s
BORG Borgarnes 56.05 21 LR LR 22 23 40.3
comp=Z,347nm,21.4s,baz=335,slow=38
BJI Beijing 56.24 293 P **P** **21 58 21.9 0.0**
BJI pmax pmax
comp=Z,7.0nm,1.3s
KTK1 Kautokeino 56.31 359 *e*P **P** **21 58 21.7 -0.3**
LVZ Lovozero 57.07 354*ce*P **P** **21 58 26.7 -0.7**
LVZ pmax pmax
comp=Z,57nm,1.0s
LVZ Lovozero 57.07 354 P **P** **21 58 26.7 -0.7**
comp=Z,70nm,1.1s
STEI Steigen 57.29 3 *e*P **P** **21 58 29.1 +0.2**
APA Apatity 57.47 355⇓*i*P P 21 58 23.8 -6.4
APA *i* 21 59 24.4
SGF Sodankyl 57.84 358 P **P** **21 58 33.0 +0.2**
SGF pmax pmax
comp=Z,60nm,1.1s
FAUS Fauske 57.84 3 *e*P **P** **21 58 33.0 +0.1**
HHC Hu-ho-hao-te 58.06 297 *e*P **P** **21 58 34.4 -0.5**
HHC pP pP 21 58 45.4 +0.8
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,110nm,6.9s
HHC LR LR
comp=Z,280nm,14.1s
HHC LR LR
comp=Z,410nm,14.2s
HHC LR LR
comp=Z,370nm,19.5s
VAGH Vaagaholmen 58.42 4 *e*P **P** **21 58 36.9 +0.1**
TIA Tai'an 58.52 289 P **P** **21 58 37.7 -0.4**
TIA pmax pmax
comp=Z,9.0nm,0.7s
RAUS Rausandaksla 58.75 4 *e*P **P** **21 58 39.3 +0.1**
HNS HongShan 58.95 292⇑P **P** **21 58 41.6 +0.6**
HNS pP **pP** **21 58 50.1 -0.6**
HNS S **S** **22 06 47.0 +2.2**
HNS pmax pmax
comp=Z,31nm,0.9s
HNS LR LR
comp=Z,260nm,19.1s
HNS LR LR
comp=Z,490nm,19.1s
HNS LR LR
comp=Z,400nm,17.5s
BTO Baotou 59.04 297 *e*P **P** **21 58 41.8 +0.1**
BTO pP **pP** **21 58 51.9 +0.5**
BTO sP **sP** **21 58 55.9 +0.7**
BTO pmax pmax
comp=Z,28nm,1.0s
BTO pmax pmax
comp=Z,390nm,8.2s
BTO LR LR
comp=Z,470nm,15.4s
BTO LR LR
comp=Z,830nm,13.3s
BTO LR LR
comp=Z,750nm,20.0s
LEIR Leirfjorden 59.04 4 *e*P **P** **21 58 41.4 +0.3**
JOW Kunigami 59.27 274 LR LR 22 23 07.6
comp=Z,43nm,21.2s,baz=298,slow=35
MSF Maaselka 59.31 357 P **P** **21 58 42.9 -0.2**
MSF pmax pmax
comp=Z,48nm,0.9s
ZALV Zalesovo Beam 59.77 323 P **P** **21 58 45.9 -0.5**
comp=Z,3.0nm,0.6s,baz=29,slow=5.9,SNR=14
ZALV PcP **PcP** **21 59 34.0 +1.1**
comp=Z,4.7nm,0.8s,baz=35,slow=5.4,SNR=4.4
ZALV LR LR 22 27 03.7
comp=Z,1μm,18.2s,baz=44,slow=39
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 59.77 323 *i* P **P** **21 58 46.5 +0.1**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
OUL Oulu 60.22 358 P **P** **21 58 49.3 0.0**
OUL pmax pmax
comp=Z,62nm,1.1s
NSS Namsos 60.56 5 *e*P **P** **21 58 51.7 0.0**
NJ2 Nanjing 60.67 285 *e*P **P** **21 58 52.0 -0.9**
NJ2 pmax pmax
comp=Z,18nm,0.8s
CMIG Matias Romero 60.78 102 LR LR 22 23 45.1
comp=Z,237nm,21.2s,baz=323,slow=34
MOL Molde 62.23 8 *e*P **P** **21 59 03.5 +0.6**
DGZ Jazzator, Alta 62.24 318 *i* P **P** **21 59 02.8 -0.6**
DGZ pmax pmax
comp=Z,7.0nm,1.1s
LYN LuoYang 62.28 291 P **P** **21 59 03.8 0.0**
LYN pP pP 21 59 13.6 +0.1
LYN sP sP 21 59 16.9 -0.4
LYN pmax pmax
comp=Z,35nm,0.8s
LYN pmax pmax
comp=Z,350nm,5.6s
LYN LR LR
comp=Z,710nm,17.9s
LYN LR LR
comp=Z,610nm,17.9s
LYN LR LR
comp=Z,440nm,21.3s
AKN Aaknes 62.58 8 *e*P **P** **21 59 06.0 +0.7**
DOMB Dombas 62.87 7 *e*P **P** **21 59 07.5 +0.2**
FOO Floro 62.99 9 *e*P **P** **21 59 08.0 +0.1**
HYA Hoyanger 63.51 8 *e*P **P** **21 59 12.4 +1.0**
KLMR Klimovskoe 63.67 351 *e*P **P** **21 59 10.7 -1.8**
KLMR *e**PP **pP** **21 59 19.8 -2.6**
KLMR pmax pmax
comp=Z,42nm,1.0s
KLMR MLR MLR
comp=Z,407nm,18.0s
FINES FINESS Array B 63.87 358 P **P** **21 59 13.5 -0.3**
comp=Z,25nm,0.8s,baz=28,slow=7.5,SNR=88
comp=Z,25nm,0.8s
NC405 NORSAR Array S 63.96 6 IAmb IAmb 21 59 15.8
comp=Z,18nm,0.8s
NB201 NORSAR Array S 63.99 6 IAmb IAmb 21 59 28.4
comp=Z,24nm,1.1s
NB2 NORSAR Subarra 64.00 6 P **P** **21 59 14.6 -0.2**
comp=Z,17nm,0.9s,baz=354,slow=6.9
NB2 NORSAR Subarra 64.00 6 P **P** **21 59 14.3 -0.5**
NOA NORSAR Array B 64.00 6 P **P** **21 59 14.9 +0.1**
comp=Z,8.6nm,0.8s,baz=354,slow=6.6,SNR=38
comp=Z,8.6nm,0.8s
SKAR Skarslia 64.16 7 *e*P **P** **21 59 16.6 +0.7**
SVE Sverdlovsk 64.21 338 *e*P **P** **21 59 16.6 +0.4**
SVE pmax pmax
comp=Z,63nm,1.5s
NC602 NORSAR Array S 64.32 6 *e*P **P** **21 59 16.8 0.0**
NORES NORESS Array B 64.32 6 P **P** **21 59 17.2 +0.4**
XAN Xi'an 64.57 293 P **P** **21 59 18.8 -0.1**
XAN pP pP 21 59 28.9 +0.2
XAN pmax pmax
comp=Z,16nm,0.9s
XAN pmax pmax
comp=Z,110nm,5.8s
XAN LR LR
comp=Z,710nm,17.7s
XAN LR LR
comp=Z,340nm,18.2s
XAN LR LR
comp=Z,500nm,16.1s
KURK Kurchatov 64.59 324*ce*P **P** **21 59 18.4 -0.3**
KURK pmax pmax
comp=Z,11nm,1.1s
KIRV Kirov 64.65 345 LR LR 22 32 28.0
comp=Z,697nm,18.1s,baz=0.9,slow=41
KIRV Kirov 64.65 345*ce*P **P** **21 59 18.4 -0.6**
KURBB Kurchatov Arra 64.70 324 P **P** **21 59 19.5 +0.1**
comp=Z,2.2nm,0.3s,baz=27,slow=6.2,SNR=18
KURBB PP **PP** **22 01 46.8 +5.5**
comp=Z,0.9nm,0.4s,baz=43,slow=9.3,SNR=4.1
KURBB LR LR 22 30 19.6
comp=Z,1μm,18.1s,baz=75,slow=39
comp=Z,2.2nm,0.3s
ODD1 Odda 64.79 9 *e*P **P** **21 59 20.8 +0.8**
GTA Gaotai 65.02 303 P **P** **21 59 21.4 -0.5**
GTA pmax pmax
comp=Z,30nm,1.0s
GTA LR LR
comp=Z,570nm,19.6s
GTA LR LR
comp=Z,320nm,20.0s
GTA LR LR
comp=Z,710nm,20.0s
HFS Hagfors 65.03 5 P **P** **21 59 21.7 +0.2**
comp=Z,13nm,0.7s,baz=54,slow=3.8,SNR=29
HFS LR LR 22 28 50.4
comp=Z,46nm,19.4s,baz=0.5,slow=37
comp=Z,13nm,0.7s
ZSN Zaisan 65.06 318 *e*P **P** **21 59 22.3 +0.4**
comp=Z,8.6nm,0.9s
ZSN Zaisan 65.06 318 *e*P **P** **21 59 22.3 +0.4**
ZSN pmax pmax
comp=Z,9.0nm,0.9s
ARTI Arti 65.10 339 LR LR 22 31 06.8
comp=Z,534nm,18.9s,baz=50,slow=39
ARTI Arti 65.10 339*c i*P **P** **21 59 21.4 -0.6**
ARTI 21 59 52.1
ARTI 22 01 42.6
ARTI S **S** **22 08 03.7 +1.8**
ARTI SS **SS** **22 12 13.1 -0.2**
ARTI pmax pmax
comp=Z,40nm,0.8s
ARTI MLR MLR
comp=Z,576nm,20.0s
BVAR Borovoye Array 65.17 330 P **P** **21 59 22.8 +0.3**
comp=Z,14nm,0.6s,baz=32,slow=6.9,SNR=54
BVAR LR LR 22 30 14.9
comp=Z,389nm,21.6s,baz=29,slow=38
comp=Z,14nm,0.6s
BORK Borovoye 65.17 330*ce*P **P** **21 59 22.6 +0.1**
BORK pmax pmax
comp=Z,9.0nm,0.8s
BLS5 Blasjo 65.26 9 *e*P **P** **21 59 23.8 +0.8**
KONO Kongsberg 65.28 7*ce*P **P** **21 59 24.1 +1.0**
KONO pmax pmax
comp=Z,42nm,2.5s
TAOE Nuku Hiva Isla 65.34 161 *e*S **S** **22 08 02.8 -3.0**
comp=Z,135nm,24.6s
TAOE *e*SS **SS** **22 12 11.0 -8.6**
comp=Z,90nm,24.9s
TAOE *e*LR LR 22 18 53.4
comp=Z,627nm,24.3s
LZH Lanzhou 65.62 298 *e*P **P** **21 59 25.4 -0.5**
LZH pP pP 21 59 35.0 -0.7
LZH sP sP 21 59 41.3 +1.9
LZH pmax pmax
comp=Z,29nm,1.5s
LZH LR LR
comp=Z,410nm,15.6s
LZH LR LR
comp=Z,410nm,14.0s
LZH LR LR
comp=Z,410nm,15.2s
LZDM Lanzhou Array 65.79 298 P **P** **21 59 27.3 +0.1**
comp=Z,3.5nm,0.4s,baz=298,slow=3.2,SNR=4.4
comp=Z,3.5nm,0.4s
SNART Snartemo 66.40 8 *i* P **P** **21 59 30.3 +0.1**
MK31 Makanchi Array 66.58 319*ce*P **P** **21 59 31.3 -0.4**
MKAR Makanchi Array 66.58 319 P **P** **21 59 31.2 -0.5**
comp=Z,4.5nm,0.6s,baz=42,slow=5.0,SNR=36
MKAR LR LR 22 30 57.8
comp=Z,869nm,19.4s,baz=19,slow=38
comp=Z,4.5nm,0.6s
VSU Vasula 66.84 357*ce*P **P** **21 59 32.2 -0.9**
VSU pmax pmax
comp=Z,57nm,0.8s
WMQ Urumqi 66.92 314 *e*P **P** **21 59 34.7 +0.7**
WMQ LR LR
comp=Z,460nm,16.5s
WMQ LR LR
comp=Z,330nm,15.5s
WMQ LR LR
comp=Z,550nm,23.1s
TJOU Tjoern 67.02 6 *i* P **P** **21 59 34.6 +0.4**
BRZS Berezniki 67.16 327 *e*P **P** **21 59 35.6 +0.2**
BRZS Berezniki 67.16 327 *e*P **P** **21 59 35.5 +0.2**
BORU Boraas 67.48 5 *i* P **P** **21 59 37.4 +0.2**
ONAU Onsala 67.67 6 *i* P **P** **21 59 38.6 +0.2**
FABU Falkenberg 68.11 5 *i* P **P** **21 59 41.5 +0.3**
EKA Eskdalemuir Ar 68.12 15 P **P** **21 59 41.9 +0.6**
comp=Z,12nm,0.8s,baz=332,slow=4.8,SNR=17
comp=Z,12nm,0.8s
MUD Monsted U'grnd 68.42 8 *i* P **P** **21 59 44.9 +1.8**
MUD IAmb IAmb 21 59 46.0
comp=Z,24nm,0.9s
DEL Delary 68.70 5 *i* P **P** **21 59 44.0 -0.9**
MOS Moscow 68.90 351 *e*P **P** **21 59 44.9 -1.2**
MOS *e* 22 00 10.8
MOS *e* 22 03 55.4
BJUU Bjuv 69.05 5 *i* P **P** **21 59 46.9 -0.2**
LUNU Lund 69.52 5 *i* P **P** **21 59 50.2 +0.3**
TDK Taldyqorghan 69.54 321 *e*P **P** **21 59 50.5 +0.2**
comp=Z,13nm,0.8s
TDK Taldyqorghan 69.54 321 *e*P **P** **21 59 50.5 +0.2**
TDK pmax pmax
comp=Z,13nm,0.8s
OBN Obninsk 69.61 351⇓P **P** **21 59 50.0 -0.5**
OBN Obninsk 69.61 351*ce*P **P** **21 59 49.8 -0.7**
OBN *e* 22 00 12.6
OBN *e* 22 02 27.6
OBN *e*PPP PPP 22 04 05.7
OBN *e*S SKiKP 22 09 16.2 -19
OBN pmax pmax
comp=Z,20nm,0.9s
OBN MLR MLR
comp=Z,318nm,23.0s
OBN Obninsk 69.61 351 P **P** **21 59 49.3 -1.2**
comp=Z,44nm,1.2s
CD2 Chengdu 69.72 295 P **P** **21 59 51.8 +0.1**
CD2 pmax pmax
comp=Z,20nm,0.9s
GOMU GeErMu 69.96 305 P **P** **21 59 51.6 -1.9**
GOMU pP pP 22 00 01.2 -2.2
GOMU PcP **PcP** **22 00 13.5 -2.2**
GOMU pmax pmax
comp=Z,8.0nm,0.9s
GOMU LR LR
comp=Z,390nm,17.3s
GOMU LR LR
comp=Z,260nm,15.7s
SHLS Shalkode 70.73 319 *e*P **P** **21 59 57.0 -0.8**
comp=Z,7.9nm,0.7s
SHLS Shalkode 70.73 319 *e*P **P** **21 59 57.0 -0.8**
SHLS pmax pmax
comp=Z,8.0nm,0.7s
MNK Minsk 70.77 356 *i* P **P** **21 59 56.6 -1.0**
MNK *i* 22 00 16.9
MNK *i* 22 02 35.8
MNK *i* PPP PPP 22 04 16.6
MNK *i* S **S** **22 09 09.9 +0.3**
MNK *i* 22 09 57.5
MNK *i* SS **SS** **22 13 43.6 +2.9**
MNK pmax pmax
comp=E,22nm,1.0s
MNK pmax pmax
comp=Z,28nm,0.8s
MNK MLR MLR
comp=Z,213nm,19.0s
MNK MLR MLR
comp=E,162nm,20.0s
MNK MLR MLR
comp=N,77nm,17.0s
BELG Belogornoye 70.90 344*c i*P **P** **21 59 57.9 -0.5**
BELG pmax pmax
comp=Z,14nm,1.0s
UZB Uzynbulak 70.91 319 *e*P **P** **21 59 59.0 +0.1**
comp=Z,4.9nm,0.7s
UZB Uzynbulak 70.91 319 *e*P **P** **21 59 59.0 +0.1**
UZB pmax pmax
comp=Z,5.0nm,0.7s
SATY Saty 71.21 320 *e*P **P** **22 00 00.9 +0.2**
comp=Z,8.5nm,1.0s
SATY Saty 71.21 320 *e*P **P** **22 00 00.9 +0.2**
SATY pmax pmax
comp=Z,9.0nm,1.0s
SUW Suwalki 71.36 359 *e*P **P** **22 00 00.5 -0.7**
MDOK Medeo 71.62 321 *e*P **P** **22 00 03.4 +0.2**
MDOK Medeo 71.62 321 *e*P **P** **22 00 03.4 +0.2**
AAA Alma-Ata 71.63 321 *e*P **P** **22 00 03.3 +0.2**
comp=Z,14nm,0.6s
AAA Alma-Ata 71.63 321 *e*P **P** **22 00 03.3 +0.2**
AAA pmax pmax
comp=Z,14nm,0.6s
TNSS Tian-Shan 71.77 321 *e*P **P** **22 00 04.3 -0.1**
TNSS Tian-Shan 71.77 321 *e*P **P** **22 00 04.2 -0.1**
LPSR Galich'ya Gora 71.86 349 *e*P **P** **22 00 01.8 -2.4**
LPSR pmax pmax
comp=Z,20nm,0.9s
JTS Las Juntas de 71.90 98 LR LR 22 34 48.6
comp=Z,126nm,18.8s,baz=312,slow=38
TKM2 Tokmak 2 72.36 322 P **P** **22 00 08.2 +0.5**
SNR=13
USP Ospenovka 72.44 323 P **P** **22 00 08.9 +0.9**
SNR=9.2
TARG Taragay, Kyrgy 72.58 320 IAmb IAmb 22 00 11.6
comp=Z,9.9nm,0.7s
TARG Taragay, Kyrgy 72.58 320 P **P** **22 00 09.1 -0.2**
TARG pmax pmax
comp=Z,15nm,1.5s
CHMS Chumysh 72.59 322 P **P** **22 00 09.8 +1.0**
SNR=16
PPT Papeete 72.62 172 LR LR 22 24 55.4
comp=Z,314nm,20.1s,baz=0.0,slow=30
PPT2 Papeete2 72.64 172 *e*P **P** **22 00 12.7 +3.5**
comp=Z,44nm,26.2s
PPT2 *e*S **S** **22 09 28.5 -3.4**
comp=Z,134nm,29.2s
PPT2 *e*SS **SS** **22 14 11.1 -1.1**
comp=Z,74nm,35.5s
PPT2 *e*LQ LQ 22 19 24.6
comp=Z,1μm,38.0s
PPT2 *e*LR LR 22 22 20.3
comp=Z,346nm,22.8s
PPT2 *e*LR LR 22 22 20.3
comp=Z,278nm,27.5s
VORR Voronezh 72.75 349 *e*P **P** **22 00 07.5 -2.0**
VORR pmax pmax
comp=Z,10.0nm,0.9s
FRU1 Bishkek 72.80 322 P **P** **22 00 11.2 +1.1**
FRU1 pmax pmax
comp=Z,46nm,1.4s
KBK Karagaybulak 72.82 322 P **P** **22 00 11.4 +1.0**
SNR=16
VRH Novokhopyorsk 72.91 347 *e*P **P** **22 00 07.9 -2.6**
VRH pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 72.99 322 IAmb IAmb 22 00 13.3
comp=Z,20nm,1.0s
AAK Ala-Archa 72.99 322 P **P** **22 00 12.3 +0.9**
SNR=17
AAK Ala-Archa 72.99 322*ce*P **P** **22 00 11.6 +0.2**
AAK pmax pmax
comp=Z,21nm,1.0s
HNR Honiara 73.20 224 LR LR 22 26 16.9
comp=Z,246nm,21.6s,baz=354,slow=31
VSR Storozhevoye 73.20 349 *e*P **P** **22 00 09.9 -2.3**
VSR pmax pmax
comp=Z,20nm,0.9s
EKS2 Erkin-Say 73.22 323 P **P** **22 00 13.6 +0.9**
SNR=12
UCH Uchtor 73.35 322 P **P** **22 00 15.2 +1.3**
SNR=5.4
VORD Divnogorie 73.44 349 *e*P **P** **22 00 11.6 -2.0**
VORD pmax pmax
comp=Z,30nm,0.8s
ARLS Aral 73.74 322 P **P** **22 00 17.1 +1.3**
ARLS pmax pmax
comp=Z,38nm,0.9s
CLL Collm 73.81 6 IAmb IAmb 22 00 17.3
comp=Z,8.3nm,0.9s
CLL Collm 73.81 6 P **P** **22 00 16.6 +0.8**
CLL pmax pmax
comp=Z,12nm,1.1s
CLL Collm 73.81 6 P **P** **22 00 16.1 +0.3**
comp=Z,12nm,1.1s
CLL Collm 73.81 6 *i* P **P** **22 00 16.1 +0.3**
comp=Z,13nm,1.2s
CLL *e*S **S** **22 09 45.0 +0.5**
DZA Taraz 73.86 325 *e*P **P** **22 00 16.6 +0.3**
DZA Taraz 73.86 325 *e*P **P** **22 00 16.6 +0.3**
RNPP9 Sopachiv 73.92 357 P **P** **22 00 16.3 -0.1**
RNPP8 Varash 74.00 358 P **P** **22 00 17.0 +0.1**
RNPP5 Staryi Chortor 74.10 357 P **P** **22 00 17.6 +0.1**
BRLS Boroldoy 74.23 326 *e*P **P** **22 00 20.1 +1.7**
BRLS Boroldoy 74.23 326 *e*P **P** **22 00 20.1 +1.7**
BRG Berggiesshubel 74.29 5 P **P** **22 00 19.2 +0.5**
BRG pmax pmax
comp=Z,11nm,0.9s
PZH PanZhiHua 74.30 294 P **P** **22 00 19.5 +0.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
MI28 Mi28,Pidlybu 74.35 356 P **P** **22 00 19.0 +0.1**
MOX Moxa 74.38 7 P **P** **22 00 19.9 +0.7**
MOX pmax pmax
comp=Z,16nm,0.9s
KSP Ksiaz 74.43 4 *e*P **P** **22 00 20.2 +0.7**
KSP Ksiaz 74.43 4 P **P** **22 00 19.9 +0.4**
comp=Z,12nm,0.9s
AK21 Malin Array Si 74.44 355 P **P** **22 00 19.2 -0.3**
AK23 Malin Array Si 74.45 355 P **P** **22 00 19.3 -0.3**
AK22 Malin Array Si 74.46 355 P **P** **22 00 19.2 -0.4**
AK20 Malin Array Si 74.48 355 P **P** **22 00 19.3 -0.4**
AKASG Malin Array Be 74.51 355 P **P** **22 00 19.6 -0.3**
comp=Z,17nm,0.6s,baz=5.6,slow=5.6,SNR=45
comp=Z,17nm,0.6s
AKBB Malin Array Si 74.51 355*ce*P **P** **22 00 19.4 -0.5**
AKBB pmax pmax
comp=Z,20nm,0.8s
AKBB Malin Array Si 74.51 355 P **P** **22 00 19.4 -0.5**
KIEV Kiev 74.52 355⇓P **P** **22 00 20.0 +0.1**
KIEV Kiev 74.52 355⇓P **P** **22 00 20.0 +0.1**
KIEV Kiev 74.52 355 P **P** **22 00 19.4 -0.5**
comp=Z,2μmcomp=Z,131nm,1.1s
HSKC Hora Svate Kat 74.53 6 *e*P **P** **22 00 21.0 +0.9**
ARK Arkit 74.61 324 P **P** **22 00 21.6 +0.7**
ARK pmax pmax
comp=Z,9.0nm,0.9s
PVCC Panska Ves 74.67 5 P **P** **22 00 21.7 +0.9**
PVCC pmax pmax
comp=Z,22nm,0.9s
CHVC Chvalec 74.68 4 *e*P **P** **22 00 21.3 +0.4**
CHVC Chvalec 74.68 4 *e*P **P** **22 00 21.3 +0.4**
KHAM Kharkiv 74.71 351 P **P** **22 00 21.6 +0.5**
OSTC Ostas 74.71 4 *e*P **P** **22 00 22.3 +1.2**
OSTC Ostas 74.71 4 *e*P **P** **22 00 22.3 +1.2**
UPC Upice 74.75 4 *e*P **P** **22 00 23.0 +1.6**
UPC Upice 74.75 4 *e*P **P** **22 00 23.0 +1.6**
KMI Kunming 74.88 292 P **P** **22 00 22.6 -0.2**
KMI pP pP 22 00 32.5 -0.2
KMI pmax pmax
comp=Z,5.0nm,0.9s
KMI LR LR
comp=Z,250nm,25.7s
KMI LR LR
comp=Z,380nm,25.1s
KMI LR LR
comp=Z,260nm,20.4s
DPC Dobruska-Polom 74.92 4 *e*P **P** **22 00 22.8 +0.4**
DPC *e*PP **pP** **22 00 33.3 +0.9**
DPC Dobruska-Polom 74.92 4 *e*P **P** **22 00 22.8 +0.4**
DPC *e*pP **pP** **22 00 33.3 +0.9**
CHM Chimkent 74.94 325 *e*P **P** **22 00 22.9 +0.3**
comp=Z,7.1nm,0.5s
CHM Chimkent 74.94 325 *e*P **P** **22 00 22.9 +0.3**
CHM pmax pmax
comp=Z,7.0nm,0.5s
IUG luzhnay 74.95 325 *e*P **P** **22 00 23.1 +0.3**
comp=Z,18nm,0.8s
IUG luzhnay 74.95 325 *e*P **P** **22 00 23.0 +0.3**
IUG pmax pmax

comp=Z,18nm,0.8s
TRKS Terek-Say 75.13 324 P P 22 00 24.8 +0.9
TRKS pmax pmax
comp=Z,32nm,1.0s
OJC Ojcow 75.15 1 *eP* P **P** 22 00 14.9 -8.7
OJC Ojcow 75.15 1 P P 22 00 24.1 +0.5
OJC pmax pmax
comp=Z,7.0nm,0.7s
KSH Kashi 75.19 320 P P 22 00 28.1 +3.9
KSH sP sP 22 00 41.0 +3.1
KSH pmax pmax
comp=Z,32nm,0.9s
KSH LR LR
comp=Z,730nm,20.6s
KSH LR LR
comp=Z,540nm,21.1s
KSH LR LR
comp=Z,1μm,20.8s
KRLC Kraliky 75.22 3 *eP* **P 22 00 24.6 +0.5**
KRLC *e*PP* **pP 22 00 34.4 +0.3**
KRLC Kraliky 75.22 3 *eP* **P 22 00 24.6 +0.5**
KRLC *epP* **pP 22 00 34.4 +0.3**
LUBAR Lubar, Ukraine 75.35 356 P **P 22 00 24.3 -0.5**
STEB Steborice 75.39 3 *eP* **P 22 00 25.4 +0.4**
OHH Osh 75.46 322 P **P 22 00 25.2 -0.5**
OKC Ostrava-Krasne 75.50 3 P **P 22 00 26.8 +1.2**
OKC pmax pmax
comp=Z,16nm,0.9s
MORC Moravsky Berou 75.54 3 IAmb IAmb 22 00 39.4
comp=Z,41nm,1.9s
MORC Moravsky Berou 75.54 3 ⇓P **P 22 00 26.8 +0.9**
MORC Moravsky Berou 75.54 3 *eP* **P 22 00 26.1 +0.2**
MORC Moravsky Berou 75.54 3 ⇓P **P 22 00 26.8 +0.9**
ZVC Zvikov 75.74 5 *eP* **P 22 00 27.8 +0.8**
ZVC *epP* **pP 22 00 37.6 +0.6**
KWP Kalwaria Pacla 75.75 360 *eP* **P 22 00 27.6 +0.5**
RAR Rarotonga 75.91 182 LR LR 22 29 09.5
comp=Z,247nm,18.1s,baz=356,slow=32
NIE Niedzica 75.95 1 *eP* **P 22 00 29.2 +0.9**
NIE Niedzica 75.95 1 P **P 22 00 30.3 +2.0**
WET Wettzell 75.96 6 P **P 22 00 29.2 +0.9**
WET pmax pmax
comp=Z,7.0nm,1.1s
STHS Stebnicka Huta 75.97 1 *eP* **P 22 00 29.1 +0.8**
STHS pmax pmax
comp=Z,11nm,0.8s
STHS Stebnicka Huta 75.97 1 *eP* **P 22 00 29.1 +0.8**
VRAC Vranov 75.98 4 ⇓P **P 22 00 29.7 +1.3**
VRAC Vranov 75.98 4 *eP* **P 22 00 28.7 +0.3**
VRAC Vranov 75.98 4 ⇓P **P 22 00 29.7 +1.3**
KHC Kasperske Hory 76.01 6 IAmb IAmb 22 00 31.0
comp=Z,11nm,1.0s
KHC Kasperske Hory 76.01 6 *ceP* **P 22 00 29.0 +0.4**
KHC pmax pmax
comp=Z,12nm,1.0s
KHC Kasperske Hory 76.01 6 *eP* **P 22 00 29.9 +1.3**
KHC *epP* **pP 22 00 39.8 +1.2**
LANS Liptovska Anna 76.21 2 *eP* **P 22 00 31.3 +1.5**
LANS pmax pmax
comp=Z,8.0nm,1.0s
LANS Liptovska Anna 76.21 2 *eP* **P 22 00 31.3 +1.5**
KRUC Moravsky 76.21 4 *eP* **P 22 00 29.6 -0.1**
KRUC Moravsky 76.21 4 P **P 22 00 30.1 +0.4**
KRUC pmax pmax
comp=Z,7.0nm,1.3s
GERES GERESS Array B 76.30 6 P **P 22 00 30.9 +0.5**
comp=Z,3.4nm,0.8s,baz=337,slow=5.8,SNR=16
comp=Z,3.4nm,0.8s
CKRC Cesky Krumlov 76.36 5 *eP* **P 22 00 31.1 +0.5**
CKRC Cesky Krumlov 76.36 5 *eP* **P 22 00 31.1 +0.5**
ECH Echery 76.41 10 IAmb IAmb 22 00 32.1
comp=Z,18nm,1.1s
ECH Echery 76.41 10 P **P 22 00 31.7 +0.8**
JAVC Velka Javorina 76.46 3 *eP* **P 22 00 32.5 +1.3**
KMPD K-Podol'skiy 76.75 357 P **P 22 00 32.8 0.0**
MODS Modra-Piesok 76.93 3 *eP* **P 22 00 35.4 +1.6**
MODS pmax pmax
comp=Z,33nm,1.1s
MODS Modra-Piesok 76.93 3 *eP* **P 22 00 35.4 +1.6**
LSA Lhasa 77.05 303 P **P 22 00 32.6 -2.7**
LSA pmax pmax
comp=Z,11nm,1.0s
ZST Bratislava 77.11 3 *eP* **P 22 00 33.9 -0.9**
ZST pmax pmax
comp=Z,10.0nm,0.1s
ZST Bratislava 77.11 3 *eP* **P 22 00 33.8 -1.0**
SORM Soroca 77.11 356 ⇑P **P 22 00 34.2 -0.6**
SORM Soroca 77.11 356 ⇑P **P 22 00 34.2 -0.6**
BAL3X Bal3x, Balta 77.25 355 P **P 22 00 35.2 -0.4**
SLVN Son La 77.31 289 IAmb IAmb 22 00 48.0
comp=Z,21nm,1.2s
CONA Conrad Observa 77.33 4 *eP* **P 22 00 37.2 +1.1**
comp=Z,2.0nm,0.8s
PSZ Piszkesteto 77.45 1 IAmb IAmb 22 00 39.2
comp=Z,11nm,1.0s
RONA Rosalia, Austr 77.57 4 *eP* **P 22 00 39.2 +1.7**
comp=Z,0.6nm,0.5s
MOTA Moosalm 77.62 8 *i* P **P 22 00 38.8 +0.9**
comp=Z,5.9nm,0.8s,SNR=6.5
LESA Schwarzleotal 77.66 6 *eP* **P 22 00 38.8 +0.8**
comp=Z,1.4nm,0.5s
WATA Walderalm 77.67 7 *eP* **P 22 00 39.1 +0.9**
comp=Z,3.5nm,0.6s
BMR Baia Mare 77.70 359 ⇑P **P 22 00 39.0 +0.8**
BMR Baia Mare 77.70 359 ⇑P **P 22 00 39.0 +0.8**
BUR08 Bucovina Ar. S 77.71 358 IAmb IAmb 22 00 49.3
comp=Z,22nm,1.6s
BURAR Bucovina Array 77.73 358 ⇑P **P 22 00 38.8 +0.3**
BURAR Bucovina Array 77.73 358 ⇑P **P 22 00 38.8 +0.3**
WTTA Wattenberg 77.75 7 *i* P **P 22 00 39.6 +1.0**
comp=Z,7.4nm,0.8s,SNR=5.3
WTTA Wattenberg 77.75 7 P **P 22 00 39.8 +1.2**
WTTA pmax pmax
comp=Z,19nm,1.5s
SQTA Sankt Quirin 77.76 8 *eP* **P 22 00 39.6 +1.0**
comp=Z,7.5nm,0.7s
FETA Feichten 77.92 8 *eP* **P 22 00 40.5 +0.9**
comp=Z,4.7nm,0.8s
ARSA Arzberg 77.99 5 *eP* **P 22 00 41.8 +2.0**
comp=Z,1.8nm,0.5s
KBA Koelnbreinsper 78.04 6 *i* P **P 22 00 41.5 +1.2**
comp=Z,5.4nm,0.6s,SNR=8.0
KBA Koelnbreinsper 78.04 6 P **P 22 00 41.5 +1.2**
KBA pmax pmax
comp=Z,28nm,1.0s
MESR Meseseni 78.23 359 ⇓P **P 22 00 41.3 +0.2**
FUORN Ofenpass-Fuorn 78.28 8 IAmb IAmb 22 00 59.6
comp=Z,17nm,1.1s
ARCR ARCALIA 78.28 358 ⇓P **P 22 00 43.0 +1.7**
MILM Milestii Mici 78.31 355 ⇑P **P 22 00 40.0 -1.5**
MILM Milestii Mici 78.31 355 ⇑P **P 22 00 40.0 -1.5**
ABTA Abfaltersbach 78.32 7 *eP* **P 22 00 43.2 +1.5**
comp=Z,4.6nm,1.0s
TBI Tubuai 78.36 172 *eP* **P 22 00 39.7 -2.1**
comp=Z,720nm,40.2s
TBI *eS* **S 22 10 32.3 -2.6**
comp=Z,2μm,33.5s
TBI Tubuai 78.36 172 *eLQ* LQ 22 21 35.5
comp=Z,775nm,36.5s
TBI *eLR* LR 22 24 55.2
comp=Z,2μm,24.8s
TBI *eLR* LR 22 25 02.9
comp=Z,827nm,27.0s
SOKA Soboth 78.53 5 *i* P **P 22 00 44.0 +1.1**
comp=Z,7.8nm,1.1s,SNR=8.1
VASR Vaslui 78.63 356 ⇓P **P 22 00 44.0 +0.8**
OBKA Obir 78.68 5 *i* P **P 22 00 44.7 +1.0**
comp=Z,16nm,0.7s,SNR=8.9
MARR Marisel-Cluj 78.70 359 ⇓P **P 22 00 45.0 +1.2**
GOF Gofitskoye 78.74 345 *ceP* **P 22 00 44.3 +0.4**
TESR Tescani 78.80 357 ⇑P **P 22 00 45.2 +1.0**
ONER Baraj Valea Uz 78.98 357 ⇑P **P 22 00 46.6 +1.3**
SIRR Siria 79.12 0 ⇑P **P 22 00 46.7 +0.7**
MORH Mrgy, Hungar 79.13 2 ⇓P **P 22 00 46.9 +0.9**
GHRR 79.22 356 ⇑P **P 22 00 47.6 +1.1**
MDB Medias 79.22 358 ⇑P **P 22 00 46.2 -0.4**
MDB Medias 79.22 358 ⇑P **P 22 00 46.2 -0.4**
OZUR 79.24 357 ⇑P **P 22 00 47.6 +0.9**
TURR Turia 79.27 357 ⇓P **P 22 00 47.9 +1.0**
VARL Varlezi 79.36 356 ⇓P **P 22 00 48.6 +1.3**
DOPR Dopca 79.38 358 ⇑P **P 22 00 48.6 +1.2**
VLDR Vladesti 79.41 356 ⇑P **P 22 00 48.3 +0.7**
VRI Vrincioaia 79.44 357 ⇑P **P 22 00 48.4 +0.7**
VRI Vrincioaia 79.44 357 ⇓P **P 22 00 48.8 +1.0**

PLOR Plostina 79.46 357 ⇑P **P 22 00 49.3 +1.4**
PLOR Plostina 79.46 357 ⇑P **P 22 00 49.3 +1.4**
ODBI Odobesti 79.53 356 ⇓P **P 22 00 50.5 +2.2**
SURR Surduc 79.63 360 ⇑P **P 22 00 45.7 -3.0**
TUDR 79.68 356 ⇓P **P 22 00 49.8 +0.8**
NEGRR Negrea 79.73 356 ⇑P **P 22 00 50.8 +1.5**
BISRR Bisoca 79.76 357 ⇓P **P 22 00 50.0 +0.4**
SCHL Schela 79.76 356 ⇑P **P 22 00 49.8 +0.3**
BZS Buzias 79.77 0 ⇑P **P 22 00 50.8 +1.3**
MLR Muntele Rosu 79.84 357 IAmb IAmb 22 01 07.4
comp=Z,36nm,1.7s
MLR Muntele Rosu 79.84 357 ⇓P **P 22 00 50.6 +0.5**
MLR Muntele Rosu 79.84 357 ⇓P **P 22 00 50.6 +0.5**
KIV Kislovodsk 79.88 345 ⇑P **P 22 00 51.0 +0.7**
KIV Kislovodsk 79.88 345 *eP* **P 22 00 50.7 +0.4**
KIV pmax pmax
comp=Z,24nm,1.0s
NEHR Nehoiu 79.89 357 ⇓P **P 22 00 51.3 +1.1**
SIM Simferopol' 79.91 351 *eP* **P 22 00 51.0 +0.7**
SIM pmax pmax
comp=Z,15nm,0.9s
VOIR 79.92 358 ⇑P **P 22 00 51.0 +0.5**
VOIR 79.92 358 ⇑P **P 22 00 51.0 +0.5**
LOT Lotru 79.93 359 ⇓P **P 22 00 50.8 +0.3**
GZR Gura Zlata 79.99 359 ⇑P **P 22 00 51.6 +0.8**
GZR Gura Zlata 79.99 359 ⇑P **P 22 00 51.6 +0.8**
ARR Arges 79.99 358 ⇑P **P 22 00 51.3 +0.5**
MAK Makhachkala 80.04 341 *di* P **P 22 00 49.7 -1.3**
MAK *ePPP* PPP 22 05 49.5
MAK *eS* **S 22 10 52.9 +0.3**
MAK *eSS* **SS 22 16 06.8 +5.3**
MAK pmax pmax
comp=Z,125nm,1.2s
KBZ Khabaz 80.06 345 P **P 22 00 52.2 +1.1**
comp=Z,19nm,0.9s,baz=337,slow=4.1,SNR=56
comp=Z,19nm,0.9s
KBZ Khabaz 80.06 345 *ceP* **P 22 00 51.3 +0.2**
KBZ pmax pmax
comp=Z,18nm,0.9s
CFR Carcaliu 80.07 356 ⇑P **P 22 00 51.5 +0.3**
CFR Carcaliu 80.07 356 ⇑P **P 22 00 51.5 +0.3**
SHA1 Shidzhatmaz 80.09 345 *i* P **P 22 00 51.0 -0.6**
SHL Shillong 80.12 301 IAmb IAmb 22 01 10.8
comp=Z,17nm,0.5s
NCK Nalchik 80.19 344 *i* P **P 22 00 51.5 -0.4**
NCK pmax pmax
comp=Z,32nm,0.8s
RKT Rikitea 80.25 159 *e*LR LR 22 25 49.6
comp=Z,5μm,35.2s
TPGR TOPOLOG 80.38 355 ⇓P **P 22 00 53.7 +0.8**
HERR Herculane 80.50 360 ⇓P **P 22 00 53.8 +0.3**
EVN Everest 80.56 306 IAmb IAmb 22 01 12.1
comp=Z,42nm,1.4s
HARR Harsova 80.57 356 ⇓P **P 22 00 54.7 +0.9**
MDVR Moldovita 80.60 0 ⇓P **P 22 00 54.3 +0.2**
TLBR Topalu 80.71 356 ⇓P **P 22 00 54.7 +0.1**
TIRR Tirgusor 80.78 355 ⇓P **P 22 00 56.0 +1.1**
TIRR Tirgusor 80.78 355 ⇓P **P 22 00 56.0 +1.1**
SGRR Singureni 81.11 357 ⇓P **P 22 00 56.5 -0.2**
ICOR Ion Corvin 81.15 356 ⇑P **P 22 00 58.6 +1.7**
SDV Santo Domingo 81.27 87 LR LR 22 39 14.1
comp=Z,125nm,19.3s,baz=352,slow=37
AKT Akhty 81.43 341 *eP* **P 22 00 57.8 -0.8**
AKT *e* 22 04 01.9
AKT *eS* **S 22 11 03.2 -4.3**
AKT pmax pmax
comp=Z,26nm,0.9s
BOVS Bovan 81.75 0 ⇓P **P 22 01 00.6 +0.5**
DDFL Dedoflistskaro 81.76 342 P **P 22 01 00.6 +0.3**
BLKB Belogradchik 81.76 360 ⇑P **P 22 01 00.4 +0.2**
MURB Monte Urbino 81.79 7 IAmb IAmb 22 01 20.9
comp=Z,24nm,1.0s
SEKA Sheki 81.79 341 P **P 22 01 00.7 +0.2**
PLVB Pleven 81.97 358 ⇑P **P 22 01 01.3 0.0**
CHTO Chiang Mai 82.04 291 P **P 22 01 02.1 0.0**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
FDMO Fiordimonte 82.05 7 IAmb IAmb 22 01 06.5
comp=Z,20nm,1.2s
KBL Kabul 82.13 322 IAmb IAmb 22 01 02.7
comp=Z,14nm,0.8s
KBL Kabul 82.13 322 P **P 22 01 01.8 -0.8**
KBL pmax pmax
comp=Z,22nm,1.0s
MNGR Mingechevir, A 82.23 341 P **P 22 01 03.1 +0.4**
NRCA Norcia 82.26 7 IAmb IAmb 22 01 07.1
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 82.33 291 P **P 22 01 04.0 +0.4**
comp=Z,17nm,0.8s,baz=14,slow=5.3,SNR=81
comp=Z,17nm,0.8s
CMAR Chiang Mai Arr 82.33 291 *ceP* **P 22 01 04.0 +0.4**
CMAR pmax pmax
comp=Z,18nm,0.8s
ROSC El Rosal 82.42 92 LR LR 22 39 58.0
comp=Z,89nm,20.4s,baz=8.6,slow=37
GANJ Ganja 82.50 342 P **P 22 01 04.5 +0.3**
PDG Podgorica 82.93 2 IAmb IAmb 22 01 24.7
comp=Z,25nm,1.1s
PDG Podgorica 82.93 2 ⇓P **P 22 01 07.0 +0.7**
ESDC Sonseca Array 83.12 20 IAmb IAmb 22 01 09.3
comp=Z,12nm,0.9s
ESDC Sonseca Array 83.12 20 P **P 22 01 08.6 +1.2**
comp=Z,9.8nm,0.8s,baz=344,slow=4.8,SNR=34
comp=Z,9.8nm,0.8s
GNI Garni 83.26 343 *ceP* **P 22 01 09.0 +0.7**
GNI pmax pmax
comp=Z,7.0nm,0.9s
ILGA Ilgaz 83.81 351 IAmb IAmb 22 01 28.3
comp=Z,11nm,0.9s
LKRN Lenkeran, Azer 83.89 339 P **P 22 01 11.8 +0.5**
NAX Nakhchivan 84.08 342 P **P 22 01 12.7 +0.3**
RDO Rodhopi 84.19 357 IAmb IAmb 22 01 14.9
comp=Z,14nm,0.9s
TOKA Tokat 84.26 349 IAmb IAmb 22 01 28.8
comp=Z,11nm,1.1s
ANTO Ankara 85.06 352 ⇓P **P 22 01 18.9 +1.5**
ANTO Ankara 85.06 352 ⇓P **P 22 01 18.9 +1.5**
BR131 Keskin Array S 85.13 351 IAmb IAmb 22 01 19.9
comp=Z,15nm,0.9s
BR131 Keskin Array S 85.13 351 *c* P **P 22 01 18.5 +0.7**
BRTR Keskin Array B 85.13 351 P **P 22 01 18.6 +0.8**
comp=Z,8.1nm,0.8s,baz=33,slow=2.5,SNR=56
comp=Z,8.1nm,0.8s
KIRS Kirsehir-Merke 85.70 351 ⇑P **P 22 01 21.9 +1.4**
MANT Manisa 86.72 355 IAmb IAmb 22 01 27.3
comp=Z,16nm,0.9s
ISP Isparta 87.27 353 *ceP* **P 22 01 28.8 +0.5**
ISP pmax pmax
comp=Z,16nm,0.7s
KEST Kesra 88.99 10 P **P 22 01 37.6 +1.2**
comp=Z,6.6nm,0.9s,baz=26,slow=2.5,SNR=5.7
comp=Z,6.6nm,0.9s
ARG Arkhangelos 89.01 355 P **P 22 01 36.4 0.0**
ARG pmax pmax
comp=Z,42nm,0.9s
RPN Rapa Nui 91.79 138 LR LR 22 35 11.1
comp=Z,110nm,18.9s,baz=351,slow=30
WRA Warramunga Arr 94.08 241 P **P 22 01 59.8 -0.2**
comp=Z,1.5nm,0.8s,baz=39,slow=5.2,SNR=11
comp=Z,1.5nm,0.8s
WRA Warramunga Arr 94.08 241 *ceP* **P 22 02 00.5 +0.5**
WRA pmax pmax
comp=Z,2.0nm,0.8s
RAYN Ar Rayn 99.26 338 ⇓P **Pdif 22 02 24.1 +0.4**
H03N2 Juan Fernandez 110.89 119 T T 00 07 31.8
baz=325,slow=78,SNR=26
H03N1 Juan Fernandez 110.91 118 T T 00 07 33.8
baz=325,slow=78,SNR=30
H03N3 Juan Fernandez 110.91 119 T T 00 07 31.0
baz=325,slow=78,SNR=21
QSPA South Pole Qui 144.77 180 PKPbc **PKiKP 22 08 19.9 -0.8**
comp=Z,6.0nm,0.7s,baz=48,slow=1.8,SNR=18
GRTLG Ghanzi 146.42 1 *i* P **PKPab 22 08 23.5 -0.1**
KHWEE KHWEE 146.91 354 *i* P **PKiKP 22 08 26.8 +0.2**
MREMI Moremi 147.37 351 *i* P **PKiKP 22 08 28.0 +0.5**
KGCAE Kacgae 147.91 360 *i* P **PKPbc 22 08 27.5 +0.7**
KOCLE Kule 148.02 3 *i* P **PKPbc 22 08 28.1 +1.0**
LPHEE Lephephe 148.29 353 *i* P **PKPbc 22 08 28.7 +0.9**
KDWAN Kaudwane 148.37 355 *i* P **PKiKP 22 08 29.0 -0.6**
SKOMA Sekoma 149.53 357 *i* P **PKiKP 22 08 31.8 -0.2**
MAKGR Makgori 150.78 355 *i* P **PKiKP 22 08 34.6 0.0**
BOSA Boshof 153.54 354 PKPbc **PKPbc 22 08 40.0 0.0**
comp=Z,3.3nm,0.7s,baz=359,slow=6.2,SNR=7.3
MAW Mawson 157.20 220 PKPab **PKPab 22 09 07.5 +0.5**
comp=Z,2.2nm,1.0s,baz=95,slow=3.5,SNR=4.4

SNAA Sanae 160.17 157 PKPab **PKPab 22 09 22.2 +2.3**
comp=Z,1.5nm,0.9s,baz=148,slow=5.9,SNR=3.8
NVL N'lazarevskaya 163.54 168 *e*PKIKP **PKPdf 22 08 45.0 +2.3**
NVL *e* 22 13 24.5
NVL *e*SS SS 22 33 50.9 +6.2
NVL *e*SSS SSS 22 40 12.2
NVL pmax pmax
comp=Z,15nm,1.0s
SYO Syowa Base 163.80 203 *e*PKPdf **PKPdf 22 08 46.8 +3.8**
SYO Syowa Base 163.80 203 *ep*PKPdf pPKPdf 22 08 50.8 -2.7

*TAP **07** 22:02:28.5,24.°90N×121.°98E,h101km,ML3.5,B*
*JMA **07** 22:02:29.2±0.2,24.°9N±0.°7×122.°0E±0.°5,h94km±2km,*
MV2.7/13, TAIWAN REGION

ISC 07 22:02:28.5±1.4,24.°88N±0.°04×121.°99E±0.°03,h103km±6km,
n103,σ0°61/173,8C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.06**	**231**	P	**Pn**	**22 02 42.8**	**0.0**
TWB1	**Santiao Chiao**	**0.12**	**1**	⇑*i*P	**Pn**	**22 02 42.9**	**0.0**
TWB1				*i* S	**Sn**	**22 02 53.0**	**-0.6**
TIPB	**Shuangxi**	**0.17**	**301**	⇑*i*P	**Pn**	**22 02 42.9**	**-0.1**
TIPB				*i* S	**Sn**	**22 02 53.0**	**-0.8**
SXI1	**Grass Mountain**	**0.23**	**335**	*i* P	**Pn**	**22 02 42.9**	**-0.4**
SXI1				*i* S	**Sn**	**22 02 53.5**	**-0.8**
ILA	**Ilan**	**0.25**	**241**	P	**Pn**	**22 02 43.2**	**0.0**
ILA				S	**Sn**	**22 02 54.7**	**+0.6**
NWF	**Wu-fen Shan**	**0.26**	**315**	⇑*i*P	**Pn**	**22 02 43.2**	**-0.2**
NWF				*i* S	**Sn**	**22 02 53.4**	**-1.1**
WFSB	**Wu-fen Shan**	**0.26**	**315**	⇑*i*P	**Pn**	**22 02 43.2**	**0.0**
WFSB				S	**Sn**	**22 02 53.5**	**-0.8**
TWC	**Suao**	**0.30**	**204**	⇑*i*P	**Pn**	**22 02 43.4**	**0.0**
TWC				*i* S	**Sn**	**22 02 53.9**	**-0.6**
TNOU	**National Taiwa**	**0.33**	**324**	P	**Pn**	**22 02 43.4**	**-0.2**
TNOU				*e*S	**Sn**	**22 02 54.1**	**-0.7**
TWE	**Neicheng**	**0.33**	**241**	P	**Pn**	**22 02 44.0**	**+0.4**
TWE				S	**Sn**	**22 02 55.6**	**+0.8**
ESAO	**Su ao**	**0.33**	**203**	*e*P	**Pn**	**22 02 44.2**	**+0.6**
ESAO				*e*S	**Sn**	**22 02 54.1**	**-0.7**
NDS	**Dongshan**	**0.35**	**225**	P	**Pn**	**22 02 44.6**	**+0.9**
NDS				*e*S	**Sn**	**22 02 55.9**	**+0.9**
TWA	**Mucha**	**0.38**	**285**	P	**Pn**	**22 02 43.7**	**-0.1**
TWA				*e*S	**Sn**	**22 02 54.6**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.38**	**251**	P	**Pn**	**22 02 43.9**	**0.0**
FUSB				S	**Sn**	**22 02 55.3**	**-0.2**
NHY	**Taipei**	**0.41**	**292**	*e*P	**Pn**	**22 02 44.3**	**+0.3**
NHY				*e*S	**Sn**	**22 02 53.8**	**-1.7**
NHDH	**Xindian Distri**	**0.42**	**281**	P	**Pn**	**22 02 44.4**	**+0.3**
NHDH				S	**Sn**	**22 02 56.8**	**+1.1**
NWLT	**Wulai**	**0.45**	**256**	⇑P	**Pn**	**22 02 44.3**	**0.0**
NWLT				S	**Sn**	**22 02 55.7**	**-0.4**
ENTT	**Nioudou**	**0.45**	**238**	⇑*i*P	**Pn**	**22 02 44.8**	**+0.5**
ENTT				*i* S	**Sn**	**22 02 56.6**	**+0.5**
YM01	**YM01**	**0.46**	**305**	P	**Pn**	**22 02 44.2**	**-0.2**
YM01				*e*S	**Sn**	**22 02 55.5**	**-0.7**
TATO	**Taipei**	**0.46**	**282**	P	**Pn**	**22 02 43.4**	**-0.9**
TATO	**Taipei**	**0.46**	**282**	S	**Sn**	**22 02 56.7**	**+0.6**
YM08	**YM08**	**0.47**	**310**	*e*P	**Pn**	**22 02 44.1**	**-0.3**
YM08				*e*S	**Sn**	**22 02 55.3**	**-1.0**
EWUT	**Wuta**	**0.48**	**203**	*e*P	**Pn**	**22 02 44.9**	**+0.5**
EWUT				*i* S	**Sn**	**22 02 56.4**	**+0.1**
ZUZH	**Zhuzihu**	**0.49**	**305**	*e*P	**Pn**	**22 02 44.8**	**+0.2**
ENA	**Nanau**	**0.51**	**206**	*i* P	**Pn**	**22 02 45.2**	**+0.5**
ENA				*i* S	**Sn**	**22 02 57.2**	**+0.5**
EOS2	**EOS2**	**0.51**	**154**	*i* P	**Pn**	**22 02 45.3**	**+0.7**
ANP	**Anpu**	**0.52**	**306**	*e*P	**Pn**	**22 02 45.0**	**+0.1**
LATG	**Datong**	**0.54**	**230**	P	**Pn**	**22 02 45.5**	**+0.4**
LATG				*i* S	**Sn**	**22 02 58.4**	**+1.0**
TWS1	**Kuangyinshan**	**0.56**	**293**	*i* P	**Pn**	**22 02 45.1**	**+0.1**
TWS1				*i* S	**Sn**	**22 02 58.6**	**+1.3**
NTST	**Danshui**	**0.56**	**300**	*e*P	**Pn**	**22 02 45.4**	**+0.4**
NTST				*i* S	**Sn**	**22 02 58.4**	**+1.0**
YHNB	**Yeheng**	**0.59**	**249**	P	**Pn**	**22 02 44.9**	**-0.5**
YHNB	**Yeheng**	**0.59**	**249**	S	**Sn**	**22 02 57.4**	**-0.6**
YHNB	**Yeheng**	**0.59**	**249**	⇑*i*P	**Pn**	**22 02 45.2**	**-0.2**
YHNB				*i* S	**Sn**	**22 02 57.3**	**-0.6**
EAHA	**Aohua**	**0.60**	**202**	*e*P	**Pn**	**22 02 46.0**	**+0.6**
EAHA				S	**Sn**	**22 02 58.7**	**+0.9**
NSK	**Sanguang**	**0.61**	**250**	*i* P	**Pn**	**22 02 45.3**	**-0.2**
NSK				*i* S	**Sn**	**22 02 57.4**	**-0.8**
NNS	**Nan Shan**	**0.71**	**232**	*i* P	**Pn**	**22 02 46.6**	**+0.1**
NNS				S	**Sn**	**22 02 59.8**	**-0.1**
NNSB	**Datong**	**0.71**	**231**	*e*P	**Pn**	**22 02 46.6**	**+0.2**
NNSB				S	**Sn**	**22 02 59.8**	**-0.1**
NCUH	**Zhongli**	**0.73**	**277**	*e*P	**Pn**	**22 02 46.7**	**+0.3**
NCUH				*i* S	**Sn**	**22 03 00.7**	**+0.8**
KSHI	**Guanxi Townshi**	**0.74**	**262**	P	**Pn**	**22 02 46.8**	**+0.2**
KSHI				*i* S	**Sn**	**22 03 00.7**	**+0.6**
PCYT	**Pengchaiyu**	**0.75**	**6**	*e*P	**Pn**	**22 02 47.1**	**+0.5**
PCYT				*e*S	**Sn**	**22 03 01.5**	**+1.3**
NACB	**Ninganchiao**	**0.79**	**207**	P	**Pn**	**22 02 47.0**	**-0.1**
NACB	**Ninganchiao**	**0.79**	**207**	P	**Pn**	**22 02 46.6**	**-0.4**
NACB				S	**Sn**	**22 03 00.3**	**-0.6**
ETL	**Fush Village**	**0.79**	**205**	*e*P	**Pn**	**22 02 47.4**	**+0.3**
ETLH	**Xiulin Townshi**	**0.81**	**214**	*e*P	**Pn**	**22 02 47.2**	**-0.1**
ETLH				S	**Sn**	**22 03 01.1**	**-0.4**
EOS4	**EOS4**	**0.82**	**158**	*e*P	**Pn**	**22 02 47.0**	**+0.1**
EOS4				S	**Sn**	**22 03 01.3**	**+0.6**
NFF	**Wufeng Townshi**	**0.83**	**253**	*i* P	**Pn**	**22 02 47.2**	**-0.2**
NFF				*i* S	**Sn**	**22 03 01.0**	**-0.7**
TWD	**Chiawan**	**0.88**	**204**	*e*P	**Pn**	**22 02 47.6**	**-0.3**
TWD				*e*S	**Sn**	**22 03 01.1**	**-1.3**
LIOB	**Emei**	**0.91**	**255**	*i* P	**Pn**	**22 02 48.2**	**0.0**
LIOB				*i* S	**Sn**	**22 03 02.1**	**-1.0**
SBCB	**Hsinchu**	**0.91**	**264**	*e*P	**Pn**	**22 02 48.6**	**+0.4**
SBCB				*e*S	**Sn**	**22 03 03.5**	**+0.4**
FUSS	**Fushou**	**0.93**	**227**	*e*P	**Pn**	**22 02 49.1**	**+0.5**
FUSS				*i* S	**Sn**	**22 03 04.0**	**+0.3**
HSN	**Hsinchu**	**0.93**	**265**	*e*P	**Pn**	**22 02 48.2**	**-0.1**
HSN				*i* S	**Sn**	**22 03 02.8**	**-0.5**
NSTT	**Nanjuang**	**0.93**	**254**	*i* P	**Pn**	**22 02 48.3**	**-0.1**
NSTT				*i* S	**Sn**	**22 03 01.9**	**-1.4**
HWA	**Hwalien**	**0.97**	**201**	*e*P	**Pn**	**22 02 48.1**	**-0.7**
HWA				*e*S	**Sn**	**22 03 05.5**	**+1.4**
TWT	**Tachien**	**0.97**	**230**	*i* P	**Pn**	**22 02 49.7**	**+0.7**
TWT				S	**Sn**	**22 03 04.7**	**+0.3**
JYNG	**Yonagunijimaku**	**0.97**	**116**	P	**Pn**	**22 02 49.0**	**+0.1**
TDCB	**Techi**	**0.98**	**230**	*e*P	**Pn**	**22 02 49.7**	**+0.6**
TDCB				*i* S	**Sn**	**22 03 04.7**	**+0.1**
WHF	**Hehuan Shan**	**0.99**	**222**	*i* P	**Pn**	**22 02 49.9**	**+0.4**
WHF				*i* S	**Sn**	**22 03 04.8**	**-0.3**
LXIB	**Xiulin Townshi**	**1.00**	**211**	*i* P	**Pn**	**22 02 48.9**	**-0.5**
LXIB				*i* S	**Sn**	**22 03 04.8**	**-0.3**
ETM	**Tongmen**	**1.02**	**206**	*e*P	**Pn**	**22 02 48.6**	**-0.8**
YOJ	**Yonaguni jima**	**1.02**	**114**	*e*P	**Pn**	**22 02 49.5**	**+0.1**
YOJ	**Yonaguni jima**	**1.02**	**114**	*e*P	**Pn**	**22 02 49.7**	**+0.3**
WHP	**Taichung City**	**1.12**	**238**	*i* P	**Pn**	**22 02 50.9**	**+0.4**
WHP				*i* S	**Sn**	**22 03 06.7**	**+0.5**
NMLH	**Miaoli**	**1.14**	**253**	*e*P	**Pn**	**22 02 51.0**	**+0.3**
NMLH				*e*S	**Sn**	**22 03 07.3**	**-0.1**
SHUL	**Shoufeng**	**1.16**	**200**	*e*P	**Pn**	**22 02 50.1**	**-0.8**
OWD	**Renai**	**1.18**	**219**	*e*P	**Pn**	**22 02 51.7**	**+0.4**
WUSB	**Renai**	**1.19**	**222**	*i* P	**Pn**	**22 02 52.1**	**+0.8**
WUSB				*i* S	**Sn**	**22 03 08.7**	**+0.1**
NSY	**Sanyi**	**1.21**	**248**	*i* P	**Pn**	**22 02 51.9**	**+0.4**
NSY				*i* S	**Sn**	**22 03 08.9**	**+0.1**
TWQ1	**Liyutan**	**1.23**	**244**	*e*P	**Pn**	**22 02 51.6**	**0.0**
TWQ1				S	**Sn**	**22 03 08.3**	**-0.9**
WCS	**Beigang Elemen**	**1.28**	**230**	*i* P	**Pn**	**22 02 52.7**	**+0.4**
WCS				*i* S	**Sn**	**22 03 10.0**	**-0.2**
WARBT	**Fenglin Townsh**	**1.28**	**205**	*i* P	**Pn**	**22 02 51.4**	**-1.0**
WDJ	**Dajia District**	**1.34**	**247**	*e*P	**Pn**	**22 02 53.1

WHYT	**Xinyi Township**	**1.57**	**221**	*eP*	**Pn**	**22 02 56.6**	**+0.8**
WHYT				S	**Sn**	**22 03 17.0**	**+0.4**
YULB	**Yu-li**	**1.61**	**203**	P	**Pn**	**22 02 56.5**	**+0.1**
YULB	**Yu-li**	**1.61**	**203**	S	**Sn**	**22 03 16.7**	**-0.8**
TWF1	**Yuli**	**1.65**	**203**	*eP*	**Pn**	**22 02 57.3**	**+0.5**
IRIF	**Iriomote-Funau**	**1.68**	**109**	P	**Pn**	**22 02 57.5**	**+0.3**
IRIF				*eS*	**Sn**	**22 03 18.3**	**-0.6**
ALS	**Alishan**	**1.74**	**218**	*eP*	**Pn**	**22 02 58.9**	**+0.7**
ALS				*i S*	**Sn**	**22 03 21.2**	**+0.5**
CHN5	**Tsauling**	**1.75**	**223**	*eP*	**Pn**	**22 02 58.1**	**-0.1**
WDLH	**Douliu**	**1.78**	**228**	*eP*	**Pn**	**22 02 59.0**	**+0.6**
WDLH				*i S*	**Sn**	**22 03 21.5**	**+0.4**
HATJ	**Hateruma jima**	**1.85**	**116**	*eS*	**Sn**	**22 03 22.5**	**-0.3**
EHD	**Haiduan**	**1.87**	**203**	*eP*	**Pn**	**22 03 00.1**	**+0.5**
WTK	**Tuku**	**1.88**	**231**	*eP*	**Pn**	**22 03 00.3**	**+0.6**
WTK				*i S*	**Sn**	**22 03 22.9**	**-0.5**
ELDTW	**Lidau**	**1.91**	**208**	*eP*	**Pn**	**22 02 59.8**	**-0.4**
JKRS	**Kuro-shima**	**1.95**	**109**	*eP*	**Pn**	**22 03 01.2**	**+0.6**
JKRS				*eS*	**Sn**	**22 03 24.9**	**-0.2**
TPUB	**Ta-pu**	**2.00**	**218**	P	**Pn**	**22 03 01.2**	**-0.1**
TPUB	**Ta-pu**	**2.00**	**218**	*eP*	**Pn**	**22 03 02.0**	**+0.7**
TPUB				*eS*	**Sn**	**22 03 26.2**	**-0.1**
JIJ	**Ishigaki jima**	**2.03**	**104**	*eP*	**Pn**	**22 03 01.4**	**-0.1**
JIJ				*eS*	**Sn**	**22 03 25.5**	**-1.4**
WTP	**Ta-pu**	**2.06**	**218**	*eP*	**Pn**	**22 03 01.7**	**-0.3**
WTP				*eS*	**Sn**	**22 03 27.0**	**-0.6**
JISG	**Ishigakijimahi**	**2.13**	**97**	*eP*	**Pn**	**22 03 03.5**	**+0.6**
JISG				*eS*	**Sn**	**22 03 29.2**	**0.0**
CHN8	**Yiju**	**2.23**	**227**	*eS*	**Sn**	**22 03 31.7**	**+0.2**
JTJ	**Tarama**	**2.48**	**95**	*eS*	**Sn**	**22 03 37.7**	**+0.4**
PTMZ	**Houxiangcun**	**2.60**	**274**	*i P*	**Pn**	**22 03 08.7**	**-0.4**
WLCH	**Liuqiu**	**2.92**	**211**	*eP*	**Pn**	**22 03 13.3**	**0.0**
WLCH				*eS*	**Sn**	**22 03 45.6**	**-2.1**

*NEIC **07** 22:05:36.0±2.2, 37°.31N±0°.02×115°.16W±0°.02, h7km±3.4km, Error ellipse: s-maj=2.8km s-min=2.1km az=148.0*

REN 07 22:05:36.1±1.3, 37°.29N±0°.02×115°.17W±0°.02, h12km±7km, ML2.7/19, ML2.6/153(NEIC), Error ellipse: s-maj=3.4km s-min=1.7km az=167.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRN	**Pahroc Range**	**0.15**	**40**		Pg	22 05 39.4	-0.4
PRN					Sg	22 05 43.2	+0.7
PRN				IAML		22 05 43.5	
	comp=E,1μm,0.5s						
PRN				IAML		22 05 45.3	
	comp=N,2μm,0.5s						
S11A	**Rachel**	**0.58**	**308**	Pg	Pg	22 05 47.2	-0.2
S11A				IAML		22 06 02.1	
	comp=N,546nm,0.5s						
S11A				IAML		22 06 02.6	
	comp=E,334nm,0.9s						
S11A	**Rachel**	**0.58**	**308**		Sb	22 05 56.1	-0.4
SHPR	**Sheep Range**	**0.78**	**179**		Pb	22 05 51.5	-0.2
MCY	**Mercury**	**0.89**	**225**		Pg	22 05 53.3	0.0
TPNV	**Topopah Spring**	**0.93**	**249**		Pg	22 05 53.7	-0.3
TPNV				Sg	Sn	22 06 07.9	-0.4
NSP	**Numbskull Pass**	**1.00**	**236**		Pb	22 05 55.5	0.0
R11B	**Troy Canyon, C**	**1.11**	**343**		Pn	22 05 57.7	+0.1
R11B	**Troy Canyon, C**	**1.11**	**343**	IAML		22 06 15.9	
	comp=E,181nm,0.5s						
R11B				IAML		22 06 16.4	
	comp=N,140nm,0.3s						
SDH	**Striped Hills**	**1.13**	**236**		Pg	22 05 58.0	+0.1
AMDNV	**Amargosa**	**1.22**	**227**		Pg	22 06 00.2	+0.6
WCT	**Wildcat Mounta**	**1.26**	**247**		Pn	22 05 59.7	+0.1
WCT				IAML		22 06 19.8	
	comp=E,84nm,0.7s						
CCUT	**Cedar City**	**1.47**	**79**		Pg	22 06 03.9	-0.4
CCUT				IAML		22 06 29.6	
	comp=N,47nm,0.5s						
SGV	**South Grapevin**	**1.52**	**259**		Pb	22 06 04.3	+0.1
LCMT	**Little Creek M**	**1.57**	**100**		Pb	22 06 05.3	+0.2
LCMT				IAML		22 06 29.2	
	comp=N,47nm,0.6s						
LCMT				IAML		22 06 29.3	
	comp=E,49nm,0.8s						
V12A	**Nelson**	**1.58**	**170**		Pb	22 06 04.8	-0.5
FURC	**Furnace Creek,**	**1.58**	**239**		Pg	22 06 05.9	-0.6
FURC				IAML		22 06 29.7	
	comp=N,116nm,0.4s						
FURC				IAML		22 06 29.8	
	comp=E,150nm,0.4s						
PSUT	**Pine Spring**	**1.62**	**40**		Pb	22 06 06.2	+0.1
PSUT				IAML		22 06 36.1	
	comp=E,54nm,0.7s						
PSUT				IAML		22 06 38.0	
	comp=N,58nm,0.8s						
GWY	**Greenwater Val**	**1.63**	**228**		Pb	22 06 06.2	0.0
GWY				IAML		22 06 36.0	
	comp=N,55nm,0.5s						
GWY				IAML		22 06 41.6	
	comp=E,42nm,0.5s						
SHOC	**Shoshone, Teco**	**1.65**	**213**		Pn	22 06 05.5	+0.7
SHOC				IAML		22 06 34.2	
	comp=E,136nm,0.9s						
SHOC				IAML		22 06 40.0	
	comp=N,83nm,0.7s						
GMN	**Gold Mountain**	**1.66**	**271**		Pn	22 06 05.9	+0.6
GMN				IAML		22 06 35.7	
	comp=N,58nm,0.6s						
SZCU	**Shurtz Canyon**	**1.69**	**79**		Pn	22 06 06.4	+0.8
SZCU				IAML		22 06 37.0	
	comp=E,44nm,0.4s						
SZCU				IAML		22 06 39.8	
	comp=N,39nm,0.4s						
GRAC	**Grapevine Rang**	**1.78**	**261**		Pg	22 06 09.7	-0.4
GRAC	**Grapevine Rang**	**1.78**	**261**	Pn	Pn	22 06 07.6	+0.9
GRAC				IAML		22 06 39.4	
	comp=N,115nm,1.1s						
GRAC				IAML		22 06 41.1	
	comp=E,98nm,0.4s						
MTPC	**Mountain Pass**	**1.83**	**190**		Pn	22 06 07.2	-0.3
SPR3	**Spring Creek 3**	**1.83**	**21**		Pn	22 06 07.7	0.0
SPR3				IAML		22 06 38.6	
	comp=N,43nm,0.5s						
SPR3				IAML		22 06 38.7	
	comp=E,47nm,0.6s						
KNB	**Kanab**	**1.90**	**98**		Pn	22 06 08.2	-0.3
KNB				IAML		22 06 39.5	
	comp=N,29nm,0.7s						
KNB				IAML		22 06 42.4	
	comp=E,40nm,0.6s						
QSM	**Queen of Sheba**	**1.90**	**226**		Pn	22 06 08.8	+0.4
QSM				IAML		22 06 41.2	
	comp=E,30nm,1.2s						
LCH	**Last Change Ra**	**1.97**	**269**		Pb	22 06 11.0	-1.0
Q09A	**Carvers**	**2.21**	**315**	Pn	Pn	22 06 11.6	-1.1
DSP	**Deep Springs**	**2.23**	**273**		Pn	22 06 12.9	+0.1
MPMC	**Manual Prospec**	**2.23**	**237**		Pg	22 06 18.1	-0.8
PKCU	**Pink Cliffs**	**2.29**	**85**		Pg	22 06 20.4	+0.5
PKCU				IAML		22 06 54.1	
	comp=N,54nm,0.7s						
GSC	**Goldstone, Bar**	**2.38**	**214**	IAML		22 07 21.2	
	comp=N,33nm,0.1s						
GSC				IAML		22 07 21.8	
	comp=E,50nm,0.1s						
W13A	**Hualapai Mount**	**2.42**	**154**		Pn	22 06 16.2	+0.5
CLC	**China Lake**	**2.44**	**234**	Pn	Pn	22 06 16.2	+0.4
CLC				IAML		22 07 45.0	
	comp=N,32nm,0.1s						
CLC				IAML		22 07 45.2	
	comp=E,20nm,0.1s						
TIN	**Tinemaha, Big**	**2.45**	**265**	Pn	Pn	22 06 16.1	+0.1
U15A	**North Rim**	**2.47**	**110**		Pg	22 06 22.3	-1.1
U15A				IAML		22 06 55.3	
	comp=N,41nm,0.8s						
U15A				IAML		22 07 04.1	
	comp=E,27nm,0.8s						
MTPU	**Mount Pierson**	**2.49**	**72**		Pn	22 06 16.3	-0.5
CCCA	**Chr Cany lake**	**2.50**	**226**	Pn	Pn	22 06 16.6	0.0
WSHM	**Spangler Hills**	**2.52**	**229**		Pg	22 06 23.7	-0.6
TCRU	**Three Creeks R**	**2.52**	**58**		Pg	22 06 26.4	+1.9
TCRU				IAML		22 07 00.7	
	comp=E,24nm,0.8s						
TCRU				IAML		22 07 11.6	
	comp=N,21nm,0.9s						
NEE2	**Needles Airpor**	**2.56**	**170**		Pn	22 06 18.7	+1.4
NEE2				IAML		22 07 33.2	
	comp=E,62nm,0.4s						
NV11	**Mina Array Sit**	**2.62**	**297**	IAML		22 07 00.9	
	comp=N,16nm,0.4s						
DANC	**Danby, Needles**	**2.65**	**184**	IAML		22 07 12.8	
	comp=E,26nm,1.1s						
DANC				IAML		22 07 15.0	
	comp=N,35nm,0.9s						
NV08	**Mina Array Sit**	**2.73**	**295**		Pn	22 06 21.1	+1.2
NV09	**Mina Array Sit**	**2.75**	**296**		Pn	22 06 22.7	+2.5
LHV	**Little Huntoon**	**2.81**	**291**		Pn	22 06 23.2	+2.4
LHV	**Little Huntoon**	**2.81**	**291**	IAML		22 07 08.6	
	comp=E,36nm,0.5s						
LHV				IAML		22 07 19.3	
	comp=N,31nm,1.0s						
RYN	**Ryan**	**2.96**	**298**		Pn	22 06 24.8	+1.7
RYN	**Ryan**	**2.96**	**298**	IAML		22 07 13.4	
	comp=N,28nm,0.5s						
RYN				IAML		22 07 17.3	
	comp=E,22nm,0.6s						
BELC	**Belle Mtn. Jos**	**3.35**	**192**	IAML		22 07 28.7	
	comp=E,9.6nm,1.0s						
DUG	**Dugway, Tooele**	**3.44**	**32**	IAML		22 07 36.1	
	comp=E,9.1nm,0.8s						
DUG				IAML		22 07 42.7	
	comp=E,9.1nm,2.6s						
WUAZ	**Wupatki**	**3.54**	**119**	IAML		22 07 29.5	
	comp=E,21nm,0.8s						
HMU	**Henry Mountain**	**3.58**	**78**	IAML		22 07 36.2	
	comp=N,19nm,0.8s						
HMU				IAML		22 07 50.0	
	comp=E,22nm,0.9s						
WAKR	**Walker**	**3.58**	**291**	IAML		22 07 53.9	
	comp=E,7.1nm,5.0s						
BC3	**Big Chuckawall**	**3.63**	**184**	IAML		22 07 44.3	
	comp=E,6.1nm,0.6s						
BC3				IAML		22 08 00.9	
	comp=N,7.2nm,3.9s						
TMUT	**Trail Mountain**	**3.71**	**56**	IAML		22 08 38.2	
	comp=E,14nm,4.3s						
TMUT				IAML		22 08 51.1	
	comp=N,13nm,4.4s						
PNTR	**Pine Nut**	**3.92**	**299**	IAML		22 07 46.0	
	comp=N,18nm,1.0s						
PNTR				IAML		22 07 52.3	
	comp=E,19nm,0.9s						
HVU	**Hansel Valley**	**4.85**	**22**	IAML		22 08 13.7	
	comp=E,8.5nm,4.1s						

TRN 07 22:05:42.8, 17°.60N×59°.82W, h40km, MD3.9, Far East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSDZ	**La Diserade, G**	**1.75**	**223**	*eP*	Pn	22 06 11.7	+1.1
DSDZ				*eS*	Sn	22 06 32.5	+0.9
ANWB	**Willy Bob**	**1.87**	**272**	*eP*	Pn	22 06 13.5	+1.2
ANWB				*eS*	Sn	22 06 36.1	+1.4
DHSZ	**Broadband at M**	**2.28**	**235**	*eP*	Pn	22 06 19.6	+1.7
DHSZ				*eS*	Sn	22 06 47.1	+2.4
MMLZ	**Guadeloupe Bro**	**2.35**	**229**	*eP*	Pn	22 06 21.0	+2.2
MMLZ				*eS*	Sn	22 06 48.9	+2.5
ATGZ	**Broadband at L**	**2.36**	**231**	*eP*	Pn	22 06 21.6	+2.7
ATGZ				*eS*	Sn	22 06 50.0	+3.4
TBG	**Guadaloupe-3**	**2.46**	**225**	*eP*	Pn	22 06 23.1	+2.7
TBG				*eS*	Sn	22 06 51.4	+2.1
DWS	**Wesley**	**2.47**	**216**	*eS*	Sn	22 06 51.2	+1.7
DSLB	**Salisbury**	**2.64**	**216**	*eP*	Pn	22 06 24.5	+1.7
DSLB				*eS*	Sn	22 06 54.7	+1.0
SKI	**Saint Kitts**	**2.80**	**265**	*eP*	Pn	22 06 26.2	+1.1
SKI				*eS*	Sn	22 06 59.4	+1.9
BIM	**Bigot**	**3.29**	**202**	*eP*	Pn	22 06 33.0	+1.2
BIM				*eS*	Sn	22 07 10.5	+0.7
SLBI	**Saint Lucia, B**	**3.72**	**197**	*eP*	Pn	22 06 41.2	+3.5
SLBI				*eS*	Sn	22 07 20.7	+0.3

*IDC **07** 22:07:31.1±0.9, 33°.12N×138°.90E, h0km, mb3.5/5, mbtmp3.5/6, ML2.8/1, Error ellipse: s-maj=20.5km s-min=14.6km az=18.0*

*JMA **07** 22:07:32.3±0.2, 33°.7N±0°.4×140°.7E±0°.8, h52km±4km, MV3.3/33, E OFF HACHIJOJIMA ISLAND*

ISC 07 22:07:32.4±1.2, 33°.65N±0°.04×140°.70E±0°.07, h57km±11km, n23, σ0°88/30, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.91**	**234**	P	**Pn**	**22 07 49.6**	**+0.4**
JHJ2				S	**Sn**	**22 08 01.5**	**0.0**
JHJ	**Hachijo jima 2**	**0.93**	**235**	Pn	**Pn**	**22 07 49.7**	**+0.3**
	446nm,0.3s,baz=270,slow=20,SNR=356						
JHJ				Sn	**Sn**	**22 08 01.2**	**-0.7**
	544nm,0.3s,baz=217,slow=20,SNR=23						
JHCJ	**Hachijojimakas**	**0.95**	**233**	P	**Pn**	**22 07 50.0**	**+0.3**
JHCJ				S	**Sn**	**22 08 02.1**	**-0.3**
JMKN	**Mikurajimanish**	**0.95**	**285**	P	**Pn**	**22 07 50.0**	**+0.2**
JMKN				S	**Sn**	**22 08 03.0**	**+0.5**
BSO1	**Boso 1**	**1.03**	**13**	P	**Pn**	**22 07 50.0**	**-0.2**
BSO1				S	**Sn**	**22 08 03.4**	**0.0**
JMYK	**Miyake Tsubota**	**1.04**	**293**	*eP*	**Pn**	**22 07 51.0**	**+0.1**
JMYK				*eS*	**Sn**	**22 08 04.9**	**+0.3**
BSO2	**Boso 2**	**1.10**	**3**	*eS*	**Sn**	**22 08 06.4**	**+0.9**
BSO3	**Boso 3**	**1.16**	**352**	P	**Pn**	**22 07 52.3**	**+0.1**
BSO3				*eS*	**Sn**	**22 08 06.7**	**-0.3**
BSO4	**Boso 4**	**1.37**	**348**	*eP*	**Pn**	**22 07 55.6**	**+0.4**
JAOM	**Aogashimamukai**	**1.42**	**214**	*eP*	**Pn**	**22 07 56.5**	**+0.5**
JAOM				*eS*	**Sn**	**22 08 13.9**	**+0.2**
JIM2	**Oshima 3**	**1.49**	**316**	P	**Pn**	**22 07 57.0**	**0.0**
JIZS	**Izushimoda**	**1.84**	**306**	P	**Pn**	**22 08 02.7**	**+1.0**
KTJ3	**Kamata3**	**1.86**	**314**	P	**Pn**	**22 08 02.1**	**+0.2**
JOD2	**Odawara 2**	**2.09**	**321**	P	**Pn**	**22 08 05.3**	**+0.3**
JOD2				*eS*	**Sn**	**22 08 28.4**	**-1.5**
MJAR	**Matsushiro Arr**	**3.53**	**325**	Pn	**Pn**	**22 08 26.8**	**+2.0**
	1.0nm,0.3s,baz=172,slow=15,SNR=25						
MJAR				Sn	**Sn**	**22 09 07.2**	**+1.9**
	0.4nm,0.3s,baz=96,slow=18,SNR=6.1 6.7nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.11**	**114**	T	T	22 42 00.7	
	baz=308,slow=74						
H11N1	**WAKE ISLAND Hy**	**27.12**	**114**	T	T	22 41 57.6	
	baz=308,slow=74						
H11N3	**WAKE ISLAND Hy**	**27.13**	**114**	T	T	22 41 57.3	
	baz=308						
SONM	**Songino Array**	**29.33**	**309**	P	**P**	**22 13 27.9**	**-1.8**
	0.2nm,0.6s,baz=90,slow=5.8,SNR=1.4 0.2nm,0.6s						
MKAR	**Makanchi Array**	**45.49**	**305**	P	**P**	**22 15 45.5**	**-0.5**
	0.7nm,0.9s,baz=92,slow=8.6,SNR=2.1 0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**47.68**	**310**	P	**P**	**22 16 02.3**	**-0.7**
	0.2nm,0.5s,baz=90,slow=7.9,SNR=4.2 0.2nm,0.5s						
WRA	**Warramunga Arr**	**53.64**	**187**	P	**P**	**22 16 49.3**	**+1.2**
	0.7nm,0.4s,baz=4.3,slow=7.7,SNR=18 0.7nm,0.4s						
ASAR	**Alice Springs**	**57.37**	**187**	P	**P**	**22 17 16.0**	**+1.2**
	0.2nm,0.4s,baz=1.4,slow=6.4,SNR=5.6 0.2nm,0.4s						

*HLW **07** 22:21:45.3, 27°.73N×34°.49E, h14km±1km, Md3.0, Ml2.9*
*SGS **07** 22:21:48.0, 27°.81N×34°.51E, h11km, Ml1.9*

ISC 07 22:21:45.0±0.9, 27°.74N±0°.04×34°.41E±0°.03, h10km, n41, σ0°74/41, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TR1	**Tor 1**	**0.48**	**303**	P	**Pb**	**22 21 56.0**	**+0.3**
RSHS		**0.66**	**32**	P	**Pb**	**22 21 58.6**	**0.0**
RSHS		**0.66**	**32**	S	**Sg**	**22 22 06.8**	**+0.4**
KRABS	**KRABS**	**0.83**	**64**	P	**Pg**	**22 22 01.3**	**+0.2**
KRABS	**KRABS**	**0.83**	**64**	S	**Sg**	**22 22 11.0**	**-0.9**
HKAT	**Jabal Katrina**	**0.86**	**335**	P	**Pb**	**22 22 02.8**	**+0.6**
HKAT				S	**Sb**	**22 22 14.2**	**+0.3**
AYUS	**`Aynunah**	**0.88**	**59**	S	**Sg**	**22 22 12.6**	**-0.9**
AYUS	**`Aynunah**	**0.88**	**59**	P	**Pg**	**22 22 02.2**	**+0.1**
TR2	**Tor 2**	**0.88**	**317**	P	**Pb**	**22 22 03.1**	**+0.6**
HHRG	**Al Ghardaqah**	**0.91**	**235**	P	**Pg**	**22 22 03.1**	**+0.6**
BDAS	**Al Bad`**	**0.92**	**42**	P	**Pg**	**22 22 03.0**	**+0.3**
BDAS	**Al Bad`**	**0.92**	**42**	S	**Sg**	**22 22 14.2**	**-0.6**
MWLHS	**Almuwaylih**	**0.98**	**89**	P	**Pg**	**22 22 03.5**	**-0.4**
HDHB	**Dhahab**	**1.00**	**11**	P	**Pg**	**22 22 04.0**	**-0.2**
NUB	**Nuweibaa**	**1.30**	**9**	P	**Pn**	**22 22 07.7**	**-1.6**
WTBKS	**WTBKS**	**1.38**	**75**	P	**Pn**	**22 22 10.1**	**-0.3**
HRDS	**Abu Rudays**	**1.38**	**315**	P	**Pn**	**22 22 10.3**	**0.0**
JLOS		**1.38**	**44**	P	**Pn**	**22 22 09.7**	**-0.8**
HAQS	**Haql**	**1.38**	**19**	P	Pg	22 22 19.0	+7.4
GRB	**Gharib**	**1.53**	**291**	P	**Pn**	**22 22 11.5**	**-1.0**
JMOS	**Jabal al Moall**	**1.55**	**23**	P	**Pn**	**22 22 12.2**	**-0.5**
DESA	**DESA**	**1.58**	**98**	P	**Pn**	**22 22 12.8**	**-0.2**
HQLS		**1.66**	**20**	P	**Pn**	**22 22 13.4**	**-0.8**
URD07	**Al Anba**	**1.94**	**91**	P	**Pn**	**22 22 18.7**	**+0.4**
TBKS	**Tabuk**	**1.95**	**75**	P	**Pn**	**22 22 18.9**	**+0.7**
WJHS		**2.03**	**119**	P	**Pn**	**22 22 18.6**	**-0.7**
URD06	**Shuwaq**	**2.11**	**97**	P	**Pn**	**22 22 20.9**	**+0.3**
URD05	**Al Faraah**	**2.32**	**102**	P	**Pn**	**22 22 23.7**	**+0.2**
URD12	**Shuwaq**	**2.35**	**89**	P	**Pn**	**22 22 24.6**	**+0.8**
NADB	**Abo Dabab**	**2.39**	**178**	P	**Pn**	**22 22 23.2**	**-1.1**
URD10	**Hayder**	**2.42**	**79**	P	**Pn**	**22 22 25.3**	**+0.5**
BIDS	**Bi'r al Bayda'**	**2.43**	**110**	P	**Pn**	**22 22 25.0**	**+0.2**
EWJHS	**Al Wajh**	**2.55**	**128**	P	**Pn**	**22 22 25.9**	**-0.6**
URD04	**Abu Rakah**	**2.62**	**104**	P	**Pn**	**22 22 28.1**	**+0.5**
URD15	**Abu Rakah**	**2.75**	**100**	P	**Pn**	**22 22 30.7**	**+1.3**
NBNS	**Bani Suef**	**2.88**	**288**	P	**Pn**	**22 22 31.7**	**+0.6**
URD14	**Abu Rakah**	**2.97**	**95**	P	**Pn**	**22 22 33.8**	**+1.4**
QLABS	**Al Qalibar**	**3.12**	**87**	P	**Pn**	**22 22 35.5**	**+1.1**
OLAS	**OLAS**	**3.24**	**117**	P	**Pn**	**22 22 36.5**	**+0.5**
HAGS	**Hagol**	**3.39**	**171**	P	**Pn**	**22 22 36.8**	**-1.2**
BRNS	**Bernies**	**3.88**	**184**	P	**Pn**	**22 22 44.0**	**-0.7**

*SOME **07** 22:24:41.4, 40°.00N×77°.45E, h5km*
*NNC **07** 22:24:43.5±1.3, 40°.00N×77°.48E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.5km s-min=6.6km az=162.0*
*KRNET **07** 22:24:48.9±0.1, 40°.20N×77°.41E, h17km, mb3.3*

ISC 07 22:24:46.6±1.9, 40°.13N±0°.07×77°.39E±0°.04, h10km±16km, n51, σ1°851/78, 25C-15D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.62**	**306**	⇑*eP*	**Pg**	**22 25 18.8**	**+1.1**
JNKS				⇑*eS*	**Sg**	**22 25 40.7**	**+2.0**
TARG	**Taragay, Kyrgy**	**1.63**	**11**	⇓*iP*	**Pb**	**22 25 18.1**	**+1.0**
TARG				⇓*iS*	**Sg**	**22 25 39.8**	**+0.6**
KDJ	**Kajisay**	**2.01**	**356**	⇑*iP*	**Pb**	**22 25 24.9**	**+1.5**
KDJ				⇑*iS*	**Sg**	**22 25 51.2**	**-0.1**
ULHL	**Ulahol**	**2.29**	**338**	⇓*iP*	**Pb**	**22 25 29.5**	**+1.4**
ULHL				⇓*iS*	**Sg**	**22 25 59.9**	**-0.3**
PRZ	**Przheval'sk**	**2.48**	**18**	⇓*iP*	**Pb**	**22 25 32.0**	**+0.7**
PRZ				⇓*iS*	**Sb**	**22 26 03.3**	**+1.4**
BOOM	**Boomskoye usch**	**2.60**	**336**	⇑*iP*	**Pb**	**22 25 33.5**	**0.0**
BOOM				⇑*iS*	**Sb**	**22 26 06.3**	**+0.8**
SALK	**Salom-Alik**	**2.82**	**287**	⇑*eP*	**Pb**	**22 25 37.7**	**+0.5**
SALK				⇑*eS*	**Sb**	**22 26 13.1**	**+1.2**
ARLS	**Aral**	**2.90**	**308**	⇓*eP*	**Pb**	**22 25 38.1**	**-0.4**
ARLS				⇓*iS*	**Sb**	**22 26 13.9**	**-0.1**
TNSS	**Tian-Shan**	**2.93**	**354**	Pg	**Pb**	**22 25 39.0**	**-0.2**
	2.8nm,0.5s						
TNSS				Lg	Lg	22 26 19.4	
	17nm,0.9s						
TNSS	**Tian-Shan**	**2.93**	**354**	*eP*	**Pb**	**22 25 39.0**	**-0.2**
	2.8nm,0.5s						
TNSS				*eS*	**Sg**	**22 26 19.4**	**-1.3**
	17nm,0.9s						
SFK	**Sufi-Kurgan**	**2.98**	**269**	⇑*eP*	**Pb**	**22 25 40.3**	**+0.3**
SFK				⇑*eS*	**Sb**	**22 26 17.6**	**+1.1**
UCH	**Uchtor**	**3.02**	**315**	⇑*iP*	**Pb**	**22 25 41.1**	**+0.4**
UCH				⇑*iS*	**Sb**	**22 26 19.3**	**+1.5**
SATY	**Saty**	**3.03**	**14**	Pg	**Pb**	**22 25 40.7**	**0.0**
	9.7nm,0.7s						
SATY				Lg	Lg	22 26 23.8	
	30nm,0.6s						
MDOK	**Medeo**	**3.05**	**355**	Pg	**Pb**	**22 25 42.2**	**+1.2**
	5.0nm,0.4s						
MDOK				Lg	Lg	22 26 25.1	
	40nm,0.5s						
MTBS	**Maitube**	**3.09**	**347**	Pg	**Pb**	**22 25 42.5**	**+0.9**
	2.7nm,0.4s						
MTBS				Lg	Lg	22 26 25.6	
	33nm,0.3s						
MTBS	**Maitube**	**3.09**	**347**	*eP*	**Pb**	**22 25 42.5**	**+0.9**
	2.7nm,0.4s						
MTBS				*eS*	**Sg**	**22 26 25.6**	**-0.2**
	33nm,0.3s						
TKM2	**Tokmak 2**	**3.10**	**335**	⇑*iP*	**Pb**	**22 25 41.1**	**-0.9**
TKM2				⇑*iS*	**Sb**	**22 26 19.6**	**-0.3**
KST	**Kastek**	**3.10**	**340**	Pg	**Pb**	**22 25 43.4**	**+1.4**
	4.5nm,0.4s						
KST				Lg	Lg	22 26 27.3	
	46nm,0.8s						
KST	**Kastek**	**3.10**	**340**	*eP*	**Pb**	**22 25 43.4**	**+1.4**
	4.5nm,0.4s						
KST				*eS*	**Sg**	**22 26 27.3**	**+0.9**
	46nm,0.8s						
KNDC	**Almaty**	**3.11**	**354**	⇑Pg	**Pb**	**22 25 40.1**	**-1.9**
	20nm,0.7s						
KNDC				⇑Lg	Lg	22 26 26.2	
	158nm,0.6s						
KOTS	**Kotyrbulak**	**3.11**	**356**	Pg	**Pb**	**22 25 43.0**	**+0.9**
	7.2nm,0.5s						
KOTS				Lg	Lg	22 26 26.9	
	66nm,0.7s						
KOTS	**Kotyrbulak**	**3.11**	**356**	*eP*	**Pb**	**22 25 43.0**	**+0.9**
	7.2nm,0.5s						
KOTS				*eS*	**

	26nm,0.6s								
KUU	**Kurty**	**3.84**	**349**	*e*P		**Pb**	**22 25 56.1**	**+1.5**	
	6.5nm,0.1s								
KUU				*e*S		**Sg**	**22 26 48.9**	**-1.2**	
	26nm,0.6s								
BLB	**Baldybastay**	**4.05**	**11**	Pg		**Pb**	**22 25 58.8**	**+0.6**	
	4.8nm,0.2s								
BLB				Lg		Lg	22 26 54.1		
	21nm,0.6s								
MRKS	**Merke**	**4.08**	**311**	Pg		**Pb**	**22 26 00.7**	**+2.2**	
	1.3nm,0.5s								
MRKS				Lg		Lg	22 26 56.8		
	8.1nm,0.6s								
MRKS	**Merke**	**4.08**	**311**	*e*P		**Pb**	**22 26 00.7**	**+2.2**	
	1.3nm,0.5s								
MRKS				*e*S		**Sg**	**22 26 56.8**	**-0.8**	
	8.1nm,0.6s								
ARXS	**Arharly**	**4.10**	**4**	Pg		**Pb**	**22 25 59.4**	**+0.5**	
	1.4nm,0.4s								
ARXS				Lg		Lg	22 26 55.5		
	14nm,0.5s								
ARXS	**Arharly**	**4.10**	**4**	*e*P		**Pb**	**22 25 59.4**	**+0.5**	
ARXS				*e*S		**Sg**	**22 26 54.7**	**-3.5**	
KNOS	**Konyrlen**	**4.43**	**17**	Pg		**Pb**	**22 26 08.0**	**+3.3**	
	1.9nm,0.5s								
KNOS				Lg		Lg	22 27 09.5		
	4.8nm,0.3s								
TDK	**Taldyqorghan**	**4.93**	**8**	Pg		**Pb**	**22 26 14.6**	**+1.6**	
	9.8nm,0.4s								
TDK				Lg		Lg	22 27 20.5		
	30nm,0.6s								
TDK	**Taldyqorghan**	**4.93**	**8**	*e*P		**Pb**	**22 26 14.6**	**+1.6**	
	9.8nm,0.4s								
TDK				*e*S		**Sg**	**22 27 20.5**	**-4.4**	
	30nm,0.6s								
KK31	**Karatay Array**	**5.95**	**302**	⇑Pg		**Pb**	**22 26 30.5**	**+0.1**	
	0.4nm,0.3s,baz=126,slow=16,SNR=3.5								
KK31				⇓Lg		Lg	22 27 57.7		
	2.7nm,0.6s,baz=121,slow=27,SNR=4.8								

MOS ***07*** *22:24:48.5±0.7,37.˚58S×51.˚45E,h12km,mb5.3/45,Error ellipse: s-maj=13.7km s-min=6.4km az=96.1*

BJI ***07*** *22:24:48.5,37.˚60S×51.˚50E,h10km,mB5.6/13,mb4.9/41, Ms5.9/2,Ms7 5.7/3*

IDC ***07*** *22:24:48.8±0.4,37.˚47S×51.˚57E,h0km,mb4.6/28, mbtmp4.6/29,ML3.9/1,MS4.6/9,Error ellipse: s-maj=13.4km s-min=8.8km az=74.0*

NEIC ***07*** *22:24:49.9±1.4,37.˚60S±0.˚07×51.˚5E±0.˚1,h10km±1km, mb5.3/157,Mww5.4/17,Error ellipse: s-maj=16.2km s-min=12.1km az=255.0*

NEIC ***07*** *22:24:50,37.˚60S×51.˚39E,h26km,Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17^Nm; Mrr~0.80; Mθθ0.79; Mφφ0.01; Mrθ~1.17; Mθφ0.26; Mφr~0.33; Fault plane solution: M0 1.48000×10^17^ NP1: φs251.83000°,δ17.24000°,λ-91.97000°. NP2:φs73.89000°, δ72.77000°,λ-89.39000°. Principal axes: T 1.5129, Plg28.0000°, Azm163.0000°; N -0.0706, Plg1.0000°, Azm254.0000°; P -1.4423, Plg62.0000°, Azm345.0000°;*

NEIC ***07*** *22:24:50,37.˚60S×51.˚52E,h26km*

GCMT ***07*** *22:24:52.9±0.2,37.˚39S±0.˚01×51.˚41E±0.˚02,h12km, MW5.2/77,Moment Tensor Solution. s37,c48; s77,c120; Duration: 1s0 Moment tensor: Scale 10^17^Nm; Mrr~0.83±.02; Mθθ0.67±.02; Mφφ0.16±.02; Mrθ~0.04±.06; Mθφ0.20±.02; Mφr0.14±.07; Best double couple: M0 0.79600×10^17^ NP1:φs79.00000°,δ45.00000°, λ-78.00000°. NP2:φs242.00000°,δ46.00000°, λ-102.00000°. Principal axes: T 0.7400, Plg0.0000°, Azm341.0000°; N 0.1110, Plg9.0000°, Azm251.0000°; P -0.8510, Plg81.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 22:24:49.8±0.2,37.˚55S±0.˚04×51.˚49E±0.˚06,h10km,n696, **σ0s92/687,mb5.2/158,MS4.5/10,28C-15D,South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N1	**CROZET ISLANDS**	**8.61**	**179**	Pn	**Pn**	**22 26 55.0**	**+0.8**
	baz=348,slow=13						
H04N1				T	T	22 35 44.7	
	baz=356,slow=76						
H04N2	**CROZET ISLANDS**	**8.61**	**179**	Pn	**Pn**	**22 26 54.8**	**+0.5**
	baz=348,slow=13						
H04N2				T	T	22 35 43.2	
	baz=356,slow=76						
H04N3	**CROZET ISLANDS**	**8.62**	**179**	Pn	**Pn**	**22 26 54.9**	**+0.5**
	baz=348,slow=13						
H04N3				T	T	22 35 39.0	
	baz=356,slow=76						
CRZF	**Crozet Islands**	**8.88**	**178**		**Pn**	**22 26 56.3**	**-1.8**
H04S3	**CROZET ISLANDS**	**9.28**	**178**	Pn	**Pn**	**22 27 05.1**	**+1.6**
	baz=351,slow=14						
H04S1	**CROZET ISLANDS**	**9.29**	**178**	Pn	**Pn**	**22 27 05.0**	**+1.4**
	baz=351,slow=14						
H04S2	**CROZET ISLANDS**	**9.30**	**178**	Pn	**Pn**	**22 27 05.2**	**+1.4**
	baz=351,slow=14						
FOMA	**Nahampoana Res**	**13.11**	**342**		**Pn**	**22 27 54.4**	**-1.8**
VOI	**Vohitsoka**	**16.11**	**344**		**Pn**	**22 28 36.1**	**-0.5**
VOI	**Vohitsoka**	**16.11**	**344**	P	**Pn**	**22 28 36.9**	**+0.3**
ABPO	**Ambohimpanom**	**18.84**	**347**		**Pn**	**22 29 13.0**	**+2.4**
ABPO	**Ambohimpanom**	**18.84**	**347**	P	**Pn**	**22 29 12.0**	**+1.4**
ABPO				pmax	pmax		
	comp=Z,64nm,1.4s						
OPO	**Ambohidratompo**	**19.28**	**348**	P	**Pn**	**22 29 16.1**	**+0.1**
	baz=161,slow=7.8,SNR=6.9						
OPO				S	**Sn**	**22 32 52.6**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=150,slow=16,SNR=2.2						
OPO				LR	LR	22 35 16.5	
	comp=Z,2μm,18.8s,baz=24,slow=33 comp=Z,6.5nm,0.8s						
POGA	**Pongola**	**19.52**	**296**	P	**P**	**22 29 16.8**	**-0.6**
GRHM	**Grahamstown, E**	**20.89**	**274**		**P**	**22 29 28.9**	**-3.3**
GRHM				IAmb	IAmb	22 29 48.0	
	comp=Z,171nm,1.3s						
BOSA	**Boshof**	**23.66**	**284**		**P**	**22 30 01.2**	**-0.5**
BOSA				IAmb	IAmb	22 30 05.3	
	comp=Z,221nm,1.8s						
BOSA	**Boshof**	**23.66**	**284**	P	**P**	**22 30 01.6**	**0.0**
	comp=Z,25nm,0.9s,baz=118,slow=9.1,SNR=26						
BOSA				S	**S**	**22 34 20.5**	**+4.0**
	comp=Z,2.6nm,1.1s,baz=168,slow=19,SNR=1.2						
BOSA				LR	LR	22 37 50.9	
	comp=Z,1μm,18.6s,baz=119,slow=33 comp=Z,25nm,0.9s						
BOSA	**Boshof**	**23.66**	**284**	P	**P**	**22 30 01.2**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,221nm,1.8s						
SBV	**Sambava**	**24.03**	**356**	P	**P**	**22 30 03.6**	**-1.5**
LBTB	**Lobatse**	**25.32**	**292**		**P**	**22 30 16.4**	**-0.5**
LBTB	**Lobatse**	**25.32**	**292**	LR	LR	22 38 22.6	
	comp=Z,809nm,21.8s,baz=124,slow=32						
LBTB	**Lobatse**	**25.32**	**292**	P	**P**	**22 30 16.4**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,211nm,2.0s						
MAKGR	**Makgori**	**25.46**	**290**	P	**P**	**22 30 17.6**	**-0.6**
MAKGR				IAmb	IAmb	22 30 25.8	
	comp=Z,84nm,1.4s						
MAKGR	**Makgori**	**25.46**	**290**	*i* P	**P**	**22 30 17.8**	**-0.4**
MREMI	**Moremi**	**25.51**	**299**	P	**P**	**22 30 17.9**	**-0.8**
MREMI				IAmb	IAmb	22 30 21.8	
	comp=Z,78nm,1.5s						
MREMI	**Moremi**	**25.51**	**299**	*i* P	**P**	**22 30 18.1**	**-0.6**
SUR	**Sutherland**	**25.60**	**272**	P	**P**	**22 30 19.5**	**0.0**
SUR				IAmb	IAmb	22 30 29.1	
	comp=Z,129nm,1.5s						
SUR	**Sutherland**	**25.60**	**272**	P	**P**	**22 30 19.3**	**-0.2**
LPHEP	**Lephephe**	**26.13**	**295**		**P**	**22 30 23.0**	**-1.3**
LPHEP				IAmb	IAmb	22 30 30.8	
	comp=Z,85nm,1.4s						
LPHEP	**Lephephe**	**26.13**	**295**	*i* P	**P**	**22 30 23.7**	**-0.5**
BROLN	**Tlhalogang**	**26.58**	**301**	*i* P	**P**	**22 30 27.1**	**-1.2**
SKOMA	**Sekoma**	**26.84**	**291**	*i* P	**P**	**22 30 30.4**	**-0.3**
KDWAN	**Kaudwane**	**26.98**	**294**	P	**P**	**22 30 31.6**	**-0.3**
KDWAN	**Kaudwane**	**26.98**	**294**	*i* P	**P**	**22 30 32.3**	**+0.4**
PHPEN	**Phepeng**	**27.11**	**288**	P	**P**	**22 30 32.8**	**-0.3**
PHPEN				IAmb	IAmb	22 30 37.0	
	comp=Z,52nm,1.2s						
PHPEN	**Phepeng**	**27.11**	**288**	*i* P	**P**	**22 30 32.7**	**-0.3**
KHWEE	**KHWEE**	**27.32**	**297**	P	**P**	**22 30 34.7**	**-0.3**
KHWEE				IAmb	IAmb	22 30 39.0	
	comp=Z,83nm,1.1s						
KHWEE	**KHWEE**	**27.32**	**297**	*i* P	**P**	**22 30 35.0**	**0.0**
KGCAE	**Kacgae**	**29.10**	**292**		**P**	**22 30 50.7**	**-0.2**
KGCAE				IAmb	IAmb	22 30 54.0	
	comp=Z,51nm,1.4s						
KGCAE	**Kacgae**	**29.10**	**292**	*i* P	**P**	**22 30 50.6**	**-0.2**
LKGWB	**Lokgwabe**	**29.10**	**289**		**P**	22 30 46.0	-5.0
PHDHD	**Phuduhudu**	**29.11**	**299**	P	**P**	**22 30 49.7**	**-1.3**
LSZ	**Lusaka**	**30.30**	**311**		**P**	**22 31 01.3**	**-0.3**
LSZ				IAmb	IAmb	22 31 09.6	
	comp=Z,112nm,2.0s						
LSZ	**Lusaka**	**30.30**	**311**	LR	LR	22 41 48.1	
	comp=Z,2μm,19.8s,baz=136,slow=34						
LSZ	**Lusaka**	**30.30**	**311**	P	**P**	**22 31 01.6**	**+0.1**
LSZ				S	**S**	**22 36 03.5**	**+1.7**
LSZ	**Lusaka**	**30.30**	**311**	P	**P**	**22 31 01.3**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,112nm,2.0s						
KSANE	**Kasane**	**30.34**	**303**	P	**P**	**22 31 01.3**	**-0.6**
KSANE				IAmb	IAmb	22 31 03.6	
	comp=Z,35nm,1.1s						
KSANE	**Kasane**	**30.34**	**303**	⇓*i* P	**P**	**22 31 02.8**	**+0.9**
KOOLE	**Kule**	**30.51**	**289**	P	**P**	**22 31 02.9**	**-0.6**
KOOLE	**Kule**	**30.51**	**289**	*i* P	**P**	**22 31 03.2**	**-0.3**
GRTLG	**Ghanzi**	**30.73**	**293**	P	**P**	**22 31 04.6**	**-0.8**
GRTLG				IAmb	IAmb	22 31 06.0	
	comp=Z,60nm,1.6s						
GRTLG	**Ghanzi**	**30.73**	**293**	*i* P	**P**	**22 31 05.3**	**-0.1**
MAW	**Mawson**	**30.78**	**172**	P	**P**	**22 31 06.0**	**+0.8**
	comp=Z,6.9nm,0.7s,baz=345,slow=9.1,SNR=19						
MAW				S	**S**	**22 36 10.7**	**+2.6**
	comp=Z,0.6nm,0.6s,baz=270,slow=19,SNR=1.2						
MAW				LR	LR	22 41 20.0	
	comp=Z,2μm,18.0s,baz=344,slow=32 comp=Z,6.9nm,0.7s						
GMARE	**Gumare**	**31.31**	**297**	P	**P**	**22 31 09.4**	**-1.0**
GMARE				IAmb	IAmb	22 31 13.7	
	comp=Z,96nm,1.9s						
QNGWA	**Qangwa**	**31.92**	**296**		**P**	**22 31 15.5**	**-0.3**
QNGWA				IAmb	IAmb	22 31 20.4	
	comp=Z,76nm,1.8s						
QNGWA	**Qangwa**	**31.92**	**296**	*i* P	**P**	**22 31 15.8**	**-0.1**
SYO	**Syowa Base**	**32.18**	**188**	⇑*i* P	**P**	**22 31 17.8**	**+0.3**
SYO	**Syowa Base**	**32.18**	**188**	⇓*i*pP	pP	22 31 20.2	+0.4
SYO	**Syowa Base**	**32.18**	**188**	⇑*i*sP	sP	22 31 21.5	+0.7
WIN	**Windhoek**	**33.09**	**287**	P	**P**	**22 31 25.4**	**-0.8**
WIN				IAmb	IAmb	22 31 30.2	
	comp=Z,49nm,1.3s						
WIN	**Windhoek**	**33.09**	**287**	P	**P**	**22 31 25.4**	**-0.8**
WIN				pmax	pmax		
	comp=Z,49nm,1.3s						
TSUM	**Tsumeb**	**34.74**	**292**		**P**	**22 31 39.9**	**-0.6**
TSUM				IAmb	IAmb	22 31 41.4	
	comp=Z,58nm,1.4s						
H08S1	**Diego Garcia H**	**35.33**	**38**	T	T	23 08 48.3	
	baz=209,slow=76,SNR=28						
H08S2	**Diego Garcia H**	**35.34**	**38**	T	T	23 08 56.8	
	baz=209,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**35.35**	**38**	T	T	23 08 54.7	
	baz=209,slow=76,SNR=28						
KIBK	**Kibwezi**	**37.16**	**337**	P	**P**	**22 32 00.4**	**-0.7**
KIBK	**Kibwezi**	**37.16**	**337**	P	**P**	**22 32 00.7**	**-0.4**
KMBO	**Kilima Mbogo**	**38.55**	**337**	P	**P**	**22 32 13.8**	**+0.7**
	comp=Z,4.0nm,0.4s,baz=180,slow=10.0,SNR=4.5						
KMBO				LR	LR	22 46 46.2	
	comp=Z,2μm,19.9s,baz=134,slow=34 comp=Z,4.0nm,0.4s						
KMBO	**Kilima Mbogo**	**38.55**	**337**	*i* P	**P**	**22 32 14.6**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NVL	**N'lazarevskaya**	**39.16**	**200**	*e*P	P	22 32 10.7	-6.6
NVL				*e*S	**S**	**22 38 11.4**	**-5.5**
NVL				*e*SS	**SnSn**	**22 41 04.6**	**-4.6**
NVL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NVL				MLR	MLR		
	comp=Z,122nm,19.0s						
TROLL	**Troll, Antarti**	**42.35**	**200**	⇑P	**P**	**22 32 44.5**	**+0.6**
	comp=Z,539nm,0.8s						
LODK	**Lodwar**	**43.43**	**336**	P	**P**	**22 32 53.1**	**+0.1**
LODK	**Lodwar**	**43.43**	**336**	P	**P**	**22 32 53.4**	**+0.3**
SNAA	**Sanae**	**43.75**	**202**	⇑P	**P**	**22 32 55.7**	**+0.7**
	comp=Z,193nm,0.6s						
SNAA	**Sanae**	**43.75**	**202**	P	**P**	**22 32 54.6**	**-0.5**
SNAA				IAmb	IAmb	22 32 59.9	
	comp=Z,72nm,1.7s						
SNAA	**Sanae**	**43.75**	**202**	P	**P**	**22 32 55.5**	**+0.5**
	comp=Z,8.2nm,0.7s,baz=98,slow=6.2,SNR=75						
SNAA				LR	LR	22 47 03.9	
	comp=Z,740nm,20.6s,baz=26,slow=30 comp=Z,8.2nm,0.7s						
SNAA	**Sanae**	**43.75**	**202**	*i* P	**P**	**22 32 55.1**	**0.0**
SNAA				pmax	pmax		
	comp=Z,44nm,1.7s						
VNA1	**Neumayer--Stat**	**45.12**	**204**	⇑P	**P**	**22 33 07.1**	**+1.2**
	comp=Z,15nm,1.2s						
VNA3	**Neumayer Olymp**	**45.71**	**203**	⇑P	**P**	**22 33 11.2**	**+0.6**
	comp=Z,12nm,0.7s						
ATD	**Arta Tunnel**	**49.49**	**349**	P	**P**	**22 33 40.5**	**-0.1**
ATD	**Arta Tunnel**	**49.49**	**349**	P	**P**	**22 33 40.3**	**-0.3**
H01W2	**Cape Leeuwin H**	**49.77**	**107**	T	T	23 26 57.4	
	baz=248,slow=75						
H01W3	**Cape Leeuwin H**	**49.78**	**107**	T	T	23 26 58.0	
	baz=248,slow=75						
H01W1	**Cape Leeuwin H**	**49.79**	**107**	T	T	23 26 58.7	
	baz=248,slow=75						
PALK	**Pallekele**	**52.27**	**38**	P	**P**	**22 34 01.6**	**0.0**
	comp=Z,9.3nm,0.8s,baz=119,slow=17,SNR=2.9						
	comp=Z,9.3nm,0.8s						
QSPA	**South Pole Qui**	**52.64**	**180**	P	**P**	**22 34 06.0**	**+2.1**
	comp=Z,19nm,0.8s,baz=262,slow=3.5,SNR=44						
QSPA				S	**S**	**22 41 34.6**	**+3.5**
	comp=Z,0.8nm,1.0s,baz=230,slow=17,SNR=1.8 comp=Z,19nm,0.8s						
BELA	**Belgrano 2**	**52.80**	**195**		**P**	**22 34 03.9**	**-0.9**
BELA				IAmb	IAmb	22 34 06.8	
	comp=Z,64nm,2.0s						
NWAO	**Narrogin (SRO)**	**52.92**	**106**	LR	LR	22 51 44.5	
	comp=Z,366nm,20.5s,baz=220,slow=31						
ABTO	**Aybut**	**54.63**	**2**	P	**P**	**22 34 17.0**	**-1.9**
ABTO				P	**pP**	**22 34 18.7**	**-2.6**
	SNR=7.5						
WHFO	**Wadi Hawf**	**55.21**	**3**	P	**P**	**22 34 22.3**	**-0.7**
SHAO	**Shalim**	**55.41**	**5**	P	**P**	**22 34 25.9**	**+1.5**
DOK	**Doka**	**55.92**	**3**	P	**P**	**22 34 28.1**	**+0.1**
	SNR=8.4						
EDA	**Edea**	**56.24**	**308**	P	**P**	**22 34 30.2**	**-0.2**
EDA				IAmb	IAmb	22 34 34.0	
	comp=Z,11nm,0.6s						
MNAI	**Manna**	**57.34**	**68**	P	**P**	**22 34 35.9**	**-2.5**
DQM	**DQM**	**57.45**	**7**	P	**P**	**22 34 40.7**	**+1.8**
GSI	**Gunungsitoli**	**57.49**	**59**	P	**P**	**22 34 37.5**	**-1.9**
GSI				IAmb	IAmb	22 34 45.0	
	comp=Z,29nm,1.2s						
VNDA	**Vanda**	**57.85**	**166**	P	**P**	**22 34 40.9**	**-0.2**
VNDA				IAmb	IAmb	22 34 45.8	
	comp=Z,41nm,1.9s						
VNDA	**Vanda**	**57.85**	**166**	P	**P**	**22 34 41.3**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=261,slow=6.5,SNR=16						
	comp=Z,3.1nm,0.8s						
MDSI	**Maura Dua**	**58.16**	**69**	P	P	22 34 50.4	+6.3
	comp=Z,9.8nm,1.1s						
MHTO	**MHTO**	**58.54**	**7**	P	**P**	**22 34 45.9**	**-0.6**
	SNR=17						
SBA	**Scott Base**	**58.58**	**167**	P	**P**	**22 34 46.3**	**+0.1**
SBA				IAmb	IAmb	22 35 05.7	
	comp=Z,30nm,1.5s						
SBA	**Scott Base**	**58.58**	**167**	P	**P**	**22 34 46.3**	**+0.1**
SBA				pmax	pmax		
	comp=Z,30nm,1.5s						
HOPE	**Hope Point**	**59.47**	**223**	P	**P**	**22 34 52.6**	**0.0**
HOPE	**Hope Point**	**59.47**	**223**	P	**P**	**22 34 52.6**	**0.0**
HOPE				pmax	pmax		
	comp=Z,176nm,1.5s						
PSI	**Prapat**	**59.50**	**59**	P	**P**	**22 34 54.3**	**+0.8**
	comp=Z,5.0nm,0.4s,baz=178,slow=6.8,SNR=4.3						
	comp=Z,5.0nm,0.4s						
JLN	**Jalan Bani Buh**	**59.85**	**8**	P	**P**	**22 34 53.4**	**-2.2**
UMZA	**Um Al Zommool**	**60.04**	**4**	P	**P**	**22 34 56.4**	**-0.5**
WBK	**Wadi Bani Khal**	**60.25**	**8**	P	**P**	**22 34 58.3**	**0.0**
MZR	**Muzera**	**60.26**	**2**	P	**P**	**22 34 58.7**	**+0.3**
	SNR=6.3						
MZR	**Muzera**	**60.26**	**2**	*i* P	**P**	**22 34 58.7**	**+0.3**
	SNR=5.7						
HYBB	**Hyderabad (bro**	**60.32**	**30**	IVmB_BB		22 34 59.0	
	comp=Z,595nm,2.4s						
HYBB				*e*P	**P**	**22 34 59.3**	**+0.4**
HYBB				*es*P	pwP	22 35 03.6	-0.6
HYBB				*e*PcP	**PcP**	**22 35 43.9**	**-0.2**
HYBB				*e*PP	**PP**	**22 37 12.2**	**0.0**
HYBB				*e*S	**S**	**22 43 15.9**	**+2.4**
HYBB				IVMs_BB	IVMs_BB	23 09 35.8	
	comp=Z,8μm,12.6s						
PSA00	**Pilbara Seismi**	**60.35**	**95**	P	**P**	**22 34 59.7**	**+0.5**
PSA00				IAmb	IAmb	22 35 02.9	
	comp=Z,20nm,1.2s						
PSA00	**Pilbara Seismi**	**60.35**	**95**	P	**P**	**22 34 59.5**	**+0.2**
PSA00				IAmb	IAmb	22 35 01.7	
	comp=Z,15nm,1.6s						
MBWA	**Marble Bar**	**60.47**	**95**	P	**P**	**22 34 59.8**	**-0.3**
MBWA				IAmb	IAmb	22 35 06.2	
	comp=Z,13nm,0.8s						
MBWA	**Marble Bar**	**60.47**	**95**	P	**P**	**22 35 00.1**	**0.0**
SMDO	**Samad**	**60.60**	**7**	P	**P**	**22 35 00.6**	**-0.2**
ARQ	**Araqi**	**60.75**	**5**	P	**P**	**22 35 01.4**	**-0.3**
	SNR=7.4						
WSAR	**Wadi Sarin**	**60.84**	**8**	P	**P**	**22 35 02.5**	**+0.2**
RAYN	**Ar Rayn**	**61.01**	**354**		**P**	**22 35 04.0**	**+0.5**
RAYN				IAmb	IAmb	22 35 05.5	
	comp=Z,31nm,1.6s						
RAYN	**Ar Rayn**	**61.01**	**354**	P	**P**	**22 35 04.2**	**+0.7**
RAYN	**Ar Rayn**	**61.01**	**354**	*i* P	**P**	**22 35 03.5**	**0.0**
	SNR=12						
RAYN	**Ar Rayn**	**61.01**	**354**	P	**P**	**22 35 04.0**	**+0.5**
RAYN				pmax	pmax		
	comp=Z,31nm,1.6s						
HOQ	**Hoqain**	**61.05**	**6**	P	**P**	**22 35 03.5**	**-0.3**
	SNR=6.2						
ALNE	**Al Ain**	**61.41**	**4**	P	**P**	**22 35 06.4**	**+0.3**
	SNR=7.1						
ALNE	**Al Ain**	**61.41**	**4**	*i* P	**P**	**22 35 06.5**	**+0.3**
	SNR=5.4						
SOHO	**SOHO**	**61.54**	**5**	P	**P**	**22 35 05.9**	**-1.1**
SOHO	**SOHO**	**61.54**	**5**	*i* P	**P**	**22 35 06.4**	**-0.6**
	SNR=8.0						
ASUD	**Al Ashush, Dub**	**61.95**	**4**	P	**P**	**22 35 10.2**	**+0.5**
SMRA	**Abu-Samra**	**61.97**	**359**	P	**P**	**22 35 11.1**	**+1.3**
	SNR=9.7						
ASHO	**Ashiyiah**	**62.05**	**5**	P	**P**	**22 35 10.3**	**-0.2**
	SNR=5.7						
ASHO	**Ashiyiah**	**62.05**	**5**	P	**P**	**22 35 10.2**	**-0.4**
FAQ	**Al Faqa, Dubai**	**62.08**	**4**	P	**P**	**22 35 10.6**	**-0.1**
FORT	**Forrest**	**62.10**	**109**	P	**P**	**22 35 10.6**	**-0.4**
FORT				IAmb	IAmb	22 35 13.7	
	comp=Z,11nm,0.8s						
IPM	**Ipoh**	**62.15**	**59**	P	**P**	**22 35 11.1**	**-0.3**
IPM				IAmb	IAmb	22 35 13.4	
	comp=Z,23nm,0.9s						
HATD	**Hatta, Dubai**	**62.20**	**5**	P	**P**	**22 35 11.4**	**0.0**
UOSS	**Minazif**	**62.32**	**5**	P	**P**	**22 35 11.6**	**-0.7**
UOSS				IAmb	IAmb	22 35 15.8	
	comp=Z,16nm,1.2s						
UOSS	**Minazif**	**62.32**	**5**	P	**P**	**22 35 11.6**	**-0.7**
NAZ	**Nazwa, Dubai**	**62.33**	**4**	P	**P**	**22 35 12.6**	**+0.3**
MDH	**Madha**	**62.68**	**5**	P	**P**	**22 35 13.9**	**-0.8**
MDH	**Madha**	**62.68**	**5**	P	**P**	**22 35 13.5**	**-1.2**
MSFE	**Esma-Masafi**	**62.73**	**5**	*i* P	**P**	**22 35 14.8**	**-0.3**
	SNR=5.4						
MASF	**Masafi**	**62.74**	**5**	P	**P**	**22 35 15.0**	**-0.1**
	SNR=5.9						
JAGI	**Jajag, Banyuwa**	**63.26**	**80**	P	**P**	**22 35 17.9**	**-1.1**
SMAI	**San Martin Ant**	**65.16**	**201**	P	**P**	**22 35 31.1**	**+0.6**
SMAI				IAmb	IAmb	22 35 50.4	
	comp=Z,31nm,1.2s						
ASCN	**Ascension**	**66.09**	**279**	P	**P**	**22 35 36.3**	**-1.1**
PMSA	**Palmer Station**	**66.33**	**205**	LR	LR	22 59 59.9	
	comp=Z,89nm,21.3s,baz=128,slow=32						
KSM	**Kuching**	**66.68**	**69**	P	**P**	**22 35 41.1**	**0.0**
KSM				IAmb	IAmb	22 35 55.4	
	comp=Z,22nm,1.3s						
DBIC	**Dimbokro**	**68.44**	**297**		**P**	**22 35 52.4**	**+0.2**
DBIC				IAmb	IAmb	22 35 54.8	
	comp=Z,17nm,0.9s						
DBIC	**Dimbokro**	**68.44**	**297**	P	**P**	**22 35 53.1**	**+0.9**
	comp=Z,13nm,0.8s,baz=152,slow=7.7,SNR=17						
	comp=Z,13nm,0.8s						
DBIC	**Dimbokro**	**68.44**	**297**	P	**P**	**22 35 53.6**	**+1.4**
TORD	**Torodi Ar. Bea**	**68.74**	**307**	P	**P**	**22 35 54.3**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=109,slow=6.0,SNR=25						
	comp=Z,3.7nm,0.8s						
SBUM	**Sibu**	**68.75**	**69**	P	**P**	**22 35 52.6**	**-1.5**
EDFI	**Ende, Flores**	**69.03**	**85**	P	**P**	**22 35 56.5**	**+0.4**
	comp=Z,13nm,0.9s						
MMRI	**Maumere**	**69.53**	**85**	P	**P**	**22 35 59.0**	**-0.1**
ASAR	**Alice Springs**	**70.22**	**105**		**P**	**22 36 03.4**	**+0.1**
ASAR	**Alice Springs**	**70.22**	**105**	P	**P**	**22 36 04.0**	**+0.7**
	comp=Z,6.3nm,0.7s,baz=231,slow=6.0,SNR=23						
ASAR				PKPPKP	P'P'df	23 04 01.4	-7.8
	comp=Z,0.9nm,1.0s,baz=68,slow=3.1,SNR=4.0 comp=Z,6.3nm,0.7s						
ASAR	**Alice Springs**	**70.22**	**105**	P	**P**	**22 36 04.0**	**+0.7**
AS31	**Alice Springs**	**70.22**	**105**		**P**	**22 36 03.2**	**0.0**
KNRA	**Kununurra**	**70.63**	**95**		**P**	**22 36 04.9**	**-0.9**
KNRA				IAmb	IAmb	22 36 10.9	
	comp=Z,38nm,1.6s						

MTN Manton Dam 74.13 94 P **P** **22 36 27.4 +0.6**
TOLI2 Tolitoli 74.37 76 P **P** **22 36 27.4 -0.7**
MARD Mardin 75.15 351 P **P** **22 36 32.4 +0.3**
GAZ Gaziantep 75.52 348 P **P** **22 36 34.9 +0.7**
GAZ IAmb IAmb 22 36 40.5
comp=Z,63nm,1.6s
KARP Karpathos 76.15 340 P **P** **22 36 38.5 +0.6**
KARP Karpathos 76.15 340 P **P** **22 36 38.7 +0.8**
comp=Z,845nmcomp=Z,54nm,1.1s
KARP pP **sP** **22 36 41.9 +0.5**
comp=Z,845nmcomp=Z,54nm,1.1s
AKAS Kas 76.16 342 P **P** **22 36 38.3 +0.3**
AKAS IAmb IAmb 22 36 42.8
comp=Z,33nm,1.1s
GURO Guroymak-BITLI 76.23 352 P **P** **22 36 38.9 +0.6**
MG02 Cerro Sombrero 76.38 213 P **P** **22 36 38.8 -0.3**
LSA Lhasa 76.51 35 **P** **22 36 40.2 -0.4**
LSA IAmb IAmb 22 36 43.2
comp=Z,16nm,0.8s
LSA Lhasa 76.51 35 P **P** **22 36 37.6 -3.0**
LSA pmax pmax
comp=Z,17nm,0.8s
LSA Lhasa 76.51 35 P **P** **22 36 41.3 +0.7**
LSA Lhasa 76.51 35 P **P** **22 36 40.2 -0.4**
LSA pmax pmax
comp=Z,16nm,0.8s
ARG Arkhangelos 76.53 341 P **P** **22 36 40.2 +0.3**
ARG IAmb IAmb 22 36 43.0
comp=Z,39nm,1.2s
ARG Arkhangelos 76.53 341 P **P** **22 36 40.2 +0.3**
ARG pmax pmax
comp=Z,39nm,1.2s
SLVN Son La 76.56 49 P **P** **22 36 40.4 -0.1**
SLVN IAmb IAmb 22 36 42.3
comp=Z,14nm,0.7s
IDI Anoyia 76.56 338 P **P** **22 36 40.4 +0.2**
IDI IAmb IAmb 22 36 50.5
comp=Z,30nm,1.1s
ELL Elmali 76.58 342 IAmb IAmb 22 36 45.7
comp=Z,48nm,1.3s
BNN Bunyan 77.38 348 P **P** **22 36 45.7 +0.9**
BNN IAmb IAmb 22 36 49.9
comp=Z,60nm,2.0s
ISP Isparta 77.46 343 P **P** **22 36 45.4 +0.1**
ISP IAmb IAmb 22 37 37.0
comp=Z,18nm,0.7s
ISP Isparta 77.46 343 P **P** **22 36 45.4 +0.1**
ISP pmax pmax
comp=Z,18nm,0.7s
GNI Garni 77.57 355 P **P** **22 36 47.2 +1.2**
GNI Garni 77.57 355 P **P** **22 36 47.1 +1.2**
GNI Garni 77.57 355 P **P** **22 36 47.2 +1.2**
GNI Garni 77.57 355 *i*P **P** **22 36 45.9 0.0**
GNI pmax pmax
comp=Z,8.0nm,1.1s
GNI Garni 77.57 355 P **P** **22 36 47.1 +1.2**
comp=Z,785nmcomp=Z,24nm,1.4s
KOPT Kop Dagi 77.85 351 P **P** **22 36 48.2 +0.6**
GAR Garm 78.12 15 P **P** **22 36 49.0 0.0**
MANT Manisa 78.57 342 P **P** **22 36 52.1 +0.6**
MANT IAmb IAmb 22 36 56.7
comp=Z,34nm,1.2s
BR104 Keskin Array S 78.61 346 P **P** **22 36 52.3 +0.6**
comp=Z,42nmcomp=Z,2.7nm,1.8s
BR105 Keskin Array S 78.63 346 P **P** **22 36 51.4 -0.4**
comp=Z,52nmcomp=Z,2.8nm,0.8s
BR131 Keskin Array S 78.63 346 P **P** **22 36 52.0 +0.2**
SNR=5.4
BR131 Keskin Array S 78.63 346 *i*P **P** **22 36 52.3 +0.5**
BRTR Keskin Array B 78.63 346 P **P** **22 36 51.1 -0.6**
comp=Z,0.6nm,0.5s,baz=170,slow=8.2,SNR=7.6
comp=Z,0.6nm,0.5s
BRTR Keskin Array B 78.63 346 *e*P **P** **22 36 51.4 -0.4**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BR106 Keskin Array S 78.64 346 P **P** **22 36 51.1 -0.7**
comp=Z,41nmcomp=Z,2.7nm,1.1s
TOKA Tokat 78.71 348 P **P** **22 36 52.7 +0.6**
AKT Akhty 78.73 357 *e*P **P** **22 36 52.6 +0.4**
AKT *e* 22 36 57.6
AKT *e* 22 39 49.5
AKT *e*PPP PPP 22 41 42.3
AKT *e*S **S** **22 46 45.8 -3.7**
AKT pmax pmax
comp=Z,43nm,2.0s
KMI Kunming 78.77 46 P **P** **22 36 54.0 +1.0**
KMI pmax pmax
comp=Z,8.0nm,1.3s
DRK Karamyk 78.90 16 IAmb IAmb 22 36 56.8
comp=Z,48nm,1.3s
ANTO Ankara 78.94 345 P **P** **22 36 53.4 0.0**
ANTO Ankara 78.94 345 P **P** **22 36 53.4 0.0**
ANTO pmax pmax
comp=Z,21nm,1.4s
PZH PanZhiHua 79.28 45 P **P** **22 36 55.3 -0.3**
PZH pmax pmax
comp=Z,10.0nm,0.9s
BORA Eskisehir 79.44 344 P **P** **22 36 56.1 0.0**
MLZ Mavora Lakes 79.67 140 P **P** **22 36 57.5 -0.1**
MDUB Mudurnu 79.84 344 P **P** **22 36 59.0 +0.7**
MDUB IAmb IAmb 22 37 05.6
comp=Z,52nm,1.6s
ILGA Ilgaz 79.90 346 P **P** **22 36 57.9 -0.9**
KSH Kashi 79.93 19 P **P** **22 36 56.7 -2.1**
KSH pmax pmax
comp=Z,18nm,0.7s
NEUR Neytrino 80.83 354 *i*P **P** **22 37 04.3 +0.6**
NEUR pmax pmax
comp=Z,10.0nm,1.3s
ARSB Arslanbob 80.92 16 **P** **22 37 04.8 +0.6**
ARSB IAmb IAmb 22 37 09.4
comp=Z,62nm,1.7s
ARSB Arslanbob 80.92 16 P **P** **22 37 04.8 +0.6**
ARSB pmax pmax
comp=Z,62nm,1.7s
NCK Nalchik 80.99 354 *i*P **P** **22 37 05.1 +0.8**
NCK pmax pmax
comp=Z,10.0nm,1.0s
KBZ Khabaz 81.28 354 P **P** **22 37 06.0 +0.2**
comp=Z,2.8nm,1.1s,baz=127,slow=1.9,SNR=13
comp=Z,2.8nm,1.1s
KBZ Khabaz 81.28 354 *i*P **P** **22 37 06.6 +0.8**
KBZ pmax pmax
comp=Z,7.0nm,1.1s
SHA1 Shidzhatmaz 81.31 354 *i*P **P** **22 37 06.8 +0.5**
CTYL Yalikoy Yolu 81.46 343 ⇑P **P** **22 37 08.1 +1.3**
SOC Sochi 81.46 351 *e*P **P** **22 37 07.0 +0.2**
SOC *e* 22 40 15.3
SOC *e*PPP PPP 22 42 04.0
SOC *e*S **S** **22 47 19.0 +1.1**
SOC pmax pmax
comp=Z,14nm,0.8s
ALN Alexandroupoli 81.47 341 P **P** **22 37 06.3 -0.5**
ALN Alexandroupoli 81.47 341 P **P** **22 37 06.4 -0.5**
ALN pmax pmax
comp=Z,8.0nm,1.1s
KIV Kislovodsk 81.52 354 **P** **22 37 07.5 +0.2**
KIV IAmb IAmb 22 37 12.8
comp=Z,55nm,1.5s
KIV Kislovodsk 81.52 354 P **P** **22 37 07.5 +0.2**
KIV Kislovodsk 81.52 354 ⇓P **P** **22 37 07.7 +0.5**
KIV Kislovodsk 81.52 354 *i*P **P** **22 37 07.6 +0.4**
SNR=8.4
KIV Kislovodsk 81.52 354 *e*P **P** **22 37 06.2 -1.0**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV Kislovodsk 81.52 354 P **P** **22 37 06.9 -0.3**
comp=Z,503ncomp=Z,17nm,1.3s
RDO Rodhopi 81.84 340 P **P** **22 37 08.3 -0.6**
RDO IAmb IAmb 22 37 10.9
comp=Z,47nm,1.8s
PLTB Pedras Altas 81.86 236 P **P** **22 37 07.4 -2.1**
PLTB IAmb IAmb 22 37 24.8
comp=Z,70nm,1.9s
AY03 Cochrane 81.90 215 P **P** **22 37 07.5 -1.9**
AY03 IAmb IAmb 22 39 16.6
comp=Z,21nm,1.1s
EIDS Eidsvold 82.02 116 P **P** **22 37 10.5 +0.1**
EIDS IAmb IAmb 22 37 12.8
comp=Z,62nm,1.8s
GYA Guiyang 82.07 48 ⇑P **P** **22 37 11.4 +0.8**
GYA S **S** **22 47 22.2 -3.1**
GYA pmax pmax
comp=Z,13nm,1.2s
GYA pmax pmax
comp=Z,100nm,4.0s
GYA LR LR
comp=Z,2μm,29.6s
KKAR Karatay Array 82.12 14 **P** **22 37 10.8 +0.5**
KKAR Karatay Array 82.12 14 P **P** **22 37 10.8 +0.5**
KEK Kerkira 82.22 336 P **P** **22 37 11.9 +1.0**
LABN Labinsk 82.39 352 *e*P **P** **22 37 12.0 +0.3**
LABN *e*S **SKSac** **22 47 32.4 +0.2**
LABN pmax pmax
comp=Z,205nm,1.9s
TARG Taragay, Kyrgy 82.48 20 P **P** **22 37 12.3 -0.4**
TARG Taragay, Kyrgy 82.48 20 P **P** **22 37 12.3 -0.4**
TARG pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 82.51 17 P **P** **22 37 12.7 +0.1**
AAK Ala-Archa 82.51 17 P **P** **22 37 13.7 +1.2**
AAK Ala-Archa 82.51 17 *i*P **P** **22 37 13.9 +1.3**
SNR=14
AAK Ala-Archa 82.51 17 *i*P **P** **22 37 13.1 +0.5**
AAK pmax pmax
comp=Z,61nm,1.6s
GOF Gofitskoye 82.58 354 *ce*P **P** **22 37 13.3 +0.7**
KDJ Kajisay 82.69 19 P **P** **22 37 13.7 +0.2**
KDJ Kajisay 82.69 19 P **P** **22 37 13.7 +0.2**
KDJ pmax pmax
comp=Z,37nm,1.1s
FRU1 Bishkek 82.71 17 P **P** **22 37 14.4 +1.0**
FRU1 Bishkek 82.71 17 P **P** **22 37 14.4 +1.0**
FRU1 pmax pmax
comp=Z,107nm,1.8s
BOOM Boomskoye usch 82.72 18 P **P** **22 37 14.3 +0.7**
BOOM IAmb IAmb 22 38 01.4
comp=Z,30nm,1.2s
BOOM Boomskoye usch 82.72 18 P **P** **22 37 14.4 +0.7**
BOOM pmax pmax
comp=Z,30nm,1.2s
KEST Kesra 82.73 327 P **P** **22 37 14.0 +0.2**
KEST IAmb IAmb 22 37 17.7
comp=Z,20nm,0.9s
KEST Kesra 82.73 327 P **P** **22 37 15.8 +2.0**
comp=Z,10nm,0.8s,baz=186,slow=2.4,SNR=9.9
comp=Z,10nm,0.8s
KEST Kesra 82.73 327 P **P** **22 37 16.2 +2.4**
ANN Anapa 82.95 350 *e*P **P** **22 37 12.2 -2.3**
ANN *e*S **S** **22 47 29.9 -3.2**
ANN pmax pmax
comp=Z,142nm,2.4s
PRZ Przheval'sk 83.34 20 P **P** **22 37 18.2 +1.3**
PRZ Przheval'sk 83.34 20 P **P** **22 37 18.2 +1.3**
PRZ pmax pmax
comp=Z,250nm,1.9s
ELND Elena 83.42 341 ⇓P **P** **22 37 17.7 +0.6**
ERBR Yeremizino-Bor 83.48 352 *e*P **P** **22 37 16.8 -0.5**
ERBR *i*S **S** **22 47 38.0 -0.5**
ERBR pmax pmax
comp=Z,246nm,2.3s
SIM Simferopol' 83.61 348 *e*P **P** **22 37 19.0 +1.0**
GOMU GeErMu 83.64 34 P **P** **22 37 19.6 +0.8**
GOMU pmax pmax
comp=Z,9.0nm,0.9s
CD2 Chengdu 83.81 43 P **P** **22 37 18.6 -0.8**
CD2 pmax pmax
comp=Z,30nm,0.7s
TIRR Tirgusor 84.26 344 ⇑P **P** **22 37 21.7 +0.4**
TIRR Tirgusor 84.26 344 P **P** **22 37 21.7 +0.4**
TLBR Topalu 84.42 343 ⇑P **P** **22 37 22.2 +0.1**
TPGR Topolog 84.64 344 ⇓P **P** **22 37 23.2 0.0**
VLAD Vladila 84.80 341 ⇑P **P** **22 37 24.6 +0.6**
BLKB Belogradchik 84.92 339 ⇑P **P** **22 37 25.1 +0.4**
CFR Carcaliu 85.01 344 ⇓P **P** **22 37 25.4 +0.4**
CFR Carcaliu 85.01 344 P **P** **22 37 25.4 +0.4**
BOVS Bovan 85.21 339 ⇑P **P** **22 37 27.1 +1.0**
PLCA Paso Flores 85.75 220 **P** **22 37 28.6 -0.8**
PLCA IAmb IAmb 22 37 40.6
comp=Z,18nm,1.2s
PLCA Paso Flores 85.75 220 P **P** **22 37 32.0 +2.7**
comp=Z,7.2nm,1.2s,baz=193,slow=4.3,SNR=4.3
comp=Z,7.2nm,1.2s
PLCA Paso Flores 85.75 220 P **P** **22 37 28.6 -0.8**
PLCA pmax pmax
comp=Z,18nm,1.3s
MLR Muntele Rosu 85.81 342 ⇑P **P** **22 37 29.8 +0.5**
MLR Muntele Rosu 85.81 342 P **P** **22 37 29.7 +0.5**
MLR Muntele Rosu 85.81 342 P **P** **22 37 29.1 -0.1**
comp=Z,21nm,1.6s
PLOR5 Plostina Array 85.97 343 P **P** **22 37 30.0 +0.1**
comp=Z,32nm,1.7s
VRI Vrincioaia 85.98 343 ⇓P **P** **22 37 30.2 +0.2**
VRI Vrincioaia 85.98 343 P **P** **22 37 30.1 +0.2**
VRI Vrincioaia 85.98 343 P **P** **22 37 29.9 0.0**
comp=Z,653nmcomp=Z,38nm,1.6s
VOIR 85.98 342 ⇑P **P** **22 37 30.2 +0.1**
VOIR 85.98 342 P **P** **22 37 30.1 +0.1**
VOIR 85.98 342 P **P** **22 37 29.6 -0.4**
comp=Z,442nmcomp=Z,14nm,1.6s
PLOR Plostina 85.98 343 ⇑P **P** **22 37 30.5 +0.5**
PLOR Plostina 85.98 343 P **P** **22 37 30.5 +0.5**
GHRR 86.01 343 ⇓P **P** **22 37 30.7 +0.7**
ARR Arges 86.02 341 ⇑P **P** **22 37 30.5 +0.3**
HERR Herculane 86.16 340 ⇓P **P** **22 37 31.4 +0.6**
MDVR Moldovita 86.26 339 ⇑P **P** **22 37 31.9 +0.5**
INTR Introdacqua 86.29 333 P **P** **22 37 31.4 -0.3**
INTR IAmb IAmb 22 37 35.8
comp=Z,19nm,1.3s
LOT Lotru 86.32 341 ⇑P **P** **22 37 32.0 +0.3**
TURR Turia 86.32 343 ⇑P **P** **22 37 30.3 -1.3**
DOPR Dopca 86.39 342 ⇑P **P** **22 37 31.9 -0.1**
ONER Baraj Valea Uz 86.50 343 ⇑P **P** **22 37 32.9 +0.4**
GZR Gura Zlata 86.53 340 ⇓P **P** **22 37 33.2 +0.5**
GZR Gura Zlata 86.53 340 P **P** **22 37 33.2 +0.5**
ENH Enshi 86.56 47 P **P** **22 37 32.8 -0.4**
ENH IAmb IAmb 22 37 35.3
comp=Z,20nm,1.1s
AB31 Akbulak array 86.75 6 P **P** **22 37 33.9 +0.3**
ABKAR Akbulak array 86.75 6 P **P** **22 37 33.6 +0.1**
LR05 Currie 86.87 220 P **P** **22 37 34.8 0.0**
CAMP Campotosto 86.93 333 P **P** **22 37 34.1 -0.7**
CAMP IAmb IAmb 22 37 39.3
comp=Z,50nm,1.9s
BZS Buzias 87.05 340 ⇓P **P** **22 37 35.8 +0.6**
BZS Buzias 87.05 340 P **P** **22 37 35.7 +0.6**
TGMR Targu Mures 87.13 342 ⇓P **P** **22 37 34.6 -1.0**
BIZ Bicaz 87.13 343 ⇑P **P** **22 37 36.1 +0.6**
CESX Cesi 87.30 332 P **P** **22 37 36.9 +0.5**
CESX IAmb IAmb 22 37 38.3
comp=Z,49nm,2.0s
WMQ Urumqi 87.39 25 *e*P **P** **22 37 38.3 +1.3**
WMQ pmax pmax
comp=Z,15nm,1.3s
WMQ pmax pmax
comp=Z,330nm,5.3s
MARR Marisel-Cluj 87.63 341 ⇓P **P** **22 37 38.9 +0.8**
SIRR Siria 87.64 340 ⇑P **P** **22 37 38.2 +0.2**
SORM Soroca 87.77 345 ⇑P **P** **22 37 37.1 -1.4**
SORM Soroca 87.77 345 P **P** **22 37 37.1 -1.4**
CPUP Villa Florida 87.84 238 P **P** **22 37 38.7 -1.0**
CPUP Villa Florida 87.84 238 P **P** **22 37 40.4 +0.7**
comp=Z,0.6nm,0.9s,baz=140,slow=7.9,SNR=3.0
comp=Z,0.6nm,0.9s
BURAR Bucovina Array 87.98 343 P **P** **22 37 40.5 +0.9**
BURAR Bucovina Array 87.98 343 ⇓P **P** **22 37 40.7 +0.9**
BURAR Bucovina Array 87.98 343 P **P** **22 37 40.6 +0.9**
BUR08 Bucovina Ar. S 88.01 343 P **P** **22 37 39.4 -0.4**
BUR08 IAmb IAmb 22 37 42.6
comp=Z,19nm,1.4s
PLTM Poltava 88.07 349 P **P** **22 37 39.2 -0.7**
MAKZ Makanchi 88.31 20 P **P** **22 37 41.6 +0.4**
MAKZ Makanchi 88.31 20 P **P** **22 37 41.7 +0.5**
MKAR Makanchi Array 88.39 21 P **P** **22 37 40.6 -1.0**
MKAR Makanchi Array 88.39 21 P **P** **22 37 41.2 -0.4**
comp=Z,1.4nm,0.7s,baz=210,slow=5.1,SNR=8.6
comp=Z,1.4nm,0.7s
MKAR Makanchi Array 88.39 21 *e*P **P** **22 37 42.5 +0.9**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MORH Mrgy, Hungar 88.46 338 ⇓P **P** **22 37 42.3 +0.5**
GTA Gaotai 88.53 35 *e*P **P** **22 37 42.7 +0.1**
GTA S **S** **22 48 32.6 +4.0**
GTA pmax pmax
comp=Z,7.0nm,0.9s
VORD Divnogorie 88.79 352 *e*P **P** **22 37 40.1 -3.2**
VORD pmax pmax
comp=Z,5.0nm,0.9s
VRH Novokhopyorsk 88.79 354 *e*P **P** **22 37 40.7 -2.6**
VRH pmax pmax
comp=Z,9.0nm,0.9s
XAN Xi'an 89.02 44 P **P** **22 37 45.1 +0.2**
XAN pmax pmax
comp=Z,9.0nm,1.5s
VSR Storozhevoye 89.05 352 *e*P **P** **22 37 42.0 -2.5**
VSR pmax pmax
comp=Z,5.0nm,1.0s
BEHE Becsehely 89.26 337 P **P** **22 37 46.0 +0.4**
TRI Trieste 89.57 335 P **P** **22 37 46.5 -0.6**
TRI IAmb IAmb 22 38 51.1
comp=Z,13nm,1.0s
TRI Trieste 89.57 335 P **P** **22 37 46.5 -0.6**
TRI pmax pmax
comp=Z,13nm,1.0s
BELG Belogornoye 89.64 358 *i*P **P** **22 37 48.2 +1.0**
BELG pmax pmax
comp=Z,3.0nm,0.9s
PSZ Piszkesteto 89.64 339 P **P** **22 37 47.2 -0.3**
PSZ IAmb IAmb 22 37 51.7
comp=Z,38nm,2.0s
PSZ Piszkesteto 89.64 339 P **P** **22 37 47.2 -0.3**
PSZ pmax pmax
comp=Z,38nm,2.0s
WHN Wuhan 89.66 50 P P 22 37 42.9 -5.0
SABO M.te Sabotino 89.86 335 P **P** **22 37 48.0 -0.6**
AK10 Malin Array Si 89.93 346 P **P** **22 37 48.1 -0.6**
AK09 Malin Array Si 89.94 346 P **P** **22 37 48.8 +0.1**
AK12 Malin Array Si 90.00 346 P **P** **22 37 48.8 -0.1**
AK02 Malin Array Si 90.00 346 P **P** **22 37 48.5 -0.5**
SOKA Soboth 90.00 336 *e*P **P** **22 37 50.5 +1.3**
comp=Z,2.9nm,0.7s
TEOL Teolo 90.00 333 P **P** **22 37 49.5 +0.3**
TEOL IAmb IAmb 22 37 53.8
comp=Z,27nm,1.3s
KIEV Kiev 90.03 346 **P** **22 37 49.3 +0.2**
KIEV IAmb IAmb 22 37 53.1
comp=Z,38nm,1.8s
KIEV Kiev 90.03 346 P **P** **22 37 49.3 +0.2**
KIEV pmax pmax
comp=Z,38nm,1.8s
AKASG Malin Array Be 90.04 346 P **P** **22 37 48.7 -0.4**
AKASG Malin Array Be 90.04 346 P **P** **22 37 48.4 -0.7**
comp=Z,0.7nm,0.5s,baz=172,slow=4.0,SNR=12
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 90.04 346 *e*P **P** **22 37 48.7 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 90.04 346 P **P** **22 37 48.7 -0.4**
AKBB IAmb IAmb 22 37 53.1
comp=Z,39nm,1.8s
AKBB Malin Array Si 90.04 346 *i*P **P** **22 37 50.0 +0.9**
AKBB pmax pmax
comp=Z,5.0nm,1.1s
PRED Cave del Predi 90.28 335 P **P** **22 37 50.2 -0.3**
ARSA Arzberg 90.35 336 P **P** **22 37 50.1 -0.6**
ARSA IAmb IAmb 22 37 56.1
comp=Z,45nm,1.9s
STAL STALIGIAL 90.41 334 P **P** **22 37 48.9 -2.2**
AQDB Aquidauana 90.53 244 P **P** **22 37 52.5 +0.1**
AQDB IAmb IAmb 22 38 01.5
comp=Z,13nm,1.1s
CIMO Cimolais 90.55 334 P **P** **22 37 53.0 +1.3**
CIMO IAmb IAmb 22 37 54.2
comp=Z,30nm,1.7s
CTI Castel Tesino 90.60 333 **P** **22 37 51.4 -0.7**
CTI Castel Tesino 90.60 333 P **P** **22 37 51.4 -0.7**
CTI pmax pmax
comp=Z,44nm,1.7s
ABTA Abfaltersbach 90.90 334 *e*P **P** **22 37 55.2 +1.8**
comp=Z,3.7nm,0.7s
KURBB Kurchatov Arra 90.97 17 P **P** **22 37 53.5 0.0**
comp=Z,4.8nm,0.7s,baz=214,slow=4.8,SNR=53
comp=Z,4.8nm,0.7s
KURK Kurchatov 91.08 17 P **P** **22 37 54.1 +0.1**
KURK Kurchatov 91.08 17 *i*P **P** **22 37 54.8 +0.8**
KURK pmax pmax
comp=Z,7.0nm,1.2s
RNPP5 Staryi Chortor 91.22 344 P **P** **22 37 54.5 -0.1**
MOA Molln 91.28 336 *e*P **P** **22 37 56.2 +1.1**
comp=Z,2.6nm,0.8s
LYN LuoYang 91.39 46 *e*P **P** **22 37 56.6 +0.7**
LYN pmax pmax
comp=Z,14nm,0.5s
FUORN Ofenpass-Fuorn 91.59 333 P **P** **22 37 57.4 +0.6**
BVAR Borovoye Array 91.69 11 P **P** **22 37 57.1 +0.3**
comp=Z,6.7nm,0.6s,baz=184,slow=4.9,SNR=38
comp=Z,6.7nm,0.6s
BORK Borovoye 91.70 11 *i*P **P** **22 37 57.7 +0.9**
BORK pmax pmax
comp=Z,22nm,2.0s
OJC Ojcow 91.76 340 P **P** **22 37 56.0 -1.2**
OJC Ojcow 91.76 340 P **P** **22 37 56.0 -1.2**
FETA Feichten 91.76 333 *e*PcP **PcP** **22 38 00.1 +1.7**
comp=Z,1.4nm,0.6s
SQTA Sankt Quirin 91.76 334 *e*P **P** **22 37 59.2 +1.7**
comp=Z,0.7nm,0.3s
MORC Moravsky Berou 91.99 339 P **P** **22 37 58.0 -0.3**
MORC IAmb IAmb 22 41 16.1
comp=Z,18nm,1.8s
MORC Moravsky Berou 91.99 339 P **P** **22 37 58.0 -0.3**
MORC pmax pmax
comp=Z,18nm,1.8s
ESDC Sonseca Array 92.18 320 **P** **22 37 59.1 -0.4**
ESDC IAmb IAmb 22 38 04.5
comp=Z,21nm,1.9s
ESDC Sonseca Array 92.18 320 P **P** **22 37 59.9 +0.4**
comp=Z,1.3nm,0.8s,baz=132,slow=2.9,SNR=5.4
comp=Z,1.3nm,0.8s
DAVA Damuels 92.29 333 *e*P **P** **22 38 01.2 +1.2**
comp=Z,2.7nm,0.5s
GEC2 GERESS Array S 92.33 336 P **P** **22 37 59.3 -0.7**
GERES GERESS Array B 92.33 336 P **P** **22 37 58.9 -1.1**
comp=Z,0.4nm,0.6s,baz=110,slow=7.8,SNR=3.7
comp=Z,0.4nm,0.6s
OBN Obninsk 93.18 351 ⇑*e*P **P** **22 38 03.8 +0.2**
OBN *e* 22 41 48.6
OBN *e*S **S** **22 49 06.9 -3.1**
OBN pmax pmax
comp=Z,17nm,1.6s
NJ2 Nanjing 93.48 52 *e*P **P** **22 38 07.2 +1.6**
NJ2 pmax pmax
comp=Z,13nm,0.5s
MOS Moscow 93.67 352 *e*P **P** **22 38 04.2 -1.7**
MOS *e* 22 41 50.8
ARTI Arti 93.76 4 P **P** **22 38 05.9 -0.3**
ARTI Arti 93.76 4 *c i*P **P** **22 38 07.1 +0.8**
ARTI 22 41 50.1
ARTI S **SKSac** **22 48 40.9 +0.6**
ARTI pmax pmax
comp=Z,17nm,1.8s
GRA1 Grafenberg Arr 93.88 335 P **P** **22 38 06.6 -0.4**
GRF Grafenberg Arr 93.88 335 P **P** **22 38 06.6 -0.4**
GRF pmax pmax
comp=Z,59nm,1.7s
GRFO Grafenberg 93.88 335 **P** **22 38 06.2 -0.8**
GRFO Grafenberg 93.88 335 P **P** **22 38 06.2 -0.8**
GRFO pmax pmax
comp=Z,57nm,1.7s
BTO Baotou 94.45 41 *e*P **P** **22 38 12.2 +2.2**
BTO pmax pmax
comp=Z,13nm,1.0s
BTO pmax pmax
comp=Z,250nm,7.6s
CLL Collm 94.70 337 P **P** **22 38 10.2 -0.5**
CLL IAmb IAmb 22 38 14.6
comp=Z,22nm,1.8s
CLL Collm 94.70 337 P **P** **22 38 10.2 -0.5**
CLL pmax pmax
comp=Z,22nm,1.8s
CLL Collm 94.70 337 *e*P **P** **22 38 11.0 +0.3**
CLL *e*S **S** **22 49 29.0 +5.4**
CLL *e*PS **PS** **22 50 44.0 +2.8**
PMOZ Porto Moniz, M 94.83 308 P **P** **22 38 11.4 -0.5**
HHC Hu-ho-hao-te 95.43 41 *e*P **P** **22 38 15.9 +1.4**
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,72nm,5.9s
ZAA0 Zalesovo Array 95.56 19 P **P** **22 38 13.5 -1.1**
ZAA0 IAmb IAmb 22 38 14.7
comp=Z,5.9nm,0.8s
ZALV Zalesovo Beam 95.56 19 P **P** **22 38 13.2 -1.4**
ZALV Zalesovo Beam 95.56 19 P **P** **22 38 13.8 -0.8**
comp=Z,6.5nm,0.6s,baz=205,slow=4.5,SNR=24

comp=Z,6.5nm,0.6s
ZALV **Zalesovo Beam** **95.56** **19** *e*P **P** **22 38 14.0 -0.6**
ZALV pmax pmax
comp=Z,7.0nm,0.6s
SONM **Songino Array** **98.08** **34** P **P** **22 38 25.3 -1.0**
comp=Z,0.6nm,0.8s,baz=270,slow=5.3,SNR=3.8
comp=Z,0.6nm,0.8s
FINES **FINESS Array B** **100.80** **348** P **Pdif** **22 38 36.8 -1.1**
comp=Z,1.5nm,0.8s,baz=173,slow=13,SNR=2.1
TBI **Tubuai** **116.30** **158** *e*SS SS 23 00 39.3 -2.0
comp=Z,1μm,27.0s
TBI **Tubuai** **116.30** **158** *e*LQ LQ 23 13 43.2
comp=Z,1μm,35.5s
TBI *e*LR LR 23 18 38.2
comp=Z,1μm,26.0s
TBI *e*LR LR 23 18 44.2
comp=Z,3μm,23.5s
RKT **Rikitea** **119.35** **173** *e*LR LR 23 20 02.9
comp=Z,6μm,36.0s
PPT2 **Papeete2** **121.68** **156** *e*SS SS 23 01 50.6 -0.6
comp=Z,274nm,25.8s
PPT2 **Papeete2** **121.68** **156** *e*LQ LQ 23 15 57.0
comp=Z,392nm,26.0s
PPT2 *e*LR LR 23 21 10.0
comp=Z,642nm,24.5s
PPT2 *e*LR LR 23 21 11.9
comp=Z,542nm,25.8s
BILL **Bilibino** **133.44** **28** *i* PKIKP **PKPdf** **22 44 03.9 -1.3**
BILL pmax pmax
comp=Z,3.0nm,1.3s
SIUN **Universidad Ur** **134.52** **250** PKPpre 22 43 56.0
M65A **Busby, Falmout** **135.92** **294** P **PKPdf** **22 44 10.4 -0.2**
baz=105
A19K **Wainwright** **143.01** **18** P **PKPdf** **22 44 23.2 +0.6**
baz=315
C16K **Lisburne Hills** **143.14** **22** P **PKPdf** **22 44 23.6 +0.6**
baz=307
GAMB **Gambell** **143.24** **31** P **PKPdf** **22 44 24.0 +0.8**
baz=295
B18K **Kokolik River** **143.41** **19** P **PKPdf** **22 44 23.9 +0.5**
baz=313
C17K **DeLong Mountai** **143.64** **21** P **PKPdf** **22 44 24.6 +0.8**
baz=310
A22K **Sinclair Lake** **143.75** **14** P **PKPdf** **22 44 24.7 +0.8**
baz=323
TNA **Tin City** **143.83** **27** P **PKPdf** **22 44 24.8 +0.5**
baz=301
RDOG **Red Dog Mine** **143.99** **21** P **PKPdf** **22 44 25.0 +0.5**
baz=310
C18K **Utukok River** **144.06** **20** P **PKPdf** **22 44 24.6 -0.1**
baz=313
B20K **Meade River** **144.07** **16** P **PKPdf** **22 44 25.1 +0.5**
baz=320
C19K **Lookout Ridge** **144.16** **18** P **PKPdf** **22 44 25.5 +0.7**
baz=316
D17K **Noatak River** **144.16** **22** P **PKPdf** **22 44 25.2 +0.4**
baz=310
F14K **Arctic Creek** **144.44** **26** P PKPbc 22 44 24.0 +0.1
baz=303
B22K **Teshekpuk Lake** **144.59** **14** P PKPbc 22 44 24.4 +0.3
baz=325
F15K **North Star Dit** **144.89** **25** P PKPbc 22 44 25.7 +0.4
baz=305
B21K **Ikpikpuk River** **144.93** **16** P **PKPdf** **22 44 26.2 +0.2**
baz=323
E17K **Hotham Inlet** **144.94** **22** P PKPbc 22 44 25.6 +0.2
baz=311
D19K **Kuna River** **144.98** **19** P **PKPdf** **22 44 26.1 -0.1**
baz=317
E18K **Tukpahlearik C** **145.07** **21** P **PKPdf** **22 44 26.6 +0.2**
baz=312
D20K **Etivluk River** **145.18** **18** P **PKPdf** **22 44 27.0 +0.5**
baz=319,SNR=9.6
C21K **Knifeblade Rid** **145.26** **16** P **PKPdf** **22 44 27.5 +0.9**
baz=322,SNR=9.8
ANM **Nome** **145.28** **27** P **PKPdf** **22 44 27.2 +0.4**
baz=303
A36M **Sachs Harbour** **145.45** **358** P **PKPab** **22 44 27.3 +0.2**
baz=4.6
G15K **Niukluk** **145.51** **26** P **PKPab** **22 44 28.0 +0.4**
baz=305
F17K **Baldwin Pennin** **145.53** **23** P **PKPab** **22 44 28.2 +0.6**
baz=311
C23K **Itkillik River** **145.54** **13** P **PKPab** **22 44 28.8 +1.3**
baz=328,SNR=10
E20K **Nigu River** **145.63** **18** P **PKPab** **22 44 28.7 +0.7**
baz=319,SNR=24
G16K **Koyuk River** **145.84** **25** P **PKPab** **22 44 29.4 +0.7**
baz=308
F18K **Selawik** **145.90** **22** P **PKPab** **22 44 29.1 +0.2**
baz=313
D22K **Ayikyak River** **145.94** **15** P **PKPab** **22 44 29.4 +0.3**
baz=324
E19K **Redstone River** **145.96** **19** P **PKPab** **22 44 29.6 +0.4**
baz=317,SNR=19
C24K **Franklin Bluff** **145.98** **12** P **PKPab** **22 44 29.8 +0.6**
baz=331
E21K **Killik River** **146.01** **17** P **PKPab** **22 44 29.3 0.0**
baz=322
D23K **Nanushuk River** **146.27** **14** P **PKPbc** **22 44 29.4 -0.2**
baz=327
F19K **Shaleruckik Mo** **146.27** **20** P **PKPbc** **22 44 29.9 +0.3**
baz=316,SNR=20
SPIA **Saint Paul Isl** **146.30** **41** P **PKPab** **22 44 30.6 -0.1**
baz=288
G17K **Kiwalik Mounta** **146.33** **24** P **PKPab** **22 44 30.8 +0.1**
baz=310
H16K **Elim** **146.34** **26** P **PKPab** **22 44 31.2 +0.5**
baz=307
C26K **Camden Bay** **146.40** **10** P **PKPab** **22 44 31.4 +0.6**
baz=336
D24K **Happy Valley** **146.46** **13** P **PKPab** **22 44 31.5 +0.4**
baz=330
F20K **Avaraart Lake** **146.66** **19** P **PKPab** **22 44 31.9 +0.1**
baz=319
G18K **Tagagawik** **146.68** **22** P **PKPab** **22 44 31.6 -0.4**
baz=313
D25K **Kavik River** **146.72** **11** P **PKPab** **22 44 32.1 -0.1**
baz=334
E22K **Anaktuvuk Pass** **146.73** **16** P **PKPab** **22 44 32.1 -0.1**
baz=325
TOLK **Toolik Lake Re** **146.76** **14** P **PKPab** **22 44 32.6 +0.3**
baz=329
C27K **Jago River** **146.83** **10** P **PKPab** **22 44 32.8 +0.3**
baz=338
P08K **Saint George I** **146.84** **42** P **PKPab** **22 44 32.7 -0.2**
baz=287
H17K **Granite Mounta** **146.93** **24** P **PKPab** **22 44 33.0 0.0**
baz=311
K13K **Kusilvak Mount** **146.96** **31** P **PKPab** **22 44 32.6 -0.5**
baz=301
J14K **Nanvaranak Lak** **146.96** **29** P **PKPab** **22 44 32.9 -0.2**
baz=303
BLKN **Baker Lake** **146.96** **335** **PKPbc** **22 44 32.2 +0.5**
M11K **Mekoryuk** **147.04** **34** P **PKPab** **22 44 33.3 -0.2**
baz=297
F21K **Alatna River** **147.09** **18** P **PKPab** **22 44 33.2 -0.4**
baz=322
F22K **John River** **147.16** **17** P **PKPab** **22 44 33.8 -0.1**
baz=324
E23K **Chandalar** **147.25** **14** P **PKPab** **22 44 33.8 -0.5**
baz=328
H18K **Honhosa River** **147.28** **23** P **PKPab** **22 44 34.0 -0.4**
baz=313
I17K **Unalakleet** **147.34** **26** P **PKPab** **22 44 34.2 -0.4**
baz=308
E24K **Your Creek** **147.46** **14** P **PKPab** **22 44 34.5 -0.6**
baz=330
D27M **Malcolm River** **147.53** **8** P **PKPab** **22 44 34.6 -0.8**
baz=341
H19K **Roundabout Mou** **147.59** **21** P **PKPbc** **22 44 34.4 +1.1**
baz=316
WVT **Waverly** **147.59** **280** **PKPbc** **22 44 34.6 +0.3**
WVT **Waverly** **147.59** **280** PKP2 **PKPbc** **22 44 34.6 +0.3**
G21K **Allakaket** **147.64** **18** P **PKPbc** **22 44 34.4 +0.9**
baz=321
D28M **Stokes Point** **147.68** **7** P **PKiKP** **22 44 34.6 -0.9**
baz=345
J16K **Anvik River** **147.75** **27** P **PKiKP** **22 44 35.2 -0.7**
baz=308
G22K **Bettles** **147.79** **17** P **PKiKP** **22 44 35.1 -0.7**
baz=324
COLD **Coldfoot** **147.83** **16** P **PKiKP** **22 44 35.4 -0.5**
baz=327
E25K **Arctic Village** **147.93** **12** P **PKiKP** **22 44 35.5 -0.7**
baz=334
IMAR **Indian Mountai** **147.99** **19** **PKPbc** **22 44 34.8 +0.3**
K15K **Wolf Creek Mou** **147.99** **29** P **PKiKP** **22 44 35.7 -0.7**
baz=305
GCSA **Galena City Sc** **148.02** **23** P **PKiKP** **22 44 35.6 -0.7**
baz=315
C36M **Paulatuk** **148.05** **357** P **PKiKP** **22 44 35.6 -0.6**
baz=6.7
F24K **Squaw Lake** **148.05** **14** P **PKiKP** **22 44 35.9 -0.5**
baz=330
H20K **Anotleneega Mo** **148.06** **21** P **PKPbc** **22 44 35.7 +1.0**
baz=318
L14K **Kuka Creek** **148.07** **31** P **PKPbc** **22 44 35.2 +0.5**
baz=302
NIKH **Nikolski High** **148.17** **48** P **PKPbc** **22 44 35.9 +0.6**
baz=283
J17K **VABM Dome** **148.21** **26** P **PKiKP** **22 44 36.2 -0.6**
baz=310
M13K **Dall Lake** **148.28** **33** P **PKiKP** **22 44 37.1 +0.1**
baz=300
E28M **Babbage River** **148.30** **8** P **PKPbc** **22 44 36.2 +0.9**
baz=343
G23K **Bananza Creek** **148.30** **16** P **PKiKP** **22 44 36.4 -0.5**
baz=326
L15K **Ungalak Mounta** **148.36** **30** P **PKiKP** **22 44 36.6 -0.5**
baz=304
F25K **Christian Rive** **148.40** **12** P **PKPbc** **22 44 36.5 +0.9**
baz=334
E27K **Coleen River** **148.46** **9** P **PKiKP** **22 44 36.7 -0.6**
baz=340
H21K **Melozitna Rive** **148.49** **19** P **PKiKP** **22 44 36.7 -0.6**
baz=321
F26K **Sheenjek River** **148.55** **11** P **PKPbc** **22 44 36.7 +0.8**
baz=336
H22K **Ishtalitna Cre** **148.66** **18** P **PKPbc** **22 44 37.0 +0.8**
baz=324
E29M **Blow River** **148.67** **7** P **PKPbc** **22 44 36.7 +0.6**
baz=346
M14K **Bethel** **148.68** **31** P **PKiKP** **22 44 37.5 -0.3**
baz=303
BMAR **Burnt Mountain** **148.72** **12** **PKiKP** **22 44 37.4 -0.4**
G24K **Hadweenzic Riv** **148.85** **14** P **PKiKP** **22 44 37.7 -0.3**
baz=330
K17K **Iditarod** **148.92** **26** P **PKiKP** **22 44 37.9 -0.4**
baz=310
J19K **Poorman** **148.94** **23** P **PKiKP** **22 44 37.9 -0.3**
baz=316
J18K **Innoko River** **148.96** **24** P **PKPbc** **22 44 37.3 +0.3**
baz=313
G25K **Bearman Lake** **149.05** **13** P **PKPbc** **22 44 37.6 +0.5**
baz=332
INK **Inuvik** **149.06** **4** P **PKPbc** **22 44 37.8 +0.7**
baz=352
I21K **Tanana** **149.08** **19** P **PKiKP** **22 44 38.8 +0.3**
baz=322
L16K **Owhat River** **149.12** **29** P **PKiKP** **22 44 38.9 +0.2**
baz=307
H23K **Yukon River** **149.15** **17** P **PKiKP** **22 44 38.7 0.0**
baz=326
F28M **Old Crow** **149.21** **8** P **PKPbc** **22 44 38.2 +0.6**
baz=342,SNR=8.9
M15K **Kasigluk River** **149.24** **31** P **PKiKP** **22 44 39.2 +0.2**
baz=304
N14K **Kuskokwak Cree** **149.24** **33** P **PKiKP** **22 44 39.0 +0.1**
baz=302
J20K **Nowinta River** **149.25** **22** P **PKiKP** **22 44 39.3 +0.4**
baz=309
G26K **Porcupine Rive** **149.29** **12** P **PKiKP** **22 44 39.1 +0.2**
baz=336
L17K **Donlin** **149.29** **27** P **PKiKP** **22 44 39.8 +0.8**
baz=309
UNV **Unalaska Valle** **149.31** **46** P **PKiKP** **22 44 39.6 +0.3**
baz=286
H24K **Noodor Dome** **149.51** **16** P **PKiKP** **22 44 39.6 +0.1**
baz=329
MLY **Manley** **149.52** **18** **PKiKP** **22 44 39.9 +0.4**
MLY **Manley** **149.52** **18** P **PKiKP** **22 44 39.5 0.0**
baz=324
H25L **Birch Creek** **149.55** **14** P **PKiKP** **22 44 39.9 +0.4**
baz=332
F30M **Barrier River** **149.61** **6** P **PKiKP** **22 44 40.1 +0.5**
baz=349
M16K **Timber Creek** **149.74** **29** P **PKiKP** **22 44 40.2 +0.2**
baz=307
G27K **Doyon Strip** **149.74** **10** P **PKiKP** **22 44 39.9 0.0**
baz=339
I23K **Minto, Yukon-K** **149.76** **17** P **PKiKP** **22 44 40.2 +0.3**
baz=326
O14K **Tigyukauivet M** **149.78** **34** P **PKiKP** **22 44 40.5 +0.4**
baz=301
N15K **Kwethluk River** **149.78** **31** P **PKiKP** **22 44 40.6 +0.4**
baz=304
L18K **Granite Mounta** **149.81** **26** P **PKiKP** **22 44 40.4 +0.3**
baz=312
K20K **Telida** **149.88** **23** P **PKiKP** **22 44 40.7 +0.5**
baz=317
F31M **Tsiigehtchic** **149.91** **4** P **PKiKP** **22 44 40.8 +0.6**
baz=352
CHUM **Lake Minchumin** **150.00** **21** P **PKiKP** **22 44 40.3 -0.2**
baz=320
FVM **French Village** **150.03** **283** **PKPab** **22 44 44.3 -2.1**
M17K **Holitna River** **150.08** **28** P **PKPbc** **22 44 39.9 +0.1**
baz=310
G29M **Pine Creek** **150.09** **8** P **PKPbc** **22 44 39.7 0.0**
baz=345
N16K **Nishlik Lake** **150.14** **30** P **PKiKP** **22 44 41.2 +0.3**
baz=306
G30M **tAoh Zraii Nji** **150.19** **6** P **PKPbc** **22 44 40.0 0.0**
baz=348
BPAW **Bear Paw Mtn.** **150.20** **20** P **PKiKP** **22 44 40.9 0.0**
baz=322
POKR **Poker Plat Res** **150.22** **16** P **PKiKP** **22 44 41.0 +0.1**
baz=329
NEA2 **Nenana** **150.29** **18** P **PKiKP** **22 44 40.9 -0.2**
baz=326
H27K **Steamboat Moun** **150.30** **11** P **PKiKP** **22 44 41.4 +0.3**
baz=339
O15K **Ungalikthiuk R** **150.44** **33** P **PKiKP** **22 44 41.8 +0.2**
baz=303
L19K **White Mountain** **150.47** **25** P **PKiKP** **22 44 41.7 +0.2**
baz=314
L20K **Farewell, AK** **150.58** **24** P **PKiKP** **22 44 41.6 -0.2**
baz=316
M18K **Stony River** **150.61** **27** P **PKiKP** **22 44 41.8 0.0**
baz=312
ILAR **Eielson Array** **150.64** **16** **PKPbc** **22 44 40.3 -0.8**
ILAR **Eielson Array** **150.64** **16** PKPbc **PKPbc** **22 44 40.8 -0.3**
comp=Z,6.4nm,0.7s,baz=317,slow=3.1,SNR=55
ILAR **Eielson Array** **150.64** **16** PKIKP **PKPbc** **22 44 40.3 -0.8**
FALS **False Pass** **150.69** **43** P **PKiKP** **22 44 42.3 +0.2**
baz=292
H29M **Whitestone** **150.72** **8** P **PKiKP** **22 44 42.5 +0.5**
baz=344
N17K **Nushagak Hills** **150.73** **29** P **PKiKP** **22 44 42.4 +0.3**
baz=309
EPYK **Eagle Plains** **150.75** **7** P **PKPbc** **22 44 41.8 +0.4**
baz=347
PPLA **Purkeypile** **150.79** **22** P **PKPbc** **22 44 41.9 +0.2**
baz=319
M19K **Big River Lodg** **150.82** **25** P **PKPbc** **22 44 41.6 -0.1**
baz=315
I27K **Kandik River** **150.88** **11** P **PKPbc** **22 44 42.1 +0.3**
baz=338,SNR=12
I26K **Coal Creek Min** **150.90** **13** P **PKiKP** **22 44 42.6 +0.3**
baz=336
TRF **Thorofare Moun** **150.91** **20** P **PKiKP** **22 44 42.7 +0.1**
baz=323,SNR=6.7
O16K **Kokwok River B** **150.94** **31** P **PKiKP** **22 44 42.9 +0.4**
baz=306
MCK **McKinley** **151.03** **19** P **PKPbc** **22 44 42.4 +0.3**
baz=325
S12K **Black Hills** **151.07** **40** P **PKPbc** **22 44 42.6 +0.2**
baz=295
J25K **Salcha River,** **151.10** **15** P **PKPbc** **22 44 43.1 +0.2**
baz=332
N18K **Kilae Creek** **151.12** **28** P **PKiKP** **22 44 43.4 +0.5**
baz=311
O17K **Koliganek Bris** **151.23** **30** P **PKiKP** **22 44 43.3 +0.2**
baz=308
M20K **Styx River** **151.25** **24** P **PKPbc** **22 44 42.5 -0.3**
baz=316
I28M **Miner Creek** **151.27** **10** P **PKiKP** **22 44 43.1 -0.1**
baz=341
P16K **Nushagak River** **151.31** **32** P **PKiKP** **22 44 43.2 -0.1**
baz=306
H31M **Peel River** **151.50** **5** P **PKPbc** **22 44 43.1 0.0**
baz=350
N19K **Bonanza Creek** **151.54** **27** P **PKPbc** **22 44 43.7 +0.2**
baz=313
J26L **Joseph Creek** **151.56** **14** P **PKPbc** **22 44 43.7 +0.3**
baz=334
SKT **Skwentna** **151.69** **23** P **PKiKP** **22 44 44.0 0.0**
baz=319
CUT **Chulitna** **151.74** **21** P **PKiKP** **22 44 44.4 +0.3**
baz=322
P17K **Kvichak River** **151.85** **31** P **PKiKP** **22 44 44.6 +0.3**
baz=308
WAT1 **Susitna Watana** **151.87** **19** P **PKPbc** **22 44 44.2 +0.2**
baz=325
I30M **Mount Dempster** **151.90** **7** P **PKiKP** **22 44 44.6 +0.1**
baz=347
O18K **Koktuh Hills** **151.92** **29** P **PKiKP** **22 44 45.2 +0.6**
baz=311
SCRK **Sand Creek** **151.95** **14** P **PKiKP** **22 44 45.3 +0.7**
baz=333
DHY **Denali Highway** **151.97** **18** P **PKiKP** **22 44 45.7 +0.9**
baz=327
RIDG **Independent Ri** **151.98** **15** P **PKiKP** **22 44 46.3 +1.6**
baz=332
O19K **Port Alsworth** **152.03** **28** P **PKiKP** **22 44 44.7 0.0**
baz=312
SDPT **Sand Point** **152.04** **40** P **PKiKP** **22 44 44.9 0.0**
baz=296
N20K **Mount Spurr** **152.05** **25** P **PKPbc** **22 44 44.6 0.0**
baz=317
SPCR **Spurr Chakacha** **152.05** **25** P **PKPbc** **22 44 44.7 +0.1**
baz=317
S14K **Fog Glacier** **152.06** **38** P **PKPbc** **22 44 44.9 +0.1**
baz=299
P18K **Big Mountain,** **152.21** **30** P **PKPbc** **22 44 45.2 +0.3**
baz=310
K27K **Chicken** **152.26** **13** P **PKiKP** **22 44 45.1 0.0**
baz=336
M22K **Willow** **152.29** **22** P **PKiKP** **22 44 45.5 +0.3**
baz=321
WAT6 **Susitna Watana** **152.29** **19** P **PKPbc** **22 44 45.3 +0.1**
baz=326
R16K **Pilot Point** **152.32** **34** P **PKiKP** **22 44 46.0 +0.6**
baz=304
SUA **Susitna One** **152.32** **23** P **PKPbc** **22 44 45.1 -0.1**
baz=320
PAX **Paxson** **152.52** **17** P **PKiKP** **22 44 45.9 +0.1**
baz=330
J30M **Hart River** **152.54** **7** P **PKiKP** **22 44 46.2 +0.3**
baz=346
Q17K **Contact Creek** **152.65** **32** P **PKPbc** **22 44 46.2 +0.2**
baz=307
DAWY **Dawson** **152.66** **10** P **PKPbc** **22 44 45.9 +0.1**
baz=341
PMR **Palmer** **152.71** **22** P **PKiKP** **22 44 46.4 +0.3**
baz=322
O20K **Slope Mountain** **152.72** **27** P **PKiKP** **22 44 46.3 0.0**
baz=315
CAPN **Captain Cook N** **152.72** **24** P **PKiKP** **22 44 46.5 +0.4**
baz=318
CHNA **Chernabura Isl** **152.72** **41** P **PKiKP** **22 44 46.6 +0.3**
baz=296
SML **Sawmill** **152.77** **21** P **PKiKP** **22 44 47.1 +0.8**
baz=324
Q18K **Katmai Hardscr** **152.77** **31** P **PKiKP** **22 44 47.2 +0.6**
baz=309
P19K **Oil Pt** **152.80** **28** P **PKiKP** **22 44 46.7 +0.3**
baz=313
R17L **Mt. Peulik Vol** **152.82** **33** P **PKiKP** **22 44 47.0 +0.5**
baz=306
RC01 **Rabbit Creek A** **152.93** **23** P **PKiKP** **22 44 47.1 +0.5**
baz=321
L26K **Log Cabin Wild** **152.93** **15** P **PKiKP** **22 44 46.8 +0.2**
baz=334
M23K **Glacier View** **152.95** **20** P **PKiKP** **22 44 47.1 +0.4**
baz=325
SCM **Sheep Creek Mo** **153.02** **20** P **PKiKP** **22 44 47.3 +0.4**
baz=326
KNK **Knik Glacier** **153.05** **21** P **PKiKP** **22 44 47.0 +0.1**
baz=323
HARP **HAARP** **153.09** **17** P **PKiKP** **22 44 47.3 +0.3**
baz=330
M24K **Tolsona, Glenn** **153.09** **18** P **PKiKP** **22 44 47.7 +0.7**
baz=328
K29M **Barlow Dome** **153.12** **9** P **PKiKP** **22 44 47.8 +0.7**
baz=344
L27K **Beaver Creek,** **153.19** **13** P **PKiKP** **22 44 47.4 +0.2**
baz=336
BCAR **Beaver Creek A** **153.20** **13** **PKPbc** **22 44 45.0 -2.0**
HOM **Homer** **153.37** **26** P **PKiKP** **22 44 47.9 +0.4**
baz=316
O22K **Cooper Landing** **153.40** **24** P **PKiKP** **22 44 48.4 +0.8**
baz=320
PWL **Port Wells** **153.53** **22** P **PKiKP** **22 44 48.8 +0.9**
baz=323
M26K **Nabesna, AK** **153.56** **15** P **PKiKP** **22 44 48.4 +0.4**
baz=334
YKA **Yellowknife Ar** **153.60** **345** PKPbc **PKPbc** **22 44 47.8 0.0**
comp=Z,3.4nm,0.7s,baz=5.5,slow=2.2,SNR=4.9
BRSE **Bradley Lake S** **153.62** **26** P **PKiKP** **22 44 48.5 +0.4**
baz=318
KLU **Klutina** **153.68** **19** P **PKiKP** **22 44 48.8 +0.5**
baz=328
R18K **Karluk** **153.68** **32** P **PKiKP** **22 44 48.5 +0.2**
baz=308
L29M **L29M** **153.74** **10** P **PKiKP** **22 44 48.6 +0.3**
baz=343
SEW **Seward** **153.78** **24** P **PKiKP** **22 44 48.7 +0.4**
baz=320
M27K **Edge Creek, AK** **153.83** **14** P **PKiKP** **22 44 49.0 +0.4**
baz=335
Q20K **Shuyak Island** **153.83** **29** P **PKiKP** **22 44 49.1 +0.6**
baz=313
GLI **Glacier Island** **153.87** **21** P **PKiKP** **22 44 49.1 +0.5**
baz=325
N25K **Chitina, Valde** **153.91** **18** P **PKiKP** **22 44 49.4 +0.7**
baz=330
WRGLY **Wrigley** **154.11** **355** P **PKiKP** **22 44 49.8 +0.9**
baz=9.3
CHIR **Chirikof Islan** **154.19** **36** P **PKiKP** **22 44 50.0 +0.6**
baz=304
KDAK **Kodiak Island** **154.31** **30** P **PKiKP** **22 44 50.0 +0.5**
baz=312
M29M **Somme Creek** **154.33** **11** P **PKPbc** **22 44 49.6 0.0**
baz=342
OHAK **Old Harbor** **154.39** **32** P **PKiKP** **22 44 50.0 +0.3**
baz=310
SII **Sitkinak Islan** **154.42** **34** P **PKiKP** **22 44 50.4 +0.6**
baz=307
M30M **Minto, Yukon** **154.43** **9** P **PKiKP** **22 44 50.1 +0.3**
baz=345
BMRM **Bremner River** **154.46** **18** P **PKiKP** **22 44 50.3 +0.5**
baz=329
P23K **Montague Islan** **154.50** **22** P **PKiKP** **22 44 50.8 +1.0**
baz=323
EYAK **Cordova Ski Ar** **154.52** **20** P **PKiKP** **22 44 50.9 +1.0**
baz=327
YUK3 **Moose Creek** **154.63** **13** P **PKiKP** **22 44 50.7 +0.3**
baz=338
CRQE **Cirque** **155.01** **17** P PKPdf 22 44 51.9 +10
baz=332
M31M **Drury Creek, Y** **155.05** **7** P PKPdf 22 44 51.7 +10
baz=349
CTG **Chitna Glacier** **155.21** **15** P PKPdf 22 44 51.7 +9.1
baz=335
YUK8 **Steele Glacier** **155.21** **13** P PKPdf 22 44 52.5 +10
baz=338
Q23K **Middleton Isla** **155.27** **22** P PKPdf 22 44 53.5 +11
baz=324
YUK4 **Talbot Arm** **155.35** **12** P PKPdf 22 44 52.4 +10
baz=341
KAIM **Kayak Island** **155.40** **19** P **PKPab** **22 45 08.9 +0.7**
baz=328
N30M **Aishikik Lake** **155.47** **10** P **PKPab** **22 45 09.1 +0.6**
baz=344
BGLC **Bering Glacier** **155.52** **18** P **PKPab** **22 45 09.6 +1.0**
baz=331
N31M **Braeburn, Yuko** **155.61** **8** P **PKPab** **22 45 10.0 +0.9**
baz=346
O28M **Mount Upton** **155.61** **14** P **PKPab** **22 45 09.3 -0.1**
baz=337
YUK6 **Outpost Mounta** **155.77** **12** P **PKPab** **22 45 09.9 -0.2**
baz=341
MESA **MESA** **155.78** **16** P **PKPab** **22 45 10.3 +0.2**
baz=333
TGTN **Hyland Airport** **156.00** **360** P **PKPab** **22 45 11.0 +0.3**
baz=0.5
HYT **Haines Junctio** **156.02** **11** P **PKPab** **22 45 11.8 +0.9**
baz=342
N32M **Quiet Lake** **156.20** **6** P **PKPab** **22 45 12.2 +0.5**
baz=351
PINM **Pinnacle** **156.22** **15** P **PKPab** **22 45 12.9 +1.2**
baz=336
O30N **Mendenhall** **156.27** **9** P **PKPab** **22 45 13.2 +1.3**

	baz=345								
O29M	**Mount Kennedy**	156.34	13	P		PKPab	22 45 13.2	+0.8	
	baz=340								
WHY	**Whitehorse**	156.52	8	P		PKPab	22 45 13.6	+0.5	
	baz=347								
P30M	**Million Dollar**	156.77	11	P		PKPab	22 45 14.5	+0.4	
	baz=343								
PNL	**Peninsula**	156.78	14	P		PKPab	22 45 14.5	+0.4	
	baz=338								
P29M	**Windy Craggy**	157.12	12	P		PKPab	22 45 15.0	-0.6	
	baz=341								
P33M	**Teslin, Yukon**	157.15	6	P		PKPab	22 45 15.2	-0.6	
	baz=351								
KOTAN	**Kotaneelee Air**	157.22	354	P		PKPab	22 45 16.4	+0.4	
	baz=9.2								
WTLY	**Watson Lake, Y**	157.42	0	P		PKPab	22 45 16.9	0.0	
	baz=360								
PLBC	**Pleasant Camp**	157.50	11	P		PKPab	22 45 17.5	+0.3	
	baz=344								
SKAG	**Skagway**	157.64	9	P		PKPab	22 45 18.6	+0.9	
	baz=346								
P32M	**Atlin**	157.69	7	P		PKPab	22 45 18.8	+0.7	
	baz=349								
TXAR	**Lajitas Array**	157.76	256	PKP		PKPdf	22 44 46.5	-0.3	
	comp=Z,0.4nm,0.5s,baz=155,slow=5.3,SNR=4.3								
TXAR				PKPab		pPKPab	22 45 21.3	-0.8	
	comp=Z,1.6nm,0.9s,baz=122,slow=6.6,SNR=5.1								
R33M	**Jennings River**	158.08	3	P		PKPab	22 45 19.5	-0.4	
	baz=355								
Q32M	**Nakina River**	158.44	5	P		PKPab	22 45 20.7	-0.8	
	baz=352								
TOAD	**Toad River Com**	158.58	355	P		PKPab	22 45 22.2	+0.2	
	baz=7.2								
S31K	**Pelican**	158.95	12	P		PKPab	22 45 22.9	-0.5	
	baz=343								
S34M	**Telegraph Cree**	159.55	4	P		PKPab	22 45 27.2	+1.1	
	baz=354								
S32K	**Killisnoo**	159.67	9	P		PKPab	22 45 27.4	+0.8	
	baz=346								
SIT	**Sitka**	159.96	11	P		PKPab	22 45 27.7	-0.2	
	baz=344								
WRAK	**Wrangell Islan**	160.95	7	P		PKPab	22 45 32.7	+0.5	
	baz=351								
PDAR	**Pinedale Array**	164.61	296	PKP		PKPdf	22 44 53.5	-0.4	
	comp=Z,0.2nm,0.6s,baz=75,slow=2.3,SNR=1.7								
NVAR	**Mina Array Bea**	171.90	279	PKP		PKPdf	22 44 59.2	+0.3	
	comp=Z,0.3nm,0.6s,baz=53,slow=3.2,SNR=1.7								
NVAR				PKPab		pPKPab	22 46 23.5	-0.7	
	comp=Z,1.0nm,0.9s,baz=88,slow=7.0,SNR=4.1								

*IDC **07** 22:25:18.6±6.1, 7.°90N×88.°58E, h33km±45km, mb3.8/18, mbtmp4.0/20, ML4.0/2, Error ellipse: s-maj=24.5km s-min=16.8km az=51.0*

ISC 07 22:25:15.4±0.8, 8.°0N±0.°1×88.°6E±0.°1, h10km, n26, σ0.91/22, mb4.0/17, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**7.88**	**266**	Pn	**Pn**	**22 27 10.5**	**+0.3**
	2.1nm,0.3s,baz=86,slow=12,SNR=20						
PALK				Sn	Sn	22 28 29.2	-10
	12nm,0.3s,baz=136,slow=18,SNR=9.6						
	4.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.48**	**43**	Pn	**Pn**	**22 28 40.7**	**+0.1**
	0.2nm,0.3s,baz=235,slow=14,SNR=7.1						
	0.9nm,0.6s						
H08S3	**Diego Garcia H**	**22.33**	**227**	T	T	22 53 21.7	
	baz=45,slow=76,SNR=7.4						
H08S2	**Diego Garcia H**	**22.33**	**226**	T	T	22 53 24.8	
	baz=45,slow=76,SNR=6.9						
H08S1	**Diego Garcia H**	**22.35**	**226**	T	T	22 53 35.5	
	baz=45,slow=76,SNR=7.4						
MKAR	**Makanchi Array**	**39.08**	**353**	P	**P**	**22 32 43.5**	**+0.8**
	1.9nm,0.4s,baz=172,slow=9.0,SNR=35						
	1.9nm,0.4s						
SONM	**Songino Array**	**42.52**	**18**	P	**P**	**22 33 11.8**	**+0.7**
	1.7nm,0.7s,baz=196,slow=10.0,SNR=14						
	1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**43.36**	**351**	P	**P**	**22 33 18.5**	**+0.7**
	2.0nm,0.7s,baz=172,slow=7.6,SNR=18						
	2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**45.97**	**357**	P	**P**	**22 33 39.3**	**+0.7**
	2.5nm,0.6s,baz=184,slow=8.5,SNR=9.0						
	2.5nm,0.6s						
BVAR	**Borovoye Array**	**47.33**	**345**	P	**P**	**22 33 49.0**	**-0.3**
	0.6nm,0.5s,baz=152,slow=7.7,SNR=3.9						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**52.84**	**122**	P	**P**	**22 34 31.2**	**-0.4**
	0.5nm,0.6s,baz=304,slow=8.3,SNR=7.5						
	0.5nm,0.6s						
KBZ	**Khabaz**	**53.42**	**320**	P	**P**	**22 34 34.6**	**-0.9**
	1.4nm,0.9s,baz=141,slow=5.3,SNR=4.0						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**54.25**	**127**	P	**P**	**22 34 41.7**	**-0.3**
	0.8nm,0.6s,baz=296,slow=7.5,SNR=8.8						
	0.8nm,0.6s						
BRTR	**Keskin Array B**	**58.28**	**312**	P	**P**	**22 35 11.0**	**+0.3**
	0.2nm,0.3s,baz=100,slow=7.9,SNR=2.9						
	0.2nm,0.3s						
NRIK	**Noril'sk**	**61.32**	**360**	P	**P**	**22 35 30.8**	**-0.1**
	1.9nm,0.4s,baz=168,slow=6.6,SNR=4.8						
	1.9nm,0.4s						
FINES	**FINESS Array B**	**70.13**	**333**	P	**P**	**22 36 27.3**	**-0.5**
	1.0nm,0.5s,baz=100,slow=3.9,SNR=12						
	1.0nm,0.5s						
ARCES	**ARCESS Array B**	**73.37**	**341**	P	**P**	**22 36 46.8**	**-0.5**
	1.4nm,0.7s,baz=69,slow=6.6,SNR=5.1						
	1.4nm,0.7s						
GERES	**GERESS Array B**	**74.14**	**318**	P	**P**	**22 36 52.5**	**+0.3**
	1.1nm,0.7s,baz=76,slow=5.6,SNR=8.9						
	1.1nm,0.7s						
HFS	**Hagfors**	**75.65**	**330**	P	**P**	**22 36 59.9**	**-0.8**
	0.8nm,0.4s,baz=72,slow=4.8,SNR=9.4						
	0.8nm,0.4s						
NOA	**NORSAR Array B**	**76.99**	**331**	P	P	22 37 06.6	-1.7
	0.9nm,0.8s,baz=96,slow=5.8,SNR=3.3						
	0.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**78.66**	**348**	P	**P**	**22 37 16.9**	**-0.4**
	4.9nm,0.8s,baz=161,slow=9.2,SNR=1.8						
	4.9nm,0.8s						
EKA	**Eskdalemuir Ar**	**84.54**	**325**	P	**P**	**22 37 48.4**	**-0.4**
	1.7nm,0.6s,baz=126,slow=4.2,SNR=5.1						
	1.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**85.26**	**283**	P	**P**	**22 37 52.7**	**-0.5**
	0.8nm,0.7s,baz=78,slow=4.7,SNR=2.0						
	0.8nm,0.7s						
PDAR	**Pinedale Array**	**126.87**	**17**	PKP		PKPdf	22 44 19.6	-0.6	
	0.3nm,0.6s,baz=37,slow=4.6,SNR=4.2								
NVAR	**Mina Array Bea**	**127.48**	**27**	PKP		PKPdf	22 44 20.2	-1.3	
	0.2nm,0.5s,baz=37,slow=7.5,SNR=1.4								
CFA	**Coronel Fontan**	**148.09**	**219**	PKPbc		PKPdf	22 45 01.9	+2.9	
	0.7nm,0.4s,baz=147,slow=5.7,SNR=3.9								

*IDC **07** 22:26:31.3±0.8, 37.°47S×51.°50E, h0km, mb4.3/13, mbtmp4.3/13, Error ellipse: s-maj=26.8km s-min=22.9km az=9.0*

*NEIC **07** 22:26:32.9±1.9, 37.°53S±0.°09×51.°5E±0.°2, h10km±1km, mb4.8/34, Error ellipse: s-maj=21.0km s-min=14.6km az=260.0*

ISC 07 22:26:32.9±0.5, 37.°47S±0.°08×51.°5E±0.°1, h10km, n58, σ0.96/50, mb4.7/25, 1C-1D, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N1	**CROZET ISLANDS**	**8.69**	**179**	Pn	**Pn**	**22 28 38.4**	**0.0**
H04N1				T	T	22 37 24.7	
	baz=359,slow=76,SNR=12						
H04N2	**CROZET ISLANDS**	**8.69**	**179**	Pn	**Pn**	**22 28 38.1**	**-0.3**
H04N2				T	T	22 37 29.7	
	baz=359,slow=76,SNR=11						
H04N3	**CROZET ISLANDS**	**8.70**	**179**	Pn	**Pn**	**22 28 38.2**	**-0.4**
H04N3				T	T	22 37 34.2	
	baz=359,slow=76,SNR=11						
CRZF	**Crozet Islands**	**8.96**	**178**	Pn	**Pn**	**22 28 40.6**	**-1.6**
H04S3	**CROZET ISLANDS**	**9.36**	**178**	Pn	**Pn**	**22 28 47.8**	**+0.2**
	baz=349,slow=16						
H04S1	**CROZET ISLANDS**	**9.37**	**178**	Pn	**Pn**	**22 28 47.9**	**+0.1**
	baz=349,slow=16						
H04S2	**CROZET ISLANDS**	**9.38**	**178**	Pn	**Pn**	**22 28 48.2**	**+0.2**
	baz=349,slow=16						
VOI	**Vohitsoka**	**16.04**	**344**		**Pn**	**22 30 18.2**	**-0.5**
PAF	**Port-aux-Franc**	**17.99**	**137**		**Pn**	**22 30 41.3**	**-1.6**
BOSA	**Boshof**	**23.65**	**284**	P	**P**	**22 31 41.2**	**-3.4**
BOSA				IAmb	IAmb	22 31 46.1	
	comp=Z,30nm,1.3s						
BOSA	**Boshof**	**23.65**	**284**	P	**P**	**22 31 44.4**	**-0.3**
	comp=Z,14nm,1.2s,baz=98,slow=4.5,SNR=3.0						
	comp=Z,14nm,1.2s						
LBTB	**Lobatse**	**25.30**	**292**	P	**P**	**22 32 00.1**	**+0.3**
LBTB				IAmb	IAmb	22 32 02.1	
	comp=Z,28nm,1.5s						
SYO	**Syowa Base**	**32.27**	**188**	⇑iPnPn	PnPn	22 34 06.0	-1.3
SYO	**Syowa Base**	**32.27**	**188**	⇓iPnPn	PnPn	22 34 08.0	+0.7
SNAA	**Sanae**	**43.83**	**202**	IAmb	IAmb	22 34 44.5	
	comp=Z,19nm,1.3s						
SNAA	**Sanae**	**43.83**	**202**	P	**P**	**22 34 38.4**	**-0.3**
	comp=Z,5.8nm,1.0s,baz=65,slow=9.1,SNR=10						
	comp=Z,5.8nm,1.0s						
H01W2	**Cape Leeuwin H**	**49.78**	**107**	T	T	23 28 47.2	
	baz=247,slow=75,SNR=9.4						
H01W3	**Cape Leeuwin H**	**49.79**	**107**	T	T	23 28 43.4	
	baz=247,slow=75,SNR=11						
H01W1	**Cape Leeuwin H**	**49.80**	**107**	T	T	23 28 44.1	
	baz=247,slow=75,SNR=10						
RPSI	**Rantau Prapat**	**59.37**	**59**	P	**P**	**22 36 35.2**	**-0.3**
RPSI				IAmb	IAmb	22 36 50.9	
	comp=Z,14nm,1.3s						
UGM	**Wanagama**	**60.75**	**77**	P	**P**	**22 36 45.6**	**+0.5**
DBIC	**Dimbokro**	**68.42**	**297**	IAmb	IAmb	22 38 08.4	
	comp=Z,13nm,1.3s						
DBIC	**Dimbokro**	**68.42**	**297**	P	**P**	**22 37 35.7**	**+0.6**
	comp=Z,4.3nm,0.9s,baz=185,slow=5.9,SNR=2.8						
	comp=Z,4.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**68.70**	**307**	P	**P**	**22 37 36.9**	**0.0**
	comp=Z,1.6nm,0.9s,baz=114,slow=5.2,SNR=2.9						
	comp=Z,1.6nm,0.9s						
ASAR	**Alice Springs**	**70.22**	**105**	P	**P**	**22 37 46.5**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=228,slow=5.6,SNR=5.3						
	comp=Z,1.8nm,0.7s						
CM31	**Chiang Mai Arr**	**71.32**	**48**	P	**P**	**22 37 52.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**71.32**	**48**	P	**P**	**22 37 52.9**	**0.0**
CMAR	**Chiang Mai Arr**	**71.32**	**48**	P	**P**	**22 37 53.4**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=229,slow=6.7,SNR=5.1						
	comp=Z,3.4nm,0.9s						
HRA	**Herat**	**72.19**	**9**	P	**P**	**22 37 58.2**	**+0.2**
WRA	**Warramunga Arr**	**72.61**	**102**	P	**P**	**22 38 01.0**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=234,slow=5.2,SNR=5.3						
	comp=Z,1.4nm,0.6s						
EVN	**Everest**	**73.03**	**32**	P	**P**	**22 38 02.5**	**-1.2**
EVN				IAmb	IAmb	22 38 10.7	
	comp=Z,8.6nm,1.1s						
TOLI2	**Tolitoli**	**74.34**	**76**	P	**P**	**22 38 10.1**	**-0.9**
GAZ	**Gaziantep**	**75.44**	**348**	P	**P**	**22 38 17.0**	**+0.1**
GAZ				IAmb	IAmb	22 38 24.6	
	comp=Z,9.2nm,1.1s						
KARP	**Karpathos**	**76.08**	**340**	P	**P**	**22 38 21.5**	**+0.9**
GURO	**Guroymak-BITLI**	**76.15**	**352**	P	**P**	**22 38 21.5**	**+0.5**
LSA	**Lhasa**	**76.44**	**35**	P	**P**	**22 38 23.1**	**-0.1**
LSA				IAmb	IAmb	22 38 25.4	
	comp=Z,6.8nm,0.9s						
ARPR	**Arapgir-MALATY**	**77.15**	**350**	P	**P**	**22 38 26.8**	**+0.2**
ARPR				IAmb	IAmb	22 38 33.9	
	comp=Z,11nm,1.3s						
CHGR	**Chuyangaron**	**77.48**	**14**	P	**P**	**22 38 28.7**	**+0.3**
MANT	**Manisa**	**78.49**	**342**	P	**P**	**22 38 33.7**	**-0.5**
MANT				IAmb	IAmb	22 38 36.7	
	comp=Z,11nm,1.3s						
BRTR	**Keskin Array B**	**78.56**	**346**	P	**P**	**22 38 34.0**	**-0.5**
BRTR	**Keskin Array B**	**78.56**	**346**	P	**P**	**22 38 35.1**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=164,slow=6.9,SNR=2.0						
	comp=Z,0.3nm,0.4s						
DRK	**Karamyk**	**78.82**	**16**	P	**P**	**22 38 35.6**	**-0.4**
DRK				IAmb	IAmb	22 38 38.3	
	comp=Z,17nm,1.4s						
ARSB	**Arslanbob**	**80.84**	**16**	P	**P**	**22 38 46.5**	**-0.3**
ARSB				IAmb	IAmb	22 38 49.8	
	comp=Z,10nm,1.2s						
KIV	**Kislovodsk**	**81.44**	**354**	P	**P**	**22 38 49.6**	**-0.3**
KIV				IAmb	IAmb	22 38 52.2	
	comp=Z,13nm,1.3s						
KK31	**Karatay Array**	**82.04**	**14**	P	**P**	**22 38 53.9**	**+0.9**
KK31				IAmb	IAmb	22 38 55.9	
	comp=Z,9.2nm,1.3s						
KKAR	**Karatay Array**	**82.04**	**14**	P	**P**	**22 38 54.0**	**+1.1**
AAK	**Ala-Archa**	**82.43**	**17**	P	**P**	**22 38 54.3**	**-0.9**
AAK				IAmb	IAmb	22 38 58.0	
	comp=Z,9.1nm,1.2s						
KEST	**Kesra**	**82.67**	**327**	P	**P**	**22 38 57.6**	**+1.1**
KEST				IAmb	IAmb	22 39 05.8	
	comp=Z,14nm,1.1s						
MKAR	**Makanchi Array**	**88.31**	**21**	P	**P**	**22 39 24.9**	**+0.7**
	comp=Z,1.3nm,1.0s,baz=212,slow=5.1,SNR=2.9						
	comp=Z,1.3nm,1.0s						
BKZ	**Black Stump Fm**	**88.49**	**140**	P	**P**	**22 39 29.2**	**+3.5**
BI02	**San Fabin de**	**89.21**	**223**	P	**P**	**22 39 29.2**	**0.0**
KURBB	**Kurchatov Arra**	**90.89**	**17**	P	**P**	**22 39 36.4**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=214,slow=4.9,SNR=4.7						
	comp=Z,1.5nm,0.7s						
KURK	**Kurchatov**	**91.00**	**17**	P	**P**	**22 39 36.4**	**-0.3**
KURK	**Kurchatov**	**91.00**	**17**	IAmb	IAmb	22 39 37.9	
	comp=Z,2.2nm,0.8s						
BVAR	**Borovoye Array**	**91.61**	**11**	P	**P**	**22 39 39.8**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=176,slow=4.5,SNR=4.4						
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**95.48**	**19**	P	**P**	**22 39 56.2**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=212,slow=5.3,SNR=3.6						
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**98.01**	**34**	P	**P**	**22 40 08.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=224,slow=4.0,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**150.56**	**16**	PKPbc	**PKPbc**	**22 46 23.6**	**-0.4**
	comp=Z,3.4nm,0.8s,baz=315,slow=3.0,SNR=5.5						

*BJI **07** 22:41:27.0, 5.°60N×126.°30E, h106km, mB5.2/14, mb4.9/69*

*NEIC **07** 22:41:28.1±2.2, 5.°66N±0.°05×126.°33E±0.°05, h90km±4km, mb5.1/189, Mww5.1/22, Error ellipse: s-maj=7.8km s-min=6.7km az=55.0*

*NEIC **07** 22:41:28.3, 5.°85N×126.°45E, h90km, Moment Tensor Solution. Duration: 18s8 Moment tensor: Scale 10^16^Nm; Mrr4.14; Mθθ0.13; Mϕϕ-4.27; Mrθ1.73; Mθϕ-1.28; Mϕr-0.79; Fault plane solution: M0 4.80000×10^16^ NP1:ϕs36.13000°, δ47.23000°, λ121.77000°. NP2:ϕs173.77000°, δ51.38000°, λ60.36000°. Principal axes: T 4.9449, Plg67.0000°, Azm20.0000°; N -0.3146, Plg23.0000°, Azm193.0000°; P -4.6304, Plg2.0000°, Azm284.0000°;*

*NEIC **07** 22:41:28.3, 5.°65N×126.°35E, h90km*

*DJA **07** 22:41:28.9±0.2, 6.°N±2.°×12.°6E±.°, h100km±2km, M5.0/85, mB5.5/49, mb5.2/85, MLv5.7/13, Mw5.0/19, Mw(mB)5.0/49, MwMwp5.0/8, Mwp5.3/8*

*GCMT **07** 22:41:28.3±0.3, 5.°66N±0.°03×126.°31E±0.°03, h89km±2km, MW5.1/80, Moment Tensor Solution. s30,c37; s80,c116; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr5.82±.21; Mθθ-0.29±.24; Mϕϕ-5.53±.26; Mrθ1.23±.18; Mθϕ-2.19±.29; Mϕr0.45±.25; Best double couple: M0 6.22100×10^16^ NP1:ϕs190.00000°, δ42.00000°, λ75.00000°. NP2: ϕs30.00000°, δ50.00000°, λ103.00000°. Principal axes: T 6.0580, Plg79.0000°, Azm359.0000°; N 0.3230, Plg10.0000°, Azm201.0000°; P -6.3840, Plg4.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **07** 22:41:29.5±0.8, 5.°67N×126.°18E, h107km±6km, mb4.6/27, mbtmp5.0/30, MS3.8/4 Error ellipse: s-maj=14.2km s-min=6.9km az=80.0*

*MOS **07** 22:41:29.8±1.1, 5.°63N×126.°30E, h136km, mb5.2/20, Error ellipse: s-maj=10.1km s-min=5.8km az=110.3*

ISC 07 22:41:28.7±0.5, 5.°65N±0.°03×126.°31E±0.°04, h102km±4km, n668, σ1.8/16/635, mb5.1/173, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.59**	**333**		**Pn**	**22 41 56.2**	**0.0**
DAV				Sn	**Sn**	**22 42 17.3**	**+0.2**
DAV	**Davao City (W)**	**1.59**	**333**	P	**Pn**	**22 41 57.0**	**+0.8**
	684nm,0.3s,baz=138,slow=4.2,SNR=30						
DAV				S	**Sn**	**22 42 17.0**	**0.0**
	3μm,0.5s,baz=121,slow=22,SNR=6.4						
DAV	**Davao City (W)**	**1.59**	**333**	P	**Pn**	**22 41 57.3**	**+1.1**
SGSI	**Sangihe**	**2.10**	**202**	P	**Pn**	**22 42 03.3**	**+0.6**
SGSI				S	**Sn**	**22 42 30.7**	**+2.0**
TNTI	**Ternate**	**4.96**	**168**		**Pn**	**22 42 40.7**	**-0.1**
TNTI				Sn	**Sn**	**22 43 36.0**	**-1.1**
TNTI	**Ternate**	**4.96**	**168**	P	**Pn**	**22 42 41.5**	**+0.6**
TNTI	**Ternate**	**4.96**	**168**	S	**Sn**	**22 43 37.2**	**+0.1**
TNTI	**Ternate**	**4.96**	**168**	P	**Pn**	**22 42 40.8**	**-0.1**
KMSI	**Cibinong**	**5.55**	**205**	P	**Pn**	**22 42 51.1**	**+2.1**
MRSI	**Marisa**	**6.74**	**220**	P	**Pn**	**22 43 06.4**	**+1.3**
TOLI2	**Tolitoli**	**7.13**	**231**		**Pn**	**22 43 10.3**	**0.0**
TOLI2				Sn	**Sn**	**22 44 28.7**	**-1.1**
TOLI2	**Tolitoli**	**7.13**	**231**	P	**Pn**	**22 43 10.2**	**-0.2**
LUWI	**Luwuk**	**7.53**	**208**		**Pn**	**22 43 19.9**	**+4.0**
LUWI				Sn	**Sn**	**22 44 42.0**	**+2.4**
LUWI	**Luwuk**	**7.53**	**208**	P	**Pn**	**22 43 17.7**	**+1.9**
LUWI	**Luwuk**	**7.53**	**208**	S	**Sn**	**22 44 40.9**	**+1.3**
LUWI	**Luwuk**	**7.53**	**208**	P	**Pn**	**22 43 19.3**	**+3.5**
SANI	**Sanana**	**7.65**	**182**	P	**Pn**	**22 43 15.6**	**-1.9**
MYLDM	**Lahad Datu**	**7.79**	**267**		**Pn**	**22 43 20.2**	**+0.8**
MYLDM	**Lahad Datu**	**7.79**	**267**	P	**Pn**	**22 43 21.7**	**+2.3**
APSI	**Ampana**	**8.01**	**216**	P	**Pn**	**22 43 25.9**	**+3.5**
	6μm626nm,1.2s						
SWI	**Sorong**	**8.14**	**142**	P	**Pn**	**22 43 24.1**	**0.0**
	2μm198nm,0.7s						
SWI	**Sorong**	**8.14**	**142**	P	**Pn**	**22 43 23.8**	**-0.3**
SWI				S	**Sn**	**22 44 53.6**	**-0.9**
SWI				pmax	pmax		
	comp=Z,193nm,0.7s						
NLAI	**Namlea**	**8.86**	**175**	P	**Pn**	**22 43 32.6**	**-1.4**
MSAI	**Masohi**	**9.31**	**164**	P	**Pn**	**22 43 41.1**	**+1.0**
	comp=Z,7μmcomp=Z,252nm,1.1s						
AAI	**Ambon**	**9.46**	**168**	P	**Pn**	**22 43 41.7**	**-0.4**
	comp=Z,3μmcomp=Z,135nm,1.1s						
FAKI	**Fak Fak**	**10.37**	**145**		**Pn**	**22 43 54.6**	**+0.1**
FAKI	**Fak Fak**	**10.37**	**145**	P	**Pn**	**22 43 55.7**	**+1.2**
FAKI	**Fak Fak**	**10.37**	**145**	S	**Sn**	**22 45 50.4**	**+1.5**
FAKI	**Fak Fak**	**10.37**	**145**	P	**Pn**	**22 43 55.5**	**+1.0**
	comp=Z,3μmcomp=Z,1μmcomp=Z,121nm,1.0s						
RKPI	**Ransiki, Papua**	**10.60**	**132**	P	**Pn**	**22 43 59.1**	**+1.5**
	comp=Z,255nm,1.4s						
BNDI	**Bandanaira**	**10.72**	**160**	P	**Pn**	**22 43 59.6**	**+0.3**
BNDI	**Bandanaira**	**10.72**	**160**	P	**Pn**	**22 44 00.0**	**+0.7**
SPSI	**Sidrap Palu**	**11.57**	**215**	P	**Pn**	**22 44 11.3**	**+0.6**
	comp=Z,817nmcomp=Z,84nm,0.7s						
BKB	**Balikpapan**	**11.64**	**234**			**22 44 11.5**	**-0.1**
BKB	**Balikpapan**	**11.64**	**234**	S	**Sn**	**22 46 19.2**	**-0.5**
BKB	**Balikpapan**	**11.64**	**234**	P	**Pn**	**22 44 13.6**	**+2.0**
	comp=Z,4μmcomp=Z,233nm,0.9s						
BBSI	**Bau Bau**	**11.68**	**199**	P	**Pn**	**22 44 12.7**	**+0.6**
	comp=Z,79nm,0.8s						
BNSI	**Bone**	**11.75**	**212**	P	**Pn**	**22 44 15.4**	**+2.3**
	comp=Z,1μmcomp=Z,87nm,1.1s						
KMPI	**Kaimana, Papua**	**11.83**	**141**	P	**Pn**	**22 44 13.9**	**-0.3**
	comp=Z,2μmcomp=Z,127nm,0.8s						
BAKI	**Biak**	**11.91**	**124**	P	**Pn**	**22 44 17.0**	**+1.8**
	comp=Z,2μmcomp=Z,3μmcomp=Z,100nm,0.8s						
KAPI	**Kappang**	**12.45**	**212**		**Pn**	**22 44 23.4**	**+1.1**
KAPI	**Kappang**	**12.45**	**212**	P	**Pn**	**22 44 23.2**	**+0.8**
	comp=Z,80nm,0.8s,baz=14,slow=12,SNR=47						
KAPI				LR	LR	22 49 14.2	
	comp=Z,157nm,21.3s,baz=36,slow=38						
KAPI	**Kappang**	**12.45**	**212**	P	**Pn**	**22 44 23.5**	**+1.1**
BKSI	**Bulukumba**	**12.53**	**210**	P	**Pn**	**22 44 23.2**	**-0.2**
	comp=Z,53nm,0.8s						
BSSI	**Bau Bau, Buton**	**13.08**	**206**	P	**Pn**	**22 44 31.8**	**+1.2**
	comp=Z,924nmcomp=Z,56nm,1.0s						
MTKI	**Muara Teweh, K**	**13.15**	**240**	P	**P**	**22 44 35.3**	**-2.5**
	comp=Z,54nm,1.0s						
SBUM	**Sibu**	**14.41**	**258**		**P**	**22 44 54.3**	**+2.5**
SBUM	**Sibu**	**14.41**	**258**	P	**P**	**22 44 50.0**	**-1.8**
SMPI	**Sarmi**	**14.52**	**121**	P	**Pn**	**22 44 48.5**	**-0.9**
	comp=Z,2μmcomp=Z,72nm,1.0s						
BBKI	**Banjar Baru**	**14.60**	**232**	P	**P**	**22 44 55.0**	**+1.1**
	comp=Z,182nm,0.7s						
MMRI	**Maumere**	**14.76**	**196**		**P**	**22 44 56.7**	**+1.0**
MMRI	**Maumere**	**14.76**	**196**	P	**Pn**	**22 44 53.6**	**+1.2**
MMRI	**Maumere**	**14.76**	**196**	P	**P**	**22 44 55.9**	**+0.2**
	comp=Z,101nm,0.7s						
EDFI	**Ende, Flores**	**15.03**	**198**	P	**Pn**	**22 44 55.1**	**-0.8**
	comp=Z,950nmcomp=Z,107nm,0.8s						
SOEI	**Soe**	**15.44**	**188**		**P**	**22 45 02.8**	**-0.5**
SOEI	**Soe**	**15.44**	**188**	P	**P**	**22 45 02.3**	**-1.1**
SOEI	**Soe**	**15.44**	**188**	P	**P**	**22 45 02.5**	**-0.9**
	comp=Z,2μmcomp=Z,224nm,0.8s						
BATI	**Baumata**	**15.97**	**190**	P	**P**	**22 45 08.7**	**-0.5**
	comp=Z,296nm,0.6s,baz=62,slow=4.4,SNR=33						
BATI				S	**Sn**	**22 48 08.0**	**+3.4**
	comp=Z,138nm,0.9s,baz=343,slow=20,SNR=5

comp=Z,45nm,0.6s,baz=29,slow=10,SNR=9.6
comp=Z,45nm,0.6s
LEM Lembang 22.40 237 P **P** **22 46 20.1 +1.0**
comp=Z,2µmcomp=Z,54nm,0.8s
DSRI Dabo 22.54 255 P **P** **22 46 21.4 +1.0**
BBJI Bungbulang 22.72 235 P **P** **22 46 22.7 +0.4**
MYKOM **Kota Tinggi 22.74 261** P **P** **22 46 19.8 -2.6**
MYKOM **Kota Tinggi 22.74 261** P **P** **22 46 23.0 +0.6**
BTDF Bukit Timah Da 22.89 260 P **P** **22 46 25.7 +1.7**
FITZ Fitzroy Crossi 23.61 182 P **P** **22 46 30.4 0.0**
comp=Z,34nm,0.7s,baz=4.3,slow=7.6,SNR=67
FITZ S **S** **22 50 38.1 +0.8**
comp=Z,7.9nm,0.8s,baz=39,slow=14,SNR=4.5
comp=Z,34nm,0.7s
MDSI Maura Dua 24.29 246 P **P** **22 46 37.5 +0.8**
comp=Z,717nmcomp=Z,42nm,1.0s
KASI Kota Agung 24.45 243 P **P** **22 46 38.9 +0.7**
comp=Z,810nmcomp=Z,69nm,0.8s
LWLI Liwa 24.62 245 P **P** **22 46 40.6 +0.7**
comp=Z,161nm,0.9s
LHSI Lahat 24.63 248 P **P** **22 46 42.3 +2.5**
comp=Z,2µmcomp=Z,116nm,1.3s
IPM Ipoh 25.21 269 P **P** **22 46 45.0 -0.2**
KULM Kulim 25.55 270 P **P** **22 46 47.4 -0.8**
KULM IAmb IAmb 22 47 17.9
comp=Z,108nm,1.6s
MASI Maura Aman, Be 25.58 251 P **P** **22 46 51.1 +2.6**
comp=Z,2µmcomp=Z,127nm,0.6s
PMG Port Moresby 25.60 126 **P** **22 46 47.4 -1.2**
PMG Port Moresby 25.60 126 P **P** **22 46 49.7 +1.1**
PMG Port Moresby 25.60 126 P **P** **22 46 49.9 +1.3**
PMG Port Moresby 25.60 126 P **P** **22 46 47.4 -1.2**
PMG pmax pmax
comp=Z,32nm,0.8s
COEN Coen 25.68 139 P **P** **22 46 49.4 0.0**
comp=Z,76nm,0.9s
COEN Coen 25.68 139 P **P** **22 46 49.2 -0.2**
COEN IAmb IAmb 22 46 53.2
comp=Z,66nm,1.0s
COEN Coen 25.68 139 P **P** **22 46 50.0 +0.6**
JCJ Chichijima 26.14 34 P **P** **22 46 51.4 -2.0**
WB0 Warramunga Arr 26.48 163 P **P** **22 46 55.7 -0.8**
WB0 IAmb IAmb 22 47 05.5
comp=Z,116nm,1.2s
PPI Padang Panjang 26.58 258 P **P** **22 46 57.3 -0.2**
comp=Z,42nm,0.8s
WRAB Tennant Creek 26.62 163 P **P** **22 46 57.0 -0.8**
WRAB IAmb IAmb 22 47 07.1
comp=Z,43nm,0.7s
WRAB Tennant Creek 26.62 163 P **P** **22 46 57.4 -0.4**
WRAB Tennant Creek 26.62 163 P **P** **22 46 57.0 -0.8**
WRAB pmax pmax
comp=Z,43nm,0.7s
PDSI Padang 26.62 257 P **P** **22 47 01.8 +3.8**
comp=Z,1µmcomp=Z,91nm,1.2s
WRA Warramunga Arr 26.63 163 **P** **22 46 56.3 -1.6**
WRA Warramunga Arr 26.63 163 P **P** **22 46 57.3 -0.6**
comp=Z,20nm,0.8s,baz=340,slow=10.0,SNR=55
WRA PcP **PcP** **22 50 19.8 +0.2**
comp=Z,3.8nm,0.8s,baz=336,slow=2.7,SNR=5.1
WRA S **S** **22 51 22.0 -3.5**
comp=Z,6.5nm,1.0s,baz=339,slow=15,SNR=7.5
WRA ScP **ScP** **22 53 50.3 -0.2**
comp=Z,5.5nm,1.0s,baz=341,slow=3.4,SNR=5.7
comp=Z,20nm,0.8s
WRA Warramunga Arr 26.63 163 *e*P **P** **22 46 57.3 -0.6**
WRA pmax pmax
comp=Z,22nm,0.7s
WR8 Warramunga Ar 26.69 163 **P** **22 46 57.7 -0.7**
WR8 IAmb IAmb 22 47 21.0
comp=Z,37nm,0.8s
NJ2 Nanjing 27.18 346 *e*P **P** **22 47 04.3 +1.7**
NJ2 pmax pmax
comp=Z,17nm,0.8s
WHN Wuhan 27.20 337 P **P** **22 47 08.8 +5.9**
WHN pmax pmax
comp=Z,52nm,1.1s
MBWA Marble Bar 27.41 193 P **P** **22 47 02.9 -1.9**
comp=Z,28nm,0.7s
MBWA Marble Bar 27.41 193 **P** **22 47 04.3 -0.5**
MBWA Marble Bar 27.41 193 P **P** **22 47 04.7 -0.1**
JNU Nakatsue 27.66 8 P **P** **22 47 06.2 -0.8**
JNU Nakatsue 27.66 8 P **P** **22 47 08.8 +1.8**
PSAC1 Pilbara Seismi 27.76 193 P **P** **22 47 06.7 -1.2**
comp=Z,56nm,0.7s
PSA00 Pilbara Seismi 27.79 193 P **P** **22 47 07.2 -1.0**
comp=Z,64nm,0.7s
PSA00 Pilbara Seismi 27.79 193 **P** **22 47 07.2 -1.0**
PSA00 Pilbara Seismi 27.79 193 **P** **22 47 08.1 -0.1**
PSA00 IAmb IAmb 22 47 08.7
comp=Z,40nm,0.7s
PSA00 Pilbara Seismi 27.79 193 P **P** **22 47 07.7 -0.5**
PSAB3 Pilbara Seismi 27.80 193 P **P** **22 47 06.2 -2.2**
comp=Z,58nm,0.8s
SISI Saibi 28.05 256 P P 22 47 15.6 +4.9
comp=Z,43nm,1.2s
GSI Gunungsitoli 29.00 263 **P** **22 47 17.3 -1.8**
GSI IAmb IAmb 22 47 27.4
comp=Z,42nm,0.8s
GSI Gunungsitoli 29.00 263 P **P** **22 47 18.4 -0.7**
GSI Gunungsitoli 29.00 263 P **P** **22 47 18.7 -0.4**
comp=Z,58nm,0.9s
QIS Mount Isa 29.14 154 P **P** **22 47 21.2 +1.0**
ENH Enshi 29.17 329 P **P** **22 47 22.4 +1.9**
MTSU Mount Surprise 29.57 143 P **P** **22 47 25.7 +1.6**
CMAR Chiang Mai Arr 29.58 298 **P** **22 47 22.7 -1.5**
CMAR PcP **PcP** **22 50 27.4 +0.5**
CMAR Chiang Mai Arr 29.58 298 P **P** **22 47 23.9 -0.3**
comp=Z,3.7nm,0.6s,baz=111,slow=7.2,SNR=22
CMAR PcP **PcP** **22 50 27.1 +0.1**
comp=Z,4.8nm,0.8s,baz=123,slow=1.0,SNR=15
CMAR ScP **ScP** **22 53 59.8 0.0**
comp=Z,5.5nm,0.8s,baz=128,slow=1.6,SNR=20
comp=Z,3.7nm,0.6s
CHTO Chiang Mai 29.71 299 P **P** **22 47 25.4 0.0**
CHTO Chiang Mai 29.71 299 P **P** **22 47 26.5 +1.1**
CHTO Chiang Mai 29.71 299 P **P** **22 47 25.4 0.0**
CHTO pmax pmax
comp=Z,8.0nm,0.7s
KMI Kunming 29.75 313 P **P** **22 47 26.6 +0.7**
KMI PcP **PcP** **22 50 28.4 +0.9**
KMI pmax pmax
comp=Z,17nm,0.8s
AS31 Alice Springs 30.06 166 **P** **22 47 28.3 -0.1**
ASAR Alice Springs 30.07 166 **P** **22 47 28.3 -0.1**
ASAR Alice Springs 30.07 166 P **P** **22 47 28.5 +0.1**
comp=Z,21nm,0.6s,baz=344,slow=7.0,SNR=204
ASAR PcP **PcP** **22 50 27.9 -0.1**
comp=Z,12nm,0.8s,baz=350,slow=2.2,SNR=12
ASAR S **S** **22 52 17.5 -2.1**
comp=Z,6.3nm,1.1s,baz=348,slow=21,SNR=6.6
ASAR ScP **ScP** **22 54 00.9 -0.3**
comp=Z,1.5nm,0.5s,baz=344,slow=3.3,SNR=6.2
ASAR LR LR 23 02 26.4
comp=Z,687nm,18.4s,baz=242,slow=42
comp=Z,21nm,0.6s
GIRL Giralia 30.50 202 P **P** **22 47 33.1 +0.9**
GIRL IAmb IAmb 22 47 37.1
comp=Z,67nm,1.2s
INU Inuyama 31.16 17 P **P** **22 47 37.2 -0.7**
PZH PanZhiHua 31.30 314 P **P** **22 47 38.9 -0.5**
PZH pmax pmax
comp=Z,10.0nm,1.5s
PZH pmax pmax
comp=Z,280nm,7.3s
LYN LuoYang 31.48 338 P **P** **22 47 40.3 -0.5**
LYN pmax pmax
comp=Z,14nm,0.9s
LYN pmax pmax
comp=Z,230nm,9.3s
JGF Kuroka 31.50 17 P **P** **22 47 39.2 -1.7**
JGF IAmb IAmb 22 48 44.9
comp=Z,84nm,1.9s
TIA Tai'an 31.57 346 P **P** **22 47 41.5 0.0**
TIA pmax pmax
comp=Z,9.0nm,0.9s
KSAR Wonju Array Be 31.68 2 P **P** **22 47 43.0 +0.6**
KSAR Wonju Array Be 31.68 2 P **P** **22 47 43.0 +0.6**
KSRS Korea Array 31.69 2 P **P** **22 47 43.8 +1.2**
comp=Z,7.8nm,0.5s,baz=186,slow=10.0,SNR=36
KSRS PcP **PcP** **22 50 32.5 +0.4**
comp=Z,4.8nm,0.8s,baz=197,slow=3.0,SNR=9.6
comp=Z,7.8nm,0.5s
KS19 Wonju Array Si 31.74 2 P **P** **22 47 43.9 +0.9**
KS19 IAmb IAmb 22 47 45.1
comp=Z,67nm,1.4s

TV1H Townsville Har 31.93 141 P **P** **22 47 46.2 +1.3**
XAN Xi'an 32.53 333 P **P** **22 47 48.2 -1.8**
XAN pmax pmax
comp=Z,29nm,0.7s
XAN pmax pmax
comp=Z,200nm,3.8s
XAN Xi'an 32.53 333 P **P** **22 47 48.7 -1.3**
XAN PcP **PcP** **22 50 35.0 +0.4**
MJAR Matsushiro Arr 32.62 18 IAmb IAmb 22 47 51.8
comp=Z,13nm,1.6s
MJAR **PcP** **22 50 35.7 +1.0**
MJAR Matsushiro Arr 32.62 18 P **P** **22 47 49.4 -1.4**
comp=Z,1.9nm,0.5s,baz=197,slow=8.5,SNR=8.5
MJAR PcP **PcP** **22 50 35.5 +0.8**
comp=Z,6.4nm,0.8s,baz=169,slow=3.3,SNR=11
comp=Z,1.9nm,0.5s
MJA0 Matsu Arr-Jizo 32.64 18 *e*P **P** **22 47 49.1 -1.8**
MJA0 pmax pmax
comp=Z,3.0nm,0.6s
CD2 Chengdu 32.87 323 P **P** **22 47 51.1 -1.9**
CD2 pmax pmax
comp=Z,40nm,0.8s
MEEK Meekatharra 32.95 193 P **P** **22 47 53.0 -0.7**
HNS HongShan 33.33 343 ⇑P **P** **22 47 56.1 -0.8**
HNS pmax pmax
comp=Z,18nm,1.4s
DL2 Dalian 33.38 353 P **P** **22 47 58.0 +0.8**
DL2 pmax pmax
comp=Z,90nm,0.6s
JMM Marumori 34.67 20 P **P** **22 48 07.4 -1.1**
JMM Marumori 34.67 20 P **P** **22 48 09.7 +1.2**
BJT Baijiatuau 35.42 347 P **P** **22 48 14.7 -0.1**
BJT Baijiatuau 35.42 347 P **P** **22 48 16.1 +1.3**
BJT Baijiatuau 35.42 347 P **P** **22 48 14.7 -0.1**
BJT pmax pmax
comp=Z,62nm,1.3s
BJI Beijing 35.44 347 P **P** **22 48 14.6 -0.4**
BJI pmax pmax
comp=Z,14nm,0.5s
MORW Morawa 35.90 195 P **P** **22 48 18.9 -0.2**
MORW IAmb IAmb 22 48 19.6
comp=Z,28nm,0.8s
MORW Morawa 35.90 195 P **P** **22 48 20.5 +1.4**
FORT Forrest 36.26 177 P **P** **22 48 22.0 -0.1**
FORT IAmb IAmb 22 48 28.8
comp=Z,20nm,0.8s
QLP Quilpie 36.45 152 P **P** **22 48 25.1 +1.3**
LZDM Lanzhou Array 36.63 328 P **P** **22 48 25.4 -0.2**
comp=Z,2.3nm,0.3s,baz=159,slow=13,SNR=9.0
LZDM PcP **PcP** **22 50 47.6 +0.8**
comp=Z,6.4nm,0.7s,baz=155,slow=4.2,SNR=6.2
LZDM ScP **ScP** **22 54 24.5 +0.2**
comp=Z,1.6nm,0.3s,baz=160,slow=4.7,SNR=5.3
comp=Z,2.3nm,0.3s
LZH Lanzhou 36.65 329 *e*P **P** **22 48 25.5 -0.2**
LZH pP pP 22 48 47.7 -0.5
LZH sP sP 22 48 59.9 +0.2
LZH pmax pmax
comp=Z,37nm,1.8s
BLDU Ballidu 37.21 194 P **P** **22 48 31.7 +1.5**
JTM Tenmabayashi 37.40 19 P **P** **22 48 30.9 -0.9**
HHC Hu-ho-hao-te 37.46 341 ⇑*i*P **P** **22 48 32.3 0.0**
HHC pP pP 22 48 57.8 +2.4
HHC pmax pmax
comp=Z,18nm,1.3s
BTO Baotou 37.75 340 *e*P P 22 48 40.1 +5.3
BTO pmax pmax
comp=Z,10.0nm,0.5s
BTO pmax pmax
comp=Z,170nm,4.1s
KLBR Kellerberrin 37.92 192 P **P** **22 48 38.0 +1.8**
GD1S Gladstone Soft 38.04 141 P **P** **22 48 38.4 +1.1**
SHL Shillong 38.43 305 **P** **22 48 40.0 -0.8**
SHL Shillong 38.43 305 P **P** **22 48 40.0 -0.8**
SHL pmax pmax
comp=Z,35nm,0.7s
MUN Mundaring 38.64 194 P **P** **22 48 43.2 +1.0**
USRK Ussuriysk Ar. 38.72 7 P **P** **22 48 43.4 +0.7**
comp=Z,17nm,0.7s,baz=187,slow=7.2,SNR=26
comp=Z,17nm,0.7s
MDJ Mudanjiang 38.92 4 P **P** **22 48 45.5 +1.1**
MDJ S **S** **22 54 39.6 +4.4**
MDJ sS sS 22 55 13.9 -0.8
MDJ pmax pmax
comp=Z,33nm,1.1s
MDJ LR LR
comp=Z,550nm,17.9s
MDJ LR LR
comp=Z,740nm,17.9s
MDJ LR LR
comp=Z,1µm,10.3s
MDJ Mudanjiang 38.92 4 P **P** **22 48 45.7 +1.3**
EIDS Eidsvold 39.12 143 P **P** **22 48 46.4 0.0**
EIDS IAmb IAmb 22 48 48.1
comp=Z,31nm,0.8s
EIDS Eidsvold 39.12 143 P **P** **22 48 46.9 +0.6**
XLT XiLinHaoTe 39.15 348 *e*P **P** **22 48 47.2 +0.8**
XLT pmax pmax
comp=Z,27nm,0.8s
XLT pmax pmax
comp=Z,120nm,4.5s
NWAO Narrogin (SRO) 39.32 192 P **P** **22 48 47.9 0.0**
NWAO Narrogin (SRO) 39.32 192 P **P** **22 48 47.9 0.0**
NWAO pmax pmax
comp=Z,73nm,1.4s
BBOO Buckleboo 39.35 167 P **P** **22 48 48.6 +0.5**
BBOO Buckleboo 39.35 167 P **P** **22 48 49.4 +1.2**
WHYH Whyalla 39.93 165 P **P** **22 48 54.1 +1.2**
BNX BinXian 39.95 1 ⇓P **P** **22 48 53.3 +0.4**
BNX pmax pmax
comp=Z,25nm,1.2s
STKA Stephens Creek 40.06 160 P **P** **22 48 54.6 +0.5**
STKA Stephens Creek 40.06 160 P **P** **22 48 54.9 +0.8**
comp=Z,40nm,0.7s,baz=333,slow=8.7,SNR=44
STKA PcP **PcP** **22 50 57.4 +0.3**
comp=Z,19nm,0.7s,baz=321,slow=5.2,SNR=4.7
comp=Z,40nm,0.7s
STKA Stephens Creek 40.06 160 P **P** **22 48 55.3 +1.3**
AULRC Lightning Ridg 40.62 150 P **P** **22 49 00.6 +1.9**
HTT Hallett 40.66 164 P **P** **22 49 00.5 +1.4**
LSA Lhasa 40.88 310 P **P** **22 49 01.7 +0.2**
LSA IAmb IAmb 22 49 02.8
comp=Z,44nm,1.7s
LSA Lhasa 40.88 310 P **P** **22 48 57.4 -4.0**
LSA pmax pmax
comp=Z,13nm,1.4s
LSA Lhasa 40.88 310 P **P** **22 49 01.7 +0.2**
LSA pmax pmax
comp=Z,44nm,1.7s
ASAJ Asahikawa 40.90 18 P **P** **22 49 00.7 -0.1**
ASAJ pmax pmax
comp=Z,194nm,1.9s
JKA Kamikawa-asahi 40.90 18 P **P** **22 49 00.7 -0.1**
GTA Gaotai 41.25 328 *e*P **P** **22 49 03.7 -0.2**
GTA PcP **PcP** **22 51 01.6 +0.6**
GTA pmax pmax
comp=Z,13nm,1.2s
TW1H Toowoomba 1 Ha 41.28 144 P **P** **22 49 05.3 +1.1**
CMSA Cobar Meteorol 41.35 155 P **P** **22 49 05.8 +1.2**
H11S3 WAKE ISLAND Hy 41.38 68 T T 23 33 29.1
baz=253,slow=77,SNR=8.6
H11S1 WAKE ISLAND Hy 41.40 68 T T 23 33 19.7
baz=253,slow=77,SNR=5.3
H11S2 WAKE ISLAND Hy 41.40 68 T T 23 33 10.9
baz=253,slow=77,SNR=10
AUWSH Wavell State H 41.80 143 P **P** **22 49 10.0 +1.6**
H11N1 WAKE ISLAND Hy 41.85 67 T T 23 34 02.3
baz=255,slow=74,SNR=5.6
H11N2 WAKE ISLAND Hy 41.86 67 T T 23 34 10.8
baz=255,slow=74,SNR=4.1
H11N3 WAKE ISLAND Hy 41.87 67 T T 23 34 01.8
baz=255,slow=74,SNR=4.3
GOMU GeErMu 41.94 321 P **P** **22 49 09.0 -0.9**
GOMU PcP **PcP** **22 51 03.4 -0.2**
GOMU pmax pmax
comp=Z,11nm,1.2s
AUDCS Dubbo College 43.25 152 P **P** **22 49 21.2 +1.1**
ARMA Armidale 43.29 147 P **P** **22 49 21.7 +1.2**
ARMA Armidale 43.29 147 P **P** **22 49 22.2 +1.6**
YSS Yuzhno-Sakhali 43.52 16 *e*P **P** **22 49 22.5 +0.5**
YSS pmax pmax
comp=Z,30nm,1.0s
EVN Everest 43.53 305 P **P** **22 49 22.2 -1.1**
HIA Hailar 43.82 354 P **P** **22 49 24.6 +0.1**
HIA IAmb IAmb 22 49 26.5
comp=Z,66nm,1.4s
HIA Hailar 43.82 354 P **P** **22 49 25.4 +1.0**
HIA Hailar 43.82 354 P **P** **22 49 24.6 +0.1**
HIA pmax pmax
comp=Z,66nm,1.4s
HILR Hailar Array B 44.10 354 P **P** **22 49 27.8 +1.0**
comp=Z,16nm,0.4s,baz=164,slow=10,SNR=32
HILR PcP **PcP** **22 51 10.7 +0.5**
comp=Z,6.4nm,0.4s,baz=164,slow=3.2,SNR=9.1
comp=Z,16nm,0.4s
HEH HeiHe 44.46 1 *e*P **P** **22 49 29.9 +0.4**
HEH pmax pmax
comp=Z,37nm,1.0s
MGBR Mount Gambier 45.15 164 P **P** **22 49 35.7 +0.5**
ULN Ulaanbaatar 45.18 342 P **P** **22 49 34.2 -1.3**
ULN IAmb IAmb 22 49 50.1
comp=Z,25nm,1.1s
ULN Ulaanbaatar 45.18 342 *i* P **P** **22 49 35.7 +0.3**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 45.18 342 P **P** **22 49 35.2 -0.2**
ULN PcP **PcP** **22 51 14.3 +0.2**
SONM Songino Array 45.36 341 **P** **22 49 36.3 -0.5**
SONM Songino Array 45.36 341 P **P** **22 49 36.1 -0.7**
comp=Z,3.0nm,0.5s,baz=148,slow=9.5,SNR=23
SONM PcP **PcP** **22 51 14.8 +0.1**
comp=Z,7.0nm,0.8s,baz=165,slow=4.0,SNR=8.8
SONM ScP **ScP** **22 54 58.0 -0.2**
comp=Z,1.2nm,0.8s,baz=161,slow=5.3,SNR=4.5
comp=Z,3.0nm,0.5s
SYDH Sydney Hard Ro 45.51 151 P **P** **22 49 39.8 +1.8**
SANVU Saraoutou 45.60 118 P **P** **22 49 38.5 -0.5**
SANVU Saraoutou 45.60 118 P **P** **22 49 40.2 +1.2**
SANVU Saraoutou 45.60 118 P **P** **22 49 40.6 +1.5**
AUMTS Mt Stromlo 46.01 154 P **P** **22 49 43.4 +1.4**
CAN Canberra 46.01 154 P **P** **22 49 41.4 -0.6**
CAN IAmb IAmb 22 49 44.9
comp=Z,34nm,0.8s
CAN Canberra 46.01 154 P **P** **22 49 43.6 +1.6**
CAN Canberra 46.01 154 P **P** **22 49 41.4 -0.6**
CAN pmax pmax
comp=Z,34nm,0.8s
CAN Canberra 46.01 154 P **P** **22 49 44.0 +2.0**
BRAT Ballarat 46.01 160 P **P** **22 49 43.7 +1.8**
CNB Canberra Magne 46.16 154 P **P** **22 49 44.5 +1.3**
TOO Toolangi 46.57 159 P **P** **22 49 45.9 -0.4**
TOO Toolangi 46.57 159 P **P** **22 49 45.9 -0.4**
TOO pmax pmax
comp=Z,8.0nm,0.8s
ZEA Zeya 47.95 1 *i* P **P** **22 49 57.5 +0.7**
HYBB Hyderabad (bro 48.10 288 *e*P **P** **22 49 59.4 +0.8**
HYBB *es*P **sP** **22 50 30.7 -2.3**
HYBB *e*PP **PP** **22 51 52.5 +0.7**
HYBB *e*ScP **ScP** **22 55 11.0 +0.7**
HYBB *e*S **S** **22 56 51.4 +1.5**
ONTNC Ouen Toro 48.12 127 P **P** **22 49 58.9 +0.4**
YATNC Mamie plateau, 48.34 126 P **P** **22 50 01.6 +1.3**
ZAK Zakamensk 48.59 340 *e*P **P** **22 50 00.3 -1.6**
ZAK pmax pmax
comp=Z,9.0nm,1.5s
TLY Talaya 49.59 342 P **P** **22 50 08.9 -0.5**
TLY IAmb IAmb 22 50 24.2
comp=Z,35nm,1.2s
TLY Talaya 49.59 342 *i* P **P** **22 50 09.9 +0.5**
TLY pmax pmax
comp=Z,14nm,1.5s
MOY Mondy 50.45 340 *e*P **P** **22 50 15.8 -0.2**
MOY pmax pmax
comp=Z,21nm,2.3s
WMQ Urumqi 50.93 324 *e*P **P** **22 50 19.9 +0.2**
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ LR LR
comp=Z,13µm,13.3s
WMQ LR LR
comp=Z,16µm,12.1s
WMQ LR LR
comp=Z,6µm,16.1s
PETK Petropavlovsk- 53.83 23 P **P** **22 50 39.5 -1.4**
PETK Petropavlovsk- 53.83 23 P **P** **22 50 41.2 +0.4**
comp=Z,13nm,0.8s,baz=194,slow=4.6,SNR=11
comp=Z,13nm,0.8s
DGZ Jazzator, Alta 54.73 330 *i* P **P** **22 50 48.0 +0.3**
DGZ pmax pmax
comp=Z,8.0nm,1.2s
DGAR Diego Garcia 55.28 257 P **P** **22 50 51.7 -0.3**
DGAR Diego Garcia 55.28 257 P **P** **22 50 51.7 -0.3**
DGAR pmax pmax
comp=Z,190nm,1.2s
MK31 Makanchi Array 55.76 325*c* *i*P **P** **22 50 53.8 -1.1**
MKAR Makanchi Array 55.76 325 P **P** **22 50 53.2 -1.7**
MKAR Makanchi Array 55.76 325 P **P** **22 50 53.8 -1.2**
comp=Z,19nm,0.4s,baz=119,slow=7.6,SNR=497
MKAR PcP **PcP** **22 51 52.0 -0.9**
comp=Z,11nm,0.7s,baz=117,slow=5.5,SNR=6.1
comp=Z,19nm,0.4s
MAKZ Makanchi 55.94 325 P **P** **22 50 54.7 -1.6**
MAKZ Makanchi 55.94 325 P **P** **22 50 54.7 -1.6**
MAKZ pmax pmax
comp=Z,558nm,1.2s
TARG Taragay, Kyrgy 56.06 317 P **P** **22 50 55.9 -1.7**
TARG Taragay, Kyrgy 56.06 317 P **P** **22 50 55.9 -1.7**
MSVF Nonsavu 56.10 116 P **P** **22 50 57.2 -0.7**
MSVF Nonsavu 56.10 116 P **P** **22 51 00.0 +2.1**
MSVF Nonsavu 56.10 116 P **P** **22 50 57.2 -0.7**
MSVF pmax pmax
comp=Z,35nm,0.9s
MSVF Nonsavu 56.10 116 P **P** **22 50 59.9 +2.1**
YAK Yakutsk 56.32 2 P **P** **22 50 58.1 -0.5**
YAK Yakutsk 56.32 2*c* *i*P **P** **22 50 58.6 0.0**
YAK *e* 22 51 53.3
YAK *e* 22 53 04.3
YAK *e*PPP PPP 22 54 21.5
YAK *e*S **S** **22 58 40.9 +0.2**
YAK *e* 23 00 36.4
YAK pmax pmax
comp=Z,97nm,1.1s
YAK pmax pmax
comp=N,50nm,1.3s
YAK pmax pmax
comp=E,22nm,1.4s
YAK pmax pmax
comp=Z,254nm,3.0s
YAK pmax pmax
comp=N,294nm,3.2s
YAK pmax pmax
comp=E,118nm,4.0s
YAK smax smax
comp=E,181nm,2.1s
YAK smax smax
comp=N,107nm,1.9s
TKM2 Tokmak 2 58.05 318 P **P** **22 51 10.5 -0.9**
SNR=11
KBK Karagaybulak 58.37 317 P **P** **22 51 13.1 -0.6**
SNR=6.5
ARLS Aral 58.48 316 P **P** **22 51 14.4 0.0**
ARLS pmax pmax
comp=Z,19nm,1.4s
UCH Uchtor 58.49 317 P **P** **22 51 14.2 -0.7**
SNR=16
CHMS Chumysh 58.64 318 P **P** **22 51 14.1 -1.2**
SNR=5.7
AAK Ala-Archa 58.67 317 **P** **22 51 15.4 -0.3**
AAK Ala-Archa 58.67 317 P **P** **22 51 14.9 -0.8**
comp=Z,2.8nm,0.4s,baz=134,slow=5.1,SNR=16
comp=Z,2.8nm,0.4s
AAK Ala-Archa 58.67 317 P **P** **22 51 14.5 -1.3**
SNR=7.3
AAK Ala-Archa 58.67 317 *i* P **P** **22 51 15.9 +0.2**
AAK pmax pmax
comp=Z,15nm,1.3s
ZAA0 Zalesovo Array 58.70 333 P **P** **22 51 13.7 -1.8**
ZALV Zalesovo Beam 58.70 333 P **P** **22 51 14.0 -1.5**
ZALV Zalesovo Beam 58.70 333 P **P** **22 51 13.7 -1.8**
comp=Z,6.2nm,0.4s,baz=114,slow=6.6,SNR=20
ZALV PKP2bc **P'P'bc** **23 21 00.5 -1.8**
comp=Z,2.3nm,0.8s,baz=306,slow=5.1,SNR=7.0
comp=Z,6.2nm,0.4s
USP Ospenovka 58.92 318 P **P** **22 51 16.2 -1.1**
SNR=14
EKS2 Erkin-Say 59.16 317 P **P** **22 51 18.4 -0.7**
SNR=11
ARSB Arslanbob 59.20 315 **P** **22 51 18.8 -0.6**
ARSB Arslanbob 59.20 315 P **P** **22 51 18.8 -0.6**
DRK Karamyk 59.40 313 P **P** **22 51 20.3 -0.7**

DRK **Karamyk** 59.40 313 P P 22 51 20.3 -0.7
KURBB **Kurchatov Arra** 59.91 327 P P 22 51 22.5 -1.4
comp=Z,16nm,0.6s,baz=124,slow=6.5,SNR=106
comp=Z,16nm,0.6s
KURK **Kurchatov** 59.91 327 P P 22 51 22.9 -1.0
KURK **Kurchatov** 59.91 327 *i* P P 22 51 22.7 -1.2
KURK pmax pmax
comp=Z,20nm,0.8s
KURK **Kurchatov** 59.91 327 P P 22 51 22.6 -1.2
DCZ **Deep Cove** 62.59 149 P P 22 51 41.1 -0.8
AIS **Amsterdam Isla** 62.60 222 P P 22 51 41.0 -1.2
QRZ **Quartz Range** 62.69 142 P P 22 51 41.5 -1.2
TOZ **Tahuroa Road** 62.86 138 P P 22 51 43.0 -1.0
MRNZ **Matariki Terra** 63.16 142 P P 22 51 43.3 -2.6
INZ **Inchbonnie** 63.17 144 P P 22 51 45.0 -0.9
THZ **Tophouse** 63.47 143 P P 22 51 47.1 -0.9
THZ IAmb IAmb 22 51 49.2
comp=Z,33nm,0.9s
LBZ **Lake Benmore** 63.50 146 P P 22 51 47.5 -0.6
RPZ **Rata Peaks** 63.56 145 P P 22 51 47.9 -0.6
RAO **Raoul Island** 63.79 126 P P 22 51 48.5 -1.7
RAO **Raoul Island** 63.79 126 P P 22 51 48.5 -1.7
RAO pmax pmax
comp=Z,292nm,0.9s
TCW **Tory Channel** 63.98 141 P P 22 51 51.7 +0.5
BKZ **Black Stump Fm** 64.28 138 P P 22 51 52.9 -0.5
BKZ IAmb IAmb 22 52 00.1
comp=Z,31nm,1.0s
BKZ **Black Stump Fm** 64.28 138 P P 22 51 54.9 +1.5
RTZ **Ruatahuna** 64.32 138 P P 22 51 52.3 -1.4
RTZ IAmb IAmb 22 51 55.1
comp=Z,36nm,0.9s
BHW **Baring Head** 64.47 141 P P 22 51 53.1 -1.3
BVAR **Borovoye Array** 65.50 327 PKP2bc 23 20 43.5
comp=Z,1.1nm,0.9s,baz=303,slow=8.4,SNR=4.8
TIXI **Tiksi** 65.94 1 P 22 52 03.1 -0.4
TIXI **Tiksi** 65.94 1 *i* P P 22 52 03.5 0.0
TIXI pmax pmax
comp=Z,49nm,0.9s
TIXI **Tiksi** 65.94 1 P P 22 52 03.4 0.0
BILL **Bilibino** 67.82 15 *i* P P 22 52 16.7 +1.3
BILL pmax pmax
comp=Z,5.0nm,1.0s
NRIK **Noril'sk** 68.48 346 P P 22 52 19.1 -0.4
NRIK **Noril'sk** 68.48 346 P P 22 52 18.9 -0.6
comp=Z,16nm,1.0s,baz=144,slow=7.1,SNR=15
comp=Z,16nm,1.0s
NRIK **Noril'sk** 68.48 346 *i* P P 22 52 19.5 0.0
NRIK pmax pmax
comp=Z,19nm,1.0s
AKUT **Akutan** 72.59 35 P P 22 52 46.2 +1.5
CASY **Casey** 72.66 187 P P 22 52 44.3 -0.6
CASY IAmb IAmb 22 52 47.1
comp=Z,29nm,0.8s
CASY **Casey** 72.66 187 P P 22 52 45.6 +0.7
DRV **Dumont d'Urvil** 72.81 174 P P 22 52 45.8 +0.1
GAMB **Gambell** 72.83 24 P P 22 52 46.4 +0.5
L14K **Kuka Creek** 76.01 28 IAmb IAmb 22 53 31.9
comp=Z,23nm,1.1s
L14K **Kuka Creek** 76.01 28 P P 22 53 04.7 +0.3
baz=256
M15K **Kasigluk River** 76.80 29 P P 22 53 09.7 +0.7
baz=258
N15K **Kwethluk River** 76.98 29 P P 22 53 11.8 +1.7
baz=258
H16K **Elim** 77.02 25 P P 22 53 10.8 +0.7
baz=256
J16K **Anvik River** 77.40 26 P P 22 53 13.0 +0.7
baz=257
D17K **Noatak River** 77.50 22 P P 22 53 13.5 +0.7
baz=254
L16K **Owhat River** 77.59 28 P P 22 53 14.2 +0.8
baz=259
N16K **Nishlik Lake** 77.69 29 P P 22 53 15.5 +1.5
baz=260
M16K **Timber Creek** 77.70 29 IAmb IAmb 22 53 39.3
comp=Z,15nm,0.7s
M16K **Timber Creek** 77.70 29 P P 22 53 14.8 +0.8
baz=259
AKT **Akhty** 77.73 311 *e*P P 22 53 10.4 -4.3
AKT pmax pmax
comp=Z,694nm,1.7s
E17K **Hotham Inlet** 77.80 22 P P 22 53 15.2 +0.8
baz=255
G17K **Kiwalik Mounta** 77.88 24 P P 22 53 15.6 +0.7
baz=257
J17K **VABM Dome** 78.10 26 P P 22 53 16.8 +0.6
baz=259
L17K **Donlin** 78.21 28 P P 22 53 17.3 +0.5
baz=260
K17K **Iditarod** 78.32 27 IAmb IAmb 22 53 30.7
comp=Z,30nm,1.1s
K17K **Iditarod** 78.32 27 P P 22 53 18.5 +1.1
baz=260
E18K **Tukpahlearik C** 78.34 22 P P 22 53 18.5 +1.0
baz=256
B18K **Kokolik River** 78.40 20 P P 22 53 18.8 +1.1
baz=255
O17K **Koliganek Bris** 78.40 30 P P 22 53 11.9 -6.0
baz=261
C18K **Utukok River** 78.43 21 P P 22 53 18.8 +0.8
baz=256
N17K **Nushagak Hills** 78.47 29 P P 22 53 19.4 +1.2
baz=261
M17K **Holitna River** 78.49 28 IAmb IAmb 22 53 56.0
comp=Z,76nm,1.9s
M17K **Holitna River** 78.49 28 P P 22 53 19.2 +0.9
baz=261
F18K **Selawik** 78.52 23 P P 22 53 19.6 +1.2
baz=258
BELG **Belogornoye** 78.64 322 *i* P P 22 53 17.9 -1.4
BELG pmax pmax
comp=Z,85nm,0.9s
L18K **Granite Mounta** 78.97 28 P P 22 53 21.5 +0.5
baz=261
C19K **Lookout Ridge** 79.10 21 IAmb IAmb 22 53 23.8
comp=Z,37nm,1.1s
C19K **Lookout Ridge** 79.10 21 P P 22 53 22.8 +1.2
baz=257
N18K **Kilae Creek** 79.13 29 P P 22 53 22.7 +0.8
baz=262
J18K **Innoko River** 79.16 26 P P 22 53 22.9 +0.9
baz=261
M18K **Stony River** 79.27 29 P P 22 53 23.6 +1.0
baz=262
F19K **Shaleruckik Mo** 79.30 23 P P 22 53 23.6 +0.9
baz=259
D19K **Kuna River** 79.50 21 IAmb IAmb 22 53 28.4
comp=Z,19nm,0.9s
D19K **Kuna River** 79.50 21 P P 22 53 24.7 +0.9
baz=259
H19K **Roundabout Mou** 79.60 24 P P 22 53 25.2 +0.9
baz=261
E19K **Redstone River** 79.62 22 IAmb IAmb 22 53 26.9
comp=Z,20nm,0.9s
E19K **Redstone River** 79.62 22 P P 22 53 25.4 +0.9
baz=260
J19K **Poorman** 79.72 26 P P 22 53 25.8 +0.8
baz=262
L19K **White Mountain** 79.82 28 IAmb IAmb 22 53 38.1
comp=Z,44nm,1.7s
L19K **White Mountain** 79.82 28 P P 22 53 26.9 +1.3
baz=263
N19K **Bonanza Creek** 79.83 29 P P 22 53 26.4 +0.6
baz=263
M19K **Big River Lodg** 80.00 28 IAmb IAmb 22 54 12.5
comp=Z,69nm,2.0s
M19K **Big River Lodg** 80.00 28 P P 22 53 27.6 +1.0
baz=263
D20K **Etivluk River** 80.08 21 IAmb IAmb 22 53 29.2
comp=Z,25nm,1.0s
D20K **Etivluk River** 80.08 21 P P 22 53 27.6 +0.7
baz=260
B20K **Meade River** 80.12 20 P P 22 53 27.7 +0.7
baz=259
F20K **Avaraart Lake** 80.13 23 P P 22 53 28.4 +1.2
baz=261
H20K **Anotleneega Mo** 80.24 25 P P 22 53 28.7 +0.8
baz=262
L20K **Farewell, AK** 80.31 28 P P 22 53 28.9 +0.7
baz=264
K20K **Telida** 80.32 27 P P 22 53 29.6 +1.3
baz=263
J20K **Nowinta River** 80.39 26 P P 22 53 29.9 +1.3
baz=263
M20K **Styx River** 80.59 28 P P 22 53 30.9 +1.0
baz=264

CCD **Concordia, Ant** 80.64 181 P P 22 53 31.1 +0.9
O20K **Slope Mountain** 80.67 30 P P 22 53 30.4 +0.1
baz=265
IMAR **Indian Mountai** 80.77 24 P P 22 53 31.6 +1.0
C21K **Knifeblade Rid** 80.80 21 P P 22 53 31.1 +0.4
baz=262
B21K **Ikpikpuk River** 80.93 20 IAmb IAmb 22 53 33.7
comp=Z,53nm,1.1s
B21K **Ikpikpuk River** 80.93 20 P P 22 53 31.8 +0.4
baz=265
G21K **Allakaket** 80.93 24 IAmb IAmb 22 53 33.9
comp=Z,22nm,1.0s
G21K **Allakaket** 80.93 24 P P 22 53 32.0 +0.6
baz=263
SPCR **Spurr Chakacha** 80.97 29 P P 22 53 32.1 +0.2
baz=265
N20K **Mount Spurr** 80.97 29 P P 22 53 31.9 +0.1
baz=265
E21K **Killik River** 81.00 22 P P 22 53 32.2 +0.4
baz=262
F21K **Alatna River** 81.03 23 P P 22 53 32.1 +0.1
baz=263
H21K **Melozitna River** 81.12 24 IAmb IAmb 22 53 48.6
comp=Z,42nm,0.9s
PPLA **Purkeypile** 81.12 27 P P 22 53 32.8 +0.1
baz=265
SKT **Skwentna** 81.35 28 P P 22 53 33.4 -0.4
baz=266
I21K **Tanana** 81.42 25 IAmb IAmb 22 53 37.9
comp=Z,34nm,0.8s
I21K **Tanana** 81.42 25 P P 22 53 34.0 0.0
baz=265
B22K **Teshekpuk Lake** 81.43 20 IAmb IAmb 22 53 37.6
comp=Z,61nm,1.2s
B22K **Teshekpuk Lake** 81.43 20 P P 22 53 34.4 +0.4
baz=263
D22K **Ayakyak River** 81.52 21 IAmb IAmb 22 54 10.3
comp=Z,64nm,2.0s
D22K **Ayikyak River** 81.52 21 P P 22 53 34.9 +0.3
baz=264
F22K **John River** 81.56 23 P P 22 53 35.4 +0.6
baz=264
SUA **Susitna One** 81.69 29 P P 22 53 35.4 -0.3
baz=266
H22K **Ishtalitna Cre** 81.73 24 P P 22 53 36.5 +0.8
baz=265
BPAW **Bear Paw Mtn.** 81.76 26 IAmb IAmb 22 53 37.9
comp=Z,26nm,1.0s
BPAW **Bear Paw Mtn.** 81.76 26 P P 22 53 36.9 +1.0
baz=266
E22K **Anaktuvuk Pass** 81.76 22 IAmb IAmb 22 53 39.3
comp=Z,28nm,0.9s
E22K **Anaktuvuk Pass** 81.76 22 P P 22 53 36.9 +1.1
baz=264
G22K **Bettles** 81.77 23 P P 22 53 37.0 +1.1
baz=265
SLKM **Skilak Lake** 81.89 30 IAmb IAmb 22 53 38.4
comp=Z,36nm,1.1s
MLY **Manley** 81.93 25 IAmb IAmb 22 53 38.9
comp=Z,26nm,1.0s
MLY **Manley** 81.93 25 P P 22 53 37.9 +1.1
baz=266,SNR=7.1
M22K **Willow** 82.01 29 P P 22 53 37.6 +0.5
baz=267
TRF **Thorofare Moun** 82.02 27 IAmb IAmb 22 53 40.0
comp=Z,22nm,0.9s
TRF **Thorofare Moun** 82.02 27 P P 22 53 38.1 +0.6
baz=267,SNR=11
D23K **Nanushuk River** 82.25 21 IAmb IAmb 22 53 41.3
comp=Z,23nm,0.9s
D23K **Nanushuk River** 82.25 21 P P 22 53 39.4 +1.0
baz=266
SEW **Seward** 82.26 30 P P 22 53 39.8 +1.3
baz=268
COLD **Coldfoot** 82.30 23 IAmb IAmb 22 53 42.0
comp=Z,24nm,0.8s
COLD **Coldfoot** 82.30 23 P P 22 53 39.8 +1.2
baz=266,SNR=22
G23K **Bananza Creek** 82.33 24 IAmb IAmb 22 53 42.3
comp=Z,24nm,0.9s
G23K **Bananza Creek** 82.33 24 P P 22 53 39.8 +0.9
baz=266
C23K **Itkillik River** 82.34 20 IAmb IAmb 22 53 42.5
comp=Z,36nm,0.8s
C23K **Itkillik River** 82.34 20 P P 22 53 39.4 +0.6
baz=265,SNR=17
PMR **Palmer** 82.47 29 IAmb IAmb 22 53 41.4
comp=Z,17nm,0.8s
PMR **Palmer** 82.47 29 P P 22 53 40.1 +0.5
PMR **Palmer** 82.47 29 P P 22 53 39.8 +0.2
baz=268
H23K **Yukon River** 82.48 24 P P 22 53 39.9 +0.2
baz=267
I23K **Minto, Yukon-K** 82.52 25 IAmb IAmb 22 53 42.2
comp=Z,60nm,1.4s
I23K **Minto, Yukon-K** 82.52 25 P P 22 53 40.5 +0.7
baz=267,SNR=10
E23K **Chandalar** 82.57 22 IAmb IAmb 22 53 42.5
comp=Z,24nm,1.1s
E23K **Chandalar** 82.57 22 P P 22 53 40.7 +0.5
baz=267,SNR=11
NEA2 **Nenana** 82.62 26 IAmb IAmb 22 53 42.4
comp=Z,20nm,0.9s
NEA2 **Nenana** 82.62 26 P P 22 53 40.6 +0.2
baz=268,SNR=14
TOLK **Toolik Lake Re** 82.62 22 P P 22 53 40.7 +0.4
baz=267,SNR=8.4
MCK **McKinley** 82.64 27 IAmb IAmb 22 53 41.9
comp=Z,35nm,0.9s
MCK **McKinley** 82.64 27 P P 22 53 40.5 -0.1
baz=268,SNR=20
RND **Reindeer** 82.67 27 IAmb IAmb 22 53 41.8
comp=Z,32nm,1.1s
WAT1 **Susitna Watana** 82.78 27 P P 22 53 41.4 +0.1
baz=268
KNK **Knik Glacier** 82.79 29 IAmb IAmb 22 53 43.0
comp=Z,22nm,1.0s
KNK **Knik Glacier** 82.79 29 P P 22 53 41.7 +0.4
baz=268
PWL **Port Wells** 82.83 29 P P 22 53 42.2 +0.6
baz=269
SML **Sawmill** 82.86 28 IAmb IAmb 22 53 43.3
comp=Z,29nm,1.0s
SML **Sawmill** 82.86 28 P P 22 53 42.3 +0.5
baz=269,SNR=5.0
D24K **Happy Valley** 82.92 21 IAmb IAmb 22 53 45.3
comp=Z,36nm,1.1s
D24K **Happy Valley** 82.92 21 P P 22 53 42.5 +0.7
baz=267
C24K **Franklin Bluff** 82.99 20 IAmb IAmb 22 53 43.9
comp=Z,26nm,1.1s
C24K **Franklin Bluff** 82.99 20 P P 22 53 42.8 +0.6
baz=267
E24K **Your Creek** 83.00 22 P P 22 53 42.8 +0.4
baz=268
WRH **Wood River Hil** 83.04 26 IAmb IAmb 22 53 43.8
comp=Z,21nm,1.0s
M23K **Glacier View** 83.15 29 P P 22 53 43.5 +0.3
baz=269
COLA **College** 83.15 25 P P 22 53 44.9 +1.9
COLA **College** 83.15 25 P P 22 53 43.0 0.0
COLA pmax pmax
comp=Z,22nm,0.8s
COLA **College** 83.15 25 P P 22 53 43.2 +0.2
baz=269
COLA **College** 83.15 25 P P 22 53 43.5 +0.5
WAT6 **Susitna Watana** 83.15 28 P P 22 53 43.5 +0.2
baz=269,SNR=17
H24K **Noodor Dome** 83.16 24 IAmb IAmb 22 53 46.2
comp=Z,27nm,0.9s
H24K **Noodor Dome** 83.16 24 P P 22 53 43.3 +0.1
baz=268,SNR=18
CCB **Clear Creek Bu** 83.17 26 IAmb IAmb 22 53 44.1
comp=Z,17nm,1.0s
F24K **Squaw Lake** 83.21 23 IAmb IAmb 22 53 46.4
comp=Z,23nm,1.1s
F24K **Squaw Lake** 83.21 23 P P 22 53 43.5 +0.1
baz=268,SNR=12
P23K **Montague Islan** 83.28 30 P P 22 53 45.1 +1.3
baz=270
DHY **Denali Highway** 83.33 27 P P 22 53 44.6 +0.3
baz=269
POKR **Poker Plat Res** 83.33 25 P P 22 53 44.8 +0.7
baz=269
SCM **Sheep Creek Mo** 83.34 28 P P 22 53 45.5 +1.3
baz=269,SNR=5.4
G24K **Hadweenzic Riv** 83.35 24 IAmb IAmb 22 53 46.9
comp=Z,35nm,0.9s

G24K **Hadweenzic Riv** 83.35 24 P P 22 53 43.8 -0.3
baz=269,SNR=18
GLI **Glacier Island** 83.44 29 IAmb IAmb 22 53 46.6
comp=Z,24nm,0.9s
GLI **Glacier Island** 83.44 29 P P 22 53 44.5 -0.2
baz=270
HDA **Harding Lake** 83.53 26 IAmb IAmb 22 53 46.3
comp=Z,20nm,0.7s
HDA **Harding Lake** 83.53 26 P P 22 53 44.7 -0.4
baz=270,SNR=13
ILAR **Eielson Array** 83.56 26 P 22 53 44.1 -1.1
ILAR **Eielson Array** 83.56 26 P P 22 53 44.2 -1.0
comp=Z,8.8nm,0.9s,baz=238,slow=5.3,SNR=62
comp=Z,8.8nm,0.9s
D25K **Kavik River** 83.80 21 IAmb IAmb 22 53 48.9
comp=Z,27nm,1.0s
D25K **Kavik River** 83.80 21 P P 22 53 46.3 -0.1
baz=270
Q23K **Middleton Isla** 83.82 31 P P 22 53 45.9 -0.7
baz=271
M24K **Tolsona, Glenn** 83.88 28 P P 22 53 46.8 -0.2
baz=270,SNR=5.7
G25K **Bearman Lake** 83.89 23 P P 22 53 47.1 +0.3
baz=270
KLU **Klutina** 84.01 29 IAmb IAmb 22 54 21.9
comp=Z,18nm,0.7s
KLU **Klutina** 84.01 29 P P 22 53 47.2 -0.5
baz=271,SNR=5.9
H25L **Birch Creek** 84.01 24 P P 22 53 47.3 -0.1
baz=270,SNR=13
F25K **Christian Rive** 84.07 23 P P 22 53 48.5 +0.7
baz=270
E25K **Arctic Village** 84.09 22 P P 22 53 48.4 +0.5
baz=270,SNR=30
EYAK **Cordova Ski Ar** 84.11 30 P P 22 53 48.1 +0.1
baz=271
PAX **Paxson** 84.20 27 IAmb IAmb 22 53 49.9
comp=Z,21nm,1.2s
PAX **Paxson** 84.20 27 P P 22 53 48.5 -0.1
baz=271,SNR=5.7
J25K **Salcha River,** 84.21 26 P P 22 53 48.2 -0.4
baz=271,SNR=8.7
C26K **Camden Bay** 84.31 20 P P 22 53 49.4 +0.5
baz=271
HARP **HAARP** 84.35 28 P P 22 53 50.2 +0.9
baz=271
RIDG **Independent Ri** 84.46 27 IAmb IAmb 22 53 51.4
comp=Z,21nm,0.8s
RIDG **Independent Ri** 84.46 27 P P 22 53 49.9 +0.1
baz=271,SNR=6.0
BMAR **Burnt Mountain** 84.48 23 P 22 53 51.6 +1.7
N25K **Chitina, Valde** 84.64 29 IAmb IAmb 22 53 53.0
comp=Z,22nm,1.1s
N25K **Chitina, Valde** 84.64 29 P P 22 53 50.1 -0.7
baz=272,SNR=5.7
F26K **Sheenjek River** 84.64 23 P P 22 53 50.5 -0.2
baz=272
BMRM **Bremner River** 84.66 29 IAmb IAmb 22 53 53.3
comp=Z,23nm,0.9s
BMRM **Bremner River** 84.66 29 P P 22 53 50.5 -0.4
baz=272,SNR=6.1
C27K **Jago River** 84.74 21 P P 22 53 51.4 +0.4
baz=272
KAIM **Kayak Island** 84.79 30 P P 22 53 51.7 +0.2
baz=272
G26K **Porcupine Rive** 84.81 23 IAmb IAmb 22 53 54.4
comp=Z,36nm,1.1s
G26K **Porcupine Rive** 84.81 23 P P 22 53 51.3 -0.1
baz=272
SCRK **Sand Creek** 84.83 26 P P 22 53 51.9 +0.1
baz=272,SNR=8.3
J26L **Joseph Creek** 85.00 26 P P 22 53 52.6 0.0
baz=272,SNR=13
MENT **Mentasta** 85.00 27 P P 22 53 54.2 +1.6
GLB **Gilahina Butte** 85.02 29 IAmb IAmb 22 53 55.2
comp=Z,24nm,0.9s
I26K **Coal Creek Min** 85.13 25 IAmb IAmb 22 53 54.7
comp=Z,21nm,1.0s
I26K **Coal Creek Min** 85.13 25 P P 22 53 53.0 -0.2
baz=273
L26K **Log Cabin Wild** 85.16 27 P P 22 53 53.7 +0.3
baz=273
VRDI **Verde Repeater** 85.20 29 IAmb IAmb 22 53 55.6
comp=Z,22nm,1.0s
OBN **Obninsk** 85.26 325 *de*P P 22 53 51.6 -2.3
OBN *e*S S 23 04 15.4 -0.4
OBN pmax pmax
comp=Z,235nm,1.5s
M26K **Nabesna, AK** 85.36 28 IAmb IAmb 22 54 06.9
comp=Z,41nm,1.9s
M26K **Nabesna, AK** 85.36 28 P P 22 53 54.9 +0.5
baz=273
VNDA **Vanda** 85.37 173 P 22 53 54.3 +0.3
VNDA **Vanda** 85.37 173 P P 22 53 54.0 0.0
comp=Z,9.9nm,0.8s,baz=316,slow=5.9,SNR=88
comp=Z,9.9nm,0.8s
VNDA **Vanda** 85.37 173 P P 22 53 54.3 +0.3
VNDA pmax pmax
comp=Z,12nm,0.9s
VNDA **Vanda** 85.37 173 P P 22 53 54.2 +0.3
CRQM **Cirque** 85.38 30 IAmb IAmb 22 56 01.5
comp=Z,32nm,1.0s
MAW **Mawson** 85.40 200 P P 22 53 53.6 -0.6
comp=Z,1.7nm,0.6s,baz=87,slow=7.0,SNR=9.1
comp=Z,1.7nm,0.6s
MCARA **McCarthy VSAT** 85.40 29 P P 22 53 55.0 +0.4
baz=273
CRQE **Cirque** 85.41 30 P P 22 53 54.9 +0.1
baz=273
E27K **Coleen River** 85.58 22 IAmb IAmb 22 53 57.9
comp=Z,31nm,1.3s
E27K **Coleen River** 85.58 22 P P 22 53 55.5 +0.2
baz=274
G27K **Doyon Strip** 85.65 23 IAmb IAmb 22 54 08.9
comp=Z,37nm,2.0s
G27K **Doyon Strip** 85.65 23 P P 22 53 56.0 +0.2
baz=274,SNR=8.3
K27K **Chicken** 85.67 26 IAmb IAmb 22 53 58.9
comp=Z,19nm,1.1s
K27K **Chicken** 85.67 26 P P 22 53 55.7 -0.1
baz=274
D27M **Malcolm River** 85.73 21 P P 22 53 56.8 +0.7
baz=274
H27K **Steamboat Moun** 85.75 24 P P 22 53 55.1 -1.2
baz=274
I27K **Kandik River** 85.76 25 P P 22 53 56.8 +0.5
baz=274
L27K **Beaver Creek,** 85.85 27 IAmb IAmb 22 53 58.7
comp=Z,28nm,1.9s
L27K **Beaver Creek,** 85.85 27 P P 22 53 56.6 -0.2
baz=274
BCAR **Beaver Creek A** 85.87 27 P 22 53 57.5 +0.6
M27K **Edge Creek, AK** 85.88 28 P P 22 53 55.8 -1.3
baz=274
MESA **MESA** 86.01 30 P P 22 53 57.5 -0.3
baz=274
GRNC **Granite Creek** 86.06 29 P P 22 54 00.3 +2.2
GRNC IAmb IAmb 22 54 48.5
comp=Z,16nm,0.6s
BARN **Barnard Glacie** 86.08 29 IAmb IAmb 22 54 02.3
comp=Z,16nm,1.0s
CTG **Chitna Glacier** 86.25 29 P P 22 53 57.3 -1.6
baz=275
CTGM **Chitina Glacie** 86.25 29 IAmb IAmb 22 54 03.7
comp=Z,26nm,1.0s
F28M **Old Crow** 86.28 23 IAmb IAmb 22 54 01.3
comp=Z,20nm,1.1s
F28M **Old Crow** 86.28 23 P P 22 53 57.7 -1.1
baz=276
SBA **Scott Base** 86.28 172 P 22 53 59.8 +1.3
SBA **Scott Base** 86.28 172 P P 22 53 59.8 +1.3
SBA pmax pmax
comp=Z,8.0nm,1.0s
E28M **Babbage River** 86.30 22 P P 22 53 57.9 -1.0
baz=276
LOGN **Logan Glacier** 86.42 29 IAmb IAmb 22 54 04.1
comp=Z,21nm,1.1s
I28M **Miner Creek** 86.47 25 IAmb IAmb 22 54 02.5
comp=Z,22nm,1.0s
I28M **Miner Creek** 86.47 25 P P 22 53 58.8 -1.0
baz=276
D28M **Stokes Point** 86.51 21 P P 22 53 59.1 -0.7
baz=277
YUK3 **Moose Creek** 86.60 28 P P 22 53 59.0 -1.7
baz=276
O28M **Mount Upton** 86.82 29 P P 22 54 00.3 -1.6
baz=276
DAWY **Dawson** 86.84 26 P P 22 54 00.5 -1.2

baz=276
PINM Pinnacle 86.86 30 P **P** **22 54 00.6 -1.3**
baz=276
E29M Blow River 86.93 22 P **P** **22 54 00.0 -1.9**
baz=277
YUK8 Steele Glacier 86.98 29 P **P** **22 54 00.6 -2.0**
baz=276
H29M Whitestone 87.02 24 IAmb IAmb 22 55 37.8
comp=Z,49nm,1.6s
H29M Whitestone 87.02 24 P **P** **22 53 60.0 -2.5**
baz=277
G29M Pine Creek 87.07 23 IAmb IAmb 22 54 04.3
comp=Z,18nm,0.9s
G29M Pine Creek 87.07 23 P **P** **22 54 00.6 -2.1**
baz=277
PNL Peninsula 87.34 30 P **P** **22 54 02.0 -2.1**
baz=276
M29M Somme Creek 87.45 28 IAmb IAmb 22 55 18.5
comp=Z,16nm,0.9s
M29M Somme Creek 87.45 28 P **P** **22 54 02.3 -2.4**
baz=277
YUK4 Talbot Arm 87.51 29 P **P** **22 54 03.0 -2.1**
baz=277
L29M L29M 87.52 27 P **P** **22 54 01.8 -3.1**
baz=278
EPYK Eagle Plains 87.66 24 P **P** **22 54 03.5 -2.0**
baz=279
O29M Mount Kennedy 87.67 30 P **P** **22 54 02.6 -3.2**
baz=277
K29M Barlow Dome 87.69 26 IAmb IAmb 22 55 37.3
comp=Z,38nm,1.8s
K29M Barlow Dome 87.69 26 P **P** **22 54 05.3 -0.6**
baz=278
YUK6 Outpost Mounta 87.69 29 P **P** **22 54 05.5 -0.6**
baz=277
G30M tAoh Zraii Nji 87.76 23 P **P** **22 54 05.5 -0.5**
baz=279
F30M Barrier River 87.83 22 P **P** **22 54 05.5 -0.7**
baz=279
J30M Hart River 88.10 25 P **P** **22 54 07.0 -0.7**
baz=279
HYT Haines Junctio 88.12 29 P **P** **22 54 07.2 -0.8**
baz=278
P29M Windy Craggy 88.18 30 P **P** **22 54 07.1 -1.0**
baz=278
M30M Minto, Yukon 88.20 27 P **P** **22 54 08.1 -0.1**
baz=279
N30M Aishikik Lake 88.23 29 P **P** **22 54 07.9 -0.5**
baz=278
BRTR Keskin Array B 88.48 310 P **P** **22 54 10.7 +0.6**
comp=Z,4.8nm,0.9s,baz=140,slow=3.6,SNR=1.8
comp=Z,4.8nm,0.9s
P30M Million Dollar 88.50 30 P **P** **22 54 08.9 -0.7**
baz=279
SPITS Spitsbergen Ar 88.53 349 P **P** **22 54 09.4 0.0**
comp=Z,5.8nm,0.5s,baz=87,slow=6.8,SNR=38
comp=Z,5.8nm,0.5s
INK Inuvik 88.54 21 IAmb IAmb 22 54 10.1
comp=Z,15nm,1.1s
INK Inuvik 88.54 21 P **P** **22 54 09.4 -0.1**
comp=Z,12nm,1.0s,baz=312,slow=4.5,SNR=19
comp=Z,12nm,1.0s
INK Inuvik 88.54 21 P **P** **22 54 08.5 -1.0**
baz=282
F31M Tsiigehtchic 88.63 22 P **P** **22 54 09.8 -0.2**
baz=281
H31M Peel River 88.71 24 P **P** **22 54 09.3 -1.1**
baz=281
N31M Braeburn, Yuko 88.85 28 P **P** **22 54 10.1 -1.1**
baz=280
PLBC Pleasant Camp 88.89 30 P **P** **22 54 11.2 -0.2**
baz=279
S31K Pelican 89.20 32 P **P** **22 54 12.8 -0.1**
baz=279
M31M Drury Creek, Y 89.37 28 P **P** **22 54 13.3 -0.3**
baz=281
WHY Whitehorse 89.42 29 P **P** **22 54 12.8 -1.3**
baz=280
SIT Sitka 89.84 33 P **P** **22 54 15.3 -0.6**
baz=280
R32K Eaglecrest 90.05 31 P **P** **22 54 16.5 -0.4**
baz=281
KIEV Kiev 90.16 321 P **P** **22 54 17.2 -0.3**
S32K Killisnoo 90.17 32 P **P** **22 54 17.4 0.0**
baz=281
N32M Quiet Lake 90.19 28 IAmb IAmb 22 55 44.9
comp=Z,12nm,0.8s
N32M Quiet Lake 90.19 28 P **P** **22 54 17.1 -0.4**
baz=282
P32M Atlin 90.20 30 P **P** **22 54 16.4 -1.2**
baz=281
AK12 Malin Array Si 90.20 321 P **P** **22 54 17.0 -0.7**
AK16 Malin Array Si 90.23 321 P **P** **22 54 16.7 -1.1**
A36M Sachs Harbour 90.29 17 P **P** **22 54 16.8 -0.9**
baz=289
BAL3X Bal3x, Balta 90.33 318 P **P** **22 54 17.9 -0.5**
P33M Teslin, Yukon 90.52 29 P **P** **22 54 18.8 -0.3**
baz=282
NOR Nord 91.15 355 P **P** **22 54 18.6 -3.0**
U33K Whale Pass 91.22 33 P **P** **22 54 21.9 -0.4**
baz=282
CRAG Craig 91.35 34 P **P** **22 54 22.6 -0.3**
baz=282
C36M Paulatuk 91.55 20 P **P** **22 54 23.8 +0.2**
baz=290
WRAK Wrangell Islan 91.57 33 P **P** **22 54 23.6 -0.3**
baz=282
R33M Jennings River 91.61 30 P **P** **22 54 23.8 -0.5**
baz=284
S34M Telegraph Cree 91.88 31 P **P** **22 54 25.3 -0.1**
baz=284
RNPP5 Staryi Chortor 92.13 322 P **P** **22 54 25.9 -0.8**
TGTN Hyland Airport 92.35 28 P **P** **22 54 26.9 -0.6**
baz=286
T35M Bob Quinn 92.57 32 P **P** **22 54 27.9 -0.7**
baz=284
U35K Hyder 92.95 33 P **P** **22 54 30.2 -0.1**
baz=284
LIRD Liard River Hi 94.00 29 P **P** **22 54 35.5 +0.4**
baz=288
TOAD Toad River Com 94.60 30 P **P** **22 54 38.3 +0.3**
baz=289
KOTAN Kotaneelee Air 94.75 28 P **P** **22 54 38.5 -0.1**
baz=290
DAG Danmarks Havn 95.31 352 P **P** **22 54 39.9 -0.8**
DAG pmax pmax
comp=Z,23nm,1.1s
QSPA South Pole Qui 95.54 180 P **P** **22 54 45.1 +3.0**
QSPA IAmb IAmb 22 54 46.7
comp=Z,6.4nm,0.9s
QSPA South Pole Qui 95.54 180 P **P** **22 54 44.1 +2.0**
comp=Z,6.5nm,0.9s,baz=326,slow=2.4,SNR=17
comp=Z,6.5nm,0.9s
YKA Yellowknife Ar 97.93 24 LR LR 23 44 14.9
comp=Z,828nm,19.2s,baz=6.0,slow=38
NVAR Mina Array Bea 105.94 48 Pdiff **Pdif** **22 55 29.9 +0.5**
comp=Z,0.1nm,0.3s,baz=294,slow=2.7,SNR=5.0
NVAR PKiKP **PKiKP** **22 59 42.2 +0.8**
comp=Z,0.5nm,0.6s,baz=236,slow=2.5,SNR=4.6
NVAR PKKPbc **PKKPbc** **23 11 04.3 -0.9**
comp=Z,0.1nm,0.3s,baz=108,slow=2.8,SNR=3.6
NVAR PKKP **PKKPdf** **23 11 17.4 +1.4**
comp=Z,0.7nm,0.6s,baz=97,slow=2.7,SNR=5.6
SNAA Sanae 106.95 195 PKKPbc PKKPbc 23 10 59.4 -3.6
comp=Z,1.3nm,0.8s,baz=294,slow=6.3,SNR=4.0
SNAA PKKP **PKKPdf** **23 11 15.0 +0.1**
comp=Z,1.4nm,1.1s,baz=311,slow=9.8,SNR=3.0
PDAR Pinedale Array 110.18 40 PKiKP **PKiKP** **22 59 49.8 +0.6**
comp=Z,0.3nm,0.5s,baz=150,slow=1.2,SNR=3.8
PDAR PKKPab **PKKPab** **23 10 59.8 -3.3**
comp=Z,0.7nm,0.7s,baz=116,slow=6.2,SNR=6.4
ANMO Albuquerque 116.03 47 **PKiKP** **23 00 02.1 +1.6**
ANMO Albuquerque 116.03 47 PKiKP **PKiKP** **23 00 02.1 +1.6**
SCHQ Schefferville 118.75 9 PKP **PKPdf** **23 00 04.8 -0.1**
comp=Z,12nm,0.9s,baz=30,slow=3.4,SNR=1.1
TXAR Lajitas Array 120.74 51 PKP **PKiKP** **23 00 10.2 +0.5**
comp=Z,3.0nm,0.8s,baz=171,slow=1.7,SNR=14
TORD Torodi Ar. Bea 121.91 289 PKP **PKPdf** **23 00 11.2 -0.9**
comp=Z,1.5nm,0.4s,baz=57,slow=4.5,SNR=14
MIAR Mount Ida 125.11 40 PKiKP **PKiKP** **23 00 19.4 +1.3**
WVT Waverly 127.55 35 **PKiKP** **23 00 22.6 -0.3**
WVT Waverly 127.55 35 P **PKiKP** **23 00 22.6 -0.3**
CMIG Matias Romero 133.44 60 PKP **PKPdf** **23 00 33.9 0.0**
comp=Z,6.8nm,0.9s,baz=247,slow=7.8,SNR=7.1
APG El Apazote 138.17 60 PKhKP PKPpre 23 00 40.0
comp=Z,0.2nm,0.4s,baz=32,slow=3.2,SNR=2.0
PLCA Paso Flores 141.94 159 **PKPdf** **23 00 46.0 -3.1**
PLCA Paso Flores 141.94 159 PKhKP PKPpre 23 00 44.2
comp=Z,3.2nm,0.7s,baz=190,slow=3.8,SNR=6.8
PLCA Paso Flores 141.94 159 PKIKP **PKPdf** **23 00 46.0 -3.1**
JTS Las Juntas de 145.07 63 **PKPdf** **23 00 55.8 +0.6**
JTS Las Juntas de 145.07 63 PKPbc **PKPdf** **23 00 56.0 +0.8**
comp=Z,65nm,0.8s,baz=286,slow=4.3,SNR=37
JTS Las Juntas de 145.07 63 PKIKP **PKPdf** **23 00 55.8 +0.6**
TRQA Tornquist 146.87 168 **PKPbc** **23 00 59.9 +0.3**
TRQA Tornquist 146.87 168 PKP2 **PKPbc** **23 00 59.9 +0.3**
MT01 Popeta 147.54 152 **PKPbc** **23 01 02.3 +0.8**
CFA Coronel Fontan 150.80 154 PKP **PKPdf** **23 01 04.3 +0.1**
comp=Z,20nm,0.9s,baz=215,slow=3.8,SNR=4.8
CFA PKPbc **PKiKP** **23 01 10.3 -0.2**
comp=Z,29nm,0.7s,baz=243,slow=3.3,SNR=88
OTAV Otavalo 154.59 77 *eP* **PKPdf** **23 01 09.7 -1.1**
ROSC El Rosal 156.91 64 PKP **PKPdf** **23 01 12.2 -1.6**
comp=Z,5.1nm,0.4s,baz=320,slow=19,SNR=4.6
CPUP Villa Florida 159.14 171 PKP **PKPdf** **23 01 15.8 +0.2**
comp=Z,0.2nm,0.3s,baz=124,slow=2.4,SNR=3.8
CPUP PKPab **sPKPdf** **23 01 53.5 0.0**
comp=Z,3.6nm,0.8s,baz=96,slow=18,SNR=21
LPAZ La Paz 162.33 128 PKP **PKPdf** **23 01 20.8 +0.6**
comp=Z,4.4nm,1.0s,baz=315,slow=8.6,SNR=13
LPAZ PKPab **PKPab** **23 02 09.2 +1.4**
comp=Z,6.0nm,0.8s,baz=194,slow=3.9,SNR=11
SIV San Ignacio 167.43 145 PKP **PKPdf** **23 01 24.2 +0.4**
comp=Z,3.9nm,1.0s,baz=184,slow=2.8,SNR=9.6
SIV PKPab **PKPab** **23 02 30.3 +0.9**
comp=Z,1.9nm,0.7s,baz=235,slow=5.5,SNR=5.3

*NAO **07** 22:45:11.8, 37.°42N×16.°15E, h33km, MB3.2*
*ROM **07** 22:45:49.2±0.3, 39.°49N±0.°02×15.°91E±0.°04, h241km±2km, ML3.2/76, Error ellipse: s-maj=3.5km s-min=0.7km az=87.0*
*IDC **07** 22:45:52.2±1.7, 39.°53N×15.°56E, h270km±31km, mb3.3/5, mbtmp3.7/9, Error ellipse: s-maj=52.2km s-min=30.1km az=57.0*
ISC 07 22:45:50.4±0.9, 39.°52N±0.°07×15.°92E±0.°09, h233km±6km, n50,σ1°05/62, mb3.7/4, 1C-1D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CET2	**Cetraro**	**0.03**	**70**	P	**Pn**	**22 46 20.6**	**+0.1**
CET2				S	**S**	**22 46 42.8**	**-1.4**
CET2				AML	AML		
	comp=E,1585μm,0.6s						
CET2				AML	AML		
	comp=N,3020μm,0.3s						
CET2				AML	AML		
	comp=N,3020μm,1.7s						
CAR1	**CAROLEI**	**0.35**	**139**	P	**Pn**	**22 46 21.1**	**+0.1**
CAR1				S	**S**	**22 46 43.5**	**-1.5**
CAR1				AML	AML		
	comp=E,1057μm,0.9s						
CAR1				AML	AML		
	comp=N,1330μm,0.7s						
CAR1				AML	AML		
	comp=E,1056μm,0.9s						
CAR1				AML	AML		
	comp=N,1333μm,0.7s						
CAR1				AML	AML		
	comp=N,1021μm,0.3s						
CAR1				AML	AML		
	comp=E,1056μm,0.9s						
CAR1				AML	AML		
	comp=N,1332μm,0.7s						
CAR1				AML	AML		
	comp=E,1425μm,0.7s						
CAR1				AML	AML		
	comp=E,1425μm,1.3s						
CAR1				AML	AML		
	comp=N,1332μm,1.3s						
CAR1				AML	AML		
	comp=E,1056μm,1.1s						
TDS	**Terranova Siba**	**0.35**	**67**	P	**Pn**	**22 46 22.2**	**+1.4**
TDS				S	**S**	**22 46 45.2**	**+0.4**
TDS				AML	AML		
	comp=E,173μm,1.3s						
TDS				AML	AML		
	comp=N,174μm,0.9s						
TDS				AML	AML		
	comp=E,173μm,0.7s						
TDS				AML	AML		
	comp=N,174μm,1.1s						
MMN	**Mormanno**	**0.38**	**9**	P	**Pn**	**22 46 21.3**	**+0.5**
MMN				S	**S**	**22 46 44.2**	**-0.8**
MMN				AML	AML		
	comp=E,319μm,1.5s						
MMN				AML	AML		
	comp=N,440μm,0.3s						
SPS2	**Spezzano della**	**0.40**	**124**	P	**Pn**	**22 46 21.4**	**+0.3**
SPS2				S	**S**	**22 46 44.3**	**-0.9**
SPS2				AML	AML		
	comp=N,273μm,1.4s						
SPS2				AML	AML		
	comp=N,272μm,1.4s						
SPS2				AML	AML		
	comp=E,308μm,0.4s						
SPS2				AML	AML		
	comp=N,272μm,0.6s						
CELI	**Celico**	**0.47**	**104**	P	**Pn**	**22 46 22.7**	**+1.3**
CELI				S	**S**	**22 46 46.5**	**+0.9**
CELI				AML	AML		
	comp=E,436μm,0.5s						
CELI				AML	AML		
	comp=N,524μm,0.5s						
CELI				AML	AML		
	comp=E,1075μm,0.5s						
CELI				AML	AML		
	comp=N,1295μm,0.5s						
CELI				AML	AML		
	comp=N,524μm,0.5s						
CELI				AML	AML		
	comp=E,436μm,0.5s						
CELI				AML	AML		
	comp=N,1300μm,0.5s						
CELI				AML	AML		
	comp=E,1076μm,0.5s						
CUC	**Castrocucco**	**0.48**	**351**	P	**Pn**	**22 46 21.4**	**+0.1**
SALB	**San Lorenzo Be**	**0.49**	**43**	P	**Pn**	**22 46 21.9**	**+0.5**
SALB				S	**S**	**22 46 45.3**	**-0.5**
SALB				AML	AML		
	comp=E,572μm,0.2s						
SALB				AML	AML		
	comp=N,560μm,0.3s						
SALB				AML	AML		
	comp=E,571μm,0.2s						
SIRI	**Monte Sirino -**	**0.66**	**357**	P	**Pn**	**22 46 22.7**	**+0.7**
SIRI				AML	AML		
	comp=E,274μm,1.2s						
SIRI				AML	AML		
	comp=N,225μm,0.5s						
SIRI				AML	AML		
	comp=N,224μm,0.5s						
SIRI				AML	AML		
	comp=E,270μm,0.4s						
SIRI				AML	AML		
	comp=N,230μm,0.5s						
MGR	**Morigerati**	**0.68**	**336**	P	**Pn**	**22 46 22.5**	**+0.5**
MGR				S	**S**	**22 46 46.6**	**-0.2**
MGR				AML	AML		
	comp=N,153μm,0.6s						
MGR				AML	AML		
	comp=E,136μm,1.1s						
ORI	**Oriolo Calabro**	**0.68**	**37**	P	**Pn**	**22 46 22.8**	**+0.9**
ORI				AML	AML		
	comp=N,908μm,0.4s						
ORI				AML	AML		
	comp=E,816μm,0.3s						
ORI				AML	AML		
	comp=N,908μm,1.6s						
SCHR	**S. Chirico Rap**	**0.69**	**10**	P	**Pn**	**22 46 23.0**	**+0.9**
SCHR				S	**S**	**22 46 47.6**	**+0.6**
SCHR				AML	AML		
	comp=E,244μm,0.8s						
SCHR				AML	AML		
	comp=N,172μm,0.7s						
BULG	**Bulgheria - Ca**	**0.70**	**323**	P	**Pn**	**22 46 22.7**	**+0.6**
TIP	**Timpagrande**	**0.73**	**117**	P	**Pn**	**22 46 23.1**	**+0.8**
TIP				AML	AML		
	comp=E,120μm,1.4s						
TIP				AML	AML		
	comp=N,160μm,0.4s						
TIP				AML	AML		
	comp=E,106μm,0.9s						
TIP				AML	AML		
	comp=E,121μm,1.4s						
TIP				AML	AML		
	comp=E,121μm,1.4s						
TIP				AML	AML		
	comp=N,161μm,0.4s						
TIP				AML	AML		
	comp=E,106μm,1.1s						
TIP				AML	AML		
	comp=N,146μm,0.4s						
TIP				AML	AML		
	comp=N,161μm,1.6s						
GRI	**Girifalco**	**0.80**	**151**	P	**Pn**	**22 46 23.4**	**+0.8**
GRI				AML	AML		
	comp=N,490μm,1.0s						
GRI				AML	AML		
	comp=E,450μm,1.2s						
GRI				AML	AML		
	comp=N,489μm,1.0s						
GRI				AML	AML		
	comp=N,489μm,1.0s						
MCEL	**Monticello**	**0.81**	**354**	P	**Pn**	**22 46 23.7**	**+1.1**
MCEL				S	**S**	**22 46 49.4**	**+1.4**
MCEL				AML	AML		
	comp=N,348μm,0.6s						
MCEL				AML	AML		
	comp=N,340μm,0.6s						
MCEL				AML	AML		
	comp=E,337μm,0.5s						
MCEL				AML	AML		
	comp=N,340μm,1.4s						
MCEL				AML	AML		
	comp=E,328μm,0.5s						
MCEL				AML	AML		
	comp=N,348μm,1.4s						
LADO	**San Nicola del**	**0.85**	**106**	P	**Pn**	**22 46 23.4**	**+0.6**
LADO				S	**S**	**22 46 47.7**	**-0.5**
LADO				AML	AML		
	comp=E,35μm,0.5s						
LADO				AML	AML		
	comp=N,35μm,0.5s						
SLCN	**Sala Consilina**	**0.90**	**346**	P	**Pn**	**22 46 23.8**	**+0.8**
SLCN				AML	AML		
	comp=N,285μm,0.5s						
SLCN				AML	AML		
	comp=E,272μm,1.1s						
JOPP	**Joppolo**	**0.91**	**182**	⇓P	**Pn**	**22 46 23.2**	**0.0**
JOPP				S	**S**	**22 46 47.1**	**-1.7**
JOPP				AML	AML		
	comp=E,662μm,1.1s						
JOPP				AML	AML		
	comp=N,648μm,1.1s						
JOPP				AML	AML		
	comp=E,662μm,0.9s						
JOPP				AML	AML		
	comp=N,648μm,0.9s						
CMPR	**Campora**	**0.93**	**330**	⇑P	**Pn**	**22 46 23.8**	**+0.6**
CMPR				AML	AML		
	comp=E,76μm,1.0s						
CMPR				AML	AML		
	comp=E,76μm,1.0s						
CMPR				AML	AML		
	comp=N,104μm,1.0s						
CRAC	**Craco**	**0.93**	**25**	P	**Pn**	**22 46 23.7**	**+0.5**
CRAC				AML	AML		
	comp=E,688μm,0.8s						
CRAC				AML	AML		
	comp=N,628μm,0.3s						
CDRU	**Civita di Ruta**	**1.08**	**334**	P	**Pn**	**22 46 24.7**	**+0.5**
CDRU				AML	AML		
	comp=E,62μm,0.5s						
CDRU				AML	AML		
	comp=E,62μm,0.5s						
CDRU				AML	AML		
	comp=N,56μm,0.7s						
PLAC	**Placanica**	**1.14**	**159**	P	**Pn**	**22 46 25.0**	**+0.4**
PLAC				S	**S**	**22 46 50.7**	**-0.7**
PLAC				AML	AML		
	comp=E,416μm,0.6s						
PLAC				AML	AML		
	comp=E,404μm,1.1s						
PLAC				AML	AML		
	comp=N,393μm,0.4s						
PLAC				AML	AML		
	comp=N,398μm,0.7s						
PLAC				AML	AML		
	comp=E,404μm,0.9s						
PLAC				AML	AML		
	comp=N,393μm,1.6s						
CEL	**Celeste**	**1.26**	**181**	P	**Pn**	**22 46 25.0**	**-0.4**
CEL				AML	AML		
	comp=E,260μm,1.6s						
CEL				AML	AML		
	comp=E,251μm,0.3s						
CEL				AML	AML		
	comp=E,260μm,1.6s						
CEL				AML	AML		
	comp=N,222μm,0.9s						
CEL				AML	AML		
	comp=E,260μm,0.4s						
CEL				AML	AML		
	comp=N,188μm,0.7s						
ACER	**Acerenza**	**1.27**	**1**	P	**Pn**	**22 46 25.3**	**-0.1**
ACER				AML	AML		
	comp=E,168μm,0.6s						
ACER				AML	AML		
	comp=N,160μm,0.5s						
MATE	**Matera**	**1.28**	**28**	P	**Pn**	**22 46 25.0**	**-0.3**
MATE				AML	AML		
	comp=E,256μm,0.7s						
MATE				AML	AML		
	comp=N,294μm,0.7s						
LTRZ	**Laterza**	**1.28**	**32**	P	**Pn**	**22 46 25.0**	**-0.4**
LTRZ				AML	AML		
	comp=E,260μm,1.3s						
LTRZ				AML	AML		
	comp=N,1395μm,1.5s						
MSRU	**Castanea**	**1.29**	**194**	P	**Pn**	**22 46 25.1**	**-0.5**
GMB	**Gambarie**	**1.35**	**183**	AML	AML		
	comp=N,904μm,1.6s						
GMB				AML	AML		
	comp=N,904μm,0.4s						
GMB				AML	AML		
	comp=E,1048μm,0.4s						
MCRV	**Calabrutti - M**	**1.39**	**336**	P	**Pn**	**22 46 26.9**	**+0.6**
MPNC	**Port Mandanici**	**1.44**	**198**	P	**Pn**	**22 46 26.4**	**-0.3**
MPNC				AML	AML		
	comp=N,308μm,0.5s						
MPNC				AML	AML		
	comp=E,273μm,0.5s						
SOI	**Samo**	**1.45**	**176**	P	**Pn**	**22 46 26.9**	**+0.1**
SOI				AML	AML		
	comp=E,146μm,1.6s						
SOI				AML	AML		
	comp=N,114μm,0.4s						
SOI				AML	AML		
	comp=N,114μm,1.6s						
SOI				AML	AML		
	comp=E,146μm,0.4s						
TAR1	**Taranto**	**1.45**	**46**	P	**Pn**	**22 46 26.4**	**-0.3**
TAR1				AML	AML		
	comp=E,310μm,0.5s						
TAR1				AML	AML		
	comp=N,192μm,0.7s						
AMUR	**Altamura**	**1.48**	**21**	P	**Pn**	**22 46 26.6**	**-0.3**
AMUR				AML	AML		
	comp=E,115μm,1.0s						
AMUR				AML	AML		
	comp=N,109μm,1.2s						
AMUR				AML	AML		
	comp=N,109μm,0.8s						
AMUR				AML	AML		
	comp=E,115μm,1.0s						
SNAL	**S. Angelo Dei**	**1.51**	**339**	P	**Pn**	**22 46 27.8**	**+0.7**
MTTG	**Motta San Giov**	**1.52**	**187**	P	**Pn**	**22 46 27.8**	**+0.4**
MTTG				AML	AML		
	comp=E,140μm,1.4s						
MTTG				AML	AML		
	comp=N,179μm,1.0s						
MTTG				AML	AML		
	comp=E,140μm,0.6s						
NOCI	**Noci**	**1.54**	**34**	P	**Pn**	**22 46 27.1**	**-0.3**
NOCI				AML	AML		
	comp=E,177μm,1.4s						
NOCI				AML	AML		
	comp=N,174μm,1.4s						
NOCI				AML	AML		
	comp=N,174μm,0.6s						

NOCI AML AML
comp=E,177µm,0.6s

MRVN	**Minervino Murg**	**1.56**	**8**	P		**Pn**	**22 46 27.6**	**+0.1**
MTMR	**Montemarano**	**1.56**	**334**	P		**Pn**	**22 46 28.2**	**+0.5**
HAGA	**Augusta**	**2.31**	**195**	P		**Pn**	**22 46 34.2**	**-0.3**
VAE	**Valguarnera**	**2.35**	**211**	P		**Pn**	**22 46 38.5**	**+3.5**
	comp=E,12nm,1.0s,baz=32,slow=9.5,SNR=2.3							
DAVOX	**Davos/Dischmat**	**8.49**	**331**	P		**Pn**	**22 47 51.7**	**+1.8**
	comp=E,2.5nm,0.6s,baz=148,slow=16,SNR=5.5							
GERES	**GERESS Array B**	**9.46**	**351**	P		**Pn**	**22 48 02.3**	**+0.2**
	comp=E,0.3nm,0.4s,baz=185,slow=13,SNR=4.6							
BRTR	**Keskin Array B**	**13.67**	**83**	P		**P**	**22 48 59.6**	**+3.2**
	comp=E,0.7nm,0.7s,baz=271,slow=12,SNR=5.7							
HFS	**Hagfors**	**20.68**	**357**	P		**P**	**22 50 11.0**	**-1.5**
	comp=E,3.3nm,0.4s,baz=161,slow=9.4,SNR=30							
	comp=E,3.3nm,0.4s							
NB2	**NORSAR Subarra**	**21.74**	**354**	P		**P**	**22 50 21.0**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=170,slow=10							
NOA	**NORSAR Array B**	**21.74**	**354**	P		**P**	**22 50 20.8**	**-2.2**
	comp=Z,0.4nm,0.4s,baz=171,slow=7.9,SNR=6.8							
	comp=Z,0.4nm,0.4s							
FINES	**FINESS Array B**	**22.83**	**13**	P		**P**	**22 50 32.1**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=183,slow=9.4,SNR=10							
	comp=Z,1.5nm,0.7s							
ARCES	**ARCESS Array B**	**30.51**	**7**	P		**P**	**22 51 40.3**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=193,slow=8.8,SNR=7.0							
	comp=Z,1.5nm,0.8s							
SPITS	**Spitsbergen Ar**	**38.77**	**0**	P		**P**	**22 52 51.8**	**-0.1**
	comp=Z,11nm,1.0s,baz=170,slow=8.8,SNR=1.9							
	comp=Z,11nm,1.0s							

ROM 07 22:46:03.6±0.0,**41.773N**±0.003×**13.596E**±0.004,
h13km,**ML0.9**/4,**1D**,**Error ellipse: s-maj=0.3km**
s-min=0.2km az=216.0,**Southern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VVLD	**Villa Vallelon**	**0.10**	**11**	⇓P	Pg	22 46 07.0	+0.3
VVLD				S	Sg	22 46 09.2	+0.3
VVLD				AML	AML		
	comp=N,80µm,0.5s						
VVLD				AML	AML		
	comp=E,71µm,0.4s						
VVLD				AML	AML		
	comp=N,80µm,0.1s						
POFI	**Posta Fibreno**	**0.10**	**123**	P	Pg	22 46 07.0	+0.3
POFI				S	Sg	22 46 09.4	+0.4
LRP	**Arpino**	**0.13**	**183**	P	Pg	22 46 07.2	+0.3
LRP				S	Sb	22 46 10.2	-0.5
LRP				AML	AML		
	comp=E,64µm,0.2s						
LRP				AML	AML		
	comp=N,70µm,0.3s						
OPI	**Opi**	**0.17**	**89**	P	Pg	22 46 07.9	+0.1
OPI				S	Sg	22 46 11.3	+0.7
PTQR	**Pietraquaria**	**0.29**	**330**	P	Pg	22 46 10.1	+0.4
PTQR				S	Sb	22 46 14.8	-0.7
INTR	**Introdacqua**	**0.33**	**44**	P	Pg	22 46 10.5	+0.1
INTR				S	Sb	22 46 16.1	-0.6
CERA	**Filignano**	**0.36**	**119**	P	Pg	22 46 11.2	+0.2
CERA				S	Sb	22 46 16.9	-0.6
CERT	**Cerreto**	**0.49**	**291**	P	Pg	22 46 13.3	0.0
CERT				S	Sb	22 46 20.6	-0.7

NAO ***07*** *22:46:53.0,35.10N×46.02E,h33km,MB5.7*
AFAD ***07*** *22:46:56.9,36.91N×48.30E,h6km±4km,MW5.9*
ISN ***07*** *22:47:00.5±1.6,37.91N×47.57E,h9km±50km,ML5.6*
TEH ***07*** *22:47:04.0,37.71N×47.52E,h9km*
GII ***07*** *22:47:04.6±0.0,37.81N×47.56E,h10km,confirmed*
IDC ***07*** *22:47:04.0±0.3,37.75N×47.50E,h0km,mb5.4/53,*
mbtmp5.4/65,ML4.8/10,MS5.8/79,Error ellipse:
s-maj=6.3km s-min=5.0km az=19.0
THR ***07*** *22:47:05.3±0.0,37.62N×47.48E,h6km±6km,ML5.8*
IPGP ***07*** *22:47:05.0,37.80N×47.55E,h8km,Mw6.0,Fault plane*
solution: NP1:ϕs30.00000°,δ63.00000°,λ3.00000°.
NP2:ϕs299.00000°,δ88.00000°,λ153.00000°.
NEIC ***07*** *22:47:05.5,37.81N×47.55E,h18km*
MOS ***07*** *22:47:05.2±1.2,37.73N×47.56E,h20km,mb6.0/110,*
MS5.7/83,Error ellipse: s-maj=4.2km s-min=2.5km
az=133.8
NEIC ***07*** *22:47:05.5,37.71N×47.55E,h18km,Moment Tensor*
Solution. Duration: 4s9 Moment tensor: Scale 1018Nm;
Mrr-0.28; Mθθ-0.83; Mϕϕ1.12; Mrθ0.22; Mθϕ-0.21; Mϕr0.08;
Fault plane solution: M0 1.05000×1018 NP1:
ϕs310.51000°,δ74.78000°,λ-167.77000°. NP2:
ϕs217.25000°,δ78.20000°,λ-15.56000°. Principal axes:
T 1.1396, Plg2.0000°, Azm264.0000°; N -0.2029,
Plg71.0000°, Azm1.0000°; P -0.9366, Plg19.0000°,
Azm173.0000°;
NEIC ***07*** *22:47:05.4,37.80N×47.55E,h10km*
GCMT ***07*** *22:47:06.4±0.1,37.68N×47.58E,h18km,MW6.0/161,*
Moment Tensor Solution. s142,c294; s161,c519;
Duration: 2s4 Moment tensor: Scale 1018Nm;
Mrr-0.10±.01; Mθθ-1.09±.01; Mϕϕ1.19±.01; Mrθ0.09±.02;
Mθϕ-0.46±.01; Mϕr0.01±.02; Best double couple:
M0 1.23300×1018 NP1:ϕs214.00000°,δ86.00000°,
λ-3.00000°. NP2:ϕs304.00000°,δ87.00000°,
λ-176.00000°. Principal axes: T 1.2790, Plg0.0000°,
Azm79.0000°; N -0.0930, Plg85.0000°, Azm348.0000°; P
-1.1870, Plg5.0000°, Azm169.0000°; nsta1 refers to body
waves, cutoff=40s. nsta2 refers to surface/mantle waves,
cutoff=50s. Triangular moment-rate function
DSN ***07*** *22:47:06.6±0.5,37.43N×47.59E,h15km,mb6.2/7,*
Ms6.0/10 Error ellipse: s-maj=12.9km s-min=5.4km
az=54.0
ISC-PP ***07*** *22:47:07,37.80N×47.58E,h32km,Mwppsm6.3,Moment*
Tensor Solution. s52 Moment tensor: Scale 1018Nm;
Mrr0.04±.10; Mθθ-0.68±.12; Mϕϕ0.68±.16; Mrθ0.14±.25;
Mθϕ-0.06±.12; Mϕr-0.11±.13; Fault plane solution:
M0 3.39000×1018 NP1:ϕs310.50000°,δ87.40000°,
λ191.80000°. NP2:ϕs220.00000°,δ78.30000°,λ-2.60000°.
NEIC ***07*** *22:47:07.0±1.4,37.80N±0.06×47.58E±0.08,h20km±1km,*
mb5.8/779,Ms_20 5.8/716,Mwb5.9/131,Mww5.9/28 Error
ellipse: s-maj=10.6km s-min=9.2km az=248.0,Moment
Tensor Solution. Moment tensor: Scale 1017Nm;
Mrr-2.02; Mθθ-6.26; Mϕϕ8.28; Mrθ-1.16; Mθϕ-2.53; Mϕr0.14;
Fault plane solution: M0 7.98000×1017 NP1:ϕs34.76000°,
δ79.64000°,λ-7.92000°. NP2:ϕs126.19000°,δ82.21000°,
λ-169.55000°. Principal axes: T 8.7147, Plg2.0000°,
Azm260.0000°; N -1.7713, Plg77.0000°, Azm162.0000°;
P -6.9434, Plg13.0000°, Azm351.0000°;
NNC ***07*** *22:47:08.2±1.4,38.15N×47.72E,h0km,mb6.0 Error*
ellipse: s-maj=29.2km s-min=15.9km az=161.0
PDG ***07*** *22:47:30.8,37.72N×47.60E,h10km,mb5.9/5*
ISC 07 22:47:05.6±0.3,**37.73N**±0.02×**47.47E**±0.02,**h13**km±1km,
h13km:**pP-P,n2781,σ1s63**/2990,**mb5.8**/674,**MS5.8**/546,
182C-132D,**Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHSH	**Hashtrud**	**0.46**	**201**	Pg	**Pg**	**22 47 12.9**	**-1.9**
IHRS	**Heris**	**0.68**	**330**	Pg	**Pg**	**22 47 17.2**	**-1.6**
IHRS				Sg	**Sg**	**22 47 28.1**	**+0.3**
GRMI	**Germi**	**1.12**	**17**	Pg	**Pb**	**22 47 25.0**	**-2.0**
ITBZ	**Tabriz**	**1.16**	**296**	Pg	**Pb**	**22 47 26.3**	**-1.3**
ITBZ				Sg	**Sn**	**22 47 43.9**	**+0.4**
IAZR	**Azarshahr**	**1.19**	**268**	Pg	**Pb**	**22 47 27.1**	**-1.0**
GAS1	**Astara - Iran**	**1.26**	**58**	Pg	**Pn**	**22 47 27.0**	**-1.9**
CSN1	**Caspian**	**1.30**	**97**	Pg	**Pn**	**22 47 27.6**	**-1.8**
LKRN	**Lenkeran, Azer**	**1.42**	**46**	P	**Pn**	**22 47 30.0**	**-1.0**
ZNJK	**Zanjan**	**1.44**	**137**	Pg	**Pn**	**22 47 29.9**	**-1.6**
ZNJK	**Zanjan**	**1.44**	**137**	*e*Pg	**Pn**	**22 47 30.4**	**-1.1**
ZNJK				IAML		22 48 05.4	
	comp=Z,4.0nm,1.0s						
ISHB	**Shabestar**	**1.56**	**291**	Pg	**Pn**	**22 47 33.1**	**-0.2**
IMRD	**Marand**	**1.70**	**306**	Pg	**Pb**	**22 47 36.5**	**-0.3**
MAHB	**Mahabad**	**1.71**	**236**	Pg	**Pn**	**22 47 35.3**	**+0.1**
NAX	**Nakhchivan**	**2.12**	**313**	P	**Pb**	**22 47 42.9**	**-1.0**
JIR1	**Jirandeh**	**2.12**	**118**	Pn	**Pn**	**22 47 41.4**	**+0.5**
LHJ2	**Lahijan - Gila**	**2.14**	**105**	Pn	**Pn**	**22 47 41.2**	**+0.3**
SRSL	**SARDASHT**	**2.23**	**228**	*e*Pn	**Pb**	**22 47 44.5**	**-1.3**
SRSL				IAML		22 48 24.2	
	comp=Z,140µm,1.0s						
YOVA	**Hakkari_Yksek**	**2.53**	**268**	SPECP		22 47 49.0	
YOVA				P	**Pb**	**22 47 49.9**	**-1.1**
YOVA				S	**Sg**	**22 48 26.9**	**-0.1**
IGZV	**Ghazvin**	**2.58**	**121**	Pn	**Pn**	**22 47 47.7**	**+0.5**
QABG	**Abgarm-Qazvin**	**2.64**	**139**	Pn	**Pn**	**22 47 48.6**	**+0.6**
SNQR	**Sonqor, Kerman**	**2.87**	**177**	Pn	**Pn**	**22 47 51.9**	**+0.6**
OZAP	**Van, Ozalp-Mer**	**2.89**	**290**	SPECP		22 47 55.0	
OZAP				P	**Pb**	**22 47 55.5**	**-1.7**
HAKT	**HAKKARI**	**2.99**	**268**	P	**Pb**	**22 47 57.3**	**-1.6**
GANJ	**Ganja**	**3.04**	**343**	P	**Pn**	**22 47 55.0**	**+1.6**
MNGR	**Mingechevir, A**	**3.05**	**354**	P	**Pn**	**22 47 55.9**	**+2.4**
CUKT	**Cukurca**	**3.11**	**262**	P	Pn	22 47 42.6	-12
CUKT				S	**Sn**	**22 48 26.8**	**-4.8**
CUKT	**Cukurca**	**3.11**	**262**	*e*P	Pn	22 47 42.3	-12
IDHR	**Dehrash**	**3.15**	**196**	Pn	**Pn**	**22 47 57.8**	**+2.7**
HAGD	**Aghdareh**	**3.20**	**155**	Pn	**Pn**	**22 47 55.8**	**0.0**
GNI	**Garni**	**3.22**	**319**	Pn	**Pn**	**22 47 57.2**	**+1.2**
GNI	**Garni**	**3.22**	**319**		**Sn**	**22 48 37.2**	**+2.9**
GNI	**Garni**	**3.22**	**319**	Pn	**Pn**	**22 47 58.9**	**+3.0**
	comp=Z,77nm,0.3s,baz=168,slow=1.4,SNR=294						
GNI				Pg	**Pb**	**22 48 03.9**	**+1.2**
	comp=Z,842nm,0.3s,baz=135,slow=3.1,SNR=170						
GNI				Sn	**Sn**	**22 48 37.6**	**+3.4**
	comp=Z,692nm,0.3s,baz=63,slow=11,SNR=5.6						
GNI				Lg	Lg	22 48 47.0	
	comp=Z,1µm,0.3s,baz=180,slow=20,SNR=12						
GNI				LR	LR	22 49 27.0	
	comp=Z,213µm,18.2s,baz=132,slow=44						
	comp=Z,941nm,0.7s						
GNI	**Garni**	**3.22**	**319**	*e*P	**Pn**	**22 47 59.2**	**+3.2**
GNI	**Garni**	**3.22**	**319**	P	**Pb**	**22 48 03.6**	**+0.9**
GNI				S	**Sb**	**22 48 39.8**	**-2.0**
GNI	**Garni**	**3.22**	**319**	P	**Pn**	**22 47 59.0**	**+3.0**
GNI	**Garni**	**3.22**	**319**	*i* P	**Pn**	**22 47 57.0**	**+1.0**
GNI	**Garni**	**3.22**	**319**	⇓P	**Pn**	**22 47 58.9**	**+3.0**
THKV	**Tehran--Karaj**	**3.28**	**123**	*e*Pn	**Pn**	**22 47 58.1**	**+1.3**
THKV				IAML		22 48 58.1	
	comp=Z,56µm,1.0s						
TVAN	**Van**	**3.30**	**285**	SPECP		22 48 01.0	
TVAN				P	**Pb**	**22 48 01.4**	**-2.8**
VMUR	**Van-Muradiye**	**3.31**	**293**	SPECP		22 48 00.0	
VMUR				P	**Pn**	**22 48 00.8**	**+3.5**
VMUR				S	**Sg**	**22 48 52.0**	**-0.1**
TASB	**TASBURUN-IGDIR**	**3.38**	**313**	*e*P	**Pn**	**22 48 00.5**	**+2.4**
IGDI	**IGDIR**	**3.40**	**310**	SPECP		22 48 02.0	
IGDI				P	**Pb**	**22 48 02.8**	**-3.0**
IGDI				S	**Sg**	**22 48 52.4**	**-2.5**
IKRK	**Kirkuk**	**3.43**	**228**	*e*Pn	**Pn**	**22 47 59.0**	**+0.2**
IKRK				*e*Sn	**Sn**	**22 48 42.0**	**+2.7**
IKRK				AML	AML	22 49 03.3	
	comp=E,17µm,0.8s						
IKRK				AML	AML	22 49 05.1	
	comp=N,21µm,0.3s						
CHTH	**Charan**	**3.45**	**121**	*e*Pn	**Pn**	**22 48 00.5**	**+1.2**
CHTH				IAML		22 48 56.8	
	comp=Z,14nm,1.0s						
KCHF	**Cheshme Sefid,**	**3.47**	**186**	Pn	**Pn**	**22 48 01.2**	**+1.8**
DYDN	**Diyadin**	**3.47**	**303**	P	**Pn**	**22 48 02.8**	**+3.3**
DYDN				S	**Sg**	**22 48 57.5**	**+0.4**
IGHG	**Ghaleghazi**	**3.48**	**192**	Pn	**Pn**	**22 48 01.4**	**+1.9**
SEKA	**Sheki**	**3.48**	**357**	P	**Pn**	**22 48 00.6**	**+1.2**
MZPU	**Pul - Mazandar**	**3.52**	**110**	Pn	**Pn**	**22 48 00.9**	**+0.7**
AKDM	**Akdamar-Van**	**3.60**	**281**	*e*P	**Pn**	**22 48 04.9**	**+3.7**
MSL	**Mosul**	**3.73**	**250**	*e*Pn	**Pn**	**22 48 04.0**	**+1.1**
MSL				*e*Sn	**Sn**	**22 48 49.0**	**+2.3**
AKT	**Akhty**	**3.75**	**3**	*i* P	**Pn**	**22 48 04.3**	**+1.1**
AKT				*e*S	**Sn**	**22 48 48.2**	**+1.0**
AKT				pmax	pmax		
	comp=Z,4µm,0.5s						
AKT				smax	smax		
	comp=N,6µm,0.6s						
AKT				smax	smax		
	comp=E,11µm,1.2s						
AKT				smax	smax		
	comp=E,6µm,1.1s						
AKT				MLR	MLR		
	comp=Z,151µm,12.0s						
GLG1	**Gilan-e-Gharb**	**3.83**	**200**	Pn	**Pn**	**22 48 05.7**	**+1.4**
DDFL	**Dedoflistskaro**	**3.85**	**345**	P	**Pn**	**22 48 09.0**	**+4.4**
ADCV	**BITLIS_Adilcev**	**3.89**	**287**	SPECP		22 48 09.0	
ADCV				P	**Pn**	**22 48 09.4**	**+4.2**
PERV	**Siirt/Pervari-**	**3.91**	**275**	P	**Pb**	**22 48 11.1**	**-3.4**
KOTA	**Agri, Merkez-K**	**3.92**	**303**	SPECP		22 48 09.0	
KOTA				P	**Pn**	**22 48 09.8**	**+4.2**
KOTA				S	**Sg**	**22 49 13.8**	**+2.2**
AGRB	**Hanur-Agry**	**3.96**	**299**	*e*P	**Pn**	**22 48 09.4**	**+3.2**
SIRN	**Sırnak**	**4.02**	**268**	SPECP		22 48 10.0	
SIRN				P	**Pn**	**22 48 10.1**	**+3.1**
DORK	**Agr/Tutak/Do**	**4.03**	**296**	SPECP		22 48 11.0	
DORK				P	**Pn**	**22 48 11.2**	**+4.0**
DORK				S	**Sg**	**22 49 10.7**	**-4.4**
IQOM	**Qom**	**4.09**	**134**	Pn	**Pn**	**22 48 08.1**	**0.0**
MLAZ	**Malazgirt-MUS**	**4.11**	**291**	*e*P	**Pn**	**22 48 11.6**	**+3.3**
DIGO	**Kars**	**4.16**	**311**	P	**Pb**	**22 48 17.4**	**-1.5**
IPRN	**Peran**	**4.17**	**109**	Pn	**Pn**	**22 48 09.5**	**+0.4**
DAMV	**Damavand**	**4.18**	**119**	*e*Pn	**Pn**	**22 48 11.1**	**+1.8**
DAMV				IAML		22 48 56.1	
	comp=Z,4.6nm,1.0s						
EAK	**Akyaka**	**4.21**	**316**	P	**Pb**	**22 48 18.9**	**-0.7**
IDMV	**Damavand**	**4.25**	**119**	Pn	**Pn**	**22 48 11.7**	**+1.4**
BLIS	**Bitlis-Merkez**	**4.28**	**281**	SPECP		22 48 14.0	
BLIS				P	**Pn**	**22 48 14.9**	**+4.3**
BLIS				S	**Sg**	**22 49 23.3**	**+0.2**
GURO	**Guroymak-BITLI**	**4.37**	**282**	Pn	**Pn**	**22 48 14.7**	**+2.9**
GURO	**Guroymak-BITLI**	**4.37**	**282**	*e*P	**Pn**	**22 48 15.1**	**+3.4**
GURO	**Guroymak-BITLI**	**4.37**	**282**	⇑P	**Pn**	**22 48 15.1**	**+3.4**
IVRN	**Varamin**	**4.39**	**127**	Pn	**Pn**	**22 48 12.5**	**+0.6**
SRTM	**Siirt_Merkez**	**4.40**	**275**	SPECP		22 48 16.0	
SRTM				P	**Pn**	**22 48 16.3**	**+4.1**
SRTM				S	**Sg**	**22 49 23.0**	**-3.9**
EATA	**Eleskirt**	**4.43**	**300**	SPECP		22 48 18.0	
EATA				P	Pb	22 48 18.4	-5.1
EATA				S	**Sg**	**22 49 24.4**	**-3.6**
KHMZ	**Khomeyn**	**4.47**	**152**	*e*Pn	**Pn**	**22 48 16.3**	**+3.1**
KHMZ				IAML		22 49 38.0	
	comp=Z,10µm,1.0s						
GHVR	**GHOM**	**4.49**	**135**	*e*Pn	**Pn**	**22 48 14.4**	**+1.1**
GHVR				IAML		22 49 37.0	
	comp=Z,52µm,1.0s						
BOZK	**Kars-Merkez-Bo**	**4.51**	**311**	SPECP		22 48 21.0	
BOZK				P	**Pb**	**22 48 21.5**	**-3.2**
BOZK				S	**Sb**	**22 48 22.8**	**+3.7**
TBLG	**Delisi**	**4.51**	**333**	*e*P	**Pn**	**22 48 16.1**	**+2.5**
TBLG	**Delisi**	**4.51**	**333**	P	**Pn**	**22 48 15.7**	**+2.1**
IALA	**Alasht**	**4.58**	**109**	Pn	**Pn**	**22 48 15.8**	**+0.9**
IFIR	**Firoozkooh**	**4.73**	**115**	Pn	**Pn**	**22 48 17.7**	**+0.8**
IBDR	**Badra**	**4.78**	**196**	*e*Pn	**Pn**	**22 48 18.0**	**+0.7**
IBDR				*e*Sn	**Sn**	**22 49 15.0**	**+2.5**
AKH	**Akhalkalaki**	**4.79**	**321**	*e*P	**Pn**	**22 48 21.2**	**+3.6**
MUSM	**Mu-Merkez**	**4.80**	**284**	P	**Pn**	**22 48 22.1**	**+4.5**
MUSM				S	**Sg**	**22 49 38.5**	**-1.1**
MIDY	**Mardin/Midyat-**	**4.84**	**268**	SPECP		22 48 20.0	
MIDY				P	**Pn**	**22 48 20.4**	**+2.3**
SENK	**Senkaya-Erzuru**	**4.88**	**307**	*e*P	**Pn**	**22 48 22.7**	**+3.8**
GOLE	**Ardahan-G¶le**	**4.89**	**311**	SPECP		22 48 26.0	
GOLE				P	**Pb**	**22 48 26.8**	**-4.4**
HOMI	**Horasan**	**4.92**	**300**	SPECP		22 48 26.0	
HOMI				P	Pb	22 48 26.1	-5.6
HOMI				S	**Sg**	**22 49 41.9**	**-1.7**
KOPR	**Koprukoy-ERZUR**	**4.93**	**299**	*e*P	Pn	22 48 24.6	+5.1
VRTB	**Varto-Mus**	**4.93**	**289**	SPECP		22 48 22.0	
VRTB				P	**Pn**	**22 48 23.0**	**+3.4**
VRTB	**Varto-Mus**	**4.93**	**289**	*e*P	**Pn**	**22 48 23.5**	**+4.0**
ILAS	**Lasjerd**	**5.00**	**116**	Pn	**Pn**	**22 48 21.2**	**+0.7**
AHAN	**Ardahan-Merkez**	**5.08**	**314**	SPECP		22 48 28.0	
AHAN				P		22 48 28.0	
BHD	**Baghdad**	**5.12**	**210**	*e*Pn	**Pn**	**22 48 23.0**	**+1.1**
BHD				*e*Sn	**Sn**	**22 49 24.0**	**+3.2**
ISFB	**Sefidab**	**5.13**	**130**	Pn	**Pn**	**22 48 22.6**	**+0.4**
SLHN	**Bingol, Solhan**	**5.21**	**286**	SPECP		22 48 28.0	
SLHN				P	Pn	22 48 28.4	+5.0
MAK	**Makhachkala**	**5.22**	**0**	*c i*P	**Pn**	**22 48 23.6**	**+0.3**
MAK				*e*S	**Sn**	**22 49 26.1**	**+2.8**
MAK				pmax	pmax		
	comp=Z,2µm,0.7s						
MAK				MLR	MLR		
	comp=Z,205µm,15.0s						
IGLO	**Ghaloghah**	**5.23**	**102**	Pn	**Pn**	**22 48 24.0**	**+0.3**
ERZM	**Erzurum**	**5.24**	**296**	P	Pn	22 48 29.9	+6.1
EPOS	**Posof**	**5.25**	**317**	SPECP		22 48 30.0	
EPOS				P	Pb	22 48 31.0	-6.4
KARO	**Karliova-Bingo**	**5.28**	**289**	*e*P	**Pn**	**22 48 28.1**	**+3.8**
AKDA	**Akdag**	**5.32**	**298**	SPECP		22 48 30.0	
AKDA				P	Pn	22 48 30.9	+6.0
MARD	**Mardin**	**5.34**	**268**	SPECP		22 48 27.0	
MARD				P	**Pn**	**22 48 27.3**	**+2.3**
MARD	**Mardin**	**5.34**	**268**	Pn	**Pn**	**22 48 26.6**	**+1.5**
ETEKE	**Tekederesi - E**	**5.36**	**295**	P	**Pb**	**22 48 35.7**	**-3.6**
ECAT	**Cat-ERZURUM**	**5.42**	**292**	SPECP		22 48 31.0	
ECAT				P	Pn	22 48 31.9	+5.7
DDEM	**Demirkent**	**5.44**	**307**	SPECP		22 48 32.0	
DDEM				P	Pn	22 48 32.2	+5.7
BNGB	**Bingl**	**5.49**	**285**	*e*P	**Pn**	**22 48 30.9**	**+3.8**
IKLH	**Kolahrood**	**5.53**	**142**	Pn	**Pn**	**22 48 28.2**	**+0.3**
DBAD	**Bademkaya**	**5.55**	**308**	SPECP		22 48 33.0	
DBAD				P	Pn	22 48 33.3	+5.3
EMRE	**Erzurum,Aziziy**	**5.56**	**296**	SPECP		22 48 34.0	
EMRE				P	Pn	22 48 35.0	+6.7
IANJ	**Anjilo**	**5.65**	**112**	Pn	**Pn**	**22 48 30.7**	**+1.2**
KRIK	**Erzurum-spir**	**5.72**	**299**	SPECP		22 48 36.0	
KRIK				P		22 48 36.0	
DBOC	**Borcka**	**5.76**	**311**	P	Pn	22 48 36.0	+5.3
IPIR	**Pirpir**	**5.76**	**150**	Pn	**Pn**	**22 48 32.5**	**+1.5**
DYBB	**Diyarbakir**	**5.81**	**274**	*e*P	Pn	22 48 39.0	+7.5
KOPT	**Kop Dagi**	**5.90**	**295**	SPECP		22 48 40.0	
KOPT				P	Pn	22 48 40.1	+7.2
KOPT	**Kop Dagi**	**5.90**	**295**	Pn	Pn	22 48 38.5	+5.5
JHBN	**Jahan bin**	**6.08**	**154**	Pn	**Pn**	**22 48 36.4**	**+1.0**
RAFI	**Al-Rafai**	**6.10**	**191**	*e*Pn	**Pn**	**22 48 37.0**	**+1.6**
RAFI				*e*Sn	**Sn**	**22 49 48.0**	**+3.0**
KOVA	**Elazig, Kovanc**	**6.11**	**281**	P	Pn	22 48 40.7	+5.1
BAYB	**BAYBURT**	**6.16**	**296**	P	Pn	22 48 43.2	+6.8
IZDR	**Rize**	**6.17**	**302**	P	Pn	22 48 41.1	+4.8
CHKM	**Cayeli-Rize**	**6.19**	**305**	*e*P	Pn	22 48 41.5	+4.9
ZNGN	**Zangian**	**6.25**	**153**	Pn	**Pn**	**22 48 38.7**	**+0.9**
BAYT	**Aydintepe-Bayb**	**6.29**	**297**	*e*P	Pn	22 48 43.1	+4.9
IMND	**Minoodasht**	**6.33**	**92**	Pn	**Pn**	**22 48 37.6**	**-0.9**
ERZN	**Erzincan**	**6.34**	**289**	*e*P	Pn	22 48 43.7	+4.9
TNCL	**Tunceli-Merkez**	**6.38**	**285**	P	**Pn**	**22 48 43.8**	**+4.4**
EUZM	**Uzumlu**	**6.39**	**290**	P	Pn	22 48 45.7	+6.2
AHWZ	**Ahwaz**	**6.46**	**171**	Pn	**Pn**	**22 48 42.4**	**+2.1**
SVRC	**Sivrice-ELAZID**	**6.48**	**278**	*e*P	**Pn**	**22 48 42.5**	**+1.8**
IGAR	**Gharneh**	**6.50**	**143**	Pn	**Pn**	**22 48 41.7**	**+0.5**
NASN	**Na'in**	**6.58**	**137**	*e*Pn	**Pn**	**22 48 43.6**	**+1.3**
NASN				IAML		22 51 00.1	
	comp=Z,4µm,1.0s						
IBRJ	**Brojen**	**6.59**	**151**	Pn	**Pn**	**22 48 43.1**	**+0.6**
ELZG	**Elazig**	**6.74**	**279**	P	**Pn**	**22 48 47.8**	**+3.5**
SANL	**SANLIURFA_Merk**	**6.77**	**268**	P	**Pn**	**22 48 46.5**	**+1.8**
MACK	**Trabzon**	**6.78**	**301**	P	Pn	22 48 51.2	+6.5
HANM	**anlurfa/Hi**	**6.82**	**271**	P	**Pn**	**22 48 48.1**	**+2.8**
ANAR	**Anarak**	**6.83**	**130**	Pn	**Pn**	**22 48 46.6**	**+1.1**
MRVT	**Maraveh tapeh**	**6.83**	**88**	Pn	**Pn**	**22 48 44.8**	**-0.7**
KELT	**Kelkit**	**6.84**	**293**	P	Pn	22 48 51.5	+5.7
NARI	**Adyaman-Kaht**	**6.90**	**274**	P	**Pn**	**22 48 49.8**	**+3.4**
KBZ	**Khabaz**	**6.92**	**331**	Pn	**Pn**	**22 48 50.6**	**+4.0**
	comp=Z,23nm,0.9s,baz=134,slow=11,SNR=67						
KBZ				Pg	**Pb**	**22 49 07.2**	**+1.5**
	comp=Z,6.3nm,0.3s,baz=179,slow=12,SNR=14						
KBZ				Lg	Lg	22 50 41.6	
	comp=Z,1.0nm,0.3s,baz=234,slow=17,SNR=2.0						
KBZ				LR	LR	22 51 53.9	
	comp=Z,74µm,20.4s,baz=156,slow=42						
KBZ	**Khabaz**	**6.92**	**331**	*i* P	**Pn**	**22 48 46.0**	**-0.6**
SHA1	**Shidzhatmaz**	**7.02**	**330**	*i* P	**Pn**	**22 48 52.1**	**+3.8**
SHRO	**Shahrood**	**7.06**	**102**	*e*Pn	**Pn**	**22 48 50.4**	**+1.7**
SHRO				IAML		22 51 07.7	
	comp=Z,2.2nm,1.0s						
ILIC	**ilic-Erzincan**	**7.18**	**287**	*e*P	**Pn**	**22 48 54.9**	**+4.5**
KVAR	**Kislovodsk Arr**	**7.19**	**331**	Pn	**Pn**	**22 48 55.1**	**+4.6**
	baz=77,slow=19						

comp=E,3.7nm,0.3s,baz=105,slow=18,SNR=1.9
ASF LR LR 22 53 55.2
comp=E,59µm,20.4s,baz=45,slow=40
comp=E,13nm,0.4s
AFRZ Afriz 10.33 111 Pn **Pn 22 49 35.1 +1.5**
ANN Anapa 10.34 316 *e*P Pn 22 49 38.4 +5.0
ANN *e*S Sn 22 51 42.5 +13
ANN pmax pmax
comp=Z,407nm,1.0s
ANN MLR MLR
comp=Z,56µm,15.0s
ANN MLR MLR
comp=N,167µm,21.0s
MERS Mersin 10.36 269 *e*P **Pn 22 49 37.8 +4.0**
ITEG Tejag 10.40 114 Pn **Pn 22 49 35.2 +0.6**
KHGB Koh Gabri 10.47 132 Pn **Pn 22 49 36.1 +0.5**
JRKH Jarkhoshk 10.48 96 Pn **Pn 22 49 35.6 -0.1**
JHRM Jahrom 10.53 149 Pn **Pn 22 49 36.9 +0.6**
NATI Neve Ativ 10.55 249 P **Pn 22 49 36.9 +0.5**
GEM Giv'at Ha'Em 10.63 248 ⇑P **Pn 22 49 38.5 +1.0**
GEM Giv'at Ha'Em 10.63 248 ⇑P **Pn 22 49 38.4 +0.8**
KSHT Keshet 10.63 247 P **Pn 22 49 38.2 +0.5**
TBJM Torbat-e-JAM 10.64 99 Pn **Pn 22 49 39.2 +1.4**
KIZK Mersin 10.72 267 *e*P **Pn 22 49 41.7 +2.9**
IKOO Kooshah 10.83 116 Pn **Pn 22 49 41.2 +0.7**
KRM1 Kerman Provinc 10.86 129 Pn **Pn 22 49 41.7 +0.8**
YESY Yesilyurt 10.87 274 *e*P Pn 22 49 46.4 +5.4
KAMT Kaman 10.90 283 *e*P Pn 22 49 47.7 +6.4
SILI Silifke-Mersin 10.91 267 *e*P **Pn 22 49 43.9 +2.5**
MMA0B Mount Meron ar 10.92 248 P **Pn 22 49 43.0 +1.4**
MMAI Mount Meron Ar 10.92 248 Pn **Pn 22 49 43.1 +1.5**
comp=N,5.3nm,0.3s,baz=76,slow=15,SNR=44
MMAI Lg Lg 22 52 45.7
comp=N,3.2nm,0.3s,baz=42,slow=15,SNR=1.6
MMAI LR LR 22 54 37.0
comp=N,57µm,19.7s,baz=54,slow=41
comp=N,13nm,0.5s
KRBR Kerman 10.92 132 Pn **Pn 22 49 43.0 +1.2**
KRBR Kerman 10.92 132 *e*Pn **Pn 22 49 44.0 +2.2**
KRBR IAML_BB 22 49 51.2
comp=Z,7µm,1.0s
BR131 Keskin Array S 10.99 285 Pn Pn 22 49 48.0 +5.4
BR131 Keskin Array S 10.99 285 P Pn 22 49 48.6 +6.1
SNR=700
BR131 P Pn 22 49 48.6 +6.1
SNR=700
BR131 Keskin Array S 10.99 285 P Pn 22 49 48.0 +5.4
BRTR Keskin Array B 10.99 285 Pn Pn 22 49 48.0 +5.4
BRTR Keskin Array B 10.99 285 Pn Pn 22 49 47.8 +5.3
comp=Z,2.4nm,0.3s,baz=110,slow=11,SNR=325
BRTR Lg Lg 22 52 54.7
baz=148,slow=14
BRTR LR LR 22 54 34.0
comp=Z,114µm,18.9s,baz=90,slow=41
comp=Z,272nm,1.0s
SERE Sereflikochisa 10.99 281 *e*P Pn 22 49 48.7 +6.1
SULT Sultanhani-AKS 11.03 277 *e*P Pn 22 49 48.8 +5.7
KEBE Keben-Mersin 11.07 268 *e*P Pn 22 49 48.2 +4.6
CANT Cankiri 11.13 289 *e*P Pn 22 49 52.7 +8.3
ILGA Ilgaz 11.15 292 Pn Pn 22 49 50.3 +5.4
NGRK Negar Kerman 11.15 134 Pn **Pn 22 49 45.6 +0.5**
BSRN Basiran 11.17 118 Pn **Pn 22 49 45.3 +0.3**
BSRN Basiran 11.17 118 *e*Pn **Pn 22 49 47.2 +2.2**
BSRN IAML_BB 22 49 55.2
comp=Z,4µm,1.0s
BZK Bozkurt 11.18 296 Pn Pn 22 49 50.7 +5.7
BZK Bozkurt 11.18 296 *e*P Pn 22 49 50.2 +5.2
BZK Bozkurt 11.18 296 ⇓P Pn 22 49 50.0 +5.0
SHRT Shahrakht 11.19 106 Pn **Pn 22 49 46.2 +0.9**
MMLI Mount Malkishu 11.19 245 *e*P **Pn 22 49 48.8 +3.5**
MMLI Mount Malkishu 11.19 245 ⇑P **Pn 22 49 46.2 +0.9**
BLGI Bet Lehem HaGe 11.21 247 P **Pn 22 49 46.9 +1.4**
HMDT Nahal Hemdat 11.22 244 ⇑P **Pn 22 49 46.3 +0.7**
BALJ Balqa 11.22 243 Pn **Pn 22 49 48.8 +3.1**
IDAH Dahanechah 11.29 112 Pn **Pn 22 49 48.4 +1.5**
KRMN Karaman 11.31 272 *e*P Pn 22 49 53.6 +6.6
AFSR Afar-Bala (An 11.40 283 *e*P Pn 22 49 54.5 +6.3
OFRI `Ofer 11.42 247 P **Pn 22 49 49.2 +0.9**
LMD1 Lamerd 11.42 154 *e*Pn **Pn 22 49 50.6 +2.2**
LMD1 IAML_BB 22 50 19.5
comp=Z,8µm,1.0s
UJAP Al Uja 11.42 243 *e*P **Pn 22 49 52.9 +4.5**
KULU Kulu 11.43 281 *e*P Pn 22 49 54.3 +5.7
CHMN Cheshme madani 11.47 130 Pn **Pn 22 49 51.4 +2.0**
BERE Bereket-Mersin 11.47 267 *e*P **Pn 22 49 53.7 +4.5**
LFK Lefkose 11.48 262 *e*P **Pn 22 49 51.7 +2.4**
CHBY Cihanbeyli 11.52 279 *e*P Pn 22 49 55.4 +5.7
SALP Salfit 11.55 244 ⇑P **Pn 22 49 51.6 +1.4**
SLTI Sal'it 11.57 245 P **Pn 22 49 50.6 +0.1**
TEKE Tekeli-Mersin 11.60 266 *e*P **Pn 22 49 52.8 +2.0**
ANTO Ankara 11.65 285 Pn Pn 22 49 57.1 +5.6
ANTO Ankara 11.65 285 *e*P Pn 22 49 57.6 +6.0
ANTO Ankara 11.65 285 P Pn 22 49 57.3 +5.8
ANTO P Pn 22 49 57.3 +5.8
ANTO Ankara 11.65 285 ⇓P Pn 22 49 56.8 +5.2
ANTO Ankara 11.65 285 P Pn 22 49 57.2 +5.6
ANTO Ankara 11.65 285 ⇑P Pn 22 49 57.4 +5.8
LOD Lodumlu 11.68 285 *e*P Pn 22 49 57.8 +5.9
DSI Dead Sea 11.70 242 P **Pn 22 49 52.1 -0.1**
GHAJ Ghor Haditha 11.72 240 Pn **Pn 22 49 53.4 +0.9**
GHAJ Ghor Haditha 11.72 240 P **Pn 22 49 53.4 +0.9**
CSS Mathiatis 11.73 261 Pn **Pn 22 49 56.0 +3.3**
CSS Mathiatis 11.73 261 *e*P **Pn 22 49 55.2 +3.2**
CSS Mathiatis 11.73 261 ⇑P **Pn 22 49 53.6 +1.0**
CSS Mathiatis 11.73 261 P **Pn 22 49 56.2 +3.5**
comp=Z,11µmcomp=Z,381nm,2.0s
MSBI Mazada 11.86 241 ⇑P **Pn 22 49 54.2 -0.2**
CIDE Kastamonu/Cide 11.91 295 ⇑P Pn 22 50 00.2 +5.1
LADK Ladik-KONYA 11.94 277 *e*P Pn 22 50 01.6 +6.1
KONT Konya--Tatoy 11.95 276 *e*P Pn 22 50 02.0 +6.3
HDMB Hadim 11.96 271 *e*P Pn 22 50 00.9 +5.0
YTIR Yattir 12.00 242 ⇑P **Pn 22 49 56.8 +0.4**
SAKB Bahrain 12.01 167 P **Pn 22 49 55.5 -0.9**
AMAZ Amatzia 12.04 243 ⇑P **Pn 22 49 58.7 +1.7**
AMAZ Amatzia 12.04 243 P **Pn 22 49 58.6 +1.7**
NHDN Nehbandan 12.14 118 Pn **Pn 22 49 59.2 +0.9**
SHMA Al-Shehemyia 12.21 165 P **Pn 22 49 59.0 -0.2**
SNR=41
SHMA S **Sn 22 52 20.1 +5.0**
SIM Simferopol' 12.35 310 *e*P **Pn 22 50 04.4 +3.4**
SIM *e* 22 52 25.0
SIM pmax pmax
comp=Z,6µm,3.4s
SIM smax smax
comp=E,3µm,6.8s
HRA Herat 12.41 101 Pn **Pn 22 50 01.8 -0.3**
ZFRI Zfri 12.44 238 P **Pn 22 50 03.5 +1.1**
KBAM BAM 12.54 130 Pn **Pn 22 50 05.2 +1.3**
KZIT Kziot 12.77 242 ⇑P **Pn 22 50 06.3 -0.5**
KZIT Kziot 12.77 242 P **Pn 22 50 07.9 +1.1**
HRFI Mount Harif 12.86 237 ⇑P **Pn 22 50 08.2 +0.1**
MDUB Mudurnu 12.94 287 Pn **P 22 50 15.3 -4.5**
KHNJ Kahnooj 13.00 136 Pn **Pn 22 50 11.1 +1.1**
KRMI Paran Flat 13.02 238 P **Pn 22 50 11.2 +0.9**
MBRI Mt Berech 13.10 237 P **Pn 22 50 12.1 +0.7**
EIL Elat 13.16 236 Pn **Pn 22 50 12.7 +0.5**
comp=E,4.1nm,0.3s,baz=59,slow=4.2,SNR=32
EIL Lg Lg 22 53 58.5
comp=E,1.9nm,0.3s,baz=322,slow=18,SNR=4.0
EIL LR LR 22 56 07.1
comp=E,68µm,19.9s,baz=48,slow=41
comp=E,63nm,0.9s
EIL Elat 13.16 236 P **Pn 22 50 12.0 -0.1**
SMRA Abu-Samra 13.26 167 P **Pn 22 50 11.7 -1.8**
SNR=96
SMRA S **Sn 22 52 34.0 -6.8**
TRNA Turayna 13.34 165 P **Pn 22 50 13.0 -1.7**
SNR=109
TRNA S **Sn 22 52 36.2 -6.7**
ISP Isparta 13.41 276 Pn **Pn 22 50 19.7 +4.0**
ISP Isparta 13.41 276 *e*P **P 22 50 20.8 -4.4**
ISP Isparta 13.41 276 P **Pn 22 50 19.7 +4.0**
ISP Isparta 13.41 276 ⇑P **P 22 50 20.8 -4.4**
BORA Eskisehir 13.45 284 Pn **Pn 22 50 19.9 +3.7**
JRN Qarnain Island 13.55 159 P **Pn 22 50 16.1 -1.3**
SNR=58
SHME Shamm 13.77 145 P **Pn 22 50 20.0 -0.5**
SNR=21
SHME P **Pn 22 50 20.0 -0.5**
SNR=21
SHME S **Sn 22 52 50.1 -3.2**
SHME S **Sn 22 52 50.1 -3.2**
SHME S **Sn 22 52 50.1 -3.2**
SHME Shamm 13.77 145 *i*P **Pn 22 50 17.6 -2.9**
SNR=19
BANOM Banah 13.95 145 P **Pn 22 50 21.4 -1.6**
BANOM P **Pn 22 50 21.4 -1.6**
BANOM P **Pn 22 50 21.4 -1.6**
BANOM Banah 13.95 145 *i*P **Pn 22 50 22.0 -1.1**
SNR=18
UMQ Umm Al-Quwin 14.02 148 P **Pn 22 50 23.0 -0.8**
SNR=16
UMQ P **Pn 22 50 23.0 -0.8**
SNR=16
UMQ Umm Al-Quwin 14.02 148 *i*P **Pn 22 50 22.5 -1.4**
SNR=28
ELL Elmali 14.03 271 Pn **Pn 22 50 27.8 +3.7**
ELL Elmali 14.03 271 P **Pn 22 50 27.8 +3.7**
ELL Elmali 14.03 271 ⇑P **Pn 22 50 28.0 +3.9**
VRH Novokhopyorsk 14.07 345 *e*P **Pn 22 50 21.2 -3.3**
VRH *e*S **Sn 22 53 00.0 -0.4**
VRH pmax pmax
comp=Z,730nm,1.3s
VRH smax smax
comp=N,2µm,12.0s
VRH MLR MLR
comp=Z,44µm,15.0s
SLWR Sila 14.09 164 P **Pn 22 50 22.6 -2.2**
SLWR P **Pn 22 50 22.6 -2.2**
SLWR S **Sn 22 52 53.6 -7.5**
SLWR S **Sn 22 52 53.6 -7.5**
RAYN Ar Rayn 14.27 187 Pn **Pn 22 50 22.9 -4.4**
RAYN Ar Rayn 14.27 187 P **Pn 22 50 23.7 -3.7**
RAYN Ar Rayn 14.27 187 *i*P **Pn 22 50 22.6 -4.8**
SNR=304
RAYN Ar Rayn 14.27 187 ⇓P **Pn 22 50 23.9 -3.5**
RAYN Ar Rayn 14.27 187 ⇓P Pn 22 50 22.6 -4.8
AKAS Kas 14.36 269 Pn **Pn 22 50 29.5 +0.8**
MASF Masafi 14.37 147 P **Pn 22 50 27.2 -1.5**
SNR=56
MASF P **Pn 22 50 27.2 -1.5**
SNR=56
MSFE Esma-Masafi 14.38 147 *i*P **Pn 22 50 25.7 -3.1**
SNR=6.9
VORD Divnogorie 14.45 339 *e*P **Pn 22 50 27.4 -2.3**
VORD pmax pmax
comp=Z,290nm,1.0s
VORD MLR MLR
comp=Z,12µm,11.0s
GHWR Ruwais 14.48 160 P **Pn 22 50 28.2 -2.0**
GHWR P **Pn 22 50 28.2 -2.0**
GHWR P **Pn 22 50 28.2 -2.0**
GHWR S **Sn 22 53 06.9 -3.8**
GHWR S **Sn 22 53 06.9 -3.8**
GHWR S **Sn 22 53 06.9 -3.8**
MDH Madha 14.49 146 P **Pn 22 50 28.1 -2.3**
SNR=45
MDH P **Pn 22 50 28.1 -2.3**
SNR=45
MDH Madha 14.49 146 *i*P **Pn 22 50 27.6 -2.8**
SNR=19
NAZ Nazwa, Dubai 14.49 149 P **Pn 22 50 30.0 -0.4**
SNR=82
NAZ P **Pn 22 50 30.0 -0.4**
SNR=82
NAZ Nazwa, Dubai 14.49 149 *i*P **Pn 22 50 28.1 -2.3**
SNR=35
AJN Ajban 14.61 152 P **Pn 22 50 30.7 -1.3**
SNR=82
AJN P **Pn 22 50 30.7 -1.3**
SNR=82
AJN P **Pn 22 50 30.7 -1.3**
SNR=82
AJN Ajban 14.61 152 *i*P **Pn 22 50 29.5 -2.5**
SNR=35
AB31 Akbulak array 14.62 34 Pn **Pn 22 50 27.9 -4.2**
AB31 Akbulak array 14.62 34 ⇑P **Pn 22 50 28.6 -3.5**
comp=Z,241nm,0.9s,baz=218,slow=14
AB31 ⇑S **Sn 22 53 11.5 -2.3**
comp=Z,127nm,0.7s,baz=225,slow=30
AB31 Akbulak array 14.62 34 P **Pn 22 50 28.6 -3.5**
AB31 S **Sn 22 53 11.5 -2.3**
ABKAR Akbulak array 14.62 34 Pn **Pn 22 50 27.4 -4.6**
KLYT Kilyos 14.66 290 ⇑P **P 22 50 36.1 -2.7**
BELG Belogornoye 14.66 0 Pn **Pn 22 50 29.8 -2.7**
comp=Z,16nm,0.3s,baz=175,slow=2.3,SNR=66
BELG Sn **Sn 22 53 15.5 +0.8**
comp=Z,18nm,0.3s,baz=101,slow=21,SNR=6.7
BELG LR LR 22 58 09.6
comp=Z,40µm,19.9s,baz=178,slow=45
BELG Belogornoye 14.66 0 *d*P **Pn 22 50 28.4 -4.1**
FAQ Al Faqa, Dubai 14.68 150 P **Pn 22 50 30.9 -2.1**
SNR=78
FAQ P **Pn 22 50 30.9 -2.1**
SNR=78
FAQ P **Pn 22 50 30.9 -2.1**
SNR=78
FAQ Al Faqa, Dubai 14.68 150 *i*P **Pn 22 50 30.0 -3.0**
SNR=14
ASUD Al Ashush, Dub 14.69 151 P **Pn 22 50 31.8 -1.2**
SNR=78
ASUD P **Pn 22 50 31.8 -1.2**
SNR=78
ASUD P **Pn 22 50 31.8 -1.2**
SNR=78
ASUD Al Ashush, Dub 14.69 151 *i*P **Pn 22 50 30.3 -2.8**
SNR=31
FETY Fethiye 14.70 271 P **Pn 22 50 30.6 -2.6**
VSR Storozhevoye 14.71 339 *e*P **Pn 22 50 31.1 -2.1**
VSR *e*S **Sn 22 53 13.3 -2.7**
VSR pmax pmax
comp=Z,260nm,1.1s
VSR smax smax
comp=N,2µm,9.6s
VSR MLR MLR
comp=Z,41µm,12.0s
UOSS Minazif 14.76 147 Pn **Pn 22 50 30.9 -3.1**
UOSS Minazif 14.76 147 P **Pn 22 50 31.3 -2.8**
UOSS P **Pn 22 50 31.3 -2.8**
UOSS Minazif 14.76 147 *i*P **Pn 22 50 30.7 -3.3**
SNR=27
UOSS Minazif 14.76 147 ⇑P **Pn 22 50 31.3 -2.8**
AKTO Aktyubinsk 14.77 27 Pn **Pn 22 50 30.2 -3.8**
comp=Z,6.2nm,0.3s,baz=212,slow=11,SNR=105
AKTO Sn **Sn** 22 53 07.7 -10
comp=Z,19nm,0.3s,baz=168,slow=20,SNR=10
AKTO LR LR 22 57 28.6
comp=Z,18µm,21.4s,baz=188,slow=42
comp=Z,115nm,0.7s
AKTO Aktyubinsk 14.77 27 ⇓P **Pn 22 50 30.1 -3.9**
comp=Z,723nm,1.2s
AKTO ⇓S **Sn 22 53 11.0 -6.4**
comp=Z,217nm,1.1s
HATD Hatta, Dubai 14.83 148 P **Pn 22 50 33.3 -1.8**
SNR=85
HATD P **Pn 22 50 33.3 -1.8**
SNR=85
HATD P **Pn 22 50 33.3 -1.8**
SNR=85
HATD S **Sn 22 53 15.9 -3.3**
HATD S **Sn 22 53 15.9 -3.3**
HATD S **Sn 22 53 15.9 -3.3**
HATD Hatta, Dubai 14.83 148 *i*P **Pn 22 50 31.7 -3.4**
SNR=38
MANT Manisa 14.91 279 Pn **Pn 22 50 38.6 +2.3**
ASHO Ashiyiah 14.93 148 P **Pn 22 50 33.5 -2.9**
SNR=89
ASHO Ashiyiah 14.93 148 *i*P **Pn 22 50 33.4 -3.0**
SNR=24
MZWR Madinat Zayed 14.97 157 P **Pn 22 50 35.1 -1.8**
MZWR P **Pn 22 50 35.1 -1.8**
VORR Voronezh 15.11 340 *e*P **Pn 22 50 35.0 -3.6**
VORR pmax pmax
comp=Z,220nm,0.8s
VORR MLR MLR
comp=Z,26µm,11.0s
NE56 Odesa 15.16 311 P **Pn 22 50 40.7 +1.4**
CTYL Yalikoy Yolu 15.25 290 ⇑P **P 22 50 43.9 -1.5**
YER Yerkesik 15.26 274 P **Pn 22 50 41.0 +0.3**
BAND Balkesir-Ban 15.28 286 ⇓P **P 22 50 43.9 -1.8**
ALNE Al Ain 15.36 150 P **Pn 22 50 39.8 -2.3**
SNR=208
ALNE P **Pn 22 50 39.8 -2.3**
SNR=208
ALNE P **Pn 22 50 39.8 -2.3**
SNR=208
ALNE Al Ain 15.36 150 *i*P **Pn 22 50 37.9 -4.2**
SNR=45
MANR Mangalia 15.53 299 ⇑P **P 22 50 47.2 -1.2**
ARG Arkhangelos 15.54 270 Pn **Pn 22 50 44.8 +0.5**
ARG Arkhangelos 15.54 270 P **Pn 22 50 44.5 +0.2**
ARG Arkhangelos 15.54 270 P **Pn 22 50 44.8 +0.5**
ARG pmax pmax
comp=Z,223nm,1.2s
ARG Arkhangelos 15.54 270 ⇑P **Pn 22 50 44.2 -0.2**
MZR Muzera 15.56 159 P **Pn 22 50 44.4 -0.3**
SNR=650
MZR P **Pn 22 50 44.4 -0.3**
SNR=650
MZR Muzera 15.56 159 *i*P **Pn 22 50 41.3 -3.5**
SNR=416
EFOR EFORIE 15.58 300 ⇑P **Pn 22 50 46.9 +2.2**
SOHO SOHO 15.61 148 P **Pn 22 50 42.6 -2.7**
SOHO P **Pn 22 50 42.6 -2.7**
SOHO P **Pn 22 50 42.6 -2.7**
SOHO S **Sn 22 53 35.0 -3.2**
SOHO S **Sn 22 53 35.0 -3.2**
SOHO S **Sn 22 53 35.0 -3.2**
SOHO SOHO 15.61 148 *i*P **Pn 22 50 42.7 -2.7**
SNR=27
JURR Jurilovca 15.63 303 ⇑P **Pn 22 50 46.9 +1.4**
PURM Purcari 15.71 310 ⇑P **P 22 50 49.5 -1.0**
MFTR Murfatlar 15.75 300 ⇑P **Pn 22 50 49.1 +2.1**
PSN Preselentsi 15.80 298 P **Pn 22 50 49.2 +1.6**
PHSR Pinarhisar 15.84 290 ⇑P **P 22 50 52.0 0.0**
TIRR Tirgusor 15.84 301 Pn **Pn 22 50 47.9 -0.3**
TIRR Tirgusor 15.84 301 ⇓P **Pn 22 50 49.6 +1.4**
TIRR Tirgusor 15.84 301 ⇓P **Pn 22 50 49.6 +1.4**
TIRR Tirgusor 15.84 301 ⇓P **Pn 22 50 48.0 -0.2**
TPGR Topolog 15.97 302 ⇑P **Pn 22 50 51.3 +1.4**
LPSR Galich'ya Gora 16.02 341 *e*P **Pn 22 50 48.0 -2.5**
LPSR *e*S **Sn 22 53 45.7 -2.1**
LPSR pmax pmax
comp=Z,1µm,1.0s
LPSR smax smax
comp=E,5µm,11.8s
LPSR MLR MLR
comp=Z,33µm,13.0s
BODT Bodrum 16.04 274 P **Pn 22 50 52.7 +1.8**
BLCB Balcova 16.11 279 P **P 22 50 54.7 -0.2**
TLBR Topalu 16.12 301 ⇓P **P 22 50 54.2 -0.8**
ICOR Ion Corvin 16.16 299 ⇑P **Pn 22 50 53.8 +1.5**
DKL Dikili 16.18 281 ⇑P **P 22 50 54.9 -0.8**
PRD Provadia 16.19 296 P **P 22 50 54.6 -1.3**
HARR Harsova 16.24 301 ⇓P **Pn 22 50 54.6 +1.3**
HARR Harsova 16.24 301 ⇓P **Pn 22 50 54.6 +1.3**
CFR Carcaliu 16.27 303 ⇓P **P 22 50 55.7 -1.0**
CFR Carcaliu 16.27 303 ⇓P **P 22 50 55.7 -1.0**
NEF NEVSHA 16.31 296 P **P 22 50 56.3 -0.9**
ARQ Araqi 16.32 149 P **Pn 22 50 53.1 -1.3**
SNR=166
ARQ P **Pn 22 50 53.1 -1.3**
SNR=166
ARQ P **Pn 22 50 53.1 -1.3**
SNR=166
SMG Samos 16.33 276 P **Pn 22 50 55.0 +0.4**
UMZA Um Al Zommool 16.37 154 P **Pn 22 50 53.0 -2.1**
UMZA P **Pn 22 50 53.0 -2.1**
HOQ Hoqain 16.43 146 P **Pn 22 50 55.6 -0.3**
SNR=74
HOQ P **Pn 22 50 55.6 -0.3**
SNR=74
HOQ P **Pn 22 50 55.6 -0.3**
SNR=74
HOQ S **Sn 22 53 52.9 -5.3**
HOQ S **Sn 22 53 52.9 -5.3**
HOQ S **Sn 22 53 52.9 -5.3**
KARP Karpathos 16.45 269 Pn **Pn 22 50 56.1 0.0**
KARP Karpathos 16.45 269 P **Pn 22 50 56.0 0.0**
KARP Karpathos 16.45 269 *e*P **Pn 22 50 57.3 +1.2**
KARP Karpathos 16.45 269 ⇑P **Pn 22 50 56.4 +0.3**
TATR Tatarca 16.48 305 ⇑P **P 22 50 59.1 +0.1**
MILM Milestii Mici 16.54 310 ⇓P **Pn 22 50 57.9 +0.8**
MILM Milestii Mici 16.54 310 ⇓P **Pn 22 50 57.9 +0.8**
MILM Milestii Mici 16.54 310 *e*P **Pn 22 50 54.0 -3.1**
comp=Z,7µm,2.6s
MILM *i*S **Sn 22 54 00.0 -0.4**
MILM *e*LQ LQ 22 56 24.0
comp=Z,41µm,21.0s
MILM LRM MLR 22 58 36.0
comp=Z,23µm,16.5s
SCTR Scanteiesti 16.54 305 ⇓P **P 22 50 59.3 -0.4**
VLDR Vladesti 16.55 305 ⇑P **P 22 50 59.2 -0.6**
BAL3X Bal3x, Balta 16.57 314 P **Pn 22 50 56.7 -0.8**
NEGRR Negre 16.57 304 ⇑P **P 22 50 59.1 -0.9**
KIS Kishinev 16.57 310 ⇑P **P 22 50 59.6 -0.4**
KIS Kishinev 16.57 310 ⇑P **P 22 50 59.6 -0.4**
KIS Kishinev 16.57 310 *e*P **Pn 22 50 56.0 -1.5**
comp=Z,2µm,2.3s
KIS *i*S **Sn 22 54 01.0 -0.2**
KIS *e*L L 22 56 45.0
KIS LQM 22 57 08.0
comp=Z,9µm,21.5s
KIS LRM MLR 22 58 35.0
comp=Z,9µm,16.5s
SCHLR Schela 16.57 304 ⇑P **P 22 51 00.1 +0.1**
SCHL Schela 16.59 304 ⇓P **P 22 50 59.8 -0.4**
EZN Ezine 16.62 284 P **P 22 50 59.8 -0.8**
EZN Ezine 16.62 284 ⇓P **P 22 51 00.4 -0.2**
EZN Ezine 16.62 284 ⇓P **P 22 51 00.4 -0.2**
AMRR Amara 16.62 301 ⇓P **P 22 51 00.1 -0.5**
AMRR Amara 16.62 301 ⇓P **P 22 51 00.1 -0.5**
IZVR Izvoarele 16.64 304 ⇑P **P 22 50 59.9 -0.9**
PRK Paraskevi 16.67 282 P **P 22 51 00.8 -0.3**
JMB Yambol 16.70 293 P **P 22 51 05.9 +4.4**
JMB Yambol 16.70 293 P **P 22 51 01.5 0.0**
VARL Varlezi 16.72 305 ⇓P **P 22 51 02.5 +0.8**
TUDR 16.73 304 ⇑P **P 22 51 02.3 +0.6**
CAVK Edirne/Enez-Ca 16.77 287 ⇓P **P 22 51 08.2 +6.0**
ENEZ Enez 16.78 287 P **P 22 51 06.0 +3.6**
LOZB Loznitsa 16.82 296 ⇓P **P 22 51 04.3 +1.5**
ALN Alexandroupoli 16.88 287 P **P 22 51 03.2 -0.1**
ALN Alexandroupoli 16.88 287 P **P 22 51 04.5 +1.1**
ALN Alexandroupoli 16.88 287 P **P 22 51 03.3 -0.1**
ALN pmax pmax
comp=Z,309nm,1.5s
CHOS Chios island 16.88 279 P **P 22 51 04.5 +0.9**
RAZG Razgrad 16.93 297 ⇓P **P 22 51 04.7 +0.7**
NGCH Negor - Chabah 16.94 133 P **Pn 22 51 01.9 -0.4**
SNR=29
GADA Gvkgeada 16.95 285 P **P 22 51 04.5 +0.2**
SIGR SIGRI 16.99 282 P **P 22 51 04.5 -0.2**
BIR Birlad 17.00 306 ⇑P **P 22 51 04.8 0.0**
BIR Birlad 17.00 306 ⇑P **P 22 51 04.8 0.0**
VASR Vaslui 17.05 308 ⇓P **P 22 51 06.2 +0.8**
COSR Cosmesti PH 17.05 305 ⇓P **P 22 51 06.4 +1.0**
GHRR 17.07 306 ⇓P **P 22 51 06.3 +0.8**
GHRR 17.07 306 P **P 22 51 05.1 -0.4**
CHGR Chuyangaron 17.07 80 Pn **Pn 22 51 01.1 -2.9**
CHGR Chuyangaron 17.07 80 P **Pn 22 51 01.1 -2.9**
CHGR pmax pmax
comp=Z,561nm,1.2s
GRER 17.11 303 ⇑P **P 22 51 07.3 +1.3**
PANC Panciu 17.17 305 ⇑P **P 22 51 07.2 +0.6**
ODBI Odobesti 17.19 304 ⇓P **P 22 51 08.4 +1.5**
ODBI Odobesti 17.19 304 P **P 22 51 07.4 +0.6**
comp=Z,4µmcomp=Z,437nm,1.1s
SMDO Samad 17.22 145 P **Pn 22 51 05.1 -0.8**
SNR=114
SMDO P **Pn 22 51 05.1 -0.8**
SNR=114
SZH Strazhitsa 17.24 295 P **P 22 51 07.6 +0.1**
SMTH Samothraki Isl 17.25 286 P **P 22 51 07.6 +0.1**
ELND Elena 17.25 294 ⇓P **P 22 51 08.3 +0.7**
RDO Rodhopi 17.28 288 **P 22 51 07.5 -0.4**
RDO Rodhopi 17.28 288 P **P 22 51 08.6 +0.7**
RDO Rodhopi 17.28 288 ⇑P **P 22 51 08.4 +0.6**
ISR Istrita 17.32 302 ⇓P **P 22 51 09.4 +1.1**
ISR Istrita 17.32 302 ⇓P **P 22 51 09.4 +1.1**
ISR Istrita 17.32 302 P **P 22 51 08.8 +0.5**
comp=Z,18µmcomp=Z,797nm,1.4s
WSAR Wadi Sarin 17.33 143 P **Pn 22 51 07.2 0.0**
SNR=65
WSAR S **S 22 54 26.2 -2.4**
DIM Dimitrovgrad 17.34 291 P **P 22 51 10.2 +1.7**
BISRR Bisoca 17.34 303 ⇑P **P 22 51 09.6 +0.9**
BISRR Bisoca 17.34 303 P **P 22 51 09.2 +0.6**
comp=Z,29µmcomp=Z,1µm,1.3s
SULR 17.38 300 ⇓P **P 22 51 10.4 +1.4**

SORM Soroca 17.39 313 ⇑P Pn 22 51 08.5 +0.7
SORM Soroca 17.39 313 ⇑P Pn 22 51 08.5 +0.7
IASR Iasi 17.41 309 ⇑P P 22 51 08.9 -0.4
VRI Vrincioaia 17.44 304 ⇑P P 22 51 10.2 +0.6
VRI Vrincioaia 17.44 304 ⇑P P 22 51 10.2 +0.6
VRI Vrincioaia 17.44 304 P Pn 22 51 09.2 +0.8
comp=Z,12µmcomp=Z,559nm,1.5s
APE Apeiranthos 17.45 275 ⇓P P 22 51 12.5 +2.6
APE Apeiranthos 17.45 275 ⇓P P 22 51 12.5 +2.6
SGRR Singureni 17.46 299 ⇑P P 22 51 11.1 +1.3
KDZ Kurdzhali 17.47 290 P P 22 51 11.6 +1.7
KDZ Kurdzhali 17.47 290 P P 22 51 11.1 +1.1
PLOR5 Plostina Array 17.47 304 P P 22 51 10.2 +0.1
comp=Z,12µmcomp=Z,532nm,1.6s
PLOR Plostina 17.48 304 ⇓P P 22 51 10.9 +0.7
PLOR Plostina 17.48 304 ⇓P P 22 51 10.9 +0.7
CHM Chimkent 17.54 68 eP Pn 22 51 09.0 -0.8
CHM LR LR 22 59 23.4
CHM Chimkent 17.54 68 eP Pn 22 51 08.9 -0.8
NEHR Nehoiu 17.58 303 ⇑P P 22 51 13.1 +1.9
THR8 Santorini-Mono 17.60 272 P P 22 51 11.2 -0.3
PLAR PLOIESTI 17.60 301 ⇑P P 22 51 13.0 +1.6
KBL Kabul 17.71 94 Pn 22 51 10.9 -1.2
KBL Kabul 17.71 94 P P 22 51 13.5 +0.6
SNR=221
KBL P P 22 51 13.5 +0.6
SNR=221
KBL P P 22 51 13.5 +0.6
SNR=221
KBL S S 22 54 36.4 -0.2
KBL S S 22 54 36.4 -0.2
KBL S S 22 54 36.4 -0.2
KBL Kabul 17.71 94 P Pn 22 51 10.9 -1.2
KBL pmax pmax
comp=Z,291nm,1.1s
TESR Tescani 17.72 306 ⇑P P 22 51 13.3 +0.5
TESR Tescani 17.72 306 P Pn 22 51 12.3 +0.3
comp=Z,18µmcomp=Z,842nm,1.8s
NPS Neapolis 17.75 269 P P 22 51 13.2 +0.1
KBU Kabul Universi 17.79 94 P Pn 22 51 12.4 -0.7
PVL Pavlikeni 17.79 295 P P 22 51 17.8 +4.3
BRLS Borolday 17.82 66 eP Pn 22 51 10.6 -2.7
BRLS Borolday 17.82 66 eP Pn 22 51 10.5 -2.7
ONER Baraj Valea Uz 17.82 305 ⇓P P 22 51 16.0 +2.1
MLR Muntele Rosu 17.83 303 P 22 51 14.3 +0.2
MLR IAmb IAmb 22 51 22.0
comp=Z,1µm,2.0s
MLR Muntele Rosu 17.83 303 P P 22 51 15.4 +1.2
comp=Z,1.5nm,0.3s,baz=151,slow=6.8,SNR=45
MLR S S 22 54 35.9 -2.9
comp=Z,9.6nm,1.0s,baz=60,slow=20,SNR=0.6
MLR LR LR 23 00 11.4
comp=Z,51µm,20.7s,baz=82,slow=44
comp=Z,135nm,1.0s
MLR Muntele Rosu 17.83 303 ⇑P P 22 51 15.8 +1.6
IUG luzhnay 17.84 69 eP Pn 22 51 12.9 -0.6
IUG luzhnay 17.84 69 eP Pn 22 51 12.9 -0.6
JMDO Jabal Madar 17.84 146 P Pn 22 51 13.0 -0.6
SNR=74
JMDO P Pn 22 51 13.0 -0.6
SNR=74
JMDO S S 22 54 36.7 -2.4
JMDO S S 22 54 36.7 -2.4
RZN Rozhen 17.92 290 P P 22 51 16.0 +0.8
GAR Garm 17.95 79 Pn Pn 22 51 12.6 -2.4
PLD Plovdiv 17.96 291 P P 22 51 16.7 +1.2
PLD Plovdiv 17.96 291 P P 22 51 17.7 +2.3
TURR Turia 17.97 304 ⇑P P 22 51 17.1 +1.6
WBK Wadi Bani Khal 18.03 143 P P 22 51 16.6 +0.2
SNR=33
WBK P P 22 51 16.6 +0.2
SNR=33
WBK S S 22 54 43.5 +0.7
WBK S S 22 54 43.5 +0.7
KAVA Kavala 18.04 288 P P 22 51 16.7 +0.4
OZUR 18.13 304 ⇓P P 22 51 18.7 +1.3
KARY Karystos 18.18 278 P Pn 22 51 16.5 -1.2
NDNU Novodnistrovsk 18.19 313 P Pn 22 51 17.0 -0.7
HUMR Humele 18.22 299 ⇓P P 22 51 20.8 +2.5
PLVB Pleven 18.23 295 ⇑P P 22 51 20.0 +1.6
AK09 Malin Array Si 18.27 321 P Pn 22 51 18.1 -0.5
AK07 Malin Array Si 18.27 320 P Pn 22 51 18.1 -0.5
AK10 Malin Array Si 18.27 321 P Pn 22 51 18.2 -0.5
AK06 Malin Array Si 18.29 320 P Pn 22 51 18.4 -0.5
AK08 Malin Array Si 18.29 321 P Pn 22 51 18.4 -0.5
AK05 Malin Array Si 18.31 321 P Pn 22 51 18.6 -0.5
IDI Anoyia 18.31 269 P Pn 22 51 18.4 -0.9
IDI Anoyia 18.31 269 P Pn 22 51 19.4 +0.1
IDI Anoyia 18.31 269 P Pn 22 51 19.3 -0.1
comp=Z,59nm,0.9s,baz=53,slow=10.0,SNR=20
IDI S S 22 54 47.4 -1.2
comp=Z,15nm,1.1s,baz=88,slow=10,SNR=1.0
IDI PcP PcP 22 55 50.9 0.0
comp=Z,16nm,0.9s,baz=90,slow=8.1,SNR=1.7
KK31 Karatay Array 18.32 66 Pn 22 51 17.2 -2.2
KK31 Karatay Array 18.32 66 P Pn 22 51 17.5 -1.8
comp=Z,847nm,1.1s,baz=259,slow=15,SNR=2920
KK31 ⇑S Sn 22 54 41.6 -2.1
comp=Z,337nm,1.1s,baz=39,slow=53,SNR=4.5
KK31 Karatay Array 18.32 66 P Pn 22 51 17.2 -2.2
KK31 pmax pmax
comp=Z,3µm,1.7s
KKAR Karatay Array 18.32 66 Pn 22 51 16.9 -2.5
KKAR Karatay Array 18.32 66 P Pn 22 51 16.9 -2.5
AK02 Malin Array Si 18.33 321 P Pn 22 51 19.0 -0.4
AK01 Malin Array Si 18.35 321 P Pn 22 51 18.8 -0.8
AK12 Malin Array Si 18.35 321 P Pn 22 51 18.6 -1.0
AKASG Malin Array Be 18.35 321 P Pn 22 51 18.4 -1.2
AKASG IAmb IAmb 22 51 29.1
comp=Z,2µm,1.9s
AKASG Malin Array Be 18.35 321 P Pn 22 51 18.6 -0.9
comp=Z,4.6nm,0.3s,baz=127,slow=12,SNR=158
AKASG S Sn 22 54 41.2 -3.0
comp=Z,1.2nm,0.4s,baz=116,slow=10,SNR=1.6
AKASG LR LR 22 58 56.0
comp=Z,34µm,20.2s,baz=126,slow=39
comp=Z,141nm,1.0s
AKBB Malin Array Si 18.35 321 Pn 22 51 18.1 -1.4
AKBB Malin Array Si 18.35 321 ceP Pn 22 51 18.9 -0.7
AKBB pmax pmax
comp=Z,161nm,1.0s
AKBB Malin Array Si 18.35 321 P Pn 22 51 18.6 -1.0
AKBB pP pP 22 51 22.1 -1.9
KIEV Kiev 18.35 321 P Pn 22 51 18.2 -1.4
KIEV Kiev 18.35 321 ⇑P Pn 22 51 19.5 -0.1
KIEV Kiev 18.35 321 ⇑P Pn 22 51 19.5 -0.1
KIEV Kiev 18.35 321 ⇓P Pn 22 51 18.6 -1.0
KIEV Kiev 18.35 321 P Pn 22 51 18.6 -1.0
comp=Z,47µmcomp=Z,1µm,1.8s
AK11 Malin Array Si 18.36 321 P Pn 22 51 18.8 -1.0
AK14 Malin Array Si 18.36 320 P Pn 22 51 18.8 -1.0
AK03 Malin Array Si 18.37 321 P Pn 22 51 18.8 -1.0
AK13 Malin Array Si 18.38 320 P P 22 51 18.9 -1.0
AK16 Malin Array Si 18.39 321 P P 22 51 19.5 -0.6
AK04 Malin Array Si 18.39 321 P P 22 51 19.5 -0.6
AK15 Malin Array Si 18.40 321 P P 22 51 19.5 -0.6
VOIR 18.42 302 ⇓P Pn 22 51 22.6 +2.0
VOIR 18.42 302 ⇓P Pn 22 51 22.6 +2.0
VOIR 18.42 302 P Pn 22 51 22.8 +2.2
comp=Z,21µmcomp=Z,1µm,2.2s
AK17 Malin Array Si 18.42 321 P P 22 51 19.8 -0.6
PGB Panagyurishte 18.43 292 P Pn 22 51 23.8 +3.1
AK23 Malin Array Si 18.44 321 P P 22 51 20.0 -0.6
AK18 Malin Array Si 18.44 321 P P 22 51 20.0 -0.6
DRBR Darabani 18.45 311 ⇑P Pn 22 51 22.0 +1.1
AK22 Malin Array Si 18.46 321 P P 22 51 20.2 -0.7
AK19 Malin Array Si 18.47 321 P P 22 51 20.5 -0.4
AK20 Malin Array Si 18.48 321 P P 22 51 20.2 -0.9
AK21 Malin Array Si 18.49 321 P P 22 51 20.2 -0.9
VLAD Vladila 18.51 297 ⇑P Pn 22 51 23.2 +1.7
DION Dionisos Attik 18.57 278 P Pn 22 51 23.0 +0.6
TRKS Terek-Su 18.61 71 P P 22 51 21.4 -1.3
PTL Penteli 18.63 278 P Pn 22 51 23.8 +0.7
JLN Jalan Bani Buh 18.63 143 P Pn 22 51 23.2 0.0
SNR=102
JLN P Pn 22 51 23.2 0.0
SNR=102
JLN S S 22 54 56.8 +1.8
JLN S S 22 54 56.8 +1.8
MMB Musomishta 18.65 289 P Pn 22 51 24.8 +1.4
MMB Musomishta 18.65 289 P Pn 22 51 25.7 +2.3
LUBAR Lubar, Ukraine 18.66 317 P P 22 51 22.6 -0.4
ARR Arges 18.68 301 ⇑P Pn 22 51 25.3 +1.6

ATHU Athens Univers 18.70 278 P Pn 22 51 24.8 +0.8
VLY Voula,Athens 18.71 278 P Pn 22 51 25.6 +1.5
SRS Serrai 18.74 288 P Pn 22 51 25.6 +1.1
SRS Serrai 18.74 288 P Pn 22 51 25.9 +1.4
SRS pmax pmax
comp=Z,678nm,2.0s
ATH Athens Observa 18.75 278 P Pn 22 51 26.1 +1.4
STFN Stefani 18.87 279 P Pn 22 51 26.1 0.0
DZA Taraz 18.89 67 eP P 22 51 25.8 +0.1
DZA Taraz 18.89 67 eP P 22 51 25.7 +0.1
OBN Obninsk 18.90 340 P P 22 51 23.8 -1.8
OBN IAmb IAmb 22 51 29.8
comp=Z,1µm,1.5s
OBN Obninsk 18.90 340 P P 22 51 24.2 -1.4
comp=Z,7.9nm,0.3s,baz=93,slow=8.5,SNR=77
OBN S Sn 22 54 52.2 -5.2
comp=Z,33nm,0.7s,baz=203,slow=19,SNR=1.4
OBN LR LR 22 59 27.8
comp=Z,21µm,20.0s,baz=100,slow=39
comp=Z,319nm,1.1s
OBN Obninsk 18.90 340 dP P 22 51 23.9 -1.7
OBN pmax pmax
comp=Z,307nm,1.3s
OBN MLR MLR
comp=Z,28µm,16.0s
OBN Obninsk 18.90 340 ⇓P P 22 51 23.9 -1.7
OBN Obninsk 18.90 340 P P 22 51 23.8 -1.7
comp=Z,11µmcomp=Z,587nm,1.4s
MAGU Magoula 18.90 278 P Pn 22 51 28.0 +1.6
MI30 MI30,Zelenitsa 18.90 320 P P 22 51 24.1 -1.6
comp=Z,15µmcomp=Z,448nm,1.6s
CHRU Chernivtsi 18.91 311 P P 22 51 25.1 -0.7
comp=Z,8µmcomp=Z,217nm,1.8s
SOH Sokhos 18.91 287 P Pn 22 51 28.3 +1.7
SOH Sokhos 18.91 287 P Pn 22 51 28.0 +1.4
SOH pmax pmax
comp=Z,710nm,2.5s
CHAN Chania 18.93 270 P Pn 22 51 26.6 -0.1
CRAR CRAIOVA 19.00 298 ⇑P Pn 22 51 28.6 +1.1
CRAR CRAIOVA 19.00 298 ⇑P Pn 22 51 28.6 +1.1
TNR Turnu Rosu 19.00 302 ⇑P Pn 22 51 29.2 +1.6
TNR Turnu Rosu 19.00 302 ⇑P Pn 22 51 29.2 +1.6
MHTO MHTO 19.01 148 P P 22 51 27.0 -0.1
SNR=378
MHTO P P 22 51 27.0 -0.1
SNR=378
MHTO P P 22 51 27.0 -0.1
SNR=378
MHTO S S 22 55 02.4 -0.2
MHTO S S 22 55 02.4 -0.2
MHTO S S 22 55 02.4 -0.2
HORU Horodok 19.03 314 P P 22 51 27.1 -0.1
HORU Horodok 19.03 314 P P 22 51 26.7 -0.5
VILL Villia 19.05 279 P Pn 22 51 28.7 +0.4
BURAR Bucovina Array 19.05 308 P P 22 51 27.5 0.0
BURAR Bucovina Array 19.05 308 ⇓P Pn 22 51 28.4 +0.1
BURAR Bucovina Array 19.05 308 ⇓P Pn 22 51 28.4 +0.1
BUR08 Bucovina Ar. S 19.07 308 P P 22 51 27.2 -0.5
MDB Medias 19.07 303 ⇓P Pn 22 51 29.2 +0.7
MDB Medias 19.07 303 ⇓P Pn 22 51 29.2 +0.7
HORT Hortiatis 19.10 286 P Pn 22 51 29.5 +0.6
TGMR Targu Mures 19.10 305 ⇑P Pn 22 51 29.4 +0.6
VTS Vitosha 19.13 292 P Pn 22 51 29.5 +0.2
VTS Vitosha 19.13 292 P Pn 22 51 32.3 +3.0
KKB Krupnik 19.13 290 P Pn 22 51 29.5 +0.3
KKB Krupnik 19.13 290 P Pn 22 51 32.6 +3.4
RODP Rodopos 19.14 271 P P 22 51 23.1 -5.4
MOS Moscow 19.20 343 eP P 22 51 27.1 -1.8
MOS eS Sn 22 55 00.1 -4.5
MOS pmax pmax
comp=Z,758nm,1.4s
MOS pmax pmax
comp=N,656nm,1.3s
MOS pmax pmax
comp=E,258nm,1.4s
MOS pmax pmax
comp=Z,8µm,4.3s
MOS pmax pmax
comp=N,7µm,3.9s
MOS pmax pmax
comp=E,4µm,5.3s
THE Thessaloniki 19.20 286 P Pn 22 51 30.7 +0.7
ATAL Atalanti 19.23 280 P P 22 51 29.1 -0.3
ARK Arkit 19.24 70 P P 22 51 24.8 -4.8
LKR Lokris 19.25 280 P P 22 51 29.7 +0.1
BAIL Bailesti 19.26 297 ⇓P Pn 22 51 31.3 +0.6
KNT Kendrikon 19.27 288 P Pn 22 51 31.2 +0.4
KNT Kendrikon 19.27 288 P Pn 22 51 31.5 +0.7
KNT pmax pmax
comp=Z,631nm,1.8s
MI28 Mi28,Pidlybu 19.28 320 P P 22 51 29.1 -0.7
LOT Lotru 19.29 301 ⇓P Pn 22 51 32.2 +1.1
PEHC Pehcevo 19.30 290 iP P 22 51 30.9 +0.6
KSV Kosov 19.43 310 P P 22 51 31.5 0.0
KSV Kosov 19.43 310 P P 22 51 31.1 -0.4
ANKY Antikythira Is 19.44 272 P Pn 22 51 32.8 -0.1
AXAR Agios Charalam 19.50 281 P P 22 51 32.9 +0.5
VAY Valandovo 19.52 288 iP Pn 22 51 34.0 +0.2
KTHA Kythira Island 19.54 273 P P 22 51 32.2 -0.7
LIT Litokhoron 19.57 285 P P 22 51 33.1 0.0
LIT IAmb IAmb 22 51 41.5
comp=Z,944nm,1.5s
LIT Litokhoron 19.57 285 P P 22 51 33.1 0.0
LIT pmax pmax
comp=Z,944nm,1.5s
LIT Litokhoron 19.57 285 ⇑P P 22 51 33.9 +0.7
PUNG Punghina 19.60 297 ⇑P Pn 22 51 36.1 +1.3
BLKB Belogradchik 19.67 295 ⇓P Pn 22 51 36.2 +0.5
AGG Agios Georgios 19.74 282 P Pn 22 51 35.4 +0.3
AGG Agios Georgios 19.74 282 P Pn 22 51 36.0 -0.5
AGG pmax pmax
comp=Z,674nm,2.3s
AGG Agios Georgios 19.74 282 ⇑P P 22 51 35.8 +0.8
CJR Cluj-Napoca 19.77 305 ⇑P Pn 22 51 37.5 +0.7
CJR Cluj-Napoca 19.77 305 ⇑P Pn 22 51 37.5 +0.7
DQM 19.79 151 P P 22 51 35.0 -0.6
SNR=77
DQM P P 22 51 35.0 -0.6
SNR=77
DQM P P 22 51 35.0 -0.6
SNR=77
DQM S S 22 55 15.4 -2.9
DQM S S 22 55 15.4 -2.9
DQM S S 22 55 15.4 -2.9
CBBR Cluj-Babes-Bol 19.82 305 ⇑P Pn 22 51 38.2 +0.8
OHH Osh 19.82 74 P P 22 51 35.1 -0.8
GUR Goura 19.84 278 P P 22 51 35.3 -0.9
RAKU Rahkiv 19.86 309 P P 22 51 36.5 +0.2
MAKR Makrakomi, Fth 19.89 282 P Pn 22 51 38.0 -0.3
DOK Doka 19.92 161 S S 22 55 18.2 -2.7
STNU Starunia 19.94 311 P P 22 51 36.8 -0.2
GZR Gura Zlata 19.95 300 ⇑P P 22 51 38.2 +0.9
GZR Gura Zlata 19.95 300 ⇑P P 22 51 38.2 +0.9
THL Klokotos Trika 19.95 283 P P 22 51 37.3 +0.1
DJES Djerdap 19.97 298 ⇓P Pn 22 51 40.0 +0.9
KLV Kalavryta, Ach 19.98 279 P P 22 51 37.3 -0.3
ARSB Arslanbob 19.98 72 P P 22 51 37.2 -0.5
DEV Deva 19.99 302 ⇓P Pn 22 51 39.8 +0.4
DEV Deva 19.99 302 ⇓P Pn 22 51 39.8 +0.4
ARTI Arti 20.04 18 P P 22 51 36.7 -1.4
ARTI Arti 20.04 18 P P 22 51 37.2 -0.9
comp=Z,1µm,1.2s,baz=208,slow=11,SNR=297
ARTI S S 22 55 12.5 -10
comp=Z,97nm,0.8s,baz=181,slow=19,SNR=3.3
comp=Z,1µm,1.2s
ARTI Arti 20.04 18 dP P 22 51 36.8 -1.3
ARTI S S 22 55 16.9 -6.0
ARTI pmax pmax
comp=Z,2µm,1.3s
ARTI MLR MLR
comp=Z,19µm,16.0s
ARTI Arti 20.04 18 ⇑P P 22 51 36.4 -1.7
MARR Marisel-Cluj 20.07 304 ⇑P Pn 22 51 40.1 -0.3
HERR Herculane 20.08 299 ⇑P P 22 51 39.3 +0.6
EVR Evrytania 20.15 281 P P 22 51 40.2 +0.6
ITM Ithomi 20.27 276 P P 22 51 39.7 -1.2
ITM Ithomi 20.27 276 ⇑P P 22 51 40.0 -0.8
MESR Meseseni 20.33 305 ⇓P Pn 22 51 43.5 +0.2
BOVS Bovan 20.37 295 ⇑P Pn 22 51 43.3 -0.6
DRGR 20.37 304 ⇓P Pn 22 51 44.0 +0.1
DRGR 20.37 304 ⇓P Pn 22 51 44.0 +0.1
RNPP5 Staryi Chortor 20.38 318 P P 22 51 41.3 -0.5
RNPP2 Kostyukhnivka 20.43 319 P P 22 51 42.5 +0.2

RNPP8 Varash 20.45 319 P P 22 51 42.1 -0.5
MEZ Mezhgor'ye 20.45 309 P P 22 51 43.4 +0.7
RNPP9 Sopachiv 20.47 319 P P 22 51 42.2 -0.6
MORS Morshin 20.48 311 P Pn 22 51 44.4 -0.7
MORS Morshin 20.48 311 P P 22 51 44.1 +1.2
SURR Surduc 20.48 301 ⇑P P 22 51 40.7 -2.3
WHFO Wadi Hawf 20.50 163 P P 22 51 43.2 -0.2
SNR=184
WHFO P P 22 51 43.2 -0.2
SNR=184
WHFO P P 22 51 43.2 -0.2
SNR=184
WHFO S S 22 55 31.0 -1.5
WHFO S S 22 55 31.0 -1.5
WHFO S S 22 55 31.0 -1.5
MDVR Moldovita 20.55 298 ⇓P Pn 22 51 45.7 -0.3
KORU Korolevo 20.56 308 P P 22 51 44.9 +1.1
TRSU Trosnyk 20.64 308 P P 22 51 45.8 +1.1
BRIU Brid 20.69 309 P P 22 51 46.1 +0.9
LVV L'vov 20.70 313 P P 22 51 46.0 +0.7
LVV L'vov 20.70 313 P P 22 51 46.0 +0.7
BZS Buzias 20.80 300 ⇑P P 22 51 47.4 +1.0
BZS Buzias 20.80 300 ⇑P P 22 51 47.4 +1.0
BZS Buzias 20.80 300 ⇑P P 22 51 45.5 -0.9
CEI Carei 20.82 306 ⇓P Pn 22 51 48.9 -0.2
CEI Carei 20.82 306 ⇓P Pn 22 51 48.9 -0.1
SHIU Shidnytsya 20.83 311 P P 22 51 47.5 +0.7
OHR Ohrid 20.85 288 iP Pn 22 51 50.3 +0.7
KBN Korca 20.86 286 P Pn 22 51 50.3 +0.6
KBN pmax pmax
comp=Z,1µm,1.2s
BERU Beregovo 20.89 308 P P 22 51 48.5 +1.2
SHAO Shalim 20.90 158 P P 22 51 47.5 -0.1
SNR=48
SHAO P P 22 51 47.5 -0.1
SNR=48
SHAO Shalim 20.90 158 iP P 22 51 44.9 -2.8
SNR=58
KIRV Kirov 20.91 3 P P 22 51 46.5 -0.9
comp=Z,438nm,1.1s,baz=192,slow=8.6,SNR=103
KIRV S S 22 55 38.5 -1.4
comp=Z,47nm,0.7s,baz=205,slow=19,SNR=1.8
KIRV LR LR 23 01 43.5
comp=Z,47µm,18.2s,baz=191,slow=42
comp=Z,438nm,1.1s
KIRV Kirov 20.91 3 ceP P 22 51 47.1 -0.3
SIRR Siria 20.92 302 ⇓P Pn 22 51 49.5 -0.9
ABTO Aybut 20.94 164 P P 22 51 47.6 -0.5
SNR=543
ABTO P P 22 51 47.6 -0.5
SNR=543
MUKU Mukachevo 20.94 309 P P 22 51 48.6 +0.7
DMTO DMTO 21.00 160 P P 22 51 48.2 -0.5
SNR=77
DMTO P P 22 51 48.2 -0.5
SNR=77
ARLS Aral 21.00 70 P P 22 51 50.1 +1.2
SVE Sverdlovsk 21.02 20 ceP P 22 51 48.8 +0.1
SVE eS S 22 55 41.0 -1.2
SVE pmax pmax
comp=Z,1µm,1.1s
SVE MLR MLR
comp=Z,24µm,15.0s
BORR Bors 21.07 305 ⇓P P 22 51 50.7 +1.5
BANR Banloc 21.07 300 ⇓P P 22 51 50.6 +1.2
TIM Timisoara 21.09 301 ⇑P P 22 51 51.7 +2.2
TIM Timisoara 21.09 301 ⇑P P 22 51 51.7 +2.2
HOLU Holmets 21.16 309 P P 22 51 50.9 +0.7
AAK Ala-Archa 21.18 68 P P 22 51 51.3 +0.6
AAK IAmb IAmb 22 52 01.6
comp=Z,522nm,1.2s
AAK Ala-Archa 21.18 68 P P 22 51 51.7 +1.0
comp=Z,291nm,1.3s,baz=257,slow=9.8,SNR=46
AAK S S 22 55 45.9 0.0
comp=Z,32nm,1.1s,baz=309,slow=23,SNR=1.7
AAK LR LR 23 02 33.9
comp=Z,46µm,18.7s,baz=281,slow=44
comp=Z,291nm,1.3s
AAK Ala-Archa 21.18 68 P P 22 51 52.8 +2.1
AAK P P 22 51 52.8 +2.1
AAK P P 22 51 52.8 +2.1
AAK Ala-Archa 21.18 68 ⇑P P 22 51 51.9 +1.2
comp=Z,547nm,1.2s
AAK Ala-Archa 21.18 68 iP P 22 51 51.9 +1.2
SNR=74
AAK Ala-Archa 21.18 68 ceP P 22 51 50.1 -0.6
AAK pmax pmax
comp=Z,525nm,1.7s
UZHM Uzhgorod 21.25 309 P P 22 51 52.3 +1.0
FRU1 Bishkek 21.29 68 P P 22 51 52.1 +0.3
FRU1 Bishkek 21.29 68 P P 22 51 52.1 +0.3
FRU1 pmax pmax
comp=Z,1µm,1.4s
SGDS Sogindy 21.35 66 eP P 22 51 52.7 +0.2
KWP Kalwaria Pacla 21.39 312 eP P 22 51 52.9 +0.1
KWP eS S 22 55 50.7 +0.9
KWP eL L 23 01 21.5
comp=Z,14µm,20.2s
KWP Kalwaria Pacla 21.39 312 P P 22 51 52.9 +0.1
KWP Kalwaria Pacla 21.39 312 ⇓P P 22 51 52.9 +0.1
KWP Kalwaria Pacla 21.39 312 P P 22 51 53.5 +0.7
comp=Z,19µmcomp=Z,1µm,1.1s
MNK Minsk 21.46 328 iP P 22 51 52.2 -1.2
comp=E,568nm,1.2s
MNK iP P 22 51 52.2 -1.2
comp=N,748nm,1.2s
MNK iP P 22 51 52.2 -1.2
comp=Z,610nm,1.0s,baz=132
MNK i PP PnPn 22 52 12.1 -1.5
MNK i PPP PPP 22 52 19.9
MNK iS S 22 55 50.5 -0.5
MNK iSS SnSn 22 56 14.7 +0.6
MNK iSSS SSS 22 56 27.8
MNK iLQ LQ 22 58 23.8
MNK iLR LR 22 59 41.9
MNK iLRM MLR 23 01 17.2
comp=E,20µm,16.6s
MNK iLRM MLR 23 01 17.2
comp=N,11µm,15.5s
MNK iLRM MLR 23 01 17.2
comp=Z,32µm,16.8s
MNK Minsk 21.46 328 iP P 22 51 52.2 -1.2
MNK iPPP PPP 22 52 19.9
MNK iS S 22 55 50.4 -0.5
MNK iSSS SSS 22 56 27.8
MNK pmax pmax
comp=N,748nm,1.2s
MNK pmax pmax
comp=E,568nm,1.2s
MNK pmax pmax
comp=Z,610nm,1.0s
MNK MLR MLR
comp=Z,32µm,17.0s
MNK MLR MLR
comp=N,11µm,15.0s
MNK MLR MLR
comp=E,20µm,17.0s
PVY Plav 21.54 292 ⇑iP P 22 51 55.0 +0.5
IVA Berane 21.60 292 ⇑iP P 22 51 55.8 +0.6
KEK Kerkira 21.65 284 P P 22 51 56.2 +0.6
KEK IAmb IAmb 22 52 08.3
comp=Z,890nm,1.4s
BRZS Berezniki 21.80 48 eP P 22 51 57.2 +0.1
BRZS Berezniki 21.80 48 eP P 22 51 57.1 0.0
KOME Kolasin 21.88 292 ⇑iP P 22 51 59.1 +0.9
PLE Pljevlja 22.01 294 ⇑iP P 22 52 00.1 +0.5
ULC Ulcinj 22.03 290 ⇑iP P 22 51 59.9 +0.1
BORK Borovoye 22.04 39 iP P 22 51 59.6 -0.1
BORK Borovoye 22.04 39 ceP P 22 51 59.5 -0.1
BORK pmax pmax
comp=Z,605nm,1.3s
BORK Borovoye 22.04 39 ⇓P P 22 51 59.3 -0.4
PDG Podgorica 22.04 291 P P 22 51 59.0 -0.9
PDG IAmb IAmb 22 52 11.5
comp=Z,885nm,1.8s
PDG IAMs_20 IAMs_20 23 01 13.6
comp=Z,45µm,21.0s
PDG Podgorica 22.04 291 ⇓P P 22 52 00.9 +1.1
PDG Podgorica 22.04 291 ⇓P P 22 52 00.7 +0.8
PDG Podgorica 22.04 291 ⇑iP P 22 52 00.4 +0.6
RUDO Rudo 22.05 294 eP P 22 52 00.6 +0.7
BVA0 Borovoye Array 22.06 39 ⇓P P 22 51 59.8 -0.1
comp=Z,1µm,1.4s
BVA0 Borovoye Array 22.06 39 P P 22 51 59.8 -0.1

BVAR Borovoye Array 22.06 39 P P 22 51 60.0 0.0
comp=Z,261nm,0.9s,baz=225,slow=8.2,SNR=278
BVAR S S 22 55 59.5 -3.3
comp=Z,77nm,0.7s,baz=236,slow=20,SNR=6.0
BVAR LR LR 23 02 40.7
comp=Z,34μm,19.0s,baz=234,slow=42
BVAR P3KPbc 23 25 42.8
comp=Z,3.2nm,1.0s,baz=50,slow=4.5,SNR=5.2
comp=Z,261nm,0.9s
BVAR Borovoye Array 22.06 39 P P 22 52 00.0 0.0
DRME Dracevica, Mon 22.09 290 ⇑*i*P **P 22 52 01.6 +1.3**
BSZH Besenyszg 22.12 304 ⇑P **P 22 52 02.3 +1.7**
STHS Stebnicka Huta 22.18 310 *e*P **P 22 52 01.9 +0.6**
STHS *e* 22 52 04.6
STHS pmax pmax
comp=Z,50nm,1.0s
STHS Stebnicka Huta 22.18 310 *e*P **P 22 52 01.9 +0.6**
STHS Stebnicka Huta 22.18 310 *e*PN **P 22 52 04.6 +3.3**
NACGM Naroch 22.20 327 *e*P **P 22 52 00.3 -1.1**
comp=E,574nm,1.4s
BOOM Boomskoye usch 22.23 69 P **P 22 52 02.2 +0.1**
BOOM Boomskoye usch 22.23 69 P **P 22 52 02.2 +0.1**
BOOM pmax pmax
comp=Z,2μm,1.6s
NKME Niksic 22.29 292 ⇑*i*P **P 22 52 02.3 -0.2**
CEME Cevo 22.30 291 ⇑*i*P **P 22 52 03.1 +0.4**
KSH Kashi 22.30 77 P **P 22 52 00.2 -2.6**
KSH sP pP 22 52 07.5 +0.4
KSH PP **PnPn 22 52 26.3 +0.9**
KSH S **S 22 55 59.7 -8.1**
KSH SS **SnSn 22 56 35.1 -0.1**
KSH pmax pmax
comp=Z,250nm,1.3s
KSH pmax pmax
comp=Z,6μm,6.2s
KSH LR LR
comp=Z,42μm,23.4s
KSH LR LR
comp=Z,28μm,23.2s
KSH LR LR
comp=Z,40μm,22.5s
BUM Brajici-Budva 22.31 291 ⇑*i*P **P 22 52 02.9 +0.1**
UPM Unac-Piva 22.35 293 ⇑*i*P **P 22 52 03.4 0.0**
ULHL Ulahol 22.45 69 P **P 22 52 05.9 +1.5**
SNR=34
PSZ Piszkesteto 22.53 306 P **P 22 52 04.9 -0.2**
PSZ IAmb IAmb 22 52 21.8
comp=Z,931nm,1.6s
PSZ Piszkesteto 22.53 306 *e*P **P 22 52 06.1 +0.9**
PSZ Piszkesteto 22.53 306 P **P 22 52 04.9 -0.2**
PSZ pmax pmax
comp=Z,931nm,1.6s
PSZ MLR MLR
comp=Z,22μm,19.0s
PSZ Piszkesteto 22.53 306 ⇓P **P 22 52 05.3 +0.2**
KLINJ Klinje 22.58 293 *e*P **P 22 52 08.3 +2.6**
BRY Bratogost 22.60 292 ⇑*i*P **P 22 52 05.6 -0.3**
HCY Herceg Novi 22.61 291 ⇑*i*P **P 22 52 06.0 +0.1**
KUU Kurty 22.63 65 *e*P **P 22 52 06.6 +0.4**
comp=Z,317nm,1.1s
KUU *e*S **S 22 56 14.5 +0.8**
KUU LR LR 23 02 23.3
KUU Kurty 22.63 65 *e*P **P 22 52 06.5 +0.4**
KUU *e*S **S 22 56 14.4 +0.8**
KUU pmax pmax
comp=Z,317nm,1.1s
TREB Trebinje 22.73 292 *e*P **P 22 52 05.7 -1.5**
NIE Niedzica 22.76 310 *e*P **P 22 52 08.1 +0.7**
NIE *e*S **S 22 56 22.1 +6.3**
NIE *e*L L 23 02 46.0
comp=Z,12μm,20.9s
NIE Niedzica 22.76 310 P **P 22 52 08.2 +0.7**
NIE Niedzica 22.76 310 P **P 22 52 08.0 +0.5**
comp=Z,4μmcomp=Z,207nm,1.3s
ISAL Salakas 22.93 328 *e*P **P 22 52 10.7 +1.6**
MORH Mrgy, Hungar 22.95 301 ⇑*i*P **P 22 52 09.5 0.0**
MORH Mrgy, Hungar 22.95 301 ⇓P **P 22 52 10.9 +1.5**
MORH Mrgy, Hungar 22.95 301 P **P 22 52 09.4 0.0**
comp=Z,7μmcomp=Z,190nm,2.5s
BUD Budapest 22.98 304 P **P 22 52 09.8 +0.1**
BUD pmax pmax
comp=Z,407nm,1.7s
AAA Alma-Ata 22.99 67 *e*P **P 22 52 10.4 +0.4**
comp=Z,281nm,1.2s
AAA LR LR 23 02 36.1
comp=Z,16μm,10.0s
AAA Alma-Ata 22.99 67 *e*P **P 22 52 10.3 +0.4**
AAA pmax pmax
comp=Z,281nm,1.2s
TNSS Tian-Shan 23.00 67 *e*P **P 22 52 10.5 0.0**
TNSS Tian-Shan 23.00 67 *e*P **P 22 52 10.4 0.0**
KNDC Almaty 23.03 67 ⇑P **P 22 52 11.5 +1.1**
comp=Z,2μm,1.4s
KNDC Almaty 23.03 67 P **P 22 52 11.5 +1.1**
MDOK Medeo 23.08 67 *e*P **P 22 52 11.3 +0.3**
MDOK *e*S **S 22 56 22.7 +0.8**
MDOK LR LR 23 02 38.3
MDOK Medeo 23.08 67 *e*P **P 22 52 11.3 +0.3**
MDOK *e*S **S 22 56 22.7 +0.8**
CHKK Chushkaly 23.09 65 *e*P **P 22 52 11.5 +0.5**
CHKK Chushkaly 23.09 65 *e*P **P 22 52 11.5 +0.5**
KDJ Kajisay 23.14 70 P **P 22 52 12.1 +0.4**
KDJ Kajisay 23.14 70 P **P 22 52 12.1 +0.4**
KDJ pmax pmax
comp=Z,1μm,1.6s
LANS Liptovska Anna 23.18 308 *e*P **P 22 52 13.8 +2.0**
LANS *e* 22 52 21.3
LANS Liptovska Anna 23.18 308 *e*P **P 22 52 13.8 +2.0**
LANS Liptovska Anna 23.18 308 *e*PN P 22 52 21.3 +9.5
KOVH Kovagotottos 23.30 300 ⇑P **P 22 52 13.1 +0.1**
SUW Suwalki 23.30 322 *e*P **P 22 52 12.1 -0.8**
SUW *e*S **S 22 56 25.7 +0.8**
SUW *e*L L 23 01 26.8
comp=Z,20μm,21.5s
SUW Suwalki 23.30 322 P **P 22 52 11.6 -1.3**
SUW Suwalki 23.30 322 *e*P **P 22 52 13.8 +0.9**
SUW Suwalki 23.30 322 P **P 22 52 11.6 -1.3**
SUW Suwalki 23.30 322 ⇓P **P 22 52 11.9 -0.9**
OJC Ojcow 23.35 311 *e*P **P 22 52 12.9 -0.6**
OJC *e*S **S 22 56 28.7 +2.9**
OJC *e*L L 23 03 45.3
comp=Z,14μm,20.0s
OJC Ojcow 23.35 311 P **P 22 52 12.6 -0.9**
OJC Ojcow 23.35 311 P **P 22 52 12.6 -0.9**
OJC Ojcow 23.35 311 ⇓P **P 22 52 12.7 -0.8**
OJC Ojcow 23.35 311 P **P 22 52 13.1 -0.4**
comp=Z,11μmcomp=Z,410nm,1.7s
R9F13 Warsaw-Wawer 23.42 317 *e*P **P 22 52 13.9 -0.3**
comp=Z,17nm,1.2s
R9F13 *e*S Sn 22 56 38.9 -7.2
BEL Belsk 23.44 316 *e*P **P 22 52 14.0 -0.4**
BEL *e*S **S 22 56 31.8 +4.6**
BEL *e*L L 23 02 11.8
comp=Z,624μm,16.8s
BEL Belsk 23.44 316 P **P 22 52 13.7 -0.6**
SRO Srobarova 23.53 305 *e*P **P 22 52 17.2 +1.9**
SRO *e* 22 52 24.8
SRO pmax pmax
comp=Z,23nm,1.0s
SRO Srobarova 23.53 305 *e*P **P 22 52 17.2 +1.9**
SRO Srobarova 23.53 305 *e*PN P 22 52 24.8 +10
TARG Taragay, Kyrgy 23.60 71 P **P 22 52 17.9 +1.3**
TARG Taragay, Kyrgy 23.60 71 P **P 22 52 17.9 +1.3**
TARG pmax pmax
comp=Z,1μm,1.6s
SLATY Slatina 23.66 297 *e*P **P 22 52 17.1 +0.5**
KLMR Klimovskoe 23.68 350 *d*P **P 22 52 15.0 -1.6**
KLMR S **S 22 56 30.6 -0.3**
KLMR pmax pmax
comp=Z,2μm,1.3s
KLMR MLR MLR
comp=Z,22μm,13.0s
BLY Banja Luka 23.74 297 ⇑*i*P **P 22 52 18.1 +0.8**
BLY Banja Luka 23.74 297 ⇑P **P 22 52 18.6 +1.3**
BLY Banja Luka 23.74 297 ⇑P **P 22 52 18.3 +0.9**
PABE Paberze 23.82 326 P **P 22 52 17.3 -0.7**
PABE IAMs_20 IAMs_20 23 02 12.0
comp=Z,30μm,19.0s
PABE Paberze 23.82 326 *e*P **P 22 52 18.4 +0.4**
BHUJ Bhuj 23.87 121 *e*P **P 22 52 23.7 +5.0**
BHUJ IAMs_20 IAMs_20 23 04 25.5
comp=Z,19μm,18.8s
MATE Matera 23.96 287 ⇑P **P 22 52 19.9 +0.3**
MATE Matera 23.96 287 *e*P **P 22 52 19.5 0.0**
MATE Matera 23.96 287 ⇑P **P 22 52 18.8 -0.7**
PRZ Przheval'sk 24.05 69 P **P 22 52 22.6 +2.1**
PRZ Przheval'sk 24.05 69 P **P 22 52 22.7 +2.1**
PRZ pmax pmax
comp=Z,849nm,1.3s
SATY Saty 24.07 67 *e*P **P 22 52 21.2 +0.4**
comp=Z,256nm,1.2s
SATY *e*S **S 22 56 39.1 +1.3**
SATY Saty 24.07 67 *e*P **P 22 52 21.1 +0.4**
SATY *e*S **S 22 56 39.1 +1.3**
SATY pmax pmax
comp=Z,257nm,1.2s
VSVD Vaisvydziai 24.14 327 *e*P **P 22 52 22.2 +1.3**
DHRM DHARAMSHALA 24.19 94 *e*P **P 22 52 22.9 +0.9**
DHRM IAmb IAmb 22 52 30.7
comp=Z,280nm,1.1s
DHRM IAMs_20 IAMs_20 23 02 55.2
comp=Z,45μm,18.4s
OKC Ostrava-Krasne 24.22 309 *e*P **P 22 52 22.7 +0.9**
OKC *e*S **S 22 56 43.7 +4.0**
OKC MLR MLR
comp=Z,14μm,12.8s
OKC Ostrava-Krasne 24.22 309 *e*P **P 22 52 22.7 +0.9**
OKC *e*S **S 22 56 43.7 +4.0**
OKC AMS AMS 23 05 30.0
comp=Z,14μm,12.8s
JAVC Velka Javorina 24.22 307 *e*P **P 22 52 22.9 +1.0**
JAVC *e*S **S 22 56 40.6 +0.7**
TDK Taldyqorghan 24.22 63 *e*P **P 22 52 22.5 +0.6**
TDK *e*S **S 22 56 41.6 +1.7**
TDK LR LR 23 02 57.5
comp=Z,12μm,12.4s
TDK Taldyqorghan 24.22 63 *e*P **P 22 52 22.5 +0.6**
TDK *e*S **S 22 56 41.6 +1.7**
TDK MLR MLR
comp=Z,12μm,12.0s
MAUC Maruska 24.27 308 *e*P **P 22 52 23.6 +1.3**
MAUC *e*S S 22 56 54.0 +13
BEHE Becsehely 24.27 301 P **P 22 52 22.8 +0.5**
BEHE IAmb IAmb 22 52 44.7
comp=Z,353nm,1.8s
BEHE Becsehely 24.27 301 ⇑*i*P **P 22 52 23.2 +0.9**
RAC Raciborz 24.27 310 *e*P **P 22 52 22.7 +0.4**
RAC *e*S **S 22 56 43.5 +3.0**
RAC AMS AMS 23 04 02.0
comp=Z,16nm,19.4s
RAC Raciborz 24.27 310 *e*P **P 22 52 22.7 +0.4**
RAC *e*S **S 22 56 43.5 +3.0**
RAC MLR MLR
comp=Z,16μm,19.4s
SMOL Smolenice 24.28 306 *e*P **P 22 52 24.1 +1.7**
SMOL *e* 22 52 27.5
SMOL pmax pmax
comp=Z,50nm,1.2s
KPKS Kokpek 24.29 67 *e*P **P 22 52 23.1 +0.3**
KPKS *e*S **S 22 56 42.4 +1.2**
KPKS Kokpek 24.29 67 *e*P **P 22 52 23.0 +0.3**
KPKS *e*S **S 22 56 42.4 +1.2**
MRVN Minervino Murg 24.33 288 ⇑P **P 22 52 22.3 -0.7**
MODS Modra-Piesok 24.34 306 *e*P **P 22 52 27.9 +4.9**
MODS *e* 22 52 33.3
MODS pmax pmax
comp=Z,2μm,2.2s
MODS Modra-Piesok 24.34 306 *e*P **P 22 52 27.9 +4.9**
MODS Modra-Piesok 24.34 306 *e*PN P 22 52 33.3 +10
ZST Bratislava 24.41 305 *e*P **P 22 52 27.7 +4.1**
ZST pmax pmax
comp=Z,377nm,2.7s
ZST Bratislava 24.41 305 *e*P **P 22 52 27.7 +4.1**
STEB Steborice 24.48 309 *e*P **P 22 52 26.1 +1.9**
UZB Uzynbulak 24.52 67 *e*P **P 22 52 25.4 +0.4**
comp=Z,96nm,1.1s
UZB *e*S **S 22 56 46.5 +1.4**
UZB Uzynbulak 24.52 67 *e*P **P 22 52 25.3 +0.4**
UZB *e*S **S 22 56 46.5 +1.4**
UZB pmax pmax
comp=Z,96nm,1.1s
ACER Acerenza 24.54 287 P **P 22 52 24.8 -0.1**
MORC Moravsky Berou 24.57 309 P **P 22 52 25.3 +0.2**
MORC IAmb IAmb 22 52 41.0
comp=Z,317nm,1.5s
MORC Moravsky Berou 24.57 309 ⇓P **P 22 52 26.3 +1.2**
MORC Moravsky Berou 24.57 309 *e*P **P 22 52 24.5 -0.6**
MORC *e*S **S 22 56 48.1 +2.6**
MORC Moravsky Berou 24.57 309 P **P 22 52 25.3 +0.2**
MORC pmax pmax
comp=Z,317nm,1.5s
MORC Moravsky Berou 24.57 309 ⇑P **P 22 52 24.8 -0.3**
KOGS Kog 24.62 301 *i*P **P 22 52 25.8 +0.3**
KOGS *i* 22 52 30.3
KOGS *e*S S 22 56 57.8 +12
PUL Pulkovo 24.64 339 *e*P **P 22 52 26.8 +1.3**
PUL Pulkovo 24.64 339 *ce*P **P 22 52 26.0 +0.5**
PUL pmax pmax
comp=Z,476nm,1.3s
PUL MLR MLR
comp=Z,19μm,16.0s
SGRT San Giovanni R 24.65 289 P **P 22 52 26.2 +0.3**
SGRT IAmb IAmb 22 52 31.8
comp=Z,320nm,1.2s
SOP Sopron 24.65 304 P **P 22 52 26.7 +0.9**
SOP pmax pmax
comp=Z,375nm,1.1s
CUC Castrocucco 24.69 285 P **P 22 52 25.8 -0.5**
CUC IAmb IAmb 22 52 42.2
comp=Z,259nm,1.1s
CUC Castrocucco 24.69 285 ⇑P **P 22 52 26.0 -0.2**
ZAG Zagreb 24.71 299 P **P 22 52 31.1 +4.8**
PTJ Puntijarka 24.73 299 P **P 22 52 27.9 +1.2**
VSU Vasula 24.75 334 *e*P **P 22 52 25.7 -0.8**
VSU Vasula 24.75 334 *ce*P **P 22 52 26.1 -0.4**
VSU pmax pmax
comp=Z,663nm,1.7s
VSU Vasula 24.75 334 ⇓P **P 22 52 25.3 -1.2**
RONA Rosalia, Austr 24.83 304 *e*P **P 22 52 27.5 +0.1**
comp=Z,3μm,2.4s,SNR=144
CEL Celeste 24.83 281 P **P 22 52 27.4 -0.2**
CEL IAmb IAmb 22 52 35.0
comp=Z,245nm,1.0s
CEL IAMs_20 IAMs_20 23 02 55.1
comp=Z,33μm,21.0s
CEL Celeste 24.83 281 ⇑P **P 22 52 27.2 -0.4**
CEL Celeste 24.83 281 P **P 22 52 27.4 -0.2**
comp=Z,7μmcomp=Z,282nm,1.9s
SHLS Shalkode 24.85 67 *e*P **P 22 52 30.9 +3.1**
comp=Z,137nm,0.9s
SHLS *e*S **S 22 56 56.4 +6.1**
SHLS Shalkode 24.85 67 *e*P **P 22 52 30.8 +3.1**
SHLS *e*S **S 22 56 56.4 +6.1**
SHLS pmax pmax
comp=Z,137nm,0.9s
PDGK Podgornoye 24.87 67 ⇓P **P 22 52 28.7 +0.7**
comp=Z,421nm,1.1s
PDGK Podgornoye 24.87 67 P **P 22 52 28.7 +0.7**
VRAC Vranov 25.02 307 P **P 22 52 30.2 +1.1**
comp=Z,129nm,1.1s,baz=101,slow=9.2,SNR=25
VRAC S **S 22 56 56.1 +3.3**
comp=Z,3.7nm,0.8s,baz=62,slow=8.9,SNR=0.9
VRAC LR LR 23 04 48.6
comp=Z,11μm,20.4s,baz=133,slow=42
comp=Z,129nm,1.1s
VRAC Vranov 25.02 307 ⇓P **P 22 52 30.2 +1.1**
VRAC Vranov 25.02 307 *e*P **P 22 52 29.4 +0.2**
VRAC *e*S **S 22 56 57.1 +4.3**
KRUC Moravsky 25.09 307 *e*P **P 22 52 29.9 +0.2**
KRUC *e*S **S 22 56 58.0 +4.3**
KRUC Moravsky 25.09 307 P **P 22 52 30.3 +0.6**
KRUC pmax pmax
comp=Z,390nm,1.1s
KRLC Kraliky 25.13 309 *e*P **P 22 52 30.8 +0.7**
KRLC *e*S **S 22 57 00.7 +6.2**
KRLC MLR MLR
comp=Z,18μm,14.3s
KRLC Kraliky 25.13 309 *e*P **P 22 52 30.8 +0.7**
KRLC *e*S **S 22 57 00.7 +6.2**
KRLC AMS AMS 23 04 50.0
comp=Z,18μm,14.3s
CONA Conrad Observa 25.16 304 *i*P **P 22 52 30.5 0.0**
comp=Z,2μm,2.7s,SNR=48
ARSA Arzberg 25.25 302 P **P 22 52 31.1 -0.2**
ARSA Arzberg 25.25 302 *i*P **P 22 52 31.6 +0.3**
comp=Z,3μm,2.8s,SNR=67
ARSA Arzberg 25.25 302 ⇑P **P 22 52 31.6 +0.3**
SMLA Simla 25.30 96 *e*P **P 22 52 32.5 +0.8**
SMLA IAmb IAmb 22 52 42.5
comp=Z,364nm,1.4s
SMLA IAMs_20 IAMs_20 23 05 53.5
comp=Z,25μm,19.4s
SOKA Soboth 25.49 301 *i*P **P 22 52 34.2 +0.7**
comp=Z,2μm,2.5s,SNR=91
DPC Dobruska-Polom 25.49 310 *e*P **P 22 52 34.5 +1.1**
DPC *e*S **S 22 57 02.1 +1.8**
DPC MLR MLR
comp=Z,23μm,14.6s
DPC Dobruska-Polom 25.49 310 *e*P **P 22 52 34.5 +1.1**
DPC *e*S **S 22 57 02.1 +1.8**
DPC AMS AMS 23 05 10.0
comp=Z,23μm,14.6s
DPC Dobruska-Polom 25.49 310 P **P 22 52 33.7 +0.3**
comp=Z,4μmcomp=Z,122nm,2.2s
KURBB Kurchatov Arra 25.52 50 P **P 22 52 35.0 +1.3**
comp=Z,348nm,1.1s,baz=260,slow=9.9,SNR=188
KURBB S **S 22 57 03.9 +3.3**
comp=Z,7.6nm,1.0s,baz=188,slow=20,SNR=1.4
KURBB P3KPbc 23 25 28.4
comp=Z,0.9nm,0.8s,baz=75,slow=3.8,SNR=5.8
comp=Z,348nm,1.1s
KURBB Kurchatov Arra 25.52 50 ⇑P **P 22 52 34.9 +1.3**
comp=Z,622nm,1.1s
PAOL Paolisi 25.56 288 P **P 22 52 34.8 +0.6**
KURK Kurchatov 25.61 50 P **P 22 52 35.5 +1.1**
KURK Kurchatov 25.61 50 S **S 22 57 03.9 +2.0**
KURK Kurchatov 25.61 50 P **P 22 52 36.4 +2.0**
KURK P **P 22 52 36.4 +2.0**
KURK Kurchatov 25.61 50 ⇓P **P 22 52 36.4 +2.0**
comp=Z,314nm,1.2s
KURK Kurchatov 25.61 50 *ce*P **P 22 52 35.6 +1.2**
KURK pmax pmax
comp=Z,956nm,1.3s
KURK MLR MLR
comp=Z,20μm,15.0s
OSTC Ostas 25.62 310 *e*P **P 22 52 35.8 +1.2**
OSTC *e*S **S 22 57 05.7 +3.4**
OSTC MLR MLR
comp=Z,18μm,14.7s
OSTC Ostas 25.62 310 *e*P **P 22 52 35.8 +1.2**
OSTC *e*S **S 22 57 05.7 +3.4**
OSTC AMS AMS 23 05 10.0
comp=Z,18μm,14.7s
KSP Ksiaz 25.66 311 *e*P **P 22 52 35.5 +0.6**
KSP *e*S **S 22 57 05.4 +2.5**
KSP *e*L L 23 04 45.1
comp=Z,19μm,19.2s
KSP Ksiaz 25.66 311 P **P 22 52 35.3 +0.3**
KSP Ksiaz 25.66 311 ⇓P **P 22 52 35.4 +0.3**
KSP Ksiaz 25.66 311 P **P 22 52 35.2 +0.3**
comp=Z,7μmcomp=Z,369nm,1.3s
TREC Trest 25.72 307 *e*P **P 22 52 36.4 +0.9**
TREC MLR MLR
comp=Z,19μm,18.6s
TREC Trest 25.72 307 *e*P **P 22 52 36.4 +0.9**
TREC AMS AMS 23 04 20.0
comp=Z,19μm,18.6s
CHVC Chvalec 25.73 310 *e*P **P 22 52 36.6 +1.0**
CHVC MLR MLR
comp=Z,19μm,17.7s
CHVC Chvalec 25.73 310 *e*P **P 22 52 36.6 +1.0**
CHVC AMS AMS 23 04 40.0
comp=Z,19μm,17.7s
UPC Upice 25.73 310 *e*P **P 22 52 36.6 +1.1**
UPC *e*S **S 22 57 05.8 +1.8**
UPC MLR MLR
comp=Z,22μm,14.6s
UPC Upice 25.73 310 *e*P **P 22 52 36.6 +1.1**
UPC *e*S **S 22 57 05.8 +1.8**
UPC AMS AMS 23 05 20.0
comp=Z,22μm,14.6s
LJU Ljubljana 25.75 299 *e*P **P 22 52 36.1 +0.4**
LJU *i* 22 52 40.0
LJU *e*S **S 22 57 14.3 +10**
OBKA Obir 25.79 300 *i*P **P 22 52 37.2 +0.9**
comp=Z,141nm,2.3s,SNR=17
SLIT Slitere, Latvi 25.88 328 *e*P **P 22 52 36.8 +0.1**
SLIT Slitere, Latvi 25.88 328 ⇓P **P 22 52 35.6 -1.2**
INTR Introdacqua 26.02 290 P **P 22 52 37.8 -0.5**
INTR IAmb IAmb 22 53 16.3
comp=Z,287nm,1.4s
GKP Gorka Klasztor 26.02 316 *e*P **P 22 52 37.7 -0.4**
GKP *e*S S 22 57 25.3 +17
GKP *e*L L 23 03 44.4
comp=Z,29μm,19.0s
GKP Gorka Klasztor 26.02 316 *e*P **P 22 52 40.7 +2.6**
GKP Gorka Klasztor 26.02 316 P **P 22 52 40.7 +2.6**
VAE Valguarnera 26.12 280 P **P 22 52 41.9 +2.6**
comp=Z,54nm,0.9s,baz=65,slow=2.6,SNR=12
VAE LR LR 23 04 00.7
comp=Z,36μm,18.3s,baz=68,slow=39
comp=Z,54nm,0.9s
MOA Molln 26.20 303 *i*P **P 22 52 40.4 +0.6**
comp=Z,77nm,1.3s,SNR=33
RAFF Raffo Rosso 26.21 279 P **P 22 52 40.9 +0.9**
RAFF IAmb IAmb 22 53 12.1
comp=Z,340nm,1.2s
TRI Trieste 26.24 298 P **P 22 52 39.7 -0.5**
TRI Trieste 26.24 298 P **P 22 52 39.7 -0.5**
TRI pmax pmax
comp=Z,103nm,1.0s
CADS Cadrg 26.32 300 *i*P **P 22 52 40.5 -0.4**
CADS *e*S S 22 57 28.6 +15
DDI Dehra Dun 26.32 97 *e*P **P 22 52 42.2 +1.1**
DDI IAmb IAmb 22 52 52.5
comp=Z,364nm,1.2s
DDI IAMs_20 IAMs_20 23 05 09.1
comp=Z,30μm,18.5s
CKRC Cesky Krumlov 26.36 305 *e*P **P 22 52 41.7 +0.4**
CKRC *e*S **S 22 57 16.7 +2.7**
CKRC MLR MLR
comp=Z,13μm,16.6s
CKRC Cesky Krumlov 26.36 305 *e*P **P 22 52 41.7 +0.4**
CKRC *e*S **S 22 57 16.7 +2.7**
CKRC AMS AMS 23 08 10.0
comp=Z,13μm,16.6s
CAMP Campotosto 26.37 291 P **P 22 52 43.2 +1.6**
CAMP IAmb IAmb 22 53 11.7
comp=Z,238nm,1.3s
AQU L'Aquila 26.38 291 P **P 22 52 42.2 +0.7**
AQU L'Aquila 26.38 291 ⇑*i*P **P 22 52 42.0 +0.4**
AQU L'Aquila 26.38 291 P **P 22 52 42.5 +0.9**
AQU pmax pmax
comp=Z,143nm,1.2s
AQU L'Aquila 26.38 291 ⇑P **P 22 52 42.3 +0.7**
AQU L'Aquila 26.38 291 P **P 22 52 42.2 +0.7**
comp=Z,3μmcomp=Z,143nm,1.2s
SABO M.te Sabotino 26.38 299 P **P 22 52 42.7 +1.1**
GUMA Gualdo di Mace 26.42 292 P **P 22 52 42.6 +0.7**
GUMA IAmb IAmb 22 53 15.6
comp=Z,235nm,1.0s
ATD Arta Tunnel 26.42 190 P **P 22 52 44.6 +2.5**
ATD Arta Tunnel 26.42 190 P **P 22 52 44.6 +2.5**
comp=Z,1.6nm,0.9s,baz=359,slow=6.6,SNR=22
ATD S **S 22 57 24.6 +9.3**
comp=Z,0.1nm,0.3s,baz=299,slow=21,SNR=1.1
ATD LR LR 23 03 30.9
comp=Z,795nm,18.1s,baz=13,slow=37
MYKA Terra Mystica 26.43 300 *e*P **P 22 52 45.3 +3.3**
comp=Z,872nm,3.1s,SNR=17
PRED Cave del Predi 26.46 300 P **P 22 52 42.6 +0.3**
PRU Pruhonice 26.49 308 *e*P **P 22 52 42.6 +0.2**
PRU MLR MLR
comp=Z,16μm,16.2s
PRU Pruhonice 26.49 308 *e*P **P 22 52 42.6 +0.2**
PRU AMS AMS 23 05 50.0
comp=Z,16μm,16.2s
ZVC Zvikov 26.58 307 *e*P **P 22 52 44.2 +1.0**
ZVC *e*S **S 22 57 20.9 +3.6**
ZVC AMS AMS 23 04 50.0
comp=Z,22μm,16.0s
PRA Prague 26.58 308 *e*S **S 22 57 18.2 +0.9**
PRA AMS AMS 23 05 50.0
comp=Z,16μm,14.7s
NRCA Norcia 26.58 292 P **P 22 52 42.9 -0.6**
BIOA Bad Ischl, Aus 26.59 303 *e*P **P 22 52 43.3 -0.1**
comp=Z,1μm,2.7s,SNR=38
FDMO Fiordimonte 26.60 292 P **P 22 52 43.5 -0.1**
FDMO IAmb IAmb 22 52 51.7
comp=Z,286nm,1.4s
PTCC Patocco-Chiusa 26.60 300 ⇓P **P 22 52 45.2 +1.7**
PVCC Panska Ves 26.62 309 *e*P **P 22 52 44.4 +0.8**

PVCC MLR MLR
comp=Z,17µm,14.2s
PVCC Panska Ves 26.62 309 *e*P **P 22 52 44.4 +0.8**
PVCC AMS AMS 23 05 40.0
comp=Z,17µm,14.2s
KBA Koelnbreinsper 26.69 301 *e*P **P 22 52 44.7 +0.2**
comp=Z,1µm,3.0s,SNR=42
KBA Koelnbreinsper 26.69 301 P **P 22 52 45.2 +0.7**
KBA Koelnbreinsper 26.69 301 ⇑P **P 22 52 44.5 0.0**
GEC2 GERESS Array S 26.76 305 P **P 22 52 45.0 0.0**
GEC2 IAmb IAmb 22 52 56.1
comp=Z,459nm,1.6s
GEC2 GERESS Array S 26.76 305 P **P 22 52 45.1 +0.1**
GEC2 GERESS Array S 26.76 305 *e*P **P 22 52 44.8 -0.2**
comp=Z,365nm,1.5s,baz=104,slow=9.0
GERES GERESS Array B 26.76 305 P **P 22 52 44.9 -0.2**
comp=Z,60nm,1.0s,baz=107,slow=7.1,SNR=130
GERES S **S 22 57 22.9 +2.4**
comp=Z,1.0nm,0.9s,baz=46,slow=8.4,SNR=1.1
GERES ScP **ScP 22 59 49.7 +2.2**
comp=Z,6.9nm,1.2s,baz=64,slow=6.2,SNR=4.1
GERES LR LR 23 06 02.2
comp=Z,14µm,18.0s,baz=112,slow=42
comp=Z,60nm,1.0s
MEF Metsahovi 26.85 334 *e*P **P 22 52 46.0 +0.5**
KHC Kasperske Hory 26.90 306 P **P 22 52 45.5 -0.7**
KHC IAmb IAmb 22 52 57.4
comp=Z,706nm,1.9s
KHC Kasperske Hory 26.90 306*ce*P **P 22 52 46.7 +0.5**
KHC pmax pmax
comp=Z,98nm,1.0s
KHC Kasperske Hory 26.90 306 *e*P **P 22 52 46.4 +0.2**
KHC *e*S **S 22 57 25.1 +2.6**
KHC AMS AMS 23 05 50.0
comp=Z,17µm,16.0s
KHC Kasperske Hory 26.90 306 ⇑P **P 22 52 46.5 +0.3**
KHC Kasperske Hory 26.90 306 P **P 22 52 46.4 +0.2**
comp=Z,4µmcomp=Z,126nm,2.4s
MAKZ Makanchi 26.91 59 P **P 22 52 45.9 -0.4**
MAKZ Makanchi 26.91 59 ⇓P **P 22 52 47.4 +1.1**
comp=Z,767nm,1.4s
MAKZ Makanchi 26.91 59 P **P 22 52 45.9 -0.4**
MAKZ pmax pmax
comp=Z,558nm,1.2s
MAKZ MLR MLR
comp=Z,7µm,21.0s
MAKZ Makanchi 26.91 59 ⇓P **P 22 52 47.8 +1.5**
RICC Richard 26.91 309 *e*P **P 22 52 47.3 +1.1**
RICC AMS AMS 23 06 40.0
comp=Z,16µm,16.8s
CESX Cesi 26.98 291 P **P 22 52 46.1 -0.8**
MURB Monte Urbino 27.01 293 P **P 22 52 48.4 +1.1**
STAL STALIGIAL 27.03 299 P **P 22 52 47.1 -0.2**
JOF Joensuu 27.08 344 *e*P **P 22 52 48.0 +0.4**
BRG Berggiesshubel 27.10 310 P **P 22 52 48.7 +0.8**
BRG Berggiesshubel 27.10 310 *e*P **P 22 52 48.1 +0.2**
baz=104,slow=9.0
MK31 Makanchi Array 27.12 59 ⇓P **P 22 52 49.0 +0.8**
comp=Z,336nm,0.9s,baz=254,slow=5.8,SNR=209
MK31 Makanchi Array 27.12 59*ce*P **P 22 52 48.8 +0.6**
MKAR Makanchi Array 27.12 59 P **P 22 52 48.0 -0.2**
MKAR Makanchi Array 27.12 59 P **P 22 52 49.6 +1.4**
comp=Z,263nm,1.0s,baz=263,slow=7.2,SNR=40
MKAR S **S 22 57 23.6 -2.5**
comp=Z,14nm,1.1s,baz=281,slow=25,SNR=1.6
MKAR LR LR 23 06 25.4
comp=Z,30µm,20.8s,baz=250,slow=43
MKAR P3KPbc 23 25 21.8
comp=Z,2.3nm,1.0s,baz=40,slow=6.3,SNR=4.8
comp=Z,263nm,1.0s
MKAR Makanchi Array 27.12 59 P **P 22 52 48.0 -0.2**
MKAR S **S 22 57 23.6 -2.5**
RJOB Jochberg 27.16 303 *e*P **P 22 52 48.2 -0.3**
comp=Z,374nm,1.8s,baz=104,slow=9.0
LESA Schwarzleotal 27.19 302 *e*P **P 22 52 48.6 -0.3**
comp=Z,1µm,3.3s,SNR=22
ABTA Abfaltersbach 27.22 301 *e*P **P 22 52 49.6 +0.5**
comp=Z,851nm,2.8s,SNR=22
CIMO Cimolais 27.22 300 P **P 22 52 48.7 -0.3**
FIA1 FINESS Array S 27.23 337 P **P 22 52 48.6 -0.3**
FINES FINESS Array B 27.23 337 P **P 22 52 48.3 -0.6**
FINES FINESS Array B 27.23 337 P **P 22 52 49.2 +0.3**
comp=Z,92nm,1.1s,baz=133,slow=11,SNR=69
FINES S **S 22 57 27.5 +0.2**
comp=Z,11nm,0.9s,baz=59,slow=16,SNR=0.8
FINES LR LR 23 04 58.4
comp=Z,15µm,18.2s,baz=148,slow=40
comp=Z,92nm,1.1s
MGAB Montegabbione 27.32 292 ⇓P **P 22 52 50.4 +0.5**
HSKC Hora Svate Kat 27.34 309 *e*P **P 22 52 50.4 +0.3**
HSKC AMS AMS 23 06 40.0
comp=Z,17µm,13.9s
WET Wettzell 27.35 306 P **P 22 52 50.6 +0.4**
WET Wettzell 27.35 306 *e*P **P 22 52 49.8 -0.4**
comp=Z,253nm,1.3s,baz=104,slow=9.0
RUE Ruedersdorf 27.67 313 *e*P **P 22 52 53.7 +0.8**
RUE Ruedersdorf 27.67 313 *e*P **P 22 52 52.9 0.0**
comp=Z,811nm,1.7s,baz=104,slow=9.0
TEOL Teolo 27.68 297 P **P 22 52 52.8 -0.4**
TEOL IAmb IAmb 22 53 23.3
comp=Z,168nm,1.0s
CTI Castel Tesino 27.74 299 P **P 22 52 53.9 0.0**
CTI Castel Tesino 27.74 299 P **P 22 52 53.9 0.0**
CTI pmax pmax
comp=Z,129nm,1.3s
CLL Collm 27.79 310 P **P 22 52 54.1 +0.1**
CLL IAmb IAmb 22 53 09.9
comp=Z,275nm,1.6s
CLL Collm 27.79 310 *i* P **P 22 52 54.8 +0.7**
CLL *e*S **S 22 57 42.0 +5.7**
CLL pmax pmax
comp=Z,262nm,1.5s
CLL MLR MLR
comp=Z,16µm,20.6s
CLL Collm 27.79 310 *e*P **P 22 52 54.3 +0.3**
comp=Z,216nm,1.4s,baz=104,slow=9.0
CLL Collm 27.79 310 P **P 22 52 54.7 +0.7**
comp=Z,2µmcomp=Z,105nm,1.8s
CLL Collm 27.79 310 *i* P **P 22 52 54.8 +0.7**
comp=Z,262nm,1.5s
CLL *i* x x 22 52 59.5
CLL *e*S **S 22 57 42.0 +5.7**
CLL *e*SSS SSS 22 59 00.0
CLL AMS AMS 23 06 00.0
comp=Z,16µm,20.6s
WTTA Wattenberg 27.87 301 *i* P **P 22 52 54.8 -0.3**
comp=Z,903nm,2.4s,SNR=40
WTTA Wattenberg 27.87 301 P **P 22 52 55.1 0.0**
ROTZ Rotzenmuhle 27.91 307 *e*P **P 22 52 54.8 -0.4**
comp=Z,82nm,2.0s,baz=104,slow=9.0
WATA Walderalm 27.92 302 *i* P **P 22 52 55.2 -0.3**
comp=Z,552nm,1.8s,SNR=29
OSSC Osservatorio P 27.94 293 P **P 22 52 56.5 +1.0**
ZCCA Zocca 28.14 295 P **P 22 52 59.1 +1.7**
ZCCA IAmb IAmb 22 53 47.1
comp=Z,208nm,1.2s
KEF Keuruu 28.16 338 *e*P **P 22 52 58.4 +1.1**
SQTA Sankt Quirin 28.16 301 *i* P **P 22 52 57.4 -0.1**
comp=Z,766nm,2.6s,SNR=22
GRB1 Grafenberg Arr 28.19 306 P **P 22 52 58.3 +0.6**
FUR Furstenfeldbru 28.23 303 *e*P **P 22 52 57.6 -0.5**
comp=Z,222nm,1.4s,baz=104,slow=9.0
CASP Castiglione de 28.24 292 P **P 22 52 58.4 +0.2**
MOTA Moosalm 28.24 302 *i* P **P 22 52 57.9 -0.5**
comp=Z,701nm,2.0s,SNR=32
RAF Rauma 28.34 334 *e*P **P 22 52 58.7 -0.1**
AAL Aland 28.43 331 *e*P **P 22 52 59.1 -0.5**
FETA Feichten 28.46 301 *i* P **P 22 53 00.4 +0.1**
comp=Z,436nm,1.8s,SNR=21
MOX Moxa 28.47 309 P **P 22 52 59.3 -0.9**
MOX Moxa 28.47 309 *e*P **P 22 52 59.9 -0.3**
comp=Z,41nm,1.3s,baz=104,slow=9.0
MOX *e*L L 23 07 11.0
comp=Z,11µm,19.2s
RETA Reutte 28.49 302 *e*P **P 22 53 00.1 -0.3**
comp=Z,72nm,1.3s,SNR=15
GRA1 Grafenberg Arr 28.52 306 P **P 22 53 00.4 -0.2**
GRA1 IAmb IAmb 22 53 59.6
comp=Z,266nm,1.4s
GRF Grafenberg Arr 28.52 306 P **P 22 53 00.4 -0.2**
GRF pmax pmax
comp=Z,266nm,1.4s
GRF MLR MLR
comp=Z,18µm,18.0s
GRF Grafenberg Arr 28.52 306 *e*L L 23 06 10.8
comp=Z,18µm,18.8s

GRFO Grafenberg 28.52 306 P **P 22 53 01.5 +0.9**
GRFO IAmb IAmb 22 53 59.6
comp=Z,238nm,1.3s
GRFO IAMs_20 IAMs_20 23 06 11.0
comp=Z,19µm,18.0s
GRFO Grafenberg 28.52 306 P **P 22 53 01.5 +0.9**
GRFO pmax pmax
comp=Z,238nm,1.3s
GRFO MLR MLR
comp=Z,19µm,18.0s
PRMA PARMA 28.62 296 P **P 22 53 02.1 +0.6**
RGN Rugen 28.65 317 P **P 22 53 02.0 +0.3**
RGN IAmb IAmb 22 53 13.5
comp=Z,379nm,1.2s
RGN Rugen 28.65 317 *e*P **P 22 53 02.3 +0.7**
comp=Z,428nm,1.3s,baz=104,slow=9.0
FUORN Ofenpass-Fuorn 28.75 300 **P 22 53 03.2 +0.3**
ZSN Zaisan 28.95 58 *e*P **P 22 53 04.9 +0.4**
comp=Z,149nm,1.9s
ZSN *e*S **S 22 57 55.6 +0.8**
ZSN Zaisan 28.95 58 *e*P **P 22 53 04.8 +0.4**
ZSN *e*S **S 22 57 55.5 +0.8**
ZSN pmax pmax
comp=Z,149nm,1.9s
UBR Ueberruh 28.95 302 *e*P **P 22 53 03.2 -1.4**
comp=Z,296nm,1.4s,baz=104,slow=9.0
LUNU Lund 29.00 319 *i* P **P 22 53 04.5 -0.4**
DAVOX Davos/Dischmat 29.02 300 P **P 22 53 05.0 -0.3**
comp=Z,31nm,0.7s,baz=118,slow=9.7,SNR=40
DAVOX S **S 22 57 54.6 -1.6**
comp=Z,3.3nm,0.8s,baz=0.0,slow=20,SNR=1.4
DAVOX LR LR 23 06 25.4
comp=Z,20µm,19.1s,baz=88,slow=40
comp=Z,31nm,0.7s
DAVOX Davos/Dischmat 29.02 300 P **P 22 53 05.0 -0.3**
DAVA Damuels 29.06 301 *i* P **P 22 53 05.5 -0.2**
comp=Z,698nm,2.1s,SNR=24
DAVA Damuels 29.06 301 ⇑P **P 22 53 04.7 -0.9**
FLTG Flechtingen 29.12 312 ⇑P **P 22 53 06.2 +0.3**
FLTG Flechtingen 29.12 312 *e*P **P 22 53 06.0 +0.2**
comp=Z,366nm,1.5s,baz=104,slow=9.0
DEL Delary 29.14 321 *i* P **P 22 53 05.4 -0.6**
BOB Bobbio (Coli) 29.24 296 ⇑P **P 22 53 11.1 +3.9**
GORT1 Trebel 29.26 313 *e*P **P 22 53 07.9 +0.9**
comp=Z,261nm,1.4s,baz=104,slow=9.0
TUE Stuetta 29.37 300 **P 22 53 07.9 -0.5**
TUE IAmb IAmb 22 53 28.0
comp=Z,207nm,1.4s
TUE IAMs_20 IAMs_20 23 06 53.0
comp=Z,22µm,21.0s
TUE Stuetta 29.37 300 ⇓P **P 22 53 08.9 +0.5**
ASSE Asse, Remlinge 29.40 311 *e*P **P 22 53 08.8 +0.5**
comp=Z,556nm,2.0s,baz=104,slow=9.0
BJUU Bjuv 29.40 320 *i* P **P 22 53 07.3 -1.0**
BHPL Bhopal 29.43 111 *e*P **P 22 53 09.5 +0.5**
BHPL IAmb IAmb 22 53 17.0
comp=Z,171nm,1.1s
BHPL IAMs_20 IAMs_20 23 06 43.7
comp=Z,30µm,18.9s
VAF Ylistaro 29.49 337 *e*P **P 22 53 09.1 +0.1**
CLZ Clausthal 29.51 311 *e*P **P 22 53 10.2 +0.8**
comp=Z,204nm,1.3s,baz=104,slow=9.0
COP Copenhagen 29.55 319 *i* P **P 22 53 10.2 +0.5**
COP IAmb IAmb 22 53 16.1
comp=Z,123nm,1.0s
PGF Pioggiola 29.62 292 ⇓P **P 22 53 11.4 +0.8**
VSL Villasalto 29.67 285 **P 22 53 10.8 -0.1**
VSL Villasalto 29.67 285 ⇑P **P 22 53 12.5 +1.5**
STU Stuttgart 29.69 304 P **P 22 53 09.8 -1.1**
STU Stuttgart 29.69 304 *e*P **P 22 53 11.0 +0.1**
STU Stuttgart 29.69 304 P **P 22 53 09.8 -1.1**
STU pmax pmax
comp=Z,131nm,1.3s
STU MLR MLR
comp=Z,17µm,18.0s
STU Stuttgart 29.69 304 *e*P **P 22 53 09.8 -1.1**
comp=Z,316nm,1.3s,baz=104,slow=9.0
GTTG Gottingen 29.69 310 *e*P **P 22 53 11.5 +0.5**
comp=Z,212nm,1.6s,baz=104,slow=9.0
FURI Furi 29.79 198 IAMs_20 IAMs_20 23 05 29.6
comp=Z,29µm,19.0s
FURI Furi 29.79 198 IAmb IAmb 22 53 23.7
comp=Z,231nm,1.2s
FURI Furi 29.79 198 P **P 22 53 15.0 +2.6**
comp=Z,57nm,0.9s,baz=320,slow=1.8,SNR=18
FURI LR LR 23 05 39.6
comp=Z,26µm,19.1s,baz=14,slow=37
comp=Z,57nm,0.9s
FABU Falkenberg 29.94 321 *i* P **P 22 53 12.5 -0.6**
POO Poona 29.95 122 IAMs_20 IAMs_20 23 06 08.8
comp=Z,30µm,20.9s
SLE Schleitheim 30.04 302 P **P 22 53 16.4 +2.2**
BSEG Bad Segeberg 30.11 315 P **P 22 53 16.1 +1.5**
BSEG Bad Segeberg 30.11 315 *e*P **P 22 53 15.5 +1.0**
comp=Z,203nm,1.9s,baz=104,slow=9.0
MSF Maaselka 30.18 345 P **P 22 53 15.6 +0.4**
BORU Boraas 30.19 322 *i* P **P 22 53 14.2 -1.1**
OUL Oulu 30.19 342 P **P 22 53 15.5 +0.3**
OUL pmax pmax
comp=Z,137nm,1.5s
BFO Black Forest 30.21 303 P **P 22 53 16.4 +0.8**
BFO Black Forest 30.21 303 P **P 22 53 16.4 +0.8**
BFO pmax pmax
comp=Z,77nm,1.3s
BFO MLR MLR
comp=Z,10µm,21.0s
ZAA0 Zalesovo Array 30.22 45 P **P 22 53 15.0 -0.6**
ZAA0 Zalesovo Array 30.22 45 ⇑P **P 22 53 16.3 +0.7**
comp=Z,47nm,1.1s
ZALV Zalesovo Beam 30.22 45 P **P 22 53 15.6 0.0**
ZALV Zalesovo Beam 30.22 45 P **P 22 53 16.6 +1.0**
comp=Z,246nm,1.1s,baz=263,slow=8.5,SNR=110
ZALV S **S 22 58 13.5 -1.0**
comp=Z,1.2nm,0.4s,baz=225,slow=24,SNR=1.1
ZALV LR LR 23 08 52.4
comp=Z,16µm,18.9s,baz=248,slow=43
ZALV P3KPbc 23 25 07.7
comp=Z,0.5nm,0.3s,baz=97,slow=4.9,SNR=3.6
comp=Z,246nm,1.1s
ZALV Zalesovo Beam 30.22 45 *e*P **P 22 53 16.6 +1.0**
ZALV pmax pmax
comp=Z,243nm,1.1s
MONC Moncucco Torin 30.32 297 ⇑P **P 22 53 19.9 +3.3**
RETH Rethem/Aller, 30.33 312 *e*P **P 22 53 17.7 +1.1**
comp=Z,461nm,1.7s,baz=104,slow=9.0
TNS Taunus Mts 30.38 307 P **P 22 53 21.0 +3.9**
TNS Taunus Mts 30.38 307 *e*P **P 22 53 17.3 +0.1**
comp=Z,231nm,1.7s,baz=104,slow=9.0
KEST Kesra 30.48 278 P **P 22 53 18.9 +0.6**
KEST Kesra 30.48 278 P **P 22 53 19.7 +1.4**
comp=Z,50nm,0.8s,baz=38,slow=1.5,SNR=48
KEST S **S 22 58 24.3 +5.1**
comp=Z,4.4nm,1.1s,baz=25,slow=16,SNR=1.2
KEST LR LR 23 08 37.9
comp=Z,22µm,18.7s,baz=57,slow=42
comp=Z,50nm,0.8s
KEST Kesra 30.48 278 S **S 22 58 22.2 +3.0**
ONAU Onsala 30.50 322 *i* P **P 22 53 16.9 -1.2**
KASTN Kahler Asten 30.57 309 *e*P **P 22 53 19.7 +0.9**
comp=Z,440nm,2.1s,baz=104,slow=9.0
SENIN Lac Senin/Sane 30.78 299 **P 22 53 20.1 -0.8**
SENIN IAmb IAmb 22 53 31.6
comp=Z,260nm,1.9s
SENIN IAMs_20 IAMs_20 23 07 13.4
comp=Z,23µm,21.0s
WMQ Urumqi 30.83 66 ⇑P **P 22 53 23.5 +2.3**
WMQ S **S 22 58 24.2 -0.3**
WMQ pmax pmax
comp=Z,130nm,1.1s
WMQ pmax pmax
comp=Z,3µm,3.7s
WMQ LR LR
comp=Z,23µm,14.1s
WMQ LR LR
comp=Z,20µm,16.1s
WMQ LR LR
comp=Z,12µm,20.3s
DGZ Jazzator, Alta 30.90 54*d* *i* P **P 22 53 22.7 +0.8**
DGZ pmax pmax
comp=Z,165nm,1.1s
TJOU Tjoern 30.92 323 *i* P **P 22 53 20.5 -1.2**
APA Apatity 30.92 350 ⇓*i* P **P 22 53 21.3 -0.3**
APA *i* 22 54 19.0
APA *i* S **S 22 58 24.6 -0.6**
ISO Isola 30.96 295 P **P 22 53 24.1 +1.7**
SSRD Sdr. Stenderup 30.97 317 *i* P **P 22 53 22.2 +0.1**

SSRD IAmb IAmb 22 53 24.4
comp=Z,86nm,0.9s
HFS Hagfors 30.97 327 P **P 22 53 22.0 -0.2**
comp=Z,77nm,0.7s,baz=128,slow=9.6,SNR=134
HFS S **S 22 58 23.9 -2.2**
comp=Z,13nm,1.1s,baz=62,slow=25,SNR=1.1
HFS LR LR 23 06 34.7
comp=Z,25µm,21.1s,baz=122,slow=38
comp=Z,77nm,0.7s
HFS Hagfors 30.97 327 P **P 22 53 22.0 -0.2**
ECH Echery 30.98 303 **P 22 53 21.8 -0.6**
ECH Echery 30.98 303 P **P 22 53 21.8 -0.6**
ECH pmax pmax
comp=Z,67nm,1.3s
ECH MLR MLR
comp=Z,9µm,20.0s
ECH Echery 30.98 303 ⇓P **P 22 53 22.1 -0.3**
LVZ Lovozero 31.06 351 P **P 22 53 22.5 -0.4**
LVZ IAmb IAmb 22 54 32.5
comp=Z,148nm,1.2s
LVZ IAMs_20 IAMs_20 23 06 57.1
comp=Z,18µm,19.0s
LVZ Lovozero 31.06 351*de*P **P 22 53 22.8 -0.1**
LVZ pmax pmax
comp=Z,102nm,1.7s
LVZ MLR MLR
comp=Z,18µm,18.0s
LVZ Lovozero 31.06 351 ⇓P **P 22 53 23.1 +0.2**
IBBN Ibbenburen 31.19 311 ⇓P **P 22 53 26.2 +2.1**
IBBN Ibbenburen 31.19 311 *e*P **P 22 53 25.2 +1.1**
comp=Z,373nm,1.6s,baz=104,slow=9.0
BNI Bardonecchia 31.20 297 **P 22 53 24.2 -0.4**
BNI IAmb IAmb 22 53 35.4
comp=Z,168nm,1.2s
BNI Bardonecchia 31.20 297 P **P 22 53 24.2 -0.4**
BNI pmax pmax
comp=Z,168nm,1.2s
BNI MLR MLR
comp=Z,12µm,18.0s
BNI Bardonecchia 31.20 297 ⇓P **P 22 53 24.9 +0.3**
BUG Bochum–Univer 31.32 309 P **P 22 53 27.0 +1.7**
BUG Bochum–Univer 31.32 309 *e*P **P 22 53 26.1 +0.8**
comp=Z,227nm,1.3s,baz=104,slow=9.0
MUD Monsted U'grnd 31.54 319 *i* P **P 22 53 27.0 -0.2**
MUD IAmb IAmb 22 53 29.9
comp=Z,35nm,1.0s
STRU Stroemstad 31.56 324 *i* P **P 22 53 28.0 +0.6**
GOET G??ttrup 31.71 320 *i* P **P 22 53 31.0 +2.3**
GOET IAmb IAmb 22 53 35.4
comp=Z,114nm,1.0s
WLF Walferdange 31.77 305 P **P 22 53 27.9 -1.5**
WLF Walferdange 31.77 305 **P 22 53 29.0 -0.4**
WLF IAmb IAmb 22 53 35.2
comp=Z,117nm,1.2s
WLF Walferdange 31.77 305 *d*P **P 22 53 29.0 -0.4**
comp=Z,46nm,1.2s
WLF Walferdange 31.77 305 P **P 22 53 29.0 -0.4**
WLF pmax pmax
comp=Z,117nm,1.2s
WLF Walferdange 31.77 305 ⇑P **P 22 53 30.6 +1.2**
WLF Walferdange 31.77 305 *e*P **P 22 53 30.2 +0.8**
comp=Z,130nm,1.3s,baz=104,slow=9.0
ORIF Oris-en-Rattie 31.77 296 P **P 22 53 33.0 +3.5**
BTNL Ternell 31.90 307 *d*P **P 22 53 31.9 +1.4**
comp=Z,25nm,1.3s
BHOU Houvegnez 31.95 307 *d*P **P 22 53 32.9 +2.0**
comp=Z,17nm,1.3s
MEM Membach 31.98 307 *d*P **P 22 53 32.5 +1.4**
comp=Z,44nm,1.2s
MEM Membach 31.98 307 P **P 22 53 33.0 +1.9**
SGF Sodankyl 32.01 345 P **P 22 53 32.6 +1.3**
SGF pmax pmax
comp=Z,58nm,1.0s
GOA Goa 32.14 126 IAMs_20 IAMs_20 23 08 17.1
comp=Z,12µm,18.0s
OSL Oslo 32.18 326 *e*P **P 22 53 32.9 +0.2**
NC602 NORSAR Array S 32.20 327 P **P 22 53 32.0 -1.0**
NC602 IAmb IAmb 22 53 41.4
comp=Z,152nm,1.4s
NC602 NORSAR Array S 32.20 327 *e*P **P 22 53 33.4 +0.4**
NORES NORESS Array B 32.20 327 P **P 22 53 33.5 +0.5**
BEBN Eben Emael 32.21 307 *d*P **P 22 53 34.5 +1.3**
comp=Z,51nm,1.2s
BSTI Sart Tilman 32.25 307 *d*P **P 22 53 34.1 +0.5**
NC405 NORSAR Array S 32.31 328 P **P 22 53 33.0 -1.0**
NC405 IAmb IAmb 22 53 39.8
comp=Z,180nm,0.9s
RCHB Rochefort 32.42 306 *d*P **P 22 53 35.5 +0.4**
comp=Z,30nm,1.4s
NB201 NORSAR Array S 32.46 328 P **P 22 53 34.3 -1.0**
NB201 IAmb IAmb 22 54 39.3
comp=Z,163nm,1.1s
NB2 NORSAR Subarra 32.49 328 P **P 22 53 34.4 -1.1**
comp=Z,146nm,1.1s,baz=124,slow=9.3
NOA NORSAR Array B 32.49 328 P **P 22 53 34.6 -0.9**
comp=Z,31nm,0.9s,baz=122,slow=8.5,SNR=94
NOA S **S 22 58 45.5 -4.4**
comp=Z,1.7nm,0.9s,baz=90,slow=19,SNR=1.7
NOA LR LR 23 07 31.4
comp=Z,25µm,20.7s,baz=115,slow=38
comp=Z,31nm,0.9s
NOA NORSAR Array B 32.49 328 *e*P **P 22 53 34.6 -0.9**
NOA pmax pmax
comp=Z,19nm,0.7s
NC303 NORSAR Array S 32.51 328 P **P 22 53 34.9 -0.8**
NC303 IAmb IAmb 22 53 41.5
comp=Z,95nm,1.1s
HOMB Homborsund 32.53 322 *e*P **P 22 53 35.5 -0.4**
HOMB Homborsund 32.53 322 *i* P **P 22 53 32.6 -3.3**
NAO01 NORSAR Array S 32.53 327 P **P 22 53 34.8 -1.1**
NAO01 IAmb IAmb 22 53 41.5
comp=Z,108nm,1.1s
BGES Gesves 32.53 307 *d*P **P 22 53 37.5 +1.5**
comp=Z,41nm,1.2s
KONO Kongsberg 32.56 325 P **P 22 53 35.6 -0.6**
KONO IAmb IAmb 22 53 41.8
comp=Z,96nm,1.1s
KONO Kongsberg 32.56 325 IAMs_20 IAMs_20 23 07 22.1
comp=Z,30µm,22.0s
KONO Kongsberg 32.56 325 *e*P **P 22 53 36.4 +0.1**
KONO Kongsberg 32.56 325*ce*P **P 22 53 36.3 +0.1**
KONO pmax pmax
comp=Z,101nm,1.0s
KONO Kongsberg 32.56 325 ⇑P **P 22 53 36.3 +0.1**
NBO00 NORSAR Array S 32.67 327 P **P 22 53 36.2 -0.9**
SSB Saint Sauveur 32.71 297 **P 22 53 36.6 -1.1**
SSB IAmb IAmb 22 53 42.6
comp=Z,142nm,1.6s
SSB Saint Sauveur 32.71 297 P **P 22 53 36.6 -1.1**
SSB pmax pmax
comp=Z,142nm,1.6s
SSB MLR MLR
comp=Z,14µm,21.0s
SSB Saint Sauveur 32.71 297 ⇑P **P 22 53 38.0 +0.3**
BMRD Maredsous 32.73 306 *d*P **P 22 53 39.0 +1.2**
comp=Z,27nm,1.3s
NC204 NORSAR Array S 32.79 328 P **P 22 53 37.4 -0.9**
DOU Dourbes 32.82 306 *d*P **P 22 53 39.5 +1.0**
comp=Z,20nm,1.3s
UCC Uccle 33.04 307 P **P 22 53 41.7 +1.3**
UCC IAmb IAmb 22 53 47.1
comp=Z,133nm,1.5s
UCC Uccle 33.04 307 *d*P **P 22 53 42.1 +1.7**
comp=Z,24nm,1.4s
UCC Uccle 33.04 307 P **P 22 53 41.7 +1.3**
UCC pmax pmax
comp=Z,133nm,1.5s
LOR Lormes 33.16 301 P **P 22 53 43.7 +2.1**
LOR pmax pmax
comp=Z,41nm,1.0s
LOR Lormes 33.16 301 ⇑P **P 22 53 41.8 +0.2**
MAHO Mahon 33.50 287 IAMs_20 IAMs_20 23 08 46.0
comp=Z,15µm,19.0s
SKAR Skarslia 33.59 326 *e*P **P 22 53 46.0 +0.8**
VADS Vadso 33.86 349 *e*P **P 22 53 48.3 +1.0**
DOMB Dombas 33.87 328 *e*P **P 22 53 47.7 +0.1**
KEV Kevo 33.91 347 P **P 22 53 47.2 -0.6**
KEV IAmb IAmb 22 55 02.4
comp=Z,171nm,1.3s
KEV Kevo 33.91 347 P **P 22 53 47.2 -0.6**
KEV pmax pmax
comp=Z,171nm,1.3s
KEV MLR MLR
comp=Z,12µm,19.0s
KEV Kevo 33.91 347 ⇓P **P 22 53 48.1 +0.3**

HYBB Hyderabad (bro 33.94 118 *e*P **P 22 53 48.4 -0.2**
HYBB IVmB_BB 22 53 49.1
comp=Z,496nm,2.2s
HYBB *es*P **sP 22 53 57.3 +1.9**
HYBB *e*PP **PP 22 55 05.4 -0.1**
HYBB *e*PcP **PcP 22 56 26.6 -0.3**
HYBB *e*S **S 22 59 12.8 -0.5**
HYBB *e*SS **SS 23 01 40.4 +0.3**
HYBB IVMs_BB IVMs_BB 23 09 36.4
comp=Z,8µm,12.6s
BLS5 Blasjo 33.94 323 *e*P **P 22 53 49.8 +1.6**
ARA0 ARCESS Array S 33.99 346 *e*P **P 22 53 49.4 +0.8**
ARCES ARCESS Array B 33.99 346 P **P 22 53 48.8 +0.2**
ARCES IAmb IAmb 22 54 57.9
comp=Z,129nm,1.1s
ARCES ARCESS Array B 33.99 346 P **P 22 53 49.2 +0.7**
comp=Z,52nm,1.2s,baz=148,slow=7.9,SNR=47
ARCES S **S 22 59 08.8 -4.3**
comp=Z,22nm,1.0s,baz=144,slow=17,SNR=2.5
ARCES LR LR 23 08 10.3
comp=Z,15µm,19.1s,baz=152,slow=37
comp=Z,52nm,1.2s
KTK1 Kautokeino 34.01 345 *e*P **P 22 53 48.9 +0.2**
ODD1 Odda 34.04 324 *e*P **P 22 53 51.0 +1.8**
NSS Namsos 34.05 333 *e*P **P 22 53 50.1 +1.0**
CLF Chambon-Foret 34.24 302 P **P 22 53 50.8 -0.1**
CLF IAmb IAmb 22 53 56.3
comp=Z,208nm,1.3s
CLF Chambon-Foret 34.24 302 ⇑P **P 22 53 51.8 +0.8**
EVN Everest 34.25 95 P **P 22 53 52.5 +0.5**
EVN Everest 34.25 95 ⇑P **P 22 53 53.1 +1.1**
RAUS Rausandaksla 34.51 337 *e*P **P 22 53 53.5 +0.5**
LEIR Leirfjorden 34.60 336 *e*P **P 22 53 54.3 +0.5**
ETOS Mallorca 34.62 288 P **P 22 53 56.6 +2.2**
HYA Hoyanger 34.73 326 *e*P **P 22 53 56.4 +1.4**
MOL Molde 34.74 329 *e*P **P 22 53 56.1 +1.0**
FAUS Fauske 34.76 339 *e*P **P 22 53 55.9 +0.7**
STOK Stokkvaagen 34.77 336 *e*P **P 22 53 55.8 +0.6**
AKN Aaknes 34.80 328 *e*P **P 22 53 56.5 +0.9**
CORI Orista 34.81 292 P **P 22 53 56.9 +0.9**
CORI IAmb IAmb 22 54 05.3
comp=Z,272nm,1.7s
BER Bergen 34.82 324 *e*P **P 22 53 57.0 +1.3**
BER Bergen 34.82 324 P **P 22 53 57.3 +1.5**
ASK Askoy 34.92 324 *e*P **P 22 53 57.6 +1.0**
VAGH Vaagaholmen 34.94 337 *e*P **P 22 53 58.0 +1.3**
JETT Jettan, Norway 35.05 344 *e*P **P 22 53 58.7 +1.0**
STEI Steigen 35.15 340 *e*P **P 22 53 59.1 +0.6**
HAMF Hammerfest 35.27 347 *e*P **P 22 54 00.4 +0.8**
CEST Esterri de Car 35.31 293 P **P 22 54 00.5 +0.1**
CEST IAmb IAmb 22 54 05.5
comp=Z,336nm,2.0s
SUE Sulen 35.33 325 *e*P **P 22 54 01.1 +0.9**
FOO Floro 35.41 326 *e*P **P 22 54 01.2 +0.4**
TRO Tromso 35.44 343 *e*P **P 22 54 01.4 +0.4**
BOK Bokaro 35.56 102 *e*P **P 22 54 02.6 0.0**
BOK IAmb IAmb 22 54 09.7
comp=Z,164nm,1.2s
BOK IAMs_20 IAMs_20 23 11 31.6
comp=Z,19µm,18.0s
LOF Lofoten 35.76 339 *e*P **P 22 54 03.9 +0.2**
LODK Lodwar 35.91 201 P **P 22 54 06.4 +0.8**
LODK IAmb IAmb 22 54 15.9
comp=Z,235nm,1.3s
EBR Ebro Roquetas 36.16 290 P **P 22 54 06.6 -1.0**
EBR Ebro Roquetas 36.16 290 P **P 22 54 06.6 -1.0**
CWF Charnwood Fore 36.73 310 *e*P **P 22 54 12.2 0.0**
CWF IAmb IAmb 22 54 14.9
comp=Z,9.8nm,0.6s
CWF IAMs_20 IAMs_20 23 14 41.4
comp=Z,16µm,14.0s
LSA Lhasa 36.94 89 P **P 22 54 14.3 -0.6**
LSA IAmb IAmb 22 54 22.9
comp=Z,258nm,1.3s
LSA Lhasa 36.94 89 P **P 22 54 12.4 -2.4**
LSA pmax pmax
comp=Z,73nm,1.8s
LSA LR LR
comp=Z,6µm,14.7s
LSA LR LR
comp=Z,13µm,16.5s
LSA LR LR
comp=Z,21µm,15.8s
LSA Lhasa 36.94 89 P **P 22 54 14.7 -0.1**
LSA Lhasa 36.94 89 P **P 22 54 14.3 -0.6**
LSA pmax pmax
comp=Z,258nm,1.3s
LSA MLR MLR
comp=Z,10µm,20.0s
SWN1 Swindon 36.96 308 *e*P **P 22 54 15.2 +1.0**
VIS Vishakhapatnam 37.17 112 IAMs_20 IAMs_20 23 10 46.0
comp=Z,21µm,21.5s
STRD Stroud 37.20 308 *e*P **P 22 54 16.7 +0.4**
EDMD Edmundbyers 37.31 314 *e*P **P 22 54 17.1 -0.1**
EDMD IAmb IAmb 22 54 19.1
comp=Z,51nm,0.8s
EDMD IAMs_20 IAMs_20 23 14 13.6
comp=Z,13µm,15.6s
ECHE Chera 37.51 288 P **P 22 54 16.4 -2.8**
GOMU GeErMu 37.54 77 P **P 22 54 20.5 +0.7**
GOMU PcP **PcP 22 56 37.2 -0.6**
GOMU S **S 23 00 09.2 +0.3**
GOMU pmax pmax
comp=Z,100nm,1.5s
GOMU LR LR
comp=Z,8µm,21.0s
GOMU LR LR
comp=Z,5µm,18.4s
HLM1 Long Mynd 37.67 310 *e*P **P 22 54 20.6 +0.3**
HLM1 IAMs_20 IAMs_20 23 13 39.6
comp=Z,12µm,18.6s
MCH1 Michaelchurch 37.72 309 *e*P **P 22 54 20.5 -0.2**
MCH1 IAmb IAmb 22 54 24.7
comp=Z,71nm,1.1s
MCH1 IAMs_20 IAMs_20 23 14 33.4
comp=Z,12µm,16.4s
MCH1 Michaelchurch 37.72 309 ⇑P **P 22 54 21.3 +0.6**
FOEL Foel Wylfa 37.88 310 *e*P **P 22 54 22.9 +0.9**
FOEL IAmb IAmb 22 54 24.3
comp=Z,59nm,0.9s
ROSF Rostrenen 37.94 303 ⇑P **P 22 54 21.9 -0.6**
KESW Keswick, Cumbr 37.95 313 *e*P **P 22 54 23.2 +0.6**
KESW IAmb IAmb 22 54 26.1
comp=Z,35nm,0.7s
KESW IAMs_20 IAMs_20 23 14 18.2
comp=Z,16µm,15.5s
CART Cartagena 38.03 285 P **P 22 54 24.4 +0.9**
EKA Eskdalemuir Ar 38.05 314 P **P 22 54 23.2 -0.2**
comp=Z,25nm,0.7s,baz=104,slow=8.4,SNR=32
EKA S **S 23 00 14.2 -1.1**
comp=Z,0.5nm,0.6s,baz=109,slow=8.2,SNR=1.0
comp=Z,25nm,0.7s
EKB Eskdalemuir 38.07 314 P **P 22 54 22.0 -1.6**
EKB IAmb IAmb 22 54 32.5
comp=Z,357nm,1.8s
ESK Eskdalemuir 38.07 314 P **P 22 54 23.6 0.0**
ESK Eskdalemuir 38.07 314 *e*P **P 22 54 23.7 +0.1**
ESK IAmb IAmb 22 54 28.9
comp=Z,32nm,0.9s
ESK IAMs_20 IAMs_20 23 14 47.5
comp=Z,11µm,14.8s
ESK Eskdalemuir 38.07 314 P **P 22 54 23.6 0.0**
ESK pmax pmax
comp=Z,89nm,1.1s
ESK MLR MLR
comp=Z,12µm,21.0s
ESK Eskdalemuir 38.07 314 ⇓P **P 22 54 24.3 +0.7**
EMUR La Murta 38.14 286 P **P 22 54 25.3 +0.8**
ETOB Tobarra 38.17 287 P **P 22 54 25.1 +0.4**
NRIK Noril'sk 38.28 22 P **P 22 54 25.0 -0.2**
NRIK Noril'sk 38.28 22 P **P 22 54 26.3 +1.2**
comp=Z,82nm,1.2s,baz=231,slow=7.2,SNR=28
NRIK S **S 23 00 16.8 -1.7**
comp=Z,3.8nm,0.9s,baz=141,slow=18,SNR=1.1
NRIK LR LR 23 14 42.9
comp=Z,11µm,18.2s,baz=233,slow=43
comp=Z,82nm,1.2s
NRIK Noril'sk 38.28 22 *d*/P **P 22 54 25.6 +0.5**
NRIK pmax pmax
comp=Z,86nm,1.3s
NRIK MLR MLR
comp=Z,12µm,22.0s
TAWA Tawang 38.41 92 *e*P **P 22 54 28.6 +1.4**
TAWA IAmb IAmb 22 54 35.9
comp=Z,371nm,1.6s
TAWA IAMs_20 IAMs_20 23 12 19.8
comp=Z,7µm,17.4s
TLOR Lorca, Murcia 38.53 285 P **P 22 54 27.2 -0.5**
WME Myndd Eilian 38.57 311 *e*P **P 22 54 28.6 +0.8**
WLF1 Llynfaes 38.62 311 *e*P **P 22 54 28.8 +0.6**
WLF1 IAmb IAmb 22 54 30.3
comp=Z,74nm,1.0s
HMDM Hanimaadhoo 38.66 136 P **P 22 54 28.7 -0.2**
HMDM IAmb IAmb 22 54 39.7
comp=Z,229nm,1.0s
HMDM Hanimaadhoo 38.66 136 P **P 22 54 29.9 +1.0**
SNR=7.3
HMDM Hanimaadhoo 38.66 136 ⇓P **P 22 54 30.0 +1.0**
INVG Invergeldie, C 38.66 316 *e*P **P 22 54 28.9 +0.4**
INVG IAmb IAmb 22 54 34.4
comp=Z,52nm,1.0s
INVG IAMs_20 IAMs_20 23 13 52.6
comp=Z,10µm,15.8s
TAM Tamanrasset 38.84 260 P **P 22 54 30.7 +0.1**
TAM IAmb IAmb 22 54 41.3
comp=Z,419nm,1.7s
TAM Tamanrasset 38.84 260 P **P 22 54 30.7 +0.1**
TAM pmax pmax
comp=Z,419nm,1.7s
TAM Tamanrasset 38.84 260 ⇑P **P 22 54 31.4 +0.7**
PGBU Glenifferbraes 38.84 315 *e*P **P 22 54 30.7 +0.6**
UCM Universidad Co 39.05 290 P **P 22 54 30.4 -1.7**
ENIJ Nijar 39.12 285 P **P 22 54 32.2 -0.5**
SHL Shillong 39.37 95 P **P 22 54 33.4 -1.6**
SHL IAmb IAmb 22 54 41.5
comp=Z,236nm,1.0s
SHL Shillong 39.37 95 *e*P **P 22 54 33.6 -1.4**
SHL IAmb IAmb 22 54 41.7
comp=Z,171nm,0.9s
SHL IAMs_20 IAMs_20 23 12 51.1
comp=Z,24µm,15.7s
SHL Shillong 39.37 95 P **P 22 54 33.4 -1.6**
SHL pmax pmax
comp=Z,236nm,1.0s
LAWE Loch Awe, Argy 39.40 315 *e*P **P 22 54 35.0 +0.3**
LAWE IAmb IAmb 22 54 37.2
comp=Z,20nm,0.8s
LAWE IAMs_20 IAMs_20 23 13 49.9
comp=Z,17µm,16.9s
TRD Trivandrum 39.45 130 IAMs_20 IAMs_20 23 12 23.4
comp=Z,17µm,17.5s
LINV Loch Inver, As 39.50 318 *e*P **P 22 54 35.9 +0.4**
LINV IAmb IAmb 22 54 38.5
comp=Z,40nm,0.8s
TEZP TEZPUR 39.59 93 *e*P **P 22 54 37.2 +0.5**
TEZP IAmb IAmb 22 54 43.9
comp=Z,146nm,0.6s
TEZP IAMs_20 IAMs_20 23 13 58.7
comp=Z,23µm,17.1s
MOY Mondy 39.61 52 *e*P **P 22 54 37.5 +0.8**
MOY pmax pmax
comp=Z,529nm,2.1s
AGT Agartala 39.70 98 *e*P **P 22 54 39.1 +1.4**
AGT IAmb IAmb 22 54 46.0
comp=Z,411nm,1.3s
AGT IAMs_20 IAMs_20 23 15 21.6
comp=Z,30µm,18.0s
ESBB Sonseca Array 39.74 289 P **P 22 54 37.0 -0.8**
ESDC Sonseca Array 39.74 289 P **P 22 54 36.6 -1.3**
ESDC Sonseca Array 39.74 289 P **P 22 54 37.3 -0.5**
comp=Z,8.9nm,0.7s,baz=67,slow=8.1,SNR=25
ESDC PcP **PcP 22 56 44.1 -0.1**
comp=Z,5.0nm,0.8s,baz=42,slow=2.9,SNR=5.3
ESDC S **S 23 00 39.1 -2.2**
comp=Z,0.7nm,0.9s,baz=104,slow=10,SNR=1.0
ESDC LR LR 23 13 32.4
comp=Z,11µm,18.6s,baz=81,slow=40
comp=Z,8.9nm,0.7s
ILTH Belurgan, Co L 39.80 312 P **P 22 54 40.2 +2.1**
KMBO Kilima Mbogo 39.81 196 P **P 22 54 40.3 +1.5**
comp=Z,37nm,0.8s,baz=15,slow=7.5,SNR=12
KMBO S **S 23 00 43.4 +0.4**
comp=Z,24nm,0.4s,baz=18,slow=12,SNR=4.5
KMBO LR LR 23 10 45.1
comp=Z,16µm,18.2s,baz=16,slow=36
comp=Z,37nm,0.8s
KMBO Kilima Mbogo 39.81 196 *i*P **P 22 54 38.8 0.0**
DSB Dublin 39.81 311 P **P 22 54 35.2 -3.0**
DSB Dublin 39.81 311 P **P 22 54 38.4 +0.2**
DSB IAmb IAmb 22 54 44.3
comp=Z,366nm,1.9s
DSB Dublin 39.81 311 P **P 22 54 39.0 +0.8**
ZIRO ZIRO 40.01 91 *e*P **P 22 54 41.0 +0.6**
ZIRO IAmb IAmb 22 54 48.1
comp=Z,219nm,1.0s
ZIRO IAMs_20 IAMs_20 23 13 19.6
comp=Z,20µm,17.8s
IWEX Carrickbyrne, 40.05 309 P **P 22 54 42.6 +2.4**
PAB San Pablo 40.06 289 P **P 22 54 41.6 +1.0**
PAB San Pablo 40.06 289 IAMs_20 IAMs_20 23 13 39.6
comp=Z,12µm,19.0s
PAB San Pablo 40.06 289 P **P 22 54 41.6 +1.0**
PAB pmax pmax
comp=Z,107nm,1.8s
PAB MLR MLR
comp=Z,12µm,19.0s
ITAN ITANAGAR 40.08 91 *e*P **P 22 54 42.7 +1.9**
ITAN IAmb IAmb 22 54 48.9
comp=Z,270nm,0.6s
ITAN IAMs_20 IAMs_20 23 15 15.3
comp=Z,27µm,17.4s
HOPEN Hopen 40.15 352 *e*P **P 22 54 42.7 +2.0**
BELO BELONIA 40.18 98 IAmb IAmb 22 54 49.0
comp=Z,477nm,1.1s
GTA Gaotai 40.48 71 *e*P **P 22 54 41.4 -2.7**
GTA pP pP 22 54 45.6 -3.2
GTA sS sS 23 00 59.2 -1.3
GTA pmax pmax
comp=Z,2µm,5.5s
GTA LR LR
comp=Z,16µm,21.4s
GTA LR LR
comp=Z,9µm,21.8s
GTA LR LR
comp=Z,8µm,20.7s
IDGL Inch Island, C 40.52 314 P **P 22 54 46.4 +2.4**
JORH JORHAT 40.69 92 *e*P **P 22 54 46.8 +1.0**
JORH IAmb IAmb 22 54 53.5
comp=Z,372nm,0.6s
JORH IAMs_20 IAMs_20 23 13 18.5
comp=Z,12µm,16.5s
KIBK Kibwezi 40.82 194 P **P 22 54 48.8 +1.8**
KIBK Kibwezi 40.82 194 P **P 22 54 48.1 +1.1**
KIBK Kibwezi 40.82 194 P **P 22 54 48.8 +1.8**
SNR=44
EMAL Malaga-Limoner 40.89 285 P **P 22 54 46.2 -1.1**
EMAL S **S 23 00 56.6 -1.8**
KOHI KOHIMA 41.05 93 *e*P **P 22 54 49.7 +0.7**
KOHI IAmb IAmb 22 54 56.4
comp=Z,143nm,0.6s
KOHI IAMs_20 IAMs_20 23 15 09.0
comp=Z,9µm,18.8s
ZAK Zakamensk 41.11 54 *e*P **P 22 54 50.7 +1.5**
ZAK *e* 22 56 24.4
ZAK pmax pmax
comp=Z,380nm,2.1s
ZAK pmax pmax
comp=Z,130nm,1.6s
TLY Talaya 41.26 52 P **P 22 54 51.3 +1.0**
TLY Talaya 41.26 52 P **P 22 54 53.3 +3.0**
TLY P **P 22 54 53.3 +3.0**
TLY P **P 22 54 53.3 +3.0**
TLY Talaya 41.26 52 *de*P **P 22 54 52.0 +1.7**
TLY pmax pmax
comp=Z,113nm,1.4s
TLY MLR MLR
comp=Z,9µm,17.0s
IMP Imphal 41.35 94 *e*P **P 22 54 52.5 +1.1**
IMP IAmb IAmb 22 54 59.8
comp=Z,365nm,1.6s
IMP IAMs_20 IAMs_20 23 14 19.8
comp=Z,11µm,17.1s
IGLA Glengowla, Co 41.61 311 P **P 22 54 53.7 +0.7**
IGLA Glengowla, Co 41.61 311 *e*P **P 22 54 53.1 +0.1**
IRK Irkutsk 41.62 51 *e*P **P 22 54 53.3 +0.1**
IRK *e*S **S 23 01 15.4 +6.4**
IRK pmax pmax
comp=Z,916nm,2.3s
MVO Moncorvo 41.65 292 *e*S **S 23 01 03.4 -6.5**
MVO *e*LQ LQ 23 04 29.2
MVO *e*LR LR 23 05 55.6
MVO *i* IAMs_20 IAMs_20 23 16 05.3
comp=Z,8µm,18.0s
LKP Lekhapani 41.68 90 *e*P **P 22 54 52.9 -1.0**
LKP IAmb IAmb 22 54 55.0
comp=Z,362nm,1.6s
LKP IAMs_20 IAMs_20 23 14 31.6
comp=Z,20µm,18.3s
HSPB Hornsund (broa 41.76 350 *e*P **P 22 54 53.2 -0.8**
HSPB *e*PP **PP 22 56 29.8 -0.5**
HSPB *e*S **S 23 01 15.1 +4.6**
HSPB *e*L L 23 12 48.4
comp=Z,9µm,20.9s
MALK Mahakanadarawa 41.77 126 P **P 22 54 53.4 -1.4**
MALK Mahakanadarawa 41.77 126 ⇓P **P 22 54 55.5 +0.7**
VAL Valentia 42.20 309 P **P 22 54 51.6 -6.3**
VAL Valentia 42.20 309 P **P 22 54 59.3 +1.4**
MTE Manteigas 42.22 291 P **P 22 54 57.8 -0.5**
MTE IAMs_20 IAMs_20 23 15 40.7
comp=Z,13µm,19.0s
MTE Manteigas 42.22 291 *e*P **P 22 54 58.1 -0.2**
MTE *i* IAmb IAmb 22 55 07.7
comp=Z,118nm,1.7s
MTE *e*S **S 23 01 17.8 -0.5**
MTE *e*LQ LQ 23 04 48.6
MTE *e*LR LR 23 07 13.2
MTE *i* IAMs_20 IAMs_20 23 16 05.6
comp=Z,12µm,20.0s
PCAB Cabril 42.25 293 *e*P **P 22 55 01.5 +3.0**
CNIL Conil 42.25 285 P **P 22 54 58.0 -0.5**
PCBR Castelo Branco 42.31 291 *e*P **P 22 54 58.0 -1.0**
PCBR *i* IAmb IAmb 22 55 08.2
comp=Z,123nm,1.6s
SFS San Fernando 42.34 285 IAMs_20 IAMs_20 23 13 32.2
comp=Z,15µm,20.0s
MDT Midelt 42.35 280 P **P 22 54 59.9 +0.3**
comp=Z,14nm,0.9s,baz=87,slow=9.0,SNR=14
MDT S **S 23 01 18.4 -2.0**
comp=Z,2.4nm,0.5s,baz=110,slow=1.5,SNR=4.3
MDT LR LR 23 13 39.7
comp=Z,5µm,20.7s,baz=63,slow=38
comp=Z,14nm,0.9s
PMRV Marv??o 42.36 290 *e*P **P 22 54 59.7 +0.3**
PMRV *i* IAmb IAmb 22 56 07.5
comp=Z,82nm,1.7s
PMRV *e*S **S 23 01 23.3 +3.1**
PMRV *e*LR LR 23 04 49.5
PMRV *i* IAMs_20 IAMs_20 23 15 52.5
comp=Z,5µm,20.0s
PVIS Viseu 42.40 292 *e*P P 22 55 04.4 +4.7
PBAR Barrancos 42.45 288 *e*P **P 22 54 59.7 -0.4**
PBAR *i* IAmb IAmb 22 55 05.6
comp=Z,87nm,1.7s
MD01 Midelt array s 42.45 280 P **P 22 54 59.5 -0.9**
MD31 MD31 42.45 280 P **P 22 54 59.6 -0.7**
IFR Ifrane 42.50 281 P **P 22 54 59.8 -1.0**
SPA0 Spitsbergen Ar 42.58 351 *e*P **P 22 55 01.2 +0.5**
SPITS Spitsbergen Ar 42.58 351 P **P 22 55 01.7 +1.0**
comp=Z,202nm,1.0s,baz=138,slow=8.9,SNR=31
SPITS LR LR 23 14 58.9
comp=Z,9µm,18.8s,baz=144,slow=39
comp=Z,202nm,1.0s
PESTR Estremoz 42.67 289 *e*P **P 22 55 01.1 -0.8**
PESTR *i* IAmb IAmb 22 55 10.6
comp=Z,101nm,1.6s
PALK Pallekele 42.73 127 P **P 22 55 02.2 -0.4**
PALK IAmb IAmb 22 55 11.3
comp=Z,409nm,1.9s
PALK Pallekele 42.73 127 IAMs_20 IAMs_20 23 14 51.2
comp=Z,12µm,18.0s
PALK Pallekele 42.73 127 LR LR 23 13 44.7
comp=Z,9µm,18.2s,baz=321,slow=38
PALK Pallekele 42.73 127 P **P 22 55 03.2 +0.6**
PALK P **P 22 55 03.2 +0.6**
PALK Pallekele 42.73 127 P **P 22 55 02.2 -0.4**
PALK pmax pmax
comp=Z,409nm,2.0s
PALK MLR MLR
comp=Z,12µm,18.0s
MSEY Mahe Island 42.84 168 P **P 22 55 04.2 +0.7**
MSEY Mahe Island 42.84 168 P **P 22 55 05.4 +2.0**
MSEY P **P 22 55 05.4 +2.0**
MSEY Mahe Island 42.84 168 P **P 22 55 04.2 +0.7**
MSEY pmax pmax
comp=Z,89nm,1.2s
MSEY MLR MLR
comp=Z,8µm,20.0s
PSARD Sardoal 42.89 290 *e*P **P 22 55 06.9 +3.2**
PSARD *i* IAmb IAmb 22 55 12.9
comp=Z,143nm,1.6s
PCAS Casmilo, Conde 43.02 291 *e*P **P 22 55 01.9 -2.8**
PCAS *i* IAmb IAmb 22 55 15.5
comp=Z,193nm,2.0s
PARRA Arraiolos 43.02 289 *e*P P 22 55 05.1 -5.6
PARRA *i* IAmb IAmb 22 55 12.6
comp=Z,50nm,1.7s
EVO Evora 43.08 289 P **P 22 55 04.7 -0.5**
EVO Evora 43.08 289 *e*P **P 22 55 07.3 +2.1**
EVO *i* IAmb IAmb 22 55 19.3
comp=Z,62nm,1.6s
PMTG Montargil 43.08 290 *e*P **P 22 55 05.9 +0.7**
PMTG *i* IAmb IAmb 22 55 13.2
comp=Z,97nm,1.6s
PBEJ Beja 43.12 288 *e*P **P 22 55 05.4 -0.2**
PBEJ *i* IAmb IAmb 22 55 34.5
comp=Z,96nm,1.6s
PVAQ Vaqueiros 43.20 287 P **P 22 55 06.1 -0.1**
PVAQ IAmb IAmb 22 55 13.4
comp=Z,289nm,1.7s
PVAQ Vaqueiros 43.20 287 *e*P **P 22 55 04.6 -1.6**
PVAQ *i* IAmb IAmb 22 55 14.8
comp=Z,108nm,1.6s
PVAQ *e*S **S 23 01 35.4 +2.9**
PVAQ *e*SS **SnSn 23 04 55.1 -7.1**
PVAQ *e*LR LR 23 05 03.6
PVAQ *i* IAMs_20 IAMs_20 23 15 57.3
comp=Z,5µm,20.0s
MOE Montemor 43.34 289 *e*P **P 22 55 09.3 +2.0**
MOE *i* IAmb IAmb 22 56 27.2
comp=Z,102nm,1.8s
PCVE Castro Verde 43.37 288 *e*P **P 22 55 06.1 -1.5**
PCVE *i* IAmb IAmb 22 55 36.3
comp=Z,118nm,1.4s
PSBE So Bento 43.38 291 *e*P **P 22 55 08.6 +0.9**
PSBE *i* IAmb IAmb 22 55 22.6
comp=Z,281nm,1.7s
PBDV Barranco-do-Ve 43.41 287 *e*P **P 22 55 08.8 +0.8**
PBDV *i* IAmb IAmb 22 55 45.4
comp=Z,131nm,1.3s
MESJ Messejana 43.44 288 *e*P **P 22 55 08.5 +0.3**
MESJ *e*S **S 23 01 37.8 +1.7**
MESJ IAMs_20 IAMs_20 23 15 01.2
comp=Z,11µm,18.5s
MESJ Messejana 43.44 288 P **P 22 55 08.3 +0.1**
MESJ Messejana 43.44 288 *e*P **P 22 55 09.3 +1.1**
MESJ *i* IAmb IAmb 22 55 16.1
comp=Z,74nm,2.1s
MESJ Messejana 43.44 288 *e*P **P 22 55 08.5 +0.3**
MESJ *e*S **S 23 01 37.8 +1.7**
SONM Songino Array 43.44 57 P **P 22 55 09.3 +1.1**
SONM Songino Array 43.44 57 P **P 22 55 09.6 +1.4**
comp=Z,8.6nm,0.8s,baz=280,slow=12,SNR=37
SONM PcP **PcP 22 56 56.6 +0.3**
comp=Z,23nm,1.2s,baz=279,slow=2.7,SNR=5.5
SONM S **S 23 01 38.4 +2.3**
comp=Z,0.8nm,1.1s,baz=270,slow=14,SNR=1.0
SONM LR LR 23 16 30.2
comp=Z,10µm,18.6s,baz=287,slow=41
comp=Z,8.6nm,0.8s
KBS Kingsbay 43.73 351 P **P 22 55 10.8 +0.9**
KBS IAmb IAmb 22 55 12.4
comp=Z,155nm,1.3s
KBS IAMs_20 IAMs_20 23 15 20.6
comp=Z,11µm,19.0s
KBS Kingsbay 43.73 351 *ce*P **P 22 55 09.8 -0.1**
KBS pmax pmax
comp=Z,119nm,1.3s
KBS Kingsbay 43.73 351 *i*P **P 22 55 10.7 +0.8**
JMIC Jan Mayen 43.85 337 LR LR 23 13 57.0
comp=Z,5µm,19.7s,baz=112,slow=37
ULN Ulaanbaatar 43.87 57 P **P 22 55 12.4 +0.7**
ULN IAmb IAmb 22 55 20.3
comp=Z,299nm,1.2s
ULN Ulaanbaatar 43.87 57 IAMs_20 IAMs_20 23 15 58.9
comp=Z,11µm,21.0s

ULN	**Ulaanbaatar**	**43.87**	**57**	P	**P**	**22 55 13.0 +1.3**
ULN				P	**P**	**22 55 13.0 +1.3**
ULN	**Ulaanbaatar**	**43.87**	**57**	*ce*P	**P**	**22 55 12.1 +0.4**
ULN				pmax	pmax	
comp=Z,257nm,1.7s						
ULN	**Ulaanbaatar**	**43.87**	**57**	⇓P	**P**	**22 55 12.9 +1.2**
LIS	**Lisbon**	**43.88**	**290**	*e*P	**P**	**22 55 11.8 +0.2**
LIS				*e*S	**S**	**23 01 44.1 +1.8**
LIS				IAMs_20	IAMs_20	23 09 35.5
comp=N,26µm,37.8s						
LIS	**Lisbon**	**43.88**	**290**	*e*P	**P**	**22 55 11.8 +0.2**
LIS				*e*S	**S**	**23 01 44.2 +1.8**
KAAM	**Kaadhehdhoo**	**43.89**	**142**	IAMs_20	IAMs_20	23 12 39.8
comp=Z,12µm,19.0s						
MORF	**Marmelete**	**43.93**	**287**	*e*P	**P**	**22 55 12.3 +0.2**
MORF				*e*S	**S**	**23 01 45.3 +1.9**
MORF				IAMs_20	IAMs_20	23 16 10.1
comp=Z,9µm,22.6s						
MORF	**Marmelete**	**43.93**	**287**	P	**P**	**22 55 11.0 -1.2**
MORF	**Marmelete**	**43.93**	**287**	*e*P	**P**	**22 55 13.1 +0.9**
MORF				*i* IAmb	IAmb	22 55 56.2
comp=Z,91nm,1.8s						
MORF	**Marmelete**	**43.93**	**287**	*e*P	**P**	**22 55 12.4 +0.2**
MORF				*e*S	**S**	**23 01 45.3 +1.9**
PFVI	**Vila Bisbo**	**44.12**	**287**	P	**P**	**22 55 13.2 -0.4**
PFVI				IAmb	IAmb	22 55 43.8
comp=Z,136nm,1.0s						
PFVI	**Vila Bisbo**	**44.12**	**287**	*e*P	**P**	**22 55 14.5 +0.9**
PFVI				*i* IAmb	IAmb	22 56 26.0
comp=Z,132nm,1.7s						
LZDM	**Lanzhou Array**	**44.45**	**74**	P	**P**	**22 55 18.4 +1.7**
comp=Z,52nm,0.9s,baz=282,slow=7.4,SNR=30						
LZDM				PcP	**PcP**	**22 57 00.3 +0.1**
comp=Z,20nm,0.8s,baz=300,slow=2.8,SNR=3.6						
LZDM				S	**S**	**23 01 52.7 +1.2**
comp=Z,2.5nm,0.4s,baz=228,slow=21,SNR=1.4						
LZDM				LR	LR	23 18 58.1
comp=Z,11µm,18.1s,baz=325,slow=43						
comp=Z,52nm,0.9s						
LZH	**Lanzhou**	**44.52**	**74**	⇑P	**P**	**22 55 19.3 +2.3**
LZH				pP	sP	22 55 23.7 -0.1
LZH				sP	pP	22 55 27.8 +5.9
LZH				S	**S**	**23 01 51.3 -0.9**
LZH				pmax	pmax	
comp=Z,170nm,1.3s						
LZH				pmax	pmax	
comp=Z,2µm,4.4s						
LZH				LR	LR	
comp=Z,25µm,16.8s						
LZH				LR	LR	
comp=Z,16µm,17.1s						
LZH				LR	LR	
comp=Z,25µm,16.2s						
TNCH	**TengChong**	**44.88**	**91**	⇑*i*P	**P**	**22 55 20.9 +0.8**
TNCH				sP	pP	22 55 25.1 +0.2
TNCH				PP	**PP**	**22 57 06.3 +1.5**
TNCH				S	**S**	**23 02 01.4 +3.7**
TNCH				pmax	pmax	
comp=Z,72nm,0.9s						
TNCH				LR	LR	
comp=Z,9µm,16.5s						
TNCH				LR	LR	
comp=Z,5µm,14.2s						
TNCH				LR	LR	
comp=Z,8µm,30.3s						
TIO	**Tiouine**	**45.17**	**278**	P	**P**	**22 55 21.9 -0.3**
CD2	**Chengdu**	**46.39**	**81**	P	**P**	**22 55 31.9 +0.1**
CD2				pP	pP	22 55 34.7 -2.0
CD2				sP	sP	22 55 35.7 -2.9
CD2				S	**S**	**23 02 24.9 +5.8**
CD2				pmax	pmax	
comp=Z,140nm,1.2s						
CD2				pmax	pmax	
comp=Z,1µm,4.6s						
CD2				LR	LR	
comp=Z,21µm,13.5s						
CD2				LR	LR	
comp=Z,23µm,16.9s						
CD2				LR	LR	
comp=Z,9µm,13.9s						
PZH	**PanZhiHua**	**46.73**	**87**	P	**P**	**22 55 34.8 +0.2**
PZH				S	**S**	**23 02 25.2 +0.9**
PZH				pmax	pmax	
comp=Z,50nm,1.4s						
PZH				LR	LR	
comp=Z,5µm,20.4s						
PZH				LR	LR	
comp=Z,5µm,19.6s						
PZH				LR	LR	
comp=Z,9µm,19.2s						
BOD	**Bodaibo**	**46.86**	**42**	*e*P	**P**	**22 55 35.2 +0.2**
BOD				pmax	pmax	
comp=Z,427nm,1.3s						
DGPR	**DIGLIPUR**	**47.18**	**109**	*e*P	**P**	**22 55 39.1 +1.1**
CIT	**Chita**	**47.33**	**50**	*e*P	**P**	**22 55 39.8 +0.9**
CIT				*e*		22 55 52.5
CIT				*e*		22 57 13.9
CIT				*e*		22 57 31.3
CIT				*e*		23 02 32.5
CIT				*e*		23 05 36.6
CIT				pmax	pmax	
comp=Z,918nm,1.9s						
TORD	**Torodi Ar. Bea**	**47.44**	**251**	P	**P**	**22 55 38.5 -1.6**
TORD				IAmb	IAmb	22 55 49.0
comp=Z,201nm,1.8s						
TORD	**Torodi Ar. Bea**	**47.44**	**251**	P	**P**	**22 55 39.3 -0.8**
comp=Z,27nm,0.9s,baz=62,slow=7.7,SNR=78						
TORD				S	**S**	**23 02 30.6 -3.6**
comp=Z,0.4nm,0.7s,baz=94,slow=4.3,SNR=1.2						
TORD				LR	LR	23 19 08.6
comp=Z,5µm,18.2s,baz=48,slow=40						
comp=Z,27nm,0.9s						
BORG	**Borgarnes**	**47.66**	**327**	P	**P**	**22 55 41.1 -0.1**
BORG				IAmb	IAmb	22 55 54.3
comp=Z,179nm,1.4s						
BORG	**Borgarnes**	**47.66**	**327**	IAMs_20	IAMs_20	23 15 36.1
comp=Z,15µm,22.0s						
BORG	**Borgarnes**	**47.66**	**327**	LR	LR	23 16 09.8
comp=Z,15µm,21.9s,baz=99,slow=37						
BORG	**Borgarnes**	**47.66**	**327**	P	**P**	**22 55 41.1 -0.1**
BORG				pmax	pmax	
comp=Z,179nm,1.4s						
BORG				MLR	MLR	
comp=Z,15µm,22.0s						
BTO	**Baotou**	**47.67**	**66**	⇑*i*P	**P**	**22 55 42.8 +1.1**
BTO				pP	**sP**	**22 55 47.3 -1.2**
BTO				sP	**pP**	**22 55 50.0 +3.5**
BTO				S	**S**	**23 02 35.3 -2.0**
BTO				sS	**pS**	**23 02 43.4 +0.3**
BTO				SS	SS	23 05 54.0 -11
BTO				pmax	pmax	
comp=Z,340nm,1.0s						
BTO				pmax	pmax	
comp=Z,4µm,6.3s						
BTO				LR	LR	
comp=Z,26µm,19.5s						
BTO				LR	LR	
comp=Z,20µm,22.0s						
BTO				LR	LR	
comp=Z,20µm,23.7s						
EDA	**Edea**	**48.00**	**234**	P	**P**	**22 55 44.2 -0.3**
EDA				IAmb	IAmb	22 55 53.0
comp=Z,105nm,1.5s						
EDA				IAMs_20	IAMs_20	23 16 31.5
comp=Z,12µm,21.0s						
PBA	**Port Blair**	**48.01**	**111**	P	**P**	**22 55 42.4 -2.1**
PBA	**Port Blair**	**48.01**	**111**	P	**P**	**22 55 47.5 +3.0**
DBG	**Daneborg**	**48.06**	**340**	*i* P	**P**	**22 55 45.8 +1.6**
DBG				IAmb	IAmb	22 55 53.1
comp=Z,256nm,1.6s						
SCO	**Scoresbysund**	**48.12**	**335**	*i* P	**P**	**22 55 46.5 +1.9**
SCO				IAmb	IAmb	22 55 49.2
comp=Z,79nm,1.2s						
DAG	**Danmarks Havn**	**48.17**	**344**	⇓P	**P**	**22 55 45.4 +0.4**
DAG	**Danmarks Havn**	**48.17**	**344**	*i* P	**P**	**22 55 45.0 +0.1**
DAG				IAmb	IAmb	22 55 46.9
comp=Z,108nm,1.3s						
KMI	**Kunming**	**48.18**	**88**	⇑P	**P**	**22 55 46.4 +0.4**
KMI				sP	sP	22 55 53.5 +0.7
KMI				S	**S**	**23 02 42.5 -2.6**
KMI				SS	**SS**	**23 06 05.7 -8.5**
KMI				pmax	pmax	
comp=Z,160nm,1.0s						
KMI				pmax	pmax	
comp=Z,2.0nm,2.7s						
KMI				LR	LR	
comp=Z,12µm,28.0s						
KMI				LR	LR	
comp=Z,7µm,26.4s						
KMI				LR	LR	
comp=Z,12µm,22.9s						
CHTO	**Chiang Mai**	**48.46**	**98**	P	**P**	**22 55 47.0 -1.0**
CHTO	**Chiang Mai**	**48.46**	**98**		**P**	**22 55 47.7 -0.3**
CHTO	**Chiang Mai**	**48.46**	**98**	P	**P**	**22 55 48.2 +0.3**
CHTO				P	**P**	**22 55 48.2 +0.3**
CHTO	**Chiang Mai**	**48.46**	**98**	P	**P**	**22 55 48.4 +0.4**
CHTO	**Chiang Mai**	**48.46**	**98**	P	**P**	**22 55 46.0 -2.0**
CHTO				P	**P**	**22 55 47.7 -0.3**
CHTO				pmax	pmax	
comp=Z,330nm,1.7s						
CM31	**Chiang Mai Arr**	**48.66**	**98**	P	**P**	**22 55 48.6 -0.9**
CM31				IAmb	IAmb	22 56 01.7
comp=Z,87nm,1.1s						
CMAR	**Chiang Mai Arr**	**48.66**	**98**	P	**P**	**22 55 48.8 -0.7**
CMAR	**Chiang Mai Arr**	**48.66**	**98**	P	**P**	**22 55 49.5 0.0**
comp=Z,17nm,0.8s,baz=298,slow=8.5,SNR=46						
CMAR				S	**S**	**23 02 53.8 +2.3**
comp=Z,0.6nm,0.3s,baz=315,slow=3.9,SNR=1.3						
CMAR				LR	LR	23 18 12.3
comp=Z,5µm,21.6s,baz=305,slow=38						
comp=Z,17nm,0.8s						
CMAR	**Chiang Mai Arr**	**48.66**	**98**	*e*P	**P**	**22 55 49.5 0.0**
CMAR				pmax	pmax	
comp=Z,14nm,0.6s						
HHC	**Hu-ho-hao-te**	**48.71**	**65**	⇑*i*P	**P**	**22 55 52.0 +2.2**
HHC				S	**S**	**23 02 56.0 +4.0**
HHC				pmax	pmax	
comp=Z,80nm,1.3s						
HHC				pmax	pmax	
comp=Z,2µm,4.9s						
HHC				LR	LR	
comp=Z,12µm,18.7s						
HHC				LR	LR	
comp=Z,6µm,13.2s						
HHC				LR	LR	
comp=Z,9µm,16.2s						
XAN	**Xi'an**	**49.14**	**75**	P	**P**	**22 55 53.7 +0.6**
XAN				pP	pP	22 55 57.5 -0.5
XAN				S	**S**	**23 03 00.6 +2.5**
XAN				sS	sS	23 03 09.1 +3.1
XAN				ScS	**ScS**	**23 05 43.0 -2.1**
XAN				pmax	pmax	
comp=Z,310nm,1.0s						
XAN				pmax	pmax	
comp=Z,2µm,4.5s						
XAN				LR	LR	
comp=Z,10µm,15.6s						
XAN				LR	LR	
comp=Z,17µm,14.3s						
XAN				LR	LR	
comp=Z,23µm,15.6s						
NOR	**Nord**	**49.19**	**350**	*i* P	**P**	**22 55 52.8 +0.1**
NOR				IAmb	IAmb	22 56 01.2
comp=Z,213nm,1.5s						
TIY	**Taiyuan**	**50.41**	**69**	P	**P**	**22 56 04.7 +2.0**
TIY				S	**S**	**23 03 19.7 +4.0**
TIY				pmax	pmax	
comp=Z,78nm,1.8s						
TIY				pmax	pmax	
comp=Z,2µm,4.6s						
TIY				LR	LR	
comp=Z,7µm,17.4s						
TIY				LR	LR	
comp=Z,10µm,17.9s						
TIY				LR	LR	
comp=Z,13µm,18.4s						
DGAR	**Diego Garcia**	**50.60**	**147**	IAMs_20	IAMs_20	23 16 59.0
comp=Z,9µm,19.0s						
DGAR	**Diego Garcia**	**50.60**	**147**	P	**P**	**22 56 03.9 -0.4**
GYA	**Guiyang**	**50.65**	**85**	⇓P	**P**	**22 56 05.4 +0.7**
GYA				S	**S**	**23 03 17.3 -2.1**
GYA				sS	sS	23 03 31.5 +4.0
GYA				pmax	pmax	
comp=Z,18nm,0.8s						
GYA				pmax	pmax	
comp=Z,300nm,3.1s						
GYA				LR	LR	
comp=Z,10µm,21.7s						
GYA				LR	LR	
comp=Z,8µm,29.3s						
GYA				LR	LR	
comp=Z,13µm,25.4s						
XLT	**XiLinHaoTe**	**50.94**	**60**	*e*P	**P**	**22 56 08.7 +2.0**
XLT				pP	sP	22 56 13.4 -0.1
XLT				sP	pP	22 56 16.0 +4.5
XLT				PP	**PP**	**22 58 08.4 +5.5**
XLT				S	**S**	**23 03 29.0 +6.0**
XLT				pmax	pmax	
comp=Z,93nm,1.3s						
XLT				LR	LR	
comp=Z,2µm,17.0s						
XLT				LR	LR	
comp=Z,11µm,18.2s						
XLT				LR	LR	
comp=Z,15µm,16.9s						
SBV	**Sambava**	**50.97**	**177**	P	**P**	**22 56 09.5 +2.6**
SLVN	**Son La**	**51.02**	**92**	P	**P**	**22 56 07.7 +0.3**
SLVN				IAmb	IAmb	22 56 20.6
comp=Z,195nm,1.4s						
SLVN	**Son La**	**51.02**	**92**	P	**P**	**22 56 08.6 +1.1**
ENH	**Enshi**	**51.13**	**79**	P	**P**	**22 56 08.2 0.0**
ENH				IAmb	IAmb	22 56 14.6
comp=Z,114nm,1.1s						
ENH	**Enshi**	**51.13**	**79**	P	**P**	**22 56 09.8 +1.6**
LYN	**LuoYang**	**51.63**	**73**	P	**P**	**22 56 14.3 +2.4**
LYN				pP	sP	22 56 18.4 -0.3
LYN				S	**S**	**23 03 38.1 +5.4**
LYN				pmax	pmax	
comp=Z,150nm,1.1s						
LYN				pmax	pmax	
comp=Z,2µm,5.1s						
LYN				LR	LR	
comp=Z,15µm,19.9s						
LYN				LR	LR	
comp=Z,14µm,20.6s						
LYN				LR	LR	
comp=Z,24µm,17.9s						
HILR	**Hailar Array B**	**51.71**	**52**	P	**P**	**22 56 13.8 +1.5**
comp=Z,75nm,1.0s,baz=254,slow=5.5,SNR=54						
HILR				S	**S**	**23 03 35.2 +1.8**
comp=Z,1.1nm,0.4s,baz=347,slow=5.6,SNR=1.8						
HILR				LR	LR	23 21 55.7
comp=Z,11µm,19.5s,baz=85,slow=40						
comp=Z,75nm,1.0s						
HIA	**Hailar**	**51.78**	**53**	P	**P**	**22 56 13.7 +0.8**
HIA				IAmb	IAmb	22 56 21.4
comp=Z,283nm,1.6s						
HIA	**Hailar**	**51.78**	**53**	P	**P**	**22 56 14.5 +1.7**
HIA	**Hailar**	**51.78**	**53**	*i* P	**P**	**22 56 12.0 -0.8**
HIA				pmax	pmax	
comp=Z,99nm,1.1s						
TIXI	**Tiksi**	**52.00**	**23**	P	**P**	**22 56 13.2 -0.8**
TIXI	**Tiksi**	**52.00**	**23**	*ce*P	**P**	**22 56 14.3 +0.2**
TIXI				pmax	pmax	
comp=Z,196nm,1.7s						
TIXI				MLR	MLR	
comp=Z,7µm,25.0s						
TIXI	**Tiksi**	**52.00**	**23**	⇑P	**P**	**22 56 14.6 +0.5**
PMOZ	**Porto Moniz, M**	**52.09**	**285**	P	**P**	**22 56 15.8 +0.3**
PMOZ	**Porto Moniz, M**	**52.09**	**285**	*e*S	S	23 03 49.9 +11
PMOZ				*e*LR	LR	23 06 51.5
PMOZ				*i* IAMs_20	IAMs_20	23 19 27.6
comp=Z,2µm,20.0s						
HNS	**HongShan**	**52.20**	**68**	⇑P	**P**	**22 56 17.7 +1.7**
HNS				S	**S**	**23 03 40.6 +0.3**
HNS				pmax	pmax	
comp=Z,87nm,2.2s						
HNS				LR	LR	
comp=Z,7µm,19.1s						
HNS				LR	LR	
comp=Z,9µm,19.1s						
HNS				LR	LR	
comp=Z,13µm,19.1s						
BJI	**Beijing**	**52.30**	**65**	P	**P**	**22 56 17.7 +1.0**
BJI				S	**S**	**23 03 47.6 +6.1**
BJI				pmax	pmax	
comp=Z,49nm,2.3s						
BJI				LR	LR	
comp=Z,9µm,19.2s						
BJI				LR	LR	
comp=Z,4µm,19.4s						
BJI				LR	LR	
comp=Z,7µm,18.7s						
BJT	**Baijiatuao**	**52.30**	**65**	P	**P**	**22 56 16.5 -0.3**
BJT				IAmb	IAmb	22 56 26.1
comp=Z,173nm,1.6s						
BJT	**Baijiatuao**	**52.30**	**65**	IAMs_20	IAMs_20	23 21 38.3
comp=Z,12µm,21.0s						
BJT	**Baijiatuao**	**52.30**	**65**	P	**P**	**22 56 18.7 +1.9**
BJT	**Baijiatuao**	**52.30**	**65**	P	**P**	**22 56 16.5 -0.3**
BJT				pmax	pmax	
comp=Z,173nm,1.6s						
BJT				MLR	MLR	
comp=Z,12µm,21.0s						
SUMG	**Summit**	**53.27**	**338**	P	**P**	**22 56 23.5 -0.4**
SUMG	**Summit**	**53.27**	**338**	P	**P**	**22 56 22.6 -1.4**
SUMG				IAmb	IAmb	22 56 32.7
comp=Z,249nm,1.3s						
SUMG	**Summit**	**53.27**	**338**	P	**P**	**22 56 22.6 -1.4**
SUMG				pmax	pmax	
comp=Z,249nm,1.3s						
SUMG				MLR	MLR	
comp=Z,4µm,19.0s						
SUMG	**Summit**	**53.27**	**338**	⇑P	**P**	**22 56 25.6 +1.6**
SUMG	**Summit**	**53.27**	**338**	*i* P	**P**	**22 56 24.9 +0.9**
SUMG				IAmb	IAmb	22 56 33.0
comp=Z,174nm,1.1s						
MACI	**Morro de la Ar**	**53.57**	**280**	P	**P**	**22 56 23.9 -2.6**
MACI				IAmb	IAmb	22 57 39.4
comp=Z,168nm,1.1s						
ACRG	**Accra**	**53.79**	**246**	P	**P**	**22 56 26.9 -1.1**
ACRG				IAmb	IAmb	22 56 29.3
comp=Z,110nm,0.8s						
YAK	**Yakutsk**	**53.98**	**35**	P	**P**	**22 56 28.2 -0.6**
YAK				IAmb	IAmb	22 56 31.1
comp=Z,174nm,1.4s						
YAK	**Yakutsk**	**53.98**	**35**	LR	LR	23 22 59.0
comp=Z,19µm,21.0s,baz=276,slow=40						
YAK	**Yakutsk**	**53.98**	**35**	*e*P	**P**	**22 56 28.6 -0.1**
YAK				*e**PP	**pP**	**22 56 32.0 -1.6**
YAK				*e*		22 57 34.2
YAK				*e*		22 58 29.9
YAK				*e*PPP	PPP	22 59 36.5
YAK				*e*S	**S**	**23 04 04.4 +0.6**
YAK				*e**SS	**pS**	**23 04 10.5 +0.9**
YAK				*e*		23 06 18.5
YAK				*e*SS	**SS**	**23 07 44.5 0.0**
YAK				pmax	pmax	
comp=Z,115nm,1.3s						
YAK				pmax	pmax	
comp=E,70nm,1.4s						
YAK				pmax	pmax	
comp=N,8.0nm,1.3s						
YAK				pmax	pmax	
comp=Z,265nm,2.2s						
YAK				pmax	pmax	
comp=N,147nm,2.8s						
YAK				pmax	pmax	
comp=E,200nm,2.3s						
YAK				smax	smax	
comp=E,167nm,3.0s						
YAK				smax	smax	
comp=N,380nm,3.8s						
YAK				MLR	MLR	
comp=Z,21µm,19.0s						
YAK				MLR	MLR	
comp=N,6µm,17.0s						
YAK	**Yakutsk**	**53.98**	**35**	⇑P	**P**	**22 56 29.1 +0.3**
GULI	**GuiLin**	**54.13**	**84**	P	**P**	**22 56 32.2 +1.8**
GULI				PP	**PP**	**22 58 37.1 +5.1**
GULI				S	**S**	**23 04 05.2 -1.7**
GULI				pmax	pmax	
comp=N,69nm,2.1s						
GULI				LR	LR	
comp=N,9µm,23.5s						
GULI				LR	LR	
comp=N,8µm,20.8s						
GULI				LR	LR	
comp=N,11µm,22.6s						
TIA	**Tai'an**	**54.45**	**69**	P	**P**	**22 56 34.0 +1.4**
TIA				PP	**PP**	**22 58 40.9 +6.3**
TIA				S	**S**	**23 04 10.7 -0.3**
TIA				pmax	pmax	
comp=N,86nm,1.2s						
TIA				pmax	pmax	
comp=N,2µm,3.8s						
TIA				LR	LR	
comp=N,9µm,19.2s						
TIA				LR	LR	
comp=N,5µm,19.9s						
TIA				LR	LR	
comp=N,14µm,15.8s						
CNSH	**ChangSha**	**54.76**	**79**	P	**P**	**22 56 36.3 +1.3**
CNSH				S	**S**	**23 04 16.4 +1.1**
CNSH				pmax	pmax	
comp=N,54nm,1.9s						
CNSH				LR	LR	
comp=N,18µm,22.0s						
CNSH				LR	LR	
comp=N,16µm,21.7s						
CNSH				LR	LR	
comp=N,11µm,22.6s						
WHN	**Wuhan**	**54.78**	**76**	⇓P	**P**	**22 56 37.0 +1.9**
WHN				pP	**pP**	**22 56 39.9 -0.1**
WHN				PP	**PP**	**22 58 41.1 +3.5**
WHN				S	**S**	**23 04 14.2 -1.3**
WHN				sS	**sS**	**23 04 22.3 -1.1**
WHN				SS	**SS**	**23 07 57.7 -0.7**
WHN				pmax	pmax	
comp=N,300nm,1.0s						
WHN				pmax	pmax	
comp=N,3µm,5.5s						
WHN				LR	LR	
comp=N,10µm,11.5s						
WHN				LR	LR	
comp=N,14µm,13.4s						
WHN				LR	LR	
comp=N,39µm,15.0s						
ZEA	**Zeya**	**54.98**	**46**	*e*P	**P**	**22 56 38.0 +1.8**
ZEA				*e*S	**S**	**23 04 21.2 +3.6**
ZEA				pmax	pmax	
comp=E,10.0nm,1.3s						
ZEA				pmax	pmax	
comp=Z,50nm,1.2s						
ZEA				pmax	pmax	
comp=E,200nm,4.5s						
ZEA				pmax	pmax	
comp=Z,700nm,5.8s						
ZEA				smax	smax	
comp=E,1µm,12.6s						
ZEA				MLR	MLR	
comp=E,6µm,14.0s						
ZEA				MLR	MLR	
comp=Z,9µm,15.0s						
NEEM	**North Greenlan**	**55.33**	**345**	⇓P	**P**	**22 56 39.4 +0.7**
NEEM	**North Greenlan**	**55.33**	**345**	*i* P	**P**	**22 56 38.6 -0.1**
NEEM				IAmb	IAmb	22 56 46.4
comp=Z,99nm,1.1s						
LHMI	**Lhok Sumawe**	**55.37**	**113**	IAMs_20	IAMs_20	23 22 22.6
comp=Z,10µm,21.0s						
UBPT	**Khong Chiam**	**55.59**	**97**	P	**P**	**22 56 42.1 +1.0**
LSZ	**Lusaka**	**55.76**	**203**	P	**P**	**22 56 42.8 +0.5**
LSZ				IAmb	IAmb	22 56 48.0
comp=Z,84nm,1.1s						
LSZ	**Lusaka**	**55.76**	**203**	P	**P**	**22 56 43.3 +1.0**
comp=Z,30nm,0.9s,baz=33,slow=5.9,SNR=24						
LSZ				LR	LR	23 22 07.7
comp=Z,10µm,18.4s,baz=27,slow=38						
comp=Z,30nm,0.9s						
LSZ	**Lusaka**	**55.76**	**203**	P	**P**	**22 56 43.5 +1.3**
LSZ	**Lusaka**	**55.76**	**203**	⇓P	**P**	**22 56 43.7 +1.4**
OPO	**Ambohidratompo**	**56.00**	**180**	P	**P**	**22 56 44.9 +0.8**
comp=Z,5.9nm,0.6s,baz=338,slow=7.3,SNR=5.7						
OPO				PKiKP	**PKiKP**	**23 04 12.9 +0.4**
comp=Z,4.4nm,0.6s,baz=344,slow=2.1,SNR=6.4						
OPO				LR	LR	23 21 08.2
comp=Z,16µm,20.4s,baz=188,slow=36						
comp=Z,5.9nm,0.6s						
HEH	**HeiHe**	**56.21**	**50**	*e*P	**P**	**22 56 46.5 +1.4**
HEH				pP	**pP**	**22 56 50.4 +0.4**
HEH				PcP	**PcP**	**22 57 39.8 -2.9**
HEH				PP	**PP**	**22 58 55.0 +5.0**
HEH				S	**S**	**23 04 38.0 +3.9**
HEH				sS	**sS**	**23 04 46.8 +4.6**
HEH				pmax	pmax	
comp=Z,190nm,1.3s						
HEH				pmax	pmax	

comp=Z,2µm,4.8s
HEH LR LR
comp=Z,13µm,16.9s
HEH LR LR
comp=Z,9µm,17.1s
HEH LR LR
comp=Z,17µm,16.6s
CMLA Cha da Macela 56.26 294 P **P** **22 56 46.0 +0.3**
CMLA Cha da Macela 56.26 294 P **P** **22 56 46.0 +0.3**
CMLA pmax pmax
comp=Z,1µm,2.0s
CMLA MLR MLR
comp=Z,6µm,22.0s
ABPO Ambohimpanom 56.45 180 P **P** **22 56 47.0 -0.2**
ABPO IAmb IAmb 22 56 54.9
comp=Z,132nm,1.6s
ABPO Ambohimpanom 56.45 180 P **P** **22 56 47.0 -0.2**
ABPO pmax pmax
comp=Z,132nm,1.6s
ABPO MLR MLR
comp=Z,19µm,20.0s
DBIC Dimbokro 56.52 250 P **P** **22 56 46.1 -1.7**
DBIC IAmb IAmb 22 56 48.0
comp=Z,77nm,0.8s
DBIC Dimbokro 56.52 250 P **P** **22 56 46.8 -1.0**
comp=Z,72nm,0.8s,baz=75,slow=7.8,SNR=85
DBIC S **S** **23 04 35.2 -3.8**
comp=Z,5.0nm,1.1s,baz=335,slow=17,SNR=1.6
DBIC LR LR 23 24 29.3
comp=Z,5µm,18.5s,baz=72,slow=40
comp=Z,72nm,0.8s
DBIC Dimbokro 56.52 250 ⇑P **P** **22 56 46.8 -1.0**
DL2 Dalian 56.63 64 P **P** **22 56 49.6 +1.4**
DL2 S **S** **23 04 43.0 +3.1**
DL2 pmax pmax
comp=Z,300nm,1.4s
DL2 pmax pmax
comp=Z,2µm,9.6s
DL2 LR LR
comp=Z,11µm,19.3s
DL2 LR LR
comp=Z,7µm,19.1s
DL2 LR LR
comp=Z,12µm,19.3s
SNY Shenyang 56.83 60 ⇑P **P** **22 56 49.8 +0.2**
SNY S **S** **23 04 43.6 +1.1**
SNY pmax pmax
comp=Z,660nm,4.8s
SNY LR LR
comp=Z,12µm,21.2s
SNY LR LR
comp=Z,6µm,19.3s
SNY LR LR
comp=Z,8µm,22.0s
SNSI Sinabang, Aceh 56.86 116 P **P** **22 56 51.0 +0.8**
comp=Z,163nm,0.9s
QIZ Qiongzhong 56.95 91 P **P** **22 56 50.5 -0.3**
QIZ IAmb IAmb 22 57 01.9
comp=Z,184nm,1.4s
QIZ Qiongzhong 56.95 91 P **P** **22 56 51.6 +0.8**
QIZ S **S** **23 04 44.6 -0.1**
QIZ ScS **ScS** **23 06 37.9 -2.3**
QIZ SS **SS** **23 08 34.2 +1.1**
QIZ pmax pmax
comp=Z,91nm,1.7s
QIZ LR LR
comp=Z,5µm,18.8s
QIZ LR LR
comp=Z,3µm,17.3s
QIZ LR LR
comp=Z,7µm,21.0s
QIZ Qiongzhong 56.95 91 P **P** **22 56 51.9 +1.1**
KCSI Kotacane, Aceh 57.13 114 P **P** **22 56 49.2 -2.9**
comp=Z,84nm,1.0s
CN2 Changchun 57.32 57 ⇓P **P** **22 56 53.7 +0.6**
CN2 *es*P sP 22 56 59.5 -0.4
CN2 *eS* **S** **23 04 45.8 -3.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,1µm,4.0s
CN2 LR LR
comp=Z,5µm,13.0s
CN2 LR LR
comp=Z,4µm,13.0s
CN2 LR LR
comp=Z,7µm,15.0s
NJ2 Nanjing 57.53 73⇑*i*P **P** **22 56 55.9 +1.2**
NJ2 PP **PP** **22 59 09.3 +7.1**
NJ2 S **S** **23 04 49.7 -2.4**
NJ2 pmax pmax
comp=Z,54nm,0.9s
NJ2 pmax pmax
comp=Z,1µm,4.0s
NJ2 LR LR
comp=Z,7µm,18.0s
NJ2 LR LR
comp=Z,5µm,15.2s
NJ2 LR LR
comp=Z,8µm,15.5s
GZH Guangzhou 57.58 85 P **P** **22 56 55.3 +0.1**
GZH S **S** **23 04 58.3 +5.4**
GZH LR LR
comp=Z,14µm,21.6s
GZH LR LR
comp=Z,9µm,23.7s
GZH LR LR
comp=Z,16µm,17.7s
SAATT Saattut 57.75 337 *i*P **P** **22 56 56.2 +0.6**
SAATT IAmb IAmb 22 57 03.9
comp=Z,138nm,1.1s
KULLO Kullorsuaq 57.77 342 *i*P **P** **22 56 57.4 +1.7**
KULLO IAmb IAmb 22 57 02.3
comp=Z,41nm,0.9s
BNX BinXian 57.85 55 ⇑P **P** **22 56 57.3 +0.5**
BNX S **S** **23 04 58.7 +2.8**
BNX pmax pmax
comp=Z,36nm,1.0s
BNX pmax pmax
comp=Z,1µm,5.0s
BNX LR LR
comp=Z,29µm,20.9s
BNX LR LR
comp=Z,13µm,21.3s
BNX LR LR
comp=Z,16µm,15.8s
NUUG Nuugaatsiaq 57.94 338 *i*P **P** **22 56 58.6 +1.7**
NUUG IAmb IAmb 22 56 59.1
comp=Z,70nm,1.2s
KULM Kulim 58.06 110 P **P** **22 56 56.8 -1.8**
KULM IAMs_20 IAMs_20 23 24 58.6
comp=Z,8µm,21.0s
KULM Kulim 58.06 110 P **P** **22 56 58.3 -0.3**
KULM Kulim 58.06 110 ⇓P **P** **22 56 57.6 -1.1**
ILULI Ilulissat 58.19 335 P **P** **22 56 56.0 -2.8**
ILULI IAmb IAmb 22 57 08.7
comp=Z,261nm,1.7s
ILULI IAMs_20 IAMs_20 23 21 41.8
comp=Z,8µm,22.0s
ILULI Ilulissat 58.19 335 P **P** **22 56 56.0 -2.8**
ILULI pmax pmax
comp=Z,261nm,1.7s
ILULI MLR MLR
comp=Z,8µm,22.0s
PSI Prapat 58.46 114 P **P** **22 57 00.1 -1.5**
PSI Prapat 58.46 114 P **P** **22 57 00.0 -1.5**
GSI Gunungsitoli 58.52 116 P **P** **22 57 01.5 -0.4**
GSI Gunungsitoli 58.52 116 P **P** **22 57 01.4 -0.4**
comp=Z,2µmcomp=Z,243nm,1.3s
GSI Gunungsitoli 58.52 116 ⇑P **P** **22 57 01.1 -0.8**
RPSI Rantau Prapat 58.53 114 IAMs_20 IAMs_20 23 26 50.3
comp=Z,8µm,19.0s
HKPS Hong Kong Po S 58.63 85 P **P** **22 57 00.3 -2.3**
HKPS IAMs_20 IAMs_20 23 26 42.1
comp=Z,7µm,19.0s
IPM Ipoh 58.88 110 IAMs_20 IAMs_20 23 25 31.3
comp=Z,7µm,21.0s
IPM Ipoh 58.88 110 P **P** **22 57 03.0 -1.4**
IPM Ipoh 58.88 110 ⇑P **P** **22 57 02.7 -1.7**
SFJD Kangerlussuaq 58.90 333 P **P** **22 57 03.4 -0.3**
SFJD Kangerlussuaq 58.90 333 LR LR 23 22 20.3
comp=Z,8µm,21.0s,baz=63,slow=36
SFJD Kangerlussuaq 58.90 333 P **P** **22 57 03.4 -0.3**
SFJD pmax pmax
comp=Z,56nm,1.1s
SFJD Kangerlussuaq 58.90 333 *i*P **P** **22 57 04.7 +1.0**
SFJD IAmb IAmb 22 57 08.8
comp=Z,94nm,1.2s
KSANE Kasane 59.09 205 P **P** **22 57 06.1 +0.3**
KSANE IAmb IAmb 22 57 14.8
comp=Z,99nm,1.4s
KSANE Kasane 59.09 205 *i*P **P** **22 57 07.4 +1.7**
NRS Narsarsuaq 59.10 326 *i*P **P** **22 57 05.8 +0.6**
NRS IAmb IAmb 22 57 11.1
comp=Z,596nm,1.6s
VOI Vohitsoka 59.32 181 P **P** **22 57 06.7 -0.6**
TULEG Thule 59.33 346 P **P** **22 57 05.9 -0.7**
TULEG IAmb IAmb 22 57 26.6
comp=Z,102nm,1.1s
TULEG IAMs_20 IAMs_20 23 23 08.2
comp=Z,8µm,19.0s
TULEG Thule 59.33 346 *i*P **P** **22 57 07.7 +1.1**
TULEG IAmb IAmb 22 57 09.1
comp=Z,172nm,1.4s
PYAG Pyongyang 59.49 62 P **P** **22 57 07.6 -0.6**
PYAG S **S** **23 05 13.1 -4.2**
PYAG AmB
comp=Z,2µm,2.4s
MDJ Mudanjiang 59.72 55 P **P** **22 57 09.1 -0.7**
MDJ IAmb IAmb 22 57 17.2
comp=Z,258nm,2.0s
MDJ Mudanjiang 59.72 55 P **P** **22 57 09.3 -0.5**
MDJ PP **PP** **22 59 26.1 +4.8**
MDJ S **S** **23 05 17.8 -2.4**
MDJ pmax pmax
comp=Z,55nm,2.1s
MDJ pmax pmax
comp=Z,1µm,4.8s
MDJ LR LR
comp=Z,32µm,17.2s
MDJ LR LR
comp=Z,16µm,19.9s
MDJ LR LR
comp=Z,22µm,19.9s
MDJ Mudanjiang 59.72 55 P **P** **22 57 11.7 +1.9**
SSE Sheshan 59.74 72 P **P** **22 57 09.1 -1.0**
SSE S **S** **23 05 20.5 -0.3**
SSE pmax pmax
comp=Z,50nm,1.1s
SSE pmax pmax
comp=Z,130nm,3.6s
SSE LR LR
comp=Z,5µm,19.1s
SSE LR LR
comp=Z,1µm,19.2s
HJU Haeju 59.91 63 P **P** **22 57 09.6 -1.6**
HJU S **S** **23 05 18.4 -4.3**
HJU AmB
comp=Z,2µm,2.2s
HJU AMS AMS
comp=Z,6µm,10.6s
DLV Lat 59.91 98 P **P** **22 57 11.3 -0.5**
DLV Lat 59.91 98 P **P** **22 57 12.1 +0.4**
PBSI Pulau Batu 59.97 116 P **P** **22 57 11.8 -0.1**
comp=Z,198nm,1.2s
IVI Ivigtut 60.30 326 P **P** **22 57 13.4 0.0**
IVI IAMs_20 IAMs_20 23 22 16.0
comp=Z,8µm,18.0s
IVI Ivigtut 60.30 326 *i*P **P** **22 57 13.5 0.0**
IVI IAmb IAmb 22 57 19.7
comp=Z,309nm,1.4s
MNSI Mandailing Nat 60.31 115 P **P** **22 57 12.9 -1.3**
comp=Z,6µmcomp=Z,110nm,0.9s
HHU Hamhung 60.34 61 P **P** **22 57 12.3 -1.8**
HHU AmB
comp=Z,420nm,2.0s
HHU AMS AMS
comp=Z,6µm,9.9s
NUUK Nuuk 60.51 330 *i*P **P** **22 57 13.5 -1.3**
NUUK IAmb IAmb 22 57 20.6
comp=Z,366nm,1.5s
BBTS Babate 60.69 266 LR LR 23 27 34.2
comp=Z,8µm,19.2s,baz=261,slow=40
INCN Inchon 60.80 64 P **P** **22 57 17.2 -0.2**
INCN Inchon 60.80 64 P **P** **22 57 18.3 +1.0**
INCN Inchon 60.80 64 P **P** **22 57 17.2 -0.2**
INCN pmax pmax
comp=Z,163nm,1.2s
MBO M'Bour 61.17 266 P **P** **22 57 20.3 +0.2**
GRNR Gornyy 61.31 46⇓*i*P **P** **22 57 21.4 +0.8**
GRNR pmax pmax
comp=Z,40nm,1.2s
SISI Saibi 61.44 117 P **P** **22 57 21.8 -0.1**
comp=Z,3µmcomp=Z,229nm,1.4s
USRK Ussuriysk Ar. 61.45 55 P **P** **22 57 21.8 +0.2**
comp=Z,77nm,1.0s,baz=283,slow=5.0,SNR=65
comp=Z,77nm,1.0s
USRK Ussuriysk Ar. 61.45 55 *eP* **P** **22 57 21.8 +0.2**
USRK pmax pmax
comp=Z,81nm,1.1s
BROLN Tlhalogang 61.51 201 *i*P **P** **22 57 22.9 +0.6**
PHDHD Phuduhudu 61.53 205 P **P** **22 57 22.6 +0.2**
PHDHD IAmb IAmb 22 57 30.8
comp=Z,156nm,1.6s
PHDHD Phuduhudu 61.53 205 *i*P **P** **22 57 23.4 +1.0**
GMARE Gumare 61.61 207 P **P** **22 57 22.6 -0.3**
MSHR Mys Shultsa 61.62 57*ceP* **P** **22 57 22.9 +0.1**
MSHR pmax pmax
comp=Z,137nm,2.5s
MSHR MLR MLR
comp=Z,17µm,23.0s
KS19 Wonju Array Si 61.66 63 P **P** **22 57 22.9 -0.3**
BKNI Bangkinang 61.69 114 P **P** **22 57 19.9 -3.6**
BKNI Bangkinang 61.69 114 P **P** **22 57 21.4 -2.2**
BKNI IAMs_20 IAMs_20 23 28 40.0
comp=Z,7µm,20.0s
BKNI Bangkinang 61.69 114 P **P** **22 57 21.9 -1.7**
BKNI Bangkinang 61.69 114 P **P** **22 57 22.2 -1.4**
KSAR Wonju Array Be 61.70 63 P **P** **22 57 23.1 -0.3**
KSAR Wonju Array Be 61.70 63 P **P** **22 57 23.1 -0.3**
KSRS Korea Array 61.73 63 P **P** **22 57 24.2 +0.7**
comp=Z,72nm,1.0s,baz=285,slow=6.7,SNR=93
KSRS S **S** **23 05 45.3 -0.6**
comp=Z,0.7nm,0.5s,baz=313,slow=18,SNR=1.4
KSRS LR LR 23 28 14.2
comp=Z,2921µm,18.2s,baz=290,slow=40
comp=Z,72nm,1.0s
KSRS Korea Array 61.73 63 *eP* **P** **22 57 24.2 +0.7**
KSRS pmax pmax
comp=Z,74nm,1.0s
PPI Padang Panjang 61.76 115 P **P** **22 57 23.7 -0.4**
comp=Z,2µmcomp=Z,114nm,1.9s
TJN Taejon 61.82 64 P **P** **22 57 24.4 +0.2**
TJN Taejon 61.82 64 P **P** **22 57 24.0 -0.2**
VLA Vladivostok 61.86 56 *i*P **P** **22 57 23.7 -0.7**
VLA pmax pmax
comp=Z,74nm,1.0s
QNGWA Qangwa 62.10 208 IAmb IAmb 22 57 35.2
comp=Z,165nm,1.6s
QNGWA Qangwa 62.10 208 *i*P **P** **22 57 27.0 +0.7**
PDSI Padang 62.12 115 P **P** **22 57 24.9 -1.6**
comp=Z,2µmcomp=Z,179nm,1.2s
FOMA Nahampoana Res 62.38 181 P **P** **22 57 28.3 +0.5**
FOMA IAmb IAmb 22 58 10.9
comp=Z,63nm,1.2s
MYKOM Kota Tinggi 62.76 111 P **P** **22 57 29.1 -1.6**
MYKOM IAmb IAmb 22 57 36.8
comp=Z,117nm,1.1s
MYKOM Kota Tinggi 62.76 111 P **P** **22 57 29.5 -1.3**
MREMI Moremi 62.87 201 P **P** **22 57 31.3 0.0**
MREMI Moremi 62.87 201 *i*P **P** **22 57 31.9 +0.6**
KHWEE KHWEE 62.88 203 P **P** **22 57 31.7 +0.2**
KHWEE KHWEE 62.88 203 *i*P **P** **22 57 32.2 +0.8**
BTDF Bukit Timah Da 62.99 111 P **P** **22 57 31.8 -0.5**
TATO Taipei 63.00 78 P **P** **22 57 31.1 -1.1**
YHNB Yeheng 63.07 79 P **P** **22 57 32.1 -0.7**
YHNB Yeheng 63.07 79 P **P** **22 57 34.4 +1.6**
PPSI Pulau Pagai 63.09 117 P **P** **22 57 34.6 +1.6**
comp=Z,27µmcomp=Z,3µmcomp=Z,250nm,1.5s
SSLB Suanglung 63.20 80 P **P** **22 57 33.3 -0.4**
SSLB Suanglung 63.20 80 P **P** **22 57 35.6 +1.9**
TPUB Ta-pu 63.20 80 P **P** **22 57 33.8 +0.2**
TPUB Ta-pu 63.20 80 P **P** **22 57 35.8 +2.1**
TSUM Tsumeb 63.23 212 P **P** **22 57 34.4 +0.5**
TSUM Tsumeb 63.23 212 P **P** **22 57 33.5 -0.4**
comp=Z,15nm,1.1s,baz=72,slow=5.5,SNR=5.1
TSUM S **S** **23 06 04.0 -1.4**
comp=Z,2.1nm,0.7s,baz=45,slow=6.8,SNR=1.8
TSUM LR LR 23 23 46.1
comp=Z,7µm,18.2s,baz=30,slow=35
comp=Z,15nm,1.1s
SEY Seymchan 63.35 30 LR LR 23 30 47.3
comp=Z,12µm,18.7s,baz=295,slow=41
SEY Seymchan 63.35 30 *eP* **P** **22 57 32.5 -1.5**
SEY pmax pmax
comp=Z,153nm,1.5s
NACB Ninganchiao 63.49 79 P **P** **22 57 34.4 -1.2**
POIN Pond Inlet 63.64 344 P **P** **22 57 36.0 +0.2**
POIN IAmb IAmb 22 57 58.4
comp=Z,107nm,1.6s
KRJI Kerinci 63.66 116 P **P** **22 57 36.2 -0.6**
YULB Yu-li 63.67 80 P **P** **22 57 35.4 -1.3**
YULB IAMs_20 IAMs_20 23 29 51.3
comp=Z,6µm,18.0s
YULB Yu-li 63.67 80 P **P** **22 57 39.3 +2.5**
GRTLG Ghanzi 63.76 207 P **P** **22 57 37.8 +0.5**
GRTLG IAmb IAmb 22 57 46.5
comp=Z,148nm,1.4s
GRTLG Ghanzi 63.76 207 *i*P **P** **22 57 38.5 +1.2**
TWG Pinlang 63.80 81 P **P** **22 57 36.7 -0.9**
TWGBT Beinan 63.80 81 P **P** **22 57 39.4 +1.8**
TPRI Tanjung Pinang 63.84 111 P **P** **22 57 37.6 -0.3**
comp=Z,164nm,1.3s
TEY Ternei 64.01 52⇑*eP* **P** **22 57 37.8 -0.8**
TEY *e* 23 06 14.6
TEY pmax pmax
comp=Z,20nm,1.4s
LPHEP Lephephe 64.08 202 P **P** **22 57 39.5 +0.1**
LPHEP Lephephe 64.08 202 *i*P **P** **22 57 40.2 +0.9**
JTU Tsushima 64.17 65⇑P **P** **22 57 41.1 +1.3**
MA2 Magadan 64.42 33 P **P** **22 57 41.5 +0.4**
MA2 Magadan 64.42 33 LR LR 23 29 26.2
comp=Z,10µm,20.4s,baz=297,slow=40
MA2 Magadan 64.42 33 P **P** **22 57 43.7 +2.6**
MA2 Magadan 64.42 33*ceP* **P** **22 57 42.9 +1.8**
MA2 pmax pmax
comp=Z,355nm,2.5s
MA2 MLR MLR
comp=Z,9µm,18.0s
KDWAN Kaudwane 64.47 203 P **P** **22 57 42.0 +0.1**
KDWAN Kaudwane 64.47 203 *i*P **P** **22 57 42.8 +0.9**
KGCAE Kacgae 64.78 206 P **P** **22 57 44.4 +0.4**
KGCAE IAmb IAmb 22 57 52.8
comp=Z,138nm,1.2s
KGCAE Kacgae 64.78 206 *i*P **P** **22 57 44.9 +0.9**
TYV Tymovskoe 64.78 44 *eP* **P** **22 57 45.7 +2.1**
TYV *eS* **S** **23 06 27.6 +3.8**
TYV pmax pmax
comp=Z,94nm,1.3s
TYV pmax pmax
comp=Z,1µm,4.6s
TYV smax smax
comp=N,2µm,8.2s
TYV smax smax
comp=E,1µm,8.2s
TYV MLR MLR
comp=Z,14µm,15.0s
TYV MLR MLR
comp=E,11µm,14.0s
DSRI Dabo 64.82 112 P **P** **22 57 43.5 -0.8**
comp=E,3µmcomp=E,182nm,1.4s
MASI Maura Aman, Be 64.94 116 P **P** **22 57 44.1 -1.1**
BILL Bilibino 65.10 21 P **P** **22 57 45.8 +0.4**
BILL IAMs_20 IAMs_20 23 29 07.1
comp=Z,6µm,22.0s
BILL Bilibino 65.10 21*ceP* **P** **22 57 45.8 +0.4**
BILL pmax pmax
comp=Z,189nm,1.3s
BILL MLR MLR
comp=Z,6µm,22.0s
RES Resolute Bay 65.13 350 P **P** **22 57 46.1 +0.7**
RES IAmb IAmb 22 57 54.1
comp=Z,142nm,1.7s
RES Resolute Bay 65.13 350 P **P** **22 57 46.1 +0.7**
RES pmax pmax
comp=Z,142nm,1.7s
RES Resolute Bay 65.13 350⇑P **P** **22 57 46.1 +0.7**
UGL Uglegorsk 65.33 46 *eP* P 22 57 54.1 +6.9
UGL *eS* **S** **23 06 33.7 +3.2**
UGL smax smax
comp=E,4µm,15.0s
UGL smax smax
comp=N,3µm,11.0s
KSI Kapahiang 65.55 116 P **P** **22 57 48.2 -0.9**
KOOLE Kule 65.63 208 P **P** **22 57 49.5 0.0**
KOOLE IAmb IAmb 22 57 58.3
comp=Z,86nm,1.1s
KOOLE Kule 65.63 208 *i*P **P** **22 57 50.3 +0.8**
LBTB Lobatse 65.72 202 P **P** **22 57 49.8 -0.1**
LBTB IAmb IAmb 22 57 58.1
comp=Z,115nm,1.2s
LBTB Lobatse 65.72 202 P **P** **22 57 50.7 +0.7**
comp=Z,53nm,0.9s,baz=9.8,slow=6.5,SNR=36
LBTB S **S** **23 06 35.6 -0.2**
comp=Z,4.8nm,1.2s,baz=65,slow=14,SNR=1.7
LBTB LR LR 23 26 15.2
comp=Z,9µm,19.6s,baz=18,slow=36
comp=Z,53nm,0.9s
LBTB Lobatse 65.72 202 ⇓P **P** **22 57 51.0 +1.0**
SKOMA Sekoma 65.75 204 *i*P **P** **22 57 51.0 +0.8**
JNU Nakatsue 65.93 66 P **P** **22 57 51.4 -0.1**
JNU Nakatsue 65.93 66 LR LR 23 31 14.4
comp=Z,7µm,18.7s,baz=306,slow=40
JNU Nakatsue 65.93 66 P **P** **22 57 52.8 +1.4**
JNU Nakatsue 65.93 66⇑P **P** **22 57 52.4 +0.9**
SACV Santiago Islan 66.12 271 P **P** **22 57 52.1 -0.7**
LKGWB Lokgwabe 66.29 206 P **P** **22 57 52.5 -1.2**
MNAI Manna 66.30 116 P **P** **22 57 53.4 -0.5**
MNAI Manna 66.30 116 P **P** **22 57 54.9 +1.0**
MNAI Manna 66.30 116 P P 22 57 58.8 +4.9
comp=Z,4µmcomp=Z,308nm,1.5s
LHSI Lahat 66.33 115 P **P** **22 57 52.8 -1.3**
comp=Z,2µmcomp=Z,139nm,1.1s
POGA Pongola 66.41 195 P **P** **22 57 53.6 -0.6**
WIN Windhoek 66.44 211 P **P** **22 57 55.2 +0.4**
WIN Windhoek 66.44 211 P **P** **22 57 55.2 +0.4**
WIN pmax pmax
comp=Z,249nm,1.8s
WIN MLR MLR
comp=Z,12µm,18.0s
PMBI Palembang 66.62 114 P **P** **22 57 54.8 -1.1**
MAKGR Makgori 66.70 202 P **P** **22 57 56.3 0.0**
MAKGR IAmb IAmb 22 58 04.0
comp=Z,115nm,1.1s
MAKGR Makgori 66.70 202 *i*P **P** **22 57 56.9 +0.6**
YSS Yuzhno-Sakhali 66.80 48 P **P** **22 57 56.8 +0.1**
YSS Yuzhno-Sakhali 66.80 48 P **P** **22 57 58.0 +1.3**
YSS Yuzhno-Sakhali 66.80 48 *eP* **P** **22 57 58.0 +1.3**
YSS *eS* **S** **23 06 49.4 +0.9**
YSS pmax pmax
comp=Z,50nm,1.0s
YSS pmax pmax
comp=Z,700nm,6.4s
ILON Igloolik, Nuna 66.93 343 P **P** **22 57 56.5 -0.6**
ILON IAmb IAmb 22 57 59.0
comp=Z,87nm,1.3s
FRB Frobisher Bay 66.97 334 LR LR 23 27 15.7
comp=Z,5µm,20.7s,baz=54,slow=36
FRB Frobisher Bay 66.97 334 P **P** **22 57 58.0 +0.5**
FRB Frobisher Bay 66.97 334 ⇓P **P** **22 57 58.3 +0.8**
PHPEN Phepeng 66.99 204 P **P** **22 57 58.0 -0.2**
PHPEN IAmb IAmb 22 58 06.4
comp=Z,56nm,0.9s
PHPEN Phepeng 66.99 204 *i*P **P** **22 57 58.8 +0.6**
JOW Kunigami 67.24 73 P **P** **22 57 58.9 -0.9**
JOW IAmb IAmb 22 58 05.3
comp=Z,110nm,1.1s
JOW Kunigami 67.24 73 P **P** **22 58 02.1 +2.3**
comp=Z,34nm,0.6s,baz=312,slow=5.3,SNR=5.5
comp=Z,34nm,0.6s
JOW Kunigami 67.24 73 P **P** **22 58 01.3 +1.5**
MDSI Maura Dua 67.26 115 P **P** **22 57 57.0 -3.0**
comp=Z,1µmcomp=Z,101nm,1.1s
LWLI Liwa 67.54 116 P **P** **22 58 00.5 -1.4**
JMN Monobe 67.78 64 P **P** **22 58 02.4 -0.8**
JMN Monobe 67.78 64 P **P** **22 58 04.4 +1.2**
KSM Kuching 67.83 106 P **P** **22 58 03.1 -0.5**
KSM IAmb IAmb 22 58 11.5
comp=Z,82nm,1.0s
KSM Kuching 67.83 106 P **P** **22 58 03.3 -0.3**
ASAJ Asahikawa 68.18 51 LR LR 23 31 14.9
comp=Z,6µm,18.8s,baz=300,slow=39
ASAJ Asahikawa 68.18 51 P **P** **22 58 05.3 -0.2**
ASAJ pmax pmax
comp=Z,448nm,2.0s
JKA Kamikawa-asahi 68.18 51 P **P** **22 58 05.3 -0.1**

KASI Kota Agung 68.20 116 P P 22 58 04.3 -1.7
comp=Z,2µmcomp=Z,223nm,1.1s
TGY Tagaytay City 68.50 89 LR LR 23 31 33.8
comp=Z,4µm,21.7s,baz=335,slow=39
TPI Tanjungpandan 68.61 111 P P 22 58 07.8 -0.7
comp=Z,2µmcomp=Z,141nm,1.2s
SBUM Sibu 68.67 104 P P 22 58 08.6 -0.3
SBUM Sibu 68.67 104 P P 22 58 09.6 +0.7
JTM Tenmabayashi 68.97 54 P P 22 58 09.9 -0.6
INU Inuyama 69.14 61 P P 22 58 11.4 -0.2
INU IAmb IAmb 22 58 17.2
comp=Z,93nm,1.2s
INU IAMs_20 IAMs_20 23 32 25.9
comp=Z,6µm,19.0s
INU Inuyama 69.14 61 P P 22 58 12.1 +0.5
BOSA Boshof 69.21 201 P P 22 58 12.0 0.0
BOSA IAmb IAmb 22 58 19.3
comp=Z,140nm,1.2s
BOSA Boshof 69.21 201 P P 22 58 12.3 +0.3
comp=Z,41nm,0.7s,baz=29,slow=6.0,SNR=38
BOSA S S 23 07 23.2 +5.5
comp=Z,1.8nm,0.9s,baz=352,slow=20,SNR=1.2
BOSA LR LR 23 30 14.5
comp=Z,9µm,18.9s,baz=24,slow=37
comp=Z,41nm,0.7s
JGF Kuroka 69.24 61 P P 22 58 11.5 -0.7
JGF IAmb IAmb 22 58 22.7
comp=Z,227nm,1.8s
JGF Kuroka 69.24 61 P P 22 58 12.4 +0.1
MJB9 Matsu-Tunnel 69.32 59 P P 22 58 12.9 +0.1
MAJO Matsushiro 69.32 59 P P 22 58 12.1 -0.7
MAJO Matsushiro 69.32 59 P P 22 58 12.6 -0.2
MAJO Matsushiro 69.32 59 P P 22 58 12.1 -0.7
MAJO pmax pmax
comp=Z,546nm,2.0s
MAJO MLR MLR
comp=Z,10µm,18.0s
MJAR Matsushiro Arr 69.33 59 P P 22 58 12.0 -0.8
MJAR Matsushiro Arr 69.33 59 P P 22 58 13.2 +0.4
comp=Z,82nm,1.2s,baz=302,slow=6.8,SNR=61
MJAR S S 23 07 20.4 +1.3
comp=Z,1.0nm,0.3s,baz=269,slow=19,SNR=1.8
MJAR LR LR 23 32 01.0
comp=Z,9µm,19.9s,baz=305,slow=39
comp=Z,82nm,1.2s
MJA0 Matsu Arr-Jizo 69.35 59 eP P 22 58 13.1 +0.1
MJA0 pmax pmax
comp=Z,86nm,1.2s
ERM Erimo 69.64 52 P P 22 58 16.9 +2.3
A21K Barrow 69.90 8 P P 22 58 16.5 +0.9
baz=340
YUK Yuzh-Kuril'sk 70.20 49 eP P 22 58 17.8 -0.2
YUK e 22 58 40.2
YUK 23 00 53.2
YUK ePPP PPP 23 02 35.4
YUK i S S 23 07 29.3 +0.2
YUK eSS SS 23 11 57.2 -1.2
YUK pmax pmax
comp=Z,550nm,1.2s
YUK pmax pmax
comp=N,506nm,1.0s
YUK pmax pmax
comp=E,526nm,1.0s
YUK MLR MLR
comp=Z,4µm,15.0s
YUK MLR MLR
comp=N,3µm,13.0s
YUK MLR MLR
comp=E,7µm,14.0s
JSG Sagara 70.31 61 P P 22 58 18.3 -0.5
JMM Marumori 70.36 57 P P 22 58 18.2 -0.9
JMM IAmb IAmb 22 58 24.3
comp=Z,117nm,1.1s
JMM Marumori 70.36 57 P P 22 58 19.1 0.0
A22K Sinclair Lake 70.38 8 P P 22 58 19.7 +1.1
baz=341
A22K S S 23 07 30.7 +0.5
baz=341
A19K Wainwright 70.39 10 P P 22 58 19.8 +1.1
baz=336
A19K S S 23 07 33.0 +2.6
baz=336
A36M Sachs Harbour 70.46 358 P P 22 58 19.4 +0.4
A36M IAmb IAmb 22 58 26.3
comp=Z,108nm,0.9s
A36M Sachs Harbour 70.46 358 P P 22 58 20.2 +1.1
baz=6.0
A36M S S 23 07 33.8 +2.6
baz=6.0
DBJI Dramaga 70.53 115 P P 22 58 22.3 +1.9
comp=Z,89nm,1.4s
KUQ Kuujjuuaa 70.57 330 P P 22 58 20.6 +0.6
KUQ IAmb IAmb 22 58 23.8
comp=Z,73nm,1.0s
SKJI Sukabumi 70.70 116 P P 22 58 23.5 +2.1
KUR Kuril'sk 70.72 47 P P 22 58 20.7 -0.4
KUR S S 23 07 35.8 +0.7
DRLN Deer Lake 70.97 318 P P 22 58 22.1 -0.4
B18K Kokolik River 71.06 11 P P 22 58 24.0 +1.2
baz=336
B18K S S 23 07 39.9 +1.6
baz=336
B20K Meade River 71.07 9 IAMs_20 IAMs_20 23 30 29.8
comp=Z,5µm,22.0s
B20K Meade River 71.07 9 P P 22 58 23.6 +0.8
baz=340
B20K S S 23 07 40.7 +2.3
baz=340
B22K Teshekpuk Lake 71.17 7 P P 22 58 24.1 +0.7
B22K IAmb IAmb 22 58 30.8
comp=Z,117nm,0.9s
B22K IAMs_20 IAMs_20 23 35 27.7
comp=Z,7µm,21.0s
B22K Teshekpuk Lake 71.17 7 P P 22 58 24.1 +0.7
baz=343
B22K S S 23 07 41.8 +2.3
baz=343
PEA0B Petropavlovsk- 71.28 37 P P 22 58 22.9 -1.5
PEA0B IAmb IAmb 22 58 38.3
comp=Z,160nm,1.4s
PEA0B Petropavlovsk- 71.28 37 ceP P 22 58 22.9 -1.5
PETK Petropavlovsk- 71.28 37 P P 22 58 22.3 -2.1
PETK Petropavlovsk- 71.28 37 P P 22 58 23.8 -0.7
comp=Z,42nm,1.1s,baz=2.5,slow=3.4,SNR=12
PETK PP PP 23 00 56.4 -5.6
comp=Z,9.8nm,1.0s,baz=41,slow=4.7,SNR=3.7
PETK S S 23 07 41.5 0.0
comp=Z,4.2nm,1.0s,baz=246,slow=6.3,SNR=1.9
PETK LR LR 23 33 16.6
comp=Z,10µm,21.6s,baz=303,slow=39
comp=Z,42nm,1.1s
CNJI Cibinong 71.32 115 P P 22 58 23.9 -1.2
comp=Z,2µmcomp=Z,123nm,1.2s
LEM Lembang 71.34 115 P P 22 58 26.8 +1.3
comp=Z,13nm,0.3s,baz=343,slow=6.1,SNR=4.3
LEM S S 23 07 39.8 -3.6
comp=Z,10.0nm,0.4s,baz=341,slow=21,SNR=1.5
LEM LR LR 23 32 41.8
comp=Z,5µm,19.3s,baz=301,slow=38
comp=Z,13nm,0.3s
C16K Lisburne Hills 71.49 12 P P 22 58 25.6 +0.2
C16K IAmb IAmb 22 58 27.9
comp=Z,168nm,1.4s
C16K IAMs_20 IAMs_20 23 33 47.0
comp=Z,5µm,20.0s
C16K Lisburne Hills 71.49 12 P P 22 58 25.7 +0.3
baz=333,SNR=5.4
C16K S S 23 07 45.0 +1.7
baz=333
C19K Lookout Ridge 71.61 10 P P 22 58 26.6 +0.4
C19K IAMs_20 IAMs_20 23 34 36.0
comp=Z,6µm,20.0s
C19K Lookout Ridge 71.61 10 P P 22 58 27.2 +1.0
baz=338
C19K S S 23 07 47.5 +2.7
baz=338
C17K DeLong Mountai 71.66 11 P P 22 58 27.5 +1.0
baz=335,SNR=14
C17K S S 23 07 47.8 +2.5
baz=335
B21K Ikpikpuk River 71.73 8 P P 22 58 26.8 0.0
B21K IAmb IAmb 22 58 30.2
comp=Z,118nm,1.1s
B21K IAMs_20 IAMs_20 23 35 59.4
comp=Z,7µm,20.0s
B21K Ikpikpuk River 71.73 8 P P 22 58 27.9 +1.1
baz=342
B21K S S 23 07 46.7 +0.7
baz=342
PET Petropavlovsk 71.78 36 eP P 22 58 22.9 -4.5
PET eS S 23 07 38.5 -8.6
BBJI Bungbulang 71.80 115 P P 22 58 27.1 -1.0
C18K Utukok River 71.80 11 P P 22 58 27.9 +0.5
C18K IAmb IAmb 22 58 30.4
comp=Z,144nm,1.2s
C18K IAMs_20 IAMs_20 23 34 51.3
comp=Z,5µm,19.0s
C18K Utukok River 71.80 11 P P 22 58 28.4 +1.1
baz=336,SNR=23
C18K S S 23 07 47.4 +0.3
baz=336
MYLDM Lahad Datu 71.86 98 P P 22 58 29.0 +0.5
MYLDM IAmb IAmb 22 58 37.1
comp=Z,230nm,1.6s
MYLDM Lahad Datu 71.86 98 P P 22 58 30.4 +1.9
C23K Itkillik River 71.92 7 P P 22 58 28.8 +0.8
C23K IAmb IAmb 22 58 35.6
comp=Z,150nm,1.2s
C23K IAMs_20 IAMs_20 23 33 40.6
comp=Z,5µm,22.0s
C23K Itkillik River 71.92 7 P P 22 58 29.1 +1.1
baz=345
C23K S S 23 07 46.4 -1.9
baz=345
SKR Severo-Kuril's 72.00 39 eP P 22 58 19.0 -10
SKR e 23 01 16.3
SKR pmax pmax
comp=Z,700nm,4.5s
SKR MLR MLR
comp=Z,5µm,19.0s
SCHQ Schefferville 72.05 326 P P 22 58 29.3 +0.3
SCHQ Schefferville 72.05 326 P P 22 58 29.3 +0.3
comp=Z,52nm,1.0s,baz=37,slow=6.7,SNR=17
SCHQ S S 23 07 47.6 -2.6
comp=Z,2.7nm,0.8s,baz=4.0,slow=18,SNR=1.2
SCHQ LR LR 23 29 59.3
comp=Z,1µm,18.1s,baz=56,slow=36
comp=Z,52nm,1.0s
RDOG Red Dog Mine 72.08 12 P P 22 58 29.1 +0.1
RDOG IAmb IAmb 22 58 31.6
comp=Z,114nm,1.2s
RDOG Red Dog Mine 72.08 12 P P 22 58 29.8 +0.8
baz=335,SNR=14
RDOG S S 23 07 50.1 -0.1
baz=335
C21K Knifeblade Rid 72.16 8 P P 22 58 30.5 +1.0
baz=342
C21K S S 23 07 52.5 +1.5
baz=342
C24K Franklin Bluff 72.20 6 P P 22 58 30.3 +0.7
C24K IAmb IAmb 22 58 37.1
comp=Z,149nm,1.1s
C24K IAMs_20 IAMs_20 23 33 35.6
comp=Z,5µm,21.0s
C24K Franklin Bluff 72.20 6 P P 22 58 30.6 +1.0
baz=346
C24K S S 23 07 54.1 +2.6
baz=346
C26K Camden Bay 72.28 4 P P 22 58 30.8 +0.6
baz=350
C26K S S 23 07 54.3 +2.0
baz=350
D20K Etivluk River 72.36 9 P P 22 58 31.4 +0.7
D20K IAmb IAmb 22 58 37.9
comp=Z,143nm,1.3s
D20K IAMs_20 IAMs_20 23 35 22.1
comp=Z,6µm,22.0s
D20K Etivluk River 72.36 9 P P 22 58 31.6 +0.9
baz=340
D20K S S 23 07 55.3 +1.9
baz=340
D19K Kuna River 72.37 10 P P 22 58 31.3 +0.5
D19K IAmb IAmb 22 58 33.8
comp=Z,194nm,1.2s
D19K Kuna River 72.37 10 P P 22 58 31.8 +1.0
baz=339
D19K S S 23 07 54.6 +1.0
baz=339
D17K Noatak River 72.38 12 P P 22 58 31.5 +0.7
baz=335,SNR=32
D17K S S 23 07 55.1 +1.6
baz=335
KPJI Karang Pucung 72.63 114 P P 22 58 31.7 -1.3
C27K Jago River 72.64 4 P P 22 58 33.0 +0.8
C27K IAmb IAmb 22 58 39.8
comp=Z,86nm,1.1s
C27K IAMs_20 IAMs_20 23 34 49.1
comp=Z,5µm,20.0s
C27K Jago River 72.64 4 P P 22 58 33.4 +1.1
baz=351
C27K S S 23 07 59.4 +2.9
baz=351
D22K Ayikyak River 72.65 8 P P 22 58 33.0 +0.6
D22K IAmb IAmb 22 58 39.7
comp=Z,68nm,0.9s
D22K IAMs_20 IAMs_20 23 36 16.8
comp=Z,5µm,20.0s
D22K Ayikyak River 72.65 8 P P 22 58 33.2 +0.8
baz=343,SNR=21
D22K S S 23 07 58.8 +2.1
baz=343
D24K Happy Valley 72.75 6 P P 22 58 33.6 +0.6
D24K IAmb IAmb 22 58 41.2
comp=Z,252nm,1.9s
D24K IAMs_20 IAMs_20 23 34 05.2
comp=Z,6µm,21.0s
D24K Happy Valley 72.75 6 P P 22 58 34.0 +1.1
baz=346
D24K S S 23 08 00.1 +2.4
baz=346
D23K Nanushuk River 72.76 7 P P 22 58 33.5 +0.5
D23K IAmb IAmb 22 58 40.4
comp=Z,58nm,0.9s
D23K Nanushuk River 72.76 7 P P 22 58 34.0 +0.9
baz=345
D23K S S 23 08 01.9 +4.0
baz=345
D25K Kavik River 72.77 5 P P 22 58 33.1 0.0
D25K Kavik River 72.77 5 P P 22 58 33.9 +0.7
baz=348
D25K S S 23 08 00.7 +2.6
baz=348
E20K Nigu River 72.84 9 P P 22 58 34.4 +0.7
baz=340
E20K S S 23 07 59.4 +0.4
baz=340
E21K Killik River 72.93 8 P P 22 58 34.6 +0.5
baz=342
E21K S S 23 08 00.4 +0.5
baz=342
E18K Tukpahlearik C 73.02 11 P P 22 58 34.9 +0.3
E18K IAmb IAmb 22 58 41.5
comp=Z,75nm,0.9s
E18K IAMs_20 IAMs_20 23 34 30.6
comp=Z,5µm,21.0s
E18K Tukpahlearik C 73.02 11 P P 22 58 35.3 +0.7
baz=337,SNR=18
E18K S S 23 08 02.0 +1.0
baz=337
C36M Paulatuk 73.05 357 P P 22 58 35.4 +0.7
baz=6.9
C36M S S 23 08 01.9 +0.8
baz=6.9
SHEL Horse Pasture 73.13 234 P P 22 58 35.2 -0.8
SHEL Horse Pasture 73.13 234 IAMs_20 IAMs_20 23 27 47.5
comp=Z,6µm,21.0s
SHEL Horse Pasture 73.13 234 P P 22 58 35.2 -0.8
SHEL pmax pmax
comp=Z,188nm,1.2s
SHEL MLR MLR
comp=Z,6µm,21.0s
E17K Hotham Inlet 73.14 12 P P 22 58 35.9 +0.6
baz=336,SNR=18
E17K S S 23 08 01.4 -0.9
baz=336
D28M Stokes Point 73.15 2 P P 22 58 36.1 +0.8
baz=355
D28M S S 23 08 04.0 +1.7
baz=355
D27M Malcolm River 73.15 3 P P 22 58 35.7 +0.3
D27M IAMs_20 IAMs_20 23 34 29.1
comp=Z,5µm,20.0s
D27M Malcolm River 73.15 3 P P 22 58 36.2 +0.8
baz=353
D27M S S 23 08 04.8 +2.2
baz=353
TOLK Toolik Lake Re 73.18 6 P P 22 58 36.0 +0.4
TOLK IAmb IAmb 22 58 42.8
comp=Z,101nm,0.9s
TOLK IAMs_20 IAMs_20 23 34 31.6
comp=Z,6µm,22.0s
TOLK Toolik Lake Re 73.18 6 P P 22 58 36.4 +0.8
baz=346,SNR=34
TOLK S SKiKP 23 08 05.2 -1.7
baz=346
ASCN Ascension 73.31 246 P P 22 58 37.2 +0.2
ASCN IAmb IAmb 22 58 52.4
comp=Z,171nm,1.1s
GRHM Grahamstown, E 73.33 198 P P 22 58 37.6 +0.8
GRHM IAmb IAmb 22 58 44.5
comp=Z,71nm,1.0s
TNA Tin City 73.42 15 P P 22 58 37.8 +0.8
baz=331
E22K Anaktuvuk Pass 73.46 7 P P 22 58 37.9 +0.7
E22K IAMs_20 IAMs_20 23 33 32.8
comp=Z,5µm,21.0s
E22K Anaktuvuk Pass 73.46 7 P P 22 58 37.8 +0.5
baz=344
E22K S S 23 08 06.3 +0.3
baz=344
E19K Redstone River 73.47 10 P P 22 58 37.5 +0.3
E19K IAmb IAmb 22 58 40.0
comp=Z,126nm,1.1s
E19K IAMs_20 IAMs_20 23 36 13.4
comp=Z,6µm,20.0s
E19K Redstone River 73.47 10 P P 22 58 37.9 +0.7
baz=340
E19K S SKiKP 23 08 07.4 0.0
baz=340
SMRI Semarang 73.54 113 P P 22 58 37.6 -0.8
SMRI IAMs_20 IAMs_20 23 33 37.0
comp=Z,4µm,20.0s
E23K Chandalar 73.74 7 P P 22 58 39.9 +0.9
E23K IAmb IAmb 22 58 46.2
comp=Z,185nm,1.8s
E23K IAMs_20 IAMs_20 23 34 49.7
comp=Z,7µm,22.0s
E23K Chandalar 73.74 7 P P 22 58 39.9 +0.9
baz=346
E23K S S 23 08 12.8 +3.5
baz=346
F14K Arctic Creek 73.81 14 P P 22 58 40.4 +1.1
baz=333
F14K S S 23 08 11.4 +1.5
baz=333
F17K Baldwin Pennin 73.83 12 P P 22 58 39.6 +0.3
F17K IAmb IAmb 22 58 46.2
comp=Z,69nm,0.8s
F17K Baldwin Pennin 73.83 12 P P 22 58 39.8 +0.5
baz=337,SNR=12
F17K S S 23 08 12.5 +2.5
baz=337
E24K Your Creek 73.83 6 P P 22 58 40.1 +0.7
E24K IAMs_20 IAMs_20 23 34 39.6
comp=Z,6µm,21.0s
E24K Your Creek 73.83 6 P P 22 58 40.0 +0.6
baz=347
E24K S S 23 08 11.8 +1.6
baz=347
E28M Babbage River 73.85 3 P P 22 58 39.8 +0.3
E28M IAMs_20 IAMs_20 23 34 52.6
comp=Z,5µm,20.0s
E28M Babbage River 73.85 3 P P 22 58 40.0 +0.5
baz=354
E28M S S 23 08 11.1 +0.8
baz=354
F15K North Star Dit 73.92 13 P P 22 58 40.2 +0.3
F15K IAmb IAmb 22 58 42.9
comp=Z,127nm,1.2s
F15K IAMs_20 IAMs_20 23 36 40.0
comp=Z,5µm,21.0s
F15K North Star Dit 73.92 13 P P 22 58 40.6 +0.7
baz=334
F18K Selawik 73.93 11 P P 22 58 40.3 +0.4
baz=338,SNR=30
F18K S S 23 08 13.8 +2.7
baz=338
F19K Shaleruckik Mo 73.98 10 P P 22 58 39.7 -0.5
F19K IAmb IAmb 22 58 42.4
comp=Z,90nm,1.1s
F19K IAMs_20 IAMs_20 23 36 31.9
comp=Z,5µm,20.0s
F19K Shaleruckik Mo 73.98 10 P P 22 58 40.0 -0.2
baz=339
F19K S S 23 08 13.6 +1.9
baz=339
E25K Arctic Village 74.01 5 P P 22 58 40.9 +0.4
E25K Arctic Village 74.01 5 P P 22 58 40.9 +0.4
baz=349,SNR=35
E25K S S 23 08 14.6 +2.4
baz=349
F22K John River 74.03 8 P P 22 58 41.7 +1.1
baz=344
F22K S S 23 08 14.7 +2.3
baz=344
F20K Avaraart Lake 74.05 9 IAMs_20 IAMs_20 23 37 30.5
comp=Z,5µm,20.0s
F20K Avaraart Lake 74.05 9 P P 22 58 41.2 +0.6
baz=341
F20K S S 23 08 15.1 +2.6
baz=341
SUR Sutherland 74.05 203 P P 22 58 40.7 -0.5
SUR Sutherland 74.05 203 P P 22 58 41.8 +0.6
E29M Blow River 74.12 2 P P 22 58 41.4 +0.4
E29M IAmb IAmb 22 58 48.1
comp=Z,95nm,0.9s
E29M Blow River 74.12 2 P P 22 58 41.8 +0.8
baz=356,SNR=66
E29M S S 23 08 13.7 +0.4
baz=356
F21K Alatna River 74.16 8 P P 22 58 41.2 -0.1
F21K IAmb IAmb 22 58 48.5
comp=Z,70nm,1.0s
F21K IAMs_20 IAMs_20 23 37 37.6
comp=Z,5µm,20.0s
F21K Alatna River 74.16 8 P P 22 58 42.1 +0.8
baz=343
F21K S S 23 08 14.4 +0.6
baz=343
GAMB Gambell 74.16 17 IAMs_20 IAMs_20 23 36 40.6
comp=Z,5µm,21.0s
GAMB Gambell 74.16 17 P P 22 58 41.5 +0.2
baz=329
E27K Coleen River 74.18 4 P P 22 58 41.3 -0.1
E27K Coleen River 74.18 4 P P 22 58 42.1 +0.7
baz=352,SNR=60
E27K S S 23 08 16.3 +2.3
baz=352
INK Inuvik 74.28 0 P P 22 58 41.9 0.0
INK Inuvik 74.28 0 P P 22 58 42.2 +0.3
comp=Z,30nm,1.1s,baz=357,slow=6.3,SNR=9.6
INK S S 23 08 15.0 0.0
comp=Z,2.7nm,1.0s,baz=11,slow=13,SNR=1.8
comp=Z,30nm,1.1s
INK Inuvik 74.28 0 P P 22 58 42.0 +0.1
baz=359,SNR=10
INK S S 23 08 16.7 +1.7
baz=359
BLKN Baker Lake 74.28 344 P P 22 58 41.9 -0.1
BLKN IAmb IAmb 22 58 48.3
comp=Z,102nm,1.4s
F24K Squaw Lake 74.42 6 P P 22 58 43.6 +0.7
F24K IAMs_20 IAMs_20 23 34 58.7
comp=Z,5µm,22.0s
F24K Squaw Lake 74.42 6 P P 22 58 43.8 +0.9
baz=347
F24K S S 23 08 19.8 +2.9
baz=347
BBKI Banjar Baru 74.46 107 P P 22 58 44.5 +0.7
comp=Z,124nm,1.2s
COLD Coldfoot 74.50 7 P P 22 58 43.3 +0.1
COLD Coldfoot 74.50 7 P P 22 58 44.1 +0.9
baz=346,SNR=33
COLD S S 23 08 19.4 +1.8
baz=346
F25K Christian Rive 74.52 5 P P 22 58 43.8 +0.3
F25K Christian Rive 74.52 5 P P 22 58 44.6 +1.1
baz=349,SNR=41
F25K S S 23 08 20.6 +2.6
baz=349
F26K Sheenjek River 74.53 5 P P 22 58 44.0 +0.6

F26K IAmb IAmb 22 58 50.0
comp=Z,163nm,2.0s
F26K Sheenjek River 74.53 5 P **P** **22 58 44.6 +1.1**
F26K baz=350,SNR=18 S **S** **23 08 21.4 +3.4**
baz=350
G16K Koyuk River 74.61 12 P **P** **22 58 44.6 +0.7**
G16K IAmb IAmb 22 58 46.9
comp=Z,127nm,1.2s
G16K Koyuk River 74.61 12 P **P** **22 58 44.6 +0.7**
G16K baz=336 S **S** **23 08 22.1 +3.3**
baz=336
BKB Balikpapan 74.62 104 P **P** **22 58 44.4 -0.3**
BKB IAMs_20 IAMs_20 23 36 55.6
comp=Z,5µm,19.0s
BKB Balikpapan 74.62 104 P **P** **22 58 45.6 +0.8**
BKB Balikpapan 74.62 104 P **P** **22 58 46.4 +1.6**
comp=Z,3µmcomp=Z,213nm,0.9s
BKB Balikpapan 74.62 104 P **P** **22 58 46.0 +1.2**
G22K Bettles 74.66 8 P **P** **22 58 44.6 +0.4**
G22K baz=344 S **S** **23 08 22.4 +3.0**
baz=344
G15K Niukluk 74.67 13 P **P** **22 58 44.9 +0.6**
G15K baz=334 S **S** **23 08 21.7 +2.1**
baz=334
G18K Tagagawik 74.73 11 P **P** **22 58 44.4 -0.3**
G18K IAmb IAmb 22 58 47.1
comp=Z,92nm,1.2s
G18K IAMs_20 IAMs_20 23 36 19.9
comp=Z,5µm,22.0s
G18K Tagagawik 74.73 11 P **P** **22 58 45.0 +0.3**
G18K baz=339 S **S** **23 08 21.3 +1.0**
baz=339
BMAR Burnt Mountain 74.76 5 P **P** **22 58 45.6 +0.8**
G17K Kiwalik Mounta 74.79 12 P **P** **22 58 45.6 +0.6**
G17K baz=337,SNR=11 S **S** **23 08 20.9 0.0**
baz=337
ANM Nome 74.81 14 P **P** **22 58 44.8 -0.3**
ANM IAmb IAmb 22 58 48.3
comp=Z,160nm,1.2s
ANM Nome 74.81 14 P **P** **22 58 44.8 -0.3**
ANM pmax pmax
comp=Z,160nm,1.2s
ANM Nome 74.81 14 P **P** **22 58 46.0 +0.9**
baz=334
F28M Old Crow 74.83 3 P **P** **22 58 45.5 +0.3**
F28M Old Crow 74.83 3 P **P** **22 58 45.8 +0.6**
baz=354,SNR=20
G21K Allakaket 74.83 9 P **P** **22 58 45.2 0.0**
G21K IAmb IAmb 22 58 47.8
comp=Z,91nm,1.1s
G21K IAMs_20 IAMs_20 23 35 14.4
comp=Z,4µm,20.0s
G21K Allakaket 74.83 9 P **P** **22 58 45.6 +0.4**
baz=343,SNR=39
G21K S **S** **23 08 24.9 +3.5**
baz=343
PCJI Pacitan 74.85 113 P **P** **22 58 50.6 +4.6**
comp=Z,52nm,1.4s
F30M Barrier River 74.95 1 P **P** **22 58 46.2 +0.4**
F30M IAmb IAmb 22 58 52.4
comp=Z,136nm,1.3s
F30M Barrier River 74.95 1 P **P** **22 58 46.4 +0.5**
baz=357
F30M S **S** **23 08 23.6 +1.0**
baz=357
G23K Bananza Creek 75.02 7 P **P** **22 58 46.5 +0.1**
G23K IAMs_20 IAMs_20 23 38 04.4
comp=Z,6µm,20.0s
G23K Bananza Creek 75.02 7 P **P** **22 58 47.1 +0.8**
baz=346
G23K S **S** **23 08 25.5 +2.0**
baz=346
F31M Tsiigehtchic 75.14 0 P **P** **22 58 45.9 -1.1**
F31M IAmb IAmb 22 58 49.1
comp=Z,83nm,1.1s
F31M IAMs_20 IAMs_20 23 36 47.6
comp=Z,5µm,21.0s
F31M Tsiigehtchic 75.14 0 P **P** **22 58 47.3 +0.3**
baz=359,SNR=13
F31M S **S** **23 08 25.5 +0.8**
baz=359
G24K Hadweenzic Riv 75.26 6 P **P** **22 58 48.4 +0.7**
G24K IAmb IAmb 22 58 55.2
comp=Z,105nm,1.1s
G24K Hadweenzic Riv 75.26 6 P **P** **22 58 48.9 +1.2**
baz=348
G24K S **S** **23 08 28.4 +2.2**
baz=348
G26K Porcupine Rive 75.29 5 P **P** **22 58 48.3 +0.5**
G26K IAmb IAmb 22 58 55.3
comp=Z,73nm,1.0s
G26K Porcupine Rive 75.29 5 P **P** **22 58 49.4 +1.6**
baz=351,SNR=33
G26K S **S** **23 08 29.0 +2.7**
baz=351
G25K Bearman Lake 75.31 6 P **P** **22 58 49.0 +1.1**
baz=349
IMAR Indian Mountai 75.31 9 P **P** **22 58 47.7 -0.3**
H16K Elim 75.32 13 P **P** **22 58 48.4 +0.3**
baz=336
H16K S **S** **23 08 28.2 +1.4**
baz=336
H19K Roundabout Mou 75.40 10 P **P** **22 58 48.8 +0.3**
H19K IAmb IAmb 22 58 55.5
comp=Z,218nm,1.6s
H19K Roundabout Mou 75.40 10 P **P** **22 58 48.9 +0.5**
baz=341
H19K S **S** **23 08 28.6 +1.1**
baz=341
H17K Granite Mounta 75.43 12 P **P** **22 58 48.6 -0.1**
H17K Granite Mounta 75.43 12 P **P** **22 58 49.1 +0.4**
baz=338
H17K S **S** **23 08 29.6 +1.5**
baz=338
GBN Guysborough 75.47 317 P **P** **22 58 48.4 -0.8**
GBN IAmb IAmb 22 58 55.3
comp=Z,166nm,1.1s
H18K Honhosa River 75.47 11 P **P** **22 58 49.4 +0.4**
H18K IAmb IAmb 22 58 55.7
comp=Z,74nm,1.1s
H18K IAMs_20 IAMs_20 23 35 42.4
comp=Z,5µm,22.0s
H18K Honhosa River 75.47 11 P **P** **22 58 49.5 +0.5**
baz=339
H18K S **S** **23 08 29.6 +1.1**
baz=339
G27K Doyon Strip 75.55 4 P **P** **22 58 49.7 +0.3**
G27K Doyon Strip 75.55 4 P **P** **22 58 50.5 +1.1**
baz=352,SNR=33
G27K S **S** **23 08 31.0 +1.7**
baz=352
G30M tAoh Zraii Nji 75.57 1 P **P** **22 58 49.7 +0.2**
G30M IAmb IAmb 22 58 55.8
comp=Z,113nm,1.4s
G30M IAMs_20 IAMs_20 23 36 37.1
comp=Z,5µm,21.0s
G30M tAoh Zraii Nji 75.57 1 P **P** **22 58 49.5 0.0**
baz=357
G30M S **S** **23 08 30.4 +0.8**
baz=357
G29M Pine Creek 75.59 2 P **P** **22 58 49.7 0.0**
G29M IAmb IAmb 22 59 14.1
comp=Z,81nm,1.1s
G29M Pine Creek 75.59 2 P **P** **22 58 50.2 +0.6**
baz=355,SNR=18
G29M S **S** **23 08 29.6 -0.3**
baz=355
H20K Anotleneega Mo 75.64 9 P **P** **22 58 50.9 +0.9**
baz=342,SNR=24
H20K S **S** **23 08 31.1 +0.7**
baz=342
H22K Ishtalitna Cre 75.67 8 P **P** **22 58 51.7 +1.6**
baz=345
H22K S **S** **23 08 33.5 +2.8**
baz=345
H21K Melozitna Rive 75.74 9 P **P** **22 58 50.2 -0.3**
H21K IAmb IAmb 22 58 53.7
comp=Z,129nm,1.2s
H21K Melozitna Rive 75.74 9 P **P** **22 58 51.4 +1.0**
baz=344,SNR=7.6
H21K S **S** **23 08 33.1 +1.7**
baz=344
ICQ Pointe Anglais 75.76 322 P **P** **22 58 51.0 +0.2**
H25L Birch Creek 75.82 6 P **P** **22 58 52.0 +1.1**
baz=349,SNR=22
H25L S **S** **23 08 36.4 +4.1**
baz=349
H23K Yukon River 75.93 7 P **P** **22 58 52.1 +0.6**
H23K IAmb IAmb 22 58 59.3
comp=Z,108nm,1.1s
H23K Yukon River 75.93 7 P **P** **22 58 52.8 +1.2**
baz=346
H23K S **S** **23 08 35.5 +1.9**
baz=346
H24K Noodor Dome 76.07 6 P **P** **22 58 53.3 +0.9**
H24K Noodor Dome 76.07 6 P **P** **22 58 53.7 +1.3**
baz=348,SNR=15
H24K S **S** **23 08 36.3 +1.1**
baz=348
GCSA Galena City Sc 76.08 10 P **P** **22 58 53.2 +0.9**
baz=340,SNR=8.0
GCSA S **S** **23 08 36.6 +1.5**
baz=340
H27K Steamboat Moun 76.13 4 P **P** **22 58 53.1 +0.4**
H27K IAMs_20 IAMs_20 23 37 01.8
comp=Z,5µm,21.0s
H27K Steamboat Moun 76.13 4 P **P** **22 58 53.9 +1.2**
baz=353
H27K S **S** **23 08 37.9 +2.0**
baz=353
TOLI2 Tolitoli 76.15 99 P **P** **22 58 52.8 -0.8**
TOLI2 Tolitoli 76.15 99 P **P** **22 58 53.0 -0.6**
EPYK Eagle Plains 76.17 2 P **P** **22 58 53.1 +0.2**
EPYK IAmb IAmb 22 58 59.2
comp=Z,129nm,1.4s
EPYK Eagle Plains 76.17 2 P **P** **22 58 53.2 +0.2**
baz=356,SNR=19
EPYK S **S** **23 08 34.9 -1.4**
baz=356
H29M Whitestone 76.28 2 P **P** **22 58 53.7 +0.2**
H29M IAmb IAmb 22 59 00.2
comp=Z,87nm,1.1s
H29M Whitestone 76.28 2 P **P** **22 58 54.3 +0.8**
baz=355,SNR=17
H29M S **S** **23 08 37.5 +0.1**
baz=355
I17K Unalakleet 76.28 12 P **P** **22 58 53.7 +0.2**
I17K Unalakleet 76.28 12 P **P** **22 58 54.6 +1.0**
baz=337
I17K S **S** **23 08 37.5 +0.1**
baz=337
I21K Tanana 76.30 8 P **P** **22 58 54.0 +0.4**
I21K IAmb IAmb 22 58 56.9
comp=Z,100nm,1.1s
I21K Tanana 76.30 8 P **P** **22 58 54.8 +1.2**
baz=344,SNR=5.2
I21K S **S** **23 08 39.8 +2.3**
baz=344
DAV Davao City (W) 76.31 92 P **P** **22 58 54.8 +0.3**
DAV Davao City (W) 76.31 92 IAMs_20 IAMs_20 23 39 11.0
comp=Z,4µm,20.0s
DAV Davao City (W) 76.31 92 LR LR 23 37 13.2
comp=Z,5µm,21.9s,baz=344,slow=39
I20K Naaghedeneel 76.36 9 P **P** **22 58 53.6 -0.3**
I20K IAMs_20 IAMs_20 23 36 25.6
comp=Z,6µm,21.0s
I20K Naaghedeneel 76.36 9 P **P** **22 58 54.9 +1.0**
baz=342
MLY Manley 76.58 8 P **P** **22 58 55.5 +0.2**
MLY IAmb IAmb 22 58 58.4
comp=Z,105nm,1.2s
MLY IAMs_20 IAMs_20 23 39 14.6
comp=Z,5µm,20.0s
MLY Manley 76.58 8 P **P** **22 58 56.3 +1.0**
baz=345,SNR=18
MLY S **S** **23 08 42.9 +2.1**
baz=345
I23K Minto, Yukon-K 76.61 7 P **P** **22 58 56.2 +0.9**
I23K IAmb IAmb 22 59 02.8
comp=Z,167nm,1.4s
I23K IAMs_20 IAMs_20 23 39 06.4
comp=Z,5µm,20.0s
I23K Minto, Yukon-K 76.61 7 P **P** **22 58 56.5 +1.2**
baz=346,SNR=20
I23K S **S** **23 08 43.1 +2.2**
baz=346
BATG Bathurst New B 76.66 320 P **P** **22 58 56.2 +0.2**
BATG IAmb IAmb 22 59 06.1
comp=Z,202nm,1.5s
I27K Kandik River 76.75 4 P **P** **22 58 57.0 +0.7**
baz=353,SNR=18
I27K S **S** **23 08 45.2 +2.5**
baz=353
H31M Peel River 76.78 1 P **P** **22 58 56.3 -0.1**
H31M IAMs_20 IAMs_20 23 37 28.1
comp=Z,5µm,20.0s
H31M Peel River 76.78 1 P **P** **22 58 56.5 +0.1**
baz=358,SNR=12
H31M S **S** **23 08 41.3 -1.6**
baz=358
J14K Nanvaranak Lak 76.81 14 P **P** **22 58 56.8 +0.3**
J14K IAmb IAmb 22 59 18.4
comp=Z,97nm,1.1s
J14K IAMs_20 IAMs_20 23 36 30.6
comp=Z,5µm,20.0s
J14K Nanvaranak Lak 76.81 14 P **P** **22 58 57.5 +1.0**
baz=335
POKR Poker Plat Res 76.82 6 P **P** **22 58 57.2 +0.6**
POKR IAmb IAmb 22 59 04.0
comp=Z,133nm,1.1s
POKR IAMs_20 IAMs_20 23 36 35.8
comp=Z,5µm,22.0s
POKR Poker Plat Res 76.82 6 P **P** **22 58 57.8 +1.2**
baz=348,SNR=25
POKR S **S** **23 08 46.6 +3.2**
baz=348
J16K Anvik River 76.85 13 P **P** **22 58 56.8 0.0**
J16K IAmb IAmb 22 59 03.9
comp=Z,98nm,1.1s
J16K IAMs_20 IAMs_20 23 37 28.9
comp=Z,4µm,20.0s
J16K Anvik River 76.85 13 P **P** **22 58 56.7 -0.1**
baz=337
J16K S **S** **23 08 45.6 +1.8**
baz=337
LMN Caledonia Moun 76.95 318 P **P** **22 58 57.6 -0.1**
LMN IAmb IAmb 22 59 03.0
comp=Z,120nm,1.2s
I26K Coal Creek Min 76.96 5 P **P** **22 58 57.5 +0.2**
I26K IAmb IAmb 22 59 00.0
comp=Z,82nm,1.2s
I26K Coal Creek Min 76.96 5 P **P** **22 58 57.7 +0.4**
baz=351
I26K S **S** **23 08 48.2 +3.4**
baz=351
J19K Poorman 76.97 10 P **P** **22 58 58.0 +0.6**
J19K IAmb IAmb 22 59 04.7
comp=Z,143nm,1.3s
J19K Poorman 76.97 10 P **P** **22 58 58.4 +1.0**
baz=341,SNR=29
J19K S **S** **23 08 47.7 +2.7**
baz=341
I28M Miner Creek 76.99 3 P **P** **22 58 57.5 -0.2**
I28M Miner Creek 76.99 3 P **P** **22 58 57.8 +0.1**
baz=354
I28M S **S** **23 08 46.8 +1.5**
baz=354
J20K Nowinta River 77.00 10 P **P** **22 58 58.1 +0.5**
J20K IAmb IAmb 22 59 04.9
comp=Z,111nm,1.1s
J20K IAMs_20 IAMs_20 23 36 54.6
comp=Z,5µm,20.0s
J20K Nowinta River 77.00 10 P **P** **22 58 58.8 +1.2**
baz=342,SNR=32
J20K S **S** **23 08 47.9 +2.6**
baz=342
J17K VABM Dome 77.01 12 P **P** **22 58 58.1 +0.4**
J17K IAmb IAmb 22 59 04.4
comp=Z,91nm,1.4s
J17K IAMs_20 IAMs_20 23 38 31.9
comp=Z,4µm,21.0s
J17K VABM Dome 77.01 12 P **P** **22 58 58.1 +0.4**
baz=339
COLA College 77.02 7 P **P** **22 58 57.8 +0.1**
COLA IAmb IAmb 22 59 07.8
comp=Z,87nm,0.9s
COLA IAMs_20 IAMs_20 23 36 53.3
comp=Z,5µm,22.0s
COLA College 77.02 7 P **P** **22 58 58.0 +0.3**
COLA College 77.02 7 P **P** **22 58 57.8 +0.1**
COLA pmax pmax
comp=Z,87nm,0.9s
COLA MLR MLR
comp=Z,5µm,22.0s
COLA College 77.02 7 P **P** **22 58 58.2 +0.5**
baz=348
HAL Halifax 77.10 317 P **P** **22 58 58.9 +0.4**
HAL IAmb IAmb 22 59 04.8
comp=Z,206nm,1.3s
HAL Halifax 77.10 317 P **P** **22 58 58.9 +0.4**
HAL pmax pmax
comp=Z,206nm,1.3s
NEA2 Nenana 77.18 7 P **P** **22 58 58.9 +0.3**
NEA2 IAmb IAmb 22 59 05.2
comp=Z,132nm,1.4s
NEA2 IAMs_20 IAMs_20 23 39 33.5
comp=Z,6µm,20.0s
NEA2 Nenana 77.18 7 P **P** **22 58 59.0 +0.4**
baz=347,SNR=21
NEA2 S **S** **23 08 49.4 +2.1**
baz=347
IL31 77.21 6 P **P** **22 58 58.4 -0.3**
ILAR Eielson Array 77.21 6 P **P** **22 58 58.7 -0.1**
ILAR Eielson Array 77.21 6 P **P** **22 58 59.2 +0.5**
comp=Z,14nm,1.0s,baz=333,slow=3.5,SNR=59
ILAR PP **PP** **23 01 52.6 +0.8**
comp=Z,3.9nm,0.9s,baz=350,slow=8.3,SNR=4.3
ILAR S **S** **23 08 46.4 -1.1**
comp=Z,0.2nm,0.7s,baz=263,slow=18,SNR=1.8
ILAR PKKPbc **PKKPbc** **23 18 01.6 -3.3**
comp=Z,0.9nm,0.9s,baz=195,slow=2.5,SNR=8.9
ILAR PKPPKP P'P'df 23 26 05.4 -9.4
comp=Z,0.4nm,0.9s,baz=183,slow=8.8,SNR=5.0
ILAR LR LR 23 36 47.6
comp=Z,4µm,20.8s,baz=322,slow=39
comp=Z,14nm,1.0s
ILAR Eielson Array 77.21 6 P **P** **22 58 58.7 -0.1**
ILAR S **S** **23 08 46.4 -1.1**
JAGI Jajag, Banyuwa 77.21 111 P **P** **22 58 57.0 -2.5**
JAGI Jajag, Banyuwa 77.21 111 P **P** **22 58 58.3 -1.2**
JAGI Jajag, Banyuwa 77.21 111 P **P** **22 59 01.1 +1.6**
CCB Clear Creek Bu 77.25 7 P **P** **22 58 58.9 -0.1**
CCB IAmb IAmb 22 59 05.3
comp=Z,146nm,1.5s
J18K Innoko River 77.31 11 P **P** **22 58 59.5 +0.1**
J18K IAmb IAmb 22 59 06.5
comp=Z,117nm,1.3s
J18K Innoko River 77.31 11 P **P** **22 59 00.3 +0.9**
baz=340,SNR=20
J18K S **S** **23 08 49.1 +0.4**
baz=340
K13K Kusilvak Mount 77.33 15 P **P** **22 58 59.2 -0.3**
K13K IAmb IAmb 22 59 06.3
comp=Z,97nm,1.2s
K13K Kusilvak Mount 77.33 15 P **P** **22 59 00.4 +0.9**
baz=334
K13K S **S** **23 08 50.7 +1.9**
baz=334
I30M Mount Dempster 77.33 2 P **P** **22 58 59.4 -0.2**
I30M IAmb IAmb 22 59 11.2
comp=Z,77nm,1.1s
I30M IAMs_20 IAMs_20 23 38 21.7
comp=Z,4µm,20.0s
I30M Mount Dempster 77.33 2 P **P** **22 58 59.8 +0.2**
baz=357
I30M S **S** **23 08 50.8 +1.6**
baz=357
WRH Wood River Hil 77.39 7 P **P** **22 58 59.3 -0.5**
JCJ Chichijima 77.41 66 P **P** **22 58 57.9 -2.7**
JCJ Chichijima 77.41 66 LR LR 23 36 58.4
comp=Z,2µm,20.9s,baz=319,slow=39
MRSI Marisa 77.45 99 P **P** **22 59 01.2 +0.3**
comp=Z,2µmcomp=Z,150nm,1.1s
BPAW Bear Paw Mtn. 77.45 8 P **P** **22 59 00.4 +0.3**
BPAW IAmb IAmb 22 59 07.7
comp=Z,233nm,1.5s
BPAW IAMs_20 IAMs_20 23 39 54.5
comp=Z,4µm,19.0s
BPAW Bear Paw Mtn. 77.45 8 P **P** **22 59 00.5 +0.3**
baz=345,SNR=5.8
BPAW S **S** **23 08 52.0 +1.6**
baz=345
J25K Salcha River, 77.49 6 P **P** **22 59 00.8 +0.4**
J25K IAmb IAmb 22 59 07.2
comp=Z,300nm,1.9s
J25K Salcha River, 77.49 6 P **P** **22 59 01.2 +0.8**
baz=350,SNR=27
J25K S **S** **23 08 50.1 -0.6**
baz=350
CHUM Lake Minchumin 77.51 9 P **P** **22 59 01.4 +0.9**
baz=344,SNR=34
CHUM S **S** **23 08 53.3 +2.5**
baz=344
BWN Browne 77.55 8 IAMs_20 IAMs_20 23 39 44.7
comp=Z,6µm,20.0s
HDA Harding Lake 77.56 6 P **P** **22 59 00.4 -0.4**
HDA Harding Lake 77.56 6 P **P** **22 59 00.7 0.0**
baz=348,SNR=21
HDA S **S** **23 08 49.0 -2.4**
baz=348
K15K Wolf Creek Mou 77.60 13 P **P** **22 59 01.4 +0.4**
K15K IAmb IAmb 22 59 08.4
comp=Z,188nm,1.6s
K15K IAMs_20 IAMs_20 23 36 41.7
comp=Z,5µm,21.0s
K15K Wolf Creek Mou 77.60 13 P **P** **22 59 02.2 +1.1**
baz=337,SNR=9.3
K15K S **S** **23 08 56.3 +4.4**
baz=337
J26L Joseph Creek 77.73 5 P **P** **22 59 02.2 +0.3**
J26L Joseph Creek 77.73 5 P **P** **22 59 01.9 +0.1**
baz=351,SNR=24
J26L S **S** **23 08 53.5 +0.1**
baz=351
K17K Iditarod 77.77 12 P **P** **22 59 01.6 -0.4**
K17K Iditarod 77.77 12 P **P** **22 59 02.3 +0.4**
baz=339,SNR=16
K17K S **S** **23 08 56.2 +2.6**
baz=339
K20K Telida 77.79 10 P **P** **22 59 02.4 +0.3**
K20K IAmb IAmb 22 59 05.1
comp=Z,117nm,1.2s
K20K IAMs_20 IAMs_20 23 39 49.6
comp=Z,5µm,20.0s
K20K Telida 77.79 10 P **P** **22 59 02.7 +0.6**
baz=343,SNR=8.3
K20K S **S** **23 08 56.4 +2.4**
baz=343
J30M Hart River 77.98 2 P **P** **22 59 03.3 0.0**
J30M IAMs_20 IAMs_20 23 38 39.8
comp=Z,4µm,21.0s
J30M Hart River 77.98 2 P **P** **22 59 03.7 +0.4**
baz=357
J30M S **S** **23 08 56.9 +0.7**
baz=357
KTH Kantishna Hill 77.99 8 P **P** **22 59 03.3 0.0**
KTH IAmb IAmb 22 59 10.7
comp=Z,82nm,1.0s
MCK McKinley 78.03 7 P **P** **22 59 02.7 -0.7**
MCK IAmb IAmb 22 59 06.2
comp=Z,99nm,1.2s
MCK IAMs_20 IAMs_20 23 39 59.1
comp=Z,5µm,20.0s
MCK McKinley 78.03 7 P **P** **22 59 02.7 -0.7**
MCK pmax pmax
comp=Z,99nm,1.2s
MCK MLR MLR
comp=Z,5µm,20.0s
MCK McKinley 78.03 7 P **P** **22 59 03.4 0.0**
baz=347,SNR=24
MCK S **S** **23 08 57.0 +0.4**
baz=347
APSI Ampana 78.08 101 P **P** **22 59 09.0 +4.6**
comp=Z,1µmcomp=Z,41nm,1.1s
TRF Thorofare Moun 78.16 8 P **P** **22 59 04.6 +0.2**
TRF IAmb IAmb 22 59 12.2
comp=Z,189nm,1.6s
TRF Thorofare Moun 78.16 8 P **P** **22 59 05.1 +0.8**
baz=346,SNR=18
TRF S **S** **23 08 58.1 -0.1**
baz=346
L15K Ungalak Mounta 78.18 14 P **P** **22 59 05.2 +1.0**
baz=337
L15K S **S** **23 09 00.6 +2.4**
baz=337

SCRK	**Sand Creek**	**78.22**	**5**	P	**P**	**22 59 05.0**	**+0.4**
SCRK				IAmb	IAmb	22 59 11.7	
	comp=Z,106nm,1.2s						
SCRK				IAMs_20	IAMs_20	23 40 26.1	
	comp=Z,4µm,19.0s						
SCRK	**Sand Creek**	**78.22**	**5**	P	**P**	**22 59 05.3**	**+0.7**
	baz=351,SNR=72						
SCRK				S	**S**	**23 09 00.1**	**+1.3**
	baz=351						
L14K	**Kuka Creek**	**78.26**	**14**	P	**P**	**22 59 04.6**	**0.0**
L14K				IAmb	IAmb	22 59 11.8	
	comp=Z,80nm,1.1s						
L14K	**Kuka Creek**	**78.26**	**14**	P	**P**	**22 59 05.3**	**+0.6**
	baz=336						
L14K				S	**S**	**23 08 59.6**	**+0.7**
	baz=336						
D62A	**Allapoint, All**	**78.29**	**321**	P	**P**	**22 59 05.1**	**0.0**
K27K	**Chicken**	**78.29**	**4**	P	**P**	**22 59 05.2**	**+0.4**
K27K				IAMs_20	IAMs_20	23 38 19.1	
	comp=Z,4µm,21.0s						
K27K	**Chicken**	**78.29**	**4**	P	**P**	**22 59 05.4**	**+0.6**
	baz=352						
K27K				S	**S**	**23 09 01.6**	**+2.4**
	baz=352						
L17K	**Donlin**	**78.32**	**12**	P	**P**	**22 59 05.8**	**+0.8**
	baz=339						
L17K				S	**S**	**23 09 02.2**	**+2.6**
	baz=339						
RND	**Reindeer**	**78.36**	**7**	P	**P**	**22 59 04.3**	**-1.0**
RND				IAmb	IAmb	22 59 14.2	
	comp=Z,66nm,0.9s						
RND				IAMs_20	IAMs_20	23 37 48.7	
	comp=Z,5µm,22.0s						
RND	**Reindeer**	**78.36**	**7**	P	**P**	**22 59 04.3**	**-1.0**
RND				pmax	pmax		
	comp=Z,66nm,0.9s						
RND				MLR	MLR		
	comp=Z,5µm,22.0s						
RIDG	**Independent Ri**	**78.39**	**6**	P	**P**	**22 59 05.7**	**+0.2**
RIDG	**Independent Ri**	**78.39**	**6**	P	**P**	**22 59 05.9**	**+0.4**
	baz=350,SNR=10						
RIDG				S	**S**	**23 09 01.5**	**+1.0**
	baz=350						
M11K	**Mekoryuk**	**78.39**	**16**	IAMs_20	IAMs_20	23 40 17.6	
	comp=Z,4µm,20.0s						
M11K	**Mekoryuk**	**78.39**	**16**	P	**P**	**22 59 06.5**	**+1.1**
	baz=333						
DAWY	**Dawson**	**78.39**	**3**	P	**P**	**22 59 05.9**	**+0.4**
DAWY	**Dawson**	**78.39**	**3**	P	**P**	**22 59 05.8**	**+0.4**
	baz=354,SNR=32						
DAWY				S	**S**	**23 09 01.5**	**+1.0**
	baz=354						
PPLA	**Purkeypile**	**78.48**	**9**	P	**P**	**22 59 06.2**	**+0.2**
PPLA				IAmb	IAmb	22 59 45.9	
	comp=Z,158nm,1.4s						
PPLA				IAMs_20	IAMs_20	23 37 19.8	
	comp=Z,5µm,21.0s						
PPLA	**Purkeypile**	**78.48**	**9**	P	**P**	**22 59 06.6**	**+0.6**
	baz=344,SNR=11						
PPLA				S	**S**	**23 09 00.6**	**-1.0**
	baz=344						
L18K	**Granite Mounta**	**78.50**	**11**	P	**P**	**22 59 03.8**	**-2.2**
L18K				IAMs_20	IAMs_20	23 39 38.3	
	comp=Z,5µm,19.0s						
L18K	**Granite Mounta**	**78.50**	**11**	P	**P**	**22 59 06.5**	**+0.5**
	baz=341,SNR=10						
L18K				S	**S**	**23 09 02.5**	**+1.0**
	baz=341						
GGN	**Saint George**	**78.51**	**319**	P	**P**	**22 59 06.0**	**-0.4**
L16K	**Owhat River**	**78.52**	**13**	P	**P**	**22 59 05.9**	**-0.2**
L16K				IAmb	IAmb	22 59 13.3	
	comp=Z,87nm,1.3s						
L16K	**Owhat River**	**78.52**	**13**	P	**P**	**22 59 07.0**	**+0.9**
	baz=338						
L16K				S	**S**	**23 09 02.9**	**+1.2**
	baz=338						
DOT	**Dot Lake**	**78.54**	**5**	P	**P**	**22 59 06.2**	**0.0**
DOT				IAmb	IAmb	22 59 13.3	
	comp=Z,106nm,1.1s						
DOT				IAMs_20	IAMs_20	23 40 35.5	
	comp=Z,4µm,20.0s						
SPSI	**Sidrap Palu**	**78.54**	**104**	P	**P**	**22 59 07.5**	**+0.5**
LMQ	**La Malbaie**	**78.59**	**322**	P	**P**	**22 59 06.8**	**0.0**
LMQ				IAmb	IAmb	22 59 13.1	
	comp=Z,200nm,1.5s						
L20K	**Farewell, AK**	**78.66**	**10**	P	**P**	**22 59 07.5**	**+0.6**
	baz=343,SNR=54						
L20K				S	**S**	**23 09 05.1**	**+1.7**
	baz=343						
FCC	**Fort Churchill**	**78.67**	**341**	P	**P**	**22 59 06.8**	**-0.1**
FCC				IAmb	IAmb	22 59 27.5	
	comp=Z,88nm,1.3s						
FCC	**Fort Churchill**	**78.67**	**341**	P	**P**	**22 59 06.8**	**-0.1**
FCC				pmax	pmax		
	comp=Z,88nm,1.3s						
K29M	**Barlow Dome**	**78.68**	**2**	P	**P**	**22 59 07.3**	**+0.2**
K29M	**Barlow Dome**	**78.68**	**2**	P	**P**	**22 59 07.4**	**+0.2**
	baz=356						
K29M				S	**S**	**23 09 05.7**	**+1.9**
	baz=356						
SHEM	**Shemya Is, Ala**	**78.69**	**30**	P	**P**	**22 59 05.6**	**-1.6**
SHEM	**Shemya Is, Ala**	**78.69**	**30**	LR	LR	23 38 21.9	
	comp=Z,3µm,18.4s,baz=310,slow=39						
SMY	**Shemya**	**78.69**	**30**	P	**P**	**22 59 06.0**	**-1.2**
SMY	**Shemya**	**78.69**	**30**	P	**P**	**22 59 06.0**	**-1.2**
SMY				pmax	pmax		
	comp=Z,658nm,1.7s						
LDAQ	**Lac Daran**	**78.74**	**323**	P	**P**	**22 59 07.5**	**-0.2**
F64A	**Sherman**	**78.78**	**320**	P	**P**	**22 59 07.8**	**0.0**
F64A				IAmb	IAmb	22 59 14.2	
	comp=Z,97nm,1.2s						
F64A				IAMs_20	IAMs_20	23 38 10.5	
	comp=Z,6µm,18.0s						
L19K	**White Mountain**	**78.81**	**10**	P	**P**	**22 59 08.1**	**+0.4**
L19K				IAmb	IAmb	22 59 11.4	
	comp=Z,86nm,1.2s						
L19K	**White Mountain**	**78.81**	**10**	P	**P**	**22 59 08.4**	**+0.7**
	baz=342,SNR=25						
L19K				S	**S**	**23 09 06.6**	**+1.6**
	baz=342						
G65A	**Princeton**	**78.83**	**319**	P	**P**	**22 59 08.0**	**-0.1**
DHY	**Denali Highway**	**78.83**	**7**	P	**P**	**22 59 07.7**	**-0.4**
DHY				IAMs_20	IAMs_20	23 37 40.1	
	comp=Z,4µm,22.0s						
DHY	**Denali Highway**	**78.83**	**7**	P	**P**	**22 59 08.0**	**0.0**
	baz=348,SNR=13						
E62A	**Clayton Lake**	**78.84**	**321**	P	**P**	**22 59 08.0**	**-0.2**
E62A				IAmb	IAmb	22 59 14.2	
	comp=Z,139nm,1.4s						
M14K	**Bethel**	**78.94**	**14**	P	**P**	**22 59 09.4**	**+0.9**
M14K				IAmb	IAmb	22 59 15.7	
	comp=Z,160nm,1.4s						
M14K	**Bethel**	**78.94**	**14**	P	**P**	**22 59 09.0**	**+0.6**
	baz=337						
WAT1	**Susitna Watana**	**78.95**	**7**	P	**P**	**22 59 07.7**	**-0.8**
	baz=347						
WAT1				S	**S**	**23 09 04.4**	**-2.1**
	baz=347						
MAYO	**Mayo, Yukon**	**78.97**	**2**	P	**P**	**22 59 09.3**	**+0.7**
MAYO				IAmb	IAmb	22 59 36.8	
	comp=Z,83nm,1.0s						
M13K	**Dall Lake**	**78.98**	**15**	P	**P**	**22 59 09.4**	**+0.8**
M13K				IAmb	IAmb	22 59 16.6	
	comp=Z,141nm,1.2s						
M13K				IAMs_20	IAMs_20	23 37 33.0	
	comp=Z,6µm,21.0s						
M13K	**Dall Lake**	**78.98**	**15**	P	**P**	**22 59 08.3**	**-0.3**
	baz=336						
KMSI	**Cibinong**	**78.99**	**98**	P	P	22 59 14.6	+5.2
YKAW3	**Yellowknife Wh**	**79.01**	**352**	P	**P**	**22 59 08.8**	**0.0**
YKAW3				IAmb	IAmb	22 59 14.8	
	comp=Z,76nm,1.4s						
LUWI	**Luwuk**	**79.04**	**100**	P	**P**	**22 59 05.5**	**-4.2**
LUWI	**Luwuk**	**79.04**	**100**	P	**P**	**22 59 08.8**	**-1.0**
LUWI	**Luwuk**	**79.04**	**100**	P	**P**	**22 59 10.6**	**+0.9**
LUWI	**Luwuk**	**79.04**	**100**	P	**P**	**22 59 13.5**	**+3.8**
	comp=Z,1µmcomp=Z,34nm,1.0s						
YKAW1	**Yellowknife Wh**	**79.07**	**352**	P	**P**	**22 59 09.0**	**-0.1**
YKAW1				IAmb	IAmb	22 59 15.1	
	comp=Z,51nm,1.2s						
BNSI	**Bone**	**79.08**	**104**	P	**P**	**22 59 11.0**	**+1.1**
	comp=Z,1µmcomp=Z,74nm,1.7s						
YKA	**Yellowknife Ar**	**79.08**	**352**	P	**P**	**22 59 09.2**	**+0.1**
YKA	**Yellowknife Ar**	**79.08**	**352**	P	**P**	**22 59 09.4**	**+0.3**
	comp=Z,14nm,1.0s,baz=4.3,slow=6.1,SNR=17						
YKA				LR	LR	23 35 53.7	
	comp=Z,3µm,20.6s,baz=6.0,slow=37						
	comp=Z,14nm,1.0s						
PAX	**Paxson**	**79.10**	**6**	P	**P**	**22 59 09.3**	**-0.1**
PAX	**Paxson**	**79.10**	**6**	P	**P**	**22 59 09.3**	**-0.1**
PAX				pmax	pmax		
	comp=Z,39nm,1.1s						
PAX				MLR	MLR		
	comp=Z,3µm,21.0s						
PAX	**Paxson**	**79.10**	**6**	P	**P**	**22 59 09.0**	**-0.4**
	baz=350,SNR=11						
PAX				S	**S**	**23 09 09.8**	**+1.6**
	baz=350						
EMMW	**East Machias**	**79.11**	**319**	P	**P**	**22 59 08.9**	**-0.7**
EMMW				IAmb	IAmb	22 59 19.5	
	comp=Z,147nm,1.5s						
EMMW				IAMs_20	IAMs_20	23 32 30.3	
	comp=Z,4µm,22.0s						
WRGLY	**Wrigley**	**79.12**	**356**	P	**P**	**22 59 09.2**	**-0.1**
WRGLY				IAmb	IAmb	22 59 16.3	
	comp=Z,234nm,1.6s						
WRGLY	**Wrigley**	**79.12**	**356**	P	**P**	**22 59 09.8**	**+0.4**
	baz=7.2						
WRGLY				S	**S**	**23 09 09.5**	**+1.4**
	baz=7.2						
M19K	**Big River Lodg**	**79.14**	**10**	IAMs_20	IAMs_20	23 36 19.0	
	comp=Z,4µm,22.0s						
M19K	**Big River Lodg**	**79.14**	**10**	P	**P**	**22 59 09.4**	**-0.2**
	baz=342						
M19K				S	**S**	**23 09 09.8**	**+1.4**
	baz=342						
M17K	**Holitna River**	**79.15**	**12**	P	**P**	**22 59 10.1**	**+0.5**
M17K				IAmb	IAmb	22 59 17.1	
	comp=Z,110nm,1.1s						
M17K				IAMs_20	IAMs_20	23 39 55.6	
	comp=Z,5µm,20.0s						
M17K	**Holitna River**	**79.15**	**12**	P	**P**	**22 59 09.8**	**+0.2**
	baz=340						
M17K				S	**S**	**23 09 10.3**	**+1.8**
	baz=340						
CUT	**Chulitna**	**79.18**	**8**	P	**P**	**22 59 09.9**	**+0.2**
CUT				IAmb	IAmb	22 59 48.8	
	comp=Z,184nm,1.4s						
CUT				IAMs_20	IAMs_20	23 41 00.5	
	comp=Z,5µm,19.0s						
CUT	**Chulitna**	**79.18**	**8**	P	**P**	**22 59 09.5**	**-0.2**
	baz=346,SNR=8.6						
CUT				S	**S**	**23 09 08.9**	**+0.1**
	baz=346						
KAPI	**Kappang**	**79.19**	**105**	P	**P**	**22 59 09.6**	**-0.9**
KAPI				IAmb	IAmb	22 59 14.6	
	comp=Z,166nm,1.4s						
KAPI	**Kappang**	**79.19**	**105**	P	**P**	**22 59 10.3**	**-0.2**
	comp=Z,35nm,1.0s,baz=301,slow=7.0,SNR=19						
	comp=Z,35nm,1.0s						
KAPI	**Kappang**	**79.19**	**105**	P	**P**	**22 59 10.6**	**0.0**
KAPI	**Kappang**	**79.19**	**105**	P	**P**	**22 59 10.3**	**-0.2**
L26K	**Log Cabin Wild**	**79.21**	**5**	P	**P**	**22 59 09.9**	**0.0**
L26K				IAmb	IAmb	22 59 18.1	
	comp=Z,303nm,2.0s						
L26K	**Log Cabin Wild**	**79.21**	**5**	P	**P**	**22 59 10.9**	**+0.9**
	baz=351,SNR=17						
L26K				S	**S**	**23 09 10.9**	**+1.7**
	baz=351						
M15K	**Kasigluk River**	**79.24**	**14**	P	**P**	**22 59 11.3**	**+1.2**
	baz=338,SNR=11						
M15K				S	**S**	**23 09 12.0**	**+2.5**
	baz=338						
M16K	**Timber Creek**	**79.25**	**13**	P	**P**	**22 59 10.1**	**0.0**
M16K				IAmb	IAmb	22 59 17.6	
	comp=Z,171nm,1.4s						
M16K				IAMs_20	IAMs_20	23 38 43.2	
	comp=Z,5µm,21.0s						
M16K	**Timber Creek**	**79.25**	**13**	P	**P**	**22 59 11.3**	**+1.2**
	baz=339						
M16K				S	**S**	**23 09 12.7**	**+3.1**
	baz=339						
BCAR	**Beaver Creek A**	**79.27**	**4**	P	**P**	**22 59 09.9**	**-0.4**
MENT	**Mentasta**	**79.27**	**5**	P	**P**	**22 59 10.7**	**+0.4**
MENT				IAmb	IAmb	22 59 18.4	
	comp=Z,277nm,1.8s						
L27K	**Beaver Creek,**	**79.27**	**4**	P	**P**	**22 59 10.1**	**-0.2**
L27K				IAMs_20	IAMs_20	23 39 09.8	
	comp=Z,4µm,19.0s						
L27K	**Beaver Creek,**	**79.27**	**4**	P	**P**	**22 59 10.8**	**+0.5**
	baz=352						
L27K				S	**S**	**23 09 11.7**	**+1.8**
	baz=352						
WAT6	**Susitna Watana**	**79.28**	**7**	P	**P**	**22 59 10.1**	**-0.4**
	baz=348,SNR=20						
WAT6				S	**S**	**23 09 10.6**	**+0.3**
	baz=348						
M18K	**Stony River**	**79.32**	**11**	P	**P**	**22 59 10.0**	**-0.5**
	baz=341						
M18K				S	**S**	**23 09 13.6**	**+3.2**
	baz=341						
M20K	**Styx River**	**79.33**	**10**	P	**P**	**22 59 10.9**	**+0.2**
M20K				IAMs_20	IAMs_20	23 40 48.1	
	comp=Z,5µm,20.0s						
M20K	**Styx River**	**79.33**	**10**	P	**P**	**22 59 10.7**	**0.0**
	baz=344						
M20K				S	**S**	**23 09 12.5**	**+1.8**
	baz=344						
L29M	**L29M**	**79.40**	**3**	P	**P**	**22 59 10.7**	**-0.3**
L29M				IAmb	IAmb	22 59 18.9	
	comp=Z,131nm,1.4s						
L29M	**L29M**	**79.40**	**3**	P	**P**	**22 59 11.5**	**+0.5**
	baz=355,SNR=21						
SKT	**Skwentna**	**79.44**	**9**	P	**P**	**22 59 10.7**	**-0.6**
SKT				IAmb	IAmb	22 59 18.3	
	comp=Z,152nm,1.2s						
SKT				IAMs_20	IAMs_20	23 38 00.4	
	comp=Z,4µm,21.0s						
SKT	**Skwentna**	**79.44**	**9**	P	**P**	**22 59 11.4**	**+0.1**
	baz=345,SNR=25						
SKT				S	**S**	**23 09 12.2**	**+0.5**
	baz=345						
PKME	**Peaks-Kenny Pk**	**79.67**	**320**	P	**P**	**22 59 12.8**	**+0.1**
PKME				IAmb	IAmb	22 59 19.4	
	comp=Z,147nm,1.4s						
PKME				IAMs_20	IAMs_20	23 38 39.1	
	comp=Z,5µm,18.0s						
BKSI	**Bulukumba**	**79.67**	**105**	P	**P**	**22 59 13.6**	**+0.5**
	comp=Z,68nm,1.1s						
HARP	**HAARP**	**79.69**	**6**	P	**P**	**22 59 12.5**	**-0.1**
	baz=350,SNR=18						
N14K	**Kuskokwak Cree**	**79.76**	**14**	P	**P**	**22 59 13.9**	**+0.9**
N14K				IAmb	IAmb	22 59 16.1	
	comp=Z,109nm,1.2s						
N14K				IAMs_20	IAMs_20	23 37 33.8	
	comp=Z,4µm,22.0s						
N14K	**Kuskokwak Cree**	**79.76**	**14**	P	**P**	**22 59 13.8**	**+0.9**
	baz=337,SNR=6.3						
N16K	**Nishlik Lake**	**79.80**	**13**	P	**P**	**22 59 14.2**	**+1.0**
	baz=339						
M22K	**Willow**	**79.83**	**8**	P	**P**	**22 59 13.9**	**+0.6**
M22K				IAMs_20	IAMs_20	23 41 29.7	
	comp=Z,5µm,19.0s						
M22K	**Willow**	**79.83**	**8**	P	**P**	**22 59 12.7**	**-0.5**
	baz=346						
N15K	**Kwethluk River**	**79.84**	**14**	P	**P**	**22 59 12.9**	**-0.5**
N15K				IAmb	IAmb	22 59 20.9	
	comp=Z,105nm,1.4s						
N15K				IAMs_20	IAMs_20	23 40 22.9	
	comp=Z,5µm,20.0s						
N15K	**Kwethluk River**	**79.84**	**14**	P	**P**	**22 59 14.8**	**+1.5**
	baz=338,SNR=7.2						
M26K	**Nabesna, AK**	**79.85**	**5**	P	**P**	**22 59 14.0**	**+0.5**
M26K	**Nabesna, AK**	**79.85**	**5**	P	**P**	**22 59 13.7**	**+0.2**
	baz=352,SNR=21						
STLK	**Strandline Lak**	**79.87**	**9**	P	**P**	**22 59 13.3**	**-0.3**
M24K	**Tolsona, Glenn**	**79.89**	**6**	P	**P**	**22 59 14.5**	**+0.8**
M24K				IAmb	IAmb	22 59 35.9	
	comp=Z,172nm,1.1s						
M24K	**Tolsona, Glenn**	**79.89**	**6**	P	**P**	**22 59 14.6**	**+0.8**
	baz=349,SNR=23						
GHO	**Glory Hole Cre**	**79.95**	**8**	P	**P**	**22 59 14.5**	**+0.5**
M27K	**Edge Creek, AK**	**79.97**	**4**	P	**P**	**22 59 15.2**	**+0.9**
M27K				IAmb	IAmb	22 59 17.5	
	comp=Z,95nm,1.2s						
M27K	**Edge Creek, AK**	**79.97**	**4**	P	**P**	**22 59 15.1**	**+0.9**
	baz=352,SNR=31						
M30M	**Minto, Yukon**	**79.97**	**2**	P	**P**	**22 59 14.3**	**+0.2**
M30M				IAMs_20	IAMs_20	23 39 41.5	
	comp=Z,4µm,20.0s						
M30M	**Minto, Yukon**	**79.97**	**2**	P	**P**	**22 59 14.1**	**0.0**
	baz=356,SNR=11						
SML	**Sawmill**	**79.98**	**8**	P	**P**	**22 59 14.3**	**+0.1**
SML				IAmb	IAmb	22 59 20.6	
	comp=Z,100nm,1.0s						
SML	**Sawmill**	**79.98**	**8**	P	**P**	**22 59 14.3**	**+0.1**
SML				pmax	pmax		
	comp=Z,100nm,1.0s						
SML	**Sawmill**	**79.98**	**8**	P	**P**	**22 59 13.7**	**-0.5**
	baz=347,SNR=20						
SML				S	**S**	**23 09 17.1**	**-0.3**
	baz=347						
N17K	**Nushagak Hills**	**80.02**	**12**	P	**P**	**22 59 15.2**	**+0.9**
N17K				IAmb	IAmb	22 59 22.7	
	comp=Z,185nm,1.9s						
N17K				IAMs_20	IAMs_20	23 40 32.5	
	comp=Z,6µm,20.0s						
N17K	**Nushagak Hills**	**80.02**	**12**	P	**P**	**22 59 15.6**	**+1.3**
	baz=340,SNR=8.3						
SUA	**Susitna One**	**80.04**	**9**	P	**P**	**22 59 15.4**	**+0.8**
SUA				IAmb	IAmb	22 59 21.2	
	comp=Z,184nm,1.1s						
SUA				IAMs_20	IAMs_20	23 37 58.2	
	comp=Z,4µm,21.0s						
SUA	**Susitna One**	**80.04**	**9**	P	**P**	**22 59 14.7**	**+0.1**
	baz=345,SNR=15						
SUA				S	**S**	**23 09 18.2**	**0.0**
	baz=345						
M29M	**Somme Creek**	**80.05**	**3**	P	**P**	**22 59 13.2**	**-1.4**
M29M				IAMs_20	IAMs_20	23 40 04.5	
	comp=Z,4µm,19.0s						
M29M	**Somme Creek**	**80.05**	**3**	P	**P**	**22 59 15.1**	**+0.4**
	baz=355,SNR=12						
M29M				S	**S**	**23 09 20.1**	**+1.8**
	baz=355						
SCM	**Sheep Creek Mo**	**80.05**	**7**	P	**P**	**22 59 13.7**	**-0.9**
SCM				IAmb	IAmb	22 59 21.3	
	comp=Z,205nm,1.5s						
SCM				IAMs_20	IAMs_20	23 38 29.5	
	comp=Z,4µm,22.0s						
SCM	**Sheep Creek Mo**	**80.05**	**7**	P	**P**	**22 59 13.7**	**-0.9**
SCM				pmax	pmax		
	comp=Z,205nm,1.5s						
SCM				MLR	MLR		
	comp=Z,4µm,22.0s						
SCM	**Sheep Creek Mo**	**80.05**	**7**	P	**P**	**22 59 15.4**	**+0.8**
	baz=348,SNR=9.9						
M23K	**Glacier View**	**80.06**	**7**	P	**P**	**22 59 14.8**	**+0.3**
	baz=348,SNR=11						
N18K	**Kilae Creek**	**80.08**	**11**	P	**P**	**22 59 15.5**	**+0.8**
N18K				IAmb	IAmb	22 59 22.1	
	comp=Z,107nm,1.4s						
N18K	**Kilae Creek**	**80.08**	**11**	P	**P**	**22 59 15.1**	**+0.4**
	baz=341,SNR=11						
PMR	**Palmer**	**80.10**	**8**	P	**P**	**22 59 14.7**	**0.0**
PMR				IAmb	IAmb	22 59 31.3	
	comp=Z,124nm,1.2s						
PMR	**Palmer**	**80.10**	**8**	P	**P**	**22 59 15.0**	**+0.3**
PMR	**Palmer**	**80.10**	**8**	P	**P**	**22 59 14.7**	**0.0**
PMR				pmax	pmax		
	comp=Z,124nm,1.2s						
PMR	**Palmer**	**80.10**	**8**	P	**P**	**22 59 15.2**	**+0.5**
	baz=347,SNR=12						
PMR				S	**S**	**23 09 19.0**	**+0.4**
	baz=347						
N20K	**Mount Spurr**	**80.11**	**10**	P	**P**	**22 59 14.8**	**-0.1**
	baz=344						
N20K				S	**S**	**23 09 19.7**	**+0.8**
	baz=344						
SPCR	**Spurr Chakacha**	**80.11**	**10**	P	**P**	**22 59 14.7**	**-0.2**
	baz=344						
SPCR				S	**S**	**23 09 19.5**	**+0.6**
	baz=344						
AIS	**Amsterdam Isla**	**80.13**	**156**	P	**P**	**22 59 14.7**	**-0.2**
PLAI	**Plampang**	**80.14**	**109**	P	**P**	**22 59 15.8**	**+0.1**
PLAI	**Plampang**	**80.14**	**109**	P	**P**	**22 59 16.2**	**+0.5**
	comp=Z,63nm,1.5s						
SPU	**Mount Spurr**	**80.15**	**9**	P	**P**	**22 59 14.5**	**-0.6**
N19K	**Bonanza Creek**	**80.17**	**11**	P	**P**	**22 59 15.3**	**0.0**
N19K	**Bonanza Creek**	**80.17**	**11**	P	**P**	**22 59 15.7**	**+0.4**
	baz=342,SNR=22						
N19K				S	**S**	**23 09 20.3**	**+0.7**
	baz=342						
SPIA	**Saint Paul Isl**	**80.24**	**20**	IAMs_20	IAMs_20	23 39 59.5	
	comp=Z,5µm,21.0s						
SPIA	**Saint Paul Isl**	**80.24**	**20**	P	**P**	**22 59 16.2**	**+0.6**
	baz=330						
G62A	**West of Eustis**	**80.33**	**321**	P	**P**	**22 59 15.8**	**-0.5**
G62A				IAmb	IAmb	22 59 22.9	
	comp=Z,159nm,1.3s						
G62A				IAMs_20	IAMs_20	23 39 08.5	
	comp=Z,4µm,19.0s						
WVL	**Waterville**	**80.34**	**320**	P	**P**	**22 59 16.3**	**-0.1**
KNK	**Knik Glacier**	**80.35**	**8**	P	**P**	**22 59 16.9**	**+0.8**
KNK	**Knik Glacier**	**80.35**	**8**	P	**P**	**22 59 16.0**	**-0.1**
	baz=347,SNR=24						
KNK				S	**S**	**23 09 22.2**	**+0.9**
	baz=347						
M31M	**Drury Creek, Y**	**80.40**	**1**	P	**P**	**22 59 16.2**	**-0.2**
M31M				IAMs_20	IAMs_20	23 39 37.7	
	comp=Z,4µm,21.0s						
M31M	**Drury Creek, Y**	**80.40**	**1**	P	**P**	**22 59 16.7**	**+0.3**
	baz=358,SNR=20						
M31M				S	**S**	**23 09 22.2**	**+0.5**
	baz=358						
FIS	**Fire Island**	**80.42**	**9**	IAMs_20	IAMs_20	23 36 54.1	
	comp=Z,5µm,22.0s						
O14K	**Tigyukauivet M**	**80.47**	**15**	P	**P**	**22 59 17.9**	**+1.2**
O14K				IAmb	IAmb	22 59 23.8	
	comp=Z,119nm,1.4s						
O14K				IAMs_20	IAMs_20	23 40 39.4	
	comp=Z,5µm,21.0s						
O14K	**Tigyukauivet M**	**80.47**	**15**	P	**P**	**22 59 17.0**	**+0.3**
	baz=337						
BSSI	**Bau Bau, Buton**	**80.47**	**105**	P	**P**	**22 59 17.4**	**-0.1**
	comp=Z,2µmcomp=Z,106nm,1.2s						
KLU	**Klutina**	**80.52**	**6**	P	**P**	**22 59 17.5**	**+0.4**
KLU				IAmb	IAmb	22 59 39.1	
	comp=Z,116nm,1.2s						
KLU	**Klutina**	**80.52**	**6**	P	**P**	**22 59 17.7**	**+0.6**
	baz=349,SNR=32						
N25K	**Chitina, Valde**	**80.52**	**6**	P	**P**	**22 59 17.5**	**+0.3**
N25K	**Chitina, Valde**	**80.52**	**6**	P	**P**	**22 59 17.5**	**+0.3**
	baz=350,SNR=9.6						
RC01	**Rabbit Creek A**	**80.53**	**8**	P	**P**	**22 59 16.7**	**-0.4**
RC01				IAmb	IAmb	22 59 20.0	
	comp=Z,118nm,1.1s						
RC01	**Rabbit Creek A**	**80.53**	**8**	P	**P**	**22 59 17.5**	**+0.4**
	baz=346						
YUK3	**Moose Creek**	**80.63**	**4**	P	**P**	**22 59 18.4**	**+0.5**
	baz=354,SNR=31						
CAPN	**Captain Cook N**	**80.67**	**9**	P	**P**	**22 59 18.9**	**+1.2**
	baz=345						
O16K	**Kokwok River B**	**80.74**	**13**	P	**P**	**22 59 18.8**	**+0.6**
O16K				IAMs_20	IAMs_20	23 39 16.7	
	comp=Z,5µm,21.0s						
O16K	**Kokwok River B**	**80.74**	**13**	P	**P**	**22 59 19.0**	**+0.8**
	baz=340,SNR=8.6						
GLB	**Gilahina Butte**	**80.75**	**5**	P	**P**	**22 59 17.9**	**-0.4**
O17K	**Koliganek Bris**	**80.75**	**12**	P	**P**	**22 59

comp=Z,5µm,19.0s
P08K Saint George I 80.93 20 P P 22 59 19.9 +0.6
baz=331
O18K Koktuh Hills 80.97 11 P P 22 59 20.4 +0.9
baz=342,SNR=7.0
VRDI Verde Repeater 80.98 5 P P 22 59 20.1 +0.3
GLI Glacier Island 81.02 7 P P 22 59 20.0 +0.3
GLI IAMs_20 IAMs_20 23 39 20.9
comp=Z,5µm,21.0s
GLI Glacier Island 81.02 7 P P 22 59 20.1 +0.4
baz=348,SNR=5.8
TGTN Hyland Airport 81.03 358 P P 22 59 20.9 +1.1
baz=3.3,SNR=21
SLKM Skilak Lake 81.03 9 P P 22 59 20.3 +0.5
SLKM IAmb IAmb 22 59 26.2
comp=Z,194nm,1.3s
N30M Aishikik Lake 81.08 2 P P 22 59 20.2 +0.1
N30M Aishikik Lake 81.08 2 P P 22 59 19.7 -0.4
baz=356,SNR=7.8
N31M Braeburn, Yuko 81.09 2 P P 22 59 20.3 +0.2
N31M IAmb IAmb 22 59 26.2
comp=Z,134nm,1.9s
N31M Braeburn, Yuko 81.09 2 P P 22 59 20.1 -0.1
baz=357,SNR=8.1
H62A Milan 81.10 321 P P 22 59 20.1 -0.4
H62A IAmb IAmb 22 59 26.7
comp=Z,95nm,1.3s
H62A IAMs_20 IAMs_20 23 39 41.9
comp=Z,5µm,20.0s
O22K Cooper Landing 81.12 9 P P 22 59 18.9 -1.3
O22K IAmb IAmb 22 59 34.7
comp=Z,164nm,1.1s
O22K IAMs_20 IAMs_20 23 37 39.7
comp=Z,4µm,22.0s
O22K Cooper Landing 81.12 9 P P 22 59 20.4 +0.2
baz=346,SNR=7.1
O20K Slope Mountain 81.14 10 P P 22 59 20.9 +0.4
baz=344
YUK4 Talbot Arm 81.14 3 P P 22 59 20.6 0.0
baz=355,SNR=22
BMRM Bremner River 81.15 6 P P 22 59 20.7 +0.2
BMRM Bremner River 81.15 6 P P 22 59 20.6 +0.1
baz=350,SNR=6.1
YUK8 Steele Glacier 81.15 4 P P 22 59 20.4 -0.4
baz=354
ILSW Iliamna Southw 81.16 10 P P 22 59 19.9 -0.7
ILSW IAmb IAmb 22 59 26.1
comp=Z,98nm,1.4s
I63A Otisfield 81.18 320 P P 22 59 20.1 -0.7
I63A IAmb IAmb 22 59 30.9
comp=Z,125nm,1.5s
I63A IAMs_20 IAMs_20 23 39 33.0
comp=Z,5µm,19.0s
FID Port Fidalgo 81.20 7 P P 22 59 20.9 +0.2
FID IAmb IAmb 22 59 28.6
comp=Z,276nm,1.9s
FID IAMs_20 IAMs_20 23 39 27.1
comp=Z,6µm,22.0s
BARN Barnard Glacie 81.27 4 P P 22 59 21.8 +0.5
BARN IAmb IAmb 22 59 48.7
comp=Z,127nm,1.6s
P16K Nushagak River 81.29 13 P P 22 59 22.1 +0.9
P16K IAmb IAmb 22 59 31.6
comp=Z,111nm,1.0s
P16K IAMs_20 IAMs_20 23 39 22.1
comp=Z,5µm,22.0s
P16K Nushagak River 81.29 13 P P 22 59 21.3 +0.2
baz=340
CTG Chitna Glacier 81.39 4 P P 22 59 21.7 -0.1
baz=353,SNR=9.5
CTGM Chitina Glacie 81.39 4 P P 22 59 21.6 -0.3
CTGM IAmb IAmb 22 59 28.8
comp=Z,141nm,1.6s
P17K Kvichak River 81.40 12 P P 22 59 22.3 +0.6
baz=341,SNR=11
P18K Big Mountain, 81.41 12 P P 22 59 20.8 -1.0
P18K Big Mountain, 81.41 12 P P 22 59 22.2 +0.3
baz=342
N32M Quiet Lake 81.46 0 P P 22 59 21.9 -0.3
N32M Quiet Lake 81.46 0 P P 22 59 21.8 -0.3
baz=360
P19K Oil Pt 81.47 10 P P 22 59 21.7 -0.5
P19K IAmb IAmb 23 00 38.3
comp=Z,181nm,1.6s
P19K IAMs_20 IAMs_20 23 39 19.8
comp=Z,5µm,21.0s
P19K Oil Pt 81.47 10 P P 22 59 22.3 +0.1
baz=344
EYAK Cordova Ski Ar 81.47 7 P P 22 59 22.3 +0.2
EYAK IAmb IAmb 22 59 29.4
comp=Z,216nm,1.6s
EYAK IAMs_20 IAMs_20 23 41 59.9
comp=Z,4µm,20.0s
EYAK Cordova Ski Ar 81.47 7 P P 22 59 23.8 +1.8
EYAK Cordova Ski Ar 81.47 7 P P 22 59 22.8 +0.7
baz=349,SNR=7.6
CRQM Cirque 81.47 5 P P 22 59 22.2 -0.2
CRQE Cirque 81.48 5 P P 22 59 21.0 -1.4
baz=352,SNR=12
VLDQ Val d'Or 81.48 326 P P 22 59 22.6 +0.2
VLDQ IAmb IAmb 22 59 29.2
comp=Z,210nm,1.3s
TGL Tana Glacier 81.50 5 P P 22 59 22.7 +0.3
TGL IAmb IAmb 22 59 29.0
comp=Z,171nm,1.6s
SEW Seward 81.52 8 P P 22 59 22.2 -0.1
SEW IAmb IAmb 22 59 24.9
comp=Z,118nm,1.2s
SEW IAMs_20 IAMs_20 23 41 01.2
comp=Z,4µm,20.0s
SEW Seward 81.52 8 P P 22 59 22.5 +0.2
baz=346,SNR=9.3
TNTI Ternate 81.53 96 P P 22 59 22.6 -0.5
TNTI Ternate 81.53 96 P P 22 59 24.1 +0.9
TNTI Ternate 81.53 96 P P 22 59 27.1 +3.9
comp=Z,2µmcomp=Z,142nm,2.1s
HIN Hinchinbrook I 81.55 7 P P 22 59 22.8 +0.2
HIN IAmb IAmb 23 00 05.9
comp=Z,119nm,1.2s
HIN IAMs_20 IAMs_20 23 39 37.0
comp=Z,5µm,21.0s
YUK6 Outpost Mounta 81.56 3 P P 22 59 22.5 -0.3
baz=355
TRQ Mont Tremblant 81.57 323 P P 22 59 22.0 -1.0
TRQ IAmb IAmb 22 59 29.3
comp=Z,174nm,1.5s
GRNC Granite Creek 81.59 5 P P 22 59 22.8 -0.2
GRNC IAmb IAmb 22 59 49.6
comp=Z,114nm,1.2s
O28M Mount Upton 81.64 4 P P 22 59 22.5 -0.9
O28M Mount Upton 81.64 4 P P 22 59 22.2 -1.2
baz=354
MNTQ Montreal, Queb 81.65 323 P P 22 59 23.5 +0.2
BBSI Bau Bau 81.66 104 P P 22 59 27.6 +3.8
comp=Z,7µmcomp=Z,108nm,1.5s
BRLK Bradley Lake 81.67 9 P P 22 59 22.4 -0.8
BRLK IAmb IAmb 22 59 25.2
comp=Z,119nm,1.2s
BRLK IAMs_20 IAMs_20 23 40 21.6
comp=Z,4µm,21.0s
HOM Homer 81.68 10 P P 22 59 20.8 -2.4
HOM IAMs_20 IAMs_20 23 42 14.4
comp=Z,4µm,19.0s
HOM Homer 81.68 10 P P 22 59 23.2 0.0
baz=345
ISLE Juniper Island 81.68 5 P P 22 59 23.3 -0.1
ISLE IAmb IAmb 22 59 49.6
comp=Z,136nm,1.2s
ISLE IAMs_20 IAMs_20 23 40 58.6
comp=Z,5µm,21.0s
I62A Tamworth 81.69 320 P P 22 59 23.3 -0.2
I62A IAmb IAmb 22 59 30.3
comp=Z,153nm,1.4s
I62A IAMs_20 IAMs_20 23 33 12.5
comp=Z,4µm,21.0s
HYT Haines Junctio 81.71 2 P P 22 59 23.1 -0.4
HYT Haines Junctio 81.71 2 P P 22 59 23.3 -0.2
baz=356,SNR=23
BRSE Bradley Lake S 81.72 9 P P 22 59 22.0 -1.4
baz=346
RAGM Ragged Mountai 81.72 6 P P 22 59 22.4 -1.1
RAGM IAmb IAmb 22 59 30.6
comp=Z,186nm,1.4s
LBNH Lisbon 81.72 321 P P 22 59 23.2 -0.5
LBNH IAmb IAmb 22 59 30.6
comp=Z,118nm,1.2s
LBNH IAMs_20 IAMs_20 23 37 27.4
comp=Z,3µm,18.0s
LBNH Lisbon 81.72 321 P P 22 59 23.3 -0.5
LBNH pmax pmax
comp=Z,118nm,1.3s
LBNH MLR MLR
comp=Z,3µm,18.0s
BERG Berg Lake 81.79 6 P P 22 59 24.0 +0.2
BERG IAmb IAmb 23 02 27.6
comp=Z,160nm,1.8s
WAX Waxell Ridge 81.80 5 P P 22 59 24.7 +0.7
WAX IAmb IAmb 22 59 52.3
comp=Z,160nm,1.6s
WAX IAMs_20 IAMs_20 23 42 50.7
comp=Z,4µm,20.0s
O30N Mendenhall 81.80 2 P P 22 59 22.5 -1.4
O30N IAMs_20 IAMs_20 23 41 06.8
comp=Z,4µm,20.0s
O30N Mendenhall 81.80 2 P P 22 59 23.6 -0.4
baz=357,SNR=9.2
HMT Hamilton 81.81 6 P P 22 59 23.5 -0.4
HMT IAmb IAmb 22 59 31.0
comp=Z,230nm,1.8s
P23K Montague Islan 81.85 7 P P 22 59 23.6 -0.5
P23K IAmb IAmb 22 59 32.8
comp=Z,161nm,1.3s
P23K IAMs_20 IAMs_20 23 37 23.0
comp=Z,5µm,22.0s
P23K Montague Islan 81.85 7 P P 22 59 24.1 0.0
baz=348
Q16K King Salmon 81.86 12 P P 22 59 24.2 +0.1
baz=341,SNR=8.2
CNPM China Poot 81.86 10 P P 22 59 23.1 -1.1
CNPM IAmb IAmb 22 59 33.5
comp=Z,133nm,1.3s
WBSI Waikababak, Su 81.88 109 P P 22 59 26.0 +1.0
comp=Z,2µmcomp=Z,124nm,1.6s
TABL Table Mountain 81.92 4 P P 22 59 24.8 0.0
TABL IAmb IAmb 22 59 32.4
comp=Z,118nm,1.6s
WHY Whitehorse 81.94 1 P P 22 59 24.2 -0.5
WHY Whitehorse 81.94 1 P P 22 59 24.2 -0.5
baz=358
YAH Yahtse 81.96 5 P P 22 59 24.9 -0.1
YAH IAmb IAmb 22 59 33.0
comp=Z,229nm,1.9s
YAH IAMs_20 IAMs_20 23 41 08.1
comp=Z,5µm,21.0s
SNH Sunshine Point 82.07 5 P P 22 59 24.8 -0.6
SNH IAMs_20 IAMs_20 23 42 59.8
comp=Z,5µm,19.0s
VT1 Waterbury 82.07 321 P P 22 59 25.7 +0.1
VT1 IAmb IAmb 22 59 32.3
comp=Z,104nm,1.3s
VT1 IAMs_20 IAMs_20 23 38 38.7
comp=Z,4µm,19.0s
BGLC Bering Glacier 82.09 5 P P 22 59 25.1 -0.2
baz=351
FRNY Flat Rock 82.12 322 P P 22 59 26.1 +0.3
FRNY IAmb IAmb 22 59 31.8
comp=Z,146nm,1.6s
MESA MESA 82.13 5 P P 22 59 26.4 +0.6
MESA IAmb IAmb 22 59 52.6
comp=Z,82nm,1.2s
MESA IAMs_20 IAMs_20 23 41 23.5
comp=Z,5µm,20.0s
MESA MESA 82.13 5 P P 22 59 25.3 -0.5
baz=352
Q18K Katmai Hardscr 82.16 12 P P 22 59 24.8 -1.1
baz=342
SANI Sanana 82.18 99 P P 22 59 24.6 -1.9
SANI Sanana 82.18 99 P P 22 59 25.8 -0.8
SANI Sanana 82.18 99 P P 22 59 26.3 -0.3
comp=Z,1µmcomp=Z,96nm,1.6s
O29M Mount Kennedy 82.19 3 P P 22 59 25.3 -0.8
O29M IAmb IAmb 22 59 32.5
comp=Z,157nm,2.0s
O29M Mount Kennedy 82.19 3 P P 22 59 26.2 +0.1
baz=355,SNR=6.6
KAIM Kayak Island 82.20 6 P P 22 59 25.6 -0.4
KAIM Kayak Island 82.20 6 P P 22 59 23.2 -2.7
baz=350
KOTAN Kotaneelee Air 82.24 356 P P 22 59 24.1 -2.1
baz=6.7,SNR=18
HNH Hanover 82.29 321 P P 22 59 27.1 +0.3
HNH IAmb IAmb 22 59 33.5
comp=Z,178nm,1.4s
HNH IAMs_20 IAMs_20 23 40 18.4
comp=Z,5µm,18.0s
PCA Pinnacle 82.31 4 P P 22 59 26.9 +0.2
PCA IAmb IAmb 22 59 33.7
comp=Z,143nm,1.5s
PINM Pinnacle 82.31 4 P P 22 59 25.7 -0.9
baz=354
Q17K Contact Creek 82.38 12 P P 22 59 25.4 -1.6
baz=342
P33M Teslin, Yukon 82.41 0 P P 22 59 26.6 -0.6
P33M Teslin, Yukon 82.41 0 P P 22 59 25.0 -2.1
baz=360,SNR=9.9
P30M Million Dollar 82.43 2 P P 22 59 25.5 -1.8
baz=355
WTLY Watson Lake, Y 82.46 358 P P 22 59 27.4 0.0
WTLY Watson Lake, Y 82.46 358 P P 22 59 26.5 -0.8
baz=2.9,SNR=8.8
BCPM Bancas Point 82.49 4 P P 22 59 26.8 -0.7
Q23K Middleton Isla 82.51 7 P P 22 59 27.0 -0.5
baz=349
MID Middleton Isla 82.52 7 P P 22 59 27.1 -0.5
ACHA Angle Creek He 82.52 12 P P 22 59 27.2 -0.5
WSI Waingapu 82.58 108 P P 22 59 30.4 +1.8
Q20K Shuyak Island 82.59 10 P P 22 59 27.8 -0.1
baz=344
SYI Shuyak Island 82.59 10 P P 22 59 27.1 -0.8
SYI IAmb IAmb 22 59 34.1
comp=Z,101nm,1.1s
KIWB Kanaga Island 82.64 26 P P 22 59 28.5 +0.1
KIWB IAmb IAmb 23 00 33.2
comp=Z,213nm,1.7s
J61A Chester 82.68 320 P P 22 59 29.2 +0.5
J61A IAmb IAmb 22 59 38.0
comp=Z,241nm,1.8s
BCX Boston College 82.70 319 P P 22 59 28.4 -0.5
BCX IAmb IAmb 22 59 35.1
comp=Z,230nm,1.7s
OTT Ottawa 82.72 324 P P 22 59 30.5 +1.6
WES Weston 82.74 319 P P 22 59 28.8 -0.3
WES IAmb IAmb 22 59 35.4
comp=Z,170nm,1.7s
WES IAMs_20 IAMs_20 23 40 27.4
comp=Z,4µm,18.0s
WES Weston 82.74 319 P P 22 59 28.8 -0.3
WES pmax pmax
comp=Z,170nm,1.7s
WES MLR MLR
comp=Z,4µm,18.0s
R16K Pilot Point 82.74 13 P P 22 59 28.8 0.0
baz=340
LONY Lake Ozonia 82.76 322 P P 22 59 29.2 0.0
LONY IAMs_20 IAMs_20 23 37 41.6
comp=Z,4µm,19.0s
HRV Adam Dziewonsk 82.78 319 P P 22 59 28.6 -0.7
HRV IAmb IAmb 22 59 35.5
comp=Z,169nm,1.6s
HRV Adam Dziewonsk 82.78 319 P P 22 59 28.6 -0.7
HRV pmax pmax
comp=Z,169nm,1.6s
HRV MLR MLR
comp=Z,3µm,20.0s
PNL Peninsula 82.78 4 P P 22 59 29.0 -0.1
baz=354
L64A Middleborough 82.81 319 P P 22 59 29.6 +0.2
L64A IAmb IAmb 22 59 36.8
comp=Z,209nm,1.9s
L64A IAMs_20 IAMs_20 23 36 08.3
comp=Z,5µm,21.0s
WBO Williamsburg 82.81 323 P P 22 59 29.5 +0.1
WBO IAmb IAmb 22 59 35.8
comp=Z,149nm,1.5s
GSTR Great Sitkin T 82.82 25 P P 22 59 29.2 -0.1
P29M Windy Craggy 82.89 3 P P 22 59 29.6 0.0
P29M IAmb IAmb 22 59 37.1
comp=Z,99nm,1.7s
P29M Windy Craggy 82.89 3 P P 22 59 29.7 0.0
baz=356
R17L Mt. Peulik Vol 82.90 13 P P 22 59 28.3 -1.4
baz=341
M65A Busby, Falmout 82.97 318 IAMs_20 IAMs_20 23 36 30.7
comp=Z,5µm,20.0s
M65A Busby, Falmout 82.97 318 P P 22 59 30.1 -0.1
baz=45
K62A Royalston 83.01 320 P P 22 59 31.2 +0.7
K62A IAMs_20 IAMs_20 23 34 00.5
comp=Z,4µm,22.0s
P32M Atlin 83.03 1 P P 22 59 30.2 -0.1
P32M Atlin 83.03 1 P P 22 59 29.2 -1.1
baz=359,SNR=6.4
EDFI Ende, Flores 83.05 107 P P 22 59 29.4 -1.8
comp=Z,42nm,0.9s
NCB Newcomb 83.06 322 P P 22 59 30.2 -0.6
LIRD Liard River Hi 83.06 357 P P 22 59 30.6 +0.1
baz=5.1,SNR=19
PLBC Pleasant Camp 83.11 2 P P 22 59 29.6 -1.1
baz=357,SNR=12
SKAG Skagway 83.13 1 P P 22 59 31.1 +0.3
SKAG Skagway 83.13 1 P P 22 59 30.3 -0.4
baz=358
BASI Baing, Sumba 83.14 108 P P 22 59 35.5 +4.0
comp=Z,4µmcomp=Z,272nm,1.3s
R33M Jennings River 83.22 359 P P 22 59 31.6 +0.2
R33M IAMs_20 IAMs_20 23 41 17.3
comp=Z,5µm,21.0s
R33M Jennings River 83.22 359 P P 22 59 31.1 -0.3
baz=1.2
R18K Karluk 83.28 12 P P 22 59 30.5 -1.0
baz=343
KDAK Kodiak Island 83.36 11 P P 22 59 32.4 +0.4
KDAK Kodiak Island 83.36 11 P P 22 59 32.9 +1.0
comp=Z,56nm,1.1s,baz=333,slow=6.8,SNR=6.5
KDAK LR LR 23 41 22.8
comp=Z,3µm,21.3s,baz=338,slow=39
comp=Z,56nm,1.1s
KDAK Kodiak Island 83.36 11 P P 22 59 32.4 +0.4
KDAK pmax pmax
comp=Z,164nm,1.3s
KDAK MLR MLR
comp=Z,4µm,21.0s
KDAK Kodiak Island 83.36 11 P P 22 59 31.3 -0.7
baz=344
MMRI Maumere 83.39 106 P P 22 59 31.4 -1.4
MMRI Maumere 83.39 106 P P 22 59 31.6 -1.2
MMRI Maumere 83.39 106 P P 22 59 33.9 +1.1
comp=Z,5µmcomp=Z,93nm,1.2s
L61B Northampton 83.39 320 P P 22 59 32.8 +0.3
L61B IAMs_20 IAMs_20 23 38 02.7
comp=Z,4µm,19.0s
J59A Piesco 83.57 322 P P 22 59 33.3 -0.1
J59A IAMs_20 IAMs_20 23 36 15.1
comp=Z,4µm,21.0s
S14K Fog Glacier 83.57 15 P P 22 59 32.5 -0.8
baz=339
S12K Black Hills 83.58 16 IAMs_20 IAMs_20 23 42 16.6
comp=Z,5µm,21.0s
S12K Black Hills 83.58 16 P P 22 59 32.5 -0.7
baz=337
TOAD Toad River Com 83.58 356 P P 22 59 33.1 -0.1
baz=5.7,SNR=19
UCCT U. Connecticut 83.63 319 P P 22 59 34.0 +0.3
Q32M Nakina River 83.66 360 P P 22 59 33.2 -0.6
Q32M IAmb IAmb 22 59 40.3
comp=Z,75nm,1.6s
Q32M Nakina River 83.66 360 P P 22 59 33.9 +0.1
baz=0.1
TRY Troy 83.69 321 P P 22 59 34.5 +0.6
NLAI Namlea 83.78 99 P P 22 59 39.9 +5.0
comp=Z,55nm,1.0s
OHAK Old Harbor 83.79 11 P P 22 59 33.8 -0.4
OHAK IAmb IAmb 22 59 45.2
comp=Z,52nm,1.0s
OHAK Old Harbor 83.79 11 P P 22 59 35.8 +1.6
OHAK Old Harbor 83.79 11 P P 22 59 34.0 -0.2
baz=344
M63A Gales Ferry 83.82 319 P P 22 59 35.0 +0.3
M63A IAMs_20 IAMs_20 23 34 25.0
comp=Z,5µm,22.0s
CRZF Crozet Islands 83.88 177 P P 22 59 35.4 +0.9
CRZF IAMs_20 IAMs_20 23 38 03.1
comp=Z,5µm,18.0s
LVA Lava Point 84.02 19 P P 22 59 35.2 -0.3
BESE Bessie Mountai 84.03 1 P P 22 59 35.7 +0.2
BESE IAmb IAmb 22 59 43.5
comp=Z,64nm,1.4s
BESE IAMs_20 IAMs_20 23 41 26.6
comp=Z,4µm,20.0s
FALS False Pass 84.04 17 P P 22 59 35.1 -0.4
FALS IAmb IAmb 22 59 42.7
comp=Z,116nm,1.3s
AKUT Akutan 84.11 19 P P 22 59 34.7 -1.2
AKUT IAmb IAmb 23 02 42.9
comp=Z,172nm,1.6s
DLBC Dease Lake 84.16 359 P P 22 59 37.0 +0.8
comp=Z,25nm,1.1s,baz=319,slow=5.4,SNR=17
DLBC LR LR 23 42 11.9
comp=Z,4µm,20.4s,baz=328,slow=39
comp=Z,25nm,1.1s
UNV Unalaska Valle 84.19 19 P P 22 59 35.2 -1.1
baz=334
FFC Flin Flon 84.24 343 P P 22 59 36.1 -0.5
FFC IAmb IAmb 22 59 41.7
comp=Z,63nm,1.4s
FFC Flin Flon 84.24 343 IAMs_20 IAMs_20 23 42 13.2
comp=Z,5µm,21.0s
FFC Flin Flon 84.24 343 P P 22 59 36.1 -0.5
FFC pmax pmax
comp=Z,63nm,1.4s
FFC MLR MLR
comp=Z,5µm,21.0s
SDPT Sand Point 84.25 16 P P 22 59 36.1 -0.5
SDPT Sand Point 84.25 16 P P 22 59 35.5 -1.1
baz=338
DELO Deloro Mine 84.28 324 P P 22 59 37.7 +0.7
SII Sitkinak Islan 84.29 12 P P 22 59 37.4 +0.6
SII IAMs_20 IAMs_20 23 44 02.5
comp=Z,4µm,21.0s
SII Sitkinak Islan 84.29 12 P P 22 59 36.0 -0.8
baz=343
NIKH Nikolski High 84.32 21 P P 22 59 36.3 -0.7
baz=332
KSCT Kent School, K 84.33 320 P P 22 59 37.7 +0.4
JIS Juneau Island 84.34 1 P P 22 59 38.2 +1.3
R32K Eaglecrest 84.34 1 P P 22 59 37.0 0.0
R32K IAMs_20 IAMs_20 23 40 27.8
comp=Z,4µm,20.0s
R32K Eaglecrest 84.34 1 P P 22 59 36.3 -0.7
baz=358
J57A Williamstown 84.34 322 P P 22 59 37.1 -0.2
J57A IAMs_20 IAMs_20 23 36 11.4
comp=Z,4µm,21.0s
BUKO Buck Lake 84.38 326 P P 22 59 37.4 -0.1
PECO Prince Edward 84.42 323 P P 22 59 36.7 -1.0
S31K Pelican 84.61 2 P P 22 59 39.0 +0.6
S31K IAmb IAmb 23 00 13.6
comp=Z,91nm,1.6s
S31K Pelican 84.61 2 P P 22 59 38.0 -0.3
baz=357
WSPT Westport, CT 84.66 319 P P 22 59 37.5 -1.5
WSPT IAmb IAmb 22 59 44.5
comp=Z,122nm,1.5s
S34M Telegraph Cree 84.71 359 P P 22 59 38.8 -0.1
S34M IAMs_20 IAMs_20 23 44 06.6
comp=Z,4µm,20.0s
S34M Telegraph Cree 84.71 359 P P 22 59 37.8 -1.1
baz=1.1,SNR=8.6
CHIR Chirikof Islan 84.75 13 IAMs_20 IAMs_20 23 42 27.6
comp=Z,4µm,21.0s
CHIR Chirikof Islan 84.75 13 P P 22 59 37.8 -1.3
baz=342
L59A Walton 84.78 321 P P 22 59 39.1 -0.5
SADO Sadowa 84.78 325 P P 22 59 40.0 +0.5
SADO IAmb IAmb 22 59 45.3
comp=Z,103nm,1.5s
SADO Sadowa 84.78 325 LR LR 23 37 11.0
comp=Z,3µm,21.2s,baz=64,slow=36
N62A Caumsett State 84.90 319 P P 22 59 40.2 0.0
AAI Ambon 84.92 99 P P 22 59 44.9 +4.3
comp=Z,113nm,1.9s
CHNA Chernabura Isl 84.92 15 P P 22 59 39.1 -0.8
baz=339
CNBA Chernabura Isl 84.93 15 P P 22 59 39.8 -0.3
CNBA IAmb IAmb 22 59 46.1
comp=Z,69nm,1.3s
PAL Palisades 85.07 320 P P 22 59 40.8 -0.2
PAL IAmb IAmb 22 59 46.6

comp=Z,111nm,1.2s
PAL IAMs_20 IAMs_20 23 38 28.1

comp=Z,4µm,22.0s
PAL Palisades 85.07 320 P **P** **22 59 40.8 -0.2**
PAL pmax pmax

comp=Z,111nm,1.3s
PAL MLR MLR

comp=Z,4µm,22.0s
K57A Scipio Center 85.10 322 P **P** **22 59 41.8 +0.7**
K57A IAMs_20 IAMs_20 23 39 10.6

comp=Z,4µm,19.0s
S32K Killisnoo 85.14 1 P **P** **22 59 41.4 +0.3**
S32K IAmb IAmb 22 59 48.2

comp=Z,89nm,1.7s
S32K Killisnoo 85.14 1 P **P** **22 59 40.0 -1.0**
baz=358
BINY Binghamton 85.24 322 P **P** **22 59 41.9 0.0**
BINY IAMs_20 IAMs_20 23 41 53.3

comp=Z,4µm,19.0s
CPNY Central Park 85.26 319 P **P** **22 59 42.4 +0.5**
MSAI Masohi 85.28 98 P P 22 59 48.8 +6.3

comp=Z,188nm,1.5s
J55A Hilton 85.32 323 P **P** **22 59 42.4 +0.2**
J55A IAmb IAmb 22 59 47.9

comp=Z,67nm,1.1s
J55A IAMs_20 IAMs_20 23 40 30.3

comp=Z,4µm,18.0s
BATI Baumata 85.47 106 P **P** **22 59 43.6 +0.2**
comp=Z,84nm,0.9s,baz=284,slow=1.4,SNR=9.6
BATI LR LR 23 41 38.8

comp=Z,5µm,21.7s,baz=318,slow=38
comp=Z,84nm,0.9s
BATI Baumata 85.47 106 P **P** **22 59 44.4 +1.0**
comp=Z,2µmcomp=Z,179nm,1.4s
SIT Sitka 85.54 2 P **P** **22 59 41.8 -1.2**
baz=358
SWI Sorong 85.60 94 P **P** **22 59 44.9 +0.8**
comp=Z,2µmcomp=Z,199nm,1.8s
KSPA Keystone Colle 85.61 321 P **P** **22 59 43.5 -0.3**
KSPA IAmb IAmb 22 59 49.5

comp=Z,158nm,1.5s
T35M Bob Quinn 85.63 359 P **P** **22 59 43.5 0.0**
T35M IAMs_20 IAMs_20 23 42 36.0

comp=Z,6µm,21.0s
T35M Bob Quinn 85.63 359 P **P** **22 59 43.3 -0.2**
baz=1.7
SOEI Soe 85.64 106 P **P** **22 59 42.9 -1.5**
SOEI Soe 85.64 106 P **P** **22 59 44.1 -0.2**
SOEI IAMs_20 IAMs_20 23 41 25.4

comp=Z,4µm,22.0s
SOEI Soe 85.64 106 P **P** **22 59 45.4 +1.0**
SOEI Soe 85.64 106 P **P** **22 59 47.1 +2.7**
comp=Z,3µmcomp=Z,226nm,1.7s
BRNJ Basking Ridge 85.65 320 P **P** **22 59 44.5 +0.6**
BRNJ IAmb IAmb 22 59 49.3

comp=Z,117nm,1.5s
MEDO Medina 85.70 324 P **P** **22 59 44.1 0.0**
MEDO IAmb IAmb 22 59 50.0

comp=Z,143nm,1.6s
E46A Sault Ste Mari 85.76 329 P **P** **22 59 44.3 -0.1**
E46A IAMs_20 IAMs_20 23 42 41.4

comp=Z,4µm,18.0s
MMNY Mt. Morris Dam 85.77 323 P **P** **22 59 44.0 -0.5**
MMNY IAmb IAmb 22 59 50.1

comp=Z,117nm,1.3s
TBO Thunder Bay 85.85 333 P **P** **22 59 44.6 -0.3**
L56A Greenwood 86.05 322 P **P** **22 59 45.9 -0.1**
L56A IAmb IAmb 22 59 55.4

comp=Z,162nm,1.7s
L56A IAMs_20 IAMs_20 23 39 40.8

comp=Z,4µm,20.0s
WRAK Wrangell Islan 86.21 360 P **P** **22 59 46.8 +0.5**
WRAK IAmb IAmb 23 00 33.4

comp=Z,93nm,1.5s
WRAK Wrangell Islan 86.21 360 P **P** **22 59 45.8 -0.6**
baz=0.1
M57A Sunshine Farm, 86.45 322 P **P** **22 59 48.2 +0.4**
M57A IAMs_20 IAMs_20 23 42 49.3

comp=Z,5µm,20.0s
EPLO Experimental L 86.45 336 P **P** **22 59 46.4 -1.4**
EPLO IAmb IAmb 22 59 54.4

comp=Z,86nm,1.5s
P61A Hammonton 86.51 319 P **P** **22 59 48.5 +0.3**
P61A IAMs_20 IAMs_20 23 40 02.2

comp=Z,4µm,20.0s
U33K Whale Pass 86.52 0 P **P** **22 59 48.7 +0.9**
U33K IAmb IAmb 23 00 12.8

comp=Z,115nm,1.5s
U33K Whale Pass 86.52 0 P **P** **22 59 47.5 -0.3**
baz=360
N58A Sunbury 86.62 321 P **P** **22 59 48.6 -0.1**
N58A IAmb IAmb 22 59 54.3

comp=Z,142nm,1.7s
ULM Lac du Bonnet 86.62 337 P **P** **22 59 48.5 -0.1**
ULM IAmb IAmb 22 59 53.2

comp=Z,70nm,1.3s
ULM Lac du Bonnet 86.62 337 P **P** **22 59 48.0 -0.6**
comp=Z,23nm,1.0s,baz=45,slow=4.3,SNR=8.2
ULM LR LR 23 38 46.2

comp=Z,5µm,21.4s,baz=30,slow=36
comp=Z,23nm,1.0s
ULM Lac du Bonnet 86.62 337 *e*P **P** **22 59 48.5 -0.1**
ULM pmax pmax

comp=Z,23nm,1.0s
PSUB Penn St. - Bra 86.66 320 P **P** **22 59 48.9 0.0**
PSUB IAmb IAmb 22 59 54.2

comp=Z,147nm,1.5s
U35K Hyder 86.69 359 IAMs_20 IAMs_20 23 43 08.2

comp=Z,5µm,21.0s
U35K Hyder 86.69 359 P **P** **22 59 48.8 +0.1**
baz=1.9
BNDI Bandanaira 86.77 98 P **P** **22 59 51.5 +1.7**
BNDI Bandanaira 86.77 98 P P 22 59 54.6 +4.8

comp=Z,216nm,1.2s
MVL Millersville 87.07 320 P **P** **22 59 50.6 -0.3**
MVL IAmb IAmb 22 59 56.6

comp=Z,77nm,1.5s
I49A Point Hope 87.08 327 P **P** **22 59 49.5 -1.4**
I49A IAmb IAmb 22 59 55.8

comp=Z,103nm,1.0s
PAGS Pennsylvania G 87.08 321 P **P** **22 59 50.3 -0.7**
PAGS IAmb IAmb 22 59 56.4

comp=Z,92nm,1.5s
CRAG Craig 87.16 0 P **P** **22 59 50.5 -0.5**
baz=360
EYMN Ely 87.19 334 P **P** **22 59 51.2 -0.1**
EYMN Ely 87.19 334 IAMs_20 IAMs_20 23 41 21.7

comp=Z,5µm,19.0s
ERPA Erie 87.22 324 P **P** **22 59 50.5 -1.1**
ERPA IAmb IAmb 23 00 21.4

comp=Z,111nm,1.6s
ERPA IAMs_20 IAMs_20 23 45 37.7

comp=Z,3µm,18.0s
SSPA Standing Stone 87.35 322 P **P** **22 59 52.1 -0.2**
SSPA Standing Stone 87.35 322 IAMs_20 IAMs_20 23 43 16.3

comp=Z,4µm,18.0s
GUMO Guam 87.53 75 LR LR 23 43 23.8
comp=Z,3µm,19.7s,baz=303,slow=39
PAOC Oil Creek Stat 87.55 323 P **P** **22 59 51.7 -1.5**
PAOC IAmb IAmb 23 00 27.9

comp=Z,102nm,1.7s
FAKI Fak Fak 87.64 95 P **P** **22 59 53.8 -0.2**
FAKI Fak Fak 87.64 95 P **P** **22 59 54.9 +0.9**
FAKI Fak Fak 87.64 95 P **P** **22 59 55.4 +1.4**
comp=Z,3µmcomp=Z,232nm,1.8s
SDMD Soldier's Deli 87.76 320 P **P** **22 59 53.7 -0.6**
F42A Maple Grove Fa 87.79 331 P **P** **22 59 54.6 +0.3**
K50A Casco 87.92 326 P **P** **22 59 54.8 -0.2**
K50A IAmb IAmb 22 59 56.9

comp=Z,51nm,1.0s
K50A IAMs_20 IAMs_20 23 43 02.7

comp=Z,5µm,19.0s
PAMR Moraine State 88.19 323 P **P** **22 59 54.6 -1.7**
P57A Homestead Farm 88.29 321 P **P** **22 59 56.8 0.0**
P57A IAmb IAmb 23 00 01.5

comp=Z,67nm,1.2s
P57A IAMs_20 IAMs_20 23 41 18.3

comp=Z,4µm,21.0s
RKPI Ransiki, Papua 88.30 93 P **P** **22 59 59.2 +2.0**
comp=Z,40nm,1.0s
RCBR Riachuelo 88.31 261 *e*P **P** **22 59 58.3 +1.0**
M52A Chesterland 88.31 324 P **P** **22 59 56.7 -0.2**
M52A IAMs_20 IAMs_20 23 46 58.4

comp=Z,3µm,18.0s
AGMN Agassiz Nation 88.34 336 P **P** **22 59 56.3 -0.5**
AGMN IAmb IAmb 23 00 01.8

comp=Z,38nm,1.1s
E38A The Farm, Brul 88.36 333 P **P** **22 59 56.6 -0.4**
E38A IAmb IAmb 23 00 06.9

comp=Z,60nm,1.4s
S61A Accomac 88.45 318 P **P** **22 59 57.0 -0.5**
S61A IAMs_20 IAMs_20 23 43 04.7

comp=Z,4µm,21.0s
J47A Sunmer 88.51 327 P **P** **22 59 57.8 0.0**
J47A IAmb IAmb 23 00 04.6

comp=Z,68nm,1.3s
N53A Lisbon 88.65 323 P **P** **22 59 58.3 -0.2**
N53A IAmb IAmb 23 00 05.1

comp=Z,96nm,1.7s
N53A IAMs_20 IAMs_20 23 41 25.3

comp=Z,4µm,19.0s
H43A Windswept, Lux 88.72 330 P **P** **22 59 56.7 -2.0**
H43A IAmb IAmb 23 01 28.1

comp=Z,45nm,1.1s
AAM Ann Arbor 88.75 326 P **P** **22 59 55.1 -3.8**
AAM IAmb IAmb 23 00 03.3

comp=Z,66nm,1.4s
AAM IAMs_20 IAMs_20 23 43 27.9

comp=Z,5µm,19.0s
AAM Ann Arbor 88.75 326 P **P** **22 59 55.1 -3.8**
AAM pmax pmax

comp=Z,66nm,1.4s
AAM MLR MLR

comp=Z,5µm,19.0s
O54A Avella 88.91 323 P **P** **22 59 59.6 -0.2**
O54A IAmb IAmb 23 00 04.4

comp=Z,55nm,1.2s
O54A IAMs_20 IAMs_20 23 42 17.5

comp=Z,4µm,18.0s
CBN Corbin Frederi 88.94 320 P **P** **22 59 59.0 -0.9**
CBN IAmb IAmb 23 00 05.0

comp=Z,72nm,1.5s
CBN IAMs_20 IAMs_20 23 41 54.5

comp=Z,4µm,20.0s
G40A Rib Lake 88.99 332 P **P** **22 59 59.5 -0.6**
MCWV Mont Chateau 89.06 322 P **P** **23 00 00.3 -0.2**
MCWV IAmb IAmb 23 00 05.4

comp=Z,88nm,1.1s
MCWV IAMs_20 IAMs_20 23 40 27.5

comp=Z,4µm,21.0s
M50A Fremont 89.19 325 P **P** **22 59 59.0 -2.1**
M50A IAMs_20 IAMs_20 23 43 18.7

comp=Z,3µm,19.0s
Q56A Snyder Ridge, 89.22 321 P **P** **23 00 00.3 -0.9**
Q56A IAmb IAmb 23 00 06.4

comp=Z,85nm,1.3s
Q56A IAMs_20 IAMs_20 23 44 13.7

comp=Z,4µm,18.0s
KMPI Kaimana, Papua 89.24 95 P P 23 00 07.7 +6.1
comp=Z,2µmcomp=Z,151nm,1.7s
O53A New Philadelph 89.26 323 P **P** **23 00 01.3 0.0**
N51A Ashland 89.28 324 P **P** **23 00 01.1 -0.3**
N51A IAmb IAmb 23 00 08.5

comp=Z,82nm,1.5s
N51A IAMs_20 IAMs_20 23 41 50.9

comp=Z,3µm,18.0s
R58B Mineral 89.39 320 P **P** **23 00 01.7 -0.3**
R58B IAMs_20 IAMs_20 23 39 42.2

comp=Z,5µm,22.0s
DIB Dawson Inlet, 89.44 360 P **P** **23 00 02.1 +0.3**
DIB IAmb IAmb 23 00 41.0

comp=Z,121nm,1.4s
MOBC Moresby Island 89.49 360 P **P** **23 00 02.7 +0.4**
MBWA Marble Bar 89.61 117 P **P** **23 00 05.3 +2.2**
comp=Z,18nm,2.4s
MBWA Marble Bar 89.61 117 P **P** **23 00 02.1 -1.0**
MBWA Marble Bar 89.61 117 IAMs_20 IAMs_20 23 42 48.1

comp=Z,4µm,19.0s
MBWA Marble Bar 89.61 117 P **P** **23 00 05.5 +2.4**
MBWA P **P** **23 00 05.5 +2.4**
MBWA Marble Bar 89.61 117 P **P** **23 00 02.7 -0.4**
BAKI Biak 89.64 92 P P 23 00 09.6 +6.1

comp=Z,73nm,1.6s
I42A Draeger Farm, 89.66 330 P **P** **23 00 02.6 -0.6**
I42A IAmb IAmb 23 00 09.7

comp=Z,46nm,1.2s
O52A Adamsville 89.66 324 P **P** **23 00 03.7 +0.5**
O52A IAmb IAmb 23 00 09.4

comp=Z,107nm,1.5s
MDND Maddock 89.88 339 P **P** **23 00 03.9 -0.2**
MDND IAMs_20 IAMs_20 23 41 24.5

comp=Z,5µm,19.0s
PSAC1 Pilbara Seismi 89.91 117 P **P** **23 00 06.9 +2.4**
comp=Z,20nm,1.6s
P53A Whipple 89.94 323 P **P** **23 00 04.0 -0.6**
PSA00 Pilbara Seismi 89.96 117 P **P** **23 00 06.9 +2.1**
comp=Z,23nm,1.6s
PSA00 Pilbara Seismi 89.96 117 P **P** **23 00 04.5 -0.2**
PSA00 Pilbara Seismi 89.96 117 P **P** **23 00 05.1 +0.3**
PSA00 IAmb IAmb 23 00 18.8

comp=Z,17nm,1.4s
PSA00 Pilbara Seismi 89.96 117 P **P** **23 00 05.8 +1.0**
SAUI Saumlaki 89.98 100 P **P** **23 00 04.6 -0.4**
PSAB3 Pilbara Seismi 89.98 118 P **P** **23 00 06.2 +1.4**
comp=Z,21nm,1.1s
SPMN Marine on St. 89.99 333 P **P** **23 00 04.7 0.0**
SPMN IAMs_20 IAMs_20 23 41 50.9

comp=Z,5µm,20.0s
PSAC2 Pilbara Seismi 89.99 117 P **P** **23 00 06.2 +1.3**
comp=Z,15nm,1.5s
Q54A Coxs Mills 90.07 322 P **P** **23 00 04.5 -0.6**
Q54A IAmb IAmb 23 00 10.5

comp=Z,187nm,2.0s
Q54A IAMs_20 IAMs_20 23 42 05.1

comp=Z,5µm,20.0s
S57A Dark Hollow, R 90.09 320 P **P** **23 00 05.2 -0.1**
S57A IAmb IAmb 23 00 10.7

comp=Z,82nm,1.4s
S57A IAMs_20 IAMs_20 23 42 22.7

comp=Z,5µm,21.0s
N49A Columbus Grove 90.09 326 P **P** **23 00 04.9 -0.3**
N49A IAmb IAmb 23 00 11.2

comp=Z,89nm,1.3s
ACSO Alum Creek Sta 90.10 324 P **P** **23 00 04.7 -0.6**
ACSO IAmb IAmb 23 00 11.5

comp=Z,125nm,1.6s
ACSO IAMs_20 IAMs_20 23 41 45.7

comp=Z,3µm,18.0s
L46A Eue Claire 90.14 327 P **P** **23 00 05.3 -0.1**
L46A IAmb IAmb 23 00 10.6

comp=Z,163nm,1.6s
L46A IAMs_20 IAMs_20 23 41 57.3

comp=Z,4µm,21.0s
P52A Corning 90.18 323 P **P** **23 00 05.4 -0.3**
P52A IAmb IAmb 23 00 11.7

comp=Z,112nm,1.4s
R55A Marlinton 90.27 321 P **P** **23 00 06.2 0.0**
R55A IAmb IAmb 23 00 11.7

comp=Z,109nm,1.4s
R55A IAMs_20 IAMs_20 23 44 56.4

comp=Z,4µm,18.0s
I40A Norwalk 90.32 331 P **P** **23 00 06.3 0.0**
I40A IAmb IAmb 23 00 12.9

comp=Z,151nm,1.6s
V61A Roper 90.35 318 P **P** **23 00 07.1 +0.6**
V61A IAMs_20 IAMs_20 23 41 18.0

comp=Z,3µm,20.0s
BBB Bella Bella 90.37 357 LR LR 23 46 31.6
comp=Z,3µm,19.7s,baz=360,slow=40
K43A Burlington 90.41 329 P **P** **23 00 06.9 +0.2**
K43A IAmb IAmb 23 00 21.3

comp=Z,49nm,1.1s
K43A IAMs_20 IAMs_20 23 43 57.4

comp=Z,4µm,20.0s
DGMT Dagmar 90.55 342 IAMs_20 IAMs_20 23 42 39.1
comp=Z,4µm,19.0s
F33A 5 Mile Ranch, 90.65 336 P **P** **23 00 08.0 +0.2**
F33A IAmb IAmb 23 00 13.4

comp=Z,59nm,1.3s
L44A Lake County Fo 90.68 329 IAMs_20 IAMs_20 23 40 32.5
comp=Z,4µm,22.0s
P51A Williamsport 90.73 324 P **P** **23 00 08.2 -0.1**
O49A Covington 90.75 325 P **P** **23 00 07.4 -0.9**
O49A IAMs_20 IAMs_20 23 43 01.9

comp=Z,5µm,20.0s
Q52A Bidwell 90.77 323 P **P** **23 00 08.0 -0.5**
N47A Urbana 90.80 326 P **P** **23 00 08.6 +0.1**
N47A IAMs_20 IAMs_20 23 41 17.0

comp=Z,3µm,21.0s
T57A Hurt 90.83 320 P **P** **23 00 08.6 -0.1**
T57A IAMs_20 IAMs_20 23 40 56.3

comp=Z,4µm,20.0s
NBAN Anadia - AL 90.95 259 *e*P **P** **23 00 11.0 +1.4**
HQIL Hanson Quary C 90.97 328 IAMs_20 IAMs_20 23 40 38.2
comp=Z,4µm,22.0s
JFWS Jewell Farm 91.00 330 P **P** **23 00 09.1 -0.3**
JFWS IAmb IAmb 23 00 10.6

comp=Z,59nm,1.1s
JFWS Jewell Farm 91.00 330 P **P** **23 00 09.1 -0.3**
JFWS pmax pmax

comp=Z,59nm,1.1s
JFWS MLR MLR

comp=Z,6µm,22.0s
O48B Farmland 91.07 326 P **P** **23 00 07.7 -2.1**
O48B IAMs_20 IAMs_20 23 44 27.2

comp=Z,4µm,20.0s
S54A Dingess, Beckl 91.23 322 P **P** **23 00 10.6 -0.1**
S54A IAmb IAmb 23 00 15.8

comp=Z,98nm,1.4s
S54A IAMs_20 IAMs_20 23 45 27.9

comp=Z,4µm,19.0s
Q51A Peebles 91.23 324 P **P** **23 00 10.3 -0.2**
I37A Lemond, Waseca 91.25 333 P **P** **23 00 10.3 -0.3**
BLA Blacksburg 91.25 321 P **P** **23 00 10.2 -0.5**
BLA IAmb IAmb 23 00 16.1

comp=Z,54nm,1.2s
BLA Blacksburg 91.25 321 P **P** **23 00 10.3 -0.5**
BLA pmax pmax

comp=Z,54nm,1.3s
BLA MLR MLR

comp=Z,5µm,18.0s
E28A Huff 91.34 339 P **P** **23 00 11.4 +0.4**
E28A IAMs_20 IAMs_20 23 41 59.4

comp=Z,5µm,22.0s
LLLB Lillooet 91.53 353 P **P** **23 00 12.2 +0.4**
LLLB IAmb IAmb 23 00 42.1

comp=Z,72nm,1.3s
L42A Oliver, Polo 91.54 330 P **P** **23 00 12.3 +0.3**
V58A Windy Hill, Pi 91.68 319 P **P** **23 00 12.3 -0.4**
V58A IAMs_20 IAMs_20 23 42 46.1

comp=Z,3µm,22.0s
W59A Clinton 91.81 318 P **P** **23 00 13.7 +0.4**
SFIN Lafayette 91.82 327 P **P** **23 00 12.9 -0.4**
SFIN IAmb IAmb 23 00 18.1

comp=Z,45nm,1.3s
SFIN IAMs_20 IAMs_20 23 41 36.9

comp=Z,5µm,21.0s
P48A Milroy 91.84 325 P **P** **23 00 12.7 -0.7**
P48A IAMs_20 IAMs_20 23 43 43.5

comp=Z,5µm,20.0s
U56A King 91.90 320 P **P** **23 00 13.6 -0.1**
U56A IAMs_20 IAMs_20 23 41 28.8

comp=Z,3µm,20.0s
HOLB Holberg 91.92 357 P **P** **23 00 13.2 -0.3**
FITZ Fitzroy Crossi 91.92 111 P **P** **23 00 14.5 +0.6**
comp=Z,4.5nm,1.0s
FITZ Fitzroy Crossi 91.92 111 P **P** **23 00 13.6 -0.4**
FITZ Fitzroy Crossi 91.92 111 P **P** **23 00 14.5 +0.6**
comp=Z,14nm,0.9s,baz=309,slow=1.6,SNR=19
FITZ PP **PP** **23 03 55.1 +1.5**
comp=Z,3.3nm,0.9s,baz=318,slow=5.7,SNR=3.0
FITZ LR LR 23 45 05.5

comp=Z,2µm,19.5s,baz=318,slow=38
comp=Z,14nm,0.9s
FITZ Fitzroy Crossi 91.92 111 P **P** **23 00 13.5 -0.4**
L40A Anamosa 92.11 331 P **P** **23 00 14.2 -0.4**
SMPI Sarmi 92.19 91 P **P** **23 00 19.7 +4.4**
comp=Z,3µmcomp=Z,74nm,1.8s
EGMT Eagleton 92.24 345 P **P** **23 00 14.7 -0.5**
EGMT IAmb IAmb 23 00 42.5

comp=Z,78nm,1.9s
EGMT IAMs_20 IAMs_20 23 42 20.5

comp=Z,5µm,22.0s
R50A Paris 92.29 324 P **P** **23 00 15.4 -0.1**
R50A IAmb IAmb 23 00 20.7

comp=Z,90nm,1.4s
R50A IAMs_20 IAMs_20 23 41 21.6

comp=Z,4µm,20.0s
CBB Campbell River 92.38 355 P **P** **23 00 15.4 -0.2**
CBB IAmb IAmb 23 00 45.5

comp=Z,51nm,1.4s
S51A Beattyville 92.46 323 P **P** **23 00 15.7 -0.6**
S51A IAMs_20 IAMs_20 23 43 41.2

comp=Z,4µm,19.0s
U54A Nelsons Funny 92.48 321 P **P** **23 00 16.6 +0.1**
P46A Rosedale 92.50 327 P **P** **23 00 15.9 -0.5**
P46A IAmb IAmb 23 00 20.6

comp=Z,80nm,1.4s
P46A IAMs_20 IAMs_20 23 42 27.9

comp=Z,4µm,20.0s
BLO Bloomington 92.56 326 P **P** **23 00 16.2 -0.5**
BLO IAmb IAmb 23 00 21.5

comp=Z,85nm,1.4s
BLO Bloomington 92.56 326 P **P** **23 00 16.2 -0.5**
BLO pmax pmax

comp=Z,85nm,1.5s
Y60A Bolivia 92.58 318 IAMs_20 IAMs_20 23 46 04.1
comp=Z,3µm,20.0s
ECSD EROS Data Cent 92.62 335 P **P** **23 00 16.7 -0.3**
ECSD EROS Data Cent 92.62 335 IAMs_20 IAMs_20 23 42 48.2
comp=Z,4µm,20.0s
W57A Gilead 92.63 319 P **P** **23 00 17.6 +0.5**
W57A IAmb IAmb 23 00 22.4

comp=Z,53nm,1.4s
W57A IAMs_20 IAMs_20 23 43 25.2

comp=Z,3µm,22.0s
R49A Shelbyville 92.67 325 P **P** **23 00 16.8 -0.4**
R49A IAMs_20 IAMs_20 23 41 23.7

comp=Z,4µm,22.0s
LAO LASA Array 92.71 342 IAMs_20 IAMs_20 23 48 50.7
comp=Z,4µm,21.0s
V55A Taylorsville 92.71 321 P **P** **23 00 17.5 0.0**
V55A IAMs_20 IAMs_20 23 41 02.2

comp=Z,4µm,21.0s
SUSD Miller 92.75 337 P **P** **23 00 17.1 -0.4**
SUSD IAMs_20 IAMs_20 23 41 54.5

comp=Z,5µm,22.0s
KNRA Kununurra 92.75 108 P **P** **23 00 19.0 +1.2**
comp=Z,14nm,1.5s
KNRA Kununurra 92.75 108 P **P** **23 00 17.9 +0.1**
X58A Rowland 92.75 319 P **P** **23 00 17.9 +0.3**
MTN Manton Dam 92.82 104 P **P** **23 00 21.0 +2.8**
MTN Manton Dam 92.82 104 P **P** **23 00 19.3 +1.1**
MTN IAmb IAmb 23 00 23.8

comp=Z,50nm,1.4s
SCIA State Center 93.00 332 P **P** **23 00 18.6 -0.1**
N41A Harden Midland 93.11 330 P **P** **23 00 18.7 -0.5**
N41A IAMs_20 IAMs_20 23 45 38.8

comp=Z,4µm,19.0s
WCI Wyandotte Cave 93.23 325 P **P** **23 00 19.1 -0.7**
WCI IAmb IAmb 23 00 25.6

comp=Z,92nm,1.7s
WCI Wyandotte Cave 93.23 325 IAMs_20 IAMs_20 23 45 44.5
comp=Z,5µm,20.0s
WCI Wyandotte Cave 93.23 325 P **P** **23 00 19.1 -0.7**
WCI pmax pmax

comp=Z,92nm,1.7s
WCI MLR MLR

comp=Z,4µm,20.0s
BIRD Birdtown, Kers 93.27 319 P **P** **23 00 20.3 +0.3**
BIRD IAmb IAmb 23 00 25.8

comp=Z,96nm,1.6s
NEW Newport 93.29 350 P **P** **23 00 20.4 +0.5**
NEW IAmb IAmb 23 00 26.4

comp=Z,41nm,1.1s
NEW Newport 93.29 350 LR LR 23 43 59.5
comp=Z,5µm,20.2s,baz=11,slow=37
NEW Newport 93.29 350 P **P** **23 00 20.4 +0.5**
NEW pmax pmax

comp=Z,41nm,1.2s
NEW MLR MLR

comp=Z,6µm,20.0s
TZTN Tazewell 93.31 323 P **P** **23 00 19.7 -0.6**
TZTN IAMs_20 IAMs_20 23 46 55.9

comp=Z,4µm,20.0s
KMSC Kings Mountain 93.33 320 P **P** **23 00 20.6 +0.3**
KMSC IAMs_20 IAMs_20 23 43 03.5

comp=Z,3µm,20.0s
JTMT Jette 93.35 348 P **P** **23 00 20.1 -0.3**
Y58A Scranton 93.42 318 IAMs_20 IAMs_20 23 46 13.3
comp=Z,4µm,19.0s
P43A Skaggs, Pawnee 93.47 328 IAMs_20 IAMs_20 23 48 04.3
comp=Z,4µm,19.0s
B08A Colville Reser 93.48 351 P **P** **23 00 20.1 -0.7**
B08A IAmb IAmb 23 00 49.9

comp=Z,44nm,1.6s
CLRS Cowichan Lake 93.50 354 P **P** **23 00 19.2 -1.6**
T50A Nancy 93.54 324 P **P** **23 00 21.0 -0.3**

T50A IAmb IAmb 23 00 25.8
comp=Z,31nm,1.0s
T50A IAMs_20 IAMs_20 23 44 05.9
comp=Z,4µm,19.0s
PGC Sidney 93.61 354 P **P** **23 00 20.2 -1.2**
OLIL Olney 93.62 327 P **P** **23 00 19.9 -1.7**
OLIL IAmb IAmb 23 00 26.6
comp=Z,62nm,1.2s
V53A Saluda 93.65 322 P **P** **23 00 20.4 -1.5**
V53A IAMs_20 IAMs_20 23 44 48.0
comp=Z,4µm,19.0s
GENI Genyem 93.70 90 P **P** **23 00 22.4 +0.1**
GENI Genyem 93.70 90 P **P** **23 00 26.1 +3.8**
Y57A Sumter 93.72 319 P **P** **23 00 21.0 -1.1**
KDU Kakadu 93.76 103 P **P** **23 00 21.8 -0.7**
comp=Z,19nm,1.6s
OVMT Ovando 93.79 347 P **P** **23 00 21.5 -0.9**
PAULI Pauline 93.82 320 P **P** **23 00 23.1 +0.5**
Q44A Meyer Farm, Va 93.87 327 P **P** **23 00 22.5 -0.3**
Q44A IAmb IAmb 23 00 27.8
comp=Z,57nm,1.4s
Q44A IAMs_20 IAMs_20 23 46 23.1
comp=Z,4µm,20.0s
C09A Chrisman Ranch 93.90 350 P **P** **23 00 23.0 +0.3**
JSC Jenkinsville 93.96 320 P **P** **23 00 23.0 -0.3**
JSC IAmb IAmb 23 00 30.1
comp=Z,111nm,1.7s
JSC Jenkinsville 93.96 320 P **P** **23 00 23.0 -0.3**
JSC pmax pmax
comp=Z,111nm,1.7s
N38A Joes South For 93.97 331 P **P** **23 00 22.9 -0.3**
N38A IAmb IAmb 23 00 29.3
comp=Z,27nm,0.7s
USIN University of 94.06 326 P **P** **23 00 23.6 0.0**
JAY Jayapura 94.08 90 P **P** **23 00 26.1 +1.9**
comp=Z,23nm,0.9s,baz=249,slow=4.1,SNR=4.9
JAY LR LR 23 47 06.1
comp=Z,2µm,20.2s,baz=324,slow=38
comp=Z,23nm,0.9s
L34A Svendsen Farm, 94.10 334 P **P** **23 00 22.4 -1.4**
L34A IAmb IAmb 23 00 49.5
comp=Z,27nm,0.8s
TKL Tuckaleechee C 94.13 322 P **P** **23 00 23.9 -0.2**
TKL Tuckaleechee C 94.13 322 LR LR 23 43 06.6
comp=Z,4µm,21.6s,baz=44,slow=36
TKL Tuckaleechee C 94.13 322 P **P** **23 00 23.9 -0.2**
TKL pmax pmax
comp=Z,109nm,1.4s
B04A Port Angeles 94.21 354 P **P** **23 00 23.3 -0.8**
BG3 Lake Jocassee 94.25 321 P **P** **23 00 24.5 0.0**
NHSC New Hope 94.31 318 P **P** **23 00 23.4 -1.5**
CSU Charleston Sou 94.35 318 P **P** **23 00 24.6 -0.4**
U49A Red Boiling Sp 94.39 324 P **P** **23 00 24.5 -0.7**
C03A Quillayute Air 94.40 355 P **P** **23 00 24.1 -0.8**
BPMT Black Pine Rid 94.47 347 P **P** **23 00 25.1 -0.6**
HODGE Hodges 94.51 320 P **P** **23 00 25.6 -0.2**
RSSD Black Hills 94.53 340 P **P** **23 00 24.9 -1.1**
RSSD Black Hills 94.53 340 IAMs_20 IAMs_20 23 43 43.7
comp=Z,3µm,21.0s
RSSD Black Hills 94.53 340 P **P** **23 00 24.9 -1.1**
RSSD pmax pmax
comp=Z,54nm,0.6s
RSSD MLR MLR
comp=Z,3µm,21.0s
K30B Basset 94.55 336 P **P** **23 00 25.9 +0.1**
K30B IAmb IAmb 23 00 31.9
comp=Z,69nm,1.1s
P40A Paris 94.59 330 P **P** **23 00 25.8 -0.3**
P40A IAMs_20 IAMs_20 23 42 48.0
comp=Z,4µm,22.0s
SLM Saint Louis 94.61 328 P **P** **23 00 25.4 -0.7**
SLM IAmb IAmb 23 00 31.1
comp=Z,66nm,1.4s
SLM Saint Louis 94.61 328 P **P** **23 00 25.4 -0.7**
SLM pmax pmax
comp=Z,66nm,1.4s
T47A Sharon Grove 94.62 325 P **P** **23 00 25.5 -0.7**
T47A IAmb IAmb 23 00 30.7
comp=Z,37nm,1.2s
T47A IAMs_20 IAMs_20 23 42 19.2
comp=Z,4µm,22.0s
GNW Green Mountain 94.64 353 P **P** **23 00 25.9 -0.1**
W52A Murphy 94.66 322 P **P** **23 00 26.8 +0.3**
W52A IAMs_20 IAMs_20 23 47 31.6
comp=Z,4µm,21.0s
CPCT Cooper Cave 94.66 322 P **P** **23 00 25.4 -1.0**
CPCT IAmb IAmb 23 00 32.1
comp=Z,110nm,1.8s
D08A Wollman Farm, 94.71 351 P **P** **23 00 25.5 -1.0**
D08A IAmb IAmb 23 00 32.8
comp=Z,55nm,1.7s
LTY Liberty 94.72 352 P **P** **23 00 24.9 -1.8**
N35A Tabor 94.81 333 P **P** **23 00 26.6 -0.4**
N35A IAmb IAmb 23 00 33.1
comp=Z,77nm,1.3s
MDP Montagnes des 94.87 280 LR LR 23 42 39.2
comp=Z,2µm,20.5s,baz=60,slow=35
LRM Limekiln Ridge 94.88 346 P **P** **23 00 27.7 +0.1**
NLWA Neilton Lookou 94.90 354 P **P** **23 00 26.7 -0.6**
D05A Enumclaw 94.93 353 P **P** **23 00 26.5 -1.0**
D05A IAmb IAmb 23 00 56.8
comp=Z,49nm,1.4s
BOZ Bozeman (W) 94.94 345 P **P** **23 00 27.1 -0.6**
BOZ Bozeman (W) 94.94 345 P **P** **23 00 27.1 -0.6**
BOZ pmax pmax
comp=Z,17nm,1.6s
BOZ MLR MLR
comp=Z,6µm,18.0s
SIUC Southern Illin 94.95 327 P **P** **23 00 26.2 -1.5**
S44A Carbondale 94.98 327 P **P** **23 00 26.8 -1.1**
S44A IAmb IAmb 23 00 33.0
comp=Z,45nm,1.3s
S44A IAMs_20 IAMs_20 23 48 48.7
comp=Z,4µm,18.0s
CLTN Cedars of Leba 95.00 324 P **P** **23 00 25.7 -2.2**
WAH2 Wahluke Slope 95.09 351 P **P** **23 00 27.9 -0.3**
WAH2 IAmb IAmb 23 00 57.0
comp=Z,46nm,1.4s
P38A Dawn 95.09 331 P **P** **23 00 28.3 0.0**
P38A IAmb IAmb 23 00 32.8
comp=Z,29nm,1.0s
E09A Wood Farm, Sta 95.14 350 P **P** **23 00 28.4 0.0**
E09A IAmb IAmb 23 00 58.0
comp=Z,48nm,1.7s
WISH Wishkah 95.16 354 P **P** **23 00 27.8 -0.7**
WISH IAmb IAmb 23 00 47.2
comp=Z,38nm,1.3s
YNE Yellowstone No 95.17 344 P **P** **23 00 28.8 -0.1**
BGNE Belgrade 95.20 335 P **P** **23 00 28.6 -0.2**
W50A Signal Mountai 95.24 323 P **P** **23 00 27.6 -1.6**
FVM French Village 95.24 328 P **P** **23 00 28.8 -0.3**
FVM French Village 95.24 328 P **P** **23 00 28.8 -0.3**
FVM pmax pmax
comp=Z,26nm,1.3s
T45A Paducah 95.28 326 P **P** **23 00 28.8 -0.4**
E08A Dider Farm, El 95.29 351 P **P** **23 00 29.5 +0.4**
E08A IAmb IAmb 23 00 35.6
comp=Z,49nm,1.7s
E07A Sunnyside 95.32 351 P **P** **23 00 28.8 -0.5**
E07A IAmb IAmb 23 04 14.0
comp=Z,52nm,1.9s
LON Longmire 95.35 353 P **P** **23 00 28.6 -0.8**
LON Longmire 95.35 353 P **P** **23 00 28.6 -0.8**
LON pmax pmax
comp=Z,10.0nm,1.2s
DLMT Dillon 95.35 346 P **P** **23 00 29.7 +0.1**
DLMT IAMs_20 IAMs_20 23 49 37.9
comp=Z,4µm,19.0s
MXC Moxie City 95.35 352 P **P** **23 00 28.9 -0.5**
HAWA Hanford 95.44 351 P **P** **23 00 30.2 +0.4**
CGM3 Cape Girardeau 95.49 327 P **P** **23 00 30.3 +0.1**
V48A Smith Brothers 95.51 324 P **P** **23 00 28.6 -1.7**
CCM Cathedral Cave 95.52 328 P **P** **23 00 29.7 -0.6**
CCM IAmb IAmb 23 00 37.0
comp=Z,67nm,1.9s
CCM Cathedral Cave 95.52 328 IAMs_20 IAMs_20 23 45 51.8
comp=Z,4µm,21.0s
CCM Cathedral Cave 95.52 328 P **P** **23 00 29.7 -0.6**
CCM pmax pmax
comp=Z,67nm,1.9s
CCM MLR MLR
comp=Z,4µm,21.0s
X51A Calhoun 95.53 322 P **P** **23 00 29.8 -0.6**
X51A IAmb IAmb 23 00 36.6
comp=Z,102nm,1.7s
X51A IAMs_20 IAMs_20 23 43 47.8
comp=Z,4µm,22.0s
F10A Beach Ranch, E 95.54 349 P **P** **23 00 30.0 -0.4**
YHH Holmes Hill 95.55 345 P **P** **23 00 29.8 -1.0**
YHL Hebgen Lake 95.56 345 P **P** **23 00 30.9 +0.1**
QLMT Earthquake Lak 95.63 345 P **P** **23 00 30.0 -1.0**
257A Skidaway Islan 95.64 318 IAMs_20 IAMs_20 23 46 45.1
comp=Z,3µm,18.0s
WVT Waverly 95.65 325 IAMs_20 IAMs_20 23 48 56.6
comp=Z,4µm,18.0s
NWAO Narrogin (SRO) 95.68 128 IAMs_20 IAMs_20 23 45 56.4
comp=Z,3µm,20.0s
Y52A Lilburn 95.71 321 P **P** **23 00 30.4 -0.9**
Y52A IAmb IAmb 23 00 36.8
comp=Z,81nm,1.4s
Y52A IAMs_20 IAMs_20 23 48 05.5
comp=Z,4µm,19.0s
E03A Lebam 95.71 354 P **P** **23 00 31.6 +0.6**
R40A Maddies Statio 95.74 329 P **P** **23 00 30.5 -0.9**
R40A IAmb IAmb 23 00 36.4
comp=Z,38nm,1.2s
R40A IAMs_20 IAMs_20 23 43 32.5
comp=Z,4µm,22.0s
GOGA Godfrey 95.77 321 P **P** **23 00 30.9 -0.6**
GOGA IAmb IAmb 23 00 37.1
comp=Z,48nm,1.4s
GOGA Godfrey 95.77 321 IAMs_20 IAMs_20 23 45 28.2
comp=Z,4µm,20.0s
GOGA Godfrey 95.77 321 P **P** **23 00 30.9 -0.6**
GOGA pmax pmax
comp=Z,48nm,1.4s
GOGA MLR MLR
comp=Z,4µm,20.0s
LNOR Lincton Mounta 95.79 350 P **P** **23 00 31.7 +0.2**
H17A Grant Village 95.87 344 P **P** **23 00 31.6 -0.5**
YFT Old Faithful 95.87 345 P **P** **23 00 32.2 0.0**
FPAL Fort Paine 95.92 323 P **P** **23 00 32.7 +0.4**
F07A Phinny Hill Vi 95.98 351 P **P** **23 00 32.2 0.0**
F07A IAmb IAmb 23 01 02.2
comp=Z,45nm,1.5s
YPP Pitchstone Pla 96.04 344 P **P** **23 00 32.1 -0.9**
FLWY Flagg Ranch 96.19 344 P **P** **23 00 33.4 -0.2**
FLWY IAMs_20 IAMs_20 23 45 29.3
comp=Z,5µm,22.0s
PLID Pearl Lake 96.22 348 P **P** **23 00 32.9 -0.8**
154A Montrose 96.22 320 IAMs_20 IAMs_20 23 50 08.2
comp=Z,3µm,18.0s
PBMO Poplar Bluff 96.26 327 P **P** **23 00 32.5 -1.2**
F03A Seaside 96.32 354 P **P** **23 00 33.9 +0.1**
F03A IAmb IAmb 23 00 41.3
comp=Z,41nm,1.3s
G08A Pilot Rock 96.45 350 P **P** **23 00 34.4 -0.2**
BCYI Bear Canyon 96.52 346 P **P** **23 00 34.1 -0.9**
MOOW Moose Ponds 96.52 344 P **P** **23 00 34.8 -0.2**
MOOW IAMs_20 IAMs_20 23 47 12.0
comp=Z,5µm,21.0s
SJG San Juan 96.54 299 LR LR 23 39 48.3
comp=Z,2µm,21.8s,baz=56,slow=33
K22A Casper 96.56 341 P **P** **23 00 34.2 -1.0**
K22A IAmb IAmb 23 00 40.3
comp=Z,32nm,1.2s
LOHW Long Hollow 96.62 344 P **P** **23 00 35.6 +0.1**
BMO Blue Mountains 96.65 349 IAMs_20 IAMs_20 23 48 56.0
comp=Z,4µm,20.0s
X48A Hartselle 96.67 324 IAMs_20 IAMs_20 23 50 20.8
comp=Z,3µm,19.0s
FXWY Fox Creek 96.69 344 P **P** **23 00 36.7 +0.9**
FXWY IAMs_20 IAMs_20 23 45 55.3
comp=Z,4µm,20.0s
PLAL Pickwick Lake 96.71 325 P **P** **23 00 34.0 -1.8**
PLAL IAmb IAmb 23 00 43.7
comp=Z,55nm,1.6s
PLAL IAMs_20 IAMs_20 23 45 47.7
comp=Z,4µm,20.0s
G06A Carlson Farm, 96.72 352 P **P** **23 00 35.7 0.0**
G06A IAmb IAmb 23 01 05.4
comp=Z,82nm,2.0s
HOOD Mount Hood Mea 96.74 352 P **P** **23 00 34.0 -2.0**
SNOW Snow King Moun 96.80 344 P **P** **23 00 36.5 +0.1**
SNOW IAmb IAmb 23 00 48.6
comp=Z,43nm,1.8s
TPAW Teton Pass 96.81 344 P **P** **23 00 34.6 -1.8**
TPAW IAMs_20 IAMs_20 23 47 22.7
comp=Z,4µm,21.0s
OGNE Ogallala 96.87 337 P **P** **23 00 37.6 +1.0**
G03D McMinnville, O 97.01 353 P Pdif 23 00 37.7 +0.6
G03D IAmb IAmb 23 01 06.9
comp=Z,66nm,1.5s
456A Hilliard 97.15 318 IAMs_20 IAMs_20 23 48 28.0
comp=Z,4µm,20.0s
LCAR Lake Charles 97.17 327 P **P** **23 00 38.0 +0.2**
PD31 Pinedale Array 97.19 343 P **P** **23 00 37.6 -0.6**
PDAR Pinedale Array 97.19 343 P **P** **23 00 38.3 +0.1**
comp=Z,0.8nm,0.8s,baz=46,slow=8.5,SNR=4.6
PDAR PP **PP** **23 04 35.1 +1.8**
comp=Z,3.2nm,1.1s,baz=66,slow=3.6,SNR=5.0
PDAR PKKPbc **PKKPbc** **23 17 14.7 -2.2**
comp=Z,1.4nm,0.8s,baz=157,slow=4.2,SNR=11
PDAR LR LR 23 46 12.9
comp=Z,2µm,19.7s,baz=12,slow=36
comp=Z,0.8nm,0.8s
TIGA Tifton 97.40 319 IAMs_20 IAMs_20 23 48 47.5
comp=Z,3µm,19.0s
HLID Hailey 97.43 347 IAMs_20 IAMs_20 23 48 14.7
comp=Z,4µm,20.0s
AHID Auburn Hatcher 97.54 344 IAMs_20 IAMs_20 23 52 16.9
comp=Z,4µm,19.0s
GRTK Grand Turk 97.55 304 IAMs_20 IAMs_20 23 42 15.3
comp=Z,3µm,21.0s
COR Corvallis 97.64 353 IAMs_20 IAMs_20 23 47 36.9
comp=Z,4µm,20.0s
H04D Lebanon 97.64 353 P Pdif 23 00 40.3 +0.4
H04D IAmb IAmb 23 01 36.8
comp=Z,58nm,2.0s
I07A Izee 97.71 351 P Pdif 23 00 40.7 +0.4
LRAL Lakeview Retre 97.81 323 P **P** **23 00 38.9 -1.9**
LRAL IAmb IAmb 23 04 32.7
comp=Z,34nm,1.8s
LRAL IAMs_20 IAMs_20 23 44 58.9
comp=Z,5µm,22.0s
MFID Camas Ranch 97.82 348 P **P** **23 00 40.0 -0.8**
MFID IAmb IAmb 23 00 47.1
comp=Z,41nm,1.9s
BUCK Buck Mountain 97.99 353 P **P** **23 00 39.9 -1.6**
BUCK IAmb IAmb 23 01 13.5
comp=Z,26nm,1.3s
WIFE Three Sisters- 98.01 352 P **P** **23 00 40.7 -1.0**
352A Blakely 98.05 320 P **P** **23 00 41.2 -0.7**
352A IAMs_20 IAMs_20 23 46 20.3
comp=Z,3µm,21.0s
R32A Long Quarter, 98.06 334 **P** **23 00 40.5 -1.4**
R32A IAmb IAmb 23 00 46.9
comp=Z,41nm,1.4s
R32A IAMs_20 IAMs_20 23 46 01.5
comp=Z,4µm,20.0s
CBKS Cedar Bluff 98.06 335 P **P** **23 00 40.5 -1.4**
CBKS IAmb IAmb 23 00 47.2
comp=Z,26nm,1.2s
CBKS Cedar Bluff 98.06 335 P **P** **23 00 40.5 -1.4**
CBKS pmax pmax
comp=Z,26nm,1.2s
CBKS MLR MLR
comp=Z,5µm,20.0s
PINE Pine Mountain 98.17 352 P Pdif 23 00 44.5 +1.9
U38A Gravette 98.19 330 P **P** **23 00 40.6 -1.9**
U38A IAMs_20 IAMs_20 23 51 12.2
comp=Z,4µm,22.0s
Y45A Yeager Farm, C 98.31 325 P **P** **23 00 41.4 -1.6**
Y45A IAMs_20 IAMs_20 23 50 26.0
comp=Z,4µm,18.0s
250A Grady 98.32 322 P **P** **23 00 42.5 -0.6**
250A IAmb IAmb 23 00 48.2
comp=Z,71nm,1.7s
I04A Tendick Farm, 98.33 353 P **P** **23 00 41.4 -1.6**
I03D Drain, OR 98.52 353 P **P** **23 00 43.0 -0.8**
I03D IAmb IAmb 23 01 42.8
comp=Z,58nm,2.0s
T35A Sooner Cattle 98.60 332 P **P** **23 00 43.6 -0.7**
T35A IAMs_20 IAMs_20 23 44 43.9
comp=Z,5µm,21.0s
RLO Rose Lookout 98.68 330 P **P** **23 00 43.7 -0.9**
RLO IAmb IAmb 23 04 43.3
comp=Z,31nm,1.5s
J05D Fort Rock, OR 98.71 352 P **P** **23 00 43.1 -1.7**
HWUT Hardware Ranch 98.75 344 P **P** **23 00 44.4 -0.7**
HWUT IAmb IAmb 23 01 16.3
comp=Z,7.4nm,0.3s
HAYD Hayden 98.75 341 P **P** **23 00 44.8 -0.4**
HAYD IAMs_20 IAMs_20 23 46 32.1
comp=Z,4µm,21.0s
KSCO Kaye Shedlock' **98.83 337** P **P** **23 00 45.0 -0.4**
KSCO IAmb IAmb 23 00 52.0
comp=Z,45nm,1.3s
KSCO IAMs_20 IAMs_20 23 49 47.3
comp=Z,4µm,19.0s
553A Crawfordville 98.83 319 IAMs_20 IAMs_20 23 47 22.5
comp=Z,4µm,20.0s
HVU Hansel Valley 98.83 345 P **P** **23 00 43.8 -1.7**
HVU Hansel Valley 98.83 345 P **P** **23 00 43.8 -1.7**
HVU pmax pmax
comp=Z,18nm,1.7s
J04A Umpqua Nationa 98.85 352 P **P** **23 00 44.5 -1.1**
J04A IAmb IAmb 23 01 17.2
comp=Z,39nm,1.4s
DWPF Disney Wildern 98.87 316 IAMs_20 IAMs_20 23 43 45.9
comp=Z,3µm,22.0s
SDD Santo Domingo 98.88 301 P Pdif 23 00 46.0 +0.2
ISCO Idaho Springs 98.98 339 P **P** **23 00 46.0 -0.3**
ISCO Idaho Springs 98.98 339 P **P** **23 00 46.0 -0.3**
ISCO pmax pmax
comp=Z,22nm,1.8s
ISCO MLR MLR
comp=Z,5µm,18.0s
OK051 E0350 and S346 99.08 332 IAMs_20 IAMs_20 23 45 20.7
comp=Z,4µm,21.0s
060A Indiantown 99.10 314 IAMs_20 IAMs_20 23 47 10.3
comp=Z,3µm,20.0s
451A Vernon 99.16 320 IAMs_20 IAMs_20 23 49 36.0
comp=Z,4µm,20.0s
O20A White River Ci 99.37 341 IAMs_20 IAMs_20 23 47 07.5
comp=Z,4µm,21.0s
KEBM Edson Butte 99.43 354 IAMs_20 IAMs_20 23 49 58.2
comp=Z,4µm,20.0s
MIAR Mount Ida 99.50 328 P **Pdif** **23 00 49.2 +0.9**
MIAR Mount Ida 99.50 328 P **Pdif** **23 00 49.2 +0.9**
MIAR pmax pmax
comp=Z,16nm,1.2s
MIAR MLR MLR
comp=Z,4µm,19.0s
DEOK Depew 99.54 331 P **Pdif** **23 00 47.8 -0.6**
DEOK IAmb IAmb 23 01 16.9
comp=Z,28nm,1.3s
WRA Warramunga Arr 99.55 108 P **Pdif** **23 00 47.5 -1.2**
WRA Warramunga Arr 99.55 108 P **Pdif** **23 00 48.0 -0.7**
comp=Z,1.6nm,0.9s,baz=318,slow=4.1,SNR=9.3
WRA PP **PP** **23 04 49.8 -3.0**
comp=Z,1.5nm,1.1s,baz=297,slow=4.2,SNR=4.6
WRA PKKPbc **PKKPbc** **23 17 09.5 -0.4**
comp=Z,0.6nm,0.7s,baz=167,slow=5.8,SNR=4.7
WRA LR LR 23 50 01.7
comp=Z,1µm,21.9s,baz=297,slow=38
comp=Z,1.6nm,0.9s
WRA Warramunga Arr 99.55 108 P **Pdif** **23 00 48.0 -0.7**
WB2 Warramunga Arr 99.56 108 P **Pdif** **23 00 47.1 -1.6**
BSUT Blindstream Ca 99.59 343 P **Pdif** **23 00 48.5 -0.6**
Q24A Divide 99.62 339 P **Pdif** **23 00 48.2 -1.1**
CTU Camp Tracy 99.66 344 **Pdif** **23 00 47.3 -1.9**
WR8 Warramunga Arr 99.68 108 Pdif **Pdif** **23 00 49.1 -0.1**
WR8 IAmb IAmb 23 04 51.3
comp=Z,50nm,1.9s
BGU Big Grassy Mou 99.71 345 Pdif **Pdif** **23 00 46.7 -2.6**
WR0 Warramunga Arr 99.71 108 Pdif **Pdif** **23 00 48.6 -0.8**
WR0 IAmb IAmb 23 04 51.5
comp=Z,60nm,1.9s
KBO Bosley Butte 100.07 354 IAMs_20 IAMs_20 23 50 16.3
comp=Z,3µm,21.0s
143A Socs Landing, 100.13 326 IAMs_20 IAMs_20 23 46 48.0
comp=Z,3µm,21.0s
VBMS Vicksburg 100.14 325 IAMs_20 IAMs_20 23 46 50.3
comp=Z,4µm,20.0s
ELK Elko 100.31 347 IAMs_20 IAMs_20 23 48 54.0
comp=Z,4µm,20.0s
346A Big Creek Wild 100.34 324 IAMs_20 IAMs_20 23 46 42.0
comp=Z,4µm,20.0s
T25A Trinidad 101.10 337 IAMs_20 IAMs_20 23 46 59.5
comp=Z,4µm,21.0s
KRPM Rodgers 101.10 353 IAMs_20 IAMs_20 23 53 25.6
comp=Z,3µm,18.0s
HATC Hat Creek Radi 101.17 351 IAMs_20 IAMs_20 23 51 57.5
comp=Z,4µm,20.0s
ASAR Alice Springs 101.42 111 P **Pdif** **23 00 57.2 +0.3**
comp=Z,0.8nm,0.8s,baz=316,slow=5.2,SNR=4.4
ASAR PP **PP** **23 05 05.0 -2.0**
comp=Z,1.9nm,0.9s,baz=310,slow=6.4,SNR=4.2
ASAR PKKPbc **PKKPbc** **23 17 04.8 +0.1**
comp=Z,0.5nm,0.9s,baz=129,slow=3.4,SNR=4.4
JCC Jacoby Creek, **101.44 353** IAMs_20 IAMs_20 23 49 19.5
comp=Z,3µm,21.0s
KMPM Mount Pierce 101.84 353 IAMs_20 IAMs_20 23 55 05.2
comp=Z,3µm,20.0s
KCPM Cahto Peak 102.52 353 IAMs_20 IAMs_20 23 50 01.1
comp=Z,4µm,20.0s
SUTB Sutter Butte 102.78 351 IAMs_20 IAMs_20 23 56 26.0
comp=Z,3µm,19.0s
HOPS Hopland Field 103.15 352 IAMs_20 IAMs_20 23 51 39.9
comp=Z,3µm,21.0s
MNRC McLaughlin Min 103.20 352 IAMs_20 IAMs_20 23 52 59.1
comp=Z,3µm,20.0s
WHTX Lake Whitney, 103.30 330 IAMs_20 IAMs_20 23 52 00.5
comp=Z,4µm,20.0s
WELL Weller Preserv 103.42 350 IAMs_20 IAMs_20 23 53 59.2
comp=Z,4µm,21.0s
CVS Carmenet Viney 103.73 352 IAMs_20 IAMs_20 23 54 20.1
comp=Z,3µm,20.0s
QIS Mount Isa 103.91 105 P **Pdif** **23 01 09.6 +1.5**
comp=Z,7.2nm,1.6s
MCCM Marconi Confer 103.97 352 IAMs_20 IAMs_20 23 53 40.6
comp=Z,3µm,20.0s
FARB Farallon Islan 104.43 352 IAMs_20 IAMs_20 23 56 14.7
comp=Z,3µm,21.0s
WUAZ Wupatki 104.52 342 IAMs_20 IAMs_20 23 52 29.8
comp=Z,4µm,20.0s
JRSC Jasper Ridge 104.63 352 IAMs_20 IAMs_20 23 50 54.1
comp=Z,4µm,20.0s
FURC Furnace Creek, 104.76 347 IAMs_20 IAMs_20 23 51 43.7
comp=Z,4µm,20.0s
SAO San Andreas Ge 105.17 351 IAMs_20 IAMs_20 23 55 01.3
comp=Z,4µm,20.0s
SHOC Shoshone, Teco 105.20 346 IAMs_20 IAMs_20 23 50 55.5
comp=Z,4µm,20.0s
FORD Fort Ord Natur 105.28 351 IAMs_20 IAMs_20 23 57 09.4
comp=Z,3µm,20.0s
WSHM Spangler Hills 105.71 347 IAMs_20 IAMs_20 23 56 56.0
comp=Z,3µm,20.0s
VES Vestal, Richgr 105.74 349 IAMs_20 IAMs_20 23 53 47.6
comp=Z,3µm,21.0s
PKD Bear Valley Ra 105.85 350 IAMs_20 IAMs_20 23 53 15.5
comp=Z,3µm,22.0s
LRMC Laurel Mtn Rad 105.86 347 IAMs_20 IAMs_20 23 52 43.0
comp=Z,3µm,22.0s
NEE2 Needles Airpor 105.97 345 IAMs_20 IAMs_20 23 55 38.0
comp=Z,4µm,20.0s
SDV Santo Domingo 106.00 295 *e*P **Pdif** **23 01 18.1 +0.3**
MACA Manacapuru-AM 106.27 279 *e*P **Pdif** **23 01 19.6 +0.9**
SYO Syowa Base 106.59 183⍰ *e*pPdiff pPdif 23 01 26.8 +2.8
IRM Iron Mountain 106.67 345 IAMs_20 IAMs_20 23 56 08.5
comp=Z,3µm,20.0s
EPT El Paso 106.71 337 IAMs_20 IAMs_20 23 50 22.2
comp=Z,4µm,21.0s
BELC Belle Mtn. Jos 106.99 346 IAMs_20 IAMs_20 23 57 22.0
comp=Z,3µm,19.0s
BFSC Mount Baldy Ra 107.07 347 IAMs_20 IAMs_20 23 57 22.9
comp=Z,3µm,19.0s
BC3 Big Chuckawall 107.22 345 IAMs_20 IAMs_20 23 53 31.0
comp=Z,3µm,21.0s
PASC Pasadena Art C 107.23 348 IAMs_20 IAMs_20 23 59 50.0
comp=Z,4µm,20.0s
TUC Tucson 107.42 341 IAMs_20 IAMs_20 23 53 21.8
comp=Z,3µm,19.0s
PFO Pinyon Flats O 107.46 346 IAMs_20 IAMs_20 23 52 22.3
comp=Z,3µm,20.0s
GLA Glamis 107.67 344 IAMs_20 IAMs_20 23 58 20.0
comp=Z,3µm,19.0s
SPB Sao Paulo 107.74 254 IAMs_20 IAMs_20 23 55 41.8
comp=Z,3µm,19.0s
TXAR Lajitas Array 108.02 334 PP **PP** **23 05 52.1 -2.4**
comp=Z,6.1nm,1.2s,baz=46,slow=5.4,SNR=5.2
CPE Camp Elliot 108.28 346 IAMs_20 IAMs_20 23 52 52.1
comp=Z,3µm,21.0s
BAR Barrett 108.40 346 IAMs_20 IAMs_20 23 54 12.3
comp=Z,3µm,20.0s
HTT Hallett 110.55 117 P **Pdif** **23 01 38.4 +1.1**

NVL	**N'lazarevskaya**	**111.19**	**192**	*i* PKIKP	PKiKP	23 05 24.1	-14
NVL				pmax	pmax		
	comp=Z,15nm,0.7s						
NVL				MLR	MLR		
	comp=Z,149nm,19.0s						
TGUH	**Tegucigalpa,Un**	**113.24**	**311**	IAMs_20	IAMs_20	23 54 02.1	
	comp=Z,2µm,20.0s						
TROLL	**Troll, Antarti**	**113.88**	**194**	⇑P	**PKiKP**	**23 05 42.6**	**-0.5**
	comp=Z,211nm,0.7s						
SIV	**San Ignacio**	**114.17**	**268**	PKiKP	PKPdf	23 05 44.4	-0.7
	comp=Z,1.1nm,0.6s,baz=91,slow=7.5,SNR=4.6						
SIV				PP	**PP**	**23 06 35.5**	**-4.7**
	comp=Z,4.3nm,1.0s,baz=45,slow=11,SNR=7.5						
CASY	**Casey**	**114.33**	**157**	IAMs_20	IAMs_20	23 52 23.9	
	comp=Z,3µm,20.0s						
HDC	**Heredia**	**114.41**	**306**	IAMs_20	IAMs_20	23 52 06.8	
	comp=Z,3µm,20.0s						
CMSA	**Cobar Meteorol**	**114.45**	**112**	P	**PKiKP**	**23 05 46.2**	**+1.0**
SNAA	**Sanae**	**114.70**	**196**	⇑P	PKPdf	23 05 44.2	-0.3
	comp=Z,88nm,0.9s						
SNAA	**Sanae**	**114.70**	**196**	PKP	PKPdf	23 05 43.3	-1.3
	comp=Z,6.1nm,1.1s,baz=8.3,slow=2.1,SNR=7.6						
SNAA				PP	**PP**	**23 06 41.1**	**-1.9**
	comp=Z,3.0nm,0.9s,baz=66,slow=4.7,SNR=5.1						
VNA1	**Neumayer--Stat**	**115.20**	**198**	⇑P	**PKiKP**	**23 05 45.8**	**+0.5**
	comp=Z,19nm,1.1s						
VNA3	**Neumayer Olymp**	**115.94**	**198**	⇑P	**PKPdf**	**23 05 46.4**	**-0.4**
	comp=Z,10nm,0.8s						
CPUP	**Villa Florida**	**116.78**	**256**	PKP	**PKPdf**	**23 05 48.4**	**-1.5**
	comp=Z,1.0nm,0.8s,baz=82,slow=16,SNR=6.2						
CPUP				PKKPbc	**PKKPab**	**23 16 20.3**	**+1.0**
	comp=Z,1.6nm,1.1s,baz=98,slow=9.0,SNR=6.0						
LPAZ	**La Paz**	**119.93**	**272**	PKP	**PKPdf**	**23 05 55.8**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=40,slow=2.6,SNR=6.5						
LPAZ				PKKPab	**PKKPab**	**23 16 08.3**	**+1.0**
	comp=Z,3.9nm,0.8s,baz=239,slow=6.6,SNR=7.8						
LPAZ	**La Paz**	**119.93**	**272**	*e*P	**PKPdf**	**23 05 56.8**	**-0.2**
PB18	**Visviri**	**121.72**	**272**	IAMs_20	IAMs_20	23 59 14.4	
	comp=Z,3µm,22.0s						
AP01	**Chacalluta**	**122.84**	**271**	IAMs_20	IAMs_20	00 02 32.9	
	comp=Z,2µm,22.0s						
PB12	**IPOC Station P**	**122.96**	**271**	PKPdf	**PKiKP**	**23 06 02.7**	**+0.5**
PB12				IAMs_20	IAMs_20	00 02 36.2	
	comp=Z,2µm,21.0s						
PB11	**IPOC Station P**	**123.05**	**270**	IAMs_20	IAMs_20	23 59 46.6	
	comp=Z,2µm,19.0s						
AF01	**San Pedro de A**	**123.55**	**266**	PKPdf	**PKPdf**	**23 06 03.4**	**+0.1**
AF01				IAMs_20	IAMs_20	23 59 50.2	
	comp=Z,2µm,19.0s						
PB01	**IPOC Station P**	**123.59**	**268**	IAMs_20	IAMs_20	00 01 52.2	
	comp=Z,3µm,22.0s						
TA01	**Diego Aracena**	**123.89**	**269**	PKPdf	**PKiKP**	**23 06 04.8**	**+0.9**
TA01				IAMs_20	IAMs_20	00 06 56.0	
	comp=Z,2µm,20.0s						
NNA	**Nana**	**124.27**	**282**	IAMs_20	IAMs_20	23 59 36.1	
	comp=Z,3µm,22.0s						
PB03	**IPOC Station P**	**124.33**	**267**	PKPdf	**PKPdf**	**23 06 04.4**	**-0.3**
BELA	**Belgrano 2**	**124.93**	**195**	PKPdf	**PKPdf**	**23 06 03.8**	**-0.2**
PB05	**IPOC Station P**	**125.10**	**267**	PKPdf	**PKPdf**	**23 06 05.7**	**-0.4**
TRQA	**Tornquist**	**125.63**	**246**		**PKPdf**	**23 06 06.3**	**-0.1**
TRQA	**Tornquist**	**125.63**	**246**	PKIKP	**PKPdf**	**23 06 06.4**	**-0.1**
PB10	**IPOC Station P**	**125.71**	**266**	IAMs_20	IAMs_20	00 07 04.5	
	comp=Z,3µm,19.0s						
ONTNC	**Ouen Toro**	**125.86**	**92**	PKPdf	**PKPdf**	**23 06 07.0**	**-0.4**
ONTNC				IAMs_20	IAMs_20	00 08 03.1	
	comp=Z,2µm,20.0s						
PB14	**IPOC Station P**	**126.15**	**265**	IAMs_20	IAMs_20	00 00 46.1	
	comp=Z,2µm,22.0s						
AC02	**Maricunga**	**126.22**	**262**	IAMs_20	IAMs_20	00 04 48.0	
	comp=Z,3µm,19.0s						
AC06	**Mina Casimiro**	**127.43**	**262**	IAMs_20	IAMs_20	00 09 48.0	
	comp=Z,2µm,20.0s						
QSPA	**South Pole Qui**	**127.56**	**180**		**PKiKP**	**23 06 10.7**	**+0.8**
QSPA	**South Pole Qui**	**127.56**	**180**	PKP	**PKiKP**	**23 06 10.3**	**+0.4**
	comp=Z,18nm,0.7s,baz=256,slow=1.1,SNR=70						
CFA	**Coronel Fontan**	**127.68**	**256**	PKP	**PKPdf**	**23 06 09.6**	**-1.1**
	comp=Z,3.0nm,0.8s,baz=30,slow=2.7,SNR=4.9						
AC05	**El Transito**	**128.04**	**260**	IAMs_20	IAMs_20	00 09 02.4	
	comp=Z,3µm,21.0s						
AC04	**Llanos de Chal**	**128.38**	**262**	IAMs_20	IAMs_20	00 05 31.4	
	comp=Z,2µm,21.0s						
LCO	**Las Campanas**	**128.46**	**260**		**PKiKP**	**23 06 14.1**	**+0.9**
LCO	**Las Campanas**	**128.46**	**260**	IAMs_20	IAMs_20	00 15 08.3	
	comp=Z,2µm,20.0s						
LCO	**Las Campanas**	**128.46**	**260**	PKIKP	**PKiKP**	**23 06 14.1**	**+0.9**
MT05	**Renca**	**130.34**	**255**	IAMs_20	IAMs_20	00 15 59.5	
	comp=Z,2µm,21.0s						
MT02	**Curacav**	**130.60**	**256**	IAMs_20	IAMs_20	00 05 43.2	
	comp=Z,3µm,21.0s						
VA01	**Torpederas**	**130.90**	**256**	IAMs_20	IAMs_20	00 09 30.8	
	comp=Z,2µm,21.0s						
VNDA	**Vanda**	**131.76**	**165**	PKP	**PKPdf**	**23 06 15.6**	**-1.5**
	comp=Z,2.6nm,1.0s,baz=278,slow=4.9,SNR=12						
VNDA				SKPbc	**SKPab**	**23 09 45.9**	**+2.9**
	comp=Z,9.2nm,1.3s,baz=274,slow=5.9,SNR=6.8						
ML02	**Panimavida**	**131.77**	**253**	PKPdf	**PKiKP**	**23 06 20.1**	**+0.8**
BI02	**San Fabin de**	**131.98**	**252**	PKPdf	**PKiKP**	**23 06 19.5**	**-0.2**
PMSA	**Palmer Station**	**132.47**	**213**	PKPdf	**PKiKP**	**23 06 20.5**	**+0.8**
MSVF	**Nonsavu**	**132.53**	**79**	PKPdf	**PKPdf**	**23 06 19.0**	**-1.3**
MSVF	**Nonsavu**	**132.53**	**79**	PKIKP	**PKPdf**	**23 06 19.0**	**-1.3**
SBA	**Scott Base**	**132.67**	**165**		**PKiKP**	**23 06 19.5**	**-0.3**
SBA	**Scott Base**	**132.67**	**165**	PKIKP	**PKiKP**	**23 06 19.5**	**-0.3**
SBA				MLR	MLR		
	comp=Z,4µm,18.0s						
PLCA	**Paso Flores**	**132.78**	**246**	PKP	**PKPdf**	**23 06 19.1**	**-1.0**
	comp=Z,3.0nm,0.7s,baz=169,slow=1.4,SNR=6.4						
PLCA	**Paso Flores**	**132.78**	**246**	*e*P	**PKPdf**	**23 06 20.7**	**+0.6**
SMAI	**San Martin Ant**	**133.52**	**208**	PKPdf	**PKiKP**	**23 06 24.0**	**+2.2**
LR05	**Currie**	**133.69**	**247**	PKPdf	**PKiKP**	**23 06 23.6**	**+0.6**
LL03	**Petrohue**	**134.24**	**246**	PKPdf	**PKiKP**	**23 06 25.4**	**+1.4**
OUZ	**Omahuta**	**137.10**	**104**	IAMs_20	IAMs_20	00 13 42.5	
	comp=Z,2µm,19.0s						
NNZ	**Nelson**	**138.66**	**112**	IAMs_20	IAMs_20	00 03 21.8	
	comp=Z,2µm,20.0s						
HIZ	**Hauiti**	**139.07**	**108**	IAMs_20	IAMs_20	00 11 14.7	
	comp=Z,2µm,20.0s						
TOZ	**Tahuroa Road**	**139.34**	**107**		**PKiKP**	**23 06 33.5**	**-1.0**
TOZ				IAMs_20	IAMs_20	00 06 30.8	
	comp=Z,2µm,22.0s						
SNZO	**South Karori**	**139.66**	**112**	IAMs_20	IAMs_20	00 15 47.0	
	comp=Z,2µm,20.0s						
MRZ	**Mangatainoka R**	**140.15**	**111**	IAMs_20	IAMs_20	00 06 23.3	
	comp=Z,2µm,22.0s						
BKZ	**Black Stump Fm**	**140.48**	**108**	IAMs_20	IAMs_20	00 10 11.9	
	comp=Z,2µm,22.0s						
RTZ	**Ruatahuna**	**140.71**	**107**	IAMs_20	IAMs_20	00 06 46.9	
	comp=Z,3µm,22.0s						
MXZ	**Matakaoa Point**	**141.44**	**105**	IAMs_20	IAMs_20	00 08 52.2	
	comp=Z,2µm,22.0s						
RAO	**Raoul Island**	**141.52**	**91**	IAMs_20	IAMs_20	00 12 15.7	
	comp=Z,2µm,20.0s						
TAOE	**Nuku Hiva Isla**	**150.44**	**15**	*e*P	**PKPdf**	**23 06 53.0**	**+0.8**
	comp=Z,323nm,23.0s						
TAOE	**Nuku Hiva Isla**	**150.44**	**15**	*e*SS	SS	23 29 49.4	-0.4
	comp=Z,521nm,23.6s						
TAOE	**Nuku Hiva Isla**	**150.44**	**15**	*e*LR	LR	23 56 47.8	
	comp=Z,3µm,22.7s						
RAR	**Rarotonga**	**151.27**	**63**	PKPdf	**PKPdf**	**23 06 53.2**	**+0.1**
RAR				PKPbc	**sPKPdf**	**23 06 59.9**	**-0.3**
RAR					**pPKPbc**	**23 07 04.7**	**+0.4**
RAR	**Rarotonga**	**151.27**	**63**	PKIKP	**PKPdf**	**23 06 53.2**	**+0.1**
RAR						23 06 59.9	
RAR						23 07 04.7	
PPT2	**Papeete2**	**154.97**	**41**	*e*P	**PKPdf**	**23 06 55.1**	**-3.6**
	comp=Z,195nm,24.0s						
PPT2	**Papeete2**	**154.97**	**41**	*e*PP	**PP**	**23 11 00.7**	**+2.7**
	comp=Z,286nm,22.5s						
PPT2	**Papeete2**	**154.97**	**41**	*e*SS	SS	23 30 31.6	-9.0
	comp=Z,1µm,27.8s						
PPT2	**Papeete2**	**154.97**	**41**	*e*LQ	LQ	23 51 27.8	
	comp=Z,2µm,32.8s						
PPT2				*e*LR	LR	23 58 44.0	
	comp=Z,3µm,31.0s						
PPT2				*e*LR	LR	23 58 48.2	
	comp=Z,3µm,23.2s						
TBI	**Tubuai**	**159.60**	**50**	*e*P	**PKPdf**	**23 07 02.6**	**-1.6**
	comp=Z,668nm,25.2s						
TBI	**Tubuai**	**159.60**	**50**	*e*PP	**PP**	**23 11 19.3**	**-4.4**
	comp=Z,1µm,24.2s						
TBI	**Tubuai**	**159.60**	**50**	*e*SS	SS	23 31 20.4	-10
	comp=Z,5µm,26.5s						
TBI	**Tubuai**	**159.60**	**50**	*e*LR	LR	00 01 00.1	
	comp=Z,25µm,27.5s						
TBI				*e*LR	LR	00 01 01.6	
	comp=Z,6µm,27.2s						
RKT	**Rikitea**	**165.28**	**9**	*e*LR	LR	00 03 38.2	
	comp=Z,14µm,27.0s						

*IDC **07** 22:50:09.9±1.4,8°.59N×102°.66W,h0km,mb3.6/6, mbtmp3.5/7,ML3.0/1,MS4.0/5,Error ellipse: s-maj=56.3km s-min=21.3km az=56.0*

ISC 07 22:50:12.1±1.4,8.7N±0°.2×102°.6W±0°.2,h10km,n18, σ1°22/8,mb3.5/5,Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**11.24**	**41**	LR	LR	22 56 30.7	
	comp=Z,1µm,18.3s,baz=201,slow=34						
H06S1	**SOCORRO T**	**12.86**	**322**	T	T	23 06 20.4	
	SNR=24						
H06E1	**SOCORRO T-PHAS**	**12.87**	**322**	T	T	23 06 24.0	
	SNR=19						
APG	**El Apazote**	**13.43**	**61**	Pn	**Pn**	**22 53 23.1**	**-0.1**
	0.1nm,0.3s,baz=179,slow=13,SNR=3.6						
APG				LR	LR	22 57 37.7	
	comp=Z,48nm,21.9s,baz=267,slow=33						
	0.2nm,0.4s						
LPIG	**La Paz**	**17.00**	**335**	LR	LR	22 59 10.3	
	comp=Z,1µm,18.8s,baz=158,slow=32						
JTS	**Las Juntas de**	**17.49**	**83**	LR	LR	22 59 12.4	
	comp=Z,385nm,21.2s,baz=258,slow=31						
TXAR	**Lajitas Array**	**20.56**	**357**	P	**P**	**22 54 51.6**	**+0.5**
	0.8nm,1.0s,baz=179,slow=6.3,SNR=4.3						
TXAR				LR	LR	23 01 44.0	
	comp=Z,190nm,19.2s,baz=168,slow=34						
	0.8nm,1.0s						
PFO	**Pinyon Flats O**	**27.90**	**335**	LR	LR	23 05 03.8	
	comp=Z,449nm,21.7s,baz=134,slow=32						
NVAR	**Mina Array Bea**	**32.81**	**337**	P	**P**	**22 56 47.1**	**+1.1**
	0.4nm,0.7s,baz=128,slow=3.4,SNR=2.0						
	0.4nm,0.7s						
PDAR	**Pinedale Array**	**34.48**	**351**	P	**P**	**22 57 00.1**	**-0.4**
	0.6nm,0.9s,baz=200,slow=4.2,SNR=3.0						
	0.6nm,0.9s						
LPAZ	**La Paz**	**42.20**	**126**	P	**P**	**22 58 06.6**	**+0.4**
	2.8nm,0.8s,baz=281,slow=5.6,SNR=8.2						
	2.8nm,0.8s						
H03N2	**Juan Fernandez**	**47.57**	**153**	T	T	23 49 37.8	
	baz=329,slow=77,SNR=16						
H03N1	**Juan Fernandez**	**47.58**	**153**	T	T	23 49 39.1	
	baz=329,slow=77,SNR=18						
H03N3	**Juan Fernandez**	**47.58**	**153**	T	T	23 49 38.3	
	baz=329,slow=77,SNR=16						
CPUP	**Villa Florida**	**56.08**	**130**	P	P	22 59 49.0	-2.8
	0.2nm,0.4s,baz=284,slow=5.8,SNR=3.1						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**63.96**	**341**	P	**P**	**23 00 44.5**	**-0.8**
	1.3nm,0.7s,baz=144,slow=5.0,SNR=4.2						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**124.59**	**356**	PKP	**PKPdf**	**23 09 13.5**	**+1.3**
	0.9nm,0.9s,baz=336,slow=2.7,SNR=2.6						
CMAR	**Chiang Mai Arr**	**145.65**	**322**	PKPbc	**PKPdf**	**23 09 50.0**	**-1.8**
	2.4nm,0.4s,baz=3.3,slow=2.6,SNR=5.5						

*TEH **07** 22:50:53.4,37°.72N×47°.49E,h9km±41km*
*THR **07** 22:50:55.7±0.0,37°.74N×47°.49E,h14km±5km,ML4.1*

ISC 07 22:50:53.9±0.9,37.73N±0°.03×47.51E±0°.04,h10km,n15, σ0°93/19,Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHSH	**Hashtrud**	**0.47**	**204**	Pg	**Pg**	**22 51 02.2**	**-0.9**
IHSH				Sg	**Sg**	**22 51 09.0**	**-0.4**
IHRS	**Heris**	**0.69**	**328**	Pg	**Pg**	**22 51 06.2**	**-1.0**
IHRS				Sg	**Sg**	**22 51 16.6**	**+0.2**
GRMI	**Germi**	**1.11**	**16**	Pg	**Pb**	**22 51 14.3**	**-1.0**
GRMI	**Germi**	**1.11**	**16**	*e*Pg	**Pb**	**22 51 16.5**	**+1.2**
GRMI				IAML		22 51 19.0	
	comp=Z,2µm,1.0s						
ITBZ	**Tabriz**	**1.18**	**295**	Pg	**Pb**	**22 51 15.2**	**-1.3**
ITBZ				Sg	**Sg**	**22 51 31.9**	**-0.1**
IAZR	**Azarshahr**	**1.21**	**268**	Sg	**Sb**	**22 51 33.5**	**+0.6**
GAS1	**Astara - Iran**	**1.24**	**58**	Pg	**Pn**	**22 51 17.0**	**-0.2**
CSN1	**Caspian**	**1.27**	**97**	Pg	**Pn**	**22 51 18.1**	**+0.4**
ZNJK	**Zanjan**	**1.42**	**138**	Pg	**Pn**	**22 51 19.7**	**-0.3**
ZNJK				Sg	**Sn**	**22 51 39.1**	**+0.3**
ZNJK	**Zanjan**	**1.42**	**138**	*e*Pg	**Pn**	**22 51 20.3**	**+0.3**
ZNJK				IAML		22 51 59.5	
	comp=Z,3.2nm,1.0s						
ISHB	**Shabestar**	**1.59**	**291**	Pg	**Pn**	**22 51 22.5**	**+0.2**
IMRD	**Marand**	**1.72**	**305**	Pg	**Pn**	**22 51 26.2**	**+2.1**
LHJ2	**Lahijan - Gila**	**2.11**	**105**	Pn	**Pn**	**22 51 30.7**	**+1.4**
SRSL	**SARDASHT**	**2.25**	**228**	*e*Pn	**Pb**	**22 51 35.3**	**+0.6**
SRSL				IAML		22 51 38.6	
	comp=Z,2µm,1.0s						
SNGE	**Sanandaj**	**2.64**	**183**	*e*Pn	**Pb**	**22 51 41.3**	**-0.1**
SNGE				IAML		22 52 14.6	
	comp=Z,6.7nm,1.0s						

*IDC **07** 22:50:55.4±1.2,3°.25N×127°.06E,h0km,mb4.2/9, mbtmp4.2/9,MS3.7/1,Error ellipse: s-maj=114.5km s-min=16.6km az=69.0*
*DJA **07** 22:51:00.7±0.4,3°.N±4°×12°.7E±°,h10km,M4.1/13,mb4.3/5, MLv4.0/13*
*NEIC **07** 22:51:05.2±0.9,3°.2N±0°.1×127°.0E±0°.1,h68km±12km, mb4.3/10,Error ellipse: s-maj=20.6km s-min=12.9km az=56.0*

ISC 07 22:51:02.4±0.8,3°.27N±0°.09×127°.16E±0°.09,h48km,n29, σ1°29/32,mb4.4/13,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.68**	**284**	P	**Pn**	**22 51 28.5**	**-0.8**
SGSI				S	**Sn**	**22 51 52.8**	**+3.1**
TNTI	**Ternate**	**2.49**	**175**	Pn	**Pn**	**22 51 42.3**	**+1.8**
TNTI	**Ternate**	**2.49**	**175**	P	**Pn**	**22 51 38.8**	**-1.7**
KMSI	**Cibinong**	**4.16**	**230**	P	**Pn**	**22 52 03.9**	**+0.5**
SANI	**Sanana**	**5.42**	**193**	P	**Pn**	**22 52 20.5**	**-0.1**
SWI	**Sorong**	**5.80**	**135**	P	**Pn**	**22 52 27.8**	**+1.9**
	0.1nm29nm,0.9s						
MRSI	**Marisa**	**5.91**	**242**	P	**Pn**	**22 52 27.2**	**-0.2**
TOLI2	**Tolitoli**	**6.73**	**252**	Pn	**Pn**	**22 52 38.0**	**-0.7**
FAKI	**Fak Fak**	**7.98**	**140**	Pn	**Pn**	**22 52 59.1**	**+3.3**
BATI	**Baumata**	**13.84**	**195**	LR	LR	23 00 24.3	
	comp=Z,284nm,18.9s,baz=276,slow=41						
MTN	**Manton Dam**	**16.49**	**166**		**Pn**	**22 54 51.1**	**+0.6**
JAGI	**Jajag, Banyuwa**	**17.45**	**228**		**Pn**	**22 55 02.6**	**+0.1**
JAGI				IAmb	IAmb	22 55 06.2	
	comp=Z,18nm,1.0s						
KNRA	**Kununurra**	**18.89**	**175**	P	**P**	**22 55 19.0**	**0.0**
KNRA				IAmb	IAmb	22 55 21.1	
	comp=Z,11nm,0.8s						
SSLB	**Suanglung**	**21.26**	**344**	P	**P**	**22 55 45.3**	**+0.6**
SSLB				IAmb	IAmb	22 55 57.0	
	comp=Z,56nm,1.5s						
FITZ	**Fitzroy Crossi**	**21.29**	**184**	P	**P**	**22 55 43.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**21.29**	**184**	P	**P**	**22 55 43.8**	**-1.3**
	comp=Z,6.7nm,1.0s,baz=2.6,slow=9.9,SNR=5.9						
	comp=Z,6.7nm,1.0s						
WB0	**Warramunga Arr**	**23.97**	**163**	P	**P**	**22 56 11.5**	**-1.1**
WB0				IAmb	IAmb	22 56 13.7	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**24.12**	**163**	P	**P**	**22 56 12.7**	**-1.2**
	comp=Z,5.2nm,0.8s,baz=338,slow=10,SNR=21						
WRA				PcP	**PcP**	**22 59 55.2**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=341,slow=1.8,SNR=1.6						
WRA				S	**S**	**23 00 27.6**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=334,slow=19,SNR=2.6						
	comp=Z,5.2nm,0.8s						
WR8	**Warramunga Arr**	**24.18**	**163**	P	**P**	**22 56 13.3**	**-1.2**
WR8				IAmb	IAmb	22 56 48.9	
	comp=Z,14nm,1.4s						
PSA00	**Pilbara Seismi**	**25.71**	**196**	P	**P**	**22 56 27.4**	**-1.0**
PSA00				IAmb	IAmb	22 56 42.2	
	comp=Z,8.6nm,1.1s						
ASAR	**Alice Springs**	**27.57**	**167**	P	**P**	**22 56 44.2**	**-0.9**
ASAR	**Alice Springs**	**27.57**	**167**	P	**P**	**22 56 43.7**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=344,slow=7.4,SNR=7.7						
ASAR				PcP	**PcP**	**23 00 01.2**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=347,slow=3.0,SNR=3.6						
	comp=Z,0.7nm,0.7s						
STKA	**Stephens Creek**	**37.55**	**160**	P	**P**	**22 58 12.2**	**+0.1**
STKA	**Stephens Creek**	**37.55**	**160**	P	**P**	**22 58 12.2**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=331,slow=8.1,SNR=7.5						
	comp=Z,3.5nm,0.6s						
MKAR	**Makanchi Array**	**58.17**	**325**	P	**P**	**23 00 50.6**	**-0.9**
	comp=Z,5.2nm,0.9s,baz=120,slow=7.1,SNR=1.3						
	comp=Z,5.2nm,0.9s						
ZALV	**Zalesovo Beam**	**61.19**	**333**	P	**P**	**23 01 11.7**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=156,slow=18,SNR=2.4						
	comp=Z,3.9nm,0.8s						
KURBB	**Kurchatov Arra**	**62.35**	**327**	P	**P**	**23 01 19.3**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=130,slow=5.9,SNR=1.7						
	comp=Z,3.5nm,0.8s						
BVAR	**Borovoye Array**	**67.94**	**327**	P	**P**	**23 01 56.0**	**-0.1**
	comp=Z,3.9nm,0.9s,baz=114,slow=7.0,SNR=2.3						
	comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**82.92**	**173**	P	**P**	**23 03 21.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=302,slow=7.5,SNR=6.6						
	comp=Z,0.8nm,0.7s						

*NEIC **07** 22:51:26.9±2.2,52°.91N±0°.07×160°.66W±0°.09,h10km±1km, mb4.1/56,ML4.1/24,ML3.8(AEIC),Error ellipse: s-maj=11.8km s-min=8.4km az=152.0*
*IDC **07** 22:51:26.5±1.5,52°.97N×160°.69W,h0km,mb4.0/6, mbtmp3.9/9,ML3.7/3,MS3.8/2,Error ellipse: s-maj=31.9km s-min=21.7km az=176.0*
*AEIC **07** 22:51:30.3±2.7,52°.83N±0°.07×160°.58W±0°.09,h12km±5km, Error ellipse: s-maj=11.1km s-min=7.6km az=160.0*

ISC 07 22:51:26.9±0.6,52°.94N±0°.06×160°.69W±0°.04,h10km, n238,σ1°41/254,mb4.7/8,South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**1.99**	**19**		**Pn**	**22 52 00.1**	**-0.5**
CNBA	**Chernabura Isl**	**1.99**	**19**		**Sn**	**22 52 23.3**	**-2.2**
CHNA	**Chernabura Isl**	**2.00**	**18**	P	**Pn**	**22 51 59.6**	**-1.1**
	baz=199						
CHNA				S	**Sn**	**22 52 23.6**	**-2.2**
	baz=199						
DOL	**Dolgoi Island**	**2.32**	**343**		**Pn**	**22 52 04.6**	**-0.5**
DOL					**Sn**	**22 52 32.7**	**-0.9**
DT1	**Dutton Round H**	**2.37**	**337**		**Pn**	**22 52 05.3**	**-0.4**
DT1					**Sn**	**22 52 33.8**	**-1.0**
SDPT	**Sand Point**	**2.42**	**3**		**Pn**	**22 52 06.6**	**+0.2**
SDPT	**Sand Point**	**2.42**	**3**	P	**Pn**	**22 52 06.1**	**-0.3**
	baz=183						
SDPT				S	**Sn**	**22 52 34.9**	**-1.1**
	baz=183						
HAG	**Hague Volcano**	**2.49**	**344**		**Pn**	**22 52 07.8**	**+0.4**
PS4A	**Pavlof South-4**	**2.51**	**345**		**Pn**	**22 52 08.1**	**+0.4**
PS4A					**Sn**	**22 52 37.5**	**-0.8**
PS4A					**Sb**	**22 52 39.3**	**-3.5**
FALS	**False Pass**	**2.51**	**321**		**Pn**	**22 52 07.2**	**-0.5**
FALS	**False Pass**	**2.51**	**321**		**Sn**	**22 52 37.0**	**-1.3**
FALS	**False Pass**	**2.51**	**321**	P	**Pn**	**22 52 07.2**	**-0.5**
	baz=140,SNR=17						
FALS				S	**Sn**	**22 52 36.7**	**-1.6**
	baz=140						
PS1A	**Pavlof South-1**	**2.56**	**346**		**Pn**	**22 52 08.5**	**+0.1**
PN7A	**Pavlof North-7**	**2.62**	**343**		**Pn**	**22 52 10.3**	**+1.1**
ISNN	**Isanotski Nort**	**2.64**	**317**		**Pn**	**22 52 09.6**	**+0.2**
ISNN					**Sn**	**22 52 41.8**	**+0.3**
SSLS	**Shishaldin Sou**	**2.65**	**313**		**Pn**	**22 52 09.7**	**+0.1**
SSBA	**Shishaldin**	**2.74**	**313**		**Pn**	**22 52 10.9**	**-0.1**
SSBA					**Sn**	**22 52 44.2**	**+0.1**
S12K	**Black Hills**	**2.88**	**344**		**Pn**	**22 52 13.4**	**+0.6**
S12K				Sn	**Sn**	**22 52 46.6**	**-1.0**
S12K				IAML		22 52 49.6	
	comp=N,707nm,0.3s						
S12K				IAML		22 52 50.7	
	comp=E,706nm,0.9s						
S12K	**Black Hills**	**2.88**	**344**	P	**Pn**	**22 52 13.4**	**+0.6**
	baz=164,SNR=15						
S12K				S	**Sn**	**22 52 48.7**	**+1.1**
	baz=164						
VNKR	**Veniaminof 5**	**3.19**	**13**		**Pn**	**22 52 17.5**	**+0.4**
AKSA	**Akutan Strait**	**3.22**	**294**		**Pn**	**22 52 17.0**	**-0.4**
AKSA					**Sn**	**22 52 53.3**	**-2.5**
AKUT	**Akutan**	**3.26**	**294**		**Pn**	**22 52 18.0**	**0.0**
AKUT				Sn	**Sn**	**22 52 53.8**	**-3.0**

KARR	Katmai Rainbow	6.51	29			Pn		22 53 02.6	-0.1
KDAK	Kodiak Island	6.70	40	Pn		Pn		22 53 04.5	-0.7
KDAK	Kodiak Island	6.70	40	Pn		Pn		22 53 03.8	-1.3
	comp=E,1.9nm,0.3s,baz=192,slow=4.8,SNR=15								
KDAK				Sn		Sn		22 54 15.9	-5.5
	comp=E,0.5nm,0.3s,baz=227,slow=18,SNR=1.5								
	comp=E,5.2nm,0.4s								
KDAK	Kodiak Island	6.70	40	P		Pn		22 53 04.2	-1.0
O16K	Kokwok River B	6.83	11	P		Pn		22 53 06.6	-0.3
	baz=193								
N14K	Kuskokwak Cree	7.02	356					22 53 09.1	-0.5
N14K	Kuskokwak Cree	7.02	356	P		Pn		22 53 09.4	-0.2
	baz=175								
P18K	Big Mountain,	7.15	23	Pn		Pn		22 53 12.5	+1.1
Q19K	Cape Douglas,	7.19	31	Pn		Pn		22 53 13.0	+1.1
Q20K	Shuyak Island	7.36	36	P		Pn		22 53 13.6	-0.5
	baz=223								
SYI	Shuyak Island	7.36	36	Pn		Pn		22 53 13.3	-0.8
O18K	Koktuh Hills	7.57	21	P		Pn		22 53 16.0	-1.1
	baz=206								
M14K	Bethel	7.86	355			Pn		22 53 21.7	+0.6
M14K	Bethel	7.86	355	P		Pn		22 53 20.9	-0.2
	baz=174								
P19K	Oil Pt	7.90	29	Pn		Pn		22 53 24.4	+2.7
ILSW	Iliamna Southw	8.20	28			Pn		22 53 26.7	+0.8
ATKA	Atka Island	8.27	270	Pn		Pn		22 53 26.4	-0.3
CNPM	China Poot	8.44	35	Pn		Pn		22 53 30.7	+1.7
L14K	Kuka Creek	8.49	353			Pn		22 53 30.2	+0.5
L14K	Kuka Creek	8.49	353	P		Pn		22 53 29.7	0.0
	baz=172								
M17K	Holitna River	8.66	10	P		Pn		22 53 32.6	+0.4
	baz=193								
RED	Redoubt Volcan	8.66	27	Pn		Pn		22 53 30.9	-1.3
BRLK	Bradley Lake	8.73	35			Pn		22 53 33.3	+0.2
L15K	Ungalak Mounta	8.77	357	P		Pn		22 53 33.9	+0.3
	baz=177								
K13K	Kusilvak Mount	9.27	348	P		Pn		22 53 41.1	+0.8
	baz=165								
L17K	Donlin	9.31	7	P		Pn		22 53 41.0	0.0
	baz=189								
K15K	Wolf Creek Mou	9.39	358	P		Pn		22 53 42.3	+0.2
	baz=177								
SPU	Mount Spurr	9.50	26	Pn		Pn		22 53 44.3	+0.7
O22K	Cooper Landing	9.66	34	Pn		Pn		22 53 47.1	+1.4
ADK	Adak	9.84	270	Pn		Pn		22 53 48.1	0.0
J14K	Nanvaranak Lak	9.96	352	P		Pn		22 53 50.4	+0.7
	baz=170								
SUA	Susitna One	10.09	28	Pn		Pn		22 53 51.9	+0.1
RC01	Rabbit Creek A	10.10	32	Pn		Pn		22 53 52.8	+1.0
KIWB	Kanaga Island	10.12	270	Pn		Pn		22 53 52.5	+0.4
PWL	Port Wells	10.41	35	Pn		Pn		22 53 55.8	-0.2
KNK	Knik Glacier	10.76	33	Pn		Pn		22 54 01.6	+0.8
HIN	Hinchinbrook I	10.79	41			Pn		22 54 01.2	0.0
GHO	Glory Hole Cre	10.88	31	Pn		Pn		22 54 02.6	+0.2
I17K	Unalakleet	10.98	360	Pn		Pn		22 54 04.0	+0.2
EYAK	Cordova Ski Ar	11.18	41	Pn		Pn		22 54 06.6	+0.2
EYAK	Cordova Ski Ar	11.18	41	P		Pn		22 54 05.8	-0.6
	baz=233								
KAIM	Kayak Island	11.38	46	Pn		Pn		22 54 10.3	+1.0
J19K	Poorman	11.39	11	Pn		Pn		22 54 09.7	+0.2
SCM	Sheep Creek Mo	11.44	34			Pn		22 54 10.4	+0.3
SCM	Sheep Creek Mo	11.44	34	P		Pn		22 54 10.5	+0.3
	baz=225								
RAGM	Ragged Mountai	11.52	43	Pn		Pn		22 54 11.1	-0.1
KLU	Klutina	11.70	37	Pn		Pn		22 54 13.2	-0.5
KLU	Klutina	11.70	37	P		Pn		22 54 13.8	+0.1
	baz=229								
SUCK	Suckling Hills	11.73	46	Pn		Pn		22 54 14.0	-0.2
WAT6	Susitna Watana	11.86	30	P		Pn		22 54 15.4	-0.5
	baz=221								
BMRM	Bremner River	11.88	41	Pn		Pn		22 54 16.9	+0.8
BERG	Berg Lake	11.93	45	Pn		Pn		22 54 17.5	+0.7
M24K	Tolsona, Glenn	12.02	34	Pn		Pn		22 54 19.3	+1.3
DHY	Denali Highway	12.34	29	Pn		Pn		22 54 21.8	-0.7
CRQM	Cirque	12.36	44	Pn		Pn		22 54 23.2	+0.4
VRDI	Verde Repeater	12.49	42	Pn		Pn		22 54 24.6	0.0
TGL	Tana Glacier	12.49	44	Pn		Pn		22 54 24.6	+0.1
HARP	HAARP	12.57	35	P		Pn		22 54 25.5	-0.1
	baz=228								
ISLE	Juniper Island	12.62	45	Pn		Pn		22 54 26.9	+0.6
MCARA	McCarthy VSAT	12.74	41	Pn		Pn		22 54 27.8	-0.1
MCARA	McCarthy VSAT	12.74	41	P		Pn		22 54 27.8	-0.1
	baz=236								
YAH	Yahtse	12.77	47	Pn		Pn		22 54 29.8	+1.4
PAX	Paxson	12.86	33	Pn		Pn		22 54 29.8	+0.3
GRNC	Granite Creek	12.94	45	Pn		Pn		22 54 31.2	+0.5
TABL	Table Mountain	13.07	47	Pn		Pn		22 54 33.6	+1.0
LOGN	Logan Glacier	13.30	46	Pn		Pn		22 54 37.2	+1.5
PCA	Pinnacle	13.32	49	Pn		Pn		22 54 37.3	+1.5
PINM	Pinnacle	13.32	49	P		Pn		22 54 36.1	+0.3
	baz=246								
M26K	Nabesna, AK	13.35	38	Pn		Pn		22 54 37.0	+0.9
M26K	Nabesna, AK	13.35	38	P		Pn		22 54 35.8	-0.4
	baz=233								
MENT	Mentasta	13.43	35	Pn		Pn		22 54 35.9	-1.3
BCPM	Bancas Point	13.55	50	Pn		Pn		22 54 39.6	+0.7
PNL	Peninsula	13.56	52	P		Pn		22 54 38.8	-0.3
	baz=249								
O28M	Mount Upton	13.63	47	Pn		Pn		22 54 41.7	+1.4
M27K	Edge Creek, AK	13.74	39	Pn		Pn		22 54 42.1	+0.5
DOT	Dot Lake	13.79	32	Pn		Pn		22 54 43.4	+1.3
ILAR	Eielson Array	13.80	25	Pn		Pn		22 54 39.1	-3.2
	comp=E,0.3nm,0.3s,baz=217,slow=13,SNR=9.1								
ILAR				Sn		Sn		22 57 03.1	-12
	baz=218,slow=22,SNR=1.8								
ILAR				LR		LR		22 59 25.1	
	comp=E,299nm,18.8s,baz=288,slow=35								
	comp=E,1.0nm,0.5s								
SCRK	Sand Creek	14.04	32	Pn		Pn		22 54 44.8	-0.9
YUK8	Steele Glacier	14.05	45	P		Pn		22 54 46.6	+0.6
	baz=243								
J25K	Salcha River,	14.09	28	Pn		Pn		22 54 47.6	+1.3
O29M	Mount Kennedy	14.18	50			Pn		22 54 49.7	+2.1
O29M	Mount Kennedy	14.18	50	P		Pn		22 54 47.6	0.0
	baz=248								
BCAR	Beaver Creek A	14.19	37	Pn		Pn		22 54 48.9	+1.2
P29M	Windy Craggy	14.35	53	P		Pn		22 54 51.3	+1.5
P29M	Windy Craggy	14.35	53	P		Pn		22 54 50.0	+0.1
	baz=252								
F20K	Avaraart Lake	14.36	8	Pn		Pn		22 54 50.2	+0.2
J26L	Joseph Creek	14.54	31	Pn		Pn		22 54 52.6	+0.1
S31K	Pelican	14.71	60	Pn		Pn		22 54 54.3	-0.5
S31K	Pelican	14.71	60	P		Pn		22 54 54.5	-0.3
	baz=260								
PLBC	Pleasant Camp	14.97	55	P		Pn		22 54 57.9	-0.3
	baz=255								
M29M	Somme Creek	15.14	42			Pn		22 55 01.0	+0.4
M29M	Somme Creek	15.14	42	P		Pn		22 55 00.3	-0.3
	baz=241								
SHEM	Shemya Is, Ala	15.22	279	LR		LR		23 00 21.0	
	comp=E,388nm,18.7s,baz=34,slow=35								
I26K	Coal Creek Min	15.24	29	Pn		Pn		22 55 01.3	-0.5
I26K				IAmb		IAmb		22 55 16.1	
	comp=Z,4.5nm,0.9s								
N30M	Aishikik Lake	15.29	47	Pn		Pn		22 55 03.9	+1.3
N30M				IAmb		IAmb		22 55 19.8	
	comp=Z,7.2nm,0.8s								
SKAG	Skagway	15.48	55	P		Pn		22 55 09.7	+4.8
SKAG				IAmb		IAmb		22 55 25.2	
	comp=Z,14nm,0.8s								
O30N	Mendenhall	15.49	50	Pn		Pn		22 55 06.5	+1.3
S32K	Killisnoo	15.53	63	Pn		Pn		22 55 04.5	-1.1
S32K				IAmb		IAmb		22 55 23.3	
	comp=Z,13nm,1.1s								
BESE	Bessie Mountai	15.54	58	Pn		Pn		22 55 05.8	-0.1
BESE				IAmb		IAmb		22 55 21.0	
	comp=Z,14nm,1.2s								
C16K	Lisburne Hills	15.55	354	Pn		Pn		22 55 07.0	+1.2
C16K				IAmb		IAmb		22 55 16.9	
	comp=Z,9.8nm,0.9s								
L29M	L29M	15.60	40			Pn		22 55 07.8	+1.2
L29M				IAmb		IAmb		22 55 23.7	
	comp=Z,16nm,0.8s								
DAWY	Dawson	15.65	36	Pn		Pn		22 55 08.8	+1.5
D19K	Kuna River	15.66	4	P		Pn		22 55 12.8	+5.5
D19K				IAmb		IAmb		22 55 14.7	
	comp=Z,6.8nm,0.7s								
R32K	Eaglecrest	15.66	60	Pn		Pn		22 55 07.2	-0.2
R32K				IAmb		IAmb		22 55 22.9	
	comp=Z,5.4nm,0.8s								
C18K	Utukok River	15.77	359	P		Pn		22 55 13.7	+5.0
C18K				IAmb		IAmb		22 55 16.3	
	comp=Z,10nm,0.7s								
E22K	Anaktuvuk Pass	15.83	12	Pn		Pn		22 55 10.0	+0.5
E21K	Killik River	15.88	9	Pn		Pn		22 55 09.7	-0.5
E21K				IAmb		IAmb		22 55 13.2	
	comp=Z,14nm,1.1s								
N31M	Braeburn, Yuko	15.88	48	Pn		Pn		22 55 11.2	+0.9
N31M				IAmb		IAmb		22 55 26.8	
	comp=Z,15nm,0.7s								
M30M	Minto, Yukon	15.89	43	Pn		Pn		22 55 10.3	-0.1
M30M				IAmb		IAmb		22 55 26.5	
	comp=Z,11nm,0.8s								
D20K	Etivluk River	15.95	5	Pn		Pn		22 55 12.2	+1.1
WHY	Whitehorse	16.02	51			Pn		22 55 12.2	0.0
WHY				IAmb		IAmb		22 55 28.0	
	comp=Z,17nm,0.9s								
C19K	Lookout Ridge	16.23	1	Pn		Pn		22 55 14.9	+0.2
E24K	Your Creek	16.27	16	Pn		Pn		22 55 15.1	-0.1
P32M	Atlin	16.31	55			Pn		22 55 17.8	+2.0
P32M				IAmb		IAmb		22 55 31.3	
	comp=Z,14nm,0.8s								
I28M	Miner Creek	16.32	32	Pn		Pn		22 55 16.5	+0.6
I28M				IAmb		IAmb		22 55 34.6	
	comp=Z,9.3nm,0.8s								
D22K	Ayikyak River	16.43	10			Pn		22 55 19.5	+2.3
C21K	Knifeblade Rid	16.51	7	P		Pn		22 55 18.5	+0.3
	baz=193								
TOLK	Toolik Lake Re	16.61	14	P		Pn		22 55 20.5	+1.0
TOLK				IAmb		IAmb		22 55 34.7	
	comp=Z,10nm,1.1s								
G27K	Doyon Strip	16.75	27	Pn		Pn		22 55 20.7	-0.7
D23K	Nanushuk River	16.76	13	P		Pn		22 55 23.4	+2.0
P33M	Teslin, Yukon	16.89	53			Pn		22 55 25.9	+2.8
P33M				IAmb		IAmb		22 55 38.5	
	comp=Z,17nm,0.9s								
B21K	Ikpikpuk River	16.98	7	Pn		Pn		22 55 23.6	-0.5
B21K				IAmb		IAmb		22 55 30.6	
	comp=Z,9.2nm,0.8s								
B20K	Meade River	17.21	4	Pn		Pn		22 55 26.3	-0.7
B20K				IAmb		IAmb		22 55 31.1	
	comp=Z,9.6nm,0.7s								
I30M	Mount Dempster	17.38	36			Pn		22 55 30.4	+1.1
I30M				IAmb		IAmb		22 55 46.6	
	comp=Z,8.6nm,0.8s								
C23K	Itkillik River	17.58	12			Pn		22 55 31.6	0.0
C23K				IAmb		IAmb		22 55 44.6	
	comp=Z,13nm,0.8s								
R33M	Jennings River	17.66	57			Pn		22 55 34.3	+1.6
R33M				IAmb		IAmb		22 55 47.2	
	comp=Z,8.4nm,0.9s								
C24K	Franklin Bluff	17.73	14	Pn		Pn		22 55 33.1	-0.3
C24K				IAmb		IAmb		22 55 41.4	
	comp=Z,11nm,1.0s								
D25K	Kavik River	17.74	17	P		Pn		22 55 35.6	+1.9
B22K	Teshekpuk Lake	17.77	8	Pn		Pn		22 55 33.6	-0.4
F28M	Old Crow	17.82	26	P		P		22 55 38.8	+3.5
G29M	Pine Creek	17.86	30	P		Pn		22 55 35.5	+0.3
G29M				IAmb		IAmb		22 55 49.9	
	comp=Z,16nm,0.8s								
EPYK	Eagle Plains	17.93	32	P		Pn		22 55 39.4	+3.4
EPYK	Eagle Plains	17.93	32	P		Pn		22 55 36.5	+0.5
	baz=233								
DLBC	Dease Lake	18.03	60	P		Pn		22 55 39.4	+2.0
	comp=Z,0.1nm,0.3s,baz=251,slow=18,SNR=1.7								
	comp=Z,1.5nm,0.9s								
H31M	Peel River	18.41	35	P		P		22 55 42.4	+0.6
H31M				IAmb		IAmb		22 55 57.9	
	comp=Z,13nm,0.8s								
H31M	Peel River	18.41	35	P		P		22 55 41.2	-0.6
	baz=238								
G30M	tAoh Zraii Nji	18.46	31			P		22 55 44.8	+2.4
G30M				IAmb		IAmb		22 56 01.1	
	comp=Z,18nm,0.8s								
G30M	tAoh Zraii Nji	18.46	31	P		P		22 55 42.1	-0.3
	baz=232								
C27K	Jago River	18.49	19	P		P		22 55 43.5	+0.8
C26K	Camden Bay	18.52	17	P		P		22 55 43.2	+0.2
	baz=211								
E29M	Blow River	18.89	26	P		P		22 55 48.5	+1.3
E29M	Blow River	18.89	26	P		P		22 55 47.7	+0.6
	baz=226								
F30M	Barrier River	18.98	30	P		P		22 55 51.1	+3.0
F30M				IAmb		IAmb		22 56 00.3	
	comp=Z,35nm,0.6s								
F30M	Barrier River	18.98	30	P		P		22 55 48.3	+0.2
	baz=232								
TGTN	Hyland Airport	19.35	51	P		P		22 55 52.6	+0.4
	baz=258								
F31M	Tsiigehtchic	19.51	32	P		P		22 55 53.8	-0.1
	baz=235								
INK	Inuvik	20.08	30			P		22 56 01.8	+1.7
INK				IAmb		IAmb		22 56 19.7	
	comp=Z,10nm,0.9s								
INK	Inuvik	20.08	30	P		P		22 56 01.6	+1.6
	comp=Z,3.3nm,0.5s,baz=223,slow=9.5,SNR=11								
	comp=Z,3.3nm,0.5s								
INK	Inuvik	20.08	30	P		P		22 56 00.1	0.0
	baz=234								
PETK	Petropavlovsk-	24.78	287	P		P		22 56 49.5	+0.9
	comp=Z,5.1nm,0.5s,baz=85,slow=13,SNR=19								
	comp=Z,5.1nm,0.5s								
NVAR	Mina Array Bea	32.45	99	P		P		22 57 57.7	+0.4
	comp=Z,0.1nm,0.3s,baz=311,slow=8.3,SNR=4.9								
	comp=Z,0.1nm,0.3s								
YMR	Madison River	33.18	84	P		P		22 58 05.5	+1.8
PDAR	Pinedale Array	35.09	86	P		P		22 58 22.0	+1.8
	comp=Z,0.2nm,0.5s,baz=306,slow=5.1,SNR=3.8								
	comp=Z,0.2nm,0.5s								
H11N2	WAKE ISLAND Hy	41.54	230	T		T		23 45 44.8	
	baz=26,slow=76,SNR=6.5								
H11N3	WAKE ISLAND Hy	41.55	230	T		T		23 45 18.3	
	baz=26,slow=76,SNR=7.1								
H11N1	WAKE ISLAND Hy	41.56	230	T		T		23 45 28.7	
	baz=26,slow=76,SNR=5.4								
H11S1	WAKE ISLAND Hy	42.70	229	T		T		23 46 49.9	
	baz=25,slow=76,SNR=6.7								
H11S2	WAKE ISLAND Hy	42.71	229	T		T		23 46 51.0	
	baz=25,slow=76,SNR=4.4								
H11S3	WAKE ISLAND Hy	42.72	229	T		T		23 46 49.3	
	baz=25,slow=76,SNR=4.1								
TXAR	Lajitas Array	47.49	96	P		P		23 00 03.5	+1.4
HPIG		48.05	100	P		P		23 00 05.7	-0.8
PLPT	Palo Pinto	48.27	89	P		P		23 00 07.7	-0.2
Z35A	Perchaven, San	48.55	87	P		P		23 00 09.3	-0.8
M44A	Midewin, Midew	48.69	73	P		P		23 00 10.5	-0.5
BRDY	Brady	48.92	91	P		P		23 00 12.4	-0.5
P43A	Skaggs, Pawnee	48.95	76	P		P		23 00 13.7	+0.7
MGMO	Mountain Grove	48.96	80	P		P		23 00 14.2	+1.0
CCM	Cathedral Cave	48.97	78	P		P		23 00 12.6	-0.6
FW13	Cleburne	49.12	89	P		P		23 00 13.1	-1.4
DRIO	Del Rio	49.27	94	P		P		23 00 14.3	-1.3
HHC	Hu-ho-hao-te	57.54	296	eP		P		23 01 16.3	-0.1
HHC				sP		pwP		23 01 26.5	+2.2
HHC				pmax		pmax			
	comp=Z,14nm,0.9s								
NJ2	Nanjing	59.63	284	eP		P		23 01 29.9	-1.0
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
LZH	Lanzhou	65.16	297	eP		P		23 02 02.0	-6.1
LZH				pP		pP		23 02 06.1	-3.7
LZH				sP		sP		23 02 09.1	-1.3
LZH				pmax		pmax			
	comp=Z,13nm,1.1s								
FINES	FINESS Array B	65.84	356	P		P		23 02 12.9	+1.1
	comp=Z,7.7nm,1.0s,baz=15,slow=5.8,SNR=1.1								
	comp=Z,7.7nm,1.0s								
HFS	Hagfors	67.19	3	P		P		23 02 21.5	+1.0
	comp=Z,3.0nm,0.8s,baz=11,slow=2.9,SNR=5.6								
	comp=Z,3.0nm,0.8s								
PZH	PanZhiHua	73.63	292	P		P		23 03 00.6	+0.1

*TEH **07** 22:55:41.0, 37.68N×47.49E, h6km±33km*
*THR **07** 22:55:42.0±0.0, 37.73N×47.47E, h14km±16km, ML4.1*

ISC 07 22:55:41.8±1.0, 37.70N±0.04×47.45E±0.05, h10km, n21, σ1°47/22, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHSH	Hashtrud	0.42	200	Pg	Pg	22 55 49.0	-1.1
IHSH				Sg	Sg	22 55 54.9	-0.8
IHRS	Heris	0.69	333	Pg	Pg	22 55 54.6	-0.7
ITBZ	Tabriz	1.16	298	Pg	Pb	22 56 03.4	-0.5
ITBZ				Sg	Sn	22 56 20.2	+0.1
GRMI	Germi	1.16	18	*i* P	Pb	22 56 02.9	-1.1
GRMI				IAML		22 56 25.4	
	comp=Z,1μm,1.0s						
IAZR	Azarshahr	1.16	269	Pg	Pb	22 56 03.5	-0.6
ZNJK	Zanjan	1.43	136	*e*Pg	Pn	22 56 06.7	-1.3
ZNJK				IAML		22 56 49.4	
	comp=Z,4.6nm,1.0s						
MAHB	Mahabad	1.67	237	Pg	Pb	22 56 12.7	0.0
LHJ2	Lahijan - Gila	2.15	104	Pn	Pn	22 56 18.5	+0.8
SRSL	SARDASHT	2.19	228	*e*Pn	Pn	22 56 20.4	+2.0
SRSL				IAML		22 57 01.6	
	comp=Z,610nm,1.0s						
IGZV	Ghazvin	2.58	120	Pn	Pn	22 56 25.5	+1.7
SNGE	Sanandaj	2.60	182	*i* P	Pb	22 56 28.2	-0.5
SNGE				IAML		22 56 52.9	
	comp=Z,6.6nm,1.0s						
QABG	Abgarm-Qazvin	2.63	139	Pn	Pn	22 56 25.2	+0.8
THKV	Tehran--Karaj	3.28	122	*e*Pn	Pn	22 56 35.8	+2.4
THKV				IAML		22 57 27.4	
	comp=Z,320nm,1.0s						
CHTH	Charan	3.45	120	IAML		22 57 28.8	
	comp=Z,15nm,1.0s						
IQOM	Qom	4.09	133	Pn	Pn	22 56 45.2	+0.7
IPRN	Peran	4.18	109	Pn	Pn	22 56 47.5	+1.8
DAMV	Damavand	4.18	118	*e*Pn	Pn	22 56 48.5	+2.6
IDMV	Damavand	4.25	118	Pn	Pn	22 56 49.1	+2.2
QAMS	Damsar	5.10	140	Pn	Pn	22 56 59.9	+1.5
ISFB	Sefidab	5.12	129	Pn	Pn	22 56 59.7	+1.1
IGLO	Ghaloghah	5.24	101	Pn	Pn	22 57 02.1	+1.7

IDC 07 23:00:38.0±2.2, 8.26N×103.12W, h0km, mb3.6/3, mbtmp3.5/4, ML2.9/1, MS2.8/2, Error ellipse: s-maj=70.1km s-min=28.6km az=55.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	11.89	42	LR	LR	23 07 01.7	
	comp=Z,158nm,18.9s,baz=178,slow=32						
H06S1	SOCORRO T	12.90	325	T	T	23 16 52.3	
	SNR=8.6						
H06E1	SOCORRO T-PHAS	12.92	325	T	T	23 17 17.6	
	SNR=2435						
APG	El Apazote	14.09	60	Pn	Pn	23 03 57.8	-1.4
	0.1nm,0.3s,baz=212,slow=17,SNR=3.9						
APG				LR	LR	23 08 19.2	
	comp=Z,8.6nm,19.7s,baz=240,slow=33						
	0.5nm,0.6s						
TXAR	Lajitas Array	20.97	359	P	Pn	23 05 24.3	-1.2
	0.8nm,0.9s,baz=187,slow=12,SNR=1.7						
	0.8nm,0.9s						
ANMO	Albuquerque	26.74	354	LR	LR	23 15 52.6	
	comp=Z,679nm,20.6s,baz=2.0,slow=34						
LPAZ	La Paz	42.35	125	P	P	23 08 35.1	+0.1
	1.0nm,0.8s,baz=292,slow=5.4,SNR=8.8						
	1.0nm,0.8s						
H03N2	Juan Fernandez	47.41	152	T	T	00 00 07.6	
	baz=329,slow=78,SNR=7.7						
H03N1	Juan Fernandez	47.42	152	T	T	00 00 10.6	
	baz=329,slow=78,SNR=9.3						
H03N3	Juan Fernandez	47.43	152	T	T	00 00 09.7	
	baz=329,slow=78,SNR=7.1						
ILAR	Eielson Array	64.20	341	P	P	23 11 13.9	-0.5
	1.4nm,1.1s,baz=128,slow=7.6,SNR=5.9						
	1.4nm,1.1s						

TEH 07 23:04:25.3, 37.69N×47.46E, h8km±39km, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHSH	Hashtrud	0.41	203	Pg	Pg	23 04 33.9	+0.4
IHSH				Sg	Sg	23 04 40.1	+1.3
IHRS	Heris	0.71	332	Pg	Pg	23 04 39.4	+0.3
IHRS				Sg	Sb	23 04 50.0	-0.2
ITBZ	Tabriz	1.17	298	Pg	Pg	23 04 47.8	-0.1
ITBZ				Sg	Sn	23 05 05.1	+0.7
GAS1	Astara - Iran	1.29	57	Pg	Pg	23 04 50.1	-0.1
CSN1	Caspian	1.30	95	Pg	Pg	23 04 50.7	+0.4
ZNJK	Zanjan	1.41	136	Pg	Pn	23 04 51.5	+0.1
MAHB	Mahabad	1.68	237	Pg	Pg	23 04 57.6	+0.2
IGZV	Ghazvin	2.56	120	Pn	Pb	23 05 10.1	-1.5
QABG	Abgarm-Qazvin	2.61	139	Pn	Pb	23 05 10.4	-2.1
HAGD	Aghdareh	3.16	154	Pn	Pn	23 05 17.0	+1.4

*IDC **07** 23:07:14.5±0.6, 36.62N×45.27E, h0km, mb4.1/25, mbtmp4.1/38, ML3.7/12, Error ellipse: s-maj=10.8km s-min=8.9km az=140.0*
*ISN **07** 23:07:15.1±0.5, 36.94N×45.16E, h14km±75km, ML4.8*
*THR **07** 23:07:16.2±0.0, 36.74N×45.33E, h10km±1km, ML4.4*
*TEH **07** 23:07:16.7, 36.84N×45.33E, h12km±36km*
*MOS **07** 23:07:16.8±1.3, 36.70N×45.26E, h21km, mb4.5/37, Error ellipse: s-maj=5.9km s-min=4.4km az=106.4*
*AFAD **07** 23:07:17.1, 36.48N×45.21E, h7km±3km, ML4.3*
*DSN **07** 23:07:17.4±0

BLIS Bitlis-Merkez 3.07 305 P **Pn** **23 08 07.2 +2.3**
DYDN Diyadin 3.11 336 P **Pb** **23 08 10.2 -1.7**
GURO Guroymak-BITLI 3.19 306 **Pn** **23 08 08.2 +1.5**
MIDY Mardin/Midyat- 3.22 284 P **Pn** **23 08 07.2 +0.3**
MIDY *i* IAML 23 09 06.0
comp=Z,773nm,1.4s
MIDY *i* IAML 23 09 08.0
comp=Z,972nm,1.3s
DORK Agr/Tutak/Do 3.34 324 P **Pn** **23 08 11.1 +2.4**
BTMN Batman 3.44 291 P **Pn** **23 08 11.3 +1.3**
GNI Garni 3.46 353 **Pn** **23 08 11.7 +1.3**
GNI Garni 3.46 353 Pn **Pb** **23 08 14.7 -3.2**
comp=Z,10.0nm,0.3s,baz=184,slow=2.2,SNR=13
GNI Pg **Pg** **23 08 19.0 -3.9**
comp=Z,10.0nm,0.3s,baz=157,slow=2.9,SNR=15
GNI Lg Lg 23 09 07.8
comp=Z,13nm,0.3s,baz=209,slow=19,SNR=6.7
comp=Z,27nm,0.5s
GNI Garni 3.46 353 P **Pb** **23 08 15.6 -2.2**
GNI S **Sg** **23 09 04.0 -3.8**
GNI Garni 3.46 353 P **Pb** **23 08 15.7 -2.2**
GNI Garni 3.46 353 *i* P **Pn** **23 08 09.3 -1.1**
GNI Garni 3.46 353 P **Pb** **23 08 15.6 -2.2**
BHD Baghdad 3.52 193 *e*Pn **Pn** **23 08 14.0 +3.0**
BHD *e*Sn **Sn** **23 08 57.0 +4.5**
IBDR Badra 3.63 172 *e*Pn **Pn** **23 08 16.0 +3.6**
IBDR *e*Sn **Sb** **23 09 01.0 -3.5**
IBDR AML AML 23 09 28.3
comp=N,660nm,0.7s
MUSM Mu-Merkez 3.63 305 P **Pn** **23 08 13.9 +1.3**
MARD Mardin 3.69 281 P **Pn** **23 08 14.6 +1.2**
MARD Mardin 3.69 281 **Pn** **23 08 11.2 -2.2**
KHMZ Khomeyn 4.81 127 *e*Pn **Pn** **23 08 31.0 +2.0**
KHMZ IAML 23 10 09.1
comp=Z,220nm,1.0s
IQOM Qom 5.03 110 Pn **Pn** **23 08 35.1 +3.1**
SANL SANLIURFA_Merk 5.10 277 P **Pn** **23 08 33.7 +1.1**
SANL *i* IAML 23 10 18.0
comp=Z,325nm,0.7s
SANL *i* IAML 23 10 20.0
comp=Z,365nm,1.0s
GHVR GHOM 5.35 113 *e*Pn **Pn** **23 08 37.9 +1.7**
GHVR IAML 23 10 35.2
comp=Z,250nm,1.0s
DAMV Damavand 5.48 99 *e*Pn **Pn** **23 08 40.8 +2.6**
DAMV IAML 23 09 01.1
comp=Z,4.5nm,1.0s
IPIR Pirpir 6.09 130 Pn **Pn** **23 08 50.2 +3.5**
JHBN Jahan bin 6.28 134 Pn **Pn** **23 08 52.0 +2.8**
IBRJ Brojen 6.86 133 Pn **Pn** **23 08 59.7 +2.5**
KBZ Khabaz 7.25 346 Pn Pn 23 09 07.7 +5.5
comp=Z,0.3nm,0.3s,baz=170,slow=9.0,SNR=22
comp=Z,19nm,1.0s
KBZ Khabaz 7.25 346 *ce*P Pn 23 09 06.9 +4.7
NASN Na'in 7.29 120 *e*Pn **Pn** **23 09 06.9 +3.8**
NASN IAML 23 09 59.7
comp=Z,75nm,1.0s
SHA1 Shidzhatmaz 7.31 345 *i* P **Pn** **23 09 03.2 0.0**
KVAR Kislovodsk Arr 7.51 345 Pn Pn 23 09 11.2 +5.3
baz=260,slow=22
comp=Z,4.8nm,0.9s
KIV Kislovodsk 7.51 345 **Pn** **23 09 06.6 +0.7**
KIV Kislovodsk 7.51 345 *i* P Pn 23 09 12.3 +6.5
SNR=13
KIV Kislovodsk 7.51 345 *e*P **Pn** **23 09 07.2 +1.3**
KIV pmax pmax
comp=Z,26nm,1.1s
KIV Kislovodsk 7.51 345 P Pn 23 09 12.7 +6.8
comp=Z,0.1nmcomp=Z,23nm,1.2s
FKH Fakeheh 7.68 254 *e*P **Pn** **23 09 09.1 +0.9**
BEIL Beino 7.75 256 *e*P **Pn** **23 09 10.2 +1.0**
KBD Kabd 7.77 165 P **Pn** **23 09 10.3 +0.9**
KBD S **Sn** **23 10 32.3 -5.0**
BNN Bunyan 7.80 289 **Pn** **23 09 09.6 -0.3**
HWQ Hawqa 8.03 255 *e*P **Pn** **23 09 14.2 +1.2**
ZAHL Zahle 8.23 253 *e*P **Pn** **23 09 17.5 +1.7**
ASF Jabal al Asfar 8.30 239 Pn **Pn** **23 09 16.9 +0.2**
comp=Z,0.8nm,0.3s,baz=21,slow=17,SNR=3.9
ASF Sn **Sn** **23 10 49.4 -1.1**
comp=Z,1.1nm,0.3s,baz=89,slow=20,SNR=1.3
ASF Lg Lg 23 11 34.4
comp=Z,1.6nm,0.3s,baz=66,slow=20,SNR=2.1
comp=Z,1.8nm,0.5s
BHL Bhannes 8.39 253 *e*P **Pn** **23 09 18.9 +1.0**
RCY Rachaya 8.41 250 *e*P **Pn** **23 09 19.9 +1.6**
QRWL Qaraoun 8.51 251 *e*P **Pn** **23 09 21.6 +2.1**
DQRL Deir Qamar 8.53 252 *e*P **Pn** **23 09 21.3 +1.5**
SHBL Chebaa 8.54 250 *e*P **Pn** **23 09 21.4 +1.3**
MMAI Mount Meron Ar 8.95 249 Pn **Pn** **23 09 25.8 +0.2**
comp=Z,1.6nm,0.3s,baz=64,slow=15,SNR=7.1
MMAI Sn **Sn** **23 11 05.7 -0.6**
comp=Z,0.3nm,0.3s,baz=110,slow=33,SNR=0.7
MMAI Lg Lg 23 11 55.8
comp=Z,1.9nm,0.3s,baz=54,slow=36,SNR=1.9
comp=Z,2.9nm,0.6s
BALJ Balqa 9.23 243 **Pn** **23 09 30.1 +0.6**
BR131 Keskin Array S 9.68 292 **Pn** **23 09 38.8 +3.2**
BR131 Keskin Array S 9.68 292 P Pn 23 09 41.1 +5.5
SNR=14
BR131 Keskin Array S 9.68 292 P **Pn** **23 09 38.8 +3.2**
BRTR Keskin Array B 9.68 292 **Pn** **23 09 34.2 -1.4**
BRTR Keskin Array B 9.68 292 Pn **Pn** **23 09 39.4 +3.8**
comp=Z,0.2nm,0.3s,baz=112,slow=13,SNR=4.3
BRTR Lg Lg 23 12 21.9
baz=149,slow=39,SNR=1.6
comp=Z,7.2nm,0.8s
BJRD Bojnurd 9.69 81 *e*Pn **Pn** **23 09 37.9 +2.1**
GHAJ Ghor Haditha 9.73 239 Pn **Pn** **23 09 37.0 +0.8**
ILGA Ilgaz 10.03 299 **Pn** **23 09 45.0 +4.5**
TABS Tabas 10.12 104 *e*Pn **Pn** **23 09 45.4 +3.7**
ANTO Ankara 10.34 292 Pn **Pn** **23 09 48.8 +4.1**
ANTO Ankara 10.34 292 P **Pn** **23 09 48.8 +4.1**
EIL Elat 11.17 234 Pn **Pn** **23 09 54.3 -1.6**
comp=Z,0.3nm,0.3s,baz=343,slow=8.9,SNR=4.0
EIL Lg Lg 23 12 59.4
comp=Z,0.6nm,0.3s,baz=98,slow=23,SNR=1.7
comp=Z,2.3nm,0.8s
SAKB Bahrain 11.59 156 P **Pn** **23 09 59.9 -1.8**
SAKB S **Sn** **23 12 06.4 -4.5**
SHMA Al-Shehemyia 11.84 154 P **Pn** **23 10 03.2 -2.0**
SHMA S **Sn** **23 12 13.3 -3.9**
BORA Eskisehir 12.11 290 **Pn** **23 10 11.9 +3.1**
BSRN Basiran 12.35 109 *e*Pn Pn 23 10 17.0 +4.8
ELL Elmali 12.37 275 **Pn** **23 10 15.5 +3.0**
ELL Elmali 12.37 275 P **Pn** **23 10 15.5 +3.0**
SMRA Abu-Samra 12.83 157 P **Pn** **23 10 16.4 -2.2**
TRNA Turayna 12.96 155 P **Pn** **23 10 18.5 -2.0**
SNR=14
TRNA S **Sn** **23 12 39.1 -5.5**
RAYN Ar Rayn 13.15 179 **Pn** **23 10 20.7 -2.4**
RAYN Ar Rayn 13.15 179 P **Pn** **23 10 19.7 -3.4**
RAYN S **Sn** **23 12 44.1 -5.1**
RAYN Ar Rayn 13.15 179 P **Pn** **23 10 19.9 -3.2**
RAYN Ar Rayn 13.15 179 P **Pn** **23 10 20.7 -2.4**
JRN Qarnain Island 13.39 149 P **Pn** **23 10 23.8 -2.4**
JRN S **Sn** **23 12 48.6 -6.3**
SHME Shamm 14.07 136 P **Pn** **23 10 33.1 -2.6**
SHME S **Sn** **23 13 07.7 -3.9**
SHME Shamm 14.07 136 P **Pn** **23 10 33.2 -2.5**
BANOM Banah 14.26 136 P **Pn** **23 10 36.5 -1.7**
BANOM S **Sn** **23 13 11.5 -4.8**
BANOM Banah 14.26 136 *i* P **Pn** **23 10 36.5 -1.7**
SNR=17
GHWR Ruwais 14.27 151 P **Pn** **23 10 36.3 -2.1**
GHWR S **Sn** **23 13 08.9 -7.7**
MASF Masafi 14.62 138 P **Pn** **23 10 41.6 -1.6**
SNR=12
MSFE Esma-Masafi 14.62 138 *i* P **Pn** **23 10 41.1 -2.1**
SNR=12
NAZ Nazwa, Dubai 14.66 140 P **Pn** **23 10 42.3 -1.4**
NAZ S **Sn** **23 13 21.0 -5.1**
NAZ Nazwa, Dubai 14.66 140 *i* P **Pn** **23 10 42.3 -1.4**
SNR=9.8
AJN Ajban 14.68 143 P **Pn** **23 10 43.8 -0.1**
SNR=9.6
AJN S **Sn** **23 13 20.5 -6.0**
AJN Ajban 14.68 143 *i* P **Pn** **23 10 43.2 -0.7**
SNR=9.5
MDH Madha 14.75 137 P **Pn** **23 10 44.1 -0.8**
SNR=6.4
MDH S **Sn** **23 13 23.8 -4.4**
MDH Madha 14.75 137 *i* P **Pn** **23 10 42.8 -2.1**
SNR=5.8
ASUD Al Ashush, Dub 14.79 142 P **Pn** **23 10 44.8 -0.7**
SNR=5.7
ASUD S **Sn** **23 13 25.6 -3.6**
ASUD Al Ashush, Dub 14.79 142 *i* P **Pn** **23 10 44.6 -0.9**
SNR=36
FAQ Al Faqa, Dubai 14.82 141 P **Pn** **23 10 45.8 -0.2**
FAQ S **Sn** **23 13 25.4 -4.7**
FAQ Al Faqa, Dubai 14.82 141 P **Pn** **23 10 46.4 +0.5**
VORD Divnogorie 14.89 345 *e*P **P** **23 10 51.5 -0.9**
VORD pmax pmax
comp=Z,10.0nm,1.0s
UOSS Minazif 14.98 138 P **Pn** **23 10 46.9 -1.2**
UOSS Minazif 14.98 138 *i* P **Pn** **23 10 45.5 -2.6**
SNR=5.7
HATD Hatta, Dubai 15.04 139 P **Pn** **23 10 47.6 -1.3**
SNR=12
HATD S **Sn** **23 13 28.8 -6.6**
HATD Hatta, Dubai 15.04 139 P **Pn** **23 10 47.5 -1.3**
ASHO Ashiyiah 15.12 139 P **Pn** **23 10 47.9 -2.0**
SNR=14
ASHO S **Sn** **23 13 29.4 -7.8**
ASHO Ashiyiah 15.12 139 *i* P **Pn** **23 10 47.7 -2.2**
SNR=7.6
VSR Storozhevoye 15.15 345 *e*P **P** **23 10 53.9 -1.4**
VSR pmax pmax
comp=Z,8.0nm,0.9s
MZR Muzera 15.37 150 P **Pn** **23 10 52.0 -1.2**
SNR=16
MZR S **Sn** **23 13 36.8 -6.6**
MZR Muzera 15.37 150 *i* P **Pn** **23 10 51.1 -2.1**
SNR=17
ALNE Al Ain 15.48 142 P **Pn** **23 10 53.1 -1.5**
SNR=14
ALNE S **Sn** **23 13 37.2 -8.8**
ALNE Al Ain 15.48 142 *i* P **Pn** **23 10 52.5 -2.1**
SNR=14
BELG Belogornoye 15.76 5 Pn **Pn** **23 10 58.7 +0.6**
comp=Z,0.4nm,0.3s,baz=203,slow=9.9,SNR=6.1
comp=Z,16nm,0.8s
BELG Belogornoye 15.76 5 *i* P **Pn** **23 10 59.0 +0.9**
SOHO SOHO 15.81 139 P **Pn** **23 10 56.4 -2.5**
SOHO SOHO 15.81 139 *i* P **Pn** **23 10 56.6 -2.4**
SNR=17
BAL3X Bal3x, Balta 16.12 319 P **P** **23 11 06.4 +0.3**
UMZA Um Al Zommool 16.34 146 P **Pn** **23 11 02.9 -2.9**
UMZA S **Sn** **23 13 57.8 -9.2**
AB31 Akbulak array 16.44 36 **P** **23 11 08.1 -1.5**
ABKAR Akbulak array 16.44 36 Pn **Pn** **23 11 07.9 +1.0**
ARQ Araqi 16.46 141 P **Pn** **23 11 05.6 -1.8**
SNR=10.0
ARQ S **Sn** **23 14 02.9 -7.1**
AKTO Aktyubinsk 16.48 30 Pn **Pn** **23 11 07.0 -0.3**
comp=Z,0.2nm,0.3s,baz=226,slow=7.4,SNR=7.7
comp=Z,3.2nm,0.8s
LPSR Galich'ya Gora 16.52 346 *e*P **P** **23 11 09.2 -1.2**
LPSR pmax pmax
comp=Z,20nm,0.9s
IDI Anoyia 16.60 271 Pn **Pn** **23 11 08.4 -0.6**
comp=Z,16nm,1.2s,baz=3.2,slow=12,SNR=2.8
HOQ Hoqain 16.67 138 P **Pn** **23 11 06.9 -3.0**
SNR=8.0
SORM Soroca 16.91 318 ⇑P **Pn** **23 11 12.3 -0.5**
SORM Soroca 16.91 318 ⇑P **Pn** **23 11 12.3 -0.5**
MLR Muntele Rosu 17.01 307 Pn **Pn** **23 11 14.1 -0.1**
comp=Z,0.1nm,0.3s,baz=131,slow=20,SNR=3.9
comp=Z,0.6nm,0.6s
MLR Muntele Rosu 17.01 307 ⇑P **P** **23 11 20.0 +4.0**
SMDO Samad 17.49 138 P **Pn** **23 11 18.5 -1.8**
SNR=17
SMDO S **Sn** **23 14 28.8 -6.2**
VOIR 17.56 306 ⇑P **P** **23 11 24.9 +2.7**
VOIR 17.56 306 ⇑P **P** **23 11 24.9 +2.7**
WSAR Wadi Sarin 17.67 136 P **P** **23 11 23.2 -0.2**
AK07 Malin Array Si 18.04 325 P **P** **23 11 31.0 +3.7**
AK10 Malin Array Si 18.05 325 P **P** **23 11 31.0 +3.6**
JMDO Jabal Madar 18.08 139 P **Pn** **23 11 26.6 -0.9**
JMDO S **Sn** **23 14 45.4 -3.8**
AK12 Malin Array Si 18.13 325 P **P** **23 11 32.0 +3.8**
AKASG Malin Array Be 18.14 325 *ce*P **Pn** **23 11 26.5 -1.5**
comp=Z,0.5nm,0.3s,baz=132,slow=12,SNR=8.4
comp=Z,4.1nm,0.8s
AKASG Malin Array Be 18.14 325 *ce*P **P** **23 11 28.8 +0.5**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 18.14 325 **Pn** **23 11 26.6 -1.4**
AKBB Malin Array Si 18.14 325 *ce*P **P** **23 11 28.5 +0.2**
AKBB pmax pmax
comp=Z,9.0nm,1.0s
KIEV Kiev 18.14 325 **Pn** **23 11 26.5 -1.6**
KIEV Kiev 18.14 325 P **Pn** **23 11 26.5 -1.6**
KIEV pmax pmax
comp=Z,8.0nm,1.0s
AK14 Malin Array Si 18.14 325 P **P** **23 11 32.0 +3.6**
LUBAR Lubar, Ukraine 18.32 322 P **P** **23 11 33.7 +3.4**
WBK Wadi Bani Khal 18.36 136 P **Pn** **23 11 30.3 -0.6**
BURAR Bucovina Array 18.41 313 P **Pn** **23 11 30.7 -0.8**
BURAR Bucovina Array 18.41 313 ⇓P **P** **23 11 33.4 +1.9**
BURAR Bucovina Array 18.41 313 ⇓P **P** **23 11 33.4 +1.9**
BUR08 Bucovina Ar. S 18.43 313 P **P** **23 11 30.5 -1.2**
MI29 MI29, Kamyanyy 18.59 323 P **Pn** **23 11 37.1 +3.5**
comp=Z,109nm,1.0s
MI30 MI30,Zelenitsa 18.65 324 P **Pn** **23 11 37.2 +2.9**
comp=Z,23nm,0.7s
CHGR Chuyangaron 18.95 77 **Pn** **23 11 39.1 +0.9**
CHGR IAmb IAmb 23 11 46.9
comp=Z,16nm,0.8s
CHGR Chuyangaron 18.95 77 P **Pn** **23 11 39.1 +0.9**
CHGR pmax pmax
comp=Z,16nm,0.8s
JLN Jalan Bani Buh 18.97 136 P **Pn** **23 11 38.3 -0.1**
SNR=12
MI28 Mi28,Pidlybu 19.02 324 P **Pn** **23 11 41.5 +2.8**
MHTO MHTO 19.16 141 P **P** **23 11 39.0 -0.7**
SNR=23
MARR Marisel-Cluj 19.28 308 ⇓P **Pn** **23 11 44.4 +2.3**
OBN Obninsk 19.36 345 P **Pn** **23 11 42.2 -0.6**
comp=Z,2.4nm,0.3s,baz=168,slow=20,SNR=2.8
comp=Z,8.1nm,0.5s
OBN Obninsk 19.36 345 ⇑*e*P **Pn** **23 11 42.2 -0.6**
OBN *e*S **Sn** **23 15 17.0 -2.6**
OBN pmax pmax
comp=Z,8.0nm,0.5s
OBN MLR MLR
comp=Z,2µm,17.0s
KBL Kabul 19.39 89 P **Pn** **23 11 43.7 +0.1**
KBL Kabul 19.39 89 P **Pn** **23 11 43.7 +0.1**
KBL pmax pmax
comp=Z,3.0nm,0.8s
MOS Moscow 19.74 347 *e*P **P** **23 11 41.9 -3.9**
DQM DQM 19.85 144 P **P** **23 11 46.6 -0.7**
SNR=8.4
GAR Garm 19.85 76 P **Pn** **23 11 49.0 0.0**
GAR IAmb IAmb 23 12 03.3
comp=Z,15nm,0.9s
BRIU Brid 20.05 312 P Pn 23 11 51.7 +0.6
RNPP5 Staryi Chortor 20.07 322 P Pn 23 11 53.0 +1.7
SIRR Siria 20.07 306 ⇑P Pn 23 11 51.6 +0.2
RNPP8 Varash 20.15 323 P Pn 23 11 54.1 +1.8
RNPP9 Sopachiv 20.18 323 P Pn 23 11 54.7 +2.1
KK31 Karatay Array 20.31 64 Pn 23 11 53.8 -0.4
KK31 Karatay Array 20.31 64 P Pn 23 11 53.8 -0.4
KK31 pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 20.31 64 P Pn 23 11 53.5 -0.8
KKAR Karatay Array 20.31 64 P Pn 23 11 53.5 -0.7
TRKS Terek-Say 20.57 69 P Pn 23 11 58.2 +0.8
TRKS pmax pmax
comp=Z,13nm,1.3s
RBK Rabkut 20.68 155 P **P** **23 11 55.3 -1.1**
SNR=12
SHAO Shalim 20.71 151 P **P** **23 11 55.7 -1.0**
SNR=58
SHAO Shalim 20.71 151 *i* P **P** **23 11 56.0 -0.8**
SNR=58
PDG Podgorica 20.85 294 P **P** **23 11 57.2 -0.8**
DRK Karamyk 20.99 74 P Pn 23 12 01.8 -0.8
DRK Karamyk 20.99 74 P Pn 23 12 01.8 -0.8
DRK pmax pmax
comp=Z,7.0nm,0.8s
ARK Arkit 21.20 68 P P 23 12 13.2 +11
MNK Minsk 21.47 331 *i* P **P** **23 12 03.0 -1.6**
comp=E,11nm,0.9s
MNK *i* P **P** **23 12 03.0 -1.6**
comp=N,10.0nm,0.9s
MNK *i* P **P** **23 12 03.0 -1.6**
comp=Z,14nm,0.8s,baz=139
MNK *i* PP **PnPn** **23 12 23.1 -1.6**
MNK *i* PPP PPP 23 12 31.0
MNK *i* S **S** **23 16 02.0 -0.4**
MNK *i* SS **SnSn** **23 16 26.5 +1.1**
MNK *i* SSS SSS 23 16 39.7
MNK *i* LQ LQ 23 19 36.1
MNK *i* LR LR 23 21 08.5
MNK *i* LRM MLR 23 21 54.8
comp=E,2µm,15.3s
MNK *i* LRM MLR 23 22 00.5
comp=N,2µm,14.5s
MNK *i* LRM MLR 23 22 04.9
comp=Z,3µm,14.7s
MNK Minsk 21.47 331 *i* P **P** **23 12 02.9 -1.6**
MNK *i* PPP PPP 23 12 30.9
MNK *i* S **S** **23 16 01.9 -0.4**
MNK *i* SSS SSS 23 16 39.7
MNK pmax pmax
comp=N,10.0nm,0.9s
MNK pmax pmax
comp=E,11nm,0.9s
MNK pmax pmax
comp=Z,14nm,0.8s
MNK MLR MLR
comp=E,2µm,15.0s
MNK MLR MLR
comp=N,2µm,14.0s
MNK MLR MLR
comp=Z,3µm,15.0s
ARTI Arti 21.56 20 **P** **23 12 05.3 -0.3**
ARTI IAmb IAmb 23 12 09.7
comp=Z,12nm,0.9s
ARTI Arti 21.56 20 P **P** **23 12 05.6 0.0**
comp=Z,12nm,1.0s,baz=197,slow=6.9,SNR=13
comp=Z,12nm,1.0s
ARTI Arti 21.56 20 *d* *i* P **P** **23 12 06.7 +1.1**
ARTI 23 12 27.8
ARTI S **S** **23 16 08.0 +3.9**
ARTI pmax pmax
comp=Z,21nm,1.3s
STHS Stebnicka Huta 21.59 314 *e*P **P** **23 12 06.6 +0.7**
STHS *e* 23 12 15.6
STHS pmax pmax
comp=Z,3.0nm,0.8s
STHS Stebnicka Huta 21.59 314 *e*P **P** **23 12 06.6 +0.7**
STHS Stebnicka Huta 21.59 314 *e*PN P 23 12 15.6 +10
OHH Osh 21.75 72 P **P** **23 12 09.9 +2.0**
OHH pmax pmax
comp=Z,15nm,0.8s
PSZ Piszkesteto 21.79 309 P **P** **23 12 07.6 -0.6**
PSZ Piszkesteto 21.79 309 P **P** **23 12 07.6 -0.6**
PSZ pmax pmax
comp=Z,8.0nm,1.0s
ARSB Arslanbob 21.93 69 P **P** **23 12 11.2 +1.3**
ARSB IAmb IAmb 23 12 23.2
comp=Z,14nm,1.0s
ARSB Arslanbob 21.93 69 P **P** **23 12 11.2 +1.3**
ARSB pmax pmax
comp=Z,14nm,1.0s
MORH Mrgy, Hungar 22.05 304 ⇓P **P** **23 12 11.6 +0.7**
MORH Mrgy, Hungar 22.05 304 P **P** **23 12 13.8 +2.9**
comp=Z,4.8nm,1.2s
KIRV Kirov 22.05 6 P **P** **23 12 09.7 -1.1**
comp=Z,7.2nm,0.5s,baz=191,slow=5.3,SNR=4.9
comp=Z,7.2nm,0.5s
KIRV Kirov 22.05 6 *ce*P **P** **23 12 11.4 +0.6**
NIE Niedzica 22.14 313 P **P** **23 12 14.6 +2.7**
NACGM Naroch 22.20 331 *e*P **P** **23 12 14.2 +1.9**
comp=Z,28nm,1.0s,baz=138
LANS Liptovska Anna 22.52 312 *e*P **P** **23 12 19.7 +3.7**
LANS *e* 23 12 24.5
LANS pmax pmax
comp=Z,3.0nm,1.2s
LANS Liptovska Anna 22.52 312 *e*P **P** **23 12 19.7 +3.7**
LANS Liptovska Anna 22.52 312 *e*PN P 23 12 24.5 +8.5
SRO Srobarova 22.75 308 *e*P **P** **23 12 25.0 +6.7**
SRO Srobarova 22.75 308 *e*PN **P** **23 12 25.0 +6.7**
AAK Ala-Archa 23.15 66 P **P** **23 12 24.2 +1.4**
comp=Z,0.8nm,0.5s,baz=223,slow=8.3,SNR=4.8
comp=Z,0.8nm,0.5s
AAK Ala-Archa 23.15 66 *i* P **P** **23 12 24.5 +1.7**
AAK pmax pmax
comp=Z,34nm,4.0s
FRU1 Bishkek 23.27 66 P **P** **23 12 25.2 +1.3**
FRU1 IAmb IAmb 23 12 28.0
comp=Z,7.6nm,0.6s
FRU1 Bishkek 23.27 66 P **P** **23 12 25.2 +1.3**
FRU1 pmax pmax
comp=Z,8.0nm,0.6s
CUC Castrocucco 23.32 287 P **P** **23 12 24.1 -0.3**
CUC IAmb IAmb 23 12 34.2
comp=Z,10nm,0.9s
SGRT San Giovanni R 23.40 292 P **P** **23 12 24.2 -1.0**
SGRT IAmb IAmb 23 12 24.9
comp=Z,18nm,0.8s
MODS Modra-Piesok 23.59 308 *e*P **P** **23 12 32.5 +5.6**
MODS pmax pmax
comp=Z,38nm,1.6s
MODS Modra-Piesok 23.59 308 *e*P **P** **23 12 32.5 +5.6**
PTJ Puntijarka 23.78 302 P P 23 12 37.1 +8.2
SOP Sopron 23.83 306 P **P** **23 12 35.7 +6.4**
SOP pmax pmax
comp=Z,9.0nm,1.1s
BORK Borovoye 23.91 39 *ce*P **P** **23 12 31.5 +1.6**
BORK pmax pmax
comp=Z,10.0nm,1.0s
MORC Moravsky Berou 23.93 312 P **P** **23 12 30.5 +0.3**
MORC Moravsky Berou 23.93 312 P **P** **23 12 30.5 +0.3**
MORC pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 23.93 39 P **P** **23 12 30.5 +0.3**
comp=Z,6.7nm,0.8s,baz=227,slow=7.9,SNR=26
comp=Z,6.7nm,0.8s
RONA Rosalia, Austr 24.01 306 *e*pP **P** **23 12 32.5 +1.5**
comp=Z,4.1nm,0.5s
BOOM Boomskoye usch 24.20 67 P **P** **23 12 36.2 +3.2**
BOOM IAmb IAmb 23 12 46.3
comp=Z,17nm,1.0s
BOOM Boomskoye usch 24.20 67 P **P** **23 12 36.2 +3.2**
BOOM pmax pmax
comp=Z,17nm,1.0s
CONA Conrad Observa 24.35 307 *e*P **P** **23 12 35.4 +1.1**
comp=Z,4.2nm,0.8s
KRUC Moravsky 24.37 310 P **P** **23 12 36.4 +2.2**
KRUC pmax pmax
comp=Z,6.0nm,1.6s
ARSA Arzberg 24.39 305 P **P** **23 12 34.9 +0.4**
ARSA Arzberg 24.39 305 *e*P **P** **23 12 35.2 +0.7**
comp=Z,1.2nm,0.3s
KLMR Klimovskoe 24.44 353 *e*P **P** **23 12 33.3 -1.5**
KLMR pmax pmax
comp=Z,13nm,1.2s
KRLC Kraliky 24.49 312 *e*P **P** **23 12 36.3 +0.9**
KRLC Kraliky 24.49 312 *e*P **P** **23 12 36.3 +0.9**
SOKA Soboth 24.58 303 *e*pP pP 23 12 38.4 -2.3
comp=Z,0.8nm,0.4s
OBKA Obir 24.87 303 *e*pP pP 23 12 44.0 +0.7
comp=Z,1.0nm,0.3s
DPC Dobruska-Polom 24.87 312 *e*P **P** **23 12 39.9 +1.1**
DPC Dobruska-Polom 24.87 312 *e*P **P** **23 12 39.9 +1.1**
VSU Vasula 24.95 337 *i* P **P** **23 12 40.4 +1.0**
VSU pmax pmax
comp=Z,28nm,0.9s
KDJ Kajisay 25.11 68 P **P** **23 12 43.1 +1.9**
KDJ Kajisay 25.11 68 P **P** **23 12 43.1 +1.9**
KDJ pmax pmax
comp=Z,17nm,1.0s
CHVC Chvalec 25.12 313 *e*P **P** **23 12 41.9 +0.8**
CHVC Chvalec 25.12 313 *e*P **P** **23 12 41.9 +0.8**
CAMP Campotosto 25.17 293 P **P** **23 12 42.5 +0.8**
CAMP IAmb IAmb 23 12 47.0
comp=Z,9.3nm,0.9s
TRI Trieste 25.25 301 P **P** **23 12 41.9 -0.4**
TRI IAmb IAmb 23 12 59.5
comp=Z,8.2nm,0.8s
TRI Trieste 25.25 301 P **P** **23 12 41.9 -0.4**
TRI pmax pmax
comp=Z,8.0nm,0.8s
MOA Molln 25.37 306 *e*P **P** **23 12 44.2 +0.9**
comp=Z,5.5nm,0.5s
NRCA Norcia 25.40 294 P **P** **23 12 44.1 +0.3**
NRCA IAmb IAmb 23 12 55.8
comp=Z,6.8nm,0.9s
SABO M.te Sabotino 25.41 301 P **P** **23 12 43.6 -0.2**
SABO IAmb IAmb 23 12 52.6

comp=Z,18nm,1.0s
FDMO Fiordimonte 25.43 294 P P 23 12 43.7 -0.3
FDMO IAmb IAmb 23 12 45.1
comp=Z,4.0nm,0.7s
TARG Taragay, Kyrgy 25.57 69 P 23 12 48.1 +2.5
TARG IAmb IAmb 23 12 49.8
comp=Z,8.6nm,0.8s
TARG Taragay, Kyrgy 25.57 69 P P 23 12 48.1 +2.5
TARG pmax pmax
comp=Z,9.0nm,0.8s
BIOA Bad Ischl, Aus 25.74 305 *e*P **P 23 12 47.4 +0.7**
comp=Z,3.8nm,0.5s
CESX Cesi 25.78 293 P P 23 12 47.5 +0.3
CESX IAmb IAmb 23 12 48.4
comp=Z,4.0nm,0.7s
KBA Koelnbreinsper 25.80 304 *e*P **P 23 12 48.0 +0.5**
comp=Z,8.1nm,0.8s
KBA Koelnbreinsper 25.80 304 P P 23 12 50.7 +3.3
KBA pmax pmax
comp=Z,17nm,1.0s
ZVC Zvikov 25.86 309 *e*P **P 23 12 47.9 +0.2**
MURB Monte Urbino 25.86 295 P P 23 12 49.4 +1.6
MURB IAmb IAmb 23 12 53.9
comp=Z,16nm,1.0s
PVCC Panska Ves 25.98 312 P P 23 12 55.8 +7.0
GERES GERESS Array B 25.99 308 P P 23 12 49.2 +0.1
comp=Z,1.0nm,0.5s,baz=110,slow=8.3,SNR=11
comp=Z,1.0nm,0.5s
KHC Kasperske Hory 26.15 308 *e*P **P 23 12 51.0 +0.6**
KHC Kasperske Hory 26.15 308 *e*P **P 23 12 51.0 +0.6**
KHC Kasperske Hory 26.15 308 P P 23 12 53.4 +3.0
comp=Z,7.7nm,2.1s
CIMO Cimolais 26.26 302 P P 23 12 51.2 -0.3
CIMO IAmb IAmb 23 13 02.1
comp=Z,4.3nm,0.9s
ABTA Abfaltersbach 26.29 303 *e*pP **P 23 12 52.8 +0.9**
comp=Z,2.5nm,0.7s
SQTA Sankt Quirin 27.25 303 *e*P **P 23 13 00.6 +0.1**
comp=Z,1.3nm,0.4s
MOTA Moosalm 27.35 304 *e*P **P 23 13 01.6 +0.2**
comp=Z,4.1nm,0.8s
KURBB Kurchatov Arra 27.49 49 P P 23 13 04.0 +1.6
comp=Z,4.2nm,1.0s,baz=260,slow=9.4,SNR=11
comp=Z,4.2nm,1.0s
FETA Feichten 27.54 303 *i* P **P 23 13 03.2 0.0**
comp=Z,4.9nm,0.9s
FINES FINESS Array B 27.56 340 P P 23 13 01.9 -1.0
FINES FINESS Array B 27.56 340 P P 23 13 02.7 -0.2
comp=Z,7.0nm,1.1s,baz=148,slow=9.0,SNR=7.7
comp=Z,7.0nm,1.1s
FINES FINESS Array B 27.56 340 *i* P **P 23 13 02.9 0.0**
FINES pmax pmax
comp=Z,7.0nm,1.1s
KURK Kurchatov 27.57 49 P P 23 13 04.0 +0.9
KURK IAmb IAmb 23 13 06.0
comp=Z,5.2nm,0.9s
KURK Kurchatov 27.57 49*ce*P **P 23 13 05.8 +2.7**
KURK pmax pmax
comp=Z,9.0nm,1.7s
RETA Reutte 27.60 304 *i* P **P 23 13 03.9 +0.3**
comp=Z,1.0nm,0.5s
FUORN Ofenpass-Fuorn 27.80 302 P P 23 13 06.2 +0.7
FUORN IAmb IAmb 23 13 23.3
comp=Z,9.2nm,1.1s
DAVA Damuels 28.16 303 *i* P **P 23 13 08.4 -0.2**
comp=Z,2.0nm,0.5s
MAKZ Makanchi 28.91 58 P P 23 13 16.6 +1.4
MAKZ IAmb IAmb 23 13 26.2
comp=Z,5.0nm,1.0s
MAKZ Makanchi 28.91 58 P P 23 13 16.6 +1.4
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
KEST Kesra 28.94 279 P P 23 13 16.3 +0.7
KEST IAmb IAmb 23 13 29.8
comp=Z,10nm,1.1s
KEST Kesra 28.94 279 P P 23 13 16.1 +0.4
comp=Z,5.0nm,1.0s,baz=19,slow=7.9,SNR=4.5
comp=Z,5.0nm,1.0s
MK31 Makanchi Array 29.12 58 *i* P **P 23 13 18.7 +1.6**
MKAR Makanchi Array 29.12 58 P P 23 13 18.9 +1.9
MKAR Makanchi Array 29.12 58 P P 23 13 18.5 +1.5
comp=Z,2.0nm,0.6s,baz=253,slow=9.6,SNR=22
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 29.12 58*ce*P **P 23 13 19.0 +1.9**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
SENIN Lac Senin/Sane 29.80 301 P P 23 13 22.8 -0.5
SENIN IAmb IAmb 23 13 27.3
comp=Z,4.7nm,0.9s
BNI Bardonecchia 30.15 298 P P 23 13 26.5 +0.1
BNI IAmb IAmb 23 13 27.4
comp=Z,4.6nm,0.8s
BNI Bardonecchia 30.15 298 P P 23 13 26.5 +0.1
BNI pmax pmax
comp=Z,5.0nm,0.8s
HFS Hagfors 30.94 329 P P 23 13 32.8 -0.1
comp=Z,3.5nm,0.9s,baz=126,slow=9.3,SNR=7.4
comp=Z,3.5nm,0.9s
WLF Walferdange 31.00 307 P P 23 13 32.8 -0.8
WLF Walferdange 31.00 307 P P 23 13 32.8 -0.8
WLF pmax pmax
comp=Z,14nm,1.1s
ZAA0 Zalesovo Array 32.15 45 P P 23 13 43.9 +0.2
ZAA0 IAmb IAmb 23 13 47.6
comp=Z,3.3nm,0.9s
ZALV Zalesovo Beam 32.15 45 P P 23 13 44.2 +0.5
comp=Z,1.8nm,0.6s,baz=263,slow=10,SNR=8.6
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam 32.15 45 *i* P **P 23 13 45.0 +1.3**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
NOA NORSAR Array B 32.46 329 P P 23 13 45.0 -1.4
comp=Z,0.8nm,0.8s,baz=124,slow=8.7,SNR=2.6
comp=Z,0.8nm,0.8s
NOA NORSAR Array B 32.46 329 P P 23 13 45.0 -1.4
WMQ Urumqi 32.82 64 *e*P **P 23 13 52.6 +2.9**
WMQ pmax pmax
comp=Z,14nm,0.9s
DGZ Jazzator, Alta 32.88 53 *i* P **P 23 13 51.8 +1.4**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 34.61 348 P P 23 14 05.3 +0.4
ARCES IAmb IAmb 23 14 13.2
comp=Z,3.2nm,1.1s
ARCES ARCESS Array B 34.61 348 P P 23 14 05.7 +0.8
comp=Z,3.2nm,0.8s,baz=146,slow=8.8,SNR=12
comp=Z,3.2nm,0.8s
EKA Eskdalemuir Ar 37.55 315 P P 23 14 29.7 -0.6
comp=Z,1.3nm,0.5s,baz=110,slow=8.2,SNR=7.3
comp=Z,1.3nm,0.5s
ESDC Sonseca Array 38.47 290 P P 23 14 37.0 -1.3
comp=Z,1.3nm,0.7s,baz=70,slow=8.3,SNR=9.5
comp=Z,1.3nm,0.7s
NRIK Noril'sk 39.86 22 P P 23 14 50.3 +0.9
comp=Z,1.2nm,0.3s,baz=234,slow=3.5,SNR=5.0
comp=Z,1.2nm,0.3s
NRIK Noril'sk 39.86 22*ce*P **P 23 14 50.6 +1.2**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
GTA Gaotai 42.44 69 *e*P **P 23 15 13.0 +1.7**
GTA pmax pmax
comp=Z,6.0nm,1.4s
SPITS Spitsbergen Ar 43.33 352 P P 23 15 18.7 +0.8
comp=Z,12nm,1.1s,baz=240,slow=4.7,SNR=1.8
comp=Z,12nm,1.1s
SONM Songino Array 45.43 56 P P 23 15 36.9 +1.7
SONM Songino Array 45.43 56 P P 23 15 36.3 +1.1
comp=Z,0.7nm,0.8s,baz=270,slow=8.2,SNR=4.7
comp=Z,0.7nm,0.8s
SONM Songino Array 45.43 56 P P 23 15 36.9 +1.7
TORD Torodi Ar. Bea 45.48 250 P P 23 15 34.7 -1.1
comp=Z,2.6nm,0.9s,baz=45,slow=9.7,SNR=6.9
comp=Z,2.6nm,0.9s
ULN Ulaanbaatar 45.87 56 P P 23 15 39.4 +0.7
ULN IAmb IAmb 23 15 42.1
comp=Z,7.6nm,1.0s
ULN Ulaanbaatar 45.87 56*ce*P **P 23 15 37.7 -0.9**
ULN pmax pmax
comp=Z,18nm,1.7s
PZH PanZhiHua 48.51 85 P P 23 16 03.5 +4.0
CMAR Chiang Mai Arr 50.23 96 P P 23 16 12.0 -0.6
comp=Z,1.6nm,0.6s,baz=296,slow=8.3,SNR=8.3
comp=Z,1.6nm,0.6s
CMAR Chiang Mai Arr 50.23 96*ce*P **P 23 16 13.1 +0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
LYN LuoYang 53.58 71 *e*P **P 23 16 38.4 +1.0**
LYN pmax pmax
comp=Z,11nm,0.8s
TIXI Tiksi 53.62 23*ce*P **P 23 16 38.1 +1.1**
TIXI pmax pmax
comp=Z,13nm,2.5s
HILR Hailar Array B 53.69 51 P P 23 16 38.0 0.0
comp=Z,0.5nm,0.4s,baz=280,slow=10,SNR=1.3
comp=Z,0.5nm,0.4s
DBIC Dimbokro 54.56 249 P P 23 16 43.4 -1.3
DBIC Dimbokro 54.56 249 P P 23 16 43.0 -1.7
comp=Z,4.7nm,0.8s,baz=79,slow=8.1,SNR=3.7
comp=Z,4.7nm,0.8s
DBIC Dimbokro 54.56 249 P P 23 16 43.4 -1.3
DBIC pmax pmax
comp=Z,8.0nm,1.0s
CMLA Cha da Macela 55.12 294 *i* P **P 23 16 48.4 -0.1**
ABPO Ambohimpanom 55.45 178 P P 23 16 52.3 +1.2
ABPO IAmb IAmb 23 17 01.1
comp=Z,5.4nm,1.1s
ABPO Ambohimpanom 55.45 178 P P 23 16 52.3 +1.2
ABPO pmax pmax
comp=Z,5.0nm,1.1s
YAK Yakutsk 55.79 35 *i* P **P 23 16 54.5 +1.5**
YAK pmax pmax
comp=Z,7.0nm,0.9s
KHWEE KHWEE 61.29 201 P P 23 17 33.3 +1.5
MREMI Moremi 61.33 199 P P 23 17 33.1 +1.0
GRTLG Ghanzi 62.09 206 P P 23 17 37.9 +0.7
LPHEP Lephephe 62.51 200 P P 23 17 40.6 +0.6
KDWAN Kaudwane 62.87 201 P P 23 17 43.6 +1.2
KGCAE Kacgae 63.14 204 P P 23 17 45.4 +1.2
KSRS Korea Array 63.72 62 P P 23 17 46.5 -1.4
comp=Z,1.2nm,0.6s,baz=299,slow=6.8,SNR=2.6
comp=Z,1.2nm,0.6s
LBTB Lobatse 64.15 200 P P 23 17 52.1 +1.3
LBTB Lobatse 64.15 200 P P 23 17 52.1 +1.3
LBTB pmax pmax
comp=Z,7.0nm,0.8s
LKGWB Lokgwabe 64.63 204 P P 23 17 53.9 -0.1
WIN Windhoek 64.70 209 P P 23 17 56.6 +2.0
WIN Windhoek 64.70 209 P P 23 17 56.6 +2.0
WIN pmax pmax
comp=Z,13nm,0.9s
BILL Bilibino 66.67 21 *i* P **P 23 18 07.6 +1.0**
BILL pmax pmax
comp=Z,5.0nm,1.5s
BOSA Boshof 67.66 199 P P 23 18 13.9 +0.5
BOSA Boshof 67.66 199 P P 23 18 13.6 +0.2
comp=Z,4.9nm,0.6s,baz=17,slow=6.6,SNR=17
comp=Z,4.9nm,0.6s
BOSA Boshof 67.66 199 P P 23 18 13.9 +0.5
BOSA pmax pmax
comp=Z,8.0nm,0.7s
ILAR Eielson Array 78.39 5 P P 23 19 16.1 -0.4
comp=Z,0.5nm,0.8s,baz=329,slow=3.8,SNR=4.5
comp=Z,0.5nm,0.8s
QSPA South Pole Qui 126.54 180 PKP PKiKP 23 26 19.4 +0.5
comp=Z,0.3nm,0.6s,baz=207,slow=0.7,SNR=1.4

ROM ***07*** *23:19:50.4±0.0, 41.˚777N±0.˚002×13.˚597E±0.˚001, h15km, ML3.5/247, Error ellipse: s-maj=0.2km s-min=0.0km az=3.0*
PDG ***07*** *23:19:50.3±0.2, 41.˚70N×13.˚51E, h11km±1km, ML3.3/7, Error ellipse: s-maj=1.1km s-min=2.7km az=0.0*
LDG ***07*** *23:19:51.8±0.4, 41.˚74N×13.˚70E, h11km, Ml3.0/7, Error ellipse: s-maj=11.7km s-min=6.8km az=15.0*
IDC ***07*** *23:19:51.3±1.9, 41.˚99N×13.˚31E, h0km, mb3.6/4, mbtmp3.6/8, ML3.0/3, Error ellipse: s-maj=27.0km s-min=15.2km az=66.0*
PRU ***07*** *23:19:53.7, 41.˚86N×13.˚78E, h10km*
ISC 07 23:19:51.6±0.7, 41.79N±0.˚02×13.59E±0.˚02, h11km±4km, n142,σ1s67/190, mb3.7/3, 29C-25D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
VVLD	**Villa Vallelon**	**0.08**	**14**	⇓P	**Pg**	**23 19 54.0**	**-0.4**
VVLD				S	**Sg**	**23 19 56.2**	**-0.1**
VVLD				AML	AML		
	comp=E,93450μm,0.2s						
VVLD				AML	AML		
VVLD				AML	AML		
VVLD				AML	AML		
	comp=E,95950μm,0.6s						
VVLD				AML	AML		
VVLD				AML	AML		
	comp=E,93450μm,0.2s						
VVLD				AML	AML		
	comp=N,97239μm,0.2s						
VVLD				AML	AML		
	comp=N,91966μm,0.2s						
VVLD				AML	AML		
	comp=E,93454μm,0.2s						
VVLD				AML	AML		
	comp=E,95936μm,0.2s						
POFI	**Posta Fibreno**	**0.11**	**129**	⇑P	**Pg**	**23 19 53.9**	**-0.7**
POFI				S	**Sg**	**23 19 56.4**	**-0.4**
POFI				AML	AML		
	comp=N,21650μm,1.6s						
POFI				AML	AML		
	comp=N,26100μm,1.6s						
POFI				AML	AML		
	comp=E,25650μm,0.5s						
POFI				AML	AML		
	comp=E,30350μm,0.5s						
POFI				AML	AML		
	comp=N,21650μm,0.4s						
POFI				AML	AML		
	comp=N,26100μm,0.4s						
POFI				AML	AML		
	comp=E,27840μm,0.2s						
POFI				AML	AML		
	comp=N,25915μm,0.3s						
POFI				AML	AML		
	comp=E,20919μm,0.2s						
POFI				AML	AML		
	comp=N,21510μm,0.3s						
LRP	**Arpino**	**0.14**	**182**	⇑P	**Pg**	**23 19 54.3**	**-0.7**
LRP				S	**Sg**	**23 19 57.0**	**-0.3**
LRP				AML	AML		
LRP				AML	AML		
LRP				AML	AML		
OPI	**Opi**	**0.18**	**94**	⇑P	**Pg**	**23 19 55.0**	**-0.7**
OPI				S	**Sg**	**23 19 58.2**	**-0.2**
GUAR	**Guarcino**	**0.21**	**272**	⇑P	**Pg**	**23 19 55.7**	**-0.5**
GUAR				S	**Sg**	**23 19 59.4**	**+0.1**
GUAR				AML	AML		
	comp=N,69300μm,0.3s						
GUAR				AML	AML		
	comp=E,18400μm,0.3s						
GUAR				AML	AML		
	comp=E,18400μm,1.7s						
GUAR				AML	AML		
	comp=N,69279μm,0.3s						
GUAR				AML	AML		
	comp=E,18056μm,0.3s						
PTQR	**Pietraquaria**	**0.27**	**328**	⇓P	**Pg**	**23 19 56.8**	**-0.5**
PTQR				S	**Sg**	**23 20 01.6**	**+0.5**
PTQR				AML	AML		
	comp=E,45450μm,0.3s						
PTQR				AML	AML		
	comp=N,14650μm,1.3s						
PTQR				AML	AML		
	comp=N,14650μm,0.7s						
PTQR				AML	AML		
	comp=E,45438μm,0.3s						
PTQR				AML	AML		
	comp=N,13525μm,0.2s						
LIK	**San Giovanni I**	**0.29**	**185**	⇓P	**Pg**	**23 19 56.7**	**-0.7**
LIK				S	**Sg**	**23 20 01.6**	**+0.3**
INTR	**Introdacqua**	**0.32**	**46**	⇑P	**Pg**	**23 19 57.5**	**-0.7**
INTR				S	**Sg**	**23 20 02.6**	**+0.1**
INTR				AML	AML		
	comp=N,48600μm,0.3s						
INTR				AML	AML		
	comp=E,43600μm,0.7s						
INTR				AML	AML		
	comp=E,43600μm,1.3s						
INTR				AML	AML		
	comp=E,41504μm,0.5s						
INTR				AML	AML		
	comp=N,48611μm,0.3s						
GIUL	**Giuliano Di Ro**	**0.34**	**228**	⇑P	**Pg**	**23 19 57.7**	**-0.8**
GIUL				S	**Sg**	**23 20 03.2**	**+0.1**
GIUL				AML	AML		
	comp=N,19450μm,0.8s						
GIUL				AML	AML		
	comp=E,9435μm,0.7s						
GIUL				AML	AML		
	comp=E,9081μm,0.1s						
GIUL				AML	AML		
	comp=N,19379μm,0.4s						
MCI	**Monte Cassino**	**0.35**	**151**	⇓P	**Pg**	**23 19 57.4**	**-1.2**
MCI				S	**Sg**	**23 20 02.8**	**-0.5**
MCI				AML	AML		
	comp=E,38900μm,1.1s						
MCI				AML	AML		
	comp=N,28900μm,0.2s						
MCI				AML	AML		
	comp=E,38850μm,1.1s						
MCI				AML	AML		
	comp=E,38850μm,0.9s						
MCI				AML	AML		
	comp=E,33863μm,0.2s						
MCI				AML	AML		
	comp=N,28885μm,0.2s						
CERA	**Filignano**	**0.37**	**121**	⇑P	**Pg**	**23 19 57.9**	**-1.1**
CERA				S	**Sg**	**23 20 03.6**	**-0.4**
CERA				AML	AML		
	comp=E,23300μm,0.7s						
CERA				AML	AML		
	comp=N,25500μm,0.4s						
CERA				AML	AML		
	comp=N,26300μm,0.4s						
CERA				AML	AML		
	comp=E,24050μm,0.7s						
CERA				AML	AML		
	comp=N,25513μm,0.4s						
CERA				AML	AML		
	comp=N,26300μm,0.4s						
CERA				AML	AML		
	comp=E,22415μm,0.3s						
CERA				AML	AML		
	comp=E,21623μm,0.4s						
SULP	**Sulmona Polizi**	**0.39**	**40**	⇑P	**Pg**	**23 19 58.5**	**-0.9**
SULP				S	**Sg**	**23 20 05.0**	**+0.5**
RNI2	**Rionero Sannit**	**0.43**	**102**	⇑P	**Pg**	**23 19 59.5**	**-0.6**
RNI2				S	**Sb**	**23 20 06.7**	**-1.0**
RNI2				AML	AML		
	comp=N,16900μm,0.9s						
RNI2				AML	AML		
	comp=E,22400μm,1.3s						
RNI2				AML	AML		
	comp=N,17400μm,0.9s						
RNI2				AML	AML		
	comp=E,21250μm,1.3s						
RNI2				AML	AML		
	comp=N,17400μm,1.1s						
RNI2				AML	AML		
	comp=N,16900μm,1.1s						
RNI2				AML	AML		
	comp=N,14687μm,0.2s						
RNI2				AML	AML		
	comp=E,20876μm,0.3s						
RNI2				AML	AML		
	comp=N,14996μm,0.2s						
RNI2				AML	AML		
	comp=E,21549μm,0.3s						
T0110	**Collepietro**	**0.46**	**17**	⇓P	**Pg**	**23 20 00.0**	**-0.7**
T0110				S	**Sg**	**23 20 06.9**	**+0.1**
T0110				AML	AML		
	comp=E,23550μm,0.3s						
T0110				AML	AML		
	comp=N,19250μm,0.2s						
T0110				AML	AML		
	comp=E,23553μm,0.3s						
T0110				AML	AML		
	comp=N,19227μm,0.2s						
VNF1	**Venafro**	**0.46**	**132**	P	**Pg**	**23 19 59.4**	**-1.3**
FAGN	**Fagnano**	**0.48**	**359**	⇓P	**Pg**	**23 19 60.0**	**-1.0**
FAGN				AML	AML		
	comp=N,27404μm,0.5s						
FAGN				AML	AML		
	comp=E,29747μm,0.4s						
CERT	**Cerreto**	**0.48**	**289**	⇑P	**Pg**	**23 20 00.0**	**-1.1**
CERT				S	**Sg**	**23 20 07.3**	**-0.3**
CERT				AML	AML		
	comp=N,18150μm,0.3s						
CERT				AML	AML		
	comp=E,14150μm,0.4s						
CERT				AML	AML		
	comp=E,14150μm,1.6s						
CERT				AML	AML		
	comp=N,18138μm,0.3s						
CERT				AML	AML		
	comp=E,14138μm,0.4s						
RCAV	**Rocca di Cave**	**0.49**	**277**	⇑P	**Pg**	**23 19 60.0**	**-1.2**
RCAV				S	**Sg**	**23 20 07.5**	**-0.3**
RCAV				AML	AML		
	comp=E,8765μm,0.4s						
RCAV				AML	AML		
	comp=E,8760μm,0.4s						
RCAV				AML	AML		
	comp=N,7145μm,0.4s						
RCAV				AML	AML		
	comp=N,7145μm,1.6s						
RCAV				AML	AML		
	comp=N,6843μm,0.3s						
RCAV				AML	AML		
	comp=E,8762μm,0.4s						
CSO1	**Carsoli**	**0.49**	**310**	P	**Pg**	**23 20 00.3**	**-1.0**
CSO1				S	**Sg**	**23 20 08.0**	**+0.3**
LPEL	**Lama dei Pelig**	**0.51**	**59**	⇑P	**Pg**	**23 20 00.3**	**-1.3**
LPEL				S	**Sg**	**23 20 08.1**	**-0.3**
LPEL				AML	AML		
	comp=E,9060μm,1.5s						
LPEL				AML	AML		
	comp=N,6865μm,0.7s						
LPEL				AML	AML		
	comp=E,9285μm,1.4s						
LPEL				AML	AML		
	comp=N,6870μm,0.7s						
LPEL				AML	AML		
	comp=N,7290μm,0.7s						
LPEL				AML	AML		
	comp=N,7290μm,1.3s						
LPEL				AML	AML		
	comp=N,6870μm,1.3s						
LPEL				AML	AML		
	comp=E,9285μm,0.6s						
LPEL				AML	AML		
	comp=E,9060μm,0.5s						
LPEL				AML	AML		
	comp=E,7874μm,0.4s						
LPEL				AML	AML		
	comp=E,8619μm,0.4s						
LPEL				AML	AML		
	comp=N,6018μm,0.2s						
LPEL				AML	AML		
	comp=N,5860μm,0.2s						
MIDA	**Miranda**	**0.52**	**106**	⇑P	**Pg**	**23 20 00.4**	**-1.4**
MIDA				AML	AML		
	comp=E,11700μm,0.3s						
MIDA				AML	AML		
	comp=E,12930μm,0.4s						
MIDA				AML	AML		
	comp=N,12400μm,0.3s						
MIDA				AML	AML		
	comp=N,14100μm,0.5s						
MIDA				AML	AML		
	comp=N,14100μm,1.5s						
MIDA				AML	AML		
	comp=N,12377μm,0.3s						
MIDA				AML	AML		
	comp=E,12920μm,0.4s						
MIDA				AML	AML		
	comp=N,14094μm,0.6s						
MIDA				AML	AML		
	comp=E,11728μm,0.3s						
LATB	**Latina**	**0.56**	**238**	⇑P	**Pg**	**23 20 00.9**	**-1.6**
LATB				S	**Sg**	**23 20 09.0**	**-0.8**
LATB				AML	AML		
	comp=E,4110μm,0.6s						
LATB				AML	AML		
	comp=N,1835μm,0.7s						
LATB				AML	AML		
	comp=N,1835μm,1.3s						
LATB				AML	AML		
	comp=E,4114μm,0.6s						
LATB				AML	AML		
	comp=N,1832μm,0.7s						

AQU	**L'Aquila**	**0.58**	**346**	P	**Pg**	**23 20 01.7**	**-1.3**
FIAM	**Fiamignano**	**0.60**	**324**	P	**Pg**	**23 20 02.1**	**-1.2**
FIAM				AML	AML		
	comp=E,2920µm,0.5s						
FIAM				AML	AML		
	comp=N,3125µm,0.6s						
FIAM				AML	AML		
	comp=E,5520µm,1.1s						
FIAM				AML	AML		
	comp=N,5580µm,0.6s						
FIAM				AML	AML		
	comp=E,5520µm,0.9s						
FIAM				AML	AML		
	comp=N,5580µm,1.4s						
FIAM				AML	AML		
	comp=N,3125µm,1.4s						
FIAM				AML	AML		
	comp=E,2919µm,0.5s						
FIAM				AML	AML		
	comp=N,5579µm,0.6s						
FIAM				AML	AML		
	comp=E,5153µm,0.6s						
FIAM				AML	AML		
	comp=N,3125µm,0.6s						
VAGA	**Valle Agricola**	**0.61**	**128**	P	**Pg**	**23 20 02.1**	**-1.4**
VAGA				AML	AML		
	comp=N,12750µm,0.3s						
VAGA				AML	AML		
	comp=E,6540µm,0.2s						
VAGA				AML	AML		
	comp=E,6215µm,0.3s						
VAGA				AML	AML		
	comp=N,13300µm,0.3s						
VAGA				AML	AML		
	comp=E,6538µm,0.2s						
VAGA				AML	AML		
	comp=E,6213µm,0.3s						
VAGA				AML	AML		
	comp=N,12749µm,0.3s						
VAGA				AML	AML		
	comp=N,13263µm,0.3s						
VIVA	**Pratoni del Vi**	**0.62**	**267**	⇑P	**Pg**	**23 20 02.4**	**-1.3**
VIVA				S	**Sg**	**23 20 12.3**	**+0.5**
VIVA				AML	AML		
	comp=N,20650µm,0.3s						
VIVA				AML	AML		
	comp=E,22150µm,0.5s						
VIVA				AML	AML		
	comp=E,22150µm,1.5s						
VIVA				AML	AML		
	comp=E,22190µm,0.5s						
VIVA				AML	AML		
	comp=N,20664µm,0.3s						
VCEL	**Villa Celiera**	**0.63**	**17**	⇑P	**Pg**	**23 20 03.0**	**-0.9**
VCEL				S	**Sg**	**23 20 12.6**	**+0.3**
VCEL				AML	AML		
	comp=E,13600µm,0.6s						
VCEL				AML	AML		
	comp=N,8995µm,0.4s						
VCEL				AML	AML		
	comp=E,13600µm,1.4s						
VCEL				AML	AML		
	comp=N,8995µm,0.4s						
VCEL				AML	AML		
	comp=E,13596µm,0.6s						
RDP	**Rocca di Papa**	**0.66**	**268**	⇑P	**Pg**	**23 20 03.1**	**-1.3**
RDP				S	**Sg**	**23 20 13.0**	**-0.1**
RDP				AML	AML		
	comp=E,13050µm,1.5s						
RDP				AML	AML		
	comp=N,15400µm,0.5s						
RDP				AML	AML		
	comp=E,13050µm,0.5s						
RDP				AML	AML		
	comp=N,15402µm,0.5s						
RDP				AML	AML		
	comp=E,12848µm,0.4s						
GIGS	**Gran Sasso**	**0.66**	**358**	⇓P	**Pg**	**23 20 03.2**	**-1.3**
GIGS				S	**Sg**	**23 20 13.4**	**+0.2**
GIGS				AML	AML		
	comp=N,2180µm,0.5s						
GIGS				AML	AML		
	comp=E,1850µm,0.6s						
GIGS				AML	AML		
	comp=N,2181µm,0.5s						
GIGS				AML	AML		
	comp=E,1851µm,0.6s						
MSC	**Monte Massico**	**0.66**	**154**	P	**Pg**	**23 20 02.7**	**-1.7**
RMP	**Rome, Mte Porz**	**0.67**	**272**	⇑P	**Pg**	**23 20 03.1**	**-1.5**
RMP				S	**Sg**	**23 20 13.3**	**0.0**
RMP				AML	AML		
	comp=E,8175µm,0.3s						
RMP				AML	AML		
	comp=N,9250µm,0.3s						
RMP				AML	AML		
	comp=N,9250µm,1.7s						
RMP				AML	AML		
	comp=N,9255µm,0.3s						
RMP				AML	AML		
	comp=E,8175µm,0.3s						
MTCE	**Montecelio**	**0.68**	**290**	⇑P	**Pg**	**23 20 03.1**	**-1.7**
MTCE				S	**Sg**	**23 20 13.1**	**-0.6**
MTCE				AML	AML		
	comp=N,4370µm,0.6s						
MTCE				AML	AML		
	comp=E,4940µm,0.4s						
MTCE				AML	AML		
	comp=E,4943µm,0.4s						
MTCE				AML	AML		
	comp=N,4369µm,0.6s						
LAV9	**Lanuvio**	**0.68**	**261**	⇑P	**Pg**	**23 20 03.5**	**-1.3**
LAV9				AML	AML		
	comp=N,23900µm,0.5s						
LAV9				AML	AML		
	comp=E,18050µm,0.4s						
LAV9				AML	AML		
	comp=E,18550µm,0.4s						
LAV9				AML	AML		
	comp=N,22900µm,0.3s						
LAV9				AML	AML		
	comp=E,18539µm,0.4s						
LAV9				AML	AML		
	comp=E,18051µm,0.4s						
MA9	**Marino**	**0.70**	**269**	⇑P	**Pg**	**23 20 03.6**	**-1.6**
MA9				S	**Sg**	**23 20 13.9**	**-0.5**
TRIV	**Trivento**	**0.72**	**91**	⇑P	**Pg**	**23 20 04.0**	**-1.5**
TRIV				AML	AML		
	comp=N,1960µm,0.6s						
TRIV				AML	AML		
	comp=E,2820µm,0.5s						
TRIV				AML	AML		
	comp=N,1910µm,0.6s						
TRIV				AML	AML		
	comp=E,2885µm,0.5s						
TRIV				AML	AML		
	comp=E,2885µm,1.5s						
TRIV				AML	AML		
	comp=E,2820µm,1.5s						
TRIV				AML	AML		
	comp=N,1960µm,1.4s						
TRIV				AML	AML		
	comp=N,1910µm,1.4s						
TRIV				AML	AML		
	comp=E,2819µm,0.5s						
TRIV				AML	AML		
	comp=N,1910µm,0.6s						
TRIV				AML	AML		
	comp=E,2886µm,0.5s						
TRIV				AML	AML		
	comp=N,1961µm,0.6s						
PIGN	**Pignataro Magg**	**0.73**	**143**	P	**Pg**	**23 20 04.7**	**-1.2**
PIGN				AML	AML		
	comp=E,2515µm,1.3s						
PIGN				AML	AML		
	comp=N,3170µm,0.7s						
PIGN				AML	AML		
	comp=E,2545µm,1.3s						
PIGN				AML	AML		
	comp=E,2515µm,0.7s						
PIGN				AML	AML		
	comp=E,2545µm,0.7s						
PIGN				AML	AML		
	comp=N,3045µm,0.7s						
PIGN				AML	AML		
	comp=E,2371µm,0.8s						
PIGN				AML	AML		
	comp=N,3169µm,0.7s						
PIGN				AML	AML		
	comp=E,2422µm,0.8s						
PIGN				AML	AML		
	comp=N,3043µm,0.7s						
SAMA	**S.Maria delle**	**0.75**	**270**	⇑P	**Pg**	**23 20 04.3**	**-1.8**
CAMP	**Campotosto**	**0.76**	**350**	P	**Pg**	**23 20 05.1**	**-1.3**
CAMP				AML	AML		
	comp=N,2445µm,0.5s						
CAMP				AML	AML		
	comp=N,2445µm,1.5s						
CAMP				AML	AML		
	comp=E,2265µm,0.6s						
CAMP				AML	AML		
	comp=E,2263µm,0.6s						
CAMP				AML	AML		
	comp=N,2446µm,0.5s						
RM33	**Pellescritta (**	**0.77**	**339**	P	**Pg**	**23 20 05.0**	**-1.6**
RM33				AML	AML		
	comp=E,3850µm,0.9s						
RM33				AML	AML		
	comp=N,2985µm,1.1s						
RM33				AML	AML		
	comp=E,3835µm,0.8s						
RM33				AML	AML		
	comp=N,3010µm,1.1s						
RM33				AML	AML		
	comp=E,3850µm,1.1s						
RM33				AML	AML		
	comp=E,3835µm,1.2s						
RM33				AML	AML		
	comp=N,2980µm,1.1s						
RM33				AML	AML		
	comp=E,3852µm,0.9s						
RM33				AML	AML		
	comp=N,2620µm,0.4s						
RM33				AML	AML		
	comp=N,2717µm,0.4s						
RM33				AML	AML		
	comp=E,3834µm,0.8s						
MMP1	**Mompeo**	**0.78**	**306**	P	**Pg**	**23 20 05.0**	**-1.7**
BSSO	**Busso**	**0.79**	**108**	P	**Pg**	**23 20 05.5**	**-1.4**
BSSO				AML	AML		
BSSO				AML	AML		
BSSO				AML	AML		
	comp=E,2105µm,0.4s						
BSSO				AML	AML		
	comp=N,2775µm,0.8s						
BSSO				AML	AML		
BSSO				AML	AML		
BSSO				AML	AML		
	comp=N,2777µm,0.8s						
BSSO				AML	AML		
	comp=E,2104µm,0.5s						
ROM9	**Roma**	**0.81**	**273**	P	**Pg**	**23 20 06.0**	**-1.2**
PTRJ	**Pietraroja**	**0.82**	**121**	P	**Pg**	**23 20 06.2**	**-1.3**
PTRJ				AML	AML		
	comp=N,4476µm,0.4s						
PTRJ				AML	AML		
	comp=N,3866µm,0.4s						
PTRJ				AML	AML		
	comp=E,4744µm,0.5s						
FRES	**Fresagrandinar**	**0.82**	**77**	P	**Pg**	**23 20 05.7**	**-1.9**
FRES				AML	AML		
	comp=E,3145µm,0.6s						
FRES				AML	AML		
	comp=N,2510µm,0.6s						
FRES				AML	AML		
	comp=E,3145µm,1.4s						
FRES				AML	AML		
	comp=N,2513µm,0.6s						
FRES				AML	AML		
	comp=E,3144µm,0.6s						
TERO	**Teramo**	**0.83**	**1**	P	**Pg**	**23 20 06.1**	**-1.6**
TERO				AML	AML		
	comp=E,3065µm,0.4s						
TERO				AML	AML		
	comp=E,3065µm,1.6s						
TERO				AML	AML		
	comp=N,2450µm,0.6s						
TERO				AML	AML		
	comp=N,2452µm,0.6s						
TERO				AML	AML		
	comp=E,3064µm,0.4s						
SMA1	**SAN MARTINO**	**0.86**	**347**	P	**Pg**	**23 20 06.9**	**-1.4**
SMA1				AML	AML		
	comp=N,5475µm,0.5s						
SMA1				AML	AML		
	comp=E,6540µm,0.6s						
SMA1				AML	AML		
	comp=E,6540µm,0.6s						
SMA1				AML	AML		
	comp=N,5479µm,0.5s						
PLTA	**Palata**	**0.90**	**83**	P	**Pg**	**23 20 07.0**	**-2.0**
SACR	**S. Croce Del S**	**0.92**	**115**	P	**Pg**	**23 20 07.8**	**-1.7**
SACR				AML	AML		
	comp=E,2500µm,0.6s						
SACR				AML	AML		
	comp=N,2510µm,0.6s						
SACR				AML	AML		
	comp=E,2500µm,1.4s						
SACR				AML	AML		
	comp=N,2510µm,1.4s						
SACR				AML	AML		
	comp=N,2511µm,0.6s						
SACR				AML	AML		
	comp=N,2581µm,0.6s						
SACR				AML	AML		
	comp=E,2504µm,0.6s						
SACR				AML	AML		
	comp=E,2566µm,0.8s						
MCLF	**Montecilfone**	**0.94**	**83**	P	**Pg**	**23 20 07.4**	**-2.3**
VITU	**Vitulano (BN)**	**0.99**	**128**	P	**Pg**	**23 20 09.0**	**-1.6**
VITU				AML	AML		
	comp=E,1026µm,0.3s						
VITU				AML	AML		
	comp=N,3120µm,0.3s						
VITU				AML	AML		
	comp=N,3015µm,0.3s						
VITU				AML	AML		
	comp=E,2985µm,0.3s						
VITU				AML	AML		
	comp=E,1026µm,0.3s						
VITU				AML	AML		
	comp=N,3122µm,0.3s						
VITU				AML	AML		
	comp=E,2984µm,0.3s						
VITU				AML	AML		
	comp=N,3020µm,0.3s						
CIGN	**Sant'Elia a Pi**	**0.99**	**97**	P	**Pg**	**23 20 08.6**	**-2.1**
CIGN				AML	AML		
	comp=E,1330µm,1.0s						
CIGN				AML	AML		
	comp=N,1545µm,0.6s						
CIGN				AML	AML		
	comp=N,1546µm,0.6s						
CIGN				AML	AML		
	comp=E,1334µm,1.0s						
LRNO	**Larino**	**0.99**	**89**	P	**Pg**	**23 20 08.5**	**-2.2**
GLNS	**Guglionesi**	**1.00**	**82**	P	**Pg**	**23 20 08.4**	**-2.4**
ARRO	**Arrone**	**1.00**	**322**	P	**Pb**	**23 20 09.7**	**-1.3**
ARRO				AML	AML		
	comp=E,1720µm,0.4s						
ARRO				AML	AML		
	comp=N,2260µm,0.5s						
ARRO				AML	AML		
	comp=N,2260µm,1.5s						
ARRO				AML	AML		
	comp=N,2261µm,0.5s						
ARRO				AML	AML		
	comp=E,1718µm,0.4s						
GATE	**Gambatesa**	**1.02**	**105**	P	**Pb**	**23 20 09.8**	**-1.6**
GATE				AML	AML		
	comp=E,1445µm,0.6s						
GATE				AML	AML		
	comp=N,1915µm,1.4s						
GATE				AML	AML		
	comp=E,1585µm,0.6s						
GATE				AML	AML		
	comp=N,1249µm,0.6s						
GATE				AML	AML		
	comp=E,1585µm,0.6s						
GATE				AML	AML		
	comp=N,1251µm,0.6s						
GATE				AML	AML		
	comp=N,1909µm,0.7s						
GATE				AML	AML		
	comp=E,1445µm,1.4s						
CSFT	**Campi Flegrei**	**1.04**	**157**	AML	AML		
	comp=E,4450µm,0.2s						
CSFT				AML	AML		
	comp=N,5130µm,0.2s						
CPOZ	**Campi Flegrei,**	**1.04**	**158**	P	**Pb**	**23 20 10.1**	**-1.6**
CPOZ				AML	AML		
	comp=N,1940µm,0.9s						
CPOZ				AML	AML		
	comp=E,5120µm,0.6s						
CPOZ				AML	AML		
	comp=N,1940µm,1.1s						
CPOZ				AML	AML		
	comp=N,1940µm,0.9s						
CPOZ				AML	AML		
	comp=E,5120µm,0.6s						
PAOL	**Paolisi**	**1.05**	**136**	P	**Pb**	**23 20 10.1**	**-1.8**
PAOL				AML	AML		
	comp=E,922µm,0.4s						
PAOL				AML	AML		
	comp=N,1185µm,0.6s						
PAOL				AML	AML		
	comp=N,1265µm,0.7s						
PAOL				AML	AML		
	comp=E,934µm,0.4s						
PAOL				AML	AML		
	comp=E,932µm,0.4s						
PAOL				AML	AML		
	comp=N,1185µm,0.6s						
PAOL				AML	AML		
	comp=N,1265µm,0.7s						
PAOL				AML	AML		
	comp=E,921µm,0.4s						
MRVN	**Minervino Murg**	**2.09**	**110**	AML	AML		
	comp=E,190µm,0.5s						
MRVN				AML	AML		
	comp=E,190µm,1.5s						
MRVN				AML	AML		
	comp=N,218µm,0.6s						
BRIS	**BRISIGHELLA**	**2.81**	**328**	AML	AML		
	comp=N,231µm,1.1s						
BRIS				AML	AML		
	comp=E,248µm,1.3s						
BRIS				AML	AML		
	comp=N,231µm,1.1s						
BRIS				AML	AML		
	comp=N,231µm,0.9s						
BRIS				AML	AML		
	comp=E,247µm,1.3s						
BRIS				AML	AML		
	comp=N,309µm,1.0s						
BRIS				AML	AML		
	comp=E,230µm,0.6s						
PGF	**Pioggiola**	**3.50**	**284**	*e*Pn	**Pn**	**23 20 45.8**	**-0.2**
PGF				*e*Sn	**Sn**	**23 21 28.0**	**+0.5**
	comp=E,19nm,0.5s						
TREB	**Trebinje**	**3.65**	**74**	*e*Pn	**Pn**	**23 20 47.9**	**-0.1**
HCY	**Herceg Novi**	**3.70**	**78**	*e*Pn	**Pn**	**23 20 49.5**	**+0.7**
BRY	**Bratogost**	**3.83**	**71**	⇓*i*Pn	**Pn**	**23 20 50.8**	**+0.2**
KLINJ	**Klinje**	**3.94**	**68**	*e*Pn	**Pn**	**23 20 52.4**	**+0.3**
BLY	**Banja Luka**	**3.95**	**40**	*e*Pn	**Pn**	**23 20 52.7**	**+0.5**
BLY	**Banja Luka**	**3.95**	**40**	⇑P	**Pn**	**23 20 54.1**	**+1.9**
BUM	**Brajici-Budva**	**3.98**	**81**	⇓*i*Pn	**Pn**	**23 20 53.0**	**+0.4**
BUM				*e*Sn	**Sn**	**23 21 39.7**	**+0.4**
CEME	**Cevo**	**4.03**	**77**	⇓*i*Pn	**Pn**	**23 20 54.2**	**+0.9**
CEME				*e*Sn	**Sn**	**23 21 42.0**	**+1.5**
SLATY	**Slatina**	**4.07**	**40**	*e*Pn	**Pb**	**23 20 58.9**	**-4.3**
NKME	**Niksic**	**4.09**	**74**	⇓*i*Pn	**Pn**	**23 20 55.1**	**+0.9**
NKME				*e*Sn	**Sn**	**23 21 42.7**	**+0.6**
UPM	**Unac-Piva**	**4.17**	**68**	*e*Pn	**Pn**	**23 20 56.3**	**+0.9**
UPM				*e*Sn	**Sn**	**23 21 44.9**	**+0.7**
DRME	**Dracevica, Mon**	**4.19**	**83**	⇑*i*Pn	**Pn**	**23 20 56.4**	**+1.0**
DRME				*i* Sn	**Sn**	**23 21 45.6**	**+1.3**
PDG	**Podgorica**	**4.26**	**79**	⇑P	**Pn**	**23 20 58.0**	**+1.6**
PDG	**Podgorica**	**4.26**	**79**	AML	AML		
	comp=N,66µm,0.4s						
PDG				AML	AML		
	comp=E,64µm,1.4s						
PDG				AML	AML		
	comp=E,64µm,0.6s						
PDG	**Podgorica**	**4.26**	**79**	⇓*i*Pn	**Pn**	**23 20 57.1**	**+0.7**
PDG				*e*Sn	**Sn**	**23 21 45.4**	**-0.7**
KOME	**Kolasin**	**4.52**	**74**	⇓*i*Pn	**Pn**	**23 21 02.1**	**+2.1**
KOME				*e*Sn	**Sn**	**23 21 54.2**	**+1.6**
PLE	**Pljevlja**	**4.55**	**68**	⇓*i*Pn	**Pn**	**23 21 01.5**	**+1.0**
PLE				*i* Sn	**Sn**	**23 21 54.4**	**+1.0**
RUDO	**Rudo**	**4.63**	**65**	*e*Pn	**Pn**	**23 21 01.5**	**0.0**
OBKA	**Obir**	**4.77**	**8**	*e*Pn	**Pn**	**23 21 05.4**	**+1.9**
	comp=E,3.0nm,0.2s						
IVA	**Berane**	**4.79**	**75**	*e*Pn	**Pn**	**23 21 05.1**	**+1.3**
IVA				*i* Sn	**Sn**	**23 21 59.5**	**+0.1**
PVY	**Plav**	**4.80**	**78**	*e*Pn	**Pn**	**23 21 06.1**	**+2.2**
PVY				*i* Sn	**Sn**	**23 22 02.4**	**+2.9**
MYKA	**Terra Mystica**	**4.84**	**0**	*e*Pn	**Pn**	**23 21 05.9**	**+1.4**
	comp=E,3.2nm,0.3s						
MYKA				*e*Sn	**Sn**	**23 22 00.1**	**-0.4**
	comp=E,5.9nm,0.4s						
SBF	**Sospel**	**4.98**	**297**	*e*Pn	**Pn**	**23 21 05.3**	**-1.1**
SBF				*e*Sn	**Sn**	**23 22 02.7**	**-1.3**
	comp=E,8.6nm,0.6s						
SOKA	**Soboth**	**5.00**	**11**	*e*Pn	**Pn**	**23 21 08.1**	**+1.5**
	comp=E,1.3nm,0.2s						
ABTA	**Abfaltersbach**	**5.02**	**351**	*e*Pn	**Pn**	**23 21 06.6**	**-0.3**
	comp=E,7.6nm,0.5s						
ABTA				*e*Sn	**Sn**	**23 22 05.5**	**+0.6**
	comp=E,17nm,0.8s						
BEHE	**Becsehely**	**5.21**	**25**	*e*Pn	Pb	23 21 17.6	-5.1
KBA	**Koelnbreinsper**	**5.29**	**358**	*e*Pn	**Pn**	**23 21 12.5**	**+1.7**
	comp=E,3.2nm,0.3s						
KBA				*e*Sn	**Sn**	**23 22 10.7**	**-1.1**
	comp=E,4.6nm,0.4s						
LMR	**La Mourre**	**5.46**	**289**	*e*Pn	**Pn**	**23 21 11.6**	**-1.2**
LMR				*e*Sn	**Sn**	**23 22 12.6**	**-2.9**
	comp=E,2.0nm,0.2s						
FETA	**Feichten**	**5.62**	**340**	*e*Pn	**Pn**	**23 21 17.9**	**+2.7**
	comp=E,4.4nm,0.9s						
ARSA	**Arzberg**	**5.63**	**14**	*e*Pn	**Pn**	**23 21 17.6**	**+2.3**
	comp=E,2.5nm,0.3s						
WTTA	**Wattenberg**	**5.65**	**346**	*e*Pn	**Pn**	**23 21 18.5**	**+2.9**
	comp=E,1.8nm,0.3s						
LESA	**Schwarzleotal**	**5.67**	**354**	*e*Pn	**Pn**	**23 21 16.8**	**+0.9**
	comp=E,3.3nm,0.4s						
LESA				*e*Sn	**Sn**	**23 22 21.6**	**+0.6**
	comp=E,7.9nm,0.4s						
SQTA	**Sankt Quirin**	**5.69**	**343**	*e*Pn	**Pn**	**23 21 17.4**	**+1.2**
	comp=E,4.2nm,0.3s						
SQTA				*e*Sn	**Sn**	**23 22 22.6**	**+1.0**
	comp=E,5.2nm,0.4s						
MORH	**Mrgy, Hungar**	**5.73**	**38**	*e*Pn	**Pn**	**23 21 14.3**	**-2.3**
MORH	**Mrgy, Hungar**	**5.73**	**38**	⇑P	**Pn**	**23 21 19.3**	**+2.7**
WATA	**Walderalm**	**5.73**	**346**	*e*Pn	**Pn**	**23 21 17.3**	**+0.5**
	comp=E,5.4nm,0.5s						
MBDF	**Montbardon**	**5.78**	**303**	*e*Pn	**Pn**	**23 21 18.6**	**+1.1**
MOTA	**Moosalm**	**5.83**	**343**	*e*Pn	**Pn**	**23 21 20.4**	**+2.3**
	comp=E,1.5nm,0.3s						
MOTA				*e*Sn	**Sn**	**23 22 28.2**	**+3.1**
	comp=E,6.3nm,0.6s						
BIOA	**Bad Ischl, Aus**	**5.90**	**0**	*e*Pn	**Pn**	**23 21 20.8**	**+1.8**
	comp=E,5.7nm,0.3s						
BIOA				*e*Sn	**Sn**	**23 22 26.8**	**+0.2**
	comp=E,8.7nm,0.6s						
RETA	**Reutte**	**6.04**	**341**	*e*Pn	**Pn**	**23 21 23.0**	**+2.0**
	comp=E,1.8nm,0.4s						
MOA	**Molln**	**6.08**	**4**	*e*Pn	**Pn**	**23 21 23.1**	**+1.7**
	comp=E,5.0nm,0.4s						
DAVA	**Damuels**	**6.10**	**335**	Pn	**Pn**	**23 21 23.9**	**+2.0**
	comp=E,1.3nm,0.3s						
DAVA				*e*Sn	**Sn**	**23 22 34.2**	**+2.4**
	comp=E,7.3nm,0.5s						
LPG	**La Plagne**	**6.19**	**309**	*e*P	Pn	23 21 28.2	+5.0
LPG				*e*Sn	**Sn**	**23 22 31.8**	**-2.4**
	comp=E,1.6nm,0.4s						
RONA	**Rosalia, Austr**	**6.21**	**17**	*e*Pn	**Pn**	**23 21 24.0**	**+0.7**
	comp=E,0.9nm,0.2s						
LPL	**La Plagne**	**6.22**	**309**	*e*P	**Pn**	**23 21 28.2**	**+4.7**
BOVS	**Bovan**	**6.25**	**70**	⇑P	**Pn**	**23 21 24.2**	**+0.4**
SMRF	**Simiane la Rot**	**6.28**	**293**	*e*Pn	**Pn**	**23 21 24.9**	**+0.7**
CONA	**Conrad Observa**	**6.35**	**14**	*e*Pn	**Pn**	**23 21 25.5**	**+0.4**
	comp=E,3.2nm,0.4s						
CONA				*e*Sn	**Sn**	**23 22 37.1**	**-0.5**
	comp=E,2.3nm,0.4s						
ORIF	**Oris-en-Rattie**	**6.43**	**302**	*e*Pn	**Pn**	**23 21 27.0**	**+0.6**
ORIF	**Oris-en-Rattie**	**6.43**	**302**	*e*P	**Pn**	**23 21 31.0**	**+4.6**
MDVR	**Moldovita**	**6.64**	**60**	⇓P	**Pn**	**23 21 29.4**	**+0.4**
KEST	**Kesra**	**6.90**	**210**	Pn	**Pn**	**23 21 34.5**	**+1.7**
	comp=E,0.9nm,0.3s,baz=18,slow=20,SNR=4.2						
KEST				Sn	**Sn**	**23 22 48.2**	**-3.0**

baz=72,slow=19
comp=E,3.9nm,0.5s
BZS Buzias 6.96 54 ⇓P **Pn 23 21 35.4 +1.9**
CKRC Cesky Krumlov 7.05 4 *e*PN **Pn 23 21 34.3 -0.4**
CKRC *e*SN **Sn 23 22 51.9 -2.9**
GERES GERESS Array B 7.06 1 Pn **Pn 23 21 33.6 -1.3**
comp=E,0.1nm,0.3s,baz=181,slow=12,SNR=12
GERES Sn **Sn 23 22 52.8 -2.3**
comp=E,0.1nm,0.3s,baz=165,slow=21,SNR=5.4
comp=E,0.7nm,0.4s
HERR Herculane 7.13 61 ⇓P **Pn 23 21 36.9 +1.0**
VIVF Saint-Julien-I 7.19 298 *e*Pn **Pn 23 21 36.8 +0.1**
SIRR Siria 7.33 50 ⇓P **Pn 23 21 40.1 +1.4**
SURR Surduc 7.34 54 ⇓P **Pn 23 21 35.5 -3.1**
KHC Kasperske Hory 7.34 360 *e*PN **Pn 23 21 39.2 +0.4**
KHC *e*SN **Sn 23 22 59.4 -2.6**
LASF Ste Croix 7.50 291 *e*Pn **Pn 23 21 40.6 -0.4**
GZR Gura Zlata 7.58 59 ⇑P **Pn 23 21 42.5 +0.5**
TREC Trest 7.62 9 *e*PN **Pn 23 21 43.1 +0.5**
ZVC Zvikov 7.66 3 *e*PN **Pn 23 21 42.6 -0.5**
HINF Hinteralfeld 7.70 324 *e*Pn **Pn 23 21 42.3 -1.3**
HINF *e*Sn **Sn 23 23 06.0 -4.8**
comp=E,1.0nm,0.3s
CDF Champ du Feu 7.99 328 *e*Pn **Sn 23 21 46.7 -0.9**
CDF *e*Sn **Sn 23 23 14.5 -3.5**
comp=E,1.0nm,0.2s
HAU Haudompre 8.06 323 *e*P Pn 23 21 53.5 +4.8
HAU *e*Sn **Sn 23 23 15.9 -3.9**
comp=E,1.8nm,0.3s
LOT Lotru 8.24 60 ⇓P **Pn 23 21 52.8 +1.6**
MARR Marisel-Cluj 8.40 51 ⇓P **Pn 23 21 56.8 +3.5**
ARR Arges 8.78 62 ⇓P **Pn 23 22 02.2 +3.8**
CAF Calviac 8.96 294 *e*P **Pn 23 22 04.9 +3.9**
MEZF Maizieres J'vi 9.02 321 *e*Pn **Pn 23 22 01.8 +0.1**
VOIR 9.07 62 ⇓P **Pn 23 22 06.1 +3.6**
MLR Muntele Rosu 9.69 63 Pn **Pn 23 22 13.6 +2.6**
comp=E,5.9nm,1.1s,baz=286,slow=7.4
MLR Muntele Rosu 9.69 63 ⇓P **Pn 23 22 13.9 +2.9**
LOZB Loznitsa 9.72 76 ⇓P **Pn 23 22 12.4 +1.0**
BRTR Keskin Array B 15.33 91 Pn **P 23 23 33.4 +0.6**
comp=E,0.1nm,0.3s,baz=292,slow=12,SNR=2.9
comp=E,0.5nm,0.9s
ASF Jabal al Asfar 20.89 110 P Pn 23 24 40.0 +3.5
comp=E,1.3nm,0.6s,baz=294,slow=4.6,SNR=3.8
comp=E,1.3nm,0.6s
FINES FINESS Array B 21.08 17 P **P 23 24 35.4 -0.2**
comp=E,4.0nm,1.0s,baz=202,slow=10,SNR=5.9
comp=E,4.0nm,1.0s
AKTO Aktyubinsk 31.57 59 P **P 23 26 17.4 +3.5**
comp=E,0.8nm,0.5s,baz=286,slow=7.4,SNR=4.3
comp=E,0.8nm,0.5s
MKAR Makanchi Array 48.01 59 P **P 23 28 30.9 +0.4**
comp=E,0.3nm,0.6s,baz=287,slow=5.9,SNR=2.1
comp=E,0.3nm,0.6s

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*IDC **07** 23:23:59.6±1.5, 8.°38N×103.°05W, h0km, mb3.5/6, mbtmp3.5/7, ML3.0/1, Error ellipse: s-maj=58.5km s-min=20.9km az=56.0*
ISC 07 23:24:03.0±1.3, 8.°4N±0.°2×102.°9W±0.°2, h19km, n12, σ1§20/8, mb3.8/5, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H06E1	**SOCORRO T-PHAS**	**2.90**	**324**	T	T	23 40 13.9	
	SNR=6.2						
APG	**El Apazote**	**13.79**	**61**	Pn	**Pn**	**23 27 17.3**	**-0.6**
	0.1nm,0.3s,baz=233,slow=20,SNR=7.5						
	0.4nm,0.5s						
TXAR	**Lajitas Array**	**20.79**	**358**	P	**P**	**23 28 44.5**	**+1.2**
	0.6nm,0.8s,baz=200,slow=10,SNR=3.9						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**34.69**	**351**	P	**P**	**23 30 52.9**	**+1.1**
	0.1nm,0.4s,baz=155,slow=11,SNR=4.1						
	0.1nm,0.4s						
LPAZ	**La Paz**	**42.27**	**126**	P	**P**	**23 31 57.4**	**+1.0**
	2.1nm,0.8s,baz=309,slow=10,SNR=4.5						
	2.1nm,0.8s						
H03N2	**Juan Fernandez**	**47.47**	**153**	T	T	00 23 28.1	
	baz=329,slow=77,SNR=7.6						
H03N1	**Juan Fernandez**	**47.48**	**153**	T	T	00 23 29.0	
	baz=329,slow=77,SNR=9.7						
H03N3	**Juan Fernandez**	**47.49**	**153**	T	T	00 23 32.9	
	baz=329,slow=77,SNR=9.3						
SIV	**San Ignacio**	**47.99**	**120**	P	**P**	**23 32 41.5**	**+0.3**
	0.5nm,0.6s,baz=1.2,slow=5.4,SNR=3.5						
	0.5nm,0.6s						
CPUP	**Villa Florida**	**56.13**	**129**	P	**P**	**23 33 41.2**	**-0.3**
	0.2nm,0.3s,baz=228,slow=12,SNR=3.3						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**64.10**	**341**	P	**P**	**23 34 33.9**	**-1.7**
	0.9nm,0.9s,baz=176,slow=4.9,SNR=6.9						
	0.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**145.67**	**321**	PKPbc	**PKPdf**	**23 43 40.8**	**-0.4**
	0.7nm,0.3s,baz=13,slow=3.7,SNR=2.1						

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*ISN **07** 23:26:15.6±1.1, 37.°90N×47.°52E, h12km±34km, ML3.2*
*TEH **07** 23:26:18.4, 37.°73N×47.°51E, h11km±18km*
*IDC **07** 23:26:19.8±1.8, 37.°87N×47.°47E, h0km, mb3.5/6, mbtmp3.6/14, ML4.0/5, Error ellipse: s-maj=27.0km s-min=11.8km az=13.0*
ISC 07 23:26:18.6±1.2, 37.°78N±0.°03×47.°52E±0.°03, h5km±9km, n57, σ1§82/70, mb3.4/6, 2C-2D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHSH	**Hashtrud**	**0.52**	**203**	Pg	**Pg**	**23 26 27.5**	**-1.2**
IHSH				Sg	**Sg**	**23 26 34.4**	**-1.1**
IHRS	**Heris**	**0.65**	**325**	Pg	**Pg**	**23 26 31.6**	**+0.4**
IHRS				Sg	**Sg**	**23 26 41.2**	**+1.4**
GRMI	**Germi**	**1.06**	**16**	Pg	**Pb**	**23 26 39.1**	**-0.5**
ITBZ	**Tabriz**	**1.17**	**293**	Pg	**Pb**	**23 26 40.5**	**-1.0**
ITBZ				Sg	**Sn**	**23 26 57.8**	**-0.5**
GAS1	**Astara - Iran**	**1.20**	**60**	Pg	**Pn**	**23 26 41.6**	**-0.5**
GAS1				Sg	**Sn**	**23 26 58.6**	**-0.1**
IAZR	**Azarshahr**	**1.23**	**266**	Pg	**Pb**	**23 26 41.4**	**-1.1**
CSN1	**Caspian**	**1.27**	**100**	Pg	**Pn**	**23 26 42.1**	**-0.9**
CSN1				Sg	**Sg**	**23 27 00.0**	**+0.6**
ZNJK	**Zanjan**	**1.45**	**140**	Pg	**Pn**	**23 26 44.5**	**-1.2**
ISHB	**Shabestar**	**1.58**	**289**	Pg	**Pb**	**23 26 47.7**	**-0.8**
IMRD	**Marand**	**1.71**	**304**	Pg	**Pg**	**23 26 51.3**	**0.0**
MAHB	**Mahabad**	**1.77**	**236**	Pg	**Pb**	**23 26 50.9**	**-0.8**
IGZV	**Ghazvin**	**2.57**	**122**	Pn	**Pn**	**23 27 02.1**	**+1.0**
QABG	**Abgarm-Qazvin**	**2.65**	**141**	Pn	**Pn**	**23 27 02.9**	**+0.6**
SNQR	**Sonqor, Kerman**	**2.92**	**178**	Pn	**Pb**	**23 27 07.7**	**-3.6**
GNI	**Garni**	**3.21**	**318**	Pn	**Pb**	**23 27 13.6**	**-2.5**
	14nm,0.3s,baz=138,slow=2.8,SNR=32						
GNI				Pg	**Pg**	**23 27 18.4**	**-1.7**
	14nm,0.3s,baz=144,slow=2.9,SNR=62						
GNI				Lg	Lg	23 28 00.8	
	18nm,0.3s,baz=49,slow=22,SNR=9.2						
	52nm,0.6s						
HAGD	**Aghdareh**	**3.23**	**156**	Pn	**Pn**	**23 27 10.1**	**-0.1**
IKRK	**Kirkuk**	**3.49**	**228**	*e*Pn	**Pn**	**23 27 14.0**	**+0.4**
IKRK				*e*Sn	**Sn**	**23 27 56.0**	**+0.7**
IKRK				AML	AML	23 28 20.6	
	comp=N,80nm,0.7s						
IKRK				AML	AML	23 28 21.3	
	comp=E,104nm,0.5s						
MZPU	**Pul - Mazandar**	**3.50**	**111**	Pn	**Pn**	**23 27 15.1**	**+1.2**
KCHF	**Cheshme Sefid,**	**3.52**	**186**	Pn	**Pn**	**23 27 15.7**	**+1.5**
IGHG	**Ghaleghazi**	**3.53**	**193**	Pn	**Pn**	**23 27 15.4**	**+1.0**
MSL	**Mosul**	**3.79**	**250**	*e*Pn	**Pn**	**23 27 18.0**	**+0.4**
MSL				*e*Sn	**Sn**	**23 28 03.0**	**+0.5**
GLG1	**Gilan-e-Gharb**	**3.89**	**200**	Pn	**Pn**	**23 27 20.1**	**+1.0**
IQOM	**Qom**	**4.10**	**135**	Pn	**Pn**	**23 27 22.2**	**0.0**
IPRN	**Peran**	**4.15**	**110**	Pn	**Pn**	**23 27 24.3**	**+1.5**
IDMV	**Damavand**	**4.24**	**120**	Pn	**Pn**	**23 27 25.4**	**+1.2**
IVRN	**Varamin**	**4.39**	**128**	Pn	**Pn**	**23 27 27.1**	**+1.2**
IALA	**Alasht**	**4.56**	**110**	Pn	**Pn**	**23 27 30.3**	**+1.7**
IBDR	**Badra**	**4.84**	**196**	*e*Pn	**Pn**	**23 27 33.0**	**+0.9**
IBDR				*e*Sn	**Sn**	**23 28 30.0**	**+1.5**
ILAS	**Lasjerd**	**4.99**	**117**	Pn	**Pn**	**23 27 36.0**	**+1.6**
QAMS	**Qamsar**	**5.12**	**141**	Pn	**Pn**	**23 27 37.5**	**+1.3**
ISFB	**Sefidab**	**5.13**	**130**	Pn	**Pn**	**23 27 37.0**	**+0.8**
BHD	**Baghdad**	**5.18**	**211**	*e*Pn	**Pn**	**23 27 38.0**	**+1.2**
BHD				*e*Sn	**Sn**	**23 28 38.0**	**+1.1**
IGLO	**Ghaloghah**	**5.20**	**102**	Pn	**Pn**	**23 27 38.5**	**+1.2**
IKLH	**Kolahrood**	**5.55**	**142**	Pn	**Pn**	**23 27 43.4**	**+1.3**
JHBN	**Jahan bin**	**6.11**	**154**	Pn	**Pn**	**23 27 50.9**	**+1.0**
RAFI	**Al-Rafai**	**6.16**	**191**	*e*Pn	**Pn**	**23 27 51.0**	**+0.8**
RAFI				*e*Sn	**Sn**	**23 29 02.0**	**+1.1**
ANAR	**Anarak**	**6.83**	**130**	Pn	**Pn**	**23 28 00.7**	**+1.2**
KBZ	**Khabaz**	**6.90**	**331**	Pn	**Pn**	**23 28 03.2**	**+3.0**
	comp=E,0.8nm,0.8s,baz=114,slow=12,SNR=2.1						
KBZ				Pg	**Pb**	**23 28 19.7**	**+0.9**
	comp=E,0.1nm,0.3s,baz=228,slow=16,SNR=1.7						
KVAR	**Kislovodsk Arr**	**7.17**	**331**	Pn	**Pn**	**23 28 07.2**	**+3.0**
	comp=E,0.6nm,0.5s,baz=83,slow=23,SNR=1.4						
ISFR	**Sfrayin**	**8.37**	**92**	Pn	**Pn**	**23 28 22.3**	**+1.5**
IBAF	**Bafgh**	**9.06**	**131**	Pn	**Pn**	**23 28 31.9**	**+1.8**
IPAY	**Payeh**	**9.26**	**95**	Pn	**Pn**	**23 28 34.3**	**+1.2**
IKRD	**Kardeh**	**9.61**	**92**	Pn	**Pn**	**23 28 39.0**	**+1.1**
IMYA	**Miami**	**10.16**	**94**	Pn	**Pn**	**23 28 46.6**	**+1.4**
BRTR	**Keskin Array B**	**11.01**	**284**	Pn	Pn	23 29 01.0	+4.1
	comp=E,0.9nm,1.0s,baz=96,slow=11,SNR=8.8						
AB31	**Akbulak array**	**14.56**	**34**	⇓P	**Pn**	**23 29 46.9**	**+1.7**
	comp=E,1.3nm,0.7s,baz=217,slow=13,SNR=15						
AB31				⇑S	**Sn**		
	comp=E,1.6nm,0.7s,baz=218,slow=23,SNR=5.5						
BELG	**Belogornoye**	**14.61**	**0**	Pn	**Pn**	**23 29 44.6**	**-1.2**
	comp=E,0.6nm,0.3s,baz=160,slow=6.9,SNR=7.1						
	comp=E,7.2nm,0.8s						
AKTO	**Aktyubinsk**	**14.70**	**27**	Pn	**Pn**	**23 29 45.6**	**-1.5**
	comp=E,0.4nm,0.3s,baz=176,slow=7.5,SNR=5.8						
	comp=E,0.7nm,0.3s						
AKTO	**Aktyubinsk**	**14.70**	**27**	⇑P	**Pn**	**23 29 46.0**	**-1.1**
	comp=E,2.6nm,0.9s						
AKTO				⇓S	**Sn**	**23 32 23.9**	**-6.4**
	comp=E,2.4nm,1.1s						
AKASG	**Malin Array Be**	**18.34**	**321**	P	**P**	**23 30 33.8**	**+0.2**
	comp=E,0.7nm,0.3s,baz=106,slow=5.9,SNR=1.6						
	comp=E,0.2nm,0.2s						
ARTI	**Arti**	**19.98**	**18**	P	**P**	**23 30 50.9**	**-0.7**
	comp=E,0.6nm,0.3s,baz=230,slow=9.8,SNR=4.8						
	comp=E,2.2nm,0.6s						
AAK	**Ala-Archa**	**21.12**	**68**	P	**P**	**23 31 05.8**	**+1.5**
	comp=E,1.2nm,0.9s,baz=264,slow=10,SNR=1.7						
	comp=E,1.2nm,0.9s						
BVAR	**Borovoye Array**	**22.00**	**39**	P	**P**	**23 31 16.5**	**+3.1**
	comp=E,2.2nm,0.7s,baz=240,slow=9.0,SNR=8.6						
	comp=E,2.2nm,0.7s						
KURBB	**Kurchatov Arra**	**25.46**	**50**	P	**P**	**23 31 48.7**	**+1.4**
	comp=E,0.5nm,0.7s,baz=255,slow=9.6,SNR=5.3						
	comp=E,0.5nm,0.7s						
GERES	**GERESS Array B**	**26.76**	**305**	P	**P**	**23 32 00.1**	**+0.9**
	comp=E,1.1nm,0.3s,baz=99,slow=4.2,SNR=3.4						
	comp=E,0.1nm,0.3s						
MKAR	**Makanchi Array**	**27.07**	**59**	P	**P**	**23 32 05.8**	**+3.8**
	comp=E,0.8nm,0.8s,baz=271,slow=6.9,SNR=3.6						
	comp=E,0.8nm,0.8s						
FINES	**FINESS Array B**	**27.20**	**337**	P	**P**	**23 32 03.4**	**+0.5**
	comp=E,2.4nm,1.0s,baz=144,slow=12,SNR=1.6						
	comp=E,2.4nm,1.0s						

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*IDC **07** 23:31:50.7±6.6, 23.°26S×179.°45W, h526km±72km, mb3.0/5, mbtmp3.9/6, Error ellipse: s-maj=40.5km s-min=36.5km az=55.0*
ISC 07 23:31:51.5±1.2, 23.°3S±0.°3×179.°6W±0.°2, h536km, n7, σ1§00/7, mb3.5/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.99**	**273**	P	**P**	**23 34 40.2**	**-0.2**
	4.3nm,0.8s,baz=86,slow=18,SNR=3.0						
STKA	**Stephens Creek**	**35.34**	**247**	P	**P**	**23 38 01.5**	**-0.5**
	2.3nm,0.8s,baz=82,slow=6.9,SNR=3.4						
	2.3nm,0.8s						
ASAR	**Alice Springs**	**42.55**	**260**	P	**P**	**23 39 01.5**	**+1.1**
	1.2nm,0.7s,baz=87,slow=8.5,SNR=12						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**42.87**	**265**	P	**P**	**23 39 03.3**	**+0.4**
	1.1nm,0.5s,baz=93,slow=8.5,SNR=7.7						
	1.1nm,0.5s						
QSPA	**South Pole Qui**	**66.79**	**180**	P	**P**	**23 41 49.6**	**0.0**
	0.9nm,0.8s,baz=20,slow=8.2,SNR=5.4						
	0.9nm,0.8s						
PDAR	**Pinedale Array**	**91.97**	**44**	P	**P**	**23 44 03.7**	**+0.5**
	0.3nm,0.7s,baz=282,slow=5.2,SNR=2.7						
	0.3nm,0.7s						
HFS	**Hagfors**	**142.03**	**349**	PKP	**PKPdf**	**23 50 20.6**	**-1.4**
	1.3nm,0.8s,baz=15,slow=6.0,SNR=6.8						

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*IDC **07** 23:31:60.0±1.2, 37.°68N×47.°48E, h0km, mb3.7/10, mbtmp3.6/17, ML3.8/5, Error ellipse: s-maj=18.8km s-min=11.4km az=14.0*
*TEH **07** 23:32:01.3, 37.°74N×47.°51E, h13km±15km*
*THR **07** 23:32:02.1±0.0, 37.°75N×47.°57E, h10km±6km, ML4.1*
ISC 07 23:32:02.1±0.6, 37.°75N±0.°03×47.°54E±0.°03, h10km, n60, σ1§47/63, mb3.8/8, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHSH	**Hashtrud**	**0.49**	**206**	Pg	**Pg**	**23 32 10.9**	**-0.9**
IHSH				Sg	**Sg**	**23 32 17.9**	**-0.5**
IHRS	**Heris**	**0.69**	**326**	Pg	**Pg**	**23 32 14.3**	**-1.2**
IHRS				Sg	**Sg**	**23 32 24.5**	**-0.1**
GRMI	**Germi**	**1.09**	**15**	Pg	**Pg**	**23 32 21.9**	**-1.3**
GRMI	**Germi**	**1.09**	**15**	*e*Pg	**Pg**	**23 32 22.0**	**-1.2**
GRMI				*e*Sg	**Sg**	**23 32 38.2**	**+0.8**
GRMI				IAML		23 32 43.4	
	comp=Z,1μm,1.0s						
ITBZ	**Tabriz**	**1.20**	**294**	Pg	**Pb**	**23 32 23.0**	**-2.1**
ITBZ				Sg	**Sg**	**23 32 40.3**	**-0.5**
GAS1	**Astara - Iran**	**1.21**	**58**	Pg	**Pb**	**23 32 24.4**	**-0.7**
IAZR	**Azarshahr**	**1.24**	**267**	Pg	**Pb**	**23 32 24.2**	**-1.5**
ZNJK	**Zanjan**	**1.41**	**139**	*e*Pg	**Pn**	**23 32 27.5**	**-0.6**
ZNJK				IAML		23 32 54.9	
	comp=Z,3.8nm,1.0s						
IMRD	**Marand**	**1.74**	**304**	Pg	**Pn**	**23 32 33.6**	**+1.1**
MAHB	**Mahabad**	**1.76**	**237**	Pg	**Pn**	**23 32 33.5**	**+0.7**
JIR1	**Jirandeh**	**2.08**	**119**	Pn	**Pn**	**23 32 38.4**	**+1.1**
LHJ2	**Lahijan - Gila**	**2.09**	**105**	Pn	**Pn**	**23 32 38.3**	**+1.1**
SRSL	**SARDASHT**	**2.28**	**228**	*e*Pn	**Pn**	**23 32 42.6**	**+2.6**
SRSL				IAML		23 33 16.7	
	comp=Z,650nm,1.0s						
IGZV	**Ghazvin**	**2.54**	**122**	Pn	**Pn**	**23 32 44.9**	**+1.3**
QABG	**Abgarm-Qazvin**	**2.62**	**141**	Pn	**Pn**	**23 32 45.8**	**+1.1**
SNGE	**Sanandaj**	**2.66**	**183**	*e*Pn	**Pn**	**23 32 47.4**	**+2.2**
SNGE				IAML		23 34 30.9	
	comp=Z,6.6nm,1.0s						
SNQR	**Sonqor, Kerman**	**2.89**	**179**	Pn	**Pn**	**23 32 50.2**	**+1.7**
IDHR	**Dehrash**	**3.18**	**197**	Pn	**Pn**	**23 32 54.3**	**+1.8**
HAGD	**Aghdareh**	**3.19**	**156**	Pn	**Pn**	**23 32 52.9**	**+0.3**
GNI	**Garni**	**3.24**	**319**	Pn	**Pn**	**23 32 55.5**	**+2.3**
	comp=Z,22nm,0.3s,baz=172,slow=6.3,SNR=69						
GNI				Pg	**Pb**	**23 33 00.2**	**+0.4**
	comp=Z,22nm,0.3s,baz=154,slow=3.4,SNR=88						
GNI				Lg	Lg	23 33 42.9	
	comp=Z,21nm,0.3s,baz=50,slow=23,SNR=6.8						
	comp=Z,32nm,1.0s						
THKV	**Tehran--Karaj**	**3.25**	**123**	*e*Pn	**Pn**	**23 32 55.0**	**+1.7**
THKV				IAML		23 33 49.0	
	comp=Z,370nm,1.0s						
CHTH	**Charan**	**3.42**	**121**	*i* P	**Pn**	**23 32 57.7**	**+2.0**
CHTH				IAML		23 33 50.8	
	comp=Z,2.3nm,1.0s						
MZPU	**Pul - Mazandar**	**3.48**	**111**	Pn	**Pn**	**23 32 57.7**	**+1.2**
KCHF	**Cheshme Sefid,**	**3.49**	**187**	Pn	**Pn**	**23 32 58.1**	**+1.5**
IGHG	**Ghaleghazi**	**3.50**	**193**	Pn	**Pn**	**23 32 58.2**	**+1.3**
GLG1	**Gilan-e-Gharb**	**3.86**	**200**	Pn	**Pn**	**23 33 02.6**	**+0.9**
IQOM	**Qom**	**4.07**	**134**	Pn	**Pn**	**23 33 05.5**	**+0.8**
IPRN	**Peran**	**4.13**	**110**	Pn	**Pn**	**23 33 07.0**	**+1.6**
DAMV	**Damavand**	**4.14**	**119**	*e*Pn	**Pn**	**23 33 08.0**	**+2.3**
DAMV				IAML		23 34 09.1	
	comp=Z,4.6nm,1.0s						
IDMV	**Damavand**	**4.21**	**120**	Pn	**Pn**	**23 33 08.4**	**+1.7**
IVRN	**Varamin**	**4.36**	**128**	Pn	**Pn**	**23 33 09.6**	**+1.2**
GHVR	**GHOM**	**4.46**	**136**	*e*Pn	**Pn**	**23 33 11.4**	**+1.5**
GHVR				IAML		23 34 35.3	
	comp=Z,170nm,1.0s						
KHMZ	**Khomeyn**	**4.46**	**153**	*e*Pn	**Pn**	**23 33 13.4**	**+3.4**
KHMZ				IAML		23 34 38.2	
	comp=Z,39nm,1.0s						
QAMS	**Qamsar**	**5.09**	**141**	Pn	**Pn**	**23 33 20.0**	**+1.3**
ISFB	**Sefidab**	**5.10**	**130**	Pn	**Pn**	**23 33 19.8**	**+1.1**
IGLO	**Ghaloghah**	**5.18**	**102**	Pn	**Pn**	**23 33 20.8**	**+0.9**
IKLH	**Kolahrood**	**5.51**	**142**	Pn	**Pn**	**23 33 26.0**	**+1.5**
JHBN	**Jahan bin**	**6.07**	**154**	Pn	**Pn**	**23 33 33.9**	**+1.7**
ZNGN	**Zangian**	**6.24**	**153**	Pn	**Pn**	**23 33 37.0**	**+2.4**
MRVT	**Maraveh tapeh**	**6.78**	**88**	*e*Pn	**Pn**	**23 33 42.3**	**+0.5**
MRVT				IAML		23 35 01.2	
	comp=Z,19nm,1.0s						
KBZ	**Khabaz**	**6.93**	**331**	Pn	**Pn**	**23 33 46.6**	**+2.9**
	comp=Z,0.6nm,0.7s,baz=51,slow=19,SNR=1.6						
KBZ				Pg	**Pb**	**23 34 03.9**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=158,slow=12,SNR=9.9						
KBZ				Lg	Lg	23 35 40.8	
	comp=Z,0.1nm,0.3s,baz=138,slow=16,SNR=2.4						
KVAR	**Kislovodsk Arr**	**7.20**	**331**	Pn	Pn	23 33 53.3	+5.7
	baz=93,slow=12						
YZKH	**Yazd**	**7.87**	**131**	*e*Pn	**Pn**	**23 33 58.6**	**+1.8**
YZKH				IAML		23 35 09.7	
	comp=Z,11nm,1.0s						
ISFR	**Sfrayin**	**8.36**	**92**	Pn	**Pn**	**23 34 05.1**	**+1.5**
ASF	**Jabal al Asfar**	**10.35**	**241**	Lg	Lg	23 37 27.5	
	baz=78,slow=19						
MMAI	**Mount Meron Ar**	**10.97**	**248**	Pn	**Pn**	**23 34 38.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=25,slow=21,SNR=1.2						
	comp=Z,0.6nm,0.6s						
BRTR	**Keskin Array B**	**11.04**	**285**	Pn	**Pn**	**23 34 41.1**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=95,slow=16,SNR=6.0						
BELG	**Belogornoye**	**14.64**	**0**	Pn	**Pn**	**23 35 29.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=107,slow=19,SNR=3.7						
	comp=Z,4.4nm,0.6s						
AKTO	**Aktyubinsk**	**14.73**	**27**	Pn	**Pn**	**23 35 29.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=8.6,SNR=2.4						
AKTO				Sn	Sn	23 38 03.3	-10
	comp=Z,0.1nm,0.3s,baz=192,slow=14,SNR=1.2						
	comp=Z,1.3nm,0.6s						
AKASG	**Malin Array Be**	**18.37**	**321**	P	**Pn**	**23 36 16.7**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=116,slow=10,SNR=2.0						
	comp=Z,0.2nm,0.2s						
ARTI	**Arti**	**20.01**	**18**	P	**P**	**23 36 33.6**	**-1.2**
	comp=Z,1.9nm,0.7s,baz=230,slow=9.8,SNR=3.9						
	comp=Z,1.9nm,0.7s						
AAK	**Ala-Archa**	**21.12**	**68**	P	**P**	**23 36 45.2**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=209,slow=2.9,SNR=2.2						
	comp=Z,0.4nm,0.3s						
BVAR	**Borovoye Array**	**22.02**	**39**	P	**P**	**23 36 56.3**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=229,slow=6.6,SNR=12						
	comp=Z,3.3nm,0.7s						
KURBB	**Kurchatov Arra**	**25.47**	**50**	P	**P**	**23 37 31.2**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=258,slow=9.4,SNR=13						
	comp=Z,2.3nm,0.8s						
GERES	**GERESS Array B**	**26.79**	**305**	P	**P**	**23 37 43.6**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=106,slow=7.2,SNR=5.2						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**27.07**	**59**	P	**P**	**23 37 45.8**	**+1.0**
	comp=Z,1.5nm,1.0s,baz=274,slow=8.4,SNR=5.5						
	comp=Z,1.5nm,1.0s						
FINES	**FINESS Array B**	**27.24**	**337**	P	**P**	**23 37 45.6**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=131,slow=10,SNR=4.4						
	comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	**30.17**	**45**	P	**P**	**23 38 11.2**	**-1.0**
	comp=Z,0.5nm,0.2s,baz=256,slow=12,SNR=4.9						
	comp=Z,0.5nm,0.2s						
HFS	**Hagfors**	**30.99**	**327**	P	**P**	**23 38 18.5**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=116,slow=9.8,SNR=2.2						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**47.49**	**251**	P	P	23 40 35.4	-2.1
	comp=Z,0.3nm,0.5s,baz=47,slow=6.3,SNR=3.3						
	comp=Z,0.3nm,0.5s						

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*IDC **07** 23:41:08.6±0.8, 1.°45N×126.°13E, h0km, mb3.9/9, mbtmp3.9/10, ML3.8/1, Error ellipse: s-maj=72.1km s-min=14.8km az=71.0*
*NEIC **07** 23:41:13.0±0.5, 1.°4N±0.°1×126.°1E±0.°1, h24km±7km, mb4.1/12, Error ellipse: s-maj=20.6km s-min=11.3km az=223.0*
*DJA **07** 23:41:17.2±0.3, 2.°N±3.°×12.°7E±.°, h55km±13km, M4.2/14, mB5.2/3, mb4.3/6, MLv4.1/14, Mw(mB)4.6/3*
ISC 07 23:41:15.6±0.7, 1.°55N±0.°07×126.°48E±0.°08, h47km, n36, σ1§96/38, mb4.1/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.18**	**131**		**Pn**	**23 41 37.7**	**+2.0**
TNTI				Sn	**Sn**	**23 41 55.8**	**+5.2**
TNTI	**Ternate**	**1.18**	**131**	P	**Pn**	**23 41 37.6**	**+1.9**
TNTI				S	**Sn**	**23 41 52.8**

MKAR	**Makanchi Array**	**26.00**	**66**	P		P	00 05 44.7	+1.0
	0.9nm,0.7s,baz=262,slow=9.8,SNR=7.5							
MKAR				S		S	00 10 15.6	+0.3
	0.1nm,0.6s,baz=270,slow=6.9,SNR=1.1							
	0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**28.18**	**51**	P		P	00 06 04.4	+1.1
	0.8nm,0.6s,baz=268,slow=10,SNR=3.7							
	0.8nm,0.6s							

*IDC **08** 00:14:41.9±10.0, 35°.44N×22°.00E, h0km, mb3.8/2, mbtmp3.6/3, ML2.9/1, Error ellipse: s-maj=199.0km s-min=58.5km az=26.0*
*ATH **08** 00:14:53.0, 35°.77N×22°.29E, h61km±10km, ML2.9/12, Manual Solution by G.Panopoulou First location: 2019/11/08 00:16:10, This location: 2020/11/17 02:51:02 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 3 km*
*THE **08** 00:14:54.1, 36°.N±30°×2°.2E±2°.5, h77km±26km, MLh2.7/3*

ISC 08 00:14:52.8±1.5, 35°.75N±0°.08×22°.30E±0°.08, h65km±11km, n43, σ0§55/48, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHA	**Kythira Island**	**0.80**	**51**	P	**Pn**	**00 15 08.1**	**-0.5**
KTHA				S	**Sn**	**00 15 19.4**	**-0.7**
ANKY	**Antikythira Is**	**0.82**	**82**	P	**Pn**	**00 15 09.0**	**+0.3**
ANKY				S	**Sn**	**00 15 21.1**	**+0.4**
ANKY	**Antikythira Is**	**0.82**	**82**	P	**Pn**	**00 15 09.1**	**+0.3**
ANKY				S	**Sn**	**00 15 20.5**	**-0.1**
VLI	**Veliai**	**1.09**	**28**	P	**Pn**	**00 15 10.0**	**+0.8**
VLI	**Veliai**	**1.09**	**28**	P	**Pn**	**00 15 12.5**	**+0.2**
VLI				S	**Sn**	**00 15 27.0**	**+0.3**
PYL1	**Pylos**	**1.25**	**337**	P	**Pn**	**00 15 13.6**	**-0.7**
CH01	**Chania**	**1.42**	**99**	P	**Pn**	**00 15 17.0**	**+0.4**
CHAN	**Chania**	**1.44**	**99**	P	**Pn**	**00 15 17.1**	**+0.3**
CHAN	**Chania**	**1.44**	**99**	P	**Pn**	**00 15 17.1**	**+0.3**
CHAN				S	**Sn**	**00 15 35.7**	**+0.9**
ITM	**Ithomi**	**1.45**	**348**	P	**Pn**	**00 15 16.6**	**-0.4**
CHNB	**Souda**	**1.47**	**100**	P	**Pn**	**00 15 17.3**	**+0.2**
GVD	**Gavdhos**	**1.73**	**121**	P	**Pn**	**00 15 20.9**	**+0.3**
AMT	**Artemida-Makis**	**1.84**	**345**	P	**Pn**	**00 15 22.5**	**+0.3**
MET5	**Makryloggos,Me**	**2.05**	**24**	P	**Pn**	**00 15 24.9**	**-0.1**
IDI	**Anoyia**	**2.17**	**102**	P	**Pn**	**00 15 26.4**	**-0.2**
IDI	**Anoyia**	**2.17**	**102**	P	**Pn**	**00 15 26.5**	**-0.1**
GUR	**Goura**	**2.18**	**1**	P	**Pn**	**00 15 27.7**	**+0.8**
DRO	**Drossia**	**2.24**	**348**	P	**Pn**	**00 15 27.6**	**-0.1**
KLV	**Kalavryta, Ach**	**2.29**	**357**	P	**Pn**	**00 15 28.9**	**+0.6**
LOUT	**Loutraki**	**2.29**	**13**	P	**Pn**	**00 15 27.8**	**-0.5**
LTK	**Loutraki**	**2.33**	**13**	P	**Pn**	**00 15 30.1**	**+1.3**
LTK	**Loutraki**	**2.33**	**13**	P	**Pn**	**00 15 30.0**	**+1.2**
RLS	**Riolos of Patr**	**2.39**	**344**	P	**Pn**	**00 15 29.7**	**0.0**
VLY	**Voula,Athens**	**2.41**	**29**	P	**Pn**	**00 15 30.3**	**+0.3**
VLY	**Voula,Athens**	**2.41**	**29**	P	**Pn**	**00 15 29.8**	**-0.1**
YRMI	**Loutra Irminis**	**2.46**	**342**	P	**Pn**	**00 15 30.3**	**-0.3**
ATHU	**Athens Univers**	**2.51**	**28**	P	**Pn**	**00 15 31.6**	**+0.4**
VIL2	**Platees**	**2.57**	**17**	P	**Pn**	**00 15 32.4**	**+0.2**
SNT5	**Nea Kammeni, S**	**2.59**	**75**	P	**Pn**	**00 15 32.2**	**-0.1**
THERA	**Ancient Thera,**	**2.65**	**76**	P	**Pn**	**00 15 32.2**	**-0.9**
DION	**Dionisos Attik**	**2.66**	**29**	P	**Pn**	**00 15 33.6**	**+0.2**
DION	**Dionisos Attik**	**2.66**	**29**	P	**Pn**	**00 15 33.1**	**-0.2**
NPS	**Neapolis**	**2.75**	**99**	P	**Pn**	**00 15 34.0**	**-0.5**
KARY	**Karystos**	**2.85**	**36**	P	**Pn**	**00 15 35.5**	**-0.4**
KARY	**Karystos**	**2.85**	**36**	P	**Pn**	**00 15 35.4**	**-0.4**
ANX	**Ano Chora**	**2.85**	**354**	P	**Pn**	**00 15 37.2**	**+1.2**
LKR	**Lokris**	**2.94**	**11**	P	**Pn**	**00 15 37.3**	**+0.1**
ATAL	**Atalanti**	**2.99**	**11**	P	**Pn**	**00 15 37.5**	**-0.3**
ATAL	**Atalanti**	**2.99**	**11**	P	**Pn**	**00 15 37.4**	**-0.3**
AXAR	**Agios Charalam**	**3.02**	**5**	P	**Pn**	**00 15 39.3**	**+1.1**
KBZ	**Khabaz**	**17.70**	**57**	P	**Pn**	**00 18 54.3**	**-0.5**
	baz=242,slow=21,SNR=2.0						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**33.88**	**2**	P	**P**	**00 21 28.6**	**-0.3**
	0.9nm,0.8s,baz=189,slow=8.1,SNR=5.1						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**45.40**	**57**	P	**P**	**00 23 05.1**	**+0.3**
	0.6nm,0.3s,baz=273,slow=7.8,SNR=21						
	0.6nm,0.3s						

*MDD **08** 00:19:14.4±0.7, 36°.46N×9°.95W, h34km±13km, mb_Lg2.8/8, Error ellipse: s-maj=7.0km s-min=3.5km az=86.0*
*SFS **08** 00:19:14.7, 36°.45N×9°.90W, h40km, ML3.2/8, ML2.7/11, MLv2.1/11*
*INMG **08** 00:19:15.9±1.5, 36°.61N×9°.82W, h12km±6km, ML1.7, Error ellipse: s-maj=6.3km s-min=4.6km az=49.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
*IGIL **08** 00:19:15.9, 36°.61N×9°.82W, h13km, ML1.6*
*CNRM **08** 00:19:15.3, 36°.40N×9°.56W, h60km, ML4.6*

ISC 08 00:19:12.3±1.6, 36°.44N±0°.03×9°.87W±0°.06, h31km±13km, n59, σ1§47/95, 1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.09**	**50**	Pn	**Pb**	**00 19 33.0**	**+0.5**
PFVI				Sn	**Sb**	**00 19 45.9**	**-0.5**
PFVI	**Vila Bisbo**	**1.09**	**50**	*e*P	**Pb**	**00 19 33.0**	**+0.5**
PFVI				*e*S	**Sb**	**00 19 45.7**	**-0.7**
PFVI				*i* IAML		00 19 46.6	
PFVI				*i* IAML		00 19 46.9	
PFVI				*i* IAML		00 19 46.9	
MORF	**Marmelete**	**1.30**	**48**	*e*P	**Pb**	**00 19 36.1**	**-0.1**
MORF				*e*S	**Sn**	**00 19 51.0**	**+0.2**
MORF				IAML		00 19 52.2	
	comp=N,21nm,0.1s						
MORF	**Marmelete**	**1.30**	**48**	*e*P	**Pb**	**00 19 36.2**	**0.0**
MORF				*e*S	**Sn**	**00 19 51.5**	**+0.8**
MORF				*i* IAML		00 19 52.3	
MORF				*i* IAML		00 19 52.5	
MORF				*i* IAML		00 19 54.5	
PTEO	**Sao Teotonio**	**1.44**	**39**	*e*P	**Pb**	**00 19 37.8**	**-0.6**
PTEO				*e*S	**Sn**	**00 19 54.5**	**+0.5**
PTEO				*i* IAML		00 19 54.8	
PTEO				*i* IAML		00 19 55.0	
PTEO				*i* IAML		00 19 55.4	
PBDV	**Barranco-do-Ve**	**1.75**	**62**	Pn	**Pb**	**00 19 42.6**	**-1.2**
PBDV				Sn	**Sn**	**00 20 02.1**	**+0.3**
PBDV	**Barranco-do-Ve**	**1.75**	**62**	*e*P	**Pb**	**00 19 42.6**	**-1.2**
PBDV				*e*S	**Sn**	**00 20 02.4**	**+0.6**
PBDV				*i* IAML		00 20 02.9	
PBDV				*i* IAML		00 20 05.4	
PBDV				*i* IAML		00 20 06.8	
PCVE	**Castro Verde**	**1.89**	**50**	Pn	**Pb**	**00 19 44.3**	**-1.8**
PCVE				Sn	**Sn**	**00 20 05.5**	**+0.4**
PCVE	**Castro Verde**	**1.89**	**50**	*e*P	**Pb**	**00 19 44.5**	**-1.6**
PCVE				*e*S	**Sn**	**00 20 06.6**	**+1.4**
PCVE				*i* IAML		00 20 07.4	
PCVE				*i* IAML		00 20 07.6	
PCVE				*i* IAML		00 20 10.4	
MESJ	**Messejana**	**1.92**	**43**	*e*P	**Pn**	**00 19 44.5**	**+1.7**
MESJ				*e*S	**Sn**	**00 20 05.4**	**-0.6**
MESJ				IAML		00 20 08.0	
	comp=E,2.2nm,0.1s						
MESJ	**Messejana**	**1.92**	**43**	*e*P	**Pn**	**00 19 44.5**	**+1.7**
MESJ				*e*S	**Sn**	**00 20 06.3**	**+0.4**
MESJ				*i* IAML		00 20 08.2	
MESJ				*i* IAML		00 20 09.5	
MESJ				*i* IAML		00 20 09.6	
PVAQ	**Vaqueiros**	**1.98**	**60**	*e*P	**Pb**	**00 19 45.7**	**-1.9**
PVAQ				*e*S	**Sn**	**00 20 07.5**	**+0.2**
PVAQ				*i* IAML		00 20 10.0	
PVAQ				*i* IAML		00 20 10.9	
PVAQ				*i* IAML		00 20 11.6	
PVAQ	**Vaqueiros**	**1.98**	**60**	P	**Pn**	**00 19 43.6**	**0.0**
PVAQ	**Vaqueiros**	**1.98**	**60**	S	**Sn**	**00 20 06.2**	**-1.1**
EXAYA	**Ayamonte**	**2.13**	**68**	S	**Sn**	**00 20 12.5**	**+1.5**
EGRO	**El Granado**	**2.20**	**60**	P	**Pb**	**00 19 49.5**	**-2.0**
EGRO				S	**Sn**	**00 20 13.6**	**+0.7**
EGRO				*i* IVmb_Lg		00 20 16.1	
PBEJ	**Beja**	**2.25**	**45**	*e*P	**Pn**	**00 19 48.8**	**+1.5**
PBEJ				*e*S	**Sn**	**00 20 14.2**	**+0.1**
PBEJ				*i* IAML		00 20 16.8	
PBEJ				*i* IAML		00 20 16.9	
PBEJ				*i* IAML		00 20 16.9	
MOE	**Montemor**	**2.41**	**30**	*e*P	**Pn**	**00 19 51.1**	**+1.6**
MOE				*e*S	**Sn**	**00 20 17.7**	**-0.2**
MOE				*i* IAML		00 20 18.2	
MOE				*i* IAML		00 20 18.4	
MOE				*i* IAML		00 20 19.0	
PMAFR	**Mafra**	**2.56**	**10**	Pn	**Pn**	**00 19 52.4**	**+0.9**
PMAFR	**Mafra**	**2.56**	**10**	*e*P	**Pn**	**00 19 52.6**	**+1.0**
PMAFR				*e*S	**Sn**	**00 20 20.2**	**-1.4**
EVO	**Evora**	**2.56**	**35**	Pn	**Pn**	**00 19 52.8**	**+1.2**
EVO				Sn	**Sn**	**00 20 21.0**	**-0.6**
EVO	**Evora**	**2.56**	**35**	*e*P	**Pn**	**00 19 52.8**	**+1.2**
EVO				*e*S	**Sn**	**00 20 21.2**	**-0.5**
EVO				*i* IAML		00 20 22.4	
EVO				*i* IAML		00 20 22.9	
EVO				*i* IAML		00 20 23.1	
PARRA	**Arraiolos**	**2.78**	**31**	*e*P	**Pb**	**00 19 55.9**	**0.0**
PARRA				*e*S	**Sb**	**00 20 26.9**	**+1.2**
PARRA				*i* IAML		00 20 28.1	
PARRA				*i* IAML		00 20 28.1	
PARRA				*i* IAML		00 20 28.2	
PBAR	**Barrancos**	**2.85**	**52**	Pn	**Pn**	**00 19 57.4**	**+1.9**
PBAR				Sn	**Sn**	**00 20 27.9**	**-0.9**
PBAR	**Barrancos**	**2.85**	**52**	*e*P	**Pn**	**00 19 57.5**	**+2.0**
PBAR				*e*S	**Sn**	**00 20 29.1**	**+0.4**
PBAR				*i* IAML		00 20 30.2	
PBAR				*i* IAML		00 20 30.4	
PBAR				*i* IAML		00 20 33.9	
EMIN	**Mina Concepcio**	**2.88**	**62**	Sn	**Sn**	**00 20 30.1**	**+0.5**
EMIN	**Mina Concepcio**	**2.88**	**62**	P	**Pn**	**00 19 58.5**	**+2.5**
EMIN				S	**Sn**	**00 20 29.6**	**0.0**
PMTG	**Montargil**	**2.93**	**26**	*e*P	**Pn**	**00 19 58.0**	**+1.3**
PMTG				*e*S	**Sn**	**00 20 29.5**	**-1.4**
PMTG				*i* IAML		00 20 31.0	
PMTG				*i* IAML		00 20 31.3	
PMTG				*i* IAML		00 20 31.4	
PESTR	**Estremoz**	**3.02**	**36**	Pn	**Pn**	**00 19 59.7**	**+1.7**
PESTR	**Estremoz**	**3.02**	**36**	*e*P	**Pn**	**00 20 00.2**	**+2.2**
PESTR				*e*S	**Sn**	**00 20 33.0**	**-0.2**
PSBE	**So Bento**	**3.19**	**15**	*e*S	**Sn**	**00 20 35.3**	**-1.8**
EBAD	**Badajoz**	**3.24**	**44**	Pn	**Pn**	**00 20 02.0**	**+1.1**
EBAD				Sn	**Sn**	**00 20 36.6**	**-1.8**
EBAD	**Badajoz**	**3.24**	**44**	P	**Pn**	**00 20 02.1**	**+1.1**
EBAD				S	**Sn**	**00 20 38.2**	**-0.2**
EBAD				*i* IVmb_Lg		00 20 40.9	
ESPR	**Espera**	**3.26**	**81**	P	**Pn**	**00 20 03.4**	**+2.3**
ESPR				S	**Sn**	**00 20 39.9**	**+1.0**
ESPR				*i* IVmb_Lg		00 20 41.2	
PSARD	**Sardoal**	**3.43**	**23**	*e*P	**Pn**	**00 20 05.1**	**+1.5**
PSARD				*e*S	**Sn**	**00 20 41.1**	**-2.1**
PSARD				*i* IAML		00 20 42.2	
PSARD				*i* IAML		00 20 42.4	
PSARD				*i* IAML		00 20 42.7	
PMRV	**Marv??o**	**3.57**	**33**	*e*P	**Pn**	**00 20 06.7**	**+1.2**
PMRV				*e*S	**Sn**	**00 20 44.9**	**-1.8**
PMRV				*i* IAML		00 20 46.4	
PMRV				*i* IAML		00 20 46.6	
PCBR	**Castelo Branco**	**3.88**	**28**	*e*P	**Pn**	**00 20 11.4**	**+1.6**
PCBR				*e*S	**Sn**	**00 20 52.1**	**-2.2**
ECAB	**El Cabril**	**3.91**	**64**	P	**Pn**	**00 20 12.3**	**+2.1**
ECAB				S	**Sn**	**00 20 53.8**	**-1.2**
ECAB				*i* IVmb_Lg		00 20 55.4	
ZHG	**ZHG**	**3.99**	**137**	P	**Pn**	**00 20 11.8**	**+0.4**
ZHG	**ZHG**	**3.99**	**137**	S	**Sn**	**00 20 56.6**	**-0.6**
EADA	**Adamuz**	**4.56**	**66**	P	**Pn**	**00 20 21.7**	**+2.6**
EADA				S	**Sn**	**00 21 08.9**	**-2.2**
EADA				*i* IVmb_Lg		00 21 11.8	
EPLA	**Plasencia**	**4.69**	**38**	P	**Pn**	**00 20 22.3**	**+1.4**
EPLA				S	**Sn**	**00 21 12.8**	**-1.5**
EPLA				*i* IVmb_Lg		00 21 14.3	
IFR	**Ifrane**	**4.87**	**125**	Pn	**Pn**	**00 20 24.0**	**+1.4**
IFR				Sn	**Sn**	**00 21 15.7**	**-3.1**
PAB	**San Pablo**	**5.35**	**53**	P	**Pn**	**00 20 31.8**	**+1.8**
PAB				S	**Sn**	**00 21 28.4**	**-2.2**
PAB				*i* IVmb_Lg		00 21 30.2	
PSIM	**Granatula de C**	**5.40**	**62**	S	**Sn**	**00 21 31.9**	**0.0**
OUK	**Oukaimeden**	**5.48**	**162**	P	**Pn**	**00 20 33.5**	**+1.4**
OUK	**Oukaimeden**	**5.48**	**162**	S	**Sn**	**00 21 34.6**	**+0.4**
MD31	**MD31**	**5.52**	**129**	P	**Pn**	**00 20 31.6**	**-0.8**
MD31	**MD31**	**5.52**	**129**	S	**Sn**	**00 21 32.1**	**-2.7**
ELOB	**Lobios**	**5.60**	**14**	S	**Sn**	**00 21 32.7**	**-4.1**
EQES	**Quesada**	**5.60**	**74**	S	**Sn**	**00 21 36.5**	**-0.3**
MDT	**Midelt**	**5.65**	**128**	P	**Pn**	**00 20 34.1**	**0.0**
MDT	**Midelt**	**5.65**	**128**	S	**Sn**	**00 21 35.9**	**-2.1**
TIO	**Tiouine**	**5.91**	**158**	Pn	**Pn**	**00 20 40.0**	**+2.2**
TIO				Sn	**Sn**	**00 21 41.5**	**-3.1**
TIO	**Tiouine**	**5.91**	**158**	P	**Pn**	**00 20 39.2**	**+1.4**
TIO	**Tiouine**	**5.91**	**158**	S	**Sn**	**00 21 44.8**	**+0.2**
OUZM	**OUZ**	**6.09**	**154**	P	**Pn**	**00 20 41.4**	**+1.1**
OUZM	**OUZ**	**6.09**	**154**	S	**Sn**	**00 21 49.9**	**+0.9**
EAGO	**Agolada(Pontev**	**6.50**	**12**	P	**Pn**	**00 20 46.9**	**+1.1**

*IDC **08** 00:28:34.6±1.4, 67°.89N×20°.13E, h0km, mbtmp2.8/3, ML1.7/3, Error ellipse: s-maj=20.0km s-min=8.0km az=118.0*
*UPP **08** 00:28:35.6±0.0, 67°.83N×20°.21E, h0km, ML2.2, Suspected explosion*
*HEL **08** 00:28:35.3±0.3, 67°.78N×20°.20E, h0km, ML1.7, Suspected explosion*

ISC 08 00:28:35.3±0.7, 67°.78N±0°.02×20°.25E±0°.02, h0km, n37, σ1§04/57, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.18**	**10**	P	**Pg**	**00 28 38.4**	**-0.3**
KUA				S	**Sg**	**00 28 40.4**	**-0.7**
KUA	**Kurravaara**	**0.18**	**10**	P	**Pg**	**00 28 40.0**	**+1.3**
	baz=126						
KUA				S	**Sg**	**00 28 41.9**	**+0.7**
RATU	**Laukkuluspa**	**0.26**	**281**	P	**Pg**	**00 28 40.2**	**+0.1**
RATU				S	**Sg**	**00 28 43.6**	**+0.2**
RATU	**Laukkuluspa**	**0.26**	**281**	P	**Pb**	**00 28 41.9**	**-0.8**
RATU				S	**Sg**	**00 28 45.4**	**+2.0**
KOVU	**Salmi**	**0.45**	**356**	P	**Pg**	**00 28 43.3**	**-0.7**
KOVU	**Salmi**	**0.45**	**356**	P	**Pg**	**00 28 44.8**	**+0.9**
KOVU				S	**Sg**	**00 28 50.4**	**+0.7**
NIKU	**Nikkaluokta**	**0.47**	**282**	P	**Pg**	**00 28 44.2**	**0.0**
NIKU				S	**Sg**	**00 28 50.4**	**0.0**
NIKU	**Nikkaluokta**	**0.47**	**282**	P	**Pb**	**00 28 45.9**	**-0.6**
NIKU				S	**Sg**	**00 28 52.0**	**+1.7**
DUNU	**Dundret**	**0.67**	**169**	P	**Pb**	**00 28 49.2**	**-0.6**
DUNU	**Dundret**	**0.67**	**169**	P	**Pn**	**00 28 51.4**	**-0.6**
LANU	**Lannavaara**	**0.71**	**67**	P	**Pg**	**00 28 49.0**	**+0.1**
LANU				S	**Sg**	**00 28 58.5**	**+0.3**
LANU	**Lannavaara**	**0.71**	**67**	PB	**Pg**	**00 28 49.8**	**0.0**
LANU				SG	**Sg**	**00 28 58.5**	**+0.3**
MASU	**Masugnsbyn**	**0.74**	**115**	P	**Pb**	**00 28 50.4**	**-0.7**
MASU				S	**Sb**	**00 29 01.0**	**-0.7**
MASU	**Masugnsbyn**	**0.74**	**115**	P	**Pb**	**00 28 51.8**	**+0.7**
SALU	**Saltoluokta**	**0.78**	**240**	P	**Pg**	**00 28 50.6**	**+0.4**
SALU				S	**Sb**	**00 29 01.6**	**-1.1**
SALU	**Saltoluokta**	**0.78**	**240**	P	**Pb**	**00 28 52.2**	**+0.5**
SALU	**Saltoluokta**	**0.78**	**240**	*e*P	**Pg**	**00 28 50.5**	**+0.4**
KIF	**Kilpisjarvi**	**1.25**	**9**	PG	**Pg**	**00 28 58.9**	**-0.4**
KIF				smax	smax	00 29 14.4	
	comp=Z,7.7nm,0.2s						
KIF				SG	**Sg**	**00 29 14.9**	**-0.6**
PAJU	**Pajala**	**1.34**	**123**	P	**Pg**	**00 29 01.0**	**+0.1**
PAJU	**Pajala**	**1.34**	**123**	P	**Pb**	**00 29 02.6**	**+1.3**
PAJU	**Pajala**	**1.34**	**123**	PN	**Pg**	**00 29 00.8**	**-0.1**
	baz=305						
PAJU				SN	**Sn**	**00 29 19.5**	**-0.2**
HEF	**Hetta**	**1.43**	**62**	*e*P	**Pn**	**00 29 01.8**	**-0.7**
HEF	**Hetta**	**1.43**	**62**	PN	**Pn**	**00 29 01.7**	**-0.7**
HEF				smax	smax	00 29 18.9	
	comp=Z,4.7nm,0.2s						
HEF				SN	**Sg**	**00 29 20.8**	**-0.3**
ERTU	**Ertsjaerv**	**1.44**	**147**	P	**Pb**	**00 29 03.2**	**+0.2**
ERTU	**Ertsjaerv**	**1.44**	**147**	PN	**Pb**	**00 29 03.0**	**+0.1**
	baz=326						
ERTU				SN	**Sn**	**00 29 24.0**	**+1.8**
KTK1	**Kautokeino**	**1.66**	**40**	PG	**Pn**	**00 29 05.5**	**-0.2**
KTK1				SN	**Sg**	**00 29 28.6**	**-0.1**
TRO	**Tromso**	**1.93**	**346**	PG	**Pn**	**00 29 09.5**	**+0.2**
TRO				SG	**Sb**	**00 29 35.2**	**-0.6**
KALU	**Kalix**	**2.28**	**146**	PG	**Pb**	**00 29 16.2**	**-1.0**
TOF	**Tornio**	**2.34**	**135**	PG	**Pb**	**00 29 17.3**	**-0.9**
TOF				smax	smax	00 29 45.0	
	comp=Z,2.5nm,0.2s						
RNF	**Rovaniemi**	**2.53**	**115**	PG	**Pb**	**00 29 20.5**	**-1.1**
RNF				SG	**Sb**	**00 29 54.5**	**+1.3**
ARA0	**ARCESS Array S**	**2.61**	**45**	PB	**Pn**	**00 29 20.1**	**+1.5**
ARA0				SG	**Sb**	**00 29 53.3**	**-2.2**
ARCES	**ARCESS Array B**	**2.61**	**45**	Pn	**Pn**	**00 29 20.0**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=228,slow=14,SNR=16						
ARCES				Lg	Lg	00 29 52.9	
	comp=Z,0.9nm,0.3s,baz=232,slow=25,SNR=11						
	comp=Z,0.5nm,0.3s						
RAJF	**Raja-Jooseppi**	**3.10**	**73**	SG	**Sb**	**00 30 09.0**	**-0.4**
KEV	**Kevo**	**3.16**	**48**	SB	**Sn**	**00 30 05.8**	**+1.2**
VRF	**Varrio**	**3.56**	**86**	PG	**Pb**	**00 29 40.0**	**+0.9**
FINES	**FINESS Array B**	**6.83**	**156**	Pn	**Pn**	**00 30 18.7**	**+2.1**
	baz=251,slow=24,SNR=2.6						
FINES				Pg	Pb	00 30 39.7	+5.1
	comp=Z,0.1nm,0.3s,baz=343,slow=19,SNR=1.2						
FINES				Sn	**Sn**	**00 31 35.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=179,slow=33,SNR=1.2						
FINES				Lg	Lg	00 32 12.7	
	comp=Z,0.2nm,0.3s,baz=339,slow=27,SNR=5.6						
	comp=Z,2.1nm,0.9s						
NOA	**NORSAR Array B**	**7.80**	**214**	Pn	**Pn**	**00 30 26.3**	**-3.7**
	baz=18,slow=14,SNR=2.0						
NOA				Lg	Lg	00 32 40.8	
	baz=86,slow=9.7,SNR=3.8						
	comp=Z,0.4nm,0.9s						

*IDC **08** 00:30:43.7±1.4, 24°.66N×109°.88W, h0km, mbtmp3.1/3, ML3.6/3, Error ellipse: s-maj=39.1km s-min=8.9km az=124.0*
*MEX **08** 00:30:46.6±0.3, 24°.66N×109°.91W, h16km±999km, MD3.8*

ISC 08 00:30:44.2±0.9, 24°.62N±0°.09×109°.83W±0°.09, h15km, n7, σ1§48/11, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**0.68**	**220**	P	**Pg**	**00 30 57.4**	**-0.1**
	240nm,0.3s,baz=26,slow=4.5,SNR=126						
LPIG				Lg	Lg	00 31 05.7	
	584nm,0.3s,baz=144,slow=23,SNR=22						
LPIG	**La Paz**	**0.68**	**220**	*e*P	**Pg**	**00 30 57.3**	**-0.1**
LPIG				*e*S	**Sg**	**00 31 05.7**	**-0.7**
TSIG	**Topolobambo**	**1.21**	**36**	*e*P	**Pn**	**00 31 05.6**	**-1.0**
TSIG				*e*S	**Sb**	**00 31 19.9**	**-2.4**
SSIG	**Sanalona**	**2.46**	**85**	*e*P	**Pn**	**00 31 23.7**	**-0.1**
SSIG				*e*S	**Sn**	**00 31 53.5**	**0.0**
TXAR	**Lajitas Array**	**7.23**	**48**	Pn	**Pn**	**00 32 31.0**	**+1.5**
	0.1nm,0.3s,baz=238,slow=12,SNR=1.5						
TXAR				Sn	**Sn**	**00 33 51.8**	**+0.4**
	0.1nm,0.3s,baz=231,slow=22,SNR=0.9						
TXAR				Lg	Lg	00 34 33.2	
	0.1nm,0.3s,baz=110,slow=22,SNR=1.9						
	0.1nm,0.3s						
NVAR	**Mina Array Bea**	**15.53**	**334**	Pn	**P**	**00 34 27.2**	**-0.1**
	0.1nm,0.3s,baz=169,slow=13,SNR=4.1						
	0.6nm,0.6s						
PDAR	**Pinedale Array**	**18.10**	**1**	P	**P**	**00 34 58.4**	**+2.7**
	0.1nm,0.3s,baz=162,slow=11,SNR=5.4						
	0.7nm,0.8s						

*IDC **08** 00:31:42.1±1.4, 27°.85N×142°.96E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=36.6km s-min=17.4km az=111.0*

ISC 08 00:31:45.4±1.3, 27°.9N±0°.1×143°.0E±0°.2, h22km, n8, σ1§56/9, mb3.8/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.05**	**225**	Pn	**Pn**	**00 32 02.2**	**-2.6**
	23nm,0.3s,baz=328,slow=19,SNR=20						
JCJ				Sn	**Sb**	**00 32 19.2**	**+0.9**
	28nm,0.3s,baz=285,slow=20,SNR=8.1						
SONM	**Songino Array**	**34.69**	**315**	P	**P**	**00 38 34.6**	**+1.0**
	0.8nm,0.6s,baz=107,slow=9.0,SNR=3.6						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**48.25**	**191**	P	**P**	**00 40 26.7**	**+2.0**
	0.8nm,0.8s,baz=11,slow=8.1,SNR=4.8						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**50.57**	**309**	P	**P**	**00 40 42.8**	**+0.5**
	0.8nm,0.8s,baz=92,slow=8.5,SNR=6.4						
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**53.04**	**314**	P	**P**	**00 41 00.2**	**-0.4**
	0.6nm,0.5s,baz=89,slow=7.3,SNR=7.7						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**56.70**	**29**	P	**P**	**00 41 25.6**	**-1.2**
	0.5nm,1.0s,baz=284,slow=7.1,SNR=4.2						
	0.5nm,1.0s						
BVAR	**Borovoye Array**	**57.99**	**317**	P	**P**	**00 41 36.0**	**-0.2**
	0.5nm,0.5s,baz=64,slow=9.8,SNR=2.9						
	0.8nm,0.5s						
BRTR	**Keskin Array B**	**86.03**	**313**	P

DBRK Sg Sb 01 26 19.8 -0.8
LSTV Lastovo 0.52 285 *i* Pg Pb 01 26 15.7 -0.6
LSTV Sg Sb 01 26 24.5 +1.1
TREB Trebinje 0.57 81 *e*Pg Pb 01 26 14.6 -2.6
TREB *e*Sg Sb 01 22.3 -2.6
TREB Trebinje 0.57 81 *e*Pg Pb 01 26 14.7 -2.5
TREB *e*Sg Sb 01 26 23.8 -1.1
HCY Herceg Novi 0.70 105 P Pb 01 26 18.0 -1.3
HCY S Sb 01 26 28.0 -0.5
HCY Herceg Novi 0.70 105⇑ *i*Pg Pb 01 26 17.9 -1.3
HCY *i* Sg Sb 01 26 28.0 -0.5
BRY Bratogost 0.76 69 P Pb 01 26 17.6 -2.7
BRY S Sb 01 26 28.0 -2.2
BRY Bratogost 0.76 69⇓ *i*Pg Pb 01 26 17.5 -2.8
BRY *i* Sg Sb 01 26 29.3 -0.9
MAKA Makarska 0.77 328 *i* Pg Pb 01 26 20.1 -0.3
MAKA Sg Sb 01 26 31.0 +0.4
KLINJ Klinje 0.91 54⇑ *i*Pg Pb 01 26 20.0 -3.0
KLINJ *e*Sg Sb 01 26 32.8 -1.9
RICI Ricice 0.92 339 *i* Pg Pb 01 26 21.7 -1.3
RICI Sg Sb 01 26 34.6 -0.3
HVAR Hvar 0.99 304 *i* Pg Pb 01 26 24.6 +0.3
HVAR Sg Sn 01 26 37.7 +0.2
CEME Cevo 0.99 95⇓ *i*Pg Pb 01 26 22.5 -1.8
CEME *i* Sg Sn 01 26 37.6 0.0
NKME Niksic 1.02 82⇑ *i*Pg Pn 01 26 22.5 -2.2
NKME *i* Sg Sn 01 26 38.4 +0.1
BUM Brajici-Budva 1.03 108⇓ *i*Pg Pn 01 26 23.5 -1.3
BUM *i* Sg Sn 01 26 39.1 +0.6
UPM Unac-Piva 1.13 59⇓ *i*Pg Pn 01 26 23.8 -2.5
UPM *i* Sg Sn 01 26 42.0 +0.8
PDG Podgorica 1.26 99 P Pn 01 26 27.5 -0.4
PDG Podgorica 1.26 99⇑ P Pn 01 26 28.1 +0.3
PDG Podgorica 1.26 99⇑ *i*Pg Pn 01 26 27.3 -0.5
PDG *i* Sg Sb 01 26 46.5 +2.1
TTG Podgorica 1.26 99 P Pn 01 26 27.8 0.0
TTG S Sb 01 26 46.0 +1.6
DRME Dracevica, Mon 1.27 110⇓ *i*Pg Pn 01 26 27.9 -0.2
DRME *i* Sg Sb 01 26 47.2 +2.3
ULC Ulcinj 1.41 118 P Pb 01 26 31.2 -0.1
ULC S Sb 01 26 52.0 +3.2
ULC Ulcinj 1.41 118⇑ *i*Pg Pb 01 26 31.1 -0.2
ULC *i* Sg Sb 01 26 52.0 +3.2
KOME Kolasin 1.44 81⇓ *i*Pg Pn 01 26 30.8 +0.3
KOME *i* Sg Sb 01 26 52.7 +2.8
PLE Pljevlja 1.50 62 P Pn 01 26 30.6 -0.7
PLE S Sb 01 26 52.0 +0.4
PLE Pljevlja 1.50 62⇑ *i*Pg Pn 01 26 31.1 -0.2
PLE *i* Sg Sb 01 26 54.1 +2.5
KUV Kijevo 1.62 328 *i* Pn Pb 01 26 35.2 +0.4
KUV Sn Sb 01 26 57.6 +2.7
SGRT San Giovanni R 1.62 238 Pb 01 26 34.3 -0.7
RUDO Rudo 1.64 53⇑ *i*Pn Pn 01 26 33.4 +0.2
RUDO *e*Sn Sb 01 26 54.6 -0.9
RUDO Rudo 1.64 53 *e*Pg Pn 01 26 33.7 +0.5
RUDO *e*Sg Sn 01 26 54.1 +0.6
RUDO *e*Sg Sb 01 26 54.9 -0.6
IVA Berane 1.72 81⇓ *i*Pn Pb 01 26 35.6 -1.1
IVA *i* Sn Sb 01 26 59.4 +1.5
ZIRJ Zirje 1.75 306 *e*Pn Pb 01 26 36.5 -0.6
ZIRJ Sn Sb 01 27 00.2 +1.7
PVY Plav 1.76 90⇑ *i*Pn Pb 01 26 36.4 -0.9
PVY *i* Sn Sb 01 27 00.4 +1.4
BBLS Lazi&#263i 1.82 47 *e*Pg Pb 01 26 37.3 -1.0
BBLS *e*Sg Sb 01 27 00.8 +0.1
MORI Morici 1.84 313 *i* Pn Pb 01 26 38.3 -0.4
MORI Sn Sb 01 27 03.2 +2.0
SJES Sjenica 1.87 70 *e*Pg Pb 01 26 38.6 -0.6
SJES *e*Sg Sb 01 27 03.3 +1.2
MATE Matera 2.09 199 ⇑P Pn 01 26 40.9 +1.7
IVAS Ivanjica 2.11 63 *e*Pn Pn 01 26 41.1 +1.5
IVAS *e*Sn Sn 01 27 07.0 +1.9
BLY Banja Luka 2.13 352⇑ *i*Pn Pb 01 26 42.2 -1.5
BLY *e*Sn Sb 01 27 08.7 -1.0
BLY Banja Luka 2.13 352 *e*Pn Pb 01 26 42.4 -1.3
BLY *e*Sn Sb 01 27 08.5 -1.2
SLATY Slatina 2.20 355 *e*Pn Pn 01 26 42.2 +1.3
SLATY *e*Sn Sb 01 27 10.4 -1.3
ACER Acerenza 2.21 214 Pb 01 26 43.7 -1.4
DUGI Dugi Otok 2.29 307 *e*Pn Pb 01 26 44.7 -1.6
DUGI Sn Sb 01 27 13.7 -0.4
DIVS Divibare 2.29 49 *e*Pn Pn 01 26 43.1 +1.0
DIVS *e*Sn Sn 01 27 10.4 +0.7
UDBI Udbina 2.31 326 *e*Pg Pb 01 26 48.9 +2.2
UDBI Sg Pb 01 27 10.5 +4.7
TEKS Tekeris 2.38 36 *e*Pn Pn 01 26 43.7 +0.3
TEKS *e*Sn Sn 01 27 13.6 +1.7
VIRC Vir 2.48 313 *i* Pn Pn 01 26 47.1 +2.5
VIRC Sn Sb 01 27 18.9 -0.6
GOCS Kraljevo Serbi 2.58 68 *e*Pn Pn 01 26 47.2 +1.0
GOCS *e*Sn Sn 01 27 19.7 +2.7
GRUS Gruza 2.61 60 *e*Pn Pn 01 26 47.4 +0.9
GRUS *e*Sn Sn 01 27 19.5 +2.0
PLIT Plitvice 2.65 328 *e*Pn Pb 01 26 51.3 -1.3
NVLJ Novalja 2.75 315 *e*Pn Pn 01 26 50.9 +2.4
NVLJ Sn Sb 01 27 25.3 -2.2
PAOL Paolisi 2.76 236 Pb 01 26 51.5 -2.9
INTR Introdacqua 2.79 258 Pn 01 26 51.7 +2.6
OHR Ohrid 2.84 121 *i* Pn Pn 01 26 52.5 +2.7
RABC Rab 2.93 317 *i* Pn Pn 01 26 53.8 +3.0
RABC Sn Sb 01 27 29.9 -2.7
SKO Skopje 2.94 102 *i* Pn Pb 01 26 54.3 -3.1
CUC Castrocucco 2.95 207 Pn 01 26 53.7 +2.5
AVAS Avala Beograd 2.96 45 *e*Pn Pn 01 26 51.7 +0.3
AVAS *e*Sn Sn 01 27 26.1 -0.1
FRGS Fruska Gora 3.00 32 *e*Pn Pn 01 26 51.6 -0.2
FRGS *e*Sn Sn 01 27 28.4 +1.4
BEO Beograd 3.02 43 P Pn 01 26 52.0 -0.1
MOSL Moslavina 3.04 349 *e*Pn Pn 01 26 54.9 +2.5
MOSL Sn Sn 01 27 31.6 +3.6
CAMP Campotosto 3.08 270 Pn 01 26 55.2 +2.2
AQU L'Aquila 3.10 266⇑ *i*Pn Pn 01 26 56.0 +2.7
AQU *e*Sn Sb 01 27 34.4 -3.2
AQU L'Aquila 3.10 266 P Pn 01 26 55.9 +2.7
BARS Barje 3.13 85 *e*Pn Pn 01 26 55.0 +1.4
BARS *e*Sn Sn 01 27 33.3 +3.1
BOVS Bovan 3.18 70 ⇑P Pn 01 26 55.4 +1.1
BOVS Bovan 3.18 70 *e*Pn Pn 01 26 55.4 +1.1
BOVS *e*Sn Sn 01 27 34.2 +2.7
NRCA Norcia 3.29 275 Pn 01 26 58.7 +2.7
BOJS Bojanci 3.32 330 *i* Pn Pn 01 26 58.8 +2.5
FDMO Fiordimonte 3.33 278 Pn 01 26 58.7 +2.3
OZLJ Ozalj 3.35 334 *e*Pg Pb 01 27 05.5 +1.2
OZLJ Sn Sn 01 27 39.5 +3.9
KEK Kerkira 3.37 149 Pb 01 27 03.1 -1.6
ZAG Zagreb 3.39 341 *e*Pn Pn 01 27 00.2 +3.0
ZAG Sn Sn 01 27 41.1 +4.5
ZAG Zagreb 3.39 341 P Pb 01 27 01.3 -3.8
KUBS Kucevo 3.47 58 *e*Pn Pn 01 26 57.4 -0.9
KUBS *e*Sn Sn 01 27 38.3 -0.3
PTJ Puntijarka 3.47 341 *i* Pn Pn 01 27 01.5 +3.1
PTJ Sn Sn 01 27 42.7 +3.9
PTJ Puntijarka 3.47 341 P Pn 01 27 01.3 +2.9
RIY Rijeka 3.50 321 *e*Pn Pn 01 27 01.2 +2.5
RIY *e*Sn Sn 01 27 41.6 +2.3
GBRS Gornja Briga 3.52 326 *i* Pn Pn 01 27 01.7 +2.7
BORS2 Bor- Borsko je 3.55 64 *e*Pn Pn 01 26 59.2 -0.2
BORS2 *e*Sn Sn 01 27 40.5 -0.1
BRJN Brijuni 3.58 311 *i* Pn Pn 01 27 01.8 +2.0
BRJN Sn Sn 01 27 44.8 +3.4
KALN Kalnik 3.59 347 *i* Pn Pn 01 27 02.6 +2.7
KALN Sn Sn 01 27 44.8 +3.1
ZAGS Zajecar 3.60 69 *e*Pn Pn 01 27 01.1 +1.0
ZAGS *e*Sn Sn 01 27 42.1 +0.3
BOSS Bosilegrad 3.62 91 *e*Pn Pn 01 27 01.6 +1.2
BOSS *e*Sn Sn 01 27 44.4 +1.9
MORH Mrgy, Hungar 3.66 12⇑ *i*Pn Pn 01 27 01.4 +0.5
MORH *e*Sn Sn 01 27 44.4 +1.1
MORH Mrgy, Hungar 3.66 12 ⇑P Pn 01 27 01.9 +1.0
VRSS Vrsac 3.68 46 *e*Pn Pn 01 27 01.5 +0.3
VRSS *e*Sn Sn 01 27 43.6 -0.2
LOBO Lobor 3.68 343 *i* Pn Pn 01 27 03.1 +1.8
LOBO Sn Sn 01 27 46.6 +2.7
MDVR Moldovita 3.69 53 ⇑P Pn 01 27 02.1 +0.8
CESX Cesi 3.69 271 Pn 01 27 04.5 +3.1
TRAN Tran 3.74 85 P Pn 01 27 06.4 +4.3
BANR Banloc 3.76 42 ⇑P Pn 01 27 03.1 +0.9
MURB Monte Urbino 3.76 281 Pn 01 27 05.1 +2.7
ZAPS Zavoj 3.77 79 *e*Pn Pn 01 27 03.9 +1.5

ZAPS *e*Sn Sn 01 27 48.1 +2.1
BLKB Belogradchik 3.86 73 ⇓P Pn 01 27 05.1 +1.4
BEHE Becsehely 3.88 352 Pn 01 27 05.8 +1.9
BEHE Becsehely 3.88 352 *e*Pn Pn 01 27 06.0 +2.1
BEHE *e*Sn Sn 01 27 50.7 +2.0
VAY Valandovo 3.94 108 *i* Pn Pn 01 27 06.5 +1.7
GBAS Gorenja Brezov 4.00 327 *i* Pn Pn 01 27 08.0 +2.5
GBAS *i* Sn Sn 01 27 55.9 +4.2
PEHC Pehcevo 4.04 100 *i* Pn Pn 01 27 08.2 +2.0
DJES Djerdap 4.12 59 ⇑P Pn 01 27 09.1 +1.9
DJES Djerdap 4.12 59 *e*Pn Pn 01 27 09.0 +1.7
DJES *e*Sn Sn 01 27 55.1 +0.4
TRI Trieste 4.12 320 Pn 01 27 08.5 +1.3
TRI Trieste 4.12 320 P Pn 01 27 08.5 +1.3
HERR Herculane 4.16 56 ⇓P Pn 01 27 08.7 +0.9
BZS Buzias 4.16 43 P Pn 01 27 08.2 +0.4
VTS Vitosha 4.17 88 P Pn 01 27 10.0 +1.9
KKB Krupnik 4.20 99 P Pn 01 27 10.8 +2.5
BLSH Balsha 4.20 85 P Pb 01 27 22.8 +3.8
PUNG Punghina 4.23 65 ⇑P Pn 01 27 11.0 +2.3
PLNA Plana 4.32 90 P Pb 01 27 24.4 +3.4
PERS Pernice 4.37 337 *i* Pn Pn 01 27 12.5 +1.8
SABO M.te Sabotino 4.40 321 Pn 01 27 12.6 +1.5
VALD Valchedram 4.41 74 P Pn 01 27 13.5 +2.3
SOKA Soboth 4.43 337 Pn 01 27 13.3 +1.7
SOKA Sn 01 28 06.4 +3.9
SOKA Soboth 4.43 337 *i* Pn Pn 01 27 13.3 +1.7
5.6nm,0.4s,SNR=31
SOKA Sn Sn 01 28 06.4 +3.9
64nm,0.7s
OBKA Obir 4.44 332 Pn 01 27 14.9 +3.2
OBKA Obir 4.44 332 *e*Pg Pn 01 27 14.9 +3.2
3.5nm,0.2s
OBKA Obir 4.44 332 *e*Pn Pn 01 27 15.2 +3.5
LIT Litokhoron 4.48 123 Pn 01 27 14.1 +1.9
LIT Litokhoron 4.48 123 P Pn 01 27 14.1 +1.9
CEL Celeste 4.55 197 Pn 01 27 14.9 +1.6
SRE Strehaia 4.56 62 ⇑P Pn 01 27 16.0 +2.7
SRE Strehaia 4.56 62 P Pn 01 27 15.9 +2.7
MPEP Malo Peshtene 4.58 79 P Pb 01 27 28.3 +3.0
GZR Gura Zlata 4.65 52 ⇑P Pn 01 27 15.5 +0.9
GZR Gura Zlata 4.65 52 P Pn 01 27 15.5 +0.9
SIRR Siria 4.66 37 ⇑P Pn 01 27 14.8 +0.1
ARSA Arzberg 4.84 343 Pn 01 27 19.1 +1.9
ARSA Arzberg 4.84 343 Sn 01 28 13.9 +1.4
ARSA Arzberg 4.84 343 *e*Pn Pn 01 27 19.1 +1.9
1.5nm,0.3s,SNR=22
ARSA *e*Sn Sn 01 28 13.9 +1.4
31nm,0.5s
ARSA Arzberg 4.84 343 *e*Pn Pn 01 27 19.2 +2.0
PGB Panagyurishte 4.87 89 P Pn 01 27 20.2 +2.6
MYKA Terra Mystica 4.88 326 Pn 01 27 20.0 +2.2
MYKA Sn 01 28 17.8 +4.2
MYKA Terra Mystica 4.88 326 *e*Pn Pn 01 27 20.0 +2.2
6.8nm,0.4s
MYKA *e*Sn Sn 01 28 17.8 +4.2
22nm,0.3s
BUD Budapest 4.96 11 P Pn 01 27 18.4 -0.3
DEV Deva 5.02 48 ⇑P Pn 01 27 20.7 +1.2
DEV Deva 5.02 48 P Pn 01 27 20.7 +1.2
BSZH Besenyszg 5.04 21 ⇑P Pn 01 27 21.0 +1.2
SOP Sopron 5.10 352 P Pn 01 27 23.1 +2.4
SOP pmax pmax
comp=Z,37nm,0.8s
RONA Rosalia, Austr 5.15 350 Pn 01 27 23.2 +1.8
RONA Sn 01 28 21.3 +1.3
RONA Rosalia, Austr 5.15 350 *i* Pn Pn 01 27 23.2 +1.8
comp=Z,0.8nm,0.1s,SNR=11
RONA *i* Sn Sn 01 28 21.3 +1.3
comp=Z,29nm,0.5s
SRO Srobarova 5.21 5 *e*P Pn 01 27 25.0 +2.9
SRO *e* 01 28 25.6
SRO Srobarova 5.21 5 *e*PN Pn 01 27 25.0 +2.9
SRO *e*SN Sn 01 28 25.6 +4.2
PII Pisa 5.27 284 P Pn 01 27 25.7 +2.7
LOT Lotru 5.28 56 ⇑P Pn 01 27 25.8 +2.6
KBA Koelnbreinsper 5.37 327 Pn 01 27 26.7 +2.2
KBA Sn 01 28 27.6 +1.9
KBA Koelnbreinsper 5.37 327 *i* Pn Pn 01 27 26.7 +2.2
comp=Z,1.9nm,0.4s
KBA *e*Sn Sn 01 28 27.6 +1.9
comp=Z,24nm,0.4s
KBA Koelnbreinsper 5.37 327 P Pn 01 27 27.3 +2.8
KBA pmax pmax
comp=Z,63nm,0.7s
KBA Koelnbreinsper 5.37 327 *e*Pn Pn 01 27 27.3 +2.8
KBA *e*Sn Sn 01 28 28.0 +2.3
RZN Rozhen 5.40 98 P Pn 01 27 27.6 +2.6
CONA Conrad Observa 5.43 348 *i* Pn Pn 01 27 27.8 +2.5
comp=Z,0.6nm,0.3s
CONA *e*Sn Sn 01 28 28.3 +1.2
comp=Z,20nm,0.5s
ABTA Abfaltersbach 5.47 320 Pn 01 27 27.4 +1.6
ABTA Sn 01 28 30.3 +2.2
ABTA Abfaltersbach 5.47 320 *i* Pn Pn 01 27 27.4 +1.6
comp=Z,0.5nm,0.1s
ABTA *e*Sn Sn 01 28 30.3 +2.2
comp=Z,105nm,0.7s
PSZ Piszkesteto 5.53 16 Pn 01 27 27.4 +0.8
PSZ Piszkesteto 5.53 16 ⇑P Pn 01 27 27.7 +1.0
PSZ Piszkesteto 5.53 16 P Pn 01 27 27.7 +1.0
DRGR 5.54 40 *e*P Pn 01 27 25.5 +0.8
DRGR 5.54 40 P Pn 01 27 27.5 +0.8
ZST Bratislava 5.57 357 *e*P Pn 01 27 29.9 +2.7
ZST *e* 01 28 29.8
ZST Bratislava 5.57 357 *e*PN Pn 01 27 29.9 +2.7
ZST *e*SN Sn 01 28 29.8 -0.6
PVL Pavlikeni 5.60 82 P Pn 01 27 29.6 +2.0
MARR Marisel-Cluj 5.65 42 ⇑P Pn 01 27 29.8 +1.5
TNR Turnu Rosu 5.68 56 ⇑P Pn 01 27 30.1 +1.4
TNR Turnu Rosu 5.68 56 P Pn 01 27 30.1 +1.4
VAE Valguarnera 5.69 206 P Pn 01 27 35.8 +6.9
comp=Z,10nm,0.8s,baz=42,slow=17,SNR=2.3
VAE S Sn 01 28 36.5 +3.0
comp=Z,19nm,0.5s,baz=54,slow=15,SNR=2.1
HUMR Humele 5.70 68 ⇑P Pn 01 27 31.5 +2.6
MOA Molln 5.72 337 Pn 01 27 31.7 +2.5
MOA Sn 01 28 40.1 +6.1
MOA Molln 5.72 337 *i* Pn Pn 01 27 31.7 +2.5
comp=Z,2.3nm,0.4s,SNR=16
MOA *e*Sn Sn 01 28 40.1 +6.1
comp=Z,40nm,0.6s
MOA Molln 5.72 337 *e*Pn Pn 01 27 32.1 +2.9
MOA *e*Sn Sn 01 28 40.1 +6.1
MODS Modra-Piesok 5.75 358 *e*P Pn 01 27 31.6 +2.1
MODS *e* 01 28 33.0
MODS Modra-Piesok 5.75 358 *e*PN Pn 01 27 31.6 +2.1
MODS *e*SN Sn 01 28 33.0 -1.7
COPA Copaceanca 5.76 72 ⇑P Pn 01 27 31.8 +2.0
BIOA Bad Ischl, Aus 5.77 333 Pn 01 27 32.0 +2.0
BIOA Sn 01 28 39.1 +3.6
BIOA Bad Ischl, Aus 5.77 333 *i* Pn Pn 01 27 32.0 +2.0
comp=Z,9.9nm,0.2s,SNR=33
BIOA *e*Sn Sn 01 28 39.1 +3.6
comp=Z,31nm,0.5s
ARR Arges 5.78 59 ⇑P Pn 01 27 32.7 +2.7
LESA Schwarzleotal 5.92 326 Pn 01 27 33.9 +1.9
LESA Sn 01 28 42.9 +3.9
LESA Schwarzleotal 5.92 326 *e*Pn Pn 01 27 33.9 +1.9
comp=Z,2.1nm,0.3s,SNR=23
LESA *e*Sn Sn 01 28 42.9 +3.9
comp=Z,58nm,0.5s
CJR Cluj-Napoca 5.92 44 ⇑P Pn 01 27 33.5 +1.4
CJR Cluj-Napoca 5.92 44 P Pn 01 27 33.4 +1.4
MDB Medias 6.00 52 ⇑P Pn 01 27 34.8 +1.7
MDB Medias 6.00 52 P Pn 01 27 34.8 +1.7
VOIR 6.07 60 ⇑P Pn 01 27 35.9 +1.8
VOIR 6.07 60 P Pn 01 27 35.9 +1.8
ELND Elena 6.11 84 ⇑P Pn 01 27 36.7 +2.1
RJOB Jochberg 6.12 328 *e*Pn Pn 01 27 38.7 +3.9
RJOB *e*Sn Sn 01 28 45.1 +1.1
RDO Rodhopi 6.12 101 Pn 01 27 37.3 +2.5
KECS Kecovo 6.20 18 *e*P Pn 01 27 37.2 +1.5
KECS *e* 01 28 47.0
KECS Kecovo 6.20 18 *e*PN Pn 01 27 37.2 +1.5
KECS *e*SN Sn 01 28 47.0 +1.2
SZH Strazhitsa 6.20 81 P Pn 01 27 38.8 +3.1
JAVC Velka Javorina 6.23 1 *e*Pn Pn 01 27 39.5 +3.3
WTTA Wattenberg 6.26 320 Pn 01 27 39.7 +2.9
WTTA Sn 01 28 49.9 +2.3
WTTA Wattenberg 6.26 320 *e*Pn Pn 01 27 39.7 +2.9
comp=Z,3.7nm,0.3s,SNR=8.6

WTTA *e*Sn Sn 01 28 49.9 +2.3
comp=Z,74nm,0.4s
WTTA Wattenberg 6.26 320 P Pn 01 27 41.2 +4.4
WTTA pmax pmax
comp=Z,35nm,0.6s
WTTA Wattenberg 6.26 320 *e*Pn Pn 01 27 39.7 +2.9
WTTA *e*Sn Sn 01 28 50.0 +2.3
BOB Bobbio (Coli) 6.27 293 P Pn 01 27 42.1 +5.3
PGF Pioggiola 6.33 272 *e*Pn Pn 01 27 40.1 +2.3
PGF *e*Sn Sn 01 28 47.8 -1.6
comp=Z,7.6nm,0.4s
PGF Pioggiola 6.33 272 P Pn 01 27 40.0 +2.3
WATA Walderalm 6.34 320 Pn 01 27 40.7 +2.8
WATA Sn 01 28 52.0 +2.4
WATA Walderalm 6.34 320 *e*Pn Pn 01 27 40.7 +2.8
comp=Z,3.3nm,0.2s,SNR=8.9
WATA *e*Sn Sn 01 28 52.0 +2.4
comp=Z,43nm,0.5s
SQTA Sankt Quirin 6.44 318 Pn 01 27 42.5 +3.4
SQTA Sn 01 28 54.7 +2.7
SQTA Sankt Quirin 6.44 318 *i* Pn Pn 01 27 42.5 +3.4
comp=Z,2.8nm,0.2s,SNR=6.9
SQTA *e*Sn Sn 01 28 54.7 +2.7
comp=Z,40nm,0.4s
KRUC Moravsky 6.48 353 *e*PN Pn 01 27 41.4 +1.7
KRUC *e*SN Sn 01 28 51.1 -1.7
KRUC Moravsky 6.48 353 P Pn 01 27 43.9 +4.2
KRUC pmax pmax
comp=Z,14nm,1.0s
KW1 Garching a.d. 6.51 329 *e*Pn Pn 01 27 43.8 +3.7
KW1 *e*Sn Sn 01 28 55.0 +1.4
DOPR Dopca 6.52 57 ⇓P Pn 01 27 42.0 +1.8
BMR Baia Mare 6.55 38 P Pn 01 27 45.9 +5.3
BMR pmax pmax
comp=Z,36nm,0.7s
FETA Feichten 6.55 314 Pn 01 27 43.3 +2.5
FETA Feichten 6.55 314 *i* Pn Pn 01 27 43.3 +2.5
comp=Z,0.8nm,0.3s
MOTA Moosalm 6.58 318 Pn 01 27 43.4 +2.3
MOTA Sn 01 28 58.2 +2.8
MOTA Moosalm 6.58 318 *i* Pn Pn 01 27 43.4 +2.3
comp=Z,5.1nm,0.3s,SNR=7.4
MOTA *e*Sn Sn 01 28 58.2 +2.8
comp=Z,98nm,0.6s
CKRC Cesky Krumlov 6.60 341 *e*P Pn 01 27 43.3 +2.1
CKRC *e* 01 28 56.0
CKRC Cesky Krumlov 6.60 341 *e*PN Pn 01 27 43.3 +2.1
CKRC *e*SN Sn 01 28 56.0 +0.3
RAZG Razgrad 6.60 79 ⇑P Pn 01 27 42.9 +1.5
LANS Liptovska Anna 6.65 11 *e*P Pn 01 27 45.4 +3.4
LANS *e* 01 29 01.4
LANS Liptovska Anna 6.65 11 *e*PN Pn 01 27 45.4 +3.4
LANS *e*SN Sn 01 29 01.4 +4.4
LOZB Loznitsa 6.65 81 ⇑P Pn 01 27 44.5 +2.5
MLR Muntele Rosu 6.67 62 Pn 01 27 45.3 +2.9
MLR Muntele Rosu 6.67 62 P Pn 01 27 45.1 +2.7
comp=Z,22nm,1.0s,baz=265,slow=8.0
MLR S Sn 01 28 57.7 0.0
comp=Z,12nm,0.8s,baz=300,slow=20,SNR=3.4
MLR Muntele Rosu 6.67 62 P Pn 01 27 45.3 +2.9
PART Garmisch-Parte 6.68 319 *e*Pn Pn 01 27 46.4 +4.0
PART *e*Sn Sn 01 28 59.8 +2.1
ZUGS Zugspitze, Sch 6.69 318 *e*Pn Pn 01 27 45.4 +2.6
ZUGS *e*Sn Sn 01 29 01.5 +3.2
VRAC Vranov 6.71 354 P Pn 01 27 45.6 +2.8
comp=Z,2.5nm,0.4s,baz=187,slow=15,SNR=5.1
VRAC S Sn 01 28 56.6 -1.9
comp=Z,7.7nm,0.5s,baz=133,slow=19,SNR=1.9
VRAC LR LR 01 29 57.2
comp=Z,129nm,21.4s,baz=274,slow=35
VRAC Vranov 6.71 354 *e*PN Pn 01 27 45.0 +2.2
VRAC *e*SN Sn 01 28 56.8 -1.7
MAUC Maruska 6.74 1 *e*PN Pn 01 27 47.0 +3.8
GEC2 GERESS Array S 6.78 338 *e*PN Pn 01 27 46.9 +3.1
GEC2 *e*SN Sn 01 29 02.6 +2.3
GERES GERESS Array B 6.78 338 P Pn 01 27 46.3 +2.5
comp=Z,2.7nm,0.3s,baz=164,slow=12,SNR=25
GERES S Sn 01 29 00.4 +0.2
comp=Z,7.5nm,0.4s,baz=164,slow=25,SNR=3.4
TREC Trest 6.82 348 *e*SN Sn 01 29 01.7 +0.5
OZUR 6.82 57 ⇑P Pn 01 27 47.0 +2.6
PCP Piancastagn 6.83 289 P Pn 01 27 45.9 +1.4
PCP pmax pmax
comp=Z,32nm,1.4s
RETA Reutte 6.84 317 Pn 01 27 47.4 +2.7
RETA Sn 01 29 03.9 +2.1
RETA Reutte 6.84 317 *i* Pn Pn 01 27 47.4 +2.7
comp=Z,9.3nm,0.5s
RETA *e*Sn Sn 01 29 03.9 +2.1
comp=Z,19nm,0.5s
DAVOX Davos/Dischmat 6.88 310 P Pn 01 27 47.9 +2.7
comp=Z,10nm,0.7s,baz=120,slow=16,SNR=23
DAVOX S Sn 01 29 04.4 +1.6
comp=Z,25nm,0.4s,baz=177,slow=19,SNR=5.0
NEHR Nehoiu 6.88 63 ⇓P Pn 01 27 48.0 +2.9
BE1 Monatshausen 6.92 322 *e*Pn Pn 01 27 48.7 +2.9
ISR Istrita 6.94 66 Pn Pn 01 27 49.6 +3.6
comp=Z,0.2nmcomp=Z,58nm,0.9s
TURR Turia 6.95 58 ⇑P Pn 01 27 48.7 +2.6
TUE Stuetta 7.02 306 Pn Pn 01 27 50.7 +3.5
comp=Z,1.2nmcomp=Z,109nm,0.9s
NIE Niedzica 7.04 15 P Pn 01 27 50.4 +3.0
NIE Niedzica 7.04 15 Pn Pn 01 27 50.1 +2.7
comp=Z,0.0nmcomp=Z,9.7nm,0.9s
KHC Kasperske Hory 7.07 338 *e*P Pn 01 27 49.8 +2.0
KHC *e* 01 29 06.4
KHC Kasperske Hory 7.07 338 *e*PN Pn 01 27 49.8 +2.0
KHC *e*SN Sn 01 29 06.4 -1.0
FUR Furstenfeldbru 7.09 323 *e*Sn Sn 01 29 06.2 -1.6
MORC Moravsky Berou 7.14 360 *e*PN Pn 01 27 50.7 +1.9
MORC *e*SN Sn 01 29 08.8 -0.4
MORC Moravsky Berou 7.14 360 P Pn 01 27 51.3 +2.5
MORC pmax pmax
comp=Z,15nm,0.9s
DAVA Damuels 7.17 313 Pn 01 27 52.3 +3.1
DAVA Sn 01 29 11.6 +1.6
DAVA Damuels 7.17 313 *i* Pn Pn 01 27 52.3 +3.1
comp=Z,2.4nm,0.3s
DAVA *e*Sn Sn 01 29 11.6 +1.6
comp=Z,33nm,0.6s
DAVA Damuels 7.17 313 *e*Pn Pn 01 27 52.8 +3.5
DAVA *e*Sn Sn 01 29 11.4 +1.4
BISRR Bisoca 7.19 63 Pn Pn 01 27 53.9 +4.5
comp=Z,0.5nmcomp=Z,61nm,0.8s
ZVC Zvikov 7.20 342 *e*PN Pn 01 27 53.2 +3.7
ZVC *e*SN Sn 01 29 10.2 -0.4
MEZ Mezhgor'ye 7.20 33 Pn Pn 01 27 54.3 +4.7
OKC Ostrava-Krasne 7.22 3 P Pn 01 27 53.7 +4.0
OKC Ostrava-Krasne 7.22 3 *e*SN Sn 01 29 11.5 +0.6
STHS Stebnicka Huta 7.25 19 *e*P Pn 01 27 53.1 +2.9
STHS *e* 01 29 12.9
STHS Stebnicka Huta 7.25 19 *e*PN Pn 01 27 53.1 +2.9
STHS *e*SN Sn 01 29 12.9 +1.2
PLOR Plostina 7.26 61 ⇑P Pn 01 27 53.2 +2.8
PLOR Plostina 7.26 61 P Pn 01 27 53.2 +2.8
PLOR5 Plostina Array 7.27 61 Pn Pn 01 27 54.9 +4.4
comp=Z,0.1nmcomp=Z,21nm,1.0s
WET Wettzell 7.29 335 P Pn 01 27 52.3 +1.5
WET pmax pmax
comp=Z,15nm,0.6s
WET Wettzell 7.29 335 *e*Pn Pn 01 27 52.9 +2.2
WET *e*Sn Sn 01 29 13.9 +1.2
UBR Ueberruh 7.30 316 *e*Pn Pn 01 27 52.5 +1.5
STEB Steborice 7.30 1 *e*PN Pn 01 27 53.8 +2.9
ONER Baraj Valea Uz 7.31 57 ⇑P Pn 01 27 53.5 +2.5
PLONS Plons/SG 7.31 310 *e*Pn Pn 01 27 54.1 +3.0
PLONS *e*Sn Sn 01 29 14.2 +0.9
VRI Vrincioaia 7.32 61 Pn Pn 01 27 54.9 +3.7
comp=Z,0.1nmcomp=Z,18nm,1.0s
BURAR Bucovina Array 7.35 45 Pn 01 27 53.2 +1.6
BURAR Bucovina Array 7.35 45 ⇑P Pn 01 27 53.5 +1.9
BURAR Bucovina Array 7.35 45 P Pn 01 27 53.5 +1.9
BUR08 Bucovina Ar. S 7.36 44 Pn 01 27 53.6 +1.9
SAOF Saorge 7.44 284 P Pn 01 27 55.1 +2.3
SAOF pmax pmax
comp=Z,21nm,0.7s
KRLC Kraliky 7.46 356 *e*P Pn 01 27 56.4 +3.2
KRLC Kraliky 7.46 356 *e*PN Pn 01 27 56.4 +3.2
SBF Sospel 7.51 283 *e*Pn Pn 01 27 54.9 +1.1
SBF *e*Sn Sn 01 29 15.8 -2.4
comp=Z,87nm,0.8s
SBF Sospel 7.51 283 P Pn 01 27 54.8 +1.0
TESR Tescani 7.55 56 ⇓P Pn 01 27 56.2 +1.9

ICOR	Ion Corvin	7.59	75	⇑P		Pn		01 27 56.4	+1.4
GRC1	Grafenberg Arr	7.64	328	P		Pn		01 27 58.1	+2.6
GRC1				pmax		pmax			
	comp=Z,17nm,0.6s								
PRU	Pruhonice	7.65	345	*e*P		Pn		01 27 59.5	+3.8
PRU	Pruhonice	7.65	345	*e*PN		Pn		01 27 59.5	+3.8
MMK	Mattmark	7.69	300	P		Pn		01 27 57.3	+0.8
MMK				pmax		pmax			
	comp=Z,3.0nm,0.8s								
SHIU	Shidnytsya	7.72	29	Pn		Pn		01 28 01.6	+4.9
KSV	Kosov	7.74	40	Pn		Pn		01 28 00.8	+3.9
OJC	Ojcow	7.74	11	P		Pn		01 28 00.7	+3.8
OJC				pmax		pmax			
	comp=Z,9.0nm,0.8s								
OJC	Ojcow	7.74	11	Pn		Pn		01 28 00.1	+3.2
	comp=Z,0.1nmcomp=Z,8.8nm,0.8s								
DPC	Dobruska-Polom	7.77	354	*e*P		Pn		01 28 01.2	+3.9
DPC	Dobruska-Polom	7.77	354	*e*PN		Pn		01 28 01.2	+3.9
NORI	Noerdlinger Ri	7.79	324	*e*Pn		Pn		01 28 00.2	+2.5
NORI				*e*Sn		Sn		01 29 21.5	-3.6
PZZ	Stroppo	7.83	287	P		Pn		01 28 00.3	+2.1
PZZ				pmax		pmax			
	comp=Z,27nm,0.9s								
TLBR	Topalu	7.84	72	⇓P		Pn		01 28 00.8	+2.5
MORS	Moshin	7.85	32	Pn		Pn		01 28 03.1	+4.7
KWP	Kalwaria Pacla	7.85	25	P		Pn		01 28 03.4	+5.0
KWP	Kalwaria Pacla	7.85	25	Pn		Pn		01 28 01.9	+3.5
	comp=Z,0.1nmcomp=Z,19nm,0.8s								
RSP	Reno Superiore	7.86	292	P		Pn		01 27 58.1	-0.6
WALHA	Wallhausen, DE	7.86	314	*e*Pn		Pn		01 28 00.9	+2.3
OSTC	Ostas	7.98	354	*e*P		Pn		01 28 04.8	+4.6
OSTC	Ostas	7.98	354	*e*PN		Pn		01 28 04.8	+4.6
ROTZ	Rotzenmuhle	8.05	334	*e*Pn		Pn		01 28 03.6	+2.5
DIX	Grande Dixence	8.06	299	P		Pn		01 28 06.4	+4.8
TIRR	Tirgusor	8.08	73	⇓P		Pn		01 28 04.1	+2.5
TIRR	Tirgusor	8.08	73	P		Pn		01 28 04.0	+2.5
EMING	Emmingen-Lipti	8.10	313	*e*Pn		Pn		01 28 03.7	+1.8
EMING				*e*Sn		Sn		01 29 28.4	-4.2
MBDF	Montbardon	8.11	289	*e*Pn		Pn		01 28 02.9	+0.8
MBDF				*e*Sn		Sn		01 29 28.9	-4.2
	comp=Z,32nm,0.5s								
RRL	Rocca Remolon	8.13	290	P		Pn		01 28 03.4	+0.8
LMR	La Mourre	8.15	279	*e*Pn		Pn		01 28 03.8	+1.3
LMR	La Mourre	8.15	279	P		Pn		01 28 03.8	+1.3
TPGR	Topolog	8.16	71	⇓P		Pn		01 28 04.5	+1.8
SLE	Schleitheim	8.21	312	*e*Pn		Pn		01 28 05.8	+2.3
BNI	Bardonecchia	8.24	291			Pn		01 28 04.4	+0.5
BNI	Bardonecchia	8.24	291	P		Pn		01 28 04.4	+0.5
APE	Apeiranthos	8.26	130	*i* P		Pn		01 28 05.9	+1.8
MANZ	Manzenberg	8.27	335	*e*Pn		Pn		01 28 05.8	+1.6
LPG	La Plagne	8.31	294	*e*Pn		Pn		01 28 05.1	+0.2
LPG				*e*Sn		Sn		01 29 33.4	-4.7
	comp=Z,118nm,0.9s								
LPG	La Plagne	8.31	294	P		Pn		01 28 04.2	-0.7
METMA	Mettma DE	8.31	311	*e*Pn		Pn		01 28 07.5	+2.6
METMA				*e*Sn		Sn		01 29 33.9	-4.1
LPL	La Plagne	8.32	294	*e*Pn		Pn		01 28 05.1	0.0
LPL				*e*Sn		Sn		01 29 34.2	-4.3
	comp=Z,31nm,0.4s								
LPL	La Plagne	8.32	294	P		Pn		01 28 05.3	+0.2
RSL	Roselend	8.45	295	P		Pn		01 28 10.3	+3.6
BERGE	Lenzkirch (DE)	8.45	312	*e*Pn		Pn		01 28 08.2	+1.5
STU	Stuttgart	8.49	319	P		Pn		01 28 09.1	+1.9
STU				pmax		pmax			
	comp=Z,24nm,0.7s								
KMPD	K-Podol'skiy	8.59	43	Pn		Pn		01 28 12.8	+4.2
KMPD				Pn		Pn		01 28 12.2	+3.6
BFO	Black Forest	8.64	314			Pn		01 28 09.6	+0.3
BFO	Black Forest	8.64	314	P		Pn		01 28 09.6	+0.3
ORIF	Oris-en-Rattie	8.77	289	*e*Pn		Pn		01 28 12.9	+1.8
ORIF				*e*Sn		Sn		01 29 46.4	-2.8
	comp=Z,19nm,0.4s								
ORIF	Oris-en-Rattie	8.77	289	P		Pn		01 28 12.2	+1.1
SMRF	Simiane la Rot	8.86	283	*e*Pn		Pn		01 28 13.9	+1.6
SMRF				*e*Sn		Sn		01 29 50.9	-0.4
	comp=Z,15nm,0.9s								
MOX	Moxa	9.00	335	P		Pn		01 28 18.7	+4.5
MOX				pmax		pmax			
	comp=Z,19nm,0.7s								
HORU	Horodok	9.01	40	Pn		Pn		01 28 19.7	+5.3
CABF	La Chapelle	9.11	300	*e*Pn		Pn		01 28 16.6	+0.9
CABF				*e*Sn		Sn		01 29 54.3	-3.2
	comp=Z,9.7nm,0.3s								
CABF	La Chapelle	9.11	300	P		Pn		01 28 15.7	0.0
HINF	Hinteralfeld	9.17	308	*e*Pn		Pn		01 28 17.9	+1.3
HINF				*e*Sn		Sn		01 29 56.1	-2.9
	comp=Z,11nm,0.3s								
ECH	Echery	9.21	311	*e*Pn		Pn		01 28 19.4	+2.3
CLL	Collm	9.22	342	*i* P		Pn		01 28 24.8	+7.6
CLL	Collm	9.22	342	*e*AMS		AMS		01 31 07.0	
CLL	Collm	9.22	342	*i* Pn		Pn		01 28 24.8	+7.6
CLL	Collm	9.22	342	*i* (Pg)		Pn		01 29 01.3	+44
CLL	Collm	9.22	342	*e*Sn		Sn		01 30 04.9	+3.9
CLL	Collm	9.22	342	*e*Sb		Sn		01 30 30.0	+30
	comp=Z,32nm,1.2s								
CLL	Collm	9.22	342	*e*Sg		Sn		01 30 57.0	+57
CDF	Champ du Feu	9.25	312	*e*Pn		Pn		01 28 19.1	+1.4
CDF				*e*Sn		Sn		01 29 56.9	-4.2
	comp=Z,5.9nm,0.4s								
CDF				*e*Sn		Sn		01 29 59.6	-1.5
CDF	Champ du Feu	9.25	312	P		Pn		01 28 18.3	+0.6
IDI	Anoyia	9.28	140	P		Pn		01 28 19.5	+1.3
	comp=Z,5.0nm,0.7s,baz=2.2,slow=16,SNR=1.1								
IDI				S		Sn		01 29 57.6	-4.2
	comp=Z,11nm,0.7s,baz=320,slow=16,SNR=5.7								
KEST	Kesra	9.39	226	P		Pn		01 28 26.6	+6.8
	comp=Z,3.5nm,0.6s,baz=18,slow=3.9,SNR=11								
KEST				LR		LR		01 32 40.6	
	comp=Z,172nm,18.1s,baz=262,slow=41								
HAU	Haudompre	9.56	308	*e*Pn		Pn		01 28 23.4	+1.5
HAU				*e*Sn		Sn		01 30 04.2	-4.3
	comp=Z,24nm,0.4s								
HAU	Haudompre	9.56	308	P		Pn		01 28 23.3	+1.4
VIVF	Saint-Julien-l	9.60	288	*e*Pn		Pn		01 28 23.1	+0.6
VIVF				*e*Sn		Sn		01 30 05.6	-4.0
	comp=Z,2.2nm,0.3s								
VIVF	Saint-Julien-l	9.60	288	P		Pn		01 28 22.7	+0.2
LASF	Ste Croix	10.10	283	*e*Pn		Pn		01 28 31.1	+1.8
LASF				*e*Sn		Sn		01 30 18.8	-3.0
	comp=Z,1.0nm,0.3s								
LUBAR	Lubar, Ukraine	10.13	41	Pn		Pn		01 28 33.0	+3.4
PAGF	Fort de Pagny	10.20	310	*e*Pn		Pn		01 28 32.4	+1.8
PAGF				*e*Sn		Sn		01 30 20.5	-3.6
	comp=Z,9.2nm,0.4s								
RNPP5	Staryi Chortor	10.30	31	Pn		Pn		01 28 35.0	+3.1
RNPP8	Varash	10.37	30	Pn		Pn		01 28 37.2	+4.2
SFTF	Sexfontaines	10.42	307	*e*Pn		Pn		01 28 34.6	+0.9
SFTF				*e*Sn		Sn		01 30 26.2	-3.5
	comp=Z,4.4nm,0.3s								
RNPP9	Sopachiv	10.45	30	Pn		Pn		01 28 37.1	+3.1
MEZF	Maizieres J'vi	10.56	308	*e*Pn		Pn		01 28 37.8	+2.3
MEZF				*e*Sn		Sn		01 30 27.5	-5.4
	comp=Z,1.8nm,0.3s								
SAVF	Savonnieres en	10.57	309	*e*Pn		Pn		01 28 38.7	+3.0
SMF	Signal de Mont	10.58	297	*e*Pn		Pn		01 28 35.9	+0.1
SMF				*e*Sn		Sn		01 30 27.0	-6.5
	comp=Z,17nm,0.5s								
LOR	Lormes	10.77	300	*e*Pn		Pn		01 28 39.5	+1.1
LOR				*e*Sn		Sn		01 30 33.5	-4.7
	comp=Z,13nm,0.3s								
LOR	Lormes	10.77	300	P		Pn		01 28 37.7	-0.7
MI28	Mi28,Pidlybu	10.80	36	Pn		Pn		01 28 43.1	+4.4
SSF	Saint Saulge	10.93	299	*e*Pn		Pn		01 28 40.6	0.0
SSF				*e*Sn		Sn		01 30 36.0	-6.0
	comp=Z,12nm,0.4s								
SSF	Saint Saulge	10.93	299	P		Pn		01 28 38.9	-1.7
AVF	Avril sur Loir	10.94	297	*e*Pn		Pn		01 28 41.2	+0.4
AVF				*e*Sn		Sn		01 30 36.5	-5.9
	comp=Z,1.6nm,0.3s								
AVF	Avril sur Loir	10.94	297	P		Pn		01 28 40.9	+0.1
BGF	Bois d'Agland	11.21	296	*e*Pn		Pn		01 28 44.9	+0.4
BGF				*e*Sn		Sn		01 30 43.8	-5.2
	comp=Z,24nm,0.6s								
BGF	Bois d'Agland	11.21	296	P		Pn		01 28 44.4	-0.1
AK17	Malin Array Si	11.26	40	Pn		Pn		01 28 48.5	+3.4
AK06	Malin Array Si	11.27	41	Pn		Pn		01 28 49.1	+3.9
AK20	Malin Array Si	11.28	40	Pn		Pn		01 28 50.1	+4.8
MTLF	Montolieu	11.28	279	*e*Pn		Pn		01 28 47.6	+2.2
MTLF				*e*Sn		Sn		01 30 46.6	-4.1
	comp=Z,3.3nm,0.5s								
AK11	Malin Array Si	11.31	41	Pn		Pn		01 28 49.5	+3.7
AK09	Malin Array Si	11.32	41	Pn		Pn		01 28 49.7	+3.7
AKASG	Malin Array Be	11.35	41	P		Pn		01 28 48.4	+2.0
	comp=Z,0.8nm,0.6s,baz=232,slow=14,SNR=4.7								
AKASG				LR		LR		01 33 27.5	
	comp=Z,172nm,20.2s,baz=334,slow=39								
AKBB	Malin Array Si	11.35	41	*ce*P		Pn		01 28 48.8	+2.5
CAF	Calviac	11.45	287	*e*Pn		Pn		01 28 47.6	-0.2
CAF				*e*Sn		Sn		01 30 49.5	-5.4
	comp=Z,0.7nm,0.2s								
GIVF	Givet	11.54	315	*e*P		Pn		01 28 54.7	+5.8
GIVF				*e*Sn		Sn		01 30 51.8	-5.2
	comp=Z,2.2nm,0.2s								
TCF	Toulx Ste Croi	11.57	294	*e*Pn		Pn		01 28 49.3	-0.2
TCF				*e*Sn		Sn		01 30 52.9	-5.0
	comp=Z,6.0nm,0.3s								
BAIF	Baives	11.84	313	*e*Pn		Pn		01 28 52.6	-0.5
BAIF				*e*Sn		Sn		01 30 57.6	-6.8
	comp=Z,5.2nm,0.6s								
BR106	Keskin Array S	12.43	98	Pn		Pn		01 29 05.1	+3.8
	comp=Z,1.6nm,1.0s								
BR105	Keskin Array S	12.43	98	Pn		Pn		01 29 04.4	+3.1
	comp=Z,2.9nm,1.0s								
BRTR	Keskin Array B	12.45	98	P		Pn		01 29 04.5	+3.0
	comp=Z,1.2nm,0.9s,baz=292,slow=14,SNR=7.1								
BRTR	Keskin Array B	12.45	98	*i* P		Pn		01 29 05.6	+4.1
BRTR				pmax		pmax			
	comp=Z,1.0nm,0.9s								
BR104	Keskin Array S	12.45	98	Pn		Pn		01 29 05.0	+3.4
	comp=Z,1.7nm,1.1s								
MNK	Minsk	13.68	26	*i* P		Pn		01 29 15.2	-2.9
	comp=E,8.0nm,0.7s								
MNK				*i* P		Pn		01 29 15.2	-2.9
	comp=N,4.0nm,0.8s								
MNK				*i* P		Pn		01 29 15.2	-2.9
	comp=Z,5.0nm,0.8s,baz=214								
MNK				*i* PP		PnPn		01 29 23.1	-2.8
MNK				*i* S		Sn		01 31 46.9	-2.3
MNK				*i* SS		S		01 32 25.1	+14
MNK				*i* LQ		LQ		01 32 58.3	
MNK				*i* LR		LR		01 34 31.4	
MNK				*i* LRM		MLR		01 35 25.5	
	comp=N,44nm,12.3s								
MNK				*i* LRM		MLR		01 35 26.8	
	comp=Z,116nm,12.6s								
MNK				*i* LRM		MLR		01 35 31.6	
	comp=E,140nm,12.8s								
MNK	Minsk	13.68	26	*i* P		Pn		01 29 15.1	-2.9
MNK				*i* S		Sn		01 31 46.8	-2.3
MNK				pmax		pmax			
	comp=Z,5.0nm,0.8s								
MNK				pmax		pmax			
	comp=N,4.0nm,0.8s								
MNK				pmax		pmax			
	comp=E,8.0nm,0.7s								
MNK				MLR		MLR			
	comp=N,44nm,12.0s								
MNK				MLR		MLR			
	comp=Z,116nm,13.0s								
MNK				MLR		MLR			
	comp=E,140nm,13.0s								
LDF	La Druitiere	13.74	302	*e*Pn		Pn		01 29 20.2	+1.3
LDF				*e*Sn		Sn		01 31 45.7	-5.0
	comp=E,1.4nm,0.2s								
FLN	La Foliniere	14.02	302	*e*Pn		P		01 29 27.1	-3.4
FLN				*e*Sn		Sn		01 31 50.1	-7.4
	comp=E,1.4nm,0.2s								
GRR	Gorron	14.14	300	*e*Pn		Pn		01 29 24.8	+0.4
GRR				*e*Sn		Sn		01 31 53.8	-6.6
	comp=E,0.7nm,0.2s								
ROSF	Rostrenen	15.68	298	*e*Pn		P		01 29 48.7	-0.2
ROSF				*e*Sn		Sn		01 32 31.0	-6.9
	comp=E,7.0nm,0.3s								
ESDC	Sonseca Array	16.49	267	P		P		01 29 58.4	+0.4
	comp=E,1.3nm,0.9s,baz=68,slow=12,SNR=5.1								
VSU	Vasula	16.85	17	*i* P		P		01 30 01.1	-0.7
VORD	Divnogorie	17.00	53	*e*P		P		01 30 04.1	+0.6
VORD				pmax		pmax			
	comp=Z,8.0nm,0.9s								
VSR	Storozhevoye	17.01	52	*e*P		P		01 30 04.0	+0.3
VSR				pmax		pmax			
	comp=Z,5.0nm,1.0s								
MMAI	Mount Meron Ar	17.02	118	P		P		01 30 03.4	-0.5
	comp=Z,2.8nm,0.7s,baz=312,slow=9.0,SNR=4.0								
LPSR	Galich'ya Gora	17.45	48	*e*P		P		01 30 10.3	+1.9
LPSR				pmax		pmax			
	comp=Z,9.0nm,0.9s								
OBN	Obninsk	17.59	38	P		Pn		01 30 07.7	-1.3
	comp=Z,7.7nm,0.5s,baz=274,slow=19,SNR=3.3								
OBN	Obninsk	17.59	38	⇓*e*P		Pn		01 30 07.5	-1.6
OBN				*e*S		Sn		01 33 26.5	+2.4
OBN				pmax		pmax			
	comp=Z,8.0nm,0.6s								
HFS	Hagfors	17.69	354	P		Pn		01 30 09.4	-0.9
	comp=Z,0.8nm,0.4s,baz=171,slow=10,SNR=12								
SHA1	Shidzhatmaz	18.31	78	*i* P		P		01 30 19.3	+1.0
KIV	Kislovodsk	18.31	77	*e*P		Pn		01 30 19.3	+1.1
KIV				pmax		pmax			
	comp=Z,3.0nm,1.1s								
KIV				MLR		MLR			
	comp=E,39nm,14.0s								
NEUR	Neytrino	18.39	79	*i* P		Pn		01 30 20.0	+0.8
MOS	Moscow	18.45	38	*e*P		P		01 30 18.9	-0.5
KBZ	Khabaz	18.48	78	P		Pn		01 30 20.5	+0.4
	comp=Z,1.9nm,0.8s,baz=307,slow=9.9,SNR=5.9								
KBZ	Khabaz	18.48	78	*ce*P		P		01 30 19.6	-0.3
KBZ				pmax		pmax			
	comp=Z,9.0nm,2.1s								
NORES	NORESS Array B	18.50	351	P		P		01 30 19.8	-0.1
VRH	Novokhopyorsk	18.52	54	*e*P		Pn		01 30 21.4	+0.9
VRH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
ASF	Jabal al Asfar	18.52	118	P		Pn		01 30 24.2	+3.4
	comp=Z,1.5nm,0.8s,baz=258,slow=20,SNR=1.9								
EKA	Eskdalemuir Ar	18.53	320	P		Pn		01 30 22.4	+1.8
	comp=Z,2.4nm,0.8s,baz=111,slow=9.4,SNR=6.1								
NB2	NORSAR Subarra	18.83	350	P		Pn		01 30 24.1	-0.2
	comp=Z,1.6nm,0.6s,baz=165,slow=11								
NOA	NORSAR Array B	18.83	350	P		Pn		01 30 25.1	+0.8
	comp=Z,0.6nm,0.5s,baz=165,slow=9.4,SNR=8.6								
NC303	NORSAR Array S	18.99	351	P		P		01 30 25.7	+0.3
EIL	Elat	19.04	127	P		Pn		01 30 30.9	+4.0
	comp=Z,2.1nm,0.7s,baz=313,slow=5.1,SNR=4.1								
EIL				S		Sn		01 33 50.8	-8.7
	comp=Z,1.9nm,0.7s,baz=302,slow=20,SNR=2.3								
FINES	FINESS Array B	19.52	12	P		P		01 30 30.1	-1.0
FINES	FINESS Array B	19.52	12	P		P		01 30 29.4	-1.8
	comp=Z,2.9nm,0.5s,baz=183,slow=12,SNR=16								
FINES				S		S		01 34 02.3	-7.7
	comp=Z,1.4nm,1.0s,baz=312,slow=17,SNR=1.8								
FINES	FINESS Array B	19.52	12	P		P		01 30 30.1	-1.0
GNI	Garni	20.50	88	P		Pn		01 30 44.2	-0.2
GNI				IAmb		IAmb		01 30 45.2	
	comp=Z,16nm,0.8s								
GNI	Garni	20.50	88	P		P		01 30 42.6	+0.4
	comp=Z,16nm,0.9s,baz=38,slow=3.7,SNR=6.2								
	comp=Z,16nm,0.9s								
GNI	Garni	20.50	88	*ce*P		Pn		01 30 44.2	-0.2
GNI				pmax		pmax			
	comp=Z,37nm,1.7s								
AKT	Akhty	22.37	83	*e*P		P		01 31 03.0	+0.8
AKT				*e*PPP		PPP		01 31 32.3	
AKT				pmax		pmax			
	comp=Z,18nm,1.4s								
AKT				MLR		MLR			
	comp=Z,143nm,9.0s								
BELG	Belogornoye	22.37	54	*i* P		P		01 31 01.6	-0.4
BELG				pmax		pmax			
	comp=Z,4.0nm,1.0s								
KLMR	Klimovskoe	22.55	28	*e*P		P		01 31 02.3	-1.5
KLMR				pmax		pmax			
	comp=Z,14nm,1.0s								
KIRV	Kirov	25.41	40	*ce*P		P		01 31 30.7	-0.5
APA	Apatity	26.41	14	⇓*e*P		P		01 31 36.9	-3.2
APA				*e*				01 32 19.4	
APA				MLR		MLR			
	comp=Z,381nm,18.4s								
ARCES	ARCESS Array B	27.28	6	P		P		01 31 47.4	-0.6
ARCES				IAmb		IAmb		01 32 08.8	
	comp=Z,12nm,1.3s								
ARCES	ARCESS Array B	27.28	6	P		P		01 31 47.0	-1.0
	comp=Z,1.1nm,0.6s,baz=174,slow=2.2,SNR=5.9								
	comp=Z,1.1nm,0.6s								
ARCES	ARCESS Array B	27.28	6	P		P		01 31 47.4	-0.6
ARCES				pmax		pmax			
	comp=Z,12nm,1.3s								
ARTI	Arti	29.37	48	P		P		01 32 05.4	-1.3
ARTI	Arti	29.37	48	*c* P		P		01 32 05.3	-1.4
ARTI				S		S		01 36 59.0	+0.2
ARTI				pmax		pmax			
	comp=Z,8.0nm,0.8s								
BORK	Borovoye	36.13	55	*ce*P		P		01 33 06.4	+0.6
BORK				pmax		pmax			
	comp=Z,7.0nm,1.0s								
BVAR	Borovoye Array	36.17	55	P		P		01 33 06.3	+0.2
	comp=Z,3.7nm,0.7s,baz=274,slow=7.3,SNR=18								
	comp=Z,3.7nm,0.7s								
KK31	Karatay Array	38.26	71	P		P		01 33 25.2	+1.2
KK31				IAmb		IAmb		01 33 26.2	
	comp=Z,5.9nm,0.8s								
KK31	Karatay Array	38.26	71	P		P		01 33 25.2	+1.2
KK31				pmax		pmax			
	comp=Z,6.0nm,0.9s								
KKAR	Karatay Array	38.26	71	P		P		01 33 24.7	+0.7
KKAR	Karatay Array	38.26	71	P		P		01 33 24.7	+0.7
ARSB	Arslanbob	40.58	72	P		P		01 33 45.0	+1.5
ARSB				IAmb		IAmb		01 33 55.9	
	comp=Z,12nm,1.2s								
ARSB	Arslanbob	40.58	72	P		P		01 33 45.0	+1.5
ARSB				pmax		pmax			
	comp=Z,12nm,1.2s								
DBIC	Dimbokro	40.94	215	P		P		01 33 48.1	+1.6
DBIC				IAmb		IAmb		01 33 49.1	
	comp=Z,13nm,1.4s								
DBIC	Dimbokro	40.94	215	P		P		01 33 48.0	+1.6
	comp=Z,2.3nm,0.6s,baz=30,slow=6.5,SNR=4.5								
	comp=Z,2.3nm,0.6s								
AAK	Ala-Archa	41.17	70	P		P		01 33 50.0	+1.5
AAK	Ala-Archa	41.17	70	*ce*P		P		01 33 49.6	+1.1
AAK				pmax		pmax			
	comp=Z,9.0nm,1.7s								
KURBB	Kurchatov Arra	41.54	57	P		P		01 33 50.7	-0.4
	comp=Z,1.5nm,0.2s,baz=64,slow=16,SNR=1.6								
	comp=Z,1.5nm,0.2s								
KURK	Kurchatov	41.58	57	P		P		01 33 50.7	-0.7
KURK	Kurchatov	41.58	57	IAmb		IAmb		01 33 56.0	
	comp=Z,1.7nm,0.9s								
KURK	Kurchatov	41.58	57	*i* P		P		01 33 53.2	+1.8
KURK				pmax		pmax			
	comp=Z,3.0nm,1.1s								
BOOM	Boomskoye usch	42.23	70	P		P		01 33 58.2	+1.1
BOOM	Boomskoye usch	42.23	70	P		P		01 33 58.2	+1.1
BOOM				pmax		pmax			
	comp=Z,20nm,1.2s								
NRIK	Noril'sk	43.90	29	P		P		01 34 08.5	-1.5
	comp=Z,2.3nm,0.5s,baz=273,slow=2.2,SNR=6.6								
	comp=Z,2.3nm,0.5s								
NRIK	Noril'sk	43.90	29	*ce*P		P		01 34 10.8	+0.8
NRIK				pmax		pmax			
	comp=Z,3.0nm,0.9s								
ZALV	Zalesovo Beam	44.51	51	P		P		01 34 14.9	-0.2
ZALV	Zalesovo Beam	44.51	51	P		P		01 34 14.1	-1.1
	comp=Z,3.4nm,0.6s,baz=288,slow=8.2,SNR=9.5								
	comp=Z,3.4nm,0.6s								
ZALV	Zalesovo Beam	44.51	51	*i* P		P		01 34 15.0	-0.2
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.6s								
MK31	Makanchi Array	45.02	61	*ce*P		P		01 34 19.3	0.0
MKAR	Makanchi Array	45.02	61	P		P		01 34 19.1	-0.2
MKAR	Makanchi Array	45.02	61	P		P		01 34 18.8	-0.5
	comp=Z,1.6nm,0.6s,baz=282,slow=7.5,SNR=16								
	comp=Z,1.6nm,0.6s								
MKAR	Makanchi Array	45.02	61	*ce*P		P		01 34 19.2	-0.1
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.6s								
DGZ	Jazzator, Alta	47.29	56	*i* P		P		01 34 37.6	+0.3
DGZ				pmax		pmax			
	comp=Z,3.0nm,0.9s								
TLY	Talaya	55.97	49	*i* P		P		01 35 43.9	+1.9
TLY				pmax		pmax			
	comp=Z,6.0nm,0.9s								
TIXI	Tiksi	56.27	21	*i* P		P		01 35 46.4	+2.6
TIXI				pmax		pmax			
	comp=Z,2.0nm,0.9s								
SONM	Songino Array	59.41	51	IAmb		IAmb		01 36 12.2	
	comp

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOHE	**HOHENGOEFT**	**0.21**	**271**	Pg	Pg	01 27 14.1	-0.2
HOHE				Sg	Sg	01 27 17.4	+0.4
BABA	**Baden-Baden-Ne**	**0.27**	**76**	Pg	Pg	01 27 15.4	-0.1
BABA				Sg	Sg	01 27 19.2	+0.2
SZBH	**soultz borehol**	**0.28**	**9**	Pg	Pg	01 27 15.7	0.0
OPP	**Oppenau**	**0.30**	**121**	Pg	Pg	01 27 15.9	-0.2
OPP				Sg	Sg	01 27 20.1	+0.1
CIEL	**Dossenheim-sur**	**0.34**	**302**	Pg	Pg	01 27 16.6	-0.2
CIEL				Sg	Sg	01 27 21.5	+0.2
LEMB	**Lembach**	**0.38**	**356**	Pg	Pg	01 27 17.4	-0.2
LEMB				Sg	Sg	01 27 22.7	+0.1
WLS	**Welschbruch**	**0.38**	**231**	Pg	Pg	01 27 17.2	-0.4
WLS				Sg	Sg	01 27 22.5	-0.1
CDF	**Champ du Feu**	**0.42**	**235**	*e*Pg	Pg	01 27 17.7	-0.7
CDF				*e*Sg	Sg	01 27 23.6	-0.3
	0.5nm,0.1s						
BFO	**Black Forest**	**0.48**	**132**	Pg	Pg	01 27 19.3	-0.2
BFO				Sg	Sg	01 27 25.7	-0.1
VOEL	**Voellerdingen**	**0.55**	**305**	Pg	Pg	01 27 20.5	-0.3
KIZ	**Kirchzarten**	**0.70**	**173**	Pg	Pg	01 27 23.6	-0.1
KIZ				Sg	Sg	01 27 33.0	+0.1
FELD	**Feldberg im Sc**	**0.79**	**170**	Pg	Pg	01 27 25.3	-0.1
XAFF	**Xaffevillers**	**0.82**	**253**	Pg	Pg	01 27 25.9	-0.1
ENDD	**Endenburg**	**0.94**	**183**	Pg	Pg	01 27 28.1	-0.3
ENDD				Sg	Sg	01 27 40.7	+0.2
SLE	**Schleitheim**	**1.00**	**152**	Pg	Pg	01 27 29.0	-0.5
SLE				Sg	Sg	01 27 42.7	+0.2
HINF	**Hinteralfeld**	**1.05**	**217**	*e*Pg	Pg	01 27 29.1	-1.3
HINF				*e*Sg	Sg	01 27 43.3	-0.7
	2.5nm,0.2s						
GUT	**Gutenstein**	**1.05**	**123**	Pg	Pg	01 27 29.8	-0.7
GUT				Sg	Sg	01 27 44.6	+0.5
HAU	**Haudompre**	**1.17**	**237**	*e*Pg	Pg	01 27 30.8	-1.8
HAU				*e*Sg	Sg	01 27 47.8	+0.1
	3.6nm,0.3s						
RONF	**Ronchamp**	**1.22**	**220**	Pg	Pg	01 27 31.4	-2.2
RONF				Sg	Sg	01 27 47.6	-1.8
PAGF	**Fort de Pagny**	**1.38**	**267**	*e*Pg	Pn	01 27 35.6	-0.7
PAGF				*e*Sg	Sn	01 27 54.8	-0.2
	0.6nm,0.2s						

*IDC **08** 01:33:04.5±6.9, 35°.39N×21°.74E, h0km, mb3.8/2, mbtmp3.4/5, ML2.6/2, Error ellipse: s-maj=124.0km s-min=39.9km az=28.0*
*THE **08** 01:33:15.0, 36°N±10°×2°.2E±1°.3, h37km±17km, M3.0/6, MLh3.0/6*
ISC 08 01:33:13.3±1.9, 35°.6N±0°.1×22°.1E±0°.1, h36km, n14, σ1°03/16, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHA	**Kythira Island**	**0.99**	**51**	P	**Pn**	**01 33 30.6**	**-0.1**
ANKY	**Antikythira Is**	**1.00**	**76**	P	**Pn**	**01 33 30.9**	**+0.2**
ANKY				S	**Sn**	**01 33 43.1**	**-0.5**
VLI	**Veliai**	**1.27**	**32**	P	**Pn**	**01 33 35.0**	**+0.5**
VLI				S	**Sn**	**01 33 50.6**	**+0.3**
RODP	**Rodopos**	**1.35**	**93**	P	Pn	01 33 30.4	-5.2
RODP				S	**Sn**	**01 33 51.7**	**-0.5**
ITM	**Ithomi**	**1.55**	**355**	P	**Pn**	**01 33 39.1**	**+0.8**
CHAN	**Chania**	**1.58**	**94**	P	**Pn**	**01 33 39.8**	**+1.1**
IDI	**Anoyia**	**2.30**	**98**	Pn	**Pn**	**01 33 48.7**	**+0.1**
	5.8nm,0.7s,baz=226,slow=9.3,SNR=7.2						
IDI				Sn	**Sn**	**01 34 15.2**	**-0.5**
	6.1nm,0.3s,baz=324,slow=19,SNR=7.1						
IDI	**Anoyia**	**2.30**	**98**	P	**Pn**	**01 33 49.2**	**+0.5**
DION	**Dionisos Attik**	**2.84**	**30**	P	**Pn**	**01 33 55.6**	**-0.5**
BRTR	**Keskin Array B**	**10.01**	**63**	Pn	**Pn**	**01 35 36.9**	**+2.3**
	baz=257,slow=13,SNR=3.6						
	0.2nm,0.7s						
EIL	**Elat**	**12.35**	**115**	Sn	Sn	01 38 10.9	-12
	0.3nm,0.3s,baz=272,slow=18,SNR=1.7						
KBZ	**Khabaz**	**17.90**	**57**	Pn	**P**	**01 37 21.2**	**+1.7**
	baz=253,slow=9.5,SNR=5.1						
	0.5nm,0.7s						
ARCES	**ARCESS Array B**	**34.01**	**2**	P	**P**	**01 39 52.5**	**-0.7**
	2.1nm,1.0s,baz=187,slow=8.6,SNR=3.7						
	2.1nm,1.0s						
MKAR	**Makanchi Array**	**45.59**	**57**	P	**P**	**01 41 28.5**	**-1.3**
	0.5nm,0.4s,baz=271,slow=6.6,SNR=12						
	0.5nm,0.4s						

*TEH **08** 01:37:27.5, 37°.67N×47°.46E, h9km±21km*
*THR **08** 01:37:28.6±0.0, 37°.75N×47°.44E, h14km±23km, ML4.0*
*IDC **08** 01:37:35.1±3.5, 37°.97N×47°.42E, h33km±26km, mb3.6/12, mbtmp3.8/21, ML3.7/6, MS3.1/2, Error ellipse: s-maj=23.8km s-min=12.5km az=164.0*
ISC 08 01:37:29.8±0.6, 37°.76N±0°.03×47°.46E±0°.03, h10km, n63, σ2s20/67, mb3.8/12, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHSH	**Hashtrud**	**0.48**	**199**	Pg	**Pg**	**01 37 35.5**	**-3.7**
IHSH				Sg	**Sg**	**01 37 41.5**	**-4.1**
IHRS	**Heris**	**0.65**	**330**	Pg	**Pg**	**01 37 41.2**	**-1.3**
IHRS				Sg	**Sb**	**01 37 52.0**	**-0.7**
GRMI	**Germi**	**1.10**	**18**	Pg	**Pg**	**01 37 49.4**	**-1.6**
GRMI	**Germi**	**1.10**	**18**	*e*Pg	**Pg**	**01 37 49.5**	**-1.6**
GRMI				IAML		01 38 12.5	
	comp=Z,2μm,1.0s						
ITBZ	**Tabriz**	**1.14**	**295**	Pg	**Pg**	**01 37 49.4**	**-2.4**
ITBZ				Sg	**Sn**	**01 38 06.8**	**-1.0**
IAZR	**Azarshahr**	**1.18**	**267**	Pg	**Pb**	**01 37 49.9**	**-2.5**
GAS1	**Astara - Iran**	**1.26**	**60**	Pg	**Pn**	**01 37 52.0**	**-1.4**
GAS1				Sg	**Sn**	**01 38 10.2**	**-0.2**
CSN1	**Caspian**	**1.31**	**98**	Pg	**Pn**	**01 37 52.0**	**-2.1**
ZNJK	**Zanjan**	**1.46**	**138**	Pg	**Pn**	**01 37 53.4**	**-3.1**
ZNJK	**Zanjan**	**1.46**	**138**	*i* P	**Pn**	**01 37 53.4**	**-3.1**
ZNJK				IAML		01 38 54.1	
	comp=Z,3.9nm,1.0s						
ISHB	**Shabestar**	**1.55**	**290**	Pg	**Pn**	**01 37 55.9**	**-1.8**
IMRD	**Marand**	**1.68**	**305**	Pg	**Pb**	**01 37 59.8**	**-1.2**
MAHB	**Mahabad**	**1.71**	**235**	Pg	**Pn**	**01 37 58.2**	**-1.7**
JIR1	**Jirandeh**	**2.14**	**119**	Pn	**Pn**	**01 38 05.2**	**-0.6**
LHJ2	**Lahijan - Gila**	**2.15**	**105**	Pn	**Pn**	**01 38 05.1**	**-0.6**
IGZV	**Ghazvin**	**2.59**	**121**	Pn	**Pn**	**01 38 11.5**	**-0.6**
QABG	**Abgarm-Qazvin**	**2.66**	**140**	Pn	**Pn**	**01 38 12.3**	**-0.7**
SNGE	**Sanandaj**	**2.66**	**182**	*e*Pn	**Pn**	**01 38 13.4**	**+0.4**
SNGE				IAML		01 38 59.3	
	comp=Z,6.7nm,1.0s						
SNQR	**Sonqor, Kerman**	**2.90**	**177**	Pn	**Pn**	**01 38 15.6**	**-0.7**
IDHR	**Dehrash**	**3.17**	**196**	Pn	**Pn**	**01 38 20.2**	**+0.2**
GNI	**Garni**	**3.19**	**319**	Pn	**Pb**	**01 38 23.6**	**-3.1**
	comp=Z,8.5nm,0.3s,baz=40,slow=0.3,SNR=48						
GNI				Lg	Lg	01 39 11.5	
	comp=Z,47nm,0.3s,baz=195,slow=21,SNR=9.0						
	comp=Z,56nm,0.5s						
HAGD	**Aghdareh**	**3.23**	**155**	Pn	**Pn**	**01 38 19.3**	**-1.5**
THKV	**Tehran--Karaj**	**3.30**	**123**	*e*Pn	**Pn**	**01 38 21.7**	**0.0**
THKV				IAML		01 39 19.5	
	comp=Z,370nm,1.0s						
MZPU	**Pul - Mazandar**	**3.54**	**111**	Pn	**Pn**	**01 38 24.9**	**-0.1**
GLG1	**Gilan-e-Gharb**	**3.85**	**200**	Pn	**Pn**	**01 38 28.5**	**-0.6**
IQOM	**Qom**	**4.12**	**134**	Pn	**Pn**	**01 38 31.9**	**-1.2**
IPRN	**Peran**	**4.19**	**110**	Pn	**Pn**	**01 38 34.1**	**+0.3**
IDMV	**Damavand**	**4.27**	**119**	Pn	**Pn**	**01 38 35.5**	**+0.3**
IVRN	**Varamin**	**4.41**	**127**	Pn	**Pn**	**01 38 36.4**	**-0.5**
KHMZ	**Khomeyn**	**4.49**	**152**	*e*Pn	**Pn**	**01 38 39.4**	**+1.2**
KHMZ				IAML		01 40 04.3	
	comp=Z,51nm,1.0s						
GHVR	**GHOM**	**4.51**	**135**	*e*Pn	**Pn**	**01 38 37.9**	**-0.3**
GHVR				IAML		01 39 58.1	
	comp=Z,260nm,1.0s						
IALA	**Alasht**	**4.60**	**110**	Pn	**Pn**	**01 38 40.2**	**+0.5**
QAMS	**Qamsar**	**5.13**	**140**	Pn	**Pn**	**01 38 46.8**	**-0.2**
ISFB	**Sefidab**	**5.15**	**130**	Pn	**Pn**	**01 38 46.4**	**-0.7**
IGLO	**Ghaloghah**	**5.24**	**102**	Pn	**Pn**	**01 38 48.0**	**-0.4**
IPIR	**Pirpir**	**5.79**	**150**	Pn	**Pn**	**01 38 55.9**	**-0.2**
JHBN	**Jahan bin**	**6.11**	**154**	Pn	**Pn**	**01 38 59.8**	**-0.6**
MRVT	**Maraveh tapeh**	**6.84**	**88**	*e*Pn	**Pn**	**01 39 09.5**	**-0.8**
MRVT				IAML		01 40 29.8	
	comp=Z,67nm,1.0s						
ANAR	**Anarak**	**6.85**	**130**	Pn	**Pn**	**01 39 09.8**	**-0.7**
KBZ	**Khabaz**	**6.90**	**331**	Lg	Lg	01 41 03.2	
	comp=Z,0.2nm,0.3s,baz=135,slow=20,SNR=3.9						
SHRO	**Shahrood**	**7.08**	**102**	*e*Pn	**Pn**	**01 39 14.6**	**+1.1**
SHRO				IAML		01 40 57.0	
	comp=Z,2.3nm,1.0s						
KVAR	**Kislovodsk Arr**	**7.17**	**331**	Pn	**Pn**	**01 39 17.4**	**+2.6**
	comp=Z,0.5nm,0.5s,baz=146,slow=11,SNR=1.8						
KVAR				Sn	**Sn**	**01 40 28.4**	**-7.9**
	baz=128,slow=16						
KVAR				LR	LR	01 41 57.0	
	comp=Z,283nm,21.2s,baz=326,slow=38						
ASF	**Jabal al Asfar**	**10.30**	**240**	Pn	**Pn**	**01 40 00.4**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=295,slow=23,SNR=1.4						
ASF				Sn	**Sn**	**01 42 00.8**	**+7.4**
	comp=Z,0.1nm,0.3s,baz=36,slow=19,SNR=2.2						
ASF				Lg	Lg	01 43 03.5	
	comp=Z,0.1nm,0.3s,baz=233,slow=21,SNR=1.8						
	comp=Z,1.1nm,0.7s						
BRTR	**Keskin Array B**	**10.97**	**285**	Pn	Pn	01 40 12.1	+5.1
	comp=Z,1.8nm,1.0s,baz=106,slow=13,SNR=7.4						
BRTR				LR	LR	01 44 09.3	
	comp=Z,49nm,21.4s,baz=309,slow=36						
SHRT	**Shahrakht**	**11.21**	**108**	*i* P	**Pn**	**01 40 12.0**	**+1.9**
SHRT				IAML		01 40 20.7	
	comp=Z,3.5nm,0.9s						
EIL	**Elat**	**13.16**	**236**	Sn	**Sn**	**01 43 09.9**	**+6.6**
	baz=69,slow=19,SNR=1.1						
EIL				Lg	Lg	01 44 37.4	
	comp=Z,0.2nm,0.3s,baz=117,slow=23,SNR=1.0						
BELG	**Belogornoye**	**14.64**	**0**	Pn	**Pn**	**01 40 57.0**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=175,slow=5.9,SNR=3.9						
	comp=Z,8.2nm,0.8s						
AKTO	**Aktyubinsk**	**14.75**	**27**	Pn	**Pn**	**01 40 56.7**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=201,slow=7.9,SNR=10						
	comp=Z,2.5nm,0.5s						
IDI	**Anoyia**	**18.30**	**269**	P	**P**	**01 41 45.5**	**+1.5**
	comp=Z,3.4nm,0.6s,baz=11,slow=16,SNR=1.5						
AKASG	**Malin Array Be**	**18.33**	**321**	P	**P**	**01 41 44.0**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=132,slow=12,SNR=4.3						
	comp=Z,0.2nm,0.3s						
ARTI	**Arti**	**20.02**	**18**	P	**P**	**01 42 01.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=198,slow=9.7,SNR=7.2						
	comp=Z,3.7nm,0.5s						
AAK	**Ala-Archa**	**21.18**	**68**	P	**P**	**01 42 17.5**	**+2.1**
	comp=Z,1.5nm,0.8s,baz=219,slow=8.6,SNR=4.5						
	comp=Z,1.5nm,0.8s						
BVAR	**Borovoye Array**	**22.05**	**39**	P	**P**	**01 42 24.6**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=232,slow=7.3,SNR=14						
	comp=Z,2.9nm,0.7s						
KURBB	**Kurchatov Arra**	**25.51**	**50**	P	**P**	**01 42 59.3**	**+1.1**
	comp=Z,1.0nm,0.2s,baz=257,slow=9.0,SNR=7.9						
	comp=Z,1.0nm,0.2s						
GERES	**GERESS Array B**	**26.74**	**305**	P	**P**	**01 43 09.6**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=95,slow=7.8,SNR=3.0						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**27.12**	**59**	P	**P**	**01 43 15.3**	**+2.4**
	comp=Z,1.5nm,0.9s,baz=261,slow=8.0,SNR=9.7						
	comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	**27.21**	**337**	P	**P**	**01 43 12.7**	**-0.7**
	comp=Z,2.0nm,1.0s,baz=144,slow=7.3,SNR=1.4						
	comp=Z,2.0nm,1.0s						
DAVOX	**Davos/Dischmat**	**29.00**	**300**	P	**P**	**01 43 32.3**	**+2.4**
	comp=Z,1.3nm,0.7s,baz=192,slow=12,SNR=2.2						
	comp=Z,1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**30.21**	**45**	P	**P**	**01 43 40.4**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=246,slow=9.3,SNR=1.5						
	comp=Z,0.5nm,0.3s						
HFS	**Hagfors**	**30.95**	**327**	P	**P**	**01 43 46.4**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=143,slow=8.4,SNR=4.8						
	comp=Z,1.2nm,0.6s						
NOA	**NORSAR Array B**	**32.46**	**328**	P	**P**	**01 43 59.2**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=232,slow=24,SNR=1.5						
	comp=Z,0.2nm,0.5s						
NRIK	**Noril'sk**	**38.26**	**22**	P	**P**	**01 44 50.4**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=180,slow=14,SNR=1.9						
	comp=Z,0.9nm,0.4s						
ESDC	**Sonseca Array**	**39.72**	**289**	P	**P**	**01 45 04.0**	**+1.5**
	comp=Z,0.8nm,0.9s,baz=48,slow=37,SNR=2.5						
	comp=Z,0.8nm,0.9s						

*MDD **08** 01:56:45.8±0.4, 39°.13N×10°.86W, h30km, mb_Lg4.0/64, Error ellipse: s-maj=3.1km s-min=2.0km az=86.0*
*IGIL **08** 01:56:47.2, 39°.13N×10°.86W, h31km, ML3.9*
*LDG **08** 01:56:48.2±0.3, 39°.17N×10°.75W, h30km, Ml4.0/24, Error ellipse: s-maj=7.0km s-min=5.2km az=96.0*
*INMG **08** 01:56:48.8±1.2, 39°.12N×10°.89W, h29km, ML3.6, Error ellipse: s-maj=3.5km s-min=1.7km az=87.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Canhao da Nazare*
*CNRM **08** 01:56:53.1, 38°.72N×10°.15W, h119km, ML3.7*
ISC 08 01:56:42.9±1.1, 39°.12N±0°.04×10°.80W±0°.07, h35km, n170, σ3s08/282, 7C-16D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**1.20**	**97**	Sn	**Sn**	**01 57 20.3**	**+2.2**
PMAFR				Pn	**Pn**	**01 57 06.7**	**+3.6**
PMAFR	**Mafra**	**1.20**	**97**	*e*P	**Pn**	**01 57 06.7**	**+3.6**
PMAFR				*e*S	**Sn**	**01 57 20.6**	**+2.4**
PMAFR				*i* IAML		01 57 21.6	
PMAFR				*i* IAML		01 57 21.7	
PMAFR				*i* IAML		01 57 22.4	
AML03	**Fanhoes/Loures**	**1.31**	**100**	*e*P	**Pn**	**01 57 08.6**	**+4.0**
AML03				*e*S	**Sn**	**01 57 23.0**	**+2.7**
AML03				*i* IAML		01 57 24.3	
AML03				*i* IAML		01 57 25.6	
AML03				*i* IAML		01 57 26.3	
AML01	**Serafina, Lisb**	**1.32**	**106**	*e*P	**Pn**	**01 57 08.8**	**+3.9**
AML01				*e*S	**Sn**	**01 57 24.6**	**+3.3**
AML01				*i* IAML		01 57 25.1	
AML01				*i* IAML		01 57 25.2	
AML01				*i* IAML		01 57 26.2	
LIS	**Lisbon**	**1.35**	**107**	*e*P	**Pn**	**01 57 08.9**	**+3.7**
LIS				*e*S	**Sn**	**01 57 24.0**	**+2.1**
LIS				IAML		01 57 26.2	
	comp=N,4μm,0.3s						
LIS	**Lisbon**	**1.35**	**107**	||*e*P	**Pn**	**01 57 09.2**	**+4.0**
LIS				*e*S	**Sn**	**01 57 25.2**	**+3.3**
LIS				*i* IAML		01 57 26.5	
LIS				*i* IAML		01 57 26.9	
LIS				*i* IAML		01 57 28.6	
AML05	**Montejunto**	**1.36**	**87**	*e*P	**Pn**	**01 57 09.3**	**+3.8**
AML05				*e*S	**Sn**	**01 57 24.8**	**+2.5**
AML05				*i* IAML		01 57 25.8	
AML05				*i* IAML		01 57 26.8	
AML05				*i* IAML		01 57 26.9	
AML02	**Lavradio**	**1.44**	**108**	*e*P	**Pn**	**01 57 10.8**	**+4.3**
AML02				*e*S	**Sn**	**01 57 27.9**	**+3.8**
AML02				*i* IAML		01 57 29.9	
AML02				*i* IAML		01 57 31.6	
AML02				*i* IAML		01 57 36.2	
AML04	**Campo deTiro d**	**1.54**	**102**	*e*P	**Pn**	**01 57 11.8**	**+4.0**
AML04				*e*S	**Sn**	**01 57 30.6**	**+4.0**
AML04				*i* IAML		01 57 32.9	
AML04				*i* IAML		01 57 33.9	
AML04				*i* IAML		01 57 34.0	
PBEN	**Benavente**	**1.55**	**96**	*e*P	**Pn**	**01 57 11.7**	**+3.7**
PBEN				*e*S	**Sn**	**01 57 29.7**	**+2.9**
PBEN				*i* IAML		01 57 31.3	
PBEN				*i* IAML		01 57 33.6	
PBEN				*i* IAML		01 57 34.0	
PSBE	**So Bento**	**1.61**	**75**	*e*P	**Pn**	**01 57 12.5**	**+3.7**
PSBE				*e*S	**Sn**	**01 57 30.9**	**+2.5**
PSBE				*i* IAML		01 57 40.9	
PSBE				*i* IAML		01 57 41.1	
PSBE				*i* IAML		01 57 41.6	
MOE	**Montemor**	**2.00**	**106**	||*i* P	**Pn**	**01 57 17.6**	**+3.4**
MOE				*e*S	**Sn**	**01 57 39.7**	**+1.6**
MOE				*i* IAML		01 57 43.8	
MOE				*i* IAML		01 57 52.9	
MOE				*i* IAML		01 57 53.6	
PMTG	**Montargil**	**2.01**	**91**	||*e*P	**Pn**	**01 57 17.5**	**+3.3**
PMTG				*e*S	**Sn**	**01 57 39.9**	**+1.7**
PMTG				*i* IAML		01 57 40.6	
PMTG				*i* IAML		01 57 48.8	
PMTG				*i* IAML		01 57 52.0	
PCAS	**Casmilo, Conde**	**2.01**	**62**	*e*P	**Pn**	**01 57 17.9**	**+3.5**
PCAS				*e*S	**Sn**	**01 57 40.1**	**+1.8**
PCAS				*i* IAML		01 57 41.5	
PCAS				*i* IAML		01 57 53.0	
PCAS				*i* IAML		01 57 54.6	
PSARD	**Sardoal**	**2.10**	**76**	*e*P	**Pn**	**01 57 19.1**	**+3.5**
PSARD				*e*S	**Sn**	**01 57 42.4**	**+1.8**
PSARD				*i* IAML		01 57 46.4	
PSARD				*i* IAML		01 57 47.3	
PSARD				*i* IAML		01 57 56.1	
PARRA	**Arraiolos**	**2.17**	**97**	*i* IAML		01 57 56.2	
EVO	**Evora**	**2.26**	**104**	Sn	**Sn**	**01 57 45.5**	**+1.2**
EVO				Pn	**Pn**	**01 57 20.9**	**+3.2**
EVO	**Evora**	**2.26**	**104**	||*e*P	**Pn**	**01 57 20.9**	**+3.2**
EVO				*e*S	**Sn**	**01 57 45.9**	**+1.6**
EVO				*i* IAML		01 57 48.3	
EVO				*i* IAML		01 57 55.6	
EVO				*i* IAML		01 58 00.9	
PTEO	**Sao Teotonio**	**2.27**	**133**	||*e*P	**Pn**	**01 57 20.9**	**+3.1**
PTEO				*e*S	**Sn**	**01 57 45.2**	**+0.6**
PTEO				*i* IAML		01 57 46.7	
PTEO				*i* IAML		01 57 46.9	
PTEO				*i* IAML		01 57 47.6	
MESJ	**Messejana**	**2.40**	**121**	*e*P	**Pn**	**01 57 22.8**	**+3.2**
MESJ				*e*S	**Sn**	**01 57 48.7**	**+1.0**
MESJ				IAML		01 57 53.7	
	comp=N,177nm,0.2s						
MESJ	**Messejana**	**2.40**	**121**	||*e*P	**Pn**	**01 57 22.8**	**+3.2**
MESJ				*e*S	**Sn**	**01 57 49.0**	**+1.3**
MESJ				*i* IAML		01 57 51.2	
MESJ				*i* IAML		01 57 52.8	
MESJ				*i* IAML		01 57 53.5	
MORF	**Marmelete**	**2.48**	**136**	*e*P	**Pn**	**01 57 23.9**	**+3.1**
MORF				*e*S	**Sn**	**01 57 50.6**	**+0.7**
MORF	**Marmelete**	**2.48**	**136**	||*e*P	**Pn**	**01 57 23.9**	**+3.1**
MORF				*e*S	**Sn**	**01 57 49.6**	**-0.3**
MORF				*i* IAML		01 57 51.7	
MORF				*i* IAML		01 57 52.0	
MORF				*i* IAML		01 57 52.9	
PESTR	**Estremoz**	**2.52**	**95**	Pn	**Pn**	**01 57 24.4**	**+3.1**
PESTR				Sn	**Sn**	**01 57 51.1**	**+0.4**
PESTR	**Estremoz**	**2.52**	**95**	*e*P	**Pn**	**01 57 24.5**	**+3.2**
PESTR				*e*S	**Sn**	**01 57 51.7**	**+1.0**
PESTR				*i* IAML		01 57 54.4	
PESTR				*i* IAML		01 57 54.7	
PESTR	**Estremoz**	**2.52**	**95**	P	**Pn**	**01 57 26.0**	**+4.7**
PESTR	**Estremoz**	**2.52**	**95**	S	**Sn**	**01 57 52.2**	**+1.4**
PFVI	**Vila Bisbo**	**2.52**	**141**	Sn	**Sn**	**01 57 50.2**	**-0.6**
PFVI				Pn	**Pn**	**01 57 24.4**	**+3.1**
PFVI	**Vila Bisbo**	**2.52**	**141**	||*e*P	**Pn**	**01 57 24.4**	**+3.1**
PFVI				*e*S	**Sn**	**01 57 50.3**	**-0.6**
PFVI				*i* IAML		01 57 53.0	
PFVI				*i* IAML		01 57 53.2	
PFVI				*i* IAML		01 57 54.8	
PFVI	**Vila Bisbo**	**2.52**	**141**	P	**Pn**	**01 57 24.6**	**+3.2**
PBEJ	**Beja**	**2.55**	**114**	||*e*P	**Pn**	**01 57 24.9**	**+3.2**
PBEJ				*e*S	**Sn**	**01 57 52.2**	**+0.7**
PBEJ				*i* IAML		01 57 53.8	
PBEJ				*i* IAML		01 57 54.1	
PBEJ				*i* IAML		01 57 54.3	
PCVE	**Castro Verde**	**2.63**	**123**	Sn	**Sn**	**01 57 55.5**	**+2.0**
PCVE				Pn	**Pn**	**01 57 26.0**	**+3.1**
PCVE	**Castro Verde**	**2.63**	**123**	||*e*P	**Pn**	**01 57 26.0**	**+3.1**
PCVE				*e*S	**Sn**	**01 57 55.6**	**+2.1**
PCVE				*i* IAML		01 57 57.2	
PCVE				*i* IAML		01 57 57.3	
PCVE				*i* IAML		01 57 57.3	
PMRV	**Marv??o**	**2.67**	**82**	*e*P	**Pn**	**01 57 26.6**	**+3.3**
PMRV				*e*S	**Sn**	**01 57 55.4**	**+0.9**
PMRV				*i* IAML		01 57 57.6	
PMRV				*i* IAML		01 57 58.1	
PMRV				*i* IAML		01 57 58.5	
PCBR	**Castelo Branco**	**2.67**	**73**	*e*P	**Pn**	**01 57 26.8**	**+3.4**
PCBR				*e*S	**Sn**	**01 57 55.2**	**+0.7**
PCBR				*i* IAML		01 57 56.8	
PCBR				*i* IAML		01 57 57.7	
PCBR				*i* IAML		01 57 57.8	
PVIS	**Viseu**	**2.75**	**54**	*e*P	**Pn**	**01 57 27.4**	**+3.3**
PVIS				*e*S	**Sn**	**01 57 57.2**	**+0.7**
MTE	**Manteigas**	**2.82**	**62**	*e*P	**Pn**	**01 57 28.7**	**+3.2**
MTE				*e*S	**Sn**	**01 57 59.3**	**+1.0**
MTE				*i* IAML		01 58 00.4	
MTE				*i* IAML		01 58 00.6	
MTE				*i* IAML		01 58 02.2	
PBDV	**Barranco-do-Ve**	**2.94**	**129**	Sn	**Sn**	**01 58 02.2**	**+1.1**
PBDV				Pn	**Pn**	**01 57 30.6**	**+3.5**
PBDV	**Barranco-do-Ve**	**2.94**	**129**	||*e*P	**Pn**	**01 57 30.6**	**+3.5**
PBDV				*e*S	**Sn**	**01 58 02.3**	**+1.1**
PBDV				*i* IAML		01 58 05.0	
PBDV				*i* IAML		01 58 05.1	
PBDV				*i* IAML		01 58 05.2	
PVAQ	**Vaqueiros**	**2.97**	**124**	||*e*P	**Pn**	**01 57 30.7**	**+3.2**
PVAQ				*e*S	**Sn**	**01 58 02.8**	**+0.9**
PVAQ				*i* IAML		01 58 05.3	
PVAQ				*i* IAML		01 58 05.6	
PVAQ				*i* IAML		01

ECAB *i* IVmb_Lg 01 58 37.5
ESPR Espera 4.51 118 Sn **Sn** **01 58 40.9 +1.1**
ESPR Pn **Pn** **01 57 52.5 +3.8**
ESPR Espera 4.51 118 P **Pn** **01 57 52.7 +4.1**
ESPR S **Sn** **01 58 41.7 +1.9**
ESPR *i* IVmb_Lg 01 58 44.2
CNIL Conil 4.66 125 Pn **Pn** **01 57 55.3 +4.6**
UMV12 Villanueva de 4.89 113 P **Pn** **01 57 58.1 +4.1**
UMV12 S **Sn** **01 58 50.7 +1.2**
EADA Adamuz 4.97 99 Pn **Pn** **01 57 57.9 +3.0**
EADA Sn **Sn** **01 58 50.8 -0.4**
EADA Adamuz 4.97 99 P **Pn** **01 57 58.0 +3.0**
EADA S **Sn** **01 58 49.9 -1.3**
EADA *i* IVmb_Lg 01 58 54.0
PAB San Pablo 5.02 83 P **Pn** **01 57 59.4 +3.6**
PAB S **Sn** **01 58 51.3 -1.4**
PAB *i* IVmb_Lg 01 58 54.5
EPON Pontenova 5.03 32 P **Pn** **01 57 59.0 +3.2**
EPON S **Sn** **01 58 50.6 -2.1**
EPON *i* IVmb_Lg 01 58 55.0
ESDC Sonseca Array 5.33 82 P **Pn** **01 58 03.5 +3.5**
ESDC S **Sn** **01 58 58.8 -1.3**
ESDC *i* IVmb_Lg 01 59 01.6
ESBB Sonseca Array 5.33 82 P **Pn** **01 58 03.5 +3.6**
ESBB S **Sn** **01 58 59.4 -0.8**
EMIJ Mijas 5.41 116 Pn **Pn** **01 58 04.7 +3.6**
EMIJ Mijas 5.41 116 P **Pn** **01 58 04.7 +3.6**
EMIJ S **Sn** **01 58 58.6 -3.5**
EMIJ *i* IVmb_Lg 01 59 07.7
PSIM Granatula de C 5.50 91 P **Pn** **01 58 05.7 +3.4**
PSIM S **Sn** **01 59 03.4 -1.0**
EMAL Malaga-Limoner 5.56 113 Sn **Sn** **01 59 05.5 -0.2**
EMAL Pn **Pn** **01 58 06.9 +3.8**
EGOR Sierra Gorda, 5.64 109 P **Pn** **01 58 07.7 +3.3**
EGOR S **Sn** **01 59 07.5 -0.6**
EGOR *i* IVmb_Lg 01 59 17.7
E0803 Jimena (Jaen) 5.89 100 P **Pn** **01 58 10.6 +2.9**
E0803 S **Sn** **01 59 13.8 -0.3**
E0802 Ubeda,Jaen 5.92 98 P **Pn** **01 58 10.9 +2.8**
E0802 S **Sn** **01 59 12.9 -1.8**
EARI Arriondas 5.94 43 P **Pn** **01 58 12.5 +4.2**
EARI S **Sn** **01 59 13.7 -1.4**
EARI *i* IVmb_Lg 01 59 27.2
UCM Universidad Co 5.95 76 Pn **Pn** **01 58 12.1 +3.6**
UCM Sn **Sn** **01 59 13.8 -1.6**
ELGU Los Guajares, 6.10 109 P **Pn** **01 58 13.6 +3.1**
ELGU S **Sn** **01 59 17.2 -1.9**
ELGU *i* IVmb_Lg 01 59 26.3
YEBES Yebes (Guadala 6.10 74 P **Pn** **01 58 14.6 +4.0**
YEBES S **Sn** **01 59 09.5 -0.9**
YEBES *i* IVmb_Lg 01 59 29.5
EQTA Presa de Quent 6.11 106 Pn **Pn** **01 58 14.5 +3.8**
EQTA Sn **Sn** **01 59 19.7 +0.4**
EQUE Quentar 6.11 106 P **Pn** **01 58 14.7 +4.0**
EQUE S **Sn** **01 59 17.9 -1.5**
EQUE *i* IVmb_Lg 01 59 22.6
EQES Quesada 6.21 100 P **Pn** **01 58 15.0 +2.9**
EQES S **Sn** **01 59 22.0 0.0**
EQES *i* IVmb_Lg 01 59 25.7
AVE Averroes 6.42 154 Pn **Pn** **01 58 18.3 +3.3**
AVE Sn **Sn** **01 59 24.6 -2.5**
AVE Averroes 6.42 154 P **Pn** **01 58 18.0 +3.0**
AVE Averroes 6.42 154 S **Sn** **01 59 24.1 -2.9**
ZHG ZHG 6.58 148 P **Pn** **01 58 20.5 +3.2**
ZHG ZHG 6.58 148 S **Sn** **01 59 28.3 -2.7**
ELAN Lanestosa 6.91 51 P **Pn** **01 58 25.2 +3.5**
ELAN S **Sn** **01 59 35.5 -3.6**
ELAN *i* IVmb_Lg 01 59 45.5
ETOR Torete 6.93 73 P **Pn** **01 58 26.0 +3.9**
ETOR S **Sn** **01 59 37.6 -2.0**
ETOR *i* IVmb_Lg 01 59 50.8
SRHM Skhour des Reh 7.04 160 P Pn 01 58 29.2 +5.7
SRHM Skhour des Reh 7.04 160 S **Sn** **01 59 45.0 +2.6**
ENIJ Nijar 7.11 105 P **Pn** **01 58 26.9 +2.4**
ENIJ S **Sn** **01 59 43.2 -0.8**
ENIJ *i* IVmb_Lg 01 59 47.5
AKLM AKL 7.22 127 P **Pn** **01 58 26.2 +0.2**
AKLM AKL 7.22 127 S Sn 01 59 38.1 -8.6
IFR Ifrane 7.23 139 Pn **Pn** **01 58 28.3 +2.2**
IFR Sn **Sn** **01 59 43.9 -3.2**
LCRM LCR 7.24 137 P **Pn** **01 58 28.7 +2.5**
LCRM LCR 7.24 137 S **Sn** **01 59 43.3 -4.0**
ETOB Tobarra 7.24 91 Pn **Pn** **01 58 29.0 +2.8**
ETOB Sn **Sn** **01 59 46.9 -0.3**
ETOB Tobarra 7.24 91 P **Pn** **01 58 29.2 +3.0**
ETOB S **Sn** **01 59 46.1 -1.1**
ETOB *i* IVmb_Lg 01 59 53.7
PMPST Porto Santo, M 7.51 218 *e*S Sn 01 59 47.7 -6.1
PMPST *i* IAML 01 59 55.2
PMPST *i* IAML 01 59 55.5
PMPST *i* IAML 02 00 01.9
EVIV Cofrentes, Val 7.52 86 P **Pn** **01 58 32.2 +2.0**
EVIV S **Sn** **01 59 50.9 -3.3**
EVIV *i* IVmb_Lg 01 59 56.6
PMPS Porto Santo 7.52 218 *e*P Pn 01 58 32.0 +1.9
E0901 Celadas (Terue 7.57 77 P **Pn** **01 58 33.3 +2.4**
E0901 S **Sn** **01 59 53.9 -1.6**
E0901 *i* IVmb_Lg 01 59 58.5
EMUR La Murta 7.61 97 Pn **Pn** **01 58 34.3 +3.0**
EMUR La Murta 7.61 97 P **Pn** **01 58 34.2 +3.0**
EMUR S **Sn** **01 59 54.4 -1.9**
EMUR *i* IVmb_Lg 02 00 07.3
ECHE Chera 7.64 83 Pn **Pn** **01 58 37.7 +4.0**
ECHE Sn **Sn** **01 59 52.6 -4.3**
CART Cartagena 7.85 98 Pn **Pn** **01 58 37.0 +2.4**
CART Sn **Sn** **01 59 58.3 -3.8**
CART Cartagena 7.85 98 P **Pn** **01 58 36.8 +2.3**
CART Cartagena 7.85 98 S **Sn** **01 59 58.6 -3.5**
MD31 MD31 7.93 140 P **Pn** **01 58 37.1 +1.4**
MD31 MD31 7.93 140 S Sn 01 59 58.3 -6.0
MDT Midelt 8.05 140 P **Pn** **01 58 38.8 +1.4**
MDT Midelt 8.05 140 S **Sn** **02 00 02.5 -4.7**
EMOS Mosqueruela 8.06 78 P **Pn** **01 58 40.3 +2.7**
EMOS S **Sn** **02 00 03.6 -3.9**
EMOS *i* IVmb_Lg 02 00 06.9
EORO Oroz-Betelu 8.11 59 P **Pn** **01 58 41.6 +3.5**
EORO S **Sn** **02 00 05.5 -3.0**
EORO *i* IVmb_Lg 02 00 13.0
OUK Oukaimeden 8.25 162 P **Pn** **01 58 42.7 +2.3**
OUK Oukaimeden 8.25 162 S Sn 02 00 1.5 -2.3
SJPF Ste Jean 8.26 58 *e*Pn **Pn** **01 58 43.3 +3.2**
SJPF *e*Sn **Sn** **02 00 07.3 -4.8**
comp=N,11nm,0.2s
ESAC San Caprasio 8.30 68 P **Pn** **01 58 44.3 +3.6**
ESAC S **Sn** **02 00 11.9 -1.4**
ESAC *i* IVmb_Lg 02 00 17.5
ETSF Etsaut 8.62 61 *e*Pn **Pn** **01 58 48.6 +3.5**
ETSF *e*Sn **Sn** **02 00 16.4 -4.6**
comp=N,9.4nm,0.2s
TIO Tiouine 8.67 159 Pn **Pn** **01 58 48.4 +2.4**
TIO Tiouine 8.67 159 P **Pn** **01 58 49.4 +3.4**
TIO Tiouine 8.67 159 S Sn 02 00 19.6 -3.0
ERTA Horta de San J 8.74 74 P **Pn** **01 58 49.6 +2.8**
ERTA S **Sn** **02 00 20.3 -3.7**
ERTA *i* IVmb_Lg 02 00 28.5
GOLM Goulmima 8.80 145 P **Pn** **01 58 50.7 +3.0**
GOLM Goulmima 8.80 145 S Sn **02 00 23.3 -2.5**
OUZM OUZ 8.83 157 P **Pn** **01 58 50.4 +2.2**
OUZM OUZ 8.83 157 S Sn **02 00 24.7 -1.9**
EPF Esparros 9.28 62 *e*Pn **Pn** **01 58 57.7 +3.5**
EPF *e*Sn **Sn** **02 00 33.5 -3.8**
comp=N,11nm,0.3s
TZRR Tazzarine 9.36 151 P Pn **01 58 57.4 +2.0**
TZRR Tazzarine 9.36 151 S Sn 02 00 34.8 -4.5
EPOB Poblet 9.36 72 P **Pn** **01 58 57.3 +2.0**
EPOB S **Sn** **02 00 33.7 -5.6**
ZGR Zagora 9.94 153 P **Pn** **01 59 06.1 +2.7**
LFF La Frestale 10.37 52 *e*Pn **Pn** **01 59 12.3 +3.3**
LFF *e*Sn **Sn** **02 00 59.6 -4.3**
comp=N,2.8nm,0.2s
QUIF Quistinic 10.39 30 *e*Pn **Sn** **01 59 11.7 +2.4**
QUIF *e*Sn Sn 02 00 56.1 -8.3
comp=N,9.5nm,0.5s
MTLF Montolieu 10.67 63 *e*Pn **Pn** **01 59 16.6 +3.4**
MTLF *e*Sn **Sn** **02 01 04.5 -6.9**
comp=N,6.0nm,0.4s
ROSF Rostrenen 10.70 28 *e*Pn **Pn** **01 59 15.6 +2.1**
ROSF *e*Sn **Sn** **02 01 07.9 -4.1**
comp=N,3.6nm,0.5s
MFF Saint Martin d 10.81 43 *e*Pn **Pn** **01 59 17.5 +2.4**
MFF *e*Sn **Sn** **02 01 10.4 -4.4**
comp=N,0.7nm,0.2s
MFF *e*Sn Sn 02 01 10.5 -4.3
comp=N,18nm,0.4s
SGMF Saint Gilles 10.90 30 *e*Pn **Pn** **01 59 18.3 +2.0**
SGMF *e*Sn **Sn** **02 01 12.3 -4.7**
comp=N,5.7nm,0.3s
RJF Les Rejaudoux 11.03 52 *e*Pn **Pn** **01 59 20.0 +2.0**
RJF *e*Sn **Sn** **02 01 14.2 -5.8**
comp=N,11nm,0.2s
CAF Calviac 11.19 55 *e*Pn **Pn** **01 59 22.5 +2.2**
GRR Gorron 11.72 35 *e*Pn **Pn** **01 59 30.0 +2.5**
GRR *e*Sn **Sn** **02 01 30.5 -6.4**
comp=N,7.3nm,0.5s
TCF Toulx Ste Croi 11.95 49 *e*Pn **Pn** **01 59 33.0 +2.3**
TCF *e*Sn **Sn** **02 01 36.8 -5.8**
comp=N,2.2nm,0.2s
LASF Ste Croix 12.04 61 *e*Pn **Pn** **01 59 35.8 +3.9**
LASF *e*Sn **Sn** **02 01 37.7 -7.1**
comp=N,0.7nm,0.2s
FLN La Foliniere 12.16 34 *e*Pn **Pn** **01 59 35.5 +1.9**
LDF La Druitiere 12.20 36 *e*Pn **Pn** **01 59 36.3 +2.3**
LDF *e*Sn **Sn** **02 01 43.2 -5.5**
comp=N,2.9nm,0.4s
BGF Bois d'Agland 12.46 49 *e*Pn **Pn** **01 59 39.6 +1.9**
BGF *e*Sn **Sn** **02 01 48.6 -6.6**
comp=N,3.1nm,0.3s
HYF Humbligny 12.74 46 *e*Pn **Pn** **01 59 44.7 +3.3**
HYF *e*Sn **Sn** **02 01 57.1 -4.8**
comp=N,16nm,0.4s
VIVF Saint-Julien-l 12.85 59 *e*Pn **Pn** **01 59 47.3 +4.2**
VIVF *e*Sn **Sn** **02 02 00.1 -4.7**
comp=N,2.0nm,0.3s
AVF Avril sur Loir 12.88 49 *e*Pn **Pn** **01 59 45.5 +2.1**
AVF *e*Sn **Sn** **02 01 58.6 -6.8**
comp=N,0.9nm,0.2s
SMF Signal de Mont 13.10 50 *e*Pn **Pn** **01 59 48.6 +2.2**
SMF *e*Sn **Sn** **02 02 05.1 -5.6**
comp=N,1.6nm,0.3s
SSF Saint Saulge 13.12 48 *e*Pn **Pn** **01 59 47.8 +1.2**
SSF *e*Sn **Sn** **02 02 04.5 -6.6**
comp=N,4.0nm,0.5s
LOR Lormes 13.43 48 *e*Pn **Pn** **01 59 53.7 +2.8**
baz=238
LOR *e*Sn **Sn** **02 02 12.8 -6.0**
comp=N,1.6nm,0.3s
ORIF Oris-en-Rattie 13.68 60 *e*Pn **Pn** **01 59 59.1 +4.7**
ORIF *e*Sn **Sn** **02 02 19.4 -5.7**
comp=N,1.7nm,0.4s
LPL La Plagne 14.45 58 *e*Pn **Pn** **02 00 09.1 +4.1**
SFTF Sexfontaines 14.60 46 *e*Pn **Pn** **02 00 09.2 +2.4**
baz=232
MEZF Maizieres J'vi 14.77 45 *e*Pn **Pn** **02 00 12.5 +3.4**
baz=237
SAVF Savonnieres en 14.88 45 *e*Pn **Pn** **02 00 12.3 +1.8**
PAGF Fort de Pagny 15.18 46 *e*Pn **Pn** **02 00 16.5 +2.0**
baz=238
BAIF Baives 15.27 39 *e*Pn **Pn** **02 00 17.7 +2.1**
BAIF *e*Sn **Sn** **02 02 58.2 -5.2**
comp=N,1.3nm,0.3s
GIVF Givet 15.60 40 *e*Pn **Pn** **02 00 22.6 +2.6**
CDF Champ du Feu 15.99 49 *e*Pn **Pn** **02 00 29.2 +4.0**

*NEIC **08** 02:01:15.4±2.4, 30°.61N±0°.07×140°.8E±0°.1, h44km±9km, mb4.5/5, Error ellipse: s-maj=15.7km s-min=9.8km az=77.0*
*IDC **08** 02:01:16.6±2.9, 30°.55N×140°.20E, h52km±25km, mb3.6/12, mbtmp3.8/15, ML3.1/3, MS3.4/4, Error ellipse: s-maj=21.6km s-min=18.2km az=103.0*
ISC 08 02:01:14.8±0.6, **30°.56N**±0°.09×**140°.3E**±0°.1, **h35**km, **n45,** σ1°**38**/35, **mb4.0**/16, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.58**	**350**	Pn	**Pn**	**02 01 55.1**	**+0.9**
JHJ	**Hachijo jima 2**	**2.60**	**350**	P	**Pn**	**02 01 56.6**	**+2.3**
	11nm,0.3s,baz=104,slow=19,SNR=2.4						
	142nm,0.8s						
JCJ	**Chichijima**	**3.81**	**154**	Pn	**Pn**	**02 02 10.3**	**-0.8**
JCJ	**Chichijima**	**3.81**	**154**	P	Pn	02 02 02.2	-8.9
	51nm,0.6s,baz=300,slow=20,SNR=6.1						
JCJ				S	Sn	02 02 44.2	-11
	87nm,0.8s,baz=294,slow=20,SNR=2.2						
JGF	**Kuroka**	**5.62**	**334**	Pn	**Pn**	**02 02 38.6**	**+2.7**
MJAR	**Matsushiro Art**	**6.23**	**344**	P	**Pn**	**02 02 46.2**	**+1.9**
	0.2nm,0.3s,baz=161,slow=13,SNR=7.2						
	2.7nm,0.6s						
JMM	**Marumori**	**7.30**	**3**	Pn	**Pn**	**02 02 57.5**	**-1.5**
JNU	**Nakatsue**	**8.44**	**290**	P	**Pn**	**02 03 13.6**	**-1.0**
	0.3nm,0.3s,baz=165,slow=22,SNR=2.1						
JNU				LR	LR	02 06 36.9	
	comp=Z,217nm,18.7s,baz=114,slow=38						
	13nm,1.1s						
KSRS	**Korea Array**	**12.38**	**307**	P	**Pn**	**02 04 12.3**	**+3.9**
	4.6nm,0.9s,baz=117,slow=13,SNR=7.1						
GUMO	**Guam**	**17.40**	**165**	LR	LR	02 11 41.1	
	comp=Z,78nm,19.5s,baz=350,slow=36						
H11N2	**WAKE ISLAND Hy**	**26.29**	**108**	T	T	02 34 09.3	
	baz=300,slow=75,SNR=886						
H11N1	**WAKE ISLAND Hy**	**26.29**	**108**	T	T	02 34 09.6	
	baz=300,slow=75,SNR=133						
H11N3	**WAKE ISLAND Hy**	**26.31**	**108**	T	T	02 34 10.6	
	baz=300,slow=75,SNR=157						
H11S3	**WAKE ISLAND Hy**	**26.74**	**111**	T	T	02 34 52.7	
	baz=302,slow=74,SNR=107						
H11S1	**WAKE ISLAND Hy**	**26.75**	**111**	T	T	02 34 53.0	
	baz=302,slow=74,SNR=119						
H11S2	**WAKE ISLAND Hy**	**26.76**	**111**	T	T	02 34 53.3	
	baz=302						
SONM	**Songino Array**	**31.13**	**313**	P	**P**	**02 07 28.6**	**-1.6**
	0.5nm,0.6s,baz=114,slow=9.6,SNR=1.9						
	0.5nm,0.6s						
CHTO	**Chiang Mai**	**39.18**	**262**	P	**P**	**02 08 40.0**	**+0.4**
CHTO				IAmb	IAmb	02 08 42.2	
	comp=Z,6.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.33**	**262**	P	**P**	**02 08 41.1**	**+0.2**
	comp=Z,2.0nm,0.3s,baz=63,slow=8.5,SNR=6.4						
CMAR				LR	LR	02 25 28.7	
	comp=Z,31nm,19.0s,baz=105,slow=37						
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**45.83**	**317**	PcP	**PcP**	**02 11 09.3**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=141,slow=5.0,SNR=3.7						
MKAR	**Makanchi Array**	**47.06**	**307**	P	**P**	**02 09 42.0**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=83,slow=12,SNR=2.7						
MKAR				PcP	**PcP**	**02 11 14.7**	**0.0**
	comp=Z,0.7nm,0.8s,baz=84,slow=5.1,SNR=4.0						
	comp=Z,0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**49.49**	**312**	P	**P**	**02 10 00.6**	**-1.0**
	comp=Z,1.0nm,0.2s,baz=82,slow=7.6,SNR=1.2						
KURBB				PcP	**PcP**	**02 11 22.3**	**-1.0**
	comp=Z,0.5nm,0.2s,baz=97,slow=4.8,SNR=1.8						
WB0	**Warramunga Arr**	**50.36**	**187**	P	**P**	**02 10 08.5**	**0.0**
FITZ	**Fitzroy Crossi**	**50.40**	**198**	P	**P**	**02 10 10.9**	**+2.1**
WR8	**Warramunga Arr**	**50.53**	**187**	P	**P**	**02 10 08.7**	**-1.1**
WR8				IAmb	IAmb	02 10 40.5	
	comp=Z,6.8nm,1.3s						
WRA	**Warramunga Arr**	**50.54**	**187**	P	**P**	**02 10 08.6**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=5.0,slow=7.5,SNR=8.3						
WRA				PcP	**PcP**	**02 11 27.8**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=4.3,slow=3.8,SNR=5.6						
	comp=Z,0.7nm,0.6s						
ASAR	**Alice Springs**	**54.27**	**187**	P	**P**	**02 10 37.3**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=9.8,slow=6.8,SNR=3.4						
	comp=Z,0.3nm,0.3s						
BVAR	**Borovoye Array**	**54.42**	**316**	P	**P**	**02 10 38.9**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=86,slow=10,SNR=2.5						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**55.49**	**30**	P	**P**	**02 10 46.4**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=269,slow=7.5,SNR=15						
	comp=Z,2.0nm,0.9s						
SCRK	**Sand Creek**	**56.77**	**31**	P	**P**	**02 10 55.8**	**+0.7**
SCRK				IAmb	IAmb	02 10 57.0	
	comp=Z,3.2nm,0.9s						
BCAR	**Beaver Creek A**	**57.80**	**32**	P	**P**	**02 11 04.4**	**+1.9**
ABKAR	**Akbulak array**	**61.54**	**313**	P	**P**	**02 11 28.2**	**-0.1**
FINES	**FINESS Array B**	**74.14**	**333**	P	**P**	**02 12 47.3**	**0.0**
	comp=Z,2.0nm,1.0s,baz=63,slow=5.2,SNR=3.9						
	comp=Z,2.0nm,1.0s						
RAR	**Rarotonga**	**77.19**	**124**	LR	LR	02 39 28.2	
	comp=Z,53nm,21.2s,baz=264,slow=30						
NVAR	**Mina Array Bea**	**79.65**	**52**	P	**P**	**02 13 19.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=297,slow=5.7,SNR=5.4						
	comp=Z,0.2nm,0.5s						
NOA	**NORSAR Array B**	**79.80**	**337**	P	**P**	**02 13 17.9**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=44,slow=5.4,SNR=2.6						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**82.48**	**312**	P	**P**	**02 13 32.9**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=66,slow=3.5,SNR=4.6						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**94.80**	**52**	P	**P**	**02 14 32.1**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=312,slow=5.8,SNR=6.4						
	comp=Z,1.1nm,0.7s						
H06E1	**SOCORRO T-PHAS**	**95.78**	**64**	T	T	04 01 10.1	
	SNR=3.8						
SNAA	**Sanae**	**134.29**	**195**	PKP	**PKPdf**	**02 20 27.3**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=217,slow=18,SNR=3.7						
H03N2	**Juan Fernandez**	**146.71**	**105**	T	T	05 04 41.3	
	baz=280,slow=75,SNR=33						
H03N3	**Juan Fernandez**	**146.72**	**105**	T	T	05 04 52.9	
	baz=280,slow=75,SNR=41						
H03N1	**Juan Fernandez**	**146.73**	**105**	T	T	05 04 42.9	
	baz=280,slow=75,SNR=31						
LPAZ	**La Paz**	**150.38**	**68**	PKPbc	**PKPbc**	**02 21 03.9**	**0.0**
	comp=Z,0.4nm,0.4s,baz=270,slow=2.0,SNR=4.2						
PLCA	**Paso Flores**	**153.05**	**121**	PKPbc	**PKiKP**	**02 21 10.1**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=248,slow=11,SNR=3.8						

*IDC **08** 02:03:33.7±1.4, 38°.84N×109°.74E, h0km, mb3.6/5, mbtmp3.6/8, ML3.8/3, MS3.7/1, Error ellipse: s-maj=26.7km s-min=20.8km az=101.0*
ISC 08 02:03:38.7±1.1, **38°.9N**±0°.1×**109°.7E**±0°.1, **h35**km, **n9,** σ0°**94**/8, **mb3.6**/5, **Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**5.57**	**241**	Pn	**Pn**	**02 04 59.4**	**-0.1**
	baz=51,slow=17						
LZDM				Lg	Lg	02 06 31.2	
	baz=56,slow=14						
	1.3nm,0.3s						
SONM	**Songino Array**	**9.29**	**346**	Pn	**Pn**	**02 05 50.1**	**-0.1**
	0.3nm,0.3s,baz=168,slow=14,SNR=9.2						
	2.4nm,0.7s						
HILR	**Hailar Array B**	**12.89**	**31**	Pn	**Pn**	**02 06 39.8**	**+0.4**
	baz=225,slow=14						
	1.3nm,0.4s						
MKAR	**Makanchi Array**	**21.52**	**300**	P	**P**	**02 08 23.7**	**-0.8**
	0.8nm,0.9s,baz=102,slow=11,SNR=5.0						
	0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**22.37**	**208**	P	**P**	**02 08 35.3**	**+1.4**
	1.7nm,0.3s,baz=20,slow=10,SNR=6.8						
	1.7nm,0.3s						
ZALV	**Zalesovo Beam**	**22.67**	**320**	P	**P**	**02 08 37.6**	**+0.8**
	0.7nm,0.3s,baz=111,slow=6.5,SNR=1.9						
	0.7nm,0.3s						
JCJ	**Chichijima**	**29.53**	**104**	LR	LR	02 20 48.8	
	comp=Z,151nm,21.1s,baz=9.5,slow=35						
AKASG	**Malin Array Be**	**55.63**	**311**	P	**P**	**02 13 10.6**	**-0.3**
	0.2nm,0.4s,baz=56,slow=5.7,SNR=1.9						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**62.89**	**154**	P	**P**	**02 14 00.5**	**-0.9**
	0.6nm,0.9s,baz=344,slow=6.6,SNR=3.4						
	0.6nm,0.9s						

*IDC **08** 02:05:50.9±3.1, 30°.45N×140°.08E, h52km±26km, mb3.4/13, mbtmp3.6/16, ML3.0/3, Error ellipse: s-maj=24.3km s-min=20.0km az=100.0*
ISC 08 02:05:48.9±0.8, **30°.4N**±0°.1×**140°.2E**±0°.1, **h35**km, **n25,** σ1°**04**/18, **mb3.6**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.75**	**353**	P	**Pn**	**02 06 32.4**	**+1.8**
	7.0nm,0.3s,baz=229,slow=19,SNR=1.4						
	68nm,0.6s						
MJAR	**Matsushiro Arr**	**6.36**	**346**	P	**Pn**	**02 07 19.7**	**-0.5**
	0.1nm,0.3s,baz=159,slow=10,SNR=4.6						
	1.4nm,0.6s						
KSRS	**Korea Array**	**12.38**	**308**	P	**Pn**	**02 08 42.9**	**+0.4**
	0.3nm,0.3s,baz=119,slow=14,SNR=1.7						
	1.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**26.36**	**107**	T	T	02 38 41.2	
	baz=300,slow=75,SNR=380						
H11N1	**WAKE ISLAND Hy**	**26.37**	**108**	T	T	02 38 41.4	
	baz=300,slow=75,SNR=158						
H11N3	**WAKE ISLAND Hy**	**26.38**	**107**	T	T	02 38 42.4	
	baz=300,slow=75,SNR=195						
H11S3	**WAKE ISLAND Hy**	**26.81**	**110**	T	T	02 39 21.0	
	baz=303,slow=74,SNR=51						
H11S1	**WAKE ISLAND Hy**	**26.81**	**110**	T	T	02 39 21.3	
	baz=303,slow=74,SNR=97						
H11S2	**WAKE ISLAND Hy**	**26.83**	**110**	T	T	02 39 18.0	
	baz=303,slow=74,SNR=44						
CMAR	**Chiang Mai Arr**	**39.17**	**262**	P	**P**	**02 13 14.8**	**+1.2**
	0.8nm,0.8s,baz=86,slow=10,SNR=1.3						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**47.06**	**307**	P	**P**	**02 14 15.8**	**-1.3**
	0.2nm,0.6s,baz=94,slow=12,SNR=2.2						
MKAR				PcP	**PcP**	**02 15 48.3**	**-0.5**
	0.4nm,0.8s,baz=90,slow=2.9,SNR=2.4						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**49.51**	**313**	P	**P**	**02 14 33.9**	**-1.9**
	0.2nm,0.2s,baz=90,slow=5.9,SNR=2.1						
	0.2nm,0.2s						
WRA	**Warramunga Arr**	**50.34**	**187**	P	**P**	**02 14 42.0**	**-0.5**
	0.7nm,0.7s,baz=8.0,slow=7.8,SNR=3.8						
WRA				PcP	**PcP**	**02 16 01.5**	**+0.7**
	0.8nm,0.9s,baz=8.4,slow=3.7,SNR=2.9						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**54.07**	**187**	P	**P**	**02 15 10.6**	**+0.4**
	0.5nm,0.8s,baz=15,slow=15,SNR=5.0						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**55.72**	**30**	P	**P**	**02 15 21.8**	**+0.2**
	0.4nm,0.8s,baz=267,slow=6.6,SNR=4.5						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**74.23**	**333**	P	**P**	**02 17 21.3**	**-0.6**
	0.9nm,0.6s,baz=66,slow=4.9,SNR=3.6						
	0.9nm,0.6s						
KBZ	**Khabaz**	**74.50**	**312**	P	**P**	**02 17 24.0**	**+0.2**
	1.4nm,0.8s,baz=66,slow=7.3,SNR=5.8						
	1.4nm,0.8s						
AKASG	**Malin Array Be**	**78.94**	**323**	P	**P**	**02 17 47.7**	**-1.0**
	0.2nm,0.3s,baz=54,slow=1.6,SNR=2.2						
	0.2nm,0.3s						
NVAR	**Mina Array Bea**	**79.87**	**51**	P	**P**	**02 17 55.3**	**+0.9**
	0.1nm,0.3s,baz=307,slow=5.4,SNR=2.8						
	0.1nm,0.3s						
BRTR	**Keskin Array B**	**82.50**	**312**	P	**P**	**02 18 07.6**	**-0.6**
	0.5nm,0.8s,baz=76,slow=4.0,SNR=3.7						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**83.11**	**44**	P	**P**	**02 18 10.3**	**-1.1**
	0.3nm,0.7s,baz=319,slow=8.3,SNR=2.1						
	0.3nm,0.7s						
TXAR	**Lajitas Array**	**95.02**	**52**	P	**P**	**02 19 09.2**	**+0.8**
	0.6nm,0.8s,baz=325,slow=7.0,SNR=3.6						
	0.6nm,0.8s						
H03N2	**Juan Fernandez**	**146.79**	**106**	T	T	05 09 15.3	
	baz=280,slow=75,SNR=33						
H03N3	**Juan Fernandez**	**146.80**	**106**	T	T	05 09 16.2	
	baz=280,slow=75,SNR=34						
H03N1	**Juan Fernandez**	**146.81**	**106**	T

VNDA	**Vanda**	57.91	166	P		P	02 16 29.5	+1.6
	0.4nm,0.8s,baz=235,slow=1.5,SNR=2.0							
	0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	68.85	307	P		P	02 17 41.1	-0.1
	1.7nm,0.5s,baz=134,slow=4.2,SNR=0.9							
	1.7nm,0.5s							
ASAR	**Alice Springs**	70.02	105	P		P	02 17 49.3	+0.8
	0.4nm,0.7s,baz=242,slow=5.4,SNR=5.2							
	0.4nm,0.7s							
CMAR	**Chiang Mai Arr**	71.13	47	P		P	02 17 53.9	-1.2
	1.0nm,0.2s,baz=218,slow=6.0,SNR=1.4							
	1.0nm,0.2s							
WRA	**Warramunga Arr**	72.41	102	P		P	02 18 02.7	-0.3
	0.4nm,0.8s,baz=241,slow=5.3,SNR=3.2							
	0.4nm,0.8s							
KURBB	**Kurchatov Arra**	90.78	17	P		P	02 19 40.1	+1.1
	0.5nm,0.6s,baz=219,slow=4.4,SNR=5.1							
	0.5nm,0.6s							
ILAR	**Eielson Array**	150.46	16	PKPbc		PKPbc	02 26 25.6	-1.4
	1.0nm,0.9s,baz=319,slow=3.5,SNR=7.8							

*IDC **08** 02:07:07.2±0.9, 37.°33S×51.°49E, h0km, mb4.1/9, mbtmp4.1/9, MS3.7/1, Error ellipse: s-maj=31.8km s-min=21.8km az=100.0*

ISC 08 02:07:08.6±0.8, 37.°4S±0.°1×51.°5E±0.°2, h10km, n23, σ1℘22/16, mb4.1/8, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N1	**CROZET ISLANDS**	8.75	179	Pn	Pn	02 09 13.9	-1.1
H04N1				T	T	02 18 07.0	
	baz=357,slow=76						
H04N2	**CROZET ISLANDS**	8.76	178	Pn	Pn	02 09 13.6	-1.4
H04N2				T	T	02 18 05.7	
	baz=357,slow=76						
H04N3	**CROZET ISLANDS**	8.77	179	Pn	Pn	02 09 13.7	-1.5
H04N3				T	T	02 18 06.3	
	baz=357,slow=76						
H04S3	**CROZET ISLANDS**	9.43	178	Pn	Pn	02 09 23.4	-0.8
H04S1	**CROZET ISLANDS**	9.44	178	Pn	Pn	02 09 23.3	-1.1
H04S2	**CROZET ISLANDS**	9.45	178	Pn	Pn	02 09 23.5	-1.0
MAW	**Mawson**	30.93	172	P	P	02 13 26.3	+1.1
	2.9nm,1.0s,baz=331,slow=11,SNR=3.7						
	2.9nm,1.0s						
H08S1	**Diego Carcia H**	35.23	38	T	T	02 51 13.7	
	baz=211,slow=76						
H08S2	**Diego Garcia H**	35.24	38	T	T	02 51 12.7	
	baz=209						
H08S3	**Diego Garcia H**	35.25	38	T	T	02 51 13.3	
	baz=205,slow=76						
SNAA	**Sanae**	43.88	202	P	P	02 15 14.6	-0.3
	2.8nm,1.0s,baz=60,slow=9.8,SNR=7.0						
	2.8nm,1.0s						
FURI	**Furi**	47.59	343	LR	LR	02 32 21.7	
	comp=Z,98nm,21.2s,baz=145,slow=32						
H01W2	**Cape Leeuwin H**	49.83	107	T	T	03 09 15.1	
	baz=247,slow=75						
H01W3	**Cape Leeuwin H**	49.84	107	T	T	03 09 15.7	
	baz=247,slow=75						
H01W1	**Cape Leeuwin H**	49.85	107	T	T	03 09 16.4	
	baz=247,slow=75						
QSPA	**South Pole Qui**	52.78	180	P	P	02 16 25.3	+1.5
	5.7nm,0.9s,baz=268,slow=4.5,SNR=7.6						
	5.7nm,0.9s						
VNDA	**Vanda**	57.99	166	P	P	02 17 01.1	+0.3
	0.6nm,0.7s,baz=243,slow=2.3,SNR=3.6						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	68.64	307	P	P	02 18 12.9	+0.7
	1.4nm,0.4s,baz=122,slow=3.8,SNR=2.5						
	1.4nm,0.4s						
ASAR	**Alice Springs**	70.28	105	P	P	02 18 22.2	-0.2
	1.4nm,0.8s,baz=237,slow=6.2,SNR=7.9						
	1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	71.31	48	P	P	02 18 29.6	+1.1
	0.7nm,0.3s,baz=217,slow=6.8,SNR=4.8						
	0.7nm,0.3s						
WRA	**Warramunga Arr**	72.66	102	P	P	02 18 37.0	+0.2
	1.2nm,0.7s,baz=236,slow=6.1,SNR=6.5						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	90.84	17	P	P	02 20 09.6	-2.1
	0.3nm,0.7s,baz=202,slow=3.9,SNR=5.6						
	0.3nm,0.7s						
ILAR	**Eielson Array**	150.51	16	PKPbc	PKiKP	02 26 59.3	-1.0
	1.3nm,0.9s,baz=308,slow=2.4,SNR=6.7						

*IDC **08** 02:18:28.5±1.0, 30.°51N×139.°74E, h0km, mb3.8/7, mbtmp3.7/9, ML2.4/2, MS3.4/4, Error ellipse: s-maj=30.7km s-min=20.3km az=98.0*

ISC 08 02:18:33.7±0.9, 30.°54N±0.°10×139.°6E±0.°2, h35km, n23, σ1℘15/11, mb3.8/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	2.58	3	Pn	Pn	02 19 13.3	+0.3
	4.1nm,0.3s,baz=246,slow=22,SNR=1.8						
JHJ				Sn	Sn	02 19 44.0	+0.9
	9.0nm,0.3s,baz=253,slow=19,SNR=1.4						
	106nm,0.7s						
JCJ	**Chichijima**	4.09	146	Pn	Pn	02 19 20.3	-13
	7.3nm,0.3s,baz=305,slow=18,SNR=1.4						
JCJ				Sn	Sn	02 20 02.8	-18
	5.3nm,0.3s,baz=302,slow=18,SNR=1.8						
MJAR	**Matsushiro Arr**	6.11	349	Pn	Pn	02 19 59.5	-2.0
	baz=164,slow=13,SNR=4.1						
	1.0nm,0.3s						
JNU	**Nakatsue**	7.89	291	LR	LR	02 23 01.9	
	comp=Z,185nm,18.5s,baz=123,slow=34						
GUMO	**Guam**	17.54	163	LR	LR	02 28 02.7	
	comp=Z,54nm,19.4s,baz=222,slow=33						
H11N2	**WAKE ISLAND Hy**	26.85	107	T	T	02 51 27.9	
	baz=300,slow=75,SNR=159						
H11N1	**WAKE ISLAND Hy**	26.85	107	T	T	02 51 27.8	
	baz=300,slow=75,SNR=123						
H11N3	**WAKE ISLAND Hy**	26.87	107	T	T	02 51 28.8	
	baz=300,slow=75,SNR=184						
H11S3	**WAKE ISLAND Hy**	27.29	110	T	T	02 52 00.9	
	baz=300,slow=75						
H11S1	**WAKE ISLAND Hy**	27.30	110	T	T	02 52 01.4	
	baz=300,slow=75						
H11S2	**WAKE ISLAND Hy**	27.31	110	T	T	02 52 02.2	
	baz=300,slow=75						
SONM	**Songino Array**	30.71	314	P	P	02 24 45.5	+0.1
	0.3nm,0.4s,baz=106,slow=9.1,SNR=1.8						
	0.3nm,0.4s						
CMAR	**Chiang Mai Arr**	38.74	262	P	P	02 25 55.3	+0.5
	0.8nm,0.3s,baz=66,slow=9.0,SNR=4.2						
	0.8nm,0.3s						
BRDH	**Bariadhala**	43.36	272	LR	LR	02 44 39.9	
	comp=Z,74nm,18.4s,baz=216,slow=36						
WRA	**Warramunga Arr**	50.45	186	P	P	02 27 27.2	-0.8
	0.7nm,0.7s,baz=7.0,slow=7.5,SNR=4.9						
WRA				PcP	PcP	02 28 46.8	+0.8
	0.4nm,0.7s,baz=5.0,slow=3.8,SNR=5.2						
	0.7nm,0.7s						
ILAR	**Eielson Array**	55.81	30	P	P	02 28 05.4	-1.6
	0.6nm,0.9s,baz=264,slow=7.4,SNR=2.9						
	0.6nm,0.9s						
FINES	**FINESS Array B**	73.88	333	P	P	02 30 05.7	+1.1
	0.9nm,0.8s,baz=67,slow=6.6,SNR=4.8						
	0.9nm,0.8s						
NEW	**Newport**	75.87	42	LR	LR	03 05 01.9	
	comp=Z,31nm,18.7s,baz=31,slow=37						
NVAR	**Mina Array Bea**	80.13	51	P	P	02 30 41.1	+0.5
	0.4nm,0.9s,baz=307,slow=5.4,SNR=4.4						
	0.4nm,0.9s						
TXAR	**Lajitas Array**	95.28	52	P	P	02 31 54.9	+0.4
	0.6nm,0.8s,baz=298,slow=3.5,SNR=3.9						
	0.6nm,0.8s						
H03N2	**Juan Fernandez**	147.28	105	T	T	05 22 00.7	
	baz=281,slow=75,SNR=12						
H03N3	**Juan Fernandez**	147.29	105	T	T	05 22 01.9	
	baz=281,slow=75,SNR=9.8						
H03N1	**Juan Fernandez**	147.29	105	T	T	05 22 02.5	
	baz=281,slow=75,SNR=8.7						

*BEO **08** 02:38:08.7±0.6, 40.°48N×20.°76E, h0km, ML2.7/11*
*TIR **08** 02:38:10.7, 40.°76N×20.°79E, h14km±1km, Ml2.9/3*
*THE **08** 02:38:11.8, 41.°N±2.°×2.°1E±.°, h0km±1km, M3.0/18, MLh3.0/18*
*SKO **08** 02:38:11.1, 40.°56N×20.°66E, h0km*
*ATH **08** 02:38:12.2, 40.°73N×20.°81E, h5km±1km, ML3.0/7, Manual Solution by A.Moschou First location: 2019/11/08 02:39:26, This location: 2020/10/22 06:35:48 ML*
Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km

ISC 08 02:38:12.2±0.8, 40.°67N±0.°02×20.°75E±0.°02, h11km±5km, n87, σ1℘46/124, 4C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	0.05	144	⇑Pg	Pg	02 38 13.4	-1.1
KBN				Sg	Sg	02 38 17.9	+1.8
KBN	**Korca**	0.05	144	P	Pg	02 38 13.1	-1.4
KBN				S	Sg	02 38 17.9	+1.8
NEST	**Nestorio**	0.34	137	⇑Pg	Pb	02 38 19.5	-0.9
NEST				Sg	Sb	02 38 24.8	-1.1
NEST				AML	AML	02 38 29.6	
	5.9nm,0.5s						
NEST	**Nestorio**	0.34	137	P	Pb	02 38 19.1	-1.2
NEST				S	Sb	02 38 26.5	+0.7
NEST	**Nestorio**	0.34	137	P	Pb	02 38 19.5	-0.9
OHR	**Ohrid**	0.45	5	i/Pg	Pb	02 38 21.3	-0.8
OHR				i Sg	Sb	02 38 28.9	+0.1
PENT	**Pentalofos**	0.56	147	P	Pb	02 38 22.8	-1.2
PENT				S	Sb	02 38 31.5	-0.5
PENT	**Pentalofos**	0.56	147	P	Pb	02 38 23.9	-0.2
PENT				S	Sb	02 38 32.0	-0.1
KZN	**Kozani**	0.86	114	P	Pb	02 38 28.8	-0.4
KZN				S	Sn	02 38 42.3	-0.6
KZN	**Kozani**	0.86	114	P	Pb	02 38 28.6	-0.6
KZN				S	Sb	02 38 40.1	-0.6
TIR	**Tirane**	0.95	316	⇓Pg	Pg	02 38 28.4	-2.1
TIR				Sg	Sg	02 38 41.8	-1.1
TIR				AML	AML	02 38 51.4	
	1.3nm,0.8s						
TIR	**Tirane**	0.95	316	⇑i/Pg	Pg	02 38 28.2	-2.3
TIR				i Sg	Sg	02 38 42.9	0.0
VLO	**Vlora**	0.97	259	Pg	Pg	02 38 28.8	-2.1
VLO				Sg	Sb	02 38 44.4	+0.5
VLO				AML	AML	02 38 46.9	
	16nm,0.6s						
VLO	**Vlora**	0.97	259	P	Pg	02 38 29.2	-1.7
JAN	**Janina**	1.01	175	P	Pg	02 38 30.0	-1.7
JAN	**Janina**	1.01	175	P	Pg	02 38 30.4	-1.3
JAN				S	Sn	02 38 47.0	+0.4
PRMD	**Pramanda**	1.17	167	P	Pg	02 38 33.5	-1.2
PRMD	**Pramanda**	1.17	167	P	Pb	02 38 34.2	-0.2
PRMD				S	Sn	02 38 52.9	+2.4
IGT	**Igoumenitsa**	1.18	196	Pn	Pg	02 38 33.4	-1.4
IGT				Sn	Sn	02 38 53.0	+2.4
IGT	**Igoumenitsa**	1.18	196	P	Pg	02 38 33.2	-1.6
IGT				S	Sn	02 38 51.3	+0.7
IGT	**Igoumenitsa**	1.18	196	i Pn	Pg	02 38 33.2	-1.6
IGT	**Igoumenitsa**	1.18	196	P	Pn	02 38 35.5	+0.9
IGT				S	Sn	02 38 52.0	+1.3
KEK	**Kerkira**	1.20	218	P	Pn	02 38 37.1	+2.2
KEK				S	Sn	02 38 53.9	+2.7
KEK	**Kerkira**	1.20	218	P	Pn	02 38 37.0	+2.2
KEK				S	Sn	02 38 54.1	+3.0
TETR	**Tetrakomo, Epi**	1.38	163	P	Pb	02 38 37.7	-0.4
TETR	**Tetrakomo, Epi**	1.38	163	P	Pb	02 38 38.7	+0.6
TETR				S	Sn	02 38 58.4	+2.5
SKO	**Skopje**	1.40	22	i Pn	Pn	02 38 37.8	0.0
LIT	**Litokhoron**	1.45	112	P	Pb	02 38 39.2	+0.1
LIT	**Litokhoron**	1.45	112	P	Pb	02 38 39.1	-0.1
LIT				S	Sn	02 38 59.1	+1.7
THL	**Klokotos Trika**	1.47	138	P	Pb	02 38 39.1	-0.4
THL				S	Sg	02 38 57.8	-1.7
THL	**Klokotos Trika**	1.47	138	P	Pb	02 38 39.1	-0.4
THL				S	Sn	02 38 58.9	+1.1
VAY	**Valandovo**	1.53	64	i Pn	Pg	02 38 40.8	-0.7
LRSO	**Larissa Observ**	1.61	128	P	Pg	02 38 41.6	-1.4
THE	**Thessaloniki**	1.69	90	Pn	Pn	02 38 41.5	-0.1
THE	**Thessaloniki**	1.69	90	P	Pn	02 38 42.2	+0.6
THE	**Thessaloniki**	1.69	90	i Pn	Pn	02 38 42.2	+0.6
KNT	**Kendrikon**	1.70	72	i Pn	Pn	02 38 42.4	+0.5
KNT	**Kendrikon**	1.70	72	P	Pn	02 38 41.8	0.0
KNT				S	Sn	02 39 03.8	+0.2
AMPL	**Ampelaki**	1.78	168	P	Pg	02 38 44.9	-1.4
HORT	**Hortiatis**	1.79	91	P	Pn	02 38 43.3	+0.2
EVR	**Evrytania**	1.93	155	P	Pb	02 38 47.4	0.0
NYDR	**Nydri-Lefkada**	1.95	181	P	Pn	02 38 46.0	+0.8
MAKR	**Makrakomi, Fth**	1.97	147	P	Pb	02 38 46.8	-1.3
PEHC	**Pehcevo**	1.97	55	i Pn	Pn	02 38 45.5	-0.1
SOH	**Sokhos**	1.99	85	P	Pn	02 38 46.4	+0.7
SOH	**Sokhos**	1.99	85	i Pn	Pn	02 38 46.9	+1.1
EVGI	**Lefkada island**	2.05	182	P	Pn	02 38 47.0	+0.5
AGG	**Agios Georgios**	2.05	143	P	Pn	02 38 47.3	+0.8
PVO	**Paravola**	2.13	163	P	Pb	02 38 50.1	-0.7
KKB	**Krupnik**	2.15	56	P	Pn	02 38 49.0	+1.1
KKB	**Krupnik**	2.15	56	i Pn	Pn	02 38 49.2	+1.1
SRS	**Serrai**	2.20	77	i Pn	Pn	02 38 49.4	+1.7
BOSS	**Bosilegrad**	2.24	35	ePn	Pn	02 38 50.0	+0.7
BOSS				eSn	Sn	02 39 18.8	+1.9
ANX	**Ano Chora**	2.26	156	P	Pb	02 38 53.0	-0.1
BARS	**Barje**	2.29	20	ePn	Pn	02 38 49.5	-0.4
BARS				eSn	Sn	02 39 20.1	+2.0
AXAR	**Agios Charalam**	2.41	142	P	Pn	02 38 52.3	+0.8
EFP	**Efpalio**	2.41	158	P	Pb	02 38 54.5	-1.1
MMB	**Musomishta**	2.43	68	P	Pn	02 38 52.5	+0.6
MMB	**Musomishta**	2.43	68	i Pn	Pn	02 38 52.5	+0.6
OUR	**Ouranopolis**	2.49	97	P	Pn	02 38 53.4	+0.8
VLS	**Valsamata**	2.49	183	P	Pn	02 38 52.0	-0.6
ATAL	**Atalanti**	2.64	138	P	Pn	02 38 55.5	+0.8
SJES	**Sjenica**	2.66	348	ePn	Pn	02 38 56.3	+1.3
SJES				eSn	Sn	02 39 30.7	+3.5
TREB	**Trebinje**	2.72	320	ePn	Pn	02 38 54.0	-1.8
TREB	**Trebinje**	2.72	320	ePn	Pn	02 38 54.6	-1.3
TREB				eSn	Sn	02 39 30.7	+2.0
KLV	**Kalavryta, Ach**	2.84	157	P	Pb	02 39 00.5	-2.4
GOCS	**Kraljevo Serbi**	2.89	2	ePn	Pn	02 38 59.7	+1.4
GOCS				eSn	Sn	02 39 34.5	+1.4
IVAS	**Ivanjica**	2.94	352	ePn	Pn	02 38 59.9	+1.0
IVAS				eSn	Sn	02 39 38.2	+4.0
ZAPS	**Zavoj**	2.96	28	ePn	Pn	02 39 00.0	+0.9
ZAPS				eSn	Sn	02 39 38.1	+3.4
KLINJ	**Klinje**	2.97	328	ePn	Pn	02 39 02.4	+3.0
BOVS	**Bovan**	3.05	13	ePn	Pn	02 38 59.4	-0.9
BOVS				eSn	Sn	02 39 39.2	+2.4
RUDO	**Rudo**	3.12	341	ePn	Pn	02 39 04.3	+3.0
RUDO	**Rudo**	3.12	341	ePn	Pn	02 39 02.2	+0.9
RUDO				eSn	Sn	02 39 40.8	+2.2
GRUS	**Gruza**	3.22	360	ePn	Pn	02 39 02.7	0.0
GRUS				eSn	Sn	02 39 43.6	+2.6
ZAGS	**Zajecar**	3.33	19	ePn	Pn	02 39 04.3	+0.1
ZAGS				eSn	Sn	02 39 45.4	+1.7
BBLS	**Lazi&#263i**	3.35	343	ePn	Pn	02 39 05.1	+0.6
BBLS				eSn	Sn	02 39 46.8	+2.5
DIVS	**Divibare**	3.47	351	ePn	Pn	02 39 06.9	+0.7
DIVS				eSn	Sn	02 39 50.0	+2.6
ATH	**Athens Observa**	3.54	138	P	Pn	02 39 08.1	+1.0
ATHU	**Athens Univers**	3.58	138	P	Pn	02 39 08.7	+1.0
KUBS	**Kucevo**	3.81	10	ePn	Pn	02 39 09.0	-1.7
TEKS	**Tekeris**	3.98	347	ePn	Pn	02 39 12.8	-0.4
VRSS	**Vrsac**	4.47	5	ePn	Pn	02 39 18.5	-1.4
FRGS	**Fruska Gora**	4.54	352	ePn	Pn	02 39 20.1	-0.7
BLY	**Banja Luka**	4.85	328	ePn	Pn	02 39 24.3	-0.8
BLY	**Banja Luka**	4.85	328	ePn	Pn	02 39 24.7	-0.4
MORH	**Mrgy, Hungar**	5.75	345	ePn	Pn	02 39 37.3	-0.1
AQU	**L'Aquila**	5.76	289	ePn	Pn	02 39 36.1	-1.6

IDC 08 02:47:16.2±12.0, 15.°98S×175.°95W, h281km±113km, mb3.1/4, mbtmp3.8/4, Error ellipse: s-maj=43.0km s-min=33.5km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	47.32	257	P	P	02 55 21.9	-0.6
	0.4nm,0.6s,baz=95,slow=8.1,SNR=4.8						
WRA				PcP	PcP	02 56 48.1	-0.6
	0.5nm,0.6s,baz=95,slow=3.1,SNR=2.9						
	0.4nm,0.6s						
ASAR	**Alice Springs**	47.59	252	P	P	02 55 24.8	+0.2
	0.9nm,0.3s,baz=93,slow=7.5,SNR=18						
ASAR				PcP	PcP	02 56 47.8	-1.8
	0.2nm,0.7s,baz=82,slow=3.9,SNR=1.7						
	0.9nm,0.3s						
QSPA	**South Pole Qui**	74.07	180	P	P	02 58 22.0	+0.5
	0.7nm,0.3s,baz=9.3,slow=5.5,SNR=3.8						
	0.7nm,0.3s						
NVAR	**Mina Array Bea**	76.41	43	P	P	02 58 35.0	-0.3
	0.3nm,0.7s,baz=230,slow=3.2,SNR=2.4						
	0.3nm,0.7s						
BRTR	**Keskin Array B**	145.00	318	PKPbc	PKPdf	03 06 20.5	0.0
	0.5nm,0.7s,baz=48,slow=2.1,SNR=5.1						

*IDC **08** 02:55:06.0±1.2, 60.°21N×153.°05W, h91km±13km, mb3.5/11, mbtmp3.9/15, MS2.8/1, Error ellipse: s-maj=16.8km s-min=9.7km az=98.0*
*NEIC **08** 02:55:09.0±1.4, 60.°18N±0.°04×152.°92W±0.°06, h119km±4km, Error ellipse: s-maj=5.3km s-min=4.5km az=159.0*
*AEIC **08** 02:55:09.7±0.9, 60.°12N±0.°04×152.°82W±0.°08, h118km±3km, ML3.4, ML3.5/189(NEIC), Error ellipse: s-maj=6.1km s-min=5.0km az=115.0*

ISC 08 02:55:08.3±0.6, 60.°11N±0.°03×152.°83W±0.°03, h123km±5km, n211, σ0℘98/190, mb3.9/11, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O20K	**Slope Mountain**	0.11	107		Pn	02 55 25.5	+0.3
O20K					Sn	02 55 38.3	+0.3
IVE	**Iliamna Volcan**	0.13	223		Pn	02 55 25.2	-0.1
ILS	**Iliamna Low So**	0.20	217		Pn	02 55 25.3	-0.1
ILS					Sn	02 55 38.4	+0.1
ILSW	**Iliamna Southw**	0.20	230		Pn	02 55 25.2	-0.3
ILSW				Sn	Sn	02 55 38.8	+0.4
ILSW				IAML		02 55 39.1	
	comp=E,1μm,0.4s						
ILSW				IAML		02 55 39.6	
	comp=N,946nm,0.4s						
RED	**Redoubt Volcan**	0.31	6		Pn	02 55 25.8	+0.1
RED				Sn	Sn	02 55 38.2	-0.7
RED				IAML		02 55 38.9	
	comp=N,675nm,0.5s						
RED				IAML		02 55 39.0	
	comp=E,1μm,0.9s						
RDSO	**Redoubt South**	0.34	7		Pn	02 55 25.9	-0.1
RDWB	**Redoubt West**	0.38	360		Pn	02 55 26.0	-0.1
NCT	**North Crescent**	0.45	354		Pn	02 55 26.5	+0.1
NCT					Sn	02 55 39.5	-0.6
RDJH	**Redoubt Jeurge**	0.48	2		Pn	02 55 26.5	-0.1
DFR	**Drift River**	0.49	9		Pn	02 55 26.5	-0.1
DFR					Sn	02 55 39.7	-0.7
OPT	**Oil Point**	0.50	204		Pn	02 55 27.1	+0.4
P19K	**Oil Pt**	0.50	204		Pn	02 55 27.1	+0.4
P19K				Sn	Sn	02 55 40.0	-0.4
O19K	**Port Alsworth**	0.75	277		Pn	02 55 28.4	+0.1
O19K				Sn	Sn	02 55 42.8	-0.6
HOM	**Homer**	0.75	127		Pn	02 55 29.2	+0.8
HOM	**Homer**	0.75	127		Sn	02 55 44.7	+1.2
AU22	**Augustine Moun**	0.79	200		Pn	02 55 29.0	+0.3
AU22					Sn	02 55 44.3	+0.3
AUL	**Augustine Lava**	0.79	203		Pn	02 55 29.2	+0.4
AUL					Sn	02 55 44.8	+0.7
AUCH	**Augustine Cone**	0.81	203		Pn	02 55 29.4	+0.4
AUJK	**Augustine Jueg**	0.82	201		Sn	02 55 44.9	+0.4
CNPM	**China Poot**	1.00	125		Pn	02 55 31.2	+0.6
CNPM	**China Poot**	1.00	125		Sn	02 55 47.9	+0.5
BRLK	**Bradley Lake**	1.04	109		Pn	02 55 31.4	+0.4
CAPN	**Captain Cook N**	1.06	51		Pn	02 55 33.1	+2.0
N19K	**Bonanza Creek**	1.08	311		Pn	02 55 31.5	+0.1
N19K				IAML		02 55 49.2	
	comp=N,548nm,0.7s						
N19K				IAML		02 55 49.2	
	comp=E,675nm,0.9s						
BRSE	**Bradley Lake S**	1.12	109		Pn	02 55 32.3	+0.5
BRSE					Sn	02 55 49.9	+0.4
SPCR	**Spurr Chakacha**	1.13	15		Sn	02 55 49.6	-0.4
SPU	**Mount Spurr**	1.14	19		Pn	02 55 32.2	+0.2
SPBG	**Spurr Blockage**	1.17	11		Sn	02 55 50.9	+0.2
SPCP	**Crater Peak Br**	1.20	16		Sn	02 55 51.5	+0.1
O18K	**Koktuh Hills**	1.22	259		Pn	02 55 32.9	+0.1
SPCG	**Spurr Capps Gl**	1.25	18		Sn	02 55 52.3	+0.1
Q19K	**Cape Douglas,**	1.26	200		Pn	02 55 33.3	+0.1
Q19K				IAML		02 55 54.1	
	comp=E,975nm,0.7s						
Q19K				IAML		02 55 56.1	
	comp=N,654nm,0.8s						
SLKM	**Skilak Lake**	1.36	72		Pn	02 55 34.3	0.0
SLKM	**Skilak Lake**	1.36	72		Sn	02 55 53.2	-0.9
P18K	**Big Mountain,**	1.41	240		Pn	02 55 34.9	-0.1
P18K				IAML		02 55 55.2	
	comp=N,192nm,0.8s						
STLK	**Strandline Lak**	1.47	19		Pn	02 55 36.0	+0.3
STLK				IAML		02 55 59.5	
	comp=N,257nm,0.6s						
STLK				IAML		02 55 59.6	
	comp=E,242nm,0.5s						
SYI	**Shuyak Island**	1.52	171		Pn	02 55 36.3	+0.1
O22K	**Cooper Landing**	1.59	75		Pn	02 55 37.2	+0.2
N18K	**Kilae Creek**	1.62	292		Pn	02 55 37.4	+0.1
SEW	**Seward**	1.69	89		Pn	02 55 37.8	-0.3
SEW				IAML		02 56 04.7	
	comp=E,264nm,0.3s						
SEW				IAML		02 56 05.4	
	comp=N,327nm,0.3s						
SUA	**Susitna One**	1.70	36		Pn	02 55 38.7	+0.4
KAPH	**Katmai Pasha**	1.71	208		Pn	02 55 38.9	+0.5
M20K	**Styx River**	1.78	355		Pn	02 55 39.8	+0.5
RC01	**Rabbit Creek A**	1.81	56		Pn	02 55 39.6	0.0
RC01				IAML		02 56 04.0	
	comp=N,758nm,0.3s						
KAHG	**Katmai Hook Gl**	1.85

	comp=E,79nm,0.9s								
P16K					IAML		02 56 59.8		
	comp=N,84nm,1.0s								
OHAK	**Old Harbor**	**2.91**	**185**			**Pn**	**02 55 52.3**	**-1.1**	
OHAK					IAML		02 56 27.3		
	comp=N,116nm,0.7s								
OHAK					IAML		02 56 36.6		
	comp=E,106nm,0.4s								
OHAK	**Old Harbor**	**2.91**	**185**	P		**Pn**	**02 55 52.1**	**-1.4**	
OHAK	**Old Harbor**	**2.91**	**185**	S		**Sn**	**02 56 25.9**	**-2.3**	
GLI	**Glacier Island**	**2.94**	**72**			**Pn**	**02 55 52.2**	**-1.7**	
GLI	**Glacier Island**	**2.94**	**72**		IAML		02 56 28.0		
	comp=N,254nm,0.4s								
PLK4	**Peulik 4**	**3.09**	**218**			**Pn**	**02 55 56.6**	**+0.7**	
PLK4					IAML		02 56 55.0		
	comp=E,71nm,0.8s								
PLK4					IAML		02 57 07.2		
	comp=N,79nm,0.8s								
M16K	**Timber Creek**	**3.16**	**289**			**Pn**	**02 55 57.0**	**+0.2**	
HIN	**Hinchinbrook I**	**3.17**	**82**			**Pn**	**02 55 55.8**	**-1.1**	
HIN	**Hinchinbrook I**	**3.17**	**82**		IAML		02 56 35.0		
	comp=N,209nm,0.7s								
HIN					IAML		02 56 35.5		
	comp=E,238nm,0.4s								
FID	**Port Fidalgo**	**3.21**	**76**			**Pn**	**02 55 55.6**	**-1.8**	
FID	**Port Fidalgo**	**3.21**	**76**		IAML		02 56 35.9		
	comp=E,251nm,0.3s								
MID	**Middleton Isla**	**3.36**	**99**			**Pn**	**02 55 59.9**	**+0.6**	
MID	**Middleton Isla**	**3.36**	**99**		IAML		02 56 38.7		
	comp=N,142nm,1.2s								
MID					IAML		02 57 01.0		
	comp=E,122nm,1.2s								
EYAK	**Cordova Ski Ar**	**3.55**	**80**			**Pn**	**02 56 00.2**	**-1.6**	
EYAK	**Cordova Ski Ar**	**3.55**	**80**		IAML		02 56 43.1		
	comp=E,60nm,0.4s								
EYAK					IAML		02 56 44.3		
	comp=N,70nm,0.4s								
EYAK	**Cordova Ski Ar**	**3.55**	**80**	P		**Pn**	**02 56 01.8**	**0.0**	
EYAK	**Cordova Ski Ar**	**3.55**	**80**	S		**Sn**	**02 56 42.3**	**-0.9**	
TRF	**Thorofare Moun**	**3.56**	**19**		IAML		02 56 45.1		
	comp=E,64nm,0.6s								
TRF					IAML		02 57 05.8		
	comp=N,70nm,1.0s								
KTH	**Kantishna Hill**	**3.57**	**14**		IAML		02 57 04.3		
	comp=E,42nm,1.1s								
KTH					IAML		02 57 09.5		
	comp=N,44nm,0.9s								
L16K	**Owhat River**	**3.62**	**299**			**Pn**	**02 56 02.7**	**0.0**	
DIV	**Divide**	**3.63**	**71**			**Pn**	**02 56 01.9**	**-1.0**	
DIV	**Divide**	**3.63**	**71**		IAML		02 56 47.0		
	comp=E,100nm,0.3s								
N15K	**Kwethluk River**	**3.63**	**274**			**Pn**	**02 56 04.1**	**+1.1**	
SII	**Sitkinak Islan**	**3.63**	**192**			**Pn**	**02 56 01.8**	**-1.3**	
SII					IAML		02 56 44.4		
	comp=E,116nm,1.0s								
SII					IAML		02 56 44.7		
	comp=N,153nm,0.6s								
O15K	**Ungalikthiuk R**	**3.67**	**258**			**Pn**	**02 56 04.9**	**+1.4**	
CHUM	**Lake Minchumin**	**3.79**	**3**			**Pn**	**02 56 05.1**	**+0.1**	
RND	**Reindeer**	**3.81**	**28**		IAML		02 56 52.1		
	comp=N,34nm,1.1s								
RND					IAML		02 57 09.6		
	comp=E,40nm,1.0s								
J18K	**Innoko River**	**3.83**	**333**			**Pn**	**02 56 03.4**	**-2.2**	
DHY	**Denali Highway**	**3.95**	**39**		IAML		02 56 54.9		
	comp=N,62nm,0.4s								
DHY					IAML		02 56 56.0		
	comp=E,71nm,0.5s								
GOAT	**Goat Mountain**	**4.06**	**80**			**Pn**	**02 56 07.4**	**-1.2**	
MCK	**McKinley**	**4.07**	**25**			**Pn**	**02 56 08.6**	**-0.2**	
MCK					IAML		02 56 58.9		
	comp=E,36nm,0.6s								
MCK					IAML		02 57 16.8		
	comp=N,30nm,1.0s								
RAGM	**Ragged Mountai**	**4.08**	**83**			**Pn**	**02 56 09.1**	**+0.2**	
BPAW	**Bear Paw Mtn.**	**4.09**	**11**			**Pn**	**02 56 08.1**	**-1.0**	
BPAW	**Bear Paw Mtn.**	**4.09**	**11**		IAML		02 57 02.4		
	comp=E,21nm,0.6s								
J19K	**Poorman**	**4.11**	**343**			**Pn**	**02 56 09.5**	**+0.3**	
BMRM	**Bremner River**	**4.15**	**75**			**Pn**	**02 56 08.6**	**-1.4**	
BMRM	**Bremner River**	**4.15**	**75**		IAML		02 56 56.2		
	comp=N,83nm,0.5s								
BMRM					IAML		02 56 59.4		
	comp=E,111nm,0.4s								
ANNE	**Aniakchak Nort**	**4.22**	**223**			**Pn**	**02 56 10.9**	**+0.1**	
ANNW	**Aniakchak Nort**	**4.23**	**224**			**Pn**	**02 56 11.9**	**+0.9**	
N25K	**Chitina, Valde**	**4.30**	**66**		IAML		02 57 00.7		
	comp=N,101nm,0.6s								
N25K					IAML		02 57 01.3		
	comp=E,86nm,0.6s								
O14K	**Tigyukauivet M**	**4.36**	**262**			**Pn**	**02 56 13.7**	**+1.0**	
O14K	**Tigyukauivet M**	**4.36**	**262**		IAML		02 57 36.4		
	comp=E,19nm,1.0s								
BWN	**Browne**	**4.37**	**20**		IAML		02 57 32.2		
	comp=E,59nm,1.1s								
BWN					IAML		02 59 07.4		
	comp=N,69nm,1.1s								
N14K	**Kuskokwak Cree**	**4.45**	**271**			**Pn**	**02 56 15.2**	**+1.5**	
N14K	**Kuskokwak Cree**	**4.45**	**271**		IAML		02 57 59.5		
	comp=E,18nm,1.1s								
N14K					IAML		02 58 33.3		
	comp=N,25nm,1.1s								
PAX	**Paxson**	**4.54**	**48**		IAML		02 57 05.4		
	comp=N,51nm,0.5s								
PAX					IAML		02 57 06.1		
	comp=E,49nm,0.7s								
WACK	**Wrangell Chich**	**4.54**	**62**			**Pn**	**02 56 14.6**	**-0.7**	
CHIR	**Chirikof Islan**	**4.55**	**200**			**Pn**	**02 56 13.7**	**-1.6**	
CHIR	**Chirikof Islan**	**4.55**	**200**		IAML		02 57 04.2		
	comp=E,58nm,1.1s								
CHIR					IAML		02 57 35.2		
	comp=N,40nm,1.2s								
CHIR	**Chirikof Islan**	**4.55**	**200**	P		**Pn**	**02 56 13.6**	**-1.6**	
CHIR	**Chirikof Islan**	**4.55**	**200**	S		**Sn**	**02 57 03.3**	**-3.9**	
BERG	**Berg Lake**	**4.56**	**83**			**Pn**	**02 56 14.9**	**-0.4**	
GLB	**Gilahina Butte**	**4.62**	**69**		IAML		02 57 09.1		
	comp=E,50nm,0.8s								
GLB					IAML		02 57 09.4		
	comp=N,69nm,0.6s								
VRDI	**Verde Repeater**	**4.75**	**72**		IAML		02 57 13.2		
	comp=N,69nm,0.6s								
VRDI					IAML		02 57 14.5		
	comp=E,40nm,0.6s								
GRIN	**Grindle Hills**	**4.75**	**84**			**Pn**	**02 56 17.9**	**0.0**	
I20K	**Naaghedeneel**	**4.76**	**351**		IAML		02 57 27.6		
	comp=E,56nm,1.1s								
I20K					IAML		02 58 12.9		
	comp=N,63nm,1.1s								
KHIT	**Khitrov Hills**	**4.78**	**82**			**Pn**	**02 56 17.9**	**-0.5**	
CRQM	**Cirque**	**4.85**	**78**			**Pn**	**02 56 18.9**	**-0.4**	
J16K	**Anvik River**	**4.88**	**314**			**Pn**	**02 56 19.2**	**-0.3**	
WRH	**Wood River Hil**	**4.90**	**25**			**Pn**	**02 56 18.9**	**-0.9**	
MCARA	**McCarthy VSAT**	**4.98**	**71**			**Pn**	**02 56 20.7**	**-0.2**	
MCARA	**McCarthy VSAT**	**4.98**	**71**		IAML		02 57 20.4		
	comp=E,72nm,0.4s								
TGL	**Tana Glacier**	**5.00**	**78**		IAML		02 57 20.4		
	comp=E,49nm,0.6s								
TGL					IAML		02 57 21.0		
	comp=N,42nm,0.7s								
I21K	**Tanana**	**5.10**	**4**			**Pn**	**02 56 22.3**	**-0.2**	
HDA	**Harding Lake**	**5.11**	**30**		IAML		02 57 20.6		
	comp=N,66nm,0.5s								
HDA					IAML		02 57 20.6		
	comp=E,56nm,0.5s								
CCB	**Clear Creek Bu**	**5.12**	**25**		IAML		02 57 04.8		
	comp=N,12nm,0.8s								
CCB					IAML		02 57 21.5		
	comp=E,13nm,1.0s								
VNSG	**Veniaminof 6**	**5.19**	**222**			**Pn**	**02 56 24.0**	**+0.1**	
MENT	**Mentasta**	**5.20**	**53**		IAML		02 57 42.9		
	comp=N,55nm,0.6s								
ISLE	**Juniper Island**	**5.23**	**80**			**Pn**	**02 56 24.8**	**+0.3**	
RIDG	**Independent Ri**	**5.24**	**43**		IAML		02 57 26.4		
	comp=N,47nm,0.8s								
BALM	**Baldy**	**5.25**	**75**			**Pn**	**02 56 24.0**	**-0.8**	
M26K	**Nabesna, AK**	**5.27**	**60**		IAML		02 57 25.2		
	comp=N,47nm,0.6s								
M26K					IAML		02 57 26.5		
	comp=E,34nm,0.6s								
I23K	**Minto, Yukon-K**	**5.30**	**16**		IAML		02 57 54.5		
	comp=N,10.0nm,0.8s								
COLA	**College**	**5.30**	**24**			**Pn**	**02 56 24.9**	**-0.3**	
COLA	**College**	**5.30**	**24**		IAML		02 57 28.5		
	comp=N,45nm,0.4s								
COLA					IAML		02 57 29.4		
	comp=N,47nm,0.5s								

COLA	**College**	**5.30**	**24**	P		**Pn**	**02 56 24.9**	**-0.3**	
COLA	**College**	**5.30**	**24**	S		**Sn**	**02 57 24.2**	**-1.0**	
BAGL	**Bagley Icefiel**	**5.36**	**81**			**Pn**	**02 56 26.4**	**+0.4**	
VNKR	**Veniaminof 5**	**5.36**	**223**			**Pn**	**02 56 26.1**	**-0.1**	
L26K	**Log Cabin Wild**	**5.39**	**53**		IAML		02 57 47.7		
	comp=E,38nm,0.5s								
L26K					IAML		02 57 56.5		
	comp=N,34nm,0.5s								
ILAR	**Eielson Array**	**5.43**	**28**			**Pn**	**02 56 26.4**	**-0.5**	
ILAR	**Eielson Array**	**5.43**	**28**	P		**Pn**	**02 56 25.9**	**-1.0**	
	comp=N,41nm,0.5s,baz=215,slow=14,SNR=546								
ILAR				S		**Sn**	**02 57 24.5**	**-3.7**	
	comp=N,5.8nm,0.8s,baz=212,slow=23,SNR=5.6								
MESA	**MESA**	**5.44**	**85**			**Pn**	**02 56 27.4**	**+0.2**	
DOT	**Dot Lake**	**5.46**	**46**			**Pn**	**02 56 26.7**	**-0.7**	
GRNC	**Granite Creek**	**5.53**	**79**			**Pn**	**02 56 28.9**	**+0.5**	
YAH	**Yahtse**	**5.53**	**83**			**Pn**	**02 56 29.4**	**+0.8**	
POKR	**Poker Plat Res**	**5.61**	**24**			**Pn**	**02 56 28.9**	**-0.4**	
RKAV	**Rock Avalanche**	**5.73**	**83**			**Pn**	**02 56 32.1**	**+1.0**	
M27K	**Edge Creek, AK**	**5.75**	**62**			**Pn**	**02 56 31.7**	**+0.3**	
IMAR	**Indian Mountai**	**5.91**	**356**			**Pn**	**02 56 33.7**	**+0.4**	
L27K	**Beaver Creek,**	**6.03**	**56**			**Pn**	**02 56 34.6**	**-0.4**	
BCAR	**Beaver Creek A**	**6.05**	**56**			**Pn**	**02 56 34.7**	**-0.6**	
YUK2	**White River**	**6.08**	**69**			**Pn**	**02 56 35.7**	**-0.1**	
J26L	**Joseph Creek**	**6.17**	**40**			**Pn**	**02 56 36.3**	**-0.7**	
YUK3	**Moose Creek**	**6.26**	**69**			**Pn**	**02 56 38.4**	**+0.1**	
SDPT	**Sand Point**	**6.29**	**224**	P		**Pn**	**02 56 37.6**	**-0.9**	
SDPT	**Sand Point**	**6.29**	**224**	S		**Sn**	**02 57 46.2**	**-2.8**	
PCA	**Pinnacle**	**6.29**	**85**			**Pn**	**02 56 39.4**	**+0.7**	
CHNA	**Chernabura Isl**	**6.43**	**217**	P		**Pn**	**02 56 39.0**	**-1.4**	
G21K	**Allakaket**	**6.43**	**358**			**Pn**	**02 56 39.9**	**-0.6**	
YUK8	**Steele Glacier**	**6.52**	**74**			**Pn**	**02 56 42.6**	**+0.6**	
S12K	**Black Hills**	**6.61**	**232**			**Pn**	**02 56 44.4**	**+1.5**	
G24K	**Hadweenzic Riv**	**7.03**	**18**			**Pn**	**02 56 47.9**	**-0.6**	
DT1	**Dutton Round H**	**7.13**	**229**			**Pn**	**02 56 50.2**	**+0.3**	
F21K	**Alatna River**	**7.14**	**358**			**Pn**	**02 56 50.3**	**+0.2**	
DAWY	**Dawson**	**7.44**	**52**			**Pn**	**02 56 54.0**	**-0.1**	
I27K	**Kandik River**	**7.52**	**38**			**Pn**	**02 56 54.3**	**-0.8**	
HYT	**Haines Junctio**	**7.61**	**78**			**Pn**	**02 56 57.2**	**+0.7**	
L29M	**L29M**	**7.62**	**60**			**Pn**	**02 56 56.9**	**+0.3**	
E19K	**Redstone River**	**7.62**	**347**			**Pn**	**02 56 57.2**	**+0.8**	
F24K	**Squaw Lake**	**7.75**	**14**			**Pn**	**02 56 58.1**	**-0.1**	
ISNN	**Isanotski Nort**	**7.92**	**233**			**Pn**	**02 57 01.2**	**+0.6**	
I28M	**Miner Creek**	**7.96**	**42**			**Pn**	**02 57 00.5**	**-0.7**	
E22K	**Anaktuvuk Pass**	**8.07**	**3**			**Pn**	**02 57 03.6**	**+1.1**	
M30M	**Minto, Yukon**	**8.09**	**65**			**Pn**	**02 57 02.9**	**0.0**	
K29M	**Barlow Dome**	**8.12**	**56**			**Pn**	**02 57 03.0**	**-0.3**	
BMAR	**Burnt Mountain**	**8.19**	**23**			**Pn**	**02 57 02.8**	**-1.5**	
BM01	**Burnt Mountain**	**8.22**	**23**			**Pn**	**02 57 03.4**	**-1.2**	
E20K	**Nigu River**	**8.31**	**351**			**Pn**	**02 57 07.1**	**+1.4**	
F28M	**Old Crow**	**9.43**	**32**			**Pn**	**02 57 19.6**	**-1.2**	
E27K	**Coleen River**	**9.45**	**26**			**Pn**	**02 57 20.1**	**-1.0**	
D25K	**Kavik River**	**9.64**	**14**			**Pn**	**02 57 23.3**	**-0.4**	
UNV	**Unalaska Valle**	**9.74**	**236**	P		**Pn**	**02 57 24.4**	**-0.7**	
UNV	**Unalaska Valle**	**9.74**	**236**	S		**Sn**	**02 59 09.5**	**-3.0**	
INK	**Inuvik**	**11.70**	**37**	P		**Pn**	**02 57 49.1**	**-2.0**	
	comp=N,2.9nm,0.7s,baz=241,slow=16,SNR=5.8								
DLBC	**Dease Lake**	**11.77**	**88**	P		**P**	**02 57 57.8**	**-2.5**	
	comp=N,2.2nm,0.3s,baz=237,slow=6.4,SNR=14								
DLBC				LR		LR	03 01 55.8		
	comp=N,47nm,21.6s,baz=22,slow=34								
YKA	**Yellowknife Ar**	**18.33**	**66**	P		**P**	**02 59 13.3**	**+0.6**	
	comp=N,1.6nm,0.6s,baz=289,slow=13,SNR=7.5								
NVAR	**Mina Array Bea**	**30.70**	**119**	P		**P**	**03 01 13.7**	**+2.1**	
	comp=N,0.2nm,0.5s,baz=334,slow=15,SNR=3.8								
	comp=N,0.2nm,0.5s								
PDAR	**Pinedale Array**	**31.34**	**104**	P		**P**	**03 01 18.8**	**+1.7**	
	comp=N,0.3nm,0.6s,baz=313,slow=8.9,SNR=2.0								
	comp=N,0.3nm,0.6s								
SPITS	**Spitsbergen Ar**	**41.80**	**3**	P		**P**	**03 02 45.8**	**+0.8**	
	comp=N,3.4nm,0.8s,baz=25,slow=11,SNR=7.4								
	comp=N,3.4nm,0.8s								
TXAR	**Lajitas Array**	**44.94**	**111**	P		**P**	**03 03 13.5**	**+2.6**	
	comp=N,0.5nm,0.7s,baz=313,slow=4.6,SNR=4.5								
	comp=N,0.5nm,0.7s								
KSRS	**Korea Array**	**53.24**	**283**	P		**P**	**03 04 14.3**	**+0.6**	
	comp=N,1.1nm,0.7s,baz=39,slow=6.8,SNR=2.5								
	comp=N,1.1nm,0.7s								
SONM	**Songino Array**	**54.79**	**306**	P		**P**	**03 04 26.6**	**+1.5**	
	comp=N,2.0nm,0.7s,baz=35,slow=5.4,SNR=8.0								
	comp=N,2.0nm,0.7s								
ZALV	**Zalesovo Beam**	**57.33**	**324**	P		**P**	**03 04 42.4**	**-0.5**	
	comp=N,1.0nm,0.4s,baz=23,slow=8.0,SNR=2.2								
	comp=N,1.0nm,0.4s								
HFS	**Hagfors**	**59.63**	**8**	P		**P**	**03 04 57.6**	**-1.1**	
	comp=N,1.3nm,0.9s,baz=335,slow=6.4,SNR=1.3								
	comp=N,1.3nm,0.9s								
KURK	**Kurchatov**	**61.98**	**326**	P		**P**	**03 05 15.2**	**+0.5**	
BVAR	**Borovoye Array**	**62.01**	**332**	P		**P**	**03 05 14.7**	**-0.2**	
	comp=N,0.9nm,0.5s,baz=20,slow=5.1,SNR=4.4								
	comp=N,0.9nm,0.5s								
KURBB	**Kurchatov Arra**	**62.09**	**326**	P		**P**	**03 05 15.2**	**-0.2**	
	comp=N,0.5nm,0.4s,baz=26,slow=7.3,SNR=4.2								
	comp=N,0.5nm,0.4s								
MKAR	**Makanchi Array**	**64.39**	**321**	P		**P**	**03 05 30.2**	**-0.6**	
	comp=N,0.4nm,0.5s,baz=30,slow=4.9,SNR=6.2								
	comp=N,0.4nm,0.5s								
BOSA	**Boshof**	**148.48**	**3**	PKPbc		**PKPbc**	**03 14 39.7**	**-0.4**	
	comp=N,1.1nm,1.1s,baz=333,slow=4.5,SNR=3.9								
QSPA	**South Pole Qui**	**149.91**	**180**	PKPbc		**PKiKP**	**03 14 44.6**	**+1.4**	
	comp=N,1.1nm,0.6s,baz=74,slow=1.1,SNR=4.6								

*NEIC **08** 03:07:58.8±0.5, 19.47N±0.05×66.66W±0.06, h10km±2km, ML2.2/10, Md3.1/8(RSPR), Error ellipse: s-maj=10.3km s-min=6.8km az=302.0*
*SDD **08** 03:08:01.4±2.1, 19.43N×66.89W, h23km±142km, MD3.5, ML2.5, MW2.7*
*RSPR **08** 03:08:01.5, 19.55N×66.69W, h30km±18km, MD3.1/8*

ISC 08 03:07:57.8±2.2, 19.51N±0.09×66.70W±0.05, h13km±10km, n35, σ0.59/43, 19C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.04**	**171**			**Pn**	**03 08 19.3**	**+1.1**
EMPR						**Sn**	**03 08 32.6**	**0.0**
EMPR	**Esperanza - Ma**	**1.04**	**171**	⇑*eP*		**Pn**	**03 08 19.3**	**+1.1**
EMPR	**Esperanza - Ma**	**1.04**	**171**	*eS*		**Sn**	**03 08 32.6**	**0.0**
AGPR	**Aguadilla, PR**	**1.11**	**200**			**Pg**	**03 08 20.0**	**+0.8**
AGPR						**Sg**	**03 08 33.9**	**+0.2**
AGPR	**Aguadilla, PR**	**1.11**	**200**	⇑*ePg*		**Pb**	**03 08 18.7**	**-0.2**
AGPR				⇑*eSg*		**Sb**	**03 08 32.7**	**-0.6**
AGPR				IAML			03 08 49.6	
	comp=N,67nm,1.0s							
AGPR	**Aguadilla, PR**	**1.11**	**200**	⇑*eP*		**Pg**	**03 08 20.0**	**+0.8**
AGPR	**Aguadilla, PR**	**1.11**	**200**	*eS*		**Sg**	**03 08 33.9**	**+0.2**
AOPR	**Arecibo Observ**	**1.16**	**182**			**Pg**	**03 08 20.0**	**-0.2**
AOPR	**Arecibo Observ**	**1.16**	**182**	⇑*ePg*		**Pg**	**03 08 20.0**	**-0.2**
AOPR				⇓*eSg*		**Sb**	**03 08 33.2**	**-1.5**
AOPR				IAML			03 08 53.1	
	comp=N,1μm,4.3s							
ECPR	**Experimental S**	**1.23**	**165**	⇑*eP*		**Pg**	**03 08 21.7**	**+0.1**
ECPR	**Experimental S**	**1.23**	**165**	*eS*		**Sn**	**03 08 37.1**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.25**	**181**			**Pg**	**03 08 21.9**	**0.0**
UUPR						**Sb**	**03 08 37.3**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.25**	**181**	⇑*eP*		**Pg**	**03 08 21.9**	**0.0**
UUPR	**Utuado, UPR, P**	**1.25**	**181**	*eS*		**Sb**	**03 08 37.3**	**-0.1**
GCPR	**Guaynabo City**	**1.33**	**154**			**Pb**	**03 08 22.4**	**-0.3**
GCPR	**Guaynabo City**	**1.33**	**154**	⇑*eP*		**Pb**	**03 08 22.4**	**-0.3**
OBIP	**Obispado Ponce**	**1.47**	**176**			**Sn**	**03 08 43.3**	**+0.3**
OBIP	**Obispado Ponce**	**1.47**	**176**			**Pb**	**03 08 24.5**	**-0.4**
OBIP				IAML			03 08 49.8	
	comp=N,22nm,1.0s							
OBIP	**Obispado Ponce**	**1.47**	**176**	IAML			03 08 43.1	
	comp=E,3nm,1.2s							
OBIP	**Obispado Ponce**	**1.47**	**176**	⇑*eP*		**Pb**	**03 08 24.5**	**-0.4**
OBIP	**Obispado Ponce**	**1.47**	**176**	*eS*		**Sn**	**03 08 43.3**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.55**	**195**			**Pb**	**03 08 25.7**	**-0.7**
CRPR						**Sn**	**03 08 45.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.55**	**195**	IAML			03 08 48.3	
	comp=N,45nm,2.2s							
CRPR				IAML			03 08 52.4	
	comp=E,41nm,1.9s							
CRPR	**Cabo Rojo, PR**	**1.55**	**195**	⇑*ePg*		**Pg**	**03 08 26.7**	**-0.8**
CRPR				⇑*eSg*		**Sn**	**03 08 45.0**	**-0.1**
CRPR				IAML			03 08 47.7	
	comp=N,54nm,3.0s							
CRPR	**Cabo Rojo, PR**	**1.55**	**195**	⇑*eP*		**Pb**	**03 08 25.7**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.55**	**195**	*eS*		**Sn**	**03 08 45.4**	**+0.4**
MLPR	**Magueyes Islan**	**1.57**	**192**	⇑*ePg*		**Pn**	**03 08 25.8**	**+0.4**
MLPR				⇑*eSg*		**Sn**	**03 08 45.6**	**0.0**
MLPR				IAML			03 08 58.9	
	comp=N,13nm,4.0s							
MLPR	**Magueyes Islan**	**1.57**	**192**	⇑*eP*		**Pb**	**03 08 26.9**	**+0.1**
MLPR	**Magueyes Islan**	**1.57**	**192**	*eS*		**Sn**	**03 08 45.7**	**+0.1**
HUMP	**Col San Antoni**	**1.58**	**149**			**Pb**	**03 08 26.4**	**-0.6**
HUMP						**Sn**	**03 08 45.8**	**-0.2**
HUMP	**Col San Antoni**	**1.58**	**149**	IAML			03 08 49.3	
	comp=E,30nm,0.4s							
HUMP				IAML			03 08 50.6	
	comp=N,23nm,0.2s							
HUMP	**Col San Antoni**	**1.58**	**149**	⇑*eP*		**Pb**	**03 08 26.4**	**-0.6**
HUMP	**Col San Antoni**	**1.58**	**149**	*eS*		**Sn**	**03 08 45.8**	**-0.2**
HIDR	**Higuey Centro**	**2.11**	**245**	⇓*ePg*		**Pb**	**03 08 35.3**	**-0.7**
HIDR				⇑*eSg*		**Sn**	**03 08 58.4**	**-0.7**
HIDR				IAML			03 09 37.5	
	comp=N,37nm,0.1s							
HATOM	**Hato Mayor del**	**2.63**	**255**	⇑*ePg*		**Pb**	**03 08 44.0**	**-0.9**
HATOM				⇑*eSg*		**Sn**	**03 09 13.2**	**+1.3**
HATOM				IAML			03 09 34.7	
	comp=N,21nm,1.6s							

*MOS **08** 03:17:56.4±1.2, 54.81N×111.75E, h4km, mb4.4/8, Error ellipse: s-maj=7.8km s-min=5.2km az=86.7*
*IDC **08** 03:17:56.7±0.5, 54.78N×111.60E, h0km, mb3.9/21, mbtmp4.0/27, ML4.4/6, MS3.4/25, Error ellipse: s-maj=11.5km s-min=9.4km az=178.0*
*BYKL **08** 03:17:57.9±0.1, 54.85N×111.67E, h6km±2km, Mw4.1/6(IEC), #STATIONS AAK OBN BORK YSS KEV VSU*
*NEIC **08** 03:17:58.4±2.4, 54.82N±0.09×111.8E±0.1, h10km±1km, mb4.4/10, Error ellipse: s-maj=16.3km s-min=12.3km az=29.0*

ISC 08 03:17:57.6±1.0, 54.88N±0.02×111.78E±0.02, h3km±6km, n162, σ2823/232, mb4.0/25, MS3.3/25, 15C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.36**	**269**	⇑*iPg*		**Pg**	**03 18 03.2**	**-1.3**
YLYR				Pmax			03 18 03.4	
	11μm,0.4s							
YLYR				*eSg*		**Sg**	**03 18 07.8**	**-1.3**
YLYR				Smax			03 18 08.0	
	34μm,0.6s							
YLYR	**Ulyunkhan**	**0.36**	**269**	⇑*iPG*		**Pg**	**03 18 03.2**	**-1.3**
YLYR				*e*			03 18 07.7	
YLYR				pmax	pmax			
	comp=Z,11μm,0.4s							
YLYR				smax	smax			
	comp=N,33μm,0.5s							
KMO	**Kumora**	**1.06**	**342**	⇑*iPg*		**Pg**	**03 18 16.8**	**-1.1**
KMO				Pmax			03 18 17.4	
	comp=N,3μm,0.4s							
KMO				*eSg*		**Sg**	**03 18 31.1**	**-0.5**
KMO				Smax			03 18 34.2	
	comp=N,11μm,1.2s							
KMO	**Kumora**	**1.06**	**342**	⇑*iPG*		**Pg**	**03 18 16.8**	**-1.1**
KMO				*e*			03 18 31.1	
KMO				pmax	pmax			
	comp=Z,3μm,0.4s							
KMO				smax	smax			
	comp=N,11μm,1.2s							
UKT	**Uakit**	**1.22**	**59**	⇓*iPg*		**Pn**	**03 18 20.3**	**-1.3**
UKT				*e*			03 18 23.0	
UKT				max			03 18 24.8	
	comp=N,2μm,0.5s							
UKT				*eSg*		**Sg**	**03 18 37.7**	**+0.9**
UKT				*e*

GORB *e*Sg **Sb** **03 19 23.5 +0.5**
UZR **Uzur** **2.85 238** *e*Pn **Pn** **03 18 43.0 -0.8**
UZR *e*Pg **Pb** **03 18 48.2 -0.8**
UZR Pmax 03 18 48.8
comp=N,251nm,0.5s
UZR *e*Sn **Sn** **03 19 16.7 -1.9**
UZR *e*Sg **Sb** **03 19 24.5 +0.3**
UZR Smax 03 19 26.3
comp=N,2µm,0.6s
CIT **Chita** **3.06 159** *e*Pg **Pb** **03 18 53.0 +0.4**
CIT Pmax 03 18 53.6
comp=N,468nm,0.1s
CIT *e*Sg **Sb** **03 19 32.1 +1.9**
CIT Smax 03 19 33.4
comp=N,4µm,0.3s
CIT **Chita** **3.06 159** *e*PN **Pn** **03 18 46.7 -0.1**
CIT *e* 03 18 52.9
CIT *e*S **Sn** **03 19 23.7 -0.1**
CIT *e* 03 19 31.9
CIT pmax pmax
comp=Z,506nm,0.1s
CIT smax smax
comp=E,4µm,0.6s
KELR **Kotokel** **3.06 227** *e*Pn **Pn** **03 18 46.3 -0.4**
KELR *e*Pg **Pb** **03 18 51.9 -0.6**
KELR *e*Sn **Sn** **03 19 22.5 -1.2**
KELR *e*Sg **Sb** **03 19 31.2 +1.0**
KELR *e*SgSg **SbSb** **03 19 35.3 0.0**
BOD **Bodaibo** **3.19 22** *e*Pn **Pn** **03 18 49.2 +0.6**
BOD *e*Pg **Pb** **03 18 55.8 +0.9**
BOD Pmax 03 19 00.6
comp=E,297nm,0.9s
BOD *e*Sn **Sn** **03 19 26.9 -0.2**
BOD *e*Sg **Sb** **03 19 37.1 +3.0**
BOD Smax 03 19 45.4
comp=E,1µm,1.4s
BOD **Bodaibo** **3.19 22** *e*PN **Pn** **03 18 50.1 +1.5**
BOD *e* 03 18 56.8
BOD *e*S **Sn** **03 19 27.9 +0.8**
BOD *e* 03 19 36.8
BOD pmax pmax
comp=Z,298nm,0.9s
BOD smax smax
comp=N,1µm,1.4s
ZRHB **Zarechye** **3.61 232** *e*Pn **Pn** **03 18 55.0 +0.7**
ZRHB *e*Pg **Pb** **03 19 02.1 +0.2**
ZRHB Pmax 03 19 19.3
comp=N,513nm,0.7s
ZRHB *e*Sg **Sb** **03 19 48.3 +2.3**
ZRHB Smax 03 20 21.7
comp=N,6µm,1.2s
TRG **Tyrgan** **3.86 239** *e*Pn **Pn** **03 18 57.4 -0.4**
TRG *e*Pg **Pb** **03 19 05.4 -0.8**
TRG Pmax 03 19 08.9
comp=N,154nm,0.8s
TRG *e*Sn **Sn** **03 19 42.2 -1.4**
TRG *e*Sg **Sb** **03 19 54.5 +1.2**
TRG Smax 03 20 08.3
comp=N,893nm,1.0s
TRG **Tyrgan** **3.86 239** *e*PN **Pn** **03 18 57.3 -0.5**
TRG *e* 03 19 06.1
TRG *e*S **Sn** **03 19 40.6 -3.0**
TRG *e* 03 19 53.6
TRG pmax pmax
comp=Z,155nm,0.4s
TRG smax smax
comp=N,901nm,1.1s
FFNB **Fofonovo** **4.13 229** *e*Pn **Pn** **03 19 01.1 -0.4**
FFNB *e*Pg **Pb** **03 19 11.1 +0.3**
FFNB *e*Sg **Sb** **03 20 03.3 +2.2**
CRS **Chara** **4.17 58** *e*Pn **Pn** **03 19 03.6 +1.5**
CRS *e*Pg **Pb** **03 19 14.3 +2.7**
CRS Pmax 03 19 26.1
comp=N,265nm,0.9s
CRS *e*Sg **Sg** **03 20 09.0 -2.6**
CRS Smax 03 20 16.0
comp=N,2µm,1.2s
CRS **Chara** **4.17 58** *e*PN **Pn** **03 19 03.4 +1.3**
CRS *e* 03 19 15.6
CRS *e* 03 20 09.3
CRS pmax pmax
comp=Z,274nm,0.7s
CRS smax smax
comp=E,1µm,0.8s
KAB **Kabansk** **4.17 229** *e*Pg **Pb** **03 19 11.7 +0.1**
KAB Pmax 03 19 25.8
comp=E,455nm,0.5s
KAB *e*Sg **Sb** **03 20 06.2 +3.8**
KAB Smax 03 20 20.1
comp=E,3µm,0.7s
STDB **Stepnoy Dvoret** **4.22 232** *e*Pn **Pn** **03 19 02.7 0.0**
STDB *e*Pg **Pb** **03 19 12.5 +0.1**
STDB *e*Sg **Sb** **03 20 06.3 +2.6**
HRMR **Khuramsha** **4.36 224** *e*Pn **Pn** **03 19 04.2 -0.5**
HRMR *e*Pg **Pb** **03 19 15.6 +0.8**
HRMR Pmax 03 19 16.8
comp=E,267nm,0.7s
HRMR *e*Sg **Sb** **03 20 11.6 +3.8**
HRMR Smax 03 20 17.6
comp=E,2µm,0.5s
VTMR **Vitim** **4.59 5** *e*Pn **Pn** **03 19 10.0 +2.2**
VTMR *e*Pg **Pb** **03 19 20.5 +1.9**
VTMR *e*Sg **Sb** **03 20 19.7 +5.4**
VBR **Suhoy Ruchey** **4.63 231** *e*Pg **Pb** **03 19 19.6 +0.2**
VBR *e*Sg **Sb** **03 20 19.1 +3.5**
BGT **Bolshoye Golou** **4.75 236** *e*Pn **Pn** **03 19 10.2 +0.2**
BGT *e*Pg **Pb** **03 19 22.3 +0.9**
BGT Pmax 03 19 32.8
comp=E,63nm,0.7s
BGT *e*Sg **Sb** **03 20 22.9 +3.9**
BGT Smax 03 20 35.1
comp=E,693nm,1.0s
TUP **Tupik** **4.77 92** ⇓*i*Pn **Pn** **03 19 10.9 +0.6**
TUP *e*Pg **Pb** **03 19 24.4 +2.7**
TUP Pmax 03 19 25.9
comp=E,191nm,0.4s
TUP *e*Sg **Sg** **03 20 27.0 -3.6**
TUP Smax 03 20 33.9
comp=E,3µm,0.9s
TUP **Tupik** **4.77 92** *e*PN **Pn** **03 19 10.8 +0.5**
TUP *e* 03 19 23.0
TUP *e*S **Sn** **03 20 06.7 +0.7**
TUP *e* 03 20 26.9
TUP pmax pmax
comp=Z,191nm,0.4s
TUP smax smax
comp=N,3µm,0.7s
KHNR **Khani** **5.04 63** *e*Pn **Pn** **03 19 16.0 +1.9**
KHNR *e*Pg **Pb** **03 19 29.4 +3.0**
KHNR *e*Sg **Sg** **03 20 36.2 -3.3**
LSTR **Listvyanka** **5.14 237** *e*Pn **Pn** **03 19 14.4 -0.9**
LSTR *e*Pg **Pb** **03 19 28.4 +0.4**
LSTR Pmax 03 19 36.4
comp=N,37nm,1.0s
LSTR *e*Sg **Sb** **03 20 34.4 +4.3**
LSTR *e* 03 20 40.9
LSTR max 03 20 50.1
comp=N,470nm,1.1s
IRK **Irkutsk** **5.20 243** *e*Sg **Sb** **03 20 36.1 +4.3**
IRK Smax 03 20 43.1
comp=N,2µm,0.9s
IRK **Irkutsk** **5.20 243** *e*PN **Pb** **03 19 29.8 +0.8**
IRK *e* 03 20 36.4
IRK pmax pmax
comp=Z,124nm,0.1s
IRK smax smax
comp=N,1µm,0.7s
KPC **Khapcheranga** **5.20 176** ⇓*i*Pn **Pn** **03 19 14.9 -1.3**
KPC *e*Pg **Pb** **03 19 30.3 +1.2**
KPC Pmax 03 19 34.8
comp=N,86nm,0.7s
KPC *e*Sg **Sb** **03 20 37.6 +5.7**
KPC Smax 03 20 41.6
comp=N,1µm,0.6s
KPC **Khapcheranga** **5.20 176** *e*PN **Pn** **03 19 15.1 -1.1**
KPC *e* 03 19 29.9
KPC *e*S **Sn** **03 20 13.5 -3.2**
KPC *e* 03 20 36.3
KPC pmax pmax
comp=Z,100nm,0.7s
KPC smax smax
comp=E,1µm,0.6s
IVK **Ivanovka** **5.38 238** *e*Pn **Pn** **03 19 18.4 -0.3**

IVK *e*Pg **Pb** **03 19 32.1 -0.1**
IVK Pmax 03 19 40.4
comp=E,97nm,0.7s
IVK *e* 03 20 39.7
IVK *e*Sg **Sb** **03 20 42.0 +4.8**
IVK Smax 03 20 57.2
comp=E,852nm,0.9s
YKLR **Yuktali** **5.83 69** *e*Pn **Pn** **03 19 26.0 +1.1**
YKLR *e*Pg **Pb** **03 19 44.4 +4.5**
YKLR *e*Sg **Sg** **03 21 01.2 -3.6**
TLY **Talaya** **5.84 240** *e*Pn **Pn** **03 19 24.9 -0.1**
TLY **Talaya** **5.84 240** *e*Pn **Pn** **03 19 24.8 -0.1**
TLY *e*Pg **Pb** **03 19 40.9 +0.9**
TLY Pmax 03 20 15.5
comp=E,39nm,0.9s
TLY *e*Sg **Sb** **03 20 54.5 +4.3**
TLY Smax 03 21 07.9
comp=E,285nm,0.5s
TLY **Talaya** **5.84 240** *i* PN **Pn** **03 19 24.6 -0.4**
ARS **Arshan** **6.33 246** *e*Pn **Pn** **03 19 32.1 +0.3**
ARS *e*Pg **Pb** **03 19 50.5 +2.1**
ARS Pmax 03 19 53.7
comp=E,132nm,0.3s
ARS *e*Sn **Sn** **03 20 40.4 -4.2**
ARS *e*Sg **Sb** **03 21 11.2 +6.7**
ARS Smax 03 21 17.1
comp=E,2µm,0.8s
ZAK **Zakamensk** **6.86 232** *e*Pn **Pn** **03 19 38.4 -0.6**
ZAK *e*Pg **Pb** **03 19 59.9 +2.5**
ZAK Pmax 03 20 52.7
comp=E,36nm,0.5s
ZAK *e*Sg **Sb** **03 21 28.0 +8.4**
ZAK Smax 03 21 45.8
comp=E,321nm,1.5s
ZAK **Zakamensk** **6.86 232** *e*PG **Pb** **03 20 00.4 +3.0**
ZAK *e* 03 21 29.2
ZAK pmax pmax
comp=Z,22nm,0.5s
ZAK smax smax
comp=N,322nm,1.1s
MOY **Mondy** **7.22 248** *e*Pn **Pn** **03 19 45.1 +1.0**
MOY *e*Pg **Pb** **03 20 06.0 +2.4**
MOY Pmax 03 20 14.3
comp=N,59nm,1.0s
MOY *e* 03 21 05.5
MOY *e*Sg **Sb** **03 21 39.1 +8.9**
MOY Smax 03 21 57.4
comp=N,507nm,1.2s
MOY **Mondy** **7.22 248** *e*PN **Pn** **03 19 45.0 +1.0**
MOY *e*S Sb 03 21 39.6 +9.4
MOY smax smax
comp=E,509nm,1.1s
HILR **Hailar Array B** **7.24 134** Pn **Pn** **03 19 42.3 -1.9**
baz=315,slow=13
HILR Pg Pb 03 20 10.1 +6.4
baz=318,slow=13
HILR Sn **Sn** **03 21 03.3 -3.5**
baz=321,slow=19
HILR Lg Lg 03 21 41.6
baz=322,slow=26
comp=E,13nm,0.3s
HIA **Hailar** **7.46 136** **Pn** **03 19 45.5 -1.7**
HIA **Hailar** **7.46 136** *e* **Pn** **03 19 45.7 -1.5**
HIA *e*Pg Pb 03 20 13.5 +6.0
HIA Pmax 03 20 33.8
comp=E,96nm,1.5s
HIA *e* 03 21 25.6
HIA *e*Sg **Sg** **03 21 49.7 -7.2**
HIA Smax 03 22 08.3
comp=E,728nm,2.0s
HIA **Hailar** **7.46 136** PN **Pn** **03 19 45.5 -1.7**
ORL **Orlik** **7.48 257** *e*Pn **Pn** **03 19 47.4 -0.2**
ORL *e*Pg **Pb** **03 20 11.4 +3.4**
ORL Pmax 03 20 28.1
comp=E,50nm,0.9s
ORL *e* 03 21 13.5
ORL *e*Sg Sb 03 21 47.5 +10
ORL Smax 03 21 54.2
comp=E,684nm,1.2s
ORL **Orlik** **7.48 257** *e*PN **Pn** **03 19 48.4 +0.8**
ORL *e* 03 20 10.4
ORL *e*S **Sn** **03 21 09.3 -3.6**
ORL *e* 03 21 46.6
ORL pmax pmax
comp=Z,67nm,0.9s
ORL smax smax
comp=N,686nm,1.2s
ULN **Ulaanbaatar** **7.62 205** **Pn** **03 19 50.0 +0.4**
ULN **Ulaanbaatar** **7.62 205** *e*Pn **Pn** **03 19 49.4 -0.2**
ULN *e*Pg **Pb** **03 20 14.9 +4.5**
ULN Pmax 03 20 16.2
comp=N,49nm,0.6s
ULN *e*Sg Sg 03 21 53.1 -9.0
ULN Smax 03 22 16.1
comp=N,769nm,1.4s
ULN **Ulaanbaatar** **7.62 205** *i* PN **Pn** **03 19 51.3 +1.7**
CLNS **Chul'man** **7.63 70** *e*Pn **Pn** **03 19 50.3 +0.7**
CLNS *e*Pg Pb 03 20 16.8 +6.3
CLNS *e* 03 21 34.3
CLNS *e*Sg **Sg** **03 21 55.9 -6.6**
SONM **Songino Array** **7.82 208** **Pn** **03 19 52.1 -0.2**
SONM **Songino Array** **7.82 208** Pn **Pn** **03 19 51.7 -0.6**
comp=N,6.9nm,0.3s,baz=22,slow=12,SNR=57
SONM Sn **Sn** **03 21 19.8 -1.4**
comp=N,5.5nm,0.3s,baz=24,slow=21,SNR=5.4
SONM Lg Lg 03 22 01.2
comp=N,13nm,0.3s,baz=23,slow=22,SNR=20
comp=N,9.0nm,0.4s
ZEA **Zeya** **9.12 91** *e*P **Pn** **03 20 11.0 +1.1**
ZEA *e* 03 21 49.5
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,0.7s
ZEA MLR MLR
comp=E,400nm,4.0s
ZEA MLR MLR
comp=N,200nm,3.0s
ZEA MLR MLR
comp=Z,500nm,6.0s
HEH **HeiHe** **10.58 110** *e*P **Pn** **03 20 29.6 -0.3**
HEH S **Sn** **03 22 28.5 -0.2**
HEH smax smax
comp=N,750nm,1.1s
HEH smax smax
comp=E,500nm,1.1s
XLT **XiLinHaoTe** **11.34 164** *e*P **Pn** **03 20 39.2 -1.2**
XLT sP 03 20 46.3
XLT S Sn 03 22 36.5 -11
XLT pmax pmax
comp=Z,12nm,1.0s
XLT LR LR
comp=N,56nm,7.9s
XLT LR LR
comp=E,280nm,6.8s
XLT LR LR
comp=Z,540nm,8.9s
YAK **Yakutsk** **11.77 45** Pn **Pn** **03 20 44.4 -1.6**
comp=Z,3.1nm,0.3s,baz=180,slow=2.6,SNR=1.8
YAK Sn **Sn** **03 22 50.2 -7.5**
comp=Z,2.4nm,0.3s,baz=217,slow=18,SNR=1.5
YAK Lg Lg 03 23 59.2
comp=Z,2.2nm,0.3s,baz=243,slow=18,SNR=8.6
comp=Z,18nm,0.5s
YAK **Yakutsk** **11.77 45** *i* P **Pn** **03 20 50.8 +4.8**
CN2 **Changchun** **14.19 136** P **P** **03 21 25.1 -1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,400nm,6.0s
CN2 LR LR
comp=E,300nm,6.0s
CN2 LR LR
comp=Z,300nm,7.0s
BTO **Baotou** **14.33 185** *e*P **Pn** **03 21 23.1 +1.8**
BTO PP **PnPn** **03 21 33.6 +4.5**
BTO S **Sn** **03 24 05.0 +4.2**
BTO pmax pmax
comp=Z,11nm,0.6s
BTO pmax pmax
comp=Z,290nm,5.3s
BTO LR LR
comp=N,620nm,6.3s

BTO LR LR
comp=E,710nm,5.9s
BTO LR LR
comp=Z,480nm,6.3s
ZAA0 **Zalesovo Array** **15.69 278** **Pn** **03 21 37.7 -1.6**
ZAA0 IAmb IAmb 03 21 39.0
comp=Z,15nm,1.1s
ZALV **Zalesovo Beam** **15.69 278** **Pn** **03 21 38.0 -1.3**
ZALV **Zalesovo Beam** **15.69 278** Pn **Pn** **03 21 37.7 -1.6**
comp=Z,1.0nm,0.3s,baz=74,slow=11,SNR=18
ZALV Lg Lg 03 26 08.3
comp=Z,1.8nm,0.3s,baz=75,slow=28,SNR=9.1
ZALV LR LR 03 27 57.4
comp=Z,115nm,19.7s,baz=7.0,slow=38
comp=Z,9.7nm,0.9s
ZALV **Zalesovo Beam** **15.69 278** *i* P **Pn** **03 21 38.2 -1.1**
ZALV pmax pmax
comp=Z,10.0nm,0.9s
DGZ **Jazzator, Alta** **15.73 261** *i* P **Pn** **03 21 40.0 -0.1**
DGZ pmax pmax
comp=Z,2.0nm,0.9s
USRK **Ussuriysk Ar.** **16.85 121** Pn **Pn** **03 21 52.8 -1.5**
comp=Z,0.4nm,0.3s,baz=327,slow=6.9,SNR=4.7
USRK Lg Lg 03 26 47.6
comp=Z,0.3nm,0.3s,baz=318,slow=28,SNR=11
comp=Z,0.9nm,0.3s
NRIK **Noril'sk** **18.19 332** P **Pn** **03 22 07.0 -3.7**
comp=Z,10.0nm,0.7s,baz=128,slow=14,SNR=3.2
NRIK S Sn 03 25 20.3 -14
comp=Z,8.3nm,0.9s,baz=131,slow=20,SNR=3.5
NRIK **Noril'sk** **18.19 332***ce*P **Pn** **03 22 09.7 -1.0**
NRIK pmax pmax
comp=Z,12nm,1.0s
TIXI **Tiksi** **18.36 17** P **Pn** **03 22 10.4 -2.4**
comp=Z,3.9nm,0.4s,baz=228,slow=9.9,SNR=9.4
TIXI S Sn 03 25 24.1 -14
comp=Z,2.4nm,0.5s,baz=183,slow=22,SNR=1.5
TIXI Lg Lg 03 27 33.0
comp=Z,0.5nm,0.3s,baz=311,slow=20,SNR=5.0
TIXI **Tiksi** **18.36 17***ce*P **P** **03 22 14.1 +1.2**
TIXI pmax pmax
comp=Z,6.0nm,0.9s
LZDM **Lanzhou Array** **19.73 200** P **P** **03 22 25.8 -2.8**
baz=16,slow=16
LZDM Lg Lg 03 28 21.4
baz=26,slow=27
comp=Z,1.1nm,0.3s
MK31 **Makanchi Array** **20.18 259** *i* P Pn 03 22 35.1 +0.2
MKAR **Makanchi Array** **20.18 259** P **P** **03 22 32.4 -0.7**
MKAR **Makanchi Array** **20.18 259** P **P** **03 22 31.8 -1.2**
comp=Z,1.3nm,0.6s,baz=59,slow=8.6,SNR=14
MKAR Lg Lg 03 28 30.1
baz=59,slow=24,SNR=5.7
MKAR LR LR 03 30 59.3
comp=Z,45nm,20.6s,baz=57,slow=39
comp=Z,1.3nm,0.6s
MKAR **Makanchi Array** **20.18 259** P **P** **03 22 32.4 -0.7**
MAKZ **Makanchi** **20.35 259** **P** **03 22 34.5 -0.4**
MAKZ **Makanchi** **20.35 259** P **P** **03 22 34.5 -0.4**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
KURK **Kurchatov** **20.36 272** **P** **03 22 34.2 -0.7**
KURK IAmb IAmb 03 22 37.9
comp=Z,7.4nm,0.7s
KURK **Kurchatov** **20.36 272** *i* P **P** **03 22 35.9 +1.0**
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURBB **Kurchatov Arra** **20.45 272** P **P** **03 22 35.0 -0.9**
comp=Z,1.6nm,0.2s,baz=66,slow=11,SNR=11
KURBB S **S** **03 26 23.4 -1.8**
comp=Z,0.4nm,0.2s,baz=58,slow=12,SNR=1.1
KURBB Lg Lg 03 28 39.7
comp=Z,0.1nm,0.3s,baz=64,slow=24,SNR=4.5
KURBB LR LR 03 30 37.1
comp=Z,118nm,19.8s,baz=171,slow=37
comp=Z,1.6nm,0.2s
KSRS **Korea Array** **20.62 141** P Pn 03 22 39.1 -0.9
comp=Z,2.2nm,0.6s,baz=335,slow=10,SNR=11
comp=Z,2.2nm,0.6s
XAN **Xi'an** **20.93 187** P P 03 22 27.6 -14
XAN pmax pmax
comp=Z,11nm,1.0s
MA2 **Magadan** **21.39 61** LR LR 03 31 14.6
comp=Z,61nm,19.9s,baz=141,slow=37
SEY **Seymchan** **22.11 52** LR LR 03 31 46.7
comp=Z,52nm,19.9s,baz=250,slow=37
ASAJ **Asahikawa** **22.54 106** LR LR 03 32 25.2
comp=Z,113nm,19.0s,baz=78,slow=38
BVAR **Borovoye Array** **24.18 283** P **P** **03 23 14.4 -0.4**
comp=Z,2.4nm,0.6s,baz=68,slow=8.0,SNR=11
BVAR S **S** **03 27 34.8 +1.5**
comp=Z,0.8nm,0.6s,baz=62,slow=22,SNR=1.3
BVAR LR LR 03 33 32.2
comp=Z,104nm,21.1s,baz=86,slow=39
comp=Z,2.4nm,0.6s
BORK **Borovoye** **24.21 283***ce*P **P** **03 23 15.7 +0.6**
BORK pmax pmax
comp=Z,5.0nm,0.8s
MJAR **Matsushiro Arr** **25.77 124** P **P** **03 23 30.6 +1.2**
comp=Z,1.0nm,0.6s,baz=350,slow=8.9,SNR=2.0
MJAR LR LR 03 33 31.0
comp=Z,61nm,18.5s,baz=350,slow=36
comp=Z,1.0nm,0.6s
AAK **Ala-Archa** **27.12 259** LR LR 03 34 46.4
comp=Z,112nm,20.1s,baz=46,slow=37
JHJ **Hachijo jima 2** **29.31 126** LR LR 03 34 43.9
comp=Z,25nm,20.1s,baz=208,slow=34
ARTI **Arti** **29.55 295** LR LR 03 37 43.7
comp=Z,123nm,19.0s,baz=122,slow=40
ARTI **Arti** **29.55 295** P **P** **03 24 03.9 +0.9**
ARTI 03 24 53.6
ARTI S **S** **03 29 00.7 +2.5**
ARTI SS **SnSn** **03 30 28.9 +3.7**
ARTI MLR MLR
comp=Z,129nm,15.0s
AKTO **Aktyubinsk** **32.23 285** LR LR 03 38 18.5
comp=Z,57nm,19.2s,baz=241,slow=38
KLMR **Klimovskoe** **37.08 309** *e*P **P** **03 25 07.8 -0.6**
KLMR *e* 03 26 32.7
KLMR pmax pmax
comp=Z,12nm,1.5s
ARCES **ARCESS Array B** **38.99 326** P **P** **03 25 23.6 -1.0**
comp=Z,1.0nm,0.7s,baz=64,slow=10,SNR=6.3
ARCES LR LR 03 43 29.9
comp=Z,46nm,19.2s,baz=151,slow=39
comp=Z,1.0nm,0.7s
RDOG **Red Dog Mine** **39.28 36** P **P** **03 25 28.0 +1.0**
RDOG IAmb IAmb 03 25 32.0
comp=Z,8.5nm,0.6s
D19K **Kuna River** **40.69 34** **P** **03 25 40.4 +1.7**
OBN **Obninsk** **41.17 302** *i* P **P** **03 25 45.3 +2.6**
OBN pmax pmax
comp=Z,3.0nm,0.8s
FINES **FINESS Array B** **42.56 315** P **P** **03 25 53.5 -0.6**
FINES **FINESS Array B** **42.56 315** P **P** **03 25 53.8 -0.3**
comp=Z,1.3nm,0.6s,baz=60,slow=8.5,SNR=13
FINES LR LR 03 44 49.8
comp=Z,72nm,19.4s,baz=117,slow=38
comp=Z,1.3nm,0.6s
FINES **FINESS Array B** **42.56 315***ce*P **P** **03 25 54.7 +0.7**
FINES pmax pmax
comp=Z,3.0nm,0.8s
C27K **Jago River** **44.46 29** P **P** **03 26 09.6 +0.3**
C27K IAmb IAmb 03 26 18.8
comp=Z,9.5nm,1.4s
KIV **Kislovodsk** **44.49 286** *e*P **P** **03 26 10.5 +0.6**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KBZ **Khabaz** **44.51 285** LR LR 03 47 50.2
comp=Z,31nm,19.1s,baz=69,slow=40
GNI **Garni** **45.82 280** LR LR 03 47 21.2
comp=Z,37nm,21.6s,baz=68,slow=39
GNI **Garni** **45.82 280***ce*P **P** **03 26 24.2 +3.6**
GNI pmax pmax
comp=Z,8.0nm,1.3s
ILAR **Eielson Array** **46.47 35** P **P** **03 26 26.6 +1.4**
ILAR **Eielson Array** **46.47 35** P **P** **03 26 26.3 +1.0**
comp=Z,1.2nm,0.8s,baz=305,slow=6.4,SNR=13
comp=Z,1.2nm,0.8s
ILAR **Eielson Array** **46.47 35** P **P** **03 26 26.7 +1.4**
AKASG **Malin Array Be** **47.35 301** P **P** **03 26 32.1 -0.2**
comp=Z,0.4nm,0.4s,baz=49,slow=8.4,SNR=5.4
AKASG LR LR 03 48 08.3
comp=Z,66nm,19.1s,baz=14,slow=38
comp=Z,0.4nm,0.4s
AKASG **Malin Array Be** **47.35 301***ce*P **P** **03 26 35.0 +2.7**
AKBB **Malin Array Si** **47.35 301***ce*P **P** **03 26 35.3 +3.0**

HFS	**Hagfors**	**48.25**	**318**	P	**P**	**03 26 38.2**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=51,slow=7.6,SNR=18						
HFS				LR	LR	03 47 38.9	
	comp=Z,44nm,19.8s,baz=74,slow=37						
	comp=Z,1.8nm,0.5s						
KOPT	**Kop Dagi**	**48.31**	**283**	IAmb	IAmb	03 26 44.5	
	comp=Z,7.7nm,1.3s						
NB2	**NORSAR Subarra**	**48.59**	**320**	P	**P**	**03 26 41.3**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=49,slow=7.4						
NB2	**NORSAR Subarra**	**48.59**	**320**	P	**P**	**03 26 42.5**	**+0.7**
NOA	**NORSAR Array B**	**48.59**	**320**	P	**P**	**03 26 40.7**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=48,slow=7.6,SNR=5.3						
NOA				LR	LR	03 48 12.8	
	comp=Z,30nm,19.4s,baz=225,slow=37						
	comp=Z,0.8nm,0.6s						
GUMO	**Guam**	**48.60**	**135**	LR	LR	03 45 60.0	
	comp=Z,16nm,19.2s,baz=2.0,slow=35						
NORES	**NORESS Array B**	**48.67**	**320**	P	**P**	**03 26 44.1**	**+1.7**
BRTR	**Keskin Array B**	**52.33**	**288**	P	**P**	**03 27 10.8**	**+0.3**
BRTR	**Keskin Array B**	**52.33**	**288**	P	**P**	**03 27 09.5**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=55,slow=5.9,SNR=6.3						
BRTR				LR	LR	03 54 49.8	
	comp=Z,28nm,18.1s,baz=36,slow=42						
	comp=Z,1.3nm,1.0s						
BRTR	**Keskin Array B**	**52.33**	**288**	*ce*P	**P**	**03 27 12.3**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MLR	**Muntele Rosu**	**52.44**	**298**	LR	LR	03 51 51.1	
	comp=Z,82nm,19.4s,baz=22,slow=39						
VRAC	**Vranov**	**54.35**	**307**	LR	LR	03 53 17.1	
	comp=Z,60nm,18.5s,baz=38,slow=39						
CLL	**Collm**	**54.55**	**310**	*i* P	**P**	**03 27 25.7**	**-0.8**
CLL				MLR	MLR		
	comp=Z,1μm,21.2s						
CLL	**Collm**	**54.55**	**310**	*i* P	**P**	**03 27 25.7**	**-0.8**
GERES	**GERESS Array B**	**56.01**	**308**	P	**P**	**03 27 37.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=64,slow=9.0,SNR=2.0						
GERES				LR	LR	03 53 28.9	
	comp=Z,52nm,18.8s,baz=74,slow=38						
	comp=Z,0.2nm,0.3s						
EKA	**Eskdalemuir Ar**	**57.96**	**322**	P	**P**	**03 27 50.2**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=24,slow=6.2,SNR=3.4						
	comp=Z,3.1nm,0.9s						
DAVOX	**Davos/Dischmat**	**59.27**	**309**	LR	LR	03 56 02.1	
	comp=Z,82nm,18.9s,baz=252,slow=39						
SCHQ	**Schefferville**	**70.64**	**359**	P	**P**	**03 29 14.6**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=331,slow=10,SNR=1.2						
	comp=Z,2.6nm,0.7s						
ESDC	**Sonseca Array**	**71.02**	**313**	P	**P**	**03 29 17.3**	**+0.8**
	comp=Z,2.7nm,1.0s,baz=24,slow=5.5,SNR=5.3						
	comp=Z,2.7nm,1.0s						
PLID	**Pearl Lake**	**72.48**	**33**	P	**P**	**03 29 26.6**	**+1.2**
PLID				IAmb	IAmb	03 29 27.0	
	comp=Z,1.9nm,0.7s						
PDAR	**Pinedale Array**	**76.55**	**30**	P	**P**	**03 29 48.7**	**-0.4**
PDAR	**Pinedale Array**	**76.55**	**30**	P	**P**	**03 29 48.4**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=338,slow=1.6,SNR=4.5						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**76.98**	**158**	P	**P**	**03 29 50.7**	**-0.6**
WRA	**Warramunga Arr**	**76.98**	**158**	P	**P**	**03 29 50.3**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=346,slow=6.0,SNR=17						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**76.98**	**158**	P	**P**	**03 29 50.7**	**-0.6**
WR8	**Warramunga Arr**	**77.03**	**158**	P	**P**	**03 29 50.9**	**-0.6**
NVAR	**Mina Array Bea**	**77.64**	**38**	P	**P**	**03 29 55.0**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=339,slow=7.7,SNR=4.0						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**80.50**	**160**	P	**P**	**03 30 09.6**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=352,slow=5.8,SNR=4.2						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**90.51**	**294**	P	**P**	**03 31 00.1**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=31,slow=6.2,SNR=1.8						
	comp=Z,1.3nm,0.3s						
QSPA	**South Pole Qui**	**144.64**	**180**		**PKPdf**	**03 37 33.4**	**-0.6**
QSPA	**South Pole Qui**	**144.64**	**180**	PKP	PKPbc	03 37 32.8	-0.1
	comp=Z,1.6nm,0.6s,baz=320,slow=2.2,SNR=9.2						
SNAA	**Sanae**	**148.25**	**213**		**PKPdf**	**03 37 41.3**	**+1.3**
SNAA	**Sanae**	**148.25**	**213**	PKPbc	**PKPbc**	**03 37 41.6**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=94,slow=19,SNR=2.3						
SNAA	**Sanae**	**148.25**	**213**	PKP2	**PKPdf**	**03 37 41.3**	**+1.3**
CPUP	**Villa Florida**	**150.38**	**340**	PKPbc	**PKPbc**	**03 37 47.6**	**-2.4**
	comp=Z,0.3nm,0.7s,baz=42,slow=1.4,SNR=4.1						

BER 08 03:36:50.3±8.3, 71°.63N×6°.22W, *h*2km±999km, ML2.7, Confirmed Earthquake, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.93**	**227**	*e*P		Pg	03 37 07.0	-1.0
JNE				*e*S		Sg	03 37 15.5	-4.5
JNE				IAML			03 37 16.3	
	comp=Z,248nm,0.2s							
JNE	**Jan Mayen East**	**0.93**	**227**	*e*P		Pg	03 37 07.0	-1.0
JNE				*e*S		Sn	03 37 31.5	+7.3
JNE				IAML			03 37 34.1	
	comp=Z,302nm,0.2s							
JNW	**Jan Mayen West**	**0.93**	**231**	*e*P		Pg	03 37 07.2	-0.9
JNW				*e*S		Sg	03 37 16.0	-4.1
JNW				IAML			03 37 17.0	
	comp=Z,141nm,0.3s							
JNW	**Jan Mayen West**	**0.93**	**231**	*e*P		Pg	03 37 07.2	-0.9
JNW				*e*S		Sg	03 37 16.0	-4.1
JNW				*e*S		Sn	03 37 32.2	+7.9
JNW				IAML			03 37 35.1	
	comp=Z,197nm,0.4s							
JMIC	**Jan Mayen**	**0.98**	**230**	*e*P		Pg	03 37 07.6	-1.4
JMIC				*e*S		Sg	03 37 16.9	-4.7
JMIC				IAML			03 37 17.5	
	comp=Z,135nm,0.2s							
JMIC				*e*S		Sn	03 37 32.6	+7.2
JMI	**Jan Mayen**	**1.07**	**230**	*e*P		Pg	03 37 09.3	-1.5
JMI				*e*S		Sg	03 37 19.3	-5.4
JMI				IAML			03 37 20.9	
	comp=Z,95nm,0.2s							
JMI				*e*S		Sn	03 37 35.2	+7.4

*SOME **08** 04:32:10.3, 41°.77N×78°.52E, h5km*
*NNC **08** 04:32:12.7±1.5, 41°.93N×78°.55E, h0km, mb3.0, mpv2.9, Error ellipse: s-maj=10.9km s-min=5.9km az=163.0, Suspected Mining explosion.*
*KRNET **08** 04:32:13.7±0.1, 41°.16N×77°.71E, h15km, mb2.7*
ISC 08 04:32:11.6±1.5, 41°.87N±0°.07×78°.47E±0°.05, *h*0km, n21, σ1°52/36, 12C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.52**	**255**	⇓*i*P		**Pb**	**04 32 24.7**	**+0.9**
TARG				⇓*i*S		**Sb**	**04 32 32.9**	**+1.0**
KDJ	**Kajisay**	**1.00**	**286**	⇑*i*P		**Pn**	**04 32 33.4**	**+0.4**
KDJ				⇑*i*S		**Sn**	**04 32 47.6**	**-0.3**
SATY	**Saty**	**1.19**	**358**	P		**Pg**	**04 32 33.1**	**-1.3**
	0.9nm,0.1s							
SATY				S		**Sg**	**04 32 50.0**	**0.0**
	9.7nm,0.1s							
UZB	**Uzynbulak**	**1.34**	**18**	P		**Pg**	**04 32 34.9**	**-2.4**
	3.0nm,0.3s							
UZB				S		**Sg**	**04 32 53.0**	**-1.8**
	2.7nm,0.2s							
UZB	**Uzynbulak**	**1.34**	**18**	*e*P		**Pg**	**04 32 36.1**	**-1.3**
	1.0nm,0.1s							
UZB				*e*S		**Sg**	**04 32 55.0**	**+0.2**
	2.1nm,0.1s							
SHLS	**Shalkode**	**1.48**	**29**	*e*P		**Pb**	**04 32 41.6**	**+1.5**
	1.6nm,0.1s							
SHLS				*e*S		**Sn**	**04 33 04.4**	**+4.5**
	6.1nm,0.1s							
PDGK	**Podgornoye**	**1.65**	**27**	⇑Pn		**Pb**	**04 32 43.1**	**+0.2**
	1.0nm,0.5s							
PDGK				⇑Sn		**Sn**	**04 33 04.0**	**+0.1**
	4.6nm,0.5s							
MTBS	**Maitube**	**1.97**	**311**	Pg		**Pb**	**04 32 48.7**	**+0.4**
	4.7nm,0.2s							
MTBS				Lg		Lg	04 33 16.7	
	8.3nm,0.2s							
MTBS	**Maitube**	**1.97**	**311**	*e*P		**Pg**	**04 32 49.4**	**+0.1**
	0.5nm,0.1s							
MTBS				*e*S		**Sg**	**04 33 17.8**	**+3.0**
	8.0nm,0.2s							
BOOM	**Boomskoye usch**	**1.98**	**289**	⇓*i*P		**Pb**	**04 32 48.3**	**-0.3**
BOOM				⇓*i*S		**Sb**	**04 33 13.6**	**-0.3**
KST	**Kastek**	**2.19**	**303**	Pg		**Pb**	**04 32 52.5**	**+0.2**
	1.7nm,0.3s							
KST				Lg		Lg	04 33 23.4	
	6.5nm,0.4s							
KST	**Kastek**	**2.19**	**303**	*e*P		**Pb**	**04 32 52.8**	**+0.6**
	0.9nm,0.1s							
KST				*e*S		**Sg**	**04 33 23.7**	**+1.6**
	4.7nm,0.3s							
BLB	**Baldybastay**	**2.23**	**0**	Pg		**Pb**	**04 32 52.2**	**-0.6**
	3.8nm,0.2s							
BLB				Lg		Lg	04 33 22.8	
KTBS	**Karatobe**	**2.27**	**325**	Pg		**Pb**	**04 32 53.6**	**+0.2**
	0.6nm,0.0s							
KTBS				Lg		Lg	04 33 25.2	
	0.6nm,0.0s							
TKM2	**Tokmak 2**	**2.37**	**297**	⇑*i*P		**Pb**	**04 32 55.5**	**+0.2**
TKM2				⇑*i*S		**Sb**	**04 33 25.9**	**+0.6**
ARXS	**Arharly**	**2.39**	**349**	Pg		**Pb**	**04 32 55.7**	**+0.1**
	1.8nm,0.2s							
ARXS				Lg		Lg	04 33 29.0	
	9.1nm,0.4s							
ARXS	**Arharly**	**2.39**	**349**	*e*P		**Pb**	**04 32 55.7**	**+0.1**
ARXS				*e*S		**Sg**	**04 33 28.8**	**+0.4**
DGS	**Degeres**	**2.42**	**306**	Pg		**Pb**	**04 32 56.4**	**+0.3**
	2.5nm,0.4s							
DGS				Lg		Lg	04 33 30.2	
	7.2nm,0.3s							
KBK	**Karagaybulak**	**2.73**	**288**	⇑*i*P		**Pn**	**04 32 58.0**	**+1.2**
KBK				⇑*i*S		**Sn**	**04 33 30.2**	**-0.4**
UCH	**Uchtor**	**2.97**	**278**	⇑*e*P		**Pn**	**04 32 59.2**	**-1.2**
UCH				⇑*i*S		**Sn**	**04 33 32.5**	**-4.4**
AAK	**Ala-Archa**	**3.05**	**286**	⇑*i*P		**Pn**	**04 33 01.8**	**+0.6**
AAK				⇑*i*S		**Sn**	**04 33 36.7**	**-1.8**

*PGC **08** 04:38:05.9±0.0, 59°.93N×140°.07W, h16km, ML2.8/29, ML2.7(AEIC), 43km northeast of Yakutat, Ak Southeastern Alaska*
*ANF **08** 04:38:05.0±0.2, 59°.94N×140°.02W, h0km, ML3.0/26, Error ellipse: s-maj=2.2km s-min=1.4km az=14.0*
*NEIC **08** 04:38:05.9±1.9, 59°.97N±0°.02×140°.00W±0°.02, h10km±2km, Error ellipse: s-maj=3.6km s-min=3.0km az=198.0*
*AEIC **08** 04:38:06.2±1.7, 59°.96N±0°.02×140°.07W±0°.04, h11km±6km, ML2.6, ML2.8/78(NEIC), Error ellipse: s-maj=3.6km s-min=1.9km az=216.0*
ISC 08 04:38:06.0±0.8, 59°.95N±0°.02×140°.04W±0°.01, h17km±5km, n162, σ1°49/244, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PINM	**Pinnacle**	**0.18**	**323**	P		**Pg**	**04 38 09.9**	**-0.6**
	baz=144,SNR=1000							
PINM				S		**Sg**	**04 38 13.0**	**-0.7**
	baz=144							
PCA	**Pinnacle**	**0.18**	**323**			**Pg**	**04 38 09.9**	**-0.7**
PCA	**Pinnacle**	**0.18**	**323**	P		**Pg**	**04 38 09.9**	**-0.7**
PCA				S		**Sg**	**04 38 13.8**	**0.0**
BCPM	**Bancas Point**	**0.20**	**90**			**Pg**	**04 38 10.1**	**-0.7**
SAMH	**Samovar Hills**	**0.41**	**296**			**Pb**	**04 38 14.9**	**0.0**
SAMH	**Samovar Hills**	**0.41**	**296**	P		**Pb**	**04 38 14.9**	**0.0**
PNL	**Peninsula**	**0.43**	**131**			**Pg**	**04 38 14.4**	**-0.4**
PNL						**Sg**	**04 38 20.4**	**-0.3**
PNL	**Peninsula**	**0.43**	**131**	P		**Pg**	**04 38 14.1**	**-0.7**
PNL	**Peninsula**	**0.43**	**131**	S		**Sg**	**04 38 20.9**	**+0.2**
PNL	**Peninsula**	**0.43**	**131**	P		**Pg**	**04 38 14.0**	**-0.7**
PNL				S		**Sg**	**04 38 20.1**	**-0.5**
PNL	**Peninsula**	**0.43**	**131**	P		**Pg**	**04 38 14.0**	**-0.7**
	baz=312,SNR=1000							
PNL				S		**Sg**	**04 38 20.1**	**-0.5**
	baz=312							
YKU2	**Yakutat**	**0.48**	**157**	Pg		**Pg**	**04 38 15.8**	**+0.2**
YKU2	**Yakutat**	**0.48**	**157**			**Sb**	**04 38 23.7**	**+1.0**
YKU2	**Yakutat**	**0.48**	**157**	P		**Pn**	**04 38 18.8**	**+0.8**
CHX	**Chaix Hills**	**0.55**	**282**			**Pb**	**04 38 17.5**	**+0.2**
TABL	**Table Mountain**	**0.74**	**312**			**Pg**	**04 38 19.8**	**-0.7**
TABL						**Sb**	**04 38 30.9**	**+0.6**
TABL				IAML			04 38 35.3	
	comp=N,280nm,0.8s							
TABL				IAML			04 38 36.1	
	comp=E,272nm,0.8s							
TABL	**Table Mountain**	**0.74**	**312**	P		**Pg**	**04 38 19.7**	**-0.7**
TABL				S		**Sg**	**04 38 29.6**	**-0.7**
RKAV	**Rock Avalanche**	**0.74**	**298**			**Pg**	**04 38 20.4**	**-0.1**
RKAV						**Sb**	**04 38 31.7**	**+1.3**
RKAV	**Rock Avalanche**	**0.74**	**298**	P		**Pg**	**04 38 20.4**	**-0.1**
RKAV				S		**Sg**	**04 38 28.8**	**-1.5**
O29M	**Mount Kennedy**	**0.81**	**64**			**Pg**	**04 38 20.8**	**-0.9**
O29M	**Mount Kennedy**	**0.81**	**64**	P		**Pg**	**04 38 20.9**	**-0.9**
O29M	**Mount Kennedy**	**0.81**	**64**	P		**Pg**	**04 38 20.9**	**-0.9**
	baz=246							
O29M				S		**Sg**	**04 38 31.6**	**-1.0**
	baz=246							
O28M	**Mount Upton**	**0.82**	**355**			**Pg**	**04 38 21.3**	**-0.8**
O28M						**Sg**	**04 38 32.9**	**-0.2**
O28M	**Mount Upton**	**0.82**	**355**	IAML			04 38 33.8	
	comp=E,324nm,0.6s							
O28M	**Mount Upton**	**0.82**	**355**	P		**Pg**	**04 38 21.2**	**-0.9**
O28M				S		**Sb**	**04 38 33.1**	**+0.2**
O28M	**Mount Upton**	**0.82**	**355**	P		**Pg**	**04 38 21.2**	**-0.9**
	baz=175							
O28M				S		**Sg**	**04 38 32.9**	**-0.2**
	baz=175							
YAH	**Yahtse**	**0.95**	**296**			**Pg**	**04 38 24.2**	**-0.2**
YAH				Sn		**Sn**	**04 38 38.4**	**+0.4**
YAH				IAML			04 38 39.8	
	comp=N,242nm,0.6s							
YAH				IAML			04 38 40.1	
	comp=E,250nm,0.4s							
MESA	**MESA**	**0.99**	**284**			**Pg**	**04 38 24.6**	**-0.6**
MESA	**MESA**	**0.99**	**284**			**Sb**	**04 38 38.8**	**+1.3**
MESA	**MESA**	**0.99**	**284**	P		**Pg**	**04 38 24.5**	**-0.6**
MESA	**MESA**	**0.99**	**284**	P		**Pg**	**04 38 24.5**	**-0.6**
	baz=102,SNR=172							
MESA				S		**Sb**	**04 38 38.7**	**+1.2**
	baz=102							
LOGN	**Logan Glacier**	**1.00**	**332**			**Pg**	**04 38 24.0**	**-1.3**
LOGN				IAML			04 38 38.4	
	comp=N,168nm,0.6s							
LOGN	**Logan Glacier**	**1.00**	**332**	P		**Pg**	**04 38 23.9**	**-1.4**
LOGN				S		**Sg**	**04 38 37.3**	**-1.1**
YUK7	**Dusty Glacier**	**1.11**	**58**	P		**Pb**	**04 38 26.3**	**-0.5**
YUK7				S		**Sg**	**04 38 41.2**	**-0.8**
GRNC	**Granite Creek**	**1.16**	**313**			**Pb**	**04 38 26.4**	**-1.3**
GRNC				IAML			04 38 48.8	
	comp=N,212nm,0.6s							
GRNC	**Granite Creek**	**1.16**	**313**	P		**Pb**	**04 38 26.3**	**-1.3**
GRNC				S		**Sb**	**04 38 41.8**	**-0.6**
CTGM	**Chitina Glacie**	**1.20**	**328**			**Pb**	**04 38 27.3**	**-1.0**
CTGM				IAML			04 38 49.3	
	comp=N,169nm,0.4s							
CTGM	**Chitina Glacie**	**1.20**	**328**			**Sb**	**04 38 43.4**	**-0.3**
CTGM	**Chitina Glacie**	**1.20**	**328**	P		**Pb**	**04 38 27.4**	**-1.0**
CTGM				S		**Sb**	**04 38 43.1**	**-0.5**
CTG	**Chitna Glacier**	**1.20**	**328**	P		**Pb**	**04 38 27.4**	**-1.0**
	baz=147,SNR=223							
CTG				S		**Sb**	**04 38 43.7**	**0.0**
	baz=147							
P29M	**Windy Craggy**	**1.21**	**105**			**Pn**	**04 38 27.1**	**-1.0**
P29M				IAML			04 38 46.3	
	comp=E,260nm,0.5s							
P29M	**Windy Craggy**	**1.21**	**105**	P		**Pn**	**04 38 27.1**	**-1.0**
P29M				S		**Sb**	**04 38 43.3**	**-0.5**
P29M	**Windy Craggy**	**1.21**	**105**	P		**Pn**	**04 38 27.1**	**-1.0**
	baz=287,SNR=232							
P29M				S		**Sb**	**04 38 43.2**	**-0.5**
	baz=287							
YUK6	**Outpost Mounta**	**1.29**	**39**			**Pn**	**04 38 29.9**	**+0.4**
YUK6	**Outpost Mounta**	**1.29**	**39**	P		**Pn**	**04 38 29.8**	**+0.4**
YUK6				S		**Sb**	**04 38 46.1**	**-0.2**
YUK6	**Outpost Mounta**	**1.29**	**39**	P		**Pn**	**04 38 29.9**	**+0.4**
	baz=221,SNR=1000							
YUK6				S		**Sg**	**04 38 47.6**	**-0.3**
	baz=221							
ISLE	**Juniper Island**	**1.32**	**301**			**Pn**	**04 38 29.1**	**-0.6**
ISLE				IAML			04 38 49.7	
	comp=E,164nm,0.3s							
ISLE				IAML			04 38 51.1	
	comp=N,141nm,0.8s							
YUK8	**Steele Glacier**	**1.34**	**6**			**Pn**	**04 38 30.6**	**+0.4**
YUK8	**Steele Glacier**	**1.34**	**6**	P		**Pn**	**04 38 30.5**	**+0.4**
YUK8				S		**Sb**	**04 38 47.9**	**+0.1**
YUK8	**Steele Glacier**	**1.34**	**6**	P		**Pn**	**04 38 30.7**	**+0.5**
	baz=186,SNR=832							
YUK8				S		**Sn**	**04 38 48.8**	**+1.1**
	baz=186							
BARN	**Barnard Glacie**	**1.37**	**325**			**Pn**	**04 38 30.0**	**-0.5**
BARN				IAML			04 38 49.2	
	comp=N,196nm,0.3s							
BARN				IAML			04 38 52.8	
	comp=E,213nm,0.3s							
SNH	**Sunshine Point**	**1.42**	**280**			**Pn**	**04 38 31.6**	**+0.5**
SNH				IAML			04 38 55.6	
	comp=E,112nm,0.3s							
SNH				IAML			04 39 00.1	
	comp=N,153nm,0.6s							
WAX	**Waxell Ridge**	**1.49**	**291**			**Pn**	**04 38 32.4**	**+0.4**
BRWY	**Burwash Landin**	**1.50**	**19**	Pn		**Pn**	**04 38 32.0**	**-0.2**
KIAG	**Kiagna River**	**1.51**	**311**	Pn		**Pn**	**04 38 31.8**	**-0.6**
KIAG				Sn		**Sn**	**04 38 51.3**	**-0.3**
HYT	**Haines Junctio**	**1.53**	**54**			**Pn**	**04 38 33.7**	**-0.2**
HYT	**Haines Junctio**	**1.53**	**54**	Pg		**Pn**	**04 38 33.6**	**+1.0**
HYT				Sg		**Sg**	**04 38 54.5**	**-0.9**
HYT	**Haines Junctio**	**1.53**	**54**	P		**Pn**	**04 38 33.6**	**+1.0**
	baz=237,SNR=343							
HYT				S		**Sg**	**04 38 54.5**	**-0.9**
	baz=237							
P30M	**Million Dollar**	**1.55**	**82**	Pg		**Pn**	**04 38 33.8**	**+0.9**
P30M				Sg		**Sg**	**04 38 55.4**	**-0.7**
P30M	**Million Dollar**	**1.55**	**82**	P		**Pn**	**04 38 33.8**	**+0.9**
	baz=266							
P30M				S		**Sg**	**04 38 54.9**	**-1.2**
	baz=266							
YUK4	**Talbot Arm**	**1.56**	**26**	Pg		**Pg**	**04 38 36.2**	**+0.3**
YUK4				Sn		**Sg**	**04 38 55.6**	**-0.5**
YUK4				Sg		**Sb**	**04 38 58.9**	**+5.0**
YUK4	**Talbot Arm**	**1.56**	**26**	P		**Pg**	**04 38 36.2**	**+0.3**
	baz=207,SNR=964							
YUK4				S		**Sg**	**04 38 58.6**	**+2.4**
	baz=207							
BALM	**Baldy**	**1.58**	**315**	Pn		**Pn**	**04 38 32.6**	**-0.6**
BALM				Pg		**Pb**	**04 38 34.2**	**-0.5**
BALM				Sn		**Sn**	**04 38 52.9**	**-0.4**
YUK5	**Granite Creek**	**1.60**	**41**			**Pb**	**04 38 35.4**	**+0.2**
YUK5	**Granite Creek**	**1.60**	**41**	Pg		**Pb**	**04 38 35.3**	**+0.2**
YUK5				Sn		**Sn**	**04 38 54.2**	**+0.3**
YUK5				Sg		**Sg**	**04 38 57.4**	**-0.1**
TGL	**Tana Glacier**	**1.60**	**301**			**Pn**	**04 38 33.8**	**+0.2**
TGL				IAML			04 39 04.9	
	comp=N,80nm,0.8s							
BGLC	**Bering Glacier**	**1.64**	**277**	P		**Pn**	**04 38 35.1**	**+1.2**
	baz=94							
BGLC				S		**Sb**	**04 38 57.5**	**+1.5**
	baz=94							
CRQE	**Cirque**	**1.72**	**299**	P		**Pn**	**04 38 35.7**	**+0.5**
	baz=116							
CRQE				S		**Sb**	**04 38 59.4**	**+0.9**
	baz=116							
PTPK	**Patty Peak**	**1.72**	**317**	Pn		**Pn**	**04 38 35.2**	**-0.1**
PTPK				Sn		**Sn**	**04 38 56.3**	**-0.7**
PTPK				Sg		**Sb**	**04 38 59.6**	**+1.0**
CRQM	**Cirque**	**1.74**	**299**			**Pn**	**04 38 35.7**	**+0.1**
CRQM				IAML			04 39 01.7	
	comp=E,108nm,0.5s							
CRQM				IAML			04 39 04.2	
	comp=N,105nm,0.8s							
YUK3	**Moose Creek**	**1.84**	**354**	Pg		**Pb**	**04 38 38.8**	**-0.5**
YUK3				Sn		**Sn**	**04 39 00.2**	**+0.3**
YUK3				Sg		**Sb**	**04 39 03.7**	**+1.6**
YUK3	**Moose Creek**	**1.84**	**354**	P		**Pb**	**04 38 38.6**	**-0.6**
	baz=174,SNR=225							
YUK3				S		**Sb**	**04 39 03.0**	**+1.0**
	baz=174							
YUK2	**White River**	**1.88**	**348**	Pg		**Pb**	**04 38 39.5**	**-0.5**
YUK2				Sn		**Sn**	**04 39 00.6**	**-0.2**
YUK2				Sg		**Sb**	**04 39 05.0**	**+1.9**
BERG	**Berg Lake**	**1.88**	**285**			**Pn**	**04 38 38.0**	**+0.6**
PLBC	**Pleasant Camp**	**1.93**	**103**			**Pn**	**04 38 39.2**	**+1.3**
PLBC	**Pleasant Camp**	**1.93**	**103**	Pn		**Pn**	**04 38 38.0**	**+0.1**
PLBC				Sg		**Sb**	**04 39 05.9**	**+1.6**
PLBC	**Pleasant Camp**	**1.93**	**103**	P		**Pn**	**04 38 38.5**	**+0.5**
	baz=287,SNR=71							
PLBC				S		**Sb**	**04 39 04.1**	**-0.2**
	baz=287							
MCARA	**McCarthy VSAT**	**2.05**	**316**			**Pn**	**04 38 41.4**	**+1.7**
MCARA				IAML			04 39 15.0	
	comp=N,87nm,0.5s							
MCARA				IAML			04 39 19.8	
	comp=E,84nm,0.7s							
MCARA	**McCarthy VSAT**	**2.05**	**316**	Pg		**Pb**	**04 38 42.3**	**-0.5**
MCARA	**McCarthy VSAT**	**2.05**	**316**	P		**Pn**	**04 38 41.0**	**+1.3**
	baz=133,SNR=72							
MCARA				S		**Sb**	**04 39 08.7**	**+0.7**
	baz=133							
N30M	**Aishikik Lake**	**2.09**	**43**			**Pn**	**04 38 41.4**	**+1.0**
N30M	**Aishikik Lake**	**2.09**	**43**	IAML			04 39 16.0	
	comp=E,40nm,0.5s							
N30M				IAML			04 39 18.5	
	comp=N,43nm,0.6s							
N30M	**Aishikik Lake**	**2.09**	**43**	Pg		**Pb**	**04 38 44.4**	**+0.9**
N30M	**Aishikik Lake**	**2.09**	**43**	P		**Pn**	**04 38 41.3**	**+1.0**
	baz=225							
N30M				Sb		**Sg**	**04 39 11.7**	**-1.6**
	baz=225							
VRDI	**Verde Repeater**	**2.

WHY	**Whitehorse**	**2.66**	**72**	P		**Pn**	**04 38 49.1**	**+1.0**
	baz=257,SNR=65							
WHY				Sb		**Sg**	**04 39 29.1**	**-2.4**
	baz=257							
N25K	**Chitina, Valde**	**2.78**	**309**			**Pn**	**04 38 51.0**	**+1.1**
N25K	**Chitina, Valde**	**2.78**	**309**	Pn		**Pn**	**04 38 50.8**	**+1.0**
N25K				Sn		**Sn**	**04 39 21.9**	**-1.1**
N25K	**Chitina, Valde**	**2.78**	**309**	P		**Pn**	**04 38 50.9**	**+1.1**
	baz=124							
N25K				S		**Sn**	**04 39 25.8**	**+2.8**
	baz=124							
M26K	**Nabesna, AK**	**2.84**	**331**	P		**Pn**	**04 38 52.1**	**+1.5**
	baz=148							
M26K				S		**Sn**	**04 39 27.6**	**+3.1**
	baz=148							
EYAK	**Cordova Ski Ar**	**2.91**	**284**	P		**Pb**	**04 38 55.8**	**-1.5**
EYAK	**Cordova Ski Ar**	**2.91**	**284**	S		**Sb**	**04 39 33.8**	**+1.2**
EYAK	**Cordova Ski Ar**	**2.91**	**284**	Sb		**Sb**	**04 39 34.6**	**+2.1**
	baz=99							
BESE	**Bessie Mountai**	**3.00**	**115**	Pn		**Pn**	**04 38 53.2**	**+0.5**
BESE				Sn		**Sn**	**04 39 26.9**	**-1.3**
M30M	**Minto, Yukon**	**3.06**	**29**			**Pn**	**04 38 55.2**	**+1.6**
M30M				IAML			04 39 43.9	
	comp=N,24nm,0.8s							
M30M				IAML			04 39 44.8	
	comp=E,22nm,0.7s							
M30M	**Minto, Yukon**	**3.06**	**29**	Pn		**Pn**	**04 38 54.6**	**+1.0**
M30M				Pg		**Pb**	**04 39 01.8**	**+1.8**
M30M				Sn		**Sn**	**04 39 27.5**	**-2.3**
M30M				Sg		**Sg**	**04 39 42.8**	**-1.5**
M30M	**Minto, Yukon**	**3.06**	**29**	P		**Pn**	**04 38 54.9**	**+1.3**
	baz=212,SNR=59							
M30M				Sb		**Sg**	**04 39 41.9**	**-2.3**
	baz=212							
P32M	**Atlin**	**3.22**	**94**			**Pn**	**04 38 55.8**	**+0.1**
P32M				IAML			04 39 49.5	
	comp=E,18nm,1.1s							
P32M	**Atlin**	**3.22**	**94**	Pn		**Pn**	**04 38 55.7**	**-0.1**
P32M				Pg		**Pb**	**04 39 02.8**	**+0.2**
P32M				Sg		**Sg**	**04 39 45.9**	**-3.4**
P32M	**Atlin**	**3.22**	**94**	P		**Pn**	**04 38 55.7**	**-0.1**
	baz=279,SNR=7.7							
P32M				Sb		**Sb**	**04 39 44.8**	**+3.3**
	baz=279							
BCAR	**Beaver Creek A**	**3.23**	**346**			**Pn**	**04 38 56.8**	**+0.9**
L27K	**Beaver Creek,**	**3.23**	**345**			**Pn**	**04 38 57.3**	**+1.3**
L27K	**Beaver Creek,**	**3.23**	**345**	Pn		**Pn**	**04 38 56.3**	**+0.3**
L27K				Pg		**Pb**	**04 39 03.3**	**+0.4**
L27K	**Beaver Creek,**	**3.23**	**345**	Sb		**Sb**	**04 39 46.0**	**+4.0**
	baz=164							
KLU	**Klutina**	**3.28**	**301**			**Pn**	**04 38 57.5**	**+0.9**
KLU	**Klutina**	**3.28**	**301**	IAML			04 39 45.2	
	comp=N,35nm,0.3s							
KLU				IAML			04 39 48.3	
	comp=E,32nm,0.5s							
L29M	**L29M**	**3.30**	**15**			**Pn**	**04 38 58.7**	**+1.9**
L29M	**L29M**	**3.30**	**15**	Pn		**Pn**	**04 38 58.3**	**+1.5**
L29M				Sg		**Sg**	**04 39 50.6**	**-1.1**
L29M	**L29M**	**3.30**	**15**	P		**Pn**	**04 38 58.6**	**+1.9**
	baz=197							
R32K	**Eaglecrest**	**3.31**	**118**	Sn		**Sn**	**04 39 34.8**	**-1.0**
JIS	**Juneau Island**	**3.37**	**118**	P		**Pn**	**04 38 59.1**	**+1.4**
L26K	**Log Cabin Wild**	**3.47**	**334**	S		**Sn**	**04 39 42.8**	**+3.0**
	baz=151							
M31M	**Drury Creek, Y**	**3.55**	**48**	IAML			04 39 59.4	
	comp=N,15nm,0.8s							
M31M				IAML			04 40 05.7	
	comp=E,18nm,0.7s							
M31M	**Drury Creek, Y**	**3.55**	**48**	Pn		**Pn**	**04 39 00.7**	**+0.4**
M31M				Pg		**Pb**	**04 39 09.8**	**+1.5**
M31M				Sg		**Sg**	**04 39 56.8**	**-3.1**
P33M	**Teslin, Yukon**	**3.63**	**83**			**Pn**	**04 39 01.4**	**0.0**
P33M	**Teslin, Yukon**	**3.63**	**83**	Pn		**Pn**	**04 39 01.3**	**0.0**
N32M	**Quiet Lake**	**3.64**	**68**	Pn		**Pn**	**04 39 01.9**	**+0.4**
N32M				Pg		**Pb**	**04 39 11.6**	**+1.8**
N32M	**Quiet Lake**	**3.64**	**68**	P		**Pn**	**04 39 02.6**	**+1.1**
	baz=254							
SIT	**Sitka**	**3.81**	**138**	P		**Pn**	**04 39 07.8**	**+4.0**
K29M	**Barlow Dome**	**4.08**	**16**	Pn		**Pn**	**04 39 09.2**	**+1.5**
K29M				Sn		**Sn**	**04 39 53.9**	**-1.1**
K29M				Sg		**Sg**	**04 40 14.3**	**-2.6**
K29M	**Barlow Dome**	**4.08**	**16**	P		**Pn**	**04 39 09.8**	**+2.1**
	baz=198							
Q32M	**Nakina River**	**4.09**	**101**	Pn		**Pn**	**04 39 08.3**	**+0.5**
Q32M				Sn		**Sn**	**04 39 54.2**	**-1.1**
DAWY	**Dawson**	**4.14**	**4**			**Pn**	**04 39 10.2**	**+1.9**
DAWY	**Dawson**	**4.14**	**4**	Pn		**Pn**	**04 39 09.8**	**+1.4**
DAWY	**Dawson**	**4.14**	**4**	P		**Pn**	**04 39 10.2**	**+1.9**
	baz=185,SNR=17							
MAYO	**Mayo, Yukon**	**4.15**	**27**	Pn		**Pn**	**04 39 10.1**	**+1.6**
MAYO				Sg		**Sg**	**04 40 16.4**	**-2.7**
DOT	**Dot Lake**	**4.17**	**334**	Pn		**Pn**	**04 39 10.2**	**+1.4**
K27K	**Chicken**	**4.20**	**348**	Pn		**Pn**	**04 39 09.6**	**+1.5**
K27K				Sg		**Sg**	**04 40 17.0**	**-3.7**
R33M	**Jennings River**	**4.63**	**93**			**Pn**	**04 39 15.4**	**+0.1**
R33M	**Jennings River**	**4.63**	**93**	Sg		**Sg**	**04 40 29.3**	**-5.3**
J26L	**Joseph Creek**	**4.85**	**342**			**Pn**	**04 39 20.0**	**+1.8**
J30M	**Hart River**	**4.95**	**19**			**Pn**	**04 39 22.0**	**+2.4**
J30M	**Hart River**	**4.95**	**19**	Pn		**Pn**	**04 39 21.0**	**+1.4**
J30M				Sg		**Sg**	**04 40 39.9**	**-4.8**
J30M	**Hart River**	**4.95**	**19**	P		**Pn**	**04 39 21.5**	**+1.9**
	baz=202,SNR=17							
I28M	**Miner Creek**	**5.52**	**0**	Sg		**Sg**	**04 40 56.5**	**-6.3**
I30M	**Mount Dempster**	**5.55**	**16**	Pn		**Pn**	**04 39 30.4**	**+2.6**
I30M				Sg		**Sg**	**04 41 00.3**	**-3.6**
H29M	**Whitestone**	**6.33**	**6**	Pn		**Pn**	**04 39 39.9**	**+1.4**
H29M				Sn		**Sn**	**04 40 48.3**	**-2.0**
EPYK	**Eagle Plains**	**6.61**	**12**	Sg		**Sg**	**04 41 34.7**	**-3.2**

*GCG **08** 04:46:05.2±1.5, 16.°00N×90.°33W, h13km±18km, MD4.7, ML3.9, MW3.4*
*CATAC **08** 04:46:06.1±0.2, 16°N±1.°×9.°0W±.°, h1km, M3.8/18, MLv3.8/18, Error ellipse: s-maj=3.1km s-min=2.7km az=6.5, confirmed*
ISC 08 04:46:03.9±0.9, 16.°04N±0.°04×90.°34W±0.°03, h10km, n39, σ0s89/40, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVCB	**Coban**	**0.57**	**186**	*eS*	**Sg**	**04 46 23.1**	**+0.4**
AVCB				IAML		04 46 26.3	
	comp=E,16μm,0.8s						
PETF	**Flores**	**0.98**	**28**	*eP*	**Pn**	**04 46 23.3**	**-0.5**
PETF				*eS*	**Sn**	**04 46 37.1**	**-0.6**
PETF				IAML		04 46 46.6	
	comp=E,3μm,0.5s						
PETF	**Flores**	**0.98**	**28**	P	**Pn**	**04 46 23.8**	**+0.1**
APG	**El Apazote**	**1.04**	**187**	*eP*	**Pg**	**04 46 23.5**	**-0.5**
APG				*eS*	**Sg**	**04 46 37.2**	**-0.3**
QUIS	**Sacapulas**	**1.04**	**224**	*eP*	**Pg**	**04 46 23.3**	**-0.6**
QUIS				IAML		04 46 44.1	
	comp=N,2μm,0.5s						
HUEH	**Huehuetenango**	**1.33**	**237**	*eP*	**Pg**	**04 46 29.0**	**-0.5**
HUEH				IAML		04 46 55.3	
	comp=N,2μm,0.4s						
HUEH	**Huehuetenango**	**1.33**	**237**	P	**Pg**	**04 46 29.7**	**+0.2**
HUEH	**Huehuetenango**	**1.33**	**237**	S	**Sg**	**04 46 47.2**	**+0.4**
SOKI	**Kika Raxquin**	**1.59**	**220**	*eP*	**Pb**	**04 46 33.7**	**0.0**
SOKI				IAML		04 47 03.3	
	comp=N,931nm,0.6s						
QUEO	**Labor Ovalle**	**1.62**	**224**	*eP*	**Pg**	**04 46 34.7**	**-0.4**
IZABA	**Izabal, Puerto**	**1.72**	**100**	S	**Sg**	**04 47 01.5**	**+2.2**
CCIG	**Comitan**	**1.74**	**278**	P	**Pg**	**04 46 36.8**	**-0.6**
CCIG	**Comitan**	**1.74**	**278**	S	**Sg**	**04 46 59.8**	**-0.2**
ZAFR2	**Estanzuela, Za**	**1.74**	**147**	*eP*	Pn	04 46 28.2	-6.1
ZAFR2				*eS*	Sn	04 46 45.4	-11
ESQI	**Esquipulas**	**1.76**	**147**	P	**Pg**	**04 46 37.4**	**-0.3**
ESQI	**Esquipulas**	**1.76**	**147**	S	**Sg**	**04 47 01.4**	**+0.8**
MTO3	**Montecristo**	**1.89**	**150**	P	**Pb**	**04 46 39.1**	**+0.4**
MTO3	**Montecristo**	**1.89**	**150**	S	**Sg**	**04 47 04.6**	**-0.2**
RTAL	**Retalhuleu**	**2.00**	**221**	P	**Pb**	**04 46 40.6**	**+0.2**
RTAL	**Retalhuleu**	**2.00**	**221**	S	**Sg**	**04 47 08.4**	**+0.3**
SLOZ	**Alcaldia de Sa**	**2.08**	**165**	S	**Sb**	**04 47 09.3**	**+1.6**
LOAL	**Lomas de Alarc**	**2.10**	**165**	S	**Sg**	**04 47 11.6**	**0.0**
UNIC	**Universidad Ca**	**2.19**	**159**	S	**Sg**	**04 47 13.5**	**-0.8**
UNIC	**Universidad Ca**	**2.19**	**159**	P	**Pb**	**04 46 43.6**	**0.0**
NUBE	**Las Nubes**	**2.20**	**166**	P	**Pb**	**04 46 44.7**	**+0.9**
NUBE	**Las Nubes**	**2.20**	**166**	S	**Sg**	**04 47 14.3**	**-0.3**
FAME	**Alcaldia de Sa**	**2.21**	**172**	P	**Pb**	**04 46 44.9**	**+0.9**
FAME	**Alcaldia de Sa**	**2.21**	**172**	S	**Sg**	**04 47 13.7**	**-1.3**
LLGN	**La Laguna**	**2.31**	**144**	P	**Pb**	**04 46 45.3**	**-0.3**
LLGN	**La Laguna**	**2.31**	**144**	S	**Sg**	**04 47 17.4**	**-0.7**
CEDA	**San Andres**	**2.41**	**158**	S	**Sg**	**04 47 19.8**	**-1.5**
PMON	**Piamonte**	**2.52**	**157**	P	**Pg**	**04 46 51.1**	**-1.2**
PMON	**Piamonte**	**2.52**	**157**	S	**Sg**	**04 47 24.7**	**-0.3**
JAYA	**Jayaque - finc**	**2.53**	**160**	S	**Sb**	**04 47 22.3**	**+1.6**
JAYA	**Jayaque - finc**	**2.53**	**160**	P	**Pb**	**04 46 50.3**	**+0.8**
PAVA	**Las Pavas**	**2.69**	**149**	P	**Pb**	**04 46 52.3**	**+0.2**
PAVA	**Las Pavas**	**2.69**	**149**	S	**Sb**	**04 47 27.0**	**+1.7**
COEG	**Centro de Oper**	**2.79**	**149**	P	**Pb**	**04 46 52.1**	**-1.9**
COEG	**Centro de Oper**	**2.79**	**149**	S	**Sb**	**04 47 28.4**	**+0.1**

*IDC **08** 04:48:01.8±1.5, 0.°87N×126.°24E, h0km, mb3.8/4, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=110.2km s-min=20.1km az=68.0*
*DJA **08** 04:48:11.3±0.2, 1.°N±3.°×127.°7E±.°, h46km±9km, M4.1/16, mB5.2/1, mb4.3/4, MLv4.0/16, Mw(mB)4.6/1*
ISC 08 04:48:10.2±1.0, 1.°06N±0.°08×126.°91E±0.°07, h72km, n15, σ1s23/16, mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.54**	**122**	P	**Pn**	**04 48 24.4**	**+0.9**
TNTI				S	**Sn**	**04 48 33.9**	**+0.5**
SGSI	**Sangihe**	**2.95**	**332**	P	**Pn**	**04 48 55.7**	**+1.0**
KMSI	**Cibinong**	**2.97**	**261**	P	**Pn**	**04 48 56.3**	**+1.3**
SANI	**Sanana**	**3.23**	**197**	P	**Pn**	**04 48 58.3**	**-0.2**
NLAI	**Namlea**	**4.28**	**177**	P	**Pn**	**04 49 14.0**	**+1.2**
LUWI	**Luwuk**	**4.64**	**243**	P	**Pn**	**04 49 19.1**	**+1.4**
AAI	**Ambon**	**4.89**	**165**	P	**Pn**	**04 49 22.5**	**+1.3**
MRSI	**Marisa**	**5.00**	**263**	P	**Pn**	**04 49 23.6**	**+0.8**
APSI	**Ampana**	**5.61**	**250**	P	**Pn**	**04 49 32.0**	**+0.9**
	0.2nm35nm,0.6s						
FAKI	**Fak Fak**	**6.64**	**127**	P	**Pn**	**04 49 46.3**	**+1.1**
	0.1nm8.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.08**	**184**	P	**P**	**04 52 25.6**	**-1.5**
	0.3nm,0.3s,baz=355,slow=9.7,SNR=8.7						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**22.11**	**161**	P	**P**	**04 52 58.7**	**-1.1**
	1.9nm,0.5s,baz=338,slow=10,SNR=27						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**25.50**	**165**	P	**P**	**04 53 31.9**	**-0.2**
	0.9nm,0.4s,baz=331,slow=10,SNR=19						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**59.85**	**326**	P	**P**	**04 58 09.1**	**+0.8**
	0.4nm,0.4s,baz=119,slow=7.4,SNR=7.7						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**64.08**	**328**	P	**P**	**04 58 34.4**	**-2.1**
	0.5nm,0.3s,baz=126,slow=6.1,SNR=1.9						
	0.5nm,0.3s						

IDC 08 04:52:17.7±1.8, 2.°61N×127.°07E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=119.9km s-min=21.6km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.62**	**184**	P	P	04 56 58.8	-0.1
	0.5nm,0.3s,baz=0.0,slow=12,SNR=5.6						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**23.52**	**163**	P	P	04 57 29.5	-0.1
	0.8nm,0.5s,baz=342,slow=10,SNR=11						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.95**	**166**	P	P	04 58 01.1	0.0
	0.4nm,0.9s,baz=347,slow=11,SNR=5.7						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**58.66**	**325**	P	P	05 02 15.5	-1.5
	0.1nm,0.4s,baz=116,slow=6.5,SNR=1.6						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**62.86**	**328**	P	P	05 02 47.0	+1.6
	0.2nm,0.3s,baz=138,slow=6.2,SNR=2.4						
	0.2nm,0.3s						

GCG 08 04:59:38.9±1.2, 14.°14N×91.°29W, h63km±8km, MD3.6, ML3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.31**	**344**	*eP*	Pn	04 59 53.4	+3.8
STG2				*eS*	Sn	05 00 03.9	+6.5
ESSG	**Sabana Grande**	**0.50**	**61**	*i P*	Pn	04 59 51.1	-0.2
ESSG				*eS*	Sn	05 00 00.6	+0.3
SOKI	**Kika Raxquin**	**0.68**	**350**	*eP*	Pn	04 59 54.5	+0.9
SOKI				*eS*	Sn	05 00 06.5	+2.2
FG16	**Alotenango, Sa**	**0.76**	**80**	*i P*	Pn	04 59 52.2	-2.1
FG16				*eS*	Sn	05 00 02.4	-3.2
FG16				IAML		05 00 05.8	
	comp=E,7μm,0.2s						
PCG5	**San Vicente Pa**	**0.89**	**85**	*eP*	Pn	04 59 53.3	-2.5
PCG5				*eS*	Sn	05 00 03.9	-4.3
ESSJ	**San Jos, E**	**0.96**	**127**	*i P*	Pn	04 59 50.6	-5.9
ESSJ				*i S*	Sn	05 00 01.4	-8.1
APG	**El Apazote**	**1.17**	**43**	*eP*	Pn	05 00 00.7	+1.2
NUBE	**Las Nubes**	**1.48**	**99**	*eP*	Pn	05 00 03.5	-0.1

*GCG **08** 05:02:39.6±0.7, 15.°42N×92.°96W, h91km±12km, MD3.6*
*MEX **08** 05:02:39.5±1.0, 15.°43N×92.°89W, h109km±7km, MD4.0*
ISC 08 05:02:37.5±1.4, 15.°33N±0.°05×92.°98W±0.°04, h110km±10km, n19, σ1s66/37, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.43**	**328**	*eP*	**Pn**	**05 02 54.3**	**+0.4**
PCIG				*eS*	**Sn**	**05 03 05.8**	**-0.4**
PATR	**El Naranjo**	**0.75**	**107**	*eP*	**Pn**	**05 02 56.3**	**-0.2**
PATR				*eS*	**Sn**	**05 03 09.7**	**-1.1**
PAVE	**Pavencul**	**0.79**	**100**	*eP*	**Pn**	**05 02 57.1**	**+0.3**
PAVE				*eS*	**Sn**	**05 03 10.3**	**-1.0**
THIG		**0.81**	**122**	*eP*	**Pn**	**05 02 57.3**	**+0.6**
THIG				*eS*	**Sn**	**05 03 11.8**	**+0.5**
THIG		**0.81**	**122**	*i P*	**Pn**	**05 02 57.5**	**+0.7**
THIG				*i S*	**Sn**	**05 03 11.9**	**+0.7**
CHUJ	**Union Juarez**	**0.87**	**106**	*eP*	**Pn**	**05 02 57.8**	**+0.2**
CHUJ				*eS*	**Sn**	**05 03 11.9**	**-0.9**
CCIG	**Comitan**	**1.24**	**41**	*eP*	**Pn**	**05 03 02.8**	**+1.3**
CCIG				*eS*	**Sn**	**05 03 19.3**	**-0.3**
CCIG	**Comitan**	**1.24**	**41**	*i P*	**Pn**	**05 03 02.6**	**+1.1**
CCIG				*i S*	**Sn**	**05 03 19.5**	**-0.1**
HUEH	**Huehuetenango**	**1.42**	**90**	*eP*	**Pn**	**05 03 03.9**	**+0.3**
HUEH				*eS*	**Sn**	**05 03 23.4**	**0.0**
TGIG		**1.44**	**355**	*eP*	**Pn**	**05 03 04.4**	**+0.7**
TGIG				*eS*	**Sn**	**05 03 22.5**	**-1.0**
TGIG		**1.44**	**355**	*i P*	**Pn**	**05 03 04.0**	**+0.3**
TGIG				*i S*	**Sn**	**05 03 22.4**	**-1.1**
RTAL	**Retalhuleu**	**1.48**	**123**	*eP*	**Pn**	**05 03 05.2**	**+1.2**
RTAL				*eS*	**Sn**	**05 03 25.3**	**+1.1**
STG2	**El Palmar, Qui**	**1.79**	**120**	*i S*	**Sn**	**05 03 25.6**	**-5.5**
QUIS	**Sacapulas**	**1.82**	**91**	*i P*	**Pn**	**05 03 09.8**	**+1.5**
QUIS				*i S*	**Sn**	**05 03 32.3**	**+0.4**
HUIG	**Huatulco**	**3.05**	**279**	*eP*	**Pn**	**05 03 26.2**	**+2.1**
HUIG				*eS*	**Sn**	**05 03 56.6**	**-3.4**
PETF	**Flores**	**3.38**	**62**	*eP*	**Pn**	**05 03 29.6**	**+1.0**
PETF				*eS*	**Sn**	**05 04 05.9**	**-2.1**
NEUV	**Arroyo Zacate**	**3.59**	**312**	*eP*	**Pn**	**05 03 33.5**	**+2.1**
NEUV				*eS*	**Sn**	**05 04 11.9**	**-1.2**
SCIG	**Sabancuy**	**4.00**	**25**	*eP*	**Pn**	**05 03 38.7**	**+1.9**
SCIG				*eS*	**Sn**	**05 04 19.2**	**-3.6**
PEIG	**Puerto Escondi**	**4.07**	**280**	*eP*	**Pn**	**05 03 38.4**	**+0.6**
PEIG				*eS*	**Sn**	**05 04 23.9**	**-0.6**

*IDC **08** 05:16:36.5±0.8, 2.°63N×66.°35E, h0km, mb4.2/16, mbtmp4.2/17, ML3.9/1, MS3.7/12, Error ellipse: s-maj=23.5km s-min=16.8km az=39.0*
*NEIC **08** 05:16:38.6±1.5, 2.°55N±0.°06×66.°5E±0.°1, h10km±1km, mb4.6/13, Error ellipse: s-maj=18.4km s-min=9.7km az=267.0*
ISC 08 05:16:39.3±0.7, 2.°6N±0.°1×66.°42E±0.°09, h20km, n53, σ0s83/37, mb4.3/21, MS3.7/11, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**6.88**	**107**		**Pn**	**05 18 17.3**	**-1.9**
HMDM	**Hanimaadhoo**	**7.94**	**58**	Pn	**Pn**	**05 18 31.7**	**-1.9**
PALK	**Pallekele**	**14.98**	**71**	Pn	**Pn**	**05 20 10.1**	**0.0**
	0.5nm,0.3s,baz=264,slow=8.4,SNR=1.7						
PALK				LR	LR	05 24 42.9	
	comp=Z,371nm,19.6s,baz=244,slow=32						
	5.0nm,0.7s						

OPO	**Ambohidratompo**	**28.27**	**221**	LR		LR	05 31 34.7	
	comp=Z,212nm,21.5s,baz=141,slow=32							
FURI	**Furi**	**28.30**	**284**	LR		LR	05 32 06.9	
	comp=Z,73nm,21.9s,baz=106,slow=33							
CMAR	**Chiang Mai Arr**	**35.56**	**61**	P		**P**	**05 23 37.7**	**+2.1**
	0.9nm,0.3s,baz=245,slow=9.0,SNR=1.6							
	0.9nm,0.3s							
LSA	**Lhasa**	**35.78**	**39**	P		**P**	**05 23 38.5**	**+0.7**
GAR	**Garm**	**36.45**	**5**	P		**P**	**05 23 43.6**	**+0.6**
EIL	**Elat**	**40.24**	**315**	LR		LR	05 38 44.6	
	comp=Z,53nm,21.8s,baz=163,slow=33							
ASF	**Jabal al Asfar**	**40.48**	**320**	LR		LR	05 39 18.6	
	comp=Z,47nm,20.5s,baz=116,slow=34							
LSZ	**Lusaka**	**41.77**	**244**	LR		LR	05 40 01.8	
	comp=Z,196nm,18.2s,baz=118,slow=34							
LEM	**Lembang**	**42.16**	**103**	P		**P**	**05 24 32.1**	**+1.0**
	12nm,0.3s,baz=327,slow=20,SNR=2.0							
	12nm,0.3s							
GNI	**Garni**	**42.27**	**335**	P		**P**	**05 24 32.1**	**+0.4**
GNI				IAmb		IAmb	05 24 41.1	
	comp=Z,20nm,1.2s							
GNI	**Garni**	**42.27**	**335**	LR		LR	05 41 51.4	
	comp=Z,76nm,21.7s,baz=139,slow=36							
KBZ	**Khabaz**	**46.01**	**336**	P		**P**	**05 25 02.2**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=160,slow=9.2,SNR=4.2							
	comp=Z,2.7nm,0.9s							
MKAR	**Makanchi Array**	**46.18**	**15**	P		**P**	**05 25 02.9**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=198,slow=11,SNR=3.9							
	comp=Z,1.1nm,1.0s							
AB31	**Akbulak array**	**46.86**	**354**	P		**P**	**05 25 08.4**	**+0.5**
AB31				IAmb		IAmb	05 25 09.8	
	comp=Z,11nm,1.4s							
ABKAR	**Akbulak array**	**46.86**	**354**	P		**P**	**05 25 08.4**	**+0.5**
BR131	**Keskin Array S**	**47.48**	**325**	P		**P**	**05 25 12.7**	**-0.4**
BRTR	**Keskin Array B**	**47.48**	**325**	P		**P**	**05 25 13.2**	**+0.1**
BRTR	**Keskin Array B**	**47.48**	**325**	P		**P**	**05 25 13.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=146,slow=12,SNR=4.4							
BRTR				LR		LR	05 45 29.6	
	comp=Z,44nm,18.4s,baz=150,slow=37							
	comp=Z,0.7nm,0.7s							
LBTB	**Lobatse**	**48.14**	**233**	LR		LR	05 43 34.8	
	comp=Z,142nm,18.4s,baz=54,slow=34							
KURBB	**Kurchatov Arra**	**48.98**	**10**	P		**P**	**05 25 24.7**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=205,slow=7.8,SNR=6.5							
	comp=Z,1.3nm,0.8s							
KURK	**Kurchatov**	**49.09**	**10**	P		**P**	**05 25 24.7**	**-0.5**
KURK	**Kurchatov**	**49.09**	**10**	IAmb		IAmb	05 25 26.7	
	comp=Z,7.7nm,1.4s							
BOSA	**Boshof**	**50.19**	**229**	P		**P**	**05 25 34.3**	**+0.1**
BOSA	**Boshof**	**50.19**	**229**	P		**P**	**05 25 34.8**	**+0.6**
	comp=Z,4.3nm,0.9s,baz=30,slow=8.1,SNR=5.2							
BOSA				LR		LR	05 44 44.6	
	comp=Z,120nm,18.8s,baz=26,slow=34							
	comp=Z,4.3nm,0.9s							
H04N2	**CROZET ISLANDS**	**50.20**	**193**	T		T	06 19 30.3	
	baz=18,slow=76,SNR=24							
H04N1	**CROZET ISLANDS**	**50.20**	**193**	T		T	06 19 31.4	
	baz=18,slow=76,SNR=28							
H04N3	**CROZET ISLANDS**	**50.22**	**193**	T		T	06 19 30.3	
	baz=18,slow=76,SNR=24							
BVAR	**Borovoye Array**	**50.41**	**3**	LR		LR	05 47 07.8	
	comp=Z,105nm,21.8s,baz=126,slow=36							
TSUM	**Tsumeb**	**52.63**	**244**	LR		LR	05 46 10.0	
	comp=Z,163nm,20.0s,baz=102,slow=34							
ZAA0	**Zalesovo Array**	**53.42**	**13**	P		**P**	**05 25 56.9**	**-0.7**
ZAA0				IAmb		IAmb	05 25 58.1	
	comp=Z,4.9nm,0.8s							
ZALV	**Zalesovo Beam**	**53.42**	**13**	P		**P**	**05 25 57.1**	**-0.5**
ZALV	**Zalesovo Beam**	**53.42**	**13**	P		**P**	**05 25 56.4**	**-1.2**
	comp=Z,3.7nm,0.7s,baz=208,slow=9.2,SNR=7.5							
	comp=Z,3.7nm,0.7s							
SONM	**Songino Array**	**56.74**	**31**	P		**P**	**05 26 22.5**	**+0.6**
SONM				IAmb		IAmb	05 26 30.9	
	comp=Z,5.5nm,1.2s							
SONM	**Songino Array**	**56.74**	**31**	P		**P**	**05 26 21.7**	**-0.2**
	comp=Z,2.9nm,1.1s,baz=227,slow=7.0,SNR=10							
	comp=Z,2.9nm,1.1s							
AKASG	**Malin Array Be**	**57.30**	**333**	P		**P**	**05 26 24.6**	**-1.1**

mbtmp4.8/43,MS4.5/43 Error ellipse: s-maj=14.6km s-min=7.9km az=75.0

NEIC ***08*** *05:31:44.3, 10.77N 125.67E, h40km*

GCMT ***08*** *05:31:44.3±0.1, 10.78N±0.01×125.60E±0.01, h32km, MW5.3/126, Moment Tensor Solution. s105,c166; s126,c217; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.41±.02; $M_{\theta\theta}$0.80±.01; $M_{\phi\phi}$-0.38±.01; $M_{r\theta}$0.44±.02; $M_{\theta\phi}$-0.01±.01; $M_{r\phi}$0.66±.03; Best double couple: $M_0$1.04700×10^{17} NP1:ϕ_s123.00000°, δ39.00000°, λ-24.00000°. NP2:ϕ_s232.00000°, δ75.00000°, λ-126.00000°. Principal axes: T 0.9770, Plg22.0000°, Azm349.0000°; N 0.1410, Plg35.0000°, Azm243.0000°; P -1.1170, Plg47.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***08*** *05:31:44.9±1.7, 10.76N±0.07×125.65E±0.09, h59km±6km, mb5.2/110,Mww5.3/19 Error ellipse: s-maj=12.7km s-min=9.7km az=72.0*

DJA ***08*** *05:31:45.1±0.4, 11.3°×12.6E±°, h47km±4km, M5.1/46, mb5.2/46, mB5.5/42, MLv6.1/4, Mw(mB)5.0/42, MwMwp5.0/17, Mwp5.3/17*

ISC 08 05:31:44.0±0.3, 10.75N±0.03×125.65E±0.04, h51km±2km, h51km:pP-P, n550, σ1s59/573, mb5.1/182, MS4.6/79, 14C-15D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
DAV	**Davao City (W)**	**3.66**	**181**			**Pn**	**05 32 40.3**	**+2.2**
DAV	**Davao City (W)**	**3.66**	**181**	P		**Pn**	**05 32 39.0**	**+0.9**
	1μm,0.5s,baz=64,slow=2.9,SNR=18							
DAV				S		Sn	05 33 10.2	-10
	2μm,0.7s,baz=66,slow=19,SNR=6.2							
DAV				Lg		Lg	05 33 35.3	
	209nm,0.3s,baz=334,slow=20,SNR=4.8							
DAV				LR		LR	05 34 22.2	
	comp=Z,20μm,20.6s,baz=1.5,slow=44							
DAV	**Davao City (W)**	**3.66**	**181**	P		**Pn**	**05 32 39.8**	**+1.7**
TGY	**Tagaytay City**	**5.68**	**306**	P		**Pn**	**05 33 07.5**	**+1.6**
	2μm,1.0s,baz=156,slow=4.6,SNR=32							
TGY				LR		LR	05 35 35.4	
	comp=Z,10μm,21.3s,baz=130,slow=41							
SGSI	**Sangihe**	**7.02**	**181**	P		**Pn**	**05 33 27.8**	**+3.6**
MYLDM	**Lahad Datu**	**8.98**	**233**			**Pn**	**05 33 52.3**	**+1.2**
MYLDM	**Lahad Datu**	**8.98**	**233**	P		**Pn**	**05 33 54.6**	**+3.5**
TNTI	**Ternate**	**10.06**	**170**			**Pn**	**05 34 06.2**	**+0.3**
TNTI	**Ternate**	**10.06**	**170**	P		**Pn**	**05 34 08.4**	**+2.5**
	2μm189nm,1.1s							
KMSI	**Cibinong**	**10.24**	**189**	P		**Pn**	**05 34 12.1**	**+3.7**
TOLI2	**Tolitoli**	**10.72**	**207**			**Pn**	**05 34 14.6**	**-0.4**
TOLI2	**Tolitoli**	**10.72**	**207**	P		**Pn**	**05 34 16.6**	**+1.6**
MRSI	**Marisa**	**10.85**	**200**	P		**Pn**	**05 34 17.7**	**+1.0**
	2μm123nm,1.4s							
LUWI	**Luwuk**	**12.06**	**194**			**Pn**	**05 34 36.7**	**+3.5**
LUWI	**Luwuk**	**12.06**	**194**	P		P	05 34 39.0	-5.7
APSI	**Ampana**	**12.24**	**199**	P		P	05 34 41.1	-5.7
	4μm204nm,1.0s							
SANI	**Sanana**	**12.72**	**178**	P		**Pn**	**05 34 41.1**	**-1.1**
SANI	**Sanana**	**12.72**	**178**	P		**Pn**	**05 34 38.9**	**-3.3**
	5μm2μm230nm,1.1s							
TWGBT	**Beinan**	**12.77**	**341**	P		**P**	**05 34 49.4**	**-3.2**
TWG	**Pinlang**	**12.78**	**341**	Pn		**Pn**	**05 34 42.8**	**-0.2**
SWI	**Sorong**	**12.81**	**154**	P		**Pn**	**05 34 45.8**	**+2.2**
	1μm83nm,1.1s							
YULB	**Yu-li**	**13.24**	**342**	Pn		**Pn**	**05 34 50.3**	**+0.9**
YULB	**Yu-li**	**13.24**	**342**	P		**P**	**05 34 56.4**	**-1.4**
TPUB	**Ta-pu**	**13.37**	**340**			**Pn**	**05 34 51.1**	**0.0**
TPUB	**Ta-pu**	**13.37**	**340**	P		**P**	**05 34 58.5**	**-0.8**
SSLB	**Suanglung**	**13.72**	**342**			**Pn**	**05 34 56.8**	**+0.9**
SSLB	**Suanglung**	**13.72**	**342**	P		**P**	**05 35 00.5**	**-2.6**
NACB	**Ninganchiao**	**13.90**	**344**	Pn		**Pn**	**05 35 00.5**	**+2.2**
NACB	**Ninganchiao**	**13.90**	**344**	P		**P**	**05 35 03.5**	**-1.6**
NLAI	**Namlea**	**13.97**	**174**	P		**Pn**	**05 34 57.5**	**-1.8**
	3μm1μm131nm,0.7s							
MSAI	**Masohi**	**14.38**	**167**	P		**P**	**05 35 08.7**	**-1.8**
	196nm,1.0s							
YHNB	**Yeheng**	**14.43**	**344**			**Pn**	**05 35 07.3**	**+1.9**
YHNB	**Yeheng**	**14.43**	**344**	P		**P**	**05 35 11.1**	**0.0**
RKPI	**Ransiki, Papua**	**14.84**	**145**	P		**Pn**	**05 35 09.8**	**-1.1**
FAKI	**Fak Fak**	**15.08**	**154**			**Pn**	**05 35 14.4**	**+0.4**
FAKI					IAmb	IAmb	05 35 20.8	
	comp=Z,114nm,0.8s							
FAKI	**Fak Fak**	**15.08**	**154**	P		**Pn**	**05 35 11.5**	**-2.5**
FAKI	**Fak Fak**	**15.08**	**154**	P		**Pn**	**05 35 14.8**	**+0.8**
	comp=Z,3μmcomp=Z,1μmcomp=Z,160nm,0.9s							
KNMB	**Chin-men Tao**	**15.29**	**334**			**P**	**05 35 19.6**	**-0.9**
KNMB					IAmb	IAmb	05 35 22.9	
	comp=Z,101nm,1.0s							
QZH	**Quanzhou**	**15.63**	**336**	*e*P		**Pn**	**05 35 21.3**	**+0.3**
QZH				S		**S**	**05 38 23.8**	**-2.3**
QZH				pmax		pmax		
	comp=Z,140nm,1.3s							
QZH				LR		LR		
	comp=Z,2μm,25.4s							
QZH				LR		LR		
	comp=Z,1μm,20.6s							
QZH				LR		LR		
	comp=Z,4μm,23.4s							
SBUM	**Sibu**	**15.67**	**239**	P		**P**	**05 35 24.1**	**-0.7**
SPSI	**Sidrap Palu**	**15.74**	**202**	P		**P**	**05 35 27.2**	**+1.5**
	comp=Z,2μmcomp=Z,120nm,1.1s							
BAKI	**Biak**	**15.78**	**138**	P		**P**	**05 35 24.8**	**-1.3**
	comp=Z,4μmcomp=Z,2μmcomp=Z,128nm,1.0s							
BNSI	**Bone**	**16.03**	**200**	P		**P**	**05 35 29.6**	**+0.8**
	comp=Z,4μmcomp=Z,4μmcomp=Z,197nm,1.2s							
JOW	**Kunigami**	**16.19**	**8**	P		**Pn**	**05 35 29.3**	**+1.1**
JOW					IAmb	IAmb	05 35 37.0	
	comp=Z,334nm,1.3s							
JOW	**Kunigami**	**16.19**	**8**	P		**P**	**05 35 29.7**	**-0.8**
	comp=Z,25nm,0.5s,baz=169,slow=12,SNR=7.7							
JOW				LR		LR	05 40 59.9	
	comp=Z,2μm,19.5s,baz=138,slow=34							
JOW	**Kunigami**	**16.19**	**8**	P		**P**	**05 35 32.6**	**+2.0**
KMPI	**Kaimana, Papua**	**16.41**	**150**	P		**P**	**05 35 33.0**	**0.0**
KAPI	**Kappang**	**16.72**	**201**	P		**P**	**05 35 36.1**	**-0.4**
KAPI					IAmb	IAmb	05 35 41.7	
	comp=Z,147nm,1.1s							
KAPI	**Kappang**	**16.72**	**201**	P		**Pn**	**05 35 34.5**	**-0.4**
	comp=Z,4.8nm,0.3s,baz=30,slow=6.8,SNR=23							
KAPI				LR		LR	05 42 54.0	
	comp=Z,1μm,20.6s,baz=27,slow=40							
KAPI	**Kappang**	**16.72**	**201**	P		**P**	**05 35 36.1**	**-0.4**
KAPI				pmax		pmax		
	comp=Z,147nm,1.2s							
BKSI	**Bulukumba**	**16.88**	**199**	P		**P**	**05 35 39.7**	**+1.4**
QIZ	**Qiongzhong**	**17.34**	**300**	P		**P**	**05 35 43.9**	**+0.6**
QIZ				pP		**pP**	**05 35 56.0**	**+1.1**
QIZ				S		**S**	**05 38 58.8**	**-2.4**
QIZ				pmax		pmax		
	comp=Z,720nm,3.8s							
QIZ				LR		LR		
	comp=Z,1μm,14.4s							
QIZ				LR		LR		
	comp=Z,2μm,14.7s							
QIZ				LR		LR		
	comp=Z,3μm,26.1s							
BSSI	**Bau Bau, Buton**	**17.55**	**197**	P		**P**	**05 35 46.8**	**+1.2**
BBKI	**Banjar Baru**	**17.75**	**218**	P		**P**	**05 35 51.5**	**+3.6**
SMPI	**Sarmi**	**18.14**	**133**	P		**Pn**	**05 35 53.7**	**+1.3**
	comp=Z,4μmcomp=Z,254nm,1.2s							
GUMO	**Guam**	**19.00**	**80**	P		**P**	**05 36 00.5**	**-1.2**
GUMO					IAmb	IAmb	05 36 05.8	
	comp=Z,367nm,1.6s							
GUMO	**Guam**	**19.00**	**80**	P		**Pn**	**05 36 02.4**	**-0.4**
	comp=Z,40nm,0.4s,baz=165,slow=5.1,SNR=3.6							
GUMO				LR		LR	05 41 49.9	
	comp=Z,863nm,21.5s,baz=258,slow=32							
SAUI	**Saumlaki**	**19.44**	**163**	P		**P**	**05 36 06.2**	**-0.2**
SAUI	**Saumlaki**	**19.44**	**163**	P		**Pn**	**05 36 11.4**	**+3.4**
MMRI	**Maumere**	**19.55**	**190**	P		**Pn**	**05 36 09.4**	**+0.1**
MMRI					IAmb	IAmb	05 36 21.4	
	comp=Z,91nm,0.9s							
MMRI	**Maumere**	**19.55**	**190**	P		**Pn**	**05 36 10.5**	**+1.2**
	comp=Z,118nm,0.8s							
GENI	**Genyem**	**19.61**	**132**	P		**Pn**	**05 36 10.3**	**+0.3**
EDFI	**Ende, Flores**	**19.77**	**192**	P		**Pn**	**05 36 13.2**	**+1.2**
	comp=Z,2μmcomp=Z,1μmcomp=Z,68nm,0.9s							
JAY	**Jayapura**	**19.95**	**130**	P		**P**	**05 36 12.3**	**+0.1**
	comp=Z,119nm,0.8s,baz=311,slow=4.0,SNR=23							
JAY				LR		LR	05 44 31.4	
	comp=Z,2μm,18.3s,baz=337,slow=38							
JAY	**Jayapura**	**19.95**	**130**	P		**Pn**	**05 36 13.4**	**-0.8**
	comp=Z,1μmcomp=Z,148nm,0.9s							
SOEI	**Soe**	**20.41**	**184**	P		**P**	**05 36 17.5**	**+0.3**
SOEI					IAmb	IAmb	05 36 34.1	
	comp=Z,93nm,0.9s							
SOEI	**Soe**	**20.41**	**184**	P		**P**	**05 36 17.7**	**+0.5**
SOEI	**Soe**	**20.41**	**184**	P		Pn	05 36 20.1	+0.5
	comp=Z,4μmcomp=Z,271nm,1.3s							
GULI	**GuiLin**	**20.47**	**317**	P		**P**	**05 36 18.4**	**+0.8**
GULI				S		Sn	05 40 09.9	-0.3
GULI				pmax		pmax		
	comp=Z,49nm,1.3s							
GULI				pmax		pmax		
	comp=Z,540nm,4.1s							
GULI				LR		LR		
	comp=Z,2μm,15.7s							
GULI				LR		LR		
	comp=Z,1μm,17.9s							
GULI				LR		LR		
	comp=Z,3μm,15.9s							
SSE	**Sheshan**	**20.67**	**349**	P		**P**	**05 36 20.0**	**+0.4**
SSE				S		**S**	**05 40 10.6**	**+2.8**
SSE				pmax		pmax		
	comp=Z,34nm,0.9s							
SSE				pmax		pmax		
	comp=Z,280nm,4.0s							
SSE				LR		LR		
	comp=Z,620nm,19.1s							
SSE				LR		LR		
	comp=Z,280nm,18.2s							
BATI	**Baumata**	**20.91**	**185**	P		**P**	**05 36 22.4**	**0.0**
	comp=Z,64nm,0.5s,baz=261,slow=1.8,SNR=5.2							
BATI				LR		LR	05 46 08.1	
	comp=Z,606nm,21.4s,baz=333,slow=41							
	comp=Z,64nm,0.5s							
BATI	**Baumata**	**20.91**	**185**	P		Pn	05 36 24.7	-0.7
PLAI	**Plampang**	**20.96**	**202**	P		Pn	05 36 25.0	-1.1
PLAI	**Plampang**	**20.96**	**202**	P		Pn	05 36 24.7	-1.4
	comp=Z,1μmcomp=Z,97nm,0.9s							
CNSH	**ChangSha**	**21.05**	**327**	P		**P**	**05 36 24.5**	**+0.7**
CNSH				S		**S**	**05 40 16.3**	**+0.8**
CNSH				pmax		pmax		
	comp=Z,47nm,1.6s							
CNSH				LR		LR		
	comp=Z,2μm,21.3s							
CNSH				LR		LR		
	comp=Z,3μm,21.2s							
CNSH				LR		LR		
	comp=Z,3μm,22.8s							
KMMI	**Kalianget**	**21.16**	**214**	P		**P**	**05 36 27.8**	**+2.7**
	comp=Z,106nm,1.4s							
TWSI	**Taliwang, Sumb**	**21.23**	**205**	P		**P**	**05 36 28.8**	**+3.0**
	comp=Z,1μmcomp=Z,170nm,1.0s							
SRBI	**Singaraja**	**21.40**	**209**	P		**P**	**05 36 32.0**	**+4.4**
	comp=Z,106nm,1.4s							
GRJI	**Gresik**	**21.90**	**217**	P		**P**	**05 36 36.7**	**+3.7**
BLJI	**Banyuglugur**	**21.94**	**214**	P		**P**	**05 36 36.9**	**+3.5**
	comp=Z,3μmcomp=Z,70nm,0.8s							
NJ2	**Nanjing**	**22.11**	**345**	*e*P		**P**	**05 36 36.3**	**+1.2**
NJ2				pP		**pP**	**05 36 49.0**	**+2.1**
NJ2				S		**S**	**05 40 36.3**	**+0.4**
NJ2				pmax		pmax		
	comp=Z,46nm,0.8s							
NJ2				pmax		pmax		
	comp=Z,600nm,8.1s							
NJ2				LR		LR		
	comp=Z,710nm,15.6s							
NJ2				LR		LR		
	comp=Z,450nm,13.7s							
NJ2				LR		LR		
	comp=Z,1μm,14.7s							
JAGI	**Jajag, Banyuwa**	**22.25**	**211**	P		**P**	**05 36 38.9**	**+2.0**
JAGI	**Jajag, Banyuwa**	**22.25**	**211**	P		**P**	**05 36 39.6**	**+2.7**
	comp=Z,2μmcomp=Z,190nm,1.0s							
WHN	**Wuhan**	**22.32**	**334**	⇑P		**P**	**05 36 38.3**	**+0.9**
WHN				pmax		pmax		
	comp=Z,420nm,1.4s							
WHN				LR		LR		
	comp=Z,4μm,14.5s							
WHN				LR		LR		
	comp=Z,3μm,14.7s							
WHN				LR		LR		
	comp=Z,8μm,19.0s							
TPI	**Tanjungpandan**	**22.38**	**234**	P		**P**	**05 36 39.5**	**+1.3**
JCJ	**Chichijima**	**22.52**	**41**	LR		LR	05 43 29.0	
	comp=Z,901nm,21.7s,baz=246,slow=31							
JNU	**Nakatsue**	**22.78**	**11**	P		**P**	**05 36 42.3**	**-0.1**
JNU	**Nakatsue**	**22.78**	**11**	P		**P**	**05 36 42.9**	**+0.5**
	comp=Z,30nm,1.0s,baz=162,slow=6.2,SNR=8.2							
JNU				LR		LR	05 44 36.2	
	comp=Z,1μm,22.0s,baz=176,slow=34							
	comp=Z,30nm,1.0s							
NGJI	**Ngawi**	**22.87**	**219**	P		**P**	**05 36 46.3**	**+2.9**
	comp=Z,75nm,0.9s							
SMRI	**Semarang**	**23.27**	**221**	P		**P**	**05 36 50.7**	**+3.3**
	comp=Z,136nm,1.1s							
SLVN	**Son La**	**23.36**	**299**	P		**P**	**05 36 48.1**	**-0.2**
DRS	**Darwin Rock St**	**23.61**	**167**	P		**P**	**05 36 50.6**	**+0.1**
PCJI	**Pacitan**	**23.70**	**218**	P		**P**	**05 36 54.2**	**+2.9**
GYA	**Guiyang**	**23.78**	**314**	⇓P		**P**	**05 36 53.5**	**+1.3**
GYA				pP		sP	05 37 08.6	-2.5
GYA				S		**S**	**05 41 01.9**	**-2.4**
GYA				sS		sS	05 41 27.2	+1.1
GYA				pmax		pmax		
	comp=Z,34nm,1.4s							
GYA				LR		LR		
	comp=Z,2μm,14.7s							
GYA				LR		LR		
	comp=Z,1μm,18.6s							
GYA				LR		LR		
	comp=Z,2μm,17.7s							
UGM	**Wanagama**	**23.88**	**220**	P		**P**	**05 36 53.5**	**+0.4**
UGM					IAmb	IAmb	05 37 10.5	
	comp=Z,146nm,1.2s							
UGM	**Wanagama**	**23.88**	**220**	P		**P**	**05 36 55.7**	**+2.6**
	comp=Z,108nm,1.2s							
MTN	**Manton Dam**	**24.06**	**167**	P		**P**	**05 36 52.9**	**-1.8**
	comp=Z,0.0nmcomp=Z,121nm,1.1s							
MTN	**Manton Dam**	**24.06**	**167**	P		**P**	**05 36 53.5**	**-1.2**
MTN					IAmb	IAmb	05 36 56.5	
	comp=Z,91nm,0.8s							
MMPI	**Merauke**	**24.07**	**142**	P		**P**	**05 36 56.2**	**+1.4**
JMN	**Monobe**	**24.09**	**17**	P		**P**	**05 36 53.0**	**-1.8**
JMN					IAmb	IAmb	05 37 00.4	
	comp=Z,140nm,1.5s							
JMN	**Monobe**	**24.09**	**17**	P		**P**	**05 36 56.3**	**+1.4**
KDU	**Kakadu**	**24.25**	**164**	P		**P**	**05 36 54.6**	**-1.8**
	comp=Z,302nm,0.7s							
KPJI	**Karang Pucung**	**24.48**	**224**	P		**P**	**05 37 00.4**	**+1.8**
MANU	**Manus Island**	**25.07**	**119**	P		**P**	**05 37 02.2**	**-1.8**
MANU					IAmb	IAmb	05 37 06.7	
	comp=Z,114nm,1.2s							
IPM	**Ipoh**	**25.17**	**258**	P		**P**	**05 37 04.3**	**-0.6**
IPM					IAmb	IAmb	05 37 30.9	
	comp=Z,50nm,1.0s							
KULM	**Kulim**	**25.33**	**260**	P		**P**	**05 37 08.5**	**+2.2**
KULM					IAmb	IAmb	05 37 31.0	
	comp=Z,127nm,1.9s							
KULM	**Kulim**	**25.33**	**260**	P		**P**	**05 37 11.0**	**+4.7**
TJN	**Taejon**	**25.56**	**3**	P		**P**	**05 37 07.5**	**-0.7**
TJN	**Taejon**	**25.56**	**3**	⇑*i*P		**P**	**05 37 08.4**	**+0.2**
SBJI	**Serang**	**25.66**	**230**	P		**P**	**05 37 11.4**	**+2.1**
JHJ	**Hachijo jima 2**	**25.78**	**28**	LR		LR	05 47 42.8	
	comp=Z,774nm,19.4s,baz=252,slow=37							
KMI	**Kunming**	**26.00**	**306**	P		**P**	**05 37 12.8**	**+0.2**
KMI				S		**S**	**05 41 47.6**	**+7.5**
KMI				pmax		pmax		
	comp=Z,25nm,1.0s							
KMI				pmax		pmax		
	comp=Z,340nm,7.3s							
KMI				LR		LR		
	comp=Z,900nm,20.4s							
KMI				LR		LR		
	comp=Z,1μm,22.9s							
KMI				LR		LR		
	comp=Z,2μm,19.9s							
KNRA	**Kununurra**	**26.43**	**173**	P		**P**	**05 37 15.6**	**-0.7**
	comp=Z,80nm,0.8s							
KNRA	**Kununurra**	**26.43**	**173**	P		**P**	**05 37 15.0**	**-1.2**
KNRA					IAmb	IAmb	05 37 42.9	
	comp=Z,55nm,0.8s							
TIA	**Tai'an**	**26.50**	**344**	P		**P**	**05 37 16.4**	**-0.3**
TIA				S		**S**	**05 41 43.2**	**-4.1**
TIA				pmax		pmax		
	comp=Z,28nm,0.9s							
TIA				pmax		pmax		
	comp=Z,210nm,3.5s							
TIA				LR		LR		
	comp=Z,820nm,19.8s							
TIA				LR		LR		
	comp=Z,290nm,8.8s							
TIA				LR		LR		
	comp=Z,1μm,19.0s							
LYN	**LuoYang**	**26.58**	**335**	⇑P		**P**	**05 37 18.6**	**+1.2**
LYN				S		**S**	**05 41 51.6**	**+3.1**
LYN				pmax		pmax		
	comp=Z,40nm,0.7s							
LYN				pmax		pmax		
	comp=Z,560nm,8.9s							
LYN				LR		LR		
	comp=Z,1μm,20.3s							
LYN				LR		LR		
	comp=Z,1μm,17.5s							
LYN				LR		LR		
	comp=Z,2μm,22.3s							
INU	**Inuyama**	**26.59**	**21**	P		**P**	**05 37 16.1**	**-1.3**
KSAR	**Wonju Array Be**	**26.66**	**4**	P		**P**	**05 37 17.9**	**-0.2**
KSAR	**Wonju Array Be**	**26.66**	**4**	P		**P**	**05 37 17.9**	**-0.2**
KSRS	**Korea Array**	**26.67**	**4**	P		**P**	**05 37 18.8**	**+0.6**
	comp=Z,22nm,0.9s,baz=185,slow=9.1,SNR=28							
KSRS				ScP		**ScP**	**05 44 16.8**	**-0.2**
	comp=Z,3.8nm,0.9s,baz=197,slow=3.8,SNR=7.2							
	comp=Z,22nm,0.9s							
KS19	**Wonju Array Si**	**26.71**	**4**	P		**P**	**05 37 18.9**	**+0.3**
KS19					IAmb	IAmb	05 37 23.1	
	comp=Z,81nm,1.2s							
CM31	**Chiang Mai Arr**	**26.93**	**290**	P		**P**	**05 37 19.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**26.93**	**290**	P		**P**	**05 37 20.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**26.93**	**290**	P		**P**	**05 37 21.6**	**+0.8**
	comp=Z,6.8nm,0.8s,baz=101,slow=7.1,SNR=24							
CMAR				PcP		**PcP**	**05 40 41.5**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=67,slow=3.0,SNR=1.5							
CMAR				LR		LR	05 47 09.8	
	comp=Z,356nm,21.7s,baz=105,slow=34							
	comp=Z,6.8nm,0.8s							
CHTO	**Chiang Mai**	**27.01**	**290**	P		**P**	**05 37 20.7**	**-0.8**
CHTO	**Chiang Mai**	**27.01**	**290**	P		**P**	**05 37 20.7**	**-0.8**
CHTO				pmax		pmax		
	comp=Z,14nm,1.1s							
PZH	**PanZhiHua**	**27.46**	**308**	P		**P**	**05 37 26.3**	**+0.7**
PZH				S		**S**	**05 41 58.6**	**-4.4**
PZH				pmax		pmax		
	comp=Z,20nm,1.3s							
PZH				LR		LR		
	comp=Z,1μm,19.0s							
PZH				LR		LR		
	comp=Z,960nm,17.7s							
PZH				LR		LR		
	comp=Z,2μm,18.2s							
PSI	**Prapat**	**27.66**	**255**	LR		LR	05 50 03.7	
	comp=Z,540nm,18.9s,baz=88,slow=40							
PSI	**Prapat**	**27.66**	**255**	P		**P**	**05 37 28.0**	**+0.5**
PSI				pmax		pmax		
	comp=Z,21nm,1.1s							
RPSI	**Rantau Prapat**	**27.70**	**255**	P		**P**	**05 37 28.0**	**+0.3**
XAN	**Xi'an**	**27.78**	**329**	P		**P**	**05 37 27.9**	**-0.4**
XAN				PP		**PnPn**	**05 38 18.7**	**+2.2**
XAN				S		**S**	**05 42 09.4**	**+1.7**
XAN				pmax		pmax		
	comp=Z,24nm,0.8s							
XAN				pmax		pmax		
	comp=Z,190nm,5.3s							
XAN				LR		LR		
	comp=Z,1μm,15.5s							
XAN				LR		LR		
	comp=Z,1μm,16.0s							
XAN				LR		LR		
	comp=Z,2μm,17.4s							
MJAR	**Matsushiro Arr**	**28.08**	**22**	P		**P**	**05 37 29.9**	**-1.0**
MJAR	**Matsushiro Arr**	**28.08**	**22**	P		**P**	**05 37 31.0**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=187,slow=7.8,SNR=6.7							
MJAR				LR		LR	05 46 48.1	
	comp=Z,1μm,22.0s,baz=202,slow=32							
	comp=Z,1.6nm,0.3s							
MJAR	**Matsushiro Arr**	**28.08**	**22**	P		**P**	**05 37 31.0**	**+0.1**
DL2	**Dalian**	**28.27**	**353**	P		**P**	**05 37 34.2**	**+1.7**
DL2				pmax		pmax		
	comp=Z,95nm,1.3s							
DL2				pmax		pmax		
	comp=Z,350nm,3.9s							
DL2				LR		LR		
	comp=Z,980nm,20.8s							
DL2				LR		LR		
	comp=Z,840nm,24.6s							
DL2				LR		LR		
	comp=Z,1μm,19.1s							
HNS	**HongShan**	**28.30**	**341**	⇑P		**P**	**05 37 32.4**	**-0.4**
HNS				S		**S**	**05 42 15.5**	**-0.2**
HNS				pmax		pmax		
	comp=Z,48nm,0.9s							
HNS				LR		LR		
	comp=Z,650nm,15.9s							
HNS				LR		LR		
	comp=Z,360nm,15.9s							
HNS				LR		LR		
	comp=Z,870nm,15.1s							
CD2	**Chengdu**	**28.55**	**318**	P		**P**	**05 37 35.2**	**+0.1**
CD2				S		**S**	**05 42 20.6**	**+0.8**
CD2				sS		sS	05 42 40.3	-1.6
CD2				pmax		pmax		
	comp=Z,20nm,0.5s							
CD2				pmax		pmax		
	comp=Z,250nm,4.7s							
CD2				LR		LR		
	comp=Z,2μm,15.7s							
CD2				LR		LR		
	comp=Z,2μm,16.9s							
CD2				LR		LR		
	comp=Z,2μm,15.9s							
FITZ	**Fitzroy Crossi**	**28.66**	**180**	P		**P**	**05 37 34.9**	**-1.2**
	comp=Z,9.0nm,1.4s							
FITZ	**Fitzroy Crossi**	**28.66**	**180**	P		**P**	**05 37 35.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**28.66**	**180**	P		**P**	**05 37 34.0**	**-2.1**
	comp=Z,7.7nm,0.7s,baz=7.3,slow=8.6,SNR=26							
	comp=Z,7.7nm,0.7s							
FITZ	**Fitzroy Crossi**	**28.66**	**180**	P		**P**	**05 37 35.9**	**-0.2**
PMG	**Port Moresby**	**29.31**	**132**	P		**P**	**05 37 40.8**	**-1.2**
PMG					IAmb	IAmb	05 37 53.6	
	comp=Z,58nm,0.9s							
PMG	**Port Moresby**	**29.31**	**132**	P		**P**	**05 37 41.5**	**-0.5**
	comp=Z,41nm,1.1s,baz=324,slow=8.4,SNR=12							
	comp=Z,41nm,1.1s							
PMG	**Port Moresby**	**29.31**	**132**	*d i*P		**P**	**05 37 41.0**	**-1.0**

SNY LR LR
comp=Z,900nm,18.4s
WC2 Warramunga Arr 31.67 164 P **P** **05 38 00.7 -2.0**
WRAB Tennant Creek 31.67 164 P **P** **05 38 01.1 -1.7**
WRAB Tennant Creek 31.67 164 *d iP* **P** **05 38 00.7 -2.1**
WRAB pmax pmax
comp=Z,44nm,0.7s
WRA Warramunga Arr 31.68 164 P **P** **05 38 00.4 -2.4**
WRA Warramunga Arr 31.68 164 P **P** **05 38 01.1 -1.7**
comp=Z,33nm,0.6s,baz=343,slow=9.4,SNR=104
WRA PcP **PcP** **05 40 53.2 -0.8**
comp=Z,4.1nm,0.7s,baz=350,slow=3.1,SNR=3.7
comp=Z,33nm,0.6s
WRA Warramunga Arr 31.68 164 *i* P **P** **05 38 01.1 -1.7**
WRA pmax pmax
comp=Z,38nm,0.6s
WR8 Warramunga Arr 31.73 164 P **P** **05 38 01.4 -1.9**
LZDM Lanzhou Array 32.03 325 P **P** **05 38 06.3 +0.1**
comp=Z,1.8nm,0.3s,baz=144,slow=12,SNR=1.4
LZDM LR LR 05 51 32.2
comp=Z,2μm,21.5s,baz=130,slow=37
comp=Z,1.8nm,0.3s
LZH Lanzhou 32.04 325 *eP* **P** **05 38 10.3 +4.2**
LZH pP sP 05 38 23.2 -2.1
LZH sP pP 05 38 31.6 +12
LZH S **S** **05 43 14.6 0.0**
LZH SS **SnSn** **05 45 12.5 +4.5**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,240nm,5.1s
LZH LR LR
comp=Z,2μm,15.1s
LZH LR LR
comp=Z,1μm,15.5s
LZH LR LR
comp=Z,2μm,15.8s
MBWA Marble Bar 32.23 190 P **P** **05 38 04.9 -2.8**
MBWA Marble Bar 32.23 190 P **P** **05 38 06.8 -0.9**
MBWA IAmb IAmb 05 38 26.3
comp=Z,16nm,0.7s
MBWA Marble Bar 32.23 190 P **P** **05 38 09.0 +1.3**
HHC Hu-ho-hao-te 32.46 340 *eP* **P** **05 38 10.6 +1.0**
HHC pP pP 05 38 21.5 -1.3
HHC sP sP 05 38 25.9 -2.9
HHC S **S** **05 43 20.7 -0.2**
HHC sS sS 05 43 47.5 +4.4
HHC ScS **ScS** **05 48 33.2 -1.8**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,97nm,3.9s
HHC LR LR
comp=Z,530nm,13.7s
HHC LR LR
comp=Z,460nm,13.5s
HHC LR LR
comp=Z,660nm,13.8s
PSA00 Pilbara Seismi 32.62 190 P **P** **05 38 09.9 -1.2**
comp=Z,35nm,0.8s
PSA00 Pilbara Seismi 32.62 190 P **P** **05 38 10.3 -0.7**
PSA00 IAmb IAmb 05 38 30.2
comp=Z,21nm,0.8s
PSA00 Pilbara Seismi 32.62 190 P **P** **05 38 09.8 -1.2**
PSA00 IAmb IAmb 05 38 30.3
comp=Z,11nm,0.8s
BTO Baotou 32.79 338 *eP* **P** **05 38 16.4 +3.9**
BTO pP **pP** **05 38 23.7 -2.0**
BTO sP **sP** **05 38 30.8 -0.9**
BTO S **S** **05 43 34.6 +8.5**
BTO pmax pmax
comp=Z,22nm,0.8s
BTO pmax pmax
comp=Z,360nm,5.9s
BTO LR LR
comp=Z,2μm,15.2s
BTO LR LR
comp=Z,1μm,15.1s
BTO LR LR
comp=Z,2μm,20.2s
JTM Tenmabayashi 32.88 22 P **P** **05 38 11.6 -1.5**
CN2 Changchun 32.93 360 P **P** **05 38 11.5 -2.1**
CN2 S **S** **05 43 27.0 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,800nm,15.0s
USRK Ussuriysk Ar. 33.78 8 P **P** **05 38 21.8 +0.9**
comp=Z,23nm,0.8s,baz=193,slow=7.8,SNR=20
comp=Z,23nm,0.8s
MDJ Mudanjiang 33.92 5 P **P** **05 38 23.8 +1.6**
MDJ pmax pmax
comp=Z,37nm,1.2s
MDJ LR LR
comp=Z,630nm,19.2s
MDJ LR LR
comp=Z,370nm,15.8s
MDJ LR LR
comp=Z,1μm,24.1s
QIS Mount Isa 34.01 156 P **P** **05 38 22.2 -1.0**
XLT XiLinHaoTe 34.05 348 *eP* **P** **05 38 24.5 +1.0**
XLT pP pP 05 38 33.5 -3.2
XLT PP **PnPn** **05 39 38.0 -0.2**
XLT S **S** **05 43 43.8 -1.8**
XLT SS **SnSn** **05 46 00.3 +3.7**
XLT pmax pmax
comp=Z,36nm,1.0s
XLT pmax pmax
comp=Z,240nm,3.7s
XLT LR LR
comp=Z,59nm,18.7s
XLT LR LR
comp=Z,520nm,18.7s
XLT LR LR
comp=Z,910nm,20.4s
MTSU Mount Surprise 34.11 147 P **P** **05 38 23.8 -0.3**
comp=Z,17nm,0.8s
BRDH Bariadhala 34.57 294 LR LR 05 52 54.8
comp=Z,892nm,21.5s,baz=150,slow=37
BNX BinXian 34.90 2 ⇑*P* **P** **05 38 31.2 +0.6**
BNX pP **sP** **05 38 49.1 -0.8**
BNX S **S** **05 43 56.9 -1.5**
BNX pmax pmax
comp=Z,31nm,1.2s
BNX pmax pmax
comp=Z,270nm,4.5s
BNX LR LR
comp=Z,610nm,20.2s
BNX LR LR
comp=Z,530nm,25.4s
BNX LR LR
comp=Z,990nm,19.7s
AS31 Alice Springs 35.14 167 P **P** **05 38 31.4 -1.6**
AS31 IAmb IAmb 05 38 47.0
comp=Z,11nm,0.5s
ASAR Alice Springs 35.14 167 P **P** **05 38 31.0 -2.0**
ASAR Alice Springs 35.14 167 P **P** **05 38 32.1 -0.9**
comp=Z,16nm,0.6s,baz=351,slow=6.6,SNR=139
ASAR PcP **PcP** **05 41 03.3 -0.3**
comp=Z,2.9nm,0.5s,baz=321,slow=3.6,SNR=2.3
comp=Z,16nm,0.6s
SHL Shillong 35.17 299 P **P** **05 38 33.4 -0.1**
SHL IAmb IAmb 05 38 47.5
comp=Z,33nm,0.8s
SHL Shillong 35.17 299 P **P** **05 38 33.4 -0.1**
SHL pmax pmax
comp=Z,33nm,0.8s
WRKA Warakurna 35.66 176 P **P** **05 38 37.5 0.0**
comp=Z,32nm,0.9s
ASAJ Asahikawa 36.34 21 LR LR 05 51 49.0
comp=Z,607nm,22.0s,baz=170,slow=33
GTA Gaotai 36.64 326 *eP* **P** **05 38 46.1 +0.3**
GTA pP pP 05 38 56.9 -2.2
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA LR LR
comp=Z,770nm,22.9s
GTA LR LR
comp=Z,890nm,23.3s
GTA LR LR
comp=Z,2μm,23.3s
LSA Lhasa 37.25 306 P **P** **05 38 49.0 -2.5**
LSA pmax pmax
comp=Z,22nm,1.1s
LSA LR LR
comp=Z,500nm,21.6s
LSA LR LR
comp=Z,460nm,20.8s
LSA LR LR
comp=Z,880nm,20.1s
LSA Lhasa 37.25 306 P **P** **05 38 52.2 +0.7**
LSA pmax pmax
comp=Z,31nm,0.9s
GOMU GeErMu 37.68 317 P **P** **05 38 56.2 +1.3**
GOMU S **S** **05 44 42.9 +1.1**
GOMU LR LR
comp=Z,410nm,15.7s
GOMU LR LR
comp=Z,910nm,21.2s
MEEK Meekatharra 37.78 190 P **P** **05 38 55.7 +0.2**
YSS Yuzhno-Sakhali 38.89 19 *eP* **P** **05 39 00.0 -4.5**
YSS *e**SP **pP** **05 39 17.2 -0.7**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,700nm,15.0s
HILR Hailar Array B 39.00 354 P **P** **05 39 06.0 +0.6**
comp=Z,9.7nm,0.6s,baz=171,slow=10,SNR=9.8
HILR ScP **ScP** **05 44 57.8 -1.4**
comp=Z,1.4nm,0.4s,baz=185,slow=8.7,SNR=2.0
comp=Z,9.7nm,0.6s
HEH HeiHe 39.41 2 *eP* **P** **05 39 09.1 +0.3**
HEH pmax pmax
comp=Z,40nm,1.0s
HEH LR LR
comp=Z,920nm,19.3s
HEH LR LR
comp=Z,430nm,19.0s
HEH LR LR
comp=Z,1μm,18.7s
ULN Ulaanbaatar 40.17 341 P **P** **05 39 14.9 -0.4**
ULN IAmb IAmb 05 39 32.9
comp=Z,27nm,0.9s
ULN Ulaanbaatar 40.17 341 *c iP* **P** **05 39 16.7 +1.3**
ULN pmax pmax
comp=Z,15nm,1.0s
EVN Everest 40.22 301 P **P** **05 39 16.0 -0.7**
EVN IAmb IAmb 05 39 34.3
comp=Z,20nm,0.8s
SONM Songino Array 40.36 340 P **P** **05 39 16.7 -0.2**
SONM Songino Array 40.36 340 P **P** **05 39 17.5 +0.6**
comp=Z,2.4nm,0.5s,baz=160,slow=9.9,SNR=20
SONM ScP **ScP** **05 45 04.3 -0.4**
comp=Z,1.6nm,0.7s,baz=163,slow=4.6,SNR=5.1
SONM LR LR 05 57 35.2
comp=Z,741nm,19.3s,baz=151,slow=38
comp=Z,2.4nm,0.5s
H11S3 WAKE ISLAND Hy 40.38 74 T T 06 22 06.1
baz=265,slow=75,SNR=3199
H11S1 WAKE ISLAND Hy 40.39 74 T T 06 22 05.8
baz=265,slow=75,SNR=1193
H11S2 WAKE ISLAND Hy 40.40 74 T T 06 22 06.5
baz=265,slow=75,SNR=1741
MORW Morawa 40.65 193 P **P** **05 39 18.8 -0.6**
comp=Z,19nm,1.1s
MORW Morawa 40.65 193 P **P** **05 39 18.7 -0.6**
MORW Morawa 40.65 193 P **P** **05 39 20.5 +1.1**
H11N1 WAKE ISLAND Hy 40.69 72 T T 06 22 40.2
baz=264,slow=74,SNR=3110
H11N2 WAKE ISLAND Hy 40.70 72 T T 06 22 36.7
baz=264,slow=74,SNR=2211
H11N3 WAKE ISLAND Hy 40.71 72 T T 06 22 38.3
baz=264,slow=74,SNR=2662
INKA Innaminka 40.96 159 P **P** **05 39 20.0 -1.9**
QLP Quilpie 41.27 154 P **P** **05 39 23.4 -1.0**
FORT Forrest 41.35 177 P **P** **05 39 25.2 +0.1**
comp=Z,72nm,0.7s
FORT Forrest 41.35 177 P **P** **05 39 24.6 -0.5**
BLDU Ballidu 42.01 192 P **P** **05 39 28.2 -2.3**
comp=Z,15nm,0.9s
BLDU Ballidu 42.01 192 P **P** **05 39 32.3 +1.8**
KMBL Kambalda 42.03 185 P **P** **05 39 29.7 -1.0**
comp=Z,28nm,0.8s
CIT Chita 42.32 349 *eP* **P** **05 39 34.2 +1.4**
CIT *e* 05 39 43.6
CIT *e* 05 39 56.6
CIT *e* 05 41 28.8
CIT *e* 05 45 44.2
CIT pmax pmax
comp=Z,64nm,1.8s
KLBR Kellerberrin 42.77 190 P **P** **05 39 36.6 -0.1**
comp=Z,63nm,0.7s
KLBR Kellerberrin 42.77 190 P **P** **05 39 37.5 +0.8**
ZEA Zeya 42.90 1 *eP* **P** **05 39 38.3 +0.9**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=N,200nm,15.0s
ZEA MLR MLR
comp=Z,500nm,16.0s
ZAK Zakamensk 43.60 339 *eP* **P** **05 39 45.4 +2.1**
ZAK pmax pmax
comp=Z,14nm,1.3s
NWAO Narrogin (SRO) 44.16 190 P **P** **05 39 46.8 -1.1**
comp=Z,49nm,0.7s
NWAO Narrogin (SRO) 44.16 190 P **P** **05 39 47.0 -0.8**
NWAO IAmb IAmb 05 40 14.7
comp=Z,80nm,1.4s
NWAO Narrogin (SRO) 44.16 190 P **P** **05 39 49.4 +1.6**
NWAO Narrogin (SRO) 44.16 190 P **P** **05 39 47.0 -0.8**
NWAO pmax pmax
comp=Z,80nm,1.5s
BBOO Buckleboo 44.44 167 P **P** **05 39 49.3 -0.7**
comp=Z,193nm,0.5s
BBOO Buckleboo 44.44 167 P **P** **05 39 49.4 -0.7**
BBOO Buckleboo 44.44 167 P **P** **05 39 49.8 -0.3**
PALK Pallekele 44.49 269 LR LR 05 57 29.3
comp=Z,420nm,21.9s,baz=84,slow=35
TLY Talaya 44.58 341 P **P** **05 39 49.9 -1.1**
TLY Talaya 44.58 341 *c iP* **P** **05 39 52.4 +1.4**
TLY pmax pmax
comp=Z,10.0nm,0.8s
STKA Stephens Creek 45.05 161 P **P** **05 39 54.3 -0.6**
comp=Z,397nm,1.1s
STKA Stephens Creek 45.05 161 P **P** **05 39 54.0 -0.9**
STKA Stephens Creek 45.05 161 P **P** **05 39 54.7 -0.2**
comp=Z,74nm,1.0s,baz=338,slow=8.5,SNR=36
STKA PP **PP** **05 41 41.0 -0.1**
comp=Z,19nm,0.9s,baz=355,slow=12,SNR=2.8
comp=Z,74nm,1.0s
STKA Stephens Creek 45.05 161 *d iP* **P** **05 39 54.5 -0.4**
HTT Hallett 45.72 164 P **P** **05 40 00.5 +0.2**
comp=Z,23nm,1.4s
HTT Hallett 45.72 164 P **P** **05 40 00.4 +0.2**
HTT Hallett 45.72 164 P **P** **05 39 56.0 -4.2**
RKGY Rocky Gully 45.85 190 P **P** **05 40 02.4 +1.2**
comp=Z,84nm,1.2s
KNGR Kungurtug, Tuv 45.97 335 ⇓ *iP* **P** **05 40 03.6 +1.4**
KNGR pmax pmax
comp=Z,12nm,1.2s
HYBB Hyderabad (bro 46.06 284 *eP* **P** **05 40 02.7 -0.6**
CMSA Cobar Meteorol 46.23 156 P **P** **05 40 04.0 -0.2**
comp=Z,39nm,1.3s
CMSA Cobar Meteorol 46.23 156 P **P** **05 40 04.4 +0.2**
WMQ Urumqi 46.47 322 *eP* **P** **05 40 08.4 +2.2**
WMQ pmax pmax
comp=Z,29nm,1.3s
WMQ pmax pmax
comp=Z,41nm,3.6s
WMQ LR LR
comp=Z,1μm,23.9s
WMQ LR LR
comp=Z,690nm,21.3s
WMQ LR LR
comp=Z,850nm,21.3s
BOD Bodaibo 47.81 352 *eP* **P** **05 40 17.5 +1.3**
BOD pmax pmax
comp=Z,52nm,1.6s
TARA Tarawa 47.87 98 P **P** **05 40 16.5 -0.9**
ARMA Armidale 47.95 149 P **P** **05 40 18.2 +0.3**
comp=Z,29nm,0.9s
ARMA Armidale 47.95 149 P **P** **05 40 17.0 -0.9**
ARMA IAmb IAmb 05 40 21.4
comp=Z,14nm,0.8s
ARMA Armidale 47.95 149 P **P** **05 40 18.8 +0.9**
SANVU Saraoutou 48.70 122 P **P** **05 40 23.1 -0.6**
PETK Petropavlovsk- 49.46 25 P **P** **05 40 31.3 +2.3**
comp=Z,6.0nm,0.6s,baz=189,slow=1.6,SNR=7.8
PETK PP **PP** **05 42 25.1 +1.6**
comp=Z,11nm,1.0s,baz=252,slow=8.9,SNR=3.2
PETK LR LR 05 59 30.2
comp=Z,671nm,21.8s,baz=201,slow=34
comp=Z,6.0nm,0.6s
ARPS Mount Arapiles 49.66 163 P **P** **05 40 30.6 -0.1**
comp=Z,46nm,1.3s
YNG Young 49.73 155 P **P** **05 40 32.0 +0.6**
comp=Z,46nm,1.4s
DGZ Jazzator, Alta 50.04 328 ⇑ *iP* **P** **05 40 34.6 +0.9**
DGZ pmax pmax
comp=Z,22nm,1.7s
ZSN Zaisan 50.13 325 *eP* **P** **05 40 34.6 +0.4**
ZSN Zaisan 50.13 325 *eP* **P** **05 40 34.6 +0.4**
CAN Canberra 50.87 155 P **P** **05 40 40.0 +0.1**
comp=Z,80nm,1.3s
CAN Canberra 50.87 155 P **P** **05 40 39.8 -0.1**
CAN Canberra 50.87 155 P **P** **05 40 41.0 +1.1**
CAN Canberra 50.87 155 P **P** **05 40 39.8 -0.1**
CAN pmax pmax
comp=Z,139nm,1.4s
CAN Canberra 50.87 155 P **P** **05 40 41.9 +2.0**
CNB Canberra Magne 51.01 155 P **P** **05 40 41.6 +0.5**
comp=Z,78nm,1.2s
MK31 Makanchi Array 51.28 323 *d iP* **P** **05 40 42.6 -0.3**
MKAR Makanchi Array 51.28 323 P **P** **05 40 41.6 -1.3**
MKAR Makanchi Array 51.28 323 P **P** **05 40 42.6 -0.3**
comp=Z,23nm,0.7s,baz=122,slow=7.5,SNR=127
MKAR ScP **ScP** **05 45 49.2 -0.6**
comp=Z,2.4nm,0.9s,baz=101,slow=6.3,SNR=4.6
MKAR LR LR 06 04 12.3
comp=Z,841nm,21.6s,baz=110,slow=38
comp=Z,23nm,0.7s
YAK Yakutsk 51.28 2 P **P** **05 40 42.2 -0.4**
YAK Yakutsk 51.28 2 LR LR 06 02 52.9
comp=Z,418nm,20.3s,baz=170,slow=36
YAK Yakutsk 51.28 2 *eP* **P** **05 40 43.1 +0.6**
YAK *e**PP **pP** **05 40 55.9 -0.5**
YAK *e* 05 41 56.1
YAK *e* 05 42 37.2
YAK *e*PPP PPP 05 43 40.5
YAK *e*S **S** **05 47 59.2 +1.6**
YAK *e**SS **sS** **05 48 22.7 +2.0**
YAK *e* 05 50 23.3
YAK *e*SS **SS** **05 51 36.0 +2.4**
YAK *e*SSS SSS 05 53 14.4
YAK pmax pmax
comp=Z,54nm,1.3s
YAK pmax pmax
comp=N,25nm,1.1s
YAK pmax pmax
comp=E,14nm,1.6s
YAK pmax pmax
comp=Z,425nm,4.3s
YAK pmax pmax
comp=N,551nm,4.3s
YAK pmax pmax
comp=E,429nm,3.9s
YAK smax smax
comp=E,620nm,4.3s
YAK smax smax
comp=N,609nm,4.2s
SHLS Shalkode 51.38 317 *eP* **P** **05 40 42.0 -1.9**
comp=N,19nm,1.1s
SHLS Shalkode 51.38 317 *eP* **P** **05 40 41.9 -1.9**
SHLS pmax pmax
comp=Z,19nm,1.1s
MAKZ Makanchi 51.47 323 P **P** **05 40 43.8 -0.6**
MAKZ Makanchi 51.47 323 P **P** **05 40 43.8 -0.6**
MAKZ pmax pmax
comp=Z,83nm,1.6s
MAKZ Makanchi 51.47 323 P **P** **05 40 44.1 -0.3**
NOUC Port Laguerre 51.53 129 P **P** **05 40 45.6 +0.6**
TOO Toolangi 51.54 160 P **P** **05 40 44.8 -0.2**
comp=Z,21nm,1.2s
TOO Toolangi 51.54 160 P **P** **05 40 45.2 +0.3**
TOO IAmb IAmb 05 40 48.0
comp=Z,24nm,1.1s
TOO Toolangi 51.54 160 P **P** **05 40 45.2 +0.3**
TOO pmax pmax
comp=Z,24nm,1.2s
UZB Uzynbulak 51.67 317 *eP* **P** **05 40 46.3 +0.3**
comp=Z,10nm,1.1s
UZB Uzynbulak 51.67 317 *eP* **P** **05 40 46.3 +0.3**
UZB pmax pmax
comp=Z,11nm,1.1s
ONTNC Ouen Toro 51.77 130 P **P** **05 40 47.2 +0.4**
TARG Taragay, Kyrgy 51.94 315 P **P** **05 40 47.5 -0.9**
TARG Taragay, Kyrgy 51.94 315 P **P** **05 40 47.5 -0.9**
TARG pmax pmax
comp=Z,13nm,1.0s
YATNC Mamie plateau, 51.96 129 P **P** **05 40 49.4 +1.1**
SATY Saty 52.05 317 *eP* **P** **05 40 49.1 +0.2**
comp=Z,15nm,1.4s
SATY Saty 52.05 317 *eP* **P** **05 40 49.0 +0.2**
SATY pmax pmax
comp=Z,15nm,1.4s
OUENC Ouen Island, N 52.12 129 P **P** **05 40 50.6 +1.1**
MA2 Magadan 52.24 16 LR LR 06 01 10.5
comp=Z,287nm,21.3s,baz=146,slow=34
MILA Mila 52.43 156 P **P** **05 40 53.5 +1.9**
KSH Kashi 52.46 312 P **P** **05 40 54.9 +3.0**
KSH pP sP 05 41 08.6 -3.1
KSH pmax pmax
comp=Z,19nm,1.0s
KSH LR LR
comp=Z,970nm,18.6s
KSH LR LR
comp=Z,830nm,17.2s
KSH LR LR
comp=Z,1μm,19.4s
MARNC Mare, Loyalty 52.51 128 P **P** **05 40 51.4 -1.0**
PINNC Pines Island, 52.69 129 P **P** **05 40 53.1 -0.5**
TDK Taldyqorghan 52.85 319 *eP* **P** **05 40 55.0 +0.3**
comp=Z,15nm,0.7s
TDK Taldyqorghan 52.85 319 *eP* **P** **05 40 54.9 +0.3**
TDK pmax pmax
comp=Z,15nm,0.7s
TNSS Tian-Shan 53.02 316 *eP* **P** **05 40 56.4 0.0**
TNSS Tian-Shan 53.02 316 *eP* **P** **05 40 56.3 0.0**
AAA Alma-Ata 53.11 317 *eP* **P** **05 40 56.9 +0.2**
comp=Z,14nm,0.5s
AAA Alma-Ata 53.11 317 *eP* **P** **05 40 56.8 +0.2**
AAA pmax pmax
comp=Z,14nm,0.5s
TKM2 Tokmak 2 53.90 316 P **P** **05 41 03.4 +0.8**
SNR=5.3
ZAA0 Zalesovo Array 53.91 331 P **P** **05 41 01.4 -0.8**
ZAA0 IAmb IAmb 05 41 12.7
comp=Z,15nm,0.8s
ZALV Zalesovo Beam 53.91 331 P **P** **05 41 00.8 -1.4**
ZALV Zalesovo Beam 53.91 331 P **P** **05 41 01.0 -1.2**
comp=Z,3.3nm,0.3s,baz=117,slow=7.0,SNR=15
ZALV LR LR 06 05 27.9
comp=Z,523nm,19.7s,baz=94,slow=38
comp=Z,3.3nm,0.3s
ZALV Zalesovo Beam 53.91 331 *i* P **P** **05 41 02.2 0.0**
ZALV pmax pmax
comp=Z,3.0nm,0.3s
KBK Karagaybulak 54.25 315 P **P** **05 41 06.6 +1.5**
SNR=5.5
UCH Uchtor 54.40 315 P **P** **05 41 08.3 +1.7**
SNR=26
ARLS Aral 54.41 314 P **P** **05 41 06.6 +0.3**
ARLS pmax pmax
comp=Z,19nm,0.9s
AAK Ala-Archa 54.56 315 P **P** **05 41 07.5 +0.1**
AAK Ala-Archa 54.56 315 LR LR 06 06 57.3
comp=Z,567nm,20.2s,baz=90,slow=39
AAK Ala-Archa 54.56 315 ⇓ *iP* **P** **05 41 08.2 +0.9**
AAK pmax pmax
comp=Z,4.0nm,1.1s
USP Ospenovka 54.77 316 P **P** **05 41 09.6 +0.9**
SNR=5.9
EKS2 Erkin-Say 55.06 315 P **P** **05 41 12.1 +1.1**
SNR=7.6
KURK Kurchatov 55.33 326 P **P** **05 41 11.5 -1.0**
KURK Kurchatov 55.33 326 ⇓ *iP* **P** **05 41 12.0 -0.5**
KURK pmax pmax
comp=Z,42nm,0.9s
KURK Kurchatov 55.33 326 P **P** **05 41 12.2 -0.3**
KURBB Kurchatov Arra 55.33 325 P **P** **05 41 12.1 -0.5**
comp=Z,8.8nm,0.5s,baz=128,slow=6.8,SNR=82
KURBB LR LR 06 06 32.4

comp=Z,391nm,19.2s,baz=173,slow=38
comp=Z,8.8nm,0.5s
CORO Coronation Par 55.59 160 P **P** **05 41 14.9 +0.5**
ARK Arkit 56.07 313 P **P** **05 41 18.0 -0.2**
ARK pmax pmax
comp=Z,26nm,1.2s
GAR Garm 56.52 310 P **P** **05 41 21.0 -0.4**
KBL Kabul 56.56 304 P **P** **05 41 20.2 -1.6**
KBL IAmb IAmb 05 41 32.5
comp=Z,11nm,0.7s
KBL Kabul 56.56 304 P **P** **05 41 20.3 -1.6**
KBL pmax pmax
comp=Z,11nm,0.7s
TRKS Terek-Say 56.58 313 P **P** **05 41 22.4 +0.5**
TRKS pmax pmax
comp=Z,27nm,1.4s
FUNA Funafuti 56.62 108 P **P** **05 41 22.4 +0.1**
CHGR Chuyangaron 57.31 309 P **P** **05 41 27.2 +0.2**
CHGR Chuyangaron 57.31 309 P **P** **05 41 27.2 +0.2**
CHGR pmax pmax
comp=Z,28nm,0.6s
KK31 Karatay Array 57.48 315 P **P** **05 41 26.8 -1.2**
KK31 IAmb IAmb 05 41 39.4
comp=Z,29nm,1.2s
KK31 Karatay Array 57.48 315 P **P** **05 41 26.8 -1.2**
KK31 pmax pmax
comp=Z,29nm,1.2s
KKAR Karatay Array 57.48 315 P **P** **05 41 27.2 -0.8**
KKAR Karatay Array 57.48 315 P **P** **05 41 27.3 -0.8**
IUG luzhnay 57.55 313 *eP* **P** **05 41 28.7 +0.1**
comp=Z,23nm,1.3s
IUG luzhnay 57.55 313 *eP* **P** **05 41 28.7 +0.1**
IUG pmax pmax
comp=Z,23nm,1.3s
CHM Chimkent 57.90 313 *eP* **P** **05 41 31.3 +0.3**
CHM Chimkent 57.90 313 *eP* **P** **05 41 31.3 +0.3**
BRLS Boroldaу 57.93 314 *eP* **P** **05 41 31.5 +0.3**
BRLS Boroldaу 57.93 314 *eP* **P** **05 41 31.5 +0.3**
BRZS Berezniki 58.43 323 *eP* **P** **05 41 34.8 +0.2**
BRZS Berezniki 58.43 323 *eP* **P** **05 41 34.7 +0.2**
MSVF Nonsavu 58.98 118 P **P** **05 41 40.8 +1.9**
MSVF pmax pmax
comp=Z,38nm,1.0s
TIXI Tiksi 60.89 1 P **P** **05 41 50.9 -0.1**
TIXI Tiksi 60.89 1 LR LR 06 08 23.4
comp=Z,649nm,21.2s,baz=196,slow=36
TIXI Tiksi 60.89 1⇓ *iP* **P** **05 41 51.8 +0.8**
TIXI pmax pmax
comp=Z,41nm,1.3s
BVAR Borovoye Array 60.93 325 P **P** **05 41 51.1 -0.5**
comp=Z,6.8nm,0.7s,baz=119,slow=9.2,SNR=27
BVAR LR LR 06 10 25.5
comp=Z,312nm,20.4s,baz=116,slow=38
comp=Z,6.8nm,0.7s
BORK Borovoye 60.97 325 *c iP* **P** **05 41 52.1 +0.1**
BORK pmax pmax
comp=Z,23nm,0.9s
BORK Borovoye 60.97 325 P **P** **05 41 52.9 +0.9**
BILL Bilibino 63.11 16 P **P** **05 42 05.5 -0.5**
BILL IAmb IAmb 05 42 19.1
comp=Z,67nm,1.9s
BILL Bilibino 63.11 16⇑ *iP* **P** **05 42 08.2 +2.2**
BILL pmax pmax
comp=Z,10.0nm,0.9s
NRIK Noril'sk 63.40 346 P **P** **05 42 08.3 +0.4**
NRIK Noril'sk 63.40 346 P **P** **05 42 09.1 +1.1**
comp=Z,36nm,1.1s,baz=127,slow=6.4,SNR=18
comp=Z,36nm,1.1s
ATKA Atka Island 63.45 37 P **P** **05 42 10.2 +1.7**
OUZ Omahuta 64.37 138 P **P** **05 42 16.3 +1.5**
OUZ Omahuta 64.37 138 P **P** **05 42 16.6 +1.8**
AB31 Akbulak array 66.11 319 **P** **05 42 25.0 -1.0**
AB31 IAmb IAmb 05 42 36.6
comp=Z,20nm,0.9s
ABKAR Akbulak array 66.11 319 P **P** **05 42 24.4 -1.5**
NIKH Nikolski High 66.80 37 P **P** **05 42 33.1 +2.9**
TOZ Tahuroa Road 67.08 139 P **P** **05 42 32.2 -0.1**
TOZ IAmb IAmb 05 42 35.6
comp=Z,22nm,1.0s
QRZ Quartz Range 67.11 143 P **P** **05 42 33.4 +1.1**
QRZ Quartz Range 67.11 143 P **P** **05 42 33.4 +1.1**
HIZ Hauiti 67.12 140 P **P** **05 42 35.3 +2.8**
DSZ Denniston Nort 67.27 144 P **P** **05 42 35.0 +1.6**
VRZ Vera Road 67.42 140 P **P** **05 42 36.4 +2.0**
SVE Sverdlovsk 67.48 327 *eP* P 05 42 43.8 +9.3
SVE pmax pmax
comp=Z,40nm,1.0s
TKNZ Takaka Hill 67.49 143 P **P** **05 42 34.4 -0.4**
AKTO Aktyubinsk 67.57 320 LR LR 06 14 17.2
comp=Z,1μm,20.4s,baz=72,slow=38
NNZ Nelson 67.85 143 P **P** **05 42 37.7 +0.6**
THZ Tophouse 67.91 144 P **P** **05 42 37.5 0.0**
NNVZ North Ngauruho 67.97 140 P **P** **05 42 40.2 +2.1**
TMVZ Te Maari 68.01 140 P **P** **05 42 40.3 +2.0**
OTVZ Oturere 68.02 140 P **P** **05 42 41.0 +2.7**
ETVZ East Tongariro 68.03 140 P **P** **05 42 40.0 +1.6**
RPZ Rata Peaks 68.12 146 P **P** **05 42 39.2 +0.5**
LTZ Lake Taylor 68.19 145 P **P** **05 42 39.6 +0.4**
MOVZ Moawhango 68.21 140 P **P** **05 42 39.1 -0.4**
TCW Tory Channel 68.38 142 P **P** **05 42 39.8 -0.5**
URZ Urewera 68.43 139 P **P** **05 42 44.0 +3.3**
BKZ Black Stump Fm 68.54 140 P **P** **05 42 41.6 +0.1**
BKZ Black Stump Fm 68.54 140 P **P** **05 42 41.9 +0.4**
KIW Kapiti Island 68.55 142 P **P** **05 42 41.5 0.0**
ARTI Arti 68.58 327 P **P** **05 42 39.8 -1.6**
ARTI IAmb IAmb 05 42 51.5
comp=Z,36nm,1.0s
ARTI Arti 68.58 327 LR LR 06 13 39.3
comp=Z,285nm,21.1s,baz=116,slow=37
ARTI Arti 68.58 327 *d iP* **P** **05 42 40.4 -1.0**
ARTI *PP **pP** **05 42 55.7 -0.1**
ARTI 05 43 08.6
ARTI S **S** **05 51 37.4 -2.6**
ARTI SS **SS** **05 56 00.1 -4.7**
ARTI pmax pmax
comp=Z,8.0nm,1.1s
ARTI Arti 68.58 327 P **P** **05 42 40.6 -0.8**
KWHZ Kaweka Forest 68.65 140 P **P** **05 42 42.9 +0.8**
OGWZ Otaki Gorge 68.69 142 P **P** **05 42 42.1 -0.2**
KHZ Kahutara 68.69 144 P **P** **05 42 41.5 -0.7**
SNZO South Karori 68.70 142 P **P** **05 42 41.8 -0.5**
KRHZ Kereru 68.74 140 P **P** **05 42 43.2 +0.5**
PNHZ Pukenui 68.79 140 P **P** **05 42 43.2 +0.2**
MRZ Mangatainoka R 68.84 141 P **P** **05 42 43.2 0.0**
BHW Baring Head 68.86 142 P **P** **05 42 42.2 -1.1**
HOWZ Holdsworth Sta 68.94 142 P **P** **05 42 43.7 -0.2**
DVHZ Dannevirke 68.99 141 P **P** **05 42 44.9 +0.7**
RIGZ Rimuhau 69.10 139 P **P** **05 42 47.4 +2.4**
KAHZ Kahuranaki 69.15 140 P **P** **05 42 45.9 +0.7**
PLWZ Palliser 69.19 142 P **P** **05 42 45.1 -0.4**
BFZ Birch Farm 69.27 141 P **P** **05 42 46.1 +0.2**
BFZ Birch Farm 69.27 141 P **P** **05 42 46.1 +0.2**
PXZ Pawanui 69.27 140 P **P** **05 42 45.5 -0.4**
TMWZ Te Maipa 69.30 142 P **P** **05 42 46.0 -0.1**
TRWZ Traveller 69.34 142 P **P** **05 42 46.7 +0.3**
KIRV Kirov 73.72 328 LR LR 06 18 05.6
comp=Z,620nm,20.7s,baz=92,slow=38
KIRV Kirov 73.72 328⇓ *iP* **P** **05 43 13.2 +0.8**
AKT Akhty 73.93 310 *eP* **P** **05 43 12.2 -2.0**
AKT *e* 05 43 25.2
AKT *e* 05 45 57.6
AKT S **SKiKP** **05 52 39.1 +0.4**
AKT pmax pmax
comp=Z,11nm,1.2s
AKT MLR MLR
comp=Z,662nm,22.0s
MAK Makhachkala 74.09 312 *c iP* **P** **05 43 14.2 -0.7**
MAK *e* 05 45 55.9
MAK *e*PPP PPP 05 47 42.7
MAK *e*S **S** **05 52 44.4 +0.2**
MAK *e*SS **SS** **05 57 37.7 +7.9**
MAK pmax pmax
comp=Z,217nm,1.1s
MAK MLR MLR
comp=Z,941nm,19.0s
BELG Belogornoye 74.25 321⇓ *iP* **P** **05 43 17.1 +1.4**
BELG pmax pmax
comp=Z,3.0nm,0.9s
CHIR Chirikof Islan 74.85 35 P **P** **05 43 20.8 +1.7**
ACHA Angle Creek He 75.16 33 P **P** **05 43 20.5 -0.4**
OHAK Old Harbor 76.20 34 P **P** **05 43 27.7 +0.9**
GNI Garni 76.23 309 LR LR 06 22 24.2
comp=Z,316nm,20.8s,baz=76,slow=40

B21K Ikpikpuk River 76.42 21 P **P** **05 43 28.6 +0.8**
B21K IAmb IAmb 05 43 51.8
comp=Z,34nm,0.9s
IMAR Indian Mountai 76.43 25 P **P** **05 43 27.6 -0.3**
KDAK Kodiak Island 76.60 33 IAmb IAmb 05 43 34.1
comp=Z,36nm,0.9s
KDAK Kodiak Island 76.60 33 P **P** **05 43 29.5 +0.5**
comp=Z,17nm,0.7s,baz=279,slow=7.2,SNR=10
comp=Z,17nm,0.7s
RAYN Ar Rayn 76.82 292 P **P** **05 43 30.9 -0.2**
RAYN Ar Rayn 76.82 292 P **P** **05 43 30.9 -0.2**
RAYN pmax pmax
comp=Z,7.0nm,0.7s
SKT Skwentna 77.22 29 P **P** **05 43 31.9 -0.6**
SKT IAmb IAmb 05 44 06.7
comp=Z,30nm,1.6s
KBZ Khabaz 77.44 313 P **P** **05 43 34.0 0.0**
comp=Z,3.1nm,0.8s,baz=105,slow=3.3,SNR=6.5
KBZ LR LR 06 21 46.1
comp=Z,419nm,20.7s,baz=77,slow=39
comp=Z,3.1nm,0.8s
KBZ Khabaz 77.44 313⇑ *iP* **P** **05 43 34.6 +0.6**
KBZ pmax pmax
comp=Z,13nm,2.1s
BPAW Bear Paw Mtn. 77.51 27 P **P** **05 43 33.3 -0.8**
BPAW IAmb IAmb 05 46 15.7
comp=Z,47nm,1.1s
KIV Kislovodsk 77.58 313 *eP* **P** **05 43 32.3 -2.7**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,318nm,19.0s
KIV Kislovodsk 77.58 313 P **P** **05 43 34.5 -0.5**
comp=Z,12nm,0.7s
CASY Casey 77.62 186 P **P** **05 43 33.1 -1.4**
CASY IAmb IAmb 05 43 55.2
comp=Z,20nm,0.8s
CASY Casey 77.62 186 P **P** **05 43 33.8 -0.6**
CASY pP **sP** **05 43 54.5 -0.2**
MLY Manley 77.64 26 P **P** **05 43 33.6 -1.2**
MLY IAmb IAmb 05 43 40.0
comp=Z,20nm,1.0s
M22K Willow 77.88 29 P **P** **05 43 36.5 +0.3**
COLD Coldfoot 77.90 23 P **P** **05 43 36.0 -0.1**
COLD IAmb IAmb 05 43 41.8
comp=Z,17nm,1.0s
VRH Novokhopyorsk 77.91 320 *eP* **P** **05 43 34.7 -1.8**
VRH pmax pmax
comp=Z,8.0nm,0.8s
DRV Dumont d'Urvil 77.92 174 P **P** **05 43 35.2 -0.9**
TOLK Toolik Lake Re 78.16 22 P **P** **05 43 38.0 +0.4**
PMR Palmer 78.36 29 P **P** **05 43 38.3 -0.5**
PMR Palmer 78.36 29 P **P** **05 43 38.3 -0.5**
PMR pmax pmax
comp=Z,13nm,0.8s
D24K Happy Valley 78.44 21 P **P** **05 43 39.2 +0.1**
D24K IAmb IAmb 05 43 44.7
comp=Z,19nm,0.8s
RND Reindeer 78.45 27 P **P** **05 43 38.1 -1.3**
RND IAmb IAmb 05 43 53.6
comp=Z,24nm,1.1s
RND Reindeer 78.45 27 P **P** **05 43 38.1 -1.3**
RND pmax pmax
comp=Z,24nm,1.1s
KNK Knik Glacier 78.68 29 P **P** **05 43 40.9 +0.2**
KNK IAmb IAmb 05 43 55.5
comp=Z,32nm,1.2s
SML Sawmill 78.73 29 P **P** **05 43 41.4 +0.5**
SML IAmb IAmb 05 43 55.1
comp=Z,21nm,0.9s
SML Sawmill 78.73 29 P **P** **05 43 41.4 +0.5**
SML pmax pmax
comp=Z,21nm,0.9s
PWL Port Wells 78.76 30 P **P** **05 43 40.4 -0.7**
PWL IAmb IAmb 05 43 56.1
comp=Z,55nm,1.2s
KLMR Klimovskoe 78.81 330 *eP* **P** **05 43 39.7 -1.6**
KLMR *e*PP **pP** **05 43 55.4 -0.5**
KLMR pmax pmax
comp=Z,28nm,1.0s
KLMR MLR MLR
comp=Z,421nm,15.0s
COLA College 78.86 26 P **P** **05 43 42.2 +0.7**
COLA pmax pmax
comp=Z,13nm,1.1s
CCB Clear Creek Bu 78.89 26 P **P** **05 43 41.2 -0.4**
ERBR Yeremizino-Bor 79.03 315 *eP* **P** **05 43 43.4 +0.6**
ERBR pmax pmax
comp=Z,16nm,0.5s
ERBR MLR MLR
comp=Z,492nm,20.0s
SCM Sheep Creek Mo 79.21 29 P **P** **05 43 43.4 -0.2**
SCM IAmb IAmb 05 43 58.0
comp=Z,22nm,0.8s
SCM Sheep Creek Mo 79.21 29 P **P** **05 43 43.4 -0.2**
SCM pmax pmax
comp=Z,22nm,0.8s
IL31 79.28 26 P **P** **05 43 43.8 +0.1**
ILAR Eielson Array 79.28 26 P **P** **05 43 43.1 -0.7**
comp=Z,3.5nm,0.9s,baz=241,slow=5.1,SNR=23
comp=Z,3.5nm,0.9s
VORD Divnogorie 79.45 320 *eP* **P** **05 43 42.3 -2.7**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 79.51 320 *eP* **P** **05 43 42.0 -3.3**
VSR pmax pmax
comp=Z,9.0nm,0.9s
LPSR Galich'ya Gora 79.56 322 *eP* **P** **05 43 44.0 -1.6**
LPSR pmax pmax
comp=Z,20nm,0.9s
SOC Sochi 79.75 313 *eP* **P** **05 43 43.8 -3.0**
SOC *e* 05 46 43.6
SOC *e*PPP PPP 05 48 38.7
SOC *e*S **S** **05 53 42.9 -2.9**
SOC *e*SS **SS** **05 58 51.8 -3.4**
SOC *e*SSS SSS 06 02 20.5
SOC MLR MLR
comp=Z,327nm,21.0s
KLU Klutina 79.89 29 P **P** **05 43 46.8 -0.5**
KLU IAmb IAmb 05 43 51.7
comp=Z,39nm,1.6s
MOS Moscow 80.10 325 *eP* P 05 43 56.4 +8.0
OBN Obninsk 80.75 324⇓ *iP* **P** **05 43 53.2 +1.3**
OBN *e* 05 46 51.8
OBN *e*S **S** **05 53 53.5 -2.3**
OBN *e*SS **SS** **05 59 12.2 +2.7**
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,332nm,18.0s
APA Apatity 81.00 337⇓ *eP* P 05 44 00.1 +7.1
ANN Anapa 81.26 314 *eP* **P** **05 43 56.3 +1.5**
ANN pmax pmax
comp=Z,18nm,0.4s
ANN MLR MLR
comp=Z,322nm,18.0s
MSF Maaselka 82.96 336 P **P** **05 44 02.4 -0.9**
MSF P **pP** **05 44 13.6 -4.5**
MSF pmax pmax
comp=Z,27nm,1.0s
ASF Jabal al Asfar 83.32 301 LR LR 06 26 03.4
comp=Z,197nm,22.0s,baz=109,slow=39
SPITS Spitsbergen Ar 83.43 349 P **P** **05 44 05.9 +0.3**
comp=Z,8.2nm,0.8s,baz=101,slow=7.7,SNR=12
comp=Z,8.2nm,0.8s
ARCES ARCESS Array B 83.53 340 IAmb IAmb 05 44 17.3
comp=Z,15nm,1.0s
ARCES ARCESS Array B 83.53 340 P **P** **05 44 05.2 -1.1**
comp=Z,1.1nm,0.4s,baz=85,slow=6.5,SNR=35
comp=Z,1.1nm,0.4s
SIM Simferopol' 83.58 314 *eP* P 05 44 15.7 +8.7
INK Inuvik 84.07 22 P **P** **05 44 09.0 +0.1**
comp=Z,13nm,1.1s,baz=267,slow=4.8,SNR=23
comp=Z,13nm,1.1s
INK Inuvik 84.07 22 P **P** **05 44 09.0 +0.1**
OUL Oulu 84.41 335 P **P** **05 44 11.4 +0.7**
OUL P **pP** **05 44 20.0 -5.5**
OUL pmax pmax
comp=Z,23nm,1.1s
MMAI Mount Meron Ar 84.44 302 LR LR 06 26 33.5
comp=Z,179nm,19.6s,baz=78,slow=39
O30N Mendenhall 84.72 29 P **P** **05 44 12.2 -0.3**
BR131 Keskin Array S 84.76 309 P **P** **05 44 11.7 -1.6**
BR131 Keskin Array S 84.76 309⇑ *iP* **P** **05 44 11.0 -2.3**
BRTR Keskin Array B 84.76 309 P **P** **05 44 11.6 -1.7**

BRTR Keskin Array B 84.76 309 P **P** **05 44 12.2 -1.0**
comp=Z,1.6nm,0.8s,baz=123,slow=4.6,SNR=8.9
BRTR LR LR 06 27 07.4
comp=Z,257nm,20.4s,baz=72,slow=39
comp=Z,1.6nm,0.8s
BRTR Keskin Array B 84.76 309 *i* P **P** **05 44 14.6 +1.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BR104 Keskin Array S 84.76 309 P **P** **05 44 12.5 -0.7**
comp=Z,41nmcomp=Z,4.5nm,0.8s
BR106 Keskin Array S 84.77 309 P **P** **05 44 12.6 -0.7**
comp=Z,36nmcomp=Z,4.8nm,0.8s
BR105 Keskin Array S 84.77 309 P **P** **05 44 12.6 -0.7**
comp=Z,51nmcomp=Z,6.4nm,0.8s
FINES FINESS Array B 85.18 332 P **P** **05 44 13.5 -1.2**
comp=Z,2.4nm,0.3s,baz=75,slow=4.1,SNR=49
comp=Z,2.4nm,0.3s
M31M Drury Creek, Y 85.19 28 P **P** **05 44 14.2 -0.6**
M31M IAmb IAmb 05 44 28.1
comp=Z,12nm,0.8s
EIL Elat 85.36 299 LR LR 06 29 01.6
comp=Z,178nm,20.0s,baz=59,slow=40
CCD Concordia, Ant 85.70 181 P **P** **05 44 17.0 -0.4**
CCD sP **sP** **05 44 40.3 +2.4**
AK09 Malin Array Si 85.79 321 P **P** **05 44 16.9 -1.1**
AK08 Malin Array Si 85.80 321 P **P** **05 44 17.0 -1.0**
AK03 Malin Array Si 85.80 321 P **P** **05 44 17.0 -1.0**
AKASG Malin Array Be 85.81 321 P **P** **05 44 16.2 -1.8**
comp=Z,4.6nm,0.8s,baz=66,slow=4.7,SNR=12
AKASG LR LR 06 27 06.2
comp=Z,293nm,19.6s,baz=63,slow=39
comp=Z,4.6nm,0.8s
AKASG Malin Array Be 85.81 321 *i* P **P** **05 44 19.7 +1.7**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 85.81 321 P **P** **05 44 16.6 -1.4**
AKBB IAmb IAmb 05 44 31.4
comp=Z,13nm,0.8s
AKBB Malin Array Si 85.81 321 P **P** **05 44 16.6 -1.4**
AKBB pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 85.81 321 P **P** **05 44 17.0 -1.0**
CSS Mathiatis 85.81 305 P **P** **05 44 17.5 -0.9**
comp=Z,26nm,0.9s
MNK Minsk 85.81 325 *i* P **P** **05 44 15.8 -2.2**
MNK *i* *PP **pP** **05 44 29.2 -3.6**
MNK *i* *SP **sP** **05 44 38.4 0.0**
MNK *i* 05 47 35.9
MNK *i* PPP PPP 05 49 29.6
MNK *i* S **SKSac** **05 54 39.9 +0.5**
MNK *i* PS PnS 05 56 12.3 +23
MNK pmax pmax
comp=Z,2.0nm,0.5s
MNK pmax pmax
comp=N,17nm,0.9s
MNK pmax pmax
comp=E,22nm,0.9s
MNK MLR MLR
comp=E,197nm,16.0s
MNK MLR MLR
comp=Z,263nm,16.0s
MNK MLR MLR
comp=N,274nm,18.0s
AK10 Malin Array Si 85.81 321 P **P** **05 44 17.1 -1.0**
AK01 Malin Array Si 85.82 321 P **P** **05 44 17.1 -1.0**
KIEV Kiev 85.82 321 P **P** **05 44 16.9 -1.2**
KIEV IAmb IAmb 05 44 31.4
comp=Z,12nm,0.8s
KIEV Kiev 85.82 321 P **P** **05 44 16.9 -1.2**
KIEV pmax pmax
comp=Z,12nm,0.9s
KIEV Kiev 85.82 321 P **P** **05 44 17.0 -1.2**
comp=Z,67nm,0.9s
AK02 Malin Array Si 85.83 321 P **P** **05 44 17.1 -1.0**
AK05 Malin Array Si 85.84 321 P **P** **05 44 17.2 -1.0**
AK04 Malin Array Si 85.84 321 P **P** **05 44 17.2 -1.0**
AK06 Malin Array Si 85.85 321 P **P** **05 44 17.2 -1.0**
MI28 Mi28,Pidlybu 86.72 321 P **P** **05 44 21.8 -0.8**
LUBAR Lubar, Ukraine 86.89 320 P **P** **05 44 22.9 -0.5**
KMPD K-Podol'skiy 88.03 319 P **P** **05 44 28.8 -0.1**
KMPD P **PcP** **05 44 29.6 -1.1**
KIBK Kibwezi 88.07 267 P **P** **05 44 28.8 -1.1**
KIBK IAmb IAmb 05 44 41.8
comp=Z,8.9nm,0.9s
DLBC Dease Lake 88.30 31 P **P** **05 44 30.2 +0.1**
comp=Z,3.1nm,1.1s,baz=358,slow=26,SNR=2.6
comp=Z,3.1nm,1.1s
PPT2 Papeete2 88.30 108 *eP* **P** **05 44 32.2 +1.4**
comp=Z,71nm,27.2s
PPT2 Papeete2 88.30 108 *eS* **S** **05 55 08.6 -3.9**
comp=Z,223nm,25.2s
PPT2 Papeete2 88.30 108 *eLR* LR 06 12 36.9
comp=Z,314nm,31.2s
PPT2 *eLR LR 06 12 39.6
comp=Z,474nm,29.8s
TESR Tescani 88.40 317 P **P** **05 44 30.6 -0.1**
comp=Z,18nm,0.7s
BURAR Bucovina Array 89.08 318 P **P** **05 44 33.5 -0.6**
BURAR IAmb IAmb 05 44 45.0
comp=Z,8.4nm,0.7s
BURAR Bucovina Array 89.08 318 P **P** **05 44 32.9 -1.1**
BUR08 Bucovina Ar. S 89.08 318 P **P** **05 44 32.9 -1.1**
MLR Muntele Rosu 89.13 316 LR LR 06 29 36.4
comp=Z,642nm,21.1s,baz=66,slow=39
STNU Starunia 89.25 319 P **P** **05 44 33.1 -1.6**
TBI Tubuai 89.58 114 *eP* P 05 44 28.9 -7.7
comp=Z,199nm,26.8s
TBI Tubuai 89.58 114 *eS* S 05 55 11.1 -13
comp=Z,1μm,30.8s
TBI Tubuai 89.58 114 *eLR* LR 06 13 06.7
comp=Z,3μm,25.5s
TBI *eLR LR 06 13 15.2
comp=Z,881nm,27.2s
SHIU Shidnytsya 89.84 320 P **P** **05 44 37.8 +0.4**
MAW Mawson 89.94 200 P **P** **05 44 37.3 0.0**
comp=Z,1.4nm,0.6s,baz=36,slow=4.1,SNR=4.2
comp=Z,1.4nm,0.6s
KWP Kalwaria Pacla 90.13 321 P **P** **05 44 38.6 -0.2**
DAG Danmarks Havn 90.20 352 P **P** **05 44 38.4 -0.1**
DAG AP **pP** **05 44 47.8 -5.6**
VNDA Vanda 90.48 173 P **P** **05 44 39.2 -0.5**
VNDA IAmb IAmb 05 44 41.6
comp=Z,18nm,0.9s
VNDA Vanda 90.48 173 P **P** **05 44 39.6 0.0**
comp=Z,25nm,1.1s,baz=320,slow=5.7,SNR=46
comp=Z,25nm,1.1s
RES Resolute Bay 91.14 10 P **P** **05 44 43.4 +0.5**
comp=Z,4.7nm,1.0s,baz=247,slow=6.9,SNR=6.4
comp=Z,4.7nm,1.0s
HFS Hagfors 91.34 332 P **P** **05 44 42.9 -1.3**
comp=Z,1.1nm,0.5s,baz=104,slow=6.3,SNR=7.9
HFS LR LR 06 28 25.6
comp=Z,562nm,20.6s,baz=60,slow=37
comp=Z,1.1nm,0.5s
SBA Scott Base 91.39 172 P **P** **05 44 44.9 +1.0**
SBA IAmb IAmb 05 44 46.4
comp=Z,14nm,1.1s
SBA Scott Base 91.39 172 P **P** **05 44 44.9 +1.0**
SBA pmax pmax
comp=Z,14nm,1.2s
NB2 NORSAR Subarra 92.06 334 P **P** **05 44 47.5 0.0**
comp=Z,7.9nm,1.4s,baz=66,slow=4.8
NOA NORSAR Array B 92.06 334 P **P** **05 44 47.6 +0.1**
comp=Z,1.0nm,0.8s,baz=64,slow=4.6,SNR=3.9
NOA LR LR 06 29 07.2
comp=Z,503nm,21.5s,baz=65,slow=37
comp=Z,1.0nm,0.8s
IDI Anoyia 92.49 306 LR LR 06 32 26.7
comp=Z,143nm,19.3s,baz=92,slow=39
JMIC Jan Mayen 92.83 346 LR LR 06 30 41.4
comp=Z,174nm,20.1s,baz=43,slow=38
YKA Yellowknife Ar 93.57 24 P **P** **05 44 54.7 +0.3**
comp=Z,3.1nm,0.8s,baz=301,slow=5.2,SNR=7.4
comp=Z,3.1nm,0.8s
CLL Collm 95.35 324 *eSS* SS 06 02 32.0 -10
CLL AMS AMS 06 33 00.0
comp=Z,400nm,19.4s
TAOE Nuku Hiva Isla 95.71 98 *eS* S 05 56 09.9 -10
comp=Z,133nm,27.7s
TAOE Nuku Hiva Isla 95.71 98 *eLR* LR 06 16 05.1
comp=Z,632nm,24.8s
GERES GERESS Array B 95.94 322 P **P** **05 45 03.5 -2.2**
comp=Z,0.3nm,0.4s,baz=86,slow=3.0,SNR=1.4
comp=Z,0.3nm,0.4s
SYO Syowa Base 98.54 201⇑ *ePdiff* Pdif 05 45 20.3 +3.6
NEW Newport 99.36 37 P **Pdif** **05 45 20.6 -0.4**
comp=Z,0.5nm,0.3s,baz=136,slow=13,SNR=2.6

	comp=Z,0.5nm,0.3s								
VAE	**Valguarnera**	**99.84**	**311**	LR	LR	06 36 37.8			
	comp=Z,198nm,19.3s,baz=22,slow=39								
QSPA	**South Pole Qui**	**100.61**	**180**	P	**Pdif**	**05 45 28.6**	**+2.5**		
	comp=Z,2.8nm,1.1s,baz=312,slow=1.9,SNR=5.4								
BORG	**Borgarnes**	**100.72**	**346**	*i* P	**Pdif**	**05 45 23.6**	**-3.0**		
NVAR	**Mina Array Bea**	**102.96**	**46**	Pdiff	**Pdif**	**05 45 39.1**	**+1.6**		
	comp=Z,0.5nm,0.7s,baz=262,slow=5.4,SNR=4.6								
PDAR	**Pinedale Array**	**106.72**	**39**	PP	**PP**	**05 50 19.4**	**-0.1**		
	comp=Z,0.4nm,0.8s,baz=45,slow=0.6,SNR=3.8								
TXAR	**Lajitas Array**	**117.98**	**49**	PKP	**PKiKP**	**05 50 25.9**	**0.0**		
	comp=Z,0.6nm,0.6s,baz=149,slow=1.0,SNR=9.7								
TXAR	**Lajitas Array**	**117.98**	**49**	PKIKP	**PKiKP**	**05 50 26.0**	**0.0**		
TORD	**Torodi Ar. Bea**	**119.52**	**292**	PKP	**PKPdf**	**05 50 27.6**	**-1.5**		
	comp=Z,3.1nm,0.3s,baz=59,slow=3.4,SNR=2.2								
TKL	**Tuckaleechee C**	**126.12**	**30**	PKP	**PKPdf**	**05 50 41.4**	**+0.1**		
	comp=Z,1.1nm,0.4s,baz=153,slow=2.1,SNR=6.9								
DBIC	**Dimbokro**	**127.78**	**287**	PKP	**PKPdf**	**05 50 45.0**	**+0.1**		
	comp=Z,3.7nm,1.0s,baz=149,slow=9.3,SNR=2.3								
PLCA	**Paso Flores**	**146.88**	**157**	PKPbc	**PKPbc**	**05 51 21.2**	**0.0**		
	comp=Z,15nm,0.7s,baz=230,slow=4.2,SNR=48								
PLCA	**Paso Flores**	**146.88**	**157**	*e*P	**PKPbc**	**05 51 20.6**	**-0.6**		
OTAV	**Otavalo**	**153.67**	**67**	*e*P	**PKPdf**	**05 51 31.6**	**+0.5**		
SDV	**Santo Domingo**	**154.65**	**40**	*e*P	**PKPdf**	**05 51 32.5**	**+0.3**		
CPUP	**Villa Florida**	**164.25**	**170**	PKP	**PKPdf**	**05 51 42.1**	**-0.5**		
	comp=Z,1.1nm,1.1s,baz=13,slow=2.0,SNR=3.6								
CPUP				PKPab	**PKPab**	**05 52 36.9**	**+0.6**		
	comp=Z,1.1nm,0.8s,baz=21,slow=3.9,SNR=6.8								
LPAZ	**La Paz**	**165.52**	**114**	PKP	**PKPdf**	**05 51 45.1**	**+0.4**		
	comp=Z,10nm,1.2s,baz=302,slow=1.4,SNR=14								
LPAZ				PKPab	**PKPab**	**05 52 43.1**	**-0.2**		
	comp=Z,2.0nm,0.8s,baz=267,slow=5.4,SNR=1.9								
LPAZ	**La Paz**	**165.52**	**114**	*e*P	**PKPdf**	**05 51 44.9**	**+0.2**		
TEFE	**Tefe**	**167.52**	**56**	*e*P	**PKPdf**	**05 51 45.7**	**+0.1**		
MURT	**Porto Murtinho**	**168.71**	**164**	*e*P	**PKPdf**	**05 51 46.8**	**+0.6**		
PTLB	**Pontes e Lacer**	**173.40**	**136**	*e*P	**PKPdf**	**05 51 49.3**	**+0.6**		
VILB	**Vilhena**	**173.87**	**112**	*e*P	**PKPdf**	**05 51 49.9**	**+1.0**		

*IDC **08** 05:38:27.0±1.0, 7˚.13N×126˚.37E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=19.8km s-min=10.8km az=179.0*

ISC 08 05:38:28.9±1.0, 7˚.0N±0˚.1×126˚.3E±0˚.1, h10km, n9, σ0s97/9, mb4.1/8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.70**	**272**	Pg	**Pb**	**05 38 43.0**	**-0.2**
DAV	438nm,0.3s,baz=263,slow=6.8,SNR=23			Lg	Lg	05 38 52.9	
	1µm,0.3s,baz=59,slow=19,SNR=12						
FITZ	**Fitzroy Crossi**	**24.99**	**181**	P	**P**	**05 43 52.8**	**-0.2**
	7.3nm,0.9s,baz=5.1,slow=9.8,SNR=4.0						
	7.3nm,0.9s						
WRA	**Warramunga Arr**	**27.96**	**164**	P	**P**	**05 44 20.1**	**+0.3**
	1.1nm,0.7s,baz=339,slow=10.0,SNR=1.7						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**31.42**	**167**	P	**P**	**05 44 50.9**	**+0.4**
	1.3nm,0.8s,baz=346,slow=8.8,SNR=4.7						
	1.3nm,0.8s						
GTA	**Gaotai**	**40.06**	**328**	*e*P	**P**	**05 46 06.5**	**+1.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**54.61**	**324**	P	**P**	**05 47 57.4**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=128,slow=7.9,SNR=4.8						
	comp=Z,1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**58.74**	**327**	P	**P**	**05 48 26.0**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=126,slow=6.3,SNR=11						
	comp=Z,1.3nm,0.8s						
BVAR	**Borovoye Array**	**64.33**	**326**	P	**P**	**05 49 04.1**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=123,slow=5.3,SNR=3.6						
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**82.32**	**26**	P	**P**	**05 50 50.0**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=258,slow=3.6,SNR=2.0						
	comp=Z,0.3nm,0.9s						

*RSNC **08** 05:44:48.0±0.0, 10˚.1N×7˚.3W±˚, h4km±2km, M2.2, ML2.3*
*FUNV **08** 05:44:49.7, 9˚.64N×72˚.70W, h7km, MW3.2*

ISC 08 05:44:45.3±1.2, 9˚.64N±0˚.03×72˚.80W±0˚.04, h12km±11km, n15, σ1s46/28, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.48**	**33**	*e*P	**Pn**	**05 44 57.9**	**-0.1**
MCQV				*e*S	**Sb**	**05 45 04.8**	**+2.0**
CRJC	**Cerrejon, Guaj**	**1.37**	**357**	P	**Pg**	**05 45 11.8**	**+0.1**
CRJC				S	**Sg**	**05 45 29.9**	**+0.3**
ARGC	**Ariguani, Magd**	**1.44**	**279**	P	**Pg**	**05 45 13.0**	**-0.1**
ARGC				S	**Sg**	**05 45 31.9**	**+0.1**
OCAC	**Ocana**	**1.49**	**200**	P	**Pg**	**05 45 14.1**	**+0.2**
OCAC				S	**Sg**	**05 45 33.9**	**+0.6**
CAPV	**Capacho**	**1.83**	**165**	*e*P	**Pg**	**05 45 20.9**	**+0.4**
CAPV				*e*S	**Sg**	**05 45 44.0**	**-0.3**
URIC	**Uribia, Colomb**	**2.19**	**21**	P	**Pb**	**05 45 22.9**	**-2.0**
URIC				S	**Sb**	**05 45 52.0**	**-0.1**
SDV	**Santo Domingo**	**2.27**	**109**	P	**Pb**	**05 45 26.0**	**-0.3**
SDV				S	**Sb**	**05 45 53.2**	**-1.1**
SJCC	**San Jacinto, C**	**2.36**	**276**	P	**Pb**	**05 45 27.4**	**-0.4**
SJCC				S	**Sb**	**05 45 57.3**	**+0.4**
BRJC	**Barrancabermej**	**2.81**	**200**	P	**Pg**	**05 45 38.8**	**-0.5**
BRJC				S	**Sg**	**05 46 14.0**	**-1.8**
BARC	**Barichara**	**3.05**	**187**	P	**Pg**	**05 45 42.3**	**-1.6**
BARC				S	**Sb**	**05 46 18.4**	**+1.3**
TEPV	**Terepaima**	**3.57**	**85**	*e*P	**Pn**	**05 45 42.8**	**+2.3**
TEPV				*e*S	**Sn**	**05 46 22.8**	**+0.1**
MAPV	**Macapo**	**4.28**	**87**	*e*P	**Pn**	**05 45 52.8**	**+2.5**
MAPV				*e*S	**Sn**	**05 46 38.0**	**-2.2**
BAUV	**El Baul**	**4.75**	**98**	*e*P	**Pn**	**05 45 58.5**	**+1.8**
BAUV				*e*S	**Sn**	**05 46 49.9**	**-1.7**
BENV	**Beln**	**5.13**	**86**	*e*P	**Pn**	**05 46 04.9**	**+2.8**
BENV				*e*S	**Sn**	**05 46 59.9**	**-1.5**
CACV	**CAICARA DEL OR**	**6.52**	**108**	*e*P	Pb	05 46 29.9	-8.9
CACV				*e*S	Sn	05 47 44.1	+8.6

STR 08 05:46:54.7±0.0, 44˚.4N±0˚.1×6˚.9E±0˚.1, h9km, MLv0.6/6, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SURF	**Saint Ours**	**0.12**	**326**	Pg	Pg	05 46 57.7	-0.1
SURF				Sg	Sg	05 46 59.7	-0.2
JAUF	**Jausiers**	**0.12**	**293**	Pg	Pg	05 46 57.6	-0.1
JAUF				Sg	Sg	05 46 59.8	-0.1
PZZ	**Stroppo**	**0.20**	**50**	Pg	Pg	05 46 58.8	-0.1
PZZ				Sg	Sg	05 47 01.5	-0.2
ISO	**Isola**	**0.22**	**153**	Pg	Pg	05 46 59.4	+0.1
ISO				Sg	Sg	05 47 02.3	-0.1
STV	**Sant Anna di V**	**0.33**	**114**	Pg	Pg	05 47 01.3	0.0
STV				Sg	Sg	05 47 06.0	+0.4
ENR	**Entracque**	**0.40**	**113**	Pg	Pg	05 47 02.6	0.0
SPIF	**crte de Spivo**	**0.40**	**144**	Pg	Pg	05 47 02.6	-0.1
SPIF				Sg	Sg	05 47 07.9	-0.1

ZUR 08 05:47:53.5, 46˚.32N×7˚.35E, h5km±1km, MLh0.0/3, 1C-1D, Error ellipse: s-maj=2312.4km s-min=911.0km az=144.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.03**	**254**	Pg	Pg	05 47 54.9	+0.2
RAW2				Sg	Sg	05 47 55.8	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**318**	⇓Pg	Pg	05 47 55.1	+0.1
SENIN				Sg	Sg	05 47 56.4	+0.3
STSW2	**Zeuzier, Staus**	**0.06**	**68**	⇑Pg	Pg	05 47 55.2	+0.2
STSW2				Sg	Sg	05 47 56.4	+0.3
SIOV	**Sion-Valere**	**0.09**	**175**	Sg	Sg	05 47 56.9	+0.3
RAW1	**Lenk, BE**	**0.12**	**30**	Pg	Pg	05 47 56.1	+0.2
RAW1				Sg	Sg	05 47 57.9	+0.4
GRYON	**Gryon**	**0.18**	**247**	Sg	Sg	05 47 60.0	+0.5
DIX	**Grande Dixence**	**0.24**	**171**	Pg	Pg	05 47 58.5	+0.2

*MOS **08** 05:52:05.8±1.1, 3˚.04S×147˚.67E, h9km, mb5.0/22, Error ellipse: s-maj=12.0km s-min=7.4km az=101.3*
*BJI **08** 05:52:06.7, 2˚.86S×147˚.94E, h16km, mB5.4/25, mb4.8/62, Ms5.3/59, Ms7 5.1/59*
*NEIC **08** 05:52:06.9±1.4, 2˚.84S±0˚.05×147˚.56E±0˚.04, h10km±1km, mb5.0/48, Mww5.4/23, Error ellipse: s-maj=8.8km s-min=6.5km az=161.0*

*IDC **08** 05:52:06.1±0.6, 3˚.04S×147˚.67E, h0km, mb4.5/22, mbtmp4.5/24, ML2.5/2, MS4.8/55, Error ellipse: s-maj=22.0km s-min=12.4km az=92.0*
*NEIC **08** 05:52:07.1, 2˚.83S×147˚.67E, h12km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17 Nm; Mrr=0.20; Mθθ=0.38; Mφφ=-0.18; Mrθ=0.54; Mrφ=1.49; Mθφ=0.27; Fault plane solution: M0=1.64000×10^17 NP1:φs4.03000°, δ73.39000°, λ173.29000°. NP2:φs95.96000°, δ83.57000°, λ16.72000°. Principal axes: T 1.7898, Plg16.0000°, Azm321.0000°; N -0.3576, Plg72.0000°, Azm116.0000°; P -1.4322, Plg7.0000°, Azm229.0000°;*
*NEIC **08** 05:52:07.1, 2˚.83S×147˚.57E, h12km*
*GCMT **08** 05:52:10.9±0.1, 3˚.01S±0˚.01×147˚.62E±0˚.01, h12km, MW5.4/150, Moment Tensor Solution. s114,c178; s150,c289; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr=0.06±.02; Mθθ=0.28±.02; Mφφ=-0.21±.02; Mrθ=0.13±.05; Mrφ=1.57±.01; Mθr=0.00±.05; Best double couple: M0=1.59400×10^17 NP1:φs4.00000°, δ85.00000°, λ180.00000°. NP2:φs94.00000°, δ90.00000°, λ5.00000°. Principal axes: T 1.6260, Plg3.0000°, Azm319.0000°; N -0.0650, Plg85.0000°, Azm95.0000°; P -1.5610, Plg3.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **08** 05:52:15.1±0.5, 3˚.5S±4˚×14˚.7E±˚, h47km±8km, M4.9/15, mb4.8/15, mB5.3/11, MLv5.3/3, Mw(mB)4.7/11*

ISC 08 05:52:07.3±0.3, 3˚.00S±0˚.04×147˚.63E±0˚.05, h10km, n202, σ2s15/176, mb4.9/79, MS5.0/75, 12C-6D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**0.99**	**344**		**Pg**	**05 52 24.1**	**-2.3**
RABL	**Rabaul**	**4.67**	**105**		**Pn**	**05 53 18.1**	**+0.1**
PMG	**Port Moresby**	**6.38**	**184**		**Pn**	**05 53 42.4**	**+0.9**
PMG	**Port Moresby**	**6.38**	**184**	Pn	**Pn**	**05 53 40.9**	**-0.5**
	1.8nm,0.3s,baz=34,slow=13,SNR=3.1						
PMG				Sn	**Sn**	**05 54 54.1**	**-0.4**
	1.4nm,0.3s,baz=329,slow=17,SNR=1.3						
PMG				LR	LR	05 55 48.5	
	comp=Z,3µm,20.6s,baz=12,slow=35						
	5.9nm,0.4s						
PMG	**Port Moresby**	**6.38**	**184**	P	**Pn**	**05 53 42.4**	**+0.9**
JAY	**Jayapura**	**6.94**	**274**	Pn	**Pn**	**05 53 50.8**	**+1.6**
	0.5nm,0.3s,baz=108,slow=5.3,SNR=13						
JAY				Sn	**Sn**	**05 55 11.7**	**+3.4**
	0.3nm,0.3s,baz=270,slow=23,SNR=0.8						
JAY				LR	LR	05 56 13.5	
	comp=Z,9µm,18.2s,baz=218,slow=35						
	79nm,1.1s						
JAY	**Jayapura**	**6.94**	**274**	P	**Pn**	**05 53 51.8**	**+2.6**
GENI	**Genyem**	**7.47**	**273**	P	**Pn**	**05 53 59.2**	**+2.8**
SMPI	**Sarmi**	**8.97**	**276**	P	**Pn**	**05 54 19.8**	**+2.7**
COEN	**Coen**	**11.74**	**202**		**Pn**	**05 54 55.6**	**+0.5**
HNR	**Honiara**	**13.80**	**118**	LR	LR	06 00 46.1	
	comp=Z,7µm,18.2s,baz=296,slow=38						
FAKI	**Fak Fak**	**15.37**	**270**	Pn	**Pn**	**05 55 42.0**	**-2.5**
FAKI				IAmb	IAmb	05 55 50.5	
	comp=Z,54nm,1.1s						
FAKI	**Fak Fak**	**15.37**	**270**	P	**Pn**	**05 55 45.0**	**+0.6**
	comp=Z,1µmcomp=Z,52nm,1.2s						
SWI	**Sorong**	**16.50**	**277**	P	**P**	**05 56 02.0**	**+0.2**
	comp=Z,37nm,0.5s						
GUMO	**Guam**	**16.71**	**351**	LR	LR	06 01 05.6	
	comp=Z,2µm,18.7s,baz=170,slow=32						
CTA	**Charters Tower**	**17.04**	**184**	LR	LR	06 02 47.3	
	comp=Z,98nm,19.7s,baz=2.0,slow=38						
MSAI	**Masohi**	**18.68**	**268**	P	**P**	**05 56 24.8**	**-1.1**
	comp=Z,31nm,0.9s						
MTN	**Manton Dam**	**19.03**	**238**		**P**	**05 56 28.6**	**-1.1**
MTN				IAmb	IAmb	05 56 30.4	
	comp=Z,65nm,0.8s						
NLAI	**Namlea**	**20.51**	**269**	P	**P**	**05 56 46.7**	**+0.9**
	comp=Z,µmcomp=Z,53nm,0.9s						
WB0	**Warramunga Arr**	**21.09**	**217**		**P**	**05 56 51.5**	**-0.7**
WB0				IAmb	IAmb	05 56 55.9	
	comp=Z,66nm,1.1s						
WRAB	**Tennant Creek**	**21.25**	**217**	*c i*P	**P**	**05 56 53.9**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,88nm,1.4s						
WRA	**Warramunga Arr**	**21.26**	**217**	P	**P**	**05 56 51.9**	**-2.1**
WRA	**Warramunga Arr**	**21.26**	**217**	P	**P**	**05 56 53.7**	**-0.3**
	comp=Z,30nm,1.0s,baz=43,slow=11,SNR=129						
WRA				PcP	**PcP**	**06 01 00.6**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=39,slow=2.4,SNR=1.4						
WRA				LR	LR	06 06 00.7	
	comp=Z,5µm,18.2s,baz=41,slow=39						
	comp=Z,30nm,1.0s						
WRA	**Warramunga Arr**	**21.26**	**217**	*i* P	**P**	**05 56 53.7**	**-0.3**
WRA				pmax	pmax		
	comp=Z,31nm,1.0s						
SANI	**Sanana**	**21.65**	**272**	P	**P**	**05 57 00.7**	**+2.5**
	comp=Z,923nmcomp=Z,52nm,1.0s						
KNRA	**Kununurra**	**22.45**	**235**		**P**	**05 57 05.2**	**-1.5**
KNRA				IAmb	IAmb	05 57 14.8	
	comp=Z,60nm,1.1s						
EIDS	**Eidsvold**	**22.48**	**172**	P	**P**	**05 57 07.9**	**+0.8**
EIDS				IAmb	IAmb	05 57 21.8	
	comp=Z,69nm,1.3s						
SANVU	**Saraoutou**	**22.90**	**124**		**P**	**05 57 12.1**	**+0.6**
SANVU				IAmb	IAmb	05 57 23.4	
	comp=Z,81nm,1.0s						
DAV	**Davao City (W)**	**24.18**	**295**	LR	LR	06 06 42.0	
	comp=Z,4µm,18.2s,baz=112,slow=36						
AS31	**Alice Springs**	**24.46**	**212**	P	**P**	**05 57 26.2**	**-0.5**
ASAR	**Alice Springs**	**24.46**	**212**	P	**P**	**05 57 25.9**	**-0.8**
ASAR	**Alice Springs**	**24.46**	**212**	P	**P**	**05 57 26.9**	**+0.1**
	comp=Z,31nm,1.0s,baz=43,slow=7.6,SNR=106						
ASAR				LR	LR	06 07 43.1	
	comp=Z,3µm,18.7s,baz=39,slow=38						
	comp=Z,31nm,1.0s						
INKA	**Innaminka**	**25.47**	**194**	P	**P**	**05 57 35.6**	**-0.1**
INKA				IAmb	IAmb	05 57 59.7	
	comp=Z,22nm,0.9s						
FITZ	**Fitzroy Crossi**	**26.26**	**234**	P	**P**	**05 57 41.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**26.26**	**234**	LR	LR	06 08 59.3	
	comp=Z,6µm,18.8s,baz=58,slow=39						
DZM	**Mont Dzumac**	**26.32**	**138**	LR	LR	06 06 36.2	
	comp=Z,7µm,20.9s,baz=314,slow=33						
TOLI2	**Tolitoli**	**27.15**	**278**	P	**P**	**05 57 47.5**	**-3.7**
TOLI2				IAmb	IAmb	05 58 03.6	
	comp=Z,24nm,1.1s						
ARMA	**Armidale**	**27.53**	**173**	P	**P**	**05 57 55.0**	**+0.6**
ARMA				IAmb	IAmb	05 58 01.1	
	comp=Z,28nm,1.1s						
KAPI	**Kappang**	**27.88**	**265**	LR	LR	06 09 48.5	
	comp=Z,790nm,21.1s,baz=96,slow=38						
H11S3	**WAKE ISLAND Hy**	**28.43**	**41**	T	T	06 27 52.2	
	baz=222,slow=76,SNR=174						
H11S2	**WAKE ISLAND Hy**	**28.44**	**41**	T	T	06 27 49.4	
	baz=222,slow=76,SNR=232						
H11S1	**WAKE ISLAND Hy**	**28.45**	**41**	T	T	06 27 50.6	
	baz=222,slow=76,SNR=160						
STKA	**Stephens Creek**	**29.28**	**191**	P	**P**	**05 58 10.5**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=324,slow=10.0,SNR=3.7						
STKA				LR	LR	06 10 32.1	
	comp=Z,3µm,19.4s,baz=5.2,slow=38						
	comp=Z,2.6nm,0.8s						
STKA	**Stephens Creek**	**29.28**	**191**	⇑*i*P	**P**	**05 58 10.3**	**+0.4**
H11N1	**WAKE ISLAND Hy**	**29.45**	**39**	T	T	06 29 05.0	
	baz=222,slow=76,SNR=320						
H11N3	**WAKE ISLAND Hy**	**29.47**	**39**	T	T	06 29 06.2	
	baz=222,slow=76,SNR=445						
H11N2	**WAKE ISLAND Hy**	**29.47**	**39**	T	T	06 29 06.2	
	baz=222,slow=76,SNR=328						
JCJ	**Chichijima**	**30.38**	**350**	LR	LR	06 08 50.5	
	comp=Z,975nm,21.0s,baz=118,slow=33						
TGY	**Tagaytay City**	**31.46**	**303**	LR	LR	06 09 03.2	
	comp=Z,2µm,21.8s,baz=140,slow=32						
CAN	**Canberra**	**32.18**	**178**	P	**P**	**05 58 36.2**	**+0.7**
CAN				IAmb	IAmb	05 58 42.6	
	comp=Z,31nm,1.0s						
CAN	**Canberra**	**32.18**	**178**	P	**P**	**05 58 36.3**	**+0.7**
CAN				pmax	pmax		
	comp=Z,31nm,1.0s						
PSA00	**Pilbara Seismi**	**32.72**	**233**	P	**P**	**05 58 38.6**	**-1.7**
MSVF	**Nonsavu**	**33.22**	**118**	P	**P**	**05 58 44.4**	**-0.5**
MSVF	**Nonsavu**	**33.22**	**118**	P	**P**	**05 58 44.4**	**-0.5**
MSVF				pmax	pmax		
	comp=Z,60nm,1.8s						
FORT	**Forrest**	**33.25**	**212**	P	**P**	**05 58 44.5**	**-0.4**
FORT				IAmb	IAmb	05 58 47.6	
	comp=Z,20nm,0.8s						
JAGI	**Jajag, Banyuwa**	**33.74**	**259**	P	**P**	**05 58 48.9**	**-0.5**
JAGI				IAmb	IAmb	05 58 51.7	
	comp=Z,22nm,1.0s						
JOW	**Kunigami**	**35.06**	**329**	P	**P**	**05 58 58.3**	**-2.4**
JOW	**Kunigami**	**35.06**	**329**	LR	LR	06 10 24.1	
	comp=Z,3µm,20.4s,baz=130,slow=31						
SBUM	**Sibu**	**35.81**	**278**	P	**P**	**05 59 04.4**	**-3.0**
SBUM				IAmb	IAmb	05 59 22.3	
	comp=Z,19nm,1.3s						
YOJ	**Yonaguni jima**	**36.30**	**320**	P	**P**	**05 59 07.5**	**-3.9**
YOJ	**Yonaguni jima**	**36.30**	**320**	P	**P**	**05 59 07.5**	**-3.9**
YOJ				pmax	pmax		
	comp=Z,249nm,1.1s						
JHJ	**Hachijo jima 2**	**36.69**	**349**	LR	LR	06 13 40.7	
	comp=Z,830nm,18.1s,baz=174,slow=35						
JMN	**Monobe**	**38.77**	**342**	P	**P**	**05 59 29.0**	**-3.2**
JMN				IAmb	IAmb	05 59 39.5	
	comp=Z,54nm,1.2s						
JNU	**Nakatsue**	**39.27**	**338**	LR	LR	06 14 37.6	
	comp=Z,1µm,18.4s,baz=154,slow=34						
KNMB	**Chin-men Tao**	**39.41**	**315**	P	**P**	**05 59 34.5**	**-3.2**
MJAR	**Matsushiro Arr**	**40.31**	**348**	P	**P**	**05 59 44.0**	**-1.0**
	comp=Z,4.7nm,1.0s,baz=170,slow=7.4,SNR=6.0						
MJAR				LR	LR	06 14 22.3	
	comp=Z,807nm,19.4s,baz=152,slow=33						
	comp=Z,4.7nm,1.0s						
NWAO	**Narrogin (SRO)**	**41.19**	**220**	LR	LR	06 18 21.3	
	comp=Z,3µm,18.1s,baz=54,slow=38						
RAO	**Raoul Island**	**41.85**	**132**	LR	LR	06 14 42.2	
	comp=Z,1µm,21.6s,baz=329,slow=32						
QIZ	**Qiongzhong**	**43.14**	**302**	P	**P**	**06 00 06.1**	**-2.3**
QIZ				S	**S**	**06 06 31.9**	**-3.2**
QIZ				LR	LR		
	comp=Z,780nm,14.4s						
QIZ				LR	LR		
	comp=Z,1µm,17.2s						
QIZ				LR	LR		
	comp=Z,3µm,21.3s						
TJN	**Taejon**	**43.51**	**336**	⇓*i*P	**P**	**06 00 10.4**	**-0.7**
KSRS	**Korea Array**	**44.22**	**337**	P	**P**	**06 00 17.6**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=147,slow=8.8,SNR=6.7						
	comp=Z,2.1nm,0.7s						
URZ	**Urewera**	**44.24**	**146**	LR	LR	06 16 13.9	
	comp=Z,4µm,21.1s,baz=308,slow=33						
NJ2	**Nanjing**	**44.29**	**324**	*e*P	**P**	**06 00 16.5**	**-1.0**
NJ2				S	**S**	**06 07 00.4**	**+8.9**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,600nm,5.7s						
NJ2				LR	LR		
	comp=Z,2µm,18.9s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,2µm,20.6s						
CNSH	**ChangSha**	**45.55**	**315**	P	P	06 00 33.3	+5.7
CNSH				S	S	06 07 19.1	+9.2
CNSH				pmax	pmax		
	comp=Z,35nm,1.6s						
CNSH				LR	LR		
	comp=Z,1µm,18.8s						
CNSH				LR	LR		
	comp=Z,2µm,21.1s						
CNSH				LR	LR		
	comp=Z,3µm,28.2s						
RPZ	**Rata Peaks**	**45.55**	**156**	LR	LR	06 18 09.9	
	comp=Z,580nm,19.0s,baz=312,slow=34						
WHN	**Wuhan**	**46.06**	**319**	P	P	06 00 36.6	+5.1
WHN				pP	sP	06 00 39.5	+4.0
WHN				S	**S**	**06 07 16.7**	**-0.5**
WHN				LR	LR		
	comp=Z,3µm,14.5s						
WHN				LR	LR		
	comp=Z,7µm,18.0s						
WHN				LR	LR		
	comp=Z,9µm,21.0s						
IPM	**Ipoh**	**47.16**	**279**	P	**P**	**06 00 38.4**	**-2.2**
DL2	**Dalian**	**48.11**	**333**	P	**P**	**06 00 45.7**	**-1.7**
DL2				S	**S**	**06 07 48.4**	**+2.3**
DL2				pmax	pmax		
	comp=Z,52nm,1.4s						
DL2				pmax	pmax		
	comp=Z,350nm,5.1s						
DL2				LR	LR		
	comp=Z,2µm,21.6s						
DL2				LR	LR		
	comp=Z,1µm,23.4s						
DL2				LR	LR		
	comp=Z,3µm,19.5s						
TIA	**Tai'an**	**48.30**	**327**	P	**P**	**06 00 50.7**	**+1.7**
TIA				S	**S**	**06 07 50.2**	**+1.1**
TIA				pmax	pmax		
	comp=Z,15nm,1.3s						
TIA				pmax	pmax		
	comp=Z,370nm,6.4s						
TIA				LR	LR		
	comp=Z,2µm,18.9s						
TIA				LR	LR		
	comp=Z,2µm,15.0s						
TIA				LR	LR		
	comp=Z,3µm,19.2s						
PSI	**Prapat**	**49.03**	**276**	LR	LR	06 26 26.6	
	comp=Z,382nm,18.3s,baz=119,slow=42						
USRK	**Ussuriysk Ar.**	**49.04**	**345**	P	**P**	**06 00 55.8**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=167,slow=12,SNR=4.9						
	comp=Z,3.3nm,0.7s				

BNX LR LR
comp=Z,630nm,16.5s
BNX LR LR
comp=Z,450nm,13.8s
BNX LR LR
comp=Z,890nm,18.0s
XAN Xi'an 51.82 319 P **P 06 01 19.5 +3.7**
XAN S **S 06 08 46.8 +8.4**
XAN pmax pmax
comp=Z,41nm,1.5s
XAN pmax pmax
comp=Z,220nm,5.0s
XAN LR LR
comp=Z,2μm,17.7s
XAN LR LR
comp=Z,1μm,14.8s
XAN LR LR
comp=Z,3μm,18.4s
CM31 Chiang Mai Arr 52.46 296 P **P 06 01 17.9 -2.9**
CMAR Chiang Mai Arr 52.46 296 P **P 06 01 18.7 -2.1**
CMAR Chiang Mai Arr 52.46 296 P **P 06 01 21.8 +1.0**
comp=Z,1.4nm,0.3s,baz=108,slow=5.8,SNR=9.2
CMAR LR LR 06 21 25.7
comp=Z,411nm,22.0s,baz=115,slow=34
comp=Z,1.4nm,0.3s
PZH PanZhiHua 53.15 306 P **P 06 01 27.5 +1.6**
PZH S **S 06 08 56.0 -0.9**
PZH LR LR
comp=Z,470nm,15.9s
PZH LR LR
comp=Z,670nm,18.4s
PZH LR LR
comp=Z,850nm,21.6s
CD2 Chengdu 53.69 312 P **P 06 01 30.2 +0.5**
CD2 sP sP 06 01 37.1 +3.4
CD2 S **S 06 09 07.6 +3.6**
CD2 pmax pmax
comp=Z,40nm,1.6s
CD2 LR LR
comp=Z,3μm,17.9s
CD2 LR LR
comp=Z,3μm,19.4s
CD2 LR LR
comp=Z,3μm,20.2s
RAR Rarotonga 54.21 114 LR LR 06 22 57.8
comp=Z,179nm,20.4s,baz=290,slow=34
XLT XiLinHaoTe 54.60 332 *e*P P 06 01 30.5 -5.7
XLT S **S 06 09 17.5 +1.5**
XLT pmax pmax
comp=Z,18nm,0.9s
XLT pmax pmax
comp=Z,220nm,5.0s
XLT LR LR
comp=N,86nm,17.0s
XLT LR LR
comp=E,1μm,17.0s
XLT LR LR
comp=Z,1μm,19.1s
HHC Hu-ho-hao-te 54.66 327 *e*P **P 06 01 35.3 -1.4**
HHC S **S 06 09 13.2 -3.7**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,280nm,5.2s
HHC LR LR
comp=Z,1μm,18.2s
HHC LR LR
comp=Z,1μm,17.3s
HHC LR LR
comp=Z,2μm,18.1s
TNCH TengChong 55.17 303 *e*P **P 06 01 40.7 -0.1**
TNCH S **S 06 09 21.9 -2.6**
TNCH LR LR
comp=Z,750nm,15.2s
TNCH LR LR
comp=Z,1μm,18.2s
TNCH LR LR
comp=Z,1μm,18.5s
BTO Baotou 55.35 326 *e*P **P 06 01 44.9 +3.2**
BTO S **S 06 09 33.0 +6.9**
BTO SS **SS 06 13 11.6 +0.7**
BTO pmax pmax
comp=Z,10.0nm,0.5s
BTO pmax pmax
comp=Z,410nm,5.8s
BTO LR LR
comp=Z,3μm,20.3s
BTO LR LR
comp=Z,3μm,18.2s
BTO LR LR
comp=Z,4μm,18.8s
LZH Lanzhou 56.40 318 *e*P **P 06 01 51.4 +2.0**
LZH pP sP 06 01 56.8 +3.5
LZH sP pP 06 01 58.5 +6.3
LZH S **S 06 09 43.3 +2.9**
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,210nm,5.8s
LZH LR LR
comp=Z,830nm,15.8s
LZH LR LR
comp=Z,950nm,14.1s
LZH LR LR
comp=Z,1μm,15.8s
LZDM Lanzhou Array 56.42 317 P **P 06 01 50.0 +0.2**
comp=Z,3.8nm,0.5s,baz=105,slow=9.1,SNR=7.4
LZDM LR LR 06 25 53.4
comp=Z,232nm,18.2s,baz=125,slow=36
comp=Z,3.8nm,0.5s
PEA0B Petropavlovsk- 56.54 7⇑*i*P **P 06 01 50.6 +0.8**
PETK Petropavlovsk- 56.54 7 P **P 06 01 46.0 -3.8**
PETK Petropavlovsk- 56.54 7 P **P 06 01 50.6 +0.7**
comp=Z,12nm,0.9s,baz=167,slow=5.2,SNR=8.2
PETK LR LR 06 22 20.0
comp=Z,788nm,21.7s,baz=188,slow=32
comp=Z,12nm,0.9s
PET Petropavlovsk 56.59 8 P **P 06 01 46.5 -3.6**
HILR Hailar Array B 57.63 339 P **P 06 01 59.4 +1.7**
comp=Z,1.1nm,0.4s,baz=179,slow=16,SNR=3.7
comp=Z,1.1nm,0.4s
ZEA Zeya 59.05 346 *e*P P 06 02 12.6 +5.1
ZEA pmax pmax
comp=Z,10.0nm,1.2s
SHEM Shemya Is, Ala 59.84 18 LR LR 06 24 55.8
comp=Z,361nm,18.6s,baz=246,slow=33
BRDH Bariadhala 60.27 298 LR LR 06 28 43.6
comp=Z,319nm,19.9s,baz=126,slow=36
GTA Gaotai 60.88 319 *e*P **P 06 02 22.8 +2.3**
GTA S **S 06 10 42.4 +3.8**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA LR LR
comp=Z,750nm,16.7s
GTA LR LR
comp=Z,680nm,19.6s
GTA LR LR
comp=Z,920nm,21.8s
SHL Shillong 60.97 301 P **P 06 02 23.9 +2.5**
SHL pmax pmax
comp=Z,13nm,0.6s
ULN Ulaanbaatar 61.82 330 *i* P **P 06 02 28.6 +1.9**
SONM Songino Array 62.13 330 P **P 06 02 30.1 +1.3**
comp=Z,4.6nm,1.2s,baz=134,slow=4.3,SNR=10
SONM LR LR 06 27 33.5
comp=Z,1μm,21.7s,baz=132,slow=34
comp=Z,4.6nm,1.2s
MA2 Magadan 62.44 2 LR LR 06 24 29.9
comp=Z,318nm,22.0s,baz=134,slow=31
PPT Papeete 63.18 108 LR LR 06 23 38.7
comp=Z,281nm,21.4s,baz=272,slow=30
PPT2 Papeete2 63.18 108 *e*S **S 06 11 09.8 +1.5**
comp=Z,630nm,38.2s
PPT2 *e*LQ LQ 06 18 30.1
comp=Z,2μm,30.8s
PPT2 *e*LR LR 06 21 22.4
comp=Z,810nm,23.8s
PPT2 *e*LR LR 06 21 24.5
comp=Z,703nm,26.0s
TBI Tubuai 63.99 114 *e*S **S 06 11 17.6 -0.4**
comp=Z,4μm,28.5s
TBI *e*LQ LQ 06 19 05.4
comp=Z,9μm,33.2s
TBI *e*LR LR 06 21 48.8
comp=Z,11μm,31.0s
TBI *e*LR LR 06 21 49.5
comp=Z,2μm,31.8s

ZAK Zakamensk 65.34 330 *e*P **P 06 02 50.7 +0.8**
ZAK pmax pmax
comp=Z,13nm,1.7s
SEY Seymchan 65.86 2 P **P 06 02 54.8 +1.9**
comp=Z,8.4nm,0.9s,baz=204,slow=8.5,SNR=7.1
comp=Z,8.4nm,0.9s
SEY Seymchan 65.86 2 *e*P **P 06 02 53.8 +1.0**
SEY pmax pmax
comp=Z,23nm,1.5s
TLY Talaya 66.01 332 *i* P **P 06 02 56.8 +2.7**
EVN Everest 66.02 302 **P 06 02 54.1 -1.3**
YAK Yakutsk 66.30 351 LR LR 06 32 30.9
comp=Z,331nm,18.6s,baz=157,slow=37
YAK Yakutsk 66.30 351 *e*P **P 06 02 59.4 +3.8**
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.1s
MOY Mondy 67.27 331 *e*P **P 06 03 04.6 +2.3**
MOY pmax pmax
comp=Z,33nm,2.2s
PALK Pallekele 67.56 279 LR LR 06 34 30.3
comp=Z,138nm,19.2s,baz=102,slow=38
WMQ Urumqi 70.96 318 *e*P **P 06 03 25.0 -0.3**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ LR LR
comp=Z,850nm,15.9s
WMQ LR LR
comp=Z,810nm,18.3s
WMQ LR LR
comp=Z,640nm,15.9s
HYBB Hyderabad (bro 71.04 289 *e*P **P 06 03 24.9 -1.4**
TAOE Nuku Hiva Isla 71.98 98 *e*LR LR 06 25 31.5
comp=Z,450nm,22.4s
BILL Bilibino 72.08 7 P **P 06 03 31.3 -0.1**
BILL IAmb IAmb 06 03 36.9
comp=Z,9.9nm,0.9s
BILL Bilibino 72.08 7⇑*i*P **P 06 03 33.3 +1.9**
BILL pmax pmax
comp=Z,11nm,1.0s
DGZ Jazzator, Alta 73.58 324⇑*i*P **P 06 03 41.1 +0.2**
DGZ pmax pmax
comp=Z,6.0nm,1.0s
VNDA Vanda 74.85 177 P **P 06 03 47.6 0.0**
VNDA Vanda 74.85 177 P **P 06 03 47.5 -0.1**
comp=Z,2.5nm,0.9s,baz=320,slow=6.4,SNR=14
VNDA LR LR 06 34 50.0
comp=Z,524nm,18.9s,baz=350,slow=34
comp=Z,2.5nm,0.9s
VNDA Vanda 74.85 177 P **P 06 03 47.6 0.0**
VNDA pmax pmax
comp=Z,9.0nm,1.0s
SBA Scott Base 75.48 176 P **P 06 03 55.6 +4.3**
SBA pmax pmax
comp=Z,11nm,2.3s
TIXI Tiksi 75.51 354 P **P 06 03 50.3 -1.2**
TIXI Tiksi 75.51 354⇑*i*P **P 06 03 53.6 +2.1**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 75.61 320⇑*i*P **P 06 03 53.3 +0.6**
MKAR Makanchi Array 75.61 320 P **P 06 03 52.0 -0.6**
MKAR Makanchi Array 75.61 320 P **P 06 03 54.0 +1.3**
comp=Z,3.4nm,1.0s,baz=108,slow=6.5,SNR=13
MKAR LR LR 06 37 34.3
comp=Z,986nm,19.0s,baz=86,slow=36
comp=Z,3.4nm,1.0s
ZAA0 Zalesovo Array 76.84 327 P **P 06 03 58.1 -1.3**
ZALV Zalesovo Beam 76.84 327 P **P 06 03 58.1 -1.3**
ZALV Zalesovo Beam 76.84 327 P **P 06 03 58.6 -0.7**
comp=Z,0.8nm,0.3s,baz=106,slow=5.4,SNR=5.0
ZALV LR LR 06 37 40.0
comp=Z,1μm,19.6s,baz=132,slow=36
comp=Z,0.8nm,0.3s
ZALV Zalesovo Beam 76.84 327 *i* P **P 06 04 01.0 +1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
KDAK Kodiak Island 76.98 28 LR LR 06 31 45.8
comp=Z,685nm,21.8s,baz=238,slow=31
TARG Taragay, Kyrgy 77.10 314 P **P 06 04 03.4 +1.7**
TARG pmax pmax
comp=Z,9.0nm,1.4s
RKT Rikitea 77.23 113 *e*LQ LQ 06 24 34.4
RKT *e*LR LR 06 27 53.7
comp=Z,6μm,33.2s
KSH Kashi 77.87 311 P P 06 04 11.6 +5.9
KSH pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 79.21 323 P **P 06 04 11.7 -0.9**
KURK Kurchatov 79.21 323⇓*i*P **P 06 04 13.8 +1.2**
KURK pmax pmax
comp=Z,17nm,1.8s
KURBB Kurchatov Arra 79.23 323 P **P 06 04 12.5 -0.2**
comp=Z,3.7nm,1.0s,baz=108,slow=4.8,SNR=8.6
KURBB LR LR 06 38 38.5
comp=Z,829nm,19.8s,baz=136,slow=35
comp=Z,3.7nm,1.0s
AAK Ala-Archa 79.71 314 LR LR 06 39 10.3
comp=Z,1μm,21.2s,baz=98,slow=35
AAK Ala-Archa 79.71 314⇑*i*P **P 06 04 16.2 +0.4**
AAK pmax pmax
comp=Z,2.0nm,1.0s
SML Sawmill 80.68 26 P **P 06 04 18.9 -1.6**
SML Sawmill 80.68 26 P **P 06 04 18.9 -1.6**
SML pmax pmax
comp=Z,36nm,1.3s
RND Reindeer 81.14 24 P **P 06 04 21.8 -1.1**
RND IAmb IAmb 06 04 29.1
comp=Z,15nm,1.1s
RND Reindeer 81.14 24 P **P 06 04 21.8 -1.1**
RND pmax pmax
comp=Z,15nm,1.1s
MCK McKinley 81.25 24 P **P 06 04 23.3 -0.1**
MCK IAmb IAmb 06 04 29.6
comp=Z,28nm,1.4s
MCK McKinley 81.25 24 P **P 06 04 23.3 -0.1**
MCK pmax pmax
comp=Z,28nm,1.4s
CCB Clear Creek Bu 82.08 23 P **P 06 04 27.4 -0.3**
IL31 82.49 23 P **P 06 04 28.2 -1.6**
ILAR Eielson Array 82.49 23 P **P 06 04 28.9 -1.1**
ILAR Eielson Array 82.49 23 P **P 06 04 29.9 -0.1**
comp=Z,3.1nm,0.9s,baz=258,slow=5.3,SNR=22
ILAR LR LR 06 36 26.0
comp=Z,246nm,21.3s,baz=244,slow=32
comp=Z,3.1nm,0.9s
NRIK Noril'sk 82.64 342 P **P 06 04 29.3 -1.3**
NRIK IAmb IAmb 06 04 35.3
comp=Z,20nm,1.1s
NRIK Noril'sk 82.64 342 P **P 06 04 30.4 -0.2**
comp=Z,10nm,1.0s,baz=102,slow=4.8,SNR=9.3
comp=Z,10nm,1.0s
NRIK Noril'sk 82.64 342⇑*i*P **P 06 04 31.6 +1.0**
J25K Salcha River, 83.03 24 P **P 06 04 32.4 -0.5**
J25K IAmb IAmb 06 04 43.4
comp=Z,9.0nm,0.9s
GRNC Granite Creek 83.25 28 P **P 06 04 32.1 -2.1**
BARN Barnard Glacie 83.39 28 P **P 06 04 33.3 -1.6**
BARN IAmb IAmb 06 04 46.6
comp=Z,12nm,1.2s
CTGM Chitina Glacie 83.52 28 P **P 06 04 33.7 -1.8**
BVAR Borovoye Array 84.74 324 P **P 06 04 41.9 +0.2**
comp=Z,4.3nm,0.9s,baz=93,slow=7.6,SNR=11
BVAR LR LR 06 41 24.4
comp=Z,492nm,22.0s,baz=88,slow=35
comp=Z,4.3nm,0.9s
BORK Borovoye 84.78 324⇓*i*P **P 06 04 43.9 +2.0**
BORK pmax pmax
comp=Z,5.0nm,1.1s
MAW Mawson 85.24 203 LR LR 06 42 31.4
comp=Z,485nm,18.4s,baz=84,slow=36
L29M L29M 85.58 26 P **P 06 04 45.5 -0.3**
L29M IAmb IAmb 06 04 53.5
comp=Z,13nm,1.1s
F28M Old Crow 86.16 21 **P 06 04 47.8 -0.7**
F28M IAmb IAmb 06 04 57.1
comp=Z,9.5nm,1.2s
E28M Babbage River 86.57 21 P **P 06 04 49.7 -0.8**
QSPA South Pole Qui 86.95 180 P **P 06 04 53.0 +0.5**
comp=Z,1.7nm,1.1s,baz=283,slow=0.6,SNR=5.6
QSPA LR LR 06 42 57.1
comp=Z,510nm,19.2s,baz=7.5,slow=35
comp=Z,1.7nm,1.1s

DLBC Dease Lake 88.52 31 LR LR 06 38 33.5
comp=Z,889nm,20.0s,baz=256,slow=32
INK Inuvik 88.65 21 LR LR 06 41 48.3
comp=Z,770nm,20.3s,baz=245,slow=34
BBB Bella Bella 88.82 38 LR LR 06 38 07.2
comp=Z,1μm,20.1s,baz=254,slow=31
AB31 Akbulak array 90.74 319 P **P 06 05 09.2 -1.4**
ABKAR Akbulak array 90.74 319 P **P 06 05 09.5 -1.1**
YBH Yreka Blue Hor 91.72 48 LR LR 06 39 35.7
comp=Z,63nm,19.8s,baz=298,slow=31
AKTO Aktyubinsk 92.05 320 LR LR 06 46 33.5
comp=Z,1μm,20.7s,baz=62,slow=36
ARTI Arti 92.06 326 LR LR 06 46 09.8
comp=Z,1μm,22.0s,baz=99,slow=35
SYO Syowa Base 93.61 200⇓*e*P **P 06 05 23.8 +0.3**
SYO Syowa Base 93.61 200⇓*e*pP pP 06 05 28.0 +1.5
NVAR Mina Array Bea 95.03 52 P **P 06 05 31.7 +0.6**
comp=Z,2.0nm,0.9s,baz=253,slow=7.1,SNR=14
NVAR LR LR 06 40 44.8
comp=Z,822nm,21.0s,baz=268,slow=31
comp=Z,2.0nm,0.9s
NEW Newport 95.72 42 LR LR 06 41 53.0
comp=Z,301nm,20.2s,baz=282,slow=31
YKA Yellowknife Ar 96.24 28 P **P 06 05 36.5 +0.8**
comp=Z,2.2nm,0.8s,baz=278,slow=4.8,SNR=4.2
YKA LR LR 06 45 48.7
comp=Z,343nm,19.5s,baz=272,slow=34
comp=Z,2.2nm,0.8s
PFO Pinyon Flats O 96.57 57 LR LR 06 43 19.9
comp=Z,615nm,18.8s,baz=290,slow=32
KIRV Kirov 96.84 329 LR LR 06 51 11.2
comp=Z,1μm,19.0s,baz=91,slow=37
BELG Belogornoye 98.48 322⇑*i*P **P 06 05 44.3 -1.7**
BELG pmax pmax
comp=Z,2.0nm,1.0s
AKT Akhty 99.40 311 *e*P **Pdif 06 05 50.0 -0.6**
AKT *e* 06 09 51.2
AKT pmax pmax
comp=Z,8.0nm,1.2s
AKT MLR MLR
comp=Z,734nm,19.0s
MAK Makhachkala 99.45 313*c i*P **Pdif 06 05 44.4 -6.2**
MAK *e*PPP PPP 06 12 00.2
MAK *e*SS SS 06 24 08.7 -4.6
RES Resolute Bay 99.94 14 LR LR 06 51 22.5
comp=Z,226nm,19.2s,baz=294,slow=36
CLL Collm 118.74 329 *e*PKPdf **PKPdf 06 10 54.0 -1.9**
CLL AMS AMS 07 02 00.0
comp=Z,1μm,21.2s
LPAZ La Paz 139.79 120 PKP **PKPdf 06 11 36.8 -0.7**
comp=Z,2.3nm,0.9s,baz=1.0,slow=4.9,SNR=6.4
CPUP Villa Florida 142.14 142 PKP **PKPdf 06 11 41.7 +1.0**
comp=Z,0.8nm,1.0s,baz=90,slow=3.1,SNR=3.6
TORD Torodi Ar. Bea 144.85 289 PKP **PKPdf 06 11 45.5 -0.3**
comp=Z,4.4nm,0.9s,baz=42,slow=3.5,SNR=21
DBIC Dimbokro 152.35 279 PKPbc **PKiKP 06 12 05.5 +0.4**
comp=Z,3.0nm,0.9s,baz=221,slow=2.8,SNR=1.9

IDC 08 05:55:32.2±1.4,**2°.75S**×**147°.53E**,**h0**km,**mb4.0**/5,
mbtmp4.0/5,**Error ellipse: s-maj=123.3km**
s-min=25.8km az=127.0,Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.40**	**216**	P	P	06 00 21.8	0.0
	3.3nm,1.0s,baz=41,slow=10,SNR=6.5						
	3.3nm,1.0s						
ASAR	**Alice Springs**	**24.62**	**211**	P	P	06 00 54.1	-0.5
	3.0nm,0.8s,baz=38,slow=7.7,SNR=5.4						
	3.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**26.33**	**233**	P	P	06 01 10.6	+0.5
	4.0nm,0.8s,baz=79,slow=5.2,SNR=2.3						
	4.0nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**28.31**	**41**	T	T	06 31 14.1	
	baz=222,slow=76,SNR=28						
H11S2	**WAKE ISLAND Hy**	**28.32**	**41**	T	T	06 31 12.2	
	baz=222,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**28.33**	**41**	T	T	06 31 14.6	
	baz=222,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**29.32**	**40**	T	T	06 32 27.8	
	baz=221,slow=76,SNR=51						
H11N3	**WAKE ISLAND Hy**	**29.34**	**40**	T	T	06 32 28.2	
	baz=221,slow=76,SNR=70						
H11N2	**WAKE ISLAND Hy**	**29.34**	**40**	T	T	06 32 28.8	
	baz=221,slow=76,SNR=60						
ILAR	**Eielson Array**	**82.30**	**23**	P	P	06 07 55.4	-0.1
	0.7nm,0.9s,baz=249,slow=5.7,SNR=3.7						
	0.7nm,0.9s						
NVAR	**Mina Array Bea**	**94.96**	**52**	P	P	06 08 57.3	0.0
	0.4nm,0.8s,baz=265,slow=4.3,SNR=2.9						
	0.4nm,0.8s						

WEL ***08*** *05:59:31.2*±*0.3,41°S*±*3°×17°5E*±*°,h17*km±*4km,M4.1/23, ML4.4/22,MLv4.1/23,Error ellipse: s-maj=4.6km s-min=2.8km az=136.7,confirmed*

NOU ***08*** *05:59:32.0,40°.75S×174°.74E,h42km,MLv4.1/19,Cook Strait, New Zealand*

NEIC ***08*** *05:59:32.7*±*1.2,40°.66S*±*0°.02×174°.77E*±*0°.04,h35km*±*2km, ML3.6/21,Error ellipse: s-maj=5.9km s-min=3.1km az=307.0*

ISC 08 05:59:32.1±0.9,**40°.66S**±0°.02×**174°.75E**±0°.02,**h32**km±7km,
n151,σ0**s94**/164,**Cook Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIW	**Kapiti Island**	**0.23**	**149**	P	**Pb**	**05 59 38.8**	**-0.2**
KIW				S	**Sb**	**05 59 43.4**	**-0.3**
OTKS	**Otaki School**	**0.31**	**108**	P	**Pb**	**05 59 39.6**	**-0.3**
PAPS	**Paraparaumu Pr**	**0.32**	**143**	P	**Pb**	**05 59 40.0**	**0.0**
OGWZ	**Otaki Gorge**	**0.35**	**116**	P	**Pb**	**05 59 40.3**	**-0.2**
OGWZ				S	**Sb**	**05 59 46.2**	**0.0**
HOCS	**Levin Horowhen**	**0.40**	**84**	P	**Pb**	**05 59 40.7**	**-0.5**
FXBS	**Foxton Beach S**	**0.41**	**61**	P	**Pb**	**05 59 40.9**	**-0.4**
POKS	**Katoa Kinderga**	**0.47**	**173**	P	**Pb**	**05 59 42.1**	**0.0**
PWES	**Porirua West**	**0.47**	**173**	P	**Pb**	**05 59 42.1**	**-0.1**
POLS	**Porirua Librar**	**0.47**	**172**	P	**Pb**	**05 59 42.3**	**0.0**
CAW	**Cannon Point**	**0.51**	**152**	P	**Pb**	**05 59 42.7**	**0.0**
CAW				S	**Sb**	**05 59 50.2**	**+0.2**
WEL	**Wellington**	**0.62**	**179**	P	**Pb**	**05 59 44.4**	**-0.2**
HOWZ	**Holdsworth Sta**	**0.62**	**112**	P	**Pb**	**05 59 44.5**	**-0.2**
OHWZ	**Ohakea**	**0.63**	**43**	P	**Pb**	**05 59 43.9**	**-0.7**
OHWZ				S	**Sb**	**05 59 53.1**	**-0.2**
MRZ	**Mangatainoka R**	**0.63**	**90**		**Pb**	**05 59 44.2**	**-0.4**
MRZ				Sn	**Sb**	**05 59 53.3**	**-0.1**
MRZ	**Mangatainoka R**	**0.63**	**90**	P	**Pb**	**05 59 44.3**	**-0.4**
DUWZ	**D'Urville Isla**	**0.65**	**257**	P	**Pb**	**05 59 44.2**	**-0.9**
DUWZ				S	**Sb**	**05 59 53.4**	**-0.5**
SNZO	**South Karori**	**0.65**	**183**		**Pb**	**05 59 44.7**	**-0.3**
SNZO				Sn	**Sb**	**05 59 53.8**	**-0.1**
SNZO				IAML		05 59 59.0	
	2μm,0.6s						
SNZO				IAML		05 59 59.3	
	3μm,0.3s						
SNZO	**South Karori**	**0.65**	**183**	P	**Pb**	**05 59 44.6**	**-0.4**
TCW	**Tory Channel**	**0.66**	**213**		**Pb**	**05 59 44.4**	**-0.8**
TCW				Sn	**Sb**	**05 59 53.6**	**-0.5**
TCW	**Tory Channel**	**0.66**	**213**	P	**Pb**	**05 59 44.4**	**-0.8**
TCW				S	**Sb**	**05 59 53.8**	**-0.3**
BHW	**Baring Head**	**0.75**	**173**		**Pb**	**05 59 46.3**	**-0.4**
BHW				Sn	**Sb**	**05 59 56.4**	**-0.3**
BHW				IAML		06 00 00.8	
	comp=N,2μm,0.7s						
BHW				IAML		06 00 00.8	
	comp=E,1μm,0.7s						
BHW	**Baring Head**	**0.75**	**173**	P	**Pb**	**05 59 46.3**	**-0.4**
MTW	**Mount Morrison**	**0.75**	**131**	P	**Pn**	**05 59 47.0**	**+0.5**
POWZ	**Post Office Ro**	**0.82**	**71**	P	**Pn**	**05 59 47.2**	**-0.2**
POWZ				S	**Sb**	**05 59 58.0**	**-0.6**
MSWZ	**Moikau Station**	**0.84**	**154**		**Pb**	**05 59 48.3**	**0.0**
MSWZ				Sn	**Sn**	**06 00 00.3**	**+1.3**
MSWZ	**Moikau Station**	**0.84**	**154**	P	**Pb**	**05 59 48.4**	**+0.1**
TIWZ	**Tintock**	**0.87**	**98**	P	**Pn**	**05 59 48.5**	**+0.5**
PAWZ	**Paruwai Farm**	**0.88**	**145**	P	**Pn**	**05 59 48.8**	**+0.6**
WAZ	**Wanganui**	**0.92**	**11**	P	**Pn**	**05 59 48.5**	**-0.3**
PRWZ	**Pori Road**	**0.93**	**84**	P	**Pn**	**05 59 49.6**	**+0.7**
TMWZ	**Te Maipa**	**0.97**	**118**	P	**Pn**	**05 59 49.7**	**+0.2**
TUWZ	**Tuamarina**	**0.98**	**218**		**Pn**	**05 59 50.1**	**+0.5**
TUWZ	**Tuamarina**	**0.98**	**218**	P	**Pn**	**05 59 50.1**	**+0.5**
PLWZ	**Palliser**	**0.98**	**157**		**Pn**	**05 59 50.2**	**+0.5**
PLWZ				Sn	**Sb**	**06 00 03.1**	**-0.3**
PLWZ				IAML		06 00 06.6	
	comp=N,2μm,0.6s						

PLWZ	**Palliser**	**0.98**	**157**	P		**Pn**	**05 59 50.1**	**+0.4**
TRWZ	**Traveller**	**1.02**	**136**	P		**Pn**	**05 59 50.3**	**+0.1**
TSZ	**Takapari Road**	**1.10**	**57**	P		**Pn**	**05 59 51.2**	**-0.1**
CPWZ	**Castlepoint**	**1.13**	**103**	P		**Pn**	**05 59 52.1**	**+0.6**
BFZ	**Birch Farm**	**1.14**	**91**			**Pn**	**05 59 51.6**	**-0.1**
BFZ	**Birch Farm**	**1.14**	**91**	P		**Pn**	**05 59 51.6**	**-0.1**
BFZ	**Birch Farm**	**1.14**	**91**	P		**Pn**	**05 59 51.7**	**-0.1**
DVHZ	**Dannevirke**	**1.14**	**72**	P		**Pn**	**05 59 52.0**	**+0.2**
CMWZ	**Cape Campbell**	**1.16**	**200**			**Pb**	**05 59 53.7**	**+0.1**
CMWZ				IAML			06 00 13.1	
	comp=N,2μm,0.9s							
CMWZ	**Cape Campbell**	**1.16**	**200**	P		**Pb**	**05 59 53.8**	**+0.1**
NNZ	**Nelson**	**1.18**	**241**			**Pn**	**05 59 52.5**	**+0.2**
NNZ	**Nelson**	**1.18**	**241**	P		**Pn**	**05 59 52.2**	**-0.1**
LREZ	**Lake Rotokare**	**1.23**	**347**	P		**Pn**	**05 59 53.0**	**0.0**
BSWZ	**Blackbirch Sta**	**1.24**	**212**			**Pn**	**05 59 53.9**	**+0.7**
BSWZ				IAML			06 00 15.3	
	comp=E,929nm,0.4s							
BSWZ				IAML			06 00 18.3	
	comp=N,1μm,0.7s							
BSWZ	**Blackbirch Sta**	**1.24**	**212**	P		**Pn**	**05 59 53.9**	**+0.7**
ANWZ	**Angora Road**	**1.33**	**82**	P		**Pn**	**05 59 54.3**	**-0.1**
PNHZ	**Pukenui**	**1.33**	**56**	P		**Pn**	**05 59 54.7**	**+0.2**
MTVZ	**Mangateitei**	**1.39**	**24**	P		**Pn**	**05 59 55.1**	**-0.2**
PREZ	**Palmer Road**	**1.40**	**341**	P		**Pn**	**05 59 55.8**	**+0.5**
TKNZ	**Takaka Hill**	**1.41**	**254**			**Pn**	**05 59 55.7**	**+0.2**
TKNZ	**Takaka Hill**	**1.41**	**254**	P		**Pn**	**05 59 55.9**	**+0.4**
NMEZ	**Namu Road**	**1.42**	**331**	P		**Pn**	**05 59 56.4**	**+0.9**
WPHZ	**Waipukurau**	**1.42**	**66**	P		**Pn**	**05 59 55.7**	**+0.1**
PKVZ	**Pokaka**	**1.44**	**19**	P		**Pn**	**05 59 55.6**	**-0.4**
MOVZ	**Moawhango**	**1.47**	**32**	P		**Pn**	**05 59 56.0**	**-0.4**
KHEZ	**Kahui Hut**	**1.48**	**337**	P		**Pn**	**05 59 57.0**	**+0.5**
KHEZ	**Kahui Hut**	**1.48**	**337**	S		**Sn**	**06 00 16.1**	**+1.4**
KHEZ	**Kahui Hut**	**1.48**	**337**	P		**Pn**	**05 59 57.0**	**+0.5**
NEZ	**North Egmont**	**1.48**	**340**	P		**Pn**	**05 59 56.8**	**+0.3**
WNVZ	**Wahianoa**	**1.48**	**26**	P		**Pn**	**05 59 56.5**	**-0.2**
PRHZ	**Porangahau**	**1.49**	**75**	P		**Pn**	**05 59 56.8**	**+0.2**
TRVZ	**Turoa**	**1.49**	**24**	P		**Pn**	**05 59 56.6**	**-0.2**
WHVZ	**Whangaehu Hut**	**1.52**	**25**	P		**Pn**	**05 59 57.0**	**-0.2**
MAVZ	**Matarangi**	**1.52**	**24**	P		**Pn**	**05 59 57.2**	**-0.1**
DREZ	**Durham Road**	**1.53**	**344**	P		**Pn**	**05 59 57.8**	**+0.6**
FWVZ	**Far West T-bar**	**1.53**	**24**	P		**Pn**	**05 59 57.0**	**-0.4**
VRZ	**Vera Road**	**1.54**	**0**	P		**Pn**	**05 59 57.1**	**-0.1**
NBEZ	**Newall Road No**	**1.55**	**334**	P		**Pn**	**05 59 58.3**	**+0.9**
TUVZ	**Tukino**	**1.56**	**27**	P		**Pn**	**05 59 57.8**	**+0.2**
PKE	**Pukeiti**	**1.58**	**338**	P		**Pn**	**05 59 58.4**	**+0.6**
COVZ	**Chateau Observ**	**1.58**	**23**	P		**Pn**	**05 59 57.7**	**-0.3**
KRHZ	**Kereru**	**1.60**	**51**	P		**Pn**	**05 59 58.4**	**+0.3**
MHEZ	**Mangahewa**	**1.62**	**348**	P		**Pn**	**05 59 59.4**	**+1.1**
NGZ	**Ngauruhoe**	**1.62**	**24**	P		**Pn**	**05 59 58.3**	**-0.2**
SNVZ	**South Ngauruho**	**1.62**	**25**	P		**Pn**	**05 59 57.2**	**-1.4**
OTVZ	**Oturere**	**1.65**	**25**	P		**Pn**	**05 59 57.4**	**-1.6**
NNVZ	**North Ngauruho**	**1.67**	**24**	P		**Pn**	**05 59 56.6**	**-2.5**
WTVZ	**West Tongariro**	**1.67**	**23**	P		**Pn**	**05 59 56.3**	**-2.9**
MRNZ	**Matariki Terra**	**1.68**	**243**			**Pn**	**05 59 59.6**	**+0.4**
MRNZ	**Matariki Terra**	**1.68**	**243**	P		**Pn**	**05 59 59.9**	**+0.7**
ETVZ	**East Tongariro**	**1.69**	**26**	P		**Pn**	**05 59 59.3**	**-0.2**
QRZ	**Quartz Range**	**1.70**	**264**			**Pn**	**05 59 59.4**	**0.0**
QRZ				IAML			06 00 38.9	
	comp=N,374nm,0.6s							
QRZ	**Quartz Range**	**1.70**	**264**	P		**Pn**	**05 59 59.2**	**-0.2**
QRZ	**Quartz Range**	**1.70**	**264**	P		**Pn**	**05 59 59.4**	**0.0**
PXZ	**Pawanui**	**1.73**	**69**	P		**Pn**	**05 59 59.6**	**-0.3**
THZ	**Tophouse**	**1.78**	**231**			**Pn**	**06 00 01.5**	**+0.9**
THZ	**Tophouse**	**1.78**	**231**	P		**Pn**	**06 00 01.5**	**+0.9**
KWHZ	**Kaweka Forest**	**1.78**	**47**	P		**Pn**	**06 00 01.3**	**+0.6**
KAHZ	**Kahuranaki**	**1.84**	**63**	P		**Pn**	**06 00 01.1**	**-0.3**
RITZ	**Rihia Road**	**1.89**	**27**	P		**Pn**	**06 00 03.4**	**+1.3**
MCHZ	**McNeill Hill**	**1.93**	**51**	P		**Pn**	**06 00 03.9**	**+1.3**
RATZ	**Rangitukua**	**1.96**	**24**	P		**Pn**	**06 00 04.5**	**+1.5**
KHZ	**Kahutara**	**1.98**	**207**			**Pn**	**06 00 03.7**	**+0.5**
KHZ	**Kahutara**	**1.98**	**207**	P		**Pn**	**06 00 03.5**	**+0.3**
KHZ	**Kahutara**	**1.98**	**207**	P		**Pn**	**06 00 04.0**	**+0.7**
BKZ	**Black Stump Fm**	**2.00**	**42**			**Pn**	**06 00 04.0**	**+0.2**
BKZ				IAML			06 00 36.8	
	comp=E,566nm,0.5s							
BKZ				IAML			06 00 37.0	
	comp=N,572nm,0.4s							
BKZ	**Black Stump Fm**	**2.00**	**42**	P		**Pn**	**06 00 04.8**	**+1.1**
BKZ	**Black Stump Fm**	**2.00**	**42**	S		**Sn**	**06 00 29.3**	**+1.6**
BKZ	**Black Stump Fm**	**2.00**	**42**	P		**Pn**	**06 00 03.8**	**+0.1**
WATZ	**Wairara**	**2.09**	**22**	P		**Pn**	**06 00 06.8**	**+1.9**
HIZ	**Hauiti**	**2.15**	**2**	Pn		**Pn**	**06 00 06.0**	**+0.4**
HIZ	**Hauiti**	**2.15**	**2**	P		**Pn**	**06 00 06.0**	**+0.4**
HIZ	**Hauiti**	**2.15**	**2**	S		**Sn**	**06 00 33.4**	**+2.3**
HIZ	**Hauiti**	**2.15**	**2**	P		**Pn**	**06 00 05.8**	**+0.2**
ARHZ	**Aropaoanui**	**2.22**	**52**	P		**Pn**	**06 00 07.5**	**+0.9**
NMHZ	**Naumai**	**2.22**	**46**	P		**Pn**	**06 00 07.5**	**+0.8**
KUTZ	**Kaahu Road**	**2.32**	**21**	P		**Pn**	**06 00 10.8**	**+2.8**
WPRZ	**Whakapapatarin**	**2.40**	**27**	P		**Pn**	**06 00 10.1**	**+1.0**
TLZ	**Tolley Road**	**2.41**	**15**	P		**Pn**	**06 00 08.6**	**-0.7**
MTHZ	**Maungataniwha**	**2.42**	**42**	P		**Pn**	**06 00 13.3**	**-1.6**
ALRZ	**Allen Road**	**2.43**	**31**	P		**Pn**	**06 00 10.0**	**+0.5**
DSZ	**Denniston Nort**	**2.47**	**243**	Pn		**Pn**	**06 00 10.4**	**+0.3**
DSZ	**Denniston Nort**	**2.47**	**243**	P		**Pn**	**06 00 11.0**	**+0.8**
WHHZ	**Waihua**	**2.48**	**51**	P		**Pn**	**06 00 11.6**	**+1.4**
PRRZ	**Plateau Road**	**2.50**	**31**	P		**Pn**	**06 00 11.7**	**+1.1**
RAHZ	**Arahi**	**2.50**	**47**	P		**Pb**	**06 00 14.6**	**-1.7**
GRRZ	**Galatos Road**	**2.54**	**25**	P		**Pn**	**06 00 14.3**	**+3.3**
HRRZ	**Handcock Road**	**2.56**	**28**	P		**Pn**	**06 00 12.9**	**+1.6**
HSRZ	**Hossack Road**	**2.62**	**27**	P		**Pn**	**06 00 13.6**	**+1.5**
GVZ	**Greta Valley S**	**2.64**	**209**			**Pn**	**06 00 12.6**	**+0.3**
GVZ	**Greta Valley S**	**2.64**	**209**	P		**Pn**	**06 00 12.5**	**+0.1**
RRRZ	**Republican Roa**	**2.69**	**31**	P		**Pn**	**06 00 15.8**	**+2.7**
KNZ	**Kokohu**	**2.78**	**55**	P		**Pn**	**06 00 12.9**	**-1.5**
LTZ	**Lake Taylor**	**2.82**	**220**			**Pn**	**06 00 14.2**	**-0.6**
LTZ	**Lake Taylor**	**2.82**	**220**	P		**Pn**	**06 00 15.2**	**+0.3**
MHGZ	**Mahia Peninsul**	**2.86**	**59**	P		**Pn**	**06 00 14.0**	**-1.3**
PRGZ	**Paritu Road**	**2.97**	**55**	P		**Pn**	**06 00 16.0**	**-1.0**
TOZ	**Tahuroa Road**	**2.98**	**11**	Pn		**Pn**	**06 00 17.6**	**+0.5**
TOZ	**Tahuroa Road**	**2.98**	**11**	P		**Pn**	**06 00 17.9**	**+0.8**
URZ	**Urewera**	**3.01**	**38**	P		**Pn**	**06 00 17.3**	**-0.2**
URZ	**Urewera**	**3.01**	**38**	P		**Pn**	**06 00 17.4**	**-0.1**
RIGZ	**Rimuhau**	**3.03**	**51**	P		**Pn**	**06 00 17.0**	**-0.9**
TGRZ	**Tauranga**	**3.15**	**22**	P		**Pn**	**06 00 20.8**	**+1.3**
MWZ	**Matawai**	**3.16**	**44**	P		**Pn**	**06 00 18.5**	**-1.1**
INZ	**Inchbonnie**	**3.22**	**229**			**Pn**	**06 00 21.8**	**+1.4**
OKCZ	**Okains Bay**	**3.31**	**202**	P		**Pn**	**06 00 21.0**	**-0.6**
OXZ	**Oxford**	**3.34**	**216**			**Pn**	**06 00 21.0**	**-1.0**
RUGZ	**Raukumara Rang**	**3.52**	**41**	P		**Pn**	**06 00 23.7**	**-0.9**
KUZ	**Kuaotunu**	**3.98**	**11**	P		**Pn**	**06 00 31.4**	**+0.6**
RPZ	**Rata Peaks**	**4.11**	**221**	Pn		**Pn**	**06 00 33.5**	**+0.9**
RPZ	**Rata Peaks**	**4.11**	**221**	P		**Pn**	**06 00 30.8**	**-1.7**
RPZ	**Rata Peaks**	**4.11**	**221**	S		**Sn**	**06 01 17.4**	**-2.1**
MXZ	**Matakaoa Point**	**4.15**	**43**	P		**Pn**	**06 00 34.6**	**+1.5**
ODZ	**Otahua Downs**	**5.32**	**213**	P		**Pn**	**06 00 46.7**	**-2.5**
OUZ	**Omahuta**	**5.51**	**350**	P		**Pn**	**06 00 53.5**	**+1.7**
JCZ	**Jackson Bay**	**5.58**	**330**	P		**Pn**	**06 00 51.8**	**-1.1**
CTZ	**Chatham Island**	**7.11**	**118**	P		**Pn**	**06 01 12.3**	**-1.4**

IDC 08 06:00:08.1±2.0, 3°.07S×147°.97E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=78.8km s-min=26.6km az=115.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.41**	**217**	P	P	06 04 57.5	-0.2
	3.8nm,1.0s,baz=42,slow=11,SNR=12						
	3.8nm,1.0s						
ASAR	**Alice Springs**	**24.58**	**212**	P	P	06 05 31.1	+1.0
	3.3nm,1.0s,baz=37,slow=10.0,SNR=13						
	3.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**26.49**	**234**	P	P	06 05 46.2	-1.2
	3.1nm,0.8s,baz=76,slow=6.4,SNR=5.0						
	3.1nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**28.27**	**40**	T	T	06 35 52.9	
	baz=223,slow=76,SNR=64						
H11S2	**WAKE ISLAND Hy**	**28.28**	**40**	T	T	06 35 55.2	
	baz=223,slow=76,SNR=42						
H11S1	**WAKE ISLAND Hy**	**28.29**	**40**	T	T	06 35 56.2	
	baz=223,slow=76,SNR=70						
H11N1	**WAKE ISLAND Hy**	**29.30**	**39**	T	T	06 37 07.4	
	baz=222,slow=76,SNR=40						
H11N3	**WAKE ISLAND Hy**	**29.31**	**39**	T	T	06 37 08.5	
	baz=222,slow=76,SNR=57						
H11N2	**WAKE ISLAND Hy**	**29.32**	**39**	T	T	06 37 09.3	
	baz=222,slow=76,SNR=40						
MKAR	**Makanchi Array**	**75.88**	**320**	P	P	06 11 57.3	+0.7
	0.2nm,0.6s,baz=100,slow=7.5,SNR=2.1						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**82.43**	**23**	P	P	06 12 31.3	-0.6
	0.4nm,0.8s,baz=251,slow=5.3,SNR=2.8						
	0.4nm,0.8s						

*JMA **08** 06:11:59.9±0.3, 30°.N×2°.×13°.9E±°, h457km, MV3.2/18, NEAR TORISHIMA IS*
*IDC **08** 06:12:01.7±1.3, 30°.18N×138°.58E, h424km±16km, mb3.2/10, mbtmp4.0/12, Error ellipse: s-maj=36.9km s-min=11.7km az=77.0*
ISC 08 06:12:00.4±0.7, 30°.13N±0°.07×139°.0E±0°.1, h421km, n24, σ2s39/33, mb3.5/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.05**	**13**	*eP*	**P**	**06 13 08.2**	**+2.9**
JHJ	**Hachijo jima 2**	**3.05**	**12**	P	**P**	**06 13 07.9**	**+2.5**
	60nm,0.3s,baz=36,slow=22,SNR=13						
JHJ				S	**S**	**06 13 57.9**	**-0.5**
	59nm,0.3s,baz=85,slow=20,SNR=1.6						
CBIJ	**Chichi jima**	**4.11**	**137**	*eP*	**P**	**06 13 17.2**	**+2.6**
CBIJ				*eS*	**S**	**06 14 16.6**	**+1.5**
JCJ	**Chichijima**	**4.11**	**137**	P	**P**	06 13 09.2	-5.5
	75nm,0.8s,baz=1.4,slow=17,SNR=7.0						
JCJ				S	**S**	**06 14 08.2**	**-6.9**
	73nm,0.3s,baz=313,slow=21,SNR=11						
JTNC	**Tanabenakahech**	**4.68**	**323**	*eP*	**P**	**06 13 21.4**	**+1.4**
BSO1	**Boso 1**	**4.80**	**20**	*eP*	**P**	**06 13 22.8**	**+2.3**
BSO1				*eS*	**S**	**06 14 27.8**	**+1.6**
JOD2	**Odawara 2**	**5.12**	**1**	*eP*	**P**	**06 13 26.2**	**+1.9**
JOD2				*eS*	**S**	**06 14 32.2**	**-0.8**
JNY	**Yasuok**	**5.30**	**350**	*eP*	**P**	**06 13 28.3**	**+2.0**
JRY	**Ryogami san**	**5.87**	**359**	*eP*	**P**	**06 13 33.7**	**+1.6**
JRY				*eS*	**S**	**06 14 43.9**	**-3.3**
JWT	**Wachi**	**5.98**	**330**	*eP*	**P**	**06 13 34.8**	**+1.7**
JAG	**Ashikaga**	**6.29**	**3**	*eP*	**P**	**06 13 36.4**	**-0.1**
JAG				*eS*	**S**	**06 14 48.5**	**-6.8**
JNG	**Nsakai**	**6.31**	**353**	*eP*	**P**	**06 13 37.0**	**+0.3**
JNG				*eS*	**S**	**06 14 54.2**	**-1.6**
MJAR	**Matsushiro Arr**	**6.43**	**354**	P	**P**	**06 13 38.4**	**+0.4**
	3.0nm,0.6s,baz=166,slow=11,SNR=5.9						
MJAR				S	**S**	**06 14 58.1**	**0.0**
	2.3nm,0.3s,baz=166,slow=20,SNR=4.5						
MKAR	**Makanchi Array**	**46.42**	**308**	P	**P**	**06 19 46.2**	**-0.9**
	0.6nm,0.7s,baz=80,slow=10,SNR=4.4						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**48.94**	**313**	P	**P**	**06 20 04.5**	**-1.6**
	0.7nm,0.5s,baz=92,slow=7.8,SNR=7.2						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**49.99**	**186**	P	**P**	**06 20 15.1**	**+0.9**
	1.2nm,0.5s,baz=2.1,slow=7.7,SNR=31						
WRA				PcP	**PcP**	**06 21 28.4**	**+1.3**
	0.2nm,0.5s,baz=3.6,slow=3.9,SNR=1.5						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**53.71**	**186**	P	**P**	**06 20 42.4**	**+1.0**
	0.6nm,0.5s,baz=3.8,slow=6.8,SNR=17						
	0.6nm,0.5s						
BVAR	**Borovoye Array**	**53.94**	**316**	P	**P**	**06 20 41.6**	**-1.0**
	1.1nm,0.4s,baz=95,slow=7.3,SNR=7.3						
	1.1nm,0.4s						
ARCES	**ARCESS Array B**	**69.76**	**340**	P	**P**	**06 22 26.6**	**+0.4**
	0.7nm,0.6s,baz=78,slow=8.4,SNR=5.5						
	0.7nm,0.6s						
FINES	**FINESS Array B**	**74.00**	**333**	P	**P**	**06 22 50.5**	**-0.6**
	1.3nm,0.6s,baz=81,slow=6.0,SNR=7.4						
	1.3nm,0.6s						
HFS	**Hagfors**	**79.53**	**335**	P	**P**	**06 23 21.1**	**-0.6**
	1.4nm,0.8s,baz=88,slow=9.6,SNR=4.6						
	1.4nm,0.8s						
BRTR	**Keskin Array B**	**81.91**	**311**	P	**P**	**06 23 34.2**	**-0.6**
	0.5nm,0.7s,baz=29,slow=4.1,SNR=3.0						
	0.5nm,0.7s						
ULM	**Lac du Bonnet**	**86.38**	**32**	P	**P**	**06 23 58.2**	**+1.7**
	3.6nm,0.6s,baz=161,slow=11,SNR=2.1						
	3.6nm,0.6s						
QSPA	**South Pole Qui**	**119.89**	**180**	PKP	**PKiKP**	**06 30 02.9**	**+1.9**
	0.8nm,1.0s,baz=287,slow=2.0,SNR=5.7						

*IDC **08** 06:15:39.3±0.8, 41°.7N×133°.2E±0°.1, h500km, n14, σ0s57/14, mb3.4/10, Sea of Japan*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.**	**2.65**	**342**	P	**P**	**06 16 47.3**	**-0.4**
	32nm,0.4s,baz=182,slow=5.9,SNR=47						
KSRS	**Korea Array**	**5.85**	**225**	P	**P**	**06 17 13.9**	**-0.2**
	0.9nm,0.4s,baz=38,slow=9.1,SNR=1.9						
ASAJ	**Asahikawa**	**7.34**	**68**	P	**P**	**06 17 27.7**	**-1.1**
	27nm,0.6s,baz=249,slow=6.8,SNR=17						
SONM	**Songino Array**	**19.91**	**297**	P	**P**	**06 19 37.0**	**0.0**
	1.1nm,0.6s,baz=101,slow=10,SNR=6.5						
MKAR	**Makanchi Array**	**36.27**	**296**	P	**P**	**06 21 59.5**	**0.0**
	1.2nm,0.7s,baz=86,slow=9.5,SNR=9.2						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**38.09**	**303**	P	**P**	**06 22 14.2**	**-0.2**
	3.4nm,0.6s,baz=81,slow=8.6,SNR=21						
	3.4nm,0.6s						
BVAR	**Borovoye Array**	**42.68**	**308**	P	**P**	**06 22 50.9**	**-0.2**
	0.4nm,0.3s,baz=84,slow=9.5,SNR=3.2						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**49.11**	**34**	P	**P**	**06 23 40.9**	**+1.0**
	0.3nm,0.5s,baz=286,slow=8.3,SNR=6.2						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**61.33**	**179**	P	**P**	**06 25 05.6**	**-0.3**
	0.4nm,0.5s,baz=357,slow=7.4,SNR=11						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**61.61**	**329**	P	**P**	**06 25 07.0**	**-0.1**
	0.8nm,0.6s,baz=123,slow=7.0,SNR=4.0						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**65.03**	**179**	P	**P**	**06 25 30.1**	**+0.5**
	0.4nm,0.6s,baz=357,slow=7.3,SNR=7.1						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**66.63**	**318**	P	**P**	**06 25 39.1**	**-0.2**
	0.5nm,0.4s,baz=50,slow=6.6,SNR=4.8						
	0.5nm,0.4s						
HFS	**Hagfors**	**67.09**	**332**	P	**P**	**06 25 42.3**	**+0.3**
	0.5nm,0.4s,baz=89,slow=7.6,SNR=4.1						
	0.5nm,0.4s						
NVAR	**Mina Array Bea**	**77.11**	**50**	P	**P**	**06 26 41.7**	**+0.8**
	0.2nm,0.5s,baz=307,slow=5.4,SNR=2.5						
	0.2nm,0.5s						

IDC 08 06:24:17.9±3.4, 10°.88N×126°.10E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=287.6km s-min=23.1km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.69**	**165**	P	P	06 30 43.0	-0.4
	0.5nm,0.6s,baz=346,slow=9.3,SNR=6.2						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**35.17**	**168**	P	P	06 31 14.1	+0.2
	0.5nm,0.4s,baz=352,slow=6.7,SNR=12						
	0.5nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**39.91**	**74**	T	T	07 14 54.3	
	baz=260						
H11S1	**WAKE ISLAND Hy**	**39.92**	**74**	T	T	07 14 50.8	
	baz=260						
H11S2	**WAKE ISLAND Hy**	**39.93**	**74**	T	T	07 14 56.7	
	baz=260						
H11N1	**WAKE ISLAND Hy**	**40.23**	**72**	T	T	07 15 25.2	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**40.23**	**72**	T	T	07 15 24.8	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**40.24**	**72**	T	T	07 15 24.8	
	baz=265						
MKAR	**Makanchi Array**	**51.44**	**323**	P	P	06 33 24.8	-0.2
	0.5nm,0.6s,baz=120,slow=7.2,SNR=4.2						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**55.48**	**325**	P	P	06 33 54.5	0.0
	0.2nm,0.3s,baz=124,slow=7.3,SNR=1.7						
	0.2nm,0.3s						

*ROM **08** 06:27:26.4±0.3, 43°.529N±0°.010×13°.75E±0°.02, h7km, ML2.5/49, Error ellipse: s-maj=1.6km s-min=0.4km az=61.0*
ISC 08 06:27:27.1±0.8, 43°.53N±0°.02×13°.73E±0°.02, h12km±5km, n47, σ0s75/82, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.09**	**284**	P	**Pg**	**06 27 29.2**	**-0.7**
AOI				S	**Sg**	**06 27 31.4**	**-0.6**
AOI				AML	AML		
	comp=N,6040μm,0.3s						
AOI				AML	AML		
	comp=E,11350μm,0.4s						
AOI				AML	AML		
	comp=N,6040μm,1.7s						
PCRO	**Pietralacroce**	**0.16**	**300**	P	**Pg**	**06 27 30.7**	**-0.1**
PCRO				S	**Sg**	**06 27 34.1**	**+0.6**
PP3	**Marolino**	**0.17**	**210**	P	**Pg**	**06 27 30.3**	**-0.6**
PP3				S	**Sg**	**06 27 33.8**	**+0.1**
CIMA	**Civitanova Mar**	**0.23**	**190**	P	**Pg**	**06 27 31.8**	**0.0**
CIMA				S	**Sg**	**06 27 36.6**	**+1.5**
CIMA				AML	AML		
	comp=E,18450μm,0.5s						
CIMA				AML	AML		
	comp=N,10395μm,0.5s						
CIMA				AML	AML		
	comp=N,10400μm,0.5s						
CIMA				AML	AML		
	comp=N,10400μm,1.5s						
CIMA				AML	AML		
	comp=E,18450μm,1.5s						
CADA	**Capodarco di F**	**0.33**	**176**	P	**Pg**	**06 27 33.7**	**-0.1**
CADA				S	**Sb**	**06 27 39.8**	**-0.4**
TRE1	**Treia**	**0.37**	**234**	P	**Pg**	**06 27 34.1**	**-0.4**
TRE1				S	**Sb**	**06 27 40.7**	**-0.6**
SENI	**Senigallia**	**0.40**	**297**	P	**Pb**	**06 27 35.7**	**-0.4**
SENI				S	**Sb**	**06 27 43.4**	**+1.4**
SENI				AML	AML		
	comp=E,2945μm,0.2s						
SENI				AML	AML		
	comp=N,2455μm,0.4s						
SENI				AML	AML		
	comp=E,668μm,0.9s						
SENI				AML	AML		
	comp=N,506μm,0.7s						
SENI				AML	AML		
	comp=E,2950μm,0.2s						
SENI				AML	AML		
	comp=N,2450μm,0.4s						
SENI				AML	AML		
	comp=N,2450μm,0.4s						
SENI				AML	AML		
	comp=E,669μm,0.9s						
SENI				AML	AML		
	comp=N,506μm,0.7s						
SENI				AML	AML		
	comp=E,2950μm,0.2s						
CING	**Cingoli**	**0.41**	**249**	P	**Pg**	**06 27 34.8**	**-0.5**
CING				S	**Sb**	**06 27 41.7**	**-0.9**
MNTT	**Montottone**	**0.47**	**192**	P	**Pb**	**06 27 36.6**	**-0.8**
MNTT				S	**Sb**	**06 27 45.1**	**+0.7**
SAP2	**Sant'Angelo in**	**0.49**	**209**	P	**Pg**	**06 27 36.3**	**-0.4**
SAP2				S	**Sb**	**06 27 45.0**	**+0.2**
SAP2				AML	AML		
	comp=E,679μm,0.6s						
SAP2				AML	AML		
	comp=N,3975μm,1.3s						
EL6	**Elcito**	**0.50**	**247**	P	**Pg**	**06 27 36.2**	**-0.6**
EL6				S	**Sb**	**06 27 44.6**	**-0.4**
EL6				AML	AML		
	comp=E,580μm,0.2s						
EL6				AML	AML		
	comp=N,584μm,0.2s						
EL6				AML	AML		
	comp=E,580μm,1.8s						
COR1	**Corinaldo**	**0.54**	**281**	P	**Pb**	**06 27 38.4**	**0.0**
COR1				S	**Sn**	**06 27 48.5**	**-1.0**
COR1				AML	AML		
	comp=E,402μm,0.4s						
COR1				AML	AML		
	comp=N,501μm,0.7s						
COR1				AML	AML		
	comp=E,401μm,0.4s						
COR1				AML	AML		
	comp=N,502μm,0.7s						
ARVD	**Arcevia**	**0.57**	**267**	P	**Pg**	**06 27 38.0**	**-0.2**
ARVD				S	**Sb**	**06 27 46.6**	**-0.5**
ARVD				AML	AML		
	comp=N,202μm,0.5s						
ARVD				AML	AML		
	comp=E,184μm,0.6s						
MF5	**Montefalcone A**	**0.57**	**200**	P	**Pg**	**06 27 37.8**	**-0.5**
MF5				S	**

PE3	**Peglio**	**0.91**	**281**	P	**Pb**	**06 27 44.7**	**0.0**	
PE3				AML	AML			
	comp=N,1070µm,0.4s							
PE3				AML	AML			
	comp=E,1720µm,0.4s							
CAMP	**Campotosto**	**1.02**	**193**	P	**Pg**	**06 27 45.5**	**-1.2**	
CAMP				AML	AML			
	comp=N,216µm,0.8s							
CAMP				AML	AML			
	comp=E,143µm,0.8s							
DUGI	**Dugi Otok**	**1.07**	**64**	*i* Pg	**Pn**	**06 27 48.1**	**+0.3**	
DUGI				Sg	**Sn**	**06 28 03.3**	**+0.7**	
GIGS	**Gran Sasso**	**1.08**	**186**	P	**Pg**	**06 27 46.8**	**-1.1**	
GIGS				S	**Sn**	**06 28 03.3**	**+0.3**	
GIGS				AML	AML			
	comp=E,51µm,0.8s							
GIGS				AML	AML			
	comp=N,75µm,0.5s							
RM33	**Pellescritta (**	**1.08**	**200**	P	**Pg**	**06 27 46.1**	**-1.8**	
RM33				S	**Sn**	**06 28 03.6**	**+0.5**	
RM33				AML	AML			
	comp=E,348µm,0.8s							
RM33				AML	AML			
	comp=N,358µm,0.9s							
RM33				AML	AML			
	comp=N,380µm,0.9s							
RM33				AML	AML			
	comp=N,358µm,0.9s							
RM33				AML	AML			
	comp=E,376µm,0.8s							
RM33				AML	AML			
	comp=N,358µm,1.1s							
RM33				AML	AML			
	comp=N,380µm,1.1s							
RM33				AML	AML			
	comp=E,348µm,0.7s							
VCEL	**Villa Celiera**	**1.14**	**176**	P	**Pn**	**06 27 49.0**	**+0.2**	
VCEL				AML	AML			
	comp=N,194µm,0.9s							
VCEL				AML	AML			
	comp=N,195µm,0.9s							
VCEL				AML	AML			
	comp=E,316µm,0.5s							
ARRO	**Arrone**	**1.18**	**217**	P	**Pn**	**06 27 49.4**	**0.0**	
VIRC	**Vir**	**1.23**	**51**	*i* Pg	**Pn**	**06 27 50.3**	**+0.3**	
VIRC				Sg	**Sn**	**06 28 08.2**	**+1.8**	
NVLJ	**Novalja**	**1.32**	**38**	*e*Pg	**Pg**	**06 27 51.6**	**-0.9**	
NVLJ				Sg	**Sn**	**06 28 09.9**	**+1.1**	
FIAM	**Fiamignano**	**1.34**	**200**	P	**Pg**	**06 27 52.4**	**-0.4**	
FIAM				AML	AML			
	comp=N,92µm,0.6s							
FIAM				AML	AML			
	comp=E,81µm,0.6s							
ZIRJ	**Zirje**	**1.40**	**84**	*e*Pg	**Pb**	**06 27 52.8**	**-0.3**	
ZIRJ				Sg	**Sg**	**06 28 11.8**	**-0.3**	
RABC	**Rab**	**1.44**	**32**	*e*Pn	**Pb**	**06 27 53.5**	**-0.3**	
RABC				Sn	**Sg**	**06 28 13.8**	**+0.4**	
MORI	**Morici**	**1.48**	**76**	*e*Pg	**Pb**	**06 27 54.0**	**-0.4**	
MORI				Sg	**Sg**	**06 28 14.6**	**0.0**	
INTR	**Introdacqua**	**1.52**	**175**	P	**Pn**	**06 27 54.5**	**+0.4**	
INTR				AML	AML			
	comp=E,144µm,0.5s							
INTR				AML	AML			
	comp=N,188µm,0.6s							
INTR				AML	AML			
	comp=N,188µm,1.4s							
INTR				AML	AML			
	comp=E,144µm,1.5s							
UDBI	**Udbina**	**1.78**	**55**	*e*Pn	**Pb**	**06 27 59.4**	**-0.1**	
UDBI				Sn	**Sg**	**06 28 23.3**	**-1.0**	
RMP	**Rome, Mte Porz**	**1.87**	**204**	AML	AML			
	comp=E,545µm,1.6s							
RMP				AML	AML			
	comp=N,522µm,0.7s							
PLIT	**Plitvice**	**1.92**	**45**	*e*Pn	**Pb**	**06 28 01.4**	**-0.6**	
PLIT				Sn	**Sb**	**06 28 25.6**	**-0.3**	
KIJV	**Kijevo**	**2.00**	**75**	*i* Pn	**Pb**	**06 28 02.3**	**-1.0**	
KIJV				Sn	**Sb**	**06 28 28.0**	**-0.2**	
HVAR	**Hvar**	**2.02**	**99**	*e*Pn	**Pn**	**06 28 01.1**	**+0.3**	
HVAR				Sn	**Sn**	**06 28 26.8**	**+0.8**	
LSTV	**Lastovo**	**2.44**	**107**	*i* Pn	**Pn**	**06 28 06.3**	**-0.3**	
LSTV				Sn	**Sn**	**06 28 37.1**	**+0.8**	
RICI	**Ricice**	**2.48**	**90**	*i* Pn	**Pn**	**06 28 08.7**	**+1.5**	
RICI				Sn	**Sn**	**06 28 38.3**	**+0.9**	
STON	**Ston**	**2.98**	**101**	*i* Pn	**Pn**	**06 28 14.0**	**0.0**	
STON				Sn	**Sn**	**06 28 49.7**	**+0.1**	

IDC 08 06:28:10.0±2.0, 2.97S×147.72E, h0km, mb3.6/4, mbtmp3.7/4, MS3.7/7, Error ellipse: s-maj=101.8km s-min=28.3km az=114.0, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**7.02**	**274**	LR	LR	06 32 13.6	
	comp=Z,665nm,18.5s,baz=121,slow=35						
GUMO	**Guam**	**16.70**	**350**	LR	LR	06 37 29.6	
	comp=Z,72nm,21.8s,baz=213,slow=34						
WRA	**Warramunga Arr**	**21.34**	**217**	P	P	06 32 58.2	-0.6
	2.9nm,0.8s,baz=43,slow=11,SNR=14						
WRA				LR	LR	06 41 24.6	
	comp=Z,240nm,18.6s,baz=38,slow=37						
	2.9nm,0.8s						
ASAR	**Alice Springs**	**24.53**	**212**	P	P	06 33 31.9	+0.4
	1.4nm,0.7s,baz=39,slow=7.1,SNR=14						
ASAR				LR	LR	06 44 46.7	
	comp=Z,132nm,19.4s,baz=96,slow=41						
	1.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**26.35**	**234**	LR	LR	06 44 06.8	
	comp=Z,286nm,18.0s,baz=68,slow=36						
H11S3	**WAKE ISLAND Hy 28.35**	**40**		T	T	07 03 53.2	
	baz=223,slow=76,SNR=232						
H11S2	**WAKE ISLAND Hy 28.36**	**41**		T	T	07 03 56.0	
	baz=223,slow=76,SNR=118						
H11S1	**WAKE ISLAND Hy 28.37**	**40**		T	T	07 03 56.8	
	baz=223,slow=76,SNR=104						
H11N1	**WAKE ISLAND Hy 29.38**	**39**		T	T	07 05 09.2	
	baz=222,slow=76,SNR=87						
H11N3	**WAKE ISLAND Hy 29.39**	**39**		T	T	07 05 10.4	
	baz=222,slow=76,SNR=136						
H11N2	**WAKE ISLAND Hy 29.39**	**39**		T	T	07 05 11.3	
	baz=222,slow=76,SNR=118						
URZ	**Urewera**	**44.21**	**146**	LR	LR	06 52 15.8	
	comp=Z,198nm,20.4s,baz=304,slow=33						
MA2	**Magadan**	**62.41**	**2**	LR	LR	07 05 58.9	
	comp=Z,33nm,18.8s,baz=167,slow=36						
ILAR	**Eielson Array**	**82.43**	**23**	P	P	06 40 33.9	0.0
	0.3nm,0.9s,baz=256,slow=5.7,SNR=1.7						
	0.3nm,0.9s						
BVAR	**Borovoye Array**	**84.77**	**324**	P	P	06 40 46.2	0.0
	0.4nm,0.4s,baz=94,slow=4.3,SNR=2.2						
	0.4nm,0.4s						

*DSN **08** 06:34:35.1±2.2, 28.°13N×55.°49E, h10km, ML3.0/11, Error ellipse: s-maj=33.2km s-min=14.9km az=51.0*
*TEH **08** 06:34:44.1, 27.°34N×55.°04E, h19km±12km*
ISC 08 06:34:43.4±1.1, 27.°53N±0.°05×55.°09E±0.°05, h20km, n15, σ2°04/17, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.65**	**282**	Pg	**Pn**	**06 34 57.5**	**0.0**
GENO	**Geno**	**0.97**	**97**	Pg	**Pn**	**06 35 03.4**	**+1.4**
IBND	**Bandar-abas**	**1.29**	**93**	Pg	**Pb**	**06 35 08.7**	**+1.8**
JHRM	**Jahrom**	**1.66**	**306**	Pg	**Pb**	**06 35 15.2**	**+2.0**
LMD1	**Lamerd**	**1.73**	**264**	Pg	**Pb**	**06 35 15.2**	**+0.9**
SHME	**Shamm**	**1.75**	**147**	P	**Pn**	**06 35 11.1**	**-1.4**
SHME				S	**Sb**	**06 35 40.0**	**+3.8**
BANOM	**Banah**	**1.93**	**146**	P	**Pn**	**06 35 13.3**	**-1.8**
BANOM				S	**Sb**	**06 35 41.5**	**-0.1**
MSFE	**Esma-Masafi**	**2.36**	**156**	P	**Pn**	**06 35 19.5**	**-1.6**
MDH	**Madha**	**2.47**	**154**	P	**Pn**	**06 35 22.6**	**+0.1**
NAZ	**Nazwa, Dubai**	**2.58**	**168**	P	**Pb**	**06 35 26.7**	**-2.3**
HATD	**Hatta, Dubai**	**2.85**	**161**	P	**Pn**	**06 35 28.3**	**+0.6**
ASUD	**Al Ashush, Dub**	**2.90**	**176**	P	**Pn**	**06 35 28.8**	**+0.4**
ASHO	**Ashiyiah**	**2.96**	**163**	P	**Pn**	**06 35 27.3**	**-2.0**
SOHO	**SOHO**	**3.62**	**159**	P	**Pn**	**06 35 37.6**	**-0.8**
IMEH	**Mehriz**	**3.87**	**354**	Pn	**Pb**	**06 35 47.1**	**-4.0**

*BJI **08** 07:25:50.4, 21.°71N×142.°96E, h306km, mB4.8/15, mb4.8/69*
*IDC **08** 07:25:52.0±0.9, 21.°49N×143.°07E, h324km±8km, mb4.5/34, mbtmp5.2/39, Error ellipse: s-maj=9.9km s-min=5.9km az=90.0*
*NEIC **08** 07:25:51.5±1.3, 21.°52N±0.°07×143.°1E±0.°1, h315km±8km, mb4.9/70, Error ellipse: s-maj=15.6km s-min=10.3km az=80.0*
ISC 08 07:25:51.2±0.7, 21.°49N±0.°04×143.°11E±0.°06, h318km±5km, n596, σ1°04/630, mb4.9/130, 9C-2D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.65**	**352**		**Pn**	**07 27 16.3**	**-0.5**
JCJ	**Chichijima**	**5.65**	**352**	P	Pn	07 27 08.2	-8.6
	317nm,0.3s,baz=113,slow=23,SNR=82						
JCJ				S	S	07 28 14.6	-11
	197nm,0.3s,baz=314,slow=22,SNR=7.6						
GUMO	**Guam**	**8.03**	**168**		**Pn**	**07 27 45.9**	**+0.5**
GUMO	**Guam**	**8.03**	**168**	P	**Pn**	**07 27 46.5**	**+1.1**
	2µm,1.0s,baz=166,slow=3.7,SNR=66						
GUMO				S	S	07 29 32.6	+14
	53nm,0.6s,baz=218,slow=22,SNR=1.8						
JMZ	**Minamidaito 2**	**11.71**	**294**		**Pn**	**07 28 30.7**	**+0.7**
JHJ2	**Mitsune**	**11.94**	**347**	Pn	**Pn**	**07 28 31.4**	**-1.2**
JHJ	**Hachijo jima 2**	**11.96**	**346**	P	**Pn**	**07 28 32.0**	**-0.8**
	68nm,0.3s,baz=250,slow=21,SNR=11						
JHJ				S	**S**	**07 30 37.2**	**-8.7**
	105nm,0.6s,baz=263,slow=20,SNR=1.4						
JOW	**Kunigami**	**14.54**	**294**	P	**P**	**07 29 02.2**	**-0.1**
	38nm,0.8s,baz=138,slow=8.5,SNR=4.9						
JMN	**Monobe**	**14.67**	**328**		**Pn**	**07 29 05.9**	**+0.7**
INU	**Inuyama**	**14.81**	**340**		**P**	**07 29 06.0**	**+0.9**
JGF	**Kuroka**	**14.94**	**342**		**P**	**07 29 06.5**	**-0.1**
MJAR	**Matsushiro Arr**	**15.60**	**345**	P	**P**	**07 29 13.4**	**-0.3**
	13nm,0.6s,baz=160,slow=8.9,SNR=31						
MJAR				S	**S**	**07 31 59.1**	**-2.8**
	15nm,0.7s,baz=241,slow=13,SNR=8.5						
MJAR				ScP	**ScP**	**07 36 57.0**	**-1.2**
	4.9nm,0.8s,baz=173,slow=2.8,SNR=9.2						
JNU	**Nakatsue**	**15.87**	**319**		**P**	**07 29 17.8**	**+0.9**
JNU	**Nakatsue**	**15.87**	**319**	P	**P**	**07 29 18.1**	**+1.3**
	18nm,0.8s,baz=98,slow=6.4,SNR=9.0						
JMM	**Marumori**	**16.45**	**354**	P	**P**	**07 29 23.9**	**+1.0**
JSD	**Sado**	**17.02**	**347**		**P**	**07 29 28.6**	**-0.5**
ERM	**Erimo**	**20.47**	**0**	P	**P**	**07 30 07.0**	**+1.6**
KSRS	**Korea Array**	**20.64**	**324**	P	**P**	**07 30 06.5**	**-0.6**
	52nm,0.6s,baz=145,slow=9.5,SNR=151						
KSRS				ScP	**ScP**	**07 37 09.5**	**+0.4**
	2.0nm,0.8s,baz=114,slow=3.0,SNR=6.1						
	52nm,0.6s						
KSAR	**Wonju Array Be**	**20.66**	**324**		**P**	**07 30 06.7**	**-0.6**
KS19	**Wonju Array Si**	**20.71**	**324**	P	**P**	**07 30 07.3**	**-0.5**
TGY	**Tagaytay City**	**22.33**	**254**	P	**P**	**07 30 22.0**	**-1.0**
	240nm,0.4s,baz=86,slow=5.7,SNR=5.9						
JKA	**Kamikawa-asahi**	**22.57**	**359**	P	**P**	**07 30 25.6**	**+0.8**
ASAJ	**Asahikawa**	**22.57**	**359**	P	**P**	**07 30 26.1**	**+1.3**
	11nm,0.6s,baz=202,slow=11,SNR=5.8						
	11nm,0.6s						
MANU	**Manus Island**	**23.75**	**169**		**P**	**07 30 35.7**	**-0.1**
JAY	**Jayapura**	**23.97**	**186**	P	**P**	**07 30 38.1**	**+0.3**
NJ2	**Nanjing**	**24.02**	**301**	*e*P	**P**	**07 30 38.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,24nm,0.7s						
USRK	**Ussuriysk Ar.**	**24.46**	**340**	P	**P**	**07 30 42.4**	**+0.5**
	26nm,0.6s,baz=163,slow=9.2,SNR=38						
	26nm,0.6s						
DL2	**Dalian**	**25.32**	**318**	P	**P**	**07 30 51.2**	**+1.6**
DL2				pmax	pmax		
	comp=Z,63nm,1.1s						
MDJ	**Mudanjiang**	**25.63**	**337**	P	**P**	**07 30 53.1**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,29nm,0.8s						
FAKI	**Fak Fak**	**26.48**	**205**	P	**P**	**07 30 58.5**	**-1.8**
CN2	**Changchun**	**26.65**	**331**	P	**P**	**07 31 00.1**	**-1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WHN	**Wuhan**	**27.31**	**295**	↑P	**P**	**07 31 07.3**	**-0.2**
WHN				pP	**pP**	**07 32 07.0**	**+0.8**
WHN				pmax	pmax		
	comp=Z,56nm,0.7s						
BNX	**BinXian**	**27.40**	**336**	↓P	**P**	**07 31 08.4**	**+0.4**
BNX				pmax	pmax		
	comp=Z,87nm,0.6s						
MYLDM	**Lahad Datu**	**28.84**	**239**	P	**P**	**07 31 21.8**	**+0.7**
MYLDM				IAmb	IAmb	07 31 24.2	
	comp=Z,47nm,0.9s						
HNS	**HongShan**	**29.23**	**309**	↑P	**P**	**07 31 24.7**	**+0.4**
HNS				pmax	pmax		
	comp=Z,63nm,0.9s						
MRSI	**Marisa**	**29.37**	**227**	P	**P**	**07 31 25.7**	**-0.1**
	comp=Z,57nm,1.0s						
TOLI2	**Tolitoli**	**29.73**	**230**		**P**	**07 31 28.7**	**-0.2**
LYN	**LuoYang**	**29.89**	**302**	↓P	**P**	**07 31 30.3**	**+0.1**
LYN				PcP	**PcP**	**07 34 25.2**	**+0.9**
LYN				pmax	pmax		
	comp=Z,28nm,0.8s						
GULI	**GuiLin**	**30.25**	**284**	P	**P**	**07 31 34.6**	**+1.2**
APSI	**Ampana**	**30.58**	**226**	P	**P**	**07 31 36.3**	**-0.1**
	comp=Z,60nm,1.0s						
HEH	**HeiHe**	**31.27**	**340**	*e*P	**P**	**07 31 42.2**	**+0.3**
HEH				pmax	pmax		
	comp=Z,130nm,0.9s						
XAN	**Xi'an**	**32.58**	**300**	P	**P**	**07 31 53.2**	**-0.5**
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC	**Hu-ho-hao-te**	**32.92**	**313**	*e*P	**P**	**07 31 57.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,28nm,0.6s						
HHC				pmax	pmax		
	comp=Z,74nm,4.0s						
PETK	**Petropavlovsk-**	**33.50**	**16**	P	**P**	**07 32 01.4**	**+0.2**
PETK	**Petropavlovsk-**	**33.50**	**16**	P	**P**	**07 32 01.6**	**+0.4**
	comp=Z,8.1nm,0.8s,baz=152,slow=7.5,SNR=13						
PETK				ScP	**ScP**	**07 37 45.7**	**-1.9**
	comp=Z,2.8nm,0.6s,baz=137,slow=3.9,SNR=6.1						
	comp=Z,8.1nm,0.8s						
HILR	**Hailar Array B**	**33.58**	**332**	P	**P**	**07 32 02.5**	**+0.5**
	comp=Z,17nm,0.5s,baz=134,slow=9.5,SNR=32						
HILR				PcP	**PcP**	**07 34 34.5**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=141,slow=4.8,SNR=1.8						
	comp=Z,17nm,0.5s						
GYA	**Guiyang**	**33.59**	**286**	↑P	**P**	**07 32 02.8**	**+0.2**
GYA				pmax	pmax		
	comp=Z,56nm,0.9s						
PET	**Petropavlovsk**	**33.67**	**17**	P	**P**	**07 32 02.6**	**-0.1**
BTO	**Baotou**	**33.88**	**312**	*e*P	**P**	**07 32 06.5**	**+1.7**
BTO				PP	**PP**	**07 33 28.1**	**-1.1**
BTO				S	**S**	**07 37 10.6**	**+5.3**
BTO				pmax	pmax		
	comp=Z,39nm,0.7s						
BTO				pmax	pmax		
	comp=Z,380nm,6.1s						
BTO				LR	LR		
	comp=Z,210nm,4.3s						
BTO				LR	LR		
	comp=Z,280nm,5.1s						
BTO				LR	LR		
	comp=Z,400nm,5.9s						
SPSI	**Sidrap Palu**	**34.09**	**225**	P	**P**	**07 32 06.9**	**+0.1**
	comp=Z,83nm,0.6s						
BNSI	**Bone**	**34.20**	**224**	P	**P**	**07 32 09.1**	**+1.4**
	comp=Z,58nm,1.1s						
KAPI	**Kappang**	**34.90**	**224**	P	**P**	**07 32 14.0**	**+0.4**
KAPI	**Kappang**	**34.90**	**224**	P	**P**	**07 32 14.1**	**+0.4**
	comp=Z,14nm,0.6s,baz=159,slow=2.0,SNR=6.5						
	comp=Z,14nm,0.6s						
KAPI	**Kappang**	**34.90**	**224**	P	**P**	**07 32 13.7**	**+0.1**
COEN	**Coen**	**35.22**	**180**	P	**P**	**07 32 16.6**	**+0.3**
COEN				IAmb	IAmb	07 32 17.8	
	comp=Z,20nm,0.8s						
MTKI	**Muara Teweh, K**	**35.45**	**235**	P	**P**	**07 32 18.8**	**+0.5**
SBUM	**Sibu**	**35.51**	**242**	P	**P**	**07 32 19.1**	**+0.2**
SBUM				IAmb	IAmb	07 32 20.8	
	comp=Z,28nm,0.6s						
MTN	**Manton Dam**	**36.09**	**200**	P	**P**	**07 32 23.1**	**-0.5**
MTN				IAmb	IAmb	07 32 24.2	
	comp=Z,19nm,0.3s						
CD2	**Chengdu**	**36.38**	**293**	P	**P**	**07 32 24.4**	**-1.6**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
SLVN	**Son La**	**36.43**	**277**	P	**P**	**07 32 27.1**	**+0.5**
EDFI	**Ende, Flores**	**36.67**	**217**	P	**P**	**07 32 28.2**	**-0.5**
	comp=Z,16nm,0.5s						
LZH	**Lanzhou**	**37.10**	**302**	*e*P	**P**	**07 32 32.5**	**+0.4**
LZH				pP	pP	07 33 35.5	+2.1
LZH				sP	sP	07 34 11.7	+2.0
LZH				pmax	pmax		
	comp=Z,54nm,1.3s						
KMI	**Kunming**	**37.16**	**284**	↑P	**P**	**07 32 33.9**	**+1.0**
KMI				pmax	pmax		
	comp=Z,37nm,0.8s						
KMI				pmax	pmax		
	comp=Z,220nm,4.4s						
LZDM	**Lanzhou Array**	**37.19**	**302**	P	**P**	**07 32 33.8**	**+0.7**
	comp=Z,25nm,0.5s,baz=142,slow=7.5,SNR=30						
LZDM				PcP	**PcP**	**07 34 45.0**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=207,slow=2.7,SNR=3.6						
	comp=Z,25nm,0.5s						
STKI	**Sintang**	**37.49**	**239**	P	**P**	**07 32 35.8**	**+0.3**
PZH	**PanZhiHua**	**38.00**	**286**	P	**P**	**07 32 40.3**	**+0.5**
PZH				pmax	pmax		
	comp=Z,90nm,0.7s						
PLAI	**Plampang**	**39.06**	**222**	P	**P**	**07 32 47.5**	**-0.9**
ULN	**Ulaanbaatar**	**39.08**	**321**	P	**P**	**07 32 48.7**	**+0.3**
SONM	**Songino Array**	**39.46**	**321**	P	**P**	**07 32 51.3**	**-0.1**
SONM	**Songino Array**	**39.46**	**321**	P	**P**	**07 32 51.7**	**+0.2**
	comp=Z,4.4nm,0.4s,baz=135,slow=9.7,SNR=19						
SONM				PcP	**PcP**	**07 34 51.5**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=148,slow=3.9,SNR=3.9						
	comp=Z,4.4nm,0.4s						
KNRA	**Kununurra**	**39.52**	**202**	P	**P**	**07 32 51.9**	**-0.2**
KNRA				IAmb	IAmb	07 32 52.6	
	comp=Z,19nm,0.6s						
KMMI	**Kalianget**	**40.27**	**228**	P	**P**	**07 33 00.0**	**+1.7**
GTA	**Gaotai**	**40.94**	**306**	*e*P	**P**	**07 33 04.5**	**+0.8**
GTA				PcP	**PcP**	**07 34 58.1**	**+0.9**
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
AMKA	**Amchitka**	**40.99**	**34**	P	**P**	**07 33 03.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**41.16**	**227**	P	**P**	**07 33 04.8**	**-0.7**
JAGI				IAmb	IAmb	07 33 05.4	
	comp=Z,26nm,0.6s						
JAGI	**Jajag, Banyuwa**	**41.16**	**227**	P	**P**	**07 33 04.5**	**-1.0**
	comp=Z,35nm,1.0s						
CHTO	**Chiang Mai**	**41.45**	**274**	P	**P**	**07 33 08.3**	**+0.5**
CHTO				IAmb	IAmb	07 33 09.5	
	comp=Z,69nm,1.2s						
CHTO	**Chiang Mai**	**41.45**	**274**	P	**P**	**07 33 08.6**	**+0.7**
CHTO	**Chiang Mai**	**41.45**	**274**	P	**P**	**07 33 08.5**	**+0.7**
CM31	**Chiang Mai Arr**	**41.52**	**274**	P	**P**	**07 33 08.8**	**+0.3**
CM31				IAmb	IAmb	07 33 11.4	
	comp=Z,50nm,0.5s						
CM31	**Chiang Mai Arr**	**41.52**	**274**	P	**P**	**07 33 09.2**	**+0.7**
	SNR=9.7						
CMAR	**Chiang Mai Arr**	**41.52**	**274**	P	**P**	**07 33 09.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**41.52**	**274**	P	**P**	**07 33 08.8**	**+0.3**
	comp=Z,22nm,0.5s,baz=80,slow=6.3,SNR=110						
CMAR				PcP	**PcP**	**07 34 59.1**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=77,slow=2.7,SNR=4.1						
CMAR				ScP	**ScP**	**07 38 17.1**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=90,slow=2.4,SNR=4.2						
	comp=Z,22nm,0.5s						
YAK	**Yakutsk**	**41.56**	**351**	P	**P**	**07 33 07.7**	**-0.5**
WR8	**Warramunga Arr**	**42.04**	**192**	P	**P**	**07 33 12.2**	**-0.3**
WRA	**Warramunga Arr**	**42.06**	**192**	P	**P**	**07 33 12.7**	**+0.1**
	comp=Z,22nm,0.6s,baz=17,slow=9.1,SNR=418						
WRA				S	**S**	**07 39 07.6**	**0.0**
	comp=Z,10nm,0.9s,baz=12,slow=14,SNR=20						
	comp=Z,22nm,0.6s						
TPI	**Tanjungpandan**	**42.23**	**240**	P	**P**	**07 33 13.8**	**-0.4**
	comp=Z,654nmcomp=Z,46nm,0.8s						
TPRI	**Tanjung Pinang**	**42.80**	**247**	P	**P**	**07 33 21.0**	**+2.3**
	comp=Z,121nm,0.8s						
FITZ	**Fitzroy Crossi**	**42.90**	**205**	P	**P**	**07 33 19.5**	**+0.1**
	comp=Z,19nm,0.6s,baz=20,slow=12,SNR=31						
	comp=Z,19nm,0.6s						
MYKOM	**Kota Tinggi**	**42.94**	**248**	P	**P**	**07 33 20.6**	**+0.8**
MYKOM				IAmb	IAmb	07 33 22.3	
	comp=Z,24nm,0.6s						
PCJI	**Pacitan**	**43.04**	**230**	P	**P**	**07 33 21.5**	**+0.9**
	comp=Z,63nm,0.9s						
SANVU	**Saraoutou**	**43.66**	**145**	P	**P**	**07 33 24.1**	**-1.3**
SANVU				IAmb	IAmb	07 33 25.7	
	comp=Z,27nm,0.7s						
KPJI	**Karang Pucung**	**44.10**	**233**	P	**P**	**07 33 28.4**	**-0.6**
	comp=Z,63nm,0.7s						
KULM	**Kulim**	**44.14**	**255**	P	**P**	**07 33 30.4**	**+1.0**
IPM	**Ipoh**	**44.16**	**254**	P	**P**	**07 33 30.1**	**+0.6**
IPM				IAmb	IAmb	07 33 31.5	
	comp=Z,60nm,0.7s						
GOMU	**GeErMu**	**44.33**	**300**	P	**P**	**07 33 32.2**	**+1.1**
GOMU				pmax	pmax		
	comp=Z,36nm,0.7s						
LEM	**Lembang**	**44.76**	**235**	P	**P**	**07 33 34.9**	**+0.5**
	comp=Z,55nm,0.6s,baz=53,slow=5.0,SNR=10						
	comp=Z,55nm,0.6s						
LEM	**Lembang**	**44.76**	**235**	P	**P**	**07 33 34.5**	**+0.1**
	comp=Z,64nm,0.7s						
KOHI	**KOHIMA**	**44.90**	**285**	*e*P	**P**	**07 33 33.6**	**-1.8**
KOHI				IAmb	IAmb	07 33 34.6	
	comp=Z,17nm,0.7s						
ZIRO	**ZIRO**	**44.99**	**288**	*e*P	**P**	**07 33 36.2**	**+0.1**
ZIRO				IAmb	IAmb	07 33 37.3	
	comp=Z,49nm,0.6s						
ITAN	**ITANAGAR**	**45.13**	**287**	*e*P	**P**	**07 33 37.7**	**+0.7**
IMP	**Imphal**	**45.13**	**284**	*e*P	**P**	**07 33 35.3**	**-1.9**
IMP				IAmb	IAmb	07 33 37.7	
	comp=Z,43nm,0.2s						
AS31	**Alice Springs**	**45.76**	**192**	P	**P**	**07 33 41.3**	**-0.6**
ASAR	**Alice Springs**	**45.77**	**192**		**P**	**07 33 41.2**	**-0.6**
ASAR	**Alice Springs**	**45.77**	**192**	P	**P**	**07 33 41.7**	**-0.2**
	comp=Z,9.2nm,0.6s,baz=15,slow=11,SNR=140						
ASAR				ScP	**ScP**	**07 38 36.7**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=14,slow=4.8,SNR=10						
ASAR				S	**S**	**07 39 58.8**	**-2.1**
	comp=Z,6.2nm,0.7s,baz=13,slow=14,SNR=24						
	comp=Z,9.2nm,0.6s						
TEZP	**TEZPUR**	**45.99**	**287**	*e*P	**

P08K	**Saint George I**	**49.28**	**32**	P		**P**	**07 34 08.2**	**0.0**
	baz=245								
UNV	**Unalaska Valle**	**49.82**	**37**	P		**P**	**07 34 12.6**	**+0.3**
UNV				IAmb		IAmb	07 34 13.8		
	comp=Z,42nm,0.8s								
UNV	**Unalaska Valle**	**49.82**	**37**	P		**P**	**07 34 12.8**	**+0.4**
	baz=250,SNR=7.1								
AKUT	**Akutan**	**50.33**	**37**	P		**P**	**07 34 16.5**	**+0.5**
WMQ	**Urumqi**	**50.66**	**310**	*e*P		**P**	**07 34 20.2**	**+1.3**
WMQ				PcP		**PcP**	**07 35 31.9**	**+0.6**
WMQ				pmax		pmax			
	comp=Z,36nm,1.1s								
TIXI	**Tiksi**	**50.85**	**354**	P		**P**	**07 34 19.4**	**-0.3**
TIXI				IAmb		IAmb	07 34 20.1		
	comp=Z,22nm,0.7s								
TIXI	**Tiksi**	**50.85**	**354**	P		**P**	**07 34 19.5**	**-0.2**
TIXI				PcP		**pwP**	**07 35 30.5**	**+0.9**
EVN	**Everest**	**51.17**	**289**	P		**P**	**07 34 23.9**	**+0.3**
GAMB	**Gambell**	**51.84**	**24**	P		**P**	**07 34 27.4**	**+0.3**
	baz=237								
FALS	**False Pass**	**51.86**	**36**	P		**P**	**07 34 27.3**	**-0.1**
	baz=252								
M11K	**Mekoryuk**	**52.48**	**29**	P		**P**	**07 34 31.4**	**-0.4**
	baz=245								
BOK	**Bokaro**	**52.56**	**284**	*e*P		**P**	**07 34 33.7**	**+0.6**
BOK				IAmb		IAmb	07 34 34.6		
	comp=Z,23nm,0.8s								
S12K	**Black Hills**	**52.85**	**35**	P		**P**	**07 34 34.3**	**-0.4**
	baz=253,SNR=6.0								
STKA	**Stephens Creek**	**53.08**	**182**	P		**P**	**07 34 36.5**	**0.0**
	comp=Z,16nm,0.4s,baz=17,slow=7.3,SNR=76								
	comp=Z,16nm,0.4s								
ZSN	**Zaisan**	**53.12**	**314**	*e*P		**P**	**07 34 37.5**	**+0.7**
SDPT	**Sand Point**	**53.62**	**36**	P		**P**	**07 34 40.1**	**-0.1**
	baz=254								
M13K	**Dall Lake**	**53.79**	**30**	P		**P**	**07 34 42.2**	**+0.9**
	baz=248								
K13K	**Kusilvak Mount**	**53.80**	**28**	P		**P**	**07 34 42.3**	**+0.9**
	baz=246								
CHNA	**Chernabura Isl**	**53.98**	**37**	P		**P**	**07 34 43.2**	**+0.5**
	baz=256								
TNA	**Tin City**	**54.16**	**23**	P		**P**	**07 34 44.8**	**+0.9**
	baz=240								
ZAA0	**Zalesovo Array**	**54.33**	**322**			**P**	**07 34 44.9**	**-0.4**
ZAA0				IAmb		IAmb	07 34 46.1		
	comp=Z,38nm,0.7s								
ZALV	**Zalesovo Beam**	**54.33**	**322**			**P**	**07 34 44.8**	**-0.5**
ZALV	**Zalesovo Beam**	**54.33**	**322**	P		**P**	**07 34 45.0**	**-0.3**
	comp=Z,38nm,0.6s,baz=87,slow=11,SNR=3.9								
ZALV				PcP		**PcP**	**07 35 44.3**	**-0.6**
	comp=Z,11nm,0.4s,baz=126,slow=3.8,SNR=10.0								
	comp=Z,38nm,0.6s								
O14K	**Tigyukauivet M**	**54.37**	**31**	P		**P**	**07 34 46.4**	**+0.9**
	baz=251								
S14K	**Fog Glacier**	**54.37**	**35**	P		**P**	**07 34 46.1**	**+0.4**
	baz=255								
N14K	**Kuskokwak Cree**	**54.39**	**31**	P		**P**	**07 34 46.8**	**+1.1**
	baz=250								
L14K	**Kuka Creek**	**54.44**	**29**	P		**P**	**07 34 46.8**	**+0.9**
	baz=248								
M14K	**Bethel**	**54.55**	**30**	P		**P**	**07 34 47.6**	**+0.8**
M14K				IAmb		IAmb	07 34 49.1		
	comp=Z,38nm,0.9s								
M14K	**Bethel**	**54.55**	**30**	P		**P**	**07 34 47.7**	**+1.0**
	baz=249,SNR=5.7								
J14K	**Nanvaranak Lak**	**54.60**	**27**	P		**P**	**07 34 47.9**	**+0.8**
	baz=246								
ANM	**Nome**	**54.64**	**24**	P		**P**	**07 34 47.9**	**+0.5**
	baz=243								
F14K	**Arctic Creek**	**54.70**	**23**	P		**P**	**07 34 49.0**	**+1.3**
	baz=242								
MKAR	**Makanchi Array**	**54.79**	**313**	P		**P**	**07 34 48.9**	**+0.1**
MKAR	**Makanchi Array**	**54.79**	**313**	P		**P**	**07 34 49.3**	**+0.5**
	comp=Z,20nm,0.5s,baz=91,slow=9.0,SNR=186								
MKAR				PcP		**PcP**	**07 35 47.0**	**+0.1**
	comp=Z,6.6nm,0.6s,baz=83,slow=5.4,SNR=7.8								
MKAR				ScP		**ScP**	**07 39 14.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=100,slow=4.6,SNR=2.8								
MKAR				S		**S**	**07 42 05.2**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=79,slow=15,SNR=1.8								
MKAR				PKP2bc		**P'P'bc**	**08 05 07.0**	**-7.0**
	comp=Z,0.9nm,0.9s,baz=254,slow=4.2,SNR=5.0								
	comp=Z,20nm,0.5s								
MAKZ	**Makanchi**	**55.00**	**313**	P		**P**	**07 34 50.5**	**+0.1**
MAKZ				IAmb		IAmb	07 34 51.8		
	comp=Z,39nm,0.9s								
MAKZ	**Makanchi**	**55.00**	**313**	P		**P**	**07 34 51.0**	**+0.7**
MAKZ				PcP		**PcP**	**07 35 47.2**	**-0.5**
O15K	**Ungalikthiuk R**	**55.05**	**32**	P		**P**	**07 34 51.3**	**+1.0**
	baz=252								
L15K	**Ungalak Mounta**	**55.09**	**29**	P		**P**	**07 34 51.6**	**+0.9**
	baz=249								
M15K	**Kasigluk River**	**55.12**	**30**	P		**P**	**07 34 51.7**	**+0.9**
	baz=251								
N15K	**Kwethluk River**	**55.23**	**31**	P		**P**	**07 34 52.8**	**+1.1**
	baz=252								
K15K	**Wolf Creek Mou**	**55.30**	**28**	P		**P**	**07 34 53.3**	**+1.3**
	baz=249								
G15K	**Niukluk**	**55.34**	**24**	P		**P**	**07 34 53.2**	**+0.9**
	baz=244								
F15K	**North Star Dit**	**55.43**	**23**	P		**P**	**07 34 54.1**	**+1.1**
	baz=243								
H16K	**Elim**	**55.90**	**25**	P		**P**	**07 34 57.0**	**+0.8**
	baz=246								
P16K	**Nushagak River**	**55.91**	**32**	P		**P**	**07 34 57.4**	**+1.0**
	baz=254								
N16K	**Nishlik Lake**	**55.95**	**31**	P		**P**	**07 34 58.0**	**+1.3**
	baz=253,SNR=12								
L16K	**Owhat River**	**56.01**	**29**	P		**P**	**07 34 57.9**	**+0.8**
	baz=251								
O16K	**Kokwok River B**	**56.02**	**32**	P		**P**	**07 34 58.1**	**+0.9**
	baz=254,SNR=7.1								
M16K	**Timber Creek**	**56.02**	**30**	P		**P**	**07 34 58.2**	**+1.0**
	baz=252								
J16K	**Anvik River**	**56.05**	**27**	P		**P**	**07 34 58.7**	**+1.3**
	baz=249								
I17K	**Unalakleet**	**56.23**	**26**	P		**P**	**07 34 59.9**	**+1.3**
	baz=249								
C16K	**Lisburne Hills**	**56.39**	**20**	P		**P**	**07 35 00.4**	**+0.8**
	baz=241								
R17L	**Mt. Peulik Vol**	**56.40**	**34**	P		**P**	**07 35 00.3**	**+0.3**
	baz=257								
CHIR	**Chirikof Islan**	**56.41**	**36**	P		**P**	**07 35 00.6**	**+0.6**
	baz=259								
O17K	**Koliganek Bris**	**56.55**	**32**	P		**P**	**07 35 02.0**	**+1.0**
	baz=255,SNR=7.0								
SHLS	**Shalkode**	**56.58**	**308**	⇑ *i*P		**P**	**07 35 00.1**	**-1.6**
L17K	**Donlin**	**56.67**	**29**	P		**P**	**07 35 03.0**	**+1.2**
	baz=252								
N17K	**Nushagak Hills**	**56.71**	**31**	P		**P**	**07 35 03.2**	**+1.2**
	baz=254								
P17K	**Kvichak River**	**56.73**	**32**	P		**P**	**07 35 03.1**	**+1.0**
	baz=256								
J17K	**VABM Dome**	**56.74**	**27**	P		**P**	**07 35 03.5**	**+1.3**
	baz=250,SNR=5.9								
Q17K	**Contact Creek**	**56.79**	**34**	P		**P**	**07 35 03.1**	**+0.3**
	baz=257								
M17K	**Holitna River**	**56.84**	**30**	P		**P**	**07 35 04.1**	**+1.2**
M17K	**Holitna River**	**56.84**	**30**	P		**P**	**07 35 03.9**	**+1.0**
	baz=253,SNR=5.6								
K17K	**Iditarod**	**56.85**	**28**	P		**P**	**07 35 04.3**	**+1.4**
	baz=252								
G17K	**Kiwalik Mounta**	**56.85**	**24**	P		**P**	**07 35 04.2**	**+1.2**
	baz=248								
D17K	**Noatak River**	**56.88**	**22**	P		**P**	**07 35 04.3**	**+1.3**
	baz=244								
UZB	**Uzynbulak**	**56.91**	**308**	⇑ *i*P		**P**	**07 35 04.5**	**+0.5**
H17K	**Granite Mounta**	**56.93**	**25**	P		**P**	**07 35 04.7**	**+1.2**
	baz=249								
F17K	**Baldwin Pennin**	**57.00**	**23**	P		**P**	**07 35 04.9**	**+1.0**
	baz=246								
E17K	**Hotham Inlet**	**57.05**	**22**	P		**P**	**07 35 05.4**	**+1.1**
	baz=246,SNR=5.4								
RDOG	**Red Dog Mine**	**57.09**	**21**	P		**P**	**07 35 05.7**	**+1.1**
	baz=244								
C17K	**DeLong Mountai**	**57.19**	**21**	P		**P**	**07 35 06.4**	**+1.2**
	baz=243								
Q18K	**Katmai Hardscr**	**57.33**	**33**	P		**P**	**07 35 06.6**	**+0.1**
	baz=257								
SII	**Sitkinak Islan**	**57.34**	**36**	P		**P**	**07 35 07.4**	**+0.9**
	baz=259								
SATY	**Saty**	**57.35**	**308**	*e*P		**P**	**07 35 07.6**	**+0.6**
PRZ	**Przheval'sk**	**57.36**	**307**	P		**P**	**07 35 07.5**	**+0.4**
N18K	**Kilae Creek**	**57.37**	**31**	P		**P**	**07 35 07.9**	**+1.2**
	baz=255								
P18K	**Big Mountain,**	**57.38**	**32**	P		**P**	**07 35 07.4**	**+0.6**
	baz=257								
TDK	**Taldyqorghan**	**57.38**	**310**	*e*P		**P**	**07 35 07.9**	**+0.8**
	comp=Z,25nm,0.6s								
R18K	**Karluk**	**57.39**	**35**	P		**P**	**07 35 07.1**	**+0.4**
	baz=259								
L18K	**Granite Mounta**	**57.42**	**29**	P		**P**	**07 35 08.4**	**+1.5**
	baz=254								
O18K	**Koktuh Hills**	**57.50**	**32**	P		**P**	**07 35 08.7**	**+1.1**
	baz=256,SNR=6.3								
KURK	**Kurchatov**	**57.58**	**317**			**P**	**07 35 07.9**	**-0.3**
KURK	**Kurchatov**	**57.58**	**317**	P		**P**	**07 35 08.3**	**0.0**
KURK	**Kurchatov**	**57.58**	**317**	P		**P**	**07 35 08.3**	**0.0**
M18K	**Stony River**	**57.61**	**30**	P		**P**	**07 35 09.6**	**+1.3**
	baz=255,SNR=9.6								
E18K	**Tukpahlearik C**	**57.62**	**22**	P		**P**	**07 35 09.5**	**+1.2**
	baz=246								
H18K	**Honhosa River**	**57.62**	**25**	P		**P**	**07 35 09.0**	**+0.7**
	baz=250								
KURBB	**Kurchatov Arra**	**57.63**	**317**	P		**P**	**07 35 08.7**	**+0.1**
	comp=Z,97nm,0.6s,baz=94,slow=7.5,SNR=563								
KURBB				S		**S**	**07 42 40.8**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=296,slow=6.6,SNR=6.9								
	comp=Z,97nm,0.6s								
F18K	**Selawik**	**57.65**	**23**	P		**P**	**07 35 09.4**	**+1.0**
	baz=248								
J18K	**Innoko River**	**57.77**	**27**	P		**P**	**07 35 10.3**	**+1.0**
	baz=253								
G18K	**Tagagawik**	**57.77**	**24**	P		**P**	**07 35 10.1**	**+0.8**
	baz=249,SNR=7.5								
TARG	**Taragay, Kyrgy**	**57.81**	**307**	P		**P**	**07 35 11.3**	**+0.7**
TARG				IAmb		IAmb	07 35 12.9		
	comp=Z,22nm,0.9s								
C18K	**Utukok River**	**57.92**	**21**	P		**P**	**07 35 11.0**	**+0.6**
	baz=245								
OHAK	**Old Harbor**	**57.94**	**35**	P		**P**	**07 35 10.7**	**+0.1**
	baz=260								
O19K	**Port Alsworth**	**58.01**	**32**	P		**P**	**07 35 12.0**	**+0.9**
O19K				IAmb		IAmb	07 35 12.9		
	comp=Z,34nm,0.8s								
O19K	**Port Alsworth**	**58.01**	**32**	P		**P**	**07 35 12.0**	**+0.9**
	baz=257,SNR=6.7								
B18K	**Kokolik River**	**58.03**	**20**	P		**P**	**07 35 12.3**	**+1.2**
	baz=244								
N19K	**Bonanza Creek**	**58.07**	**31**	P		**P**	**07 35 12.8**	**+1.2**
	baz=256,SNR=9.8								
GCSA	**Galena City Sc**	**58.09**	**26**	P		**P**	**07 35 12.1**	**+0.6**
	baz=252								
NRIK	**Noril'sk**	**58.17**	**340**	P		**P**	**07 35 11.5**	**-0.5**
NRIK				IAmb		IAmb	07 35 13.0		
	comp=Z,30nm,0.8s								
NRIK	**Noril'sk**	**58.17**	**340**	P		**P**	**07 35 12.1**	**+0.1**
	comp=Z,24nm,0.7s,baz=111,slow=8.4,SNR=45								
NRIK				PcP		**PcP**	**07 35 59.9**	**+0.3**
	comp=Z,9.1nm,0.8s,baz=152,slow=2.1,SNR=5.0								
NRIK				ScP		**ScP**	**07 39 29.0**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=102,slow=5.0,SNR=4.5								
	comp=Z,24nm,0.7s								
L19K	**White Mountain**	**58.23**	**29**	P		**P**	**07 35 13.6**	**+1.0**
	baz=255								
KDJ	**Kajisay**	**58.27**	**307**	P		**P**	**07 35 14.0**	**+0.6**
KDJ				IAmb		IAmb	07 35 15.5		
	comp=Z,44nm,1.2s								
MDOK	**Medeo**	**58.35**	**308**	*e*P		**P**	**07 35 14.6**	**+0.7**
M19K	**Big River Lodg**	**58.38**	**30**	P		**P**	**07 35 14.7**	**+1.2**
	baz=256								
J19K	**Poorman**	**58.39**	**27**	P		**P**	**07 35 14.7**	**+1.1**
	baz=254,SNR=11								
KDAK	**Kodiak Island**	**58.41**	**35**	P		**P**	**07 35 14.5**	**+0.7**
	baz=260								
TNSS	**Tian-Shan**	**58.42**	**308**	*e*P		**P**	**07 35 15.1**	**+0.4**
F19K	**Shaleruckik Mo**	**58.43**	**23**	P		**P**	**07 35 14.3**	**+0.5**
	baz=250								
P19K	**Oil Pt**	**58.43**	**32**	P		**P**	**07 35 14.4**	**+0.4**
	baz=258								
AAA	**Alma-Ata**	**58.45**	**308**	*e*P		**P**	**07 35 15.3**	**+0.8**
	comp=Z,44nm,0.6s								
H19K	**Roundabout Mou**	**58.51**	**25**	P		**P**	**07 35 15.8**	**+1.4**
	baz=252								
A19K	**Wainwright**	**58.63**	**19**	P		**P**	**07 35 16.6**	**+1.5**
	baz=244								
C19K	**Lookout Ridge**	**58.64**	**21**	P		**P**	**07 35 16.8**	**+1.5**
	baz=247,SNR=7.5								
Q20K	**Shuyak Island**	**58.66**	**34**	P		**P**	**07 35 16.4**	**+0.9**
	baz=260								
L20K	**Farewell, AK**	**58.75**	**29**	P		**P**	**07 35 17.3**	**+1.1**
	baz=256								
O20K	**Slope Mountain**	**58.82**	**32**	P		**P**	**07 35 17.2**	**+0.5**
	baz=259								
E19K	**Redstone River**	**58.84**	**23**	P		**P**	**07 35 17.7**	**+1.1**
	baz=250								
K20K	**Telida**	**58.88**	**28**	P		**P**	**07 35 18.4**	**+1.4**
	baz=255								
D19K	**Kuna River**	**58.90**	**22**	P		**P**	**07 35 18.0**	**+0.9**
	baz=248								
M20K	**Styx River**	**58.95**	**30**	P		**P**	**07 35 19.0**	**+1.4**
	baz=257								
ULHL	**Ulahol**	**58.96**	**307**	P		**P**	**07 35 19.4**	**+1.1**
	SNR=6.5								
J20K	**Nowinta River**	**59.06**	**27**	P		**P**	**07 35 19.9**	**+1.7**
	baz=255								
I20K	**Naaghedeneel**	**59.09**	**26**	P		**P**	**07 35 19.5**	**+1.2**
	baz=254								
H20K	**Anotleneega Mo**	**59.12**	**25**	P		**P**	**07 35 19.9**	**+1.3**
	baz=253								
SMLA	**Simla**	**59.14**	**294**	*e*P		**P**	**07 35 18.9**	**-0.4**
SMLA				IAmb		IAmb	07 35 20.0		
	comp=Z,47nm,0.6s								
BOOM	**Boomskoye usch**	**59.18**	**307**	P		**P**	**07 35 20.3**	**+0.7**
BOOM				IAmb		IAmb	07 35 21.5		
	comp=Z,30nm,0.7s								
N20K	**Mount Spurr**	**59.24**	**31**	P		**P**	**07 35 20.0**	**+0.5**
	baz=258								
SPCR	**Spurr Chakacha**	**59.24**	**31**	P		**P**	**07 35 20.5**	**+0.9**
	baz=258								
F20K	**Avaraart Lake**	**59.26**	**24**	P		**P**	**07 35 20.6**	**+1.1**
	baz=252								
KSH	**Kashi**	**59.29**	**304**	P		**P**	**07 35 23.9**	**+3.5**
KSH				pmax		pmax			
	comp=Z,29nm,0.8s								
TKM2	**Tokmak 2**	**59.42**	**308**	P		**P**	**07 35 22.1**	**+0.8**
	SNR=33								
E20K	**Nigu River**	**59.49**	**22**	P		**P**	**07 35 22.1**	**+1.0**
	baz=250								
D20K	**Etivluk River**	**59.50**	**22**	P		**P**	**07 35 22.2**	**+1.1**
	baz=250								
PPLA	**Purkeypile**	**59.60**	**29**	P		**P**	**07 35 22.9**	**+0.8**
	baz=258,SNR=6.4								
BRSE	**Bradley Lake S**	**59.69**	**32**	P		**P**	**07 35 22.5**	**-0.1**
	baz=261								
IMAR	**Indian Mountai**	**59.71**	**25**	P		**P**	**07 35 23.0**	**+0.4**
SKT	**Skwentna**	**59.71**	**30**	P		**P**	**07 35 22.7**	**0.0**
	baz=259,SNR=12								
DHRM	**DHARAMSHALA**	**59.72**	**296**	*e*P		**P**	**07 35 22.5**	**-1.0**
DHRM				IAmb		IAmb	07 35 23.8		
	comp=Z,27nm,0.7s								
CHUM	**Lake Minchumin**	**59.77**	**28**	P		**P**	**07 35 24.2**	**+1.2**
	baz=257,SNR=5.8								
B20K	**Meade River**	**59.78**	**20**	P		**P**	**07 35 24.1**	**+1.2**
	baz=249								
G21K	**Allakaket**	**59.95**	**24**	P		**P**	**07 35 25.4**	**+1.2**
	baz=254								
SUA	**Susitna One**	**59.98**	**30**	P		**P**	**07 35 24.7**	**0.0**
	baz=260								
H21K	**Melozitna Rive**	**59.99**	**26**	P		**P**	**07 35 26.0**	**+1.4**
	baz=255								
F21K	**Alatna River**	**60.15**	**24**	P		**P**	**07 35 26.5**	**+0.9**
	baz=254,SNR=8.0								
USP	**Ospenovka**	**60.21**	**308**	P		**P**	**07 35 27.1**	**+0.7**
	SNR=18								
I21K	**Tanana**	**60.21**	**26**	P		**P**	**07 35 27.4**	**+1.5**
	baz=256								
AAK	**Ala-Archa**	**60.24**	**308**	P		**P**	**07 35 27.4**	**+0.6**
AAK	**Ala-Archa**	**60.24**	**308**	P		**P**	**07 35 27.6**	**+0.8**
	SNR=13								
AAK	**Ala-Archa**	**60.24**	**308**	*i* P		**P**	**07 35 27.4**	**+0.6**
	SNR=15								
AAK	**Ala-Archa**	**60.24**	**308**	P		**P**	**07 35 27.5**	**+0.7**
AAK				PcP		**PcP**	**07 36 08.4**	**-0.3**
UCH	**Uchtor**	**60.24**	**307**	P		**P**	**07 35 28.7**	**+1.5**
	SNR=5.9								
C21K	**Knifeblade Rid**	**60.27**	**21**	P		**P**	**07 35 27.5**	**+1.2**
	baz=251								
BHPL	**Bhopal**	**60.29**	**285**	*e*P		**P**	**07 35 27.1**	**-0.2**
BHPL				IAmb		IAmb	07 35 27.7		
	comp=Z,28nm,0.5s								
O22K	**Cooper Landing**	**60.31**	**32**	P		**P**	**07 35 26.8**	**+0.2**
	baz=261								
E21K	**Killik River**	**60.33**	**22**	P		**P**	**07 35 27.6**	**+0.9**
	baz=253								
M22K	**Willow**	**60.33**	**30**	P		**P**	**07 35 26.8**	**0.0**
	baz=260,SNR=6.5								
CUT	**Chulitna**	**60.38**	**29**	P		**P**	**07 35 26.7**	**-0.4**
	baz=260								
SEW	**Seward**	**60.39**	**32**	P		**P**	**07 35 27.3**	**+0.1**
	baz=262								
BPAW	**Bear Paw Mtn.**	**60.39**	**27**	P		**P**	**07 35 28.1**	**+0.9**
	baz=258								
RC01	**Rabbit Creek A**	**60.40**	**31**	P		**P**	**07 35 27.4**	**+0.1**
	baz=261								
A21K	**Barrow**	**60.43**	**19**	P		**P**	**07 35 28.1**	**+0.8**
	baz=248								
B21K	**Ikpikpuk River**	**60.47**	**21**	P		**P**	**07 35 28.7**	**+1.1**
	baz=251,SNR=8.9								
TRF	**Thorofare Moun**	**60.56**	**28**	P		**P**	**07 35 28.8**	**+0.2**
	baz=259,SNR=13								
H22K	**Ishtalitna Cre**	**60.62**	**25**	P		**P**	**07 35 30.0**	**+1.2**
	baz=257,SNR=10								
MLY	**Manley**	**60.69**	**26**	P		**P**	**07 35 30.2**	**+0.9**
	baz=258								
F22K	**John River**	**60.71**	**24**	P		**P**	**07 35 30.8**	**+1.5**
	baz=255,SNR=20								
EKS2	**Erkin-Say**	**60.77**	**308**	P		**P**	**07 35 31.0**	**+0.7**
	SNR=7.5								
PMR	**Palmer**	**60.77**	**30**	P		**P**	**07 35 29.5**	**-0.2**
	baz=261,SNR=11								
A22K	**Sinclair Lake**	**60.81**	**19**	P		**P**	**07 35 31.1**	**+1.2**
	baz=250								
G22K	**Bettles**	**60.82**	**24**	P		**P**	**07 35 30.8**	**+0.8**
	baz=256								
GHO	**Glory Hole Cre**	**60.89**	**30**	P		**P**	**07 35 30.8**	**+0.1**
GHO				IAmb		IAmb	07 35 31.6		
	comp=Z,29nm,0.6s								
D22K	**Ayikyak River**	**60.91**	**22**	P		**P**	**07 35 32.1**	**+1.5**
	baz=254,SNR=39								
E22K	**Anaktuvuk Pass**	**61.01**	**23**	P		**P**	**07 35 32.6**	**+1.2**
	baz=255								
PWL	**Port Wells**	**61.04**	**31**	P		**P**	**07 35 31.9**	**+0.3**
	baz=262,SNR=14								
KNK	**Knik Glacier**	**61.06**	**31**	P		**P**	**07 35 32.0**	**+0.3**
	baz=262,SNR=9.6								
B22K	**Teshekpuk Lake**	**61.09**	**20**	P		**P**	**07 35 32.7**	**+1.0**
	baz=252,SNR=6.7								
SML	**Sawmill**	**61.18**	**30**	P		**P**	**07 35 32.9**	**+0.4**
	baz=262,SNR=11								
MCK	**McKinley**	**61.21**	**28**	P		**P**	**07 35 32.6**	**-0.1**
	baz=260,SNR=14								
WAT1	**Susitna Watana**	**61.23**	**29**	P		**P**	**07 35 32.6**	**-0.3**
	baz=261								
I23K	**Minto, Yukon-K**	**61.29**	**26**	P		**P**	**07 35 33.8**	**+0.7**
I23K				IAmb		IAmb	07 35 35.5		
	comp=Z,28nm,0.6s								
I23K	**Minto, Yukon-K**	**61.29**	**26**	P		**P**	**07 35 33.9**	**+0.7**
	baz=259,SNR=20								
NEA2	**Nenana**	**61.30**	**27**	P		**P**	**07 35 33.5**	**+0.1**
NEA2				IAmb		IAmb	07 35 34.6		
	comp=Z,17nm,0.6s								
NEA2	**Nenana**	**61.30**	**27**	P		**P**	**07 35 33.7**	**+0.4**
	baz=260,SNR=8.2								
G23K	**Bananza Creek**	**61.34**	**25**	P		**P**	**07 35 34.6**	**+1.1**
	baz=257								
H23K	**Yukon River**	**61.34**	**26**	P		**P**	**07 35 34.9**	**+1.3**
	baz=258								
COLD	**Coldfoot**	**61.39**	**24**	P		**P**	**07 35 35.3**	**+1.5**
	baz=257,SNR=10								
M23K	**Glacier View**	**61.46**	**30**	P		**P**	**07 35 34.5**	**+0.1**
	baz=262								
WAT6	**Susitna Watana**	**61.56**	**29**	P		**P**	**07 35 35.5**	**+0.2**
	baz=262,SNR=15								
D23K	**Nanushuk River**	**61.63**	**22**	P		**P**	**07 35 37.1**	**+1.7**
	baz=256								
GLI	**Glacier Island**	**61.65**	**31**	P		**P**	**07 35 35.9**	**+0.3**
	baz=263,SNR=5.8								
SCM	**Sheep Creek Mo**	**61.65**	**30**	P		**P**	**07 35 36.3**	**+0.5**
	baz=263,SNR=6.8								
PALK	**Pallekele**	**61.72**	**267**	P		**P**	**07 35 37.5**	**+0.6**
E23K	**Chandalar**	**61.79**	**23**	P		**P**	**07 35 38.3**	**+1.7**
	baz=257								
DHY	**Denali Highway**	**61.80**	**29**	P		**P**	**07 35 36.9**	**+0.1**
	baz=262,SNR=7.2								
CCB	**Clear Creek Bu**	**61.85**	**27**	P		**P**	**07 35 36.9**	**0.0**
COLA	**College**	**61.87**	**27**	P		**P**	**07 35 37.0**	**0.0**
COLA				IAmb		IAmb	07 35 39.0		
	comp=Z,24nm,0.5s								
COLA	**College**	**61.87**	**27**	P		**P**	**07 35 37.1**	**+0.2**
	baz=260								
COLA	**College**	**61.87**	**27**	P		**P**	**07 35 37.2**	**+0.2**
C23K	**Itkillik River**	**61.87**	**21**	P		**P**	**07 35 38.3**	**+1.3**
	baz=255,SNR=27								
TOLK	**Toolik Lake Re**	**61.94**	**23**	P		**P**	**07 35 38.8**	**+1.3**
	baz=257,SNR=27								
H24K	**Noodor Dome**	**62.02**	**26**	P		**P**	**07 35 38.4**	**+0.3**
H24K				IAmb		IAmb	07 35 40.0		
	comp=Z,21nm,0.7s								
H24K	**Noodor Dome**	**62.02**	**26**	P		**P**	**07 35 39

baz=261,SNR=11
CHM Chimkent 63.87 308 *e*P P 07 35 51.4 +0.8
comp=Z,14nm,0.5s
I26K Coal Creek Min 63.90 27 P P 07 35 50.0 -0.3
baz=265
MESA MESA 64.13 32 P P 07 35 52.1 0.0
baz=268
C27K Jago River 64.19 22 P P 07 35 52.9 +0.8
C27K IAmb IAmb 07 35 54.3
comp=Z,22nm,0.8s
C27K Jago River 64.19 22 P P 07 35 53.3 +1.2
baz=262,SNR=18
M27K Edge Creek, AK 64.25 30 P P 07 35 53.6 +0.8
baz=267,SNR=10.0
K27K Chicken 64.26 28 P P 07 35 53.5 +0.9
baz=266
L27K Beaver Creek, 64.31 29 P P 07 35 53.8 +0.7
baz=267
CTG Chitna Glacier 64.45 32 P P 07 35 54.8 +0.7
baz=268,SNR=6.8
I27K Kandik River 64.56 26 P P 07 35 55.1 +0.5
baz=266
LOGN Logan Glacier 64.62 32 P P 07 35 55.3 +0.1
G27K Doyon Strip 64.64 25 P P 07 35 56.2 +1.1
baz=265
H27K Steamboat Moun 64.64 26 P P 07 35 56.6 +1.5
baz=266,SNR=24
POO Poona 64.66 281 *e*P P 07 35 56.0 -0.1
BVCY Beaver Creek 64.73 30 P P 07 35 56.4 +0.7
baz=268
E27K Coleen River 64.78 24 P P 07 35 57.3 +1.3
baz=265,SNR=18
TRD Trivandrum 64.78 269 *e*P P 07 35 56.8 -0.1
YUK3 Moose Creek 64.90 31 P P 07 35 57.8 +0.8
baz=269,SNR=11
PINM Pinnacle 64.98 33 P P 07 35 58.3 +0.8
baz=270
O28M Mount Upton 65.01 32 P P 07 35 58.9 +1.0
baz=270
D27M Malcolm River 65.11 22 P P 07 35 59.4 +1.4
baz=265,SNR=19
YUK8 Steele Glacier 65.22 31 P P 07 36 00.2 +1.0
baz=270,SNR=8.7
I28M Miner Creek 65.25 27 P P 07 35 60.0 +0.9
baz=268,SNR=20
KBL Kabul 65.38 299 P P 07 36 00.3 -0.3
KBL Kabul 65.38 299 P P 07 36 00.9 +0.3
SNR=16
F28M Old Crow 65.39 24 P P 07 36 01.1 +1.2
baz=267,SNR=29
PNL Peninsula 65.41 33 P P 07 36 01.1 +1.0
baz=271
DAWY Dawson 65.44 28 P P 07 36 01.1 +0.8
baz=269,SNR=14
E28M Babbage River 65.57 23 P P 07 36 02.6 +1.6
baz=266,SNR=32
YUK4 Talbot Arm 65.76 31 P P 07 36 04.3 +1.7
baz=271,SNR=10
O29M Mount Kennedy 65.81 32 P P 07 36 04.3 +1.5
baz=271,SNR=11
M29M Somme Creek 65.84 30 P P 07 36 04.3 +1.4
baz=270,SNR=30
D28M Stokes Point 65.90 22 P P 07 36 04.1 +1.1
baz=267
YUK6 Outpost Mounta 65.91 32 P P 07 36 05.0 +1.5
baz=271,SNR=9.4
H29M Whitestone 65.92 26 P P 07 36 04.3 +1.1
baz=269,SNR=15
L29M L29M 65.99 29 P P 07 36 05.3 +1.5
baz=270,SNR=31
G29M Pine Creek 66.08 25 P P 07 36 05.7 +1.4
baz=269,SNR=17
E29M Blow River 66.17 23 P P 07 36 05.3 +0.6
E29M Blow River 66.17 23 P P 07 36 05.8 +1.0
baz=268,SNR=11
P29M Windy Craggy 66.25 33 P P 07 36 06.9 +1.4
baz=272
K29M Barlow Dome 66.26 28 P P 07 36 06.9 +1.3
baz=270,SNR=26
HYT Haines Junctio 66.33 32 P P 07 36 06.8 +0.7
HYT IAmb IAmb 07 36 08.5
comp=Z,22nm,1.0s
HYT Haines Junctio 66.33 32 P P 07 36 07.5 +1.4
baz=272,SNR=19
N30M Aishikik Lake 66.51 31 P P 07 36 08.4 +1.3
baz=272,SNR=17
EPYK Eagle Plains 66.59 26 P P 07 36 08.4 +0.9
baz=270,SNR=18
M30M Minto, Yukon 66.62 30 P P 07 36 08.9 +1.1
baz=272,SNR=12
P30M Million Dollar 66.63 32 P P 07 36 09.4 +1.5
baz=273
I30M Mount Dempster 66.74 27 P P 07 36 09.4 +0.8
baz=271
J30M Hart River 66.77 28 P P 07 36 09.8 +1.0
baz=271
G30M tAoh Zraii Nji 66.79 25 P P 07 36 09.3 +0.6
baz=270,SNR=17
F30M Barrier River 66.95 24 P P 07 36 10.9 +1.2
baz=270
PLBC Pleasant Camp 66.96 33 P P 07 36 11.0 +1.2
baz=273,SNR=12
MAYO Mayo, Yukon 66.99 29 P P 07 36 11.2 +1.2
baz=272
O30N Mendenhall 67.03 32 P P 07 36 11.1 +0.8
baz=273,SNR=5.3
S31K Pelican 67.13 35 P P 07 36 11.9 +1.0
baz=274
N31M Braeburn, Yuko 67.14 31 P P 07 36 12.3 +1.2
baz=273,SNR=13
SKAG Skagway 67.49 33 P P 07 36 14.3 +1.1
baz=274
H31M Peel River 67.57 26 P P 07 36 14.5 +0.8
baz=272,SNR=16
WHY Whitehorse 67.63 32 P P 07 36 15.2 +1.1
baz=274,SNR=9.9
F31M Tsiigehtchic 67.74 24 P P 07 36 14.9 +0.3
baz=272,SNR=5.8
M31M Drury Creek, Y 67.75 30 P P 07 36 15.5 +0.7
baz=274,SNR=12
INK Inuvik 67.79 24 P P 07 36 15.0 +0.2
baz=272,SNR=11
R32K Eaglecrest 68.01 34 P P 07 36 17.1 +0.7
baz=275
S32K Killisnoo 68.06 35 P P 07 36 17.5 +0.9
baz=276
P32M Atlin 68.30 33 P P 07 36 19.2 +0.9
baz=276,SNR=6.3
N32M Quiet Lake 68.46 31 P P 07 36 20.0 +0.7
baz=276
P33M Teslin, Yukon 68.69 32 P P 07 36 21.5 +0.9
baz=276,SNR=8.7
Q32M Nakina River 69.11 34 P P 07 36 24.6 +1.2
baz=277
WRAK Wrangell Islan 69.39 36 P P 07 36 25.6 +0.7
baz=278
ARTI Arti 69.50 324 P P 07 36 25.4 -0.2
ARTI Arti 69.50 324 P P 07 36 25.4 -0.2
ARTI PcP PcP 07 36 45.5 -1.0
ABKAR Akbulak array 69.65 316 P P 07 36 26.2 -0.4
R33M Jennings River 69.71 33 P P 07 36 28.3 +1.3
baz=278,SNR=5.9
S34M Telegraph Cree 69.84 35 P P 07 36 29.0 +1.4
baz=278,SNR=6.8
A36M Sachs Harbour 70.26 19 P P 07 36 30.4 +0.5
baz=278,SNR=6.3
DLBC Dease Lake 70.34 34 P P 07 36 32.2 +1.5
baz=279,SNR=7.8
T35M Bob Quinn 70.45 35 P P 07 36 32.4 +1.0
baz=279
WTLY Watson Lake, Y 70.69 32 P P 07 36 33.1 +0.4
WTLY IAmb IAmb 07 36 35.0
comp=Z,31nm,0.9s
WTLY Watson Lake, Y 70.69 32 P P 07 36 34.1 +1.3
baz=280,SNR=25
C36M Paulatuk 71.08 22 P P 07 36 35.0 +0.1
baz=280
LIRD Liard River Hi 72.16 32 P P 07 36 42.3 +0.8
baz=282
WRGLY Wrigley 72.58 28 P P 07 36 44.7 +0.9
baz=283,SNR=5.6
TOAD Toad River Com 72.72 33 P P 07 36 45.5 +0.7
baz=283,SNR=10
KOTAN Kotaneelee Air 73.01 32 P P 07 36 46.9 +0.5
baz=284
NGCH Negor - Chabah 74.17 291 P P 07 36 54.7 +1.0
HOPEN Hopen 75.46 348 *e*P P 07 37 00.8 +0.7
ALE Alert 75.49 3 P P 07 37 00.6 +0.3

SPA0 Spitsbergen Ar 76.03 350 *e*P P 07 37 03.8 +0.4
SPITS Spitsbergen Ar 76.03 350 P P 07 37 03.6 +0.2
comp=Z,5.2nm,0.4s,baz=97,slow=7.1,SNR=41
comp=Z,5.2nm,0.4s
KBS Kingsbay 76.19 351 *e*P P 07 37 04.9 +0.7
KBS Kingsbay 76.19 351 *i*P P 07 37 04.9 +0.7
NOR Nord 76.61 357 *i*P P 07 37 06.7 +0.1
NOR IAmb IAmb 07 37 08.0
comp=Z,19nm,1.3s
JLN Jalan Bani Buh 76.63 289 P P 07 37 08.0 +0.2
YKA Yellowknife Ar 76.67 28 P P 07 37 07.3 +0.1
comp=Z,21nm,0.6s,baz=303,slow=9.5,SNR=82
comp=Z,21nm,0.6s
WBK Wadi Bani Khal 76.87 289 P P 07 37 09.4 +0.3
WSAR Wadi Sarin 76.98 290 P P 07 37 09.8 +0.1
SMDO Samad 77.54 290 P P 07 37 13.0 +0.1
JMDO Jabal Madar 77.71 289 P P 07 37 13.6 -0.2
HOQ Hoqain 78.02 291 P P 07 37 16.0 +0.5
SNR=6.8
BANOM Banah 78.17 293 P P 07 37 16.8 +0.6
BANOM Banah 78.17 293 P P 07 37 16.6 +0.4
MHTO MHTO 78.26 288 P P 07 37 17.0 +0.3
SNR=8.8
SHME Shamm 78.27 293 P P 07 37 17.6 +0.9
SNR=5.6
SHME Shamm 78.27 293 *i*P P 07 37 17.4 +0.8
SNR=16
MDH Madha 78.36 293 P P 07 37 17.8 +0.6
MASF Masafi 78.46 293 P P 07 37 18.4 +0.6
MSFE Esma-Masafi 78.47 293 *i*P P 07 37 18.1 +0.3
SNR=8.0
SOHO SOHO 78.53 291 P P 07 37 18.2 +0.1
SOHO SOHO 78.53 291 *i*P P 07 37 17.7 -0.5
SNR=20
KEV Kevo 78.54 341 P P 07 37 17.4 +0.1
UOSS Minazif 78.56 292 P P 07 37 18.3 0.0
UOSS Minazif 78.56 292 *i*P P 07 37 18.1 -0.2
SNR=7.3
HATD Hatta, Dubai 78.66 292 P P 07 37 19.5 +0.7
SNR=6.4
HATD Hatta, Dubai 78.66 292 *i*P P 07 37 18.7 -0.1
SNR=16
ASHO Ashiyiah 78.76 292 P P 07 37 19.9 +0.4
SNR=6.9
ASHO Ashiyiah 78.76 292 *i*P P 07 37 19.5 0.0
SNR=18
ARQ Araqi 78.79 291 P P 07 37 19.7 +0.1
DQM DQM 78.98 287 P P 07 37 20.9 +0.3
HAMF Hammerfest 79.00 343 *e*P P 07 37 19.6 -0.1
NAZ Nazwa, Dubai 79.01 293 P P 07 37 20.8 +0.1
NAZ Nazwa, Dubai 79.01 293 *i*P P 07 37 20.8 +0.1
SNR=6.4
ARA0 ARCESS Array S 79.10 341 *e*P P 07 37 20.7 +0.4
ARCES ARCESS Array B 79.10 341 P P 07 37 20.1 -0.2
ARCES ARCESS Array B 79.10 341 P P 07 37 20.5 +0.1
comp=Z,44nm,0.6s,baz=75,slow=8.6,SNR=299
ARCES PKiKP **PKiKP** 07 42 50.1 -0.8
comp=Z,2.3nm,1.0s,baz=64,slow=2.1,SNR=6.5
comp=Z,44nm,0.6s
FAQ Al Faqa, Dubai 79.15 292 P P 07 37 21.6 +0.1
FAQ Al Faqa, Dubai 79.15 292 P P 07 37 21.3 -0.1
ALNE Al Ain 79.23 292 P P 07 37 22.7 +0.7
SNR=6.4
ALNE Al Ain 79.23 292 *i*P P 07 37 21.9 0.0
SNR=7.5
ASUD Al Ashush, Dub 79.41 292 P P 07 37 23.5 +0.6
ASUD Al Ashush, Dub 79.41 292 P P 07 37 23.0 +0.2
AJN Ajban 79.73 292 P P 07 37 24.7 +0.1
AJN Ajban 79.73 292 P P 07 37 24.8 +0.3
KTK1 Kautokeino 80.06 342 *e*P P 07 37 24.8 -0.7
UMZA Um Al Zommool 80.18 291 P P 07 37 26.7 -0.2
TULEG Thule 80.28 7 *i*P P 07 37 26.9 +0.3
TULEG IAmb IAmb 07 37 27.4
comp=Z,20nm,0.5s
E09A Wood Farm, Sta 80.47 44 P P 07 37 28.5 +0.4
E09A IAmb IAmb 07 37 29.9
comp=Z,13nm,0.8s
JETT Jettan, Norway 80.55 343 *e*P P 07 37 28.0 -0.1
TRO Tromso 80.91 343 *e*P P 07 37 29.4 -0.5
NEEM North Greenlan 80.92 3 *i*P P 07 37 30.7 +0.4
NEEM IAmb IAmb 07 37 31.5
comp=Z,41nm,0.9s
SHAO Shalim 81.32 286 P P 07 37 33.4 +0.3
DAG Danmarks Havn 81.34 356 *i*P P 07 37 31.0 -1.1
DAG IAmb IAmb 07 37 32.4
comp=Z,12nm,1.0s
JRN Qarnain Island 81.44 293 P P 07 37 33.5 0.0
MZR Muzera 81.54 291 P P 07 37 34.7 +0.5
SNR=10
MZR Muzera 81.54 291 *i*P P 07 37 34.3 +0.1
SNR=19
OBN Obninsk 81.62 326 P P 07 37 33.2 -0.7
comp=Z,62nm,0.9s
GHWR Ruwais 81.74 292 P P 07 37 35.2 0.0
DMTO DMTO 82.03 286 P P 07 37 37.0 +0.2
DOK Doka 82.45 287 P P 07 37 38.8 -0.1
SNR=10
KBZ Khabaz 82.46 314 P P 07 37 39.1 +0.6
comp=Z,34nm,0.8s,baz=117,slow=2.5,SNR=70
comp=Z,34nm,0.8s
KIV Kislovodsk 82.52 314 *i*P P 07 37 39.6 +0.6
SNR=6.4
KIV Kislovodsk 82.52 314 P P 07 37 38.9 -0.1
comp=Z,362nmcomp=Z,37nm,1.2s
GNI Garni 82.53 310 P P 07 37 39.1 -0.1
comp=Z,21nm,1.3s
SLWR Sila 82.72 293 P P 07 37 40.7 +0.4
SHMA Al-Shehemyia 82.73 295 P P 07 37 40.4 +0.2
RBK Rabkut 82.77 286 P P 07 37 40.7 0.0
SNR=5.9
TRNA Turayna 82.90 294 P P 07 37 41.1 0.0
WHFO Wadi Hawf 83.01 286 P P 07 37 41.4 -0.5
STEI Steigen 83.05 343 *e*P P 07 37 40.1 -0.9
SMRA Abu-Samra 83.23 294 P P 07 37 42.9 +0.1
NVAR Mina Array Bea 83.33 51 P P 07 37 44.1 +0.7
comp=Z,7.4nm,0.7s,baz=279,slow=5.3,SNR=84
comp=Z,7.4nm,0.7s
FINES FINESS Array B 83.34 334 P P 07 37 41.9 -0.8
comp=Z,26nm,0.5s,baz=68,slow=4.9,SNR=214
comp=Z,26nm,0.5s
FAUS Fauske 83.40 342 *e*P P 07 37 41.7 -1.1
ABTO Aybut 83.63 286 P P 07 37 45.2 +0.1
SNR=5.4
DBG Daneborg 83.83 355 *i*P P 07 37 44.7 -0.2
DBG IAmb IAmb 07 37 45.6
comp=Z,10nm,0.7s
KBD Kabd 84.28 299 P P 07 37 47.7 -0.2
RAUS Rausandaksla 84.41 342 *e*P P 07 37 46.6 -1.3
VAGH Vaagaholmen 84.43 342 *e*P P 07 37 47.2 -0.8
MOR8 Moi Rana 84.47 341 *e*P P 07 37 46.3 -1.9
STOK Stokkvaagen 84.78 342 *e*P P 07 37 48.9 -0.8
LEIR Leirfjorden 84.90 342 *e*P P 07 37 49.3 -1.0
LRMC Laurel Mtn Rad 84.91 54 P P 07 37 51.6 +0.4
LRMC IAmb IAmb 07 37 52.6
comp=Z,7.7nm,0.8s
WSHM Spangler Hills 85.00 54 P P 07 37 51.8 +0.2
FFC Flin Flon 86.04 32 P P 07 37 56.7 +0.5
SUMG Summit 86.17 0 *i*P P 07 37 58.0 +1.0
SUMG IAmb IAmb 07 37 58.1
comp=Z,28nm,0.8s
NSS Namsos 86.36 341 *e*P P 07 37 55.6 -1.9
PFO Pinyon Flats O 86.57 55 P P 07 37 59.9 +0.6
PDAR Pinedale Array 87.59 45 P P 07 38 04.3 +0.1
comp=Z,0.9nm,0.5s,baz=168,slow=1.4,SNR=16
comp=Z,0.9nm,0.5s
AK03 Malin Array Si 87.62 324 P P 07 38 01.9 -1.9
AKASG Malin Array Be 87.64 324 P P 07 38 02.4 -1.4
comp=Z,2.0nm,0.4s,baz=49,slow=4.6,SNR=23
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 87.64 324 P P 07 38 01.9 -2.0
AK01 Malin Array Si 87.65 324 P P 07 38 02.0 -1.9
KIEV Kiev 87.65 324 *i*P P 07 38 02.3 -1.7
SNR=8.4
KIEV Kiev 87.65 324 P P 07 38 01.9 -2.0
comp=Z,49nm,1.0s
KIEV Kiev 87.65 324 P P 07 38 02.5 -1.4
AK09 Malin Array Si 87.65 324 P P 07 38 02.0 -1.9
AK08 Malin Array Si 87.66 324 P P 07 38 02.0 -1.9
AK04 Malin Array Si 87.66 324 P P 07 38 02.0 -1.9
SCO Scoresbysund 87.68 355 *i*P P 07 38 03.5 -0.1
SCO IAmb IAmb 07 38 05.0
comp=Z,9.7nm,1.0s
RAYN Ar Rayn 88.20 294 P P 07 38 06.6 -0.6
RAYN Ar Rayn 88.20 294 *i*P P 07 38 06.4 -0.7
SNR=13

RAYN Ar Rayn 88.20 294 P P 07 38 06.6 -0.6
MI28 Mi28,Pidlybu 88.35 325 P P 07 38 05.2 -2.0
HFS Hagfors 88.89 337 P P 07 38 07.9 -1.6
comp=Z,8.0nm,0.5s,baz=92,slow=4.5,SNR=52
comp=Z,8.0nm,0.5s
RNPP9 Sopachiv 89.02 326 P P 07 38 09.1 -1.2
RNPP8 Varash 89.08 326 P P 07 38 08.7 -1.9
NB2 NORSAR Subarra 89.12 339 P P 07 38 09.2 -1.5
comp=Z,5.4nm,0.7s,baz=43,slow=5.1
NOA NORSAR Array B 89.12 339 P P 07 38 09.4 -1.3
comp=Z,4.1nm,0.7s,baz=46,slow=5.5,SNR=26
comp=Z,4.1nm,0.7s
RNPP5 Staryi Chortor 89.12 326 P P 07 38 09.1 -1.7
BR131 Keskin Array S 90.44 313 P P 07 38 16.0 -1.4
SNR=5.3
BRTR Keskin Array B 90.44 313 P P 07 38 15.9 -1.5
BRTR Keskin Array B 90.44 313 P P 07 38 16.1 -1.2
comp=Z,6.0nm,0.8s,baz=95,slow=3.4,SNR=31
comp=Z,6.0nm,0.8s
DEL Delary 91.38 335 *i*P P 07 38 19.8 -1.3
ONAU Onsala 91.48 336 *i*P P 07 38 20.4 -1.2
BURAR Bucovina Array 91.53 323 P P 07 38 20.8 -1.4
BJUU Bjuv 91.99 335 *i*P P 07 38 22.8 -1.2
LUNU Lund 92.13 334 *i*P P 07 38 23.8 -0.9
COP Copenhagen 92.50 335 *i*P P 07 38 26.0 -0.3
COP IAmb IAmb 07 38 26.2
comp=Z,75nm,0.4s
SSRD Sdr. Stenderup 93.75 336 *i*P P 07 38 33.2 +1.1
SSRD IAmb IAmb 07 38 33.7
comp=Z,186nm,0.5s
GERES GERESS Array B 96.73 329 P P 07 38 44.6 -1.4
comp=Z,0.9nm,0.5s,baz=22,slow=4.8,SNR=3.9
comp=Z,0.9nm,0.5s
TXAR Lajitas Array 98.23 54 P P 07 38 53.3 +0.2
comp=Z,0.8nm,0.9s,baz=316,slow=3.5,SNR=6.2
TXAR PKiKP **PKiKP** 07 43 24.1 +0.1
comp=Z,0.1nm,0.5s,baz=37,slow=3.8,SNR=1.7
comp=Z,0.8nm,0.9s
MAW Mawson 106.01 203 PKiKP **PKiKP** 07 43 37.1 +0.4
comp=Z,1.2nm,0.8s,baz=262,slow=23,SNR=2.7
QSPA South Pole Qui 111.28 180 PKiKP **PKiKP** 07 43 48.9 +2.1
comp=Z,1.5nm,0.5s,baz=277,slow=0.8,SNR=24
BOSA Boshof 123.78 249 PKP **PKPdf** 07 44 11.8 -0.2
comp=Z,2.1nm,0.8s,baz=175,slow=2.8,SNR=4.2
TROLL Troll, Antarti 124.73 194 ⇑P **PKPdf** 07 44 12.6 +0.1
comp=Z,332nm,0.6s
SNAA Sanae 126.13 193 ⇑P **PKPdf** 07 44 14.7 -0.4
SNAA Sanae 126.13 193 PKP **PKPdf** 07 44 15.2 0.0
comp=Z,2.2nm,0.6s,baz=188,slow=5.5,SNR=14
VNA3 Neumayer Olymp 127.77 191 ⇑P **PKPdf** 07 44 18.2 0.0
SDV Santo Domingo 135.19 51 *e*P **PKPdf** 07 44 33.3 -0.9
DBIC Dimbokro 137.92 308 PKhKP PKPpre 07 44 26.2
comp=Z,1.5nm,0.6s,baz=213,slow=1.6,SNR=1.6
DBIC PKP **PKPdf** 07 44 38.6 -0.4
comp=Z,5.0nm,0.7s,baz=307,slow=1.2,SNR=3.7
PLCA Paso Flores 145.67 132 PKPbc **PKPbc** 07 44 53.8 +0.7
comp=Z,12nm,0.6s,baz=241,slow=3.8,SNR=63
LPAZ La Paz 150.03 85 PKP **PKPdf** 07 45 02.3 +1.7
comp=Z,24nm,0.5s,baz=317,slow=3.7,SNR=20
LPAZ PKPbc **PKiKP** 07 45 07.1 +0.6
comp=Z,8.8nm,0.6s,baz=182,slow=5.2,SNR=9.1

PRE ***08*** *07:27:39.8±1.1,26.35S×27.40E,h2km,ML2.6*
BGSI ***08*** *07:27:44.2±1.4,26.32S×27.33E,h0km±28km,ML2.9*
ISC 08 07:27:40.3±1.0,26.37S±0.03×27.39E±0.03,h7km±6km,
n29,σ1s44/55,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**0.06**	**152**	*e*P	**Pg**	**07 27 42.0**	**-0.1**
WDLM				*e*S	**Sg**	**07 27 43.0**	**-0.5**
WDLM				IAML		07 27 43.2	
comp=Z,6μm,0.1s							
HRAO	**HartRAO**	**0.55**	**29**	*e*P	**Pg**	**07 27 50.2**	**-0.6**
HRAO				*e*S	**Sg**	**07 27 57.5**	**-0.5**
HRAO				IAML		07 27 58.0	
comp=Z,269nm,0.3s							
PRYS	**Parys**	**0.56**	**183**	*e*P	**Pg**	**07 27 50.0**	**-1.0**
PRYS				*e*S	**Sg**	**07 27 58.5**	**+0.1**
PRYS				IAML		07 28 00.9	
comp=Z,120nm,0.5s							
SNKL	**Senekal, Frees**	**1.93**	**170**	*e*P	**Pn**	**07 28 15.1**	**+1.3**
SNKL				*e*S	**Sb**	**07 28 40.9**	**+0.6**
SNKL				IAML		07 28 41.4	
comp=Z,115nm,0.7s							
SWZ	**Schweizer**	**2.01**	**246**	*e*P	**Pn**	**07 28 16.4**	**+1.6**
SWZ				*e*S	**Sb**	**07 28 42.7**	**+0.1**
SWZ				IAML		07 28 45.1	
comp=Z,101nm,0.3s							
LBTB	**Lobatse**	**2.10**	**309**	*e*P	**Pn**	**07 28 16.4**	**+0.3**
LBTB				*e*S	**Sn**	**07 28 43.3**	**+0.7**
LBTB				IAML		07 28 49.6	
comp=Z,104nm,0.4s							
MAKGR	**Makgori**	**2.39**	**283**	*i*P	**Pn**	**07 28 21.5**	**+1.5**
MAKGR				*i*S	**Sn**	**07 28 50.2**	**+0.4**
MAKGR				IAML		07 28 59.3	
comp=E,196nm,0.6s							
LEPH	**Lephalale, Lim**	**2.53**	**9**	*e*P	**Pn**	**07 28 23.1**	**+1.2**
LEPH				*e*S	**Sn**	**07 28 53.1**	**+0.1**
LEPH				IAML		07 28 59.4	
comp=Z,54nm,0.4s							
NWCL	**Newcastle**	**2.62**	**122**	*e*P	**Pn**	**07 28 24.3**	**+1.2**
NWCL				*e*S	**Sn**	**07 28 55.9**	**+0.6**
NWCL				IAML		07 29 00.8	
comp=Z,42nm,0.4s							
BOSA	**Boshof**	**2.93**	**220**	*e*P	**Pn**	**07 28 28.5**	**+1.0**
BOSA				*e*S	**Sn**	**07 29 05.1**	**+2.1**
BOSA				IAML		07 29 13.0	
comp=Z,13nm,0.2s							
LPHEP	**Lephephe**	**3.30**	**335**	*i*P	**Pn**	**07 28 34.9**	**+2.4**
LPHEP				*i*S	**Sn**	**07 29 11.0**	**-1.1**
LPHEP				IAML		07 29 30.4	
comp=E,50nm,0.3s							
PILG	**Pilgrimsrest,**	**3.32**	**65**	*e*P	**Pn**	**07 28 33.5**	**+0.6**
PILG				*e*S	**Sn**	**07 29 12.8**	**0.0**
PILG				IAML		07 29 29.8	
comp=Z,22nm,0.5s							
SKOMA	**Sekoma**	**3.63**	**300**	*i*P	**Pn**	**07 28 38.5**	**+1.4**
SKOMA				*i*S	**Sn**	**07 29 19.0**	**-1.3**
SKOMA				IAML		07 29 39.7	
comp=E,39nm,0.4s							
MREMI	**Moremi**	**3.78**	**1**	*i*P	**Pn**	**07 28 41.2**	**+2.1**
MREMI				IAML		07 29 42.8	
comp=E,129nm,0.3s							
KDWAN	**Kaudwane**	**3.87**	**320**	*i*P	**Pn**	**07 28 42.2**	**+1.8**
KDWAN				IAML		07 29 45.9	
comp=N,77nm,0.6s							
POGA	**Pongola**	**3.98**	**105**	*e*P	**Pn**	**07 28 43.4**	**+1.6**
POGA				*e*S	**Sn**	**07 29 29.3**	**+0.5**
POGA				IAML		07 29 43.1	
comp=Z,24nm,0.6s							
PMBG	**Pietermaritzbu**	**4.17**	**139**	*e*P	**Pn**	**07 28 45.6**	**+1.1**
PMBG				*e*S	**Sn**	**07 29 33.1**	**-0.5**
PMBG				IAML		07 29 47.6	
comp=Z,22nm,0.3s							
KSTD	**Kokstad**	**4.56**	**159**	*e*P	**Pn**	**07 28 51.1**	**+1.2**
KSTD				*e*S	**Sn**	**07 29 42.7**	**-0.5**
KSTD				IAML		07 30 10.0	
comp=Z,7.5nm,0.4s							
MOPA	**Mopani**	**4.62**	**53**	*e*P	**Pn**	**07 28 50.9**	**+0.4**
MOPA				*e*S	**Sn**	**07 29 42.4**	**-2.1**
MOPA				IAML		07 30 02.6	
comp=Z,21nm,0.3s							
MUSN	**Musina, Limpop**	**4.65**	**30**	*e*P	**Pn**	**07 28 51.4**	**+0.4**
MUSN				*e*S	**Sn**	**07 29 43.9**	**-1.4**
MUSN				IAML		07 30 04.9	
comp=Z,18nm,0.4s							
BROLN	**Tlhalogang**	**5.25**	**359**	*i*P	**Pn**	**07 29 00.4**	**+1.1**
BROLN				*i*S	**Sn**	**07 29 58.7**	**-1.4**
BROLN				IAML		07 30 25.8	
comp=E,14nm,0.5s							
ALKP	**Alkanpan, Nort**	**5.77**	**231**	*e*P	**Pn**	**07 29 07.1**	**+0.6**
ALKP				*e*S	**Sn**	**07 30 11.6**	**-1.4**
ALKP				IAML		07 30 45.9	
comp=Z,21nm,0.5s							
UPI	**Upington**	**5.81**	**249**	*e*P	**Pn**	**07 29 08.4**	**+1.4**
UPI				*e*S	**Sn**	**07 30 12.9**	**-1.0**
UPI				IAML		07 30 43.5	
comp=Z,8.3nm,0.4s							
KGCAE	**Kacgae**	**5.87**	**305**	*i*P	**Pn**	**07 29 10.3**	**+2.3**
KGCAE				IAML		07 30 57.0	
comp=N,34nm,0.5s							
BRAK	**Brakfontein**	**6.67**	**215**	*e*P	**Pn**	**07 29 19.6**	**+0.7**
BRAK				*e*S	**Sn**	**07 30 33.2**	**-2.0**

BRAK				IAML		07 31 25.0	
	comp=Z,4.5nm,0.5s						
ROOI	**Rooidraai Farm**	**6.96**	**208**	*eP*	**Pn**	**07 29 23.9**	**+1.1**
ROOI				*eS*	**Sn**	**07 30 39.9**	**-2.5**
ROOI				IAML		07 31 18.7	
	comp=Z,4.9nm,0.5s						
ARMS	**Ukamas**	**7.01**	**255**	*eP*	**Pn**	**07 29 24.9**	**+1.4**
ARMS				*eS*	**Sn**	**07 30 41.8**	**-1.8**
MERW	**Merweville**	**8.10**	**218**	*eP*	**Pn**	**07 29 39.4**	**+0.9**
MERW				*eS*	**Sn**	**07 31 07.3**	**-3.0**
MERW				IAML		07 31 16.8	
	comp=Z,2.0nm,0.8s						
SUR	**Sutherland**	**8.29**	**222**	*eP*	**Pn**	**07 29 43.4**	**+2.2**
SUR				*eS*	**Sn**	**07 31 12.1**	**-3.2**
SUR				IAML		07 31 28.5	
	comp=Z,2.4nm,0.5s						

*JMA **08** 07:29:01.6±0.1,24°.5N±0°.3×121°.9E±0°.6,h39km±3km, MV3.3/11,TAIWAN REGION*
*TAP **08** 07:29:01.4,24°.54N×121°.89E,h38km,ML4.1,B*
ISC 08 07:29:01.1±1.0,**24°.50N**±0°.02×**121°.97E**±0°.02,**h34**km±2km, **n152,**σ0°.98/260,**1C-8D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESAO	**Su ao**	**0.14**	**302**	*i* P	**Pb**	**07 29 08.2**	**+1.0**
ESAO				S	**Sb**	**07 29 12.5**	**+1.1**
TWC	**Suao**	**0.15**	**314**	*i* P	**Pb**	**07 29 08.0**	**+0.6**
TWC				*i* S	**Sb**	**07 29 12.5**	**+0.8**
EWUT	**Wuta**	**0.18**	**252**	*i* P	**Pb**	**07 29 08.5**	**+0.8**
ENA	**Nanau**	**0.22**	**250**	*i* P	**Pb**	**07 29 08.7**	**+0.7**
ENA				*i* S	**Sb**	**07 29 13.7**	**+0.9**
NDS	**Dongshan**	**0.27**	**299**	P	**Pb**	**07 29 08.9**	**+0.3**
NDS				S	**Sn**	**07 29 14.1**	**+2.0**
EAHA	**Aohua**	**0.27**	**231**	P	**Pb**	**07 29 09.3**	**+0.7**
EAHA				S	**Sb**	**07 29 14.9**	**+1.2**
EHP	**Heping Village**	**0.28**	**227**	P	**Pb**	**07 29 09.6**	**+0.8**
EHP				*eS*	**Sb**	**07 29 15.5**	**+1.6**
ILA	**Ilan**	**0.33**	**322**	P	**Pb**	**07 29 09.7**	**+0.3**
ILA				S	**Sb**	**07 29 15.8**	**+0.8**
EGS		**0.34**	**354**	*eP*	**Pb**	**07 29 10.0**	**+0.5**
EGS				*eS*	**Sb**	**07 29 16.3**	**+1.0**
TWE	**Neicheng**	**0.35**	**308**	*i* P	**Pb**	**07 29 09.7**	**+0.1**
TWE				S	**Sb**	**07 29 14.9**	**-0.6**
NTC	**Toucheng**	**0.37**	**340**	P	**Pb**	**07 29 10.3**	**+0.3**
NTC				S	**Sb**	**07 29 16.9**	**+1.0**
ENTT	**Nioudou**	**0.39**	**290**	*i* P	**Pb**	**07 29 10.2**	**0.0**
ENTT				*i* S	**Sb**	**07 29 16.0**	**-0.4**
LATG	**Datong**	**0.41**	**275**	*i* P	**Pb**	**07 29 10.6**	**+0.1**
LATG				*i* S	**Sb**	**07 29 16.9**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.43**	**306**	*i* P	**Pb**	**07 29 10.8**	**-0.1**
FUSB				S	**Sb**	**07 29 16.9**	**-0.5**
ETL	**Fush Village**	**0.47**	**223**	P	**Pn**	**07 29 11.8**	**+0.3**
ETL				S	**Sn**	**07 29 20.4**	**+1.8**
NACB	**Ninganchiao**	**0.47**	**226**	P	**Pn**	**07 29 11.8**	**+0.2**
NACB	**Ninganchiao**	**0.47**	**226**	S	**Sn**	**07 29 20.5**	**+1.8**
NACB	**Ninganchiao**	**0.47**	**226**	*i* P	**Pn**	**07 29 11.7**	**+0.2**
NACB				S	**Sn**	**07 29 19.9**	**+1.2**
TIPB	**Shuangxi**	**0.48**	**344**	*i* P	**Pn**	**07 29 11.8**	**+0.1**
TIPB				S	**Sb**	**07 29 18.6**	**-0.2**
TWB1	**Santiao Chiao**	**0.50**	**2**	*i* P	**Pn**	**07 29 11.8**	**-0.1**
TWB1				*i* S	**Sb**	**07 29 19.4**	**+0.2**
NWLT	**Wulai**	**0.51**	**303**	P	**Pn**	**07 29 11.6**	**-0.3**
NWLT				S	**Sb**	**07 29 18.4**	**-0.9**
ETLH	**Xiulin Townshi**	**0.53**	**237**	*i* P	**Pb**	**07 29 12.7**	**+0.3**
ETLH				*i* S	**Sn**	**07 29 21.3**	**+1.1**
NNSB	**Datong**	**0.54**	**262**	*i* P	**Pn**	**07 29 12.5**	**0.0**
NNSB				*eS*	**Sb**	**07 29 20.6**	**+0.3**
TWD	**Chiawan**	**0.54**	**219**	P	**Pn**	**07 29 12.7**	**+0.4**
TWD				S	**Sn**	**07 29 21.9**	**+1.6**
NNS	**Nan Shan**	**0.55**	**264**	*i* P	**Pn**	**07 29 12.5**	**-0.1**
NNS				S	**Sb**	**07 29 20.4**	**-0.1**
YHNB	**Yeheng**	**0.56**	**287**	P	**Pn**	**07 29 12.7**	**-0.1**
YHNB	**Yeheng**	**0.56**	**287**	*i* P	**Pn**	**07 29 12.8**	**-0.1**
YHNB				*i* S	**Sn**	**07 29 20.3**	**-0.8**
NSK	**Sanguang**	**0.58**	**287**	*i* P	**Pn**	**07 29 12.9**	**-0.1**
NSK				S	**Sn**	**07 29 20.5**	**-0.9**
NWF	**Wu-fen Shan**	**0.59**	**343**	*i* P	**Pn**	**07 29 13.4**	**+0.2**
NWF				S	**Sn**	**07 29 21.7**	**0.0**
TWA	**Mucha**	**0.59**	**324**	P	**Pn**	**07 29 13.6**	**+0.6**
TWA				S	**Sn**	**07 29 21.3**	**-0.2**
WFSB	**Wu-fen Shan**	**0.59**	**343**	P	**Pn**	**07 29 13.4**	**+0.3**
WFSB				S	**Sn**	**07 29 21.6**	**+0.1**
SXI1	**Grass Mountain**	**0.59**	**352**	*i* P	**Pn**	**07 29 13.2**	**0.0**
SXI1				*eS*	**Sn**	**07 29 21.4**	**-0.3**
NHDH	**Xindian Distri**	**0.61**	**319**	P	**Pn**	**07 29 13.7**	**+0.4**
NHDH				S	**Sn**	**07 29 21.9**	**-0.1**
HWA	**Hwalien**	**0.62**	**212**	P	**Pb**	**07 29 14.6**	**+0.9**
TATO	**Taipei**	**0.64**	**317**	P	**Pn**	**07 29 13.8**	**0.0**
TATO	**Taipei**	**0.64**	**317**	S	**Sn**	**07 29 23.7**	**+0.9**
NHY	**Taipei**	**0.65**	**326**	*eP*	**Pn**	**07 29 14.5**	**+0.7**
NHY				*eS*	**Sn**	**07 29 23.9**	**+1.0**
TNOU	**National Taiwa**	**0.67**	**345**	P	**Pn**	**07 29 13.8**	**-0.3**
TNOU				S	**Sn**	**07 29 23.1**	**-0.4**
ETM	**Tongmen**	**0.69**	**219**	P	**Pb**	**07 29 14.7**	**-0.2**
ETM				S	**Sb**	**07 29 25.2**	**+1.0**
LXIB	**Xiulin Townshi**	**0.70**	**227**	P	**Pn**	**07 29 14.8**	**+0.1**
LXIB				S	**Sb**	**07 29 25.5**	**+0.9**
FUSS	**Fushou**	**0.71**	**249**	P	**Pn**	**07 29 15.2**	**+0.2**
FUSS				S	**Sn**	**07 29 25.3**	**+0.5**
TEYL	**Yanliau Villag**	**0.72**	**208**	P	**Pb**	**07 29 15.8**	**+0.5**
TEYL				S	**Sb**	**07 29 27.5**	**+2.6**
WHF	**Hehuan Shan**	**0.73**	**241**	*i* P	**Pn**	**07 29 15.7**	**+0.2**
WHF				*eS*	**Sb**	**07 29 26.4**	**+0.5**
YM01	**YM01**	**0.74**	**331**	P	**Pn**	**07 29 15.1**	**-0.1**
YM01				*eS*	**Sn**	**07 29 25.2**	**-0.1**
ZUZH	**Zhuzihu**	**0.76**	**330**	*eP*	**Pn**	**07 29 15.4**	**-0.1**
ZUZH				S	**Sn**	**07 29 25.4**	**-0.5**
YM08	**YM08**	**0.76**	**333**	P	**Pn**	**07 29 15.1**	**-0.5**
YM08				S	**Sn**	**07 29 24.6**	**-1.3**
TWT	**Tachien**	**0.77**	**251**	P	**Pn**	**07 29 16.3**	**+0.6**
TWT				S	**Sb**	**07 29 26.8**	**+0.4**
KSHI	**Guanxi Townshi**	**0.77**	**291**	*eP*	**Pn**	**07 29 16.3**	**+0.7**
KSHI				*eS*	**Sb**	**07 29 27.8**	**+1.3**
TWS1	**Kuangyinshan**	**0.78**	**320**	*i* P	**Pn**	**07 29 16.0**	**+0.3**
TWS1				*eS*	**Sn**	**07 29 26.9**	**+0.8**
TDCB	**Techi**	**0.78**	**252**	P	**Pn**	**07 29 16.4**	**+0.6**
TDCB				S	**Sn**	**07 29 27.0**	**+0.5**
NFF	**Wufeng Townshi**	**0.79**	**280**	P	**Pn**	**07 29 16.5**	**+0.7**
NFF				S	**Sn**	**07 29 26.4**	**-0.1**
ANP	**Anpu**	**0.79**	**329**	*eP*	**Pn**	**07 29 15.6**	**-0.4**
SHUL	**Shoufeng**	**0.80**	**208**	*eP*	**Pb**	**07 29 17.3**	**+0.6**
SHUL				*eS*	**Sb**	**07 29 29.6**	**+2.2**
NTST	**Danshui**	**0.81**	**324**	*eP*	**Pn**	**07 29 15.9**	**-0.2**
NTST				*eS*	**Sn**	**07 29 27.1**	**+0.2**
TWY	**Chenhua**	**0.84**	**337**	P	**Pn**	**07 29 16.3**	**-0.3**
TWY				S	**Sn**	**07 29 28.5**	**+0.8**
ESL	**Shilin**	**0.84**	**216**	*eP*	**Pn**	**07 29 16.5**	**-0.1**
ESL				*eS*	**Sb**	**07 29 28.7**	**+0.2**
NCUH	**Zhongli**	**0.85**	**303**	*eP*	**Pn**	**07 29 17.1**	**+0.4**
NCUH				S	**Sn**	**07 29 28.4**	**+0.4**
LIOB	**Emei**	**0.88**	**279**	*i* P	**Pn**	**07 29 17.8**	**+0.7**
LIOB				*i* S	**Sn**	**07 29 29.9**	**+1.1**
JYNG	**Yonagunijimaku**	**0.89**	**93**	P	**Pb**	**07 29 18.4**	**+0.2**
JYNG				S	**Sb**	**07 29 31.0**	**+1.2**
NSTT	**Nanjuang**	**0.89**	**278**	P	**Pn**	**07 29 18.0**	**+0.7**
NSTT				*i* S	**Sn**	**07 29 29.8**	**+0.8**
OWD	**Renai**	**0.91**	**233**	P	**Pn**	**07 29 18.1**	**+0.5**
OWD				S	**Sb**	**07 29 30.4**	**0.0**
WUSB	**Renai**	**0.93**	**237**	P	**Pb**	**07 29 18.8**	**-0.2**
WUSB				S	**Sb**	**07 29 31.2**	**+0.2**
SBCB	**Hsinchu**	**0.94**	**288**	*eP*	**Pn**	**07 29 18.0**	**+0.1**
SBCB				S	**Sn**	**07 29 30.0**	**+0.7**
WARBT	**Fenglin Townsh**	**0.95**	**214**	*eP*	**Pn**	**07 29 17.7**	**-0.3**
WARBT				*eS*	**Sb**	**07 29 30.4**	**-1.0**
YOJ	**Yonaguni jima**	**0.95**	**92**	P	**Pb**	**07 29 19.1**	**0.0**
YOJ				*eS*	**Sb**	**07 29 32.5**	**+1.1**
YOJ	**Yonaguni jima**	**0.95**	**92**	P	**Pb**	**07 29 19.1**	**0.0**
YOJ				*eS*	**Sb**	**07 29 32.4**	**+0.9**
HSN	**Hsinchu**	**0.96**	**288**	*eP*	**Pn**	**07 29 17.9**	**-0.2**
HSN				*eS*	**Sn**	**07 29 30.1**	**-0.5**
WHP	**Taichung City**	**0.96**	**257**	*eP*	**Pb**	**07 29 19.6**	**+0.2**
WHP				S	**Sn**	**07 29 31.7**	**+0.9**
EGFH	**Guangfu**	**0.97**	**211**	P	**Pb**	**07 29 18.9**	**-0.6**
EGFH				*eS*	**Sb**	**07 29 31.8**	**-0.1**
VWDT	**VWDT**	**1.06**	**226**	*i* P	**Pb**	**07 29 20.5**	**-0.5**
VWDT				S	**Sb**	**07 29 33.9**	**-0.8**
WCS	**Beigang Elemen**	**1.06**	**246**	*eP*	**Pb**	**07 29 21.0**	**-0.1**
NMLH	**Miaoli**	**1.07**	**272**	P	**Pn**	**07 29 21.0**	**+1.2**
NMLH				S	**Sn**	**07 29 35.3**	**+1.8**
TWQ1	**Liyutan**	**1.10**	**262**	*eP*	**Pb**	**07 29 21.9**	**+0.2**
TWQ1				*eS*	**Sb**	**07 29 36.9**	**+1.1**
NSY	**Sanyi**	**1.10**	**266**	P	**Pn**	**07 29 21.4**	**+1.1**
NSY				*eS*	**Sb**	**07 29 37.5**	**+1.6**
HGSD	**Ruisui**	**1.12**	**206**	*eP*	**Pb**	**07 29 21.6**	**-0.5**
HGSD				*eS*	**Sb**	**07 29 37.3**	**+0.9**
PCYT	**Pengchaiyu**	**1.12**	**5**	P	**Pn**	**07 29 20.1**	**-0.4**
PCYT				*eS*	**Sn**	**07 29 35.4**	**+0.6**
EHY	**Hungye**	**1.16**	**211**	*eP*	**Pn**	**07 29 21.1**	**+0.2**
EHY				S	**Sb**	**07 29 36.6**	**-0.7**
EHYH	**Wanrong**	**1.16**	**210**	P	**Pn**	**07 29 20.4**	**-0.5**
EHYH				S	**Sb**	**07 29 36.3**	**-1.1**
SMLT	**Sun Moon Lake**	**1.16**	**238**	P	**Pn**	**07 29 22.2**	**-0.4**
SMLT				*eS*	**Sb**	**07 29 39.3**	**+1.8**
SSLB	**Suanglung**	**1.17**	**233**	P	**Pb**	**07 29 22.2**	**-0.7**
SSLB	**Suanglung**	**1.17**	**233**	S	**Sb**	**07 29 40.9**	**+3.1**
SSLB	**Suanglung**	**1.17**	**233**	P	**Pn**	**07 29 21.9**	**+0.8**
SSLB				S	**Sb**	**07 29 37.1**	**-0.6**
TYC	**Yuchr**	**1.18**	**240**	*eP*	**Pb**	**07 29 22.6**	**-0.4**
TYC				S	**Sb**	**07 29 37.9**	**-0.1**
WDJ	**Dajia District**	**1.22**	**263**	*eP*	**Pn**	**07 29 23.1**	**+1.3**
TCU	**Taichung**	**1.23**	**254**	*eP*	**Pn**	**07 29 22.8**	**+0.8**
YULB	**Yu-li**	**1.27**	**209**	P	**Pn**	**07 29 22.1**	**-0.3**
YULB	**Yu-li**	**1.27**	**209**	P	**Pn**	**07 29 21.8**	**-0.7**
WHYT	**Xinyi Township**	**1.30**	**232**	P	**Pb**	**07 29 24.7**	**-0.4**
WHYT				*i* S	**Sb**	**07 29 42.4**	**+0.9**
TWF1	**Yuli**	**1.30**	**208**	*eP*	**Pn**	**07 29 23.5**	**+0.6**
TWF1				*eS*	**Sn**	**07 29 39.3**	**+0.2**
WJS	**Zhushan**	**1.32**	**239**	*eP*	**Pb**	**07 29 25.7**	**+0.3**
WJS				*eS*	**Sb**	**07 29 43.7**	**+1.7**
WNT	**Mingjian**	**1.33**	**242**	*eP*	**Pb**	**07 29 24.4**	**-0.2**
WNT				*eS*	**Sb**	**07 29 43.6**	**+1.3**
WCHH	**Zhanghua**	**1.35**	**252**	*eP*	**Pn**	**07 29 24.4**	**+0.8**
WCHH				*eS*	**Sb**	**07 29 42.3**	**-0.6**
WCH1	**Changhua City**	**1.37**	**252**	*eP*	**Pb**	**07 29 25.8**	**-0.4**
YUS	**Yu-Shan**	**1.37**	**223**	*eP*	**Pn**	**07 29 25.4**	**+1.0**
CHKH	**Chenggong**	**1.41**	**202**	*eP*	**Pb**	**07 29 25.5**	**-1.3**
CHKH				*eS*	**Sb**	**07 29 43.2**	**-1.2**
FULB	**Fuli**	**1.44**	**206**	P	**Pb**	**07 29 26.3**	**-1.1**
ALS	**Alishan**	**1.45**	**227**	P	**Pn**	**07 29 26.5**	**+1.2**
ALS				*S*	**Sb**	**07 29 45.4**	**-0.6**
CHN5	**Tsauling**	**1.48**	**233**	*eP*	**Pb**	**07 29 27.9**	**-0.3**
CHN5				*i* S	**Sb**	**07 29 47.3**	**+0.5**
CHKT	**Chengkung**	**1.50**	**202**	*eP*	**Pb**	**07 29 27.6**	**-0.9**
CHKT				*eS*	**Sb**	**07 29 45.1**	**-2.1**
EHD	**Haiduan**	**1.52**	**208**	*eP*	**Pb**	**07 29 27.4**	**-1.4**
EHD				*eS*	**Sb**	**07 29 45.8**	**-1.9**
WGK	**Gukeng**	**1.52**	**238**	*eP*	**Pn**	**07 29 26.8**	**+0.9**
WGK				*eS*	**Sb**	**07 29 48.7**	**+0.9**
WDL	**Douliou City**	**1.52**	**239**	*eP*	**Pn**	**07 29 25.9**	**-0.1**
WDL				*eS*	**Sb**	**07 29 48.8**	**+0.9**
WDLH	**Douliu**	**1.54**	**239**	*eP*	**Pb**	**07 29 28.4**	**-0.6**
WDLH				*eS*	**Sb**	**07 29 48.7**	**+0.5**
ECS	**Chishang**	**1.56**	**206**	*eP*	**Pb**	**07 29 28.8**	**-0.6**
ELDTW	**Lidau**	**1.57**	**214**	*eP*	**Pn**	**07 29 27.7**	**+1.0**
IRIF	**Iriomote-Funau**	**1.61**	**96**	P	**Pn**	**07 29 28.1**	**+0.9**
IRIF				*eS*	**Sn**	**07 29 47.5**	**+0.7**
EDH	**Donghe**	**1.64**	**202**	*eP*	**Pn**	**07 29 28.6**	**+1.0**
EDH				*eS*	**Sn**	**07 29 48.5**	**+0.9**
WTK	**Tuku**	**1.66**	**241**	*eP*	**Pn**	**07 29 29.2**	**+1.4**
WTK				*eS*	**Sb**	**07 29 50.7**	**-0.9**
WTCT	**Ta-ch'eng**	**1.67**	**248**	*eP*	**Pn**	**07 29 29.3**	**+1.3**
WTCT				*eS*	**Sb**	**07 29 51.3**	**-0.6**
CHN2	**Minshiung**	**1.67**	**235**	*eP*	**Pn**	**07 29 29.4**	**+1.3**
CHN2				*eS*	**Sb**	**07 29 52.5**	**+0.4**
TPUB	**Ta-pu**	**1.71**	**226**	P	**Pb**	**07 29 31.2**	**-0.9**
TPUB	**Ta-pu**	**1.71**	**226**	S	**Sb**	**07 29 54.5**	**+1.2**
TPUB	**Ta-pu**	**1.71**	**226**	P	**Pb**	**07 29 31.3**	**-0.7**
TPUB				*eS*	**Sb**	**07 29 53.3**	**+0.1**
STYH	**Taoyuan**	**1.72**	**220**	*eP*	**Pn**	**07 29 30.2**	**+1.6**
CHY	**Chiayi**	**1.73**	**235**	*eP*	**Pn**	**07 29 30.2**	**+1.4**
CHY				S	**Sb**	**07 29 52.9**	**-0.8**
WTP	**Ta-pu**	**1.76**	**225**	*eP*	**Pb**	**07 29 31.2**	**-1.7**
WSF	**Szhu**	**1.81**	**242**	*eP*	**Pn**	**07 29 31.2**	**+1.3**
WSF				*eS*	**Sb**	**07 29 54.6**	**-1.5**
TWK	**Hsinying**	**1.83**	**228**	*eP*	**Pb**	**07 29 32.9**	**-1.2**
TWK				*eS*	**Sb**	**07 29 56.9**	**+0.2**
CHN1	**Nanshi**	**1.86**	**225**	P	**Pb**	**07 29 33.5**	**-1.0**
CHN1				S	**Sb**	**07 29 56.9**	**-0.5**
TWGBT	**Beinan**	**1.86**	**206**	P	**Pn**	**07 29 31.2**	**+0.5**
TWGBT	**Beinan**	**1.86**	**206**	*eP*	**Pn**	**07 29 31.2**	**+0.5**
TWG	**Pinlang**	**1.87**	**206**	*eP*	**Pn**	**07 29 31.2**	**+0.5**
TWG				*eS*	**Sn**	**07 29 53.9**	**+0.8**
WSL	**Shuilin Townsh**	**1.87**	**239**	P	**Pn**	**07 29 32.4**	**+1.6**
WSL				*eS*	**Sn**	**07 29 55.5**	**+2.4**
JKRS	**Kuro-shima**	**1.88**	**98**	P	**Pn**	**07 29 32.2**	**+1.4**
JKRS				S	**Sb**	**07 29 55.0**	**-2.9**
CHN8	**Yiju**	**1.98**	**235**	*eP*	**Pn**	**07 29 32.4**	**+0.2**
CHN8				*eS*	**Sb**	**07 29 59.8**	**-1.0**
JIJ	**Ishigaki jima**	**1.99**	**94**	P	**Pn**	**07 29 33.1**	**+0.8**
JIJ				S	**Sn**	**07 29 56.9**	**+0.9**
SCLT	**Jiali**	**2.10**	**231**	*eP*	**Pb**	**07 29 37.7**	**-0.8**
SCST	**Cishan**	**2.10**	**220**	*eP*	**Pn**	**07 29 35.7**	**+1.8**
ECL	**Taimali**	**2.11**	**206**	*eP*	**Pn**	**07 29 35.8**	**+1.7**
JISG	**Ishigakijimahi**	**2.13**	**87**	P	**Pn**	**07 29 35.4**	**+1.0**
SSD	**Sandimen**	**2.14**	**215**	*eP*	**Pb**	**07 29 37.6**	**-1.6**
TSMG	**Majia**	**2.16**	**214**	*eP*	**Pb**	**07 29 37.6**	**-2.0**
TSCK	**Chigu Township**	**2.19**	**232**	*eP*	**Pb**	**07 29 37.9**	**-2.2**
TSCK				*eS*	**Sb**	**07 30 04.0**	**-2.8**
MASBT	**Mashibuluo**	**2.25**	**213**	*eP*	**Pb**	**07 29 39.4**	**-1.7**
MASBT				*eS*	**Sb**	**07 30 06.7**	**-1.8**
EAST	**Anshuo**	**2.35**	**206**	*eP*	**Pn**	**07 29 38.8**	**+1.4**
TAWH	**Dawu Township**	**2.37**	**205**	*eP*	**Pn**	**07 29 39.8**	**+2.2**
PNG	**Penghu**	**2.40**	**248**	*eP*	**Pn**	**07 29 37.9**	**-0.1**
PNG				*eS*	**Sn**	**07 30 05.6**	**-0.5**
PHUB	**P'eng-hu**	**2.40**	**246**	*eP*	**Pn**	**07 29 38.0**	**-0.1**
PHUB				S	**Sn**	**07 30 05.7**	**-0.6**
WDGT	**Dungji**	**2.45**	**240**	*eP*	**Pn**	**07 29 37.3**	**-1.4**
WDGT				*eS*	**Sn**	**07 30 08.0**	**+0.5**
SCZT	**Fangliau**	**2.46**	**211**	*eP*	**Pb**	**07 29 42.0**	**-2.6**
MATB	**Ma-tsu**	**2.46**	**312**	*eP*	**Pn**	**07 29 38.0**	**-0.9**
LAY	**Lan-yu**	**2.48**	**189**	*eP*	**Pn**	**07 29 39.9**	**+0.7**
LAY				*eS*	**Sn**	**07 30 08.2**	**-0.1**
LYUB	**Lan-yu**	**2.52**	**188**	*eP*	**Pn**	**07 29 38.3**	**-1.3**
LYUB				*eS*	**Sn**	**07 30 06.6**	**-2.5**
PTMZ	**Houxiangcun**	**2.65**	**282**	*eP*	**Pn**	**07 29 41.1**	**-0.3**
VCHM	**Qimei**	**2.66**	**242**	*eP*	**Pn**	**07 29 41.0**	**-0.6**
VCHM				*eS*	**Sn**	**07 30 12.5**	**-0.1**
XPSS	**Dashiqiu**	**2.90**	**327**	*eP*	**Pn**	**07 29 44.3**	**-0.6**
MHZQ	**Yeshan**	**3.10**	**301**	*eP*	**Pn**	**07 29 46.6**	**-1.0**
KNM	**Kinmen**	**3.22**	**269**	*eP*	**Pn**	**07 29 50.9**	**+1.5**
KNMB	**Chin-men Tao**	**3.26**	**270**	*eP*	**Pn**	**07 29 49.1**	**-0.8**
AXDP	**Jialang**	**3.66**	**277**	*eP*	**Pn**	**07 29 54.6**	**-0.7**
ZPLA	**Ao Xicun**	**3.89**	**262**	*eP*	**Pn**	**07 29 57.7**	**-0.9**
DSXP	**Dongshan**	**4.23**	**260**	*eP*	**Pn**	**07 30 03.6**	**+0.5**

*IDC **08** 07:33:31.1±2.8,2°.43N×122°.35E,h515km±33km,mb3.1/6, mbtmp4.0/6,Error ellipse: s-maj=99.8km s-min=14.3km az=63.0*
ISC 08 07:33:29.6±1.3,**2°.6N**±0°.4×**122°.6E**±0°.8,**h500**km,**n6,** σ1°**27**/7,**mb3.5**/5,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.75**	**172**	P	**P**	**07 37 34.8**	**-0.3**
	2.5nm,0.4s,baz=348,slow=9.3,SNR=8.6 2.5nm,0.4s						
WRA	**Warramunga Arr**	**25.18**	**153**	P	**P**	**07 38 14.5**	**-0.3**
	1.3nm,0.4s,baz=336,slow=9.6,SNR=11 1.3nm,0.4s						
ASAR	**Alice Springs**	**28.32**	**158**	P	**P**	**07 38 42.6**	**+0.2**
	0.7nm,0.4s,baz=329,slow=7.7,SNR=6.1						
ASAR				ScP	**ScP**	**07 44 31.0**	**-2.3**
	0.7nm,1.0s,baz=332,slow=2.2,SNR=2.6 0.7nm,0.4s						
STKA	**Stephens Creek**	**38.73**	**154**	P	**P**	**07 40 11.0**	**+0.7**
	1.4nm,0.3s,baz=329,slow=7.2,SNR=9.4 1.4nm,0.3s						
MKAR	**Makanchi Array**	**56.22**	**328**	P	**P**	**07 42 22.2**	**+0.5**
	0.4nm,0.3s,baz=128,slow=8.4,SNR=8.4 0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**60.54**	**329**	P	**P**	**07 42 50.8**	**0.0**
	0.9nm,0.7s,baz=132,slow=6.3,SNR=5.0 0.9nm,0.7s						

IDC 08 07:43:01.6±17.0,**28°.45N×68°.21E,h0**km,**mb3.6**/5, **mbtmp3.6**/5,**MS3.3**/1,**Error ellipse: s-maj=318.7km s-min=69.0km az=165.0,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**21.38**	**27**	P	P	07 47 50.9	+0.1
	0.3nm,0.5s,baz=201,slow=7.6,SNR=2.5 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**23.49**	**17**	P	P	07 48 13.0	+0.1
	1.0nm,0.6s,baz=208,slow=11,SNR=5.3 1.0nm,0.6s						
BVAR	**Borovoye Array**	**24.61**	**3**	P	P	07 48 23.5	+0.1
	0.6nm,0.5s,baz=180,slow=8.1,SNR=3.0 0.6nm,0.5s						
KVAR	**Kislovodsk Arr**	**25.61**	**314**	LR	LR	08 00 49.9	
	comp=Z,60nm,19.2s,baz=310,slow=42						
ZALV	**Zalesovo Beam**	**28.23**	**21**	P	P	07 48 55.9	-0.2
	0.7nm,0.3s,baz=214,slow=10.0,SNR=5.0 0.7nm,0.3s						
ARCES	**ARCESS Array B**	**47.84**	**341**	P	P	07 51 40.6	-0.2
	1.2nm,0.8s,baz=119,slow=7.8,SNR=4.2 1.2nm,0.8s						

IDC 08 07:55:15.4±1.7,**2°.52S×147°.74E,h0**km,**mb3.7**/4, **mbtmp3.7**/4,**MS3.4**/7,**Error ellipse: s-maj=90.9km s-min=31.0km az=120.0,Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**7.03**	**270**	LR	LR	07 59 23.8	
	comp=Z,89nm,19.6s,baz=66,slow=35						
HNR	**Honiara**	**13.94**	**120**	LR	LR	08 04 10.2	
	comp=Z,95nm,18.8s,baz=11,slow=38						
WRA	**Warramunga Arr**	**21.71**	**216**	P	P	08 00 07.4	-0.9
	5.3nm,1.1s,baz=44,slow=11,SNR=14 5.3nm,1.1s						
ASAR	**Alice Springs**	**24.93**	**211**	P	P	08 00 40.4	-0.1
	2.0nm,0.9s,baz=44,slow=7.3,SNR=16						
ASAR				LR	LR	08 11 13.9	
	comp=Z,29nm,19.6s,baz=316,slow=38 2.0nm,0.9s						
DZM	**Mont Dzumac**	**26.61**	**138**	LR	LR	08 09 48.5	
	comp=Z,89nm,20.6s,baz=354,slow=33						
FITZ	**Fitzroy Crossi**	**26.64**	**233**	LR	LR	08 13 14.4	
	comp=Z,68nm,18.6s,baz=103,slow=40						
H11S3	**WAKE ISLAND Hy**	**28.00**	**41**	T	T	08 31 04.2	
	baz=223,slow=76,SNR=366						
H11S2	**WAKE ISLAND Hy**	**28.01**	**41**	T	T	08 31 05.2	
	baz=223,slow=76,SNR=210						
H11S1	**WAKE ISLAND Hy**	**28.02**	**41**	T	T	08 31 04.5	
	baz=223,slow=76,SNR=186						
H11N1	**WAKE ISLAND Hy**	**29.02**	**40**	T	T	08 32 21.6	
	baz=222,slow=76,SNR=66						
H11N3	**WAKE ISLAND Hy**	**29.03**	**40**	T	T	08 32 19.1	
	baz=222,slow=76,SNR=128						
H11N2	**WAKE ISLAND Hy**	**29.03**	**40**	T	T	08 32 19.2	
	baz=222,slow=76,SNR=136						
SONM	**Songino Array**	**61.77**	**330**	LR	LR	08 31 29.1	
	comp=Z,56nm,21.9s,baz=340,slow

GRHS eS Sn 08 12 02.2 -1.2
GRSS Sisters 1.72 16 eP Pn 08 11 44.5 +0.1
GRSS eS Sn 08 12 04.8 -0.5
GCMP Grenada, Carri 1.96 20⇑*i*P Pn 08 11 47.4 -0.3
GCMP eS Sn 08 12 09.6 -1.4
PCRV Puerto La Cruz 2.54 260 eP Pn 08 11 59.1 +3.5
PCRV ⇓eS Sn 08 12 27.1 +1.6
PCRV Puerto La Cruz 2.54 260 eP Pn 08 11 59.1 +3.5
PCRV eS Sn 08 12 28.2 +2.8
SVB Belmont 2.75 17 eP Pn 08 11 58.7 +0.1
SVB eS Sn 08 12 30.8 +0.2
BBGH Gun Hill 3.52 45 Pn Pn 08 12 09.8 +0.7
BBGH Gun Hill 3.52 45 eP Pn 08 12 10.3 +1.2
BBGH Gun Hill 3.52 45 P Pn 08 12 12.2 +3.1
BBGH S Sn 08 12 49.3 -0.3
SLBI Saint Lucia, B 3.54 18 eP Pn 08 12 09.0 -0.4
SLBI eS Sn 08 12 48.6 -1.5
H05S1 Guadeloupe/Mar 3.96 18 P Pn 08 12 16.3 +1.1
H05S1 S Sn 08 12 59.8 -0.7
SNR=118
MPOM Morne Pois Mar 3.98 18 Pn 08 12 15.7 +0.4
BIM Bigot 3.99 14 Pn 08 12 15.8 +0.2
BIM Bigot 3.99 14 eP Pn 08 12 15.3 -0.2
BIM eS Sn 08 12 58.5 -2.6
SVN Savane Anatole 4.28 12 Pn 08 12 19.3 -0.3
SVN Savane Anatole 4.28 12 eP Pn 08 12 19.7 +0.1
SVN eS Sn 08 13 05.1 -3.2
ILAM Ilet Lapin Mar 4.29 16 Pn 08 12 19.6 0.0
ILAM Ilet Lapin Mar 4.29 16 eP Pn 08 12 20.3 +0.7
ILAM eS Sn 08 13 06.3 -2.1
FUNV FUNVISIS 4.64 268 eP Pn 08 12 28.1 +3.6
FUNV eS Sn 08 13 18.6 +1.4
DSLB Salisbury 4.82 8 eP Pn 08 12 27.5 +0.6
TACV Tcata 4.87 265 eP Pn 08 12 31.0 +3.3
TACV eS Sn 08 13 23.0 +0.1
DWS Wesley 4.97 9 eP Pn 08 12 30.0 +1.0
DWS eS Sn 08 13 22.3 -2.7
TDBA Terre de Bas, 5.21 5 Pn 08 12 33.4 +1.1
TBG Guadaloupe-3 5.21 5 eP Pn 08 12 33.0 +0.7
CACV CAICARA DEL OR 5.34 236 eP Pn 08 12 30.8 -3.2
CACV eS Sn 08 13 24.3 -10
MAGL Barre de l'ile 5.34 8 Pn 08 12 34.8 +0.6
MMLZ Guadeloupe Bro 5.40 4 eP Pn 08 12 36.0 +1.2
MMLZ eS Sn 08 13 33.0 -2.7
CBE Ff, Capester 5.43 5 Pn 08 12 36.1 +0.9
ATGZ Broadband at L 5.44 4 eP Pn 08 12 36.9 +1.5
BENV Beln 5.46 263 eP Pn 08 12 39.0 +3.3
BENV eS Sn 08 13 37.6 +0.3
DHSZ Broadband at M 5.62 3 eP Pn 08 12 39.0 +1.2
GDHS Morne Mazeau, 5.62 3 Pn 08 12 38.0 +0.1
TURV Turiamo 5.65 269 eP Pn 08 12 41.7 +3.4
TURV eS Sn 08 13 42.4 +0.4
DSDZ La Diserade, G 5.74 10 eP Pn 08 12 39.8 +0.3
DSDZ eS Sn 08 13 40.2 -3.8
GDSD La Dsirade Is 5.74 10 Pn 08 12 39.4 -0.1
H05N1 Guadeloupe/Mar 5.74 10 P Pn 08 12 40.2 +0.7
SNR=119
H05N1 S Sn 08 13 44.9 +0.8
ABD La Joyeuse, An 5.84 6 Pn 08 12 42.1 +1.2
MBFL Flemmings, Mon 6.08 359 eP Pn 08 12 45.2 +1.0
MBFL eS Sn 08 13 49.2 -3.3
BAUV El Baul 6.09 255 Pn 08 12 46.9 +2.5
BAUV El Baul 6.09 255 eP Pn 08 12 46.5 +2.0
BAUV eS Sn 08 13 51.2 -1.6
BAUV El Baul 6.09 255 eP Pn 08 12 46.3 +1.9
BAUV eS Sn 08 13 51.6 -1.3
MAPV Macapo 6.31 263 eP Pn 08 12 50.2 +2.8
MAPV eS Sn 08 13 57.7 -0.5
JACV Jacura 6.63 275 eP Pn 08 12 54.2 +2.4
SKOC St. Kitts, UWI 6.65 355 eP Pn 08 12 53.9 +1.9
SKI Saint Kitts 6.69 355 eP Pn 08 12 54.0 +1.4
SKI eS Sn 08 14 04.8 -2.7
SEUS St. Eustatius 6.87 353 Pn 08 12 56.5 +1.4
ANWB Willy Bob 7.00 2 Pn Pn 08 12 57.4 +0.5
ANWB Willy Bob 7.00 2 eP Pn 08 12 58.0 +1.2
ANWB Willy Bob 7.00 2 P Pn 08 12 57.9 +1.1
132nm,0.7s
TEPV Terepaima 7.01 265 eP Pn 08 12 58.4 +1.3
TEPV eS Sn 08 14 12.7 -2.8
SABA Saba 7.04 351 Pn 08 12 58.8 +1.4
HUMP Col San Antoni 8.30 334 Pn 08 13 15.0 +0.3
BOAV Boa Vista 8.33 169 Pn 08 13 14.8 -0.4
BOAV Boa Vista 8.33 169 eP Pn 08 13 12.8 -2.3
BOAV Boa Vista 8.33 169 P Pn 08 13 14.3 -0.8
1µm64nm,0.5s
BOAV S Sn 08 14 37.8 -10
1µm64nm,0.5s
SJG San Juan 8.41 333 P Pn 08 13 16.1 0.0
13nm,0.3s,baz=130,slow=22,SNR=6.8
SJG S Sn 08 14 43.1 -6.6
45nm,0.4s,baz=317,slow=17,SNR=9.1
GCPR Guaynabo City 8.55 334 Pn Pn 08 13 19.4 +1.3
OBIP Obispado Ponce 8.56 330 Pn Pn 08 13 18.6 +0.4
SDV Santo Domingo 8.59 259 Pn 08 13 20.0 +1.2
SDV Santo Domingo 8.59 259 P Pn 08 13 20.3 +1.5
27nm,0.3s,baz=140,slow=7.1,SNR=30
SDV S Sn 08 14 50.7 -3.7
28nm,0.3s,baz=265,slow=23,SNR=9.5
SDV LR LR 08 17 38.1
comp=Z,71nm,19.2s,baz=134,slow=45
SDV Santo Domingo 8.59 259 eP Pn 08 13 20.0 +1.2
SDV Santo Domingo 8.59 259 P Pn 08 13 19.8 +1.0
1µm43nm,0.6s
SDV S Sn 08 14 48.6 -5.9
1µm43nm,0.6s
CRPR Cabo Rojo, PR 8.79 327 Pn Pn 08 13 23.3 +2.0
AOPR Arecibo Observ 8.89 330 Pn 08 13 23.7 +0.9
AOPR Arecibo Observ 8.89 330 eP Pn 08 13 23.5 +0.7
URIC Uribia, Colomb 9.77 277 P Pn 08 13 36.4 +1.6
29nm,0.8s
CRJC Cerrejon, Guaj 10.60 273 P Pn 08 13 49.3 +3.0
2µm39nm,0.6s
DR12 Loma Pena Alta 10.74 320 Pn 08 13 50.3 +2.2
MDP Montagnes des 10.86 120 P Pn 08 13 45.5 -4.2
40nm,0.5s,baz=316,slow=14,SNR=130
MDP S Sn 08 15 37.1 -13
167nm,0.4s,baz=34,slow=17,SNR=24
MDP LR LR 08 19 01.3
comp=Z,69nm,21.6s,baz=287,slow=41
BANI BANI 11.11 315 Pn 08 13 56.7 +3.5
OCAC Ocana 11.32 259 P Pn 08 13 57.9 +1.7
2µm70nm,0.8s
OCAC S Sn 08 16 00.0 -1.4
2µm70nm,0.8s
BARC Barichara 11.67 251 P Pn 08 14 00.7 -0.3
806nm33nm,0.6s
SGC2 Sao Gabriel da 11.76 205 P Pn 08 14 03.0 +1.0
3µm88nm,0.8s
SGC2 S Sn 08 16 07.5 -4.4
3µm88nm,0.8s
RUSC La Rusia 11.85 247 Pn 08 14 04.1 +0.5
RUSC La Rusia 11.85 247 P Pn 08 14 03.7 +0.1
SMRC Santa Marta, M 11.92 274 Pn Pn 08 14 07.2 +3.0
BRJC Barrancabermej 12.07 253 P Pn 08 14 07.3 +1.0
SC01 Santiago de lo 12.07 317 Pn Pn 08 14 08.4 +2.1
SDDR Presa de Saban 12.15 314 Pn 08 14 10.2 +2.8
ROSC El Rosal 13.40 246 Pn 08 14 28.0 +3.1
ROSC El Rosal 13.40 246 P Pn 08 14 26.8 +1.9
13nm,0.3s,baz=2.5,slow=2.7,SNR=10
ROSC S Sn 08 16 48.9 -3.7
8.4nm,0.4s,baz=126,slow=18,SNR=1.8
ROSC LR LR 08 20 55.0
comp=Z,204nm,19.0s,baz=59,slow=43
MACA Manacapuru-AM 13.78 174 Pn 08 14 27.1 -2.5
MACA Manacapuru-AM 13.78 174 eP Pn 08 14 27.2 -2.4
TEFE Tefe 14.27 190 eP Pn 08 14 34.7 -1.5
MAL2 Monte Alegre, 14.83 147 Pn 08 14 40.3 -3.3
ITTB Itaituba 16.19 157 eP Pn 08 14 57.6 -3.5
CHIV Chivirico 16.63 306 P 08 15 10.6 +2.3
CHIV IAmb IAmb 08 15 36.7
comp=Z,14nm,1.1s
NPGB Novo Progresso 18.80 159 eP P 08 15 32.2 0.0
TMAB Tom-Au,PA,Br 19.00 132 eP P 08 15 33.8 -0.6
OTAV Otavalo 19.26 239 P P 08 15 39.8 +2.0
SLOR San Lorenzo - 19.84 236 P P 08 15 45.9 +1.8
PRPB Parauapebas 20.70 143 eP P 08 15 52.6 -0.3
COHC Cochancay 21.47 234 P P 08 16 03.4 +2.3
HDC Heredia 21.67 270 eP P 08 16 05.3 +1.9
PDRB Porto dos Gac 22.73 166 eP P 08 16 14.4 -0.3
PDRB eS S 08 20 20.2 +0.4
SOR Soroa 23.36 304 P P 08 16 24.8 +4.0
SOR IAmb IAmb 08 16 32.7
comp=Z,23nm,1.1s
VILB Vilhena 23.51 175 P P 08 16 22.8 +0.4
VILB IAmb IAmb 08 16 45.2
comp=Z,14nm,0.7s
VILB Vilhena 23.51 175 eP P 08 16 22.9 +0.5
MGAN Managua 23.72 276 P P 08 16 25.7 +1.4
MGAN IAmb IAmb 08 16 34.0
comp=Z,35nm,0.8s
SMTB Santa Maria do 24.16 143 eP P 08 16 28.6 +0.2
SNDB Serra Nova Dou 24.89 154 eP P 08 16 34.5 -0.5
PTLB Pontes e Lacer 26.08 173 eP P 08 16 46.2 +0.5
SALV Santo Antonio 27.11 166 eP P 08 16 54.9 -0.2
LPAZ La Paz 27.41 193 P P 08 17 01.0 +2.6
comp=Z,0.7nm,0.8s,baz=0.0,slow=12,SNR=2.4
comp=Z,0.7nm,0.8s
LPAZ La Paz 27.41 193 eP P 08 16 58.2 -0.2
ARAG Araguaiana, MT 28.08 159 eP P 08 17 04.5 +0.7
SDBA SAO DESIDERIO 28.56 143 eP P 08 17 08.6 +0.5
C2SB Chapadao do Su 30.61 163 eP P 08 17 26.1 0.0
RCBR Riachuelo 30.79 121 eP P 08 17 27.9 +0.1
PB11 IPOC Station P 31.11 194 P P 08 17 30.9 +0.3
PB11 IAmb IAmb 08 18 00.6
comp=Z,8.3nm,1.1s
BDQN Bodoquena, MS 31.33 170 eP P 08 17 33.2 +0.8
U54A Nelsons Funny 31.34 328 P P 08 17 32.3 -0.2
U54A IAmb IAmb 08 17 40.1
comp=Z,8.8nm,1.1s
GDU01 Guandu, BA 32.93 137 eP P 08 17 46.3 -0.4
DIAM Diamantina, MG 34.02 148 eP P 08 17 57.0 +0.8
P43A Skaggs, Pawnee 37.79 325 P P 08 18 27.6 -0.5
P43A IAmb IAmb 08 18 28.7
comp=Z,11nm,0.5s
BRDY Brady 39.85 307 P 08 18 44.7 -0.8
BRDY IAmb IAmb 08 18 45.4
comp=Z,7.5nm,0.8s
BLOK Blackwell 40.98 315 P P 08 18 54.7 0.0
APMT Aspermont 41.53 309 P P 08 18 58.4 -1.0
APMT IAmb IAmb 08 18 59.0
comp=Z,9.1nm,1.2s
TXAR Lajitas Array 42.98 302 P P 08 19 11.2 -0.2
comp=Z,0.2nm,0.4s,baz=121,slow=10,SNR=11
TXAR PcP PcP 08 21 01.1 0.0
comp=Z,0.5nm,0.6s,baz=113,slow=4.6,SNR=5.6
TXAR ScP ScP 08 24 45.0 -3.0
comp=Z,0.6nm,1.0s,baz=46,slow=3.0,SNR=3.2
comp=Z,0.2nm,0.4s
SCHQ Schefferville 44.25 356 P P 08 19 20.6 -0.4
comp=Z,3.5nm,0.5s,baz=179,slow=5.9,SNR=9.2
comp=Z,3.5nm,0.5s
PV01 Paradox Valley 49.71 311 P P 08 20 04.0 -0.2
PV01 IAmb IAmb 08 20 04.7
comp=Z,2.8nm,0.6s
PV18 Skein Mesa, Pa 50.00 311 P P 08 20 06.1 -0.3
PV18 IAmb IAmb 08 20 07.9
comp=Z,2.9nm,0.6s
H10N3 ASCENSION HYDR 50.80 109 T T 09 15 36.8
baz=292,slow=75,SNR=29
H10N2 ASCENSION HYDR 50.81 109 T T 09 15 37.4
baz=292,slow=75,SNR=32
H10N1 ASCENSION HYDR 50.83 109 T T 09 15 38.4
baz=292,slow=75,SNR=32
H10S3 ASCENSION HYDR 51.05 111 T T 09 15 38.2
baz=295,slow=75,SNR=29
H10S2 ASCENSION HYDR 51.07 111 T T 09 15 39.6
baz=285,slow=75,SNR=18
PDAR Pinedale Array 52.16 317 P P 08 20 20.9 -1.7
PDAR Pinedale Array 52.16 317 P P 08 20 20.9 -1.6
comp=Z,2.1nm,0.5s,baz=114,slow=9.9,SNR=27
comp=Z,2.1nm,0.5s
AVE Averroes 54.82 57 P P 08 20 41.5 -0.4
MTE Manteigas 56.38 48 P P 08 20 53.5 +0.4
DBIC Dimbokro 56.66 89 P P 08 20 56.0 +0.6
DBIC IAmb IAmb 08 21 34.0
comp=Z,5.8nm,1.1s
NVAR Mina Array Bea 57.12 309 P P 08 20 58.0 -0.6
comp=Z,0.2nm,0.5s,baz=69,slow=5.9,SNR=2.3
NVAR LR LR 08 50 36.5
comp=Z,28nm,19.0s,baz=62,slow=42
comp=Z,0.2nm,0.5s
ESDC Sonseca Array 58.86 50 P P 08 21 11.8 +1.3
comp=Z,1.1nm,0.9s,baz=263,slow=6.2,SNR=2.2
comp=Z,1.1nm,0.9s
ILULI Ilulissat 58.95 5 P P 08 21 12.5 +2.0
SUMG Summit 63.51 8 P P 08 21 42.0 +0.2
SUMG IAmb IAmb 08 21 59.4
comp=Z,4.8nm,0.9s
NB2 NORSAR Subarra 72.69 29 P P 08 22 40.3 +1.2
comp=Z,1.6nm,0.7s,baz=264,slow=6.2
NOA NORSAR Array B 72.69 29 P P 08 22 40.3 +1.2
comp=Z,0.7nm,0.6s,baz=262,slow=5.9,SNR=4.1
comp=Z,0.7nm,0.6s
HFS Hagfors 73.77 30 P P 08 22 46.1 +0.7
comp=Z,1.3nm,0.6s,baz=98,slow=2.2,SNR=5.5
comp=Z,1.3nm,0.6s
SPITS Spitsbergen Ar 77.30 12 P P 08 23 05.9 +0.5
comp=Z,1.6nm,0.4s,baz=172,slow=2.5,SNR=13
comp=Z,1.6nm,0.4s
ILAR Eielson Array 78.23 334 P P 08 23 08.8 -2.0
comp=Z,0.4nm,0.6s,baz=258,slow=7.1,SNR=4.7
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 79.28 21 P P 08 23 16.8 +0.4
comp=Z,1.8nm,0.6s,baz=270,slow=6.1,SNR=9.2
comp=Z,1.8nm,0.6s
FINES FINESS Array B 79.87 29 P P 08 23 20.9 +1.2
comp=Z,0.9nm,0.5s,baz=275,slow=4.7,SNR=9.5
comp=Z,0.9nm,0.5s
CMAR Chiang Mai Arr 145.57 33 PKPbc **PKPdf** 08 30 51.0 +0.7
comp=Z,1.7nm,0.5s,baz=315,slow=5.4,SNR=11

*CNRM **08** 08:20:29.6,35˚.08N×11˚.55W,h10km,ML3.7*
*INMG **08** 08:20:35.7±1.2,35˚.18N×11˚.65W,h48km±14km,ML3.0,*
Error ellipse: s-maj=5.9km s-min=3.6km az=89.0,
#DIST_RANGE: REGIONAL #IPMA_REGION:
Horseshoe-Ampere
*MDD **08** 08:20:35.7±0.8,35˚.26N×11˚.58W,h40km,Mb4.7/12,Error*
ellipse: s-maj=6.1km s-min=4.4km az=69.0
*IGIL **08** 08:20:35.0,35˚.18N×11˚.64W,h30km,ML3.2*

ISC 08 08:20:33.7±2.1,35°.23N±0°.06×11°.5W±0°.1,h35km,n98,
σ2s14/145,10C-1D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.89**	**48**	⇓*e*P		**Pn**		**08 21 19.3**	**+2.1**
PFVI				*e*S		**Sn**		**08 21 51.9**	**+1.1**
PFVI				*i*	IAML			08 21 53.1	
PFVI				*i*	IAML			08 21 53.2	
PFVI				*i*	IAML			08 21 56.0	
PFVI	**Vila Bisbo**	**2.89**	**48**	P		**Pn**		**08 21 19.0**	**+1.7**
PFVI	**Vila Bisbo**	**2.89**	**48**	S		**Sn**		**08 21 52.1**	**+1.3**
MORF	**Marmelete**	**3.11**	**47**	*e*P		**Pn**		**08 21 22.4**	**+2.2**
MORF				*e*S		**Sn**		**08 21 56.8**	**+0.5**
MORF				IAML				08 21 60.0	
comp=N,119nm,0.3s									
MORF	**Marmelete**	**3.11**	**47**	*e*P		**Pn**		**08 21 22.4**	**+2.2**
MORF				*e*S		**Sn**		**08 21 57.3**	**+1.1**
MORF				*i*	IAML			08 22 00.1	
MORF				*i*	IAML			08 22 00.2	
MORF				*i*	IAML			08 22 01.1	
PTEO	**Sao Teotonio**	**3.23**	**43**	*e*P		**Pn**		**08 21 24.2**	**+2.3**
PTEO				*e*S		**Sn**		**08 22 00.2**	**+1.0**
PTEO				*i*	IAML			08 22 02.2	
PTEO				*i*	IAML			08 22 03.0	
PTEO				*i*	IAML			08 22 04.4	
PBDV	**Barranco-do-Ve**	**3.53**	**54**	P		**Pn**		**08 21 28.4**	**+2.3**
PBDV				S		**Sn**		**08 22 09.5**	**+3.0**
PBDV	**Barranco-do-Ve**	**3.53**	**54**	*e*P		**Pn**		**08 21 28.4**	**+2.3**
PBDV				*e*S		**Sn**		**08 22 07.6**	**+1.0**
PBDV				*i*	IAML			08 22 08.6	
PBDV				*i*	IAML			08 22 09.6	
PBDV				*i*	IAML			08 22 11.1	
PCVE	**Castro Verde**	**3.69**	**48**	*e*P		**Pn**		**08 21 30.7**	**+2.4**
PCVE				*e*S		**Sn**		**08 22 11.7**	**+1.1**
PCVE				*i*	IAML			08 22 13.3	
PCVE				*i*	IAML			08 22 13.5	
PCVE				*i*	IAML			08 22 14.5	
MESJ	**Messejana**	**3.72**	**45**	*e*P		**Pn**		**08 21 30.5**	**+1.8**
MESJ				*e*S		**Sn**		**08 22 11.1**	**-0.2**
MESJ				IAML				08 22 13.8	
comp=N,32nm,0.2s									
MESJ	**Messejana**	**3.72**	**45**	*e*P		**Pn**		**08 21 30.5**	**+1.8**
MESJ				*e*S		**Sn**		**08 22 11.9**	**+0.6**
MESJ				*i*	IAML			08 22 13.8	
MESJ				*i*	IAML			08 22 14.2	
MESJ				*i*	IAML			08 22 15.3	
PVAQ	**Vaqueiros**	**3.76**	**54**	*e*P		**Pn**		**08 21 31.7**	**+2.5**
PVAQ				*e*S		**Sn**		**08 22 12.2**	**0.0**
PVAQ				*i*	IAML			08 22 16.4	
PVAQ				*i*	IAML			08 22 16.8	
PVAQ				*i*	IAML			08 22 19.7	
PVAQ	**Vaqueiros**	**3.76**	**54**	P		**Pn**		**08 21 30.6**	**+1.4**
PVAQ	**Vaqueiros**	**3.76**	**54**	S		**Sn**		**08 22 13.1**	**+0.9**
AVE	**Averroes**	**3.91**	**118**	S		**Sn**		**08 22 17.5**	**+1.7**
EGRO	**El Granado**	**3.99**	**54**	P		**Pn**		**08 21 34.5**	**+2.2**
EGRO				S		**Sn**		**08 22 18.5**	**+0.7**
EGRO	**El Granado**	**3.99**	**54**	Pn		**Pn**		**08 21 34.8**	**+2.5**
EGRO				⇑*i*	IVmb_VC			08 21 39.9	
comp=N,369nm,SNR=2.4									
EGRO					Sn	**Sn**		**08 22 16.3**	**-1.5**
PBEJ	**Beja**	**4.06**	**45**	*e*S		**Sn**		**08 22 19.7**	**+0.2**
PBEJ				*i*	IAML			08 22 21.0	
PBEJ				*i*	IAML			08 22 22.3	
PBEJ				*i*	IAML			08 22 24.6	
SRHM	**Skhour des Reh**	**4.08**	**131**	P		**Pn**		**08 21 33.1**	**-0.5**
SRHM	**Skhour des Reh**	**4.08**	**131**	S		**Sn**		**08 22 18.6**	**-1.6**
PMAFR	**Mafra**	**4.13**	**25**	P		**Pn**		**08 21 35.1**	**+0.9**
PMAFR				S		**Sn**		**08 22 20.8**	**-0.5**
PMAFR	**Mafra**	**4.13**	**25**	*e*P		**Pn**		**08 21 35.5**	**+1.2**
PMAFR				*e*S		**Sn**		**08 22 21.6**	**+0.2**
PMAFR				*i*	IAML			08 22 21.7	
PMAFR				*i*	IAML			08 22 22.3	
PMAFR				*i*	IAML			08 22 25.9	
MOE	**Montemor**	**4.16**	**37**	*e*P		**Pn**		**08 21 36.4**	**+1.8**
MOE				*e*S		**Sn**		**08 22 22.0**	**0.0**
MOE				*i*	IAML			08 22 26.6	
MOE				*i*	IAML			08 22 26.8	
MOE				*i*	IAML			08 22 29.2	
ARNO	**Arenosillo**	**4.30**	**63**	P		**Pn**		**08 21 38.7**	**+2.2**
ARNO				S		**Sn**		**08 22 27.9**	**+2.4**
EVO	**Evora**	**4.33**	**39**	P		**Pn**		**08 21 38.7**	**+1.7**
EVO				S		**Sn**		**08 22 26.3**	**-0.1**
EVO	**Evora**	**4.33**	**39**	*e*P		**Pn**		**08 21 38.8**	**+1.7**
EVO				*e*S		**Sn**		**08 22 26.3**	**-0.1**
EVO				*i*	IAML			08 22 28.9	
EVO				*i*	IAML			08 22 29.0	
EVO				*i*	IAML			08 22 31.0	
ZHG	**ZHG**	**4.41**	**112**	P		**Pn**		**08 21 37.4**	**-0.8**
ZHG	**ZHG**	**4.41**	**112**	S		**Sn**		**08 22 27.4**	**-1.0**
PMPST	**Porto Santo, M**	**4.53**	**243**	*e*P		Pn		08 21 35.6	-4.1
PMPST				*e*S		Sn		08 22 18.5	-13
PMPST				*i*	IAML			08 22 23.3	
PMPST				*i*	IAML			08 22 23.8	
PMPST				*i*	IAML			08 22 24.7	
PARRA	**Arraiolos**	**4.54**	**37**	*e*P		Pn		08 21 41.6	+7.8
PARRA				*e*S		Sn		08 22 31.0	+11
PARRA				*i*	IAML			08 22 33.2	
PARRA				*i*	IAML			08 22 34.0	
PARRA				*i*	IAML			08 22 34.6	
PMPS	**Porto Santo**	**4.54**	**243**	*e*P		Pn		08 21 35.7	-4.1
PBAR	**Barrancos**	**4.65**	**49**	P		**Pn**		**08 21 43.2**	**+1.8**
PBAR				S		**Sn**		**08 22 34.5**	**+0.4**
PBAR	**Barrancos**	**4.65**	**49**	*e*P		**Pn**		**08 21 43.5**	**+2.1**
PBAR				*e*S		**Sn**		**08 22 34.5**	**+0.4**
PBAR				*i*	IAML			08 22 36.0	
PBAR				*i*	IAML			08 22 37.3	
PBAR				*i*	IAML			08 22 38.4	
PMTG	**Montargil**	**4.65**	**33**	*e*P		**Pn**		**08 21 43.3**	**+1.9**
PMTG				*e*S		**Sn**		**08 22 33.5**	**-0.7**
PMTG				*i*	IAML			08 22 34.7	
PMTG				*i*	IAML			08 22 34.8	
PMTG				*i*	IAML			08 22 37.4	
EMIN	**Mina Concepcio**	**4.66**	**56**	P		**Pn**		**08 21 43.5**	**+2.0**
EMIN				S		**Sn**		**08 22 34.1**	**-0.2**
EMIN	**Mina Concepcio**	**4.66**	**56**	Pn		**Pn**		**08 21 43.7**	**+2.2**
EMIN				Sn		**Sn**		**08 22 33.8**	**-0.5**
RSA	**Sarsar**	**4.69**	**93**	P		**Pn**		**08 21 41.1**	**-0.9**
RSA	**Sarsar**	**4.69**	**93**	S		**Sn**		**08 22 35.1**	**-0.1**
PSBE	**So Bento**	**4.80**	**26**	*e*S		**Sn**		**08 22 37.5**	**-0.3**
PSBE				*i*	IAML			08 22 40.5	
PSBE				*i*	IAML			08 22 40.5	
PSBE				*i*	IAML			08 22 42.5	
PESTR	**Estremoz**	**4.80**	**40**	P		**Pn**		**08 21 46.0**	**+2.5**
PESTR				S		**Sn**		**08 22 37.5**	**-0.5**
PESTR	**Estremoz**	**4.80**	**40**	*e*P		**Pn**		**08 21 46.4**	**+2.9**
PESTR				*e*S		**Sn**		**08 22 37.8**	**-0.2**
PESTR				*i*	IAML			08 22 39.7	
PESTR				*i*	IAML			08 22 40.4	
PESTR				*i*	IAML			08 22 41.5	
PESTR	**Estremoz**	**4.80**	**40**	P		**Pn**		**08 21 44.4**	**+0.8**
PESTR	**Estremoz**	**4.80**	**40**	S		**Sn**		**08 22 41.4**	**+3.5**
ESPR	**Espera**	**4.87**	**69**	P		**Pn**		**08 21 46.6**	**+2.1**
ESPR				S		**Sn**		**08 22 41.1**	**+1.4**
ESPR	**Espera**	**4.87**	**69**	Pn		**Pn**		**08 21 47.1**	**+2.6**
ESPR				⇑*i*	IVmb_VC			08 21 48.1	
comp=N,347nm,SNR=2.5									
ESPR					Sn	**Sn**		**08 22 38.4**	**-1.2**
EBAD	**Badajoz**	**5.04**	**44**	P		**Pn**		**08 21 47.9**	**+1.1**
EBAD				S		**Sn**		**08 22 42.9**	**-0.9**
EBAD	**Badajoz**	**5.04**	**44**	Pn		**Pn**		**08 21 47.9**	**+1.1**
EBAD				⇑*i*	IVmb_VC			08 21 50.2	
comp=N,323nm,SNR=2.2									
EBAD					Sn	**Sn**		**08 22 41.0**	**-2.8**
OUK	**Oukaimeden**	**5.04**	**142**	P		**Pn**		**08 21 47.5**	**+0.3**
OUK	**Oukaimeden**	**5.04**	**142**	S		**Sn**		**08 22 42.0**	**-2.3**
PSARD	**Sardoal**	**5.12**	**30**	*e*P		**Pn**		**08 21 49.6**	**+1.8**
PSARD				*e*S		**Sn**		**08 22 44.8**	**-0.9**
PSARD				*i*	IAML			08 22 46.7	
PSARD				*i*	IAML			08 22 48.7	
PSARD				*i*	IAML			08 22 49.4	
PMAR	**Madeira**	**5.13**	**242**	*e*P		Pn		08 21 44.6	-3.5
PMAR				*e*S		Sn		08 22 35.8	-10
PMAR				*i*	IAML			08 22 39.6	
PMAR				*i*	IAML			08 22 42.1	
PMAR	**Madeira**	**5.13**	**242**	P		Pn		08 21 43.8	-4.4
PMOZ	**Porto Moniz, M**	**5.29**	**245**	P		Pn		08 21 46.0	-4.2
PMOZ				S		Sn		08 22 41.7	-8.3
PMOZ	**Porto Moniz, M**	**5.29**	**245**	P		Pn		08 21 46.1	-4.2
PMOZ	**Porto Moniz, M**	**5.29**	**245**	S		Sn		08 22 44.0	-5.6
PMRV	**Marv??o**	**5.33**	**37**	*e*P		**Pn**		**08 21 52.3**	**+1.5**
PMRV				*e*S		**Sn**		**08 22 49.6**	**-1.3**
PMRV				*i*	IAML			08 22 51.1	
PMRV				*i*	IAML			08 22 53.6	
PMRV				*i*	IAML			08 22 53.6	
TTIG	**Tnine Tigouga,**	**5.34**	**150**	P		Pn		08 21 47.2	-3.8
PCAS	**Casmilo, Conde**	**5.38**	**26**	*e*P		**Pn**		**08 21 52.9**	**+1.4**
PCAS				*e*S		**Sn**		**08 22 51.4**	**-0.8**
PCAS				*i*	IAML			08 22 53.0	
PCAS				*i*	IAML			08 22 55.2	
PCAS				*i*	IAML			08 22 55.9	
TISM	**Timmit**	**5.50**	**128**	P		**Pn**		**08 21 50.8**	**-2.2**
IFR	**Ifrane**	**5.55**	**106**	P		**Pn**		**08 21 54.5**	**+0.5**
IFR				S		**Sn**		**08 22 54.5**	**-2.3**
TIO	**Tiouine**	**5.58**	**139**	P		**Pn**		**08 21 55.9**	**+1.5**
TIO				S		**Sn**		**08 22 54.4**	**-2.9**
TIO	**Tiouine**	**5.58**	**139**	P		**Pn**		**08 21 53.2**	**-1.1**
TIO	**Tiouine**	**5.58**	**139**	S		**Sn**		**08 22 55.6**	**-1.7**
PCBR	**Castelo Branco**	**5.62**	**34**	*e*P		**Pn**		**08 21 56.4**	**+1.8**
PCBR				*e*S		**Sn**		**08 22 56.9**	**-1.0**
PCBR				*i*	IAML			08 23 00.1	
PCBR				*i*	IAML			08 23 00.2	
PCBR				*i*	IAML			08 23 00.6	
EMIJ	**Mijas**	**5.64**	**74**	P		**Pn**		**08 21 56.1**	**+1.1**
ECAB	**El Cabril**	**5.67**	**58**	P		**Pn**		**08 21 57.4**	**+2.0**
ECAB				S		**Sn**		**08 22 58.4**	**-0.9**
ECAB	**El Cabril**	**5.67**	**58**	Pn		**Pn**		**08 21 57.6**	**+2.2**
ECAB				Sn		**Sn**		**08 22 55.9**	**-3.4**
**OUZ

ELGU				S		Sn	08 23 23.2	+0.8
ELGU	**Los Guajares,**	**6.60**	**73**	Sn		Sn	08 23 20.7	-1.6
POLO	**Lamas de Olo**	**6.80**	**24**	*eP*		Pn	08 22 11.7	+0.7
POLO				*eS*		Sn	08 23 23.7	-3.6
POLO				*i* IAML			08 23 26.1	
POLO				*i* IAML			08 23 27.4	
POLO				*i* IAML			08 23 28.1	
EQTA	**Presa de Quent**	**6.82**	**71**	P		Pn	08 22 14.0	+2.6
EQTA				S		Sn	08 23 28.5	+0.7
EQUE	**Quentar**	**6.82**	**71**	Pn		Pn	08 22 14.7	+3.3
EQUE				⇑*i*VMb_VC			08 22 17.8	
	comp=N,168nm,SNR=1.2							
EQUE				Sn		Sn	08 23 24.5	-3.4
MVO	**Moncorvo**	**6.90**	**29**	*eP*		Pn	08 22 13.9	+1.5
MVO				*eS*		Sn	08 23 26.9	-2.8
MVO				*i* IAML			08 23 29.2	
MVO				*i* IAML			08 23 30.3	
PCAB	**Cabril**	**7.03**	**22**	*eP*		Pn	08 22 15.0	+0.9
PCAB				*eS*		Sn	08 23 30.4	-2.4
PAB	**San Pablo**	**7.15**	**51**	Pn		Pn	08 22 17.6	+1.8
PAB				⇑*i*VMb_VC			08 22 18.1	
	comp=N,171nm,SNR=1.5							
PAB				Sn		Sn	08 23 31.9	-4.1
ELOB	**Lobios**	**7.16**	**21**	Pn		Pn	08 22 16.7	+0.7
ELOB				⇑*i*VMb_VC			08 22 26.1	
	comp=N,429nm,SNR=1.4							
ELOB				Sn		Sn	08 23 29.8	-6.3
PSIM	**Granatula de C**	**7.17**	**58**	Pn		Pn	08 22 18.3	+2.2
PSIM				Sn		Sn	08 23 33.6	-2.7
PGAV	**Gavieira, Arco**	**7.19**	**20**	*eP*		Pn	08 22 17.4	+1.0
PGAV				*eS*		Sn	08 23 33.0	-3.9
PGAV				*i* IAML			08 23 36.8	
PGAV				*i* IAML			08 23 36.9	
PGAV				*i* IAML			08 23 37.1	
EQES	**Quesada**	**7.27**	**67**	Pn		Pn	08 22 19.4	+1.8
EQES				⇑*i*VMb_VC			08 22 19.5	
	comp=N,190nm,SNR=0.9							
EQES				Sn		Sn	08 23 34.4	-4.5
ECAL	**Calabor**	**7.68**	**28**	P		Pn	08 22 23.1	+0.1
ECAL				S		Sn	08 23 46.6	-2.2
ECAL	**Calabor**	**7.68**	**28**	Pn		Pn	08 22 23.6	+0.5
ECAL				⇑*i*VMb_VC			08 22 30.0	
	comp=N,365nm,SNR=1.2							
ECAL				Sn		Sn	08 23 43.0	-5.8
EMAZ	**Mazaricos**	**7.96**	**14**	Pn		Pn	08 22 27.5	+0.6
EMAZ				Sn		Sn	08 23 49.2	-6.5
EAGO	**Agolada(Pontev**	**8.02**	**18**	Pn		Pn	08 22 28.3	+0.6
EAGO				⇑*i*VMb_VC			08 22 33.6	
	comp=N,358nm,SNR=0.9							
EAGO				Sn		Sn	08 23 52.2	-5.0
CLUM	**San Bartolome**	**8.18**	**207**	Sn		Sn	08 23 47.4	-14
CROM	**Garafia, La Pa**	**8.41**	**222**	Sn		Sn	08 23 51.7	-15
ETOB	**Tobarra**	**8.68**	**64**	P		Pn	08 22 38.8	+2.0
ETOB				S		Sn	08 24 11.2	-2.3
ETOB	**Tobarra**	**8.68**	**64**	Pn		Pn	08 22 39.3	+2.5
ETOB				Sn		Sn	08 24 10.7	-2.8

ASRS 08 08:25:27.0±1.0, 54°35N×86°95E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 08 08:26:15.0±2.9, 53°91N×90°20E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

GCG 08 08:27:43.0±0.9, 14°14N×91°29W, h67km±7km, MD3.5, ML3.4, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.30**	**344**	*eP*	Pn	08 27 58.2	+4.1
STG2				*eS*	Sn	08 28 08.6	+6.4
ESSG	**Sabana Grande**	**0.51**	**62**	*i* P	Pn	08 27 55.8	+0.1
ESSG				*eS*	Sn	08 28 05.4	+0.4
SOKI	**Kika Raxquin**	**0.68**	**351**	*eS*	Sn	08 28 11.1	+2.2
SOKI				IAML		08 28 12.3	
	comp=N,564nm,0.5s						
FG16	**Alotenango, Sa**	**0.77**	**80**	*i* P	Pn	08 27 56.7	-2.0
FG16				*eS*	Sn	08 28 06.9	-3.3
FG16				IAML		08 28 08.0	
	comp=N,6μm,0.2s						
ESSJ	**San Jos, E**	**0.96**	**127**	*i* P	Pn	08 27 55.3	-5.6
APG	**El Apazote**	**1.17**	**43**	*eP*	Pn	08 28 03.8	0.0
NUBE	**Las Nubes**	**1.48**	**99**	*eP*	Pn	08 28 08.0	+0.2

*IDC **08** 08:41:30.1±5.7, 9°27N×85°72W, h45km±31km, mb3.2/4, mbtmp3.5/5, ML2.7/2, Error ellipse: s-maj=70.5km s-min=21.5km az=157.0*
*UCR **08** 08:41:31.0±1.1, 10°10N×86°05W, h2km±7km, MW4.3*
*CATAC **08** 08:41:36.9±0.4, 10°N±3°×8°6W±°, h4km±2km, M3.9/25, MLv3.9/25, Error ellipse: s-maj=9.6km s-min=3.4km az=54.5, confirmed*

ISC 08 08:41:35.8±0.9, 10°21N±0°04×85°81W±0°04, h16km±6km, n77, σ1°20/84, mb3.5/4, 24C-7D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAJU	**San Juanillo,**	**0.17**	**146**	⇓*eP*	Pg	08 41 39.3	-0.8
SAJU				*eS*	Sg	08 41 43.9	+0.9
SACU	**Santa Cruz**	**0.23**	**76**	*eP*	Pg	08 41 41.7	+0.7
JUD3	**Juan Diaz 3**	**0.27**	**99**	⇓*eP*	Pg	08 41 42.2	+0.5
DELF	**Filadelfia**	**0.34**	**46**	⇓*eP*	Pb	08 41 44.0	+0.4
CMARA	**Lajas Hojancha**	**0.42**	**116**	P	Pg	08 41 44.4	0.0
CMARA				S	Sb	08 41 53.0	+2.0
CMARA	**Lajas Hojancha**	**0.42**	**116**	⇓*eP*	Pg	08 41 44.2	-0.2
CMARA				*eS*	Sb	08 41 53.0	+2.0
INDI	**Punta indio, G**	**0.45**	**139**	⇑*eP*	Pg	08 41 43.8	-1.1
INDI				*eS*	Sg	08 41 51.5	+0.5
ALIBA	**Liberia Airpor**	**0.46**	**34**	⇓*eP*	Pb	08 41 46.4	+0.9
PLVR	**Palo Verde**	**0.47**	**73**	⇓*eP*	Pb	08 41 46.1	+0.3
ELI1	**Hacienda Flor**	**0.50**	**30**	*eP*	Pb	08 41 47.3	+1.0
ERIA	**Liberia**	**0.56**	**40**	⇓*eP*	Pb	08 41 48.1	+0.9
NYURE	**Nandayure**	**0.58**	**111**	⇑*eP*	Pg	08 41 46.5	-0.8
BAGA	**Bagaces**	**0.62**	**59**	⇑*eP*	Pb	08 41 49.0	+0.7
LAPC	**Finca la Perla**	**0.67**	**33**	⇑*eP*	Pb	08 41 49.2	+0.1
GPS2	**Hotel Rincn d**	**0.70**	**39**	⇑*eP*	Pb	08 41 49.9	+0.2
VRLE	**La Escondida,**	**0.72**	**37**	⇑*eP*	Pb	08 41 50.2	+0.1
CNAS	**Canas**	**0.74**	**72**	*eP*	Pn	08 41 51.6	+0.1
VORI	**VORI**	**0.76**	**37**	⇑*eP*	Pb	08 41 50.8	+0.1
CUI	**Cuipilapa**	**0.77**	**55**	⇑*eP*	Pb	08 41 51.1	+0.2
INVE	**Universidad In**	**0.78**	**70**	⇑*eP*	Pb	08 41 51.3	+0.4
HORNC	**Hornillas**	**0.80**	**51**	⇑*eP*	Pb	08 41 51.3	0.0
BUAI	**Buenos Aires**	**0.81**	**35**	⇑*eP*	Pb	08 41 51.6	+0.1
JUNT	**Juntas**	**0.84**	**85**	⇑*eP*	Pg	08 41 51.4	-0.7
PEJA	**Penjamo Buenos**	**0.84**	**35**	*eP*	Pb	08 41 52.2	+0.2
JTS	**Las Juntas de**	**0.84**	**84**	P	Pg	08 41 51.2	-1.0
	287nm,0.4s,baz=36,slow=2.0,SNR=175						
JTS				S	Sn	08 42 07.4	+2.3
	364nm,0.3s,baz=296,slow=21,SNR=8.1						
JTS	**Las Juntas de**	**0.84**	**84**	P	Pg	08 41 51.8	-0.5
JTS	**Las Juntas de**	**0.84**	**84**	⇑*eP*	Pg	08 41 51.5	-0.8
TIMP	**Tierras Morena**	**0.86**	**64**	⇑*eP*	Pb	08 41 52.3	-0.1
TILA	**Tilaran**	**0.86**	**72**	⇑*eP*	Pb	08 41 52.3	-0.1
MOTZ	**Rio Naranjo**	**0.86**	**57**	*eP*	Pb	08 41 52.6	+0.2
LCRUZ	**La Cruz**	**0.88**	**11**	⇑*eP*	Pb	08 41 52.4	-0.4
VMAR	**Armenia, Volca**	**0.91**	**48**	⇑*eP*	Pb	08 41 53.4	+0.2
TENO	**El Achiote**	**0.95**	**59**	⇑*eP*	Pg	08 41 52.9	-1.4
QUEB	**Quebradon, Cot**	**0.99**	**65**	⇑*eP*	Pb	08 41 54.3	-0.2
CARN	**Rivas**	**1.01**	**16**	P	Pb	08 41 55.0	0.0
CARN	**Rivas**	**1.01**	**16**	*eP*	Pg	08 41 54.0	-1.5
UPAL	**Upala**	**1.04**	**49**	P	Pb	08 41 55.3	-0.1
TABAC	**Tabacon**	**1.06**	**74**	⇑*eP*	Pb	08 41 55.7	-0.1
CASO	**Castillo**	**1.08**	**78**	*eP*	Pg	08 41 55.6	-1.1
ARE1	**Arenal 1**	**1.10**	**77**	*eP*	Pg	08 41 56.3	-0.8
VARE2	**V. Arenal**	**1.10**	**77**	⇑*eP*	Pg	08 41 56.3	-0.8
CEDE	**Laguna Cedeo**	**1.12**	**76**	⇑*eP*	Pg	08 41 56.6	-0.9
VACR	**Volcan Arenal**	**1.14**	**76**	⇑*eP*	Pg	08 41 56.7	-1.2
SOCE	**Pocosol**	**1.18**	**81**	P	Pg	08 41 57.3	-1.3
SOCE	**Pocosol**	**1.18**	**81**	*eP*	Pg	08 41 57.0	-1.6
MORN	**Al O del Volca**	**1.34**	**7**	P	Pn	08 41 59.4	-0.4
QUEU	**Ciudad Quesada**	**1.35**	**85**	*eP*	Pn	08 41 60.0	-0.1
PALD	**Palmares**	**1.36**	**96**	⇑*eP*	Pn	08 41 59.1	-1.1
CONN	**Concepcion**	**1.36**	**7**	P	Pn	08 41 59.7	-0.4
COVE	**Coope Vega, Sa**	**1.47**	**70**	P	Pb	08 42 02.8	0.0
ECI	**Escuela Centro**	**1.75**	**99**	*eP*	Pn	08 42 05.4	-0.2
ECI				*eS*	Sg	08 42 31.1	-1.0
UNAN	**Cigeo UNAN**	**1.95**	**346**	P	Pn	08 42 09.5	+1.3
UNAN				S	Sn	08 42 34.3	+2.0
TISN	**Laguna Tiscapa**	**1.98**	**347**	P	Pn	08 42 09.9	+1.3
WILN	**Americas 2**	**1.98**	**349**	P	Pn	08 42 10.3	+1.7
WILN				S	Sn	08 42 34.3	+1.3
APQ2	**Apoyeque**	**2.04**	**346**	P	Pn	08 42 11.3	+1.8
COPN	**Copaltepe**	**2.11**	**339**	P	Pb	08 42 13.8	+0.1
MOM2	**El Cardon**	**2.31**	**343**	P	Pb	08 42 16.6	-0.6
OCHAL	**Ojochal**	**2.40**	**117**	P	Pb	08 42 18.2	-0.4
CNGN	**Cerro Negro**	**2.44**	**339**	P	Pn	08 42 17.1	+2.0
ESPN	**Las Esperanzas**	**2.47**	**37**	P	Pn	08 42 15.8	+0.5
ESPN	**Las Esperanzas**	**2.47**	**37**	*eP*	Pn	08 42 14.9	-0.5
DRK0	**Durika**	**2.69**	**110**	P	Pn	08 42 21.4	+2.8
PKGN	**Cerro Pekin**	**2.70**	**335**	P	Pn	08 42 19.9	+1.3
MATN	**Matagalpa**	**2.71**	**358**	P	Pn	08 42 16.8	-2.0
MATN	**Matagalpa**	**2.71**	**358**	S	Sn	08 42 53.3	+2.1
LIMN	**Finca el Limon**	**2.89**	**349**	P	Pn	08 42 22.8	+1.5
LIMN				S	Sn	08 42 57.0	+1.3
RCON	**San Juan de Ri**	**3.27**	**354**	P	Pn	08 42 26.8	+0.2
CDITO	**Canoas**	**3.32**	**119**	P	Pn	08 42 29.5	+2.5
RCVN	**Varillal2**	**3.38**	**354**	P	Pn	08 42 27.6	-0.4
SIUN	**Universidad Ur**	**3.63**	**16**	P	Pn	08 42 33.0	+1.7
YUSH	**Yuscaran**	**3.86**	**345**	P	Pn	08 42 36.4	+1.8
APG	**El Apazote**	**6.59**	**317**	P	Pn	08 43 15.3	+3.0
	baz=162,slow=20,SNR=1.9						
CMIG	**Matias Romero**	**11.16**	**309**	P	Pn	08 44 16.1	+1.3
	0.2nm,0.3s,baz=135,slow=11,SNR=1.7 1.4nm,0.6s						
TXAR	**Lajitas Array**	**25.32**	**321**	P	P	08 46 60.0	-2.1
	0.8nm,0.9s,baz=140,slow=9.3,SNR=6.1 0.8nm,0.9s						
PDAR	**Pinedale Array**	**38.50**	**332**	P	P	08 48 54.6	-3.0
	0.3nm,0.7s,baz=133,slow=4.4,SNR=2.7 0.3nm,0.7s						
NVAR	**Mina Array Bea**	**40.44**	**319**	P	P	08 49 11.3	-2.5
	0.7nm,0.6s,baz=132,slow=6.8,SNR=8.5 0.7nm,0.6s						
ILAR	**Eielson Array**	**68.71**	**336**	P	P	08 52 34.4	-4.0
	0.3nm,0.8s,baz=129,slow=7.2,SNR=4.7 0.3nm,0.8s						

NNC 08 08:53:04.5±1.8, 50°71N×73°67E, h0km, mb3.6, mpv3.3, 3C-5D, Error ellipse: s-maj=27.8km s-min=10.0km az=26.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA0	**Borovoye Array**	**3.09**	**320**	⇓Pn	Pn	08 53 54.7	+0.2
	7.4nm,0.7s,baz=125,slow=16,SNR=23						
BVA0				⇓Sn	Sn	08 54 33.0	+1.0
	54nm,0.8s						
KURBB	**Kurchatov Arra**	**3.10**	**90**	⇓Pn	Pn	08 53 54.6	0.0
	12nm,0.4s,baz=279,slow=12						
KURBB				⇑Lg	Lg	08 54 42.3	
	152nm,0.7s,baz=276,slow=32						
KURK	**Kurchatov**	**3.15**	**88**	⇓Pn	Pn	08 53 55.5	+0.2
	3.3nm,0.7s						
KURK				⇑Lg	Lg	08 54 43.2	
	20nm,0.7s						
MK31	**Makanchi Array**	**6.91**	**121**	⇓Lg	Lg	08 56 44.0	
	12nm,1.1s,baz=302,slow=31						
AB31	**Akbulak array**	**9.97**	**266**	⇑P	Pn	08 55 15.2	0.0
	0.6nm,0.7s,baz=80,slow=9.8,SNR=8.9						

*NIED **08** 09:18:23.3, 36°54N×140°84E, h52km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.38; Mθθ0.91; Mφφ-1.29; Mrθ-1.38; Mθφ2.50; Mφr0.29; Fault plane solution: Mo3.09000×10^15^ NP1: φs191.00000°, δ62.00000°, λ175.00000°. NP2: φs283.00000°, δ86.00000°, λ28.00000°.*
*NEIC **08** 09:18:23.9, 36°62N×140°85E, h44km*
*IDC **08** 09:18:23.7±1.7, 36°54N×140°82E, h52km±15km, mb3.9/20, mbtmp4.2/26, ML4.1/6, MS3.0/8, Error ellipse: s-maj=13.6km s-min=9.2km az=71.0*
*JMA **08** 09:18:23.3±0.1, 36°5N±0°3×140°8E±0°6, h52km, MD4.4/40, MW4.3/40, E OFF IBARAKI PREF*
JMA Felt IV J1 at E OFF IBARAKI PREF .
*NEIC **08** 09:18:24.0±1.9, 36°61N±0°06×140°84E±0°09, h47km±6km, mb4.5/29, Mwr4.2/20, Error ellipse: s-maj=10.6km s-min=7.6km az=111.0, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.39; Mθθ0.60; Mφφ-1.00; Mrθ-1.31; Mθφ1.81; Mφr0.41; Fault plane solution: Mo2.43000×10^15^ NP1:φ284.82000°, δ85.16000°, λ35.95000°. NP2:φ191.32000°, δ54.20000°, λ174.03000°. Principal axes: T 2.2550, Plg28.0000°, Azm154.0000°; N 0.3253, Plg54.0000°, Azm291.0000°; P -2.5803, Plg21.0000°, Azm53.0000°;*

ISC 08 09:18:23.3±0.7, 36°54N±0°04×140°89E±0°05, h47km±6km, n149, σ0°98/110, mb4.3/32, MS3.0/4, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.27**	**285**	⇓*iP*	Pn	09 18 32.1	+0.3
JHO				⇓S	Sn	09 18 37.9	-0.1
JHO	**Hitachi**	**0.27**	**285**	A	A	09 18 32.1	
	comp=N,119nm,0.6s,comp=E,80nm,0.3s						
JHYU	**Hitachinakayam**	**0.32**	**231**	⇓*iP*	Pn	09 18 32.6	+0.3
JHYU				⇓S	Sn	09 18 38.9	+0.3
JHYU	**Hitachinakayam**	**0.32**	**231**	A	A	09 18 32.6	
	comp=N,113nm,0.4s,comp=E,105nm,0.3s						
ONAJ	**Iwakimizuishiy**	**0.56**	**352**	*iP*	Pn	09 18 35.0	-0.2
ONAJ				S	Sn	09 18 43.3	-0.5
ONAJ	**Iwakimizuishiy**	**0.56**	**352**	A	A	09 18 35.0	
	comp=N,53nm,0.2s,comp=E,68nm,0.5s						
JFFD	**Fukushimafurud**	**0.61**	**334**	A	A	09 18 35.8	
	comp=N,35nm,0.6s,comp=E,29nm,0.8s						
JYT	**Yasato**	**0.64**	**241**	⇓*iP*	Pn	09 18 35.9	-0.2
JYT				⇓S	Sn	09 18 44.7	-0.7
JYT	**Yasato**	**0.64**	**241**	A	A	09 18 35.9	
	comp=N,37nm,0.4s,comp=E,66nm,0.3s						
JIHU	**Itakohorinouch**	**0.65**	**207**	A	A	09 18 36.2	
	comp=N,39nm,1.8s,comp=E,43nm,1.2s						
JFK	**Kawauchi**	**0.82**	**359**	*iP*	Pn	09 18 38.1	-0.5
JFK				*eS*	Sn	09 18 48.4	-1.4
JSB	**Shiboa**	**0.89**	**299**	A	A	09 18 39.3	
	comp=N,48nm,0.8s,comp=E,29nm,0.4s						
JSMT	**Sanmumatsuo**	**0.96**	**202**	A	A	09 18 40.6	
	comp=N,18nm,1.8s,comp=E,18nm,1.4s						
JOTO	**OTAMA OYAMA**	**1.11**	**336**	*iP*	Pn	09 18 42.8	+0.4
JOTO				*eS*	Sn	09 18 57.2	+0.5
JOTO	**OTAMA OYAMA**	**1.11**	**336**	A	A	09 18 42.8	
	comp=N,26nm,0.3s,comp=E,34nm,0.3s						
JAG	**Ashikaga**	**1.17**	**265**	⇓*iP*	Pn	09 18 43.0	-0.2
JAG	**Ashikaga**	**1.17**	**265**	A	A	09 18 43.0	
	comp=N,13nm,1.1s,comp=E,9.0nm,0.7s						
JMST	**Minamisoumatoc**	**1.18**	**360**	A	A	09 18 43.8	
	comp=N,10.0nm,0.5s,comp=E,14nm,0.5s						
TOK	**Tokyo**	**1.25**	**227**	A	A	09 18 44.4	
	comp=N,22nm,0.7s,comp=E,20nm,0.9s						
JFY	**Yanaizu**	**1.28**	**313**	*iP*	Pn	09 18 44.9	+0.1
JFY	**Yanaizu**	**1.28**	**313**	A	A	09 18 44.9	
	comp=N,10.0nm,0.7s,comp=E,12nm,0.5s						
JMM	**Marumori**	**1.33**	**357**		Pn	09 18 45.2	-0.2
JMM	**Marumori**	**1.33**	**357**	P	Pn	09 18 45.3	0.0
JMM	**Marumori**	**1.33**	**357**	*iP*	Pn	09 18 45.4	0.0
JMM				*eS*	Sn	09 19 01.7	-0.1
JMM	**Marumori**	**1.33**	**357**	A	A	09 18 45.4	
	comp=N,10.0nm,0.4s,comp=E,14nm,0.4s						
JKT	**Katashina**	**1.34**	**280**	*iP*	Pn	09 18 45.9	+0.3
JKT				S	Sn	09 19 02.3	0.0
JKT	**Katashina**	**1.34**	**280**	A	A	09 18 45.9	
	comp=N,46nm,0.3s,comp=E,57nm,0.4s						
JYAR	**Yonezawaarcadi**	**1.49**	**337**	A	A	09 18 48.0	
	comp=N,10.0nm,0.5s,comp=E,7.0nm,1.2s						
JUON	**Uonuma**	**1.62**	**295**	A	A	09 18 49.4	
	comp=N,12nm,0.7s,comp=E,10.0nm,1.1s						
JYO	**Yokosk**	**1.65**	**218**	A	A	09 18 50.1	
	comp=N,7.0nm,2.4s,comp=E,12nm,2.3s						
JSGW	**Sagamiharawaka**	**1.65**	**236**	A	A	09 18 50.1	
	comp=N,6.0nm,1.0s,comp=E,5.0nm,1.2s						
JYS	**Shirataka**	**1.80**	**339**	A	A	09 18 52.5	
	comp=N,5.0nm,0.5s,comp=E,6.0nm,2.2s						
JGK	**Kuni**	**1.81**	**271**	A	A	09 18 52.2	
	comp=N,9.0nm,1.3s,comp=E,9.0nm,0.6s						
JOU	**Okura**	**1.83**	**354**	A	A	09 18 53.0	
	comp=N,8.0nm,0.7s,comp=E,8.0nm,0.6s						
JOD2	**Odawara 2**	**1.94**	**229**	A	A	09 18 54.2	
	comp=N,5.0nm,2.0s,comp=E,5.0nm,1.0s						
MJAR	**Matsushiro Arr**	**2.16**	**271**	P	Pn	09 18 57.3	+0.5
	comp=E,19nm,0.3s,baz=121,slow=9.4,SNR=705						
MJAR				S	Sn	09 19 21.5	-0.9
	comp=E,303nm,0.6s,baz=99,slow=15,SNR=6.0						
MJAR				LR	LR	09 19 56.7	
	comp=E,313nm,18.3s,baz=94,slow=44 comp=E,123nm,0.3s						
MAJO	**Matsushiro**	**2.16**	**271**		Pn	09 18 57.3	+0.5
MAJO	**Matsushiro**	**2.16**	**271**	P	Pn	09 18 57.8	+1.0
MJB9	**Matsu-Tunnel**	**2.16**	**271**		Pn	09 18 58.0	+1.1
JHTM	**Izuhatsuma**	**2.20**	**225**	A	A	09 18 57.9	
	comp=N,9.0nm,1.3s,comp=E,8.0nm,3.4s						
JYA	**Atsumi**	**2.25**	**336**	A	A	09 18 58.9	
	comp=N,8.0nm,0.8s,comp=E,7.0nm,0.6s						
JSD	**Sado**	**2.58**	**306**		Pn	09 19 02.5	0.0
JSD	**Sado**	**2.58**	**306**	P	Pn	09 19 02.7	+0.2
SHZ3	**Shizuoka 3**	**2.63**	**237**	A	A	09 19 03.9	
	comp=N,6.0nm,1.3s,comp=E,3.0nm,0.9s						
JNY	**Yasuok**	**2.73**	**245**	A	A	09 19 05.2	
	comp=N,5.0nm,1.9s,comp=E,5.0nm,0.9s						
JRG	**Rokugo**	**2.86**	**356**	A	A	09 19 07.6	
	comp=N,3.0nm,1.2s,comp=E,5.0nm,0.7s						
JSG	**Sagara**	**2.88**	**231**		Pn	09 19 09.2	+2.5
JOM	**Ohasama**	**2.94**	**6**	A	A	09 19 09.0	
	comp=N,4.0nm,0.6s,comp=E,4.0nm,0.7s						
JGF	**Kuroka**	**3.01**	**253**		Pn	09 19 09.7	+1.2
JGF	**Kuroka**	**3.01**	**253**	P	Pn	09 19 10.5	+2.0
INU	**Inuyama**	**3.36**	**250**		Pn	09 19 14.9	+1.7
INU	**Inuyama**	**3.36**	**250**	P	Pn	09 19 15.1	+1.9
JHJ	**Hachijo jima 2**	**3.53**	**195**	P	Pn	09 19 16.3	+0.7
	comp=E,136nm,0.3s,baz=261,slow=23,SNR=37						
JHJ				S	Sn	09 19 56.2	+0.1
	comp=E,373nm,0.3s,baz=42,slow=21,SNR=6.5 comp=E,337nm,0.3s						
JHJ2	**Mitsune**	**3.53**	**195**	P	Pn	09 19 16.4	+0.8
JKEN	**Kujiedanarisaw**	**3.72**	**10**	A	A	09 19 19.8	
	comp=N,9.0nm,0.8s,comp=E,9.0nm,0.9s						
JTM	**Tenmabayashi**	**4.24**	**2**		Pn	09 19 26.1	+0.8
JTM	**Tenmabayashi**	**4.24**	**2**	P	Pn	09 19 26.8	+1.5
ERM	**Erimo**	**5.74**	**17**		Pn	09 19 44.8	-1.1
ERM	**Erimo**	**5.74**	**17**	P	Pn	09 19 45.0	-0.9
JEM	**Erimo**	**5.74**	**17**	P	Pn	09 19 45.2	-0.7
JMN	**Monobe**	**6.39**	**246**	Pn	Pn	09 19 55.5	+0.6
JMN	**Monobe**	**6.39**	**246**	P	Pn	09 19 56.3	+1.4
ASAJ	**Asahikawa**	**7.68**	**9**	P	Pn	09 20 11.7	-0.8
	comp=E,20nm,0.3s,baz=224,slow=11,SNR=112						
ASAJ				S	Sn	09 21 36.9	-1.1
	comp=E,23nm,0.4s,baz=28,slow=33,SNR=2.4						
ASAJ				LR	LR	09 23 13.9	
	comp=E,86nm,19.2s,baz=352,slow=38 comp=E,36nm,0.3s						
JKA	**Kamikawa-asahi**	**7.68**	**9**		Pn	09 20 11.2	-1.2
JNU	**Nakatsue**	**8.91**	**250**	P	Pn	09 20 28.5	-0.9
	comp=E,0.3nm,0.3s,baz=41,slow=9.9,SNR=1.5						
JNU				LR	LR	09 24 02.0	
	comp=E,113nm,20.6s,baz=52,slow=38 comp=E,4.0nm,0.6s						
JCJ	**Chichijima**	**9.48**	**173**	Pn	Pn	09 20 35.2	-1.9
JCJ	**Chichijima**	**9.48**	**173**	P	Pn	09 20 26.2	-11
	comp=E,120nm,0.3s,baz=89,slow=12,SNR=34						
JCJ				S	Sn	09 22 05.4	-17
	comp=E,66nm,0.5s,baz=248,slow=22,SNR=1.0						
JCJ	**Chichijima**	**9.48**	**173**	P	Pn	09 20 34.9	-2.3
USRK	**Ussuriysk Ar.**	**10.22**	**321**	P	Pn	09 20 46.6	-0.7
	comp=E,2.8nm,0.3s,baz=132,slow=13,SNR=19 comp=E,1.9nm,0.4s						
KSRS	**Korea Array**	**10.41**	**279**	P	Pn	09 20 51.2	+1.3
	comp=E,0.3nm,0.3s,baz=90,slow=14,SNR=4.2 comp=E,0.7nm,0.4s						
YSS	**Yuzhno-Sakhali**	**10.50**	**7**		Pn	09 20 50.4	-0.6
YSS	**Yuzhno-Sakhali**	**10.50**	**7**	P	Pn	09 20 51.0	0.0
MDJ	**Mudanjiang**	**11.78**	**317**		Pn	09 21 13.7	+5.2
MDJ	**Mudanjiang**	**11.78**	**317**	P	Pn	09 21 13.1	+4.6
MDJ				pmax	pmax		
	comp=Z,22nm,1.3s						
JMZ	**Minamidaito 2**	**13.51**	**220**	Pn	Pn	09 21 31.8	-0.4
CN2	**Changchun**	**13.85**	**306**	P	Pn	09 21 35.5	-1.2
CN2				pmax	pmax		
	comp=

IL31			**50.13**	**32**	P		**P**	09 27 13.7	**+0.3**
IL31					IAmb		IAmb	09 27 14.8	
	comp=Z,4.3nm,0.7s								
ILAR	**Eielson Array**		**50.13**	**32**	P		**P**	**09 27 14.2**	**+0.8**
	comp=Z,3.2nm,0.7s,baz=270,slow=6.4,SNR=39								
	comp=Z,3.2nm,0.7s								
BVAR	**Borovoye Array**		**50.59**	**313**	P		**P**	**09 27 16.6**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=79,slow=9.2,SNR=4.9								
	comp=Z,1.2nm,0.5s								
K27K	**Chicken**		**52.28**	**33**	P		**P**	**09 27 31.0**	**+1.5**
WR8	**Warramunga Arr**		**56.51**	**187**			**P**	**09 28 00.0**	**-0.7**
WRA	**Warramunga Arr**		**56.52**	**187**			**P**	**09 27 59.5**	**-1.3**
WRA	**Warramunga Arr**		**56.52**	**187**	P		**P**	**09 28 00.1**	**-0.6**
	comp=Z,4.6nm,0.5s,baz=4.3,slow=7.4,SNR=102								
	comp=Z,4.6nm,0.5s								
A36M	**Sachs Harbour**		**56.87**	**22**	P		**P**	**09 28 03.5**	**+0.9**
P33M	**Teslin, Yukon**		**57.34**	**36**	P		**P**	**09 28 07.9**	**+1.7**
SANVU	**Saraoutou**		**57.37**	**149**	P		**P**	**09 28 07.1**	**+0.3**
AB31	**Akbulak array**		**57.94**	**310**	P		**P**	**09 28 09.7**	**-0.8**
AB31					IAmb		IAmb	09 28 13.9	
	comp=Z,1.9nm,0.7s								
ABKAR	**Akbulak array**		**57.94**	**310**	P		**P**	**09 28 09.8**	**-0.7**
AS31	**Alice Springs**		**60.24**	**187**	P		**P**	**09 28 26.8**	**+0.2**
ASAR	**Alice Springs**		**60.24**	**187**	P		**P**	**09 28 26.5**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=9.5,slow=9.3,SNR=26								
	comp=Z,2.3nm,0.8s								
ARCES	**ARCESS Array B**		**64.31**	**339**	IAmb		IAmb	09 28 54.1	
	comp=Z,4.1nm,1.1s								
ARCES	**ARCESS Array B**		**64.31**	**339**	P		**P**	**09 28 53.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=60,slow=7.4,SNR=6.9								
	comp=Z,0.6nm,0.5s								
STKA	**Stephens Creek**		**68.06**	**179**	P		**P**	**09 29 17.9**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=341,slow=11,SNR=4.8								
	comp=Z,2.3nm,0.6s								
FINES	**FINESS Array B**		**69.06**	**332**	P		**P**	**09 29 23.4**	**-0.3**
FINES	**FINESS Array B**		**69.06**	**332**	P		**P**	**09 29 23.2**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=59,slow=5.6,SNR=5.8								
	comp=Z,2.1nm,0.8s								
HFS	**Hagfors**		**74.36**	**336**	P		**P**	**09 29 55.0**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=56,slow=6.1,SNR=5.3								
	comp=Z,1.0nm,0.5s								
AKASG	**Malin Array Be**		**74.43**	**322**	P		**P**	**09 29 55.4**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=49,slow=6.3,SNR=6.2								
	comp=Z,1.0nm,0.5s								
NB201	**NORSAR Array S**		**74.45**	**337**	P		**P**	**09 29 55.8**	**-0.3**
NB201					IAmb		IAmb	09 30 23.4	
	comp=Z,13nm,1.1s								
NB2	**NORSAR Subarra**		**74.48**	**337**	P		**P**	**09 29 55.7**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=40,slow=5.9								
NOA	**NORSAR Array B**		**74.48**	**337**	P		**P**	**09 29 56.1**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=39,slow=5.8,SNR=5.8								
	comp=Z,1.0nm,0.7s								
NVAR	**Mina Array Bea**		**75.62**	**53**	P		**P**	**09 30 04.4**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=294,slow=4.5,SNR=4.8								
	comp=Z,0.4nm,0.6s								
PDAR	**Pinedale Array**		**78.31**	**45**	P		**P**	**09 30 19.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=275,slow=2.4,SNR=7.1								
	comp=Z,0.4nm,0.5s								
BRTR	**Keskin Array B**		**78.86**	**311**	P		**P**	**09 30 21.3**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=40,slow=4.7,SNR=2.7								
	comp=Z,0.4nm,0.7s								
CLL	**Collm**		**81.31**	**330**	*i* sP		sP	09 30 53.5	0.0
TXAR	**Lajitas Array**		**90.75**	**52**	P		**P**	**09 31 22.4**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=312,slow=4.0,SNR=5.3								
	comp=Z,0.2nm,0.6s								
VNDA	**Vanda**		**114.52**	**175**			PKPdf	09 36 56.6	-0.1
VNDA	**Vanda**		**114.52**	**175**	PKP		PKPdf	09 36 56.5	-0.3
	comp=Z,0.2nm,0.3s,baz=348,slow=16,SNR=1.4								
QSPA	**South Pole Qui**		**126.28**	**180**	PKP		**PKPdf**	**09 37 19.7**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=341,slow=0.9,SNR=3.8								
LPAZ	**La Paz**		**147.30**	**60**	PKPbc		**PKPbc**	**09 38 02.4**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=283,slow=5.1,SNR=2.0								
H03N2	**Juan Fernandez**		**147.39**	**97**	T		T	12 23 08.4	
	baz=291,slow=76,SNR=41								
H03N3	**Juan Fernandez**		**147.40**	**97**	T		T	12 23 12.4	
	baz=291,slow=76,SNR=45								
H03N1	**Juan Fernandez**		**147.40**	**96**	T		T	12 23 13.5	
	baz=291,slow=76,SNR=42								

*ISK **08** 09:23:41.4, 40°.40N×28°.96E, h9km±1km, ML1.4/5*

AFAD 08 09:23:42.3, 40°.34N×29°.02E, h7km±2km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
MDNY	**Mudanya-Bursa**	**0.11**	**284**	Pg		Pg	09 23 43.7		-1.0
MDNY				Sg		Sg	09 23 45.5		-0.9
AVDN	**Avdancik/Bursa**	**0.12**	**115**	P		Pg	09 23 45.6		+0.8
AVDN				S		Sg	09 23 48.6		+1.9
AVDN				*i* IAML			09 23 49.0		
	comp=N,37nm,0.1s								
AVDN				*i* IAML			09 23 51.0		
	comp=E,65nm,0.5s								
AVDN	**Avdancik/Bursa**	**0.12**	**115**	P		Pg	09 23 45.6		+0.8
AVDN				*i* IAML			09 23 48.0		
	comp=N,53nm,0.5s								
AVDN				*i* IAML			09 23 48.0		
	comp=E,144nm,0.2s								
AVDN				S		Sg	09 23 48.5		+1.9
YYLC	**Yaylacik**	**0.16**	**256**	P		Pg	09 23 45.1		-0.6
YYLC				S		Sg	09 23 47.8		-0.1
YYLC				*i* IAML			09 23 50.0		
	comp=E,137nm,0.6s								
ULDT	**Uludag**	**0.22**	**157**	P		Pg	09 23 47.4		+0.7
ULDT				S		Sg	09 23 50.6		+0.9
ULDT				*i* IAML			09 23 52.0		
	comp=E,17nm,0.2s								
ULDT	**Uludag**	**0.22**	**157**	P		Pg	09 23 47.6		+0.9
ULDT				S		Sg	09 23 50.6		+0.9
ARMT	**Armutlu**	**0.26**	**331**	Pg		Pg	09 23 45.7		-1.6
ARMT				Sg		Sg	09 23 48.6		-2.2
KURT	**Yalova, Merkez**	**0.28**	**30**	P		Pg	09 23 46.8		-1.1
KURT				S		Sg	09 23 50.7		-1.0
ORLT	**Orhaneli**	**0.31**	**198**	Pg		Pg	09 23 48.9		+0.5
YLV	**Yalova**	**0.35**	**50**	Pg		Pg	09 23 48.6		-0.5
ADVT	**Abdulvahap**	**0.55**	**80**	Pg		Pg	09 23 53.4		+0.4
HRT	**Hereke**	**0.69**	**46**	Pg		Pg	09 23 54.9		-0.6
HISA	**Bilecik-Osmane**	**0.70**	**80**	P		Pg	09 23 55.6		-0.1
HISA				S		Sg	09 24 05.0		+0.3
HISA				*i* IAML			09 24 07.0		
	comp=E,8.3nm,0.4s								
HISA				*i* IAML			09 24 08.0		
	comp=N,17nm,0.9s								
HISA	**Bilecik-Osmane**	**0.70**	**80**	P		Pg	09 23 55.5		-0.2
HISA				S		Sb	09 24 05.7		-0.9
HISA				*i* IAML			09 24 06.0		
	comp=E,12nm,0.5s								
HISA				*i* IAML			09 24 08.0		
	comp=N,17nm,0.9s								
DOMA	**Ktahya-Doman**	**0.76**	**137**	P		Pn	09 23 59.4		-0.1
DOMA				S		Sb	09 24 08.1		-0.3
DOMA	**Ktahya-Doman**	**0.76**	**137**	P		Pn	09 23 59.3		-0.2
DOMA				S		Sb	09 24 08.0		-0.4
SEMS	**Kocaeli-K¶rfe**	**0.76**	**46**	P		Pg	09 23 56.3		-0.5
SEMS				S		Sg	09 24 05.7		-1.0
SEMS				*i* IAML			09 24 08.0		
	comp=N,5.2nm,0.9s								
DURS	**Dursunbey**	**0.85**	**210**	P		Pb	09 23 59.7		+0.2
DURS				S		Sb	09 24 11.0		-0.1
DURS	**Dursunbey**	**0.85**	**210**	P		Pg	09 23 59.0		+0.3
DURS				S		Sb	09 24 11.0		-0.2
DURS				*i* IAML			09 24 17.0		
	comp=N,9.9nm,0.4s								
DURS				*i* IAML			09 24 17.0		
	comp=E,10nm,0.4s								
BKES	**Balkesir-Mer**	**1.04**	**234**	P		Pg	09 24 00.9		-1.3
BKES				S		Sg	09 24 15.8		+0.1
BKES				*i* IAML			09 24 18.0		
	comp=N,15nm,0.9s								
KAYN	**Sakarya, Kayna**	**1.18**	**58**	P		Pg	09 24 04.2		-0.7
KAYN				S		Sg	09 24 19.2		-1.0
KAYN				*i* IAML			09 24 21.0		
	comp=N,3.2nm,0.2s								
KAYN				*i* IAML			09 24 23.0		
	comp=E,6.3nm,0.7s								

*IGIL **08** 09:24:39.1, 42°.38N×12°.05W, h31km, ML2.3*

*INMG **08** 09:24:40.9±1.2, 42°.40N×12°.04W, h33km, ML2.8, Error ellipse: s-maj=6.0km s-min=2.8km az=105.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Banco da Galiza*

*MDD **08** 09:24:41.5±0.9, 42°.24N×11°.71W, h40km, Mb4.5/11, Error ellipse: s-maj=7.4km s-min=4.0km az=111.0*

*CNRM **08** 09:24:48.3, 41°.85N×11°.25W, h46km, ML3.8*

ISC 08 09:24:36.8±3.3, 42°.26N±0°.06×11°.7W±0°.1, h20km±25km, n61, σ2s27/109, 11C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
EMAZ	**Mazaricos**	**2.15**	**70**	Pn		**Pb**	**09 25 13.8**		**-1.2**
EMAZ				Sn		**Sn**	**09 25 37.0**		**-0.6**
STS	**Santiago**	**2.44**	**74**	Pn		**Pn**	**09 25 13.1**		**-2.3**
STS				Sn		**Sn**	**09 25 44.7**		**+0.1**
PGAV	**Gavieira, Arco**	**2.60**	**95**	*e*P		**Pb**	**09 25 21.0**		**-1.7**
PGAV				*e*S		**Sn**	**09 25 50.5**		**+1.7**
PGAV				*i* IAML			09 25 51.2		
PGAV				*i* IAML			09 25 52.1		
PGAV				*i* IAML			09 25 52.3		
EAGO	**Agolada(Pontev**	**2.75**	**77**	Pn		**Pn**	**09 25 22.2**		**+2.4**
EAGO				⇑*i*IVmb_VC			09 25 24.5		
	681nm,SNR=1.8								
EAGO				Sn		**Sn**	**09 25 52.0**		**-0.4**
ELOB	**Lobios**	**2.77**	**97**	Pn		**Pb**	**09 25 23.7**		**-1.9**
ELOB				⇑*i*IVmb_VC			09 25 32.9		
	576nm,SNR=1.6								
ELOB				Sn		**Sn**	**09 25 51.9**		**-1.0**
PCAB	**Cabril**	**2.82**	**100**	*e*P		**Pb**	**09 25 23.8**		**-2.7**
PCAB				*e*S		**Sn**	**09 25 55.9**		**+1.7**
PCAB				*i* IAML			09 25 57.8		
PCAB				*i* IAML			09 25 58.2		
PCAB				*i* IAML			09 25 58.2		
POLO	**Lamas de Olo**	**3.08**	**105**	*e*P		**Pb**	**09 25 27.7**		**-3.2**
POLO				*e*S		**Sn**	**09 26 02.0**		**+1.4**
POLO				*i* IAML			09 26 06.3		
POLO				*i* IAML			09 26 06.7		
POLO				*i* IAML			09 26 08.7		
PVRL	**Vila Real**	**3.17**	**107**	*e*S		**Sn**	**09 26 04.2**		**+1.6**
PVRL				*i* IAML			09 26 05.4		
PVRL				*i* IAML			09 26 08.4		
PVRL				*i* IAML			09 26 08.8		
PVIS	**Viseu**	**3.28**	**117**	*e*P		**Pn**	**09 25 30.3**		**+3.3**
PVIS				*e*S		**Sn**	**09 26 07.1**		**+1.7**
PCAS	**Casmilo, Conde**	**3.30**	**131**	*e*P		**Pn**	**09 25 30.2**		**+3.0**
PCAS				*e*S		**Sn**	**09 26 07.2**		**+1.4**
PCAS				*i* IAML			09 26 07.8		
PCAS				*i* IAML			09 26 08.2		
PCAS				*i* IAML			09 26 11.8		
PSBE	**So Bento**	**3.54**	**140**	*e*P		**Pn**	**09 25 33.6**		**+3.0**
PSBE				*e*S		**Sn**	**09 26 12.8**		**+1.0**
PSBE				*i* IAML			09 26 14.0		
PSBE				*i* IAML			09 26 14.8		
PSBE				*i* IAML			09 26 15.0		
EPON	**Pontenova**	**3.54**	**71**	Pn		**Pn**	**09 25 33.3**		**+2.6**
EPON				⇑*i*IVmb_VC			09 25 36.9		
	675nm,SNR=1.2								
EPON				Sn		**Sn**	**09 26 10.0**		**-1.9**
MTE	**Manteigas**	**3.67**	**119**	*e*P		**Pn**	**09 25 35.4**		**+3.0**
MTE				*e*S		**Sn**	**09 26 16.9**		**+1.8**
MTE				*i* IAML			09 26 18.0		
MTE				*i* IAML			09 26 20.3		
MTE				*i* IAML			09 26 21.5		
MVO	**Moncorvo**	**3.69**	**106**	*e*P		**Pn**	**09 25 35.6**		**+2.9**
MVO				*e*S		**Sn**	**09 26 15.7**		**0.0**
MVO				*i* IAML			09 26 19.2		
MVO				*i* IAML			09 26 19.6		
MVO				*i* IAML			09 26 20.1		
ECAL	**Calabor**	**3.74**	**93**	Pn		**Pn**	**09 25 36.5**		**+3.1**
ECAL				Sn		**Sn**	**09 26 17.7**		**+0.9**
ECAL	**Calabor**	**3.74**	**93**	⇑*i*IVmb_VC			09 25 35.5		
	373nm,SNR=1.2								
ECAL				Pn		**Pn**	**09 25 36.4**		**+3.1**
ECAL				Sn		**Sn**	**09 26 16.2**		**-0.6**
PBRG	**Braganca**	**3.75**	**95**	*e*S		**Sn**	**09 26 18.1**		**+1.0**
PBRG				*i* IAML			09 26 20.6		
PBRG				*i* IAML			09 26 21.9		
PBRG				*i* IAML			09 26 22.5		
PMAFR	**Mafra**	**3.80**	**150**	Pn		**Pn**	**09 25 37.0**		**+2.9**
PMAFR				Sn		**Sn**	**09 26 17.7**		**-0.4**
PMAFR	**Mafra**	**3.80**	**150**	*e*P		**Pn**	**09 25 36.8**		**+2.7**
PMAFR				*e*S		**Sn**	**09 26 18.5**		**+0.3**
PMAFR				*i* IAML			09 26 20.2		
PMAFR				*i* IAML			09 26 21.7		
PMAFR				*i* IAML			09 26 21.7		
PSARD	**Sardoal**	**3.80**	**133**	*e*P		**Pn**	**09 25 36.8**		**+2.7**
PSARD				*e*S		**Sn**	**09 26 19.2**		**+1.0**
PSARD				*i* IAML			09 26 20.9		
PSARD				*i* IAML			09 26 21.8		
PSARD				*i* IAML			09 26 25.1		
PCBR	**Castelo Branco**	**4.03**	**125**	*e*P		**Pn**	**09 25 40.2**		**+2.9**
PCBR				*e*S		**Sn**	**09 26 23.4**		**-0.5**
PCBR				*i* IAML			09 26 26.1		
PCBR				*i* IAML			09 26 26.4		
PCBR				*i* IAML			09 26 28.6		
PMTG	**Montargil**	**4.16**	**139**	*e*P		**Pn**	**09 25 41.5**		**+2.4**
PMTG				*e*S		**Sn**	**09 26 27.4**		**+0.2**
PMTG				*i* IAML			09 26 29.9		
PMTG				*i* IAML			09 26 30.2		
PMTG				*i* IAML			09 26 30.9		
PMRV	**Marv??o**	**4.35**	**129**	*e*P		**Pn**	**09 25 44.4**		**+2.7**
PMRV				*e*S		**Sn**	**09 26 30.6**		**-1.1**
PMRV				*i* IAML			09 26 34.9		
PMRV				*i* IAML			09 26 35.2		
PMRV				*i* IAML			09 26 36.1		
PARRA	**Arraiolos**	**4.45**	**139**	*e*P		**Pb**	**09 25 45.7**		**-1.4**
PARRA				*e*S		**Sb**	**09 26 33.1**		**-1.7**
PARRA				*i* IAML			09 26 35.5		
PARRA				*i* IAML			09 26 35.6		
PARRA				*i* IAML			09 26 37.4		
MOE	**Montemor**	**4.54**	**144**	*e*P		**Pn**	**09 25 46.7**		**+2.4**
MOE				*e*S		**Sn**	**09 26 36.5**		**-0.1**
MOE				*i* IAML			09 26 39.5		
MOE				*i* IAML			09 26 39.5		
MOE				*i* IAML			09 26 39.6		
PESTR	**Estremoz**	**4.64**	**136**	Pn		**Pn**	**09 25 47.8**		**+2.1**
PESTR				Sn		**Sn**	**09 26 36.7**		**-2.1**
PESTR	**Estremoz**	**4.64**	**136**	*e*P		**Pn**	**09 25 47.8**		**+2.1**
PESTR				*e*S		**Sn**	**09 26 38.3**		**-0.6**
PESTR				*i* IAML			09 26 41.2		
PESTR				*i* IAML			09 26 42.5		
PESTR				*i* IAML			09 26 42.6		
PESTR	**Estremoz**	**4.64**	**136**	P		**Pn**	**09 25 47.8**		**+2.1**
PESTR	**Estremoz**	**4.64**	**136**	S		**Sn**	**09 26 35.5**		**-3.4**
EVO	**Evora**	**4.69**	**141**	Sn		**Sn**	**09 26 39.0**		**-1.1**
EVO				Pn		**Pn**	**09 25 47.7**		**+1.3**
EVO	**Evora**	**4.69**	**141**	*e*S		**Sn**	**09 26 40.4**		**+0.3**
EVO				*i* IAML			09 26 43.4		
EVO				*i* IAML			09 26 44.6		
EPLA	**Plasencia**	**4.80**	**115**	Pn		**Pn**	**09 25 51.0**		**+3.1**
EPLA				⇑*i*IVmb_VC			09 25 53.2		
	300nm,SNR=1.8								
EPLA				Sn		**Sn**	**09 26 40.9**		**-2.2**
EARI	**Arriondas**	**4.92**	**76**	Sn		**Sn**	**09 26 44.0**		**-1.9**
EBAD	**Badajoz**	**5.02**	**133**	Pn		**Pn**	**09 25 53.1**		**+2.1**
EBAD				Sn		**Sn**	**09 26 47.0**		**-1.4**
EBAD	**Badajoz**	**5.02**	**133**	Pn		**Pn**	**09 25 53.1**		**+2.1**
EBAD				⇑*i*IVmb_VC			09 25 55.8		
	258nm,SNR=2.1								
EBAD				Sn		**Sn**	**09 26 47.0**		**-1.4**
PBEJ	**Beja**	**5.17**	**144**	*e*S		**Sn**	**09 26 51.9**		**-0.1**
PBEJ				*i* IAML			09 26 54.5		
PBEJ				*i* IAML			09 26 54.7		
PBEJ				*i* IAML			09 26 55.4		
MESJ	**Messejana**	**5.18**	**147**	*e*P		**Pn**	**09 25 55.0**		**+2.0**
MESJ				*e*S		**Sn**	**09 26 50.3**		**-1.9**
MESJ				IAML			09 26 53.0		
	comp=E,4.0nm,0.3s								
MESJ	**Messejana**	**5.18**	**147**	*e*P		**Pn**	**09 25 55.3**		**+2.2**
MESJ				*e*S		**Sn**	**09 26 51.2**		**-1.0**
MESJ				*i* IAML			09 26 54.6		
MESJ				*i* IAML			09 26 54.6		
MESJ				*i* IAML			09 26 55.2		
PCVE	**Castro Verde**	**5.43**	**147**	Pn		**Pn**	**09 25 58.8**		**+2.3**
PCVE				Sn		**Sn**	**09 26 55.5**		**-2.9**
PCVE	**Castro Verde**	**5.43**	**147**	*e*P		**Pn**	**09 25 58.8**		**+2.3**
PCVE				*e*S		**Sn**	**09 26 57.3**		**-1.1**
PCVE				*i* IAML			09 26 59.7		
PCVE				*i* IAML			09 27 00.7		
PCVE				*i* IAML			09 27 00.8		
PBAR	**Barrancos**	**5.44**	**137**	Pn		**Pn**	**09 25 59.0**		**+2.3**
PBAR				Sn		**Sn**	**09 26 58.0**		**-0.6**
PBAR	**Barrancos**	**5.44**	**137**	*e*P		**Pn**	**09 25 59.0**		**+2.3**
PBAR				*e*S		**Sn**	**09 26 58.5**		**-0.1**
PBAR				*i* IAML			09 27 02.2		
PBAR				*i* IAML			09 27 03.4		
PBAR				*i* IAML			09 27 04.4		
MORF	**Marmelete**	**5.49**	**153**	*e*P		**Pn**	**09 26 00.3**		**+2.8**
MORF				*e*S		**Sn**	**09 26 59.3**		**-0.7**
MORF				*i* IAML			09 27 02.4		
MORF				*i* IAML			09 27 02.6		
MORF				*i* IAML			09 27 03.0		
PFVI	**Vila Bisbo**	**5.59**	**155**	Pn		**Pn**	**09 26 00.7**		**+1.9**
PFVI				Sn		**Sn**	**09 27 00.9**		**-1.6**
PFVI	**Vila Bisbo**	**5.59**	**155**	*e*P		**Pn**	**09 26 01.0**		**+2.2**
PFVI				*e*S		**Sn**	**09 27 01.9**		**-0.6**
PFVI				*i* IAML			09 27 04.3		
PFVI				*i* IAML			09 27 04.5		
PFVI				*i* IAML			09 27 06.5		
PFVI	**Vila Bisbo**	**5.59**	**155**	P		**Pn**	**09 26 01.8**		**+3.0**
PFVI	**Vila Bisbo**	**5.59**	**155**	S		**Sn**	**09 26 59.6**		**-2.9**
EGRO	**El Granado**	**5.75**	**144**	Pn		**Pn**	**09 26 03.9**		**+3.0**
EGRO				⇑*i*IVmb_VC			09 26 12.2		
	comp=E,166nm,SNR=1.3								
EGRO				Sn		**Sn**	**09 27 04.1**		**-2.1**
PVAQ	**Vaqueiros**	**5.76**	**146**	*e*P		**Pn**	**09 26 03.7**		**+2.7**
PVAQ				*e*S		**Sn**	**09 27 05.4**		**-1.1**
PVAQ				*i* IAML			09 27 09.0		
PVAQ				*i* IAML			09 27 09.3		
PVAQ				*i* IAML			09 27 09.7		
PVAQ	**Vaqueiros**	**5.76**	**146**	P		**Pn**	**09 26 03.9**		**+2.9**
PVAQ	**Vaqueiros**	**5.76**	**146**	S		**Sn**	**09 27 03.0**		**-3.4**
PBDV	**Barranco-do-Ve**	**5.81**	**148**	Sn		**Sn**	**09 27 05.5**		**-2.3**
PBDV	**Barranco-do-Ve**	**5.81**	**148**	*e*P		**Pn**	**09 26 04.9**		**+3.1**
PBDV				*e*S		**Sn**	**09 27 06.4**		**-1.4**
PBDV				*i* IAML			09 27 09.0		
EMIN	**Mina Concepcio**	**5.94**	**137**	Pn		**Pn**	**09 26 06.5**		**+2.9**
EMIN				Sn		**Sn**	**09 27 09.0**		**-1.9**
EMIN	**Mina Concepcio**	**5.94**	**137**	Pn		**Pn**	**09 26 06.1**		**+2.5**
EMIN				⇑*i*IVmb_VC			09 26 07.1		
	comp=E,173nm,SNR=1.6								
EMIN				Sn		**Sn**	**09 27 06.6**		**-4.3**
PAB	**San Pablo**	**6.22**	**113**	Pn		**Pn**	**09 26 10.6**		**+3.1**
PAB				⇑*i*IVmb_VC			09 26 20.4		
	comp=E,150nm,SNR=1.2								
PAB				Sn		**Sn**	**09 27 13.9**		**-4.2**
ECAB	**El Cabril**	**6.40**	**129**	Pn		**Pn**	**09 26 12.0**		**+2.1**
ECAB				Sn		**Sn**	**09 27 20.6**		**-1.7**
ECAB	**El Cabril**	**6.40**	**129**	⇑*i*IVmb_VC			09 26 11.5		
	comp=E,195nm,SNR=1.6								
ECAB				Pn		**Pn**	**09 26 11.8**		**+2.0**
ECAB				Sn		**Sn**	**09 27 17.5**		**-4.8**
EADA	**Adamuz**	**6.84**	**124**	Pn		**Pn**	**09 26 18.6**		**+2.7**
EADA				Sn		**Sn**	**09 27 31.4**		**-1.8**
EADA	**Adamuz**	**6.84**	**124**	Pn		**Pn**	**09 26 18.5**		**+2.6**
EADA				⇑*i*IVmb_VC			09 26 19.2		
	comp=E,254nm,SNR=1.9								
EADA				Sn		**Sn**	**09 27 29.3**		**-3.8**
PSIM	**Granatula de C**	**6.98**	**117**	Sn		**Sn**	**09 27 33.5**		**-3.3**

*IDC **08** 09:41:09.5±0.4, 15°.77S×173°.02W, h0km, mb5.5/27, mbtmp5.5/28, ML6.3/1, MS5.4/64, Error ellipse: s-maj=14.2km s-min=13.3km az=151.0*

*BJI **08** 09:41:09.3, 15°.66S×172°.73W, h13km, mB5.9/58, mb5.6/66, Ms5.5/77, Ms7 5.3/79*

*NEIC **08** 09:41:10.8, 15°.81S×172°.85W, h60km*

*NOU **08** 09:41:10.0, 15°.82S×172°.90W, h4km, mb5.7/82, Samoa Islands Region*

*IPGP **08** 09:41:10.0, 15°.80S×172°.86W, h51km, Mw6.0, Fault plane solution: NP1:φs199.00000°, δ23.00000°, λ142.00000°. NP2:φs325.00000°, δ76.00000°, λ71.00000°.*

*MOS **08** 09:41:10.1±1.0, 15°.77S×173°.15W, h10km, mb5.8/64, MS5.5/14, Error ellipse: s-maj=7.6km s-min=6.5km az=137.2*

*NEIC **08** 09:41:10.8, 15°.21S×172°.33W, h60km, Moment Tensor Solution. Duration: 3s4 Moment tensor: Scale 10^{17}Nm; Mrr3.26; Mθθ-0.95; Mφφ-2.31; Mrθ-2.85; Mφθ-0.84; Mφr4.99; Fault plane solution: M06.49000×10^{17} NP1: φs201.94000°, δ15.99000°, λ133.04000°. NP2: φs337.77000°, δ78.38000°, λ78.93000°. Principal axes: T 7.2101, Plg55.0000°, Azm234.0000°; N -1.8321, Plg11.0000°, Azm340.0000°; P -5.3781, Plg33.0000°, Azm77.0000°;*

*NEIC **08** 09:41:14.9, 15°.77S×172°.85W, h43km*

*NEIC **08** 09:41:14.6±2.1, 15°.78S±0°.06×172°.85W

MARNC **Mare, Loyalty** 18.94 250 ⇑P P 09 45 30.9 -1.7
SANVU **Saraoutou** 19.20 268 P P 09 45 34.5 -1.0
SANVU **Saraoutou** 19.20 268 P P 09 45 34.7 -0.7
SANVU **Saraoutou** 19.20 268 S S 09 49 12.7 +1.4
SANVU **Saraoutou** 19.20 268 ⇑P P 09 45 35.0 -0.4
PINNC **Pines Island,** 19.76 247 P P 09 45 39.9 -1.7
PINNC **Pines Island,** 19.76 247 P P 09 45 40.7 -0.8
PINNC **Pines Island,** 19.76 247 P S 09 49 25.0 +2.4
YATNC **Mamie plateau,** 20.11 249 P P 09 45 45.9 +0.5
OUENC **Ouen Island, N** 20.24 248 P P 09 45 46.1 -0.7
DZM **Mont Dzumac** 20.51 249 P P 09 45 48.4 -1.4
comp=Z,68nm,0.8s,baz=72,slow=19,SNR=72
DZM LR LR 09 53 28.2
comp=Z,15µm,18.1s,baz=98,slow=36
comp=Z,68nm,0.8s
ONTNC **Ouen Toro** 20.56 249 P P 09 45 48.8 -1.5
ONTC IAMs_20 IAMs_20 09 52 18.1
comp=Z,34µm,22.0s
ONTNC **Ouen Toro** 20.56 249 P P 09 45 49.9 -0.4
ONTNC **Ouen Toro** 20.56 249 ⇑P P 09 45 47.5 -2.8
NFK **Norfolk Island** 22.03 230 P P 09 46 06.4 +0.4
comp=Z,0.0nmcomp=Z,276nm,1.0s
NFK **Norfolk Island** 22.03 230 ⇑P P 09 46 06.8 +0.8
TARA **Tarawa** 22.12 319 P P 09 46 04.7 -2.4
PAE **Paea** 22.37 98 *e*PKIKP P 09 46 06.5 -3.2
comp=Z,58nm,1.1s
PAE *e*LR LR 09 51 38.4
comp=Z,4µm,23.3s
PPT **Papeete** 22.37 98 P P 09 46 11.6 +1.8
comp=Z,208nm,1.0s,baz=324,slow=5.8,SNR=10
PPT LR LR 09 52 27.2
comp=Z,7µm,20.1s,baz=276,slow=30
comp=Z,208nm,1.0s
PPT2 **Papeete2** 22.37 98 *e*PKIKP P 09 46 11.5 +1.6
comp=Z,225nm,1.1s
PPT2 *e*LR LR 09 51 23.3
comp=Z,27µm,24.5s
PPT2 *e*LR LR 09 51 30.4
comp=Z,23µm,27.2s
PPTF **Pamatai, Papee** 22.38 98 P P 09 46 08.2 -1.8
PPTF IAmb IAmb 09 46 13.8
comp=Z,424nm,1.2s
PPTF **Pamatai, Papee** 22.38 98 ⇑P P 09 46 11.9 +2.0
TIAR **Tiarei** 22.59 98 *e*PKIKP P 09 46 11.4 -0.8
comp=Z,343nm,1.0s
TIAR *e*LR LR 09 51 44.5
comp=Z,16µm,22.6s
TVO **Taravao** 22.68 98 *e*PKIKP P 09 46 12.6 -0.6
comp=Z,95nm,1.0s
TVO *e*LR LR 09 51 47.1
comp=Z,3µm,21.9s
OUZ **Omahuta** 22.79 210 P P 09 46 13.5 -0.5
OUZ **Omahuta** 22.79 210 P P 09 46 13.4 -0.5
OUZ **Omahuta** 22.79 210 ⇑P P 09 46 12.9 -1.1
GRZ **Great Barrier** 22.83 205 P P 09 46 15.1 +0.7
MXZ **Matakaoa Point** 23.00 198 P P 09 46 14.9 -1.2
MXZ IAmb IAmb 09 46 20.1
comp=Z,128nm,0.6s
MXZ **Matakaoa Point** 23.00 198 P P 09 46 16.1 0.0
MXZ **Matakaoa Point** 23.00 198 P P 09 46 15.9 -0.3
WCZ **Waipu Caves** 23.03 207 P P 09 46 17.2 +0.7
KUZ **Kuaotunu** 23.15 204 P P 09 46 18.8 +1.0
KUZ **Kuaotunu** 23.15 204 P P 09 46 18.7 +1.0
WMGZ **Waiomatatini S** 23.20 198 P P 09 46 19.1 +0.9
TBI **Tubuai** 23.26 112 *e*P P 09 46 20.8 +1.9
comp=Z,211nm,0.9s
TBI *e*LR LR 09 51 54.1
comp=Z,142µm,27.8s
TBI *e*LR LR 09 51 57.6
comp=Z,21µm,23.5s
HAZ **Te Kaha** 23.33 199 P P 09 46 19.6 0.0
PKGZ **Pakihiroa** 23.34 198 P P 09 46 21.3 +1.6
XMAS **Kiritimati** 23.42 42 P P 09 46 18.8 -1.8
XMAS IAmb IAmb 09 46 24.9
comp=Z,360nm,1.1s
XMAS **Kiritimati** 23.42 42 ⇑P P 09 46 21.8 +1.2
MYRZ **Mayor Island** 23.43 202 P P 09 46 23.9 +3.4
PUZ **Puketiti** 23.48 198 P P 09 46 21.7 +0.7
RUGZ **Raukumara Rang** 23.56 199 P P 09 46 23.4 +1.5
TWGZ **Tauwhareparae** 23.66 198 P P 09 46 24.1 +1.4
WHRZ **Whale Island** 23.69 200 P P 09 46 26.1 +3.1
OPRZ **Ohinepanea** 23.82 201 P P 09 46 26.3 +2.1
TGRZ **Tauranga** 23.82 202 P P 09 46 26.4 +2.2
CNGZ **Carnagh Statio** 23.88 198 P P 09 46 28.0 +3.2
MARZ **Manawahe** 23.91 201 P P 09 46 27.6 +2.5
TKGZ **Te Karaka** 23.94 198 P P 09 46 26.3 +0.9
MWZ **Matawai** 23.94 199 P P 09 46 26.1 +0.7
EDRZ **Edgecumbe** 23.99 200 P P 09 46 29.9 +4.0
URZ **Urewera** 24.01 200 P P 09 46 25.8 -0.2
URZ **Urewera** 24.01 200 P S 09 50 45.1 +4.2
URZ **Urewera** 24.01 200 P P 09 46 25.1 -0.9
URZ **Urewera** 24.01 200 ⇑P P 09 46 24.2 -1.7
LIRZ **Lichensteins R** 24.02 201 P P 09 46 31.0 +4.8
KMRZ **Kaimai** 24.04 202 P P 09 46 29.6 +3.3
KARZ **Kaharoa** 24.09 201 P P 09 46 30.0 +3.3
PMOR **Pomariorio Ree** 24.09 91 *e*P P 09 46 24.5 -2.4
comp=Z,365nm,1.0s
PMOR *e*LR LR 09 52 25.5
comp=Z,17µm,22.0s
TOZ **Tahuroa Road** 24.10 203 P P 09 46 26.6 -0.2
TOZ IAMs_20 IAMs_20 09 54 28.4
comp=Z,27µm,22.0s
TOZ **Tahuroa Road** 24.10 203 P P 09 46 29.2 +2.4
OMRZ **Omania** 24.12 201 P P 09 46 29.2 +2.2
RAGZ **Rawiri** 24.13 199 P P 09 46 30.6 +3.4
TARZ **Mount Tarawera** 24.19 201 P P 09 46 29.7 +2.0
RIGZ **Rimuhau** 24.21 198 P P 09 46 30.2 +2.2
UTU **Utuhina** 24.24 201 P P 09 46 31.7 +3.5
HLRZ **Highlands Stat** 24.25 201 P P 09 46 31.6 +3.3
RRRZ **Republican Roa** 24.28 201 P P 09 46 29.6 +1.0
MUGZ **Murupara** 24.32 200 P P 09 46 31.2 +2.4
VAH **Vaihoa** 24.32 92 *e*P P 09 46 29.1 0.0
comp=Z,44nm,1.0s
HSRZ **Hossack Road** 24.35 201 P P 09 46 32.3 +3.2
RTZ **Ruatahuna** 24.37 200 P P 09 46 27.7 -1.8
RTZ **Ruatahuna** 24.37 200 P P 09 46 31.6 +2.1
PRGZ **Paritu Road** 24.38 198 P P 09 46 32.7 +3.3
HRRZ **Handcock Road** 24.40 201 P P 09 46 32.4 +2.7
SNGZ **Shannon Statio** 24.41 199 P P 09 46 32.8 +3.1
GRRZ **Galatos Road** 24.43 201 P P 09 46 32.4 +2.5
PRRZ **Plateau Road** 24.46 201 P P 09 46 31.0 +0.8
KNZ **Kokohu** 24.53 198 P P 09 46 32.9 +2.1
ALRZ **Allen Road** 24.54 201 P P 09 46 32.0 +1.1
WPRZ **Whakapapatarin** 24.59 201 P P 09 46 33.0 +1.9
MHGZ **Mahia Peninsul** 24.59 197 P P 09 46 35.0 +3.7
TLZ **Tolley Road** 24.61 202 P P 09 46 33.8 +2.2
RAHZ **Arahi** 24.61 199 P P 09 46 32.9 +1.4
MTHZ **Maungataniwha** 24.64 200 P P 09 46 33.6 +1.8
KUTZ **Kaahu Road** 24.65 202 P P 09 46 37.3 +5.3
WHHZ **Waihua** 24.72 199 P P 09 46 35.0 +2.5
MRHZ **Matea Rd** 24.76 200 P P 09 46 33.7 +0.8
NMHZ **Naumai** 24.87 199 P P 09 46 36.8 +2.9
WATZ **Wairara** 24.88 202 P P 09 46 35.9 +2.0
ARHZ **Aropaoanui** 24.96 199 P P 09 46 38.1 +3.4
RATZ **Rangitukua** 25.01 201 P P 09 46 36.5 +1.3
HIZ **Hauiti** 25.03 203 P P 09 46 35.4 +0.1
HIZ **Hauiti** 25.03 203 P P 09 46 36.6 +1.3
HIZ **Hauiti** 25.03 203 P P 09 46 37.8 +2.5
BKZ **Black Stump Fm** 25.03 200 P P 09 46 34.1 -1.2
BKZ IAmb IAmb 09 46 48.2
comp=Z,140nm,0.7s
BKZ **Black Stump Fm** 25.03 200 P P 09 46 35.3 -0.1
BKZ **Black Stump Fm** 25.03 200 P S 09 51 01.3 +3.8
BKZ **Black Stump Fm** 25.03 200 P P 09 46 35.4 +0.1
RITZ **Rihia Road** 25.08 201 P P 09 46 37.9 +2.1
KATZ **Kakaramea** 25.13 201 P P 09 46 38.2 +1.8
MCHZ **McNeill Hill** 25.22 199 P P 09 46 38.1 +1.1
NTVZ **North Tongarir** 25.25 201 P P 09 46 38.7 +1.2
TMVZ **Te Maari** 25.25 201 P P 09 46 38.7 +1.3
KRVZ **Karewarewa** 25.26 201 P P 09 46 38.4 +0.9
ETVZ **East Tongariro** 25.27 201 P P 09 46 38.6 +1.0
KWHZ **Kaweka Forest** 25.29 200 P P 09 46 38.4 +0.7
WTVZ **West Tongariro** 25.29 201 P P 09 46 38.8 +1.0
CKHZ **Cape Kidnapper** 25.30 198 P P 09 46 42.9 +5.2
NNVZ **North Ngauruho** 25.30 201 P P 09 46 38.6 +0.7
TWVZ **Taurewa** 25.31 202 P P 09 46 38.5 +0.6
OTVZ **Oturere** 25.31 201 P P 09 46 38.4 +0.4
SNVZ **South Ngauruho** 25.34 201 P P 09 46 38.7 +0.5
NGZ **Ngauruhoe** 25.34 201 P P 09 46 39.3 +1.0
COVZ **Chateau Observ** 25.39 201 P P 09 46 39.2 +0.6
TUVZ **Tukino** 25.41 201 P P 09 46 40.4 +1.5
FWVZ **Far West T-bar** 25.43 201 P P 09 46 40.4 +1.2

MAVZ **Matarangi** 25.44 201 P P 09 46 41.2 +1.8
TRVZ **Turoa** 25.47 201 P P 09 46 40.2 +0.6
WNVZ **Wahianoa** 25.48 201 P P 09 46 39.6 0.0
KAHZ **Kahuranaki** 25.48 199 P P 09 46 41.1 +1.6
MOVZ **Moawhango** 25.50 201 P P 09 46 40.2 +0.6
KRHZ **Kereru** 25.50 200 P P 09 46 40.7 +1.1
PKVZ **Pokaka** 25.53 202 P P 09 46 40.6 +0.7
VRZ **Vera Road** 25.60 203 P P 09 46 42.5 +2.1
PXZ **Pawanui** 25.70 198 P P 09 46 43.5 +2.2
WPHZ **Waipukurau** 25.87 199 P P 09 46 44.7 +1.8
PKE **Pukeiti** 25.95 204 P P 09 46 48.3 +4.6
NEZ **North Egmont** 25.98 204 P P 09 46 46.9 +2.9
PRHZ **Porangahau** 25.99 199 P P 09 46 47.8 +3.8
TSZ **Takapari Road** 26.01 200 P P 09 46 47.4 +3.1
PREZ **Palmer Road** 26.02 203 P P 09 46 49.7 +5.4
LREZ **Lake Rotokare** 26.03 203 P P 09 46 45.7 +1.4
KHEZ **Kahui Hut** 26.03 204 P P 09 46 44.5 0.0
KHEZ **Kahui Hut** 26.03 204 P P 09 46 47.6 +3.2
NBEZ **Newall Road No** 26.07 204 P P 09 46 49.0 +4.4
WAZ **Wanganui** 26.07 202 P P 09 46 47.4 +2.6
DVHZ **Dannevirke** 26.17 199 P P 09 46 46.5 +0.9
NMEZ **Namu Road** 26.19 204 P P 09 46 49.7 +3.9
ANWZ **Angora Road** 26.22 199 P P 09 46 48.1 +2.1
OHWZ **Ohakea** 26.36 201 P P 09 46 50.7 +3.4
POWZ **Post Office Ro** 26.38 200 P P 09 46 50.3 +2.8
PRWZ **Pori Road** 26.46 199 P P 09 46 50.3 +2.0
BFZ **Birch Farm** 26.49 199 P P 09 46 48.6 +0.1
BFZ **Birch Farm** 26.49 199 P S 09 51 24.4 +4.0
BFZ **Birch Farm** 26.49 199 P P 09 46 49.3 +0.8
MRZ **Mangatainoka R** 26.68 200 P P 09 46 50.5 +0.3
HOWZ **Holdsworth Sta** 26.92 200 P P 09 46 54.4 +2.0
OGWZ **Otaki Gorge** 26.96 200 P P 09 46 52.7 0.0
TMWZ **Te Maipa** 26.99 199 P P 09 46 54.3 +1.3
MTW **Mount Morrison** 27.16 199 P P 09 46 55.4 +0.9
CAW **Cannon Point** 27.25 200 P P 09 46 55.2 -0.2
HNR **Honiara** 27.27 280 P P 09 46 54.1 -1.7
HNR IAmb IAmb 09 47 01.4
comp=Z,166nm,1.1s
HNR **Honiara** 27.27 280 LR LR 09 56 20.6
comp=Z,16µm,20.2s,baz=124,slow=34
HNR **Honiara** 27.27 280 P P 09 46 54.1 -1.7
HNR pmax pmax
comp=Z,166nm,1.1s
HNR MLR MLR
comp=Z,17µm,21.0s
MSWZ **Moikau Station** 27.47 200 P P 09 46 56.5 -0.8
SAVO **Savo Central** 27.47 281 P P 09 46 57.5 -0.1
SNZO **South Karori** 27.56 201 P P 09 46 57.0 -1.0
SNZO IAmb IAmb 09 47 03.1
comp=Z,172nm,0.7s
SNZO **South Karori** 27.56 201 P P 09 46 58.5 +0.5
SNZO **South Karori** 27.56 201 ⇓P P 09 46 57.5 -0.5
BHW **Baring Head** 27.59 200 P P 09 46 57.5 -0.8
BHW IAmb IAmb 09 47 04.8
comp=Z,129nm,0.7s
PLWZ **Palmer** 27.61 199 P P 09 46 57.2 -1.3
TCW **Tory Channel** 27.61 201 P P 09 46 57.1 -1.5
QRZ **Quartz Range** 27.93 204 P P 09 47 02.8 +1.4
KHZ **Kahutara** 28.94 201 P P 09 47 10.3 0.0
KHZ **Kahutara** 28.94 201 P S 09 52 03.0 +4.1
KHZ **Kahutara** 28.94 201 ⇑P P 09 47 10.1 -0.3
LTZ **Lake Taylor** 29.71 202 IAMs_20 IAMs_20 09 58 06.8
comp=Z,19µm,22.0s
LHI **Lord Howe Isla** 29.95 234 P P 09 47 17.9 -1.6
comp=Z,0.0nmcomp=Z,312nm,1.2s
LHI **Lord Howe Isla** 29.95 234 P P 09 47 17.9 -1.6
OXZ **Oxford** 30.27 202 P P 09 47 20.0 -2.2
RPZ **Rata Peaks** 30.96 203 LR LR 09 58 22.0
comp=Z,7µm,20.9s,baz=42,slow=33
RPZ **Rata Peaks** 30.96 203 P P 09 47 28.2 -0.1
JCZ **Jackson Bay** 32.16 205 P P 09 47 39.9 +1.0
ODZ **Otahua Downs** 32.26 202 P P 09 47 40.0 +0.4
ODZ **Otahua Downs** 32.26 202 ⇑P P 09 47 39.6 0.0
TAOE **Nuku Hiva Isla** 32.68 82 *e*PKIKP P 09 47 47.4 +3.6
comp=Z,645nm,28.8s
TAOE *e*S S 09 52 51.1 -7.2
comp=Z,2µm,28.5s
TAOE *e*LR LR 09 56 11.5
comp=Z,23µm,26.0s
SYZ **Scrubby Hill** 34.08 202 P P 09 47 55.7 +0.2
EIDS **Eidsvold** 34.95 248 P P 09 47 60.0 -3.4
comp=Z,57nm,1.1s
EIDS **Eidsvold** 34.95 248 P P 09 48 01.1 -2.4
EIDS **Eidsvold** 34.95 248 P P 09 48 01.9 -1.5
EIDS **Eidsvold** 34.95 248 ⇑P P 09 48 00.3 -3.1
ARMA **Armidale** 35.55 240 P P 09 48 07.1 -1.6
comp=Z,0.0nmcomp=Z,174nm,0.9s
ARMA **Armidale** 35.55 240 P P 09 48 06.9 -1.8
ARMA **Armidale** 35.55 240 P P 09 48 08.0 -0.7
ARMA **Armidale** 35.55 240 ⇑P P 09 48 07.1 -1.6
RKT **Rikitea** 36.37 108 *e*P P 09 48 15.9 +0.3
comp=Z,50nm,0.9s
RKT **Rikitea** 36.37 108 *e*P P 09 48 17.3 +1.7
comp=Z,2µm,34.8s
RKT *e*S S 09 53 50.9 -4.0
comp=Z,4µm,27.8s
RKT *e*SS SS 09 56 30.6 -3.9
comp=Z,13µm,27.8s
RKT *e*LR LR 09 57 56.0
comp=Z,44µm,26.5s
MGCD **Mangrove Creek** 36.82 235 P P 09 48 18.3 -1.0
comp=Z,81nm,0.8s
RIV **Riverview** 36.99 234 P P 09 48 18.5 -2.2
comp=Z,132nm,1.2s
RIV **Riverview** 36.99 234 P P 09 48 18.9 -1.8
TV1H **Townsville Har** 38.55 259 P P 09 48 34.0 -0.1
CNB **Canberra Magne** 38.89 233 P P 09 48 35.5 -1.4
comp=Z,0.0nmcomp=Z,149nm,1.1s
CNB **Canberra Magne** 38.89 233 P P 09 48 36.1 -0.7
CTA **Charters Tower** 39.05 258 LR LR 10 02 43.9
comp=Z,240nm,20.9s,baz=84,slow=33
CAN **Canberra** 39.17 233 P P 09 48 37.4 -1.8
comp=Z,0.0nmcomp=Z,81nm,1.4s
CAN **Canberra** 39.17 233 P P 09 48 39.5 +0.3
CAN **Canberra** 39.17 233 P P 09 48 38.1 -1.1
CAN pmax pmax
comp=Z,81nm,1.4s
CAN **Canberra** 39.17 233 ⇑P P 09 48 37.7 -1.5
CAN **Canberra** 39.17 233 P P 09 48 37.1 -2.0
POHA **Pohakuloa** 39.27 26 ⇓P P 09 48 42.0 +1.6
YNG **Young** 39.31 235 P P 09 48 38.6 -1.8
comp=Z,57nm,1.7s
PMG **Port Moresby** 39.48 274 P P 09 48 41.2 -0.8
PMG IAmb IAmb 09 48 58.9
comp=Z,240nm,1.6s
PMG **Port Moresby** 39.48 274 LR LR 10 03 18.0
comp=Z,4µm,20.8s,baz=103,slow=34
PMG **Port Moresby** 39.48 274*c* *i*P P 09 48 41.0 -0.9
PMG pmax pmax
comp=Z,100nm,1.8s
PMG **Port Moresby** 39.48 274 ⇑P P 09 48 41.2 -0.8
H11S2 **WAKE ISLAND Hy** 39.61 329 T T 10 29 48.7
baz=146,slow=76,SNR=11
H11S3 **WAKE ISLAND Hy** 39.62 329 T T 10 29 18.5
baz=146,slow=76,SNR=97
H11S1 **WAKE ISLAND Hy** 39.63 329 T T 10 29 19.6
baz=146,slow=76,SNR=85
MILA **Mila** 39.67 230 P P 09 48 42.0 -1.3
comp=Z,28nm,1.3s
KIP **Kipapa** 39.80 22 ⇓*i*P P 09 48 45.7 +1.3
KIP pmax pmax
comp=Z,364nm,1.2s
WAKE **Wake Island** 40.31 329 P P 09 48 47.5 -1.1
WAKE **Wake Island** 40.31 329 P P 09 48 48.8 +0.2
H11N3 **WAKE ISLAND Hy** 40.55 330 T T 10 31 32.7
baz=149,slow=76,SNR=136
H11N1 **WAKE ISLAND Hy** 40.56 330 T T 10 31 35.3
baz=149,slow=76,SNR=98
H11N2 **WAKE ISLAND Hy** 40.57 330 T T 10 31 39.5
baz=149,slow=76,SNR=147
CMSA **Cobar Meteorol** 40.77 240 P P 09 48 50.5 -1.9
comp=Z,0.0nmcomp=Z,315nm,0.8s
CMSA **Cobar Meteorol** 40.77 240 P P 09 48 51.2 -1.3
MTSU **Mount Surprise** 40.95 260 P P 09 48 51.8 -2.3
comp=Z,56nm,0.9s
MTSU **Mount Surprise** 40.95 260 P P 09 48 53.5 -0.6
QLP **Quilpie** 41.22 248 P P 09 48 53.4 -2.8
comp=Z,0.0nmcomp=Z,115nm,0.9s
QLP **Quilpie** 41.22 248 P P 09 48 54.8 -1.4
QLP **Quilpie** 41.22 248 ⇑P P 09 48 53.6 -2.6
GLAD **Gladstone** 42.05 226 P P 09 49 02.2 -0.6
COEN **Coen** 42.47 267 P P 09 49 05.5 -1.1
comp=Z,0.0nmcomp=Z,109nm,1.2s
COEN **Coen** 42.47 267 P P 09 49 05.2 -1.4

COEN **Coen** 42.47 267 P P 09 49 06.1 -0.5
COEN **Coen** 42.47 267 ⇑P P 09 49 05.0 -1.6
TOO **Toolangi** 42.58 231 P P 09 49 05.7 -1.5
comp=Z,0.0nmcomp=Z,97nm,1.1s
TOO **Toolangi** 42.58 231 P P 09 49 05.8 -1.5
TOO **Toolangi** 42.58 231 P P 09 49 05.8 -1.5
TOO pmax pmax
comp=Z,84nm,1.0s
TOO **Toolangi** 42.58 231 ⇑P P 09 49 05.1 -2.2
MOO **Moorlands** 43.22 224 P P 09 49 12.6 +0.3
TAU **Tasmania Unive** 43.34 223 IAMs_20 IAMs_20 10 03 43.6
comp=Z,11µm,21.0s
TAU **Tasmania Unive** 43.34 223 P P 09 49 13.5 +0.3
BRAT **Ballarat** 43.75 232 P P 09 49 16.5 -0.1
STKA **Stephens Creek** 44.26 240 P P 09 49 19.4 -1.4
comp=Z,0.0nmcomp=Z,996nm,1.1s
STKA **Stephens Creek** 44.26 240 P P 09 49 19.3 -1.6
STKA **Stephens Creek** 44.26 240 P P 09 49 19.6 -1.2
comp=Z,276nm,1.1s,baz=80,slow=8.5,SNR=80
STKA PP PP 09 51 03.7 -0.6
comp=Z,34nm,0.9s,baz=28,slow=8.1,SNR=3.1
STKA LR LR 10 05 21.9
comp=Z,7µm,21.5s,baz=87,slow=33
comp=Z,276nm,1.1s
STKA **Stephens Creek** 44.26 240 P P 09 49 20.1 -0.7
STKA **Stephens Creek** 44.26 240*c* *i*P P 09 49 19.5 -1.4
INKA **Innaminka** 44.43 246 P P 09 49 20.6 -1.6
ARPS **Mount Arapiles** 45.14 234 P P 09 49 26.2 -1.5
comp=Z,109nm,1.1s
QIS **Mount Isa** 45.27 257 P P 09 49 26.6 -2.4
comp=Z,0.0nmcomp=Z,33nm,1.4s
QIS **Mount Isa** 45.27 257 P P 09 49 28.8 -0.3
HTT **Hallett** 46.75 239 P P 09 49 39.2 -1.4
comp=Z,119nm,1.1s
HTT **Hallett** 46.75 239 P P 09 49 40.3 -0.3
HTT **Hallett** 46.75 239 P P 09 49 39.5 -1.1
HTT **Hallett** 46.75 239 ⇑P P 09 49 39.2 -1.4
JAY **Jayapura** 47.58 281 LR LR 10 09 44.5
comp=Z,901nm,20.3s,baz=103,slow=36
JAY **Jayapura** 47.58 281 P P 09 49 46.4 -0.9
comp=Z,5µmcomp=Z,1µmcomp=Z,58nm,1.2s
JAY **Jayapura** 47.58 281 P P 09 49 45.8 -1.5
JAY pmax pmax
comp=Z,58nm,1.2s
GENI **Genyem** 48.06 281 P P 09 49 51.3 +0.3
comp=Z,8µmcomp=Z,4µmcomp=Z,197nm,1.4s
BBOO **Buckleboo** 49.03 240 P P 09 49 56.5 -1.7
comp=Z,0.0nmcomp=Z,149nm,1.0s
BBOO **Buckleboo** 49.03 240 P P 09 49 56.4 -1.8
BBOO IAmb IAmb 09 49 58.9
comp=Z,88nm,0.8s
BBOO **Buckleboo** 49.03 240 P P 09 49 57.4 -0.8
WRAB **Tennant Creek** 50.23 257 P P 09 50 05.0 -2.6
WRAB PcP PcP 09 51 27.2 +0.7
WRAB **Tennant Creek** 50.23 257 P P 09 50 05.9 -1.7
WRAB **Tennant Creek** 50.23 257 *i* P P 09 50 04.9 -2.6
WRAB pmax pmax
comp=Z,102nm,0.9s
WRAB **Tennant Creek** 50.23 257 P P 09 50 05.2 -2.4
WRAB PcP PcP 09 51 26.9 +0.5
WRA **Warramunga Arr** 50.24 257 P P 09 50 05.2 -2.4
WRA PcP PcP 09 51 27.3 +0.7
WRA **Warramunga Arr** 50.24 257 P P 09 50 06.1 -1.5
comp=Z,75nm,0.8s,baz=93,slow=7.6,SNR=233
WRA PcP PcP 09 51 27.2 +0.7
comp=Z,45nm,1.1s,baz=90,slow=4.0,SNR=5.8
WRA S S 09 57 10.8 -7.3
comp=Z,1.0nm,0.9s,baz=93,slow=15,SNR=3.2
WRA LR LR 10 10 35.1
comp=Z,6µm,19.3s,baz=96,slow=35
comp=Z,75nm,0.8s
AS31 **Alice Springs** 50.46 252 P P 09 50 07.0 -2.3
AS31 IAmb IAmb 09 50 10.4
comp=Z,88nm,0.9s
ASAR **Alice Springs** 50.46 252 P P 09 50 07.2 -2.1
ASAR **Alice Springs** 50.46 252 P P 09 50 07.7 -1.6
comp=Z,278nm,0.8s,baz=85,slow=7.7,SNR=663
ASAR PP PP 09 52 04.6 -0.5
comp=Z,14nm,1.0s,baz=100,slow=7.9,SNR=1.0
ASAR ScP ScP 09 55 25.1 +4.0
comp=Z,1.0nm,0.8s,baz=88,slow=4.0,SNR=1.8
ASAR S S 09 57 15.4 -5.8
comp=Z,7.3nm,0.9s,baz=93,slow=14,SNR=10
ASAR LR LR 10 10 15.4
comp=Z,15µm,20.4s,baz=94,slow=35
comp=Z,278nm,0.8s
GUMO **Guam** 51.01 303 LR LR 10 08 22.8
comp=Z,910nm,21.9s,baz=134,slow=32
KDU **Kakadu** 52.95 266 P P 09 50 25.8 -2.1
comp=Z,31nm,0.7s
MTN **Manton Dam** 54.21 265 P P 09 50 34.7 -2.4
comp=Z,0.0nmcomp=Z,82nm,0.7s
MTN **Manton Dam** 54.21 265 P P 09 50 34.8 -2.4
MTN IAmb IAmb 09 50 37.5
comp=Z,56nm,0.8s
DRS **Darwin Rock St** 54.51 266 P P 09 50 38.7 -0.6
FAKI **Fak Fak** 55.48 277 P P 09 50 44.3 -2.1
FAKI **Fak Fak** 55.48 277 P P 09 50 44.8 -1.6
FAKI **Fak Fak** 55.48 277 ⇑P P 09 50 44.6 -1.8
WRKA **Warakurna** 55.53 250 P P 09 50 44.9 -1.7
comp=Z,0.0nmcomp=Z,121nm,1.1s
FORT **Forrest** 55.67 243 P P 09 50 45.4 -2.2
comp=Z,0.0nmcomp=Z,137nm,0.7s
FORT **Forrest** 55.67 243 P P 09 50 45.5 -2.1
FORT IAmb IAmb 09 50 47.5
comp=Z,84nm,0.8s
KNRA **Kununurra** 56.01 262 P P 09 50 48.3 -1.8
comp=Z,0.0nmcomp=Z,100nm,0.8s
KNRA **Kununurra** 56.01 262 P P 09 50 47.9 -2.3
KNRA IAmb IAmb 09 50 50.2
comp=Z,62nm,0.8s
SWI **Sorong** 57.05 279 P P 09 50 56.5 -1.0
comp=Z,6µmcomp=Z,3µmcomp=Z,173nm,1.1s
SWI **Sorong** 57.05 279 P P 09 50 56.2 -1.3
SWI pmax pmax
comp=Z,173nm,1.1s
FITZ **Fitzroy Crossi** 58.62 258 P P 09 51 06.9 -1.7
FITZ **Fitzroy Crossi** 58.62 258 LR LR 10 14 41.8
comp=Z,12µm,20.6s,baz=98,slow=34
FITZ **Fitzroy Crossi** 58.62 258 P P 09 51 07.7 -0.8
FITZ **Fitzroy Crossi** 58.62 258 ⇑P P 09 51 07.1 -1.4
AAI **Ambon** 59.14 275 P P 09 51 10.6 -1.6
comp=Z,7µmcomp=Z,2µmcomp=Z,89nm,0.9s
AAI **Ambon** 59.14 275 P P 09 51 10.1 -2.1
AAI pmax pmax
comp=Z,86nm,0.9s
DRV **Dumont d'Urvil** 59.35 200 P P 09 51 13.8 +1.1
RPN **Rapa Nui** 59.64 112 LR LR 10 10 28.4
comp=Z,1µm,21.6s,baz=266,slow=29
NLAI **Namlea** 60.32 275 P P 09 51 19.1 -1.2
comp=Z,7µmcomp=Z,2µmcomp=Z,56nm,0.8s
JCJ **Chichijima** 61.03 314 P P 09 51 23.4 -1.5
comp=Z,84nm,0.8s,baz=271,slow=18,SNR=2.1
JCJ LR LR 10 12 38.0
comp=Z,2µm,22.0s,baz=113,slow=31
comp=Z,84nm,0.8s
SOEI **Soe** 61.42 267 P P 09 51 26.2 -1.8
SOEI **Soe** 61.42 267 P P 09 51 28.0 0.0
SOEI **Soe** 61.42 267 P P 09 51 28.0 0.0
SOEI **Soe** 61.42 267 ⇑P P 09 51 27.9 0.0
SANI **Sanana** 61.72 276 P P 09 51 28.3 -1.5
SANI **Sanana** 61.72 276 ⇑P P 09 51 27.9 -2.0
BATI **Baumata** 61.90 267 LR LR 10 16 37.4
comp=Z,4µm,20.7s,baz=120,slow=34
SBA **Scott Base** 62.85 185 P P 09 51 37.7 +1.4
SBA **Scott Base** 62.85 185 P P 09 51 37.7 +1.4
SBA pmax pmax
comp=Z,112nm,0.9s
SBA **Scott Base** 62.85 185 P P 09 51 39.2 +2.9
VNDA **Vanda** 62.98 186 P P 09 51 37.7 +0.5
VNDA IAmb IAmb 09 51 40.8
comp=Z,61nm,0.9s
VNDA **Vanda** 62.98 186 P P 09 51 39.3 +2.0
comp=Z,53nm,0.9s,baz=7.6,slow=6.5,SNR=250
VNDA LR LR 10 14 44.3
comp=Z,1µm,21.8s,baz=18,slow=32
comp=Z,53nm,0.9s
VNDA **Vanda** 62.98 186 P P 09 51 39.1 +1.9
VNDA PcP PcP 09 52 17.1 +2.1
PSA00 **Pilbara Seismi** 63.57 254 P P 09 51 40.0 -2.1
PSA00 **Pilbara Seismi** 63.57 254 P P 09 51 40.2 -1.9
PSA00 IAmb IAmb 09 51 43.2
comp=Z,414nm,1.5s
PSA00 **Pilbara Seismi** 63.57 254 P P 09 51 41.3 -0.8
MBWA **Marble Bar** 63.73 254 P P 09 51 41.6 -1.5

MBWA Marble Bar 63.73 254 IAMs_20 IAMs_20 10 19 50.6
comp=Z,6µm,18.0s
MBWA Marble Bar 63.73 254 P **P** **09 51 42.2 -1.0**
MBWA Marble Bar 63.73 254 P **P** **09 51 42.2 -1.0**
MBWA Marble Bar 63.73 254 ⇑P **P** **09 51 41.6 -1.5**
MBWA Marble Bar 63.73 254 P **P** **09 51 41.8 -1.4**
MEEK Meekatharra 64.12 248 P **P** **09 51 45.5 -0.2**
EDFI Ende, Flores 64.12 268 P **P** **09 51 44.0 -2.0**
comp=Z,5µmcomp=Z,2µmcomp=Z,106nm,0.8s
KLBR Kellerberrin 64.48 242 P **P** **09 51 48.3 +0.3**
NWAO Narrogin (SRO) 64.85 241 P **P** **09 51 49.2 -1.1**
NWAO Narrogin (SRO) 64.85 241 LR LR 10 17 49.6
comp=Z,3µm,21.3s,baz=92,slow=34
NWAO Narrogin (SRO) 64.85 241 P **P** **09 51 49.7 -0.6**
NWAO Narrogin (SRO) 64.85 241 P **P** **09 51 50.3 0.0**
NWAO Narrogin (SRO) 64.85 241 P **P** **09 51 49.9 -0.4**
NWAO Narrogin (SRO) 64.85 241 P **P** **09 51 49.2 -1.1**
NWAO pmax pmax
comp=Z,252nm,1.7s
NWAO Narrogin (SRO) 64.85 241 P **P** **09 51 49.5 -0.8**
DAV Davao City (W) 65.05 286 LR LR 10 18 55.8
comp=Z,1µm,18.3s,baz=103,slow=35
BLDU Ballidu 65.48 243 P **P** **09 51 53.7 -0.6**
MUN Mundaring 65.77 242 P **P** **09 51 56.4 +0.1**
MUN Mundaring 65.77 242 P **P** **09 51 55.6 -0.7**
WBSI Waikabubak, Su 66.13 266 P **P** **09 52 00.1 +1.1**
comp=Z,6µmcomp=Z,2µmcomp=Z,104nm,0.8s
MORW Morawa 66.16 245 P **P** **09 51 57.2 -1.7**
MORW IAmb IAmb 09 52 00.2
comp=Z,82nm,1.1s
MORW Morawa 66.16 245 P **P** **09 51 59.0 +0.1**
MORW Morawa 66.16 245 ⇑P **P** **09 51 57.5 -1.4**
APSI Ampana 66.20 276 P **P** **09 51 59.5 +0.2**
comp=Z,104nm,1.6s
JHJ Hachijo jima 2 66.44 318 LR LR 10 15 28.9
comp=Z,941nm,22.0s,baz=125,slow=31
BNSI Bone 66.72 272 P **P** **09 52 02.4 -0.3**
comp=Z,5µmcomp=Z,2µmcomp=Z,65nm,1.4s
KAPI Kappang 66.90 271 LR LR 10 19 04.5
comp=Z,1µm,21.7s,baz=90,slow=34
KAPI Kappang 66.90 271 P **P** **09 52 02.5 -1.3**
KAPI S **S** **10 00 58.7 +3.6**
KAPI Kappang 66.90 271 ⇓*i*P **P** **09 52 03.0 -0.8**
KAPI pmax pmax
comp=Z,18nm,1.1s
SPSI Sidrap Palu 67.16 272 P **P** **09 52 07.1 +1.6**
H01W1 Cape Leeuwin H 67.28 238 P **P** **09 52 05.6 -0.1**
baz=134,slow=6.7,SNR=6.0
H01W3 Cape Leeuwin H 67.30 238 P **P** **09 52 05.8 0.0**
baz=134,slow=6.7,SNR=6.0
H01W2 Cape Leeuwin H 67.30 238 P **P** **09 52 07.3 +1.5**
baz=134,slow=6.7,SNR=3.5
ADK Adak 67.53 357 P **P** **09 52 07.5 +0.6**
TOLI2 Tolitoli 67.62 278 P **P** **09 52 06.7 -1.7**
TOLI2 Tolitoli 67.62 278 P **P** **09 52 08.1 -0.3**
ATKA Atka Island 67.77 359 P **P** **09 52 08.9 +0.4**
PLAI Plampang 67.87 267 P **P** **09 52 09.8 -0.2**
PLAI Plampang 67.87 267 P **P** **09 52 09.4 -0.6**
comp=Z,6µmcomp=Z,2µmcomp=Z,61nm,1.0s
CCD Concordia, Ant 68.16 194 P **P** **09 52 12.4 +1.1**
CCD PcP **PcP** **09 52 37.9 +0.9**
GIRL Giralia 68.57 252 P **P** **09 52 13.8 -0.4**
GIRL IAmb IAmb 09 52 15.7
comp=Z,67nm,1.1s
NIKH Nikolski High 68.62 3 P **P** **09 52 12.2 -1.6**
NIKH Nikolski High 68.62 3 P **P** **09 52 13.6 -0.2**
baz=184
TWSI Taliwang, Sumb 68.75 267 P **P** **09 52 14.4 -1.1**
comp=Z,6µmcomp=Z,2µmcomp=Z,154nm,1.1s
JMM Marumori 68.90 322 P **P** **09 52 15.0 -0.8**
JMM Marumori 68.90 322 ⇓P **P** **09 52 16.1 +0.3**
SHEM Shemya Is, Ala 69.22 352 LR LR 10 16 01.0
comp=Z,5µm,21.6s,baz=152,slow=30
JGF Kuroka 69.56 318 P **P** **09 52 19.5 -0.6**
JGF IAmb IAmb 09 52 36.0
comp=Z,127nm,1.8s
JGF Kuroka 69.56 318 ⇓P **P** **09 52 20.1 0.0**
MJAR Matsushiro Arr 69.61 320 P **P** **09 52 19.0 -1.3**
MJAR Matsushiro Arr 69.61 320 P **P** **09 52 19.8 -0.5**
comp=Z,22nm,0.9s,baz=153,slow=5.7,SNR=44
MJAR LR LR 10 17 28.4
comp=Z,3µm,21.9s,baz=118,slow=31
comp=Z,22nm,0.9s
MAJO Matsushiro 69.61 320 P **P** **09 52 19.6 -0.8**
MAJO Matsushiro 69.61 320 ⇓*i*P **P** **09 52 20.4 0.0**
MAJO pmax pmax
comp=Z,32nm,0.9s
MAJO Matsushiro 69.61 320 ⇓P **P** **09 52 20.4 0.0**
MJB9 Matsu-Tunnel 69.62 320 P **P** **09 52 20.5 +0.2**
INU Inuyama 69.62 318 P **P** **09 52 18.9 -1.5**
INU IAmb IAmb 09 52 47.1
comp=Z,106nm,1.5s
AKUT Akutan 69.97 4 P **P** **09 52 21.7 -0.3**
AKUT Akutan 69.97 4 P **P** **09 52 23.1 +1.1**
AKUT Akutan 69.97 4 ⇓P **P** **09 52 22.1 +0.1**
H06N1 SOCORRO T-PHAS 69.98 63 T T 11 09 03.9
SNR=8.3
H06E1 SOCORRO T-PHAS 70.00 63 P **P** **09 52 24.1 +1.1**
SNR=6.0
H06E1 T T 11 09 02.8
SNR=2.7
CASY Casey 70.22 205 P **P** **09 52 23.9 +0.3**
CASY Casey 70.22 205 ⇑P **P** **09 52 24.1 +0.5**
CASY Casey 70.22 205 P **P** **09 52 24.2 +0.6**
SRBI Singaraja 70.51 267 P **P** **09 52 25.6 -0.7**
comp=Z,5µmcomp=Z,2µmcomp=Z,177nm,1.2s
JSD Sado 70.53 321 P **P** **09 52 26.0 +0.1**
JMN Monobe 70.74 315 P **P** **09 52 27.0 -0.4**
JMN IAmb IAmb 09 52 30.8
comp=Z,70nm,1.0s
JMN Monobe 70.74 315 P **P** **09 52 27.8 +0.5**
JMN Monobe 70.74 315 ⇑P **P** **09 52 28.4 +1.0**
FALS False Pass 70.88 6 P **P** **09 52 27.2 -0.4**
FALS False Pass 70.88 6 P **P** **09 52 27.6 0.0**
baz=190
FARB Farallon Islan 70.92 40 P **P** **09 52 28.6 +0.3**
FARB IAmb IAmb 09 52 31.7
comp=Z,100nm,0.9s
FARB IAMs_20 IAMs_20 10 15 27.1
comp=Z,7µm,22.0s
HULI Fort Hunter Li 71.01 42 P **P** **09 52 30.2 +1.3**
HULI IAmb IAmb 09 52 32.8
comp=Z,99nm,1.0s
MYLDM Lahad Datu 71.04 281 P **P** **09 52 29.5 -0.1**
MYLDM IAmb IAmb 09 53 10.4
comp=Z,67nm,1.0s
MYLDM Lahad Datu 71.04 281 ⇑P **P** **09 52 30.5 +0.9**
JOW Kunigami 71.16 306 LR LR 10 17 42.3
comp=Z,2µm,21.7s,baz=124,slow=31
JRSC Jasper Ridge 71.21 41 P **P** **09 52 30.6 +0.6**
JRSC IAmb IAmb 09 52 33.6
comp=Z,58nm,0.9s
JRSC IAMs_20 IAMs_20 10 15 35.9
comp=Z,8µm,22.0s
MCCM Marconi Confer 71.28 40 IAMs_20 IAMs_20 10 16 28.6
comp=Z,6µm,20.0s
MCCM Marconi Confer 71.28 40 ⇑P **P** **09 52 32.2 +1.8**
CNBA Chernabura Isl 71.29 8 IAMs_20 IAMs_20 10 16 23.4
comp=Z,6µm,22.0s
CHNA Chernabura Isl 71.30 8 P **P** **09 52 30.2 +0.1**
baz=194
SAO San Andreas Ge 71.32 42 P **P** **09 52 31.1 +0.3**
SAO IAmb IAmb 09 52 35.0
comp=Z,79nm,1.1s
SAO San Andreas Ge 71.32 42 P **P** **09 52 31.1 +0.3**
SAO pmax pmax
comp=Z,79nm,1.1s
SAO San Andreas Ge 71.32 42 ⇓P **P** **09 52 32.0 +1.2**
PKD Bear Valley Ra 71.42 43 P **P** **09 52 31.5 +0.1**
PKD IAmb IAmb 09 52 35.5
comp=Z,102nm,1.1s
JAGI Jajag, Banyuwa 71.44 266 P **P** **09 52 29.7 -2.3**
comp=Z,5µmcomp=Z,181nm,1.1s
JAGI Jajag, Banyuwa 71.44 266 ⇑P **P** **09 52 29.6 -2.3**
ABJI Asem Bagus 71.52 267 P **P** **09 52 32.9 +0.5**
comp=Z,155nm,1.1s
SKR Severo-Kuril's 71.62 340 *e*P P 09 52 45.1 +13
SKR MLR MLR
comp=Z,2µm,15.0s
CVS Carmenet Viney 71.66 40 IAMs_20 IAMs_20 10 15 48.7
comp=Z,7µm,22.0s
SDPT Sand Point 71.69 7 P **P** **09 52 32.1 -0.4**
baz=192
KCPM Cahto Peak 71.83 38 IAMs_20 IAMs_20 10 15 54.1
comp=Z,8µm,22.0s

OSI Osito Audit: C 71.85 45 P **P** **09 52 34.1 0.0**
OSI IAMs_20 IAMs_20 10 15 41.8
comp=Z,8µm,22.0s
S12K Black Hills 71.86 6 IAMs_20 IAMs_20 10 17 14.1
comp=Z,4µm,21.0s
S12K Black Hills 71.86 6 P **P** **09 52 33.0 -0.6**
baz=191,SNR=11
TGY Tagaytay City 71.87 291 LR LR 10 19 41.8
comp=Z,3µm,22.0s,baz=124,slow=32
KMMI Kalianget 71.96 268 P **P** **09 52 36.1 +1.0**
comp=Z,6µmcomp=Z,92nm,1.1s
PASC Pasadena Art C 71.97 45 P **P** **09 52 34.6 -0.1**
PASC IAMs_20 IAMs_20 10 15 45.9
comp=Z,7µm,22.0s
KMPM Mount Pierce 71.99 37 P **P** **09 52 32.8 -2.0**
KMPM IAMs_20 IAMs_20 10 16 51.2
comp=Z,7µm,20.0s
MNRC McLaughlin Min 72.00 39 P **P** **09 52 33.8 -1.1**
MNRC IAMs_20 IAMs_20 10 15 48.7
comp=Z,8µm,22.0s
CBX Cerro Bola 72.00 48 P **P** **09 52 33.9 -1.3**
CBX IAmb IAmb 09 52 38.1
comp=Z,145nm,1.8s
CPE Camp Elliot 72.00 47 P **P** **09 52 33.6 -1.3**
CPE IAmb IAmb 09 52 50.8
comp=Z,106nm,1.7s
CPE IAMs_20 IAMs_20 10 15 57.0
comp=Z,6µm,22.0s
BBKI Banjar Baru 72.03 271 P **P** **09 52 35.7 +0.1**
comp=Z,5µmcomp=Z,116nm,1.5s
MWC Mount Wilson 72.08 45 P **P** **09 52 34.7 -0.9**
MWC IAMs_20 IAMs_20 10 15 50.0
comp=Z,7µm,22.0s
MWC Mount Wilson 72.08 45 P **P** **09 52 34.7 -0.9**
MWC pmax pmax
comp=Z,50nm,0.9s
BLJI Banyuglugur 72.14 267 P **P** **09 52 35.6 -0.6**
comp=Z,165nm,1.0s
DPP Dos Picos Cty 72.18 47 P **P** **09 52 35.1 -1.0**
JKA Kamikawa-asahi 72.19 328 P **P** **09 52 35.0 -0.7**
JKA IAmb IAmb 09 52 38.3
comp=Z,85nm,0.9s
ASAJ Asahikawa 72.19 328 P **P** **09 52 35.8 0.0**
comp=Z,68nm,0.8s,baz=208,slow=6.8,SNR=22
ASAJ LR LR 10 20 52.4
comp=Z,593nm,20.2s,baz=161,slow=33
comp=Z,68nm,0.8s
BAR Barrett 72.20 47 IAMs_20 IAMs_20 10 15 51.1
comp=Z,6µm,22.0s
ELS Elsinore Mount 72.20 46 P **P** **09 52 37.1 +0.9**
P08K Saint George I 72.23 2 P **P** **09 52 35.6 -0.1**
baz=183
JCC Jacoby Creek, 72.30 37 IAMs_20 IAMs_20 10 16 30.4
comp=Z,6µm,21.0s
VES Vestal, Richgr 72.31 43 P **P** **09 52 36.8 +0.1**
VES IAMs_20 IAMs_20 10 16 09.0
comp=Z,7µm,22.0s
TPO Tropico Hills 72.33 45 P **P** **09 52 37.5 +0.6**
TPO IAmb IAmb 09 52 53.0
comp=Z,193nm,1.6s
BFSC Mount Baldy Ra 72.36 46 P **P** **09 52 36.9 -0.4**
BFSC IAMs_20 IAMs_20 10 16 09.6
comp=Z,7µm,22.0s
JNU Nakatsue 72.48 313 P **P** **09 52 36.9 -0.9**
JNU Nakatsue 72.48 313 P **P** **09 52 37.7 -0.2**
comp=Z,43nm,0.8s,baz=79,slow=2.5,SNR=26
JNU LR LR 10 18 01.5
comp=Z,932nm,21.4s,baz=115,slow=31
comp=Z,43nm,0.8s
JNU Nakatsue 72.48 313 P **P** **09 52 38.1 +0.3**
JNU Nakatsue 72.48 313 ⇓P **P** **09 52 37.4 -0.5**
KHMM Horse Mountain 72.51 37 IAMs_20 IAMs_20 10 17 08.0
comp=Z,7µm,20.0s
KRPM Rodgers 72.52 37 IAMs_20 IAMs_20 10 16 37.4
comp=Z,6µm,21.0s
SUTB Sutter Butte 72.62 39 IAMs_20 IAMs_20 10 16 30.1
comp=Z,4µm,22.0s
S14K Fog Glacier 72.72 8 P **P** **09 52 38.8 0.0**
baz=193
SRIG Santa Rosalia 72.78 54 P **P** **09 52 38.8 -0.8**
SRIG IAmb IAmb 09 52 55.6
comp=Z,189nm,1.8s
SPIA Saint Paul Isl 72.78 1 P **P** **09 52 39.9 +0.9**
baz=183
WELL Weller Preserv 72.79 40 IAMs_20 IAMs_20 10 16 35.7
comp=Z,7µm,21.0s
LPIG La Paz 72.84 58 LR LR 10 16 19.1
comp=Z,5µm,21.1s,baz=246,slow=29
PFO Pinyon Flats O 72.85 47 IAMs_20 IAMs_20 10 16 20.6
comp=Z,6µm,22.0s
PFO Pinyon Flats O 72.85 47 LR LR 10 16 44.3
comp=Z,7µm,21.9s,baz=270,slow=29
PFO Pinyon Flats O 72.85 47 P **P** **09 52 41.0 +0.8**
PFO pmax pmax
comp=Z,34nm,1.7s
PFO Pinyon Flats O 72.85 47 P **P** **09 52 41.2 +1.1**
PFO pP **pwP** **09 52 54.9 +1.3**
PET Petropavlovsk 72.86 342 *e*P **P** **09 52 36.9 -2.6**
PET *e*S **S** **10 02 03.2 -0.2**
PET *e*SS **SS** **10 06 46.9 +2.5**
PET MLR MLR
comp=Z,1µm,18.0s
CHIR Chirikof Islan 72.86 10 IAMs_20 IAMs_20 10 17 39.7
comp=Z,8µm,21.0s
CHIR Chirikof Islan 72.86 10 P **P** **09 52 40.2 +0.7**
baz=197
ORV Oroville 73.00 39 IAMs_20 IAMs_20 10 16 43.0
comp=Z,5µm,21.0s
KSXB Camp Six Broad 73.04 36 IAMs_20 IAMs_20 10 16 53.1
comp=Z,7µm,21.0s
KBO Bosley Butte 73.09 36 IAMs_20 IAMs_20 10 17 05.5
comp=Z,6µm,21.0s
PEA0B Petropavlovsk- 73.21 342 ⇑*i*P **P** **09 52 42.8 +1.1**
PETK Petropavlovsk- 73.21 342 P **P** **09 52 40.3 -1.4**
PETK Petropavlovsk- 73.21 342 P **P** **09 52 41.8 +0.1**
comp=Z,68nm,0.8s,baz=128,slow=5.2,SNR=52
comp=Z,68nm,0.8s
WSHM Spangler Hills 73.24 44 IAMs_20 IAMs_20 10 17 20.6
comp=Z,7µm,21.0s
O03E Paynes Creek 73.27 38 IAMs_20 IAMs_20 10 16 53.3
comp=Z,7µm,22.0s
BELC Belle Mtn. Jos 73.39 47 IAMs_20 IAMs_20 10 17 10.6
comp=Z,6µm,21.0s
KEBM Edson Butte 73.47 35 IAMs_20 IAMs_20 10 16 54.4
comp=Z,5µm,21.0s
BC3 Big Chuckawall 73.58 47 IAMs_20 IAMs_20 10 16 55.8
comp=Z,5µm,21.0s
YBH Yreka Blue Hor 73.65 37 LR LR 10 17 24.9
comp=Z,526nm,21.8s,baz=266,slow=30
GLA Glamis 73.71 48 IAMs_20 IAMs_20 10 16 59.1
comp=Z,5µm,21.0s
HATC Hat Creek Radi 73.80 38 IAMs_20 IAMs_20 10 17 20.3
comp=Z,7µm,21.0s
SII Sitkinak Islan 73.81 11 IAMs_20 IAMs_20 10 18 28.9
comp=Z,6µm,20.0s
SII Sitkinak Islan 73.81 11 P **P** **09 52 45.8 +0.6**
baz=199
IRM Iron Mountain 74.07 47 IAMs_20 IAMs_20 10 16 59.6
comp=Z,6µm,22.0s
YSS Yuzhno-Sakhali 74.13 330 *a i*P **P** **09 52 48.2 +1.0**
YSS *e* 09 53 05.7
YSS *e*S **S** **10 02 20.2 +2.2**
YSS *e*PS **PnS** **10 02 56.6 +1.9**
YSS pmax pmax
comp=Z,130nm,0.9s
YSS pmax pmax
comp=N,20nm,0.7s
YSS pmax pmax
comp=Z,800nm,3.3s
YSS smax smax
comp=E,2µm,9.3s
YSS MLR MLR
comp=E,900nm,16.0s
YSS Yuzhno-Sakhali 74.13 330 ⇑P **P** **09 52 48.1 +0.9**
DANC Danby, Needles 74.16 46 P **P** **09 52 47.9 +0.2**
DANC IAmb IAmb 09 53 03.7
comp=Z,92nm,0.9s
DANC IAMs_20 IAMs_20 10 16 53.0
comp=Z,6µm,22.0s
L04D Klamath Falls 74.19 37 P **P** **09 52 48.2 +0.4**
L04D IAmb IAmb 09 52 52.0
comp=Z,148nm,1.2s
QSPA South Pole Qui 74.20 180 P **P** **09 52 47.7 +0.2**
QSPA South Pole Qui 74.20 180 P **P** **09 52 51.4 +3.8**
comp=Z,206nm,0.9s,baz=36,slow=1.5,SNR=426
QSPA LR LR 10 20 59.3
comp=Z,2µm,21.7s,baz=39,slow=32

SHOC Shoshone, Teco 74.23 45 IAMs_20 IAMs_20 10 17 18.8
comp=Z,6µm,21.0s
R16K Pilot Point 74.24 8 P **P** **09 52 47.8 +0.3**
baz=195
NGJI Ngawi 74.29 267 P **P** **09 52 49.0 +0.1**
comp=Z,59nm,1.0s
NVAR Mina Array Bea 74.32 42 P **P** **09 52 49.8 +1.0**
comp=Z,59nm,0.8s,baz=227,slow=8.5,SNR=348
NVAR LR LR 10 17 50.1
comp=Z,9µm,21.4s,baz=232,slow=30
NVAR PKPPKP **P'P'df** **10 20 18.8 +1.1**
comp=Z,0.6nm,0.7s,baz=46,slow=4.3,SNR=4.4
comp=Z,59nm,0.8s
PCJI Pacitan 74.36 266 P **P** **09 52 48.6 -0.7**
R17L Mt. Peulik Vol 74.48 9 P **P** **09 52 49.4 +0.4**
baz=196,SNR=8.4
PLK4 Peulik 4 74.48 9 IAMs_20 IAMs_20 10 18 00.6
comp=Z,7µm,22.0s
I03D Drain, OR 74.55 35 IAmb IAmb 09 52 54.1
comp=Z,161nm,1.4s
OHAK Old Harbor 74.60 11 P **P** **09 52 49.9 +0.2**
OHAK Old Harbor 74.60 11 P **P** **09 52 49.9 +0.2**
baz=200
214A Organ Pipe Nat 74.61 50 IAmb IAmb 09 53 06.6
comp=Z,143nm,1.8s
R18K Karluk 74.72 10 IAMs_20 IAMs_20 10 18 30.0
comp=Z,4µm,21.0s
R18K Karluk 74.72 10 P **P** **09 52 50.5 +0.1**
baz=198
NEE2 Needles Airpor 74.76 47 IAMs_20 IAMs_20 10 17 21.9
comp=Z,5µm,22.0s
TPNV Topopah Spring 74.82 44 ⇑P **P** **09 52 52.7 +1.0**
UGM Wanagama 75.05 266 IAmb IAmb 09 52 55.3
comp=Z,188nm,1.4s
UGM Wanagama 75.05 266 P **P** **09 52 52.9 -0.5**
UGM Wanagama 75.05 266 P **P** **09 52 54.5 +1.1**
comp=Z,93nm,1.1s
BUCK Buck Mountain 75.08 35 IAmb IAmb 09 52 56.6
comp=Z,86nm,1.1s
I04A Tendick Farm, 75.13 35 IAmb IAmb 09 52 56.3
comp=Z,61nm,0.9s
COR Corvallis 75.16 34 IAMs_20 IAMs_20 10 17 46.0
comp=Z,6µm,22.0s
COR Corvallis 75.16 34 P **P** **09 52 54.7 +1.5**
COR pmax pmax
comp=Z,77nm,1.4s
COR Corvallis 75.16 34 ⇑P **P** **09 52 55.0 +1.8**
COR Corvallis 75.16 34 P **P** **09 52 55.2 +2.1**
Q17K Contact Creek 75.16 9 P **P** **09 52 53.1 +0.1**
baz=197
ACHA Angle Creek He 75.19 9 IAmb IAmb 09 53 10.4
comp=Z,140nm,1.9s
YULB Yu-li 75.24 300 P **P** **09 52 54.5 +0.3**
KDAK Kodiak Island 75.26 11 IAMs_20 IAMs_20 10 18 31.1
comp=Z,7µm,22.0s
KDAK Kodiak Island 75.26 11 LR LR 10 19 04.5
comp=Z,7µm,21.7s,baz=207,slow=30
KDAK Kodiak Island 75.26 11 P **P** **09 52 54.3 +0.7**
baz=200
KDAK Kodiak Island 75.26 11 P **P** **09 52 54.2 +0.7**
NACB Ninganchiao 75.32 301 IAmb IAmb 09 52 55.5
comp=Z,85nm,0.8s
NACB Ninganchiao 75.32 301 P **P** **09 52 55.0 +0.4**
H04D Lebanon 75.42 35 IAmb IAmb 09 52 58.9
comp=Z,106nm,0.8s
O14K Tigyukauivet M 75.43 6 IAMs_20 IAMs_20 10 20 18.6
comp=Z,4µm,20.0s
O14K Tigyukauivet M 75.43 6 P **P** **09 52 55.3 +0.8**
baz=192
Q16K King Salmon 75.44 9 P **P** **09 52 54.9 +0.5**
baz=196,SNR=5.5
J05D Fort Rock, OR 75.47 36 IAmb IAmb 09 52 59.0
comp=Z,126nm,0.9s
O15K Ungalikthiuk R 75.51 7 IAMs_20 IAMs_20 10 18 32.8
comp=Z,5µm,22.0s
O15K Ungalikthiuk R 75.51 7 P **P** **09 52 55.2 +0.2**
baz=193
S11A Rachel 75.54 44 IAmb IAmb 09 52 59.0
comp=Z,77nm,0.9s
P16K Nushagak River 75.60 8 IAMs_20 IAMs_20 10 18 35.1
comp=Z,4µm,22.0s
P16K Nushagak River 75.60 8 P **P** **09 52 55.9 +0.5**
baz=195,SNR=6.0
Q18K Katmai Hardscr 75.66 10 P **P** **09 52 56.3 +0.4**
baz=198,SNR=7.5
SSLB Suanglung 75.69 300 IAmb IAmb 09 52 57.0
comp=Z,184nm,1.6s
SSLB Suanglung 75.69 300 P **P** **09 52 56.1 -0.7**
YHNB Yeheng 75.71 301 IAmb IAmb 09 53 00.8
comp=Z,117nm,1.1s
TPUB Ta-pu 75.76 300 P **P** **09 52 56.6 -0.6**
H04A Detroit Lake 75.83 35 IAmb IAmb 09 52 59.3
comp=Z,67nm,0.8s
PRN Pahroc Range 75.87 44 IAmb IAmb 09 53 02.2
comp=Z,110nm,1.3s
P17K Kvichak River 75.97 9 P **P** **09 52 57.1 -0.4**
baz=196,SNR=11
TEY Ternei 75.97 326 *e*P **P** **09 52 55.3 -2.5**
N14K Kuskokwak Cree 76.05 6 P **P** **09 52 58.1 +0.2**
baz=191
Q20K Shuyak Island 76.07 11 P **P** **09 52 58.8 +0.7**
baz=200
SYI Shuyak Island 76.07 11 IAMs_20 IAMs_20 10 18 57.6
comp=Z,6µm,22.0s
I05D Terrebonne, OR 76.08 35 IAmb IAmb 09 53 02.8
comp=Z,156nm,1.4s
O16K Kokwok River B 76.13 8 IAMs_20 IAMs_20 10 19 03.1
comp=Z,4µm,22.0s
O16K Kokwok River B 76.13 8 P **P** **09 52 58.4 0.0**
baz=195
Q19K Cape Douglas, 76.16 10 IAMs_20 IAMs_20 10 19 03.8
comp=Z,7µm,22.0s
M11K Mekoryuk 76.16 3 P **P** **09 52 59.2 +0.6**
baz=187
TUC Tucson 76.28 50 IAMs_20 IAMs_20 10 18 38.3
comp=Z,4µm,20.0s
TUC Tucson 76.28 50 P **P** **09 53 01.4 +1.4**
TUC pmax pmax
comp=Z,61nm,2.1s
TUC Tucson 76.28 50 ⇓P **P** **09 53 01.2 +1.2**
TUC Tucson 76.28 50 P **P** **09 53 01.9 +1.9**
P18K Big Mountain, 76.34 9 IAMs_20 IAMs_20 10 19 08.7
comp=Z,4µm,22.0s
P18K Big Mountain, 76.34 9 P **P** **09 52 60.0 +0.3**
baz=197,SNR=6.9
M13K Dall Lake 76.38 5 IAmb IAmb 09 53 02.7
comp=Z,91nm,0.8s
M13K Dall Lake 76.38 5 P **P** **09 53 00.1 +0.3**
baz=189
O17K Koliganek Bris 76.44 8 P **P** **09 53 00.6 +0.5**
baz=196,SNR=7.4
N15K Kwethluk River 76.45 7 IAmb IAmb 09 53 16.3
comp=Z,106nm,1.6s
N15K IAMs_20 IAMs_20 10 20 59.7
comp=Z,4µm,20.0s
N15K Kwethluk River 76.45 7 P **P** **09 53 00.8 +0.5**
baz=193
WVOR Wild Horse Val 76.47 38 IAmb IAmb 09 53 04.3
comp=Z,77nm,1.0s
WVOR Wild Horse Val 76.47 38 ⇓P **P** **09 53 01.8 +0.9**
TJN Taejon 76.66 314 P **P** **09 53 02.2 +0.3**
TJN pmax pmax
comp=Z,105nm,2.3s
NLWA Neilton Lookou 76.71 32 IAmb IAmb 09 53 06.5
comp=Z,89nm,1.1s
NLWA IAMs_20 IAMs_20 10 18 50.0
comp=Z,4µm,21.0s
NLWA Neilton Lookou 76.71 32 ⇓P **P** **09 53 03.8 +1.7**
KPJI Karang Pucung 76.73 266 P **P** **09 53 01.9 -1.0**
comp=Z,2µmcomp=Z,66nm,1.1s
O18K Koktuh Hills 76.79 9 IAMs_20 IAMs_20 10 20 37.6
comp=Z,3µm,20.0s
O18K Koktuh Hills 76.79 9 P **P** **09 53 02.3 +0.2**
baz=197
X16A Lo Mia Camp, P 76.83 48 IAmb IAmb 09 53 07.0
comp=Z,52nm,1.0s
KSRS Korea Array 76.84 315 P **P** **09 53 03.1 +0.2**
comp=Z,15nm,1.0s,baz=129,slow=6.6,SNR=27
KSRS LR LR 10 21 11.8
comp=Z,586µm,21.8s,baz=120,slow=31
comp=Z,15nm,1.0s
M14K Bethel 76.84 5 P **P** **09 53 03.0 +0.6**
baz=191,SNR=26
LCMT Little Creek M 76.89 45 IAmb IAmb 09 53 30.1
comp=Z,96nm,1.7s
N16K Nishlik Lake 76.90 7 P **P** **09 53 03.5 +0.6**
baz=194

M15K	**Kasigluk River** baz=192	76.91	6	P		**P**		**09 53 03.4**	**+0.6**
P19K	**Oil Pt** comp=Z,6μm,21.0s	76.91	10	IAMs_20		IAMs_20		10 19 49.8	
P19K	**Oil Pt** baz=199	76.91	10	P		**P**		**09 53 03.5**	**+0.6**
I07A	**Izee** comp=Z,73nm,0.9s	76.95	36	IAmb		IAmb		09 53 07.1	
TYV	**Tymovskoe**	76.98	333	*e*P		**P**		**09 53 04.0**	**+0.6**
TYV				eS		**S**		**10 02 52.7**	**+3.3**
TYV	comp=Z,79nm,0.9s			pmax		pmax			
TYV	comp=Z,1μm,4.2s			pmax		pmax			
TYV	comp=N,21nm,1.7s			smax		smax			
TYV	comp=N,800nm,6.2s			smax		smax			
TYV	comp=E,3μm,6.2s			smax		smax			
G06A	**Carlson Farm,** comp=Z,60nm,1.0s	77.03	35	IAmb		IAmb		09 53 07.0	
H02S2	**DAWSON INLET T** SNR=4.4	77.05	24	P		**P**		**09 53 03.3**	**-0.4**
N17K	**Nushagak Hills** baz=195	77.15	8	P		**P**		**09 53 05.0**	**+0.8**
HOM	**Homer** comp=Z,7μm,22.0s	77.19	11	IAMs_20		IAMs_20		10 19 33.2	
HOM	**Homer** baz=201	77.19	11	P		**P**		**09 53 04.6**	**+0.2**
ILSW	**Iliamna Southw** comp=Z,123nm,1.3s	77.24	10	IAmb		IAmb		09 53 27.3	
O19K	**Port Alsworth** comp=Z,5μm,22.0s	77.25	9	IAMs_20		IAMs_20		10 19 48.7	
O19K	**Port Alsworth** baz=198,SNR=7.9	77.25	9	P		**P**		**09 53 05.1**	**+0.4**
PSUT	**Pine Spring** comp=Z,54nm,0.8s	77.28	44	IAmb		IAmb		09 53 08.9	
SZCU	**Shurtz Canyon** comp=Z,135nm,1.7s	77.30	45	IAmb		IAmb		09 53 10.3	
B04A	**Port Angeles** comp=Z,145nm,1.5s	77.34	31	IAmb		IAmb		09 53 10.0	
GNW	**Green Mountain** comp=Z,76nm,1.1s	77.36	32	IAmb		IAmb		09 53 09.8	
L14K	**Kuka Creek** comp=Z,58nm,0.8s	77.36	5	IAmb		IAmb		09 53 07.8	
L14K	**Kuka Creek** baz=190	77.36	5	P		**P**		**09 53 06.2**	**+1.0**
M16K	**Timber Creek** comp=Z,4μm,22.0s	77.42	7	IAMs_20		IAMs_20		10 19 54.1	
M16K	**Timber Creek** baz=194,SNR=10	77.42	7	P		**P**		**09 53 06.6**	**+0.9**
O20K	**Slope Mountain** baz=200	77.42	10	P		**P**		**09 53 06.6**	**+0.8**
WUAZ	**Wupatki** comp=Z,116nm,1.6s	77.42	47	IAmb		IAmb		09 53 23.2	
WUAZ	comp=Z,5μm,22.0s			IAMs_20		IAMs_20		10 18 54.6	
WUAZ	**Wupatki**	77.42	47	⇓P		**P**		**09 53 08.1**	**+1.6**
BRLK	**Bradley Lake** comp=Z,7μm,22.0s	77.43	11	IAMs_20		IAMs_20		10 19 49.2	
BRSE	**Bradley Lake S** baz=202	77.44	11	P		**P**		**09 53 06.4**	**+0.6**
N18K	**Kilae Creek** comp=Z,4μm,22.0s	77.48	8	IAMs_20		IAMs_20		10 19 43.8	
N18K	**Kilae Creek** baz=197	77.48	8	P		**P**		**09 53 06.0**	**-0.1**
CLRS	**Cowichan Lake** comp=Z,51nm,1.0s	77.53	31	IAmb		IAmb		09 53 10.7	
ELK	**Elko** comp=Z,8μm,21.8s,baz=218,slow=30	77.58	41	LR		LR		10 19 51.0	
ELK	**Elko**	77.58	41	P		**P**		**09 53 08.1**	**+0.7**
ELK	**Elko**	77.58	41	⇓P		**P**		**09 53 08.1**	**+0.7**
RED	**Redoubt Volcan** comp=Z,85nm,1.1s	77.71	10	IAmb		IAmb		09 53 22.4	
INCN	**Inchon**	77.73	315	P		**P**		**09 53 05.6**	**-2.4**
INCN	**Inchon**	77.73	315	P		**P**		**09 53 08.4**	**+0.4**
INCN				S		**S**		**10 03 05.4**	**+7.2**
INCN	**Inchon**	77.73	315	P		**P**		**09 53 05.6**	**-2.4**
INCN	comp=Z,333nm,1.8s			pmax		pmax			
KSM	**Kuching**	77.74	275	P		**P**		**09 53 05.5**	**-3.1**
PGC	**Sidney**	77.76	31	P		**P**		**09 53 06.5**	**-1.3**
PGC	comp=Z,69nm,0.7s			IAmb		IAmb		09 53 10.2	
K13K	**Kusilvak Mount** baz=188	77.80	4	P		**P**		**09 53 08.0**	**+0.2**
L15K	**Ungalak Mounta** baz=191,SNR=20	77.80	6	P		**P**		**09 53 08.3**	**+0.6**
N19K	**Bonanza Creek** comp=Z,156nm,1.6s	77.81	9	IAmb		IAmb		09 53 23.3	
N19K	comp=Z,5μm,22.0s			IAMs_20		IAMs_20		10 19 54.6	
N19K	**Bonanza Creek** baz=198	77.81	9	P		**P**		**09 53 08.2**	**+0.2**
F07A	**Phinny Hill Vi** comp=Z,47nm,0.8s	77.83	35	IAmb		IAmb		09 53 10.7	
HPIG	comp=Z,84nm,1.4s	77.84	57	IAmb		IAmb		09 53 25.3	
BBJI	**Bungbulang**	77.92	266	P		**P**		**09 53 09.1**	**-0.6**
M17K	**Holitna River** comp=Z,4μm,21.0s	77.97	8	IAMs_20		IAMs_20		10 21 04.7	
M17K	**Holitna River** baz=195,SNR=8.2	77.97	8	P		**P**		**09 53 09.5**	**+0.8**
G08A	**Pilot Rock** comp=Z,96nm,0.9s	78.00	36	IAmb		IAmb		09 53 12.8	
SEW	**Seward** comp=Z,185nm,1.8s	78.02	12	IAmb		IAmb		09 53 27.1	
SEW	comp=Z,6μm,22.0s			IAMs_20		IAMs_20		10 19 41.2	
SEW	**Seward** baz=203	78.02	12	P		**P**		**09 53 09.3**	**+0.3**
L16K	**Owhat River** comp=Z,4μm,21.0s	78.03	6	IAMs_20		IAMs_20		10 21 08.3	
L16K	**Owhat River** baz=193	78.03	6	P		**P**		**09 53 10.1**	**+1.0**
USRK	**Ussuriysk Ar.** comp=Z,38nm,1.0s,baz=127,slow=3.7,SNR=18 comp=Z,38nm,1.0s	78.05	323	P		**P**		**09 53 09.1**	**-0.4**
BBB	**Bella Bella** comp=Z,2μm,21.9s,baz=238,slow=30	78.06	26	LR		LR		10 19 36.3	
BBB	**Bella Bella**	78.06	26	⇓P		**P**		**09 53 11.2**	**+1.8**
Q23K	**Middleton Isla** baz=206	78.06	13	P		**P**		**09 53 09.6**	**+0.4**
MID	**Middleton Isla** comp=Z,5μm,22.0s	78.06	13	IAMs_20		IAMs_20		10 20 27.2	
LEM	**Lembang** comp=Z,2μm,20.5s,baz=155,slow=36	78.11	266	LR		LR		10 28 03.1	
QZH	**Quanzhou**	78.12	300	P		**P**		**09 53 10.2**	**-0.2**
QZH				S		**S**		**10 03 02.0**	**-0.8**
QZH	comp=Z,2μm,32.6s			LR		LR			
SLKM	**Skilak Lake** comp=Z,87nm,1.1s	78.25	11	IAmb		IAmb		09 53 25.9	
SLKM	comp=Z,5μm,21.0s			IAMs_20		IAMs_20		10 20 37.2	
TCRU	**Three Creeks R** comp=Z,72nm,0.9s	78.25	44	IAmb		IAmb		09 53 15.2	
M18K	**Stony River** baz=197	78.27	8	P		**P**		**09 53 10.3**	**0.0**
E07A	**Sunnyside** comp=Z,100nm,0.9s	78.28	34	IAmb		IAmb		09 53 14.2	
LTY	**Liberty** comp=Z,103nm,1.5s	78.28	33	IAmb		IAmb		09 53 37.0	
O22K	**Cooper Landing** comp=Z,5μm,21.0s	78.32	11	IAMs_20		IAMs_20		10 20 26.0	
O22K	**Cooper Landing** baz=203	78.32	11	P		**P**		**09 53 11.3**	**+0.6**
CAPN	**Captain Cook N** baz=201	78.32	11	P		**P**		**09 53 11.2**	**+0.5**
P23K	**Montague Islan** baz=205	78.34	13	P		**P**		**09 53 11.5**	**+0.7**
HAWA	**Hanford** comp=Z,57nm,0.8s	78.35	35	IAmb		IAmb		09 53 13.7	
HAWA	comp=Z,5μm,20.0s			IAMs_20		IAMs_20		10 20 30.6	
HAWA	**Hanford**	78.35	35	⇓P		**P**		**09 53 12.6**	**+1.4**
K15K	**Wolf Creek Mou** baz=191	78.40	5	P		**P**		**09 53 12.3**	**+1.2**
YPT	**Yellepit** comp=Z,127nm,1.7s	78.45	35	IAmb		IAmb		09 53 14.7	
CNJI	**Cibinong** comp=Z,72nm,1.1s	78.46	266	P		**P**		**09 53 11.4**	**-1.2**
N20K	**Mount Spurr** baz=200	78.54	10	P		**P**		**09 53 11.7**	**-0.3**
SPCR	**Spurr Chakacha** baz=200	78.54	10	P		**P**		**09 53 12.0**	**-0.1**
CRAG	**Craig**	78.56	22	P		**P**		**09 53 13.5**	**+1.4**
CRAG	**Craig** baz=219	78.56	22	P		**P**		**09 53 12.0**	**-0.1**
L17K	**Donlin** baz=194,SNR=18	78.58	7	P		**P**		**09 53 12.9**	**+0.9**
SSE	**Sheshan**	78.64	307	P		**P**		**09 53 13.0**	**-0.1**
SSE				S		**S**		**10 03 10.8**	**+2.7**
SSE	comp=Z,13nm,0.7s			pmax		pmax			
SSE	comp=Z,280nm,7.8s			pmax		pmax			
SSE	comp=Z,360nm,23.5s			LR		LR			
SSE	comp=Z,260nm,23.7s			LR		LR			
E08A	**Dider Farm, El** comp=Z,224nm,1.8s	78.67	35	IAmb		IAmb		09 53 29.3	
BMO	**Blue Mountains** comp=Z,4μm,20.0s	78.67	37	IAMs_20		IAMs_20		10 21 00.2	
BMO	**Blue Mountains**	78.67	37	⇓P		**P**		**09 53 13.9**	**+0.7**
BMO	**Blue Mountains**	78.67	37	⇓P		**P**		**09 53 13.9**	**+0.7**
J14K	**Nanvaranak Lak** baz=189	78.68	4	P		**P**		**09 53 13.8**	**+1.2**
MFID	**Camas Ranch** comp=Z,5μm,22.0s	78.71	39	IAMs_20		IAMs_20		10 20 07.3	
FIS	**Fire Island** comp=Z,5μm,22.0s	78.84	11	IAMs_20		IAMs_20		10 20 35.8	
DUG	**Dugway, Tooele** comp=Z,6μm,21.0s	78.84	43	IAMs_20		IAMs_20		10 20 31.8	
DUG	**Dugway, Tooele**	78.84	43	P		**P**		**09 53 15.3**	**+1.0**
DUG	comp=Z,51nm,1.0s			pmax		pmax			
DUG	**Dugway, Tooele**	78.84	43	⇓P		**P**		**09 53 15.1**	**+0.9**
L18K	**Granite Mounta** comp=Z,4μm,22.0s	78.85	8	IAMs_20		IAMs_20		10 20 49.1	
L18K	**Granite Mounta** baz=196	78.85	8	P		**P**		**09 53 13.9**	**+0.3**
M19K	**Big River Lodg** comp=Z,4μm,22.0s	78.87	9	IAMs_20		IAMs_20		10 20 39.4	
M19K	**Big River Lodg** baz=198	78.87	9	P		**P**		**09 53 13.6**	**-0.1**
RC01	**Rabbit Creek A** comp=Z,4μm,22.0s	78.88	11	IAMs_20		IAMs_20		10 20 54.8	
RC01	**Rabbit Creek A** baz=203	78.88	11	P		**P**		**09 53 13.6**	**-0.2**
PWL	**Port Wells** comp=Z,181nm,1.6s	78.94	12	IAmb		IAmb		09 53 29.5	
PWL	comp=Z,5μm,20.0s			IAMs_20		IAMs_20		10 21 01.4	
PWL	**Port Wells** baz=204,SNR=7.6	78.94	12	P		**P**		**09 53 14.1**	**0.0**
KAIM	**Kayak Island** comp=Z,6μm,21.0s	78.95	14	IAMs_20		IAMs_20		10 20 42.7	
KAIM	**Kayak Island** baz=208,SNR=7.4	78.95	14	P		**P**		**09 53 14.7**	**+0.5**
DBJI	**Dramaga** comp=Z,173nm,1.0s	79.02	266	P		**P**		**09 53 15.3**	**-0.4**
M20K	**Styx River** comp=Z,162nm,1.9s	79.04	9	IAmb		IAmb		09 53 28.8	
M20K	comp=Z,5μm,22.0s			IAMs_20		IAMs_20		10 20 56.0	
M20K	**Styx River** baz=199	79.04	9	P		**P**		**09 53 14.6**	**-0.2**
SUA	**Susitna One** baz=202,SNR=8.4	79.04	11	P		**P**		**09 53 14.8**	**0.0**
L19K	**White Mountain** baz=198	79.06	8	P		**P**		**09 53 14.8**	**0.0**
U33K	**Whale Pass** comp=Z,50nm,0.7s	79.07	21	IAmb		IAmb		09 53 17.4	
U33K	comp=Z,4μm,21.0s			IAMs_20		IAMs_20		10 20 34.0	
U33K	**Whale Pass** baz=219,SNR=10.0	79.07	21	P		**P**		**09 53 15.5**	**+0.7**
SIT	**Sitka** baz=217	79.07	20	P		**P**		**09 53 15.2**	**+0.4**
HMU	**Henry Mountain** comp=Z,260nm,1.8s	79.07	45	IAmb		IAmb		09 53 32.7	
D08A	**Wollman Farm,** comp=Z,86nm,0.9s	79.09	34	IAmb		IAmb		09 53 18.6	
TPI	**Tanjungpandan** comp=Z,4μmcomp=Z,1μmcomp=Z,59nm,1.0s	79.14	270	P		**P**		**09 53 16.4**	**+0.1**
K17K	**Iditarod** comp=Z,4μm,21.0s	79.14	7	IAMs_20		IAMs_20		10 21 51.7	
K17K	**Iditarod** baz=194	79.14	7	P		**P**		**09 53 16.1**	**+1.0**
EYAK	**Cordova Ski Ar**	79.20	13	P		**P**		**09 53 16.6**	**+1.1**
EYAK	**Cordova Ski Ar** baz=206	79.20	13	P		**P**		**09 53 15.7**	**+0.2**
GLI	**Glacier Island** comp=Z,74nm,0.7s	79.21	13	IAmb		IAmb		09 53 16.8	
GLI	comp=Z,6μm,21.0s			IAMs_20		IAMs_20		10 21 07.7	
GLI	**Glacier Island** baz=205,SNR=20	79.21	13	P		**P**		**09 53 15.7**	**+0.1**
FID	**Port Fidalgo** comp=Z,266nm,2.0s	79.22	13	IAmb		IAmb		09 53 31.1	
SUCK	**Suckling Hills** comp=Z,6μm,21.0s	79.23	14	IAMs_20		IAMs_20		10 20 52.1	
EPT	**El Paso** comp=Z,5μm,20.0s	79.25	53	IAMs_20		IAMs_20		10 21 42.1	
RAGM	**Ragged Mountai** comp=Z,132nm,1.6s	79.30	14	IAmb		IAmb		09 53 31.8	
HMT	**Hamilton** comp=Z,7μm,21.0s	79.35	14	IAMs_20		IAMs_20		10 20 56.2	
GAMB	**Gambell** baz=181	79.38	1	P		**P**		**09 53 17.8**	**+1.4**
F10A	**Beach Ranch, E** comp=Z,108nm,0.9s	79.38	36	IAmb		IAmb		09 53 19.6	
SKT	**Skwentna** comp=Z,150nm,1.7s	79.39	10	IAmb		IAmb		09 53 30.1	
SKT	comp=Z,7μm,22.0s			IAMs_20		IAMs_20		10 21 08.3	
SKT	**Skwentna** baz=201,SNR=8.6	79.39	10	P		**P**		**09 53 16.1**	**-0.4**
KNK	**Knik Glacier** comp=Z,39nm,0.6s	79.42	12	IAmb		IAmb		09 53 18.5	
KNK	comp=Z,5μm,22.0s			IAMs_20		IAMs_20		10 20 35.2	
KNK	**Knik Glacier** baz=204,SNR=16	79.42	12	P		**P**		**09 53 16.9**	**+0.1**
M22K	**Willow** comp=Z,98nm,1.0s	79.42	11	IAmb		IAmb		09 53 29.5	
M22K	**Willow** baz=202,SNR=7.4	79.42	11	P		**P**		**09 53 16.8**	**+0.1**
J16K	**Anvik River** comp=Z,91nm,0.8s	79.46	6	IAmb		IAmb		09 53 33.0	
J16K	**Anvik River** baz=192	79.46	6	P		**P**		**09 53 17.8**	**+0.9**
PMR	**Palmer** comp=Z,76nm,1.2s	79.46	11	IAmb		IAmb		09 53 32.3	
PMR	**Palmer**	79.46	11	P		**P**		**09 53 17.3**	**+0.4**
PMR	**Palmer** baz=203,SNR=15	79.46	11	P		**P**		**09 53 17.3**	**+0.4**
L20K	**Farewell, AK** baz=198,SNR=12	79.49	9	P		**P**		**09 53 17.2**	**+0.1**
S31K	**Pelican** comp=Z,5μm,22.0s	79.51	19	IAMs_20		IAMs_20		10 19 54.7	
S31K	**Pelican** baz=216,SNR=5.6	79.51	19	P		**P**		**09 53 17.4**	**+0.1**
BERG	**Berg Lake** comp=Z,109nm,1.5s	79.53	14	IAmb		IAmb		09 54 11.6	
BERG	comp=Z,6μm,20.0s			IAMs_20		IAMs_20		10 21 33.1	
SNH	**Sunshine Point** comp=Z,79nm,0.8s	79.55	15	IAmb		IAmb		09 53 19.9	
PLID	**Pearl Lake** comp=Z,7μm,22.0s	79.57	37	IAMs_20		IAMs_20		10 20 23.8	
WRAK	**Wrangell Islan** comp=Z,4μm,21.0s	79.58	22	IAMs_20		IAMs_20		10 21 00.5	
WRAK	**Wrangell Islan** baz=219	79.58	22	P		**P**		**09 53 17.9**	**+0.3**
S32K	**Killisnoo** comp=Z,4μm,22.0s	79.64	20	IAMs_20		IAMs_20		10 20 32.2	
S32K	**Killisnoo** baz=217	79.64	20	P		**P**		**09 53 18.1**	**+0.1**
HLID	**Hailey** comp=Z,67nm,0.9s	79.65	39	IAmb		IAmb		09 53 22.2	
HLID	comp=Z,5μm,22.0s			IAMs_20		IAMs_20		10 20 36.1	
GHO	**Glory Hole Cre** comp=Z,54nm,0.6s	79.66	11	IAmb		IAmb		09 53 19.6	
B08A	**Colville Reser** comp=Z,49nm,0.8s	79.67	33	IAmb		IAmb		09 53 20.1	
T33K	**Petersburg** baz=219	79.67	21	P		**P**		**09 53 18.5**	**+0.3**
MDJ	**Mudanjiang**	79.69	322	P		**P**		**09 53 19.4**	**+0.8**
MDJ				S		**S**		**10 03 22.5**	**+3.7**
MDJ				SS		**SS**		**10 08 33.8**	**+5.5**
MDJ	comp=Z,46nm,1.3s			pmax		pmax			
MDJ	comp=Z,630nm,8.2s			LR		LR			
MDJ	comp=Z,1μm,22.7s			LR		LR			
MDJ	comp=Z,2μm,20.6s			LR		LR			
MDJ	comp=Z,4μm,21.3s			LR		LR			
HVU	**Hansel Valley** comp=Z,44nm,0.7s	79.70	41	IAmb		IAmb		09 53 21.6	
DIV	**Divide** comp=Z,80nm,0.7s	79.72	13	IAmb		IAmb		09 53 19.9	
DIV	comp=Z,7μm,22.0s			IAMs_20		IAMs_20		10 20 49.9	
J17K	**VABM Dome** comp=Z,4μm,21.0s	79.72	6	IAMs_20		IAMs_20		10 21 59.0	
J17K	**VABM Dome** baz=194	79.72	6	P		**P**		**09 53 18.9**	**+0.6**
MESA	**MESA** comp=Z,92nm,0.7s	79.77	15	IAmb		IAmb		09 53 21.0	
MESA	**MESA** baz=210,SNR=20	79.77	15	P		**P**		**09 53 19.7**	**+0.8**
WAX	**Waxell Ridge** comp=Z,79nm,0.7s	79.78	15	IAmb		IAmb		09 53 20.8	
GRNR	**Gornyy**	79.79	330	⇑P		**P**		**09 53 19.7**	**+0.7**
GRNR	comp=E,10.0nm,0.8s			pmax		pmax			
GRNR	comp=Z,40nm,0.9s			pmax		pmax			
SRU	**San Rafael Swe** comp=Z,74nm,1.0s	79.80	44	IAmb		IAmb		09 53 23.6	
SML	**Sawmill** comp=Z,5μm,22.0s	79.81	12	IAMs_20		IAMs_20		10 21 10.4	
SML	**Sawmill** baz=204	79.81	12	P		**P**		**09 53 19.3**	**+0.4**
BMRM	**Bremner River** comp=Z,5μm,22.0s	79.83	14	IAMs_20		IAMs_20		10 20 30.0	
BMRM	**Bremner River** baz=208,SNR=22	79.83	14	P		**P**		**09 53 19.3**	**+0.2**
P17A	**Butcher Ranch,** comp=Z,85nm,1.0s	79.84	44	IAmb		IAmb		09 53 24.1	
Y22A	**Socorro** comp=Z,100nm,1.5s	79.87	50	IAmb		IAmb		09 53 37.8	
C09A	**Chrisman Ranch** comp=Z,66nm,0.8s	79.89	34	IAmb		IAmb		09 53 21.7	
M23K	**Glacier View** baz=204,SNR=7.5	79.91	12	P		**P**		**09 53 19.6**	**+0.2**
YAH	**Yahtse** comp=Z,70nm,0.7s	79.98	15	IAmb		IAmb		09 53 22.1	
CRQM	**Cirque** comp=Z,44nm,0.7s	79.98	14	IAmb		IAmb		09 53 21.7	
CRQE	**Cirque** baz=209,SNR=19	79.99	14	P		**P**		**09 53 20.5**	**+0.5**
VHRN	**Van Horn** comp=Z,53nm,0.8s	80.00	54	IAmb		IAmb		09 53 23.8	
PNL	**Peninsula** baz=213,SNR=16	80.00	17	P		**P**		**09 53 20.7**	**+0.8**
CUT	**Chulitna** comp=Z,85nm,0.9s	80.00	10	IAmb		IAmb		09 53 43.0	
CUT	**Chulitna** baz=202,SNR=10	80.00	10	P		**P**		**09 53 20.0**	**+0.2**
KLU	**Klutina** comp=Z,207nm,1.9s	80.01	13	IAmb		IAmb		09 53 34.6	
KLU	comp=Z,6μm,21.0s			IAMs_20		IAMs_20		10 21 32.7	
KLU	**Klutina** baz=206,SNR=12	80.01	13	P		**P**		**09 53 20.5**	**+0.5**
SCM	**Sheep Creek Mo** comp=Z,68nm,0.6s	80.03	12	IAmb		IAmb		09 53 21.6	
SCM	comp=Z,5μm,22.0s			IAMs_20		IAMs_20		10 20 53.2	
SCM	**Sheep Creek Mo** baz=205,SNR=23	80.03	12	P		**P**		**09 53 20.5**	**+0.4**
R31K	**City Hall, Gus** baz=216	80.03	19	P		**P**		**09 53 20.8**	**+0.7**
U35K	**Hyder** comp=Z,5μm,21.0s	80.04	23	IAMs_20		IAMs_20		10 20 44.7	
U35K	**Hyder** baz=222	80.04	23	P		**P**		**09 53 20.5**	**+0.4**
I17K	**Unalakleet** baz=192	80.04	5	P		**P**		**09 53 20.3**	**+0.3**
J18K	**Innoko River** comp=Z,189nm,1.8s	80.05	7	IAmb		IAmb		09 53 35.5	
J18K	comp=Z,4μm,22.0s			IAMs_20		IAMs_20		10 21 25.8	
J18K	**Innoko River** baz=196	80.05	7	P		**P**		**09 53 20.6**	**+0.5**
MNTX	**Cornudas Mount** comp=Z,210nm,1.9s	80.08	53	IAmb		IAmb		09 53 37.6	
MNTX	comp=Z,5μm,21.0s			IAMs_20		IAMs_20		10 20 58.1	
PINM	**Pinnacle** baz=212,SNR=7.5	80.14	16	P		**P**		**09 53 20.7**	**-0.1**
PPLA	**Purkeypile** comp=Z,5μm,22.0s	80.14	9	IAMs_20		IAMs_20		10 21 20.2	
PPLA	**Purkeypile** baz=200	80.14	9	P		**P**		**09 53 21.1**	**+0.3**
BCPM	**Bancas Point** comp=Z,55nm,0.7s	80.18	16	IAmb		IAmb		09 53 22.8	
BCPM	comp=Z,6μm,21.0s			IAMs_20		IAMs_20		10 21 00.3	
TABL	**Table Mountain** comp=Z,54nm,0.7s	80.20	15	IAmb		IAmb		09 53 23.0	
TCUT	**Toone Canyon** comp=Z,112nm,0.8s	80.23	42	IAmb		IAmb		09 53 25.4	
P18A	**Preston Nutter** comp=Z,76nm,1.2s	80.25	44	IAmb		IAmb		09 53 41.1	
PV05	**Paradox Valley** comp=Z,129nm,1.2s	80.27	46	IAmb		IAmb		09 53 39.2	
MVCO	**Mesa Verde** comp=Z,6μm,22.0s	80.27	47	IAMs_20		IAMs_20		10 20 24.9	
K20K	**Telida** baz=198	80.30	8	P		**P**		**09 53 21.6**	**+0.1**
R32K	**Eaglecrest** comp=Z,4μm,21.0s	80.30	19	IAMs_20		IAMs_20		10 21 02.7	
R32K	**Eaglecrest** baz=217,SNR=7.2	80.30	19	P		**P**		**09 53 22.0**	**+0.4**
VRDI	**Verde Repeater** comp=Z,90nm,1.4s	80.32	14	IAmb		IAmb		09 53 43.7	
VRDI	comp=Z,5μm,21.0s			IAMs_20		IAMs_20		10 21 59.0	
JIS	**Juneau Island**	80.35	19	P		**P**		**09 53 22.8**	**+1.0**
ANM	**Nome** baz=187	80.37	3	P		**P**		**09 53 21.9**	**+0.1**
N25K	**Chitina, Valde** comp=Z,52nm,0.7s	80.40	13	IAmb		IAmb		09 53 24.1	
N25K	comp=Z,6μm,22.0s			IAMs_20		IAMs_20		10 20 49.0	
N25K	**Chitina, Valde** baz=208,SNR=65	80.40	13	P		**P**		**09 53 22.4**	**+0.3**
GLB	**Gilahina Butte** comp=Z,247nm,2.0s	80.43	14	IAmb		IAmb		09 53 37.9	
GLB	comp=Z,4μm,22.0s			IAMs_20		IAMs_20		10 20 48.8	
P29M	**Windy Craggy** comp=Z,58nm,0.8s	80.43	17	IAmb		IAmb		09 53 24.6	
P29M	comp=Z,7μm,22.0s			IAMs_20		IAMs_20		10 20 35.0	
P29M	**Windy Craggy** baz=214,SNR=30	80.43	17	P		**P**		**09 53 23.0**	**+0.7**
TX31	**Lajitas Ar. Si** comp=Z,198nm,1.6s	80.44	56	IAmb		IAmb		09 53 40.0	
TXAR	**Lajitas Array** comp=Z,32nm,1.0s,baz=220,slow=4.9,SNR=114	80.44	56	P		**P**		**09 53 24.6**	**+1.4**
TXAR				PKKPbc		**PKKPbc**		**10 12 04.7**	**-0.8**
TXAR	comp=Z,1.0nm,0.9s,baz=43,slow=2.3,SNR=5.9			PKPPKP		**P'P'df**		**10 20 07.4**	**-0.6**
TXAR	comp=Z,1.0nm,1.1s,baz=146,slow=2.4,SNR=5.1 comp=Z,4μm,21.3s,baz=234,slow=30			LR		LR		10 21 00.4	
BESE	**Bessie Mountai** comp=Z,32nm,1.0s comp=Z,4μm,22.0s	80.44	19	IAMs_20		IAMs_20		10 20 22.3	
UNM	**Universidad Na** comp=Z,5μm,22.0s	80.45	67	IAMs_20		IAMs_20		10 20 06.6	
UNM	**Universidad Na**	80.45	67	P		**P**		**09 53 24.8**	**+1.2**
PV10	**Paradox Valley** comp=Z,122nm,0.9s	80.45	46	IAmb		IAmb		09 53 26.2	
PV19	**Morning Glory** comp=Z,130nm,1.1s	80.46	46	IAmb		IAmb		09 53 26.6	
PV17	**East Wray Mesa** comp=Z,61nm,0.9s	80.46	46	IAmb		IAmb		09 53 27.2	
PV14	**Lion Creek, Pa** comp=Z,76nm,0.9s	80.46	46	IAmb		IAmb		09 53 26.6	
PV18	**Skein Mesa, Pa** comp=Z,120nm,0.9s	80.48	46	IAmb		IAmb		09 53 27.2	
M24K	**Tolsona, Glenn**	80.51	12	IAmb		IAmb		09 53 42.6	

comp=Z,100nm,0.9s
M24K IAMs_20 IAMs_20 10 22 10.0
comp=Z,4μm,21.0s
M24K Tolsona, Glenn 80.51 12 P P 09 53 23.4 +0.7
baz=206,SNR=12
PV11 David Mesa, Pa 80.53 46 IAmb IAmb 09 53 28.3
comp=Z,72nm,0.9s
PV04 Paradox Valley 80.55 46 IAmb IAmb 09 53 27.1
comp=Z,107nm,1.2s
MCARA McCarthy VSAT 80.56 14 IAMs_20 IAMs_20 10 20 41.3
comp=Z,5μm,22.0s
MCARA McCarthy VSAT 80.56 14 P P 09 53 23.6 +0.7
baz=209,SNR=14
PV12 Saucer Basin, 80.59 46 IAmb IAmb 09 53 28.1
comp=Z,108nm,0.8s
CTG Chitna Glacier 80.60 15 P P 09 53 23.6 +0.3
baz=211,SNR=30
CTGM Chitina Glacie 80.60 15 IAmb IAmb 09 53 38.1
comp=Z,251nm,1.9s
BARN Barnard Glacie 80.61 15 IAmb IAmb 09 53 25.2
comp=Z,43nm,0.7s
BARN IAMs_20 IAMs_20 10 21 14.6
comp=Z,6μm,21.0s
WAT6 Susitna Watana 80.63 11 P P 09 53 23.7 +0.2
baz=204,SNR=24
H16K Elim 80.65 5 P P 09 53 24.5 +1.2
baz=190
PV01 Paradox Valley 80.66 46 IAmb IAmb 09 53 40.6
comp=Z,72nm,1.1s
PLBC Pleasant Camp 80.69 18 P P 09 53 24.5 +0.9
baz=215,SNR=23
TASM ASL Pad, Albuq 80.69 50 IAmb IAmb 09 53 41.2
comp=Z,185nm,1.8s
TASM ASL Pad, Albuq 80.69 50 IAmb IAmb 09 53 41.3
comp=Z,183nm,1.8s
TASM ASL Pad, Albuq 80.69 50 IAmb IAmb 09 53 41.3
comp=Z,200nm,1.9s
ABQ Albuquerque 80.70 50 IAmb IAmb 09 53 41.2
comp=Z,163nm,1.7s
ANMO Albuquerque 80.70 50 IAmb IAmb 09 53 41.2
comp=Z,157nm,1.7s
ANMO Albuquerque 80.70 50 IAMs_20 IAMs_20 10 20 39.3
comp=Z,4μm,22.0s
ANMO Albuquerque 80.70 50 LR LR 10 21 01.4
comp=Z,5μm,21.7s,baz=324,slow=30
ANMO Albuquerque 80.70 50 *i* **P P 09 53 25.9 +1.4**
ANMO pmax pmax
comp=Z,50nm,1.2s
ANMO Albuquerque 80.70 50 P P 09 53 25.6 +1.1
J19K Poorman 80.70 8 IAmb IAmb 09 53 39.3
comp=Z,83nm,1.3s
J19K IAMs_20 IAMs_20 10 22 17.9
comp=Z,4μm,21.0s
J19K Poorman 80.70 8 P P 09 53 24.0 +0.4
baz=197,SNR=8.9
WAT1 Susitna Watana 80.70 11 P P 09 53 23.7 0.0
baz=204
O28M Mount Upton 80.73 16 P P 09 53 24.5 +0.3
baz=212
MA2 Magadan 80.75 342 P P 09 53 23.8 -0.2
MA2 IAmb IAmb 09 53 25.3
comp=Z,47nm,0.7s
MA2 Magadan 80.75 342 LR LR 10 25 11.1
comp=Z,1μm,20.1s,baz=141,slow=33
MA2 Magadan 80.75 342 ⇓*i* **P P 09 53 24.2 +0.3**
MA2 pmax pmax
comp=Z,55nm,0.8s
MA2 Magadan 80.75 342 ⇓**P P 09 53 24.2 +0.3**
MA2 Magadan 80.75 342 P P 09 53 23.2 -0.7
comp=Z,86nm,0.8s
MA2 Magadan 80.75 342 P P 09 53 24.0 +0.1
T35M Bob Quinn 80.75 22 IAMs_20 IAMs_20 10 21 26.7
comp=Z,4μm,21.0s
T35M Bob Quinn 80.75 22 P P 09 53 24.6 +0.5
baz=221
O29M Mount Kennedy 80.76 17 IAmb IAmb 09 53 26.3
comp=Z,42nm,0.7s
O29M Mount Kennedy 80.76 17 P P 09 53 25.4 +1.2
baz=213
NEW Newport 80.79 34 IAMs_20 IAMs_20 10 20 49.0
comp=Z,5μm,22.0s
NEW Newport 80.79 34 LR LR 10 21 22.8
comp=Z,5μm,22.0s,baz=220,slow=30
NEW Newport 80.79 34 P P 09 53 25.1 +0.6
NEW pmax pmax
comp=Z,36nm,0.8s
NJ2 Nanjing 80.84 307 ⇑**P P 09 53 25.5 +0.4**
NJ2 S **S 10 03 31.8 +0.4**
NJ2 SKS **SKSac 10 03 40.7 -0.8**
NJ2 pmax pmax
comp=Z,43nm,1.2s
NJ2 pmax pmax
comp=Z,810nm,5.7s
NJ2 LR LR
comp=Z,690nm,18.5s
NJ2 LR LR
comp=Z,990nm,20.4s
NJ2 LR LR
comp=Z,2μm,20.3s
G15K Niukluk 80.88 4 P P 09 53 24.8 +0.3
baz=189
TRF Thorofare Moun 80.97 10 IAmb IAmb 09 53 26.6
comp=Z,51nm,0.7s
TRF Thorofare Moun 80.97 10 P P 09 53 25.0 -0.3
baz=202,SNR=50
HARP HAARP 80.98 13 P P 09 53 25.6 +0.4
baz=207,SNR=10
SKAG Skagway 81.00 18 P P 09 53 26.3 +1.0
baz=216,SNR=15
CHUM Lake Minchumin 81.06 9 P P 09 53 25.5 0.0
baz=200
P30M Million Dollar 81.06 17 P P 09 53 26.5 +0.8
baz=215
J20K Nowinta River 81.07 8 P P 09 53 25.9 +0.4
baz=198,SNR=24
H17K Granite Mounta 81.14 6 IAMs_20 IAMs_20 10 24 28.6
comp=Z,3μm,21.0s
H17K Granite Mounta 81.14 6 P P 09 53 26.5 +0.6
baz=193
DHY Denali Highway 81.15 11 IAmb IAmb 09 53 43.0
comp=Z,134nm,1.9s
DHY Denali Highway 81.15 11 P P 09 53 26.0 -0.2
baz=205,SNR=17
S34M Telegraph Cree 81.15 21 IAMs_20 IAMs_20 10 22 30.1
comp=Z,3μm,20.0s
S34M Telegraph Cree 81.15 21 P P 09 53 26.1 0.0
baz=220,SNR=21
SMAI San Martin Ant 81.16 159 P P 09 53 27.1 +0.9
RND Reindeer 81.18 11 IAmb IAmb 09 53 45.7
comp=Z,75nm,1.1s
F14K Arctic Creek 81.23 3 P P 09 53 26.1 -0.3
baz=186
TNA Tin City 81.25 2 P P 09 53 26.5 +0.1
baz=185
GCSA Galena City Sc 81.27 7 P P 09 53 27.0 +0.4
baz=196,SNR=7.3
YUK8 Steele Glacier 81.27 15 P P 09 53 27.3 +0.2
baz=212,SNR=27
AHID Auburn Hatcher 81.28 41 IAmb IAmb 09 53 43.8
comp=Z,213nm,1.9s
AHID IAMs_20 IAMs_20 10 21 58.2
comp=Z,5μm,21.0s
YUK6 Outpost Mounta 81.36 16 P P 09 53 27.9 +0.5
baz=213,SNR=10.0
G16K Koyuk River 81.39 4 IAmb IAmb 09 53 42.8
comp=Z,172nm,1.9s
G16K Koyuk River 81.39 4 P P 09 53 27.8 +0.6
baz=190
PAX Paxson 81.43 12 IAmb IAmb 09 53 41.9
comp=Z,195nm,2.0s
PAX IAMs_20 IAMs_20 10 21 48.3
comp=Z,6μm,22.0s
PAX Paxson 81.43 12 P P 09 53 27.7 +0.1
baz=207,SNR=13
KASI Kota Agung 81.45 267 P P 09 53 27.4 -1.3
M26K Nabesna, AK 81.46 14 IAmb IAmb 09 53 43.7
comp=Z,146nm,1.5s
M26K IAMs_20 IAMs_20 10 21 58.1
comp=Z,4μm,22.0s
M26K Nabesna, AK 81.46 14 P P 09 53 28.3 +0.5
baz=209,SNR=40
BPAW Bear Paw Mtn. 81.47 10 IAMs_20 IAMs_20 10 22 13.2
comp=Z,5μm,22.0s
BPAW Bear Paw Mtn. 81.47 10 P P 09 53 27.9 +0.2
baz=201
MCK McKinley 81.47 11 IAmb IAmb 09 53 29.1
comp=Z,78nm,0.8s
MCK McKinley 81.47 11 P P 09 53 27.8 +0.1
baz=203,SNR=60
HYT Haines Junctio 81.49 17 P P 09 53 28.6 +0.6
baz=214,SNR=33
H18K Honhosa River 81.51 6 IAMs_20 IAMs_20 10 23 26.2
comp=Z,4μm,21.0s
H18K Honhosa River 81.51 6 P P 09 53 28.8 +0.9
baz=194
YUK3 Moose Creek 81.52 15 P P 09 53 28.5 +0.2
baz=211,SNR=32
F15K North Star Dit 81.55 3 P P 09 53 28.7 +0.6
baz=188
Q32M Nakina River 81.57 20 IAmb IAmb 09 53 45.1
comp=Z,98nm,1.7s
Q32M IAMs_20 IAMs_20 10 21 32.2
comp=Z,4μm,22.0s
Q32M Nakina River 81.57 20 P P 09 53 28.8 +0.2
baz=219
BNX BinXian 81.60 322 ⇑**P P 09 53 28.7 -0.1**
BNX pP **PcP 09 53 32.6 -2.0**
BNX PP **PP 09 56 35.9 0.0**
BNX S **SKSac 10 03 42.0 -4.1**
BNX sS **SKKSac 10 03 49.9 +0.8**
BNX SS **SS 10 09 03.4 +6.6**
BNX pmax pmax
comp=Z,140nm,0.8s
BNX pmax pmax
comp=Z,1μm,3.6s
BNX LR LR
comp=Z,1μm,23.3s
BNX LR LR
comp=Z,1μm,24.4s
BNX LR LR
comp=Z,2μm,19.5s
P32M Atlin 81.60 19 IAMs_20 IAMs_20 10 22 35.0
comp=Z,4μm,22.0s
P32M Atlin 81.60 19 P P 09 53 29.2 +0.7
baz=218
YUK4 Talbit Arm 81.62 16 P P 09 53 30.0 +1.2
baz=213,SNR=22
I20K Naaghedeneel 81.62 8 IAMs_20 IAMs_20 10 21 50.2
comp=Z,4μm,22.0s
I20K Naaghedeneel 81.62 8 P P 09 53 29.4 +1.0
baz=198
G17K Kiwalik Mounta 81.63 5 P P 09 53 29.3 +0.8
baz=192
M27K Edge Creek, AK 81.68 14 IAmb IAmb 09 53 45.3
comp=Z,120nm,1.3s
M27K IAMs_20 IAMs_20 10 23 03.9
comp=Z,4μm,20.0s
M27K Edge Creek, AK 81.68 14 P P 09 53 29.2 +0.2
baz=210
S22A 4UR Ranch, Cre 81.70 47 IAmb IAmb 09 53 33.7
comp=Z,58nm,0.9s
S22A IAMs_20 IAMs_20 10 21 22.6
comp=Z,6μm,22.0s
DLMT Dillon 81.72 38 IAmb IAmb 09 53 46.1
comp=Z,185nm,1.5s
DLMT IAMs_20 IAMs_20 10 22 05.8
comp=Z,7μm,22.0s
MSO Missoula 81.73 36 IAmb IAmb 09 53 32.9
comp=Z,72nm,1.1s
MSO IAMs_20 IAMs_20 10 22 24.1
comp=Z,7μm,22.0s
TPAW Teton Pass 81.74 40 IAmb IAmb 09 53 46.5
comp=Z,198nm,1.8s
TPAW IAMs_20 IAMs_20 10 23 26.4
comp=Z,3μm,20.0s
CN2 Changchun 81.76 320 P P 09 53 30.2 +0.5
CN2 pP PcP 09 53 34.4 -0.9
CN2 S **SKSac 10 03 42.3 -5.0**
CN2 pmax pmax
comp=Z,80nm,0.9s
CN2 pmax pmax
comp=Z,800nm,4.0s
CN2 LR LR
comp=Z,500nm,21.0s
CN2 LR LR
comp=Z,1μm,21.0s
CN2 LR LR
comp=Z,1μm,22.0s
FXWY Fox Creek 81.77 40 IAmb IAmb 09 53 46.7
comp=Z,240nm,1.9s
FXWY IAMs_20 IAMs_20 10 22 05.3
comp=Z,4μm,22.0s
O20A White River Ci 81.84 44 IAmb IAmb 09 53 45.9
comp=Z,177nm,1.6s
O20A IAMs_20 IAMs_20 10 22 50.3
comp=Z,6μm,20.0s
O30N Mendenhall 81.84 17 IAMs_20 IAMs_20 10 21 19.3
comp=Z,6μm,22.0s
O30N Mendenhall 81.84 17 P P 09 53 30.7 +0.9
baz=216,SNR=18
SNOW Snow King Moun 81.85 41 IAmb IAmb 09 53 47.1
comp=Z,189nm,1.6s
SNOW IAMs_20 IAMs_20 10 23 28.4
comp=Z,4μm,20.0s
DL2 Dalian 81.86 314 P P 09 53 29.6 -0.7
DL2 S **SKSac 10 03 43.3 -4.9**
DL2 pmax pmax
comp=Z,76nm,1.6s
DL2 pmax pmax
comp=Z,1μm,6.9s
DL2 LR LR
comp=Z,740nm,18.9s
DL2 LR LR
comp=Z,980nm,23.1s
DL2 LR LR
comp=Z,1μm,20.6s
L26K Log Cabin Wild 81.93 13 IAmb IAmb 09 53 46.6
comp=Z,162nm,2.0s
L26K IAMs_20 IAMs_20 10 22 43.5
comp=Z,6μm,21.0s
L26K Log Cabin Wild 81.93 13 P P 09 53 31.0 +0.8
baz=209,SNR=20
DLBC Dease Lake 81.93 21 LR LR 10 23 16.2
comp=Z,3μm,20.4s,baz=202,slow=31
DLBC Dease Lake 81.93 21 P P 09 53 31.5 +1.1
baz=221,SNR=8.9
SNY Shenyang 81.95 317 ⇓**P P 09 53 31.2 +0.5**
SNY S **SKSac 10 03 47.0 -1.6**
SNY SS **SS 10 09 07.4 +5.3**
SNY pmax pmax
comp=Z,36nm,1.4s
SNY pmax pmax
comp=Z,650nm,3.5s
SNY LR LR
comp=Z,450nm,18.0s
SNY LR LR
comp=Z,380nm,16.1s
SNY LR LR
comp=Z,690nm,21.6s
BVCY Beaver Creek 81.97 14 P P 09 53 30.9 +0.5
baz=211
LWLI Iwa 82.00 267 P P 09 53 31.3 -0.5
MOOW Moose Ponds 82.00 40 IAmb IAmb 09 53 47.8
comp=Z,143nm,1.8s
MOOW IAMs_20 IAMs_20 10 21 38.4
comp=Z,5μm,22.0s
LOHW Long Hollow 82.02 40 IAmb IAmb 09 53 57.9
comp=Z,135nm,1.9s
LOHW IAMs_20 IAMs_20 10 21 38.9
comp=Z,4μm,22.0s
MDSI Maura Dua 82.02 268 P P 09 53 29.8 -2.0
comp=Z,2μmcomp=Z,52nm,0.8s
H19K Roundabout Mou 82.08 7 IAmb IAmb 09 53 46.5
comp=Z,119nm,1.4s
H19K IAMs_20 IAMs_20 10 23 54.3
comp=Z,4μm,21.0s
H19K Roundabout Mou 82.08 7 P P 09 53 31.9 +1.1
baz=196
WHY Whitehorse 82.10 18 P P 09 53 30.7 -0.5
WHY Whitehorse 82.10 18 P P 09 53 32.0 +0.8
baz=217,SNR=15
N30M Aishikik Lake 82.13 16 IAmb IAmb 09 53 47.5
comp=Z,161nm,2.0s
N30M IAMs_20 IAMs_20 10 22 23.9
comp=Z,5μm,21.0s
N30M Aishikik Lake 82.13 16 P P 09 53 32.0 +0.7
baz=215
G18K Tagagawik 82.20 6 IAMs_20 IAMs_20 10 25 10.6
comp=Z,3μm,20.0s
G18K Tagagawik 82.20 6 P P 09 53 32.2 +0.7
baz=194
FLWY Flagg Ranch 82.20 40 IAMs_20 IAMs_20 10 22 08.7
comp=Z,5μm,22.0s
H20K Anotleneega Mo 82.23 7 P P 09 53 32.7 +1.0
baz=197
NEA2 Nenana 82.24 10 IAmb IAmb 09 53 34.3
comp=Z,39nm,0.7s
NEA2 Nenana 82.24 10 P P 09 53 31.9 +0.2
baz=203,SNR=16
RIDG Independent Ri 82.25 12 IAMs_20 IAMs_20 10 22 45.9
comp=Z,6μm,21.0s
RIDG Independent Ri 82.25 12 P P 09 53 32.1 +0.2
baz=207,SNR=5.8
PDAR Pinedale Array 82.26 42 P P 09 53 33.2 +0.6
comp=Z,32nm,0.8s,baz=215,slow=2.9,SNR=247
PDAR PKKPbc **PKKPbc 10 12 00.8 -1.5**
comp=Z,1.0nm,0.9s,baz=83,slow=4.7,SNR=6.0
PDAR PKPPKP **P'P'df 10 20 06.0 +2.5**
comp=Z,0.6nm,0.9s,baz=348,slow=0.8,SNR=2.1
PDAR LR LR 10 23 33.8
comp=Z,4μm,20.6s,baz=221,slow=31
comp=Z,32nm,0.8s
WRH Wood River Hil 82.30 11 IAmb IAmb 09 53 33.5
comp=Z,84nm,0.8s
WRH IAMs_20 IAMs_20 10 22 36.1
comp=Z,6μm,22.0s
L27K Beaver Creek, 82.30 14 IAmb IAmb 09 53 48.5
comp=Z,85nm,1.6s
L27K IAMs_20 IAMs_20 10 22 12.3
comp=Z,5μm,22.0s
L27K Beaver Creek, 82.30 14 P P 09 53 32.8 +0.6
baz=210
I21K Tanana 82.33 9 IAmb IAmb 09 53 46.9
comp=Z,129nm,1.7s
I21K Tanana 82.33 9 P P 09 53 32.8 +0.6
baz=200,SNR=8.9
DOT Dot Lake 82.33 13 IAMs_20 IAMs_20 10 22 26.0
comp=Z,5μm,21.0s
R33M Jennings River 82.34 20 IAmb IAmb 09 53 49.0
comp=Z,137nm,1.9s
R33M IAMs_20 IAMs_20 10 21 34.5
comp=Z,3μm,22.0s
R33M Jennings River 82.34 20 P P 09 53 33.1 +0.6
baz=220
P33M Teslin, Yukon 82.37 19 IAMs_20 IAMs_20 10 21 12.4
comp=Z,4μm,22.0s
P33M Teslin, Yukon 82.37 19 P P 09 53 33.5 +0.9
baz=219,SNR=8.7
MLY Manley 82.38 9 IAmb IAmb 09 53 33.8
comp=Z,44nm,0.7s
MLY Manley 82.38 9 P P 09 53 32.4 -0.1
baz=201,SNR=14
BOZ Bozeman (W) 82.42 38 IAMs_20 IAMs_20 10 23 11.4
comp=Z,6μm,21.0s
BOZ Bozeman (W) 82.42 38 ⇓**P P 09 53 34.4 +1.1**
HDA Harding Lake 82.44 11 IAmb IAmb 09 53 34.5
comp=Z,64nm,0.8s
HDA Harding Lake 82.44 11 P P 09 53 32.9 0.0
baz=205,SNR=60
ODSA Odessa 82.45 54 IAmb IAmb 09 53 36.6
comp=Z,85nm,1.0s
CCB Clear Creek Bu 82.51 11 IAMs_20 IAMs_20 10 22 41.7
comp=Z,6μm,22.0s
F17K Baldwin Pennin 82.51 5 P P 09 53 33.9 +0.8
baz=191
N31M Braeburn, Yuko 82.51 17 IAmb IAmb 09 53 49.6
comp=Z,132nm,1.6s
N31M IAMs_20 IAMs_20 10 21 40.0
comp=Z,6μm,22.0s
N31M Braeburn, Yuko 82.51 17 P P 09 53 34.1 +0.8
baz=216,SNR=19
DLV Lat 82.55 285 IAmb IAmb 09 53 36.5
comp=Z,54nm,0.9s
M29M Somme Creek 82.59 15 P P 09 53 34.4 +0.6
baz=213
LKWY Lake 82.63 40 IAMs_20 IAMs_20 10 24 18.1
comp=Z,3μm,20.0s
SCRK Sand Creek 82.64 12 IAMs_20 IAMs_20 10 22 35.1
comp=Z,6μm,22.0s
SCRK Sand Creek 82.64 12 P P 09 53 34.3 +0.3
baz=208,SNR=51
SDCO Great Sand Dun 82.64 48 IAmb IAmb 09 53 51.2
comp=Z,137nm,1.8s
H21K Melozitna Rive 82.66 8 IAMs_20 IAMs_20 10 23 18.8
comp=Z,3μm,21.0s
H21K Melozitna Rive 82.66 8 P P 09 53 35.0 +1.1
baz=199,SNR=10
HAYD Hayden 82.68 44 IAMs_20 IAMs_20 10 22 34.6
comp=Z,3μm,22.0s
I23K Minto, Yukon-K 82.70 10 P P 09 53 34.3 +0.2
baz=203,SNR=16
DSRI Dabo 82.71 272 P P 09 53 35.3 0.0
comp=Z,4μmcomp=Z,1μmcomp=Z,46nm,1.4s
COLA College 82.71 10 P P 09 53 34.4 +0.3
COLA College 82.71 10 P P 09 53 34.1 0.0
COLA pmax pmax
comp=Z,139nm,0.8s
COLA College 82.71 10 P P 09 53 34.4 +0.3
baz=204
COLA College 82.71 10 P P 09 53 34.0 -0.1
ILAR Eielson Array 82.79 11 P P 09 53 34.5 0.0
comp=Z,26nm,0.6s,baz=226,slow=5.8,SNR=423
ILAR PP **PP 09 56 45.2 0.0**
comp=Z,3.7nm,1.0s,baz=218,slow=8.7,SNR=4.2
ILAR PKKPbc **PKKPbc 10 12 02.0 +0.1**
comp=Z,0.5nm,0.8s,baz=318,slow=2.6,SNR=5.0
ILAR PKPPKP **P'P'df 10 20 05.3 +5.2**
comp=Z,1.7nm,1.2s,baz=31,slow=2.2,SNR=4.9
ILAR LR LR 10 23 33.7
comp=Z,2μm,21.6s,baz=198,slow=31
comp=Z,26nm,0.6s
F18K Selawik 82.80 5 P P 09 53 35.2 +0.6
baz=193,SNR=5.7
LHSI Lahat 82.83 268 P P 09 53 36.6 +0.6
comp=Z,4μmcomp=Z,61nm,1.3s
DRIO Del Rio 82.91 57 IAmb IAmb 09 53 55.6
comp=Z,54nm,1.0s
J25K Salcha River, 82.93 12 IAmb IAmb 09 53 37.0
comp=Z,44nm,0.7s
J25K Salcha River, 82.93 12 P P 09 53 35.6 +0.2
baz=207
POKR Poker Plat Res 83.00 11 IAmb IAmb 09 53 37.2
comp=Z,82nm,0.8s
POKR IAMs_20 IAMs_20 10 22 56.8
comp=Z,6μm,22.0s
POKR Poker Plat Res 83.00 11 P P 09 53 35.9 +0.2
baz=205,SNR=36
MSTX Muleshoe 83.03 52 IAMs_20 IAMs_20 10 22 53.1
comp=Z,5μm,20.0s
N32M Quiet Lake 83.03 18 IAMs_20 IAMs_20 10 22 17.7
comp=Z,4μm,22.0s
N32M Quiet Lake 83.03 18 P P 09 53 36.6 +0.6
baz=218,SNR=9.2
SEY Seymchan 83.08 345 LR LR 10 25 40.0
comp=Z,2μm,21.2s,baz=144,slow=32
SEY Seymchan 83.08 345 *e***P P 09 53 35.2 -0.9**
SEY pmax pmax
comp=Z,32nm,0.7s
OZNA Ozona 83.09 55 IAmb IAmb 09 53 54.2
comp=Z,69nm,1.4s
H22K Ishtalitna Cre 83.09 9 P P 09 53 36.5 +0.4
baz=201
K27K Chicken 83.09 13 IAmb IAmb 09 53 52.8
comp=Z,150nm,1.8s
K27K IAMs_20 IAMs_20 10 23 40.5
comp=Z,5μm,21.0s
K27K Chicken 83.09 13 P P 09 53 36.8 +0.7
baz=210
E17K Hotham Inlet 83.09 4 P P 09 53 36.9 +0.8
baz=191,SNR=9.2
YNE Yellowstone No 83.10 39 IAmb IAmb 09 53 42.7
comp=Z,59nm,1.0s
M30M Minto, Yukon 83.13 16 IAmb IAmb 09 53 51.2
comp=Z,153nm,1.9s
M30M Minto, Yukon 83.13 16 P P 09 53 36.6 +0.1
baz=215,SNR=32
T25A Trinidad 83.15 48 IAmb IAmb 09 53 53.7
comp=Z,105nm,1.4s
T25A IAMs_20 IAMs_20 10 23 03.2
comp=Z,4μm,22.0s
J26L Joseph Creek 83.19 12 IAMs_20 IAMs_20 10 23 02.7
comp=Z,6μm,22.0s
J26L Joseph Creek 83.19 12 P P 09 53 37.4 +0.6
baz=208
F19K Shaleruckik Mo 83.20 6 IAmb IAmb 09 53 39.7
comp=Z,40nm,0.7s
F19K Shaleruckik Mo 83.20 6 P P 09 53 37.3 +0.6
baz=195,SNR=24
L29M L29M 83.23 15 IAmb IAmb 09 53 39.2
comp=Z,66nm,0.8s
L29M L29M 83.23 15 P P 09 53 37.5 +0.6
baz=214
H23K Yukon River 83.30 9 IAmb IAmb 09 53 51.7
comp=Z,110nm,1.8s

H23K IAMs_20 IAMs_20 10 23 19.7
comp=Z,6µm,22.0s
H23K Yukon River 83.30 9 P P 09 53 37.5 +0.2
baz=202
G21K Allakaket 83.38 8 IAMs_20 IAMs_20 10 23 51.8
comp=Z,3µm,21.0s
G21K Allakaket 83.38 8 P P 09 53 38.3 +0.6
baz=199
ISCO Idaho Springs 83.47 46 IAmb IAmb 09 53 55.7
comp=Z,125nm,1.6s
ISCO IAMs_20 IAMs_20 10 24 16.6
comp=Z,3µm,20.0s
ISCO Idaho Springs 83.47 46 P P 09 53 40.4 +1.3
ISCO pmax pmax
comp=Z,44nm,1.9s
ISCO Idaho Springs 83.47 46 ⇓P P 09 53 40.3 +1.2
BELA Belgrano 2 83.48 172 P P 09 53 38.3 +0.1
BELA IAmb IAmb 09 53 40.0
comp=Z,95nm,0.9s
M31M Drury Creek, Y 83.48 17 IAmb IAmb 09 53 53.9
comp=Z,80nm,1.6s
M31M IAMs_20 IAMs_20 10 22 21.7
comp=Z,6µm,22.0s
M31M Drury Creek, Y 83.48 17 P P 09 53 38.5 +0.2
baz=217,SNR=12
833A Chaparral WMA, 83.50 58 IAmb IAmb 09 53 55.3
comp=Z,74nm,1.3s
E18K Tukpahlearik C 83.52 5 IAmb IAmb 09 53 41.2
comp=Z,51nm,0.8s
E18K Tukpahlearik C 83.52 5 P P 09 53 39.2 +0.9
baz=192,SNR=17
CMIG Matias Romero 83.55 70 LR LR 10 22 23.9
comp=Z,4µm,20.6s,baz=248,slow=30
QIZ Qiongzhong 83.55 292 P P 09 53 38.8 -0.7
QIZ S SKSac 10 03 59.9 -0.4
QIZ pmax pmax
comp=Z,1µm,5.7s
QIZ LR LR
comp=Z,580nm,19.2s
QIZ LR LR
comp=Z,980nm,24.7s
QIZ LR LR
comp=Z,2µm,23.4s
PMSA Palmer Station 83.56 156 IAmb IAmb 09 53 42.5
comp=Z,106nm,1.2s
PMSA Palmer Station 83.56 156 LR LR 10 25 34.1
comp=Z,802nm,18.3s,baz=248,slow=32
PMSA Palmer Station 83.56 156 P P 09 53 40.1 +1.4
H24K Noodor Dome 83.58 10 P P 09 53 38.1 -0.6
baz=204
WTLY Watson Lake, Y 83.61 21 IAmb IAmb 09 53 40.9
comp=Z,38nm,0.7s
WTLY Watson Lake, Y 83.61 21 P P 09 53 39.3 +0.3
baz=222,SNR=25
RLMT Red Lodge 83.61 40 IAMs_20 IAMs_20 10 22 44.6
comp=Z,4µm,22.0s
D17K Noatak River 83.62 4 P P 09 53 40.1 +1.3
baz=189,SNR=6.3
F20K Avaraart Lake 83.63 7 IAmb IAmb 09 53 55.4
comp=Z,74nm,1.6s
F20K IAMs_20 IAMs_20 10 23 27.3
comp=Z,4µm,22.0s
F20K Avaraart Lake 83.63 7 P P 09 53 39.6 +0.8
baz=197
DAWY Dawson 83.73 14 IAmb IAmb 09 53 41.6
comp=Z,45nm,0.7s
DAWY Dawson 83.73 14 P P 09 53 40.0 +0.5
baz=212,SNR=56
KSI Kapahiang 83.77 268 P P 09 53 40.4 -0.5
comp=Z,121nm,0.8s
WHN Wuhan 83.77 304 P P 09 53 40.2 -0.2
WHN S S 10 04 00.8 -0.7
WHN sS sS 10 04 17.4 -0.1
WHN LR LR
comp=Z,5µm,26.7s
E19K Redstone River 83.86 6 IAmb IAmb 09 53 55.6
comp=Z,70nm,1.1s
E19K Redstone River 83.86 6 P P 09 53 40.7 +0.6
baz=195
TIA Tai'an 83.89 310 P P 09 53 41.4 +0.5
TIA S S 10 04 02.3 -0.2
TIA pmax pmax
comp=Z,23nm,1.1s
TIA pmax pmax
comp=Z,1µm,5.9s
TIA LR LR
comp=Z,700nm,20.2s
TIA LR LR
comp=Z,1µm,22.8s
TIA LR LR
comp=Z,2µm,24.3s
TOAD Toad River Com 83.96 23 P P 09 53 41.1 +0.3
baz=226,SNR=102
JCT Junction City 83.97 56 IAMs_20 IAMs_20 10 24 13.2
comp=Z,3µm,20.0s
JCT Junction City 83.97 56 ⇓P P 09 53 41.9 +0.4
I26K Coal Creek Min 83.98 12 IAMs_20 IAMs_20 10 24 20.7
comp=Z,4µm,21.0s
I26K Coal Creek Min 83.98 12 P P 09 53 41.3 +0.6
baz=209
RDOG Red Dog Mine 83.98 4 IAmb IAmb 09 53 56.4
comp=Z,123nm,1.5s
RDOG Red Dog Mine 83.98 4 P P 09 53 41.9 +1.2
baz=190,SNR=7.9
K29M Barlow Dome 83.99 15 IAmb IAmb 09 53 57.5
comp=Z,93nm,1.2s
K29M Barlow Dome 83.99 15 P P 09 53 42.0 +1.0
baz=214
MYKOM Kota Tinggi 84.03 274 IAmb IAmb 09 53 44.5
comp=Z,60nm,1.1s
HNDO Hondo 84.03 57 IAmb IAmb 09 53 45.0
comp=Z,40nm,0.8s
LIRD Liard River Hi 84.03 22 P P 09 53 41.0 -0.1
baz=225,SNR=9.2
CNSH ChangSha 84.04 301 P P 09 53 42.8 +0.9
CNSH S S 10 04 05.6 +1.3
CNSH pmax pmax
comp=Z,32nm,0.8s
CNSH LR LR
comp=Z,880nm,27.6s
CNSH LR LR
comp=Z,1µm,22.8s
CNSH LR LR
comp=Z,1µm,24.5s
G23K Bananza Creek 84.05 9 IAmb IAmb 09 53 56.3
comp=Z,102nm,1.4s
G23K Bananza Creek 84.05 9 P P 09 53 41.5 +0.4
baz=202
F21K Alatna River 84.06 7 IAmb IAmb 09 53 56.4
comp=Z,169nm,1.8s
F21K IAMs_20 IAMs_20 10 23 50.7
comp=Z,3µm,22.0s
F21K Alatna River 84.06 7 P P 09 53 41.8 +0.7
baz=199,SNR=12
HEH HeiHe 84.06 326 eP P 09 53 41.2 -0.3
HEH pP PcP 09 53 45.0 -0.3
HEH SKS SKSac 10 04 00.6 -1.6
HEH S S 10 04 06.3 +2.7
HEH sS ScS 10 04 16.4 +0.6
HEH pmax pmax
comp=Z,32nm,0.9s
HEH pmax pmax
comp=Z,880nm,10.5s
HEH LR LR
comp=Z,830nm,20.3s
HEH LR LR
comp=Z,1µm,23.3s
HEH LR LR
comp=Z,980nm,23.0s
C16K Lisburne Hills 84.07 3 P P 09 53 41.9 +0.8
baz=187
RTBA Rita Blanca 84.07 50 IAmb IAmb 09 53 44.3
comp=Z,45nm,1.0s
MAYO Mayo, Yukon 84.20 16 IAmb IAmb 09 53 55.9
comp=Z,78nm,0.9s
MAYO Mayo, Yukon 84.20 16 P P 09 53 42.5 +0.6
baz=216,SNR=11
AMTX Amarillo 84.22 51 IAMs_20 IAMs_20 10 23 52.7
comp=Z,5µm,20.0s
MASI Maura Aman, Be 84.24 268 P P 09 53 43.7 +0.4
comp=Z,2µmcomp=Z,146nm,1.3s
H25L Birch Creek 84.33 11 P P 09 53 42.1 -0.3
baz=206,SNR=11
C17K DeLong Mountai 84.38 4 P P 09 53 43.7 +1.0
baz=189
G24K Hadweenzic Riv 84.44 10 IAmb IAmb 09 53 58.9
comp=Z,110nm,2.0s

G24K Hadweenzic Riv 84.44 10 P P 09 53 43.7 +0.7
baz=204
F22K John River 84.50 8 P P 09 53 44.3 +1.0
baz=200
COLD Coldfoot 84.51 9 IAmb IAmb 09 53 59.2
comp=Z,114nm,1.4s
COLD Coldfoot 84.51 9 P P 09 53 44.6 +1.3
baz=202,SNR=6.6
H03S2 Juan Fernandez 84.53 123 T T 11 27 52.1
baz=251,slow=75,SNR=39
H03S1 Juan Fernandez 84.54 123 T T 11 27 37.5
baz=251,slow=75,SNR=34
H03S3 Juan Fernandez 84.54 123 T T 11 27 33.2
baz=251,slow=75,SNR=14
I27K Kandik River 84.56 13 P P 09 53 44.5 +0.8
baz=210
H03N2 Juan Fernandez 84.63 123 T T 11 27 50.6
baz=256
H03N3 Juan Fernandez 84.63 123 T T 11 27 41.8
baz=256
H03N1 Juan Fernandez 84.64 123 T T 11 28 03.9
baz=256
C18K Utukok River 84.69 4 IAmb IAmb 09 53 59.4
comp=Z,185nm,2.0s
C18K Utukok River 84.69 4 P P 09 53 45.2 +0.9
baz=191
G25K Bearman Lake 84.73 10 P P 09 53 44.7 +0.3
baz=206
E20K Nigu River 84.74 6 P P 09 53 45.4 +0.8
baz=196
EGMT Eagleton 84.78 37 IAMs_20 IAMs_20 10 23 26.7
comp=Z,6µm,22.0s
I28M Miner Creek 84.78 13 IAmb IAmb 09 54 01.0
comp=Z,136nm,1.8s
I28M IAMs_20 IAMs_20 10 23 40.9
comp=Z,6µm,22.0s
I28M Miner Creek 84.78 13 P P 09 53 45.3 +0.4
baz=212
D19K Kuna River 84.78 5 IAmb IAmb 09 53 46.3
comp=Z,42nm,0.7s
D19K IAMs_20 IAMs_20 10 27 05.9
comp=Z,3µm,20.0s
D19K Kuna River 84.78 5 P P 09 53 45.3 +0.6
baz=194
J30M Hart River 84.89 15 IAmb IAmb 09 54 00.6
comp=Z,47nm,1.1s
J30M Hart River 84.89 15 P P 09 53 45.7 +0.2
baz=215,SNR=36
BRDY Brady 84.91 56 IAmb IAmb 09 54 12.3
comp=Z,54nm,1.4s
735A Kenedy 84.99 58 IAMs_20 IAMs_20 10 23 18.3
comp=Z,4µm,21.0s
BILL Bilibino 85.02 352 IAmb IAmb 09 53 47.7
comp=Z,60nm,1.1s
BILL IAMs_20 IAMs_20 10 24 10.2
comp=Z,5µm,22.0s
BILL Bilibino 85.02 352 ⇑iP P 09 53 45.9 0.0
BILL pmax pmax
comp=Z,60nm,1.1s
BILL Bilibino 85.02 352 P P 09 53 46.4 +0.5
H27K Steamboat Moun 85.12 12 IAMs_20 IAMs_20 10 24 46.8
comp=Z,4µm,21.0s
H27K Steamboat Moun 85.12 12 P P 09 53 47.0 +0.5
baz=210,SNR=12
F24K Squaw Lake 85.12 9 IAmb IAmb 09 54 03.3
comp=Z,94nm,1.4s
F24K Squaw Lake 85.12 9 P P 09 53 47.5 +1.0
baz=204
E22K Anaktuvuk Pass 85.14 8 IAmb IAmb 09 53 48.7
comp=Z,58nm,0.8s
E22K IAMs_20 IAMs_20 10 24 58.1
comp=Z,5µm,22.0s
E22K Anaktuvuk Pass 85.14 8 P P 09 53 47.3 +0.7
baz=200
D20K Etivluk River 85.14 6 IAMs_20 IAMs_20 10 26 47.2
comp=Z,3µm,20.0s
D20K Etivluk River 85.14 6 P P 09 53 47.2 +0.7
baz=196
E21K Killik River 85.16 7 IAmb IAmb 09 54 01.8
comp=Z,66nm,1.1s
E21K IAMs_20 IAMs_20 10 26 12.8
comp=Z,3µm,20.0s
E21K Killik River 85.16 7 P P 09 53 47.2 +0.5
baz=198
GULI GuiLin 85.17 298 P P 09 53 48.4 +0.7
GULI S SKSac 10 04 10.4 -0.1
GULI pmax pmax
comp=Z,27nm,1.0s
GULI pmax pmax
comp=Z,760nm,8.7s
GULI LR LR
comp=Z,410nm,21.1s
GULI LR LR
comp=Z,1µm,24.5s
GULI LR LR
comp=Z,840nm,25.1s
C19K Lookout Ridge 85.26 5 IAmb IAmb 09 53 49.0
comp=Z,61nm,0.8s
C19K IAMs_20 IAMs_20 10 24 57.3
comp=Z,4µm,22.0s
C19K Lookout Ridge 85.26 5 P P 09 53 48.0 +0.9
baz=193
KOTAN Kotaneelee Air 85.28 22 P P 09 53 47.9 +0.6
baz=227,SNR=16
G26K Porcupine Rive 85.31 11 P P 09 53 48.4 +1.0
baz=208
B18K Kokolik River 85.35 4 P P 09 53 48.7 +1.2
baz=191
E23K Chandalar 85.36 9 IAmb IAmb 09 54 03.3
comp=Z,46nm,1.0s
E23K Chandalar 85.36 9 P P 09 53 48.7 +0.9
baz=202
SMWD Samnorwood 85.39 52 IAmb IAmb 09 54 03.4
comp=Z,143nm,1.9s
I30M Mount Dempster 85.41 15 IAmb IAmb 09 54 04.0
comp=Z,70nm,0.9s
I30M IAMs_20 IAMs_20 10 24 09.6
comp=Z,6µm,22.0s
I30M Mount Dempster 85.41 15 P P 09 53 48.7 +0.5
baz=215
E24K Your Creek 85.55 9 IAMs_20 IAMs_20 10 24 42.0
comp=Z,5µm,22.0s
E24K Your Creek 85.55 9 P P 09 53 49.2 +0.6
baz=204
F25K Christian Rive 85.56 10 IAmb IAmb 09 54 26.1
comp=Z,153nm,1.9s
F25K Christian Rive 85.56 10 P P 09 53 49.6 +0.9
baz=206
G27K Doyon Strip 85.60 12 IAMs_20 IAMs_20 10 25 22.5
comp=Z,5µm,21.0s
G27K Doyon Strip 85.60 12 P P 09 53 49.6 +0.7
baz=210
D22K Ayikyak River 85.73 7 IAmb IAmb 09 54 05.2
comp=Z,61nm,0.8s
D22K IAMs_20 IAMs_20 10 24 44.9
comp=Z,4µm,22.0s
D22K Ayikyak River 85.73 7 P P 09 53 50.4 +0.9
baz=199,SNR=21
C21K Knifeblade Rid 85.75 6 P P 09 53 50.3 +0.7
baz=197,SNR=12
H29M Whitestone 85.78 13 IAMs_20 IAMs_20 10 24 10.3
comp=Z,6µm,22.0s
H29M Whitestone 85.78 13 P P 09 53 50.4 +0.6
baz=213
CCIG Comitan 85.80 72 IAmb IAmb 09 53 54.3
comp=Z,37nm,0.9s
435B Jarrell 85.86 57 IAmb IAmb 09 53 54.1
comp=Z,46nm,0.9s
F26K Sheenjek River 85.91 11 IAmb IAmb 09 54 06.4
comp=Z,48nm,1.0s
F26K IAMs_20 IAMs_20 10 24 35.6
comp=Z,5µm,22.0s
F26K Sheenjek River 85.91 11 P P 09 53 51.2 +0.8
baz=208
TOLK Toolik Lake Re 85.91 8 IAmb IAmb 09 54 05.8
comp=Z,51nm,1.1s
TOLK Toolik Lake Re 85.91 8 P P 09 53 50.9 +0.5
baz=202,SNR=16
E25K Arctic Village 86.05 10 IAmb IAmb 09 53 53.6
comp=Z,36nm,0.8s
E25K Arctic Village 86.05 10 P P 09 53 51.6 +0.5
baz=206,SNR=52
D23K Nanushuk River 86.06 8 IAmb IAmb 09 54 06.9
comp=Z,50nm,1.0s
D23K IAMs_20 IAMs_20 10 25 59.7
comp=Z,4µm,22.0s
D23K Nanushuk River 86.06 8 P P 09 53 51.7 +0.6
baz=201,SNR=12

ZEA Zeya 86.07 329 eP P 09 53 51.6 +0.2
ZEA eS SKSac 10 04 10.5 -4.3
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA pmax pmax
comp=N,200nm,4.3s
ZEA pmax pmax
comp=Z,300nm,4.0s
ZEA smax smax
comp=E,500nm,13.6s
ZEA smax smax
comp=N,800nm,7.4s
HNS HongShan 86.14 310 ⇑P P 09 53 53.0 +0.8
HNS SKS SKSac 10 04 16.0 0.0
HNS pmax pmax
comp=N,46nm,1.4s
HNS pmax pmax
comp=N,960nm,10.6s
HNS LR LR
comp=N,380nm,20.7s
HNS LR LR
comp=N,690nm,20.7s
HNS LR LR
comp=N,1µm,22.3s
BJT Baijiatuau 86.15 313 P P 09 53 50.6 -1.6
BJT IAmb IAmb 09 53 55.2
comp=Z,65nm,1.1s
BJT Baijiatuau 86.15 313 P P 09 53 50.6 -1.6
BJT pmax pmax
comp=Z,65nm,1.1s
BJI Beijing 86.15 313 P P 09 53 52.6 +0.5
BJI sP sP 09 54 07.2 +2.2
BJI PP PP 09 57 15.6 +2.4
BJI SKS SKSac 10 04 12.2 -3.7
BJI SS SS 10 10 06.2 +1.9
BJI pmax pmax
comp=Z,32nm,1.5s
BJI pmax pmax
comp=Z,520nm,4.4s
BJI LR LR
comp=Z,220nm,22.5s
BJI LR LR
comp=Z,260nm,22.9s
BJI LR LR
comp=Z,510nm,23.9s
B21K Ikpikpuk River 86.22 6 IAmb IAmb 09 54 12.3
comp=Z,132nm,1.9s
B21K IAMs_20 IAMs_20 10 27 20.8
comp=Z,4µm,21.0s
B21K Ikpikpuk River 86.22 6 P P 09 53 52.4 +0.6
baz=198
A19K Wainwright 86.23 4 P P 09 53 52.5 +0.6
baz=191
EPYK Eagle Plains 86.28 14 IAMs_20 IAMs_20 10 24 37.6
comp=Z,3µm,21.0s
EPYK Eagle Plains 86.28 14 P P 09 53 52.5 +0.2
baz=215,SNR=14
B20K Meade River 86.34 5 IAMs_20 IAMs_20 10 27 28.0
comp=Z,3µm,20.0s
B20K Meade River 86.34 5 P P 09 53 53.1 +0.7
baz=195
WMOK Wichita Mounta 86.37 53 IAMs_20 IAMs_20 10 25 09.5
comp=Z,4µm,20.0s
WMOK Wichita Mounta 86.37 53 P P 09 53 53.6 +0.2
WMOK pmax pmax
comp=Z,28nm,2.4s
ELIS Ellis County 86.38 51 IAmb IAmb 09 54 18.8
comp=Z,84nm,1.3s
H31M Peel River 86.39 15 IAmb IAmb 09 54 07.5
comp=Z,83nm,1.3s
H31M Peel River 86.39 15 P P 09 53 53.3 +0.5
baz=217
WHTX Lake Whitney, 86.39 55 IAmb IAmb 09 54 20.9
comp=Z,94nm,1.4s
WHTX IAMs_20 IAMs_20 10 24 28.5
comp=Z,5µm,21.0s
OGNE Ogallala 86.44 46 IAMs_20 IAMs_20 10 24 32.1
comp=Z,4µm,22.0s
G29M Pine Creek 86.44 13 IAmb IAmb 09 53 55.1
comp=Z,54nm,0.8s
G29M IAMs_20 IAMs_20 10 24 52.7
comp=Z,5µm,22.0s
G29M Pine Creek 86.44 13 P P 09 53 53.5 +0.5
baz=213
RSSD Black Hills 86.44 42 IAmb IAmb 09 53 56.8
comp=Z,39nm,1.1s
RSSD Black Hills 86.44 42 P P 09 53 53.9 +0.1
RSSD pmax pmax
comp=Z,19nm,1.0s
RSSD Black Hills 86.44 42 P P 09 53 53.7 -0.2
D24K Happy Valley 86.49 8 IAmb IAmb 09 54 12.6
comp=Z,78nm,1.6s
D24K Happy Valley 86.49 8 P P 09 53 54.1 +0.9
baz=203
PDSI Padang 86.55 270 P P 09 53 54.1 -0.7
comp=Z,4µmcomp=Z,55nm,0.8s
F28M Old Crow 86.65 12 IAmb IAmb 09 53 56.0
comp=Z,26nm,0.8s
F28M IAMs_20 IAMs_20 10 26 16.2
comp=Z,5µm,20.0s
F28M Old Crow 86.65 12 P P 09 53 54.5 +0.5
baz=212,SNR=36
PPI Padang Panjang 86.74 270 P P 09 53 56.3 +0.6
comp=Z,4µmcomp=Z,2µmcomp=Z,65nm,1.1s
LYN LuoYang 86.74 307 ⇑P P 09 53 55.6 +0.4
LYN SKS SKSac 10 04 19.9 0.0
LYN pmax pmax
comp=Z,84nm,0.8s
LYN pmax pmax
comp=Z,1µm,5.8s
LYN LR LR
comp=Z,1µm,16.8s
LYN LR LR
comp=Z,890nm,18.0s
LYN LR LR
comp=Z,2µm,17.2s
E27K Coleen River 86.81 11 IAmb IAmb 09 54 10.6
comp=Z,93nm,1.4s
E27K Coleen River 86.81 11 P P 09 53 55.6 +0.8
baz=210
C23K Itkillik River 86.89 8 IAMs_20 IAMs_20 10 26 48.6
comp=Z,6µm,21.0s
C23K Itkillik River 86.89 8 P P 09 53 55.7 +0.6
baz=201
G30M tAoh Zraii Nji 86.90 14 IAMs_20 IAMs_20 10 25 05.8
comp=Z,4µm,22.0s
G30M tAoh Zraii Nji 86.90 14 P P 09 53 55.6 +0.3
baz=215,SNR=28
APG El Apazote 86.95 74 LR LR 10 25 16.9
comp=Z,143nm,19.7s,baz=244,slow=30
HKT Hockley 86.98 58 IAMs_20 IAMs_20 10 24 22.2
comp=Z,4µm,22.0s
HKT Hockley 86.98 58 P P 09 53 57.4 +1.0
HKT pmax pmax
comp=Z,38nm,2.5s
D25K Kavik River 87.00 9 IAmb IAmb 09 54 10.5
comp=Z,110nm,1.9s
D25K Kavik River 87.00 9 P P 09 53 56.5 +0.7
baz=205
COCO West Island 87.02 258 P P 09 53 56.8 -0.2
COCO pmax pmax
comp=Z,69nm,1.0s
C24K Franklin Bluff 87.03 8 P P 09 53 56.6 +0.8
baz=203
B22K Teshekpuk Lake 87.03 6 P P 09 53 57.1 +1.3
baz=199
OK038 West end E0370 87.05 51 IAMs_20 IAMs_20 10 24 42.4
comp=Z,5µm,22.0s
LL02 Futaleuf 87.10 134 IAmb IAmb 09 54 01.2
comp=Z,32nm,1.0s
CBKS Cedar Bluff 87.20 48 IAmb IAmb 09 53 59.5
comp=Z,31nm,0.8s
CBKS IAMs_20 IAMs_20 10 26 29.5
comp=Z,3µm,20.0s
LOOK Love County 87.33 54 IAmb IAmb 09 54 33.8
comp=Z,86nm,1.4s
F30M Barrier River 87.51 13 IAMs_20 IAMs_20 10 25 47.0
comp=Z,3µm,20.0s
F30M Barrier River 87.51 13 P P 09 53 58.6 +0.4
baz=216,SNR=6.4
MAW Mawson 87.53 198 P P 09 53 59.6 +1.1
comp=Z,102nm,0.9s,baz=122,slow=5.8,SNR=177
MAW PKiKP PKiKP 09 59 03.2 +1.3
comp=Z,1.6nm,0.8s,baz=148,slow=4.4,SNR=2.3
MAW LR LR 10 29 15.7

comp=Z,3µm,21.8s,baz=118,slow=33
comp=Z,102nm,0.9s
E28M Babbage River 87.56 12 IAmb IAmb 09 54 34.2
comp=Z,70nm,1.9s
E28M IAMs_20 IAMs_20 10 28 24.3
comp=Z,3µm,20.0s
E28M Babbage River 87.56 12 P **P** **09 53 59.2 +0.8**
baz=212
ENH Enshi 87.59 302 P **P** **09 53 57.3 -2.2**
ENH IAmb IAmb 09 54 02.1
comp=Z,43nm,0.7s
FNO Franklin 87.61 52 IAmb IAmb 09 54 03.1
comp=Z,42nm,0.9s
WRGLY Wrigley 87.61 20 IAmb IAmb 09 54 03.1
comp=Z,33nm,0.9s
WRGLY Wrigley 87.61 20 P **P** **09 53 59.8 +1.0**
baz=227
OKCSW OKLAHOMA CITY 87.64 52 IAmb IAmb 09 54 01.7
comp=Z,51nm,0.7s
C27K Jago River 87.70 10 P **P** **09 53 59.8 +0.8**
baz=208,SNR=14
E29M Blow River 87.70 12 P **P** **09 53 59.9 +0.8**
baz=214
C26K Camden Bay 87.77 9 P **P** **09 54 00.2 +0.9**
baz=207
R32A Long Quarter, 87.80 49 IAMs_20 IAMs_20 10 25 50.2
comp=Z,4µm,21.0s
XLT XiLinHaoTe 87.80 317 *e*P **P** **09 53 59.1 -1.1**
XLT sP pP 09 54 07.6 -2.4
XLT PP **PP** **09 57 28.4 +1.8**
XLT SKS **SKSac** **10 04 22.8 -3.4**
XLT S **S** **10 04 41.1 +0.4**
XLT sS pS 10 04 53.0 -0.1
XLT SS **SS** **10 10 26.5 -2.0**
XLT pmax pmax
comp=Z,48nm,0.9s
XLT pmax pmax
comp=Z,650nm,4.3s
XLT LR LR
comp=Z,550nm,21.3s
XLT LR LR
comp=Z,1µm,22.5s
D27M Malcolm River 87.84 11 IAmb IAmb 09 54 36.9
comp=Z,68nm,1.8s
D27M Malcolm River 87.84 11 P **P** **09 54 00.6 +0.8**
baz=211
F31M Tsiigehtchic 87.84 14 IAMs_20 IAMs_20 10 25 00.7
comp=Z,5µm,22.0s
F31M Tsiigehtchic 87.84 14 P **P** **09 53 59.9 +0.2**
baz=217,SNR=22
MNSI Mandailing Nat 87.86 271 P **P** **09 54 02.3 +1.2**
comp=Z,63nm,1.1s
HIA Hailar 87.86 323 P **P** **09 53 58.8 -1.5**
HIA IAmb IAmb 09 54 03.0
comp=Z,79nm,1.4s
HIA Hailar 87.86 323 P **P** **09 53 58.8 -1.5**
HIA pmax pmax
comp=Z,79nm,1.4s
TIY Taiyuan 87.93 310 P **P** **09 54 01.7 +0.7**
TIY SKS **SKSac** **10 04 27.1 -0.1**
TIY S **S** **10 04 45.0 +2.8**
TIY pmax pmax
comp=Z,68nm,2.4s
TIY pmax pmax
comp=Z,880nm,4.3s
TIY LR LR
comp=Z,500nm,22.6s
TIY LR LR
comp=Z,650nm,27.3s
TIY LR LR
comp=Z,770nm,22.8s
LR05 Currie 87.95 131 IAmb IAmb 09 54 04.5
comp=Z,62nm,1.1s
HILR Hailar Array B 87.99 323 P **P** **09 54 01.6 +0.6**
comp=Z,35nm,0.8s,baz=127,slow=9.4,SNR=34
HILR LR LR 10 27 49.0
comp=Z,2µm,22.0s,baz=105,slow=32
comp=Z,35nm,0.8s
KULM Kulim 88.06 276 IAmb IAmb 09 54 05.0
comp=Z,96nm,1.4s
D28M Stokes Point 88.33 11 P **P** **09 54 02.4 +0.4**
baz=213
OK052 Battle Ridge R 88.33 52 IAMs_20 IAMs_20 10 26 23.4
comp=Z,5µm,22.0s
OK048 Pawnee Station 88.37 52 IAmb IAmb 09 54 17.9
comp=Z,64nm,1.6s
OK048 IAMs_20 IAMs_20 10 26 24.6
comp=Z,4µm,20.0s
OK051 E0350 and S346 88.48 51 IAMs_20 IAMs_20 10 28 05.5
comp=Z,4µm,20.0s
NATX Nacogdoches 88.54 57 IAMs_20 IAMs_20 10 27 35.5
comp=Z,4µm,21.0s
INK Inuvik 88.58 14 LR LR 10 26 31.2
comp=Z,3µm,21.9s,baz=200,slow=31
INK Inuvik 88.58 14 P **P** **09 54 03.7 +0.5**
INK pmax pmax
comp=Z,57nm,2.6s
INK Inuvik 88.58 14 P **P** **09 54 03.1 -0.1**
baz=218,SNR=7.8
GYA Guiyang 88.71 298 ⇑P **P** **09 54 05.8 +0.8**
GYA SKS **SKSac** **10 04 35.5 +3.1**
GYA S **S** **10 04 48.8 -1.3**
GYA SS **SS** **10 10 42.2 -0.3**
GYA pmax pmax
comp=Z,24nm,0.8s
GYA pmax pmax
comp=Z,930nm,3.6s
GYA LR LR
comp=Z,650nm,20.6s
K30B Basset 88.78 45 IAMs_20 IAMs_20 10 25 50.1
comp=Z,4µm,22.0s
Z38A Mt. Pleasant 88.79 55 IAMs_20 IAMs_20 10 26 36.8
comp=Z,5µm,21.0s
PLCA Paso Flores 88.83 132 P **P** **09 54 07.2 +1.9**
comp=Z,9.0nm,0.9s,baz=250,slow=5.5,SNR=10
PLCA PKKPbc **PKKPbc** **10 11 45.3 -0.2**
comp=Z,8.6nm,1.1s,baz=131,slow=2.4,SNR=9.8
PLCA PKP2bc 10 19 13.8
comp=Z,1.6nm,0.7s,baz=226,slow=2.1,SNR=3.5
PLCA LR LR 10 25 03.2
comp=Z,2µm,21.4s,baz=262,slow=30
comp=Z,9.0nm,0.9s
T35A Sooner Cattle 88.87 51 IAmb IAmb 09 54 08.3
comp=Z,32nm,1.1s
T35A IAMs_20 IAMs_20 10 26 20.8
comp=Z,6µm,21.0s
RPSI Rantau Prapat 89.00 273 P **P** **09 54 04.0 -2.6**
PSI Prapat 89.03 273 LR LR 10 35 38.4
comp=Z,1µm,20.1s,baz=132,slow=37
PSI Prapat 89.03 273 P **P** **09 54 04.0 -2.8**
PSI pmax pmax
comp=Z,90nm,1.1s
PSI MLR MLR
comp=Z,2µm,21.0s
TUL3 Leonard 89.07 52 IAMs_20 IAMs_20 10 28 59.0
comp=Z,3µm,20.0s
XAN Xi'an 89.31 306 P **P** **09 54 08.0 +0.5**
XAN SKS **SKSac** **10 04 34.7 -0.8**
XAN S **ScS** **10 04 58.9 -1.2**
XAN pmax pmax
comp=Z,53nm,1.3s
XAN pmax pmax
comp=Z,1µm,6.0s
XAN LR LR
comp=Z,920nm,17.2s
XAN LR LR
comp=Z,1µm,19.7s
XAN LR LR
comp=Z,2µm,21.3s
BGNE Belgrade 89.31 47 IAMs_20 IAMs_20 10 28 03.2
comp=Z,4µm,20.0s
SLVN Son La 89.56 292 IAmb IAmb 09 54 41.6
comp=Z,125nm,2.0s
KSU1 Kansas State U 89.58 49 IAMs_20 IAMs_20 10 27 05.3
comp=Z,5µm,21.0s
HHC Hu-ho-hao-te 89.71 313 ⇑*i*P **P** **09 54 10.3 +1.0**
HHC sP sP 09 54 24.3 +2.1
HHC PP **PP** **09 57 44.0 +2.1**
HHC SKS **SKSac** **10 04 35.8 -1.9**
HHC S **S** **10 04 57.5 -1.4**
HHC sS pS 10 05 08.7 -2.6
HHC SS **SS** **10 10 58.9 +2.5**
HHC pmax pmax
comp=Z,26nm,0.6s
HHC pmax pmax
comp=Z,710nm,6.6s
HHC LR LR
comp=Z,430nm,16.5s
HHC LR LR
comp=Z,430nm,16.1s
HHC LR LR
comp=Z,1µm,16.7s
YAK Yakutsk 89.73 337 LR LR 10 27 27.6
comp=Z,828nm,22.0s,baz=124,slow=31
YAK Yakutsk 89.73 337 *e*P **P** **09 54 08.1 -0.6**
YAK *e**PP **PcP** **09 54 12.2 +2.2**
YAK *e*PPP PPP 09 59 36.2
YAK *e*S **SKSac** **10 04 37.9 +1.4**
YAK *e**SS **SKKSac** **10 04 54.0 +4.6**
YAK *e*SS **SS** **10 10 56.5 +1.1**
YAK *e*SSS SSS 10 14 32.1
YAK pmax pmax
comp=Z,68nm,1.5s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=E,12nm,1.7s
YAK smax smax
comp=E,1µm,6.2s
YAK smax smax
comp=N,956nm,6.1s
YAK MLR MLR
comp=E,409nm,26.0s
GSI Gunungsitoli 89.93 271 P **P** **09 54 09.1 -1.7**
GSI Gunungsitoli 89.93 271 P **P** **09 54 12.0 +1.1**
YKA Yellowknife Ar 90.30 23 P **P** **09 54 11.9 +0.5**
comp=E,12nm,0.8s,baz=244,slow=4.9,SNR=20
YKA LR LR 10 27 39.2
comp=E,4µm,21.4s,baz=238,slow=31
comp=E,12nm,0.8s
U38A Gravette 90.32 52 IAMs_20 IAMs_20 10 28 15.1
comp=Z,3µm,20.0s
MIAR Mount Ida 90.32 54 IAmb IAmb 09 54 28.6
comp=Z,79nm,1.8s
MIAR IAMs_20 IAMs_20 10 27 13.2
comp=Z,5µm,21.0s
MIAR Mount Ida 90.32 54 P **P** **09 54 13.4 +1.2**
MIAR pmax pmax
comp=Z,14nm,1.1s
KCSI Kotacane, Aceh 90.34 274 P **P** **09 54 12.6 -0.2**
comp=Z,948nmcomp=Z,50nm,0.7s
YKAW3 Yellowknife Wh 90.34 23 IAmb IAmb 09 54 26.6
comp=Z,87nm,1.7s
YKAW1 Yellowknife Wh 90.34 23 IAmb IAmb 09 54 26.6
comp=Z,189nm,2.0s
Z41A Richland Creek 90.52 56 IAmb IAmb 09 54 15.3
comp=Z,30nm,0.7s
BO01 Tunca 90.57 126 IAmb IAmb 09 54 17.1
comp=Z,28nm,1.0s
BO01 IAMs_20 IAMs_20 10 25 47.3
comp=Z,2µm,19.0s
BO02 Sierra Bellavi 90.67 126 IAmb IAmb 09 54 40.6
comp=Z,35nm,1.1s
BTO Baotou 90.72 312 *e*P **P** **09 54 15.1 +1.1**
BTO SKS **SKSac** **10 04 37.5 -6.1**
BTO S **ScS** **10 05 13.1 +1.5**
BTO SS **SS** **10 11 13.6 +2.5**
BTO pmax pmax
comp=Z,150nm,1.0s
BTO pmax pmax
comp=Z,2µm,4.8s
BTO LR LR
comp=Z,900nm,18.8s
BTO LR LR
comp=Z,790nm,13.0s
BTO LR LR
comp=Z,1µm,21.1s
L34A Svendsen Farm, 90.75 46 IAMs_20 IAMs_20 10 27 05.3
comp=Z,4µm,21.0s
JTS Las Juntas de 90.78 80 LR LR 10 24 51.9
comp=Z,3µm,21.4s,baz=258,slow=29
MDND Maddock 90.80 40 IAMs_20 IAMs_20 10 27 54.1
comp=Z,4µm,21.0s
N35A Tabor 90.89 48 IAmb IAmb 09 54 16.3
comp=Z,30nm,0.8s
N35A IAMs_20 IAMs_20 10 27 29.9
comp=Z,4µm,22.0s
ECSD EROS Data Cent 91.21 45 IAmb IAmb 09 54 17.9
comp=Z,28nm,1.3s
ECSD EROS Data Cent 91.21 45 IAMs_20 IAMs_20 10 28 01.4
comp=Z,5µm,22.0s
PEL Peldehue 91.30 125 P **P** **09 54 19.2 +2.2**
PEL pmax pmax
comp=Z,56nm,1.0s
UALR University of 91.36 54 IAmb IAmb 09 54 19.6
comp=Z,34nm,0.8s
143A Socs Landing, 91.46 57 IAMs_20 IAMs_20 10 29 25.6
comp=Z,3µm,20.0s
C36M Paulatuk 91.65 15 IAMs_20 IAMs_20 10 28 18.5
comp=Z,5µm,21.0s
C36M Paulatuk 91.65 15 P **P** **09 54 17.6 +0.1**
baz=226
KMI Kunming 91.68 296 P **P** **09 54 18.5 -0.5**
KMI SKS **SKSac** **10 04 53.4 +3.4**
KMI S **S** **10 05 14.7 -3.2**
KMI pmax pmax
comp=Z,34nm,0.9s
KMI pmax pmax
comp=Z,520nm,9.8s
KMI LR LR
comp=Z,470nm,17.4s
KMI LR LR
comp=Z,590nm,27.0s
KMI LR LR
comp=Z,800nm,33.9s
MT08 Bocatoma Ro 91.72 125 IAMs_20 IAMs_20 10 24 50.8
comp=Z,4µm,20.0s
MLSI Meulaboh, Aceh 91.85 274 P **P** **09 54 20.8 +1.0**
comp=Z,95nm,1.1s
FCAR Ozark Folk Cen 91.87 53 IAmb IAmb 09 54 45.0
comp=Z,68nm,1.7s
CO05 La Serena 91.93 122 IAMs_20 IAMs_20 10 24 15.6
comp=Z,3µm,21.0s
P38A Dawn 92.00 49 IAMs_20 IAMs_20 10 28 29.4
comp=Z,5µm,22.0s
VBMS Vicksburg 92.03 57 IAMs_20 IAMs_20 10 28 44.7
comp=Z,3µm,22.0s
F33A 5 Mile Ranch, 92.17 43 IAmb IAmb 09 54 34.4
comp=Z,30nm,1.3s
FFC Flin Flon 92.19 33 IAMs_20 IAMs_20 10 28 59.6
comp=Z,4µm,22.0s
EFI East Falkland 92.24 146 ⇓*i*P **P** **09 54 22.2 +1.4**
EFI pmax pmax
comp=Z,61nm,1.0s
SYO Syowa Base 92.26 191 ⇑*i*PcP **P** **09 54 20.5 -0.1**
SYO Syowa Base 92.26 191 ⇓*i*sP sP 09 54 35.4 +1.8
TROLL Troll, Antarti 92.30 179 ⇑P **P** **09 54 21.7 +0.7**
comp=Z,6µm,0.9s
TROLL ⇑S **S** **10 05 16.8 -4.8**
VNA3 Neumayer Olymp 92.36 175 ⇑P **P** **09 54 21.7 +0.6**
comp=Z,173nm,0.8s
SNAA Sanae 92.43 177 ⇑P **P** **09 54 22.0 +0.5**
comp=Z,2µm,1.1s
SNAA ⇓SKSac **SKSac** **10 04 51.6 -0.7**
SNAA Sanae 92.43 177 P **P** **09 54 20.9 -0.5**
SNAA Sanae 92.43 177 P **P** **09 54 21.8 +0.5**
comp=Z,73nm,1.0s,baz=309,slow=6.9,SNR=3.8
SNAA LR LR 10 31 31.0
comp=Z,2µm,21.1s,baz=190,slow=33
comp=Z,73nm,1.0s
SNAA Sanae 92.43 177 *c i*P **P** **09 54 21.9 +0.5**
SNAA pmax pmax
comp=Z,131nm,1.1s
NNA Nana 92.45 103 LR LR 10 26 03.9
comp=Z,917nm,21.3s,baz=242,slow=29
CD2 Chengdu 92.48 301 P **P** **09 54 22.4 0.0**
CD2 SKS **SKSac** **10 04 54.7 +0.8**
CD2 S **SKKSac** **10 05 16.9 +5.4**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,750nm,6.6s
CD2 LR LR
comp=Z,2µm,21.2s
CD2 LR LR
comp=Z,1µm,21.4s
CD2 LR LR
comp=Z,1µm,23.5s
R40A Maddies Statio 92.51 51 IAmb IAmb 09 54 24.5
comp=Z,36nm,1.0s
R40A IAMs_20 IAMs_20 10 30 39.0
comp=Z,4µm,20.0s
N38A Joes South For 92.59 48 IAMs_20 IAMs_20 10 30 06.9
comp=Z,4µm,20.0s
CIT Chita 92.60 324 *e*P **P** **09 54 23.0 +0.6**
CIT *e* 09 54 31.4
CIT pmax pmax
comp=Z,204nm,1.6s
LCAR Lake Charles 92.68 53 IAmb IAmb 09 54 24.4
comp=Z,20nm,0.9s
LCO Las Campanas 92.68 121 IAmb IAmb 09 54 26.5
comp=Z,33nm,0.9s
VNA2 Neumayer--Watz 92.86 175 ⇑P **P** **09 54 24.5 +1.1**
comp=Z,180nm,0.7s,baz=190,slow=3.8
PZH PanZhiHua 92.93 297 P **P** **09 54 23.9 -0.8**
PZH SKS **SKSac** **10 04 56.8 +0.1**
PZH S **S** **10 05 27.9 -0.9**
PZH pmax pmax
comp=Z,430nm,9.5s
PZH LR LR
comp=Z,380nm,14.3s
PZH LR LR
comp=Z,510nm,19.4s
PZH LR LR
comp=Z,650nm,18.4s
SCIA State Center 92.95 47 IAMs_20 IAMs_20 10 28 12.6
comp=Z,5µm,21.0s
P40A Paris 93.06 50 IAmb IAmb 09 54 25.6
comp=Z,18nm,0.9s
VNA1 Neumayer--Stat 93.06 175 ⇑P **P** **09 54 25.4 +1.2**
comp=Z,310nm,0.9s
AC05 El Transito 93.09 121 IAMs_20 IAMs_20 10 25 54.2
comp=Z,3µm,21.0s
CCM Cathedral Cave 93.20 51 IAMs_20 IAMs_20 10 29 02.6
comp=Z,5µm,21.0s
A36M Sachs Harbour 93.22 13 IAMs_20 IAMs_20 10 30 52.8
comp=Z,3µm,20.0s
A36M Sachs Harbour 93.22 13 P **P** **09 54 25.3 +0.6**
baz=225
CM31 Chiang Mai Arr 93.24 288 P **P** **09 54 27.0 +0.9**
CM31 S **SKSac** **10 05 02.0 +3.6**
CMAR Chiang Mai Arr 93.24 288 P **P** **09 54 25.6 -0.5**
comp=Z,8.2nm,0.9s,baz=95,slow=2.7,SNR=40
CMAR PKiKP **PKiKP** **09 59 13.8 +0.9**
comp=Z,1.2nm,0.5s,baz=131,slow=0.5,SNR=5.0
CMAR PKKPbc **PKKPbc** **10 11 35.1 +1.2**
comp=Z,0.8nm,0.3s,baz=285,slow=5.4,SNR=7.0
CMAR LR LR 10 31 59.9
comp=Z,677nm,21.8s,baz=105,slow=33
comp=Z,8.2nm,0.9s
CMAR Chiang Mai Arr 93.24 288 *i*P **P** **09 54 27.1 +1.0**
CMAR pmax pmax
comp=Z,9.0nm,0.9s
AGMN Agassiz Nation 93.30 41 IAmb IAmb 09 54 41.3
comp=Z,54nm,1.7s
AGMN IAMs_20 IAMs_20 10 29 56.3
comp=Z,5µm,20.0s
146A Union 93.33 57 IAMs_20 IAMs_20 10 30 07.2
comp=Z,3µm,22.0s
CHTO Chiang Mai 93.34 288 P **P** **09 54 27.3 +0.8**
CHTO pmax pmax
comp=Z,23nm,1.4s
I37A Lemond, Waseca 93.50 45 IAMs_20 IAMs_20 10 30 32.8
comp=Z,4µm,20.0s
AC06 Mina Casimiro 93.52 120 IAMs_20 IAMs_20 10 26 21.7
comp=Z,3µm,20.0s
GO03 Copiapo 93.54 120 IAMs_20 IAMs_20 10 25 39.3
comp=Z,3µm,21.0s
OXF Oxford 93.58 55 IAMs_20 IAMs_20 10 28 38.8
comp=Z,5µm,22.0s
CFA Coronel Fontan 93.78 124 LR LR 10 26 54.8
comp=Z,1µm,21.7s,baz=270,slow=29
FVM French Village 93.80 52 IAmb IAmb 09 54 30.5
comp=Z,44nm,1.4s
LZH Lanzhou 93.90 306 *e*P **P** **09 54 29.6 +0.6**
LZH pP PcP 09 54 33.9 +4.5
LZH sP pP 09 54 37.1 -1.6
LZH PP **PP** **09 58 11.6 -3.6**
LZH SKS **SKSac** **10 04 58.2 -3.5**
LZH S **SKKSac** **10 05 25.5 +3.4**
LZH sS pS 10 05 45.7 -3.9
LZH SS **SS** **10 11 52.8 -4.3**
LZH pmax pmax
comp=Z,27nm,1.3s
LZH pmax pmax
comp=Z,400nm,4.1s
LZH LR LR
comp=Z,480nm,18.9s
LZH LR LR
comp=Z,760nm,19.9s
LZH LR LR
comp=Z,1µm,19.6s
ULM Lac du Bonnet 93.96 39 P **P** **09 54 28.0 -0.7**
comp=Z,15nm,0.9s,baz=208,slow=6.0,SNR=7.3
ULM LR LR 10 29 51.5
comp=Z,8µm,22.0s,baz=250,slow=31
comp=Z,15nm,0.9s
LZDM Lanzhou Array 93.98 306 P **P** **09 54 30.1 +0.6**
comp=Z,10nm,0.9s,baz=114,slow=5.5,SNR=8.6
LZDM LR LR 10 34 22.5
comp=Z,582nm,20.8s,baz=115,slow=34
comp=Z,10nm,0.9s
CGM3 Cape Girardeau 94.19 53 IAmb IAmb 09 54 31.5
comp=Z,34nm,0.8s
N41A Harden Midland 94.28 49 IAMs_20 IAMs_20 10 31 00.8
comp=Z,4µm,20.0s
SPMN Marine on St. 94.28 44 IAmb IAmb 09 54 32.5
comp=Z,43nm,1.1s
PB14 IPOC Station P 94.39 117 IAmb IAmb 09 54 35.5
comp=Z,29nm,1.2s
L40A Anamosa 94.42 48 IAMs_20 IAMs_20 10 30 22.3
comp=Z,3µm,21.0s
BRAL Brewton 94.56 59 IAMs_20 IAMs_20 10 31 08.0
comp=Z,3µm,21.0s
SIUC Southern Illin 94.64 52 IAmb IAmb 09 54 47.9
comp=Z,28nm,1.1s
PLAL Pickwick Lake 94.77 55 IAMs_20 IAMs_20 10 29 40.2
comp=Z,3µm,21.0s
T45A Paducah 94.89 53 IAMs_20 IAMs_20 10 29 35.0
comp=Z,4µm,21.0s
P43A Skaggs, Pawnee 94.95 50 IAMs_20 IAMs_20 10 30 09.7
comp=Z,5µm,21.0s
EPLO Experimental L 95.08 40 IAmb IAmb 09 54 33.9
comp=Z,23nm,0.8s
LRAL Lakeview Retre 95.11 57 IAMs_20 IAMs_20 10 31 21.2
comp=Z,3µm,22.0s
ULN Ulaanbaatar 95.11 318 P **P** **09 54 31.8 -2.4**
ULN Ulaanbaatar 95.11 318 *c i*P **P** **09 54 34.0 -0.2**
ULN pmax pmax
comp=Z,15nm,1.1s
Q44A Meyer Farm, Va 95.12 51 IAmb IAmb 09 54 35.5
comp=Z,17nm,0.8s
Q44A IAMs_20 IAMs_20 10 30 55.3
comp=Z,5µm,20.0s
WVT Waverly 95.27 54 IAmb IAmb 09 54 50.9
comp=Z,45nm,1.7s
TNCH TengChong 95.34 294 ⇑*i*P **P** **09 54 36.9 +1.1**
TNCH pmax pmax
comp=Z,540nm,3.0s
TNCH LR LR
comp=Z,670nm,17.9s
TNCH LR LR
comp=Z,810nm,22.0s
TNCH LR LR
comp=Z,2µm,25.6s
I40A Norwalk 95.38 46 IAmb IAmb 09 54 36.4
comp=Z,32nm,0.8s
I40A IAMs_20 IAMs_20 10 31 11.6
comp=Z,4µm,21.0s
X48A Hartselle 95.44 56 IAMs_20 IAMs_20 10 30 21.1
comp=Z,5µm,21.0s
L42A Oliver, Polo 95.51 48 IAmb IAmb 09 54 37.0
comp=Z,35nm,0.9s
L42A IAMs_20 IAMs_20 10 29 40.3
comp=Z,3µm,21.0s
SONM Songino Array 95.52 318 P **P** **09 54 33.8 -2.2**
SONM Songino Array 95.52 318 P **P** **09 54 35.8 -0.2**
comp=Z,6.1nm,0.9s,baz=133,slow=4.5,SNR=14
SONM LR LR 10 33 05.8
comp=Z,632nm,21.8s,baz=102,slow=33
comp=Z,6.1nm,0.9s
TIXI Tiksi 95.57 344 P **P** **09 54 34.2 -1.3**
TIXI Tiksi 95.57 344 LR LR 10 34 40.1
comp=Z,1µm,20.3s,baz=146,slow=34
TIXI Tiksi 95.57 344 ⇑*i*P **P** **09 54 34.9 -0.6**
TIXI pmax pmax
comp=Z,12nm,0.9s
Y49A Blount Mountai 95.80 57 IAMs_20 IAMs_20 10 30 12.5
comp=Z,5µm,22.0s
EYMN Ely 95.96 42 IAMs_20 IAMs_20 10 32 05.8
comp=Z,4µm,20.0s

T47A	**Sharon Grove**	**96.06**	**53**	IAmb	IAmb	09 54 40.8				
	comp=Z,18nm,0.8s									
T47A				IAMs_20	IAMs_20	10 33 08.3				
	comp=Z,4μm,20.0s									
M44A	**Midewin, Midew**	**96.51**	**49**	IAMs_20	IAMs_20	10 30 37.9				
	comp=Z,4μm,22.0s									
I42A	**Draeger Farm,**	**96.56**	**46**	IAmb	IAmb	09 54 41.7				
	comp=Z,34nm,1.0s									
I42A				IAMs_20	IAMs_20	10 31 58.9				
	comp=Z,4μm,20.0s									
K43A	**Burlington**	**96.65**	**48**	IAMs_20	IAMs_20	10 30 59.6				
	comp=Z,3μm,20.0s									
HQIL	**Hanson Quary C**	**96.76**	**49**	IAMs_20	IAMs_20	10 33 32.4				
	comp=Z,3μm,18.0s									
L44A	**Lake County Fo**	**96.81**	**48**	IAMs_20	IAMs_20	10 30 41.8				
	comp=Z,2μm,19.0s									
152A	**Waverly Hall**	**96.87**	**58**	IAMs_20	IAMs_20	10 31 15.9				
	comp=Z,3μm,22.0s									
WCI	**Wyandotte Cave**	**97.00**	**52**	IAMs_20	IAMs_20	10 31 44.1				
	comp=Z,5μm,22.0s									
W50A	**Signal Mountai**	**97.02**	**56**	IAMs_20	IAMs_20	10 31 30.6				
	comp=Z,3μm,21.0s									
GO01	**Chusmiza**	**97.10**	**113**	IAMs_20	IAMs_20	10 27 51.8				
	comp=Z,2μm,20.0s									
X51A	**Calhoun**	**97.22**	**56**	IAMs_20	IAMs_20	10 31 37.1				
	comp=Z,4μm,20.0s									
H43A	**Windswept, Lux**	**97.50**	**46**	IAMs_20	IAMs_20	10 33 26.9				
	comp=Z,4μm,20.0s									
Y52A	**Lilburn**	**97.69**	**57**	IAMs_20	IAMs_20	10 33 17.6				
	comp=Z,3μm,20.0s									
CPCT	**Cooper Cave**	**97.70**	**55**	IAmb	IAmb	09 57 23.7				
	comp=Z,33nm,1.7s									
T50A	**Nancy**	**97.83**	**54**	IAMs_20	IAMs_20	10 32 28.0				
	comp=Z,4μm,20.0s									
GTA	**Gaotai**	**97.86**	**309**	*e*P	**P**	**09 54 47.0**	**+0.1**			
GTA				SKS	**SKSac**	**10 05 18.8**	**-3.6**			
GTA				pmax	pmax					
	comp=Z,13nm,1.1s									
GTA				pmax	pmax					
	comp=Z,290nm,7.3s									
GTA				LR	LR					
	comp=Z,520nm,19.3s									
GTA				LR	LR					
	comp=Z,1μm,21.1s									
GTA				LR	LR					
	comp=Z,2μm,24.4s									
R49A	**Shelbyville**	**97.88**	**53**	IAMs_20	IAMs_20	10 32 10.2				
	comp=Z,5μm,21.0s									
656A	**Willston**	**97.89**	**62**	IAMs_20	IAMs_20	10 33 06.2				
	comp=Z,3μm,22.0s									
P48A	**Milroy**	**97.96**	**51**	IAMs_20	IAMs_20	10 33 20.5				
	comp=Z,4μm,20.0s									
W52A	**Murphy**	**98.09**	**56**	IAMs_20	IAMs_20	10 32 14.1				
	comp=Z,3μm,22.0s									
154A	**Montrose**	**98.17**	**58**	IAMs_20	IAMs_20	10 32 39.6				
	comp=Z,3μm,21.0s									
ZAK	**Zakamensk**	**98.19**	**320**	*e*P	**P**	**09 54 46.0**	**-2.1**			
ZAK				pmax	pmax					
	comp=Z,12nm,1.4s									
TLY	**Talaya**	**98.31**	**321**	*ce*P	**P**	**09 54 49.1**	**+0.7**			
TLY				pmax	pmax					
	comp=Z,7.0nm,0.8s									
TKL	**Tuckaleechee C**	**98.34**	**55**	LR	LR	10 32 13.8				
	comp=Z,4μm,21.8s,baz=258,slow=31									
R50A	**Paris**	**98.52**	**53**	IAMs_20	IAMs_20	10 32 20.2				
	comp=Z,5μm,21.0s									
BLKN	**Baker Lake**	**98.57**	**25**	IAmb	IAmb	09 54 50.4				
	comp=Z,15nm,0.9s									
S51A	**Beattyville**	**98.94**	**53**	IAMs_20	IAMs_20	10 32 13.4				
	comp=Z,5μm,22.0s									
V53A	**Saluda**	**99.11**	**56**	IAMs_20	IAMs_20	10 31 19.0				
	comp=Z,4μm,22.0s									
LPAZ	**La Paz**	**99.18**	**110**	P	**Pdif**	**09 54 54.9**	**+0.9**			
	comp=Z,3.1nm,1.0s,baz=22,slow=2.1,SNR=6.5									
LPAZ				PKKPbc	**PKKPbc**	**10 11 18.1**	**-0.4**			
	comp=Z,1.2nm,0.3s,baz=162,slow=3.2,SNR=6.4									
LPAZ				LR	LR	10 30 04.5				
	comp=Z,922nm,21.7s,baz=278,slow=30									
	comp=Z,3.1nm,1.0s									
060A	**Indiantown**	**99.22**	**65**	IAMs_20	IAMs_20	10 33 33.5				
	comp=Z,3μm,21.0s									
J47A	**Sunmer**	**99.28**	**48**	IAMs_20	IAMs_20	10 33 02.1				
	comp=Z,4μm,22.0s									
Q51A	**Peebles**	**99.44**	**52**	IAMs_20	IAMs_20	10 33 29.6				
	comp=Z,3μm,20.0s									
ROSC	**El Rosal**	**99.51**	**88**	LR	LR	10 30 32.9				
	comp=Z,1μm,21.7s,baz=232,slow=30									
AAM	**Ann Arbor**	**99.91**	**49**	IAMs_20	IAMs_20	10 35 29.9				
	comp=Z,3μm,19.0s									
ACSO	**Alum Creek Sta**	**99.97**	**51**	IAMs_20	IAMs_20	10 35 38.5				
	comp=Z,4μm,20.0s									
U54A	**Nelsons Funny**	**100.08**	**55**	IAMs_20	IAMs_20	10 33 38.6				
	comp=Z,5μm,22.0s									
KMSC	**Kings Mountain**	**100.17**	**56**	IAMs_20	IAMs_20	10 34 21.3				
	comp=Z,3μm,20.0s									
Q52A	**Bidwell**	**100.24**	**52**	IAMs_20	IAMs_20	10 31 56.9				
	comp=Z,4μm,22.0s									
V55A	**Taylorsville**	**100.42**	**56**	IAMs_20	IAMs_20	10 32 45.7				
	comp=Z,4μm,22.0s									
NHSC	**New Hope**	**100.69**	**59**	IAMs_20	IAMs_20	10 33 50.0				
	comp=Z,3μm,21.0s									
Y57A	**Sumter**	**100.70**	**58**	IAMs_20	IAMs_20	10 36 16.3				
	comp=Z,3μm,20.0s									
O52A	**Adamsville**	**100.81**	**51**	IAMs_20	IAMs_20	10 33 42.9				
	comp=Z,4μm,22.0s									
I49A	**Point Hope**	**100.85**	**47**	IAMs_20	IAMs_20	10 34 00.6				
	comp=Z,4μm,21.0s									
GOMU	**GeErMu**	**101.02**	**305**	P	**Pdif**	**09 55 01.6**	**+0.3**			
GOMU				PP	**PP**	**09 59 06.4**	**-3.8**			
GOMU				SS	SS	10 13 39.2	+1.4			
GOMU				LR	LR					
	comp=Z,310nm,19.6s									
GOMU				LR	LR					
	comp=Z,340nm,20.2s									
P53A	**Whipple**	**101.02**	**52**	IAMs_20	IAMs_20	10 33 29.3				
	comp=Z,4μm,22.0s									
W57A	**Gilead**	**101.25**	**57**	IAMs_20	IAMs_20	10 33 41.8				
	comp=Z,3μm,22.0s									
Y58A	**Scranton**	**101.27**	**58**	IAMs_20	IAMs_20	10 36 43.5				
	comp=Z,2μm,20.0s									
BLA	**Blacksburg**	**101.32**	**54**	IAMs_20	IAMs_20	10 34 16.5				
	comp=Z,4μm,20.0s									
Q54A	**Coxs Mills**	**101.34**	**53**	IAMs_20	IAMs_20	10 33 17.0				
	comp=Z,5μm,22.0s									
X58A	**Rowland**	**101.66**	**57**	IAMs_20	IAMs_20	10 34 15.7				
	comp=Z,3μm,22.0s									
N53A	**Lisbon**	**101.69**	**51**	IAMs_20	IAMs_20	10 34 49.9				
	comp=Z,4μm,22.0s									
O54A	**Avella**	**101.92**	**51**	IAMs_20	IAMs_20	10 34 16.0				
	comp=Z,5μm,22.0s									
V58A	**Windy Hill, Pi**	**102.08**	**56**	IAMs_20	IAMs_20	10 34 08.7				
	comp=Z,4μm,22.0s									
MCWV	**Mont Chateau**	**102.22**	**52**	IAMs_20	IAMs_20	10 34 05.2				
	comp=Z,4μm,22.0s									
Y60A	**Bolivia**	**102.47**	**58**	IAMs_20	IAMs_20	10 37 37.2				
	comp=Z,3μm,21.0s									
W59A	**Clinton**	**102.50**	**57**	IAMs_20	IAMs_20	10 34 29.9				
	comp=Z,3μm,22.0s									
S57A	**Dark Hollow, R**	**102.57**	**54**	IAMs_20	IAMs_20	10 35 44.6				
	comp=Z,4μm,21.0s									
Q56A	**Snyder Ridge,**	**102.61**	**53**	IAMs_20	IAMs_20	10 35 18.6				
	comp=Z,4μm,21.0s									
P57A	**Homestead Farm**	**103.59**	**52**	IAMs_20	IAMs_20	10 36 29.4				
	comp=Z,4μm,20.0s									
SSPA	**Standing Stone**	**103.87**	**51**	IAMs_20	IAMs_20	10 37 48.7				
	comp=Z,3μm,21.0s									
J55A	**Hilton**	**104.31**	**49**	IAMs_20	IAMs_20	10 35 24.3				
	comp=Z,2μm,22.0s									
CPUP	**Villa Florida**	**104.63**	**123**	Pdiff	**Pdif**	**09 55 18.8**	**+1.5**			
	comp=Z,0.2nm,0.3s,baz=91,slow=5.1,SNR=3.6									
CPUP				PKKPbc	**PKKPbc**	**10 11 00.6**	**-1.4**			
	comp=Z,0.6nm,0.8s,baz=45,slow=4.3,SNR=4.2									
N58A	**Sunbury**	**104.78**	**51**	IAMs_20	IAMs_20	10 35 00.8				
	comp=Z,4μm,22.0s									
J57A	**Williamstown**	**105.65**	**49**	IAMs_20	IAMs_20	10 36 24.7				
	comp=Z,3μm,21.0s									
SDDR	**Presa de Saban**	**105.70**	**74**	IAMs_20	IAMs_20	10 33 48.6				
	comp=Z,4μm,22.0s									
J59A	**Piesco**	**106.74**	**49**	IAMs_20	IAMs_20	10 36 34.5				
	comp=Z,3μm,22.0s									
PAL	**Palisades**	**106.91**	**51**	IAMs_20	IAMs_20	10 37 43.2				
	comp=Z,4μm,21.0s									
WMQ	**Urumqi**	**107.55**	**312**	Pdif	**Pdif**	**09 55 30.0**	**+0.2**			
PALK	**Pallekele**	**107.71**	**273**	IAMs_20	IAMs_20	10 44 11.1				
	comp=Z,2μm,21.0s									
NRIK	**Noril'sk**	**108.09**	**338**	PKiKP	**PKiKP**	**09 59 38.3**	**+0.2**			
	comp=Z,3.1nm,0.6s,baz=129,slow=3.7,SNR=3.4									
NRIK				PP	**PP**	**10 00 00.1**	**-1.1**			
	comp=Z,0.8nm,0.3s,baz=72,slow=3.2,SNR=3.6									
NRIK				PKKPab	**PKKPab**	**10 11 04.7**	**+1.7**			
	comp=Z,1.5nm,0.3s,baz=258,slow=6.6,SNR=5.2									
J61A	**Chester**	**108.14**	**49**	IAMs_20	IAMs_20	10 40 41.6				
	comp=Z,3μm,20.0s									
M63A	**Gales Ferry**	**108.34**	**51**	IAMs_20	IAMs_20	10 37 45.2				
	comp=Z,3μm,21.0s									
HNH	**Hanover**	**108.36**	**49**	IAMs_20	IAMs_20	10 38 08.5				
	comp=Z,4μm,22.0s									
ZSN	**Zaisan**	**109.76**	**315**	*e*PKiKP	**PKiKP**	**09 59 41.5**	**-0.4**			
ZALV	**Zalesovo Beam**	**109.89**	**322**	PKiKP	**PKiKP**	**09 59 41.4**	**-0.5**			
	comp=Z,7.9nm,0.6s,baz=144,slow=1.9,SNR=12									
FRB	**Frobisher Bay**	**110.42**	**27**	PKiKP	**PKiKP**	**09 59 44.1**	**+1.5**			
	comp=Z,36nm,1.2s,baz=23,slow=5.3,SNR=3.2									
E62A	**Clayton Lake**	**110.47**	**46**	IAMs_20	IAMs_20	10 41 54.0				
	comp=Z,3μm,20.0s									
F64A	**Sherman**	**111.27**	**47**	IAMs_20	IAMs_20	10 41 44.2				
	comp=Z,3μm,21.0s									
DGAR	**Diego Garcia**	**111.33**	**255**	IAMs_20	IAMs_20	10 40 43.0				
	comp=Z,2μm,21.0s									
MKAR	**Makanchi Array**	**111.51**	**314**	Pdiff	**Pdif**	**09 55 46.4**	**-0.9**			
	comp=Z,0.9nm,1.0s,baz=101,slow=6.3,SNR=4.7									
MKAR				PKiKP	**PKiKP**	**09 59 44.6**	**-0.6**			
	comp=Z,7.6nm,0.6s,baz=66,slow=0.5,SNR=49									
MKAR				PKKPbc	**PKKPbc**	**10 10 40.5**	**-0.6**			
	comp=Z,1.0nm,0.7s,baz=279,slow=2.3,SNR=5.4									
MKAR				PKKPab	**PKKPab**	**10 10 48.9**	**+0.4**			
	comp=Z,2.1nm,0.8s,baz=261,slow=5.8,SNR=7.5									
MKAR				PKKP	**PKKPdf**	**10 11 00.3**	**+0.3**			
	comp=Z,0.8nm,0.8s,baz=267,slow=4.2,SNR=3.6									
HYBB	**Hyderabad (bro**	**111.94**	**283**	*e*PKiKP	**PKiKP**	**09 59 44.8**	**-2.1**			
HYBB				*e*PP	**PP**	**10 00 28.4**	**-2.2**			
HYBB				*e*SKSac	**SKSac**	**10 06 23.1**	**-3.8**			
HYBB				*e*SKKSac	**SKKSdf**	**10 17 59.5**	**-8.7**			
NEEM	**North Greenlan**	**112.07**	**12**	*i* P	**PKiKP**	**09 59 45.7**	**-0.2**			
KAAM	**Kaadhehdhoo**	**113.32**	**264**	IAMs_20	IAMs_20	10 44 31.9				
	comp=Z,2μm,20.0s									
SHLS	**Shalkode**	**113.50**	**311**	*e*PKiKP	**PKiKP**	**09 59 48.0**	**-1.3**			
SHLS	**Shalkode**	**113.50**	**311**	*i* PKiKP	**PKiKP**	**09 59 48.0**	**-1.3**			
KURK	**Kurchatov**	**113.81**	**319**	*i* PKiKP	**PKiKP**	**09 59 49.2**	**-0.2**			
UZB	**Uzynbulak**	**113.82**	**310**	*e*PKiKP	**PKiKP**	**09 59 49.3**	**-0.7**			
UZB				*e*PP	**PP**	**10 00 42.6**	**-0.9**			
UZB	**Uzynbulak**	**113.82**	**310**	*i* PKiKP	**PKiKP**	**09 59 49.2**	**-0.7**			
UZB				*e*		10 00 42.6				
KURBB	**Kurchatov Arra**	**113.88**	**319**	Pdiff	**Pdif**	**09 55 58.1**	**+0.4**			
	comp=Z,0.6nm,0.6s,baz=78,slow=3.7,SNR=3.2									
KURBB				PKiKP	**PKiKP**	**09 59 49.2**	**-0.4**			
	comp=Z,12nm,0.7s,baz=90,slow=1.8,SNR=66									
KURBB				PKKPbc	**PKKPbc**	**10 10 32.8**	**-0.5**			
	comp=Z,1.0nm,0.6s,baz=264,slow=4.2,SNR=5.8									
TDK	**Taldyqorghan**	**114.24**	**313**	*e*PKP	PKPdf	09 59 50.0	-0.5			
TDK				LR	LR	10 49 12.8				
	comp=Z,956nm,23.6s									
TDK	**Taldyqorghan**	**114.24**	**313**	*e*PKiKP	PKPdf	09 59 50.0	-0.5			
TDK				MLR	MLR					
	comp=Z,956nm,24.0s									
SATY	**Saty**	**114.28**	**310**	*e*PKP	PKPdf	09 59 50.1	-0.7			
SATY	**Saty**	**114.28**	**310**	*e*PKiKP	PKPdf	09 59 50.1	-0.7			
TNSS	**Tian-Shan**	**115.34**	**310**	*e*PKP	**PKiKP**	**09 59 52.2**	**-1.1**			
TNSS	**Tian-Shan**	**115.34**	**310**	*e*PKiKP	**PKiKP**	**09 59 52.1**	**-1.1**			
AAA	**Alma-Ata**	**115.36**	**311**	*e*PKP	**PKiKP**	**09 59 52.2**	**-0.7**			
AAA	**Alma-Ata**	**115.36**	**311**	*e*PKiKP	**PKiKP**	**09 59 52.1**	**-0.7**			
ULHL	**Ulahol**	**115.89**	**310**	P	**PKPdf**	**09 59 54.3**	**+0.3**			
	SNR=7.4									
KSH	**Kashi**	**116.15**	**307**	PKP	**PKiKP**	**09 59 55.7**	**+1.2**			
KSH				SKS	**SKSdf**	**10 07 05.6**	**+1.1**			
KSH				SKKS	**SKKSac**	**10 08 01.2**	**+2.4**			
KSH				LR	LR					
	comp=Z,480nm,22.7s									
KSH				LR	LR					
	comp=Z,480nm,18.8s									
KSH				LR	LR					
	comp=Z,810nm,23.2s									
TKM2	**Tokmak 2**	**116.34**	**310**	P	**PKPdf**	**09 59 54.4**	**-0.5**			
	SNR=14									
USP	**Ospenovka**	**117.12**	**311**	P	**PKPdf**	**09 59 55.4**	**-0.7**			
	SNR=7.2									
AAK	**Ala-Archa**	**117.17**	**310**	P	**PKPdf**	**09 59 55.9**	**-0.6**			
	SNR=7.5									
AAK	**Ala-Archa**	**117.17**	**310**	*i* PKPdf	**PKPdf**	**09 59 55.8**	**-0.6**			
	SNR=7.8									
AAK	**Ala-Archa**	**117.17**	**310**	*d i* PKiKP	**PKPdf**	**09 59 56.3**	**-0.1**			
UCH	**Uchtor**	**117.17**	**310**	P	**PKPdf**	**09 59 56.7**	**-0.1**			
	SNR=20									
SPITS	**Spitsbergen Ar**	**117.48**	**358**	PKP	**PKPdf**	**09 59 55.7**	**-0.2**			
	comp=Z,24nm,0.8s,baz=118,slow=4.8,SNR=16									
SUMG	**Summit**	**117.50**	**14**	*i* P	**PKPdf**	**09 59 56.6**	**+0.1**			
DAG	**Danmarks Havn**	**117.63**	**6**	*i* P	**PKPdf**	**09 59 54.8**	**-1.2**			
BRZS	**Berezniki**	**117.68**	**318**	*e*PKP	**PKPdf**	**09 59 56.6**	**-0.3**			
BRZS	**Berezniki**	**117.68**	**318**	*e*PKiKP	**PKPdf**	**09 59 56.6**	**-0.3**			
EKS2	**Erkin-Say**	**117.69**	**310**	P	**PKPdf**	**09 59 57.6**	**+0.2**			
	SNR=6.7									
BVAR	**Borovoye Array**	**118.55**	**322**	PKP	**PKPdf**	**09 59 58.0**	**-0.5**			
	comp=Z,31nm,0.7s,baz=78,slow=1.5,SNR=108									
BORK	**Borovoye**	**118.59**	**322**	*c i* PKiKP	**PKPdf**	**09 59 58.1**	**-0.5**			
BORK				MLR	MLR					
	comp=Z,1μm,20.0s									
DZA	**Taraz**	**119.47**	**311**	*e*PKP	**PKPdf**	**10 00 00.0**	**-0.6**			
DZA	**Taraz**	**119.47**	**311**	*e*PKiKP	**PKPdf**	**10 00 00.0**	**-0.6**			
DBG	**Daneborg**	**119.59**	**8**	*i* P	**PKPdf**	**09 59 59.3**	**-0.6**			
IVI	**Ivigtut**	**120.18**	**27**	*i* P	**PKPdf**	**10 00 01.6**	**+0.3**			
IUG	**Iuzhnay**	**120.50**	**310**	*e*PKP	**PKPdf**	**10 00 02.0**	**-0.8**			
IUG				*e*PP	**PP**	**10 01 29.2**	**-0.8**			
IUG	**Iuzhnay**	**120.50**	**310**	*e*PKiKP	**PKPdf**	**10 00 01.9**	**-0.8**			
IUG				*e*		10 01 29.1				
BRLS	**Boroldaу**	**120.54**	**311**	*e*PKP	**PKPdf**	**10 00 02.3**	**-0.4**			
BRLS				*e*PP	**PP**	**10 01 30.4**	**+0.2**			
BRLS	**Boroldaу**	**120.54**	**311**	*e*PKiKP	**PKPdf**	**10 00 02.3**	**-0.4**			
BRLS				*e*		10 01 30.3				
CHM	**Chimkent**	**120.80**	**310**	*e*PKP	**PKPdf**	**10 00 02.6**	**-0.7**			
CHM	**Chimkent**	**120.80**	**310**	*e*PKiKP	**PKPdf**	**10 00 02.5**	**-0.7**			
KBL	**Kabul**	**121.82**	**301**	P	**PKPdf**	**10 00 06.3**	**+0.6**			
	SNR=17									
SCO	**Scoresbysund**	**122.57**	**11**	*i* P	**PKPdf**	**10 00 06.1**	**+0.4**			
SVE	**Sverdlovsk**	**122.78**	**328**	*i* PKiKP	**PKPdf**	**10 00 06.3**	**-0.2**			
SVE				pmax	pmax					
	comp=Z,38nm,0.8s									
SVE				MLR	MLR					
	comp=Z,1μm,21.0s									
FOMA	**Nahampoana Res**	**123.83**	**224**	IAMs_20	IAMs_20	10 43 26.7				
	comp=Z,2μm,21.0s									
JNW	**Jan Mayen West**	**124.04**	**6**	*e*P	**PKiKP**	**10 00 09.6**	**+0.8**			
JMIC	**Jan Mayen**	**124.07**	**6**	PKP	**PKPdf**	**10 00 09.3**	**+0.7**			
	comp=Z,38nm,0.8s,baz=320,slow=23,SNR=2.6									
JMIC	**Jan Mayen**	**124.07**	**6**	*e*P	**PKPdf**	**10 00 09.5**	**+0.9**			
JNE	**Jan Mayen East**	**124.09**	**6**	*e*P	**PKPdf**	**10 00 08.5**	**-0.1**			
ARTI	**Arti**	**124.10**	**328**	IAMs_20	IAMs_20	11 05 12.3				
	comp=Z,1μm,19.0s									
ARTI	**Arti**	**124.10**	**328**	*i* PKiKP	**PKPdf**	**10 00 08.9**	**-0.2**			
ARTI						10 01 56.6				
ARTI						10 07 20.5				
ARTI				SP	SP	10 11 53.5	+6.2			
ARTI				SS	SS	10 18 39.2	-2.5			
ARTI				MLR	MLR					
	comp=Z,1μm,22.0s									
HAMF	**Hammerfest**	**124.30**	**353**	*e*P	**PKPdf**	**10 00 08.5**	**-0.5**			
LVZ	**Lovozero**	**125.05**	**348**	IAMs_20	IAMs_20	11 05 26.9				
	comp=Z,2μm,21.0s									
ARA0	**ARCESS Array S**	**125.12**	**352**	*e*P	**PKPdf**	**10 00 10.7**	**0.0**			
ARCES	**ARCESS Array B**	**125.12**	**352**	PKP	**PKPdf**	**10 00 10.6**	**-0.1**			
	comp=Z,23nm,0.7s,baz=16,slow=1.2,SNR=107									
ARCES				PKKPbc	**PKKPbc**	**10 09 53.2**	**+1.1**			
	comp=Z,1.9nm,0.8s,baz=197,slow=3.8,SNR=3.8									
APA	**Apatity**	**125.58**	**348**	*i* PKiKP	**PKPdf**	**10 00 06.9**	**-4.7**			
JETT	**Jettan, Norway**	**125.68**	**354**	*e*P	**PKPdf**	**10 00 11.3**	**-0.5**			
TRO	**Tromso**	**125.74**	**355**	*e*P	**PKPdf**	**10 00 11.0**	**-0.8**			
KTK1	**Kautokeino**	**125.90**	**353**	*e*P	**PKPdf**	**10 00 11.6**	**-0.6**			
VOI	**Vohitsoka**	**125.97**	**227**	IAMs_20	IAMs_20	10 48 34.9				
	comp=Z,2μm,22.0s									
KIRV	**Kirov**	**127.17**	**334**	*c i* PKiKP	**PKPdf**	**10 00 14.7**	**-0.1**			
ABPO	**Ambohimpanom**	**127.49**	**230**	IAMs_20	IAMs_20	10 50 39.4				
	comp=Z,2μm,20.0s									
LOF	**Lofoten**	**127.59**	**357**	*e*P	**PKPdf**	**10 00 12.4**	**-3.0**			
STEI	**Steigen**	**127.69**	**356**	*e*P	**PKPdf**	**10 00 12.6**	**-3.0**			
OPO	**Ambohidratompo**	**127.80**	**231**	PKP	**PKPdf**	**10 00 18.6**	**+1.1**			
	comp=Z,7.6nm,0.8s,baz=113,slow=4.3,SNR=5.6									
FAUS	**Fauske**	**128.23**	**356**	*e*P	**PKPdf**	**10 00 15.5**	**-1.2**			
VAGH	**Vaagaholmen**	**129.00**	**357**	*e*P	**PKPdf**	**10 00 18.1**	**0.0**			
RAUS	**Rausandaksla**	**129.25**	**356**	*e*P	**PKPdf**	**10 00 18.6**	**-0.1**			
KLMR	**Klimovskoe**	**129.39**	**340**	*e*PKiKP	**PKPdf**	**10 00 17.6**	**-1.4**			
KLMR				*e*		10 02 27.3				
KLMR				pmax	pmax					
	comp=Z,74nm,1.4s									
KLMR				MLR	MLR					
	comp=Z,2μm,22.0s									
STOK	**Stokkvaagen**	**129.41**	**357**	*e*P	**PKPdf**	**10 00 18.5**	**-0.4**			
MOR8	**Moi Rana**	**129.48**	**356**	*e*P	**PKPdf**	**10 00 18.5**	**-0.6**			
LEIR	**Leirfjorden**	**129.62**	**357**	*e*P	**PKPdf**	**10 00 17.4**	**-1.9**			
JLN	**Jalan Bani Buh**	**130.37**	**286**	P	**PKiKP**	**10 00 25.0**	**+2.1**			
	SNR=5.7									
WSAR	**Wadi Sarin**	**131.12**	**287**	P	**PKiKP**	**10 00 25.7**	**+1.3**			
NSS	**Namsos**	**131.25**	**357**	*e*P	**PKPdf**	**10 00 21.6**	**-0.8**			
BELG	**Belogornoye**	**131.53**	**328**	*d i* PKiKP	**PKPdf**	**10 00 23.3**	**0.0**			
JMDO	**Jabal Madar**	**131.58**	**286**	P	**PKPdf**	**10 00 24.8**	**+0.5**			
SMDO	**Samad**	**131.65**	**287**	P	**PKPdf**	**10 00 24.7**	**+0.1**			
	SNR=11									
MHTO	**MHTO**	**131.66**	**284**	P	**PKiKP**	**10 00 26.0**	**+0.5**			
	SNR=10									
DQM	**DQM**	**132.00**	**283**	P	**PKPdf**	**10 00 27.0**	**+0.7**			
	SNR=7.4									
HOQ	**Hoqain**	**132.34**	**288**	P	**PKPdf**	**10 00 27.1**	**+1.3**			
BOSA	**Boshof**	**132.45**	**202**	PKP	**PKiKP**	**10 00 27.6**	**+0.4**			
	comp=Z,17nm,0.8s,baz=151,slow=2.5,SNR=17									
FINES	**FINESS Array B**	**132.49**	**348**	PKhKP	PKPpre	10 00 15.2				
	comp=Z,0.5nm,0.3s,baz=138,slow=14,SNR=7.1									
FINES				PKP	**PKPdf**	**10 00 24.5**	**-0.3**			
	comp=Z,23nm,0.8s,baz=145,slow=7.0,SNR=14									
SOHO	**SOHO**	**133.05**	**288**	P	**PKPdf**	**10 00 27.0**	**-0.1**			
SOHO	**SOHO**	**133.05**	**288**	*i* PKPdf	**PKPdf**	**10 00 27.0**	**-0.1**			
	SNR=34									
BANOM	**Banah**	**133.22**	**291**	P	**PKPdf**	**10 00 27.9**	**+0.5**			
BANOM	**Banah**	**133.22**	**291**	PKPdf	**PKPdf**	**10 00 27.

LABN				pmax	pmax			
	comp=Z,29nm,0.6s							
EKA	**Eskdalemuir Ar**	**139.80**	**9**	PKhKP	PKPpre	10 00 29.1		
	comp=Z,1.6nm,0.6s,baz=315,slow=1.7,SNR=4.5							
EKA				PKP		**PKPdf**	**10 00 39.3**	**+0.7**
	comp=Z,3.0nm,0.6s,baz=347,slow=1.5,SNR=10							
SOC	**Sochi**	**140.88**	**322**	*e*PKIKP		**PKPdf**	**10 00 40.9**	**-0.1**
SOC				*e*			10 03 47.0	
SOC				*e*PPP	PPP		10 06 43.6	
SOC				*e*SSS	SSS		10 27 25.7	
SOC				pmax	pmax			
	comp=Z,19nm,0.8s							
AKASG	**Malin Array Be**	**140.95**	**338**	PKhKP	PKPpre	10 00 33.0		
	comp=Z,7.3nm,0.7s,baz=41,slow=4.0,SNR=15							
KIEV	**Kiev**	**140.96**	**338**	⇓P		**PKPdf**	**10 00 34.9**	**-6.0**
KIEV	**Kiev**	**140.96**	**338**	*i* PKPdf		**PKPdf**	**10 00 35.1**	**-5.8**
	SNR=11							
KIEV	**Kiev**	**140.96**	**338**	⇓PKHKP	PKPpre	10 00 34.9		
RGN	**Rugen**	**141.08**	**354**	IAMs_20	IAMs_20	11 10 16.9		
	comp=Z,2μm,18.0s							
ANN	**Anapa**	**141.46**	**325**	*i* P		**Pdif**	**09 57 56.5**	**-4.0**
ANN				*i*			10 00 39.6	
ANN				*e*			10 03 42.8	
ANN				pmax	pmax			
	comp=Z,42nm,1.1s							
LSZ	**Lusaka**	**142.73**	**215**	IAMs_20	IAMs_20	10 55 09.5		
	comp=Z,2μm,22.0s							
LSZ	**Lusaka**	**142.73**	**215**	PKhKP	PKPpre	10 00 40.9		
	comp=Z,24nm,0.7s,baz=162,slow=3.0,SNR=19							
SIM	**Simferopol'**	**143.15**	**328**	*i* PKIKP		**PKPdf**	**10 00 44.5**	**-0.5**
RAYN	**Ar Rayn**	**143.16**	**288**	P		PKPbc	10 00 43.3	+0.6
RAYN	**Ar Rayn**	**143.16**	**288**	*i* PKPdf		PKPab	10 00 41.9	+0.6
	SNR=36							
RAYN	**Ar Rayn**	**143.16**	**288**	⇓PKHKP	PKPpre	10 00 41.3		
SORM	**Soroca**	**143.37**	**336**	⇑P		PKPab	10 00 42.7	+1.4
SORM	**Soroca**	**143.37**	**336**	⇑PKIKP	PKPbc	10 00 42.7	+0.3	
KWP	**Kalwaria Pacla**	**144.00**	**343**	*e*PKPdf	PKPab	10 00 44.0	+0.2	
PURM	**Purcari**	**144.02**	**333**	⇑P		PKPab	10 00 44.9	+1.0
KIS	**Kishinev**	**144.10**	**334**	⇓*e*PKP		**PKPab**	**10 00 44.0**	**-0.1**
	comp=Z,700nm,1.5s							
KIS				*i* pPKP			10 05 34.0	
MILM	**Milestii Mici**	**144.16**	**334**	⇑*i* PKP		**PKPab**	**10 00 43.0**	**-1.4**
	comp=Z,290nm,2.9s							
MILM				*e*L	L		10 51 18.0	
MILM				LRM	MLR		10 57 57.0	
	comp=Z,900nm,27.0s							
OJC	**Ojcow**	**144.22**	**346**	*e*PKPdf	**PKPab**	**10 00 44.6**	**+0.1**	
CLL	**Collm**	**144.32**	**354**	*i* PKIKP	PKPbc	10 00 45.9	+0.8	
CLL				pmax	pmax			
	comp=Z,71nm,0.8s							
CLL				MLR	MLR			
	comp=Z,4μm,19.1s							
KSP	**Ksiaz**	**144.32**	**350**	*e*PKPdf	**PKPab**	**10 00 45.5**	**+0.7**	
KIBK	**Kibwezi**	**144.49**	**242**	P	PKPbc	10 00 48.4	+1.4	
	SNR=144							
STHS	**Stebnicka Huta**	**144.60**	**344**	*e*PKIKP	**PKPab**	**10 00 45.8**	**-0.2**	
STHS	**Stebnicka Huta**	**144.60**	**344**	*e*PKP	**PKPab**	**10 00 45.8**	**-0.2**	
CHVC	**Chvalec**	**144.61**	**350**	*e*PKIKP	**PKPab**	**10 00 46.5**	**+0.5**	
CHVC	**Chvalec**	**144.61**	**350**	*e*PKP	**PKPab**	**10 00 46.5**	**+0.5**	
OSTC	**Ostas**	**144.61**	**350**	*e*PKIKP	PKPbc	10 00 47.2	+1.0	
OSTC	**Ostas**	**144.61**	**350**	*e*PKP	PKPbc	10 00 47.2	+1.0	
UPC	**Upice**	**144.69**	**350**	*e*PKIKP	**PKPab**	**10 00 46.9**	**+0.6**	
UPC	**Upice**	**144.69**	**350**	*e*PKP	**PKPab**	**10 00 46.9**	**+0.6**	
DPC	**Dobruska-Polom**	**144.79**	**350**	*e*PKIKP	**PKPab**	**10 00 47.2**	**+0.5**	
DPC	**Dobruska-Polom**	**144.79**	**350**	*e*PKP	**PKPab**	**10 00 47.2**	**+0.5**	
VASR	**Vaslui**	**144.81**	**335**	⇑P	**PKPab**	**10 00 46.9**	**+0.1**	
NIE	**Niedzica**	**144.84**	**345**	*e*PKPdf	**PKPab**	**10 00 47.6**	**+0.7**	
STEB	**Steborice**	**144.92**	**348**	*e*PKP	**PKPab**	**10 00 47.7**	**+0.6**	
BURAR	**Bucovina Array**	**144.97**	**339**	⇑P	**PKPab**	**10 00 47.5**	**0.0**	
BURAR	**Bucovina Array**	**144.97**	**339**	⇑PKIKP	**PKPab**	**10 00 47.5**	**0.0**	
KRLC	**Kraliky**	**144.98**	**349**	*e*PKIKP	**PKPab**	**10 00 47.6**	**+0.2**	
KRLC				MLR	MLR			
	comp=Z,2μm,20.8s							
KRLC	**Kraliky**	**144.98**	**349**	*e*PKP	**PKPab**	**10 00 47.6**	**+0.2**	
KRLC				AMS	AMS	11 04 20.0		
	comp=Z,2μm,20.8s							
ATD	**Arta Tunnel**	**145.06**	**268**	P		**PKPdf**	**10 00 50.9**	**+1.6**
	SNR=22							
UCC	**Uccle**	**145.07**	**3**	*d*PKP	**PKPbc**	**10 00 47.8**	**+0.2**	
MORC	**Moravsky Berou**	**145.12**	**348**	⇓P	**PKPbc**	**10 00 47.4**	**-0.4**	
MORC	**Moravsky Berou**	**145.12**	**348**	*e*PKP	**PKPbc**	**10 00 48.0**	**+0.1**	
MORC	**Moravsky Berou**	**145.12**	**348**	⇓PKIKP	**PKPbc**	**10 00 47.4**	**-0.4**	
BEBN	**Eben Emael**	**145.12**	**2**	*d*PKP	**PKPbc**	**10 00 47.6**	**-0.1**	
BZK	**Bozkurt**	**145.20**	**324**	⇑P	**PKPdf**	**10 00 49.0**	**+0.7**	
LANS	**Liptovska Anna**	**145.29**	**346**	*e*PKIKP	**PKPdf**	**10 00 49.7**	**+1.0**	
LANS	**Liptovska Anna**	**145.29**	**346**	*e*PKP	**PKPdf**	**10 00 49.7**	**+1.0**	
MEM	**Membach**	**145.32**	**1**	*d*PKP	**PKPbc**	**10 00 47.7**	**-0.6**	
VLDR	**Vladesti**	**145.33**	**334**	⇓P	**PKPbc**	**10 00 49.4**	**+0.9**	
BSTI	**Sart Tilman**	**145.33**	**2**	*d*PKP	**PKPbc**	**10 00 48.6**	**+0.2**	
BTNL	**Ternell**	**145.34**	**1**	*d*PKP	**PKPbc**	**10 00 48.0**	**-0.5**	
PRA	**Prague**	**145.36**	**352**	*e*PKIKP	**PKPbc**	**10 00 49.0**	**+0.5**	
PRA	**Prague**	**145.36**	**352**	*e*PKP	**PKPbc**	**10 00 49.0**	**+0.5**	
TESR	**Tescani**	**145.37**	**336**	⇓P	**PKPbc**	**10 00 48.4**	**-0.3**	
PRU	**Pruhonice**	**145.42**	**352**	*e*PKIKP	**PKPbc**	**10 00 49.6**	**+0.9**	
PRU				MLR	MLR			
	comp=N,2μm,21.1s							
PRU	**Pruhonice**	**145.42**	**352**	*e*PKP	**PKPbc**	**10 00 49.6**	**+0.9**	
PRU				AMS	AMS	11 03 20.0		
GHRR		**145.43**	**335**	⇑P	**PKPbc**	**10 00 49.3**	**+0.1**	
MAUC	**Maruska**	**145.45**	**348**	*e*PKP	**PKPab**	**10 00 49.9**	**+0.8**	
BCLA	**Clavier**	**145.49**	**2**	*d*PKP	**PKPdf**	**10 00 48.4**	**-0.5**	
SCTR	**Scanteiesti**	**145.50**	**334**	⇓P	**PKPdf**	**10 00 49.8**	**+0.7**	
BMR	**Baia Mare**	**145.50**	**340**	⇓P	**PKPdf**	**10 00 49.2**	**+0.2**	
BMR	**Baia Mare**	**145.50**	**340**	⇓PKIKP	**PKPdf**	**10 00 49.2**	**+0.2**	
BGES	**Gesves**	**145.51**	**2**	*d*PKP	**PKPdf**	**10 00 49.0**	**0.0**	
TATR	**Tatarca**	**145.53**	**334**	⇑P	**PKPdf**	**10 00 49.9**	**+0.8**	
BHOU	**Houvegnez**	**145.57**	**1**	*d*PKP	**PKPdf**	**10 00 49.5**	**+0.4**	
BMRD	**Maredsous**	**145.58**	**3**	*d*PKP	**PKPdf**	**10 00 49.0**	**0.0**	
ONER	**Baraj Valea Uz**	**145.61**	**336**	⇑P	**PKPdf**	**10 00 50.0**	**+0.8**	
COSR	**Cosmesti PH**	**145.64**	**335**	⇓P	**PKPab**	**10 00 50.7**	**+0.9**	
KECS	**Kecovo**	**145.66**	**344**	*e*PKIKP	**PKPbc**	**10 00 50.4**	**+0.9**	
KECS	**Kecovo**	**145.66**	**344**	*e*PKP	**PKPbc**	**10 00 50.4**	**+0.9**	
NEGRR	**Negrea**	**145.66**	**334**	⇑P	**PKPdf**	**10 00 50.3**	**+0.9**	
PANC	**Panciu**	**145.69**	**335**	⇓P	**PKPbc**	**10 00 50.5**	**+0.8**	
IZVR	**Izvoarele**	**145.70**	**334**	⇑P	**PKPdf**	**10 00 50.3**	**+0.9**	
TUDR		**145.70**	**334**	⇓P	**PKPbc**	**10 00 50.4**	**+0.7**	
SCHL	**Schela**	**145.71**	**334**	⇓P	**PKPdf**	**10 00 50.3**	**+0.9**	
SCHL	**Schela**	**145.73**	**334**	⇑P	**PKPdf**	**10 00 49.4**	**0.0**	
RCHB	**Rochefort**	**145.75**	**2**	*d*PKP	**PKPdf**	**10 00 49.5**	**+0.2**	
VRAC	**Vranov**	**145.75**	**349**	⇑P	**PKPdf**	**10 00 50.3**	**+0.9**	
VRAC	**Vranov**	**145.75**	**349**	*e*PKP	**PKPdf**	**10 00 50.1**	**+0.7**	
VRAC	**Vranov**	**145.75**	**349**	⇑PKIKP	**PKPdf**	**10 00 50.3**	**+0.9**	
DOU	**Dourbes**	**145.78**	**3**	*d*PKP	**PKPdf**	**10 00 50.1**	**+0.7**	
KMBO	**Kilima Mbogo**	**145.80**	**243**	PKPbc	**PKPdf**	**10 00 51.2**	**+0.4**	
	comp=N,143nm,1.1s,baz=80,slow=3.3,SNR=50							
ODBI	**Odobesti**	**145.82**	**335**	⇑P	**PKPbc**	**10 00 51.0**	**+0.8**	
CFR	**Carcaliu**	**145.83**	**333**	⇑P	**PKPdf**	**10 00 50.4**	**+0.8**	
CIDE	**Kastamonu/Cide**	**145.84**	**325**	⇑P	**PKPdf**	**10 00 50.7**	**+0.9**	
VRI	**Vrincioaia**	**145.87**	**335**	⇑P	**PKPbc**	**10 00 51.0**	**+0.7**	
VRI	**Vrincioaia**	**145.87**	**335**	⇑PKP2	**PKPbc**	**10 00 51.0**	**+0.7**	
PLOR	**Plostina**	**145.91**	**335**	⇑P	**PKPdf**	**10 00 50.3**	**+0.5**	
PLOR	**Plostina**	**145.91**	**335**	⇑PKP2	**PKPdf**	**10 00 50.3**	**+0.5**	
TREC	**Trest**	**145.95**	**350**	*e*PKP2	**PKPdf**	**10 00 50.6**	**+0.8**	
TREC	**Trest**	**145.95**	**350**	*e*PKP	**PKPdf**	**10 00 50.6**	**+0.8**	
TPGR	**Topolog**	**145.96**	**333**	⇓P	**PKPbc**	**10 00 51.3**	**+0.7**	
JAVC	**Velka Javorina**	**145.97**	**348**	*e*PKP	**PKPab**	**10 00 51.9**	**+0.8**	
ZVC	**Zvikov**	**146.01**	**352**	*e*PKP	**PKPbc**	**10 00 51.1**	**+0.5**	
KRUC	**Moravsky**	**146.02**	**349**	*e*PKP	**PKPdf**	**10 00 50.5**	**+0.6**	
OZUR		**146.05**	**337**	⇑P	**PKPdf**	**10 00 51.3**	**+1.2**	
BISRR	**Bisoca**	**146.13**	**335**	⇑P	**PKPdf**	**10 00 51.2**	**+0.9**	
WLF	**Walferdange**	**146.26**	**1**	*d*PKP	**PKPbc**	**10 00 52.0**	**+0.7**	
TIRR	**Tirgusor**	**146.27**	**332**	⇑P	**PKPdf**	**10 00 51.8**	**+1.4**	
TIRR	**Tirgusor**	**146.27**	**332**	⇑PKP2	**PKPdf**	**10 00 51.8**	**+1.4**	
DOPR	**Dopca**	**146.31**	**337**	⇓P	**PKPbc**	**10 00 52.3**	**+0.7**	
HARR	**Harsova**	**146.31**	**333**	⇓P	**PKPbc**	**10 00 52.0**	**+0.4**	
HARR	**Harsova**	**146.31**	**333**	⇓PKP2	**PKPbc**	**10 00 52.0**	**+0.4**	
CJR	**Cluj-Napoca**	**146.31**	**339**	⇓P	**PKPdf**	**10 00 51.9**	**+1.4**	
CJR	**Cluj-Napoca**	**146.31**	**339**	⇓PKP2	**PKPdf**	**10 00 51.9**	**+1.4**	
PSZ	**Piszkesteto**	**146.33**	**344**	⇑P	**PKPdf**	**10 00 51.5**	**+1.0**	
PSZ	**Piszkesteto**	**146.33**	**344**	⇑PKP2	**PKPdf**	**10 00 51.5**	**+1.0**	
SMOL	**Smolenice**	**146.34**	**348**	*e*PKP2	**PKPab**	**10 00 53.4**	**+0.9**	
TLBR	**Topalu**	**146.37**	**333**	⇓P	**PKPdf**	**10 00 52.0**	**+1.4**	
KHC	**Kasperske Hory**	**146.39**	**352**	*e*PKP2	**PKPdf**	**10 00 51.3**	**+0.8**	
KHC				MLR	MLR			
	comp=Z,2μm,21.4s							
KHC	**Kasperske Hory**	**146.39**	**352**	*e*PKP	**PKPdf**	**10 00 51.3**	**+0.8**	
KHC				AMS	AMS	11 09 10.0		
	comp=Z,2μm,21.4s							
NEHR	**Nehoiu**	**146.40**	**335**	⇑P	**PKPdf**	**10 00 52.2**	**+1.5**	
EFOR	**EFORIE**	**146.47**	**331**	⇑P	**PKPdf**	**10 00 51.5**	**+0.8**	
MFTR	**Murfatlar**	**146.49**	**332**	⇓P	**PKPdf**	**10 00 52.3**	**+1.5**	
MLR	**Muntele Rosu**	**146.49**	**336**	⇑P	**PKPdf**	**10 00 51.6**	**+0.7**	
MLR	**Muntele Rosu**	**146.49**	**336**	⇑PKP2	**PKPdf**	**10 00 51.6**	**+0.7**	
MARR	**Marisel-Cluj**	**146.50**	**340**	⇑P	**PKPbc**	**10 00 53.6**	**+1.3**	
MODS	**Modra-Piesok**	**146.51**	**348**	*e*PKP2	**PKPbc**	**10 00 52.9**	**+0.7**	
MODS	**Modra-Piesok**	**146.51**	**348**	*e*PKP	**PKPbc**	**10 00 52.9**	**+0.7**	
MDB	**Medias**	**146.53**	**338**	⇑P	**PKPbc**	**10 00 52.8**	**+0.5**	
MDB	**Medias**	**146.53**	**338**	⇑PKP2	**PKPbc**	**10 00 52.8**	**+0.5**	
DRGR		**146.53**	**340**	⇑P	**PKPbc**	**10 00 52.5**	**+0.1**	
DRGR		**146.53**	**340**	⇑PKP2	**PKPbc**	**10 00 52.5**	**+0.1**	
ISR	**Istrita**	**146.55**	**335**	⇓P	**PKPbc**	**10 00 52.9**	**+0.5**	
ISR	**Istrita**	**146.55**	**335**	⇓PKP2	**PKPbc**	**10 00 52.9**	**+0.5**	
CKRC	**Cesky Krumlov**	**146.60**	**351**	*e*PKP2	**PKPdf**	**10 00 51.6**	**+0.7**	
CKRC				MLR	MLR			
	comp=Z,2μm,22.0s							
CKRC	**Cesky Krumlov**	**146.60**	**351**	*e*PKP	**PKPdf**	**10 00 51.6**	**+0.7**	
CKRC				AMS	AMS	11 04 30.0		
	comp=Z,2μm,22.0s							
GERES	**GERESS Array B**	**146.66**	**352**	PKPbc	**PKPdf**	**10 00 52.6**	**+1.5**	
	comp=Z,20nm,0.7s,baz=3.4,slow=1.9,SNR=92							
MANR	**Mangalia**	**146.69**	**331**	⇓P	**PKPbc**	**10 00 53.3**	**+0.6**	
TSMN	**Mangalia Port-**	**146.70**	**331**	⇑P	**PKPbc**	**10 00 54.2**	**+1.4**	
ZST	**Bratislava**	**146.71**	**348**	*e*PKP2	**PKPab**	**10 00 54.7**	**+0.8**	
ZST	**Bratislava**	**146.71**	**348**	*e*PKP	**PKPab**	**10 00 54.7**	**+0.8**	
ICOR	**Ion Corvin**	**146.81**	**332**	⇓P	**PKPbc**	**10 00 54.1**	**+1.0**	
SRO	**Srobarova**	**146.81**	**346**	*e*PKP2	**PKPbc**	**10 00 53.9**	**+0.9**	
SRO	**Srobarova**	**146.81**	**346**	*e*PKP	**PKPbc**	**10 00 53.9**	**+0.9**	
BR131	**Keskin Array S**	**146.83**	**321**	P	**PKPbc**	**10 00 53.7**	**+0.1**	
	SNR=143							
BRTR	**Keskin Array B**	**146.83**	**321**	PKPbc	**PKPbc**	**10 00 53.9**	**+0.4**	
	comp=Z,145nm,0.9s,baz=123,slow=2.0,SNR=249							
VOIR		**146.88**	**337**	⇓P	**PKPbc**	**10 00 53.8**	**+0.4**	
VOIR		**146.88**	**337**	⇓PKP2	**PKPbc**	**10 00 53.8**	**+0.4**	
TNR	**Turnu Rosu**	**146.99**	**338**	⇓P	**PKPbc**	**10 00 54.2**	**+0.6**	
TNR	**Turnu Rosu**	**146.99**	**338**	⇓PKP2	**PKPbc**	**10 00 54.2**	**+0.6**	
KIRS	**Kirsehir-Merke**	**147.02**	**320**	⇑P	**PKPbc**	**10 00 54.1**	**+0.1**	
PSN	**Preselentsi**	**147.03**	**331**	P	**PKPbc**	**10 00 54.1**	**+0.3**	
ARR	**Arges**	**147.10**	**337**	⇑P	**PKPbc**	**10 00 55.1**	**+1.1**	
STU	**Stuttgart**	**147.12**	**357**	IAMs_20	IAMs_20	11 04 48.3		
	comp=Z,2μm,21.0s							
CONA	**Konrad Observa**	**147.21**	**349**	*e*PKP	**PKPdf**	**10 00 52.0**	**0.0**	
	comp=Z,41nm,0.8s,SNR=51							
ANTO	**Ankara**	**147.24**	**322**	P	**PKPdf**	**10 00 53.1**	**+0.8**	
ANTO	**Ankara**	**147.24**	**322**	⇑P	**PKPbc**	**10 00 55.2**	**+0.6**	
ANTO	**Ankara**	**147.24**	**322**	⇑PKP2	**PKPbc**	**10 00 55.2**	**+0.6**	
DEV	**Deva**	**147.27**	**339**	⇓P	**PKPdf**	**10 00 53.7**	**+1.7**	
DEV	**Deva**	**147.27**	**339**	⇓PKP2	**PKPdf**	**10 00 53.7**	**+1.7**	
SIRR	**Siria**	**147.33**	**341**	⇓P	**PKPdf**	**10 00 52.9**	**+0.7**	
LOT	**Lotru**	**147.34**	**338**	⇓P	**PKPdf**	**10 00 52.3**	**-0.1**	
RONA	**Rosalia, Austr**	**147.35**	**348**	*e*PKP	**PKPdf**	**10 00 52.3**	**+0.1**	
	comp=Z,84nm,0.9s							
MOA	**Molln**	**147.55**	**351**	*e*PKP	**PKPdf**	**10 00 54.2**	**+1.7**	
	comp=Z,29nm,1.0s							
BFO	**Black Forest**	**147.59**	**359**	IAMs_20	IAMs_20	11 10 40.7		
	comp=Z,2μm,20.0s							
SURR	**Surduc**	**147.64**	**340**	⇑P	**PKPdf**	**10 00 51.4**	**-1.3**	
NEF	**NEVSHA**	**147.72**	**332**	P	**PKPbc**	**10 00 56.7**	**+1.0**	
ECH	**Echery**	**147.72**	**360**	IAMs_20	IAMs_20	11 10 40.1		
	comp=Z,2μm,21.0s							
PRD	**Provadia**	**147.74**	**332**	P	**PKPbc**	**10 00 56.4**	**+0.7**	
GZR	**Gura Zlata**	**147.74**	**339**	⇑P	**PKPbc**	**10 00 55.7**	**-0.1**	
GZR	**Gura Zlata**	**147.74**	**339**	⇑PKP2	**PKPbc**	**10 00 55.7**	**-0.1**	
BIOA	**Bad Ischl, Aus**	**147.80**	**352**	*e*pPKP	**PKPbc**	**10 00 55.6**	**-0.2**	
	comp=Z,36nm,0.8s							
RAZG	**Razgrad**	**147.82**	**333**	⇓P	**PKPbc**	**10 00 56.1**	**+0.1**	
ARSA	**Arzberg**	**147.92**	**349**	*i* PKP	**PKPdf**	**10 00 52.7**	**-0.4**	
	comp=Z,16nm,1.0s,SNR=15							
BZS	**Buzias**	**147.93**	**341**	⇑P	**PKPbc**	**10 00 56.4**	**+0.2**	
BZS	**Buzias**	**147.93**	**341**	⇑PKP2	**PKPbc**	**10 00 56.4**	**+0.2**	
LOZB	**Loznitsa**	**147.94**	**333**	⇑P	**PKPbc**	**10 00 56.7**	**+0.4**	
BEIL	**Beino**	**147.97**	**311**	*e*P	**PKPdf**	**10 00 54.0**	**+0.4**	
LESA	**Schwarzleotal**	**148.18**	**353**	*i* PKP	**PKPdf**	**10 00 53.6**	**-0.1**	
	comp=Z,15nm,0.9s,SNR=9.0							
SRE	**Strehaia**	**148.22**	**338**	⇓P	**PKPbc**	**10 00 57.5**	**+0.5**	
SRE	**Strehaia**	**148.22**	**338**	⇓PKP2	**PKPbc**	**10 00 57.5**	**+0.5**	
MORH	**Mrgy, Hungar**	**148.23**	**345**	*e*P	**PKPdf**	**10 00 53.6**	**0.0**	
MORH	**Mrgy, Hungar**	**148.23**	**345**	⇓P	**PKPdf**	**10 00 53.3**	**-0.3**	
HWQ	**Hawqa**	**148.26**	**311**	*e*P	**PKPdf**	**10 00 53.7**	**-0.5**	
BANR	**Banloc**	**148.29**	**341**	⇓P	**PKPbc**	**10 00 58.5**	**+1.4**	
SZH	**Strazhitsa**	**148.29**	**333**	P	**PKPbc**	**10 00 57.3**	**+0.1**	
SZH	**Strazhitsa**	**148.29**	**333**	P	**PKPbc**	**10 00 57.6**	**+0.4**	
RETA	**Reutte**	**148.31**	**355**	*i* PKP	**PKPdf**	**10 00 52.6**	**-1.2**	
	comp=Z,26nm,1.1s,SNR=12							
HERR	**Herculane**	**148.31**	**339**	⇓P	**PKPbc**	**10 00 57.4**	**+0.1**	
VLAD	**Vladila**	**148.34**	**336**	⇑P	**PKPbc**	**10 00 57.6**	**+0.3**	
WATA	**Walderalm**	**148.39**	**354**	*i* PKP	**PKPdf**	**10 00 53.9**	**-0.2**	
	comp=Z,18nm,0.9s,SNR=12							
MOTA	**Moosalm**	**148.42**	**355**	*i* PKP	**PKPdf**	**10 00 53.8**	**-0.3**	
	comp=Z,67nm,1.0s,SNR=16							
BEHE	**Becsehely**	**148.43**	**347**	*e*P	**PKPbc**	**10 00 57.2**	**-0.3**	
KBA	**Koelnbreinsper**	**148.44**	**352**	*i* PKP	**PKPdf**	**10 00 53.5**	**-0.7**	
	comp=Z,19nm,1.0s,SNR=21							
WTTA	**Wattenberg**	**148.45**	**354**	*i* PKP	**PKPdf**	**10 00 53.9**	**-0.3**	
	comp=Z,38nm,0.9s,SNR=17							
DJES	**Djerdap**	**148.47**	**339**	⇓P	**PKPbc**	**10 00 57.0**	**-0.6**	
SQTA	**Sankt Quirin**	**148.54**	**355**	*i* PKP	**PKPdf**	**10 00 53.7**	**-0.5**	
	comp=Z,24nm,0.9s,SNR=12							
SOKA	**Soboth**	**148.56**	**350**	*i* PKP	**PKPdf**	**10 00 53.8**	**-0.5**	
	comp=Z,33nm,1.0s,SNR=23							
DAVA	**Damuels**	**148.57**	**356**	*i* PKP	**PKPdf**	**10 00 54.0**	**-0.4**	
	comp=Z,26nm,1.0s,SNR=20							
CTYL	**Yalikoy Yolu**	**148.60**	**329**	⇑P	**PKPbc**	**10 00 59.2**	**+1.2**	
ELND	**Elena**	**148.61**	**333**	⇓P	**PKPdf**	**10 00 54.5**	**+0.1**	
MDVR	**Moldovita**	**148.64**	**340**	⇓P	**PKPbc**	**10 00 57.9**	**-0.2**	
BHL	**Bhannes**	**148.65**	**310**	*e*P	**PKPdf**	**10 00 54.1**	**-0.7**	
PUNG	**Punghina**	**148.66**	**338**	⇑P	**PKPdf**	**10 00 57.0**	**+2.7**	
JMB	**Yambol**	**148.66**	**332**	P	**PKPbc**	**10 00 57.9**	**-0.3**	
JMB	**Yambol**	**148.66**	**332**	P	**PKPbc**	**10 00 58.5**	**+0.3**	
PVL	**Pavlikeni**	**148.75**	**334**	P	**PKPbc**	**10 00 58.8**	**+0.4**	
PLVB	**Pleven**	**148.76**	**335**	⇑P	**PKPbc**	**10 00 59.1**	**+0.6**	
FETA	**Feichten**	**148.78**	**355**	*i* PKP	**PKPdf**	**10 00 54.4**	**-0.4**	
	comp=Z,37nm,1.2s,SNR=21							
QRWL	**Qaraoun**	**148.80**	**310**	*e*P	**PKPdf**	**10 00 55.6**	**+0.6**	
MYKA	**Terra Mystica**	**148.83**	**351**	*i* PKP	**PKPdf**	**10 00 54.0**	**-0.7**	
	comp=Z,25nm,0.8s,SNR=20							
SHBL	**Chebaa**	**148.84**	**309**	*e*P	**PKPdf**	**10 00 56.0**	**+0.7**	
PHSR	**Pinarhisar**	**148.86**	**330**	⇑P	**PKPbc**	**10 00 59.2**	**+0.4**	
ABTA	**Abfaltersbach**	**148.87**	**353**	*i* PKP	**PKPdf**	**10 00 53.7**	**-1.1**	
	comp=Z,33nm,0.9s,SNR=17							
FUORN	**Ofenpass-Fuorn**	**149.21**	**356**	IAMs_20	IAMs_20	11 21 17.5		
	comp=Z,2μm,20.0s							
MMAI	**Mount Meron Ar**	**149.25**	**309**	PKPbc	**PKPbc**	**10 01 01.3**	**+1.2**	
	comp=Z,143nm,0.8s,baz=57,slow=3.1,SNR=108							
LJU	**Ljubljana**	**149.27**	**350**	*e*PKP	**PKPdf**	**10 00 55.8**	**+0.5**	
LJU				*i* PKPbc		**PKPbc**	**10 00 59.7**	**0.0**
CRNS	**Crni Vrh**	**149.27**	**350**	*i* PKPbc	**PKPbc**	**10 00 59.3**	**-0.4**	
BLKB	**Belogradchik**	**149.31**	**338**	⇓P	**PKPbc**	**10 00 59.9**	**0.0**	
DIM	**Dimitrovgrad**	**149.45**	**332**	P	**PKPbc**	**10 01 00.6**	**+0.4**	
BAND	**Balkesir-Ban**	**149.53**	**327**	⇓P	**PKPbc**	**10 01 00.3**	**-0.2**	
BOVS	**Bovan**	**149.65**	**339**	⇑P	**PKPbc**	**10 01 00.4**	**-0.2**	
BOJS	**Bojanci**	**149.66**	**349**	*i* PKPbc	**PKPbc**	**10 01 00.9**	**+0.3**	
PGB	**Panagyurishte**	**149.67**	**335**	P	**PKPbc**	**10 01 00.9**	**+0.1**	
PLD	**Plovdiv**	**149.73**	**333**	P	**PKPbc**	**10 01 00.8**	**0.0**	
SLATY	**Slatina**	**149.86**	**346**	*e*P	**PKPbc**	**10 01 01.5**	**+0.4**	
KDZ	**Kurdzhali**	**149.89**	**332**	P	**PKPbc**	**10 01 01.1**	**-0.2**	
KDZ	**Kurdzhali**	**149.89**	**332**	P	**PKPbc**	**10 01 01.4**	**+0.1**	
VTS	**Vitosha**	**149.96**	**336**	P	**PKPbc**	**10 01 01.8**	**+0.2**	
VTS	**Vitosha**	**149.96**	**336**	P	**PKPbc**	**10 01 02.0**	**+0.4**	
BLY	**Banja Luka**	**149.96**	**346**	*e*P	**PKPbc**	**10 01 01.4**	**0.0**	
BLY	**Banja Luka**	**149.96**	**346**	⇑P	**PKPbc**	**10 01 01.8**	**+0.4**	
RZN	**Rozhen**	**150.10**	**333**	P	**PKPbc**	**10 01 01.8**	**-0.3**	
RZN	**Rozhen**	**150.10**	**333**	P	**PKPbc**	**10 01 02.0**	**-0.1**	
ALN	**Alexandroupoli**	**150.14**	**330**	P	**PKPbc**	**10 01 00.9**	**-1.0**	
RDO	**Rodhopi**	**150.18**	**331**	P	**PKPbc**	**10 01 01.4**	**-0.6**	
ENEZ	**Enez**	**150.21**	**330**	P	**PKPbc**	**10 01 01.4**	**-0.6**	
RUDO	**Rudo**	**150.42**	**342**	*e*P	**PKPbc**	**10 01 02.4**	**-0.1**	
MMB	**Musomishta**	**150.65**	**334**	P	**PKPbc**	**10 01 02.6**	**-0.5**	
MMB	**Musomishta**	**150.65**	**334**	P	**PKPbc**	**10 01 03.0**	**-0.2**	
KKB	**Krupnik**	**150.66**	**335**	P

SMG				S	**Sb**	**09 47 46.4**	**-0.5**
SMG	**Samos**	**0.69**	**142**	P	**Pg**	**09 47 36.6**	**+0.2**
SMG				S	**Sg**	**09 47 45.8**	**+0.5**
IZMD	**zmir-Dikili-**	**0.88**	**33**	P	**Pb**	**09 47 41.2**	**+0.5**
IZMD				S	**Sb**	**09 47 53.4**	**+0.9**
GCAM	**G?zelcaml?**	**0.92**	**127**	SPECP		09 47 40.0	
GCAM				P	**Pg**	**09 47 40.3**	**-0.5**
GCAM				S	**Sb**	**09 47 54.5**	**+1.1**
GCAM				*i* IAML		09 47 56.0	
	comp=E,326nm,0.3s						
GCAM				*i* IAML		09 47 57.0	
	comp=N,394nm,0.2s						
GCAM	**G?zelcaml?**	**0.92**	**127**	Pg	**Pg**	**09 47 40.3**	**-0.5**
GCAM				Sg	**Sb**	**09 47 53.3**	**-0.2**
ZEDA	**zmir-Bergama**	**0.93**	**40**	P	**Pb**	**09 47 42.0**	**+0.5**
ZEDA				S	**Sb**	**09 47 54.1**	**0.0**
DKL	**Dikili**	**0.94**	**30**	Pg	**Pb**	**09 47 41.6**	**-0.1**
DKL				Sg	**Sn**	**09 47 55.4**	**-0.8**
PRK	**Paraskevi**	**0.99**	**358**	P	**Pg**	**09 47 41.9**	**-0.3**
PRK				S	**Sb**	**09 47 55.7**	**0.0**
PRK	**Paraskevi**	**0.99**	**358**	P	**Pb**	**09 47 42.6**	**+0.1**
PRK				S	**Sg**	**09 47 54.9**	**-0.3**
SIGR	**SIGRI**	**1.02**	**340**	Pg	**Pb**	**09 47 43.0**	**0.0**
SIGR				Sg	**Sb**	**09 47 56.9**	**+0.4**
SIGR	**SIGRI**	**1.02**	**340**	P	**Pg**	**09 47 42.0**	**-0.8**
SIGR				S	**Sg**	**09 47 56.1**	**0.0**
SIGR	**SIGRI**	**1.02**	**340**	P	**Pg**	**09 47 42.8**	**0.0**
SIGR				S	**Sg**	**09 47 56.1**	**0.0**
DDIM	**Aydin, Didim**	**1.08**	**137**	SPECP		09 47 43.0	
DDIM				P	**Pg**	**09 47 43.3**	**-0.7**
DDIM				S	**Sn**	**09 47 59.9**	**+0.2**
DDIM				*i* IAML		09 48 02.0	
	comp=N,258nm,1.0s						
DDIM				*i* IAML		09 48 05.0	
	comp=E,351nm,1.0s						
AYVA	**Ayvalik**	**1.10**	**16**	SPECP		09 47 43.0	
AYVA				P	**Pg**	**09 47 43.3**	**-1.0**
AYVA				S	**Sn**	**09 47 59.5**	**-0.4**
AYVA				*i* IAML		09 48 00.0	
	comp=N,265nm,0.6s						
AYVA				*i* IAML		09 48 10.0	
	comp=E,181nm,0.8s						
TNSA	**Tinos**	**1.15**	**232**	P	**Pg**	**09 47 44.0**	**-1.3**
GPNR	**Gulpinar-Canak**	**1.21**	**354**	Pn	**Pn**	**09 47 46.5**	**+0.2**
KOCA	**Canakkale, Ayv**	**1.25**	**354**	SPECP		09 47 45.0	
KOCA				P	**Pn**	**09 47 46.0**	**-0.9**
KOCA				S	**Sg**	**09 48 03.4**	**-0.2**
KOCA				*i* IAML		09 48 06.0	
	comp=E,381nm,0.7s						
KOCA				*i* IAML		09 48 09.0	
	comp=N,323nm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**1.28**	**103**	Pn	**Pn**	**09 47 46.9**	**-0.5**
IZMR	**zmir-demi**	**1.30**	**95**	SPECP		09 47 47.0	
IZMR				P	**Pn**	**09 47 47.2**	**-0.3**
IZMR				S	**Sb**	**09 48 04.1**	**-0.4**
SOMA	**Soma-Manisa**	**1.32**	**46**	Pn	**Pg**	**09 47 48.4**	**-0.1**
AKHS	**Akhisar**	**1.33**	**62**	SPECP		09 47 48.0	
AKHS				P	**Pn**	**09 47 48.2**	**+0.2**
AKHS				S	**Sb**	**09 48 05.0**	**-0.6**
AKHS				*i* IAML		09 48 08.0	
	comp=E,143nm,0.8s						
AKS	**Akhisar**	**1.33**	**62**	Pn	**Pb**	**09 47 48.4**	**0.0**
GOMA	**Golmarmara-Man**	**1.34**	**70**	Pn	**Pn**	**09 47 48.3**	**+0.2**
NAX1	**Naxos Island**	**1.37**	**213**	P	**Pn**	**09 47 47.7**	**-0.7**
AYDN	**Tasoluk**	**1.38**	**115**	P	**Pn**	**09 47 47.5**	**-1.1**
AYDN				S	**Sb**	**09 48 06.0**	**-0.8**
BUHA	**Balikesir, Bur**	**1.38**	**25**	P	**Pn**	**09 47 47.5**	**-1.2**
BUHA				S	**Sb**	**09 48 06.8**	**-0.1**
ODEM	**Odemis-Izmir**	**1.39**	**88**	Pn	**Pn**	**09 47 48.8**	**0.0**
BODT	**Bodrum**	**1.43**	**146**	Pn	**Pn**	**09 47 49.6**	**+0.3**
BODT	**Bodrum**	**1.43**	**146**	P	**Pg**	**09 47 50.6**	**0.0**
YAYO	**Edremit-Balk**	**1.48**	**23**	Pn	**Pn**	**09 47 50.5**	**+0.5**
BDRM	**Kayabasi**	**1.49**	**142**	P	**Pn**	**09 47 47.9**	**-2.2**
BDRM				S	**Sg**	**09 48 12.3**	**+1.2**
KARY	**Karystos**	**1.49**	**262**	P	**Pn**	**09 47 49.6**	**-0.5**
KARY	**Karystos**	**1.49**	**262**	P	**Pn**	**09 47 49.6**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**1.50**	**7**	P	**Pn**	**09 47 48.6**	**-1.6**
BAYC				S	**Sn**	**09 48 09.0**	**-1.0**
EZNE	**Ezine-Canakkal**	**1.50**	**2**	Pn	**Pb**	**09 47 51.2**	**0.0**
MLSB	**Milas**	**1.50**	**129**	Pn	**Pn**	**09 47 50.5**	**+0.1**
SKY	**Skiros Island**	**1.51**	**295**	P	**Pn**	**09 47 50.7**	**+0.2**
EZN	**Ezine**	**1.57**	**0**	Pn	**Pn**	**09 47 51.9**	**+0.7**
EZN	**Ezine**	**1.57**	**0**	P	**Pn**	**09 47 51.6**	**+0.4**
EZN				S	**Sg**	**09 48 13.4**	**-0.3**
STEP	**BALIKESIR_Sava**	**1.57**	**44**	P	**Pb**	**09 47 52.4**	**0.0**
STEP				S	**Sg**	**09 48 15.5**	**+1.7**
STEP				*i* IAML		09 48 20.0	
	comp=E,337nm,0.8s						
STEP				*i* IAML		09 48 25.0	
	comp=N,373nm,1.0s						
NAZL	**Nazilli-Aydin**	**1.59**	**100**	Pn	**Pn**	**09 47 51.8**	**+0.3**
BOZC	**Bozcaada**	**1.60**	**353**	Pn	**Pn**	**09 47 52.1**	**+0.5**
GORD	**Gordes-Manisa**	**1.60**	**65**	Pn	**Pn**	**09 47 52.4**	**+0.6**
KIRA	**zmir-Kiraz**	**1.65**	**91**	P	**Pn**	**09 47 52.0**	**-0.4**
KIRA				S	**Sb**	**09 48 15.1**	**+0.4**
ESEN	**Aydn-Nazilli**	**1.67**	**105**	P	**Pn**	**09 47 52.3**	**-0.3**
ESEN				S	**Sg**	**09 48 18.3**	**+1.4**
KYMI	**Kymi, Euboea I**	**1.78**	**283**	P	**Pn**	**09 47 54.8**	**+0.7**
MANT	**Manisa**	**1.78**	**82**	SPECP		09 47 55.0	
MANT				P	**Pb**	**09 47 56.0**	**-0.2**
MANT				S	**Sb**	**09 48 19.1**	**+0.4**
MANT				*i* IAML		09 48 23.0	
	comp=N,119nm,0.8s						
MANT				*i* IAML		09 48 24.0	
	comp=E,81nm,0.8s						
BALY	**Balya**	**1.80**	**34**	P	**Pb**	**09 47 56.8**	**+0.4**
BALY				S	**Sg**	**09 48 22.0**	**+0.8**
BALY				*i* IAML		09 48 25.0	
	comp=N,184nm,0.8s						
BALY				*i* IAML		09 48 30.0	
	comp=E,141nm,0.7s						
YAZI	**Mula-Dat§a-**	**1.81**	**150**	P	**Pn**	**09 47 53.5**	**-1.1**
YAZI				S	**Sg**	**09 48 23.5**	**+2.0**
DAT	**Datca**	**1.82**	**146**	Pn	**Pn**	**09 47 54.2**	**-0.6**
COMU	**Canakkale**	**1.85**	**4**	Pn	**Pb**	**09 47 56.3**	**-0.9**
CANM	**Can-anakkale**	**1.85**	**18**	Pn	**Pn**	**09 47 56.1**	**+1.0**
LIA	**Limnos Island**	**1.86**	**332**	P	**Pn**	**09 47 54.9**	**-0.4**
LIA	**Limnos Island**	**1.86**	**332**	P	**Pn**	**09 47 55.1**	**-0.2**
DION	**Dionisos Attik**	**1.88**	**265**	P	**Pn**	**09 47 55.3**	**-0.2**
YER	**Yerkesik**	**1.92**	**125**	Pn	**Pn**	**09 47 56.0**	**-0.1**
GADA	**Gvkgeada**	**1.96**	**351**	Pn	**Pn**	**09 47 57.4**	**+0.8**
SAP3	**Santorini-Thir**	**1.97**	**203**	P	**Pn**	**09 47 57.1**	**+0.4**
THR3	**Thira Island,**	**1.98**	**202**	P	**Pn**	**09 47 58.3**	**+1.5**
SNT5	**Nea Kammeni, S**	**1.98**	**202**	P	**Pn**	**09 47 57.8**	**+0.9**
THERA	**Ancient Thera,**	**2.00**	**200**	P	**Pn**	**09 47 57.3**	**+0.2**
ATHU	**Athens Univers**	**2.01**	**263**	P	**Pn**	**09 47 57.6**	**+0.3**
VLY	**Voula,Athens**	**2.02**	**259**	P	**Pn**	**09 47 58.1**	**+0.6**
GONE	**Gonen-Balikesi**	**2.09**	**30**	Pn	**Pn**	**09 47 59.4**	**+1.1**
TURN	**Turunc**	**2.13**	**133**	Pn	**Pn**	**09 47 59.2**	**+0.3**
LPK	**Lapseki**	**2.15**	**9**	Pn	**Pn**	**09 48 00.2**	**+1.1**
GELI	**Tayfur-Gelibol**	**2.15**	**3**	Pn	**Pn**	**09 47 59.9**	**+0.8**
KRBG	**Karabiga-Canak**	**2.27**	**19**	Pn	**Pn**	**09 48 02.0**	**+1.1**
SMTH	**Samothraki Isl**	**2.30**	**345**	P	**Pn**	**09 48 00.7**	**-0.5**
MET4	**Agioi Theodoro**	**2.38**	**256**	P	**Pn**	**09 48 03.3**	**+0.9**
VIL2	**Platees**	**2.40**	**270**	P	**Pn**	**09 48 02.6**	**0.0**
MET5	**Makryloggos,Me**	**2.42**	**256**	P	**Pn**	**09 48 02.9**	**0.0**
MET6	**Megalochori,Me**	**2.43**	**255**	P	**Pn**	**09 48 03.3**	**+0.3**
MET2	**Kameni Chora,**	**2.44**	**256**	P	**Pn**	**09 48 02.9**	**-0.3**
ARG	**Arkhangelos**	**2.50**	**144**	P	**Pn**	**09 48 03.1**	**-0.8**
ALN	**Alexandroupoli**	**2.65**	**356**	P	**Pn**	**09 48 06.5**	**+0.5**
PLN1	**Chaniotis**	**2.75**	**310**	P	**Pn**	**09 48 07.4**	**0.0**
OUR	**Ouranopolis**	**2.75**	**320**	Pn	**Pn**	**09 48 08.4**	**+0.9**
OUR	**Ouranopolis**	**2.75**	**320**	P	**Pn**	**09 48 08.1**	**+0.7**
RDO	**Rodhopi**	**2.95**	**349**	P	**Pn**	**09 48 10.3**	**+0.1**
VLI	**Veliai**	**3.09**	**241**	P	**Pn**	**09 48 11.8**	**-0.3**

RHSSO 08 09:59:28.3±0.5, 43°04N×18°63E, h3km, ML1.9/2, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.14**	**346**	*e*Pg	Pg	09 59 30.9	-0.2
KLINJ				*e*Sg	Sg	09 59 33.4	+0.5
TREB	**Trebinje**	**0.38**	**213**	*i*Pg	Pg	09 59 35.1	-0.5
TREB				*e*Sg	Sg	09 59 41.3	+0.8
RUDO	**Rudo**	**0.79**	**43**	*e*Pg	Pg	09 59 42.9	-0.6
RUDO				*e*Sg	Sg	09 59 53.4	-0.4

*NOU **08** 09:59:16.2, 32°58S×175°52W, h0km, MLv5.0/7, South of Kermadec Islands*

*IDC **08** 09:59:51.1±0.9, 33°27S×178°83W, h0km, mb4.1/6, mbtmp4.1/6, Error ellipse: s-maj=35.3km s-min=27.3km az=35.0*

*WEL **08** 09:59:54.2±1.1, 34°S±.8°×17°8W±1°3, h33km, mB5.0/6, ML4.9/13, MLv4.6/13, Mw(mB)4.3/6, Error ellipse: s-maj=18.9km s-min=7.4km az=118.5, confirmed*

ISC 08 09:59:53.9±0.9, 33.86S±0.07×178.2W±0.1, h35km, n67, σ1§31/83, mb4.1/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.65**	**216**	P	**Pn**	**10 01 01.6**	**0.0**
	72nm,1.0s						
MXZ	**Matakaoa Point**	**4.65**	**216**	P	**Pn**	**10 01 01.5**	**-0.1**
MXZ				S	**Sn**	**10 01 55.1**	**+0.7**
WMGZ	**Waiomatatini S**	**4.80**	**214**	P	**Pn**	**10 01 04.1**	**+0.4**
WMGZ				S	**Sn**	**10 02 00.7**	**+2.5**
PKGZ	**Pakihiroa**	**5.00**	**216**	P	**Pn**	**10 01 06.3**	**-0.1**
PKGZ				S	**Sn**	**10 02 02.9**	**-0.1**
HAZ	**Te Kaha**	**5.07**	**219**	P	**Pn**	**10 01 06.9**	**-0.4**
HAZ				S	**Sn**	**10 02 07.5**	**+2.9**
PUZ	**Puketiti**	**5.08**	**213**	P	**Pn**	**10 01 06.4**	**-1.2**
PUZ				S	**Sn**	**10 02 05.7**	**+0.7**
RUGZ	**Raukumara Rang**	**5.28**	**218**	P	**Pn**	**10 01 09.9**	**-0.4**
RUGZ				S	**Sn**	**10 02 10.5**	**+0.5**
TWGZ	**Tauwhareparae**	**5.30**	**215**	P	**Pn**	**10 01 12.0**	**+1.4**
TWGZ				S	**Sn**	**10 02 12.2**	**+1.9**
CNGZ	**Carnagh Statio**	**5.45**	**211**	P	**Pn**	**10 01 12.2**	**-0.3**
CNGZ				S	**Sn**	**10 02 16.7**	**+2.8**
TKGZ	**Te Karaka**	**5.57**	**214**	P	**Pn**	**10 01 15.4**	**+1.2**
TKGZ				S	**Sn**	**10 02 17.6**	**+0.7**
WHRZ	**Whale Island**	**5.58**	**223**	P	**Pn**	**10 01 16.1**	**+1.7**
WHRZ				S	**Sn**	**10 02 19.5**	**+2.2**
MWZ	**Matawai**	**5.64**	**216**	P	**Pn**	**10 01 13.9**	**-1.3**
MWZ				S	**Sn**	**10 02 18.8**	**+0.1**
KUZ	**Kuaotunu**	**5.73**	**238**	P	**Pn**	**10 01 17.3**	**+0.8**
	25nm,1.6s						
URZ	**Urewera**	**5.79**	**219**	Pn	**Pn**	**10 01 17.3**	**-0.1**
	7.6nm,0.3s,baz=10,slow=4.1,SNR=53						
URZ				Sn	**Sn**	**10 02 21.1**	**-1.4**
	14nm,0.3s,baz=225,slow=9.0,SNR=12						
URZ	**Urewera**	**5.79**	**219**	P	**Pn**	**10 01 17.0**	**-0.3**
	69nm,0.7s						
URZ	**Urewera**	**5.79**	**219**	P	**Pn**	**10 01 16.3**	**-1.0**
URZ				S	**Sn**	**10 02 20.5**	**-2.1**
OPRZ	**Ohinepanea**	**5.82**	**225**	P	**Pn**	**10 01 18.4**	**+0.8**
OPRZ				S	**Sn**	**10 02 22.3**	**-0.7**
RIGZ	**Rimuhau**	**5.82**	**213**	P	**Pn**	**10 01 18.5**	**+0.7**
RIGZ				S	**Sn**	**10 02 24.2**	**+0.9**
TGRZ	**Tauranga**	**5.92**	**228**	P	**Pn**	**10 01 20.3**	**+1.3**
PRGZ	**Paritu Road**	**5.95**	**211**	P	**Pn**	**10 01 20.0**	**+0.5**
SNGZ	**Shannon Statio**	**6.08**	**215**	P	**Pn**	**10 01 21.8**	**+0.5**
KNZ	**Kokohu**	**6.12**	**212**	P	**Pn**	**10 01 21.7**	**-0.1**
MHGZ	**Mahia Peninsul**	**6.13**	**209**	P	**Pn**	**10 01 22.4**	**+0.4**
MUGZ	**Murupara**	**6.14**	**220**	P	**Pn**	**10 01 21.7**	**-0.3**
RRRZ	**Republican Roa**	**6.18**	**222**	P	**Pn**	**10 01 23.6**	**+1.0**
RAHZ	**Arahi**	**6.31**	**216**	P	**Pn**	**10 01 24.0**	**+0.5**
MTHZ	**Maungataniwha**	**6.38**	**217**	P	**Pn**	**10 01 26.2**	**+0.8**
WCZ	**Waipu Caves**	**6.46**	**249**	P	**Pn**	**10 01 27.4**	**+1.0**
NMHZ	**Naumai**	**6.59**	**216**	P	**Pn**	**10 01 29.2**	**+0.9**
NMHZ				S	**Sn**	**10 02 41.7**	**-0.4**
ARHZ	**Aropaoanui**	**6.63**	**214**	P	**Pn**	**10 01 29.1**	**+0.4**
BKZ	**Black Stump Fm**	**6.79**	**217**	P	**Pn**	**10 01 29.9**	**-1.2**
	22nm,0.9s						
BKZ	**Black Stump Fm**	**6.79**	**217**	P	**Pn**	**10 01 30.3**	**-0.8**
OUZ	**Omahuta**	**6.89**	**256**	P	**Pn**	**10 01 33.3**	**+0.9**
	34nm,1.5s						
OUZ	**Omahuta**	**6.89**	**256**	P	**Pn**	**10 01 33.3**	**+0.9**
MCHZ	**McNeill Hill**	**6.91**	**215**	P	**Pn**	**10 01 32.6**	**-0.1**
RITZ	**Rihia Road**	**6.99**	**221**	P	**Pn**	**10 01 34.7**	**+0.9**
KWHZ	**Kaweka Forest**	**7.03**	**216**	P	**Pn**	**10 01 33.8**	**-0.5**
KAHZ	**Kahuranaki**	**7.11**	**212**	P	**Pn**	**10 01 33.6**	**-1.8**
TMVZ	**Te Maari**	**7.17**	**221**	P	**Pn**	**10 01 36.0**	**-0.3**
NTVZ	**North Tongarir**	**7.18**	**222**	P	**Pn**	**10 01 35.9**	**-0.5**
ETVZ	**East Tongariro**	**7.18**	**221**	P	**Pn**	**10 01 36.1**	**-0.4**
KRVZ	**Karewarewa**	**7.19**	**222**	P	**Pn**	**10 01 37.0**	**+0.4**
KRHZ	**Kereru**	**7.22**	**215**	P	**Pn**	**10 01 35.7**	**-1.3**
OTVZ	**Oturere**	**7.23**	**221**	P	**Pn**	**10 01 36.8**	**-0.3**
SNVZ	**South Ngauruho**	**7.26**	**221**	P	**Pn**	**10 01 37.4**	**-0.2**
HIZ	**Hauiti**	**7.27**	**228**	P	**Pn**	**10 01 39.7**	**+2.1**
	58nm,1.7s						
HIZ	**Hauiti**	**7.27**	**228**	P	**Pn**	**10 01 39.8**	**+2.2**
MOVZ	**Moawhango**	**7.36**	**219**	P	**Pn**	**10 01 38.1**	**-0.7**
WNVZ	**Wahianoa**	**7.38**	**221**	P	**Pn**	**10 01 39.3**	**0.0**
VRZ	**Vera Road**	**7.72**	**225**	P	**Pn**	**10 01 45.9**	**+2.2**
BFZ	**Birch Farm**	**8.11**	**211**	P	**Pn**	**10 01 47.1**	**-2.0**
BFZ	**Birch Farm**	**8.11**	**211**	P	**Pn**	**10 01 45.7**	**-3.4**
DZM	**Mont Dzumac**	**17.91**	**307**	Pn	**Pn**	**10 03 57.5**	**-2.9**
	0.4nm,0.3s,baz=106,slow=14,SNR=11						
STKA	**Stephens Creek**	**33.67**	**262**	P	**P**	**10 06 29.1**	**-2.4**
	1.4nm,0.8s,baz=63,slow=9.0,SNR=0.9						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**42.86**	**271**	P	**P**	**10 07 47.4**	**-1.6**
	5.0nm,0.8s,baz=111,slow=7.2,SNR=45						
ASAR				PcP	**PcP**	**10 09 39.4**	**-0.1**
	0.6nm,0.7s,baz=104,slow=3.5,SNR=3.4						
	5.0nm,0.8s						
WRA	**Warramunga Arr**	**44.16**	**276**	P	**P**	**10 07 57.9**	**-1.5**
	4.8nm,0.7s,baz=118,slow=7.4,SNR=32						
WRA				PcP	**PcP**	**10 09 44.0**	**+0.1**
	0.4nm,0.7s,baz=118,slow=2.8,SNR=2.4						
	4.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.26**	**273**	P	**P**	**10 09 00.3**	**-1.6**
	3.2nm,1.0s,baz=24,slow=20,SNR=3.9						
	3.2nm,1.0s						
QSPA	**South Pole Qui**	**56.26**	**180**	P	P	10 09 37.9	+7.4
	1.2nm,0.9s,baz=50,slow=2.1,SNR=7.4						
	1.2nm,0.9s						
SNAA	**Sanae**	**74.71**	**178**	P	P	10 11 35.5	+5.9
	1.4nm,1.0s,baz=222,slow=6.3,SNR=4.8						
	1.4nm,1.0s						
MKAR	**Makanchi Array**	**119.82**	**309**	PKP	**PKPdf**	**10 18 41.1**	**+1.0**
	0.2nm,0.4s,baz=63,slow=0.3,SNR=2.6						
KURBB	**Kurchatov Arra**	**123.30**	**312**	PKP	**PKPdf**	**10 18 46.9**	**+0.3**
	0.7nm,0.8s,baz=121,slow=2.1,SNR=5.1						
KBZ	**Khabaz**	**146.77**	**300**	PKPbc	**PKPdf**	**10 19 31.6**	**+1.5**
	1.0nm,0.5s,baz=228,slow=2.9,SNR=4.0						
FINES	**FINESS Array B**	**148.30**	**338**	PKPbc	**PKPbc**	**10 19 36.2**	**+0.7**
	6.0nm,0.8s,baz=38,slow=3.8,SNR=18						
MMAI	**Mount Meron Ar**	**152.00**	**278**	PKPbc	**PKiKP**	**10 19 47.3**	**+1.5**
	2.2nm,0.6s,baz=132,slow=2.1,SNR=2.2						
HFS	**Hagfors**	**152.58**	**347**	PKPbc	**PKiKP**	**10 19 48.5**	**+2.5**
	2.6nm,0.8s,baz=56,slow=3.6,SNR=1.8						
AKASG	**Malin Array Be**	**153.85**	**318**	PKPbc	**PKiKP**	**10 19 50.5**	**+1.5**
	0.9nm,0.3s,baz=61,slow=1.8,SNR=3.1						
BRTR	**Keskin Array B**	**153.91**	**292**	PKPbc	**PKPbc**	**10 19 50.4**	**+0.8**
	1.2nm,0.6s,baz=134,slow=3.6,SNR=7.3						

*UPP **08** 10:00:08.8±1.1, 67°73N×26°17E, h0km, ML1.8, Presumed earthquake*

HEL 08 10:00:04.3±0.1, 67.71N×26.85E, h0km, ML1.8, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAJF	**Raja-Jooseppi**	**0.94**	**35**	PG	Pg	10 00 21.7	-0.7
RAJF				SG	Sg	10 00 31.3	-3.2
VRF	**Varrio**	**1.05**	**87**	PG	Pg	10 00 23.3	-1.1
	baz=273						
VRF				SG	Sg	10 00 36.3	-1.7
VRF				smax	smax	10 00 36.5	
	comp=Z,7.3nm,0.2s						
RNF	**Rovaniemi**	**1.16**	**197**	PN	Pg	10 00 26.2	-0.2
	baz=15						
RNF				SN	Sg	10 00 41.7	+0.4
HEF	**Hetta**	**1.39**	**302**	*e*P	Pg	10 00 30.4	-0.4
HEF	**Hetta**	**1.39**	**302**	PN	Pn	10 00 30.9	0.0
	baz=120						
HEF				smax	smax	10 00 46.0	
	comp=Z,9.4nm,0.2s						
PAJU	**Pajala**	**1.60**	**246**	P	Pn	10 00 34.3	+0.4
PAJU				S	Sg	10 00 55.8	0.0
PAJU	**Pajala**	**1.60**	**246**	PN	Pn	10 00 34.1	+0.2
PAJU				SN	Sg	10 00 55.7	0.0
OLKF	**Oulanka, Finla**	**1.72**	**143**	PG	Pn	10 00 35.4	0.0
OLKF				smax	smax	10 00 55.6	
	comp=Z,9.3nm,0.2s						
OLKF				SN	Sg	10 00 59.2	-0.1
LANU	**Lannavaara**	**1.87**	**283**	P	Pn	10 00 38.2	+0.6
LANU	**Lannavaara**	**1.87**	**283**	PG	Pn	10 00 38.0	+0.5
MASU	**Masugnsbyn**	**1.88**	**264**	P	Pb	10 00 38.6	-0.9
MSF	**Maaselka**	**2.00**	**153**	PG	Pb	10 00 40.8	-0.8
	baz=335						
MSF				SB	Sn	10 01 02.8	-2.3
KEV	**Kevo**	**2.06**	**1**	PG	Pn	10 00 40.9	+0.9
	baz=184						
KEV				SG	Sb	10 01 07.5	-0.9
KU6	**Riekki**	**2.08**	**143**	PG	Pn	10 00 41.5	+1.2
	baz=325						
KU6				smax	smax	10 01 06.0	
	comp=Z,3.5nm,0.2s						
KU6				SG	Sb	10 01 09.0	-0.1
KU6	**Riekki**	**2.08**	**143**	PG	Pn	10 00 41.5	+1.2
KU6				smax	smax	10 00 59.1	
	comp=Z,3.5nm,0.2s						
KU2	**Taivalkoski**	**2.08**	**164**	PG	Pb	10 00 41.8	-1.1
	baz=349						
KU2				SN	Sn	10 01 05.5	-1.6
ERTU	**Ertsjaerv**	**2.16**	**240**	P	Pb	10 00 43.2	-1.0
ERTU	**Ertsjaerv**	**2.16**	**240**	PG	Pb	10 00 43.0	-1.3
	baz=59						
KALU	**Kalix**	**2.32**	**218**	PG	Pn	10 00 45.1	+1.5
	baz=32						
KU1	**Kurvinen**	**2.41**	**152**	PG	Pb	10 00 49.1	+0.6
KUA	**Kurravaara**	**2.48**	**279**	P	Pn	10 00 47.4	+1.4
	baz=107						
DUNU	**Dundret**	**2.50**	**259**	P	Pn	10 00 47.4	+1.3
KOVU	**Salmi**	**2.58**	**285**	P	Pn	10 00 48.8	+1.5
	baz=123						
KIF	**Kilpisjarvi**	**2.59**	**303**	*e*P	Pb	10 00 50.2	-1.4
KIF	**Kilpisjarvi**	**2.59**	**303**	PG	Pb	10 00 49.9	-1.7
KIF				smax	smax	10 01 21.3	
	comp=Z,2.7nm,0.2s						
OUL	**Oulu**	**2.67**	**189**	PG	Pb	10 00 51.2	-1.6
RATU	**Laukkuluspa**	**2.77**	**276**	P	Pn	10 00 51.1	+1.3
NIKU	**Nikkaluokta**	**2.98**	**277**	P	Pn	10 00 54.0	+1.4
OBF4	**Vikkela, Lumij**	**3.00**	**194**	PB	Pn	10 00 54.6	+1.6
OBF4				smax	smax	10 01 32.4	
	comp=Z,2.2nm,0.2s						
OBF4				SG	Sb	10 01 33.9	-1.6
OBF0	**Syolatti, Pyha**	**3.40**	**199**	PB	Pn	10 01 00.6	+2.2
OUF	**Merijarvi**	**3.47**	**195**	PB	Pn	10 01 02.9	+3.5
OUF				SN	Sn	10 01 38.5	-2.6
OUF	**Merijarvi**	**3.47**	**195**	PN	Pn	10 01 02.9	+3.5
OUF				smax	smax	10 01 36.9	
	comp=Z,1.8nm,0.2s						
OUF				SG	Sn	10 01 38.5	-2.6
OBF8	**Ulkokalla**	**3.67**	**204**	PB	Pn	10 01 03.6	+1.4

HEL 08 10:00:18.1±0.3, 64.74N×30.87E, h0km, ML1.5, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RMF	**Romuvaara**	**0.66**	**218**	PG	Pg	10 00 30.1	-0.7
RMF				SG	Sg	10 00 38.3	-1.0
RMF				smax	smax	10 00 39.1	
	comp=Z,4.8nm,0.2s						
KU1	**Kurvinen**	**1.00**	**327**	PG	Pg	10 00 36.1	-1.1
	baz=147						
MSF	**Maaselka**	**1.40**	**328**	PG	Pn	10 00 43.7	-1.2
	baz=147						
KU2	**Taivalkoski**	**1.48**	**312**	PG	Pn	10 00 44.8	-1.1
JOF	**Joensuu**	**1.84**	**174**	*e*P	Pn	10 00 51.7	+0.8
JOF	**Joensuu**	**1.84**	**174**	PG	Pn	10 00 51.3	+0.4
JOF				SN	Sb	10 01 16.3	+0.2
NIF	**Nilsia**	**1.91**	**226**	PG	Pn	10 00 52.0	+0.2
NIF				smax	smax	10 01 14.9	
	comp=Z,2.2nm,0.2s						
OUL	**Oulu**	**2.15**	**282**	PB	Pn	10 00 55.7	+0.6

WB0	**Warramunga Arr**	**44.88**	**262**		**P**	**10 09 55.4**	**-0.5**
WRAB	**Tennant Creek**	**44.90**	**262**	P	**P**	**10 09 55.4**	**-0.6**
WRAB				IAmb	IAmb	10 09 58.5	
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**44.90**	**262**		**P**	**10 09 55.5**	**-0.6**
WRA	**Warramunga Arr**	**44.90**	**262**	P	**P**	**10 09 55.2**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=97,slow=7.6,SNR=75						
WRA				PcP	**PcP**	**10 11 26.0**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=98,slow=7.3,SNR=2.0						
	comp=Z,2.2nm,0.3s						
MTN	**Manton Dam**	**49.41**	**270**	P	**P**	**10 10 29.6**	**-0.4**
MTN				IAmb	IAmb	10 10 30.6	
	comp=Z,6.6nm,0.8s						
FORT	**Forrest**	**49.69**	**246**	P	**P**	**10 10 31.2**	**-0.7**
KNRA	**Kununurra**	**50.93**	**266**	P	**P**	**10 10 40.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**53.33**	**262**	P	**P**	**10 10 58.4**	**-0.1**
PSA00	**Pilbara Seismi**	**58.00**	**257**	P	**P**	**10 11 30.3**	**-0.7**
PSA00				IAmb	IAmb	10 11 31.1	
	comp=Z,10nm,0.9s						
MBWA	**Marble Bar**	**58.19**	**257**	P	**P**	**10 11 31.1**	**-1.1**
MBWA				IAmb	IAmb	10 11 31.9	
	comp=Z,6.0nm,0.6s						
SBA	**Scott Base**	**58.30**	**184**	P	**P**	**10 11 31.0**	**-1.1**
VNDA	**Vanda**	**58.35**	**185**	P	**P**	**10 11 31.1**	**-1.3**
VNDA	**Vanda**	**58.35**	**185**	P	**P**	**10 11 32.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=358,slow=7.6,SNR=7.7						
	comp=Z,0.9nm,0.6s						
NWAO	**Narrogin (SRO)**	**58.78**	**243**	P	**P**	**10 11 35.6**	**-0.4**
MORW	**Morawa**	**60.22**	**247**	P	**P**	**10 11 45.4**	**-0.4**
MORW				IAmb	IAmb	10 12 05.0	
	comp=Z,7.7nm,1.1s						
QSPA	**South Pole Qui**	**69.98**	**180**	P	**P**	**10 12 49.3**	**+2.4**
QSPA				IAmb	IAmb	10 12 49.6	
	comp=Z,4.8nm,0.6s						
QSPA	**South Pole Qui**	**69.98**	**180**	P	**P**	**10 12 48.9**	**+2.1**
	comp=Z,4.9nm,0.7s,baz=2.1,slow=2.0,SNR=30						
	comp=Z,4.9nm,0.7s						
PETK	**Petropavlovsk-**	**75.93**	**345**	P	**P**	**10 13 21.6**	**+0.7**
	comp=Z,9.6nm,1.1s,baz=101,slow=7.7,SNR=4.2						
	comp=Z,9.6nm,1.1s						
BELA	**Belgrano 2**	**79.94**	**173**	P	**P**	**10 13 41.4**	**-0.9**
NVAR	**Mina Array Bea**	**80.55**	**43**	P	**P**	**10 13 47.6**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=229,slow=9.4,SNR=4.5						
	comp=Z,0.5nm,0.7s						
MAW	**Mawson**	**82.04**	**200**	P	**P**	**10 13 52.5**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=109,slow=5.2,SNR=8.6						
	comp=Z,1.3nm,0.6s						
TXAR	**Lajitas Array**	**86.62**	**57**	P	**P**	**10 14 18.2**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=240,slow=4.9,SNR=3.8						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**87.85**	**13**	P	**P**	**10 14 21.5**	**0.0**
	comp=Z,0.5nm,0.7s,baz=205,slow=5.1,SNR=1.3						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**88.49**	**43**	P	**P**	**10 14 26.0**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=268,slow=7.7,SNR=2.9						
	comp=Z,0.3nm,0.6s						
AKASG	**Malin Array Be**	**142.77**	**332**	PKhKP	PKPpre	10 20 57.5	
	comp=Z,0.5nm,0.4s,baz=50,slow=1.4,SNR=4.5						

STR 08 10:06:25.8±1.8, 44°N±6°×°±1°, 2 h0km, MLv1.5/3, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSF	**Rustrel**	**0.54**	**192**	Pg	Pb	10 06 37.2	-0.9

IDC 08 10:09:42.2±3.3, 18°82S×178°.86W, h0km, mb3.6/2, mbtmp3.9/3, ML4.7/1, Error ellipse: s-maj=68.6km s-min=49.1km az=63.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.69**	**189**	P	P	10 14 12.9	0.0
	2.1nm,0.3s,baz=333,slow=4.1,SNR=12						
	6.4nm,0.3s						
WRA	**Warramunga Arr**	**44.05**	**261**	P	P	10 17 51.9	-0.4
	0.2nm,0.4s,baz=96,slow=6.9,SNR=6.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**44.14**	**255**	P	P	10 17 52.9	0.0
	1.4nm,0.6s,baz=89,slow=7.8,SNR=31						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**133.94**	**344**	PKhKP	PKPpre	10 28 52.4	
	1.0nm,0.6s,baz=119,slow=1.7,SNR=5.2						
FINES				PKP	PKPdf	10 29 00.8	-0.1
	1.2nm,0.7s,baz=29,slow=3.2,SNR=3.9						

*IDC **08** 10:09:51.9±0.5, 57°.83S×25°.26W, h0km, mb4.5/13, mbtmp4.5/15, ML4.6/2, Error ellipse: s-maj=17.4km s-min=15.1km az=40.0*
*NEIC **08** 10:09:57.6±1.2, 57°.86S±0°.07×25°.1W±0°.2, h35km±2km, mb4.8/43, Error ellipse: s-maj=14.2km s-min=11.6km az=123.0*

ISC 08 10:09:57.8±0.4, 57°.90S±0°.07×25°.17W±0°.07, h40km, n130, σ1s08/127, mb4.7/27, 8C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.29**	**295**		**Pn**	**10 11 41.0**	**-0.6**
VNA1	**Neumayer--Stat**	**14.66**	**157**	⇑P	**Pn**	**10 13 20.0**	**-2.2**
	comp=Z,18nm,0.3s						
VNA3	**Neumayer Olymp**	**14.88**	**160**	⇑P	**Pn**	**10 13 22.4**	**-2.6**
	comp=Z,6.8nm,0.2s						
VNA3				⇑S	Sn	10 15 51.7	-17
	comp=E,11nm,0.5s						
VNA2	**Neumayer--Watz**	**15.06**	**157**	⇑P	**Pn**	**10 13 25.4**	**-2.1**
	comp=Z,20nm,0.4s,baz=324,slow=13						
SNAA	**Sanae**	**16.60**	**155**	⇑P	**Pn**	**10 13 46.3**	**-1.0**
	comp=Z,182nm,0.3s						
SNAA				⇑S	Sn	10 16 36.1	-14
	comp=E,143nm,0.7s						
SNAA	**Sanae**	**16.60**	**155**		**Pn**	**10 13 46.5**	**-0.8**
SNAA	**Sanae**	**16.60**	**155**	Pn	**Pn**	**10 13 46.3**	**-1.0**
	comp=E,3.3nm,0.3s,baz=321,slow=16,SNR=50						
SNAA				Sn	Sn	10 16 35.5	-15
	comp=E,0.6nm,0.3s,baz=334,slow=19,SNR=5.5						
	comp=E,7.0nm,0.3s						
TROLL	**Troll, Antarti**	**18.09**	**152**	⇑P	**Pn**	**10 14 05.5**	**-0.3**
	comp=Z,278nm,0.3s						
TROLL				⇑S	Sn	10 17 10.9	-16
	comp=E,116nm,0.3s						
PMSA	**Palmer Station**	**19.60**	**233**	P	**P**	**10 14 18.0**	**-4.2**
PMSA				IAmb	IAmb	10 14 28.6	
	comp=Z,28nm,0.8s						
PMSA	**Palmer Station**	**19.60**	**233**	P	**P**	**10 14 21.8**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=90,slow=7.7,SNR=18						
	comp=Z,5.3nm,0.8s						
PMSA	**Palmer Station**	**19.60**	**233**	*e*P	**Pn**	**10 14 27.4**	**+3.6**
EFI	**East Falkland**	**19.82**	**274**	P	**Pn**	**10 14 26.8**	**+0.3**
EFI				IAmb	IAmb	10 14 40.0	
	comp=Z,79nm,1.2s						
BELA	**Belgrano 2**	**20.33**	**186**		**P**	**10 14 29.2**	**-0.9**
SMAI	**San Martin Ant**	**21.14**	**224**		**P**	**10 14 39.4**	**+0.6**
MG02	**Cerro Sombrero**	**25.21**	**263**	P	**P**	**10 15 19.8**	**+0.4**
GO09	**Cerro Castillo**	**27.64**	**263**	P	**P**	**10 15 41.1**	**-0.2**
GO09				IAmb	IAmb	10 15 56.4	
	comp=Z,22nm,1.2s						
QSPA	**South Pole Qui**	**32.35**	**180**	P	**P**	**10 16 25.7**	**+2.6**
QSPA	**South Pole Qui**	**32.35**	**180**	P	**P**	**10 16 24.2**	**+1.1**
	comp=Z,4.8nm,0.7s,baz=180,slow=6.0,SNR=31						
	comp=Z,4.8nm,0.7s						
QSPA	**South Pole Qui**	**32.35**	**180**	P	**P**	**10 16 26.5**	**+3.5**
LL02	**Futaleuf**	**32.37**	**276**		**P**	**10 16 24.0**	**+0.7**
LL02				IAmb	IAmb	10 16 26.1	
	comp=Z,16nm,1.2s						
PLTB	**Pedras Altas**	**32.55**	**311**	P	**P**	**10 16 24.7**	**-0.2**
PLTB				IAmb	IAmb	10 16 25.1	
	comp=Z,12nm,0.9s						
PLTB	**Pedras Altas**	**32.55**	**311**	*e*P	**P**	**10 16 24.5**	**-0.4**
PLCA	**Paso Flores**	**33.42**	**281**		**P**	**10 16 32.1**	**-0.4**
PLCA				IAmb	IAmb	10 16 33.0	
	comp=Z,10nm,0.9s						
PLCA	**Paso Flores**	**33.42**	**281**	P	**P**	**10 16 31.8**	**-0.8**
	comp=Z,9.1nm,0.9s,baz=136,slow=7.2,SNR=17						
	comp=Z,9.1nm,0.9s						
PLCA	**Paso Flores**	**33.42**	**281**	*e*P	**P**	**10 16 31.9**	**-0.7**
PLCA	**Paso Flores**	**33.42**	**281**	P	**P**	**10 16 31.7**	**-0.8**
PLCA				PcP	**PcP**	**10 19 13.1**	**+0.1**
CPSB	**Cacapava Do Su**	**33.68**	**312**	*e*P	**P**	**10 16 35.4**	**+0.6**
ITAB	**Concordia**	**36.03**	**317**	*e*P	**P**	**10 16 56.2**	**+1.2**
BI02	**San Fabin de**	**36.83**	**285**		**P**	**10 17 03.2**	**+1.3**
BI02				IAmb	IAmb	10 17 07.3	
	comp=Z,24nm,0.9s						
SPB	**Sao Paulo**	**37.83**	**325**		**P**	**10 17 11.2**	**+0.9**
SPB	**Sao Paulo**	**37.83**	**325**	*e*P	**P**	**10 17 11.4**	**+1.1**
DUB01	**Friburgo-RJ**	**37.89**	**333**	*e*P	**P**	**10 17 12.6**	**+1.6**
MAW	**Mawson**	**38.01**	**142**	P	**P**	**10 17 11.4**	**0.0**
	comp=Z,2.3nm,0.6s,baz=241,slow=9.1,SNR=15						
	comp=Z,2.3nm,0.6s						
VAO	**Valinhos**	**38.24**	**326**		**P**	**10 17 15.2**	**+1.2**
VAO				IAmb	IAmb	10 17 16.5	
	comp=Z,28nm,0.8s						
VAO	**Valinhos**	**38.24**	**326**	*e*P	**P**	**10 17 16.0**	**+2.1**
PTGB	**Pitanga**	**38.31**	**318**	*e*P	**P**	**10 17 15.0**	**+0.5**
FRTB	**Fartura**	**38.73**	**323**	*e*P	**P**	**10 17 19.5**	**+1.5**
CPUP	**Villa Florida**	**38.86**	**310**		**P**	**10 17 18.2**	**-0.8**
CPUP	**Villa Florida**	**38.86**	**310**	P	**P**	**10 17 18.0**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=111,slow=14,SNR=11						
CPUP				PcP	**PcP**	**10 19 28.8**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=180,slow=1.0,SNR=4.3						
	comp=Z,1.1nm,0.6s						
CPUP	**Villa Florida**	**38.86**	**310**	P	**P**	**10 17 17.8**	**-1.1**
BSCB	**Bom Sucesso**	**39.53**	**330**	*e*P	**P**	**10 17 26.3**	**+1.6**
RIB01	**Linhares ES**	**40.13**	**337**	*e*P	**P**	**10 17 30.8**	**+1.2**
SUR	**Sutherland**	**40.13**	**71**	P	**P**	**10 17 29.8**	**0.0**
SUR				IAmb	IAmb	10 17 52.7	
	comp=Z,20nm,1.2s						
BB19B	**Bebedouro**	**40.53**	**325**	*e*P	**P**	**10 17 34.3**	**+1.3**
SJMB	**Sao Joao De Ma**	**40.89**	**336**	*e*P	**P**	**10 17 37.5**	**+1.6**
DIAM	**Diamantina, MG**	**41.84**	**333**	*e*P	**P**	**10 17 45.1**	**+1.2**
PMNB	**Patos De Minas**	**42.33**	**329**	*e*P	**P**	**10 17 49.2**	**+1.4**
ITRB	**Iturama**	**42.38**	**324**	*e*P	**P**	**10 17 49.0**	**+0.8**
GUA01	**Guaratinga, BA**	**42.67**	**339**	*e*P	**P**	**10 17 51.9**	**+1.5**
MURT	**Porto Murtinho**	**43.16**	**313**	*e*P	**P**	**10 17 53.6**	**-0.8**
IPMB	**Ipameri, GO**	**43.35**	**327**	*e*P	**P**	**10 17 57.4**	**+1.3**
AC04	**Llanos de Chal**	**43.49**	**293**	P	**P**	**10 17 57.3**	**+0.3**
AC04				IAmb	IAmb	10 18 03.7	
	comp=Z,19nm,1.1s						
AQDB	**Aquidauana**	**43.51**	**316**	P	**P**	**10 17 56.9**	**-0.2**
AQDB	**Aquidauana**	**43.51**	**316**	*e*P	**P**	**10 17 57.2**	**+0.1**
BDQN	**Bodoquena, MS**	**43.92**	**315**	*e*P	**P**	**10 17 59.9**	**-0.6**
SBA	**Scott Base**	**44.31**	**184**		**P**	**10 18 04.4**	**+1.4**
SBA	**Scott Base**	**44.31**	**184**	P	**P**	**10 18 04.1**	**+1.1**
VNDA	**Vanda**	**44.77**	**182**	P	**P**	**10 18 07.4**	**+0.7**
VNDA	**Vanda**	**44.77**	**182**	P	**P**	**10 18 07.4**	**+0.7**
	comp=Z,5.1nm,0.7s,baz=188,slow=6.6,SNR=43						
	comp=Z,5.1nm,0.7s						
VNDA	**Vanda**	**44.77**	**182**	P	**P**	**10 18 07.3**	**+0.7**
VNDA				pP	**pP**	**10 18 17.4**	**+0.2**
BOSA	**Boshof**	**45.42**	**72**	P	**P**	**10 18 12.4**	**-0.1**
BOSA				IAmb	IAmb	10 18 12.9	
	comp=Z,9.5nm,0.9s						
BOSA	**Boshof**	**45.42**	**72**	P	**P**	**10 18 12.6**	**+0.1**
	comp=Z,6.3nm,0.8s,baz=214,slow=10.0,SNR=5.9						
	comp=Z,6.3nm,0.8s						
BOSA	**Boshof**	**45.42**	**72**	P	**P**	**10 18 12.5**	**-0.1**
H04S2	**CROZET ISLANDS**	**45.82**	**111**	T	T	11 08 50.2	
	baz=225,slow=75,SNR=22						
H04S3	**CROZET ISLANDS**	**45.83**	**111**	T	T	11 08 52.2	
	baz=225,slow=75,SNR=26						
H04S1	**CROZET ISLANDS**	**45.84**	**111**	T	T	11 08 50.6	
	baz=225,slow=75,SNR=7.0						
PP1B	**Ponte de Pedra**	**45.85**	**319**	*e*P	**P**	**10 18 16.0**	**+0.1**
ARAG	**Araguaiana, MT**	**46.59**	**324**	*e*P	**P**	**10 18 22.4**	**+0.7**
SALV	**Santo Antonio**	**47.71**	**319**	*e*P	**P**	**10 18 30.7**	**+0.3**
LBTB	**Lobatse**	**48.55**	**70**	P	**P**	**10 18 36.7**	**-0.3**
LBTB				IAmb	IAmb	10 18 38.1	
	comp=Z,12nm,1.1s						
LBTB	**Lobatse**	**48.55**	**70**	P	**P**	**10 18 36.3**	**-0.7**
	comp=Z,6.0nm,0.9s,baz=203,slow=8.5,SNR=6.3						
	comp=Z,6.0nm,0.9s						
LBTB	**Lobatse**	**48.55**	**70**	P	**P**	**10 18 37.2**	**+0.2**
KGCAE	**Kacgae**	**48.70**	**65**	P	**P**	**10 18 37.9**	**-0.2**
PTLB	**Pontes e Lacer**	**49.39**	**315**	P	**P**	**10 18 43.0**	**-0.3**
PTLB				IAmb	IAmb	10 18 44.6	
	comp=Z,5.7nm,0.6s						
PTLB	**Pontes e Lacer**	**49.39**	**315**	*e*P	**P**	**10 18 43.2**	**-0.2**
KDWAN	**Kaudwane**	**49.45**	**68**	P	**P**	**10 18 43.1**	**-0.8**
KDWAN				IAmb	IAmb	10 18 44.9	
	comp=Z,18nm,1.1s						
H10S2	**ASCENSION HYDR**	**49.49**	**14**	T	T	11 13 20.6	
	baz=188,slow=74,SNR=6.0						
H10S3	**ASCENSION HYDR**	**49.50**	**14**	T	T	11 13 21.7	
	baz=32,slow=74,SNR=5.5						
GO01	**Chusmiza**	**49.85**	**301**	P	**P**	**10 18 46.6**	**-0.8**
SNDB	**Serra Nova Dou**	**49.95**	**326**	*e*P	**P**	**10 18 48.8**	**+1.2**
H10N1	**ASCENSION HYDR**	**50.61**	**14**	T	T	11 14 45.0	
	baz=195						
H10N3	**ASCENSION HYDR**	**50.62**	**14**	T	T	11 14 40.9	
	baz=195						
H10N2	**ASCENSION HYDR**	**50.63**	**14**	T	T	11 14 47.7	
	baz=195						
QNGWA	**Qangwa**	**51.05**	**61**	P	**P**	**10 18 55.6**	**-0.4**
QNGWA				IAmb	IAmb	10 18 57.5	
	comp=Z,7.8nm,0.8s						
SMTB	**Santa Maria do**	**51.88**	**331**	*e*P	**P**	**10 19 03.3**	**+1.2**
PDRB	**Porto dos Gac**	**52.05**	**319**	*e*P	**P**	**10 19 02.9**	**-0.5**
VILB	**Vilhena**	**52.08**	**315**	P	**P**	**10 19 03.0**	**-0.6**
VILB				IAmb	IAmb	10 19 04.3	
	comp=Z,19nm,0.8s						
VILB	**Vilhena**	**52.08**	**315**	*e*P	**P**	**10 19 03.2**	**-0.4**
PHDHD	**Phuduhudu**	**52.08**	**65**	P	**P**	**10 19 03.2**	**-0.6**
PHDHD				IAmb	IAmb	10 19 04.8	
	comp=Z,38nm,1.4s						
LPAZ	**La Paz**	**52.34**	**304**	P	**P**	**10 19 05.3**	**-0.9**
LPAZ	**La Paz**	**52.34**	**304**	P	**P**	**10 19 05.4**	**-0.8**
	comp=Z,3.9nm,0.6s,baz=144,slow=7.0,SNR=18						
	comp=Z,3.9nm,0.6s						
LPAZ	**La Paz**	**52.34**	**304**	*e*P	**P**	**10 19 05.4**	**-0.8**
LPAZ	**La Paz**	**52.34**	**304**	P	**P**	**10 19 05.5**	**-0.8**
LPAZ				pP	**pP**	**10 19 16.1**	**-0.6**
LPAZ				PcP	**PcP**	**10 20 17.0**	**+0.1**
CLDB	**Colider**	**52.42**	**321**	*e*P	**P**	**10 19 05.9**	**-0.2**
RCBR	**Riachuelo**	**52.61**	**347**	P	**P**	**10 19 06.7**	**-0.8**
KSANE	**Kasane**	**54.43**	**64**	P	**P**	**10 19 21.3**	**+0.2**
KSANE				IAmb	IAmb	10 19 22.2	
	comp=Z,18nm,1.1s						
PRPB	**Parauapebas**	**55.05**	**330**	*e*P	**P**	**10 19 26.4**	**+1.1**
NPGB	**Novo Progresso**	**55.86**	**323**	*e*P	**P**	**10 19 31.1**	**-0.1**
LSZ	**Lusaka**	**58.07**	**66**	P	**P**	**10 19 47.0**	**0.0**
LSZ	**Lusaka**	**58.07**	**66**	P	**P**	**10 19 46.8**	**-0.2**
	comp=Z,4.6nm,0.7s,baz=211,slow=8.1,SNR=7.0						
	comp=Z,4.6nm,0.7s						
ITTB	**Itaituba**	**58.50**	**324**	*e*P	**P**	**10 19 49.9**	**0.0**
MAL2	**Monte Alegre,**	**60.24**	**326**	P	**P**	**10 20 01.3**	**-0.5**
MACA	**Manacapuru-AM**	**61.29**	**319**	P	**P**	**10 20 08.0**	**-1.0**
BOAV	**Boa Vista**	**66.42**	**321**	P	**P**	**10 20 41.8**	**-0.9**
DBIC	**Dimbokro**	**66.43**	**22**	P	**P**	**10 20 42.7**	**0.0**
DBIC				IAmb	IAmb	10 20 51.9	
	comp=Z,6.6nm,0.9s						
DBIC	**Dimbokro**	**66.43**	**22**	P	**P**	**10 20 44.2**	**+1.5**
	comp=Z,5.3nm,1.0s,baz=188,slow=7.7,SNR=3.6						
	comp=Z,5.3nm,1.0s						
COHC	**Cochancay**	**69.57**	**300**	P	**P**	**10 21 01.9**	**-0.6**
OTAV	**Otavalo**	**71.59**	**302**	P	**P**	**10 21 15.2**	**-0.2**
OTAV				IAmb	IAmb	10 21 18.6	
	comp=Z,7.0nm,0.9s						
OTAV	**Otavalo**	**71.59**	**302**	*e*P	**P**	**10 21 16.7**	**+1.3**
TORD	**Torodi Ar. Bea**	**74.16**	**27**	P	**P**	**10 21 29.4**	**-0.5**
TORD				IAmb	IAmb	10 21 31.9	
	comp=Z,12nm,1.4s						
TORD	**Torodi Ar. Bea**	**74.16**	**27**	P	**P**	**10 21 30.6**	**+0.7**
	comp=Z,2.1nm,0.4s,baz=186,slow=4.7,SNR=2.4						
	comp=Z,2.1nm,0.4s						
BAUV	**El Baul**	**75.16**	**316**		**P**	**10 21 35.6**	**-0.1**
SDV	**Santo Domingo**	**76.09**	**313**	P	**P**	**10 21 40.9**	**-0.4**
SDV				IAmb	IAmb	10 21 41.8	
	comp=Z,9.8nm,0.9s						
SDV	**Santo Domingo**	**76.09**	**313**	P	**P**	**10 21 40.5**	**-0.8**
	comp=Z,5.0nm,0.5s,baz=182,slow=3.7,SNR=6.5						
	comp=Z,5.0nm,0.5s						
ASAR	**Alice Springs**	**96.89**	**161**	P	**P**	**10 23 23.4**	**-1.3**
ASAR	**Alice Springs**	**96.89**	**161**	P	**P**	**10 23 23.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=196,slow=5.6,SNR=6.8						
	comp=Z,0.9nm,0.8s						
NVAR	**Mina Array Bea**	**123.11**	**291**	PKP	**PKPdf**	**10 28 48.5**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=167,slow=2.7,SNR=4.5						
CMAR	**Chiang Mai Arr**	**123.39**	**110**	PKP	**PKPdf**	**10 28 49.1**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=220,slow=4.2,SNR=4.9						
PZH	**PanZhiHua**	**131.50**	**107**	PKP	**PKiKP**	**10 29 06.3**	**-0.4**
BVAR	**Borovoye Array**	**134.83**	**58**	PKP	**PKPdf**	**10 29 10.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=215,slow=1.8,SNR=3.8						
MKAR	**Makanchi Array**	**136.42**	**72**	PKP	**PKPdf**	**10 29 14.8**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=216,slow=0.7,SNR=3.5						
KURBB	**Kurchatov Arra**	**137.08**	**65**	PKP	**PKiKP**	**10 29 16.9**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=214,slow=1.9,SNR=4.7						
WMQ	**Urumqi**	**137.19**	**79**	*e*PKP	**PKiKP**	**10 29 18.3**	**+0.7**
WMQ				LR	LR		
	comp=N,1μm,13.9s						
WMQ				LR	LR		
	comp=E,6μm,20.9s						
WMQ				LR	LR		
	comp=Z,3μm,24.1s						
YKA	**Yellowknife Ar**	**138.28**	**316**	PKP	**PKPdf**	**10 29 16.9**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=137,slow=1.7,SNR=6.5						
NJ2	**Nanjing**	**144.44**	**121**	*e*P	**PKPdf**	**10 29 30.2**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC	**Hu-ho-hao-te**	**147.77**	**103**	*e*P	**PKPdf**	**10 29 35.1**	**+0.5**
SONM	**Songino Array**	**149.71**	**88**		**PKPbc**	**10 29 42.5**	**+0.2**
SONM	**Songino Array**	**149.71**	**88**	PKPbc	**PKPbc**	**10 29 42.2**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=226,slow=2.7,SNR=16						
ILAR	**Eielson Array**	**152.15**	**309**		**PKiKP**	**10 29 47.5**	**-0.1**
ILAR	**Eielson Array**	**152.15**	**309**	PKPbc	**PKPbc**	**10 29 46.9**	**-0.4**
	comp=Z,7.6nm,0.9s,baz=39,slow=0.4,SNR=47						

*DJA **08** 10:15:53.0±0.5, 8°N±4°×12°.5E±°, h10km, M4.9/13, mb4.8/13, mB5.7/5, MLv4.9/10, Mw(mB)5.2/5*
*IDC **08** 10:15:57.9±1.1, 6°.83N×124°.91E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=21.4km s-min=10.5km az=160.0*

ISC 08 10:16:00.0±1.0, 7°.0N±0°.1×124°.90E±0°.10, h13km, n14, σ1s70/14, mb3.7/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.68**	**83**	Pg	**Pg**	**10 16 11.4**	**-1.9**
	425nm,0.3s,baz=265,slow=2.1,SNR=12						
DAV				Lg	Lg	10 16 21.5	
	588nm,0.3s,baz=260,slow=23,SNR=9.3						
SGSI	**Sangihe**	**3.34**	**169**	P	**Pn**	**10 16 52.3**	**+0.3**
KMSI	**Cibinong**	**6.44**	**188**	P	**Pn**	**10 17 34.5**	**-0.1**
TNTI	**Ternate**	**6.65**	**158**	P	**Pn**	**10 17 39.4**	**+1.9**
	0.2nm32nm,0.7s						
MRSI	**Marisa**	**7.11**	**205**	P	**Pn**	**10 17 43.2**	**-0.6**
	0.3nm50nm,0.5s						
LUWI	**Luwuk**	**8.26**	**195**	P	**Pn**	**10 17 58.1**	**-1.5**
	3μm95nm,0.8s						
APSI	**Ampana**	**8.49**	**203**	P	**Pn**	**10 18 03.1**	**+0.3**
	26nm,0.5s						
NLAI	**Namlea**	**10.40**	**168**	P	**Pn**	**10 18 30.5**	**+1.6**
	20nm,0.5s						
FAKI	**Fak Fak**	**12.28**	**143**	P	**Pn**	**10 18 58.2**	**+3.5**
	16nm,1.1s						
WRA	**Warramunga Arr**	**28.33**	**161**	P	**P**	**10 21 52.6**	**-1.2**
	0.6nm,0.6s,baz=332,slow=10,SNR=9.8						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**31.71**	**164**	P	**P**	**10 22 22.2**	**-1.6**
	0.6nm,0.6s,baz=339,slow=6.8,SNR=11						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**53.86**	**325**	P	**P**	**10 25 24.6**	**+1.8**
	0.5nm,0.6s,baz=115,slow=8.1,SNR=6.2						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**58.03**	**327**	P	**P**	**10 25 53.1**	**+0.5**
	0.6nm,0.8s,baz=127,slow=6.4,SNR=1.7						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**82.97**	**26**	P	**P**	**10 28 24.8**	**+0.1**
	0.4nm,0.7s,baz=245,slow=5.5,SNR=6.1						
	0.4nm,0.7s						

*NNC **08** 10:29:41.8±2.1, 36°.79N×70°.02E, h0km, mb4.3, mpv4.4, Error ellipse: s-maj=18.8km s-min=17.3km az=66.0*
*IDC **08** 10:29:44.2±3.6, 36°.34N×70°.43E, h189km±32km, mb3.5/14, mbtmp4.0/18, Error ellipse: s-maj=26.1km s-min=13.0km az=30.0*
*NEIC **08** 10:29:46.0±1.9, 36°.48N±0°.06×70°.23E±0°.09, h213km±8km, mb4.3/13, Error ellipse: s-maj=11.0km s-min=8.8km az=115.0*

**ISC 08 10:29:45.4±0.5, 36°.44N±0°.04×70°.43E±0°.

BVA0	**Borovoye Array**	**16.59**	**360**	P	**Pn**	**10 33 31.0**	**+4.5**
	comp=Z,1.9nm,0.5s,baz=166,slow=7.3,SNR=9.8						
BVAR	**Borovoye Array**	**16.59**	**360**	P	**P**	**10 33 25.4**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=184,slow=7.2,SNR=9.4						
BVAR				S	**S**	**10 36 27.6**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=230,slow=31,SNR=1.9						
AKTO	**Aktyubinsk**	**16.61**	**331**	P	**P**	**10 33 25.9**	**+0.1**
	comp=Z,6.4nm,0.6s,baz=148,slow=9.4,SNR=24						
AKTO				S	**S**	**10 36 26.9**	**-2.1**
	comp=Z,0.8nm,0.3s,baz=90,slow=20,SNR=1.3						
ZAA0	**Zalesovo Array**	**20.17**	**25**	P	**P**	**10 34 04.8**	**+0.6**
ZALV	**Zalesovo Beam**	**20.17**	**25**	P	**P**	**10 34 03.9**	**-0.3**
ZALV	**Zalesovo Beam**	**20.17**	**25**	P	**P**	**10 34 05.0**	**+0.8**
	comp=Z,4.5nm,0.4s,baz=212,slow=9.9,SNR=10						
	comp=Z,4.5nm,0.4s						
GNI	**Garni**	**20.47**	**288**	P	**P**	**10 34 05.9**	**-2.0**
GNI				IAmb	IAmb	10 34 11.7	
	comp=Z,11nm,1.1s						
ARTI	**Arti**	**21.55**	**342**	P	**P**	**10 34 18.0**	**-0.8**
ARTI	**Arti**	**21.55**	**342**	P	**P**	**10 34 19.5**	**+0.7**
	comp=Z,3.5nm,0.4s,baz=156,slow=7.9,SNR=6.9						
	comp=Z,3.5nm,0.4s						
SONM	**Songino Array**	**28.75**	**55**	P	**P**	**10 35 26.2**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=267,slow=8.7,SNR=2.0						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**29.01**	**288**	P	**P**	**10 35 27.6**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=86,slow=6.9,SNR=3.2						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.83**	**118**	P	**P**	**10 35 42.2**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=341,slow=11,SNR=4.5						
	comp=Z,0.7nm,0.3s						
AKASG	**Malin Array Be**	**32.62**	**309**	P	**P**	**10 35 58.4**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=82,slow=6.9,SNR=4.2						
	comp=Z,0.5nm,0.4s						
NRIK	**Noril'sk**	**34.27**	**11**	P	**P**	**10 36 12.9**	**+0.9**
	comp=Z,2.6nm,0.4s,baz=186,slow=8.1,SNR=4.2						
	comp=Z,2.6nm,0.4s						
FIA1	**FINESS Array S**	**37.28**	**326**	P	**P**	**10 36 38.3**	**+0.7**
FINES	**FINESS Array B**	**37.28**	**326**	P	**P**	**10 36 38.4**	**+0.7**
FINES	**FINESS Array B**	**37.28**	**326**	P	**P**	**10 36 38.1**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=116,slow=10,SNR=15						
	comp=Z,3.0nm,0.6s						
LVZ	**Lovozero**	**37.35**	**339**	P	**P**	**10 36 39.0**	**+0.8**
LVZ				IAmb	IAmb	10 36 44.0	
	comp=Z,9.4nm,1.1s						
KEV	**Kevo**	**40.69**	**338**	P	**P**	**10 37 06.5**	**+0.7**
KEV				IAmb	IAmb	10 37 14.9	
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**10 37 09.5**	**+0.9**
ARCES				IAmb	IAmb	10 37 09.8	
	comp=Z,4.7nm,0.7s						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**10 37 09.3**	**+0.8**
	comp=Z,3.4nm,0.5s,baz=110,slow=7.6,SNR=52						
	comp=Z,3.4nm,0.5s						
HFS	**Hagfors**	**42.83**	**322**	P	**P**	**10 37 23.7**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=97,slow=11,SNR=14						
	comp=Z,1.8nm,0.3s						
NC405	**NORSAR Array S**	**43.92**	**323**	P	**P**	**10 37 32.5**	**+0.6**
NC303	**NORSAR Array S**	**44.10**	**323**	P	**P**	**10 37 34.0**	**+0.6**
NC303				IAmb	IAmb	10 37 36.2	
	comp=Z,9.2nm,1.1s						
NB201	**NORSAR Array S**	**44.12**	**323**	P	**P**	**10 37 33.5**	**0.0**
NB201				IAmb	IAmb	10 37 44.1	
	comp=Z,12nm,1.1s						
NB2	**NORSAR Subarra**	**44.15**	**323**	P	**P**	**10 37 33.6**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**44.15**	**323**	P	**P**	**10 37 33.4**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=98,slow=7.8,SNR=6.7						
	comp=Z,0.9nm,0.5s						
NC204	**NORSAR Array S**	**44.40**	**323**	P	**P**	**10 37 35.8**	**0.0**
MA2	**Magadan**	**54.70**	**38**	P	**P**	**10 38 53.9**	**+0.5**
ILAR	**Eielson Array**	**74.97**	**16**	P	**P**	**10 41 02.8**	**-1.3**
ILAR	**Eielson Array**	**74.97**	**16**	P	**P**	**10 41 04.5**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=305,slow=4.7,SNR=5.5						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**82.35**	**122**	P	**P**	**10 41 43.8**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=320,slow=4.9,SNR=4.9						
	comp=Z,0.3nm,0.7s						
ASAR	**Alice Springs**	**84.60**	**125**	P	**P**	**10 41 56.1**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=318,slow=6.0,SNR=4.6						
	comp=Z,0.3nm,0.6s						

DJA ***08*** *10:33:59.8±0.7, 2°S±5°×13°9E±°, h12km±4km, M3.9/5, MLv3.9/5*

IDC ***08*** *10:34:01.7±1.7, 2°37S×139°13E, h0km, mb3.4/2, mbtmp3.5/3, ML4.0/1, Error ellipse: s-maj=30.0km s-min=15.1km az=178.0*

ISC 08 10:33:54.0±1.9, **1°5S**±0°1×**139°09E**±0°06, **h10**km, **n8, s0°77/9, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.66**	**216**	P	**Pn**	**10 34 08.9**	**-0.5**
SMPI				S	**Sg**	**10 34 16.1**	**+0.6**
GENI	**Genyem**	**1.56**	**137**	P	**Pg**	**10 34 24.7**	**+0.7**
GENI				S	**Sn**	**10 34 41.8**	**-0.4**
JAY	**Jayapura**	**1.93**	**123**	Pg	**Pb**	**10 34 29.8**	**+0.6**
	11nm,0.3s,baz=278,slow=14,SNR=27						
JAY				Lg	Lg	10 34 52.7	
	19nm,0.3s,baz=307,slow=20,SNR=9.1						
JAY	**Jayapura**	**1.93**	**123**	P	**Pb**	**10 34 29.3**	**+0.1**
BAKI	**Biak**	**3.00**	**275**	P	**Pb**	**10 34 48.0**	**+0.5**
WRA	**Warramunga Arr**	**18.96**	**194**	P	**P**	**10 38 14.4**	**-1.2**
	0.5nm,0.3s,baz=17,slow=12,SNR=31						
WRA				S	Sn	10 41 29.4	-19
	0.8nm,0.8s,baz=9.5,slow=23,SNR=4.8						
	0.9nm,0.4s						
ASAR	**Alice Springs**	**22.65**	**192**	P	**P**	**10 38 55.0**	**-0.6**
	1.1nm,0.6s,baz=20,slow=11,SNR=25						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**69.03**	**322**	P	P	10 45 14.4	+14
	0.1nm,0.3s,baz=119,slow=5.6,SNR=2.4						
	0.1nm,0.3s						

MOS ***08*** *10:44:43.1±0.9, 21°87S×179°58W, h571km, mb5.9/48, Error ellipse: s-maj=7.6km s-min=6.6km az=108.3*

IPGP ***08*** *10:44:44.0, 21°97S×179°49W, h602km, Mw6.6, Fault plane solution: NP1:φs118.00000°, δ17.00000°, λ-165.00000°. NP2:φs13.00000°, δ86.00000°, λ-74.00000°.*

NEIC ***08*** *10:44:44.3±1.7, 21°95S±0°09×179°51W±0°09, h577km±1km, mb5.9/734, Mwb6.6/210, Mww6.5/55, Error ellipse: s-maj=15.2km s-min=12.9km az=150.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.00; Mθθ=0.30; Mφφ=1.30; Mrθ=2.94; Mθφ=1.12; Mφr=8.16; Fault plane solution: M0 8.83000×10¹⁸ NP1: φs123.57000°, δ9.36000°, λ-164.78000°. NP2:φs18.55000°, δ87.55000°, λ-80.96000°. Principal axes: T 8.5376, Plg42.0000°, Azm100.0000°; N 0.5533, Plg9.0000°, Azm198.0000°; P -9.0908, Plg47.0000°, Azm298.0000°;*

BJI ***08*** *10:44:44.9, 21°855S×179°50W, h600km, mB6.3/69, mb5.9/81*

NEIC ***08*** *10:44:44.6, 21°96S×179°49W, h580km*

NEIC ***08*** *10:44:45.2, 21°84S×179°48W, h570km, Moment Tensor Solution. Duration: 9s5 Moment tensor: Scale 10¹⁸Nm; Mrr=0.96; Mθθ0.08; Mφφ0.89; Mrθ=2.22; Mθφ=1.67; Mφr=6.85; Fault plane solution: M0 7.46000×10¹⁸ NP1: φs113.72000°, δ13.20000°, λ-170.80000°. NP2: φs14.76000°, δ87.91000°, λ-76.96000°. Principal axes: T 6.8854, Plg41.0000°, Azm92.0000°; N 1.0318, Plg13.0000°, Azm194.0000°; P -7.9171, Plg46.0000°, Azm298.0000°;*

NEIC ***08*** *10:44:45.2, 21°94S×179°48W, h570km*

NOU ***08*** *10:44:45.9, 21°92S×179°47W, h588km, mB6.3/222, Fiji Islands Region*

IDC ***08*** *10:44:46.5±0.3, 21°85S×179°64W, h599km±2km, mb5.4/33, mbtmp6.2/34, Error ellipse: s-maj=7.5km s-min=6.9km az=39.0*

BGR ***08*** *10:44:48.7, 21°855S×178°59W, h629km±6km*

GCMT ***08*** *10:44:50.3±0.1, 21°94S±0°01×179°42W±0°01, h599km, MW6.5/163, Moment Tensor Solution. s163,c411; s145,c265; Duration: 49s6 Moment tensor: Scale 10¹⁸Nm; Mrr=0.70±.03; Mθθ=1.14±.04; Mφφ1.85±.04; Mrθ=2.39±.04; Mθφ=1.94±.04; Mφr=7.61±.04; Best double couple: M0 8.36500×10¹⁸ NP1:φs114.00000°, δ17.00000°, λ-172.00000°. NP2:φs16.00000°, δ88.00000°, λ-73.00000°. Principal axes: T 8.2890, Plg40.0000°,*

Azm91.0000°; N 0.1570, Plg17.0000°, Azm196.0000°; P -8.4410, Plg45.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function

ISC 08 10:44:45.8±0.2, **21°96S**±0°03×**179°43W**±0°03, **h601**km±1km, **h602**km:**pP-P, n2417,** σ**1s50**/2599, **mb6.0**/513, **124C-163D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.83**	**330**		**P**	**10 46 18.1**	**+0.5**
MSVF	**Nonsavu**	**4.83**	**330**	P	**P**	**10 46 17.9**	**+0.3**
MSVF	**Nonsavu**	**4.83**	**330**	S	**S**	**10 47 32.5**	**+0.1**
MSVF	**Nonsavu**	**4.83**	**330**	*c iP*	**P**	**10 46 18.1**	**+0.5**
MSVF	**Nonsavu**	**4.83**	**330**	⇓P	**P**	**10 46 17.5**	**-0.1**
RIZ	**Raoul Island**	**7.38**	**170**	P	**P**	**10 46 37.7**	**-1.4**
RAO	**Raoul Island**	**7.38**	**170**		**P**	**10 46 37.2**	**-2.0**
RAO	**Raoul Island**	**7.38**	**170**	P	**P**	**10 46 37.6**	**-1.6**
	11μm,0.2s,baz=69,slow=7.8,SNR=99						
RAO				S	**S**	**10 48 07.2**	**-5.0**
	16μm,0.6s,baz=119,slow=22,SNR=7.8						
RAO	**Raoul Island**	**7.38**	**170**	P	**P**	**10 46 37.7**	**-1.5**
	24μm,0.8s						
RAO	**Raoul Island**	**7.38**	**170**	S	**S**	**10 48 11.0**	**-1.2**
	24μm,0.8s						
RAO	**Raoul Island**	**7.38**	**170**	P	**P**	**10 46 37.8**	**-1.5**
RAO	**Raoul Island**	**7.38**	**170**	P	**P**	**10 46 37.2**	**-2.0**
RAO	**Raoul Island**	**7.38**	**170**	⇓P	**P**	**10 46 37.2**	**-2.0**
GLKZ	**Green Lake**	**7.39**	**170**	P	**P**	**10 46 37.6**	**-1.7**
NIUE	**Niue**	**9.36**	**74**		**P**	**10 46 57.2**	**-1.1**
NIUE	**Niue**	**9.36**	**74**	P	**P**	**10 46 57.7**	**-0.6**
	16μm,1.0s						
NIUE	**Niue**	**9.36**	**74**	S	**S**	**10 48 47.1**	**+0.2**
	16μm,1.0s						
AFI	**Afiamalu**	**10.82**	**44**		**P**	**10 47 10.3**	**-2.7**
AFI	**Afiamalu**	**10.82**	**44**	P	**P**	**10 47 10.4**	**-2.5**
AFI	**Afiamalu**	**10.82**	**44**	P	**P**	**10 47 10.2**	**-2.7**
AFI				S	**S**	**10 49 05.3**	**-8.4**
AFI	**Afiamalu**	**10.82**	**44**	P	**P**	**10 47 10.3**	**-2.7**
MARNC	**Mare, Loyalty**	**11.67**	**270**		**P**	**10 47 19.8**	**-1.4**
MARNC	**Mare, Loyalty**	**11.67**	**270**	P	**P**	**10 47 21.0**	**-0.2**
MARNC	**Mare, Loyalty**	**11.67**	**270**	S	**S**	**10 49 28.4**	**-0.5**
PINNC	**Pines Island,**	**12.17**	**264**		**P**	**10 47 25.2**	**-1.1**
PINNC	**Pines Island,**	**12.17**	**264**	P	**P**	**10 47 25.6**	**-0.6**
PINNC	**Pines Island,**	**12.17**	**264**	S	**S**	**10 49 38.8**	**+0.7**
YATNC	**Mamie plateau,**	**12.69**	**267**	P	**P**	**10 47 30.4**	**-1.1**
YATNC	**Mamie plateau,**	**12.69**	**267**	S	**S**	**10 49 48.5**	**+0.7**
OUENC	**Ouen Island, N**	**12.73**	**265**	P	**P**	**10 47 30.9**	**-1.0**
ONTNC	**Ouen Toro**	**13.09**	**266**		**P**	**10 47 34.1**	**-1.4**
ONTNC	**Ouen Toro**	**13.09**	**266**	P	**P**	**10 47 34.6**	**-0.9**
DZM	**Mont Dzumac**	**13.11**	**267**	P	**P**	**10 47 33.0**	**-2.8**
	134nm,0.6s,baz=84,slow=16,SNR=320						
DZM				S	**S**	**10 49 54.5**	**-0.9**
	255nm,1.1s,baz=245,slow=19,SNR=7.9						
DZM				ScP	**ScP**	**10 54 55.5**	**+1.8**
	307nm,1.0s,baz=54,slow=13,SNR=13						
NFK	**Norfolk Island**	**13.40**	**236**	⇑P	**P**	**10 47 38.4**	**-0.3**
FUNA	**Funafuti**	**13.43**	**354**		**P**	**10 47 37.4**	**-1.7**
FUNA	**Funafuti**	**13.43**	**354**	P	**P**	**10 47 38.0**	**-1.1**
FUNA	**Funafuti**	**13.43**	**354**	⇑P	**P**	**10 47 37.4**	**-1.7**
SANVU	**Saraoutou**	**14.22**	**295**		**P**	**10 47 44.8**	**-2.1**
SANVU	**Saraoutou**	**14.22**	**295**	P	**P**	**10 47 46.2**	**-0.7**
SANVU	**Saraoutou**	**14.22**	**295**	S	**S**	**10 50 16.0**	**+1.1**
SANVU	**Saraoutou**	**14.22**	**295**	⇓P	**P**	**10 47 44.3**	**-2.6**
OUZ	**Omahuta**	**14.55**	**203**	P	**P**	**10 47 50.9**	**+1.2**
OUZ	**Omahuta**	**14.55**	**203**	S	**S**	**10 50 21.6**	**+1.8**
OUZ	**Omahuta**	**14.55**	**203**	P	**P**	**10 47 50.8**	**+1.2**
GRZ	**Great Barrier**	**14.92**	**196**	P	**P**	**10 47 53.2**	**+0.2**
WCZ	**Waipu Caves**	**14.95**	**200**	P	**P**	**10 47 54.4**	**+1.2**
KOUNC	**Koumac, New Ca**	**15.25**	**272**	P	**P**	**10 47 57.2**	**+0.9**
KOUNC	**Koumac, New Ca**	**15.25**	**272**	S	**S**	**10 50 35.0**	**+3.4**
KUZ	**Kuaotunu**	**15.32**	**195**	P	**P**	**10 47 57.2**	**+0.6**
KUZ	**Kuaotunu**	**15.32**	**195**	S	**S**	**10 50 35.3**	**+3.0**
KUZ	**Kuaotunu**	**15.32**	**195**	P	**P**	**10 47 56.8**	**+0.1**
ABAZ	**Army Bay**	**15.41**	**198**	P	**P**	**10 47 59.6**	**+2.1**
WIAZ	**Waiheke Island**	**15.51**	**197**	P	**P**	**10 47 59.8**	**+1.4**
MBAZ	**Motutapu North**	**15.55**	**197**	P	**P**	**10 48 00.3**	**+1.5**
RVAZ	**Riverhead Bore**	**15.64**	**198**	P	**P**	**10 48 01.5**	**+1.9**
MXZ	**Matakaoa Point**	**15.67**	**187**		**P**	**10 47 58.3**	**-1.5**
MXZ	**Matakaoa Point**	**15.67**	**187**	P	**P**	**10 47 59.9**	**+0.1**
MXZ	**Matakaoa Point**	**15.67**	**187**	P	**P**	**10 47 58.1**	**-1.8**
HBAZ	**Herne Bay Bore**	**15.68**	**198**	P	**P**	**10 48 01.8**	**+1.9**
EPAZ	**Eden Park BICE**	**15.70**	**198**	P	**P**	**10 48 02.3**	**+2.3**
MYRZ	**Mayor Island**	**15.72**	**193**	P	**P**	**10 48 02.4**	**+2.1**
ETAZ	**East Tamaki Re**	**15.72**	**197**	P	**P**	**10 48 01.6**	**+1.3**
WTAZ	**Waiatarua**	**15.80**	**198**	P	**P**	**10 48 02.6**	**+1.5**
MKAZ	**Moumakai**	**15.80**	**196**	P	**P**	**10 48 01.7**	**+0.7**
KBAZ	**Karaka Road Bo**	**15.86**	**197**	P	**P**	**10 48 04.2**	**+2.6**
AWAZ	**Awhitu Peninsu**	**15.90**	**198**	P	**P**	**10 48 03.1**	**+1.1**
WMGZ	**Waiomatatini S**	**15.91**	**186**	P	**P**	**10 48 00.4**	**-1.7**
HAZ	**Te Kaha**	**15.92**	**188**	P	**P**	**10 48 00.1**	**-2.0**
PKGZ	**Pakihiroa**	**15.99**	**187**	P	**P**	**10 48 01.2**	**-1.7**
WHRZ	**Whale Island**	**16.14**	**190**	P	**P**	**10 48 04.6**	**+0.4**
RUGZ	**Raukumara Rang**	**16.14**	**188**	P	**P**	**10 48 02.3**	**-2.0**
TGRZ	**Tauranga**	**16.15**	**192**	P	**P**	**10 48 05.6**	**+1.4**
OPRZ	**Ohinepanea**	**16.20**	**191**	P	**P**	**10 48 04.9**	**+0.1**
TOZ	**Tahuroa Road**	**16.31**	**194**		**P**	**10 48 06.7**	**+0.9**
TWGZ	**Tauwhareparae**	**16.31**	**187**	P	**P**	**10 48 04.6**	**-1.2**
MARZ	**Manawahe**	**16.32**	**191**	P	**P**	**10 48 06.3**	**+0.4**
KMRZ	**Kaimai**	**16.32**	**193**	P	**P**	**10 48 06.4**	**+1.5**
LIRZ	**Lichensteins R**	**16.39**	**192**	P	**P**	**10 48 08.1**	**+1.7**
EDRZ	**Edgecumbe**	**16.42**	**191**	P	**P**	**10 48 06.5**	**-0.4**
KARZ	**Kaharoa**	**16.43**	**192**	P	**P**	**10 48 09.0**	**+2.1**
OMRZ	**Omania**	**16.49**	**192**	P	**P**	**10 48 08.3**	**+0.9**
MKRZ	**Makatiti**	**16.50**	**191**	P	**P**	**10 48 09.9**	**+2.3**
URZ	**Urewera**	**16.51**	**190**	P	**P**	**10 48 05.8**	**-1.7**
	857nm,0.6s,baz=1.6,slow=4.7,SNR=277						
URZ				S	**S**	**10 50 45.1**	**-6.8**
	284nm,0.6s,baz=37,slow=22,SNR=10						
URZ	**Urewera**	**16.51**	**190**	P	**P**	**10 48 04.0**	**-3.5**
NGRZ	**Ngongotaha**	**16.52**	**192**	P	**P**	**10 48 10.2**	**+2.5**
MWZ	**Matawai**	**16.52**	**188**	P	**P**	**10 48 05.7**	**-2.1**
TKGZ	**Te Karaka**	**16.59**	**188**	P	**P**	**10 48 07.1**	**-1.1**
CNGZ	**Carmagh Statio**	**16.59**	**187**	P	**P**	**10 48 06.6**	**-0.7**
TARZ	**Mount Tarawera**	**16.59**	**191**	P	**P**	**10 48 09.2**	**+0.8**
UTU	**Utuhina**	**16.59**	**192**	P	**P**	**10 48 10.8**	**+2.4**
HLRZ	**Highlands Stat**	**16.64**	**192**	P	**P**	**10 48 09.7**	**+0.9**
RRRZ	**Republican Roa**	**16.69**	**191**	P	**P**	**10 48 10.0**	**+0.7**
RAGZ	**Rawiri**	**16.70**	**189**	P	**P**	**10 48 08.9**	**-0.5**
HSRZ	**Hossack Road**	**16.71**	**192**	P	**P**	**10 48 10.4**	**+0.9**
GRRZ	**Galatos Road**	**16.78**	**192**	P	**P**	**10 48 11.5**	**+1.5**
MUGZ	**Murupara**	**16.78**	**190**	P	**P**	**10 48 07.9**	**-2.1**
HRRZ	**Handcock Road**	**16.78**	**192**	P	**P**	**10 48 11.0**	**+0.9**
RIGZ	**Rimuhau**	**16.86**	**188**	P	**P**	**10 48 09.6**	**-1.2**
PRRZ	**Plateau Road**	**16.87**	**191**	P	**P**	**10 48 10.1**	**-0.8**
TLZ	**Tolley Road**	**16.88**	**194**	P	**P**	**10 48 12.2**	**+1.2**
RTZ	**Ruatahuna**	**16.88**	**190**		**P**	**10 48 08.8**	**-2.2**
RTZ	**Ruatahuna**	**16.88**	**190**	P	**P**	**10 48 10.0**	**-1.1**
WPRZ	**Whakapapataprin**	**16.93**	**192**	P	**P**	**10 48 12.7**	**+1.2**
ALRZ	**Allen Road**	**16.94**	**191**	P	**P**	**10 48 11.0**	**-0.5**
KUTZ	**Kaahu Road**	**16.97**	**193**	P	**P**	**10 48 13.5**	**+1.7**
SNGZ	**Shannon Statio**	**16.99**	**189**	P	**P**	**10 48 10.3**	**-1.7**
PRGZ	**Paritu Road**	**17.06**	**187**	P	**P**	**10 48 12.4**	**-0.2**
WHTZ	**Whakaora**	**17.11**	**192**	P	**P**	**10 48 14.8**	**+1.6**
MTHZ	**Maungataniwha**	**17.14**	**190**	P	**P**	**10 48 11.8**	**-1.5**
RAHZ	**Arahi**	**17.16**	**189**	P	**P**	**10 48 11.7**	**-1.9**
KNZ	**Kokohu**	**17.18**	**188**	P	**P**	**10 48 12.4**	**-1.3**
MRHZ	**Matea Rd**	**17.19**	**191**	P	**P**	**10 48 13.0**	**-0.9**
WATZ	**Wairara**	**17.20**	**193**	P	**P**	**10 48 14.8**	**+0.9**
HIZ	**Hauiti**	**17.21**	**195**		**P**	**10 48 16.6**	**+2.7**
HIZ	**Hauiti**	**17.21**	**195**	P	**P**	**10 48 16.1**	**+2.1**
HIZ	**Hauiti**	**17.21**	**195**	S	**S**	**10 51 06.3**	**+3.0**
HIZ	**Hauiti**	**17.21**	**195**	P	**P**	**10 48 16.4**	**+2.5**
MHGZ	**Mahia Peninsul**	**17.29**	**187**	P	**P**	**10 48 14.9**	**+0.3**
WHHZ	**Waihua**	**17.30**	**189**	P	**P**	**10 48 13.6**	**-1.1**
HATZ	**Hinemaiaia**	**17.30**	**192**	P	**P**	**10 48 14.7**	**-0.2**
RATZ	**Rangitukua**	**17.34**	**193**	P	**P**	**10 48 14.9**	**-0.3**
NMHZ	**Naumai**	**17.38**	**190**	P	**P**	**10 48 14.3**	**-1.3**
RITZ	**Rihia Road**	**17.43**	**193**	P	**P**	**10 48 15.8**	**-0.2**
KATZ	**Kakaramea**	**17.46**	**193**	P	**P**	**10 48 16.4**	**0.0**
BKZ	**Black Stump Fm**	**17.50**	**191**		**P**	**10 48 14.8**	**-1.9**
BKZ	**Black Stump Fm**	**17.50**	**191**	P	**P**	**10 48 15.6**	**-1.1**
BKZ	**Black Stump Fm**	**17.50**	**191**	P	**P**	**10 48 14.2**	**-2.4**
ARHZ	**Aropaoanui**	**17.51**	**189**	P	**P**	**10 48 15.4**	**-1.3**
NTVZ	**North Tongarir**	**17.59**	**193**	P	**P**	**10 48 17.0**	**-0.6**
KRVZ	**Karewarewa**	**17.59**	**193**	P	**P**	**10 48 16.6**	**-1.0**
TMVZ	**Te Maari**	**17.60**	**193**	P	**P**	**10 48 16.5**	**-1.1**
TWVZ	**Taurewa**	**17.61**	**193**	P	**P**	**10 48 17.6**	**-0.1**
ETVZ	**East Tongariro**	**17.61**	**193**	P	**P**	**10 48 16.6**	**-1.2**
WTVZ	**West Tongariro**	**17.62**	**193**	P	**P**	**10 48 16.9**	**-0.9**
NNVZ	**North Ngauruho**	**17.63**	**193**	P	**P**	**10 48 17.2**	**-0.8**
OTVZ	**Oturere**	**17.65**	**193**	P	**P**	**10 48 16.6**	**-1.6**
NGZ	**Ngauruhoe**	**17.68**	**193**	P	**P**	**10 48 19.3**	**+0.9**
SNVZ	**South Ngauruho**	**17.68**	**193**	P	**P**	**10 48 17.4**	**-1.1**
COVZ	**Chateau Observ**	**17.71**	**193**	P	**P**	**10 48 18.2**	**-0.5**
MCHZ	**McNeill Hill**	**17.74**	**190**	P	**P**	**10 48 16.8**	**-1.9**
TUVZ	**Tukino**	**17.75**	**193**	P	**P**	**10 48 19.2**	**+0.1**
KWHZ	**Kaweka Forest**	**17.76**	**191**	P	**P**	**10 48 16.8**	**-2.3**
WHVZ	**Whangaehu Hut**	**17.78**	**193**	P	**P**	**10 48 19.1**	**-0.4**
TRVZ	**Turoa**	**17.80**	**193**	P	**P**	**10 48 19.2**	**-0.5**
VRZ	**Vera Road**	**17.81**	**195**	P	**P**	**10 48 20.9**	**+1.4**
WNVZ	**Wahianoa**	**17.82**	**193**	P	**P**	**10 48 18.2**	**-1.6**
PKVZ	**Pokaka**	**17.84**	**193**	P	**P**	**10 48 21.0**	**+1.2**
MOVZ	**Moawhango**	**17.87**	**192**	P	**P**	**10 48 19.0**	**-1.0**
CKHZ	**Cape Kidnapper**	**17.89**	**189**	P	**P**	**10 48 19.6**	**-0.5**
MTVZ	**Mangateitei**	**17.90**	**193**	P	**P**	**10 48 21.4**	**+1.0**
KRHZ	**Kereru**	**17.98**	**191**	P	**P**	**10 48 18.7**	**-2.4**
DREZ	**Durham Road**	**18.01**	**196**	P	**P**	**10 48 25.2**	**+3.9**
KAHZ	**Kahuranaki**	**18.05**	**189**	P	**P**	**10 48 20.8**	**-0.9**
PKE	**Pukeiti**	**18.07**	**197**	P	**P**	**10 48 25.6**	**+3.7**
NEZ	**North Egmont**	**18.12**	**196**	P	**P**	**10 48 25.9**	**+3.5**
KHEZ	**Kahui Hut**	**18.16**	**197**	P	**P**	**10 48 24.2**	**+1.5**
KHEZ	**Kahui Hut**	**18.16**	**197**	P	**P**	**10 48 26.9**	**+4.1**
NBEZ	**Newall Road No**	**18.18**	**197**	P	**P**	**10 48 26.4**	**+3.6**
LREZ	**Lake Rotokare**	**18.22**	**195**	P	**P**	**10 48 26.0**	**+2.8**
PXZ	**Pawanui**	**18.29**	**189**	P	**P**	**10 48 22.4**	**-1.4**
RAR	**Rarotonga**	**18.30**	**91**		**P**	**10 48 23.9**	**-0.2**
RAR	**Rarotonga**	**18.30**	**91**	P	**P**	**10 48 24.4**	**+0.3**
	1μm,1.0s,baz=240,slow=6.2,SNR=52						
RAR	**Rarotonga**	**18.30**	**91**	P	**P**	**10 48 24.5**	**+0.4**
RAR	**Rarotonga**	**18.30**	**91**	P	**P**	**10 48 23.9**	**-0.2**
RAR	**Rarotonga**	**18.30**	**91**	⇑P	**P**	**10 48 23.9**	**-0.2**
NMEZ	**Namu Road**	**18.31**	**197**	P	**P**	**10 48 27.1**	**+3.2**
WAZ	**Wanganui**	**18.36**	**194**	P	**P**	**10 48 24.1**	**-0.4**
WPHZ	**Waipukurau**	**18.38**	**190**	P	**P**	**10 48 24.4**	**-0.3**
TSZ	**Takapari Road**	**18.46**	**191**	P	**P**	**10 48 25.7**	**+0.4**
PRHZ	**Porangahau**	**18.55**	**190**	P	**P**	**10 48 25.2**	**-0.9**
DVHZ	**Dannevirke**	**18.66**	**191**	P	**P**	**10 48 25.5**	**-1.7**
OHWZ	**Ohakea**	**18.73**	**193**	P	**P**	**10 48 27.7**	**0.0**
ANWZ	**Angora Road**	**18.76**	**190**	P	**P**	**10 48 27.6**	**-0.4**
POWZ	**Post Office Ro**	**18.82**	**191**	P	**P**	**10 48 28.7**	**+0.1**
PRWZ	**Pori Road**	**18.94**	**191**	P	**P**	**10 48 29.3**	**-0.4**
BFZ	**Birch Farm**	**19.02**	**190**	P	**P**	**10 48 30.2**	**-0.2**
BFZ	**Birch Farm**	**19.02**	**190**	P	**P**	**10 48 29.7**	**-0.7**
BFZ	**Bir

CNB Canberra Magne 30.31 237 P P 10 50 10.9 +0.7
AUDAR Daramalan Coll 30.46 237 P P 10 50 12.3 +0.8
AUSIS Research Schoo 30.50 237 P P 10 50 13.1 +1.4
AUMTS Mt Stromlo 30.59 237 P P 10 50 13.2 +0.6
CAN Canberra 30.60 237 P 10 50 12.3 -0.3
CAN Canberra 30.60 237 P P 10 50 13.1 +0.5
CAN Canberra 30.60 237 P P 10 50 12.3 -0.3
CAN pmax pmax
comp=Z,1μm,1.2s
CAN Canberra 30.60 237 P P 10 50 13.1 +0.5
CAN pP pP 10 51 47.0 -0.2
CAN ScP ScP 10 55 41.4 +3.2
PMOR Pomariorio Ree 30.66 82 eP P 10 50 13.0 -0.3
comp=Z,6μm,1.3s
VAH Vaihoa 30.83 83 eP P 10 50 14.1 -0.7
comp=Z,580nm,1.0s
MILA Mila 31.03 234 ⇓P P 10 50 16.8 +0.5
AUSMG Snowy Mountain 31.23 235 P P 10 50 19.4 +1.3
TV1H Townsville Har 31.69 269 P P 10 50 21.9 -0.1
XMAS Kiritimati 32.10 45 P 10 50 25.4 -0.2
XMAS Kiritimati 32.10 45 P P 10 50 26.8 +1.2
XMAS Kiritimati 32.10 45 ⇓P P 10 50 26.2 +0.7
XMAS Kiritimati 32.10 45 P P 10 50 26.0 +0.4
CMSA Cobar Meteorol 32.46 245 P P 10 50 28.7 +0.3
RABL Rabaul 32.72 299 P P 10 50 29.0 -1.8
RABL Rabaul 32.72 299 ⇓P P 10 50 28.6 -2.2
AUSSC Sale College, 32.94 233 P P 10 50 33.8 +1.5
GLAD Gladstone 33.36 228 P P 10 50 36.4 +0.6
QLP Quilpie 33.37 255 P P 10 50 36.2 +0.1
QLP Quilpie 33.37 255 ⇓P P 10 50 35.7 -0.4
TOO Toolangi 33.96 235 P 10 50 40.5 -0.5
TOO IAmb IAmb 10 50 43.4
comp=Z,596nm,1.4s
TOO Toolangi 33.96 235 P P 10 50 40.5 -0.5
TOO pmax pmax
comp=Z,595nm,1.4s
TOO Toolangi 33.96 235 ⇓P P 10 50 40.8 -0.2
AUMAG Moama Anglican 34.13 238 P P 10 50 43.7 +1.3
CORO Coronation Par 34.15 228 P P 10 50 43.8 +1.5
MTSU Mount Surprise 34.27 270 P P 10 50 43.4 0.0
PMG Port Moresby 34.42 286 P 10 50 44.6 -0.4
PMG Port Moresby 34.42 286 ScP ScP 10 55 52.5 +0.8
comp=Z,142nm,1.0s,baz=66,slow=5.3,SNR=5.7
PMG Port Moresby 34.42 286 P P 10 50 44.8 -0.2
PMG Port Moresby 34.42 286 P P 10 50 44.9 -0.1
PMG Port Moresby 34.42 286 *d* iP P 10 50 44.4 -0.6
PMG Port Moresby 34.42 286 ⇓P P 10 50 44.4 -0.6
PMG Port Moresby 34.42 286 P P 10 50 44.6 -0.4
MLBS Spotswood, Mel 34.49 235 P P 10 50 46.1 +0.8
MOO Moorlands 34.53 226 P P 10 50 46.7 +1.1
AUTAR Taroona High S 34.64 225 P P 10 50 48.9 +2.5
TAU Tasmania Unive 34.65 225 P 10 50 46.8 +0.2
TAU IAmb IAmb 10 50 48.9
comp=Z,612nm,1.4s
TAU Tasmania Unive 34.65 225 P P 10 50 48.0 +1.5
TAU Tasmania Unive 34.65 225 P P 10 50 46.8 +0.2
TAU pmax pmax
comp=Z,612nm,1.4s
TAU Tasmania Unive 34.65 225 ⇓P P 10 50 46.7 +0.2
TAU Tasmania Unive 34.65 225 P P 10 50 47.5 +0.9
AUBRN Burnie High Sc 34.87 229 P P 10 50 50.5 +2.2
GEXS Deakin Univers 35.06 234 P P 10 50 50.7 +0.7
BRAT Ballarat 35.15 235 P P 10 50 51.4 +0.7
AUMTC Mt Clear Colle 35.20 235 P P 10 50 51.6 +0.4
STKA Stephens Creek 35.96 246 P 10 50 57.3 -0.3
STKA Stephens Creek 35.96 246 P P 10 50 57.5 -0.1
comp=Z,309nm,0.4s,baz=89,slow=9.7,SNR=345
STKA S S 10 55 53.1 -1.7
comp=Z,127nm,0.9s,baz=78,slow=5.6,SNR=6.5
comp=Z,309nm,0.4s
STKA Stephens Creek 35.96 246 P P 10 50 57.9 +0.3
PATS Pohnpei 35.99 320 P P 10 50 57.0 -1.0
PATS Pohnpei 35.99 320 P P 10 50 59.0 +1.0
COEN Coen 36.38 276 P P 10 51 01.0 -0.2
COEN Coen 36.38 276 P P 10 51 01.4 +0.2
COEN Coen 36.38 276 ⇓P P 10 51 01.1 -0.2
INKA Innaminka 36.48 253 IAmb IAmb 10 51 04.8
comp=Z,540nm,1.1s
AUHPC Hawkesdale P12 36.52 235 P P 10 51 03.7 +1.7
MANU Manus Island 37.87 297 ⇓P P 10 51 12.9 -0.5
QIS Mount Isa 38.13 264 P P 10 51 14.6 +0.8
AUMBR Murray Bridge 38.30 241 P P 10 51 17.0 +0.5
HTT Hallett 38.38 244 P P 10 51 17.4 +0.1
HTT Hallett 38.38 244 P P 10 51 16.1 -1.2
HTT Hallett 38.38 244 ⇑P P 10 51 16.8 -0.5
AUJCS Jamestown Cent 38.61 244 P P 10 51 19.7 +0.6
AUMAR Marden Senior 38.79 241 P P 10 51 20.9 +0.4
GHSS Government Hou 38.83 241 P P 10 51 21.3 +0.5
PTPS Port Pirie 39.12 244 P P 10 51 23.8 +0.6
WHYH Whyalla 39.46 244 P P 10 51 26.1 +0.2
JOHN Johnston Islan 39.66 15 P P 10 51 27.4 -0.2
JOHN Johnston Islan 39.66 15 P P 10 51 29.0 +1.4
JOHN Johnston Islan 39.66 15 ⇓P P 10 51 28.9 +1.4
TAOE Nuku Hiva Isla 39.92 77 P P 10 51 29.4 -0.5
TAOE Nuku Hiva Isla 39.92 77 ⇑iP P 10 51 30.0 +0.1
comp=Z,5μm,1.1s
TAOE *e*pP pP 10 53 10.7 +0.6
comp=Z,1μm,1.5s
TAOE *e*S S 10 56 47.3 -6.1
comp=Z,6μm,24.5s
TAOE *e*SS SS 11 00 19.8 +2.1
comp=Z,9μm,25.1s
TAOE Nuku Hiva Isla 39.92 77 P P 10 51 31.2 +1.3
TAOE Nuku Hiva Isla 39.92 77 ⇓P P 10 51 30.6 +0.7
TAOE Nuku Hiva Isla 39.92 77 P P 10 51 30.6 +0.7
BBOO Buckleboo 40.71 245 P P 10 51 34.8 -1.1
BBOO Buckleboo 40.71 245 P P 10 51 35.6 -0.3
MMPI Merauke 40.90 283 P P 10 51 38.0 +0.5
RKT Rikitea 40.96 100 eP P 10 51 39.0 +1.1
comp=Z,468nm,0.9s
RKT *e*pP pP 10 53 18.8 -0.3
comp=Z,106nm,1.0s
RKT *e*S S 10 57 07.5 -0.5
comp=Z,9μm,26.8s
RKT *es*S sS 11 00 15.0 -0.5
comp=Z,39μm,27.0s
RKT *e*LQ LQ 11 02 07.6
comp=Z,21μm,28.8s
RKT *e*LR LR 11 03 46.1
comp=Z,8μm,29.2s
AUCAS Cummins Area S 41.11 243 P P 10 51 39.6 +0.6
AS31 Alice Springs 42.90 258 P P 10 51 52.4 -0.8
AS31 IAmb IAmb 10 51 55.3
comp=Z,593nm,1.2s
ASAR Alice Springs 42.90 258 P P 10 51 52.1 -1.2
ASAR Alice Springs 42.90 258 P P 10 51 52.5 -0.8
comp=Z,1μm,0.8s,baz=101,slow=7.9,SNR=1082
ASAR PcP PcP 10 53 30.0 0.0
comp=Z,98nm,0.8s,baz=101,slow=3.4,SNR=4.6
ASAR ScP ScP 10 56 26.1 +1.4
comp=Z,60nm,0.9s,baz=111,slow=4.1,SNR=5.2
ASAR S S 10 57 34.1 -1.9
comp=Z,68nm,0.7s,baz=97,slow=16,SNR=8.7
comp=Z,1μm,0.8s
AUALC St Philip's Co 42.92 258 P P 10 51 53.3 -0.1
WR8 Warramunga Arr 42.95 264 P P 10 51 52.1 -1.5
WB0 Warramunga Arr 43.08 264 P P 10 51 53.4 -1.3
WRAB Tennant Creek 43.09 264 P P 10 51 53.2 -1.5
WRAB Tennant Creek 43.09 264 P P 10 51 53.7 -1.0
WRAB Tennant Creek 43.09 264 *d* iP P 10 51 53.2 -1.5
WRAB pmax pmax
comp=Z,2μm,1.0s
WRAB Tennant Creek 43.09 264 P P 10 51 53.6 -1.0
WRA Warramunga Arr 43.10 264 IAmb IAmb 10 51 55.9
comp=Z,152nm,0.9s
WRA Warramunga Arr 43.10 264 P P 10 51 53.9 -0.9
comp=Z,980nm,0.9s,baz=99,slow=5.5,SNR=470
WRA PcP PcP 10 53 30.3 -0.4
comp=Z,50nm,0.9s,baz=90,slow=2.6,SNR=2.7
WRA ScP ScP 10 56 26.0 +0.6
comp=Z,191nm,1.1s,baz=97,slow=4.0,SNR=9.4
WRA S S 10 57 34.5 -4.3
comp=Z,54nm,0.9s,baz=95,slow=14,SNR=14
comp=Z,980nm,0.9s
I07AU WARRAMUNGA INR 43.11 264 P P 10 51 54.6 -0.2
baz=120,slow=6.2,SNR=4.1
WAKE Wake Island 43.20 341 P P 10 51 56.2 +0.9
WAKE Wake Island 43.20 341 P P 10 51 55.1 -0.2
JAY Jayapura 43.28 291 P P 10 51 52.2 -1.1
comp=Z,25μmcomp=Z,20μmcomp=Z,3μm,0.9s
GENI Genyem 43.71 290 P P 10 51 59.6 +0.1
GENI Genyem 43.71 290 P P 10 51 58.9 -0.6
GENI Genyem 43.71 290 ⇓P P 10 51 59.0 -0.6

SMPI Sarmi 45.27 290 P P 10 52 10.4 -1.1
comp=Z,26μmcomp=Z,19μmcomp=Z,2μm,1.7s
AIN Ainahou 47.30 31 IAmb IAmb 10 52 29.9
comp=Z,409nm,1.2s
HLP Hilina Pali 47.31 32 IAmb IAmb 10 52 29.2
comp=Z,972nm,1.6s
MWH Mokuaweoweo 47.33 31 IAmb IAmb 10 52 39.4
comp=Z,598nm,1.6s
HUH Hualalai 47.38 31 IAmb IAmb 10 52 31.3
comp=Z,276nm,0.7s
PUH Pauahi 47.42 32 IAmb IAmb 10 52 31.3
comp=Z,478nm,1.0s
UWE Uwekahuna 47.42 32 IAmb IAmb 10 52 30.7
comp=Z,695nm,1.2s
BYL Byron's Ledge 47.43 32 IAmb IAmb 10 52 30.7
comp=Z,285nm,1.0s
MLH Mauna Loa 47.44 31 IAmb IAmb 10 52 30.1
comp=Z,670nm,1.2s
HATHI Halema'uma'u T 47.44 32 IAmb IAmb 10 52 30.7
comp=Z,743nm,1.4s
STCH Steam Cracks 47.47 32 IAmb IAmb 10 52 29.8
comp=Z,510nm,0.8s
FORT Forrest 47.50 248 P P 10 52 26.9 -1.1
POHA Pohakuloa 47.59 31 P P 10 52 29.2 +0.2
POHA IAmb IAmb 10 52 32.2
comp=Z,664nm,1.2s
POHA Pohakuloa 47.59 31 P P 10 52 29.8 +0.7
POHA Pohakuloa 47.59 31 ⇑P P 10 52 29.7 +0.7
KEKH Kekaha 47.73 25 IAmb IAmb 10 52 31.7
comp=Z,388nm,0.7s
HON Honolulu 47.84 27 P P 10 52 32.0 +1.4
HON pmax pmax
comp=Z,832nm,1.1s
KIP Kipapa 47.92 27 P P 10 52 32.3 +1.1
KIP Kipapa 47.92 27 P P 10 52 32.8 +1.6
KIP Kipapa 47.92 27 P P 10 52 32.7 +1.6
KIP Kipapa 47.92 27 *j* iP P 10 52 32.3 +1.1
KIP pmax pmax
comp=Z,743nm,1.8s
KIP Kipapa 47.92 27 P P 10 52 32.3 +1.1
KIP ScP ScP 10 56 49.3 +4.0
BAKI Biak 47.93 289 P P 10 52 32.4 +0.9
comp=Z,33μmcomp=Z,30μmcomp=Z,4μm,1.1s
KHLH Kahului Airpor 48.16 29 IAmb IAmb 10 52 35.3
comp=Z,443nm,0.8s
DRS Darwin Rock St 48.21 273 P P 10 52 32.5 -1.0
AUDHS Darwin High Sc 48.27 273 P P 10 52 33.0 -1.0
KMPI Kaimana, Papua 48.93 285 P P 10 52 39.3 +0.4
KNRA Kununurra 49.25 268 P P 10 52 40.4 -0.8
SAUI Saumlaki 49.37 279 P P 10 52 41.7 -0.4
SAUI Saumlaki 49.37 279 P P 10 52 42.5 +0.4
SAUI Saumlaki 49.37 279 P P 10 52 42.4 +0.4
SAUI Saumlaki 49.37 279 ⇑P P 10 52 42.1 0.0
RKPI Ransiki, Papua 49.48 288 P P 10 52 42.3 -0.6
comp=Z,28μmcomp=Z,27μmcomp=Z,1μm,0.7s
GUMO Guam 49.75 312 P P 10 52 44.4 -0.3
GUMO Guam 49.75 312 P P 10 52 44.6 -0.1
comp=Z,2μm,0.8s,baz=170,slow=6.5,SNR=44
comp=Z,2μm,0.8s
GUMO Guam 49.75 312 P P 10 52 45.0 +0.2
GUMO Guam 49.75 312 ⇓P P 10 52 44.5 -0.3
GUMO Guam 49.75 312 P P 10 52 44.6 -0.1
GUMO PcP PcP 10 53 56.8 +2.3
MIDW Midway 49.93 2 P P 10 52 45.8 0.0
MIDW Midway 49.93 2 P P 10 52 46.3 +0.5
MIDW Midway 49.93 2 ⇓P P 10 52 47.2 +1.4
FAKI Fak Fak 50.56 285 P P 10 52 49.5 -1.3
FAKI Fak Fak 50.56 285 P P 10 52 50.6 -0.2
FAKI Fak Fak 50.56 285 P P 10 52 49.3 -1.5
comp=Z,30μmcomp=Z,21μmcomp=Z,2μm,1.7s
FAKI Fak Fak 50.56 285 ⇓P P 10 52 49.5 -1.3
FITZ Fitzroy Crossi 51.53 264 P P 10 52 57.0 -0.7
FITZ Fitzroy Crossi 51.53 264 S S 10 59 35.2 +0.4
comp=Z,50nm,1.0s,baz=279,slow=21,SNR=10.0
FITZ PKPPKP 11 23 23.9
comp=Z,19nm,1.0s,baz=263,slow=3.2,SNR=9.6
FITZ Fitzroy Crossi 51.53 264 P P 10 52 57.8 +0.1
DRV Dumont d'Urvil 51.54 199 P P 10 52 56.4 -0.5
BNDI Bandanaira 52.00 282 P P 10 53 01.4 +0.3
BNDI Bandanaira 52.00 282 P P 10 53 00.2 -0.9
BNDI Bandanaira 52.00 282 ⇓P P 10 53 00.2 -0.9
SWI Sorong 52.36 287 P P 10 53 02.7 -1.0
MSAI Masohi 53.37 283 P P 10 53 09.5 -1.4
comp=Z,26μmcomp=Z,22μmcomp=Z,2μm,0.7s
AAI Ambon 53.89 282 P P 10 53 13.3 -1.3
comp=Z,26μmcomp=Z,21μmcomp=Z,2μm,0.8s
NLAI Namlea 55.07 282 P P 10 53 21.9 -0.9
comp=Z,26μmcomp=Z,29μmcomp=Z,3μm,1.9s
SOEI Soe 55.23 273 P P 10 53 24.5 +0.4
SOEI Soe 55.23 273 P P 10 53 25.7 +1.6
SOEI Soe 55.23 273 P P 10 53 24.5 +0.4
SOEI Soe 55.23 273 ⇓P P 10 53 24.8 +0.7
BATI Baumata 55.64 273 P P 10 53 27.7 +0.9
comp=Z,23μmcomp=Z,23μmcomp=Z,2μm,0.7s
AUALB St Joseph's Co 55.79 242 P P 10 53 28.5 +1.1
PSA00 Pilbara Seismi 56.05 258 P P 10 53 27.8 -1.7
PSA00 IAmb IAmb 10 53 32.5
comp=Z,773nm,0.8s
PSA00 Pilbara Seismi 56.05 258 P P 10 53 28.5 -1.0
MEEK Meekatharra 56.19 252 P P 10 53 29.2 -1.2
KLBR Kellerberrin 56.24 246 P P 10 53 30.4 -0.2
MBWA Marble Bar 56.25 259 P P 10 53 29.5 -1.3
MBWA Marble Bar 56.25 259 P P 10 53 30.1 -0.7
MBWA Marble Bar 56.25 259 P P 10 53 29.8 -1.1
MBWA Marble Bar 56.25 259 ⇓P P 10 53 29.3 -1.5
MBWA Marble Bar 56.25 259 P P 10 53 29.3 -1.5
MBWA S S 11 00 30.1 -6.3
MBWA Marble Bar 56.25 259 P P 10 53 29.7 -1.1
SBA Scott Base 56.33 183 P P 10 53 32.3 +1.9
SBA Scott Base 56.33 183 P P 10 53 32.3 +1.9
SBA pmax pmax
comp=Z,289nm,1.1s
VNDA Vanda 56.34 185 P P 10 53 31.8 +1.3
VNDA Vanda 56.34 185 P P 10 53 32.0 +1.5
comp=Z,63nm,0.7s,baz=355,slow=7.4,SNR=348
VNDA pP pwP 10 55 25.3 -1.7
comp=Z,10.0nm,0.8s,baz=2.2,slow=8.3,SNR=1.1
comp=Z,63nm,0.7s
NWAO Narrogin (SRO) 56.53 244 P P 10 53 31.5 -1.1
NWAO IAmb IAmb 10 55 34.0
comp=Z,1μm,1.4s
NWAO Narrogin (SRO) 56.53 244 P P 10 53 32.2 -0.4
NWAO S S 11 00 38.7 -1.0
NWAO Narrogin (SRO) 56.53 244 P P 10 53 33.2 +0.6
NWAO Narrogin (SRO) 56.53 244 P P 10 53 31.5 -1.1
NWAO pmax pmax
comp=Z,1μm,1.4s
NWAO Narrogin (SRO) 56.53 244 P P 10 53 32.0 -0.6
NWAO pP pP 10 55 23.6 -1.3
TNTI Ternate 56.57 286 P P 10 53 32.0 -1.1
TNTI Ternate 56.57 286 P P 10 53 33.2 +0.1
TNTI Ternate 56.57 286 P P 10 53 32.3 -0.8
comp=Z,13μmcomp=Z,19μmcomp=Z,2μm,1.0s
TNTI Ternate 56.57 286 ⇓P P 10 53 32.3 -0.8
SANI Sanana 56.58 283 P P 10 53 31.9 -1.2
SANI Sanana 56.58 283 P P 10 53 32.4 -0.8
SANI Sanana 56.58 283 P P 10 53 31.5 -1.7
comp=Z,27μmcomp=Z,18μmcomp=Z,2μm,0.9s
BLDU Ballidu 57.25 247 P P 10 53 37.0 -0.5
MMRI Maumere 57.50 274 P P 10 53 38.3 -1.1
MMRI Maumere 57.50 274 P P 10 53 39.4 0.0
MMRI Maumere 57.50 274 P P 10 53 38.3 -1.1
comp=Z,24μmcomp=Z,21μmcomp=Z,2μm,1.5s
MMRI Maumere 57.50 274 ⇓P P 10 53 38.3 -1.1
MUN Mundaring 57.50 245 P P 10 53 40.1 +0.9
AUHAR St Anne's Scho 57.63 244 P P 10 53 41.0 +1.0
AUMAZ Mazenod Senior 57.64 245 P P 10 53 40.0 -0.1
MTKN Mount Kenneth 57.87 245 P P 10 53 42.8 +1.1
EDFI Ende, Flores 57.97 273 P P 10 53 41.3 -1.4
comp=Z,22μmcomp=Z,17μmcomp=Z,2μm,1.6s
AUBUS Georgiana Moll 57.99 243 P P 10 53 43.7 +1.2
MORW Morawa 58.05 249 P P 10 53 41.6 -1.3
MORW IAmb IAmb 10 53 44.5
comp=Z,1μm,1.4s
MORW Morawa 58.05 249 P P 10 53 42.6 -0.4
MORW Morawa 58.05 249 ⇑P P 10 53 41.9 -1.1
BASI Baing, Sumba 58.50 271 P P 10 53 46.8 +0.6
comp=Z,23μmcomp=Z,4μm,1.7s
WSI Waingapu 58.94 272 P P 10 53 49.0 -0.1
KMSI Cibinong 59.51 284 P P 10 53 52.3 -0.6
comp=Z,19μmcomp=Z,20μmcomp=Z,2μm,0.9s
SGSI Sangihe 59.53 288 P P 10 53 51.7 -1.4
WBSI Waikabubak, Su 59.79 271 P P 10 53 54.4 -0.5
comp=Z,21μmcomp=Z,18μmcomp=Z,1μm,0.9s

LUWI Luwuk 59.91 282 P P 10 53 55.2 -0.4
LUWI Luwuk 59.91 282 P P 10 53 55.0 -0.6
LUWI Luwuk 59.91 282 P P 10 53 56.2 +0.6
LUWI Luwuk 59.91 282 P P 10 53 55.3 -0.3
comp=Z,25μmcomp=Z,26μmcomp=Z,2μm,2.0s
LUWI Luwuk 59.91 282 ⇓P P 10 53 55.2 -0.4
BSSI Bau Bau, Buton 60.01 276 P P 10 53 55.3 -0.9
comp=Z,22μmcomp=Z,19μmcomp=Z,1μm,1.5s
BKSI Bulukumba 60.65 276 P P 10 53 59.1 -1.3
comp=Z,18μmcomp=Z,12μmcomp=Z,969nm,1.2s
CCD Concordia, Ant 60.72 194 P P 10 54 00.6 +0.3
GIRL Giralia 60.89 256 P P 10 54 01.7 -0.2
GIRL IAmb IAmb 10 54 06.4
comp=Z,615nm,1.0s
APSI Ampana 60.99 282 P P 10 54 02.6 0.0
comp=Z,17μmcomp=Z,2μm,1.4s
BNSI Bone 61.01 277 P P 10 54 01.9 -0.9
comp=Z,21μmcomp=Z,18μmcomp=Z,1μm,1.7s
KAPI Kappang 61.11 277 P P 10 54 02.6 -0.8
KAPI Kappang 61.11 277 P P 10 54 04.1 +0.7
KAPI S S 11 01 36.6 -1.1
KAPI Kappang 61.11 277 P P 10 54 04.0 +0.6
KAPI Kappang 61.11 277 *d* iP P 10 54 02.5 -0.9
KAPI pmax pmax
comp=Z,1μm,1.9s
KAPI Kappang 61.11 277 ⇓P P 10 54 02.6 -0.8
KAPI Kappang 61.11 277 P P 10 54 02.4 -1.1
KAPI S S 11 01 35.7 -2.0
DAV Davao City (W) 61.11 292 P P 10 54 02.1 -1.3
DAV Davao City (W) 61.11 292 P P 10 54 04.0 +0.5
DAV Davao City (W) 61.11 292 P P 10 54 04.1 +0.7
DAV Davao City (W) 61.11 292 ⇓P P 10 54 02.4 -1.0
DAV Davao City (W) 61.11 292 P P 10 54 01.7 -1.8
CBIJ Chichi jima 61.30 321 P P 10 54 04.8 +0.5
JCJ Chichijima 61.30 321 P P 10 54 03.5 -0.8
JCJ Chichijima 61.30 321 P P 10 54 05.8 +1.4
JCJ Chichijima 61.30 321 ⇓P P 10 54 04.1 -0.3
MRSI Marisa 61.31 283 P P 10 54 03.1 -1.6
SPSI Sidrap Palu 61.49 278 P P 10 54 04.0 -1.9
comp=Z,17μmcomp=Z,530nm,0.8s
PLAI Plampang 61.57 272 P P 10 54 06.0 -0.4
PLAI Plampang 61.57 272 P P 10 54 05.3 -1.1
comp=Z,23μmcomp=Z,25μmcomp=Z,2μm,1.8s
CASY Casey 62.08 205 P P 10 54 08.4 -0.4
CASY Casey 62.08 205 ⇓P P 10 54 08.3 -0.4
CASY Casey 62.08 205 P P 10 54 08.4 -0.4
TWSI Taliwang, Sumb 62.43 271 P P 10 54 11.0 -1.0
comp=Z,20μmcomp=Z,24μmcomp=Z,2μm,0.8s
TOLI2 Tolitoli 62.62 283 P P 10 54 11.9 -1.4
TOLI2 Tolitoli 62.62 283 P P 10 54 12.7 -0.5
VA02 Isla de Pascua 63.14 110 P P 10 54 19.2 +2.9
VA02 IAmb IAmb 10 54 22.2
comp=Z,606nm,0.9s
VA02 Isla de Pascua 63.14 110 ⇑P P 10 54 18.9 +2.5
RPN Rapa Nui 63.23 110 P P 10 54 19.6 +2.5
RPN IAmb IAmb 10 54 22.7
comp=Z,536nm,0.8s
RPN Rapa Nui 63.23 110 P P 10 54 19.0 +2.0
comp=Z,321nm,0.7s,baz=282,slow=4.8,SNR=25
comp=Z,321nm,0.7s
RPN Rapa Nui 63.23 110 P P 10 54 19.0 +2.0
RPN Rapa Nui 63.23 110 ⇑P P 10 54 19.5 +2.5
RPN Rapa Nui 63.23 110 P P 10 54 19.8 +2.8
DNP Denpasar 64.00 271 P P 10 54 22.7 +0.7
SRBI Singaraja 64.20 272 P P 10 54 22.2 -1.1
comp=Z,22μmcomp=Z,2μm,1.1s
JAGI Jajag, Banyuwa 65.05 271 P P 10 54 26.5 -2.1
JAGI Jajag, Banyuwa 65.05 271 P P 10 54 27.7 -1.0
JAGI Jajag, Banyuwa 65.05 271 P P 10 54 26.7 -2.0
comp=Z,18μmcomp=Z,15μmcomp=Z,2μm,0.9s
JAGI Jajag, Banyuwa 65.05 271 ⇓P P 10 54 26.5 -2.1
BKB Balikpapan 65.19 279 IAmb IAmb 10 54 35.5
comp=Z,510nm,0.9s
BKB Balikpapan 65.19 279 P P 10 54 30.9 +1.4
BKB Balikpapan 65.19 279 P P 10 54 32.1 +2.6
comp=Z,13μmcomp=Z,647nm,1.0s
BKB Balikpapan 65.19 279 ⇓P P 10 54 30.8 +1.3
ABJI Asem Bagus 65.21 271 P P 10 54 29.3 -0.3
comp=Z,23μmcomp=Z,21μmcomp=Z,1μm,1.5s
KMMI Kalianget 65.72 272 P P 10 54 33.1 +0.3
comp=Z,21μmcomp=Z,17μmcomp=Z,1μm,1.7s
BLJI Banyuglugur 65.82 271 P P 10 54 32.7 -0.7
comp=Z,21μmcomp=Z,20μmcomp=Z,2μm,1.3s
BBKI Banjar Baru 66.22 276 P P 10 54 36.1 +0.1
comp=Z,24μmcomp=Z,18μmcomp=Z,1μm,1.8s
MYLDM Lahad Datu 66.44 286 P P 10 54 39.5 +2.2
MTKI Muara Teweh, K 67.15 279 P P 10 54 41.4 -0.2
comp=Z,18μmcomp=Z,13μmcomp=Z,733nm,0.8s
GRJI Gresik 67.15 272 P P 10 54 41.9 +0.3
JHJ2 Mitsune 67.17 324 P P 10 54 42.4 +1.1
JHJ2 Mitsune 67.17 324 ⇑P P 10 54 42.0 +0.7
JHJ2 Mitsune 67.17 324 P P 10 54 42.3 +1.0
JHJ Hachijo jima 2 67.19 324 P P 10 54 41.0 -0.5
comp=Z,1μm,0.7s,baz=66,slow=23,SNR=23
comp=Z,1μm,0.7s
JMZ Minamidaito 2 67.42 312 P P 10 54 43.1 +0.2
TBJI Tambak Boyo 67.77 272 P P 10 54 46.7 +1.3
comp=Z,22μmcomp=Z,25μmcomp=Z,2μm,1.8s
PCJI Pacitan 67.91 270 P P 10 54 45.6 -0.6
NGJI Ngawi 67.93 271 P P 10 54 48.0 +1.6
comp=Z,656nm,0.8s
QSPA South Pole Qui 68.11 180 P P 10 54 49.2 +2.5
QSPA IAmb IAmb 10 54 54.6
comp=Z,566nm,0.9s
QSPA South Pole Qui 68.11 180 P P 10 54 49.8 +3.1
comp=Z,476nm,0.8s,baz=333,slow=0.6,SNR=677
QSPA pP pwP 10 56 51.5 +2.6
comp=Z,194nm,1.0s,baz=37,slow=3.0,SNR=4.5
comp=Z,476nm,0.8s
UGM Wanagama 68.61 270 P P 10 54 49.2 -1.4
UGM Wanagama 68.61 270 P P 10 54 49.8 -0.8
UGM Wanagama 68.61 270 P P 10 54 49.9 -0.7
comp=Z,17μmcomp=Z,10μmcomp=Z,1μm,0.8s
YOGI Yogyakarta 68.86 270 P P 10 54 52.1 +0.1
comp=Z,15μmcomp=Z,17μmcomp=Z,2μm,0.8s
SMRI Semarang 68.99 271 P P 10 54 53.9 +1.1
SMRI Semarang 68.99 271 P P 10 54 54.0 +1.1
comp=Z,22μmcomp=Z,2μm,1.4s
SMRI Semarang 68.99 271 ⇓P P 10 54 52.4 -0.4
JOD2 Odawara 2 69.19 325 P P 10 54 52.6 -0.9
JSG Sagara 69.24 324 P P 10 54 55.5 +1.8
JSG Sagara 69.24 324 ⇓P P 10 54 55.0 +1.3
JSG ⇓P P 10 54 55.2 +1.5
JSG Sagara 69.24 324 P P 10 54 54.3 +0.6
JRY Ryogami san 69.85 325 P P 10 54 57.2 -0.3
JIE Ise 69.86 322 P P 10 54 57.4 -0.1
JOW Kunigami 70.10 311 P P 10 54 58.8 -0.3
comp=Z,596nm,0.7s,baz=124,slow=12,SNR=33
JOW pP pP 10 57 01.0 +1.1
comp=Z,108nm,1.2s,baz=156,slow=9.9,SNR=1.3
comp=Z,596nm,0.7s
JOW Kunigami 70.10 311 P P 10 55 00.2 +1.1
JAM Amami Oshima 70.19 313 P P 10 55 00.0 +0.5
JMM Marumori 70.29 327 IAmb IAmb 10 55 03.9
comp=Z,663nm,1.1s
JMM Marumori 70.29 327 P P 10 55 00.8 +0.9
KPJI Karang Pucung 70.30 270 P P 10 54 59.4 -1.1
comp=Z,18μmcomp=Z,11μmcomp=Z,1μm,0.8s
JGF Kuroka 70.38 324 IAmb IAmb 10 55 03.6
comp=Z,258nm,0.8s
JGF Kuroka 70.38 324 P P 10 55 01.0 +0.4
JGF Kuroka 70.38 324 P P 10 54 59.9 -0.7
INU Inuyama 70.38 323 IAmb IAmb 10 55 03.8
comp=Z,458nm,1.2s
INU Inuyama 70.38 323 P P 10 55 01.1 +0.6
INU Inuyama 70.38 323 ⇑P P 10 55 00.4 -0.1
INU Inuyama 70.38 323 P P 10 55 00.9 +0.4
MJAR Matsushiro Arr 70.61 325 P P 10 55 01.2 -0.7
MJAR IAmb IAmb 10 55 04.9
comp=Z,397nm,1.1s
MJAR Matsushiro Arr 70.61 325 P P 10 55 01.2 -0.7
comp=Z,268nm,0.9s,baz=158,slow=5.8,SNR=149
MJAR pP pP 10 57 01.7 -1.7
comp=Z,46nm,1.1s,baz=160,slow=6.0,SNR=3.6
MJAR PKP2ab P'P'ab 11 22 51.0 -1.1
comp=Z,6.9nm,1.1s,baz=319,slow=3.6,SNR=9.5
comp=Z,268nm,0.9s
MAJO Matsushiro 70.62 325 P P 10 55 01.3 -0.6
MAJO IAmb IAmb 10 55 04.9
comp=Z,508nm,1.1s
MAJO Matsushiro 70.62 325 P P 10 55 02.1 +0.2
MAJO Matsushiro 70.62 325 *d* iP P 10 55 01.4 -0.5
MAJO pmax pmax
comp=Z,518nm,1.1s

MAJO	**Matsushiro**	**70.62**	**325**	⇓P		**P**		**10 55 01.4**	**-0.5**
MAJO	**Matsushiro**	**70.62**	**325**	P		**P**		**10 55 01.4**	**-0.5**
MAJO				S		**S**		**11 03 30.9**	**+1.9**
MAJO	**Matsushiro**	**70.62**	**325**	P		**P**		**10 55 01.8**	**-0.1**
MAT	**Matsushiro**	**70.62**	**325**	P		**P**		**10 55 01.3**	**-0.6**
MJB9	**Matsu-Tunnel**	**70.62**	**325**	IAmb		IAmb		10 55 05.9	
	comp=Z,493nm,1.1s								
SZP	**Santa**	**70.74**	**299**	P		**P**		**10 55 03.9**	**+0.9**
JGN	**Niukaw**	**70.86**	**324**	P		**P**		**10 55 02.7**	**-0.7**
SBUM	**Sibu**	**70.95**	**281**	P		**P**		**10 55 03.8**	**-0.6**
SBUM				IAmb		IAmb		10 55 08.0	
	comp=Z,303nm,1.0s								
SBUM	**Sibu**	**70.95**	**281**	P		**P**		**10 55 05.3**	**+0.9**
JMJ	**Miyako jima 2**	**71.02**	**308**	P		**P**		**10 55 05.5**	**+1.0**
JMN	**Monobe**	**71.03**	**320**	P		**P**		**10 55 05.5**	**+1.1**
JMN	**Monobe**	**71.03**	**320**	P		**P**		**10 55 04.7**	**+0.3**
JCJI	**Jatiwangi**	**71.21**	**270**	P		**P**		**10 55 05.5**	**-0.4**
JWT	**Wachi**	**71.24**	**322**	P		**P**		**10 55 05.4**	**-0.1**
JOM	**Ohasama**	**71.29**	**329**	P		**P**		**10 55 05.8**	**0.0**
JYA	**Atsumi**	**71.39**	**327**	P		**P**		**10 55 06.8**	**+0.5**
BBJI	**Bungbulang**	**71.44**	**269**	P		**P**		**10 55 06.1**	**-1.2**
JSU	**Suzuyama**	**71.64**	**316**	P		**P**		**10 55 07.9**	**-0.1**
JAD	**Aida**	**71.71**	**321**	P		**P**		**10 55 08.6**	**+0.3**
JSD	**Sado**	**71.71**	**326**	IAmb		IAmb		10 55 12.5	
	comp=Z,471nm,1.2s								
JSD	**Sado**	**71.71**	**326**	P		**P**		**10 55 09.1**	**+0.9**
JSD	**Sado**	**71.71**	**326**	P		**P**		**10 55 08.9**	**+0.7**
CNJI	**Cibinong**	**71.98**	**269**	P		**P**		**10 55 08.9**	**-1.4**
	comp=Z,491nm,0.9s								
XMI	**Christmas Isla**	**72.23**	**266**	P		**P**		**10 55 12.9**	**+1.1**
KSM	**Kuching**	**72.31**	**279**	P		**P**		**10 55 11.6**	**-0.7**
KSM	**Kuching**	**72.31**	**279**	P		**P**		**10 55 12.3**	**0.0**
KSM	**Kuching**	**72.31**	**279**	⇓P		**P**		**10 55 11.8**	**-0.4**
KSM				⇓P		**P**		**10 55 11.9**	**-0.4**
JHS	**Saijyo**	**72.36**	**321**	P		**P**		**10 55 12.3**	**+0.2**
JTM	**Tenmabayashi**	**72.43**	**330**	P		**P**		**10 55 14.0**	**+1.7**
JNU	**Nakatsue**	**72.44**	**318**	P		**P**		**10 55 12.2**	**-0.5**
	comp=Z,251nm,1.0s,baz=91,slow=3.8,SNR=47								
JNU				pP		**pP**		**10 57 13.4**	**-1.1**
	comp=Z,238nm,1.3s,baz=58,slow=5.6,SNR=4.7								
	comp=Z,251nm,1.0s								
JNU	**Nakatsue**	**72.44**	**318**	P		**P**		**10 55 13.4**	**+0.8**
JNU	**Nakatsue**	**72.44**	**318**	P		**P**		**10 55 12.0**	**-0.6**
ERM	**Erimo**	**72.45**	**332**	P		**P**		**10 55 12.6**	**+0.2**
ERM				IAmb		IAmb		10 55 17.9	
	comp=Z,487nm,1.2s								
ERM	**Erimo**	**72.45**	**332**	P		**P**		**10 55 14.1**	**+1.7**
ERM	**Erimo**	**72.45**	**332**	P		**P**		**10 55 12.6**	**+0.2**
ERM				pmax		pmax			
	comp=Z,487nm,1.2s								
ERM	**Erimo**	**72.45**	**332**	P		**P**		**10 55 13.3**	**+1.0**
JEM	**Erimo**	**72.45**	**332**	P		**P**		**10 55 13.6**	**+1.2**
JEM	**Erimo**	**72.45**	**332**	P		**P**		**10 55 14.4**	**+2.0**
YOJ	**Yonaguni jima**	**72.50**	**306**	P		**P**		**10 55 14.8**	**+1.7**
YOJ	**Yonaguni jima**	**72.50**	**306**	P		**P**		**10 55 13.8**	**+0.7**
YOJ				pmax		pmax			
	comp=Z,1μm,1.6s								
DBJI	**Dramaga**	**72.59**	**270**	P		**P**		**10 55 13.3**	**-0.6**
	comp=Z,19μmcomp=Z,19μmcomp=Z,2μm,1.8s								
SKJI	**Sukabumi**	**72.61**	**269**	P		**P**		**10 55 14.0**	**0.0**
	comp=Z,18μmcomp=Z,14μmcomp=Z,942nm,1.4s								
TNG	**Tangerang**	**72.83**	**270**	P		**P**		**10 55 17.5**	**+2.3**
	comp=Z,2μm,1.8s								
JOT	**Ohata**	**72.91**	**330**	P		**P**		**10 55 15.9**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**72.97**	**335**	*d* iP		**P**		**10 55 15.8**	**+0.5**
YUK				*i*				10 55 29.3	
YUK				*e*				10 58 10.6	
YUK				*e*PPP		PPP		10 59 53.6	
YUK				*e*S		**S**		**11 03 56.1**	**+1.3**
YUK				*e*				11 04 24.6	
YUK				*e*SS		**SS**		**11 08 51.9**	**-1.4**
YUK				pmax		pmax			
	comp=N,680nm,1.2s								
YUK				pmax		pmax			
	comp=E,562nm,1.2s								
YUK				pmax		pmax			
	comp=Z,1μm,1.2s								
TWGBT	**Beinan**	**73.06**	**304**	P		**P**		**10 55 15.2**	**-1.1**
TPI	**Tanjungpandan**	**73.14**	**274**	P		**P**		**10 55 16.5**	**-0.5**
	comp=Z,18μmcomp=Z,8μmcomp=Z,524nm,1.5s								
YULB	**Yu-li**	**73.20**	**304**	IAmb		IAmb		10 55 19.2	
	comp=Z,489nm,1.1s								
YULB	**Yu-li**	**73.20**	**304**	P		**P**		**10 55 16.6**	**-0.5**
KUR	**Kuril'sk**	**73.21**	**336**	*e*P		**P**		**10 55 17.0**	**+0.4**
KUR				*i* S		S		**11 03 59.5**	**+2.1**
KUR				*e*SSS		SSS		11 12 14.8	
KUR				pmax		pmax			
	comp=Z,2μm,1.7s								
KUR				pmax		pmax			
	comp=Z,7μm,7.4s								
SBJI	**Serang**	**73.32**	**270**	P		**P**		**10 55 17.9**	**-0.1**
	comp=Z,21μmcomp=Z,27μmcomp=Z,2μm,2.0s								
NACB	**Ninganchiao**	**73.41**	**305**	P		**P**		**10 55 18.8**	**+0.5**
KIWB	**Kanaga Island**	**73.52**	**1**	P		**P**		**10 55 17.6**	**-0.6**
ADK	**Adak**	**73.57**	**2**	P		**P**		**10 55 18.0**	**-0.5**
ADK	**Adak**	**73.57**	**2**	P		**P**		**10 55 19.2**	**+0.7**
ADK	**Adak**	**73.57**	**2**	P		**P**		**10 55 18.0**	**-0.5**
ADK				pmax		pmax			
	comp=Z,1μm,1.5s								
ADK	**Adak**	**73.57**	**2**	⇑P		**P**		**10 55 18.1**	**-0.5**
ADK	**Adak**	**73.57**	**2**	P		**P**		**10 55 18.1**	**-0.4**
TPUB	**Ta-pu**	**73.67**	**304**	P		**P**		**10 55 19.0**	**-0.8**
SSLB	**Suanglung**	**73.68**	**305**	P		**P**		**10 55 19.6**	**-0.3**
YHNB	**Yeheng**	**73.85**	**306**	P		**P**		**10 55 21.7**	**+0.8**
JEW	**Eniwo**	**73.87**	**331**	P		**P**		**10 55 21.6**	**+1.1**
TATO	**Taipei**	**73.94**	**306**	P		**P**		**10 55 19.8**	**-1.4**
TATO	**Taipei**	**73.94**	**306**	P		**P**		**10 55 21.3**	**0.0**
TATO	**Taipei**	**73.94**	**306**	P		**P**		**10 55 21.9**	**+0.7**
JMP	**Maruseppu**	**73.98**	**333**	P		**P**		**10 55 22.8**	**+1.7**
ATKA	**Atka Island**	**73.99**	**3**	P		**P**		**10 55 20.6**	**-0.3**
JTU	**Tsushima**	**74.29**	**318**	P		**P**		**10 55 23.9**	**+0.9**
JSH	**Shimam**	**74.36**	**330**	P		**P**		**10 55 23.9**	**+0.7**
ASAJ	**Asahikawa**	**74.39**	**333**	P		**P**		**10 55 23.8**	**+0.4**
	comp=Z,171nm,0.7s,baz=221,slow=5.9,SNR=47								
	comp=Z,171nm,0.7s								
ASAJ	**Asahikawa**	**74.39**	**333**	P		**P**		**10 55 24.9**	**+1.5**
BLSI	**Bandar Lampung**	**74.41**	**270**	P		**P**		**10 55 24.1**	**-0.1**
	comp=Z,12μmcomp=Z,9μmcomp=Z,708nm,1.0s								
SHEM	**Shemya Is, Ala**	**74.59**	**356**	IAmb		IAmb		10 55 26.8	
	comp=Z,754nm,1.2s								
SHEM	**Shemya Is, Ala**	**74.59**	**356**	P		**P**		**10 55 24.5**	**+0.3**
	comp=Z,426nm,1.0s,baz=18,slow=1.8,SNR=10								
	comp=Z,426nm,1.0s								
SMY	**Shemya**	**74.59**	**356**	P		**P**		**10 55 26.8**	**+2.6**
SMY	**Shemya**	**74.59**	**356**	P		**P**		**10 55 26.5**	**+2.3**
PPBI	**Pangkal Pinang**	**74.76**	**274**	P		**P**		**10 55 29.6**	**+3.4**
KLI	**Kotabumi**	**74.96**	**271**	P		**P**		**10 55 26.9**	**-0.3**
	comp=Z,13μmcomp=Z,10μmcomp=Z,472nm,0.8s								
KASI	**Kota Agung**	**75.05**	**270**	P		**P**		**10 55 26.4**	**-1.4**
	comp=Z,12μmcomp=Z,8μmcomp=Z,592nm,0.9s								
NIKH	**Nikolski High**	**75.18**	**7**	P		**P**		**10 55 26.5**	**-1.0**
NIKH				IAmb		IAmb		10 55 30.8	
	comp=E,658nm,1.0s								
NIKH	**Nikolski High**	**75.18**	**7**	P		**P**		**10 55 26.9**	**-0.6**
	baz=190,SNR=31								
NIKH				S		**S**		**11 04 16.6**	**-1.9**
	baz=190								
LWLI	**Liwa**	**75.64**	**270**	P		**P**		**10 55 30.5**	**-0.7**
	comp=Z,16μmcomp=Z,19μmcomp=Z,1μm,0.8s								
MDSI	**Maura Dua**	**75.72**	**271**	P		**P**		**10 55 29.2**	**-2.3**
	comp=Z,8μmcomp=Z,637nm,1.0s								
PMBI	**Palembang**	**75.74**	**273**	P		**P**		**10 55 35.2**	**+3.6**
	comp=Z,11μmcomp=Z,270nm,0.8s								
QZH	**Quanzhou**	**76.12**	**304**	⇓ *i* P		**P**		**10 55 33.4**	**0.0**
QZH				pP		**pP**		**10 57 35.3**	**-1.3**
QZH				sP		**sP**		**10 58 39.6**	**+2.2**
QZH				S		**S**		**11 04 30.8**	**+1.2**
QZH				pmax		pmax			
	comp=Z,1μm,0.9s								
QZH				pmax		pmax			
	comp=Z,7μm,6.5s								
LHSI	**Lahat**	**76.57**	**271**	P		**P**		**10 55 35.0**	**-1.1**
	comp=Z,15μmcomp=Z,10μmcomp=Z,504nm,1.3s								
YSS	**Yuzhno-Sakhali**	**76.62**	**334**	P		**P**		**10 55 36.2**	**+0.6**
YSS				IAmb		IAmb		10 55 40.0	
	comp=Z,570nm,1.1s								
YSS	**Yuzhno-Sakhali**	**76.62**	**334**	P		**P**		**10 55 37.6**	**+2.0**
YSS	**Yuzhno-Sakhali**	**76.62**	**334**	k *i* P		**P**		**10 55 37.2**	**+1.6**
YSS				*e**PP		**pwP**		**10 57 42.2**	**-0.3**
YSS				*e**SP		**sP**		**10 58 43.5**	**+3.4**
YSS				*i* S		**S**		**11 04 38.2**	**+4.2**
YSS				*e*				11 04 53.2	
YSS				*e*SSS		SSS		11 13 14.3	
YSS				pmax		pmax			
	comp=Z,6μm,6.1s								
YSS				pmax		pmax			
	comp=N,100nm,1.3s								
YSS				pmax		pmax			
	comp=Z,400nm,1.3s								
YSS				pmax		pmax			
	comp=E,270nm,1.1s								
YSS				smax		smax			
	comp=N,8μm,8.3s								
YSS				smax		smax			
	comp=E,7μm,7.9s								
YSS				MLR		MLR			
	comp=E,1μm,15.0s								
YSS				MLR		MLR			
	comp=Z,2μm,15.0s								
YSS				MLR		MLR			
	comp=N,1μm,13.0s								
AKUT	**Akutan**	**76.69**	**8**	IAmb		IAmb		10 55 39.0	
	comp=Z,593nm,1.6s								
AKUT	**Akutan**	**76.69**	**8**	P		**P**		**10 55 35.5**	**-0.3**
AKUT	**Akutan**	**76.69**	**8**	⇓P		**P**		**10 55 35.3**	**-0.5**
TJN	**Taejon**	**76.76**	**318**	P		**P**		**10 55 37.6**	**+1.0**
TJN	**Taejon**	**76.76**	**318**	*d* iP		**P**		**10 55 36.2**	**-0.4**
DSRI	**Dabo**	**76.83**	**275**	P		**P**		**10 55 38.2**	**+0.6**
MNAI	**Manna**	**76.90**	**271**	P		**P**		**10 55 38.9**	**+0.9**
MNAI	**Manna**	**76.90**	**271**	P		**P**		**10 55 38.0**	**0.0**
	comp=Z,17μmcomp=Z,26μmcomp=Z,2μm,1.1s								
PET	**Petropavlovsk**	**77.06**	**347**	P		**P**		**10 55 37.2**	**-0.6**
PET	**Petropavlovsk**	**77.06**	**347**	P		**P**		**10 55 37.7**	**-0.1**
PET	**Petropavlovsk**	**77.06**	**347**	⇓ *i* P		**P**		**10 55 37.9**	**+0.1**
PET				pmax		pmax			
	comp=Z,273nm,0.9s								
PET	**Petropavlovsk**	**77.06**	**347**	P		**P**		**10 55 37.3**	**-0.6**
PET	**Petropavlovsk**	**77.06**	**347**	P		**P**		**10 55 37.8**	**-0.1**
KSRS	**Korea Array**	**77.11**	**320**	P		**P**		**10 55 39.0**	**+0.5**
	comp=Z,102nm,1.0s,baz=143,slow=6.1,SNR=70								
KSRS				pP		**pP**		**10 57 43.3**	**+1.3**
	comp=Z,31nm,1.2s,baz=141,slow=6.5,SNR=4.4								
KSRS				PP		**PP**		**10 58 43.3**	**-0.5**
	comp=Z,16nm,0.9s,baz=136,slow=8.4,SNR=4.5								
	comp=Z,102nm,1.0s								
KSAR	**Wonju Array Be**	**77.13**	**320**	P		**P**		**10 55 38.5**	**-0.1**
KSAR	**Wonju Array Be**	**77.13**	**320**	P		**P**		**10 55 38.5**	**-0.1**
KS19	**Wonju Array Si**	**77.18**	**320**	IAmb		IAmb		10 55 42.7	
	comp=Z,477nm,1.3s								
PEA0B	**Petropavlovsk-**	**77.35**	**346**	P		**P**		**10 55 38.8**	**-0.7**
PEA0B				IAmb		IAmb		10 55 42.8	
	comp=Z,742nm,1.0s								
PEA0B	**Petropavlovsk-**	**77.35**	**346**	*d* iP		**P**		**10 55 40.4**	**+1.0**
PETK	**Petropavlovsk-**	**77.35**	**346**	P		**P**		**10 55 39.1**	**-0.3**
PETK	**Petropavlovsk-**	**77.35**	**346**	P		**P**		**10 55 39.4**	**0.0**
	comp=Z,331nm,0.7s,baz=144,slow=4.4,SNR=95								
PETK				pP		**pP**		**10 57 44.8**	**+1.6**
	comp=Z,53nm,0.9s,baz=126,slow=7.5,SNR=5.4								
	comp=Z,331nm,0.7s								
TPRI	**Tanjung Pinang**	**77.41**	**276**	P		**P**		**10 55 41.4**	**+0.7**
	comp=Z,15μmcomp=Z,9μmcomp=Z,489nm,1.1s								
KSI	**Kapahiang**	**77.50**	**271**	P		**P**		**10 55 40.7**	**-0.6**
	comp=Z,20μmcomp=Z,17μmcomp=Z,2μm,1.2s								
SSE	**Sheshan**	**77.62**	**311**	P		**P**		**10 55 42.4**	**+1.0**
SSE				pP		**pP**		**10 57 43.7**	**-1.6**
SSE				PP		**PP**		**10 58 45.2**	**-2.9**
SSE				S		**S**		**11 04 46.5**	**+1.3**
SSE				pmax		pmax			
	comp=Z,110nm,1.2s								
SSE				pmax		pmax			
	comp=Z,2μm,7.4s								
FALS	**False Pass**	**77.73**	**9**	P		**P**		**10 55 42.4**	**+1.0**
FALS	**False Pass**	**77.73**	**9**	P		**P**		**10 55 40.5**	**-0.9**
	baz=195								
FALS				S		**S**		**11 04 44.0**	**-1.3**
	baz=195								
TEY	**Ternei**	**77.79**	**330**	⇓ *e*P		**P**		**10 55 42.4**	**+0.4**
TEY				pmax		pmax			
	comp=Z,30nm,2.2s								
TEY				pmax		pmax			
	comp=E,100nm,6.3s								
TEY				pmax		pmax			
	comp=N,100nm,6.4s								
TEY				pmax		pmax			
	comp=Z,500nm,6.1s								
TEY				pmax		pmax			
	comp=N,20nm,1.4s								
TEY				pmax		pmax			
	comp=E,20nm,0.8s								
INCN	**Inchon**	**77.92**	**319**	P		**P**		**10 55 43.0**	**+0.1**
INCN				IAmb		IAmb		10 55 46.8	
	comp=Z,780nm,1.2s								
INCN	**Inchon**	**77.92**	**319**	P		**P**		**10 55 44.4**	**+1.6**
INCN	**Inchon**	**77.92**	**319**	P		**P**		**10 55 44.6**	**+1.7**
INCN	**Inchon**	**77.92**	**319**	P		**P**		**10 55 43.0**	**+0.1**
INCN				pmax		pmax			
	comp=Z,780nm,1.2s								
MASI	**Maura Aman, Be**	**78.01**	**271**	P		**P**		**10 55 43.0**	**-1.0**
	comp=Z,13μmcomp=Z,15μmcomp=Z,1μm,1.5s								
HKC	**Hong Kong Obse**	**78.23**	**300**	⇑P		**P**		**10 55 47.0**	**+2.1**
HKPS	**Hong Kong Po S**	**78.25**	**300**	P		**P**		**10 55 47.1**	**+2.1**
BTDF	**Bukit Timah Da**	**78.28**	**276**	P		**P**		**10 55 46.4**	**+1.1**
BELA	**Belgrano 2**	**78.28**	**173**	P		**P**		**10 55 44.5**	**+0.3**
BELA				IAmb		IAmb		10 55 48.2	
	comp=Z,516nm,1.1s								
DLV	**Lat**	**78.29**	**288**	IAmb		IAmb		10 55 49.8	
	comp=Z,533nm,1.1s								
DLV	**Lat**	**78.29**	**288**	P		**P**		**10 55 46.3**	**+0.7**
CHNA	**Chernabura Isl**	**78.35**	**12**	P		**P**		**10 55 46.8**	**+2.1**
CHNA	**Chernabura Isl**	**78.35**	**12**	P		**P**		**10 55 44.2**	**-0.6**
	baz=199,SNR=11								
CHNA				S		**S**		**11 04 50.7**	**-1.1**
	baz=199								
MYKOM	**Kota Tinggi**	**78.37**	**277**	P		**P**		**10 55 46.8**	**+1.0**
UGL	**Uglegorsk**	**78.61**	**335**	*e*P		**P**		**10 55 46.4**	**+0.2**
UGL				*e*S		**S**		**11 04 51.0**	**-3.7**
UGL				pmax		pmax			
	comp=Z,6μm,6.3s								
UGL				pmax		pmax			
	comp=Z,600nm,1.1s								
UGL				smax		smax			
	comp=N,7μm,6.5s								
UGL				smax		smax			
	comp=E,8μm,6.5s								
SDPT	**Sand Point**	**78.69**	**11**	P		**P**		**10 55 48.1**	**+1.6**
SDPT	**Sand Point**	**78.69**	**11**	P		**P**		**10 55 45.7**	**-0.8**
	baz=198,SNR=6.1								
SDPT				S		**S**		**11 04 53.1**	**-2.2**
	baz=198								
P08K	**Saint George I**	**78.70**	**6**	P		**P**		**10 55 46.3**	**-0.2**
	baz=189								
P08K				S		**S**		**11 04 54.8**	**-0.5**
	baz=189								
VLA	**Vladivostok**	**78.73**	**326**	*ce*P		**P**		**10 55 48.6**	**+1.6**
VLA				pmax		pmax			
	comp=Z,535nm,1.4s								
MSHR	**Mys Shultsa**	**78.73**	**325**	*ce*P		**P**		**10 55 48.7**	**+1.6**
MSHR				pmax		pmax			
	comp=Z,523nm,1.7s								
S12K	**Black Hills**	**78.76**	**10**	P		**P**		**10 55 46.2**	**-0.7**
	baz=196,SNR=16								
S12K				S		**S**		**11 04 54.3**	**-1.8**
	baz=196								
KRJI	**Kerinci**	**79.12**	**272**	P		**P**		**10 55 49.8**	**-0.1**
	comp=Z,12μmcomp=Z,10μmcomp=Z,909nm,0.8s								
SPIA	**Saint Paul Isl**	**79.21**	**5**	P		**P**		**10 55 52.1**	**+2.9**
SPIA	**Saint Paul Isl**	**79.21**	**5**	P		**P**		**10 55 49.7**	**+0.5**
	baz=189								
GZH	**Guangzhou**	**79.29**	**300**	P		**P**		**10 55 51.2**	**+0.8**
GZH				pP		**pP**		**10 57 54.5**	**-0.5**
GZH				sP		**sP**		**10 58 55.7**	**+0.4**
GZH				S		**S**		**11 05 05.8**	**+3.0**
GZH				pmax		pmax			
	comp=Z,740nm,1.2s								
USRK	**Ussuriysk Ar.**	**79.44**	**327**	P		**P**		**10 55 51.2**	**+0.5**
	comp=Z,271nm,1.0s,baz=131,slow=3.6,SNR=79								
USRK				pP		**pP**		**10 57 56.9**	**+1.5**
	comp=Z,69nm,1.0s,baz=130,slow=3.0,SNR=8.4								
	comp=Z,271nm,1.0s								
FARB	**Farallon Islan**	**79.59**	**42**	IAmb		IAmb		10 55 57.1	
	comp=Z,1μm,1.9s								
HULI	**Fort Hunter Li**	**79.69**	**44**	IAmb		IAmb		10 58 06.8	
	comp=Z,853nm,1.6s								
S14K	**Fog Glacier**	**79.74**	**11**	P		**P**		**10 55 51.9**	**-0.3**
	baz=199								
S14K				S		**S**		**11 05 04.8**	**-1.5**
	baz=199								
MAW	**Mawson**	**79.74**	**200**	P		**P**		**10 55 53.5**	**+1.5**
	comp=Z,115nm,0.6s,baz=132,slow=5.9,SNR=445								
MAW				pP		**pwP**		**10 57 58.7**	**-1.0**
	comp=Z,15nm,0.6s,baz=103,slow=9.3,SNR=1.9								
MAW				S		**S**		**11 05 05.9**	**-0.1**
	comp=Z,9.9nm,1.1s,baz=278,slow=21,SNR=5.6								
MAW				PKKPbc		**PKKPbc**		**11 14 33.0**	**-2.4**
	comp=Z,1.0nm,0.7s,baz=261,slow=2.2,SNR=4.6								
	comp=Z,115nm,0.6s								
NJ2	**Nanjing**	**79.80**	**311**	⇓P		**P**		**10 55 53.5**	**+0.6**
NJ2				PcP		**PcP**		**10 55 56.4**	**-1.8**
NJ2				pP		**pP**		**10 57 56.9**	**-1.0**
NJ2				sP		**sP**		**10 58 58.9**	**+1.0**
NJ2				PP		**PP**		**10 59 05.1**	**-0.9**
NJ2				S		**S**		**11 05 09.9**	**+2.2**
NJ2				SS		**SS**		**11 10 34.0**	**-1.4**
NJ2				pmax		pmax			
	comp=Z,460nm,0.9s								
NJ2				pmax		pmax			
	comp=Z,5μm,9.0s								
COCO	**West Island**	**79.80**	**261**	P		**P**		**10 55 54.9**	**+1.5**
COCO				S		**S**		**11 05 09.9**	**+1.4**
COCO	**West Island**	**79.80**	**261**	P		**P**		**10 55 54.8**	**+1.5**
COCO	**West Island**	**79.80**	**261**	P		**P**		**10 55 54.0**	**+0.7**
COCO				pmax		pmax			
	comp=Z,591nm,1.9s								
TYV	**Tymovskoe**	**79.84**	**337**	*e*P		**P**		**10 55 54.8**	**+2.1**
TYV				*e*S		**S**		**11 05 05.9**	**-1.4**
TYV				pmax		pmax			
	comp=Z,460nm,1.0s								
TYV				pmax		pmax			
	comp=Z,3μm,7.0s								
TYV				smax		smax			
	comp=E,58nm,2.0s								
TYV				smax		smax			
	comp=N,7μm,7.0s								
TYV				smax		smax			
	comp=E,7μm,7.0s								
SAO	**San Andreas Ge**	**80.00**	**44**	P		**P**		**10 55 54.7**	**+0.8**
CHIR	**Chirikof Islan**	**80.08**	**13**	P		**P**		**10 55 55.4**	**+1.6**
CHIR	**Chirikof Islan**	**80.08**	**13**	P		**P**		**10 55 53.2**	**-0.6**
	baz=202								
CHIR				S		**S**		**11 05 09.4**	**-0.1**
	baz=202								
PMPB	**Monarch Peak**	**80.09**	**44**	IAmb		IAmb		10 58 08.9	
	comp=Z,562nm,1.4s								
BBGB	**Big Mountain B**	**80.15**	**44**	IAmb		IAmb		10 58 18.5	
	comp=Z,737nm,1.5s								
PPSI	**Pulau Pagai**	**80.22**	**271**	P		**P**		**10 55 56.9**	**+1.3**
	comp=Z,17μmcomp=Z,934nm,1.9s								
QIZ	**Qiongzhong**	**80.25**	**295**	P		**P**		**10 55 56.5**	**+0.9**
QIZ				pP		**pP**		**10 57 58.3**	**-2.3**
QIZ				sP		**sP**		**10 58 58.8**	**-2.2**
QIZ				S		S		**11 05 15.8**	**+2.9**
QIZ				sS		**sS**		**11 08 53.0**	**-3.4**
QIZ				pmax		pmax			
	comp=Z,210nm,1.9s								
QIZ				pmax		pmax			
	comp=Z,4μm,4.6s								
QIZ	**Qiongzhong**	**80.25**	**295**	P		**P**		**10 55 56.8**	**+1.2**
CVS	**Carmenet Viney**	**80.32**	**42**	IAmb		IAmb		10 58 15.2	
	comp=Z,510nm,1.4s								
GDXM	**Geysers**	**80.40**	**41**	IAmb		IAmb		10 56 01.9	
	comp=Z,637nm,2.0s								
BKNI	**Bangkinang**	**80.41**	**274**	P		**P**		**10 55 55.6**	**-1.0**
BKNI	**Bangkinang**	**80.41**	**274**	P		**P**		**10 55 57.2**	**+0.6**
BKNI	**Bangkinang**	**80.41**	**274**	P		**P**		**10 55 58.2**	**+1.6**
	comp=Z,18μmcomp=Z,13μmcomp=Z,656nm,1.9s								
CCX	**Cicese**	**80.44**	**50**	IAmb		IAmb		10 56 01.6	
	comp=Z,784nm,1.7s								
KCPM	**Cahto Peak**	**80.47**	**40**	IAmb		IAmb		10 56 02.0	
	comp=Z,571nm,1.3s								
PMSA	**Palmer Station**	**80.47**	**157**	P		**P**		**10 55 56.8**	**+0.9**
PMSA				IAmb		IAmb		10 56 00.8	
	comp=Z,323nm,0.9s								
PMSA	**Palmer Station**	**80.47**	**157**	*e*P		**P**		**10 55 58.2**	**+2.4**
PMSA				*e*pP		**pwP**		**10 58 02.8**	**-1.2**
PDSI	**Padang**	**80.49**	**273**	P		**P**		**10 55 55.4**	**-1.6**
	comp=Z,11μmcomp=Z,8μmcomp=Z,302nm,1.2s								
TJX	**Tijuana**	**80.52**	**

DL2 sS **sS** **11 09 11.7 -1.6**
DL2 pmax pmax
comp=Z,360nm,1.5s
DL2 pmax pmax
comp=Z,7µm,5.2s
R18K Karluk **81.94 13** P **P** **10 56 02.5 -0.7**
baz=203
R18K S **SKSac** **11 05 28.5 +2.2**
baz=203
MNSI Mandailing Nat **81.94 274** P **P** **10 56 02.7 -1.7**
comp=Z,6µmcomp=Z,441nm,0.8s
CCCA Chr Cany lake **81.97 47** IAmb IAmb 10 58 18.4
comp=Z,503nm,1.3s
CLC China Lake **81.98 46** IAmb IAmb 10 56 09.1
comp=Z,359nm,1.2s
L02F Cave Junction **82.00 38** IAmb IAmb 10 56 09.8
comp=Z,669nm,1.9s
IPM Ipoh **82.01 278** P **P** **10 56 05.5 +0.8**
KEBM Edson Butte **82.04 37** IAmb IAmb 10 56 09.9
comp=Z,451nm,1.4s
CNSH ChangSha **82.12 304** P **P** **10 56 06.3 +1.3**
CNSH S **SKSac** **11 05 27.9 -1.1**
CNSH pmax pmax
comp=Z,300nm,1.8s
GRNR Gornyy **82.20 333** ⇓*i*P **P** **10 56 05.8 +1.0**
GRNR pmax pmax
comp=Z,140nm,1.0s
GSC Goldstone, Bar **82.23 47** IAmb IAmb 10 56 10.4
comp=Z,792nm,1.9s
WHN Wuhan **82.25 307** ⇓P **P** **10 56 05.8 +0.3**
WHN pP **pP** **10 58 11.5 +0.3**
WHN sP **sP** **10 59 11.7 +0.4**
WHN S **S** **11 05 33.9 +1.5**
WHN pmax pmax
comp=Z,1µm,1.2s
WHN pmax pmax
comp=Z,14µm,10.0s
TIN Tinemaha, Big **82.26 45** IAmb IAmb 10 56 10.6
comp=Z,428nm,0.9s
BC3 Big Chuckawall **82.26 49** IAmb IAmb 10 56 11.4
comp=Z,1µm,2.0s
O14K Tigyukauivet M **82.29 9** P **P** **10 56 05.0 -0.1**
baz=197
O14K S **SKSac** **11 05 30.6 +2.0**
baz=197
Q17K Contact Creek **82.29 12** P **P** **10 56 04.3 -0.9**
baz=202
K02D Willamette Mer **82.31 38** IAmb IAmb 10 56 11.3
comp=Z,557nm,1.5s
M03C McCloud **82.32 40** IAmb IAmb 10 56 11.0
comp=Z,463nm,0.9s
GLA Glamis **82.38 50** IAmb IAmb 10 56 11.9
comp=Z,383nm,1.1s
MPK Martis Peak **82.41 42** IAmb IAmb 10 56 11.5
comp=Z,878nm,1.4s
HATC Hat Creek Radi **82.44 40** IAmb IAmb 10 56 11.7
comp=Z,727nm,1.2s
O15K Ungalikthiuk R **82.44 10** P **P** **10 56 05.0 -0.8**
baz=198
O15K S **SKSac** **11 05 31.6 +2.0**
baz=198
SNY Shenyang **82.48 321** ⇓P **P** **10 56 06.4 0.0**
SNY pP **pP** **10 58 09.2 -3.2**
SNY S **SKSac** **11 05 29.0 -1.7**
SNY pmax pmax
comp=Z,280nm,1.2s
SNY pmax pmax
comp=Z,1µm,3.8s
Q16K King Salmon **82.53 12** P **P** **10 56 05.7 -0.5**
baz=201,SNR=32
Q16K S **S** **11 05 34.9 +1.0**
baz=201
BEKR Beckworth **82.54 42** IAmb IAmb 10 56 11.9
comp=Z,885nm,1.9s
KDAK Kodiak Island **82.55 14** P **P** **10 56 06.5 +0.2**
KDAK Kodiak Island **82.55 14** P **P** **10 56 06.5 +0.2**
KDAK pmax pmax
comp=Z,218nm,1.2s
KDAK Kodiak Island **82.55 14** P **P** **10 56 04.8 -1.6**
baz=205
KDAK S **S** **11 05 36.7 +2.5**
baz=205
PNTR Pine Nut **82.56 43** IAmb IAmb 10 56 12.2
comp=Z,393nm,0.8s
PIX Pinacate **82.59 52** IAmb IAmb 10 56 12.3
comp=Z,368nm,1.2s
P16K Nushagak River **82.61 11** IAmb IAmb 10 56 10.4
comp=Z,780nm,1.2s
P16K Nushagak River **82.61 11** P **P** **10 56 04.9 -1.8**
baz=200,SNR=13
P16K S **S** **11 05 35.9 +1.1**
baz=200
CN2 Changchun **82.66 323** ⇓*i*P **P** **10 56 07.4 +0.1**
CN2 pP pwP 10 58 16.0 -2.0
CN2 sP sP 10 59 16.1 +2.9
CN2 SKS **SKSac** **11 05 29.0 -2.7**
CN2 S **SKKSac** **11 05 36.8 -0.6**
CN2 sS sS 11 09 22.6 +1.3
CN2 pmax pmax
comp=Z,600nm,1.6s
CN2 pmax pmax
comp=Z,4µm,4.0s
KULM Kulim **82.66 279** P **P** **10 56 08.9 +0.9**
GULI GuiLin **82.73 301** P **P** **10 56 09.2 +1.1**
GULI pP **pP** **10 58 11.9 -2.0**
GULI sP **sP** **10 59 15.3 +1.1**
GULI S **SKSac** **11 05 34.9 +1.8**
GULI pmax pmax
comp=Z,660nm,1.0s
GULI pmax pmax
comp=Z,4µm,6.3s
IRM Iron Mountain **82.75 49** IAmb IAmb 10 56 13.5
comp=Z,1µm,1.8s
M11K Mekoryuk **82.76 7** IAmb IAmb 10 56 12.5
comp=Z,596nm,1.2s
M11K Mekoryuk **82.76 7** P **P** **10 56 05.9 -1.4**
baz=192,SNR=12
M11K S **S** **11 05 40.3 +4.2**
baz=192
LHV Little Huntoon **82.77 44** IAmb IAmb 10 58 22.8
comp=Z,527nm,1.4s
GRAC Grapevine Rang **82.80 45** IAmb IAmb 10 56 13.5
comp=Z,862nm,1.4s
L04D Klamath Falls **82.80 39** IAmb IAmb 10 56 13.3
comp=Z,326nm,1.1s
Q18K Katmai Hardscr **82.82 13** P **P** **10 56 05.5 -2.4**
baz=203,SNR=25
Q18K S **S** **11 05 38.0 +0.9**
baz=203
PBSI Pulau Batu **82.83 273** P **P** **10 56 10.6 +1.8**
comp=Z,17µmcomp=Z,12µmcomp=Z,409nm,1.0s
DANC Danby, Needles **82.84 48** IAmb IAmb 10 56 13.8
comp=Z,874nm,1.6s
BNX BinXian **82.86 326** ⇓P **P** **10 56 07.9 -0.3**
BNX pP **pP** **10 58 15.9 +1.7**
BNX sP **sP** **10 59 15.8 +1.6**
BNX S **S** **11 05 38.2 +0.4**
BNX pmax pmax
comp=Z,470nm,1.1s
BNX pmax pmax
comp=Z,5µm,5.6s
N14K Kuskokwak Cree **82.87 9** P **P** **10 56 07.8 -0.2**
baz=197,SNR=68
N14K S **S** **11 05 37.7 +0.4**
baz=197
SHOC Shoshone, Teco **82.92 47** IAmb IAmb 10 58 23.9
comp=Z,385nm,1.3s
BLYC Blythe **82.97 49** IAmb IAmb 10 56 14.5
comp=Z,464nm,1.4s
RYN Ryan **82.97 44** IAmb IAmb 10 56 14.2
comp=Z,598nm,1.7s
113A Mohawk Valley, **82.99 51** IAmb IAmb 10 56 14.6
comp=Z,346nm,1.2s
BBOR Butler Butte **83.00 38** IAmb IAmb 10 56 14.7
comp=Z,652nm,2.0s
NVAR Mina Array Bea **83.00 44** P **P** **10 56 09.9 +0.5**
NVAR Mina Array Bea **83.00 44** P **P** **10 56 10.8 +1.4**
comp=Z,102nm,0.9s,baz=224,slow=7.8,SNR=282
NVAR pP **pwP** **10 58 18.1 -1.2**
comp=Z,108nm,1.1s,baz=224,slow=7.9,SNR=12
NVAR S **SKSac** **11 05 34.1 -0.6**
comp=Z,2.0nm,0.9s,baz=259,slow=6.7,SNR=4.5
NVAR PKKPbc **PKKPbc** **11 14 27.2 -0.6**
comp=Z,3.2nm,0.7s,baz=84,slow=3.6,SNR=12
NVAR PKPPKP **P'P'df** **11 22 32.7 +1.7**
comp=Z,3.8nm,0.8s,baz=78,slow=2.5,SNR=12
comp=Z,102nm,0.9s

P17K Kvichak River **83.05 12** P **P** **10 56 08.4 -0.4**
baz=201,SNR=42
P17K S **S** **11 05 39.7 +0.7**
baz=201
I02E Swisshome, OR **83.11 37** IAmb IAmb 10 58 26.2
comp=Z,527nm,1.7s
M13K Dall Lake **83.12 8** P **P** **10 56 09.1 0.0**
baz=195,SNR=9.6
M13K S **S** **11 05 44.3 +4.7**
baz=195
O16K Kokwok River B **83.13 11** P **P** **10 56 08.7 -0.5**
baz=200
O16K S **SKSac** **11 05 39.0 +5.0**
baz=200
HSIG **83.18 55** IAmb IAmb 10 56 14.7
comp=Z,241nm,0.8s
RPSI Rantau Prapat **83.26 276** P **P** **10 56 09.5 -1.5**
RPSI IAmb IAmb 10 56 14.2
comp=Z,390nm,0.9s
TIA Tai'an **83.29 313** P **P** **10 56 11.0 +0.4**
TIA pP **pP** **10 58 16.2 -0.5**
TIA sP **sP** **10 59 16.4 -0.4**
TIA S **SKSac** **11 05 35.9 -0.3**
TIA pmax pmax
comp=Z,160nm,1.1s
TIA pmax pmax
comp=Z,5µm,6.7s
PSI Prapat **83.30 276** P **P** **10 56 11.0 -0.4**
PSI Prapat **83.30 276** P **P** **10 56 09.5 -1.9**
PSI pmax pmax
comp=Z,390nm,0.9s
Q20K Shuyak Island **83.34 14** P **P** **10 56 09.8 -0.5**
baz=205
Q20K S **S** **11 05 42.6 +0.6**
baz=205
N15K Kwethluk River **83.35 10** P **P** **10 56 10.5 +0.1**
baz=198
N15K S **S** **11 05 45.2 +3.1**
baz=198
Q19K Cape Douglas, **83.36 13** IAmb IAmb 10 58 28.2
comp=Z,351nm,1.2s
P18K Big Mountain, **83.47 12** P **P** **10 56 10.5 -0.4**
baz=202,SNR=10.0
P18K S **S** **11 05 43.8 +0.5**
baz=202
O17K Koliganek Bris **83.47 11** P **P** **10 56 10.7 -0.2**
baz=201,SNR=15
O17K S **S** **11 05 44.1 +0.9**
baz=201
J04A Umpqua Nationa **83.54 38** IAmb IAmb 10 56 17.3
comp=Z,431nm,0.9s
M14K Bethel **83.63 9** IAmb IAmb 10 56 15.6
comp=Z,472nm,1.4s
M14K Bethel **83.63 9** P **P** **10 56 12.3 +0.6**
baz=196,SNR=24
M14K S **S** **11 05 47.7 +3.0**
baz=196
BUCK Buck Mountain **83.64 37** IAmb IAmb 10 58 29.0
comp=Z,510nm,1.4s
COR Corvallis **83.71 37** P **P** **10 56 12.4 -0.1**
COR Corvallis **83.71 37** P **P** **10 56 12.4 -0.1**
COR pmax pmax
comp=Z,116nm,0.9s
COR Corvallis **83.71 37** P **P** **10 56 15.1 +2.6**
COR pP **pwP** **10 58 22.6 -0.1**
M15K Kasigluk River **83.76 9** P **P** **10 56 12.8 +0.5**
baz=198
M15K S **S** **11 05 48.0 +2.1**
baz=198
ESPZ Base Esperanza **83.80 158** IAmb IAmb 10 56 17.4
comp=Z,510nm,1.0s
N16K Nishlik Lake **83.85 10** P **P** **10 56 13.3 +0.5**
baz=199
N16K S **S** **11 05 49.6 +2.7**
baz=199
O18K Koktuh Hills **83.90 12** P **P** **10 56 12.7 -0.4**
baz=202,SNR=50
O18K S **S** **11 05 48.7 +1.3**
baz=202
K05A Summer Lake **83.94 39** IAmb IAmb 10 56 19.4
comp=Z,716nm,1.5s
GSI Gunungsitoli **83.99 274** P **P** **10 56 15.7 +1.1**
GSI Gunungsitoli **83.99 274** P **P** **10 56 14.9 +0.3**
comp=Z,17µmcomp=Z,1µm,1.9s
MG01 Puerto William **83.99 147** IAmb IAmb 10 56 20.1
comp=Z,309nm,0.9s
J05D Fort Rock, OR **84.08 39** IAmb IAmb 10 56 19.9
comp=Z,276nm,1.0s
L14K Kuka Creek **84.10 8** P **P** **10 56 14.8 +0.8**
baz=196,SNR=23
L14K S **S** **11 05 52.6 +3.3**
baz=196
P19K Oil Pt **84.11 13** IAmb IAmb 10 58 32.3
comp=Z,320nm,1.2s
P19K Oil Pt **84.11 13** P **P** **10 56 14.1 0.0**
baz=204,SNR=5.5
P19K S **S** **11 05 50.0 +0.5**
baz=204
G03D McMinnville, O **84.13 36** IAmb IAmb 10 58 31.4
comp=Z,536nm,1.4s
N17K Nushagak Hills **84.16 11** P **P** **10 56 14.4 0.0**
baz=201
N17K S **S** **11 05 50.6 +0.7**
baz=201
S11A Rachel **84.23 46** IAmb IAmb 10 56 20.4
comp=Z,815nm,2.0s
M16K Timber Creek **84.34 10** P **P** **10 56 15.9 +0.7**
baz=199,SNR=43
M16K S **S** **11 05 56.2 +4.7**
baz=199
O19K Port Alsworth **84.39 12** IAmb IAmb 10 58 33.3
comp=Z,630nm,1.2s
O19K Port Alsworth **84.39 12** P **P** **10 56 14.6 -0.8**
baz=203,SNR=74
O19K S **S** **11 05 51.4 -0.7**
baz=203
F03A Seaside **84.42 35** IAmb IAmb 10 58 32.9
comp=Z,394nm,1.4s
CNPM China Poot **84.43 14** IAmb IAmb 10 56 19.1
comp=Z,492nm,1.6s
ILSW Iliamna Southw **84.43 13** IAmb IAmb 10 56 18.4
comp=Z,434nm,1.2s
K13K Kusilvak Mount **84.44 7** P **P** **10 56 15.3 -0.3**
baz=194
K13K S **S** **11 05 55.6 +3.1**
baz=194
HOM Homer **84.46 14** IAmb IAmb 10 56 19.2
comp=Z,527nm,1.1s
HOM Homer **84.46 14** P **P** **10 56 15.7 -0.1**
baz=206,SNR=5.5
HOM S **S** **11 05 53.4 +0.6**
baz=206
N18K Kilae Creek **84.54 11** P **P** **10 56 15.7 -0.5**
baz=202,SNR=8.6
N18K S **S** **11 05 53.5 -0.1**
baz=202
PINE Pine Mountain **84.55 38** IAmb IAmb 10 56 22.4
comp=Z,704nm,1.5s
G04A Mulino **84.56 37** IAmb IAmb 10 56 22.1
comp=Z,257nm,0.9s
L15K Ungalak Mounta **84.59 8** P **P** **10 56 16.5 +0.2**
baz=197
L15K S **S** **11 05 55.8 +1.8**
baz=197
RADR Rader Ridge **84.61 35** IAmb IAmb 10 56 22.5
comp=Z,990nm,1.9s
O20K Slope Mountain **84.63 13** P **P** **10 56 16.0 -0.7**
baz=205,SNR=5.8
O20K S **S** **11 05 55.4 +0.8**
baz=205
KCSI Kotacane, Aceh **84.64 276** P **P** **10 56 17.0 -0.8**
BRSE Bradley Lake S **84.74 14** P **P** **10 56 16.9 -0.3**
baz=207,SNR=14
BRSE S **S** **11 05 55.3 -0.2**
baz=207
E03A Lebam **84.81 35** IAmb IAmb 10 58 34.3
comp=Z,398nm,1.2s
F04D Rainier, OR **84.81 36** IAmb IAmb 10 56 22.8
comp=Z,209nm,0.9s
MA2 Magadan **84.84 345** P **P** **10 56 17.4 -0.3**
MA2 IAmb IAmb 10 56 20.6
comp=Z,629nm,1.2s
MA2 Magadan **84.84 345** P **P** **10 56 17.4 -0.3**
comp=Z,254nm,1.0s,baz=130,slow=5.3,SNR=23
MA2 pP **pP** **10 58 25.6 +0.9**
comp=Z,61nm,1.0s,baz=153,slow=8.8,SNR=5.9
comp=Z,254nm,1.0s
MA2 Magadan **84.84 345** P **P** **10 56 18.4 +0.7**

MA2 Magadan **84.84 345** ⇑*i*P **P** **10 56 17.4 -0.3**
MA2 pmax pmax
comp=Z,618nm,1.2s
RED Redoubt Volcan **84.91 13** IAmb IAmb 10 56 20.5
comp=Z,345nm,1.4s
L16K Owhat River **84.91 9** IAmb IAmb 10 58 36.0
comp=Z,329nm,1.3s
L16K Owhat River **84.91 9** P **P** **10 56 17.8 -0.1**
baz=199,SNR=14
L16K S **S** **11 05 59.0 +2.0**
baz=199
TUC Tucson **84.93 52** P **P** **10 56 20.0 +1.1**
TUC Tucson **84.93 52** P **P** **10 56 20.0 +1.1**
TUC pmax pmax
comp=Z,215nm,1.1s
TUC Tucson **84.93 52** P **P** **10 56 20.9 +2.1**
N19K Bonanza Creek **84.93 12** P **P** **10 56 17.0 -1.2**
baz=203
N19K S **S** **11 05 56.0 -1.5**
baz=203
M17K Holitna River **84.94 10** IAmb IAmb 10 58 42.1
comp=Z,398nm,1.3s
M17K Holitna River **84.94 10** P **P** **10 56 18.4 +0.3**
baz=200,SNR=29
M17K S **S** **11 05 59.4 +2.0**
baz=200
SYO Syowa Base **85.01 193** ⇓*i*P **P** **10 56 18.0 -0.5**
SYO Syowa Base **85.01 193** ⇓*i*pP pP 10 58 22.0 -3.6
SYO Syowa Base **85.01 193** *e*SH **S** **11 05 57.8 -0.3**
WISH Wishkah **85.07 34** IAmb IAmb 10 58 37.0
comp=Z,651nm,1.5s
WVOR Wild Horse Val **85.10 40** P **P** **10 56 21.3 +1.8**
WVOR pmax pmax
comp=Z,216nm,1.8s
K15K Wolf Creek Mou **85.17 8** P **P** **10 56 19.2 0.0**
baz=197
K15K S **S** **11 06 03.1 +3.5**
baz=197
C03A Quillayute Air **85.19 33** IAmb IAmb 10 58 37.8
comp=Z,644nm,1.3s
NLWA Neilton Lookou **85.19 34** P **P** **10 56 21.4 +1.7**
G05A Wamic **85.22 37** IAmb IAmb 10 56 25.3
comp=Z,680nm,1.7s
M18K Stony River **85.31 11** P **P** **10 56 19.7 -0.1**
baz=202,SNR=34
M18K S **S** **11 06 02.0 +1.2**
baz=202
SEW Seward **85.36 15** P **P** **10 56 20.3 +0.2**
baz=208,SNR=9.2
SEW S **S** **11 06 01.1 -0.2**
baz=208
J14K Nanvaranak Lak **85.36 7** P **P** **10 56 20.4 +0.4**
baz=195
J14K S **S** **11 06 04.0 +2.7**
baz=195
L17K Donlin **85.49 10** P **P** **10 56 21.2 +0.5**
baz=200
L17K S **S** **11 06 06.3 +3.7**
baz=200
X16A Lo Mia Camp, P **85.50 50** IAmb IAmb 10 58 38.8
comp=Z,564nm,1.2s
Q23K Middleton Isla **85.53 16** S **S** **11 06 04.2 +1.2**
baz=211
SLKM Skilak Lake **85.54 14** IAmb IAmb 10 58 43.7
comp=Z,447nm,1.2s
I07A Izee **85.56 39** IAmb IAmb 10 58 36.8
comp=Z,281nm,1.4s
SNSI Sinabang, Aceh **85.56 274** P **P** **10 56 23.2 +1.0**
comp=Z,15µmcomp=Z,10µmcomp=Z,748nm,1.7s
HNS HongShan **85.56 313** ⇓P **P** **10 56 22.2 +0.6**
HNS pP **pP** **10 58 25.8 -3.0**
HNS sP **sP** **10 59 28.2 -0.4**
HNS SKS **SKSac** **11 05 49.8 -0.5**
HNS S **S** **11 06 06.6 +2.3**
HNS pmax pmax
comp=Z,440nm,1.5s
HNS pmax pmax
comp=Z,6µm,6.5s
CAPN Captain Cook N **85.57 13** S **S** **11 06 06.1 +2.8**
baz=206
G06A Carlson Farm, **85.60 37** IAmb IAmb 10 56 26.9
comp=Z,840nm,1.8s
O22K Cooper Landing **85.63 14** IAmb IAmb 10 58 55.3
comp=Z,248nm,1.1s
O22K Cooper Landing **85.63 14** P **P** **10 56 20.8 -0.5**
baz=208,SNR=5.8
O22K S **S** **11 06 02.7 -1.2**
baz=208
LYN LuoYang **85.65 310** ⇓P **P** **10 56 23.2 +1.0**
LYN pP pwP 10 58 31.7 -2.1
LYN PP **PP** **10 59 52.5 -0.5**
LYN SKS **SKSac** **11 05 50.6 -0.4**
LYN S **S** **11 06 08.2 +2.9**
LYN pmax pmax
comp=Z,600nm,1.4s
LYN pmax pmax
comp=Z,5µm,3.5s
GAMB Gambell **85.67 3** P **P** **10 56 21.2 -0.3**
baz=187
GAMB S **S** **11 06 07.4 +3.3**
baz=187
N20K Mount Spurr **85.73 13** P **P** **10 56 20.4 -1.6**
baz=205,SNR=46
N20K S **S** **11 06 04.0 -1.1**
baz=205
SPCR Spurr Chakacha **85.73 13** P **P** **10 56 20.6 -1.4**
baz=205,SNR=33
SPCR S **S** **11 06 03.7 -1.4**
baz=205
P23K Montague Islan **85.75 16** IAmb IAmb 10 58 44.8
comp=Z,335nm,1.3s
P23K Montague Islan **85.75 16** P **P** **10 56 21.4 -0.6**
baz=210,SNR=5.2
P23K S **S** **11 06 06.1 +0.9**
baz=210
ENH Enshi **85.77 305** **P** **10 56 22.2 -0.7**
ENH Enshi **85.77 305** P **P** **10 56 24.0 +1.1**
ENH Enshi **85.77 305** P **P** **10 56 23.8 +1.0**
L18K Granite Mounta **85.84 10** P **P** **10 56 22.1 -0.2**
baz=201
L18K S **S** **11 06 07.9 +2.0**
baz=201
HEH HeiHe **85.86 329** *e*P **P** **10 56 22.8 +0.1**
HEH pP **pP** **10 58 29.2 -1.1**
HEH SKS **SKSac** **11 05 50.0 -1.5**
HEH S **S** **11 06 08.8 +2.2**
HEH pmax pmax
comp=Z,500nm,1.4s
HEH pmax pmax
comp=Z,5µm,7.5s
KNB Kanab **85.87 47** IAmb IAmb 10 58 40.8
comp=Z,492nm,1.5s
M19K Big River Lodg **85.95 12** P **P** **10 56 22.4 -0.6**
baz=203
SZCU Shurtz Canyon **85.99 47** IAmb IAmb 10 58 39.4
comp=Z,240nm,1.3s
BJT Baijiatuau **86.00 316** **P** **10 56 23.9 +0.2**
BJT IAmb IAmb 10 56 27.7
comp=Z,212nm,0.8s
BJT Baijiatuau **86.00 316** P **P** **10 56 25.5 +1.8**
BJT Baijiatuau **86.00 316** P **P** **10 56 23.9 +0.2**
BJT pmax pmax
comp=Z,212nm,0.8s
BJT Baijiatuau **86.00 316** P **P** **10 56 24.3 +0.6**
BJI Beijing **86.00 316** P **P** **10 56 24.1 +0.4**
BJI pP **pP** **10 58 32.3 +1.2**
BJI sP **sP** **10 59 31.4 +0.6**
BJI SKS **SKSac** **11 05 52.0 -0.8**
BJI sS **sS** **11 09 56.7 +0.4**
BJI pmax pmax
comp=Z,140nm,1.4s
BJI pmax pmax
comp=Z,1µm,3.5s
K17K Iditarod **86.04 10** P **P** **10 56 23.6 +0.3**
baz=200
K17K S **S** **11 06 10.0 +2.2**
baz=200
LHMI Lhok Sumawe **86.04 277** P **P** **10 56 25.6 +1.1**
LHMI Lhok Sumawe **86.04 277** P **P** **10 56 25.8 +1.3**
comp=Z,16µmcomp=Z,811nm,1.4s
GO07 Milladeo Hill, **86.07 135** IAmb IAmb 10 56 30.8
comp=Z,572nm,1.4s
L19K White Mountain **86.12 11** P **P** **10 56 23.9 +0.1**
baz=203
L19K S **S** **11 06 08.4 -0.3**
baz=203

CBB	**Campbell River**	**86.15**	**32**	IAmb	IAmb	10 58 42.3		
	comp=Z,479nm,1.6s							
RC01	**Rabbit Creek A**	**86.17**	**14**	IAmb	IAmb	10 56 27.1		
	comp=Z,343nm,1.3s							
RC01	**Rabbit Creek A**	**86.17**	**14**	P	**P**	**10 56 22.8**	**-1.1**	
	baz=208,SNR=19							
RC01				S	**S**	**11 06 08.0**	**-1.0**	
	baz=208							
M20K	**Styx River**	**86.17**	**12**	P	**P**	**10 56 22.6**	**-1.5**	
	baz=204							
M20K				S	**S**	**11 06 08.3**	**-0.9**	
	baz=204							
MLSI	**Meulaboh, Aceh**	**86.18**	**276**	P	**P**	**10 56 25.2**	**0.0**	
	comp=Z,15µmcomp=Z,11µmcomp=Z,1µm,1.0s							
GYA	**Guiyang**	**86.22**	**300**	⇑P	**P**	**10 56 26.1**	**+0.9**	
GYA				pP	pP	10 58 30.9	-1.8	
GYA				sP	sP	10 59 31.7	-0.7	
GYA				PP	**PP**	**10 59 58.2**	**+0.4**	
GYA				SKS	**SKSac**	**11 05 55.7**	**+0.6**	
GYA				S	**S**	**11 06 12.2**	**+0.8**	
GYA				SS	**SS**	**11 12 14.9**	**+5.3**	
GYA				pmax	pmax			
	comp=Z,220nm,1.9s							
GYA				pmax	pmax			
	comp=Z,5µm,6.3s							
J16K	**Anvik River**	**86.25**	**8**	P	**P**	**10 56 23.7**	**-0.5**	
	baz=198,SNR=15							
J16K				S	**S**	**11 06 11.0**	**+1.3**	
	baz=198							
ELK	**Elko**	**86.25**	**43**	P	**P**	**10 56 26.5**	**+1.3**	
TROLL	**Troll, Antarti**	**86.27**	**181**	⇑P	**P**	**10 56 23.8**	**-0.9**	
	comp=Z,9µm,0.7s							
SLVN	**Son La**	**86.27**	**295**	IAmb	IAmb	10 56 30.1		
	comp=Z,202nm,1.1s							
SLVN	**Son La**	**86.27**	**295**	P	**P**	**10 56 26.8**	**+1.3**	
SUA	**Susitna One**	**86.28**	**13**	P	**P**	**10 56 23.2**	**-1.5**	
	baz=206,SNR=16							
SUA				S	**S**	**11 06 10.3**	**-0.1**	
	baz=206							
PWL	**Port Wells**	**86.28**	**15**	IAmb	IAmb	10 56 27.5		
	comp=Z,471nm,1.6s							
PWL	**Port Wells**	**86.28**	**15**	P	**P**	**10 56 23.6**	**-0.9**	
	baz=209,SNR=39							
PWL				S	**S**	**11 06 09.4**	**-0.8**	
	baz=209							
F07A	**Phinny Hill Vi**	**86.39**	**37**	IAmb	IAmb	10 56 30.4		
	comp=Z,412nm,1.7s							
KAIM	**Kayak Island**	**86.47**	**17**	IAmb	IAmb	10 58 45.9		
	comp=Z,279nm,1.4s							
KAIM	**Kayak Island**	**86.47**	**17**	P	**P**	**10 56 25.2**	**-0.2**	
	baz=212							
KAIM				S	**S**	**11 06 12.6**	**+0.7**	
	baz=212							
J17K	**VABM Dome**	**86.57**	**9**	P	**P**	**10 56 24.9**	**-0.9**	
	baz=199							
J17K				S	**S**	**11 06 12.8**	**0.0**	
	baz=199							
L20K	**Farewell, AK**	**86.58**	**12**	P	**P**	**10 56 25.3**	**-0.6**	
	baz=204,SNR=47							
L20K				S	**S**	**11 06 10.0**	**-3.0**	
	baz=204							
SKT	**Skwentna**	**86.58**	**13**	P	**P**	**10 56 23.9**	**-2.0**	
	baz=206,SNR=25							
SKT				S	**S**	**11 06 10.0**	**-3.0**	
	baz=206							
G08A	**Pilot Rock**	**86.58**	**38**	IAmb	IAmb	10 56 31.5		
	comp=Z,611nm,1.5s							
SNAA	**Sanae**	**86.58**	**179**	⇑P	**P**	**10 56 25.6**	**-0.5**	
	comp=Z,1µm,0.7s							
SNAA	**Sanae**	**86.58**	**179**	P	**P**	**10 56 25.7**	**-0.3**	
SNAA	**Sanae**	**86.58**	**179**	P	**P**	**10 56 26.0**	**-0.1**	
	comp=Z,44nm,0.6s,baz=206,slow=6.1,SNR=164							
SNAA				pP	**pP**	**10 58 34.6**	**+0.5**	
	comp=Z,52nm,0.9s,baz=208,slow=4.3,SNR=8.1							
SNAA				S	**SKSac**	**11 05 55.2**	**-0.6**	
	comp=Z,5.5nm,0.9s,baz=190,slow=21,SNR=7.6							
SNAA				PKKPbc	**PKKPbc**	**11 14 17.6**	**-2.5**	
	comp=Z,4.4nm,0.7s,baz=181,slow=0.5,SNR=16							
	comp=Z,44nm,0.6s							
SNAA	**Sanae**	**86.58**	**179**	⇑*i*P	**P**	**10 56 26.2**	**+0.2**	
SNAA				pmax	pmax			
	comp=Z,68nm,0.9s							
CRAG	**Craig**	**86.59**	**24**	IAmb	IAmb	10 58 43.1		
	comp=Z,396nm,2.0s							
CRAG	**Craig**	**86.59**	**24**	P	**P**	**10 56 27.0**	**+1.0**	
CRAG	**Craig**	**86.59**	**24**	P	**P**	**10 56 25.4**	**-0.6**	
	baz=222							
CRAG				S	**S**	**11 06 16.2**	**+3.1**	
	baz=222							
GLI	**Glacier Island**	**86.60**	**15**	IAmb	IAmb	10 58 48.1		
	comp=Z,276nm,1.1s							
GLI	**Glacier Island**	**86.60**	**15**	P	**P**	**10 56 25.6**	**-0.4**	
	baz=210,SNR=31							
GLI				S	**S**	**11 06 12.6**	**-0.5**	
	baz=210							
X18A	**Snowflake**	**86.63**	**51**	IAmb	IAmb	10 58 43.7		
	comp=Z,342nm,1.2s							
A04D	**Lummi Island**	**86.64**	**34**	IAmb	IAmb	10 58 44.6		
	comp=Z,443nm,1.2s							
FID	**Port Fidalgo**	**86.64**	**16**	IAmb	IAmb	10 56 29.1		
	comp=Z,276nm,1.4s							
EYAK	**Cordova Ski Ar**	**86.65**	**16**	P	**P**	**10 56 27.8**	**+1.6**	
EYAK	**Cordova Ski Ar**	**86.65**	**16**	P	**P**	**10 56 25.2**	**-1.0**	
	baz=211,SNR=13							
EYAK				S	**S**	**11 06 13.4**	**-0.1**	
	baz=211							
M22K	**Willow**	**86.67**	**13**	IAmb	IAmb	10 56 29.1		
	comp=Z,370nm,1.1s							
M22K	**Willow**	**86.67**	**13**	P	**P**	**10 56 25.5**	**-0.7**	
	baz=207,SNR=30							
M22K				S	**S**	**11 06 13.8**	**+0.1**	
	baz=207							
KNK	**Knik Glacier**	**86.74**	**14**	P	**P**	**10 56 25.3**	**-1.4**	
	baz=209							
KNK				S	**S**	**11 06 14.7**	**+0.2**	
	baz=209							
PMR	**Palmer**	**86.75**	**14**	IAmb	IAmb	10 56 29.7		
	comp=Z,292nm,1.4s							
PMR	**Palmer**	**86.75**	**14**	P	**P**	**10 56 27.9**	**+1.3**	
PMR	**Palmer**	**86.75**	**14**	P	**P**	**10 56 27.8**	**+1.2**	
PMR	**Palmer**	**86.75**	**14**	P	**P**	**10 56 25.6**	**-1.1**	
	baz=208,SNR=56							
PMR				S	**S**	**11 06 14.5**	**0.0**	
	baz=208							
VNA3	**Neumayer Olymp**	**86.77**	**177**	⇑P	**P**	**10 56 26.6**	**-0.2**	
	comp=Z,217nm,0.6s							
RAGM	**Ragged Mountai**	**86.79**	**16**	IAmb	IAmb	10 58 47.8		
	comp=Z,253nm,1.3s							
I17K	**Unalakleet**	**86.81**	**8**	P	**P**	**10 56 26.0**	**-0.9**	
	baz=197							
I17K				S	**S**	**11 06 17.0**	**+2.1**	
	baz=197							
MTPU	**Mount Pierson**	**86.83**	**47**	IAmb	IAmb	10 58 44.3		
	comp=Z,395nm,1.3s							
E07A	**Sunnyside**	**86.83**	**37**	IAmb	IAmb	10 56 33.7		
	comp=Z,173nm,0.9s							
HAWA	**Hanford**	**86.91**	**37**	IAmb	IAmb	10 58 42.6		
	comp=Z,524nm,1.4s							
MOIG	**Morelia**	**86.92**	**67**	IAmb	IAmb	10 56 32.9		
	comp=Z,315nm,0.9s							
ANM	**Nome**	**86.94**	**6**	P	**P**	**10 56 27.3**	**-0.2**	
	baz=193							
ANM				S	**S**	**11 06 18.1**	**+2.1**	
	baz=193							
BGLC	**Bering Glacier**	**86.94**	**17**	P	**P**	**10 56 27.2**	**-0.4**	
	baz=213							
BGLC				S	**S**	**11 06 19.0**	**+2.8**	
	baz=213							
TCRU	**Three Creeks R**	**86.94**	**46**	IAmb	IAmb	10 58 44.4		
	comp=Z,275nm,1.3s							
SIT	**Sitka**	**86.98**	**22**	P	**P**	**10 56 29.5**	**+1.7**	
SIT	**Sitka**	**86.98**	**22**	P	**P**	**10 56 32.0**	**+4.2**	
SIT	**Sitka**	**86.98**	**22**	P	**P**	**10 56 27.4**	**-0.4**	
	baz=220,SNR=6.7							
SIT				S	**S**	**11 06 19.5**	**+2.8**	
	baz=220							
J18K	**Innoko River**	**87.00**	**10**	P	**P**	**10 56 27.7**	**-0.2**	
	baz=201							
J18K				S	**S**	**11 06 16.8**	**0.0**	
	baz=201							
YPT	**Yellepit**	**87.03**	**37**	IAmb	IAmb	10 58 42.9		
	comp=Z,331nm,1.6s							
BERG	**Berg Lake**	**87.05**	**17**	IAmb	IAmb	10 58 51.5		
	comp=Z,254nm,1.2s							
U33K	**Whale Pass**	**87.07**	**24**	P	**P**	**10 56 28.4**	**+0.1**	
	baz=222,SNR=8.0							
U33K				S	**S**	**11 06 19.9**	**+2.3**	
	baz=222							
SNH	**Sunshine Point**	**87.11**	**17**	IAmb	IAmb	10 58 49.2		
	comp=Z,271nm,1.2s							
WAH2	**Wahluke Slope**	**87.11**	**37**	IAmb	IAmb	10 58 43.5		
	comp=Z,516nm,1.6s							
SML	**Sawmill**	**87.12**	**14**	IAmb	IAmb	10 58 44.0		
	comp=Z,389nm,1.9s							
SML	**Sawmill**	**87.12**	**14**	P	**P**	**10 56 28.0**	**-0.5**	
	baz=209,SNR=16							
SML				S	**S**	**11 06 17.6**	**-0.5**	
	baz=209							
DIV	**Divide**	**87.14**	**16**	IAmb	IAmb	10 58 49.2		
	comp=Z,322nm,1.2s							
NVL	**N'lazarevskaya**	**87.18**	**184**	*e*P	**P**	**10 56 29.1**	**+0.4**	
NVL				*e*		11 00 01.3		
NVL				*e*PPP	PPP	11 02 04.9		
NVL				*e*S	**SKSac**	**11 05 58.1**	**-1.1**	
NVL				*e*SS	**SS**	**11 12 21.8**	**+2.1**	
NVL				*e*SSS	SSS	11 16 03.3		
NVL				pmax	pmax			
	comp=Z,39nm,0.5s							
VNA2	**Neumayer--Watz**	**87.19**	**177**	⇑P	**P**	**10 56 29.1**	**+0.2**	
	comp=Z,181nm,0.6s,baz=181,slow=4.1							
LL01	**San Ignacio de**	**87.22**	**135**	IAmb	IAmb	10 56 35.3		
	comp=Z,264nm,1.4s							
CUT	**Chulitna**	**87.23**	**13**	P	**P**	**10 56 28.1**	**-0.8**	
	baz=207,SNR=52							
CUT				S	**S**	**11 06 17.2**	**-1.6**	
	baz=207							
E08A	**Dider Farm, El**	**87.23**	**37**	IAmb	IAmb	10 58 44.1		
	comp=Z,485nm,1.5s							
M23K	**Glacier View**	**87.25**	**14**	P	**P**	**10 56 28.5**	**-0.5**	
	baz=209,SNR=26							
M23K				S	**S**	**11 06 18.2**	**-1.0**	
	baz=209							
TIY	**Taiyuan**	**87.27**	**313**	*e*P	**P**	**10 56 30.6**	**+0.8**	
TIY				sP	**sP**	**10 59 37.9**	**+0.6**	
TIY				SKS	**SKSac**	**11 05 59.8**	**-1.0**	
TIY				S	**ScS**	**11 06 23.2**	**-1.7**	
TIY				pmax	pmax			
	comp=Z,300nm,1.1s							
TIY				pmax	pmax			
	comp=Z,3µm,8.2s							
PPLA	**Purkeypile**	**87.28**	**12**	P	**P**	**10 56 28.8**	**-0.6**	
	baz=205,SNR=12							
PPLA				S	**S**	**11 06 15.8**	**-3.9**	
	baz=205							
BMO	**Blue Mountains**	**87.29**	**39**	IAmb	IAmb	10 56 34.5		
	comp=Z,655nm,1.9s							
BMRM	**Bremner River**	**87.30**	**16**	IAmb	IAmb	10 58 52.9		
	comp=Z,453nm,1.3s							
BMRM	**Bremner River**	**87.30**	**16**	P	**P**	**10 56 28.7**	**-0.6**	
	baz=212,SNR=38							
BMRM				S	**S**	**11 06 20.4**	**+0.6**	
	baz=212							
LNOR	**Lincton Mounta**	**87.31**	**38**	IAmb	IAmb	10 58 44.1		
	comp=Z,313nm,1.8s							
WAX	**Waxell Ridge**	**87.33**	**17**	IAmb	IAmb	10 58 50.2		
	comp=Z,402nm,1.4s							
H16K	**Elim**	**87.34**	**7**	P	**P**	**10 56 29.3**	**-0.1**	
	baz=196,SNR=6.5							
H16K				S	**S**	**11 06 21.2**	**+1.3**	
	baz=196							
K20K	**Telida**	**87.35**	**11**	IAmb	IAmb	10 58 49.6		
	comp=Z,195nm,1.1s							
K20K	**Telida**	**87.35**	**11**	P	**P**	**10 56 29.5**	**0.0**	
	baz=204,SNR=9.3							
K20K				S	**S**	**11 06 19.5**	**-0.5**	
	baz=204							
MESA	**MESA**	**87.36**	**18**	P	**P**	**10 56 29.6**	**-0.2**	
	baz=214,SNR=20							
MESA				S	**S**	**11 06 23.2**	**+2.6**	
	baz=214							
MFID	**Camas Ranch**	**87.36**	**41**	IAmb	IAmb	10 56 35.1		
	comp=Z,179nm,1.0s							
S31K	**Pelican**	**87.36**	**21**	P	**P**	**10 56 29.6**	**+0.1**	
	baz=220,SNR=8.5							
S31K				S	**S**	**11 06 23.5**	**+3.3**	
	baz=220							
SCM	**Sheep Creek Mo**	**87.38**	**15**	IAmb	IAmb	10 56 32.3		
	comp=Z,177nm,0.9s							
SCM	**Sheep Creek Mo**	**87.38**	**15**	P	**P**	**10 56 28.7**	**-1.0**	
	baz=210,SNR=40							
SCM				S	**S**	**11 06 19.6**	**-0.9**	
	baz=210							
KLU	**Klutina**	**87.42**	**15**	P	**P**	**10 56 29.4**	**-0.5**	
	baz=211,SNR=27							
KLU				S	**S**	**11 06 21.2**	**+0.4**	
	baz=211							
VNA1	**Neumayer--Stat**	**87.43**	**177**	⇑P	**P**	**10 56 30.4**	**+0.6**	
	comp=Z,272nm,1.0s							
G15K	**Niukluk**	**87.49**	**6**	P	**P**	**10 56 30.0**	**0.0**	
	baz=194							
G15K				S	**S**	**11 06 23.6**	**+2.4**	
	baz=194							
SEY	**Seymchan**	**87.50**	**348**	P	**P**	**10 56 29.9**	**-0.2**	
	comp=Z,224nm,1.0s,baz=151,slow=4.7,SNR=61							
SEY				pP	**pP**	**10 58 38.5**	**+0.3**	
	comp=Z,93nm,1.2s,baz=140,slow=4.3,SNR=6.6							
	comp=Z,224nm,1.0s							
SEY	**Seymchan**	**87.50**	**348**	*e*P	**P**	**10 56 28.5**	**-1.6**	
SEY				pmax	pmax			
	comp=Z,515nm,1.4s							
CRQM	**Cirque**	**87.51**	**17**	IAmb	IAmb	10 58 54.3		
	comp=Z,253nm,1.2s							
CRQE	**Cirque**	**87.52**	**17**	P	**P**	**10 56 30.4**	**-0.1**	
	baz=213,SNR=31							
CRQE				S	**S**	**11 06 22.8**	**+0.9**	
	baz=213							
DUG	**Dugway, Tooele**	**87.53**	**45**	P	**P**	**10 56 32.5**	**+1.5**	
DUG				pmax	pmax			
	comp=Z,68nm,2.1s							
S32K	**Killisnoo**	**87.55**	**22**	P	**P**	**10 56 29.7**	**-0.8**	
	baz=221,SNR=6.6							
S32K				S	**S**	**11 06 25.3**	**+3.2**	
	baz=221							
WRAK	**Wrangell Islan**	**87.59**	**24**	P	**P**	**10 56 31.1**	**+0.4**	
	baz=223,SNR=11							
WRAK				S	**S**	**11 06 27.7**	**+5.3**	
	baz=223							
TGL	**Tana Glacier**	**87.59**	**17**	IAmb	IAmb	10 58 51.2		
	comp=Z,392nm,1.4s							
ISLE	**Juniper Island**	**87.60**	**17**	IAmb	IAmb	10 58 51.3		
	comp=Z,274nm,1.3s							
D08A	**Wollman Farm,**	**87.64**	**37**	IAmb	IAmb	10 56 35.7		
	comp=Z,138nm,0.8s							
T33K	**Petersburg**	**87.65**	**24**	P	**P**	**10 56 30.7**	**-0.3**	
	baz=222							
T33K				S	**S**	**11 06 26.8**	**+3.9**	
	baz=222							
J19K	**Poorman**	**87.67**	**10**	P	**P**	**10 56 31.1**	**+0.1**	
	baz=202,SNR=31							
J19K				S	**S**	**11 06 24.7**	**+1.7**	
	baz=202							
LR04	**Corral**	**87.67**	**132**	IAmb	IAmb	10 56 37.1		
	comp=Z,236nm,1.2s							
PNL	**Peninsula**	**87.69**	**19**	P	**P**	**10 56 30.4**	**-0.7**	
	baz=217,SNR=15							
PNL				S	**S**	**11 06 25.3**	**+2.0**	
	baz=217							
TNA	**Tin City**	**87.69**	**5**	P	**P**	**10 56 30.9**	**-0.1**	
	baz=191							
TNA				S	**S**	**11 06 25.6**	**+2.6**	
	baz=191							
F14K	**Arctic Creek**	**87.74**	**5**	P	**P**	**10 56 30.0**	**-1.2**	
	baz=192							
F14K				S	**S**	**11 06 25.6**	**+2.1**	
	baz=192							
HMU	**Henry Mountain**	**87.76**	**47**	IAmb	IAmb	10 58 47.7		
	comp=Z,368nm,1.5s							
E09A	**Wood Farm, Sta**	**87.76**	**37**	IAmb	IAmb	10 58 46.4		
	comp=Z,397nm,1.5s							
PCA	**Pinnacle**	**87.78**	**18**	IAmb	IAmb	10 58 50.2		
	comp=Z,293nm,1.7s							
PINM	**Pinnacle**	**87.78**	**18**	P	**P**	**10 56 29.8**	**-1.8**	
	baz=216,SNR=12							
PINM				S	**S**	**11 06 25.8**	**+1.5**	
	baz=216							
LL03	**Petrohue**	**87.80**	**134**	IAmb	IAmb	10 56 37.2		
	comp=Z,341nm,1.1s							
TABL	**Table Mountain**	**87.80**	**18**	IAmb	IAmb	10 58 49.2		
	comp=Z,212nm,1.2s							
VRDI	**Verde Repeater**	**87.82**	**17**	IAmb	IAmb	10 58 52.4		
	comp=Z,368nm,1.4s							
N25K	**Chitina, Valde**	**87.84**	**16**	IAmb	IAmb	10 58 53.0		
	comp=Z,275nm,1.1s							
N25K	**Chitina, Valde**	**87.84**	**16**	P	**P**	**10 56 30.3**	**-1.7**	
	baz=212,SNR=56							
N25K				S	**S**	**11 06 25.5**	**+0.6**	
	baz=212							
BCPM	**Bancas Point**	**87.85**	**19**	IAmb	IAmb	10 58 48.6		
	comp=Z,225nm,1.4s							
GRNC	**Granite Creek**	**87.87**	**17**	IAmb	IAmb	10 58 52.7		
	comp=Z,268nm,1.3s							
R31K	**City Hall, Gus**	**87.87**	**21**	P	**P**	**10 56 30.5**	**-1.5**	
	baz=220							
R31K				S	**S**	**11 06 28.4**	**+3.5**	
	baz=220							
M24K	**Tolsona, Glenn**	**87.89**	**15**	P	**P**	**10 56 30.1**	**-2.0**	
	baz=211,SNR=25							
M24K				S	**S**	**11 06 26.0**	**+0.8**	
	baz=211							
GLB	**Gilahina Butte**	**87.91**	**16**	IAmb	IAmb	10 58 53.2		
	comp=Z,228nm,1.2s							
H17K	**Granite Mounta**	**87.92**	**8**	P	**P**	**10 56 30.1**	**-2.0**	
	baz=198							
H17K				S	**S**	**11 06 25.6**	**+0.3**	
	baz=198							
WAT6	**Susitna Watana**	**87.93**	**14**	P	**P**	**10 56 30.7**	**-1.7**	
	baz=209,SNR=76							
WAT6				S	**S**	**11 06 25.3**	**-0.4**	
	baz=209							
XAN	**Xi'an**	**87.97**	**308**	⇓P	**P**	**10 56 33.4**	**+0.3**	
XAN				pP	pP	10 58 40.5	-0.8	
XAN				sP	sP	10 59 41.0	+0.2	
XAN				SKS	**SKSac**	**11 06 04.2**	**-0.8**	
XAN				S	**S**	**11 06 28.9**	**+1.8**	
XAN				pmax	pmax			
	comp=Z,630nm,1.3s							
XAN				pmax	pmax			
	comp=Z,7µm,7.7s							
F10A	**Beach Ranch, E**	**87.97**	**38**	IAmb	IAmb	10 56 37.2		
	comp=Z,239nm,1.0s							
JRQG	**Juriquilla Cam**	**87.97**	**67**	IAmb	IAmb	10 56 38.8		
	comp=Z,218nm,1.5s							
WAT1	**Susitna Watana**	**87.97**	**14**	P	**P**	**10 56 30.4**	**-2.0**	
	baz=208							
WAT1				S	**S**	**11 06 25.8**	**-0.1**	
	baz=208							
G16K	**Koyuk River**	**88.06**	**7**	P	**P**	**10 56 32.1**	**-0.6**	
	baz=196							
G16K				S	**S**	**11 06 26.8**	**+0.3**	
	baz=196							
MCARA	**McCarthy VSAT**	**88.07**	**17**	IAmb	IAmb	10 58 54.8		
	comp=Z,263nm,1.2s							
MCARA	**McCarthy VSAT**	**88.07**	**17**	P	**P**	**10 56 32.3**	**-0.6**	
	baz=214,SNR=52							
MCARA				S	**S**	**11 06 27.4**	**+0.7**	
	baz=214							
J20K	**Nowinta River**	**88.09**	**11**	IAmb	IAmb	10 56 36.1		
	comp=Z,217nm,1.4s							
J20K	**Nowinta River**	**88.09**	**11**	P	**P**	**10 56 32.4**	**-0.5**	
	baz=203,SNR=48							
J20K				S	**S**	**11 06 26.4**	**-0.4**	
	baz=203							
F15K	**North Star Dit**	**88.12**	**6**	P	**P**	**10 56 32.3**	**-0.7**	
	baz=194							
F15K				S	**S**	**11 06 28.5**	**+1.4**	
	baz=194							
KTH	**Kantishna Hill**	**88.12**	**12**	IAmb	IAmb	10 58 53.5		
	comp=Z,319nm,1.5s							
U35K	**Hyder**	**88.12**	**25**	S	**S**	**11 06 31.6**	**+4.2**	
	baz=225							
CHUM	**Lake Minchumin**	**88.15**	**12**	P	**P**	**10 56 31.8**	**-1.4**	
	baz=205,SNR=31							
CHUM				S	**S**	**11 06 25.2**	**-2.1**	
	baz=205							
TRF	**Thorofare Moun**	**88.16**	**13**	IAmb	IAmb	10 56 35.2		
	comp=Z,158nm,0.8s							
TRF	**Thorofare Moun**	**88.16**	**13**	P	**P**	**10 56 31.9**	**-1.6**	
	baz=207,SNR=74							
TRF				S	**S**	**11 06 26.4**	**-1.4**	
	baz=207							
XLT	**XiLinHaoTe**	**88.17**	**319**	*e*P	**P**	**10 56 33.5**	**-0.4**	
XLT				pP	pP	10 58 41.6	-0.5	
XLT				sP	sP	10 59 41.5	-0.2	
XLT				PP	**PP**	**11 00 12.2**	**-0.6**	
XLT				SKS	**SKSac**	**11 06 03.6**	**-2.2**	
XLT				S	**ScS**	**11 06 31.2**	**-0.9**	
XLT				sS	sS	11 10 21.4	+3.9	
XLT				pmax	pmax			
	comp=Z,150nm,1.3s							
BARN	**Barnard Glacie**	**88.17**	**17**	IAmb	IAmb	10 58 55.0		
	comp=Z,384nm,1.4s							
P29M	**Windy Craggy**	**88.17**	**20**	IAmb	IAmb	10 58 50.8		
	comp=Z,401nm,1.6s							
P29M	**Windy Craggy**	**88.17**	**20**	P	**P**	**10 56 33.1**	**-0.3**	
	baz=218							
P29M				S	**S**	**11 06 31.5**	**+3.7**	
	baz=218							
GCSA	**Galena City Sc**	**88.17**	**9**	P	**P**	**10 56 33.0**	**-0.2**	
	baz=201,SNR=25							
GCSA				S	**S**	**11 06 27.3**	**-0.2**	
	baz=201							
CTG	**Chitna Glacier**	**88.18**	**18**	P	**P**	**10 56 33.1**	**-0.4**	
	baz=215,SNR=50							
CTG				S	**S**	**11 06 30.4**	**+2.4**	
	baz=215							
PLID	**Pearl Lake**	**88.18**	**39**	IAmb	IAmb	10 58 48.8		
	comp=Z,339nm,1.4s							
R32K	**Eaglecrest**	**88.19**	**22**	P	**P**	**10 56 31.3**	**-2.2**	
	baz=221							
R32K				S	**S**	**11 06 30.7**	**+2.8**	
	baz=221							
MPU	**Maple Canyon**	**88.21**	**45**	IAmb	IAmb	10 56 39.4		
	comp=Z,250nm,1.4s							
JIS	**Juneau Island**	**88.23**	**22**	P	**P**	**10 56 36.3**	**+2.7**	
ZEA	**Zeya**	**88.27**	**332**	*e*P	**P**	**10 56 34.7**	**+0.8**	
ZEA				*e**PP	**pP**	**10 58 43.5**	**+1.2**	
ZEA				*e*		11 06 07.1		
ZEA				*e*S	**S**	**11 06 32.9**	**+4.1**	
ZEA				pmax	pmax			
	comp=E,10.0nm,1.1s							
ZEA				pmax	pmax			
	comp=N,60nm,0.9s							
ZEA				pmax	pmax			
	comp=Z,140nm,1.1s							
ZEA				pmax	pmax			
	comp=N,300nm,2.8s							
ZEA				pmax	pmax			
	comp=Z,2µm,4.1s							
ZEA				smax	smax			
	comp=E,2µm,7.6s							
ZEA				smax	smax			
	comp=N,4µm,9.6s							
HLID	**Hailey**	**88.30**	**41**	IAmb	IAmb	10 58 49.8		
	comp=Z,250nm,1.4s							
BESE	**Bessie Mountai**	**88.30**	**22**	IAmb	IAmb	10 58 57.5		
	comp=Z,194nm,1.4s							
TLIG	**Tlapa**	**88.33**	**70**	IAmb	IAmb	10 56 40.2		
	comp=Z,185nm,0.9s							
H18K	**Honhosa River**	**88.34**	**9**	P	**P**	**10 56 32.7**	**-1.3**	
	baz=200							
H18K				S	**S**	**11 06 27.5**	**-1.6**	
	baz=200							
O28M	**Mount Upton**	**88.35**	**18**	P	**P**	**10 56 31.8**	**-2.7**	
	baz=216							
O28M				S	**S**	**11 06 31.2**	**+1.3**	
	baz=216							
G17K	**Kiwalik Mounta**	**88.37**	**8**	P	**P**	**10 56 32.3**	**-1.8**	
	baz=197,SNR=14							
G17K				S	**S**	**11 06 29.9**	**+0.

BPAW S **S** **11 06 28.7 -2.8**
baz=206
I20K Naaghedeneel 88.61 10 IAmb IAmb 10 56 39.5
comp=Z,249nm,1.4s
I20K Naaghedeneel 88.61 10 P **P** **10 56 34.1 -1.1**
baz=203
I20K S **S** **11 06 32.4 +1.0**
baz=203
MCK McKinley 88.69 13 P **P** **10 56 35.0 -0.7**
baz=208,SNR=49
MCK S **S** **11 06 29.7 -2.7**
baz=208
T35M Bob Quinn 88.79 24 P **P** **10 56 36.7 +0.3**
baz=225
T35M S **S** **11 06 39.2 +5.6**
baz=225
PAX Paxson 88.80 15 P **P** **10 56 35.6 -0.7**
baz=211,SNR=32
PAX S **S** **11 06 32.2 -1.3**
baz=211
P30M Million Dollar 88.80 20 P **P** **10 56 36.5 +0.1**
baz=219
P30M S **S** **11 06 36.4 +2.8**
baz=219
SKAG Skagway 88.81 21 IAmb IAmb 10 58 57.0
comp=Z,324nm,1.5s
SKAG Skagway 88.81 21 P **P** **10 56 39.0 +2.7**
SKAG Skagway 88.81 21 P **P** **10 56 37.0 +0.7**
baz=220,SNR=12
SKAG S **S** **11 06 38.8 +5.2**
baz=220
KMI Kunming 88.83 298 ⇓P **P** **10 56 38.7 +1.1**
KMI pP pP 10 58 43.2 -2.7
KMI sP sP 10 59 45.8 +0.3
KMI SKS **SKSac** **11 06 09.1 -1.7**
KMI pmax pmax
comp=Z,320nm,1.8s
KMI pmax pmax
comp=Z,4μm,8.6s
YUK8 Steele Glacier 88.88 18 P **P** **10 56 37.6 +0.6**
baz=216,SNR=54
YUK8 S **S** **11 06 37.1 +2.4**
baz=216
M26K Nabesna, AK 88.92 16 IAmb IAmb 10 58 58.4
comp=Z,222nm,1.1s
M26K Nabesna, AK 88.92 16 P **P** **10 56 37.4 +0.5**
baz=214,SNR=53
M26K S **S** **11 06 35.9 +1.2**
baz=214
P18A Preston Nutter 88.94 46 IAmb IAmb 10 58 52.8
comp=Z,309nm,1.6s
MVCO Mesa Verde 88.96 49 IAmb IAmb 10 59 07.5
comp=Z,179nm,1.4s
TXAR Lajitas Array 88.96 58 P **P** **10 56 39.0 +1.1**
TXAR Lajitas Array 88.96 58 P **P** **10 56 39.4 +1.4**
comp=Z,145nm,0.9s,baz=220,slow=4.8,SNR=263
TXAR pP **pwP** **10 58 49.9 +0.1**
comp=Z,128nm,1.0s,baz=197,slow=3.9,SNR=13
TXAR PKKPbc **PKKPbc** **11 14 13.3 +0.3**
comp=Z,4.4nm,0.6s,baz=81,slow=3.2,SNR=21
TXAR SKKP **SKKPdf** **11 16 43.7 -3.1**
comp=Z,3.5nm,1.1s,baz=106,slow=2.7,SNR=5.5
TXAR PKPPKP **P'P'df** **11 22 20.5 -0.4**
comp=Z,0.7nm,0.8s,baz=104,slow=3.0,SNR=4.1
comp=Z,145nm,0.9s
H19K Roundabout Mou 88.97 9 P **P** **10 56 37.5 +0.6**
baz=201
H19K S **S** **11 06 35.8 +1.1**
baz=201
G18K Tagagawik 89.00 8 P **P** **10 56 37.3 +0.2**
baz=199
G18K S **S** **11 06 34.3 -0.8**
baz=199
YUK6 Outpost Mounta 89.02 19 P **P** **10 56 38.4 +0.8**
baz=218,SNR=8.7
YUK6 S **S** **11 06 37.7 +1.8**
baz=218
YUK3 Moose Creek 89.09 17 P **P** **10 56 37.2 -0.7**
baz=216,SNR=102
YUK3 S **S** **11 06 38.3 +1.9**
baz=216
HIA Hailar 89.12 325 **P** **10 56 37.7 -0.4**
HIA Hailar 89.12 325 P **P** **10 56 38.8 +0.7**
HIA Hailar 89.12 325 P **P** **10 56 37.7 -0.4**
HIA pmax pmax
comp=Z,94nm,0.9s
S34M Telegraph Cree 89.13 23 IAmb IAmb 10 58 57.3
comp=Z,251nm,1.4s
S34M Telegraph Cree 89.13 23 P **P** **10 56 38.3 +0.5**
baz=224,SNR=31
S34M S **S** **11 06 41.6 +5.1**
baz=224
PV14 Lion Creek, Pa 89.15 48 IAmb IAmb 10 58 53.5
comp=Z,376nm,1.7s
M27K Edge Creek, AK 89.18 17 P **P** **10 56 38.5 +0.3**
baz=214
M27K S **S** **11 06 37.9 +0.8**
baz=214
H20K Anotleneega Mo 89.18 10 P **P** **10 56 37.9 0.0**
baz=203
H20K S **S** **11 06 38.5 +1.7**
baz=203
HYT Haines Junctio 89.18 19 IAmb IAmb 10 58 55.7
comp=Z,168nm,1.4s
HYT Haines Junctio 89.18 19 P **P** **10 56 38.7 +0.5**
baz=218,SNR=22
HYT S **S** **11 06 38.2 +1.0**
baz=218
PV13 Radium Mtn., P 89.19 48 IAmb IAmb 10 58 56.9
comp=Z,337nm,1.5s
MENT Mentasta 89.19 15 IAmb IAmb 10 58 59.1
comp=Z,155nm,1.2s
MENT Mentasta 89.19 15 P **P** **10 56 39.5 +1.4**
PV23 Carpenter Ridg 89.20 48 IAmb IAmb 10 56 43.0
comp=Z,206nm,1.0s
F17K Baldwin Pennin 89.20 7 IAmb IAmb 10 56 41.3
comp=Z,152nm,1.2s
F17K Baldwin Pennin 89.20 7 P **P** **10 56 36.6 -1.3**
baz=197,SNR=7.9
F17K S **S** **11 06 37.1 +0.4**
baz=197
PLCA Paso Flores 89.23 134 IAmb IAmb 10 56 44.3
comp=Z,150nm,0.9s
PLCA Paso Flores 89.23 134 P **P** **10 56 40.8 +1.7**
comp=Z,92nm,0.8s,baz=234,slow=5.1,SNR=63
PLCA pP **pwP** **10 58 49.5 -0.9**
comp=Z,91nm,1.2s,baz=239,slow=5.6,SNR=18
PLCA PKKPbc **PKKPbc** **11 14 11.2 -1.5**
comp=Z,2.8nm,0.7s,baz=94,slow=3.7,SNR=7.0
PLCA SKKP **SKKPdf** **11 16 36.9 -7.0**
comp=Z,4.7nm,1.0s,baz=37,slow=2.7,SNR=3.8
PLCA PKPPKP **P'P'df** **11 22 16.5 -4.9**
comp=Z,3.9nm,0.9s,baz=38,slow=5.4,SNR=3.3
comp=Z,92nm,0.8s
PLCA Paso Flores 89.23 134 P **P** **10 56 40.9 +1.9**
PLCA S **S** **11 06 42.6 +3.9**
PLCA Paso Flores 89.23 134 *e*P **P** **10 56 40.2 +1.2**
PLCA *e*pP **pP** **10 58 49.0 +1.1**
PLCA Paso Flores 89.23 134 P **P** **10 56 39.4 +0.4**
PLCA pP **pwP** **10 58 49.5 -0.9**
PV04 Paradox Valley 89.24 48 IAmb IAmb 10 58 54.0
comp=Z,393nm,1.6s
YUK4 Talbot Arm 89.25 18 P **P** **10 56 40.6 +1.9**
baz=217,SNR=10.0
YUK4 S **S** **11 06 40.1 +2.2**
baz=217
HILR Hailar Array B 89.28 325 P **P** **10 56 38.8 -0.1**
comp=Z,85nm,0.8s,baz=132,slow=7.9,SNR=40
HILR pP **pP** **10 58 48.8 +1.3**
comp=Z,110nm,1.3s,baz=152,slow=6.7,SNR=3.3
comp=Z,85nm,0.8s
BCYI Bear Canyon 89.32 41 IAmb IAmb 10 58 58.3
comp=Z,334nm,1.7s
NEW Newport 89.33 36 P **P** **10 56 40.7 +1.6**
NEW pmax pmax
comp=Z,34nm,2.0s
TASM ASL Pad, Albuq 89.35 52 IAmb IAmb 10 58 57.6
comp=Z,264nm,1.4s
TASM ASL Pad, Albuq 89.35 52 IAmb IAmb 10 58 57.6
comp=Z,265nm,1.4s
TASM ASL Pad, Albuq 89.35 52 IAmb IAmb 10 58 57.6
comp=Z,272nm,1.4s
ABQ Albuquerque 89.35 52 IAmb IAmb 10 58 57.6
comp=Z,236nm,1.4s
ANMO Albuquerque 89.35 52 P **P** **10 56 39.6 -0.2**
ANMO IAmb IAmb 10 58 57.6
comp=Z,251nm,1.4s
ANMO Albuquerque 89.35 52*c* *i*P **P** **10 56 41.0 +1.3**
ANMO pmax pmax
comp=Z,232nm,1.7s
ANMO Albuquerque 89.35 52 P **P** **10 56 40.6 +0.8**
CM31 Chiang Mai Arr 89.36 290 P **P** **10 56 41.0 +1.1**
CM31 Chiang Mai Arr 89.36 290 P **P** **10 56 41.5 +1.7**
SNR=172
CMAR Chiang Mai Arr 89.36 290 P **P** **10 56 41.0 +1.1**
CMAR Chiang Mai Arr 89.36 290 P **P** **10 56 41.0 +1.1**
comp=Z,292nm,0.8s,baz=128,slow=3.1,SNR=340
CMAR pP **pP** **10 58 48.9 +0.7**
comp=Z,23nm,1.0s,baz=119,slow=3.3,SNR=4.4
CMAR PP **PP** **11 00 22.4 0.0**
comp=Z,32nm,0.8s,baz=133,slow=5.7,SNR=7.2
CMAR S **SKSac** **11 06 13.8 +0.2**
comp=Z,1.2nm,0.5s,baz=214,slow=5.7,SNR=5.1
CMAR PKKP **PKKPdf** **11 14 06.6 -0.3**
comp=Z,1.4nm,0.3s,baz=266,slow=5.7,SNR=4.5
CMAR PKKPbc **PKKPbc** **11 14 13.6 +2.0**
comp=Z,8.1nm,0.6s,baz=282,slow=4.2,SNR=18
CMAR SKKP **SKKPdf** **11 16 45.1 -0.3**
comp=Z,1.1nm,0.3s,baz=344,slow=4.6,SNR=2.2
CMAR SKKPbc **SKKPbc** **11 16 54.2 -0.1**
comp=Z,3.2nm,0.9s,baz=287,slow=4.8,SNR=4.3
CMAR PKPPKP **P'P'df** **11 22 17.9 -2.9**
comp=Z,1.3nm,0.8s,baz=283,slow=3.4,SNR=6.4
comp=Z,292nm,0.8s
CMAR Chiang Mai Arr 89.36 290 *i*P **P** **10 56 41.0 +1.1**
CMAR pmax pmax
comp=Z,309nm,0.8s
L26K Log Cabin Wild 89.36 16 P **P** **10 56 38.4 -0.4**
baz=213,SNR=34
L26K S **S** **11 06 38.2 -0.3**
baz=213
I21K Tanana 89.39 11 IAmb IAmb 10 56 41.8
comp=Z,169nm,1.2s
I21K Tanana 89.39 11 P **P** **10 56 38.4 -0.5**
baz=205,SNR=35
I21K S **S** **11 06 37.2 -1.4**
baz=205
NEA2 Nenana 89.42 13 P **P** **10 56 37.4 -1.7**
baz=208,SNR=6.7
NEA2 S **S** **11 06 36.5 -2.5**
baz=208
HHC Hu-ho-hao-te 89.43 315 *e*P **P** **10 56 40.0 +0.2**
HHC pP pP 10 58 48.2 -0.1
HHC sP sP 10 59 45.9 -1.9
HHC PP **PP** **11 00 19.0 -3.7**
HHC SKS **SKSac** **11 06 11.7 -1.6**
HHC S **S** **11 06 39.2 -1.0**
HHC sS sS 11 10 30.1 +0.2
HHC pmax pmax
comp=Z,47nm,0.6s
HHC pmax pmax
comp=Z,2μm,5.0s
PV07 Paradox Valley 89.44 48 IAmb IAmb 10 58 54.9
comp=Z,338nm,1.6s
P32M Atlin 89.45 21 IAmb IAmb 10 58 59.6
comp=Z,213nm,1.5s
P32M Atlin 89.45 21 P **P** **10 56 40.4 +1.0**
baz=222,SNR=9.8
P32M S **S** **11 06 44.0 +4.5**
baz=222
Q32M Nakina River 89.48 22 P **P** **10 56 39.0 -0.8**
baz=223
Q32M S **S** **11 06 43.5 +3.4**
baz=223
MLY Manley 89.49 12 P **P** **10 56 38.0 -1.5**
baz=206,SNR=11
MLY S **S** **11 06 37.3 -2.3**
baz=206
CMBY CAMPBELL BAY 89.49 278 *e*P **P** **10 56 40.9 +0.3**
CMBY IAmb IAmb 10 56 46.0
comp=Z,92nm,1.3s
CHTO Chiang Mai 89.50 290 P **P** **10 56 41.5 +1.0**
CHTO Chiang Mai 89.50 290 P **P** **10 56 41.8 +1.3**
CHTO Chiang Mai 89.50 290 P **P** **10 56 41.7 +1.3**
CHTO Chiang Mai 89.50 290 P **P** **10 56 41.5 +1.0**
CHTO Chiang Mai 89.50 290 P **P** **10 56 41.4 +0.9**
CHTO Chiang Mai 89.50 290 P **P** **10 56 41.5 +1.0**
BVCY Beaver Creek 89.50 17 P **P** **10 56 39.7 +0.2**
baz=215
PV15 Paradox Valley 89.51 48 IAmb IAmb 10 58 58.3
comp=Z,316nm,1.5s
WRH Wood River Hil 89.52 13 IAmb IAmb 10 59 00.8
comp=Z,204nm,1.2s
F18K Selawik 89.54 8 P **P** **10 56 37.5 -2.0**
baz=198,SNR=12
F18K S **S** **11 06 38.7 -1.1**
baz=198
O30N Mendenhall 89.58 20 IAmb IAmb 10 58 57.5
comp=Z,226nm,1.3s
O30N Mendenhall 89.58 20 P **P** **10 56 39.4 -0.5**
baz=220,SNR=21
O30N S **S** **11 06 43.4 +2.9**
baz=220
RIDG Independent Ri 89.60 15 IAmb IAmb 10 59 02.8
comp=Z,235nm,1.4s
RIDG Independent Ri 89.60 15 P **P** **10 56 39.1 -0.9**
baz=212,SNR=10
RIDG S **S** **11 06 41.6 +0.9**
baz=212
H21K Melozitna Rive 89.68 11 IAmb IAmb 10 56 43.7
comp=Z,288nm,1.8s
H21K Melozitna Rive 89.68 11 P **P** **10 56 39.7 -0.6**
baz=205,SNR=29
H21K S **S** **11 06 41.6 +0.4**
baz=205
HDA Harding Lake 89.71 13 P **P** **10 56 39.2 -1.2**
baz=210,SNR=37
HDA S **S** **11 06 37.5 -4.0**
baz=210
DOT Dot Lake 89.71 15 IAmb IAmb 10 59 01.2
comp=Z,172nm,1.4s
E17K Hotham Inlet 89.75 7 P **P** **10 56 39.1 -1.4**
baz=196,SNR=27
E17K S **S** **11 06 42.5 +0.8**
baz=196
L27K Beaver Creek, 89.78 16 P **P** **10 56 40.6 -0.3**
baz=214,SNR=33
L27K S **S** **11 06 44.0 +1.8**
baz=214
BCAR Beaver Creek A 89.79 16 P **P** **10 56 40.5 -0.4**
N30M Aishikik Lake 89.81 19 P **P** **10 56 39.4 -1.6**
baz=219,SNR=11
N30M S **S** **11 06 43.9 +1.3**
baz=219
IMAR Indian Mountai 89.82 10 P **P** **10 56 40.5 -0.4**
RDMU Red Mountain 89.85 46 IAmb IAmb 10 56 45.9
comp=Z,120nm,0.8s
I23K Minto, Yukon-K 89.86 12 P **P** **10 56 40.1 -1.0**
baz=208,SNR=23
I23K S **S** **11 06 39.0 -3.7**
baz=208
WHY Whitehorse 89.88 20 P **P** **10 56 41.4 0.0**
baz=221,SNR=13
WHY S **S** **11 06 47.3 +4.0**
baz=221
DLBC Dease Lake 89.92 24 PKKPbc PKKPbc 11 14 10.1 -1.9
comp=Z,1.9nm,0.6s,baz=256,slow=3.0,SNR=11
DLBC Dease Lake 89.92 24 P **P** **10 56 39.7 -1.9**
baz=225,SNR=11
DLBC S **S** **11 06 48.9 +5.2**
baz=225
COLA College 89.92 13 P **P** **10 56 40.9 -0.5**
COLA IAmb IAmb 10 59 03.0
comp=Z,146nm,1.0s
COLA College 89.92 13 P **P** **10 56 40.6 -0.7**
COLA College 89.92 13⇑ *i*P **P** **10 56 40.7 -0.6**
COLA pmax pmax
comp=Z,171nm,1.2s
COLA College 89.92 13 P **P** **10 56 40.7 -0.6**
baz=209
COLA S **S** **11 06 39.9 -3.4**
baz=209
COLA College 89.92 13 P **P** **10 56 42.3 +1.0**
COLA College 89.92 13 P **P** **10 56 40.6 -0.7**
AHID Auburn Hatcher 89.95 43 IAmb IAmb 10 56 47.3
comp=Z,187nm,0.9s
SCRK Sand Creek 90.01 15 IAmb IAmb 10 59 03.0
comp=Z,232nm,1.6s
SCRK Sand Creek 90.01 15 P **P** **10 56 41.2 -0.8**
baz=213,SNR=30
SCRK S **S** **11 06 44.8 +0.4**
baz=213
F19K Shaleruckik Mo 90.01 8 IAmb IAmb 10 56 44.9
comp=Z,156nm,1.3s
F19K Shaleruckik Mo 90.01 8 P **P** **10 56 41.0 -0.7**
baz=200,SNR=24
F19K S **S** **11 06 43.7 -0.3**
baz=200
IL31 90.03 13 IAmb IAmb 10 59 07.6
comp=Z,169nm,1.4s
ILAR Eielson Array 90.03 13 P **P** **10 56 41.3 -0.6**
ILAR Eielson Array 90.03 13 P **P** **10 56 41.6 -0.3**
comp=Z,54nm,1.1s,baz=140,slow=6.9,SNR=4.1
ILAR pP **pwP** **10 58 53.3 -0.3**
comp=Z,45nm,1.1s,baz=235,slow=5.0,SNR=5.7
ILAR PKKPbc **PKKPdf** **11 14 09.2 +1.5**
comp=Z,1.1nm,0.6s,baz=346,slow=2.7,SNR=6.7
ILAR SKKP **SKKPdf** **11 16 48.5 +2.1**
comp=Z,0.2nm,0.4s,baz=356,slow=28,SNR=4.6
ILAR PKPPKP **P'P'df** **11 22 10.8 -5.2**
comp=Z,0.8nm,0.8s,baz=358,slow=1.7,SNR=4.1
comp=Z,54nm,1.1s
H22K Ishtalitna Cre 90.15 11 P **P** **10 56 41.6 -0.8**
baz=206
H22K S **S** **11 06 45.8 +0.4**
baz=206
M29M Somme Creek 90.18 18 P **P** **10 56 43.1 +0.3**
baz=218,SNR=34
M29M S **S** **11 06 48.5 +2.4**
baz=218
E18K Tukpahlearik C 90.21 7 P **P** **10 56 42.7 0.0**
baz=198
E18K S **S** **11 06 46.1 +0.2**
baz=198
D17K Noatak River 90.22 6 P **P** **10 56 41.7 -1.0**
baz=195,SNR=15
D17K S **S** **11 06 47.8 +1.9**
baz=195
P33M Teslin, Yukon 90.22 21 P **P** **10 56 40.8 -2.1**
baz=222,SNR=5.1
P33M S **S** **11 06 49.2 +2.8**
baz=222
POKR Poker Plat Res 90.22 13 P **P** **10 56 42.0 -0.8**
baz=210,SNR=9.7
POKR S **S** **11 06 43.3 -2.8**
baz=210
PZH PanZhiHua 90.22 298 P **P** **10 56 44.3 +0.4**
PZH PP **PP** **11 00 27.5 -1.7**
PZH SKS **SKSac** **11 06 16.9 -1.6**
PZH S **ScS** **11 06 52.0 +1.9**
PZH pmax pmax
comp=Z,220nm,0.8s
PZH pmax pmax
comp=Z,3μm,7.2s
N31M Braeburn, Yuko 90.23 19 IAmb IAmb 10 59 00.6
comp=Z,241nm,1.2s
N31M Braeburn, Yuko 90.23 19 P **P** **10 56 42.8 -0.1**
baz=220,SNR=16
N31M S **S** **11 06 48.4 +2.1**
baz=220
J25K Salcha River, 90.23 14 P **P** **10 56 40.7 -2.2**
baz=211
J25K S **S** **11 06 44.1 -2.1**
baz=211
R33M Jennings River 90.26 23 P **P** **10 56 41.5 -1.8**
baz=224
R33M S **S** **11 06 49.4 +2.5**
baz=224
BTO Baotou 90.33 314 *e*P **P** **10 56 45.9 +1.9**
BTO pP **pP** **10 58 52.7 0.0**
BTO PP **PP** **11 00 28.5 -1.3**
BTO SKS **SKSac** **11 06 18.6 +0.1**
BTO S **S** **11 06 42.6 -5.7**
BTO pmax pmax
comp=Z,250nm,1.1s
BTO pmax pmax
comp=Z,5μm,6.6s
MSO Missoula 90.34 39 IAmb IAmb 10 59 02.5
comp=Z,304nm,1.6s
G21K Allakaket 90.35 10 IAmb IAmb 10 56 46.6
comp=Z,193nm,1.4s
G21K Allakaket 90.35 10 P **P** **10 56 41.5 -1.9**
baz=204,SNR=34
G21K S **S** **11 06 47.2 +0.1**
baz=204
BILL Bilibino 90.36 355 P **P** **10 56 43.4 +0.1**
BILL IAmb IAmb 10 56 46.7
comp=Z,272nm,1.3s
BILL Bilibino 90.36 355⇓ *i*P **P** **10 56 43.0 -0.3**
BILL pmax pmax
comp=Z,249nm,1.4s
DLMT Dillon 90.36 40 IAmb IAmb 10 59 15.7
comp=Z,259nm,1.4s
S22A 4UR Ranch, Cre 90.38 49 IAmb IAmb 10 59 01.8
comp=Z,343nm,1.5s
H23K Yukon River 90.42 12 P **P** **10 56 42.4 -1.4**
baz=208
H23K S **S** **11 06 46.5 -1.4**
baz=208
FXWY Fox Creek 90.44 42 IAmb IAmb 10 56 49.8
comp=Z,226nm,1.7s
CD2 Chengdu 90.46 303 P **P** **10 56 44.8 0.0**
CD2 pP pP 10 58 51.3 -2.2
CD2 PP **PP** **11 00 29.3 -1.6**
CD2 SKS **SKSac** **11 06 18.3 -1.2**
CD2 S **ScS** **11 06 51.0 -0.7**
CD2 pmax pmax
comp=Z,200nm,1.3s
CD2 pmax pmax
comp=Z,5μm,6.6s
F20K Avaraart Lake 90.50 9 P **P** **10 56 42.7 -1.3**
baz=202,SNR=41
F20K S **S** **11 06 49.1 +0.7**
baz=202
K27K Chicken 90.52 15 P **P** **10 56 42.9 -1.2**
baz=214
SNOW Snow King Moun 90.52 43 IAmb IAmb 10 56 50.0
comp=Z,127nm,0.9s
O20A White River Ci 90.53 47 IAmb IAmb 10 56 49.5
comp=Z,123nm,0.9s
MNHN Monahans 90.53 56 IAmb IAmb 10 59 01.6
comp=Z,300nm,1.6s
J26L Joseph Creek 90.55 15 P **P** **10 56 43.2 -1.2**
baz=213
J26L S **S** **11 06 49.9 +0.7**
baz=213
EFI East Falkland 90.57 148 P **P** **10 56 44.9 +0.1**
EFI East Falkland 90.57 148⇓ *i*P **P** **10 56 46.5 +1.7**
EFI pmax pmax
comp=Z,279nm,0.9s
C16K Lisburne Hills 90.57 5 P **P** **10 56 44.4 +0.1**
baz=193
C16K S **S** **11 06 47.4 -1.5**
baz=193
RDOG Red Dog Mine 90.58 6 IAmb IAmb 10 56 47.8
comp=Z,152nm,1.4s
RDOG Red Dog Mine 90.58 6 P **P** **10 56 43.1 -1.2**
baz=195,SNR=8.2
RDOG S **S** **11 06 47.4 -1.7**
baz=195
E19K Redstone River 90.67 8 IAmb IAmb 10 56 48.1
comp=Z,184nm,1.2s
E19K Redstone River 90.67 8 P **P** **10 56 44.0 -0.8**
baz=201
E19K S **S** **11 06 48.7 -1.2**
baz=201
H24K Noodor Dome 90.76 12 P **P** **10 56 43.1 -2.2**
baz=209
H24K S **S** **11 06 47.7 -3.2**
baz=209
M30M Minto, Yukon 90.77 18 IAmb IAmb 10 59 02.8
comp=Z,156nm,1.2s
M30M Minto, Yukon 90.77 18 P **P** **10 56 44.9 -0.5**
baz=219,SNR=38
M30M S **S** **11 06 52.6 +1.5**
baz=219
L29M L29M 90.81 17 P **P** **10 56 45.5 -0.1**
baz=218,SNR=48
L29M S **S** **11 06 51.6 +0.2**
baz=218
N32M Quiet Lake 90.83 21 P **P** **10 56 46.1 +0.4**
baz=222
YPP Pitchstone Pla 90.89 42 IAmb IAmb 10 59 06.7
comp=Z,181nm,1.7s
YHB Horse Butte 90.90 41 IAmb IAmb 10 59 06.4
comp=Z,274nm,1.3s
PDAR Pinedale Array 90.94 44 P **P** **10 56 46.4 -0.5**
PDAR Pinedale Array 90.94 44 P **P** **10 56 47.7 +0.8**
comp=Z,41nm,0.9s,baz=209,slow=2.9,SNR=135
PDAR pP **pwP** **10 58 59.0 -0.6**
comp=Z,27nm,1.0s,baz=238,slow=2.8,SNR=7.2
PDAR PKKP **PKKPbc** **11 14 08.7 -0.2**

comp=Z,4.2nm,0.7s,baz=84,slow=4.5,SNR=18
PDAR SKKP **SKKPdf** **11 16 42.6 -1.6**
comp=Z,1.3nm,1.0s,baz=92,slow=4.5,SNR=4.1
PDAR PKPPKP **P'P'df** **11 22 15.2 -1.2**
comp=Z,1.0nm,0.7s,baz=102,slow=4.2,SNR=6.6
comp=Z,41nm,0.9s
C17K **DeLong Mountai** **90.96 6** P **P** **10 56 46.0 -0.2**
baz=195
C17K S **S** **11 06 51.2 -1.3**
baz=195
YFT **Old Faithful** **90.97 42** IAmb IAmb 10 59 07.4
comp=Z,131nm,1.3s
ML02 **Panimavida** **90.98 129** IAmb IAmb 10 56 57.8
comp=Z,144nm,0.9s
F21K **Alatna River** **91.00 10** P **P** **10 56 46.8 +0.5**
baz=204
F21K S **S** **11 06 50.8 -2.1**
baz=204
H17A **Grant Village** **91.10 42** IAmb IAmb 10 59 07.9
comp=Z,202nm,1.4s
G23K **Bananza Creek** **91.13 11** P **P** **10 56 47.0 0.0**
baz=207
G23K S **S** **11 06 54.8 +0.7**
baz=207
YNR **Norris Junctio** **91.20 42** IAmb IAmb 10 59 08.4
comp=Z,302nm,1.5s
M31M **Drury Creek, Y** **91.20 19** P **P** **10 56 47.3 -0.1**
baz=221,SNR=9.9
M31M S **S** **11 06 54.8 -0.1**
baz=221
DAWY **Dawson** **91.23 16** IAmb IAmb 10 59 09.4
comp=Z,198nm,1.2s
DAWY **Dawson** **91.23 16** P **P** **10 56 47.0 -0.5**
baz=217,SNR=36
DAWY S **S** **11 06 53.2 -1.9**
baz=217
LKWY **Lake** **91.29 42** IAmb IAmb 10 59 09.1
comp=Z,324nm,1.6s
I26K **Coal Creek Min** **91.32 14** IAmb IAmb 10 59 08.2
comp=Z,269nm,1.5s
I26K **Coal Creek Min** **91.32 14** P **P** **10 56 47.0 -0.9**
baz=213,SNR=34
I26K S **S** **11 06 57.1 +1.3**
baz=213
C18K **Utukok River** **91.33 7** P **P** **10 56 47.4 -0.4**
baz=197
C18K S **S** **11 06 54.8 -1.0**
baz=197
HAYD **Hayden** **91.37 47** IAmb IAmb 10 59 08.1
comp=Z,203nm,1.5s
F22K **John River** **91.47 10** P **P** **10 56 46.8 -1.7**
baz=205,SNR=6.8
F22K S **S** **11 06 56.9 -0.1**
baz=205
D19K **Kuna River** **91.53 8** P **P** **10 56 48.2 -0.6**
baz=200
D19K S **S** **11 06 55.8 -1.8**
baz=200
WTLY **Watson Lake, Y** **91.55 23** IAmb IAmb 10 59 10.1
comp=Z,162nm,1.3s
WTLY **Watson Lake, Y** **91.55 23** P **P** **10 56 48.4 -0.6**
baz=226,SNR=9.9
WTLY S **S** **11 07 01.8 +3.8**
baz=226
H25L **Birch Creek** **91.56 13** P **P** **10 56 49.1 +0.3**
baz=211
K29M **Barlow Dome** **91.56 17** P **P** **10 56 49.0 -0.1**
baz=218
K29M S **S** **11 06 59.3 +1.2**
baz=218
COLD **Coldfoot** **91.56 11** P **P** **10 56 48.5 -0.4**
baz=207,SNR=17
COLD S **S** **11 06 58.7 +1.0**
baz=207
E20K **Nigu River** **91.56 8** P **P** **10 56 47.4 -1.5**
baz=202,SNR=41
E20K S **S** **11 06 56.2 -1.7**
baz=202
G24K **Hadweenzic Riv** **91.60 12** P **P** **10 56 48.3 -0.8**
baz=210
G24K S **S** **11 06 56.9 -1.2**
baz=210
OZNA **Ozona** **91.63 57** IAmb IAmb 10 56 53.8
comp=Z,67nm,0.7s
MAYO **Mayo, Yukon** **91.82 18** P **P** **10 56 49.2 -0.9**
baz=220,SNR=6.5
MAYO S **S** **11 07 01.3 +1.1**
baz=220
BO01 **Tunca** **91.86 128** IAmb IAmb 10 56 55.3
comp=Z,95nm,0.9s
BO02 **Sierra Bellavi** **91.89 129** IAmb IAmb 10 56 55.8
comp=Z,129nm,0.9s
G25K **Bearman Lake** **91.93 13** P **P** **10 56 49.7 -0.9**
baz=211
G25K S **S** **11 07 03.0 +2.0**
baz=211
I27K **Kandik River** **91.93 15** P **P** **10 56 49.5 -1.2**
baz=215,SNR=13
I27K S **S** **11 07 01.3 +0.1**
baz=215
D20K **Etivluk River** **91.93 8** IAmb IAmb 10 56 54.8
comp=Z,262nm,1.4s
D20K **Etivluk River** **91.93 8** P **P** **10 56 50.6 0.0**
baz=201,SNR=20
D20K S **S** **11 06 58.4 -2.6**
baz=201
C19K **Lookout Ridge** **91.94 7** P **P** **10 56 50.2 -0.5**
baz=198
C19K S **S** **11 07 00.5 -0.7**
baz=198
833A **Chaparral WMA,** **91.94 60** IAmb IAmb 10 56 56.2
comp=Z,207nm,1.0s
B18K **Kokolik River** **91.95 6** P **P** **10 56 49.6 -1.0**
baz=196
B18K S **S** **11 07 00.8 -0.3**
baz=196
TOAD **Toad River Com** **92.03 25** P **P** **10 56 49.9 -1.3**
baz=229,SNR=12
TOAD S **S** **11 07 04.2 +2.0**
baz=229
E21K **Killik River** **92.05 9** P **P** **10 56 51.2 0.0**
baz=204,SNR=18
E21K S **S** **11 07 01.0 -1.1**
baz=204
LIRD **Liard River Hi** **92.06 24** P **P** **10 56 52.0 +0.6**
baz=228
LIRD S **S** **11 07 05.3 +2.8**
baz=228
VA01 **Torpederas** **92.09 127** IAmb IAmb 10 56 56.4
comp=Z,146nm,0.8s
E22K **Anaktuvuk Pass** **92.10 10** P **P** **10 56 49.9 -1.6**
baz=206
E22K S **S** **11 07 02.3 -0.2**
baz=206
ISCO **Idaho Springs** **92.16 48** P **P** **10 56 54.2 +1.5**
ISCO pmax pmax
comp=Z,49nm,1.8s
I28M **Miner Creek** **92.21 15** P **P** **10 56 51.9 -0.2**
baz=216,SNR=21
I28M S **S** **11 07 03.7 -0.1**
baz=216
MT09 **Talagante** **92.22 128** IAmb IAmb 10 56 57.1
comp=Z,182nm,1.0s
POST **Post** **92.23 55** IAmb IAmb 10 59 06.7
comp=Z,222nm,1.4s
F24K **Squaw Lake** **92.24 12** P **P** **10 56 50.7 -1.4**
baz=209
F24K S **S** **11 07 05.2 +1.5**
baz=209
TNCH **TengChong** **92.29 296** ⇓*i* P **P** **10 56 54.0 +0.5**
TNCH pP pP 10 59 01.0 -1.4
TNCH PP **PP** **11 00 43.9 -1.5**
TNCH SKS **SKSac** **11 06 29.7 -0.5**
TNCH pmax pmax
comp=Z,170nm,0.4s
E23K **Chandalar** **92.40 11** P **P** **10 56 51.5 -1.4**
baz=208,SNR=11
E23K S **S** **11 07 05.7 +0.4**
baz=208
J30M **Hart River** **92.45 17** P **P** **10 56 53.4 +0.2**
baz=219
J30M S **S** **11 07 07.3 +1.4**
baz=219
H27K **Steamboat Moun** **92.47 14** IAmb IAmb 10 59 17.3
comp=Z,122nm,1.4s
H27K **Steamboat Moun** **92.47 14** P **P** **10 56 53.7 +0.5**
baz=215,SNR=9.9
H27K S **S** **11 07 07.1 +1.3**
baz=215
JCT **Junction City** **92.49 58** IAmb IAmb 10 56 57.4
comp=Z,97nm,1.1s
JCT **Junction City** **92.49 58** P **P** **10 56 54.9 +0.8**
G26K **Porcupine Rive** **92.57 13** P **P** **10 56 52.4 -1.1**
baz=213,SNR=27
G26K S **S** **11 07 07.8 +1.3**
baz=213
C21K **Knifeblade Rid** **92.59 9** P **P** **10 56 52.0 -1.6**
baz=203
C21K S **S** **11 07 06.0 -0.8**
baz=203
LZH **Lanzhou** **92.61 308** *e*P **P** **10 56 55.5 +0.8**
LZH pP pP 10 59 05.4 +1.9
LZH PP **PP** **11 00 50.5 +3.0**
LZH SKS **SKSac** **11 06 29.6 -1.8**
LZH S **ScS** **11 07 14.3 +4.7**
LZH pmax pmax
comp=Z,280nm,1.3s
LZH pmax pmax
comp=Z,2μm,5.2s
E24K **Your Creek** **92.62 11** P **P** **10 56 51.8 -2.0**
baz=209
E24K S **S** **11 07 07.8 +0.7**
baz=209
D22K **Ayikyak River** **92.64 9** P **P** **10 56 53.2 -0.7**
baz=205,SNR=13
D22K S **S** **11 07 07.6 +0.4**
baz=205
LZDM **Lanzhou Array** **92.66 308** P **P** **10 56 55.7 +0.6**
comp=Z,51nm,0.7s,baz=123,slow=5.5,SNR=35
LZDM pP **pP** **10 59 05.2 +1.2**
comp=Z,29nm,1.0s,baz=104,slow=6.3,SNR=2.4
LZDM PP **PP** **11 00 47.9 -0.3**
comp=Z,24nm,0.9s,baz=154,slow=8.2,SNR=4.0
LZDM PKKP **PKKPbc** **11 14 05.0 +0.7**
comp=Z,4.7nm,0.4s,baz=210,slow=1.2,SNR=7.9
comp=Z,51nm,0.7s
DGPR **DIGLIPUR** **92.69 283** *e*P **P** **10 56 58.1 +2.8**
DGPR IAmb IAmb 10 57 02.9
comp=Z,64nm,1.0s
SN07 **Snyder 07** **92.70 55** IAmb IAmb 10 59 08.6
comp=Z,194nm,1.4s
MT03 **Universidad Ad** **92.71 128** IAmb IAmb 10 56 59.5
comp=Z,145nm,1.1s
MT16 **CCHEN** **92.73 128** IAmb IAmb 10 56 59.6
comp=Z,161nm,0.8s
F25K **Christian Rive** **92.73 12** P **P** **10 56 54.3 -0.1**
baz=211,SNR=11
F25K S **S** **11 07 10.0 +1.9**
baz=211
PEL **Peldehue** **92.75 127** P **P** **10 56 56.5 +1.1**
PEL pmax pmax
comp=Z,321nm,1.0s
BMAR **Burnt Mountain** **92.81 13** P **P** **10 56 54.8 +0.1**
A19K **Wainwright** **92.83 6** S **S** **11 07 08.8 +0.1**
baz=197
AMTX **Amarillo** **92.85 54** IAmb IAmb 10 59 12.2
comp=Z,245nm,1.6s
G27K **Doyon Strip** **92.92 14** P **P** **10 56 55.2 0.0**
baz=215
G27K S **S** **11 07 11.1 +1.4**
baz=215
DKNS **Dickens** **92.92 55** IAmb IAmb 10 59 10.1
comp=Z,250nm,1.7s
TOLK **Toolik Lake Re** **92.93 11** P **P** **10 56 55.4 +0.1**
baz=208,SNR=14
TOLK S **S** **11 07 09.8 0.0**
baz=208
I30M **Mount Dempster** **92.94 17** IAmb IAmb 10 59 17.1
comp=Z,135nm,1.1s
I30M **Mount Dempster** **92.94 17** P **P** **10 56 55.0 -0.5**
baz=219
I30M S **S** **11 07 07.6 -2.6**
baz=219
YAK **Yakutsk** **92.97 339** P **P** **10 56 55.1 -0.3**
YAK **Yakutsk** **92.97 339** P **P** **10 56 55.3 -0.1**
comp=Z,224nm,0.7s,baz=321,slow=0.9,SNR=35
YAK pP **pP** **10 59 03.7 -0.7**
comp=Z,153nm,0.9s,baz=342,slow=1.3,SNR=12
YAK S **SKSac** **11 06 29.4 -2.4**
comp=Z,12nm,0.5s,baz=344,slow=23,SNR=10.0
comp=Z,224nm,0.7s
YAK **Yakutsk** **92.97 339** *e*P **P** **10 56 53.8 -1.6**
YAK *e**PP **pP** **10 59 03.7 -0.7**
YAK *e* 11 00 46.3
YAK *e*S **SKSac** **11 06 30.1 -1.7**
YAK *e* 11 07 08.0
YAK pmax pmax
comp=Z,487nm,1.6s
YAK pmax pmax
comp=N,56nm,1.5s
YAK pmax pmax
comp=E,79nm,2.1s
YAK pmax pmax
comp=Z,1μm,5.6s
YAK pmax pmax
comp=N,506nm,3.0s
YAK pmax pmax
comp=E,550nm,4.5s
YAK smax smax
comp=N,1μm,2.5s
YAK smax smax
comp=E,748nm,2.9s
VA03 **San Esteban** **93.03 127** IAmb IAmb 10 57 13.1
comp=Z,109nm,0.8s
D23K **Nanushuk River** **93.03 10** IAmb IAmb 10 59 21.6
comp=Z,110nm,1.4s
D23K **Nanushuk River** **93.03 10** P **P** **10 56 55.9 +0.3**
baz=207
D23K S **S** **11 07 10.8 +0.2**
baz=207
B21K **Ikpikpuk River** **93.05 8** P **P** **10 56 53.7 -1.9**
baz=203,SNR=6.9
B21K S **S** **11 07 09.2 -1.4**
baz=203
B20K **Meade River** **93.08 7** P **P** **10 56 54.2 -1.6**
baz=201
B20K S **S** **11 07 09.9 -1.0**
baz=201
MT08 **Bocatoma Ro** **93.09 128** IAmb IAmb 10 57 02.2
comp=Z,93nm,0.8s
F26K **Sheenjek River** **93.12 13** P **P** **10 56 55.1 -1.0**
baz=212,SNR=11
F26K S **S** **11 07 13.8 +2.3**
baz=212
E25K **Arctic Village** **93.20 12** P **P** **10 56 54.4 -2.0**
baz=211,SNR=13
E25K S **S** **11 07 13.5 +1.4**
baz=211
H29M **Whitestone** **93.22 15** P **P** **10 56 55.6 -1.0**
baz=218,SNR=15
H29M S **S** **11 07 12.8 +0.5**
baz=218
KOTAN **Kotaneelee Air** **93.32 24** P **P** **10 56 55.2 -2.0**
baz=230
KOTAN S **S** **11 07 14.9 +1.5**
baz=230
BRDY **Brady** **93.44 58** IAmb IAmb 10 59 14.5
comp=Z,123nm,1.3s
D24K **Happy Valley** **93.51 11** P **P** **10 56 56.2 -1.5**
baz=208
D24K S **S** **11 07 14.4 -0.3**
baz=208
EPYK **Eagle Plains** **93.75 16** IAmb IAmb 10 59 20.6
comp=Z,186nm,1.3s
EPYK **Eagle Plains** **93.75 16** P **P** **10 56 58.0 -1.0**
baz=219,SNR=12
EPYK S **S** **11 07 16.3 -0.6**
baz=219
C23K **Itkillik River** **93.83 10** IAmb IAmb 10 59 27.1
comp=Z,98nm,1.4s
C23K **Itkillik River** **93.83 10** P **P** **10 56 58.9 -0.3**
baz=207
C23K S **S** **11 07 15.5 -1.8**
baz=207
CO03 **El Pedregal** **93.83 125** IAmb IAmb 10 57 04.6
comp=Z,160nm,1.1s
G29M **Pine Creek** **93.85 15** P **P** **10 56 59.3 -0.1**
baz=218,SNR=7.5
G29M S **S** **11 07 19.0 +1.3**
baz=218
B22K **Teshekpuk Lake** **93.87 9** IAmb IAmb 10 57 02.7
comp=Z,112nm,1.4s
B22K **Teshekpuk Lake** **93.87 9** P **P** **10 56 57.9 -1.5**
baz=204
B22K S **S** **11 07 17.7 0.0**
baz=204
KSCO **Kaye Shedlock'** **93.90 49** IAmb IAmb 10 57 04.8
comp=Z,134nm,1.0s
CIT **Chita** **93.92 325** *e*P **P** **10 57 01.2 +1.1**
CIT *e* 10 59 10.2
CIT pmax pmax
comp=Z,276nm,2.0s
H31M **Peel River** **93.94 17** P **P** **10 56 58.2 -1.7**
baz=221
H31M S **S** **11 07 17.4 -1.1**
baz=221
F28M **Old Crow** **93.98 14** IAmb IAmb 10 59 22.1
comp=Z,118nm,1.6s
F28M **Old Crow** **93.98 14** P **P** **10 56 58.8 -1.2**
baz=216
F28M S **S** **11 07 18.7 -0.1**
baz=216
SMWD **Samnorwood** **94.02 54** IAmb IAmb 10 59 17.5
comp=Z,92nm,1.4s
C24K **Franklin Bluff** **94.03 10** P **P** **10 56 58.8 -1.3**
baz=208
C24K S **S** **11 07 19.3 +0.2**
baz=208
GO04 **Tololo Observa** **94.06 125** IAmb IAmb 10 57 05.6
comp=Z,146nm,1.1s
E27K **Coleen River** **94.07 13** P **P** **10 56 59.7 -0.7**
baz=215,SNR=11
E27K S **S** **11 07 21.1 +1.5**
baz=215
D25K **Kavik River** **94.09 11** P **P** **10 56 58.6 -1.9**
baz=210,SNR=5.7
D25K S **S** **11 07 18.4 -1.4**
baz=210
A22K **Sinclair Lake** **94.28 8** P **P** **10 57 00.1 -1.1**
baz=203
A22K S **S** **11 07 20.4 -0.8**
baz=203
G30M **tAoh Zraii Nji** **94.35 16** P **P** **10 57 00.4 -1.3**
baz=220
G30M S **S** **11 07 21.2 -0.8**
baz=220
435B **Jarrell** **94.36 59** IAmb IAmb 10 59 16.7
comp=Z,114nm,1.1s
A21K **Barrow** **94.38 7** P **P** **10 57 00.6 -1.1**
baz=201
A21K S **S** **11 07 20.8 -1.2**
baz=201
MLDN **Muldoon** **94.39 60** IAmb IAmb 10 57 06.9
comp=Z,102nm,1.1s
LCO **Las Campanas** **94.68 124** P **P** **10 57 05.1 +0.6**
LCO IAmb IAmb 10 57 09.1
comp=Z,88nm,0.9s
LCO **Las Campanas** **94.68 124** P **P** **10 57 05.1 +0.6**
LCO pmax pmax
comp=Z,88nm,1.0s
CO01 **Juntas del Tor** **94.69 125** IAmb IAmb 10 57 09.2
comp=Z,230nm,1.9s
WTFS **Witchita Falls** **94.83 56** IAmb IAmb 10 59 18.8
comp=Z,172nm,1.4s
C27K **Jago River** **94.84 12** P **P** **10 57 02.6 -1.2**
baz=213
C27K S **S** **11 07 26.6 +0.4**
baz=213
E28M **Babbage River** **94.85 14** P **P** **10 57 03.8 -0.2**
baz=217
E28M S **S** **11 07 26.3 0.0**
baz=217
C26K **Camden Bay** **94.86 11** P **P** **10 57 03.2 -0.7**
baz=212,SNR=10.0
C26K S **S** **11 07 26.1 -0.1**
baz=212
WHTX **Lake Whitney,** **94.93 58** IAmb IAmb 10 59 19.1
comp=Z,159nm,1.3s
F30M **Barrier River** **94.94 15** IAmb IAmb 10 59 28.3
comp=Z,67nm,1.1s
F30M **Barrier River** **94.94 15** P **P** **10 57 03.3 -1.0**
baz=220
F30M S **S** **11 07 26.2 -0.9**
baz=220
ZON **Zonda** **95.00 127** IAmb IAmb 10 57 10.2
comp=Z,70nm,0.9s
ZON **Zonda** **95.00 127** P **P** **10 57 07.6 +1.9**
ZON pmax pmax
comp=Z,68nm,0.7s
ELIS **Ellis County** **95.02 53** IAmb IAmb 10 59 22.6
comp=Z,103nm,1.2s
E29M **Blow River** **95.05 14** P **P** **10 57 02.5 -2.3**
baz=218
E29M S **S** **11 07 28.6 +0.7**
baz=218
D27M **Malcolm River** **95.07 13** IAmb IAmb 10 59 25.1
comp=Z,180nm,1.6s
D27M **Malcolm River** **95.07 13** P **P** **10 57 04.7 -0.2**
baz=216,SNR=18
D27M S **S** **11 07 29.3 +1.1**
baz=216
FW13 **Cleburne** **95.09 57** IAmb IAmb 10 59 19.8
comp=Z,146nm,1.4s
OGNE **Ogallala** **95.12 48** IAmb IAmb 10 59 25.4
comp=Z,187nm,1.4s
RSSD **Black Hills** **95.13 44** P **P** **10 57 04.8 -1.1**
RSSD **Black Hills** **95.13 44** P **P** **10 57 04.9 -1.1**
RSSD pmax pmax
comp=Z,361nm,1.3s
FW06 **Azle** **95.23 57** IAmb IAmb 10 59 20.6
comp=Z,136nm,1.3s
CFA **Coronel Fontan** **95.30 127** pP **pP** **10 59 17.6 +1.1**
comp=Z,13nm,1.2s,baz=230,slow=2.3,SNR=3.8
CFA PP **PP** **11 01 06.5 -1.0**
comp=Z,6.4nm,0.9s,baz=254,slow=9.0,SNR=6.6
CFA S **SKSac** **11 06 45.0 -1.0**
comp=Z,1.8nm,0.7s,baz=229,slow=20,SNR=14
F31M **Tsiigehtchic** **95.33 16** P **P** **10 57 04.4 -1.7**
baz=222,SNR=16
F31M S **S** **11 07 29.6 -0.7**
baz=222
MTO3 **Montecristo** **95.33 77** IAmb IAmb 10 59 21.6
comp=Z,184nm,1.5s
LKP **Lekhapani** **95.39 297** IAmb IAmb 10 57 05.3
comp=Z,37nm,0.3s
LKP *e*P **P** **10 57 07.4 +0.1**
HKT **Hockley** **95.44 60** P **P** **10 57 09.2 +1.8**
HKT pmax pmax
comp=Z,65nm,1.8s
WRGLY **Wrigley** **95.53 22** S **S** **11 07 33.9 +1.7**
baz=231
Z35A **Perchaven, San** **95.60 56** IAmb IAmb 10 59 22.1
comp=Z,144nm,1.2s
ULN **Ulaanbaatar** **95.60 320** P **P** **10 57 07.1 -0.9**
ULN IAmb IAmb 10 59 25.7
comp=Z,136nm,1.4s
ULN **Ulaanbaatar** **95.60 320** ‖ *i*P **P** **10 57 08.3 +0.3**
ULN **Ulaanbaatar** **95.60 320** ‖ *i*P **P** **10 57 07.7 -0.3**
ULN pmax pmax
comp=Z,82nm,1.3s
D28M **Stokes Point** **95.61 13** P **P** **10 57 07.3 +0.1**
baz=218
D28M S **S** **11 07 33.1 +0.5**
baz=218
OK038 **West end E0370** **95.68 53** IAmb IAmb 10 59 37.2
comp=Z,160nm,1.7s
GO03 **Copiapo** **95.71 123** IAmb IAmb 10 59 22.6
comp=Z,233nm,2.0s
AC06 **Mina Casimiro** **95.73 122** IAmb IAmb 10 59 32.1
comp=Z,130nm,1.4s
PETF **Flores** **95.78 74** IAmb IAmb 10 59 25.4
comp=Z,134nm,1.8s
SONM **Songino Array** **95.98 319** P **P** **10 57 09.5 -0.2**
SONM IAmb IAmb 10 59 26.5
comp=Z,252nm,1.9s
SONM **Songino Array** **95.98 319** P **P** **10 57 09.3 -0.4**
comp=Z,1.1nm,0.8s,baz=138,slow=2.7,SNR=40
SONM pP **pP** **10 59 18.3 -0.6**
comp=Z,14nm,1.1s,baz=135,slow=3.4,SNR=5.4
SONM PP **PP** **11 01 08.5 -4.6**
comp=Z,27nm,1.1s,baz=124,slow=6.0,SNR=6.3
SONM S **SKSac** **11 06 45.3 -3.3**
comp=Z,6.9nm,1.0s,baz=182,slow=4.9,SNR=6.6
SONM PKKP **PKKPbc** **11 13 55.8 0.0**
comp=Z,8.4nm,0.9s,baz=268,slow=2.1,SNR=11
comp=Z,11nm,0.8s
SONM **Songino Array** **95.98 319** P **P** **10 57 09.5 -0.2**
SONM pmax pmax
comp=Z,252nm,1.9s
INK **Inuvik** **96.03 16** IAmb IAmb 10 59 32.8
comp=Z,80nm,1.1s
INK **Inuvik** **96.03 16** PKKP 11 13 54.1
comp=Z,2.9nm,0.7s,baz=40,slow=7.0,SNR=7.2
INK **Inuvik** **96.03 16** P **P** **10 57 10.7 +1.5**

INK pmax pmax
comp=Z,26nm,1.6s
INK Inuvik 96.03 16 P **P** **10 57 08.8 -0.4**
baz=222,SNR=10
INK S **S** **11 07 35.5 -0.7**
baz=222
IMP Imphal 96.06 294 *e*P **P** **10 57 10.8 +0.3**
IMP IAmb IAmb 10 57 12.9
comp=Z,67nm,0.5s
DIBR DIBRUGARH 96.21 297 *e*P P 10 56 53.0 -18
FNO Franklin 96.22 55 IAmb IAmb 10 59 29.0
comp=Z,96nm,1.0s
KOHI KOHIMA 96.25 295 *e*P **P** **10 57 11.2 -0.2**
KOHI IAmb IAmb 10 57 24.3
comp=Z,27nm,0.6s
CROK Carrier 96.26 53 IAmb IAmb 10 59 40.3
comp=Z,100nm,1.4s
TRQA Tornquist 96.29 135 P **P** **10 57 11.4 +0.1**
TRQA IAmb IAmb 10 59 28.9
comp=Z,98nm,1.5s
TRQA Tornquist 96.29 135 P **P** **10 57 11.4 +0.1**
TRQA pmax pmax
comp=Z,98nm,1.5s
TRQA Tornquist 96.29 135 P **P** **10 57 13.3 +2.0**
TRQA S **S** **11 07 38.8 -1.3**
TRQA Tornquist 96.29 135 *e*P **P** **10 57 12.4 +1.1**
TRQA *e*pP **pwP** **10 59 23.0 -0.6**
KAN14 Manchester OK 96.44 53 IAmb IAmb 10 59 29.7
comp=Z,131nm,1.8s
JORH JORHAT 96.50 296 *e*P **P** **10 57 13.0 +0.7**
JORH IAmb IAmb 10 57 17.2
comp=Z,53nm,1.3s
KAN01 Argonia South 96.67 53 IAmb IAmb 10 59 43.3
comp=Z,124nm,1.3s
BOD Bodaibo 96.69 330 *e*P **P** **10 57 11.6 -0.8**
BOD pmax pmax
comp=Z,30nm,1.9s
GTA Gaotai 96.87 310 *e*P **P** **10 57 13.8 0.0**
GTA pP pP 10 59 24.9 +1.8
GTA sP sP 11 00 22.4 +0.2
GTA PP **PP** **11 01 21.9 +1.9**
GTA SKS **SKSac** **11 06 52.1 -1.5**
GTA S **ScS** **11 07 50.4 +5.4**
GTA sS sS 11 11 40.9 +2.2
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,1µm,12.0s
BLOK Blackwell 96.93 53 IAmb IAmb 10 59 43.6
comp=Z,95nm,1.3s
AC02 Maricunga 96.94 122 IAmb IAmb 10 59 29.3
comp=Z,111nm,1.6s
OK052 Battle Ridge R 96.95 54 IAmb IAmb 11 00 02.5
comp=Z,111nm,1.4s
PB14 IPOC Station P 96.97 120 PP **PP** **11 01 19.0 -1.6**
PB14 IPOC Station P 96.97 120 IAmb IAmb 10 59 28.8
comp=Z,138nm,1.7s
OK048 Pawnee Station 97.00 54 IAmb IAmb 11 01 20.1
comp=Z,132nm,1.6s
SILR SILCHAR 97.02 294 *e*P **P** **10 57 12.2 -2.5**
ITAN ITANAGAR 97.08 296 *e*P **P** **10 57 16.4 +1.5**
ITAN IAmb IAmb 10 57 41.0
comp=Z,56nm,0.7s
ZIRO ZIRO 97.11 297 *e*P **P** **10 57 16.0 +0.7**
ZIRO IAmb IAmb 10 57 26.1
comp=Z,63nm,1.0s
DEOK Depew 97.12 54 IAmb IAmb 10 59 35.8
comp=Z,80nm,1.3s
GO02 Mina Guanaco 97.37 121 IAmb IAmb 10 59 30.6
comp=Z,139nm,1.8s
TEZP TEZPUR 97.67 295 *e*P Pdif 10 57 17.3 -0.2
TEZP IAmb IAmb 10 57 22.0
comp=Z,51nm,0.9s
JTS Las Juntas de 97.89 82 P **P** **10 57 20.7 +1.9**
JTS pmax pmax
comp=Z,27nm,1.7s
SHL Shillong 98.07 294 P **P** **10 57 20.4 +0.8**
SNR=7.9
SHL Shillong 98.07 294 *e*P **P** **10 57 20.2 +0.6**
SHL IAmb IAmb 10 57 22.2
comp=Z,34nm,0.9s
YKA Yellowknife Ar 98.39 25 P **P** **10 57 20.8 +0.9**
comp=Z,3.0nm,0.9s,baz=253,slow=4.9,SNR=5.9
YKA pP **pP** **10 59 30.9 +0.5**
comp=Z,10nm,1.1s,baz=251,slow=4.8,SNR=4.9
YKA PKiKP **PKiKP** **11 01 47.6 -0.3**
comp=Z,0.9nm,0.6s,baz=242,slow=2.1,SNR=1.7
YKA PKKP **PKKPbc** **11 13 48.0 -1.6**
comp=Z,0.9nm,0.5s,baz=162,slow=4.4,SNR=8.8
YKA SKKPbc SKKPbc 11 16 34.7 -1.2
comp=Z,4.5nm,1.1s,baz=48,slow=4.2,SNR=4.2
comp=Z,3.0nm,0.9s
GUWA GUWAHATI 98.45 295 *e*P Pdif 10 57 20.0 -1.0
GUWA IAmb IAmb 10 57 28.3
comp=Z,15nm,0.8s
HDC Heredia 98.56 83 *e*P **P** **10 57 23.9 +1.9**
HDC *e*pP **pwP** **10 59 33.5 -1.0**
TAWA Tawang 98.78 296 *e*P **P** **10 57 24.6 +1.6**
TAWA IAmb IAmb 10 57 35.2
comp=Z,38nm,0.6s
MIAR Mount Ida 98.89 56 P P 10 57 27.7 +4.9
MIAR pmax pmax
comp=Z,11nm,1.8s
ZAK Zakamensk 98.91 321 *e*P Pdif 10 57 21.2 -1.4
ZAK pmax pmax
comp=Z,43nm,1.6s
TLY Talaya 99.22 322 P **Pdif** **10 57 24.0 +0.1**
TLY Talaya 99.22 322 *ce*P **Pdif** **10 57 25.8 +1.9**
TLY pmax pmax
comp=Z,44nm,2.5s
C36M Paulatuk 99.23 17 Pdiff **Pdif** **10 57 22.9 -0.5**
baz=231
GOMU GeErMu 99.39 305 P **Pdif** **10 57 26.6 +1.2**
GOMU PP **PP** **11 01 40.4 +1.2**
GOMU S **S** **11 08 08.9 +1.8**
GOMU pmax pmax
comp=Z,35nm,1.4s
TIXI Tiksi 99.82 345 ⇓ *i*P **Pdif** **10 57 25.4 -0.6**
TIXI pmax pmax
comp=Z,23nm,1.2s
PB08 IPOC Station P 100.08 116 PP **PP** **11 01 41.8 -2.3**
LSA Lhasa 100.09 298 P **Pdif** **10 57 23.6 -5.2**
LSA Lhasa 100.09 298 Pdiff **Pdif** **10 57 28.3 -0.5**
OTAV Otavalo 100.27 94 P **Pdif** **10 57 31.5 +1.5**
OTAV Otavalo 100.27 94 *e*P **Pdif** **10 57 32.2 +2.2**
OTAV *e*pP pP 10 59 40.8 +0.8
A36M Sachs Harbour 100.63 15 Pdiff **Pdif** **10 57 28.8 -0.7**
baz=230
MOY Mondy 100.74 321 *e*P **Pdif** **10 57 30.6 -0.1**
MOY *e* 11 01 49.9
MOY pmax pmax
comp=Z,43nm,3.1s
PALK Pallekele 101.81 273 P **Pdif** **10 57 37.3 +1.0**
MALK Mahakanadarawa 102.35 274 PP **PKiKP** **11 01 59.1 +2.6**
ULM Lac du Bonnet 102.60 41 PKiKP **PKiKP** **11 01 56.4 +0.4**
comp=Z,8.7nm,0.6s,baz=239,slow=5.3,SNR=9.2
LPAZ La Paz 102.72 113 P **Pdif** **10 57 43.0 +2.0**
comp=Z,9.0nm,0.9s,baz=258,slow=2.1,SNR=20
LPAZ PKiKP **PKiKP** **11 01 59.7 +1.7**
comp=Z,9.9nm,1.1s,baz=222,slow=8.0,SNR=7.2
LPAZ PKKPbc **PKKPbc** **11 13 36.2 -0.8**
comp=Z,8.4nm,0.7s,baz=339,slow=1.7,SNR=10
LPAZ La Paz 102.72 113 P **Pdif** **10 57 45.3 +4.3**
LPAZ La Paz 102.72 113 *e*P **Pdif** **10 57 41.4 +0.4**
LPAZ *e*pP **pPdif** **10 59 52.8 +2.0**
POPC Popayan, Colom 102.77 92 P **PP** **11 02 02.2 -2.2**
comp=Z,2µmcomp=Z,42nm,1.9s
VIS Vishakhapatnam 102.95 284 *e*P **Pdif** **10 57 41.0 -0.1**
CBOC Ciudad Bolivar 104.60 90 P **PP** **11 02 16.2 -1.4**
comp=Z,5µmcomp=Z,216nm,1.8s
ORTC Ortega, Tolima 104.60 92 P **PP** **11 02 20.2 +2.7**
comp=Z,4µmcomp=Z,110nm,1.9s
DBBC Dabeiba 104.82 88 P **PP** **11 02 21.6 +2.4**
comp=Z,21µmcomp=Z,46nm,1.8s
PRAC Prado 104.86 92 P **PP** **11 02 22.6 +3.2**
comp=Z,4µmcomp=Z,97nm,2.3s
HELC Santa Helena 105.16 89 P **PP** **11 02 23.9 +1.9**
comp=Z,3µmcomp=Z,89nm,2.1s
CPUP Villa Florida 106.18 128 Pdiff **Pdif** **10 57 57.0 +1.5**
comp=Z,0.5nm,0.6s,baz=147,slow=5.6,SNR=5.8
CPUP PKiKP **PKiKP** **11 02 03.6 +0.2**
comp=Z,1.0nm,0.8s,baz=225,slow=1.0,SNR=4.9
SPBC San Pablo de B 106.32 90 P **PP** **11 02 30.0 -0.1**
comp=Z,3µmcomp=Z,61nm,2.3s
WMQ Urumqi 106.88 311 Pdif **Pdif** **10 57 59.4 +1.2**
WMQ PP **PP** **11 02 34.3 +0.8**
WMQ S **Sdif** **11 09 14.6 +6.5**
WMQ AMB AMB
comp=Z,2µm,6.1s
HYBB Hyderabad (bro 107.17 282 *e*PKiKP **PKiKP** **11 02 05.3 -0.1**
HYBB *e*PP **PP** **11 02 35.0 -1.1**
HYBB *ep*PKiKP **pPKiKP** **11 04 20.5 -2.5**
HYBB *es*PKiKP **sPKiKP** **11 05 15.4 -4.7**
HYBB *e*SKSac **SKSac** **11 07 43.5 +1.1**
HYBB *e*SKKSac **SKKSac** **11 08 38.0 +0.8**
RUSC La Rusia 107.33 91 P **PP** **11 02 38.9 +1.2**
comp=Z,5µmcomp=Z,195nm,1.8s
BARC Barichara 107.48 90 P **PP** **11 02 40.7 +2.1**
comp=Z,1µmcomp=Z,97nm,1.3s
OCAC Ocana 107.93 88 P **PP** **11 02 42.0 +0.3**
LABB Lıbrea 108.01 108 P **Pdif** **10 58 07.3 +3.5**
MURT Porto Murtinho 108.59 123 *e*P **Pdif** **10 58 07.9 +1.6**
SIV San Ignacio 108.80 117 PKiKP **PKiKP** **11 02 08.8 +0.3**
comp=Z,1.5nm,0.4s,baz=250,slow=5.3,SNR=6.7
CNLB Canela 108.93 134 *e*P **Pdif** **10 58 09.8 +2.1**
ITAB Concordia 109.36 131 *e*P **Pdif** **10 58 12.6 +3.0**
ZSN Zaisan 109.62 314 *e*PKiKP **PKiKP** **11 02 09.1 0.0**
BHPL Bhopal 109.88 288 *e*P **Pdif** **10 58 11.5 -0.5**
BDQN Bodoquena, MS 109.93 123 *e*P **Pdif** **10 58 14.5 +2.3**
BDQN *ep*P **pPdif** **11 00 22.0 -0.1**
SDV Santo Domingo 110.65 89 *e*P **Pdif** **10 58 16.9 +1.1**
PTLB Pontes e Lacer 110.68 117 *e*P **Pdif** **10 58 18.5 +2.9**
ZALV Zalesovo Beam 110.79 321 Pdiff **Pdif** **10 58 14.6 -0.6**
comp=Z,2.8nm,0.8s,baz=107,slow=5.1,SNR=6.2
ZALV PKiKP **PKiKP** **11 02 10.4 -0.7**
comp=Z,24nm,0.6s,baz=158,slow=0.8,SNR=42
ZALV PP **PP** **11 02 58.5 -2.5**
comp=Z,7.9nm,0.9s,baz=107,slow=5.0,SNR=5.0
ZALV PKKPbc **PKKPbc** **11 13 11.9 -0.4**
comp=Z,2.2nm,0.6s,baz=268,slow=3.7,SNR=4.0
ZALV PKKPab **PKKPab** **11 13 24.3 +1.7**
comp=Z,2.5nm,0.6s,baz=252,slow=3.0,SNR=4.9
GOA Goa 110.89 279 *e*P **Pdif** **10 58 15.8 -0.7**
GOA IAmb IAmb 10 58 20.5
comp=Z,122nm,0.2s
PTGB Pitanga 110.96 129 PKP **PKiKP** **11 02 13.1 +0.6**
PTGB PKP **PKiKP** **11 02 13.2 +0.7**
PTGB Pitanga 110.96 129 *e*P **Pdif** **10 58 18.9 +2.0**
MK31 Makanchi Array 111.23 313 *i* PKiKP **PKiKP** **11 02 10.7 -1.5**
MKAR Makanchi Array 111.23 313 Pdiff **Pdif** **10 58 17.6 +0.3**
comp=Z,6.1nm,0.8s,baz=92,slow=6.3,SNR=19
MKAR PKiKP **PKiKP** **11 02 11.3 -0.9**
comp=Z,16nm,0.6s,baz=179,slow=0.9,SNR=38
MKAR PP **PP** **11 03 00.2 -4.1**
comp=Z,13nm,0.9s,baz=108,slow=7.8,SNR=6.9
MKAR SKP **SKPdf** **11 04 51.2 -0.2**
comp=Z,8.9nm,0.8s,baz=118,slow=5.5,SNR=1.6
MKAR PKKPbc **PKKPbc** **11 13 11.2 +0.4**
comp=Z,16nm,0.8s,baz=275,slow=3.9,SNR=22
MKAR PKKPab **PKKPab** **11 13 22.5 +1.5**
comp=Z,14nm,1.0s,baz=274,slow=3.4,SNR=5.9
MKAR PKPPKP **P'P'df** **11 21 38.8 +1.0**
comp=Z,1.6nm,1.0s,baz=274,slow=3.2,SNR=3.8
NRIK Noril'sk 111.41 338 Pdiff **Pdif** **10 58 17.8 +0.2**
comp=Z,2.0nm,0.5s,baz=114,slow=4.4,SNR=7.2
NRIK PKiKP **PKiKP** **11 02 11.5 -0.3**
comp=Z,12nm,0.7s,baz=99,slow=3.2,SNR=6.8
MAKZ Makanchi 111.44 313 PKiKP **PKiKP** **11 02 11.1 -1.5**
TEFE Tefe 111.47 103 *e*P **Pdif** **10 58 21.2 +2.0**
SHLS Shalkode 112.60 309 *e*PKiKP **PKiKP** **11 02 14.2 -0.9**
SHLS Shalkode 112.60 309 *i* PKiKP **PKiKP** **11 02 14.2 -0.9**
PDGK Podgornoye 112.61 309 PKiKP **PKiKP** **11 02 13.5 -1.6**
-UZB Uzynbulak 112.92 309 *e*PKiKP **PKiKP** **11 02 15.3 -0.4**
UZB *e*PP **PP** **11 03 14.7 -1.8**
UZB Uzynbulak 112.92 309 *i* PKiKP **PKiKP** **11 02 15.3 -0.4**
UZB *e* 11 03 14.7
PP1B Ponte de Pedra 112.98 121 *e*P **Pdif** **10 58 27.5 +1.6**
SATY Saty 113.35 309 *e*PKiKP **PKiKP** **11 02 16.2 -0.3**
SATY *e*PP **PP** **11 03 17.6 -1.9**
SATY Saty 113.35 309 *i* PKiKP **PKiKP** **11 02 16.2 -0.3**
SATY *e* 11 03 17.5
FRTB Fartura 113.60 130 P **Pdif** **10 58 30.4 +1.9**
FRTB Fartura 113.60 130 *e*P **Pdif** **10 58 29.6 +1.0**
FRTB *ep*P **pPdif** **11 00 38.5 0.0**
TDK Taldyqorghan 113.63 311 *e*PKiKP **PKiKP** **11 02 16.8 0.0**
TDK Taldyqorghan 113.63 311 *i* PKiKP **PKiKP** **11 02 16.8 0.0**
ARXS Arharly 113.93 310 *i* PKiKP **PKiKP** **11 02 17.3 -0.2**
KURK Kurchatov 114.16 317 P PKPdf 11 02 16.7 -0.9
KURK Kurchatov 114.16 317 *d* iPKiKP PKPdf 11 02 16.9 -0.7
KURK pmax pmax
comp=Z,24nm,0.6s
KURBB Kurchatov Arra 114.21 317 Pdiff **Pdif** **10 58 30.1 -0.3**
comp=Z,0.5nm,0.3s,baz=94,slow=3.5,SNR=4.2
KURBB PKiKP PKPdf 11 02 17.1 -0.6
comp=Z,20nm,0.6s,baz=108,slow=1.7,SNR=46
KURBB PP PP 11 03 16.4 -8.5
comp=Z,18nm,0.9s,baz=100,slow=5.8,SNR=8.3
KURBB SKP **SKPdf** **11 04 56.4 -0.6**
comp=Z,13nm,0.7s,baz=96,slow=1.8,SNR=4.8
KURBB PKKPbc **PKKPbc** **11 13 01.0 +0.1**
comp=Z,4.9nm,0.7s,baz=268,slow=4.4,SNR=8.5
KURBB PKKPab **PKKPab** **11 13 10.0 +2.4**
comp=Z,18nm,0.8s,baz=278,slow=5.0,SNR=23
KURBB SKKPbc **SKKPbc** **11 15 48.6 -2.1**
comp=Z,4.9nm,0.8s,baz=274,slow=4.1,SNR=8.5
KURBB Kurchatov Arra 114.21 317 PKiKP PKPdf 11 02 16.2 -1.5
TNSS Tian-Shan 114.41 309 *e*PKP PKPdf 11 02 18.2 -0.7
TNSS *e*PP **PP** **11 03 24.9 -2.2**
TNSS Tian-Shan 114.41 309 *e*PKiKP PKPdf 11 02 18.2 -0.7
TNSS *e* 11 03 24.8
AAA Alma-Ata 114.45 309 *e*PKP PKPdf 11 02 18.3 -0.3
AAA Alma-Ata 114.45 309 *e*PKiKP PKPdf 11 02 18.2 -0.3
KSH Kashi 114.62 305 PKP **PKiKP** **11 02 19.2 +0.1**
KSH PP **PP** **11 03 29.5 +1.1**
KSH AMB AMB
comp=Z,2µm,7.7s
PDRB Porto dos Gac 114.64 115 PKP **PKiKP** **11 02 20.1 +0.4**
ULHL Ulahol 114.81 308 P **PKiKP** **11 02 19.9 +0.4**
SNR=17
TKM2 Tokmak 2 115.37 308 P **PKPdf** **11 02 19.8 -0.7**
SNR=17
VAO Valinhos 115.66 131 **PKiKP** **11 02 22.3 +0.8**
KBK Karagaybulak 115.82 308 P **PKiKP** **11 02 21.6 +0.3**
SNR=7.3
TULEG Thule 115.98 14 *i* P **PKiKP** **11 02 20.5 +0.1**
CHMS Chumysh 116.00 308 P **PKPdf** **11 02 21.4 -0.1**
SNR=8.9
UCH Uchtor 116.09 307 P **PKPdf** **11 02 22.0 -0.3**
SNR=26
SGDS Sogindy 116.14 309 *e*PKP **PKPdf** **11 02 21.5 -0.3**
SGDS *e*PP **PP** **11 03 36.8 -1.8**
AAK Ala-Archa 116.15 308 **PKPdf** **11 02 21.2 -0.7**
AAK Ala-Archa 116.15 308 PKKPbc PKKPbc 11 12 55.5 +1.1
comp=Z,35nm,0.8s,baz=233,slow=4.7,SNR=20
AAK Ala-Archa 116.15 308 P **PKPdf** **11 02 21.4 -0.5**
AAK Ala-Archa 116.15 308 P **PKiKP** **11 02 22.3 +0.3**
SNR=9.2
AAK Ala-Archa 116.15 308 *i* PKPdf **PKPdf** **11 02 21.4 -0.5**
SNR=9.6
AAK Ala-Archa 116.15 308 ⇓ *i* PKiKP **PKPdf** **11 02 21.4 -0.5**
FRNY Flat Rock 116.20 50 PKPdf **PKiKP** **11 02 21.8 0.0**
USP Ospenovka 116.21 309 P **PKPdf** **11 02 21.4 -0.5**
SNR=26
L61B Northampton 116.62 52 **PKiKP** **11 02 23.0 +0.3**
EKS2 Erkin-Say 116.67 308 P **PKiKP** **11 02 23.4 +0.5**
SNR=16
VOI Vohitsoka 117.29 229 **PKPdf** **11 02 24.4 -0.4**
VOI Vohitsoka 117.29 229 P **PKPdf** **11 02 24.5 -0.3**
BOAV Boa Vista 117.63 99 **PKiKP** **11 02 25.7 +0.2**
BOAV Boa Vista 117.63 99 PKP **PKiKP** **11 02 25.8 +0.3**
IPMB Ipameri, GO 117.91 126 PKP **PKiKP** **11 02 26.1 +0.1**
BRZS Berezniki 117.91 316 *e*PKP **PKPdf** **11 02 24.9 -0.1**
BRZS Berezniki 117.91 316 *e*PKiKP **PKPdf** **11 02 24.8 -0.1**
M65A Busby, Falmout 118.04 54 PKiKP **PKPdf** **11 02 24.3 -1.1**
baz=265
NPGB Novo Progresso 118.09 111 PKP **PKiKP** **11 02 26.8 +0.4**
NPGB Novo Progresso 118.09 111 *e*P **PKPdf** **11 02 24.5 -1.8**
DZA Taraz 118.49 308 *e*PKP **PKPdf** **11 02 25.9 -0.4**
DZA Taraz 118.49 308 *e*PKiKP **PKPdf** **11 02 25.8 -0.4**
BSCB Bom Sucesso 118.50 131 *e*P **PKiKP** **11 02 27.3 +0.2**
VAS01 Vassouras-RJ 118.57 133 *e*P **PKiKP** **11 02 27.5 +0.3**
ABPO Ambohimpanom 118.84 232 **PKiKP** **11 02 28.2 +0.3**
ABPO Ambohimpanom 118.84 232 PKiKP **PKiKP** **11 02 28.2 +0.3**
PMNB Patos De Minas 118.88 128 *e*P **PKiKP** **11 02 28.1 +0.1**
SNDB Serra Nova Dou 118.96 118 PKP **PKiKP** **11 02 28.4 +0.3**
SNDB Serra Nova Dou 118.96 118 *e*P **PKPdf** **11 02 27.9 -0.1**
ITTB Itaituba 119.04 108 *e*P **PKiKP** **11 02 28.7 +0.4**
KK31 Karatay Array 119.10 308 *i* PKiKP **PKPdf** **11 02 26.6 -0.8**
KKAR Karatay Array 119.10 308 **PKPdf** **11 02 27.1 -0.3**
KKAR Karatay Array 119.10 308 PKiKP **PKPdf** **11 02 27.1 -0.3**
NEEM North Greenlan 119.27 11 *i* P **PKPdf** **11 02 26.3 -0.8**
BVA0 Borovoye Array 119.33 319 *i* PKiKP **PKPdf** **11 02 26.7 -0.8**
BVAR Borovoye Array 119.33 319 Pdiff **Pdif** **10 58 53.2 0.0**
comp=Z,0.6nm,0.4s,baz=73,slow=5.0,SNR=4.6
BVAR PKP **PKPdf** **11 02 26.6 -0.9**
comp=Z,47nm,0.3s,baz=104,slow=2.3,SNR=157
BVAR PP **PP** **11 03 56.6 -3.3**
comp=Z,35nm,0.9s,baz=93,slow=5.2,SNR=4.4
BVAR pPKP **pPKPdf** **11 04 48.0 +2.9**
comp=Z,20nm,0.9s,baz=90,slow=4.4,SNR=2.3
BVAR SKP **SKPdf** **11 05 07.4 +0.7**
comp=Z,23nm,0.8s,baz=64,slow=1.6,SNR=4.3
BVAR PKKPbc **PKKPbc** **11 12 43.8 +0.5**
comp=Z,7.5nm,0.8s,baz=291,slow=2.9,SNR=11
KBU Kabul Universi 119.33 298 PKP **PKPdf** **11 02 27.4 -1.0**
BORK Borovoye 119.37 319 ⇑ *i* PKiKP **PKPdf** **11 02 26.6 -1.0**
KULLO Kullorsuaq 119.39 15 *i* P **PKPdf** **11 02 26.3 -0.7**
IUG luzhnay 119.39 307 *e*PKP **PKPdf** **11 02 27.7 -0.5**
IUG *e*PP **PP** **11 03 59.1 -1.8**
IUG luzhnay 119.39 307 *e*PKiKP **PKPdf** **11 02 27.6 -0.5**
IUG *e* 11 03 59.0
KBL Kabul 119.41 298 **PKiKP** **11 02 28.8 +0.2**
KBL Kabul 119.41 298 P **PKPdf** **11 02 28.3 -0.2**
SNR=28
KBL Kabul 119.41 298 PKiKP **PKiKP** **11 02 28.8 +0.2**
DUB01 Friburgo-RJ 119.42 133 *e*P **PKiKP** **11 02 29.1 +0.2**
BRLS Borolday 119.59 308 *e*PKP **PKPdf** **11 02 28.1 -0.4**
BRLS Borolday 119.59 308 *e*PKiKP **PKPdf** **11 02 28.0 -0.4**
CHM Chimkent 119.72 307 *e*PKP **PKPdf** **11 02 28.3 -0.3**
CHM Chimkent 119.72 307 *e*PKiKP **PKPdf** **11 02 28.3 -0.3**
NOR Nord 119.88 3 *i* P **PKPdf** **11 02 27.1 -0.7**
CAM01 Campos-RJ 120.08 134 PKP **PKiKP** **11 02 30.4 +0.3**
CAM01 Campos-RJ 120.08 134 *e*P **PKiKP** **11 02 30.2 +0.2**
MSEY Mahe Island 120.12 251 PKiKP **PKiKP** **11 02 30.8 +0.3**
SBV Sambava 120.15 239 P **PKPdf** **11 02 28.6 -1.6**
UPNV Upernavik 120.45 17 *i* P **PKiKP** **11 02 29.3 +0.1**
SCHQ Schefferville 120.64 38 PKP **PKPdf** **11 02 28.8 -1.2**
comp=Z,18nm,0.9s,baz=240,slow=5.6,SNR=8.0
SCHQ PKKPbc **PKKPbc** **11 12 36.9 -1.7**
comp=Z,8.6nm,0.8s,baz=118,slow=0.5,SNR=6.3
CAN3 Cana Brava 120.75 121 PKP **PKPdf** **11 02 31.2 -0.3**
SSV2 Sao Salvador 120.95 121 PKP **PKiKP** **11 02 32.6 +0.7**
DIAM Diamantina, MG 121.05 129 PKP **PKiKP** **11 02 32.5 +0.2**
DIAM Diamantina, MG 121.05 129 *e*P **PKiKP** **11 02 32.6 +0.3**
JQT1 Jequitai-MG 121.23 128 PKP **PKiKP** **11 02 32.5 0.0**
MAL2 Monte Alegre, 121.49 107 PKP **PKiKP** **11 02 33.9 +0.8**
NUUG Nuugaatsiaq 121.82 18 *i* P **PKPdf** **11 02 31.6 -0.1**
MC01 Montes Claros 121.88 128 PKP **PKiKP** **11 02 34.3 +0.5**
LAJE UHE Lajeado 122.49 118 PKP **PKiKP** **11 02 35.3 +0.3**
SJMB Sao Joao De Ma 122.54 132 PKP **PKiKP** **11 02 35.0 0.0**
SJMB Sao Joao De Ma 122.54 132 *e*P **PKiKP** **11 02 35.1 +0.1**
SUR Sutherland 122.60 200 **PKiKP** **11 02 35.8 +0.7**
SUR Sutherland 122.60 200 P **PKPdf** **11 02 34.8 0.0**
SAATT Saattut 122.62 18 *i* P **PKiKP** **11 02 33.7 +0.2**
RIB01 Linhares ES 122.66 133 PKP **PKiKP** **11 02 35.3 +0.1**
RIB01 Linhares ES 122.66 133 *e*P **PKiKP** **11 02 35.1 -0.1**
BSFB Barra de Sao F 122.68 132 *e*P **PKiKP** **11 02 35.5 +0.2**
KBS Kingsbay 122.74 357 *e*PKPdf **PKiKP** **11 02 35.0 +1.3**
KBS Kingsbay 122.74 357 *i* P **PKiKP** **11 02 33.9 +0.3**
BMO2 UHE Belo Monte 122.81 109 PKP **PKiKP** **11 02 36.1 +0.4**
SPA0 Spitsbergen Ar 123.23 356 *e*PKPdf **PKPdf** **11 02 31.5 -2.9**
SPITS Spitsbergen Ar 123.23 356 PKP **PKPdf** **11 02 34.4 0.0**
comp=Z,113nm,0.7s,baz=99,slow=5.2,SNR=92
SPITS pPKP **pPKPdf** **11 04 53.1 +0.5**
comp=Z,39nm,0.9s,baz=114,slow=10.3,SNR=5.0
SPITS PKKPbc **PKKPbc** **11 12 29.2 -0.2**
comp=Z,32nm,0.9s,baz=165,slow=6.9,SNR=10
PRPB Parauapebas 123.28 114 PKP **PKiKP** **11 02 37.1 +0.5**
PRPB Parauapebas 123.28 114 *e*P **PKPdf** **11 02 36.3 0.0**
ILULI Ilulissat 123.56 20 *i* P **PKPdf** **11 02 35.0 -0.2**
SMTB Santa Maria do 123.71 118 PKP **PKiKP** **11 02 37.9 +0.4**
SMTB Santa Maria do 123.71 118 *e*P **PKPdf** **11 02 37.1 -0.1**
SDBA SAO DESIDERIO 123.82 123 PKP **PKiKP** **11 02 37.8 +0.2**
SDBA SAO DESIDERIO 123.82 123 *e*P **PKPdf** **11 02 37.5 +0.1**
HOPEN Hopen 124.05 353 *e*PKPdf **PKPdf** **11 02 35.8 -0.1**
DAG Danmarks Havn 124.31 5 PKiKP **PKPdf** **11 02 34.2 -2.2**
DAG Danmarks Havn 124.31 5 *i* P **PKPdf** **11 02 34.9 -1.6**
BOSA Boshof 124.36 206 PKP **PKiKP** **11 02 39.0 +0.4**
comp=Z,32nm,0.7s,baz=161,slow=1.3,SNR=40
BOSA pPKP **pPKPdf** **11 04 57.6 +1.6**
comp=Z,66nm,1.2s,baz=174,slow=3.9,SNR=2.2
BOSA PKKPbc **PKKPbc** **11 12 25.9 +0.7**
comp=Z,8.0nm,0.9s,baz=14,slow=3.8,SNR=6.8
BOSA Boshof 124.36 206 PKP **PKiKP** **11 02 38.8 +0.3**
SVE Sverdlovsk 124.42 325 *i* PKiKP **PKPdf** **11 02 36.5 -0.7**
SVE pmax pmax
comp=Z,84nm,0.7s
ABR01 Abrolhos, BA 124.75 133 PKP **PKiKP** **11 02 39.6 +0.2**
ABR01 Abrolhos, BA 124.75 133 *e*P **PKPdf** **11 02 38.9 -0.1**
SFJD Kangerlussuaq 124.79 22 **PKiKP** **11 02 38.3 +0.4**
SFJD Kangerlussuaq 124.79 22 PKiKP **PKiKP** **11 02 38.3 +0.4**
SFJD Kangerlussuaq 124.79 22 *i* P **PKPdf** **11 02 37.4 -0.2**
NGCH Negor - Chabah 124.83 286 P **PKiKP** **11 02 39.4 +0.1**
SUMG Summit 124.88 13 PKP **PKPdf** **11 02 38.3 +0.1**
SUMG Summit 124.88 13 PKiKP **PKPdf** **11 02 36.6 -1.5**
SUMG Summit 124.88 13 *i* P **PKiKP** **11 02 38.5 0.0**
GUA01 Guaratinga, BA 124.93 131 PKP **PKiKP** **11 02 39.8 0.0**
GUA01 Guaratinga, BA 124.93 131 *e*P **PKPdf** **11 02 39.4 +0.1**
PAL01 Palmeiras do T 124.94 116 PKP **PKiKP** **11 02 40.3 +0.4**
PAL2 UHE Estreito - 125.08 116 PKP **PKiKP** **11 02 40.7 +0.5**
NUUK Nuuk 125.66 25 *i* P **PKiKP** **11 02 40.2 +0.4**
ARTI Arti 125.74 325 **PKiKP** **11 02 40.0 -0.2**
ARTI Arti 125.74 325 *i* PKiKP **PKPdf** **11 02 38.6 -1.1**
JLN Jalan Bani Buh 125.78 282 P **PKiKP** **11 02 41.1 -0.2**
SNR=26
CMC01 Camacan, BA 125.96 130 PKP **PKiKP** **11 02 41.6 -0.2**
CMC01 Camacan, BA 125.96 130 *e*P **PKPdf** **11 02 41.2 -0.1**
AB31 Akbulak array 126.21 316 *i* PKiKP **PKPdf** **11 02 40.6 -0.2**
WBK Wadi Bani Khal 126.27 283 P **PKiKP** **11 02 42.1 -0.2**
SNR=9.8
DBG Daneborg 126.44 7 *i* P **PKPdf** **11 02 39.7 -0.9**
TMAB Tom-Au,PA,Br 126.67 111 PKP **PKiKP** **11 02 44.0 +0.7**
TMAB Tom-Au,PA,Br 126.67 111 *e*P **PKiKP** **11 02 43.2 -0.2**
WSAR Wadi Sarin 126.70 283 P **PKPdf** **11 02 41.3 -1.3**
SNR=16
MHTO MHTO 126.86 280 P **PKPdf** **11 02 43.0 +0.2**
SNR=32
MAKGR Makgori 127.01 208 *i* P **PKiKP** **11 02 44.2 +0.3**
JMDO Jabal Madar 127.01 282 P **PKPdf** **11 02 42.8 -0.4**
SNR=19
DQM DQM 127.02 279 P **PKPdf** **11 02 43.0 -0.3**
SNR=21
DRLN Deer Lake 127.05 44 **PKiKP** **11 02 42.8 -0.2**
SMDO Samad 127.19 283 P **PKPdf** **11 02 43.3 -0.3**
SNR=27
AKTO Aktyubinsk 127.25 317 PKiKP **PKPdf** **11 02 42.6 -0.2**
LBTB Lobatse 127.36 209 PKiKP **PKPdf** **11 02 41.8 -2.2**
HOQ Hoqain 127.95 283 P **PKiKP** **11 02 45.5 -0.2**
SNR=20
SHAO Shalim 128.34 276 P **PKiKP** **11 02 45.9 +0.1**
SNR=8.4
SHAO Shalim 128.34 276 *i* PKiKP **PKPdf** **11 02 46.0 +0.1**
SNR=8.3
IVI Ivigtut 128.44 28 *i* P **PKPdf** **11 02 44.7 0.0**
SKOMA Sekoma 128.52 207 *i* P **PKiKP** **11 02 47.0 0.0**
MREMI Moremi 128.57 212 *i* P **PKiKP** **11 02 46.9 -0.1**
ARQ Araqi 128.62 283 P **PKPdf** **11 02 46.0 -0.3**
SNR=25
LPHEP Lephephe 128.66 210 *i* P **PKiKP** **11 02 47.5 +0.2**
SOHO SOHO 128.75 284 P **PKPdf** **11 02 46.1 -0.3**
SOHO SOHO 128.75 284 *i* PKPdf **PKPdf** **11 02 46.1 -0.3**
SNR=25
VADS Vadso 128.88 348 *e*PKPdf **PKPdf** **11 02 43.2 -2.1**
DMTO DMTO 128.89 275 P **PKPdf** **11 02 46.7 -0.1**
SNR=11
MDH Madha 129.14 285 P **PKPdf** **11 02 46.9 -0.2**
SNR=12
MDH Madha 129.14 285 *i* PKPdf **PKPdf** **11 02 45.9 -1.3**
SNR=13
UOSS Minazif 129.17 285 P **PKPdf** **11 02 47.5 +0.3**
**UOS

ASHO Ashiyiah 129.26 284 P PKPdf 11 02 47.2 -0.2
SNR=9.8
ASHO Ashiyiah 129.26 284 *i* PKPdf PKPdf 11 02 45.9 -1.6
SNR=9.7
MSFE Esma-Masafi 129.28 285 *i* PKPdf PKPdf 11 02 46.8 -0.6
SNR=16
MASF Masafi 129.28 285 P PKPdf 11 02 47.9 +0.4
SNR=17
SHME Shamm 129.39 286 P PKiKP 11 02 48.4 -0.1
SNR=13
SHME Shamm 129.39 286 *i* PKPdf PKPdf 11 02 47.1 -0.5
SNR=7.8
LVZ Lovozero 129.43 344 PKiKP 11 02 47.1 -0.1
LVZ Lovozero 129.43 344 PKIKP PKiKP 11 02 47.2 -0.1
HAMF Hammerfest 129.44 350 *e*PKPdf PKPdf 11 02 46.6 +0.3
ALNE Al Ain 129.44 284 P PKPdf 11 02 46.9 -0.9
SNR=36
ALNE Al Ain 129.44 284 *i* PKiKP PKPdf 11 02 48.0 +0.2
SNR=9.1
RBK Rabkut 129.53 275 P PKiKP 11 02 48.7 -0.3
SNR=6.7
KIRV Kirov 129.55 329 *d i* PKIKP PKPdf 11 02 47.0 +0.2
KEV Kevo 129.64 348 PKiKP 11 02 47.5 -0.1
KEV Kevo 129.64 348 PKIKP PKiKP 11 02 47.5 -0.1
KEV Kevo 129.64 348 PKP PKiKP 11 02 47.2 -0.4
NRS Narsarsuaq 129.64 27 *i* P PKPdf 11 02 47.2 +0.3
NAZ Nazwa, Dubai 129.67 285 P PKiKP 11 02 49.0 0.0
SNR=25
NAZ Nazwa, Dubai 129.67 285 *i* PKPdf PKPdf 11 02 47.6 -0.5
SNR=14
SCO Scoresbysund 129.67 10 *i* P PKiKP 11 02 47.4 -0.2
FAQ Al Faqa, Dubai 129.69 284 P PKPdf 11 02 48.2 0.0
SNR=13
FAQ Al Faqa, Dubai 129.69 284 *i* PKPdf PKPdf 11 02 47.6 -0.6
SNR=18
UMQ Umm Al-Quwin 129.74 286 P PKiKP 11 02 50.1 +1.0
SNR=8.4
UMQ Umm Al-Quwin 129.74 286 *i* PKPdf PKPdf 11 02 48.3 0.0
SNR=11
UMZA Um Al Zommool 129.75 282 P PKiKP 11 02 49.4 +0.1
BROLN Tlhalogang 129.86 213 *i* P PKiKP 11 02 49.4 -0.3
DOK Doka 129.86 276 P PKiKP 11 02 49.4 -0.2
SNR=5.6
ANGG Ammassalik, Gr 129.88 20 *i* P PKiKP 11 02 48.0 -0.1
ASUD Al Ashush, Dub 129.91 284 P PKiKP 11 02 49.3 -0.2
SNR=6.7
ASUD Al Ashush, Dub 129.91 284 *i* PKPdf PKPdf 11 02 47.7 -0.9
SNR=11
APA Apatity 130.00 344 ⇓ *i* PKIKP PKPdf 11 02 47.4 -0.1
APA *e* 11 05 09.8
WHFO Wadi Hawf 130.03 275 P PKPdf 11 02 49.5 +0.4
SNR=30
KHWEE **KHWEE** 130.07 211 *i* P PKiKP 11 02 50.7 +0.6
ARA0 ARCESS Array S 130.10 349 *e*PKPdf PKPdf 11 02 46.2 -1.4
ARCES ARCESS Array B 130.10 349 PKP PKPdf 11 02 47.7 +0.1
comp=Z,20nm,1.0s,baz=158,slow=1.7,SNR=6.0
ARCES pPKP **pPKPdf** 11 05 05.5 -0.3
comp=Z,24nm,1.0s,baz=349,slow=1.2,SNR=5.5
ARCES PKKP **PKKPdf** 11 12 49.7 -2.4
comp=Z,3.6nm,0.7s,baz=194,slow=3.1,SNR=6.0
AJN Ajban 130.21 284 P PKiKP 11 02 49.7 -0.4
SNR=14
AJN Ajban 130.21 284 *i* PKPdf PKPdf 11 02 48.1 -1.0
SNR=11
ABTO Aybut 130.33 275 P PKiKP 11 02 50.7 +0.1
SNR=6.2
ABTO P **sPdif** 11 02 51.0 -0.3
SNR=29
KGCAE **Kacgae** 130.72 207 *i* P PKiKP 11 02 51.5 +0.1
JETT Jettan, Norway 130.92 351 *e*PKPdf PKPdf 11 02 48.8 -0.4
KTK1 Kautokeino 130.96 349 *e*PKPdf PKPdf 11 02 49.2 -0.1
KTK1 *e*SS SS 11 21 50.0 -9.5
TRO Tromso 131.06 352 *e*PKPdf PKPdf 11 02 49.8 +0.4
TRO *e*SS SS 11 22 01.7 +1.2
NBPS Pedro II - PI 131.25 117 PKP PKPdf 11 02 52.0 +0.4
MZR Muzera 131.33 282 P PKiKP 11 02 52.3 -0.2
SNR=23
MZR Muzera 131.33 282 *i* PKPdf PKPdf 11 02 51.1 -0.3
SNR=20
KOOLE **Kule** 131.40 204 *i* P PKiKP 11 02 53.1 +0.3
NBMA Muriti-CE 131.66 123 PKP PKiKP 11 02 53.4 -0.1
PHDHD **Phuduhudu** 132.00 211 *i* P PKiKP 11 02 54.4 +0.3
NBAN Anadia - AL 132.10 127 PKP PKPdf 11 02 53.4 +0.3
NBAN PKP PKiKP 11 02 53.8 -0.5
NBAN Anadia - AL 132.10 127 *e*P PKPdf 11 02 53.6 +0.5
NBPB Pedra_Branca-C 132.11 120 PKP PKPdf 11 02 53.7 +0.6
JRN Qarnain Island 132.19 284 P PKiKP 11 02 53.8 -0.2
SNR=10
GRTLG **Ghanzi** 132.46 206 *i* P PKiKP 11 02 54.4 -0.5
SBBR Sobral 132.58 118 PKP PKPdf 11 02 54.3 +0.2
KLMR Klimovskoe 132.66 335 *e*PKIKP PKPdf 11 02 51.9 -0.8
KLMR *e* 11 05 24.7
KLMR PPP PPP 11 08 21.7
KLMR SS SS 11 22 16.7 -3.6
KLMR pmax pmax
comp=Z,138nm,1.3s
WIN Windhoek 132.90 201 PKiKP PKiKP 11 02 55.8 -0.1
BELG Belogornoye 132.96 322 *d i* PKIKP PKPdf 11 02 53.2 -0.3
SLWR Sila 133.11 283 P PKiKP 11 02 55.3 -0.6
STEI Steigen 133.13 352 *e*PKPdf PKPdf 11 02 53.7 +0.4
LOF Lofoten 133.13 353 *e*PKPdf PKPdf 11 02 53.7 +0.3
LOF *e*SS SS 11 22 31.8 +6.5
NBCA Caruaru-PE 133.23 126 PKP PKPdf 11 02 55.8 +0.5
TRNA Turayna 133.63 284 P PKPdf 11 02 56.2 +0.6
SNR=9.4
FAUS Fauske 133.65 352 *e*PKPdf PKPdf 11 02 53.7 -0.6
KSANE **Kasane** 133.72 213 *i* P PKPdf 11 02 56.8 +0.6
NBPA Parau_RN 133.95 122 PKP PKiKP 11 02 57.5 -0.5
SHMA Al-Shehemyia 133.99 285 P PKPdf 11 02 56.9 +0.7
SNR=5.2
GNGWA **Qangwa** 134.10 208 *i* P PKiKP 11 02 58.1 -0.2
VAGH Vaagaholmen 134.51 353 *e*PKPdf PKPdf 11 02 56.6 +0.6
RAUS Rausandaksla 134.70 352 *e*PKPdf PKPdf 11 02 56.8 +0.4
RCBR Riachuelo 134.84 123 PKP PKiKP 11 02 59.7 -0.1
RCBR PKP PKiKP 11 02 59.8 -0.1
RCBR Riachuelo 134.84 123 *e*P PKPdf 11 02 58.6 +0.3
MOR8 Moi Rana 134.91 352 *e*PKPdf PKPdf 11 02 56.8 0.0
XAUDM **Khaudum** 134.91 208 *i* P PKiKP 11 03 00.7 +0.7
STOK Stokkvaagen 134.92 353 *e*PKPdf PKPdf 11 02 56.8 +0.1
NBPV Pedro Velho 134.94 125 PKP PKiKP 11 02 59.6 -0.5
LEIR Leirfjorden 135.12 353 *e*PKPdf PKPdf 11 02 56.8 -0.3
AKT Akhty 136.03 307 *e*P Pdif 11 00 06.7 -1.2
AKT *e* 11 02 59.6
AKT *e* 11 05 47.3
AKT *e*PPP PPP 11 08 55.3
AKT *e* 11 09 16.0
AKT pmax pmax
comp=Z,83nm,0.7s
KIBK Kibwezi 136.14 241 PKP PKPdf 11 02 59.9 -0.9
MOS Moscow 136.53 330 *i* PKIKP PKPdf 11 02 58.3 -1.7
MOS *e* 11 05 03.6
MOS pmax pmax
comp=Z,111nm,0.9s
FINES FINESS Array B 136.78 342 PKhKP PKPpre 11 02 47.7
comp=Z,13nm,0.6s,baz=66,slow=3.2,SNR=33
FINES PKP **PKPdf** 11 02 60.0 -0.3
comp=Z,10nm,0.3s,baz=93,slow=2.2,SNR=3.7
FINES pPKP pPKPdf 11 05 19.7 +1.1
comp=Z,17nm,1.0s,baz=66,slow=4.8,SNR=2.6
FINES SKP **SKPbc** 11 05 38.9 +1.5
comp=Z,36nm,0.7s,baz=64,slow=4.4,SNR=7.5
FINES SKKPbc **SKKPbc** 11 14 32.4 -2.4
comp=Z,2.0nm,0.5s,baz=195,slow=2.7,SNR=7.0
FINES FINESS Array B 136.78 342 PKIKP PKPdf 11 03 00.0 -0.3
VRH Novokhopyorsk 136.79 323 *e*PKIKP PKPdf 11 03 00.0 -0.7
VRH pmax pmax
comp=Z,70nm,0.8s
OBN Obninsk 137.38 330 PKPdf 11 03 02.0 +0.4
OBN Obninsk 137.38 330 ⇑ *i* PKIKP PKPdf 11 03 01.8 +0.2
OBN *e*SS SS 11 23 13.9 -2.3
OBN pmax pmax
comp=Z,295nm,1.7s
LPSR Galich'ya Gora 137.62 326 *e*PKIKP PKPdf 11 03 01.7 -0.4
LPSR pmax pmax
comp=Z,40nm,0.9s
VORR Voronezh 137.95 325 *e*PKIKP PKPdf 11 03 02.3 -0.5
VORR pmax pmax
comp=Z,90nm,0.8s
TBLG Delisi 138.16 309 PKIKP PKPdf 11 03 00.0 -3.6
VSR Storozhevoye 138.20 324 *e*PKIKP PKPdf 11 03 03.1 -0.2
VSR pmax pmax
comp=Z,40nm,0.9s
VORD Divnogorie 138.25 324 *e*PKIKP PKPdf 11 03 03.5 +0.2
VORD pmax pmax
comp=Z,40nm,0.9s
ATD Arta Tunnel 138.33 263 PKPdf 11 03 00.0 -4.7
GOF Gofitskoye 138.39 314 *ce*PKHKP PKPpre 11 02 55.9
GNI Garni 138.52 306 PKPdf 11 03 00.7 -3.8
GNI Garni 138.52 306 *e*P PKPpre 11 02 55.8
GNI Garni 138.52 306 PKPdf PKPdf 11 02 58.3 -6.2
GNI Garni 138.52 306 PKIKP PKPdf 11 03 00.7 -3.8
RAYN Ar Rayn 138.66 281 *i* PKPdf PKPpre 11 02 57.0
SNR=19
RAYN Ar Rayn 138.66 281 ⇓ PKHKP PKPpre 11 02 57.4
KBZ Khabaz 138.91 312 PKhKP PKPpre 11 02 58.1
comp=Z,6.9nm,0.7s,baz=161,slow=5.0,SNR=13
KBZ PKP **PKiKP** 11 03 06.2 -1.0
comp=Z,17nm,0.8s,baz=188,slow=3.3,SNR=12
KBZ pPKP pPKPdf 11 05 23.2 +0.8
comp=Z,7.8nm,0.9s,baz=33,slow=5.9,SNR=2.3
KBZ SKPbc **SKiKP** 11 05 45.6 -1.4
comp=Z,20nm,0.8s,baz=46,slow=4.0,SNR=9.0
KIV Kislovodsk 138.98 312 PKPdf 11 03 01.0 -4.1
KIV Kislovodsk 138.98 312 *e*P PKPpre 11 02 50.6
KIV Kislovodsk 138.98 312 ⇑ P PKPdf 11 03 00.1 -5.0
KIV Kislovodsk 138.98 312 *i* PKPdf PKPdf 11 02 59.2 -5.9
SNR=11
KIV Kislovodsk 138.98 312 *e*PKHKP PKPpre 11 02 58.4
KIV *i* 11 03 06.6
KIV *e* 11 06 03.9
KIV *e* 11 09 21.5
KIV *e*SS SS 11 23 35.2 -1.0
KIV pmax pmax
comp=Z,51nm,1.1s
MOL Molde 139.14 355 *e*PKPdf PKPdf 11 03 05.4 +0.8
AKH Akhalkalaki 139.15 308 *e*P PKPpre 11 02 54.9
DOMB Dombas 139.52 354 *e*PKPdf PKPdf 11 03 05.4 0.0
ERBR Yeremizino-Bor 139.84 316 *i* PKHKP PKPpre 11 03 01.9
ERBR *e* 11 06 18.7
ERBR pmax pmax
comp=Z,84nm,0.8s
ERBR pmax pmax
comp=N,103nm,0.9s
ERBR pmax pmax
comp=E,46nm,1.0s
AGRB Hanur-Agry 139.96 306 *e*P PKPpre 11 02 58.2
LABN Labinsk 140.08 314 *i* PKIKP PKPdf 11 03 07.6 +0.7
LABN *e* 11 06 13.6
LABN pmax pmax
comp=N,36nm,0.7s
SENK Senkaya-Erzuru 140.20 308 *e*P PKPpre 11 03 02.1
AKDM Akdamar-Van 140.24 304 *e*P PKPpre 11 03 01.6
NB2 NORSAR Subarra 140.25 352 PKP PKPdf 11 03 00.5 -6.3
comp=Z,152nm,1.7s,baz=16,slow=3.2
NB2 pPKP **SKPbc** 11 05 49.0 +1.9
comp=Z,6.1nm,0.7s,baz=15,slow=2.5
NB2 SKKP **SKKPab** 11 14 20.4 -1.1
comp=Z,1.3nm,0.7s,baz=183,slow=4.8
NOA NORSAR Array B 140.25 352 PKhKP PKPpre 11 02 59.9
comp=Z,10nm,0.6s,baz=6.3,slow=4.0,SNR=92
NOA PKP **PKiKP** 11 03 08.2 -1.3
comp=Z,2.3nm,0.5s,baz=14,slow=2.4,SNR=10
NOA pPKP pPKPdf 11 05 27.1 +2.0
comp=Z,15nm,1.0s,baz=16,slow=4.1,SNR=4.4
NOA SKPbc **SKPbc** 11 05 48.5 +1.4
comp=Z,19nm,0.9s,baz=14,slow=4.2,SNR=4.3
NOA SKKPbc **SKKPab** 11 14 21.0 -0.5
comp=Z,5.3nm,1.0s,baz=195,slow=4.1,SNR=5.0
KOPR Koprukoy-ERZUR 140.71 307 *e*P PKPpre 11 03 04.0
HFS Hagfors 140.75 350 PKhKP PKPpre 11 03 01.1
comp=Z,65nm,0.6s,baz=72,slow=4.8,SNR=130
HFS PKP **PKPdf** 11 03 08.5 +0.9
comp=Z,42nm,0.8s,baz=116,slow=3.4,SNR=3.9
HFS SKPbc **SKPbc** 11 05 46.5 -1.8
comp=Z,38nm,0.9s,baz=28,slow=3.7,SNR=5.8
HFS SKKPbc **SKKPab** 11 14 17.7 -1.5
comp=Z,22nm,1.0s,baz=180,slow=1.5,SNR=8.0
GURO Guroymak-BITLI 140.92 305 *e*P PKPpre 11 03 02.7
SOC Sochi 141.13 313 *e*PKIKP PKPdf 11 03 08.5 -0.3
SOC *e* 11 06 19.3
SOC *e*PPP PPP 11 09 30.7
SOC *e*SSS SSS 11 29 32.0
CHOM Cayeli-Rize 141.21 309 *e*P PKPpre 11 03 02.6
VRTB Varto-Mus 141.22 306 *e*P PKPdf 11 03 06.6 -2.7
KARO Karliova-Bingo 141.49 306 *e*P PKPpre 11 03 04.9
LODK Lodwar 141.54 246 PKPdf 11 03 06.7 -3.9
LODK Lodwar 141.54 246 P PKPdf 11 03 07.1 -3.5
SNR=40
MNK Minsk 141.55 335 *i* PKHKP PKPpre 11 03 06.5
MNK *i* 11 03 10.0
MNK *i* 11 06 18.7
MNK *i* 11 06 20.4
MNK *i*SS SS 11 24 05.6 +1.4
MNK *i*SSS SSS 11 29 34.8
MNK pmax pmax
comp=Z,40nm,0.9s
MNK pmax pmax
comp=E,33nm,1.2s
MNK pmax pmax
comp=N,19nm,1.0s
MNK pmax pmax
comp=N,29nm,1.1s
MNK pmax pmax
comp=E,38nm,1.0s
MNK pmax pmax
comp=Z,138nm,0.7s
KONO Kongsberg 141.81 353 ⇑ PKHKP PKPpre 11 03 04.1
SHEL Horse Pasture 141.81 170 PKPdf 11 03 09.6 -1.3
SHEL Horse Pasture 141.81 170 PKIKP PKPdf 11 03 09.6 -1.3
LRW Lerwick 141.84 1 *e*P PKPdf 11 03 06.1 -3.5
BNGB Bingl 141.84 306 *e*P PKPpre 11 03 06.5
BAYT Aydintepe-Bayb 141.87 308 *e*P PKPpre 11 03 07.3
ANN Anapa 142.18 316 *i* PKHKP PKPpre 11 03 06.4
ANN *e* 11 06 25.6
ANN pmax pmax
comp=E,27nm,0.6s
ANN pmax pmax
comp=N,122nm,1.6s
ANN pmax pmax
comp=Z,336nm,1.2s
STRU Stroemstad 142.19 351 *i* P PKPdf 11 03 06.4 -3.8
ERZN Erzincan 142.40 307 *e*P PKPpre 11 03 08.2
SVRC Sivrice-ELAZID 143.04 305 *e*P PKPab 11 03 10.7 +0.2
TJOU Tjoern 143.09 350 *i* P PKPab 11 03 09.0 -0.8
BORU Boraas 143.28 349 *i* P PKPab 11 03 09.7 -0.8
HOMB Homborsund 143.28 353 *i* P PKPab 11 03 10.4 -0.1
ILIC ilic-Erzincan 143.30 307 *e*P PKPbc 11 03 11.8 +0.2
SNART **Snartemo** 143.35 354 *i* P PKPab 11 03 10.8 0.0
BIGH Upper Bighouse 143.37 4 *e*P PKPab 11 03 08.7 -2.1
LEWI Lewis, Hebride 143.46 7 *e*P PKPab 11 03 11.1 -0.1
AK03 Malin Array Si 143.60 329 PKP PKPbc 11 03 10.7 -1.3
AKASG **Malin Array Be** 143.61 329 PKPbc 11 03 10.7 -1.3
AKASG **Malin Array Be** 143.61 329 PKP PKPbc 11 03 11.6 -0.4
comp=Z,359nm,0.7s,baz=43,slow=4.4,SNR=327
AKASG pPKP pPKPdf 11 05 31.3 +0.4
comp=Z,105nm,1.1s,baz=42,slow=3.7,SNR=6.2
AKASG SKPbc **SKPbc** 11 05 55.6 -0.1
comp=Z,42nm,0.8s,baz=43,slow=2.6,SNR=6.0
AKASG **Malin Array Be** 143.61 329 PKHKP PKPpre 11 03 10.7
AKBB Malin Array Si 143.61 329 PKP PKPbc 11 03 10.7 -1.3
AK23 Malin Array Si 143.62 329 PKP PKPbc 11 03 10.8 -1.2
AK01 Malin Array Si 143.62 329 PKP PKPbc 11 03 10.8 -1.2
KIEV Kiev 143.62 329 PKPbc 11 03 10.7 -1.3
KIEV Kiev 143.62 329 ⇓ P PKPbc 11 03 10.8 -1.2
KIEV Kiev 143.62 329 *i* PKPbc PKPbc 11 03 10.6 -1.5
SNR=104
KIEV Kiev 143.62 329 PKHKP PKPpre 11 03 10.7
KIEV Kiev 143.62 329 PKP PKPbc 11 03 10.7 -1.3
AK04 Malin Array Si 143.62 329 PKP PKPbc 11 03 10.8 -1.3
AK09 Malin Array Si 143.64 329 PKP PKPbc 11 03 10.8 -1.3
AK08 Malin Array Si 143.64 329 PKP PKPbc 11 03 10.8 -1.3
AK22 Malin Array Si 143.65 329 PKP PKPbc 11 03 10.9 -1.2
AK21 Malin Array Si 143.65 329 PKP PKPbc 11 03 10.9 -1.2
ONAU Onsala 143.65 350 *i* P PKPbc 11 03 10.8 -1.1
SUW Suwalki 143.70 337 *e*PKP PKPbc 11 03 11.6 -0.6
SUW Suwalki 143.70 337 PKIKP PKPbc 11 03 11.7 -0.5
FABU Falkenberg 143.88 349 *i* P PKPbc 11 03 12.0 -0.7
DEL Delary 144.16 347 *i* P PKPbc 11 03 13.2 -0.3
SIM Simferopol' 144.22 318 *i* PKIKP PKPab 11 03 15.2 +0.6
SIM pmax pmax
comp=Z,619nm,1.0s
SVSK Karacayir 144.30 308 *e*P PKPab 11 03 15.0 0.0
MCD Coleburn Disti 144.31 4 *e*P PKPbc 11 03 13.0 -1.0
KPL Plockton 144.37 6 *e*P PKPdf 11 03 13.6 -0.4
KPL *e* 11 05 32.2
GOET G??ttrup 144.40 352 *i* P PKPab 11 03 15.0 +0.2
TOKT Tokat 144.50 309 *e*P PKPdf 11 03 14.9 0.0
RNPP9 Sopachiv 144.63 332 PKP PKPdf 11 03 14.9 +0.2
RNPP8 Varash 144.70 332 PKP PKPdf 11 03 14.6 -0.2
BJUU Bjuv 144.70 348 *i* P PKPbc 11 03 14.9 -0.2
GAZ Gaziantep 144.96 304 *e*P PKPdf 11 03 16.1 +0.3
MUD Monsted U'grnd 144.97 352 *i* P PKPbc 11 03 15.9 -0.1
DRUM Mains of Drumt 145.02 3 *e*P PKPdf 11 03 13.8 -1.4
LUNU Lund 145.03 347 *i* P PKPbc 11 03 16.3 +0.1
COP Copenhagen 145.18 348 *i* P PKPbc 11 03 16.1 -0.5
INVG Invergeldie, C 145.41 5 *e*P PKPbc 11 03 16.7 -0.6
LAWE Loch Awe, Argy 145.46 6 *e*P PKPbc 11 03 16.7 -0.7
LAWE *e* 11 05 35.0
BNN Bunyan 145.50 307 *e*P PKPdf 11 03 15.8 -1.0
YOZ Yozgat 145.61 309 *e*P PKPdf 11 03 15.3 -1.7
BZK Bozkurt 145.64 313 *e*P PKPdf 11 03 15.6 -1.1
BZK Bozkurt 145.64 313 ⇑ P PKPbc 11 03 18.8 +0.4
SORM Soroca 145.72 326 ⇓ P PKPbc 11 03 18.4 0.0
SORM Soroca 145.72 326 ⇓ PKIKP PKPbc 11 03 18.4 0.0
SSRD Sdr. Stenderup 145.85 351 *i* P PKPbc 11 03 19.0 +0.5
R9F13 Warsaw-Wawer 145.88 337 *e*PKPdf PKPbc 11 03 18.4 -0.3
R9F13 *e*PKPbcd 11 03 19.7
R9F13 *e*PKPab **PKiKP** 11 03 21.3 +0.1
R9F13 *ep*PKP **pPKPdf** 11 05 40.9 +6.0
R9F13 *e*SKSdf **SKSdf** 11 09 30.4 +1.1
PURM Purcari 145.89 323 ⇓ P PKPbc 11 03 19.6 +0.7
CORM Corum 145.91 310 *e*P PKPbc 11 03 18.5 -0.9
TAHT Tahtakopru-Hat 145.96 303 *e*P PKPdf 11 03 16.3 -1.2
EDI Edinburgh 145.97 4 *e*P PKPdf 11 03 16.1 -0.7
PGBU Glenifferbraes 145.99 5 *e*P PKPbc 11 03 18.2 -0.7
PGBU *e* 11 05 36.2
RGN Rugen 146.07 347 *e*PKPbc PKPbc 11 03 20.2 +1.0
baz=19,slow=2.4
RGN *ep*PKPbc **pPKPdf** 11 05 41.9 +6.3
KOZK Kozakli-Nevseh 146.09 308 *e*P PKPdf 11 03 18.0 +0.2
CEYT Ceyhan 146.12 304 *e*P PKPdf 11 03 16.5 -1.2
KIS Kishinev 146.18 324 ⇓ P PKPbc 11 03 19.7 -0.1
KIS Kishinev 146.18 324 ⇓ PKIKP PKPbc 11 03 19.7 -0.1
ASF Jabal al Asfar 146.23 295 PKPbc PKPbc 11 03 20.2 -0.3
comp=Z,204nm,0.8s,baz=110,slow=2.2,SNR=79
ASF pPKPbc **pPKPdf** 11 05 37.5 +1.4
comp=Z,129nm,1.0s,baz=31,slow=1.8,SNR=7.2
MILM Milestii Mici 146.24 324 ⇑ P PKPbc 11 03 18.8 -1.1
MILM Milestii Mici 146.24 324 ⇑ PKIKP PKPbc 11 03 18.8 -1.1
MILM Milestii Mici 146.24 324 ⇓ *i* PKP PKPdf 11 03 15.0 -2.6
comp=Z,2μm,2.1s
MILM *i* pPKP pPKPab 11 05 33.0 -1.9
GKP Gorka Klasztor 146.25 342 *e*PKPbc PKPbc 11 03 20.4 +0.7
BEL Belsk 146.32 337 *e*PKPbc PKPbc 11 03 21.0 +1.0
CIDE Kastamonu/Cide 146.38 314 ⇑ P PKPbc 11 03 20.6 +0.1
IDGL Inch Island, C 146.39 8 PKP PKiKP 11 03 21.7 -0.5
IDGL PKPdf PKPbc 11 03 19.3 -0.7
IDGL Inch Island, C 146.39 8 *e*P PKPbc 11 03 19.1 -0.9
IDGL *e* 11 05 36.3
CANT Cankiri 146.46 311 *e*P PKPdf 11 03 19.4 +1.1
CMRD Camardi-Nigde 146.51 306 *e*P PKPdf 11 03 18.5 0.0
KURC Kurucasile-Bar 146.54 314 *e*P PKPdf 11 03 16.7 -1.5
DRBR Darabani 146.55 328 ⇓ P PKPbc 11 03 20.4 -0.3
CLGH Cloghs, Cushen 146.55 7 *e*P PKPdf 11 03 18.3 +0.5
EKA Eskdalemuir Ar 146.56 4 PKPbc PKPbc 11 03 19.4 -1.1
comp=Z,91nm,0.7s,baz=343,slow=2.0,SNR=94
EKA pPKPbc **pPKPdf** 11 05 37.0 +0.5
comp=Z,64nm,1.0s,baz=333,slow=2.6,SNR=8.8
ESK Eskdalemuir 146.57 4 PKPbc 11 03 19.5 -1.0
ESK Eskdalemuir 146.57 4 *e*P PKPbc 11 03 19.6 -1.0
ESK *e* 11 05 38.3
ESK *e* 11 05 38.3
ESK Eskdalemuir 146.57 4 PKIKP PKPbc 11 03 19.5 -1.0
KARA Karaisali 146.58 305 *e*P PKPdf 11 03 17.5 -1.0
HWQ Hawqa 146.64 299 *e*P pPKPbc 11 05 35.5 -1.3
NEWG New Galloway 146.70 5 *e*P PKPbc 11 03 19.6 -1.2
IASR Iasi 146.73 326 ⇑ P PKPbc 11 03 21.8 +0.5
BR131 Keskin Array S 146.79 310 P PKPdf 11 03 19.0 0.0
SNR=200
BRTR Keskin Array B 146.79 310 PKPdf 11 03 16.8 -2.1
BRTR Keskin Array B 146.79 310 PKPbc PKPbc 11 03 21.5 -0.4
comp=Z,98nm,0.7s,baz=142,slow=4.2,SNR=123
BRTR pPKPbc **pPKPdf** 11 05 36.6 -0.2
comp=Z,61nm,1.1s,baz=132,slow=1.8,SNR=8.1
BRTR Keskin Array B 146.79 310 PKHKP PKPpre 11 03 16.8
KIRS Kirsehir-Merke 146.81 309 ⇑ P PKPdf 11 03 19.1 +0.2
GULA Gulagac 146.85 307 *e*P PKPab 11 03 26.1 +0.8
KAMT Kaman 146.87 309 *e*P PKPdf 11 03 18.1 -1.0
GAL1 Galloway 146.91 6 *e*P PKPdf 11 03 19.3 +0.9
BHL Bhannes 146.96 299 *e*P pPKPbc 11 05 37.4 -0.3
VASR Vaslui 146.96 325 ⇑ P PKPbc 11 03 21.8 -0.1
MERS Mersin 147.11 304 *e*P PKPdf 11 03 18.5 -1.0
EDMD Edmundbyers 147.13 3 *e*P PKPdf 11 03 19.8 +1.0
SERE Serefikochisa 147.13 309 *e*P PKPdf 11 03 17.9 -1.6
BSEG Bad Segeberg 147.23 349 *e*PKPbc PKiKP 11 03 23.2 -0.8
baz=19,slow=2.4
BSEG *ep*PKPbc **pPKPab** 11 05 45.2 +6.9
TLCR 147.27 322 ⇓ P PKPbc 11 03 23.0 +0.3
TLCR 147.27 322 ⇓ PKP2 PKPbc 11 03 23.0 +0.3
BIR Birlad 147.28 324 ⇑ P PKPdf 11 03 16.4 -3.0
BIR Birlad 147.28 324 ⇑ PKHKP PKPpre 11 03 16.4
VLDR Vladesti 147.29 323 ⇓ P PKPbc 11 03 22.6 -0.1
AFSR Afar-Bala (An 147.30 310 *e*P PKPdf 11 03 18.6 -1.1
KESW Keswick, Cumbr 147.31 4 *e*P PKPbc 11 03 21.1 -1.4
KESW *e* 11 05 41.4
KWP Kalwaria Pacla 147.31 333 *e*PKPbc PKPbc 11 03 23.5 +0.7
ANTO Ankara 147.34 311 PKPdf 11 03 20.4 +0.6
ANTO Ankara 147.34 311 *e*P PKPdf 11 03 18.7 -1.1
ANTO Ankara 147.34 311 P PKPdf 11 03 20.8 +1.0
ANTO Ankara 147.34 311 ⇑ P PKPdf 11 03 20.4 +0.6
ANTO Ankara 147.34 311 ⇑ PKIKP PKPdf 11 03 20.4 +0.6
ANTO Ankara 147.34 311 PKP PKPdf 11 03 18.5 -1.3
ANTO PKP PKPdf 11 03 20.3 +0.6
MMAI Mount Meron Ar 147.34 297 PKPbc PKPbc 11 03 23.9 +0.6
comp=Z,126nm,0.5s,baz=68,slow=4.9,SNR=151
MMAI pPKPbc **pPKPdf** 11 05 37.9 0.0
comp=Z,255nm,1.1s,baz=70,slow=2.7,SNR=12
LOD Lodumlu 147.35 311 *e*P PKPdf 11 03 18.7 -1.1
HLG Helgoland 147.35 352 *e*PKPbc PKiKP 11 03 23.8 -0.4
baz=19,slow=2.4
HLG *ep*PKPbc **pPKPab** 11 05 45.9 +7.1
YESY Yesilyurt 147.41 306 *e*P PKPbc 11 03 22.3 -1.2
MMLI Mount Malkishu 147.43 296 *e*P PKPdf 11 03 19.8 -0.3
SULT Sultanhani-AKS 147.44 307 *e*P PKPpre 11 03 15.9
GIUM Giurgiulesti 147.44 323 ⇓ P PKPbc 11 03 23.7 +0.6
SCTR Scanteiesti 147.44 323 ⇑ P PKiKP 11 03 24.2 -0.5
TATR Tatarca 147.46 323 ⇓ P PKPbc 11 03 22.8 -0.4
UJAP Al Uja 147.47 295 *e*P PKPdf 11 03 19.2 -0.8
KULU Kulu 147.51 309 *e*P PKPdf 11 03 18.8 -1.3
IOMK Kirk Michael 147.52 6 *e*P PKPdf 11 03 20.2 +0.7
IOMK *e* 11 05 40.4
GHRR 147.53 324 ⇑ P PKiKP 11 03 24.1 -0.7
ILTH Belurgan, Co L 147.56 8 PKP PKiKP 11 03 23.4 -1.2
ILTH PKPdf PKPbc 11 03 21.4 -1.7
ILTH Belurgan, Co L 147.56 8 *e*P PKPbc 11 03 21.4 -1.7
ILTH *e* 11 05 41.4
GDLE Glaisdale, N Y 147.57 2 *e*P PKPbc 11 03 22.7 -0.5
NEGRR **Negrea** 147.59 323 ⇓ P PKPbc 11 03 24.1 +0.5
BURAR **Bucovina Array** 147.64 328 PKPbc 11 03 20.5 +0.5
BURAR **Bucovina Array** 147.64 328 ⇓ P PKPbc 11 03 22.0 -1.7
BURAR **Bucovina Array** 147.64 328 ⇓ PKIKP PKPbc 11 03 22.0 -1.7
SCHL Schela 147.64 323 ⇑ P PKPbc 11 03 23.6 0.0
TESR Tescani 147.65 325 ⇑ P PKPbc 11 03 24.0 +0.3
IZVR Izvoarele 147.65 323 ⇓ P PKiKP 11 03 24.7 -0.4
SCHLR **Schela** 147.66 323 ⇓ P PKiKP 11 03 24.8 -0.3
CFR Carcaliu 147.66 322 ⇓ P PKPdf 11 03 19.9 -0.1
CFR Carcaliu 147.66 322 ⇓ PKIKP PKPdf 11 03 19.9 -0.1
TUDR 147.68 323 ⇓ P PKiKP 11 03 25.0 -0.2
IGLA Glengowla, Co 147.69 11 PKP PKiKP 11 03 23.7 -1.2
IGLA PKPdf PKPbc 11 03 22.7 -0.8
IGLA Glengowla, Co 147.69 11 *e*P PKPdf 11 03 21.6 +1.8
TPGR Topolog 147.69 322 ⇑ P PKiKP 11 03 24.6 -0.6
COSR Cosmesti PH 147.71 324 ⇓ P PKiKP 11 03 25.2 0.0
SILI Silifke-Mersin 147.71 304 *e*P PKPdf 11 03 19.8 -0.6
CHBY Cihanbeyli 147.76 308 *e*P PKPdf 11 03 18.4 -2.1
PANC Panciu 147.79 324 ⇑ P PKiKP 11 03 25.1 -0.3
POLA Polati-ANKAR 147.84 311 *e*P PKPdf 11 03 20.7 +0.1
KEBE Keben-Mersin 147.85 304 *e*P PKPdf 11 03 19.6 -1.1
RUE Ruedersdorf 147.88 345 *e*PKPbc PKiKP 11 03 24.8 -0.5
baz=19,slow=2.4
RUE *ep*PKPbc **pPKPab** 11 05 47.9 +7.2
YUVA Yuva-Kibriscik 147.89 312 *e*P PKPdf 11 03 20.1 -0.6
ONER Baraj Valea Uz 147.90 325 ⇑ P PKPbc 11 03 24.9 +0.6
ODBI Odobesti 147.91 324 ⇓ P PKiKP 11 03 26.0 +

TSCT	Constanta Port	147.95	320	⇓P		PKiKP	11 03 25.7	-0.1	
OJC	Ojcow	148.00	336	*e*PKPbc		PKPbc	11 03 25.0	+0.6	
OJC	Ojcow	148.00	336	PKHKP	PKPpre		11 03 23.9		
EFOR	EFORIE	148.01	320	⇓P		PKiKP	11 03 25.7	-0.1	
VRI	Vrincioaia	148.02	324	*e*P		PKPdf	11 03 19.1	-1.5	
VRI	Vrincioaia	148.02	324	⇑P		PKPbc	11 03 22.9	-1.8	
VRI	Vrincioaia	148.02	324	⇑PKHKP	PKPpre		11 03 22.9		
HARR	Harsova	148.07	322	⇓P		PKPdf	11 03 21.1	+0.4	
HARR	Harsova	148.07	322	⇓PKHKP	PKPpre		11 03 21.1		
PLOR	Plostina	148.07	324	⇓P		PKPbc	11 03 25.0	+0.2	
PLOR	Plostina	148.07	324	⇓PKP2		PKPbc	11 03 25.0	+0.2	
MFTR	Murfatlar	148.08	321	⇑P		PKPdf	11 03 21.6	+0.9	
STHS	Stebnicka Huta	148.08	334	*e*PKHKP	PKPpre		11 03 24.7		
STHS	Stebnicka Huta	148.08	334	*e*PKP		PKPbc	11 03 24.7	0.0	
STHS				*e*			11 05 40.5		
STHS				*e*			11 05 47.1		
TLBR	Topalu	148.09	321	⇓P		PKiKP	11 03 25.8	-0.3	
MANR	Mangalia	148.19	320	⇑P		PKPbc	11 03 25.5	+0.4	
GRER		148.19	324	⇑P		PKiKP	11 03 26.0	-0.3	
MDUB	Mudurnu	148.19	312	*e*P		PKPdf	11 03 21.2	0.0	
EIL	Elat	148.20	291	PKPbc		PKPbc	11 03 23.6	-1.9	
	comp=Z,285nm,0.7s,baz=8.4,slow=2.3,SNR=62								
EIL				*e*PKPbc		PKPbc	11 05 40.8	-0.7	
	comp=Z,89nm,1.1s,baz=307,slow=0.8,SNR=4.1								
CVDA	Cernavoda	148.22	321	⇓P		PKiKP	11 03 26.3	0.0	
BISRR	Bisoca	148.23	324	⇑P		PKPdf	11 03 21.3	+0.3	
SAHE	Sakarya_HENDEK	148.25	313	⇓P		PKPbc	11 03 24.3	-1.1	
BERE	Bereket-Mersin	148.26	304	*e*P		PKPdf	11 03 20.1	-1.4	
TURR	Turia	148.28	325	⇓P		PKiKP	11 03 26.4	-0.1	
DSB	Dublin	148.32	8	PKP		PKPdf	11 03 20.7	-0.1	
DSB	Dublin	148.32	8	PKP		PKiKP	11 03 26.4	+0.2	
DSB				PKPdf		PKPbc	11 03 23.7	-1.4	
LFK	Lefkose	148.33	302	*e*P		PKPdf	11 03 21.1	-0.4	
OZUR		148.37	326	⇓P		PKiKP	11 03 26.4	-0.2	
KIZT	Kizilcal	148.38	309	*e*P		PKPdf	11 03 19.9	-1.6	
KONT	Konya--Tatoy	148.38	307	*e*P		PKPdf	11 03 19.8	-1.7	
SVRH	Sivrihisar-ESK	148.40	311	*e*P		PKPdf	11 03 20.3	-1.2	
TEKE	Tekeli-Mersin	148.41	304	*e*P		PKPdf	11 03 18.7	-2.8	
BMR	Baia Mare	148.42	330	⇑P		PKPbc	11 03 25.0	-0.5	
BMR	Baia Mare	148.42	330	⇑PKHKP	PKPpre		11 03 25.0		
NIE	Niedzica	148.46	335	*e*PKPbc		PKiKP	11 03 26.8	+0.1	
AMRR	Amara	148.46	322	⇑P		PKiKP	11 03 27.0	+0.2	
AMRR	Amara	148.46	322	⇑PKP2		PKiKP	11 03 27.0	+0.2	
ICOR	Ion Corvin	148.48	321	⇑P		PKiKP	11 03 26.3	-0.5	
WLF1	Llynfaes	148.50	6	*e*P		PKPdf	11 03 22.4	+1.4	
KALB	Balgarevo	148.52	316	⇓P		PKPbc	11 03 24.7	+0.2	
NEHR	Nehoiu	148.53	324	⇓P		PKiKP	11 03 26.6	-0.4	
RETH	Rethem/Aller,	148.54	350	*e*PKPbc		PKiKP	11 03 26.4	-0.2	
	baz=19,slow=2.4								
RETH				*ep*PKPbc		PKPbc	11 05 50.4	+7.2	
PSN	Preselentsi	148.56	320	P		PKiKP	11 03 26.9	-0.2	
LBWR	Ladybower, Pea	148.56	3	*e*P		PKPdf	11 03 23.1	+1.9	
CSS	Mathiatis	148.57	302	*e*P		PKPdf	11 03 20.5	-1.3	
FLTG	Flechtingen	148.59	347	*e*PKPbc		PKiKP	11 03 26.4	-0.4	
	baz=19,slow=2.4								
FLTG				*ep*PKPbc		PKPbc	11 05 49.8	+6.4	
ISR	Istrita	148.59	323	⇓P		PKiKP	11 03 26.8	-0.3	
ISR	Istrita	148.59	323	⇓PKP2		PKiKP	11 03 26.8	-0.3	
HDMB	Hadim	148.62	306	*e*P		PKPdf	11 03 20.3	-1.8	
KSP	Ksiaz	148.62	341	*e*PKPbc		PKiKP	11 03 27.0	0.0	
KSP	Ksiaz	148.66	341	PKHKP	PKPpre		11 03 23.5		
SAUV	Serdivan-Sakar	148.66	314	*e*P		PKPdf	11 03 20.2	-1.6	
DOPR	Dopca	148.67	326	⇑P		PKPdf	11 03 23.7	+2.0	
GULT	Gulveren	148.68	313	*e*P		PKPdf	11 03 20.7	-1.2	
MLR	Muntele Rosu	148.68	325	PKP		PKPdf	11 03 22.1	+0.2	
	comp=Z,80nm,0.8s,baz=353,slow=2.4,SNR=29								
MLR				PKPbc		PKPbc	11 03 26.4	0.0	
	comp=Z,242nm,1.1s,baz=346,slow=2.5,SNR=38								
MLR				*e*PKPbc		PKPbc	11 05 42.4	-0.2	
	comp=Z,43nm,1.0s,baz=36,slow=4.0,SNR=2.6								
MLR	Muntele Rosu	148.68	325	*e*P		PKPdf	11 03 20.3	-1.5	
MLR	Muntele Rosu	148.68	325	⇓P		PKPdf	11 03 22.4	+0.6	
TGMR	Targu Mures	148.73	327	⇓P		PKPab	11 03 33.9	+1.4	
CIFT	Cifteler, Eski	148.76	311	*e*P		PKPdf	11 03 20.4	-1.7	
LEHL	Lehliu	148.84	322	⇑P		PKiKP	11 03 28.0	+0.5	
ASSE	Asse, Remlinge	148.89	348	*e*PKPbc		PKiKP	11 03 27.3	0.0	
	baz=19,slow=2.4								
OKC	Ostrava-Krasne	148.91	338	*e*PKHKP	PKPpre		11 03 27.1		
OKC	Ostrava-Krasne	148.91	338	⇑*e*PKP		PKPbc	11 03 27.1	+0.4	
VAL	Valentia	148.93	13	PKP		PKPdf	11 03 22.9	+1.1	
VAL	Valentia	148.93	13	PKP		PKiKP	11 03 27.8	+0.3	
VAL				PKPdf		PKPdf	11 03 23.5	+1.7	
OSTC	Ostas	148.93	341	*e*PKP2		PKiKP	11 03 28.0	+0.3	
OSTC	Ostas	148.93	341	⇑*e*PKP		PKiKP	11 03 28.0	+0.3	
OSTC				*ep*PKP		PKPab	11 05 49.5	+4.6	
CHVC	Chvalec	148.96	341	*e*PKHKP	PKPpre		11 03 27.5		
CHVC	Chvalec	148.96	341	⇑*e*PKP		PKiKP	11 03 27.5	-0.2	
CHVC				*ep*PKP		PKPab	11 05 50.1	+5.5	
SEYS	Seydisehir-KON	148.96	307	*e*P		PKPdf	11 03 21.6	-0.9	
STEB	Steborice	148.96	338	⇑*e*PKP		PKiKP	11 03 27.3	-0.4	
STEB				*ep*PKP		PKPab	11 05 47.2	+2.2	
FOEL	Foel Wylfa	148.99	4	*e*P		PKPdf	11 03 23.0	+1.1	
GAZI	Gazipasa	148.99	304	*e*P		PKPdf	11 03 20.1	-2.4	
LANS	Liptovska Anna	149.00	336	*e*PKP2		PKiKP	11 03 28.2	+0.3	
LANS	Liptovska Anna	149.00	336	*e*PKP		PKiKP	11 03 28.2	+0.3	
LANS				*e*			11 05 52.4		
LLW	Llanuwychllyn	149.00	5	*e*P		PKPdf	11 03 22.4	+0.5	
PLAR	PLOIESTI	149.00	324	⇓P		PKiKP	11 03 27.9	0.0	
SULR		149.03	323	⇑P		PKiKP	11 03 27.5	-0.4	
UPC	Upice	149.04	341	*e*PKHKP	PKPpre		11 03 27.5		
UPC	Upice	149.04	341	⇑*e*PKP		PKiKP	11 03 27.5	-0.3	
CBBR	Cluj-Babes-Bol	149.04	329	⇑P		PKiKP	11 03 27.7	-0.2	
MESR	Meseseni	149.05	330	⇑P		PKiKP	11 03 28.1	+0.2	
CJR	Cluj-Napoca	149.06	328	⇓P		PKPbc	11 03 27.3	+0.1	
CJR	Cluj-Napoca	149.06	328	⇓PKHKP	PKPpre		11 03 27.3		
HRT	Hereke	149.06	314	*e*P		PKPdf	11 03 20.2	-2.3	
MDB	Medias	149.07	327	⇑P		PKPbc	11 03 27.6	+0.4	
MDB	Medias	149.07	327	⇑PKHKP	PKPpre		11 03 27.6		
DPC	Dobruska-Polom	149.08	340	*e*PKHKP	PKPpre		11 03 24.7		
DPC	Dobruska-Polom	149.08	340	*e*PKPDF	PKPbc		11 03 24.7	-2.4	
DPC				⇑*e*PKP		PKiKP	11 03 27.9	-0.1	
IWEX	Carrickbyrne,	149.12	9	PKP		PKPbc	11 03 27.0	-0.1	
IWEX	Carrickbyrne,	149.12	9	*e*P		PKPbc	11 03 26.6	-0.5	
KECS	Kecovo	149.13	334	*e*PKP2		PKiKP	11 03 29.1	+1.0	
KECS	Kecovo	149.13	334	*e*PKP		PKiKP	11 03 29.1	+1.0	
KECS				*e*			11 05 51.6		
CLL	Collm	149.15	345	*i* PKHKP	PKPpre		11 03 22.8		
CLL				*i*			11 03 34.7		
CLL				pmax		pmax			
	comp=Z,177nm,2.1s								
CLL				pmax		pmax			
	comp=Z,379nm,1.0s								
CLL	Collm	149.15	345	*e*PKPbc		PKiKP	11 03 27.7	-0.3	
	baz=19,slow=2.4								
CLL				*e*PKPab		PKPab	11 03 35.8	+1.6	
	baz=22,slow=4.0								
KRLC	Kraliky	149.17	339	*e*PKHKP	PKPpre		11 03 27.8		
KRLC	Kraliky	149.17	339	⇑*e*PKP		PKiKP	11 03 27.8	-0.4	
KRLC				*ep*PKP		PKPab	11 05 50.8	+4.9	
MORC	Moravsky Berou	149.18	338	⇓P		PKPdf	11 03 23.6	+1.3	
MORC	Moravsky Berou	149.18	338	*e*PKP		PKPdf	11 03 22.0	-0.4	
MORC				*e*			11 03 27.8		
MORC				*ep*PKP		PKPbc	11 05 43.1	-0.6	
MORC	Moravsky Berou	149.18	338	⇓PKHKP	PKPpre		11 03 23.6		
VOIR		149.19	325	⇑P		PKPbc	11 03 27.7	+0.1	
VOIR		149.19	325	⇑PKHKP	PKPpre		11 03 27.7		
ADVT	Abdulvahap	149.20	313	*e*P		PKPdf	11 03 21.2	-1.4	
IBBN	Ibbenburen	149.21	351	*e*PKPbc		PKiKP	11 03 28.0	-0.1	
	baz=19,slow=2.4								
IBBN				*e*PKPab		PKPab	11 03 36.5	+2.2	
	baz=22,slow=4.0								
CLZ	Clausthal	149.22	348	*e*PKPbc		PKiKP	11 03 28.2	0.0	
	baz=19,slow=2.4								
CWF	Charnwood Fore	149.24	2	*e*P		PKPdf	11 03 22.5	+0.2	
CWF				*e*			11 05 46.8		
PRD	Provadia	149.27	320	P		PKiKP	11 03 28.8	+0.3	
BUC	Bucharest	149.28	323	⇑P		PKPbc	11 03 28.0	+0.3	
BUC	Bucharest	149.28	323	⇑PKHKP	PKPpre		11 03 28.0		
NEF	NEVSHA	149.29	320	P		PKPbc	11 03 28.1	+0.3	
WACR	West Acre	149.29	360	*e*P		PKPbc	11 03 26.9	-0.6	
WACR				*e*			11 05 46.4		
BRG	Berggiesshubel	149.31	343	*e*PKPbc		PKiKP	11 03 28.4	0.0	
	baz=19,slow=2.4								
BRG				*e*PKPab		PKPab	11 03 36.8	+2.0	
	baz=22,slow=4.0								
MARR	Marisel-Cluj	149.32	329	⇓P		PKPdf	11 03 24.5	+1.7	
MTUR	Matau	149.33	325	⇑P		PKiKP	11 03 31.3	+2.6	
MTUR	Matau	149.33	325	⇑PKP2		PKiKP	11 03 31.3	+2.6	
ISK	Istanbul-Kandi	149.35	315	*e*P		PKPdf	11 03 20.6	-2.2	
HLM1	Long Mynd	149.38	4	*e*P		PKPdf	11 03 22.5	0.0	
YLV	Yalova	149.38	314	*e*P		PKPpre	11 03 14.5		
MAUC	Maruska	149.42	338	*ep*PKPDF		PKPdf	11 03 24.0	+1.2	
MAUC				⇑*ep*PKP		PKiKP	11 03 28.9	+0.2	
DRGR		149.43	329	*ep*P		PKPdf	11 03 23.5	+0.6	
DRGR		149.43	329	⇑P		PKPdf	11 03 23.2	+0.3	
DRGR		149.43	329	⇑PKIKP		PKPdf	11 03 23.2	+0.3	
PVCC	Panska Ves	149.45	342	PKHKP	PKPpre		11 03 25.8		
TNR	Turnu Rosu	149.46	326	⇑P		PKiKP	11 03 29.1	+0.2	
TNR	Turnu Rosu	149.46	326	⇑PKHKP	PKPpre		11 03 29.1		
SHUT	Suhut-Afyon	149.46	310	*e*P		PKPdf	11 03 22.1	-1.2	
ARR	Arges	149.46	326	⇓P		PKPdf	11 03 24.2	+1.2	
SGRR	Singureni	149.47	323	⇓P		PKPbc	11 03 28.4	+0.3	
NEUB	Neuenburg	149.53	346	*e*PKPbc		PKiKP	11 03 28.7	-0.1	
	baz=19,slow=2.4								
NEUB				*e*PKPab		PKPab	11 03 36.9	+1.2	
	baz=22,slow=4.0								
RAZG	Razgrad	149.56	321	⇓P		PKPbc	11 03 28.7	+0.3	
RICC	Richard	149.56	343	⇑*e*PKP		PKiKP	11 03 28.9	0.0	
RICC				*ep*PKP		PKPab	11 05 52.4	+5.1	
GTTG	Gottingen	149.58	348	*e*PKPbc		PKiKP	11 03 28.9	0.0	
	baz=19,slow=2.4								
LOZB	Loznitsa	149.63	321	⇓P		PKiKP	11 03 29.1	-0.2	
BORR	Bors	149.64	331	⇑P		PKPdf	11 03 22.3	-0.8	
CTYL	Yalikoy Yolu	149.64	316	*e*P		PKPdf	11 03 22.6	-0.7	
CTYL	Yalikoy Yolu	149.64	316	⇑P		PKiKP	11 03 30.4	+1.0	
HSKC	Hora Svate Kat	149.68	344	⇑*e*PKP		PKiKP	11 03 28.9	-0.3	
HSKC				*ep*PKP		PKPab	11 05 48.9	+1.1	
ISP	Isparta	149.77	308	*e*P		PKPdf	11 03 21.3	-2.5	
PSZ	Piszkesteto	149.82	334	⇓P		PKiKP	11 03 29.5	-0.1	
PSZ	Piszkesteto	149.82	334	⇓PKHKP	PKPpre		11 03 29.5		
SLVT	Silivri	149.82	316	*e*P		PKPpre	11 03 20.6		
HUMR	Humele	149.83	324	⇑P		PKPbc	11 03 28.9	-0.1	
TVSB	Tavsanli	149.84	312	*e*P		PKPdf	11 03 22.4	-1.4	
LOT	Lotru	149.85	326	*e*P		PKPdf	11 03 21.9	-1.8	
LOT	Lotru	149.85	326	⇑P		PKPdf	11 03 24.0	+0.3	
BCK	Bucak	149.86	308	*e*P		PKPdf	11 03 21.3	-2.6	
MCH1	Michaelchurch	149.89	4	*e*P		PKPdf	11 03 24.2	+0.9	
PRA	Prague	149.90	342	*e*PKHKP	PKPpre		11 03 29.3		
PRA	Prague	149.90	342	⇑*e*PKP		PKiKP	11 03 29.3	-0.3	
VRAC	Vranov	149.90	339	PKP		PKPdf	11 03 24.5	+1.0	
	comp=Z,9.2nm,0.9s,baz=164,slow=3.4,SNR=9.3								
VRAC				PKPbc		PKiKP	11 03 30.0	+0.4	
	comp=Z,89nm,0.8s,baz=36,slow=1.6,SNR=58								
VRAC				*ep*PKPbc		PKPbc	11 05 46.6	+1.0	
	comp=Z,317nm,1.1s,baz=6.8,slow=2.6,SNR=2.3								
VRAC	Vranov	149.90	339	⇓P		PKiKP	11 03 30.1	+0.4	
VRAC	Vranov	149.90	339	*e*PKP		PKPdf	11 03 22.9	-0.6	
VRAC				*e*			11 03 29.4		
VRAC				*ep*PKP		PKPbc	11 05 44.4	-1.2	
JAVC	Velka Javorina	149.91	337	*e*PKP		PKPdf	11 03 24.1	+0.5	
JAVC				*e*			11 03 30.3		
JAVC				*ep*PKP		PKPbc	11 05 44.2	-1.5	
PRU	Pruhonice	149.94	342	*e*PKHKP	PKPpre		11 03 26.4		
PRU	Pruhonice	149.94	342	*e*PKPDF		PKPbc	11 03 26.4	-2.7	
PRU				⇑*e*PKP		PKiKP	11 03 29.5	-0.2	
PRU				*ep*PKP		PKPbc	11 05 47.0	+1.4	
COPA	Copaceanca	149.95	323	⇑P		PKPbc	11 03 28.7	-0.6	
DEV	Deva	149.99	328	⇑P		PKPbc	11 03 29.5	+0.1	
DEV	Deva	149.99	328	⇑PKHKP	PKPpre		11 03 29.5		
SZH	Strazhitsa	150.05	321	PKP	pPKPbc		11 05 43.5	-2.7	
SZH	Strazhitsa	150.05	321	P		PKiKP	11 03 30.2	0.0	
GEDZ	Gediz	150.06	311	*e*P		PKPdf	11 03 23.2	-0.9	
MONM	Monmouth	150.06	4	*e*P		PKPdf	11 03 24.3	+0.7	
MOX	Moxa	150.09	346	*e*PKPbc		PKiKP	11 03 30.4	+0.4	
	baz=19,slow=2.4								
MOX				*e*PKPab		PKPab	11 03 40.2	+2.0	
	baz=22,slow=4.0								
TANN	Tannenbergstha	150.11	345	*e*PKPbc		PKiKP	11 03 30.4	+0.3	
	baz=19,slow=2.4								
TANN				*e*PKPab		PKPab	11 03 41.0	+2.8	
	baz=22,slow=4.0								
PLN	Plauen	150.12	345	*e*PKPbc		PKiKP	11 03 30.6	+0.5	
	baz=19,slow=2.4								
BUG	Bochum--Univer	150.12	352	*e*PKPbc		PKiKP	11 03 30.2	+0.2	
	baz=19,slow=2.4								
STRD	Stroud	150.17	3	*e*P		PKPdf	11 03 26.6	+2.8	
KRUC	Moravsky	150.18	339	*e*PKP		PKPdf	11 03 23.2	-0.7	
KRUC				*e*			11 03 29.7		
KRUC				*ep*PKP		PKPbc	11 05 44.8	-1.5	
KASTN	Kahler Asten	150.18	350	*e*PKPbc		PKiKP	11 03 30.2	0.0	
	baz=19,slow=2.4								
JMB	Yambol	150.18	319	PKP	pPKPbc		11 05 44.2	-2.2	
JMB	Yambol	150.18	319	P		PKiKP	11 03 30.8	+0.4	
KORT	Korkueli	150.21	307	*e*P		PKPdf	11 03 22.9	-1.6	
TREC	Trest	150.27	340	*e*PKIKP		PKPbc	11 03 29.7	-0.2	
TREC	Trest	150.27	340	⇑*e*PKP		PKPbc	11 03 29.7	-0.2	
UBBA	Unterbreizbach	150.27	348	*e*PKPbc		PKiKP	11 03 30.6	+0.3	
	baz=19,slow=2.4								
SMOL	Smolenice	150.28	337	*e*PKIKP		PKiKP	11 03 31.6	+1.1	
SMOL				*e*			11 05 46.1		
SIRR	Siria	150.31	330	⇑P		PKiKP	11 03 30.9	+0.2	
ELND	Elena	150.31	321	⇑P		PKPdf	11 03 26.5	+2.2	
BAND	Balkesir-Ban	150.33	314	⇑P		PKPbc	11 03 29.9	-0.5	
SIMA	Simav-Kutahya	150.34	312	*e*P		PKPdf	11 03 22.9	-1.7	
GZR	Gura Zlata	150.40	327	⇑P		PKPbc	11 03 30.2	-0.2	
GZR	Gura Zlata	150.40	327	⇑PKIKP		PKPbc	11 03 30.2	-0.2	
EDRB	Edirne	150.41	318	*e*P		PKPdf	11 03 22.8	-1.7	
MODS	Modra-Piesok	150.46	337	*e*PKIKP		PKPdf	11 03 25.3	+0.9	
MODS	Modra-Piesok	150.46	337	*e*PKP		PKPdf	11 03 25.3	+0.9	
MODS				*e*			11 03 31.5		
MODS				*e*			11 03 41.8		
MODS				*e*			11 05 46.5		
SURR	Surduc	150.46	329	⇑P		PKPdf	11 03 26.2	+1.8	
VLAD	Vladila	150.49	324	⇑P		PKiKP	11 03 30.9	-0.1	
SRO	Srobarova	150.53	335	*e*PKIKP		PKiKP	11 03 31.4	+0.4	
SRO	Srobarova	150.53	335	*e*PKP		PKiKP	11 03 31.4	+0.4	
SRO				*e*			11 03 41.7		
SRO				*e*			11 05 54.2		
ZVC	Zvikov	150.53	342	*e*PKPDF		PKPdf	11 03 25.8	+1.4	
ZVC				⇑*e*PKP		PKiKP	11 03 31.9	+0.9	
ZVC				*ep*PKP		PKPbc	11 05 49.2	+1.9	
MANZ	Manzenberg	150.59	345	*e*PKPbc		PKiKP	11 03 31.4	+0.3	
	baz=19,slow=2.4								
CRAR	CRAIOVA	150.60	325	⇓P		PKiKP	11 03 31.7	+0.5	
CRAR	CRAIOVA	150.60	325	⇓PKIKP		PKiKP	11 03 31.7	+0.5	
PVL	Pavlikeni	150.60	322	P		PKiKP	11 03 31.6	+0.3	
ELL	Elmali	150.63	307	*e*P		PKPdf	11 03 24.4	-0.8	
ZST	Bratislava	150.67	337	*e*PKIKP		PKiKP	11 03 33.6	+2.3	
ZST	Bratislava	150.67	337	*e*PKP		PKiKP	11 03 33.6	+2.3	
ZST				*e*			11 03 42.0		
ZST				*e*			11 05 52.5		
WOL	Wolverton	150.67	2	*e*P		PKPbc	11 03 30.3	-0.4	
SRE	Strehaia	150.68	326	⇓P		PKiKP	11 03 31.8	+0.4	
SRE	Strehaia	150.68	326	⇓PKIKP		PKiKP	11 03 31.8	+0.4	
PLVB	Pleven	150.75	323	⇓P		PKiKP	11 03 31.9	+0.3	
RKY	Sarkoy-Tekirda	150.77	316	*e*P		PKPpre	11 03 21.9		
ROTZ	Rotzenmuhle	150.77	344	*e*PKPbc		PKiKP	11 03 31.7	+0.3	
	baz=19,slow=2.4								
ROTZ				*e*PKPab		PKPab	11 03 43.3	+2.4	
	baz=22,slow=4.0								
APMY	Acipayam-Deniz	150.80	308	*e*P		PKPdf	11 03 24.9	-0.4	
BZS	Buzias	150.80	329	*e*P		PKPdf	11 03 23.8	-1.1	
BZS	Buzias	150.80	329	⇓P		PKPdf	11 03 24.6	-0.3	
BZS	Buzias	150.80	329	⇓PKIKP		PKPdf	11 03 24.6	-0.3	
KULA	Kula-Manisa	150.82	311	*e*P		PKPdf	11 03 24.0	-1.3	
KRBG	Karabiga-Canak	150.84	315	*e*P		PKPdf	11 03 24.1	-1.0	
ELSH	Elham, Standar	150.87	359	*e*P		PKPbc	11 03 31.1	-0.1	
HERR	Herculane	150.94	327	⇑P		PKPbc	11 03 31.1	-0.5	
BEBN	Eben Emael	150.95	353	*d*PKP		PKiKP	11 03 32.0	+0.3	
KHC	Kasperske Hory	150.99	342	*e*PKIKP		PKPdf	11 03 26.2	+1.0	
KHC	Kasperske Hory	150.99	342	*e*PKPDF		PKPdf	11 03 26.2	+1.0	
KHC				⇑*e*PKP		PKiKP	11 03 32.1	+0.1	
KHC				*ep*PKPAB		PKPab	11 03 43.6	+1.6	
KHC				*ep*PKP		PKPab	11 05 51.8	-1.3	
CAME	Cameli-Denizli	151.01	307	*e*P		PKPdf	11 03 25.6	-0.1	
DIM	Dimitrovgrad	151.01	319	PKP	pPKPbc		11 05 46.3	-2.3	
DJES	Djerdap	151.03	327	⇑P		PKPbc	11 03 31.8	-0.1	
BAIL	Bailesti	151.04	325	⇑P		PKPbc	11 03 32.7	+0.5	
AKAS	Kas	151.05	306	*e*P		PKPdf	11 03 24.7	-1.1	
CKRC	Cesky Krumlov	151.05	341	*e*PKIKP		PKPdf	11 03 26.6	+1.3	
CKRC	Cesky Krumlov	151.05	341	*e*PKPDF		PKPdf	11 03 26.6	+1.3	
CKRC				⇑*e*PKP		PKiKP	11 03 32.2	+0.1	
UCC	Uccle	151.07	355	*d*PKPdf		PKPdf	11 03 26.2	+1.1	
UCC				*d*PKP		PKPbc	11 03 31.6	-0.1	
GRF	Grafenberg Arr	151.07	346	*e*PKPab		PKPab	11 03 43.3	+1.0	
	baz=22,slow=4.0								
PUNG	Punghina	151.09	326	⇓P		PKiKP	11 03 32.2	-0.1	
MEM	Membach	151.09	353	*d*PKPdf		PKPdf	11 03 25.4	+0.2	
MEM				*d*PKP		PKPbc	11 03 31.6	-0.1	
BTNL	Ternell	151.10	353	*d*PKPdf		PKPdf	11 03 25.4	+0.1	
BTNL				*d*PKP		PKPbc	11 03 31.6	-0.2	
TNS	Taunus Mts	151.12	349	*e*PKPbc		PKiKP	11 03 32.8	+0.5	
	baz=19,slow=2.4								
TNS				*e*PKPab		PKPab	11 03 45.1	+2.6	
	baz=22,slow=4.0								
WET	Wettzell	151.17	343	*e*PKPbc		PKiKP	11 03 32.9	+0.6	
	baz=19,slow=2.4								
WET				*e*PKPab		PKPab	11 03 43.9	+1.2	
	baz=22,slow=4.0								
BSTI	Sart Tilman	151.17	353	*d*PKP		PKPdf	11 03 26.2	+0.9	
CANM	Can-anakkale	151.20	315	*e*P		PKiKP	11 03 32.6	0.0	
LPK	Lapseki	151.20	316	*e*P		PKPdf	11 03 23.0	-2.7	
BANR	Banloc	151.21	329	⇑P		PKPbc	11 03 31.6	-0.5	
GEC2	GERESS Array S	151.21	342	*e*PKPbc		PKiKP	11 03 32.7	+0.2	
	baz=19,slow=2.4								
GERES	GERESS Array B	151.21	342	PKP		PKPdf	11 03 25.6

	comp=Z,40nm,0.9s							
BFO	**Black Forest**	**152.97**	**349**	*e*PKPab	**PKPab**	**11 03 51.1**	**+0.7**
	baz=22,slow=4.0							
OUR	**Ouranopolis**	**152.99**	**318**	PKP	pPKPdf	11 05 46.8	+0.2
OBKA	**Obir**	**153.01**	**338**	*e*PKP	**PKPdf**	**11 03 27.7**	**-0.6**
	comp=Z,7.8nm,0.8s							
OBKA				*e*PKP	**PKPbc**	**11 03 36.0**	**-0.3**
	comp=Z,44nm,1.2s							
OBKA				*e*PKP	**PKPab**	**11 03 51.1**	**+0.4**
	comp=Z,49nm,0.7s							
OBKA				*ep*PKP	**pPKPdf**	**11 05 48.0**	**+1.0**
	comp=Z,86nm,1.7s							
SOH	**Sokhos**	**153.09**	**320**	PKP	pPKPdf	11 05 47.0	-0.1
KARP	**Karpathos**	**153.15**	**306**	*e*P	**PKPdf**	**11 03 27.3**	**-1.5**
KARP	**Karpathos**	**153.15**	**306**	PKP	pPKPdf	11 05 47.0	-0.1
KNT	**Kendrikon**	**153.15**	**321**	PKP	pPKPdf	11 05 47.0	0.0
WATA	**Walderalm**	**153.17**	**343**	*i* PKP	**PKPdf**	**11 03 28.0**	**-0.5**
	comp=Z,10nm,0.7s,SNR=9.1							
WATA				*e*PKP	**PKiKP**	**11 03 36.7**	**0.0**
	comp=Z,9.2nm,0.4s							
WATA				*e*PKP	**PKPab**	**11 03 51.7**	**+0.2**
	comp=Z,26nm,0.6s							
WATA				*i* pPKiKP	**pPKPbc**	**11 05 53.7**	**-0.1**
	comp=Z,79nm,1.0s,SNR=6.9							
WATA	**Walderalm**	**153.17**	**343**	*i* P	pPKPbc	11 05 53.7	-0.1
	comp=Z,79nm,1.0s,SNR=6.9							
GCIS	**Gornji Cirnik**	**153.18**	**336**	*i* PKPbc	**PKiKP**	**11 03 37.0**	**+0.5**
MYKA	**Terra Mystica**	**153.20**	**340**	*i* PKP	**PKPdf**	**11 03 27.9**	**-0.7**
	comp=Z,9.4nm,0.9s,SNR=7.7							
MYKA				*e*PKP	**PKPbc**	**11 03 36.2**	**-0.4**
	comp=Z,33nm,0.6s							
MYKA				*e*PKP	**PKPab**	**11 03 51.6**	**+0.1**
	comp=Z,20nm,0.5s							
UBR	**Ueberruh**	**153.22**	**346**	*e*PKPbc	**PKiKP**	**11 03 36.7**	**+0.1**
	baz=19,slow=2.4							
WTTA	**Wattenberg**	**153.22**	**343**	*i* PKP	**PKPdf**	**11 03 28.4**	**-0.3**
	comp=Z,17nm,0.7s,SNR=16							
WTTA				*e*PKP	**PKiKP**	**11 03 37.0**	**+0.1**
	comp=Z,46nm,0.5s							
WTTA				*e*PKP	**PKPab**	**11 03 52.6**	**+0.9**
	comp=Z,105nm,0.7s							
WTTA				*i* pPKiKP	**pPKPbc**	**11 05 53.5**	**-0.5**
	comp=Z,192nm,1.2s,SNR=6.8							
WTTA	**Wattenberg**	**153.22**	**343**	*i* P	pPKPbc	11 05 53.5	-0.5
	comp=Z,192nm,1.2s,SNR=6.8							
VAY	**Valandovo**	**153.24**	**321**	*i* P	**PKPdf**	**11 03 28.0**	**-0.6**
RETA	**Reutte**	**153.24**	**345**	*e*PKP	**PKPab**	**11 03 52.3**	**+0.7**
	comp=Z,42nm,0.7s							
RETA				*ep*PKiKP	**pPKPbc**	**11 05 53.5**	**-0.7**
	comp=Z,72nm,1.3s							
MOTA	**Moosalm**	**153.29**	**344**	*i* PKP	**PKPdf**	**11 03 28.1**	**-0.6**
	comp=Z,27nm,0.7s,SNR=14							
MOTA				*e*PKP	**PKPbc**	**11 03 36.9**	**0.0**
	comp=Z,64nm,1.2s							
MOTA				*e*PKP	**PKPab**	**11 03 52.0**	**+0.1**
	comp=Z,95nm,1.1s							
MOTA				*i* pPKiKP	**pPKPbc**	**11 05 53.9**	**-0.6**
	comp=Z,127nm,1.3s,SNR=7.0							
MOTA	**Moosalm**	**153.29**	**344**	*i* P	pPKPbc	11 05 53.9	-0.6
	comp=Z,127nm,1.3s,SNR=7.0							
HORT	**Hortiatis**	**153.38**	**319**	PKP	pPKPdf	11 05 47.4	-0.1
SQTA	**Sankt Quirin**	**153.38**	**344**	*i* PKP	**PKPdf**	**11 03 28.6**	**-0.2**
	comp=Z,50nm,1.2s,SNR=14							
SQTA				*e*PKP	**PKiKP**	**11 03 37.2**	**+0.2**
	comp=Z,9.7nm,0.5s							
SQTA				*e*PKP	**PKPab**	**11 03 53.1**	**+0.8**
	comp=Z,40nm,0.9s							
SQTA				*i* pPKiKP	**pPKPbc**	**11 05 54.3**	**-0.4**
	comp=Z,124nm,1.4s,SNR=5.7							
SQTA	**Sankt Quirin**	**153.38**	**344**	*i* P	pPKPbc	11 05 54.3	-0.4
	comp=Z,124nm,1.4s,SNR=5.7							
LJU	**Ljubljana**	**153.42**	**338**	*i* PKPdf	**PKPdf**	**11 03 28.9**	**+0.1**
LJU				*i* PKPbc	**PKiKP**	**11 03 37.4**	**+0.4**
LJU				*e*PKPab	**PKPab**	**11 03 52.9**	**+0.5**
LJU				*ep*PKPdf	**pPKPdf**	**11 05 48.4**	**+0.8**
LJU				*e*		11 17 02.8		
LJU				*e*		11 19 50.6		
THE	**Thessaloniki**	**153.44**	**320**	PKP	pPKPdf	11 05 50.5	+3.1
ABTA	**Abfaltersbach**	**153.45**	**341**	*i* PKP	**PKPdf**	**11 03 28.0**	**-0.9**
	comp=Z,36nm,0.9s,SNR=21							
ABTA				*e*PKP	**PKPbc**	**11 03 36.8**	**-0.3**
	comp=Z,17nm,0.7s							
ABTA				*e*PKP	**PKPab**	**11 03 52.8**	**+0.2**
	comp=Z,61nm,0.6s							
ABTA				*i* pPKP	**pPKPbc**	**11 05 51.7**	**-2.8**
	comp=Z,147nm,1.5s,SNR=6.8							
ABTA	**Abfaltersbach**	**153.45**	**341**	*i* P	pPKPbc	11 05 51.7	-2.8
	comp=Z,147nm,1.5s,SNR=6.8							
BLY	**Banja Luka**	**153.48**	**333**	⇑P	**PKPdf**	**11 03 29.6**	**+0.7**
CRNS	**Crni Vrh**	**153.48**	**338**	*i* PKPdf	**PKPdf**	**11 03 28.5**	**-0.4**
CRNS				*i* PKPab	**PKPab**	**11 03 52.8**	**+0.1**
BOJS	**Bojanci**	**153.62**	**336**	*i* PKPdf	**PKPdf**	**11 03 29.3**	**+0.2**
BOJS				*i* PKPbc	**PKiKP**	**11 03 38.2**	**+0.7**
DAVA	**Damuels**	**153.64**	**346**	*i* PKP	**PKPdf**	**11 03 28.4**	**-0.9**
	comp=Z,16nm,0.8s,SNR=8.8							
DAVA				*e*PKP	**PKPab**	**11 03 54.2**	**+0.8**
	comp=Z,61nm,0.8s							
DAVA				pPKiKP	**pPKPbc**	**11 05 53.0**	**-2.1**
	comp=Z,90nm,1.4s							
FETA	**Feichten**	**153.69**	**344**	*i* PKP	**PKPdf**	**11 03 28.8**	**-0.6**
	comp=Z,51nm,0.8s,SNR=24							
FETA				*e*PKP	**PKPab**	**11 03 53.1**	**-0.5**
	comp=Z,52nm,1.0s							
FETA				*ep*PKiKP	**pPKPbc**	**11 05 53.9**	**-1.4**
	comp=Z,104nm,1.3s							
KYMI	**Kymi, Euboea I**	**153.87**	**315**	PKP	pPKPdf	11 05 51.1	+3.2
KARY	**Karystos**	**153.96**	**313**	PKP	pPKPdf	11 05 50.4	+2.3
ZKR	**Zakros**	**154.03**	**306**	*e*P	**PKPdf**	**11 03 28.9**	**-1.1**
THERA	**Ancient Thera,**	**154.04**	**309**	PKP	pPKPdf	11 05 48.8	+0.4
LIT	**Litokhoron**	**154.05**	**319**	PKP	pPKPdf	11 05 48.4	0.0
LIT	**Litokhoron**	**154.05**	**319**	P	**PKPbc**	**11 03 36.7**	**+0.1**
NEO	**Neokhori**	**154.06**	**317**	PKP	pPKPdf	11 05 48.4	-0.2
DAVOX	**Davos/Dischmat**	**154.12**	**345**	PKP	**PKPdf**	**11 03 30.1**	**+0.1**
	comp=Z,44nm,0.9s,baz=77,slow=2.7,SNR=48							
DAVOX				PKPbc	**PKPbc**	**11 03 38.6**	**-0.1**
	comp=Z,53nm,0.6s,baz=145,slow=2.2,SNR=19							
DAVOX				pPKPbc	**pPKPbc**	**11 05 57.1**	**+0.8**
	comp=Z,69nm,1.0s,baz=59,slow=5.3,SNR=5.3							
FUORN	**Ofenpass-Fuorn**	**154.17**	**345**		**PKPdf**	**11 03 30.2**	**0.0**
DION	**Dionisos Attik**	**154.28**	**314**	PKP	pPKPdf	11 05 48.7	+0.2
PDG	**Podgorica**	**154.29**	**327**	⇓P	**PKiKP**	**11 03 38.5**	**-0.4**
KZN	**Kozani**	**154.35**	**320**	PKP	pPKPdf	11 05 48.9	0.0
OHR	**Ohrid**	**154.39**	**323**	*i* P	**PKPdf**	**11 03 30.7**	**+0.4**
NPS	**Neapolis**	**154.42**	**307**	PKP	pPKPdf	11 05 48.9	+0.1
ATHU	**Athens Univers**	**154.44**	**314**	PKP	pPKPdf	11 05 49.0	-0.1
ATH	**Athens Observa**	**154.48**	**314**	PKP	pPKPdf	11 05 49.0	0.0
ATAL	**Atalanti**	**154.54**	**316**	PKP	pPKPdf	11 05 49.1	+0.2
LKR	**Lokris**	**154.58**	**316**	PKP	pPKPdf	11 05 49.2	+0.2
THL	**Klokotos Trika**	**154.66**	**319**	PKP	pPKPdf	11 05 48.9	-0.3
THL	**Klokotos Trika**	**154.66**	**319**	P	**PKPdf**	**11 03 30.2**	**-0.5**
NEST	**Nestorio**	**154.71**	**321**	PKP	pPKPdf	11 05 49.0	-0.4
AXAR	**Agios Charalam**	**154.73**	**316**	PKP	pPKPdf	11 05 49.1	-0.3
PENT	**Pentalofos**	**154.79**	**321**	PKP	pPKPdf	11 05 48.8	-0.7
MAKR	**Makrakomi, Fth**	**154.92**	**318**	PKP	pPKPdf	11 05 48.9	-0.7
MAKR	**Makrakomi, Fth**	**154.92**	**318**	P	**PKiKP**	**11 03 40.1**	**-0.3**
MAKR				S	PKPbc	11 03 57.1	+17
IDI	**Anoyia**	**154.94**	**307**	PKP	**PKPdf**	**11 03 30.3**	**-1.1**
IDI	**Anoyia**	**154.94**	**307**	PKP	**PKPdf**	**11 03 31.8**	**+0.5**
	comp=Z,57nm,1.0s,baz=82,slow=2.6,SNR=10.0							
IDI				pPKPbc	**pPKPdf**	**11 05 50.9**	**+1.1**
	comp=Z,36nm,1.0s,baz=141,slow=2.7,SNR=2.2							
IDI	**Anoyia**	**154.94**	**307**	*e*P	**PKPdf**	**11 03 30.2**	**-1.1**
IDI	**Anoyia**	**154.94**	**307**	PKP	pPKPdf	11 05 48.9	-0.8
LTK	**Loutraki**	**154.95**	**315**	PKP	pPKPdf	11 05 49.0	-0.8
EVR	**Evrytania**	**155.18**	**318**	PKP	pPKPdf	11 05 49.3	-0.8
EVR	**Evrytania**	**155.18**	**318**	P	PKPdf	11 03 40.6	+9.0
EVR				S	PKPbc	11 04 00.5		
PRMD	**Pramanda**	**155.24**	**320**	PKP	pPKPdf	11 05 49.4	-0.7
TETR	**Tetrakomo, Epi**	**155.25**	**319**	PKP	pPKPdf	11 05 49.4	-0.8
TETR	**Tetrakomo, Epi**	**155.25**	**319**	P	PKPdf	11 03 41.0	+9.4
JAN	**Janina**	**155.31**	**320**	PKP	pPKPdf	11 05 49.5	-0.7
JAN	**Janina**	**155.31**	**320**	P	PKPdf	11 03 41.3	+10
SERG	**Sergoula**	**155.32**	**316**	PKP	pPKPdf	11 05 49.5	-0.7
SERG	**Sergoula**	**155.32**	**316**	P	PKPdf	11 03 41.6	+10
SERG				S	PKPbc	11 03 59.9		
EFP	**Efpalio**	**155.41**	**317**	PKP	pPKPdf	11 05 49.6	-0.7
EFP	**Efpalio**	**155.41**	**317**	P	PKPdf	11 03 42.6	+11
EFP				S	PKPbc	11 04 01.1		
KLV	**Kalavryta, Ach**	**155.47**	**316**	PKP	pPKPdf	11 05 49.7	-1.0
KLV	**Kalavryta, Ach**	**155.47**	**316**	P	PKPdf	11 03 42.1	+10
KLV				S	PKPbc	11 03 59.7		
VLI	**Veliai**	**155.66**	**312**	PKP	pPKPdf	11 05 49.9	-0.8
IGT	**Igoumenitsa**	**155.70**	**321**	PKP	pPKPdf	11 05 52.0	+1.4
GVD	**Gavdhos**	**155.73**	**307**	*e*P	PKPdf	11 03 42.7	+10
GVD	**Gavdhos**	**155.73**	**307**	PKP	pPKPdf	11 05 51.9	+1.2
DRO	**Drossia**	**155.81**	**316**	PKP	pPKPdf	11 05 50.0	-1.1
AXS	**Araxos**	**155.88**	**317**	PKP	pPKPdf	11 05 50.2	-0.7
AXS	**Araxos**	**155.88**	**317**	P	PKPdf	11 03 45.9	+14
AXS				S	PKPbc	11 04 02.6		
ITM	**Ithomi**	**156.10**	**314**	*e*P	PKPdf	11 03 43.1	+10
FSK	**Fiskardo**	**156.23**	**318**	PKP	pPKPdf	11 05 50.9	-0.4
VLC	**Villacollemand**	**156.42**	**342**	PKP	**PKPdf**	**11 03 31.9**	**-1.1**
BNI	**Bardonecchia**	**156.43**	**349**	PKIKP	**PKPdf**	**11 03 33.4**	**+0.4**
AQU	**L'Aquila**	**157.00**	**335**	PKP	**PKPdf**	**11 03 33.3**	**-0.4**
AQU	**L'Aquila**	**157.00**	**335**	PKIKP	**PKPdf**	**11 03 34.5**	**+0.8**
PGAV	**Gavieira, Arco**	**158.72**	**18**	*e*PKPdf	**PKPdf**	**11 03 37.7**	**+1.8**
PCAB	**Cabril**	**159.02**	**18**	*e*PKPdf	**PKPdf**	**11 03 36.4**	**+0.2**
PBRG	**Braganca**	**159.28**	**16**	*e*PKPdf	**PKPdf**	**11 03 37.7**	**+1.2**
PBRG				*e*PKPab	**PKPab**	**11 04 20.1**	**+2.2**
POLO	**Lamas de Olo**	**159.40**	**18**	*e*PKPdf	**PKPdf**	**11 03 38.1**	**+1.4**
POLO				*e*PKPab	**PKPab**	**11 04 20.5**	**+2.0**
EDA	**Edea**	**159.67**	**209**		**PKPab**	**11 04 20.3**	**+0.1**
MVO	**Moncorvo**	**159.81**	**17**	*e*PKPdf	**PKPdf**	**11 03 38.4**	**+1.2**
MVO				*e*PKPab	**PKPab**	**11 04 21.8**	**+1.6**
PVIS	**Viseu**	**159.98**	**19**	*e*PKPdf	**PKPdf**	**11 03 38.3**	**+1.0**
MTE	**Manteigas**	**160.37**	**19**	*e*PKPdf	**PKPdf**	**11 03 37.9**	**+0.2**
PCAS	**Casmilo, Conde**	**160.38**	**21**	*e*PKPdf	**PKPdf**	**11 03 39.0**	**+1.3**
VAE	**Valguarnera**	**160.45**	**325**	PKP	**PKPdf**	**11 03 38.3**	**+0.4**
	comp=Z,24nm,0.5s,baz=156,slow=2.0,SNR=3.2							
VAE				PKPab	**PKPab**	**11 04 21.4**	**-1.9**
	comp=Z,7.2nm,0.3s,baz=201,slow=21,SNR=1.0							
PCBR	**Castelo Branco**	**160.91**	**19**	*e*PKPdf	**PKPdf**	**11 03 39.6**	**+1.4**
PSARD	**Sardoal**	**160.91**	**21**	*e*PKPdf	**PKPdf**	**11 03 39.7**	**+1.5**
PSARD				*e*PKPab	**PKPab**	**11 04 26.4**	**+1.4**
PMAFR	**Mafra**	**161.08**	**24**	PKP	**PKPdf**	**11 03 40.7**	**+2.2**
PMAFR	**Mafra**	**161.08**	**24**	*e*PKPdf	**PKPdf**	**11 03 40.9**	**+2.4**
PMAFR				*e*PKPab	**PKPab**	**11 04 27.3**	**+1.5**
PMRV	**Marv??o**	**161.31**	**20**	*e*PKPdf	**PKPdf**	**11 03 39.8**	**+1.1**
PMRV				*e*PKPab	**PKPab**	**11 04 28.2**	**+1.5**
PMTG	**Montargil**	**161.36**	**22**	*e*PKPdf	**PKPdf**	**11 04 27.3**	**+0.3**
PARRA	**Arraiolos**	**161.65**	**22**	*e*PKPdf	**PKPdf**	**11 03 40.2**	**+1.1**
PARRA				*e*PKPab	**PKPab**	**11 04 29.2**	**+0.9**
PESTR	**Estremoz**	**161.76**	**21**	*e*PKPdf	**PKPdf**	**11 03 40.1**	**+1.0**
PESTR				*e*PKPab	**PKPab**	**11 04 29.8**	**+1.0**
MOE	**Montemor**	**161.80**	**23**	*e*PKPdf	**PKPdf**	**11 03 40.5**	**+1.3**
MOE				*e*PKPab	**PKPab**	**11 04 30.4**	**+1.4**
EVO	**Evora**	**161.91**	**22**	PKP	**PKPdf**	**11 03 38.3**	**-1.0**
EVO	**Evora**	**161.91**	**22**	*e*PKPdf	**PKPdf**	**11 03 40.7**	**+1.4**
EVO				*e*PKPab	**PKPab**	**11 04 30.8**	**+1.3**
ESDC	**Sonseca Array**	**161.93**	**11**		**PKPab**	**11 04 29.9**	**+0.4**
ESDC	**Sonseca Array**	**161.93**	**11**	PKP	**PKPdf**	**11 03 39.5**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=345,slow=2.7,SNR=13							
ESDC				PKPab	**PKPab**	**11 04 29.8**	**+0.3**
	comp=Z,36nm,1.1s,baz=340,slow=4.3,SNR=25							
ESDC				pPKPab	**pPKPab**	**11 06 39.9**	**-0.4**
	comp=Z,12nm,1.0s,baz=338,slow=3.5,SNR=2.0							
BBTS	**Babate**	**162.22**	**111**	PKPab	**PKPab**	**11 04 34.1**	**+2.6**
	comp=Z,107nm,0.8s,baz=170,slow=7.2,SNR=15							
BBTS				pPKPab	**pPKPab**	**11 06 43.3**	**+1.7**
	comp=Z,62nm,1.1s,baz=170,slow=0.7,SNR=2.8							
PBEJ	**Beja**	**162.42**	**23**	*e*PKPdf	**PKPdf**	**11 03 41.4**	**+1.6**
PBEJ				*e*PKPab	**PKPab**	**11 04 32.2**	**+0.5**
MESJ	**Messejana**	**162.45**	**24**	*e*PKPdf	**PKPdf**	**11 03 40.4**	**+0.6**
MESJ	**Messejana**	**162.45**	**24**	*e*PKPdf	**PKPdf**	**11 03 40.4**	**+0.6**
PTEO	**Sao Teotonio**	**162.52**	**25**	*e*PKPdf	**PKPdf**	**11 03 41.8**	**+1.9**
PBAR	**Barrancos**	**162.56**	**20**	*e*PKPdf	**PKPdf**	**11 03 41.2**	**+1.3**
PBAR				*e*PKPab	**PKPab**	**11 04 32.6**	**+0.3**
PCVE	**Castro Verde**	**162.70**	**24**	*e*PKPdf	**PKPdf**	**11 03 41.9**	**+1.8**
PCVE				*e*PKPab	**PKPab**	**11 04 34.6**	**+1.6**
MORF	**Marmelete**	**162.75**	**26**	*e*PKPdf	**PKPdf**	**11 03 40.6**	**+0.4**
MORF	**Marmelete**	**162.75**	**26**	*e*PKPdf	**PKPdf**	**11 03 41.7**	**+1.5**
PFVI	**Vila Bisbo**	**162.83**	**26**	*e*PKPdf	**PKPdf**	**11 03 42.3**	**+2.0**
PVAQ	**Vaqueiros**	**163.03**	**23**	*e*PKPdf	**PKPdf**	**11 03 42.2**	**+1.8**
PBDV	**Barranco-do-Ve**	**163.09**	**24**	*e*PKPdf	**PKPdf**	**11 03 42.6**	**+2.1**
PBDV				*e*PKPab	**PKPab**	**11 04 36.8**	**+2.1**
DBIC	**Dimbokro**	**163.92**	**160**	PKP	**PKPdf**	**11 03 41.8**	**-0.1**
	comp=Z,64nm,0.8s,baz=188,slow=1.3,SNR=72							
DBIC				PKPab	**PKPab**	**11 04 40.5**	**+1.8**
	comp=Z,84nm,0.8s,baz=216,slow=4.5,SNR=14							
DBIC				pPKP	**pPKPdf**	**11 06 02.5**	**+1.2**
	comp=Z,30nm,1.1s,baz=237,slow=0.3,SNR=2.9							
DBIC				pPKPab	**pPKPab**	**11 06 50.6**	**+1.3**
	comp=Z,148nm,1.3s,baz=208,slow=4.1,SNR=4.0							
DBIC	**Dimbokro**	**163.92**	**160**	PKP	**PKPdf**	**11 03 41.1**	**-0.8**
DBIC				PKP	**PKPdf**	**11 03 41.3**	**-0.6**
KEST	**Kesra**	**164.29**	**333**	PKP	**PKPdf**	**11 03 42.0**	**+0.3**
	comp=Z,9.6nm,0.8s,baz=311,slow=7.2,SNR=8.2							
KEST				PKPab	**PKPab**	**11 04 40.9**	**+0.7**
	comp=Z,97nm,1.0s,baz=9.7,slow=0.5,SNR=17							
KEST				pPKPab	**pPKPab**	**11 06 50.0**	**-0.1**
	comp=Z,17nm,0.9s,baz=281,slow=0.8,SNR=2.5							
KEST	**Kesra**	**164.29**	**333**	P	**PKPdf**	**11 03 39.2**	**-2.5**
EMAL	**Malaga-Limoner**	**164.63**	**15**	PKP	**PKPdf**	**11 03 41.5**	**-0.3**
IFR	**Ifrane**	**167.44**	**22**	PKP	**PKPdf**	**11 03 45.1**	**+0.7**
MDT	**Midelt**	**168.26**	**22**	PKP	**PKPdf**	**11 03 45.5**	**+0.6**
	comp=Z,32nm,1.0s,baz=159,slow=1.7,SNR=13							
MDT				PKPab	**PKPab**	**11 04 58.2**	**+0.5**
	comp=Z,21nm,0.9s,baz=348,slow=3.7,SNR=9.8							
TIO	**Tiouine**	**168.65**	**37**	PKP	**PKPdf**	**11 03 44.6**	**-0.6**
TOA0	**Torodi Ar. Sit**	**171.17**	**187**	P	**PKPdf**	**11 03 47.0**	**0.0**
SNR=9.7								
TORD	**Torodi Ar. Bea**	**171.17**	**187**	PKP	**PKPdf**	**11 03 46.6**	**-0.3**
	comp=Z,31nm,0.8s,baz=25,slow=2.2,SNR=16							
TORD				PKPab	**PKPab**	**11 05 12.1**	**+1.3**
	comp=Z,30nm,0.7s,baz=149,slow=2.3,SNR=12							
TORD				pPKP	**pPKPdf**	**11 06 07.2**	**+0.6**
	comp=Z,35nm,1.1s,baz=73,slow=1.2,SNR=4.2							
TORD				pPKPab	**pPKPab**	**11 07 22.5**	**+1.6**
	comp=Z,10nm,1.0s,baz=134,slow=2.6,SNR=2.1							
TORD				PP	**PP**	**11 09 02.1**	**+1.1**
	comp=Z,21nm,1.1s,baz=138,slow=3.1,SNR=4.7							
TAM	**Tamanrasset**	**175.34**	**281**	PKIKP	**PKPdf**	**11 03 47.9**	**-0.6**

*AFAD **08** 10:58:25.3, 35˚.26N×27˚.76E, h11km±2km, MW3.9*
*ISK **08** 10:58:26.8, 35˚.29N×27˚.71E, h6km, ML2.9/12*
*THE **08** 10:58:29.4, 35°N±22°×2°8E±3°0, h0km±28km, M2.7/4, MLh2.7/4*
*ATH **08** 10:58:29.0±1.0, 35˚.45N×27˚.70E, h9km±3km, ML2.8/4, Manual Solution by N.Liadopoulou First location: 2019/11/08 10:59:50, This location: 2019/11/08 11:17:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 6 km; Longitude uncertainty: 5 km*

ISC 08 10:58:28.9±1.4, 35˚.38N±0˚.06×27˚.67E±0˚.03, h13km±10km, n48, σ0°92/62, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.45**	**292**	Pg	**Pg**	**10 58 37.6**	**-0.3**
KARP				Sg	**Sb**	**10 58 45.0**	**-0.4**
KARP	**Karpathos**	**0.45**	**292**	P	**Pg**	**10 58 37.5**	**-0.3**
KARP				S	**Sg**	**10 58 43.8**	**-0.2**
KARP	**Karpathos**	**0.45**	**292**	P	**Pg**	**10 58 37.6**	**-0.3**
KARP				S	**Sb**	**10 58 45.4**	**-0.1**
ARG	**Arkhangelos**	**0.92**	**24**	Pg	**Pg**	**10 58 46.1**	**-0.6**
ARG				Sg	**Sn**	**10 58 59.9**	**-0.7**
ARG	**Arkhangelos**	**0.92**	**24**	P	**Pg**	**10 58 45.9**	**-0.7**
ARG				S	**Sb**	**10 58 59.2**	**+0.4**
ARG	**Arkhangelos**	**0.92**	**24**	P	**Pg**	**10 58 46.0**	**-0.7**
ARG				S	**Sg**	**10 58 57.5**	**-1.2**
ZKR	**Zakros**	**1.22**	**258**	Pn	**Pn**	**10 58 50.4**	**-1.3**
ZKR	**Zakros**	**1.22**	**258**	P	**Pn**	**10 58 51.5**	**-0.2**
ZKR	**Zakros**	**1.22**	**258**	P	**Pn**	**10 58 50.9**	**-0.8**
ZKR				S	**Sg**	**10 59 09.7**	**+1.4**
NISR	**Nisiros**	**1.31**	**340**	P	**Pn**	**10 58 52.0**	**-1.0**
YAZI	**Mula-Dat§a-**	**1.31**	**352**	SPECP		10 58 52.0	
YAZI				P	**Pn**	**10 58 52.5**	**-0.5**
YAZI				S	**Sg**	**10 59 11.9**	**+0.6**
DAT	**Datca**	**1.35**	**357**	Pn	**Pn**	**10 58 53.9**	**+0.2**
TURN	**Turunc**	**1.47**	**18**	SPECP		10 58 54.0	
TURN				P	**Pn**	**10 58 54.7**	**-0.5**
TURN				S	**Sg**	**10 59 16.6**	**+0.3**
TURN	**Turunc**	**1.47**	**18**	Pn	**Pb**	**10 58 55.6**	**-0.6**
DALY	**Dalyan (Mula)**	**1.64**	**29**	Pn	**Pn**	**10 58 58.1**	**+0.6**
IZZE	**Mula-Seydike**	**1.65**	**50**	SPECP		10 58 56.0	
IZZE				P	**Pn**	**10 58 56.6**	**-1.0**
IZZE				S	**Sb**	**10 59 20.3**	**+0.5**
NPS	**Neapolis**	**1.69**	**267**	P	**Pb**	**10 58 59.7**	**-0.1**
NPS	**Neapolis**	**1.69**	**267**	P	**Pb**	**10 58 59.6**	**-0.2**
FETY	**Fethiye**	**1.70**	**42**	P	Pn	10 58 50.7	-7.6
FETY				S	**Sb**	**10 59 20.7**	**-0.7**
BODT	**Bodrum**	**1.71**	**350**	Pn	**Pn**	**10 58 58.8**	**+0.3**
SABU	**Mula-Dalaman**	**1.79**	**36**	SPECP		10 58 59.0	
SABU				P	**Pn**	**10 58 59.1**	**-0.4**
SABU				S	**Sg**	**10 59 29.4**	**+3.0**
AKAS	**Kas**	**1.79**	**61**	SPECP		10 58 58.0	
AKAS				P	**Pn**	**10 58 58.4**	**-1.3**
AKAS				S	**Sb**	**10 59 23.3**	**-0.8**
AKAS	**Kas**	**1.79**	**61**	Pn	**Pn**	**10 58 59.8**	**+0.1**
YER	**Yerkesik**	**1.82**	**16**	Pn	**Pn**	**10 59 00.9**	**+0.8**
MLSB	**Milas**	**1.92**	**2**	Pn	**Pn**	**10 59 01.8**	**+0.5**
MULA	**Mugla, Merkez-**	**1.95**	**15**	SPECP		10 59 03.0	
MULA				P	**Pb**	**10 59 03.6**	**-0.8**
THERA	**Ancient Thera,**	**2.04**	**300**	P	**Pn**	**10 59 02.6**	**-0.3**
CAME	**Cameli-Denizli**	**2.05**	**40**	Pn	**Pn**	**10 59 02.9**	**-0.3**
THR8	**Santorini-Mono**	**2.06**	**301**	P	**Pn**	**10 59 03.3**	**+0.1**
THR6	**Thira Island,**	**2.09**	**299**	P	**Pn**	**10 59 04.8**	**+1.1**
THR3	**Thira Island,**	**2.11**	**300**	P	**Pn**	**10 59 04.8**	**+0.8**
THR3	**Thira Island,**	**2.11**	**300**	P	**Pn**	**10 59 03.9**	**-0.1**
SNT5	**Nea Kammeni, S**	**2.11**	**300**	P	**Pn**	**10 59 04.2**	**+0.2**
KNIK	**Mula-Seydike**	**2.13**	**46**	SPECP		10 59 04.0	
KNIK				P	**Pn**	**10 59 04.1**	**-0.2**
CAEL	**Denizli, Camel**	**2.19**	**37**	SPECP		10 59 04.0	
CAEL				P	**Pn**	**10 59 05.0**	**-0.3**
CAEL				S	**Sg**	**10 59 43.3**	**+3.7**
IDI	**Anoyia**	**2.28**	**269**	Pn	**Pn**	**10 59 06.5**	**+0.2**
IDI	**Anoyia**	**2.28**	**269**	P	**Pn**	**10 59 07.5**	**+1.2**
IDI	**Anoyia**	**2.28**	**269**	P	**Pn**	**10 59 07.1**	**+0.8**
TAVA	**DENIZLI_Tavas**	**2.31**	**

TRNA	**Turayna**	**7.37**	**238**	P		**Pn**	**11 15 57.7**	**-1.5**
SMRA	**Abu-Samra**	**7.65**	**240**	P		**Pn**	**11 16 01.9**	**-1.2**
DMTO	**DMTO**	**11.41**	**195**	P		**Pn**	**11 16 54.4**	**-0.3**
WHFO	**Wadi Hawf**	**11.54**	**201**	P		**Pn**	**11 16 56.3**	**-0.2**
ABTO	**Aybut**	**12.22**	**202**	P		**Pn**	**11 17 04.4**	**-1.5**

*IDC **08** 11:18:20.5±0.6,3.°12S×147.°67E, h0km, mb4.2/19, mbtmp4.2/22, ML2.2/2, Error ellipse: s-maj=18.8km s-min=13.8km az=80.0*
*NEIC **08** 11:18:22.1±1.2,2.°99S±0.°05×147.°71E±0.°04, h10km±1km, mb4.3/15, Error ellipse: s-maj=10.3km s-min=4.3km az=146.0*

ISC 08 11:18:21.9±0.4,**2.°99S**±0.°05×**147.°69E**±0.°07,**h10**km,**n54,** σ1.**8**/52,**mb4.2**/26,**Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MANU	**Manus Island**	**1.00**	**341**			**Pg**	**11 18 38.9**	**-2.2**
RABL	**Rabaul**	**4.62**	**105**	Pn		**Pn**	**11 19 30.0**	**-1.9**
PMG	**Port Moresby**	**6.39**	**185**			**Pn**	**11 19 55.1**	**-1.1**
PMG	**Port Moresby**	**6.39**	**185**	Pn		**Pn**	**11 19 55.3**	**-0.9**
	0.7nm,0.3s,baz=304,slow=7.7,SNR=4.9							
PMG				Sn		**Sn**	**11 21 13.3**	**+4.0**
	0.5nm,0.3s,baz=336,slow=19,SNR=3.4							
	6.8nm,0.7s							
JAY	**Jayapura**	**6.99**	**274**	Pn		**Pn**	**11 20 04.1**	**-0.3**
	0.4nm,0.3s,baz=11,slow=6.0,SNR=4.3							
	4.6nm,0.5s							
COEN	**Coen**	**11.77**	**202**			**Pn**	**11 21 09.9**	**-0.1**
HNR	**Honiara**	**13.76**	**118**			**Pn**	**11 21 35.9**	**-1.3**
HNR	**Honiara**	**13.76**	**118**	Pn		**Pn**	**11 21 35.7**	**-1.4**
	11nm,0.3s,baz=208,slow=17,SNR=1.5							
HNR				Sn		**Sn**	**11 24 11.4**	**+1.2**
	7.1nm,0.3s,baz=0.0,slow=19,SNR=4.4							
WB0	**Warramunga Arr**	**21.13**	**217**	P		**P**	**11 23 05.7**	**-1.4**
WB0				IAmb		IAmb	11 23 17.1	
	comp=Z,20nm,1.1s							
WR8	**Warramunga Arr**	**21.21**	**216**	P		**P**	**11 23 07.1**	**-0.9**
WRAB	**Tennant Creek**	**21.28**	**217**	P		**P**	**11 23 08.5**	**-0.3**
WRAB				IAmb		IAmb	11 23 18.7	
	comp=Z,21nm,1.0s							
WRA	**Warramunga Arr**	**21.30**	**217**	P		**P**	**11 23 06.9**	**-2.0**
WRA	**Warramunga Arr**	**21.30**	**217**	P		**P**	**11 23 08.0**	**-0.9**
	comp=Z,7.6nm,0.8s,baz=42,slow=10,SNR=36							
WRA				PcP		**PcP**	**11 27 12.2**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=29,slow=2.0,SNR=1.0							
	comp=Z,7.6nm,0.8s							
EIDS	**Eidsvold**	**22.49**	**172**	P		**P**	**11 23 20.7**	**-0.9**
EIDS				IAmb		IAmb	11 23 37.3	
	comp=Z,12nm,1.1s							
KNRA	**Kununurra**	**22.50**	**235**	P		**P**	**11 23 20.6**	**-1.2**
KNRA				IAmb		IAmb	11 23 45.8	
	comp=Z,15nm,1.1s							
AS31	**Alice Springs**	**24.50**	**212**			**P**	**11 23 41.1**	**-0.5**
ASAR	**Alice Springs**	**24.50**	**212**	P		**P**	**11 23 41.1**	**-0.5**
ASAR	**Alice Springs**	**24.50**	**212**	P		**P**	**11 23 41.0**	**-0.6**
	comp=Z,4.9nm,0.8s,baz=40,slow=6.9,SNR=22							
ASAR				PcP		**PcP**	**11 27 19.3**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=28,slow=4.2,SNR=4.5							
	comp=Z,4.9nm,0.8s							
DZM	**Mont Dzumac**	**26.30**	**138**	P		**P**	**11 23 56.3**	**-1.6**
	comp=Z,2.0nm,0.5s,baz=298,slow=3.2,SNR=10							
	comp=Z,2.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**26.31**	**234**	P		**P**	**11 23 57.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**26.31**	**234**	P		**P**	**11 23 58.1**	**+0.1**
	comp=Z,7.5nm,0.9s,baz=56,slow=11,SNR=6.0							
	comp=Z,7.5nm,0.9s							
ARMA	**Armidale**	**27.53**	**173**	P		**P**	**11 24 09.1**	**+0.1**
ARMA				IAmb		IAmb	11 24 31.8	
	comp=Z,8.7nm,1.1s							
H11S3	**WAKE ISLAND Hy**	**28.39**	**41**	T		T	11 54 06.9	
	baz=223,slow=76,SNR=206							
H11S2	**WAKE ISLAND Hy**	**28.40**	**41**	T		T	11 54 06.7	
	baz=223,slow=76,SNR=210							
H11S1	**WAKE ISLAND Hy**	**28.41**	**41**	T		T	11 54 08.6	
	baz=223,slow=76,SNR=198							
H11N1	**WAKE ISLAND Hy**	**29.41**	**39**	T		T	11 55 22.4	
	baz=222,slow=76,SNR=59							
H11N3	**WAKE ISLAND Hy**	**29.43**	**39**	T		T	11 55 23.9	
	baz=222,slow=76,SNR=102							
H11N2	**WAKE ISLAND Hy**	**29.43**	**39**	T		T	11 55 23.7	
	baz=222,slow=76,SNR=95							
CAN	**Canberra**	**32.19**	**178**	P		**P**	**11 24 49.5**	**-0.7**
FORT	**Forrest**	**33.28**	**212**	P		**P**	**11 24 59.7**	**-0.1**
FORT				IAmb		IAmb	11 25 11.1	
	comp=Z,4.6nm,0.8s							
KSRS	**Korea Array**	**44.23**	**337**	P		**P**	**11 26 32.2**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=156,slow=8.8,SNR=4.5							
	comp=Z,1.2nm,0.6s							
USRK	**Ussuriysk Ar.**	**49.05**	**345**	P		**P**	**11 27 10.3**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=126,slow=2.0,SNR=2.9							
	comp=Z,3.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**52.50**	**296**	P		**P**	**11 27 34.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**52.50**	**296**	P		**P**	**11 27 35.6**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=114,slow=5.8,SNR=5.2							
	comp=Z,0.5nm,0.4s							
LZDM	**Lanzhou Array**	**56.45**	**317**	P		**P**	**11 28 06.0**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=163,slow=5.3,SNR=1.9							
	comp=Z,1.4nm,0.3s							
PETK	**Petropavlovsk-**	**56.53**	**7**	P		**P**	**11 28 04.4**	**+0.1**
PETK	**Petropavlovsk-**	**56.53**	**7**	P		**P**	**11 28 06.3**	**+2.0**
	comp=Z,5.3nm,0.8s,baz=131,slow=6.7,SNR=2.8							
	comp=Z,5.3nm,0.8s							
SONM	**Songino Array**	**62.15**	**330**	P		**P**	**11 28 43.1**	**-0.3**
SONM				IAmb		IAmb	11 28 50.3	
	comp=Z,1.3nm,0.9s							
SONM	**Songino Array**	**62.15**	**330**	P		**P**	**11 28 44.1**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=131,slow=6.7,SNR=4.1							
	comp=Z,0.4nm,0.3s							
VNDA	**Vanda**	**74.86**	**177**	P		**P**	**11 30 02.2**	**0.0**
VNDA				IAmb		IAmb	11 30 03.5	
	comp=Z,1.6nm,0.8s							
VNDA	**Vanda**	**74.86**	**177**	P		**P**	**11 30 01.1**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=330,slow=6.4,SNR=10							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**75.64**	**320**	P		**P**	**11 30 06.0**	**-1.4**
MKAR	**Makanchi Array**	**75.64**	**320**	P		**P**	**11 30 07.5**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=115,slow=5.5,SNR=5.9							
	comp=Z,1.0nm,0.9s							
KURK	**Kurchatov**	**79.23**	**323**	P		**P**	**11 30 27.0**	**-0.3**
KURK				IAmb		IAmb	11 30 30.2	
	comp=Z,4.0nm,1.1s							
KURBB	**Kurchatov Arra**	**79.26**	**323**	P		**P**	**11 30 27.6**	**+0.2**
	comp=Z,3.0nm,0.2s,baz=100,slow=5.0,SNR=4.2							
	comp=Z,3.0nm,0.2s							
ILAR	**Eielson Array**	**82.47**	**23**	P		**P**	**11 30 44.7**	**+0.4**
ILAR	**Eielson Array**	**82.47**	**23**	P		**P**	**11 30 44.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=250,slow=5.2,SNR=11							
	comp=Z,1.3nm,0.7s							
GLB	**Gilahina Butte**	**82.51**	**27**	P		**P**	**11 30 45.6**	**+0.9**
BVAR	**Borovoye Array**	**84.76**	**324**	P		**P**	**11 30 57.1**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=114,slow=5.4,SNR=4.9							
	comp=Z,0.8nm,0.6s							
QSPA	**South Pole Qui**	**86.95**	**180**	P		**P**	**11 31 07.2**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=269,slow=1.2,SNR=5.1							
	comp=Z,0.7nm,0.8s							
NVAR	**Mina Array Bea**	**94.99**	**52**	P		**P**	**11 31 46.9**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=252,slow=5.6,SNR=3.9							
	comp=Z,0.8nm,0.8s							
NEW	**Newport**	**95.68**	**42**	P		**P**	**11 31 48.8**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=334,slow=4.5,SNR=3.3							
	comp=Z,1.6nm,0.9s							
YKA	**Yellowknife Ar**	**96.21**	**28**	P		**P**	**11 31 51.5**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=299,slow=44,SNR=1.4							
	comp=Z,0.6nm,0.7s							
SIV	**San Ignacio**	**145.88**	**124**	PKPbc		**PKPab**	**11 38 04.0**	**+0.9**
	comp=Z,2.6nm,0.7s,baz=227,slow=2.4,SNR=12							

BER 08 11:21:38.3±1.6,**66.°42N**×**14.°69E**,**h0**km,**ML1.3,**
Suspected explosion, Northern Norway

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAUS	**Rausandaksla**	**0.26**	**275**	*e*P		Pg	11 21 42.5	-0.8
RAUS				*e*S		Sg	11 21 46.0	-0.7
MOR8	**Moi Rana**	**0.27**	**203**	*e*P		Pg	11 21 40.1	-3.2
MOR8				*e*S		Sg	11 21 42.2	-4.5
MOR8				IAML			11 21 43.4	
	comp=Z,82nm,0.5s							
VAGH	**Vaagaholmen**	**0.65**	**300**	*e*P		Pg	11 21 49.8	-0.9
STOK	**Stokkvaagen**	**0.68**	**264**	*e*P		Pg	11 21 50.4	-0.9
STOK				*e*S		Sg	11 22 01.1	+1.0
FAUS	**Fauske**	**1.00**	**13**	*e*P		Pg	11 21 55.8	-1.6
STEI	**Steigen**	**1.54**	**8**	*e*P		Pn	11 22 05.2	-1.7
SALU	**Saltoluokta**	**1.79**	**55**	*e*P		Pn	11 22 09.9	-0.6

DNK 08 11:21:57.2±1.8,**59.°07N**×**9.°61E**,**h0**km±14km,**Southern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STRU	**Stroemstad**	**0.82**	**92**	*i* P		Pg	11 22 12.1	-0.7
STRU				*i* S		Sg	11 22 23.3	0.0
HOMB	**Homborsund**	**0.99**	**216**	*e*P		Pg	11 22 13.4	-2.7
HOMB				*i* S		Sg	11 22 29.4	+0.4
SNART	**Snartemo**	**1.45**	**240**	*i* P		Pn	11 22 24.1	-0.6
SNART				*i* S		Sg	11 22 42.4	-1.4
TJOU	**Tjoern**	**1.49**	**134**	*i* P		Pn	11 22 23.8	-1.3
TJOU				*i* S		Sg	11 22 43.6	-1.3

*BGR **08** 11:21:52.3,21.°74S×178.°83W, h600km*
*NEIC **08** 11:22:51.8±1.9,22.°1S±0.°1×179.°5W±0.°1, h554km±7km, mb4.5/148, Error ellipse: s-maj=17.6km s-min=14.5km az=129.0*
*IDC **08** 11:22:52.7±1.2,22.°01S×179.°66W, h570km±13km, mb3.7/18, mbtmp4.6/20, Error ellipse: s-maj=13.2km s-min=9.5km az=157.0*
*NOU **08** 11:22:52.0,22.°15S×179.°43W, h575km, mb4.5/52, South of Fiji Islands*

ISC 08 11:22:53.6±0.3,**22.°23S**±0.°05×**179.°50W**±0.°06,**h592**km, **n559**,**s0695**/509,**mb4.5**/93,**22C-18D**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**7.14**	**169**			**P**	**11 24 42.8**	**-1.6**
RAO	**Raoul Island**	**7.14**	**169**	P		**P**	**11 24 43.0**	**-1.5**
	397nm,0.3s,baz=70,slow=6.6,SNR=13							
RAO				S		**S**	**11 26 12.8**	**-2.4**
	243nm,0.7s,baz=81,slow=23,SNR=1.4							
RAO	**Raoul Island**	**7.14**	**169**	S		**S**	**11 26 13.1**	**-2.1**
RAO	**Raoul Island**	**7.14**	**169**	P		**P**	**11 24 42.9**	**-1.6**
RAO	**Raoul Island**	**7.14**	**169**	P		**P**	**11 24 42.7**	**-1.7**
GLKZ	**Green Lake**	**7.15**	**169**	P		**P**	**11 24 42.7**	**-1.8**
GLKZ				S		**S**	**11 26 12.3**	**-3.0**
NIUE	**Niue**	**9.49**	**72**	P		**P**	**11 25 05.8**	**-1.5**
NIUE	**Niue**	**9.49**	**72**	P		**P**	**11 25 05.8**	**-1.5**
NIUE	**Niue**	**9.49**	**72**	P		**P**	**11 25 05.7**	**-2.2**
NIUE				S		**S**	**11 26 57.0**	**+0.1**
AFI	**Afiamalu**	**11.06**	**43**	P		**P**	**11 25 18.8**	**-4.2**
AFI	**Afiamalu**	**11.06**	**43**	P		**P**	**11 25 18.8**	**-4.2**
MARNC	**Mare, Loyalty**	**11.61**	**271**			**P**	**11 25 27.6**	**-0.9**
MARNC	**Mare, Loyalty**	**11.61**	**271**	P		**P**	**11 25 27.2**	**-1.2**
PINNC	**Pines Island,**	**12.09**	**266**			**P**	**11 25 32.5**	**-0.8**
PINNC	**Pines Island,**	**12.09**	**266**	P		**P**	**11 25 32.2**	**-1.0**
YATNC	**Mamie plateau,**	**12.62**	**268**	P		**P**	**11 25 37.5**	**-1.2**
OUENC	**Ouen Island, N**	**12.65**	**267**	P		**P**	**11 25 37.9**	**-1.0**
ONTNC	**Ouen Toro**	**13.01**	**267**			**P**	**11 25 40.2**	**-2.4**
DZM	**Mont Dzumac**	**13.03**	**268**	P		**P**	**11 25 40.3**	**-2.7**
	11nm,0.6s,baz=69,slow=20,SNR=21							
NFK	**Norfolk Island**	**13.21**	**237**	P		**P**	**11 25 45.0**	**+0.4**
SANVU	**Saraoutou**	**14.28**	**296**	P		**P**	**11 25 53.3**	**-2.2**
OUZ	**Omahuta**	**14.29**	**204**	P		**P**	**11 25 56.1**	**+0.9**
OUZ	**Omahuta**	**14.29**	**204**	P		**P**	**11 25 56.0**	**+0.8**
WCZ	**Waipu Caves**	**14.68**	**200**	P		**P**	**11 26 01.0**	**+2.1**
KUZ	**Kuaotunu**	**15.05**	**195**	P		**P**	**11 26 02.5**	**+0.2**
HAZ	**Te Kaha**	**15.65**	**188**	P		**P**	**11 26 07.1**	**-0.8**
RUGZ	**Raukumara Rang**	**15.87**	**188**	P		**P**	**11 26 08.7**	**-1.4**
TGRZ	**Tauranga**	**15.88**	**192**	P		**P**	**11 26 11.6**	**+1.6**
PUZ	**Puketiti**	**15.91**	**186**	P		**P**	**11 26 09.4**	**-0.9**
TOZ	**Tahuroa Road**	**16.04**	**194**			**P**	**11 26 12.6**	**+1.1**
TOZ				IAmb		IAmb	11 26 15.5	
	comp=Z,8.8nm,0.7s							
TOZ	**Tahuroa Road**	**16.04**	**194**	P		**P**	**11 26 12.6**	**+1.1**
TWGZ	**Tauwhareparae**	**16.04**	**187**	P		**P**	**11 26 11.8**	**+0.2**
KMRZ	**Kaimai**	**16.05**	**193**	P		**P**	**11 26 13.0**	**+1.3**
URZ	**Urewera**	**16.24**	**190**	P		**P**	**11 26 11.7**	**-1.7**
	comp=Z,12nm,0.3s,baz=243,slow=2.7,SNR=34							
URZ				S		**S**	**11 28 49.6**	**-6.5**
	comp=Z,12nm,0.5s,baz=73,slow=22,SNR=16							
URZ	**Urewera**	**16.24**	**190**	P		**P**	**11 26 11.8**	**-1.5**
URZ	**Urewera**	**16.24**	**190**	P		**P**	**11 26 10.8**	**-2.5**
MWZ	**Matawai**	**16.25**	**188**	P		**P**	**11 26 12.1**	**-1.5**
MUGZ	**Murupara**	**16.51**	**190**	P		**P**	**11 26 14.5**	**-1.3**
RIGZ	**Rimuhau**	**16.59**	**188**	P		**P**	**11 26 16.1**	**-0.5**
ETVZ	**East Tongariro**	**17.34**	**193**	P		**P**	**11 26 22.4**	**-1.1**
RAR	**Rarotonga**	**18.35**	**91**	P		**P**	**11 26 33.2**	**+0.3**
	comp=Z,11nm,0.7s,baz=255,slow=12,SNR=1.2							
BFZ	**Birch Farm**	**18.75**	**190**	P		**P**	**11 26 34.6**	**-1.6**
SNZO	**South Karori**	**19.64**	**193**	P		**P**	**11 26 44.3**	**0.0**
QRZ	**Quartz Range**	**19.73**	**198**	P		**P**	**11 26 45.2**	**+0.1**
KHZ	**Kahutara**	**20.96**	**195**	P		**P**	**11 26 54.8**	**-1.3**
LHI	**Lord Howe Isla**	**21.22**	**240**	P		**P**	**11 26 56.5**	**-2.1**
JCZ	**Jackson Bay**	**23.84**	**201**	P		**P**	**11 27 21.8**	**-0.1**
GC1S	**Gold Coast 1 S**	**25.10**	**251**	P		**P**	**11 27 32.8**	**-0.3**
EIDS	**Eidsvold**	**27.08**	**258**	P		**P**	**11 27 50.6**	**0.0**
EIDS	**Eidsvold**	**27.08**	**258**	P		**P**	**11 27 50.5**	**0.0**
ARMA	**Armidale**	**27.08**	**246**			**P**	**11 27 52.0**	**+1.4**
ARMA	**Armidale**	**27.08**	**246**	P		**P**	**11 27 51.9**	**+1.2**
MGCD	**Mangrove Creek**	**28.14**	**241**	P		**P**	**11 28 01.7**	**+2.0**
CNB	**Canberra Magne**	**30.12**	**237**	P		**P**	**11 28 18.0**	**+1.2**
CAN	**Canberra**	**30.40**	**238**	P		**P**	**11 28 20.4**	**+1.2**
CAN	**Canberra**	**30.40**	**238**	P		**P**	**11 28 20.2**	**+0.9**
CMSA	**Cobar Meteorol**	**32.29**	**246**	P		**P**	**11 28 35.5**	**+0.2**
QLP	**Quilpie**	**33.24**	**255**	P		**P**	**11 28 43.4**	**0.0**
TOO	**Toolangi**	**33.76**	**235**			**P**	**11 28 48.4**	**+0.8**
TAU	**Tasmania Unive**	**34.42**	**225**	P		**P**	**11 28 53.7**	**+0.7**
BRAT	**Ballarat**	**34.95**	**236**	P		**P**	**11 28 58.8**	**+1.4**
STKA	**Stephens Creek**	**35.80**	**246**			**P**	**11 29 05.2**	**+0.6**
STKA	**Stephens Creek**	**35.80**	**246**	P		**P**	**11 29 04.7**	**+0.1**
	comp=Z,21nm,0.5s,baz=93,slow=10,SNR=54							
	comp=Z,21nm,0.5s							
STKA	**Stephens Creek**	**35.80**	**246**	P		**P**	**11 29 05.1**	**+0.5**
INKA	**Innaminka**	**36.34**	**253**			**P**	**11 29 10.0**	**+0.9**
COEN	**Coen**	**36.35**	**277**	P		**P**	**11 29 10.0**	**+0.7**
COEN	**Coen**	**36.35**	**277**	P		**P**	**11 29 09.3**	**0.0**
QIS	**Mount Isa**	**38.04**	**265**	P		**P**	**11 29 22.4**	**-0.7**
HTT	**Hallett**	**38.20**	**244**	P		**P**	**11 29 24.5**	**+0.2**
BBOO	**Buckleboo**	**40.55**	**245**	P		**P**	**11 29 43.0**	**+0.1**
BBOO	**Buckleboo**	**40.55**	**245**	P		**P**	**11 29 42.6**	**-0.4**
AS31	**Alice Springs**	**42.79**	**259**	P		**P**	**11 30 00.8**	**0.0**
ASAR	**Alice Springs**	**42.79**	**259**	P		**P**	**11 30 00.3**	**-0.5**
ASAR	**Alice Springs**	**42.79**	**259**	P		**P**	**11 30 00.6**	**-0.2**
	comp=Z,20nm,0.8s,baz=96,slow=8.0,SNR=124							
ASAR				PcP		**PcP**	**11 31 38.8**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=108,slow=3.5,SNR=5.9							
ASAR				ScP		**ScP**	**11 34 37.6**	**+4.1**
	comp=Z,0.7nm,0.7s,baz=106,slow=4.2,SNR=2.2							
ASAR				S		**S**	**11 35 41.6**	**-1.6**
	comp=Z,1.9nm,0.6s,baz=94,slow=16,SNR=14							
	comp=Z,20nm,0.8s							
WR8	**Warramunga Arr**	**42.86**	**264**	P		**P**	**11 30 00.4**	**-0.9**
WB0	**Warramunga Arr**	**43.00**	**264**	P		**P**	**11 30 01.7**	**-0.7**
WB0				IAmb		IAmb	11 30 02.2	
	comp=Z,16nm,0.6s							
WRAB	**Tennant Creek**	**43.00**	**264**	P		**P**	**11 30 01.5**	**-0.9**
WRAB				IAmb		IAmb	11 30 02.3	
	comp=Z,9.8nm,0.8s							
WRAB	**Tennant Creek**	**43.00**	**264**	P		**P**	**11 30 01.3**	**-1.1**
WRA	**Warramunga Arr**	**43.01**	**264**	P		**P**	**11 30 02.0**	**-0.5**
WRA	**Warramunga Arr**	**43.01**	**264**	P		**P**	**11 30 01.6**	**-0.9**
	comp=Z,8.9nm,0.6s,baz=95,slow=7.8,SNR=266							
WRA				ScP		**ScP**	**11 34 37.1**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=96,slow=3.9,SNR=2.2							
WRA				S		**S**	**11 35 45.8**	**-0.6**
	comp=Z,1.5nm,1.0s,baz=105,slow=14,SNR=6.7							
	comp=Z,8.9nm,0.6s							
JAY	**Jayapura**	**43.32**	**291**	P		**P**	**11 30 03.4**	**-1.6**
	comp=Z,9.9nm,0.8s,baz=159,slow=1.9,SNR=4.7							
	comp=Z,9.9nm,0.8s							
WAKE	**Wake Island**	**43.42**	**341**	P		**P**	**11 30 04.6**	**-0.9**
FORT	**Forrest**	**47.35**	**248**			**P**	**11 30 35.2**	**-0.1**
MTN	**Manton Dam**	**47.82**	**273**	P		**P**	**11 30 38.5**	**-0.6**
KNRA	**Kununurra**	**49.18**	**268**	P		**P**	**11 30 49.0**	**-0.1**
KNRA				IAmb		IAmb	11 30 50.9	
	comp=Z,8.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**51.44**	**264**	P		**P**	**11 31 05.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**51.44**	**264**	P		**P**	**11 31 05.8**	**+0.3**
	comp=Z,3.1nm,0.3s,baz=60,slow=6.4,SNR=33							
	comp=Z,3.1nm,0.3s							
FITZ	**Fitzroy Crossi**	**51.44**	**264**	P		**P**	**11 31 05.5**	**0.0**
PSA00	**Pilbara Seismi**	**55.94**	**258**	P		**P**	**11 31 36.9**	**-0.3**
PSA00	**Pilbara Seismi**	**55.94**	**258**	P		**P**	**11 31 37.1**	**0.0**
PSA00				IAmb		IAmb	11 31 37.2	
	comp=Z,9.2nm,0.6s							
PSA00	**Pilbara Seismi**	**55.94**	**258**	P		**P**	**11 31 37.3**	**+0.1**
MEEK	**Meekatharra**	**56.05**	**252**	P		**P**	**11 31 37.1**	**-0.8**
SBA	**Scott Base**	**56.07**	**183**	P		**P**	**11 31 40.9**	**+3.9**
VNDA	**Vanda**	**56.08**	**185**	P		**P**	**11 31 39.7**	**+2.5**
VNDA	**Vanda**	**56.08**	**185**	P		**P**	**11 31 39.8**	**+2.7**
	comp=Z,0.8nm,0.7s,baz=347,slow=6.7,SNR=3.6							
	comp=Z,0.8nm,0.7s							
MBWA	**Marble Bar**	**56.13**	**259**	P		**P**	**11 31 38.2**	**-0.3**
MBWA				IAmb		IAmb	11 31 38.8	
	comp=Z,12nm,0.8s							
MBWA	**Marble Bar**	**56.13**	**259**	P		**P**	**11 31 38.0**	**-0.5**
NWAO	**Narrogin (SRO)**	**56.36**	**244**	P		**P**	**11 31 39.9**	**0.0**
NWAO				IAmb		IAmb	11 32 02.1	
	comp=Z,32nm,1.4s							
BLDU	**Ballidu**	**57.09**	**247**	P		**P**	**11 31 44.5**	**-0.4**
MORW	**Morawa**	**57.90**	**249**	P		**P**	**11 31 50.4**	**-0.1**
MORW				IAmb		IAmb	11 31 51.0	
	comp=Z,15nm,1.0s							
MORW	**Morawa**	**57.90**	**249**	P		**P**	**11 31 50.3**	**-0.1**
PLAI	**Plampang**	**61.51**	**272**	P		**P**	**11 32 14.3**	**-0.3**
CASY	**Casey**	**61.81**	**206**	P		**P**	**11 32 16.6**	**+1.0**
CASY				IAmb		IAmb	11 32 31.1	
	comp=Z,19nm,1.4s							
TOLI2	**Tolitoli**	**62.62**	**284**	P		**P**	**11 32 21.1**	**-0.7**
TOLI2	**Tolitoli**	**62.62**	**284**	P		**P**	**11 32 21.1**	**-0.7**
JAGI	**Jajag, Banyuwa**	**65.00**	**271**	P		**P**	**11 32 36.1**	**-0.7**
JAGI				IAmb		IAmb	11 32 44.6	
	comp=Z,29nm,1.3s							
QSPA	**South Pole Qui**	**67.85**	**180**	P		**P**	**11 32 56.3**	**+2.6**
QSPA	**South Pole Qui**	**67.85**	**180**	P		**P**	**11 32 57.2**	**+3.6**
	comp=Z,1.3nm,0.5s,baz=132,slow=15,SNR=17							
	comp=Z,1.3nm,0.5s							
UGM	**Wanagama**	**68.55**	**270**	P		**P**	**11 32 58.5**	**-0.3**
MJAR	**Matsushiro Arr**	**70.79**	**325**			**P**	**11 33 11.3**	**-0.2**
MJAR	**Matsushiro Arr**	**70.79**	**325**	P		**P**	**11 33 11.0**	**-0.5**
	comp=Z,7.0nm,0.7s,baz=157,slow=5.8,SNR=16							
	comp=Z,7.0nm,0.7s							
YOJ	**Yonaguni jima**	**72.61**	**306**	P		**P**	**11 33 22.1**	**-0.2**
YULB	**Yu-li**	**73.30**	**305**	P		**P**	**11 33 25.3**	**-1.0**
NACB	**Ninganchiao**	**73.51**	**305**	P		**P**	**11 33 26.9**	**-0.5**
TPUB	**Ta-pu**	**73.76**	**304**	P		**P**	**11 33 27.6**	**-1.3**
SSLB	**Suanglung**	**73.78**	**305**	P		**P**	**11 33 28.3**	**-0.7**
ADK	**Adak**	**73.83**	**2**	P		**P**	**11 33 28.2**	**-0.4**
NIKH	**Nikolski High**	**75.45**	**7**	P		**P**	**11 33 37.6**	**0.0**
	baz=190							
AKUT	**Akutan**	**76.96**	**8**	P		**P**	**11 33 44.9**	**-0.9**
KSRS	**Korea Array**	**77.28**	**320**	P		**P**	**11 33 48.1**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=134,slow=5.1,SNR=5.3							
	comp=Z,2.2nm,0.8s							
PETK	**

baz=206
PINE Pine Mountain 84.80 38 lAmb lAmb 11 34 29.4
comp=Z,28nm,1.5s
N18K Kilae Creek 84.81 11 P P 11 34 26.3 +0.2
baz=202
L15K Ungalak Mounta 84.86 9 P P 11 34 26.1 -0.2
baz=197
O20K Slope Mountain 84.90 13 P P 11 34 26.2 -0.5
baz=205
BRSE Bradley Lake S 85.01 14 P P 11 34 26.2 -0.9
baz=207
L16K Owhat River 85.18 9 P P 11 34 26.7 -1.1
baz=199
N19K Bonanza Creek 85.20 12 lAmb lAmb 11 34 27.9
comp=Z,7.8nm,0.8s
N19K Bonanza Creek 85.20 12 P P 11 34 27.1 -1.0
baz=203
M17K Holitna River 85.21 10 P P 11 34 28.7 +0.6
baz=200
K15K Wolf Creek Mou 85.44 8 P P 11 34 29.5 +0.4
baz=197
M18K Stony River 85.58 11 P P 11 34 29.6 -0.2
baz=202
SEW Seward 85.63 15 P P 11 34 29.5 -0.5
baz=208
J14K Nanvaranak Lak 85.63 7 P P 11 34 29.7 -0.2
baz=195
L17K Donlin 85.76 10 P P 11 34 30.4 -0.3
baz=200
Q23K Middleton Isla 85.80 16 P P 11 34 30.9 +0.1
baz=211
I07A Izee 85.80 39 lAmb lAmb 11 34 33.9
comp=Z,7.1nm,1.1s
CAPN Captain Cook N 85.84 14 P P 11 34 30.7 -0.2
baz=206
O22K Cooper Landing 85.90 14 P P 11 34 31.3 +0.1
baz=208
N20K Mount Spurr 86.00 13 P P 11 34 30.9 -1.0
baz=205
SPCR Spurr Chakacha 86.00 13 P P 11 34 31.2 -0.7
baz=205
P23K Montague Islan 86.03 16 P P 11 34 31.7 -0.2
baz=210
L18K Granite Mounta 86.11 10 P P 11 34 32.6 +0.3
baz=201
U15A North Rim 86.15 48 lAmb lAmb 11 34 36.0
comp=Z,5.1nm,0.8s
M19K Big River Lodg 86.22 12 P P 11 34 32.7 -0.1
baz=203
D05A Enumclaw 86.31 35 lAmb lAmb 11 34 36.4
comp=Z,17nm,1.1s
K17K Iditarod 86.31 10 P P 11 34 33.3 +0.1
baz=200
L19K White Mountain 86.39 11 lAmb lAmb 11 34 35.0
comp=Z,15nm,0.8s
L19K White Mountain 86.39 11 P P 11 34 33.9 +0.2
baz=203
M20K Styx River 86.44 12 P P 11 34 32.6 -1.3
baz=204
J16K Anvik River 86.52 8 P P 11 34 33.2 -0.9
baz=198
SUA Susitna One 86.55 13 P P 11 34 33.8 -0.7
baz=207
PWL Port Wells 86.56 15 P P 11 34 34.5 +0.1
baz=209
KAIM Kayak Island 86.73 17 P P 11 34 35.2 -0.1
baz=212
G08A Pilot Rock 86.83 38 lAmb lAmb 11 34 38.5
comp=Z,10nm,1.1s
J17K VABM Dome 86.84 9 P P 11 34 35.8 +0.1
baz=199
L20K Farewell, AK 86.85 12 P P 11 34 35.6 -0.2
baz=204
SKT Skwentna 86.85 13 P P 11 34 35.0 -0.8
baz=206
CRAG Craig 86.86 24 P P 11 34 35.5 -0.4
baz=222
GLI Glacier Island 86.87 15 P P 11 34 35.8 -0.1
baz=210,SNR=5.8
EYAK Cordova Ski Ar 86.92 16 P P 11 34 36.2 +0.1
EYAK Cordova Ski Ar 86.92 16 P P 11 34 36.1 +0.1
baz=211
M22K Willow 86.94 14 P P 11 34 36.6 +0.4
baz=207
KNK Knik Glacier 87.01 14 P P 11 34 36.9 +0.3
baz=209
PMR Palmer 87.02 14 P P 11 34 36.4 -0.1
PMR Palmer 87.02 14 P P 11 34 36.5 -0.1
baz=208,SNR=5.9
E07A Sunnyside 87.08 37 lAmb lAmb 11 34 39.7
comp=Z,10nm,0.8s
I17K Unalakleet 87.08 8 P P 11 34 36.1 -0.7
baz=197
HAWA Hanford 87.16 37 lAmb lAmb 11 34 39.9
comp=Z,8.1nm,0.8s
ANM Nome 87.20 6 P P 11 34 36.4 -0.9
baz=193
SIT Sitka 87.24 22 P P 11 34 37.1 -0.6
baz=220
J18K Innoko River 87.27 10 P P 11 34 37.0 -0.8
baz=201
WAH2 Wahluke Slope 87.36 37 lAmb lAmb 11 34 40.2
comp=Z,4.3nm,0.6s
SML Sawmill 87.39 14 P P 11 34 37.9 -0.5
baz=209
DIV Divide 87.41 16 lAmb lAmb 11 34 39.5
comp=Z,8.4nm,0.7s
E08A Dider Farm, El 87.48 37 lAmb lAmb 11 34 41.8
comp=Z,8.4nm,1.0s
CUT Chulitna 87.50 13 P P 11 34 38.1 -0.6
baz=207,SNR=8.2
M23K Glacier View 87.52 14 P P 11 34 38.0 -0.9
baz=209
PPLA Purkeypile 87.55 12 P P 11 34 38.3 -0.9
baz=205
BMRM Bremner River 87.57 16 lAmb lAmb 11 34 40.4
comp=Z,12nm,0.8s
BMRM Bremner River 87.57 16 P P 11 34 38.7 -0.5
baz=212
MFID Camas Ranch 87.60 41 lAmb lAmb 11 34 42.1
comp=Z,5.9nm,1.0s
H16K Elim 87.61 7 P P 11 34 38.6 -0.7
baz=196
S31K Pelican 87.62 21 P P 11 34 39.3 -0.1
baz=220
MESA MESA 87.63 18 P P 11 34 39.6 -0.1
baz=214
SCM Sheep Creek Mo 87.64 15 P P 11 34 39.6 0.0
baz=210,SNR=8.0
KLU Klutina 87.69 15 P P 11 34 39.6 -0.2
baz=211
G15K Niukluk 87.76 7 P P 11 34 40.7 +0.8
baz=194
CRQE Cirque 87.79 17 P P 11 34 40.3 -0.1
baz=213
S32K Killisnoo 87.82 22 P P 11 34 40.9 +0.5
baz=221
WRAK Wrangell Islan 87.85 24 P P 11 34 40.5 -0.1
baz=223
D08A Wollman Farm, 87.89 37 lAmb lAmb 11 34 43.2
comp=Z,11nm,0.9s
J19K Poorman 87.94 10 P P 11 34 41.1 +0.3
baz=202
PNL Peninsula 87.96 19 P P 11 34 41.1 0.0
baz=217
F14K Arctic Creek 88.01 5 P P 11 34 41.6 +0.5
baz=192
E09A Wood Farm, Sta 88.01 37 lAmb lAmb 11 34 43.5
comp=Z,7.6nm,1.0s
PINM Pinnacle 88.05 18 P P 11 34 41.5 0.0
baz=216
XAN Xi'an 88.08 308 P P 11 34 43.6 +1.3
XAN pmax pmax
comp=Z,18nm,0.9s
N25K Chitina, Valde 88.11 16 lAmb lAmb 11 34 43.0
comp=Z,9.7nm,0.7s
N25K Chitina, Valde 88.11 16 P P 11 34 41.8 0.0
baz=212,SNR=7.1
GRNC Granite Creek 88.14 18 lAmb lAmb 11 34 43.5
comp=Z,9.0nm,0.9s
M24K Tolsona, Glenn 88.16 15 P P 11 34 42.9 +0.9
baz=211
GLB Gilahina Butte 88.18 16 lAmb lAmb 11 34 43.2
comp=Z,8.7nm,0.7s
H17K Granite Mounta 88.19 8 P P 11 34 41.8 -0.2
baz=198
WAT6 Susitna Watana 88.20 14 P P 11 34 42.5 +0.2
baz=209,SNR=7.8

F10A Beach Ranch, E 88.22 38 lAmb lAmb 11 34 44.2
comp=Z,7.3nm,0.9s
WAT1 Susitna Watana 88.24 14 P P 11 34 42.5 +0.2
baz=208
G16K Koyuk River 88.33 7 P P 11 34 42.0 -0.6
baz=196
MCARA McCarthy VSAT 88.34 17 P P 11 34 42.8 +0.1
baz=214
TMUT Trail Mountain 88.35 46 lAmb lAmb 11 34 46.4
comp=Z,6.1nm,1.1s
J20K Nowinta River 88.36 11 P 11 34 43.2 +0.4
J20K lAmb lAmb 11 34 43.7
comp=Z,7.5nm,0.9s
J20K Nowinta River 88.36 11 P P 11 34 42.7 -0.1
baz=203
F15K North Star Dit 88.39 6 P P 11 34 42.7 -0.2
baz=194
KTH Kantishna Hill 88.39 12 P P 11 34 42.6 -0.4
CHUM Lake Minchumin 88.42 12 P P 11 34 42.4 -0.6
baz=205
PLID Pearl Lake 88.43 39 lAmb lAmb 11 34 45.5
comp=Z,8.8nm,1.4s
TRF Thorofare Moun 88.43 13 P P 11 34 43.0 -0.3
baz=207,SNR=15
P29M Windy Craggy 88.44 20 P P 11 34 43.8 +0.5
baz=218
B08A Colville Reser 88.44 35 P 11 34 44.1 +0.6
B08A lAmb lAmb 11 34 45.0
comp=Z,6.2nm,0.8s
GCSA Galena City Sc 88.44 9 P P 11 34 43.7 +0.6
baz=201
CTG Chitna Glacier 88.45 18 P P 11 34 43.2 -0.2
baz=215,SNR=7.5
R32K Eaglecrest 88.45 22 P P 11 34 43.5 +0.1
baz=221
HLID Hailey 88.54 41 P 11 34 45.2 +0.8
HLID lAmb lAmb 11 34 46.7
comp=Z,3.6nm,0.8s
H18K Honhosa River 88.61 9 P P 11 34 43.9 -0.1
baz=200
HVU Hansel Valley 88.61 43 lAmb lAmb 11 34 46.8
comp=Z,6.2nm,1.0s
O28M Mount Upton 88.61 18 lAmb lAmb 11 34 45.8
comp=Z,8.2nm,0.7s
O28M Mount Upton 88.61 18 P P 11 34 44.3 -0.1
baz=216
G17K Kiwalik Mounta 88.64 8 P P 11 34 44.2 +0.2
baz=198
HARP HAARP 88.65 15 P P 11 34 44.4 +0.2
baz=212
C09A Chrisman Ranch 88.69 36 lAmb lAmb 11 34 46.5
comp=Z,4.5nm,0.8s
O29M Mount Kennedy 88.71 19 P P 11 34 44.8 +0.1
baz=217
SRU San Rafael Swe 88.72 47 lAmb lAmb 11 34 47.3
comp=Z,7.3nm,1.0s
DHY Denali Highway 88.72 14 P P 11 34 44.8 +0.1
baz=210
PLBC Pleasant Camp 88.74 20 P P 11 34 45.0 +0.4
baz=219
VHRN Van Horn 88.77 56 P 11 34 47.5 +1.8
VHRN lAmb lAmb 11 34 47.9
comp=Z,2.6nm,0.7s
BPAW Bear Paw Mtn. 88.87 12 P P 11 34 45.4 +0.2
baz=206
MNTX Cornudas Mount 88.88 55 P 11 34 47.5 +1.5
MNTX lAmb lAmb 11 34 48.4
comp=Z,4.4nm,0.8s
MCK McKinley 88.96 13 lAmb lAmb 11 34 47.5
comp=Z,10nm,1.0s
MCK McKinley 88.96 13 P P 11 34 45.6 0.0
baz=208,SNR=5.6
T35M Bob Quinn 89.06 25 P P 11 34 45.8 -0.4
baz=225
PAX Paxson 89.07 15 P P 11 34 45.1 -1.2
baz=211
P30M Million Dollar 89.07 20 P P 11 34 46.1 -0.2
baz=219
TCUT Toone Canyon 89.15 45 lAmb lAmb 11 34 49.5
comp=Z,8.0nm,0.8s
YUK8 Steele Glacier 89.15 18 P P 11 34 47.7 +0.9
baz=216,SNR=7.9
TX31 Lajitas Ar. Si 89.15 58 lAmb lAmb 11 34 50.6
comp=Z,4.1nm,1.1s
TXAR Lajitas Array 89.15 58 P P 11 34 49.5 +2.1
TXAR Lajitas Array 89.15 58 P P 11 34 49.4 +1.9
comp=Z,2.1nm,0.9s,baz=218,slow=6.2,SNR=16
comp=Z,2.1nm,0.9s
M26K Nabesna, AK 89.19 16 P P 11 34 47.6 +0.8
baz=214
H19K Roundabout Mou 89.24 9 P P 11 34 47.2 +0.4
baz=201
G18K Tagagawik 89.27 8 P P 11 34 47.5 +0.5
baz=199
BSUT Blindstream Ca 89.28 45 lAmb lAmb 11 34 50.3
comp=Z,7.0nm,0.9s
YUK6 Outpost Mounta 89.29 19 P P 11 34 47.5 0.0
baz=218
HWUT Hardware Ranch 89.30 44 lAmb lAmb 11 34 49.4
comp=Z,3.5nm,0.8s
YUK3 Moose Creek 89.36 17 P P 11 34 48.0 +0.2
baz=216,SNR=9.4
CMAR Chiang Mai Arr 89.39 290 P 11 34 50.5 +1.8
CMAR Chiang Mai Arr 89.39 290 P P 11 34 49.0 +0.4
comp=Z,4.6nm,0.8s,baz=73,slow=4.1,SNR=29
comp=Z,4.6nm,0.8s
S34M Telegraph Cree 89.40 24 lAmb lAmb 11 34 50.0
comp=Z,7.9nm,0.8s
S34M Telegraph Cree 89.40 24 P P 11 34 48.4 +0.7
baz=224
M27K Edge Creek, AK 89.45 17 lAmb lAmb 11 34 49.2
comp=Z,6.1nm,0.9s
M27K Edge Creek, AK 89.45 17 P P 11 34 48.3 +0.2
baz=214
HYT Haines Junctio 89.45 19 P P 11 34 48.2 +0.1
baz=218
H20K Anotleneega Mo 89.45 10 P P 11 34 48.2 +0.4
baz=203
HILR Hailar Array B 89.46 325 P P 11 34 49.0 +0.7
comp=Z,1.4nm,0.4s,baz=135,slow=7.2,SNR=2.6
comp=Z,1.4nm,0.4s
F17K Baldwin Pennin 89.47 7 P P 11 34 48.4 +0.6
baz=197
YUK4 Talbot Arm 89.53 18 P P 11 34 49.0 +0.5
baz=217
TASM ASL Pad, Albuq 89.56 52 lAmb lAmb 11 34 53.3
comp=Z,6.0nm,1.5s
TASM ASL Pad, Albuq 89.56 52 lAmb lAmb 11 34 52.9
comp=Z,0.6nm,0.6s
HHC Hu-ho-hao-te 89.57 315 eP P 11 34 52.0 +2.9
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,140nm,5.6s
L26K Log Cabin Wild 89.63 16 P P 11 34 48.9 +0.2
baz=213
ALPN Alpine 89.63 57 lAmb lAmb 11 34 51.9
comp=Z,4.0nm,0.7s
I21K Tanana 89.66 11 P P 11 34 48.8 0.0
baz=205
NEA2 Nenana 89.69 13 P P 11 34 48.6 -0.3
baz=208
P32M Atlin 89.72 21 P P 11 34 48.9 -0.4
baz=222
Q32M Nakina River 89.75 22 P P 11 34 48.9 -0.7
baz=223
MLY Manley 89.76 12 P P 11 34 48.7 -0.6
baz=206
BVCY Bever Creek 89.77 17 P P 11 34 49.5 +0.1
baz=215
F18K Selawik 89.81 8 P P 11 34 47.9 -1.5
baz=198
O30N Mendenhall 89.85 20 P P 11 34 49.2 -0.6
baz=220
RIDG Independent Ri 89.87 15 P P 11 34 49.2 -0.7
baz=212
H21K Melozitna Rive 89.95 11 P P 11 34 50.6 +0.4
H21K lAmb lAmb 11 34 51.2
comp=Z,5.9nm,0.9s
H21K Melozitna Rive 89.95 11 P P 11 34 49.8 -0.3
baz=205
HDA Harding Lake 89.98 14 P P 11 34 50.4 +0.1
HDA lAmb lAmb 11 34 50.9
comp=Z,5.8nm,0.6s
HDA Harding Lake 89.98 14 P P 11 34 49.2 -1.0
baz=210,SNR=6.1
DOT Dot Lake 89.98 15 lAmb lAmb 11 34 51.8
comp=Z,5.4nm,0.9s

E17K Hotham Inlet 90.02 7 P P 11 34 50.0 -0.4
baz=196
L27K Beaver Creek, 90.05 16 P P 11 34 50.3 -0.4
baz=214
I23K Minto, Yukon-K 90.13 12 P P 11 34 50.5 -0.4
baz=208
WHY Whitehorse 90.14 20 P P 11 34 50.8 -0.5
baz=221
DLBC Dease Lake 90.18 24 P P 11 34 51.0 -0.5
baz=225
AHID Auburn Hatcher 90.19 43 lAmb lAmb 11 34 54.7
comp=Z,5.1nm,0.8s
COLA College 90.19 13 P P 11 34 51.7 +0.5
COLA College 90.19 13 P P 11 34 51.0 -0.2
baz=209
SCRK Sand Creek 90.28 15 lAmb lAmb 11 34 53.7
comp=Z,3.8nm,0.9s
SCRK Sand Creek 90.28 15 P P 11 34 51.0 -0.9
baz=213,SNR=5.3
F19K Shaleruckik Mo 90.28 8 P P 11 34 51.3 -0.3
baz=200
PZH PanZhiHua 90.30 298 P P 11 34 54.2 +1.4
IL31 90.31 13 lAmb lAmb 11 34 53.6
comp=Z,8.6nm,1.4s
ILAR Eielson Array 90.31 13 P P 11 34 51.1 -0.7
ILAR Eielson Array 90.31 13 P P 11 34 51.0 -0.8
comp=Z,1.5nm,0.6s,baz=222,slow=4.0,SNR=24
comp=Z,1.5nm,0.6s
H22K Ishtalitna Cre 90.42 11 P P 11 34 52.4 +0.1
baz=206
M29M Somme Creek 90.45 18 P P 11 34 53.3 +0.7
M29M lAmb lAmb 11 34 53.7
comp=Z,3.8nm,0.8s
M29M Somme Creek 90.45 18 P P 11 34 52.5 -0.2
baz=218
D17K Noatak River 90.48 6 P P 11 34 52.6 +0.1
baz=195
E18K Tukpahlearik C 90.48 7 P P 11 34 52.5 -0.1
baz=198
P33M Teslin, Yukon 90.48 21 P P 11 34 52.7 -0.1
baz=222
POKR Poker Plat Res 90.49 13 P P 11 34 52.5 -0.1
baz=210
N31M Braeburn, Yuko 90.50 19 P P 11 34 52.5 -0.3
baz=220
J25K Salcha River, 90.50 14 lAmb lAmb 11 34 53.7
comp=Z,3.4nm,0.6s
J25K Salcha River, 90.50 14 P P 11 34 53.0 +0.2
baz=211
R33M Jennings River 90.53 23 P P 11 34 52.6 -0.5
baz=224
G21K Allakaket 90.62 10 P P 11 34 53.3 +0.1
baz=204
H23K Yukon River 90.70 12 P P 11 34 53.7 +0.1
baz=208
F20K Avaraart Lake 90.77 9 P P 11 34 54.5 +0.6
baz=202
K27K Chicken 90.78 16 P P 11 34 54.0 0.0
baz=214
J26L Joseph Creek 90.82 15 lAmb lAmb 11 34 55.8
comp=Z,7.3nm,1.0s
J26L Joseph Creek 90.82 15 P P 11 34 54.7 +0.4
baz=213
C16K Lisburne Hills 90.84 5 P P 11 34 54.7 +0.5
baz=193
RDOG Red Dog Mine 90.84 6 P P 11 34 54.4 +0.1
baz=195
E19K Redstone River 90.94 8 P P 11 34 55.0 +0.3
baz=201
H24K Noodor Dome 91.03 12 P P 11 34 55.4 +0.3
baz=209
M30M Minto, Yukon 91.04 18 P P 11 34 55.6 +0.3
baz=219
L29M L29M 91.08 17 lAmb lAmb 11 34 57.5
comp=Z,4.3nm,0.8s
L29M L29M 91.08 17 P P 11 34 55.5 +0.1
baz=218
PDAR Pinedale Array 91.17 44 P P 11 34 57.5 +0.9
PDAR Pinedale Array 91.17 44 P P 11 34 57.0 +0.4
comp=Z,1.7nm,1.0s,baz=224,slow=4.1,SNR=8.0
comp=Z,1.7nm,1.0s
C17K DeLong Mountai 91.23 6 P P 11 34 56.0 0.0
baz=195
F21K Alatna River 91.27 10 P P 11 34 56.4 +0.2
baz=204
G23K Bananza Creek 91.40 11 P P 11 34 57.0 +0.1
baz=207
M31M Drury Creek, Y 91.47 19 P P 11 34 57.0 -0.3
baz=221
DAWY Dawson 91.50 16 P P 11 34 57.5 +0.1
baz=217
I26K Coal Creek Min 91.59 14 P P 11 34 57.7 0.0
baz=213
C18K Utukok River 91.59 7 P P 11 34 57.6 -0.2
baz=197
DRIO Del Rio 91.60 59 lAmb lAmb 11 35 00.5
comp=Z,6.4nm,0.8s
D19K Kuna River 91.80 8 P P 11 34 58.4 -0.3
baz=200
WTLY Watson Lake, Y 91.81 23 P P 11 34 58.6 -0.3
baz=226
H25L Birch Creek 91.83 13 P P 11 34 58.8 +0.1
baz=211
K29M Barlow Dome 91.83 17 P P 11 34 58.7 -0.3
baz=218
COLD Coldfoot 91.83 11 P P 11 34 59.2 +0.4
baz=207
E20K Nigu River 91.83 8 P P 11 34 58.9 0.0
baz=202
G24K Hadweenzic Riv 91.87 12 P P 11 34 58.7 -0.3
baz=210
I27K Kandik River 92.20 15 P P 11 35 00.4 -0.2
baz=215
D20K Etivluk River 92.20 8 P P 11 35 00.5 +0.1
baz=201
C19K Lookout Ridge 92.21 7 P P 11 35 00.5 -0.1
baz=198
B18K Kokolik River 92.22 6 P P 11 35 00.1 -0.4
baz=196
TOAD Toad River Com 92.29 25 P P 11 35 01.0 -0.2
baz=229
E21K Killik River 92.32 9 P P 11 35 01.0 -0.1
baz=204
E22K Anaktuvuk Pass 92.37 10 P P 11 35 00.7 -0.6
baz=206
I28M Miner Creek 92.48 15 P P 11 35 01.2 -0.7
baz=216
F24K Squaw Lake 92.51 12 P P 11 35 01.4 -0.6
baz=209
E23K Chandalar 92.67 11 P P 11 35 01.8 -1.0
baz=208
LZH Lanzhou 92.72 308 eP P 11 35 08.0 +4.2
LZH pP PcP 11 35 14.0 +10
LZH pmax pmax
comp=Z,18nm,1.2s
J30M Hart River 92.72 17 P P 11 35 02.2 -0.9
baz=219
G26K Porcupine Rive 92.84 13 P P 11 35 03.8 +0.4
baz=213
E24K Your Creek 92.89 11 P P 11 35 03.5 -0.1
baz=209
D22K Ayikyak River 92.91 9 P P 11 35 03.3 -0.4
baz=205
F25K Christian Rive 93.00 12 P P 11 35 03.6 -0.6
baz=211
A19K Wainwright 93.10 6 P P 11 35 04.9 +0.4
baz=197
TOLK Teolik Lake Re 93.20 11 P P 11 35 05.1 0.0
baz=208
I30M Mount Dempster 93.21 17 P P 11 35 05.0 -0.3
baz=219
D23K Nanushuk River 93.31 10 P P 11 35 05.3 -0.2
baz=207
B21K Ikpikpuk River 93.32 8 P P 11 35 05.3 -0.2
baz=203
B20K Meade River 93.35 8 P P 11 35 06.1 +0.4
baz=201
F26K Sheenjek River 93.39 13 P P 11 35 06.0 +0.1
baz=212
E25K Arctic Village 93.47 12 P P 11 35 06.3 0.0
baz=211
H29M Whitestone 93.48 15 P P 11 35 06.4 0.0
baz=218
KOTAN Kotaneelee Air 93.58 24 P P 11 35 06.7 -0.3
baz=230
EPYK Eagle Plains 94.02 16 P P 11 35 08.5 -0.3
baz=219
C23K Itkillik River 94.10 10 P P 11 35 08.9 -0.2

baz=207
G29M Pine Creek 94.12 15 P P 11 35 09.0 -0.3
baz=218
B22K Teshekpuk Lake 94.14 9 P P 11 35 09.5 +0.3
baz=204
H31M Peel River 94.21 17 P P 11 35 09.0 -0.7
baz=221
F28M Old Crow 94.25 14 P P 11 35 09.7 -0.2
baz=216
C24K Franklin Bluff 94.30 10 P P 11 35 10.0 0.0
baz=208
E27K Coleen River 94.34 13 P P 11 35 10.3 0.0
baz=215
D25K Kavik River 94.36 11 P P 11 35 10.2 -0.2
baz=211
A22K Sinclair Lake 94.55 8 P P 11 35 10.8 -0.3
baz=203
G30M tAoh Zraii Nji 94.62 16 P P 11 35 11.6 0.0
baz=220
A21K Barrow 94.65 7 P P 11 35 11.2 -0.3
baz=201
C27K Jago River 95.11 12 P P 11 35 13.5 -0.2
baz=213
E28M Babbage River 95.12 14 P P 11 35 13.5 -0.3
baz=217
C26K Camden Bay 95.13 11 P P 11 35 12.9 -0.8
baz=212
E29M Blow River 95.32 14 P P 11 35 14.7 0.0
baz=218
D27M Malcolm River 95.34 13 P P 11 35 14.3 -0.5
baz=216
F31M Tsiigehtchic 95.60 16 P P 11 35 15.8 -0.1
baz=222
C36M Paulatuk 99.50 17 P Pdif 11 35 32.3 -1.0
baz=231
A36M Sachs Harbour 100.90 15 P Pdif 11 35 39.0 -0.4
baz=230
ZALV Zalesovo Beam 110.96 321 PKiKP 11 40 19.5 -0.6
ZALV Zalesovo Beam 110.96 321 PKiKP PKiKP 11 40 19.1 -1.0
comp=Z,2.3nm,0.6s,baz=129,slow=2.1,SNR=6.6
MKAR Makanchi Array 111.36 313 PKiKP 11 40 20.1 -1.1
MKAR Makanchi Array 111.36 313 PKiKP PKiKP 11 40 19.8 -1.3
comp=Z,0.9nm,0.5s,baz=143,slow=1.3,SNR=11
KURBB Kurchatov Arra 114.36 317 PKP PKPdf 11 40 25.9 -0.8
comp=Z,1.1nm,0.5s,baz=114,slow=1.8,SNR=12
BVAR Borovoye Array 119.49 319 PKP PKPdf 11 40 36.0 -0.5
comp=Z,4.8nm,0.4s,baz=117,slow=2.2,SNR=31
SPITS Spitsbergen Ar 123.49 356 PKP PKPdf 11 40 43.5 -0.1
comp=Z,5.7nm,0.7s,baz=267,slow=2.7,SNR=5.6
ARCES ARCESS Array B 130.35 349 PKP PKPdf 11 40 56.5 -0.3
comp=Z,2.5nm,0.5s,baz=26,slow=1.5,SNR=28
ARCES SKPbc SKPab 11 43 27.9 +1.7
comp=Z,3.8nm,0.9s,baz=38,slow=8.1,SNR=5.5
FINES FINESS Array B 137.01 342 PKhKP PKPpre 11 40 57.5
comp=Z,1.0nm,0.5s,baz=57,slow=4.1,SNR=6.0
FINES PKP PKPdf 11 41 09.1 -0.4
comp=Z,2.1nm,0.6s,baz=75,slow=2.1,SNR=6.5
NB2 NORSAR Subarra1 140.50 352 PKP PKPpre 11 41 10.1
comp=Z,0.5nm,0.4s,baz=16,slow=3.2
NOA NORSAR Array B 140.50 352 PKhKP PKPpre 11 41 09.2
comp=Z,0.3nm,0.3s,baz=359,slow=3.6,SNR=5.8
NOA PKP PKPdf 11 41 17.2 +1.3
comp=Z,0.7nm,0.4s,baz=14,slow=3.9,SNR=3.7
HFS Hagfors 141.00 350 PKhKP PKPpre 11 41 11.1
comp=Z,4.9nm,0.4s,baz=64,slow=3.4,SNR=46
HFS PKP PKiKP 11 41 18.3 -1.3
comp=Z,3.2nm,0.7s,baz=90,slow=3.7,SNR=2.7
STRU Stroemstad 142.44 351 *i* P PKPdf 11 41 16.1 -3.3
TJOU Tjoern 143.34 350 *i* P PKPab 11 41 19.2 -0.2
HOMB Homborsund 143.53 353 *i* P PKPbc 11 41 20.2 0.0
SNART Snartemo 143.60 354 *i* P PKPab 11 41 20.2 -0.2
AKASG Malin Array Be 143.81 329 PKPbc 11 41 20.7 -0.6
AKASG Malin Array Be 143.81 329 PKP PKPbc 11 41 20.9 -0.4
comp=Z,8.3nm,0.4s,baz=42,slow=4.4,SNR=51
KIEV Kiev 143.82 329 PKPbc 11 41 20.7 -0.6
KIEV Kiev 143.82 329 ↑P PKPbc 11 41 20.4 -0.9
ONAU Onsala 143.90 350 *i* P PKPbc 11 41 20.6 -0.7
SUW Suwalki 143.92 337 PKPab 11 41 21.8 0.0
FABU Falkenberg 144.13 349 *i* P PKPbc 11 41 21.6 -0.5
DEL Delary 144.41 347 *i* P PKPdf 11 41 22.6 -0.2
LUNU Lund 145.28 347 *i* P PKPbc 11 41 25.7 +0.1
BNN Bunyan 145.60 307 PKPbc PKPbc 11 41 27.9 +0.6
LAWE Loch Awe, Argy 145.73 6 *e*P PKPbc 11 41 26.0 -0.8
BZK Bozkurt 145.78 313 ↑P PKPbc 11 41 28.2 +0.7
SORM Soroca 145.90 326 ↓P PKPbc 11 41 27.3 -0.3
ILGA Ilgaz 146.34 312 PKPbc PKPbc 11 41 30.4 +1.0
CIDE Kastamonu/Cide 146.52 313 ↓P PKPbc 11 41 29.3 -0.2
EKA Eskdalemuir Ar 146.83 4 PKPbc PKPbc 11 41 29.6 -0.3
comp=Z,4.3nm,0.6s,baz=2.6,slow=2.6,SNR=13
BR131 Keskin Array S 146.91 309 PKPbc PKPbc 11 41 30.8 -0.1
BRTR Keskin Array B 146.91 309 PKPbc 11 41 31.2 +0.3
BRTR PKPab PKPab 11 41 34.8 +0.6
BRTR Keskin Array B 146.91 309 PKPbc PKPbc 11 41 30.6 -0.2
comp=Z,5.2nm,0.8s,baz=134,slow=4.3,SNR=23
KIRS Kirsehir-Merke 146.93 308 ↑P PKPbc 11 41 30.8 0.0
NEWG New Galloway 146.97 5 *e*P PKPbc 11 41 29.2 -1.0
GAL1 Galloway 147.17 6 *e*P PKPbc 11 41 30.0 -0.9
EDMD Edmundbyers 147.39 3 *e*P PKPbc 11 41 30.6 -0.8
MMAI Mount Meron Ar 147.40 297 PKPbc PKPbc 11 41 32.8 +0.5
comp=Z,4.8nm,0.4s,baz=65,slow=5.9,SNR=13
TLCR 147.44 321 ↑P PKPbc 11 41 32.2 +0.3
ANTO Ankara 147.46 310 PKPbc PKPbc 11 41 32.9 +0.7
VARL Varlezi 147.56 323 ↑P PKPab 11 41 51.1 +15
GHRR 147.71 324 ↑P PKiKP 11 41 33.6 -0.4
BURAR Bucovina Array 147.83 328 PKiKP 11 41 34.1 -0.1
BURAR PKPab PKPab 11 41 38.7 +1.1
BURAR Bucovina Array 147.83 328 ↓P PKiKP 11 41 33.9 -0.4
TESR Tescani 147.83 325 ↓P PKPbc 11 41 32.7 -0.2
CFR Carcaliu 147.83 322 ↑P PKPbc 11 41 32.9 +0.1
TPGR Topolog 147.86 321 ↓P PKPbc 11 41 32.9 -0.1
WIM Isle of Man 147.89 6 *e*P PKPbc 11 41 33.4 +0.6
ONER Baraj Valea Uz 148.08 325 ↑P PKiKP 11 41 34.2 -0.5
TIRR Tirgusor 148.09 321 PKPbc PKiKP 11 41 34.5 -0.3
TIRR Tirgusor 148.09 321 ↑P PKPbc 11 41 33.7 +0.2
VRI Vrincioaia 148.20 324 ↓P PKPbc 11 41 33.7 0.0
OJC Ojcow 148.22 336 PKPbc 11 41 34.0 +0.3
HARR Harsova 148.24 321 ↓P PKPbc 11 41 33.7 -0.1
PLOR Plostina 148.25 324 ↓P PKPbc 11 41 33.9 0.0
MDUB Mudurnu 148.32 312 PKPbc PKiKP 11 41 36.3 +0.8
MANR Mangalia 148.35 320 ↑P PKPbc 11 41 34.6 +0.4
SAHE Sakarya_HENDEK 148.39 313 ↑P PKPbc 11 41 34.1 -0.3
ICOR Ion Corvin 148.65 321 ↑P PKPbc 11 41 35.0 +0.1
RETH Rethem/Aller, 148.79 350 *e*PKPbc PKiKP 11 41 35.4 -0.4
baz=20,slow=2.5
FLTG Flechtingen 148.83 347 *e*PKPbc PKPbc 11 41 35.3 +0.2
baz=20,slow=2.5
DOPR Dopca 148.85 325 ↓P PKiKP 11 41 36.0 -0.3
MLR Muntele Rosu 148.86 324 ↓P PKPbc 11 41 35.8 +0.2
LANS Liptovska Anna 149.21 335 *e*PKP PKiKP 11 41 37.7 +0.7
FOEL Foel Wylfa 149.26 4 *e*P PKPbc 11 41 34.8 -1.3
VOIR 149.38 325 ↓P PKPbc 11 41 36.4 -0.3
CLL Collm 149.39 345 *e*PKPbc PKiKP 11 41 36.9 -0.4
baz=20,slow=2.5
CLL Collm 149.39 345 ↑*i* PKPbc PKPbc 11 41 36.8 +0.4
comp=Z,29nm,0.8s
CLL *i* PKPab PKPab 11 41 43.8 0.0
comp=Z,15nm,0.7s
MORC Moravsky Berou 149.40 338 ↑P PKPbc 11 41 36.8 +0.2
MORC Moravsky Berou 149.40 338 *e*PKP PKiKP 11 41 37.0 -0.4
CLZ Clausthal 149.47 348 *e*PKPbc PKiKP 11 41 37.4 -0.1
baz=20,slow=2.5
MARR Marisel-Cluj 149.51 329 ↓P PKiKP 11 41 37.7 0.0
BRG Berggiesshubel 149.54 343 *e*PKPbc PKiKP 11 41 37.4 -0.2
baz=20,slow=2.5
DRGR 149.62 329 ↑P PKPbc 11 41 37.4 +0.1
HLM1 Long Mynd 149.65 4 *e*P PKPbc 11 41 35.7 -1.4
PSZ Piszkesteto 150.02 333 ↑P PKPbc 11 41 36.8 -1.4
LOT Lotru 150.04 326 ↓P PKPbc 11 41 38.0 -0.4
VRAC Vranov 150.12 339 ↑P PKiKP 11 41 38.7 -0.2
VRAC Vranov 150.12 339 *e*PKP PKiKP 11 41 38.6 -0.2
JAVC Velka Javorina 150.12 337 *e*PKP PKiKP 11 41 39.8 +0.9
MCH1 Michaelchurch 150.16 4 *e*P PKPbc 11 41 37.1 -1.2
TANN Tannenbergstha 150.34 344 *e*PKPbc PKiKP 11 41 39.2 -0.1
baz=20,slow=2.5
PLN Plauen 150.35 345 *e*PKPbc PKiKP 11 41 39.4 +0.1
baz=20,slow=2.5
KRUC Moravsky 150.40 339 *e*PKP PKiKP 11 41 39.3 -0.1
KASTN Kahler Asten 150.43 350 *e*PKPbc PKiKP 11 41 39.3 -0.1
baz=20,slow=2.5
SIRR Siria 150.50 329 ↓P PKiKP 11 41 39.6 -0.1
GZR Gura Zlata 150.58 327 ↑P PKPbc 11 41 39.5 0.0
SURR Surduc 150.65 328 ↓P PKPdf 11 41 35.1 +1.7
MODS Modra-Piesok 150.67 337 *e*PKP PKiKP 11 41 40.4 +0.4
MANZ Manzenberg 150.83 345 *e*PKPbc PKiKP 11 41 40.5 +0.2
baz=20,slow=2.5
SRE Strehaia 150.87 326 ↓P PKiKP 11 41 40.8 +0.3
BZS Buzias 151.00 329 ↓P PKPbc 11 41 40.3 0.0
ROTZ Rotzenmuhle 151.00 344 *e*PKPbc PKiKP 11 41 40.8 +0.2
baz=20,slow=2.5
HERR Herculane 151.12 327 ↑P PKPbc 11 41 40.6 0.0
SBD Saint Breward 151.43 7 *e*P PKPbc 11 41 40.2 -0.9
GERES GERESS Array B 151.44 342 PKPbc PKPbc 11 41 41.5 +0.1
comp=Z,2.8nm,0.4s,baz=343,slow=2.8,SNR=13
GERES PKPab PKPab 11 41 52.9 +0.3
comp=Z,1.6nm,0.4s,baz=10,slow=8.1,SNR=6.1
MDVR Moldovita 151.55 327 ↑P PKPbc 11 41 39.8 -2.0
CONA Conrad Observa 151.55 338 *i* PKP PKiKP 11 41 42.0 0.0
comp=Z,1.5nm,0.4s
RONA Rosalia, Austr 151.59 337 *i* PKP PKiKP 11 41 42.0 +0.1
comp=Z,7.3nm,0.5s
MORH Mrgy, Hungar 151.89 333 ↑P PKPbc 11 41 42.3 -0.1
EZN Ezine 151.92 315 ↑P PKPbc 11 41 42.2 -0.4
MOA Molln 152.15 340 *e*PKP PKPab 11 41 56.3 +0.8
comp=Z,4.6nm,0.9s
BIOA Bad Ischl, Aus 152.49 341 *e*PKP PKPab 11 41 58.0 +1.0
comp=Z,8.8nm,0.7s
MYKA Terra Mystica 153.43 340 *e*PKP PKPab 11 42 00.6 -0.5
comp=Z,5.7nm,0.7s
WTTA Wattenberg 153.46 343 *i* PKP PKPab 11 42 01.8 +0.4
comp=Z,8.6nm,0.5s,SNR=5.3
RETA Reutte 153.48 344 *e*PKP PKPab 11 42 01.7 +0.4
comp=Z,4.5nm,0.6s
MOTA Moosalm 153.52 344 *e*PKP PKPab 11 42 01.7 +0.1
comp=Z,2.9nm,0.6s
SQTA Sankt Quirin 153.61 343 *e*PKP PKPab 11 42 02.7 +0.8
comp=Z,11nm,1.2s
ABTA Abfaltersbach 153.68 341 *i* PKP PKPab 11 42 02.2 0.0
comp=Z,4.9nm,0.6s,SNR=4.1
DAVA Damuels 153.88 345 *e*PKP PKPab 11 42 03.1 0.0
comp=Z,5.9nm,0.8s
FETA Feichten 153.92 344 *e*PKP PKPab 11 42 03.5 +0.2
comp=Z,4.1nm,0.7s
ESDC Sonseca Array 162.20 11 PKP PKPdf 11 41 47.5 -0.8
comp=Z,0.5nm,0.5s,baz=300,slow=0.8,SNR=1.6
ESDC PKPab PKPab 11 42 39.7 +0.4
comp=Z,1.1nm,0.7s,baz=354,slow=5.7,SNR=4.3
TORD Torodi Ar. Bea 170.90 187 PKP PKPdf 11 41 54.6 -0.9
comp=Z,1.1nm,0.9s,baz=80,slow=1.2,SNR=6.4
TORD PKPab PKPab 11 43 18.4 +0.3
comp=Z,0.1nm,0.4s,baz=186,slow=2.5,SNR=2.8

IDC 08 11:37:54.7±1.1, 18°.35S×177°.19W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=47.2km s-min=26.6km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.69	260	P	P	11 46 17.7	0.0
	0.2nm,0.3s,baz=93,slow=7.9,SNR=4.8						
	0.2nm,0.3s						
ASAR	Alice Springs	45.78	255	P	P	11 46 18.4	-0.1
	1.1nm,0.5s,baz=91,slow=8.4,SNR=40						
	1.1nm,0.5s						
QSPA	South Pole Qui	71.70	180	P	P	11 49 18.3	-0.1
	1.3nm,0.8s,baz=22,slow=5.4,SNR=9.1						
	1.3nm,0.8s						
NVAR	Mina Array Bea	78.95	43	P	P	11 50 00.0	-0.5
	0.3nm,0.7s,baz=255,slow=4.4,SNR=2.2						
	0.3nm,0.7s						
TXAR	Lajitas Array	85.26	57	P	P	11 50 34.4	+0.6
	0.9nm,0.9s,baz=219,slow=5.8,SNR=6.8						
	0.9nm,0.9s						

IDC 08 11:41:43.1±2.0,2.°90S×127.°67E, h0km, mb3.5/2, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=107.3km s-min=25.9km az=69.0
DJA 08 11:41:50.7±0.6,4.°5S×4.°2E±.°, h37km±11km, M3.8/8, mb3.9/3, MLv3.7/8
ISC 08 11:41:50.6±0.9, 3.°64S±0.°08×126.°54E±0.°06, h35km, n12, σ0.°83/14, Buru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	0.68	55	P	Pn	11 42 04.2	+0.5
NLAI				S	Sn	11 42 14.3	+1.2
AAI	Ambon	1.65	92	P	Pn	11 42 16.0	-1.0
SANI	Sanana	1.67	341	P	Pn	11 42 17.6	+0.2
SANI				S	Sn	11 42 37.2	-0.4
MSAI	Masohi	2.40	83	P	Pn	11 42 27.3	-0.1
BBSI	Bau Bau	4.37	245	P	Pn	11 42 54.8	+0.3
LUWI	Luwuk	4.57	304	P	Pn	11 42 58.0	+0.8
SWI	Sorong	5.46	60	P	Pn	11 43 09.3	-0.2
	0.1nm15nm,0.4s						
FAKI	Fak Fak	5.74	83	P	Pn	11 43 13.6	+0.2
FITZ	Fitzroy Crossi	14.40	183	Pn	P	11 45 19.6	+1.2
	0.1nm,0.3s,baz=11,slow=15,SNR=2.4						
	1.8nm,0.7s						
WRA	Warramunga Arr	17.90	155	P	P	11 45 57.3	-0.1
	0.5nm,0.3s,baz=338,slow=11,SNR=28						
	3.0nm,0.7s						
ASAR	Alice Springs	21.14	161	P	P	11 46 32.7	0.0
	0.8nm,0.3s,baz=344,slow=9.2,SNR=27						
	0.8nm,0.3s						
MKAR	Makanchi Array	63.55	328	P	P	11 52 16.1	-1.6
	0.2nm,0.5s,baz=113,slow=11,SNR=4.3						
	0.2nm,0.5s						

CATAC 08 11:42:08.6±0.6, 13.°N×3.°3W±.°, h30km±5km, M3.8/24, MLv3.8/24, Error ellipse: s-maj=6.7km s-min=3.0km az=27.5, confirmed
SNET 08 11:42:09.2±1.7, 12.°76N×88.°73W, h29km, ML3.7
GCG 08 11:42:11.0±0.5, 12.°79N×88.°96W, h27km±4km, MD4.2
ISC 08 11:42:07.6±1.7, 12.°66N±0.°07×88.°80W±0.°03, h25km±14km, n55, σ0.°62/63, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TECO	Alcaldia de Te	0.87	1	S	Sn	11 42 35.5	-0.7
TECO	Alcaldia de Te	0.87	1	P	Pb	11 42 23.8	-0.2
RANC	El Ranchito	0.91	33	S	Sn	11 42 37.5	0.0
RANC	El Ranchito	0.91	33	P	Pb	11 42 25.0	+0.2
PACA	Pacayal	0.92	30	S	Sn	11 42 37.5	-0.2
PACA	Pacayal	0.92	30	P	Pb	11 42 25.3	+0.2
BLLM	Bellamira	0.95	35	*e*P	Pb	11 42 25.5	+0.1
LALI	Alcalda de L	0.96	328	*e*P	Pn	11 42 25.8	+0.2
LALI				*e*S	Sb	11 42 37.1	-0.9
LALI	Alcalda de L	0.96	328	*e*P	Pn	11 42 25.6	0.0
LALI				*e*S	Sb	11 42 36.5	-1.5
LALI	Alcalda de L	0.96	328	P	Pn	11 42 25.2	-0.5
UESV	Universidad de	0.97	1	S	Sn	11 42 38.1	-0.6
UESV	Universidad de	0.97	1	P	Pb	11 42 25.7	0.0
PQSS	Presa 15 de Se	0.98	14	S	Sn	11 42 39.0	0.0
PQSS	Presa 15 de Se	0.98	14	P	Pn	11 42 25.4	-0.5
CNRM	Centro Naciona	1.01	37	S	Sb	11 42 39.9	+0.5
CNRM	Centro Naciona	1.01	37	P	Pn	11 42 26.0	-0.3
LOMA	Loma Larga	1.04	340	P	Pn	11 42 26.7	-0.1
PAVA	Las Pavas	1.05	353	S	Sb	11 42 41.0	+0.4
PAVA	Las Pavas	1.05	353	P	Pb	11 42 27.4	+0.2
LCND	La Caada	1.09	54	*e*P	Pn	11 42 27.0	-0.4
LCND	La Caada	1.09	54	P	Pn	11 42 27.0	-0.4
CNCH	Conchagua	1.12	57	*e*P	Pn	11 42 27.7	-0.1
CNCH				*e*S	Sb	11 42 43.2	+0.6
CNCH	Conchagua	1.12	57	P	Pn	11 42 27.3	-0.6
LFU	La Fuente	1.12	344	*e*P	Pb	11 42 29.4	+1.0
UEES	Universidad Ev	1.13	338	P	Pn	11 42 27.8	-0.2
PMON	Piamonte	1.16	334	S	Sb	11 42 43.5	-0.1
PMON	Piamonte	1.16	334	P	Pn	11 42 28.9	+0.5
BQQS	Boqueron	1.16	336	*e*P	Pb	11 42 29.2	0.0
JAYA	Jayaque - finc	1.17	327	*e*P	Pn	11 42 29.0	+0.4
JAYA				*e*S	Sn	11 42 43.6	-0.3
JAYA	Jayaque - finc	1.17	327	*e*P	Pn	11 42 28.6	0.0
JAYA	Jayaque - finc	1.17	327	P	Pn	11 42 28.9	+0.3
POTN	Potosi Cosigui	1.30	75	P	Pn	11 42 29.7	-0.5
CEVE	Cerro Verde	1.41	325	*e*P	Pb	11 42 33.7	+0.3
CEVE				*e*S	Sb	11 42 51.0	-0.1
CEVE	Cerro Verde	1.41	325	P	Pb	11 42 33.5	+0.1
LLGN	La Laguna	1.50	355	P	Pb	11 42 34.4	-0.4
UNIC	Universidad Ca	1.50	331	P	Pn	11 42 33.9	+0.8
UNIC	Universidad Ca	1.50	331	S	Sb	11 42 52.3	-1.2
NUBE	Las Nubes	1.56	322	*e*P	Pn	11 42 34.7	+0.7
NUBE				*e*S	Sn	11 42 53.9	+0.5
NUBE	Las Nubes	1.56	322	*i* P	Pn	11 42 34.6	+0.7
NUBE				*e*S	Sn	11 42 53.4	-0.1
NUBE	Las Nubes	1.56	322	P	Pn	11 42 34.8	+0.9
SLOZ	Alcaldia de Sa	1.66	325	P	Pn	11 42 34.9	-0.3
FAME	Alcaldia de Sa	1.67	315	P	Pn	11 42 35.5	+0.3
FAME	Alcaldia de Sa	1.67	315	S	Sn	11 42 55.9	0.0
CRIN	San Cristobal	1.71	89	P	Pn	11 42 36.4	+0.5
CRIN	San Cristobal	1.71	89	S	Sn	11 42 56.2	-0.8
PKGN	Cerro Pekin	1.78	90	P	Pn	11 42 36.7	-0.1
MTO3	Montecristo	1.81	342	*e*P	Pn	11 42 38.6	+1.1
MTO3	Montecristo	1.81	342	P	Pn	11 42 38.5	+1.1
TGUH	Tegucigalpa,Un	2.03	47	P	Pn	11 42 41.1	+0.7
TGUH				S	Sn	11 43 04.8	-0.2
COPN	Copaltepe	2.21	102	P	Pn	11 42 42.4	-0.3
YUSH	Yuscaran	2.29	56	P	Pn	11 42 44.4	+0.4
LIMN	Finca el Limon	2.40	80	P	Pn	11 42 45.4	-0.1
OCON	Estacion meteo	2.46	67	P	Pn	11 42 46.1	-0.1
RCVN	Varillal2	2.70	70	P	Pn	11 42 50.1	+0.6
RCPN	Sur Rio San Ju	2.77	72	P	Pn	11 42 52.9	+2.3

FUNV 08 11:56:28.2, 7.°75N×72.°28W, h27km, MW3.2
RSNC 08 11:56:30.8±0.0, 7.°N±8.°×7.°2W±.°, h0km±9km, M2.3, ML2.0
ISC 08 11:56:19.3±1.7, 7.°54N±0.°08×71.°69W±0.°05, h2km±15km, n10, σ2.°21/18, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	0.70	298	*e*P	Pg	11 56 32.9	+0.1
PAMC	Pamplona, Colo	1.02	259	P	Pg	11 56 39.3	+0.3
PAMC				S	Sg	11 56 49.6	-2.7
OCAC	Ocana	1.76	293	P	Pg	11 56 55.6	+2.5
OCAC				S	Sg	11 57 16.1	+0.1
BRJC	Barrancabermej	2.12	255	P	Pb	11 56 59.0	+0.6
BRJC				S	Sb	11 57 24.0	-1.1
RUSC	La Rusia	2.14	220	P	Pb	11 56 59.8	+0.7
RUSC				S	Sb	11 57 24.7	-1.7
PTBC	PUERTO BERRIO,	2.92	250	P	Pb	11 57 12.1	-0.1
PTBC				S	Sn	11 57 43.2	+0.7
SPBC	San Pablo de B	3.02	232	P	Pb	11 57 13.9	0.0
SPBC				S	Sn	11 57 46.6	+1.5
BAUV	El Baul	3.87	69	*e*P	Pb	11 57 31.3	+3.0
BAUV				*e*S	Sb	11 58 17.8	+2.1
BENV	Beln	4.71	59	*e*P	Pb	11 57 43.0	+0.3
BENV				*e*S	Sb	11 58 34.5	-5.3
TACV	Tcata	5.28	60	*e*P	Pb	11 57 50.0	-2.4

NEIC 08 12:10:12.4±2.7, 34.°286N±0.°009×119.°29W±0.°01, h10km±1km, Error ellipse: s-maj=2.6km s-min=1.9km az=352.0
PAS 08 12:10:12.8±2.8, 34.°27N±0.°01×119.°29W±0.°01, h11km±2km, ML3.4/133, ML3.1/122(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=209.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STCC	Santa Clara	0.09	66		Pg	12 10 16.1	+0.6
STCC					Sg	12 10 19.3	+1.8
SBC	Santa Barbara	0.39	297		Pg	12 10 20.9	+0.3
SBC					Sb	12 10 27.3	-0.5
AGOC	Agoura	0.45	105		Sg	12 10 28.4	+0.8
BLCC	Black Canyon	0.51	92		Pg	12 10 22.8	0.0
BLCC					Sg	12 10 30.4	+0.8
MPI	Mount Pinos, F	0.56	12		Pg	12 10 23.2	-0.6
MPI					Sg	12 10 31.1	-0.1
OAT	Oat Mountain	0.56	82		Pg	12 10 24.1	+0.2
OAT					Sb	12 10 33.2	+0.3
OSI	Osito Audit: C	0.58	53		Pg	12 10 23.6	-0.6
OSI				Sg	Sg	12 10 31.9	0.0
OSI				IAML		12 10 33.2	
	comp=E,2μm,0.5s						
OSI				IAML		12 10 34.6	
	comp=N,1μm,0.5s						
PDE	Pardee, Santa	0.61	73		Pg	12 10 24.7	0.0
PDE					Sb	12 10 34.3	+0.2
SYP	Santa Ynez Pea	0.63	295		Pg	12 10 24.7	-0.3
SYP					Sg	12 10 33.9	+0.6
BCW	Bitter Crk WRg	0.68	351		Pg	12 10 25.6	-0.5
BCW					Sg	12 10 35.5	+0.5
DJJ	Donna J Jenkin	0.71	103		Pg	12 10 25.3	-1.2
DJJ	Donna J Jenkin	0.71	103		Pg	12 10 25.5	-1.0
DJJ					Sg	12 10 35.1	-0.8
BTPC	Burnt Peak	0.72	55		Pg	12 10 26.2	-0.7
BTPC					Sb	12 10 37.1	-0.3
FIGC	Figueroa Mtn.	0.74	309		Pg	12 10 26.9	-0.2
PKM	Mcpherson Peak	0.76	325		Pg	12 10 26.9	-0.6
PKM					Sg	12 10 36.9	-0.6
HLLC	North Hollywoo	0.78	96		Sg	12 10 37.8	-0.1
NJQ	Nojoqui County	0.78	290		Pg	12 10 27.1	-0.8
NJQ					Sg	12 10 38.1	-0.1
DECC	Green Verdugo	0.79	91		Pg	12 10 27.2	-0.9
DECC					Sg	12 10 38.3	-0.2
LCGC	La Cienega, Cu	0.80	109		Sn	12 10 40.9	-1.0
SBI	Santa Barbara	0.81	164		Pg	12 10 28.2	-0.2
SBI					Sb	12 10 40.5	+0.7
BHPC	Baldwin Hills	0.82	109		Pg	12 10 28.4	-0.2
THC	Tehachapi Micr	0.82	39		Pg	12 10 27.6	-1.2
THC					Sg	12 10 39.4	-0.2
GR2C	Griffith Obs.	0.83	100		Pg	12 10 27.5	-1.4
GR2C					Pn	12 10 39.2	+8.8
USC	University of	0.87	106		Sb	12 10 41.4	0.0
TJR	Tejon Ranch	0.88	31		Pg	12 10 28.4	-1.4
TJR					Sg	12 10 40.5	-0.9
LEOC	Leona Valley	0.89	66		Pg	12 10 28.7	-1.4
LEOC					Sg	12 10 41.0	-0.7
RPV	Rancho Palos V	0.90	125		Pg	12 10 29.2	-1.0
BSM	San Miguel Isl	0.91	256		Pg	12 10 28.9	-1.4
BSM					Pn	12 10 41.3	+10
ALPC	Antelope	0.92	63		Pg	12 10 29.2	-1.4
PASC	Pasadena Art C	0.92	96		Pg	12 10 29.0	-1.6
PASC				IAML		12 10 42.5	
	comp=E,465nm,0.5s						
PASC	Pasadena Art C	0.92	96		Pn	12 10 41.3	+10
ARVC	Arvin	0.94	24		Pg	12 10 29.7	-1.2
CJV	Casa Juvan	0.98	74		Pg	12 10 30.9	-0.9
FMP	Fort Macarthur	0.99	123		Pg	12 10 30.7	-1.3
MWC	Mount Wilson	1.02	92		Pg	12 10 31.0	-1.5
MWC				IAML		12 10 45.4	
	comp=E,811nm,0.5s						
MWC				IAML		12 10 47.6	
	comp=N,830nm,0.4s						
MWC	Mount Wilson	1.02	92		Sg	12 10 45.0	-0.8
CRGC	Crocker Grade	1.04	340		Pg	12 10 32.1	-0.7
GATR	Gnd/Air Tx Cnt	1.04	286		Pg	12 10 31.6	-1.2
GATR					Sg	12 10 46.3	-0.2
CHFC	Chilao Flat St	1.05	86		Pg	12 10 31.1	-1.9
CHFC					Sg	12 10 45.2	-1.5
TPO	Tropico Hills	1.07	55		Pb	12 10 31.9	-1.4
LRRC	Littlerock Res	1.07	76		Pb	12 10 32.6	-0.8
TEJ	El Tejon	1.08	27		Pb	12 10 31.9	-1.7
TEJ					Sb	12 10 47.1	-0.6
BAKC	Calstate	1.09	8		Pb	12 10 32.6	-1.0
JNH	Juniper Hills	1.

VTV	**Victorville**	**1.65**	**79**			Sn	12 11 03.1	+0.3
ELS	**Elsinore Mount**	**1.67**	**111**			Pn	12 10 39.9	-2.1
LRMC	**Laurel Mtn Rad**	**1.79**	**47**			Pn	12 10 42.6	-1.2
LRMC					IAML		12 11 12.0	
	comp=N,209nm,0.6s							
LRMC					IAML		12 11 12.4	
	comp=E,210nm,0.4s							
SRTC	**Snort**	**1.90**	**41**			Pn	12 10 44.1	-1.1
PKD	**Bear Valley Ra**	**1.96**	**329**			Pn	12 10 44.1	-2.0
PKD					IAML		12 11 18.7	
	comp=E,201nm,0.7s							
PKD					IAML		12 11 22.7	
	comp=N,184nm,1.0s							
SPG2	**Springville 2**	**1.98**	**12**			Pn	12 10 45.4	-0.8
TOW	**Tower One**	**1.98**	**39**			Pb	12 10 48.5	-0.4
WSHM	**Spangler Hills**	**1.99**	**47**			Pn	12 10 45.0	-1.4
WSHM					IAML		12 11 16.9	
	comp=N,108nm,0.7s							
WSHM					IAML		12 11 18.7	
	comp=N,154nm,0.4s							
CCCA	**Chr Cany lake**	**2.02**	**51**			Pn	12 10 45.8	-1.0
CCCA					IAML		12 11 19.6	
	comp=E,243nm,0.5s							
POB	**Polly Butte**	**2.05**	**106**			Pn	12 10 45.5	-1.8
CLC	**China Lake**	**2.08**	**41**			Pn	12 10 46.4	-1.3
WRVM	**Rose V. Centra**	**2.08**	**33**			Pb	12 10 49.9	-0.8
PSMM	**Smith Mountain**	**2.09**	**330**			Pn	12 10 46.7	-1.2
MFS	**McCloud Flat S**	**2.19**	**32**			Pb	12 10 51.4	-1.1
GSC	**Goldstone, Bar**	**2.29**	**62**			Pn	12 10 49.1	-1.4
GSC					IAML		12 11 29.8	
	comp=N,110nm,0.6s							
PMPB	**Monarch Peak**	**2.31**	**328**	Pn		Pn	12 10 48.9	-1.9
DNR	**Dunn Ranch,Anz**	**2.32**	**107**			Pn	12 10 49.9	-1.0
DPP	**Dos Picos Cty**	**2.33**	**122**			Pn	12 10 49.0	-2.0
HULI	**Fort Hunter Li**	**2.37**	**318**			Pn	12 10 49.6	-1.9
HULI					IAML		12 11 39.1	
	comp=E,186nm,0.9s							
PCCM	**Crazy Canyon**	**2.38**	**320**			Pn	12 10 49.5	-2.2
BLAC	**Blackrock camp**	**2.41**	**94**			Pn	12 10 52.5	+0.2
PFO	**Pinyon Flats O**	**2.44**	**105**			Pn	12 10 51.8	-0.9
PMD	**Palm Desert**	**2.50**	**103**			Pn	12 10 52.8	-0.5
PMD					IAML		12 11 39.1	
	comp=N,58nm,0.8s							
BORC	**Borrego Spring**	**2.59**	**112**			Pn	12 10 54.1	-0.5
BORC					IAML		12 11 49.4	
	comp=N,59nm,0.9s							
QSM	**Queen of Sheba**	**2.61**	**49**			Pn	12 10 53.7	-1.2
QSM					IAML		12 11 37.5	
	comp=E,84nm,0.7s							
QSM					IAML		12 11 41.2	
	comp=N,85nm,0.8s							
BSGM	**Shirttail Gulc**	**2.68**	**324**			Pn	12 10 53.3	-2.5
TPC	**Twentynine Pal**	**2.69**	**92**			Pn	12 10 56.2	+0.2
BAR	**Barrett**	**2.70**	**125**			Pn	12 10 54.5	-1.6
BAR					IAML		12 11 40.0	
	comp=N,84nm,0.6s							
BAR					IAML		12 11 45.3	
	comp=E,54nm,0.5s							
BBGB	**Big Mountain B**	**2.71**	**329**			Pn	12 10 55.1	-1.3
BELC	**Belle Mtn. Jos**	**2.74**	**95**			Pn	12 10 56.3	-0.5
BELC					IAML		12 11 47.7	
	comp=N,76nm,0.6s							
BELC					IAML		12 11 48.4	
	comp=E,110nm,0.7s							
GWY	**Greenwater Val**	**2.88**	**47**			Pn	12 10 57.5	-1.2
GWY					IAML		12 11 50.4	
	comp=E,63nm,0.6s							
CBX	**Cerro Bola**	**2.94**	**131**			Pn	12 10 57.8	-1.7
CBX					IAML		12 11 52.5	
	comp=N,106nm,0.8s							
SHOC	**Shoshone, Teco**	**2.96**	**56**			Pn	12 10 58.8	-0.9
SAO	**San Andreas Ge**	**3.05**	**325**			Pn	12 10 58.9	-2.1
GRAC	**Grapevine Rang**	**3.14**	**29**			Pn	12 11 01.9	-0.4
GRAC					IAML		12 11 59.6	
	comp=N,89nm,0.8s							
GRAC					IAML		12 12 10.1	
	comp=E,76nm,0.7s							
YUH	**Yuha Desert**	**3.24**	**119**			Pn	12 11 04.1	+0.5
YUH					IAML		12 12 02.1	
	comp=E,31nm,1.1s							
BC3	**Big Chuckawall**	**3.25**	**100**	Pn	Pn	Pn	12 11 03.2	-0.5
BC3					IAML		12 12 05.3	
	comp=N,33nm,1.1s							
DSP	**Deep Springs**	**3.28**	**19**	Pn	Pn	Pn	12 11 04.0	0.0
DSP					IAML		12 12 03.5	
	comp=E,39nm,1.0s							
AMDNV	**Amargosa**	**3.29**	**48**			Pn	12 11 02.9	-1.2
MTPC	**Mountain Pass**	**3.30**	**67**			Pn	12 11 03.7	-0.9
MTPC					IAML		12 12 05.1	
	comp=N,36nm,1.8s							
MTPC					IAML		12 12 05.1	
	comp=E,47nm,0.7s							
WCT	**Wildcat Mounta**	**3.33**	**40**			Pn	12 11 04.3	-0.5
MDPB	**Devils Postpil**	**3.36**	**3**			Pn	12 11 05.7	+0.3
MDPB					IAML		12 11 55.8	
	comp=N,79nm,0.4s							
MDPB					IAML		12 12 00.8	
	comp=E,81nm,0.7s							
IRM	**Iron Mountain**	**3.44**	**91**			Pn	12 11 05.7	-0.6
GMN	**Gold Mountain**	**3.45**	**28**			Pn	12 11 06.6	0.0
ESJX	**Sierra Juarez**	**3.60**	**128**			Pn	12 11 07.9	-0.7
MHC	**Mount Hamilton**	**3.62**	**329**	Pn		Pn	12 11 07.2	-1.6
MHC					IAML		12 12 28.4	
	comp=E,29nm,1.1s							
MHC					IAML		12 12 34.4	
	comp=N,26nm,0.8s							
TPNV	**Topopah Spring**	**3.65**	**42**			Pn	12 11 09.0	-0.3
TPNV					IAML		12 12 16.7	
	comp=N,29nm,1.1s							
TPNV					IAML		12 12 19.5	
	comp=N,27nm,2.2s							
5054	**Holtville Bond**	**3.66**	**114**			Pn	12 11 11.0	+1.8
V12A	**Nelson**	**3.92**	**67**			Pn	12 11 12.4	-0.7
V12A					IAML		12 11 59.2	
	comp=E,18nm,0.6s							
V12A					IAML		12 12 25.7	
	comp=N,18nm,1.4s							
JRSC	**Jasper Ridge**	**3.94**	**323**			Pn	12 11 10.9	-2.3
JRSC					IAML		12 12 19.5	
	comp=E,24nm,3.2s							
JRSC					IAML		12 12 47.2	
	comp=N,25nm,2.8s							
SHPR	**Sheep Range**	**4.05**	**55**	Pn	Pn	Pn	12 11 14.5	-0.3
VTX	**Valle De La Tr**	**4.11**	**133**	Pn	Pn	Pn	12 11 15.1	-0.5
W13A	**Hualapai Mount**	**4.53**	**78**			Pn	12 11 20.7	-0.7
W13A					IAML		12 12 46.0	
	comp=N,18nm,2.1s							
PRN	**Pahroc Range**	**4.66**	**46**			Pn	12 11 22.8	-0.3
PRN					IAML		12 12 49.5	
	comp=N,15nm,0.7s							
PRN					IAML		12 13 02.9	
	comp=E,20nm,0.8s							
Y14A	**Wickenburg**	**5.22**	**92**			Pn	12 11 30.1	-0.8
Y14A					IAML		12 13 09.6	
	comp=E,6.9nm,0.9s							
Y14A					IAML		12 13 13.3	
	comp=N,10nm,2.4s							
U15A	**North Rim**	**6.11**	**67**			Pn	12 11 43.9	+0.6

*IDC **08** 12:19:59.6±4.6,21°.93S×179°.48W,h599km±57km,mb3.1/6, mbtmp4.1/8,Error ellipse: s-maj=40.8km s-min=28.8km az=147.0*

ISC 08 12:19:58.5±1.0,22°.1S-0°.1×179°.4W-0°.2,h592km,n10, σ0s11/11,mb3.8/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.12**	**267**	P	**P**	**12 22 48.2**	**-0.5**
	4.8nm,0.7s,baz=80,slow=20,SNR=9.7						
URZ	**Urewera**	**16.42**	**190**	P	**P**	**12 23 20.1**	**+0.3**
	3.8nm,0.3s,baz=270,slow=3.6,SNR=6.9						
URZ				S	**S**	**12 26 02.5**	**-1.4**
	5.1nm,0.8s,baz=188,slow=21,SNR=6.2						
STKA	**Stephens Creek**	**35.94**	**246**	P	**P**	**12 26 11.9**	**+1.3**
	1.6nm,0.5s,baz=73,slow=9.1,SNR=5.4						
	1.6nm,0.5s						
ASAR	**Alice Springs**	**42.90**	**259**	P	**P**	**12 27 07.1**	**+0.6**
	2.6nm,0.8s,baz=97,slow=8.2,SNR=43						
ASAR				PcP	**PcP**	**12 28 44.2**	**+0.6**
	0.1nm,0.4s,baz=97,slow=4.1,SNR=1.6						
	2.6nm,0.8s						
WRA	**Warramunga Arr**	**43.10**	**264**	P	**P**	**12 27 07.5**	**-0.6**
	1.3nm,0.5s,baz=95,slow=7.8,SNR=47						
	1.3nm,0.5s						

PETK	**Petropavlovsk-**	**77.45**	**346**	P		**P**	**12 30 52.9**	**-0.6**
	5.7nm,1.0s,baz=175,slow=5.6,SNR=5.4							
	5.7nm,1.0s							
NVAR	**Mina Array Bea**	**83.06**	**44**	P		**P**	**12 31 24.3**	**+1.1**
	0.3nm,0.6s,baz=254,slow=4.7,SNR=4.1							
	0.3nm,0.6s							
ILAR	**Eielson Array**	**90.12**	**13**	P		**P**	**12 31 55.5**	**-0.3**
	0.3nm,0.6s,baz=220,slow=4.7,SNR=4.2							
	0.3nm,0.6s							
HFS	**Hagfors**	**140.85**	**350**	PKhKP	PKPpre		12 38 15.6	
	0.6nm,0.3s,baz=101,slow=7.7,SNR=5.4							
AKASG	**Malin Array Be**	**143.70**	**329**	PKP	**PKPdf**	**12 38 24.9**	**-1.8**	
	0.7nm,0.3s,baz=44,slow=4.1,SNR=5.9							

*SDD **08** 12:35:09.5±0.9, 19°.07N×67°.21W,h23km±29km, MD3.5, ML2.9,MW3.2*
*NEIC **08** 12:35:09.3±1.4, 19°.03N±0°.02×67°.15W±0°.03,h10km±2km, ML2.9/11,Md3.0/12(RSPR), Error ellipse: s-maj=5.2km s-min=3.0km az=242.0*
*RSPR **08** 12:35:12.6, 18°.89N×67°.19W,h68km±6km,MD3.0/12*

ISC 08 12:35:09.3±1.6, 19°.05N±0°.05×67°.19W±0°.03,h20km±5km, n52,σ0s63/68,10C-6D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.58**	**173**		**Pb**	**12 35 21.6**	**+0.8**
AGPR					**Sn**	**12 35 30.3**	**-1.1**
AGPR	**Aguadilla, PR**	**0.58**	**173**	*e*Pg	**Pb**	**12 35 21.0**	**+0.2**
AGPR				*e*Sg	**Sb**	**12 35 28.9**	**+0.4**
AGPR				IAML		12 35 32.4	
	comp=N,818nm,0.3s						
AGPR	**Aguadilla, PR**	**0.58**	**173**	↑*e*P	**Pb**	**12 35 21.6**	**+0.8**
AGPR	**Aguadilla, PR**	**0.58**	**173**	*e*S	**Sn**	**12 35 30.3**	**-1.1**
IDE	**Isla Desecheo**	**0.71**	**203**		**Pg**	**12 35 23.2**	**-0.1**
IDE					**Sn**	**12 35 34.8**	**+0.1**
IDE	**Isla Desecheo**	**0.71**	**203**	↓*e*P	**Pg**	**12 35 23.2**	**-0.1**
IDE	**Isla Desecheo**	**0.71**	**203**	*e*S	**Sn**	**12 35 34.8**	**+0.1**
AOPR	**Arecibo Observ**	**0.81**	**149**		**Pb**	**12 35 24.2**	**-0.5**
AOPR	**Arecibo Observ**	**0.81**	**149**	*e*Pg	**Pb**	**12 35 24.4**	**-0.3**
AOPR				*e*Sg	**Sb**	**12 35 35.1**	**-0.1**
AOPR				IAML		12 35 44.8	
	comp=N,857nm,1.4s						
AOPR	**Arecibo Observ**	**0.81**	**149**	↑*e*P	**Pb**	**12 35 24.5**	**-0.2**
PRSN	**Puerto Rico Se**	**0.83**	**177**		**Pb**	**12 35 25.1**	**+0.2**
PRSN					**Sn**	**12 35 37.0**	**-0.5**
PRSN	**Puerto Rico Se**	**0.83**	**177**	↓*e*P	**Pb**	**12 35 25.1**	**+0.2**
PRSN	**Puerto Rico Se**	**0.83**	**177**	*e*S	**Sn**	**12 35 37.0**	**-0.5**
EMPR	**Esperanza - Ma**	**0.84**	**132**		**Pn**	**12 35 26.6**	**+0.5**
EMPR					**Sn**	**12 35 38.7**	**+0.8**
EMPR	**Esperanza - Ma**	**0.84**	**132**	↑*e*P	**Pn**	**12 35 26.6**	**+0.5**
EMPR	**Esperanza - Ma**	**0.84**	**132**	*e*S	**Sn**	**12 35 38.7**	**+0.8**
LSP	**Las Mesas**	**0.87**	**174**		**Pb**	**12 35 25.7**	**-0.1**
LSP					**Sn**	**12 35 38.6**	**-0.1**
LSP	**Las Mesas**	**0.87**	**174**	↑*e*P	**Pb**	**12 35 25.7**	**-0.1**
LSP	**Las Mesas**	**0.87**	**174**	*e*S	**Sn**	**12 35 38.6**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.91**	**151**		**Pn**	**12 35 27.5**	**+0.6**
UUPR					**Sb**	**12 35 38.4**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.91**	**151**	↑*e*P	**Pn**	**12 35 27.5**	**+0.6**
UUPR	**Utuado, UPR, P**	**0.91**	**151**	*e*S	**Sb**	**12 35 38.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.04**	**176**		**Pb**	**12 35 28.0**	**-0.6**
CRPR					**Sb**	**12 35 42.1**	**+0.4**
CRPR				IAML		12 35 43.1	
	comp=N,219nm,0.4s						
CRPR				IAML		12 35 43.4	
	comp=E,230nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.04**	**176**	*e*Pg	**Pb**	**12 35 28.2**	**-0.4**
CRPR				*e*Sg	**Sb**	**12 35 42.0**	**+0.2**
CRPR				IAML		12 35 47.7	
	comp=N,251nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.04**	**176**	↓*e*P	**Pb**	**12 35 28.3**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.04**	**176**	*e*S	**Sb**	**12 35 42.3**	**+0.5**
ECPR	**Experimental S**	**1.06**	**133**	↓*e*P	**Pn**	**12 35 29.8**	**+0.7**
ECPR	**Experimental S**	**1.06**	**133**	*e*S	**Sn**	**12 35 43.9**	**+0.5**
MLPR	**Magueyes Islan**	**1.08**	**173**	*e*Pg	**Pb**	**12 35 28.8**	**-0.6**
MLPR				*e*Sg	**Sb**	**12 35 43.2**	**+0.2**
MLPR				IAML		12 35 51.0	
	comp=N,67nm,0.4s						
MLPR	**Magueyes Islan**	**1.08**	**173**	↑*i*P	**Pb**	**12 35 28.7**	**-0.6**
MLPR	**Magueyes Islan**	**1.08**	**173**	*e*S	**Sn**	**12 35 43.6**	**-0.2**
OBIP	**Obispado Ponce**	**1.14**	**151**		**Pn**	**12 35 29.4**	**-0.7**
OBIP					**Sb**	**12 35 43.6**	**-1.2**
OBIP				IAML		12 35 46.1	
	comp=N,232nm,0.5s						
OBIP	**Obispado Ponce**	**1.14**	**151**	↑*e*P	**Pn**	**12 35 29.9**	**-0.2**
OBIP	**Obispado Ponce**	**1.14**	**151**	*e*S	**Sb**	**12 35 43.8**	**-1.0**
GCPR	**Guaynabo City**	**1.28**	**125**		**Pn**	**12 35 31.6**	**-0.4**
GCPR	**Guaynabo City**	**1.28**	**125**	↑*e*P	**Pn**	**12 35 32.8**	**+0.8**
GCPR	**Guaynabo City**	**1.28**	**125**	*e*S	**Sb**	**12 35 48.9**	**+0.2**
SJG	**San Juan**	**1.35**	**133**		**Pn**	**12 35 33.0**	**-0.1**
SJG				IAML		12 35 57.7	
	comp=N,218nm,0.2s						
SJG				IAML		12 35 57.8	
	comp=N,168nm,0.4s						
SJG	**San Juan**	**1.35**	**133**	↑*e*P	**Pg**	**12 35 35.1**	**-0.4**
SJG	**San Juan**	**1.35**	**133**	*e*S	**Sb**	**12 35 51.2**	**+0.3**
HIDR	**Higuey Centro**	**1.52**	**253**	*e*Pg	**Pn**	**12 35 35.4**	**0.0**
HIDR				*e*Sg	**Sn**	**12 35 55.2**	**+0.6**
HIDR				IAML		12 36 04.5	
	comp=N,248nm,0.2s						
HIDR	**Higuey Centro**	**1.52**	**253**	↑*e*P	**Pb**	**12 35 37.3**	**+0.5**
HIDR	**Higuey Centro**	**1.52**	**253**	*e*S	**Sb**	**12 35 55.7**	**+0.1**
HUMP	**Col San Antoni**	**1.56**	**125**		**Pn**	**12 35 36.0**	**+0.1**
HUMP				IAML		12 36 00.5	
	comp=N,162nm,0.2s						
HUMP				IAML		12 36 02.0	
	comp=E,184nm,0.2s						
HUMP	**Col San Antoni**	**1.56**	**125**	↑*e*P	**Pn**	**12 35 36.1**	**+0.3**
HUMP	**Col San Antoni**	**1.56**	**125**	*e*S	**Sn**	**12 35 55.8**	**+0.3**
MIDR	**Miches**	**1.76**	**268**	*e*Pg	**Pb**	**12 35 40.3**	**-0.7**
MIDR				*e*Sg	**Sn**	**12 36 01.6**	**+0.9**
MIDR				IAML		12 36 10.1	
	comp=N,78nm,0.4s						
MIDR	**Miches**	**1.76**	**268**	↓*i*P	**Pb**	**12 35 40.4**	**-0.5**
SMDR	**Samana, DR**	**1.91**	**278**	↓*e*P	**Pb**	**12 35 42.5**	**-0.9**
DR12	**Loma Pena Alta**	**2.09**	**263**		**Pn**	**12 35 44.8**	**+1.5**
HATOM	**Hato Mayor del**	**2.09**	**263**	*e*Pg	**Pn**	**12 35 44.8**	**+1.5**
HATOM				*e*Sg	**Sb**	**12 36 11.1**	**-1.2**
HATOM				IAML		12 36 18.5	
	comp=N,80nm,0.5s						
BANI	**BANI**	**3.08**	**258**	*e*Pg	**Pb**	**12 36 02.2**	**-1.3**
BANI				*e*Sg	**Sb**	**12 36 40.7**	**+0.1**
BANI				IAML		12 36 45.6	
	comp=N,87nm,1.0s						

*IDC **08** 12:36:38.8±3.6, 17°.76S×178°.62W,h559km±40km, mb3.1/11,mbtmp4.0/12,Error ellipse: s-maj=21.7km s-min=20.5km az=179.0*
*NEIC **08** 12:36:40.4±0.6, 17°.7S±0°.3×178°.43W±0°.08,h592km±11km, mb4.1/24,Error ellipse: s-maj=40.1km s-min=10.5km az=183.0*

ISC 08 12:36:40.2±0.5, 17°.8S±0°.1×178°.57W±0°.09,h579km,n46, σ0s75/48,mb4.1/23,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.22**	**271**	P	**P**	**12 38 00.9**	**+1.8**
NIUE	**Niue**	**8.30**	**100**	P	**P**	**12 38 40.7**	**-1.0**
MARNC	**Mare, Loyalty**	**13.13**	**252**	P	**P**	**12 39 31.4**	**+0.9**
DZM	**Mont Dzumac**	**14.70**	**251**	P	**P**	**12 39 46.0**	**-0.3**
	3.5nm,0.7s,baz=84,slow=18,SNR=4.0						
URZ	**Urewera**	**20.70**	**190**	P	**P**	**12 40 40.0**	**-0.9**
	3.5nm,0.6s,baz=260,slow=18,SNR=6.4						
	3.5nm,0.6s						
EIDS	**Eidsvold**	**29.15**	**250**	P	**P**	**12 41 55.7**	**-0.1**
EIDS				IAmb	IAmb	12 42 17.9	
	comp=Z,5.4nm,0.9s						
ARMA	**Armidale**	**29.84**	**240**	P	**P**	**12 42 02.2**	**+0.3**
PMG	**Port Moresby**	**34.29**	**280**	P	**P**	**12 42 39.2**	**-0.4**
COEN	**Coen**	**36.95**	**270**	P	**P**	**12 43 01.5**	**0.0**
TOO	**Toolangi**	**37.10**	**231**	P	**P**	**12 43 02.8**	**+0.3**
TOO				IAmb	IAmb	12 43 04.0	
	comp=Z,7.3nm,1.1s						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**12 43 14.2**	**0.0**
	comp=Z,7.0nm,0.7s,baz=85,slow=10,SNR=16						
	comp=Z,7.0nm,0.7s						
INKA	**Innaminka**	**38.63**	**248**	P	**P**	**12 43 15.0**	**0.0**
BBOO	**Buckleboo**	**43.31**	**241**	P	**P**	**12 43 52.1**	**+0.1**
WR8	**Warramunga Arr**	**44.34**	**259**		**P**	**12 43 59.8**	**-0.4**
WR8				IAmb	IAmb	12 44 01.7	
	comp=Z,3.5nm,0.7s						

WB0	**Warramunga Arr**	**44.46**	**260**			**P**	**12 44 00.3**	**-0.8**
WB2	**Warramunga Arr**	**44.48**	**259**	P		**P**	**12 44 00.6**	**-0.6**
WB2				IAmb	IAmb	IAmb	12 44 01.0	
	comp=Z,5.2nm,0.8s							
WRAB	**Tennant Creek**	**44.48**	**259**	P		**P**	**12 44 00.5**	**-0.8**
WRAB				IAmb	IAmb	IAmb	12 44 00.9	
	comp=Z,5.6nm,0.9s							
WRA	**Warramunga Arr**	**44.49**	**259**			**P**	**12 44 00.3**	**-1.1**
WRA	**Warramunga Arr**	**44.49**	**259**	P		**P**	**12 44 00.5**	**-0.9**
	comp=Z,3.2nm,0.5s,baz=96,slow=6.9,SNR=157							
WRA				PcP		**PcP**	**12 45 31.9**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=91,slow=3.7,SNR=4.7							
	comp=Z,3.2nm,0.5s							
AS31	**Alice Springs**	**44.66**	**254**			**P**	**12 44 02.6**	**0.0**
AS31				IAmb	IAmb	IAmb	12 44 03.1	
	comp=Z,7.7nm,0.8s							
ASAR	**Alice Springs**	**44.66**	**254**			**P**	**12 44 02.6**	**0.0**
ASAR	**Alice Springs**	**44.66**	**254**	P		**P**	**12 44 02.5**	**-0.2**
	comp=Z,22nm,0.5s,baz=88,slow=8.4,SNR=450							
ASAR				PcP		**PcP**	**12 45 32.4**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=101,slow=3.8,SNR=6.6							
MTN	**Manton Dam**	**48.65**	**268**	P		**P**	**12 44 32.1**	**-0.5**
MTN				IAmb	IAmb	IAmb	12 44 32.4	
	comp=Z,6.7nm,0.8s							
FORT	**Forrest**	**49.90**	**245**	P		**P**	**12 44 41.3**	**-0.3**
FORT				IAmb	IAmb	IAmb	12 44 59.7	
	comp=Z,9.8nm,1.1s							
KNRA	**Kununurra**	**50.34**	**264**	P		**P**	**12 44 44.8**	**-0.3**
KNRA				IAmb	IAmb	IAmb	12 44 45.5	
	comp=Z,5.0nm,0.7s							
FAKI	**Fak Fak**	**50.41**	**281**	P		**P**	**12 44 44.6**	**-1.0**
FAKI				IAmb	IAmb	IAmb	12 44 58.2	
	comp=Z,8.3nm,0.9s							
FITZ	**Fitzroy Crossi**	**52.89**	**261**	P		**P**	**12 45 03.0**	**-0.4**
PSA00	**Pilbara Seismi**	**57.78**	**255**	P		**P**	**12 45 36.5**	**-0.7**
PSA00				IAmb	IAmb	IAmb	12 45 37.4	
	comp=Z,12nm,1.1s							
MBWA	**Marble Bar**	**57.94**	**256**	P		**P**	**12 45 37.5**	**-0.9**
MORW	**Morawa**	**60.37**	**246**	P		**P**	**12 45 53.7**	**-0.8**
MORW				IAmb	IAmb	IAmb	12 46 08.0	
	comp=Z,8.1nm,1.1s							
GIRL	**Giralia**	**62.77**	**253**	P		**P**	**12 46 09.9**	**-0.3**
QSPA	**South Pole Qui**	**72.22**	**180**	P		**P**	**12 47 09.5**	**+2.4**
	comp=Z,2.4nm,0.9s,baz=33,slow=2.7,SNR=6.8							
	comp=Z,2.4nm,0.9s							
NVAR	**Mina Array Bea**	**79.48**	**44**	P		**P**	**12 47 47.9**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=231,slow=8.4,SNR=3.8							
	comp=Z,0.4nm,0.8s							
BELA	**Belgrano 2**	**82.26**	**173**	P		**P**	**12 48 00.7**	**-0.5**
MAW	**Mawson**	**83.88**	**200**	P		**P**	**12 48 09.3**	**0.0**
	comp=Z,1.3nm,0.6s,baz=160,slow=4.1,SNR=8.8							
	comp=Z,1.3nm,0.6s							
ILAR	**Eielson Array**	**85.85**	**13**	P		**P**	**12 48 18.1**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=226,slow=4.8,SNR=4.4							
	comp=Z,0.1nm,0.4s							
TXAR	**Lajitas Array**	**86.09**	**58**	P		**P**	**12 48 22.4**	**+1.6**
	comp=Z,0.5nm,0.9s,baz=244,slow=4.5,SNR=2.9							
	comp=Z,0.5nm,0.9s							
PDAR	**Pinedale Array**	**87.41**	**43**	P		**P**	**12 48 27.0**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=236,slow=7.1,SNR=2.2							
	comp=Z,0.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**88.71**	**290**	P		**P**	**12 48 34.1**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=124,slow=3.7,SNR=5.2							
	comp=Z,0.6nm,0.3s							
SNAA	**Sanae**	**90.67**	**179**	P		**P**	**12 48 41.1**	**-0.4**
SNAA	**Sanae**	**90.67**	**179**	P		**P**	**12 48 40.8**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=210,slow=8.1,SNR=2.4							
	comp=Z,1.2nm,1.0s							
BVAR	**Borovoye Array**	**116.69**	**321**	PKP	**PKPdf**		**12 54 18.1**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=104,slow=1.3,SNR=7.0							
ARCES	**ARCESS Array B**	**126.22**	**350**	PKP	**PKPdf**		**12 54 36.7**	**-0.2**
	comp=Z,2.4nm,1.1s,baz=48,slow=2.0,SNR=4.4							
BRTR	**Keskin Array B**	**144.62**	**315**	PKP	**PKPdf**		**12 55 11.8**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=114,slow=1.5,SNR=7.4							
MMAI	**Mount Meron Ar**	**145.97**	**303**	PKPbc	**PKPbc**		**12 55 16.7**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=52,slow=11,SNR=2.0							
GERES	**GERESS Array B**	**147.50**	**345**	PKPbc	**PKPbc**		**12 55 19.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=5.2,slow=1.5,SNR=5.1							

GCG 08 13:02:30.8±1.6, 13°.84N×91°.59W,h13km±79km, MD3.7, ML3.6,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.63**	**20**	*e*P	Pn	13 02 47.4	+1.8
SOKI	**Kika Raxquin**	**0.99**	**11**	*e*P	Pg	13 02 49.5	-0.5
SOKI				*e*S	Sb	13 03 03.4	+0.2
PCG5	**San Vicente Pa**	**1.24**	**72**	*e*P	Pn	13 02 49.1	-4.8
PCG5				*e*S	Sb	13 03 04.0	-6.1
APG	**El Apazote**	**1.59**

RATZ	**Rangitukua**	**0.59**	**269**	P	**Pn**	**13 19 37.0**	**+0.1**
WHHZ	**Waihua**	**0.59**	**111**	P	**Pn**	**13 19 37.7**	**+0.9**
HSRZ	**Hossack Road**	**0.59**	**338**	P	**Pn**	**13 19 36.8**	**0.0**
MCHZ	**McNeill Hill**	**0.60**	**167**	P	**Pn**	**13 19 38.4**	**+1.5**
GRRZ	**Galatos Road**	**0.61**	**327**	P	**Pn**	**13 19 37.2**	**+0.2**
TIRS	**Atiamuri Tiroh**	**0.62**	**309**	P	**Pn**	**13 19 37.2**	**0.0**
HLRZ	**Highlands Stat**	**0.62**	**347**	P	**Pn**	**13 19 37.9**	**+0.6**
TARZ	**Mount Tarawera**	**0.63**	**358**	P	**Pn**	**13 19 37.3**	**0.0**
SNGZ	**Shannon Statio**	**0.64**	**83**	P	**Pn**	**13 19 38.0**	**+0.6**
WATZ	**Wairara**	**0.64**	**284**	P	**Pn**	**13 19 37.4**	**0.0**
KATZ	**Kakaramea**	**0.66**	**260**	P	**Pn**	**13 19 37.9**	**+0.2**
KUTZ	**Kaahu Road**	**0.67**	**304**	P	**Pn**	**13 19 37.7**	**+0.1**
TMVZ	**Te Maari**	**0.69**	**248**	P	**Pn**	**13 19 38.3**	**+0.2**
ETVZ	**East Tongariro**	**0.69**	**247**	P	**Pn**	**13 19 38.4**	**+0.2**
NTVZ	**North Tongarir**	**0.70**	**250**	P	**Pn**	**13 19 38.5**	**+0.2**
MKRZ	**Makatiti**	**0.72**	**356**	P	**Pn**	**13 19 38.8**	**+0.3**
KRVZ	**Karewarewa**	**0.73**	**251**	P	**Pn**	**13 19 38.7**	**+0.2**
UTU	**Utuhina**	**0.73**	**339**	P	**Pn**	**13 19 38.6**	**+0.1**
OTVZ	**Oturere**	**0.74**	**246**	P	**Pn**	**13 19 39.0**	**+0.3**
URZ	**Urewera**	**0.76**	**37**	P	**Pn**	**13 19 38.2**	**-0.5**
URZ	**Urewera**	**0.76**	**37**	S	**Sn**	**13 19 49.4**	**-0.2**
URZ	**Urewera**	**0.76**	**37**	P	**Pn**	**13 19 38.3**	**-0.5**
NNVZ	**North Ngauruho**	**0.76**	**249**	P	**Pn**	**13 19 39.3**	**+0.3**
SNVZ	**South Ngauruho**	**0.76**	**245**	P	**Pn**	**13 19 39.4**	**+0.3**
OMRZ	**Omania**	**0.77**	**351**	P	**Pn**	**13 19 38.6**	**-0.3**
EDRZ	**Edgecumbe**	**0.77**	**12**	P	**Pn**	**13 19 38.7**	**-0.4**
WTVZ	**West Tongariro**	**0.77**	**251**	P	**Pn**	**13 19 39.4**	**+0.3**
RAGZ	**Rawiri**	**0.79**	**63**	P	**Pn**	**13 19 39.9**	**+0.6**
RAGZ				S	**Sn**	**13 19 52.5**	**+2.0**
NGZ	**Ngauruhoe**	**0.79**	**246**	P	**Pn**	**13 19 39.6**	**+0.3**
KRHZ	**Kereru**	**0.79**	**189**	P	**Pn**	**13 19 40.2**	**+1.0**
TUVZ	**Tukino**	**0.79**	**239**	P	**Pn**	**13 19 39.7**	**+0.3**
NGRZ	**Ngongotaha**	**0.81**	**341**	P	**Pn**	**13 19 39.5**	**0.0**
MOVZ	**Moawhango**	**0.81**	**228**	P	**Pn**	**13 19 39.7**	**+0.1**
COVZ	**Chateau Observ**	**0.84**	**246**	P	**Pn**	**13 19 40.2**	**+0.3**
WHVZ	**Whangaehu Hut**	**0.84**	**240**	P	**Pn**	**13 19 40.4**	**+0.2**
MAVZ	**Matarangi**	**0.85**	**241**	P	**Pn**	**13 19 40.5**	**+0.2**
WNVZ	**Wahianoa**	**0.86**	**237**	P	**Pn**	**13 19 40.5**	**+0.3**
LIRZ	**Lichensteins R**	**0.86**	**352**	P	**Pn**	**13 19 40.1**	**0.0**
KARZ	**Kaharoa**	**0.87**	**345**	P	**Pn**	**13 19 40.3**	**0.0**
TWVZ	**Taurewa**	**0.88**	**256**	P	**Pn**	**13 19 40.4**	**0.0**
TRVZ	**Turoa**	**0.88**	**240**	P	**Pn**	**13 19 40.8**	**+0.2**
MARZ	**Manawahe**	**0.88**	**8**	P	**Pn**	**13 19 40.2**	**-0.2**
CKHZ	**Cape Kidnapper**	**0.90**	**152**	P	**Pn**	**13 19 41.6**	**+0.9**
KNZ	**Kokohu**	**0.91**	**100**	P	**Pn**	**13 19 40.5**	**-0.2**
TLZ	**Tolley Road**	**0.94**	**304**	P	**Pn**	**13 19 41.2**	**0.0**
MWZ	**Matawai**	**0.94**	**56**	P	**Pn**	**13 19 40.9**	**-0.3**
KAHZ	**Kahuranaki**	**0.97**	**164**	P	**Pn**	**13 19 42.4**	**+0.8**
MTVZ	**Mangateitei**	**0.97**	**237**	P	**Pn**	**13 19 42.0**	**+0.3**
RIGZ	**Rimuhau**	**0.98**	**81**	P	**Pn**	**13 19 41.9**	**+0.3**
PKVZ	**Pokaka**	**1.01**	**245**	P	**Pn**	**13 19 42.5**	**+0.3**
OPRZ	**Ohinepanea**	**1.02**	**1**	P	**Pn**	**13 19 41.4**	**-0.7**
PRGZ	**Paritu Road**	**1.06**	**94**	P	**Pn**	**13 19 42.5**	**-0.2**
WHRZ	**Whale Island**	**1.06**	**19**	P	**Pn**	**13 19 44.2**	**+1.4**
MHGZ	**Mahia Peninsul**	**1.11**	**106**	P	**Pn**	**13 19 43.4**	**0.0**
KMRZ	**Kaimai**	**1.11**	**335**	P	**Pn**	**13 19 42.6**	**-0.8**
TKGZ	**Te Karaka**	**1.12**	**68**	P	**Pn**	**13 19 44.6**	**+1.1**
TGRZ	**Tauranga**	**1.15**	**349**	P	**Pn**	**13 19 43.6**	**-0.3**
PXZ	**Pawanui**	**1.20**	**168**	P	**Pn**	**13 19 44.6**	**+0.1**
WPHZ	**Waipukurau**	**1.20**	**183**	P	**Pn**	**13 19 44.8**	**+0.2**
RUGZ	**Raukumara Rang**	**1.27**	**46**	P	**Pn**	**13 19 45.0**	**-0.6**
TSZ	**Takapari Road**	**1.27**	**200**	P	**Pn**	**13 19 45.9**	**+0.3**
TWGZ	**Tauwhareparae**	**1.33**	**59**	P	**Pn**	**13 19 47.0**	**+0.7**
HIZ	**Hauiti**	**1.35**	**284**	P	**Pn**	**13 19 47.2**	**+0.6**
HIZ	**Hauiti**	**1.35**	**284**	P	**Pn**	**13 19 47.2**	**+0.6**
CNGZ	**Carnagh Statio**	**1.37**	**74**	P	**Pn**	**13 19 47.8**	**+1.0**
TOZ	**Tahuroa Road**	**1.39**	**324**	P	**Pn**	**13 19 47.2**	**+0.1**
VRZ	**Vera Road**	**1.40**	**259**	P	**Pn**	**13 19 47.9**	**+0.6**
PRHZ	**Porangahau**	**1.41**	**177**	P	**Pn**	**13 19 47.1**	**-0.2**
DVHZ	**Dannevirke**	**1.46**	**191**	P	**Pn**	**13 19 47.8**	**-0.3**
HAZ	**Te Kaha**	**1.48**	**42**	P	**Pn**	**13 19 47.4**	**-0.9**
WAZ	**Wanganui**	**1.49**	**233**	P	**Pn**	**13 19 49.7**	**+1.2**
PUZ	**Puketiti**	**1.57**	**60**	P	**Pn**	**13 19 49.8**	**+0.2**
PKGZ	**Pakihiroa**	**1.57**	**51**	P	**Pn**	**13 19 49.7**	**+0.1**
ANWZ	**Angora Road**	**1.60**	**181**	P	**Pn**	**13 19 49.7**	**-0.2**
POWZ	**Post Office Ro**	**1.64**	**201**	P	**Pn**	**13 19 50.6**	**+0.1**
OHWZ	**Ohakea**	**1.64**	**215**	P	**Pn**	**13 19 51.9**	**+1.5**
PRWZ	**Pori Road**	**1.74**	**194**	P	**Pn**	**13 19 52.0**	**+0.1**
LREZ	**Lake Rotokare**	**1.76**	**249**	P	**Pn**	**13 19 53.3**	**+1.3**
WMGZ	**Waiomatatini S**	**1.81**	**56**	P	**Pn**	**13 19 52.8**	**0.0**
BFZ	**Birch Farm**	**1.83**	**187**	P	**Pn**	**13 19 52.3**	**-0.8**
BFZ	**Birch Farm**	**1.83**	**187**	S	**Sn**	**13 20 15.4**	**+0.2**
BFZ	**Birch Farm**	**1.83**	**187**	P	**Pn**	**13 19 52.2**	**-0.9**
DREZ	**Durham Road**	**1.84**	**259**	P	**Pn**	**13 19 54.9**	**+1.7**
MXZ	**Matakaoa Point**	**1.91**	**48**	P	**Pn**	**13 19 54.5**	**+0.4**
MXZ	**Matakaoa Point**	**1.91**	**48**	P	**Pn**	**13 19 54.8**	**+0.7**
NEZ	**North Egmont**	**1.94**	**257**	P	**Pn**	**13 19 56.3**	**+1.8**
MRZ	**Mangatainoka R**	**1.94**	**202**	P	**Pn**	**13 19 53.7**	**-0.8**
KHEZ	**Kahui Hut**	**2.00**	**257**	P	**Pn**	**13 19 57.3**	**+1.9**
KHEZ	**Kahui Hut**	**2.00**	**257**	P	**Pn**	**13 19 57.4**	**+1.9**
PKE	**Pukeiti**	**2.01**	**260**	P	**Pn**	**13 19 57.8**	**+2.3**
MKAZ	**Moumakai**	**2.06**	**328**	P	**Pn**	**13 19 56.5**	**+0.3**
CPWZ	**Castlepoint**	**2.06**	**187**	P	**Pn**	**13 19 55.8**	**-0.4**
NBEZ	**Newall Road No**	**2.11**	**258**	P	**Pn**	**13 19 58.6**	**+1.7**
NMEZ	**Namu Road**	**2.13**	**254**	P	**Pn**	**13 19 59.6**	**+2.4**
HOWZ	**Holdsworth Sta**	**2.18**	**201**	P	**Pn**	**13 19 56.7**	**-1.1**
KUZ	**Kuaotunu**	**2.21**	**343**	P	**Pn**	**13 19 58.6**	**+0.4**
KUZ	**Kuaotunu**	**2.21**	**343**	P	**Pn**	**13 19 58.6**	**+0.4**
OGWZ	**Otaki Gorge**	**2.21**	**208**	P	**Pn**	**13 19 57.4**	**-0.9**
ETAZ	**East Tamaki Re**	**2.29**	**326**	P	**Pn**	**13 20 00.1**	**+0.9**
TMWZ	**Te Maipa**	**2.29**	**192**	P	**Pn**	**13 19 58.0**	**-1.4**
AWAZ	**Awhitu Peninsu**	**2.33**	**320**	P	**Pn**	**13 20 00.7**	**+0.8**
WIAZ	**Waiheke Island**	**2.34**	**81**	P	**Pn**	**13 20 01.9**	**+0.6**
KIW	**Kapiti Island**	**2.35**	**211**	P	**Pn**	**13 19 59.4**	**-0.8**
MTW	**Mount Morrison**	**2.42**	**199**	P	**Pn**	**13 19 59.7**	**-1.5**
MBAZ	**Motutapu North**	**2.46**	**328**	P	**Pn**	**13 20 02.5**	**+0.9**
WTAZ	**Waiatarua**	**2.47**	**321**	P	**Pn**	**13 20 02.8**	**+1.0**
CAW	**Cannon Point**	**2.51**	**206**	P	**Pn**	**13 20 00.8**	**-1.5**
RVAZ	**Riverhead Bore**	**2.60**	**323**	P	**Pn**	**13 20 04.5**	**+1.0**
TRWZ	**Traveller**	**2.61**	**194**	P	**Pn**	**13 20 02.2**	**-1.6**
MSWZ	**Moikau Station**	**2.73**	**201**	P	**Pn**	**13 20 04.1**	**-1.3**
GRZ	**Great Barrier**	**2.74**	**342**	P	**Pn**	**13 20 05.9**	**+0.4**
DUWZ	**D'Urville Isla**	**2.79**	**225**	P	**Pn**	**13 20 05.3**	**-0.9**
SNZO	**South Karori**	**2.82**	**209**	P	**Pn**	**13 20 06.3**	**-0.2**
PLWZ	**Palliser**	**2.87**	**199**	P	**Pn**	**13 20 05.4**	**-1.9**
TCW	**Tory Channel**	**2.91**	**216**	P	**Pn**	**13 20 06.1**	**-1.7**
TUWZ	**Tuamarina**	**3.24**	**217**	P	**Pn**	**13 20 10.8**	**-1.5**
NNZ	**Nelson**	**3.37**	**225**	P	**Pn**	**13 20 12.7**	**-1.4**
WCZ	**Waipu Caves**	**3.40**	**329**	P	**Pn**	**13 20 15.9**	**+1.4**
TKNZ	**Takaka Hill**	**3.50**	**231**	P	**Pn**	**13 20 15.6**	**-0.2**
BSWZ	**Blackbirch Sta**	**3.50**	**315**	P	**Pn**	**13 20 15.8**	**-2.0**
QRZ	**Quartz Range**	**3.65**	**236**	P	**Pn**	**13 20 18.6**	**+0.7**
QRZ	**Quartz Range**	**3.65**	**236**	P	**Pn**	**13 20 16.3**	**-1.6**
MRNZ	**Matariki Terra**	**3.84**	**228**	P	**Pn**	**13 20 19.0**	**-1.5**
THZ	**Tophouse**	**4.01**	**223**	P	**Pn**	**13 20 21.0**	**-1.9**
KHZ	**Kahutara**	**4.21**	**212**	P	**Pn**	**13 20 25.2**	**-0.4**
OUZ	**Omahuta**	**4.33**	**326**	P	**Pn**	**13 20 28.6**	**+1.4**
OUZ	**Omahuta**	**4.33**	**326**	P	**Pn**	**13 20 28.7**	**+1.5**
GVZ	**Greta Valley S**	**4.88**	**212**	P	**Pn**	**13 20 33.6**	**-1.1**
ARCZ	**Arundel**	**6.48**	**217**	P	**Pn**	**13 20 56.5**	**-0.2**
CTZ	**Chatham Island** 46nm,2.0s	**7.09**	**136**	P	**Pn**	**13 21 03.4**	**-1.6**
CTZ	**Chatham Island**	**7.09**	**136**	P	**Pn**	**13 21 03.4**	**-1.6**
ODZ	**Otahua Downs**	**7.57**	**213**	P	**Pn**	**13 21 11.4**	**-0.2**
RAO	**Raoul Island** 320nm,1.0s	**10.63**	**27**	P	**Pn**	**13 21 52.0**	**-1.5**

*NEIC **08** 13:29:17.4±2.1,34°.28N±0°.01×119°.28W±0°.01,h10km±1km, Error ellipse: s-maj=2.9km s-min=2.2km az=65.0*

PAS 08 13:29:17.8±2.0,34°.27N±0°.01×119°.29W±0°.01,h13km±3km, ML2.9/35,**ML3.3**/14(NEIC),**Error ellipse: s-maj=2.1km s-min=1.6km az=207.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCC	**Santa Clara**	**0.09**	**69**		Pg	13 29 21.0	+0.2
STCC					Sg	13 29 24.0	+1.1
AGOC	**Agoura**	**0.45**	**106**		Sg	13 29 33.4	+0.5
BLCC	**Black Canyon**	**0.51**	**93**		Pg	13 29 27.7	-0.3
BLCC					Sg	13 29 35.4	+0.6
MPI	**Mount Pinos, F**	**0.56**	**13**		Pg	13 29 28.2	-0.7
MPI					Sg	13 29 36.2	0.0
OAT	**Oat Mountain**	**0.57**	**82**		Pg	13 29 29.1	+0.1
OAT					Sb	13 29 38.2	+0.6
OSI	**Osito Audit: C**	**0.58**	**54**		Pg	13 29 28.3	-1.0
OSI	**Osito Audit: C**	**0.58**	**54**		Sg	13 29 37.0	0.0
BCW	**Bitter Crk WRg**	**0.68**	**352**		Pg	13 29 30.6	-0.4
BCW					Sb	13 29 40.6	-0.3
DJJ	**Donna J Jenkin**	**0.71**	**103**		Pg	13 29 30.5	-1.1
DJJ					Sg	13 29 40.2	-0.9
FIGC	**Figueroa Mtn.**	**0.73**	**309**		Pg	13 29 31.9	-0.2
FIGC					Sb	13 29 43.0	+0.6
PKM	**Mcpherson Peak**	**0.75**	**325**		Pg	13 29 31.9	-0.5
NJQ	**Nojoqui County**	**0.78**	**290**		Pg	13 29 32.1	-0.8
DECC	**Green Verdugo**	**0.79**	**91**		Pg	13 29 32.4	-0.8
DECC					Sg	13 29 43.2	-0.5
SBI	**Santa Barbara**	**0.82**	**164**		Pg	13 29 33.2	-0.4
THC	**Tehachapi Micr**	**0.82**	**39**		Pg	13 29 32.8	-1.1
THC					Sg	13 29 44.7	0.0
GR2C	**Griffith Obs.**	**0.84**	**100**		Sg	13 29 43.8	-1.2
TJR	**Tejon Ranch**	**0.88**	**31**		Pg	13 29 33.6	-1.3
LEOC	**Leona Valley**	**0.89**	**66**		Pg	13 29 33.9	-1.3
RPV	**Rancho Palos V**	**0.91**	**125**		Pg	13 29 34.3	-1.0
BSM	**San Miguel Isl**	**0.91**	**256**		Pg	13 29 34.3	-1.0
PASC	**Pasadena Art C**	**0.92**	**96**	Pg	Pb	13 29 34.0	-1.6
ARVC	**Arvin**	**0.94**	**24**		Pb	13 29 34.7	-1.1
ARVC					Sg	13 29 47.9	-0.3
MWC	**Mount Wilson**	**1.02**	**92**	Pg	Pb	13 29 35.8	-1.6
CRGC	**Crocker Grade**	**1.03**	**340**		Pb	13 29 37.1	-0.5
GATR	**Gnd/Air Tx Cnt**	**1.04**	**286**		Pb	13 29 36.6	-1.1
GATR					Sb	13 29 51.0	-0.2
CHFC	**Chilao Flat St**	**1.05**	**86**		Pb	13 29 36.0	-1.9
TPO	**Tropico Hills**	**1.07**	**55**		Pb	13 29 37.1	-1.1
LRRC	**Littlerock Res**	**1.08**	**76**		Pg	13 29 38.6	+0.1
TEJ	**El Tejon**	**1.08**	**27**		Pg	13 29 37.0	-1.3
BAKC	**Calstate**	**1.08**	**8**		Pg	13 29 39.5	+0.8
BAKC					Sb	13 29 45.9	-6.5
JNH	**Juniper Hills**	**1.12**	**81**		Pn	13 29 39.3	+0.1
CARC	**Carrizo Plain**	**1.13**	**336**		Pb	13 29 38.6	-0.6
HOLC	**Holcomb Ridge**	**1.21**	**81**		Pn	13 29 39.6	-0.9
EDW2	**Edwards Air Fo**	**1.23**	**60**		Pb	13 29 39.5	-1.2
SBB	**Saddle Back Bu**	**1.28**	**71**		Pn	13 29 40.4	-1.0
SSK	**Sunset Peak**	**1.33**	**92**		Pn	13 29 41.0	-1.2
BFSC	**Mount Baldy Ra**	**1.35**	**91**		Pn	13 29 41.8	-0.7
CCAC	**Calif City Air**	**1.37**	**50**		Pn	13 29 41.6	-1.0
TSCN	**Private Proper**	**1.54**	**326**		Pn	13 29 43.8	-1.1
HYS	**Haystack Butte**	**1.54**	**67**		Pn	13 29 44.1	-0.9
ISA	**Isabella, Lake**	**1.54**	**26**		Pn	13 29 44.6	-0.5
VES	**Vestal, Richgr**	**1.58**	**6**	Pn	Pn	13 29 44.8	-0.6
WBSM	**Bird Springs**	**1.58**	**37**		Sn	13 30 06.3	+0.2
DCD	**Diablo Creek**	**1.58**	**307**		Sn	13 30 05.1	-0.8
WASM	**Alta Sierra Ca**	**1.58**	**22**		Pn	13 29 45.5	-0.2
WASM					Sn	13 30 05.8	-0.3
WHFM	**Hanning Flat**	**1.62**	**28**		Pn	13 29 45.5	-0.6
WHFM					Sn	13 30 06.8	-0.1
ELS	**Elsinore Mount**	**1.67**	**111**	Pn	Pn	13 29 46.1	-0.7
GPO	**China Lake**	**1.92**	**44**		Pn	13 29 48.9	-1.3
PKD	**Bear Valley Ra**	**1.96**	**329**		Pn	13 29 49.4	-1.3
SPG2	**Springville 2**	**1.98**	**12**		Pn	13 29 50.6	-0.3
WSHM	**Spangler Hills**	**1.99**	**48**		Pn	13 29 50.2	-0.9
CLC	**China Lake**	**2.08**	**42**		Pn	13 29 51.5	-0.9
GSC	**Goldstone, Bar**	**2.29**	**63**		Pn	13 29 54.7	-0.7
PMPB	**Monarch Peak**	**2.30**	**328**		Pn	13 29 54.4	-1.1
HULI	**Fort Hunter Li**	**2.36**	**318**		Pn	13 29 54.7	-1.6
CWC	**Cottonwood Cre**	**2.38**	**24**	Pn	Pn	13 29 56.4	-0.3
PMD	**Palm Desert**	**2.50**	**104**	Pn	Pn	13 29 57.9	-0.2
BORC	**Borrego Spring**	**2.59**	**112**		Pn	13 29 59.2	-0.2
QSM	**Queen of Sheba**	**2.61**	**49**		Pn	13 29 58.5	-1.1
BAR	**Barrett**	**2.70**	**125**		Pn	13 29 59.1	-1.8
GWY	**Greenwater Val**	**2.88**	**48**	Pn	Pn	13 30 02.2	-1.3
SHOC	**Shoshone, Teco**	**2.96**	**56**	Pn	Pn	13 30 04.3	-0.2
MDPB	**Devils Postpil**	**3.36**	**3**		Pn	13 30 10.7	+0.5
GMN	**Gold Mountain**	**3.45**	**28**		Pn	13 30 11.4	0.0
TPNV	**Topopah Spring**	**3.65**	**42**		Pn	13 30 14.0	0.0
SHPR	**Sheep Range**	**4.05**	**55**	Pn	Pn	13 30 20.1	+0.5
W13A	**Hualapai Mount**	**4.53**	**126**		Pn	13 30 25.8	-0.5
PAHR	**Pah Rah Range**	**5.43**	**359**	Pn	Pn	13 30 39.8	+1.3
LCMT	**Little Creek M**	**5.63**	**59**	Pn	Pn	13 30 42.4	+1.1

*NEIC **08** 13:29:38.7±1.9,34°.280N±0°.010×119°.281W±0°.010, h10km±1km,Error ellipse: s-maj=2.9km s-min=2.1km az=217.0*

*PAS **08** 13:29:38.9±1.9,34°.28N±0°.01×119°.29W±0°.01,h12km±4km, ML3.6/162,ML3.5/54(NEIC),Error ellipse: s-maj=1.8km s-min=1.3km az=214.0*

*IDC **08** 13:29:42.5±1.9,34°.72N×119°.52W,h0km,mb3.6/1, mbtmp3.3/4,ML3.4/3,Error ellipse: s-maj=22.7km s-min=15.4km az=69.0*

ISC 08 13:29:38.7±1.0,34°.27N±0°.02×119°.28W±0°.02,h19km±2km, n75,σ0°76/98,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCC	**Santa Clara**	**0.09**	**66**		Pg	**13 29 41.9**	**-0.5**
STCC					Sg	**13 29 45.1**	**+0.2**
SBC	**Santa Barbara**	**0.40**	**296**		Pg	**13 29 46.8**	**-0.2**
SBC					Sb	**13 29 53.4**	**+0.4**
AGOC	**Agoura**	**0.44**	**106**		Pg	**13 29 47.6**	**-0.2**
AGOC					Sg	**13 29 54.4**	**+0.1**
BLCC	**Black Canyon**	**0.50**	**93**		Pg	**13 29 48.6**	**-0.3**
BLCC					Sb	**13 29 56.2**	**+0.3**
MPI	**Mount Pinos, F**	**0.55**	**12**		Pb	**13 29 49.2**	**-0.7**
MPI					Sb	**13 29 57.1**	**-0.5**
OAT	**Oat Mountain**	**0.56**	**82**		Pg	**13 29 50.0**	**0.0**
OSI	**Osito Audit: C**	**0.57**	**53**		Sg	**13 29 58.0**	**0.0**
OSI	**Osito Audit: C**	**0.57**	**53**	Pg	Pb	**13 29 49.7**	**-0.5**
OSI	comp=N,2μm,0.7s			IAML		13 30 00.6	
OSI	comp=E,3μm,0.7s			IAML		13 30 00.6	
PDE	**Pardee, Santa**	**0.60**	**73**		Pg	**13 29 50.7**	**-0.1**
PDE					Sn	**13 30 00.9**	**-0.6**
SYP	**Santa Ynez Pea**	**0.63**	**294**		Pb	**13 29 50.6**	**-0.5**
SYP					Sg	**13 29 59.5**	**-0.3**
BCW	**Bitter Crk WRg**	**0.68**	**351**		Pb	**13 29 51.5**	**-0.5**
BCW					Sg	**13 30 01.5**	**+0.2**
DJJ	**Donna J Jenkin**	**0.70**	**103**		Pb	**13 29 51.5**	**-0.9**
DJJ					Sb	**13 30 01.2**	**-0.4**
BTPC	**Burnt Peak**	**0.71**	**55**		Pg	**13 29 52.6**	**-0.3**
BTPC					Sn	**13 30 03.2**	**-1.3**
FIGC	**Figueroa Mtn.**	**0.74**	**308**		Pb	**13 29 52.8**	**-0.3**
FIGC					Sg	**13 30 03.4**	**0.0**
PKM	**Mcpherson Peak**	**0.76**	**325**		Pb	**13 29 52.8**	**-0.6**
PKM					Sg	**13 30 03.4**	**-0.5**
HLLC	**North Hollywoo**	**0.77**	**97**		Sb	**13 30 03.8**	**+0.2**
DECC	**Green Verdugo**	**0.78**	**91**		Pb	**13 29 53.2**	**-0.5**
DECC					Sb	**13 30 04.2**	**+0.2**
NJQ	**Nojoqui County**	**0.79**	**290**		Pb	**13 29 53.0**	**-0.8**
NJQ					Sb	**13 30 04.0**	**-0.1**
LCGC	**La Cienega, Cu**	**0.80**	**109**		Sn	**13 30 06.8**	**+0.6**
BHPC	**Baldwin Hills**	**0.81**	**110**		Sn	**13 30 06.5**	**-0.1**
SBI	**Santa Barbara**	**0.81**	**165**		Pb	**13 29 54.0**	**-0.2**
SBI					Sn	**13 30 06.2**	**-0.4**
THC	**Tehachapi Micr**	**0.82**	**38**		Pb	**13 29 53.7**	**-0.8**
THC					Sg	**13 30 05.7**	**0.0**
GR2C	**Griffith Obs.**	**0.83**	**100**		Pb	**13 29 53.5**	**-1.0**
GR2C					Sb	**13 30 04.5**	**-0.7**
USC	**University of**	**0.86**	**106**		Sn	**13 30 07.9**	**+0.1**
TJR	**Tejon Ranch**	**0.88**	**30**		Pb	**13 29 54.4**	**-1.0**
TJR					Sn	**13 30 06.2**	**-2.1**
LEOC	**Leona Valley**	**0.88**	**66**		Pb	**13 29 54.8**	**-0.7**
RPV	**Rancho Palos V**	**0.90**	**125**		Sn	**13 30 08.8**	**+0.1**
ALPC	**Antelope**	**0.91**	**62**		Pb	**13 29 55.5**	**-0.4**
ALPC					Sg	**13 30 08.2**	**-0.4**
PASC	**Pasadena Art C**	**0.91**	**96**		Pb	**13 29 55.1**	**-0.8**
PASC	**Pasadena Art C**	**0.91**	**96**		Pb	**13 29 55.6**	**-0.3**
PASC	comp=E,604nm,0.7s			IAML		13 30 08.2	
PASC	comp=N,543nm,0.6s			IAML		13 30 10.3	
BSM	**San Miguel Isl**	**0.92**	**256**		Pb	**13 29 55.4**	**-0.6**
BSM					Sg	**13 30 08.3**	**-0.4**
ARVC	**Arvin**	**0.93**	**23**		Pb	**13 29 55.7**	**-0.6**
ARVC					Sg	**13 30 08.8**	**-0.4**
CJV	**Casa Juvan**	**0.97**	**74**		Sg	**13 30 10.1**	**-0.5**
MWC	**Mount Wilson**	**1.01**	**92**		Sb	**13 30 10.8**	**0.0**
MWC	**Mount Wilson**	**1.01**	**92**	Pg	Pb	**13 29 56.6**	**-1.2**
MWC	comp=E,1μm,0.6s			IAML		13 30 11.3	
MWC	comp=N,976nm,0.8s			IAML		13 30 13.6	
CRGC	**Crocker Grade**	**1.04**	**339**		Sg	**13 30 13.4**	**+0.7**
CHFC	**Chilao Flat St**	**1.04**	**86**		Pb	**13 29 57.3**	**-0.9**
GATR	**Gnd/Air Tx Cnt**	**1.05**	**286**		Pb	**13 29 57.5**	**-0.8**
GATR					Sn	**13 30 12.1**	**-0.5**
TPO	**Tropico Hills**	**1.06**	**55**	Pg	Pn	**13 29 58.4**	**-0.2**
TPO	comp=E,1μm,0.5s			IAML		13 30 14.7	
TPO	comp=N,2μm,0.5s			IAML		13 30 14.7	
TPO	**Tropico Hills**	**1.06**	**55**		Sg	**13 30 13.4**	**0.0**
LRRC	**Littlerock Res**	**1.07**	**76**		Pg	**13 29 59.3**	**-0.2**
TEJ	**El Tejon**	**1.08**	**27**		Pb	**13 29 58.3**	**-0.4**
CIAC	**Catalina I. Ai**	**1.13**	**140**		Pb	**13 29 60.0**	**+0.4**
CIAC					Sb	**13 30 13.8**	**0.0**
CARC	**Carrizo Plain**	**1.14**	**336**		Pb	**13 29 59.6**	**-0.3**
CARC					Sg	**13 30 15.6**	**-0.2**
SMMC	**Simmler**	**1.20**	**331**		Pb	**13 30 00.5**	**-0.4**
SMMC					Sg	**13 30 18.0**	**+0.3**
HOLC	**Holcomb Ridge**	**1.20**	**81**		Pb	**13 30 00.9**	**-0.1**
HOLC					Sg	**13 30 17.9**	**0.0**
EDW2	**Edwards Air Fo**	**1.23**	**60**		Pb	**13 30 01.0**	**-0.3**
EDW2					Sn	**13 30 17.4**	**+0.4**
SBB	**Saddle Back Bu**	**1.27**	**70**		Pb	**13 30 01.8**	**-0.4**
CRNC	**Corona**	**1.48**	**105**		Pn	**13 30 03.5**	**-0.8**
HYS	**Haystack Butte**	**1.53**	**67**		Pn	**13 30 05.1**	**0.0**
ISA	**Isabella, Lake**	**1.54**	**25**	Pn	Pn	**13 30 05.3**	**0.0**
ISA	comp=E,377nm,0.6s			IAML		13 30 27.2	
ISA	comp=N,354nm,0.7s			IAML		13 30 28.9	
ADO	**Adelanto Recei**	**1.55**	**79**		Sg	**13 30 27.5**	**-1.4**
WBSM	**Bird Springs**	**1.57**	**36**		Sg	**13 30 28.4**	**-1.3**
VES	**Vestal, Richgr**	**1.58**	**6**	Pn	Pn	**13 30 05.7**	**0.0**
VES	comp=E,790nm,0.5s			IAML		13 30 32.4	
ELS	**Elsinore Mount**	**1.66**	**111**		Pn	**13 30 07.1**	**+0.3**
WORM	**Onyx Ranch**	**1.66**	**31**		Pn	**13 30 07.0**	**+0.1**
SPG2	**Springville 2**	**1.97**	**12**		Pn	**13 30 11.3**	**+0.1**
DGR	**Domenigoni Val**	**1.99**	**107**		Pn

TJR	**Tejon Ranch**	**0.88**	**31**			Pg	13 37 36.5	-1.2
LEOC	**Leona Valley**	**0.89**	**66**			Pg	13 37 36.6	-1.4
LEOC						Sg	13 37 49.1	-0.5
RPV	**Rancho Palos V**	**0.91**	**125**			Pg	13 37 37.2	-1.1
RPV						Sn	13 37 49.8	-2.7
BSM	**San Miguel Isl**	**0.91**	**255**			Pg	13 37 36.8	-1.5
BSM						Sn	13 37 49.1	-3.5
ALPC	**Antelope**	**0.92**	**63**			Pg	13 37 37.2	-1.2
ALPC						Sg	13 37 49.9	-0.5
PASC	**Pasadena Art C**	**0.92**	**96**			Pg	13 37 36.9	-1.6
PASC					Sg	Sg	13 37 49.5	-1.1
PASC					IAML		13 37 51.2	
	comp=E,345nm,0.4s							
PASC					IAML		13 37 52.4	
	comp=N,351nm,0.5s							
PASC	**Pasadena Art C**	**0.92**	**96**			Sn	13 37 49.3	-3.6
ARVC	**Arvin**	**0.93**	**24**			Pg	13 37 37.7	-1.1
CJV	**Casa Juvan**	**0.98**	**75**			Pg	13 37 38.6	-1.1
FMP	**Fort Macarthur**	**1.00**	**124**			Pg	13 37 38.8	-1.2
MWC	**Mount Wilson**	**1.02**	**92**			Pg	13 37 39.0	-1.5
MWC					Sg	Sg	13 37 52.5	-1.4
MWC					IAML		13 37 53.3	
	comp=E,506nm,0.6s							
MWC					IAML		13 37 55.8	
	comp=N,430nm,0.5s							
CRGC	**Crocker Grade**	**1.03**	**340**			Pg	13 37 40.0	-0.7
GATR	**Gnd/Air Tx Cnt**	**1.04**	**286**			Pb	13 37 39.3	-1.5
GATR						Sg	13 37 54.0	-0.4
CHFC	**Chilao Flat St**	**1.05**	**86**			Pg	13 37 39.1	-2.0
TPO	**Tropico Hills**	**1.06**	**55**			Pb	13 37 39.9	-1.4
LRRC	**Littlerock Res**	**1.07**	**76**			Pg	13 37 41.5	0.0
TEJ	**El Tejon**	**1.07**	**27**			Pb	13 37 39.8	-1.6
TEJ						Sb	13 37 53.8	-1.7
JNH	**Juniper Hills**	**1.12**	**81**			Pb	13 37 40.1	-2.2
CARC	**Carrizo Plain**	**1.13**	**336**			Pb	13 37 41.2	-1.2
BREC	**Barre Substati**	**1.18**	**113**			Sn	13 37 59.2	0.0
HOLC	**Holcomb Ridge**	**1.21**	**81**			Pn	13 37 42.5	-1.3
EDW2	**Edwards Air Fo**	**1.23**	**60**			Pn	13 37 42.5	-1.4
EDW2						Sb	13 37 59.1	-0.9
PSRC	**Puddingstone R**	**1.24**	**98**			Pn	13 37 43.5	-0.6
PMLM	**Mount Lospe**	**1.25**	**300**			Pn	13 37 44.0	-0.2
SBB	**Saddle Back Bu**	**1.28**	**71**			Pn	13 37 43.8	-0.9
SBB						Sb	13 38 00.4	-1.0
SSK	**Sunset Peak**	**1.32**	**92**			Pn	13 37 44.2	-1.2
BFSC	**Mount Baldy Ra**	**1.35**	**91**			Pn	13 37 44.5	-1.2
BFSC					IAML		13 38 05.0	
	comp=E,331nm,0.8s							
BFSC					IAML		13 38 12.7	
	comp=N,229nm,0.7s							
CCAC	**Calif City Air**	**1.37**	**50**			Pn	13 37 44.5	-1.3
HYS	**Haystack Butte**	**1.54**	**67**			Pn	13 37 47.0	-1.2
TSCN	**Private Proper**	**1.54**	**326**			Pn	13 37 46.8	-1.4
ISA	**Isabella, Lake**	**1.54**	**26**			Pn	13 37 47.2	-1.1
DTP	**Desert Tortois**	**1.55**	**50**			Pn	13 37 47.2	-1.1
VES	**Vestal, Richgr**	**1.57**	**6**			Pn	13 37 47.5	-1.1
VES					IAML		13 38 12.4	
	comp=E,227nm,0.6s							
WASM	**Alta Sierra Ca**	**1.58**	**22**			Pn	13 37 47.8	-1.1
WHFM	**Hanning Flat**	**1.62**	**28**			Pn	13 37 48.5	-0.8
WORM	**Onyx Ranch**	**1.66**	**31**			Pn	13 37 48.9	-1.0
ELS	**Elsinore Mount**	**1.67**	**111**			Pn	13 37 48.5	-1.5
LRMC	**Laurel Mtn Rad**	**1.79**	**47**			Pn	13 37 50.6	-1.1
LRMC					IAML		13 38 20.0	
	comp=N,130nm,0.6s							
LRMC					IAML		13 38 20.4	
	comp=E,107nm,0.4s							
PKD	**Bear Valley Ra**	**1.96**	**329**			Pn	13 37 52.4	-1.5
PKD					IAML		13 38 26.6	
	comp=E,152nm,0.7s							
PKD					IAML		13 38 29.9	
	comp=N,137nm,1.4s							
SPG2	**Springville 2**	**1.97**	**12**			Pn	13 37 53.6	-0.6
TOW	**Tower One**	**1.98**	**39**			Pb	13 37 56.4	-0.4
WSHM	**Spangler Hills**	**1.98**	**48**			Pn	13 37 52.8	-1.5
WSHM					IAML		13 38 25.6	
	comp=N,88nm,0.6s							
CCCA	**Chr Cany lake**	**2.02**	**51**			Pn	13 37 53.7	-1.1
CCCA					IAML		13 38 27.6	
	comp=E,177nm,0.5s							
CLC	**China Lake**	**2.07**	**42**			Pn	13 37 54.2	-1.3
PSMM	**Smith Mountain**	**2.09**	**330**			Pn	13 37 54.3	-1.4
PSAM	**San Ardo**	**2.18**	**324**			Pb	13 38 00.7	+0.4
PLM	**Palomar**	**2.22**	**114**			Pn	13 37 56.4	-1.4
CRY	**Cary Ranch**	**2.24**	**108**			Pn	13 37 56.5	-1.4
GSC	**Goldstone, Bar**	**2.29**	**63**			Pn	13 37 57.6	-1.0
GSC					IAML		13 38 37.8	
	comp=N,65nm,0.6s							
GSC					IAML		13 38 43.4	
	comp=E,133nm,0.6s							
PMPB	**Monarch Peak**	**2.30**	**328**			Pn	13 37 56.9	-1.8
DNR	**Dunn Ranch,Anz**	**2.32**	**107**			Pn	13 37 58.5	-0.5
HLLI	**Fort Hunter Li**	**2.36**	**318**			Pn	13 37 57.5	-2.0
CWC	**Cottonwood Cre**	**2.38**	**24**	Pn		Pn	13 37 59.5	-0.3
CWC					IAML		13 38 36.6	
	comp=N,54nm,0.4s							
CWC					IAML		13 38 39.3	
	comp=E,58nm,0.5s							
PFO	**Pinyon Flats O**	**2.44**	**105**			Pn	13 38 00.7	-0.1
PMD	**Palm Desert**	**2.50**	**104**	Pn		Pn	13 38 00.7	-0.7
PMD					IAML		13 38 47.1	
	comp=N,47nm,0.8s							
BORC	**Borrego Spring**	**2.59**	**112**			Pn	13 38 02.4	-0.3
BORC					IAML		13 38 57.0	
	comp=N,42nm,0.8s							
QSM	**Queen of Sheba**	**2.60**	**49**			Pn	13 38 01.7	-1.2
QSM					IAML		13 38 45.5	
	comp=E,57nm,0.7s							
QSM					IAML		13 38 49.2	
	comp=N,53nm,0.8s							
BBGB	**Big Mountain B**	**2.71**	**329**			Pn	13 38 03.5	-0.8
BELC	**Belle Mtn. Jos**	**2.74**	**95**			Pn	13 38 04.8	-0.1
BELC					IAML		13 38 55.5	
	comp=N,55nm,0.7s							
BELC					IAML		13 38 56.4	
	comp=E,81nm,0.7s							
GWY	**Greenwater Val**	**2.87**	**48**			Pn	13 38 05.3	-1.4
GWY					IAML		13 38 57.4	
	comp=E,41nm,0.5s							
FURC	**Furnace Creek,**	**2.95**	**41**		IAML		13 39 00.7	
	comp=E,52nm,0.9s							
FURC					IAML		13 39 08.4	
	comp=N,56nm,0.9s							
GRAC	**Grapevine Rang**	**3.14**	**29**		IAML		13 39 07.5	
	comp=N,65nm,0.8s							
GRAC					IAML		13 39 10.6	
	comp=E,57nm,0.6s							
BC3	**Big Chuckawall**	**3.25**	**100**		IAML		13 39 17.1	
	comp=N,23nm,0.8s							
YUH	**Yuha Desert**	**3.25**	**119**		IAML		13 39 10.6	
	comp=E,25nm,0.9s							
DANC	**Danby, Needles**	**3.25**	**82**		IAML		13 39 14.1	
	comp=N,55nm,0.9s							
DSP	**Deep Springs**	**3.27**	**19**		IAML		13 39 16.1	
	comp=E,32nm,1.4s							
MTPC	**Mountain Pass**	**3.30**	**67**		IAML		13 39 13.9	
	comp=N,28nm,1.2s							
MTPC					IAML		13 39 13.9	
	comp=E,33nm,0.9s							
MDPB	**Devils Postpil**	**3.36**	**3**		IAML		13 39 04.8	
	comp=N,53nm,0.6s							
MHC	**Mount Hamilton**	**3.61**	**329**		IAML		13 39 29.0	
	comp=N,24nm,0.8s							
MHC					IAML		13 39 36.3	
	comp=E,23nm,1.1s							
TPNV	**Topopah Spring**	**3.64**	**42**		IAML		13 39 23.2	
	comp=E,21nm,1.0s							
TPNV					IAML		13 39 24.6	
	comp=E,20nm,1.1s							
V12A	**Nelson**	**3.92**	**67**		IAML		13 39 33.1	
	comp=N,16nm,1.7s							
BLYC	**Blythe**	**3.99**	**96**		IAML		13 39 46.4	
	comp=N,17nm,1.1s							
WAKR	**Walker**	**4.22**	**358**		IAML		13 39 35.2	
	comp=N,24nm,1.2s							
NV11	**Mina Array Sit**	**4.25**	**12**		IAML		13 39 37.0	
	comp=E,15nm,0.8s							
RYN	**Ryan**	**4.39**	**8**		IAML		13 39 42.1	
	comp=E,11nm,1.1s							
RYN					IAML		13 39 42.3	
	comp=N,12nm,1.1s							
S11A	**Rachel**	**4.42**	**39**		IAML		13 39 04.5	
	comp=N,22nm,3.5s							
W13A	**Hualapai Mount**	**4.53**	**78**		IAML		13 39 54.6	
	comp=N,12nm,1.4s							
PRN	**Pahroc Range**	**4.65**	**47**		IAML		13 39 55.7	
	comp=N,13nm,1.2s							
PRN					IAML		13 40 10.9	
	comp=E,15nm,0.8s							

*LDG **08** 13:44:59.2±0.2, 43°.24N×0°.08W, h2km, Md1.4/2, Ml1.9/1, Error ellipse: s-maj=4.9km s-min=2.7km az=161.0*
STR 08 13:44:59.8±1.8, 43°N±9°×±°, h0km, MLv0.9/5, LOCSAT earthModelID pyrenees_taup-2.11 preliminary, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYLO	**Lourdes**	**0.08**	**170**	Pg	Pg	13 45 02.1	+0.9
PYLO				Sg	Sg	13 45 03.0	+0.8
LABF	**Labassere**	**0.16**	**141**	Pg	Pg	13 45 03.0	+0.2
LABF				Sg	Sg	13 45 04.9	-0.1
REYF	**Montagne du Re**	**0.26**	**246**	Pg	Pg	13 45 05.0	+0.3
VIEF	**Viey**	**0.30**	**167**	Pg	Pg	13 45 04.5	-1.0
VIEF				Sg	Sg	13 45 08.1	-1.2
EPF	**Esparros**	**0.33**	**116**	*e*Pg	Pg	13 45 06.3	+0.2
EPF				*e*Sg	Sg	13 45 11.2	+0.9
	3.2nm,0.2s						
ETSF	**Etsaut**	**0.45**	**233**	*e*Pg	Pg	13 45 09.0	+0.6
ETSF				*e*Sg	Sg	13 45 15.1	+0.8
	2.2nm,0.2s						
CANF	**Canfranc**	**0.53**	**219**	Pg	Pg	13 45 09.9	+0.1
CANF				Sg	Sg	13 45 17.1	+0.5
RJF	**Les Rejaudoux**	**2.42**	**28**	*e*Sg	Sb	13 46 13.5	-0.9
	2.1nm,0.3s						

*STR **08** 13:45:03.7±0.0, 46°.04N±0°.10×6°.9E±0°.1, h7km, MLv0.8/7, LOCSAT earthModelID apes_taup-2.11 preliminary*
ZUR 08 13:45:03.8, 46°.04N×6°.89E, h6km±2km, MLh0.6/10, 4C-3D, Error ellipse: s-maj=5307.4km s-min=770.5km az=179.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEMOS	**Emosson Stauma**	**0.04**	**44**	⇑Pg	Pg	13 45 05.4	+0.2
OGSI	**Sixt**	**0.10**	**286**	⇓Pg	Pg	13 45 05.9	-0.1
OGSI	**Sixt**	**0.10**	**286**	Pg	Pg	13 45 05.9	-0.1
OGSI				Sg	Sg	13 45 07.6	+0.1
SALAN	**Lac Salanfe**	**0.12**	**27**	⇑Pg	Pg	13 45 06.6	+0.2
MFERR	**Prayon, Val Fe**	**0.17**	**120**	⇓Pg	Pg	13 45 07.6	+0.3
ILLEZ	**Chalet Vouargn**	**0.18**	**10**	⇑Pg	Pg	13 45 07.6	+0.2
BLANC	**P.ta Helbronne**	**0.20**	**172**	⇑Pg	Pg	13 45 07.9	+0.2
BLANC				Sg	Sg	13 45 10.7	+0.3
RAW4	**Former Reservo**	**0.26**	**49**	Sg	Sg	13 45 12.6	+0.3
GRYON	**Gryon**	**0.26**	**35**	Sg	Sg	13 45 12.5	+0.1
REMY	**Saint-Rhmy-en**	**0.27**	**137**	Sg	Sg	13 45 13.3	+0.6
REMY	**Saint-Rhmy-en**	**0.27**	**137**	Pg	Pg	13 45 09.5	+0.4
REMY				Sg	Sg	13 45 13.4	+0.6
MRGE	**Morge**	**0.29**	**156**	Pg	Pg	13 45 09.6	+0.1
MRGE				Sg	Sg	13 45 13.6	+0.3
AIGLE	**Aigle**	**0.31**	**8**	Pg	Pg	13 45 09.8	+0.1
AIGLE				Sg	Sg	13 45 14.0	+0.1
AIGLE	**Aigle**	**0.31**	**8**	Pg	Pg	13 45 09.8	0.0
AIGLE				Sg	Sg	13 45 14.0	+0.2
DIX	**Grande Dixence**	**0.36**	**83**	⇓Pg	Pg	13 45 11.1	+0.2
DIX				Sg	Sg	13 45 15.9	+0.3
DIX	**Grande Dixence**	**0.36**	**83**	Pg	Pg	13 45 11.0	+0.2
DIX				Sg	Sg	13 45 15.9	+0.3
DIX	**Grande Dixence**	**0.36**	**83**	Pg	Pg	13 45 10.9	+0.1
DIX				Sg	Sg	13 45 15.9	+0.3
RSL	**Roselend**	**0.40**	**208**	Pg	Pg	13 45 11.2	-0.3
RSL				Sg	Sg	13 45 16.0	-0.7
RSL	**Roselend**	**0.40**	**208**	Pg	Pg	13 45 11.2	-0.3
RSL				Sg	Sg	13 45 16.0	-0.7
SENIN	**Lac Senin/Sane**	**0.43**	**41**	Sg	Sg	13 45 18.1	+0.3
LSD	**Lago del Serru**	**0.60**	**164**	Pg	Pg	13 45 15.5	+0.2
LSD				Sg	Sg	13 45 22.9	-0.3
CIRO	**Champorcher**	**0.64**	**133**	Pg	Pg	13 45 16.1	0.0
CIRO				Sg	Sg	13 45 24.3	-0.2

*ATH **08** 13:45:25.3, 36°.57N×22°.04E, h5km, ML2.8/4, Manual Solution by M.Charalampakis First location: 2019/11/08 13:46:36, This location: 2019/11/08 14:36:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 1 km*
ISC 08 13:45:23.6±3.3, 36°.5N±0°.2×22°.07E±0°.08, h11km, n19, σ1s22/19, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTHA	**Methoni**	**0.47**	**321**	P	**Pg**	**13 45 32.4**	**-0.4**
MTHA				S	**Sg**	**13 45 37.1**	**-1.9**
PYL1	**Pylos**	**0.55**	**327**	P	**Pg**	**13 45 33.4**	**-1.0**
ITM	**Ithomi**	**0.73**	**351**	P	**Pg**	**13 45 37.3**	**-0.5**
VLI	**Veliai**	**0.75**	**69**	P	**Pg**	**13 45 36.1**	**-1.9**
KTHA	**Kythira Island**	**0.82**	**103**	P	Pg	13 45 34.4	-5.1
AMT	**Artemida-Makis**	**1.12**	**345**	P	**Pg**	**13 45 44.0**	**-1.1**
GUR	**Goura**	**1.50**	**8**	P	**Pn**	**13 45 51.5**	**+1.0**
GUR	**Goura**	**1.50**	**8**	P	**Pn**	**13 45 51.5**	**+1.0**
DRO	**Drossia**	**1.52**	**349**	P	**Pn**	**13 45 51.6**	**+0.8**
DRO	**Drossia**	**1.52**	**349**	P	**Pb**	**13 45 51.9**	**0.0**
MET6	**Megalochori,Me**	**1.53**	**42**	P	**Pn**	**13 45 52.0**	**+1.1**
MET2	**Kameni Chora,**	**1.53**	**41**	P	**Pn**	**13 45 52.3**	**+1.4**
MET5	**Makryloggos,Me**	**1.56**	**41**	P	**Pn**	**13 45 52.9**	**+1.7**
MET4	**Agioi Theodoro**	**1.58**	**42**	P	**Pn**	**13 45 52.9**	**+1.4**
KLV	**Kalavryta, Ach**	**1.59**	**2**	P	**Pn**	**13 45 52.8**	**+1.0**
KLV	**Kalavryta, Ach**	**1.59**	**2**	P	**Pn**	**13 45 52.7**	**+1.0**
RLS	**Riolos of Patr**	**1.67**	**343**	P	**Pb**	**13 45 55.0**	**+0.6**
LOUT	**Loutraki**	**1.69**	**25**	P	**Pb**	**13 45 55.5**	**+0.8**
LTK	**Loutraki**	**1.72**	**24**	P	**Pb**	**13 45 56.0**	**+0.7**

*NAO **08** 13:51:07.7, 33°.01N×49°.13E, h33km, MB4.5*
*ISN **08** 13:51:41.5±1.1, 37°.97N×47°.43E, h2km±102km, ML4.4*
*THR **08** 13:51:45.8±0.0, 37°.74N×47°.43E, h8km±8km, ML4.8*
*TEH **08** 13:51:45.3, 37°.73N×47°.41E, h5km±32km*
*IDC **08** 13:51:45.5±0.8, 37°.78N×47°.44E, h0km, mb4.3/21, mbtmp4.4/32, ML4.3/8, MS3.9/38, Error ellipse: s-maj=13.1km s-min=8.4km az=177.0*
*NEIC **08** 13:51:47.6±1.5, 37°.88N±0°.02×47°.46E±0°.09, h10km±1km, mb4.6/47, Error ellipse: s-maj=12.6km s-min=3.2km az=273.0*
*MOS **08** 13:51:47.9±1.5, 38°.01N×47°.49E, h16km, mb4.8/21, Error ellipse: s-maj=5.3km s-min=3.2km az=125.0*
*NNC **08** 13:51:57.6±3.1, 38°.30N×48°.61E, h0km, mb4.8, Error ellipse: s-maj=50.2km s-min=24.5km az=88.0*
ISC 08 13:51:46.8±1.1, 37.77N±0°.02×47°.40E±0°.03, h7km±7km, n438, σ1s71/457, mb4.6/73, MS4.0/35, 45C-36D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHSH	**Hashtrud**	**0.48**	**194**	Pg	**Pg**	**13 51 54.2**	**-1.9**
IHSH				Sg	**Sg**	**13 52 01.1**	**-1.3**
IHRS	**Heris**	**0.62**	**333**	Pg	**Pg**	**13 51 57.7**	**-1.0**
ITBZ	**Tabriz**	**1.09**	**295**	Pg	**Pg**	**13 52 06.0**	**-1.8**
ITBZ				Sg	**Sg**	**13 52 22.4**	**+0.3**
GRMI	**Germi**	**1.10**	**20**	Pg	**Pg**	**13 52 06.6**	**-1.4**
IAZR	**Azarshahr**	**1.13**	**266**	Pg	**Pg**	**13 52 07.2**	**-1.4**
GAS1	**Astara - Iran**	**1.29**	**61**	Pg	**Pn**	**13 52 09.5**	**-1.7**
GAS1				Sg	**Sb**	**13 52 28.5**	**+0.4**
CSN1	**Caspian**	**1.36**	**98**	Pg	**Pn**	**13 52 10.3**	**-1.6**
ISHB	**Shabestar**	**1.50**	**290**	Pg	**Pn**	**13 52 13.3**	**-1.1**
ZNJK	**Zanjan**	**1.50**	**137**	Pg	**Pn**	**13 52 12.7**	**-1.6**
ZNJK				Sg	**Sn**	**13 52 32.6**	**-1.7**
ZNJK	**Zanjan**	**1.50**	**137**	*e*Pg	**Pn**	**13 52 12.6**	**-1.7**
ZNJK				IAML		13 52 46.0	
	comp=Z,3.8nm,1.0s						
IMRD	**Marand**	**1.64**	**306**	Pg	**Pn**	**13 52 16.5**	**+0.4**
MAHB	**Mahabad**	**1.69**	**234**	Pg	**Pn**	**13 52 15.6**	**-1.1**
JIR1	**Jirandeh**	**2.19**	**118**	Pn	**Pn**	**13 52 24.0**	**+0.3**
LHJ2	**Lahijan - Gila**	**2.20**	**105**	Pn	**Pn**	**13 52 24.0**	**+0.3**
SRSL	**SARDASHT**	**2.21**	**226**	*e*Pn	**Pn**	**13 52 25.0**	**+0.9**
SRSL				*e*Sg	**Sb**	**13 52 54.9**	**0.0**
SRSL				IAML		13 53 02.8	
	comp=Z,6μm,1.0s						
HGHA	**Hamedan- Ghaye**	**2.56**	**152**	Pn	**Pn**	**13 52 29.6**	**+0.7**
IGZV	**Ghazvin**	**2.64**	**121**	Pn	**Pn**	**13 52 30.5**	**+0.5**
SNGE	**Sanandaj**	**2.67**	**181**	*e*Pn	**Pn**	**13 52 32.1**	**+1.7**
SNGE				IAML		13 54 06.1	
	comp=Z,7.0nm,1.0s						
QABG	**Abgarm-Qazvin**	**2.70**	**139**	Pn	**Pn**	**13 52 31.0**	**+0.2**
SNQR	**Sonqor, Kerman**	**2.91**	**176**	Pn	**Pn**	**13 52 34.7**	**+0.9**
GNI	**Garni**	**3.15**	**320**		**Pn**	**13 52 39.4**	**+2.4**
GNI	**Garni**	**3.15**	**320**	Pn	**Pn**	**13 52 39.8**	**+2.8**
	comp=Z,28nm,0.3s,baz=176,slow=1.1,SNR=34						
GNI				Pg	**Pb**	**13 52 45.1**	**+1.8**
	comp=Z,290nm,0.3s,baz=103,slow=2.4,SNR=111						
GNI				Lg	Lg	13 53 29.5	
	comp=Z,229nm,0.3s,baz=16,slow=2.1,SNR=5.8						
GNI				LR	LR	13 54 06.0	
	comp=Z,3μm,18.2s,baz=118,slow=44						
	comp=Z,571nm,0.9s						
GNI	**Garni**	**3.15**	**320**	P	**Pn**	**13 52 40.1**	**+3.1**
GNI				S	**Sb**	**13 53 20.7**	**-1.3**
GNI	**Garni**	**3.15**	**320**	*d* iPN	**Pn**	**13 52 39.3**	**+2.3**
GNI				pmax	pmax		
	comp=Z,409nm,0.7s						
IDHR	**Dehrash**	**3.17**	**195**	Pn	**Pn**	**13 52 39.0**	**+1.7**
HAGD	**Aghdareh**	**3.26**	**154**	Pn	**Pn**	**13 52 38.1**	**-0.4**
THKV	**Tehran--Karaj**	**3.35**	**123**	*e*Pn	**Pn**	**13 52 40.1**	**+0.4**
THKV				IAML		13 53 35.6	
	comp=Z,3μm,1.0s						
IKRK	**Kirkuk**	**3.42**	**227**	*e*Pn	**Pn**	**13 52 40.0**	**-0.5**
IKRK				*e*Sn	**Sn**	**13 53 22.0**	**+0.8**
IKRK				AML	AML	13 53 44.6	
	comp=E,1μm,0.9s						
IKRK				AML	AML	13 53 53.8	
	comp=N,2μm,0.8s						
IGHG	**Ghaleghazi**	**3.50**	**191**	Pn	**Pn**	**13 52 42.8**	**+1.0**
KCHF	**Cheshme Sefid,**	**3.50**	**185**	Pn	**Pn**	**13 52 42.6**	**+0.8**
CHTH	**Charan**	**3.52**	**121**	*e*Pn	**Pn**	**13 52 43.4**	**+1.3**
CHTH				IAML		13 53 25.4	
	comp=Z,14nm,1.0s						
MZPU	**Pul - Mazandar**	**3.58**	**110**	Pn	**Pn**	**13 52 43.4**	**+0.5**
AKT	**Akhty**	**3.71**	**4**	*e*PN	**Pn**	**13 52 45.1**	**+0.5**
AKT				*e*		13 52 53.0	
AKT				*e*		13 52 56.4	
AKT				*e*S	**Sn**	**13 53 29.9**	**+1.2**
AKT				*e*S	**Sb**	**13 53 42.5**	**+4.5**
AKT				pmax	pmax		
	comp=Z,553nm,0.5s						
AKT				smax	smax		
	comp=E,1μm,0.6s						
AKT				smax	smax		
	comp=N,1μm,0.6s						
AKT				smax	smax		
	comp=E,1μm,0.6s						
AKT				MLR	MLR		
	comp=Z,1μm,2.0s						
IQOM	**Qom**	**4.16**	**134**	Pn	**Pn**	**13 52 50.7**	**-0.2**
IPRN	**Peran**	**4.23**	**110**	Pn	**Pn**	**13 52 52.3**	**+0.5**
GURO	**Guroymak-BITLI**	**4.30**	**282**		**Pn**	**13 52 56.1**	**+3.3**
IDMV	**Damavand**	**4.32**	**119**	Pn	**Pn**	**13 52 53.8**	**+0.7**
KARS	**Kars**	**4.41**	**312**	Pn	**Pn**	**13 52 54.8**	**+0.6**
IVRN	**Varamin**	**4.45**	**127**	Pn	**Pn**	**13 52 55.3**	**+0.5**
KHMZ	**Khomeyn**	**4.53**	**152**	*e*Pn	**Pn**	**13 52 57.9**	**+2.0**
KHMZ				IAML		13 54 33.2	
	comp=Z,360nm,1.0s						
GHVR	**GHOM**	**4.55**	**135**	*e*Pn	**Pn**	**13 52 56.6**	**+0.5**
GHVR				IAML		13 54 22.7	
	comp=Z,1μm,1.0s						
IALA	**Alasht**	**4.65**	**110**	Pn	**Pn**	**13 52 58.8**	**+1.2**
IBDR	**Badra**	**4.80**	**195**	*e*Pn	**Pn**	**13 52 59.0**	**-0.5**
IBDR				*e*Sn	**Sn**	**13 53 56.0**	**+0.6**
ILAS	**Lasjerd**	**5.07**	**116**	Pn	**Pn**	**13 53 04.6**	**+1.2**
BHD	**Baghdad**	**5.12**	**210**	*e*Pn	**Pn**	**13 53 04.0**	**+0.1**
BHD				*e*Sn	**Sn**	**13 54 04.0**	**+0.7**
QAMS	**Qamsar**	**5.17**	**140**	Pn	**Pn**	**13 52 05.3**	**+0.4**
MAK	**Makhachkala**	**5.18**	**1**	*c* iPN	**Pn**	**13 53 03.1**	**-1.6**
MAK				*e*S	**Sn**	**13 54 03.6**	**-1.2**
MAK				pmax	pmax		
	comp=Z,176nm,0.8s						
MAK				MLR	MLR		
	comp=Z,1μm,7.0s						
ISFB	**Sefidab**	**5.20**	**130**	Pn	**Pn**	**13 53 05.3**	**+0.3**
MARD	**Mardin**	**5.28**	**267**		**Pn**	**13 53 07.2**	**+0.9**
IKLH	**Kolahrood**	**5.59**	**141**	Pn	**Pn**	**13 53 12.0**	**+1.4**
KOPT	**Kop Dagi**	**5.84**	**295**		**Pn**	**13 53 14.7**	**+0.7**
RAFI	**Al-Rafai**	**6.13**	**190**	*e*Pn	**Pn**	**13 53 18.0**	**+0.3**
RAFI				*e*Sn	**Sn**	**13 54 29.0**	**+1.0**
JHBN	**Jahan bin**	**6.14**	**153**	Pn	**Pn**	**13 53 18.4**	**+0.2**
ZNGN	**Zangian**	**6.31**	**152**	Pn	**Pn**	**13 53 21.6**	**+1.1**
IZEF	**Zefreh**	**6.31**	**139**	Pn	**Pn**	**13 53 21.6**	**+1.1**
IMND	**Minoodasht**	**6.38**	**92**	Pn	**Pn**	**13 53 20.3**	**-0.9**
NASN	**Na'in**	**6.64**	**137**	*e*Pn	**Pn**	**13 53 26.6**	**+1.5**
NASN				IAML		13 55 38.0	
	comp=Z,120nm,1.0s						
KBZ	**Khabaz**	**6.86**	**332**	Pn	**Pn**	**13 53 31.2**	**+3.5**
	comp=Z,5.0nm,0.8s,baz=140,slow=9.5,SNR=13						
KBZ				LR	LR	13 56 21.7	
	comp=Z,1μm,19.1s,baz=119,slow=40						
KBZ	**Khabaz**	**6.86**	**332**	⇓*e*P	**Pn**	**13 53 29.3**	**+1.

ANN pmax pmax
comp=Z,63nm,0.9s
ANN MLR MLR
comp=Z,520nm,14.0s
ANN MLR MLR
comp=E,405nm,14.0s
ANN MLR MLR
comp=N,456nm,14.0s
JRKH Jarkhoshk 10.54 96 Pn **Pn 13 54 18.9 +0.5**
KIRS Kirsehir-Merke 10.67 281 ⇑P Pn 13 54 26.1 +6.1
MMAI Mount Meron Ar 10.88 248 Pn **Pn 13 54 23.4 +0.5**
comp=N,1.0nm,0.3s,baz=56,slow=17,SNR=6.3
comp=N,1.1nm,0.5s
BR131 Keskin Array S 10.93 285 Pn 13 54 24.1 +0.4
BR131 Keskin Array S 10.93 285 *de*P **Pn 13 54 28.3 +4.6**
BRTR Keskin Array B 10.93 285 Pn 13 54 24.5 +0.8
BRTR Keskin Array B 10.93 285 Pn Pn 13 54 28.6 +4.9
comp=N,7.7nm,0.9s,baz=104,slow=13,SNR=17
BRTR LR LR 13 58 29.4
comp=N,286nm,19.1s,baz=108,slow=37
ILGA Ilgaz 11.08 291 Pn 13 54 26.3 +0.4
SHRT Shahrakht 11.26 108 Pn **Pn 13 54 29.1 +1.0**
SHRT Shahrakht 11.26 108 *e*Pn **Pn 13 54 29.7 +1.6**
ANTO Ankara 11.59 285 Pn 13 54 33.5 +0.8
ANTO Ankara 11.59 285 P Pn **13 54 33.5 +0.8**
CSS Mathiatis 11.69 260 Pn **Pn 13 54 34.9 +0.9**
GHAJ Ghor Haditha 11.69 240 Pn 13 54 34.5 +0.5
SAKB Bahrain 12.05 166 P **Pn 13 54 37.5 -1.5**
SAKB S **Sn 13 56 52.4 -1.3**
SIM Simferopol' 12.28 310 *e*P Pn 13 54 47.0 +5.0
SIM S **Sn 13 57 06.5 +7.4**
SIM pmax pmax
comp=Z,30nm,1.2s
SIM MLR MLR
comp=Z,150nm,9.3s
HRA Herat 12.47 101 Pn 13 54 44.3 -0.6
EIL Elat 13.13 236 Pn **Pn 13 54 54.0 +0.3**
comp=Z,0.4nm,0.3s,baz=39,slow=6.0,SNR=7.7
EIL LR LR 14 00 34.9
comp=Z,691nm,18.7s,baz=47,slow=40
comp=Z,5.0nm,0.8s
SMRA Abu-Samra 13.31 166 P **Pn 13 54 55.0 -1.1**
BORA Eskisehir 13.39 284 Pn 13 54 55.1 -2.1
TRNA Turayna 13.39 165 P **Pn 13 54 56.0 -1.2**
JRN Qarnain Island 13.60 159 P **Pn 13 55 00.5 +0.4**
SHME Shamm 13.83 145 P **Pn 13 55 05.6 +2.3**
SHME P **Pn 13 55 05.6 +2.3**
BANOM Banah 14.01 145 P **Pn 13 55 04.8 -1.0**
BANOM P **Pn 13 55 04.8 -1.0**
BANOM S **Sn 13 57 42.8 +1.1**
BANOM S **Sn 13 57 42.8 +1.1**
VRH Novokhopyorsk 14.02 345 *e*P **Pn 13 55 02.9 -2.8**
VRH pmax pmax
comp=Z,20nm,0.8s
SLWR Sila 14.14 164 P **Pn 13 55 07.1 -0.4**
SLWR P **Pn 13 55 07.1 -0.4**
SLWR S **Sn 13 57 42.5 -2.2**
SLWR S **Sn 13 57 42.5 -2.2**
RAYN Ar Rayn 14.30 187 Pn 13 55 06.3 -3.4
RAYN Ar Rayn 14.30 187 P Pn 13 55 04.5 -5.2
RAYN Ar Rayn 14.30 187 P **Pn 13 55 06.3 -3.4**
VORD Divnogorie 14.40 339 *e*P **Pn 13 55 08.9 -2.0**
VORD pmax pmax
comp=Z,20nm,1.0s
MASF Masafi 14.43 146 P **Pn 13 55 14.1 +2.6**
MASF P **Pn 13 55 14.1 +2.6**
GHWR Ruwais 14.54 160 P **Pn 13 55 13.0 +0.1**
NAZ Nazwa, Dubai 14.55 149 P **Pn 13 55 14.1 +0.9**
AB31 Akbulak array 14.62 34 Pn 13 55 11.0 -3.0
AB31 Akbulak array 14.62 34 ⇑P **Pn 13 55 11.8 -2.2**
comp=Z,11nm,0.7s,baz=227,slow=12,SNR=104
AB31 ⇓S Sn 13 57 46.6 -10
comp=Z,10nm,0.6s,baz=221,slow=24
AB31 Akbulak array 14.62 34 P **Pn 13 55 11.8 -2.2**
AB31 S Sn 13 57 46.6 -10
ABKAR Akbulak array 14.62 34 Pn 13 55 09.9 -4.1
BELG Belogornoye 14.62 1 Pn **Pn 13 55 12.3 -1.6**
comp=Z,2.9nm,0.3s,baz=48,slow=2.2,SNR=7.3
BELG Sn **Sn 13 57 52.9 -3.3**
comp=Z,2.7nm,0.3s,baz=351,slow=16,SNR=4.9
comp=Z,37nm,0.9s
BELG Belogornoye 14.62 1 *de*P **Pn 13 55 13.0 -0.9**
BELG pmax pmax
comp=Z,8.0nm,1.0s
VSR Storozhevoye 14.66 339 *e*P **Pn 13 55 10.4 -4.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
AJN Ajban 14.67 152 P **Pn 13 55 14.5 -0.2**
SNR=8.2
AJN P **Pn 13 55 14.5 -0.2**
SNR=8.2
FAQ Al Faqa, Dubai 14.74 149 P **Pn 13 55 18.9 +3.2**
SNR=5.8
FAQ P **Pn 13 55 18.9 +3.2**
SNR=5.8
ASUD Al Ashush, Dub 14.74 150 P **Pn 13 55 15.1 -0.6**
ASUD P **Pn 13 55 15.1 -0.6**
AKTO Aktyubinsk 14.76 28 Pn **Pn 13 55 12.4 -3.4**
comp=Z,1.9nm,0.3s,baz=203,slow=9.4,SNR=44
AKTO Sn Sn 13 57 49.3 -10
comp=Z,1.3nm,0.3s,baz=338,slow=17,SNR=3.8
comp=Z,21nm,0.6s
AKTO Aktyubinsk 14.76 28 ⇑P **Pn 13 55 14.7 -1.1**
comp=Z,31nm,0.9s
AKTO ⇑S Sn 13 57 50.2 -9.3
comp=Z,28nm,0.9s
UOSS Minazif 14.82 147 Pn 13 55 16.7 -0.1
UOSS Minazif 14.82 147 P **Pn 13 55 17.7 +0.9**
UOSS P **Pn 13 55 17.7 +0.9**
HATD Hatta, Dubai 14.89 148 P **Pn 13 55 18.2 +0.4**
ASHO Ashiyiah 14.99 148 P **Pn 13 55 17.7 -1.4**
MZWR Madinat Zayed 15.03 157 P **Pn 13 55 19.5 -0.1**
ALNE Al Ain 15.42 150 P **Pn 13 55 27.3 +2.5**
SNR=14
ALNE P **Pn 13 55 27.3 +2.5**
SNR=14
ALNE S **Sn 13 58 18.1 +2.2**
ALNE S **Sn 13 58 18.1 +2.2**
MZR Muzera 15.62 159 P **Pn 13 55 26.8 -0.6**
SNR=39
SOHO SOHO 15.67 148 P **Pn 13 55 29.2 +1.1**
SOHO P **Pn 13 55 29.2 +1.1**
TLCR 15.76 304 ⇓P **Pn 13 55 29.8 +0.7**
TLCR 15.76 304 ⇓P **Pn 13 55 29.8 +0.7**
TIRR Tirgusor 15.78 301 Pn 13 55 28.9 -0.3
TIRR Tirgusor 15.78 301 ⇑P **Pn 13 55 28.2 -1.1**
TIRR Tirgusor 15.78 301 P **Pn 13 55 29.0 -0.3**
TIRR pmax pmax
comp=Z,17nm,0.9s
TPGR Topolog 15.90 302 ⇑P **Pn 13 55 32.8 +1.8**
LPSR Galich'ya Gora 15.97 341 *e*P **Pn 13 55 30.0 -1.7**
LPSR pmax pmax
comp=Z,80nm,0.9s
TLBR Topalu 16.05 301 ⇓P **P 13 55 37.6 +1.2**
HARR Harsova 16.18 301 ⇑P **P 13 55 37.5 -0.2**
HARR Harsova 16.18 301 ⇑P **P 13 55 37.5 -0.2**
CFR Carcaliu 16.20 303 ⇓P **P 13 55 37.8 -0.2**
CFR Carcaliu 16.20 303 ⇓P **P 13 55 37.8 -0.2**
ARQ Araqi 16.38 149 P **Pn 13 55 39.1 +1.9**
SNR=11
KARP Karpathos 16.39 268 Pn 13 55 37.7 +0.3
KARP IAmb IAmb 13 55 55.9
comp=Z,46nm,0.9s
UMZA Um Al Zommool 16.42 154 P **Pn 13 55 37.8 0.0**
MILM Milestii Mici 16.47 310 ⇑P **Pn 13 55 37.5 -0.7**
MILM Milestii Mici 16.47 310 ⇑P **Pn 13 55 37.5 -0.7**
MILM Milestii Mici 16.47 310 ⇑*i*P **Pn 13 55 38.8 +0.6**
comp=Z,130nm,1.2s
MILM *e*L L 14 04 20.0
MILM LRM MLR 14 04 50.0
comp=Z,300nm,17.0s
HOQ Hoqain 16.49 146 P **P 13 55 42.4 +1.1**
HOQ P **P 13 55 42.4 +1.1**
KIS Kishinev 16.51 310 *e*P **Pn 13 55 40.0 +1.3**
comp=Z,120nm,2.3s
ODBI Odobesti 17.12 304 ⇑P **P 13 55 49.0 +0.9**
ELND Elena 17.18 294 ⇓P **P 13 55 49.2 +0.3**
RDO Rodhopi 17.21 288 P **P 13 55 48.8 -0.4**
RDO IAmb IAmb 13 55 56.1
comp=Z,69nm,1.1s
BISRR Bisoca 17.27 303 ⇑P **P 13 55 52.5 +2.6**
SMDO Samad 17.28 145 P **P 13 55 51.1 +0.9**
SNR=8.4
SORM Soroca 17.33 313 ⇓P **Pn 13 55 48.4 -0.6**
SORM Soroca 17.33 313 ⇓P **Pn 13 55 48.4 -0.6**
VRI Vrincioaia 17.37 304 ⇓P **Pn 13 55 49.8 +0.2**
VRI Vrincioaia 17.37 304 ⇓P **Pn 13 55 49.8 +0.2**
WSAR Wadi Sarin 17.39 143 P **P 13 55 52.6 +1.2**
PLOR Plostina 17.42 304 ⇓P **Pn 13 55 50.8 +0.6**
PLOR Plostina 17.42 304 ⇓P **Pn 13 55 50.8 +0.6**
TESR Tescani 17.66 306 ⇑P **Pn 13 55 52.1 -1.1**
ONER Baraj Valea Uz 17.76 305 ⇓P **P 13 55 55.6 +0.4**
KBL Kabul 17.77 94 P **P 13 55 55.9 +0.3**
KBL Kabul 17.77 94 P **P 13 55 59.7 +4.1**
SNR=6.6
KBL P **P 13 55 59.7 +4.1**
SNR=6.6
KBL Kabul 17.77 94 P **P 13 55 55.9 +0.3**
KBL pmax pmax
comp=Z,13nm,0.9s
MLR Muntele Rosu 17.77 303 P **P 13 55 55.8 +0.4**
MLR Muntele Rosu 17.77 303 P **P 13 55 55.9 +0.5**
comp=Z,0.4nm,0.3s,baz=134,slow=6.7,SNR=17
comp=Z,14nm,0.9s
MLR Muntele Rosu 17.77 303 ⇓P **P 13 55 56.9 +1.4**
MLR Muntele Rosu 17.77 303 P **P 13 55 55.8 +0.4**
MLR pmax pmax
comp=Z,22nm,0.9s
BRLS Borolday 17.86 66 *i*P **Pn 13 55 50.7 -5.0**
IUG Iuzhnay 17.88 69 *i*P **Pn 13 55 54.4 -1.6**
JMDO Jabal Madar 17.90 146 P **P 13 55 58.4 +1.4**
SNR=7.7
GAR Garm 18.00 79 P **Pn 13 55 56.0 -1.6**
GAR IAmb IAmb 13 56 10.5
comp=Z,53nm,1.1s
WBK Wadi Bani Khal 18.09 143 P **P 13 56 02.3 +3.3**
PLVB Pleven 18.17 295 ⇑P **P 13 56 01.0 +1.3**
IDI Anoyia 18.26 269 P **P 13 56 01.1 +0.2**
comp=Z,7.6nm,0.7s,baz=46,slow=7.9,SNR=6.6
AKASG Malin Array Be 18.29 321 P **Pn 13 55 59.9 -0.9**
AKASG Malin Array Be 18.29 321 P **Pn 13 56 00.1 -0.7**
comp=Z,0.9nm,0.3s,baz=129,slow=11,SNR=30
AKASG LR LR 14 04 38.1
comp=Z,310nm,18.2s,baz=116,slow=42
comp=Z,17nm,0.8s
AKASG Malin Array Be 18.29 321 *i*P **Pn 13 56 00.1 -0.7**
AKASG pmax pmax
comp=Z,19nm,0.9s
AKBB Malin Array Si 18.29 321 P **Pn 13 55 58.7 -2.1**
AKBB Malin Array Si 18.29 321 *de*P **Pn 13 55 59.3 -1.5**
DOPR Dopca 18.29 304 ⇑P **P 13 56 01.5 +0.4**
KIEV Kiev 18.29 321 P **Pn 13 55 59.2 -1.7**
KIEV Kiev 18.29 321 ⇓P Pn 13 55 53.2 -7.7
KIEV Kiev 18.29 321 P **Pn 13 55 59.2 -1.7**
KIEV pmax pmax
comp=Z,22nm,1.0s
VOIR 18.35 302 ⇓P **P 13 56 02.9 +1.0**
VOIR 18.35 302 ⇓P **P 13 56 02.9 +1.0**
KK31 Karatay Array 18.36 66 P **Pn 13 56 00.3 -1.5**
KK31 IAmb IAmb 13 56 07.6
comp=Z,37nm,0.9s
KK31 Karatay Array 18.36 66 ⇑P **Pn 13 56 01.3 -0.5**
comp=Z,45nm,0.9s,baz=258,slow=16,SNR=127
KK31 Karatay Array 18.36 66 P **Pn 13 56 00.3 -1.5**
KK31 pmax pmax
comp=Z,37nm,0.9s
KKAR Karatay Array 18.36 66 P **Pn 13 56 00.0 -1.8**
KKAR Karatay Array 18.36 66 P **Pn 13 56 00.0 -1.8**
ARR Arges 18.61 301 ⇓P **Pn 13 56 06.1 +1.1**
SRS Serrai 18.68 288 P **Pn 13 56 06.7 +1.0**
SRS pmax pmax
comp=Z,27nm,1.2s
JLN Jalan Bani Buh 18.70 143 P **Pn 13 56 07.3 +1.3**
SNR=7.5
OBN Obninsk 18.85 340 P **P 13 56 05.6 -1.4**
OBN Obninsk 18.85 340 LR LR 14 04 24.9
comp=Z,452nm,19.2s,baz=102,slow=40
OBN Obninsk 18.85 340 ⇓*i*P **P 13 56 05.5 -1.6**
OBN *e*S **Sn 13 59 38.4 -0.1**
OBN pmax pmax
comp=Z,77nm,2.5s
OBN MLR MLR
comp=Z,460nm,20.0s
SOH Sokhos 18.85 287 P **Pn 13 56 09.6 +1.8**
SOH pmax pmax
comp=Z,24nm,2.1s
BURAR Bucovina Array 18.99 308 P **P 13 56 08.9 +0.1**
BURAR IAmb IAmb 13 56 10.1
comp=Z,31nm,0.8s
BURAR Bucovina Array 18.99 308 ⇑P **P 13 56 07.6 -1.2**
BURAR Bucovina Array 18.99 308 ⇑P **P 13 56 07.6 -1.2**
BUR08 Bucovina Ar. S 19.01 308 P **P 13 56 08.9 -0.2**
MHTO MHTO 19.07 148 P **Pn 13 56 11.5 +1.0**
SNR=14
MHTO P **Pn 13 56 11.5 +1.0**
SNR=14
DRK Karamyk 19.13 77 P **P 13 56 11.7 +1.1**
DRK IAmb IAmb 13 56 24.3
comp=Z,43nm,1.2s
DRK Karamyk 19.13 77 P **P 13 56 11.7 +1.1**
DRK pmax pmax
comp=Z,43nm,1.2s
THE Thessaloniki 19.14 286 P **Pn 13 56 11.7 +0.4**
THE pmax pmax
comp=Z,38nm,1.1s
MOS Moscow 19.15 343 *e*P **P 13 56 09.0 -1.4**
MOS *e* 13 59 41.9
MOS pmax pmax
comp=Z,43nm,0.6s
MOS MLR MLR
comp=Z,500nm,18.0s
KNT Kendrikon 19.20 288 P **Pn 13 56 12.3 +0.2**
KNT pmax pmax
comp=Z,20nm,1.7s
LOT Lotru 19.22 301 ⇑P **P 13 56 11.5 +0.1**
LIT Litokhoron 19.50 285 P **Pn 13 56 19.5 +3.8**
LIT pmax pmax
comp=Z,20nm,1.7s
BLKB Belogradchik 19.61 295 ⇑P **P 13 56 16.4 +0.8**
CJR Cluj-Napoca 19.70 305 P **Pn 13 56 21.4 +3.4**
DQM DQM 19.85 151 P **Pn 13 56 21.9 +2.0**
SNR=5.1
DQM P **Pn 13 56 21.9 +2.0**
SNR=5.1
GZR Gura Zlata 19.88 300 ⇑P **P 13 56 17.6 -1.1**
GZR Gura Zlata 19.88 300 ⇑P **P 13 56 17.6 -1.1**
DOK Doka 19.97 161 P **P 13 56 20.6 +1.0**
SNR=9.8
DOK P **P 13 56 20.6 +1.0**
SNR=9.8
MARR Marisel-Cluj 20.00 304 ⇓P **P 13 56 19.0 -1.0**
HERR Herculane 20.02 299 ⇑P **P 13 56 19.9 -0.1**
ARSB Arslanbob 20.02 72 IAmb IAmb 13 56 39.4
comp=Z,50nm,1.2s
ARTI Arti 20.02 18 P **P 13 56 18.6 -1.3**
ARTI Arti 20.02 18 P **P 13 56 18.6 -1.3**
comp=Z,13nm,0.5s,baz=206,slow=6.7,SNR=19
ARTI S **S 14 00 01.7 -3.5**
comp=Z,10nm,0.8s,baz=243,slow=21,SNR=3.9
comp=Z,13nm,0.5s
ARTI Arti 20.02 18 *c*P **P 13 56 18.7 -1.3**
ARTI S **S 13 59 59.7 -5.4**
ARTI pmax pmax
comp=Z,20nm,0.7s
BMR Baia Mare 20.09 307 P Pn 13 56 22.2 -0.3
BOVS Bovan 20.30 295 ⇑P **P 13 56 23.8 +0.7**
DRGR 20.30 304 P **P 13 56 23.7 +0.5**
DRGR pmax pmax
comp=Z,28nm,0.9s
SURR Surduc 20.41 301 ⇑P **P 13 56 20.1 -4.2**
MDVR Moldovita 20.49 298 ⇑P **P 13 56 25.5 +0.3**
WHFO Wadi Hawf 20.55 162 P **P 13 56 27.0 +1.0**
SNR=9.8
WHFO S **S 14 00 15.7 -0.5**
EKS2 Erkin-Say 20.69 68 P **P 13 56 28.9 +1.4**
SNR=11
BZS Buzias 20.73 300 ⇑P **P 13 56 26.9 -0.8**
BZS Buzias 20.73 300 ⇑P **P 13 56 26.9 -0.8**
SIRR Siria 20.86 302 ⇑P **P 13 56 29.6 +0.5**
KIRV Kirov 20.87 3 P **P 13 56 27.9 -1.1**
comp=Z,13nm,0.5s,baz=196,slow=13,SNR=5.5
KIRV LR LR 14 06 41.4
comp=Z,723nm,18.5s,baz=189,slow=43
comp=Z,13nm,0.5s
KIRV Kirov 20.87 3 *de*P **P 13 56 27.7 -1.4**
SHAO Shalim 20.95 158 P Pn 13 56 33.0 +0.2
ABTO Aybut 20.99 164 P **P 13 56 31.0 +0.3**
SNR=26
SVE Sverdlovsk 21.00 21 *e*P **P 13 56 32.2 +1.6**
SVE *e*S **S 14 00 19.7 -4.8**
SVE pmax pmax
comp=Z,51nm,0.8s
DMTO DMTO 21.05 160 P **P 13 56 32.6 +1.3**
DMTO P **P 13 56 32.6 +1.3**
RBK Rabkut 21.06 162 P **P 13 56 32.8 +1.3**
SNR=13
UCH Uchtor 21.20 69 P **P 13 56 33.8 +0.5**
SNR=8.6
AAK Ala-Archa 21.21 68 P **P 13 56 34.0 +0.8**
AAK IAmb IAmb 13 56 45.5
comp=Z,30nm,1.0s
AAK Ala-Archa 21.21 68 P **P 13 56 34.6 +1.4**
comp=Z,12nm,1.1s,baz=269,slow=11,SNR=9.5
AAK LR LR 14 07 14.3
comp=Z,336nm,18.7s,baz=282,slow=44
comp=Z,12nm,1.1s
AAK Ala-Archa 21.21 68 ⇓P **P 13 56 33.3 +0.1**
comp=Z,48nm,1.3s
AAK Ala-Archa 21.21 68 *i*P **P 13 56 33.1 -0.1**
KWP Kalwaria Pacla 21.32 312 P **P 13 56 34.2 +0.1**
MNK Minsk 21.40 328 *i*P **P 13 56 33.1 -1.8**
comp=E,27nm,0.8s
MNK *i*P **P 13 56 33.1 -1.8**
comp=N,40nm,0.9s
MNK *i*P **P 13 56 33.1 -1.8**
comp=Z,48nm,0.8s,baz=133
MNK *i*PP **PnPn 13 56 56.8 +2.1**
MNK *i*S **S 14 00 27.6 -4.8**
MNK *i*LQ LQ 14 03 29.7
MNK *i*LR LR 14 04 40.1
MNK *i*LRM MLR 14 05 33.0
comp=E,82nm,12.0s
MNK *i*LRM MLR 14 05 37.3
comp=Z,215nm,12.1s
MNK *i*LRM MLR 14 05 43.7
comp=N,252nm,15.9s
MNK Minsk 21.40 328 *c*P **P 13 56 33.0 -1.8**
CHMS Chumysh 21.43 67 P **P 13 56 36.4 +1.0**
SNR=9.6
KBK Karagabulak 21.55 68 P **P 13 56 31.5 -5.3**
SNR=7.4
BORK Borovoye 22.04 39 *de*P **P 13 56 41.4 -0.4**
BORK pmax pmax
comp=Z,14nm,1.1s
TKM2 Tokmak 2 22.04 68 P **P 13 56 42.7 +0.6**
SNR=16
BVA0 Borovoye Array 22.07 39 ⇑P **P 13 56 43.2 +1.1**
comp=Z,32nm,0.8s,baz=238,slow=8.3,SNR=83
BVA0 Borovoye Array 22.07 39 P **P 13 56 43.2 +1.1**
BVAR Borovoye Array 22.07 39 P **P 13 56 42.0 0.0**
comp=Z,12nm,0.8s,baz=237,slow=6.9,SNR=18
BVAR S **S 14 00 44.7 -0.8**
comp=Z,1.5nm,0.5s,baz=258,slow=41,SNR=4.0
BVAR LR LR 14 08 01.7
comp=Z,178nm,20.0s,baz=231,slow=44
comp=Z,12nm,0.8s
NACGM Naroch 22.14 327 *e*P **P 13 56 42.0 -0.8**
BOOM Boomskoye usch 22.27 69 P **P 13 56 44.6 +0.1**
BOOM IAmb IAmb 13 56 58.4
comp=Z,36nm,1.0s
BOOM Boomskoye usch 22.27 69 P **P 13 56 44.7 +0.1**
BOOM pmax pmax
comp=Z,36nm,1.0s
KSH Kashi 22.35 77 P **P 13 56 42.4 -3.0**
KSH sP pP 13 56 48.3 +0.4
KSH PP **PnPn 13 57 10.4 +2.5**
KSH pmax pmax
comp=Z,18nm,1.1s
KSH LR LR
comp=N,650nm,17.2s
KSH LR LR
comp=E,190nm,12.4s
KSH LR LR
comp=Z,380nm,18.8s
PSZ Piszkesteto 22.47 306 P **P 13 56 45.8 -0.7**
PSZ IAmb IAmb 13 57 04.8
comp=Z,18nm,0.9s
PSZ Piszkesteto 22.47 306 ⇓P **P 13 56 45.7 -0.7**
PSZ Piszkesteto 22.47 306 P **P 13 56 45.8 -0.7**
PSZ pmax pmax
comp=Z,18nm,0.9s
ULHL Ulahol 22.48 69 P **P 13 56 48.4 +1.5**
SNR=10
NIE Niedzica 22.69 310 *e*P **P 13 56 49.3 +0.5**
NIE Niedzica 22.69 310 P **P 13 56 49.1 +0.3**
MORH Mrgy, Hungar 22.88 301 ⇑P **P 13 56 46.1 -4.7**
LANS Liptovska Anna 23.11 308 *e*P **P 13 56 54.2 +1.0**
LANS Liptovska Anna 23.11 308 *e*P **P 13 56 54.2 +1.0**
KDJ Kajisay 23.18 70 P **P 13 56 54.0 -0.1**
KDJ IAmb IAmb 13 57 01.6
comp=Z,26nm,1.0s
KDJ Kajisay 23.18 70 P **P 13 56 54.0 -0.1**
KDJ pmax pmax
comp=Z,26nm,1.0s
SUW Suwalki 23.23 322 *e*P **P 13 56 54.4 0.0**
SUW Suwalki 23.23 322 P **P 13 56 53.3 -1.0**
SUW Suwalki 23.23 322 P **P 13 56 53.3 -1.0**
OJC Ojcow 23.29 311 *e*P **P 13 56 54.1 -0.8**
OJC Ojcow 23.29 311 P **P 13 56 53.0 -1.9**
OJC Ojcow 23.29 311 P **P 13 56 53.0 -1.9**
SRO Srobarova 23.46 305 *e*P **P 13 56 58.7 +2.0**
SRO Srobarova 23.46 305 *e*P **P 13 56 58.7 +2.0**
KLMR Klimovskoe 23.64 350 *e*P **P 13 56 55.0 -3.3**
KLMR *e* 13 57 21.5
KLMR pmax pmax
comp=Z,51nm,1.2s
TARG Taragay, Kyrgy 23.64 71 **P 13 56 58.1 -0.9**
TARG IAmb IAmb 13 57 07.0
comp=Z,32nm,1.3s
TARG Taragay, Kyrgy 23.64 71 P **P 13 56 58.1 -0.9**
TARG pmax pmax
comp=Z,32nm,1.3s
PABE Paberze 23.76 326 P **P 13 56 59.0 -0.5**
ARXS Arharly 23.76 65 *i*P **P 13 57 01.1 +1.3**
JAVC Velka Javorina 24.15 307 *e*P **P 13 57 04.0 +0.6**
SMOL Smolenice 24.22 306 *e*P **P 13 57 04.6 +0.6**
MODS Modra-Piesok 24.28 306 *e*P **P 13 57 06.6 +2.1**
STEB Steborice 24.41 309 *e*P **P 13 57 04.6 -1.1**
ACER Acerenza 24.47 287 P **P 13 57 06.0 -0.4**
MORC Moravsky Berou 24.50 309 P **P 13 57 06.5 -0.1**
MORC Moravsky Berou 24.50 309 *e*P **P 13 57 07.0 +0.4**
MORC Moravsky Berou 24.50 309 P **P 13 57 06.5 -0.1**
MORC pmax pmax
comp=Z,15nm,1.3s
UZB Uzynbulak 24.56 67 *i*P **P 13 57 11.4 +4.1**
SOP Sopron 24.58 304 P **P 13 57 07.9 +0.6**
SOP pmax pmax
comp=Z,23nm,0.6s
VSU Vasula 24.69 334 *de*P **P 13 57 06.3 -1.8**
VSU pmax pmax
comp=Z,58nm,0.8s
RONA Rosalia, Austr 24.76 304 *e*P **P 13 57 08.8 -0.2**
comp=Z,26nm,1.0s
SHLS Shalkode 24.88 67 *i*P **P 13 57 15.2 +5.0**
SHLS pmax pmax
comp=Z,26nm,1.1s
PDGK Podgornoye 24.91 67 ⇓P **P 13 57 11.0 +0.5**
comp=Z,38nm,1.2s
PDGK Podgornoye 24.91 67 P **P 13 57 11.0 +0.5**
VRAC Vranov 24.96 307 P **P 13 57 11.0 +0.3**
comp=Z,13nm,1.1s,baz=105,slow=10,SNR=7.6
comp=Z,13nm,1.1s
VRAC Vranov 24.96 307 *e*P **P 13 57 11.4 +0.7**
VRAC Vranov 24.96 307 P **P 13 57 11.0 +0.3**
KRUC Moravsky 25.02 307 *e*P **P 13 57 11.9 +0.7**
KRUC Moravsky 25.02 307 P **P 13 57 12.3 +1.1**
KRUC pmax pmax
comp=Z,44nm,0.9s
CONA Conrad Observa 25.09 304 *e*P **P 13 57 11.8 -0.3**
comp=Z,9.8nm,1.2s
ARSA Arzberg 25.19 302 P **P 13 57 12.8 0.0**
ARSA Arzberg 25.19 302 *e*P **P 13 57 12.9 +0.1**
comp=Z,6.8nm,0.6s
SOKA Soboth 25.42 301 *e*P **P 13 57 16.5 +1.5**
comp=Z,13nm,0.9s
DPC Dobruska-Polom 25.43 310 *e*P **P 13 57 16.8 +1.8**
DPC Dobruska-Polom 25.43 310 *e*P **P 13 57 16.8 +1.8**
KURBB Kurchatov Arra 25.54 50 P **P 13 57 17.2 +1.4**
comp=Z,11nm,0.8s,baz=258,slow=9.6,SNR=44
comp=Z,11nm,0.8s
KURBB Kurchatov Arra 25.54 50 ⇓P **P 13 57 18.4 +2.5**
comp=Z,19nm,0.8s
KURBB Kurchatov Arra 25.54 50 P **P 13 57 18.4 +2.5**
KSP Ksiaz 25.60 311 *e*P **P 13 57 18.3 +1.8**

KSP	**Ksiaz**	**25.60**	**311**	P		**P**		**13 57 17.7**	**+1.2**
KURK	**Kurchatov**	**25.62**	**50**	P		**P**		**13 57 16.4**	**-0.2**
KURK	**Kurchatov**	**25.62**	**50**	⇑P		**P**		**13 57 18.9**	**+2.3**
	comp=Z,14nm,1.1s								
KURK	**Kurchatov**	**25.62**	**50**	⇑*eP*		**P**		**13 57 17.4**	**+0.8**
KURK				pmax	pmax				
	comp=Z,13nm,0.9s								
CHVC	**Chvalec**	**25.66**	**310**	*eP*		**P**		**13 57 19.1**	**+2.0**
CHVC	**Chvalec**	**25.66**	**310**	*eP*		**P**		**13 57 19.1**	**+2.0**
UPC	**Upice**	**25.66**	**310**	*eP*		**P**		**13 57 19.0**	**+1.9**
UPC	**Upice**	**25.66**	**310**	*eP*		**P**		**13 57 19.0**	**+1.9**
VAE	**Valguarnera**	**26.06**	**280**	LR	LR			14 08 46.3	
	comp=Z,498nm,18.8s,baz=174,slow=39								
MOA	**Molln**	**26.13**	**303**	*eP*		**P**		**13 57 21.0**	**-0.3**
	comp=Z,4.3nm,0.7s								
CKRC	**Cesky Krumlov**	**26.30**	**305**	*eP*		**P**		**13 57 24.4**	**+1.6**
CKRC	**Cesky Krumlov**	**26.30**	**305**	*eP*		**P**		**13 57 24.4**	**+1.6**
ZVC	**Zvikov**	**26.51**	**307**	*eP*		**P**		**13 57 27.8**	**+3.1**
KBA	**Koelnbreinsper**	**26.63**	**301**	*eP*		**P**		**13 57 26.0**	**0.0**
	comp=Z,9.6nm,0.9s								
GEC2	**GERESS Array S**	**26.70**	**305**	P		**P**		**13 57 25.9**	**-0.7**
GERES	**GERESS Array B**	**26.70**	**305**	P		**P**		**13 57 25.9**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=99,slow=8.2,SNR=22								
GERES				LR		LR		14 10 48.8	
	comp=Z,156nm,18.7s,baz=118,slow=43								
	comp=Z,4.8nm,0.8s								
KHC	**Kasperske Hory**	**26.83**	**306**	P		**P**		**13 57 27.2**	**-0.5**
KHC	**Kasperske Hory**	**26.83**	**306**	*eP*		**P**		**13 57 31.4**	**+3.7**
KHC				*e*				13 57 39.0	
KHC	**Kasperske Hory**	**26.83**	**306**	*eP*		**P**		**13 57 26.5**	**-1.2**
KHC				*ex*		x		13 57 31.4	
KHC				*ex*		x		13 57 39.0	
MAKZ	**Makanchi**	**26.94**	**59**	P		**P**		**13 57 28.4**	**-0.3**
MAKZ				IAmb		IAmb		13 57 51.3	
	comp=Z,12nm,1.0s								
MAKZ	**Makanchi**	**26.94**	**59**	⇓P		**P**		**13 57 31.9**	**+3.3**
	comp=Z,17nm,1.4s								
MAKZ	**Makanchi**	**26.94**	**59**	P		**P**		**13 57 28.4**	**-0.3**
MAKZ				pmax	pmax				
	comp=Z,12nm,1.0s								
LESA	**Schwarzleotal**	**27.12**	**302**	*eP*		**P**		**13 57 30.4**	**0.0**
	comp=Z,5.5nm,1.1s								
MK31	**Makanchi Array**	**27.15**	**59**	P		**P**		**13 57 30.3**	**-0.3**
MK31				IAmb		IAmb		13 57 53.9	
	comp=Z,12nm,0.8s								
MK31	**Makanchi Array**	**27.15**	**59**	⇓P		**P**		**13 57 32.7**	**+2.1**
	comp=Z,16nm,0.8s,baz=255,slow=8.5,SNR=60								
MK31	**Makanchi Array**	**27.15**	**59**	⇑*eP*		**P**		**13 57 30.6**	**0.0**
MKAR	**Makanchi Array**	**27.15**	**59**	P		**P**		**13 57 30.2**	**-0.4**
MKAR	**Makanchi Array**	**27.15**	**59**	P		**P**		**13 57 31.2**	**+0.6**
	comp=Z,10.0nm,1.0s,baz=260,slow=7.5,SNR=32								
MKAR				LR		LR		14 11 06.0	
	comp=Z,378nm,19.0s,baz=249,slow=43								
	comp=Z,10.0nm,1.0s								
MKAR	**Makanchi Array**	**27.15**	**59**	P		**P**		**13 57 30.2**	**-0.4**
FIA1	**FINESS Array S**	**27.18**	**338**	P		**P**		**13 57 30.5**	**-0.1**
FINES	**FINESS Array B**	**27.18**	**338**	P		**P**		**13 57 30.2**	**-0.4**
FINES	**FINESS Array B**	**27.18**	**338**	P		**P**		**13 57 29.9**	**-0.7**
	comp=Z,5.2nm,0.8s,baz=134,slow=11,SNR=9.5								
FINES				LR		LR		14 09 35.8	
	comp=Z,378nm,20.0s,baz=137,slow=39								
	comp=Z,5.2nm,0.8s								
CLL	**Collm**	**27.72**	**310**	IAmb		IAmb		13 57 42.0	
	comp=Z,16nm,1.3s								
CLL	**Collm**	**27.72**	**310**	*i* P		**P**		**13 57 35.4**	**-0.2**
CLL				pmax	pmax				
	comp=Z,21nm,1.5s								
CLL	**Collm**	**27.72**	**310**	*i* P		**P**		**13 57 35.4**	**-0.2**
	comp=Z,21nm,1.5s								
WATA	**Walderalm**	**27.86**	**302**	*eP*		**P**		**13 57 36.6**	**-0.4**
	comp=Z,6.5nm,0.9s								
SQTA	**Sankt Quirin**	**28.09**	**301**	*eP*		**P**		**13 57 38.6**	**-0.5**
	comp=Z,4.0nm,0.6s								
MOTA	**Moosalm**	**28.18**	**302**	*eP*		**P**		**13 57 40.1**	**+0.2**
	comp=Z,2.9nm,0.5s								
FETA	**Feichten**	**28.40**	**301**	*eP*		**P**		**13 57 40.9**	**-1.0**
	comp=Z,3.9nm,0.7s								
DAVOX	**Davos/Dischmat**	**28.95**	**300**	P		**P**		**13 57 45.1**	**-1.7**
	comp=Z,3.4nm,0.5s,baz=65,slow=11,SNR=6.3								
DAVOX				LR		LR		14 10 28.1	
	comp=Z,190nm,18.9s,baz=82,slow=39								
	comp=Z,3.4nm,0.5s								
DAVA	**Damuels**	**29.00**	**301**	*eP*		**P**		**13 57 45.7**	**-1.5**
	comp=Z,5.7nm,0.7s								
TUE	**Stuetta**	**29.30**	**299**	P		**P**		**13 57 49.5**	**-0.5**
TUE				IAmb		IAmb		13 58 05.0	
	comp=Z,8.5nm,1.0s								
FURI	**Furi**	**29.81**	**198**	LR		LR		14 09 16.2	
	comp=Z,260nm,19.9s,baz=19,slow=35								
ZAA0	**Zalesovo Array**	**30.23**	**46**			**P**		**13 57 56.7**	**-1.1**
ZAA0				IAmb		IAmb		13 58 04.9	
	comp=Z,9.8nm,1.0s								
ZALV	**Zalesovo Beam**	**30.23**	**46**	P		**P**		**13 57 56.2**	**-1.7**
ZALV	**Zalesovo Beam**	**30.23**	**46**	P		**P**		**13 57 57.3**	**-0.5**
	comp=Z,2.9nm,0.7s,baz=267,slow=9.8,SNR=14								
ZALV				LR		LR		14 11 24.7	
	comp=Z,150nm,19.0s,baz=109,slow=39								
	comp=Z,2.9nm,0.7s								
KEST	**Kesra**	**30.43**	**278**	LR		LR		14 11 55.1	
	comp=Z,267nm,19.6s,baz=59,slow=40								
SENIN	**Lac Senin/Sane**	**30.71**	**299**	P		**P**		**13 58 01.4**	**-1.0**
SENIN				IAmb		IAmb		13 58 15.2	
	comp=Z,8.2nm,1.1s								
WMQ	**Urumqi**	**30.87**	**66**	*eP*		**P**		**13 58 06.1**	**+2.4**
WMQ				LR		LR			
	comp=Z,150nm,23.8s								
HFS	**Hagfors**	**30.91**	**327**	P		**P**		**13 58 03.2**	**-0.6**
	comp=Z,9.0nm,0.6s,baz=138,slow=9.4,SNR=20								
HFS				LR		LR		14 11 23.1	
	comp=Z,320nm,18.6s,baz=113,slow=38								
	comp=Z,9.0nm,0.6s								
DGZ	**Jazzator, Alta**	**30.92**	**54**	⇑*eP*		**P**		**13 58 04.1**	**-0.1**
DGZ				pmax	pmax				
	comp=Z,6.0nm,1.0s								
NC405	**NORSAR Array S**	**32.25**	**328**	P		**P**		**13 58 14.7**	**-0.9**
NB201	**NORSAR Array S**	**32.40**	**328**	P		**P**		**13 58 15.7**	**-1.2**
NB201				IAmb		IAmb		13 58 22.1	
	comp=Z,17nm,1.2s								
NB2	**NORSAR Subarra**	**32.42**	**328**	P		**P**		**13 58 15.5**	**-1.6**
	comp=Z,5.7nm,0.7s,baz=121,slow=8.6								
NOA	**NORSAR Array B**	**32.42**	**328**	P		**P**		**13 58 15.7**	**-1.4**
	comp=Z,2.7nm,0.7s,baz=121,slow=8.4,SNR=15								
NOA				LR		LR		14 12 20.3	
	comp=Z,315nm,19.7s,baz=110,slow=38								
	comp=Z,2.7nm,0.7s								
ARCES	**ARCESS Array B**	**33.95**	**346**	P		**P**		**13 58 30.5**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=134,slow=8.7,SNR=9.1								
	comp=Z,1.0nm,0.6s								
EVN	**Everest**	**34.31**	**95**	P		**P**		**13 58 34.4**	**-0.2**
GOMU	**GeErMu**	**37.59**	**77**	P		**P**		**13 59 02.1**	**-0.3**
GOMU				S		S		14 04 42.4	-10
GOMU				pmax	pmax				
	comp=Z,4.0nm,0.9s								
EKA	**Eskdalemuir Ar**	**37.98**	**314**	P		**P**		**13 59 03.5**	**-1.5**
	comp=Z,3.4nm,0.7s,baz=101,slow=8.3,SNR=11								
	comp=Z,3.4nm,0.7s								
MOY	**Mondy**	**39.63**	**52**	*eP*		P		13 59 10.3	-8.7
ESDC	**Sonseca Array**	**39.67**	**289**	P		**P**		**13 59 17.8**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=72,slow=8.7,SNR=4.2								
	comp=Z,1.1nm,0.7s								
GTA	**Gaotai**	**40.52**	**71**	*eP*		**PnPn**		**14 01 11.7**	**+8.1**
GTA				PP		**PnPn**			
GTA				pmax	pmax				
	comp=Z,3.0nm,1.1s								
GTA				LR		LR			
	comp=N,190nm,13.1s								
GTA				LR		LR			
	comp=E,210nm,13.5s								
GTA				LR		LR			
	comp=Z,230nm,13.1s								
SPITS	**Spitsbergen Ar**	**42.54**	**351**	P		**P**		**13 59 43.0**	**+0.5**
	comp=Z,6.6nm,0.8s,baz=103,slow=10,SNR=6.0								
SPITS				LR		LR		14 19 17.6	
	comp=Z,183nm,18.5s,baz=150,slow=39								
	comp=Z,6.6nm,0.8s								
SPITS	**Spitsbergen Ar**	**42.54**	**351**	P		**P**		**13 59 43.0**	**+0.5**
SONM	**Songino Array**	**43.47**	**57**	P		**P**		**13 59 51.7**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=265,slow=13,SNR=4.3								
	comp=Z,0.3nm,0.5s								
JMIC	**Jan Mayen**	**43.80**	**337**	LR		LR		14 19 01.6	
	comp=Z,106nm,18.5s,baz=154,slow=37								
ULN	**Ulaanbaatar**	**43.90**	**57**	⇑*eP*		**P**		**13 59 55.0**	**+0.9**
ULN				pmax	pmax				
	comp=Z,3.0nm,0.9s								
LZDM	**Lanzhou Array**	**44.49**	**74**	LR		LR		14 21 32.7	
	comp=Z,127nm,21.2s,baz=195,slow=40								
LZH	**Lanzhou**	**44.56**	**74**	*eP*		**P**		**14 00 04.2**	**+4.7**
LZH				pP		sP		14 00 09.2	+5.8
LZH				sP		pP		14 00 12.3	+10
LZH				pmax	pmax				
	comp=Z,19nm,1.3s								
PZH	**PanZhiHua**	**46.79**	**87**	P		**P**		**14 00 20.3**	**+3.1**
PZH				pmax	pmax				
	comp=Z,10.0nm,0.8s								
BORG	**Borgarnes**	**47.60**	**327**	LR		LR		14 20 13.6	
	comp=Z,184nm,19.2s,baz=136,slow=36								
KMI	**Kunming**	**48.23**	**88**	P		**P**		**14 00 29.0**	**+0.4**
KMI				pmax	pmax				
	comp=Z,16nm,1.0s								
CMAR	**Chiang Mai Arr**	**48.72**	**98**			**P**		**14 00 34.7**	**+2.6**
CMAR	**Chiang Mai Arr**	**48.72**	**98**	P		**P**		**14 00 31.8**	**-0.3**
	comp=Z,5.0nm,0.8s,baz=298,slow=7.9,SNR=22								
CMAR				LR		LR		14 26 01.1	
	comp=Z,57nm,19.5s,baz=105,slow=42								
	comp=Z,5.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**48.72**	**98**	*i* P		**P**		**14 00 34.5**	**+2.4**
CMAR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
HHC	**Hu-ho-hao-te**	**48.74**	**65**	*eP*		**P**		**14 00 32.5**	**+0.3**
HHC				pmax	pmax				
	comp=Z,11nm,0.6s								
HHC				pmax	pmax				
	comp=Z,71nm,5.0s								
XAN	**Xi'an**	**49.18**	**75**	P		**P**		**14 00 35.9**	**+0.3**
XAN				pmax	pmax				
	comp=Z,12nm,0.9s								
XLT	**XiLinHaoTe**	**50.97**	**60**	*eP*		**P**		**14 00 49.8**	**+0.8**
XLT				pP		sP		14 00 53.7	+0.7
XLT				pmax	pmax				
	comp=Z,11nm,0.8s								
HNS	**HongShan**	**52.24**	**68**	⇑P		**P**		**14 01 02.0**	**+3.5**
HNS				pmax	pmax				
	comp=Z,8.0nm,1.0s								
YAK	**Yakutsk**	**53.98**	**35**	LR		LR		14 26 17.6	
	comp=Z,103nm,18.4s,baz=266,slow=38								
OPO	**Ambohidratompo**	**56.04**	**180**	LR		LR		14 24 52.1	
	comp=Z,106nm,21.4s,baz=166,slow=35								
HEH	**HeiHe**	**56.23**	**50**	*eP*		P		14 01 32.4	+5.0
HEH				pmax	pmax				
	comp=Z,4.0nm,0.7s								
DBIC	**Dimbokro**	**56.48**	**250**	P		**P**		**14 01 27.9**	**-1.8**
	comp=Z,1.9nm,0.6s,baz=73,slow=4.3,SNR=4.4								
	comp=Z,1.9nm,0.6s								
NJ2	**Nanjing**	**57.58**	**73**	*eP*		**P**		**14 01 36.4**	**-0.8**
NJ2				pmax	pmax				
	comp=Z,12nm,0.5s								
PSI	**Prapat**	**58.53**	**114**	P		**P**		**14 01 44.0**	**-0.2**
PSI				pmax	pmax				
	comp=Z,15nm,1.1s								
GSI	**Gunungsitoli**	**58.59**	**116**	P		**P**		**14 01 43.9**	**-0.6**
RPSI	**Rantau Prapat**	**58.60**	**114**	P		**P**		**14 01 44.0**	**-0.5**
KSRS	**Korea Array**	**61.76**	**63**	P		**P**		**14 02 04.9**	**-1.1**
	comp=Z,6.9nm,1.1s,baz=278,slow=7.0,SNR=12								
	comp=Z,6.9nm,1.1s								
SEY	**Seymchan**	**63.34**	**30**	LR		LR		14 35 10.8	
	comp=Z,115nm,18.3s,baz=295,slow=41								
MA2	**Magadan**	**64.42**	**33**	LR		LR		14 35 21.2	
	comp=Z,108nm,18.7s,baz=325,slow=41								
BILL	**Bilibino**	**65.09**	**21**	⇑*eP*		**P**		**14 02 27.5**	**0.0**
BILL				pmax	pmax				
	comp=Z,4.0nm,1.0s								
FRB	**Frobisher Bay**	**66.92**	**334**	LR		LR		14 31 06.3	
	comp=Z,96nm,18.1s,baz=80,slow=35								
MJAR	**Matsushiro Arr**	**69.35**	**59**	LR		LR		14 35 44.5	
	comp=Z,84nm,18.2s,baz=306,slow=38								
PETK	**Petropavlovsk-**	**71.28**	**37**	LR		LR		14 40 43.6	
	comp=Z,90nm,18.9s,baz=339,slow=41								
E19K	**Redstone River**	**73.44**	**10**	P		**P**		**14 03 19.5**	**+0.2**
E19K				IAmb		IAmb		14 03 20.5	
	comp=Z,6.7nm,0.8s								
E29M	**Blow River**	**74.08**	**2**	P		**P**		**14 03 23.3**	**+0.3**
E29M				IAmb		IAmb		14 03 30.6	
	comp=Z,4.1nm,0.8s								
I30M	**Mount Dempster**	**77.30**	**2**			**P**		**14 03 41.3**	**-0.3**
SHEM	**Shemya Is, Ala**	**78.69**	**30**	LR		LR		14 41 27.1	
	comp=Z,37nm,19.9s,baz=287,slow=38								
HYT	**Haines Junctio**	**81.67**	**2**	P		**P**		**14 04 05.2**	**-0.3**
HYT				IAmb		IAmb		14 04 05.5	
	comp=Z,8.0nm,1.4s								
KDAK	**Kodiak Island**	**83.33**	**11**	LR		LR		14 46 23.2	
	comp=Z,71nm,19.3s,baz=352,slow=39								
SADO	**Sadowa**	**84.72**	**325**	LR		LR		14 40 49.7	
	comp=Z,66nm,18.9s,baz=348,slow=35								
BBB	**Bella Bella**	**90.33**	**357**	LR		LR		14 49 21.2	
	comp=Z,55nm,20.8s,baz=37,slow=38								
NEW	**Newport**	**93.24**	**350**	LR		LR		14 48 07.4	
	comp=Z,134nm,18.0s,baz=26,slow=36								
PDAR	**Pinedale Array**	**97.14**	**343**	LR		LR		14 50 01.9	
	comp=Z,65nm,18.2s,baz=16,slow=36								
BELA	**Belgrano 2**	**124.95**	**195**	pPKPdf		pPKPdf		14 10 51.0	+1.7

*IDC **08** 13:54:49.6±1.2,34.˚86S×108.˚27W,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=52.3km s-min=32.9km az=54.0*
*NEIC **08** 13:54:51.9±1.0,34.˚73S±0.˚09×108.˚0W±0.˚2,h10km±1km, mb4.8/9,Error ellipse: s-maj=25.1km s-min=14.7km az=286.0*
ISC 08 13:54:51.3±0.6,34.˚8S±0.˚1×108.˚1W±0.˚2,h10km,n24, σ0s83/24,mb4.4/8,1C,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA02	**Isla de Pascua**	**7.67**	**351**	Pn	**Pn**	**13 56 44.3**	**+1.3**
PLCA	**Paso Flores**	**30.12**	**113**	P	**P**	**14 01 02.5**	**+1.2**
	2.1nm,0.8s,baz=275,slow=11,SNR=4.8						
	2.1nm,0.8s						
LPAZ	**La Paz**	**40.17**	**73**	P	**P**	**14 02 27.4**	**-1.2**
BELA	**Belgrano 2**	**52.82**	**165**	P	**P**	**14 04 06.6**	**+0.2**
QSPA	**South Pole Qui**	**55.44**	**180**	P	**P**	**14 04 26.6**	**+0.7**
QSPA				IAmb	IAmb	14 04 56.2	
	comp=Z,25nm,1.9s						
TXAR	**Lajitas Array**	**63.89**	**4**	P	**P**	**14 05 23.7**	**-0.6**
TXAR	**Lajitas Array**	**63.89**	**4**	P	**P**	**14 05 24.8**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=185,slow=6.0,SNR=4.9						
	comp=Z,0.6nm,0.9s						
TX31	**Lajitas Ar. Si**	**63.89**	**4**	P	**P**	**14 05 23.9**	**-0.4**
TX31				IAmb	IAmb	14 07 39.7	
	comp=Z,15nm,1.9s						
NV11	**Mina Array Sit**	**73.42**	**352**	P	**P**	**14 06 24.0**	**+0.3**
NV11				IAmb	IAmb	14 06 26.9	
	comp=Z,5.2nm,1.4s						
NVAR	**Mina Array Bea**	**73.44**	**352**	P	**P**	**14 06 24.1**	**+0.2**
NVAR	**Mina Array Bea**	**73.44**	**352**	P	**P**	**14 06 25.3**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=189,slow=6.3,SNR=7.2						
	comp=Z,0.8nm,0.8s						
SYO	**Syowa Base**	**73.81**	**168**	⇑*ep*P	**P**	**14 06 26.0**	**+0.5**
PD31	**Pinedale Array**	**77.17**	**359**	P	**P**	**14 06 44.9**	**-0.3**
PD31				IAmb	IAmb	14 08 58.5	
	comp=Z,16nm,1.9s						
PDAR	**Pinedale Array**	**77.17**	**359**	P	**P**	**14 06 45.1**	**-0.2**
PDAR	**Pinedale Array**	**77.17**	**359**	P	**P**	**14 06 45.5**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=155,slow=4.9,SNR=5.9						
	comp=Z,0.9nm,0.9s						
HLID	**Hailey**	**78.17**	**355**	P	**P**	**14 06 50.6**	**-0.1**
HLID				IAmb	IAmb	14 07 06.5	
	comp=Z,19nm,1.9s						
A04D	**Lummi Island**	**84.13**	**350**	P	**P**	**14 07 22.7**	**+0.6**
FORT	**Forrest**	**96.06**	**226**	P	**P**	**14 08 19.3**	**+0.1**
AKASG	**Malin Array Be**	**145.38**	**49**	PKPbc	**PKPbc**	**14 14 27.3**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=278,slow=3.4,SNR=6.0						
CM31	**Chiang Mai Arr**	**151.00**	**243**	PKPab	**PKPab**	**14 14 51.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**151.00**	**243**	PKPab	**PKPab**	**14 14 51.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**151.00**	**243**	PKPbc	**PKPbc**	**14 14 44.6**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=195,slow=2.1,SNR=7.1						
SONM	**Songino Array**	**151.24**	**308**	PKPab	**PKPab**	**14 14 52.1**	**-0.7**
SONM	**Songino Array**	**151.24**	**308**	PKPbc	**PKPbc**	**14 14 43.8**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=125,slow=1.5,SNR=4.4						

*IDC **08** 13:59:10.6±1.7,7.˚59S×127.˚85E,h153km±16km,mb3.8/10, mbtmp4.3/12,Error ellipse: s-maj=15.3km s-min=10.5km az=36.0*
*DJA **08** 13:59:10.8±0.2,8.˚S±3.˚×12.˚8E±.˚,h194km±9km,M4.5/19, mB5.0/8,mb4.3/15,MLv4.7/19,Mw(mB)4.3/8*
*NEIC **08** 13:59:12.2±2.2,7.˚59S±0.˚06×127.˚85E±0.˚07,h167km±7km, mb4.4/25,Error ellipse: s-maj=11.6km s-min=7.9km az=52.0*
ISC 08 13:59:09.9±0.4,7.˚69S±0.˚05×127.˚81E±0.˚04,h142km,n99, σ1s87/106,mb4.2/22,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.47**	**95**		**Pn**	**14 00 04.6**	**+1.5**
SAUI				Sn	**Sn**	**14 00 46.1**	**+1.9**
SAUI	**Saumlaki**	**3.47**	**95**	P	**Pn**	**14 00 05.4**	**+2.3**
SAUI	**Saumlaki**	**3.47**	**95**	P	**Pn**	**14 00 05.2**	**+2.1**
BNDI	**Bandanaira**	**3.77**	**34**	P	Pn	14 00 12.3	+5.3
AAI	**Ambon**	**3.99**	**6**	P	**Pn**	**14 00 12.0**	**+2.1**
SOEI	**Soe**	**4.06**	**239**		**Pn**	**14 00 13.8**	**+2.9**
SOEI	**Soe**	**4.06**	**239**	P	**Pn**	**14 00 12.0**	**+1.1**
SOEI	**Soe**	**4.06**	**239**	P	**Pn**	**14 00 13.6**	**+2.7**
MSAI	**Masohi**	**4.46**	**15**	P	**Pn**	**14 00 18.5**	**+2.5**
NLAI	**Namlea**	**4.48**	**351**	P	**Pn**	**14 00 19.5**	**+3.2**
BATI	**Baumata**	**4.80**	**238**	P	**Pn**	**14 00 23.8**	**+3.1**
	162nm,0.5s,baz=122,slow=2.8,SNR=34						
BATI				S	**Sn**	**14 01 17.6**	**+2.0**
	196nm,0.4s,baz=109,slow=6.2,SNR=18						
BATI	**Baumata**	**4.80**	**238**	P	**Pn**	**14 00 23.7**	**+3.1**
AUDHS	**Darwin High Sc**	**5.58**	**148**	P	**Pn**	**14 00 32.8**	**+1.8**
DRS	**Darwin Rock St**	**5.61**	**147**	P	**Pn**	**14 00 33.5**	**+2.1**
BBSI	**Bau Bau**	**5.64**	**292**	P	**Pn**	**14 00 35.8**	**+3.9**
	0.3nm86nm,1.0s						
SANI	**Sanana**	**5.89**	**342**	P	**Pn**	**14 00 38.1**	**+3.0**
SANI	**Sanana**	**5.89**	**342**	P	**Pn**	**14 00 37.8**	**+2.7**
MTN	**Manton Dam**	**6.08**	**148**		**Pn**	**14 00 38.4**	**+0.8**
EDFI	**Ende, Flores**	**6.15**	**260**	P	**Pn**	**14 00 41.0**	**+2.3**
	0.1nm14nm,0.6s						
FAKI	**Fak Fak**	**6.48**	**43**		**Pn**	**14 00 42.3**	**-0.7**
FAKI	**Fak Fak**	**6.48**	**43**	P	**Pn**	**14 00 42.1**	**-0.9**
	0.3nm1µm24nm,0.5s						
KMPI	**Kaimana, Papua**	**7.10**	**56**	P	**Pn**	**14 00 52.2**	**+0.9**
BSSI	**Bau Bau, Buton**	**7.43**	**281**	P	**Pn**	**14 00 57.6**	**+1.9**
	0.1nm29nm,0.9s						
BASI	**Baing, Sumba**	**7.57**	**250**	P	**Pn**	**14 00 59.5**	**+1.8**
	0.9nm100nm,0.7s						
SWI	**Sorong**	**7.60**	**27**	P	**Pn**	**14 00 59.5**	**+1.4**
	0.2nm35nm,0.5s						
WSI	**Waingapu**	**7.68**	**255**	P	**Pn**	**14 01 00.3**	**+1.2**
KNRA	**Kununurra**	**8.00**	**173**		**Pn**	**14 01 03.9**	**+0.6**
BNSI	**Bone**	**8.33**	**293**	P	**Pn**	**14 01 10.6**	**+2.8**
	17nm,0.9s						
WBSI	**Waikabubak, Su**	**8.55**	**256**	P	**Pn**	**14 01 10.3**	**-0.5**
	28nm,0.7s						
RKPI	**Ransiki, Papua**	**8.83**	**46**	P	**Pn**	**14 01 14.3**	**-0.2**
PLAI	**Plampang**	**9.99**	**263**	P	**Pn**	**14 01 29.7**	**-0.4**
	34nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.56**	**191**		**Pn**	**14 01 36.2**	**-1.3**
FITZ	**Fitzroy Crossi**	**10.56**	**191**	P	**Pn**	**14 01 35.7**	**-1.9**
	13nm,0.3s,baz=26,slow=10,SNR=116						
FITZ				S	Sn	14 03 26.3	-8.0
	54nm,0.6s,baz=87,slow=15,SNR=12						
FITZ	**Fitzroy Crossi**	**10.56**	**191**	P	**Pn**	**14 01 36.3**	**-1.3**
FITZ	**Fitzroy Crossi**	**10.56**	**191**	S	**Sn**	**14 03 30.1**	**-4.2**
TOLI2	**Tolitoli**	**11.20**	**321**		**Pn**	**14 01 49.4**	**+3.2**
TOLI2	**Tolitoli**	**11.20**	**321**	P	**Pn**	**14 01 49.9**	**+3.8**
WB0	**Warramunga Arr**	**13.60**	**153**		**Pn**	**14 02 15.4**	**-1.8**
WRAB	**Tennant Creek**	**13.72**	**153**		**Pn**	**14 02 16.1**	**-2.6**
WRAB	**Tennant Creek**	**13.72**	**153**	P	**Pn**	**14 02 18.5**	**-0.3**
WRA	**Warramunga Arr**	**13.73**	**153**		**Pn**	**14 02 16.2**	**-2.6**
WRA	**Warramunga Arr**	**13.73**	**153**	P	**Pn**	**14 02 16.7**	**-2.1**
	35nm,0.5s,baz=320,slow=15,SNR=158						
WRA				S	Sn	14 04 39.6	-11
	42nm,0.7s,baz=334,slow=22,SNR=12						
WR8	**Warramunga Ar**	**13.81**	**153**		**Pn**	**14 02 17.9**	**-1.9**
PSA00	**Pilbara Seismi**	**

comp=Z,3.2nm,0.6s,baz=134,slow=5.1,SNR=40
comp=Z,3.2nm,0.6s
KURK Kurchatov 71.99 330 P **P** **14 10 17.0 -1.0**
KURK IAmb IAmb 14 10 18.3
comp=Z,4.7nm,0.8s
VNDA Vanda 72.04 173 P **P** **14 10 18.7 +0.8**
VNDA Vanda 72.04 173 P **P** **14 10 18.4 +0.5**
comp=Z,0.4nm,0.5s,baz=320,slow=8.6,SNR=6.3
comp=Z,0.4nm,0.5s
BVAR Borovoye Array 77.50 329 P **P** **14 10 48.1 -1.6**
comp=Z,0.8nm,0.4s,baz=114,slow=6.5,SNR=9.6
comp=Z,0.8nm,0.4s
AB31 Akbulak array 81.70 322 P **P** **14 11 11.2 -1.3**
ABKAR Akbulak array 81.70 322 P **P** **14 11 11.0 -1.5**
QSPA South Pole Qui 82.29 180 P **P** **14 11 16.1 +0.6**
BELA Belgrano 2 94.01 184 P **P** **14 12 12.3 +0.9**
BELA IAmb IAmb 14 12 31.5
comp=Z,4.2nm,1.5s
BCAR Beaver Creek A 96.98 27 P **P** **14 12 23.7 -1.5**

NNC 08 14:00:26.1±5.7, 39°.57N×72°.50E, h0km, mb3.8, mpv3.7, 2C-1D, Error ellipse: s-maj=58.2km s-min=37.6km az=5.0, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.19**	**325**	Pg	Pn	14 01 18.7	+1.1
	20nm,0.2s						
IUG				Lg	Lg	14 02 13.2	
	84nm,0.4s						
MRKS	**Merke**	**3.22**	**10**	Pg	Pb	14 01 22.8	-1.4
	12nm,0.3s						
MRKS				Lg	Lg	14 02 20.3	
	11nm,0.5s						
KK31	**Karatay Array**	**3.84**	**338**	⇑Pn	Pn	14 01 26.1	-0.4
	1.3nm,0.3s,baz=152,slow=10,SNR=9.9						
KK31				⇓Lg	Lg	14 02 29.0	
	4.3nm,0.3s,baz=156,slow=22						
MK31	**Makanchi Array**	**10.15**	**41**	⇑P	Pn	14 02 54.2	+1.0
	9.1nm,1.8s,baz=256,slow=17,SNR=3.5						
AB31	**Akbulak array**	**13.19**	**321**	P	Pn	14 03 34.2	-0.3
	0.7nm,0.8s,baz=162,slow=10,SNR=5.8						

JMA 08 14:04:09.2±0.3, 31°N±2°×13°9E±°, h328km, MV3.7/9, NEAR TORISHIMA IS, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.12**	**8**	*eP*	Pn	14 04 59.5	+0.2
BSO1	**Boso 1**	**3.86**	**19**	*eP*	Pn	14 05 15.5	+0.8
BSO1				*eS*	S	14 06 04.5	-3.1
JIE	**Ise**	**4.09**	**326**	*eP*	Pn	14 05 17.9	+0.1
JOD2	**Odawara 2**	**4.25**	**356**	*eP*	Pn	14 05 20.1	+0.5
CBIJ	**Chichi jima**	**4.58**	**148**	*eP*	Pn	14 05 23.8	+0.5
CBIJ				*eS*	S	14 06 20.3	-2.5
JRY	**Ryogami san**	**5.02**	**355**	*eP*	Pn	14 05 28.8	+0.8
JMK	**Ichinoseki**	**8.06**	**10**	*eP*	Pn	14 06 04.5	+0.9
JMK				*eS*	S	14 07 31.1	-5.6

*UPP **08** 14:07:41.5±0.4, 62°.32N×21°.46E, h0km, ML1.8, Presumed earthquake*
HEL 08 14:07:39.7±0.2, 62°.26N×21°.57E, h0km, ML1.5, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPF	**Kankaanpaa**	**0.48**	**150**	PG	Pg	14 07 49.2	+0.3
KPF				smax	smax	14 07 55.5	
	comp=Z,4.1nm,0.2s						
KPF				SG	Sb	14 07 57.3	-1.4
VAF	**Ylistaro**	**0.94**	**32**	*eP*	Pg	14 07 56.6	-1.1
VAF	**Ylistaro**	**0.94**	**32**	PG	Pg	14 07 56.9	-0.8
	baz=214						
VAF				smax	smax	14 08 08.8	
	comp=Z,3.5nm,0.2s						
VAF				SG	Sg	14 08 09.8	0.0
RAF	**Rauma**	**1.24**	**176**	*eP*	Pg	14 08 03.2	-0.2
RAF	**Rauma**	**1.24**	**176**	PN	Pg	14 08 03.3	-0.1
RAF				smax	smax	14 08 17.3	
	comp=Z,4.6nm,0.2s						
RAF				SN	Sb	14 08 20.6	+0.2
HUSU	**Husum**	**1.53**	**316**	PN	Pn	14 08 08.0	-0.3
KEF	**Keuruu**	**1.55**	**92**	*eP*	Pn	14 08 07.7	-0.8
KEF	**Keuruu**	**1.55**	**92**	PG	Pn	14 08 07.9	-0.6
KEF				smax	smax	14 08 26.1	
	comp=Z,3.6nm,0.2s						
KEF				SN	Sn	14 08 29.2	-0.1
UMAU	**Umeaa**	**1.68**	**346**	P	Pn	14 08 10.6	+0.2
UMAU	**Umeaa**	**1.68**	**346**	PG	Pn	14 08 10.4	+0.1
UMAU				SN	Sb	14 08 33.1	-0.1
HEMU	**Hemsoen**	**1.69**	**286**	P	Pn	14 08 11.0	+0.5
HEMU	**Hemsoen**	**1.69**	**286**	PG	Pn	14 08 10.1	-0.4
HEMU				SN	Sg	14 08 34.9	+0.8
ARNU	**Arnoeviken**	**2.06**	**256**	P	Pn	14 08 16.5	+1.1
ARNU				S	Sb	14 08 43.0	-0.9
BREU	**Bredtraesk**	**2.13**	**322**	P	Pb	14 08 17.9	-1.3
HUDU	**Hudiksvall**	**2.16**	**258**	P	Pb	14 08 18.8	-0.8
SUF	**Sumiainen**	**2.18**	**76**	PG	Pn	14 08 18.1	+1.0
SUF				smax	smax	14 08 44.2	
	comp=Z,1.5nm,0.2s						
SUF				SG	Sb	14 08 47.7	+0.2
ODEU	**Stanfors**	**2.20**	**350**	P	Pn	14 08 18.3	+0.9
AAL	**Aland**	**2.22**	**201**	P	Pb	14 08 19.7	-0.9
AAL	**Aland**	**2.22**	**201**	*eP*	Pb	14 08 19.4	-1.2
AAL	**Aland**	**2.22**	**201**	PG	Pb	14 08 19.7	-0.9
AAL				SG	Sg	14 08 49.8	-1.1
KAF	**Kangasniemi**	**2.23**	**92**	PG	Pn	14 08 19.0	+1.2
KAF				smax	smax	14 08 45.5	
	comp=Z,2.5nm,0.2s						
KAF				SG	Sb	14 08 49.0	+0.1
OBF8	**Ulkokalla**	**2.25**	**21**	PG	Pn	14 08 19.4	+1.3
	baz=198						
OBF8				smax	smax	14 08 46.3	
	comp=Z,2.3nm,0.2s						
OBF8				SG	Sb	14 08 48.7	-0.8
FIA0	**FINESS Array S**	**2.29**	**109**	PB	Pn	14 08 19.9	+1.3
	baz=294						
FIA0				smax	smax	14 08 47.3	
	comp=Z,2.5nm,0.2s						
FIA0				SG	Sb	14 08 50.6	0.0
NUR	**Nurmijarvi**	**2.30**	**138**	smax	smax	14 08 47.6	
	comp=Z,1.5nm,0.2s						
NUR				SG	Sg	14 08 52.2	-1.2
HASU	**Hassela**	**2.32**	**270**	P	Pb	14 08 21.0	-1.4
BURU	**Burvik**	**2.34**	**358**	P	Pn	14 08 20.7	+1.3
BURU	**Burvik**	**2.34**	**358**	PG	Pn	14 08 20.8	+1.5
BURU				SG	Sb	14 08 50.6	-1.5
MEF	**Metsahovi**	**2.46**	**145**	smax	smax	14 08 52.3	
	comp=Z,2.6nm,0.2s						
MEF				SG	Sb	14 08 56.4	+0.9
IGGU	**Iggoen**	**2.46**	**238**	P	Pb	14 08 23.3	-1.4
OBF0	**Syolatti, Pyha**	**2.55**	**27**	PB	Pn	14 08 23.5	+1.2
OBF0				smax	smax	14 08 55.1	
	comp=Z,1.2nm,0.2s						
OBF0				SB	Sn	14 08 55.8	+1.8
TVF	**Tvarminne**	**2.56**	**161**	smax	smax	14 08 55.1	
	comp=Z,0.8nm,0.2s						
TVF				SG	Sg	14 09 00.1	-1.6
OUF	**Merijarvi**	**2.56**	**33**	PB	Pn	14 08 23.7	+1.4
OUF				smax	smax	14 08 55.1	
	comp=Z,2.1nm,0.2s						
OUF				SB	Sn	14 08 56.0	+2.0
ROTU	**Roteberg**	**2.85**	**255**	P	Pb	14 08 29.0	-2.4
OBF4	**Vikkela, Lumij**	**3.02**	**30**	PN	Pn	14 08 29.9	+1.2
	baz=216						
OBF4				smax	smax	14 09 08.3	
	comp=Z,1.3nm,0.2s						
KALU	**Kalix**	**3.70**	**11**	PG	Pb	14 08 46.1	+0.2
SLIT	**Slitere, Latvi**	**4.66**	**175**	PN	Pn	14 08 51.8	+0.6

WEL 08 14:47:29.6±1.0, 32°S±9°×18°0W±2°3, h310km±15km, M3.8/7, mB4.2/5, ML4.1/6, MLv4.0/7, Mw(mB)3.3/5, Error ellipse: s-maj=32.5km s-min=5.1km az=109.8, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.42**	**28**	P	Pn	14 48 30.7	+0.4
GLKZ				S	S	14 49 18.9	0.0
MXZ	**Matakaoa Point**	**5.49**	**196**	P	Pn	14 48 54.0	+0.9
MXZ				S	S	14 50 02.0	+1.7
WMGZ	**Waiomatatini S**	**5.71**	**195**	P	Pn	14 48 57.5	+1.9
WMGZ				S	S	14 50 06.8	+1.8
HAZ	**Te Kaha**	**5.81**	**199**	P	Pn	14 48 57.3	+0.6
HAZ				S	S	14 50 07.8	+0.8
PKGZ	**Pakihiroa**	**5.83**	**197**	P	Pn	14 48 57.9	+0.8
PKGZ				S	S	14 50 05.6	-2.1
PUZ	**Puketiti**	**5.99**	**195**	P	Pn	14 48 59.5	+0.6
PUZ				S	S	14 50 10.9	-0.2
RUGZ	**Raukumara Rang**	**6.03**	**199**	P	Pn	14 49 00.3	+0.7
WCZ	**Waipu Caves**	**6.08**	**232**	P	Pn	14 49 00.3	+0.2
TWGZ	**Tauwhareparae**	**6.15**	**197**	P	Pn	14 49 02.2	+1.3
TWGZ				S	S	14 50 16.7	+2.1
MWZ	**Matawai**	**6.42**	**199**	P	Pn	14 49 03.8	-0.3
MWZ				S	S	14 50 19.8	-0.6
TKGZ	**Te Karaka**	**6.43**	**197**	P	Pn	14 49 04.3	+0.1
TKGZ				S	S	14 50 20.4	-0.3
URZ	**Urewera**	**6.47**	**202**	P	Pn	14 49 03.6	-1.1
RIGZ	**Rimuhau**	**6.71**	**197**	P	Pn	14 49 06.3	-1.2
MUGZ	**Murupara**	**6.78**	**204**	P	Pn	14 49 07.5	-0.9
PRGZ	**Paritu Road**	**6.88**	**195**	P	Pn	14 49 08.6	-1.1
RAHZ	**Arahi**	**7.08**	**200**	P	Pn	14 49 10.7	-1.3
MHGZ	**Mahia Peninsul**	**7.10**	**195**	P	Pn	14 49 11.6	-0.6
MTHZ	**Maungataniwha**	**7.10**	**202**	P	Pn	14 49 12.7	+0.4
WHHZ	**Waihua**	**7.19**	**199**	P	Pn	14 49 13.9	+0.6
MRHZ	**Matea Rd**	**7.22**	**204**	P	Pn	14 49 12.9	-0.9
NMHZ	**Naumai**	**7.33**	**201**	P	Pn	14 49 15.5	+0.4

*IDC **08** 14:54:40.1±1.0, 4°.21S×133°.85E, h0km, mb3.6/5, mbtmp3.9/8, ML4.5/2, MS3.2/2, Error ellipse: s-maj=31.4km s-min=23.9km az=72.0*
*NEIC **08** 14:54:41.3±1.7, 4°.26S±0°.07×133°.75E±0°.08, h10km±1km, mb4.1/12, Error ellipse: s-maj=14.8km s-min=11.2km az=63.0*
*DJA **08** 14:54:44.4±0.4, 4°S±2°×13°4E±°, h12km±3km, M4.5/14, mB5.2/5, mb4.7/8, MLv4.5/14, Mw(mB)4.5/5*
ISC 08 14:54:40.8±0.5, 4°.31S±0°.05×133°.86E±0°.05, h10km, n55, σ1s62/60, mb3.8/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.66**	**346**	P	**Pg**	**14 54 53.2**	**-0.4**
KMPI				S	**Sg**	**14 55 02.6**	**+0.4**
FAKI	**Fak Fak**	**2.12**	**310**		**Pn**	**14 55 16.0**	**-0.4**
FAKI	**Fak Fak**	**2.12**	**310**	P	**Pn**	**14 55 16.1**	**-0.2**
FAKI	**Fak Fak**	**2.12**	**310**	P	**Pn**	**14 55 16.1**	**-0.2**
RKPI	**Ransiki, Papua**	**2.79**	**6**	P	**Pn**	**14 55 26.9**	**+1.3**
RKPI				S	**Sn**	**14 55 59.9**	**+0.5**
BAKI	**Biak**	**3.82**	**36**	P	**Pn**	**14 55 42.0**	**+2.3**
BNDI	**Bandanaira**	**3.95**	**267**	P	**Pn**	**14 55 44.1**	**+2.5**
BNDI	**Bandanaira**	**3.95**	**267**	P	**Pn**	**14 55 44.0**	**+2.5**
BNDI				S	**Sn**	**14 56 31.1**	**+3.1**
SWI	**Sorong**	**4.30**	**323**	P	**Pn**	**14 55 46.3**	**0.0**
SWI				S	**Sn**	**14 56 35.3**	**-1.2**
SAUI	**Saumlaki**	**4.46**	**215**	Pn	**Pn**	**14 55 47.6**	**-0.9**
SAUI	**Saumlaki**	**4.46**	**215**	P	**Pn**	14 55 53.5	+5.0
MSAI	**Masohi**	**5.02**	**281**	P	**Pn**	**14 55 58.4**	**+2.2**
MSAI				S	**Sn**	**14 56 56.4**	**+2.1**
SMPI	**Sarmi**	**5.36**	**65**	P	**Pn**	**14 56 03.8**	**+2.9**
	0.1nm15nm,0.5s						
AAI	**Ambon**	**5.69**	**276**	P	**Pn**	**14 56 07.5**	**+2.0**
	0.6nm2μm129nm,0.8s						
AAI				S	**Sn**	**14 57 12.0**	**+1.1**
	0.6nm2μm129nm,0.8s						
NLAI	**Namlea**	**6.83**	**279**	P	**Pn**	**14 56 24.2**	**+3.0**
	0.3nm930nm60nm,0.5s						
NLAI				S	**Sn**	**14 57 41.7**	**+2.6**
	0.3nm930nm60nm,0.5s						
JAY	**Jayapura**	**7.06**	**76**	Pn	**Pn**	**14 56 25.2**	**+0.9**
	3.9nm,0.6s,baz=276,slow=23,SNR=2.3						
SANI	**Sanana**	**8.18**	**286**	P	**Pn**	**14 56 39.0**	**-0.6**
TNTI	**Ternate**	**8.22**	**308**	Pn	**Pn**	**14 56 37.9**	**-2.3**
DRS	**Darwin Rock St**	**8.59**	**200**	P	**Pn**	**14 56 47.8**	**+2.5**
MTN	**Manton Dam**	**8.90**	**197**		**Pn**	**14 56 50.9**	**+1.3**
SOEI	**Soe**	**10.95**	**240**		**Pn**	**14 57 18.7**	**+0.8**
SOEI	**Soe**	**10.95**	**240**	P	**Pn**	**14 57 21.5**	**+3.7**
SOEI	**Soe**	**10.95**	**240**	P	**Pn**	**14 57 21.1**	**+3.3**
	29nm,0.6s						
BATI	**Baumata**	**11.69**	**239**	Pn	**Pn**	**14 57 29.0**	**+1.1**
	5.4nm,0.3s,baz=115,slow=5.2,SNR=5.8						
	18nm,0.4s						
KNRA	**Kununurra**	**12.36**	**204**		**Pn**	**14 57 36.8**	**-0.2**
COEN	**Coen**	**13.28**	**137**	Pn	**Pn**	**14 57 47.9**	**-1.7**
COEN	**Coen**	**13.28**	**137**	P	**Pn**	**14 57 48.9**	**-0.6**
PMG	**Port Moresby**	**14.14**	**112**	LR	LR	15 04 42.8	
	comp=Z,60nm,18.7s,baz=334,slow=42						
TOLI2	**Tolitoli**	**14.14**	**292**	Pn	**Pn**	**14 57 58.9**	**-2.4**
WB0	**Warramunga Arr**	**15.38**	**178**		**Pn**	**14 58 16.5**	**-1.5**
WB0				IAmb	IAmb	14 58 29.4	
	comp=Z,9.0nm,0.7s						
WRA	**Warramunga Arr**	**15.55**	**178**		**Pn**	**14 58 18.6**	**-1.8**
WRA	**Warramunga Arr**	**15.55**	**178**	Pn	**Pn**	**14 58 18.5**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=355,slow=13,SNR=26						
WRA				LR	LR	15 05 28.6	
	comp=Z,110nm,18.7s,baz=70,slow=42						
WR8	**Warramunga Arr**	**15.57**	**178**		**Pn**	**14 58 19.4**	**-1.1**
WR8				IAmb	IAmb	14 58 30.3	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.90**	**210**		**Pn**	**14 58 24.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**15.90**	**210**	Pn	**Pn**	**14 58 23.2**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=42,slow=11,SNR=26						
PLAI	**Plampang**	**16.60**	**253**	P	**P**	**14 58 36.5**	**+0.2**
QIS	**Mount Isa**	**17.09**	**161**	P	**P**	**14 58 40.8**	**-1.0**
AS31	**Alice Springs**	**19.25**	**180**		**Pn**	**14 59 05.9**	**-0.6**
AS31				IAmb	IAmb	14 59 14.3	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**19.25**	**180**		**Pn**	**14 59 05.7**	**-0.9**
ASAR	**Alice Springs**	**19.25**	**180**	P	**Pn**	**14 59 07.1**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=4.3,slow=10,SNR=134						
	comp=Z,12nm,0.7s						
MBWA	**Marble Bar**	**21.66**	**218**		**P**	**14 59 31.2**	**-0.5**
PSA00	**Pilbara Seismi**	**21.90**	**217**	P	**P**	**14 59 33.6**	**-0.7**
PSA00	**Pilbara Seismi**	**21.90**	**217**		**P**	**14 59 33.8**	**-0.5**
PSA00				IAmb	IAmb	14 59 45.7	
	comp=Z,9.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.18**	**304**	P	**P**	**15 02 26.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=132,slow=7.1,SNR=4.8						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**68.18**	**325**	P	**P**	**15 05 40.4**	**-1.1**
MKAR	**Makanchi Array**	**68.18**	**325**	P	**P**	**15 05 41.8**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=110,slow=8.2,SNR=8.7						
	comp=Z,0.7nm,0.6s						
KK31	**Karatay Array**	**73.93**	**317**	P	**P**	**15 06 14.5**	**-1.9**
KK31				IAmb	IAmb	15 06 32.4	
	comp=Z,1.1nm,0.8s						
KKAR	**Karatay Array**	**73.93**	**317**	P	**P**	**15 06 14.8**	**-1.6**
VNDA	**Vanda**	**74.67**	**174**	P	**P**	**15 06 21.4**	**+1.3**
VNDA	**Vanda**	**74.67**	**174**	P	**P**	**15 06 21.7**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=324,slow=5.7,SNR=5.4						
	comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**77.90**	**326**	P	**P**	**15 06 39.4**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=138,slow=7.1,SNR=4.9						
	comp=Z,0.4nm,0.6s						
AB31	**Akbulak array**	**82.84**	**321**	P	**P**	**15 07 05.2**	**-0.3**
AB31				IAmb	IAmb	15 07 23.9	
	comp=Z,2.0nm,1.1s						
ABKAR	**Akbulak array**	**82.84**	**321**	P	**P**	**15 07 05.0**	**-0.5**
QSPA	**South Pole Qui**	**85.65**	**180**	P	**P**	**15 07 19.1**	**-0.6**
ILAR	**Eielson Array**	**89.29**	**25**	P	**P**	**15 07 37.3**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=262,slow=4.8,SNR=2.5						
	comp=Z,0.2nm,0.5s						

*MOS **08** 15:00:51.8±0.9, 25°.02N×45°.63W, h10km, mb5.1/49, Error ellipse: s-maj=9.8km s-min=5.3km az=47.7*
*IDC **08** 15:00:51.2±0.5, 24°.93N×45°.67W, h0km, mb4.6/27, mbtmp4.6/27, MS4.1/64, Error ellipse: s-maj=16.5km s-min=12.7km az=156.0*
*NEIC **08** 15:00:53.5±1.7, 24°.94N±0°.10×45°.7W±0°.1, h10km±1km, mb5.1/441, Error ellipse: s-maj=17.7km s-min=15.9km az=303.0*
*GCMT **08** 15:00:55.5±0.2, 24°.96N±0°.03×45°.63W±0°.02, h12km, MW5.0/92, Moment Tensor Solution. s23,c25; s92,c134; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~3.84±.12; Mθθ 1.05±.13; Mϕϕ 2.79±.10; Mrθ -1.17±.47; Mθϕ 1.89±.09; Mϕr~0.74±.44; Best double couple: M=4.15900×10^16 NP1: ϕ=204.00000°, δ=37.00000°, λ=-104.00000°. NP2: ϕ=41.00000°, δ=54.00000°, λ=-80.00000°. Principal axes: T 4.1970, Plg9.0000°, Azm124.0000°; N -0.0770, Plg8.0000°, Azm215.0000°; P -4.1200, Plg78.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 15:00:52.6±0.4, 24°.90N±0°.07×45°.62W±0°.06, h10km, n738, σ1s06/513, mb5.1/289, MS4.0/67, 22C-30D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCPR	**Guaynabo City**	**20.12**	**255**	P	**P**	**15 05 24.6**	**-2.1**
SJG	**San Juan**	**20.25**	**255**	LR	LR	15 11 45.6	
	comp=Z,409nm,21.7s,baz=81,slow=32						
OBIP	**Obispado Ponce**	**20.68**	**255**		**P**	**15 05 32.3**	**-0.5**
OBIP				IAmb	IAmb	15 05 46.0	
	comp=Z,94nm,1.1s						
MDP	**Montagnes des**	**20.81**	**200**	P	**P**	**15 05 33.0**	**-1.3**
	comp=Z,27nm,1.2s,baz=22,slow=11,SNR=4.2						
MDP				LR	LR	15 11 44.4	
	comp=Z,284nm,21.9s,baz=356,slow=31						
	comp=Z,27nm,1.2s						
SDDR	**Presa de Saban**	**24.51**	**261**		**P**	**15 06 11.3**	**-1.0**
SDDR				IAmb	IAmb	15 06 16.9	
	comp=Z,53nm,1.2s						
BOAV	**Boa Vista**	**26.60**	**215**		**P**	**15 06 31.0**	**-0.2**
SDV	**Santo Domingo**	**28.67**	**241**	LR	LR	15 16 50.0	
	comp=Z,207nm,21.4s,baz=70,slow=34						
BBTS	**Babate**	**29.14**	**105**	LR	LR	15 15 33.0	
	comp=Z,685nm,18.6s,baz=80,slow=30						
SADO	**Sadowa**	**33.58**	**315**	LR	LR	15 18 36.7	
	comp=Z,173nm,21.1s,baz=158,slow=32						
SCHQ	**Schefferville**	**33.76**	**338**	LR	LR	15 19 46.2	
	comp=Z,422nm,20.6s,baz=130,slow=34						
GOGA	**Godfrey**	**33.98**	**293**	P	**P**	**15 07 38.4**	**+2.0**
GOGA				IAmb	IAmb	15 07 38.8	
	comp=Z,26nm,1.2s						
GOGA	**Godfrey**	**33.98**	**293**	P	**P**	**15 07 38.4**	**+2.0**
GOGA				pmax	pmax		
	comp=Z,26nm,1.2s						
ROSC	**El Rosal**	**34.02**	**239**	LR	LR	15 20 40.6	
	comp=Z,259nm,21.7s,baz=277,slow=35						
TKL	**Tuckaleechee C**	**34.46**	**297**	LR	LR	15 18 48.7	
	comp=Z,962nm,22.0s,baz=95,slow=31						
Q51A	**Peebles**	**34.71**	**303**	P	**P**	**15 07 43.7**	**+1.0**
152A	**Waverly Hall**	**34.98**	**292**	P	**P**	**15 07 45.3**	**+0.2**
T50A	**Nancy**	**35.50**	**299**		**P**	**15 07 50.4**	**+0.8**
T50A				IAmb	IAmb	15 07 52.4	
	comp=Z,74nm,1.8s						
MDT	**Midelt**	**36.59**	**68**	LR	LR	15 19 31.6	
	comp=Z,296nm,21.2s,baz=238,slow=31						
LRAL	**Lakeview Retre**	**36.91**	**292**	P	**P**	**15 08 03.0**	**+1.3**
X48A	**Hartselle**	**37.02**	**295**		**P**	**15 08 03.6**	**+1.1**
ESDC	**Sonseca Array**	**37.82**	**57**	P	**P**	**15 08 09.2**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=60,slow=12,SNR=2.0						
ESDC				PcP	**PcP**	**15 10 26.3**	**+0.4**
	comp=Z,3.9nm,1.1s,baz=291,slow=3.7,SNR=8.6						
ESDC				LR	LR	15 19 28.8	
	comp=Z,247nm,20.8s,baz=236,slow=30						
	comp=Z,0.8nm,0.8s						
OTAV	**Otavalo**	**40.12**	**237**	P	**P**	**15 08 30.7**	**+1.4**
OTAV				pmax	pmax		
	comp=Z,10.0nm,1.6s						
BDFB	**Brasilia**	**40.37**	**184**	LR	LR	15 23 42.6	
	comp=Z,422nm,18.5s,baz=15,slow=34						
LCAR	**Lake Charles**	**40.47**	**297**		**P**	**15 08 32.5**	**+1.1**
CNGN	**Cerro Negro**	**40.66**	**260**	P	**P**	**15 08 33.0**	**-0.4**
CCM	**Cathedral Cave**	**40.68**	**300**	P	**P**	**15 08 34.3**	**+1.1**
CCM				IAmb	IAmb	15 08 35.6	
	comp=Z,64nm,1.6s						
CCM	**Cathedral Cave**	**40.68**	**300**	P	**P**	**15 08 34.3**	**+1.1**
CCM				pmax	pmax		
	comp=Z,64nm,1.6s						
WHAR	**Wooly Hollow**	**41.36**	**296**		**P**	**15 08 38.6**	**-0.3**
WHAR				IAmb	IAmb	15 08 41.5	
	comp=Z,46nm,1.3s						
P40A	**Paris**	**41.45**	**302**		**P**	**15 08 39.7**	**+0.2**
TBO	**Thunder Bay**	**41.57**	**316**		**P**	**15 08 41.5**	**+1.1**
FRB	**Frobisher Bay**	**41.67**	**345**	LR	LR	15 24 15.2	
	comp=Z,562nm,21.3s,baz=129,slow=34						
WLAR	**White Oak Lake**	**42.03**	**293**		**P**	**15 08 45.0**	**+0.6**
WLAR				IAmb	IAmb	15 08 53.6	
	comp=Z,55nm,1.0s						
SFJD	**Kangerlussuaq**	**42.22**	**357**	LR	LR	15 22 57.0	
	comp=Z,519nm,18.2s,baz=164,slow=31						
MTO3	**Montecristo**	**42.34**	**264**	P	**P**	**15 08 48.9**	**+1.6**
MIAR	**Mount Ida**	**42.41**	**295**	P	**P**	**15 08 45.1**	**-2.3**
MIAR				pmax	pmax		
	comp=Z,12nm,1.3s						
BORG	**Borgarnes**	**42.83**	**15**	LR	LR	15 22 24.5	
	comp=Z,133nm,21.3s,baz=193,slow=30						
DBIC	**Dimbokro**	**42.98**	**108**	P	**P**	**15 08 51.6**	**-0.7**
DBIC	**Dimbokro**	**42.98**	**108**	P	**P**	**15 08 52.4**	**+0.1**
	comp=Z,4.3nm,0.8s,baz=344,slow=9.7,SNR=5.4						
DBIC				LR	LR	15 23 42.2	
	comp=Z,709nm,20.6s,baz=314,slow=32						
	comp=Z,4.3nm,0.8s						
APG	**El Apazote**	**43.12**	**266**	LR	LR	15 25 21.4	
	comp=Z,17nm,21.3s,baz=288,slow=34						
SIV	**San Ignacio**	**43.35**	**202**	LR	LR	15 25 34.4	
	comp=Z,185nm,21.7s,baz=82,slow=34						
EKA	**Eskdalemuir Ar**	**43.41**	**34**	P	**P**	**15 08 54.5**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=249,slow=8.3,SNR=3.9						
EKA				PcP	**PcP**	**15 10 43.5**	**0.0**
	comp=Z,1.6nm,0.7s,baz=245,slow=1.8,SNR=5.3						
	comp=Z,3.6nm,0.9s						
H10N2	**ASCENSION HYDR**	**44.48**	**133**	T	T	15

TAM Tamanrasset 46.60 82 P P 15 09 21.6 +0.3
TAM pmax pmax
comp=Z,20nm,1.0s
WMOK Wichita Mounta 46.69 295 IAmb IAmb 15 09 23.9
comp=Z,33nm,1.3s
WMOK Wichita Mounta 46.69 295 P P 15 09 22.7 +1.0
WMOK pmax pmax
comp=Z,20nm,1.3s
BSTI Sart Tilman 46.73 43 *dP* **P 15 09 23.7 +2.0**
BHOU Houvegnez 46.94 43 *dP* **P 15 09 24.9 +1.4**
comp=Z,14nm,1.4s
MEM Membach 47.01 43 *dP* **P 15 09 24.6 +0.8**
comp=Z,7.3nm,1.1s
BTNL Ternell 47.07 43 *dP* **P 15 09 25.8 +1.4**
comp=Z,10nm,1.4s
BRDY Brady 47.15 290 IAmb IAmb 15 09 33.7
comp=Z,19nm,0.9s
ABTX Abilene, Hawle 47.56 292 IAmb IAmb 15 09 29.8
comp=Z,17nm,0.9s
HNDO Hondo 47.60 288 IAmb IAmb 15 09 37.8
comp=Z,16nm,0.9s
SCO Scoresbysund 47.63 11 *i* P **P 15 09 29.6 +1.2**
SCO IAmb IAmb 15 09 30.8
comp=Z,29nm,1.0s
SMWD Samnorwood 47.87 296 IAmb IAmb 15 09 34.7
comp=Z,22nm,0.9s
SUMG Summit 47.88 3 P 15 09 30.6 -0.2
SUMG IAmb IAmb 15 10 51.8
comp=Z,25nm,1.8s
SUMG Summit 47.88 3 P P **15 09 30.6 -0.2**
SUMG pmax pmax
comp=Z,25nm,1.8s
SUMG Summit 47.88 3 *i* P **P 15 09 31.3 +0.5**
SUMG IAmb IAmb 15 09 32.4
comp=Z,29nm,0.9s
JCT Junction City 47.92 289 P **P 15 09 31.5 +0.1**
JCT Junction City 47.92 289 P **P 15 09 31.5 +0.1**
JCT pmax pmax
comp=Z,48nm,1.7s
BFO Black Forest 48.05 47 P **P 15 09 32.5 +0.4**
KEST Kesra 48.12 63 IAmb IAmb 15 09 38.8
comp=Z,33nm,1.5s
KEST Kesra 48.12 63 P **P 15 09 34.0 +1.2**
comp=Z,7.4nm,0.8s,baz=152,slow=3.5,SNR=3.7
KEST LR LR 15 28 43.2
comp=Z,116nm,18.1s,baz=316,slow=35
comp=Z,7.4nm,0.8s
TNS Taunus Mts 48.45 44 P **P 15 09 36.1 +0.9**
TNS pmax pmax
comp=Z,25nm,1.7s
TUE Stuetta 48.48 49 IAmb IAmb 15 09 37.5
comp=Z,22nm,1.2s
DKNS Dickens 48.54 294 IAmb IAmb 15 09 37.2
comp=Z,42nm,1.6s
SN07 Snyder 07 48.56 293 IAmb IAmb 15 09 37.4
comp=Z,14nm,0.8s
DRIO Del Rio 48.77 288 IAmb IAmb 15 09 39.0
comp=Z,34nm,1.4s
DAVOX Davos/Dischmat 48.88 49 LR LR 15 26 33.8
comp=Z,122nm,20.5s,baz=264,slow=32
SGCY Sterling City 48.88 291 IAmb IAmb 15 09 40.1
comp=Z,36nm,1.2s
DAVA Damuels 48.94 48 *i* P **P 15 09 40.4 +1.3**
comp=Z,44nm,0.9s,SNR=6.3
OZNA Ozona 49.00 290 IAmb IAmb 15 09 48.3
comp=Z,14nm,0.9s
AMTX Amarillo 49.06 295 IAmb IAmb 15 09 42.0
comp=Z,25nm,0.9s
FETA Feichten 49.48 49 *eP* **P 15 09 44.5 +1.3**
comp=Z,27nm,1.0s,SNR=5.9
RETA Reutte 49.55 48 *i* P **P 15 09 45.0 +1.2**
comp=Z,15nm,1.0s
MOTA Moosalm 49.77 48 *i* P **P 15 09 46.4 +0.9**
comp=Z,11nm,1.0s
SQTA Sankt Quirin 49.83 48 *i* P **P 15 09 46.8 +0.9**
comp=Z,25nm,0.8s,SNR=6.0
GO01 Chusmiza 49.89 210 P **P 15 09 46.8 -0.2**
GO01 IAmb IAmb 15 09 49.7
comp=Z,23nm,1.2s
CTI Castel Tesino 50.02 50 P 15 09 48.0 +0.6
CTI IAmb IAmb 15 09 48.8
comp=Z,30nm,1.2s
CTI Castel Tesino 50.02 50 P **P 15 09 48.0 +0.6**
CTI pmax pmax
comp=Z,30nm,1.2s
WATA Walderalm 50.09 48 *i* P **P 15 09 48.8 +0.9**
comp=Z,18nm,0.9s
WTTA Wattenberg 50.12 48 *i* P **P 15 09 49.3 +1.1**
comp=Z,24nm,0.8s
WTTA Wattenberg 50.12 48 P **P 15 09 49.2 +1.1**
WTTA pmax pmax
comp=Z,38nm,0.9s
PB11 IPOC Station P 50.18 210 P 15 09 46.4 -2.4
MOX Moxa 50.52 44 P **P 15 09 50.7 -0.2**
MOX pmax pmax
comp=Z,12nm,1.3s
ABTA Abfaltersbach 50.67 49 *eP* **P 15 09 52.9 +0.6**
comp=Z,26nm,1.0s,SNR=5.1
JMIC Jan Mayen 50.73 15 LR LR 15 27 39.0
comp=Z,84nm,18.4s,baz=226,slow=32
LESA Schwarzleotal 50.84 48 *i* P **P 15 09 53.7 +0.2**
comp=Z,11nm,0.8s
FDMO Fiordimonte 50.90 54 IAmb IAmb 15 09 55.4
comp=Z,16nm,0.9s
POIN Pond Inlet 51.02 348 P P 15 09 53.7 -0.6
AQU L'Aquila 51.13 55 P P 15 09 58.2 +2.5
CAMP Campotosto 51.13 54 IAmb IAmb 15 09 57.5
comp=Z,24nm,1.1s
ALPN Alpine 51.22 290 IAmb IAmb 15 09 58.9
comp=Z,28nm,1.5s
DBG Daneborg 51.23 9 *i* P **P 15 09 56.5 +0.7**
KBA Koelnbreinsper 51.27 49 *i* P **P 15 09 56.8 -0.1**
comp=Z,11nm,0.9s
PRED Cave del Predi 51.38 49 P 15 09 56.5 -1.0
TXAR Lajitas Array 51.41 289 P 15 09 57.4 -0.7
TXAR Lajitas Array 51.41 289 P **P 15 09 57.8 -0.3**
comp=Z,2.8nm,0.8s,baz=99,slow=8.0,SNR=28
TXAR PcP **PcP 15 11 12.6 -0.1**
comp=Z,1.7nm,0.9s,baz=108,slow=4.1,SNR=4.0
TXAR LR LR 15 32 03.6
comp=Z,105nm,19.8s,baz=74,slow=36
comp=Z,2.8nm,0.8s
MYKA Terra Mystica 51.44 49 *eP* **P 15 09 59.1 +1.1**
comp=Z,15nm,1.1s
CLL Collm 51.48 43 *i* P **P 15 09 58.7 +0.6**
CLL pmax pmax
comp=Z,14nm,1.0s
CLL Collm 51.48 43 *i* P **P 15 09 58.7 +0.6**
comp=Z,14nm,1.0s
BIOA Bad Ischl, Aus 51.51 48 *i* P **P 15 09 58.8 +0.4**
comp=Z,4.8nm,0.5s
KHC Kasperske Hory 51.59 46 IAmb IAmb 15 10 00.8
comp=Z,18nm,1.0s
KHC Kasperske Hory 51.59 46 *deP* **P 15 09 59.1 0.0**
KHC pmax pmax
comp=Z,26nm,1.3s
KHC Kasperske Hory 51.59 46 *eP* **P 15 09 59.8 +0.7**
GEC2 GERESS Array S 51.65 46 IAmb IAmb 15 10 01.0
comp=Z,25nm,1.2s
GERES GERESS Array B 51.65 46 P **P 15 09 59.6 0.0**
comp=Z,7.0nm,0.9s,baz=267,slow=7.6,SNR=33
GERES LR LR 15 28 15.6
comp=Z,50nm,21.5s,baz=258,slow=32
comp=Z,7.0nm,0.9s
MOA Molln 51.95 48 *i* P **P 15 10 01.9 +0.2**
comp=Z,16nm,1.4s
BRG Berggiesshubel 52.01 44 P **P 15 10 02.8 +0.7**
BRG pmax pmax
comp=Z,11nm,1.3s
ZVC Zvikov 52.02 46 *eP* **P 15 10 02.7 +0.5**
OBKA Obir 52.06 49 *i* P **P 15 10 02.9 +0.3**
comp=Z,43nm,0.9s,SNR=6.8
PVCC Panska Ves 52.37 44 P **P 15 10 06.1 +1.3**
PVCC pmax pmax
comp=Z,21nm,1.3s
SOKA Soboth 52.40 49 *i* P **P 15 10 05.0 -0.1**
comp=Z,22nm,1.7s
K22A Casper 52.52 306 IAmb IAmb 15 10 08.6
comp=Z,51nm,1.7s
NB2 NORSAR Subarra 52.58 31 P **P 15 10 07.2 +1.0**
comp=Z,2.1nm,0.7s,baz=254,slow=7.9
NOA NORSAR Array B 52.58 31 P **P 15 10 06.9 +0.6**
comp=Z,6.4nm,1.0s,baz=254,slow=7.7,SNR=14
NOA LR LR 15 28 16.9
comp=Z,141nm,20.6s,baz=255,slow=31
comp=Z,6.4nm,1.0s
NORES NORESS Array B 52.65 31 P **P 15 10 08.2 +1.5**
NORES pmax pmax
comp=Z,1.0nm,0.8s
NEEM North Greenlan 52.67 359 *i* P **P 15 10 07.5 +0.5**
NEEM IAmb IAmb 15 10 08.3
comp=Z,32nm,1.0s
ARSA Arzberg 52.76 49 IAmb IAmb 15 10 08.6
comp=Z,18nm,0.8s
ARSA Arzberg 52.76 49 *i* P **P 15 10 07.7 -0.1**
comp=Z,19nm,0.8s,SNR=6.2
TULEG Thule 52.94 353 *i* P **P 15 10 09.1 +0.5**
TULEG IAmb IAmb 15 10 10.6
comp=Z,48nm,1.1s
ANMO Albuquerque 52.97 296 P 15 10 09.8 +0.1
ANMO Albuquerque 52.97 296 LR LR 15 30 23.9
comp=Z,473nm,21.4s,baz=184,slow=34
ANMO Albuquerque 52.97 296⇓ *eP* **P 15 10 10.8 +1.1**
ANMO pmax pmax
comp=Z,10.0nm,1.3s
TASM ASL Pad, Albuq 52.97 296 IAmb IAmb 15 10 12.2
comp=Z,14nm,1.4s
CONA Conrad Observa 53.02 48 *i* P **P 15 10 09.8 +0.1**
comp=Z,14nm,0.9s,SNR=5.5
RONA Rosalia, Austr 53.30 48 *i* P **P 15 10 12.1 +0.3**
comp=Z,22nm,0.8s,SNR=8.5
KRUC Moravsky 53.44 46 *eP* **P 15 10 12.9 +0.2**
SOP Sopron 53.48 48 P **P 15 10 13.5 +0.5**
SOP pmax pmax
comp=Z,40nm,0.9s
KSP Ksiaz 53.49 44 P **P 15 10 14.1 +1.0**
HFS Hagfors 53.52 32 P **P 15 10 13.1 0.0**
comp=Z,9.4nm,0.9s,baz=232,slow=7.3,SNR=8.9
HFS LR LR 15 29 50.6
comp=Z,130nm,18.7s,baz=252,slow=32
comp=Z,9.4nm,0.9s
DAG Danmarks Havn 53.56 7 *i* P **P 15 10 13.0 -0.2**
DAG IAmb IAmb 15 10 14.3
comp=Z,11nm,0.9s
VRAC Vranov 53.58 46 *eP* **P 15 10 14.0 +0.3**
HPIG 53.60 286 IAmb IAmb 15 10 17.0
comp=Z,45nm,1.6s
KRLC Kraliky 53.75 45 *eP* **P 15 10 15.8 +0.8**
KRLC Kraliky 53.75 45 *eP* **P 15 10 15.8 +0.8**
ZST Bratislava 53.86 47 *eP* **P 15 10 16.8 +1.0**
ZST pmax pmax
comp=Z,6.0nm,1.3s
ZST Bratislava 53.86 47 *eP* **P 15 10 16.8 +1.0**
O20A White River Ci 53.91 303 IAmb IAmb 15 10 19.4
comp=Z,36nm,1.6s
MODS Modra-Piesok 53.99 47 *eP* **P 15 10 17.2 +0.4**
MODS pmax pmax
comp=Z,58nm,1.3s
MODS Modra-Piesok 53.99 47 *eP* **P 15 10 17.2 +0.4**
MORC Moravsky Berou 54.22 45 IAmb IAmb 15 10 20.2
comp=Z,16nm,1.0s
MORC Moravsky Berou 54.22 45⇑ P **P 15 10 19.3 +0.8**
MORC Moravsky Berou 54.22 45 *eP* **P 15 10 18.9 +0.4**
MORC Moravsky Berou 54.22 45 P **P 15 10 19.3 +0.8**
MVCO Mesa Verde 54.36 299 IAmb IAmb 15 10 23.2
comp=Z,37nm,1.6s
STEB Steborice 54.38 45 *eP* **P 15 10 20.3 +0.7**
MAUC Maruska 54.39 46 *eP* **P 15 10 21.0 +1.3**
121A Cookes Peak, D 54.39 293 IAmb IAmb 15 10 22.6
comp=Z,3nm,1.1s
PV21 Cone Mtn., Par 54.60 301 IAmb IAmb 15 10 25.1
comp=Z,34nm,2.0s
OKC Ostrava-Krasne 54.62 45 P **P 15 10 23.6 +2.3**
SRO Srobarova 54.67 48 *eP* **P 15 10 21.9 +0.2**
SRO pmax pmax
comp=Z,22nm,1.0s
SRO Srobarova 54.67 48 *eP* **P 15 10 21.9 +0.2**
PV10 Paradox Valley 54.67 301 IAmb IAmb 15 11 29.3
comp=Z,26nm,1.5s
BW06 Boulder Array 54.75 306 IAmb IAmb 15 10 23.8
comp=Z,19nm,1.1s
PD31 Pinedale Array 54.75 306 IAmb IAmb 15 10 23.8
comp=Z,19nm,1.1s
PDAR Pinedale Array 54.75 306 P **P 15 10 22.6 -0.1**
comp=Z,7.6nm,0.9s,baz=81,slow=9.2,SNR=37
PDAR LR LR 15 32 45.3
comp=Z,277nm,18.8s,baz=82,slow=35
comp=Z,7.6nm,0.9s
MORH Mrgy, Hungar 54.89 50⇓ P **P 15 10 23.9 +0.6**
RDMU Red Mountain 54.90 303 IAmb IAmb 15 10 25.2
comp=Z,33nm,1.7s
YNE Yellowstone No 55.00 309 IAmb IAmb 15 10 26.2
comp=Z,46nm,1.6s
YMP Mirror Lake Pl 55.11 308 IAmb IAmb 15 10 27.3
comp=Z,33nm,1.2s
LKWY Lake 55.29 308 IAmb IAmb 15 10 29.3
comp=Z,12nm,0.8s
LANS Liptovska Anna 55.46 46 *eP* **P 15 10 29.1 +1.7**
LANS pmax pmax
comp=Z,9.0nm,1.7s
LANS Liptovska Anna 55.46 46 *eP* **P 15 10 29.1 +1.7**
FLWY Flagg Ranch 55.52 308 IAmb IAmb 15 10 39.4
comp=Z,19nm,1.2s
W18A Petrified Fore 55.61 297 IAmb IAmb 15 10 31.0
comp=Z,22nm,1.3s
OJC Ojcow 55.69 45 P P 15 10 30.4 +1.3
PSZ Piszkesteto 55.73 48 P P 15 10 32.5 +3.0
TPAW Teton Pass 55.74 307 IAmb IAmb 15 10 33.4
comp=Z,24nm,1.3s
SRU San Rafael Swe 55.76 302 IAmb IAmb 15 10 31.7
comp=Z,14nm,0.8s
YHL Hebgen Lake 55.84 308 IAmb IAmb 15 10 33.1
comp=Z,23nm,1.3s
YHB Horse Butte 55.85 308 IAmb IAmb 15 10 33.8
comp=Z,42nm,1.4s
RES Resolute Bay 55.87 346 P **P 15 10 30.1 +0.2**
RES IAmb IAmb 15 10 31.4
comp=Z,21nm,1.1s
RES Resolute Bay 55.87 346 LR LR 15 33 26.2
comp=Z,419nm,18.8s,baz=74,slow=35
RES Resolute Bay 55.87 346 P **P 15 10 30.1 +0.2**
RES pmax pmax
comp=Z,21nm,1.2s
P17A Butcher Ranch, 55.89 302 IAmb IAmb 15 10 33.5
comp=Z,22nm,1.4s
AHID Auburn Hatcher 55.89 306 IAmb IAmb 15 10 34.2
comp=Z,36nm,1.7s
NIE Niedzica 56.01 46 P P 15 10 33.1 +1.8
HMU Henry Mountain 56.05 300 IAmb IAmb 15 10 35.1
comp=Z,30nm,1.5s
BOZ Bozeman (W 56.12 309 IAmb IAmb 15 10 34.0
comp=Z,28nm,1.6s
KECS Kecovo 56.13 47 *eP* **P 15 10 33.9 +1.7**
KECS pmax pmax
comp=Z,22nm,1.4s
KECS Kecovo 56.13 47 *eP* **P 15 10 33.8 +1.6**
TCUT Toone Canyon 56.24 304 IAmb IAmb 15 10 35.9
comp=Z,29nm,1.3s
TMUT Trail Mountain 56.27 302 IAmb IAmb 15 10 35.7
comp=Z,32nm,1.5s
Q16A Castle Valley 56.28 301 IAmb IAmb 15 10 37.0
comp=Z,36nm,1.6s
MPU Maple Canyon 56.52 303 IAmb IAmb 15 10 38.4
comp=Z,34nm,1.5s
STHS Stebnicka Huta 56.62 46 *eP* **P 15 10 36.6 +0.9**
STHS pmax pmax
comp=Z,9.0nm,1.0s
STHS Stebnicka Huta 56.62 46 *eP* **P 15 10 36.6 +0.9**
WUAZ Wupatki 56.88 297 IAmb IAmb 15 10 41.4
comp=Z,27nm,1.4s
TUC Tucson 56.93 293 P 15 10 39.3 +1.0
TUC Tucson 56.93 293 P **P 15 10 39.3 +1.0**
TUC pmax pmax
comp=Z,11nm,1.2s
SIRR Siria 56.98 50⇓ P **P 15 10 38.8 +0.5**
BZS Buzias 56.98 51⇓ P **P 15 10 39.4 +1.1**
BZS Buzias 56.98 51 P **P 15 10 39.4 +1.1**
MDVR Moldovita 57.10 52⇓ P **P 15 10 39.0 -0.2**
BOVS Bovan 57.17 53⇓ P **P 15 10 40.8 +1.1**
PKCU Pink Cliffs 57.35 300 IAmb IAmb 15 10 43.5
comp=Z,33nm,1.6s
BGU Big Grassy Mou 57.48 304 IAmb IAmb 15 10 44.4
comp=Z,17nm,1.0s
KWP Kalwaria Pacla 57.57 46 P P 15 10 44.3 +1.9
GZR Gura Zlata 57.81 51⇓ P **P 15 10 45.1 +0.8**
GZR Gura Zlata 57.81 51 P P 15 10 45.0 +0.8
BLKB Belogradchik 57.87 53⇓ P **P 15 10 45.7 +1.0**
NOR Nord 57.92 5 *i* P **P 15 10 44.5 +0.2**
NOR IAmb IAmb 15 10 45.5
comp=Z,22nm,1.3s
MARR Marisel-Cluj 57.97 49⇓ P **P 15 10 44.8 -0.5**
LIT Litokhoron 58.10 57 IAmb IAmb 15 10 48.1
comp=Z,32nm,1.3s
CCUT Cedar City 58.16 300 IAmb IAmb 15 10 50.0
comp=Z,20nm,1.1s
LPIG La Paz 58.34 284 LR LR 15 34 57.3
comp=Z,214nm,21.7s,baz=58,slow=35
Y14A Wickenburg 58.47 296 IAmb IAmb 15 10 52.1
comp=Z,40nm,1.7s
YKA Yellowknife Ar 58.53 329 P P 15 10 47.6 -1.3
YKA Yellowknife Ar 58.53 329 P P 15 10 47.9 -1.0
comp=Z,4.5nm,0.9s,baz=97,slow=6.5,SNR=8.8
YKA LR LR 15 35 16.3
comp=Z,337nm,19.8s,baz=70,slow=35
comp=Z,4.5nm,0.9s
YKA Yellowknife Ar 58.53 329 *ce* P **P 15 10 48.2 -0.7**
YKA pmax pmax
comp=Z,4.0nm,0.9s
214A Organ Pipe Nat 58.68 293 IAmb IAmb 15 11 00.3
comp=Z,20nm,0.9s
SPR3 Spring Creek 3 58.71 302 IAmb IAmb 15 10 53.4
comp=Z,34nm,1.4s
ARR Arges 59.12 51⇑ P **P 15 10 54.2 +0.9**
ELK Elko 59.17 304 P P 15 10 54.2 +0.2
PLID Pearl Lake 59.23 309 IAmb IAmb 15 10 55.7
comp=Z,21nm,1.3s
MFID Camas Ranch 59.28 307 IAmb IAmb 15 10 56.3
comp=Z,24nm,1.2s
BUR08 Bucovina Ar. S 59.32 48 IAmb IAmb 15 10 57.9
comp=Z,23nm,1.3s
BURAR Bucovina Array 59.33 48 P 15 10 55.8 +1.0
BURAR Bucovina Array 59.33 48⇑ P **P 15 10 55.4 +0.5**
BURAR Bucovina Array 59.33 48 P P 15 10 55.3 +0.5
VOIR 59.40 51⇑ P **P 15 10 55.7 +0.3**
VOIR 59.40 51 P P 15 10 55.6 +0.3
PRN Pahroc Range 59.51 300 IAmb IAmb 15 10 59.6
comp=Z,18nm,1.3s
V12A Nelson 59.64 298 IAmb IAmb 15 11 00.2
comp=Z,19nm,1.3s
FINES FINESS Array B 59.72 32 P **P 15 10 56.9 -0.2**
comp=Z,7.8nm,0.9s,baz=289,slow=5.8,SNR=14
FINES LR LR 15 33 30.7
comp=Z,103nm,18.0s,baz=286,slow=33
comp=Z,7.8nm,0.9s
NEW Newport 59.73 313 IAmb IAmb 15 11 01.0
comp=Z,15nm,0.8s
NEW Newport 59.73 313 LR LR 15 35 29.7
comp=Z,520nm,18.8s,baz=82,slow=35
NEW Newport 59.73 313 P P 15 10 58.0 +0.4
S11A Rachel 60.02 300 IAmb IAmb 15 11 15.2
comp=Z,17nm,1.2s
MLR Muntele Rosu 60.02 50 LR LR 15 36 45.8
comp=Z,69nm,18.4s,baz=240,slow=36
MLR Muntele Rosu 60.02 50⇑ P **P 15 11 00.4 +0.7**
MLR Muntele Rosu 60.02 50 P P 15 11 00.4 +0.7
SPITS Spitsbergen Ar 60.15 12 LR LR 15 30 58.6
comp=Z,63nm,22.0s,baz=252,slow=30
IRM Iron Mountain 60.17 296 IAmb IAmb 15 11 03.8
comp=Z,19nm,1.5s
RDO Rodhopi 60.26 55 IAmb IAmb 15 11 03.7
comp=Z,19nm,1.3s
ARCES ARCESS Array B 60.31 23 P 15 11 01.0 -0.1
ARCES IAmb IAmb 15 11 02.3
comp=Z,15nm,0.8s
ARCES ARCESS Array B 60.31 23 P **P 15 11 01.4 +0.3**
comp=Z,10nm,0.7s,baz=258,slow=6.2,SNR=46
ARCES LR LR 15 30 14.2
comp=Z,66nm,20.8s,baz=277,slow=29
comp=Z,10nm,0.7s
VRI Vrincioaia 60.53 50⇓ P **P 15 11 03.3 +0.2**
VRI Vrincioaia 60.53 50 P P 15 11 03.2 +0.2
TPNV Topopah Spring 60.53 300 IAmb IAmb 15 11 06.1
comp=Z,26nm,1.3s
C09A Chrisman Ranch 60.54 312 IAmb IAmb 15 11 04.9
comp=Z,26nm,1.6s
MNK Minsk 60.62 40 *c i* P **P 15 11 03.0 -0.5**
LNOR Lincton Mounta 60.75 310 IAmb IAmb 15 11 08.0
comp=Z,24nm,1.3s
WCT Wildcat Mounta 60.86 300 IAmb IAmb 15 11 08.0
comp=Z,15nm,1.2s
D08A Wollman Farm, 61.05 312 IAmb IAmb 15 11 10.2
comp=Z,22nm,1.0s
YUH Yuha Desert 61.12 295 IAmb IAmb 15 11 09.7
comp=Z,17nm,1.3s
YPT Yellepit 61.20 310 IAmb IAmb 15 11 09.5
comp=Z,14nm,1.0s
QSM Queen of Sheba 61.21 299 IAmb IAmb 15 11 10.3
comp=Z,22nm,1.4s
ESJX Sierra Juarez 61.28 294 IAmb IAmb 15 11 11.1
comp=Z,19nm,1.4s
G08A Pilot Rock 61.29 310 IAmb IAmb 15 11 09.3
comp=Z,21nm,1.5s
PFO Pinyon Flats O 61.35 296 P **P 15 11 09.3 +0.3**
PFO IAmb IAmb 15 11 11.3
comp=Z,18nm,1.4s
PFO Pinyon Flats O 61.35 296 LR LR 15 35 41.4
comp=Z,339nm,21.6s,baz=75,slow=34
PFO Pinyon Flats O 61.35 296 *eP* **P 15 11 09.3 +0.3**
HAWA Hanford 61.55 311 IAmb IAmb 15 11 13.6
comp=Z,17nm,1.0s
KIEV Kiev 61.68 44 P 15 11 10.2 -0.6
KIEV Kiev 61.68 44⇑ P **P 15 11 10.4 -0.3**
KIEV Kiev 61.68 44 P P 15 11 10.4 -0.3
AKASG Malin Array Be 61.69 44 P P 15 11 09.7 -1.1
AKASG Malin Array Be 61.69 44 P P 15 11 10.4 -0.4
comp=Z,6.0nm,0.7s,baz=278,slow=6.0,SNR=20
AKASG LR LR 15 36 04.7
comp=Z,76nm,18.3s,baz=294,slow=34
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 61.69 44 *ce* P **P 15 11 10.3 -0.5**
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKBB Malin Array Si 61.69 44 IAmb IAmb 15 11 10.9
comp=Z,9.4nm,0.9s
AKBB Malin Array Si 61.69 44 *de* P **P 15 11 10.3 -0.5**
E07A Sunnyside 61.75 311 IAmb IAmb 15 11 12.9
comp=Z,27nm,1.3s
DSP Deep Springs 61.81 301 IAmb IAmb 15 11 14.4
comp=Z,15nm,1.2s
NVAR Mina Array Bea 61.87 302 P P 15 11 11.6 -0.9
NVAR Mina Array Bea 61.87 302 P P 15 11 12.8 +0.3
comp=Z,2.1nm,1.0s,baz=82,slow=6.3,SNR=13
NVAR LR LR 15 35 54.9
comp=Z,764nm,21.5s,baz=94,slow=34
comp=Z,2.1nm,1.0s
DPP Dos Picos Cty 61.88 295 IAmb IAmb 15 11 14.6
comp=Z,27nm,1.4s
F07A Phinny Hill Vi 61.89 310 IAmb IAmb 15 11 13.8
comp=Z,32nm,1.5s
LRMC Laurel Mtn Rad 61.95 298 IAmb IAmb 15 11 15.7
comp=Z,20nm,1.8s
CWC Cottonwood Cre 62.08 300 IAmb IAmb 15 11 16.2
comp=Z,14nm,1.3s
BFSC Mount Baldy Ra 62.19 297 IAmb IAmb 15 11 16.4
comp=Z,17nm,1.4s
WRGLY Wrigley 62.61 330 P P 15 11 17.4 +0.7
baz=89
WAKR Walker 62.73 302 IAmb IAmb 15 11 20.1
comp=Z,15nm,1.3s
MANT Manisa 63.01 58 IAmb IAmb 15 11 22.1
comp=Z,13nm,1.0s
KOTAN Kotaneelee Air 63.02 327 P P 15 11 19.7 +0.1
baz=87
APA Apatity 63.06 25⇓ *i* P **P 15 11 17.6 -2.1**
APA *i* 15 11 53.9
APA *i* 15 13 35.9
APA *i* S **S 15 19 45.0 -5.1**
APA *i* SS **SS 15 24 02.5 +7.3**
I05D Terrebonne, OR 63.10 309 IAmb IAmb 15 11 31.0
comp=Z,11nm,0.9s
J05D Fort Rock, OR 63.20 308 IAmb IAmb 15 11 23.2
comp=Z,20nm,1.2s
A36M Sachs Harbour 63.33 340 P P 15 11 22.3 +0.9
baz=92
TOAD Toad River Com 63.72 325 P P 15 11 24.4 +0.1
baz=85
I04A Tendick Farm, 63.96 308 IAmb IAmb 15 11 29.6
comp=Z,22nm,1.3s
ORV Oroville 64.10 304 IAmb IAmb 15 11 28.5
comp=Z,17nm,1.4s
LIRD Liard River Hi 64.11 326 P P 15 11 27.7 +1.0
baz=85
L04D Klamath Falls 64.17 307 P 15 11 27.4 -0.2
M03C McCloud 64.22 306 IAmb IAmb 15 11 38.9
comp=Z,16nm,1.0s
CLRS Cowichan Lake 64.29 314 IAmb IAmb 15 11 29.8
comp=Z,20nm,1.0s
BBOR Butler Butte 64.32 307 IAmb IAmb 15 11 29.5
comp=Z,19nm,1.5s
NLWA Neilton Lookou 64.35 312 IAmb IAmb 15 11 30.9

comp=Z,25nm,1.2s
YBH Yreka Blue Hor 64.56 306 LR LR 15 37 30.1
comp=Z,25nm,21.9s,baz=82,slow=34
MHC Mount Hamilton 64.68 301 P **P** **15 11 32.4 +1.4**
MHC IAmb IAmb 15 11 33.6
comp=Z,12nm,1.0s
MHC Mount Hamilton 64.68 301 P **P** **15 11 32.4 +1.4**
MHC pmax pmax
comp=Z,12nm,1.0s
CBB Campbell River 64.89 316 IAmb IAmb 15 11 34.1
comp=Z,15nm,0.8s
MNRC McLaughlin Min 64.95 303 IAmb IAmb 15 11 35.5
comp=Z,20nm,1.2s
K02D Willamette Mer 65.07 307 IAmb IAmb 15 11 35.3
comp=Z,23nm,1.4s
OBN Obninsk 65.56 39⇑ *i*P **P** **15 11 37.2 +1.0**
OBN *e* 15 13 59.5
OBN *e*S **S** **15 20 20.7 -0.7**
OBN pmax pmax
comp=Z,48nm,1.2s
OBN MLR MLR
comp=Z,71nm,16.0s
KCPM Cahto Peak 65.64 304 IAmb IAmb 15 11 40.2
comp=Z,28nm,1.5s
MOS Moscow 66.06 38 *e*P **P** **15 11 36.0 -3.4**
MOS *e* 15 11 39.8
BBB Bella Bella 66.23 318 LR LR 15 39 17.3
comp=Z,248nm,19.6s,baz=66,slow=35
KLMR Klimovskoe 66.24 32 *e*P **P** **15 11 38.2 -2.3**
KLMR *e* 15 12 08.2
KLMR pmax pmax
comp=Z,21nm,1.2s
DLBC Dease Lake 66.25 325 LR LR 15 40 28.3
comp=Z,279nm,18.4s,baz=56,slow=36
DLBC Dease Lake 66.25 325 P **P** **15 11 41.6 +0.9**
baz=81,SNR=8.7
INK Inuvik 66.36 336 IAmb IAmb 15 11 41.5
comp=Z,15nm,1.0s
INK Inuvik 66.36 336 LR LR 15 40 56.8
comp=Z,122nm,18.4s,baz=136,slow=36
INK Inuvik 66.36 336 P **P** **15 11 40.5 -0.7**
baz=82
F31M Tsiigehtchic 66.56 335 P **P** **15 11 42.6 +0.1**
baz=82
R33M Jennings River 66.58 326 P **P** **15 11 43.5 +0.6**
baz=80,SNR=17
BR131 Keskin Array S 66.60 56 IAmb IAmb 15 11 45.5
comp=Z,15nm,1.1s
BR131 Keskin Array S 66.60 56 *d i*P **P** **15 11 44.3 +0.9**
BRTR Keskin Array B 66.60 56 **P** **15 11 43.6 +0.1**
BRTR Keskin Array B 66.60 56 P **P** **15 11 44.4 +1.0**
comp=Z,6.8nm,0.9s,baz=274,slow=4.8,SNR=31
comp=Z,6.8nm,0.9s
T35M Bob Quinn 66.61 324 IAmb IAmb 15 11 45.2
comp=Z,21nm,1.1s
T35M Bob Quinn 66.61 324 P **P** **15 11 43.7 +0.7**
baz=80,SNR=5.2
S34M Telegraph Cree 66.92 325 IAmb IAmb 15 11 47.0
comp=Z,18nm,1.2s
S34M Telegraph Cree 66.92 325 P **P** **15 11 45.4 +0.5**
baz=80,SNR=6.5
H31M Peel River 67.05 333 P **P** **15 11 45.7 0.0**
baz=80
F30M Barrier River 67.31 335 P **P** **15 11 47.0 -0.3**
baz=80
Q32M Nakina River 67.32 326 IAmb IAmb 15 11 49.6
comp=Z,24nm,1.1s
Q32M Nakina River 67.32 326 P **P** **15 11 47.8 +0.1**
baz=79
P33M Teslin, Yukon 67.36 327 IAmb IAmb 15 11 49.0
comp=Z,19nm,1.1s
P33M Teslin, Yukon 67.36 327 P **P** **15 11 47.6 -0.2**
baz=79,SNR=5.1
LPSR Galich'ya Gora 67.39 41 *e*P **P** **15 11 45.7 -2.3**
LPSR pmax pmax
comp=Z,20nm,0.9s
G30M tAoh Zrail Nji 67.59 335 P **P** **15 11 48.7 -0.4**
baz=79
M31M Drury Creek, Y 67.73 330 IAmb IAmb 15 11 51.8
comp=Z,14nm,1.1s
M31M Drury Creek, Y 67.73 330 P **P** **15 11 50.1 0.0**
baz=79
VSR Storozhevoye 67.82 43 *e*P **P** **15 11 49.1 -1.7**
VSR pmax pmax
comp=Z,10.0nm,1.0s
WRAK Wrangell Islan 67.86 323 P **P** **15 11 50.4 -0.4**
baz=78
EPYK Eagle Plains 67.90 334 P **P** **15 11 50.7 -0.4**
baz=78
P32M Atlin 67.92 327 IAmb IAmb 15 11 52.6
comp=Z,12nm,1.2s
P32M Atlin 67.92 327 P **P** **15 11 51.1 -0.3**
baz=78
E29M Blow River 67.94 336 P **P** **15 11 51.0 -0.3**
baz=78
VORD Divnogorie 67.95 43 *e*P **P** **15 11 50.4 -1.2**
VORD pmax pmax
comp=Z,9.0nm,0.9s
I30M Mount Dempster 68.00 333 P **P** **15 11 51.1 -0.7**
baz=78
D28M Stokes Point 68.04 338 P **P** **15 11 52.2 +0.4**
baz=78
J30M Hart River 68.11 332 IAmb IAmb 15 11 53.9
comp=Z,26nm,1.2s
J30M Hart River 68.11 332 P **P** **15 11 52.7 +0.2**
baz=78
MAYO Mayo, Yukon 68.12 331 P **P** **15 11 52.4 0.0**
baz=78
WHY Whitehorse 68.27 328 IAmb IAmb 15 11 55.1
comp=Z,13nm,1.0s
WHY Whitehorse 68.27 328 P **P** **15 11 53.6 0.0**
baz=78
G29M Pine Creek 68.30 335 P **P** **15 11 53.0 -0.6**
baz=78,SNR=6.1
U33K Whale Pass 68.34 323 P **P** **15 11 53.7 -0.2**
baz=78
E28M Babbage River 68.48 337 P **P** **15 11 54.1 -0.5**
baz=77,SNR=10
CRAG Craig 68.48 322 P **P** **15 11 54.4 -0.4**
baz=77
N31M Braeburn, Yuko 68.52 329 P **P** **15 11 55.2 +0.1**
baz=77,SNR=29
H29M Whitestone 68.59 334 IAmb IAmb 15 11 55.9
comp=Z,14nm,0.8s
H29M Whitestone 68.59 334 P **P** **15 11 55.0 -0.3**
baz=77,SNR=11
R32K Eaglecrest 68.61 325 P **P** **15 11 54.9 -0.7**
baz=77
M30M Minto, Yukon 68.74 330 IAmb IAmb 15 11 57.7
comp=Z,22nm,1.2s
M30M Minto, Yukon 68.74 330 P **P** **15 11 56.3 -0.1**
baz=77,SNR=12
SKAG Skagway 68.75 327 P **P** **15 11 56.0 -0.4**
baz=77
K29M Barlow Dome 68.78 332 IAmb IAmb 15 11 58.0
comp=Z,14nm,1.1s
K29M Barlow Dome 68.78 332 P **P** **15 11 56.7 0.0**
baz=77,SNR=7.1
S32K Killisnoo 68.82 325 IAmb IAmb 15 11 58.9
comp=Z,18nm,1.0s
S32K Killisnoo 68.82 325 P **P** **15 11 56.4 -0.5**
baz=77,SNR=6.6
O30N Mendenhall 68.83 328 P **P** **15 11 56.7 -0.2**
baz=77,SNR=18
D27M Malcolm River 68.83 338 P **P** **15 11 57.4 +0.5**
baz=76
F28M Old Crow 68.84 336 IAmb IAmb 15 11 57.9
comp=Z,15nm,0.9s
F28M Old Crow 68.84 336 P **P** **15 11 56.9 0.0**
baz=76
N30M Aishikik Lake 69.14 329 P **P** **15 11 59.1 +0.2**
baz=76,SNR=7.4
L29M L29M 69.21 331 IAmb IAmb 15 12 00.7
comp=Z,15nm,1.1s
L29M L29M 69.21 331 P **P** **15 11 59.8 +0.4**
baz=76,SNR=10.0
PLBC Pleasant Camp 69.27 327 P **P** **15 11 60.0 +0.3**
baz=76
PLCA Paso Flores 69.29 200 P **P** **15 12 01.0 +1.0**
PLCA Paso Flores 69.29 200 P **P** **15 12 00.5 +0.4**
comp=Z,3.1nm,0.9s,baz=22,slow=11,SNR=5.4
comp=Z,3.1nm,0.9s
PLCA Paso Flores 69.29 200 P **P** **15 12 01.0 +1.0**
PLCA pmax pmax
comp=Z,47nm,2.0s
SIT Sitka 69.31 324 P **P** **15 11 59.4 -0.5**
baz=76
E27K Coleen River 69.33 337 IAmb IAmb 15 12 01.2
comp=Z,16nm,1.1s
E27K Coleen River 69.33 337 P **P** **15 11 60.0 0.0**
baz=75,SNR=8.6
VRH Novokhopyorsk 69.39 42 *e*P **P** **15 11 58.2 -2.3**
VRH pmax pmax
comp=Z,10.0nm,0.9s
I28M Miner Creek 69.40 334 IAmb IAmb 15 12 01.5
comp=Z,36nm,1.9s
I28M Miner Creek 69.40 334 P **P** **15 12 00.2 -0.3**
baz=75,SNR=6.0
P30M Million Dollar 69.40 328 P **P** **15 12 01.0 +0.4**
baz=76
HYT Haines Junctio 69.49 328 IAmb IAmb 15 12 02.9
comp=Z,14nm,1.0s
HYT Haines Junctio 69.49 328 P **P** **15 12 01.5 +0.4**
baz=76,SNR=7.8
DAWY Dawson 69.52 332 IAmb IAmb 15 12 02.4
comp=Z,22nm,1.1s
DAWY Dawson 69.52 332 P **P** **15 12 01.4 +0.2**
baz=75,SNR=17
M29M Somme Creek 69.53 330 IAmb IAmb 15 12 02.7
comp=Z,18nm,1.2s
M29M Somme Creek 69.53 330 P **P** **15 12 01.7 +0.3**
baz=76,SNR=12
S31K Pelican 69.57 325 P **P** **15 12 01.7 +0.2**
baz=76
C27K Jago River 69.67 338 P **P** **15 12 02.5 +0.5**
baz=74
G27K Doyon Strip 69.72 335 IAmb IAmb 15 12 03.6
comp=Z,17nm,1.4s
G27K Doyon Strip 69.72 335 P **P** **15 12 02.1 -0.3**
baz=74
MMAI Mount Meron Ar 69.75 62 P **P** **15 12 04.4 +1.2**
comp=Z,7.5nm,0.9s,baz=257,slow=7.6,SNR=5.4
comp=Z,7.5nm,0.9s
H27K Stemboat Moun 69.82 335 P **P** **15 12 02.5 -0.5**
baz=74
YUK6 Outpost Mounta 69.86 329 P **P** **15 12 04.2 +0.6**
baz=75,SNR=12
YUK4 Talbot Arm 69.89 329 P **P** **15 12 03.6 -0.2**
baz=75
P29M Windy Craggy 69.90 327 IAmb IAmb 15 12 05.6
comp=Z,17nm,0.9s
P29M Windy Craggy 69.90 327 P **P** **15 12 04.5 +0.9**
baz=75,SNR=14
C26K Camden Bay 69.98 339 P **P** **15 12 04.2 +0.3**
baz=72
I27K Kandik River 70.03 334 P **P** **15 12 04.5 +0.1**
baz=74
O29M Mount Kennedy 70.13 328 IAmb IAmb 15 12 07.2
comp=Z,43nm,1.8s
O29M Mount Kennedy 70.13 328 P **P** **15 12 05.8 +0.7**
baz=75,SNR=7.1
VSLR Vesyoloye 70.30 50⇑ *e*P **P** **15 12 08.0 +1.7**
VSLR pmax pmax
comp=Z,25nm,1.0s
EIL Elat 70.38 66 LR LR 15 42 09.1
comp=Z,157nm,21.9s,baz=336,slow=35
F26K Sheenjek River 70.39 336 P **P** **15 12 07.4 +0.9**
baz=72,SNR=14
GHAJ Ghor Haditha 70.39 64 IAmb IAmb 15 12 10.1
comp=Z,12nm,0.9s
YUK8 Steele Glacier 70.43 329 P **P** **15 12 07.5 +0.4**
baz=74,SNR=9.7
G26K Porcupine Rive 70.48 336 IAmb IAmb 15 12 08.6
comp=Z,20nm,1.0s
G26K Porcupine Rive 70.48 336 P **P** **15 12 07.5 +0.5**
baz=72,SNR=12
BVCY Beaver Creek 70.61 331 P **P** **15 12 08.2 +0.2**
baz=74
YUK3 Moose Creek 70.61 330 P **P** **15 12 08.5 +0.4**
baz=74,SNR=29
BMAR Burnt Mountain 70.63 336 **P** **15 12 08.4 +0.4**
D25K Kavik River 70.66 338 IAmb IAmb 15 12 09.8
comp=Z,19nm,0.8s
D25K Kavik River 70.66 338 P **P** **15 12 08.8 +0.7**
baz=71,SNR=8.0
K27K Chicken 70.67 332 P **P** **15 12 08.3 +0.1**
baz=73
PNL Peninsula 70.70 328 P **P** **15 12 08.3 -0.2**
baz=74
I26K Coal Creek Min 70.73 334 IAmb IAmb 15 12 09.7
comp=Z,14nm,1.2s
I26K Coal Creek Min 70.73 334 P **P** **15 12 08.7 +0.1**
baz=72
E25K Arctic Village 70.77 337 P **P** **15 12 09.6 +0.9**
baz=71
O28M Mount Upton 70.77 329 P **P** **15 12 09.7 +0.5**
baz=74
BCAR Beaver Creek A 70.83 331 **P** **15 12 09.2 0.0**
L27K Beaver Creek, 70.85 331 IAmb IAmb 15 12 10.7
comp=Z,21nm,1.0s
L27K Beaver Creek, 70.85 331 P **P** **15 12 09.5 +0.1**
baz=73
F25K Christian Rive 70.96 336 P **P** **15 12 11.1 +1.1**
baz=71,SNR=12
PINM Pinnacle 71.00 328 P **P** **15 12 11.1 +0.7**
baz=73,SNR=7.5
M27K Edge Creek, AK 71.08 331 P **P** **15 12 11.4 +0.5**
baz=73,SNR=22
J26L Joseph Creek 71.15 333 IAmb IAmb 15 12 12.1
comp=Z,13nm,1.0s
J26L Joseph Creek 71.15 333 P **P** **15 12 11.0 -0.2**
baz=72,SNR=12
CTG Chitna Glacier 71.25 329 P **P** **15 12 12.8 +0.8**
baz=73,SNR=14
C24K Franklin Bluff 71.29 339 P **P** **15 12 12.0 +0.2**
baz=69
G25K Bearman Lake 71.41 336 P **P** **15 12 13.7 +1.1**
baz=70
H25L Birch Creek 71.47 335 P **P** **15 12 14.0 +1.1**
baz=70,SNR=5.1
SCRK Sand Creek 71.49 333 P **P** **15 12 13.2 -0.1**
baz=71,SNR=5.2
L26K Log Cabin Wild 71.52 332 P **P** **15 12 13.5 +0.1**
baz=72
D24K Happy Valley 71.53 338 IAmb IAmb 15 12 15.2
comp=Z,31nm,1.4s
D24K Happy Valley 71.53 338 P **P** **15 12 14.2 +0.9**
baz=69
M26K Nabesna, AK 71.56 331 IAmb IAmb 15 12 14.9
comp=Z,13nm,1.0s
M26K Nabesna, AK 71.56 331 P **P** **15 12 14.0 +0.3**
baz=72
KIRV Kirov 71.64 33 LR LR 15 41 20.1
comp=Z,56nm,18.1s,baz=306,slow=34
KIRV Kirov 71.64 33⇑ *e*P **P** **15 12 13.7 -0.4**
MESA MESA 71.78 328 P **P** **15 12 16.4 +1.2**
baz=72,SNR=9.4
F24K Squaw Lake 71.80 337 IAmb IAmb 15 12 17.5
comp=Z,20nm,0.8s
F24K Squaw Lake 71.80 337 P **P** **15 12 16.3 +1.3**
baz=69,SNR=17
E24K Your Creek 71.81 337 P **P** **15 12 16.2 +1.1**
baz=69
J25K Salcha River, 71.85 333 P **P** **15 12 16.2 +0.8**
baz=70
C23K Ikilik River 71.86 339 P **P** **15 12 16.2 +0.9**
baz=67
MCARA McCarthy VSAT 71.90 330 P **P** **15 12 16.4 +0.7**
baz=71,SNR=21
RIDG Independent Ri 71.92 332 P **P** **15 12 16.0 +0.1**
baz=70
G24K Hadweenzic Riv 71.94 336 IAmb IAmb 15 12 18.0
comp=Z,22nm,1.0s
G24K Hadweenzic Riv 71.94 336 P **P** **15 12 16.0 +0.2**
baz=69
TOLK Toolik Lake Re 71.97 338 P **P** **15 12 16.7 +0.7**
baz=68
KIV Kislovodsk 72.00 49 *e*P **P** **15 12 17.6 +0.9**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,26nm,18.0s
SHA1 Shidzhatmaz 72.04 50 *d i*P **P** **15 12 18.8 +1.6**
CRQE Cirque 72.14 329 P **P** **15 12 17.6 +0.3**
baz=71,SNR=13
E23K Chandalar 72.21 337 IAmb IAmb 15 12 19.5
comp=Z,10nm,0.7s
E23K Chandalar 72.21 337 P **P** **15 12 18.1 +0.6**
baz=68
KBZ Khabaz 72.21 50 P **P** **15 12 19.4 +1.6**
comp=Z,5.3nm,0.8s,baz=297,slow=3.4,SNR=15
KBZ LR LR 15 41 51.7
comp=Z,22nm,21.3s,baz=20,slow=34
comp=Z,5.3nm,0.8s
KBZ Khabaz 72.21 50 *de*P **P** **15 12 19.5 +1.6**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
NEUR Neytrino 72.22 50⇑ *e*P **P** **15 12 18.0 -0.2**
NEUR pmax pmax
comp=Z,4.0nm,1.1s
D23K Nanushuk River 72.22 339 P **P** **15 12 18.3 +0.8**
baz=67
IL31 72.40 334 IAmb IAmb 15 12 19.8
comp=Z,26nm,1.0s
ILAR Eielson Array 72.40 334 **P** **15 12 18.5 -0.2**
ILAR Eielson Array 72.40 334 P **P** **15 12 18.6 -0.1**
comp=Z,14nm,0.9s,baz=69,slow=4.5,SNR=108
ILAR LR LR 15 44 21.7
comp=Z,528nm,18.6s,baz=69,slow=36
comp=Z,14nm,0.9s
H24K Noodor Dome 72.41 335 IAmb IAmb 15 12 20.6
comp=Z,25nm,1.6s
H24K Noodor Dome 72.41 335 P **P** **15 12 19.3 +0.5**
baz=69
BGLC Bering Glacier 72.43 329 P **P** **15 12 19.2 +0.4**
baz=71
PAX Paxson 72.45 332 IAmb IAmb 15 12 19.9
comp=Z,18nm,1.0s
PAX Paxson 72.45 332 P **P** **15 12 19.0 -0.1**
baz=70,SNR=12
POKR Poker Plat Res 72.50 334 P **P** **15 12 19.5 +0.3**
baz=69
HARP HAARP 72.51 331 P **P** **15 12 19.8 +0.4**
baz=70,SNR=12
B22K Teshekpuk Lake 72.54 340 P **P** **15 12 19.9 +0.6**
baz=65
N25K Chitina, Valde 72.54 330 IAmb IAmb 15 12 21.5
comp=Z,24nm,1.1s
N25K Chitina, Valde 72.54 330 P **P** **15 12 20.0 +0.4**
baz=70,SNR=13
HDA Harding Lake 72.56 333 P **P** **15 12 19.6 0.0**
baz=69
MARD Mardin 72.65 56 IAmb IAmb 15 12 22.6
comp=Z,13nm,1.0s
A22K Sinclair Lake 72.72 341 P **P** **15 12 20.9 +0.5**
baz=64
COLD Coldfoot 72.74 337 IAmb IAmb 15 12 22.8
comp=Z,14nm,1.0s
COLD Coldfoot 72.74 337 P **P** **15 12 21.8 +1.1**
baz=67,SNR=7.7
COLA College 72.75 334 *c i*P **P** **15 12 21.0 +0.3**
COLA pmax pmax
comp=Z,14nm,1.0s
COLA College 72.75 334 P **P** **15 12 21.5 +0.8**
baz=68
BMRM Bremner River 72.76 330 P **P** **15 12 20.8 -0.2**
BMRM Bremner River 72.76 330 P **P** **15 12 21.1 +0.2**
baz=70,SNR=13
CCB Clear Creek Bu 72.82 334 IAmb IAmb 15 12 22.3
comp=Z,30nm,1.1s
G23K Bananza Creek 72.88 336 IAmb IAmb 15 12 23.7
comp=Z,22nm,0.9s
G23K Bananza Creek 72.88 336 P **P** **15 12 22.3 +0.8**
baz=67
D22K Ayikyak River 72.92 339 IAmb IAmb 15 12 24.1
comp=Z,20nm,0.9s
D22K Ayikyak River 72.92 339 P **P** **15 12 22.8 +1.1**
baz=65,SNR=5.4
E22K Anaktuvuk Pass 72.94 338 IAmb IAmb 15 12 25.2
comp=Z,41nm,1.6s
E22K Anaktuvuk Pass 72.94 338 P **P** **15 12 22.6 +0.7**
baz=66,SNR=6.8
WRH Wood River Hil 73.00 334 IAmb IAmb 15 12 23.3
comp=Z,25nm,1.0s
KAIM Kayak Island 73.03 329 P **P** **15 12 22.9 +0.4**
baz=70
H23K Yukon River 73.05 335 P **P** **15 12 23.2 +0.7**
baz=67
A21K Barrow 73.05 342 P **P** **15 12 22.7 +0.4**
baz=62
M24K Tolsona, Glenn 73.06 331 P **P** **15 12 22.6 -0.1**
baz=69
KLU Klutina 73.17 330 P **P** **15 12 23.4 0.0**
baz=69,SNR=13
B21K Ikpikpuk River 73.22 340 P **P** **15 12 23.9 +0.5**
baz=64
DHY Denali Highway 73.22 332 IAmb IAmb 15 12 24.9
comp=Z,13nm,1.0s
DHY Denali Highway 73.22 332 P **P** **15 12 24.0 +0.3**
baz=68,SNR=7.2
DIV Divide 73.23 330 IAmb IAmb 15 12 24.6
comp=Z,12nm,0.9s
I23K Minto, Yukon-K 73.24 335 P **P** **15 12 24.3 +0.8**
baz=67,SNR=5.6
F22K John River 73.33 337 P **P** **15 12 24.3 +0.2**
baz=65
G22K Bettles 73.33 337 P **P** **15 12 24.8 +0.7**
baz=66,SNR=12
NEA2 Nenana 73.34 334 IAmb IAmb 15 12 25.5
comp=Z,43nm,1.6s
NEA2 Nenana 73.34 334 P **P** **15 12 24.2 -0.1**
baz=67
EYAK Cordova Ski Ar 73.44 329 IAmb IAmb 15 12 26.2
comp=Z,17nm,1.0s
EYAK Cordova Ski Ar 73.44 329 P **P** **15 12 24.2 -0.6**
baz=69
C21K Knifeblade Rid 73.48 339 P **P** **15 12 25.3 +0.3**
baz=64
E21K Killik River 73.53 339 IAmb IAmb 15 12 27.0
comp=Z,19nm,1.2s
E21K Killik River 73.53 339 P **P** **15 12 25.4 +0.1**
baz=64
WAT6 Susitna Watana 73.57 332 P **P** **15 12 25.4 -0.4**
baz=68,SNR=8.3
MCK McKinley 73.62 333 IAmb IAmb 15 12 27.0
comp=Z,23nm,1.0s
MCK McKinley 73.62 333 P **P** **15 12 26.0 0.0**
baz=67,SNR=11
SCM Sheep Creek Mo 73.67 331 P **P** **15 12 26.1 -0.2**
baz=68
H22K Ishtalitna Cre 73.71 336 P **P** **15 12 27.1 +0.7**
baz=66,SNR=14
RND Reindeer 73.72 333 IAmb IAmb 15 12 27.8
comp=Z,25nm,1.6s
WAT1 Susitna Watana 73.82 332 P **P** **15 12 27.2 +0.1**
baz=67
MLY Manley 73.82 335 IAmb IAmb 15 12 28.5
comp=Z,17nm,1.0s
MLY Manley 73.82 335 P **P** **15 12 26.9 -0.2**
baz=66
B20K Meade River 73.83 341 P **P** **15 12 26.7 -0.3**
baz=62
M23K Glacier View 73.86 331 P **P** **15 12 27.2 -0.1**
baz=68
F21K Alatna River 73.91 337 P **P** **15 12 27.6 0.0**
baz=64
GLI Glacier Island 73.93 330 IAmb IAmb 15 12 28.6
comp=Z,30nm,1.2s
GLI Glacier Island 73.93 330 P **P** **15 12 27.0 -0.7**
baz=68
SML Sawmill 74.12 331 IAmb IAmb 15 12 49.4
comp=Z,24nm,1.3s
SML Sawmill 74.12 331 P **P** **15 12 28.2 -0.8**
baz=67
G21K Allakaket 74.22 337 IAmb IAmb 15 12 31.5
comp=Z,28nm,1.1s
G21K Allakaket 74.22 337 P **P** **15 12 29.7 +0.3**
baz=64
I21K Tanana 74.24 335 P **P** **15 12 29.8 +0.3**
baz=65,SNR=5.1
D20K Etivluk River 74.27 339 IAmb IAmb 15 12 31.7
comp=Z,45nm,1.4s
D20K Etivluk River 74.27 339 P **P** **15 12 30.2 +0.5**
baz=62
TRF Thorofare Moun 74.29 333 IAmb IAmb 15 12 30.8
comp=Z,14nm,0.8s
TRF Thorofare Moun 74.29 333 P **P** **15 12 30.2 +0.2**
baz=66,SNR=11
BPAW Bear Paw Mtn. 74.31 334 P **P** **15 12 29.6 -0.3**
baz=65
KNK Knik Glacier 74.33 331 IAmb IAmb 15 12 32.2
comp=Z,28nm,1.1s
KNK Knik Glacier 74.33 331 P **P** **15 12 30.5 +0.4**
baz=67,SNR=8.1
H21K Melozitna Rive 74.34 336 IAmb IAmb 15 12 32.1
comp=Z,25nm,1.1s
H21K Melozitna Rive 74.34 336 P **P** **15 12 30.8 +0.7**
baz=64
E20K Nigu River 74.35 339 P **P** **15 12 30.2 0.0**
baz=62
GHO Glory Hole Cre 74.39 331 IAmb IAmb 15 12 31.8
comp=Z,44nm,1.5s
P23K Montague Islan 74.41 329 P **P** **15 12 30.3 -0.2**
baz=67

PWL	**Port Wells**	**74.50**	**330**	IAmb	IAmb	15 12 32.3	
	comp=Z,28nm,0.9s						
PWL	**Port Wells**	**74.50**	**330**	P	**P**	**15 12 31.3**	**+0.2**
	baz=67,SNR=7.7						
IMAR	**Indian Mountai**	**74.55**	**336**	P	**P**	**15 12 31.8**	**+0.5**
PMR	**Palmer**	**74.56**	**331**	IAmb	IAmb	15 12 32.6	
	comp=Z,29nm,1.0s						
PMR	**Palmer**	**74.56**	**331**	P	**P**	**15 12 31.8**	**+0.4**
	baz=66,SNR=12						
GNI	**Garni**	**74.66**	**53**		**P**	**15 12 34.1**	**+1.5**
GNI				IAmb	IAmb	15 12 35.3	
	comp=Z,16nm,0.9s						
GNI	**Garni**	**74.66**	**53**	LR	LR	15 47 05.9	
	comp=Z,29nm,18.3s,baz=290,slow=37						
GNI	**Garni**	**74.66**	**53**	*deP*	**P**	**15 12 34.2**	**+1.6**
GNI				pmax	pmax		
	comp=Z,34nm,1.7s						
CUT	**Chulitna**	**74.72**	**332**	P	**P**	**15 12 32.5**	**+0.3**
	baz=66,SNR=11						
F20K	**Avaraart Lake**	**74.77**	**338**	P	**P**	**15 12 32.5**	**0.0**
	baz=62						
D19K	**Kuna River**	**74.86**	**339**	IAmb	IAmb	15 12 35.1	
	comp=Z,21nm,0.9s						
D19K	**Kuna River**	**74.86**	**339**	P	**P**	**15 12 33.2**	**+0.2**
	baz=60						
A19K	**Wainwright**	**74.89**	**341**	P	**P**	**15 12 33.1**	**+0.1**
	baz=58						
M22K	**Willow**	**74.92**	**332**	P	**P**	**15 12 32.9**	**-0.5**
	baz=66						
CHUM	**Lake Minchumin**	**74.93**	**334**	P	**P**	**15 12 33.4**	**0.0**
	baz=64,SNR=12						
C19K	**Lookout Ridge**	**75.02**	**340**	P	**P**	**15 12 35.1**	**+1.1**
	baz=59						
RC01	**Rabbit Creek A**	**75.03**	**331**	P	**P**	**15 12 34.3**	**+0.1**
	baz=66						
E19K	**Redstone River**	**75.08**	**338**	IAmb	IAmb	15 12 36.2	
	comp=Z,14nm,1.0s						
E19K	**Redstone River**	**75.08**	**338**	P	**P**	**15 12 34.9**	**+0.5**
	baz=61						
H20K	**Anotleneega Mo**	**75.19**	**336**	P	**P**	**15 12 35.4**	**+0.4**
	baz=62						
O22K	**Cooper Landing**	**75.27**	**330**	P	**P**	**15 12 35.6**	**+0.1**
	baz=66						
SEW	**Seward**	**75.31**	**330**	P	**P**	**15 12 35.4**	**-0.3**
	baz=66						
PPLA	**Purkeypile**	**75.31**	**333**	P	**P**	**15 12 35.1**	**-0.8**
	baz=64,SNR=6.8						
SUA	**Susitna One**	**75.31**	**331**	IAmb	IAmb	15 12 37.2	
	comp=Z,20nm,0.8s						
SUA	**Susitna One**	**75.31**	**331**	P	**P**	**15 12 35.1**	**-0.8**
	baz=65						
I20K	**Naaghedeneel**	**75.36**	**335**	P	**P**	**15 12 35.7**	**-0.2**
	baz=63						
SKT	**Skwentna**	**75.43**	**332**	IAmb	IAmb	15 12 37.6	
	comp=Z,22nm,1.0s						
SKT	**Skwentna**	**75.43**	**332**	P	**P**	**15 12 36.3**	**-0.2**
	baz=64,SNR=12						
J20K	**Nowinta River**	**75.52**	**335**	IAmb	IAmb	15 12 39.0	
	comp=Z,18nm,1.3s						
J20K	**Nowinta River**	**75.52**	**335**	P	**P**	**15 12 36.1**	**-0.8**
	baz=63						
TSUM	**Tsumeb**	**75.52**	**119**	LR	LR	15 39 04.0	
	comp=Z,175nm,20.4s,baz=330,slow=30						
B18K	**Kokolik River**	**75.55**	**341**	P	**P**	**15 12 36.3**	**-0.7**
	baz=57						
F19K	**Shaleruckik Mo**	**75.58**	**338**	IAmb	IAmb	15 12 38.9	
	comp=Z,19nm,1.2s						
F19K	**Shaleruckik Mo**	**75.58**	**338**	P	**P**	**15 12 37.2**	**+0.1**
	baz=60						
H19K	**Roundabout Mou**	**75.75**	**336**	P	**P**	**15 12 38.5**	**+0.3**
	baz=61						
C18K	**Utukok River**	**75.75**	**340**	P	**P**	**15 12 37.8**	**-0.5**
	baz=58						
CAPN	**Captain Cook N**	**75.79**	**331**	P	**P**	**15 12 38.1**	**-0.3**
	baz=64						
K20K	**Telida**	**75.86**	**334**	P	**P**	**15 12 38.4**	**-0.5**
	baz=63						
SPU	**Mount Spurr**	**76.01**	**331**	IAmb	IAmb	15 12 40.7	
	comp=Z,17nm,0.9s						
BRSE	**Bradley Lake S**	**76.05**	**330**	P	**P**	**15 12 38.8**	**-1.2**
	baz=65						
N20K	**Mount Spurr**	**76.06**	**331**	P	**P**	**15 12 40.0**	**-0.2**
	baz=64,SNR=9.3						
SPCR	**Spurr Chakacha**	**76.06**	**331**	P	**P**	**15 12 40.1**	**-0.1**
	baz=64,SNR=7.7						
M20K	**Styx River**	**76.15**	**332**	P	**P**	**15 12 40.1**	**-0.6**
	baz=63						
J19K	**Poorman**	**76.18**	**335**	IAmb	IAmb	15 12 41.7	
	comp=Z,17nm,0.9s						
J19K	**Poorman**	**76.18**	**335**	P	**P**	**15 12 40.4**	**-0.2**
	baz=62						
L20K	**Farewell, AK**	**76.19**	**333**	P	**P**	**15 12 40.5**	**-0.3**
	baz=63						
E18K	**Tukpahlearik C**	**76.22**	**339**	P	**P**	**15 12 41.3**	**+0.4**
	baz=58						
GCSA	**Galena City Sc**	**76.29**	**336**	P	**P**	**15 12 40.7**	**-0.5**
	baz=61						
AKT	**Akhty**	**76.32**	**51**	*eP*	**P**	**15 12 40.9**	**-1.2**
AKT				*e*		15 12 52.3	
AKT				*e*		15 15 29.9	
AKT				pmax	pmax		
	comp=Z,16nm,1.0s						
F18K	**Selawik**	**76.34**	**338**	P	**P**	**15 12 40.9**	**-0.6**
	baz=59						
G18K	**Tagagawik**	**76.36**	**337**	P	**P**	**15 12 41.3**	**-0.3**
	baz=59						
C17K	**DeLong Mountai**	**76.46**	**340**	P	**P**	**15 12 41.5**	**-0.7**
	baz=56						
HOM	**Homer**	**76.50**	**330**	P	**P**	**15 12 41.5**	**-1.0**
	baz=64						
RDOG	**Red Dog Mine**	**76.61**	**340**	P	**P**	**15 12 43.3**	**+0.2**
	baz=56,SNR=5.0						
H18K	**Honhosa River**	**76.63**	**336**	P	**P**	**15 12 42.9**	**-0.4**
	baz=59						
L19K	**White Mountain**	**76.73**	**333**	P	**P**	**15 12 42.9**	**-1.0**
	baz=62						
O20K	**Slope Mountain**	**76.75**	**330**	P	**P**	**15 12 42.8**	**-1.3**
	baz=63						
E17K	**Hotham Inlet**	**76.81**	**339**	P	**P**	**15 12 42.8**	**-1.3**
	baz=57						
J18K	**Innoko River**	**76.86**	**335**	IAmb	IAmb	15 12 45.9	
	comp=Z,15nm,1.0s						
J18K	**Innoko River**	**76.86**	**335**	P	**P**	**15 12 43.8**	**-0.7**
	baz=60						
D17K	**Noatak River**	**76.87**	**340**	P	**P**	**15 12 43.9**	**-0.6**
	baz=56						
ARTI	**Arti**	**76.95**	**34**		**P**	**15 12 45.4**	**+0.3**
ARTI	**Arti**	**76.95**	**34**	LR	LR	15 44 52.7	
	comp=Z,79nm,18.1s,baz=340,slow=34						
ARTI	**Arti**	**76.95**	**34**	*diP*	**P**	**15 12 45.9**	**+0.7**
ARTI				S	**S**	**15 22 34.1**	**+0.9**
ARTI				SS	**SS**	**15 27 24.4**	**-4.7**
ARTI				pmax	pmax		
	comp=Z,17nm,1.4s						
F17K	**Baldwin Pennin**	**76.97**	**338**	P	**P**	**15 12 44.8**	**-0.3**
	baz=57						
P19K	**Oil Pt**	**77.22**	**330**	P	**P**	**15 12 46.0**	**-0.7**
	baz=62						
N19K	**Bonanza Creek**	**77.23**	**332**	IAmb	IAmb	15 12 48.0	
	comp=Z,16nm,0.7s						
N19K	**Bonanza Creek**	**77.23**	**332**	P	**P**	**15 12 46.2**	**-0.6**
	baz=62						
C16K	**Lisburne Hills**	**77.23**	**341**	P	**P**	**15 12 46.1**	**-0.4**
	baz=54						
G17K	**Kiwalik Mounta**	**77.27**	**337**	P	**P**	**15 12 46.5**	**-0.3**
	baz=58						
H17K	**Granite Mounta**	**77.31**	**337**	P	**P**	**15 12 46.3**	**-0.7**
	baz=58						
Q20K	**Shuyak Island**	**77.31**	**329**	P	**P**	**15 12 47.0**	**-0.1**
	baz=63						
O19K	**Port Alsworth**	**77.45**	**331**	P	**P**	**15 12 47.9**	**0.0**
	baz=62						
L18K	**Granite Mounta**	**77.47**	**333**	P	**P**	**15 12 47.9**	**0.0**
	baz=60						
M18K	**Stony River**	**77.47**	**333**	P	**P**	**15 12 47.6**	**-0.4**
	baz=61						
KDAK	**Kodiak Island**	**77.78**	**328**	LR	LR	15 47 56.3	
	comp=Z,201nm,18.5s,baz=55,slow=36						
KDAK	**Kodiak Island**	**77.78**	**328**	P	**P**	**15 12 49.5**	**-0.3**
	baz=63						
J17K	**VABM Dome**	**77.81**	**335**	IAmb	IAmb	15 12 52.2	
	comp=Z,32nm,1.2s						
J17K	**VABM Dome**	**77.81**	**335**	P	**P**	**15 12 48.9**	**-0.9**
	baz=58						
K17K	**Iditarod**	**77.86**	**334**	IAmb	IAmb	15 12 52.1	
	comp=Z,24nm,0.9s						
K17K	**Iditarod**	**77.86**	**334**	P	**P**	**15 12 50.1**	**-0.1**
	baz=59						
SVE	**Sverdlovsk**	**77.87**	**33**	*leP*	**P**	**15 12 51.7**	**+1.4**
SVE				pmax	pmax		
	comp=Z,26nm,1.5s						
N18K	**Kilae Creek**	**77.90**	**332**	P	**P**	**15 12 49.4**	**-1.0**
	baz=61						
G16K	**Koyuk River**	**77.92**	**338**	P	**P**	**15 12 49.7**	**-0.8**
	baz=56						
O18K	**Koktuh Hills**	**78.00**	**331**	P	**P**	**15 12 50.8**	**-0.2**
	baz=61						
I17K	**Unalakleet**	**78.16**	**336**	P	**P**	**15 12 50.9**	**-0.9**
	baz=57						
L17K	**Donlin**	**78.16**	**334**	P	**P**	**15 12 50.7**	**-1.1**
	baz=59						
M17K	**Holitna River**	**78.19**	**333**	P	**P**	**15 12 51.3**	**-0.7**
	baz=59						
P18K	**Big Mountain,**	**78.24**	**331**	P	**P**	**15 12 51.1**	**-1.3**
	baz=61						
H16K	**Elim**	**78.31**	**337**	P	**P**	**15 12 51.2**	**-1.3**
	baz=56						
OHAK	**Old Harbor**	**78.38**	**328**	P	**P**	**15 12 52.0**	**-1.1**
	baz=62						
J16K	**Anvik River**	**78.45**	**335**	P	**P**	**15 12 51.5**	**-1.9**
	baz=57						
Q18K	**Katmai Hardscr**	**78.50**	**330**	P	**P**	**15 12 53.0**	**-1.0**
	baz=61						
F15K	**North Star Dit**	**78.53**	**338**	P	**P**	**15 12 53.0**	**-0.8**
	baz=54						
N17K	**Nushagak Hills**	**78.53**	**332**	P	**P**	**15 12 53.4**	**-0.5**
	baz=60						
G15K	**Niukluk**	**78.73**	**338**	P	**P**	**15 12 54.4**	**-0.6**
	baz=54						
R18K	**Karluk**	**78.77**	**329**	P	**P**	**15 12 54.0**	**-1.2**
	baz=61						
L16K	**Owhat River**	**78.86**	**334**	P	**P**	**15 12 54.7**	**-0.9**
	baz=58						
ACHA	**Angle Creek He**	**78.86**	**329**	IAmb	IAmb	15 12 58.8	
	comp=Z,23nm,1.3s						
O17K	**Koliganek Bris**	**78.87**	**331**	P	**P**	**15 12 54.7**	**-1.1**
	baz=59						
P17K	**Kvichak River**	**78.88**	**331**	P	**P**	**15 12 54.5**	**-1.3**
	baz=60						
M16K	**Timber Creek**	**79.02**	**333**	P	**P**	**15 12 55.3**	**-1.3**
	baz=58						
Q17K	**Contact Creek**	**79.09**	**330**	P	**P**	**15 12 56.2**	**-1.0**
	baz=60						
SII	**Sitkinak Islan**	**79.13**	**328**	P	**P**	**15 12 55.9**	**-1.3**
	baz=61						
F14K	**Arctic Creek**	**79.22**	**339**	P	**P**	**15 12 56.1**	**-1.5**
	baz=53						
N16K	**Nishlik Lake**	**79.23**	**332**	P	**P**	**15 12 56.5**	**-1.2**
	baz=58						
Q16K	**King Salmon**	**79.23**	**330**	P	**P**	**15 12 56.5**	**-1.3**
	baz=60						
AKTO	**Aktyubinsk**	**79.34**	**39**	LR	LR	15 46 54.0	
	comp=Z,71nm,18.0s,baz=12,slow=35						
K15K	**Wolf Creek Mou**	**79.36**	**335**	P	**P**	**15 12 56.3**	**-2.1**
	baz=56						
O16K	**Kokwok River B**	**79.40**	**331**	P	**P**	**15 12 56.5**	**-2.1**
	baz=59						
ANM	**Nome**	**79.45**	**338**	P	**P**	**15 12 56.6**	**-2.3**
	baz=53						
R17L	**Mt. Peulik Vol**	**79.63**	**329**	P	**P**	**15 12 57.9**	**-2.1**
	baz=60						
P16K	**Nushgak River**	**79.65**	**331**	P	**P**	**15 12 58.1**	**-1.9**
	baz=59						
L15K	**Ungalak Mounta**	**79.68**	**334**	P	**P**	**15 12 58.5**	**-1.6**
	baz=56						
TNA	**Tin City**	**79.69**	**339**	P	**P**	**15 12 57.8**	**-2.3**
	baz=51						
J14K	**Nanvaranak Lak**	**79.87**	**336**	P	**P**	**15 12 58.9**	**-2.3**
	baz=55						
M15K	**Kasigluk River**	**79.91**	**333**	P	**P**	**15 12 59.6**	**-1.8**
	baz=57						
N15K	**Kwethluk River**	**79.95**	**332**	IAmb	IAmb	15 13 04.3	
	comp=Z,21nm,0.9s						
N15K	**Kwethluk River**	**79.95**	**332**	P	**P**	**15 13 00.0**	**-1.6**
	baz=57						
CHIR	**Chirikof Islan**	**80.19**	**327**	P	**P**	**15 13 01.2**	**-1.8**
	baz=60						
R16K	**Pilot Point**	**80.22**	**330**	P	**P**	**15 13 01.4**	**-1.8**
	baz=59						
RPN	**Rapa Nui**	**80.30**	**234**	LR	LR	15 48 28.6	
	comp=Z,23nm,20.2s,baz=336,slow=36						
L14K	**Kuka Creek**	**80.35**	**334**	IAmb	IAmb	15 13 06.2	
	comp=Z,18nm,0.9s						
L14K	**Kuka Creek**	**80.35**	**334**	P	**P**	**15 13 02.4**	**-1.3**
	baz=55						
O15K	**Ungalikthiuk R**	**80.37**	**332**	P	**P**	**15 13 02.5**	**-1.4**
	baz=57						
LODK	**Lodwar**	**80.39**	**91**	P	**P**	**15 13 05.5**	**+0.5**
M14K	**Bethel**	**80.39**	**333**	IAmb	IAmb	15 13 06.5	
	comp=Z,32nm,0.9s						
M14K	**Bethel**	**80.39**	**333**	P	**P**	**15 13 02.7**	**-1.3**
	baz=56						
N14K	**Kuskokwak Cree**	**80.75**	**333**	P	**P**	**15 13 04.4**	**-1.5**
	baz=56						
K13K	**Kusilvak Mount**	**80.77**	**335**	P	**P**	**15 13 04.4**	**-1.6**
	baz=54						
O14K	**Tigyukauivet M**	**80.95**	**332**	P	**P**	**15 13 05.0**	**-2.0**
	baz=56						
ABKAR	**Akbulak array**	**80.98**	**40**		**P**	**15 13 07.4**	**0.0**
M13K	**Dall Lake**	**81.15**	**334**	P	**P**	**15 13 06.1**	**-2.0**
	baz=54						
FURI	**Furi**	**81.17**	**84**	LR	LR	15 49 44.4	
	comp=Z,114nm,18.0s,baz=320,slow=36						
RAYN	**Ar Rayn**	**81.38**	**68**		**P**	**15 13 11.3**	**+1.2**
RAYN	**Ar Rayn**	**81.38**	**68**	P	**P**	**15 13 11.3**	**+1.2**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
S14K	**Fog Glacier**	**81.83**	**329**	P	**P**	**15 13 09.6**	**-2.3**
	baz=57						
GAMB	**Gambell**	**82.09**	**339**	P	**P**	**15 13 11.4**	**-1.6**
	baz=48						
LSZ	**Lusaka**	**82.25**	**111**	LR	LR	15 46 55.4	
	comp=Z,137nm,19.2s,baz=307,slow=34						
M11K	**Mekoryuk**	**82.30**	**334**	P	**P**	**15 13 12.4**	**-1.7**
	baz=52						
CHNA	**Chernabura Isl**	**82.64**	**328**	P	**P**	**15 13 14.3**	**-1.7**
	baz=57						
SDPT	**Sand Point**	**82.78**	**329**	P	**P**	**15 13 14.7**	**-2.1**
	baz=56						
S12K	**Black Hills**	**83.32**	**329**	P	**P**	**15 13 17.7**	**-1.9**
	baz=55						
TIXI	**Tiksi**	**83.63**	**2**		**P**	**15 13 21.2**	**+0.4**
TIXI				IAmb	IAmb	15 13 22.4	
	comp=Z,15nm,1.1s						
TIXI	**Tiksi**	**83.63**	**2**	LR	LR	15 45 49.9	
	comp=Z,56nm,20.5s,baz=188,slow=32						
TIXI	**Tiksi**	**83.63**	**2**	*leP*	**P**	**15 13 21.6**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,16nm,1.3s						
BILL	**Bilibino**	**84.38**	**348**	*ceP*	**P**	**15 13 25.4**	**+0.7**
BILL				pmax	pmax		
	comp=Z,13nm,1.3s						
FALS	**False Pass**	**84.45**	**329**	P	**P**	**15 13 23.3**	**-2.0**
	baz=54						
BORK	**Borovoye**	**84.60**	**33**	*diP*	**P**	**15 13 27.1**	**+0.9**
BORK				pmax	pmax		
	comp=Z,14nm,1.0s						
BVAR	**Borovoye Array**	**84.65**	**33**	P	**P**	**15 13 27.2**	**+0.7**
	comp=Z,7.5nm,0.7s,baz=306,slow=4.2,SNR=43						
BVAR				LR	LR	15 49 46.4	
	comp=Z,49nm,18.4s,baz=323,slow=35						
	comp=Z,7.5nm,0.7s						
LBTB	**Lobatse**	**84.88**	**120**	LR	LR	15 43 55.3	
	comp=Z,262nm,20.7s,baz=300,slow=30						
SPIA	**Saint Paul Isl**	**85.98**	**333**	P	**P**	**15 13 30.9**	**-2.0**
	baz=48						
P08K	**Saint George I**	**86.07**	**333**	P	**P**	**15 13 32.1**	**-1.3**
	baz=49						
BOSA	**Boshof**	**86.44**	**124**	LR	LR	15 45 09.3	
	comp=Z,150nm,19.9s,baz=358,slow=31						
UNV	**Unalaska Valle**	**86.50**	**329**	P	**P**	**15 13 34.2**	**-1.3**
	baz=51						
NIKH	**Nikolski High**	**88.14**	**330**	P	**P**	**15 13 42.5**	**-1.0**
	baz=49						
KURK	**Kurchatov**	**90.09**	**32**		**P**	**15 13 53.2**	**+0.5**
KURK				IAmb	IAmb	15 13 54.3	
	comp=Z,12nm,0.9s						
KURK	**Kurchatov**	**90.09**	**32**	*deP*	**P**	**15 13 53.0**	**+0.3**
KURK				pmax	pmax		
	comp=Z,27nm,1.7s						
KURBB	**Kurchatov Arra**	**90.11**	**32**	P	**P**	**15 13 53.6**	**+0.8**
	comp=Z,3.0nm,0.3s,baz=310,slow=5.0,SNR=27						
	comp=Z,3.0nm,0.3s						
KKAR	**Karatay Array**	**90.45**	**41**		**P**	**15 13 54.9**	**+0.3**
KKAR	**Karatay Array**	**90.45**	**41**	P	**P**	**15 13 54.9**	**+0.3**
ZAA0	**Zalesovo Array**	**90.59**	**27**	IAmb	IAmb	15 13 56.5	
	comp=Z,16nm,1.1s						
ZALV	**Zalesovo Beam**	**90.59**	**27**		**P**	**15 13 55.1**	**0.0**
ZALV	**Zalesovo Beam**	**90.59**	**27**	P	**P**	**15 13 55.5**	**+0.5**
	comp=Z,8.7nm,0.9s,baz=310,slow=5.6,SNR=19						
	comp=Z,8.7nm,0.9s						
ZALV	**Zalesovo Beam**	**90.59**	**27**	*iP*	**P**	**15 13 55.7**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AAK	**Ala-Archa**	**93.07**	**40**	LR	LR	15 54 52.5	
	comp=Z,48nm,19.8s,baz=326,slow=35						
AAK	**Ala-Archa**	**93.07**	**40**	*leP*	**P**	**15 14 08.6**	**+1.6**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK	**Yakutsk**	**93.29**	**2**	LR	LR	15 52 00.3	
	comp=Z,52nm,21.1s,baz=16,slow=33						
MK31	**Makanchi Array**	**94.53**	**33**	*leP*	**P**	**15 14 13.6**	**+0.2**
MKAR	**Makanchi Array**	**94.53**	**33**	P	**P**	**15 14 12.8**	**-0.6**
MKAR	**Makanchi Array**	**94.53**	**33**	P	**P**	**15 14 13.4**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=322,slow=3.7,SNR=5.8						
MKAR				LR	LR	15 54 37.4	
	comp=Z,70nm,18.2s,baz=316,slow=34						
	comp=Z,0.8nm,0.9s						
MKAR	**Makanchi Array**	**94.53**	**33**	*ceP*	**P**	**15 14 13.6**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSH	**Kashi**	**95.89**	**41**	P	**P**	**15 14 22.0**	**+2.1**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WMQ	**Urumqi**	**99.32**	**32**	*eP*	**Pdif**	**15 14 36.6**	**+1.4**
PETK	**Petropavlovsk-**	**99.71**	**346**	LR	LR	16 03 56.5	
	comp=Z,74nm,18.1s,baz=59,slow=38						
HHC	**Hu-ho-hao-te**	**111.23**	**18**	*eP*	**PKiKP**	**15 19 21.9**	**-5.1**
PZH	**PanZhiHua**	**119.96**	**34**	PKP	**PKPdf**	**15 19 44.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**124.78**	**42**	PKP	**PKPdf**	**15 19 52.9**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=300,slow=2.9,SNR=16						
CMAR	**Chiang Mai Arr**	**124.78**	**42**	*c iP*KiKP	**PKPdf**	**15 19 53.5**	**+0.1**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**125.73**	**187**	PKP	**PKiKP**	**15 19 54.4**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=283,slow=1.3,SNR=16						
KSM	**Kuching**	**144.90**	**45**	PKPdf	**PKPab**	**15 20 29.7**	**-0.2**
WRA	**Warramunga Arr**	**175.06**	**0**	PKPab	**PKPab**	**15 22 37.2**	**-1.2**
	comp=Z,1.7nm,0.9s,baz=10,slow=4.2,SNR=8.1						
WRA				PP	**PP**	**15 26 27.7**	**-1.8**
	comp=Z,2.3nm,1.2s,baz=355,slow=5.5,SNR=5.1						
ASAR	**Alice Springs**	**178.69**	**20**	PKP	**PKPdf**	**15 21 03.5**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=72,slow=0.3,SNR=8.9						
ASAR				PKPab	**pPKPab**	**15 22 55.2**	**-1.6**
	comp=Z,2.4nm,0.9s,baz=351,slow=4.2,SNR=16						

*SJA **08** 15:33:52.7±0.8,31°.80S×71°.46W,h31km±2km, ML3.7, MW3.8*
*GUC **08** 15:33:54.7±0.9,31°.80S×71°.33W,h57km±4km, ML3.8*
ISC 08 15:33:54.9±1.1,**31°.80S**±0°.02×**71°.48W**±0°.04,**h28**km±11km,
n74,σ1ˢ**21**/116,**7C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CO04	**Los Peladeros**	**0.49**	**120**	⇓*iP*	**Pb**	**Pb**	**15 34 05.5**	**+0.2**
CO04				*eS*	**Sb**	**Sb**	**15 34 13.3**	**+0.9**
CO04				IAML			15 34 14.3	
	comp=N,6μm,0.2s							
CO02	**Combarbal**	**0.72**	**35**	⇑*iP*	**Pb**	**Pb**	**15 34 08.3**	**-0.6**
CO02				*eS*	**Sb**	**Sb**	**15 34 18.4**	**-0.2**
CO02	**Combarbal**	**0.72**	**35**	*eP*	**Pb**	Pb	15 34 03.0	-6.0
CO02				*eS*	**Sb**	**Sb**	**15 34 18.1**	**-0.4**
CO02				IAML			15 34 19.3	
	comp=Z,4μm,0.2s							
VA06	**Catapilco**	**0.78**	**169**	⇑*iP*	**Pb**	**Pb**	**15 34 09.6**	**-0.2**
VA06				*eS*	**Sb**	**Sb**	**15 34 20.9**	**+0.9**
VA06				IAML			15 34 26.8	
	comp=N,4μm,0.4s							
CO06	**Fray Jorge**	**1.13**	**353**	⇑*iP*	**Pn**	**Pn**	**15 34 14.9**	**+0.1**
CO06				*eS*	**Sn**	**Sn**	**15 34 30.4**	**+1.0**
CO06				IAML			15 34 34.9	
	comp=N,2μm,0.3s							
CO03	**El Pedregal**	**1.17**	**35**	⇑*iP*	**Pn**	**Pn**	**15 34 14.4**	**-1.1**
CO03				*eS*	**Sn**	**Sn**	**15 34 29.1**	**-1.5**
CO03				IAML			15 34 29.8	
	comp=E,6μm,0.2s							
CO03	**El Pedregal**	**1.17**	**35**	*eP*	**Pn**	**Pn**	**15 34 14.4**	**-1.1**
CO03				*eS*	**Sn**	**Sn**	**15 34 29.3**	**-1.3**
CO03				IAML			15 34 29.8	
	comp=Z,2μm,0.5s							
VA01	**Torpederas**	**1.23**	**187**	*eP*	**Pn**	**Pn**	**15 34 15.8**	**-0.4**
VA01	**Torpederas**	**1.23**	**187**	*eP*	**Pn**	**Pn**	**15 34 15.7**	**-0.4**
VA01				IAML			15 34 35.5	
	comp=Z,948nm,0.3s							
ROCH	**El Roble**	**1.23**	**161**	*iP*			15 34 16.1	
ROCH				⇑*iP*	**Pn**	**Pn**	**15 34 15.9**	**-0.6**
ROCH				*eS*	**Sn**	**Sn**	**15 34 32.2**	**-0.2**
ROCH				IAML			15 34 34.6	
	comp=N,3μm,0.4s							
ROC1	**El Roble**	**1.24**	**162**	*eP*	**Pn**	**Pn**	**15 34 16.0**	**-0.6**
ROC1				*eS*	**Sn**	**Sn**	**15 34 32.8**	**+0.3**
VA03	**San Esteban**	**1.24**	**141**	⇓*iP*	**Pn**	**Pn**	**15 34 15.1**	**-1.4**
VA03				*eS*	**Sn**	**Sn**	**15 34 30.4**	**-2.0**
VA03				IAML			15 34 33.3	
	comp=E,3μm,0.4s							
VA03	**San Esteban**	**1.24**	**141**	*eP*	**Pn**	**Pn**	**15 34 15.2**	**-1.4**
VA03				*eS*	**Sn**	**Sn**	**15 34 31.1**	**-1.2**
VA03				IAML			15 34 34.0	
	comp=Z,1μm,0.5s							
MT02	**Curacav**	**1.48**	**169**	⇑*iP*	**Pn**	**Pn**	**15 34 18.9**	**-0.8**
MT02				*eS*	**Sn**	**Sn**	**15 34 38.2**	**0.0**
MT02				IAML			15 34 39.6	
	comp=N,914nm,0.3s							
MT02	**Curacav**	**1.48**	**169**	*eP*	**Pn**	**Pn**	**15 34 19.0**	**-0.7**
MT02				*eS*	**Sn**	**Sn**	**15 34 38.2**	**0.0**
MT02				IAML			15 34 39.5	
	comp=Z,695nm,0.3s							
PEL	**Peldehue**	**1.50**	**154**	*eP*	**Pn**	**Pn**	**15 34 19.1**	**-0.8**
PEL				*eS*	**Sn**	**Sn**	**15 34 37.1**	**-1.5**
PEL				IAML			15 34 43.4	
	comp=N,914nm,0.5s							
PEL	**Peldehue**	**1.50**	**154**	*eP*	**Pn**	**Pn**	**15 34 19.1**	**-0.8**
PEL				*eS*	**Sn**	**Sn**	**15 34 39.5**	**+0.8**
PEL				IAML			15 34 40.6	
	comp=Z,575nm,0.6s				

MT15 IAML 15 34 55.4
comp=N,2μm,0.3s
MT09 Talagante 2.02 168 *i*P **Pn 15 34 26.9 -0.2**
MT09 IAML 15 34 54.1
comp=E,1μm,0.1s
MT08 Bocatoma Ro 2.05 143 *e*P **Pn 15 34 28.2 +0.5**
MT08 IAML 15 34 58.4
comp=N,806nm,0.4s
MT08 Bocatoma Ro 2.05 143 *e*P **Pn 15 34 28.0 +0.2**
MT08 *e*S **Sb 15 34 55.5 -1.3**
MT08 IAML 15 34 57.4
comp=Z,401nm,0.3s
MT01 Popeta 2.07 175 *e*P **Pn 15 34 27.2 -0.5**
MT01 IAML 15 34 59.3
comp=E,2μm,0.3s
MT01 Popeta 2.07 175 *e*P **Pn 15 34 27.6 -0.2**
MT01 *e*S **Sn 15 34 52.0 -0.6**
MT01 IAML 15 34 58.4
comp=Z,424nm,0.5s
MT12 Pirque 2.08 158 *e*P **Pn 15 34 27.5 -0.5**
MT12 IAML 15 34 57.3
comp=N,1μm,0.5s
CO01 Juntas del Tor 2.17 34 *e*P **Pn 15 34 29.2 -0.1**
CO01 IAML 15 34 58.4
comp=E,440nm,0.2s
CO01 Juntas del Tor 2.17 34 *e*P **Pn 15 34 29.3 -0.1**
CO01 *e*S **Sn 15 34 56.0 +0.5**
CO01 IAML 15 34 59.3
comp=Z,406nm,0.3s
BO04 La Punta 2.30 162 IAML 15 35 03.6
comp=E,717nm,0.4s
LMEL Las Melosas 2.31 153 *e*P **Pn 15 34 31.2 0.0**
LMEL IAML 15 35 01.9
comp=N,1μm,0.3s
LMEL Las Melosas 2.31 153 *e*P **Pn 15 34 31.5 +0.3**
LMEL *e*S **Sn 15 35 00.2 +1.4**
LMEL IAML 15 35 05.4
comp=Z,402nm,0.5s
AROD Rodeo 2.37 47 *e*P **Pn 15 34 33.6 +1.5**
ASAL Salagasta 2.38 110 *e*P **Pn 15 34 33.1 +1.1**
ASAL *e*S **Sb 15 35 09.2 +3.3**
ARCO CERRO ARCO 2.39 116 *e*P **Pn 15 34 33.8 +1.5**
ARCO *e*S **Sb 15 35 08.4 +1.9**
ARCO IAML 15 35 10.3
comp=Z,533nm,0.5s
ACCO Cerro Coronel 2.39 60 *e*P Pn 15 34 28.0 -4.5
ACCO *e*P 15 34 33.8
ACCO *e*S **Sb 15 35 04.8 -2.0**
ZON Zonda 2.40 85 *e*P **Pn 15 34 32.5 +0.1**
ZON *e*S Sn 15 34 51.7 -9.1
ZON *e*S 15 35 04.8
ZON IAML 15 35 05.9
comp=Z,189nm,0.3s
AAGR Agrelo 2.58 120 *e*P **Pn 15 34 36.5 +1.6**
AAGR *e*S **Sb 15 35 11.7 -0.2**
AAGR IAML 15 35 15.5
comp=Z,247nm,0.4s
RTLL Cerro Villicun 2.61 80 *e*P **Pn 15 34 35.4 +0.2**
RTLL *e*S **Sn 15 35 05.5 -0.5**
RTLL IAML 15 35 15.4
comp=Z,269nm,0.4s
BO01 Tunca 2.61 173 *e*P **Pn 15 34 34.4 -0.8**
BO01 Tunca 2.61 173 *e*P **Pn 15 34 34.7 -0.5**
BO01 *e*S **Sb 15 35 11.2 -1.3**
BO01 IAML 15 35 15.6
comp=Z,226nm,1.1s
BO03 Pichilemu 2.72 188 *e*P **Pn 15 34 35.2 -1.5**
CFA Coronel Fontan 2.77 87 *e*P **Pn 15 34 36.9 -0.5**
CFA *e*S **Sn 15 35 09.8 -0.1**
CFA IAML 15 35 16.6
comp=Z,129nm,0.2s
LCO Las Campanas 2.86 14 *e*P **Pn 15 34 38.5 -0.3**
LCO Las Campanas 2.86 14 *e*P **Pn 15 34 38.9 0.0**
LCO *e*S **Sn 15 35 14.5 +2.0**
LCO IAML 15 35 24.1
comp=Z,506nm,0.8s
AVIZ Vizcacheras 3.01 125 *e*P Pn 15 34 36.4 -4.3
AVIZ *e*S **Sb 15 35 24.1 0.0**
BO02 Sierra Bellavi 3.04 169 *e*P **Pn 15 34 40.5 -0.7**
BO02 Sierra Bellavi 3.04 169 *e*P **Pn 15 34 41.2 0.0**
BO02 *e*S **Sn 15 35 17.7 +1.0**
BO02 IAML 15 35 28.2
comp=Z,331nm,0.2s
AC05 El Transito 3.13 20 *e*P **Pn 15 34 42.1 -0.4**
AC05 El Transito 3.13 20 *e*P **Pn 15 34 42.6 +0.2**
AC05 *e*S **Sn 15 35 20.4 +1.4**
AC05 IAML 15 35 31.6
comp=Z,237nm,0.8s
GO05 Hualane 3.23 187 *e*P **Pn 15 34 42.2 -1.5**
GO05 IAML 15 35 38.4
comp=E,279nm,0.3s
GO05 Hualane 3.23 187 *e*P **Pn 15 34 42.8 -0.9**
GO05 *e*S **Sb 15 35 34.0 +3.7**
GO05 IAML 15 35 36.9
comp=Z,178nm,1.1s
AGUA GUANDACOL 3.46 49 *e*P **Pn 15 34 48.4 +1.5**
AGUA *e*S **Sb 15 35 34.3 -2.7**
AGUA IAML 15 35 36.6
comp=Z,293nm,0.3s
AC04 Llanos de Chal 3.60 6 *e*P **Pn 15 34 48.2 -0.5**
AC04 *e*S **Sn 15 35 33.5 +3.2**
AC04 IAML 15 35 40.9
comp=Z,168nm,0.7s
AVFE Valle Fertil 3.63 73 *e*P **Pn 15 34 48.9 -0.4**
AVFE *e*S **Sn 15 35 28.0 -3.2**
AVFE IAML 15 35 37.6
comp=Z,217nm,0.6s
ACAN Cantantal 3.67 99 *e*P **Pn 15 34 48.4 -1.5**
ACAN IAML 15 35 51.7
comp=Z,367nm,0.7s
RFA San Rafael 3.89 140 *e*P **Pn 15 34 52.8 -0.1**
VCA Vinchina 4.16 44 *e*P **Pn 15 34 55.9 -0.8**
VCA *e*S **Sn 15 35 45.1 +0.6**
VCA IAML 15 36 03.1
comp=Z,344nm,0.4s
GO03 Copiapo 4.33 15 *e*P **Pn 15 34 58.2 -0.7**
GO03 Copiapo 4.33 15 *e*P **Pn 15 35 00.2 +1.3**
GO03 *e*S **Sn 15 35 49.3 +0.9**
GO03 IAML 15 36 03.1
comp=Z,170nm,0.8s
APLL PUNTA DE LOS L 4.47 73 *e*P **Pn 15 34 59.9 -0.9**
APLL *e*S **Sn 15 35 55.7 +3.8**
ACLC CERRO LA CRUZ 4.56 60 *e*P **Pn 15 35 01.9 -0.3**
ACLC *e*S **Sn 15 35 54.1 -0.3**
ACLC IAML 15 36 02.0
comp=Z,101nm,0.4s
BI02 San Fabin de 4.86 178 *e*P **Pn 15 35 05.4 -0.7**
BI02 IAML 15 36 27.0
comp=Z,31nm,1.1s
MRA San Martin 4.93 99 *e*P **Pn 15 35 05.5 -1.6**
MRA *e*S **Sn 15 36 06.6 +3.3**
MRA IAML 15 36 06.7
comp=Z,75nm,0.3s

IDC ***08*** *15:52:41.2±0.4, 15°.75S×173°.04W, h0km, mb5.0/25, mbtmp5.0/25, MS4.3/56, Error ellipse: s-maj=16.4km s-min=14.0km az=138.0*
MOS ***08*** *15:52:41.8±1.5, 15°.70S×173°.09W, h10km, mb5.3/25, Error ellipse: s-maj=11.1km s-min=9.2km az=61.8*
NEIC ***08*** *15:52:42.6±1.9, 15°.67S±0°.07×173°.1W±0°.1, h10km±1km, mb5.3/379, Mww5.2/9, Error ellipse: s-maj=17.6km s-min=11.7km az=101.0*
BGR ***08*** *15:52:44.5, 16°.73S×171°.91W, h45km, Ms4.8*
NOU ***08*** *15:52:45.4, 15°.83S×172°.94W, h25km, mb5.4/103, Samoa Islands Region*
BJI ***08*** *15:52:46.0, 15°.43S×172°.73W, h42km, mB5.5/8, mb5.3/49, Ms5.3/5, Ms7 5.2/2*
GCMT ***08*** *15:52:50.6±0.2, 15°.80S±0°.01×172°.86W±0°.01, h12km, MW5.5/112, Moment Tensor Solution. s47, c59; s112, c168; Duration: 1ŝ3 Moment tensor: Scale 10^17 Nm; Mrr0.09±.02; Mθθ0.04±.02; Mϕϕ-0.12±.01; Mrθ-0.95±.04; Mrϕ0.11±.01; Mθϕ1.79±.03; Best double couple: Mo2.03000×10^17 NP1:ϕ157.00000°, δ2.00000°, λ95.00000°. NP2:ϕ332.00000°, δ88.00000°, λ90.00000°. Principal axes: T 1.9830, Plg47.0000°, Azm242.0000°; N 0.0950, Plg0.0000°, Azm332.0000°; P -2.0780, Plg43.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 15:52:44.7±0.2, 15°.78S±0°.04×172°.89W±0°.04, h26km, n937, σ1ŝ36/738, mb5.3/267, MS4.4/59, 64C-30D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.15**	**30**		**Pn**	**15 53 17.3**	**-1.6**
AFI	**Afiamalu**	**2.15**	**30**	P	**Pn**	**15 53 18.1**	**-0.8**
AFI	**Afiamalu**	**2.15**	**30**	P	**Pn**	**15 53 17.3**	**-1.6**
NIUE	**Niue**	**4.33**	**140**	P	**Pn**	**15 53 48.4**	**-0.5**
NIUE				S	**Sn**	**15 54 33.6**	**-5.0**
NIUE	**Niue**	**4.33**	**140**		**Pn**	**15 53 48.9**	**-0.1**
NIUE	**Niue**	**4.33**	**140**	P	**Pn**	**15 53 49.2**	**+0.3**
RAR	**Rarotonga**	**13.56**	**115**	Pn	**Pn**	**15 55 53.2**	**-2.3**
	3.5nm,0.3s,baz=259,slow=7.9,SNR=17						
RAR				Sn	Sn	15 58 11.2	-14
	0.7nm,0.3s,baz=106,slow=18,SNR=0.9						
RAR				LR	LR	15 59 55.1	
	comp=Z,1μm,19.4s,baz=291,slow=32						
RAR	**Rarotonga**	**13.56**	**115**	P	**Pn**	**15 55 57.9**	**+2.4**
RAR	**Rarotonga**	**13.56**	**115**	P	**Pn**	**15 55 53.9**	**-1.6**
MARNC	**Mare, Loyalty**	**18.94**	**250**		**P**	**15 57 01.4**	**-2.5**
MARNC	**Mare, Loyalty**	**18.94**	**250**	P	**P**	**15 57 04.8**	**+0.9**
SANVU	**Saraoutou**	**19.18**	**268**	P	**Pn**	**15 57 08.7**	**+1.2**
SANVU	**Saraoutou**	**19.18**	**268**	S	**Sn**	**16 00 42.9**	**+1.1**
PINNC	**Pines Island,**	**19.76**	**247**		**P**	**15 57 12.1**	**-0.8**
PINNC	**Pines Island,**	**19.76**	**247**	P	**P**	**15 57 14.5**	**+1.6**
YATNC	**Mamie plateau,**	**20.11**	**249**	P	**P**	**15 57 17.6**	**+0.9**
OUENC	**Ouen Island, N**	**20.25**	**248**	P	**P**	**15 57 18.3**	**+0.1**
DZM	**Mont Dzumac**	**20.52**	**249**	P	**P**	**15 57 19.9**	**-1.3**
	32nm,0.8s,baz=78,slow=18,SNR=18						
DZM				LR	LR	16 04 10.7	
	comp=Z,3μm,21.9s,baz=79,slow=34						
	32nm,0.8s						
ONTNC	**Ouen Toro**	**20.57**	**248**		**P**	**15 57 19.4**	**-2.2**
ONTNC	**Ouen Toro**	**20.57**	**248**	P	**P**	**15 57 23.7**	**+2.1**
TARA	**Tarawa**	**22.05**	**319**	P	**P**	**15 57 39.9**	**+2.2**
NFK	**Norfolk Island**	**22.06**	**230**	P	**P**	**15 57 38.1**	**+0.5**
	comp=Z,88nm,0.8s						
PPT	**Papeete**	**22.40**	**98**	P	**P**	**15 57 43.6**	**+2.1**
	comp=Z,90nm,0.8s,baz=42,slow=23,SNR=6.4						
PPT				LR	LR	16 03 57.0	
	comp=Z,736nm,19.8s,baz=277,slow=30						
	comp=Z,90nm,0.8s						
PPT2	**Papeete2**	**22.41**	**98**	*e*P	**P**	**15 57 43.2**	**+1.7**
	comp=Z,332nm,29.8s						
PPT2				*e*S	**S**	**16 01 40.6**	**-5.9**
	comp=Z,1μm,30.0s						
PPT2				*e*LR	LR	16 02 53.2	
	comp=Z,3μm,24.8s						
PPT2				*e*LR	LR	16 03 00.5	
	comp=Z,2μm,27.2s						
PPTF	**Pamatai, Papee**	**22.41**	**98**		**P**	**15 57 43.3**	**+1.7**
PPTF	**Pamatai, Papee**	**22.41**	**98**	P	**P**	**15 57 43.9**	**+2.2**
OUZ	**Omahuta**	**22.84**	**210**	P	**P**	**15 57 46.6**	**+0.8**
KUZ	**Kuaotunu**	**23.21**	**204**	P	**P**	**15 57 50.8**	**+1.2**
TBI	**Tubuai**	**23.31**	**113**	*e*P	**P**	**15 57 51.6**	**+0.8**
	comp=Z,499nm,38.2s						
TBI				*e*S	**S**	**16 01 59.8**	**-2.1**
	comp=Z,6μm,34.2s						
TBI				*e*LR	LR	16 03 24.3	
	comp=Z,16μm,27.5s						
TBI				*e*LR	LR	16 03 26.8	
	comp=Z,3μm,26.8s						
XMAS	**Kiritimati**	**23.38**	**42**		**P**	**15 57 48.4**	**-3.1**
XMAS	**Kiritimati**	**23.38**	**42**	P	**P**	**15 57 52.4**	**+0.8**
XMAS	**Kiritimati**	**23.38**	**42**	S	**S**	**16 02 07.6**	**+4.4**
HIZ	**Hauiti**	**25.09**	**203**	P	**P**	**15 58 06.9**	**-0.3**
BKZ	**Black Stump Fm**	**25.09**	**200**		**P**	**15 58 05.9**	**-1.4**
BKZ				*e*LR	LR	15 58 13.2	
	comp=Z,36nm,0.6s						
BKZ	**Black Stump Fm**	**25.09**	**200**	P	**P**	**15 58 08.2**	**+0.9**
BKZ	**Black Stump Fm**	**25.09**	**200**	S	**S**	**16 02 30.5**	**+0.1**
KHEZ	**Kahui Hut**	**26.09**	**204**	P	**P**	**15 58 16.0**	**-0.4**
KHEZ	**Kahui Hut**	**26.09**	**204**	S	**S**	**16 02 47.0**	**+0.8**
BFZ	**Birch Farm**	**26.55**	**199**	P	**P**	**15 58 20.9**	**+0.5**
BFZ	**Birch Farm**	**26.55**	**199**	P	**P**	**15 58 21.3**	**+0.9**
MRZ	**Mangatainoka R**	**26.74**	**200**	P	**P**	**15 58 22.0**	**-0.2**
MRZ				*e*LR	LR	15 58 28.5	
	comp=Z,34nm,0.6s						
HNR	**Honiara**	**27.23**	**280**	LR	LR	16 07 52.4	
	comp=Z,2μm,20.1s,baz=121,slow=34						
SAVO	**Savo Central**	**27.43**	**281**	P	**P**	**15 58 30.1**	**+1.4**
MSWZ	**Moikau Station**	**27.53**	**200**	P	**P**	**15 58 26.9**	**-2.4**
BHW	**Baring Head**	**27.65**	**200**	P	**P**	**15 58 29.2**	**-1.0**
BHW				IAmb	IAmb	15 58 37.8	
	comp=Z,41nm,0.7s						
TCW	**Tory Channel**	**27.67**	**201**	P	**P**	**15 58 28.2**	**-2.3**
QRZ	**Quartz Range**	**27.98**	**204**	P	**P**	**15 58 34.2**	**+0.9**
TUWZ	**Tuamarina**	**27.98**	**201**	P	**P**	**15 58 32.6**	**-0.6**
NNZ	**Nelson**	**28.00**	**202**	IAmb	IAmb	15 58 39.4	
	comp=Z,47nm,0.7s						
KHZ	**Kahutara**	**29.00**	**201**	P	**P**	**15 58 42.0**	**-0.2**
KHZ	**Kahutara**	**29.00**	**201**	P	**P**	**15 58 42.5**	**+0.2**
LTZ	**Lake Taylor**	**29.77**	**202**	P	**P**	**15 58 48.0**	**-1.2**
INZ	**Inchbonnie**	**30.03**	**203**	P	**P**	**15 58 50.6**	**-0.9**
OXZ	**Oxford**	**30.32**	**202**	P	**P**	**15 58 53.0**	**-1.1**
FOZ	**Fox Glacier**	**31.35**	**205**	P	**P**	**15 59 03.1**	**0.0**
JCZ	**Jackson Bay**	**32.21**	**205**	P	**P**	**15 59 11.8**	**+1.0**
TAOE	**Nuku Hiva Isla**	**32.69**	**82**	*e*P	**P**	**15 59 17.7**	**+2.4**
	comp=Z,178nm,28.4s						
TAOE				*e*S	**S**	**16 04 32.5**	**+2.0**
	comp=Z,187nm,28.4s						
TAOE				*e*LR	LR	16 07 41.3	
	comp=Z,2μm,26.2s						
MLZ	**Mavora Lakes**	**33.55**	**205**	P	**P**	**15 59 22.2**	**-0.2**
AUWSH	**Wavell State H**	**33.62**	**244**	P	**P**	**15 59 21.7**	**-1.5**
DCZ	**Deep Cove**	**34.02**	**205**	P	**P**	**15 59 25.0**	**-1.4**
WHZ	**Wether Hill Ro**	**34.05**	**204**	P	**P**	**15 59 26.6**	**0.0**
TW1H	**Toowoomba 1 Ha**	**34.57**	**244**	P	**P**	**15 59 31.8**	**+0.2**
EIDS	**Eidsvold**	**34.96**	**248**	P	**P**	**15 59 32.4**	**-2.4**
	comp=Z,17nm,0.8s						
EIDS	**Eidsvold**	**34.96**	**248**	P	P	15 59 31.2	-3.6
EIDS				IAmb	IAmb	15 59 42.0	
	comp=Z,85nm,2.0s						
ARMA	**Armidale**	**35.57**	**240**	P	**P**	**15 59 39.0**	**-1.2**
	comp=Z,36nm,1.0s						
ARMA	**Armidale**	**35.57**	**240**	P	**P**	**15 59 37.9**	**-2.3**
ARMA				IAmb	IAmb	15 59 40.5	
	comp=Z,34nm,1.0s						
ARMA	**Armidale**	**35.57**	**240**	P	**P**	**15 59 40.6**	**+0.4**
PATS	**Pohnpei**	**36.31**	**306**	P	**P**	**15 59 43.9**	**-2.6**
	comp=Z,130nm,0.7s						
AUPHS	**Peel High Scho**	**36.37**	**239**	P	**P**	**15 59 47.4**	**+0.5**
RKT	**Rikitea**	**36.41**	**108**	*e*LR	LR	16 09 25.9	
	comp=Z,6μm,28.2s						
AULRC	**Lightning Ridg**	**38.40**	**242**	P	**P**	**16 00 02.8**	**-1.4**
AUDCS	**Dubbo College**	**38.54**	**238**	P	**P**	**16 00 05.2**	**-0.1**
CNB	**Canberra Magne**	**38.91**	**233**	P	**P**	**16 00 07.8**	**-0.7**
	comp=Z,43nm,1.6s						
CNB	**Canberra Magne**	**38.91**	**233**	P	**P**	**16 00 08.1**	**-0.3**
CTA	**Charters Tower**	**39.04**	**257**	LR	LR	16 14 15.5	
	comp=Z,20nm,20.8s,baz=76,slow=33						
AUSIS	**Research Schoo**	**39.09**	**233**	P	**P**	**16 00 10.3**	**+0.4**
CAN	**Canberra**	**39.19**	**233**	P	**P**	**16 00 10.3**	**-0.5**
	comp=Z,51nm,2.6s						
CAN	**Canberra**	**39.19**	**233**	P	**P**	**16 00 08.5**	**-2.3**
CAN				IAmb	IAmb	16 00 11.1	
	comp=Z,96nm,1.5s						
CAN	**Canberra**	**39.19**	**233**	P	**P**	**16 00 11.2**	**+0.4**
CAN	**Canberra**	**39.19**	**233**	P	**P**	**16 00 08.5**	**-2.3**
CAN				pmax	pmax		
	comp=Z,96nm,1.5s						
PMG	**Port Moresby**	**39.45**	**274**	LR	LR	16 15 00.2	
	comp=Z,298nm,19.6s,baz=98,slow=34						
PMG	**Port Moresby**	**39.45**	**274**	P	**P**	**16 00 13.1**	**0.0**
PMG	**Port Moresby**	**39.45**	**274**	P	**P**	**16 00 13.3**	**+0.2**
PMG	**Port Moresby**	**39.45**	**274**	*c i*P	**P**	**16 00 12.6**	**-0.5**
PMG				pmax	pmax		
	comp=Z,44nm,1.7s						
H11S2	**WAKE ISLAND Hy**	**39.54**	**329**	T	T	16 41 01.2	
	baz=146,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	**39.55**	**329**	T	T	16 41 02.8	
	baz=146,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**39.56**	**329**	T	T	16 41 03.1	
	baz=146,slow=76,SNR=52						
MILA	**Mila**	**39.69**	**230**	P	**P**	**16 00 13.9**	**-1.0**
	comp=Z,17nm,1.5s						
KIP	**Kipapa**	**39.75**	**22**	P	**P**	**16 00 16.5**	**+1.1**
KIP	**Kipapa**	**39.75**	**22**	*e*P	**P**	**16 00 14.3**	**-1.1**
KIP				pmax	pmax		
	comp=Z,225nm,1.4s						
AUSMG	**Snowy Mountain**	**39.87**	**232**	P	**P**	**16 00 17.3**	**+0.8**
WAKE	**Wake Island**	**40.23**	**329**	P	**P**	**16 00 21.1**	**+1.7**
H11N3	**WAKE ISLAND Hy**	**40.48**	**330**	T	T	16 43 02.5	
	baz=150,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**40.49**	**330**	T	T	16 43 02.8	
	baz=150,slow=76,SNR=27						
H11N2	**WAKE ISLAND Hy**	**40.50**	**330**	T	T	16 43 03.8	
	baz=150,slow=76,SNR=20						
CMSA	**Cobar Meteorol**	**40.79**	**240**	P	**P**	**16 00 22.7**	**-1.2**
	comp=Z,83nm,0.9s						
CMSA	**Cobar Meteorol**	**40.79**	**240**	P	**P**	**16 00 22.8**	**-1.2**
MTSU	**Mount Surprise**	**40.93**	**260**	P	**P**	**16 00 23.8**	**-1.7**
	comp=Z,27nm,0.9s						
MTSU	**Mount Surprise**	**40.93**	**260**	P	**P**	**16 00 24.2**	**-1.2**
QLP	**Quilpie**	**41.23**	**248**	P	**P**	**16 00 25.8**	**-1.9**
	comp=Z,61nm,0.8s						
QLP	**Quilpie**	**41.23**	**248**	P	**P**	**16 00 27.0**	**-0.7**
COEN	**Coen**	**42.45**	**266**	P	**P**	**16 00 36.9**	**-0.9**
	comp=Z,77nm,0.8s						
COEN	**Coen**	**42.45**	**266**	P	**P**	**16 00 37.0**	**-0.9**
COEN				IAmb	IAmb	16 00 38.4	
	comp=Z,49nm,0.7s						
COEN	**Coen**	**42.45**	**266**	P	**P**	**16 00 37.5**	**-0.3**
TOO	**Toolangi**	**42.61**	**231**	P	**P**	**16 00 38.2**	**-0.7**
	comp=Z,23nm,1.1s						
TOO	**Toolangi**	**42.61**	**231**	P	**P**	**16 00 37.1**	**-1.8**
TOO	**Toolangi**	**42.61**	**231**	P	**P**	**16 00 37.1**	**-1.8**
				pmax	pmax		
	comp=Z,28nm,1.2s						
AUMAG	**Moama Anglican**	**42.72**	**234**	P	**P**	**16 00 40.1**	**+0.4**
CORO	**Coronation Par**	**42.87**	**225**	P	**P**	**16 00 41.2**	**+0.4**
BRAT	**Ballarat**	**43.78**	**232**	P	**P**	**16 00 48.9**	**+0.6**
AUMTC	**Mt Clear Colle**	**43.84**	**232**	P	**P**	**16 00 49.0**	**+0.3**
STKA	**Stephens Creek**	**44.27**	**240**	P	**P**	**16 00 51.4**	**-1.0**
	comp=Z,332nm,1.1s						
STKA	**Stephens Creek**	**44.27**	**240**	P	**P**	**16 00 50.8**	**-1.6**
STKA	**Stephens Creek**	**44.27**	**240**	P	**P**	**16 00 50.5**	**-1.9**
	comp=Z,30nm,0.6s,baz=100,slow=11,SNR=51						
STKA				PcP	**PcP**	**16 02 37.1**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=32,slow=4.3,SNR=3.4						
STKA				LR	LR	16 16 54.1	
	comp=Z,520nm,21.8s,baz=71,slow=33						
	comp=Z,30nm,0.6s						
STKA	**Stephens Creek**	**44.27**	**240**	P	**P**	**16 00 51.4**	**-1.0**
STKA	**Stephens Creek**	**44.27**	**240**	*c i*P	**P**	**16 00 51.0**	**-1.4**
INKA	**Innaminka**	**44.44**	**246**	P	**P**	**16 00 52.8**	**-0.9**
ARPS	**Mount Arapiles**	**45.16**	**234**	P	**P**	**16 00 57.8**	**-1.5**
	comp=Z,36nm,1.0s						
QIS	**Mount Isa**	**45.27**	**257**	P	**P**	**16 00 58.9**	**-1.6**
	comp=Z,10nm,1.4s						
QIS	**Mount Isa**	**45.27**	**257**	P	**P**	**16 01 00.8**	**+0.3**
HTT	**Hallett**	**46.77**	**239**	P	**P**	**16 01 10.9**	**-1.2**
	comp=Z,31nm,1.1s						
HTT	**Hallett**	**46.77**	**239**	P	**P**	**16 01 11.7**	**-0.5**
AUMBR	**Murray Bridge**	**46.79**	**236**	P	**P**	**16 01 11.9**	**-0.3**
AUJCS	**Jamestown Cent**	**46.98**	**239**	P	**P**	**16 01 14.1**	**+0.3**
AUMAR	**Marden Senior**	**47.26**	**237**	P	**P**	**16 01 15.6**	**-0.3**
JAY	**Jayapura**	**47.54**	**281**	LR	LR	16 21 26.7	
	comp=Z,87nm,20.2s,baz=92,slow=36						
JAY	**Jayapura**	**47.54**	**281**	P	**P**	**16 01 18.1**	**-0.3**
	comp=Z,34nm,1.4s						
WHYH	**Whyalla**	**47.82**	**240**	P	**P**	**16 01 20.6**	**+0.3**
GENI	**Genyem**	**48.02**	**281**	P	**P**	**16 01 23.3**	**+1.2**
BBOO	**Buckleboo**	**49.05**	**240**	P	**P**	**16 01 28.4**	**-1.4**
	comp=Z,76nm,0.8s						
BBOO	**Buckleboo**	**49.05**	**240**	P	**P**	**16 01 28.4**	**-1.4**
BBOO	**Buckleboo**	**49.05**	**240**	P	**P**	**16 01 28.9**	**-0.9**
AUCAS	**Cumulus Area S**	**49.53**	**238**	P	**P**	**16 01 33.5**	**+0.1**
WR8	**Warramunga Arr**	**50.08**	**257**	P	P	16 01 34.2	-3.7
WR8				IAmb	IAmb	16 01 38.0	
	comp=Z,30nm,1.1s						
WR8				PcP	**PcP**	**16 02 57.1**	**-0.3**
WB0	**Warramunga Arr**	**50.20**	**257**	P	**P**	**16 01 36.0**	**-2.7**
WB0				IAmb	IAmb	16 01 38.8	
	comp=Z,40nm,1.0s						
WB6	**Warramunga Arr**	**50.22**	**257**	P	**P**	**16 01 37.1**	**-1.7**
WRAB	**Tennant Creek**	**50.23**	**257**	P	**P**	**16 01 37.2**	**-1.7**
WRAB	**Tennant Creek**	**50.23**	**257**	*ce*P	**P**	**16 01 36.8**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,62nm,1.7s						
WRA	**Warramunga Arr**	**50.24**	**257**	P	**P**	**16 01 36.9**	**-2.1**
WRA	**Warramunga Arr**	**50.24**	**257**	P	**P**	**16 01 36.7**	**-2.3**
	comp=Z,18nm,0.7s,baz=179,slow=9.3,SNR=4.6						
WRA				PcP	**PcP**	**16 02 58.4**	**+0.4**
	comp=Z,14nm,1.0s,baz=91,slow=4.0,SNR=7.3						
WRA				LR	LR	16 22 26.3	
	comp=Z,466nm,19.0s,baz=74,slow=36						
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**50.24**	**257**	P	**P**	**16 01 36.9**	**-2.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AS31	**Alice Springs**	**50.46**	**252**	P	**P**	**16 01 39.0**	**-1.8**
AS31				IAmb	IAmb	16 01 40.5	
	comp=Z,29nm,0.6s						
ASAR	**Alice Springs**	**50.46**	**252**	P	**P**	**16 01 39.0**	**-1.7**
ASAR	**Alice Springs**	**50.46**	**252**	P	**P**	**16 01 39.0**	**-1.7**
	comp=Z,102nm,0.6s,baz=86,slow=8.0,SNR=1394						
ASAR				S	**S**	**16 08 47.0**	**-6.2**
	comp=Z,1.4nm,1.0s,baz=84,slow=16,SNR=6.3						
ASAR				LR	LR	16 21 36.9	
	comp=Z,1μm,21.0s,baz=98,slow=34						
	comp=Z,102nm,0.6s						
AUALC	**St Philip's Co**	**50.48**	**252**	P	**P**	**16 01 39.5**	**-1.4**
GUMO	**Guam**	**50.95**	**303**	LR	LR	16 20 04.6	
	comp=Z,90nm,21.7s,baz=113,slow=32						
KDU	**Kakadu**	**52.93**	**266**	P	**P**	**16 01 57.8**	**-1.4**
	comp=Z,11nm,0.8s						
MTN	**Manton Dam**	**54.19**	**265**	P	**P**	**16 02 07.0**	**-1.5**
MTN				IAmb	IAmb	16 02 08.5	
	comp=Z,22nm,0.9s						
WRKA	**Warakurna**	**55.53**	**250**	P	**P**	**16 02 16.4**	**-1.7**
	comp=Z,57nm,1.0s						
FORT	**Forrest**	**55.68**	**243**	P	**P**	**16 02 16.8**	**-2.2**
	comp=Z,34nm,1.6s						
KNRA	**Kununurra**	**55.99**	**262**	P	**P**	**16 02 20.1**	**-1.4**
	comp=Z,38nm,0.9s						
KNRA	**Kununurra**	**55.99**	**262**	P	**P**	**16 02 19.1**	**-2.3**
KNRA				IAmb	IAmb	16 02 21.5	
	comp=Z,23nm,0.7s						
SWI	**Sorong**	**57.01**	**279**	P	**P**	**16 02 28.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**58.61**	**258**	P	**P**	**16 02 38.8**	**-1.2**
	comp=Z,4.9nm,1.6s						
FITZ	**Fitzroy Crossi**	**58.61**	**258**	P	**P**	**16 02 37.5**	**-2.5**
FITZ	**Fitzroy Crossi**	**58.61**	**258**	LR	LR	16 26 13.7	
	comp=Z,998nm,20.5s,baz=98,slow=34						
FITZ	**Fitzroy Crossi**	**58.61**	**258**	P	**P**	**16 02 40.2**	**+0.3**
RPN	**Rapa Nui**	**59.69**	**112**	LR	LR	16 25 13.1	
	comp=

MEEK **Meekatharra** 64.12 248 P P 16 03 15.3 -1.9
comp=Z,47nm,0.8s
MEEK **Meekatharra** 64.12 248 P P 16 03 16.3 -0.9
KLBR **Kellerberrin** 64.50 242 P P 16 03 18.4 -1.2
comp=Z,182nm,0.9s
KLBR **Kellerberrin** 64.50 242 P P 16 03 18.8 -0.7
NWAO **Narrogin (SRO)** 64.86 241 P P 16 03 20.7 -1.2
comp=Z,46nm,1.2s
NWAO **Narrogin (SRO)** 64.86 241 P P 16 03 21.7 -0.1
NWAO **Narrogin (SRO)** 64.86 241 P P 16 03 21.8 -0.1
RKGY **Rocky Gully** 65.00 239 P P 16 03 21.3 -1.4
comp=Z,101nm,0.9s
DAV **Davao City (W)** 65.01 286 LR LR 16 26 46.4
comp=Z,127nm,21.9s,baz=116,slow=32
BLDU **Ballidu** 65.46 243 P P 16 03 24.4 -1.4
comp=Z,58nm,1.0s
BLDU **Ballidu** 65.46 243 P P 16 03 25.1 -0.7
MUN **Mundaring** 65.79 242 P P 16 03 26.8 -1.1
comp=Z,74nm,1.1s
MUN **Mundaring** 65.79 242 P P 16 03 27.9 0.0
AUMAZ **Mazenod Senior** 65.93 242 P P 16 03 29.1 +0.3
MTKN **Mount Kenneth** 66.16 242 P P 16 03 30.0 -0.3
comp=Z,191nm,1.0s
MTKN **Mount Kenneth** 66.16 242 P P 16 03 30.8 +0.5
MORW **Morawa** 66.17 245 P P 16 03 29.4 -1.0
comp=Z,42nm,1.0s
MORW **Morawa** 66.17 245 P P 16 03 30.3 -0.1
JHJ **Hachijo jima 2** 66.38 318 LR LR 16 26 27.5
comp=Z,115nm,21.5s,baz=328,slow=31
KAPI **Kappang** 66.88 271 LR LR 16 30 36.6
comp=Z,168nm,21.9s,baz=110,slow=34
TOLI2 **Tolitoli** 67.58 278 P P 16 03 40.3 +0.7
NIKH **Nikolski High** 68.55 3 P P 16 03 43.7 -1.1
baz=184
GIRL **Giralia** 68.57 252 P P 16 03 44.2 -1.5
TWSI **Taliwang, Sumb** 68.73 267 P P 16 03 45.7 -1.1
comp=Z,62nm,1.2s
JMM **Marumori** 68.83 322 P P 16 03 47.3 +0.4
SHEM **Shemya Is, Ala** 69.14 352 LR LR 16 27 31.7
comp=Z,204nm,21.6s,baz=116,slow=30
JGF **Kuroka** 69.49 318 P P 16 03 52.9 +1.8
MJAR **Matsushiro Arr** 69.54 320 P P 16 03 51.5 +0.2
comp=Z,8.2nm,1.0s,baz=156,slow=5.7,SNR=16
MJAR LR LR 16 28 49.3
comp=Z,216nm,21.6s,baz=116,slow=31
comp=Z,8.2nm,1.0s
MAJO **Matsushiro** 69.54 320 P P 16 03 48.0 -3.4
MAJO IAmb IAmb 16 03 52.1
comp=Z,23nm,1.1s
MAJO **Matsushiro** 69.54 320 P P 16 03 51.5 +0.1
MAJO **Matsushiro** 69.54 320 ||/P P 16 03 47.9 -3.5
MAJO pmax pmax
comp=Z,26nm,1.2s
UNV **Unalaska Valle** 69.56 4 P P 16 03 49.9 -1.1
baz=186
CASY **Casey** 70.27 205 P P 16 03 55.9 +0.5
FALS **False Pass** 70.81 6 P P 16 03 56.4 -2.3
baz=190
JOW **Kunigami** 71.10 306 LR LR 16 28 31.4
comp=Z,162nm,21.7s,baz=198,slow=30
CHNA **Chernabura Isl** 71.23 8 P P 16 03 59.6 -1.7
baz=193
SAO **San Andreas Ge** 71.28 42 IAmb IAmb 16 04 04.5
comp=Z,25nm,1.0s
PKD **Bear Valley Ra** 71.38 43 IAmb IAmb 16 04 05.0
comp=Z,32nm,1.1s
JAGI **Jajag, Banyuwa** 71.42 266 P P 16 04 02.1 -1.2
JAGI **Jajag, Banyuwa** 71.42 266 P P 16 04 01.5 -1.8
comp=Z,71nm,1.1s
MHC **Mount Hamilton** 71.51 41 IAmb IAmb 16 04 06.2
comp=Z,21nm,1.1s
SDPT **Sand Point** 71.62 7 P P 16 04 01.5 -2.1
baz=192
HOPS **Hopland Field** 71.65 39 IAmb IAmb 16 04 06.7
comp=Z,32nm,1.2s
S12K **Black Hills** 71.79 6 P P 16 04 03.2 -1.4
baz=191
KCPM **Cahto Peak** 71.79 38 IAmb IAmb 16 04 07.8
comp=Z,24nm,1.2s
TGY **Tagaytay City** 71.82 291 LR LR 16 31 36.6
comp=Z,230nm,21.8s,baz=126,slow=33
KMPM **Mount Pierce** 71.94 37 IAmb IAmb 16 04 08.8
comp=Z,25nm,1.0s
MWC **Mount Wilson** 72.05 45 IAmb IAmb 16 04 08.7
comp=Z,20nm,0.9s
JKA **Kamikawa-asahi** 72.12 328 P P 16 04 07.3 +0.5
ASAJ **Asahikawa** 72.12 328 P P 16 04 07.6 +0.8
comp=Z,28nm,0.8s,baz=230,slow=5.6,SNR=11
ASAJ LR LR 16 30 56.0
comp=Z,66nm,21.2s,baz=163,slow=32
comp=Z,28nm,0.8s
P08K **Saint George I** 72.16 2 P P 16 04 05.3 -1.5
baz=183
SPIA **Saint Paul Isl** 72.71 2 P P 16 04 09.0 -1.0
baz=183
CHIR **Chirikof Islan** 72.80 10 P P 16 04 09.8 -0.8
baz=197
LPIG **La Paz** 72.82 58 LR LR 16 27 49.2
comp=Z,402nm,20.8s,baz=238,slow=29
PFO **Pinyon Flats O** 72.82 47 P P 16 04 10.7 -0.8
PFO **Pinyon Flats O** 72.82 47 LR LR 16 28 14.2
comp=Z,575nm,21.6s,baz=255,slow=29
PFO **Pinyon Flats O** 72.82 47 ||/eP P 16 04 10.3 -1.2
PFO pmax pmax
comp=Z,25nm,1.5s
PETK **Petropavlovsk-** 73.14 342 P P 16 04 10.5 -2.2
PETK **Petropavlovsk-** 73.14 342 P P 16 04 12.8 +0.1
comp=Z,20nm,0.8s,baz=126,slow=5.5,SNR=12
PETK LR LR 16 36 49.2
comp=Z,43nm,18.1s,baz=149,slow=36
comp=Z,20nm,0.8s
O03E **Paynes Creek** 73.23 38 IAmb IAmb 16 04 16.4
comp=Z,36nm,1.3s
CLC **China Lake** 73.25 44 IAmb IAmb 16 04 28.4
comp=Z,28nm,1.4s
M02C **Callahan** 73.31 37 IAmb IAmb 16 04 29.3
comp=Z,67nm,2.0s
MPMC **Manual Prospec** 73.46 44 IAmb IAmb 16 04 29.8
comp=Z,36nm,1.2s
TIN **Tinemaha, Big** 73.54 43 IAmb IAmb 16 04 32.8
comp=Z,40nm,0.9s
YBH **Yreka Blue Hor** 73.60 37 IAmb IAmb 16 04 18.5
comp=Z,24nm,1.1s
YBH **Yreka Blue Hor** 73.60 37 LR LR 16 28 54.6
comp=Z,37nm,22.0s,baz=254,slow=30
M03C **McCloud** 73.66 37 IAmb IAmb 16 04 18.4
comp=Z,26nm,1.0s
MPK **Martis Peak** 73.70 40 IAmb IAmb 16 04 18.9
comp=Z,46nm,1.2s
SII **Sitkinak Islan** 73.75 11 P P 16 04 14.6 -1.7
baz=199
QSM **Queen of Sheba** 73.83 44 IAmb IAmb 16 04 19.1
comp=Z,22nm,0.8s
PNTR **Pine Nut** 73.85 41 IAmb IAmb 16 04 19.8
comp=Z,30nm,0.9s
IRM **Iron Mountain** 74.03 47 IAmb IAmb 16 04 20.7
comp=Z,26nm,1.2s
LHV **Little Huntoon** 74.05 42 IAmb IAmb 16 04 33.3
comp=Z,35nm,1.1s
YSS **Yuzhno-Sakhali** 74.05 330 P P 16 04 18.5 +0.3
YSS **Yuzhno-Sakhali** 74.05 330 P P 16 04 20.1 +1.9
YSS **Yuzhno-Sakhali** 74.05 330 eP P 16 04 18.4 +0.2
YSS eS SKiKP 16 13 46.7 +1.8
YSS 16 21 50.7
YSS pmax pmax
comp=Z,70nm,1.0s
YSS pmax pmax
comp=N,10.0nm,1.3s
GRAC **Grapevine Rang** 74.07 43 IAmb IAmb 16 04 21.3
comp=Z,62nm,1.4s
FURC **Furnace Creek,** 74.11 44 IAmb IAmb 16 04 20.9
comp=Z,34nm,1.2s

L04D **Klamath Falls** 74.15 37 IAmb IAmb 16 04 21.5
comp=Z,52nm,1.3s
R16K **Pilot Point** 74.17 9 P P 16 04 17.9 -0.7
baz=195
SHOC **Shoshone, Teco** 74.19 45 IAmb IAmb 16 04 41.1
comp=Z,29nm,0.9s
QSPA **South Pole Qui** 74.27 180 P P 16 04 23.8 +4.4
comp=Z,60nm,0.9s,baz=24,slow=1.0,SNR=245
QSPA LR LR 16 32 30.6
comp=Z,104nm,21.5s,baz=38,slow=32
NVAR **Mina Array Bea** 74.28 42 P P 16 04 20.2 +0.1
NVAR **Mina Array Bea** 74.28 42 P P 16 04 21.1 +1.1
comp=Z,14nm,0.8s,baz=227,slow=9.9,SNR=78
NVAR LR LR 16 29 30.6
comp=Z,705nm,21.1s,baz=240,slow=30
comp=Z,14nm,0.8s
GMN **Gold Mountain** 74.31 43 IAmb IAmb 16 04 22.3
comp=Z,20nm,0.8s
PCJI **Pacitan** 74.34 266 P P 16 04 20.2 -0.4
NV11 **Mina Array Sit** 74.38 42 IAmb IAmb 16 04 22.8
comp=Z,31nm,1.1s
R17L **Mt. Peulik Vol** 74.41 9 P P 16 04 19.3 -0.8
baz=196
I03D **Drain, OR** 74.51 35 IAmb IAmb 16 04 23.5
comp=Z,35nm,1.2s
OHAK **Old Harbor** 74.54 11 P P 16 04 19.9 -0.8
baz=200
R18K **Karluk** 74.66 10 P P 16 04 19.3 -2.2
baz=198
TPNV **Topopah Spring** 74.79 44 IAmb IAmb 16 04 37.6
comp=Z,23nm,1.1s
Q17K **Contact Creek** 75.09 9 P P 16 04 21.7 -2.5
baz=197
KDAK **Kodiak Island** 75.19 11 LR LR 16 30 34.0
comp=Z,373nm,21.5s,baz=206,slow=30
KDAK **Kodiak Island** 75.19 11 P P 16 04 23.5 -1.1
baz=200
O14K **Tigyukauivet M** 75.36 6 P P 16 04 24.3 -1.2
baz=192
Q16K **King Salmon** 75.38 9 P P 16 04 24.3 -1.3
baz=196
H04D **Lebanon** 75.38 35 IAmb IAmb 16 04 34.8
comp=Z,20nm,0.9s
J05D **Fort Rock, OR** 75.43 36 IAmb IAmb 16 04 29.1
comp=Z,46nm,1.2s
O15K **Ungalikhiuk R** 75.45 7 P P 16 04 24.4 -1.6
baz=193
P16K **Nushagak River** 75.53 8 P P 16 04 24.5 -2.0
baz=195
G03D **McMinnville, O** 75.54 34 IAmb IAmb 16 04 29.4
comp=Z,37nm,1.0s
Q18K **Katmai Hardscr** 75.60 10 P P 16 04 25.7 -1.4
baz=198
H04A **Detroit Lake** 75.78 35 IAmb IAmb 16 04 42.6
comp=Z,34nm,1.2s
PRN **Pahroc Range** 75.84 44 IAmb IAmb 16 04 43.9
comp=Z,28nm,1.1s
P17K **Kvichak River** 75.91 9 P P 16 04 27.4 -1.2
baz=196
N14K **Kuskokwak Cree** 75.98 6 P P 16 04 27.0 -2.0
baz=191
Q20K **Shuyak Island** 76.01 11 P P 16 04 26.9 -2.4
baz=200
I05D **Terrebonne, OR** 76.03 35 IAmb IAmb 16 04 39.5
comp=Z,34nm,1.2s
O16K **Kokwok River B** 76.06 8 P P 16 04 27.4 -2.1
baz=195
M11K **Mekoryuk** 76.09 3 P P 16 04 27.6 -2.0
baz=187
SBUM **Sibu** 76.16 277 P P 16 04 32.2 +1.1
TUC **Tucson** 76.25 50 P P 16 04 31.2 -0.2
TUC **Tucson** 76.25 50 P P 16 04 31.2 -0.2
TUC pmax pmax
comp=Z,20nm,1.2s
P18K **Big Mountain,** 76.27 9 P P 16 04 28.7 -2.1
baz=197
M13K **Dall Lake** 76.31 5 P P 16 04 29.3 -1.6
baz=189
O17K **Koliganek Bris** 76.37 8 P P 16 04 29.5 -1.7
baz=196
N15K **Kwethluk River** 76.39 7 P P 16 04 29.5 -1.9
baz=193
WVOR **Wild Horse Val** 76.42 38 P P 16 04 33.2 +1.0
G05A **Wamic** 76.61 35 IAmb IAmb 16 04 47.7
comp=Z,34nm,1.1s
NLWA **Neilton Lookou** 76.66 32 IAmb IAmb 16 04 36.0
comp=Z,26nm,1.1s
KPJI **Karang Pucung** 76.71 266 P P 16 04 33.7 -0.5
comp=Z,26nm,0.7s
O18K **Koktuh Hills** 76.72 9 P P 16 04 31.9 -1.4
baz=197
KSRS **Korea Array** 76.77 315 P P 16 04 35.9 +1.8
comp=Z,7.5nm,0.9s,baz=129,slow=6.8,SNR=20
KSRS LR LR 16 32 44.6
comp=Z,34µm,21.8s,baz=135,slow=31
comp=Z,7.5nm,0.9s
M14K **Bethel** 76.77 5 P P 16 04 32.4 -1.1
baz=191,SNR=6.3
X16A **Lo Mia Camp, P** 76.80 48 IAmb IAmb 16 04 49.5
comp=Z,22nm,1.0s
N16K **Nishlik Lake** 76.84 7 P P 16 04 32.4 -1.6
baz=194
M15K **Kasigluk River** 76.84 6 P P 16 04 32.8 -1.0
baz=192
P19K **Oil Pt** 76.84 10 P P 16 04 31.7 -2.3
baz=199
319A **Douglas** 76.94 52 IAmb IAmb 16 04 50.1
comp=Z,27nm,1.1s
G06A **Carlson Farm,** 76.98 35 IAmb IAmb 16 04 50.8
comp=Z,57nm,1.8s
N17K **Nushagak Hills** 77.09 8 P P 16 04 33.9 -1.4
baz=195
HOM **Homer** 77.13 11 P P 16 04 33.6 -1.9
baz=201
KNB **Kanab** 77.14 45 IAmb IAmb 16 04 52.4
comp=Z,33nm,1.1s
O19K **Port Alsworth** 77.18 9 P P 16 04 33.8 -2.0
baz=198
U15A **North Rim** 77.21 46 IAmb IAmb 16 04 52.0
comp=Z,27nm,1.1s
SZCU **Shurtz Canyon** 77.26 45 IAmb IAmb 16 04 52.8
comp=Z,50nm,1.8s
L14K **Kuka Creek** 77.29 5 IAmb IAmb 16 04 51.5
comp=Z,35nm,1.0s
L14K **Kuka Creek** 77.29 5 P P 16 04 33.8 -2.6
baz=190
GNW **Green Mountain** 77.31 32 IAmb IAmb 16 04 51.6
comp=Z,32nm,1.3s
LON **Longmire** 77.31 33 IAmb IAmb 16 05 00.6
comp=Z,33nm,1.6s
M16K **Timber Creek** 77.35 7 P P 16 04 34.7 -2.1
baz=194
O20K **Slope Mountain** 77.35 10 P P 16 04 34.4 -2.5
baz=200
BRSE **Bradley Lake S** 77.37 11 P P 16 04 34.8 -2.2
baz=202
N18K **Kilae Creek** 77.41 8 P P 16 04 35.5 -1.6
baz=197
CLRS **Cowichan Lake** 77.48 31 IAmb IAmb 16 04 57.1
comp=Z,52nm,1.7s
ELK **Elko** 77.54 41 P P 16 04 39.5 +0.8
RED **Redoubt Volcan** 77.65 10 IAmb IAmb 16 04 52.2
comp=Z,28nm,1.0s
INCN **Inchon** 77.66 315 P P 16 04 40.0 +0.9
PGC **Sidney** 77.71 31 IAmb IAmb 16 04 53.7
comp=Z,36nm,1.3s
KSM **Kuching** 77.71 275 P P 16 04 40.8 +0.9
K13K **Kusilvak Mount** 77.73 4 P P 16 04 38.1 -0.7
baz=188
L15K **Ungalak Mounta** 77.73 6 P P 16 04 37.3 -1.5
baz=191
N19K **Bonanza Creek** 77.75 9 IAmb IAmb 16 04 53.5
comp=Z,48nm,1.6s
N19K **Bonanza Creek** 77.75 9 P P 16 04 38.4 -0.7
baz=198
HPIG 77.82 57 IAmb IAmb 16 04 54.9
comp=Z,44nm,1.3s
M17K **Holitna River** 77.90 8 P P 16 04 38.2 -1.6
baz=195
BBJI **Bungbulang** 77.91 266 P P 16 04 41.4 +0.3
G08A **Pilot Rock** 77.95 36 IAmb IAmb 16 04 42.9
comp=Z,27nm,1.1s
L16K **Owhat River** 77.96 6 IAmb IAmb 16 04 55.4
comp=Z,33nm,1.2s
L16K **Owhat River** 77.96 6 P P 16 04 38.4 -1.8
baz=193
USRK **Ussuriysk Ar.** 77.98 323 P P 16 04 42.2 +1.6
comp=Z,14nm,0.9s,baz=99,slow=3.6,SNR=12

comp=Z,14nm,0.9s
BBB **Bella Bella** 78.00 26 LR LR 16 30 20.9
comp=Z,209nm,20.6s,baz=226,slow=29
LEM **Lembang** 78.09 266 P P 16 04 42.3 0.0
comp=Z,37nm,0.7s,baz=39,slow=5.8,SNR=11
LEM LR LR 16 39 25.0
comp=Z,189nm,21.3s,baz=170,slow=36
comp=Z,37nm,0.7s
MTPU **Mount Pierson** 78.11 45 IAmb IAmb 16 04 45.2
comp=Z,47nm,1.5s
M18K **Stony River** 78.20 8 P P 16 04 40.2 -1.3
baz=197
TCRU **Three Creeks R** 78.22 44 IAmb IAmb 16 04 57.7
comp=Z,24nm,0.9s
E07A **Sunnyside** 78.23 34 IAmb IAmb 16 04 44.4
comp=Z,28nm,1.0s
O22K **Cooper Landing** 78.25 11 P P 16 04 40.3 -1.5
baz=203
P23K **Montague Islan** 78.28 13 P P 16 04 39.1 -2.9
baz=205
HAWA **Hanford** 78.31 35 IAmb IAmb 16 04 57.9
comp=Z,42nm,1.4s
K15K **Wolf Creek Mou** 78.33 5 P P 16 04 40.4 -1.8
baz=191
N20K **Mount Spurr** 78.48 10 P P 16 04 41.4 -1.8
baz=200
SPCR **Spurr Chakacha** 78.48 10 P P 16 04 42.2 -1.0
baz=200
CRAG **Craig** 78.50 22 P P 16 04 42.0 -1.3
baz=219
L17K **Donlin** 78.51 7 P P 16 04 41.7 -1.5
baz=194
WAH2 **Wahluke Slope** 78.51 34 IAmb IAmb 16 04 58.2
comp=Z,44nm,1.4s
121A **Cookes Peak, D** 78.60 51 IAmb IAmb 16 04 59.7
comp=Z,65nm,1.7s
J14K **Nanvaranak Lak** 78.61 4 P P 16 04 42.2 -1.5
baz=189
E08A **Dider Farm, El** 78.63 35 IAmb IAmb 16 04 58.9
comp=Z,38nm,1.4s
BMO **Blue Mountains** 78.63 37 IAmb IAmb 16 04 58.7
comp=Z,29nm,1.4s
L18K **Granite Mounta** 78.79 8 IAmb IAmb 16 05 00.8
comp=Z,36nm,1.2s
L18K **Granite Mounta** 78.79 8 P P 16 04 43.5 -1.3
baz=196
RC01 **Rabbit Creek A** 78.81 11 P P 16 04 43.6 -1.4
baz=203
PWL **Port Wells** 78.87 12 P P 16 04 43.9 -1.4
baz=204
KAIM **Kayak Island** 78.88 14 P P 16 04 44.4 -1.0
baz=208
M20K **Styx River** 78.97 9 P P 16 04 45.0 -0.9
baz=199
SUA **Susitna One** 78.98 11 P P 16 04 45.1 -0.8
baz=202
L19K **White Mountain** 79.00 9 P P 16 04 45.7 -0.2
baz=198
SIT **Sitka** 79.01 20 P P 16 04 45.3 -0.7
baz=217
U33K **Whale Pass** 79.01 21 P P 16 04 45.1 -1.0
baz=219
HMU **Henry Mountain** 79.04 45 IAmb IAmb 16 05 02.3
comp=Z,48nm,1.4s
D08A **Wollman Farm,** 79.05 34 IAmb IAmb 16 05 01.2
comp=Z,36nm,1.2s
K17K **Iditarod** 79.07 7 IAmb IAmb 16 05 02.4
comp=Z,45nm,1.3s
K17K **Iditarod** 79.07 7 P P 16 04 45.0 -1.3
baz=194
TPI **Tanjunggpandan** 79.11 270 P P 16 04 47.3 -0.3
comp=Z,39nm,1.0s
EYAK **Cordova Ski Ar** 79.14 13 P P 16 04 45.7 -0.9
baz=206
E09A **Wood Farm, Sta** 79.14 35 IAmb IAmb 16 05 01.3
comp=Z,44nm,1.5s
GLI **Glacier Island** 79.14 13 IAmb IAmb 16 05 00.5
comp=Z,41nm,1.1s
GLI **Glacier Island** 79.14 13 P P 16 04 45.9 -0.8
baz=205
GAMB **Gambell** 79.31 1 P P 16 04 46.7 -0.8
baz=181
SKT **Skwentna** 79.32 10 P P 16 04 46.3 -1.5
baz=201
BGLC **Bering Glacier** 79.33 15 P P 16 04 46.8 -0.9
baz=209
F10A **Beach Ranch, E** 79.33 36 IAmb IAmb 16 04 49.8
comp=Z,24nm,1.0s
KNK **Knik Glacier** 79.36 12 P P 16 04 46.7 -1.2
baz=204
M22K **Willow** 79.36 11 P P 16 04 46.5 -1.3
baz=202
J16K **Anvik River** 79.39 6 P P 16 04 47.8 -0.3
baz=192
PMR **Palmer** 79.39 11 P P 16 04 48.6 +0.6
PMR **Palmer** 79.39 11 P P 16 04 47.7 -0.4
baz=203
TMUT **Trail Mountain** 79.40 44 IAmb IAmb 16 05 04.3
comp=Z,32nm,1.0s
L20K **Farewell, AK** 79.42 9 P P 16 04 47.7 -0.6
baz=198
S31K **Pelican** 79.45 19 P P 16 04 47.6 -0.8
baz=216
WRAK **Wrangell Islan** 79.52 22 P P 16 04 48.2 -0.6
baz=219
S32K **Killisnoo** 79.58 20 P P 16 04 48.4 -0.7
baz=217
GHO **Glory Hole Cre** 79.60 11 IAmb IAmb 16 05 03.2
comp=Z,35nm,1.3s
MDJ **Mudanjiang** 79.62 322 P P 16 04 51.5 +1.8
MDJ pmax pmax
comp=Z,27nm,1.1s
MDJ **Mudanjiang** 79.62 322 P P 16 04 50.7 +1.0
B08A **Colville Reser** 79.62 33 IAmb IAmb 16 05 03.6
comp=Z,32nm,1.4s
J17K **VABM Dome** 79.65 6 P P 16 04 48.6 -0.8
baz=193
DIV **Divide** 79.65 13 IAmb IAmb 16 05 03.5
comp=Z,44nm,1.2s
HVU **Hansel Valley** 79.66 41 IAmb IAmb 16 05 04.7
comp=Z,35nm,1.4s
MESA **MESA** 79.71 15 IAmb IAmb 16 05 13.1
comp=Z,32nm,1.0s
MESA **MESA** 79.71 15 P P 16 04 48.7 -1.3
baz=210
WAX **Waxell Ridge** 79.72 15 IAmb IAmb 16 05 04.4
comp=Z,45nm,1.2s
SML **Sawmill** 79.74 12 P P 16 04 48.1 -1.9
baz=204
BMRM **Bremner River** 79.77 14 P P 16 04 48.9 -1.3
baz=208
P17A **Butcher Ranch,** 79.80 44 IAmb IAmb 16 05 06.1
comp=Z,31nm,1.1s
C09A **Chrisman Ranch** 79.85 34 IAmb IAmb 16 05 06.0
comp=Z,30nm,1.2s
M23K **Glacier View** 79.85 12 P P 16 04 49.2 -1.4
baz=204
JLU **Jordanelle** 79.91 43 IAmb IAmb 16 05 06.2
comp=Z,52nm,1.6s
YAH **Yahtse** 79.92 15 IAmb IAmb 16 05 05.8
comp=Z,41nm,1.2s
CRQM **Cirque** 79.92 14 IAmb IAmb 16 05 16.1
comp=Z,28nm,1.0s
CRQE **Cirque** 79.93 14 P P 16 04 49.7 -1.5
baz=209
CUT **Chulitna** 79.94 10 P P 16 04 49.7 -1.3
baz=202
PNL **Peninsula** 79.94 17 P P 16 04 49.7 -1.4
baz=213
KLU **Klutina** 79.95 13 P P 16 04 50.1 -1.1
baz=206
SCM **Sheep Creek Mo** 79.96 12 IAmb IAmb 16 05 05.3
comp=Z,44nm,1.2s
SCM **Sheep Creek Mo** 79.96 12 P P 16 04 50.4 -0.9
baz=205
I17K **Unalakleet** 79.97 5 P P 16 04 50.0 -1.1
baz=192
VHRN **Van Horn** 79.98 54 IAmb IAmb 16 05 07.0
comp=Z,30nm,1.1s
J18K **Innoko River** 79.99 7 IAmb IAmb 16 05 06.8
comp=Z,35nm,1.1s
J18K **Innoko River** 79.99 7 P P 16 04 50.4 -0.9
baz=196
TGL **Tana Glacier** 79.99 14 IAmb IAmb 16 05 05.7
comp=Z,38nm,1.3s
MNTX **Cornudas Mount** 80.06 53 IAmb IAmb 16 05 07.3
comp=Z,33nm,1.2s
PINM **Pinnacle** 80.07 16 P P 16 04 51.1 -0.8

	baz=212							
PPLA	**Purkeypile**	80.08	9	P	**P**	16 04 50.9	-1.1	
	baz=200							
TABL	**Table Mountain**	80.14	15	IAmb	IAmb	16 05 06.6		
	comp=Z,30nm,1.2s							
GRNC	**Granite Creek**	80.23	15	IAmb	IAmb	16 05 17.9		
	comp=Z,45nm,1.3s							
PV05	**Paradox Valley**	80.24	46	IAmb	IAmb	16 05 08.8		
	comp=Z,32nm,1.0s							
R32K	**Eaglecrest**	80.25	19	P	**P**	16 04 51.6	-1.1	
	baz=217							
VRDI	**Verde Repeater**	80.26	14	IAmb	IAmb	16 05 07.2		
	comp=Z,34nm,1.2s							
ANM	**Nome**	80.30	3	P	**P**	16 04 52.4	-0.5	
	baz=187							
N25K	**Chitina, Valde**	80.33	13	IAmb	IAmb	16 05 08.2		
	comp=Z,42nm,1.4s							
N25K	**Chitina, Valde**	80.33	13	P	**P**	16 04 51.6	-1.7	
	baz=208,SNR=7.9							
GLB	**Gilahina Butte**	80.37	14	IAmb	IAmb	16 05 08.2		
	comp=Z,36nm,1.3s							
P29M	**Windy Craggy**	80.37	17	P	**P**	16 04 52.6	-0.9	
	baz=214,SNR=5.1							
TX31	**Lajitas Ar. Si**	80.42	56	IAmb	IAmb	16 05 09.6		
	comp=Z,52nm,1.2s							
TXAR	**Lajitas Array**	80.42	56	P	**P**	16 04 55.4	+0.9	
TXAR	**Lajitas Array**	80.42	56	P	**P**	16 04 55.6	+1.2	
	comp=Z,7.1nm,1.0s,baz=232,slow=6.1,SNR=45							
TXAR				LR	LR	16 31 57.3		
	comp=Z,441nm,22.0s,baz=238,slow=29							
	comp=Z,7.1nm,1.0s							
PV17	**East Wray Mesa**	80.43	46	IAmb	IAmb	16 05 09.1		
	comp=Z,26nm,1.2s							
PV14	**Lion Creek, Pa**	80.43	46	IAmb	IAmb	16 05 09.2		
	comp=Z,30nm,1.1s							
M24K	**Tolsona, Glenn**	80.45	12	P	**P**	16 04 53.1	-0.8	
	baz=206							
PV13	**Radium Mtn., P**	80.47	46	IAmb	IAmb	16 05 09.4		
	comp=Z,30nm,1.2s							
PV16	**Nyswonger Mesa**	80.47	46	IAmb	IAmb	16 05 09.5		
	comp=Z,48nm,1.4s							
PV03	**Paradox Valley**	80.49	46	IAmb	IAmb	16 05 09.5		
	comp=Z,32nm,1.2s							
MCARA	**McCarthy VSAT**	80.50	14	P	**P**	16 04 53.0	-1.1	
	baz=209							
PV11	**David Mesa, Pa**	80.50	46	IAmb	IAmb	16 05 10.2		
	comp=Z,56nm,1.3s							
LOGN	**Logan Glacier**	80.50	15	IAmb	IAmb	16 05 08.6		
	comp=Z,40nm,1.4s							
PV04	**Paradox Valley**	80.52	46	IAmb	IAmb	16 05 09.8		
	comp=Z,29nm,1.1s							
CTG	**Chitna Glacier**	80.54	15	P	**P**	16 04 53.0	-1.4	
	baz=211							
BARN	**Barnard Glacie**	80.54	15	IAmb	IAmb	16 05 09.6		
	comp=Z,53nm,1.3s							
PV21	**Cone Mtn., Par**	80.55	46	IAmb	IAmb	16 05 10.0		
	comp=Z,27nm,1.0s							
WAT6	**Susitna Watana**	80.56	12	P	**P**	16 04 53.8	-0.8	
	baz=204							
H16K	**Elim**	80.58	5	P	**P**	16 04 52.7	-1.7	
	baz=190							
PLBC	**Pleasant Camp**	80.63	18	P	**P**	16 04 53.9	-0.9	
	baz=215							
J19K	**Poorman**	80.63	8	P	**P**	16 04 53.7	-1.1	
	baz=197							
WAT1	**Susitna Watana**	80.64	11	P	**P**	16 04 54.0	-0.8	
	baz=204							
O28M	**Mount Upton**	80.67	16	P	**P**	16 04 54.4	-1.0	
	baz=212							
TASM	**ASL Pad, Albuq**	80.67	50	IAmb	IAmb	16 05 23.6		
	comp=Z,20nm,1.2s							
ANMO	**Albuquerque**	80.67	50	LR	LR	16 32 31.1		
	comp=Z,376nm,21.7s,baz=332,slow=30							
ANMO	**Albuquerque**	80.67	50⇑	*i*P	**P**	16 04 54.5	-1.4	
ANMO				pmax	pmax			
	comp=Z,10.0nm,1.6s							
O29M	**Mount Kennedy**	80.70	17	IAmb	IAmb	16 05 10.0		
	comp=Z,43nm,1.4s							
O29M	**Mount Kennedy**	80.70	17	P	**P**	16 04 54.3	-1.0	
	baz=213							
T35M	**Bob Quinn**	80.70	22	P	**P**	16 04 53.8	-1.5	
	baz=221							
NEW	**Newport**	80.74	34	LR	LR	16 33 24.5		
	comp=Z,313nm,19.8s,baz=221,slow=30							
NJ2	**Nanjing**	80.78	307	*e*P	**P**	16 04 57.4	+1.2	
G15K	**Niukluk**	80.81	4	P	**P**	16 04 55.1	-0.5	
	baz=189							
KTH	**Kantishna Hill**	80.90	10	P	**P**	16 04 54.9	-1.3	
KTH				IAmb	IAmb	16 05 10.5		
	comp=Z,56nm,1.4s							
TRF	**Thorofare Moun**	80.91	10	IAmb	IAmb	16 05 22.8		
	comp=Z,24nm,1.0s							
TRF	**Thorofare Moun**	80.91	10	P	**P**	16 04 55.3	-1.2	
	baz=202,SNR=7.8							
HARP	**HAARP**	80.92	13	P	**P**	16 04 55.7	-0.7	
	baz=207							
SKAG	**Skagway**	80.94	18	P	**P**	16 04 57.8	+1.4	
SKAG	**Skagway**	80.94	18	P	**P**	16 04 55.7	-0.7	
	baz=216							
CHUM	**Lake Minchumin**	80.99	9	P	**P**	16 04 55.6	-1.0	
	baz=200							
P30M	**Million Dollar**	81.00	17	P	**P**	16 04 56.0	-0.9	
	baz=215							
J20K	**Nowinta River**	81.00	8	IAmb	IAmb	16 05 12.1		
	comp=Z,46nm,1.2s							
J20K	**Nowinta River**	81.00	8	P	**P**	16 04 55.7	-1.0	
	baz=198,SNR=7.5							
H17K	**Granite Mounta**	81.07	6	P	**P**	16 04 55.1	-1.9	
	baz=193							
DHY	**Denali Highway**	81.08	11	P	**P**	16 04 56.1	-1.3	
	baz=205							
S34M	**Telegraph Cree**	81.09	21	P	**P**	16 04 55.5	-1.8	
	baz=220							
GCSA	**Galena City Sc**	81.20	7	P	**P**	16 04 57.0	-0.7	
	baz=196							
YUK8	**Steele Glacier**	81.21	15	P	**P**	16 04 57.2	-1.1	
	baz=212							
SMAI	**San Martin Ant**	81.23	159	P	**P**	16 04 59.7	+1.7	
YUK6	**Outpost Mounta**	81.29	16	P	**P**	16 04 57.5	-1.1	
	baz=213							
G16K	**Koyuk River**	81.32	4	P	**P**	16 04 57.3	-1.0	
	baz=190							
PAX	**Paxson**	81.37	12	P	**P**	16 04 57.6	-1.2	
	baz=207							
M26K	**Nabesna, AK**	81.40	14	IAmb	IAmb	16 05 13.3		
	comp=Z,50nm,1.2s							
M26K	**Nabesna, AK**	81.40	14	P	**P**	16 04 57.8	-1.1	
	baz=209,SNR=10							
BPAW	**Bear Paw Mtn.**	81.40	10	P	**P**	16 04 58.0	-0.9	
	baz=201							
MCK	**McKinley**	81.40	11	IAmb	IAmb	16 05 13.5		
	comp=Z,40nm,1.0s							
MCK	**McKinley**	81.40	11	P	**P**	16 04 57.9	-1.0	
	baz=203,SNR=9.5							
KASI	**Kota Agung**	81.43	267	P	**P**	16 04 58.8	-1.3	
	comp=Z,72nm,1.0s							
HYT	**Haines Junctio**	81.43	17	P	**P**	16 04 58.5	-0.7	
	baz=214							
H18K	**Honhosa River**	81.44	6	P	**P**	16 04 58.3	-0.7	
	baz=194							
YUK3	**Moose Creek**	81.45	15	P	**P**	16 04 58.7	-0.8	
	baz=211							
Q32M	**Nakina River**	81.51	20	P	**P**	16 04 58.0	-1.8	
	baz=219							
BNX	**BinXian**	81.53	322	⇑P	**P**	16 05 00.3	+0.4	
BNX				pmax	pmax			
	comp=Z,45nm,1.1s							
P32M	**Atlin**	81.54	19	P	**P**	16 04 58.7	-1.1	
	baz=218							
I20K	**Naaghedeneel**	81.55	8	P	**P**	16 04 58.7	-0.9	
	baz=198							
YUK4	**Talbot Arm**	81.55	16	P	**P**	16 04 58.6	-1.4	
	baz=213							
M27K	**Edge Creek, AK**	81.61	14	P	**P**	16 04 58.4	-1.8	
	baz=210							
S22A	**4UR Ranch, Cre**	81.67	47	IAmb	IAmb	16 05 16.4		
	comp=Z,35nm,1.3s							
DLMT	**Dillon**	81.68	38	IAmb	IAmb	16 05 35.8		
	comp=Z,31nm,1.3s							
CN2	**Changchun**	81.69	320	P	**P**	16 05 01.6	+0.8	
CN2				pP	pwP	16 05 15.7	+4.8	
CN2				pmax	pmax			
	comp=Z,40nm,0.9s							
MSO	**Missoula**	81.69	36	IAmb	IAmb	16 05 14.9		
	comp=Z,32nm,1.4s							
MENT	**Mentasta**	81.71	13	P	**P**	16 05 01.6	+1.1	
FXWY	**Fox Creek**	81.73	40	IAmb	IAmb	16 05 16.2		
	comp=Z,30nm,1.3s							
O30N	**Mendenhall**	81.78	17	IAmb	IAmb	16 05 16.4		
	comp=Z,22nm,0.9s							
O30N	**Mendenhall**	81.78	17	P	**P**	16 04 59.3	-1.6	
	baz=216,SNR=6.1							
L26K	**Log Cabin Wild**	81.87	13	P	**P**	16 05 00.9	-0.5	
	baz=209,SNR=5.6							
DLBC	**Dease Lake**	81.87	21	LR	LR	16 35 06.1		
	comp=Z,192nm,19.6s,baz=206,slow=31							
DLBC	**Dease Lake**	81.87	21	P	**P**	16 04 59.8	-1.8	
	baz=221							
SAND	**Sanderson**	81.89	56	IAmb	IAmb	16 05 16.7		
	comp=Z,24nm,1.1s							
BVCY	**Beaver Creek**	81.91	14	P	**P**	16 05 00.8	-0.7	
	baz=211							
MNHN	**Monahans**	81.94	54	IAmb	IAmb	16 05 16.8		
	comp=Z,29nm,1.2s							
LWLI	**Liwa**	81.98	267	P	**P**	16 05 02.4	-0.8	
	comp=Z,59nm,0.8s							
MDSI	**Maura Dua**	82.00	268	P	**P**	16 05 01.6	-1.5	
	comp=Z,26nm,0.9s							
H19K	**Roundabout Mou**	82.01	7	P	**P**	16 05 01.0	-1.0	
	baz=196							
WHY	**Whitehorse**	82.04	18	IAmb	IAmb	16 05 17.1		
	comp=Z,38nm,1.2s							
WHY	**Whitehorse**	82.04	18	P	**P**	16 05 00.5	-2.0	
	baz=217							
N30M	**Aishikik Lake**	82.07	16	P	**P**	16 05 01.2	-1.3	
	baz=215							
G18K	**Tagagawik**	82.13	6	P	**P**	16 05 02.2	-0.4	
	baz=194							
H20K	**Anotleneega Mo**	82.16	7	P	**P**	16 05 01.9	-0.9	
	baz=197							
NEA2	**Nenana**	82.17	10	P	**P**	16 05 01.9	-1.0	
	baz=203,SNR=7.1							
RIDG	**Independent Ri**	82.18	12	P	**P**	16 05 01.0	-2.1	
	baz=207							
YPP	**Pitchstone Pla**	82.19	40	IAmb	IAmb	16 05 32.6		
	comp=Z,52nm,1.9s							
PDAR	**Pinedale Array**	82.22	42	P	**P**	16 05 03.8	-0.2	
PDAR	**Pinedale Array**	82.22	42	P	**P**	16 05 04.6	+0.7	
	comp=Z,4.2nm,0.8s,baz=215,slow=2.9,SNR=35							
PDAR				LR	LR	16 35 03.8		
	comp=Z,324nm,20.4s,baz=224,slow=31							
	comp=Z,4.2nm,0.8s							
L27K	**Beaver Creek,**	82.24	14	P	**P**	16 05 02.1	-1.2	
	baz=210							
BCAR	**Beaver Creek A**	82.25	14	P	**P**	16 05 03.2	-0.2	
I21K	**Tanana**	82.26	9	P	**P**	16 05 01.5	-1.8	
	baz=200							
R33M	**Jennings River**	82.28	20	P	**P**	16 05 01.6	-2.1	
	baz=220							
MLY	**Manley**	82.31	9	IAmb	IAmb	16 05 17.8		
	comp=Z,28nm,1.3s							
MLY	**Manley**	82.31	9	P	**P**	16 05 01.5	-2.1	
	baz=201							
P33M	**Teslin, Yukon**	82.31	19	P	**P**	16 05 01.2	-2.6	
	baz=219							
BOZ	**Bozeman (W)**	82.38	38	IAmb	IAmb	16 05 20.2		
	comp=Z,31nm,1.2s							
HDA	**Harding Lake**	82.38	11	IAmb	IAmb	16 05 18.5		
	comp=Z,20nm,0.8s							
HDA	**Harding Lake**	82.38	11	P	**P**	16 05 03.1	-0.9	
	baz=205,SNR=10							
F17K	**Baldwin Pennin**	82.44	5	P	**P**	16 05 02.2	-2.0	
	baz=191							
CCB	**Clear Creek Bu**	82.44	11	IAmb	IAmb	16 05 18.2		
	comp=Z,36nm,1.1s							
N31M	**Braeburn, Yuko**	82.45	17	P	**P**	16 05 02.4	-2.1	
	baz=216							
M29M	**Somme Creek**	82.52	15	P	**P**	16 05 02.9	-2.0	
	baz=213							
SCRK	**Sand Creek**	82.57	12	P	**P**	16 05 05.6	+0.4	
SCRK				IAmb	IAmb	16 05 19.5		
	comp=Z,20nm,1.0s							
SCRK	**Sand Creek**	82.57	12	P	**P**	16 05 03.3	-1.8	
	baz=208,SNR=6.2							
H21K	**Melozitna Rive**	82.59	8	P	**P**	16 05 06.2	+1.1	
H21K				IAmb	IAmb	16 05 20.0		
	comp=Z,52nm,1.6s							
H21K	**Melozitna Rive**	82.59	8	P	**P**	16 05 03.2	-1.8	
	baz=199							
I23K	**Minto, Yukon-K**	82.64	10	P	**P**	16 05 03.3	-1.9	
	baz=203							
COLA	**College**	82.64	10	P	**P**	16 05 06.6	+1.3	
COLA	**College**	82.64	10	*e*P	**P**	16 05 01.5	-3.8	
COLA				pmax	pmax			
	comp=Z,20nm,0.8s							
COLA	**College**	82.64	10	P	**P**	16 05 04.0	-1.3	
	baz=204							
DSRI	**Dabo**	82.68	272	P	**P**	16 05 07.0	+0.3	
	comp=Z,19nm,1.3s							
IL31		82.72	11	IAmb	IAmb	16 05 19.8		
	comp=Z,44nm,1.4s							
ILAR	**Eielson Array**	82.72	11	P	**P**	16 05 05.4	-0.3	
ILAR	**Eielson Array**	82.72	11	P	**P**	16 05 05.5	-0.2	
	comp=Z,5.5nm,0.7s,baz=226,slow=5.9,SNR=78							
ILAR				LR	LR	16 33 55.1		
	comp=Z,220nm,21.1s,baz=200,slow=30							
	comp=Z,5.5nm,0.7s							
F18K	**Selawik**	82.73	5	P	**P**	16 05 04.3	-1.4	
	baz=193							
IMAR	**Indian Mountai**	82.78	8	P	**P**	16 05 05.8	-0.2	
J25K	**Salcha River,**	82.86	12	IAmb	IAmb	16 05 20.9		
	comp=Z,27nm,1.1s							
J25K	**Salcha River,**	82.86	12	P	**P**	16 05 05.5	-1.1	
	baz=207,SNR=15							
POKR	**Poker Plat Res**	82.94	11	P	**P**	16 05 06.1	-0.7	
	baz=205,SNR=7.0							
SEY	**Seymchan**	83.01	345	*e*P	**P**	16 05 06.9	-0.3	
SEY				pmax	pmax			
	comp=Z,19nm,1.1s							
H22K	**Ishtalitna Cre**	83.02	9	P	**P**	16 05 06.3	-1.0	
	baz=201							
K27K	**Chicken**	83.02	13	IAmb	IAmb	16 05 23.2		
	comp=Z,24nm,1.3s							
K27K	**Chicken**	83.02	13	P	**P**	16 05 05.7	-1.6	
	baz=210							
E17K	**Hotham Inlet**	83.03	4	P	**P**	16 05 07.4	+0.2	
	baz=191							
M30M	**Minto, Yukon**	83.07	16	IAmb	IAmb	16 05 22.0		
	comp=Z,26nm,1.2s							
M30M	**Minto, Yukon**	83.07	16	P	**P**	16 05 07.0	-0.6	
	baz=215,SNR=5.5							
T25A	**Trinidad**	83.12	48	IAmb	IAmb	16 05 23.2		
	comp=Z,23nm,1.2s							
J26L	**Joseph Creek**	83.12	12	IAmb	IAmb	16 05 32.0		
	comp=Z,26nm,1.0s							
J26L	**Joseph Creek**	83.12	12	P	**P**	16 05 06.8	-1.1	
	baz=208							
F19K	**Shaleruckik Mo**	83.13	6	IAmb	IAmb	16 05 34.8		
	comp=Z,16nm,0.9s							
F19K	**Shaleruckik Mo**	83.13	6	P	**P**	16 05 06.8	-1.0	
	baz=195							
L29M	**L29M**	83.17	15	P	**P**	16 05 06.7	-1.5	
	baz=214							
H23K	**Yukon River**	83.24	9	P	**P**	16 05 07.9	-0.5	
	baz=202							
G21K	**Allakaket**	83.32	8	P	**P**	16 05 07.4	-1.4	
	baz=199							
M31M	**Drury Creek, Y**	83.42	17	P	**P**	16 05 08.5	-0.9	
	baz=217							
ISCO	**Idaho Springs**	83.44	46	IAmb	IAmb	16 05 25.2		
	comp=Z,21nm,1.2s							
E18K	**Tukpahlearik C**	83.45	5	P	**P**	16 05 08.8	-0.6	
	baz=192							
H24K	**Noodor Dome**	83.52	10	P	**P**	16 05 08.6	-1.3	
	baz=204							
CMIG	**Matias Romero**	83.55	70	LR	LR	16 33 02.4		
	comp=Z,889nm,21.1s,baz=213,slow=29							
D17K	**Noatak River**	83.55	4	P	**P**	16 05 09.8	-0.2	
	baz=189							
BELA	**Belgrano 2**	83.56	172	P	**P**	16 05 10.4	+0.4	
F20K	**Avaraart Lake**	83.56	7	IAmb	IAmb	16 05 24.9		
	comp=Z,32nm,1.3s							
F20K	**Avaraart Lake**	83.56	7	P	**P**	16 05 07.7	-2.2	
	baz=196							
POST	**Post**	83.61	53	IAmb	IAmb	16 05 25.2		
	comp=Z,25nm,1.1s							
PMSA	**Palmer Station**	83.63	156	LR	LR	16 36 27.7		
	comp=Z,83nm,19.6s,baz=268,slow=31							
DAWY	**Dawson**	83.67	14	P	**P**	16 05 08.7	-2.0	
	baz=212,SNR=10.0							
E19K	**Redstone River**	83.79	6	IAmb	IAmb	16 05 32.8		
	comp=Z,22nm,0.9s							
E19K	**Redstone River**	83.79	6	P	**P**	16 05 10.1	-1.2	
	baz=195,SNR=7.3							
TIA	**Tai'an**	83.83	310	P	**P**	16 05 12.7	+0.6	
TIA				pmax	pmax			
	comp=Z,21nm,0.9s							
TOAD	**Toad River Com**	83.90	23	P	**P**	16 05 09.7	-2.2	
	baz=226							
RDOG	**Red Dog Mine**	83.91	4	P	**P**	16 05 10.1	-1.7	
	baz=190							
I26K	**Coal Creek Min**	83.92	12	IAmb	IAmb	16 05 26.7		
	comp=Z,28nm,1.2s							
I26K	**Coal Creek Min**	83.92	12	P	**P**	16 05 10.0	-1.9	
	baz=209,SNR=7.0							
K29M	**Barlow Dome**	83.93	15	IAmb	IAmb	16 05 27.1		
	comp=Z,26nm,1.1s							
K29M	**Barlow Dome**	83.93	15	P	**P**	16 05 10.8	-1.3	
	baz=214							
BTDF	**Bukit Timah Da**	83.95	273	P	**P**	16 05 14.3	+1.0	
G22K	**Bettles**	83.97	8	P	**P**	16 05 10.3	-1.8	
	baz=201							
G23K	**Bananza Creek**	83.98	9	P	**P**	16 05 09.6	-2.6	
	baz=202							
F21K	**Alatna River**	83.99	7	P	**P**	16 05 10.3	-1.9	
	baz=199							
HEH	**HeiHe**	83.99	326	*e*P	**P**	16 05 12.7	+0.1	
HEH				pmax	pmax			
	comp=Z,17nm,0.9s							
MYKOM	**Kota Tinggi**	84.00	274	IAmb	IAmb	16 05 15.0		
	comp=Z,30nm,1.2s							
MYKOM	**Kota Tinggi**	84.00	274	P	**P**	16 05 13.9	+0.4	
H25L	**Birch Creek**	84.27	11	P	**P**	16 05 11.4	-2.2	
	baz=206,SNR=5.3							
C17K	**DeLong Mountai**	84.31	4	P	**P**	16 05 11.7	-2.2	
	baz=189							
G24K	**Hadweenzic Riv**	84.38	10	P	**P**	16 05 11.8	-2.4	
	baz=204							
COLD	**Coldfoot**	84.44	9	IAmb	IAmb	16 05 29.8		
	comp=Z,36nm,1.3s							
COLD	**Coldfoot**	84.44	9	P	**P**	16 05 13.5	-1.0	
	baz=202							
I27K	**Kandik River**	84.49	13	P	**P**	16 05 13.9	-1.0	
	baz=210							
H03S2	**Juan Fernandez**	84.59	123	T	T	17 39 03.7		
	baz=250,slow=75,SNR=21							
H03S1	**Juan Fernandez**	84.60	123	T	T	17 39 05.6		
	baz=250,slow=75,SNR=17							
H03S3	**Juan Fernandez**	84.60	123	T	T	17 39 03.2		
	baz=250,slow=75,SNR=16							
C18K	**Utukok River**	84.62	4	P	**P**	16 05 14.1	-1.3	
	baz=191							
G25K	**Bearman Lake**	84.67	10	P	**P**	16 05 14.0	-1.6	
	baz=206							
E20K	**Nigu River**	84.67	6	P	**P**	16 05 14.3	-1.5	
	baz=196							
D19K	**Kuna River**	84.72	5	P	**P**	16 05 14.0	-1.9	
	baz=194							
I28M	**Miner Creek**	84.72	13	IAmb	IAmb	16 05 31.4		
	comp=Z,45nm,1.7s							
I28M	**Miner Creek**	84.72	13	P	**P**	16 05 13.7	-2.4	
	baz=212							
J30M	**Hart River**	84.83	15	P	**P**	16 05 17.5	+0.8	
J30M				IAmb	IAmb	16 05 31.4		
	comp=Z,26nm,1.2s							
J30M	**Hart River**	84.83	15	P	**P**	16 05 15.7	-1.0	
	baz=215,SNR=7.1							
BILL	**Bilibino**	84.95	352⇑	*e*P	**P**	16 05 15.4	-1.6	
BILL				pmax	pmax			
	comp=Z,15nm,1.0s							
H27K	**Steamboat Moun**	85.06	12	P	**P**	16 05 15.8	-1.9	
	baz=210							
F24K	**Squaw Lake**	85.06	9	IAmb	IAmb	16 05 37.2		
	comp=Z,24nm,1.3s							
F24K	**Squaw Lake**	85.06	9	P	**P**	16 05 16.1	-1.6	
	baz=204							
E22K	**Anaktuvuk Pass**	85.07	8	P	**P**	16 05 15.4	-2.3	
	baz=200,SNR=7.4							
D20K	**Etivluk River**	85.07	6	P	**P**	16 05 18.6	+0.9	
D20K	**Etivluk River**	85.07	6	P	**P**	16 05 16.0	-1.7	
	baz=196							
E21K	**Killik River**	85.09	7	P	**P**	16 05 16.1	-1.7	
	baz=198							
C19K	**Lookout Ridge**	85.19	5	P	**P**	16 05 17.1	-1.2	
	baz=193							
KOTAN	**Kotaneelee Air**	85.22	22	P	**P**	16 05 15.8	-2.8	
	baz=227							
G26K	**Porcupine Rive**	85.25	11	P	**P**	16 05 17.2	-1.4	
	baz=208							
B18K	**Kokolik River**	85.28	4	P	**P**	16 05 17.3	-1.4	
	baz=191							
E23K	**Chandalar**	85.30	9	IAmb	IAmb	16 05 33.9		
	comp=Z,25nm,1.2s							
E23K	**Chandalar**	85.30	9	P	**P**	16 05 17.2	-1.8	
	baz=202							
I30M	**Mount Dempster**	85.35	15	P	**P**	16 05 18.0	-1.3	
	baz=215,SNR=14							
E24K	**Your Creek**	85.48	9	IAmb	IAmb	16 05 35.1		
	comp=Z,36nm,1.6s							
E24K	**Your Creek**	85.48	9	P	**P**	16 05 18.5	-1.3	
	baz=203							
F25K	**Christian Rive**	85.49	10	IAmb	IAmb	16 05 35.2		
	comp=Z,32nm,1.6s							
F25K	**Christian Rive**	85.49	10	P	**P**	16 05 19.9	0.0	
	baz=206							
BMAR	**Burnt Mountain**	85.53	11	P	**P**	16 05 20.8	+0.8	
G27K	**Doyon Strip**	85.53	12	IAmb	IAmb	16 05 35.0		
	comp=Z,28nm,1.4s							
G27K	**Doyon Strip**	85.53	12	P	**P**	16 05 19.3	-0.8	
	baz=210,SNR=6.6							
D22K	**Ayikyak River**	85.66	7	IAmb	IAmb	16 05 35.8		
	comp=Z,22nm,1.0s							
D22K	**Ayikyak River**	85.66	7	P	**P**	16 05 20.1	-0.5	
	baz=199							
C21K	**Knifeblade Rid**	85.69	6	P	**P**	16 05 19.9	-0.9	
	baz=197							
H29M	**Whitestone**	85.72	13	P	**P**	16 05 20.4	-0.6	
	baz=213							
F26K	**Sheenjek River**	85.84	11	IAmb	IAmb	16 05 37.1		
	comp=Z,39nm,1.4s							
F26K	**Sheenjek River**	85.84	11	P	**P**	16 05 20.4	-1.2	
	baz=208							
TOLK	**Toolik Lake Re**	85.84	8	P	**P**	16 05 20.7	-0.8	
	baz=202							
E25K	**Arctic Village**	85.98	10	IAmb	IAmb	16 05 37.5		
	comp=Z,23nm,1.1s							
E25K	**Arctic

baz=216
E28M Babbage River 87.49 12 P **P**
E28M lAmb lAmb 16 05 44.4
comp=Z,30nm,1.7s
E28M Babbage River 87.49 12 P **P** **16 05 27.3 -2.3**
baz=212
ENH Enshi 87.53 302 P **P** **16 05 31.8 +1.1**
WRGLY Wrigley 87.56 20 P **P** **16 05 27.1 -2.9**
baz=227
MAW Mawson 87.59 198 P **P** **16 05 31.5 +1.3**
comp=Z,27nm,0.9s,baz=132,slow=6.1,SNR=43
MAW LR LR 16 45 10.1
comp=Z,207nm,18.1s,baz=120,slow=36
comp=Z,27nm,0.9s
C27K Jago River 87.63 10 P **P** **16 05 28.6 -1.7**
baz=208
E29M Blow River 87.64 12 P **P** **16 05 28.7 -1.6**
baz=214
C26K Camden Bay 87.70 9 P **P** **16 05 28.4 -2.2**
baz=207
XLT XiLinHaoTe 87.73 317 *e*P **P** **16 05 32.3 +0.9**
XLT pP pwP 16 05 46.3 +4.8
XLT sP sP 16 05 50.4 +8.2
XLT S **S** **16 16 14.9 +2.7**
XLT sS sS 16 16 33.6 +8.5
XLT pmax pmax
comp=Z,29nm,1.1s
XLT pmax pmax
comp=Z,180nm,4.3s
D27M Malcolm River 87.77 11 P **P** **16 05 29.1 -1.9**
baz=211
F31M Tsiigehtchic 87.78 14 P **P** **16 05 29.2 -1.7**
baz=217
HIA Hailar 87.79 323 P **P** **16 05 32.7 +1.2**
MNSI Mandailing Nat 87.83 271 P **P** **16 05 32.3 -0.2**
HILR Hailar Array B 87.92 323 P **P** **16 05 33.0 +0.9**
comp=Z,21nm,1.0s,baz=126,slow=7.5,SNR=28
HILR LR LR 16 39 11.2
comp=Z,141nm,21.6s,baz=160,slow=32
comp=Z,21nm,1.0s
KULM Kulim 88.02 276 P **P** **16 05 34.8 +1.4**
D28M Stokes Point 88.26 12 P **P** **16 05 32.3 -0.9**
baz=213
INK Inuvik 88.52 14 LR LR 16 38 53.5
comp=Z,234nm,19.2s,baz=192,slow=31
INK Inuvik 88.52 14 P **P** **16 05 33.3 -1.1**
baz=218
GYA Guiyang 88.65 298 ⇓P **P** **16 05 37.7 +1.5**
GYA pmax pmax
comp=Z,19nm,1.6s
PLCA Paso Flores 88.90 132 P **P** **16 05 39.3 +2.2**
comp=Z,2.7nm,1.0s,baz=227,slow=1.7,SNR=3.7
PLCA LR LR 16 36 42.9
comp=Z,158nm,20.9s,baz=266,slow=30
comp=Z,2.7nm,1.0s
PSI Prapat 89.01 273 P **P** **16 05 38.4 +0.2**
XAN Xi'an 89.25 306 P **P** **16 05 39.8 +1.0**
XAN pmax pmax
comp=Z,34nm,1.0s
SLVN Son La 89.51 292 P **P** **16 05 41.2 +0.9**
HHC Hu-ho-hao-te 89.64 313 *e*P **P** **16 05 41.8 +1.3**
HHC sP pwP 16 05 55.9 +5.3
HHC pmax pmax
comp=Z,40nm,0.9s
HHC pmax pmax
comp=Z,120nm,4.5s
YAK Yakutsk 89.65 337 P **P** **16 05 38.7 -1.1**
comp=Z,12nm,0.7s,baz=167,slow=0.7,SNR=7.1
YAK LR LR 16 40 04.8
comp=Z,56nm,21.2s,baz=120,slow=32
comp=Z,12nm,0.7s
YAK Yakutsk 89.65 337 *e*P **P** **16 05 38.5 -1.4**
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.5s
GSI Gunungsitoli 89.90 271 P **P** **16 05 43.5 +1.2**
GSI Gunungsitoli 89.90 271 P **P** **16 05 43.4 +1.2**
YKA Yellowknife Ar 90.25 23 P **P** **16 05 43.8 +1.1**
comp=E,2.4nm,0.8s,baz=244,slow=5.2,SNR=4.1
YKA LR LR 16 38 57.3
comp=E,314nm,19.1s,baz=249,slow=31
comp=E,2.4nm,0.8s
KCSI Kotacane, Aceh 90.31 274 P **P** **16 05 44.2 +0.1**
comp=E,24nm,0.8s
BTO Baotou 90.65 312 *e*P **P** **16 05 47.0 +1.8**
BTO pP **pwP** **16 06 00.7 +5.4**
BTO S **S** **16 16 40.9 +1.1**
BTO pmax pmax
comp=E,82nm,1.0s
BTO pmax pmax
comp=E,320nm,5.8s
BTO LR LR
comp=E,490nm,6.4s
BTO LR LR
comp=E,320nm,4.7s
BTO LR LR
comp=E,360nm,6.4s
JTS Las Juntas de 90.80 80 LR LR 16 35 48.6
comp=E,262nm,21.5s,baz=173,slow=28
JTS Las Juntas de 90.80 80⇓*e*P **P** **16 05 43.1 -3.3**
JTS pmax pmax
comp=Z,10.0nm,1.3s
C36M Paulatuk 91.59 15 P **P** **16 05 46.9 -1.8**
baz=226
KMI Kunming 91.63 296 P **P** **16 05 49.8 -0.5**
KMI pmax pmax
comp=Z,12nm,1.2s
SYO Syowa Base 92.33 191⇑*i*P **P** **16 05 52.4 0.0**
SYO Syowa Base 92.33 191⇑*ep*P pP 16 05 56.8 -3.1
TROLL Troll, Antarti 92.37 179 ⇑P **P** **16 05 53.6 +0.8**
comp=Z,1μm,0.8s
VNA3 Neumayer Olymp 92.44 175 ⇑P **P** **16 05 53.7 +0.8**
comp=Z,39nm,0.7s
NNA Nana 92.49 103 LR LR 16 37 36.0
comp=Z,115nm,21.7s,baz=258,slow=29
SNAA Sanae 92.50 177 ⇑P **P** **16 05 53.9 +0.5**
comp=Z,257nm,0.9s
SNAA Sanae 92.50 177 P **P** **16 05 53.8 +0.5**
SNAA Sanae 92.50 177 P **P** **16 05 53.6 +0.3**
comp=Z,16nm,1.0s,baz=205,slow=3.0,SNR=31
SNAA LR LR 16 43 11.3
comp=Z,96nm,20.2s,baz=192,slow=33
comp=Z,16nm,1.0s
SNAA Sanae 92.50 177 P **P** **16 05 53.8 +0.5**
SNAA pmax pmax
comp=Z,34nm,1.2s
CIT Chita 92.52 324 *e*P **P** **16 05 54.6 +1.0**
CIT *e* 16 05 59.0
CIT *e* 16 09 43.4
CIT pmax pmax
comp=Z,130nm,2.1s
PZH PanZhiHua 92.88 297 P **P** **16 05 55.8 -0.1**
VNA2 Neumayer--Watz 92.94 175 ⇑P **P** **16 05 56.7 +1.5**
comp=Z,39nm,0.8s,baz=178,slow=5.2
VNA1 Neumayer--Stat 93.13 175 ⇑P **P** **16 05 57.2 +1.1**
comp=Z,72nm,1.0s
A36M Sachs Harbour 93.15 13 P **P** **16 05 54.6 -1.3**
baz=225
CMAR Chiang Mai Arr 93.20 288 P **P** **16 05 58.2 +0.8**
comp=Z,5.6nm,1.1s,baz=100,slow=2.7,SNR=30
CMAR LR LR 16 42 20.1
comp=Z,50nm,21.5s,baz=85,slow=32
comp=Z,5.6nm,1.1s
CHTO Chiang Mai 93.29 289 P **P** **16 05 58.7 +0.9**
LZH Lanzhou 93.84 306 *e*P **P** **16 06 01.7 +1.5**
LZH pP pP 16 06 08.7 +0.6
LZH sP pwP 16 06 14.5 +4.2
LZH pmax pmax
comp=Z,31nm,1.2s
ULN Ulaanbaatar 95.04 318⇓*e*P **P** **16 06 04.6 -0.8**
ULN pmax pmax
comp=Z,12nm,1.2s
SONM Songino Array 95.45 318 P **P** **16 06 07.4 +0.2**
comp=Z,1.9nm,0.7s,baz=118,slow=3.7,SNR=9.6
comp=Z,1.9nm,0.7s
TIXI Tiksi 95.50 344 LR LR 16 43 23.2
comp=Z,80nm,21.0s,baz=192,slow=32
TIXI Tiksi 95.50 344⇓*e*P **P** **16 06 06.6 -0.1**
TIXI pmax pmax
comp=Z,4.0nm,0.9s
GTA Gaotai 97.80 309 *e*P Pdif 16 06 19.2 +1.1
GTA pmax pmax
comp=Z,8.0nm,0.9s
TKL Tuckaleechee C 98.32 55 LR LR 16 43 53.9
comp=Z,338nm,19.8s,baz=246,slow=31
LPAZ La Paz 99.22 110 LR LR 16 40 43.7
comp=Z,90nm,21.7s,baz=244,slow=29
ROSC El Rosal 99.53 88 LR LR 16 41 40.7
comp=Z,172nm,21.3s,baz=233,slow=30
WMQ Urumqi 107.48 312 Pdif **Pdif** **16 07 01.2 +0.2**
ZALV Zalesovo Beam 109.82 322 PKiKP **PKiKP** **16 11 12.8 -0.5**
comp=Z,2.0nm,0.6s,baz=96,slow=1.4,SNR=7.6
MK31 Makanchi Array 111.44 314*c i*PKiKP **PKiKP** **16 11 15.4 -1.3**
MKAR Makanchi Array 111.44 314 PKiKP **PKiKP** **16 11 16.1 -0.6**
comp=Z,1.8nm,0.6s,baz=71,slow=0.8,SNR=18
KURK Kurchatov 113.75 319⇓*i*PKiKP **PKiKP** **16 11 19.3 -1.5**
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURBB Kurchatov Arra 113.81 319 PKiKP **PKiKP** **16 11 20.3 -0.7**
comp=Z,2.8nm,0.8s,baz=93,slow=1.9,SNR=27
KSH Kashi 116.09 307 PKP **PKiKP** **16 11 27.2 +1.3**
BVAR Borovoye Array 118.48 322 PKP **PKPdf** **16 11 29.6 -0.3**
comp=Z,6.6nm,0.7s,baz=81,slow=1.5,SNR=43
BORK Borovoye 118.52 322*c i*PKiKP **PKPdf** **16 11 29.1 -0.9**
BORK pmax pmax
comp=Z,14nm,1.7s
SVE Sverdlovsk 122.71 328 *e*PKiKP **PKPdf** **16 11 37.7 -0.2**
SVE pmax pmax
comp=Z,10.0nm,0.9s
ARTI Arti 124.02 328 *i* PKiKP **PKPdf** **16 11 39.9 -0.6**
ARTI 16 13 22.5
ARTI 16 18 47.0
ARTI SS SS 16 30 12.1 -0.7
ARCES ARCESS Array B 125.05 352 PKP **PKPdf** **16 11 41.8 -0.3**
comp=Z,4.1nm,0.6s,baz=24,slow=1.1,SNR=24
KIRV Kirov 127.09 334*c i*PKiKP **PKPdf** **16 11 45.4 -0.8**
KLMR Klimovskoe 129.31 340 *e*PKiKP **PKPdf** **16 11 47.1 -3.3**
KLMR pmax pmax
comp=Z,20nm,1.3s
FINES FINESS Array B 132.41 348 PKP **PKPdf** **16 11 56.6 +0.3**
comp=Z,2.5nm,0.7s,baz=11,slow=1.8,SNR=15
BOSA Boshof 132.50 202 PKP **PKiKP** **16 11 59.2 +0.4**
comp=Z,6.0nm,0.9s,baz=150,slow=4.5,SNR=5.8
OBN Obninsk 134.65 337⇓*i*PKiKP **PKPdf** **16 12 00.9 +0.3**
OBN *e* 16 14 31.5
OBN pmax pmax
comp=Z,22nm,1.3s
OBN MLR MLR
comp=Z,112nm,20.0s
NB2 NORSAR Subarra134.70 357 PKP **PKPdf** **16 12 00.7 0.0**
comp=Z,1.0nm,0.6s,baz=10,slow=4.0
NOA NORSAR Array B134.70 357 PKP **PKiKP** **16 12 01.8 -0.3**
comp=Z,0.6nm,0.8s,baz=264,slow=0.4,SNR=2.4
HFS Hagfors 135.45 355 PKP **PKPdf** **16 12 02.1 +0.1**
comp=Z,2.9nm,0.6s,baz=276,slow=1.3,SNR=9.2
MNK Minsk 138.12 342 *i* PKiKP **PKiKP** **16 12 09.4 +0.2**
MNK *i* 16 14 56.3
MNK *i* SS SS 16 33 06.5 +2.1
MNK pmax pmax
comp=Z,14nm,0.8s
MNK pmax pmax
comp=E,26nm,0.9s
MNK pmax pmax
comp=N,12nm,1.0s
MNK MLR MLR
comp=Z,106nm,17.0s
MNK MLR MLR
comp=N,306nm,20.0s
MNK MLR MLR
comp=E,498nm,19.0s
KBZ Khabaz 138.79 320 PKhKP PKPpre 16 12 05.6
comp=E,1.7nm,0.8s,baz=95,slow=3.1,SNR=4.0
KIV Kislovodsk 138.80 320 *i* PKiKP **PKPdf** **16 12 07.8 -1.1**
KIV pmax pmax
comp=Z,6.0nm,1.0s
GNI Garni 139.29 314⇑*i*PKiKP **PKPdf** **16 12 10.3 +0.3**
AKASG Malin Array Be 140.87 338 PKhKP PKPpre 16 12 06.0
comp=Z,2.2nm,0.7s,baz=40,slow=4.2,SNR=6.8
AKASG PKP **PKPdf** **16 12 11.4 -0.9**
comp=Z,4.0nm,0.8s,baz=37,slow=2.3,SNR=7.8
AKASG Malin Array Be 140.87 338*c i*PKiKP **PKPdf** **16 12 13.0 +0.7**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
LSZ Lusaka 142.78 215 **PKPdf** **16 12 13.9 -2.9**
LSZ Lusaka 142.78 215 PKiKP **PKPdf** **16 12 14.0 -2.9**
RAYN Ar Rayn 143.12 288⇑PKiKP PKPab 16 12 14.0 +1.3
SORM Soroca 143.30 336⇓P PKPbc 16 12 15.2 +1.5
SORM Soroca 143.30 336⇓PKiKP PKPbc 16 12 15.2 +1.5
TSUM Tsumeb 143.74 197 PKPdf PKPbc 16 12 17.3 +1.3
KWP Kalwaria Pacla 143.93 343 *e*PKPdf PKPab 16 12 15.2 +0.2
OJC Ojcow 144.14 346 *e*PKPdf **PKPdf** **16 12 18.2 +0.1**
CLL Collm 144.24 354 *i* PKiKP PKPbc 16 12 16.6 +0.2
CLL pmax pmax
comp=Z,13nm,0.9s
CLL Collm 144.24 354 *e*PKPbc PKPbc 16 12 17.1 +0.7
baz=5.5,slow=2.9
CHVC Chvalec 144.53 350 *e*PKiKP **PKPdf** **16 12 20.0 +1.2**
CHVC Chvalec 144.53 350 *e*PKP **PKPdf** **16 12 20.0 +1.2**
OSTC Ostas 144.54 350 *e*PKiKP **PKiKP** **16 12 21.0 -1.5**
OSTC Ostas 144.54 350 *e*PKP **PKiKP** **16 12 21.0 -1.5**
UPC Upice 144.62 350 *e*PKiKP **PKPdf** **16 12 20.2 +1.2**
UPC Upice 144.62 350 *e*PKP **PKPdf** **16 12 20.2 +1.2**
DPC Dobruska-Polom 144.72 350 *e*PKiKP PKPbc 16 12 18.8 +0.7
DPC Dobruska-Polom 144.72 350 *e*PKP PKPbc 16 12 18.8 +0.7
NIE Niedzica 144.77 345 *e*PKPdf PKPbc 16 12 18.9 +0.6
STEB Steborice 144.85 348 *e*PKP PKPbc 16 12 19.0 +0.6
STEB *ex* x 16 12 32.5
BURAR Bucovina Array 144.90 339 PKPbc 16 12 19.5 +0.7
KRLC Kraliky 144.90 349 *e*PKiKP PKPbc 16 12 19.1 +0.4
KRLC Kraliky 144.90 349 *e*PKP PKPbc 16 12 19.1 +0.4
MOX Moxa 145.03 355 *e*PKPbc **PKPab** **16 12 19.4 +0.4**
baz=5.5,slow=2.9
MOX *e*L L 17 19 14.1
comp=Z,129nm,18.5s
MORC Moravsky Berou 145.04 348 **PKPbc** **16 12 19.3 +0.1**
MORC Moravsky Berou 145.04 348 *e*PKP **PKPbc** **16 12 19.1 0.0**
MORC Moravsky Berou 145.04 348 PKiKP **PKPbc** **16 12 19.3 +0.1**
BZK Bozkurt 145.13 324⇑P **PKPdf** **16 12 20.5 +0.4**
BIZ Bicaz 145.15 337⇓P **PKiKP** **16 12 26.8 +2.9**
TANN Tannenbergstha 145.18 354 *e*PKPbc **PKPab** **16 12 20.0 +0.4**
baz=5.5,slow=2.9
LANS Liptovska Anna 145.22 346 *e*PKiKP **PKPdf** **16 12 20.8 +0.7**
LANS Liptovska Anna 145.22 346 *e*PKP **PKPdf** **16 12 20.8 +0.7**
MEM Membach 145.25 1 *d*PKP **PKPbc** **16 12 19.7 +0.1**
BSTI Sart Tilman 145.26 2 *d*PKP **PKPbc** **16 12 19.6 -0.1**
BTNL Ternell 145.27 1 *d*PKP **PKPbc** **16 12 19.7 -0.1**
TESR Tescani 145.29 336⇑P **PKPbc** **16 12 19.3 -0.7**
PRU Pruhonice 145.35 352 *e*PKiKP **PKPdf** **16 12 20.5 +0.3**
PRU Pruhonice 145.35 352 *e*PKP **PKPdf** **16 12 20.5 +0.3**
PRU *ex* x 16 12 31.6
MAUC Maruska 145.38 348 *e*PKP **PKPab** **16 12 21.2 +0.8**
MAUC *ex* x 16 12 33.6
BGES Gesves 145.44 2 *d*PKP **PKPbc** **16 12 20.0 -0.3**
TLCR 145.45 333⇑P **PKPdf** **16 12 20.8 +0.3**
TLCR 145.45 333⇑PKiKP **PKPdf** **16 12 20.8 +0.3**
BHOU Houvegnez 145.50 1 *d*PKP **PKPdf** **16 12 20.7 +0.2**
BMRD Maredsous 145.51 3 *d*PKP **PKPdf** **16 12 20.6 +0.1**
ONER Baraj Valea Uz 145.54 336⇑P **PKPdf** **16 12 20.0 -0.7**
KECS Kecovo 145.58 344 *e*PKiKP **PKPab** **16 12 22.4 +1.3**
KECS Kecovo 145.58 344 *e*PKP **PKPab** **16 12 22.4 +1.3**
NEGRR Negrea 145.58 334⇑P **PKPbc** **16 12 21.2 +0.3**
TNS Taunus Mts 145.63 358 *e*PKPbc **PKPbc** **16 12 21.2 +0.2**
baz=5.5,slow=2.9
MANZ Manzenberg 145.64 354 *e*PKPbc **PKPbc** **16 12 21.4 +0.4**
baz=5.5,slow=2.9
MANZ *ep*PKPbc sPKPab 16 12 35.0 +3.3
VRAC Vranov 145.67 349 PKPbc **PKPdf** **16 12 21.0 +0.2**
comp=Z,13nm,1.0s,baz=20,slow=3.8,SNR=14
VRAC Vranov 145.67 349⇑P **PKPdf** **16 12 21.1 +0.2**
VRAC Vranov 145.67 349 *e*PKP **PKPbc** **16 12 21.3 +0.2**
VRAC Vranov 145.67 349 PKiKP **PKPdf** **16 12 21.0 +0.2**
ODBI Odobesti 145.74 335⇑P **PKPab** **16 12 22.1 +0.4**
CFR Carcaliu 145.76 333⇑P **PKPbc** **16 12 21.9 +0.4**
CFR Carcaliu 145.76 333⇑PKiKP **PKPbc** **16 12 21.9 +0.4**
CIDE Kastamonu/Cide 145.77 325⇓P **PKPab** **16 12 22.5 +0.5**
VRI Vrincioaia 145.79 335⇓P **PKPbc** **16 12 21.9 +0.3**
VRI Vrincioaia 145.79 335⇓PKiKP **PKPbc** **16 12 21.9 +0.3**
KMBO Kilima Mbogo 145.81 243 PKPbc **PKPdf** **16 12 23.1 +0.7**
comp=Z,24nm,0.7s,baz=87,slow=3.2,SNR=30
PLOR Plostina 145.84 335⇑P **PKPdf** **16 12 20.5 -0.7**
PLOR Plostina 145.84 335⇑PKiKP **PKPdf** **16 12 20.5 -0.7**
ROTZ Rotzenmuhle 145.85 354 *e*PKPbc **PKPbc** **16 12 21.7 +0.1**
baz=5.5,slow=2.9
ROTZ *ep*PKPbc sPKPab 16 12 35.4 +2.9
TREC Trest 145.88 350 *e*PKP2 **PKPbc** **16 12 21.9 +0.1**
TREC Trest 145.88 350 *e*PKP **PKPbc** **16 12 21.9 +0.1**
TPGR Topolog 145.88 333⇑P **PKPbc** **16 12 22.2 +0.3**
JAVC Velka Javorina 145.89 348 *e*PKP **PKPab** **16 12 23.3 +1.0**
ZVC Zvikov 145.94 352 *e*PKP **PKPdf** **16 12 21.6 +0.4**
KRUC Moravsky 145.95 349 *e*PKP **PKPdf** **16 12 21.9 +0.6**
OZUR 145.97 337⇑P **PKPab** **16 12 23.3 +0.6**
GRF Grafenberg Arr 146.01 355 *e*PKPbc **PKPab** **16 12 23.1 +0.4**
baz=5.5,slow=2.9
GRF *e*L L 17 20 38.8
comp=Z,172nm,18.6s
WLF Walferdange 146.19 1 *d*PKP **PKPab** **16 12 23.3 0.0**
DOPR Dopca 146.23 337⇓P **PKPdf** **16 12 22.7 +0.8**
TLBR Topalu 146.29 333⇑P **PKPbc** **16 12 23.0 -0.1**
KHC Kasperske Hory 146.32 352 **PKPbc** **16 12 23.6 +0.5**
KHC Kasperske Hory 146.32 352*c i*PKP2 **PKPbc** **16 12 23.1 0.0**
KHC pmax pmax
comp=Z,31nm,1.3s
KHC Kasperske Hory 146.32 352 *e*PKP **PKPbc** **16 12 23.7 +0.5**
KHC *ex* x 16 12 38.6
NEHR Nehoiu 146.32 335⇓P **PKPab** **16 12 24.3 +0.3**
MLR Muntele Rosu 146.41 336 PKPbc **PKPbc** **16 12 24.1 +0.4**
comp=Z,18nm,0.9s,baz=334,slow=2.0,SNR=21
MLR Muntele Rosu 146.41 336⇑P **PKPbc** **16 12 24.0 +0.4**
MARR Marisel-Cluj 146.43 340⇑P **PKPbc** **16 12 23.9 +0.3**
MODS Modra-Piesok 146.44 348 *e*PKP2 **PKPab** **16 12 24.5 +0.1**
MODS Modra-Piesok 146.44 348 *e*PKP **PKPab** **16 12 24.5 +0.1**
DRGR 146.46 340⇓P **PKPdf** **16 12 21.4 -0.9**
DRGR 146.46 340⇓PKiKP **PKPdf** **16 12 21.4 -0.9**
CKRC Cesky Krumlov 146.52 351 *e*PKP2 **PKPbc** **16 12 24.4 +0.7**
CKRC Cesky Krumlov 146.52 351 *e*PKP **PKPbc** **16 12 24.4 +0.7**
GEC2 GERESS Array S 146.58 352 *e*PKPbc **PKPbc** **16 12 24.2 +0.2**
baz=5.5,slow=2.9
GERES GERESS Array B 146.58 352 PKPbc **PKPbc** **16 12 23.9 0.0**
comp=Z,3.7nm,0.7s,baz=0.0,slow=3.1,SNR=24
GERES GERESS Array B 146.58 352 PKP2 **PKPbc** **16 12 24.0 0.0**
MANR Mangalia 146.61 331⇑P **PKPab** **16 12 25.2 0.0**
SRO Srobarova 146.74 346 *e*PKP2 **PKPab** **16 12 25.6 +0.1**
SRO Srobarova 146.74 346 *e*PKP **PKPab** **16 12 25.6 +0.1**
BR131 Keskin Array S 146.76 321 **PKPbc** **16 12 24.8 -0.1**
BR131 Keskin Array S 146.76 321*c i*PKP2 **PKPbc** **16 12 25.0 +0.1**
BRTR Keskin Array B 146.76 321 **PKPbc** **16 12 25.2 +0.4**
BRTR Keskin Array B 146.76 321 PKPbc **PKPbc** **16 12 25.4 +0.5**
comp=Z,34nm,0.9s,baz=132,slow=1.8,SNR=98
VOIR 146.81 337⇑P **PKPbc** **16 12 25.5 +0.8**
VOIR 146.81 337⇑PKP2 **PKPbc** **16 12 25.5 +0.8**
KIRS Kirsehir-Merke 146.95 320⇑P **PKPbc** **16 12 25.8 +0.4**
ARR Arges 147.02 337⇓P **PKPdf** **16 12 24.2 +0.9**
CONA Conrad Observa 147.13 349 *i* PKiKP **PKPbc** **16 12 26.3 +0.7**
comp=Z,22nm,0.8s,SNR=9.4
ANTO Ankara 147.17 322⇑P **PKPbc** **16 12 26.9 +0.9**
ANTO Ankara 147.17 322⇑PKP2 **PKPbc** **16 12 26.9 +0.9**
SIRR Siria 147.26 341⇑P **PKPdf** **16 12 24.6 +1.0**
LOT Lotru 147.27 338⇓P **PKPbc** **16 12 25.8 -0.2**
RONA Rosalia, Austr 147.27 348 *i* PKiKP **PKPbc** **16 12 26.6 +0.7**
comp=Z,22nm,0.9s,SNR=8.2
MOA Molln 147.48 351 *i* PKiKP **PKPbc** **16 12 27.1 +0.6**
comp=Z,18nm,1.0s
BFO Black Forest 147.52 358 *e*PKPbc **PKPbc** **16 12 26.5 0.0**
baz=5.5,slow=2.9
SAHE Sakarya_HENDEK 147.63 325⇑P **PKPdf** **16 12 24.0 -0.4**
PRD Provadia 147.66 332 P **PKPbc** **16 12 27.7 +0.6**
GZR Gura Zlata 147.67 339⇓P **PKPbc** **16 12 26.2 -0.9**
GZR Gura Zlata 147.67 339⇓PKP2 **PKPbc** **16 12 26.2 -0.9**
BIOA Bad Ischl, Aus 147.72 352 *i* PKiKP **PKPbc** **16 12 27.5 +0.4**
comp=Z,22nm,1.1s
RAZG Razgrad 147.75 333⇑P **PKPbc** **16 12 27.5 +0.1**
RJOB Jochberg 147.79 353 *e*PKPbc **PKPbc** **16 12 27.7 +0.4**
baz=5.5,slow=2.9
ARSA Arzberg 147.85 349 *i* PKiKP **PKPbc** **16 12 28.0 +0.5**
comp=Z,8.2nm,0.8s
BZS Buzias 147.85 341⇑P **PKPdf** **16 12 25.4 +0.8**
BZS Buzias 147.85 341⇑PKiKP **PKPdf** **16 12 25.4 +0.8**
FKH Fakeheh 147.88 310 *e*P **PKPbc** **16 12 28.9 +0.8**
BEIL Beino 147.90 311 *e*P **PKPbc** **16 12 28.8 +0.7**
LESA Schwarzleotal 148.11 353 *i* PKiKP **PKPdf** **16 12 26.0 +0.9**
comp=Z,10nm,1.2s
MORH Mrgy, Hungar 148.16 345⇓P **PKPdf** **16 12 25.3 +0.3**
HWQ Hawqa 148.20 311 *e*P **PKPbc** **16 12 29.1 +0.1**
SZH Strazhitsa 148.22 333 P **PKPbc** **16 12 28.1 -0.5**
RETA Reutte 148.24 355 *i* PKP **PKPbc** **16 12 28.8 +0.2**
comp=Z,14nm,1.0s
HERR Herculane 148.24 339⇑P **PKPbc** **16 12 28.8 +0.3**
WATA Walderalm 148.32 354 *i* PKP **PKPbc** **16 12 29.3 +0.5**
comp=Z,9.6nm,1.0s
MOTA Moosalm 148.35 355 *i* PKP **PKPbc** **16 12 29.1 +0.1**
comp=Z,17nm,1.0s
KBA Koelnbreinsper 148.36 352 *i* PKP **PKPbc** **16 12 29.5 +0.4**
comp=Z,5.8nm,1.0s
WTTA Wattenberg 148.38 354 *i* PKP **PKPbc** **16 12 29.4 +0.3**
comp=Z,13nm,0.7s,SNR=5.4
ZAHL Zahle 148.44 310 *e*P **PKPbc** **16 12 30.5 +0.9**
SQTA Sankt Quirin 148.46 355 *i* PKP **PKPbc** **16 12 29.1 -0.2**
comp=Z,14nm,0.8s
SOKA Soboth 148.49 350 *i* PKP **PKPbc** **16 12 29.1 -0.1**
comp=Z,20nm,1.0s,SNR=5.5
DAVA Damuels 148.50 356 *i* PKP **PKPbc** **16 12 30.1 +0.7**
comp=Z,15nm,0.9s
ELND Elena 148.53 333⇑P **PKPdf** **16 12 25.9 +0.2**
MDVR Moldovita 148.56 340⇑P **PKPbc** **16 12 29.7 +0.2**
BHL Bhannes 148.59 310 *e*P **PKPbc** **16 12 30.4 +0.4**
RCY Rachaya 148.64 309 *e*P **PKPbc** **16 12 30.9 +0.7**
PLVB Pleven 148.69 335⇑P **PKPdf** **16 12 27.3 +1.3**
FETA Feichten 148.70 355 *i* PKP **PKPbc** **16 12 30.4 +0.5**
comp=Z,20nm,1.0s
QRWL Qaraoun 148.73 310 *e*P **PKPbc** **16 12 31.1 +0.8**
OBKA Obir 148.74 350 *e*PKP **PKPbc** **16 12 29.5 -0.4**
comp=Z,10.0nm,0.9s
DQRL Deir Qamar 148.74 310 *e*P **PKPbc** **16 12 31.4 +1.0**
MYKA Terra Mystica 148.76 351 *i* PKP **PKPbc** **16 12 29.7 -0.3**
comp=Z,14nm,0.8s
SHBL Chebaa 148.78 309 *e*P **PKPbc** **16 12 31.5 +1.0**
PHSR Pinarhisar 148.79 330⇑P **PKPbc** **16 12 30.6 +0.5**
ABTA Abfaltersbach 148.79 353 *i* PKP **PKPbc** **16 12 29.8 -0.3**
comp=Z,24nm,0.9s,SNR=6.6
VALD Valchedram 148.90 337 P **PKiKP** **16 12 31.6 0.0**
MPEP Malo Peshtene 149.06 336 P **PKiKP** **16 12 31.8 -0.2**
MMAI Mount Meron Ar 149.19 309 PKPbc **PKiKP** **16 12 32.7 0.0**
comp=Z,36nm,0.8s,baz=46,slow=3.6,SNR=53
BLKB Belogradchik 149.24 338⇑P **PKPbc** **16 12 31.3 +0.1**
BAND Balkesir-Ban 149.45 327⇓P **PKPbc** **16 12 31.8 0.0**
BOVS Bovan 149.57 339⇑P **PKPbc** **16 12 31.9 -0.1**
BLSH Balsha 149.67 336 P **PKiKP** **16 12 33.8 +0.4**
ISP Isparta 149.84 321⇓*i*PKP2 **PKPbc** **16 12 33.2 +0.2**
ISP pmax pmax
comp=Z,34nm,1.3s
VTS Vitosha 149.88 336 P **PKPbc** **16 12 33.3 +0.3**
MMB Musomishta 150.57 334 P **PKPbc** **16 12 34.4 -0.1**
KKB Krupnik 150.58 335 P **PKPbc** **16 12 34.9 +0.4**
PGAV Gavieira, Arco 150.73 24 *e*PKPbc **PKiKP** **16 12 37.8 +2.2**
EZN Ezine 150.75 329⇑P **PKPbc** **16 12 35.0 +0.1**
EZN Ezine 150.75 329⇑PKiKP **PKPbc** **16 12 35.0 +0.1**
PCAB Cabril 151.04 24 *e*PKPbc **PKiKP** **16 12 36.3 +0.1**
VAY Valandovo 151.25 335 *i* P **PKPbc** **16 12 36.1 +0.1**
POLO Lamas de Olo 151.42 24 *e*PKPbc **PKiKP** **16 12 37.5 +0.4**
MVO Moncorvo 151.90 23 *e*PKPbc **PKiKP** **16 12 38.1 +0.1**
OHR Ohrid 152.11 338 *i* P **PKiKP** **16 12 38.9 +0.5**
PMTG Montargil 153.18 27 *e*PKPbc **PKiKP** **16 12 40.8 +0.1**
ESDC Sonseca Array 154.30 20 PKPbc **PKPbc** **16 12 42.1 -0.9**
comp=Z,1.4nm,0.9s,baz=316,slow=3.6,SNR=5.1
DBIC Dimbokro 165.19 126 PKP **PKPdf** **16 12 47.0 -0.7**
comp=Z,3.8nm,0.8s,baz=268,slow=2.0,SNR=4.3
DBIC Dimbokro 165.19 126 PKiKP **PKPdf** **16 12 47.0 -0.7**
TORD Torodi Ar. Bea 174.14 116 PKP **PKPdf** **16 12 51.7 -1.3**
comp=Z,5.4nm,1.0s,baz=351,slow=1.2,SNR=6.1

IDC 08 16:00:15.8±2.4, 30.03N×70.72E, h0km, mb3.5/4, mbtmp3.4/5, MS3.3/2, Error ellipse: s-maj=76.6km s-min=31.5km az=73.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.00**	**25**	P	P	16 04 37.9	-1.1
	0.4nm,0.8s,baz=202,slow=11,SNR=2.5						
KURBB	**Kurchatov Arra**	**21.39**	**14**	P	P	16 05 04.8	-0.1
	0.3nm,0.3s,baz=207,slow=9.7,SNR=5.1						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**22.98**	**359**	P	P	16 05 22.9	+1.1
	0.9nm,0.7s,baz=170,slow=9.0,SNR=5.2						
	0.9nm,0.7s						
OBN	**Obninsk**	**34.92**	**326**	LR	LR	16 24 51.2	
	comp=Z,78nm,18.7s,baz=280,slow=42						
ARCES	**ARCESS Array B**	**47.08**	**340**	P	P	16 08 48.2	-0.7
	2.7nm,1.1s,baz=125,slow=6.1,SNR=3.7						
	2.7nm,1.1s						
DAVOX	**Davos/Dischmat**	**49.30**	**308**	LR	LR	16 35 54.7	
	comp=Z,21nm,20.9s,baz=300,slow=43						

ASAR	Alice Springs	80.80	124	P		P		16 12 31.9	+0.2
	0.3nm,0.8s,baz=295,slow=6.0,SNR=4.3									
	0.3nm,0.8s									

IDC 08 16:02:45.8±1.8, 13°.36N×120°.05E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=36.0km s-min=12.8km az=123.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	1.14	50	Pg		16 03 06.6	-1.0
	193nm,0.3s,baz=233,slow=6.1,SNR=21						
TGY				Lg	Lg	16 03 24.1	
	294nm,0.3s,baz=323,slow=22,SNR=18						
WRA	Warramunga Arr	35.96	157	P	P	16 09 48.0	-0.5
	1.9nm,0.7s,baz=336,slow=9.6,SNR=11						
	1.9nm,0.7s						
HILR	Hailar Array B	36.09	360	P	P	16 09 49.5	+0.2
	0.4nm,0.3s,baz=166,slow=9.4,SNR=1.3						
	0.4nm,0.3s						
ASAR	Alice Springs	39.22	160	P	P	16 10 16.4	+0.3
	1.0nm,0.7s,baz=340,slow=6.9,SNR=16						
	1.0nm,0.7s						

IDC 08 16:20:14.3±2.0, 29°.81N×70°.33E, h0km, mb3.8/6, mbtmp3.7/7, ML3.3/1, MS3.9/2, Error ellipse: s-maj=68.6km s-min=23.8km az=74.0

ISC 08 16:20:20.1±1.9, 29°.9N±0°.2×70°.5E±0°.4, h35km, n9, σ1s32/7, mb3.6/6, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.19	25	P	Pn	16 24 41.4	-0.4
	0.1nm,0.3s,baz=210,slow=12,SNR=7.1						
	0.6nm,0.6s						
KURBB	Kurchatov Arra	21.54	14	P	P	16 25 06.0	-0.1
	1.2nm,0.2s,baz=205,slow=10,SNR=4.9						
	1.2nm,0.2s						
BVAR	Borovoye Array	23.08	360	P	P	16 25 21.4	-1.1
	0.9nm,0.7s,baz=184,slow=10.0,SNR=5.8						
	0.9nm,0.7s						
ZALV	Zalesovo Beam	26.17	19	P	P	16 25 52.9	+1.9
	0.8nm,0.4s,baz=207,slow=9.6,SNR=4.3						
	0.8nm,0.4s						
ARCES	ARCESS Array B	47.10	340	P	P	16 28 48.6	+0.4
	3.7nm,1.2s,baz=130,slow=6.9,SNR=4.5						
	3.7nm,1.2s						
SPITS	Spitsbergen Ar	53.80	348	LR	LR	16 57 18.8	
	comp=Z,132nm,19.4s,baz=334,slow=41						
BOSA	Boshof	72.47	221	LR	LR	17 00 49.9	
	comp=Z,73nm,21.3s,baz=168,slow=34						
WRA	Warramunga Arr	78.96	121	P	P	16 32 19.3	-1.2
	0.2nm,0.3s,baz=321,slow=4.9,SNR=1.8						
	0.2nm,0.3s						
ASAR	Alice Springs	80.92	124	P	P	16 32 31.6	+0.6
	0.6nm,0.9s,baz=306,slow=4.8,SNR=8.9						
	0.6nm,0.9s						

IDC 08 16:36:28.0±0.7, 35°.66N×135°.88E, h345km±7km, mb3.1/16, mbtmp3.2/22, Error ellipse: s-maj=13.1km s-min=11.7km az=70.0

JMA 08 16:36:28.1±0.2, 35°.7N±0°.7×135°.8E±0°.7, h343km±1km, MV3.7/38, E PART OF WAKASA BAY

ISC 08 16:36:28.0±0.6, 35°.67N±0°.08×135°.81E±0°.06, h343km±6km, n42, σ0s76/53, mb3.2/16, 18D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFM	Mihama	0.20	135	⇓P	Pn	16 37 11.6	+0.5
JFM				⇓eS	S	16 37 45.1	-0.4
JWT	Wachi	0.51	221	⇓P	Pn	16 37 11.9	+0.3
JWT				⇓eS	S	16 37 45.9	-0.5
JKG	Kaga	0.74	34	⇓P	Pn	16 37 12.2	+0.3
JYTA	Yamagatataniai	0.76	95	⇓P	Pn	16 37 12.5	+0.4
JWY	Kouya	1.46	187	⇓P	Pn	16 37 15.8	+0.5
JWY				⇓eS	S	16 37 52.7	-0.6
JIE	Ise	1.47	150	⇓P	Pn	16 37 16.1	+0.8
JIE				⇓eS	S	16 37 53.1	-0.1
JTNC	Tanabenakahech	1.85	185	⇓P	Pn	16 37 18.0	+0.2
JTNC				⇓eS	S	16 37 56.5	-1.1
MAT	Matsushiro	2.13	65	P	Pn	16 37 19.7	+0.2
MJAR	Matsushiro Arr	2.13	65	P	Pn	16 37 20.0	+0.5
	16nm,0.6s,baz=252,slow=10,SNR=101						
MJAR				S	S	16 38 01.6	+0.7
	2.0nm,0.6s,baz=248,slow=12,SNR=4.2						
JOI	OKI	2.17	287	eP	Pn	16 37 20.0	+0.2
JSZ	Suzu	2.17	35	eP	Pn	16 37 20.2	+0.4
JAI	Aioi	2.18	211	⇓P	Pn	16 37 20.6	+0.6
JAI				⇓eS	S	16 38 01.6	-0.1
JYN	Shimodo	2.23	94	⇓P	Pn	16 37 20.7	+0.3
JYN				⇓eS	S	16 38 03.0	+0.5
JHS	Saijyo	2.30	254	⇓P	Pn	16 37 21.3	+0.3
JHG	Hegura jima	2.35	22	eP	Pn	16 37 22.0	+0.9
JMN	Monobe	2.51	220	eP	Pn	16 37 23.2	+0.6
JRY	Ryogami san	2.53	81	eP	Pn	16 37 23.0	+0.3
JOD2	Odawara 2	2.70	98	eP	Pn	16 37 24.9	+0.6
JGT2	ShimaneMisato	2.77	258	eP	Pn	16 37 25.0	+0.3
JSD	Sado	3.07	39	⇓P	Pn	16 37 27.5	+0.1
JTO	Tosashimizu	3.75	223	eP	Pn	16 37 34.9	+0.9
JNU	Nakatsue	4.80	240	P	Pn	16 37 46.1	+0.8
	6.3nm,0.4s,baz=123,slow=0.9,SNR=18						
KSRS	Korea Array	6.60	288	P	Pn	16 38 05.8	+0.4
	2.7nm,0.8s,baz=109,slow=12,SNR=7.8						
USRK	Ussuriysk Ar.	9.01	342	P	Pn	16 38 34.3	+0.3
	26nm,0.5s,baz=155,slow=11,SNR=67						
ASAJ	Asahikawa	9.91	30	P	Pn	16 38 42.5	-2.2
	6.7nm,0.4s,baz=236,slow=14,SNR=47						
HILR	Hailar Array B	18.18	325	P	P	16 40 16.0	-1.0
	2.7nm,0.4s,baz=133,slow=11,SNR=6.9						
SONM	Songino Array	24.93	308	P	P	16 41 23.0	+1.9
	1.8nm,0.6s,baz=112,slow=10,SNR=8.8						
	1.8nm,0.6s						
CMAR	Chiang Mai Arr	36.77	252	P	P	16 43 03.9	-0.3
	0.3nm,0.5s,baz=46,slow=8.4,SNR=1.6						
	0.3nm,0.5s						
ZALV	Zalesovo Beam	39.54	314	P	P	16 43 26.6	0.0
	0.6nm,0.4s,baz=90,slow=8.3,SNR=1.9						
ZALV				PcP	PcP	16 45 25.9	-0.3
	0.5nm,0.3s,baz=183,slow=2.9,SNR=1.9						
	0.6nm,0.4s						
MKAR	Makanchi Array	41.03	303	P	P	16 43 38.6	-0.2
	0.6nm,0.5s,baz=84,slow=11,SNR=8.3						
MKAR				PcP	PcP	16 45 31.1	-0.2
	0.2nm,0.4s,baz=88,slow=3.8,SNR=3.0						
	0.6nm,0.5s						
KURBB	Kurchatov Arra	43.30	309	P	P	16 43 58.1	+1.3
	0.4nm,0.3s,baz=83,slow=8.0,SNR=5.9						
	0.4nm,0.3s						
BVAR	Borovoye Array	48.15	312	P	P	16 44 36.1	+1.7
	0.3nm,0.3s,baz=66,slow=9.8,SNR=4.1						
BVAR				PcP	PcP	16 45 55.3	-0.5
	0.8nm,0.5s,baz=101,slow=3.2,SNR=4.5						
	0.3nm,0.3s						
ILAR	Eielson Array	53.05	32	P	P	16 45 10.0	-0.4
	0.6nm,0.8s,baz=275,slow=8.1,SNR=7.0						
	0.6nm,0.8s						
WRA	Warramunga Arr	55.32	182	P	P	16 45 26.6	-0.6
	0.4nm,0.4s,baz=358,slow=7.6,SNR=7.8						
	0.4nm,0.4s						
ASAR	Alice Springs	59.04	182	P	P	16 45 52.5	-0.5
	0.4nm,0.5s,baz=357,slow=5.4,SNR=14						
	0.4nm,0.5s						
ARCES	ARCESS Array B	63.64	338	P	P	16 46 22.5	-0.4
	1.8nm,0.8s,baz=54,slow=11,SNR=2.1						
	1.8nm,0.8s						
FINES	FINESS Array B	67.86	331	P	P	16 46 48.5	-1.2
	0.4nm,0.3s,baz=73,slow=6.6,SNR=5.8						
	0.4nm,0.3s						
HFS	Hagfors	73.39	334	P	P	16 47 21.7	-1.1
	3.5nm,1.1s,baz=163,slow=11,SNR=4.5						
	3.5nm,1.1s						
NOA	NORSAR Array B	73.62	335	P	P	16 47 23.7	-0.4
	0.3nm,0.5s,baz=31,slow=5.7,SNR=2.1						
	0.3nm,0.5s						
PDAR	Pinedale Array	81.79	43	P	P	16 48 10.2	+0.6
	0.4nm,0.7s,baz=240,slow=1.2,SNR=4.2						
	0.4nm,0.7s						
EKA	Eskdalemuir Ar	82.80	338	P	P	16 48 13.9	-0.2
	4.5nm,1.1s,baz=38,slow=6.3,SNR=3.1						
	4.5nm,1.1s						
TXAR	Lajitas Array	94.48	49	P	P	16 49 11.2	+1.0
	0.4nm,0.7s,baz=330,slow=3.1,SNR=4.4						
	0.4nm,0.7s						

SJA 08 16:49:17.3±0.7, 40°.84S×72°.15W, h152km±4km, ML3.0, MW3.5

GUC 08 16:49:19.1±0.8, 40°.85S×72°.24W, h136km±4km, ML3.2

ISC 08 16:49:18.4±1.6, 40°.85S±0°.03×72°.20W±0°.05, h140km±12km, n23, σ0s84/39, 1C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LR05	Currie	0.63	13	eP	Pn	16 49 39.5	+0.1
LR05				eS	Sn	16 49 54.9	-0.5
LR05				IAML		16 49 56.8	
	comp=E,527nm,0.5s						
LL05	Los Muermos	1.12	239	eP	Pn	16 49 42.9	-0.5
LL05				eS	Sn	16 50 01.7	-0.6
LL05				IAML		16 50 02.5	
	comp=E,474nm,0.3s						
LR03	Panguipulli	1.22	355	eP	Pn	16 49 44.7	+0.3
LR03				eS	Sn	16 50 03.5	-0.6
LR03				IAML		16 50 06.8	
	comp=E,407nm,0.3s						
LR03	Panguipulli	1.22	355	i P	Pn	16 49 44.6	+0.3
LR03				i S	Sn	16 50 05.2	+1.1
LR03				IAML		16 50 08.3	
	comp=Z,197nm,0.2s						
PLCA	Paso Flores	1.25	85	⇑iP	Pn	16 49 44.7	-0.1
PLCA				eS	Sn	16 50 03.3	-1.5
PLCA	Paso Flores	1.25	85	i P	Pn	16 49 44.7	-0.1
PLCA				IAML		16 50 04.9	
	comp=Z,29nm,0.7s						
PLCA				i S	Sn	16 50 05.3	+0.5
LR02	Universidad Au	1.31	322	eP	Pn	16 49 44.9	-0.3
LR02				eS	Sn	16 50 04.3	-1.4
LR04	Corral	1.35	315	eP	Pn	16 49 47.2	+1.6
LR04				eS	Sn	16 50 05.7	-0.6
LR04	Corral	1.35	315	i P	Pn	16 49 46.4	+0.8
LR04				i S	Sn	16 50 07.3	+1.0
LR04				IAML		16 50 08.3	
	comp=Z,429nm,0.2s						
GO06	Curarrehue	1.38	24	⇓iP	Pn	16 49 46.7	+0.6
GO06				eS	Sn	16 50 07.5	+0.3
GO06	Curarrehue	1.38	24	i P	Pn	16 49 46.5	+0.4
GO06				IAML		16 50 42.1	
	comp=Z,75nm,0.9s						
LL01	San Ignacio de	1.54	186	eP	Pn	16 49 48.6	+0.9
LL01				eS	Sn	16 50 09.8	-0.3
LL01	San Ignacio de	1.54	186	i P	Pn	16 49 48.0	+0.4
LL01				i S	Sn	16 50 11.0	+0.9
LL01				IAML		16 50 12.6	
	comp=Z,62nm,0.9s						
LL06	Loncomilla	1.74	218	eP	Pn	16 49 49.8	-0.1
LL06				eS	Sn	16 50 12.2	-1.9
LC01	Cunco	1.96	7	eP	Pn	16 49 53.1	+0.5
LC01				eS	Sn	16 50 19.2	+0.5
LC01				IAML		16 50 24.1	
	comp=E,196nm,0.1s						
PDRA	Piedra	2.01	183	⇓iP	Pn	16 49 53.5	+0.3
VNTQ	Ventisquero	2.04	185	eP	Pn	16 49 53.9	+0.4
LL02	Futaleuf	2.36	174	eP	Pn	16 49 57.6	+0.3
GO07	Milladeo Hill,	2.52	205	⇓iP	Pn	16 49 59.2	-0.1
GO07	Milladeo Hill,	2.52	205	i P	Pn	16 49 59.4	+0.1
GO07				i S	Sn	16 50 31.0	+0.3
GO07				IAML		16 50 31.9	
	comp=Z,414nm,0.2s						
CANA	Caviahue	3.08	17	i P	Pn	16 50 07.1	+0.5
CANA				IAML		16 50 54.8	
	comp=Z,6.2nm,1.3s						
MGDN	Magdalena	3.83	188	eP	Pn	16 50 16.9	+0.8
BI02	San Fabin de	4.24	10	i P	Pn	16 50 21.7	0.0
BI02				i S	Sn	16 51 08.5	-2.2
BI02				IAML		16 51 35.1	
	comp=Z,16nm,1.0s						

CNRM 08 16:54:22.8, 36°.25N×7°.62W, h74km, ML5.6

SFS 08 16:54:23.6, 36°.35N×7°.70W, h15km, ML2.6/6, ML2.1/8, MLv1.9/8

MDD 08 16:54:24.7±1.4, 36°.44N×7°.73W, h3km±6km, mb_Lg2.3/4, Error ellipse: s-maj=8.6km s-min=6.9km az=175.0

INMG 08 16:54:25.1±2.0, 36°.44N×7°.66W, h0km±6km, ML1.9, Error ellipse: s-maj=5.7km s-min=5.6km az=153.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Golfo de Cadiz

ISC 08 16:54:22.1±1.3, 36°.25N±0°.03×7°.67W±0°.04, h23km±14km, n34, σ1s04/54, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	Barranco-do-Ve	1.01	348	Pg	Pb	16 54 40.4	-0.6
PBDV				Sg	Sb	16 54 52.4	-1.5
PBDV	Barranco-do-Ve	1.01	348	eP	Pb	16 54 40.6	-0.4
PBDV				eS	Sb	16 54 52.9	-1.0
PBDV				i IAML		16 54 54.7	
PBDV				i IAML		16 54 56.2	
PBDV				i IAML		16 54 56.5	
PVAQ	Vaqueiros	1.15	358	eP	Pb	16 54 43.4	+0.1
PVAQ				eS	Sb	16 54 55.0	-2.9
PVAQ				i IAML		16 54 58.2	
PVAQ				i IAML		16 54 58.5	
PVAQ				i IAML		16 54 59.0	
PVAQ	Vaqueiros	1.15	358	P	Pb	16 54 43.5	+0.1
PVAQ	Vaqueiros	1.15	358	S	Sn	16 54 58.9	+1.0
PFVI	Vila Bisbo	1.28	314	Pg	Pb	16 54 45.7	+0.2
PFVI				Sg	Sn	16 55 00.8	-0.1
PFVI	Vila Bisbo	1.28	314	eP	Pb	16 54 45.7	+0.2
PFVI				eS	Sb	16 55 02.1	+0.6
PFVI				i IAML		16 55 03.8	
PFVI				i IAML		16 55 04.6	
PFVI				i IAML		16 55 05.6	
PFVI	Vila Bisbo	1.28	314	P	Pb	16 54 45.8	+0.3
PFVI	Vila Bisbo	1.28	314	S	Sb	16 55 03.4	+1.9
EGRO	El Granado	1.29	7	Pg	Pb	16 54 45.6	-0.1
EGRO				Sg	Sn	16 55 00.9	-0.4
EGRO	El Granado	1.29	7	Pg	Pn	16 54 45.0	+0.2
EGRO				Sg	Sn	16 55 00.3	-0.9
EGRO				i lVmb_Lg		16 55 04.9	
MORF	Marmelete	1.31	323	eP	Pb	16 54 46.2	+0.1
MORF				eS	Sn	16 55 02.3	+0.4
MORF				i IAML		16 55 03.1	
MORF				i IAML		16 55 03.2	
MORF				i IAML		16 55 05.1	
PCVE	Castro Verde	1.41	348	Pg	Pb	16 54 47.6	-0.1
PCVE				Pn	Pn	16 54 45.3	-1.0
PCVE				Sg	Sn	16 55 03.7	-0.5
PCVE	Castro Verde	1.41	348	eP	Pb	16 54 47.6	-0.1
PCVE				eS	Sn	16 55 04.4	+0.2
PCVE				i IAML		16 55 06.9	
PCVE				i IAML		16 55 08.0	
PCVE				i IAML		16 55 09.8	
PTEO	Sao Teotonio	1.54	327	eP	Pb	16 54 50.2	+0.2
PTEO				eS	Sb	16 55 09.0	-0.1
PTEO				i IAML		16 55 12.5	
PTEO				i IAML		16 55 14.0	
PTEO				i IAML		16 55 14.4	
MESJ	Messejana	1.64	345	ePn	Pb	16 54 52.0	+0.2
MESJ				eSg	Sb	16 55 11.8	-0.3
MESJ				i IAML		16 55 14.0	
MESJ				i IAML		16 55 14.2	
MESJ				i IAML		16 55 17.0	
EMIN	Mina Concepcio	1.71	28	Sn	Sn	16 55 11.4	-0.3
EMIN	Mina Concepcio	1.71	28	Pn	Pb	16 54 53.4	+0.5
EMIN				Sn	Sn	16 55 12.6	+0.9
EMIN				i lVmb_Lg		16 55 16.0	
PBEJ	Beja	1.78	355	ePg	Pb	16 54 54.7	+0.6
PBAR	Barrancos	1.98	15	Pn	Pn	16 54 53.4	-0.9
PBAR				Sn	Sn	16 55 16.6	-1.8
PBAR	Barrancos	1.98	15	ePg	Pb	16 54 59.1	+1.6
PBAR				eSg	Sb	16 55 21.9	0.0
PBAR				i IAML		16 55 25.6	
PBAR				i IAML		16 55 25.6	
PBAR				i IAML		16 55 28.3	
MOE	Montemor	2.33	347	ePg	Pb	16 55 05.2	+1.8
MOE				eSg	Sb	16 55 33.4	+1.6
MOE				i IAML		16 55 35.6	
MOE				i IAML		16 55 35.8	
MOE				i IAML		16 55 38.5	
EBAD	Badajoz	2.55	12	Pn	Pn	16 55 03.0	+0.9
EBAD				Sn	Sn	16 55 32.1	-0.4
EBAD				i lVmb_Lg		16 55 45.4	
ECAB	El Cabril	2.56	44	Pn	Pn	16 55 01.9	-0.4
ECAB	El Cabril	2.56	44	Pn	Pn	16 55 03.2	+1.0
ECAB				i lVmb_Lg		16 55 32.7	
ECAB				Sn	Sn	16 55 33.4	+0.7
PARRA	Arraiolos	2.58	354	ePn	Pn	16 55 02.9	-2.4
PARRA				eSg	Sn	16 55 41.0	+2.9
PARRA				i IAML		16 55 45.9	
PESTR	Estremoz	2.61	1	P	Pn	16 55 03.4	+0.5
PESTR	Estremoz	2.61	1	S	Sn	16 55 33.0	-0.9
MD31	MD31	4.14	144	P	Pn	16 55 24.3	+0.2
MD31	MD31	4.14	144	S	Sn	16 56 11.7	-0.2
MDT	Midelt	4.26	143	P	Pn	16 55 25.8	+0.1
MDT	Midelt	4.26	143	S	Sn	16 56 13.4	-1.3
OUK	Oukaimeden	5.03	182	P	Pn	16 55 36.6	+0.1
OUK	Oukaimeden	5.03	182	S	Sn	16 56 33.5	-0.7

SNET 08 16:59:14.8±1.8, 12°.71N×88°.67W, h26km±13km, ML4.2

CATAC 08 16:59:15.3±0.5, 13°.N±2°×8°.9W±°, h30km±3km, M4.4/28, MLv4.4/28, Error ellipse: s-maj=5.8km s-min=1.8km az=29.1, confirmed

GCG 08 16:59:18.0±0.9, 12°.90N×88°.73W, h30km±5km, MD4.1, ML4.1

ISC 08 16:59:14.7±1.4, 12°.69N±0°.05×88°.68W±0°.03, h29km±13km, n90, σ0s71/103, 5C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TECA	Tecapa	0.82	12	eP	Pn	16 59 30.6	0.0
LCY	Lacayo	0.82	27	eP	Pn	16 59 30.6	0.0
RANC	El Ranchito	0.84	27	eP	Pn	16 59 30.7	0.0
TECO	Alcaldia de Te	0.85	354	eP	Pn	16 59 30.8	0.0
TECO				eS	Sb	16 59 41.8	-0.3
TECO	Alcaldia de Te	0.85	354	P	Pn	16 59 30.9	+0.1
TECO	Alcaldia de Te	0.85	354	S	Sn	16 59 42.6	+0.2
PACA	Pacayal	0.85	24	eP	Pn	16 59 31.1	+0.1
PACA				eS	Sn	16 59 42.4	-0.1
PACA	Pacayal	0.85	24	P	Pb	16 59 31.4	+0.4
BLLM	Bellamira	0.87	30	⇓iP	Pn	16 59 31.2	+0.1
CNRM	Centro Naciona	0.93	32	eP	Pn	16 59 31.9	+0.1
CNRM	Centro Naciona	0.93	32	P	Pn	16 59 32.0	+0.1
CNRM	Centro Naciona	0.93	32	S	Sb	16 59 44.6	+0.4
SNVI	San Vicente	0.93	351	eP	Pn	16 59 32.2	+0.2
PQSS	Presa 15 de Se	0.94	7	P	Pn	16 59 32.3	+0.3
PQSS	Presa 15 de Se	0.94	7	S	Sb	16 59 44.8	+0.3
COEG	Centro de Oper	0.95	348	eP	Pn	16 59 28.7	-3.5
COEG				eS	Sn	16 59 40.9	-3.9
UESV	Universidad de	0.95	354	P	Pn	16 59 32.5	+0.4
UESV	Universidad de	0.95	354	S	Sb	16 59 45.2	+0.4
LCND	La Caada	0.99	51	eP	Pn	16 59 32.3	-0.4
LCND	La Caada	0.99	51	P	Pn	16 59 32.3	-0.4
LFRS	El Faro	1.00	338	⇑eP	Pn	16 59 32.5	0.0
LALI	Alcalda de L	1.01	322	eP	Pn	16 59 33.0	0.0
LALI	Alcalda de L	1.01	322	eP	Pn	16 59 33.0	0.0
LALI				eS	Sn	16 59 45.1	-1.1
LALI	Alcalda de L	1.01	322	S	Sn	16 59 46.5	+0.2
CNCH	Conchagua	1.01	55	eP	Pn	16 59 33.1	0.0
PANCS	Alcalda de	1.04	332	S	Sb	16 59 47.4	0.0
PANCS	Alcalda de	1.04	332	P	Pn	16 59 33.6	+0.2
PAVA	Las Pavas	1.05	346	⇓eP	Pn	16 59 33.9	+0.3
PAVA	Las Pavas	1.05	346	P	Pn	16 59 34.1	+0.5
PAVA	Las Pavas	1.05	346	S	Sb	16 59 48.0	+0.2
LOMA	Loma Larga	1.06	334	eP	Pn	16 59 33.5	-0.3
LOMA	Loma Larga	1.06	334	P	Pn	16 59 33.6	-0.2
LOMA	Loma Larga	1.06	334	S	Sb	16 59 48.7	+0.5
LBRS	Las Brisas	1.10	341	eP	Pn	16 59 34.7	+0.4
UDBS	Universidad Do	1.12	336	S	Sb	16 59 49.7	0.0
UDBS	Universidad Do	1.12	336	P	Pn	16 59 35.1	+0.6
IGN	Direccin Gen	1.13	335	eP	Pn	16 59 35.0	+0.4
IGN	Direccin Gen	1.13	335	P	Pn	16 59 34.9	+0.4
IGN	Direccin Gen	1.13	335	S	Sb	16 59 49.8	-0.1
UTEC	Universidad Te	1.13	333	S	Sb	16 59 50.0	0.0
UTEC	Universidad Te	1.13	333	P	Pn	16 59 35.0	+0.4
LFU	La Fuente	1.14	338	⇑eP	Pn	16 59 35.2	+0.5
UEES	Universidad Ev	1.16	332	S	Sn	16 59 50.6	+0.5
UEES	Universidad Ev	1.16	332	P	Pn	16 59 35.4	+0.3
CAHU	Cacacuatique	1.17	23	eP	Pn	16 59 35.7	+0.4
POTN	Potosi Cosigui	1.19	75	P	Pn	16 59 35.3	-0.1
POTN				S	Sn	16 59 50.1	-0.5
PIC2	El Picacho	1.19	332	⇑eP	Pn	16 59 36.3	+0.6
PMON	Piamonte	1.19	329	P	Pn	16 59 35.8	+0.2
PMON	Piamonte	1.19	329	S	Sb	16 59 51.9	+0.1
BOQS	Boqueron	1.19	331	⇑eP	Pn	16 59 36.2	+0.5
JAYA	Jayaque - finc	1.22	322	eP	Pn	16 59 35.9	0.0
JAYA				eS	Sn	16 59 51.1	-0.4
JAYA	Jayaque - finc	1.22	322	eP	Pn	16 59 35.9	0.0
JAYA				eS	Sn	16 59 50.8	-0.8
JAYA	Jayaque - finc	1.22	322	S	Sn	16 59 51.0	+0.5
JAYA	Jayaque - finc	1.22	322	P	Pn	16 59 36.3	+0.3
CEVE	Cerro Verde	1.46	321	eP	Pb	16 59 40.9	-0.5
CEVE	Cerro Verde	1.46	321	P	Pb	16 59 40.9	-0.5
CEVE	Cerro Verde	1.46	321	S	Sb	16 59 59.1	-0.5
SBLS	San Blas	1.47	321	eP	Pn	16 59 40.3	+0.8
SNJE	San Jose	1.48	323	eP	Pn	16 59 40.4	+0.8
LLGN	La Laguna	1.49	350	S	Sn	16 59 59.3	+1.1
LLGN	La Laguna	1.49	350	P	Pn	16 59 39.9	+0.2
UNIC	Universidad Ca	1.54	327	P	Pn	16 59 41.1	+0.8
UNIC	Universidad Ca	1.54	327	S	Sn	17 00 00.3	+0.9
CRIN	San Cristobal	1.59	89	P	Pn	16 59 41.7	+0.6
CRIN	San Cristobal	1.59	89	S	Sn	17 00 01.3	+0.6
NUBE	Las Nubes	1.61	319	eP	Pn	16 59 41.8	+0.5
NUBE	Las Nubes	1.61	319	eP	Pn	16 59 41.8	+0.5
NUBE				eS	Sn	17 00 00.5	-0.8
NUBE	Las Nubes	1.61	319	P	Pn	16 59 41.9	+0.5
NUBE	Las Nubes	1.61	319	S	Sn	17 00 01.9	+0.2
PKGN	Cerro Pekin	1.67	90	P	Pn	16 59 42.4	+0.4
PKGN				S	Sn	17 00 02.2	-0.2
LOAL	Lomas de Alarc	1.69	321	P	Pn	16 59 43

GUMO	**Guam**	**1.39**	**356**	Sn	**Sn**	**17**	**10**	**25.2 -1.3**
GUMO	**Guam**	**1.39**	**356**	P	**Pg**	**17**	**10**	**10.8 +0.3**
	212nm,0.3s,baz=166,slow=22,SNR=88							
GUMO				S	**Sg**	**17**	**10**	**29.2 +0.5**
	305nm,0.3s,baz=343,slow=19,SNR=5.2							
GUMO				LR	LR	17	11	09.0
	comp=Z,219nm,21.5s,baz=238,slow=59							
PATS	**Pohnpei**	**14.20**	**111**	Pn	**Pn**	**17**	**13**	**04.7 +0.5**
MJAR	**Matsushiro Arr**	**25.00**	**347**	LR	LR	17	23	30.2
	comp=Z,33nm,20.3s,baz=200,slow=33							
WB0	**Warramunga Arr**	**33.42**	**198**	P	**P**	**17**	**16**	**22.3 +0.4**
WB0				IAmb	IAmb	17	16	41.8
	comp=Z,2.8nm,1.1s							
WR8	**Warramunga Arr**	**33.56**	**198**	P	**P**	**17**	**16**	**23.8 +0.6**
WR8				IAmb	IAmb	17	17	01.8
	comp=Z,6.3nm,1.4s							
WRA	**Warramunga Arr**	**33.60**	**198**	P	**P**	**17**	**16**	**24.8 +1.3**
	comp=Z,0.7nm,0.7s,baz=21,slow=9.8,SNR=6.9							
	comp=Z,0.7nm,0.7s							
AS31	**Alice Springs**	**37.24**	**197**	P	**P**	**17**	**16**	**56.0 +1.2**
ASAR	**Alice Springs**	**37.24**	**197**	P	**P**	**17**	**16**	**55.4 +0.6**
ASAR	**Alice Springs**	**37.24**	**197**	P	**P**	**17**	**16**	**56.2 +1.4**
	comp=Z,0.8nm,0.6s,baz=21,slow=10,SNR=20							
	comp=Z,0.8nm,0.6s							
EIDS	**Eidsvold**	**37.81**	**171**	P	**P**	**17**	**16**	**59.3 -0.2**
CMAR	**Chiang Mai Arr**	**44.72**	**284**	P	**P**	**17**	**17**	**56.6 0.0**
CMAR	**Chiang Mai Arr**	**44.72**	**284**	P	**P**	**17**	**17**	**57.1 +0.6**
	comp=Z,0.6nm,0.5s,baz=80,slow=6.5,SNR=7.2							
	comp=Z,0.6nm,0.5s							
CAN	**Canberra**	**47.41**	**176**	P	**P**	**17**	**18**	**16.0 -1.4**
SONM	**Songino Array**	**47.92**	**326**	P	**P**	**17**	**18**	**22.1 +0.6**
SONM	**Songino Array**	**47.92**	**326**	P	**P**	**17**	**18**	**22.8 +1.3**
	comp=Z,0.5nm,0.7s,baz=142,slow=7.3,SNR=3.3							
	comp=Z,0.5nm,0.7s							
GSI	**Gunungsitoli**	**48.20**	**261**	P	**P**	**17**	**18**	**22.9 -1.1**
MKAR	**Makanchi Array**	**62.56**	**317**	P	**P**	**17**	**20**	**06.3 -0.7**
MKAR	**Makanchi Array**	**62.56**	**317**	P	**P**	**17**	**20**	**07.3 +0.3**
	comp=Z,0.7nm,0.7s,baz=97,slow=7.4,SNR=7.5							
	comp=Z,0.7nm,0.7s							
MAKZ	**Makanchi**	**62.77**	**317**	P	**P**	**17**	**20**	**08.2 -0.1**
MAKZ				IAmb	IAmb	17	20	09.6
	comp=Z,3.3nm,1.1s							
KURK	**Kurchatov**	**65.71**	**320**	P	**P**	**17**	**20**	**27.4 -0.1**
KURK				IAmb	IAmb	17	20	28.6
	comp=Z,1.6nm,0.8s							
KURBB	**Kurchatov Arra**	**65.75**	**320**	P	**P**	**17**	**20**	**27.6 -0.2**
	comp=Z,0.6nm,0.5s,baz=105,slow=6.6,SNR=7.5							
	comp=Z,0.6nm,0.5s							
ARSB	**Arslanbob**	**68.54**	**310**	P	**P**	**17**	**20**	**46.0 +0.1**
ARSB				IAmb	IAmb	17	20	50.0
	comp=Z,3.2nm,1.0s							
ILAR	**Eielson Array**	**69.79**	**25**	P	**P**	**17**	**20**	**52.4 -0.6**
	comp=Z,0.3nm,0.5s,baz=255,slow=5.4,SNR=7.3							
	comp=Z,0.3nm,0.5s							
BVAR	**Borovoye Array**	**71.08**	**322**	P	**P**	**17**	**21**	**01.3 +0.2**
	comp=Z,0.7nm,0.3s,baz=99,slow=7.9,SNR=8.6							
	comp=Z,0.7nm,0.3s							
ARTI	**Arti**	**78.06**	**325**	LR	LR	17	58	12.4
	comp=Z,36nm,18.2s,baz=238,slow=37							

*HVO **08** 17:44:16.5±0.8,20°.18N±0°.04×155°.79W±0°.06,h35km±7km, Error ellipse: s-maj=8.1km s-min=5.1km az=112.0*

NEIC 08 17:44:14.3±0.7,20°.19N±0°.04×155°.80W±0°.03,h43km±3km, ML2.7/46,ML2.6/24(HVO),Error ellipse: s-maj=5.3km s-min=3.8km az=206.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHA	**Mahukona**	**0.10**	**271**		Pn	17 44 22.1	+0.9
MHA				Sn	Sn	17 44 25.6	-0.5
HPAH	**Hawaii Prepara**	**0.18**	**149**	Pn	Pn	17 44 22.0	+0.2
HPAH				Sn	Sn	17 44 26.3	-0.8
HPAH				IAML		17 44 26.7	
	comp=N,858nm,0.1s						
POHA	**Pohakuloa**	**0.49**	**150**		Pn	17 44 25.5	+0.3
POHA				IAML		17 44 34.1	
	comp=N,447nm,0.3s						
POHA	**Pohakuloa**	**0.49**	**150**	Sn	Sn	17 44 32.2	-0.8
HUH	**Hualalai**	**0.50**	**184**		Pn	17 44 25.9	+0.5
HUH				Sn	Sn	17 44 33.1	-0.1
HMH	**Humu'ula Sheep**	**0.65**	**153**		Pn	17 44 27.8	+0.4
HMH				IAML		17 44 45.4	
	comp=E,258nm,3.1s						
HMH	**Humu'ula Sheep**	**0.65**	**153**		Sn	17 44 36.0	-0.8
HMH	**Humu'ula Sheep**	**0.65**	**153**	IAML		17 44 34.5	
	comp=N,196nm,4.2s						
ALEP	**Alea Permanent**	**0.66**	**167**		Pn	17 44 28.1	+0.5
ALEP					Sn	17 44 36.8	-0.2
HLK	**Haleakala**	**0.71**	**323**		Pn	17 44 28.3	+0.1
HLK	**Haleakala**	**0.71**	**323**	IAML		17 44 54.5	
	comp=N,330nm,4.2s						
HLK				IAML		17 44 56.3	
	comp=E,262nm,4.1s						
MWH	**Mokuaweoweo**	**0.72**	**165**		Pn	17 44 28.5	0.0
MWH					Sn	17 44 37.7	-1.1
MWH	**Mokuaweoweo**	**0.72**	**165**	IAML		17 44 48.5	
	comp=E,284nm,2.4s						
MWH				IAML		17 44 57.8	
	comp=N,254nm,0.8s						
MLH	**Mauna Loa**	**0.79**	**151**		Pn	17 44 29.4	+0.2
MLH				IAML		17 44 47.5	
	comp=E,277nm,3.5s						
MLH	**Mauna Loa**	**0.79**	**151**		Sn	17 44 39.0	-1.0
RSD	**Rainshed**	**0.87**	**146**		Pn	17 44 30.4	+0.2
RSD	**Rainshed**	**0.87**	**146**		Sn	17 44 41.0	-0.8
AIN	**Ainahou**	**0.87**	**158**		Pn	17 44 30.5	+0.2
AIN				IAML		17 44 41.9	
	comp=E,312nm,0.3s						
AIN	**Ainahou**	**0.87**	**158**		Sn	17 44 40.9	-1.0
UWE	**Uwekahuna**	**0.90**	**148**		Pn	17 44 30.7	+0.1
UWE					Sn	17 44 41.2	-1.3
UWB	**Uwekahuna Bluf**	**0.90**	**147**		Pn	17 44 30.6	0.0
UWB					Sn	17 44 41.0	-1.5
OBL	**Observatory Le**	**0.90**	**148**		Pn	17 44 30.7	0.0
OBL					Sn	17 44 41.3	-1.3
SBLHI	**Steaming Bluff**	**0.90**	**147**		Pn	17 44 30.6	-0.1
SBLHI					Sn	17 44 41.0	-1.6
WRMHI	**West Rim**	**0.91**	**149**		Pn	17 44 30.7	0.0
WRMHI					Sn	17 44 41.4	-1.3
HATHI	**Halema'uma'u T**	**0.91**	**146**		Pn	17 44 30.7	-0.1
HATHI					Sn	17 44 41.1	-1.7
HATHI	**Halema'uma'u T**	**0.91**	**146**	IAML		17 44 52.2	
	comp=N,175nm,2.1s						
HATHI				IAML		17 45 02.8	
	comp=E,228nm,2.0s						
BYL	**Byron's Ledge**	**0.92**	**147**		Pn	17 44 30.8	-0.1
KHLH	**Kahului Airpor**	**0.92**	**320**	Pn	Pn	17 44 31.1	+0.3
SDHHI	**Sand Hill**	**0.92**	**149**		Pn	17 44 30.9	-0.1
RIM	**Rim**	**0.93**	**148**		Pn	17 44 30.9	-0.1
RIM					Sn	17 44 42.4	-0.8
KKO	**Keanakako'i**	**0.93**	**147**		Pn	17 44 31.1	+0.1
KKO					Sn	17 44 42.4	-0.9
KHU	**Kahuku**	**0.95**	**170**		Pn	17 44 31.3	-0.1
KHU					Sn	17 44 42.3	-1.6
PUH	**Pauahi**	**0.97**	**146**		Pn	17 44 31.4	-0.2
PUH				IAML		17 45 05.8	
	comp=N,214nm,3.9s						
PUH	**Pauahi**	**0.97**	**146**		Sn	17 44 42.9	-1.4
PUH	**Pauahi**	**0.97**	**146**	IAML		17 44 40.9	
	comp=E,152nm,3.6s						
KNHH	**Kane Nui o Ham**	**1.00**	**144**		Pn	17 44 31.9	0.0
HLP	**Hilina Pali**	**1.00**	**152**		Pn	17 44 32.1	+0.2
HLP					Sn	17 44 43.6	-1.3
HTC	**Hot Caves**	**1.02**	**158**		Pn	17 44 32.3	+0.2
STCH	**Steam Cracks**	**1.02**	**141**		Pn	17 44 32.1	0.0
STCH	**Steam Cracks**	**1.02**	**141**	IAML		17 44 44.5	
	comp=N,252nm,0.2s						
NPOC	**North of Pu'u**	**1.02**	**141**		Sn	17 44 32.2	0.0
NPOC					Sn	17 44 43.8	-1.6
JCUZ	**Jacuzzi**	**1.03**	**141**		Pn	17 44 32.4	0.0
JCUZ					Sn	17 44 44.0	-1.6
JOKA	**Jonika Flow**	**1.06**	**135**		Pn	17 44 32.5	-0.1
JOKA				IAML		17 44 53.9	
	comp=E,178nm,3.5s						
JOKA	**Jonika Flow**	**1.06**	**135**		Sn	17 44 45.0	-1.2
KPA	**Kalaupapa**	**1.50**	**312**	Pn	Pn	17 44 38.6	0.0
WMR	**Waimanalo Ridg**	**2.10**	**303**		Pn	17 44 47.2	+0.3
HON	**Honolulu**	**2.35**	**299**		Pn	17 44 50.2	-0.3
KEKH	**Kekaha**	**4.07**	**297**		Pn	17 45 11.0	-3.0

*VIE **08** 17:44:34.8±0.2,50°.27N×18°.75E,h0km,mb2.6/2,ml2.5/3, Error ellipse: s-maj=2.6km s-min=1.3km az=171.0 17 km*

W of Katowice Suspected Mining induced.
*IPEC **08** 17:44:34.9±0.1,50°.22N×18°.76E,h1km,ML2.4/6, Error ellipse: s-maj=1.7km s-min=0.8km az=176.0*
*PRU **08** 17:44:36.3,50°.19N×18°.71E,h0km*

ISC 08 17:44:34.8±0.8,50°.17N±0°.04×18°.73E±0°.02,h0km,n32, σ1s09/59,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.50**	**229**	*e*PG	**Pb**	**17**	**44**	**46.3 -0.2**
OKC				*e*SG	**Sb**	**17**	**44**	**53.2 -1.1**
	comp=Z,82nm,0.7s							
STEB	**Steborice**	**0.66**	**250**	*e*PG	**Pb**	**17**	**44**	**49.1 -0.1**
STEB				*e*SG	**Sb**	**17**	**44**	**58.7 -0.2**
	comp=Z,96nm,0.4s							
OJC	**Ojcow**	**0.69**	**85**	*e*Pg	**Pg**	**17**	**44**	**47.9 -0.1**
OJC				*e*Sg	**Sg**	**17**	**44**	**56.9 0.0**
MORC	**Moravsky Berou**	**0.86**	**244**	*e*PG	**Pb**	**17**	**44**	**52.2 -0.5**
MORC				*e*SG	**Sg**	**17**	**45**	**03.2 +0.8**
MORC	**Moravsky Berou**	**0.86**	**244**	*e*Pg	**Pb**	**17**	**44**	**52.1 -0.6**
	baz=60							
MORC				*e*Sg	**Sg**	**17**	**45**	**03.1 +0.7**
	96nm,0.7s,baz=60							
ANAC	**Anensky vrch**	**0.88**	**265**	*e*Pg	**Pb**	**17**	**44**	**52.4 -0.5**
	baz=80							
ANAC				*e*Sg	**Sg**	**17**	**45**	**03.0 +0.1**
	96nm,0.3s,baz=80							
MAUC	**Maruska**	**0.99**	**216**	*e*PG	**Pn**	**17**	**44**	**55.4 -0.6**
LOSC	**Losov**	**1.03**	**239**	*e*Pg	**Pb**	**17**	**44**	**55.7 +0.1**
	baz=56							
LOSC				*e*Sg	**Sg**	**17**	**45**	**08.7 +0.7**
	58nm,0.3s,baz=56							
LANS	**Liptovska Anna**	**1.12**	**154**	*e*PG	**Pn**	**17**	**44**	**57.5 -0.3**
LANS				*e*SG	**Sn**	**17**	**45**	**13.7 -0.3**
LANS				*e*LG	Lg	17	45	18.5
KRLC	**Kraliky**	**1.26**	**267**	*e*PG	**Pg**	**17**	**44**	**58.4 -0.5**
KRLC				*e*SG	**Sb**	**17**	**45**	**15.9 -0.3**
	comp=Z,50nm,0.4s							
NIE	**Niedzica**	**1.26**	**126**	*e*Pg	**Pb**	**17**	**44**	**59.2 -0.3**
NIE				*e*Sg	**Sn**	**17**	**45**	**17.3 -0.1**
JAVC	**Velka Javorina**	**1.48**	**208**	*e*Pn	**Pb**	**17**	**45**	**03.3 +0.1**
	baz=27							
DPC	**Dobruska-Polom**	**1.56**	**278**	*e*PG	**Pn**	**17**	**45**	**03.8 0.0**
DPC				*e*SG	**Sn**	**17**	**45**	**24.5 -0.2**
	comp=Z,43nm,0.3s							
VRAC	**Vranov**	**1.63**	**239**	*e*PN	**Pb**	**17**	**45**	**05.5 -0.3**
VRAC				*e*SG	**Sg**	**17**	**45**	**27.3 +0.1**
VRAC	**Vranov**	**1.63**	**239**	*e*Pn	**Pb**	**17**	**45**	**05.4 -0.3**
	baz=56							
VRAC				*e*Sg	**Sg**	**17**	**45**	**27.2 +0.1**
	37nm,0.5s,baz=56							
OSTC	**Ostas**	**1.66**	**285**	*e*PG	**Pg**	**17**	**45**	**06.3 -0.3**
OSTC				*e*SG	**Sg**	**17**	**45**	**27.7 -0.3**
KSP	**Ksiaz**	**1.70**	**294**	*e*Pg	**Pg**	**17**	**45**	**07.7 +0.3**
KSP				*e*Sg	**Sg**	**17**	**45**	**30.5 +1.2**
CHVC	**Chvalec**	**1.76**	**285**	*e*PG	**Pb**	**17**	**45**	**07.6 -0.5**
UPC	**Upice**	**1.77**	**282**	*e*SG	**Sg**	**17**	**45**	**32.0 +0.2**
	comp=Z,16nm,0.5s							
STHS	**Stebnicka Huta**	**1.79**	**114**	*e*PG	**Pb**	**17**	**45**	**07.9 -0.6**
STHS				*e*SG	**Sg**	**17**	**45**	**34.5 +2.1**
STHS				*e*LG	Lg	17	45	35.5
KRUC	**Moravsky**	**1.88**	**235**	*e*Pn	**Pn**	**17**	**45**	**08.6 +0.4**
	baz=52							
KRUC				*e*Sg	**Sg**	**17**	**45**	**35.2 +0.1**
	13nm,0.5s,baz=52							
MODS	**Modra-Piesok**	**2.03**	**208**	*e*PN	**Pb**	**17**	**45**	**12.4 -0.2**
MODS				*e*SG	**Sg**	**17**	**45**	**41.4 +1.4**
KECS	**Kecovo**	**2.04**	**145**	*e*PN	**Pb**	**17**	**45**	**10.0 -0.4**
KECS				*e*SN	**Sn**	**17**	**45**	**35.2 -1.3**
PVCC	**Panska Ves**	**2.69**	**279**	*e*PG	**Pg**	**17**	**45**	**25.3 -1.1**
PVCC				*e*SG	**Sg**	**17**	**46**	**01.1 -0.1**
	comp=Z,14nm,0.3s							
PRU	**Pruhonice**	**2.70**	**268**	*e*SG	**Sg**	**17**	**46**	**00.2 -1.4**
	comp=Z,9.5nm,0.4s							
CONA	**Conrad Observa**	**2.93**	**221**	*i* Pn	**Pn**	**17**	**45**	**23.3 +0.6**
	0.9nm,0.3s							
CONA				*i* Sn	**Sn**	**17**	**46**	**01.1 +2.5**
	10nm,0.7s							
RONA	**Rosalia, Austr**	**2.94**	**214**	*i* Pn	**Pn**	**17**	**45**	**23.4 +0.6**
	0.9nm,0.3s							
RONA				*i* Sn	**Sn**	**17**	**46**	**01.5 +2.6**
	3.7nm,0.4s							
ZVC	**Zvikov**	**3.03**	**258**	*e*PG	**Pg**	**17**	**45**	**31.2 -1.6**
CKRC	**Cesky Krumlov**	**3.18**	**247**	*e*PG	**Pg**	**17**	**45**	**34.8 -1.0**
CKRC				*e*SG	**Sg**	**17**	**46**	**14.8 -2.2**
KHC	**Kasperske Hory**	**3.50**	**255**	*e*PN	**Pn**	**17**	**45**	**30.5 -0.1**
KHC				*e*PG	**Pg**	**17**	**45**	**39.7 -2.3**
KHC				*e*SG	**Sg**	**17**	**46**	**26.2 -1.2**
	comp=Z,14nm,0.7s							
MOA	**Molln**	**3.74**	**233**	*e*Pn	**Pn**	**17**	**45**	**36.7 +2.9**
	0.8nm,0.3s							
MOA				*e*Sn	**Sn**	**17**	**46**	**21.6 +3.0**
	4.6nm,0.7s							
CLL	**Collm**	**3.81**	**290**	*i* Pg	**Pg**	**17**	**45**	**49.0 +1.1**
CLL				*i* Sg	**Sg**	**17**	**46**	**37.2 -0.1**
	comp=Z,10.0nm,0.6s							

GCG 08 17:47:18.6±0.8,13°.96N×91°.04W,h71km±11km,MD3.0, ML3.6,MW3.0,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.47**	**26**	*i* P	Pn	17	47	31.6 +0.2
ESSG				*e*S	Sn	17	47	41.5 +0.8
FG16	**Alotenango, Sa**	**0.60**	**59**	*i* S	Sn	17	47	43.5 +0.2
FG16				IAML		17	47	46.1
	comp=E,5μm,0.2s							
PCG5	**San Vicente Pa**	**0.70**	**69**	*i* P	Pn	17	47	32.7 -1.1
SOKI	**Kika Raxquin**	**0.92**	**338**	*e*S	Sn	17	47	51.7 +1.8
APG	**El Apazote**	**1.18**	**28**	*e*P	Pn	17	47	40.8 +1.1
NUBE	**Las Nubes**	**1.23**	**93**	*e*P	Pn	17	47	40.2 -0.1

*TEH **08** 17:55:47.8,36°.07N×45°.89E,h12km±31km*
*ISN **08** 17:55:49.6±1.8,36°.03N×45°.91E,h25km±15km,ML2.6*

ISC 08 17:55:47.6±0.9,36°.11N±0°.04×45°.85E±0°.04,h10km,n15, σ0s87/18,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.66**	**350**	Pg	**Pg**	**17**	**56**	**00.7 +0.2**
MAHB				Sg	**Sb**	**17**	**56**	**10.4 -0.4**
IKRK	**Kirkuk**	**1.42**	**240**	*e*Pg	**Pn**	**17**	**56**	**14.0 +0.5**
IKRK				*e*Sg	**Sg**	**17**	**56**	**34.0 +0.8**
	comp=N,116nm,0.6s			AML	AML	17	56	38.3
IKRK				AML	AML	17	56	39.1
	comp=E,89nm,0.4s							
IDHR	**Dehrash**	**1.48**	**162**	Pg	**Pn**	**17**	**56**	**13.4 -1.0**
IHSH	**Hashtrud**	**1.65**	**43**	Pg	**Pg**	**17**	**56**	**19.1 -0.2**
IGHG	**Ghaleghazi**	**1.87**	**161**	Pn	**Pb**	**17**	**56**	**21.5 -0.6**
SNQR	**Sonqor, Kerman**	**1.92**	**130**	Pn	**Pn**	**17**	**56**	**21.7 +1.1**
GLG1	**Gilan-e-Gharb**	**1.99**	**178**	Pn	**Pb**	**17**	**56**	**23.3 -0.7**
KCHF	**Cheshme Sefid,**	**2.08**	**152**	Pn	**Pb**	**17**	**56**	**24.9 -0.7**
ITBZ	**Tabriz**	**2.13**	**6**	Pn	**Pb**	**17**	**56**	**26.8 +0.3**
ISHB	**Shabestar**	**2.18**	**355**	Pn	**Pb**	**17**	**56**	**26.4 -0.8**
MSL	**Mosul**	**2.23**	**278**	*e*Pn	**Pb**	**17**	**56**	**27.0 -1.0**
MSL				*e*Sn	**Sb**	**17**	**56**	**56.0 +0.3**
IHRS	**Heris**	**2.40**	**23**	Pn	**Pg**	**17**	**56**	**32.5 -1.2**
HGHA	**Hamedan- Ghaye**	**2.53**	**103**	Pn	**Pb**	**17**	**56**	**33.2 0.0**
IMRD	**Marand**	**2.60**	**358**	Pn	**Pb**	**17**	**56**	**34.4 0.0**
IBDR	**Badra**	**3.00**	**179**	*e*Pn	**Pn**	**17**	**56**	**37.0 +1.8**

*HEL **08** 18:00:24.5±0.3,67°.12N×20°.66E,h0km,ML1.8,Explosion*
*UPP **08** 18:00:26.7±0.1,67°.05N×20°.97E,h0km,ML2.2,Suspected explosion*
*IDC **08** 18:00:27.3±1.0,67°.04N×21°.10E,h0km,mbtmp2.6/4, ML1.7/4,Error ellipse: s-maj=20.5km s-min=9.2km az=110.0*

ISC 08 18:00:27.2±0.8,67°.06N±0°.02×20°.94E±0°.02,h0km,n50, σ1s03/71,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.16**	**293**	P	**Pg**	**18**	**00**	**30.3 +0.1**
	baz=118							
DUNU				S	**Sg**	**18**	**00**	**33.0 +0.8**
DUNU	**Dundret**	**0.16**	**293**	P	**Pg**	**18**	**00**	**31.1 +0.9**
	baz=120							
DUNU				S	**Sg**	**18**	**00**	**33.6 +1.3**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**18**	**00**	**37.8 -0.3**
MASU				S	**Sg**	**18**	**00**	**45.5 0.0**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**18**	**00**	**38.8 +0.7**
MASU				S	**Sg**	**18**	**00**	**46.9 +1.4**
ERTU	**Ertsjaerv**	**0.71**	**135**	P	**Pg**	**18**	**00**	**39.8 -0.9**
ERTU				S	**Sg**	**18**	**00**	**49.0 -0.8**
ERTU	**Ertsjaerv**	**0.71**	**135**	P	**Pg**	**18**	**00**	**41.1 +0.4**
ERTU				S	**Sg**	**18**	**00**	**50.4 +0.6**
ERTU	**Ertsjaerv**	**0.71**	**135**	PG	**Pg**	**18**	**00**	**39.6 -1.1**
ERTU				SG	**Sg**	**18**	**00**	**50.0 +0.2**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**18**	**00**	**42.5 -1.0**
PAJU				S	**Sg**	**18**	**00**	**53.9 -0.5**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**18**	**00**	**43.9 +0.5**
PAJU				S	**Sg**	**18**	**00**	**55.4 +1.0**
PAJU	**Pajala**	**0.85**	**91**	PG	**Pg**	**18**	**00**	**42.4 -1.0**
	baz=277							
PAJU				SB	**Sg**	**18**	**00**	**55.4 +1.0**
HARU	**Harads**	**0.90**	**179**	P	**Pg**	**18**	**00**	**43.4 -0.9**
HARU	**Harads**	**0.90**	**179**	P	**Pg**	**18**	**00**	**44.4 0.0**
KUA	**Kurravaara**	**0.93**	**346**	P	**Pg**	**18**	**00**	**44.1 -0.9**
KUA	**Kurravaara**	**0.93**	**346**	P	**Pb**	**18**	**00**	**45.5 -0.6**
RATU	**Laukkuluspa**	**0.93**	**326**	P	**Pg**	**18**	**00**	**44.2 -0.7**
RATU	**Laukkuluspa**	**0.93**	**326**	P	**Pg**	**18**	**00**	**45.5 +0.6**
SALU	**Saltoluokta**	**1.00**	**290**	P	**Pg**	**18**	**00**	**45.7 -0.6**
LANU	**Lannavaara**	**1.07**	**22**	P	**Pg**	**18**	**00**	**46.7 -1.0**
LANU	**Lannavaara**	**1.07**	**22**	PN	**Pg**	**18**	**00**	**46.5 -1.2**
	baz=214							
LANU				SN	**Sg**	**18**	**01**	**01.8 +0.3**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**18**	**00**	**47.3 -0.8**
KOVU	**Salmi**	**1.21**	**346**	P	**Pg**	**18**	**00**	**49.3 -1.0**
KALU	**Kalix**	**1.55**	**140**	P	**Pn**	**18**	**00**	**54.8 -1.0**
KALU	**Kalix**	**1.55**	**140**	PN	**Pn**	**18**	**00**	**54.9 -1.0**
KALU				SN	**Sg**	**18**	**01**	**18.2 +1.5**
SJUU	**Sjulsmark**	**1.58**	**170**	P	**Pn**	**18**	**00**	**55.6 -0.8**
TOF	**Tornio**	**1.67**	**124**	PG	**Pn**	**18**	**00**	**57.0 -0.6**
TOF				smax	smax	18	01	18.1
	comp=Z,8.0nm,0.2s							
TOF				SG	**Sn**	**18**	**01**	**19.7 0.0**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**18**	**00**	**57.7 -0.5**
HEF	**Hetta**	**1.71**	**36**	smax	smax	18	01	15.8
	comp=Z,7.2nm,0.2s							
HEF				SN	**Sn**	**18**	**01**	**20.8 +0.2**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*P	**Pb**	**18**	**01**	**02.7 -0.8**
RNF	**Rovaniemi**	**2.06**	**100**	PG	**Pn**	**18**	**01**	**03.4 +0.5**
RNF				SG	**Sb**	**18**	**01**	**32.0 +0.6**
BURU	**Burvik**	**2.49**	**176**	PG	**Pn**	**18**	**01**	**09.7 +0.8**
OBF4	**Vikkela, Lumij**	**2.83**	**141**	PB	**Pn**	**18**	**01**	**14.4 +1.0**
	baz=328							
OBF4				smax	smax	18	01	51.3
	comp=Z,1.6nm,0.2s							
OUL	**Oulu**	**2.83**	**132**	PB	**Pn**	**18**	**01**	**14.9 +1.4**
OBF0	**Syolatti, Pyha**	**2.91**	**151**	PB	**Pn**	**18**	**01**	**15.3 +0.7**
OBF0				smax	smax	18	01	53.4
	comp=Z,2.8nm,0.2s							
OBF8	**Ulkokalla**	**2.93**	**158**	PB	**Pn**	**18**	**01**	**15.4 +0.5**
OBF8				smax	smax	18	01	53.6
	comp=Z,4.1nm,0.2s							
ARA0	**ARCESS Array S**	**3.01**	**32**	PB	**Pn**	**18**	**01**	**16.4 +0.3**
ARA0				SG	**Sb**	**18**	**01**	**56.1 -2.7**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**18**	**01**	**16.1 +0.1**
	comp=Z,0.1nm,0.3s,baz=213,slow=13,SNR=18							
ARCES				Sn	**Sn**	**18**	**01**	**53.0 +0.2**
	comp=Z,0.3nm,0.3s,baz=211,slow=23,SNR=8.7							
	comp=Z,0.3nm,0.2s							
OUF	**Merijarvi**	**3.12**	**148**	PB	**Pn**	**18**	**01**	**19.4 +1.8**
RAJF	**Raja-Jooseppi**	**3.14**	**60**	PB	**Pn**	**18**	**01**	**19.3 +1.5**
RAJF				SG	**Sb**	**18**	**02**	**10.9 +1.3**
UMAU	**Umeaa**	**3.19**	**182**	PB	**Pn**	**18**	**01**	**18.7 +0.2**
KU2	**Taivalkoski**	**3.23**	**111**	PN	**Pn**	**18**	**01**	**19.5 +0.4**
	baz=298							
VRF	**Varrio**	**3.42**	**74**	PB	**Pn**	**18**	**01**	**22.6 +1.0**
VRF				SG	**Sb**	**18**	**02**	**11.3 +0.8**
OLKF	**Oulanka, Finla**	**3.44**	**99**	PN	**Pn**	**18**	**01**	**22.6 +0.6**
OLKF				SN	**Sn**

IHRS	**Heris**	**0.75**	**280**	Pg	**Pg**	**18 14 02.1**	**-0.5**		
LKRN	**Lenkeran, Azer**	**0.81**	**50**	P	**Pb**	**18 14 04.5**	**-0.4**		
LKRN				S	**Sn**	**18 14 17.7**	**-1.2**		
IHSH	**Hashtrud**	**1.06**	**213**	Pg	**Pg**	**18 14 07.7**	**-0.8**		
IHSH				Sg	**Sg**	**18 14 21.9**	**-0.2**		
CSN1	**Caspian**	**1.08**	**125**	Pg	**Pn**	**18 14 09.5**	**-0.7**		
GLBA	**Clilabad**	**1.09**	**17**	P	**Pn**	**18 14 10.8**	**+0.4**		
GLBA				S	**Sn**	**18 14 27.9**	**+1.9**		
QRD	**Qoradiz**	**1.36**	**338**	Pn	**Pg**	**18 14 15.0**	**+0.7**		
QRD				Sn	**Sg**	**18 14 35.9**	**+3.8**		
ITBZ	**Tabriz**	**1.45**	**272**	Pg	**Pn**	**18 14 14.7**	**-0.7**		
BLQ	**Beylaqan**	**1.56**	**348**	Pn	**Pg**	**18 14 19.0**	**+1.0**		
BLQ				Sn	**Sg**	**18 14 40.8**	**+2.6**		
ZNJK	**Zanjan**	**1.62**	**160**	Pg	**Pb**	**18 14 18.4**	**-0.5**		
IAZR	**Azarshahr**	**1.67**	**253**	Pg	**Pb**	**18 14 19.1**	**-0.5**		
SAAT	**Saatly**	**1.70**	**12**	Pn	**Pg**	**18 14 22.4**	**+1.7**		
SAAT				Sn	**Sg**	**18 14 46.6**	**+3.9**		
ORD	**Ordubad**	**1.72**	**296**	Pn	**Pg**	**18 14 21.8**	**+0.6**		
ORD				Sg	**Sg**	**18 14 43.5**	**0.0**		
IMRD	**Marand**	**1.86**	**287**	Pn	**Pb**	**18 14 23.0**	**0.0**		
ISHB	**Shabestar**	**1.86**	**273**	Pn	**Pb**	**18 14 22.2**	**-0.8**		
ALIB	**&Aumlli-Bayram**	**1.93**	**24**	Pn	**Pg**	**18 14 24.9**	**-0.3**		
ALIB				Sn	**Sg**	**18 14 52.3**	**+2.1**		
AGDM	**Agdam**	**2.03**	**341**	Pn	**Pb**	**18 14 25.9**	**+0.3**		
AGDM				Sn	**Sg**	**18 14 54.8**	**+1.5**		
JIR1	**Jirandeh**	**2.08**	**135**	Pn	**Pb**	**18 14 25.1**	**-1.4**		
ZRD	**Zardab**	**2.09**	**354**	Pn	**Pg**	**18 14 27.5**	**-0.8**		
ZRD				Sn	**Sg**	**18 14 58.0**	**+2.6**		
BRDA	**Brd**	**2.16**	**343**	Pn	**Pg**	**18 14 28.8**	**-0.7**		
BRDA				Sn	**Sg**	**18 14 59.1**	**+1.7**		
NAX	**Nakhchivan**	**2.18**	**297**	Pn	**Pb**	**18 14 28.4**	**+0.1**		
NAX				Sn	**Sg**	**18 15 00.1**	**+1.9**		
SBZ	**Shahbuz**	**2.25**	**303**	Pn	**Pg**	**18 14 30.2**	**+1.0**		
SBZ				Sn	**Sg**	**18 15 01.4**	**+1.1**		
MAHB	**Mahabad**	**2.31**	**232**	Pn	**Pb**	**18 14 30.0**	**-0.5**		
GBS	**Qobustan**	**2.45**	**17**	Pn	**Pb**	**18 14 32.3**	**-0.6**		
GBS				Sn	**Sg**	**18 15 06.2**	**-0.7**		
IGZV	**Ghazvin**	**2.54**	**135**	Pn	**Pb**	**18 14 32.0**	**-2.5**		
IML	**Ismayilli**	**2.60**	**3**	Pn	**Pb**	**18 14 34.0**	**-1.4**		
IML				Sn	**Sg**	**18 15 09.5**	**-2.1**		
PQL	**Pirkuli**	**2.63**	**10**	Pn	**Pb**	**18 14 35.0**	**-1.1**		
PQL				Sn	**Sg**	**18 15 10.6**	**-2.1**		
QBL	**Gabala**	**2.75**	**358**	Pn	**Pb**	**18 14 36.5**	**-1.5**		
QBL				Sn	**Sb**	**18 15 12.5**	**+0.4**		
ATGJ	**Altiaghaj**	**2.76**	**15**	Pg	**Pb**	**18 14 37.4**	**-0.8**		
ATGJ				Sg	**Sg**	**18 15 15.4**	**-1.5**		
GANJ	**Ganja**	**2.76**	**333**	Pn	**Pb**	**18 14 36.3**	**-1.9**		
GANJ				Sn	**Sb**	**18 15 13.8**	**+1.3**		
HGHA	**Hamedan- Ghaye**	**2.79**	**165**	Pn	**Pn**	**18 14 35.8**	**+1.8**		
QABG	**Abgarm-Qazvin**	**2.79**	**152**	Pn	**Pn**	**18 14 35.7**	**+1.7**		
HYR	**Heyderabad**	**2.88**	**303**	Pg	**Pb**	**18 14 40.4**	**+0.2**		
HYR				Sg	**Sg**	**18 15 21.3**	**+0.8**		
SIZA	**Siyzn**	**2.96**	**14**	Pg	**Pb**	**18 14 40.5**	**-1.2**		
SIZA				Sg	**Sg**	**18 15 22.3**	**-1.0**		
XNQ	**Khinaliq**	**2.97**	**2**	Pn	**Pb**	**18 14 39.3**	**-2.6**		
XNQ				Sn	**Sb**	**18 15 18.2**	**-0.5**		
GDB	**GEDABAY**	**3.06**	**326**	Pg	**Pb**	**18 14 42.5**	**-0.8**		
GDB				Sg	**Sg**	**18 15 24.5**	**-1.8**		
SEKA	**Sheki**	**3.07**	**349**	Pn	**Pb**	**18 14 40.7**	**-2.7**		
SEKA				Sn	**Sb**	**18 15 20.1**	**-1.2**		
QUBA	**Quba, Azerbaij**	**3.18**	**7**	Pg	**Pb**	**18 14 44.3**	**-1.0**		
QUBA				Sg	**Sg**	**18 15 28.6**	**-1.7**		
VSHL	**Vashlovani**	**3.27**	**339**	P	**Pb**	**18 14 44.2**	**-2.6**		
VSHL				S	**Sb**	**18 15 26.5**	**-0.5**		
QSAR	**Qusar**	**3.32**	**4**	Pg	**Pb**	**18 14 46.2**	**-1.5**		
QSAR				Sg	**Sb**	**18 15 31.3**	**+2.7**		
MZPU	**Pul - Mazandar**	**3.35**	**120**	Pn	**Pb**	**18 14 49.4**	**+1.7**		
HAKT	**HAKKARI**	**3.44**	**261**	Pg	**Pb**	**18 14 50.6**	**+0.6**		
HAKT				Sg	**Sg**	**18 15 38.8**	**0.0**		
HAGD	**Aghdareh**	**3.49**	**164**	Pn	**Pn**	**18 14 44.8**	**+1.2**		
QZX	**Qazax, Azerbai**	**3.50**	**326**	Pg	**Pb**	**18 14 50.4**	**-0.4**		
QZX				Sg	**Sg**	**18 15 38.0**	**-2.5**		
ZKTA	**Zakatala**	**3.59**	**343**	Pn	**Pb**	**18 14 48.5**	**-3.8**		
ZKTA				Sn	**Sb**	**18 15 33.8**	**-2.5**		
DGRG	**David-gareji**	**3.82**	**329**	P	**Pb**	**18 14 57.3**	**+1.1**		
LGD	**Lagodekhi**	**3.87**	**340**	P	**Pb**	**18 14 52.5**	**-4.6**		
LGD				S	**Sb**	**18 15 43.5**	**-0.8**		
IPRN	**Peran**	**3.99**	**118**	Pn	**Pn**	**18 14 51.0**	**+0.7**		
TRLG	**Trialeti**	**4.48**	**319**	P	**Pb**	**18 15 05.9**	**-1.7**		

*ISN **08** 18:22:29.5±1.5, 34°.46N×45°.78E, h1km±10km, ML3.8*
*TEH **08** 18:22:31.0, 34°.52N×45°.84E, h8km±33km*
ISC 08 18:22:30.9±1.6, **34°.48N**±0°.03×**45°.82E**±0°.04, **h3**km±12km, **n35**, σ1°**52**/40, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLG1	**Gilan-e-Gharb**	**0.38**	**168**	Pg	**Pg**	**18 22 38.9**	**+0.8**
GLG1				Sg	**Sb**	**18 22 46.1**	**-0.4**
IDHR	**Dehrash**	**0.52**	**65**	Pg	**Pg**	**18 22 40.5**	**-0.3**
IDHR				Sg	**Sg**	**18 22 48.8**	**+1.2**
IGHG	**Ghaleghazi**	**0.64**	**104**	Pg	**Pg**	**18 22 43.8**	**+0.6**
KCHF	**Cheshme Sefid,**	**1.03**	**101**	Pg	**Pg**	**18 22 50.1**	**-0.6**
KCHF				Sg	**Sb**	**18 23 05.7**	**+0.1**
IBDR	**Badra**	**1.37**	**176**	*e*Pn	**Pn**	**18 22 57.0**	**+0.1**
IBDR				*e*Sn	**Sn**	**18 23 17.0**	**+1.4**
IKRK	**Kirkuk**	**1.52**	**307**	*e*Pn	**Pn**	**18 22 59.0**	**0.0**
IKRK				*e*Sn	**Sn**	**18 23 21.0**	**+1.7**
IKRK	comp=E,2μm,0.6s			AML	AML	18 23 24.0	
IKRK	comp=N,1μm,0.5s			AML	AML	18 23 28.3	
SNQR	**Sonqor, Kerman**	**1.54**	**75**	Pg	**Pn**	**18 22 59.4**	**-0.1**
BHD	**Baghdad**	**1.70**	**225**	*e*Pn	**Pn**	**18 23 02.0**	**+0.6**
BHD				*e*Sn	**Sn**	**18 23 25.0**	**+1.4**
IDOB	**Doab**	**2.08**	**109**	Pn	**Pn**	**18 23 08.0**	**+1.2**
MAHB	**Mahabad**	**2.28**	**358**	Pn	**Pn**	**18 23 10.8**	**+1.2**
BDRS	**Dareh Seyedi**	**2.59**	**101**	Pn	**Pn**	**18 23 15.5**	**+1.5**
HGHA	**Hamedan- Ghaye**	**2.69**	**67**	Pn	**Pn**	**18 23 17.0**	**+1.7**
HAGD	**Aghdareh**	**2.76**	**82**	Pn	**Pn**	**18 23 16.7**	**+0.5**
RAFI	**Al-Rafai**	**2.76**	**175**	*e*Pn	**Pn**	**18 23 17.0**	**+1.0**
RAFI				*e*Sn	**Sn**	**18 23 52.0**	**+2.1**
MSL	**Mosul**	**2.92**	**312**	*e*Pn	**Pn**	**18 23 19.0**	**+0.8**
MSL				*e*Sn	**Sn**	**18 23 55.0**	**+1.1**
IHSH	**Hashtrud**	**3.05**	**22**	Pn	**Pn**	**18 23 21.1**	**+0.7**
IAZR	**Azarshahr**	**3.19**	**2**	Pn	**Pn**	**18 23 22.8**	**+0.6**
ZNJK	**Zanjan**	**3.20**	**46**	Pn	**Pn**	**18 23 23.1**	**+0.8**
IMRD	**Marand**	**4.22**	**359**	Pn	**Pn**	**18 23 37.7**	**+1.4**
GRMI	**Germi**	**4.63**	**21**	Pn	**Pn**	**18 23 42.6**	**+0.8**
JHBN	**Jahan bin**	**4.64**	**118**	Pn	**Pn**	**18 23 42.9**	**+0.8**
IVRN	**Varamin**	**4.89**	**82**	Pn	**Pn**	**18 23 46.7**	**+1.2**
IKLH	**Kolahrood**	**4.93**	**102**	Pn	**Pn**	**18 23 46.9**	**+0.8**
IDMV	**Damavand**	**5.21**	**76**	Pn	**Pn**	**18 23 51.0**	**+0.9**
IFIR	**Firoozkooh**	**5.80**	**77**	Pn	**Pn**	**18 23 59.0**	**+0.9**
KLNJ	**Kolanjah**	**5.97**	**124**	Pn	**Pn**	**18 24 02.0**	**+1.5**
SHME	**Shamm**	**12.25**	**131**	Pn	**Pn**	**18 25 23.9**	**-2.4**
BANOM	**Banah**	**12.44**	**130**	Pn	**Pn**	**18 25 26.2**	**-2.7**
MSFE	**Esma-Masafi**	**12.76**	**133**	Pn	**Pn**	**18 25 30.2**	**-3.2**
MDH	**Madha**	**12.89**	**132**	Pn	**Pn**	**18 25 32.4**	**-2.6**
UOSS	**Minazif**	**13.10**	**134**	Pn	Pn	18 25 33.5	-4.3
HATD	**Hatta, Dubai**	**13.15**	**134**	Pn	Pn	18 25 34.2	-4.3
ASHO	**Ashiyiah**	**13.21**	**135**	Pn	Pn	18 25 34.3	-5.1
MZR	**Muzera**	**13.26**	**148**	Pn	**Pn**	**18 25 37.6**	**-2.5**
ALNE	**Al Ain**	**13.52**	**138**	Pn	**Pn**	**18 25 40.5**	**-3.2**

*IDC **08** 18:26:11.8±1.5, 12°.81N×90°.13W, h0km, mb3.5/3, mbtmp3.5/5, ML3.0/2, MS3.0/1, Error ellipse: s-maj=65.4km s-min=22.1km az=62.0*
*CATAC **08** 18:26:14.0±0.8, 13°.4×9°.0W±°, h9km±5km, M3.7/13, MLv3.7/13, Error ellipse: s-maj=8.9km s-min=7.6km az=146.4, confirmed*
*SNET **08** 18:26:15.0±1.0, 12°.96N×90°.37W, h11km±8km, ML3.7*
*GCG **08** 18:26:15.0±1.1, 13°.07N×90°.45W, h1km±14km, MD4.0, ML3.8, MW3.3*
ISC 08 18:26:14.2±1.0, **12°.86N**±0°.06×**90°.27W**±0°.04, **h10**km, **n54**, σ0°**73**/56, **1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**1.01**	**14**	P	**Pg**	**18 26 33.3**	**-0.3**
LALI	**Alcalda de L**	**1.12**	**56**	*e*P	**Pg**	**18 26 36.1**	**+0.4**
LALI	**Alcalda de L**	**1.12**	**56**	*e*P	**Pb**	**18 26 36.0**	**+0.3**
LALI	**Alcalda de L**	**1.12**	**56**	S	**Sn**	**18 26 52.1**	**+0.7**
JAYA	**Jayaque - finc**	**1.12**	**45**	*e*P	**Pb**	**18 26 36.3**	**+0.4**
JAYA	**Jayaque - finc**	**1.12**	**45**	*e*P	**Pb**	**18 26 36.2**	**+0.4**
JAYA				*e*S	**Sn**	**18 26 52.7**	**+0.9**
JAYA	**Jayaque - finc**	**1.12**	**45**	P	**Pb**	**18 26 36.3**	**+0.4**

NUBE	**Las Nubes**	**1.14**	**25**	*e*P	**Pg**	**18 26 35.7**	**-0.5**		
NUBE	**Las Nubes**	**1.14**	**25**	*e*P	**Pg**	**18 26 35.7**	**-0.5**		
NUBE	**Las Nubes**	**1.14**	**25**	P	**Pg**	**18 26 35.7**	**-0.5**		
CEVE	**Cerro Verde**	**1.15**	**33**	*e*P	**Pb**	**18 26 36.7**	**+0.4**		
CEVE	**Cerro Verde**	**1.15**	**33**	P	**Pb**	**18 26 36.8**	**+0.4**		
CEVE	**Cerro Verde**	**1.15**	**33**	S	**Sn**	**18 26 52.6**	**+0.1**		
SBLS	**San Blas**	**1.16**	**33**	*e*P	**Pb**	**18 26 36.7**	**+0.2**		
SNJE	**San Jose**	**1.19**	**33**	*e*P	**Pb**	**18 26 37.1**	**+0.1**		
LOAL	**Lomas de Alarc**	**1.23**	**23**	*e*P	**Pn**	**18 26 37.8**	**+0.2**		
LOAL	**Lomas de Alarc**	**1.23**	**23**	P	**Pg**	**18 26 38.0**	**+0.1**		
PMON	**Piamonte**	**1.26**	**48**	*e*P	**Pb**	**18 26 38.4**	**+0.3**		
PMON	**Piamonte**	**1.26**	**48**	P	**Pg**	**18 26 38.5**	**+0.1**		
BOQS	**Boqueron**	**1.30**	**48**	*e*P	**Pn**	**18 26 39.1**	**+0.4**		
UNIC	**Universidad Ca**	**1.32**	**32**	P	**Pn**	**18 26 38.9**	**+0.1**		
UNIC	**Universidad Ca**	**1.32**	**32**	S	**Sn**	**18 26 57.2**	**+0.7**		
LOMA	**Loma Larga**	**1.32**	**54**	*e*P	**Pn**	**18 26 38.8**	**-0.2**		
LOMA	**Loma Larga**	**1.32**	**54**	P	**Pn**	**18 26 38.6**	**-0.4**		
PCG5	**San Vicente Pa**	**1.35**	**356**	*i* P	**Pn**	**18 26 38.6**	**-0.7**		
RBDL	**Robledal**	**1.37**	**25**	*e*P	**Pn**	**18 26 39.5**	**0.0**		
LFRS	**El Faro**	**1.40**	**57**	*e*P	**Pn**	**18 26 40.4**	**+0.4**		
FG16	**Alotenango, Sa**	**1.42**	**351**	*e*P	**Pg**	**18 26 41.9**	**+0.4**		
FG16	comp=E,3μm,0.3s			IAML		18 27 15.6			
PAVA	**Las Pavas**	**1.55**	**57**	*e*P	**Pb**	**18 26 43.2**	**+0.1**		
PAVA	**Las Pavas**	**1.55**	**57**	P	**Pb**	**18 26 43.4**	**+0.2**		
TECO	**Alcaldia de Te**	**1.60**	**65**	*e*P	**Pn**	**18 26 42.9**	**+0.3**		
TECO	**Alcaldia de Te**	**1.60**	**65**	P	**Pn**	**18 26 42.9**	**+0.3**		
UESV	**Universidad de**	**1.64**	**62**	P	**Pn**	**18 26 43.8**	**+0.6**		
UESV	**Universidad de**	**1.64**	**62**	S	**Sg**	**18 27 06.5**	**-0.4**		
MTO3	**Montecristo**	**1.77**	**30**	*e*P	**Pn**	**18 26 46.1**	**+1.0**		
MTO3	**Montecristo**	**1.77**	**30**	*e*P	**Pn**	**18 26 45.9**	**+0.8**		
MTO3	**Montecristo**	**1.77**	**30**	P	**Pn**	**18 26 45.3**	**+0.2**		
LLGN	**La Laguna**	**1.83**	**45**	P	**Pn**	**18 26 46.3**	**+0.5**		
STG2	**El Palmar, Qui**	**1.90**	**326**	*e*P	**Pb**	**18 26 50.0**	**+0.9**		
ESQI	**Esquipulas**	**1.91**	**28**	P	**Pn**	**18 26 48.3**	**+1.2**		
PACA	**Pacayal**	**1.99**	**72**	*e*P	**Pn**	**18 26 49.3**	**+1.2**		
PACA	**Pacayal**	**1.99**	**72**	S	**Sb**	**18 27 16.1**	**+0.5**		
PACA	**Pacayal**	**1.99**	**72**	S	**Pb**	**18 26 50.5**	**-0.1**		
APG	**El Apazote**	**2.14**	**355**	Pn	**Pn**	**18 26 50.2**	**0.0**		
APG	comp=E,3.0nm,0.3s,baz=147,slow=10.0,SNR=105			Sn	**Sb**	**18 27 19.1**	**-0.7**		
	comp=E,2.0nm,0.3s,baz=92,slow=14,SNR=13 comp=E,7.7nm,0.4s								
APG	**El Apazote**	**2.14**	**355**	*i* P	**Pn**	**18 26 50.2**	**0.0**		
LCND	**La Caada**	**2.36**	**79**	P	**Pn**	**18 26 54.0**	**+0.9**		
CNCH	**Conchagua**	**2.41**	**80**	*e*P	**Pn**	**18 26 54.6**	**+0.7**		
POLN	**Al Sur del Vol**	**3.38**	**93**	P	**Pn**	**18 27 07.4**	**+0.2**		
CMIG	**Matias Romero**	**6.12**	**314**	Pn	**Pn**	**18 27 47.3**	**+2.4**		
CMIG	comp=E,0.5nm,0.3s,baz=124,slow=11,SNR=5.7 comp=E,0.7nm,0.3s,baz=304,slow=16,SNR=4.1 comp=E,4.6nm,0.7s			Sn	**Sn**	**18 28 53.3**	**-1.7**		
TXAR	**Lajitas Array**	**20.58**	**325**	P	**P**	**18 30 53.6**	**+0.2**		
	comp=E,0.8nm,0.9s,baz=155,slow=11,SNR=6.4 comp=E,0.8nm,0.9s								
LPIG	**La Paz**	**22.01**	**303**	LR	LR	18 39 02.7			
	comp=E,40nm,19.6s,baz=57,slow=35								
NVAR	**Mina Array Bea**	**35.61**	**321**	P	**P**	**18 33 11.8**	**-0.6**		
	comp=E,0.4nm,0.6s,baz=131,slow=5.9,SNR=4.1 comp=E,0.4nm,0.6s								
LPAZ	**La Paz**	**36.31**	**142**	P	**P**	**18 33 17.2**	**-1.8**		
	comp=E,0.8nm,0.3s,baz=350,slow=6.1,SNR=2.9 comp=E,0.8nm,0.3s								
CMAR	**Chiang Mai Arr**	**147.58**	**344**	PKPbc	**PKPdf**	**18 45 58.6**	**+1.4**		
	comp=E,0.6nm,0.6s,baz=339,slow=2.7,SNR=5.4								

*KRSC **08** 18:50:03.5±0.5, 55°.74N×161°.70E, h86km±9km, Mc4.5, Ml4.6, Felt [III-IV] at HMS cape Afrika, kordon Kronoki; [II] at cape Afrika.*
*MOS **08** 18:50:04.2±0.9, 55°.84N×161°.55E, h90km, mb4.1/10, Error ellipse: s-maj=10.1km s-min=4.3km az=75.7*
*IDC **08** 18:50:07.9±2.5, 55°.78N×161°.28E, h104km±21km, mb3.6/17, mbtmp4.0/21, MS3.0/4, Error ellipse: s-maj=20.4km s-min=13.4km az=102.0*
*NEIC **08** 18:50:07.9±1.4, 55°.76N±0°.09×161°.2E±0°.3, h104km±9km, mb4.3/10, Error ellipse: s-maj=24.5km s-min=12.5km az=100.0*
ISC 08 18:50:05.1±0.6, **55°.76N**±0°.03×**161°.67E**±0°.03, **h85**km±5km, **n144**, σ1°**24**/195, **mb4.1**/26, **7C-5D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.55**	**298**	PN	**Pn**	**18 50 19.9**	**0.0**
ZLN	**Zelenaya**	**0.55**	**298**	*e*P	**Pn**	**18 50 19.9**	**0.0**
BZGR	**Bezymyannyi-Gr**	**0.58**	**289**	PN	**Pn**	**18 50 19.9**	**-0.2**
BZGR				S	**Sn**	**18 50 31.4**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**0.58**	**289**	*e*P	**Pn**	**18 50 20.0**	**-0.2**
BZGR				*e*S	**Sn**	**18 50 31.5**	**+0.1**
CIRR	**Tsirk**	**0.63**	**305**	PN	**Pn**	**18 50 20.6**	**0.0**
CIRR	**Tsirk**	**0.63**	**305**	*e*P	**Pn**	**18 50 20.6**	**0.0**
BZMR	**Bezymyannaya**	**0.69**	**285**	PN	**Pn**	**18 50 20.9**	**-0.3**
BZMR				S	**Sn**	**18 50 33.2**	**0.0**
BZMR	**Bezymyannaya**	**0.69**	**285**	*e*P	**Pn**	**18 50 20.9**	**-0.3**
BZMR				*e*S	**Sn**	**18 50 33.3**	**0.0**
BZWR	**Bezymyannyi-We**	**0.69**	**288**	PN	**Pn**	**18 50 21.2**	**-0.1**
BZWR				S	**Sn**	**18 50 34.1**	**+0.8**
BZWR	**Bezymyannyi-We**	**0.69**	**288**	*e*P	**Pn**	**18 50 21.3**	**-0.1**
BZWR				*e*S	**Sn**	**18 50 34.1**	**+0.8**
KBG	**Krutoberegovo**	**0.76**	**49**	PN	**Pn**	**18 50 21.7**	**-0.1**
KBG				S	**Sn**	**18 50 34.9**	**+0.7**
KBG	**Krutoberegovo**	**0.76**	**49**	*e*P	**Pn**	**18 50 21.7**	**-0.1**
KBG				*e*S	**Sn**	**18 50 34.9**	**+0.7**
KIRR	**Kirishev**	**0.77**	**285**	PN	**Pn**	**18 50 21.9**	**-0.2**
KIRR				S	**Sn**	**18 50 34.7**	**-0.1**
KIRR	**Kirishev**	**0.77**	**285**	*e*P	**Pn**	**18 50 22.0**	**-0.2**
KIRR				*e*S	**Sn**	**18 50 34.7**	**-0.1**
KBTR	**Krutoberegovo**	**0.79**	**55**	PN	**Pn**	**18 50 21.7**	**-0.3**
KBTR				S	**Sn**	**18 50 34.8**	**+0.1**
KBTR	**Krutoberegovo**	**0.79**	**55**	*e*P	**Pn**	**18 50 21.7**	**-0.3**
KBTR				*e*S	**Sn**	**18 50 34.9**	**+0.1**
KLY	**Klyuchi**	**0.80**	**315**	PN	**Pn**	**18 50 21.2**	**-0.9**
KLY				S	**Sn**	**18 50 33.3**	**-1.6**
KLY	**Klyuchi**	**0.80**	**315**	*e*P	**Pn**	**18 50 21.3**	**-0.9**
KLY				*e*S	**Sn**	**18 50 33.3**	**-1.6**
KMNR	**Kamenistaya**	**0.81**	**270**	PN	**Pn**	**18 50 22.5**	**+0.1**
KMNR				S	**Sn**	**18 50 35.7**	**+0.3**
KMNR	**Kamenistaya**	**0.81**	**270**	*e*P	**Pn**	**18 50 22.6**	**+0.1**
KMNR				*e*S	**Sn**	**18 50 35.7**	**+0.3**
SMKR	**Semkarok**	**0.83**	**352**	PN	**Pn**	**18 50 23.0**	**+0.4**
SMKR				S	**Sn**	**18 50 37.8**	**+2.1**
SMKR	**Semkarok**	**0.83**	**352**	*e*P	**Pn**	**18 50 23.1**	**+0.4**
SMKR				*e*S	**Sn**	**18 50 37.8**	**+2.1**
KPT	**Kopyto**	**0.84**	**285**	PN	**Pn**	**18 50 22.8**	**0.0**
KPT				S	**Sn**	**18 50 35.6**	**-0.4**
KPT	**Kopyto**	**0.84**	**285**	*e*P	**Pn**	**18 50 22.8**	**0.0**
KPT				*e*S	**Sn**	**18 50 35.6**	**-0.4**
BDR	**Baidarnaya**	**0.85**	**342**	PN	**Pn**	**18 50 23.3**	**+0.5**
BDR				S	**Sn**	**18 50 38.0**	**+1.9**
BDR	**Baidarnaya**	**0.85**	**342**	*e*P	**Pn**	**18 50 23.4**	**+0.5**
BDR				*e*S	**Sn**	**18 50 38.0**	**+1.9**
TUMD	**Tumrok D**	**0.91**	**233**	PN	**Pn**	**18 50 22.9**	**-0.6**
TUMD				S	**Sn**	**18 50 36.3**	**-0.9**
TUMD	**Tumrok D**	**0.91**	**233**	*e*P	**Pn**	**18 50 22.9**	**-0.6**
TUMD				*e*S	**Sn**	**18 50 36.3**	**-0.9**
SRKR	**Sorokina**	**0.94**	**343**	PN	**Pn**	**18 50 24.0**	**+0.2**
SRKR	**Sorokina**	**0.94**	**343**	*e*P	**Pn**	**18 50 24.1**	**+0.2**
KZV	**Kizimen**	**1.02**	**231**	PN	**Pn**	**18 50 24.0**	**-0.8**
KZV				S	**Sn**	**18 50 39.0**	**-0.6**
KZV	**Kizimen**	**1.02**	**231**	*e*P	**Pn**	**18 50 24.1**	**-0.8**
KZV				*e*S	**Sn**	**18 50 39.0**	**-0.6**
KOZ	**Kozyrevsk**	**1.05**	**287**	PN	**Pn**	**18 50 25.2**	**+0.1**
KOZ				S	**Sn**	**18 50 40.7**	**+0.6**
KOZ	**Kozyrevsk**	**1.05**	**287**	*e*P	**Pn**	**18 50 25.3**	**+0.1**
KOZ				*e*S	**Sn**	**18 50 40.8**	**+0.6**
ESO	**Esso**	**1.68**	**277**	PN	**Pn**	**18 50 32.7**	**-0.2**
ESO				S	**Sn**	**18 50 53.4**	**-0.7**
ESO	**Esso**	**1.68**	**277**	*e*P	**Pn**	**18 50 32.8**	**-0.2**
ESO				*e*S	**Sn**	**18 50 53.5**	**-0.7**
KII	**Karymskiy**	**2.15**	**218**	PN	**Pn**	**18 50 39.3**	**+0.1**
KII	**Karymskiy**	**2.15**	**218**	*e*P	**Pn**	**18 50 39.4**	**+0.1**
BKI	**Bering**	**2.51**	**101**	PN	**Pn**	**18 50 43.3**	**-0.5**
BKI				S	**Sn**	**18 51 11.9**	**-1.7**
BKI	**Bering**	**2.51**	**101**	*e*P	**Pn**	**18 50 43.3**	**-0.5**
BKI				*e*S	**Sn**	**18 51 11.9**	**-1.7**
SDLR	**Sedlovina**	**2.97**	**214**	PN	**Pn**	**18 50 50.7**	**+0.5**
SDLR	**Sedlovina**	**2.97**	**214**	*e*P	**Pn**	**18 50 50.7**	**+0.5**
KRX	**Arik**	**2.98**	**217**	PN	**Pn**	**18 50 51.2**	**+0.9**
KRX	**Arik**	**2.98**	**217**	*e*P	**Pn**	**18 50 51.2**	**+0.9**

KRER	**Koryakskii**	**2.99**	**216**	PN	**Pn**	**18 50 51.8**	**+1.3**		
KRER	**Koryakskii**	**2.99**	**216**	*e*P	**Pn**	**18 50 51.8**	**+1.3**		
SMAR	**Somma**	**3.01**	**215**	PN	**Pn**	**18 50 51.1**	**+0.3**		
SMAR	**Somma**	**3.01**	**215**	*e*P	**Pn**	**18 50 51.1**	**+0.3**		
AVH	**Avacha**	**3.03**	**216**	PN	**Pn**	**18 50 52.2**	**+1.3**		
AVH	**Avacha**	**3.03**	**216**	*e*P	**Pn**	**18 50 52.2**	**+1.3**		
KOK	**Koryaka**	**3.04**	**217**	PN	**Pn**	**18 50 53.2**	**+2.1**		
KOK	**Koryaka**	**3.04**	**217**	*e*P	**Pn**	**18 50 53.2**	**+2.1**		
UGLR	**Uglovaya**	**3.05**	**214**	PN	**Pn**	**18 50 52.3**	**+1.1**		
UGLR	**Uglovaya**	**3.05**	**214**	*e*P	**Pn**	**18 50 52.3**	**+1.1**		
DALK	**Dalny**	**3.22**	**213**	PN	**Pn**	**18 50 53.8**	**+0.4**		
DALK				S	**Sn**	**18 51 31.0**	**+0.2**		
DALK	**Dalny**	**3.22**	**213**	*e*P	**Pn**	**18 50 53.9**	**+0.4**		
DALK				*e*S	**Sn**	**18 51 31.0**	**+0.2**		
INSR	**Institute**	**3.24**	**215**	PN	**Pn**	**18 50 54.5**	**+0.8**		
INSR				S	**Sn**	**18 51 33.5**	**+2.3**		
INSR	**Institute**	**3.24**	**215**	*e*P	**Pn**	**18 50 54.6**	**+0.8**		
INSR				*e*S	**Sn**	**18 51 33.6**	**+2.3**		
PET	**Petropavlovsk**	**3.26**	**214**		**Pn**	**18 50 54.6**	**+0.6**		
PET				Sn	**Sn**	**18 51 33.2**	**+1.5**		
PET	**Petropavlovsk**	**3.26**	**214**	*e*PN	**Pn**	**18 50 55.2**	**+1.2**		
PET				*e*S	**Sn**	**18 51 34.4**	**+2.7**		
PET	comp=Z,208nm,0.6s			pmax	pmax				
PET	comp=N,846nm,0.7s			smax	smax				
PET	comp=E,527nm,0.7s			smax	smax				
PET	**Petropavlovsk**	**3.26**	**214**	*e*P	**Pn**	**18 50 54.6**	**+0.6**

comp=Z,0.9nm,0.6s,baz=33,slow=3.5,SNR=5.4
comp=Z,1.0nm,0.6s

BORK	**Borovoye**	**49.49**	**307**	⇑*e*P	**P**	**18 58 45.6**	**-0.8**
BORK				pmax	pmax		

comp=Z,2.0nm,0.9s

ARCES	**ARCESS Array B**	**51.04**	**342**	P	**P**	**18 58 57.4**	**-0.4**

comp=Z,2.2nm,0.9s,baz=20,slow=8.4,SNR=3.6
comp=Z,2.2nm,0.9s

ARTI	**Arti**	**52.17**	**317**	*d*iP	**P**	**18 59 06.3**	**-0.1**
ARTI				*PP	**pP**	**18 59 27.4**	**0.0**
ARTI						19 00 13.3	
ARTI						19 01 02.6	
ARTI				S	**S**	**19 06 25.3**	**+1.3**
ARTI				SS	**SS**	**19 09 53.2**	**-8.3**
ARTI				pmax	pmax		

comp=Z,9.0nm,2.5s

AAK	**Ala-Archa**	**54.74**	**295**	⇑*e*P	**P**	**18 59 25.3**	**-0.3**
AAK				pmax	pmax		

comp=Z,2.0nm,1.0s

KKAR	**Karatay Array**	**56.41**	**298**	P	**P**	**18 59 35.9**	**-1.5**
KKAR	**Karatay Array**	**56.41**	**298**	P	**P**	**18 59 35.9**	**-1.5**
AB31	**Akbulak array**	**56.78**	**310**		**P**	**18 59 38.8**	**-1.1**
AB31				IAmb	IAmb	18 59 40.4	

comp=Z,4.0nm,1.4s

FINES	**FINESS Array B**	**58.03**	**337**	P	**P**	**18 59 48.9**	**+0.4**
FINES	**FINESS Array B**	**58.03**	**337**	P	**P**	**18 59 49.4**	**+0.9**

comp=Z,1.1nm,0.7s,baz=46,slow=9.6,SNR=8.8
comp=Z,1.1nm,0.7s

FINES	**FINESS Array B**	**58.03**	**337**	*i*P	**P**	**18 59 50.2**	**+1.7**
FINES				pmax	pmax		

comp=Z,1.0nm,0.7s

CMAR	**Chiang Mai Arr**	**59.64**	**258**	P	**P**	**18 59 59.9**	**-0.3**

comp=Z,0.4nm,0.8s,baz=11,slow=5.7,SNR=4.0
comp=Z,0.4nm,0.8s

CMAR	**Chiang Mai Arr**	**59.64**	**258**	*e*P	**P**	**19 00 02.5**	**+2.3**
NOA	**NORSAR Array B**	**61.23**	**344**	P	**P**	**19 00 10.8**	**+0.4**

comp=Z,0.3nm,0.3s,baz=20,slow=6.7,SNR=4.3
comp=Z,0.3nm,0.3s

HFS	**Hagfors**	**61.69**	**342**	P	**P**	**19 00 13.3**	**-0.2**

comp=Z,1.3nm,0.6s,baz=57,slow=5.5,SNR=10
comp=Z,1.3nm,0.6s

EKA	**Eskdalemuir Ar**	**68.58**	**351**	P	**P**	**19 00 58.8**	**+0.7**

comp=Z,0.9nm,0.6s,baz=32,slow=3.4,SNR=2.2
comp=Z,0.9nm,0.6s

TXAR	**Lajitas Array**	**68.78**	**69**	P	**P**	**19 01 01.2**	**+1.2**

comp=Z,0.4nm,0.7s,baz=312,slow=6.9,SNR=3.5
comp=Z,0.4nm,0.7s

WRA	**Warramunga Arr**	**78.89**	**206**	P	**P**	**19 01 58.2**	**-0.6**
WRA	**Warramunga Arr**	**78.89**	**206**	P	**P**	**19 01 58.8**	**0.0**

comp=Z,1.2nm,0.7s,baz=15,slow=5.8,SNR=4.2
comp=Z,1.2nm,0.7s

WRA	**Warramunga Arr**	**78.89**	**206**	P	**P**	**19 01 58.2**	**-0.6**
ASAR	**Alice Springs**	**82.57**	**206**	P	**P**	**19 02 18.2**	**-0.1**
ASAR	**Alice Springs**	**82.57**	**206**	P	**P**	**19 02 18.7**	**+0.4**

comp=Z,1.4nm,0.7s,baz=9.7,slow=5.3,SNR=5.8
comp=Z,1.4nm,0.7s

ASAR	**Alice Springs**	**82.57**	**206**	P	**P**	**19 02 18.3**	**-0.1**
ESDC	**Sonseca Array**	**84.15**	**349**	P	**P**	**19 02 27.7**	**+1.2**

comp=Z,1.1nm,0.8s,baz=350,slow=5.8,SNR=4.1
comp=Z,1.1nm,0.8s

QSPA	**South Pole Qui**	**145.51**	**180**	PKPbc	**PKiKP**	**19 09 33.7**	**-2.0**

comp=Z,1.1nm,0.5s,baz=327,slow=3.7,SNR=5.7

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*DJA **08** 18:52:09.4±0.2,6°S±2°×13°2E±°, h98km±5km, M4.5/19, mb4.2/19, mB5.1/7, MLv4.6/14, Mw(mB)4.4/7*
*IDC **08** 18:52:15.1±8.7, 6°.53S×131°.47E, h129km±86km, mb3.5/1, mbtmp4.3/5, Error ellipse: s-maj=67.4km s-min=28.8km az=43.0*
ISC 08 18:52:09.2±0.7,**6°.00S**±0°.05×**131°.65E**±0°.06,**h100**km,**n32,** σ1**$49**/35,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.00**	**190**	P		**Pn**	**18 52 43.2**	**+1.3**
SAUI	**Saumlaki**	**2.00**	**190**	P		**Pn**	**18 52 43.4**	**+1.5**
SAUI				S		**Sn**	**18 53 07.6**	**+0.8**
BNDI	**Bandanaira**	**2.27**	**310**	P		**Pn**	**18 52 45.6**	**+0.2**
BNDI	**Bandanaira**	**2.27**	**310**	S		**Sn**	**18 53 12.6**	**-0.4**
BNDI	**Bandanaira**	**2.27**	**310**	P		**Pn**	**18 52 45.5**	**+0.2**
BNDI				S		**Sn**	**18 53 12.0**	**-1.0**
KMPI	**Kaimana, Papua**	**3.10**	**42**	P		**Pn**	**18 52 56.4**	**+0.1**
FAKI	**Fak Fak**	**3.11**	**11**	P		**Pn**	**18 52 56.0**	**-0.5**
FAKI	**Fak Fak**	**3.11**	**11**	S		**Sn**	**18 53 30.5**	**-2.5**
FAKI	**Fak Fak**	**3.11**	**11**	P		**Pn**	**18 52 56.0**	**-0.5**
MSAI	**Masohi**	**3.78**	**314**	P		**Pn**	**18 53 05.6**	**+0.2**
AAI	**Ambon**	**4.13**	**304**	P		**Pn**	**18 53 10.7**	**+0.4**
SWI	**Sorong**	**5.11**	**356**	P		**Pn**	**18 53 21.9**	**-1.6**
RKPI	**Ransiki, Papua**	**5.12**	**30**	P		**Pn**	**18 53 24.8**	**+1.2**
NLAI	**Namlea**	**5.30**	**301**	P		**Pn**	**18 53 26.7**	**+0.7**

0.2nm24nm,0.9s

DRS	**Darwin Rock St**	**6.44**	**187**	P		**Pn**	**18 53 41.7**	**+0.2**
BAKI	**Biak**	**6.53**	**43**	P		**Pn**	**18 53 43.4**	**+0.7**

0.2nm37nm,0.5s

SANI	**Sanana**	**6.87**	**305**	P		**Pn**	**18 53 48.3**	**+0.9**
SANI	**Sanana**	**6.87**	**305**	P		**Pn**	**18 53 48.0**	**+0.6**

0.1nm9.3nm,0.6s

TNTI	**Ternate**	**7.97**	**327**	P		**Pn**	**18 54 03.6**	**+1.3**
SOEI	**Soe**	**8.21**	**242**	P		**Pn**	**18 54 07.2**	**+1.5**
SOEI	**Soe**	**8.21**	**242**	P		**Pn**	**18 54 06.7**	**+1.0**

21nm,0.9s

BATI	**Baumata**	**8.94**	**242**	P		**Pn**	**18 54 16.2**	**+0.6**

16nm,0.4s,baz=120,slow=2.4,SNR=7.5

BATI				S		**Sn**	**18 55 51.6**	**-3.0**

20nm,0.4s,baz=270,slow=20,SNR=5.7

BATI	**Baumata**	**8.94**	**242**	P		**Pn**	**18 54 16.3**	**+0.6**
MMPI	**Merauke**	**9.01**	**106**	P		**Pn**	**18 54 17.2**	**+0.7**
WBSI	**Waikabubak, Su**	**12.67**	**253**	P		**Pn**	**18 55 06.0**	**+0.1**

33nm,1.3s

FITZ	**Fitzroy Crossi**	**13.38**	**205**	P		**Pn**	**18 55 12.5**	**-2.7**

18nm,0.5s,baz=40,slow=12,SNR=80

FITZ				S		Sn	18 57 32.9	-10

7.2nm,0.3s,baz=176,slow=19,SNR=9.2

COEN	**Coen**	**13.83**	**126**	P		**Pn**	**18 55 20.3**	**-0.8**
PLAI	**Plampang**	**14.04**	**258**	P		**P**	**18 55 28.7**	**+0.3**
PLAI	**Plampang**	**14.04**	**258**	P		**Pn**	**18 55 23.9**	**+0.1**

15nm,0.9s

WRA	**Warramunga Arr**	**14.11**	**170**	P		**Pn**	**18 55 22.1**	**-2.6**

2.5nm,0.3s,baz=350,slow=13,SNR=22

WRA				S		Sn	18 57 49.6	-11

4.9nm,0.4s,baz=357,slow=23,SNR=9.6

ASAR	**Alice Springs**	**17.70**	**173**	P		**P**	**18 56 09.0**	**0.0**

1.2nm,0.5s,baz=350,slow=9.5,SNR=42

ASAR				S		Sn	18 59 15.3	-12

1.8nm,0.7s,baz=354,slow=26,SNR=5.6

MKAR	**Makanchi Array**	**68.30**	**326**	P		**P**	**19 03 04.3**	**+4.6**

0.5nm,0.4s,baz=109,slow=7.4,SNR=13
0.5nm,0.4s

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*WEL **08** 18:59:18.0±1.6,31°S±28°×18°0E±8°0,h334km±48km, M4.3/5, mB4.5/5, ML4.8/6, MLv4.6/5, Mw(mB)3.7/5, Error ellipse: s-maj=110.6km s-min=9.9km az=108.8, confirmed*
*NOU **08** 18:59:48.6,33°.96S×179°.20W, h248km, mb3.6/5, South of Kermadec Islands*
ISC 08 18:59:15.1±2.4,**30°.4S**±0°.2×**179°.1E**±0°.3,**h300**km,**n16,** σ1**$72**/19,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.86**	**67**	P	**Pn**	**19 00 11.6**	**+2.2**
MXZ	**Matakaoa Point**	**7.14**	**185**	P	**Pn**	**19 00 53.8**	**-4.2**
MXZ	**Matakaoa Point**	**7.14**	**185**	P	**Pn**	**19 00 58.7**	**+0.7**
WMGZ	**Waiomatatini S**	**7.39**	**184**	P	**Pn**	**19 01 03.1**	**+2.1**
PKGZ	**Pakihiroa**	**7.46**	**186**	P	**Pn**	**19 01 04.1**	**+2.1**
RUGZ	**Raukumara Rang**	**7.60**	**188**	P	**Pn**	**19 01 04.3**	**+0.5**
PUZ	**Puketiti**	**7.65**	**185**	P	**Pn**	**19 01 03.5**	**-0.8**
PUZ				S	**S**	**19 02 32.2**	**-0.6**
TWGZ	**Tauwhareparae**	**7.78**	**186**	P	**Pn**	**19 01 07.4**	**+1.5**
URZ	**Urewera**	**7.97**	**191**	P	**Pn**	**19 01 06.8**	**-1.4**
URZ	**Urewera**	**7.97**	**191**	P	**Pn**	**19 01 09.1**	**+0.9**
URZ				S	**S**	**19 02 40.6**	**+0.6**
MWZ	**Matawai**	**7.98**	**189**	P	**Pn**	**19 01 09.6**	**+1.2**
CNGZ	**Carnagh Statio**	**8.06**	**185**	P	**Pn**	**19 01 08.8**	**-0.5**
RIGZ	**Rimuhau**	**8.32**	**187**	P	**Pn**	**19 01 12.4**	**-0.2**
RIGZ				S	**S**	**19 02 46.9**	**-1.0**
HIZ	**Hauiti**	**8.78**	**202**	P	**P**	**19 01 24.2**	**+1.1**
BKZ	**Black Stump Fm**	**8.97**	**193**	P	**Pn**	**19 01 19.8**	**-0.7**
BFZ	**Birch Farm**	**10.48**	**192**	P	**Pn**	**19 01 36.9**	**-2.1**

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*IDC **08** 19:01:17.0±1.4,5°.57S×147°.26E, h190km±12km, mb3.5/6, mbtmp4.1/9, Error ellipse: s-maj=22.1km s-min=11.2km az=103.0*
*NEIC **08** 19:01:18.7±1.3,5°.51S±0°.07×147°.22E±0°.08, h196km±6km, mb4.3/14, Error ellipse: s-maj=11.9km s-min=9.3km az=127.0*
ISC 08 19:01:17.9±0.7,**5°.54S**±0°.07×**147°.22E**±0°.09,**h195**km,**n42,** σ1**$29**/43,**mb3.9**/10,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.48**	**2**			**Pn**	**19 02 14.6**	**+1.4**
PMG	**Port Moresby**	**3.84**	**181**			**Pn**	**19 02 17.3**	**-0.2**
PMG						**Sn**	**19 03 01.2**	**-3.2**
PMG	**Port Moresby**	**3.84**	**181**	P		**Pn**	**19 02 17.4**	**-0.1**

63nm,0.3s,baz=326,slow=6.7,SNR=150

PMG				S		**Sn**	**19 03 00.8**	**-3.6**

59nm,0.4s,baz=104,slow=1.9,SNR=3.5

PMG	**Port Moresby**	**3.84**	**181**	P		**Pn**	**19 02 17.2**	**-0.3**
RABL	**Rabaul**	**5.10**	**75**			**Pn**	**19 02 33.8**	**+0.2**
JAY	**Jayapura**	**7.16**	**295**	P		**Pn**	**19 03 00.5**	**+0.1**

2.6nm,0.2s,baz=161,slow=4.9,SNR=11

COEN	**Coen**	**9.26**	**205**			**Pn**	**19 03 29.1**	**+1.4**
COEN	**Coen**	**9.26**	**205**	P		**Pn**	**19 03 29.5**	**+1.8**
MTSU	**Mount Surprise**	**12.83**	**193**	P		**P**	**19 04 20.2**	**+3.0**
TV1H	**Townsville Har**	**13.64**	**182**	P		**P**	**19 04 29.0**	**+2.9**
QIS	**Mount Isa**	**16.66**	**206**	P		**Pn**	**19 05 00.9**	**+0.4**
MTN	**Manton Dam**	**17.45**	**244**	P		**P**	**19 05 08.5**	**+0.3**
WB0	**Warramunga Arr**	**18.86**	**220**			**P**	**19 05 24.0**	**+0.5**
WB0					IAmb	IAmb	19 05 28.5	

comp=Z,17nm,0.9s

WR8	**Warramunga Arr**	**18.93**	**220**			**P**	**19 05 24.9**	**+0.6**
WRAB	**Tennant Creek**	**19.01**	**220**	P		**P**	**19 05 25.9**	**+0.7**
WRAB	**Tennant Creek**	**19.01**	**220**	P		**P**	**19 05 26.0**	**+0.9**
WRA	**Warramunga Arr**	**19.02**	**220**			**P**	**19 05 24.5**	**-0.8**
WRA	**Warramunga Arr**	**19.02**	**220**	P		**P**	**19 05 26.1**	**+0.8**

comp=Z,11nm,0.7s,baz=49,slow=12,SNR=59

WRA				S		**Sn**	**19 08 50.0**	**-0.9**

comp=Z,0.9nm,0.7s,baz=36,slow=19,SNR=4.3

KNRA	**Kununurra**	**20.73**	**240**	P		**P**	**19 05 42.6**	**-0.9**
KNRA				IAmb	IAmb		19 05 47.6	

comp=Z,16nm,1.0s

AS31	**Alice Springs**	**22.12**	**214**			**P**	**19 05 58.4**	**+0.6**
AS31				IAmb	IAmb		19 06 04.2	

comp=Z,6.6nm,1.0s

ASAR	**Alice Springs**	**22.12**	**214**			**P**	**19 05 57.9**	**+0.1**
ASAR	**Alice Springs**	**22.12**	**214**	P		**P**	**19 05 58.6**	**+0.8**

comp=Z,10nm,0.9s,baz=49,slow=8.3,SNR=90

ASAR				S		**S**	**19 09 47.4**	**+0.1**

comp=Z,1.2nm,0.7s,baz=26,slow=20,SNR=7.1
comp=Z,10nm,0.9s

INKA	**Innaminka**	**22.92**	**195**	P		**P**	**19 06 06.0**	**+1.0**
INKA				IAmb	IAmb		19 06 17.2	

comp=Z,4.3nm,0.9s

FITZ	**Fitzroy Crossi**	**24.50**	**238**	P		**P**	**19 06 19.5**	**+0.1**
FITZ				IAmb	IAmb		19 06 22.6	

comp=Z,2.7nm,0.6s

STKA	**Stephens Creek**	**26.72**	**191**	P		**P**	**19 06 39.3**	**0.0**
STKA	**Stephens Creek**	**26.72**	**191**	P		**P**	**19 06 38.7**	**-0.6**

comp=Z,2.4nm,1.1s,baz=8.7,slow=13,SNR=1.4
comp=Z,2.4nm,1.1s

H11S3	**WAKE ISLAND Hy**	**30.64**	**38**	T	T		19 39 16.0	

baz=223,slow=75,SNR=4.9

H11S2	**WAKE ISLAND Hy**	**30.65**	**38**	T	T		19 39 15.9	

baz=223,slow=75,SNR=8.7

H11S1	**WAKE ISLAND Hy**	**30.66**	**38**	T	T		19 39 17.7	

baz=223,slow=75,SNR=4.1

FORT	**Forrest**	**30.90**	**213**	P		**P**	**19 07 15.7**	**-0.7**
PSA00	**Pilbara Seismi**	**30.93**	**236**	P		**P**	**19 07 15.5**	**-1.2**
TUWZ	**Tuamarina**	**42.96**	**150**	P		**P**	**19 08 58.5**	**+0.8**
BSWZ	**Blackbirch Sta**	**43.14**	**151**	P		**P**	**19 08 59.6**	**+0.4**
VNDA	**Vanda**	**72.35**	**177**	P		**P**	**19 12 22.1**	**+0.2**
VNDA	**Vanda**	**72.35**	**177**	P		**P**	**19 12 22.5**	**+0.5**

comp=Z,0.5nm,0.5s,baz=332,slow=6.5,SNR=11
comp=Z,0.5nm,0.5s

MKAR	**Makanchi Array**	**77.29**	**320**	P		**P**	**19 12 50.5**	**-0.4**
MKAR	**Makanchi Array**	**77.29**	**320**	P		**P**	**19 12 50.7**	**-0.1**

comp=Z,0.3nm,0.4s,baz=96,slow=7.8,SNR=7.9
comp=Z,0.3nm,0.4s

ZALV	**Zalesovo Beam**	**78.75**	**328**	P		**P**	**19 12 57.0**	**-1.6**
ZALV	**Zalesovo Beam**	**78.75**	**328**	P		**P**	**19 12 57.5**	**-1.2**

comp=Z,0.6nm,0.4s,baz=114,slow=6.5,SNR=2.2
comp=Z,0.6nm,0.4s

SUA	**Susitna One**	**81.95**	**25**	P		**P**	**19 13 16.3**	**+0.6**
SUA				IAmb	IAmb		19 13 39.8	

comp=Z,6.1nm,1.1s

ILAR	**Eielson Array**	**84.98**	**23**	P		**P**	**19 13 29.3**	**-1.6**

comp=Z,0.5nm,0.6s,baz=251,slow=4.7,SNR=8.6
comp=Z,0.5nm,0.6s

TORD	**Torodi Ar. Bea**	**145.19**	**285**	PKPbc	**PKPdf**	**19 20 32.6**	**-0.6**

comp=Z,1.0nm,0.6s,baz=59,slow=6.6,SNR=8.4

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*NEIC **08** 19:26:58.0±1.9,3°.4S±0°.1×138°.50E±0°.05, h62km±10km, mb4.3/15, Error ellipse: s-maj=15.3km s-min=6.5km az=190.0*
*IDC **08** 19:26:59.3±1.9,3°.41S×138°.64E, h81km±21km, mb3.9/8, mbtmp4.3/13, MS2.9/1, Error ellipse: s-maj=19.9km s-min=10.9km az=103.0*
*DJA **08** 19:26:59.2±0.2,3°S±3°×139°E±°, h89km±5km, M4.3/13, mb4.1/13, mB5.0/2, MLv4.4/10, Mw(mB)4.3/2*
ISC 08 19:26:58.2±0.6,**3°.51S**±0°.05×**138°.50E**±0°.06,**h71**km,**n49,** σ2**$39**/52,**mb4.2**/12,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.53**	**8**	P		**Pn**	**19 27 21.8**	**-1.8**
SMPI				S		**Sn**	**19 27 39.5**	**-3.2**
GENI	**Genyem**	**1.90**	**61**	P		**Pn**	**19 27 28.5**	**-0.1**
JAY	**Jayapura**	**2.42**	**66**	P		**Pn**	**19 27 34.5**	**-1.1**

61nm,0.3s,baz=234,slow=11,SNR=163

JAY				S		**Sn**	**19 28 02.1**	**-2.1**

77nm,0.3s,baz=80,slow=21,SNR=8.5

JAY	**Jayapura**	**2.42**	**66**	P		**Pn**	**19 27 35.3**	**-0.3**
BAKI	**Biak**	**3.32**	**314**	P		**Pn**	**19 27 47.2**	**-0.6**
RKPI	**Ransiki, Papua**	**4.75**	**295**	P		**Pn**	**19 28 07.8**	**+0.4**
KMPI	**Kaimana, Papua**	**4.79**	**268**	P		**Pn**	**19 28 11.7**	**+3.9**
MMPI	**Merauke**	**5.27**	**159**	P		Pn	19 28 19.4	+5.0
FAKI	**Fak Fak**	**6.27**	**275**	Pn		**Pn**	**19 28 28.8**	**+0.7**
FAKI	**Fak Fak**	**6.27**	**275**	P		**Pn**	**19 28 30.0**	**+1.9**

0.2nm16nm,1.0s

SWI	**Sorong**	**7.70**	**290**	P		**Pn**	**19 28 49.2**	**+1.5**

0.1nm11nm,0.5s

SAUI	**Saumlaki**	**8.43**	**238**	Pn		**Pn**	**19 28 57.0**	**-0.7**
PMG	**Port Moresby**	**10.41**	**125**			**Pn**	**19 29 25.7**	**+1.0**
PMG	**Port Moresby**	**10.41**	**125**	P		**Pn**	**19 29 26.8**	**+2.1**

10.0nm,0.6s,baz=293,slow=7.2,SNR=10

PMG				LR	LR		19 34 37.9	

comp=Z,65nm,19.0s,baz=114,slow=44

COEN	**Coen**	**11.36**	**156**			**Pn**	**19 29 39.0**	**+1.3**
MTN	**Manton Dam**	**11.79**	**218**			**Pn**	**19 29 44.2**	**+0.6**
SANI	**Sanana**	**12.58**	**276**	P		**Pn**	**19 29 55.7**	**+1.3**

4.5nm,0.7s

KNRA	**Kununurra**	**15.43**	**218**			**Pn**	**19 30 31.3**	**-0.5**
KNRA				IAmb	IAmb		19 30 36.9	

comp=Z,18nm,1.2s

SOEI	**Soe**	**15.43**	**246**			**Pn**	**19 30 33.9**	**+1.9**
SOEI				IAmb	IAmb		19 30 43.5	

comp=Z,20nm,1.1s

SOEI	**Soe**	**15.43**	**246**	P		**P**	**19 30 36.8**	**+1.7**

comp=Z,17nm,0.9s

BATI	**Baumata**	**16.15**	**245**	P		**P**	**19 30 42.8**	**-0.3**

comp=Z,12nm,0.6s,baz=27,slow=6.8,SNR=2.4

BATI	**Baumata**	**16.15**	**245**	P		**P**	**19 30 44.7**	**+1.7**

comp=Z,16nm,1.5s

WB0	**Warramunga Arr**	**16.65**	**194**			**Pn**	**19 30 46.7**	**-0.4**
WR8	**Warramunga Arr**	**16.80**	**193**			**Pn**	**19 30 48.9**	**-0.2**
WR8				IAmb	IAmb		19 30 55.8	

comp=Z,9.7nm,0.5s

WRA	**Warramunga Arr**	**16.83**	**194**	P		**Pn**	**19 30 48.1**	**-1.3**
WRA						**Sn**	**19 33 48.7**	**-7.1**
WRA	**Warramunga Arr**	**16.83**	**194**	P		**Pn**	**19 30 50.4**	**+1.0**

comp=Z,7.5nm,0.5s,baz=16,slow=12,SNR=52

WRA				S		**Sn**	**19 33 49.2**	**-6.7**

comp=Z,1.6nm,0.8s,baz=11,slow=21,SNR=5.5

FITZ	**Fitzroy Crossi**	**19.20**	**220**	P		**Pn**	**19 31 18.2**	**+0.1**
FITZ						**S**	**19 34 41.9**	**-8.7**
FITZ	**Fitzroy Crossi**	**19.20**	**220**	P		**Pn**	**19 31 18.6**	**+0.5**

comp=Z,2.6nm,0.3s,baz=41,slow=12,SNR=25

FITZ				S	S		19 34 41.1	-10

comp=Z,8.8nm,0.7s,baz=125,slow=9.0,SNR=10.0

AS31	**Alice Springs**	**20.52**	**192**			Pn	19 31 33.4	-0.3
AS31				IAmb	IAmb		19 31 35.0	

comp=Z,6.8nm,0.5s

ASAR	**Alice Springs**	**20.52**	**192**			Pn	19 31 33.1	-0.6
ASAR						**S**	**19 35 16.6**	**-0.1**
ASAR	**Alice Springs**	**20.52**	**192**	P		Pn	19 31 33.1	-0.6

comp=Z,1.1nm,0.5s,baz=18,slow=10,SNR=202

ASAR				S		**S**	**19 35 18.9**	**+2.2**

comp=Z,1.4nm,0.6s,baz=18,slow=25,SNR=7.5
comp=Z,1.1nm,0.5s

MBWA	**Marble Bar**	**25.32**	**225**	P		**P**	**19 32 18.0**	**-0.5**
MBWA				IAmb	IAmb		19 32 22.1	

comp=Z,8.4nm,0.8s

PSA00	**Pilbara Seismi**	**25.51**	**224**			**P**	**19 32 20.2**	**0.0**
PSA00	**Pilbara Seismi**	**25.51**	**224**	P		**P**	**19 32 20.2**	**0.0**
PSA00				IAmb	IAmb		19 32 25.5	

comp=Z,9.9nm,0.9s

STKA	**Stephens Creek**	**28.37**	**174**	P		**P**	**19 32 47.2**	**+1.5**
STKA	**Stephens Creek**	**28.37**	**174**	P		**P**	**19 32 47.5**	**+1.7**

comp=Z,1.2nm,0.4s,baz=350,slow=12,SNR=3.7
comp=Z,1.2nm,0.4s

FORT	**Forrest**	**28.86**	**199**	P		**P**	**19 32 50.6**	**+0.4**
FORT				IAmb	IAmb		19 32 57.5	

comp=Z,17nm,1.4s

TOO	**Toolangi**	**34.50**	**170**	P		**P**	**19 33 40.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**44.66**	**301**	P		**P**	**19 35 04.8**	**+0.6**

comp=Z,0.8nm,0.6s,baz=121,slow=6.6,SNR=9.8
comp=Z,0.8nm,0.6s

MKAR	**Makanchi Array**	**70.29**	**323**	P		**P**	**19 38 03.5**	**-0.7**
MKAR	**Makanchi Array**	**70.29**	**323**	P		**P**	**19 38 04.8**	**+0.6**

comp=Z,1.1nm,0.5s,baz=107,slow=8.4,SNR=15
comp=Z,1.1nm,0.5s

MAKZ	**Makanchi**	**70.49**	**323**	P		**P**	**19 38 05.7**	**+0.3**
MAKZ				IAmb	IAmb		19 38 05.9	

comp=Z,3.1nm,1.1s

ZALV	**Zalesovo Beam**	**72.52**	**330**	P		**P**	**19 38 16.3**	**-1.0**

comp=Z,0.8nm,0.5s,baz=92,slow=7.9,SNR=3.6
comp=Z,0.8nm,0.5s

KURBB	**Kurchatov Arra**	**74.26**	**325**	P		**P**	**19 38 27.4**	**-0.3**

comp=Z,1.8nm,0.2s,baz=117,slow=5.4,SNR=4.8
comp=Z,1.8nm,0.2s

comp=E,2μm,0.3s
PB06 IPOC Station P 1.48 169 *e*P **Pn** **19 55 25.1 -0.7**
PB06 eS **Sn** **19 55 44.7 +0.1**
PB06 IAML 19 55 45.8
comp=Z,1μm,0.3s
PB11 IPOC Station P 1.50 8⇑ *e*P **Pn** **19 55 26.3 +0.2**
PB11 eS **Sb** **19 55 46.2 +0.2**
PB11 IAML 19 55 47.9
comp=N,3μm,0.2s
PB11 IPOC Station P 1.50 8 *e*P **Pn** **19 55 25.7 -0.4**
PB11 IAML 19 55 50.1
comp=Z,1μm,0.4s
PB05 IPOC Station P 1.62 190 *e*P **Pn** **19 55 27.1 -0.5**
PB05 eS **Sn** **19 55 48.0 -0.2**
PB05 IAML 19 55 54.5
comp=E,721nm,0.3s
PB05 IPOC Station P 1.62 190 *e*P **Pn** **19 55 27.2 -0.5**
PB05 eS **Sn** **19 55 42.4 -5.7**
PB05 IAML 19 55 54.3
comp=Z,708nm,0.4s
GO01 Chusmiza 1.70 23 *e*P **Pn** **19 55 30.1 +0.9**
GO01 eS **Sb** **19 55 52.1 -0.1**
GO01 IAML 19 55 54.8
comp=E,14μm,0.1s
GO01 Chusmiza 1.70 23 *e*P **Pb** **19 55 30.3 -0.7**
GO01 eS **Sb** **19 55 52.6 +0.3**
GO01 IAML 19 55 54.6
comp=Z,2μm,0.1s
PX02 IPOC Station P 2.29 353 eS **Pn** **19 55 37.9 +0.9**
PX02 ⇑*e*P **Pb** **19 55 39.0 -1.9**
PX02 eS **Sb** **19 56 07.2 -1.7**
PX02 IAML 19 56 12.4
comp=N,495nm,0.5s
AF01 San Pedro de A 2.32 137 *e*P **Pb** **19 55 40.5 -1.0**
AF01 eS **Sn** **19 56 07.2 +1.6**
AF01 IAML 19 56 29.4
comp=Z,952nm,0.5s
PB10 IPOC Station P 2.33 195 *e*P **Pn** **19 55 38.2 +0.7**
PB10 eS **Sn** **19 56 07.8 +2.3**
PB10 IAML 19 56 21.2
comp=N,236nm,0.4s
PB10 IPOC Station P 2.33 195 *e*P **Pn** **19 55 37.8 +0.4**
PB10 eS **Sn** **19 56 06.1 +0.5**
PB12 IPOC Station P 2.66 351 *e*P **Pn** **19 55 43.1 +1.1**
PB12 eS **Sb** **19 56 17.5 -1.9**
PB12 IAML 19 56 23.9
comp=E,630nm,0.6s
PB12 IPOC Station P 2.66 351 *e*P **Pn** **19 55 43.0 +1.1**
PB12 eS **Sn** **19 56 12.5 -1.2**
PB12 IAML 19 56 23.1
comp=Z,397nm,0.8s
AP01 Chacalluta 2.90 351 eS **Sn** **19 56 21.6 +2.2**
AP01 IAML 19 56 37.4
comp=E,1μm,0.5s
AP01 Chacalluta 2.90 351 *e*P Pn 19 55 34.7 -10
AP01 eS **Sn** **19 56 20.5 +1.1**
AP01 IAML 19 56 32.0
comp=Z,297nm,0.7s
PB14 IPOC Station P 3.39 188 *e*P **Pn** **19 55 52.2 -0.1**
PB14 eS **Sb** **19 56 44.0 +3.3**
PB14 IAML 19 56 47.9
comp=Z,146nm,0.4s
GO02 Mina Guanaco 3.90 176 *e*P **Pn** **19 56 01.0 +1.7**
GO02 eS **Sb** **19 56 57.1 +1.7**
GO02 IAML 19 57 07.4
comp=Z,159nm,0.7s
AC01 Pan de Azucar 4.92 187 *e*P **Pn** **19 56 11.8 -1.1**
AC01 eS **Sb** **19 57 23.4 -0.9**
AC01 IAML 19 57 31.1
comp=Z,72nm,1.1s
LPAZ La Paz 5.21 19 Pn **Pn** **19 56 21.9 +4.3**
comp=Z,0.4nm,0.3s,baz=209,slow=11,SNR=16
comp=Z,3.0nm,0.6s
H03N1 Juan Fernandez 14.54 211 T T 20 12 43.6
baz=35,slow=72,SNR=25
H03N2 Juan Fernandez 14.55 212 T T 20 12 43.8
baz=35,slow=72,SNR=17
H03N3 Juan Fernandez 14.56 211 T T 20 12 43.6
baz=35,slow=72,SNR=24
TORD Torodi Ar. Bea 78.13 71 P P 20 07 04.9 +6.5
comp=Z,0.3nm,0.4s,baz=249,slow=3.8,SNR=6.7
comp=Z,0.3nm,0.4s
MKAR Makanchi Array 145.96 35 PKPbc **PKPbc** **20 14 38.7 +0.3**
comp=Z,0.6nm,0.8s,baz=307,slow=2.9,SNR=3.4

*MAN **08** 19:57:12.9, 4°.53N×128°.13E, h32km, mb6.0, ML5.1, MS5.6*
*BJI **08** 19:57:18.8, 4°.65N×127°.52E, h57km, mB5.4/25, mb5.2/78, Ms4.6/28, Ms7 4.3/28*
*MOS **08** 19:57:20.0±1.3, 4°.99N×127°.48E, h50km, mb5.5/59, Error ellipse: s-maj=8.6km s-min=4.0km az=117.6*
*NEIC **08** 19:57:21.5±1.9, 4°.85N±0°.05×127°.42E±0°.07, h60km±1km, mb5.1/193, Error ellipse: s-maj=11.2km s-min=7.5km az=70.0*
*IDC **08** 19:57:23.3±1.2, 4°.92N×127°.51E, h64km±10km, mb4.7/31, mbtmp5.0/35, MS3.9/66, Error ellipse: s-maj=15.8km s-min=7.8km az=72.0*
*GCMT **08** 19:57:23.5±0.2, 4°.93N±0°.01×127°.40E±0°.01, h58km±1km, MW5.1/103, Moment Tensor Solution. s61,c81; s103,c159; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.57±.15; Mθθ1.47±.13; Mϕϕ-5.03±.11; Mrθ1.59±.09; Mθϕ2.84±.10; Mrϕ0.65±.12; Best double couple: M=5.47100×10^16 NP1:ϕs129.00000°, δ55.00000°, λ43.00000°. NP2:ϕs10.00000°, δ56.00000°, λ136.00000°. Principal axes: T 4.8460, Plg53.0000°, Azm339.0000°; N 1.2600, Plg37.0000°, Azm160.0000°; P -6.0960, Plg0.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **08** 19:57:24.8±0.3, 5°N±2°×12°7E±°, h75km±2km, M4.9/90, mB5.4/43, mb5.1/90, MLv5.6/14, Mw5.1/116, Mw(mB)4.8/43, MwMwp4.7/7, Mwp5.1/7*
ISC 08 19:57:22.7±0.3, 4°.90N±0°.03×127°.46E±0°.04, h65km±2km, h65km:pP-P, n938, σ1§54/906, mb5.1/221, 68C-19D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.27**	**238**	P		**Pn**	**19 57 58.5**	**+0.6**
SGSI				S		**Sn**	**19 58 24.7**	**-0.2**
DAV	**Davao City (W)**	**2.85**	**319**			**Pn**	**19 58 07.5**	**+1.5**
DAV				Sn		**Sn**	**19 58 36.3**	**-2.9**
DAV	**Davao City (W)**	**2.85**	**319**	P		**Pn**	**19 58 07.4**	**+1.5**
	956nm,0.4s,baz=110,slow=2.7,SNR=34							
DAV				S		**Sn**	**19 58 40.6**	**+1.5**
	4μm,0.7s,baz=239,slow=21,SNR=6.9							
DAV				LR		LR	19 59 37.6	
	comp=Z,4μm,20.5s,baz=174,slow=47							
DAV	**Davao City (W)**	**2.85**	**319**	P		**Pn**	**19 58 09.7**	**+3.8**
DAV				S		**Sn**	**19 58 43.1**	**+4.0**
DAV	**Davao City (W)**	**2.85**	**319**	P		**Pn**	**19 58 04.7**	**-1.2**
TNTI	**Ternate**	**4.10**	**181**			**Pn**	**19 58 24.2**	**+1.2**
TNTI				Sn		**Sn**	**19 59 06.7**	**-2.9**
TNTI	**Ternate**	**4.10**	**181**	P		**Pn**	**19 58 24.9**	**+2.0**
TNTI	**Ternate**	**4.10**	**181**	P		**Pn**	**19 58 24.9**	**+2.0**
KMSI	**Cibinong**	**5.52**	**219**	P		**Pn**	**19 58 44.2**	**+1.8**
SWI	**Sorong**	**6.87**	**146**	P		**Pn**	**19 59 01.5**	**+0.7**
	0.8nm2μm118nm,0.9s							
SWI	**Sorong**	**6.87**	**146**	P		**Pn**	**19 59 02.2**	**+1.4**
MRSI	**Marisa**	**7.04**	**232**	P		**Pn**	**19 59 04.8**	**+1.5**
SANI	**Sanana**	**7.05**	**192**	P		**Pn**	**19 59 02.2**	**-1.2**
SANI	**Sanana**	**7.05**	**192**	P		**Pn**	**19 59 01.8**	**-1.6**
	1.1nm4μm261nm,0.7s							
LUWI	**Luwuk**	**7.53**	**219**			**Pn**	**19 59 08.7**	**-1.3**
LUWI	**Luwuk**	**7.53**	**219**	P		**Pn**	**19 59 12.3**	**+2.4**
LUWI	**Luwuk**	**7.53**	**219**	P		**Pn**	**19 59 11.9**	**+2.0**
TOLI2	**Tolitoli**	**7.65**	**241**			**Pn**	**19 59 10.3**	**-1.3**
TOLI2				Sn		**Sn**	**20 00 32.2**	**-4.7**
TOLI2	**Tolitoli**	**7.65**	**241**	P		**Pn**	**19 59 11.2**	**-0.4**
NLAI	**Namlea**	**8.09**	**183**	P		**Pn**	**19 59 18.0**	**+0.4**
	1.9nm3μm218nm,0.8s							
APSI	**Ampana**	**8.18**	**225**	P		**Pn**	**19 59 22.2**	**+3.4**
MSAI	**Masohi**	**8.32**	**170**	P		**Pn**	**19 59 21.7**	**+1.0**
	2μm179nm,0.8s							
AAI	**Ambon**	**8.56**	**175**	P		**Pn**	**19 59 23.2**	**-0.8**
	2μm155nm,0.8s							
MYLDM	**Lahad Datu**	**8.93**	**272**			**Pn**	**19 59 30.0**	**+1.0**
MYLDM	**Lahad Datu**	**8.93**	**272**	P		**Pn**	**19 59 30.6**	**+1.6**
FAKI	**Fak Fak**	**9.12**	**148**			**Pn**	**19 59 30.8**	**-0.9**
FAKI	**Fak Fak**	**9.12**	**148**	P		**Pn**	**19 59 32.9**	**+1.2**
FAKI	**Fak Fak**	**9.12**	**148**	P		**Pn**	**19 59 32.9**	**+1.2**
	984nm67nm,1.0s							
RKPI	**Ransiki, Papua**	**9.25**	**133**	P		**Pn**	**19 59 36.5**	**+3.0**
	2μm157nm,0.9s							
BNDI	**Bandanaira**	**9.67**	**165**	P		**Pn**	**19 59 40.9**	**+1.7**
BNDI	**Bandanaira**	**9.67**	**165**	P		**Pn**	**19 59 40.0**	**+0.8**
BAKI	**Biak**	**10.55**	**125**	P		**Pn**	**19 59 55.5**	**+4.3**
	3μm212nm,1.3s							
TGY	**Tagaytay City**	**11.18**	**325**	LR		LR	20 04 47.7	
	comp=Z,934nm,19.1s,baz=154,slow=40							
BBSI	**Bau Bau**	**11.41**	**205**	P		**Pn**	**20 00 03.4**	**+0.4**
	159nm,1.2s							
SPSI	**Sidrap Palu**	**11.68**	**221**	P		**Pn**	**20 00 07.2**	**+0.5**
	991nm64nm,0.8s							
BNSI	**Bone**	**11.80**	**219**	P		**Pn**	**20 00 09.6**	**+1.3**
	1μm127nm,1.2s							
BKB	**Balikpapan**	**12.20**	**240**			**Pn**	**20 00 09.5**	**-4.2**
BKB	**Balikpapan**	**12.20**	**240**	P		**Pn**	**20 00 12.2**	**-1.5**
KAPI	**Kappang**	**12.50**	**218**			**Pn**	**20 00 15.4**	**-2.4**
KAPI	**Kappang**	**12.50**	**218**	P		**Pn**	**20 00 17.3**	**-0.5**
	55nm,1.1s,baz=7.8,slow=7.8,SNR=12							
KAPI				LR		LR	20 06 00.6	
	comp=Z,710nm,18.8s,baz=26,slow=41							
KAPI	**Kappang**	**12.50**	**218**	P		**Pn**	**20 00 17.6**	**-0.3**
KAPI				S		**Sn**	**20 02 36.4**	**+1.0**
KAPI	**Kappang**	**12.50**	**218**	P		**Pn**	**20 00 14.8**	**-3.0**
KAPI	**Kappang**	**12.50**	**218**	*de*P		**Pn**	**20 00 16.8**	**-1.0**
KAPI				pmax		pmax		
	comp=Z,37nm,1.0s							
BKSI	**Bulukumba**	**12.52**	**216**	P		**Pn**	**20 00 18.4**	**+0.3**
BSSI	**Bau Bau, Buton**	**12.99**	**212**	P		**Pn**	**20 00 26.1**	**+1.6**
	comp=Z,910nmcomp=Z,68nm,1.4s							
SMPI	**Sarmi**	**13.16**	**121**	P		**Pn**	**20 00 30.0**	**+3.2**
	comp=Z,2μmcomp=Z,178nm,1.3s							
SAUI	**Saumlaki**	**13.36**	**163**	Pn		Pn	20 00 23.9	-5.6
MTKI	**Muara Teweh, K**	**13.82**	**246**	P		**Pn**	**20 00 37.3**	**+1.6**
	comp=Z,2μmcomp=Z,3μmcomp=Z,144nm,1.1s							
MMRI	**Maumere**	**14.42**	**201**			**Pn**	**20 00 41.2**	**-2.3**
MMRI	**Maumere**	**14.42**	**201**	P		**Pn**	**20 00 44.6**	**+1.1**
MMRI	**Maumere**	**14.42**	**201**	P		**Pn**	**20 00 43.6**	**+0.1**
	comp=Z,2μmcomp=Z,147nm,1.0s							
GENI	**Genyem**	**14.72**	**120**	P		**P**	**20 00 50.1**	**-1.9**
GENI	**Genyem**	**14.72**	**120**	P		**P**	**20 00 50.8**	**-1.2**
EDFI	**Ende, Flores**	**14.73**	**203**	P		**Pn**	**20 00 49.6**	**+1.9**
	comp=Z,974nmcomp=Z,80nm,0.9s							
SOEI	**Soe**	**14.90**	**192**			**Pn**	**20 00 47.9**	**-2.0**
SOEI	**Soe**	**14.90**	**192**	P		**Pn**	**20 00 51.2**	**+1.3**
SOEI	**Soe**	**14.90**	**192**	P		**Pn**	**20 00 51.6**	**+1.7**
	comp=Z,2μmcomp=Z,185nm,1.0s							
BBKI	**Banjar Baru**	**15.09**	**237**	P		**Pn**	**20 00 52.9**	**+0.6**
JAY	**Jayapura**	**15.15**	**119**	P		**Pn**	**20 00 54.8**	**+1.8**
	comp=Z,12nm,0.9s,baz=266,slow=17,SNR=4.0							
JAY	**Jayapura**	**15.15**	**119**	P		**P**	**20 00 55.1**	**-1.7**
	comp=Z,55nm,0.9s							
SBUM	**Sibu**	**15.40**	**261**			**Pn**	**20 00 54.4**	**-1.8**
SBUM				IAmb		IAmb	20 01 02.9	
	comp=Z,158nm,0.8s							
SBUM	**Sibu**	**15.40**	**261**	P		**Pn**	**20 00 56.3**	**+0.1**
BATI	**Baumata**	**15.47**	**194**	P		**Pn**	**20 00 58.0**	**+0.8**
	comp=Z,22nm,0.8s,baz=134,slow=1.3,SNR=8.2							
BATI				LR		LR	20 07 48.4	
	comp=Z,393nm,18.3s,baz=24,slow=40							
BATI	**Baumata**	**15.47**	**194**	P		**Pn**	**20 00 58.6**	**+1.4**
	comp=Z,108nm,1.1s							
WSI	**Waingapu**	**16.13**	**206**	P		**P**	**20 01 06.7**	**-1.0**
	comp=Z,289nm,1.4s							
WBSI	**Waikabubak, Su**	**16.53**	**209**	P		**Pn**	**20 01 10.9**	**+0.4**
	comp=Z,2μmcomp=Z,207nm,0.9s							
PLAI	**Plampang**	**16.70**	**215**	P		**P**	**20 01 13.7**	**-0.3**
PLAI	**Plampang**	**16.70**	**215**	P		**Pn**	**20 01 13.0**	**+0.3**
TWSI	**Taliwang, Sumb**	**17.17**	**218**	P		**P**	**20 01 20.4**	**+1.3**
	comp=Z,2μmcomp=Z,224nm,0.9s							
KSM	**Kuching**	**17.45**	**259**			**Pn**	**20 01 17.8**	**-4.2**
KSM				IAmb		IAmb	20 01 25.1	
	comp=Z,153nm,0.8s							
KSM	**Kuching**	**17.45**	**259**	P		**P**	**20 01 23.5**	**+1.2**
AUDHS	**Darwin High Sc**	**17.55**	**169**	P		**P**	**20 01 23.9**	**+0.6**
DRS	**Darwin Rock St**	**17.55**	**169**	P		**P**	**20 01 25.6**	**+2.2**
MTN	**Manton Dam**	**18.00**	**168**	P		**P**	**20 01 27.7**	**-0.6**
	comp=Z,57nm,0.6s							
MTN	**Manton Dam**	**18.00**	**168**			**P**	**20 01 24.7**	**-3.6**
KDU	**Kakadu**	**18.17**	**164**	P		**P**	**20 01 29.6**	**-0.5**
	comp=Z,33nm,1.0s							
DNP	**Denpasar**	**18.19**	**222**	P		**Pn**	**20 01 30.7**	**-0.2**
	comp=Z,222nm,0.9s							
JAGI	**Jajag, Banyuwa**	**18.77**	**225**	P		**P**	**20 01 32.4**	**-4.4**
JAGI	**Jajag, Banyuwa**	**18.77**	**225**	P		**Pn**	**20 01 39.2**	**+1.3**
JAGI	**Jajag, Banyuwa**	**18.77**	**225**	P		**P**	**20 01 36.5**	**-0.3**
	comp=Z,104nm,1.0s							
TWGBT	**Beinan**	**18.85**	**342**	P		**Pn**	**20 01 39.7**	**+0.9**
TWG	**Pinlang**	**18.86**	**341**	P		**P**	**20 01 36.3**	**-1.4**
GUMO	**Guam**	**19.22**	**62**	P		**P**	**20 01 38.6**	**-3.1**
GUMO				IAmb		IAmb	20 01 51.9	
	comp=Z,176nm,1.2s							
GUMO	**Guam**	**19.22**	**62**	LR		LR	20 07 58.0	
	comp=Z,405nm,21.2s,baz=218,slow=33							
GUMO	**Guam**	**19.22**	**62**	P		**P**	**20 01 38.6**	**-3.1**
GUMO				pmax		pmax		
	comp=Z,176nm,1.2s							
YULB	**Yu-li**	**19.32**	**343**	P		**P**	**20 01 40.3**	**-2.5**
YULB	**Yu-li**	**19.32**	**343**	P		**Pn**	**20 01 43.8**	**-0.6**
TPUB	**Ta-pu**	**19.45**	**341**	P		**P**	**20 01 42.7**	**-1.5**
TPUB				IAmb		IAmb	20 01 55.7	
	comp=Z,110nm,0.9s							
TPUB	**Ta-pu**	**19.45**	**341**	P		**Pn**	**20 01 45.1**	**-0.8**
SSLB	**Suanglung**	**19.80**	**342**	P		**P**	**20 01 46.9**	**-1.1**
SSLB				IAmb		IAmb	20 01 54.2	
	comp=Z,72nm,0.8s							
SSLB	**Suanglung**	**19.80**	**342**	P		**Pn**	**20 01 49.3**	**-0.8**
NACB	**Ninganchiao**	**19.98**	**344**	P		**P**	**20 01 49.5**	**-0.4**
NACB				IAmb		IAmb	20 01 57.2	
	comp=Z,185nm,2.0s							
DLV	**Lat**	**20.02**	**292**	P		**P**	**20 01 48.9**	**-1.8**
DLV				IAmb		IAmb	20 01 56.3	
	comp=Z,62nm,0.7s							
DLV	**Lat**	**20.02**	**292**	P		**P**	**20 01 51.4**	**+0.8**
NGJI	**Ngawi**	**20.08**	**233**	P		**P**	**20 01 51.4**	**+0.3**
KNRA	**Kununurra**	**20.48**	**176**	P		**P**	**20 01 56.1**	**+0.8**
	comp=Z,83nm,0.9s							
KNRA	**Kununurra**	**20.48**	**176**	P		**P**	**20 01 54.4**	**-1.0**
YHNB	**Yeheng**	**20.51**	**344**	P		**P**	**20 01 55.4**	**-0.3**
YHNB				IAmb		IAmb	20 02 01.8	
	comp=Z,71nm,0.8s							
SMRI	**Semarang**	**20.72**	**235**	P		**P**	**20 01 56.2**	**-1.8**
SMRI				IAmb		IAmb	20 02 06.6	
	comp=Z,82nm,1.0s							
SMRI	**Semarang**	**20.72**	**235**	P		Pn	20 02 00.5	-0.5
SMRI	**Semarang**	**20.72**	**235**	P		**P**	**20 01 57.9**	**-0.1**
	comp=Z,79nm,0.9s							
PCJI	**Pacitan**	**20.80**	**231**	P		**P**	**20 01 58.4**	**-0.5**
	comp=Z,76nm,0.9s							
MANU	**Manus Island**	**21.05**	**109**	P		**P**	**20 02 00.6**	**-1.1**
UGM	**Wanagama**	**21.15**	**233**	P		**P**	**20 02 01.5**	**-1.2**
UGM	**Wanagama**	**21.15**	**233**	P		**P**	**20 02 02.4**	**-0.3**
TPI	**Tanjungpandan**	**21.20**	**249**	P		**P**	**20 02 03.0**	**-0.1**
	comp=Z,50nm,1.0s							
YOGI	**Yogyakarta**	**21.28**	**234**	P		**P**	**20 02 04.5**	**+0.5**
KNMB	**Chin-men Tao**	**21.32**	**337**	P		**P**	**20 02 03.4**	**-1.0**
KNMB				IAmb		IAmb	20 02 06.8	
	comp=Z,93nm,0.8s							
QZH	**Quanzhou**	**21.68**	**338**	*e*P		**P**	**20 02 09.5**	**+1.4**
QZH				pmax		pmax		
	comp=Z,160nm,1.4s							
JOW	**Kunigami**	**21.83**	**2**	P		**P**	**20 02 10.0**	**+0.3**
JOW				IAmb		IAmb	20 02 32.2	
	comp=Z,68nm,1.0s							
JOW	**Kunigami**	**21.83**	**2**	LR		LR	20 12 02.2	
	comp=Z,136nm,20.6s,baz=278,slow=40							
KPJI	**Karang Pucung**	**22.12**	**237**	P		**P**	**20 02 13.4**	**+0.4**
	comp=Z,90nm,1.2s							
QIZ	**Qiongzhong**	**22.19**	**311**	P		**P**	**20 02 11.5**	**-2.3**
QIZ				IAmb		IAmb	20 02 25.2	
	comp=Z,166nm,1.8s							
QIZ	**Qiongzhong**	**22.19**	**311**	P		**P**	**20 02 12.5**	**-1.3**
QIZ				S		**S**	**20 06 13.2**	**-1.3**
QIZ				LR		LR		
	comp=Z,880nm,16.5s							
QIZ				LR		LR		
	comp=Z,620nm,10.8s							
QIZ				LR		LR		
	comp=Z,670nm,23.2s							
PPBI	**Pangkal Pinang**	**22.43**	**252**	P		**P**	**20 02 17.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**22.92**	**184**	P		**P**	**20 02 21.7**	**+0.3**
	comp=Z,9.5nm,1.3s							
FITZ	**Fitzroy Crossi**	**22.92**	**184**	P		**P**	**20 02 19.4**	**-2.0**
FITZ	**Fitzroy Crossi**	**22.92**	**184**	LR		LR	20 12 08.6	
	comp=Z,340nm,21.4s,baz=10,slow=39							
FITZ	**Fitzroy Crossi**	**22.92**	**184**	P		**P**	**20 02 23.0**	**+1.6**
LEM	**Lembang**	**22.97**	**240**	LR		LR	20 13 01.8	
	comp=Z,356nm,18.6s,baz=344,slow=41							
LEM	**Lembang**	**22.97**	**240**	P		**P**	**20 02 24.0**	**+1.8**
TPRI	**Tanjung Pinang**	**23.23**	**261**	P		**P**	**20 02 25.9**	**+1.3**
	comp=Z,53nm,1.3s							
BBJI	**Bungbulang**	**23.27**	**238**	P		**P**	**20 02 24.2**	**-0.8**
DSRI	**Dabo**	**23.47**	**257**	P		**P**	**20 02 26.0**	**-0.8**
CNJI	**Cibinong**	**23.63**	**239**	P		**P**	**20 02 27.4**	**-0.9**
	comp=Z,39nm,1.1s							
MYKOM	**Kota Tinggi**	**23.77**	**263**	P		**P**	**20 02 27.4**	**-2.1**
MYKOM	**Kota Tinggi**	**23.77**	**263**	P		**P**	**20 02 29.8**	**+0.3**
BTDF	**Bukit Timah Da**	**23.91**	**262**	P		**P**	**20 02 31.6**	**+0.8**
PMG	**Port Moresby**	**24.24**	**126**	P		**P**	**20 02 31.8**	**-2.0**
PMG	**Port Moresby**	**24.24**	**126**	LR		LR	20 12 31.0	
	comp=Z,235nm,19.3s,baz=304,slow=38							
PMG	**Port Moresby**	**24.24**	**126**	P		**P**	**20 02 39.8**	**+6.0**
PMG	**Port Moresby**	**24.24**	**126**	P		**P**	**20 02 38.7**	**+4.9**
PMG	**Port Moresby**	**24.24**	**126**⇑	*e*P		**P**	**20 02 34.6**	**+0.8**
PMG				pmax		pmax		
	comp=Z,20nm,1.1s							
COEN	**Coen**	**24.38**	**140**	P		**P**	**20 02 33.0**	**-2.0**
COEN	**Coen**	**24.38**	**140**	P		**P**	**20 02 40.3**	**+5.3**
MDSI	**Maura Dua**	**25.05**	**249**	P		**P**	**20 02 40.7**	**-0.5**
KASI	**Kota Agung**	**25.16**	**246**	P		**P**	**20 02 42.0**	**-0.2**
	comp=Z,64nm,1.0s							
LWLI	**Liwa**	**25.36**	**247**	P		**P**	**20 02 44.8**	**+0.7**
	comp=Z,2μmcomp=Z,111nm,1.1s							
WB0	**Warramunga Arr**	**25.44**	**165**	P		**P**	**20 02 42.9**	**-1.8**
WB0				IAmb		IAmb	20 02 49.3	
	comp=Z,61nm,0.7s							
WRAB	**Tennant Creek**	**25.59**	**165**	P		**P**	**20 02 44.4**	**-1.6**
WRAB				IAmb		IAmb	20 03 03.7	
	comp=Z,55nm,0.8s							
WRAB	**Tennant Creek**	**25.59**	**165**	P		**P**	**20 02 45.4**	**-0.6**
WRAB	**Tennant Creek**	**25.59**	**165**⇑	*e*P		**P**	**20 02 45.2**	**-0.8**
WRAB				pmax		pmax		
	comp=Z,22nm,0.5s							
WRA	**Warramunga Arr**	**25.59**	**165**			**P**	**20 02 43.4**	**-2.7**
WRA	**Warramunga Arr**	**25.59**	**165**	P		**P**	**20 02 45.5**	**-0.5**
	comp=Z,36nm,0.9s,baz=343,slow=10.0,SNR=64							
WRA				S		**S**	**20 07 09.5**	**-0.1**
	comp=Z,9.1nm,1.3s,baz=339,slow=16,SNR=3.2							
WRA				LR		LR	20 13 47.2	
	comp=Z,263nm,20.1s,baz=343,slow=38							
	comp=Z,36nm,0.9s							
WR8	**Warramunga Arr**	**25.65**	**165**	P		**P**	**20 02 44.3**	**-2.3**
WR8				IAmb		IAmb	20 03 04.2	
	comp=Z,46nm,0.9s							
GULI	**GuiLin**	**26.08**	**323**	P		**P**	**20 02 51.2**	**+0.8**
MNAI	**Manna**	**26.14**	**250**	P		**P**	**20 02 47.9**	**-3.2**
JCJ	**Chichijima**	**26.17**	**31**			**P**	**20 02 50.7**	**-0.5**
JCJ	**Chichijima**	**26.17**	**31**	P		P	20 02 43.1	-8.0
	comp=Z,106nm,0.7s,baz=298,slow=16,SNR=7.7							
JCJ				LR		LR	20 11 33.8	
	comp=Z,227nm,21.1s,baz=284,slow=33							
KSI	**Kapahiang**	**26.25**	**252**	P		**P**	**20 02 53.7**	**+1.5**
	comp=Z,2μmcomp=Z,88nm,1.0s							
RABL	**Rabaul**	**26.28**	**110**	P		**P**	**20 02 48.5**	**-3.9**
IPM	**Ipoh**	**26.35**	**270**	P		**P**	**20 02 49.9**	**-3.1**
IPM	**Ipoh**	**26.35**	**270**	P		**P**	**20 02 55.1**	**+2.1**
MASI	**Maura Aman, Be**	**26.43**	**253**	P		**P**	**20 02 54.6**	**+0.9**
	comp=Z,2μmcomp=Z,151nm,1.3s							
KULM	**Kulim**	**26.70**	**272**	P		**P**	**20 02 53.2**	**-3.0**
KULM	**Kulim**	**26.70**	**272**	P		**P**	**20 02 57.5**	**+1.3**
CNSH	**ChangSha**	**26.96**	**331**	P		**P**	**20 03 00.0**	**+1.7**
MBWA	**Marble Bar**	**26.98**	**196**	P		**P**	**20 03 00.1**	**+1.6**
	comp=Z,54nm,1.3s							
MBWA	**Marble Bar**	**26.98**	**196**	P		**P**	**20 02 55.4**	**-3.1**
MBWA				IAmb		IAmb	20 03 18.3	
	comp=Z,48nm,0.9s							
MBWA	**Marble Bar**	**26.98**	**196**	P		**P**	**20 03 00.6**	**+2.1**
MBWA	**Marble Bar**	**26.98**	**196**	P		**P**	**20 03 01.1**	**+2.6**
PSAC1	**Pilbara Seismi**	**27.32**	**196**	P		**P**	**20 03 03.1**	**+1.6**
	comp=Z,80nm,1.4s							
PSAC2	**Pilbara Seismi**	**27.32**	**195**	P		**P**	**20 03 03.9**	**+2.3**
	comp=Z,106nm,1.3s							
PSA00	**Pilbara Seismi**	**27.34**	**196**	P		**P**	**20 03 03.8**	**+2.0**
	comp=Z,86nm,1.4s							
PSA00	**Pilbara Seismi**	**27.34**	**196**	P		**P**	**20 02 58.7**	**-3.1**
PSA00				IAmb		IAmb	20 03 20.1	
	comp=Z,80nm,1.0s							
PSA00	**Pilbara Seismi**	**27.34**	**196**	P		**P**	**20 02 59.1**	**-2.6**
PSA00				IAmb		IAmb	20 03 20.1	
	comp=Z,54nm,1.1s							
PSA00	**Pilbara Seismi**	**27.34**	**196**	P		**P**	**20 03 04.5**	**+2.7**
PSAB3	**Pilbara Seismi**	**27.36**	**196**	P		**P**	**20 03 03.3**	**+1.4**
	comp=Z,96nm,1.4s							
PPI	**Padang Panjang**	**27.55**	**260**	P		**P**	**20 03 04.7**	**+1.0**
	comp=Z,46nm,1.0s							
PDSI	**Padang**	**27.58**	**259**	P		**P**	**20 03 04.2**	**+0.1**
	comp=Z,38nm,1.4s							
QIS	**Mount Isa**	**27.97**	**155**	P		**P**	**

CM31 Chiang Mai Arr 30.94 298 P **P** **20 03 31.6 -2.1**
CM31 Chiang Mai Arr 30.94 298 P **P** **20 03 34.8 +1.0**
SNR=5.0
CMAR Chiang Mai Arr 30.94 298 **P** **20 03 32.5 -1.2**
CMAR **ScP** **20 10 05.1 -1.3**
CMAR Chiang Mai Arr 30.94 298 P **P** **20 03 34.1 +0.4**
comp=Z,5.9nm,0.8s,baz=112,slow=7.2,SNR=37
CMAR ScP **ScP** **20 10 07.8 +1.4**
comp=Z,2.1nm,0.9s,baz=140,slow=2.1,SNR=6.8
CMAR LR LR 20 17 16.0
comp=Z,188nm,18.3s,baz=115,slow=38
comp=Z,5.9nm,0.8s
CMAR Chiang Mai Arr 30.94 298 *i* P **P** **20 03 34.7 +0.9**
CMAR pmax pmax
comp=Z,5.0nm,0.7s
CTA Charters Tower 30.95 144 LR LR 20 16 47.5
comp=Z,9.9nm,18.8s,baz=349,slow=38
MLSI Meulaboh, Aceh 30.96 270 P **P** **20 03 33.8 -0.2**
comp=Z,64nm,1.0s
CHTO Chiang Mai 31.07 299 P **P** **20 03 33.9 -1.1**
CHTO Chiang Mai 31.07 299 P **P** **20 03 36.1 +1.2**
CHTO Chiang Mai 31.07 299 P **P** **20 03 35.8 +0.9**
CHTO Chiang Mai 31.07 299 P **P** **20 03 33.9 -1.1**
CHTO pmax pmax
comp=Z,19nm,1.1s
CHTO Chiang Mai 31.07 299 P **P** **20 03 35.8 +0.9**
KMI Kunming 31.10 313 P **P** **20 03 37.4 +2.0**
KMI pmax pmax
comp=Z,24nm,1.0s
KMI LR LR
comp=Z,660nm,29.6s
TJN Taejon 31.33 360⇑ *e*P **P** **20 03 37.3 +0.4**
INU Inuyama 31.56 15 P **P** **20 03 38.6 -0.5**
INU IAmb IAmb 20 04 01.0
comp=Z,24nm,0.7s
INU Inuyama 31.56 15 P **P** **20 03 41.5 +2.5**
INU Inuyama 31.56 15 P **P** **20 03 39.2 +0.2**
JGF Kuroka 31.89 15 P **P** **20 03 40.3 -1.6**
KSAR Wonju Array Be 32.39 1 P **P** **20 03 45.3 -1.0**
KSAR Wonju Array Be 32.39 1 P **P** **20 03 45.3 -1.0**
KSRS Korea Array 32.41 1 P **P** **20 03 47.1 +0.7**
comp=Z,13nm,0.9s,baz=180,slow=10,SNR=35
KSRS ScP **ScP** **20 10 09.8 -1.1**
comp=Z,0.8nm,0.7s,baz=180,slow=2.3,SNR=6.3
KSRS LR LR 20 19 06.3
comp=Z,48µm,20.4s,baz=175,slow=40
comp=Z,13nm,0.9s
KS19 Wonju Array Si 32.45 1 P **P** **20 03 45.0 -1.8**
KS19 IAmb IAmb 20 03 48.9
comp=Z,28nm,1.1s
MEEK Meekatharra 32.50 195 P **P** **20 03 48.4 +1.0**
comp=Z,43nm,0.9s
MEEK Meekatharra 32.50 195 P **P** **20 03 49.1 +1.7**
TIA Tai'an 32.58 344 P **P** **20 03 48.7 +0.7**
TIA pmax pmax
comp=Z,27nm,0.9s
LYN LuoYang 32.61 337 ⇓P **P** **20 03 50.5 +2.2**
LYN pmax pmax
comp=Z,75nm,1.0s
PZH PanZhiHua 32.64 314 P **P** **20 03 49.0 +0.2**
PZH pmax pmax
comp=Z,10.0nm,1.3s
MJAR Matsushiro Arr 33.01 16 P **P** **20 03 49.9 -1.8**
MJAR Matsushiro Arr 33.01 16 P **P** **20 03 50.1 -1.6**
comp=Z,7.5nm,1.0s,baz=195,slow=8.9,SNR=16
MJAR LR LR 20 15 18.3
comp=Z,383nm,21.2s,baz=204,slow=33
comp=Z,7.5nm,1.0s
MJAR Matsushiro Arr 33.01 16 P **P** **20 03 49.9 -1.8**
MJAR pmax pmax
comp=Z,13nm,1.3s
MAJO Matsushiro 33.01 16 P **P** **20 03 50.2 -1.5**
MAJO Matsushiro 33.01 16 P **P** **20 03 54.4 +2.7**
MAJO Matsushiro 33.01 16‖ *e*P **P** **20 03 50.1 -1.6**
MAJO pmax pmax
comp=Z,13nm,1.2s
MJB9 Matsu-Tunnel 33.01 16 P **P** **20 03 50.5 -1.2**
XAN Xi'an 33.72 332 P **P** **20 03 58.2 +0.2**
XAN pP pwP 20 04 16.9 -2.5
XAN pmax pmax
comp=Z,140nm,1.0s
XAN pmax pmax
comp=Z,690nm,4.6s
CD2 Chengdu 34.16 322 P **P** **20 04 00.6 -1.2**
CD2 pP pwP 20 04 19.8 -2.7
CD2 S **S** **20 09 22.7 -0.9**
CD2 pmax pmax
comp=Z,150nm,1.0s
CD2 LR LR
comp=Z,1µm,17.9s
CD2 LR LR
comp=Z,1µm,14.8s
CD2 LR LR
comp=Z,720nm,17.6s
TNCH TengChong 34.23 309⇑ *i*P **P** **20 04 03.0 +0.2**
TNCH S **S** **20 09 23.0 -2.3**
TNCH pmax pmax
comp=Z,140nm,1.3s
DL2 Dalian 34.26 352 P **P** **20 04 04.2 +1.6**
DL2 pmax pmax
comp=Z,41nm,1.0s
HNS HongShan 34.39 342 ⇑P **P** **20 04 03.9 +0.3**
HNS pmax pmax
comp=Z,100nm,1.1s
JSD Sado 34.42 15 **P** **20 04 02.9 -1.1**
JSD IAmb IAmb 20 04 26.1
comp=Z,19nm,0.8s
JSD Sado 34.42 15 P **P** **20 04 06.4 +2.4**
JMM Marumori 35.00 19 P **P** **20 04 07.3 -1.7**
JMM Marumori 35.00 19 P **P** **20 04 10.3 +1.4**
TIY Taiyuan 35.43 339 *e*P **P** **20 04 14.5 +1.8**
TIY pmax pmax
comp=Z,73nm,0.8s
FORT Forrest 35.48 179 P **P** **20 04 14.1 +0.9**
comp=Z,30nm,0.7s
FORT Forrest 35.48 179 P **P** **20 04 09.3 -3.8**
FORT IAmb IAmb 20 04 28.1
comp=Z,21nm,0.7s
MORW Morawa 35.51 197 IAmb IAmb 20 04 31.0
comp=Z,28nm,1.1s
MORW Morawa 35.51 197 P **P** **20 04 15.4 +2.0**
BJT Baijiatuan 36.42 345 P **P** **20 04 20.6 -0.5**
BJT Baijiatuan 36.42 345 P **P** **20 04 23.3 +2.2**
BJT Baijiatuan 36.42 345 P **P** **20 04 20.6 -0.5**
BJT pmax pmax
comp=Z,54nm,0.7s
BJT Baijiatuan 36.42 345 P **P** **20 04 23.1 +2.1**
BJI Beijing 36.44 345 P **P** **20 04 21.0 -0.2**
BJI S **S** **20 09 56.3 -2.0**
BJI pmax pmax
comp=Z,20nm,0.9s
SNY Shenyang 36.94 355⇑P **P** **20 04 26.7 +1.3**
SNY pmax pmax
comp=Z,20nm,1.3s
KLBR Kellerberrin 37.45 194 P **P** **20 04 33.3 +3.4**
LZDM Lanzhou Array 37.87 328 P **P** **20 04 35.4 +1.6**
comp=Z,35nm,0.8s,baz=150,slow=12,SNR=20
LZDM LR LR 20 20 50.5
comp=Z,247nm,21.8s,baz=155,slow=37
comp=Z,35nm,0.8s
LZH Lanzhou 37.88 328 *e*P **P** **20 04 34.6 +0.8**
LZH pP pP 20 04 50.8 +2.6
LZH S **S** **20 10 19.6 -1.2**
LZH sS sS 20 10 43.0 -3.0
LZH pmax pmax
comp=Z,190nm,1.3s
LZH pmax pmax
comp=Z,470nm,5.4s
LZH LR LR
comp=Z,510nm,15.1s
LZH LR LR
comp=Z,580nm,14.8s
LZH LR LR
comp=Z,710nm,14.8s
HHC Hu-ho-hao-te 38.53 341 *e*P **P** **20 04 41.2 +2.1**
HHC pmax pmax
comp=Z,41nm,0.7s
HHC pmax pmax
comp=Z,190nm,4.9s
HHC LR LR
comp=Z,170nm,13.7s
HHC LR LR
comp=Z,260nm,13.9s
HHC LR LR
comp=Z,210nm,13.2s

CN2 Changchun 38.78 358 P **P** **20 04 42.2 +1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
NWAO Narrogin (SRO) 38.85 194 P **P** **20 04 42.6 +1.0**
NWAO Narrogin (SRO) 38.85 194 P **P** **20 04 44.1 +2.4**
BRDH Bariadhala 38.85 301 LR LR 20 24 35.2
comp=Z,192nm,18.4s,baz=187,slow=42
BTO Baotou 38.85 339 *e*P **P** **20 04 43.9 +2.1**
BTO PP **PnPn** **20 06 17.5 +2.7**
BTO S **S** **20 10 38.6 +3.4**
BTO pmax pmax
comp=Z,27nm,0.9s
BTO pmax pmax
comp=Z,650nm,6.4s
BTO LR LR
comp=Z,360nm,12.8s
BTO LR LR
comp=Z,370nm,12.5s
BTO LR LR
comp=Z,520nm,14.3s
STKA Stephens Creek 38.97 161 P **P** **20 04 43.2 +0.5**
comp=Z,28nm,0.4s,baz=340,slow=8.3,SNR=122
STKA LR LR 20 22 46.9
comp=Z,185nm,19.1s,baz=338,slow=39
comp=Z,28nm,0.4s
STKA Stephens Creek 38.97 161 P **P** **20 04 44.8 +2.1**
STKA Stephens Creek 38.97 161‖ *e*P **P** **20 04 43.0 +0.3**
USRK Ussuriysk Ar. 39.34 5 P **P** **20 04 46.4 +0.8**
comp=Z,6.6nm,0.7s,baz=189,slow=7.3,SNR=8.1
comp=Z,6.6nm,0.7s
AULRC Lightning Ridg 39.41 151 P **P** **20 04 50.6 +4.2**
MDJ Mudanjiang 39.60 2 IAmb IAmb 20 04 50.5
comp=Z,38nm,1.0s
MDJ Mudanjiang 39.60 2 P **P** **20 04 48.0 +0.2**
MDJ pmax pmax
comp=Z,48nm,1.2s
MDJ Mudanjiang 39.60 2 P **P** **20 04 49.7 +1.9**
HTT Hallett 39.64 165 P **P** **20 04 52.2 +3.9**
SHL Shillong 39.79 305 P **P** **20 04 50.2 +0.3**
SNR=14
SHL S **S** **20 10 48.7 -1.1**
SHL Shillong 39.79 305 P **P** **20 04 50.0 +0.1**
SHL pmax pmax
comp=Z,171nm,1.0s
XLT XiLinHaoTe 40.12 347 *e*P **P** **20 04 53.1 +0.9**
XLT pmax pmax
comp=Z,25nm,0.9s
XLT pmax pmax
comp=Z,210nm,5.8s
CMSA Cobar Meteorol 40.19 156 P **P** **20 04 55.9 +3.1**
BNX BinXian 40.68 360⇑P **P** **20 04 57.8 +1.1**
BNX pmax pmax
comp=Z,17nm,0.9s
AUMAR Marden Senior 40.95 166 P **P** **20 05 03.8 +4.7**
ASAJ Asahikawa 41.27 17 P **P** **20 05 03.4 +1.8**
comp=Z,18nm,0.6s,baz=238,slow=13,SNR=6.4
ASAJ LR LR 20 20 43.3
comp=Z,184nm,21.7s,baz=14,slow=34
comp=Z,18nm,0.6s
JKA Kamikawa-asahi 41.27 17 P **P** **20 05 00.9 -0.7**
ARMA Armidale 42.05 148 P **P** **20 05 08.3 0.0**
comp=Z,25nm,1.3s
LSA Lhasa 42.23 310 P **P** **20 05 07.8 -2.5**
LSA pmax pmax
comp=Z,25nm,1.6s
LSA Lhasa 42.23 310 P **P** **20 05 11.7 +1.4**
LSA pmax pmax
comp=Z,27nm,1.2s
GTA Gaotai 42.49 328 P **P** **20 05 13.8 +2.0**
GTA pP sP 20 05 31.2 -2.0
GTA S **S** **20 11 33.5 +4.2**
GTA ScS **ScS** **20 15 10.6 +3.1**
GTA pmax pmax
comp=Z,81nm,1.4s
GTA pmax pmax
comp=Z,400nm,4.3s
GTA LR LR
comp=Z,230nm,14.5s
GTA LR LR
comp=Z,320nm,14.2s
GTA LR LR
comp=Z,300nm,15.3s
GOMU GeErMu 43.24 320 P **P** **20 05 18.4 +0.2**
GOMU S **S** **20 11 39.8 -1.1**
GOMU pmax pmax
comp=Z,26nm,1.3s
ARPS Mount Arapiles 43.58 163 P **P** **20 05 20.8 +0.4**
comp=Z,52nm,0.7s
YSS Yuzhno-Sakhali 43.93 15 P **P** **20 05 20.8 -2.3**
YSS Yuzhno-Sakhali 43.93 15 P **P** **20 05 25.8 +2.7**
YSS Yuzhno-Sakhali 43.93 15 *e*P **P** **20 05 20.8 -2.3**
YSS *e**PP **sP** **20 05 42.8 -1.5**
YSS *e*S **S** **20 11 47.9 -2.0**
YSS 20 15 21.8
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=Z,200nm,3.7s
EVN Everest 44.90 305 P **P** **20 05 30.4 -1.5**
HILR Hailar Array B 44.98 353 P **P** **20 05 32.7 +1.2**
comp=Z,8.4nm,0.7s,baz=170,slow=11,SNR=9.7
HILR LR LR 20 24 54.3
comp=Z,70nm,22.0s,baz=135,slow=37
comp=Z,8.4nm,0.7s
ULN Ulaanbaatar 46.25 341 P **P** **20 05 41.9 +0.2**
ULN Ulaanbaatar 46.25 341 P **P** **20 05 42.9 +1.2**
ULN Ulaanbaatar 46.25 341 *c i*P **P** **20 05 42.9 +1.2**
ULN pmax pmax
comp=Z,90nm,1.7s
ULN Ulaanbaatar 46.25 341 P **P** **20 05 43.0 +1.3**
GRNR Gornyy 46.33 8⇓ *i*P **P** **20 05 43.0 +0.9**
GRNR pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 46.44 340 P **P** **20 05 42.2 -0.9**
SONM Songino Array 46.44 340 P **P** **20 05 44.7 +1.5**
comp=Z,10nm,0.8s,baz=162,slow=7.0,SNR=74
SONM LR LR 20 26 58.5
comp=Z,111nm,19.7s,baz=164,slow=38
comp=Z,10nm,0.8s
PALK Pallekele 46.54 275 LR LR 20 26 54.3
comp=Z,173nm,19.5s,baz=96,slow=38
YATNC Mamie plateau, 46.98 126 P **P** **20 05 51.4 +3.8**
OUENC Ouen Island, N 47.12 127 P **P** **20 05 53.2 +4.5**
CIT Chita 48.37 349 *e*P **P** **20 05 59.8 +1.8**
CIT *e* 20 06 11.2
CIT *e* 20 06 16.2
CIT *e* 20 07 43.6
CIT *e* 20 08 35.4
CIT *e* 20 12 58.4
CIT pmax pmax
comp=Z,96nm,2.1s
ZEA Zeya 48.69 360 *e*P **P** **20 06 00.8 +0.5**
ZEA pmax pmax
comp=Z,20nm,1.2s
HYBB Hyderabad (bro 49.42 289 *e*P **P** **20 06 06.8 +0.3**
HYBB *e*pP **pP** **20 06 20.5 -1.8**
HYBB *e*PP **PP** **20 07 59.7 -1.6**
HYBB *e*ScP **ScP** **20 11 16.6 -1.4**
HYBB *e*S **S** **20 13 08.8 -0.5**
ZAK Zakamensk 49.68 340 *e*P **P** **20 06 07.5 -0.6**
ZAK pmax pmax
comp=Z,19nm,1.7s
TLY Talaya 50.66 341 P **P** **20 06 14.7 -0.7**
TLY IAmb IAmb 20 06 18.6
comp=Z,20nm,1.0s
TLY Talaya 50.66 341 P **P** **20 06 16.8 +1.3**
TLY Talaya 50.66 341 *c e*P **P** **20 06 16.7 +1.3**
TLY pmax pmax
comp=Z,34nm,1.3s
TLY Talaya 50.66 341 P **P** **20 06 17.6 +2.2**
IRK Irkutsk 50.95 342 *e*P **P** **20 06 18.1 +0.6**
IRK pmax pmax
comp=Z,49nm,2.4s
MOY Mondy 51.55 339 *e*P **P** **20 06 23.3 +1.1**
MOY pmax pmax
comp=Z,71nm,2.1s
KNGR Kungurtug, Tuv 52.01 336⇑ *e*P **P** **20 06 23.3 -2.3**
KNGR pmax pmax
comp=Z,44nm,1.2s
WMQ Urumqi 52.20 324 ⇑P **P** **20 06 28.8 +1.7**
WMQ pP pP 20 06 45.2 +2.9
WMQ pmax pmax
comp=Z,72nm,1.1s
WMQ pmax pmax
comp=Z,400nm,3.7s

WMQ LR LR
comp=Z,470nm,16.3s
WMQ LR LR
comp=Z,330nm,23.9s
WMQ Urumqi 52.20 324 P **P** **20 06 29.4 +2.2**
BOD Bodaibo 53.83 351 *e*P **P** **20 06 39.7 +1.0**
BOD pmax pmax
comp=Z,72nm,1.1s
PEA0B Petropavlovsk- 54.08 22⇑ *e*P **P** **20 06 39.9 -0.8**
PETK Petropavlovsk- 54.08 22 P **P** **20 06 40.2 -0.5**
PETK Petropavlovsk- 54.08 22 P **P** **20 06 42.0 +1.4**
comp=Z,32nm,0.7s,baz=171,slow=3.1,SNR=31
PETK LR LR 20 32 43.9
comp=Z,23nm,18.6s,baz=218,slow=39
comp=Z,32nm,0.7s
PET Petropavlovsk 54.38 23⇑ *e*P **P** **20 06 44.0 +1.3**
PET pmax pmax
comp=Z,56nm,1.2s
PET Petropavlovsk 54.38 23 P **P** **20 06 44.1 +1.3**
comp=Z,86nm,1.3s
PET pP **sP** **20 07 04.0 -0.1**
comp=Z,86nm,1.3s
MSVF Nonsavu 54.75 116⇑ *e*P **P** **20 06 43.3 -2.9**
MSVF pmax pmax
comp=Z,19nm,1.3s
ZSN Zaisan 55.93 326⇑ *i*P **P** **20 06 55.0 +0.8**
comp=Z,22nm,1.2s
ZSN Zaisan 55.93 326 *c i*P **P** **20 06 54.9 +0.8**
ZSN pmax pmax
comp=Z,22nm,1.2s
DGZ Jazzator, Alta 55.95 330⇑ *i*P **P** **20 06 55.1 +0.7**
DGZ pmax pmax
comp=Z,44nm,0.9s
SHLS Shalkode 56.92 320 *e*P **P** **20 07 00.1 -1.3**
comp=Z,39nm,1.9s
SHLS Shalkode 56.92 320 *e*P **P** **20 07 00.1 -1.3**
SHLS pmax pmax
comp=Z,39nm,1.9s
PDGK Podgornoye 56.99 320 P **P** **20 07 02.7 +0.8**
MK31 Makanchi Array 57.02 324 *c i*P **P** **20 07 03.3 +1.3**
MK31 pmax pmax
comp=Z,80nm,0.8s
MKAR Makanchi Array 57.02 324 P **P** **20 07 01.6 -0.3**
MKAR Makanchi Array 57.02 324 P **P** **20 07 03.3 +1.4**
comp=Z,56nm,0.8s,baz=124,slow=8.0,SNR=344
MKAR ScP **ScP** **20 11 49.1 -1.5**
comp=Z,0.8nm,0.8s,baz=108,slow=4.7,SNR=2.3
MKAR LR LR 20 32 39.8
comp=Z,210nm,21.5s,baz=120,slow=37
comp=Z,56nm,0.8s
YAK Yakutsk 57.03 1 P **P** **20 07 00.5 -1.2**
YAK Yakutsk 57.03 1 P **P** **20 07 02.1 +0.5**
comp=Z,107nm,0.8s,baz=17,slow=0.4,SNR=40
YAK LR LR 20 29 42.5
comp=Z,79nm,21.8s,baz=178,slow=34
comp=Z,107nm,0.8s
YAK Yakutsk 57.03 1 *e*P **P** **20 07 02.3 +0.7**
YAK *e**PP **pP** **20 07 17.6 +1.0**
YAK *e* 20 07 56.0
YAK *e* 20 09 07.9
YAK *e*PPP PPP 20 10 27.9
YAK *e*S **S** **20 14 53.2 +2.1**
YAK *e* 20 16 46.1
YAK *e*SS **SS** **20 18 42.6 +1.9**
YAK pmax pmax
comp=Z,193nm,1.3s
YAK pmax pmax
comp=N,67nm,1.4s
YAK pmax pmax
comp=E,13nm,1.7s
YAK pmax pmax
comp=Z,526nm,4.4s
YAK pmax pmax
comp=N,375nm,5.3s
YAK pmax pmax
comp=E,259nm,2.6s
YAK smax smax
comp=E,658nm,6.3s
YAK smax smax
comp=N,585nm,6.5s
YAK Yakutsk 57.03 1 P **P** **20 07 02.8 +1.2**
UZB Uzynbulak 57.21 319 *e*P **P** **20 07 04.0 +0.6**
comp=N,12nm,0.8s
UZB Uzynbulak 57.21 319 *e*P **P** **20 07 04.0 +0.6**
UZB pmax pmax
comp=Z,12nm,0.8s
MAKZ Makanchi 57.21 324 **P** **20 07 03.7 +0.4**
MAKZ Makanchi 57.21 324 P **P** **20 07 04.2 +0.9**
MAKZ Makanchi 57.21 324 P **P** **20 07 04.6 +1.3**
MAKZ sP **sP** **20 07 24.4 -1.0**
TARG Taragay, Kyrgy 57.38 317 P **P** **20 07 06.9 +1.9**
TARG pmax pmax
comp=Z,40nm,1.2s
MA2 Magadan 57.40 14 LR LR 20 29 21.6
comp=Z,81nm,21.6s,baz=142,slow=33
MA2 Magadan 57.40 14‖ *e*P **P** **20 07 05.1 +0.8**
MA2 pmax pmax
comp=Z,30nm,1.0s
SATY Saty 57.57 319 *e*P **P** **20 07 06.7 +0.6**
SATY Saty 57.57 319 *e*P **P** **20 07 06.6 +0.6**
KSH Kashi 57.74 314 P **P** **20 07 10.3 +3.0**
KSH pP pwP 20 07 27.9 -0.3
KSH pmax pmax
comp=Z,52nm,1.3s
KDJ Kajisay 57.97 318 **P** **20 07 09.1 +0.2**
KDJ Kajisay 57.97 318 P **P** **20 07 09.1 +0.2**
KDJ pmax pmax
comp=Z,71nm,0.9s
TDK Taldyqorghan 58.46 321 *e*P **P** **20 07 12.9 +0.8**
TDK Taldyqorghan 58.46 321 *e*P **P** **20 07 12.8 +0.8**
ARXS Arharly 58.47 320 *i* P **P** **20 07 12.9 +0.7**
TNSS Tian-Shan 58.52 318 *e*P **P** **20 07 13.2 +0.2**
TNSS Tian-Shan 58.52 318 *e*P **P** **20 07 13.2 +0.2**
AAA Alma-Ata 58.61 319 *e*P **P** **20 07 13.9 +0.6**
AAA Alma-Ata 58.61 319 *e*P **P** **20 07 13.8 +0.6**
ULHL Ulahol 58.65 317 P **P** **20 07 15.8 +2.1**
SNR=26
BOOM Boomskoye usch 58.96 317 P **P** **20 07 15.8 0.0**
BOOM Boomskoye usch 58.96 317 P **P** **20 07 15.8 0.0**
BOOM pmax pmax
comp=Z,39nm,1.1s
TKM2 Tokmak 2 59.37 318 P **P** **20 07 20.1 +1.5**
SNR=67
KBK Karagaybulak 59.69 317 P **P** **20 07 22.6 +1.8**
SNR=36
ARLS Aral 59.81 316 P **P** **20 07 23.5 +1.9**
ARLS pmax pmax
comp=Z,77nm,1.0s
UCH Uchtor 59.82 317 P **P** **20 07 23.7 +1.6**
SNR=112
ZAA0 Zalesovo Array 59.89 332 IAmb IAmb 20 07 24.4
comp=Z,25nm,0.9s
ZALV Zalesovo Beam 59.89 332 P **P** **20 07 20.5 -1.2**
ZALV Zalesovo Beam 59.89 332 P **P** **20 07 21.9 +0.2**
comp=Z,16nm,0.6s,baz=122,slow=5.8,SNR=43
ZALV LR LR 20 34 29.1
comp=Z,135nm,21.4s,baz=121,slow=37
comp=Z,16nm,0.6s
ZALV Zalesovo Beam 59.89 332 P **P** **20 07 20.5 -1.2**
CHMS Chumysh 59.96 318 P **P** **20 07 23.6 +1.1**
SNR=28
FRU1 Bishkek 59.97 317 P **P** **20 07 24.1 +1.5**
FRU1 pmax pmax
comp=Z,36nm,1.2s
AAK Ala-Archa 59.99 317 P **P** **20 07 22.3 -0.6**
AAK Ala-Archa 59.99 317 LR LR 20 36 03.6
comp=Z,133nm,21.3s,baz=102,slow=39
AAK Ala-Archa 59.99 317 P **P** **20 07 24.5 +1.6**
AAK Ala-Archa 59.99 317 P **P** **20 07 24.6 +1.6**
SNR=26
AAK Ala-Archa 59.99 317 *c i*P **P** **20 07 24.2 +1.3**
AAK pmax pmax
comp=Z,21nm,1.0s
AAK Ala-Archa 59.99 317 P **P** **20 07 24.4 +1.6**
AAK sP **sP** **20 07 44.5 -0.6**
SGDS Sogindy 60.23 318 *e*P **P** **20 07 25.1 +0.8**
comp=Z,21nm,1.2s
USP Ospenovka 60.24 318 P **P** **20 07 25.9 +1.5**
SNR=72
OHH Osh 60.39 314 P **P** **20 07 25.3 -0.2**
OHH pmax pmax
comp=Z,57nm,1.3s
EKS2 Erkin-Say 60.49 317 P **P** **20 07 28.0 +1.8**
SNR=81
SEY Seymchan 60.74 13 LR LR 20 31 44.1
comp=Z,77nm,21.9s,baz=199,slow=34

SEY **Seymchan** 60.74 13 *e*P P 20 07 28.7 +1.4
SEY pmax pmax
comp=Z,36nm,1.3s
SHEM **Shemya Is, Ala** 61.10 30 LR LR 20 29 17.3
comp=Z,126nm,20.2s,baz=266,slow=31
KURK **Kurchatov** 61.16 327 P P 20 07 31.0 +0.6
KURK **Kurchatov** 61.16 327 P P 20 07 31.7 +1.3
KURK **Kurchatov** 61.16 327 *c i*P P 20 07 31.4 +1.0
KURK pmax pmax
comp=Z,275nm,1.7s
KURK **Kurchatov** 61.16 327 P P 20 07 31.8 +1.3
KURBB **Kurchatov Arra** 61.16 327 P P 20 07 31.1 +0.7
comp=Z,44nm,0.5s,baz=125,slow=6.2,SNR=308
KURBB PP PP 20 09 45.4 -0.4
comp=Z,8.3nm,1.2s,baz=125,slow=8.8,SNR=5.7
KURBB LR LR 20 36 01.1
comp=Z,57nm,19.7s,baz=175,slow=38
comp=Z,44nm,0.5s
KURBB **Kurchatov Arra** 61.16 327 P P 20 07 31.5 +1.1
KBL **Kabul** 61.40 307 P P 20 07 31.6 -1.0
KBL **Kabul** 61.40 307 P P 20 07 33.6 +0.9
SNR=13
KBL **Kabul** 61.40 307 P P 20 07 31.6 -1.0
KBL pmax pmax
comp=Z,31nm,0.8s
ARK **Arkit** 61.42 315 P P 20 07 34.3 +1.7
ARK pmax pmax
comp=Z,101nm,1.1s
TRKS **Terek-Say** 61.91 315 P P 20 07 37.0 +1.1
TRKS pmax pmax
comp=Z,68nm,1.3s
DZA **Taraz** 62.25 316 *e*P P 20 07 38.8 +0.8
comp=Z,17nm,1.0s
DZA **Taraz** 62.25 316 *e*P P 20 07 38.7 +0.8
DZA pmax pmax
comp=Z,17nm,1.0s
RPZ **Rata Peaks** 62.30 146 LR LR 20 34 37.8
comp=Z,239nm,19.2s,baz=110,slow=36
KK31 **Karatay Array** 62.88 316 P P 20 07 41.7 -0.5
KK31 **Karatay Array** 62.88 316 *i*P P 20 07 43.0 +0.8
KKAR **Karatay Array** 62.88 316 P P 20 07 42.1 -0.1
KKAR **Karatay Array** 62.88 316 P P 20 07 42.1 -0.1
IUG **Iuzhnay** 62.89 315 *e*P P 20 07 43.1 +0.7
IUG **Iuzhnay** 62.89 315 *e*P P 20 07 43.1 +0.7
URZ **Urewera** 62.90 138 LR LR 20 34 18.8
comp=Z,150nm,20.4s,baz=305,slow=35
CHM **Chimkent** 63.25 315 *e*P P 20 07 45.4 +0.8
comp=Z,10nm,0.7s
CHM **Chimkent** 63.25 315 *e*P P 20 07 45.4 +0.8
CHM pmax pmax
comp=Z,10.0nm,0.7s
BRLS **Boroldaу** 63.33 316⇑ *i*P P 20 07 46.1 +0.9
comp=Z,30nm,0.9s
BRLS **Boroldaу** 63.33 316 *c i*P P 20 07 46.0 +0.9
BRLS pmax pmax
comp=Z,31nm,0.9s
BRZS **Berezniki** 64.17 324 *e*P P 20 07 51.4 +0.9
BRZS **Berezniki** 64.17 324 *e*P P 20 07 51.4 +0.9
NGCH **Negor - Chabah** 66.54 295 P P 20 08 07.4 +1.2
TIXI **Tiksi** 66.67 0 P P 20 08 05.3 -1.0
TIXI **Tiksi** 66.67 0 *de*P P 20 08 05.9 -0.3
TIXI pmax pmax
comp=Z,75nm,1.3s
TIXI **Tiksi** 66.67 0 P P 20 08 06.3 0.0
BVA0 **Borovoye Array** 66.75 327 *i*P P 20 08 08.5 +1.4
BVAR **Borovoye Array** 66.75 327 P P 20 08 07.7 +0.6
comp=Z,72nm,0.7s,baz=107,slow=5.5,SNR=151
BVAR LR LR 20 38 55.4
comp=Z,78nm,19.1s,baz=117,slow=37
comp=Z,72nm,0.7s
BORK **Borovoye** 66.80 327 *c i*P P 20 08 08.3 +0.9
BORK pmax pmax
comp=Z,145nm,1.0s
BORK **Borovoye** 66.80 327 P P 20 08 08.6 +1.2
BORK pP **pwP** 20 08 28.6 -1.0
HRA **Herat** 66.85 305 P P 20 08 06.0 -2.4
HRA IAmb IAmb 20 08 10.2
comp=Z,16nm,0.9s
JLN **Jalan Bani Buh** 67.84 292 P P 20 08 13.6 -1.0
BILL **Bilibino** 68.25 15⇓ *e*P P 20 08 16.4 +0.1
BILL pmax pmax
comp=Z,27nm,1.9s
WSAR **Wadi Sarin** 68.64 293 P P 20 08 19.1 -0.4
JMDO **Jabal Madar** 69.07 292 P P 20 08 22.4 +0.1
MHTO **MHTO** 69.12 290 P P 20 08 22.7 +0.1
SMDO **Samad** 69.16 293 P P 20 08 22.9 -0.1
DQM **DQM** 69.47 289 P P 20 08 25.6 +0.8
NRIK **Noril'sk** 69.48 346 P P 20 08 22.6 -1.3
NRIK **Noril'sk** 69.48 346 P P 20 08 24.1 +0.2
comp=Z,10nm,0.7s,baz=130,slow=6.2,SNR=21
NRIK LR LR 20 42 03.0
comp=Z,107nm,21.2s,baz=134,slow=39
comp=Z,10nm,0.7s
NRIK **Noril'sk** 69.48 346 *c i*P P 20 08 23.8 -0.1
NRIK pmax pmax
comp=Z,17nm,1.0s
HOQ **Hoqain** 69.87 293 P P 20 08 27.4 +0.2
NIKH **Nikolski High** 70.45 35 P P 20 08 31.0 +0.8
baz=251
ARQ **Araqi** 70.58 293 P P 20 08 32.1 +0.5
SOHO **SOHO** 70.61 294 P P 20 08 32.1 +0.4
UOSS **Minazif** 70.96 295 P P 20 08 33.6 -0.2
HATD **Hatta, Dubai** 71.02 294 P P 20 08 34.8 +0.6
MASF **Masafi** 71.02 295 P P 20 08 35.6 +1.3
ASHO **Ashiyiah** 71.07 294 P P 20 08 35.4 +0.8
SHME **Shamm** 71.08 296 P P 20 08 36.0 +1.4
SPIA **Saint Paul Isl** 71.13 31 P P 20 08 35.4 +1.3
baz=249
P08K **Saint George I** 71.28 31 P P 20 08 36.1 +1.0
baz=250
ALNE **Al Ain** 71.32 294 P P 20 08 36.8 +0.7
AB31 **Akbulak array** 71.71 320 *i*P P 20 08 38.9 +1.0
ABKAR **Akbulak array** 71.71 320 P P 20 08 37.7 -0.2
ASUD **Al Ashush, Dub** 71.73 294 P P 20 08 39.1 +0.6
DMTO **DMTO** 71.88 287 P P 20 08 38.9 -0.5
UNV **Unalaska Valle** 72.06 35 P P 20 08 40.6 +0.8
baz=253
CASY **Casey** 72.06 187 P P 20 08 41.4 +1.9
DOK **Doka** 72.66 288 P P 20 08 44.2 +0.1
SNR=5.3
WHFO **Wadi Hawf** 73.00 287 P P 20 08 46.0 -0.2
MZWR **Madinat Zayed** 73.02 293 P P 20 08 46.8 +0.7
GAMB **Gambell** 73.04 24 P P 20 08 46.8 +1.4
baz=246
AKTO **Aktyubinsk** 73.20 321 LR LR 20 44 17.7
comp=Z,177nm,18.8s,baz=82,slow=38
AKTO **Aktyubinsk** 73.20 321 P P 20 08 48.3 +1.6
SVE **Sverdlovsk** 73.35 328 *e*P P 20 08 47.9 +0.4
SVE *e*S **SKiKP** 20 18 12.4 -0.4
SVE pmax pmax
comp=Z,43nm,0.8s
MZR **Muzera** 73.36 292 P P 20 08 49.3 +1.1
SNR=8.1
ABTO **Aybut** 73.45 287 P P 20 08 48.5 -0.4
GHWR **Ruwais** 73.94 293 P P 20 08 52.6 +1.0
JRN **Qarnain Island** 74.00 294 P P 20 08 52.6 +0.7
FALS **False Pass** 74.07 34 P P 20 08 52.8 +1.1
baz=256
M11K **Mekoryuk** 74.20 28 P P 20 08 53.3 +1.0
baz=252
ARTI **Arti** 74.43 327 P P 20 08 52.5 -1.3
ARTI **Arti** 74.43 327 LR LR 20 44 15.1
comp=Z,119nm,19.5s,baz=110,slow=38
ARTI **Arti** 74.43 327 *c i*P P 20 08 53.5 -0.3
ARTI **PP* **pP** 20 09 12.2 +2.3
ARTI 20 11 38.8
ARTI S **S** 20 18 25.0 +1.6
ARTI SS **SS** 20 23 10.1 -0.7
ARTI pmax pmax
comp=Z,30nm,1.5s
ARTI **Arti** 74.43 327 P P 20 08 53.9 +0.1
S12K **Black Hills** 75.03 34 P P 20 08 57.7 +0.5
baz=256
SLWR **Sila** 75.03 293 P P 20 08 59.0 +1.2
TNA **Tin City** 75.24 23 P P 20 08 59.3 +1.0
baz=249
K13K **Kusilvak Mount** 75.40 27 P P 20 09 00.2 +1.0
baz=253
TRNA **Turayna** 75.48 294 P P 20 09 01.3 +0.9
M13K **Dall Lake** 75.57 29 P P 20 09 01.2 +1.1
baz=254
SHMA **Al-Shehemyia** 75.73 295 P P 20 09 02.4 +0.5
RAR **Rarotonga** 75.83 113 LR LR 20 39 43.3
comp=Z,23nm,19.5s,baz=261,slow=34

SDPT **Sand Point** 75.83 34 P P 20 09 02.3 +0.5
baz=258
F14K **Arctic Creek** 75.83 23 P P 20 09 02.1 +0.4
baz=250
SMRA **Abu-Samra** 75.83 294 P P 20 09 03.3 +0.8
ANM **Nome** 75.91 24 P P 20 09 02.4 +0.3
baz=251
J14K **Nanvaranak Lak** 76.13 26 P P 20 09 04.4 +1.1
baz=253
L14K **Kuka Creek** 76.13 28 P P 20 09 04.0 +0.6
baz=254
N14K **Kuskokwak Cree** 76.24 29 P P 20 09 05.3 +1.2
baz=256
M14K **Bethel** 76.32 28 P P 20 09 04.4 -0.1
baz=255
S14K **Fog Glacier** 76.53 33 P P 20 09 06.1 +0.2
baz=258
F15K **North Star Dit** 76.57 23 P P 20 09 06.9 +1.1
baz=252
L15K **Ungalak Mounta** 76.77 28 P P 20 09 07.7 +0.7
baz=256
K15K **Wolf Creek Mou** 76.91 27 P P 20 09 08.6 +0.8
baz=255
M15K **Kasigluk River** 76.91 29 P P 20 09 08.3 +0.5
baz=256
O15K **Ungalikthiuk R** 76.99 30 P P 20 09 09.2 +0.9
baz=258
N15K **Kwethluk River** 77.08 29 P P 20 09 10.0 +1.1
baz=257
C16K **Lisburne Hills** 77.15 21 P P 20 09 10.5 +1.5
baz=250
H16K **Elim** 77.22 25 P P 20 09 11.0 +1.5
baz=254
J16K **Anvik River** 77.57 26 P P 20 09 12.8 +1.3
baz=256
I17K **Unalakleet** 77.68 25 P P 20 09 12.6 +0.6
baz=256
L16K **Owhat River** 77.71 28 P P 20 09 13.4 +1.1
baz=257
D17K **Noatak River** 77.77 21 P P 20 09 14.0 +1.5
baz=253
N16K **Nishlik Lake** 77.78 29 P P 20 09 13.7 +0.9
baz=258
M16K **Timber Creek** 77.81 29 P P 20 09 13.8 +0.9
baz=258
P16K **Nushagak River** 77.89 31 P P 20 09 13.7 +0.3
baz=259
RDOG **Red Dog Mine** 77.94 21 P P 20 09 14.5 +1.0
baz=253
O16K **Kokwok River B** 77.94 30 P P 20 09 14.6 +1.0
baz=259
C17K **DeLong Mountai** 77.97 21 P P 20 09 14.4 +0.8
baz=252
E17K **Hotham Inlet** 78.06 22 P P 20 09 14.4 +0.2
baz=254
G17K **Kiwalik Mounta** 78.10 24 P P 20 09 14.4 0.0
baz=256
F17K **Baldwin Pennin** 78.11 23 P P 20 09 14.6 +0.2
baz=255
LKRN **Lenkeran, Azer** 78.12 308 P P 20 09 17.9 +2.9
H17K **Granite Mounta** 78.26 25 P P 20 09 15.7 +0.4
baz=256
J17K **VABM Dome** 78.26 26 P P 20 09 15.8 +0.5
baz=257
L17K **Donlin** 78.35 27 P P 20 09 15.9 0.0
baz=258
K17K **Iditarod** 78.47 27 IAmb IAmb 20 09 20.6
comp=Z,25nm,1.1s
K17K **Iditarod** 78.47 27 P P 20 09 17.0 +0.6
baz=258
O17K **Koliganek Bris** 78.47 30 P P 20 09 16.8 +0.2
baz=260
R17L **Mt. Peulik Vol** 78.49 32 P P 20 09 16.8 0.0
baz=261
N17K **Nushagak Hills** 78.56 29 P P 20 09 17.4 +0.3
baz=260
M17K **Holitna River** 78.61 28 P P 20 09 17.9 +0.6
baz=259
E18K **Tukpahlearik C** 78.61 22 P P 20 09 17.4 +0.2
baz=255
CHIR **Chirikof Islan** 78.62 34 P P 20 09 17.4 -0.1
baz=262
KBD **Kabd** 78.70 299 P P 20 09 19.4 +0.9
B18K **Kokolik River** 78.71 20 P P 20 09 17.9 +0.3
baz=254
C18K **Utukok River** 78.72 21 P P 20 09 18.0 +0.2
baz=254
F18K **Selawik** 78.77 23 P P 20 09 18.5 +0.5
baz=256
Q17K **Contact Creek** 78.84 32 P P 20 09 18.6 -0.1
baz=261
H18K **Honhosa River** 78.95 24 P P 20 09 18.5 -0.6
baz=259
G18K **Tagagawik** 79.00 24 P P 20 09 19.1 -0.2
baz=257
AKT **Akhty** 79.08 311 *e*P P 20 09 21.2 +0.8
AKT *e* 20 09 29.4
AKT *e**PP **pP** 20 09 36.8 0.0
AKT *e**SP **pwP** 20 09 42.7 -0.2
AKT pmax pmax
comp=Z,100nm,1.4s
L18K **Granite Mounta** 79.11 28 P P 20 09 19.7 -0.2
baz=260
N18K **Kilae Creek** 79.22 29 P P 20 09 20.6 -0.1
baz=261
P18K **Big Mountain,** 79.35 31 P P 20 09 21.1 -0.4
baz=262
Q18K **Katmai Hardscr** 79.35 31 P P 20 09 21.0 -0.6
baz=262
M18K **Stony River** 79.38 28 P P 20 09 21.1 -0.4
baz=261
C19K **Lookout Ridge** 79.40 20 P P 20 09 20.7 -0.8
baz=256
O18K **Koktuh Hills** 79.43 30 P P 20 09 21.6 -0.2
baz=262
SEKA **Sheki** 79.46 311 P P 20 09 25.1 +2.6
GCSA **Galena City Sc** 79.49 25 P P 20 09 22.2 +0.2
baz=259
SII **Sitkinak Islan** 79.52 33 P P 20 09 22.2 -0.2
baz=263
MNGR **Mingechevir, A** 79.53 310 P P 20 09 25.7 +3.0
F19K **Shaleruckik Mo** 79.55 23 P P 20 09 22.0 -0.3
baz=258
KIRV **Kirov** 79.61 329 LR LR 20 47 28.0
comp=Z,126nm,20.8s,baz=103,slow=38
KIRV **Kirov** 79.61 329 *ce*P P 20 09 22.9 +0.2
D19K **Kuna River** 79.78 21 IAmb IAmb 20 09 26.6
comp=Z,22nm,1.0s
D19K **Kuna River** 79.78 21 P P 20 09 23.4 -0.2
baz=257
H19K **Roundabout Mou** 79.81 24 P P 20 09 23.6 -0.2
baz=259
E19K **Redstone River** 79.88 22 P P 20 09 24.0 -0.2
E19K IAmb IAmb 20 09 50.6
comp=Z,32nm,0.9s
E19K **Redstone River** 79.88 22 P P 20 09 23.4 -0.7
baz=258
J19K **Poorman** 79.89 26 P P 20 09 24.0 -0.3
baz=260
CCD **Concordia, Ant** 79.92 181 P P 20 09 27.1 +2.5
N19K **Bonanza Creek** 79.92 29 IAmb IAmb 20 09 27.1
comp=Z,53nm,1.6s
N19K **Bonanza Creek** 79.92 29 P P 20 09 24.1 -0.4
baz=262
BELG **Belogornoye** 79.93 322 *ce*P P 20 09 24.6 0.0
BELG pmax pmax
comp=Z,6.0nm,1.0s
L19K **White Mountain** 79.95 28 P P 20 09 24.5 -0.1
baz=261
OHAK **Old Harbor** 80.08 33 P P 20 09 24.8 -0.6
baz=264
GANJ **Ganja** 80.10 310 P P 20 09 22.2 -3.7
DDFL **Dedoflistskaro** 80.29 311 P P 20 09 29.9 +3.0
D20K **Etivluk River** 80.36 21 P P 20 09 26.2 -0.5
baz=259
F20K **Avaraart Lake** 80.38 23 P P 20 09 26.9 +0.1
baz=260
P19K **Oil Pt** 80.39 30 P P 20 09 26.9 -0.2
baz=263
E20K **Nigu River** 80.43 22 P P 20 09 27.7 +0.5
baz=259,SNR=9.5
B20K **Meade River** 80.44 20 P P 20 09 27.3 +0.3
baz=258
L20K **Farewell, AK** 80.44 28 P P 20 09 27.6 +0.4
baz=262
H20K **Anotleneega Mo** 80.45 24 P P 20 09 27.9 +0.7
baz=261
K20K **Telida** 80.48 27 P P 20 09 28.0 +0.6
baz=262
I20K **Naaghedeneel** 80.51 25 P P 20 09 28.6 +1.1
baz=261
KDAK **Kodiak Island** 80.52 32 LR LR 20 40 16.2
comp=Z,126nm,21.7s,baz=245,slow=32
KDAK **Kodiak Island** 80.52 32 P P 20 09 28.2 +0.5
baz=264
J20K **Nowinta River** 80.56 26 IAmb IAmb 20 09 50.3
comp=Z,56nm,1.7s
J20K **Nowinta River** 80.56 26 P P 20 09 28.1 +0.3
baz=262
RAYN **Ar Rayn** 80.70 293 P 20 09 29.4 -0.1
RAYN **Ar Rayn** 80.70 293 P P 20 09 30.5 +1.1
RAYN **Ar Rayn** 80.70 293 P P 20 09 29.4 -0.1
RAYN pmax pmax
comp=Z,44nm,0.9s
RAYN **Ar Rayn** 80.70 293 P P 20 09 30.1 +0.6
NAX **Nakhchivan** 80.70 309 P P 20 09 32.1 +2.9
Q20K **Shuyak Island** 80.71 32 P P 20 09 29.0 +0.3
baz=264
M20K **Styx River** 80.71 28 P P 20 09 29.1 +0.3
baz=263
O20K **Slope Mountain** 80.75 30 P P 20 09 29.1 +0.1
baz=264
A21K **Barrow** 80.89 18 P P 20 09 29.6 +0.2
baz=258
IMAR **Indian Mountai** 80.99 24 P P 20 09 30.3 +0.2
N20K **Mount Spurr** 81.07 29 P P 20 09 30.5 -0.2
baz=264
SPCR **Spurr Chakacha** 81.07 29 P P 20 09 30.2 -0.5
baz=264
C21K **Knifeblade Rid** 81.09 21 P P 20 09 30.2 -0.4
baz=260
G21K **Allakaket** 81.16 23 P P 20 09 30.7 -0.3
baz=262
HOM **Homer** 81.19 30 P P 20 09 31.1 -0.2
baz=265
B21K **Ikpikpuk River** 81.23 20 IAmb IAmb 20 09 34.9
comp=Z,37nm,1.0s
B21K **Ikpikpuk River** 81.23 20 P P 20 09 31.8 +0.5
baz=260,SNR=6.9
PPLA **Purkeypile** 81.27 27 P P 20 09 30.9 -0.9
baz=264
F21K **Alatna River** 81.27 23 P P 20 09 31.4 -0.2
baz=262
GNI **Garni** 81.30 310 LR LR 20 49 30.6
comp=Z,23nm,20.8s,baz=88,slow=38
GNI **Garni** 81.30 310 P P 20 09 35.2 +2.7
GNI **Garni** 81.30 310 *de*P P 20 09 35.1 +2.7
GNI pmax pmax
comp=Z,32nm,1.2s
CHUM **Lake Minchumin** 81.32 26 P P 20 09 32.4 +0.5
baz=263
H21K **Melozitna Rive** 81.33 24 IAmb IAmb 20 09 35.2
comp=Z,26nm,1.3s
H21K **Melozitna Rive** 81.33 24 P P 20 09 32.3 +0.4
baz=263,SNR=10
SKT **Skwentna** 81.47 28 P P 20 09 32.8 0.0
baz=264,SNR=5.8
I21K **Tanana** 81.61 25 IAmb IAmb 20 11 36.5
comp=Z,31nm,0.9s
I21K **Tanana** 81.61 25 P P 20 09 33.9 +0.5
baz=264
BRSE **Bradley Lake S** 81.66 30 P P 20 09 34.0 +0.3
baz=265
B22K **Teshekpuk Lake** 81.75 20 P P 20 09 34.6 +0.6
baz=261
SUA **Susitna One** 81.80 29 IAmb IAmb 20 09 58.9
comp=Z,18nm,0.8s
SUA **Susitna One** 81.80 29 P P 20 09 34.6 0.0
baz=265
D22K **Ayikyak River** 81.80 21 P P 20 09 34.6 +0.3
baz=262
F22K **John River** 81.81 23 P P 20 09 34.6 +0.2
baz=263
KTH **Kantishna Hill** 81.90 27 IAmb IAmb 20 09 37.4
comp=Z,36nm,1.4s
BPAW **Bear Paw Mtn.** 81.93 26 P P 20 09 35.8 +0.7
baz=265
H22K **Ishtalitna Cre** 81.94 24 P P 20 09 35.7 +0.6
baz=264
SLKM **Skilak Lake** 81.98 30 IAmb IAmb 20 09 59.9
comp=Z,18nm,0.9s
G22K **Bettles** 82.00 23 P P 20 09 36.0 +0.6
baz=264
E22K **Anaktuvuk Pass** 82.02 22 P P 20 09 35.7 +0.1
E22K IAmb IAmb 20 10 01.6
comp=Z,20nm,1.0s
E22K **Anaktuvuk Pass** 82.02 22 P P 20 09 36.6 +1.1
baz=263,SNR=6.5
CUT **Chulitna** 82.10 28 P P 20 09 36.2 +0.2
baz=266
M22K **Willow** 82.12 28 P P 20 09 36.7 +0.6
baz=266
MLY **Manley** 82.12 25 IAmb IAmb 20 10 04.2
comp=Z,18nm,0.9s
MLY **Manley** 82.12 25 P P 20 09 37.1 +0.9
baz=265
TRF **Thorofare Moun** 82.18 27 P P 20 09 36.6 0.0
baz=265,SNR=7.3
O22K **Cooper Landing** 82.22 30 P P 20 09 36.4 -0.3
baz=266
RC01 **Rabbit Creek A** 82.26 29 P P 20 09 36.7 -0.1
baz=266
SEW **Seward** 82.33 30 P P 20 09 37.4 +0.1
baz=266
ABPO **Ambohimpanom** 82.39 250 P P 20 09 40.0 +1.5
D23K **Nanushuk River** 82.53 21 IAmb IAmb 20 09 42.0
comp=Z,26nm,1.1s
D23K **Nanushuk River** 82.53 21 P P 20 09 38.1 -0.1
baz=264
COLD **Coldfoot** 82.54 23 IAmb IAmb 20 10 01.8
comp=Z,15nm,0.8s
COLD **Coldfoot** 82.54 23 P P 20 09 38.8 +0.6
baz=265,SNR=6.4
G23K **Bananza Creek** 82.56 23 P P 20 09 39.0 +0.6
baz=265
PMR **Palmer** 82.58 29 P P 20 09 38.2 -0.3
baz=267
GOF **Gofitskoye** 82.61 315 *ce*P P 20 09 41.4 +2.3
C23K **Itkillik River** 82.64 20 P P 20 09 39.1 +0.4
baz=264
H23K **Yukon River** 82.69 24 IAmb IAmb 20 10 04.2
comp=Z,14nm,0.8s
H23K **Yukon River** 82.69 24 P P 20 09 38.8 -0.2
baz=266
KBZ **Khabaz** 82.71 313 P P 20 09 40.5 +1.0
comp=Z,11nm,0.9s,baz=155,slow=5.1,SNR=21
KBZ LR LR 20 51 21.2
comp=Z,59nm,18.2s,baz=82,slow=39
comp=Z,11nm,0.9s
KBZ **Khabaz** 82.71 313⇓ *e*P P 20 09 38.4 -1.1
KBZ pmax pmax
comp=Z,15nm,1.0s
I23K **Minto, Yukon-K** 82.71 25 P P 20 09 40.0 +0.8
baz=266,SNR=13
NEA2 **Nenana** 82.80 26 P P 20 09 39.7 +0.1
baz=266
MCK **McKinley** 82.80 26 IAmb IAmb 20 10 05.0
comp=Z,36nm,1.2s
MCK **McKinley** 82.80 26 P P 20 09 39.8 +0.2
baz=266,SNR=12
RND **Reindeer** 82.82 27 IAmb IAmb 20 10 19.8
comp=Z,20nm,1.0s
E23K **Chandalar** 82.84 22 P P 20 09 39.6 -0.2
baz=265,SNR=11
KVAR **Kislovodsk Arr** 82.86 314 LR LR 20 51 11.9
comp=Z,68nm,19.9s,baz=252,slow=39
KIV **Kislovodsk** 82.86 314 P 20 09 39.1 -1.4
KIV IAmb IAmb 20 09 44.2
comp=Z,30nm,1.0s
KIV **Kislovodsk** 82.86 314 P P 20 09 41.9 +1.4
KIV **Kislovodsk** 82.86 314 ⇑P P 20 09 40.5 0.0
KIV **Kislovodsk** 82.86 314 *e*P P 20 09 40.5 0.0
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,40nm,19.0s
KNK **Knik Glacier** 82.89 29 P P 20 09 40.2 0.0
baz=267,SNR=6.0
TOLK **Toolik Lake Re** 82.90 21 IAmb IAmb 20 09 43.6
comp=Z,39nm,1.4s
TOLK **Toolik Lake Re** 82.90 21 P P 20 09 40.4 +0.3
baz=265,SNR=7.7
WAT1 **Susitna Watana** 82.92 27 P P 20 09 40.6 +0.3
baz=267
PWL **Port Wells** 82.92 29 P P 20 09 40.7 +0.3
baz=267,SNR=5.7

SML	**Sawmill**	82.97	28	P		P	20 09 41.1	+0.5	
	baz=267								
VOI	**Vohitsoka**	83.19	247			P	20 09 40.6	-2.0	
VOI				IAmb		IAmb	20 09 44.6		
	comp=Z,17nm,0.8s								
VOI	**Vohitsoka**	83.19	247	P		P	20 09 44.0	+1.4	
D24K	**Happy Valley**	83.21	21	P		P	20 09 42.1	+0.5	
	baz=266,SNR=8.2								
M23K	**Glacier View**	83.26	28	P		P	20 09 42.3	+0.3	
	baz=268								
E24K	**Your Creek**	83.26	22	P		P	20 09 42.6	+0.5	
	baz=266								
WAT6	**Susitna Watana**	83.28	28	P		P	20 09 42.5	+0.2	
	baz=268,SNR=15								
C24K	**Franklin Bluff**	83.30	20	P		P	20 09 42.6	+0.6	
	baz=266								
COLA	**College**	83.34	25	⇓*e*P		P	20 09 42.1	-0.2	
COLA				pmax		pmax			
	comp=Z,4.0nm,0.9s								
CCB	**Clear Creek Bu**	83.34	26	IAmb		IAmb	20 10 03.9		
	comp=Z,38nm,1.5s								
P23K	**Montague Islan**	83.35	30	P		P	20 09 42.8	+0.2	
	baz=268								
H24K	**Noodor Dome**	83.37	24	IAmb		IAmb	20 10 05.9		
	comp=Z,15nm,0.7s								
H24K	**Noodor Dome**	83.37	24	P		P	20 09 43.7	+1.1	
	baz=267,SNR=11								
SCM	**Sheep Creek Mo**	83.45	28	P		P	20 09 43.5	+0.4	
	baz=268								
F24K	**Squaw Lake**	83.45	23	P		P	20 09 42.2	-0.8	
F24K				IAmb		IAmb	20 10 07.2		
	comp=Z,16nm,0.8s								
F24K	**Squaw Lake**	83.45	23	P		P	20 09 43.7	+0.7	
	baz=267								
DHY	**Denali Highway**	83.47	27	IAmb		IAmb	20 10 05.9		
	comp=Z,34nm,1.6s								
DHY	**Denali Highway**	83.47	27	P		P	20 09 43.0	-0.3	
	baz=268								
POKR	**Poker Flat Res**	83.52	25	P		P	20 09 42.9	-0.5	
	baz=268								
GLI	**Glacier Island**	83.53	29	P		P	20 09 43.2	-0.3	
	baz=268								
VRH	**Novokhopyorsk**	83.54	321	*e*P		P	20 09 39.9	-3.8	
VRH				pmax		pmax			
	comp=Z,10.0nm,0.9s								
G24K	**Hadweenzic Riv**	83.58	24	IAmb		IAmb	20 10 08.9		
	comp=Z,26nm,0.9s								
G24K	**Hadweenzic Riv**	83.58	24	P		P	20 09 43.6	0.0	
	baz=268								
HDA	**Harding Lake**	83.71	26	P		P	20 09 44.3	0.0	
	baz=268,SNR=6.3								
ILAR	**Eielson Array**	83.74	25			P	20 09 43.0	-1.4	
ILAR	**Eielson Array**	83.74	25	P		P	20 09 44.0	-0.5	
	comp=Z,2.1nm,0.9s,baz=240,slow=5.2,SNR=13								
ILAR				LR		LR	20 45 27.4		
	comp=Z,23nm,21.7s,baz=272,slow=34								
	comp=Z,2.1nm,0.9s								
ATD	**Arta Tunnel**	83.77	281	P		P	20 09 48.3	+2.6	
	SNR=5.1								
M24K	**Tolsona, Glenn**	84.00	28	P		P	20 09 46.0	+0.1	
	baz=269								
D25K	**Kavik River**	84.09	21	IAmb		IAmb	20 10 08.2		
	comp=Z,27nm,1.3s								
D25K	**Kavik River**	84.09	21	P		P	20 09 46.0	-0.3	
	baz=268								
KLU	**Klutina**	84.11	29	IAmb		IAmb	20 10 08.9		
	comp=Z,52nm,1.7s								
KLU	**Klutina**	84.11	29	P		P	20 09 46.7	+0.2	
	baz=269								
G25K	**Bearman Lake**	84.12	23	P		P	20 09 46.9	+0.5	
	baz=269								
DIV	**Divide**	84.18	29			P	20 09 45.9	-1.0	
EYAK	**Cordova Ski Ar**	84.19	30	P		P	20 09 46.6	-0.1	
	baz=270								
K24K	**Donnelly Dome**	84.21	26	P		P	20 09 46.4	-0.5	
K24K				IAmb		IAmb	20 10 16.0		
	comp=Z,22nm,0.9s								
K24K	**Donnelly Dome**	84.21	26	P		P	20 09 46.9	0.0	
	baz=269								
H25L	**Birch Creek**	84.23	24	P		P	20 09 47.2	+0.3	
	baz=269,SNR=6.7								
LABN	**Labinsk**	84.27	314	*e*P		P	20 09 45.9	-1.7	
LABN				pmax		pmax			
	comp=Z,24nm,0.7s								
F25K	**Christian Rive**	84.32	23	P		P	20 09 47.1	-0.3	
	baz=269								
PAX	**Paxson**	84.34	27	P		P	20 09 47.6	0.0	
	baz=270,SNR=8.2								
E25K	**Arctic Village**	84.36	22	IAmb		IAmb	20 10 17.2		
	comp=Z,21nm,1.1s								
E25K	**Arctic Village**	84.36	22	P		P	20 09 48.3	+0.7	
	baz=269,SNR=11								
J25K	**Salcha River,**	84.39	26	P		P	20 09 47.6	-0.2	
	baz=270								
ERBR	**Yeremizino-Bor**	84.41	315	*e*P		P	20 09 46.2	-2.1	
ERBR				pmax		pmax			
	comp=Z,24nm,0.9s								
HARP	**HAARP**	84.48	28	P		P	20 09 48.3	0.0	
	baz=270								
VNDA	**Vanda**	84.49	173	P		P	20 09 49.5	+1.6	
	comp=Z,6.1nm,0.9s,baz=314,slow=5.9,SNR=28								
VNDA				LR		LR	20 47 05.6		
	comp=Z,89nm,20.4s,baz=334,slow=35								
	comp=Z,6.1nm,0.9s								
VNDA	**Vanda**	84.49	173	P		P	20 09 49.6	+1.6	
C26K	**Camden Bay**	84.62	20	P		P	20 09 49.5	+0.7	
	baz=270								
RIDG	**Independent Ri**	84.62	27	P		P	20 09 49.0	0.0	
	baz=270								
BMAR	**Burnt Mountain**	84.73	23			P	20 09 49.7	+0.2	
N25K	**Chitina, Valde**	84.75	29	IAmb		IAmb	20 10 11.9		
	comp=Z,46nm,1.6s								
N25K	**Chitina, Valde**	84.75	29	P		P	20 09 50.0	+0.3	
	baz=271,SNR=6.6								
BMRM	**Bremner River**	84.75	29	P		P	20 09 49.5	-0.3	
BMRM				IAmb		IAmb	20 10 12.2		
	comp=Z,21nm,0.9s								
BMRM	**Bremner River**	84.75	29	P		P	20 09 50.2	+0.4	
	baz=271								
KLMR	**Klimovskoe**	84.75	331	*e*P		P	20 09 48.1	-1.5	
KLMR				*e*			20 13 04.2		
KLMR				pmax		pmax			
	comp=Z,35nm,0.8s								
PPT	**Papeete**	84.78	108	LR		LR	20 42 18.8		
	comp=Z,46nm,21.5s,baz=334,slow=32								
PPT2	**Papeete2**	84.78	108	*e*P		P	20 09 43.0	-7.8	
	comp=Z,27nm,23.8s								
PPT2	**Papeete2**	84.78	108	*e*S		SKSac	20 20 04.8	-5.3	
	comp=Z,88nm,30.0s								
PPT2				*e*SS		SS	20 25 32.8	-15	
	comp=Z,112nm,31.2s								
PPT2				*e*LQ		LQ	20 32 56.3		
	comp=Z,469nm,45.5s								
PPT2				*e*LR		LR	20 36 34.7		
	comp=Z,190nm,30.2s								
PPT2				*e*LR		LR	20 36 43.7		
	comp=Z,179nm,25.2s								
VSLR	**Vesyoloye**	84.79	313	⇓*e*P		P	20 09 50.2	-0.1	
VSLR				pmax		pmax			
	comp=Z,49nm,1.0s								
KAIM	**Kayak Island**	84.85	30	P		P	20 09 50.4	+0.3	
	baz=271								
F26K	**Sheenjek River**	84.89	23	IAmb		IAmb	20 10 25.6		
	comp=Z,20nm,1.4s								
F26K	**Sheenjek River**	84.89	23	P		P	20 09 51.3	+1.1	
	baz=270								
SCRK	**Sand Creek**	85.00	26	P		P	20 09 51.6	+0.6	
	baz=271								
C27K	**Jago River**	85.03	21	IAmb		IAmb	20 10 26.7		
	comp=Z,16nm,1.0s								
C27K	**Jago River**	85.03	21	P		P	20 09 51.4	+0.5	
	baz=271								
G26K	**Porcupine Rive**	85.04	23	P		P	20 09 51.5	+0.5	
	baz=271								
VORD	**Divnogorie**	85.07	321	*e*P		P	20 09 49.3	-2.1	
VORD				pmax		pmax			
	comp=Z,20nm,0.9s								
MAW	**Mawson**	85.09	200	P		P	20 09 53.3	+2.2	
	comp=Z,8.8nm,0.8s,baz=61,slow=6.4,SNR=18								
MAW				LR		LR	20 44 42.4		
	comp=Z,54nm,21.9s,baz=70,slow=33								
	comp=Z,8.8nm,0.8s								
VORR	**Voronezh**	85.11	321	*e*P		P	20 09 49.7	-1.9	
VORR				pmax		pmax			
	comp=Z,30nm,0.9s								
GLB	**Gilahina Butte**	85.13	29	IAmb		IAmb	20 10 17.8		
	comp=Z,32nm,1.2s								
VSR	**Storozhevoye**	85.14	321	*e*P		P	20 09 50.3	-1.5	
VSR				pmax		pmax			
	comp=Z,20nm,0.9s								
J26L	**Joseph Creek**	85.17	26	P		P	20 09 51.9	+0.1	
	baz=271								
LPSR	**Galich'ya Gora**	85.25	322	*e*P		P	20 09 50.1	-2.2	
LPSR				pmax		pmax			
	comp=Z,40nm,0.9s								
L26K	**Log Cabin Wild**	85.30	27	P		P	20 09 52.9	+0.5	
	baz=272								
VRDI	**Verde Repeater**	85.30	29			P	20 09 51.9	-0.8	
I26K	**Coal Creek Min**	85.33	25	IAmb		IAmb	20 10 20.3		
	comp=Z,13nm,1.1s								
I26K	**Coal Creek Min**	85.33	25	P		P	20 09 53.2	+0.7	
	baz=272								
CRQM	**Cirque**	85.47	30	IAmb		IAmb	20 10 35.2		
	comp=Z,23nm,1.0s								
M26K	**Nabesna, AK**	85.48	28	IAmb		IAmb	20 10 37.2		
	comp=Z,22nm,1.6s								
M26K	**Nabesna, AK**	85.48	28	P		P	20 09 54.2	+0.8	
	baz=272								
CRQE	**Cirque**	85.49	30	P		P	20 09 53.6	+0.1	
	baz=272								
MCARA	**McCarthy VSAT**	85.51	29	P		P	20 09 52.4	-1.0	
MCARA				IAmb		IAmb	20 10 29.4		
	comp=Z,14nm,0.9s								
MCARA	**McCarthy VSAT**	85.51	29	P		P	20 09 53.9	+0.5	
	baz=272								
TBI	**Tubuai**	85.59	114	*e*S		SKSac	20 20 11.6	-3.2	
	comp=Z,736nm,37.8s								
TBI				*e*SS		SS	20 25 49.6	-10	
	comp=Z,422nm,30.2s								
TBI				*e*LQ		LQ	20 33 25.2		
	comp=Z,1μm,36.8s								
TBI				*e*LR		LR	20 36 58.3		
	comp=Z,1μm,32.5s								
TBI				*e*LR		LR	20 37 01.7		
	comp=Z,872nm,33.2s								
TGL	**Tana Glacier**	85.62	30	IAmb		IAmb	20 10 19.8		
	comp=Z,15nm,0.9s								
K27K	**Chicken**	85.84	26	P		P	20 09 55.5	+0.4	
	baz=273								
E27K	**Coleen River**	85.84	22	P		P	20 09 55.4	+0.4	
	baz=273								
G27K	**Doyon Strip**	85.89	23	P		P	20 09 55.7	+0.5	
	baz=273								
MOS	**Moscow**	85.89	325	*e*P		P	20 09 54.5	-0.9	
MOS				*e*			20 10 13.0		
MOS				*e*			20 20 17.9		
MOS				pmax		pmax			
	comp=Z,59nm,0.8s								
I27K	**Kandik River**	85.96	25	P		P	20 09 55.2	-0.5	
	baz=273								
H27K	**Steamboat Moun**	85.97	24	P		P	20 09 55.5	-0.1	
	baz=273								
L27K	**Beaver Creek,**	86.00	27	P		P	20 09 55.7	-0.2	
	baz=273								
M27K	**Edge Creek, AK**	86.01	28	P		P	20 09 56.0	-0.1	
	baz=273								
D27M	**Malcolm River**	86.02	21	IAmb		IAmb	20 10 19.8		
	comp=Z,8.8nm,0.7s								
D27M	**Malcolm River**	86.02	21	P		P	20 09 56.4	+0.5	
	baz=273								
MESA	**MESA**	86.08	30	P		P	20 09 56.7	+0.2	
	baz=273								
GRNC	**Granite Creek**	86.15	30	IAmb		IAmb	20 10 39.7		
	comp=Z,35nm,1.5s								
BARN	**Barnard Glacie**	86.18	29	P		P	20 09 56.3	-0.7	
BARN				IAmb		IAmb	20 10 23.9		
	comp=Z,13nm,0.8s								
CTG	**Chitna Glacier**	86.34	29	P		P	20 09 57.4	-0.4	
	baz=274								
CTGM	**Chitina Glacie**	86.34	29	IAmb		IAmb	20 10 21.1		
	comp=Z,22nm,1.2s								
TABL	**Table Mountain**	86.47	30	IAmb		IAmb	20 10 32.9		
	comp=Z,15nm,0.8s								
BVCY	**Beer Creek**	86.48	28	P		P	20 09 57.9	-0.4	
	baz=274								
F28M	**Old Crow**	86.53	23	IAmb		IAmb	20 10 26.3		
	comp=Z,12nm,0.9s								
F28M	**Old Crow**	86.53	23	P		P	20 09 59.0	+0.6	
	baz=274								
OBN	**Obninsk**	86.53	325	LR		LR	20 50 34.4		
	comp=Z,71nm,20.4s,baz=172,slow=37								
OBN	**Obninsk**	86.53	325	⇓*e*P		P	20 09 59.6	+1.1	
OBN				*i*			20 10 20.4		
OBN				*e*			20 13 21.2		
OBN				pmax		pmax			
	comp=Z,70nm,1.7s								
OBN				MLR		MLR			
	comp=Z,117nm,21.0s								
OBN	**Obninsk**	86.53	325	P		P	20 09 58.8	+0.3	
	comp=Z,59nm,2.2s								
E28M	**Babbage River**	86.58	22	P		P	20 09 58.9	+0.3	
	baz=275								
ANN	**Anapa**	86.60	315	*e*P		P	20 09 59.6	+0.4	
ANN				pmax		pmax			
	comp=Z,27nm,0.9s								
I28M	**Miner Creek**	86.67	25	IAmb		IAmb	20 10 28.1		
	comp=Z,13nm,0.8s								
I28M	**Miner Creek**	86.67	25	P		P	20 09 59.7	+0.5	
	baz=274								
YUK3	**Moose Creek**	86.71	28	P		P	20 09 59.4	-0.2	
	baz=274								
D28M	**Stokes Point**	86.80	21	P		P	20 10 00.1	+0.5	
	baz=275								
O28M	**Mount Upton**	86.92	29	P		P	20 10 00.9	+0.1	
	baz=274								
PINM	**Pinnacle**	86.94	30	P		P	20 10 00.6	0.0	
	baz=274								
DAWY	**Dawson**	87.02	26	P		P	20 09 59.8	-1.1	
	baz=275								
APA	**Apatity**	87.06	337	⇓*e*P		P	20 09 58.3	-2.6	
YUK8	**Steele Glacier**	87.08	29	P		P	20 10 00.5	-1.0	
	baz=275								
E29M	**Blow River**	87.20	22	P		P	20 10 01.4	-0.2	
	baz=276								
H29M	**Whitestone**	87.24	24	P		P	20 10 01.6	-0.3	
	baz=276								
G29M	**Pine Creek**	87.31	23	IAmb		IAmb	20 10 26.3		
	comp=Z,13nm,0.8s								
G29M	**Pine Creek**	87.31	23	P		P	20 10 01.8	-0.4	
	baz=276								
PNL	**Peninsula**	87.40	30	P		P	20 10 02.0	-0.8	
	baz=275								
M29M	**Somme Creek**	87.59	28	P		P	20 10 03.2	-0.5	
	baz=276								
YUK4	**Talbot Arm**	87.61	29	P		P	20 10 03.1	-0.9	
	baz=276								
L29M	**L29M**	87.67	27	IAmb		IAmb	20 10 26.2		
	comp=Z,35nm,1.9s								
L29M	**L29M**	87.67	27	P		P	20 10 03.4	-0.6	
	baz=276								
O29M	**Mount Kennedy**	87.75	30	P		P	20 10 03.9	-0.7	
	baz=276								
YUK6	**Outpost Mounta**	87.79	29	P		P	20 10 03.8	-1.0	
	baz=276								
K29M	**Barlow Dome**	87.86	26	P		P	20 10 04.2	-0.9	
	baz=277								
EPYK	**Eagle Plains**	87.89	24	P		P	20 10 04.4	-0.6	
	baz=277								
ASF	**Jabal al Asfar**	87.90	302	LR		LR	20 54 41.0		
	comp=Z,50nm,21.7s,baz=113,slow=39								
G30M	**tAoh Zraii Nji**	88.00	23	P		P	20 10 05.1	-0.4	
	baz=278								
FURI	**Furi**	88.05	279	LR		LR	20 47 31.7		
	comp=Z,47nm,21.6s,baz=82,slow=34								
F30M	**Barrier River**	88.08	22	P		P	20 10 05.7	-0.2	
	baz=278								
I30M	**Mount Dempster**	88.18	25	P		P	20 10 06.0	-0.5	
	baz=278								
BNN	**Bunyan**	88.22	309			P	20 10 06.1	-1.2	
BNN				IAmb		IAmb	20 10 11.1		
	comp=Z,13nm,0.9s								
HYT	**Haines Junctio**	88.22	29	P		P	20 10 06.5	-0.3	
	baz=277								
P29M	**Windy Craggy**	88.24	30	P		P	20 10 06.2	-0.6	
	baz=277								
J30M	**Hart River**	88.28	25	P		P	20 10 06.8	-0.2	
	baz=278								
M30M	**Minto, Yukon**	88.34	27	P		P	20 10 07.2	0.0	
	baz=277								
N30M	**Aishikik Lake**	88.34	29	P		P	20 10 06.9	-0.4	
	baz=277								
INK	**Inuvik**	88.82	22	P		P	20 10 08.3	-1.0	
	baz=280								
F31M	**Tsiigehtchic**	88.89	22	P		P	20 10 09.1	-0.5	
	baz=280								
O30N	**Mendenhall**	88.92	29	P		P	20 10 09.4	-0.6	
	baz=278								
H31M	**Peel River**	88.93	24	P		P	20 10 09.4	-0.5	
	baz=280								
SIM	**Simferopol'**	88.94	315	*e*P		P	20 10 11.6	+1.2	
SIM				S		S	20 20 43.0	-10	
SIM				pmax		pmax			
	comp=Z,13nm,0.8s								
PLBC	**Pleasant Camp**	88.96	31	P		P	20 10 09.7	-0.4	
	baz=278								
N31M	**Braeburn, Yuko**	88.96	28	P		P	20 10 09.8	-0.3	
	baz=278								
MMAI	**Mount Meron Ar**	89.08	303	P		P	20 10 13.0	+1.6	
	comp=Z,1.4nm,0.5s,baz=98,slow=4.3,SNR=9.0								
MMAI				LR		LR	20 58 50.0		
	comp=Z,30nm,18.2s,baz=76,slow=41								
	comp=Z,1.4nm,0.5s								
S31K	**Pelican**	89.23	32	P		P	20 10 10.8	-0.5	
	baz=278								
SPITS	**Spitsbergen Ar**	89.48	349	P		P	20 10 12.2	-0.1	
	comp=Z,25nm,1.1s,baz=102,slow=7.9,SNR=8.5								
SPITS				LR		LR	20 55 38.7		
	comp=Z,60nm,21.9s,baz=66,slow=39								
	comp=Z,25nm,1.1s								
SKAG	**Skagway**	89.48	30	P		P	20 10 12.4	-0.1	
	baz=279								
M31M	**Drury Creek, Y**	89.50	28	P		P	20 10 11.8	-0.8	
	baz=280								
WHY	**Whitehorse**	89.52	29	P		P	20 10 12.3	-0.6	
	baz=279								
ARCES	**ARCESS Array B**	89.61	340			P	20 10 11.7	-1.3	
ARCES				IAmb		IAmb	20 10 33.2		
	comp=Z,16nm,0.9s								
ARCES	**ARCESS Array B**	89.61	340	P		P	20 10 12.3	-0.7	
	comp=Z,7.3nm,0.7s,baz=85,slow=6.1,SNR=36								
ARCES				LR		LR	20 54 47.1		
	comp=Z,57nm,18.5s,baz=76,slow=38								
	comp=Z,7.3nm,0.7s								
KIBK	**Kibwezi**	89.61	268	P		P	20 10 16.6	+2.3	
ILGA	**Ilgaz**	89.64	311	IAmb		IAmb	20 10 40.6		
	comp=Z,9.0nm,0.9s								
KIRS	**Kirsehir-Merke**	89.69	309	⇑P		P	20 10 15.0	+0.9	
EIL	**Elat**	89.78	300	LR		LR	20 56 12.5		
	comp=Z,47nm,20.3s,baz=181,slow=39								
BR131	**Keskin Array S**	89.84	310	IAmb		IAmb	20 10 36.4		
	comp=Z,8.1nm,0.8s								
BR131	**Keskin Array S**	89.84	310	P		P	20 10 15.8	+0.9	
	SNR=8.6								
BR131	**Keskin Array S**	89.84	310	*ce*P		P	20 10 15.4	+0.5	
BRTR	**Keskin Array B**	89.84	310			P	20 10 13.3	-1.5	
BRTR	**Keskin Array B**	89.84	310	P		P	20 10 15.4	+0.5	
	comp=Z,4.6nm,0.9s,baz=136,slow=4.5,SNR=23								
BRTR				LR		LR	20 58 13.9		
	comp=Z,33nm,18.2s,baz=82,slow=41								
	comp=Z,4.6nm,0.9s								
SIT	**Sitka**	89.85	33	P		P	20 10 13.4	-0.9	
	baz=279								
BR106	**Keskin Array S**	89.85	310	P		P	20 10 15.0	+0.1	
	comp=Z,53nmcomp=Z,6.5nm,0.9s								
BR105	**Keskin Array S**	89.86	310	P		P	20 10 15.0	0.0	
	comp=Z,70nmcomp=Z,11nm,0.9s								
R32K	**Eaglecrest**	90.09	32	P		P	20 10 14.0	-1.5	
	baz=279								
S32K	**Killisnoo**	90.19	32	P		P	20 10 14.1	-1.8	
	baz=279								
P32M	**Atlin**	90.27	30	P		P	20 10 14.1	-2.2	
	baz=280								
ANTO	**Ankara**	90.47	310	P		P	20 10 18.1	+0.4	
CSS	**Mathiatis**	90.60	305	P		P	20 10 18.1	-0.3	
	comp=Z,17nm,0.9s								
CSS				pP		pwP	20 10 38.3	-2.9	
	comp=Z,17nm,0.9s								
MMPY	**Sheldon Lake,**	90.86	27	P		P	20 10 17.2	-1.7	
	baz=282								
Q32M	**Nakina River**	91.12	31	P		P	20 10 18.0	-2.5	
	baz=281								
FINES	**FINESS Array B**	91.15	332	P		P	20 10 19.4	-0.9	
	comp=Z,1.9nm,0.4s,baz=72,slow=4.3,SNR=24								
FINES				LR		LR	20 54 34.1		
	comp=Z,126nm,18.3s,baz=56,slow=38								
	comp=Z,1.9nm,0.4s								
FINES	**FINESS Array B**	91.15	332	*i* P		P	20 10 19.8	-0.5	
FINES				pmax		pmax			
	comp=Z,2.0nm,0.4s								
CRAG	**Craig**	91.33	34	P		P	20 10 19.3	-1.9	
	baz=281								
AK09	**Malin Array Si**	91.42	321	P		P	20 10 20.3	-1.5	
AK08	**Malin Array Si**	91.44	321	P		P	20 10 20.4	-1.5	
AK03	**Malin Array Si**	91.45	321	P		P	20 10 20.4	-1.5	
AK10	**Malin Array Si**	91.45	321	P		P	20 10 20.4	-1.5	
AKASG	**Malin Array Be**	91.45	321	IAmb		IAmb	20 10 42.4		
	comp=Z,20nm,1.6s								
AKASG	**Malin Array Be**	91.45	321	P		P	20 10 21.4	-0.4	
	comp=Z,3.7nm,0.8s,baz=68,slow=4.7,SNR=9.2								
	comp=Z,3.7nm,0.8s								
AKASG	**Malin Array Be**	91.45	321	*i* P		P	20 10 21.5	-0.4	
AKASG				pmax		pmax			
	comp=Z,5.0nm,0.8s								
AKBB	**Malin Array Si**	91.45	321	⇑*e*P		P	20 10 20.9	-1.0	
AKBB	**Malin Array Si**	91.45	321	P		P	20 10 20.4	-1.5	
AK01	**Malin Array Si**	91.46	321	P		P	20 10 20.5	-1.4	
KIEV	**Kiev**	91.46	321			P	20 10 20.1	-1.9	
KIEV	**Kiev**	91.46	321	⇓P		P	20 10 20.8	-1.1	
KIEV	**Kiev**	91.46	321	⇓P		P	20 10 20.8	-1.1	
KIEV	**Kiev**	91.46	321	P		P	20 10 20.4	-1.5	
AK05	**Malin Array Si**	91.47	321	P		P	20 10 20.6	-1.4	
AK04	**Malin Array Si**	91.48	321	P		P	20 10 20.6	-1.4	
AK06	**Malin Array Si**	91.48	321	P		P	20 10 20.6	-1.5	
AK07	**Malin Array Si**	91.49	321	P		P	20 10 20.6	-1.5	
AK11	**Malin Array Si**	91.49	321	P		P	20 10 20.6	-1.5	
AK12	**Malin Array Si**	91.50	321	P		P	20 10 20.7	-1.4	
AK16	**Malin Array Si**	91.53	321	P		P	20 10 20.8	-1.5	
AK14	**Malin Array Si**	91.53	321	P		P	20 10 20.8	-1.5	
AK22	**Malin Array Si**	91.53	321	P		P	20 10 20.8	-1.5	
WRAK	**Wrangell Islan**	91.58	33	P		P	20 10 20.7	-1.6	
	baz=281								
MNK	**Minsk**	91.59	325	*i* P		P	20 10

RNPP8	Varash	93.42	322	P		P		20 10 29.5	-1.5
RNPP5	Staryi Chortor	93.42	322	P		P		20 10 29.5	-1.5
SYO	Syowa Base	93.77	201⇑	*e*PcP		PcP		20 10 33.6	+1.0
SYO	Syowa Base	93.77	201⇑	*e*pP		pP		20 10 49.4	-0.1
TESR	Tescani	93.88	317	⇑P		P		20 10 34.2	+0.9
VRI	Vrincioaia	93.95	317	⇑P		P		20 10 34.8	+1.2
VRI	Vrincioaia	93.95	317	⇑P		P		20 10 34.8	+1.2
PLOR	Plostina	94.01	317	⇑P		P		20 10 34.8	+0.9
PLOR	Plostina	94.01	317	⇑P		P		20 10 34.8	+0.9
BISRR	Bisoca	94.03	316	⇑P		P		20 10 34.4	+0.3
ONER	Baraj Valea Uz	94.09	317	⇑P		P		20 10 34.3	+0.1
NEHR	Nehoiu	94.34	316	⇑P		P		20 10 34.8	-0.6
TURR	Turia	94.40	317	⇓P		P		20 10 34.8	-0.9
MLR	Muntele Rosu	94.56	316	IAmb		IAmb		20 10 39.7	
	comp=Z,11nm,0.9s								
MLR	Muntele Rosu	94.56	316	⇑P		P		20 10 37.5	+0.9
MLR	Muntele Rosu	94.56	316	⇑P		P		20 10 37.5	+0.9
BURAR	Bucovina Array	94.62	318			P		20 10 35.4	-1.4
BURAR				IAmb		IAmb		20 10 40.8	
	comp=Z,7.0nm,0.8s								
BURAR	Bucovina Array	94.62	318	⇑P		P		20 10 36.0	-0.8
BURAR	Bucovina Array	94.62	318	⇑P		P		20 10 36.0	-0.8
BUR08	Bucovina Ar. S	94.62	318	IAmb		IAmb		20 10 52.7	
	comp=Z,6.1nm,0.9s								
QSPA	South Pole Qui	94.80	180	P		P		20 10 41.5	+4.3
QSPA				IAmb		IAmb		20 11 14.8	
	comp=Z,12nm,1.1s								
QSPA	South Pole Qui	94.80	180	P		P		20 10 41.4	+4.3
	comp=Z,3.6nm,0.9s,baz=355,slow=1.9,SNR=8.3								
QSPA				LR		LR		20 54 59.2	
	comp=Z,65nm,19.8s,baz=8.5,slow=36								
BBB	Bella Bella	94.94	37	LR		LR		20 46 28.0	
	comp=Z,51nm,21.3s,baz=262,slow=31								
ELND	Elena	95.13	314	⇑P		P		20 10 39.7	+0.6
VOIR		95.19	316	⇑P		P		20 10 38.1	-1.3
VOIR		95.19	316	⇑P		P		20 10 38.1	-1.3
ARR	Arges	95.49	316	⇑P		P		20 10 41.6	+0.8
CJR	Cluj-Napoca	95.89	318	⇓P		P		20 10 42.3	-0.2
CJR	Cluj-Napoca	95.89	318	⇓P		P		20 10 42.3	-0.2
VLAD	Vladila	95.95	315	⇑P		P		20 10 44.0	+1.2
LOT	Lotru	96.07	317	⇑P		P		20 10 44.3	+0.8
MARR	Marisel-Cluj	96.22	318	⇓P		P		20 10 44.8	+0.7
DRGR		96.47	318	⇑P		P		20 10 45.8	+0.6
DRGR		96.47	318	⇑P		P		20 10 45.8	+0.6
RES	Resolute Bay	96.54	10	LR		LR		20 54 16.1	
	comp=Z,27nm,22.0s,baz=12,slow=35								
STHS	Stebnicka Huta	96.75	321	*e*P		P		20 10 46.1	-0.2
STHS	Stebnicka Huta	96.75	321	*e*PDIFF		P		20 10 46.1	-0.2
SURR	Surduc	97.12	317	⇑P		P		20 10 45.9	-2.1
HERR	Herculane	97.13	316	⇓P		P		20 10 46.8	-1.4
BLKB	Belogradchik	97.26	315	⇑P		Pdif		20 10 48.9	+0.1
SIRR	Siria	97.30	318	⇑P		P		20 10 48.8	-0.1
HFS	Hagfors	97.33	332	P		P		20 10 47.5	-1.1
	comp=Z,2.5nm,0.5s,baz=108,slow=4.8,SNR=14								
HFS				LR		LR		20 59 03.3	
	comp=Z,132nm,19.1s,baz=67,slow=38								
	comp=Z,2.5nm,0.5s								
BZS	Buzias	97.50	317	⇑P		P		20 10 47.1	-2.6
BZS	Buzias	97.50	317	⇑P		P		20 10 47.1	-2.6
NB2	NORSAR Subarra	98.07	334	P		P		20 10 50.8	-1.2
	comp=Z,5.9nm,1.1s,baz=67,slow=4.6								
NOA	NORSAR Array B	98.07	334	P		P		20 10 51.1	-0.9
	comp=Z,1.3nm,0.8s,baz=65,slow=4.6,SNR=6.2								
NOA				LR		LR		20 59 28.8	
	comp=Z,70nm,21.9s,baz=65,slow=38								
	comp=Z,1.3nm,0.8s								
YKA	Yellowknife Ar	98.14	24	LR		LR		20 52 29.8	
	comp=Z,42nm,21.8s,baz=312,slow=34								
JMIC	Jan Mayen	98.90	347	LR		LR		21 00 25.0	
	comp=Z,42nm,20.5s,baz=102,slow=38								
MODS	Modra-Piesok	99.55	321	*e*PDIFF		Pdif		20 11 01.4	+2.5
RONA	Rosalia, Austr	100.39	320	*i* PP		PP		20 15 07.4	-2.1
	comp=Z,6.7nm,1.2s								
CONA	Conrad Observa	100.59	320	*e*PP		PP		20 15 10.2	-0.9
	comp=Z,8.3nm,1.5s								
ARSA	Arzberg	101.04	320	*e*PP		PP		20 15 12.3	-2.0
	comp=Z,7.9nm,1.5s								
SOKA	Soboth	101.55	319	*i* PP		PP		20 15 14.0	-4.2
	comp=Z,12nm,1.2s								
GERES	GERESS Array B	101.62	322	P		Pdif		20 11 08.2	0.0
	comp=Z,0.8nm,0.9s,baz=282,slow=2.6,SNR=4.8								
OBKA	Obir	101.92	319	*e*PKiKP		PKiKP		20 15 25.5	-6.7
	comp=Z,12nm,1.2s								
BIOA	Bad Ischl, Aus	102.08	321	*e*PP		PP		20 15 17.3	-4.9
	comp=Z,7.2nm,1.4s								
MYKA	Terra Mystica	102.46	320	*i* PP		PP		20 15 26.4	+1.3
	comp=Z,11nm,1.6s								
KBA	Koelnbreinsper	102.49	320	*i* PP		PP		20 15 22.6	-2.8
	comp=Z,9.6nm,1.4s								
LESA	Schwarzleotal	102.79	321	*e*PP		PP		20 15 23.8	-3.7
	comp=Z,9.4nm,1.4s								
WTTA	Wattenberg	103.50	321	*e*PKiKP		PKiKP		20 15 33.1	-2.1
	comp=Z,10.0nm,1.2s								
WATA	Walderalm	103.51	321	*e*PKiKP		PKiKP		20 15 33.2	-1.9
	comp=Z,9.2nm,1.2s								
SQTA	Sankt Quirin	103.79	321	*e*PP		PP		20 15 33.2	-1.8
	comp=Z,12nm,1.6s								
RETA	Reutte	103.96	321	*e*PKiKP		PKiKP		20 15 31.9	-4.0
	comp=Z,15nm,1.6s								
FETA	Feichten	104.17	321	*e*PKiKP		PKiKP		20 15 31.0	-5.4
	comp=Z,10nm,1.6s								
PDAR	Pinedale Array	110.00	41	PKKPab		PKKPab		20 27 00.5	-1.7
	comp=Z,0.2nm,0.4s,baz=96,slow=3.1,SNR=4.1								
ESDC	Sonseca Array	117.05	319	PP		PP		20 17 12.6	+2.0
	comp=Z,1.3nm,0.8s,baz=46,slow=6.1,SNR=5.2								
TXAR	Lajitas Array	120.31	52	PKP		PKPdf		20 16 06.8	-0.6
	comp=Z,0.4nm,0.7s,baz=297,slow=0.6,SNR=4.5								
TXAR				PKKPab		PKKPab		20 26 28.9	+12
	comp=Z,0.7nm,1.0s,baz=96,slow=5.9,SNR=3.5								
TORD	Torodi Ar. Bea	123.24	289	PKhKP		PKPpre		20 16 11.2	
	comp=Z,0.7nm,0.7s,baz=111,slow=1.3,SNR=6.6								
TORD				PKP		PKiKP		20 16 15.0	+1.6
	comp=Z,4.0nm,0.7s,baz=50,slow=4.1,SNR=28								
DBIC	Dimbokro	131.03	283	PKP		PKiKP		20 16 29.5	+0.4
	comp=Z,3.5nm,0.7s,baz=135,slow=1.7,SNR=5.8								
DBIC				SKPbc		SKPab		20 19 47.8	+0.3
	comp=Z,4.7nm,0.8s,baz=104,slow=5.0,SNR=5.2								
DBIC				PKKPab		SKKSac		20 25 36.9	0.0
	comp=Z,3.9nm,1.0s,baz=251,slow=11,SNR=3.0								
PLCA	Paso Flores	140.82	158			PKPdf		20 16 39.6	-6.1
PLCA	Paso Flores	140.82	158	PKhKP		PKPpre		20 16 40.0	
	comp=Z,1.3nm,0.8s,baz=280,slow=6.1,SNR=3.3								
PLCA	Paso Flores	140.82	158	PKHKP		PKPpre		20 16 39.6	
CFA	Coronel Fontan	149.62	153	PKPbc		PKiKP		20 17 08.2	+1.4
	comp=Z,2.6nm,0.5s,baz=200,slow=1.9,SNR=8.1								
AC05	El Transito	150.85	147			PKiKP		20 17 11.2	+1.7
CPUP	Villa Florida	158.20	168	PKPab		PKPab		20 17 49.5	+2.4
	comp=Z,0.7nm,0.8s,baz=349,slow=4.6,SNR=5.8								
LPAZ	La Paz	160.97	128	PKP		PKPdf		20 17 18.1	+0.7
	comp=Z,0.8nm,0.7s,baz=235,slow=5.7,SNR=2.2								
SIV	San Ignacio	166.16	143	PKP		PKPdf		20 17 21.7	+0.2
	comp=Z,1.0nm,0.7s,baz=128,slow=3.7,SNR=4.2								

*TAP **08** 20:13:55.8, 23.°90N×121.°74E, h51km, ML3.1, C*
*JMA **08** 20:13:55.3±0.1, 23.°9N±0.°2×121.°8E±0.°4, h52km, MV2.7/10, TAIWAN REGION*

ISC 08 20:13:56.0±1.2, **23.°87N**±0.°02×**121.°79E**±0.°02, **h46**km±5km, **n126**, σ1**0**02/252, **1C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TEYL	Yanliau Villag	0.17	268	*i* P		Pn	20 14 04.3	+0.6
TEYL				*e*S		Sn	20 14 10.5	+1.2
HWA	Hwalien	0.20	302	*i* P		Pn	20 14 04.3	+0.4
HWA				S		Sn	20 14 10.8	+1.3
SHUL	Shoufeng	0.22	247	*i* P		Pn	20 14 04.8	+0.7
SHUL				*i* S		Sn	20 14 11.6	+1.7
TWD	Chiawan	0.27	320⇑	*i* P		Pn	20 14 04.3	-0.2
TWD				*i* S		Sn	20 14 10.8	+0.2
TEGC	Jichi Village	0.28	234	*i* P		Pn	20 14 04.8	+0.2
TEGC				*e*S		Sn	20 14 11.8	+1.2
ETM	Tongmen	0.28	289	*i* P		Pn	20 14 04.5	-0.2
ETM				S		Sn	20 14 10.9	+0.1
ETL	Fush Village	0.32	333	*i* P		Pn	20 14 04.8	-0.3
ETL				*e*S		Sn	20 14 11.9	+0.5
ESL	Shilin	0.33	260	*i* P		Pn	20 14 04.8	-0.3
ESL				*i* S		Sn	20 14 11.1	-0.4
NACB	Ninganchiao	0.35	330	*i* P		Pn	20 14 04.9	-0.4
NACB				*i* S		Sn	20 14 12.1	+0.2
LXIB	Xiulin Townshi	0.37	293	*i* P		Pn	20 14 05.0	-0.7
LXIB				*i* S		Sn	20 14 11.8	-0.8
EGFH	Guangfu	0.39	238	*i* P		Pn	20 14 05.6	-0.1
EGFH				S		Sn	20 14 12.6	0.0
WARBT	Fenglin Townsh	0.40	247	*i* P		Pn	20 14 05.3	-0.5
WARBT				*i* S		Sn	20 14 12.2	-0.6
ETLH	Xiulin Townshi	0.43	320	*i* P		Pn	20 14 05.8	-0.5
ETLH				*e*S		Sn	20 14 13.1	-0.6
EAHA	Aohua	0.46	355	*i* P		Pn	20 14 06.0	-0.5
EAHA				*i* S		Sn	20 14 14.3	+0.3
HGSD	Ruisui	0.50	221	*i* P		Pn	20 14 07.6	+0.5
HGSD				*i* S		Sn	20 14 16.5	+1.5
WHF	Hehuan Shan	0.55	300	*i* P		Pn	20 14 07.4	-0.7
WHF				*i* S		Sn	20 14 15.8	-0.9
EHYH	Wanrong	0.55	227	*i* P		Pn	20 14 07.2	-0.5
EHYH				*i* S		Sn	20 14 15.7	-0.4
ENA	Nanau	0.55	356	*i* P		Pn	20 14 07.4	-0.3
ENA				*e*S		Sn	20 14 16.4	+0.3
EHY	Hungye	0.56	229	*i* P		Pn	20 14 07.0	-0.8
EHY				*i* S		Sn	20 14 15.2	-1.1
OWD	Renai	0.56	278	*i* P		Pn	20 14 07.7	-0.3
OWD				*i* S		Sn	20 14 15.7	-0.8
EWUT	Wuta	0.57	359	*i* P		Pn	20 14 07.7	-0.3
EWUT				*i* S		Sn	20 14 16.5	0.0
VWDT	VWDT	0.60	259	*i* P		Pn	20 14 08.3	0.0
VWDT				*e*S		Sn	20 14 17.5	+0.3
FUSS	Fushou	0.62	307	*i* P		Pn	20 14 08.7	-0.2
FUSS				S		Sn	20 14 17.7	-0.3
WUSB	Renai	0.62	281	⇓*i* P		Pn	20 14 08.5	-0.2
WUSB				*i* S		Sn	20 14 17.2	-0.6
ECBN	Changbin	0.63	209	*e*P		Pn	20 14 09.3	+0.6
ECBN				*i* S		Sn	20 14 18.7	+0.8
YULB	Yu-li	0.66	223	*i* P		Pn	20 14 08.3	-0.8
YULB				S		Sn	20 14 17.7	-0.7
NNSB	Datong	0.66	326	*i* P		Pn	20 14 09.0	-0.3
NNSB				S		Sn	20 14 18.4	-0.4
NNSH	Datong	0.66	326	*i* P		Pn	20 14 08.8	-0.5
NNSH				*i* S		Sn	20 14 18.1	-0.7
TWT	Tachien	0.67	304	*i* P		Pn	20 14 09.6	+0.2
TWT				*i* S		Sn	20 14 19.0	-0.2
EYUL	Yuli	0.68	219	*i* P		Pn	20 14 09.2	-0.1
EYUL				*e*S		Sn	20 14 20.0	+1.1
NNS	Nan Shan	0.68	326	*i* P		Pn	20 14 09.1	-0.4
NNS				*i* S		Sn	20 14 18.6	-0.5
TWF1	Yuli	0.69	221	*i* P		Pn	20 14 08.8	-0.7
TWF1				*i* S		Sn	20 14 18.6	-0.6
TDCB	Techi	0.69	304	*i* P		Pn	20 14 09.6	0.0
TDCB				S		Sn	20 14 18.6	-0.7
LATG	Datong	0.70	340	*i* P		Pn	20 14 09.3	-0.4
LATG				*i* S		Sn	20 14 19.1	-0.6
ESAO	Su ao	0.70	4	*i* P		Pn	20 14 09.9	+0.2
ESAO				*i* S		Sn	20 14 20.4	+0.9
TWC	Suao	0.73	5	*i* P		Pn	20 14 10.3	+0.2
TWC				*i* S		Sn	20 14 20.9	+0.7
NDS	Dongshan	0.76	355	*i* P		Pn	20 14 10.5	+0.3
NDS				S		Sn	20 14 21.4	+0.5
SSLB	Suanglung	0.77	264	*i* P		Pn	20 14 10.3	-0.2
SSLB				S		Sn	20 14 21.0	-0.1
CHKH	Chenggong	0.77	208	*i* P		Pn	20 14 10.6	+0.1
CHKH				*i* S		Sn	20 14 21.3	+0.3
ENTT	Nioudou	0.79	345	*i* P		Pn	20 14 10.6	-0.3
ENTT				*i* S		Sn	20 14 21.5	-0.1
DPDB	Guoxing	0.80	282	*i* P		Pn	20 14 10.9	-0.2
DPDB				S		Sn	20 14 21.6	-0.3
FULB	Fuli	0.81	214	*i* P		Pn	20 14 11.1	0.0
FULB				*i* S		Sn	20 14 23.7	+1.6
SMLT	Sun Moon Lake	0.81	271	*i* P		Pn	20 14 11.1	-0.1
SMLT				*i* S		Sn	20 14 23.3	+1.0
WCS	Beigang Elemen	0.82	283	*i* P		Pn	20 14 11.3	+0.1
WCS				*e*S		Sn	20 14 22.3	0.0
TYC	Yuchr	0.85	272	*i* P		Pn	20 14 11.6	0.0
TYC				S		Sn	20 14 23.6	+0.6
TWE	Neicheng	0.85	353	*i* P		Pn	20 14 11.7	0.0
TWE				*i* S		Sn	20 14 23.1	+0.1
YUS	Yu-Shan	0.85	244	*i* P		Pn	20 14 12.2	0.0
YUS				*i* S		Sn	20 14 23.8	0.0
CHKT	Chengkung	0.86	207	*i* P		Pn	20 14 10.9	-0.8
CHKT				*i* S		Sn	20 14 22.5	-0.8
WHP	Taichung City	0.87	298	*i* P		Pn	20 14 12.5	+0.5
WHP				*i* S		Sn	20 14 23.7	+0.2
WHYT	Xinyi Township	0.87	259	*i* P		Pn	20 14 12.4	+0.4
WHYT				*i* S		Sn	20 14 24.1	+0.4
YHNB	Yeheng	0.88	335	*i* P		Pn	20 14 12.0	-0.1
YHNB				S		Sn	20 14 23.0	-0.8
NSK	Sanguang	0.89	334	*i* P		Pn	20 14 12.1	-0.2
NSK				*i* S		Sn	20 14 23.1	-1.0
EHD	Haiduan	0.90	217	*i* P		Pn	20 14 10.9	-1.3
EHD				S		Sn	20 14 22.6	-1.5
FUSB	Fushanzhiwuyua	0.90	348	*i* P		Pn	20 14 12.8	0.0
FUSB				*i* S		Sn	20 14 24.2	-0.2
ECS	Chishang	0.93	214	*i* P		Pn	20 14 12.8	0.0
ECS				S		Sn	20 14 25.9	+0.9
NWLT	Wulai	0.94	344	*i* P		Pn	20 14 12.7	-0.2
NWLT				*i* S		Sn	20 14 24.8	-0.4
ALS	Alishan	0.97	248	*i* P		Pn	20 14 14.1	+0.6
ALS				*i* S		Sn	20 14 27.5	+1.2
WJS	Zhushan	0.97	267	*i* P		Pn	20 14 13.9	+0.6
WJS				*i* S		Sn	20 14 28.1	+2.2
NFF	Wufeng Townshi	0.97	321	*i* P		Pn	20 14 13.8	+0.5
NFF				*i* S		Sn	20 14 25.9	-0.1
ELDTW	Lidau	0.98	226	*i* P		Pn	20 14 12.7	-0.9
ELDTW				*i* S		Sn	20 14 25.3	-1.0
EDH	Donghe	1.00	206	*i* P		Pn	20 14 13.4	-0.2
EDH				*i* S		Sn	20 14 26.2	-0.4
WNT	Mingjian	1.01	270	*i* P		Pn	20 14 14.7	+0.9
WNT				*i* S		Sn	20 14 28.1	+1.2
WWF	Wufeng	1.01	280	*i* P		Pn	20 14 14.8	+1.0
WWF				*i* S		Sn	20 14 28.9	+2.1
WNT1	Nantou City	1.01	272	*e*P		Pn	20 14 14.3	+0.5
WNT1				*i* S		Sn	20 14 29.0	+2.1
TWQ1	Liyutan	1.04	297	*i* P		Pn	20 14 14.4	+0.3
TWQ1				*i* S		Sn	20 14 28.8	+1.1
NSTT	Nanjuang	1.04	317	*i* P		Pn	20 14 14.9	+0.7
NSTT				*i* S		Sn	20 14 28.5	+0.9
LIOB	Emei	1.04	318	*i* P		Pn	20 14 15.0	+0.7
LIOB				S		Sn	20 14 27.7	0.0
TCU	Taichung	1.05	285	*i* P		Pn	20 14 14.9	+0.6
TCU				*i* S		Sn	20 14 29.6	+1.8
CHN5	Tsauling	1.05	255	*i* P		Pn	20 14 15.5	+1.0
CHN5				*i* S		Sn	20 14 29.1	+1.1
KSHI	Guanxi Townshi	1.06	328	*i* P		Pn	20 14 15.3	+0.9
KSHI				*i* S		Sn	20 14 29.6	+1.6
TIPB	Shuangxi	1.09	2	*i* P		Pn	20 14 15.7	+0.7
TIPB				*i* S		Sn	20 14 30.1	+1.0
NHDH	Xindian Distri	1.11	348	*i* P		Pn	20 14 15.4	+0.3
NHDH				S		Sn	20 14 30.2	+0.9
TWA	Mucha	1.12	351	*i* P		Pn	20 14 15.8	+0.5
TWA				S		Sn	20 14 29.8	+0.3
NMLH	Miaoli	1.12	306	*i* P		Pn	20 14 14.6	-0.8
NMLH				S		Sn	20 14 31.2	+1.5
LONT	Longtian	1.14	212	*i* P		Pn	20 14 14.1	-1.4
LONT				*i* S		Sn	20 14 29.3	-0.7
WGK	Gukeng	1.14	261	*i* P		Pn	20 14 16.9	+1.4
WGK				*i* S		Sn	20 14 31.7	+1.8
WCHH	Zhanghua	1.14	281	*i* P		Pn	20 14 16.0	+0.5
WCHH				*i* S		Sn	20 14 32.2	+2.1
TWB1	Santiao Chiao	1.15	9	*i* P		Pn	20 14 14.6	-1.0
TWB1				*e*S		Sn	20 14 29.7	-0.5
WCH1	Changhua City	1.15	280	P		Pn	20 14 16.3	+0.6
WCH1				*i* S		Sn	20 14 32.5	+2.2
WDL	Douliou City	1.15	262	*i* P		Pn	20 14 16.2	+0.5
WDL				*i* S		Sn	20 14 33.2	+2.8
WDLH	Douliu	1.16	261	*i* P		Pn	20 14 16.7	+1.0
WDLH				*i* S		Sn	20 14 32.2	+1.7
STYH	Taoyuan	1.16	233	*i* P		Pn	20 14 15.7	-0.1
STYH				*i* S		Sn	20 14 31.4	+0.8
STYT	Tauyuan	1.18	233	*i* P		Pn	20 14 16.5	+0.3
STYT				S		Sn	20 14 32.1	+1.0
NWF	Wu-fen Shan	1.19	360	*i* P		Pn	20 14 17.4	+1.0
NWF				*i* S		Sn	20 14 32.4	+1.0
WFSB	Wu-fen Shan	1.19	360	*i* P		Pn	20 14 17.2	+0.9
WFSB				*i* S		Sn	20 14 32.5	+1.2
TPUB	Ta-pu	1.20	242	*i* P		Pn	20 14 17.0	+0.6
TPUB				S		Sn	20 14 33.1	+1.4
SXI1	Grass Mountain	1.22	4	*i* P		Pn	20 14 17.4	+0.7
SXI1				*i* S		Sn	20 14 33.9	+1.7
NCUH	Zhongli	1.22	333	*e*P		Pn	20 14 16.1	-0.6
NCUH				*i* S		Sn	20 14 33.1	+1.0
LDUT	Ludao	1.23	194	*e*P		Pn	20 14 15.0	-1.7
LDUT				*i* S		Sn	20 14 30.9	-1.3
TWGBT	Beinan	1.23	212	P		Pn	20 14 15.7	-1.1
TWGBT				*e*S		Sn	20 14 31.8	-0.6
TWG	Pinlang	1.24	212	*i* P		Pn	20 14 15.9	-1.0
TWG				*i* S		Sn	20 14 31.5	-0.9
WTP	Ta-pu	1.24	240	*i* P		Pn	20 14 17.8	+0.8
WTP				*i* S		Sn	20 14 34.5	+1.8
TWS1	Kuangyinshan	1.27	345	*i* P		Pn	20 14 17.9	+0.6
TWS1				*i* S		Sn	20 14 34.1	+0.9
YM01	YM01	1.28	351	*i* P		Pn	20 14 17.3	-0.2
YM01				*i* S		Sn	20 14 33.4	-0.3
WTK	Tuku	1.29	262	*i* P		Pn	20 14 18.3	+0.7
WTK				*i* S		Sn	20 14 35.6	+1.8
ZUZH	Zhuzihu	1.30	350	*i* P		Pn	20 14 17.6	-0.2
ZUZH				*i* S		Sn	20 14 33.6	-0.4
CHY	Chiayi	1.30	254	P		Pn	20 14 18.2	+0.4
CHY				*i* S		Sn	20 14 35.5	+1.5
RLNB	Erlin	1.30	271	P		Pn	20 14 18.3	+0.5
RLNB				*i* S		Sn	20 14 35.8	+1.7
NTST	Danshui	1.32	347	*e*P		Pn	20 14 18.4	+0.4
NTST				S		Sn	20 14 34.7	+0.2
YM08	YM08	1.32	352	*e*P		Pn	20 14 17.9	-0.1
YM08				*i* S		Sn	20 14 33.6	-0.9
ANP	Anpu	1.33	350	*e*P		Pn	20 14 18.2	0.0
ANP				*e*S		Sn	20 14 34.2	-0.6
TWK	Hsinying	1.33	243	*i* P		Pn	20 14 19.1	+0.8
TWK				*i* S		Sn	20 14 36.6	+1.7
CHN1	Nanshi	1.34	240	*i* P		Pn	20 14 19.1	+0.8
CHN1				*i* S		Sn	20 14 36.7	+1.6
SNST	Tainan City	1.35	241	*i* P		Pn	20 14 19.5	+1.0
SNST				*i* S		Sn	20 14 36.9	+1.7
SGST	Jiashian	1.36	235	*i* P		Pn	20 14 18.5	0.0
SGST				*i* S		Sn	20 14 35.8	+0.4
WTCT	Ta-ch'eng	1.38	270	*e*P		Pn	20 14 19.3	+0.6
WTCT				*i* S		Sn	20 14 37.8	+2.0
WSF	Szhu	1.45	261	*i* P		Pn	20 14 20.6	+0.8
WSF				*i* S		Sn	20 14 39.4	+1.7
WSL	Shuilin Townsh	1.47	257	*i* P		Pn	20 14 20.4	+0.3
WSL				*i* S		Sn	20 14 39.1	+1.0
ECL	Taimali	1.48	211	*i* P		Pn	20 14 19.2	-1.0
ECL				S		Sn	20 14 38.1	-0.4
CHN8	Yiju	1.54	250	P		Pn	20 14 21.7	+0.8
CHN8				*i* S		Sn	20 14 41.2	+1.5
SCST	Cishan	1.54	231	*i* P		Pn	20 14 22.4	+1.4
SCST				*e*S		Sn	20 14 42.5	+2.6
SSD	Sandimen	1.54	224	*i* P		Pn	20 14 22.0	+0.9
SSD				S		Sn	20 14 41.8	+1.9
MASBT	Mashibuluo	1.64	220	*i* P		Pn	20 14 22.3	-0.2
MASBT				*e*S		Sn	20 14 44.3	+1.9
EAST	Anshuo	1.72	210	*i* P		Pn	20 14 22.7	-0.7
EAST				*e*S		Sn	20 14 43.3	-0.9
TSCK	Chigu Township	1.72	245	*i* P		Pn	20 14 24.0	+0.5
TSCK				*i* S		Sn	20 14 44.9	+0.7
TAWH	Dawu Township	1.74	209	*e*P		Pn	20 14 25.1	+1.4
TAWH				*e*S		Sn	20 14 43.6	-1.0
IRIF	Iriomote-Funau	1.84	75	P		Pn	20 14 25.9	+0.8
IR

O22K Cooper Landing 0.86 172 Pn 20 15 41.3 -0.4
O22K Cooper Landing 0.86 172 P Pn 20 15 41.4 -0.4
baz=352,SNR=301
STLK Strandline Lak 0.91 281 Pn Pn 20 15 42.7 +0.2
STLK Sn Sn 20 15 55.1 +0.6
STLK IAML 20 15 56.1
comp=N,10µm,0.4s
STLK IAML 20 15 56.9
comp=E,7µm,0.4s
SML Sawmill 0.92 58 Pn 20 15 42.2 -0.4
SML Sn Sn 20 15 55.2 +0.3
SML IAML 20 15 57.0
comp=E,6µm,0.7s
SML IAML 20 15 58.5
comp=N,6µm,0.4s
SML Sawmill 0.92 58 P Pn 20 15 42.4 -0.3
baz=238,SNR=736
SML S Sn 20 15 55.4 +0.5
baz=238
PWL Port Wells 0.93 120 Pn 20 15 42.6 -0.1
PWL Sn Sn 20 15 55.4 +0.5
PWL Port Wells 0.93 120 P Pn 20 15 42.6 -0.1
baz=300,SNR=1000
PWL S Sn 20 15 55.7 +0.7
baz=300
SPCG Spurr Capps Gl 0.99 269 Pn 20 15 41.4 -2.1
SKT Skwentna 0.99 312 Pn 20 15 43.4 -0.1
SKT Sn Sn 20 15 56.5 +0.1
SKT IAML 20 15 57.7
comp=E,6µm,0.5s
SKT Skwentna 0.99 312 P Pn 20 15 43.5 0.0
baz=131,SNR=561
SKT S Sn 20 15 57.0 +0.6
baz=131
SPU Mount Spurr 1.01 262 Pn 20 15 43.4 -0.5
SPCP Crater Peak Br 1.05 267 Pn 20 15 38.3 -6.2
CUT Chulitna 1.09 353 Pn 20 15 44.8 0.0
CUT Sn Sn 20 15 58.8 +0.1
CUT Chulitna 1.09 353 P Pn 20 15 44.9 +0.2
baz=172,SNR=184
N20K Mount Spurr 1.09 264 P Pn 20 15 44.9 0.0
baz=83,SNR=724
N20K S Sn 20 15 59.6 +0.7
baz=83
SPCR Spurr Chakacha 1.09 264 Pn 20 15 39.5 -5.4
SPCR Sn 20 15 59.4 +0.6
SPCR Spurr Chakacha 1.09 264 Pn 20 15 39.5 -5.4
SPCR Spurr Chakacha 1.09 264 P Pn 20 15 44.8 0.0
baz=83,SNR=534
SPCR S Sn 20 15 59.4 +0.6
baz=83
M23K Glacier View 1.17 66 Sn 20 16 02.6 +1.7
M23K Glacier View 1.17 66 P Pn 20 15 46.3 +0.3
baz=246,SNR=1000
SEW Seward 1.26 168 Pn 20 15 47.0 0.0
SEW IAML 20 16 09.6
comp=E,3µm,0.3s
SEW Seward 1.26 168 P Pn 20 15 46.5 -0.6
baz=349,SNR=81
SCM Sheep Creek Mo 1.36 67 Pn Pn 20 15 49.0 +0.4
SCM Sheep Creek Mo 1.36 67 Sn 20 16 07.6 +2.0
SCM Sheep Creek Mo 1.36 67 P Pn 20 15 49.1 +0.4
baz=248,SNR=717
GLI Glacier Island 1.47 107 Pn 20 15 49.7 -0.3
GLI Glacier Island 1.47 107 Sn 20 16 09.1 +1.0
GLI Glacier Island 1.47 107 P Pn 20 15 50.0 0.0
baz=288,SNR=174
WAT7 Susitna Watana 1.60 19 Pn 20 15 52.4 +0.6
M20K Styx River 1.61 292 Pn 20 15 52.5 +0.6
M20K Styx River 1.61 292 IAML 20 16 15.9
comp=N,2µm,1.0s
M20K IAML 20 16 16.2
comp=E,2µm,0.7s
M20K Styx River 1.61 292 P Pn 20 15 52.3 +0.3
baz=110
RDSO Redoubt South 1.61 238 Pn 20 15 52.4 +0.3
RDSO Sn 20 16 12.9 +1.1
BRLK Bradley Lake 1.64 196 Pn 20 15 52.3 0.0
BRLK IAML 20 16 16.8
comp=N,3µm,0.4s
BRLK IAML 20 16 17.5
comp=E,3µm,0.7s
BRSE Bradley Lake S 1.64 194 P Pn 20 15 52.1 -0.2
baz=14,SNR=70
WAT6 Susitna Watana 1.64 39 Pn 20 15 52.8 +0.3
WAT6 Susitna Watana 1.64 39 P Pn 20 15 52.9 +0.5
baz=220,SNR=357
RED Redoubt Volcan 1.65 237 Pn 20 15 52.6 +0.1
RED IAML 20 16 14.5
comp=N,2µm,0.7s
RED IAML 20 16 15.9
comp=E,3µm,0.8s
WAT1 Susitna Watana 1.65 23 Pn 20 15 52.9 +0.4
WAT1 Susitna Watana 1.65 23 P Pn 20 15 53.0 +0.6
baz=204
FID Port Fidalgo 1.80 107 Pn 20 15 53.5 -1.0
FID IAML 20 16 25.2
comp=N,3µm,0.4s
FID IAML 20 16 26.1
comp=E,2µm,0.4s
O20K Slope Mountain 1.81 227 P Pn 20 15 55.7 +1.0
baz=46,SNR=75
P23K Montague Islan 1.84 135 Pn 20 15 54.2 -0.9
P23K IAML 20 16 25.1
comp=E,2µm,0.4s
P23K IAML 20 16 27.0
comp=N,3µm,0.7s
P23K Montague Islan 1.84 135 P Pn 20 15 54.2 -0.9
baz=317
HOM Homer 1.87 207 Pn 20 15 55.7 +0.3
HOM Homer 1.87 207 P Pn 20 15 55.5 +0.1
baz=26,SNR=12
PPLA Purkeypile 1.88 327 Pn 20 15 56.1 +0.3
PPLA IAML 20 16 21.7
comp=E,2µm,0.7s
PPLA IAML 20 16 21.8
comp=N,1µm,0.7s
PPLA Purkeypile 1.88 327 P Pn 20 15 56.3 +0.5
baz=146,SNR=67
CNPM China Poot 1.92 200 Pn 20 15 56.1 0.0
CNPM IAML 20 16 23.1
comp=E,2µm,0.7s
CNPM IAML 20 16 26.6
comp=N,2µm,0.5s
HIN Hinchinbrook I 1.94 117 Pn 20 15 56.1 -0.4
KLU Klutina 1.96 83 Pn 20 15 56.8 0.0
KLU IAML 20 16 26.6
comp=N,2µm,0.4s
KLU IAML 20 16 29.0
comp=E,1µm,0.4s
KLU Klutina 1.96 83 P Pn 20 15 57.0 +0.2
baz=266,SNR=479
M24K Tolsona, Glenn 1.97 65 Pn 20 15 57.9 +1.0
M24K Tolsona, Glenn 1.97 65 P Pn 20 15 58.1 +1.2
baz=248,SNR=1000
IVE Iliamna Volcan 1.99 230 Pn 20 15 57.9 +0.6
DIV Divide 2.04 94 Pn 20 15 58.2 +0.3
DIV IAML 20 16 31.9
comp=N,2µm,0.4s
DIV IAML 20 16 32.5
comp=E,1µm,0.4s
ILSW Iliamna Southw 2.06 230 Pn 20 15 58.9 +0.7
TRF Thorofare Moun 2.13 356 Pn 20 15 59.7 +0.5
TRF IAML 20 16 37.4
comp=N,967nm,0.6s
TRF Thorofare Moun 2.13 356 P Pn 20 15 59.7 +0.5
baz=176,SNR=75
DHY Denali Highway 2.13 34 Pn 20 15 59.6 +0.4
DHY IAML 20 16 30.4
comp=E,2µm,0.5s
DHY IAML 20 16 30.9
comp=N,1µm,0.5s
DHY Denali Highway 2.13 34 P Pn 20 15 59.9 +0.7
baz=215,SNR=223
RND Reindeer 2.15 14 Pn 20 15 59.9 +0.5
L20K Farewell, AK 2.18 304 Pn 20 16 00.4 +0.7
L20K Farewell, AK 2.18 304 P Pn 20 16 00.4 +0.7
baz=121,SNR=170
L20K S Sn 20 16 27.0 +1.6
baz=121
EYAK Cordova Ski Ar 2.21 109 Pn 20 15 59.5 -0.6
EYAK IAML 20 16 36.8
comp=E,866nm,0.5s
EYAK IAML 20 16 37.2
comp=N,1µm,0.7s
EYAK Cordova Ski Ar 2.21 109 P Pn 20 16 00.2 +0.1
baz=292,SNR=154
N19K Bonanza Creek 2.25 259 IAML 20 16 34.4
comp=N,893nm,0.7s
N19K Bonanza Creek 2.25 259 P Pn 20 16 01.5 +0.7
baz=75,SNR=145
KTH Kantishna Hill 2.27 349 Pn 20 16 01.7 +0.6
KTH IAML 20 16 32.2
comp=N,899nm,0.6s
KTH IAML 20 16 53.1
comp=E,853nm,0.7s
P19K Oil Pt 2.33 225 Pn 20 16 02.3 +0.5
P19K Oil Pt 2.33 225 P Pn 20 16 02.2 +0.5
baz=43,SNR=43
O19K Port Alsworth 2.42 244 Pn 20 16 03.1 +0.1
O19K Port Alsworth 2.42 244 P Pn 20 16 03.1 +0.1
baz=61,SNR=94
MCK McKinley 2.46 11 Pn 20 16 04.7 +1.1
MCK IAML 20 16 47.0
comp=E,678nm,0.7s
MCK IAML 20 16 48.0
comp=N,1µm,1.0s
MCK McKinley 2.46 11 P Pn 20 16 04.5 +1.0
baz=191,SNR=123
L19K White Mountain 2.47 292 Pn 20 16 04.4 +0.7
L19K IAML 20 16 49.9
comp=N,857nm,0.9s
L19K White Mountain 2.47 292 P Pn 20 16 04.7 +1.0
baz=108,SNR=471
HARP HAARP 2.52 63 P Pn 20 16 05.7 +1.3
baz=246
N25K Chitina, Valde 2.60 82 Pn 20 16 05.3 -0.2
N25K IAML 20 16 44.6
comp=N,851nm,0.5s
N25K IAML 20 16 46.5
comp=E,619nm,0.6s
N25K Chitina, Valde 2.60 82 P Pn 20 16 05.6 +0.1
baz=266,SNR=266
AGU Auguine-Summ 2.62 222 Pn 20 16 06.6 +0.8
BMRM Bremner River 2.63 96 Pn 20 16 05.5 -0.4
BMRM IAML 20 16 46.9
comp=E,1µm,0.5s
BMRM IAML 20 16 52.0
comp=N,1µm,0.5s
BMRM Bremner River 2.63 96 P Pn 20 16 05.3 -0.6
baz=280,SNR=386
PAX Paxson 2.68 50 Pn 20 16 07.9 +1.2
PAX IAML 20 16 46.1
comp=E,572nm,1.0s
PAX IAML 20 16 46.9
comp=N,944nm,0.6s
PAX Paxson 2.68 50 P Pn 20 16 07.9 +1.2
baz=234,SNR=271
RAGM Ragged Mountai 2.76 108 Pn 20 16 07.1 -0.6
WACK Wrangell Chich 2.77 74 Pn 20 16 08.7 +0.6
CHUM Lake Minchumin 2.78 338 Pn 20 16 08.3 +0.5
CHUM Lake Minchumin 2.78 338 P Pn 20 16 08.4 +0.5
baz=156,SNR=10
K20K Telida 2.79 319 Pn 20 16 08.5 +0.5
K20K Telida 2.79 319 P Pn 20 16 08.9 +0.8
baz=135
M18K Stony River 2.82 276 Pn 20 16 09.2 +0.8
M18K Stony River 2.82 276 P Pn 20 16 09.2 +0.8
baz=91
BPAW Bear Paw Mtn. 2.82 351 Pn 20 16 08.3 -0.2
BPAW Bear Paw Mtn. 2.82 351 P Pn 20 16 08.6 +0.2
baz=170,SNR=10
BWN Browne 2.86 5 Pn 20 16 09.5 +0.5
BWN IAML 20 16 58.3
comp=N,1µm,0.8s
N18K Kilae Creek 2.95 260 Pn 20 16 10.5 +0.2
N18K Kilae Creek 2.95 260 P Pn 20 16 10.5 +0.2
baz=75,SNR=86
GLB Gilahina Butte 2.97 85 Pn 20 16 10.2 -0.3
GLB IAML 20 16 58.5
comp=E,423nm,0.4s
GLB IAML 20 17 00.1
comp=N,692nm,0.8s
HMT Hamilton 2.97 107 Pn 20 16 09.6 -1.0
O18K Koktuh Hills 2.98 242 P Pn 20 16 10.7 +0.1
baz=58,SNR=40
SYI Shuyak Island 2.99 205 Pn 20 16 10.8 0.0
SYI IAML 20 16 56.7
comp=N,453nm,0.9s
SYI IAML 20 16 57.0
comp=E,811nm,0.6s
Q20K Shuyak Island 2.99 205 P Pn 20 16 10.7 0.0
baz=23,SNR=8.4
Q19K Cape Douglas, 3.03 219 Pn 20 16 11.1 -0.3
KAIM Kayak Island 3.08 115 Pn 20 16 12.4 +0.3
KAIM IAML 20 17 31.6
comp=E,412nm,0.9s
KAIM Kayak Island 3.08 115 P Pn 20 16 10.5 -1.5
baz=299,SNR=6.3
K24K Donnelly Dome 3.15 36 P Pn 20 16 16.0 +3.0
baz=220
VRDI Verde Repeater 3.15 89 Pn 20 16 12.4 -0.8
VRDI IAML 20 17 00.9
comp=N,541nm,0.7s
P18K Big Mountain, 3.25 236 Pn 20 16 13.6 -0.8
P18K Big Mountain, 3.25 236 P Pn 20 16 14.3 -0.1
baz=52
SUCK Suckling Hills 3.30 110 Pn 20 16 13.7 -1.3
SUCK Suckling Hills 3.30 110 IAML 20 17 10.8
comp=E,375nm,1.0s
SUCK IAML 20 17 14.8
comp=N,466nm,0.6s
NEA2 Nenana 3.30 7 P Pn 20 16 16.1 +1.1
baz=187,SNR=12
L18K Granite Mounta 3.31 289 IAML 20 17 13.2
comp=E,390nm,1.1s
L18K Granite Mounta 3.31 289 P Pn 20 16 15.9 +0.7
baz=103,SNR=40
MCARA McCarthy VSAT 3.35 86 Pn 20 16 16.0 +0.3
MCARA McCarthy VSAT 3.35 86 P Pn 20 16 16.4 +0.7
baz=272,SNR=202
MENT Mentasta 3.35 59 P Pn 20 16 18.4 +2.6
CRQM Cirque 3.38 97 Pn 20 16 15.9 -0.4
CRQM Cirque 3.38 97 IAML 20 17 11.4
comp=E,658nm,0.8s
CRQM IAML 20 17 15.3
comp=N,718nm,0.7s
HDA Harding Lake 3.39 23 Pn 20 16 17.3 +1.1
HDA IAML 20 17 13.4
comp=E,675nm,1.0s
HDA Harding Lake 3.39 23 P Pn 20 16 18.0 +1.7
baz=205,SNR=79
RIDG Independent Ri 3.39 42 Pn 20 16 16.0 -0.4
RIDG IAML 20 17 08.0
comp=E,758nm,0.5s
RIDG Independent Ri 3.39 42 P Pn 20 16 17.3 +0.9
baz=226,SNR=58
CRQE Cirque 3.40 97 P Pn 20 16 16.5 0.0
baz=282,SNR=192
J20K Nowinta River 3.44 328 Pn 20 16 17.2 +0.3
J20K Nowinta River 3.44 328 IAML 20 16 58.2
comp=N,365nm,0.5s
J20K Nowinta River 3.44 328 P Pn 20 16 17.4 +0.4
baz=144,SNR=131
CCB Clear Creek Bu 3.47 16 Pn 20 16 17.8 +0.4
M26K Nabesna, AK 3.48 69 IAML 20 17 27.2
comp=N,410nm,0.7s
M26K Nabesna, AK 3.48 69 P Pn 20 16 17.9 +0.3
baz=255,SNR=52
TGL Tana Glacier 3.52 96 Pn 20 16 17.8 -0.5
TGL Tana Glacier 3.52 96 IAML 20 17 21.2
comp=E,534nm,0.6s
L26K Log Cabin Wild 3.54 58 IAML 20 17 16.8
comp=E,633nm,0.5s
L26K IAML 20 17 22.8
comp=N,651nm,0.5s
L26K Log Cabin Wild 3.54 58 P Pn 20 16 18.3 -0.1
baz=244,SNR=82
M17K Holitna River 3.59 274 Pn 20 16 19.8 +0.7
M17K Holitna River 3.59 274 IAML 20 17 18.9
comp=N,513nm,0.8s
M17K IAML 20 17 31.7
comp=E,609nm,1.4s
M17K Holitna River 3.59 274 P Pn 20 16 19.6 +0.6
baz=88
DOT Dot Lake 3.60 47 Pn 20 16 20.4 +1.3
DOT IAML 20 17 18.3
comp=N,449nm,0.7s
N17K Nushagak Hills 3.61 260 IAML 20 17 23.6
comp=N,305nm,0.9s
N17K Nushagak Hills 3.61 260 P Pn 20 16 19.6 +0.3
baz=74,SNR=86
KAHG Katmai Hook Gl 3.66 221 Pn 20 16 20.3 +0.3
COLA College 3.69 14 Pn 20 16 20.2 -0.1
COLA College 3.69 14 P Pn 20 16 21.6 +1.3
COLA College 3.69 14 P Pn 20 16 21.9 +1.6
baz=196
SNH Sunshine Point 3.69 105 Pn 20 16 19.5 -1.0
SNH IAML 20 17 25.4
comp=E,243nm,1.2s
KAHC Katmai Hardscr 3.69 225 Pn 20 16 20.5 0.0
Q18K Katmai Hardscr 3.69 225 P Pn 20 16 19.9 -0.7
baz=41,SNR=9.1
KARR Katmai Rainbow 3.71 222 Pn 20 16 20.9 +0.3
IL31 3.73 21 Pn 20 16 21.2 +0.3
ILAR Eielson Array 3.73 21 Pn 20 16 21.4 +0.5
ILAR Eielson Array 3.73 21 P Pn 20 16 21.9 +1.0
comp=E,10nm,0.4s,baz=208,slow=15,SNR=150
ILAR S Sn 20 17 05.6 +2.1
comp=E,26nm,0.5s,baz=207,slow=21,SNR=3.2
J19K Poorman 3.73 318 Pn 20 16 21.3 +0.4
J19K Poorman 3.73 318 P Pn 20 16 21.6 +0.7
baz=133,SNR=34
MLY Manley 3.73 355 P Pn 20 16 21.3 +0.4
baz=174,SNR=14
BARK Barkley Ridge 3.78 101 Pn 20 16 21.3 -0.4
ISLE Juniper Island 3.79 98 IAML 20 17 22.4
comp=E,423nm,0.8s
J18K Innoko River 3.80 307 IAML 20 17 07.1
comp=N,272nm,0.6s
J18K Innoko River 3.80 307 P Pn 20 16 22.5 +0.6
baz=122,SNR=70
KDAK Kodiak Island 3.80 202 Pn 20 16 20.6 -1.2
KDAK IAML 20 17 24.6
comp=N,262nm,0.7s
KDAK IAML 20 17 33.8
comp=N,217nm,0.8s
KDAK Kodiak Island 3.80 202 P Pn 20 16 20.7 -1.2
comp=N,9.4nm,0.2s,baz=41,slow=3.7,SNR=41
KDAK S Sn 20 17 15.7 +11
comp=N,163nm,0.5s,baz=158,slow=18,SNR=8.0
KDAK Kodiak Island 3.80 202 P Pn 20 16 20.7 -1.2
baz=20
KAWH Katmai 3.83 222 Pn 20 16 22.2 -0.2
SCRK Sand Creek 3.83 44 Pn 20 16 23.2 +0.8
SCRK Sand Creek 3.83 44 IAML 20 17 25.0
comp=N,354nm,0.8s
SCRK IAML 20 17 25.8
comp=E,369nm,1.1s
SCRK Sand Creek 3.83 44 P Pn 20 16 23.2 +0.8
baz=228,SNR=25
I23K Minto, Yukon-K 3.84 4 Pn 20 16 23.2 +0.8
I23K Minto, Yukon-K 3.84 4 P Pn 20 16 23.2 +0.8
baz=184,SNR=70
O17K Koliganek Bris 3.85 249 P Pn 20 16 22.4 -0.1
baz=63,SNR=28
P17K Kvichak River 3.87 239 P Pn 20 16 23.2 +0.4
baz=54,SNR=41
J25K Salcha River, 3.91 31 IAML 20 17 20.0
comp=N,292nm,0.4s
J25K Salcha River, 3.91 31 P Pn 20 16 25.2 +1.8
baz=214,SNR=94
I21K Tanana 3.97 348 P Pn 20 16 25.7 +1.5
baz=166
POKR Poker Plat Res 3.97 16 Pn 20 16 25.5 +1.3
POKR Poker Plat Res 3.97 16 IAML 20 17 37.8
comp=E,262nm,1.4s
POKR Poker Plat Res 3.97 16 P Pn 20 16 25.7 +1.5
baz=198,SNR=15
M27K Edge Creek, AK 3.98 71 P Pn 20 16 25.5 +1.1
baz=258
BARN Barnard Glacie 4.04 90 IAML 20 17 32.6
comp=N,195nm,0.6s
BARN IAML 20 17 41.9
comp=E,242nm,1.1s
I20K Naaghedeneel 4.04 331 P Pn 20 16 26.3 +1.2
baz=148
L17K Donlin 4.04 285 Pn 20 16 25.8 +0.7
L17K Donlin 4.04 285 P Pn 20 16 25.8 +0.7
baz=98
GRNC Granite Creek 4.05 95 Pn 20 16 25.2 -0.3
GRNC Granite Creek 4.05 95 IAML 20 17 28.1
comp=N,282nm,0.6s
GRNC IAML 20 17 36.0
comp=E,201nm,0.6s
MESA MESA 4.11 103 Pn 20 16 25.7 -0.6
MESA IAML 20 17 41.0
comp=E,322nm,0.5s
MESA IAML 20 17 41.2
comp=N,428nm,0.7s
MESA MESA 4.11 103 P Pn 20 16 25.6 -0.6
baz=290
ACHA Angle Creek He 4.13 223 Pn 20 16 27.1 +0.6
MGLS Mageik Landsli 4.14 222 Pn 20 16 26.9 +0.3
YAH Yahtse 4.14 100 Pn 20 16 26.5 -0.3
YAH Yahtse 4.14 100 IAML 20 17 33.8
comp=N,244nm,0.8s
YAH IAML 20 17 39.8
comp=E,231nm,0.8s
K17K Iditarod 4.16 293 IAML 20 17 42.2
comp=N,349nm,1.3s
K17K IAML 20 17 44.3
comp=E,271nm,1.2s
K17K Iditarod 4.16 293 P Pn 20 16 27.5 +0.7
baz=106,SNR=42
L27K Beaver Creek, 4.19 62 P Pn 20 16 28.3 +1.0
baz=249,SNR=18
ANCK Angle Creek 4.20 224 Pn 20 16 27.9 +0.4
CTG Chitna Glacier 4.20 91 P Pn 20 16 28.0 +0.5
baz=278,SNR=29
CTGM Chitina Glacie 4.21 91 Pn 20 16 27.7 +0.1
CTGM Chitina Glacie 4.21 91 IAML 20 17 44.7
comp=N,172nm,1.0s
BCAR Beaver Creek A 4.21 62 Pn 20 16 28.2 +0.5
CAHL Cahill 4.25 222 Pn 20 16 28.5 +0.4
CNTC Contact Creek 4.28 227 Pn 20 16 29.1 +0.4
Q17K Contact Creek 4.29 227 P Pn 20 16 28.9 +0.2
baz=42
J26L Joseph Creek 4.33 40 IAML 20 17 25.7
comp=E,333nm,0.5s
J26L IAML 20 17 29.1
comp=N,285nm,0.6s
J26L Joseph Creek 4.33 40 P Pn 20 16 30.6 +1.4
baz=225,SNR=182
RKAV Rock Avalanche 4.35 100 Pn 20 16 29.6 0.0
M16K Timber Creek 4.36 270 Pn 20 16 30.4 +0.8
M16K Timber Creek 4.36 270 P Pn 20 16 30.3 +0.8
baz=82,SNR=66
N16K Nishlik Lake 4.38 263 P Pn 20 16 30.6 +0.7
baz=75,SNR=64
O16K Kokwok River B 4.38 250 Pn 20 16 30.1 +0.3
O16K Kokwok River B 4.38 250 IAML 20 17 42.4
comp=N,142nm,0.5s
O16K IAML 20 17 59.9
comp=E,141nm,0.8s
O16K Kokwok River B 4.38 250 P Pn 20 16 30.4 +0.6
baz=63,SNR=26
LOGN Logan Glacier 4.39 93 Pn 20 16 30.0 -0.1
LOGN Logan Glacier 4.39 93 IAML 20 17 21.0
comp=N,167nm,0.6s
LOGN IAML 20 17 45.5
comp=E,168nm,1.1s
YUK2 White River 4.39 80 Pn 20 16 30.1 -0.1
TABL Table Mountain 4.41 98 IAML 20 17 50.2
comp=E,192nm,1.1s
TABL IAML 20 17 52.9
comp=N,241nm,0.8s
R18K Karluk 4.41 213 P Pn 20 16 30.1 -0.1
baz=30
BVCY Beaver Creek 4.45 72 P Pn 20 16 32.3 +1.4
baz=260
OHAK Old Harbor 4.46 204 Pn 20 16 29.3 -1.6
OHAK IAML 20 17 42.3
comp=E,147nm,0.8s
OHAK Old Harbor 4.46 204 P Pn 20 16 29.1 -1.8
OHAK Old Harbor 4.46 204 P Pn 20 16 29.3 -1.6
baz=21
H23K Yukon River 4.52 2 P Pn 20 16 33.5 +1.7
baz=182
H21K Melozitna Rive 4.52 345 P Pn 20 16 32.6 +0.8
baz=162
K27K Chicken 4.54 50 IAML 20 17 52.5
comp=N,145nm,1.1s
K27K IAML 20 17 56.9
comp=E,164nm,1.4s
K27K Chicken 4.54 50 P Pn 20 16 32.6 +0.7
baz=237
L16K Owhat River 4.56 279 IAML 20 17 56.5

L16K **Owhat River** 4.56 279 P Pn 20 16 32.8 +0.5
baz=91,SNR=24
YUK3 **Moose Creek** 4.58 80 Pn 20 16 32.7 0.0
YUK3 **Moose Creek** 4.58 80 P Pn 20 16 33.2 +0.5
baz=268,SNR=44
P16K **Nushagak River** 4.62 244 Pn 20 16 33.7 +0.7
P16K **Nushagak River** 4.62 244 P Pn 20 16 33.8 +0.7
baz=57,SNR=5.1
H24K **Noodor Dome** 4.62 11 IAML 20 17 58.3
comp=E,148nm,0.8s
H24K **Noodor Dome** 4.62 11 P Pn 20 16 34.9 +1.8
baz=192,SNR=27
H22K **Ishtalitna Cre** 4.62 353 P Pn 20 16 34.9 +1.7
baz=172
GCSA **Galena City Sc** 4.65 320 P Pn 20 16 34.2 +0.8
baz=134
SAMH **Samovar Hills** 4.67 101 Pn 20 16 34.2 +0.3
J17K **VABM Dome** 4.72 300 Pn 20 16 34.8 +0.3
J17K **VABM Dome** 4.72 300 P Pn 20 16 34.7 +0.3
baz=112,SNR=8.7
H20K **Anotleneega Mo** 4.72 334 Pn 20 16 34.9 +0.4
H20K **Anotleneega Mo** 4.72 334 P Pn 20 16 35.0 +0.5
baz=150,SNR=8.3
O28M **Mount Upton** 4.79 92 IAML 20 17 53.8
comp=N,127nm,0.6s
O28M **Mount Upton** 4.79 92 P Pn 20 16 36.2 +0.4
baz=281
YUK8 **Steele Glacier** 4.92 86 P Pn 20 16 38.0 +0.5
baz=275,SNR=17
PCA **Pinnacle** 4.93 100 Pn 20 16 36.8 -0.7
PLK4 **Peulik 4** 4.93 224 Pn 20 16 38.1 +0.6
PLK4 **Peulik 4** 4.93 224 IAML 20 18 09.6
comp=N,155nm,0.9s
PLK4 IAML 20 18 22.9
comp=E,202nm,1.1s
R17L **Mt. Peulik Vol** 4.93 224 P Pn 20 16 37.8 +0.3
baz=39,SNR=23
PINM **Pinnacle** 4.94 100 P Pn 20 16 37.3 -0.2
baz=288,SNR=11
IMAR **Indian Mountai** 4.96 342 Pn 20 16 38.0 +0.2
I26K **Coal Creek Min** 5.04 35 IAML 20 18 02.6
comp=N,196nm,1.1s
I26K IAML 20 18 07.3
comp=E,217nm,0.8s
I26K **Coal Creek Min** 5.04 35 P Pn 20 16 40.2 +1.4
baz=220
N15K **Kwethluk River** 5.10 261 Pn 20 16 40.4 +0.7
N15K IAML 20 18 12.9
comp=E,131nm,0.6s
N15K IAML 20 18 21.0
comp=N,192nm,1.6s
N15K **Kwethluk River** 5.10 261 P Pn 20 16 40.3 +0.7
baz=73,SNR=25
H19K **Roundabout Mou** 5.12 328 IAML 20 18 15.2
comp=E,88nm,1.5s
H19K IAML 20 18 17.6
comp=N,102nm,1.3s
H19K **Roundabout Mou** 5.12 328 P Pn 20 16 40.0 +0.1
baz=142
M15K **Kasigluk River** 5.25 268 Pn 20 16 42.1 +0.4
M15K **Kasigluk River** 5.25 268 P Pn 20 16 42.2 +0.5
baz=79
SII **Sitkinak Islan** 5.26 206 P Pn 20 16 43.2 +1.3
BCPM **Bancas Point** 5.28 101 Pn 20 16 42.6 +0.5
BCPM IAML 20 18 05.1
comp=E,134nm,0.9s
BCPM IAML 20 18 14.7
comp=N,117nm,0.8s
H25L **Birch Creek** 5.29 19 P Pn 20 16 44.4 +2.2
baz=202,SNR=14
J16K **Anvik River** 5.33 296 Pn 20 16 43.2 +0.4
J16K **Anvik River** 5.33 296 IAML 20 18 18.6
comp=N,129nm,0.8s
J16K **Anvik River** 5.33 296 P Pn 20 16 43.2 +0.4
baz=107
O15K **Ungalikthiuk R** 5.36 251 Pn 20 16 43.9 +0.7
O15K **Ungalikthiuk R** 5.36 251 IAML 20 18 32.6
comp=N,106nm,1.1s
O15K IAML 20 18 35.5
comp=E,85nm,1.3s
O15K **Ungalikthiuk R** 5.36 251 P Pn 20 16 44.0 +0.7
baz=62,SNR=18
H18K **Honhosa River** 5.39 319 Pn 20 16 44.4 +0.8
H18K **Honhosa River** 5.39 319 P Pn 20 16 44.5 +0.8
baz=132
G23K **Bananza Creek** 5.40 360 P Pn 20 16 44.9 +1.0
baz=180
G21K **Allakaket** 5.43 345 P Pn 20 16 45.2 +0.9
baz=162
YUK4 **Talbot Arm** 5.46 85 P Pn 20 16 46.1 +1.3
baz=274
PNL **Peninsula** 5.49 103 Pn 20 16 44.7 -0.3
PNL **Peninsula** 5.49 103 P Pn 20 16 44.9 -0.2
baz=292
G24K **Hadweenzic Riv** 5.50 10 P Pn 20 16 46.5 +1.3
baz=192
L15K **Ungalak Mounta** 5.52 279 Pn 20 16 45.9 +0.4
L15K **Ungalak Mounta** 5.52 279 P Pn 20 16 45.9 +0.4
baz=89,SNR=9.1
M29M **Somme Creek** 5.56 73 Pn 20 16 46.5 +0.4
M29M **Somme Creek** 5.56 73 P Pn 20 16 46.8 +0.7
baz=263,SNR=33
K15K **Wolf Creek Mou** 5.56 285 Pn 20 16 46.5 +0.5
K15K **Wolf Creek Mou** 5.56 285 P Pn 20 16 46.7 +0.7
baz=95,SNR=18
I17K **Unalakleet** 5.57 302 P Pn 20 16 47.0 +0.8
baz=113
DAWY **Dawson** 5.59 56 Pn 20 16 47.1 +0.6
DAWY **Dawson** 5.59 56 P Pn 20 16 47.2 +0.7
baz=245,SNR=16
YUK6 **Outpost Mounta** 5.64 89 Pn 20 16 47.6 +0.2
YUK6 **Outpost Mounta** 5.64 89 P Pn 20 16 47.9 +0.5
baz=279
O29M **Mount Kennedy** 5.67 95 Pn 20 16 48.0 +0.3
O29M **Mount Kennedy** 5.67 95 P Pn 20 16 47.8 +0.1
baz=285
I27K **Kandik River** 5.69 38 Pn 20 16 49.2 +1.3
I27K **Kandik River** 5.69 38 P Pn 20 16 49.1 +1.3
baz=225,SNR=37
G25K **Bearman Lake** 5.71 16 Pn 20 16 49.7 +1.6
G25K **Bearman Lake** 5.71 16 P Pn 20 16 49.4 +1.3
baz=199
H17K **Granite Mounta** 5.78 313 Pn 20 16 50.0 +1.0
H17K **Granite Mounta** 5.78 313 P Pn 20 16 49.6 +0.7
baz=124
L29M **L29M** 5.82 67 P Pn 20 16 50.6 +0.9
baz=257,SNR=7.0
M14K **Bethel** 5.85 270 P Pn 20 16 51.0 +1.0
baz=79,SNR=25
YUK5 **Granite Creek** 5.86 87 Pn 20 16 50.5 +0.3
COLD **Coldfoot** 5.92 359 P Pn 20 16 52.6 +1.7
baz=179
N14K **Kuskokwak Cree** 5.93 261 Pn 20 16 52.0 +0.9
N14K **Kuskokwak Cree** 5.93 261 P Pn 20 16 51.3 +0.2
baz=71,SNR=12
O14K **Tigyukauivet M** 5.99 255 Pn 20 16 52.7 +0.9
O14K **Tigyukauivet M** 5.99 255 P Pn 20 16 52.7 +0.9
baz=65
G18K **Tagagawik** 5.99 324 Pn 20 16 52.8 +0.9
G18K **Tagagawik** 5.99 324 P Pn 20 16 52.9 +0.9
baz=136
HYT **Haines Junctio** 6.08 89 P Pn 20 16 53.8 +0.6
baz=280
F21K **Alatna River** 6.11 347 P Pn 20 16 54.7 +1.2
baz=164,SNR=8.2
I28M **Miner Creek** 6.11 43 Pn 20 16 54.6 +0.9
I28M **Miner Creek** 6.11 43 P Pn 20 16 54.8 +1.1
baz=232,SNR=25
L14K **Kuka Creek** 6.12 276 Pn 20 16 54.4 +0.9
L14K **Kuka Creek** 6.12 276 P Pn 20 16 54.7 +1.1
baz=85
H27K **Steamboat Moun** 6.18 34 P Pn 20 16 55.5 +1.0
baz=221
N30M **Aishikik Lake** 6.19 83 P Pn 20 16 54.6 -0.2
baz=274,SNR=8.5
G26K **Porcupine Rive** 6.25 23 Pn 20 16 56.3 +0.8
G26K **Porcupine Rive** 6.25 23 P Pn 20 16 56.3 +0.8
baz=208,SNR=14
CHIR **Chirikof Islan** 6.26 211 P Pn 20 16 56.6 +1.0
F20K **Avaraart Lake** 6.26 339 Pn 20 16 56.1 +0.6
F20K **Avaraart Lake** 6.26 339 P Pn 20 16 56.5 +0.9
baz=154
F24K **Squaw Lake** 6.28 7 P Pn 20 16 57.4 +1.5
baz=189
K29M **Barlow Dome** 6.28 61 P Pn 20 16 57.3 +1.3
baz=252

P29M **Windy Craggy** 6.29 100 P Pn 20 16 56.8 +0.8
baz=291,SNR=21
M30M **Minto, Yukon** 6.34 73 P Pn 20 16 58.6 +1.8
baz=264
G17K **Kiwalik Mounta** 6.36 316 P Pn 20 16 58.3 +1.4
baz=126
F19K **Shaleruckik Mo** 6.49 332 P Pn 20 17 00.0 +1.3
baz=145
H16K **Elim** 6.49 306 P Pn 20 17 00.1 +1.3
baz=115
P30M **Million Dollar** 6.50 95 Pn 20 16 59.1 +0.2
P30M **Million Dollar** 6.50 95 P Pn 20 16 59.0 0.0
baz=286
J14K **Nanvaranak Lak** 6.54 288 Pn 20 17 00.2 +0.8
J14K **Nanvaranak Lak** 6.54 288 P Pn 20 17 00.2 +0.8
baz=97
BMAR **Burnt Mountain** 6.55 19 Pn 20 17 00.2 +0.6
F25K **Christian Rive** 6.56 15 Pn 20 17 01.1 +1.3
F25K **Christian Rive** 6.56 15 P Pn 20 17 01.3 +1.5
baz=198,SNR=12
BM01 **Burnt Mountain** 6.58 19 Pn 20 17 01.0 +1.0
G27K **Doyon Strip** 6.59 30 Pn 20 17 01.1 +0.9
G27K **Doyon Strip** 6.59 30 P Pn 20 17 01.4 +1.2
baz=217
M13K **Dall Lake** 6.59 268 Pn 20 17 01.1 +1.0
M13K **Dall Lake** 6.59 268 P Pn 20 17 00.8 +0.6
baz=76
E23K **Chandalar** 6.76 1 P Pn 20 17 03.5 +1.1
baz=181,SNR=6.4
O30N **Mendenhall** 6.77 89 Pn 20 17 02.3 -0.3
O30N **Mendenhall** 6.77 89 P Pn 20 17 02.9 +0.3
baz=281
F18K **Selawik** 6.78 325 P Pn 20 17 04.3 +1.6
baz=137
E24K **Your Creek** 6.80 5 P Pn 20 17 04.0 +0.9
baz=186
N31M **Braeburn, Yuko** 6.82 82 P Pn 20 17 03.6 +0.4
baz=275
F26K **Sheenjek River** 6.86 19 P Pn 20 17 05.2 +1.3
baz=204,SNR=14
E22K **Anaktuvuk Pass** 6.88 354 P Pn 20 17 05.8 +1.7
baz=172
G16K **Koyuk River** 6.89 312 P Pn 20 17 05.7 +1.5
baz=121
E19K **Redstone River** 6.90 336 Pn 20 17 05.2 +0.8
E19K **Redstone River** 6.90 336 P Pn 20 17 05.2 +0.8
baz=150
PLBC **Pleasant Camp** 7.00 100 P Pn 20 17 06.4 +0.7
baz=291
J30M **Hart River** 7.02 56 P Pn 20 17 07.4 +1.3
baz=248,SNR=28
K13K **Kusilvak Mount** 7.02 281 P Pn 20 17 06.6 +0.6
baz=89
E25K **Arctic Village** 7.07 14 P Pn 20 17 08.0 +1.3
baz=197,SNR=10.0
S14K **Fog Glacier** 7.09 229 P Pn 20 17 07.6 +0.6
baz=41
H29M **Whitestone** 7.10 41 P Pn 20 17 09.1 +2.0
baz=232,SNR=11
F17K **Baldwin Pennin** 7.14 321 P Pn 20 17 09.3 +1.8
baz=131
I30M **Mount Dempster** 7.26 52 P Pn 20 17 10.5 +1.0
baz=244
TOLK **Toolik Lake Re** 7.34 1 P Pn 20 17 12.6 +2.2
baz=181
WHY **Whitehorse** 7.37 89 Pn 20 17 10.4 -0.5
WHY **Whitehorse** 7.37 89 P Pn 20 17 11.0 +0.1
baz=282
E20K **Nigu River** 7.44 342 P Pn 20 17 13.4 +1.6
baz=156
M31M **Drury Creek, Y** 7.45 76 P Pn 20 17 12.9 +1.1
baz=270,SNR=5.5
E18K **Tukpahlearik C** 7.64 328 P Pn 20 17 16.2 +1.7
baz=138
G29M **Pine Creek** 7.65 38 P Pn 20 17 16.5 +1.8
baz=228
F28M **Old Crow** 7.66 30 P Pn 20 17 16.2 +1.4
baz=215
D22K **Ayikyak River** 7.67 353 P Pn 20 17 17.1 +2.3
baz=170
D23K **Nanushuk River** 7.67 358 P Pn 20 17 17.3 +2.4
baz=177
EPYK **Eagle Plains** 7.73 43 P Pn 20 17 16.8 +1.1
baz=235,SNR=8.7
E17K **Hotham Inlet** 7.74 323 P Pn 20 17 16.6 +0.8
baz=133
E27K **Coleen River** 7.75 24 P Pn 20 17 17.1 +1.0
baz=211,SNR=12
D24K **Happy Valley** 7.87 3 P Pn 20 17 19.9 +2.3
baz=184
F15K **North Star Dit** 7.88 310 P Pn 20 17 19.5 +1.8
baz=117
D20K **Etivluk River** 7.92 342 P Pn 20 17 20.1 +1.8
baz=156
D19K **Kuna River** 7.97 338 P Pn 20 17 20.7 +1.7
baz=150
M11K **Mekoryuk** 7.98 270 P Pn 20 17 20.1 +1.0
baz=76
C21K **Knifeblade Rid** 8.11 348 P Pn 20 17 22.1 +1.2
baz=163
P32M **Atlin** 8.22 95 P Pn 20 17 22.8 +0.3
baz=289
G30M **tAoh Zraii Nji** 8.25 41 P Pn 20 17 24.2 +1.4
baz=233,SNR=8.0
H31M **Peel River** 8.28 50 P Pn 20 17 24.7 +1.5
baz=244
F14K **Arctic Creek** 8.42 307 P Pn 20 17 26.5 +1.4
baz=112
S12K **Black Hills** 8.47 234 P Pn 20 17 26.0 +0.2
baz=43
P33M **Teslin, Yukon** 8.47 90 P Pn 20 17 25.7 -0.2
baz=285
E28M **Babbage River** 8.52 27 P Pn 20 17 27.8 +1.3
baz=216
C27K **Jago River** 8.72 15 P Pn 20 17 31.3 +2.0
baz=200
E29M **Blow River** 8.73 31 P Pn 20 17 30.5 +1.1
baz=222
S32K **Killisnoo** 8.75 109 P Pn 20 17 29.6 -0.1
baz=303
F30M **Barrier River** 8.77 38 P Pn 20 17 32.4 +2.5
baz=231
D27M **Malcolm River** 8.78 21 Pn 20 17 31.1 +0.9
D27M **Malcolm River** 8.78 21 P Pn 20 17 31.5 +1.4
baz=210
MMPY **Sheldon Lake,** 8.90 73 P Pn 20 17 33.9 +2.1
baz=270
TNA **Tin City** 9.07 306 P Pn 20 17 35.7 +1.7
baz=110
Q32M **Nakina River** 9.14 97 P Pn 20 17 35.6 +0.4
baz=292
D28M **Stokes Point** 9.28 25 P Pn 20 17 38.5 +1.6
baz=216
F31M **Tsiigehtchic** 9.30 42 P Pn 20 17 38.4 +1.3
baz=236
R33M **Jennings River** 9.61 93 Pn 20 17 41.6 0.0
R33M **Jennings River** 9.61 93 P Pn 20 17 42.3 +0.7
baz=290
INK **Inuvik** 9.87 38 P Pn 20 17 46.5 +1.5
comp=E,4.0nm,0.6s,baz=245,slow=11,SNR=21
INK S Sn 20 19 36.9 +2.8
comp=E,14nm,0.7s,baz=291,slow=8.7,SNR=7.0
INK LR LR 20 22 31.4
comp=E,121nm,20.2s,baz=72,slow=43
INK **Inuvik** 9.87 38 P Pn 20 17 46.3 +1.4
baz=233
A19K **Wainwright** 9.98 338 P Pn 20 17 47.5 +1.1
baz=148
DLBC **Dease Lake** 10.43 97 P Pn 20 17 56.2 +3.6
comp=E,1.0nm,0.4s,baz=198,slow=20,SNR=2.3
DLBC LR LR 20 22 26.6
comp=E,126nm,21.1s,baz=302,slow=40
T35M **Bob Quinn** 11.01 105 P Pn 20 18 00.9 +0.3
baz=301
P08K **Saint George I** 11.14 254 P Pn 20 18 01.1 -1.1
baz=57
SPIA **Saint Paul Isl** 11.16 257 P Pn 20 18 01.9 -0.6
baz=60
UNV **Unalaska Valle** 11.59 237 P Pn 20 18 08.5 +0.1
baz=43
YKA **Yellowknife Ar** 16.57 70 P Pn 20 19 15.8 +1.2
comp=E,1.3nm,0.5s,baz=290,slow=13,SNR=7.5
PINE **Pine Mountain** 24.57 122 P P 20 20 42.6 +1.5
ELK **Elko** 29.46 118 P P 20 21 26.2 +1.1
NVAR **Mina Array Bea** 30.16 125 P P 20 21 32.3 +0.9
NVAR **Mina Array Bea** 30.16 125 P P 20 21 32.6 +1.3
comp=E,0.9nm,0.6s,baz=320,slow=9.2,SNR=6.9
comp=E,0.9nm,0.6s

PDAR **Pinedale Array** 30.34 109 P P 20 21 33.0 +0.2
PDAR **Pinedale Array** 30.34 109 P P 20 21 33.6 +0.7
comp=E,0.7nm,0.6s,baz=325,slow=5.1,SNR=9.3
comp=E,0.7nm,0.6s
R11B **Troy Canyon, C** 31.33 121 P P 20 21 42.6 +1.0
ULM **Lac du Bonnet** 31.44 86 IAmb IAmb 20 21 43.8
comp=Z,13nm,1.1s
ULM **Lac du Bonnet** 31.44 86 P P 20 21 43.1 +0.9
comp=Z,4.9nm,0.7s,baz=300,slow=7.2,SNR=3.6
ULM LR LR 20 36 25.6
comp=Z,85nm,18.5s,baz=318,slow=40
comp=Z,4.9nm,0.7s
BSUT **Blindstream Ca** 31.58 113 P P 20 21 45.6 +1.7
BSUT IAmb IAmb 20 21 47.4
comp=Z,6.0nm,1.4s
RSSD **Black Hills** 31.87 101 P P 20 21 47.6 +1.3
RSSD IAmb IAmb 20 22 00.2
comp=Z,19nm,1.5s
KNB **Kanab** 33.62 119 P P 20 22 02.8 +1.2
KNB IAmb IAmb 20 22 04.6
comp=Z,4.1nm,0.9s
WUAZ **Wupatki** 35.50 119 P P 20 22 19.5 +1.6
WUAZ IAmb IAmb 20 22 20.6
comp=Z,4.9nm,0.8s
X18A **Snowflake** 36.95 118 P P 20 22 31.3 +1.1
X18A IAmb IAmb 20 22 33.0
comp=Z,2.9nm,0.6s
G40A **Rib Lake** 37.66 87 P P 20 22 36.2 +0.3
G40A IAmb IAmb 20 22 42.9
comp=Z,14nm,1.3s
SPITS **Spitsbergen Ar** 40.48 4 P P 20 22 58.5 -0.6
comp=Z,1.3nm,0.3s,baz=29,slow=6.6,SNR=18
comp=Z,1.3nm,0.3s
SPB2 **Spitsbergen Ar** 40.49 4 P P 20 22 58.7 -0.5
SADO **Sadowa** 43.31 79 LR LR 20 42 03.2
comp=Z,72nm,20.6s,baz=360,slow=37
TXAR **Lajitas Array** 44.12 115 P P 20 23 30.6 +1.2
comp=Z,0.6nm,0.7s,baz=332,slow=7.1,SNR=6.9
comp=Z,0.6nm,0.7s
L56A **Greenwood** 46.06 80 P P 20 23 44.8 +0.3
P53A **Whipple** 46.28 85 P P 20 23 46.2 0.0
SSPA **Standing Stone** 47.06 82 P P 20 23 51.9 -0.5
F64A **Sherman** 47.49 70 P P 20 23 55.2 -0.4
FPAL **Fort Paine** 48.19 93 P P 20 24 01.1 0.0
FPAL IAmb IAmb 20 24 21.3
comp=Z,12nm,1.5s
ARCES **ARCESS Array B** 49.38 2 P P 20 24 09.1 -0.7
ARCES IAmb IAmb 20 24 09.4
comp=Z,12nm,1.5s
ARCES PcP PcP 20 25 30.7 -0.8
ARCES **ARCESS Array B** 49.38 2 P P 20 24 08.4 -1.4
comp=Z,1.5nm,0.6s,baz=352,slow=7.4,SNR=4.8
ARCES PcP PcP 20 25 29.4 -2.0
comp=Z,2.1nm,0.8s,baz=348,slow=3.9,SNR=4.4
comp=Z,1.5nm,0.6s
LVZ **Lovozero** 51.02 358 P P 20 24 21.9 -0.4
KSRS **Korea Array** 54.32 284 P P 20 24 47.1 +0.2
comp=Z,1.0nm,0.7s,baz=34,slow=6.6,SNR=4.0
comp=Z,1.0nm,0.7s
SONM **Songino Array** 55.19 307 P P 20 24 54.2 +0.8
SONM **Songino Array** 55.19 307 P P 20 24 54.4 +1.0
comp=Z,0.6nm,0.5s,baz=43,slow=7.3,SNR=5.6
NB2 **NORSAR Subarra** 57.10 11 P P 20 25 05.5 -1.2
comp=Z,0.7nm,0.7s,baz=350,slow=6.9
NOA **NORSAR Array B** 57.10 11 P P 20 25 05.7 -1.0
comp=Z,0.8nm,0.6s,baz=350,slow=7.0,SNR=4.9
comp=Z,0.8nm,0.6s
ZALV **Zalesovo Beam** 57.16 325 P P 20 25 03.8 -3.3
comp=Z,0.5nm,0.4s,baz=15,slow=6.2,SNR=3.6
comp=Z,0.5nm,0.4s
FIA1 **FINESS Array S** 57.51 2 P P 20 25 08.8 -0.7
FINES **FINESS Array B** 57.51 2 P P 20 25 08.1 -1.4
FINES **FINESS Array B** 57.51 2 P P 20 25 08.5 -1.0
comp=Z,1.8nm,0.6s,baz=359,slow=8.7,SNR=22
comp=Z,1.8nm,0.6s
HFS **Hagfors** 58.21 10 P P 20 25 12.9 -1.5
comp=Z,2.2nm,0.8s,baz=53,slow=5.6,SNR=6.3
comp=Z,2.2nm,0.8s
HHC **Hu-ho-hao-te** 58.87 299 eP P 20 25 22.7 +3.3
HHC pmax pmax
HHC pmax pmax
comp=Z,4.0nm,0.5s
comp=Z,68nm,5.6s
ARTI **Arti** 60.52 342 P 20 25 29.5 -0.9
EKA **Eskdalemuir Ar** 60.77 21 P P 20 25 31.4 -0.7
comp=Z,0.4nm,0.3s,baz=342,slow=7.1,SNR=9.2
comp=Z,0.4nm,0.3s
BVAR **Borovoye Array** 61.56 334 P P 20 25 36.1 -1.4
comp=Z,1.8nm,0.5s,baz=36,slow=6.2,SNR=9.3
comp=Z,1.8nm,0.5s
KURBB **Kurchatov Arra** 61.85 327 P P 20 25 36.9 -2.5
comp=Z,1.1nm,0.4s,baz=28,slow=6.8,SNR=7.1
comp=Z,1.1nm,0.4s
PABE **Paberze** 63.41 4 P P 20 25 49.3 -0.4
MKAR **Makanchi Array** 64.29 323 P P 20 25 54.0 -1.8
MKAR **Makanchi Array** 64.29 323 P P 20 25 54.1 -1.6
comp=Z,0.7nm,0.5s,baz=40,slow=6.6,SNR=17
comp=Z,0.7nm,0.5s
MAKZ **Makanchi** 64.37 323 P P 20 25 54.5 -1.8
MAKZ IAmb IAmb 20 26 03.3
comp=Z,3.9nm,1.5s
AB31 **Akbulak array** 67.17 339 P 20 26 13.6 -0.6
AB31 IAmb IAmb 20 26 13.9
comp=Z,1.6nm,0.7s
ABKAR **Akbulak array** 67.17 339 P P 20 26 13.0 -1.2
AKASG **Malin Array Be** 68.32 1 P P 20 26 20.1 -1.3
AKASG IAmb IAmb 20 26 21.5
comp=Z,5.5nm,1.4s
AKASG **Malin Array Be** 68.32 1 P P 20 26 20.5 -0.8
comp=Z,1.7nm,0.4s,baz=2.7,slow=6.3,SNR=9.3
comp=Z,1.7nm,0.4s
AKBB **Malin Array Si** 68.32 1 P P 20 26 20.2 -1.1
AKBB IAmb IAmb 20 26 21.2
comp=Z,4.9nm,0.8s
KIEV **Kiev** 68.32 1 P P 20 26 20.3 -1.1
KIEV IAmb IAmb 20 26 21.2
comp=Z,4.7nm,0.9s
MORC **Moravsky Berou** 68.79 9 eP P 20 26 24.3 -0.1
VRAC **Vranov** 69.19 9 eP P 20 26 27.2 +0.4
GERES **GERESS Array B** 69.39 11 P P 20 26 28.2 0.0
comp=Z,1.1nm,0.9s,baz=313,slow=4.7,SNR=6.0
comp=Z,1.1nm,0.9s
KRUC **Moravsky** 69.41 10 eP P 20 26 28.2 0.0
CONA **Conrad Observa** 70.50 10 i P P 20 26 35.5 +0.5
comp=Z,0.4nm,0.3s
MOTA **Moosalm** 70.61 14 eP P 20 26 35.9 +0.2
comp=Z,0.7nm,0.4s
LESA **Schwarzleotal** 70.70 12 eP P 20 26 36.4 +0.2
comp=Z,0.3nm,0.3s
WTTA **Wattenberg** 70.75 13 eP P 20 26 37.0 +0.4
comp=Z,0.7nm,0.3s
KKAR **Karatay Array** 70.86 330 P P 20 26 36.4 -0.8
FETA **Feichten** 70.88 14 i P P 20 26 38.0 +0.6
comp=Z,1.4nm,0.7s
KBA **Koelnbreinsper** 71.11 12 i P P 20 26 39.3 +0.5
comp=Z,4.9nm,0.7s
FUORN **Ofenpass-Fuorn** 71.22 14 P P 20 26 39.4 -0.2
FUORN IAmb IAmb 20 26 40.0
comp=Z,2.9nm,0.9s
TUE **Stuetta** 71.26 15 P P 20 26 39.5 -0.3
TUE IAmb IAmb 20 26 41.1
comp=Z,2.8nm,0.8s
BUR08 **Bucovina Ar. S** 71.31 3 P P 20 26 40.0 +0.1
BURAR **Bucovina Array** 71.34 3 P P 20 26 40.1 0.0
ABTA **Abfaltersbach** 71.35 13 eP P 20 26 41.1 +1.0
comp=Z,1.2nm,0.5s
SOKA **Soboth** 71.67 11 i P P 20 26 42.7 +0.7
comp=Z,1.2nm,0.6s
OBKA **Obir** 71.79 11 i P P 20 26 43.2 +0.3
comp=Z,4.9nm,0.6s
KBZ **Khabaz** 74.77 350 P P 20 26 59.8 -0.5
comp=Z,2.7nm,0.9s,baz=333,slow=4.5,SNR=7.1
comp=Z,2.7nm,0.9s
FDMO **Fiordimonte** 75.08 13 P P 20 27 02.0 -0.2
NRCA **Norcia** 75.28 13 P P 20 27 02.7 -0.7
PZH **PanZhiHua** 75.33 298 P P 20 27 06.5 +2.6
ESDC **Sonseca Array** 75.61 26 P P 20 27 05.5 +0.2
ESDC **Sonseca Array** 75.61 26 P P 20 27 05.1 -0.2
comp=Z,1.1nm,0.8s,baz=338,slow=5.7,SNR=6.1
comp=Z,1.1nm,0.8s
RDO **Rodhopi** 77.81 3 P P 20 27 18.0 +0.4
BAUV **El Baul** 78.34 93 P P 20 27 19.4 -1.4
RUSC **La Rusia** 78.57 99 P P 20 27 20.8 -1.9
RUSC IAmb IAmb 20 27 22.9
comp=Z,4.3nm,0.9s
BRTR **Keskin Array B** 79.25 357 P P 20 27 25.0 -0.7
BRTR **Keskin Array B** 79.25 357 P P 20 27 24.3 -1.4

comp=Z,0.6nm,0.8s,baz=304,slow=2.4,SNR=3.9
comp=Z,0.6nm,0.8s

VAE	**Valguarnera**	**80.72**	**13**	LR	LR	21 06 23.2
	comp=Z,42nm,18.2s,baz=104,slow=38					
KEST	**Kesra**	**81.82**	**17**	LR	LR	21 06 51.4
	comp=Z,32nm,21.3s,baz=298,slow=38					
MD01	**Midelt array s**	**81.96**	**29**	P	**P**	**20 27 39.4 -0.9**
CMAR	**Chiang Mai Arr**	**83.62**	**297**	P	**P**	**20 27 48.6 -0.4**
	comp=Z,0.5nm,0.6s,baz=11,slow=6.6,SNR=6.2					
	comp=Z,0.5nm,0.6s					
BOSA	**Boshof**	**147.13**	**8**	PKPdf	**PKPdf**	**20 35 02.0 +1.2**
BOSA	**Boshof**	**147.13**	**8**	PKPbc	**PKPdf**	**20 35 02.0 +1.2**
	comp=Z,1.8nm,0.8s,baz=1.3,slow=6.1,SNR=4.3					
QSPA	**South Pole Qui**	**151.14**	**180**		**PKiKP**	**20 35 13.5 +1.1**
QSPA	**South Pole Qui**	**151.14**	**180**	PKPbc	**PKiKP**	**20 35 14.2 +1.8**
	comp=Z,2.3nm,0.5s,baz=3.8,slow=1.1,SNR=8.6					
BELA	**Belgrano 2**	**154.14**	**154**	PKPbc	**PKPbc**	**20 35 16.6 -1.6**

*TAP **08** 20:18:56.9, 24˚.84N×122˚.17E, h12km, ML3.0, C*
*JMA **08** 20:18:57.4±0.1, 24˚.7N±0˚.8×122˚.2E±0˚.4, h0km, MV2.7/10, TAIWAN REGION*
ISC 08 20:18:57.0±0.9**, 24˚.84N**±0˚.02×**122˚.18E**±0˚.02**, h12**km±7km**,**
n97,σ0²**76**/191**, 2C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.23**	**272**	*i* P	**Pb**	**20 19 02.3**	**-0.7**
EGS				*e*S	**Sg**	**20 19 05.8**	**+0.7**
TWB1	**Santiao Chiao**	**0.25**	**314**	⇑*i* P	**Pg**	**20 19 02.3**	**+0.1**
TWB1				*i* S	**Sg**	**20 19 05.6**	**-0.1**
TIPB	**Shuangxi**	**0.35**	**293**	*i* P	**Pb**	**20 19 04.4**	**-0.8**
TIPB				*e*S	**Sb**	**20 19 09.4**	**-1.3**
TWC	**Suao**	**0.38**	**233**	*i* P	**Pg**	**20 19 04.3**	**-0.2**
TWC				S	**Sg**	**20 19 09.5**	**-0.1**
SXI1	**Grass Mountain**	**0.38**	**313**	*i* P	**Pb**	**20 19 05.1**	**-0.6**
SXI1				*e*S	**Sb**	**20 19 10.7**	**-0.9**
ILA	**Ilan**	**0.40**	**260**	*i* P	**Pb**	**20 19 05.8**	**-0.2**
ILA				*e*S	**Sb**	**20 19 13.0**	**+0.9**
ESAO	**Su ao**	**0.40**	**230**	*i* P	**Pb**	**20 19 05.4**	**-0.6**
ESAO				*i* S	**Sg**	**20 19 10.1**	**-0.2**
NWF	**Wu-fen Shan**	**0.43**	**303**	*i* P	**Pb**	**20 19 06.2**	**-0.4**
NWF				*i* S	**Sb**	**20 19 12.6**	**-0.5**
WFSB	**Wu-fen Shan**	**0.43**	**303**	*i* P	**Pb**	**20 19 06.6**	**+0.1**
WFSB				S	**Sb**	**20 19 12.6**	**-0.4**
NDS	**Dongshan**	**0.47**	**245**	*i* P	**Pg**	**20 19 06.2**	**-0.1**
NDS				*e*S	**Sb**	**20 19 13.3**	**-0.8**
TWE	**Neicheng**	**0.48**	**256**	⇓*i* P	**Pg**	**20 19 06.3**	**-0.1**
TWE				*i* S	**Sb**	**20 19 13.6**	**-0.8**
TNOU	**National Taiwa**	**0.49**	**310**	*i* P	**Pb**	**20 19 07.3**	**-0.2**
TNOU				*e*S	**Sb**	**20 19 14.4**	**-0.1**
EWUT	**Wuta**	**0.54**	**224**	*i* P	**Pg**	**20 19 07.3**	**-0.1**
EWUT				*i* S	**Sg**	**20 19 14.1**	**-0.4**
FUSB	**Fushanzhiwuyua**	**0.55**	**262**	*i* P	**Pg**	**20 19 07.8**	**+0.1**
FUSB				S	**Sb**	**20 19 16.1**	**-0.2**
TWA	**Mucha**	**0.56**	**285**	*i* P	**Pn**	**20 19 09.7**	**-1.1**
TWA				*e*S	**Sb**	**20 19 17.7**	**+1.0**
ENA	**Nanau**	**0.57**	**225**	*i* P	**Pg**	**20 19 08.2**	**0.0**
ENA				*i* S	**Sg**	**20 19 15.3**	**-0.4**
ENTT	**Nioudou**	**0.59**	**251**	*i* P	**Pg**	**20 19 08.7**	**+0.1**
ENTT				*i* S	**Sb**	**20 19 17.6**	**-0.1**
NHDH	**Xindian Distri**	**0.61**	**282**	⇑*i* P	**Pn**	**20 19 10.9**	**-0.5**
NHDH				*i* S	**Sn**	**20 19 20.1**	**-1.0**
NWLT	**Wulai**	**0.62**	**265**	*i* P	**Pg**	**20 19 09.0**	**-0.1**
NWLT				*e*S	**Sg**	**20 19 17.4**	**+0.1**
YM01	**YM01**	**0.64**	**299**	*i* P	**Pb**	**20 19 10.4**	**+0.3**
YM01				*e*S	**Sb**	**20 19 19.8**	**+0.9**
YM08	**YM08**	**0.64**	**303**	*i* P	**Pb**	**20 19 10.1**	**0.0**
YM08				*e*S	**Sb**	**20 19 19.4**	**+0.3**
EAHA	**Aohua**	**0.65**	**219**	*i* P	**Pg**	**20 19 09.3**	**-0.2**
EAHA				*i* S	**Sg**	**20 19 18.0**	**0.0**
TATO	**Taipei**	**0.65**	**283**	*i* P	**Pn**	**20 19 11.2**	**-0.7**
TATO				S	**Sn**	**20 19 20.9**	**-1.2**
ZUZH	**Zhuzihu**	**0.66**	**299**	*i* P	**Pb**	**20 19 10.6**	**+0.1**
ZUZH				*e*S	**Sb**	**20 19 19.6**	**-0.1**
LATG	**Datong**	**0.67**	**244**	*i* P	**Pg**	**20 19 09.9**	**0.0**
LATG				S	**Sb**	**20 19 19.2**	**-0.7**
TWY	**Chenhua**	**0.69**	**310**	*i* P	**Pb**	**20 19 11.2**	**+0.4**
TWY				*i* S	**Sb**	**20 19 21.4**	**+1.1**
ANP	**Anpu**	**0.69**	**300**	*i* P	**Pb**	**20 19 11.1**	**0.0**
ANP				*e*S	**Sn**	**20 19 22.1**	**-1.4**
NTST	**Danshui**	**0.74**	**296**	*i* P	**Pn**	**20 19 12.6**	**-0.7**
NTST				*i* S	**Sn**	**20 19 23.9**	**-0.5**
TWS1	**Kuangyinshan**	**0.74**	**291**	*i* P	**Pn**	**20 19 12.5**	**-0.8**
TWS1				*i* S	**Sn**	**20 19 24.3**	**-0.2**
YHNB	**Yeheng**	**0.75**	**257**	*i* P	**Pg**	**20 19 11.2**	**-0.3**
YHNB				*e*S	**Sb**	**20 19 22.0**	**-0.3**
NSK	**Sanguang**	**0.77**	**258**	*i* P	**Pg**	**20 19 11.4**	**-0.4**
NSK				*e*S	**Sg**	**20 19 21.9**	**+0.1**
JYNG	**Yonagunijimaku**	**0.79**	**119**	*e*S	**Sg**	**20 19 23.1**	**+0.4**
PCYT	**Pengchaiyu**	**0.80**	**353**	*i* P	**Pb**	**20 19 12.6**	**-0.2**
PCYT				*e*S	**Sn**	**20 19 25.3**	**-0.5**
NNSB	**Datong**	**0.83**	**241**	*i* P	**Pg**	**20 19 12.9**	**-0.2**
NNSB				*i* S	**Sb**	**20 19 24.6**	**-0.1**
NNSH	**Datong**	**0.83**	**241**	*i* P	**Pg**	**20 19 12.9**	**-0.2**
NNSH				S	**Sg**	**20 19 23.9**	**-0.1**
NNS	**Nan Shan**	**0.83**	**242**	*i* P	**Pg**	**20 19 13.1**	**-0.1**
NNS				*i* S	**Sb**	**20 19 24.3**	**-0.5**
YOJ	**Yonaguni jima**	**0.84**	**116**	*e*P	**Pg**	**20 19 13.2**	**0.0**
YOJ				S	**Sg**	**20 19 24.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.84**	**116**	P	**Pb**	**20 19 13.7**	**+0.2**
YOJ				*e*S	**Sg**	**20 19 23.9**	**-0.4**
ETL	**Fush Village**	**0.84**	**217**	*i* P	**Pg**	**20 19 13.0**	**-0.3**
ETL				S	**Sg**	**20 19 24.3**	**-0.1**
NACB	**Ninganchiao**	**0.85**	**219**	*i* P	**Pg**	**20 19 12.8**	**-0.6**
NACB				*i* S	**Sg**	**20 19 23.7**	**-0.8**
ETLH	**Xiulin Townshi**	**0.89**	**226**	*i* P	**Pg**	**20 19 14.1**	**-0.1**
ETLH				S	**Sg**	**20 19 25.6**	**-0.4**
NCUH	**Zhongli**	**0.92**	**278**	P	**Pn**	**20 19 16.7**	**+1.0**
NCUH				*e*S	**Sn**	**20 19 27.7**	**-1.0**
KSHI	**Guanxi Townshi**	**0.92**	**267**	*i* P	**Pn**	**20 19 16.1**	**+0.4**
KSHI				*e*S	**Sn**	**20 19 28.1**	**-0.6**
TWD	**Chiawan**	**0.92**	**216**	*i* P	**Pg**	**20 19 14.4**	**-0.3**
TWD				*i* S	**Sg**	**20 19 26.2**	**-0.7**
NFF	**Wufeng Townshi**	**0.99**	**258**	*i* P	**Pn**	**20 19 17.1**	**+0.4**
NFF				S	**Sn**	**20 19 31.5**	**+0.8**
NJD	**Zhudong**	**1.00**	**265**	*i* P	**Pn**	**20 19 17.6**	**+0.8**
NJD				*e*S	**Sn**	**20 19 33.4**	**+2.6**
FUSS	**Fushou**	**1.04**	**236**	*i* P	**Pb**	**20 19 16.9**	**-0.1**
FUSS				*i* S	**Sn**	**20 19 31.4**	**-0.7**
ETM	**Tongmen**	**1.07**	**216**	*i* P	**Pb**	**20 19 16.8**	**-0.6**
ETM				S	**Sg**	**20 19 31.4**	**-0.1**
LXIB	**Xiulin Townshi**	**1.07**	**221**	*i* P	**Pb**	**20 19 17.0**	**-0.5**
LXIB				*i* S	**Sb**	**20 19 31.8**	**+0.2**
LIOB	**Emei**	**1.08**	**260**	*i* P	**Pn**	**20 19 18.4**	**+0.5**
LIOB				*i* S	**Sn**	**20 19 34.9**	**+2.1**
WHF	**Hehuan Shan**	**1.08**	**231**	*i* P	**Pg**	**20 19 17.7**	**-0.2**
WHF				*i* S	**Sb**	**20 19 32.5**	**+0.3**
TWT	**Tachien**	**1.08**	**238**	P	**Pn**	**20 19 18.7**	**+0.6**
TWT				*e*S	**Sn**	**20 19 34.4**	**+1.2**
SBCB	**Hsinchu**	**1.09**	**268**	*e*P	**Pn**	**20 19 18.1**	**+0.1**
SBCB				*e*S	**Sn**	**20 19 33.1**	**+0.1**
NSTT	**Nanjuang**	**1.09**	**260**	*i* P	**Pn**	**20 19 19.7**	**+1.6**
NSTT				*i* S	**Sn**	**20 19 34.2**	**+1.1**
TDCB	**Techi**	**1.10**	**238**	*i* P	**Pn**	**20 19 18.6**	**+0.3**
TDCB				*e*S	**Sg**	**20 19 32.6**	**+0.1**
SHUL	**Shoufeng**	**1.19**	**209**	*i* P	**Pg**	**20 19 19.8**	**0.0**
SHUL				*e*S	**Sn**	**20 19 37.7**	**+2.3**
ESL	**Shilin**	**1.23**	**214**	*i* P	**Pn**	**20 19 19.4**	**-0.5**
ESL				*e*S	**Sg**	**20 19 36.2**	**-0.3**
WHP	**Taichung City**	**1.26**	**244**	*i* P	**Pg**	**20 19 21.4**	**+0.3**
WHP				*e*S	**Sn**	**20 19 37.1**	**-0.2**
OWD	**Renai**	**1.27**	**227**	*i* P	**Pb**	**20 19 20.8**	**-0.1**
OWD				*i* S	**Sb**	**20 19 37.2**	**0.0**
WUSB	**Renai**	**1.28**	**229**	*i* P	**Pg**	**20 19 21.4**	**-0.3**
WUSB				S	**Sn**	**20 19 37.9**	**-0.2**
NMLH	**Miaoli**	**1.30**	**257**	P	**Pg**	**20 19 22.8**	**+0.8**
NMLH				*i* S	**Sg**	**20 19 41.8**	**+2.9**
WARBT	**Fenglin Townsh**	**1.33**	**213**	*i* P	**Pb**	**20 19 21.7**	**-0.2**
WARBT				S	**Sg**	**20 19 40.2**	**+0.4**
EGFH	**Guangfu**	**1.35**	**211**	*i* P	**Pg**	**20 19 23.4**	**+0.4**
EGFH				*e*S	**Sg**	**20 19 40.6**	**+0.1**
TWQ1	**Liyutan**	**1.37**	**250**	P	**Pg**	**20 19 24.6**	**+1.2**
TWQ1				S	**Sg**	**20 19 42.6**	**+1.5**
WCS	**Beigang Elemen**	**1.39**	**236**	*i* P	**Pg**	**20 19 23.9**	**+0.1**
WCS				*e*S	**Sg**	**20 19 41.8**	**-0.1**
VWDT	**VWDT**	**1.44**	**222**	*i* P	**Pg**	**20 19 24.4**	**-0.1**
VWDT				S	**Sg**	**20 19 43.8**	**+0.5**
IRIF	**Iriomote-Funau**	**1.49**	**109**	S	**Sb**	**20 19 44.4**	**+0.9**
HGSD	**Ruisui**	**1.51**	**208**	*i* P	**Pb**	**20 19 24.6**	**-0.3**
HGSD				*e*S	**Sg**	**20 19 44.8**	**-0.7**
SMLT	**Sun Moon Lake**	**1.51**	**231**	*i* P	**Pg**	**20 19 25.5**	**-0.4**
SMLT				*e*S	**Sb**	**20 19 44.4**	**+0.4**
TYC	**Yuchr**	**1.52**	**233**	*i* P	**Pg**	**20 19 25.7**	**-0.6**
TYC				*e*S	**Sb**	**20 19 45.0**	**+0.6**
SSLB	**Suanglung**	**1.53**	**227**	*i* P	**Pb**	**20 19 25.7**	**+0.4**
SSLB				S	**Sg**	**20 19 45.7**	**-0.6**
TCU	**Taichung**	**1.53**	**244**	P	**Pg**	**20 19 27.2**	**+0.7**
TCU				*e*S	**Sg**	**20 19 48.3**	**+1.9**
EHY	**Hungye**	**1.54**	**211**	*i* P	**Pn**	**20 19 24.4**	**+0.1**
EHY				*e*S	**Sn**	**20 19 44.3**	**+0.2**
EHYH	**Wanrong**	**1.54**	**210**	*i* P	**Pn**	**20 19 24.3**	**0.0**
EHYH				*e*S	**Sb**	**20 19 45.0**	**+0.2**
YULB	**Yu-li**	**1.65**	**210**	*i* P	**Pn**	**20 19 26.2**	**+0.4**
YULB				*e*S	**Sn**	**20 19 46.6**	**-0.3**
WHYT	**Xinyi Township**	**1.66**	**227**	*i* P	**Pg**	**20 19 29.4**	**+0.5**
WHYT				S	**Sg**	**20 19 50.0**	**-0.4**
WNT	**Mingjian**	**1.67**	**235**	*i* P	**Pg**	**20 19 29.4**	**+0.5**
WNT				*i* S	**Sg**	**20 19 52.9**	**+2.3**
TWF1	**Yuli**	**1.68**	**209**	*i* P	**Pn**	**20 19 26.6**	**+0.3**
TWF1				*e*S	**Sn**	**20 19 47.9**	**+0.2**
YUS	**Yu-Shan**	**1.75**	**220**	*i* P	**Pb**	**20 19 29.5**	**+0.2**
YUS				*e*S	**Sg**	**20 19 52.4**	**-1.0**
FULB	**Fuli**	**1.82**	**207**	*i* P	**Pn**	**20 19 29.1**	**+1.0**
FULB				*e*S	**Sb**	**20 19 53.7**	**+0.7**
ALS	**Alishan**	**1.82**	**224**	*i* P	**Pg**	**20 19 31.8**	**-0.2**
ALS				S	**Sg**	**20 19 55.0**	**-0.7**
JIJ	**Ishigaki jima**	**1.84**	**104**	*e*P	**Pb**	**20 19 30.4**	**-0.2**
JIJ				*e*S	**Sb**	**20 19 53.7**	**0.0**
CHN5	**Tsauling**	**1.85**	**228**	*i* P	**Pg**	**20 19 32.0**	**-0.4**
CHN5				S	**Sg**	**20 19 56.8**	**+0.4**
WDLH	**Douliu**	**1.89**	**233**	*e*P	**Pg**	**20 19 57.2**	**-1.0**
WDLH				*e*S	**Sg**	**20 19 57.2**	**-0.4**
EHD	**Haiduan**	**1.90**	**208**	*i* P	**Pn**	**20 19 29.8**	**+0.6**
EHD				*e*S	**Sn**	**20 19 53.6**	**+0.4**
JISG	**Ishigakijimahi**	**1.95**	**97**	*e*P	**Pb**	**20 19 32.0**	**-0.5**
ELDTW	**Lidau**	**1.96**	**213**	*i* P	**Pb**	**20 19 31.4**	**-1.2**
ELDTW				*e*S	**Sn**	**20 19 55.5**	**+0.9**
CHN4	**Tsaushan**	**2.07**	**225**	*i* P	**Pb**	**20 19 35.0**	**+0.5**
CHN4				*e*S	**Sg**	**20 20 02.0**	**-1.6**
TPUB	**Ta-pu**	**2.09**	**223**	*i* P	**Pb**	**20 19 35.1**	**+0.3**
TPUB				S	**Sg**	**20 20 02.5**	**-1.5**
STYH	**Taoyuan**	**2.10**	**218**	*i* P	**Pb**	**20 19 34.0**	**-0.9**
STYH				S	**Sb**	**20 20 01.9**	**+1.0**
WTP	**Ta-pu**	**2.14**	**223**	*i* P	**Pb**	**20 19 35.9**	**+0.3**
WTP				*e*S	**Sb**	**20 20 02.9**	**+0.8**
TWK	**Hsinying**	**2.20**	**225**	*i* P	**Pb**	**20 19 36.8**	**+0.1**
TWK				*e*S	**Sb**	**20 20 05.6**	**+1.6**
WSL	**Shuilin Townsh**	**2.21**	**234**	*i* P	**Pb**	**20 19 36.5**	**-1.3**
WSL				*e*S	**Sg**	**20 20 06.5**	**-1.6**
CHN1	**Nanshi**	**2.23**	**223**	*i* P	**Pb**	**20 19 37.1**	**-0.2**
CHN1				*i* S	**Sg**	**20 20 07.5**	**-1.3**
SSD	**Sandimen**	**2.52**	**215**	*i* P	**Pb**	**20 19 41.1**	**-1.1**
SSD				*e*S	**Sb**	**20 20 12.0**	**-1.0**
MASBT	**Mashibuluo**	**2.63**	**213**	*i* P	**Pb**	**20 19 42.4**	**-1.7**
MASBT				S	**Sb**	**20 20 16.7**	**+0.4**
EAST	**Anshuo**	**2.73**	**207**	*e*P	**Pn**	**20 19 41.1**	**+0.4**
EAST				*e*S	**Sn**	**20 20 13.1**	**-0.5**

*NEIC **08** 20:36:29.4±1.3, 19˚.21N±0˚.04×67˚.33W±0˚.04, h10km±2km, ML2.5/11, Md3.3/9(RSPR), Error ellipse: s-maj=6.6km s-min=5.8km az=12.0*
*SDD **08** 20:36:31.1±1.8, 19˚.26N×67˚.20W, h22km±73km, MD3.5, ML2.6, MW2.9*
*RSPR **08** 20:36:32.4, 19˚.27N×67˚.44W, h26km±29km, MD3.3/9*
ISC 08 20:36:32.8±1.6**, 19˚.15N**±0˚.07×**67˚.30W**±0˚.04**, h26**km±13km**,**
n40,σ1⁹**06**/56**, 15C-7D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.70**	**165**		**Pb**	**20 36 45.8**	**-0.6**
AGPR					**Sb**	**20 36 57.0**	**+1.3**
AGPR	**Aguadilla, PR**	**0.70**	**165**	⇑*e*Pg	**Pb**	**20 36 45.2**	**-1.1**
AGPR				⇑*e*Sg	**Sb**	**20 36 55.5**	**-0.2**
AGPR				IAML		20 36 58.0	
	comp=N,252nm,0.2s						
AGPR	**Aguadilla, PR**	**0.70**	**165**	⇑*i* P	**Pb**	**20 36 45.8**	**-0.6**
AGPR	**Aguadilla, PR**	**0.70**	**165**	*e*S	**Sb**	**20 36 57.0**	**+1.3**
IDE	**Isla Desecheo**	**0.77**	**192**		**Pb**	**20 36 46.9**	**-0.7**
IDE					**Sb**	**20 36 58.5**	**+0.8**
IDE	**Isla Desecheo**	**0.77**	**192**	⇓*i* P	**Pb**	**20 36 46.9**	**-0.7**
IDE	**Isla Desecheo**	**0.77**	**192**	*e*S	**Sb**	**20 36 58.5**	**+0.8**
AOPR	**Arecibo Observ**	**0.95**	**147**		**Pn**	**20 36 49.0**	**-1.5**
AOPR	**Arecibo Observ**	**0.95**	**147**	⇓*e*Pg	**Pn**	**20 36 49.0**	**-1.5**
AOPR				⇑*e*Sg	**Sn**	**20 36 53.2**	**0.0**
AOPR				IAML		20 37 07.4	
	comp=N,1μm,1.0s						
AOPR	**Arecibo Observ**	**0.95**	**147**	⇓*e*P	**Pn**	**20 36 49.1**	**-1.3**
LSP	**Las Mesas**	**0.99**	**168**		**Pn**	**20 36 49.9**	**-1.1**
LSP					**Sn**	**20 37 05.2**	**+1.1**
LSP	**Las Mesas**	**0.99**	**168**	⇓*e*P	**Pn**	**20 36 49.9**	**-1.1**
LSP	**Las Mesas**	**0.99**	**168**	*e*S	**Sn**	**20 37 05.2**	**+1.1**
EMPR	**Esperanza - Ma**	**0.99**	**132**		**Pn**	**20 36 51.4**	**+0.5**
EMPR					**Sn**	**20 37 05.6**	**+1.5**
EMPR	**Esperanza - Ma**	**0.99**	**132**	⇑*i* P	**Pn**	**20 36 51.4**	**+0.5**
EMPR	**Esperanza - Ma**	**0.99**	**132**	*e*S	**Sn**	**20 37 05.6**	**+1.5**
UUPR	**Utuado, UPR, P**	**1.05**	**148**		**Pn**	**20 36 51.4**	**-0.4**
UUPR					**Sn**	**20 37 04.7**	**-0.8**
UUPR	**Utuado, UPR, P**	**1.05**	**148**	⇓*e*P	**Pn**	**20 36 51.4**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.05**	**148**	*e*S	**Sn**	**20 37 04.7**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.15**	**171**		**Pn**	**20 36 52.5**	**-0.6**
CRPR					**Sn**	**20 37 08.1**	**+0.1**
CRPR				IAML		20 37 09.5	
	comp=N,102nm,0.4s						
CRPR				IAML		20 37 12.0	
	comp=E,87nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.15**	**171**	⇑*e*Pg	**Pn**	**20 36 52.1**	**-1.1**
CRPR				⇑*e*Sg	**Sn**	**20 37 09.3**	**+1.3**
CRPR				IAML		20 37 11.8	
	comp=N,106nm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.15**	**171**	⇑*e*P	**Pn**	**20 36 52.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.15**	**171**	*e*S	**Sn**	**20 37 09.1**	**+1.1**
MLPR	**Magueyes Islan**	**1.20**	**168**	⇑*e*Pg	**Pn**	**20 36 52.9**	**-0.9**
MLPR				⇑*e*Sg	**Sn**	**20 37 10.0**	**+0.9**
MLPR				IAML		20 37 17.4	
	comp=N,20nm,0.3s						
MLPR	**Magueyes Islan**	**1.20**	**168**	⇓*i* P	**Pn**	**20 36 53.3**	**-0.5**
MLPR	**Magueyes Islan**	**1.20**	**168**	*e*S	**Sn**	**20 37 09.5**	**+0.3**
PCDR	**Punta Cana, DR**	**1.20**	**239**	⇑*e*Pg	**Pb**	**20 36 55.0**	**+0.1**
PCDR				⇑*e*Sg	**Sb**	**20 37 11.1**	**+1.2**
PCDR				IAML		20 37 16.7	
	comp=N,170nm,0.7s						
OBIP	**Obispado Ponce**	**1.28**	**149**		**Pn**	**20 36 53.7**	**-1.3**
OBIP					**Sn**	**20 37 11.5**	**+0.2**
OBIP				IAML		20 37 13.2	
	comp=E,83nm,0.3s						
OBIP				IAML		20 37 15.9	
	comp=N,78nm,0.5s						
OBIP	**Obispado Ponce**	**1.28**	**149**	⇓*e*P	**Pn**	**20 36 54.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.28**	**149**	*e*S	**Sn**	**20 37 12.3**	**+1.0**
GCPR	**Guaynabo City**	**1.43**	**126**	Pn	**Pn**	**20 36 55.9**	**-1.1**
GCPR					**Sn**	**20 37 14.2**	**-0.7**
GCPR	**Guaynabo City**	**1.43**	**126**	*e*S	**Sn**	**20 37 15.7**	**+0.8**
SJG	**San Juan**	**1.50**	**133**		**Pn**	**20 36 57.3**	**-0.7**
SJG				IAML		20 37 25.5	
	comp=N,45nm,0.5s						
SJG				IAML		20 37 27.5	
	comp=N,58nm,0.4s						
MIDR	**Miches**	**1.66**	**265**	⇑*e*Pg	**Pb**	**20 37 02.0**	**-0.7**
MIDR				⇑*e*Sg	**Sb**	**20 37 25.6**	**+2.4**
MIDR				IAML		20 37 48.1	
	comp=N,22nm,0.9s						
HUMP	**Col San Antoni**	**1.70**	**126**		**Pn**	**20 36 59.5**	**-1.2**
HUMP					**Sn**	**20 37 22.3**	**+0.6**
HUMP				IAML		20 37 27.6	
	comp=N,47nm,0.2s						
HUMP	**Col San Antoni**	**1.70**	**126**	⇑*e*P	**Pn**	**20 37 01.6**	**+0.8**
HUMP	**Col San Antoni**	**1.70**	**126**	*e*S	**Sn**	**20 37 22.9**	**+1.2**
DR12	**Loma Pena Alta**	**2.00**	**260**	Pn	**Pn**	**20 37 04.3**	**-0.6**
HATOM	**Hato Mayor del**	**2.00**	**260**	⇑*e*Pg	**Pb**	**20 37 06.8**	**-1.7**
HATOM				⇑*e*Sg	**Sb**	**20 37 34.9**	**+1.9**
HATOM				IAML		20 37 38.2	
	comp=N,29nm,0.7s						
BANI	**BANI**	**2.99**	**256**	Pn	**Pn**	**20 37 16.8**	**-1.8**

*BER **08** 20:37:30.0±0.4, 71˚.14N×8˚.17W, h17km±4km, ML2.9, Confirmed Earthquake*
ISC 08 20:37:28.3±1.4**, 71˚.31N**±0˚.06×**8˚.5W**±0˚.2**, h10**km**, n6,**
σ1⁹**54**/12**, 4C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.28**	**175**	⇑*i* P	**Pg**	**20 37 34.2**	**+0.4**
JNW				*e*S	**Sg**	**20 37 37.4**	**-0.2**
JNW				IAML		20 37 39.2	
	comp=Z,2μm,0.3s						
JMIC	**Jan Mayen**	**0.32**	**180**	⇑*i* P	**Pg**	**20 37 34.7**	**+0.1**
JMIC				*e*S	**Sg**	**20 37 38.3**	**-0.6**
JMIC				IAML		20 37 39.0	
	comp=Z,914nm,0.3s						
JNE	**Jan Mayen East**	**0.32**	**168**	⇑*i* P	**Pg**	**20 37 34.4**	**-0.3**
JNE				*e*S	**Sg**	**20 37 37.6**	**-1.4**
JNE				IAML		20 37 38.1	
	comp=Z,3μm,0.2s						
JMI	**Jan Mayen**	**0.39**	**191**	⇑*i* P	**Pg**	**20 37 36.3**	**+0.5**
JMI				*e*S	**Sg**	**20 37 40.9**	**0.0**
JMI				IAML		20 37 43.2	
	comp=Z,463nm,0.4s						
DBG	**Daneborg**	**4.60**	**316**	*i* P	**Pn**	**20 38 39.3**	**+1.6**
DBG				*i* S	**Sn**	**20 39 28.4**	**-2.6**
DAG	**Danmarks Havn**	**6.15**	**338**	*i* P	**Pn**	**20 39 01.0**	**+2.0**
DAG				*i* S	**Sn**	**20 40 07.0**	**-2.3**

*IDC **08** 20:45:37.5±1.7, 10˚.87N×94˚.85E, h18km±6km, mb3.2/4, mbtmp3.2/5, MS2.0/1, Error ellipse: s-maj=73.0km s-min=17.6km az=61.0*
ISC 08 20:45:38.0±1.5**, 10˚.9N**±0˚.2×**94˚.9E**±0˚.3**, h22**km**, n6,** σ0²**54**/8**, mb3.7**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.47**	**27**	Pn	**Pn**	**20 47 39.5**	**0.0**
	0.3nm,0.6s,baz=203,slow=15,SNR=3.8						
CMAR				LR	LR	20 51 15.5	
	comp=Z,9.4nm,20.0s,baz=195,slow=40						
MKAR	**Makanchi Array**	**37.34**	**346**	P	**P**	**20 52 49.7**	**+0.8**
	0.2nm,0.7s,baz=166,slow=8.7,SNR=4.7						
MKAR				pP	**pP**	**20 52 53.8**	**-0.8**
	0.4nm,0.6s,baz=164,slow=8.5,SNR=4.1						
	0.2nm,0.7s						
KURBB	**Kurchatov Arra**	**41.84**	**344**	P	**P**	**20 53 26.1**	**0.0**
	0.2nm,0.5s,baz=163,slow=7.8,SNR=6.2						
	0.2nm,0.5s						
BVAR	**Borovoye Array**	**46.41**	**340**	pP	pP	20 54 07.7	-1.0
	0.7nm,0.7s,baz=113,slow=12,SNR=4.7						
WRA	**Warramunga Arr**	**49.46**	**128**	P	**P**	**20 54 26.7**	**-0.2**
	0.7nm,0.7s,baz=302,slow=7.4,SNR=6.8						
WRA				pP	**pP**	**20 54 33.0**	**+0.1**
	1.4nm,0.8s,baz=304,slow=8.4,SNR=7.4						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**51.32**	**132**	P	**P**	**20 54 41.0**	**0.

Yuzhno-Kuril'sk; (II) at Golovnino, Goryachiy Plyazh.
*NIED **08** 21:03:41.1, 43˙55N×147˙04E, h43km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr3.32; Mθθ4.78; Mφφ-8.10; Mrθ-3.17; Mθφ-0.61; Mφr-3.66; Fault plane solution: M08.44000×10^15 NP1: φs323.00000°, δ47.00000°, λ21.00000°. NP2: φs218.00000°, δ75.00000°, λ135.00000°.*
*IDC **08** 21:03:41.5±0.5, 43.74N×146.93E, h50km±4km, mb4.3/22, mbtmp4.5/29, MS3.6/47 Error ellipse: s-maj=12.2km s-min=10.9km az=142.0*
*JMA **08** 21:03:41.1±0.2, 43˙6N±0˙8×14˙7E±˙, h43km±4km, MD4.5/40, MV4.9/40, E OFF HOKKAIDO*
JMA Felt I J1 at E OFF HOKKAIDO .
*NEIC **08** 21:03:41.7±1.5, 43˙60N±0˙07×147˙0E±0˙1, h56km±7km, mb4.8/159, Error ellipse: s-maj=12.7km s-min=10.7km az=101.0*
*SKHL **08** 21:03:42.1±0.7, 43˙60N×147˙10E, h68km±1km, mb6.3/3, mbv5.7/3, msh5.1/3*
ISC 08 21:03:41.5±0.4, 43˙61N±0˙04×147˙04E±0˙04, h57km±3km, h57km:pP-P, n606, σ1§14/606, mb4.8/169, MS3.8/47, 34C-35D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.31**	**330**	*i* P		Pn	21 03 58.0	+6.7
SHO					AMB	AMB	21 03 58.3	
	48μm,0.3s							
SHO				*e*S		**Sn**	**21 04 04.5**	**+6.0**
SHO					A	A	21 04 04.8	
	129μm,0.2s							
SHO					A	A	21 04 04.8	
	61μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**0.96**	**297**	*d* iPN		**Pn**	**21 03 58.3**	**-0.5**
YUK				*i* S		**Sn**	**21 04 10.3**	**-1.3**
YUK					pmax	pmax		
	comp=E,2μm,0.2s							
YUK					pmax	pmax		
	comp=Z,5μm,0.2s							
YUK					pmax	pmax		
	comp=N,2μm,0.3s							
YUK					smax	smax		
	comp=N,45μm,0.8s							
YUK					smax	smax		
	comp=E,94μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**0.96**	**297**	*i* P		**Pn**	**21 03 58.4**	**-0.4**
YUK					AMB	AMB	21 03 58.9	
	comp=E,6μm,0.2s							
YUK				*i* S		**Sn**	**21 04 10.9**	**-0.7**
YUK					A	A	21 04 11.3	
	comp=E,74μm,0.5s							
YUK					A	A	21 04 11.3	
	comp=E,126μm,0.5s							
NEM2	**Nemuro 2**	**0.98**	**256**	*i* P		**Pn**	**21 03 58.6**	**-0.5**
NEM2					S	**Sn**	**21 04 10.9**	**-1.2**
NEM2	**Nemuro 2**	**0.98**	**256**	A		A	21 03 58.6	
	comp=N,10.0nm,1.6s,comp=E,17nm,2.3s							
NMR	**Nemuro--Hokkai**	**0.99**	**257**	⇓*i* PN		**Pn**	**21 03 58.6**	**-0.6**
NMR				*e*S		**Sn**	**21 04 10.7**	**-1.6**
NMR	**Nemuro--Hokkai**	**0.99**	**257**	*i* P		**Pn**	**21 03 58.6**	**-0.6**
NMR				*e*S		**Sn**	**21 04 11.0**	**-1.3**
GLVR	**Golovnino**	**1.11**	**277**	⇓*i* PN		**Pn**	**21 04 00.8**	**-0.1**
GLVR				*i* S		**Sn**	**21 04 15.2**	**-0.1**
GLVR					pmax	pmax		
	comp=E,11μm,0.5s							
GLVR					pmax	pmax		
	comp=N,625nm,0.3s							
GLVR					pmax	pmax		
	comp=E,902nm,0.2s							
GLVR					smax	smax		
	comp=N,29μm,0.9s							
GLVR					smax	smax		
	comp=E,24μm,0.7s							
GLVR	**Golovnino**	**1.11**	**277**	*i* P		**Pn**	**21 04 00.8**	**-0.1**
GLVR					AMB	AMB	21 04 01.6	
	comp=E,11μm,0.5s							
GLVR				*i* S		**Sn**	**21 04 15.2**	**-0.1**
GLVR					A	A	21 04 20.4	
	comp=E,29μm,0.8s							
GLVR					A	A	21 04 20.4	
	comp=E,24μm,0.8s							
RUSJ	**Misakicho**	**1.39**	**292**	⇓*i* PN		**Pn**	**21 04 04.9**	**+0.3**
RUSJ				*e*S		**Sn**	**21 04 21.6**	**-0.3**
JRA	**Rausu**	**1.43**	**284**	*i* P		**Pn**	**21 04 05.4**	**+0.3**
JRA				S		**Sn**	**21 04 23.2**	**+0.3**
JRA	**Rausu**	**1.43**	**284**	A		A	21 04 05.4	
	comp=N,14nm,1.3s,comp=E,21nm,2.0s							
JKHN	**Kushirohamanak**	**1.47**	**250**	*i* P		**Pn**	**21 04 05.7**	**0.0**
JKHN				S		**Sn**	**21 04 23.4**	**-0.4**
JKHN	**Kushirohamanak**	**1.47**	**250**	A		A	21 04 05.7	
	comp=N,14nm,3.7s,comp=E,19nm,2.1s							
JNSB	**Nemuroshibetsu**	**1.49**	**277**	*i* P		**Pn**	**21 04 06.2**	**+0.3**
JNSB				*e*S		**Sn**	**21 04 25.4**	**+1.1**
JNSB	**Nemuroshibetsu**	**1.49**	**277**	A		A	21 04 06.2	
	comp=N,21nm,1.2s,comp=E,25nm,1.6s							
JNK	**Nakash**	**1.69**	**270**	*i* P		**Pn**	**21 04 08.5**	**-0.1**
AKK	**Akkeshi**	**1.71**	**251**	*e*P		**Pn**	**21 04 08.6**	**-0.3**
AKK				*e*S		**Sn**	**21 04 29.6**	**-0.1**
KUR	**Kuril'sk**	**1.73**	**20**	*c* iPN		**Pn**	**21 04 08.3**	**-0.9**
KUR				*i* S		**Sn**	**21 04 28.6**	**-1.5**
KUR					pmax	pmax		
	comp=Z,620nm,0.5s							
KUR					smax	smax		
	comp=N,16μm,0.2s							
KUR					smax	smax		
	comp=E,10μm,0.2s							
KUR	**Kuril'sk**	**1.73**	**20**	*i* P		**Pn**	**21 04 09.6**	**+0.4**
KUR					AMB	AMB	21 04 09.7	
	comp=E,610nm,0.5s							
KUR				*e*S		**Sn**	**21 04 29.8**	**-0.3**
KUR					A	A	21 04 31.0	
	comp=E,17μm,0.2s							
KUR					A	A	21 04 31.0	
	comp=E,12μm,0.2s							
JAK	**Akkeshi**	**1.82**	**251**	*i* P		**Pn**	**21 04 10.2**	**-0.2**
JAK				*e*S		**Sn**	**21 04 31.9**	**-0.4**
JAK	**Akkeshi**	**1.82**	**251**	A		A	21 04 10.2	
	comp=N,11nm,1.0s,comp=E,11nm,0.7s							
JTKR	**Abashiri--Toko**	**2.30**	**280**	*i* P		**Pn**	**21 04 18.0**	**+1.1**
JTKR	**Abashiri--Toko**	**2.30**	**280**	A		A	21 04 18.0	
	comp=N,3.0nm,2.0s,comp=E,3.0nm,1.6s							
JAR	**Ashorobuto**	**2.41**	**264**	*e*P		**Pn**	**21 04 19.3**	**+0.9**
JAR				S		**Sn**	**21 04 47.2**	**+0.6**
JAR	**Ashorobuto**	**2.41**	**264**	A		A	21 04 19.3	
	comp=N,8.0nm,3.4s,comp=E,6.0nm,0.8s							
JOB	**Onbets**	**2.45**	**254**	*i* P		**Pn**	**21 04 19.3**	**+0.4**
JOB				S		**Sn**	**21 04 47.9**	**+0.2**
JOB	**Onbets**	**2.45**	**254**	A		A	21 04 19.3	
	comp=N,6.0nm,1.0s,comp=E,5.0nm,1.4s							
JMP	**Maruseppu**	**2.70**	**280**	*i* P		**Pn**	**21 04 23.6**	**+1.2**
JMP	**Maruseppu**	**2.70**	**280**	A		A	21 04 23.6	
	comp=N,3.0nm,0.7s,comp=E,3.0nm,1.3s							
JCH	**Churui**	**2.87**	**251**	P		**Pn**	**21 04 24.8**	**0.0**
JKK2	**Kamakawa 2**	**3.12**	**276**	*i* P		**Pn**	**21 04 29.9**	**+1.7**
JKA	**Kamikawa-asahi**	**3.25**	**281**			**Pn**	**21 04 31.1**	**+1.1**
JKA	**Kamikawa-asahi**	**3.25**	**281**	*e*P		**Pn**	**21 04 31.1**	**+1.1**
ASAJ	**Asahikawa**	**3.26**	**281**	P		**Pn**	**21 04 32.0**	**+2.0**
	comp=E,207nm,0.6s,baz=85,slow=17,SNR=77							
ASAJ					LR	LR	21 05 53.4	
	comp=E,1μm,21.0s,baz=155,slow=42							
ASAJ	**Asahikawa**	**3.26**	**281**	PN		**Pn**	**21 04 31.1**	**+1.1**
ASAJ	**Asahikawa**	**3.26**	**281**	*e*P		**Pn**	**21 04 31.6**	**+1.5**
ERM	**Erimo**	**3.27**	**242**			**Pn**	**21 04 31.8**	**+1.6**
ERM	**Erimo**	**3.27**	**242**	P		**Pn**	**21 04 32.7**	**+2.5**
ERM	**Erimo**	**3.27**	**242**	PN		**Pn**	**21 04 31.8**	**+1.6**
JEM	**Erimo**	**3.27**	**242**	P		**Pn**	**21 04 32.7**	**+2.5**
JEM	**Erimo**	**3.27**	**242**	*e*P		**Pn**	**21 04 32.5**	**+2.3**
JFR	**Furan**	**3.27**	**264**	*e*P		**Pn**	**21 04 31.8**	**+1.5**
JNBK	**Urakawa-nobuka**	**3.42**	**249**	A		A	21 04 33.3	
	comp=N,4.0nm,4.6s,comp=E,4.0nm,1.2s							
JIAM	**Iburiatsuma**	**3.88**	**257**	A		A	21 04 39.8	
	comp=N,8.0nm,5.0s,comp=E,6.0nm,1.2s							
YSS	**Yuzhno-Sakhali**	**4.51**	**319**			**Pn**	**21 04 47.0**	**-0.2**
YSS	**Yuzhno-Sakhali**	**4.51**	**319**	P		**Pn**	**21 04 49.0**	**+1.8**
YSS	**Yuzhno-Sakhali**	**4.51**	**319**	S		**Sn**	**21 05 37.1**	**-1.2**
YSS	**Yuzhno-Sakhali**	**4.51**	**319**	⇓*e*PN		**Pn**	**21 04 48.3**	**+1.1**
YSS				*e*S		**Sn**	**21 05 37.8**	**-0.6**
YSS					pmax	pmax		
	comp=Z,90nm,0.6s							
YSS					smax	smax		
	comp=N,270nm,0.8s							
YSS					smax	smax		
	comp=E,260nm,0.8s							
YSS					MLR	MLR		
	comp=Z,800nm,12.0s							
YSS	**Yuzhno-Sakhali**	**4.51**	**319**	*e*P		**Pn**	**21 04 48.5**	**+1.3**
YSS					AMB	AMB	21 04 51.6	
	comp=Z,50nm,0.3s							
YSS				*e*S		**Sn**	**21 05 37.7**	**-0.6**
YSS					A	A	21 05 38.1	
	comp=Z,260nm,0.6s							
YSS					A	A	21 05 38.1	
	comp=Z,260nm,0.6s							
JTM	**Tenmabayashi**	**5.26**	**240**			**Pn**	**21 04 56.7**	**-0.7**
JTM	**Tenmabayashi**	**5.26**	**240**	P		**Pn**	**21 04 57.7**	**+0.3**
JTM	**Tenmabayashi**	**5.26**	**240**	S		**Sn**	**21 05 53.2**	**-3.5**
JMM	**Marumori**	**7.44**	**222**			**Pn**	**21 05 24.9**	**-2.4**
JMM	**Marumori**	**7.44**	**222**	P		**Pn**	**21 05 26.6**	**-0.7**
TEY	**Ternei**	**7.62**	**284**	*e*PN		**Pn**	**21 05 32.3**	**+2.5**
TEY	**Ternei**	**7.62**	**284**	*e*P		**Pn**	**21 05 32.3**	**+2.5**
TYV	**Tymovskoe**	**7.85**	**339**	*e*PN		**Pn**	**21 05 35.9**	**+3.1**
TYV					pmax	pmax		
	comp=Z,24nm,1.3s							
TYV					pmax	pmax		
	comp=Z,600nm,3.7s							
TYV	**Tymovskoe**	**7.85**	**339**	*e*P		**Pn**	**21 05 34.8**	**+2.0**
TYV					AMB	AMB	21 05 43.5	
	comp=Z,850nm,4.0s							
TYV				*e*S		**Sn**	**21 07 00.3**	**+0.2**
TYV					A	A	21 07 02.9	
	comp=Z,1μm,4.0s							
TYV					A	A	21 07 02.9	
	comp=Z,1μm,4.0s							
JSD	**Sado**	**8.67**	**233**			**Pn**	**21 05 42.6**	**-1.6**
JSD	**Sado**	**8.67**	**233**	P		**Pn**	**21 05 44.2**	**0.0**
JSD	**Sado**	**8.67**	**233**	S		**Sn**	**21 07 17.1**	**-3.4**
SKR	**Severo-Kuril's**	**9.39**	**38**	*e*PN		**Pn**	**21 05 54.5**	**+0.6**
SKR					pmax	pmax		
	comp=Z,105nm,0.6s							
SKR	**Severo-Kuril's**	**9.39**	**38**	*e*P		**Pn**	**21 05 54.6**	**+0.6**
SKR					AMB	AMB	21 05 55.8	
	comp=Z,100nm,0.6s							
SKR				*e*S		**Sn**	**21 07 33.0**	**-4.9**
SKR					A	A	21 07 39.2	
	comp=Z,120nm,0.8s							
SKR					A	A	21 07 39.2	
	comp=Z,120nm,0.8s							
MAJO	**Matsushiro**	**9.77**	**227**			**Pn**	**21 05 56.8**	**-2.5**
MAJO	**Matsushiro**	**9.77**	**227**	P		**Pn**	**21 05 58.9**	**-0.4**
MAJO	**Matsushiro**	**9.77**	**227**	*de*PN		**Pn**	**21 05 58.5**	**-0.8**
MJAR	**Matsushiro Arr**	**9.77**	**227**			**Pn**	**21 05 57.7**	**-1.6**
MJAR	**Matsushiro Arr**	**9.77**	**227**	P		**Pn**	**21 05 59.0**	**-0.3**
	comp=Z,6.9nm,0.8s,baz=26,slow=15,SNR=13							
MJAR					S	**Sn**	**21 07 50.2**	**+2.7**
	comp=Z,8.6nm,0.9s,baz=44,slow=11,SNR=2.8							
MJAR					LR	LR	21 10 07.0	
	comp=Z,175nm,21.6s,baz=41,slow=39							
MJB9	**Matsu-Tunnel**	**9.77**	**227**			**Pn**	**21 05 57.1**	**-2.2**
GRNR	**Gornyy**	**10.17**	**318**	⇑*i* PN		**Pn**	**21 06 07.3**	**+2.7**
GRNR					pmax	pmax		
	comp=Z,20nm,1.2s							
GRNR	**Gornyy**	**10.17**	**318**	*e*P		**Pn**	**21 06 07.3**	**+2.7**
PAU	**Pauzhetka**	**10.26**	**37**	*e*P		**Pn**	**21 06 06.1**	**+0.3**
PAU				*e*S		**Sn**	**21 07 55.8**	**-3.4**
USRK	**Ussuriysk Ar.**	**10.88**	**278**	P		**Pn**	**21 06 14.6**	**+0.2**
	comp=Z,5.0nm,0.6s,baz=87,slow=12,SNR=9.4							
JGF	**Kuroka**	**10.94**	**226**			**Pn**	**21 06 14.2**	**-1.0**
JGF	**Kuroka**	**10.94**	**226**	P		**Pn**	**21 06 14.5**	**-0.7**
PEA0B	**Petropavlovsk-**	**11.85**	**33**	⇑*e*PN		**Pn**	**21 06 26.3**	**-1.1**
PETK	**Petropavlovsk-**	**11.85**	**33**	P		**Pn**	**21 06 26.3**	**-1.1**
	comp=Z,3.7nm,0.6s,baz=203,slow=11,SNR=6.6							
MDJ	**Mudanjiang**	**12.59**	**281**			**Pn**	**21 06 35.9**	**-1.7**
MDJ	**Mudanjiang**	**12.59**	**281**	P		**Pn**	**21 06 38.1**	**+0.5**
MDJ					pmax	pmax		
	comp=Z,18nm,1.4s							
BNX	**BinXian**	**14.14**	**285**	⇓P		**Pn**	**21 06 58.0**	**-0.6**
BNX					pmax	pmax		
	comp=Z,15nm,1.0s							
HEH	**HeiHe**	**14.95**	**303**	*e*P		**Pn**	**21 07 08.7**	**-0.4**
CN2	**Changchun**	**15.62**	**278**	P		**Pn**	**21 07 17.0**	**-0.8**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.7s							
CN2					LR	LR		
	comp=Z,200nm,14.0s							
CN2					LR	LR		
	comp=Z,300nm,14.0s							
CN2					LR	LR		
	comp=Z,400nm,16.0s							
KSRS	**Korea Array**	**15.77**	**254**	P		**Pn**	**21 07 18.6**	**-1.1**
	comp=Z,5.1nm,0.9s,baz=62,slow=11,SNR=10							
MA2	**Magadan**	**16.16**	**7**	LR		LR	21 12 43.5	
	comp=Z,173nm,20.5s,baz=148,slow=34							
JNU	**Nakatsue**	**16.41**	**236**	P		**Pn**	**21 07 28.6**	**+0.6**
	comp=Z,12nm,0.8s,baz=70,slow=5.0,SNR=6.4							
JNU					LR	LR	21 14 18.3	
	comp=Z,129nm,19.3s,baz=48,slow=39							
ZEA	**Zeya**	**16.49**	**315**	*e*P		**P**	**21 07 32.3**	**+1.8**
ZEA					pmax	pmax		
	comp=Z,20nm,1.0s							
SEY	**Seymchan**	**19.61**	**7**	P		**P**	**21 08 04.8**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=195,slow=8.6,SNR=4.6							
SEY					LR	LR	21 15 05.3	
	comp=Z,142nm,19.1s,baz=148,slow=35							
SEY	**Seymchan**	**19.61**	**7**	⇓*e*P		**Pn**	**21 08 06.4**	**-0.1**
SEY					pmax	pmax		
	comp=Z,42nm,1.7s							
SEY	**Seymchan**	**19.61**	**7**	*e*P		**Pn**	**21 08 06.4**	**-0.1**
HILR	**Hailar Array B**	**19.62**	**297**	P		**P**	**21 08 02.8**	**-2.2**
	comp=Z,9.0nm,0.5s,baz=102,slow=9.7,SNR=15							
HILR					LR	LR	21 16 24.5	
	comp=Z,243nm,19.9s,baz=80,slow=39							
DL2	**Dalian**	**19.65**	**265**	P		**Pn**	**21 08 06.8**	**-0.4**
DL2					pmax	pmax		
	comp=Z,37nm,1.2s							
SHEM	**Shemya Is, Ala**	**20.12**	**54**	LR		LR	21 15 53.7	
	comp=Z,33nm,21.0s,baz=280,slow=36							
YAK	**Yakutsk**	**21.10**	**337**	P		**P**	**21 08 18.0**	**-2.8**
	comp=Z,6.6nm,0.3s,baz=151,slow=0.0,SNR=4.8							
YAK					LR	LR	21 16 39.4	
	comp=Z,127nm,19.4s,baz=139,slow=37							
	comp=Z,6.6nm,0.3s							
YAK	**Yakutsk**	**21.10**	**337**	*e*P		**P**	**21 08 18.2**	**-2.6**
YAK					pmax	pmax		
	comp=Z,10.0nm,0.9s							
YAK					pmax	pmax		
	comp=N,7.0nm,1.4s							
YAK					pmax	pmax		
	comp=E,4.0nm,1.2s							
YAK	**Yakutsk**	**21.10**	**337**	*e*P		**P**	**21 08 20.9**	**+0.1**
XLT	**XiLinHaoTe**	**22.31**	**282**	*e*P		**P**	**21 08 32.5**	**-1.6**
XLT					pP	pP	21 08 50.0	+3.1
XLT					sP	sP	21 08 54.5	+0.5
XLT					PP	**PnPn**	**21 09 00.7**	**+2.0**
XLT					pmax	pmax		
	comp=E,33nm,0.6s							
XLT					pmax	pmax		
	comp=E,110nm,4.3s							
BJI	**Beijing**	**23.21**	**272**	P		**P**	**21 08 41.7**	**-1.6**
BJI					pP	**pP**	**21 08 52.7**	**-3.7**
BJI					sP	sP	21 08 58.5	-5.0
BJI					S	**S**	**21 12 46.9**	**-3.8**
BJI					pmax	pmax		
	comp=E,76nm,6.1s							
BJT	**Baijiatuao**	**23.22**	**272**			**P**	**21 08 41.5**	**-1.9**
BJT					IAmb	IAmb	21 08 45.0	
	comp=Z,63nm,1.8s							
BJT	**Baijiatuao**	**23.22**	**272**	P		**P**	**21 08 41.5**	**-1.9**
BJT					pmax	pmax		
	comp=Z,63nm,1.8s							
TIA	**Tai'an**	**24.02**	**262**	P		**P**	**21 08 50.7**	**-0.2**
TIA					pmax	pmax		
	comp=Z,52nm,1.0s							
NJ2	**Nanjing**	**24.96**	**252**	*e*P		**P**	**21 09 00.6**	**+1.2**
NJ2					pmax	pmax		
	comp=Z,11nm,1.1s							
HNS	**HongShan**	**25.25**	**267**	⇓P		**P**	**21 09 02.4**	**+0.4**
HNS					S	**S**	**21 13 26.4**	**+2.9**
HNS					pmax	pmax		
	comp=Z,18nm,1.2s							
HNS					LR	LR		
	comp=Z,270nm,11.2s							
HHC	**Hu-ho-hao-te**	**26.30**	**276**	*e*P		**P**	**21 09 12.3**	**+0.7**
HHC					pmax	pmax		
	comp=Z,18nm,0.6s							
HHC					pmax	pmax		
	comp=Z,130nm,5.1s							
HHC					LR	LR		
	comp=Z,160nm,10.2s							
HHC					LR	LR		
	comp=Z,190nm,10.6s							
BTO	**Baotou**	**27.49**	**277**	*e*P		**P**	**21 09 23.2**	**+0.9**
BTO					pP	**pP**	**21 09 37.2**	**+0.7**
BTO					S	**S**	**21 14 01.3**	**+2.3**
BTO					pmax	pmax		
	comp=E,41nm,0.8s							
BTO					pmax	pmax		
	comp=Z,380nm,5.4s							
BTO					LR	LR		
	comp=Z,530nm,7.6s							
BTO					LR	LR		
	comp=Z,660nm,12.7s							
BTO					LR	LR		
	comp=Z,480nm,7.8s							
ULN	**Ulaanbaatar**	**28.01**	**293**			**P**	**21 09 25.5**	**-1.5**
ULN	**Ulaanbaatar**	**28.01**	**293**	*ce*P		**P**	**21 09 26.7**	**-0.3**
ULN					pmax	pmax		
	comp=Z,11nm,1.3s							
ULN	**Ulaanbaatar**	**28.01**	**293**	*e*P		**P**	**21 09 26.7**	**-0.3**
SONM	**Songino Array**	**28.46**	**293**	P		**P**	**21 09 30.0**	**-0.9**
SONM	**Songino Array**	**28.46**	**293**	P		**P**	**21 09 30.7**	**-0.2**
	comp=Z,6.8nm,0.6s,baz=85,slow=8.5,SNR=36							
SONM					LR	LR	21 21 31.6	
	comp=Z,210nm,18.9s,baz=85,slow=38							
	comp=Z,6.8nm,0.6s							
WHN	**Wuhan**	**28.96**	**254**	P		**P**	**21 09 36.0**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**29.04**	**139**	T		T	21 40 24.3	
	baz=330,slow=76,SNR=692							
H11N1	**WAKE ISLAND Hy**	**29.05**	**139**	T		T	21 40 24.3	
	baz=330,slow=76,SNR=775							
H11N3	**WAKE ISLAND Hy**	**29.06**	**139**	T		T	21 40 20.2	
	baz=330,slow=76,SNR=764							
TIXI	**Tiksi**	**29.49**	**348**	LR		LR	21 21 15.1	
	comp=Z,94nm,20.3s,baz=200,slow=36							
GUMO	**Guam**	**29.97**	**184**	LR		LR	21 20 24.7	
	comp=Z,35nm,20.9s,baz=42,slow=33							
H11S1	**WAKE ISLAND Hy**	**30.00**	**140**	T		T	21 41 31.4	
	baz=331,slow=76,SNR=3850							
H11S3	**WAKE ISLAND Hy**	**30.01**	**140**	T		T	21 41 36.0	
	baz=331,slow=76,SNR=2696							
H11S2	**WAKE ISLAND Hy**	**30.02**	**140**	T		T	21 41 33.6	
	baz=331,slow=76,SNR=1294							
XAN	**Xi'an**	**30.97**	**265**	P		**P**	**21 09 52.8**	**-0.4**
XAN					pmax	pmax		
	comp=Z,16nm,0.6s							
LZH	**Lanzhou**	**33.70**	**272**	*e*P		**P**	**21 10 18.2**	**+1.0**
LZH					pP	pP	21 10 30.7	-0.9
LZH					sP	sP	21 10 37.3	-1.1
LZH					S	S	21 15 25.7	-11
LZH					sS	sS	21 15 56.6	-4.2
LZH					pmax	pmax		
	comp=Z,54nm,1.3s							
LZH					pmax	pmax		
	comp=Z,75nm,5.8s							
LZH					LR	LR		
	comp=Z,240nm,13.4s							
LZH					LR	LR		
	comp=Z,150nm,13.4s							
LZH					LR	LR		
	comp=Z,220nm,13.4s							
LZDM	**Lanzhou Array**	**33.87**	**272**	P		**P**	**21 10 19.6**	**+0.8**
	comp=Z,12nm,0.6s,baz=127,slow=2.2,SNR=11							
	comp=Z,12nm,0.6s							
GTA	**Gaotai**	**35.24**	**280**	*e*P		**P**	**21 10 31.2**	**+0.7**
GTA					pmax	pmax		
	comp=Z,9.0nm,1.2s							
GYA	**Guiyang**	**36.81**	**256**	P		**P**	**21 10 42.5**	**-1.5**
GYA					pmax	pmax		
	comp=Z,8.0nm,1.8s							
E19K	**Redstone River**	**37.64**	**31**	P		**P**	**21 10 50.1**	**-0.2**
E19K					IAmb	IAmb	21 11 07.5	
	comp=Z,14nm,1.0s							
H19K	**Roundabout Mou**	**37.65**	**35**	P		**P**	**21 10 50.5**	**+0.1**
H19K					IAmb	IAmb	21 11 07.8	
	comp=Z,19nm,0.9s							
J19K	**Poorman**	**37.84**	**37**	P		**P**	**21 10 53.0**	**+0.8**
J19K					IAmb	IAmb	21 11 09.0	
	comp=Z,8.6nm,1.0s							
J20K	**Nowinta River**	**38.50**	**37**			**P**	**21 10 59.4**	**+1.8**
J20K					IAmb	IAmb	21 11 02.5	
	comp=Z,7.4nm,0.9s							
G21K	**Allakaket**	**38.96**	**33**	P		**P**	**21 11 01.9**	**+0.5**
G21K					IAmb	IAmb	21 11 19.1	
	comp=Z,18nm,1.1s							
H21K	**Melozitna Rive**	**39.17**	**35**	P		**P**	**21 11 03.0**	**-0.2**
H21K					IAmb	IAmb	21 11 21.0	
	comp=Z,8.9nm,1.0s							
NRIK	**Noril'sk**	**39.34**	**331**	LR		LR	21 28 43.4	
	comp=Z,65nm,18.1s,baz=71,slow=38							
STLK	**Strandline Lak**	**39.53**	**41**	P		**P**	**21 11 08.3**	**+2.0**
E22K	**Anaktuvuk Pass**	**39.78**	**31**	P		**P**	**21 11 08.0**	**-0.3**
E22K					IAmb	IAmb	21 11 36.8	
	comp=Z,10nm,1.0s							
KTH	**Kantishna Hill**	**39.91**	**38**	P		**P**	**21 11 10.4**	**+0.9**
KTH					IAmb	IAmb	21 11 38.5	
	comp=Z,12nm,1.0s							
GOMU	**GeErMu**	**40.18**	**278**	P		**P**	**21 11 12.5**	**0.0**
GOMU					pP	pP	21 11 23.9	-3.2
GOMU					S	**S**	**21 17 15.2**	**-0.2**
GOMU					pmax	pmax		
	comp=Z,19nm,0.9s							
PZH	**PanZhiHua**	**40.28**	**260**	P		**P**	**21 11 13.4**	**+0.3**
PZH					pmax	pmax		
	comp=Z,20nm,0.7s							
KMI	**Kunming**	**40.41**	**258**	P		**P**	**21 11 14.9**	**+0.6**
KMI					pmax	pmax		
	comp=Z,18nm,1.0s							
DGZ	**Jazzator, Alta**	**40.42**	**300**	⇑*e*P		**P**	**21 11 14.1**	**+0.1**
DGZ					pmax	pmax		
	comp=Z,4.0nm,1.0s							
NEA2	**Nenana**	**40.72**	**36**	P		**P**	**21 11 16.4**	**+0.4**
MCK	**McKinley**	**40.79**	**38**			**P**	**21 11 17.3**	**+0.6**
MCK					IAmb	IAmb	21 11 19.3	
	comp=Z,38nm,1.8s							
MCK	**McKinley

comp=Z,59nm,2.0s
G24K Hadweenzic Riv 41.37 33 P **P** **21 11 19.9 -1.5**
G24K IAmb IAmb 21 11 37.1
comp=Z,12nm,1.1s
DHY Denali Highway 41.53 39 P **P** **21 11 23.5 +0.5**
DHY IAmb IAmb 21 11 28.8
comp=Z,17nm,1.4s
HDA Harding Lake 41.64 37 P **P** **21 11 23.6 -0.1**
IL31 41.65 36 P **P** **21 11 23.9 +0.2**
ILAR Eielson Array 41.65 36 P **P** **21 11 24.5 +0.8**
comp=Z,1.4nm,0.5s,baz=282,slow=10,SNR=20
ILAR LR LR 21 30 35.4
comp=Z,44nm,18.4s,baz=289,slow=39
comp=Z,1.4nm,0.5s
WMQ Urumqi 42.08 292 *e*P **P** **21 11 29.5 +1.9**
WMQ pmax pmax
comp=Z,21nm,1.5s
J25K Salcha River, 42.31 36 P **P** **21 11 29.7 +0.6**
KLU Klutina 42.35 41 P **P** **21 11 30.9 +1.2**
KLU IAmb IAmb 21 11 44.4
comp=Z,16nm,1.2s
F26K Sheenjek River 42.66 32 P **P** **21 11 32.4 +0.5**
F26K IAmb IAmb 21 11 49.7
comp=Z,21nm,1.6s
C27K Jago River 42.79 29 P **P** **21 11 33.4 +0.5**
G26K Porcupine Rive 42.82 33 P **P** **21 11 34.2 +1.0**
G26K IAmb IAmb 21 11 51.3
comp=Z,20nm,1.4s
DOT Dot Lake 42.97 38 P **P** **21 11 35.7 +1.2**
BMRM Bremner River 43.06 42 P **P** **21 11 35.9 +0.7**
BMRM IAmb IAmb 21 11 58.8
comp=Z,10nm,0.8s
J26L Joseph Creek 43.10 36 P **P** **21 11 35.4 -0.2**
L26K Log Cabin Wild 43.36 39 P **P** **21 11 40.4 +2.8**
VRDI Verde Repeater 43.57 41 P **P** **21 11 41.0 +1.5**
BERG Berg Lake 43.59 42 P **P** **21 11 40.6 +1.1**
BERG IAmb IAmb 21 12 09.8
comp=Z,47nm,1.8s
E27K Coleen River 43.59 31 P **P** **21 11 40.5 +1.0**
M26K Nabesna, AK 43.60 39 P **P** **21 11 41.2 +1.5**
M26K IAmb IAmb 21 11 55.2
comp=Z,16nm,1.1s
G27K Doyon Strip 43.67 33 **P** **21 11 41.3 +1.1**
D27M Malcolm River 43.77 29 P **P** **21 11 41.0 +0.1**
H27K Steamboat Moun 43.78 34 P **P** **21 11 40.7 -0.3**
H27K IAmb IAmb 21 11 59.9
comp=Z,24nm,1.5s
K27K Chicken 43.80 37 P **P** **21 11 42.4 +1.3**
CRQM Cirque 43.80 42 P **P** **21 11 42.2 +0.8**
CRQM IAmb IAmb 21 11 56.8
comp=Z,36nm,1.3s
TGL Tana Glacier 43.95 42 P **P** **21 11 43.4 +0.9**
WAX Waxell Ridge 43.99 42 P **P** **21 11 42.8 0.0**
WAX IAmb IAmb 21 11 58.3
comp=Z,21nm,1.2s
L27K Beaver Creek, 44.04 38 P **P** **21 11 44.5 +1.4**
SNH Sunshine Point 44.05 43 P **P** **21 11 45.0 +1.8**
SNH IAmb IAmb 21 12 03.1
comp=Z,24nm,1.0s
BCAR Beaver Creek A 44.06 38 **P** **21 11 44.1 +0.8**
M27K Edge Creek, AK 44.13 39 P **P** **21 11 45.8 +1.8**
M27K IAmb IAmb 21 12 00.4
comp=Z,18nm,1.2s
ISLE Juniper Island 44.21 42 P **P** **21 11 44.8 +0.2**
ISLE IAmb IAmb 21 12 18.9
comp=Z,13nm,0.8s
F28M Old Crow 44.29 32 P **P** **21 11 45.7 +0.6**
E28M Babbage River 44.33 30 **P** **21 11 45.9 +0.6**
BARN Barnard Glacie 44.45 41 P **P** **21 11 49.4 +2.7**
BARN IAmb IAmb 21 12 01.9
comp=Z,17nm,1.2s
GRNC Granite Creek 44.47 42 P **P** **21 11 47.7 +0.9**
GRNC IAmb IAmb 21 12 03.0
comp=Z,16nm,1.0s
I28M Miner Creek 44.52 35 P **P** **21 11 47.4 +0.4**
I28M IAmb IAmb 21 12 16.3
comp=Z,12nm,1.1s
MK31 Makanchi Array 44.58 298*c i*P **P** **21 11 47.2 -0.5**
MKAR Makanchi Array 44.58 298 P **P** **21 11 47.1 -0.5**
comp=Z,9.1nm,0.6s,baz=78,slow=9.7,SNR=103
MKAR LR LR 21 31 49.6
comp=Z,100nm,18.6s,baz=64,slow=38
comp=Z,9.1nm,0.6s
CTGM Chitina Glacie 44.63 41 P **P** **21 11 49.4 +1.4**
CTGM IAmb IAmb 21 12 03.3
comp=Z,24nm,1.4s
MAKZ Makanchi 44.78 298 **P** **21 11 48.8 -0.4**
MAKZ IAmb IAmb 21 11 51.1
comp=Z,12nm,0.7s
MAKZ Makanchi 44.78 298 P **P** **21 11 48.8 -0.4**
MAKZ pmax pmax
comp=Z,12nm,0.7s
MAKZ Makanchi 44.78 298 P **P** **21 11 49.2 0.0**
LOGN Logan Glacier 44.82 41 P **P** **21 11 51.4 +1.9**
LOGN IAmb IAmb 21 12 06.0
comp=Z,13nm,1.3s
E29M Blow River 44.95 30 P **P** **21 11 51.3 +1.1**
DAWY Dawson 44.96 37 P **P** **21 11 51.4 +1.0**
H29M Whitestone 45.05 34 P **P** **21 11 52.4 +1.3**
H29M IAmb IAmb 21 12 06.0
comp=Z,12nm,1.1s
G29M Pine Creek 45.09 33 P **P** **21 11 53.1 +1.7**
G29M IAmb IAmb 21 12 10.7
comp=Z,12nm,0.8s
KURK Kurchatov 45.55 304 **P** **21 11 54.4 -0.8**
KURK IAmb IAmb 21 11 56.8
comp=Z,8.6nm,0.6s
KURK Kurchatov 45.55 304*ce*P **P** **21 11 54.9 -0.3**
KURK pmax pmax
comp=Z,7.0nm,0.6s
KURK Kurchatov 45.55 304 *e*P **P** **21 11 54.9 -0.3**
KURK Kurchatov 45.55 304 P **P** **21 11 55.2 +0.1**
KURBB Kurchatov Arra 45.63 304 P **P** **21 11 55.4 -0.5**
comp=Z,8.3nm,0.7s,baz=71,slow=8.4,SNR=56
KURBB PcP **PcP** **21 13 35.6 +2.4**
comp=Z,0.6nm,0.6s,baz=71,slow=3.3,SNR=1.6
KURBB pPcP 21 13 48.3
comp=Z,3.3nm,0.7s,baz=78,slow=3.5,SNR=10
KURBB LR LR 21 32 17.5
comp=Z,84nm,18.6s,baz=166,slow=38
comp=Z,8.3nm,0.7s
BCPM Bancas Point 45.67 42 P **P** **21 11 55.4 -0.6**
M29M Somme Creek 45.67 39 P **P** **21 11 57.5 +1.3**
M29M IAmb IAmb 21 12 02.1
comp=Z,17nm,1.8s
L29M L29M 45.69 38 P **P** **21 11 57.9 +1.7**
G30M tAoh Zraii Nji 45.78 32 **P** **21 11 57.3 +0.5**
G30M IAmb IAmb 21 12 14.4
comp=Z,24nm,1.4s
F30M Barrier River 45.84 31 **P** **21 11 58.1 +0.8**
F30M IAmb IAmb 21 12 26.4
comp=Z,22nm,1.1s
I30M Mount Dempster 46.03 35 **P** **21 12 00.1 +1.2**
I30M IAmb IAmb 21 12 14.3
comp=Z,16nm,0.9s
LSA Lhasa 46.12 272 **P** **21 12 00.8 +0.3**
LSA Lhasa 46.12 272 P **P** **21 11 57.5 -3.0**
LSA pmax pmax
comp=Z,26nm,0.7s
LSA Lhasa 46.12 272 *i* P **P** **21 12 01.8 +1.3**
SNR=13
LSA Lhasa 46.12 272 P **P** **21 12 00.8 +0.3**
LSA pmax pmax
comp=Z,18nm,0.7s
LSA Lhasa 46.12 272 P **P** **21 12 02.1 +1.5**
J30M Hart River 46.17 36 **P** **21 12 00.3 +0.2**
JAY Jayapura 46.27 189 LR LR 21 29 18.8
comp=Z,49nm,20.4s,baz=310,slow=33
HYT Haines Junctio 46.49 41 **P** **21 12 02.6 0.0**
HYT IAmb IAmb 21 12 19.8
comp=Z,20nm,0.9s
INK Inuvik 46.56 30 **P** **21 12 02.8 -0.1**
INK IAmb IAmb 21 12 31.6
comp=Z,7.6nm,1.1s
INK Inuvik 46.56 30 P **P** **21 12 02.8 -0.1**
INK pmax pmax
comp=Z,8.0nm,1.1s
F31M Tsiigehtchic 46.65 31 P **P** **21 12 04.4 +0.9**
F31M IAmb IAmb 21 12 21.3
comp=Z,12nm,1.1s
P29M Windy Craggy 46.68 42 **P** **21 12 05.3 +1.3**
P29M IAmb IAmb 21 12 21.2
comp=Z,19nm,0.8s
H31M Peel River 46.74 34 P **P** **21 12 06.2 +1.7**
H31M IAmb IAmb 21 12 22.8
comp=Z,9.9nm,1.0s
CHTO Chiang Mai 47.17 254 **P** **21 12 08.6 +0.3**
CHTO IAmb IAmb 21 12 10.4
comp=Z,17nm,1.3s
CHTO Chiang Mai 47.17 254 P **P** **21 12 08.6 +0.3**
CHTO pmax pmax
comp=Z,17nm,1.3s
CHTO Chiang Mai 47.17 254 P **P** **21 12 09.6 +1.3**
CHTO pP **pP** **21 12 23.1 -0.2**
CMAR Chiang Mai Arr 47.41 254 P **P** **21 12 10.2 0.0**
CMAR Chiang Mai Arr 47.41 254 P **P** **21 12 10.9 +0.8**
comp=Z,1.2nm,0.3s,baz=47,slow=7.7,SNR=14
comp=Z,1.2nm,0.3s
CMAR Chiang Mai Arr 47.41 254 *i* P **P** **21 12 11.0 +0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 49.53 309 P **P** **21 12 25.6 -0.6**
comp=Z,1.6nm,0.4s,baz=84,slow=11,SNR=19
BVAR PcP **PcP** **21 13 48.8 +1.6**
comp=Z,0.9nm,0.4s,baz=56,slow=4.4,SNR=2.1
BVAR pPcP 21 14 01.2
comp=Z,2.1nm,0.4s,baz=86,slow=3.3,SNR=5.9
BVAR LR LR 21 35 21.5
comp=Z,116nm,18.7s,baz=73,slow=38
comp=Z,1.6nm,0.4s
BORK Borovoye 49.57 309 *e*P **P** **21 12 26.7 +0.4**
BORK pmax pmax
comp=Z,7.0nm,0.8s
TARG Taragay, Kyrgy 49.57 293 **P** **21 12 26.8 -0.3**
TARG Taragay, Kyrgy 49.57 293 P **P** **21 12 26.8 -0.3**
TARG pmax pmax
comp=Z,11nm,0.6s
KDJ Kajisay 49.81 294 P **P** **21 12 28.1 -0.5**
KDJ Kajisay 49.81 294 P **P** **21 12 28.1 -0.5**
KDJ pmax pmax
comp=Z,20nm,0.6s
EVN Everest 50.24 273 **P** **21 12 33.2 +0.6**
ULHL Ulahol 50.38 294 P **P** **21 12 34.0 +1.1**
SNR=5.8
BOOM Boomskoye usch 50.47 295 P **P** **21 12 34.2 +0.7**
BOOM Boomskoye usch 50.47 295 P **P** **21 12 34.2 +0.7**
BOOM pmax pmax
comp=Z,45nm,0.8s
TKM2 Tokmak 2 50.50 296 P **P** **21 12 34.8 +1.0**
SNR=28
DLBC Dease Lake 50.84 42 LR LR 21 35 35.2
comp=Z,49nm,18.9s,baz=338,slow=38
CHMS Chumysh 51.02 296 P **P** **21 12 38.0 +0.5**
SNR=6.8
KBK Karagaybulak 51.04 295 P **P** **21 12 39.0 +1.1**
SNR=40
USP Ospenovka 51.06 296 P **P** **21 12 38.4 +0.6**
SNR=36
FRU1 Bishkek 51.18 296 P **P** **21 12 39.4 +0.6**
FRU1 Bishkek 51.18 296 P **P** **21 12 39.4 +0.6**
FRU1 pmax pmax
comp=Z,25nm,0.6s
AAK Ala-Archa 51.35 296 **P** **21 12 40.2 0.0**
AAK Ala-Archa 51.35 296 P **P** **21 12 40.8 +0.6**
SNR=26
AAK Ala-Archa 51.35 296 *i* P **P** **21 12 40.7 +0.6**
SNR=29
AAK Ala-Archa 51.35 296*c i*P **P** **21 12 40.7 +0.6**
AAK pmax pmax
comp=Z,26nm,1.3s
AAK Ala-Archa 51.35 296 *e*P **P** **21 12 40.7 +0.6**
AAK Ala-Archa 51.35 296 P **P** **21 12 40.7 +0.6**
AAK pP **pP** **21 12 56.6 +1.3**
UCH Uchtor 51.53 295 P **P** **21 12 42.8 +0.9**
SNR=7.5
EKS2 Erkin-Say 51.81 296 P **P** **21 12 44.3 +0.7**
SNR=6.0
KSH Kashi 51.84 291 P **P** **21 12 47.7 +3.9**
KSH pmax pmax
comp=Z,15nm,0.8s
PMG Port Moresby 52.76 180 LR LR 21 32 03.6
comp=Z,22nm,20.5s,baz=326,slow=32
ARSB Arslanbob 52.96 295 **P** **21 12 52.8 +0.7**
ARSB Arslanbob 52.96 295 P **P** **21 12 52.8 +0.7**
ARSB pmax pmax
comp=Z,68nm,0.7s
SVE Sverdlovsk 53.19 317 *e*P **P** **21 12 53.7 +0.3**
SVE pmax pmax
comp=Z,10.0nm,0.8s
KK31 Karatay Array 53.71 298 **P** **21 12 57.2 -0.2**
KK31 Karatay Array 53.71 298 P **P** **21 12 57.3 -0.2**
KK31 pmax pmax
comp=Z,25nm,0.7s
KKAR Karatay Array 53.71 298 **P** **21 12 57.6 +0.2**
KKAR Karatay Array 53.71 298 P **P** **21 12 57.7 +0.2**
HNR Honiara 54.07 164 LR LR 21 35 06.8
comp=Z,31nm,19.3s,baz=340,slow=35
BBB Bella Bella 54.43 49 LR LR 21 38 16.1
comp=Z,18nm,18.2s,baz=188,slow=38
ARTI Arti 54.51 317 **P** **21 13 01.3 -1.7**
ARTI IAmb IAmb 21 13 04.7
comp=Z,9.1nm,0.6s
ARTI Arti 54.51 317 LR LR 21 37 57.8
comp=Z,77nm,19.4s,baz=22,slow=38
ARTI Arti 54.51 317*d i*P **P** **21 13 02.3 -0.7**
ARTI *PP **pP** **21 13 13.9 -4.4**
ARTI 21 14 06.6
ARTI S **S** **21 20 38.9 +1.4**
ARTI SS **SS** **21 24 20.3 +0.4**
ARTI pmax pmax
comp=Z,8.0nm,1.0s
DRK Karamyk 54.66 293 P **P** **21 13 04.8 0.0**
DRK Karamyk 54.66 293 P **P** **21 13 04.8 0.0**
DRK pmax pmax
comp=Z,22nm,0.6s
SPITS Spitsbergen Ar 54.91 349 LR LR 21 37 45.8
comp=Z,50nm,20.2s,baz=295,slow=37
RES Resolute Bay 55.13 17 LR LR 21 41 00.7
comp=Z,55nm,18.1s,baz=5.0,slow=41
GAR Garm 55.90 294 **P** **21 13 12.9 -0.5**
YKA Yellowknife Ar 55.96 34 pP pP 21 13 26.1 -2.6
comp=Z,4.5nm,0.9s,baz=305,slow=7.4,SNR=5.0
AB31 Akbulak array 57.09 309 **P** **21 13 21.5 -0.1**
ABKAR Akbulak array 57.09 309 **P** **21 13 21.5 -0.1**
COEN Coen 57.39 184 **P** **21 13 24.8 +0.8**
COEN IAmb IAmb 21 13 26.7
comp=Z,10nm,0.8s
AKTO Aktyubinsk 57.57 311 LR LR 21 40 20.6
comp=Z,71nm,19.0s,baz=68,slow=38
KIRV Kirov 57.66 322 LR LR 21 39 53.0
comp=Z,75nm,19.1s,baz=69,slow=38
KBL Kabul 59.17 290 **P** **21 13 35.5 -1.1**
KBL Kabul 59.17 290 P **P** **21 13 35.5 -1.1**
KBL pmax pmax
comp=Z,24nm,0.7s
ARA0 ARCESS Array S 59.35 340 *e*P **P** **21 13 35.7 -1.4**
ARCES ARCESS Array B 59.35 340 P **P** **21 13 36.4 -0.7**
comp=Z,1.9nm,0.6s,baz=50,slow=6.9,SNR=19
ARCES LR LR 21 42 59.7
comp=Z,74nm,19.0s,baz=22,slow=40
comp=Z,1.9nm,0.6s
KTK1 Kautokeino 60.30 340 *e*P **P** **21 13 42.4 -1.1**
KLMR Klimovskoe 60.52 328 *e*P **P** **21 13 43.8 -1.3**
KLMR pmax pmax
comp=Z,17nm,0.8s
JETT Jettan, Norway 60.58 341 *e*P **P** **21 13 44.8 -0.7**
TRO Tromso 60.87 342 *e*P **P** **21 13 45.9 -1.5**
NEW Newport 62.48 49 P **P** **21 13 59.9 +1.2**
NEW pmax pmax
comp=Z,8.0nm,1.1s
FAUS Fauske 63.47 341 *e*P **P** **21 14 03.6 -1.2**
HRA Herat 63.84 293 **P** **21 14 08.4 +0.2**
WB0 Warramunga Arr 64.12 193 **P** **21 14 09.1 -0.6**
WB0 IAmb IAmb 21 14 11.8
comp=Z,16nm,1.1s
WR8 Warramunga Arr 64.29 193 **P** **21 14 11.1 +0.4**
WR8 IAmb IAmb 21 14 12.9
comp=Z,14nm,1.1s
WRAB Tennant Creek 64.29 193*ti* *e*P **P** **21 14 10.8 +0.1**
WRAB pmax pmax
comp=Z,15nm,1.0s
WRA Warramunga Arr 64.30 193 **P** **21 14 10.5 -0.3**
WRA Warramunga Arr 64.30 193 P **P** **21 14 11.5 +0.6**
comp=Z,7.7nm,0.9s,baz=11,slow=6.8,SNR=37
comp=Z,7.7nm,0.9s
WRA Warramunga Arr 64.30 193 *i* P **P** **21 14 11.6 +0.8**
WRA pmax pmax
comp=Z,8.0nm,0.9s
RAUS Rausandaksla 64.53 341 *e*P **P** **21 14 11.1 -0.7**
MOR8 Moi Rana 64.65 341 *e*P **P** **21 14 09.5 -3.1**
FIA1 FINESS Array S 64.97 333 P **P** **21 14 13.6 -1.1**
FINES FINESS Array B 64.97 333 P **P** **21 14 13.6 -1.1**
FINES FINESS Array B 64.97 333 P **P** **21 14 14.1 -0.6**
comp=Z,19nm,0.5s,baz=42,slow=7.7,SNR=167
comp=Z,19nm,0.5s
PLID Pearl Lake 64.99 51 **P** **21 14 15.9 +0.4**
PLID IAmb IAmb 21 14 36.8
comp=Z,5.5nm,0.8s
OBN Obninsk 65.39 324*ti i*P **P** **21 14 17.0 -0.5**
OBN *e* 21 16 40.3
OBN *e*S **S** **21 22 57.4 +0.4**
OBN pmax pmax
comp=Z,18nm,1.3s
OBN MLR MLR
comp=Z,58nm,18.0s
OBN Obninsk 65.39 324 *e*P **P** **21 14 17.0 -0.5**
OBN Obninsk 65.39 324 P **P** **21 14 16.2 -1.3**
comp=Z,11nm,0.6s
BEKR Beckworth 65.58 58 **P** **21 14 19.7 +0.4**
VSU Vasula 66.92 330*ce*P **P** **21 14 26.2 -1.1**
VSU pmax pmax
comp=Z,23nm,1.3s
LHV Little Huntoon 67.71 58 P **P** **21 14 33.8 +1.2**
LHV IAmb IAmb 21 14 49.9
comp=Z,12nm,0.9s
NVAR Mina Array Bea 67.72 58 P **P** **21 14 32.8 -0.2**
NVAR Mina Array Bea 67.72 58 P **P** **21 14 34.2 +1.2**
comp=Z,1.8nm,0.7s,baz=295,slow=6.8,SNR=16
NVAR pP **pP** **21 14 47.2 -1.4**
comp=Z,3.2nm,0.6s,baz=286,slow=6.7,SNR=16
comp=Z,1.8nm,0.7s
NV11 Mina Array Sit 67.81 58 P **P** **21 14 33.2 -0.3**
YHB Horse Butte 67.87 49 P **P** **21 14 34.2 +0.4**
YHB IAmb IAmb 21 14 37.7
comp=Z,11nm,1.2s
AS31 Alice Springs 68.02 193 **P** **21 14 35.4 +0.8**
ASAR Alice Springs 68.02 193 P **P** **21 14 35.8 +1.1**
comp=Z,4.4nm,0.8s,baz=12,slow=6.2,SNR=51
ASAR LR LR 21 43 48.9
comp=Z,13nm,19.2s,baz=110,slow=35
comp=Z,4.4nm,0.8s
AKT Akhty 68.58 307 *e*P **P** **21 14 38.3 +0.1**
AKT *e**SP **pP** **21 14 57.1 +3.1**
AKT *e* 21 15 03.1
AKT *e*S **S** **21 23 37.1 +0.8**
AKT *e*SS **SS** **21 28 03.6 +3.0**
AKT pmax pmax
comp=Z,48nm,1.0s
DSP Deep Springs 68.59 58 **P** **21 14 39.1 +1.0**
DSP IAmb IAmb 21 14 55.3
comp=Z,7.0nm,1.0s
MOOW Moose Ponds 68.76 49 **P** **21 14 40.7 +1.2**
MOOW IAmb IAmb 21 14 56.3
comp=Z,10nm,1.6s
GOF Gofitskoye 68.88 313*ce*P **P** **21 14 40.4 +0.5**
SFJD Kangerlussuaq 68.90 7 LR LR 21 44 31.9
comp=Z,112nm,21.1s,baz=134,slow=36
SEKA Sheki 69.06 307 P **P** **21 14 42.2 +1.0**
MOL Molde 69.31 341 *e*P **P** **21 14 40.7 -1.5**
DOMB Dombas 69.40 340 *e*P **P** **21 14 42.8 -0.1**
MNK Minsk 69.40 327 *i* P **P** **21 14 43.3 +0.4**
MNK *i **PP **pP** **21 15 02.9 +4.2**
MNK *i* 21 15 08.2
MNK *i* PPP PPP 21 18 59.1
MNK *i* S **S** **21 23 45.9 +0.6**
MNK *i **SS **sS** **21 24 18.7 +6.8**
MNK pmax pmax
comp=N,10.0nm,0.9s
MNK pmax pmax
comp=Z,20nm,0.7s
MNK pmax pmax
comp=E,21nm,0.9s
MNGR Mingechevir, A 69.41 307 P **P** **21 14 44.6 +1.4**
R11B Troy Canyon, C 69.43 56 P **P** **21 14 43.6 0.0**
PSA00 Pilbara Seismi 69.50 207 P **P** **21 14 43.6 -0.2**
NC303 NORSAR Array S 69.51 339 **P** **21 14 42.7 -0.8**
NC303 NORSAR Array S 69.51 339 *e*P **P** **21 14 42.8 -0.8**
NC405 NORSAR Array S 69.52 339 P **P** **21 14 43.2 -0.3**
DDFL Dedoflistskaro 69.53 308 P **P** **21 14 45.6 +1.5**
NC204 NORSAR Array S 69.63 339 P **P** **21 14 43.8 -0.5**
NC204 NORSAR Array S 69.63 339 *e*P **P** **21 14 43.6 -0.7**
NB201 NORSAR Array S 69.68 339 P **P** **21 14 43.4 -1.2**
NB201 NORSAR Array S 69.68 339 *e*P **P** **21 14 44.8 +0.2**
NB2 NORSAR Subarra 69.71 339 P **P** **21 14 44.3 -0.5**
comp=Z,6.3nm,0.5s,baz=32,slow=6.5
NOA NORSAR Array B 69.71 339 P **P** **21 14 44.3 -0.5**
comp=Z,12nm,0.7s,baz=32,slow=6.5,SNR=73
NOA LR LR 21 49 13.8
comp=Z,36nm,18.5s,baz=310,slow=39
comp=Z,12nm,0.7s
LKRN Lenkeran, Azer 69.74 304 P **P** **21 14 46.0 +0.8**
AKN Aaknes 69.78 341 *e*P **P** **21 14 44.8 -0.4**
HFS Hagfors 69.79 337 P **P** **21 14 44.7 -0.5**
comp=Z,22nm,0.5s,baz=46,slow=6.4,SNR=164
HFS LR LR 21 48 01.8
comp=Z,46nm,20.6s,baz=42,slow=38
comp=Z,22nm,0.5s
KVAR Kislovodsk Arr 69.80 312 LR LR 21 48 38.2
comp=Z,70nm,18.3s,baz=264,slow=39
KIV Kislovodsk 69.80 312 **P** **21 14 45.9 +0.2**
KIV Kislovodsk 69.80 312 *ti* P **P** **21 14 46.4 +0.7**
KIV Kislovodsk 69.80 312 *i* P **P** **21 14 46.6 +0.9**
SNR=34
KIV Kislovodsk 69.80 312 *e*P **P** **21 14 45.1 -0.6**
KIV pmax pmax
comp=Z,75nm,1.1s
KIV MLR MLR
comp=Z,51nm,17.0s
KIV Kislovodsk 69.80 312 *e*P **P** **21 14 45.1 -0.6**
KIV Kislovodsk 69.80 312 P **P** **21 14 46.4 +0.7**
KIV pP **pP** **21 15 01.4 -0.2**
NBO00 NORSAR Array S 69.83 339 P **P** **21 14 45.2 -0.3**
NBO00 NORSAR Array S 69.83 339 *e*P **P** **21 14 44.8 -0.7**
KBZ Khabaz 69.84 312 P **P** **21 14 46.8 +1.1**
comp=Z,34nm,0.8s,baz=74,slow=3.8,SNR=104
KBZ LR LR 21 49 44.6
comp=Z,91nm,19.2s,baz=38,slow=40
KBZ Khabaz 69.84 312*ce*P **P** **21 14 46.4 +0.6**
KBZ pmax pmax
comp=Z,35nm,0.9s
KBZ Khabaz 69.84 312 *e*P **P** **21 14 46.4 +0.6**
NC602 NORSAR Array S 69.88 338 *e*P **P** **21 14 44.8 -1.0**
NORES NORESS Array B 69.88 338 P **P** **21 14 45.6 -0.2**
GANJ Ganja 69.93 307 P **P** **21 14 46.8 +0.3**
NA001 NORSAR Array S 69.96 339 *e*P **P** **21 14 45.3 -0.9**
SHA1 Shidzhatmaz 69.96 312*d i*P **P** **21 14 47.6 +0.7**
PD31 Pinedale Array 70.06 50 IAmb IAmb 21 15 02.9
comp=Z,20nm,1.6s
PABE Paberze 70.14 330 P **P** **21 14 46.3 -1.2**
SKAR Skarslia 70.76 340 *e*P **P** **21 14 51.4 +0.2**
HYA Hoyanger 70.85 341 *e*P **P** **21 14 51.4 -0.2**
GNI Garni 71.17 308 **P** **21 14 53.7 -0.5**
GNI IAmb IAmb 21 15 01.8
comp=Z,13nm,0.9s
GNI Garni 71.17 308 LR LR 21 49 35.3
comp=Z,47nm,18.6s,baz=46,slow=39
GNI Garni 71.17 308 P **P** **21 14 55.6 +1.4**
GNI Garni 71.17 308*de*P **P** **21 14 55.9 +1.7**
GNI pmax pmax
comp=Z,15nm,1.0s
GNI Garni 71.17 308 P **P** **21 14 56.0 +1.8**
SUE Sulen 71.28 342 *e*P **P** **21 14 53.8 -0.4**
KONO Kongsberg 71.32 339*ce*P **P** **21 14 54.8 +0.3**
KONO pmax pmax
comp=Z,45nm,2.5s
NAX Nakhchivan 71.38 307 P **P** **21 14 56.5 +1.1**
STRU Stroemstad 71.42 338 *i* P **P** **21 14 54.8 -0.2**
VSLR Vesyoloye 71.56 313*d i*P **P** **21 14 56.8 +0.5**
VSLR pmax pmax
comp=Z,25nm,0.9s
AK03 Malin Array Si 71.63 324 P **P** **21 14 56.0 -0.6**
AK23 Malin Array Si 71.65 324 P **P** **21 14 56.1 -0.5**
AKASG Malin Array Be 71.65 324 P **P** **21 14 55.4 -1.3**
AKASG IAmb IAmb 21 14 57.5
comp=Z,8.3nm,1.1s
AKASG Malin Array Be 71.65 324 P **P** **21 14 56.0 -0.6**
comp=Z,10.0nm,0.5s,baz=42,slow=6.3,SNR=64
AKASG LR LR 21 49 21.9
comp=Z,56nm,19.6s,baz=48,slow=38
comp=Z,10.0nm,0.5s
AKASG Malin Array Be 71.65 324 *i* P **P** **21 14 56.2 -0.5**
AKASG pmax pmax
comp=Z,10.0nm,0.4s
AKBB Malin Array Si 71.65 324 **P** **21 14 56.1 -0.6**

AKBB	Malin Array Si	71.65 324	*de*P		P		21 14 55.6	-1.1
AKBB	Malin Array Si	71.65 324	P		P		21 14 56.1	-0.6
AK04	Malin Array Si	71.66 324	P		P		21 14 56.1	-0.6
AK01	Malin Array Si	71.66 324	P		P		21 14 56.1	-0.6
KIEV	Kiev	71.66 324			P		21 14 56.1	-0.6
KIEV	Kiev	71.66 324	⇓P		P		21 14 56.4	-0.4
KIEV	Kiev	71.66 324	*i* P		P		21 14 56.4	-0.4
	SNR=17							
KIEV	Kiev	71.66 324	P		P		21 14 56.3	-0.4
KIEV	Kiev	71.66 324	P		P		21 14 56.1	-0.6
	comp=Z,105nm,1.1s							
KIEV	Kiev	71.66 324	P		P		21 14 56.5	-0.2
AK22	Malin Array Si	71.67 324	P		P		21 14 56.2	-0.6
AK21	Malin Array Si	71.67 324	P		P		21 14 56.2	-0.6
AK08	Malin Array Si	71.69 324	P		P		21 14 56.3	-0.6
AK09	Malin Array Si	71.69 324	P		P		21 14 56.3	-0.6
ASK	Askoy	71.69 341	*e*P		P		21 14 56.6	-0.1
AK02	Malin Array Si	71.69 324	P		P		21 14 56.3	-0.6
AK11	Malin Array Si	71.69 324	P		P		21 14 56.3	-0.6
BER	Bergen	71.74 341	*e*P		P		21 14 57.2	+0.2
ODD1	Odda	71.85 340	*e*P		P		21 14 57.5	-0.3
PFO	Pinyon Flats O	71.94 61	LR		LR		21 40 12.3	
	comp=Z,28nm,20.6s,baz=14,slow=30							
TJOU	Tjoern	72.14 337	*i* P		P		21 14 58.8	-0.7
MI28	Mi28,Pidlybu	72.14 325	P		P		21 14 59.1	-0.5
BORU	Boraas	72.14 336	*i* P		P		21 14 59.1	-0.4
BLJS	Blasjo	72.32 340	*e*P		P		21 14 59.9	-0.7
RNPP9	Sopachiv	72.52 326	P		P		21 15 01.1	-0.7
HMU	Henry Mountain	72.59 54			P		21 15 02.9	0.0
HMU				IAmb	IAmb		21 15 24.4	
	comp=Z,7.7nm,0.8s							
RNPP8	Varash	72.59 326	P		P		21 15 01.6	-0.7
ONAU	Onsala	72.59 336	*i* P		P		21 15 01.1	-1.0
RNPP5	Staryi Chortor	72.66 326	P		P		21 15 02.0	-0.7
U15A	North Rim	72.67 56			P		21 15 04.3	+0.9
FABU	Falkenberg	72.69 336	*i* P		P		21 15 01.9	-0.9
DEL	Delary	72.79 335	*i* P		P		21 15 02.7	-0.6
HOMB	Homborsund	72.80 339	*e*P		P		21 15 01.0	-2.3
HOMB	Homborsund	72.80 339	*i* P		P		21 15 04.0	+0.7
KMY	Karmoy	72.80 341	*e*P		P		21 15 03.0	-0.3
LUBAR	Lubar, Ukraine	72.86 324	P		P		21 15 03.2	-0.7
SNART	Snartemo	73.08 339	*e*P		P		21 15 03.9	-1.1
SNART	Snartemo	73.08 339	*i* P		P		21 15 05.2	+0.2
BANOM	Banah	73.12 290	P		P		21 15 06.4	+0.5
SHME	Shamm	73.15 290	*i* P		P		21 15 06.3	+0.3
	SNR=6.5							
PV10	Paradox Valley	73.29 53	P		P		21 15 07.3	+0.3
PV10				IAmb	IAmb		21 15 23.7	
	comp=Z,16nm,0.8s							
GLA	Glamis	73.33 60	P		P		21 15 06.8	-0.3
GLA				IAmb	IAmb		21 15 09.7	
	comp=Z,13nm,0.7s							
GLA	Glamis	73.33 60	P		P		21 15 06.8	-0.3
GLA				pmax	pmax			
	comp=Z,13nm,0.7s							
PV19	Morning Glory	73.36 53	IAmb		IAmb		21 15 23.6	
	comp=Z,29nm,1.3s							
BJUU	Bjuv	73.38 335	*i* P		P		21 15 06.7	-0.2
PV17	East Wray Mesa	73.40 53	P		P		21 15 06.7	-0.9
PV17				IAmb	IAmb		21 15 23.9	
	comp=Z,8.9nm,0.8s							
PV05	Paradox Valley	73.45 53	P		P		21 15 08.1	+0.2
PV05				IAmb	IAmb		21 15 24.6	
	comp=Z,10nm,1.2s							
MSFE	Esma-Masafi	73.58 289	P		P		21 15 09.8	+1.1
LUNU	Lund	73.62 335	*i* P		P		21 15 08.0	-0.3
KOPT	Kop Dagi	73.66 310	P		P		21 15 09.4	+0.2
KOPT				IAmb	IAmb		21 15 13.7	
	comp=Z,8.2nm,0.8s							
GOET	G??ttrup	73.67 338	*i* P		P		21 15 09.6	+1.1
GOET				IAmb	IAmb		21 15 17.1	
	comp=Z,197nm,1.2s							
GURO	Guroymak-BITLI	73.80 308			P		21 15 09.5	-0.4
UOSS	Minazif	73.82 289	P		P		21 15 10.8	+0.8
UOSS	Minazif	73.82 289	P		P		21 15 10.3	+0.3
COP	Copenhagen	73.89 335	*i* P		P		21 15 10.3	+0.5
COP				IAmb	IAmb		21 15 10.5	
	comp=Z,43nm,0.8s							
SORM	Soroca	73.94 322	⇓P		P		21 15 09.9	-0.4
SORM	Soroca	73.94 322	P		P		21 15 09.9	-0.4
HATD	Hatta, Dubai	73.95 289	P		P		21 15 12.0	+1.2
ASHO	Ashiyiah	74.09 289	P		P		21 15 12.7	+1.1
SOHO	SOHO	74.13 288	P		P		21 15 12.4	+0.7
NAZ	Nazwa, Dubai	74.17 289	P		P		21 15 12.8	+0.8
MUD	Monsted U'grnd	74.19 337	*i* P		P		21 15 11.8	+0.3
MUD				IAmb	IAmb		21 15 13.1	
	comp=Z,13nm,0.8s							
FAQ	Al Faqa, Dubai	74.37 289	P		P		21 15 14.7	+1.5
ASUD	Al Ashush, Dub	74.63 289	P		P		21 15 15.9	+1.2
ALNE	Al Ain	74.72 289	*i* P		P		21 15 15.6	+0.3
	SNR=8.1							
SSRD	Sdr. Stenderup	74.90 336	*i* P		P		21 15 16.6	+0.9
SSRD				IAmb	IAmb		21 15 21.0	
	comp=Z,112nm,1.4s							
KWP	Kalwaria Pacla	75.18 326	*e*P		P		21 15 17.9	+0.5
STKA	Stephens Creek	75.28 185	LR		LR		21 49 58.6	
	comp=Z,14nm,18.5s,baz=23,slow=37							
MARD	Mardin	75.37 308			P		21 15 19.7	+0.8
ARPR	Arapgir-MALATY	75.50 310	P		P		21 15 20.5	+0.7
ARPR				IAmb	IAmb		21 15 22.2	
	comp=Z,16nm,0.9s							
TBO	Thunder Bay	75.63 35	P		P		21 15 20.2	+0.2
TOKA	Tokat	75.65 312	P		P		21 15 20.5	+0.1
BUR08	Bucovina Ar. S	75.69 324			P		21 15 20.7	+0.2
BURAR	Bucovina Array	75.71 324	P		P		21 15 20.8	+0.2
BURAR	Bucovina Array	75.71 324	⇑P		P		21 15 20.6	0.0
BURAR	Bucovina Array	75.71 324	P		P		21 15 20.6	0.0
OJC	Ojcow	75.86 328	*e*P		P		21 15 21.7	+0.3
OJC	Ojcow	75.86 328			P		21 15 20.7	-0.6
OJC	Ojcow	75.86 328	P		P		21 15 20.7	-0.6
TESR	Tescani	75.92 322	⇓P		P		21 15 21.8	0.0
STHS	Stebnicka Huta	75.94 327	*e*P		P		21 15 22.0	+0.2
STHS				pmax	pmax			
	comp=Z,9.0nm,0.7s							
STHS	Stebnicka Huta	75.94 327	*e*P		P		21 15 22.0	+0.2
TLCR		75.94 320	⇓P		P		21 15 22.3	+0.5
TLCR		75.94 320	P		P		21 15 22.3	+0.5
ONER	Baraj Valea Uz	76.17 322	⇓P		P		21 15 23.8	+0.6
CFR	Carcaliu	76.26 320	⇑P		P		21 15 23.8	+0.1
CFR	Carcaliu	76.26 320	P		P		21 15 23.7	+0.1
ODBI	Odobesti	76.31 321	⇑P		P		21 15 25.0	+1.0
TPGR	Topolog	76.37 320	⇓P		P		21 15 25.1	+0.7
VRI	Vrincioaia	76.38 322	⇑P		P		21 15 24.5	+0.1
VRI	Vrincioaia	76.38 322	P		P		21 15 24.5	+0.1
PLOR	Plostina	76.43 322	⇓P		P		21 15 24.9	+0.1
PLOR	Plostina	76.43 322	P		P		21 15 24.8	+0.1
TURR	Turia	76.56 322	⇑P		P		21 15 25.5	+0.1
ILGA	Ilgaz	76.58 314			P		21 15 26.1	+0.2
ILGA				IAmb	IAmb		21 15 28.5	
	comp=Z,14nm,1.0s							
OZUR		76.63 322	⇓P		P		21 15 25.3	-0.5
KSP	Ksiaz	76.65 330	*e*P		P		21 15 26.3	+0.4
HARR	Harsova	76.73 320	⇓P		P		21 15 26.9	+0.6
HARR	Harsova	76.73 320	P		P		21 15 26.9	+0.6
LANS	Liptovska Anna	76.85 328	*e*P		P		21 15 28.6	+1.6
LANS				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LANS	Liptovska Anna	76.85 328	*e*P		P		21 15 28.6	+1.6
STEB	Steborice	76.86 329	*e*P		P		21 15 27.3	+0.3
DOPR	Dopca	76.90 322	⇓P		P		21 15 26.6	-0.7
OSTC	Ostas	76.92 330	*e*P		P		21 15 27.4	0.0
OSTC	Ostas	76.92 330	*e*P		P		21 15 27.4	0.0
CHVC	Chvalec	76.95 330	*e*P		P		21 15 28.2	+0.7
CHVC	Chvalec	76.95 330	*e*P		P		21 15 28.2	+0.7
MZR	Muzera	76.97 289	*i* P		P		21 15 28.3	+0.2
	SNR=7.7							
MLR	Muntele Rosu	77.02 322			P		21 15 28.0	-0.2
MLR				IAmb	IAmb		21 15 29.9	
	comp=Z,27nm,1.7s							
MLR	Muntele Rosu	77.02 322	LR		LR		21 52 46.5	
	comp=Z,74nm,21.0s,baz=62,slow=38							
MLR	Muntele Rosu	77.02 322	⇓P		P		21 15 28.8	+0.6
MLR	Muntele Rosu	77.02 322	P		P		21 15 28.8	+0.6
UPC	Upice	77.03 330	*e*P		P		21 15 28.4	+0.4
UPC	Upice	77.03 330	*e*P		P		21 15 28.4	+0.4
ISR	Istrita	77.04 321	⇑P		P		21 15 28.9	+0.7
ISR	Istrita	77.04 321	P		P		21 15 28.9	+0.7
BNN	Bunyan	77.04 312			P		21 15 28.0	-0.4
BNN				IAmb	IAmb		21 15 30.3	
	comp=Z,9.2nm,1.0s							
DPC	Dobruska-Polom	77.05 330	*e*P		P		21 15 28.4	+0.3
DPC	Dobruska-Polom	77.05 330	*e*P		P		21 15 28.4	+0.3
MORC	Moravsky Berou	77.07 329			P		21 15 28.4	+0.1
MORC				IAmb	IAmb		21 15 29.9	
	comp=Z,8.5nm,0.8s							
MORC	Moravsky Berou	77.07 329	⇓P		P		21 15 28.0	-0.3
MORC	Moravsky Berou	77.07 329	*e*P		P		21 15 28.8	+0.5
MORC	Moravsky Berou	77.07 329	P		P		21 15 28.4	+0.1
MORC				pmax	pmax			
	comp=Z,9.0nm,0.8s							
KRLC	Kraliky	77.11 330	*e*P		P		21 15 29.0	+0.5
KRLC	Kraliky	77.11 330	*e*P		P		21 15 29.0	+0.5
ICOR	Ion Corvin	77.22 320	⇑P		P		21 15 29.6	+0.5
MAUC	Mauska	77.30 329	*e*P		P		21 15 30.4	+0.8
CLL	Collm	77.41 332	P		P		21 15 29.8	-0.2
CLL	Collm	77.41 332	*i* P		P		21 15 29.8	-0.2
CLL				pmax	pmax			
	comp=Z,20nm,0.8s							
CLL	Collm	77.41 332	*i* P		P		21 15 29.8	-0.2
	comp=Z,20nm,0.8s							
DRGR		77.42 324	⇓P		P		21 15 30.3	-0.1
DRGR		77.42 324	P		P		21 15 30.2	-0.1
VOIR		77.46 322	⇑P		P		21 15 31.0	+0.4
VOIR		77.46 322	P		P		21 15 31.0	+0.4
PVCC	Panska Ves	77.53 331	*e*P		P		21 15 31.5	+0.8
PVCC	Panska Ves	77.53 331	*e*P		P		21 15 31.5	+0.8
BR131	Keskin Array S	77.59 314	P		P		21 15 31.7	+0.3
BR131	Keskin Array S	77.59 314	*de*P		P		21 15 31.8	+0.3
BRTR	Keskin Array B	77.59 314	P		P		21 15 30.9	-0.6
BRTR	Keskin Array B	77.59 314	P		P		21 15 31.6	+0.3
	comp=Z,2.5nm,0.8s,baz=71,slow=3.7,SNR=17							
BRTR				pP	pP		21 15 45.4	-2.1
	comp=Z,1.4nm,0.8s,baz=203,slow=0.9,SNR=4.7							
BRTR				LR	LR		21 54 13.1	
	comp=Z,40nm,19.7s,baz=50,slow=39							
	comp=Z,2.5nm,0.8s							
BRTR	Keskin Array B	77.59 314	*i* P		P		21 15 31.8	+0.3
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
PSZ	Piszkesteto	77.67 327	P		P		21 15 31.7	0.0
PSZ				IAmb	IAmb		21 15 33.4	
	comp=Z,7.4nm,0.8s							
PSZ	Piszkesteto	77.67 327	⇓P		P		21 15 31.5	-0.2
PSZ	Piszkesteto	77.67 327	P		P		21 15 31.7	0.0
PSZ				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ARR	Arges	77.70 322	⇑P		P		21 15 32.6	+0.7
JAVC	Velka Javorina	77.78 329	*e*P		P		21 15 33.6	+1.4
VRAC	Vranov	77.81 329	LR		LR		21 51 22.9	
	comp=Z,36nm,21.3s,baz=34,slow=37							
VRAC	Vranov	77.81 329	*e*P		P		21 15 32.9	+0.5
VRAC	Vranov	77.81 329	P		P		21 15 32.2	-0.2
HSKC	Hora Svate Kat	77.85 332	*e*P		P		21 15 32.6	0.0
KIRS	Kirsehir-Merke	77.87 313	⇑P		P		21 15 33.3	+0.3
ANTO	Ankara	77.92 314			P		21 15 32.9	-0.4
ANTO				IAmb	IAmb		21 15 35.7	
	comp=Z,12nm,0.8s							
ANTO	Ankara	77.92 314	⇑P		P		21 15 33.1	-0.1
ANTO	Ankara	77.92 314	P		P		21 15 33.1	-0.1
PRU	Pruhonice	77.99 331	*e*P		P		21 15 33.6	+0.3
PRU	Pruhonice	77.99 331	*e*P		P		21 15 33.6	+0.3
KRUC	Moravsky	78.09 329	*e*P		P		21 15 34.4	+0.5
SMOL	Smolenice	78.15 328	*e*P		P		21 15 35.7	+1.4
SMOL				pmax	pmax			
	comp=Z,4.0nm,0.8s							
EKA	Eskdalemuir Ar	78.24 343	P		P		21 15 34.9	+0.3
	comp=Z,4.4nm,0.7s,baz=29,slow=5.1,SNR=9.6							
	comp=Z,4.4nm,0.7s							
MODS	Modra-Piesok	78.32 328	*e*P		P		21 15 36.5	+1.3
MODS	Modra-Piesok	78.32 328	*e*P		P		21 15 36.5	+1.3
COPA	Copaceanca	78.40 321	⇓P		P		21 15 35.9	+0.2
GZR	Gura Zlata	78.49 324	⇑P		P		21 15 35.7	-0.6
GZR	Gura Zlata	78.49 324	P		P		21 15 35.6	-0.6
ZVC	Zvikov	78.57 331	*e*P		P		21 15 37.1	+0.6
ELND	Elena	79.03 320	⇑P		P		21 15 39.3	+0.1
KHC	Kasperske Hory	79.05 331			P		21 15 39.0	-0.2
KHC				IAmb	IAmb		21 15 40.7	
	comp=Z,7.2nm,0.9s							
KHC	Kasperske Hory	79.05 331	⇓P		P		21 15 39.8	+0.6
KHC				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KHC	Kasperske Hory	79.05 331	*e*P		P		21 15 39.5	+0.3
CKRC	Cesky Krumlov	79.05 330	*e*P		P		21 15 39.8	+0.6
CKRC	Cesky Krumlov	79.05 330	*e*P		P		21 15 39.8	+0.6
HERR	Herculane	79.06 323	⇓P		P		21 15 39.2	-0.1
BORA	Eskisehir	79.12 316	P		P		21 15 40.2	+0.4
CONA	Conrad Observa	79.23 329	*i* P		P		21 15 41.1	+0.9
	comp=Z,4.9nm,0.7s							
GERES	GERESS Array B	79.25 331	P		P		21 15 40.6	+0.2
	comp=Z,1.3nm,0.5s,baz=26,slow=6.0,SNR=16							
GERES				pP	pP		21 15 54.3	-2.2
	comp=Z,0.7nm,0.5s,baz=346,slow=3.4,SNR=4.4							
GERES				LR	LR		21 56 15.5	
	comp=Z,42nm,18.5s,baz=40,slow=40							
	comp=Z,1.3nm,0.5s							
RONA	Rosalia, Austr	79.25 329	*i* P		P		21 15 41.1	+0.8
	comp=Z,2.2nm,0.9s							
MDVR	Moldovita	79.44 324	⇑P		P		21 15 40.6	-0.9
MORH	Mrgy, Hungar	79.56 326	⇑P		P		21 15 42.0	+0.1
MOA	Molln	79.88 330	*e*P		P		21 15 43.6	-0.2
	comp=Z,3.7nm,0.4s							
BLKB	Belogradchik	79.94 322	⇑P		P		21 15 44.1	0.0
BIOA	Bad Ischl, Aus	80.24 330	*e*P		P		21 15 46.3	+0.6
	comp=Z,7.6nm,1.2s							
BOVS	Bovan	80.36 323	⇓P		P		21 15 45.9	-0.5
RDO	Rodhopi	80.57 319	IAmb		IAmb		21 16 03.2	
	comp=Z,10nm,0.9s							
SOKA	Soboth	80.58 329	*i* P		P		21 15 48.1	+0.5
	comp=Z,4.7nm,0.8s							
LESA	Schwarzleotal	80.81 331	*i* P		P		21 15 48.7	-0.2
	comp=Z,2.6nm,0.6s							
KBA	Koelnbreinsper	80.87 330	*i* P		P		21 15 48.2	-1.1
	comp=Z,4.3nm,0.5s							
OBKA	Obir	80.90 329	*e*P		P		21 15 48.6	-0.8
	comp=Z,6.6nm,0.8s							
MYKA	Terra Mystica	81.14 330	*e*P		P		21 15 50.3	-0.3
	comp=Z,1.2nm,0.5s							
ASF	Jabal al Asfar	81.26 306	LR		LR		21 57 40.3	
	comp=Z,30nm,20.0s,baz=113,slow=40							
WATA	Walderalm	81.28 331	*i* P		P		21 15 51.0	-0.5
	comp=Z,3.5nm,0.6s							
WTTA	Wattenberg	81.32 331	*i* P		P		21 15 52.0	+0.4
	comp=Z,5.3nm,0.5s							
RETA	Reutte	81.43 332	*i* P		P		21 15 52.1	0.0
	comp=Z,4.3nm,0.8s							
MOTA	Moosalm	81.44 331	*i* P		P		21 15 52.6	+0.3
	comp=Z,7.1nm,1.1s							
SQTA	Sankt Quirin	81.51 331	*i* P		P		21 15 52.8	+0.3
	comp=Z,3.9nm,0.7s							
MMAI	Mount Meron Ar	81.51 308	P		P		21 15 54.2	+1.4
	comp=Z,2.8nm,0.4s,baz=39,slow=5.4,SNR=25							
MMAI				LR	LR		21 55 44.0	
	comp=Z,41nm,19.5s,baz=10,slow=38							
	comp=Z,2.8nm,0.4s							
FETA	Feichten	81.85 331	*e*P		P		21 15 54.9	+0.5
	comp=Z,4.4nm,1.1s							
DAVA	Damuels	81.91 332	*i* P		P		21 15 52.4	-2.3
	comp=Z,12nm,1.7s							
RAYN	Ar Rayn	81.99 295	P		P		21 15 55.4	0.0
RAYN	Ar Rayn	81.99 295	P		P		21 15 56.1	+0.7
RAYN	Ar Rayn	81.99 295	P		P		21 15 55.4	0.0
RAYN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
RAYN	Ar Rayn	81.99 295	P		P		21 15 56.0	+0.7
RAYN				pP	pP		21 16 09.8	-1.8
BALJ	Balqa	82.05 307			P		21 15 55.2	-0.4
BALJ				IAmb	IAmb		21 15 57.6	
	comp=Z,20nm,1.1s							
TX31	Lajitas Ar. Si	82.79 56			P		21 15 59.7	+0.1
TXAR	Lajitas Array	82.79 56	P		P		21 15 60.0	+0.4
TXAR	Lajitas Array	82.79 56	P		P		21 16 00.6	+1.0
	comp=Z,2.3nm,0.9s,baz=296,slow=4.8,SNR=18							
TXAR				pP	pP		21 16 15.2	-0.5
	comp=Z,3.2nm,0.7s,baz=305,slow=4.4,SNR=15							
	comp=Z,2.3nm,0.9s							
TXAR	Lajitas Array	82.79 56	P		P		21 16 00.0	+0.4
PPT	Papeete	84.01 121	LR		LR		21 44 17.3	
	comp=Z,58nm,21.1s,baz=352,slow=29							
PPT2	Papeete2	84.03 121	*e*LR		LR		21 42 32.4	
	comp=Z,131nm,26.5s							
PPT2			*e*LR		LR		21 42 41.4	
	comp=Z,148nm,27.0s							
EIL	Elat	84.22 306	LR		LR		21 56 48.9	
	comp=Z,41nm,19.7s,baz=1.0,slow=38							
DRIO	Del Rio	84.55 54	P		P		21 16 08.1	-0.4
DRIO				IAmb	IAmb		21 16 24.9	
	comp=Z,14nm,1.1s							
FRNY	Flat Rock	84.80 28	P		P		21 16 09.1	-0.3
TBI	Tubuai	88.45 125	*e*LR		LR		21 44 14.2	
	comp=Z,490nm,33.2s							
ESDC	Sonseca Array	93.06 338	LR		LR		22 04 36.6	
	comp=Z,30nm,18.9s,baz=4.5,slow=39							
RKT	Rikitea	97.42 115	*e*LR		LR		21 48 44.2	
	comp=Z,3μm,39.8s							
VNDA	Vanda	121.20 176	PKP		PKiKP		21 22 26.2	-0.2
	comp=Z,0.2nm,0.6s,baz=309,slow=4.9,SNR=3.6							
H03N2	Juan Fernandez	143.04 90	T		T		00 02 28.2	
	baz=304,slow=77,SNR=63							
H03N3	Juan Fernandez	143.05 90	T		T		00 02 24.0	
	baz=304,slow=77,SNR=55							
H03N1	Juan Fernandez	143.06 90	T		T		00 02 29.3	
	baz=304,slow=77,SNR=96							
TROLL	Troll, Antarti	146.83 199	⇑P		PKPab		21 23 17.2	-0.3
	comp=Z,332nm,0.6s							
SNAA	Sanae	148.29 198	⇑P		PKiKP		21 23 20.3	-1.2
SNAA	Sanae	148.29 198	PKPbc		PKPbc		21 23 19.9	+0.1
	comp=Z,3.8nm,1.0s,baz=186,slow=2.4,SNR=9.2							
SNAA			pPKPbc		pPKPdf		21 23 36.4	+3.1
	comp=Z,3.9nm,0.9s,baz=116,slow=5.3,SNR=6.2							
BDFB	Brasilia	149.31 29	pPKPbc		pPKPbc		21 23 39.2	-1.8
	comp=Z,2.7nm,0.7s,baz=317,slow=4.0,SNR=4.9							
VNA3	Neumayer Olymp	150.01 195	⇑P		PKiKP		21 23 25.1	+0.1
PLCA	Paso Flores	152.14 97	PKPbc		PKiKP		21 23 31.1	+0.7
	comp=Z,3.6nm,0.7s,baz=288,slow=6.1,SNR=7.8							
PLCA			pPKPbc		pPKPbc		21 23 47.2	+0.2
	comp=Z,5.0nm,0.9s,baz=220,slow=2.7,SNR=5.4							

NIED ***08*** *21:10:37.0,24.66N×122.41E,h34km,MW4.1,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr-0.90; Mθθ2.03; Mϕϕ-1.13; Mrθ-0.07; Mθϕ0.40; Mrϕ0.34; Fault plane solution: M₀1.75000×10¹⁵ NP1: ϕs223.00000°,δ66.00000°,λ-155.00000°. NP2: ϕs122.00000°,δ67.00000°,λ-26.00000°.*

JMA ***08*** *21:10:37.0±0.1,24.7N±0.7×122.4E±0.3,h34km±2km, MV3.6/12,NW OFF ISHIGAKIJIMA IS*

TAP ***08*** *21:10:36.1,24.75N×122.39E,h8km,ML4.1,C*

IDC ***08*** *21:10:54.2±8.2,24.67N×122.32E,h168km±90km,mb3.2/5, mbtmp3.7/6,MS3.5/1,Error ellipse: s-maj=42.1km s-min=18.8km az=60.0*

ISC 08 21:10:35.6±1.2,24.72N±0.02×122.44E±0.02,h2km±9km, n137,σ1$06/205,mb4.0/5,9D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EGS		0.48 286		*i* P		Pg	21 10 45.1	+0.3
TWB1	Santiago Chiao	0.50 305		⇓*i* P		Pb	21 10 46.0	-1.2
TWB1				*i* S		Sg	21 10 51.8	-0.1
JYNG	Yonagunijimaku	0.53 120		P		Pb	21 10 47.8	+0.2
JYNG				S		Sb	21 10 55.4	-0.3
TWC	Suao	0.55 259		⇓*i* P		Pg	21 10 45.9	-0.2
TWC				*i* S		Sb	21 10 54.6	-1.6
ESAO	Su ao	0.56 256		*i* P		Pg	21 10 46.8	+0.4
ESAO				S		Sb	21 10 56.2	-0.4
NTC	Toucheng	0.57 284		P		Pb	21 10 47.9	-0.5
NTC				S		Sb	21 10 56.2	-0.7
YOJ	Yonaguni jima	0.58 116		P		Pb	21 10 48.6	+0.2
YOJ	Yonaguni jima	0.58 116		S		Sb	21 10 56.9	-0.2
YOJ	Yonaguni jima	0.58 116		*i* P		Pb	21 10 48.6	+0.2
YOJ				S		Sb	21 10 56.6	-0.5
YOJ	Yonaguni jima	0.58 116		*i* P		Pb	21 10 48.7	+0.2
YOJ				S		Sb	21 10 57.0	0.0
TIPB	Shuangxi	0.61 295		*e*P		Pb	21 10 48.1	-1.0
TIPB				S		Sb	21 10 57.0	-1.2
ILA	Ilan	0.63 275		P		Pg	21 10 47.1	-0.6
ILA				S		Sb	21 10 58.2	-0.4
SXI1	Grass Mountain	0.64 306		*i* P		Pb	21 10 48.9	-0.6
SXI1				*i* S		Sg	21 10 56.6	+0.5
NDS	Dongshan	0.67 263		P		Pg	21 10 48.4	0.0
NDS				S		Sb	21 10 57.8	-1.8
NWF	Wu-fen Shan	0.70 301		⇓*i* P		Pn	21 10 50.6	-2.0
NWF				S		Sb	21 10 59.9	-0.7
WFSB	Wu-fen Shan	0.70 301		⇓*i* P		Pn	21 10 50.6	-1.9
ENA	Nanau	0.70 246		*i* P		Pg	21 10 48.9	-0.2
ENA				S		Sg	21 10 58.8

OWD	Renai	1.38	237	*i*	P	Pb	21 11 01.6	-0.6	
OWD					S	Sg	21 11 22.0	+1.9	
WARBT	Fenglin Townsh	1.39	224	*i*	P	Pb	21 11 01.6	-0.6	
WARBT					*i* S	Sg	21 11 20.2	0.0	
EGFH	Guangfu	1.40	222	*eP*		Pg	21 11 02.2	-0.2	
EGFH					*eS*	Sg	21 11 21.5	+1.0	
HATJ	Hateruma jima	1.41	118	*eS*		Sb	21 11 18.4	-2.5	
WUSB	Renai	1.41	239	*i*	P	Pb	21 11 02.2	-0.5	
WUSB					*eS*	Sg	21 11 23.7	+2.8	
WHP	Taichung City	1.43	253	*eP*		Pg	21 11 03.5	+0.4	
JKRS	Kuro-shima	1.51	108	P		Pn	21 11 02.7	-0.9	
NMLH	Miaoli	1.51	264	*i*	P	Pg	21 11 05.3	+0.7	
VWDT	VWDT	1.53	231	P		Pg	21 11 04.6	-0.3	
WCS	Beigang Elemen	1.54	245	*eP*		Pg	21 11 05.6	+0.4	
TWQ1	Liyutan	1.56	257	*eP*		Pg	21 11 06.2	+0.6	
EHYH	Wanrong	1.58	220	*eP*		Pb	21 11 05.0	-0.4	
EHYH					*eS*	Sb	21 11 25.6	-0.3	
EHY	Hungye	1.58	221	*eP*		Pb	21 11 05.1	-0.5	
JJ	Ishigaki jima	1.59	102	P		Pn	21 11 03.8	-1.0	
SMLT	Sun Moon Lake	1.63	240	P		Pg	21 11 06.6	-0.4	
SSLB	Suanglung	1.64	236	P		Pb	21 11 06.3	-0.3	
SSLB	Suanglung	1.64	236	*i*	P	Pb	21 11 06.4	-0.3	
TYC	Yuchr	1.66	241	*i*	P	Pg	21 11 07.3	0.0	
TYC					*eS*	Sg	21 11 30.3	+1.5	
ECBN	Changbin	1.66	213	*eS*		Sn	21 11 26.4	-1.3	
YULB	Yu-li	1.68	219	P		Pn	21 11 05.3	-0.8	
YULB	Yu-li	1.68	219	P		Pn	21 11 05.4	-0.7	
JISG	Ishigakijimahi	1.71	94	P		Pn	21 11 05.5	-0.8	
TWF1	Yuli	1.71	218	*eP*		Pb	21 11 06.9	-0.9	
WHYT	Xinyi Township	1.77	235	P		Pg	21 11 08.8	-0.7	
WHYT					*eS*	Sg	21 11 33.4	+0.9	
WNT	Mingjian	1.81	243	*eP*		Pb	21 11 09.3	-0.2	
WNT					*eS*	Sg	21 11 36.0	+2.2	
YUS	Yu-Shan	1.83	228	*eP*		Pb	21 11 09.6	-0.4	
YUS					S	Sb	21 11 32.4	-1.2	
FULB	Fuli	1.84	215	*eP*		Pn	21 11 08.0	-0.2	
FULB					*eS*	Sb	21 11 32.7	-0.8	
ALS	Alishan	1.92	232	P		Pb	21 11 10.9	-0.5	
ALS					*eS*	Sg	21 11 36.5	-0.8	
EHD	Haiduan	1.93	216	*eP*		Pn	21 11 09.4	0.0	
EHD					*eS*	Sn	21 11 32.5	-1.7	
CHN5	Tsauling	1.96	236	P		Pg	21 11 12.8	-0.4	
WGK	Gukeng	2.00	240	*eP*		Pb	21 11 11.0	-1.7	
ELDTW	Lidau	2.00	221	*eP*		Pb	21 11 11.5	-1.4	
WDL	Douliou City	2.00	241	*eS*		Sg	21 11 40.6	+0.6	
WDLH	Douliu	2.02	240	*eP*		Pg	21 11 13.3	-0.9	
EDH	Donghe	2.02	211	*eP*		Pn	21 11 09.9	-0.8	
EDH					S	Sn	21 11 34.1	-2.5	
WTK	Tuku	2.14	242	*eP*		Pb	21 11 15.2	+0.2	
WTK					S	Sg	21 11 44.2	-0.1	
CHN2	Minshiung	2.15	237	*eP*		Pg	21 11 16.2	-0.7	
CHN2					S	Sg	21 11 44.5	-0.2	
STYH	Taoyuan	2.17	225	*eP*		Pb	21 11 14.4	-1.1	
STYH					*eS*	Sb	21 11 41.4	-1.5	
TPUB	Ta-pu	2.18	230	P		Pb	21 11 14.5	-1.2	
TPUB	Ta-pu	2.18	230	*eP*		Pb	21 11 14.8	-0.9	
CHY	Chiayi	2.21	237	*eP*		Pb	21 11 15.9	-0.3	
CHY					S	Sg	21 11 45.4	-1.2	
LDUT	Ludao	2.22	204	*eP*		Pn	21 11 10.4	-3.0	
LDUT					S	Sn	21 11 39.0	-2.5	
WTP	Ta-pu	2.22	229	*eP*		Pb	21 11 16.9	+0.4	
TWGBT	Beinan	2.27	214	P		Pn	21 11 13.3	-0.8	
TWGBT	Beinan	2.27	214	*eP*		Pn	21 11 13.7	-0.3	
TWGBT					*eS*	Sn	21 11 40.7	-1.9	
TWG	Pinlang	2.27	214	*eP*		Pn	21 11 13.8	-0.3	
TTN	Taitung	2.29	212	*eS*		Sn	21 11 43.8	+0.8	
TWK	Hsinying	2.30	231	*eP*		Pb	21 11 17.7	-0.1	
TWK					*eS*	Sb	21 11 47.4	+0.8	
SNST	Tainan City	2.32	230	*eP*		Pb	21 11 18.5	+0.3	
CHN1	Nanshi	2.32	229	*eP*		Pb	21 11 17.4	-0.8	
WSL	Shuilin Townsh	2.35	240	*eP*		Pb	21 11 16.8	-1.8	
WSL					*eS*	Sb	21 11 48.9	+0.9	
ECL	Taimali	2.51	213	*eS*		Sn	21 11 46.2	-2.5	
SCST	Cishan	2.55	225	*eP*		Pb	21 11 21.2	-0.8	
SCLT	Jiali	2.57	234	*eS*		Sb	21 11 54.1	-0.3	
TSCK	Chigu Township	2.66	235	*eS*		Sb	21 11 55.5	-1.6	
MATB	Ma-tsu	2.67	303	*eP*		Pn	21 11 18.3	-1.3	
MASBT	Mashibuluo	2.67	219	*eP*		Pb	21 11 22.6	-1.5	
MASBT					S	Sb	21 11 55.4	-2.0	
EAST	Anshuo	2.75	213	*eS*		Sn	21 11 52.9	-1.5	
LAY	Lan-yu	2.79	197	*eS*		Sn	21 11 53.1	-2.4	
PNG	Penghu	2.88	247	*eS*		Sn	21 11 59.0	+1.5	
PHUB	P'eng-hu	2.88	246	*eP*		Pn	21 11 23.9	+1.4	
XPSS	Dashiqiu	3.00	318	*eP*		Pn	21 11 23.7	-0.4	
WLCH	Liuqiu	3.02	219	*eP*		Pn	21 11 26.5	+2.1	
PTMZ	Houxiangcun	3.03	277	*eP*		Pn	21 11 23.6	-1.0	
TWP	Hsiaoliuchiu	3.04	219	*eP*		Pb	21 11 27.7	-2.7	
KSRS	Korea Array 1.6nm,0.6s,baz=197,slow=11,SNR=9.9	13.53	19	P		P	21 14 00.5	+2.5	
CMAR	Chiang Mai Arr 0.6nm,0.7s,baz=61,slow=8.7,SNR=1.8 0.6nm,0.7s	22.70	259	P		P	21 15 40.6	+1.8	
ASAJ	Asahikawa comp=Z,118nm,20.7s,baz=350,slow=36	25.39	35	LR		LR	21 26 08.6		
SONM	Songino Array 2.6nm,0.8s,baz=152,slow=8.3,SNR=11 2.6nm,0.8s	26.34	335	P		P	21 16 14.2	+1.1	
MKAR	Makanchi Array 0.3nm,0.6s,baz=98,slow=11,SNR=2.5 0.3nm,0.6s	38.76	315	P		P	21 18 02.2	+0.7	
WRA	Warramunga Arr 1.3nm,0.7s,baz=346,slow=8.8,SNR=6.7 1.3nm,0.7s	45.88	164	P		P	21 18 59.0	-0.6	
ASAR	Alice Springs 1.4nm,0.7s,baz=342,slow=9.2,SNR=19 1.4nm,0.7s	49.36	166	P		P	21 19 26.9	+0.3	

*MOS **08** 21:23:50.4±0.8, 41°.45N×142°.16E, h61km, mb4.6/5, Error ellipse: s-maj=13.4km s-min=7.7km az=68.3*
*NIED **08** 21:23:52.1, 41°.46N×142°.14E, h58km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.68; $M_{\theta\theta}$1.20; $M_{\phi\phi}$-3.87; $M_{r\theta}$1.23; $M_{r\phi}$0.62; $M_{\theta f}$3.15; Fault plane solution: $M_0$4.83000×10^{14} NP1: ϕ_s145.00000°, δ30.00000°, λ43.00000°. NP2:ϕ_s16.00000°, δ70.00000°, λ113.00000°.*
*NEIC **08** 21:23:52.4±1.5, 41.47N±0.07×142.14E±0.06, h58km±8km, mb4.6/34 Error ellipse: s-maj=12.7km s-min=1.8km az=147.0*
*IDC **08** 21:23:52.7±2.1, 41°.48N×142°.12E, h64km±18km, mb3.6/13, mbtmp3.9/15, Error ellipse: s-maj=25.2km s-min=14.0km az=100.0*
*JMA **08** 21:23:52.1±0.1, 41°.5N±0°.4×142°.1E±0°.6, h58km±1km, MD3.8/38, MV3.5/38, E OFF AOMORI PREF*
JMA Felt I J1 at E OFF AOMORI PREF .

ISC 08 21:23:52.0±0.9, 41°.43N±0°.04×142°.19E±0°.04, h60km±8km, n105, σ0°95/111, mb4.4/33, 1C-12D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.66	256	⇓*iP*		Pn	Pn	21 24 05.7	-0.1
JAHD				⇓*eS*		Sn	Sn	21 24 15.2	-0.6
JAHD	Aomorihigashid comp=N,9.0nm,1.8s,comp=E,14nm,0.6s	0.66	256	A		A	A	21 24 05.7	
JARK	Aomorirokkasho	0.75	236	⇓*iP*		Pn	Pn	21 24 06.6	-0.2
JAPK				⇓*eS*		Sn	Sn	21 24 17.0	-0.6
JOT	Ohata	0.86	267	⇓*iP*		Pn	Pn	21 24 07.8	-0.5
ERM	Erimo	0.93	51			Pn	Pn	21 24 09.4	+0.3
ERM					Sn	Sn	Sn	21 24 22.2	+0.4
ERM	Erimo	0.93	51	P		Pn	Pn	21 24 09.4	+0.3
ERM								21 24 22.2	
JEM	Erimo	0.93	50	*i* P		Pn	Pn	21 24 09.3	+0.2
JNBK	Urakawa-nobuka	0.95	26	P		Pn	Pn	21 24 09.4	0.0
JNBK	Urakawa-nobuka comp=N,7.0nm,1.1s,comp=E,4.0nm,1.3s	0.95	26	A		A	A	21 24 09.4	
JKB	Kayabe	0.98	298	⇓P		Pn	Pn	21 24 08.9	-0.9
JTM	Tenmabayashi	1.06	233			Pn	Pn	21 24 10.8	-0.1
JTM					Sn	Sn	Sn	21 24 25.6	+0.8
JTM	Tenmabayashi	1.06	233	⇓*iP*		Pn	Pn	21 24 11.1	+0.2
JTM				⇓S		Sn	Sn	21 24 24.9	+0.1
JANG	Nango	1.17	206	*i* P		Pn	Pn	21 24 12.4	+0.1
JANG					*eS*	Sn	Sn	21 24 27.2	-0.1
JIAM	Iburiatsuma	1.21	350	⇓P		Pn	Pn	21 24 13.5	+0.7
JIAM				⇓*eS*		Sn	Sn	21 24 30.4	+2.1
JSR	Shiriuchi	1.34	275	*i* P		Pn	Pn	21 24 14.3	-0.1
JNB	Noboribetsu	1.35	321	*i* P		Pn	Pn	21 24 13.6	-1.0
JNB					S	Sn	Sn	21 24 30.2	-1.4
JBT2	Biratori 2	1.36	5	P		Pn	Pn	21 24 14.9	+0.2
JBT2					*eS*	Sn	Sn	21 24 33.5	+1.7
JCH	Churui	1.47	36	*eP*		Pn	Pn	21 24 17.1	+0.8
JEW	Eniwo	1.52	339	*i* P		Pn	Pn	21 24 17.0	+0.1
JEW					*eS*	Sn	Sn	21 24 35.7	+0.1
JYM2	Yakumo 2	1.53	297	⇓*iP*		Pn	Pn	21 24 17.0	0.0
JOMM	Oshimamatsumae	1.65	274	*eP*		Pn	Pn	21 24 18.2	-0.4
JAH	Hinai	1.71	224	P		Pn	Pn	21 24 20.4	+0.9
ASAJ	Asahikawa comp=E,32nm,0.3s,baz=213,slow=16,SNR=13	2.71	6	P		Pn	Pn	21 24 34.7	+1.7
ASAJ					S	Sn	Sn	21 25 04.3	-0.2
	comp=E,33nm,0.5s,baz=154,slow=23,SNR=5.8								
ASAJ	Asahikawa	2.71	6	P		Pn	Pn	21 24 33.6	+0.5
JKA	Kamikawa-asahi	2.71	6			Pn	Pn	21 24 33.6	+0.6
NMR	Nemuro--Hokkai	3.26	52	⇑*iP*		Pn	Pn	21 24 39.2	-1.4
NMR					*eS*	Sn	Sn	21 25 14.4	-3.8
GLVR	Golovnino	3.37	46	*eP*		Pn	Pn	21 24 42.2	+0.1
GLVR					*i* S	Sn	Sn	21 25 18.8	-2.1
GLVR	comp=Z,334nm,0.2s				pmax	pmax			
GLVR	comp=N,44nm,0.3s				pmax	pmax			
GLVR	comp=E,557nm,0.3s				smax	smax			
GLVR	comp=N,733nm,0.2s				smax	smax			
RUSJ	Misakicho	3.50	39	⇓*iP*		Pn	Pn	21 24 44.5	+0.7
RUSJ					*eS*	Sn	Sn	21 25 24.4	+0.5
JMM	Marumori	3.72	197			Pn	Pn	21 24 48.0	+1.2
YUK	Yuzh-Kuril'sk	3.75	45	*eP*		Pn	Pn	21 24 47.2	-0.2
YUK					*eS*	Sn	Sn	21 25 27.6	-2.7
YUK	comp=N,122nm,0.2s				pmax	pmax			
YUK	comp=E,94nm,0.2s				pmax	pmax			
YUK	comp=Z,195nm,0.2s				pmax	pmax			
YUK	comp=N,406nm,0.6s				smax	smax			
YUK	comp=E,452nm,0.3s				smax	smax			
JSD	Sado	4.54	223	Pn		Pn	Pn	21 24 58.6	+0.4
KUR	Kuril'sk	5.62	46	*eP*		Pn	Pn	21 25 12.5	-0.4
MJB9	Matsu-Tunnel	5.78	214	Pn		Pn	Pn	21 25 14.3	-0.8
MAJO	Matsushiro	5.78	214	Pn		Pn	Pn	21 25 15.3	+0.1
MAJO	Matsushiro	5.78	214	P		Pn	Pn	21 25 15.3	+0.1
MJAR	Matsushiro Arr	5.78	214			Pn	Pn	21 25 15.9	+0.7
MJAR	Matsushiro Arr comp=E,1.3nm,0.5s,baz=25,slow=14,SNR=8.7	5.78	214	P		Pn	Pn	21 25 17.3	+2.1
KSRS	Korea Array comp=E,1.7nm,0.5s,baz=64,slow=14,SNR=6.5	11.72	255	P		Pn	Pn	21 26 41.5	+5.2
SONM	Songino Array comp=E,0.8nm,0.4s,baz=94,slow=9.7,SNR=3.9 comp=E,0.8nm,0.4s	26.10	296	P		P	P	21 29 18.7	-1.4
H11N2	WAKE ISLAND Hy baz=323,SNR=7.9	30.14	128	T		T		22 01 24.8	
H11N1	WAKE ISLAND Hy baz=323,slow=74,SNR=11	30.15	128	T		T		22 01 24.8	
H11N3	WAKE ISLAND Hy baz=323,slow=74,SNR=8.2	30.16	128	T		T		22 01 27.7	
HKPS	Hong Kong Po S	30.33	240	P		P	P	21 29 57.2	-0.7
H11S1	WAKE ISLAND Hy baz=324,slow=76,SNR=10	30.99	130	T		T		22 02 33.2	
H11S3	WAKE ISLAND Hy baz=324,slow=76,SNR=11	30.99	130	T		T		22 02 35.1	
H11S2	WAKE ISLAND Hy baz=324,slow=76,SNR=7.6	31.00	130	T		T		22 02 35.0	
K13K	Kusilvak Mount	37.43	39	P		P	P	21 30 59.1	0.0
I17K	Unalakleet	39.48	36	P		P	P	21 31 17.0	+0.7
N15K	Kwethluk River N15K	39.49	42	P	IAmb	P	P IAmb	21 31 17.3 21 31 26.1	+0.8
	comp=Z,16nm,1.3s								
ZAA0	Zalesovo Array	39.53	309	P		P	P	21 31 16.4	-0.3
ZALV	Zalesovo Beam	39.53	309	P		P	P	21 31 16.8	0.0
ZALV	Zalesovo Beam comp=Z,1.5nm,0.5s,baz=87,slow=7.7,SNR=6.6 comp=Z,1.5nm,0.5s	39.53	309	P		P	P	21 31 16.9	+0.2
F19K	Shaleruckik Mo F19K comp=Z,17nm,1.4s	41.06	31	P	IAmb	P	P IAmb	21 31 28.4 21 31 38.2	-0.9
D19K	Kuna River	41.18	29	P		P	P	21 31 30.6	+0.3
J18K	Innoko River J18K comp=Z,10nm,1.2s	41.22	37	P	IAmb	P	P IAmb	21 31 31.6 21 31 45.0	+1.0
E19K	Redstone River E19K comp=Z,13nm,1.2s	41.35	31	P	IAmb	P	P IAmb	21 31 31.2 21 31 54.1	-0.4
J19K	Poorman J19K comp=Z,9.8nm,1.4s	41.73	36	P	IAmb	P	P IAmb	21 31 33.3 21 32 09.2	-1.4
D20K	Etivluk River D20K comp=Z,15nm,1.4s	41.76	29	P	IAmb	P	P IAmb	21 31 34.8 21 32 13.4	-0.2
J20K	Nowinta River	42.38	36	P		P	P	21 31 39.9	-0.1
MKAR	Makanchi Array comp=Z,0.7nm,0.6s,baz=84,slow=11,SNR=10 comp=Z,0.7nm,0.6s	42.44	298	P		P	P	21 31 40.5	-0.3
MKAR	Makanchi Array	42.44	298	P		P	P	21 31 40.6	-0.2
MAKZ	Makanchi	42.64	298	P		P	P	21 31 42.1	-0.3
MAKZ	Makanchi MAKZ comp=Z,2.0nm,1.0s	42.64	298	P	pmax	P	P pmax	21 31 42.1	-0.3
RED	Redoubt Volcan RED comp=Z,7.5nm,0.9s	43.13	41	P	IAmb	P	P IAmb	21 31 44.5 21 31 46.6	-1.8
OHAK	Old Harbor	43.19	46	P		P	P	21 31 48.6	+1.9
E22K	Anaktuvuk Pass	43.47	30	P		P	P	21 31 48.5	-0.3
KURK	Kurchatov	43.81	305	P		P	P	21 31 52.1	+0.3
KURBB	Kurchatov Arra comp=Z,2.0nm,0.5s,baz=78,slow=8.9,SNR=18 comp=Z,2.0nm,0.5s	43.89	305	P		P	P	21 31 52.1	-0.3
ILAR	Eielson Array comp=Z,0.8nm,0.9s,baz=294,slow=8.4,SNR=5.5 comp=Z,0.8nm,0.9s	45.50	35	P		P	P	21 32 06.2	+1.1
SCM	Sheep Creek Mo SCM comp=Z,14nm,1.5s	45.62	39	P	IAmb	P	P IAmb	21 32 05.7 21 32 28.9	-0.4
SCM	Sheep Creek Mo SCM comp=Z,14nm,1.5s	45.62	39	P	pmax	P	P pmax	21 32 05.7	-0.4
GLI	Glacier Island GLI comp=Z,11nm,1.0s	45.86	40	P	IAmb	P	P IAmb	21 32 09.8 21 32 53.1	+1.9
C27K	Jago River C27K comp=Z,8.0nm,1.5s	46.40	28	P	IAmb	P	P IAmb	21 32 12.3 21 32 29.1	+0.2
WAX	Waxell Ridge	47.99	40	P		P	P	21 32 25.4	+0.8
BOOM	Boomskoye usch	48.12	295	P		P	P	21 32 25.4	-0.6
BOOM	Boomskoye usch BOOM comp=Z,3.0nm,1.1s	48.12	295	P	pmax	P	P pmax	21 32 25.4	-0.6
BVAR	Borovoye Array comp=Z,1.3nm,0.3s,baz=74,slow=8.8,SNR=6.6 comp=Z,1.3nm,0.3s	48.15	310	P		P	P	21 32 25.6	-0.3
I28M	Miner Creek	48.33	33	P		P	P	21 32 28.7	+1.5
E29M	Blow River E29M comp=Z,6.5nm,1.4s	48.62	29	P	IAmb	P	P IAmb	21 32 30.5 21 32 49.9	+1.2
G30M	tAoh Zrail Nji G30M comp=Z,9.0nm,1.4s	49.51	31	P	IAmb	P	P IAmb	21 32 37.0 21 33 13.3	+0.9
F30M	Barrier River F30M comp=Z,11nm,1.2s	49.55	30	P	IAmb	P	P IAmb	21 32 37.3 21 32 39.2	+0.9
INK	Inuvik	50.23	29	P		P	P	21 32 42.5	+1.0
INK	Inuvik INK comp=Z,4.0nm,1.2s	50.23	29	P	pmax	P	P pmax	21 32 42.5	+1.0
H31M	Peel River H31M comp=Z,13nm,1.4s	50.52	32	P	IAmb	P	P IAmb	21 32 45.4 21 32 52.8	+1.6
ARSB	Arslanbob ARSB comp=Z,3.3nm,0.8s	50.61	294	P	IAmb	P	P IAmb	21 32 45.0 21 32 47.2	0.0
ARSB	Arslanbob ARSB comp=Z,3.0nm,0.8s	50.61	294	P	pmax	P	P pmax	21 32 45.0	0.0
KKAR	Karatay Array	51.54	297	P		P	P	21 32 51.5	-0.3
KKAR	Karatay Array	51.54	297	P		P	P	21 32 51.5	-0.3
AB31	Akbulak array	55.64	308	P		P	P	21 33 21.3	-0.3
ABKAR	Akbulak array	55.64	308	P		P	P	21 33 21.4	-0.2
HG4B	Hotspring	56.80	47	P		P	P	21 33 32.5	+2.6
KEV	Kevo	59.57	339	P		P	P	21 33 48.6	-0.2
KEV	Kevo KEV comp=Z,43nm,1.5s	59.57	339	P	pmax	P	P pmax	21 33 48.6	-0.2
WR8	Warramunga Arr	61.48	188	P		P	P	21 34 02.3	-0.2
WR8					IAmb	IAmb		21 34 11.2	
	comp=Z,6.4nm,1.4s								
WRA	Warramunga Arr comp=Z,0.5nm,0.4s,baz=6.9,slow=6.9,SNR=4.7 comp=Z,0.5nm,0.4s	61.49	188	P		P	P	21 34 02.0	-0.5
ASAR	Alice Springs	65.22	188	P		P	P	21 34 27.7	+0.6
ASAR	Alice Springs comp=Z,0.3nm,0.5s,baz=3.4,slow=6.4,SNR=2.6 comp=Z,0.3nm,0.5s	65.22	188	P		P	P	21 34 27.0	-0.1
ASAR	Alice Springs	65.22	188	P		P	P	21 34 27.7	+0.6
FINES	FINESS Array B comp=Z,1.0nm,0.5s,baz=35,slow=7.0,SNR=12 comp=Z,1.0nm,0.5s	65.23	332	P		P	P	21 34 26.4	-0.3
NC204	NORSAR Array S	70.32	337	P		P	P	21 34 58.9	0.0
HFS	Hagfors comp=Z,0.9nm,0.3s,baz=40,slow=5.8,SNR=16 comp=Z,0.9nm,0.3s	70.34	335	P		P	P	21 34 58.9	0.0
NB201	NORSAR Array S NB201 comp=Z,11nm,1.1s	70.35	337	P	IAmb	P IAmb	P IAmb	21 34 58.5 21 35 33.6	-0.6
NOA	NORSAR Array B comp=Z,0.4nm,0.5s,baz=30,slow=5.1,SNR=4.9 comp=Z,0.4nm,0.5s	70.38	337	P		P	P	21 34 58.9	-0.3
AKASG	Malin Array Be comp=Z,0.8nm,0.4s,baz=46,slow=6.4,SNR=5.8 comp=Z,0.8nm,0.4s	71.21	322	P		P	P	21 35 04.0	-0.3
EKA	Eskdalemuir Ar comp=Z,2.7nm,1.0s,baz=24,slow=6.2,SNR=4.2 comp=Z,2.7nm,1.0s	79.19	341	P		P	P	21 35 50.1	-0.1

*SJA **08** 21:38:45.1±0.7, 31°.82S×71°.52W, h29km±2km, ML3.5, MW3.6*
*GUC **08** 21:38:47.4±0.7, 31°.83S×71°.33W, h58km±4km, ML3.6*

ISC 08 21:38:47.5±1.0, 31°.83S±0°.02×71°.36W±0°.04, h22km±8km, n58, σ1°963/81, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO04	Los Peladeros	0.39	124	⇑*iP*		Pn	Pn	21 38 58.1	-0.1
CO04					*eS*	Sn	Sn	21 39 05.7	+0.6
CO04	comp=N,13μm,0.2s				IAML			21 39 06.4	
CO02	Combarbal	0.69	26	⇓*iP*		Pb	Pb	21 39 01.4	+0.4
CO02					*eS*	Sn	Sn	21 39 11.7	-0.6
CO02	comp=E,9μm,0.3s				IAML			21 39 13.0	
CO02	Combarbal	0.69	26	*eP*		Pb	Pb	21 39 00.7	-0.3
CO02					*eS*	Sn	Sn	21 39 11.8	-0.4
CO02	comp=Z,2μm,0.3s				IAML			21 39 13.9	
VA06	Catapilco	0.73	176	⇑*iP*		Pb	Pb	21 39 01.8	+0.1
VA06					*eS*	Sn	Sn	21 39 12.4	-0.7
VA06	comp=E,4μm,0.4s				IAML			21 39 14.8	
CO03	El Pedregal	1.14	30	⇓*iP*		Pn	Pn	21 39 07.6	-0.7
CO03					*eS*	Sn	Sn	21 39 22.5	-0.7
CO03	comp=E,2μm,0.2s				IAML			21 39 25.6	
CO03	El Pedregal	1.14	30	*eP*		Pn	Pn	21 39 07.5	-0.7
CO03					*eS*	Sb	Sb	21 39 23.5	+0.5
CO03	comp=Z,608nm,0.3s				IAML			21 39 24.3	
VA03	San Esteban	1.16	144	*eP*		Pn	Pn	21 39 07.6	-0.9
VA03	comp=N,4μm,0.2s				IAML			21 39 25.2	
VA03	San Esteban	1.16	144	*eP*		Pn	Pn	21 39 07.7	-0.9
VA03					*eS*	Sn	Sn	21 39 23.2	-0.6
VA03	comp=Z,2μm,0.4s				IAML			21 39 26.6	
CO06	Fray Jorge	1.17	348	*eP*		Pn	Pn	21 39 07.9	-0.7
ROCH	El Roble	1.18	166	*eP*		Pn	Pn	21 39 08.2	-0.8
ROCH					*eS*	Sn	Sn	21 39 24.0	-0.5
ROCH	comp=N,3μm,0.4s				IAML			21 39 26.8	
ROC1	El Roble	1.18	166	*eP*		Pn	Pn	21 39 08.4	-0.6
ROC1					*eS*	Sn	Sn	21 39 24.1	-0.5
VA01	Torpederas	1.22	191	*eP*		Pn	Pn	21 39 08.7	-0.6
VA01					*eS*	Sb	Sb	21 39 25.9	+0.8
VA01	comp=Z,354nm,0.2s				IAML			21 39 27.9	
PEL	Peldehue	1.43	157	*eP*		Pn	Pn	21 39 11.2	-1.0
PEL					*eS*	Sn	Sn	21 39 29.2	-1.2
PEL	Peldehue	1.43	157	*eP*		Pn	Pn	21 39 06.5	-5.7
PEL					*eS*	Sn	Sn	21 39 29.9	-0.5
PEL	comp=Z,484nm,0.2s				IAML			21 39 32.4	
MT02	Curacav	1.44	173	*eP*		Pn	Pn	21 39 11.3	-1.1
MT02	comp=E,697nm,0.3s				IAML			21 39 31.7	
MT02	Curacav	1.44	173	*eP*		Pn	Pn	21 39 11.4	-0.9
MT02					*eS*	Sn	Sn	21 39 30.7	+0.1
MT02	comp=Z,413nm,0.2s				IAML			21 39 32.8	
MT05	Renca	1.65	162	IAML				21 39 37.0	
MT05	comp=E,2μm,0.3s								
MT05	Renca	1.65	162	*eP*		Pn	Pn	21 39 15.1	-0.1
MT05					*eS*	Sn	Sn	21 39 35.2	-0.6
MT05	comp

AROD				eS		Sn	21 39 42.4	-10	
ACCO	**Cerro Coronel**	**2.32**	**58**	eP		**Pn**	**21 39 26.7**	**+2.0**	
ACCO				eS		**Sn**	**21 39 54.5**	**+1.7**	
AAGR	**Agrelo**	**2.48**	**121**	eP		**Pb**	**21 39 29.2**	**-2.2**	
AAGR				eS		**Sb**	**21 40 06.4**	**+4.8**	
AAGR				IAML			21 40 20.9		
	comp=Z,96nm,0.5s								
RTLL	**Cerro Villicun**	**2.51**	**79**	eP		**Pn**	**21 39 28.5**	**+1.4**	
RTLL				eS		**Sn**	**21 39 58.7**	**+1.6**	
RTLL				IAML			21 40 09.3		
	comp=Z,212nm,0.4s								
BO01	**Tunca**	**2.57**	**175**	eP		**Pn**	**21 39 27.8**	**-0.1**	
BO01				eS		**Sn**	**21 40 00.3**	**+1.9**	
BO01				IAML			21 40 05.4		
	comp=Z,90nm,0.4s								
CFA	**Coronel Fontan**	**2.67**	**86**	eP		**Pn**	**21 39 30.5**	**+1.3**	
CFA				eS		**Sb**	**21 40 04.7**	**-2.3**	
CFA				IAML			21 40 46.1		
	comp=Z,220nm,0.8s								
LCO	**Las Campanas**	**2.86**	**12**	eP		**Pn**	**21 39 29.8**	**-2.3**	
LCO				eS		**Sn**	**21 40 07.6**	**+1.6**	
LCO				IAML			21 40 21.1		
	comp=Z,214nm,0.3s								
AVIZ	**Vizcacheras**	**2.91**	**125**	eP		Pn	21 39 17.9	-15	
BO02	**Sierra Bellavi**	**3.00**	**171**	eP		**Pn**	**21 39 33.9**	**+0.1**	
BO02				eS		**Sn**	**21 40 08.0**	**-1.1**	
BO02				IAML			21 40 19.3		
	comp=Z,251nm,0.1s								
AC05	**El Transito**	**3.12**	**18**	eP		**Pn**	**21 39 35.8**	**+0.2**	
AC05				eS		**Sn**	**21 40 13.8**	**+1.4**	
AC05				IAML			21 40 30.1		
	comp=Z,98nm,0.7s								
GO05	**Hualane**	**3.21**	**188**	eP		**Pn**	**21 39 35.2**	**-1.5**	
GO05				eS		**Sb**	**21 40 29.6**	**+7.1**	
GO05				IAML			21 40 32.3		
	comp=Z,58nm,0.3s								
AGUA	**GUANDACOL**	**3.40**	**47**	eP		**Pn**	**21 39 36.7**	**-2.6**	
AGUA				eP			21 39 42.4		
AGUA				eS		**Sb**	**21 40 29.6**	**+1.6**	
AGUA				IAML			21 40 32.9		
	comp=Z,130nm,0.3s								
AVFE	**Valle Fertil**	**3.54**	**72**	eP		**Pn**	**21 39 42.1**	**+0.9**	
AVFE				eS		**Sb**	**21 40 27.4**	**-4.6**	
AVFE				IAML			21 40 31.5		
	comp=Z,141nm,0.4s								
ACAN	**Cantantal**	**3.57**	**98**	eP		**Pn**	**21 39 41.4**	**-0.3**	
ACAN				IAML			21 40 45.6		
	comp=Z,196nm,0.4s								
AC04	**Llanos de Chal**	**3.62**	**4**	eP		**Pn**	**21 39 41.9**	**-0.4**	
AC04				eS		**Sn**	**21 40 26.1**	**+1.8**	
AC04				IAML			21 40 36.3		
	comp=Z,77nm,0.9s								
RFA	**San Rafael**	**3.81**	**141**	eP		**Pn**	**21 39 46.2**	**+1.3**	
VCA	**Vinchina**	**4.11**	**42**	eP		**Pn**	**21 39 52.2**	**+3.0**	
VCA				eS		**Sb**	**21 40 49.9**	**+1.2**	
VCA				IAML			21 40 55.2		
	comp=Z,155nm,0.3s								
MRA	**San Martin**	**4.82**	**99**	eP		Pn	21 39 53.0	-5.9	
MRA				eP			21 39 58.0		
MRA				eS		**Sn**	**21 40 53.0**	**-1.2**	
MRA				IAML			21 40 58.2		
	comp=Z,33nm,0.8s								

NEIC ***08*** *21:53:39.1±1.5,25°.3S±0°.2×177°.5W±0°.1,h411km±5km, mb4.0/12, Error ellipse: s-maj=27.2km s-min=15.0km az=167.0*

IDC ***08*** *21:53:42.4±17.0,25°.13S×177°.71W,h442km±74km, mb3.3/3, mbtmp4.2/5, Error ellipse: s-maj=261.3km s-min=56.3km az=62.0*

ISC 08 21:53:37.9±0.9,25°.1S±0°.1×177°.5W±0°.1,h400km,n22, σ0s97/22,mb3.9/9,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.13**	**185**	P	**Pn**	**21 54 52.4**	**+1.2**
NIUE	**Niue**	**9.22**	**51**	P	**Pn**	**21 55 47.4**	**+0.4**
MARNC	**Mare, Loyalty**	**13.81**	**282**	P	**P**	**21 56 37.4**	**-0.1**
URZ	**Urewera**	**13.88**	**198**	P	**Pn**	**21 56 40.8**	**0.0**
	2.4nm,0.3s,baz=28,slow=10,SNR=5.6						
PINNC	**Pines Island,**	**14.03**	**277**	P	**P**	**21 56 41.1**	**+1.2**
DZM	**Mont Dzumac**	**15.06**	**278**	P	**P**	**21 56 52.4**	**+1.2**
	2.8nm,0.8s,baz=130,slow=17,SNR=4.2						
EIDS	**Eidsvold**	**28.42**	**263**	P	**P**	**21 58 56.9**	**-1.0**
EIDS				IAmb	IAmb	21 59 14.2	
	comp=Z,26nm,1.5s						
STKA	**Stephens Creek**	**36.44**	**250**	P	**P**	**22 00 05.9**	**-0.8**
STKA	**Stephens Creek**	**36.44**	**250**	P	**P**	**22 00 05.8**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=98,slow=11,SNR=4.9						
	comp=Z,1.6nm,0.5s						
COEN	**Coen**	**38.59**	**279**	P	**P**	**22 00 25.6**	**+1.0**
COEN				IAmb	IAmb	22 00 26.4	
	comp=Z,7.7nm,1.2s						
BBOO	**Buckleboo**	**41.11**	**248**	P	**P**	**22 00 43.6**	**-1.4**
AS31	**Alice Springs**	**44.12**	**261**	P	**P**	**22 01 08.2**	**-0.8**
ASAR	**Alice Springs**	**44.12**	**261**	P	**P**	**22 01 07.6**	**-1.4**
ASAR	**Alice Springs**	**44.12**	**261**	P	**P**	**22 01 08.6**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=93,slow=7.5,SNR=41						
	comp=Z,1.2nm,0.3s						
WR8	**Warramunga Arr**	**44.48**	**267**	P	**P**	**22 01 10.9**	**-0.9**
WR8				IAmb	IAmb	22 01 14.7	
	comp=Z,4.6nm,1.4s						
WB0	**Warramunga Arr**	**44.63**	**267**	P	**P**	**22 01 12.4**	**-0.6**
WB0				IAmb	IAmb	22 01 13.5	
	comp=Z,4.5nm,0.8s						
WRA	**Warramunga Arr**	**44.63**	**267**	P	**P**	**22 01 12.1**	**-0.9**
WRA	**Warramunga Arr**	**44.63**	**267**	P	**P**	**22 01 12.6**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=104,slow=8.0,SNR=12						
	comp=Z,2.3nm,0.6s						
FORT	**Forrest**	**48.06**	**250**	P	**P**	**22 01 38.5**	**-0.6**
FORT				IAmb	IAmb	22 02 02.1	
	comp=Z,8.3nm,1.1s						
KNRA	**Kununurra**	**50.99**	**270**	P	**P**	**22 02 02.1**	**+1.0**
KNRA				IAmb	IAmb	22 02 18.9	
	comp=Z,11nm,1.3s						
FITZ	**Fitzroy Crossi**	**53.04**	**266**	P	**P**	**22 02 16.6**	**+0.6**
PB18	**Visviri**	**98.06**	**114**		**P**	**22 06 30.1**	**-1.1**

NEIC ***08*** *21:55:01.4±3.5,34°.27N±0°.01×119°.281W±0°.009, h10km±1km, Error ellipse: s-maj=2.9km s-min=2.3km az=84.0*

PAS 08 21:55:02.2±2.6,34°.28N±0°.01×119°.28W±0°.01,h13km±3km, ML2.9/228,ML2.7/111(NEIC),Error ellipse: s-maj=2.1km s-min=1.6km az=203.0,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STCC	**Santa Clara**	**0.08**	**74**		Pg	21 55 05.2	+0.2
STCC					Sg	21 55 08.2	+1.3
SBC	**Santa Barbara**	**0.39**	**295**		Pg	21 55 10.2	+0.1
SBC					Sb	21 55 16.6	-0.3
AGOC	**Agoura**	**0.45**	**107**		Sg	21 55 17.5	+0.5
BLCC	**Black Canyon**	**0.51**	**94**		Sg	21 55 19.6	+0.6
MPI	**Mount Pinos, F**	**0.54**	**12**		Pg	21 55 12.3	-0.6
MPI					Sg	21 55 20.3	0.0
OAT	**Oat Mountain**	**0.56**	**83**		Pg	21 55 13.3	+0.1
OAT					Sb	21 55 22.2	+0.3
OSI	**Osito Audit: C**	**0.57**	**54**		Pg	21 55 13.1	-0.4
OSI				Sg	Sg	21 55 21.0	0.0
OSI				IAML		21 55 22.3	
	comp=E,563nm,0.5s						
OSI				IAML		21 55 23.6	
	comp=N,372nm,0.5s						
BCW	**Bitter Crk WRg**	**0.67**	**351**		Pg	21 55 14.7	-0.5
BCW					Sg	21 55 24.5	+0.4
DJJ	**Donna J Jenkin**	**0.71**	**104**		Pg	21 55 14.7	-1.3
DJJ					Sg	21 55 24.2	-1.1
BTPC	**Burnt Peak**	**0.71**	**55**		Pg	21 55 15.5	-0.6
FIGC	**Figueroa Mtn.**	**0.73**	**308**		Sb	21 55 26.9	-0.1
NJQ	**Nojoqui County**	**0.78**	**289**		Pg	21 55 16.4	-1.0
DECC	**Geon Verdugo**	**0.79**	**92**		Pg	21 55 16.5	-0.9
DECC					Sg	21 55 27.4	-0.4
SBI	**Santa Barbara**	**0.82**	**165**		Pg	21 55 17.6	-0.6
SBI					Sn	21 55 29.7	-1.9
GR2C	**Griffith Obs.**	**0.83**	**101**		Sg	21 55 27.8	-1.4
LEOC	**Leona Valley**	**0.88**	**66**		Pg	21 55 17.8	-1.5
ALPC	**Antelope**	**0.91**	**63**		Pg	21 55 18.4	-1.4
ALPC					Sg	21 55 30.9	-0.8
PASC	**Pasadena Art C**	**0.92**	**96**		Pg	21 55 18.5	-1.4
PASC				Sg	Sg	21 55 30.8	-1.2
PASC				IAML		21 55 31.6	
	comp=E,162nm,0.4s						
PASC				IAML		21 55 33.4	
	comp=N,152nm,0.6s						
BSM	**San Miguel Isl**	**0.92**	**255**		Pg	21 55 18.7	-1.2
MWC	**Mount Wilson**	**1.02**	**93**		Pb	21 55 20.1	-1.7
MWC				IAML		21 55 34.4	
	comp=E,273nm,0.5s						
MWC				IAML		21 55 37.0	
	comp=N,257nm,0.5s						
GATR	**Gnd/Air Tx Cnt**	**1.04**	**285**		Pb	21 55 20.8	-1.4
TPO	**Tropico Hills**	**1.06**	**55**		Pb	21 55 21.3	-1.2
TPO				IAML		21 55 37.5	
	comp=E,277nm,0.5s						
LRRC	**Littlerock Res**	**1.07**	**76**		Pb	21 55 21.1	-1.5
CIAC	**Catalina I. Ai**	**1.14**	**140**		Pb	21 55 22.8	-1.0
BFSC	**Mount Baldy Ra**	**1.35**	**91**		Pn	21 55 25.9	-1.0
BFSC				IAML		21 55 45.5	
	comp=N,109nm,0.4s						
BFSC				IAML		21 55 46.1	
	comp=E,147nm,0.6s						
ISA	**Isabella, Lake**	**1.53**	**25**		Pn	21 55 28.6	-0.8
ISA				IAML		21 55 50.2	
	comp=E,65nm,0.6s						
TSCN	**Private Proper**	**1.54**	**326**		Pn	21 55 28.1	-1.3
VES	**Vestal, Richgr**	**1.57**	**6**		Pn	21 55 28.9	-0.8
VES				IAML		21 55 51.3	
	comp=N,144nm,0.6s						
VES				IAML		21 55 53.7	
	comp=E,130nm,0.4s						
ELS	**Elsinore Mount**	**1.67**	**112**		Pn	21 55 30.0	-1.2
LRMC	**Laurel Mtn Rad**	**1.78**	**47**		Pn	21 55 31.6	-1.2
LRMC				IAML		21 56 01.0	
	comp=N,70nm,0.5s						
PKD	**Bear Valley Ra**	**1.96**	**329**		Pn	21 55 33.9	-1.3
PKD				IAML		21 56 07.9	
	comp=E,67nm,0.7s						
PKD				IAML		21 56 23.2	
	comp=N,50nm,1.1s						
WSHM	**Spangler Hills**	**1.97**	**48**	IAML		21 56 07.7	
	comp=N,42nm,0.4s						
CCCA	**Chr Cany lake**	**2.01**	**51**	IAML		21 56 09.9	
	comp=E,71nm,0.7s						
CLC	**China Lake**	**2.06**	**42**	Pn	Pn	21 55 35.7	-1.0
GSC	**Goldstone, Bar**	**2.28**	**63**		Pn	21 55 39.2	-0.5
PMPB	**Monarch Peak**	**2.30**	**328**		Pn	21 55 38.6	-1.3
MPMC	**Manual Prospec**	**2.30**	**39**		Pn	21 55 39.3	-0.8
MPMC				Pg	Pb	21 55 44.5	+0.7
MPMC				IAML		21 56 18.2	
	comp=N,32nm,1.1s						
DNR	**Dunn Ranch,Anz**	**2.32**	**107**		Pn	21 55 39.1	-1.1
DPP	**Dos Picos Cty**	**2.33**	**123**		Pn	21 55 39.6	-0.8
DPP				IAML		21 56 07.3	
	comp=N,32nm,0.2s						
DPP				IAML		21 56 18.5	
	comp=E,33nm,0.2s						
HULI	**Fort Hunter Li**	**2.36**	**318**		Pn	21 55 38.9	-1.8
HULI				IAML		21 56 26.5	
	comp=N,64nm,0.8s						
HULI				IAML		21 56 28.6	
	comp=E,41nm,0.8s						
CWC	**Cottonwood Cre**	**2.37**	**24**		Pn	21 55 40.1	-0.9
CWC				IAML		21 56 18.5	
	comp=E,34nm,0.2s						
CWC				IAML		21 56 19.2	
	comp=N,36nm,0.3s						
PFO	**Pinyon Flats O**	**2.44**	**105**		Pn	21 55 41.7	-0.2
PMD	**Palm Desert**	**2.50**	**104**	Pn	Pn	21 55 42.0	-0.6
BORC	**Borrego Spring**	**2.59**	**112**		Pn	21 55 43.6	-0.3
QSM	**Queen of Sheba**	**2.60**	**49**		Pn	21 55 43.0	-1.0
QSM				Pg	Pb	21 55 49.5	+0.8
QSM				IAML		21 56 26.6	
	comp=E,26nm,0.8s						
QSM				IAML		21 56 28.3	
	comp=N,23nm,0.6s						
BAR	**Barrett**	**2.70**	**125**		Pn	21 55 45.1	-0.4
BAR				IAML		21 56 28.8	
	comp=N,27nm,0.3s						
BAR				IAML		21 56 34.4	
	comp=E,21nm,0.4s						
BBGB	**Big Mountain B**	**2.71**	**328**		Pn	21 55 45.4	-0.1
BELC	**Belle Mtn. Jos**	**2.74**	**95**		Pn	21 55 46.0	-0.1
BELC				IAML		21 56 31.7	
	comp=N,22nm,0.6s						
BELC				IAML		21 56 36.5	
	comp=E,32nm,0.6s						
GWY	**Greenwater Val**	**2.86**	**48**		Pn	21 55 47.3	-0.4
GWY				IAML		21 56 36.3	
	comp=E,22nm,0.5s						
SHOC	**Shoshone, Teco**	**2.95**	**56**	Pn	Pn	21 55 48.5	-0.3
GRAC	**Grapevine Rang**	**3.13**	**29**	IAML		21 56 48.7	
	comp=N,28nm,0.9s						
GRAC				IAML		21 56 51.7	
	comp=E,21nm,0.7s						
DSP	**Deep Springs**	**3.26**	**19**	IAML		21 56 52.5	
	comp=E,12nm,1.2s						
MDPB	**Devils Postpil**	**3.35**	**3**	IAML		21 56 46.0	
	comp=N,24nm,0.5s						
MDPB				IAML		21 56 47.7	
	comp=E,25nm,0.7s						
IRM	**Iron Mountain**	**3.43**	**91**	IAML		21 57 10.9	
	comp=N,10nm,3.4s						
TPNV	**Topopah Spring**	**3.63**	**42**	IAML		21 57 08.6	
	comp=N,11nm,2.3s						
TPNV				IAML		21 57 22.8	
	comp=N,11nm,3.6s						
WAKR	**Walker**	**4.22**	**358**	IAML		21 57 15.3	
	comp=E,13nm,0.6s						
WAKR				IAML		21 57 15.4	
	comp=N,11nm,1.4s						
W13A	**Hualapai Mount**	**4.52**	**78**	IAML		21 57 09.7	
	comp=E,5.7nm,4.6s						
W13A				IAML		21 57 28.8	
	comp=N,7.0nm,4.6s						

NOU 08 22:10:05.9,21°.10S×169°.51E,h0km,MLv3.5/10, Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.43**	**254**	P	Pn	22 10 32.1	-1.0
MARNC	**Mare, Loyalty**	**1.43**	**254**	S	Sg	22 10 51.8	-0.1
MARNC	**Mare, Loyalty**	**1.43**	**254**	P	Pn	22 10 32.2	-0.9
MARNC	**Mare, Loyalty**	**1.43**	**254**	S	Sg	22 10 52.0	+0.1
PINNC	**Pines Island,**	**2.44**	**231**	P	Pn	22 10 46.6	-0.4
PINNC	**Pines Island,**	**2.44**	**231**	S	Sn	22 11 19.3	+1.8
PINNC	**Pines Island,**	**2.44**	**231**	P	Pn	22 10 47.0	0.0
PINNC	**Pines Island,**	**2.44**	**231**	S	Sn	22 11 18.2	+0.7
YATNC	**Mamie plateau,**	**2.62**	**248**	P	Pn	22 10 48.3	-1.2
YATNC	**Mamie plateau,**	**2.62**	**248**	S	Sn	22 11 22.7	+0.7
YATNC	**Mamie plateau,**	**2.62**	**248**	P	Pn	22 10 48.7	-0.8
YATNC	**Mamie plateau,**	**2.62**	**248**	S	Sn	22 11 21.8	-0.2
OUENC	**Quen Island, N**	**2.81**	**242**	P	Pn	22 10 52.5	+0.4
OUENC	**Quen Island, N**	**2.81**	**242**	S	Sn	22 11 27.2	+0.6
OUENC	**Quen Island, N**	**2.81**	**242**	P	Pn	22 10 52.4	+0.3
OUENC	**Quen Island, N**	**2.81**	**242**	S	Sn	22 11 27.0	+0.4
ONTNC	**Quen Toro**	**3.08**	**247**	S	Sn	22 11 33.8	+0.3
ONTNC	**Quen Toro**	**3.08**	**247**	P	Pn	22 10 55.9	0.0
ONTNC	**Quen Toro**	**3.08**	**247**	S	Sn	22 11 33.5	0.0

DJA ***08*** *22:34:58.5±0.6,3°.N±8°×12°.3E±°, h487km±5km, M3.8/10, mB4.6/3, mb3.7/7, MLv3.9/10, Mw(mB)3.8/3*

IDC ***08*** *22:35:04.8±9.2,3°.20N×123°.35E, h537km±136km, mb3.0/9, mbtmp3.9/9, Error ellipse: s-maj=63.7km s-min=27.6km az=75.0*

ISC 08 22:35:01.4±0.7,3°.14N±0°.09×123°.3E±0°.2,h500km,n17, σ1s33/17,mb3.5/9,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**2.97**	**207**	P	**P**	**22 36 09.9**	**-2.3**
LUWI	**Luwuk**	**4.19**	**187**	P	**P**	**22 36 20.2**	**-1.2**
APSI	**Ampana**	**4.34**	**202**	P	**P**	**22 36 21.3**	**-1.4**
SANI	**Sanana**	**5.82**	**152**	P	**P**	**22 36 33.9**	**-2.1**
KDI	**Kendari**	**7.08**	**185**	P	**P**	**22 36 47.9**	**-0.6**
RKPI	**Ransiki, Papua**	**11.82**	**113**	P	**P**	**22 37 36.9**	**-1.3**
EDFI	**Ende, Flores**	**11.92**	**188**	P	**P**	**22 37 39.1**	**-0.2**
	7.7nm,0.7s						
PCJI	**Pacitan**	**16.51**	**227**	P	**P**	**22 38 26.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**21.23**	**174**	P	**P**	**22 39 13.1**	**+1.8**
	1.5nm,0.6s,baz=20,slow=9.6,SNR=6.9						
	1.5nm,0.6s						
WRA	**Warramunga Arr**	**25.38**	**155**	P	**P**	**22 39 49.4**	**+1.0**
	0.8nm,0.6s,baz=336,slow=9.5,SNR=5.4						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**28.58**	**159**	P	**P**	**22 40 18.4**	**+1.8**
	0.3nm,0.4s,baz=336,slow=6.9,SNR=10.0						
	0.3nm,0.4s						
HILR	**Hailar Array B**	**46.34**	**357**	P	**P**	**22 42 42.4**	**+0.6**
	3.0nm,0.5s,baz=178,slow=10,SNR=4.2						
	3.0nm,0.5s						
SONM	**Songino Array**	**46.85**	**344**	P	**P**	**22 42 45.5**	**-0.2**
	1.0nm,0.8s,baz=168,slow=8.7,SNR=4.7						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**56.13**	**327**	P	**P**	**22 43 53.8**	**+0.9**
	1.1nm,0.5s,baz=123,slow=8.0,SNR=22						
	1.1nm,0.5s						
ZALV	**Zalesovo Beam**	**59.60**	**335**	P	**P**	**22 44 16.2**	**-0.2**
	0.3nm,0.3s,baz=131,slow=5.9,SNR=1.8						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**60.42**	**329**	P	**P**	**22 44 21.6**	**-0.2**
	1.0nm,0.6s,baz=132,slow=6.1,SNR=9.7						
	1.0nm,0.6s						
NRIK	**Noril'sk**	**70.21**	**347**	P	**P**	**22 45 23.2**	**+0.1**
	1.8nm,0.5s,baz=142,slow=5.9,SNR=5.7						
	1.8nm,0.5s						

NEIC ***08*** *22:47:38.3±1.5,17°.8S±0°.1×177°.92E±0°.08,h10km±1km, mb4.7/29, Error ellipse: s-maj=23.4km s-min=9.1km az=152.0*

IDC ***08*** *22:47:47.1±7.8,18°.01S×177°.74E,h75km±68km,mb4.0/14, mbtmp4.3/14,MS3.5/28,Error ellipse: s-maj=24.0km s-min=19.6km az=76.0*

ISC 08 22:47:38.1±0.4,17.84S±0°.09×177°.89E±0°.08,h10km,n93, σ1s04/73,mb4.5/29,MS3.6/26,3C,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**0.18**	**56**		**Pg**	**22 47 40.6**	**-1.5**
MSVF					**Sg**	**22 47 43.5**	**-1.3**
PINNC	**Pines Island,**	**10.89**	**242**	Pn	Pn	22 50 18.3	+4.2
DZM	**Mont Dzumac**	**11.56**	**247**	P	Pn	22 50 32.7	+9.3
	7.9nm,1.1s,baz=137,slow=24,SNR=8.3						
RAO	**Raoul Island**	**11.99**	**162**	LR	LR	22 54 15.2	
	comp=Z,541nm,20.8s,baz=93,slow=33						
HNR	**Honiara**	**19.32**	**293**	LR	LR	22 58 46.5	
	comp=Z,169nm,19.3s,baz=124,slow=34						
URZ	**Urewera**	**20.36**	**182**	P	Pn	22 52 17.2	+0.4
	15nm,0.9s,baz=107,slow=2.2,SNR=5.4						
	15nm,0.9s						
BKZ	**Black Stump Fm**	**21.29**	**183**	P	**P**	**22 52 25.9**	**+1.1**
RAR	**Rarotonga**	**21.32**	**103**	LR	LR	22 58 56.4	
	comp=Z,35nm,21.9s,baz=266,slow=31						
BFZ	**Birch Farm**	**22.81**	**183**	P	**P**	**22 52 40.4**	**-0.7**
BFZ				IAmb	IAmb	22 52 42.9	
	comp=Z,16nm,1.1s						
TCW	**Tory Channel**	**23.50**	**187**	P	**P**	**22 52 48.5**	**+0.4**
NNZ	**Nelson**	**23.62**	**189**	P	**P**	**22 52 47.7**	**-1.6**
NNZ				IAmb	IAmb	22 53 01.1	
	comp=Z,38nm,1.2s						
PPT	**Papeete**	**30.97**	**95**	LR	LR	23 04 29.2	
	comp=Z,31nm,19.1s,baz=244,slow=32						
PMG	**Port Moresby**	**30.98**	**282**	LR	LR	23 05 31.5	
	comp=Z,124nm,18.0s,baz=78,slow=34						
COEN	**Coen**	**33.58**	**272**	P	**P**	**22 54 18.2**	**-0.6**
COEN				IAmb	IAmb	22 54 22.7	
	comp=Z,5.9nm,0.9s						
INKA	**Innaminka**	**35.52**	**247**	P	**P**	**22 54 35.5**	**+0.1**
INKA				IAmb	IAmb	22 54 39.4	
	comp=Z,6.8nm,0.6s						
STKA	**Stephens Creek**	**35.59**	**240**		**P**	**22 54 35.7**	**-0.3**
STKA	**Stephens Creek**	**35.59**	**240**	P	**P**	**22 54 35.5**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=80,slow=8.9,SNR=7.9						
STKA				LR	LR	23 07 19.2	
	comp=Z,44nm,20.4s,baz=26,slow=33						
	comp=Z,7.0nm,0.9s						
BBOO	**Buckleboo**	**40.37**	**240**	P	**P**	**22 55 15.4**	**-1.0**
BBOO				IAmb	IAmb	22 55 20.2	
	comp=Z,12nm,0.9s						
WR8	**Warramunga Arr**	**41.02**	**260**		**P**	**22 55 20.9**	**-1.0**
WB0	**Warramunga Arr**	**41.14**	**260**	P	**P**	**22 55 22.2**	**-0.7**
WRA	**Warramunga Arr**	**41.18**	**260**	P	**P**	**22 55 22.1**	**-1.1**
	comp=Z,7.2nm,1.2s,baz=90,slow=8.1,SNR=12						
WRA				LR	LR	23 10 57.9	
	comp=Z,52nm,21.8s,baz=113,slow=34						
	comp=Z,7.2nm,1.2s						
AS31	**Alice Springs**	**41.42**	**254**		**P**	**22 55 24.8**	**-0.4**
ASAR	**Alice Springs**	**41.42**	**254**	P	**P**	**22 55 25.1**	**-0.1**
	comp=Z,8.2nm,0.8s,baz=83,slow=8.7,SNR=54						
ASAR				PcP	**PcP**	**22 57 23.4**	**+0.2**
	comp=Z,2.5nm,1.1s,baz=89,slow=4.0,SNR=4.6						
	comp=Z,8.2nm,0.8s						
GUMO	**Guam**	**45.13**	**312**	LR	LR	23 13 15.0	
	comp=Z,28nm,18.5s,baz=112,slow=34						
FORT	**Forrest**	**46.86**	**244**	P	**P**	**22 56 07.7**	**-0.9**
FORT				IAmb	IAmb	22 56 13.4	
	comp=Z,6.6nm,0.8s						
KNRA	**Kununurra**	**46.99**	**265**	P	**P**	**22 56 09.2**	**-0.6**
KNRA				IAmb	IAmb	22 56 12.6	
	comp=Z,8.4nm,1.1s						
FAKI	**Fak Fak**	**47.12**	**283**	P	**P**	**22 56 09.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**49.56**	**261**	P	**P**	**22 56 28.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**49.56**	**261**	LR	LR	23 14 54.6	
	comp=Z,82nm,22.0s,baz=70,slow=33						
PSA00	**Pilbara Seismi**	**54.51**	**256**	P	**P**	**22 57 06.0**	**-0.6**
PSA00	**Pilbara Seismi**	**54.51**	**256**	P	**P**	**22 57 05.8**	**-0.7**
PSA00				IAmb	IAmb	22 57 10.0	
	comp=Z,10nm,1.1s						
MBWA	**Marble Bar**	**54.67**	**256**		**P**	**22 57 07.4**	**-0.3**
NWAO	**Narrogin (SRO)**	**56.13**	**242**	P	**P**	**22 57 17.5**	**-0.6**
NWAO				IAmb	IAmb	22 57 31.3	
	comp=Z,14nm,1.0s						
JCJ	**Chichijima**	**56.52**	**321**	LR	LR	23 15 16.1	
	comp=Z,104nm,21.7s,baz=108,slow=29	

BBB	**Bella Bella**	**83.98**	**30**	LR	LR	23 32 13.5		
	comp=Z,42nm,18.7s,baz=40,slow=32							
PMSA	**Palmer Station**	**85.23**	**158**	LR	LR	23 30 19.4		
	comp=Z,42nm,19.8s,baz=284,slow=30							
CMAR	**Chiang Mai Arr**	**85.55**	**291**	P	**P**	**23 00 17.1**	**0.0**	
	comp=Z,2.0nm,0.7s,baz=121,slow=3.2,SNR=15							
CMAR				LR	LR	23 34 48.5		
	comp=Z,21nm,21.9s,baz=95,slow=33							
	comp=Z,2.0nm,0.7s							
ILAR	**Eielson Array**	**86.65**	**14**	P	**P**	**23 00 21.9**	**+0.4**	
ILAR	**Eielson Array**	**86.65**	**14**	P	**P**	**23 00 21.5**	**0.0**	
	comp=Z,1.1nm,1.0s,baz=222,slow=5.5,SNR=5.8							
	comp=Z,1.1nm,1.0s							
LZDM	**Lanzhou Array**	**88.14**	**309**	P	**P**	**23 00 31.5**	**+1.7**	
	comp=Z,1.1nm,0.3s,baz=89,slow=9.0,SNR=4.9							
	comp=Z,1.1nm,0.3s							
YAK	**Yakutsk**	**88.24**	**339**	LR	LR	23 33 18.3		
	comp=Z,50nm,20.9s,baz=126,slow=31							
DLMT	**Dillon**	**88.91**	**41**	P	**P**	**23 00 34.1**	**+1.2**	
DLMT				IAmb	IAmb	23 00 40.8		
	comp=Z,6.2nm,1.1s							
I28M	**Miner Creek**	**88.95**	**16**	P	**P**	**23 00 32.0**	**-0.6**	
I28M				IAmb	IAmb	23 00 44.9		
	comp=Z,3.5nm,1.1s							
TXAR	**Lajitas Array**	**88.95**	**59**	P	**P**	**23 00 34.2**	**+0.7**	
TXAR	**Lajitas Array**	**88.95**	**59**	P	**P**	**23 00 35.9**	**+2.3**	
	comp=Z,1.1nm,1.0s,baz=210,slow=7.2,SNR=8.2							
	comp=Z,1.1nm,1.0s							
TROLL	**Troll, Antarti**	**90.32**	**181**	⇑P	**P**	**23 00 38.8**	**-0.4**	
	comp=Z,693nm,0.6s							
SNAA	**Sanae**	**90.72**	**180**	⇑P	**P**	**23 00 40.4**	**-0.6**	
	comp=Z,56nm,0.6s							
SNAA	**Sanae**	**90.72**	**180**	P	**P**	**23 00 40.4**	**-0.6**	
SNAA				IAmb	IAmb	23 00 52.6		
	comp=Z,3.2nm,1.0s							
SNAA	**Sanae**	**90.72**	**180**	P	**P**	**23 00 40.3**	**-0.6**	
	comp=Z,3.3nm,0.8s,baz=199,slow=9.4,SNR=15							
	comp=Z,3.3nm,0.8s							
GO07	**Milladeo Hill,**	**90.77**	**136**	P	**P**	**23 00 41.6**	**0.0**	
VNA3	**Neumayer Olymp**	**91.00**	**178**	⇑P	**P**	**23 00 41.6**	**-0.7**	
	comp=Z,3.1nm,0.7s							
SONM	**Songino Array**	**91.22**	**320**	P	**P**	**23 00 44.0**	**+0.3**	
	comp=Z,0.5nm,0.6s,baz=116,slow=3.4,SNR=4.3							
SONM				LR	LR	23 38 21.4		
	comp=Z,24nm,20.9s,baz=38,slow=33							
	comp=Z,0.5nm,0.6s							
BRTR	**Keskin Array B**	**142.19**	**313**	PKP	**PKPdf**	**23 07 11.2**	**-0.1**	
	comp=Z,0.7nm,0.9s,baz=126,slow=6.3,SNR=3.8							
GERES	**GERESS Array B**	**146.51**	**341**	PKPbc	**PKPbc**	**23 07 19.9**	**+0.1**	
	comp=Z,1.8nm,0.9s,baz=35,slow=4.9,SNR=8.4							
CONA	**Conrad Observa**	**146.58**	**338**	*i* PKP	**PKPab**	**23 07 21.3**	**+0.2**	
	comp=Z,12nm,1.7s							
RONA	**Rosalia, Austr**	**146.62**	**337**	*i* PKP	**PKPab**	**23 07 20.9**	**-0.2**	
	comp=Z,7.1nm,0.9s							
MOA	**Molln**	**147.20**	**339**	*e*PKP	**PKPbc**	**23 07 21.1**	**-0.6**	
	comp=Z,7.8nm,1.3s							
ARSA	**Arzberg**	**147.28**	**338**	*e*PKP	**PKiKP**	**23 07 25.8**	**+1.5**	
	comp=Z,5.0nm,1.1s							
BIOA	**Bad Ischl, Aus**	**147.55**	**340**	*i* PKP	**PKiKP**	**23 07 26.0**	**+1.1**	
	comp=Z,5.7nm,1.2s							
LESA	**Schwarzleotal**	**148.09**	**341**	*i* PKP	**PKPab**	**23 07 28.1**	**+1.2**	
	comp=Z,4.1nm,1.0s							
KBA	**Koelnbreinsper**	**148.18**	**340**	*i* PKP	**PKPbc**	**23 07 23.7**	**-0.9**	
	comp=Z,10nm,1.6s							
OBKA	**Obir**	**148.26**	**338**	*e*PKP	**PKPbc**	**23 07 25.3**	**+0.6**	
	comp=Z,11nm,1.1s							
MYKA	**Terra Mystica**	**148.47**	**339**	*e*PKP	**PKiKP**	**23 07 26.1**	**-0.7**	
	comp=Z,7.2nm,1.1s							
WATA	**Walderalm**	**148.50**	**342**	*i* PKP	**PKiKP**	**23 07 26.2**	**-0.7**	
	comp=Z,3.6nm,0.7s							
WTTA	**Wattenberg**	**148.55**	**342**	*i* PKP	**PKPbc**	**23 07 26.3**	**+0.8**	
	comp=Z,7.4nm,1.1s							
RETA	**Reutte**	**148.60**	**343**	*e*PKP	**PKiKP**	**23 07 27.5**	**+0.5**	
	comp=Z,10.0nm,1.3s							
MOTA	**Moosalm**	**148.63**	**343**	*e*PKiKP	**PKPab**	**23 07 29.9**	**+0.6**	
	comp=Z,13nm,2.1s							
SQTA	**Sankt Quirin**	**148.71**	**342**	*i* PKP	**PKPab**	**23 07 28.9**	**-0.6**	
	comp=Z,4.4nm,0.9s							
ABTA	**Abfaltersbach**	**148.74**	**340**	*i* PKP	**PKPbc**	**23 07 26.0**	**+0.1**	
	comp=Z,7.3nm,1.3s							
DAVA	**Damuels**	**149.02**	**344**	*i* PKP	**PKPab**	**23 07 30.2**	**-0.6**	
	comp=Z,6.5nm,1.0s							
FETA	**Feichten**	**149.03**	**343**	*i* PKiKP	**PKPab**	**23 07 30.5**	**-0.4**	
	comp=Z,10nm,1.3s							
TORD	**Torodi Ar. Bea**	**174.07**	**219**	PKPab	**PKPab**	**23 09 16.8**	**-3.2**	
	comp=Z,0.4nm,0.8s,baz=93,slow=5.0,SNR=3.7							

IDC 08 23:08:23.2±6.1, 2.55S×138.94E, h0km, mb3.3/2, mbtmp3.3/3, ML2.8/1, MS3.5/1, Error ellipse: s-maj=249.1km s-min=31.4km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.86**	**194**	P	P	23 12 34.8	+0.7
	baz=15,slow=12,SNR=1.9						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**21.55**	**193**	P	P	23 13 13.7	-0.7
	0.4nm,0.6s,baz=20,slow=12,SNR=6.0						
	0.4nm,0.6s						
PALK	**Pallekele**	**58.92**	**280**	LR	LR	23 49 03.8	
	comp=Z,42nm,18.6s,baz=184,slow=41						
MKAR	**Makanchi Array**	**69.80**	**322**	P	P	23 19 35.7	0.0
	0.4nm,0.6s,baz=111,slow=6.9,SNR=4.5						
	0.4nm,0.6s						

*BJI **08** 23:14:39.5, 0.48S×127.54E, h115km, mB5.2/6, mb4.7/29*
*DJA **08** 23:14:47.4±0.1, 0.7N±2.2×12.7E±*, h112km±2km, M4.7/37, mb4.7/37, mB5.2/11, MLv5.0/22, Mw(mB)4.6/11, MwMwp6.6/1, Mwp6.5/1*
*NEIC **08** 23:14:47.4±1.5, 0.24N±0.04×127.03E±0.06, h114km±4km, mb4.7/67, Error ellipse: s-maj=9.2km s-min=5.3km az=95.0*
*IDC **08** 23:14:49.5±2.2, 0.20N×127.17E, h143km±19km, mb4.0/23, mbtmp4.5/26, MS3.3/9, Error ellipse: s-maj=19.5km s-min=7.3km az=76.0*

ISC 08 23:14:47.3±0.6, 0.21N±0.04×127.04E±0.05, h117km±5km, n212, σ1s18/221, mb4.6/65, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.65**	**31**		**Pn**	**23 15 05.4**	**-0.6**
TNTI				Sn	**Sn**	**23 15 18.7**	**-1.2**
TNTI	**Ternate**	**0.65**	**31**	P	**Pn**	**23 15 05.3**	**-0.6**
TNTI	**Ternate**	**0.65**	**31**	P	**Pn**	**23 15 05.3**	**-0.6**
TNTI				S	**Sn**	**23 15 18.3**	**-1.6**
SANI	**Sanana**	**2.48**	**205**	P	**Pn**	**23 15 26.2**	**-0.4**
SANI	**Sanana**	**2.48**	**205**	P	**Pn**	**23 15 26.3**	**-0.4**
KMSI	**Cibinong**	**3.08**	**277**	P	**Pn**	**23 15 34.8**	**+0.4**
NLAI	**Namlea**	**3.43**	**179**	P	**Pn**	**23 15 39.8**	**+0.6**
SGSI	**Sangihe**	**3.76**	**336**	P	**Pn**	**23 15 42.9**	**-0.7**
MSAI	**Masohi**	**4.01**	**152**	P	**Pn**	**23 15 48.7**	**+1.8**
AAI	**Ambon**	**4.04**	**163**	P	**Pn**	**23 15 48.3**	**+0.9**
SWI	**Sorong**	**4.36**	**104**	P	**Pn**	**23 15 52.7**	**+1.2**
LUWI	**Luwuk**	**4.44**	**254**		**Pn**	**23 15 52.6**	**-0.1**
LUWI				Sn	**Sn**	**23 16 40.5**	**-3.0**
LUWI	**Luwuk**	**4.44**	**254**	P	**Pn**	**23 15 52.8**	**+0.1**
LUWI	**Luwuk**	**4.44**	**254**	P	**Pn**	**23 15 52.7**	**+0.1**
MRSI	**Marisa**	**5.10**	**273**	P	**Pn**	**23 16 01.2**	**-0.3**
	0.7nm2µm76nm,0.5s						
APSI	**Ampana**	**5.50**	**258**	P	**Pn**	**23 16 07.1**	**+0.2**
BNDI	**Bandanaira**	**5.51**	**149**	P	**Pn**	**23 16 07.4**	**+0.3**
BNDI	**Bandanaira**	**5.51**	**149**	P	**Pn**	**23 16 07.3**	**+0.2**
	0.8nm89nm,0.4s						
KDI	**Kendari**	**6.05**	**227**	P	**Pn**	**23 16 15.8**	**+1.4**
FAKI	**Fak Fak**	**6.07**	**121**		**Pn**	**23 16 14.1**	**-0.6**
FAKI	**Fak Fak**	**6.07**	**121**	P	**Pn**	**23 16 15.9**	**+1.2**
FAKI	**Fak Fak**	**6.07**	**121**	P	**Pn**	**23 16 15.6**	**+0.9**
	0.2nm51nm,0.8s						
TOLI2	**Tolitoli**	**6.32**	**278**		**Pn**	**23 16 16.9**	**-1.0**
TOLI2	**Tolitoli**	**6.32**	**278**	P	**Pn**	**23 16 18.0**	**0.0**
BBSI	**Bau Bau**	**7.21**	**218**	P	**Pn**	**23 16 31.3**	**+1.3**
	0.3nm366µm109nm,0.9s						
KMPI	**Kaimana, Papua**	**7.70**	**120**	P	**Pn**	**23 16 37.8**	**+1.1**
	0.3nm60nm,0.9s						
BNSI	**Bone**	**8.30**	**236**	P	**Pn**	**23 16 47.1**	**+2.2**
SPSI	**Sidrap Palu**	**8.36**	**240**	P	**Pn**	**23 16 47.1**	**+1.4**
BKSI	**Bulukumba**	**8.82**	**231**	P	**Pn**	**23 16 55.1**	**+3.1**
KAPI	**Kappang**	**8.94**	**234**		**Pn**	**23 16 53.5**	**0.0**
KAPI				Sn	**Sn**	**23 18 33.0**	**+0.5**
KAPI	**Kappang**	**8.94**	**234**	P	**Pn**	**23 16 56.2**	**+2.7**
	54nm,0.4s,baz=57,slow=3.0,SNR=62						
KAPI				S	**Sn**	**23 18 30.8**	**-1.7**
	59nm,0.4s,baz=318,slow=22,SNR=16						
KAPI	**Kappang**	**8.94**	**234**	P	Pn	23 16 50.4	-3.0
KAPI				S	**Sn**	**23 18 32.0**	**-0.5**
KAPI	**Kappang**	**8.94**	**234**	P	**Pn**	**23 16 55.3**	**+1.8**
KAPI	**Kappang**	**8.94**	**234**	S	**Sn**	**23 18 32.2**	**-0.3**
BSSI	**Bau Bau, Buton**	**9.09**	**226**	P	**Pn**	**23 16 58.5**	**+3.0**
	940nm57nm,0.5s						
MYLDM	**Lahad Datu**	**9.85**	**300**	P	**Pn**	**23 17 06.7**	**+0.9**
MMRI	**Maumere**	**10.01**	**208**	Pn	**Pn**	**23 17 08.9**	**+1.0**
SOEI	**Soe**	**10.28**	**195**	Pn	**Pn**	**23 17 10.6**	**-1.2**
SOEI	**Soe**	**10.28**	**195**	P	**Pn**	**23 17 13.3**	**+1.6**
EDFI	**Ende, Flores**	**10.37**	**211**	P	**Pn**	**23 17 14.7**	**+1.7**
	1µm53nm,0.6s						
BATI	**Baumata**	**10.88**	**198**	P	**Pn**	**23 17 20.2**	**+0.4**
	7.7nm,0.3s,baz=72,slow=5.7,SNR=5.0						
BATI				LR	LR	23 22 04.0	
	comp=Z,95nm,19.4s,baz=81,slow=40						
PLAI	**Plampang**	**12.87**	**226**	P	**P**	**23 17 51.9**	**-0.4**
	18nm,0.9s						
DRS	**Darwin Rock St**	**13.13**	**163**	P	**Pn**	**23 17 48.6**	**-0.8**
TWSI	**Taliwang, Sumb**	**13.47**	**228**	P	**Pn**	**23 17 57.8**	**+4.0**
MTN	**Manton Dam**	**13.59**	**163**		**Pn**	**23 17 53.7**	**-1.7**
SBUM	**Sibu**	**14.98**	**279**		**Pn**	**23 18 12.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.47**	**236**	Pn	**Pn**	**23 18 18.8**	**-0.4**
JAGI	**Jajag, Banyuwa**	**15.47**	**236**	P	**Pn**	**23 18 19.9**	**+0.7**
KNRA	**Kununurra**	**15.88**	**174**	Pn	**Pn**	**23 18 23.6**	**-0.7**
KNRA				IAmb	IAmb	23 18 24.7	
	comp=Z,22nm,0.7s						
KSM	**Kuching**	**16.77**	**274**		**Pn**	**23 18 32.8**	**-2.5**
KSM				IAmb	IAmb	23 18 38.8	
	comp=Z,25nm,0.9s						
PCJI	**Pacitan**	**17.88**	**242**	P	**Pn**	**23 18 50.1**	**+1.4**
	comp=Z,33nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.25**	**184**		**P**	**23 18 51.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**18.25**	**184**	P	**P**	**23 18 51.7**	**0.0**
	comp=Z,8.4nm,0.6s,baz=27,slow=9.6,SNR=27						
FITZ	**Fitzroy Crossi**	**18.25**	**184**	P	**P**	**23 18 51.1**	**-0.6**
UGM	**Wanagama**	**18.33**	**244**		**P**	**23 18 54.8**	**+2.1**
UGM				IAmb	IAmb	23 19 32.3	
	comp=Z,69nm,1.3s						
KPJI	**Karang Pucung**	**19.55**	**247**	P	**P**	**23 19 08.9**	**+2.9**
	comp=Z,113nm,0.9s						
TPI	**Tanjungpandan**	**19.60**	**261**	P	**P**	**23 19 07.9**	**+1.4**
	comp=Z,20nm,0.9s						
LEM	**Lembang**	**20.60**	**250**	P	**P**	**23 19 20.1**	**+2.7**
	comp=Z,62nm,0.7s,baz=54,slow=10,SNR=12						
	comp=Z,62nm,0.7s						
BBJI	**Bungbulang**	**20.78**	**248**	P	**P**	**23 19 20.1**	**+0.8**
WB0	**Warramunga Arr**	**21.13**	**160**		**P**	**23 19 22.6**	**-0.3**
WB0				IAmb	IAmb	23 19 23.6	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**21.27**	**161**	P	**P**	**23 19 24.3**	**-0.1**
WRAB				IAmb	IAmb	23 19 25.1	
	comp=Z,18nm,0.7s						
WRAB	**Tennant Creek**	**21.27**	**161**	P	**P**	**23 19 23.8**	**-0.6**
WRA	**Warramunga Arr**	**21.27**	**161**	P	**P**	**23 19 23.0**	**-1.4**
WRA	**Warramunga Arr**	**21.27**	**161**	P	**P**	**23 19 24.3**	**-0.1**
	comp=Z,25nm,0.6s,baz=340,slow=11,SNR=104						
WRA				S	**S**	**23 23 11.0**	**-3.3**
	comp=Z,6.4nm,1.0s,baz=337,slow=17,SNR=11						
WRA				LR	LR	23 28 02.5	
	comp=Z,64nm,19.8s,baz=108,slow=37						
	comp=Z,25nm,0.6s						
WB2	**Warramunga Arr**	**21.28**	**161**	P	**P**	**23 19 24.6**	**+0.1**
WB2				IAmb	IAmb	23 19 25.2	
	comp=Z,22nm,0.6s						
COEN	**Coen**	**21.30**	**132**		**P**	**23 19 24.3**	**-0.5**
COEN	**Coen**	**21.30**	**132**	P	**P**	**23 19 25.4**	**+0.6**
WR8	**Warramunga Arr**	**21.34**	**160**		**P**	**23 19 24.9**	**-0.3**
WR8				IAmb	IAmb	23 19 25.9	
	comp=Z,23nm,0.5s						
WR0	**Warramunga Arr**	**21.36**	**160**	P	**P**	**23 19 25.6**	**+0.3**
WR0				IAmb	IAmb	23 19 26.0	
	comp=Z,17nm,0.6s						
KASI	**Kota Agung**	**23.21**	**255**	P	**P**	**23 19 45.5**	**+1.3**
	comp=Z,97nm,0.9s						
MYKOM	**Kota Tinggi**	**23.23**	**274**	P	**P**	**23 19 43.7**	**-0.7**
MYKOM				IAmb	IAmb	23 19 47.0	
	comp=Z,32nm,1.0s						
MDSI	**Maura Dua**	**23.31**	**258**	P	**P**	**23 19 47.2**	**+2.1**
	comp=Z,1µmcomp=Z,98nm,1.0s						
TPUB	**Ta-pu**	**23.78**	**345**	P	**P**	**23 19 50.6**	**+1.3**
QIS	**Mount Isa**	**24.03**	**150**	P	**P**	**23 19 52.6**	**+1.0**
MNAI	**Manna**	**24.48**	**259**	P	**P**	**23 19 57.6**	**+1.8**
MNAI	**Manna**	**24.48**	**259**	P	**P**	**23 19 57.2**	**+1.4**
AS31	**Alice Springs**	**24.66**	**165**	P	**P**	**23 19 57.4**	**+0.1**
ASAR	**Alice Springs**	**24.66**	**165**	P	**P**	**23 19 57.6**	**+0.4**
ASAR	**Alice Springs**	**24.66**	**165**	P	**P**	**23 19 58.0**	**+0.8**
	comp=Z,13nm,0.6s,baz=347,slow=11,SNR=124						
ASAR				PcP	**PcP**	**23 23 31.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=354,slow=2.0,SNR=6.8						
ASAR				S	**S**	**23 24 09.0**	**-1.5**
	comp=Z,2.0nm,1.1s,baz=353,slow=22,SNR=5.2						
ASAR				LR	LR	23 30 24.7	
	comp=Z,45nm,18.5s,baz=284,slow=38						
	comp=Z,13nm,0.6s						
YHNB	**Yeheng**	**24.92**	**348**	P	**P**	**23 20 00.4**	**+0.7**
MASI	**Maura Aman, Be**	**25.01**	**262**	P	**P**	**23 20 02.2**	**+1.6**
IPM	**Ipoh**	**26.32**	**280**	P	**P**	**23 20 12.9**	**+0.4**
IPM				IAmb	IAmb	23 20 13.9	
	comp=Z,13nm,0.6s						
PPSI	**Pulau Pagai**	**27.18**	**264**	P	**P**	**23 20 22.8**	**+2.7**
	comp=Z,54nm,1.1s						
GSI	**Gunungsitoli**	**29.48**	**272**		**P**	**23 20 40.1**	**-0.4**
FORT	**Forrest**	**30.84**	**178**	P	**P**	**23 20 52.1**	**-0.2**
MLSI	**Meulaboh, Aceh**	**30.86**	**278**	P	**P**	**23 20 52.4**	**-0.4**
	comp=Z,19nm,0.8s						
MORW	**Morawa**	**30.96**	**199**	P	**P**	**23 20 53.8**	**+0.4**
MORW				IAmb	IAmb	23 20 54.6	
	comp=Z,8.3nm,0.7s						
BLDU	**Ballidu**	**32.19**	**197**	P	**P**	**23 21 04.4**	**+0.2**
WHN	**Wuhan**	**32.48**	**339**	P	**P**	**23 21 11.5**	**+4.8**
NJ2	**Nanjing**	**32.60**	**347**	*e*P	**P**	**23 21 08.7**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,11nm,1.1s						
CMAR	**Chiang Mai Arr**	**33.02**	**305**	P	**P**	**23 21 12.4**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=136,slow=8.4,SNR=9.4						
CMAR				PcP	**PcP**	**23 23 53.7**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=165,slow=1.3,SNR=9.3						
	comp=Z,1.0nm,0.3s						
CHTO	**Chiang Mai**	**33.19**	**305**	P	**P**	**23 21 13.2**	**+0.1**
CHTO	**Chiang Mai**	**33.19**	**305**	P	**P**	**23 21 14.2**	**+1.1**
MUN	**Mundaring**	**33.62**	**197**	P	**P**	**23 21 17.2**	**+0.6**
BBOO	**Buckleboo**	**33.93**	**166**	P	**P**	**23 21 19.6**	**+0.3**
BBOO	**Buckleboo**	**33.93**	**166**	P	**P**	**23 21 19.6**	**+0.3**
EIDS	**Eidsvold**	**34.45**	**139**	P	**P**	**23 21 24.5**	**+0.6**
STKA	**Stephens Creek**	**34.77**	**158**	P	**P**	**23 21 26.8**	**+0.3**
STKA	**Stephens Creek**	**34.77**	**158**	P	**P**	**23 21 26.1**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=329,slow=9.0,SNR=8.9						
STKA				LR	LR	23 35 50.9	
	comp=Z,48nm,20.3s,baz=22,slow=36						
	comp=Z,1.3nm,0.3s						
STKA	**Stephens Creek**	**34.77**	**158**	P	**P**	**23 21 26.4**	**-0.1**
HTT	**Hallett**	**35.29**	**163**	P	**P**	**23 21 31.9**	**+0.9**
PZH	**PanZhiHua**	**35.72**	**319**	P	**P**	**23 21 37.9**	**+2.9**
JWT	**Wachi**	**35.75**	**12**	P	**P**	**23 21 36.1**	**+1.2**
KSRS	**Korea Array**	**37.07**	**1**	P	**P**	**23 21 45.8**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=178,slow=9.7,SNR=5.5						
	comp=Z,1.9nm,0.6s						
MAJO	**Matsushiro**	**37.60**	**15**	P	**P**	**23 21 49.4**	**-1.2**
MAJO				IAmb	IAmb	23 21 49.8	
	comp=Z,16nm,1.2s						
MJAR	**Matsushiro Arr**	**37.60**	**15**	P	**P**	**23 21 48.7**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=189,slow=9.0,SNR=2.4						
	comp=Z,0.8nm,0.3s						
MJB9	**Matsu-Tunnel**	**37.61**	**15**	P	**P**	**23 21 50.3**	**-0.4**
MJB9				IAmb	IAmb	23 21 50.8	
	comp=Z,15nm,1.2s						
XAN	**Xi'an**	**37.69**	**335**	P	**P**	**23 21 51.0**	**-0.5**
XAN				pmax	pmax		
	comp=Z,17nm,0.5s						
ARMA	**Armidale**	**38.41**	**145**	P	**P**	**23 21 56.7**	**-1.0**
HNS	**HongShan**	**38.72**	**344**	⇑P	**P**	**23 22 00.3**	**+0.4**
BRAT	**Ballarat**	**40.69**	**159**	P	**P**	**23 22 15.2**	**-1.1**
LZDM	**Lanzhou Array**	**41.66**	**331**	P	**P**	**23 22 26.1**	**+1.5**
	comp=Z,1.6nm,0.4s,baz=151,slow=9.5,SNR=3.7						
	comp=Z,1.6nm,0.4s						
SHL	**Shillong**	**42.26**	**309**	P	**P**	**23 22 29.2**	**-0.4**
SHL				IAmb	IAmb	23 22 30.5	
	comp=Z,9.6nm,0.7s						
HHC	**Hu-ho-hao-te**	**42.82**	**343**	*e*P	**P**	**23 22 36.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,180nm,4.5s						
ASAJ	**Asahikawa**	**45.86**	**16**	LR	LR	23 40 02.4	
	comp=Z,17nm,21.2s,baz=136,slow=33						
GTA	**Gaotai**	**46.27**	**331**	*e*P	**P**	**23 23 02.7**	**+1.5**
GTA				PcP	**PcP**	**23 24 35.3**	**+0.4**
GTA				pmax	pmax		
	comp=Z,11nm,0.7s						
GOMU	**GeErMu**	**46.65**	**324**	P	**P**	**23 23 05.3**	**+0.8**
GOMU				S	**S**	**23 29 45.5**	**+0.1**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EVN	**Everest**	**47.38**	**309**	P	**P**	**23 23 08.3**	**-2.4**
ULN	**Ulaanbaatar**	**50.54**	**343**	P	**P**	**23 23 33.9**	**0.0**
ULN				IAmb	IAmb	23 23 35.1	
	comp=Z,10nm,1.4s						
ULN	**Ulaanbaatar**	**50.54**	**343**	P	**P**	**23 23 34.5**	**+0.6**
SONM	**Songino Array**	**50.71**	**342**	P	**P**	**23 23 34.8**	**-0.3**
SONM	**Songino Array**	**50.71**	**342**	P	**P**	**23 23 35.0**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=155,slow=8.1,SNR=15						
SONM				PcP	**PcP**	**23 24 50.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=166,slow=5.2,SNR=5.0						
	comp=Z,2.1nm,0.7s						
WMQ	**Urumqi**	**55.78**	**326**	*e*P	**P**	**23 24 13.5**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WHZ	**Wether Hill Ro**	**58.32**	**147**	P	**P**	**23 24 30.4**	**+0.4**
PEA0B	**Petropavlovsk-**	**58.56**	**21**	P	**P**	**23 24 31.1**	**-0.4**
PETK	**Petropavlovsk-**	**58.56**	**21**	P	**P**	**23 24 31.4**	**-0.1**
PETK	**Petropavlovsk-**	**58.56**	**21**	P	**P**	**23 24 31.1**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=180,slow=4.1,SNR=8.7						
	comp=Z,4.2nm,0.8s						
TARG	**Taragay, Kyrgy**	**60.58**	**319**	P	**P**	**23 24 47.0**	**+0.9**
MK31	**Makanchi Array**	**60.62**	**326**	P	**P**	**23 24 46.0**	**+0.2**
MK31				IAmb	IAmb	23 24 46.9	
	comp=Z,4.7nm,0.8s						
MKAR	**Makanchi Array**	**60.62**	**326**	P	**P**	**23 24 46.1**	**+0.3**
MKAR	**Makanchi Array**	**60.62**	**326**	P	**P**	**23 24 46.3**	**+0.5**
	comp=Z,4.0nm,0.4s,baz=114,slow=7.9,SNR=85						
MKAR				PcP	**PcP**	**23 25 28.4**	**-0.6**
	comp=Z,3.9nm,0.6s,baz=126,slow=4.4,SNR=11						
	comp=Z,4.0nm,0.4s						
KSH	**Kashi**	**60.76**	**316**	P	**P**	**23 24 48.9**	**+1.9**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	**Makanchi**	**60.80**	**326**	P	**P**	**23 24 47.2**	**+0.2**
MAKZ				IAmb	IAmb	23 24 47.6	
	comp=Z,5.6nm,0.6s						
KDJ	**Kajisay**	**61.18**	**320**	P	**P**	**23 24 50.4**	**+0.5**
KDJ				IAmb	IAmb	23 24 51.3	
	comp=Z,7.4nm,0.7s						
BOOM	**Boomskoye usch**	**62.16**	**319**	P	**P**	**23 24 57.1**	**+0.6**
BOOM				IAmb	IAmb	23 24 58.2	
	comp=Z,8.7nm,1.3s						
ARSB	**Arslanbob**	**63.60**	**317**	P	**P**	**23 25 06.1**	**+0.1**
ARSB				IAmb	IAmb	23 25 07.5	
	comp=Z,6.4nm,0.9s						
ZALV	**Zalesovo Beam**	**63.85**	**334**	P	**P**	**23 25 06.1**	**-1.0**
ZALV	**Zalesovo Beam**	**63.85**	**334**	P	**P**	**23 25 06.3**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=104,slow=6.3,SNR=12						
	comp=Z,1.7nm,0.5s						
KBL	**Kabul**	**63.92**	**309**	P	**P**	**23 25 08.4**	**+0.1**
KBL				IAmb	IAmb	23 25 09.4	
	comp=Z,9.5nm,0.9s						
KBL	**Kabul**	**63.92**	**309**	P	**P**	**23 25 08.6**	**+0.3**
GAR	**Garm**	**64.54**	**314**	P	**P**	**23 25 12.6

comp=Z,7.1nm,0.7s
ASF Jabal al Asfar 90.00 302 LR LR 00 15 22.3
comp=Z,13nm,18.3s,baz=76,slow=40
QSPA South Pole Qui 90.14 180 P **P** **23 27 36.7 +2.6**
comp=Z,1.0nm,0.6s,baz=158,slow=2.5,SNR=4.0
MMAI Mount Meron Ar 91.26 303 P **P** **23 27 39.8 -0.2**
comp=Z,0.3nm,0.5s,baz=81,slow=10,SNR=4.1
comp=Z,0.3nm,0.5s
BRTR Keskin Array B 92.48 310 P **P** **23 27 44.0 -1.6**
comp=Z,0.5nm,0.9s,baz=90,slow=7.4,SNR=4.1
BRTR LR LR 00 16 00.4
comp=Z,18nm,18.1s,baz=22,slow=40
comp=Z,0.5nm,0.9s
ARCES ARCESS Array B 93.83 340 P **P** **23 27 49.4 -1.6**
comp=Z,2.2nm,0.5s,baz=80,slow=6.6,SNR=39
comp=Z,2.2nm,0.5s
FINES FINESS Array B 95.05 332 P **P** **23 27 54.7 -2.0**
comp=Z,0.8nm,0.6s,baz=64,slow=4.4,SNR=12
comp=Z,0.8nm,0.6s
BUR08 Bucovina Ar. S 97.81 318 P **P** **23 28 08.8 -0.9**
BUR08 IAmb IAmb 23 28 09.8
comp=Z,2.5nm,0.8s
HFS Hagfors 101.25 332 P **Pdif** **23 28 21.9 -2.7**
comp=Z,2.1nm,0.9s,baz=61,slow=12,SNR=4.7
NOA NORSAR Array B 102.05 333 P **Pdif** **23 28 26.3 -1.9**
comp=Z,0.5nm,0.5s,baz=67,slow=4.5,SNR=2.7
PDAR Pinedale Array 113.76 42 PKKPbc PKKPbc 23 43 54.8 -2.3
comp=Z,0.3nm,0.5s,baz=131,slow=1.7,SNR=3.6
TORD Torodi Ar. Bea 124.24 286 PKP **PKPdf** **23 33 33.2 -0.2**
comp=Z,0.4nm,0.5s,baz=107,slow=2.6,SNR=4.0
TORD PKKPbc **PKKPab** **23 43 17.9 0.0**
comp=Z,0.6nm,0.7s,baz=312,slow=2.9,SNR=4.9
PLCA Paso Flores 136.62 160 PKP **PKPdf** **23 33 56.4 +0.2**
comp=Z,1.2nm,0.6s,baz=270,slow=1.0,SNR=3.8
CPUP Villa Florida 153.70 171 PKPbc **PKPbc** **23 34 31.4 -1.9**
comp=Z,0.7nm,0.7s,baz=284,slow=3.8,SNR=5.8

BER 08 23:26:07.3±1.1, 74.68N×8.85E, h10km, mb(Pn)3.5,
Confirmed Earthquake, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRBB	**Barentsburg B**	**3.66**	**18**	*eP*	Pn	23 27 02.4	-1.4
SPA0	**Spitsbergen Ar**	**3.94**	**23**	*eP*	Pn	23 27 06.8	-0.9
SPA0				IAML		23 27 29.3	
	comp=Z,3.5nm,0.8s						
SPA0				*eS*	Sn	23 27 49.0	-4.8
KBS	**Kingsbay**	**4.33**	**8**	*eP*	Pn	23 27 11.7	-1.3
KBS				IAML		23 27 48.9	
	comp=Z,2.9nm,0.9s						
KBS				*eS*	Sn	23 27 57.7	-5.8
HOPEN	**Hopen**	**4.43**	**58**	*eP*	Pn	23 27 12.8	-1.5
HOPEN				IAML		23 27 50.3	
	comp=Z,6.6nm,0.9s						
HOPEN				*eS*	Sn	23 28 00.2	-5.7
JNE	**Jan Mayen East**	**6.26**	**242**	*eP*	Pn	23 27 37.0	-2.5
JNW	**Jan Mayen West**	**6.26**	**243**	*eP*	Pn	23 27 37.4	-2.1
JMIC	**Jan Mayen**	**6.31**	**243**	*eP*	Pn	23 27 37.3	-2.9

*IDC **08** 23:30:24.5±2.3, 15.51N×96.63W, h0km, mb3.6/4, mbtmp3.6/6, ML2.6/2, MS3.2/3, Error ellipse: s-maj=36.6km s-min=16.7km az=168.0*
*MEX **08** 23:30:25.7±1.1, 15.53N×96.81W, h16km±7km, MD4.4*
ISC 08 23:30:23.4±1.6, 15.50N±0.07×96.80W±0.0, h4km±10km, n48, σ2°90/83, mb3.6/4, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.59**	**326**	*eP*	**Pg**	**23 30 34.1**	**-0.7**
PEIG				*eS*	**Sg**	**23 30 42.7**	**0.0**
HUIG	**Huatulco**	**0.72**	**68**	*eP*	**Pg**	**23 30 37.3**	**+0.1**
HUIG				*eS*	**Sg**	**23 30 46.0**	**-0.5**
YOIG	**Yosondua**	**1.52**	**332**	*eP*	**Pn**	**23 30 49.7**	**-2.0**
YOIG				*eS*	**Sn**	**23 31 06.0**	**-6.1**
PNIG	**Pinotepa**	**1.55**	**305**	*eP*	**Pn**	**23 30 49.2**	**-2.7**
PNIG				*eS*	**Sn**	**23 31 07.5**	**-5.0**
OXLC	**Oaxaca**	**1.56**	**3**	*eP*	**Pn**	**23 30 50.0**	**-2.1**
OXLC				*eS*	**Sn**	**23 31 08.2**	**-4.7**
OXBJ	**Oaxaca**	**1.56**	**3**	*eP*	**Pn**	**23 30 51.8**	**-0.3**
OXBJ				*eS*	**Sn**	**23 31 11.1**	**-1.8**
VHO	**Vista Hermosa**	**1.56**	**2**	*eP*	**Pn**	**23 30 49.6**	**-2.5**
VHO				*eS*	**Sn**	**23 31 08.1**	**-4.8**
TXIG	**Tlaxiaco**	**1.97**	**332**	*eP*	**Pn**	**23 30 56.7**	**-1.2**
TXIG				*eS*	**Sn**	**23 31 22.2**	**-1.0**
NEUV	**Arroyo Zacate**	**2.40**	**23**	*eP*	**Pn**	**23 31 00.9**	**-2.5**
NEUV				*eS*	**Sn**	**23 31 30.3**	**-3.0**
CMIG	**Matias Romero**	**2.42**	**49**	Pn	**Pn**	**23 31 01.8**	**-2.1**
	4.8nm,0.3s,baz=224,slow=11,SNR=62						
CMIG				Pg	**Pb**	**23 31 05.8**	**-1.8**
	40nm,0.3s,baz=244,slow=15,SNR=60						
CMIG				Lg	Lg	23 31 38.8	
	102nm,0.3s,baz=319,slow=13,SNR=9.0						
	36nm,0.4s						
MGIG	**Malinaltepec**	**2.46**	**315**	*eP*	**Pn**	**23 31 02.4**	**-2.1**
MGIG				*eS*	**Sn**	**23 31 35.0**	**-0.2**
HLIG	**Huajuapan de L**	**2.51**	**338**	*eP*	**Pn**	**23 31 06.7**	**+1.6**
HLIG				*eS*	**Sn**	**23 31 35.0**	**-1.3**
CRIG	**Cruz Grande**	**2.56**	**299**	*eP*	**Pn**	**23 31 04.7**	**-1.0**
CRIG				*eS*	**Sn**	**23 31 31.4**	**-5.8**
TOIG	**Toxpalan**	**2.59**	**354**	*eP*	**Pn**	**23 31 06.6**	**+0.4**
TLIG	**Tlapa**	**2.66**	**321**	*eP*	**Pn**	**23 31 08.4**	**+1.2**
TLIG				*eS*	**Sn**	**23 31 40.8**	**+0.8**
FTIG	**Fresnillo de T**	**2.71**	**332**	*eP*	**Pn**	**23 31 10.5**	**+2.6**
FTIG				*eS*	**Sn**	**23 31 38.3**	**-2.9**
TPIG	**Tehuac#an**	**2.95**	**350**	*eP*	**Pn**	**23 31 12.2**	**+1.0**
TPIG				*eS*	**Sn**	**23 31 43.0**	**-4.2**
DAIG	**Los Arroyos**	**3.13**	**299**	*eP*	**Pn**	**23 31 11.6**	**-2.0**
DAIG				*eS*	**Sn**	**23 31 45.9**	**-5.5**
PMUV	**Sontecomapan**	**3.42**	**28**	*eP*	**Pn**	**23 31 17.1**	**-0.5**
PMUV				*eS*	**Sn**	**23 31 56.2**	**-2.5**
MEIG	**Mezcala**	**3.62**	**312**	*eP*	**Pn**	**23 31 19.8**	**-0.6**
MEIG				*eS*	**Sn**	**23 32 00.7**	**-3.0**
CAIG	**El Cayaco**	**3.67**	**295**	*eP*	**Pn**	**23 31 18.8**	**-2.2**
CAIG				*eS*	**Sn**	**23 31 57.4**	**-7.4**
PPCL	**Tochimilco**	**3.81**	**333**	*eP*	**Pn**	**23 31 24.4**	**+1.2**
PPCL				*eS*	**Sn**	**23 32 06.1**	**-2.5**
JAUV	**Jalcomulco**	**3.84**	**360**	*eP*	**Pn**	**23 31 24.5**	**+1.1**
JAUV				*eS*	**Sn**	**23 32 03.7**	**-5.4**
PPPT	**Popocatepetl**	**3.87**	**333**	*eP*	**Pn**	**23 31 24.4**	**+0.2**
PPPT				*eS*	**Sn**	**23 32 07.9**	**-2.4**
PBXN	**Popocatepetl**	**3.91**	**333**	*eP*	**Pn**	**23 31 25.5**	**+0.7**
PBXN				*eS*	**Sn**	**23 32 09.0**	**-2.4**
PPSX	**Xalitzintla**	**3.92**	**336**	*eP*	**Pn**	**23 31 25.4**	**+0.7**
PPSX				*eS*	**Sn**	**23 32 10.1**	**-1.3**
PPM	**Popocatepetl**	**3.95**	**334**	*eP*	**Pn**	**23 31 28.2**	**+2.8**
PPM				*eS*	**Sn**	**23 32 10.7**	**-1.7**
YAIG	**Yautepec**	**3.98**	**327**	*eP*	**Pn**	**23 31 26.0**	**+0.5**
YAIG				*eS*	**Sn**	**23 32 09.9**	**-2.8**
LVIG	**Laguna Verde**	**4.21**	**5**	*eP*	**Pn**	**23 31 29.7**	**+1.2**
LVIG				*eS*	**Sn**	**23 32 12.2**	**-5.9**
MPVM	**San Francisco**	**4.24**	**330**	*eP*	**Pn**	**23 31 29.4**	**+0.3**
MPVM				*eS*	**Sn**	**23 32 16.4**	**-2.8**
MAVM	**Malinalco, Edo**	**4.29**	**324**	*eS*	**Sn**	**23 32 17.2**	**-3.2**
TLVM	**San Miguel Top**	**4.32**	**329**	*eS*	**Sn**	**23 32 18.1**	**-3.2**
MZVM		**4.34**	**328**	*eP*	**Pn**	**23 31 29.8**	**-0.3**
MZVM				*eS*	**Sn**	**23 32 15.6**	**-5.6**
ARIG	**Puente Sto Nin**	**4.38**	**310**	*eP*	**Pn**	**23 31 30.4**	**-0.4**
ARIG				*eS*	**Sn**	**23 32 24.0**	**+1.7**
AOVM	**Tlapan**	**4.45**	**328**	*eP*	**Pn**	**23 31 32.9**	**+0.8**
AOVM				*eS*	**Sn**	**23 32 17.5**	**-7.2**
MCRU	**Las Cruces**	**4.46**	**329**	*eS*	**Sn**	**23 32 23.0**	**-1.8**
INVM	**La Marquesa**	**4.50**	**327**	*eP*	**Pn**	**23 31 33.7**	**+0.9**
INVM				*eS*	**Sn**	**23 32 20.9**	**-5.0**
CXUV	**Coxquihui**	**4.71**	**351**	*eP*	**Pn**	**23 31 36.8**	**+1.5**
CXUV				*eS*	**Sn**	**23 32 29.7**	**-0.7**
ZIIG	**Zihuatanejo**	**4.94**	**296**	*eP*	**Pn**	23 31 33.3	-5.1
ZIIG				*eS*	**Sn**	**23 32 33.3**	**-2.7**
ACIG	**Acambay**	**5.33**	**327**	*eP*	**Pn**	**23 31 46.0**	**+1.9**
ACIG				*eS*	**Sn**	**23 32 45.3**	**-0.7**
CTUV	**Llano Grande**	**6.12**	**346**	*eS*	**Sn**	**23 33 01.9**	**-3.3**
APG	**El Apazote**	**6.13**	**94**	Pn	**Pn**	**23 31 56.2**	**+1.1**
	baz=240,slow=20,SNR=1.6						
APG				Sn	**Sn**	**23 33 04.2**	**-1.6**
	0.1nm,0.3s,baz=73,slow=19,SNR=2.4						
TXAR	**Lajitas Array**	**15.15**	**336**	Pn	**Pn**	**23 34 01.2**	**+2.8**
	0.9nm,1.0s,baz=139,slow=10,SNR=4.2						
TXAR				LR	LR	23 39 56.1	
	comp=Z,104nm,19.2s,baz=122,slow=38						
ANMO	**Albuquerque**	**21.22**	**338**	P	**P**	**23 35 13.2**	**+2.7**
	1.6nm,0.7s,baz=224,slow=8.7,SNR=6.0						
ANMO				LR	LR	23 43 59.9	
	comp=Z,136nm,18.8s,baz=230,slow=38						
	1.6nm,0.7s						
PDAR	**Pinedale Array**	**29.29**	**341**	P	**P**	**23 36 29.5**	**+2.3**
	0.3nm,0.6s,baz=146,slow=7.7,SNR=3.6						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**29.67**	**324**	P	**P**	**23 36 33.8**	**+3.2**
	1.0nm,0.8s,baz=154,slow=10,SNR=6.9						
	1.0nm,0.8s						
CPUP	**Villa Florida**	**56.59**	**137**	LR	LR	00 05 46.4	
	comp=Z,6.7nm,19.2s,baz=216,slow=38						
ILAR	**Eielson Array**	**59.66**	**338**	P	**P**	**23 40 30.1**	**+1.4**
	0.9nm,1.0s,baz=112,slow=4.7,SNR=5.1						
	0.9nm,1.0s						

*TAP **08** 23:40:14.8, 21.79N×121.11E, h50km, ML3.5, D*
*JMA **08** 23:40:15.1±0.2, 21.9N±0.8×121.1E±, h21km±4km, MV3.8/11, TAIWAN REGION*
ISC 08 23:40:14.6±1.9, 21.72N±0.08×121.10E±0.03, h55km±8km, n110, σ1°23/197, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.26**	**314**	*iP*	**Pn**	**23 40 24.4**	**+0.4**
TSEB				*iS*	**Sn**	**23 40 31.8**	**+1.2**
TWKBT	**Hengchun**	**0.35**	**310**	⇓*iP*	**Pn**	**23 40 24.8**	**+0.1**
TWKBT				*iS*	**Sn**	**23 40 32.0**	**+0.1**
TWK1	**Hengchun**	**0.35**	**309**	*iP*	**Pn**	**23 40 24.9**	**+0.1**
TWK1				S	**Sn**	**23 40 32.1**	**0.0**
SMST	**Manzhou Townsh**	**0.39**	**321**	*iP*	**Pn**	**23 40 25.0**	**-0.1**
SMST				*eS*	**Sn**	**23 40 31.8**	**-0.7**
HEN	**Hengchun**	**0.44**	**310**	*iP*	**Pn**	**23 40 26.4**	**+0.7**
HEN				S	**Sn**	**23 40 34.8**	**+1.3**
LAY	**Lan-yu**	**0.53**	**53**	P	**Pn**	**23 40 26.3**	**-0.3**
LAY				*eS*	**Sn**	**23 40 34.8**	**-0.4**
LYUB	**Lan-yu**	**0.53**	**58**	⇓*iP*	**Pn**	**23 40 25.9**	**-0.7**
LYUB				S	**Sn**	**23 40 33.9**	**-1.3**
SLIU	**Shizi**	**0.57**	**331**	*iP*	**Pn**	**23 40 27.0**	**-0.1**
SLIU				*iS*	**Sn**	**23 40 36.2**	**+0.2**
TAWH	**Dawu Township**	**0.65**	**342**	P	**Pn**	**23 40 27.7**	**-0.3**
TAWH				S	**Sn**	**23 40 36.9**	**-0.8**
TAW	**Tawu**	**0.66**	**344**	P	**Pn**	**23 40 27.7**	**-0.5**
TAW				S	**Sn**	**23 40 37.2**	**-0.8**
EAST	**Anshuo**	**0.70**	**341**	*eP*	**Pn**	**23 40 28.5**	**-0.2**
EAST				S	**Sn**	**23 40 38.0**	**-1.0**
SCZT	**Fangliau**	**0.79**	**326**	P	**Pn**	**23 40 29.7**	**0.0**
SCZT				S	**Sn**	**23 40 40.1**	**-0.8**
ECL	**Taimali**	**0.88**	**351**	*iP*	**Pn**	**23 40 30.1**	**-0.9**
ECL				*iS*	**Sn**	**23 40 41.5**	**-1.6**
WLCH	**Liuqiu**	**0.92**	**313**	P	**Pn**	**23 40 32.8**	**+1.3**
WLCH				S	**Sn**	**23 40 45.8**	**+2.0**
TWP	**Hsiaoliuchiu**	**0.93**	**313**	*eP*	**Pn**	**23 40 32.7**	**+1.1**
TWP				S	**Sn**	**23 40 45.1**	**+1.2**
MASBT	**Mashibuluo**	**0.99**	**334**	P	**Pn**	**23 40 32.4**	**0.0**
MASBT				S	**Sn**	**23 40 45.0**	**-0.5**
LDUT	**Ludao**	**1.01**	**20**	P	**Pn**	**23 40 32.0**	**-0.7**
LDUT				S	**Sn**	**23 40 45.4**	**-0.5**
TTN	**Taitung**	**1.03**	**2**	*eP*	**Pn**	**23 40 32.5**	**-0.5**
TSMG	**Majia**	**1.07**	**337**	*eP*	**Pn**	**23 40 32.2**	**-1.2**
TSMG				*eS*	**Sn**	**23 40 46.1**	**-1.3**
TWGBT	**Beinan**	**1.09**	**359**	P	**Pn**	**23 40 32.3**	**-1.5**
TWGBT	**Beinan**	**1.09**	**359**	P	**Pn**	**23 40 32.9**	**-0.9**
TWGBT				*eS*	**Sn**	**23 40 46.1**	**-1.9**
TWG	**Pinlang**	**1.10**	**359**	P	**Pn**	**23 40 33.0**	**-0.9**
TWG				S	**Sn**	**23 40 46.3**	**-1.7**
SSD	**Sandimen**	**1.11**	**337**	P	**Pn**	**23 40 35.0**	**+0.9**
SSD				S	**Sn**	**23 40 47.0**	**-1.3**
LONT	**Longtian**	**1.18**	**1**	P	**Pn**	**23 40 34.5**	**-0.5**
LONT				*eS*	**Sn**	**23 40 48.7**	**-1.4**
WSSB	**Gushan**	**1.20**	**320**	*eP*	**Pn**	**23 40 35.8**	**+0.5**
WSSB				*eS*	**Sn**	**23 40 50.4**	**-0.2**
EDH	**Donghe**	**1.26**	**9**	*eP*	**Pn**	**23 40 35.5**	**-0.6**
EDH				S	**Sn**	**23 40 51.0**	**-1.0**
TWM1	**Shoushan**	**1.27**	**330**	P	**Pn**	**23 40 36.7**	**+0.6**
TWM1				*eS*	**Sn**	**23 40 54.8**	**+2.7**
SCST	**Cishan**	**1.29**	**334**	*eP*	**Pn**	**23 40 38.1**	**+1.7**
SCST				*eS*	**Sn**	**23 40 52.9**	**+0.3**
ECS	**Chishang**	**1.37**	**5**	*eP*	**Pn**	**23 40 37.1**	**-0.4**
ECS				*eS*	**Sn**	**23 40 54.5**	**-0.2**
CHKT	**Chengkung**	**1.40**	**10**	P	**Pn**	**23 40 38.2**	**+0.4**
CHKT				*eS*	**Sn**	**23 40 54.6**	**-0.6**
EHD	**Haiduan**	**1.43**	**4**	*eP*	**Pn**	**23 40 38.4**	**-0.6**
EHD				S	**Sn**	**23 40 54.4**	**-1.6**
ELDTW	**Lidau**	**1.47**	**357**	*eP*	**Pn**	**23 40 38.5**	**-0.3**
ELDTW				*iS*	**Sn**	**23 40 56.2**	**-0.9**
STYH	**Taoyuan**	**1.48**	**348**	*eP*	**Pn**	**23 40 41.0**	**+2.1**
STYH				*eS*	**Sn**	**23 40 57.4**	**+0.3**
FULB	**Fuli**	**1.48**	**7**	P	**Pn**	**23 40 39.1**	**+0.1**
FULB				S	**Sn**	**23 40 57.5**	**+0.1**
CHKH	**Chenggong**	**1.49**	**11**	*eP*	**Pn**	**23 40 39.3**	**+0.2**
CHKH				*iS*	**Sn**	**23 40 56.9**	**-0.6**
CHN1	**Nanshi**	**1.55**	**340**	*eP*	**Pn**	**23 40 40.5**	**+0.5**
CHN1				*eS*	**Sn**	**23 40 58.8**	**-0.3**
WTP	**Ta-pu**	**1.58**	**344**	*eP*	**Pn**	**23 40 43.7**	**+3.2**
WTP				S	**Sn**	**23 40 59.7**	**-0.2**
SNST	**Tainan City**	**1.59**	**340**	*eP*	**Pn**	**23 40 41.0**	**+0.5**
SNST				S	**Sn**	**23 40 59.7**	**-0.4**
ECBN	**Changbin**	**1.62**	**11**	*eP*	**Pn**	**23 40 41.3**	**+0.4**
TPUB	**Ta-pu**	**1.63**	**345**	P	**Pn**	**23 40 43.8**	**+2.7**
TPUB	**Ta-pu**	**1.63**	**345**	P	**Pn**	**23 40 41.3**	**+0.2**
TPUB				*eS*	**Sn**	**23 41 00.3**	**+0.7**
TWF1	**Yuli**	**1.64**	**6**	*eP*	**Pn**	**23 40 39.5**	**-1.6**
TWF1				*eS*	**Sn**	**23 40 59.0**	**-2.1**
TWK	**Hsinying**	**1.64**	**340**	P	**Pn**	**23 40 42.5**	**+1.3**
TWK				S	**Sn**	**23 41 00.9**	**-0.4**
SCLT	**Jiali**	**1.67**	**330**	*eP*	**Pn**	**23 40 42.1**	**+0.5**
SCLT				*eS*	**Sn**	**23 41 01.9**	**0.0**
YULB	**Yu-li**	**1.68**	**6**	P	**Pn**	**23 40 40.8**	**-0.9**
YULB	**Yu-li**	**1.68**	**6**	P	**Pn**	**23 40 40.5**	**-1.1**
YULB				S	**Sn**	**23 40 59.8**	**-2.3**
TSCK	**Chigu Township**	**1.70**	**327**	P	**Pn**	**23 40 41.8**	**-0.2**
TSCK				*eS*	**Sn**	**23 41 01.6**	**-1.1**
YUS	**Yu-Shan**	**1.77**	**356**	P	**Pn**	**23 40 43.8**	**+0.4**
YUS				*eS*	**Sn**	**23 41 04.7**	**-0.2**
EHYH	**Wanrong**	**1.78**	**7**	*eP*	**Pn**	**23 40 42.7**	**-0.4**
EHYH				*eS*	**Sn**	**23 41 03.5**	**-1.1**
HGSD	**Ruisui**	**1.79**	**10**	P	**Pn**	**23 40 43.2**	**0.0**
HGSD				S	**Sn**	**23 41 05.0**	**+0.2**
EHY	**Hungye**	**1.79**	**7**	P	**Pn**	**23 40 42.6**	**-0.6**
EHY				*eS*	**Sn**	**23 41 02.8**	**-2.1**
ALS	**Alishan**	**1.80**	**351**	P	**Pn**	**23 40 45.3**	**+1.6**
ALS				S	**Sn**	**23 41 05.9**	**+0.3**
CHN8	**Yiju**	**1.82**	**333**	*eP*	**Pn**	**23 40 42.8**	**-0.7**
CHN8				*eS*	**Sn**	**23 41 05.6**	**+0.2**
CHY	**Chiayi**	**1.88**	**341**	*eP*	**Pn**	**23 40 44.8**	**+0.4**
CHY				*eS*	**Sn**	**23 41 06.2**	**-0.7**
WSL	**Shuilin Townsh**	**1.97**	**336**	*eP*	**Pn**	**23 40 44.6**	**-1.0**
WSL				S	**Sn**	**23 41 08.8**	**-0.3**
WHYT	**Xinyi Township**	**1.98**	**353**	*eP*	**Pn**	**23 40 48.0**	**+2.1**
WHYT				*eS*	**Sn**	**23 41 10.4**	**+0.8**
WARBT	**Fenglin Townsh**	**2.01**	**8**	*eP*	**Pn**	**23 40 46.4**	**+0.2**
WARBT				S	**Sn**	**23 41 07.9**	**-2.3**
VWDT	**VWDT**	**2.03**	**1**	*eP*	**Pn**	**23 40 47.3**	**+0.9**
VWDT				*eS*	**Sn**	**23 41 10.8**	**+0.2**
WDLH	**Douliu**	**2.03**	**345**	*eP*	**Pn**	**23 40 48.2**	**+1.8**
WDLH				*eS*	**Sn**	**23 41 10.3**	**-0.4**
SSLB	**Suanglung**	**2.06**	**356**	P	**Pn**	**23 40 48.3**	**+1.3**
SSLB	**Suanglung**	**2.06**	**356**	*eP*	**Pn**	**23 40 47.8**	**+0.8**
SSLB				*eS*	**Sn**	**23 41 11.9**	**+0.3**
SHUL	**Shoufeng**	**2.10**	**12**	*eP*	**Pn**	**23 40 47.8**	**+0.3**
SHUL				*eS*	**Sn**	**23 41 14.0**	**+1.5**
ESL	**Shilin**	**2.11**	**8**	*eP*	**Pn**	**23 40 48.3**	**+0.8**
ESL				*eS*	**Sn**	**23 41 09.8**	**-2.8**
VCHM	**Qimei**	**2.14**	**314**	P	**Pn**	**23 40 46.7**	**-1.3**
VCHM				*eS*	**Sn**	**23 41 10.0**	**-3.4**
SMLT	**Sun Moon Lake**	**2.16**	**355**	P	**Pn**	**23 40 49.0**	**+0.6**
SMLT				S	**Sn**	**23 41 14.3**	**+0.2**
WNT	**Mingjian**	**2.18**	**350**	*eP*	**Pn**	**23 40 51.3**	**+2.8**
WNT				S	**Sn**	**23 41 14.1**	**-0.4**
TYC	**Yuchr**	**2.19**	**354**	P	**Pn**	**23 40 49.4**	**+0.8**
TYC				S	**Sn**	**23 41 15.3**	**+0.8**
OWD	**Renai**	**2.23**	**2**	P	**Pn**	**23 40 50.3**	**+1.0**
OWD				S	**Sn**	**23 41 15.6**	**-0.1**
WUSB	**Renai**	**2.26**	**0**	P	**Pn**	**23 40 50.6**	**+0.9**
WUSB				S	**Sn**	**23 41 15.9**	**-0.6**
ETM	**Tongmen**	**2.27**	**9**	*eP*	**Pn**	**23 40 50.0**	**+0.3**
ETM				*eS*	**Sn**	**23 41 14.3**	**-2.2**
PHUB	**P'eng-hu**	**2.28**	**322**	*eP*	**Pn**	**23 40 48.4**	**-1.5**
PHUB				*eS*	**Sn**	**23 41 13.5**	**-3.2**
LXIB	**Xiulin Townshi**	**2.31**	**7**	P	**Pn**	**23 40 50.1**	**-0.3**
LXIB				*eS*	**Sn**	**23 41 16.3**	**-1.5**
PNG	**Penghu**	**2.33**	**322**	*eP*	**Pn**	**23 40 49.2**	**-1.3**
PNG				*eS*	**Sn**	**23 41 15.2**	**-2.8**
WCS	**Beigang Elemen**	**2.33**	**356**	P	**Pn**	**23 40 51.0**	**+0.4**
WCS				S	**Sn**	**23 41 17.8**	**-0.3**
TWD	**Chiawan**	**2.39**	**11**	*eP*	**Pn**	**23 40 51.7**	**+0.3**
WCHH	**Zhanghua**	**2.40**	**348**	*eP*	**Pn**	**23 40 52.7**	**+1.2**
WCHH				*eS*	**Sn**	**23 41 19.5**	**-0.3**
WHF	**Hehuan Shan**	**2.42**	**4**	P	**Pn**	**23 40 53.3**	**+1.1**
WHF				S	**Sn**	**23 41 21.4**	**+0.6**
TCU	**Taichung**	**2.45**	**351**	*eP*	**Pn**	**23 40 53.2**	**+1.0**
TCU				*eS*	**Sn**	**23 41 19.8**	**-1.1**
NACB	**Ninganchiao**	**2.49**	**10**	P	**Pn**	**23 40 54.0**	**+1.3**
NACB	**Ninganchiao**	**2.49**	**10**	*eP*	**Pn**	**23 40 52.3**	**-0.4**
NACB				*eS*	**Sn**	**23 41 20.7**	**-1.1**
ETLH	**Xiulin Townshi**	**2.50**	**8**	*eP*	**Pn**	**23 40 52.7**	**-0.3**
ETLH				*eS*	**Sn**	**23 41 22.8**	**+0.4**
FUSS	**Fushou**	**2.52**	**3**	*eP*	**Pn**	**23 40 54.3**	**+0.9**
TDCB	**Techi**	**2.52**	**1**	*eP*	**Pn**	**23 40 53.9**	**+0.6**
TDCB				*eS*	**Sn**	**23 41 24.0**	**+1.0**
TWT	**Tachien**	**2.52**	**2**	*eP*	**Pn**	**23 40 54.6**	**+1.2**
TWT				*eS*	**Sn**	**23 41 22.2**	**-0.8**
WHP	**Taichung City**	**2.55**	**357**	P	**Pn**	**23 40 54.3**	**+0.6**
WHP				S	**Sn**	**23 41 24.9**	**+1.3**
TWQ1	**Liyutan**	**2.63**	**354**	*eP*	**Pn**	**23 40 57.0**	**+2.2**
TWQ1				*eS*	**Sn**	**23 41 27.0**	**+1.4**
NNSB	**Datong**	**2.71**	**5**	*eP*	**Pn**	**23 40 57.3**	**+1.4**
NNSB				*eS*	**Sn**	**23 41 27.0**	**-0.6**
NNS	**Nan Shan**	**2.72**	**5**	*eP*	**Pn**	**23 40 58.0**	**+1.9**
NNS				*eS*	**Sn**	**23 41 29.7**	**+1.9**
ENA	**Nanau**	**2.76**	**12**	*eP*	**Pn**	**23 40 58.0**	**+1.5**
ENA				*eS*	**Sn**	**23 41 29.4**	**+0.2**
LATG	**Datong**	**2.83**	**8**	*eP*	**Pn**	**23 40 58.0**	**+0.5**
NFF	**Wufeng Townshi**	**2.90**	**0**	*eP*	**Pn**	**23 41 01.3**	**+2.8**
NSTT	**Nanjuang**	**2.90**	**358**	*eP*	**Pn**	**23 40 58.6**	**+0.2**
LIOB	**Emei**	**2.91**	**359**	*eP*	**Pn**	**23 41 01.9**	**+3.4**
YHNB	**Yeheng**	**2.95**	**5**	P	**Pn**	**23 41 00.8**	**+1.7**
YHNB	**Yeheng**	**2.95**	**5**	*eP*	**Pn**	**23 41 00.8**	**+1.7**
NSK	**Sanguang**	**2.95**	**5**	*eP*	**Pn**	**23 41 01.1**	**+1.9**
NSK				*eS*	**Sn**	**23 41 34.3**	**+0.9**
TWC	**Suao**	**2.96**	**13**	*eP*	**Pn**	**23 41 00.6**	**+1.4**
TWC				*eS*	**Sn**	**23 41 35.2**	**+1.8**
FUSB	**Fushanzhiwuyua**	**3.06**	**8**	*eP*	**Pn**	**23 41 02.4**	**+1.7**
NWLT	**Wulai**	**3.07**	**7**	*eP*	**Pn**	**23 41 02.8**	**+2.1**
NWLT				*eS*	**Sn**	**23 41 36.1**	**-0.1**
ILA	**Ilan**	**3.09**	**11**	*eP*	**Pn**	**23 41 02.4**	**+1.4**
YOJ	**Yonaguni jima**	**3.25**	**32**	S	**Sn**	**23 41 40.9**	**+0.4**
TIPB	**Shuangxi**	**3.31**	**12**	*eP*	**Pn**	**23 41 06.3**	**+2.4**
SXI1	**Grass Mountain**	**3.44**	**12**	*eP*	**Pn**	**23 41 07.9**	**+2.1**
IRIF	**Iriomote-Funau**	**3.56**	**42**	P	**Pn**	**23 41 08.6**	**+1.2**
JKRS	**Kuro-shima**	**3.67**	**46**	P	**Pn**	**23 41 10.2**	**+1.3**
JKRS				*eS*	**Sn**	**23 41 50.8**	**-0.1**
KNMB	**Chin

ETLH	**Xiulin Townshi**	**0.74**	**207**	*i*	P	**Pn**	23 47 21.4	-0.2
ETLH					S	**Sn**	23 47 33.5	-0.8
PCYT	**Pengchaiyu**	**0.79**	**14**	*e*	P	**Pn**	23 47 22.4	+0.3
LIOB	**Emei**	**0.79**	**254**	*i*	P	**Pn**	23 47 22.4	+0.2
LIOB					S	**Sn**	23 47 34.7	-0.5
SBCB	**Hsinchu**	**0.79**	**265**		P	**Pn**	23 47 22.2	+0.2
SBCB					S	**Sn**	23 47 35.0	-0.1
HSN	**Hsinchu**	**0.81**	**266**		P	**Pn**	23 47 22.1	-0.1
HSN					S	**Sn**	23 47 34.7	-0.7
NSTT	**Nanjuang**	**0.81**	**253**		P	**Pn**	23 47 22.4	+0.1
NSTT					S	**Sn**	23 47 34.7	-0.7
TWD	**Chiawan**	**0.81**	**197**	*e*	P	**Pn**	23 47 21.8	-0.6
TWD				*e*	S	**Sn**	23 47 34.8	-0.8
FUSS	**Fushou**	**0.83**	**222**	*i*	P	**Pn**	23 47 23.3	+0.6
FUSS					S	**Sn**	23 47 36.5	+0.2
TWT	**Tachien**	**0.87**	**226**	*i*	P	**Pn**	23 47 23.9	+0.8
TWT				*i*	S	**Sn**	23 47 36.9	+0.1
TDCB	**Techi**	**0.88**	**226**	*i*	P	**Pn**	23 47 23.8	+0.6
TDCB				*i*	S	**Sn**	23 47 36.8	-0.2
WHF	**Hehuan Shan**	**0.89**	**217**		P	**Pn**	23 47 23.9	+0.3
WHF					S	**Sn**	23 47 37.6	-0.2
HWA	**Hwalien**	**0.91**	**194**	*e*	P	**Pn**	23 47 23.4	0.0
LXIB	**Xiulin Townshi**	**0.93**	**206**		P	**Pn**	23 47 23.0	-0.8
LXIB					S	**Sn**	23 47 37.1	-0.9
ETM	**Tongmen**	**0.95**	**200**		P	**Pn**	23 47 22.7	-1.2
WHP	**Taichung City**	**1.01**	**235**		P	**Pn**	23 47 25.2	+0.6
WHP				*i*	S	**Sn**	23 47 39.5	-0.1
NMLH	**Miaoli**	**1.02**	**252**	*e*	P	**Pn**	23 47 25.1	+0.5
NMLH					S	**Sn**	23 47 38.5	-1.0
TEYL	**Yanliau Villag**	**1.02**	**193**	*e*	P	**Pn**	23 47 25.6	+1.0
NSY	**Sanyi**	**1.09**	**246**		P	**Pn**	23 47 25.9	+0.5
NSY					S	**Sn**	23 47 41.0	-0.1
OWD	**Renai**	**1.10**	**214**		P	**Pn**	23 47 26.1	+0.5
OWD					S	**Sn**	23 47 41.2	-0.1
WUSB	**Renai**	**1.10**	**218**	*i*	P	**Pn**	23 47 26.3	+0.6
WUSB				*i*	S	**Sn**	23 47 41.4	0.0
SHUL	**Shoufeng**	**1.10**	**194**	*e*	P	**Pn**	23 47 25.7	+0.1
SHUL				*e*	S	**Sn**	23 47 41.6	+0.3
TWQ1	**Liyutan**	**1.11**	**243**	*e*	P	**Pn**	23 47 26.0	+0.3
TWQ1					S	**Sn**	23 47 41.0	-0.4
ESL	**Shilin**	**1.11**	**200**	*e*	P	**Pn**	23 47 24.6	-1.1
YOJ	**Yonaguni jima**	**1.13**	**111**		P	**Pn**	23 47 26.0	+0.2
YOJ	**Yonaguni jima**	**1.13**	**111**		P	**Pn**	23 47 24.4	-1.4
WCS	**Beigang Elemen**	**1.18**	**227**	*i*	P	**Pn**	23 47 27.1	+0.7
WCS					S	**Sn**	23 47 42.4	-0.4
WARBT	**Fenglin Townsh**	**1.22**	**201**		P	**Pn**	23 47 25.6	-1.4
WARBT					S	**Sn**	23 47 41.4	-2.4
WDJ	**Dajia District**	**1.22**	**245**		P	**Pn**	23 47 27.5	+0.6
WDJ					S	**Sn**	23 47 43.7	+0.1
EGFH	**Guangfu**	**1.25**	**198**	*e*	P	**Pn**	23 47 27.4	+0.1
EGFH				*e*	S	**Sn**	23 47 42.8	-1.6
VWDT	**VWDT**	**1.28**	**211**		P	**Pn**	23 47 28.1	+0.4
VWDT				*e*	S	**Sn**	23 47 46.5	+1.4
TCU	**Taichung**	**1.29**	**237**	*e*	P	**Pn**	23 47 28.2	+0.5
TCU				*e*	S	**Sn**	23 47 45.0	-0.2
SMLT	**Sun Moon Lake**	**1.31**	**222**	*e*	P	**Pn**	23 47 28.9	+0.7
SMLT					S	**Sn**	23 47 46.4	+0.6
TYC	**Yuchr**	**1.32**	**224**		P	**Pn**	23 47 28.9	+0.7
TYC					S	**Sn**	23 47 46.1	+0.2
SSLB	**Suanglung**	**1.35**	**218**		P	**Pn**	23 47 29.2	+0.6
SSLB				*i*	S	**Sn**	23 47 46.6	0.0
WCHH	**Zhanghua**	**1.42**	**237**		P	**Pn**	23 47 29.6	+0.3
WCHH				*e*	S	**Sn**	23 47 48.1	+0.1
HGSD	**Ruisui**	**1.42**	**196**		P	**Pn**	23 47 29.8	+0.3
HGSD				*e*	S	**Sn**	23 47 48.6	+0.4
WCH1	**Changhua City**	**1.43**	**237**	*e*	P	**Pn**	23 47 29.8	+0.3
WCH1				*e*	S	**Sn**	23 47 48.3	0.0
EHY	**Hungye**	**1.44**	**200**	*e*	P	**Pn**	23 47 29.1	-0.6
EHY					S	**Sn**	23 47 47.4	-1.2
EHYH	**Wanrong**	**1.44**	**199**	*e*	P	**Pn**	23 47 28.8	-0.9
WNT	**Mingjian**	**1.45**	**228**	*e*	P	**Pn**	23 47 30.4	+0.7
WNT				*i*	S	**Sn**	23 47 49.2	+0.4
WJS	**Zhushan**	**1.46**	**225**	*e*	P	**Pn**	23 47 30.5	+0.6
WJS				*e*	S	**Sn**	23 47 49.4	+0.4
WHYT	**Xinyi Township**	**1.48**	**218**		P	**Pn**	23 47 31.2	+1.0
WHYT					S	**Sn**	23 47 50.1	+0.6
YULB	**Yu-li**	**1.55**	**199**		P	**Pn**	23 47 30.2	-0.9
ECBN	**Changbin**	**1.58**	**193**	*e*	P	**Pn**	23 47 30.9	-0.6
TWF1	**Yuli**	**1.59**	**199**	*e*	P	**Pn**	23 47 31.2	-0.3
YUS	**Yu-Shan**	**1.60**	**211**	*e*	P	**Pn**	23 47 33.6	+1.4
YUS				*e*	S	**Sn**	23 47 54.4	+1.5
ALS	**Alishan**	**1.65**	**216**		P	**Pn**	23 47 33.6	+0.9
ALS				*i*	S	**Sn**	23 47 55.1	+1.3
CHN5	**Tsauling**	**1.66**	**221**	*e*	P	**Pn**	23 47 33.1	+0.6
WGK	**Gukeng**	**1.66**	**225**	*e*	P	**Pn**	23 47 33.2	+0.7
WGK				*e*	S	**Sn**	23 47 54.1	+0.5
WDLH	**Douliu**	**1.68**	**226**		P	**Pn**	23 47 33.6	+0.9
WDLH					S	**Sn**	23 47 53.8	-0.2
CHKH	**Chenggong**	**1.72**	**194**	*e*	P	**Pn**	23 47 34.0	+0.8
CHKH				*e*	S	**Sn**	23 47 54.6	-0.2
FULB	**Fuli**	**1.73**	**197**	*e*	P	**Pn**	23 47 33.7	+0.3
FULB				*e*	S	**Sn**	23 47 56.3	+0.9
WTCT	**Ta-ch'eng**	**1.75**	**236**	*e*	P	**Pn**	23 47 34.2	+0.7
WTCT				*e*	S	**Sn**	23 47 55.3	-0.2
WTK	**Tuku**	**1.78**	**229**	*e*	P	**Pn**	23 47 34.4	+0.4
WTK				*i*	S	**Sn**	23 47 56.0	-0.2
IRIF	**Iriomote-Funau**	**1.79**	**107**		P	**Pn**	23 47 34.2	+0.2
IRIF				*e*	S	**Sn**	23 47 56.2	-0.2
EHD	**Haiduan**	**1.81**	**199**	*e*	P	**Pn**	23 47 34.3	-0.1
EHD				*e*	S	**Sn**	23 47 55.6	-1.4
CHKT	**Chengkung**	**1.81**	**194**	*e*	P	**Pn**	23 47 35.0	+0.6
CHKT				*e*	S	**Sn**	23 47 56.5	-0.6
CHN2	**Minshiung**	**1.83**	**224**	*e*	P	**Pn**	23 47 35.0	+0.4
CHN2				*e*	S	**Sn**	23 47 58.5	+1.1
ELDTW	**Lidau**	**1.83**	**205**	*e*	P	**Pn**	23 47 35.5	+0.7
ELDTW				*i*	S	**Sn**	23 47 57.7	-0.1
CHY	**Chiayi**	**1.89**	**224**	*e*	P	**Pn**	23 47 35.8	+0.4
CHY				*i*	S	**Sn**	23 47 58.7	0.0
TPUB	**Ta-pu**	**1.92**	**216**	*e*	P	**Pn**	23 47 36.3	+0.5
TPUB					S	**Sn**	23 48 01.2	+1.7
WSF	**Szhu**	**1.93**	**231**	*e*	P	**Pn**	23 47 37.1	+1.2
WSF				*e*	S	**Sn**	23 47 59.5	-0.1
EDH	**Donghe**	**1.95**	**195**	*e*	P	**Pn**	23 47 36.3	+0.1
EDH				*e*	S	**Sn**	23 47 60.0	-0.3
STYH	**Taoyuan**	**1.95**	**211**	*e*	P	**Pn**	23 47 37.7	+1.4
STYH				*i*	S	**Sn**	23 48 02.2	+1.8
WTP	**Ta-pu**	**1.97**	**215**	*e*	P	**Pn**	23 47 37.5	+1.0
WSL	**Shuilin Townsh**	**2.00**	**228**	*e*	P	**Pn**	23 47 37.6	+0.8
WSL				*e*	S	**Sn**	23 48 00.4	-0.9
TWK	**Hsinying**	**2.02**	**218**	*e*	P	**Pn**	23 47 37.3	0.0
TWK				*e*	S	**Sn**	23 48 01.9	0.1
LONT	**Longtian**	**2.06**	**199**	*e*	P	**Pn**	23 47 37.0	-0.7
JKRS	**Kuro-shima**	**2.06**	**107**		P	**Pn**	23 47 38.4	+0.8
CHN1	**Nanshi**	**2.06**	**216**	*e*	P	**Pn**	23 47 38.2	+0.4
CHN1				*e*	S	**Sn**	23 48 03.5	+0.5
JJ	**Ishigaki jima**	**2.14**	**103**		P	**Pn**	23 47 39.0	+0.3
JJ					S	**Sn**	23 48 04.7	-0.1
MATB	**Ma-tsu**	**2.15**	**307**	*e*	P	**Pn**	23 47 39.0	+0.2
TWG	**Pinlang**	**2.16**	**200**	*e*	P	**Pn**	23 47 38.9	-0.1
TWGBT	**Beinan**	**2.16**	**199**	*e*	P	**Pn**	23 47 38.9	-0.1
LDUT	**Ludao**	**2.21**	**189**	*e*	P	**Pn**	23 47 40.2	+0.5
LDUT				*e*	S	**Sn**	23 48 04.2	-2.2
JISG	**Ishigakijimahi**	**2.25**	**97**		P	**Pn**	23 47 41.2	+1.0
SCLT	**Jiali**	**2.27**	**222**	*e*	S	**Sn**	23 48 09.2	+1.5
SSD	**Sandimen**	**2.39**	**208**	*e*	P	**Pn**	23 47 43.6	+1.6
ECL	**Taimali**	**2.40**	**200**	*e*	P	**Pn**	23 47 43.1	+0.9
ECL				*e*	S	**Sn**	23 48 10.2	-0.7
PNG	**Penghu**	**2.46**	**239**	*e*	P	**Pn**	23 47 42.8	-0.2
PNG				*e*	S	**Sn**	23 48 11.6	-0.8
PHUB	**P'eng-hu**	**2.48**	**238**		P	**Pn**	23 47 42.6	-0.6
PHUB					S	**Sn**	23 48 10.3	-2.4
PTMZ	**Houxiangcun**	**2.49**	**275**	*e*	P	**Pn**	23 47 43.0	-0.2
PTMZ				*e*	S	**Sn**	23 48 12.8	-0.1
MASBT	**Mashibuluo**	**2.50**	**207**	*e*	P	**Pn**	23 47 45.2	+1.6
MASBT				*i*	S	**Sn**	23 48 14.8	+1.4
XPSS	**Dashiqiu**	**2.54**	**324**	*e*	P	**Pn**	23 47 44.6	+0.5
EAST	**Anshuo**	**2.64**	**201**	*e*	P	**Pn**	23 47 46.3	+0.9
SCZT	**Fangliau**	**2.73**	**205**	*e*	P	**Pn**	23 47 45.4	-1.2
VCHM	**Qimei**	**2.76**	**234**	*e*	P	**Pn**	23 47 47.0	0.0
VCHM				*e*	S	**Sn**	23 48 18.1	-1.4
MHZQ	**Yeshan**	**2.83**	**296**	*e*	P	**Pn**	23 47 48.1	+0.2
LYUB	**Lan-yu**	**2.86**	**185**	*e*	P	**Pn**	23 47 48.0	-0.3
KNMB	**Chin-men Tao**	**3.18**	**264**	*e*	P	**Pn**	23 47 52.1	-0.5
AXDP	**Jialang**	**3.53**	**271**	*e*	P	**Pn**	23 47 56.3	-0.9
DSXP	**Dongshan**	**4.20**	**255**	*e*	P	**Pn**	23 48 06.4	0.0

NEIC ***08*** *23:54:12.6±0.6, 19°.20N±0°.02×155°.49W±0°.03, h37km±1km, Error ellipse: s-maj=4.1km s-min=2.5km az=124.0*

HVO 08 23:54:13.6±0.9, 19°.17N±0°.06×155°.47W±0°.07, h35km±7km, ML2.5/27, ML2.5/42(NEIC), Error ellipse: s-maj=10.7km s-min=7.2km az=118.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.09**	**46**		Pn	23 54 19.2	-0.5
HPO	**Honuapo**	**0.12**	**224**		Pn	23 54 19.3	+0.2
HPO					Sn	23 54 23.1	+0.8
KHU	**Kahuku**	**0.16**	**298**		Pn	23 54 19.4	-0.4
KHU					Sn	23 54 23.7	0.0
HLP	**Hilina Pali**	**0.20**	**51**		Pn	23 54 19.9	-0.3
HLP					Sn	23 54 24.8	+0.4
HLP				IAML		23 54 32.3	
	comp=N,506nm,0.4s						
HLP				IAML		23 54 33.0	
	comp=E,648nm,1.0s						
AIN	**Ainahou**	**0.20**	**3**		Pn	23 54 20.0	-0.4
AIN					Sn	23 54 24.8	+0.1
AIN	**Ainahou**	**0.20**	**3**	IAML		23 54 25.2	
	comp=E,688nm,0.4s						
AIN				IAML		23 54 25.6	
	comp=N,1μm,0.4s						
SDHHI	**Sand Hill**	**0.27**	**37**		Pn	23 54 20.4	-1.0
SDHHI					Sn	23 54 25.3	-1.1
WRMHI	**West Rim**	**0.28**	**34**		Pn	23 54 20.4	-1.1
WRMHI					Sn	23 54 25.6	-1.0
RIM	**Rim**	**0.29**	**40**		Pn	23 54 20.5	-1.1
RIM					Sn	23 54 25.7	-1.1
KKO	**Keanakako'i**	**0.30**	**41**		Pn	23 54 20.6	-1.1
KKO					Sn	23 54 25.7	-1.2
UWE	**Uwekahuna**	**0.30**	**34**		Pn	23 54 20.6	-1.1
UWE					Sn	23 54 26.0	-1.0
UWE	**Uwekahuna**	**0.30**	**34**	IAML		23 54 30.2	
	comp=N,566nm,1.6s						
UWE				IAML		23 54 33.5	
	comp=E,508nm,0.6s						
OBL	**Observatory Le**	**0.30**	**36**		Pn	23 54 20.5	-1.1
OBL					Sn	23 54 25.8	-1.2
BYL	**Byron's Ledge**	**0.31**	**40**		Pn	23 54 20.6	-1.2
BYL	**Byron's Ledge**	**0.31**	**40**	IAML		23 54 24.3	
	comp=E,299nm,4.1s						
BYL				IAML		23 54 34.5	
	comp=N,244nm,3.6s						
UWB	**Uwekahuna Bluf**	**0.31**	**36**		Pn	23 54 20.5	-1.3
UWB					Sn	23 54 25.8	-1.4
PUH	**Pauahi**	**0.31**	**50**		Pn	23 54 20.6	-1.2
PUH					Sn	23 54 25.8	-1.4
PUH	**Pauahi**	**0.31**	**50**	IAML		23 54 26.2	
	comp=E,258nm,0.3s						
PUH				IAML		23 54 29.4	
	comp=N,313nm,0.4s						
SBLHI	**Steaming Bluff**	**0.32**	**37**		Pn	23 54 20.6	-1.3
SBLHI					Sn	23 54 26.0	-1.4
HATHI	**Halema'uma'u T**	**0.32**	**38**		Pn	23 54 20.6	-1.3
HATHI					Sn	23 54 26.1	-1.4
HATHI	**Halema'uma'u T**	**0.32**	**38**	IAML		23 54 26.7	
	comp=E,252nm,0.6s						
HATHI				IAML		23 54 33.8	
	comp=N,247nm,0.4s						
MLH	**Mauna Loa**	**0.33**	**14**		Pn	23 54 21.1	-1.1
MLH					Sn	23 54 26.7	-1.2
MLH	**Mauna Loa**	**0.33**	**14**	IAML		23 54 27.0	
	comp=E,350nm,1.4s						
MLH				IAML		23 54 27.1	
	comp=N,343nm,0.2s						
MWH	**Mokuaweoweo**	**0.33**	**339**		Pn	23 54 21.0	-1.5
MWH					Sn	23 54 27.0	-1.4
MWH	**Mokuaweoweo**	**0.33**	**339**	IAML		23 54 27.2	
	comp=E,475nm,0.3s						
MWH				IAML		23 54 31.7	
	comp=N,390nm,1.4s						
RSD	**Rainshed**	**0.34**	**32**		Pn	23 54 20.9	-1.4
RSD	**Rainshed**	**0.34**	**32**		Sn	23 54 26.8	-1.2
RSD	**Rainshed**	**0.34**	**32**	IAML		23 54 24.4	
	comp=N,139nm,3.0s						
KNHH	**Kane Nui o Ham**	**0.35**	**54**		Pn	23 54 21.1	-1.2
STCH	**Steam Cracks**	**0.39**	**57**		Pn	23 54 21.5	-1.4
STCH					Sn	23 54 27.7	-1.4
STCH	**Steam Cracks**	**0.39**	**57**	IAML		23 54 28.1	
	comp=N,229nm,0.4s						
STCH				IAML		23 54 31.7	
	comp=E,3.4nm,0.3s						
ALEP	**Alea Permanent**	**0.40**	**336**		Pn	23 54 21.6	-1.7
ALEP					Sn	23 54 27.4	-2.4
NPOC	**North of Pu'u**	**0.41**	**57**		Pn	23 54 21.7	-1.4
NPOC					Sn	23 54 27.7	-1.8
JCUZ	**Jacuzzi**	**0.41**	**59**		Pn	23 54 21.7	-1.4
JCUZ					Sn	23 54 27.8	-1.7
HMH	**Humu'ula Sheep**	**0.43**	**358**		Pn	23 54 22.4	-1.2
HMH					Sn	23 54 28.8	-1.6
HMH	**Humu'ula Sheep**	**0.43**	**358**	IAML		23 54 29.3	
	comp=N,520nm,0.4s						
HMH				IAML		23 54 29.4	
	comp=E,446nm,0.2s						
JOKA	**Jonika Flow**	**0.51**	**59**		Pn	23 54 22.9	-1.6
JOKA					Sn	23 54 29.8	-2.3
JOKA	**Jonika Flow**	**0.51**	**59**	IAML		23 54 30.3	
	comp=E,285nm,0.4s						
JOKA				IAML		23 54 31.8	
	comp=N,395nm,0.4s						
POHA	**Pohakuloa**	**0.59**	**354**		Sn	23 54 31.3	-2.9
POHA	**Pohakuloa**	**0.59**	**354**	Pn	Pn	23 54 24.1	-1.6
POHA				IAML		23 54 31.9	
	comp=N,172nm,2.3s						
POHA				IAML		23 54 47.4	
	comp=N,249nm,3.3s						
HUH	**Hualalai**	**0.62**	**326**		Pn	23 54 25.1	-1.1
HUH	**Hualalai**	**0.62**	**326**		Sn	23 54 32.7	-2.3
KKH	**Kailua Kona**	**0.71**	**313**		Pn	23 54 26.3	-0.9
KKH	**Kailua Kona**	**0.71**	**313**		Pn	23 54 25.2	-1.9
KKH	**Kailua Kona**	**0.71**	**313**		Sn	23 54 33.8	-3.0
MHA	**Mahukona**	**1.09**	**338**	Pn	Pn	23 54 30.3	-2.1

IDC ***09*** *00:06:29.7±2.9, 20°.91S×70°.69W, h0km, mb3.7/1, mbtmp3.6/3, ML3.3/2, Error ellipse: s-maj=88.9km s-min=44.6km az=120.0*

GUC ***09*** *00:06:34.3±0.9, 20°.14S×70°.94W, h18km±5km, ML3.8*

ISC 09 00:06:31.3±1.9, 20°.18S±0°.03×70°.89W±0°.08, h6km±11km, n22, σ0°.71/30, 6C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.72**	**97**	*e*P	**Pn**	**00 06 47.5**	**-0.4**
TA02				IAML		00 06 59.9	
	comp=E,7μm,0.2s						
TA01	**Diego Aracena**	**0.77**	**120**	⇓*i*P	**Pn**	**00 06 48.5**	**-0.1**
TA01				*i* S	**Sn**	**00 06 59.4**	**-1.1**
PB11	**IPOC Station P**	**1.23**	**70**	⇓*i*P	**Pb**	**00 06 55.5**	**+0.3**
PB11				*i* S	**Sn**	**00 07 12.5**	**+0.1**
PB11				IAML		00 07 14.1	
	comp=N,2μm,0.6s						
PB02	**IPOC Station P**	**1.46**	**141**	⇑*i*P	**Pg**	**00 06 59.5**	**+0.1**
PB02				*i* S	**Sg**	**00 07 18.3**	**0.0**
PB02				IAML		00 07 24.8	
	comp=E,2μm,0.4s						
PB01	**IPOC Station P**	**1.57**	**123**	⇑*i*P	**Pg**	**00 07 01.2**	**-0.1**
PB01				*i* S	**Sg**	**00 07 21.1**	**-0.6**
PB08	**IPOC Station P**	**1.63**	**89**	⇑*i*P	**Pb**	**00 07 02.1**	**+0.1**
PB08				*i* S	**Sg**	**00 07 24.2**	**+0.4**
PB12	**IPOC Station P**	**1.65**	**19**	⇑*i*P	**Pn**	**00 07 00.9**	**0.0**
PB12				*i* S	**Sn**	**00 07 21.3**	**-1.2**
GO01	**Chusmiza**	**1.68**	**72**	*e*P	**Pn**	**00 07 02.6**	**+1.0**
GO01				*e*S	**Sg**	**00 07 24.8**	**-0.4**
GO01				IAML		00 07 27.4	
	comp=N,3μm,0.3s						
AP01	**Chacalluta**	**1.88**	**16**	*e*P	**Pn**	**00 07 04.5**	**+0.6**
AP01				*e*S	**Sn**	**00 07 28.0**	**+0.1**
AP01				IAML		00 07 39.9	
	comp=E,1μm,0.4s						
PB03	**IPOC Station P**	**2.14**	**150**	⇑*i*P	**Pn**	**00 07 08.7**	**+1.1**
PB03				*e*S	**Sb**	**00 07 36.6**	**-0.8**
PB09	**IPOC Station P**	**2.22**	**136**	⇑*i*P	**Pb**	**00 07 11.3**	**-0.7**
PB09				*e*S	**Sb**	**00 07 40.4**	**+0.5**
PB09				IAML		00 07 53.0	
	comp=E,743nm,0.5s						
PB16	**IPOC Station P**	**2.26**	**36**	*e*P	**Pn**	**00 07 10.6**	**+0.9**
PB16				*e*S	**Sb**	**00 07 40.9**	**-0.3**
PB16				IAML		00 07 46.9	
	comp=E,1μm,1.0s						
PB05	**IPOC Station P**	**2.73**	**167**	*e*P	**Pn**	**00 07 16.1**	**+0.3**
PB06	**IPOC Station P**	**2.79**	**154**	*e*P	**Pn**	**00 07 17.4**	**+0.7**
PB18	**Visviri**	**2.91**	**28**	*e*P	**Pb**	**00 07 22.8**	**-1.1**
LPAZ	**La Paz**	**4.68**	**35**	Pn	Pn	00 07 49.2	+6.2
	comp=E,0.3nm,0.3s,baz=157,slow=4.4,SNR=5.9						
LPAZ					Sn	**Sb**	**00 08 51.1**	**+0.1**
	baz=330,slow=16 comp=E,1.4nm,0.5s						
SIV	**San Ignacio**	**10.22**	**68**	Pn	**Pn**	**00 09 00.2**	**+1.5**
	comp=E,0.1nm,0.3s,baz=264,slow=9.6,SNR=17 comp=E,2.3nm,0.5s						
H03N1	**Juan Fernandez**	**15.01**	**207**	T	T	00 25 41.3	
	baz=33,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**15.02**	**207**	T	T	00 25 40.0	
	baz=33,slow=72,SNR=13						
H03N3	**Juan Fernandez**	**15.03**	**207**	T	T	00 25 33.6	
	baz=33,slow=72,SNR=12						
TORD	**Torodi Ar. Bea**	**78.68**	**71**	P	**P**	**00 18 34.3**	**-0.6**
	comp=E,0.5nm,0.7s,baz=262,slow=3.7,SNR=3.8 comp=E,0.5nm,0.7s						
MKAR	**Makanchi Array**	**145.61**	**33**	PKPbc	**PKPdf**	**00 26 11.3**	**+0.6**
	comp=E,0.5nm,0.8s,baz=321,slow=1.8,SNR=4.0						

DJA ***09*** *00:07:16.9±1.3, 8°.N±8°×12°.5E±1°.5, h82km±11km, M5.1/5, mB5.4/2, mb5.4/2, MLv5.0/5, Mw(mB)4.8/2*

IDC ***09*** *00:07:26.9±1.1, 6°.65N×125°.07E, h0km, mb3.4/5, mbtmp3.4/5, MS2.9/3, Error ellipse: s-maj=24.2km s-min=10.0km az=137.0*

ISC 09 00:07:28.6±1.1, 6°.7N±0°.1×125°.2E±0°.2, h10km, n10, σ1s10/7, mb3.4/5, MS2.6/3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.50**	**49**	Pg	**Pg**	**00 07 38.5**	**+0.1**
	214nm,0.3s,baz=20,slow=3.6,SNR=22						
DAV				Lg	Lg	00 07 49.4	
	767nm,0.3s,baz=73,slow=19,SNR=16						
SGSI	**Sangihe**	**3.05**	**174**	P	**Pn**	**00 08 17.6**	**+0.6**
GUMO	**Guam**	**20.51**	**69**	LR	LR	00 18 29.1	
	comp=Z,30nm,21.9s,baz=138,slow=32						
PSI	**Prapat**	**26.47**	**263**	LR	LR	00 25 13.1	
	comp=Z,19nm,19.5s,baz=132,slow=40						
WRA	**Warramunga Arr**	**28.00**	**161**	P	**P**	**00 13 20.0**	**0.0**
	0.2nm,0.3s,baz=331,slow=10,SNR=2.3 0.2nm,0.3s						
ASAR	**Alice Springs**	**31.40**	**165**	P	**P**	**00 13 49.1**	**-0.9**
	0.3nm,0.6s,baz=341,slow=8.9,SNR=8.7 0.3nm,0.6s						
MJAR	**Matsushiro Arr**	**31.96**	**20**	LR	LR	00 26 16.8	
	comp=Z,30nm,19.6s,baz=44,slow=35						
MKAR	**Makanchi Array**	**54.23**	**325**	P	**P**	**00 16 53.6**	**-1.1**
	0.3nm,0.7s,baz=130,slow=7.9,SNR=3.6 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**58.40**	**327**	P	**P**	**00 17 25.9**	**+1.5**
	0.3nm,0.7s,baz=123,slow=6.8,SNR=4.8 0.3nm,0.7s						
ILAR	**Eielson Array**	**83.06**	**26**	P	**P**	**00 19 54.0**	**-0.2**
	0.2nm,0.5s,baz=262,slow=5.3,SNR=2.0 0.2nm,0.5s						

IDC ***09*** *00:12:59.9±1.0, 9°.51N×126°.14E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=70.6km s-min=21.1km az=69.0*

ISC 09 00:13:08.6±1.0, 9°.4N±0°.2×126°.0E±0°.4, h67km, n13, σ0s33/7, mb3.9/7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.30**	**164**	P	**P**	**00 19 14.2**	**+0.5**
	0.2nm,0.4s,baz=341,slow=8.3,SNR=1.6 0.2nm,0.4s						
ASAR	**Alice Springs**	**33.77**	**167**	P	**P**	**00 19 43.8**	**-0.5**
	0.2nm,0.3s,baz=350,slow=6.6,SNR=6.6 0.2nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**40.38**	**73**	T	T	01 03 39.3	
	baz=262,slow=75						
H11S1	**WAKE ISLAND Hy**	**40.40**	**73**	T	T	01 03 37.2	
	baz=262,slow=75						
H11S2	**WAKE ISLAND Hy**	**40.40**	**73**	T	T	01 03 45.9	

KUA	**Kurravaara**	**0.11**	**13**	P	Pg	00 19 37.3	+0.3
	baz=234						
KUA				S	Sg	00 19 39.0	+0.5
RATU	**Laukkuluspa**	**0.26**	**265**	P	Pg	00 19 40.0	+0.2
RATU				S	Sg	00 19 44.0	+0.8
KOVU	**Salmi**	**0.38**	**354**	P	Pg	00 19 42.3	+0.1
NIKU	**Nikkaluokta**	**0.47**	**273**	P	Pg	00 19 44.0	+0.1
NIKU				S	Sg	00 19 50.3	+0.4
DUNU	**Dundret**	**0.74**	**171**	P	Pg	00 19 48.8	-0.1
SALU	**Saltoluokta**	**0.82**	**236**	P	Pg	00 19 50.1	-0.5

*BJI **09** 00:27:54.8,27.°15S×66.°59E,h11km,mB5.4/15,mb5.1/56, Ms5.0/18,Ms7 4.7/20*
*IDC **09** 00:27:55.2±0.4,27.°15S×66.°67E,h0km,mb4.8/27, mbtmp4.8/28,ML3.7/1,MS4.2/55,Error ellipse: s-maj=14.9km s-min=12.3km az=80.0*
*MOS **09** 00:27:55.1±0.8,27.°19S×66.°76E,h10km,mb5.2/80, MS4.4/4,Error ellipse: s-maj=9.6km s-min=4.9km az=99.1*
*NEIC **09** 00:27:57.3,27.°30S×66.°73E,h18km*
*NEIC **09** 00:27:57.3,27.°30S×66.°73E,h18km,Moment Tensor Solution. Duration: 1ᵗ9 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.45; $M_{\theta\theta}$5.98; $M_{\phi\phi}$0.47; $M_{r\theta}$0.06; $M_{\theta\phi}$1.37; $M_{\phi r}$-5.02; Fault plane solution: $M_0$8.12000×10^{16} NP1: ϕ_s278.71000°,δ44.89000°,λ-49.83000°. NP2:ϕ_s48.72000°, δ57.37000°,λ-122.72000°. Principal axes: T 6.4309, Plg7.0000°, Azm161.0000°; N 2.6897, Plg27.0000°, Azm68.0000°; P -9.1206, Plg62.0000°, Azm264.0000°;*
*NEIC **09** 00:27:57.4±2.3,27.°31S±0.°09×66.°75E±0.°10,h10km±1km, mb5.2/171,Mww5.2/20 Error ellipse: s-maj=15.0km s-min=13.7km az=225.0*
*GCMT **09** 00:27:59.3±0.1,27.°32S±0.°01×66.°61E±0.°01,h12km, MW5.1/130,Moment Tensor Solution. s85,c111; s130,c225; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.04±.10; $M_{\theta\theta}$6.05±.08; $M_{\phi\phi}$0.00±.10; $M_{r\theta}$0.10±.25; $M_{\theta\phi}$1.45±.08; $M_{\phi r}$-0.10±.31; Best double couple: $M_0$6.21100×10^{16} NP1:ϕ_s76.00000°,δ45.00000°, λ-92.00000°. NP2:ϕ_s258.00000°,δ45.00000°, λ-88.00000°. Principal axes: T 6.3800, Plg0.0000°, Azm347.0000°; N -0.3350, Plg1.0000°, Azm77.0000°; P -6.0430, Plg89.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 00:27:56.7±0.5,**27.°29S**±0.°04×**66.°72E**±0.°05,**h12**km±2km, **h12**km:**pP-P, n670,**σ1ˢ**11**/668,**mb5.1**/208,**MS4.3**/67, **32C-43D,Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**13.90**	**142**	Pn	**Pn**	**00 31 09.6**	**-3.9**
FOMA	**Nahampoana Res**	**17.88**	**273**		**P**	**00 32 07.0**	**+1.1**
VOI	**Vohitsoka**	**18.89**	**282**	P	**Pn**	**00 32 18.6**	**+0.7**
VOI	**Vohitsoka**	**18.89**	**282**	P	**Pn**	**00 32 19.7**	**+1.8**
ABPO	**Ambohimpanom**	**19.71**	**291**		**Pn**	**00 32 27.2**	**-0.5**
ABPO	**Ambohimpanom**	**19.71**	**291**	P	**Pn**	**00 32 27.2**	**-0.5**
ABPO				pmax	pmax		
	comp=Z,63nm,1.3s						
OPO	**Ambohidratompo**	**19.95**	**292**	P	**P**	**00 32 28.6**	**-0.4**
	baz=112,slow=14,SNR=15						
OPO				S	S	00 36 01.7	-12
	comp=Z,3.0nm,0.9s,baz=115,slow=19,SNR=1.9						
	comp=Z,3.4nm,0.8s						
H08S1	**Diego Carcia H**	**20.28**	**17**	T	T	00 53 42.6	
	baz=195,slow=76						
H08S2	**Diego Garcia H**	**20.29**	**17**	T	T	00 53 25.3	
	baz=195,slow=76						
H08S3	**Diego Garcia H**	**20.30**	**17**	T	T	00 53 26.4	
	baz=195,slow=76						
SBV	**Sambava**	**20.88**	**308**	P	Pn	00 32 43.4	+2.1
PAF	**Port-aux-Franc**	**22.20**	**174**	P	**P**	**00 32 49.3**	**-3.4**
PAF	**Port-aux-Franc**	**22.20**	**174**	P	**P**	**00 32 49.3**	**-3.4**
PAF				pmax	pmax		
	comp=Z,779nm,1.5s						
H04N2	**CROZET ISLANDS**	**22.25**	**208**	T	T	00 55 53.5	
	baz=36,slow=74						
H04N1	**CROZET ISLANDS**	**22.25**	**208**	T	T	00 55 53.3	
	baz=36,slow=74						
H04N3	**CROZET ISLANDS**	**22.27**	**208**	T	T	00 55 52.2	
	baz=36,slow=74						
CRZF	**Crozet Islands**	**22.43**	**208**	P	**P**	**00 32 54.4**	**-1.0**
CRZF				IAmb	IAmb	00 33 12.6	
	comp=Z,96nm,0.8s						
MSEY	**Mahe Island**	**24.91**	**333**	P	**P**	**00 33 20.1**	**+0.2**
MSEY	**Mahe Island**	**24.91**	**333**	P	**P**	**00 33 20.1**	**+0.2**
MSEY				pmax	pmax		
	comp=Z,30nm,1.2s						
HMDM	**Hanimaadhoo**	**34.43**	**11**	P	**P**	**00 34 45.9**	**+1.6**
MREMI	**Moremi**	**35.82**	**269**	P	**P**	**00 34 55.7**	**-0.7**
BROLN	**Tlhalogang**	**36.34**	**271**	*i* P	**P**	**00 35 01.0**	**+0.1**
BOSA	**Boshof**	**36.52**	**258**		**P**	**00 35 01.4**	**-1.0**
BOSA	**Boshof**	**36.52**	**258**	P	**P**	**00 35 01.9**	**-0.4**
	comp=Z,14nm,0.9s,baz=116,slow=9.3,SNR=12						
BOSA				LR	LR	00 48 17.1	
	comp=Z,360nm,18.0s,baz=94,slow=34						
	comp=Z,14nm,0.9s						
BOSA	**Boshof**	**36.52**	**258**	P	**P**	**00 35 02.0**	**-0.4**
LBTB	**Lobatse**	**36.87**	**264**	P	**P**	**00 35 03.9**	**-1.5**
LBTB	**Lobatse**	**36.87**	**264**	LR	LR	00 47 46.7	
	comp=Z,213nm,20.7s,baz=102,slow=32						
LBTB	**Lobatse**	**36.87**	**264**	P	**P**	**00 35 03.9**	**-1.5**
LBTB				pmax	pmax		
	comp=Z,33nm,1.4s						
PALK	**Pallekele**	**36.93**	**24**	P	**P**	**00 35 06.3**	**+0.5**
PALK				IAmb	IAmb	00 35 13.4	
	comp=Z,43nm,1.4s						
PALK	**Pallekele**	**36.93**	**24**	LR	LR	00 47 00.3	
	comp=Z,927nm,19.5s,baz=218,slow=31						
PALK	**Pallekele**	**36.93**	**24**	P	**P**	**00 35 06.3**	**+0.5**
PALK				pmax	pmax		
	comp=Z,43nm,1.5s						
KIBK	**Kibwezi**	**37.00**	**307**		**P**	**00 35 07.0**	**+0.6**
KIBK	**Kibwezi**	**37.00**	**307**	P	**P**	**00 35 08.5**	**+2.0**
	SNR=9.2						
LPHEP	**Lephephe**	**37.03**	**267**		**P**	**00 35 06.5**	**-0.3**
LPHEP	**Lephephe**	**37.03**	**267**	*i* P	**P**	**00 35 05.6**	**-1.2**
MAKGR	**Makgori**	**37.40**	**262**	*i* P	**P**	**00 35 10.3**	**+0.4**
LSZ	**Lusaka**	**37.69**	**280**		**P**	**00 35 12.6**	**+0.1**
LSZ	**Lusaka**	**37.69**	**280**	LR	LR	00 48 54.9	
	comp=Z,299nm,19.8s,baz=119,slow=34						
LSZ	**Lusaka**	**37.69**	**280**	P	**P**	**00 35 13.6**	**+1.1**
LSZ	**Lusaka**	**37.69**	**280**	P	**P**	**00 35 12.6**	**+0.1**
LSZ				pmax	pmax		
	comp=Z,27nm,1.0s						
KHWEE	**KHWEE**	**37.77**	**269**	P	**P**	**00 35 12.2**	**-0.9**
KHWEE				IAmb	IAmb	00 35 14.9	
	comp=Z,60nm,1.1s						
KHWEE	**KHWEE**	**37.77**	**269**	*i* P	**P**	**00 35 13.2**	**+0.1**
KDWAN	**Kaudwane**	**38.09**	**266**	*i* P	**P**	**00 35 16.6**	**+0.9**
KMBO	**Kilima Mbogo**	**38.41**	**308**	‖ *e*P	**P**	**00 35 19.7**	**+1.1**
PHDHD	**Phuduhudu**	**39.11**	**271**		**P**	**00 35 24.6**	**+0.2**
PHDHD				IAmb	IAmb	00 35 26.1	
	comp=Z,44nm,1.1s						
PHDHD	**Phuduhudu**	**39.11**	**271**	*i* P	**P**	**00 35 25.3**	**+1.0**
PHPEN	**Phepeng**	**39.19**	**262**	P	**P**	**00 35 24.7**	**-0.2**
PHPEN	**Phepeng**	**39.19**	**262**	*i* P	**P**	**00 35 25.4**	**+0.5**
KSANE	**Kasane**	**39.38**	**275**		**P**	**00 35 26.3**	**-0.2**
KSANE				IAmb	IAmb	00 35 28.2	
	comp=Z,50nm,1.4s						
KSANE	**Kasane**	**39.38**	**275**	*i* P	**P**	**00 35 27.2**	**+0.6**
KGCAE	**Kacgae**	**40.41**	**266**	P	**P**	**00 35 35.1**	**0.0**
KGCAE				IAmb	IAmb	00 35 37.2	
	comp=Z,64nm,1.1s						
KGCAE	**Kacgae**	**40.41**	**266**	*i* P	**P**	**00 35 36.1**	**+1.0**
MAW	**Mawson**	**40.41**	**182**	P	**P**	**00 35 35.9**	**+1.5**
	comp=Z,7.6nm,0.8s,baz=356,slow=7.8,SNR=22						
MAW				LR	LR	00 48 06.7	
	comp=Z,811nm,21.7s,baz=356,slow=30						
	comp=Z,7.6nm,0.8s						
H01W2	**Cape Leeuwin H**	**41.00**	**113**	T	T	01 19 23.2	
	baz=268,slow=75,SNR=21						
H01W3	**Cape Leeuwin H**	**41.00**	**113**	T	T	01 19 18.9	
	baz=268,slow=75,SNR=19						
H01W1	**Cape Leeuwin H**	**41.01**	**113**	T	T	01 19 22.0	
	baz=268,slow=75,SNR=20						
GSI	**Gunungsitoli**	**41.10**	**51**	P	**P**	**00 35 41.0**	**+0.2**
GSI				IAmb	IAmb	00 35 44.6	
	comp=Z,54nm,1.4s						
GSI	**Gunungsitoli**	**41.10**	**51**	P	**P**	**00 35 43.7**	**+2.9**
MNAI	**Manna**	**41.39**	**63**	P	**P**	**00 35 43.0**	**-0.2**
GMARE	**Gumare**	**41.49**	**271**	P	**P**	**00 35 44.5**	**+0.5**
GMARE	**Gumare**	**41.49**	**271**	*i* P	**P**	**00 35 45.3**	**+1.2**
PDSI	**Padang**	**41.65**	**57**	P	**P**	**00 35 47.8**	**+2.5**
	comp=Z,6μmcomp=Z,33nm,1.3s						
GRTLG	**Ghanzi**	**41.71**	**268**	P	**P**	**00 35 45.5**	**-0.3**
GRTLG	**Ghanzi**	**41.71**	**268**	*i* P	**P**	**00 35 45.9**	**0.0**
KOOLE	**Kule**	**42.15**	**265**	P	**P**	**00 35 49.7**	**+0.2**
KOOLE	**Kule**	**42.15**	**265**	*i* P	**P**	**00 35 50.0**	**+0.5**
MNSI	**Mandailing Nat**	**42.16**	**54**	P	**P**	**00 35 51.9**	**+2.5**
	comp=Z,22nm,1.0s						
ONGWA	**Qangwa**	**42.32**	**270**	P	**P**	**00 35 51.6**	**+0.8**
ONGWA	**Qangwa**	**42.32**	**270**	*i* P	**P**	**00 35 51.7**	**+0.8**
MLSI	**Meulaboh, Aceh**	**42.49**	**47**	P	**P**	**00 35 54.1**	**+2.0**
	comp=Z,68nm,1.2s						
XAUDM	**Khaudum**	**42.51**	**272**	*i* P	**P**	**00 35 53.8**	**+1.4**
KCSI	**Kotacane, Aceh**	**42.84**	**49**	P	**P**	**00 35 57.2**	**+2.2**
	comp=Z,13nm,1.4s						
BKNI	**Bangkinang**	**42.91**	**56**	P	**P**	**00 35 56.3**	**+0.8**
MUN	**Mundaring**	**42.97**	**109**	P	**P**	**00 35 57.7**	**+1.8**
LODK	**Lodwar**	**42.98**	**310**	P	**P**	**00 35 57.1**	**+0.9**
LODK	**Lodwar**	**42.98**	**310**	P	**P**	**00 35 58.5**	**+2.3**
	SNR=6.8						
RPSI	**Rantau Prapat**	**43.03**	**51**	P	**P**	**00 35 58.0**	**+1.5**
PSI	**Prapat**	**43.11**	**51**	LR	LR	00 49 38.6	
	comp=Z,183nm,21.2s,baz=216,slow=30						
PSI	**Prapat**	**43.11**	**51**	P	**P**	**00 35 58.0**	**+0.7**
PSI				pmax	pmax		
	comp=Z,24nm,1.1s						
MORW	**Morawa**	**43.26**	**104**	P	**P**	**00 35 58.6**	**+0.3**
MORW				IAmb	IAmb	00 36 01.6	
	comp=Z,60nm,1.5s						
MORW	**Morawa**	**43.26**	**104**	P	**P**	**00 36 00.1**	**+1.8**
LHMI	**Lhok Sumawe**	**43.57**	**47**	P	**P**	**00 36 01.6**	**+0.8**
BLDU	**Ballidu**	**43.58**	**107**	P	**P**	**00 36 02.7**	**+1.8**
NWAO	**Narrogin (SRO)**	**43.73**	**110**	LR	LR	00 49 39.4	
	comp=Z,105nm,19.2s,baz=219,slow=30						
NWAO	**Narrogin (SRO)**	**43.73**	**110**	P	**P**	**00 36 02.6**	**+0.6**
LEM	**Lembang**	**43.79**	**70**	LR	LR	00 49 43.4	
	comp=Z,128nm,21.3s,baz=176,slow=30						
KLBR	**Kellerberrin**	**44.33**	**108**	P	**P**	**00 36 08.0**	**+1.1**
SYO	**Syowa Base**	**44.70**	**194**	‖ *i*P	**P**	**00 36 11.1**	**+1.9**
SYO	**Syowa Base**	**44.70**	**194**	‖ *es*P	sP	00 36 15.6	+3.3
ATD	**Arta Tunnel**	**45.00**	**326**	P	**P**	**00 36 13.3**	**+1.0**
ATD				IAmb	IAmb	00 36 16.8	
	comp=Z,46nm,1.5s						
ATD	**Arta Tunnel**	**45.00**	**326**	LR	LR	00 51 59.9	
	comp=Z,20nm,20.2s,baz=166,slow=32						
FURI	**Furi**	**45.08**	**319**	LR	LR	00 51 41.1	
	comp=Z,323nm,21.8s,baz=162,slow=32						
TSUM	**Tsumeb**	**45.62**	**269**	P	**P**	**00 36 17.9**	**+0.4**
TSUM	**Tsumeb**	**45.62**	**269**	LR	LR	00 53 03.8	
	comp=Z,165nm,20.5s,baz=107,slow=33						
IPM	**Ipoh**	**45.77**	**52**	P	**P**	**00 36 18.8**	**+0.3**
IPM				IAmb	IAmb	00 36 21.7	
	comp=Z,64nm,1.4s						
IPM	**Ipoh**	**45.77**	**52**	P	**P**	**00 36 20.8**	**+2.4**
HYBB	**Hyderabad (bro**	**45.90**	**16**	*eP*	**P**	**00 36 20.3**	**+1.0**
HYBB				*ep*P	**sP**	**00 36 23.2**	**+0.7**
HYBB				*ePP*	**PP**	**00 38 08.9**	**+1.8**
HYBB				*eS*	**S**	**00 43 05.4**	**+1.7**
MYKOM	**Kota Tinggi**	**45.97**	**57**	P	**P**	**00 36 18.8**	**-1.2**
MEEK	**Meekatharra**	**45.98**	**102**	P	**P**	**00 36 21.4**	**+1.3**
KULM	**Kulim**	**46.09**	**50**	P	**P**	**00 36 20.3**	**-0.6**
KULM				IAmb	IAmb	00 36 31.8	
	comp=Z,33nm,1.3s						
KULM	**Kulim**	**46.09**	**50**	P	**P**	**00 36 22.5**	**+1.6**
PCJI	**Pacitan**	**46.10**	**74**	P	**P**	**00 36 22.2**	**+1.1**
	comp=Z,55nm,1.1s						
RBK	**Rabkut**	**46.15**	**343**	P	**P**	**00 36 18.3**	**-3.0**
RBK				S	S	00 42 56.0	-11
DMTO	**DMTO**	**46.17**	**344**	P	**P**	**00 36 21.4**	**0.0**
ABTO	**Aybut**	**46.25**	**342**	P	**P**	**00 36 22.5**	**+0.3**
	SNR=7.2						
WHFO	**Wadi Hawf**	**46.66**	**343**	P	**P**	**00 36 25.8**	**+0.4**
DOK	**Doka**	**47.24**	**344**	P	**P**	**00 36 29.9**	**+0.1**
	SNR=9.7						
CASY	**Casey**	**47.40**	**158**	P	**P**	**00 36 31.8**	**+1.2**
CASY				IAmb	IAmb	00 36 53.2	
	comp=Z,23nm,1.4s						
PSA00	**Pilbara Seismi**	**48.41**	**95**	P	**P**	**00 36 39.5**	**+0.5**
PSA00				IAmb	IAmb	00 36 41.1	
	comp=Z,45nm,1.2s						
PSA00	**Pilbara Seismi**	**48.41**	**95**	P	**P**	**00 36 39.2**	**+0.1**
PSA00				IAmb	IAmb	00 36 41.1	
	comp=Z,30nm,1.4s						
PSA00	**Pilbara Seismi**	**48.41**	**95**	P	**P**	**00 36 40.5**	**+1.4**
MBWA	**Marble Bar**	**48.44**	**95**	P	**P**	**00 36 39.4**	**+0.2**
MBWA				IAmb	IAmb	00 36 41.4	
	comp=Z,34nm,1.1s						
MBWA	**Marble Bar**	**48.44**	**95**	P	**P**	**00 36 40.0**	**+0.8**
MBWA	**Marble Bar**	**48.44**	**95**	P	**P**	**00 36 40.6**	**+1.3**
JAGI	**Jajag, Banyuwa**	**48.52**	**76**	P	**P**	**00 36 38.9**	**-1.1**
JAGI				IAmb	IAmb	00 36 41.8	
	comp=Z,24nm,1.0s						
MHTO	**MHTO**	**48.73**	**349**	P	**P**	**00 36 41.1**	**-0.2**
JLN	**Jalan Bani Buh**	**49.65**	**351**	P	**P**	**00 36 48.6**	**+0.3**
SMDO	**Samad**	**50.75**	**350**	P	**P**	**00 36 56.4**	**-0.4**
	SNR=5.4						
WSAR	**Wadi Sarin**	**50.83**	**350**	P	**P**	**00 36 57.7**	**+0.4**
UMZA	**Um Al Zommool**	**50.95**	**346**	P	**P**	**00 36 57.8**	**-0.4**
ARQ	**Araqi**	**51.28**	**348**	P	**P**	**00 37 00.5**	**-0.2**
HOQ	**Hoqain**	**51.38**	**349**	P	**P**	**00 37 03.2**	**+1.7**
MZR	**Muzera**	**51.61**	**344**	P	**P**	**00 37 03.4**	**+0.3**
	SNR=5.4						
SOHO	**SOHO**	**52.06**	**348**	P	**P**	**00 37 06.3**	**-0.2**
ALNE	**Al Ain**	**52.13**	**347**	P	**P**	**00 37 07.6**	**+0.5**
MZWR	**Madinat Zayed**	**52.24**	**345**	P	**P**	**00 37 10.0**	**+2.2**
NGCH	**Negor - Chabah**	**52.62**	**354**	P	**P**	**00 37 10.5**	**0.0**
GHWR	**Ruwais**	**52.67**	**344**	P	**P**	**00 37 10.9**	**-0.2**
ASHO	**Ashiyiah**	**52.68**	**348**	P	**P**	**00 37 10.7**	**-0.4**
SBUM	**Sibu**	**52.85**	**63**	P	**P**	**00 37 12.0**	**-0.6**
SBUM				IAmb	IAmb	00 37 15.0	
	comp=Z,22nm,0.9s						
NAZ	**Nazwa, Dubai**	**53.05**	**347**	P	**P**	**00 37 14.3**	**+0.5**
	SNR=5.6						
NVL	**N'lazarevskaya**	**53.14**	**200**	*eP*	**P**	**00 37 16.7**	**+2.7**
NVL				*e*		00 39 10.6	
NVL				*ePPP*	PPP	00 40 20.6	
NVL				*eS*	**S**	**00 44 48.4**	**+4.4**
NVL				*eSS*	**SKiKP**	**00 48 29.4**	**-2.4**
NVL				*eSSS*	SSS	00 50 19.3	
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVL				MLR	MLR		
	comp=Z,74nm,18.0s						
FORT	**Forrest**	**53.16**	**109**	P	**P**	**00 37 15.1**	**+0.4**
FORT				IAmb	IAmb	00 37 17.4	
	comp=Z,22nm,0.8s						
RAYN	**Ar Rayn**	**54.51**	**336**	P	**P**	**00 37 24.4**	**-0.2**
RAYN	**Ar Rayn**	**54.51**	**336**	P	**P**	**00 37 25.1**	**+0.5**
RAYN	**Ar Rayn**	**54.51**	**336**	P	**P**	**00 37 24.4**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,18nm,1.5s						
FITZ	**Fitzroy Crossi**	**54.70**	**94**	P	**P**	**00 37 26.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**54.70**	**94**	LR	LR	00 57 10.7	
	comp=Z,145nm,21.4s,baz=256,slow=32						
SHMA	**Al-Shehemyia**	**54.97**	**343**	P	**P**	**00 37 27.9**	**+0.1**
EDFI	**Ende, Flores**	**54.98**	**81**	P	**P**	**00 37 28.9**	**+0.6**
	comp=Z,1μmcomp=Z,17nm,1.5s						
KAPI	**Kappang**	**55.05**	**76**	P	**P**	**00 37 27.6**	**-1.2**
KAPI	**Kappang**	**55.05**	**76**	LR	LR	01 00 29.8	
	comp=Z,32nm,18.1s,baz=260,slow=36						
KAPI	**Kappang**	**55.05**	**76**	P	**P**	**00 37 27.6**	**-1.2**
KAPI				pmax	pmax		
	comp=Z,15nm,1.1s						
CM31	**Chiang Mai Arr**	**55.17**	**38**	P	**P**	**00 37 29.7**	**+0.2**
CM31	**Chiang Mai Arr**	**55.17**	**38**	P	**P**	**00 37 30.4**	**+1.0**
	SNR=11						
CMAR	**Chiang Mai Arr**	**55.17**	**38**		**P**	**00 37 29.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**55.17**	**38**	P	**P**	**00 37 29.9**	**+0.5**
	comp=Z,20nm,0.9s,baz=231,slow=7.2,SNR=88						
CMAR				LR	LR	00 56 31.7	
	comp=Z,146nm,21.7s,baz=220,slow=31						
	comp=Z,20nm,0.9s						
CMAR	**Chiang Mai Arr**	**55.17**	**38**	*ce*P	**P**	**00 37 30.3**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,20nm,0.9s						
SAKB	**Bahrain**	**55.20**	**342**	P	**P**	**00 37 30.0**	**+0.5**
BRDH	**Bariadhala**	**55.20**	**28**	LR	LR	01 00 39.9	
	comp=Z,559nm,18.2s,baz=172,slow=36						
CHTO	**Chiang Mai**	**55.46**	**38**		**P**	**00 37 31.5**	**0.0**
CHTO				IAmb	IAmb	00 37 33.1	
	comp=Z,28nm,1.2s						
CHTO	**Chiang Mai**	**55.46**	**38**	P	**P**	**00 37 31.9**	**+0.4**
CHTO	**Chiang Mai**	**55.46**	**38**	P	**P**	**00 37 31.5**	**0.0**
CHTO				pmax	pmax		
	comp=Z,28nm,1.2s						
MMRI	**Maumere**	**55.51**	**81**	P	**P**	**00 37 31.8**	**-0.2**
BATI	**Baumata**	**56.07**	**84**	LR	LR	00 58 26.4	
	comp=Z,59nm,21.3s,baz=260,slow=33						
SOEI	**Soe**	**56.80**	**84**	P	**P**	**00 37 41.5**	**+0.1**
SOEI	**Soe**	**56.80**	**84**	P	**P**	**00 37 43.0**	**+1.5**
SHL	**Shillong**	**57.87**	**27**	P	**P**	**00 37 48.7**	**0.0**
SHL				IAmb	IAmb	00 38 01.1	
	comp=Z,39nm,1.3s						
SHL	**Shillong**	**57.87**	**27**	P	**P**	**00 37 48.7**	**0.0**
SHL				pmax	pmax		
	comp=Z,39nm,1.3s						
SNAA	**Sanae**	**57.93**	**200**	⇑P	**P**	**00 37 49.3**	**+0.7**
	comp=Z,129nm,0.8s						
SNAA	**Sanae**	**57.93**	**200**	P	**P**	**00 37 49.1**	**+0.6**
SNAA	**Sanae**	**57.93**	**200**	P	**P**	**00 37 49.6**	**+1.0**
	comp=Z,3.7nm,0.7s,baz=96,slow=5.7,SNR=22						
SNAA				LR	LR	00 57 41.3	
	comp=Z,156nm,20.0s,baz=18,slow=31						
	comp=Z,3.7nm,0.7s						
SNAA	**Sanae**	**57.93**	**200**	*de*P	**P**	**00 37 49.4**	**+0.9**
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EVN	**Everest**	**58.22**	**21**	P	**P**	**00 37 51.7**	**0.0**
EVN				IAmb	IAmb	00 37 53.1	
	comp=Z,20nm,1.0s						
KNRA	**Kununurra**	**58.37**	**92**	P	**P**	**00 37 51.4**	**-1.0**
KNRA				IAmb	IAmb	00 37 53.8	
	comp=Z,23nm,1.0s						
KBD	**Kabd**	**59.03**	**341**	P	**P**	**00 37 56.5**	**0.0**
TOLI2	**Tolitoli**	**59.10**	**71**	P	**P**	**00 37 56.7**	**-0.8**
TOLI2				IAmb	IAmb	00 37 58.7	
	comp=Z,35nm,1.5s						
BBOO	**Buckleboo**	**59.31**	**114**	P	**P**	**00 37 58.0**	**-0.7**
LUWI	**Luwuk**	**59.66**	**74**	P	**P**	**00 38 01.0**	**-0.2**
LUWI	**Luwuk**	**59.66**	**74**	P	**P**	**00 38 02.2**	**+0.9**
	comp=Z,41nm,1.3s						
ASAR	**Alice Springs**	**60.10**	**103**		**P**	**00 38 04.2**	**-0.1**
ASAR	**Alice Springs**	**60.10**	**103**	P	**P**	**00 38 04.8**	**+0.4**
	comp=Z,28nm,0.8s,baz=251,slow=6.9,SNR=4.4						
ASAR				LR	LR	01 00 17.8	
	comp=Z,140nm,20.1s,baz=275,slow=32						
ASAR				PKPPKP	**P'P'df**	**01 07 28.5**	**-4.1**
	comp=Z,0.6nm,1.0s,baz=101,slow=1.9,SNR=3.2						
ASAR				PKP2bc	**P'P'bc**	**01 07 36.7**	**-5.6**
	comp=Z,1.1nm,1.0s,baz=97,slow=2.7,SNR=5.0						
	comp=Z,28nm,0.8s						
AS31	**Alice Springs**	**60.10**	**103**	P	**P**	**00 38 04.2**	**-0.1**
AS31				IAmb	IAmb	00 38 05.6	
	comp=Z,10nm,0.8s						
SLVN	**Son La**	**60.26**	**40**	P	**P**	**00 38 05.4**	**+0.2**
SLVN				IAmb	IAmb	00 38 07.4	
	comp=Z,17nm,1.0s						
LSA	**Lhasa**	**61.30**	**24**	P	**P**	**00 38 12.8**	**+0.1**
LSA				IAmb	IAmb	00 38 14.2	
	comp=Z,17nm,1.2s						
LSA	**Lhasa**	**61.30**	**24**	P	**P**	**00 38 12.8**	**+0.1**
LSA				pmax	pmax		
	comp=Z,17nm,1.2s						
HRA	**Herat**	**61.48**	**356**	P	**P**	**00 38 12.7**	**-0.9**
KBL	**Kabul**	**61.53**	**2**	P	**P**	**00 38 13.2**	**-0.6**
KBL				IAmb	IAmb	00 38 23.6	
	comp=Z,25nm,1.1s						
KBL	**Kabul**	**61.53**	**2**	P	**P**	**00 38 13.3**	**-0.6**
	SNR=10						
KBL	**Kabul**	**61.53**	**2**	P	**P**	**00 38 13.2**	**-0.6**
KBL				pmax	pmax		
	comp=Z,25nm,1.2s						
MTN	**Manton Dam**	**61.60**	**90**	P	**P**	**00 38 14.5**	**-0.1**
MTN				IAmb	IAmb	00 38 16.1	
	comp=Z,35nm,1.4s						
WRA	**Warramunga Arr**	**61.74**	**99**		**P**	**00 38 15.3**	**-0.2**
WRA	**Warramunga Arr**	**61.74**	**99**	P	**P**	**00 38 16.0**	**+0.5**
	comp=Z,40nm,0.9s,baz=250,slow=6.4,SNR=139						
WRA				LR	LR	01 00 32.4	
	comp=Z,165nm,20.6s,baz=232,slow=32						
WRA				PKP2bc	**P'P'bc**	**01 07 33.8**	**-4.1**
	comp=Z,2.5nm,1.1s,baz=70,slow=3.4,SNR=5.0						
	comp=Z,40nm,0.9s						
WRAB	**Tennant Creek**	**61.76**	**99**	P	**P**	**00 38 15.5**	**0.0**
WRAB	**Tennant Creek**	**61.76**	**99**	*d* P	**P**	**00 38 15.4**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,55nm,1.0s				

comp=Z,430nm,17.2s
KSH LR LR
comp=Z,420nm,22.7s
KSH LR LR
comp=Z,500nm,19.3s
SWI Sorong 67.08 79 P **P** **00 38 50.9 +0.4**
CD2 Chengdu 67.82 34 P **P** **00 38 53.9 -0.9**
CD2 pP pwP 00 39 00.0 -2.9
CD2 sP sP 00 39 01.4 +3.4
CD2 S **S** **00 47 57.4 +4.5**
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 pmax pmax
comp=Z,280nm,6.1s
ARSB Arslanbob 68.51 5 **P** **00 38 59.0 0.0**
ARSB Arslanbob 68.51 5 P **P** **00 38 59.0 0.0**
ARSB pmax pmax
comp=Z,40nm,1.3s
MARD Mardin 68.73 338 P **P** **00 39 01.0 +0.5**
MARD IAmb IAmb 00 39 02.6
comp=Z,26nm,1.4s
CAN Canberra 68.88 120 P **P** **00 39 01.2 -0.4**
CAN Canberra 68.88 120 P **P** **00 39 01.2 -0.4**
CAN pmax pmax
comp=Z,31nm,1.0s
IUG Iuzhnay 69.15 3⇓*i*P **P** **00 39 03.2 +0.2**
comp=Z,22nm,1.2s
IUG Iuzhnay 69.15 3*d i*P **P** **00 39 03.2 +0.2**
IUG pmax pmax
comp=Z,23nm,1.2s
CHM Chimkent 69.31 2 *e*P **P** **00 39 04.3 +0.4**
comp=Z,16nm,1.1s
CHM Chimkent 69.31 2 *e*P **P** **00 39 04.2 +0.4**
CHM pmax pmax
comp=Z,16nm,1.1s
TARG Taragay, Kyrgy 69.43 9 P **P** **00 39 04.4 -0.7**
TARG Taragay, Kyrgy 69.43 9 P **P** **00 39 04.4 -0.7**
TARG pmax pmax
comp=Z,7.0nm,1.1s
GURO Guroymak-BITLI 69.45 340 P **P** **00 39 05.9 +0.9**
GURO IAmb IAmb 00 39 15.6
comp=Z,31nm,1.4s
CSS Mathiatis 69.50 331 P **P** **00 39 05.3 +0.1**
CSS IAmb IAmb 00 39 15.8
comp=Z,36nm,1.2s
CSS Mathiatis 69.50 331 P **P** **00 39 04.6 -0.6**
comp=Z,380nmcomp=Z,28nm,1.3s
UCH Uchtor 69.54 6 P **P** **00 39 06.2 +0.4**
SNR=7.3
KDJ Kajisay 69.74 8 P **P** **00 39 06.3 -0.4**
KDJ IAmb IAmb 00 39 16.0
comp=Z,20nm,1.3s
KDJ Kajisay 69.74 8 P **P** **00 39 06.3 -0.4**
KDJ pmax pmax
comp=Z,20nm,1.3s
ULHL Ulahol 69.74 8 P **P** **00 39 07.5 +0.7**
SNR=8.0
GAZ Gaziantep 69.86 335 P **P** **00 39 07.2 -0.2**
GAZ IAmb IAmb 00 39 09.5
comp=Z,12nm,1.0s
EKS2 Erkin-Say 69.90 6 P **P** **00 39 08.9 +1.3**
SNR=24
AAK Ala-Archa 69.94 6 **P** **00 39 08.3 +0.3**
AAK IAmb IAmb 00 39 09.6
comp=Z,26nm,1.3s
AAK Ala-Archa 69.94 6 LR LR 01 06 28.9
comp=Z,346nm,20.5s,baz=202,slow=33
AAK Ala-Archa 69.94 6 P **P** **00 39 06.4 -1.5**
AAK Ala-Archa 69.94 6 P **P** **00 39 08.5 +0.6**
SNR=6.0
AAK Ala-Archa 69.94 6*de*P **P** **00 39 08.2 +0.3**
AAK pmax pmax
comp=Z,23nm,1.3s
BOOM Boomskoye usch 69.95 7 P **P** **00 39 08.0 +0.1**
BOOM IAmb IAmb 00 39 18.2
comp=Z,22nm,1.4s
BOOM Boomskoye usch 69.95 7 P **P** **00 39 08.0 +0.1**
BOOM pmax pmax
comp=Z,22nm,1.4s
DZA Taraz 69.96 4 *e*P **P** **00 39 08.1 +0.3**
comp=Z,9.1nm,0.9s
DZA Taraz 69.96 4 *e*P **P** **00 39 08.1 +0.3**
DZA pmax pmax
comp=Z,9.0nm,0.9s
BRLS Boroldav 70.03 2 *e*P **P** **00 39 06.3 -2.0**
comp=Z,6.3nm,0.8s
BRLS Boroldav 70.03 2 *e*P **P** **00 39 06.2 -2.0**
BRLS pmax pmax
comp=Z,6.0nm,0.8s
FRU1 Bishkek 70.13 6 P **P** **00 39 09.9 +1.0**
FRU1 IAmb IAmb 00 39 18.6
comp=Z,16nm,0.8s
FRU1 Bishkek 70.13 6 P **P** **00 39 09.9 +1.0**
FRU1 pmax pmax
comp=Z,16nm,0.8s
KK31 Karatay Array 70.13 3 **P** **00 39 09.1 +0.3**
KK31 Karatay Array 70.13 3 P **P** **00 39 09.1 +0.3**
KK31 pmax pmax
comp=Z,43nm,1.3s
KKAR Karatay Array 70.13 3 **P** **00 39 09.0 +0.2**
KKAR Karatay Array 70.13 3 P **P** **00 39 09.0 +0.2**
GNI Garni 70.14 342 P **P** **00 39 09.9 +0.8**
GNI IAmb IAmb 00 39 11.7
comp=Z,34nm,1.1s
GNI Garni 70.14 342 LR LR 01 09 08.9
comp=Z,350nm,18.3s,baz=168,slow=35
GNI Garni 70.14 342 P **P** **00 39 10.7 +1.6**
GNI Garni 70.14 342*de*P **P** **00 39 10.2 +1.0**
GNI pmax pmax
comp=Z,27nm,1.3s
GNI Garni 70.14 342 P **P** **00 39 09.3 +0.1**
comp=Z,637nmcomp=Z,30nm,1.7s
PRZ Przheval'sk 70.25 9 **P** **00 39 10.1 +0.3**
PRZ Przheval'sk 70.25 9 P **P** **00 39 10.1 +0.3**
PRZ pmax pmax
comp=Z,43nm,1.1s
TKM2 Tokmak 2 70.33 7 P **P** **00 39 10.6 +0.2**
SNR=25
ENH Enshi 70.34 39 P **P** **00 39 10.4 -0.1**
USP Ospenovka 70.57 6 P **P** **00 39 12.1 +0.5**
SNR=32
TNSS Tian-Shan 70.61 8 *e*P **P** **00 39 11.9 -0.4**
TNSS Tian-Shan 70.61 8 *e*P **P** **00 39 11.8 -0.4**
AKT Akhty 70.64 345 *e*P **P** **00 39 12.0 -0.2**
AKT *e* 00 39 30.2
AKT pmax pmax
comp=Z,36nm,1.4s
SGDS Sogindy 70.76 6⇓*i*P **P** **00 39 12.9 +0.1**
comp=Z,11nm,1.5s
AAA Alma-Ata 70.77 8 *e*P **P** **00 39 13.1 +0.2**
comp=Z,20nm,1.2s
AAA Alma-Ata 70.77 8 *e*P **P** **00 39 13.0 +0.2**
AAA pmax pmax
comp=Z,20nm,1.2s
SATY Saty 70.82 9⇓*i*P **P** **00 39 13.3 0.0**
comp=Z,26nm,1.8s
SATY Saty 70.82 9*d i*P **P** **00 39 13.2 0.0**
SATY pmax pmax
comp=Z,26nm,1.8s
UZB Uzynbulak 70.99 9 *e*P **P** **00 39 14.3 -0.1**
comp=Z,16nm,1.5s
UZB Uzynbulak 70.99 9 *e*P **P** **00 39 14.2 -0.1**
UZB pmax pmax
comp=Z,15nm,1.5s
SHLS Shalkode 71.07 10⇓*i*P **P** **00 39 15.2 +0.4**
comp=Z,12nm,1.1s
SHLS Shalkode 71.07 10*d i*P **P** **00 39 15.1 +0.4**
SHLS pmax pmax
comp=Z,12nm,1.1s
KOPT Kop Dagi 71.27 339 P **P** **00 39 16.9 +0.7**
KOPT IAmb IAmb 00 39 27.0
comp=Z,20nm,1.3s
KNMB Chin-men Tao 71.63 49 P **P** **00 39 18.0 -0.4**
COEN Coen 71.84 97 P **P** **00 39 19.3 -0.6**
COEN IAmb IAmb 00 39 21.6
comp=Z,16nm,1.2s
BNN Bunyan 71.85 335 **P** **00 39 20.1 +0.5**
BNN IAmb IAmb 00 39 21.5
comp=Z,19nm,1.3s
LZDM Lanzhou Array 71.92 31 P **P** **00 39 19.9 -0.4**
comp=Z,3.3nm,0.5s,baz=193,slow=6.1,SNR=8.8
comp=Z,3.3nm,0.5s
LZH Lanzhou 72.10 31 *e*P **P** **00 39 24.2 +3.0**
LZH pP pwP 00 39 28.0 -1.3
LZH sP sP 00 39 30.6 +6.2
LZH pmax pmax
comp=Z,26nm,1.2s
LZH pmax pmax
comp=Z,200nm,4.4s
LZH LR LR
comp=Z,210nm,12.7s
LZH LR LR
comp=Z,260nm,13.4s
MAK Makhachkala 72.11 345*c i*P **P** **00 39 16.8 -4.0**
MAK *e*S **S** **00 48 36.2 -6.3**
MAK *e*SS **SS** **00 53 16.1 -4.4**
MAK *e*SSS SSS 00 56 33.7
MAK pmax pmax
comp=Z,115nm,1.3s
MAK MLR MLR
comp=Z,181nm,17.0s
AKAS Kas 72.22 329 P **P** **00 39 21.5 -0.3**
AKAS IAmb IAmb 00 39 31.6
comp=Z,24nm,1.2s
ACRG Accra 72.39 286 P **P** **00 39 23.9 +0.8**
ACRG IAmb IAmb 00 39 34.9
comp=Z,24nm,1.4s
ELL Elmali 72.50 330 P **P** **00 39 23.6 +0.1**
ELL Elmali 72.50 330 P **P** **00 39 23.6 +0.1**
ELL pmax pmax
comp=Z,10.0nm,1.2s
ARMA Armidale 72.67 116 P **P** **00 39 25.6 +0.8**
TDK Taldyqorghan 72.73 9 *e*P **P** **00 39 24.5 0.0**
comp=Z,25nm,1.3s
TDK Taldyqorghan 72.73 9 *e*P **P** **00 39 24.5 0.0**
TDK pmax pmax
comp=Z,25nm,1.3s
KIRS Kirsehir-Merke 72.83 334⇑P **P** **00 39 25.8 +0.4**
TOKA Tokat 72.91 336 P **P** **00 39 26.1 +0.4**
SSLB Suanglung 72.92 51 P **P** **00 39 26.4 +0.2**
SSLB IAmb IAmb 00 39 28.6
comp=Z,28nm,0.8s
XAN Xi'an 72.94 36 P **P** **00 39 26.2 +0.1**
XAN pmax pmax
comp=Z,62nm,0.9s
XAN pmax pmax
comp=Z,390nm,3.6s
GTA Gaotai 73.19 26 *e*P **P** **00 39 28.1 +0.6**
GTA sP pwP 00 39 36.7 +1.1
GTA pmax pmax
comp=Z,25nm,1.2s
GTA LR LR
comp=Z,230nm,15.6s
GTA LR LR
comp=Z,260nm,14.9s
GTA LR LR
comp=Z,340nm,17.8s
WMQ Urumqi 73.33 16 *e*P **P** **00 39 31.1 +2.9**
WMQ LR LR
comp=Z,530nm,23.9s
WMQ LR LR
comp=Z,360nm,18.5s
BR104 Keskin Array S 73.44 334 P **P** **00 39 28.4 -0.6**
comp=Z,81nmcomp=Z,10nm,1.1s
BRTR Keskin Array B 73.45 334 **P** **00 39 29.1 -0.1**
BRTR Keskin Array B 73.45 334 P **P** **00 39 29.3 +0.2**
comp=Z,7.9nm,0.9s,baz=156,slow=6.7,SNR=45
comp=Z,7.9nm,0.9s
BR131 Keskin Array S 73.45 334 P **P** **00 39 28.9 -0.1**
BR131 IAmb IAmb 00 39 30.3
comp=Z,13nm,0.9s
BR131 Keskin Array S 73.45 334 P **P** **00 39 29.5 +0.5**
SNR=13
BR131 Keskin Array S 73.45 334*d i*P **P** **00 39 29.0 -0.1**
BR105 Keskin Array S 73.45 334 P **P** **00 39 28.5 -0.6**
comp=Z,87nmcomp=Z,11nm,1.0s
BR106 Keskin Array S 73.47 334 P **P** **00 39 28.6 -0.6**
comp=Z,88nmcomp=Z,11nm,1.0s
NCK Nalchik 73.57 343⇑*e*P **P** **00 39 30.2 +0.7**
NCK pmax pmax
comp=Z,21nm,1.3s
NACB Ninganchiao 73.62 51 P **P** **00 39 30.1 -0.1**
NACB IAmb IAmb 00 39 50.0
comp=Z,47nm,1.3s
IDI Anoyia 73.72 325 P **P** **00 39 30.9 +0.2**
IDI IAmb IAmb 00 39 32.3
comp=Z,16nm,0.9s
ANTO Ankara 73.91 333 P **P** **00 39 31.8 +0.1**
ANTO Ankara 73.91 333 P **P** **00 39 31.8 +0.1**
ANTO pmax pmax
comp=Z,8.0nm,1.1s
ANTO Ankara 73.91 333 P **P** **00 39 31.1 -0.6**
comp=Z,4.4nm,1.3s
KBZ Khabaz 73.97 342 P **P** **00 39 31.9 0.0**
comp=Z,11nm,1.2s,baz=161,slow=5.8,SNR=10
KBZ LR LR 01 10 53.1
comp=Z,492nm,20.1s,baz=144,slow=35
comp=Z,11nm,1.2s
KBZ Khabaz 73.97 342*de*P **P** **00 39 32.0 +0.2**
KBZ pmax pmax
comp=Z,10.0nm,1.2s
SHA1 Shidzhatmaz 74.05 342*ce*P **P** **00 39 33.3 +0.7**
EIDS Eidsvold 74.13 111 P **P** **00 39 32.9 -0.5**
EIDS IAmb IAmb 00 39 34.8
comp=Z,41nm,1.2s
KVAR Kislovodsk Arr 74.24 342 LR LR 01 10 24.6
comp=Z,514nm,20.8s,baz=60,slow=34
KIV Kislovodsk 74.24 342 **P** **00 39 33.6 +0.1**
KIV IAmb IAmb 00 39 36.5
comp=Z,47nm,1.4s
KIV Kislovodsk 74.24 342 P **P** **00 39 33.3 -0.2**
KIV Kislovodsk 74.24 342⇓P **P** **00 39 33.4 -0.2**
KIV Kislovodsk 74.24 342 *e*P **P** **00 39 32.8 -0.7**
KIV pmax pmax
comp=Z,19nm,1.1s
KIV Kislovodsk 74.24 342 P **P** **00 39 32.9 -0.6**
comp=Z,19nm,1.2s
MANT Manisa 74.55 330 P **P** **00 39 36.1 +0.5**
MANT IAmb IAmb 00 39 37.2
comp=Z,19nm,1.2s
VSLR Vesyoloye 74.55 340*ce*P **P** **00 39 35.7 +0.5**
VSLR pmax pmax
comp=Z,40nm,1.3s
ILGA Ilgaz 74.57 335 P **P** **00 39 36.2 +0.5**
JAY Jayapura 74.62 85 LR LR 01 09 36.6
comp=Z,37nm,21.1s,baz=320,slow=34
TORD Torodi Ar. Bea 74.75 294 P **P** **00 39 36.6 -0.5**
TORD Torodi Ar. Bea 74.75 294 P **P** **00 39 36.4 -0.6**
comp=Z,1.4nm,0.8s,baz=95,slow=6.5,SNR=9.8
TORD LR LR 01 10 30.0
comp=Z,356nm,21.0s,baz=144,slow=34
comp=Z,1.4nm,0.8s
SOC Sochi 74.75 340 *e*P **P** **00 39 35.1 -1.3**
SOC *e* 00 42 18.1
SOC *e*PPP PPP 00 44 08.4
SOC *e*S **S** **00 49 12.2 -0.4**
SOC *e*SS **SS** **00 54 03.4 +2.4**
SOC *e*SSS SSS 00 57 20.2
SOC MLR MLR
comp=Z,121nm,10.0s
BORA Eskisehir 74.87 332 P **P** **00 39 37.8 +0.5**
BORA IAmb IAmb 00 39 39.1
comp=Z,40nm,1.4s
MAKZ Makanchi 75.03 11 **P** **00 39 37.3 -0.6**
MAKZ Makanchi 75.03 11 P **P** **00 39 38.0 +0.1**
MDUB Mudurnu 75.06 333 P **P** **00 39 39.3 +0.9**
MDUB IAmb IAmb 00 39 41.5
comp=Z,23nm,1.0s
MK31 Makanchi Array 75.07 11*d i*P **P** **00 39 37.4 -0.8**
MKAR Makanchi Array 75.07 11 **P** **00 39 37.6 -0.6**
MKAR Makanchi Array 75.07 11 P **P** **00 39 37.9 -0.3**
comp=Z,5.0nm,0.8s,baz=198,slow=5.8,SNR=40
MKAR LR LR 01 10 32.4
comp=Z,355nm,20.5s,baz=194,slow=34
comp=Z,5.0nm,0.8s
GOF Gofitskoye 75.17 343*ce*P **P** **00 39 39.5 +0.7**
LYN LuoYang 75.22 38 P **P** **00 39 40.1 +0.8**
LYN pmax pmax
comp=Z,20nm,0.9s
LABN Labinsk 75.42 341 *e*P **P** **00 39 37.9 -2.3**
LABN *e*PP **pP** **00 39 41.5 -1.1**
LABN *e*S **S** **00 49 18.1 -1.9**
LABN pmax pmax
comp=Z,21nm,1.3s
ZSN Zaisan 76.17 13 *e*P **P** **00 39 44.8 +0.3**
ZSN Zaisan 76.17 13 *e*P **P** **00 39 44.8 +0.3**
AB31 Akbulak array 76.44 355 **P** **00 39 45.7 -0.2**
AB31 IAmb IAmb 00 39 46.9
comp=Z,29nm,0.9s
ABKAR Akbulak array 76.44 355 P **P** **00 39 45.5 -0.4**
ERBR Yeremizino-Bor 76.47 341 *e*P **P** **00 39 45.2 -1.0**
ERBR *e*PP **pP** **00 39 48.1 -0.5**
ERBR *e*S **S** **00 49 33.3 +1.8**
ERBR pmax pmax
comp=Z,21nm,0.9s
ANN Anapa 76.56 339 *e*P **P** **00 39 47.2 +0.5**
ANN *e*PP **sP** **00 39 49.7 -0.2**
ANN *e*S **S** **00 49 36.5 +4.0**
ANN *e*SS **SS** **00 54 26.7 -1.7**
ANN pmax pmax
comp=Z,42nm,1.2s
EZN Ezine 76.64 329⇓P **P** **00 39 48.0 +0.7**
EZN Ezine 76.64 329 P **P** **00 39 47.9 +0.7**
DBIC Dimbokro 76.89 285 P **P** **00 39 49.3 -0.1**
DBIC Dimbokro 76.89 285 P **P** **00 39 49.6 +0.3**
comp=Z,5.4nm,0.8s,baz=118,slow=8.6,SNR=7.0
comp=Z,5.4nm,0.8s
NJ2 Nanjing 77.11 43⇑P **P** **00 39 50.3 +0.2**
NJ2 sP **pwP** **00 39 57.4 -0.8**
NJ2 pmax pmax
comp=Z,32nm,0.8s
PMG Port Moresby 77.30 94 P **P** **00 39 51.3 -0.3**
PMG IAmb IAmb 00 39 53.3
comp=Z,37nm,1.5s
PMG Port Moresby 77.30 94 LR LR 01 12 15.3
comp=Z,73nm,18.7s,baz=292,slow=34
PMG Port Moresby 77.30 94*d i*P **P** **00 39 52.6 +1.0**
PMG pmax pmax
comp=Z,12nm,1.1s
AKTO Aktyubinsk 77.76 354 LR LR 01 13 14.8
comp=Z,130nm,18.1s,baz=183,slow=35
SIM Simferopol' 77.80 337 *e*P **P** **00 39 53.3 -0.4**
SIM pmax pmax
comp=Z,20nm,1.1s
RDO Rodhopi 78.06 329 P **P** **00 39 54.9 -0.3**
KURBB Kurchatov Arra 78.27 8 P **P** **00 39 56.2 +0.1**
comp=Z,8.4nm,1.0s,baz=205,slow=6.2,SNR=40
KURBB LR LR 01 12 49.5
comp=Z,276nm,19.6s,baz=168,slow=34
comp=Z,8.4nm,1.0s
KURK Kurchatov 78.37 8 **P** **00 39 57.0 +0.4**
KURK IAmb IAmb 00 39 57.9
comp=Z,18nm,1.1s
KURK Kurchatov 78.37 8 P **P** **00 39 56.9 +0.2**
KURK Kurchatov 78.37 8*d i*P **P** **00 39 56.4 -0.3**
KURK pmax pmax
comp=Z,24nm,1.3s
ASCN Ascension 78.51 267 P **P** **00 39 58.2 -0.2**
HNS HongShan 78.55 37⇓P **P** **00 39 58.6 +0.6**
HNS pmax pmax
comp=Z,38nm,1.1s
BTO Baotou 78.61 32 *e*P **P** **00 39 59.5 +1.1**
BTO S **S** **00 49 51.6 -3.5**
BTO pmax pmax
comp=Z,40nm,1.2s
BTO pmax pmax
comp=Z,420nm,6.6s
BTO LR LR
comp=Z,640nm,5.1s
BTO LR LR
comp=Z,430nm,7.5s
BTO LR LR
comp=Z,290nm,8.9s
LIT Litokhoron 78.66 327 P **P** **00 39 57.9 -0.7**
LIT IAmb IAmb 00 39 59.2
comp=Z,33nm,1.4s
LIT Litokhoron 78.66 327 P **P** **00 39 57.9 -0.7**
LIT pmax pmax
comp=Z,33nm,1.4s
DGZ Jazzator, Alta 78.83 14*de*P **P** **00 40 00.0 +0.5**
DGZ pmax pmax
comp=Z,8.0nm,1.2s
SMAI San Martin Ant 78.94 196 P **P** **00 39 59.9 +0.1**
SMAI IAmb IAmb 00 40 10.1
comp=Z,23nm,1.1s
TIA Tai'an 79.02 39 P **P** **00 40 00.6 0.0**
TIA pmax pmax
comp=Z,26nm,0.8s
ELND Elena 79.34 331⇓P **P** **00 40 02.3 +0.1**
ESPZ Base Esperanza 79.35 202 P **P** **00 40 02.6 +0.5**
ESPZ IAmb IAmb 00 40 20.9
comp=Z,27nm,0.9s
TIRR Tirgusor 79.53 333 **P** **00 40 03.0 -0.1**
TIRR IAmb IAmb 00 40 04.5
comp=Z,45nm,1.3s
TIRR Tirgusor 79.53 333⇓P **P** **00 40 03.5 +0.3**
TIRR Tirgusor 79.53 333 P **P** **00 40 03.5 +0.3**
TIRR Tirgusor 79.53 333 P **P** **00 40 02.8 -0.4**
comp=Z,30nm,1.3s
HHC Hu-ho-hao-te 79.54 33 *e*P **P** **00 40 04.2 +0.7**
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,160nm,4.5s
HHC LR LR
comp=Z,170nm,15.7s
HHC LR LR
comp=Z,190nm,15.5s
HHC LR LR
comp=Z,190nm,15.4s
BVAR Borovoye Array 80.03 2 P **P** **00 40 05.4 -0.3**
comp=Z,6.4nm,0.6s,baz=165,slow=6.2,SNR=34
BVAR LR LR 01 13 52.1
comp=Z,338nm,21.5s,baz=189,slow=34
comp=Z,6.4nm,0.6s
BORK Borovoye 80.05 2*de*P **P** **00 40 05.4 -0.5**
BORK pmax pmax
comp=Z,17nm,1.3s
CFR Carcaliu 80.23 333⇓P **P** **00 40 07.4 +0.4**
CFR Carcaliu 80.23 333 P **P** **00 40 07.3 +0.4**
PLVB Pleven 80.25 330⇓P **P** **00 40 06.7 -0.5**
ISR Istrita 80.83 332⇑P **P** **00 40 10.3 0.0**
ISR Istrita 80.83 332 P **P** **00 40 10.3 0.0**
ISR Istrita 80.83 332 P **P** **00 40 10.6 +0.3**
comp=Z,31nm,1.4s
VAE Valguarnera 80.99 320 LR LR 01 14 36.5
comp=Z,156nm,19.3s,baz=156,slow=35
BELG Belogornoye 81.08 348*de*P **P** **00 40 11.1 -0.2**
BELG pmax pmax
comp=Z,12nm,1.2s
RPZ Rata Peaks 81.13 135 P **P** **00 40 12.6 +0.5**
RPZ Rata Peaks 81.13 135 LR LR 01 09 46.7
comp=Z,194nm,21.2s,baz=309,slow=31
ODBI Odobesti 81.14 333 P **P** **00 40 10.9 -1.0**
comp=Z,8.8nm,1.4s
NEHR Nehoiu 81.18 332⇑P **P** **00 40 12.8 +0.6**
VRH Novokhopyorsk 81.20 344 *e*P **P** **00 40 09.8 -2.2**
VRH pmax pmax
comp=Z,10.0nm,1.0s
BJT Baijiatuau 81.24 36 P **P** **00 40 12.6 0.0**
BJT IAmb IAmb 00 40 16.1
comp=Z,28nm,1.4s
BJT Baijiatuau 81.24 36 P **P** **00 40 12.6 0.0**
GHRR 81.25 333 P **P** **00 40 12.4 0.0**
BJI Beijing 81.26 36 P **P** **00 40 13.2 +0.6**
BJI pmax pmax
comp=Z,5.0nm,1.1s
BLKB Belogradchik 81.31 329⇓P **P** **00 40 12.6 -0.3**
VRI Vrincioaia 81.36 333⇑P **P** **00 40 13.5 +0.4**
VRI Vrincioaia 81.36 333 P **P** **00 40 13.4 +0.4**
VRI Vrincioaia 81.36 333 P **P** **00 40 12.9 -0.2**
comp=Z,34nm,1.3s
PLOR5 Plostina Array 81.37 333 P **P** **00 40 13.0 -0.1**
comp=Z,38nm,1.3s
MLR Muntele Rosu 81.38 332 IAmb IAmb 00 40 14.7
comp=Z,25nm,1.2s
MLR Muntele Rosu 81.38 332⇓P **P** **00 40 13.9 +0.6**
MLR Muntele Rosu 81.38 332 P **P** **00 40 13.9 +0.6**
MLR Muntele Rosu 81.38 332 P **P** **00 40 13.0 -0.3**
comp=Z,20nm,1.5s
PLOR Plostina 81.38 333⇓P **P** **00 40 13.6 +0.3**
PLOR Plostina 81.38 333 P **P** **00 40 13.5 +0.3**
MILM Milestii Mici 81.41 335⇑*i*P **P** **00 40 12.0 -1.3**
comp=Z,700nm,6.6s
VORD Divnogorie 81.59 343 *e*P **P** **00 40 12.9 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VOIR 81.71 332⇑P **P** **00 40 14.8 -0.2**
VOIR 81.71 332 P **P** **00 40 14.7 -0.2**
VOIR 81.71 332 P **P** **00 40 14.3 -0.7**
comp=Z,12nm,1.4s
TURR Turia 81.80 333⇑P **P** **00 40 15.1 -0.4**
ARR Arges 81.83 331⇓P **P** **00 40 14.8 -0.8**
VSR Storozhevoye 81.85 343 *e*P **P** **00 40 13.2 -2.3**
VSR pmax pmax

comp=Z,10.0nm,1.1s
INZ Inchbonnie 81.86 134 P P 00 40 15.5 -0.5
INZ IAmb IAmb 00 40 18.8
comp=Z,38nm,1.1s
ONER Baraj Valea Uz 81.88 333 ⇑P P 00 40 15.5 -0.3
OZUR 81.93 333 ⇑P P 00 40 15.9 -0.2
DOPR Dopca 81.99 332 ⇑P P 00 40 16.4 0.0
KNGR Kungurtug, Tuv 82.20 19⇑ *eP* **P 00 40 18.1 +0.6**
KNGR pmax pmax
comp=Z,8.0nm,1.0s
VORR Voronezh 82.26 343 *eP* **P 00 40 15.8 -1.8**
VORR pmax pmax
comp=Z,10.0nm,1.0s
LOT Lotru 82.26 331 ⇓P **P 00 40 17.3 -0.6**
LTZ Lake Taylor 82.36 134 P **P 00 40 18.9 +0.1**
LTZ IAmb IAmb 00 40 35.5
comp=Z,34nm,1.3s
ZAA0 Zalesovo Array 82.40 11 P 00 40 18.3 0.0
ZALV Zalesovo Beam 82.40 11 P 00 40 18.2 -0.1
ZALV Zalesovo Beam 82.40 11 P **P 00 40 18.5 +0.2**
comp=Z,22nm,0.7s,baz=198,slow=4.8,SNR=119
ZALV LR LR 01 14 35.7
comp=Z,190nm,18.3s,baz=194,slow=34
comp=Z,22nm,0.7s
HERR Herculane 82.41 330 ⇑P **P 00 40 18.7 +0.2**
SORM Soroca 82.60 335 ⇑P **P 00 40 18.7 -0.7**
SORM Soroca 82.60 335 P **P 00 40 18.7 -0.7**
GZR Gura Zlata 82.65 330 ⇓P **P 00 40 19.7 -0.3**
GZR Gura Zlata 82.65 330 P **P 00 40 19.6 -0.3**
KEST Kesra 82.80 316 LR LR 01 16 51.7
comp=Z,426nm,19.1s,baz=140,slow=36
SONM Songino Array 82.84 26 P 00 40 21.3 +0.3
SONM IAmb IAmb 00 40 22.5
comp=Z,16nm,1.1s
SONM Songino Array 82.84 26 P **P 00 40 21.3 +0.3**
comp=Z,8.7nm,0.9s,baz=211,slow=5.0,SNR=32
SONM LR LR 01 15 43.9
comp=Z,337nm,20.8s,baz=204,slow=35
comp=Z,8.7nm,0.9s
DEV Deva 82.98 331 ⇓P **P 00 40 21.8 +0.2**
DEV Deva 82.98 331 P **P 00 40 21.7 +0.2**
ULN Ulaanbaatar 83.12 26 P 00 40 21.8 -0.7
ULN IAmb IAmb 00 40 23.6
comp=Z,32nm,1.4s
ULN Ulaanbaatar 83.12 26 *de*P **P 00 40 22.3 -0.2**
ULN pmax pmax
comp=Z,21nm,1.3s
LPSR Galich'ya Gora 83.17 343 *e*P **P 00 40 20.6 -1.7**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
KHZ Kahutara 83.35 134 P 00 40 23.7 0.0
BURAR Bucovina Array 83.39 333 P 00 40 24.4 +0.6
BURAR Bucovina Array 83.39 333 ⇓P **P 00 40 23.5 -0.3**
BURAR Bucovina Array 83.39 333 P **P 00 40 23.4 -0.3**
BUR08 Bucovina Ar. S 83.42 333 P **P 00 40 23.9 0.0**
BUR08 IAmb IAmb 00 40 27.8
comp=Z,18nm,1.3s
MARR Marisel-Cluj 83.51 331 ⇑P **P 00 40 25.1 +0.7**
ARTI Arti 83.64 355 P **P 00 40 24.2 -0.5**
ARTI IAmb IAmb 00 40 26.0
comp=Z,23nm,0.9s
ARTI Arti 83.64 355 LR LR 01 14 56.5
comp=Z,134nm,21.9s,baz=162,slow=34
ARTI Arti 83.64 355 *d*P **P 00 40 24.9 +0.2**
ARTI S **S 00 50 46.5 -0.1**
ARTI pmax pmax
comp=Z,33nm,1.3s
KMPD K-Podol'skiy 83.67 334 P P 00 40 24.1 -0.9
KMPD P **P 00 40 24.1 -0.9**
DRGR 83.77 331 ⇓P **P 00 40 25.9 +0.2**
DRGR 83.77 331 P **P 00 40 25.9 +0.2**
ZAK Zakamensk 83.84 23 *e*P **P 00 40 22.9 -3.1**
ZAK pmax pmax
comp=Z,12nm,2.4s
BSWZ Blackbirch Sta 83.93 134 P P 00 40 26.9 +0.1
SVE Sverdlovsk 83.94 357 *e*P **P 00 40 26.8 +0.6**
SVE pmax pmax
comp=Z,45nm,1.4s
KSV Kosov 84.01 334 P P 00 40 27.2 +0.4
KSV Kosov 84.01 334 P P 00 40 25.9 -0.9
XLT XiLinHaoTe 84.03 33 *e*P **P 00 40 27.7 +0.6**
XLT pP PcP 00 40 30.8 -0.2
XLT sP pwP 00 40 36.1 +0.8
XLT pmax pmax
comp=Z,16nm,1.4s
XLT pmax pmax
comp=Z,220nm,3.5s
TUWZ Tuamarina 84.12 134 P P 00 40 27.5 -0.2
RAKU Rahkiv 84.14 333 P P 00 40 27.2 -0.3
HORU Horodok 84.21 335 P P 00 40 27.6 -0.2
HORU Horodok 84.21 335 P P 00 40 26.9 -0.9
LUBAR Lubar, Ukraine 84.30 336 P P 00 40 27.5 -0.7
AK07 Malin Array Si 84.31 337 P P 00 40 27.5 -0.7
AK09 Malin Array Si 84.33 337 P P 00 40 27.7 -0.6
AK06 Malin Array Si 84.34 337 P P 00 40 27.7 -0.7
AK08 Malin Array Si 84.36 337 P P 00 40 27.8 -0.7
AK05 Malin Array Si 84.37 337 P P 00 40 27.8 -0.7
AK02 Malin Array Si 84.40 337 P P 00 40 28.0 -0.7
AK12 Malin Array Si 84.40 337 P P 00 40 28.0 -0.7
AK14 Malin Array Si 84.41 337 P P 00 40 28.1 -0.6
AK13 Malin Array Si 84.41 337 P P 00 40 28.1 -0.6
KIEV Kiev 84.43 337 P 00 40 27.9 -0.9
KIEV IAmb IAmb 00 40 29.1
comp=Z,12nm,0.8s
KIEV Kiev 84.43 337 ⇓P **P 00 40 28.6 -0.3**
KIEV Kiev 84.43 337 P **P 00 40 28.5 -0.3**
AKASG Malin Array Be 84.43 337 P **P 00 40 28.2 -0.7**
AKASG Malin Array Be 84.43 337 P **P 00 40 28.6 -0.1**
comp=Z,8.2nm,0.9s,baz=152,slow=4.4,SNR=24
AKASG LR LR 01 16 24.3
comp=Z,55nm,21.8s,baz=104,slow=34
comp=Z,8.2nm,0.9s
AKASG Malin Array Be 84.43 337 *ce*P **P 00 40 28.7 -0.1**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 84.43 337 P 00 40 28.3 -0.5
AKBB IAmb IAmb 00 40 29.1
comp=Z,12nm,0.8s
AKBB Malin Array Si 84.43 337 *de*P **P 00 40 28.5 -0.3**
TRSU Trosnyk 84.69 332 P **P 00 40 31.2 +1.0**
MORS Morshin 85.13 333 P **P 00 40 33.8 +1.4**
MORH Mrgy, Hungar 85.14 329 ⇑P **P 00 40 32.7 +0.2**
JNU Nakatsue 85.55 49 P **P 00 40 34.9 -0.1**
JNU Nakatsue 85.55 49 LR LR 01 19 32.6
comp=Z,66nm,18.7s,baz=233,slow=36
MRZ Mangatainoka R 85.58 134 P P 00 40 35.7 +0.6
LVV L'vov 85.62 334 P P 00 40 35.2 +0.3
PSZ Piszkesteto 85.86 331 P P 00 40 35.5 -0.7
PSZ Piszkesteto 85.86 331 P P 00 40 35.5 -0.7
PSZ pmax pmax
comp=Z,7.0nm,1.4s
GUMO Guam 85.91 73 LR LR 01 17 48.8
comp=Z,14nm,18.7s,baz=158,slow=35
BFZ Birch Farm 85.99 134 P P 00 40 38.5 +1.3
BFZ IAmb IAmb 00 40 53.5
comp=Z,28nm,1.1s
OBN Obninsk 86.05 343 P P 00 40 37.1 +0.3
OBN Obninsk 86.05 343 *c* i P **P 00 40 37.4 +0.6**
OBN *i* *PP **PcP 00 40 40.1 +0.7**
OBN *i* *SP **sP 00 40 41.7 +1.7**
OBN *e*S **S 00 51 12.5 +2.0**
OBN *e*PS **PnS 00 52 06.9 -1.7**
OBN *e*SSS SSS 01 00 20.1
OBN pmax pmax
comp=Z,40nm,1.3s
OBN Obninsk 86.05 343 P P 00 40 36.3 -0.5
comp=Z,18nm,0.5s
RNPP5 Staryi Chortor 86.06 336 P P 00 40 36.3 -0.6
RNPP8 Varash 86.15 336 P P 00 40 37.7 +0.3
RNPP9 Sopachiv 86.20 336 P P 00 40 37.4 -0.3
KSAR Wonju Array Be 86.24 44 P 00 40 37.8 -0.4
KSAR Wonju Array Be 86.24 44 P P 00 40 37.8 -0.4
KS19 Wonju Array Si 86.27 44 P P 00 40 37.9 -0.5
KS19 IAmb IAmb 00 40 39.4
comp=Z,24nm,0.9s
KSRS Korea Array 86.27 44 P P 00 40 38.5 +0.2
comp=Z,16nm,0.9s,baz=233,slow=4.9,SNR=25
comp=Z,16nm,0.9s
MOS Moscow 86.34 344 *e*P **P 00 40 35.0 -3.3**
MOS *e* 00 44 04.8
MOS pmax pmax
comp=Z,46nm,1.4s
MOS pmax pmax
comp=Z,300nm,3.0s
KIRV Kirov 86.75 351 LR LR 01 19 19.3
comp=Z,221nm,20.4s,baz=165,slow=36
KIRV Kirov 86.75 351 *d* i P **P 00 40 40.1 -0.1**
NIE Niedzica 86.83 332 P **P 00 40 41.3 +0.4**
comp=Z,5.1nm,1.5s
LANS Liptovska Anna 86.98 331 *e*P **P 00 40 42.6 +1.0**
LANS *e* 00 40 50.6
LANS pmax pmax
comp=Z,6.0nm,1.0s
LANS Liptovska Anna 86.98 331 *e*P **P 00 40 42.6 +1.0**
LANS *e* 00 40 50.6
TRI Trieste 87.11 326 P **P 00 40 44.6 +2.3**
TRI Trieste 87.11 326 P **P 00 40 44.6 +2.3**
TRI pmax pmax
comp=Z,48nm,1.4s
RONA Rosalia, Austr 87.32 329 *i* P **P 00 40 43.8 +0.5**
comp=Z,24nm,1.5s,SNR=6.8
ARSA Arzberg 87.36 328 P **P 00 40 44.1 +0.6**
ARSA IAmb IAmb 00 40 53.1
comp=Z,18nm,1.5s
ARSA Arzberg 87.36 328 *i* P **P 00 40 44.2 +0.7**
comp=Z,7.6nm,1.2s
MODS Modra-Piesok 87.36 330 *e*P **P 00 40 43.7 +0.2**
MODS *e* 00 40 50.8
MODS pmax pmax
comp=Z,27nm,1.2s
MODS Modra-Piesok 87.36 330 *e*P **P 00 40 43.7 +0.2**
MODS *e* 00 40 50.8
JAVC Velka Javorina 87.55 330 *e*P **P 00 40 45.1 +0.7**
ZCCA Zocca 87.61 324 P **P 00 40 46.5 +1.7**
OJC Ojcow 87.65 332 P **P 00 40 44.2 -0.6**
CONA Conrad Observa 87.69 329 *i* P **P 00 40 45.6 +0.4**
comp=Z,20nm,1.1s,SNR=6.0
PRED Cave del Predi 87.73 326 P **P 00 40 46.1 +0.7**
MAUC Maruska 87.85 330 *e*P **P 00 40 46.0 +0.2**
URZ Urewera 87.87 132 LR LR 01 14 05.9
comp=Z,234nm,18.4s,baz=226,slow=32
TEOL Teolo 87.93 325 P **P 00 40 45.4 -0.9**
MNK Minsk 88.06 339 *i* P **P 00 40 47.1 +0.5**
MNK *i* 00 44 13.5
MNK *i* PPP PPP 00 46 08.6
MNK *i* S **SKSac 00 51 14.9 +0.3**
MNK *i* SS **SS 00 57 20.1 +1.2**
MNK *i* SSS SSS 01 00 53.8
MNK pmax pmax
comp=E,12nm,0.8s
MNK pmax pmax
comp=Z,29nm,0.9s
MNK pmax pmax
comp=N,17nm,1.0s
MNK MLR MLR
comp=Z,146nm,18.0s
MNK MLR MLR
comp=E,659nm,18.0s
KRUC Moravsky 88.27 330 *e*P **P 00 40 47.5 -0.2**
KBA Koelnbreinsper 88.28 327 *i* P **P 00 40 48.1 0.0**
comp=Z,9.9nm,1.3s
MORC Moravsky Berou 88.28 331 IAmb IAmb 00 40 49.0
comp=Z,12nm,1.2s
MORC Moravsky Berou 88.28 331 ⇑P **P 00 40 47.1 -0.8**
MORC Moravsky Berou 88.28 331 *e*P **P 00 40 47.7 -0.2**
MORC Moravsky Berou 88.28 331 P **P 00 40 47.0 -0.8**
STEB Steborice 88.30 331 *e*P **P 00 40 47.7 -0.2**
VRAC Vranov 88.36 330 LR LR 01 21 43.1
comp=Z,48nm,18.1s,baz=113,slow=37
VRAC Vranov 88.36 330 *e*P **P 00 40 48.1 -0.1**
MOA Molln 88.38 328 *e*P **P 00 40 48.8 +0.4**
comp=Z,16nm,0.9s,SNR=5.3
CTI Castel Tesino 88.41 325 P **P 00 40 50.4 +1.8**
CTI Castel Tesino 88.41 325 P **P 00 40 50.4 +1.8**
CTI pmax pmax
comp=Z,8.0nm,1.1s
ABTA Abfaltersbach 88.46 326 *i* P **P 00 40 49.7 +0.9**
comp=Z,17nm,1.3s
BIOA Bad Ischl, Aus 88.57 327 *i* P **P 00 40 49.3 0.0**
comp=Z,12nm,1.2s
KRLC Kraliky 88.84 330 *e*P **P 00 40 50.5 0.0**
KRLC Kraliky 88.84 330 *e*P **P 00 40 50.5 0.0**
LESA Schwarzleotal 88.85 327 *i* P **P 00 40 50.7 +0.1**
comp=Z,12nm,1.0s
CKRC Cesky Krumlov 89.05 328 *e*P **P 00 40 50.7 -0.8**
CKRC Cesky Krumlov 89.05 328 *e*P **P 00 40 50.7 -0.8**
WTTA Wattenberg 89.25 326 *i* P **P 00 40 53.1 +0.4**
comp=Z,22nm,1.2s
WATA Walderalm 89.33 326 *i* P **P 00 40 53.2 +0.2**
comp=Z,19nm,1.1s
GERES GERESS Array B 89.35 328 P **P 00 40 52.0 -1.0**
comp=Z,2.1nm,0.9s,baz=126,slow=2.3,SNR=9.5
GERES LR LR 01 20 30.9
comp=Z,50nm,19.3s,baz=112,slow=35
comp=Z,2.1nm,0.9s
OSTC Ostas 89.44 331 *e*P **P 00 40 53.6 +0.4**
OSTC Ostas 89.44 331 *e*P **P 00 40 53.6 +0.4**
SQTA Sankt Quirin 89.44 326 *i* P **P 00 40 54.0 +0.5**
comp=Z,26nm,1.3s
FUORN Ofenpass-Fuorn 89.51 325 IAmb IAmb 00 40 55.5
comp=Z,34nm,1.4s
CHVC Chvalec 89.53 330 *e*P **P 00 40 54.3 +0.6**
CHVC Chvalec 89.53 330 *e*P **P 00 40 54.3 +0.6**
FETA Fehrbten 89.54 325 *e*P **P 00 40 54.7 +0.7**
comp=Z,22nm,1.1s,SNR=5.3
ZVC Zvikov 89.54 329 *e*P **P 00 40 53.7 0.0**
MOTA Moosalm 89.57 326 *i* P **P 00 40 54.5 +0.3**
comp=Z,20nm,1.2s
KHC Kasperske Hory 89.61 328 P **P 00 40 52.9 -1.2**
KHC IAmb IAmb 00 40 54.6
comp=Z,13nm,1.2s
KHC Kasperske Hory 89.61 328⇑ *e*P **P 00 40 53.9 -0.2**
KHC pmax pmax
comp=Z,9.0nm,1.2s
KHC Kasperske Hory 89.61 328 *e*P **P 00 40 52.9 -1.2**
DAVOX Davos/Dischmat 89.81 325 LR LR 01 20 46.8
comp=Z,71nm,19.7s,baz=88,slow=35
RETA Reutte 89.84 326 *i* P **P 00 40 55.9 +0.6**
comp=Z,16nm,1.2s
HILR Hailar Array B 89.86 31 P **P 00 40 54.7 -0.6**
comp=Z,6.1nm,0.8s,baz=145,slow=5.4,SNR=5.0
comp=Z,6.1nm,0.8s
DAVA Damuels 90.15 325 *i* P **P 00 40 57.4 +0.6**
comp=Z,12nm,0.8s
MDT Midelt 90.34 307 LR LR 01 19 51.5
comp=Z,143nm,20.9s,baz=110,slow=34
JCJ Chichijima 90.43 60 LR LR 01 18 20.6
comp=Z,45nm,18.1s,baz=116,slow=34
MD01 Midelt array s 90.48 307 P **P 00 40 58.8 +0.1**
KLMR Klimovskoe 90.58 347 *e*P **P 00 40 56.1 -2.2**
KLMR pmax pmax
comp=Z,39nm,1.4s
BBTS Babate 90.77 286 LR LR 01 22 21.9
comp=Z,136nm,18.1s,baz=260,slow=36
BNX BinXian 91.17 38 ⇑P **P 00 41 00.4 -1.0**
BNX pmax pmax
comp=Z,10.0nm,1.3s
CLL Collm 91.40 330 *e*Px Px 00 41 00.0
CLL *e*PS **PnS 00 53 12.0 -0.3**
CLL *e*SS SS 00 58 22.0 +14
CLL L L 01 19 00.0
comp=Z,100nm,21.7s
MJAR Matsushiro Arr 92.45 50 P **P 00 41 06.8 -0.8**
MJAR IAmb IAmb 00 41 08.2
comp=Z,10nm,1.1s
MJAR Matsushiro Arr 92.45 50 P **P 00 41 07.0 -0.6**
comp=Z,9.3nm,1.1s,baz=223,slow=5.7,SNR=11
MJAR LR LR 01 20 41.9
comp=Z,46nm,21.3s,baz=237,slow=34
comp=Z,9.3nm,1.1s
MJAR Matsushiro Arr 92.45 50 P **P 00 41 07.0 -0.6**
ESDC Sonseca Array 93.60 313 P **P 00 41 13.6 +0.7**
ESDC IAmb IAmb 00 41 22.8
comp=Z,9.3nm,1.4s
ESDC Sonseca Array 93.60 313 P **P 00 41 12.4 -0.5**
comp=Z,4.2nm,1.1s,baz=120,slow=3.8,SNR=8.7
ESDC LR LR 01 21 09.8
comp=Z,85nm,21.6s,baz=118,slow=34
comp=Z,4.2nm,1.1s
PAB San Pablo 93.78 313 P **P 00 41 14.8 +1.0**
PAB IAmb IAmb 00 41 19.2
comp=Z,19nm,1.4s
PAB San Pablo 93.78 313 P **P 00 41 14.8 +1.0**
PAB pmax pmax
comp=Z,19nm,1.4s
FINES FINESS Array B 94.33 342 P **P 00 41 14.7 -0.8**
comp=Z,1.6nm,0.7s,baz=156,slow=7.2,SNR=5.6
FINES LR LR 01 24 21.1
comp=Z,112nm,18.5s,baz=133,slow=36
comp=Z,1.6nm,0.7s
NRIK Noril'sk 97.53 7 LR LR 01 24 03.2
comp=Z,149nm,20.1s,baz=224,slow=35
NRIK Noril'sk 97.53 7⇑ *eP* **P 00 41 29.5 -0.5**
NRIK pmax pmax
comp=Z,8.0nm,1.6s
APA Apatity 97.80 348⇓ *eP* P 00 41 22.8 -8.5
APA MLR MLR
comp=Z,488nm,6.2s
ASAJ Asahikawa 99.20 45 LR LR 01 24 47.0
comp=Z,42nm,19.4s,baz=136,slow=34
TBI Tubuai 118.72 142 *e*SS SS 01 04 14.8 -5.5
comp=Z,517nm,27.2s
TBI Tubuai 118.72 142 *e*LR LR 01 22 47.9
comp=Z,677nm,29.8s
PPT2 Papeete2 123.17 138 *e*LR LR 01 24 54.7
comp=Z,214nm,29.8s
PPT2 *e*LR LR 01 24 55.8
comp=Z,227nm,24.8s
RKT Rikitea 125.68 155 *e*LR LR 01 26 00.6
comp=Z,41μm,39.5s
RKT *e*LR LR 01 26 05.1
comp=Z,1μm,27.0s
TAOE Nuku Hiva Isla 135.63 140 *e*LR LR 01 30 40.5
comp=Z,169nm,30.7s
ILAR Eielson Array 136.86 20 PKPdf 00 47 18.1 -0.5
ILAR Eielson Array 136.86 20 PKP **PKPdf 00 47 17.4 -1.2**
comp=Z,4.7nm,1.2s,baz=292,slow=2.4,SNR=13
ILAR Eielson Array 136.86 20 PKIKP **PKPdf 00 47 18.1 -0.5**
MCK McKinley 136.90 22 PKiKP 00 47 20.5 0.0
MCK McKinley 136.90 22 PKIKP **PKiKP 00 47 20.5 0.0**
OTAV Otavalo 137.09 237 PKiKP 00 47 23.1 +0.1
OTAV Otavalo 137.09 237 PKIKP **PKiKP 00 47 23.1 +0.1**
STLK Strandline Lak 137.22 26 PKPdf **PKiKP 00 47 21.4 +0.1**
CUT Chulitna 137.27 24 PKPdf **PKPdf 00 47 19.3 -0.1**
SPU Mount Spurr 137.31 27 PKPdf **PKiKP 00 47 22.6 +1.1**
P19K Oil Pt 137.67 29 PKPdf **PKPdf 00 47 17.8 -2.5**
DHY Denali Highway 137.86 22 PKPdf **PKPdf 00 47 21.1 +0.4**
BCAR Beaver Creek A 139.65 20 PKPdf 00 47 24.3 +0.5
YKA Yellowknife Ar 144.78 1 PKPbc 00 47 32.0 +0.1
YKA Yellowknife Ar 144.78 1 PKP **PKPab 00 47 31.8 0.0**
comp=Z,17nm,0.9s,baz=336,slow=3.9,SNR=16
YKA Yellowknife Ar 144.78 1 PKIKP PKPbc 00 47 32.0 +0.1
SSPA Standing Stone 147.99 304 PKPdf 00 47 40.0 +1.0
P57A Homestead Farm 148.34 302 PKPdf 00 47 40.5 +0.8
ERPA Erie 149.11 307 PKPdf **PKPdf 00 47 40.4 -0.5**
FFC Flin Flon 151.37 346 PKPbc 00 47 49.7 -0.3
FFC Flin Flon 151.37 346 PKIKP **PKPbc 00 47 49.7 -0.3**
KMSC Kings Mountain 151.67 294 PKPdf **PKPdf 00 47 44.8 -0.3**
ACSO Alum Creek Sta 151.84 305 PKPbc **PKPbc 00 47 51.4 -0.2**
P51A Williamsport 152.12 304 PKPab **PKPab 00 48 00.5 -1.4**
ULM Lac du Bonnet 153.49 335 PKPbc **PKPbc 00 47 54.0 -0.8**
comp=Z,12nm,0.6s,baz=51,slow=2.8,SNR=11
E09A Wood Farm, Sta 160.43 10 PKPab **PKPab 00 48 37.3 +0.2**
G08A Pilot Rock 161.47 13 PKPdf 00 47 57.9 +0.4
RSSD Black Hills 161.62 338 PKPdf 00 47 58.5 +0.6
RSSD PKPab **PKPab 00 48 43.4 +0.7**
RSSD Black Hills 161.62 338 PKIKP **PKPdf 00 47 58.5 +0.6**
BOZ Bozeman (W) 161.68 356 PKPdf **PKPdf 00 47 58.5 +0.7**
BOZ PKPab **PKPab 00 48 41.7 -1.1**
BOZ Bozeman (W) 161.68 356 PKIKP **PKPdf 00 47 58.5 +0.7**
BOZ 00 48 41.7
DLMT Dillon 161.95 358 PKPdf **PKPdf 00 47 58.5 +0.4**
DLMT PKPab **PKPab 00 48 44.3 +0.3**
I07A Izee 162.50 15 PKPdf **PKPdf 00 48 00.1 +1.5**
I07A PKPab **PKPab 00 48 47.2 +0.9**
BCYI Bear Canyon 163.01 0 PKPab **PKPab 00 48 48.9 +0.2**
MOOW Moose Ponds 163.45 354 PKPab **PKPab 00 48 51.1 +0.5**
K22A Casper 163.71 342 PKPdf **PKPdf 00 47 59.8 -0.1**
K22A PKPab **PKPab 00 48 51.8 -0.1**
M02C Callahan 163.88 27 PKPab **PKPab 00 48 53.8 +1.3**
PDAR Pinedale Array 164.26 350 PKP **PKPdf 00 48 00.0 -0.5**
comp=Z,2.7nm,0.9s,baz=324,slow=0.7,SNR=18
PDAR PKPab **PKPab 00 48 53.6 -0.7**
comp=Z,0.5nm,0.9s,baz=344,slow=5.3,SNR=1.2
N02D Trinity Center 164.29 27 PKPab **PKPab 00 48 53.7 -0.6**
KHBM Hayfork Bally 164.33 29 PKPdf **PKPdf 00 48 02.0 +1.4**
KHBM PKPab **PKPab 00 48 55.2 +0.5**
O02D Mt. Diablo Mer 164.92 29 PKPdf **PKPdf 00 48 02.5 +1.5**
HVU Hansel Valley 165.53 358 PKPdf **PKPdf 00 48 02.6 +1.1**
HVU PKPab **PKPab 00 48 59.9 +0.1**
HVU Hansel Valley 165.53 358 PKIKP **PKPdf 00 48 02.6 +1.1**
HWUT Hardware Ranch 165.64 355 PKPdf **PKPdf 00 48 01.2 -0.5**
HWUT PKPab **PKPab 00 49 00.4 +0.1**
HAYD Hayden 165.89 341 PKPdf 00 48 02.1 +0.1
ORV Oroville 165.98 27 PKPdf **PKPdf 00 48 01.7 0.0**
ORV **PKPab 00 49 00.7 -1.0**
ORV Oroville 165.98 27 PKIKP **PKPdf 00 48 01.7 0.0**
ORV 00 49 00.7
BEKR Beckworth 166.14 23 PKPab 00 49 02.7 +0.1
ELK Elko 166.48 6 PKP **PKPdf 00 48 02.8 +0.4**
comp=Z,2.7nm,1.0s,baz=343,slow=1.3,SNR=8.3
ELK PKPab **PKPab 00 49 04.3 +0.3**
comp=Z,1.9nm,0.9s,baz=1.7,slow=2.6,SNR=5.2
BSUT Blindstream Ca 166.62 352 PKPdf **PKPdf 00 48 03.1 +0.4**
BSUT PKPab **PKPab 00 49 04.6 -0.3**
MPK Martis Peak 166.76 23 PKPdf **PKPdf 00 48 04.1 +1.4**
MPK **PKPab 00 49 03.6 -1.9**
T25A Trinidad 167.64 325 PKPdf 00 48 05.0 +1.6
T25A PKPab **PKPab 00 49 09.0 -0.4**
NVAR Mina Array Bea 168.12 20 PKPdf 00 48 03.5 -0.1
NVAR PKPab **PKPab 00 49 10.1 -1.3**
NVAR Mina Array Bea 168.12 20 PKP **PKPdf 00 48 04.2 +0.5**
comp=Z,2.7nm,1.1s,baz=259,slow=0.2,SNR=11
PV21 Cone Mtn., Par 168.19 343 PKPdf **PKPdf 00 48 04.0 +0.3**
PV21 PKPab **PKPab 00 49 12.0 +0.2**
SPR3 Spring Creek 3 168.29 4 PKPdf **PKPdf 00 48 04.0 +0.1**
SPR3 PKPab **PKPab 00 49 12.9 +0.7**
PV23 Carpenter Ridg 168.30 343 PKPdf 00 48 05.7 +1.8
PV23 **PKPab 00 49 12.8 +0.5**
PV23 Carpenter Ridg 168.30 343 P **PKPab 00 49 12.8 +0.5**
PV04 Paradox Valley 168.33 343 PKPdf **PKPdf 00 48 04.7 +0.9**
PV04 **PKPab 00 49 12.4 +0.1**
PV04 Paradox Valley 168.33 343 IAmb IAmb 00 49 20.8
comp=Z,5.5nm,1.1s
PV04 Paradox Valley 168.33 343 P **PKPab 00 49 12.4 +0.1**
PV12 Saucer Basin, 168.38 342 PKPdf 00 48 05.3 +1.5
PV12 **PKPab 00 49 13.2 +0.7**
PV12 Saucer Basin, 168.38 342 P **PKPab 00 49 13.2 +0.7**
PV10 Paradox Valley 168.38 343 PKPdf 00 48 05.4 +1.5
PV10 PKPab **PKPab 00 49 12.3 -0.3**
PV14 Lion Creek, Pa 168.38 343 PKPdf **PKPdf 00 48 05.1 +1.2**
PV14 PKPab **PKPab 00 49 12.8 +0.2**
PV11 David Mesa, Pa 168.41 342 IAmb IAmb 00 49 22.8
comp=Z,14nm,1.1s
PV11 David Mesa, Pa 168.41 342 P **PKPab 00 49 13.3 +0.6**
PV16 Nysswonger Mesa 168.41 343 PKPdf 00 48 05.8 +1.9
PV16 **PKPab 00 49 13.2 +0.5**
PV16 Nysswonger Mesa 168.41 343 IAmb IAmb 00 49 13.8
comp=Z,10nm,1.1s
PV16 Nysswonger Mesa 168.41 343 P **PKPab 00 49 13.2 +0.5**
PV19 Morning Glory 168.43 343 PKPdf 00 48 05.3 +1.4
PV19 **PKPab 00 49 13.0 +0.2**
PV19 Morning Glory 168.43 343 IAmb IAmb 00 49 15.7
comp=Z,9.8nm,1.1s
PV19 Morning Glory 168.43 343 P **PKPab 00 49 13.0 +0.2**
PV03 Paradox Valley 168.45 342 PKPdf 00 48 05.3 +1.4
PV03 **PKPab 00 49 12.9 0.0**
PV03 Paradox Valley 168.45 342 IAmb IAmb 00 49 13.9
comp=Z,9.8nm,1.1s
PV03 Paradox Valley 168.45 342 P **PKPab 00 49 12.9 0.0**
PV02 Paradox Valley 168.46 342 PKPdf 00 48 05.4 +1.5
PV02 PKPab **PKPab 00 49 11.9 -1.0**
PV18 Skein Mesa, Pa 168.47 343 PKPdf 00 48 05.3 +1.5
PV18 **PKPab 00 49 13.4 +0.4**
PV18 Skein Mesa, Pa 168.47 343 P **PKPab 00 49 13.4 +0.4**
PV13 Radium Mtn., P 168.53 342 IAmb IAmb 00 49 14.3
comp=Z,8.6nm,1.1s
PV13 Radium Mtn., P 168.53 342 P **PKPab 00 49 13.2 -0.1**
ANMO Albuquerque 170.39 324 PKP **PKPdf 00 48 05.2 +0.1**
comp=Z,2.1nm,1.0s,baz=260,slow=1.7,SNR=5.6
LRMC Laurel Mtn Rad 171.01 24 PKPdf 00 48 08.0 +2.7
LRMC PKPab **PKPab 00 49 23.4 -0.8**
TXAR Lajitas Array 171.29 286 PKPdf 00 48 04.4 -1.3
TXAR **PP 00 53 16.4 -0.6**
TXAR Lajitas Array 171.29 286 PKP **PKPdf 00 48 04.7 -0.9**
comp=Z,3.1nm,1.1s,baz=122,slow=1.6,SNR=14
TXAR PP **PP 00 53 17.3 +0.3**
comp=Z,0.5nm,0.9s,baz=76,slow=5.3,SNR=4.5
TX31 Lajitas Ar. Si 171.29 286 PKPdf **PKPdf 00 48 06.8 +1.2**
VHRN Van Horn 171.95 298 PKPdf 00 48 05.9 -0.1

*IDC **09** 00:32:13.3±1.2,27.05S×67.00E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=45.5km s-min=28.2km az=66.0*

ISC 09 00:32:14.9±1.2,**27.1S**±0.2×**67.0E**±0.3,**h10**km,**n10,** σ0.6**4/7, mb4.1/7, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04N2	**CROZET ISLANDS**	**22.57**	**208**	T	T	01 00 06.1	
	baz=36,slow=74						
H04N1	**CROZET ISLANDS**	**22.57**	**208**	T	T	01 00 07.5	
	baz=36,slow=74						
H04N3	**CROZET ISLANDS**	**22.58**	**208**	T	T	01 00 06.3	
	baz=36,slow=74						
ASAR	**Alice Springs**	**59.91**	**103**	P	**P**	**00 42 22.1**	**+0.6**
	1.6nm,0.9s,baz=252,slow=6.0,SNR=5.5						
	1.6nm,0.9s						
WRA	**Warramunga Arr**	**61.53**	**99**	P	**P**	**00 42 31.7**	**-0.9**
	1.5nm,0.9s,baz=251,slow=6.9,SNR=5.4						
	1.5nm,0.9s						
QSPA	**South Pole Qui**	**63.08**	**180**	P	**P**	**00 42 42.4**	**+0.1**
	3.4nm,1.0s,baz=304,slow=4.1,SNR=4.2						
	3.4nm,1.0s						
BRTR	**Keskin Array B**	**73.36**	**334**	P	**P**	**00 43 46.9**	**-0.1**
	0.4nm,0.8s,baz=159,slow=4.5,SNR=2.5						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**74.80**	**11**	P	**P**	**00 43 55.4**	**+0.2**
	0.5nm,0.7s,baz=191,slow=5.9,SNR=3.3						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**82.13**	**11**	P	**P**	**00 44 34.9**	**-0.5**
	1.6nm,0.7s,baz=197,slow=5.3,SNR=3.9						
	1.6nm,0.7s						
SONM	**Songino Array**	**82.53**	**26**	P	**P**	**00 44 38.3**	**+0.5**
	0.5nm,0.8s,baz=212,slow=5.1,SNR=2.3						
	0.5nm,0.8s						

*JMA **09** 00:33:20.8±0.2,24°N±1°,122°E±0.7, h26km, MV2.4/7, NW OFF ISHIGAKIJIMA IS*
*TAP **09** 00:33:21.0,24.06N×122.44E, h30km, ML2.8, D*

ISC 09 00:33:20.4±1.1,**24.01N**±0.03×**122.45E**±0.03,**h27**km±12km, **n71,** σ0.**54**/130**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.63**	**46**	P	**Pb**	**00 33 33.1**	**+0.2**
JYNG				*e*S	**Sb**	**00 33 41.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.68**	**49**	P	**Pb**	**00 33 34.0**	**+0.2**
YOJ				*e*S	**Sb**	**00 33 42.7**	**-0.2**
YOJ	**Yonaguni jima**	**0.68**	**49**	P	**Pb**	**00 33 34.0**	**+0.2**
YOJ				S	**Sb**	**00 33 42.5**	**-0.4**
EWUT	**Wuta**	**0.75**	**305**	*i* P	**Pb**	**00 33 34.7**	**-0.1**
EWUT				*i* S	**Sn**	**00 33 45.5**	**-0.2**
ENA	**Nanau**	**0.77**	**303**	*e*P	**Pn**	**00 33 35.6**	**+0.1**
ENA				S	**Sn**	**00 33 45.5**	**-0.7**
ETL	**Fush Village**	**0.77**	**281**	*e*P	**Pb**	**00 33 35.1**	**-0.1**
ETL				*e*S	**Sn**	**00 33 46.0**	**-0.3**
TWD	**Chiawan**	**0.78**	**275**	*e*P	**Pn**	**00 33 35.2**	**-0.5**
TWD				S	**Sb**	**00 33 45.7**	**+0.1**
ESAO	**Su ao**	**0.79**	**316**	P	**Pn**	**00 33 35.6**	**-0.2**
ESAO				S	**Sn**	**00 33 45.9**	**-0.8**
NACB	**Ninganchiao**	**0.80**	**282**	P	**Pn**	**00 33 35.5**	**-0.3**
NACB				*e*S	**Sb**	**00 33 46.5**	**+0.4**
TWC	**Suao**	**0.81**	**318**	P	**Pn**	**00 33 35.5**	**-0.6**
TWC				S	**Sb**	**00 33 45.2**	**-1.2**
SHUL	**Shoufeng**	**0.84**	**255**	P	**Pn**	**00 33 36.3**	**-0.2**
SHUL				*e*S	**Sn**	**00 33 48.5**	**+0.6**
ETM	**Tongmen**	**0.87**	**267**	P	**Pn**	**00 33 36.5**	**-0.5**
ETM				*e*S	**Sb**	**00 33 48.0**	**-0.4**
ETLH	**Xiulin Townshi**	**0.90**	**283**	P	**Pn**	**00 33 37.1**	**-0.3**
ETLH				S	**Sn**	**00 33 49.6**	**0.0**
LXIB	**Xiulin Townshi**	**0.94**	**271**	P	**Pn**	**00 33 37.9**	**-0.2**
LXIB				S	**Sn**	**00 33 50.3**	**-0.5**
ESL	**Shilin**	**0.95**	**258**	*e*P	**Pn**	**00 33 36.8**	**-1.2**
ESL				*e*S	**Sn**	**00 33 49.4**	**-1.2**
LATG	**Datong**	**0.99**	**302**	*e*P	**Pb**	**00 33 39.1**	**0.0**
TWE	**Neicheng**	**1.00**	**315**	P	**Pb**	**00 33 39.0**	**-0.2**
TWE				*i* S	**Sb**	**00 33 51.8**	**-0.2**
WARBT	**Fenglin Townsh**	**1.01**	**253**	P	**Pn**	**00 33 38.6**	**-0.3**
WARBT				S	**Sn**	**00 33 52.0**	**-0.3**
ENTT	**Nioudou**	**1.02**	**308**	*e*P	**Pb**	**00 33 39.6**	**+0.1**
NNSB	**Datong**	**1.06**	**293**	P	**Pn**	**00 33 39.8**	**+0.1**
NNSB				S	**Sb**	**00 33 53.8**	**+0.2**
NNS	**Nan Shan**	**1.07**	**294**	P	**Pn**	**00 33 40.1**	**+0.4**
NNS				S	**Sb**	**00 33 54.6**	**+0.6**
HGSD	**Ruisui**	**1.07**	**241**	*e*P	**Pn**	**00 33 39.7**	**0.0**
HGSD				*e*S	**Sn**	**00 33 53.7**	**0.0**
TWB1	**Santiao Chiao**	**1.08**	**337**	*e*P	**Pn**	**00 33 39.6**	**-0.2**
FUSB	**Fushanzhiwuyua**	**1.08**	**314**	P	**Pb**	**00 33 40.6**	**0.0**
FUSB				S	**Sb**	**00 33 55.0**	**+0.7**
WHF	**Hehuan Shan**	**1.09**	**277**	*e*P	**Pn**	**00 33 40.3**	**0.0**
WHF				*e*S	**Sn**	**00 33 54.3**	**-0.4**
TIPB	**Shuangxi**	**1.11**	**330**	*e*P	**Pn**	**00 33 40.2**	**-0.1**
TIPB				*i* S	**Sb**	**00 33 55.1**	**-0.1**
FSS	**Fushou**	**1.12**	**282**	*e*P	**Pn**	**00 33 41.2**	**+0.5**
FUSS				*e*S	**Sb**	**00 33 55.8**	**+0.1**
EHYH	**Wanrong**	**1.13**	**243**	*e*P	**Pn**	**00 33 40.4**	**-0.2**
EHYH				*e*S	**Sn**	**00 33 54.9**	**-0.3**
EHY	**Hungye**	**1.15**	**244**	*e*P	**Pn**	**00 33 41.0**	**+0.2**
EHY				*e*S	**Sn**	**00 33 55.3**	**-0.3**
NWLT	**Wulai**	**1.15**	**312**	*e*P	**Pb**	**00 33 41.4**	**-0.3**
NWLT				*e*S	**Sb**	**00 33 56.5**	**+0.2**
OWD	**Renai**	**1.16**	**267**	P	**Pn**	**00 33 41.4**	**+0.3**
OWD				S	**Sn**	**00 33 55.8**	**-0.4**
YHNB	**Yeheng**	**1.18**	**304**	P	**Pb**	**00 33 41.7**	**-0.5**
YHNB				*e*S	**Sb**	**00 33 57.0**	**-0.1**
TWT	**Tachien**	**1.19**	**282**	*e*P	**Pb**	**00 33 42.8**	**+0.4**
NSK	**Sanguang**	**1.19**	**304**	P	**Pn**	**00 33 41.9**	**+0.5**
NSK				*e*S	**Sb**	**00 33 57.0**	**-0.5**
SXI1	**Grass Mountain**	**1.20**	**334**	P	**Pn**	**00 33 41.3**	**-0.2**
SXI1				S	**Sb**	**00 33 57.2**	**-0.5**
TDCB	**Techi**	**1.20**	**282**	P	**Pn**	**00 33 42.4**	**+0.8**
TDCB				S	**Sn**	**00 33 57.4**	**+0.3**
WUSB	**Renai**	**1.22**	**269**	P	**Pn**	**00 33 42.3**	**+0.5**
WUSB				S	**Sn**	**00 33 57.9**	**+0.4**
IRIF	**Iriomote-Funau**	**1.22**	**74**	*e*P	**Pb**	**00 33 42.6**	**-0.2**
NWF	**Wu-fen Shan**	**1.22**	**330**	P	**Pn**	**00 33 42.0**	**+0.2**
NWF				S	**Sb**	**00 33 58.8**	**+0.6**
WFSB	**Wu-fen Shan**	**1.22**	**330**	*e*P	**Pn**	**00 33 41.6**	**-0.1**
WFSB				*e*S	**Sb**	**00 33 58.8**	**+0.7**
YULB	**Yu-li**	**1.22**	**240**	*i* P	**Pn**	**00 33 42.1**	**+0.3**
YULB				S	**Sn**	**00 33 57.1**	**-0.3**
VWDT	**VWDT**	**1.22**	**258**	P	**Pn**	**00 33 42.6**	**+0.8**
VWDT				S	**Sn**	**00 33 57.8**	**+0.4**
TWF1	**Yuli**	**1.24**	**238**	P	**Pn**	**00 33 42.5**	**+0.4**
TWF1				*e*S	**Sn**	**00 33 58.2**	**+0.3**
TWA	**Mucha**	**1.25**	**321**	*e*P	**Pb**	**00 33 43.4**	**+0.1**
TWA				*e*S	**Sb**	**00 34 00.1**	**+1.1**
FULB	**Fuli**	**1.33**	**233**	*e*P	**Pn**	**00 33 43.2**	**-0.1**
FULB				*e*S	**Sn**	**00 34 00.8**	**+0.7**
NFF	**Wufeng Townshi**	**1.36**	**297**	*e*P	**Pb**	**00 33 45.3**	**0.0**
NFF				*e*S	**Sb**	**00 34 02.4**	**+0.1**
SSLB	**Suanglung**	**1.38**	**261**	*e*P	**Pn**	**00 33 45.1**	**+1.1**
SSLB				*e*S	**Sn**	**00 34 01.8**	**+0.4**
YM01	**YM01**	**1.38**	**325**	*e*P	**Pn**	**00 33 44.3**	**+0.2**
YM01				*e*S	**Sb**	**00 34 02.4**	**-0.6**
WHP	**Taichung City**	**1.40**	**281**	*e*P	**Pn**	**00 33 45.2**	**+0.9**
WHP				*e*S	**Sb**	**00 34 03.0**	**-0.4**
WCS	**Beigang Elemen**	**1.40**	**272**	*e*P	**Pn**	**00 33 45.3**	**+1.0**
WCS				*e*S	**Sb**	**00 34 03.4**	**-0.1**
ZUZH	**Zhuzihu**	**1.41**	**325**	*e*P	**Pn**	**00 33 44.9**	**+0.5**
ZUZH				*e*S	**Sb**	**00 34 04.3**	**+0.6**
SMLT	**Sun Moon Lake**	**1.42**	**265**	*e*P	**Pn**	**00 33 45.6**	**+1.0**
SMLT				*e*S	**Sn**	**00 34 03.2**	**+0.8**
EHD	**Haiduan**	**1.43**	**233**	*e*P	**Pn**	**00 33 45.9**	**+1.4**
EHD				*e*S	**Sn**	**00 34 03.7**	**+1.3**
LIOB	**Emei**	**1.45**	**296**	P	**Pb**	**00 33 46.6**	**-0.2**
LIOB				*e*S	**Sb**	**00 34 05.1**	**+0.2**
NSTT	**Nanjuang**	**1.46**	**295**	*e*P	**Pb**	**00 33 46.1**	**-0.8**
TYC	**Yuchr**	**1.46**	**266**	*e*P	**Pn**	**00 33 46.1**	**+1.1**
TYC				*e*S	**Sb**	**00 34 04.7**	**-0.3**
YUS	**Yu-Shan**	**1.46**	**250**	*e*P	**Pn**	**00 33 46.0**	**+0.5**
YUS				*e*S	**Sn**	**00 34 04.2**	**+0.1**
EDH	**Donghe**	**1.47**	**226**	*e*P	**Pn**	**00 33 45.1**	**-0.1**
EDH				*e*S	**Sn**	**00 34 02.6**	**-1.0**
WHYT	**Xinyi Township**	**1.49**	**258**	*e*P	**Pb**	**00 33 47.3**	**-0.3**
ELDTW	**Lidau**	**1.54**	**238**	*e*P	**Pn**	**00 33 46.7**	**+0.4**
ELDTW				*e*S	**Sn**	**00 34 04.8**	**-0.8**
ALS	**Alishan**	**1.58**	**252**	*e*P	**Pn**	**00 33 47.7**	**+0.7**
ALS				*e*S	**Sn**	**00 34 07.4**	**+0.7**
TWGBT	**Beinan**	**1.73**	**227**	*e*P	**Pn**	**00 33 48.4**	**-0.4**
TWGBT				*e*S	**Sn**	**00 34 10.0**	**+0.1**
TWG	**Pinlang**	**1.73**	**227**	*e*P	**Pn**	**00 33 48.8**	**0.0**
TWG				*e*S	**Sn**	**00 34 09.3**	**-0.7**
STYH	**Taoyuan**	**1.75**	**242**	*e*P	**Pb**	**00 33 51.3**	**-0.5**
WDLH	**Douliu**	**1.78**	**260**	*e*P	**Pb**	**00 33 52.0**	**-0.3**
TPUB	**Ta-pu**	**1.81**	**247**	*e*P	**Pb**	**00 33 52.7**	**-0.2**
TPUB				*e*S	**Sb**	**00 34 15.0**	**-0.2**
CHN1	**Nanshi**	**1.94**	**245**	*e*P	**Pb**	**00 33 54.4**	**-0.8**
CHN1				*e*S	**Sb**	**00 34 19.0**	**0.0**
TWK	**Hsinying**	**1.94**	**248**	*e*P	**Pb**	**00 33 54.5**	**-0.7**
TWK				*e*S	**Sb**	**00 34 18.9**	**-0.2**
LYUB	**Lan-yu**	**2.15**	**202**	*e*P	**Pn**	**00 33 54.6**	**0.0**
MASBT	**Mashibuluo**	**2.17**	**230**	*e*P	**Pn**	**00 33 56.2**	**+1.4**
TAWH	**Dawu Township**	**2.20**	**221**	*e*P	**Pn**	**00 33 56.3**	**+1.1**

*IDC **09** 00:37:00.5±9.6, 14.87S×174.43W, h0km, mb4.0/2, mbtmp4.0/2, Error ellipse: s-maj=411.6km s-min=65.4km az=138.0*
*NEIC **09** 00:37:11.7±1.1, 15.41S±0.06×173.8W±0.1, h110km±9km, mb4.5/12, Error ellipse: s-maj=18.8km s-min=8.7km az=87.0*

ISC 09 00:37:09.5±1.1,**15.41S**±0.09×**173.9W**±0.1,**h94**km,**n9,** σ1**9/30/11, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.53**	**54**		**Pn**	**00 37 50.4**	**+1.4**
AFI				Sn	**Sn**	**00 38 17.7**	**-1.5**
NIUE	**Niue**	**5.25**	**135**		**Pn**	**00 38 27.4**	**+1.8**
NIUE				Sn	**Sn**	**00 39 23.0**	**-1.9**
WR8	**Warramunga Arr**	**49.23**	**257**	P	**P**	**00 45 49.1**	**+0.1**
WB0	**Warramunga Arr**	**49.35**	**257**	P	**P**	**00 45 49.6**	**-0.2**
WRA	**Warramunga Arr**	**49.39**	**257**	P	**P**	**00 45 49.5**	**-0.6**
WRA	**Warramunga Arr**	**49.39**	**257**	P	**P**	**00 45 48.8**	**-1.3**
	0.3nm,0.3s,baz=92,slow=7.3,SNR=5.8						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**49.66**	**252**	P	**P**	**00 45 52.1**	**0.0**
	2.6nm,0.4s,baz=87,slow=8.1,SNR=38						
	2.6nm,0.4s						
BRTR	**Keskin Array B**	**145.87**	**321**		**PKPab**	**00 56 38.7**	**-0.4**
BRTR	**Keskin Array B**	**145.87**	**321**	PKPbc	**PKPab**	**00 56 39.1**	**0.0**
	0.4nm,0.7s,baz=62,slow=3.4,SNR=3.9						

*IDC **09** 00:38:29.1±2.6, 35.43N×13.59E, h0km, mb3.7/4, mbtmp3.4/8, ML3.4/4, Error ellipse: s-maj=63.7km s-min=23.6km az=177.0*

ISC 09 00:38:25.3±2.0,**35.0N**±0.3×**13.10E**±0.07,**h10**km,**n8,** σ1**9/11/9, mb3.6/4, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEST	**Kesra**	**3.15**	**284**	Pn	**Pg**	**00 39 25.0**	**-0.6**
	1.4nm,0.3s,baz=99,slow=15,SNR=26						
KEST				Sn	**Sg**	**00 40 07.1**	**+0.6**
	5.1nm,0.3s,baz=24,slow=21,SNR=17						
	6.8nm,0.5s						
BRTR	**Keskin Array B**	**16.98**	**68**	Pn	**P**	**00 42 25.2**	**+0.3**
	baz=246,slow=14,SNR=3.3						
	0.7nm,1.0s						
MMAI	**Mount Meron Ar**	**18.59**	**90**	P	**Pn**	**00 42 41.8**	**-1.1**
	0.3nm,0.3s,baz=283,slow=13,SNR=1.7						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**19.56**	**32**	P	**Pn**	**00 42 53.6**	**-0.8**
	0.4nm,0.3s,baz=225,slow=10.0,SNR=2.6						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**27.71**	**13**	P	**P**	**00 44 12.9**	**-0.5**
	4.4nm,0.9s,baz=198,slow=8.7,SNR=3.0						
	4.4nm,0.9s						
KURBB	**Kurchatov Arra**	**48.87**	**50**	P	**P**	**00 47 12.5**	**+1.5**
	0.3nm,0.6s,baz=282,slow=8.1,SNR=2.3						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**52.02**	**55**	P	**P**	**00 47 36.2**	**+1.3**
	0.3nm,0.5s,baz=281,slow=7.2,SNR=2.8						
	0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**52.20**	**45**	P	**P**	**00 47 36.7**	**+0.6**
	0.3nm,0.4s,baz=278,slow=9.8,SNR=1.6						
	0.3nm,0.4s						

*IDC **09** 01:03:46.3±1.1, 12.38S×97.34E, h0km, mb3.8/9, mbtmp3.8/9, MS3.2/4, Error ellipse: s-maj=49.4km s-min=19.1km az=51.0*

ISC 09 01:03:48.2±1.2,**12.4S**±0.2×**97.4E**±0.3,**h10**km,**n25,** σ1**9/03/9, mb3.8/9, MS3.3/4, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**24.96**	**278**	T	T	01 34 31.8	
	baz=105,slow=75						
H08S3	**Diego Garcia H**	**24.97**	**279**	T	T	01 34 29.9	
	baz=105,slow=75						
H08S1	**Diego Garcia H**	**24.98**	**278**	T	T	01 34 13.2	
	baz=105,slow=75						
PALK	**Pallekele**	**25.62**	**319**	LR	LR	01 18 11.5	
	comp=Z,83nm,18.5s,baz=224,slow=34						
H01W3	**Cape Leeuwin H**	**27.07**	**149**	T	T	01 37 38.6	
	baz=319,slow=76						
H01W2	**Cape Leeuwin H**	**27.08**	**149**	T	T	01 37 39.2	
	baz=319,slow=76						
H01W1	**Cape Leeuwin H**	**27.09**	**149**	T	T	01 37 38.0	
	baz=319,slow=76						
CMAR	**Chiang Mai Arr**	**30.68**	**3**	LR	LR	01 23 11.9	
	comp=Z,33nm,18.1s,baz=280,slow=38						
WRA	**Warramunga Arr**	**36.21**	**107**	P	**P**	**01 10 50.3**	**-1.3**
	0.2nm,0.3s,baz=281,slow=9.1,SNR=5.3						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**36.39**	**113**	P	**P**	**01 10 53.4**	**+0.3**
	1.0nm,0.8s,baz=286,slow=8.3,SNR=13						
	1.0nm,0.8s						
H04N2	**CROZET ISLANDS**	**51.07**	**220**	T	T	02 06 20.1	
	baz=61,slow=74,SNR=136						
H04N1	**CROZET ISLANDS**	**51.09**	**220**	T	T	02 06 20.6	
	baz=61,slow=74,SNR=121						
H04N3	**CROZET ISLANDS**	**51.09**	**220**	T	T	02 06 19.3	
	baz=61,slow=74,SNR=128						
H04S1	**CROZET ISLANDS**	**51.31**	**219**	T	T	02 06 36.0	
	baz=63,slow=75,SNR=46						
H04S3	**CROZET ISLANDS**	**51.32**	**219**	T	T	02 06 35.5	
	baz=63,slow=75,SNR=118						
H04S2	**CROZET ISLANDS**	**51.32**	**219**	T	T	02 06 36.9	
	baz=63,slow=75,SNR=71						
AAK	**Ala-Archa**	**58.64**	**340**	LR	LR	01 37 53.6	
	comp=Z,21nm,21.8s,baz=216,slow=35						
MKAR	**Makanchi Array**	**60.44**	**348**	P	**P**	**01 13 57.5**	**-0.5**
	0.5nm,0.8s,baz=162,slow=12,SNR=3.1						
	0.5nm,0.8s						
SONM	**Songino Array**	**60.48**	**7**	P	**P**	**01 13 60.0**	**+1.6**
	0.6nm,0.9s,baz=193,slow=5.9,SNR=2.6						
	0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**64.86**	**347**	P	**P**	**01 14 27.3**	**-0.1**
	0.8nm,0.8s,baz=169,slow=5.9,SNR=5.9						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**66.93**	**352**	P	**P**	**01 14 40.2**	**-0.4**
	1.6nm,0.7s,baz=158,slow=4.8,SNR=7.4						
	1.6nm,0.7s						
BVAR	**Borovoye Array**	**69.14**	**343**	P	**P**	**01 14 54.0**	**-0.5**
	1.2nm,0.7s,baz=134,slow=6.2,SNR=6.4						
	1.2nm,0.7s						
VNDA	**Vanda**	**72.57**	**168**	P	**P**	**01 15 15.8**	**+0.6**
	0.6nm,0.7s,baz=303,slow=5.1,SNR=3.8						
	0.6nm,0.7s						
ASF	**Jabal al Asfar**	**72.83**	**309**	LR	LR	01 44 35.3	
	comp=Z,18nm,20.9s,baz=124,slow=34						
KBZ	**Khabaz**	**74.65**	**322**	P	**P**	**01 15 27.0**	**-0.9**
	3.7nm,0.9s,baz=134,slow=5.1,SNR=9.1						
	3.7nm,0.9s						

*DJA **09** 01:19:39.8±0.5, 8°S±2°×10°E±°, h17km±4km, M4.4/19, mB6.0/2, mb4.7/4, MLv4.3/19, Mw(mB)5.6/2*
*IDC **09** 01:19:44.6±1.1, 7.71S×108.12E, h98km±8km, mb3.5/9, mbtmp3.8/10, Error ellipse: s-maj=35.7km s-min=13.8km az=49.0*
*NEIC **09** 01:19:44.8±1.8, 7.6S±0.1×108.16E±0.06, h94km±7km, mb4.5/10, Error ellipse: s-maj=17.0km s-min=7.2km az=200.0*

ISC 09 01:19:42.3±1.0,**8.00S**±0.09×**107.95E**±0.04,**h80**km±9km, **n52,** σ1**8/86/59, mb4.1/14, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**1.06**	**310**	P	Pn	01 20 00.1	-2.0
CNJI				S	**Sn**	**01 20 13.7**	**-3.2**
KPJI	**Karang Pucung**	**1.18**	**56**	P	**Pn**	**01 20 02.5**	**-1.1**
KPJI				S	**Sn**	**01 20 19.5**	**0.0**
LEM	**Lembang**	**1.21**	**344**	P	**Pn**	**01 20 03.7**	**-0.4**
	963nm,0.6s,baz=116,slow=9.0,SNR=107						
LEM				LR	LR	01 20 16.1	
	comp=Z,96nm,20.5s,baz=188,slow=31						
LEM				S	**Sn**	**01 20 21.4**	**+0.9**
	737nm,0.6s,baz=276,slow=23,SNR=7.3						
LEM	**Lembang**	**1.21**	**344**	P	**Pn**	**01 20 03.8**	**-0.4**
LEM				S	**Sn**	**01 20 22.0**	**+1.5**
SKJI	**Sukabumi**	**1.70**	**306**	P	**Pn**	**01 20 09.4**	**-0.8**
SKJI				S	**Sn**	**01 20 31.6**	**+0.3**
DBJI	**Dramaga**	**1.86**	**320**	P	**Pn**	**01 20 11.4**	**-1.0**
DBJI				S	**Sn**	**01 20 37.4**	**+2.1**
YOGI	**Yogyakarta**	**2.33**	**86**	P	**Pn**	**01 20 19.4**	**+0.7**
UGM	**Wanagama**	**2.56**	**88**		**Pn**	**01 20 20.4**	**-1.3**
UGM	**Wanagama**	**2.56**	**88**	P	**Pn**	**01 20 20.3**	**-1.3**
UGM				S	**Sn**	**01 20 53.5**	**+1.6**
SBJI	**Serang**	**2.60**	**316**	P	**Pn**	**01 20 21.4**	**-0.8**
SBJI				S	**Sn**	**01 20 55.3**	**+2.5**
SMRI	**Semarang**	**2.65**	**69**		**Pn**	**01 20 22.3**	**-0.7**
SMRI	**Semarang**	**2.65**	**69**	P	**Pn**	**01 20 23.5**	**+0.6**
SMRI				S	**Sn**	**01 20 56.7**	**+2.5**
PCJI	**Pacitan**	**3.21**	**94**	P	**Pn**	**01 20 29.5**	**-0.9**
TBJI	**Tambak Boyo**	**4.05**	**73**	P	**Pn**	**01 20 41.6**	**-0.3**
TBJI				S	**Sn**	**01 21 31.1**	**+3.0**
KASI	**Kota Agung**	**4.22**	**306**	P	**Pn**	**01 20 44.4**	**+0.2**
KASI				S	**Sn**	**01 21 34.6**	**+2.3**
GRJI	**Gresik**	**4.62**	**77**	P	**Pn**	**01 20 48.8**	**-0.9**
GRJI				S	**Sn**	**01 21 41.9**	**-0.3**
MNAI	**Manna**	**6.14**	**306**	Pn	**Pn**	**01 21 12.3**	**+1.8**
JAGI	**Jajag, Banyuwa**	**6.16**	**95**		**Pn**	**01 21 10.7**	**-0.1**
JAGI	**Jajag, Banyuwa**	**6.16**	**95**	P	**Pn**	**01 21 12.4**	**+1.6**
	0.3nm27nm,0.6s						
KRJI	**Kerinci**	**8.73**	**312**	P	**Pn**	**01 21 46.3**	**+0.4**
TWSI	**Taliwang, Sumb**	**8.87**	**95**	P	**Pn**	**01 21 46.3**	**-1.5**
	15nm,1.1s						
PPSI	**Pulau Pagai**	**9.46**	**303**	P	**Pn**	**01 21 54.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**19.93**	**122**	P	**P**	**01 24 09.4**	**+1.6**
FITZ	**Fitzroy Crossi**	**19.93**	**122**	P	**P**	**01 24 08.8**	**+1.0**
	2.3nm,0.8s,baz=270,slow=4.0,SNR=7.9						
FITZ				S	**S**	**01 27 39.1**	**-8.8**
	1.4nm,0.9s,baz=0.0,slow=20,SNR=2.1						
H01W3	**Cape Leeuwin H**	**27.35**	**169**	T	T	01 55 15.8	
	baz=348,slow=76,SNR=4.8						
H01W1	**Cape Leeuwin H**	**27.36**	**169**	T	T	01 55 21.6	
	baz=348,slow=76,SNR=3.9						
H01W2	**Cape Leeuwin H**	**27.37**	**169**	T	T	01 55 20.7	
	baz=348,slow=76,SNR=5.7						
WRA	**Warramunga Arr**	**28.18**	**118**	P	**P**	**01 25 27.8**	**+0.3**
	0.4nm,0.8s,baz=290,slow=9.6,SNR=2.4						
	0.4nm,0.8s						
WR8	**Warramunga Arr**	**28.32**	**118**	P	**P**	**01 25 30.0**	**+1.3**
WR8				IAmb	IAmb	01 25 33.0	
	comp=Z,8.1nm,1.4s						
ASAR	**Alice Springs**	**29.35**	**125**	P	**P**	**01 25 38.9**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=316,slow=7.7,SNR=2.6						
	comp=Z,0.4nm,0.7s						
COEN	**Coen**	**35.06**	**103**	P	**P**	**01 26 27.9**	**0.0**
COEN				IAmb	IAmb	01 26 47.9	
	comp=Z,8.2nm,1.2s						
H08S2	**Diego Garcia H**	**35.12**	**268**	T	T	02 03 40.7	
	baz=93,slow=76,SNR=212						
H08S3	**Diego Garcia H**	**35.13**	**268**	T	T	02 03 41.0	
	baz=93,slow=76,SNR=46						
H08S1	**Diego Garcia H**	**35.14**	**268**	T	T	02 03 42.5	
	baz=93,slow=76,SNR=70						
STKA	**Stephens Creek**	**39.28**	**132**	P	**P**	**01 27 04.5**	**+1.1**
STKA	**Stephens Creek**	**39.28**	**132**	P	**P**	**01 27 04.5**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=327,slow=8.1,SNR=4.7						
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**55.61**	**359**	P	**P**	**01 29 09.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=176,slow=9.5,SNR=2.6						
SONM				PcP	**PcP**	**01 30 08.4**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=176,slow=3.7,SNR=4.8						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.14**	**340**	P	**P**	**01 29 32.7**	**-1.9**
MKAR	**Makanchi Array**	**59.14**	**340**	P	**P**	**01 29 32.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M22K	**Willow**	**0.27**	**335**		**Pn**	**01 40 40.0**	**-0.3**
M22K				IAML		01 40 47.0	
	comp=E,5μm,0.5s						
M22K	**Willow**	**0.27**	**335**		**Sn**	**01 40 46.8**	**+0.6**
PMR	**Palmer**	**0.37**	**77**		**Pn**	**01 40 41.0**	**-0.2**
PMR				IAML		01 40 48.7	
	comp=N,6μm,0.3s						
PMR	**Palmer**	**0.37**	**77**		**Sn**	**01 40 48.1**	**+0.2**
PMR	**Palmer**	**0.37**	**77**	P	**Pn**	**01 40 41.0**	**-0.2**
FIS	**Fire Island**	**0.40**	**204**		**Pn**	**01 40 42.2**	**+0.7**
FIS				IAML		01 40 51.6	
	comp=E,4μm,0.6s						
FIS				IAML		01 40 51.6	
	comp=N,6μm,0.6s						
SUA	**Susitna One**	**0.42**	**264**		**Pn**	**01 40 41.9**	**0.0**
SUA	**Susitna One**	**0.42**	**264**		**Sn**	**01 40 49.8**	**+0.7**
RC01	**Rabbit Creek A**	**0.43**	**170**		**Pn**	**01 40 41.7**	**-0.2**
RC01				IAML		01 40 50.9	
	comp=E,5μm,0.2s						
RC01				IAML		01 40 51.0	
	comp=N,4μm,0.3s						
RC01	**Rabbit Creek A**	**0.43**	**170**		**Sn**	**01 40 49.7**	**+0.7**
GHO	**Glory Hole Cre**	**0.53**	**60**		**Pn**	**01 40 43.1**	**-0.1**
GHO	**Glory Hole Cre**	**0.53**	**60**		**Sn**	**01 40 51.9**	**+0.6**
KNK	**Knik Glacier**	**0.69**	**97**		**Pn**	**01 40 45.5**	**+0.3**
KNK	**Knik Glacier**	**0.69**	**97**		**Sn**	**01 40 56.1**	**+1.1**
SML	**Sawmill**	**0.80**	**67**		**Pn**	**01 40 46.5**	**-0.2**
SML				IAML		01 40 59.3	
	comp=E,4μm,0.5s						
SML				IAML		01 41 00.4	
	comp=N,3μm,0.7s						
SML	**Sawmill**	**0.80**	**67**		**Sn**	**01 40 57.9**	**+0.4**
SKT	**Skwentna**	**0.92**	**302**		**Pn**	**01 40 48.0**	**-0.2**
SKT				IAML		01 41 02.1	
	comp=N,3μm,0.4s						
SKT	**Skwentna**	**0.92**	**302**		**Sn**	**01 41 00.8**	**+0.5**
CUT	**Chulitna**	**0.92**	**349**		**Pn**	**01 40 48.2**	**-0.1**
CUT	**Chulitna**	**0.92**	**349**		**Sn**	**01 41 01.1**	**+0.8**
STLK	**Strandline Lak**	**0.94**	**270**		**Pn**	**01 40 48.8**	**+0.2**
STLK				IAML		01 41 02.2	
	comp=N,2μm,0.3s						
STLK	**Strandline Lak**	**0.94**	**270**		**Sn**	**01 41 01.9**	**+1.0**
CAPN	**Captain Cook N**	**0.97**	**220**		**Pn**	**01 40 50.5**	**+1.6**
PWL	**Port Wells**	**0.99**	**130**		**Pn**	**01 40 49.5**	**+0.3**
PWL	**Port Wells**	**0.99**	**130**		**Sn**	**01 41 02.9**	**+0.7**
SLKM	**Skilak Lake**	**1.02**	**189**		**Pn**	**01 40 49.8**	**+0.1**
SLKM				IAML		01 41 05.8	
	comp=E,2μm,0.7s						
SLKM				IAML		01 41 06.5	
	comp=N,1μm,0.2s						
SLKM	**Skilak Lake**	**1.02**	**189**		**Sn**	**01 41 04.0**	**+1.2**
O22K	**Cooper Landing**	**1.03**	**176**		**Pn**	**01 40 49.9**	**+0.1**
O22K	**Cooper Landing**	**1.03**	**176**		**Sn**	**01 41 04.5**	**+1.4**
SPCG	**Spurr Capps Gl**	**1.05**	**259**		**Sn**	**01 41 05.0**	**+1.2**
M23K	**Glacier View**	**1.07**	**74**		**Sn**	**01 41 04.9**	**+0.9**
SPU	**Mount Spurr**	**1.10**	**254**		**Pn**	**01 40 50.9**	**+0.2**
SPCP	**Crater Peak Br**	**1.12**	**258**		**Pn**	**01 40 51.6**	**+0.4**
SPCP					**Sn**	**01 41 06.1**	**+0.7**
SPCR	**Spurr Chakacha**	**1.16**	**256**		**Pn**	**01 40 51.9**	**+0.3**
SPCR					**Sn**	**01 41 07.0**	**+0.6**
SPCR	**Spurr Chakacha**	**1.16**	**256**		**Pn**	**01 40 51.9**	**+0.3**
SPCR					**Sn**	**01 41 07.5**	**+1.0**
SPBG	**Spurr Blockage**	**1.22**	**259**		**Pn**	**01 40 52.9**	**+0.4**
SCM	**Sheep Creek Mo**	**1.26**	**74**		**Pn**	**01 40 53.5**	**+0.5**
SCM	**Sheep Creek Mo**	**1.26**	**74**		**Sn**	**01 41 09.6**	**+0.8**
WAT7	**Susitna Watana**	**1.41**	**20**		**Pn**	**01 40 55.8**	**+0.7**
SEW	**Seward**	**1.43**	**171**		**Pn**	**01 40 54.7**	**-0.4**
SEW				IAML		01 41 18.0	
	comp=N,713nm,0.6s						
WAT1	**Susitna Watana**	**1.47**	**25**		**Pn**	**01 40 56.3**	**+0.6**
WAT1					**Sn**	**01 41 14.4**	**+0.7**
WAT6	**Susitna Watana**	**1.48**	**42**		**Pn**	**01 40 56.5**	**+0.5**
WAT6					**Sn**	**01 41 15.0**	**+0.8**
GLI	**Glacier Island**	**1.49**	**114**		**Pn**	**01 40 56.3**	**+0.2**
GLI				IAML		01 41 16.2	
	comp=E,1μm,0.7s						
GLI	**Glacier Island**	**1.49**	**114**		**Sn**	**01 41 15.6**	**+1.3**
RDT	**Redoubt**	**1.55**	**234**		**Pn**	**01 40 57.1**	**+0.3**
M20K	**Styx River**	**1.59**	**285**		**Pn**	**01 40 58.1**	**+0.6**
M20K				IAML		01 41 20.7	
	comp=N,784nm,0.9s						
M20K				IAML		01 41 21.8	
	comp=E,796nm,0.7s						
DFR	**Drift River**	**1.65**	**237**		**Pn**	**01 40 58.6**	**+0.4**
DFR					**Sn**	**01 41 18.9**	**+0.7**
PPLA	**Purkeypile**	**1.76**	**323**		**Pn**	**01 41 00.3**	**+0.4**
PPLA				IAML		01 41 24.8	
	comp=E,715nm,0.7s						
PPLA				IAML		01 41 26.1	
	comp=N,752nm,0.8s						
RDWB	**Redoubt West**	**1.77**	**236**		**Pn**	**01 41 00.4**	**+0.5**
FID	**Port Fidalgo**	**1.82**	**113**	IAML		01 41 33.7	
	comp=N,1μm,0.5s						
BRLK	**Bradley Lake**	**1.82**	**196**		**Pn**	**01 41 00.7**	**+0.1**
BRLK				IAML		01 41 28.1	
	comp=E,608nm,0.5s						
BRSE	**Bradley Lake S**	**1.82**	**194**		**Pn**	**01 41 00.4**	**-0.3**
M24K	**Tolsona, Glenn**	**1.86**	**70**		**Pn**	**01 41 02.6**	**+1.4**
KLU	**Klutina**	**1.90**	**89**		**Pn**	**01 41 01.9**	**+0.2**
KLU				IAML		01 41 27.2	
	comp=N,718nm,0.5s						
KLU				IAML		01 41 33.7	
	comp=E,859nm,0.4s						
P23K	**Montague Islan**	**1.94**	**140**		**Pn**	**01 41 01.6**	**-0.6**
TRF	**Thorofare Moun**	**1.96**	**355**	IAML		01 41 31.2	
	comp=N,517nm,0.5s						
DHY	**Denali Highway**	**1.96**	**36**		**Pn**	**01 41 03.4**	**+0.8**
DHY				IAML		01 41 34.6	
	comp=N,386nm,0.4s						
DHY				IAML		01 41 34.9	
	comp=E,411nm,0.4s						
RND	**Reindeer**	**1.96**	**14**		**Pn**	**01 41 03.5**	**+0.9**
HIN	**Hinchinbrook I**	**1.99**	**123**		**Pn**	**01 41 03.2**	**+0.3**
HIN				IAML		01 41 37.8	
	comp=N,893nm,0.8s						
DIV	**Divide**	**2.02**	**99**		**Pn**	**01 41 03.5**	**+0.1**
DIV				IAML		01 41 34.8	
	comp=N,735nm,0.7s						
DIV				IAML		01 41 35.2	
	comp=E,475nm,0.4s						
CNPM	**China Poot**	**2.10**	**199**		**Pn**	**01 41 04.5**	**+0.1**
CNPM				IAML		01 41 36.6	
	comp=E,483nm,0.5s						
CNPM				IAML		01 41 36.7	
	comp=N,563nm,0.4s						
KTH	**Kantishna Hill**	**2.11**	**347**		**Pn**	**01 41 05.6**	**+1.1**
KTH				IAML		01 41 33.9	
	comp=E,665nm,0.6s						
KTH				IAML		01 41 35.7	
	comp=N,500nm,0.4s						
ILS	**Iliamna Low So**	**2.21**	**227**		**Pn**	**01 41 06.6**	**+0.7**
ILSW	**Iliamna Southw**	**2.22**	**228**		**Pn**	**01 41 06.9**	**+0.8**
EYAK	**Cordova Ski Ar**	**2.23**	**114**		**Pn**	**01 41 06.2**	**0.0**
EYAK				IAML		01 41 44.7	
	comp=E,362nm,0.5s						
EYAK				IAML		01 41 45.8	
	comp=N,516nm,0.5s						
MCK	**McKinley**	**2.27**	**11**		**Pn**	**01 41 08.1**	**+1.4**
MCK				IAML		01 41 47.9	
	comp=N,294nm,0.9s						
MCK				IAML		01 41 48.1	
	comp=E,270nm,0.8s						
N19K	**Bonanza Creek**	**2.34**	**255**	IAML		01 41 41.3	
	comp=E,248nm,0.8s						
HARP	**HAARP**	**2.40**	**66**		**Pn**	**01 41 09.8**	**+1.2**
L19K	**White Mountain**	**2.45**	**288**		**Pn**	**01 41 10.0**	**+0.8**
P19K	**Oil Pt**	**2.49**	**223**		**Pn**	**01 41 10.9**	**+1.1**
N25K	**Chitina, Valde**	**2.53**	**85**		**Pn**	**01 41 10.3**	**0.0**
N25K	**Chitina, Valde**	**2.53**	**85**	IAML		01 41 50.2	
	comp=N,384nm,0.8s						
N25K				IAML		01 41 51.2	
	comp=E,291nm,0.4s						
PAX	**Paxson**	**2.53**	**53**		**Pn**	**01 41 12.3**	**+1.9**
PAX				IAML		01 41 53.9	
	comp=E,208nm,0.8s						
PAX				IAML		01 41 55.4	
	comp=N,262nm,0.6s						
O19K	**Port Alsworth**	**2.54**	**241**		**Pn**	**01 41 10.6**	**+0.2**
BMRM	**Bremner River**	**2.61**	**100**		**Pn**	**01 41 10.9**	**-0.5**
BMRM	**Bremner River**	**2.61**	**100**	IAML		01 41 53.1	
	comp=N,354nm,0.4s						
BMRM				IAML		01 41 58.7	
	comp=E,373nm,0.6s						
BWN	**Browne**	**2.68**	**4**	IAML		01 42 12.8	
	comp=E,387nm,0.9s						
K20K	**Telida**	**2.69**	**315**	IAML		01 41 52.7	
	comp=E,180nm,0.8s						
M18K	**Stony River**	**2.85**	**272**		**Pn**	**01 41 15.0**	**+0.4**
GLB	**Gilahina Butte**	**2.91**	**89**		**Pn**	**01 41 15.4**	**-0.2**
GLB	**Gilahina Butte**	**2.91**	**89**	IAML		01 41 58.8	
	comp=N,200nm,0.6s						
GLB				IAML		01 42 04.7	
	comp=E,150nm,0.5s						
HMT	**Hamilton**	**2.99**	**111**		**Pn**	**01 41 15.9**	**-0.6**
O18K	**Koktuh Hills**	**3.10**	**240**		**Pn**	**01 41 18.1**	**0.0**
VRDI	**Verde Repeater**	**3.11**	**92**		**Pn**	**01 41 18.0**	**-0.4**
NEA2	**Nenana**	**3.12**	**6**		**Pn**	**01 41 19.1**	**+0.7**
KAIM	**Kayak Island**	**3.12**	**118**		**Pn**	**01 41 17.5**	**-0.8**
KAIM	**Kayak Island**	**3.12**	**118**	IAML		01 42 21.2	
	comp=E,160nm,0.7s						
KAIM				IAML		01 42 32.4	
	comp=N,154nm,1.1s						
NICHA	**Nichawak Mount**	**3.16**	**111**		**Pn**	**01 41 18.2**	**-0.7**
SYI	**Shuyak Island**	**3.17**	**204**		**Pn**	**01 41 19.0**	**0.0**
SYI	**Shuyak Island**	**3.17**	**204**	IAML		01 42 12.5	
	comp=E,142nm,0.7s						
SYI				IAML		01 42 27.8	
	comp=N,148nm,1.1s						
Q19K	**Cape Douglas,**	**3.20**	**218**		**Pn**	**01 41 20.1**	**+0.7**
HDA	**Harding Lake**	**3.20**	**23**		**Pn**	**01 41 21.0**	**+1.5**
HDA				IAML		01 42 16.5	
	comp=N,230nm,0.8s						
HDA				IAML		01 42 18.9	
	comp=E,159nm,0.5s						
BERG	**Berg Lake**	**3.22**	**108**		**Pn**	**01 41 19.1**	**-0.6**
MENT	**Mentasta**	**3.22**	**61**	P	**Pn**	**01 41 23.0**	**+3.2**
RIDG	**Independent Ri**	**3.23**	**44**	IAML		01 42 08.4	
	comp=E,302nm,0.7s						
RIDG				IAML		01 42 15.0	
	comp=N,212nm,0.6s						
CCB	**Clear Creek Bu**	**3.29**	**16**		**Pn**	**01 41 21.4**	**+0.7**
MCARA	**McCarthy VSAT**	**3.30**	**89**		**Pn**	**01 41 21.4**	**+0.6**
L18K	**Granite Mounta**	**3.30**	**285**	IAML		01 42 24.6	
	comp=N,114nm,0.9s						
J20K	**Nowinta River**	**3.31**	**326**	IAML		01 42 23.5	
	comp=E,163nm,0.7s						
J20K				IAML		01 42 25.2	
	comp=N,168nm,0.6s						
CRQM	**Cirque**	**3.36**	**100**		**Pn**	**01 41 21.6**	**-0.2**
CRQM	**Cirque**	**3.36**	**100**	IAML		01 42 19.9	
	comp=N,274nm,0.6s						
M26K	**Nabesna, AK**	**3.37**	**72**	IAML		01 42 25.1	
	comp=E,118nm,0.8s						
M26K				IAML		01 42 30.0	
	comp=N,148nm,0.7s						
L26K	**Log Cabin Wild**	**3.41**	**61**		**Pn**	**01 41 23.2**	**+0.8**
L26K	**Log Cabin Wild**	**3.41**	**61**	IAML		01 42 20.0	
	comp=E,217nm,0.7s						
DOT	**Dot Lake**	**3.44**	**49**		**Pn**	**01 41 26.3**	**+3.5**
DOT				IAML		01 42 20.9	
	comp=N,196nm,0.7s						
DOT				IAML		01 42 23.5	
	comp=E,204nm,0.6s						
COLA	**College**	**3.50**	**14**		**Pn**	**01 41 25.0**	**+1.5**
COLA	**College**	**3.50**	**14**	P	**Pn**	**01 41 24.9**	**+1.4**
TGL	**Tana Glacier**	**3.50**	**99**		**Pn**	**01 41 23.6**	**-0.1**
TGL	**Tana Glacier**	**3.50**	**99**	IAML		01 42 23.9	
	comp=N,214nm,0.5s						
BGLC	**Bering Glacier**	**3.52**	**110**		**Pn**	**01 41 23.6**	**-0.2**
IL31		**3.54**	**21**		**Pn**	**01 41 24.9**	**+0.8**
ILAR	**Eielson Array**	**3.54**	**21**	P	**Pn**	**01 41 25.4**	**+1.2**
	comp=N,1.9nm,0.3s,baz=202,slow=14,SNR=39			S	**Sn**	**01 42 06.0**	**+1.2**
ILAR							
	comp=N,14nm,0.6s,baz=201,slow=20,SNR=4.0						
	comp=N,3.5nm,0.5s						
IL01		**3.55**	**21**		**Pn**	**01 41 25.2**	**+1.0**
MLY	**Manley**	**3.56**	**354**		**Pn**	**01 41 25.3**	**+0.9**
PTPK	**Patty Peak**	**3.59**	**92**		**Pn**	**01 41 25.1**	**+0.2**
WAX	**Waxell Ridge**	**3.59**	**104**	IAML		01 42 31.4	
	comp=E,216nm,0.6s						
M17K	**Holitna River**	**3.63**	**272**		**Pn**	**01 41 25.4**	**+0.1**
M17K	**Holitna River**	**3.63**	**272**	IAML		01 42 30.5	
	comp=N,193nm,0.8s						
J19K	**Poorman**	**3.63**	**316**		**Pn**	**01 41 25.6**	**+0.2**
J19K				IAML		01 42 08.6	
	comp=E,101nm,0.6s						
J19K				IAML		01 42 25.8	
	comp=N,132nm,0.7s						
I23K	**Minto, Yukon-K**	**3.66**	**3**		**Pn**	**01 41 26.5**	**+0.7**
I23K	**Minto, Yukon-K**	**3.66**	**3**	IAML		01 42 43.0	
	comp=N,80nm,0.8s						
SCRK	**Sand Creek**	**3.67**	**45**	IAML		01 42 27.6	
	comp=N,91nm,0.6s						
SCRK				IAML		01 42 30.9	
	comp=E,105nm,0.6s						
N17K	**Nushagak Hills**	**3.69**	**258**		**Pn**	**01 41 26.4**	**+0.3**
N17K	**Nushagak Hills**	**3.69**	**258**	IAML		01 42 30.2	
	comp=N,92nm,0.6s						
SNH	**Sunshine Point**	**3.70**	**108**		**Pn**	**01 41 25.9**	**-0.4**
SNH	**Sunshine Point**	**3.70**	**108**	IAML		01 42 35.4	
	comp=E,98nm,0.8s						
J18K	**Innoko River**	**3.73**	**305**		**Pn**	**01 41 26.7**	**0.0**
J18K				IAML		01 42 28.2	
	comp=N,82nm,1.0s						
J25K	**Salcha River,**	**3.73**	**31**		**Pn**	**01 41 27.9**	**+1.1**
J25K	**Salcha River,**	**3.73**	**31**	IAML		01 42 17.1	
	comp=E,109nm,0.6s						
J25K				IAML		01 42 19.3	
	comp=N,99nm,0.4s						
BARK	**Barkley Ridge**	**3.77**	**104**		**Pn**	**01 41 27.1**	**-0.3**
ISLE	**Juniper Island**	**3.78**	**101**		**Pn**	**01 41 27.3**	**-0.2**
ISLE	**Juniper Island**	**3.78**	**101**	IAML		01 42 29.4	
	comp=E,136nm,0.6s						
ISLE				IAML		01 42 35.5	
	comp=N,173nm,1.1s						
POKR	**Poker Plat Res**	**3.79**	**16**		**Pn**	**01 41 28.0**	**+0.5**
I21K	**Tanana**	**3.80**	**347**		**Pn**	**01 41 28.6**	**+0.9**
M27K	**Edge Creek, AK**	**3.88**	**74**		**Pn**	**01 41 30.1**	**+1.2**
BAGI	**Bagley Icefiel**	**3.93**	**102**		**Pn**	**01 41 29.4**	**0.0**
BARN	**Barnard Glacie**	**3.99**	**93**		**Pn**	**01 41 30.6**	**+0.1**
BARN	**Barnard Glacie**	**3.99**	**93**	IAML		01 42 37.6	
	comp=N,82nm,0.4s						
BARN				IAML		01 42 44.9	
	comp=E,112nm,0.7s						
GRNC	**Granite Creek**	**4.02**	**98**		**Pn**	**01 41 30.6**	**-0.3**
GRNC	**Granite Creek**	**4.02**	**98**	IAML		01 42 36.1	
	comp=N,89nm,0.6s						
L17K	**Donlin**	**4.04**	**283**		**Pn**	**01 41 31.2**	**+0.2**
BCAR	**Beaver Creek A**	**4.09**	**64**		**Pn**	**01 41 32.7**	**+1.0**
MESA	**MESA**	**4.10**	**105**		**Pn**	**01 41 31.7**	**-0.4**
MESA	**MESA**	**4.10**	**105**	IAML		01 42 43.5	
	comp=N,126nm,0.7s						
MESA				IAML		01 42 49.0	
	comp=E,120nm,0.8s						
YAH	**Yahtse**	**4.13**	**103**		**Pn**	**01 41 32.2**	**-0.3**
YAH	**Yahtse**	**4.13**	**103**	IAML		01 42 46.7	
	comp=E,80nm,0.8s						
YAH				IAML		01 42 51.7	
	comp=N,82nm,0.9s						
K17K	**Iditarod**	**4.14**	**291**		**Pn**	**01 41 32.9**	**+0.6**
K17K				IAML		01 42 50.4	
	comp=N,77nm,1.1s						
K17K				IAML		01 42 54.1	
	comp=E,78nm,1.0s						
J26L	**Joseph Creek**	**4.16**	**41**	IAML		01 42 30.7	
	comp=E,102nm,0.5s						
J26L				IAML		01 42 31.5	
	comp=N,71nm,0.5s						
CTGM	**Chitina Glacie**	**4.17**	**94**		**Pn**	**01 41 32.9**	**0.0**
CTGM	**Chitina Glacie**	**4.17**	**94**	IAML		01 42 42.2	
	comp=N,97nm,0.6s						
RKAV	**Rock Avalanche**	**4.34**	**102**		**Pn**	**01 41 35.3**	**+0.1**
LOGN	**Logan Glacier**	**4.36**	**95**	IAML		01 42 46.4	
	comp=N,69nm,0.7s						
LOGN				IAML		01 43 00.7	
	comp=E,58nm,0.9s						
M16K	**Timber Creek**	**4.41**	**268**		**Pn**	**01 41 36.4**	**+0.4**
M16K	**Timber Creek**	**4.41**	**268**	IAML		01 42 55.2	
	comp=N,56nm,0.7s						
N16K	**Nishlik Lake**	**4.45**	**260**		**Pn**	**01 41 37.1**	**+0.4**
O16K	**Kokwok River B**	**4.49**	**248**		Pn	01 41 29.7	-7.4
O16K				IAML		01 42 46.1	
	comp=N,48nm,0.8s						
O16K				IAML		01 42 49.4	
	comp=E,49nm,1.2s						
CHX	**Chaix Hills**	**4.53**	**105**		**Pn**	**01 41 38.1**	**+0.2**
GCSA	**Galena City Sc**	**4.54**	**319**		**Pn**	**01 41 38.5**	**+0.7**
H20K	**Anotleneega Mo**	**4.58**	**333**		**Pn**	**01 41 38.0**	**-0.4**
L16K	**Owhat River**	**4.58**	**277**		**Pn**	**01 41 38.6**	**+0.1**
L16K	**Owhat River**	**4.58**	**277**	IAML		01 43 02.9	
	comp=N,53nm,0.9s						
L16K				IAML		01 43 03.8	
	comp=E,44nm,0.9s						
J17K	**VABM Dome**	**4.67**	**298**	IAML		01 43 00.5	
	comp=N,47nm,0.7s						
J17K				IAML		01 43 03.9	
	comp=E,44nm,0.9s						
O28M	**Mount Upton**	**4.75**	**95**		**Pn**	**01 41 41.2**	**+0.2**
O28M	**Mount Upton**	**4.75**	**95**	IAML		01 43 03.5	
	comp=N,57nm,0.9s						
IMAR	**Indian Mountai**	**4.81**	**341**		**Pn**	**01 41 42.3**	**+0.8**
I26K	**Coal Creek Min**	**4.86**	**35**	IAML		01 43 11.9	
	comp=E,82nm,1.2s						
I26K				IAML		01 43 18.4	
	comp=N,67nm,1.0s						
PCA	**Pinnacle**	**4.92**	**102**		**Pn**	**01 41 42.7**	**-0.5**
G21K	**Allakaket**	**5.27**	**344**		**Pn**	**01 41 48.8**	**+1.0**
G21K	**Allakaket**	**5.27**	**344**	IAML		01 42 49.8	
	comp=E,42nm,0.6s						
G21K				IAML		01 42 49.8	
	comp=N,36nm,0.7s						
H18K	**Honhosa River**	**5.29**	**317**	IAML		01 43 33.5	
	comp=N,30nm,0.9s						
J16K	**Anvik River**	**5.29**	**294**		**Pn**	**01 41 48.1**	**0.0**
J16K	**Anvik River**	**5.29**	**294**	IAML		01 43 41.6	
	comp=N,32nm,0.9s						
M15K	**Kasigluk River**	**5.31**	**266**		**Pn**	**01 41 48.5**	**+0.2**
G24K	**Hadweenzic Riv**	**5.32**	**10**	IAML		01 43 36.1	
	comp=E,24nm,1.1s						
I17K	**Unalakleet**	**5.52**	**300**		**Pn**	**01 41 51.9**	**+0.7**
L15K	**Ungalak Mounta**	**5.54**	**277**		**Pn**	**01 41 51.7**	**+0.1**
K15K	**Wolf Creek Mou**	**5.56**	**283**		**Pn**	**01 41 52.2**	**+0.3**
YUK6	**Outpost Mounta**	**5.59**	**91**		**Pn**	**01 41 52.7**	**+0.2**
H17K	**Granite Mounta**	**5.69**	**312**		**Pn**	**01 41 54.4**	**+0.8**
G18K	**Tagagawik**	**5.88**	**322**		**Pn**	**01 41 55.9**	**-0.2**
M14K	**Bethel**	**5.90**	**268**		**Pn**	**01 41 55.9**	**-0.6**
F21K	**Alatna River**	**5.94**	**346**		**Pn**	**01 41 57.4**	**+0.4**
I28M	**Miner Creek**	**5.95**	**44**		**Pn**	**01 41 57.5**	**+0.2**
N30M	**Aishikik Lake**	**6.13**	**85**		**Pn**	**01 41 58.9**	**-0.8**
L14K	**Kuka Creek**	**6.15**	**274**		**Pn**	**01 42 01.4**	**+1.6**
G17K	**Kiwalik Mounta**	**6.26**	**314**		**Pn**	**01 42 01.4**	**0.0**
P29M	**Windy Craggy**	**6.28**	**102**		**Pn**	**01 42 01.5**	**-0.2**
BMAR	**Burnt Mountain**	**6.37**	**19**		**Pn**	**01 42 04.5**	**+1.6**
J14K	**Nanvaranak Lak**	**6.53**	**287**		**Pn**	**01 42 05.0**	**-0.1**
F26K	**Sheenjek River**	**6.68**	**19**		**Pn**	**01 42 07.3**	**+0.2**
TOLK	**Toolik Lake Re**	**7.16**	**1**		**Pn**	**01 42 13.4**	**-0.4**
E17K	**Hotham Inlet**	**7.62**	**322**		**Pn**	**01 42 19.2**	**-0.8**
INK	**Inuvik**	**9.70**	**38**	P	**Pn**	**01 42 49.5**	**+1.1**
	comp=E,0.1nm,0.3s,baz=230,slow=13,SNR=4.2						
	comp=E,2.1nm,1.0s						
PDAR	**Pinedale Array**	**30.36**	**109**	P	**P**	**01 46 40.1**	**+1.0**
	comp=E,0.2nm,0.5s,baz=319,slow=8.3,SNR=2.7						
	comp=E,0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**61.72**	**327**	P	**P**	**01 50 42.6**	**-2.1**
	comp=E,0.4nm,0.4s,baz=32,slow=6.7,SNR=2.9						
	comp=E,0.4nm,0.4s						
AKASG	**Malin Array Be**	**68.14**	**1**	P	**P**	**01 51 24.7**	**-1.6**
	comp=E,0.4nm,0.3s,baz=0.9,slow=6.3,SNR=2.7						
	comp=E,0.4nm,0.3s						

*IDC **09** 01:40:31.7±1.0,56˚32N×157˚11W,h0km,mb3.9/10, mbtmp3.9/12,ML3.9/2,Error ellipse: s-maj=25.6km s-min=14.7km az=179.0*

*NEIC **09** 01:40:38.9±1.0,56˚25N±0˚04×156˚50W±0˚09, h52km±11km,Error ellipse: s-maj=7.6km s-min=5.4km az=53.0*

*AEIC **09** 01:40:39.4±1.4,56˚23N±0˚03×156˚58W±0˚08,h44km±7km, ML3.5,ML3.7/34(NEIC),Error ellipse: s-maj=6.4km s-min=4.3km az=70.0*

ISC 09 01:40:37.3±0.6,56˚26N±0˚04×156˚60W±0˚04,h35km,n41, σ1§84/42,mb3.9/10,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.70**	**128**		**Pn**	**01 40 52.1**	**+1.4**
CHIR					**Sn**	**01 41 02.5**	**+2.1**
CHIR				IAML		01 41 08.0	
	comp=E,5μm,0.6s						
CHIR	**Chirikof Islan**	**0.70**	**128**	P	**Pn**	**01 40 52.1**	**+1.4**
SII	**Sitkinak Islan**	**1.37**	**76**		**Pn**	**01 41 00.9**	**+0.9**
PLK4	**Peulik 4**	**1.38**	**5**		**Pn**	**01 41 02.1**	**+1.9**
PLK4				Sn	**Sn**	**01 41 19.4**	**+2.1**
R16K	**Pilot Point**	**1.42**	**338**		**Pn**	**01 41 02.4**	**+1.9**
R18K	**Karluk**	**1.76**	**41**		**Pn**	**01 41 06.7**	**+1.5**
R18K				IAML		01 41 39.5	
	comp=N,1μm,0.5s						
R18K				IAML		01 41 48.3	
	comp=E,1μm,0.5s						
OHAK	**Old Harbor**	**2.06**	**61**		**Pn**	**01 41 10.1**	**+0.7**
OHAK				IAML		01 41 53.2	
	comp=N,411nm,0.9s						
ACHA	**Angle Creek He**	**2.07**	**19**		**Pn**	**01 41 11.5**	**+1.8**
CNBA	**Chernabura Isl**	**2.23**	**231**		**Pn**	**01 41 13.2**	**+1.4**
CNBA				IAML		01 41 52.0	
	comp=E,429nm,0.5s						
CNBA				IAML		01 41 53.9	
	comp=N,363nm,0.7s						
SDPT	**Sand Point**	**2.37**	**249**		**Pn**	**01 41 15.9**	**+2.1**

comp=N,1.1nm,0.7s
ARCES **ARCESS Array B** 54.50 359 P P 01 49 59.9 -0.9
ARCES **ARCESS Array B** 54.50 359 P P 01 50 00.2 -0.6
comp=N,2.6nm,1.0s,baz=12,slow=9.2,SNR=2.2
comp=N,2.6nm,1.0s
SONM **Songino Array** 55.43 306 P P 01 50 06.4 -1.6
comp=N,1.0nm,0.6s,baz=44,slow=6.8,SNR=2.5
comp=N,1.0nm,0.6s
BVAR **Borovoye Array** 64.44 331 P P 01 51 08.3 -1.3
comp=N,0.6nm,0.5s,baz=22,slow=7.9,SNR=3.2
comp=N,0.6nm,0.5s
MKAR **Makanchi Array** 66.12 320 P P 01 51 18.3 -2.2
comp=N,0.2nm,0.4s,baz=47,slow=5.3,SNR=1.9
comp=N,0.2nm,0.4s
EKA **Eskdalemuir Ar** 66.68 16 P P 01 51 24.1 +0.1
comp=N,1.5nm,0.7s,baz=346,slow=6.6,SNR=3.6
comp=N,1.5nm,0.7s
AKASG **Malin Array Be** 73.29 356 P P 01 52 03.4 -1.2
comp=N,0.5nm,0.4s,baz=6.5,slow=5.1,SNR=2.6
comp=N,0.5nm,0.4s

*IDC **09** 02:02:36.7±1.0,37.41N×135.51E,h362km±13km,mb3.0/2, mbtmp3.7/6,Error ellipse: s-maj=27.9km s-min=20.1km az=62.0*
*JMA **09** 02:02:36.4±0.3,37.4N±1.0×13.5E±°,h372km±3km, MV2.9/40,SEA OF JAPAN*
ISC 09 02:02:36.4±0.9,37.47N±0.07×135.37E±0.07,h365km,n24, σ1§34/29,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHG	**Hegura jima**	1.29	73	*e*P		Pn	02 03 26.3	+1.5
JKG	**Kaga**	1.42	147	*e*P		Pn	02 03 26.4	+0.7
JSZ	**Suzu**	1.59	90	*e*P		Pn	02 03 28.0	+1.5
JOI	**OKI**	2.07	236	*e*P		Pn	02 03 29.4	-0.2
JYTA	**Yamagatataniai**	2.18	149	*e*P		Pn	02 03 30.4	+0.1
JWT	**Wachi**	2.19	179	*e*P		Pn	02 03 30.8	+0.3
JWT				*e*S		S	02 04 12.7	-1.3
JSD	**Sado**	2.36	75	*e*P		Pn	02 03 32.9	+1.3
MAT	**Matsushiro**	2.46	111	P		Pn	02 03 33.4	+1.0
MJAR	**Matsushiro Arr**	2.46	111	P		Pn	02 03 33.6	+1.1
	25nm,0.7s,baz=286,slow=8.8,SNR=63							
MJAR				S		S	02 04 15.5	-2.0
	1.1nm,0.3s,baz=301,slow=18,SNR=1.3							
JEG	**Eigenji**	2.48	160	*e*P		Pn	02 03 33.1	+0.5
JAO	**Obara**	2.68	145	*e*P		Pn	02 03 34.6	+0.4
JNY	**Yasuok**	2.92	136	*e*P		Pn	02 03 37.0	+0.7
JHS	**Saijyo**	3.07	217	P		Pn	02 03 37.8	+0.2
JIE	**Ise**	3.26	160	*e*P		Pn	02 03 40.0	+0.7
JYT	**Yasato**	4.07	106	P		Pn	02 03 47.8	+0.9
JHO	**Hitachi**	4.25	100	P		Pn	02 03 48.8	0.0
BSO4	**Boso 4**	4.72	120	P		Pn	02 03 54.3	+0.7
BSO4				*e*S		S	02 04 55.5	-0.6
JMK	**Ichinoseki**	4.84	70	P		Pn	02 03 57.1	+2.2
BSO3	**Boso 3**	4.94	121	*e*S		S	02 04 59.0	-1.1
KSRS	**Korea Array**	5.92	272	P		Pn	02 04 08.1	+1.4
	1.5nm,0.5s,baz=94,slow=12,SNR=5.1							
USRK	**Ussuriysk Ar.**	7.19	340	P		P	02 04 23.2	+0.9
	2.7nm,0.5s,baz=176,slow=13,SNR=4.8							
USRK				S		S	02 05 43.2	-3.3
	1.1nm,0.2s,baz=159,slow=20,SNR=4.8							
ASAJ	**Asahikawa**	8.61	37	P		Pn	02 04 38.2	+0.5
	6.6nm,0.3s,baz=230,slow=12,SNR=6.4							
ASAJ				S		S	02 06 14.2	-2.8
	6.2nm,0.6s,baz=188,slow=33,SNR=2.4							
WRA	**Warramunga Arr**	57.12	181	P		P	02 11 46.1	+0.1
	0.2nm,0.5s,baz=357,slow=6.5,SNR=1.3							
	0.2nm,0.5s							
FINES	**FINESS Array B**	66.11	330	P		P	02 12 46.0	+1.0
	2.4nm,0.9s,baz=61,slow=5.7,SNR=3.8							
	2.4nm,0.9s							

*NEIC **09** 02:11:04.0±2.1,19.12N±0.04×67.07W±0.02,h10km±1km, ML2.0/9,Md2.7/11(RSPR),Error ellipse: s-maj=6.2km s-min=2.9km az=185.0*
*SDD **09** 02:11:05.1±1.5,19.13N×67.07W,h31km±42km,MD3.4, ML2.3,MW2.7*
*RSPR **09** 02:11:06.9,19.03N×67.15W,h5km±1km,MD2.7/11*
ISC 09 02:11:04.0±1.7,19.10N±0.06×67.09W±0.03,h12km±10km, n42,σ0§52/50,9C-13D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	0.63	182			Pb	02 11 17.7	+0.7
AGPR						Sb	02 11 26.4	+0.7
AGPR	**Aguadilla, PR**	0.63	182	⇓*e*Pg		Pb	02 11 16.9	0.0
AGPR				⇓*e*Sg		Sb	02 11 26.4	+0.7
AGPR				IAML			02 11 31.0	
	comp=N,101nm,1.5s							
AGPR	**Aguadilla, PR**	0.63	182	⇓*e*P		Pb	02 11 17.7	+0.7
AGPR	**Aguadilla, PR**	0.63	182	*e*S		Sb	02 11 26.4	+0.7
IDE	**Isla Desecheo**	0.80	207			Pb	02 11 20.1	+0.3
IDE						Sg	02 11 30.2	+0.3
IDE	**Isla Desecheo**	0.80	207	⇑*e*P		Pb	02 11 20.1	+0.3
IDE	**Isla Desecheo**	0.80	207	*e*S		Sg	02 11 30.2	+0.3
AOPR	**Arecibo Observ**	0.81	157			Pb	02 11 20.1	-0.1
AOPR	**Arecibo Observ**	0.81	157	⇑*e*Pg		Pb	02 11 20.0	-0.1
AOPR				IAML			02 11 34.8	
	comp=N,1μm,3.4s							
AOPR	**Arecibo Observ**	0.81	157	⇑*e*P		Pb	02 11 20.1	-0.1
EMPR	**Esperanza - Ma**	0.82	139			Pn	02 11 21.8	+0.5
EMPR	**Esperanza - Ma**	0.82	139	⇓*e*P		Pn	02 11 21.8	+0.5
UUPR	**Utuado, UPR, P**	0.91	157			Pn	02 11 22.7	0.0
UUPR	**Utuado, UPR, P**	0.91	157	⇑*e*P		Pn	02 11 22.7	0.0
LSP	**Las Mesas**	0.92	180			Pg	02 11 21.5	-0.3
LSP						Sg	02 11 33.8	-0.1
LSP	**Las Mesas**	0.92	180	⇑*e*P		Pg	02 11 21.5	-0.3
LSP	**Las Mesas**	0.92	180	*e*S		Sg	02 11 33.8	-0.1
ECPR	**Experimental S**	1.04	138	⇑*e*P		Pn	02 11 24.4	0.0
ECPR	**Experimental S**	1.04	138	*e*S		Sn	02 11 38.7	-0.1
CRPR	**Cabo Rojo, PR**	1.09	181			Pb	02 11 24.1	-0.7
CRPR						Sb	02 11 38.6	-0.4
CRPR	**Cabo Rojo, PR**	1.09	181	IAML			02 11 42.1	
	comp=N,40nm,0.4s							
CRPR	**Cabo Rojo, PR**	1.09	181	⇑*e*Pg		Pb	02 11 24.1	-0.7
CRPR				⇓*e*Sg		Sb	02 11 38.3	-0.7
CRPR				IAML			02 11 42.8	
	comp=N,46nm,0.3s							
CRPR	**Cabo Rojo, PR**	1.09	181	⇑*e*P		Pb	02 11 24.1	-0.7
CRPR	**Cabo Rojo, PR**	1.09	181	*e*S		Sb	02 11 38.6	-0.4
MLPR	**Magueyes Islan**	1.13	178	⇓*e*Pg		Pb	02 11 24.6	-0.9
MLPR				⇓*e*Sg		Sb	02 11 38.8	-1.2
MLPR				IAML			02 11 39.4	
	comp=N,7.2nm,0.4s							
MLPR	**Magueyes Islan**	1.13	178	⇓*e*P		Pb	02 11 24.9	-0.6
MLPR	**Magueyes Islan**	1.13	178	*e*S		Sb	02 11 39.5	-0.6
OBIP	**Obispado Ponce**	1.15	156			Pb	02 11 25.5	-0.3
OBIP						Sb	02 11 40.3	-0.4
OBIP	**Obispado Ponce**	1.15	156	IAML			02 11 40.6	
	comp=E,36nm,0.3s							
OBIP				IAML			02 11 41.5	
	comp=N,28nm,0.4s							
OBIP	**Obispado Ponce**	1.15	156	⇓*e*P		Pb	02 11 25.5	-0.3
OBIP	**Obispado Ponce**	1.15	156	*e*S		Sb	02 11 40.3	-0.4
GCPR	**Guaynabo City**	1.24	129			Sn	02 11 43.9	+0.2
GCPR	**Guaynabo City**	1.24	129			Pg	02 11 28.4	+0.6
GCPR	**Guaynabo City**	1.24	129	*e*S		Sn	02 11 43.9	+0.2
HUMP	**Col San Antoni**	1.51	129			Pb	02 11 31.8	-0.3
HUMP						Sb	02 11 50.7	-0.5
HUMP	**Col San Antoni**	1.51	129	IAML			02 11 55.6	
	comp=E,21nm,0.2s							
HUMP				IAML			02 11 55.8	
	comp=N,22nm,0.2s							
HUMP	**Col San Antoni**	1.51	129	⇓*e*P		Pb	02 11 31.8	-0.3
HUMP	**Col San Antoni**	1.51	129	*e*S		Sb	02 11 50.7	-0.5
MIDR	**Miches**	1.86	267	⇓*e*Pg		Pn	02 11 35.3	-0.4
MIDR				⇓*e*Sg		Sn	02 11 59.9	+0.8
MIDR				IAML			02 12 08.6	
	comp=N,24nm,3.8s							
MIDR	**Miches**	1.86	267	⇓*e*P		Pn	02 11 35.5	-0.2
DR12	**Loma Pena Alta**	2.19	262	Pn		Pn	02 11 40.7	+0.4
HATOM	**Hato Mayor del**	2.19	262	⇑*e*Pg		Pn	02 11 41.0	+0.6
HATOM				*e*Sg		Sb	02 12 09.6	-1.2
HATOM				IAML			02 12 28.8	
	comp=N,17nm,2.7s							

*IDC **09** 02:21:13.1±6.2,32.05S×138.64E,h0km,mbtmp3.1/3, ML2.8/3,Error ellipse: s-maj=97.3km s-min=20.2km az=20.0*

*AUST **09** 02:21:14.2±0.3,32.3S±3.3×13.9E±°,h10km,mb3.6/3, ML2.8/7,Error ellipse: s-maj=6.3km s-min=4.5km az=29.0*
ISC 09 02:21:15.2±0.9,31.89S±0.04×138.68E±0.04,h21km±3km, n17,σ1§48/27,South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YAPP	**Yappala Statio**	0.32	274	P		Pb	02 21 21.9	-0.2
YAPP				S		Sb	02 21 27.0	+0.2
NAPP	**Napperby**	1.37	199	P		Pb	02 21 39.7	-0.3
LCRK	**Leigh Creek**	1.49	344	P		Pn	02 21 41.9	+1.1
LCRK				S		Sn	02 22 01.1	+1.4
HTT	**Hallett**	1.55	173	P		Pb	02 21 42.2	-0.9
HTT				S		Sb	02 22 02.4	0.0
BBOO	**Buckleboo**	2.40	247	P		Pn	02 21 54.2	+0.9
BBOO				S		Sn	02 22 23.7	+1.6
STKA	**Stephens Creek**	2.48	90	P		Pn	02 21 54.0	-0.3
STKA	**Stephens Creek**	2.48	90	Pn		Pn	02 21 54.5	+0.2
	0.4nm,0.3s,baz=261,slow=14,SNR=2.8							
STKA				Pg		Pb	02 21 59.3	+0.4
	0.3nm,0.3s,baz=267,slow=15,SNR=11							
STKA				Sn		Sn	02 22 24.8	+0.9
	3.4nm,0.3s,baz=244,slow=11,SNR=5.8							
STKA				Lg		Lg	02 22 33.4	
	9.1nm,0.3s,baz=7.5,slow=18,SNR=5.0							
	2.8nm,0.3s							
SDAN	**Sedan**	2.67	168	P		Pn	02 21 57.7	+0.8
MULG	**Mulgathing**	4.28	291	P		Pn	02 22 19.8	+0.7
MULG				S		Sn	02 23 07.7	-0.7
KELC	**Kelly Hill Cav**	4.34	199	P		Pn	02 22 21.0	+1.1
OOD	**Oodnadatta**	4.84	327	P		Pn	02 22 27.5	+0.7
OOD				S		Sn	02 23 21.1	-1.2
ARPS	**Mount Arapiles**	5.52	153	P		Pn	02 22 35.8	-0.4
	comp=Z,24nm,2.3s,comp=Z,0.1nm							
CMSA	**Cobar Meteorol**	5.98	88	P		Pn	02 22 42.0	-0.5
TOO	**Toolangi**	7.97	137	P		Pn	02 23 09.1	-0.6
	comp=Z,10nm,2.8s,comp=Z,0.0nm							
FORT	**Forrest**	9.16	274	P		Pn	02 23 25.4	-0.7
	comp=Z,6.9nm,2.0s,comp=Z,0.0nm							
ASAR	**Alice Springs**	9.22	332	Pn		Pn	02 23 30.9	+3.9
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=6.3							
ASAR				Sn		Sn	02 25 07.8	-2.3
	comp=Z,0.3nm,0.3s,baz=154,slow=22,SNR=6.3							
	comp=Z,0.3nm,0.4s							
WRA	**Warramunga Arr**	12.52	341	Pn		Pn	02 24 12.5	+0.3
	comp=Z,0.2nm,0.3s,baz=159,slow=12,SNR=2.8							
WRA				Sn		Sn	02 26 27.2	-3.9
	comp=Z,0.1nm,0.3s,baz=163,slow=24,SNR=2.2							
	comp=Z,0.2nm,0.3s							

IDC 09 02:30:50.2±1.4,3.81S×147.60E,h0km,mb3.7/5, mbtmp3.7/5,MS3.4/9,Error ellipse: s-maj=113.1km s-min=23.9km az=128.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAY	**Jayapura**	7.00	280	LR		LR	02 34 37.7	
	comp=Z,164nm,19.6s,baz=215,slow=32							
WRA	**Warramunga Arr**	20.60	218	P		P	02 35 31.6	+0.5
	3.5nm,0.9s,baz=42,slow=10,SNR=9.6							
WRA				LR		LR	02 43 44.9	
	comp=Z,82nm,18.4s,baz=136,slow=38							
	3.5nm,0.9s							
ASAR	**Alice Springs**	23.77	213	P		P	02 36 04.6	0.0
	2.0nm,1.0s,baz=38,slow=8.0,SNR=12							
ASAR				LR		LR	02 46 19.0	
	comp=Z,68nm,20.4s,baz=322,slow=39							
	2.0nm,1.0s							
DAV	**Davao City (W)**	24.49	296	LR		LR	02 45 15.6	
	comp=Z,75nm,18.7s,baz=352,slow=35							
DZM	**Mont Dzumac**	25.76	136	LR		LR	02 45 17.5	
	comp=Z,95nm,19.5s,baz=354,slow=34							
FITZ	**Fitzroy Crossi**	25.77	235	P		P	02 36 22.5	-0.4
	2.9nm,0.9s,baz=54,slow=7.9,SNR=5.1							
FITZ				LR		LR	02 46 48.7	
	comp=Z,93nm,19.9s,baz=66,slow=37							
	2.9nm,0.9s							
STKA	**Stephens Creek**	28.49	191	LR		LR	02 49 01.1	
	comp=Z,54nm,20.0s,baz=25,slow=38							
H11S3	**WAKE ISLAND Hy**	29.06	40	T		T	03 06 33.6	
	baz=223,slow=76,SNR=17							
H11S2	**WAKE ISLAND Hy**	29.07	40	T		T	03 06 35.1	
	baz=223,slow=76,SNR=22							
H11S1	**WAKE ISLAND Hy**	29.08	40	T		T	03 06 34.7	
	baz=223,slow=76,SNR=20							
H11N1	**WAKE ISLAND Hy**	30.10	38	T		T	03 07 49.4	
	baz=221,slow=76,SNR=15							
H11N3	**WAKE ISLAND Hy**	30.11	38	T		T	03 07 48.3	
	baz=221,slow=76,SNR=20							
H11N2	**WAKE ISLAND Hy**	30.11	38	T		T	03 07 50.6	
	baz=221,slow=76,SNR=12							
KDAK	**Kodiak Island**	77.70	28	LR		LR	03 08 22.9	
	comp=Z,22nm,21.8s,baz=25,slow=29							
ILAR	**Eielson Array**	83.24	23	P		P	02 43 19.1	+0.8
	0.3nm,0.6s,baz=238,slow=7.9,SNR=6.4							
	0.3nm,0.6s							
BBB	**Bella Bella**	89.47	38	LR		LR	03 15 46.7	
	comp=Z,30nm,21.1s,baz=216,slow=30							
NVAR	**Mina Array Bea**	95.55	52	P		P	02 44 16.4	-1.5
	0.1nm,0.5s,baz=306,slow=4.3,SNR=2.5							
	0.1nm,0.5s							

*IDC **09** 02:37:59.6±1.6,28.15N×128.88E,h0km,mb3.7/8, mbtmp3.7/8,Error ellipse: s-maj=101.6km s-min=22.9km az=69.0*
*JMA **09** 02:38:01.2±0.1,27.6N±0.7×129.4E±0.9,h40km±2km, MV3.1/12,NEAR AMAMI-OSHIMA ISLAND*
ISC 09 02:38:01.5±1.4,27.61N±0.06×129.33E±0.08,h41km±11km, n20,σ0§55/29,mb3.6/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTK	**Tokunoshima**	0.38	298	*e*P		Pn	02 38 10.6	-0.2
JTK				*e*S		Sn	02 38 17.4	+0.1
JAMN	**Amaminishikomi**	0.65	348	*i* P		Pn	02 38 14.4	+0.1
JAMN				*e*S		Sn	02 38 23.9	+0.5
JOKE	**Okinoerabujima**	0.72	250	*e*P		Pn	02 38 15.3	+0.1
JOKE				*e*S		Sn	02 38 25.5	+0.3
JAM	**Amami Oshima**	0.84	17	*e*P		Pn	02 38 16.6	-0.2
JAM				*e*S		Sn	02 38 28.0	0.0
JZK	**Kikaishima**	0.90	39	*e*P		Pn	02 38 17.8	+0.1
JZK				*e*S		Sn	02 38 29.9	+0.2
JYRO	**Yoronjima**	0.98	234	P		Pn	02 38 18.9	+0.1
JYRO				*e*S		Sn	02 38 31.5	+0.1
JOW	**Kunigami**	1.22	231	Pn		Pn	02 38 22.3	+0.2
	48nm,0.3s,baz=112,slow=25,SNR=105							
JOW				Sn		Sn	02 38 37.9	+0.5
	67nm,0.3s,baz=93,slow=30,SNR=11							
JOW	**Kunigami**	1.22	231	*e*P		Pn	02 38 21.9	-0.2
JOW				*e*S		Sn	02 38 37.4	0.0
JIH	**Iheya**	1.34	245	*e*P		Pn	02 38 24.0	+0.3
JIH				*e*S		Sn	02 38 40.7	+0.3
JTAJ	**Takarajima**	1.54	356	*e*P		Pn	02 38 26.6	+0.1
JTAJ				*e*S		Sn	02 38 46.0	+0.6
JNTH	**Nagotoyohara**	1.59	227	P		Pn	02 38 27.3	0.0
JNTH				*e*S		Sn	02 38 46.6	0.0
MKAR	**Makanchi Array**	41.37	310	P		P	02 45 41.9	-1.7
	0.1nm,0.3s,baz=97,slow=8.5,SNR=2.4							
	0.1nm,0.3s							
WRA	**Warramunga Arr**	47.52	174	P		P	02 46 42.8	+10
	0.4nm,0.8s,baz=354,slow=8.4,SNR=2.1							
	0.4nm,0.8s							
ASAR	**Alice Springs**	51.17	175	P		P	02 47 07.4	+6.7
	0.2nm,0.8s,baz=4.5,slow=15,SNR=4.6							
	0.2nm,0.8s							
KBZ	**Khabaz**	69.05	309	P		P	02 49 04.5	+1.4
	1.1nm,0.7s,baz=107,slow=6.8,SNR=3.9							
	1.1nm,0.7s							
FINES	**FINESS Array B**	72.15	331	P		P	02 49 21.9	+0.2
	1.5nm,0.7s,baz=69,slow=6.3,SNR=10							
	1.5nm,0.7s							
BRTR	**Keskin Array B**	76.97	308	P		P	02 49 49.6	-0.6
	0.5nm,0.7s,baz=64,slow=5.6,SNR=4.5							
	0.5nm,0.7s							
HFS	**Hagfors**	78.06	333	P		P	02 49 56.4	+0.7
	2.7nm,1.0s,baz=85,slow=4.9,SNR=7.3							
	2.7nm,1.0s							
NB2	**NORSAR Subarra**	78.51	334	P		P	02 49 58.9	+0.6
	comp=Z,0.4nm,0.6s,baz=51,slow=5.3							
NOA	**NORSAR Array B**	78.51	334	P		P	02 49 58.7	+0.4
	comp=Z,0.6nm,0.7s,baz=54,slow=5.3,SNR=4.2							
	comp=Z,0.6nm,0.7s							

*IDC **09** 02:50:16.7±2.7,27.97N×128.06E,h0km,mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=283.6km s-min=19.2km az=74.0*
*JMA **09** 02:50:16.4±0.1,27.6N±0.8×12.9E±°,h39km±2km, MV3.2/12,NEAR AMAMI-OSHIMA ISLAND*
ISC 09 02:50:17.1±1.9,27.60N±0.06×129.35E±0.09,h37km±2km, n15,σ0§41/23,mb3.9/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JTK	**Tokunoshima**	0.40	297	*e*P		Pn	02 50 25.8	-0.3
JTK				*e*S		Sn	02 50 32.8	-0.1
JAMN	**Amaminishikomi**	0.66	347	*i* P		Pn	02 50 29.6	-0.3
JAMN				*e*S		Sn	02 50 39.4	+0.3
JOKE	**Okinoerabujima**	0.73	251	P		Pn	02 50 30.7	-0.2
JAM	**Amami Oshima**	0.84	16	*i* P		Pn	02 50 31.9	-0.5
JAM				*e*S		Sn	02 50 43.1	-0.4
JZK	**Kikaishima**	0.90	38	P		Pn	02 50 33.2	0.0
JZK				*e*S		Sn	02 50 45.2	+0.2
JYRO	**Yoronjima**	0.98	234	*e*P		Pn	02 50 34.1	-0.2
JYRO				*e*S		Sn	02 50 46.8	-0.2
JOW	**Kunigami**	1.23	231	Pn		Pn	02 50 38.1	+0.4
	46nm,0.3s,baz=71,slow=13,SNR=41							
JOW				Sn		Sn	02 50 54.1	+1.1
	79nm,0.3s,baz=120,slow=28,SNR=6.4							
JOW	**Kunigami**	1.23	231	P		Pn	02 50 37.4	-0.3
JOW				*e*S		Sn	02 50 52.8	-0.2
JIH	**Iheya**	1.35	246	P		Pn	02 50 39.2	-0.2
JIH				*e*S		Sn	02 50 56.1	0.0
JTAJ	**Takarajima**	1.55	355	*e*P		Pn	02 50 41.9	-0.2
JTAJ				*e*S		Sn	02 51 01.4	+0.4
JNTH	**Nagotoyohara**	1.60	228	P		Pn	02 50 42.4	-0.4
JNTH				*e*S		Sn	02 51 01.7	-0.5
WRA	**Warramunga Arr**	47.51	174	P		P	02 58 58.7	+10
	0.5nm,0.7s,baz=355,slow=8.4,SNR=2.3							
	0.5nm,0.7s							
ASAR	**Alice Springs**	51.16	175	P		P	02 59 27.0	+10
	0.2nm,0.7s,baz=6.4,slow=14,SNR=6.6							
	0.2nm,0.7s							
FINES	**FINESS Array B**	72.16	331	P		P	03 01 37.3	-0.4
	1.7nm,0.8s,baz=58,slow=4.7,SNR=9.3							
	1.7nm,0.8s							
HFS	**Hagfors**	78.07	333	P		P	03 02 12.1	+0.4
	2.3nm,0.9s,baz=64,slow=6.6,SNR=4.9							
	2.3nm,0.9s							

*SOME **09** 02:57:47.5,42.15N×80.48E,h10km*
*KRNET **09** 02:57:49.0±0.1,42.53N×80.64E,mb3.5*
*NNC **09** 02:57:49.2±0.7,42.22N×80.46E,h0km,mb4.0,mpv3.8, Error ellipse: s-maj=4.8km s-min=3.7km az=156.0*
ISC 09 02:57:51.1±1.4,42.33N±0.05×80.41E±0.05,h10km,n56, σ1§72/86,18C-18D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHLS	**Shalkode**	1.09	320	P		Pg	02 58 08.5	-3.6
	36nm,0.1s							
SHLS				S		Sg	02 58 23.7	-2.5
	473nm,0.2s							
SHLS	**Shalkode**	1.09	320	*e*P		Pg	02 58 09.0	-3.0
	22nm,0.1s							
SHLS				*e*S		Sg	02 58 24.5	-1.7
	473nm,0.2s							
KTMS	**Ketmen**	1.12	358	*e*P		Pg	02 58 11.0	-1.7
	8.7nm,0.1s							
KTMS				*e*S		Sn	02 58 27.9	-0.8
	30nm,0.2s							
PDGK	**Podgornoye**	1.21	326	⇑P		Pg	02 58 13.8	-0.7
	24nm,0.7s							
PDGK				⇑S		Sn	02 58 31.7	+0.9
	52nm,0.3s							
UZB	**Uzynbulak**	1.31	309	P		Pg	02 58 15.8	-0.6
	20nm,0.1s							
UZB				S		Sg	02 58 36.2	+2.7
	75nm,0.2s							
UZB	**Uzynbulak**	1.31	309	*e*P		Pg	02 58 15.8	-0.6
	3.9nm,0.3s							
UZB				*e*S		Sg	02 58 36.2	+2.7
	75nm,0.2s							
PRZ	**Przheval'sk**	1.50	277	⇓*e*P		Pg	02 58 18.8	-1.1
PRZ				⇓*e*S		Sg	02 58 40.7	+1.3
KPKS	**Kokpek**	1.71	312	Pg		Pg	02 58 22.7	-1.2
	0.8nm,0.3s							
KPKS				Lg		Lg	02 58 48.5	
	351nm,0.5s							
KURS	**Kuram**	2.02	306	Pg		Pg	02 58 28.3	-1.5
	60nm,0.7s							
KURS				Lg		Lg	02 58 57.9	
	67nm,0.5s							
TARG	**Taragay, Kyrgy**	2.03	254	⇑*e*P		Pb	02 58 27.3	-1.1
TARG				⇑*e*S		Sg	02 58 55.1	-1.4
KNOS	**Konyrlen**	2.22	337	Pg		Pb	02 58 31.1	-0.4
	26nm,0.2s							
KNOS				Lg		Lg	02 59 02.6	
	211nm,0.4s							
BLB	**Baldybastay**	2.27	322	Pg		Pb	02 58 32.0	-0.2
	94nm,0.4s							
BLB				Lg		Lg	02 59 04.4	
	354nm,0.3s							
KDJ	**Kajisay**	2.41	266	⇓*e*P		Pb	02 58 31.8	-2.9
KDJ				⇓*e*S		Sb	02 59 02.9	-1.6
KOTS	**Kotyrbulak**	2.59	292	Pg		P

KAPS				Lg	Lg	02 59 28.0			
	81nm,0.2s								
KTBS	**Karatobe**	**3.07 298**	Pg	**Pb**	**02 58 46.5 +0.7**				
	12nm,0.2s								
KTBS				Lg	Lg	02 59 29.2			
	93nm,0.4s								
ULHL	**Ulahol**	**3.10 270**	⇓*eP*	**Pn**	**02 58 41.3 +1.0**				
ULHL			⇓*eS*	**Sn**	**02 59 19.5 +2.1**				
BOOM	**Boomskoye usch**	**3.32 274**	⇓*eP*	**Pn**	**02 58 44.1 +0.8**				
BOOM			⇑*eS*	**Sn**	**02 59 24.4 +1.6**				
KST	**Kastek**	**3.36 284**	Pg	**Pb**	**02 58 51.0 +0.1**				
	18nm,0.5s								
KST			Lg	Lg	02 59 37.0				
	61nm,0.5s								
KST	**Kastek**	**3.36 284**	*eP*	**Pb**	**02 58 51.0 +0.1**				
	18nm,0.5s								
KST			*eS*	**Sg**	**02 59 37.0 -2.0**				
	61nm,0.5s								
KUU	**Kurty**	**3.37 299**	Pg	**Pb**	**02 58 51.9 +0.9**				
	3.4nm,0.0s								
KUU			Lg	Lg	02 59 38.3				
	48nm,0.5s								
KUU	**Kurty**	**3.37 299**	*eP*	**Pb**	**02 58 51.9 +0.9**				
	3.4nm,0.0s								
KUU			*eS*	**Sg**	**02 59 38.3 -1.0**				
	48nm,0.5s								
DGS	**Degeres**	**3.54 287**	Pg	**Pb**	**02 58 54.7 +0.8**				
	10nm,0.3s								
DGS			Lg	Lg	02 59 43.1				
	49nm,0.6s								
TKM2	**Tokmak 2**	**3.60 281**	⇓*eP*	**Pn**	**02 58 47.8 +0.6**				
TKM2			⇓*eS*	**Sn**	**02 59 30.9 +0.9**				
KRBS	**Karabastau**	**3.74 293**	Pg	**Pb**	**02 58 57.9 +0.7**				
	6.5nm,0.3s								
KRBS			Lg	Lg	02 59 48.5				
	9.8nm,0.4s								
JNKS	**Jany-Kuch**	**3.78 252**	⇑*eP*	**Pn**	**02 58 51.4 +1.7**				
JNKS			⇑*eS*	**Sn**	**02 59 37.1 +2.7**				
UCH	**Uchtor**	**4.38 271**	⇓*eP*	**Pn**	**02 58 59.3 +1.2**				
UCH			⇓*eS*	**Sn**	**02 59 50.4 +1.0**				
AAK	**Ala-Archa**	**4.39 276**	⇑Pg	**Pb**	**02 59 10.6 +2.2**				
	4.3nm,0.6s								
AAK			⇓Lg	Lg	03 00 07.8				
	117nm,0.6s								
AAK	**Ala-Archa**	**4.39 276**	⇓*eP*	**Pn**	**02 58 59.0 +1.0**				
AAK			⇓*eS*	**Sn**	**02 59 49.9 +0.7**				
SGDS	**Sogindy**	**4.40 287**	Pg	**Pb**	**02 59 09.8 +1.3**				
	3.8nm,0.7s								
SGDS			Lg	Lg	03 00 09.4				
	16nm,0.2s								
ARLS	**Aral**	**4.56 266**	⇑*eP*	**Pn**	**02 59 01.6 +1.3**				
ARLS			⇑*eS*	**Sn**	**02 59 54.5 +1.1**				
MAKZ	**Makanchi**	**4.62 13**	⇑Pn	**Pn**	**02 59 02.7 +1.7**				
	4.9nm,0.6s								
MAKZ			⇓Sn	**Sn**	**02 59 58.9 +4.2**				
	14nm,0.9s								
MK31	**Makanchi Array**	**4.66 16**	Pn	**Pn**	**02 59 03.1 +1.5**				
	0.6nm,0.2s,baz=200,slow=13,SNR=93								
MK31			⇓Sn	**Sn**	**02 59 59.9 +4.1**				
	12nm,0.6s								
EKS2	**Erkin-Say**	**4.92 276**	⇑*eP*	**Pn**	**02 59 06.1 +0.9**				
EKS2			⇑*eS*	**Sn**	**03 00 02.5 +0.3**				
SALK	**Salom-Alik**	**5.15 256**	⇓*eP*	**Pn**	**02 59 10.1 +1.7**				
SALK			⇓*eS*	**Sn**	**03 00 09.2 +1.2**				
MRKS	**Merke**	**5.33 277**	Pg	**Pg**	**02 59 30.1 -3.0**				
	4.4nm,0.5s								
MRKS			Lg	Lg	03 00 43.7				
	10nm,0.5s								
MRKS	**Merke**	**5.33 277**	*eP*	**Pb**	**02 59 27.1 +2.8**				
	2.6nm,0.2s								
MRKS			*eS*	**Sg**	**03 00 38.6 -3.5**				
	10nm,0.5s								
SFK	**Sufi-Kurgan**	**5.70 248**	⇑*eP*	**Pn**	**02 59 17.9 +1.8**				
SFK			⇑*eS*	**Sn**	**03 00 22.7 +1.0**				
ZSN	**Zaisan**	**6.02 30**	Pg	Pg	02 59 40.6 -5.8				
	4.6nm,0.2s								
ZSN			Lg	Lg	03 01 01.9				
	24nm,0.6s								
ZSN	**Zaisan**	**6.02 30**	*eP*	**Pb**	**02 59 38.4 +2.3**				
	1.3nm,0.1s								
ZSN			*eS*	**Sg**	**03 00 57.9 -6.4**				
	24nm,0.6s								
KK31	**Karatay Array**	**7.33 279**	⇑Lg	Lg	03 01 41.5				
	2.1nm,0.5s,baz=100,slow=28,SNR=7.3								

*RSNC **09** 03:04:37.7±0.7,9˚N±4˚×7˚9W±˚, h62km±25km, M2.8, mb3.9, ML2.6*
*UPA **09** 03:04:39.2±1.2,9˚.31N×78˚.62W, h57km±6km, ML3.7, MW3.8*
ISC 09 03:04:37.3±1.3,**9˚31N**±0˚.07×**78˚56W**±0˚.03,**h71**km±10km, **n19**,σ1≒**14**/38,**Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNTA3	**Canitas, Panam**	**0.34**	**255**	*eP*	**Pn**	**03 04 48.6**	**-0.2**
CNTA3				AMP		03 04 48.8	
	comp=Z,6μm,0.1s						
CNTA3				*eS*	**Sn**	**03 04 56.3**	**-0.9**
TOTI	**Torti**	**0.45**	**147**	*eP*	**Pn**	**03 04 50.7**	**+1.0**
TOTI				AMP		03 04 50.9	
	comp=Z,6μm,0.1s						
TOTI				*eS*	**Sn**	**03 04 59.0**	**+0.3**
FLAM	**Flamenco Islan**	**1.04**	**248**	*eP*	**Pn**	**03 04 56.2**	**-0.2**
FLAM				*eS*	**Sn**	**03 05 09.8**	**-0.8**
TABO3	**Taboga, Panama**	**1.11**	**243**	*eP*	**Pn**	**03 04 58.3**	**+1.1**
TABO3				*eS*	**Sn**	**03 05 11.3**	**-0.7**
ARRA3	**Arraijan, Pana**	**1.14**	**253**	*eP*	**Pn**	**03 04 58.0**	**+0.4**
ARRA3				AMP		03 04 58.9	
	comp=Z,3μm,0.2s						
ARRA3				*eS*	**Sn**	**03 05 12.3**	**-0.3**
GAMB1	**Gamboa**	**1.15**	**261**	*eP*	**Pn**	**03 04 58.0**	**+0.3**
GAMB1				*eS*	**Sn**	**03 05 12.5**	**-0.6**
FRIJ	**El Hiral**	**1.16**	**266**	*eP*	**Pn**	**03 04 58.2**	**+0.4**
FRIJ				*eS*	**Sn**	**03 05 11.7**	**-1.4**
CHOR3	**La Chorrera**	**1.26**	**251**	*eP*	**Pn**	**03 04 59.8**	**+0.7**
CHOR3				*eS*	**Sn**	**03 05 16.0**	**+0.5**
BCIP	**Isla Barro Col**	**1.27**	**264**	*eP*	**Pn**	**03 05 00.2**	**+1.0**
BCIP				*eS*	**Sn**	**03 05 15.5**	**-0.3**
BCIP	**Isla Barro Col**	**1.27**	**264**	P	**Pn**	**03 04 59.9**	**+0.6**
BCIP				S	**Sn**	**03 05 15.6**	**-0.2**
MLIR	**Monte Lirio**	**1.28**	**267**	*eP*	**Pn**	**03 05 00.4**	**+1.0**
MLIR				*eS*	**Sn**	**03 05 15.6**	**-0.4**
ZANG	**Zanguenga, Cho**	**1.34**	**255**	*eP*	**Pn**	**03 05 00.5**	**+0.3**
ZANG				AMP		03 05 00.9	
	comp=Z,1μm,0.1s						
ZANG				*eS*	**Sn**	**03 05 17.1**	**-0.2**
LCBC	**Los crdobas,**	**2.21**	**101**	P	**Pn**	**03 05 14.4**	**+2.7**
LCBC				S	**Sn**	**03 05 38.1**	**0.0**
AZU	**Azuero**	**2.27**	**229**	*eP*	**Pn**	**03 05 12.9**	**+0.3**
AZU				*eS*	**Sn**	**03 05 39.6**	**0.0**
CHIT3	**Chitre**	**2.28**	**234**	*eP*	**Pn**	**03 05 13.8**	**+1.1**
CHIT3				AMP		03 05 14.8	
	comp=Z,152nm,0.2s						
CHIT3				*eS*	**Sn**	**03 05 40.8**	**+1.0**
SJCC	**San Jacinto, C**	**3.38**	**80**	P	**Pn**	**03 05 29.6**	**+1.8**
SJCC				S	**Sn**	**03 06 07.1**	**+0.3**
CBOC	**Ciudad Bolivar**	**4.25**	**143**	P	**Pn**	**03 05 37.9**	**-1.8**
CBOC				S	**Sn**	**03 06 27.2**	**-1.0**
OCAC	**Ocana**	**5.28**	**101**	P	**Pn**	**03 05 53.9**	**+0.1**
OCAC				S	**Sn**	**03 06 53.9**	**+0.4**
CRJC	**Cerrejon, Guaj**	**5.84**	**73**	P	**Pn**	**03 06 01.5**	**+0.1**
CRJC				S	**Sn**	**03 07 03.0**	**-4.1**

DJA 09 03:08:23.8±0.2,**9˚S**±2˚×**11˚9E**±˚,**h10**km,**M4.2**/12,**mB5.3**/1, **mb4.2**/3,**MLv4.1**/12,**Mw(mB)4.7**/1,**Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.78**	**171**	P	Pg	03 08 38.6	-0.2
WBSI				S	Sg	03 08 49.5	+0.5
WSI	**Waingapu**	**1.29**	**128**	P	Pn	03 08 47.9	0.0
WSI				S	Sg	03 09 05.9	+0.6
PLAI	**Plampang**	**1.48**	**272**	P	Pn	03 08 49.6	-0.9
PLAI				S	Sn	03 09 09.7	-0.2
BASI	**Baing, Sumba**	**1.86**	**136**	P	Pn	03 08 54.7	-1.1
BASI				S	Sn	03 09 19.7	+0.4
TWSI	**Taliwang, Sumb**	**2.36**	**273**	P	Pn	03 09 03.2	+0.5
TWSI				S	Sn	03 09 33.4	+1.6
EDFI	**Ende, Flores**	**2.40**	**87**	P	Pn	03 09 04.4	+1.2
EDFI				S	Sn	03 09 33.3	+0.6
BSSI	**Bau Bau, Buton**	**2.97**	**24**	P	Pn	03 09 11.3	+0.3
SRBI	**Singaraja**	**4.09**	**281**	P	Pn	03 09 27.0	+0.6
JAGI	**Jajag, Banyuwa**	**5.08**	**274**	P	Pn	03 09 39.8	-0.2
PCJI	**Pacitan**	**8.03**	**274**	P	Pn	03 10 21.4	+0.8
	30nm,2.3s						

*IDC **09** 03:15:13.4±0.7,2˚.87S×101˚.55E, h27km±4km, mb3.9/18, mbtmp4.1/20, ML4.0/2, MS3.3/7, Error ellipse: s-maj=26.9km s-min=11.0km az=55.0*
*DJA **09** 03:15:14.5±0.4,3˚S±2˚×10˚2E±˚, h14km±3km, M4.7/20, mb4.8/6, MLv4.7/20*
*NEIC **09** 03:15:15.1±2.2,2.92S±0˚.05×101˚.51E±0˚.09, h35km±2km, mb4.4/16, Error ellipse: s-maj=17.2km s-min=5.4km az=64.0*
ISC 09 03:15:13.9±0.6,**2˚96S**±0˚.04×**101˚53E**±0˚.04,**h29**km±4km, **n101**,σ1≒**91**/99,**mb4.3**/24,**MS3.2**/6,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASI	**Maura Aman, Be**	**0.73**	**104**	P	**Pn**	**03 15 29.4**	**+1.1**
MASI				S	**Sn**	**03 15 40.4**	**+1.8**
KRJI	**Kerinci**	**0.86**	**356**	P	**Pn**	**03 15 30.9**	**+0.8**
KRJI				S	**Sb**	**03 15 44.1**	**+2.5**
KSI	**Kapahiang**	**1.27**	**123**	P	**Pn**	**03 15 37.3**	**+1.6**
KSI				S	**Sb**	**03 15 55.1**	**+1.9**
PPSI	**Pulau Pagai**	**1.53**	**277**	P	**Pb**	**03 15 43.2**	**+1.7**
PPSI				S	**Sb**	**03 16 00.9**	**+0.4**
MNAI	**Manna**	**2.00**	**134**		**Pn**	**03 15 47.0**	**+1.4**
MNAI				Sn	**Sn**	**03 16 10.3**	**+0.7**
MNAI	**Manna**	**2.00**	**134**	P	**Pn**	**03 15 47.7**	**+2.1**
MNAI	**Manna**	**2.00**	**134**	P	**Pn**	**03 15 47.4**	**+1.8**
MNAI				S	**Sb**	**03 16 14.2**	**+0.2**
LHSI	**Lahat**	**2.17**	**114**	P	**Pn**	**03 15 51.6**	**+3.6**
LHSI				S	**Sb**	**03 16 20.3**	**+1.2**
PDSI	**Padang**	**2.29**	**332**	P	**Pn**	**03 15 50.9**	**+1.1**
PDSI				S	**Sb**	**03 16 20.9**	**-1.7**
PPI	**Padang Panjang**	**2.73**	**336**	P	**Pn**	**03 15 57.7**	**+2.0**
PPI				S	**Sn**	**03 16 30.9**	**+3.2**
SISI	**Saibi**	**2.92**	**304**	P	**Pn**	**03 16 00.3**	**+1.9**
MDSI	**Maura Dua**	**3.05**	**120**	P	**Pn**	**03 16 02.9**	**+2.8**
PMBI	**Palembang**	**3.24**	**90**	Pn	**Pn**	**03 16 02.5**	**-0.3**
LWLI	**Liwa**	**3.25**	**129**	P	**Pn**	**03 16 06.6**	**+3.6**
LWLI				S	**Sn**	**03 16 45.0**	**+4.2**
BKNI	**Bangkinang**	**3.30**	**351**		**Pn**	**03 16 01.9**	**-1.7**
BKNI	**Bangkinang**	**3.30**	**351**	P	**Pb**	**03 16 11.4**	**-0.3**
BKNI	**Bangkinang**	**3.30**	**351**	P	**Pn**	**03 16 04.9**	**+1.4**
BKNI				S	**Sn**	**03 16 45.4**	**+3.6**
KASI	**Kota Agung**	**3.91**	**131**	P	**Pn**	**03 16 14.0**	**+2.1**
DSRI	**Dabo**	**3.92**	**51**	P	**Pn**	**03 16 15.1**	**+3.0**
MNSI	**Mandailing Nat**	**4.21**	**332**	P	**Pn**	**03 16 18.5**	**+2.5**
PBSI	**Pulau Batu**	**4.34**	**312**	P	**Pn**	**03 16 19.8**	**+1.9**
BTDF	**Bukit Timah Da**	**4.84**	**28**	P	Pb	03 16 33.5	-4.5
TPRI	**Tanjung Pinang**	**4.88**	**38**	P	**Pn**	**03 16 26.0**	**+0.7**
TPRI				S	**Sn**	**03 17 24.3**	**+3.5**
MYKOM	**Kota Tinggi**	**5.26**	**26**		**Sn**	**03 16 33.9**	**+3.4**
MYKOM	**Kota Tinggi**	**5.26**	**26**	P	Pn	03 16 39.3	+8.8
GSI	**Gunungsitoli**	**5.79**	**317**		**Pn**	**03 16 38.1**	**+0.3**
GSI	**Gunungsitoli**	**5.79**	**317**	P	**Pn**	**03 16 40.8**	**+3.0**
GSI	**Gunungsitoli**	**5.79**	**317**	P	**Pn**	**03 16 38.6**	**+0.8**
	0.4nm58nm,0.5s						
TPI	**Tanjungpandan**	**6.12**	**88**	P	**Pn**	**03 16 44.0**	**+1.6**
RPSI	**Rantau Prapat**	**6.19**	**335**		**Pn**	**03 16 42.2**	**-1.0**
PSI	**Prapat**	**6.28**	**336**	Pn	**Pn**	**03 16 42.2**	**-2.5**
	1.1nm,0.3s,baz=186,slow=22,SNR=5.6						
PSI				Lg	Lg	03 18 34.5	
	0.4nm,0.3s,baz=310,slow=23,SNR=4.5						
PSI				LR	LR	03 19 09.5	
	comp=Z,136nm,20.5s,baz=140,slow=38 2.5nm,0.4s						
PSI	**Prapat**	**6.28**	**336**	P	**Pn**	**03 16 48.9**	**+4.2**
LEM	**Lembang**	**7.18**	**123**	Pn	**Pn**	**03 16 58.4**	**+1.3**
	6.9nm,0.3s,baz=311,slow=19,SNR=6.1 13nm,0.3s						
IPM	**Ipoh**	**7.40**	**356**	P	Pn	03 17 08.3	+8.3
BBJI	**Bungbulang**	**7.56**	**127**	P	**Pn**	**03 17 04.1**	**+1.8**
KULM	**Kulim**	**8.24**	**354**		**Pn**	**03 17 12.0**	**+0.6**
KULM	**Kulim**	**8.24**	**354**	P	Pn	03 17 19.6	+8.1
MLSI	**Meulaboh, Aceh**	**8.81**	**324**	P	**Pn**	**03 17 20.9**	**+1.5**
JAGI	**Jajag, Banyuwa**	**13.70**	**114**		**Pn**	**03 18 24.9**	**-1.4**
KAPI	**Kappang**	**18.30**	**97**	P	**Pn**	**03 19 27.9**	**+2.3**
	3.9nm,0.4s,baz=184,slow=16,SNR=1.5						
CMAR	**Chiang Mai Arr**	**21.43**	**353**	P	**P**	**03 19 58.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**21.43**	**353**	P	**P**	**03 20 00.6**	**+0.9**
	0.6nm,0.4s,baz=186,slow=9.1,SNR=4.9						
CMAR				LR	LR	03 27 43.0	
	comp=Z,54nm,19.5s,baz=175,slow=35 0.6nm,0.4s						
BATI	**Batanta**	**23.13**	**109**	LR	LR	03 30 49.9	
	comp=Z,83nm,18.4s,baz=150,slow=40						
PALK	**Pallekele**	**23.13**	**296**	LR	LR	03 28 56.1	
	comp=Z,77nm,18.1s,baz=142,slow=36						
DAV	**Davao City (W)**	**25.99**	**67**	LR	LR	03 31 26.5	
	comp=Z,59nm,19.6s,baz=323,slow=38						
H08S2	**Diego Garcia H**	**29.27**	**260**	T	T	03 50 38.1	
	baz=82,slow=75,SNR=22						
H08S3	**Diego Garcia H**	**29.28**	**260**	T	T	03 50 45.0	
	baz=82,slow=75,SNR=29						
H08S1	**Diego Garcia H**	**29.29**	**260**	T	T	03 50 46.1	
	baz=82,slow=75,SNR=29						
NWAO	**Narrogin (SRO)**	**33.25**	**155**	LR	LR	03 34 07.2	
	comp=Z,73nm,21.3s,baz=54,slow=34						
H01W3	**Cape Leeuwin H**	**33.86**	**161**	T	T	03 56 09.4	
	baz=339						
H01W2	**Cape Leeuwin H**	**33.87**	**161**	T	T	03 56 20.4	
	baz=339,slow=74						
H01W1	**Cape Leeuwin H**	**33.88**	**161**	T	T	03 56 15.1	
	baz=339,slow=74						
WB0	**Warramunga Arr**	**36.17**	**120**	P	**P**	**03 22 13.3**	**-0.8**
WB0				lAmb	lAmb	03 22 14.8	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**36.20**	**120**	P	**P**	**03 22 13.7**	**-0.6**
WRA	**Warramunga Arr**	**36.20**	**120**	P	**P**	**03 22 13.5**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=301,slow=9.2,SNR=12						
WRA				pP	**pP**	**03 22 21.9**	**-1.1**
	comp=Z,2.1nm,0.7s,baz=303,slow=9.0,SNR=5.9						
WRA				PcP	**PcP**	**03 24 38.8**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=315,slow=2.4,SNR=1.7						
WRA				S	**S**	**03 27 45.7**	**-7.2**
	comp=Z,0.1nm,0.4s,baz=288,slow=14,SNR=1.9 comp=Z,0.9nm,0.5s						
AS31	**Alice Springs**	**37.46**	**126**	P	**P**	**03 22 25.2**	**+0.1**
ASAR	**Alice Springs**	**37.46**	**126**	P	**P**	**03 22 24.8**	**-0.3**
ASAR	**Alice Springs**	**37.46**	**126**	P	**P**	**03 22 24.6**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=303,slow=8.5,SNR=19						
ASAR				PcP	**PcP**	**03 24 43.0**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=309,slow=2.7,SNR=5.5						
ASAR				S	**S**	**03 28 06.5**	**-5.6**
	comp=Z,0.3nm,0.7s,baz=304,slow=16,SNR=4.7 comp=Z,1.6nm,0.5s						
BBOO	**Buckleboo**	**43.91**	**136**	P	**P**	**03 23 18.8**	**+0.6**
STKA	**Stephens Creek**	**47.38**	**132**	P	**P**	**03 23 45.9**	**+0.3**
STKA	**Stephens Creek**	**47.38**	**132**	P	**P**	**03 23 46.0**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=302,slow=11,SNR=7.3 comp=Z,2.3nm,0.5s						
SONM	**Songino Array**	**50.76**	**4**	P	**P**	**03 24 12.0**	**+0.7**
SONM	**Songino Array**	**50.76**	**4**	P	**P**	**03 24 11.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=189,slow=11,SNR=5.5						
SONM				pP	**pP**	**03 24 19.8**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=181,slow=9.2,SNR=6.1 comp=Z,0.6nm,0.5s						
ARSB	**Arslanbob**	**51.17**	**332**	lAmb	lAmb	03 24 28.8	
	comp=Z,7.8nm,0.8s						
MKAR	**Makanchi Array**	**52.37**	**343**	P	**P**	**03 24 22.1**	**-1.2**
MKAR	**Makanchi Array**	**52.37**	**343**	P	**P**	**03 24 22.5**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=143,slow=8.0,SNR=13 comp=Z,2.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.30**	**27**	P	**P**	**03 24 37.1**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=231,slow=6.0,SNR=7.6 comp=Z,3.6nm,0.7s						
KURBB	**Kurchatov Arra**	**56.90**	**343**	P	**P**	**03 24 54.9**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=159,slow=6.7,SNR=17 comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**56.96**	**343**	P	**P**	**03 24 55.8**	**-0.7**
KURK				lAmb	lAmb	03 25 00.6	
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**58.39**	**348**	P	**P**	**03 25 05.4**	**-1.0**
ZALV	**Zalesovo Beam**	**58.39**	**348**	P	**P**	**03 25 05.7**	**-0.7**
	comp=Z,2.1nm,0.4s,baz=177,slow=8.2,SNR=9.0 comp=Z,2.1nm,0.4s						
H04N2	**CROZET ISLANDS**	**60.95**	**217**	T	T	04 30 42.5	
	baz=59,slow=75,SNR=39						
H04N1	**CROZET ISLANDS**	**60.96**	**217**	T	T	04 30 42.9	
	baz=59,slow=75,SNR=32						
H04N3	**CROZET ISLANDS**	**60.97**	**217**	T	T	04 30 41.5	
	baz=59,slow=75,SNR=35						
H04S1	**CROZET ISLANDS**	**61.22**	**217**	T	T	04 30 54.9	
	baz=58,slow=75,SNR=14						
H04S3	**CROZET ISLANDS**	**61.23**	**217**	T	T	04 30 56.7	
	baz=58,slow=75,SNR=29						
H04S2	**CROZET ISLANDS**	**61.24**	**217**	T	T	04 31 10.2	
	baz=58,slow=75,SNR=11						
BVAR	**Borovoye Array**	**61.61**	**339**	P	**P**	**03 25 26.9**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=142,slow=7.5,SNR=4.8						
BVAR				pP	**pP**	**03 25 35.8**	**-1.9**
	comp=Z,1.8nm,0.4s,baz=143,slow=9.3,SNR=9.9 comp=Z,0.8nm,0.4s						
AB31	**Akbulak array**	**63.21**	**331**	P	**P**	**03 25 38.1**	**-1.2**
AB31				lAmb	lAmb	03 25 49.3	
	comp=Z,3.1nm,0.8s						
ABKAR	**Akbulak array**	**63.21**	**331**	P	**P**	**03 25 38.2**	**-1.2**
KBZ	**Khabaz**	**70.03**	**319**	P	**P**	**03 26 22.8**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=128,slow=6.6,SNR=6.4 comp=Z,2.0nm,0.7s						
MMAI	**Mount Meron Ar**	**71.83**	**306**	P	**P**	**03 26 34.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=113,slow=3.7,SNR=2.4 comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**75.09**	**312**	P	**P**	**03 26 52.2**	**-1.3**
BRTR	**Keskin Array B**	**75.09**	**312**	P	**P**	**03 26 52.5**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=134,slow=7.1,SNR=15						
BRTR				pP	**pP**	**03 27 02.2**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=144,slow=7.7,SNR=7.1 comp=Z,1.3nm,0.5s						
BR131	**Keskin Array S**	**75.09**	**312**	lAmb	lAmb	03 26 53.0	
	comp=Z,1.9nm,0.6s						
TIXI	**Tiksi**	**76.56**	**9**	LR	LR	04 04 54.2	
	comp=Z,50nm,20.6s,baz=202,slow=39						
VNDA	**Vanda**	**80.94**	**169**	P	**P**	**03 27 26.3**	**+1.3**
VNDA	**Vanda**	**80.94**	**169**	P	**P**	**03 27 26.3**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=304,slow=6.8,SNR=7.8 comp=Z,0.9nm,0.7s						
BURAR	**Bucovina Array**	**82.98**	**319**	P	**P**	**03 27 37.0**	**+0.5**
BURAR				lAmb	lAmb	03 27 37.5	
	comp=Z,1.5nm,0.7s						
BUR08	**Bucovina Ar. S**	**83.00**	**319**	P	**P**	**03 27 37.1**	**+0.5**
BUR08				lAmb	lAmb	03 27 51.6	
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**85.66**	**332**	P	**P**	**03 27 49.3**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=78,slow=4.4,SNR=2.1 comp=Z,2.1nm,0.9s						
QSPA	**South Pole Qui**	**87.01**	**180**	P	**P**	**03 27 58.6**	**+2.3**
QSPA				lAmb	lAmb	03 28 34.8	
	comp=Z,7.2nm,1.5s						
QSPA	**South Pole Qui**	**87.01**	**180**	P	**P**	**03 27 58.1**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=280,slow=2.7,SNR=3.8 comp=Z,0.7nm,0.7s						
ARCES	**ARCESS Array B**	**87.89**	**340**	P	**P**	**03 27 59.9**	**-0.4**
ARCES	**ARCESS Array B**	**87.89**	**340**	P	**P**	**03 28 00.1**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=76,slow=4.9,SNR=2.0 comp=Z,2.7nm,1.0s						
GERES	**GERESS Array B**	**90.77**	**319**	P	**P**	**03 28 14.3**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=94,slow=4.4,SNR=2.3 comp=Z,0.3nm,0.6s						
CPUP	**Villa Florida**	**144.42**	**214**		**PKPdf**	**03 34 47.6**	**-0.5**
CPUP	**Villa Florida**	**144.42**	**214**	PKP	**PKPdf**	**03 34 47.3**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=4.2,slow=2.4,SNR=16						
TXAR	**Lajitas Array**	**144.49**	**40**	PKP	**PKPab**	**03 34 46.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=291,slow=1.1,SNR=25						
TXAR				pPKP	**pPKPdf**	**03 34 56.1**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=233,slow=0.8,SNR=7.6						
BDFB	**Brasilia**	**144.65**	**238**		**PKPdf**	**03 34 48.7**	**-0.2**
BDFB	**Brasilia**	**144.65**	**238**	PKP	**PKPdf**	**03 34 48.5**	**-0.4**
	comp=Z,4.2nm,0.4s,baz=134,slow=3.5,SNR=10						

*IDC **09** 03:29:17.7±1.7,3˚.72S×128˚.01E, h0km, mb3.7/3, mbtmp3.7/5, ML3.3/2, MS2.6/1, Error ellipse: s-maj=102.7km s-min=24.4km az=71.0*
*DJA **09** 03:29:20.8±0.4,4˚S±3˚×12˚8E±˚, h10km, M3.5/7, MLv3.5/7*
ISC 09 03:29:19.4±0.8,**3˚74S**±0˚.07×**128˚38E**±0˚.04,**h10**km,**n13**, σ1≒**59**/16,**Seram**

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

BKZ	Black Stump Fm	25.42	163	P	P	03 49 09.8	+1.3
CMSA	Cobar Meteorol	25.88	227	P	P	03 49 13.2	+0.6
CNB	Canberra Magne	26.01	215	P	P	03 49 14.5	+0.6
BFZ	Birch Farm	26.78	165	P	P	03 49 23.9	+3.3
QIS	Mount Isa	27.10	254	P	P	03 49 23.0	-0.8
INKA	Innaminka	27.89	238		P	03 49 31.0	+0.2
INKA				IAmb	IAmb	03 49 31.7	
	comp=Z,9.0nm,0.5s						
STKA	Stephens Creek	29.01	230		P	03 49 41.0	+0.3
STKA	Stephens Creek	29.01	230	P	P	03 49 41.0	+0.3
	comp=Z,36nm,0.6s,baz=45,slow=8.6,SNR=99						
	comp=Z,36nm,0.6s						
STKA	Stephens Creek	29.01	230	P	P	03 49 41.2	+0.5
TOO	Toolangi	29.81	217	P	P	03 49 47.8	+0.1
TOO				IAmb	IAmb	03 50 33.9	
	comp=Z,32nm,1.9s						
HTT	Hallett	31.74	229	P	P	03 50 05.0	+0.2
WB0	Warramunga Arr	31.90	257	P	P	03 50 04.2	-2.1
WB0				IAmb	IAmb	03 50 04.9	
	comp=Z,7.9nm,0.6s						
WRAB	Tennant Creek	31.95	256	P	P	03 50 04.5	-2.3
WRAB	Tennant Creek	31.95	256	P	P	03 50 04.4	-2.4
WRA	Warramunga Arr	31.96	256	P	P	03 50 04.5	-2.3
WRA	Warramunga Arr	31.96	256	P	P	03 50 04.6	-2.3
	comp=Z,3.5nm,0.5s,baz=86,slow=9.2,SNR=39						
WRA				PcP	PcP	03 52 54.0	-0.9
	comp=Z,0.6nm,0.6s,baz=86,slow=3.3,SNR=1.5						
	comp=Z,3.5nm,0.5s						
AS31	Alice Springs	32.78	249	P	P	03 50 12.3	-1.7
AS31				IAmb	IAmb	03 50 13.5	
	comp=Z,6.1nm,0.6s						
ASAR	Alice Springs	32.78	249	P	P	03 50 12.5	-1.5
ASAR	Alice Springs	32.78	249	P	P	03 50 12.2	-1.8
	comp=Z,13nm,0.6s,baz=80,slow=9.0,SNR=273						
ASAR				PcP	PcP	03 52 57.3	+0.2
	comp=Z,0.3nm,0.3s,baz=65,slow=2.9,SNR=1.4						
ASAR				ScP	ScP	03 56 32.4	+0.1
	comp=Z,0.8nm,0.9s,baz=81,slow=3.0,SNR=5.2						
ASAR				LR	LR	04 02 44.7	
	comp=Z,27nm,18.2s,baz=232,slow=35						
	comp=Z,13nm,0.6s						
BBOO	Buckleboo	33.61	232	P	P	03 50 21.2	+0.2
BBOO				IAmb	IAmb	03 50 21.9	
	comp=Z,38nm,0.7s						
BBOO	Buckleboo	33.61	232	P	P	03 50 20.6	-0.5
FORT	Forrest	39.36	239	P	P	03 51 09.4	-0.6
FORT				IAmb	IAmb	03 51 10.1	
	comp=Z,14nm,0.7s						
FITZ	Fitzroy Crossi	40.17	260	P	P	03 51 15.6	-1.2
FITZ	Fitzroy Crossi	40.17	260	P	P	03 51 15.8	-1.0
BATI	Baumata	42.96	271	LR	LR	04 08 18.2	
	comp=Z,32nm,18.5s,baz=192,slow=34						
MBWA	Marble Bar	45.68	255	P	P	03 52 00.3	-1.0
MBWA				IAmb	IAmb	03 52 01.2	
	comp=Z,18nm,0.9s						
MBWA	Marble Bar	45.68	255	P	P	03 52 00.6	-0.7
MBWA	Marble Bar	45.68	255	P	P	03 52 00.5	-0.7
MEEK	Meekatharra	46.89	247	P	P	03 52 10.0	-0.7
KLBR	Kellerberrin	48.18	241	P	P	03 52 20.3	-0.3
NWAO	Narrogin (SRO)	48.81	239	P	P	03 52 24.2	-1.3
NWAO	Narrogin (SRO)	48.81	239	P	P	03 52 24.3	-1.2
PLAI	Plampang	48.92	271	P	P	03 52 26.4	-0.1
MORW	Morawa	49.35	244	P	P	03 52 28.8	-0.9
GIRL	Giralia	50.76	253	P	P	03 52 40.9	+0.5
SSLB	Suanglung	59.55	310	P	P	03 53 42.5	-1.0
VNDA	Vanda	62.67	181	P	P	03 54 03.7	-0.1
VNDA	Vanda	62.67	181	P	P	03 54 03.8	0.0
	comp=Z,1.1nm,0.4s,baz=354,slow=8.7,SNR=26						
	comp=Z,1.1nm,0.4s						
VNDA	Vanda	62.67	181	P	P	03 54 03.6	-0.1
CASY	Casey	63.42	202	P	P	03 54 08.4	-0.4
CASY				IAmb	IAmb	03 54 44.9	
	comp=Z,14nm,1.2s						
NJ2	Nanjing	65.95	316	*e*P	P	03 54 25.6	-0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PETK	Petropavlovsk-	68.28	354	P	P	03 54 39.3	-0.8
PETK	Petropavlovsk-	68.28	354	P	P	03 54 39.6	-0.5
	comp=Z,6.4nm,0.9s,baz=177,slow=5.6,SNR=3.1						
	comp=Z,6.4nm,0.9s						
QSPA	South Pole Qui	75.10	180	P	P	03 55 23.6	+2.5
QSPA	South Pole Qui	75.10	180	P	P	03 55 23.7	+2.5
	comp=Z,4.7nm,0.7s,baz=20,slow=11,SNR=33						
	comp=Z,4.7nm,0.7s						
CMAR	Chiang Mai Arr	75.20	294	P	P	03 55 22.8	+0.5
	comp=Z,1.4nm,0.4s,baz=130,slow=5.0,SNR=6.2						
	comp=Z,1.4nm,0.4s						
HHC	Hu-ho-hao-te	75.86	320	*e*P	P	03 55 23.2	-2.5
HHC				pmax	pmax		
	comp=Z,17nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
PZH	PanZhiHua	75.96	303	P	P	03 55 28.7	+2.0
LZDM	Lanzhou Array	78.64	312	LR	LR	04 28 51.0	
	comp=Z,66nm,20.3s,baz=75,slow=34						
SONM	Songino Array	82.77	324	P	P	03 56 02.9	-0.3
SONM	Songino Array	82.77	324	P	P	03 56 03.2	0.0
	comp=Z,0.9nm,0.5s,baz=138,slow=5.9,SNR=4.7						
	comp=Z,0.9nm,0.5s						
TRF	Thorofare Moun	84.67	18	P	P	03 56 11.6	-1.0
TRF				IAmb	IAmb	03 58 37.0	
	comp=Z,26nm,1.8s						
ILAR	Eielson Array	86.65	18	P	P	03 56 21.2	-0.9
ILAR	Eielson Array	86.65	18	P	P	03 56 20.2	-1.9
	comp=Z,0.8nm,0.8s,baz=238,slow=6.1,SNR=9.8						
	comp=Z,0.8nm,0.8s						
EVN	Everest	88.88	299	P	P	03 56 34.1	-0.4
EVN				IAmb	IAmb	03 56 34.6	
	comp=Z,6.5nm,0.6s						
TROLL	Troll, Antarti	92.68	185	⇑P	P	03 56 49.3	-1.3
	comp=Z,139nm,0.5s						
WMQ	Urumqi	93.00	314	*e*P	P	03 56 53.2	+0.7
SNAA	Sanae	93.36	183	⇑P	P	03 56 51.7	-2.0
	comp=Z,23nm,0.5s						
SNAA	Sanae	93.36	183	P	P	03 56 51.8	-1.9
SNAA				IAmb	IAmb	03 57 57.4	
	comp=Z,19nm,1.9s						
SNAA	Sanae	93.36	183	P	P	03 56 52.2	-1.5
	comp=Z,0.9nm,0.6s,baz=203,slow=12,SNR=12						
	comp=Z,0.9nm,0.6s						
VNA3	Neumayer Olymp	94.02	181	⇑P	P	03 56 54.3	-2.4
	comp=Z,4.5nm,0.6s						
MKAR	Makanchi Array	97.48	316	P	P	03 57 12.3	-0.5
MKAR	Makanchi Array	97.48	316	P	P	03 57 12.4	-0.3
	comp=Z,0.8nm,0.6s,baz=82,slow=7.1,SNR=8.2						
	comp=Z,0.8nm,0.6s						
ZALV	Zalesovo Beam	97.66	324	P	P	03 57 11.7	-1.6
	comp=Z,0.8nm,0.7s,baz=123,slow=5.3,SNR=2.0						
	comp=Z,0.8nm,0.7s						
ARCES	ARCESS Array B	120.49	345		PKPdf	04 02 28.5	-0.9
ARCES	ARCESS Array B	120.49	345	PKP	PKPdf	04 02 28.7	-0.7
	comp=Z,0.9nm,0.4s,baz=39,slow=2.3,SNR=15						

*IDC **09** 03:48:34.2±0.9, 45°.85S×34°.90E, h0km, mb4.0/7, mbtmp4.0/8, ML4.0/1, MS3.6/13, Error ellipse: s-maj=42.5km s-min=21.7km az=57.0*

*NEIC **09** 03:48:36.1±1.5, 45°.96S±0°.08×34°.5E±0°.3, h10km±1km, mb4.3/7, Error ellipse: s-maj=31.8km s-min=12.8km az=79.0*

ISC 09 03:48:35.3±0.7, 45°.82S±0°.10×34°.5E±0°.2, h10km, n35, σ2§56/20, mb4.2/10, MS3.5/12, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04S3	CROZET ISLANDS	12.08	101	T	T	04 03 45.3	
	baz=268,slow=76,SNR=16						
H04S2	CROZET ISLANDS	12.08	101	T	T	04 03 44.2	
	baz=268,slow=76,SNR=15						
H04S1	CROZET ISLANDS	12.10	101	T	T	04 03 44.7	
	baz=268,slow=76,SNR=16						
GRHM	Grahamstown, E	13.99	331	Pn	Pn	03 51 51.7	-1.9
SUR	Sutherland	17.08	317	Pn	Pn	03 52 35.2	+0.9
SUR				IAmb	IAmb	03 52 41.5	
	comp=Z,56nm,1.4s						
POGA	Pongola	18.57	352	P	Pn	03 52 56.7	+4.1
POGA				IAmb	IAmb	03 53 00.9	
	comp=Z,13nm,0.6s						
BOSA	Boshof	18.66	334	P	P	03 52 54.2	+0.8
BOSA	Boshof	18.66	334	P	Pn	03 52 56.7	+2.9
	comp=Z,0.3nm,0.3s,baz=163,slow=13,SNR=6.6						
BOSA				S	Sn	03 56 15.5	-6.9
	comp=Z,2.6nm,1.0s,baz=76,slow=21,SNR=1.8						
BOSA				LR	LR	03 58 52.4	
	comp=Z,147nm,19.4s,baz=197,slow=33						
	comp=Z,1.5nm,0.6s						
LBTB	Lobatse	21.96	338	P	P	03 53 31.8	+2.5
LBTB				IAmb	IAmb	03 53 34.6	
	comp=Z,10nm,1.1s						
LBTB	Lobatse	21.96	338	LR	LR	04 01 01.9	
	comp=Z,204nm,19.1s,baz=158,slow=34						
MAW	Mawson	26.36	156	P	P	03 54 10.6	-0.5
	comp=Z,5.0nm,1.0s,baz=312,slow=11,SNR=5.8						
MAW				LR	LR	04 02 29.7	
	comp=Z,66nm,18.2s,baz=289,slow=32						
	comp=Z,5.0nm,1.0s						
TSUM	Tsumeb	30.00	327	LR	LR	04 05 35.3	
	comp=Z,130nm,21.1s,baz=178,slow=34						
LSZ	Lusaka	30.91	348	LR	LR	04 06 09.4	
	comp=Z,146nm,18.6s,baz=159,slow=34						
SNAA	Sanae	31.34	202	P	P	03 54 55.2	-0.3
SNAA				IAmb	IAmb	03 55 38.7	
	comp=Z,4.0nm,1.3s						
SNAA	Sanae	31.34	202	LR	LR	04 06 55.3	
	comp=Z,30nm,18.3s,baz=12,slow=35						
BELA	Belgrano 2	41.29	197	P	P	03 56 20.1	-0.2
BELA				IAmb	IAmb	03 57 03.7	
	comp=Z,7.4nm,0.6s						
QSPA	South Pole Qui	44.40	180	LR	LR	04 13 30.2	
	comp=Z,55nm,21.5s,baz=238,slow=34						
VNDA	Vanda	52.74	167	P	P	03 57 48.6	-1.1
	comp=Z,0.7nm,1.0s,baz=239,slow=9.7,SNR=3.6						
	comp=Z,0.7nm,1.0s						
PMSA	Palmer Station	53.03	212	LR	LR	04 14 48.5	
	comp=Z,24nm,21.4s,baz=96,slow=30						
FURI	Furi	54.60	5	LR	LR	04 20 48.5	
	comp=Z,58nm,18.6s,baz=188,slow=35						
H10S2	ASCENSION HYDR	55.76	295	T	T	04 58 30.6	
	baz=139,slow=74,SNR=156						
H10S3	ASCENSION HYDR	55.77	295	T	T	04 58 31.8	
	baz=81,slow=74,SNR=150						
DBIC	Dimbokro	62.95	315	P	P	03 59 05.0	+3.0
DBIC	Dimbokro	62.95	315	P	P	03 59 05.0	+3.0
	comp=Z,3.3nm,1.0s,baz=169,slow=6.8,SNR=3.3						
	comp=Z,3.3nm,1.0s						
ASF	Jabal al Asfar	77.66	2	LR	LR	04 33 44.6	
	comp=Z,21nm,19.9s,baz=124,slow=35						
ASAR	Alice Springs	79.61	113	P	P	04 00 42.8	-0.1
	comp=Z,0.6nm,0.7s,baz=227,slow=4.8,SNR=9.8						
	comp=Z,0.6nm,0.7s						
WRA	Warramunga Arr	82.54	111	P	P	04 00 58.3	-0.3
	comp=Z,0.8nm,1.0s,baz=216,slow=5.5,SNR=2.9						
	comp=Z,0.8nm,1.0s						
VAE	Valguarnera	84.87	344	LR	LR	04 41 04.4	
	comp=Z,114nm,18.4s,baz=306,slow=37						
BRTR	Keskin Array B	85.17	359	P	P	04 01 10.8	-0.6
	comp=Z,0.3nm,0.6s,baz=195,slow=4.3,SNR=4.6						
	comp=Z,0.3nm,0.6s						
MDT	Midelt	85.90	328	LR	LR	04 40 31.5	
	comp=Z,30nm,18.9s,baz=150,slow=36						
CMAR	Chiang Mai Arr	86.49	59	P	P	04 01 16.8	-1.5
	comp=Z,1.8nm,0.3s,baz=236,slow=3.3,SNR=1.4						
	comp=Z,1.8nm,0.3s						
DAVOX	Davos/Dischmat	94.72	343	LR	LR	04 46 22.1	
	comp=Z,62nm,19.2s,baz=254,slow=37						
TXAR	Lajitas Array	143.44	258		PKPdf	04 08 08.9	-1.1
TXAR	Lajitas Array	143.44	258	PKP	PKPdf	04 08 08.7	-1.3
	comp=Z,1.1nm,0.8s,baz=147,slow=2.5,SNR=11						
NVAR	Mina Array Bea	158.58	260	PKPab	PKPab	04 09 09.4	+1.3
	comp=Z,0.4nm,0.7s,baz=118,slow=4.3,SNR=4.0						

*NEIC **09** 03:58:30.9±0.8, 19°.34N±0°.04×67°.33W±0°.05, h10km±1km, ML2.5/11, Md3.0/12(RSPR), Error ellipse: s-maj=8.5km s-min=6.1km az=70.0*

*SDD **09** 03:58:33.0±2.9, 19°.32N×67°.12W, h23km±141km, MD3.6, ML2.7, MW3.0*

*RSPR **09** 03:58:33.4, 19°.37N×67°.40W, h51km±8km, MD3.0/12*

ISC 09 03:58:31.3±1.5, 19°.32N±0°.06×67°.20W±0°.03, h9km±10km, n45, σ1§06/59, 11C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.85	174		Pn	03 58 49.0	-0.5
AGPR					Sg	03 58 58.9	+0.1
AGPR	Aguadilla, PR	0.85	174	*e*Pg	Pn	03 58 48.6	-0.9
AGPR				IAML		03 58 59.4	
	comp=N,415nm,0.2s						
AGPR				*e*Sg	Sg	03 58 59.5	+0.7
AGPR	Aguadilla, PR	0.85	174⇑	*e*P	Pn	03 58 49.0	-0.5
AGPR	Aguadilla, PR	0.85	174	*e*S	Sg	03 58 58.9	+0.1
IDE	Isla Desecheo	0.97	196		Pn	03 58 50.5	-0.6
IDE					Sg	03 59 02.9	+0.4
IDE	Isla Desecheo	0.97	196⇓	*e*P	Pn	03 58 50.5	-0.6
IDE	Isla Desecheo	0.97	196	*e*S	Sg	03 59 02.9	+0.4
EMPR	Esperanza - Ma	1.05	143		Pn	03 58 53.0	+0.8
EMPR					Sn	03 59 09.9	+3.0
EMPR	Esperanza - Ma	1.05	143⇑	*e*P	Pn	03 58 53.0	+0.8
EMPR	Esperanza - Ma	1.05	143	*e*S	Sn	03 59 09.9	+3.0
AOPR	Arecibo Observ	1.06	156		Pn	03 58 51.8	-0.5
AOPR				Sn	Sb	03 59 04.7	-1.0
AOPR	Arecibo Observ	1.06	156	*e*Pg	Pn	03 58 51.8	-0.5
AOPR				IAML		03 59 09.8	
	comp=N,1μm,0.9s						
PRSN	Puerto Rico Se	1.10	177		Pg	03 58 52.8	+0.4
PRSN					Sb	03 59 07.3	+0.4
PRSN	Puerto Rico Se	1.10	177	*e*Pg	Pg	03 58 52.5	+0.1
PRSN				*e*Sg	Sb	03 59 06.9	0.0
PRSN				IAML		03 59 10.4	
	comp=N,428nm,0.3s						
PRSN	Puerto Rico Se	1.10	177⇑	*e*P	Pg	03 58 52.8	+0.4
PRSN	Puerto Rico Se	1.10	177	*e*S	Sb	03 59 07.3	+0.4
LSP	Las Mesas	1.15	175		Pg	03 58 53.3	0.0
LSP					Sb	03 59 08.5	+0.3
LSP	Las Mesas	1.15	175⇑	*e*P	Pg	03 58 53.3	0.0
LSP	Las Mesas	1.15	175	*e*S	Sb	03 59 08.5	+0.3
UUPR	Utuado, UPR, P	1.16	157		Pg	03 58 53.6	+0.1
UUPR					Sn	03 59 10.4	+0.8
UUPR	Utuado, UPR, P	1.16	157⇑	*e*P	Pg	03 58 53.6	+0.1
UUPR	Utuado, UPR, P	1.16	157	*e*S	Sn	03 59 10.4	+0.8
ECPR	Experimental S	1.27	141⇑	*e*P	Pg	03 58 56.0	+0.2
ECPR	Experimental S	1.27	141	*e*S	Sg	03 59 13.9	+1.6
CRPR	Cabo Rojo, PR	1.31	176		Pb	03 58 55.4	-0.7
CRPR					Sn	03 59 12.5	-0.9
CRPR	Cabo Rojo, PR	1.31	176	IAML		03 59 14.2	
	comp=E,84nm,0.7s						
CRPR				IAML		03 59 15.6	
	comp=N,92nm,0.5s						
CRPR	Cabo Rojo, PR	1.31	176	*e*Pg	Pb	03 58 55.3	-0.7
CRPR				*e*Sg	Sn	03 59 10.8	-2.6
CRPR				IAML		03 59 15.3	
	comp=N,101nm,0.7s						
CRPR	Cabo Rojo, PR	1.31	176⇑	*e*P	Pb	03 58 55.4	-0.7
CRPR	Cabo Rojo, PR	1.31	176	*e*S	Sn	03 59 12.5	-0.9
MLPR	Magueyes Islan	1.35	174	*e*Pg	Pb	03 58 56.0	-0.7
MLPR				*e*Sg	Sn	03 59 14.7	+0.3
MLPR				IAML		03 59 15.9	
	comp=N,32nm,0.6s						
MLPR	Magueyes Islan	1.35	174⇑	*e*P	Pb	03 58 56.1	-0.7
PCDR	Punta Cana, DR	1.38	234	*e*Pg	Pg	03 58 58.5	+0.8
PCDR				*e*Sg	Sn	03 59 15.4	+0.4
PCDR				IAML		03 59 20.2	
	comp=N,145nm,0.4s						
OBIP	Obispado Ponce	1.39	156		Pg	03 58 57.2	-0.8
OBIP	Obispado Ponce	1.39	156	IAML		03 59 17.1	
	comp=N,75nm,0.3s						
OBIP				IAML		03 59 17.6	
	comp=E,73nm,0.6s						
OBIP	Obispado Ponce	1.39	156⇑	*e*P	Pg	03 58 57.2	-0.8
GCPR	Guaynabo City	1.46	133		Pg	03 58 58.7	-0.6
GCPR					Sg	03 59 19.5	+1.2
GCPR	Guaynabo City	1.46	133⇑	*e*P	Pg	03 58 58.7	-0.6
GCPR	Guaynabo City	1.46	133	*e*S	Sg	03 59 19.5	+1.2
SJG	San Juan	1.56	140		Pg	03 59 00.1	-1.1
SJG				IAML		03 59 27.1	
	comp=E,68nm,0.3s						
HUMP	Col San Antoni	1.74	132		Pg	03 59 02.6	-1.9
HUMP	Col San Antoni	1.74	132	IAML		03 59 33.2	
	comp=E,53nm,0.2s						
HUMP				IAML		03 59 39.0	
	comp=N,37nm,0.2s						
HUMP	Col San Antoni	1.74	132⇑	*e*P	Pg	03 59 02.6	-1.9
MIDR	Miches	1.78	259	*e*Pg	Pg	03 59 04.8	-0.6
MIDR				*e*Sg	Sb	03 59 27.0	+0.5
MIDR				IAML		03 59 31.5	
	comp=N,33nm,0.7s						
SMDR	Samana, DR	1.88	269	*e*Pg	Pg	03 59 05.5	-1.8
SMDR				*e*Sg	Sg	03 59 33.7	+2.0
SMDR				IAML		03 59 46.6	
	comp=N,51nm,1.2s						
HATOM	Hato Mayor del	2.13	256	*e*Pg	Pb	03 59 10.1	0.0
HATOM				*e*Sg	Sg	03 59 40.7	+1.0
HATOM				IAML		03 59 53.5	
	comp=N,24nm,0.8s						

*MOS **09** 04:03:47.5±1.3, 45°.15N×148°.66E, h73km, mb3.7/3, Error ellipse: s-maj=29.0km s-min=11.7km az=57.2*

MOS Felt (II) at Kuril'sk.

*SKHL **09** 04:03:49.8±0.1, 45°.10N×148°.80E, h76km±8km, mb4.9/3*

ISC 09 04:03:46.8±2.1, 45°.2N±0°.1×149°.2E±0°.2, h48km±19km, n18, σ1§96/23, mb3.5/3, 4C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.95	274	*e*PN	Pn	04 04 03.7	0.0
KUR				pmax	pmax		
	comp=Z,512nm,0.2s						
KUR				pmax	pmax		
	comp=E,55nm,0.2s						
KUR				pmax	pmax		
	comp=Z,170nm,0.2s						
KUR				smax	smax		
	comp=N,360nm,0.2s						
KUR				smax	smax		
	comp=E,203nm,0.2s						
KUR	Kuril'sk	0.95	274	*i* P	Pn	04 04 04.0	+0.3
KUR				AMB	AMB	04 04 05.3	
	comp=E,400nm,0.2s						
KUR				*e*S	Sn	04 04 14.6	-1.5
KUR				A	A	04 04 17.9	
	comp=E,3μm,0.2s						
KUR				A	A	04 04 17.9	
	comp=E,1μm,0.2s						
SHO	Shikotan	2.14	233	*e*P	Pn	04 04 24.6	+4.6
SHO				*e*S	Sn	04 04 46.7	+1.5
SHO				A	A	04 04 48.7	
	comp=E,120nm,0.2s						
SHO				A	A	04 04 48.7	
	comp=E,260nm,0.2s						
YUK	Yuzh-Kuril'sk	2.64	246	*e*P	Pn	04 04 26.0	-0.9
YUK				AMB	AMB	04 04 27.7	
	comp=E,170nm,0.3s						
YUK				*e*S	Sn	04 04 53.2	-4.5
YUK				A	A	04 04 55.3	
	comp=E,390nm,0.3s						
YUK				A	A	04 04 55.3	
	comp=E,270nm,0.3s						
GLVR	Golovnino	3.00	243	PN	Pn	04 04 30.8	-1.0
GLVR				*e*S	Sn	04 05 07.1	+0.6
GLVR				pmax	pmax		
	comp=Z,85nm,0.2s						
GLVR				pmax	pmax		
	comp=N,55nm,0.1s						
GLVR				smax	smax		
	comp=N,513nm,0.2s						
GLVR				smax	smax		
	comp=E,412nm,0.2s						
GLVR	Golovnino	3.00	243	*e*P	Pn	04 04 30.8	-1.0
GLVR				AMB	AMB	04 04 31.9	
	comp=E,90nm,0.2s						
GLVR				*e*S	Sn	04 05 07.1	+0.6
GLVR				A	A	04 05 12.0	
	comp=E,510nm,0.2s						
GLVR				A	A	04 05 12.0	
	comp=E,410nm,0.2s						
RUSJ	Misakicho	3.02	251	*e*PN	Pn	04 04 32.9	+0.9
RUSJ				*e*S	Sn	04 05 08.6	+1.7
NMR	Nemuro--Hokkai	3.08	235⇓	*i*PN	Pn	04 04 30.2	-2.6
NMR	Nemuro--Hokkai	3.08	235	*i* P	Pn	04 04 31.2	-1.6
AKK	Akkeshi	3.81	237	*e*P	Pn	04 04 41.9	-1.0
SKR	Severo-Kuril's	7.21	38⇑	*e*PN	Pn	04 05 31.1	+1.7
TEY	Ternei	8.91	274	*e*PN	Pn	04 05 44.0	-8.8
BILL	Bilibino	24.59	15⇑	*e*P	P	04 09 00.6	-1.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL	Bilibino	24.59	15	*e*P	P	04 09 00.6	-1.4
TIXI	Tiksi	28.29	347⇑	*e*P	P	04 09 36.2	+1.0
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.4s						
TIXI	Tiksi	28.29	347	*e*P	P	04 09 36.2	+1.0
ULN	Ulaanbaatar	28.87	291⇑	*e*P	P	04 09 41.4	+0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	Ulaanbaatar	28.87	291	*e*P	P	04 09 41.4	+0.5

*JMA **09** 04:08:10.0±0.3, 25°.1°×122°.1E±0°.5, h92km±3km, MV2.5/12, TAIWAN REGION*

*TAP **09** 04:08:10.3, 24°.78N×122°.15E, h91km, ML3.7, B*

ISC 09 04:08:09.7±1.3, 24°.78N±0°.03×122°.18E±0°.03, h95km±6km, n136, σ1§01/249, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		0.23	286	*e*P	Pn	04 08 23.5	+0.2
TWB1	Santiao Chiao	0.28	323	*i* P	Pn	04 08 23.8	+0.3
TWB1				*i* S	Sn	04 08 33.4	-0.5
TWC	Suao	0.34	241	*i* P	Pn	04 08 24.0	+0.2
TWC				S	Sn	04 08 33.7	-0.7
ESAO	Su ao	0.37	236	*i* P	Pn	04 08 24.7	+0.7
ESAO				*i* S	Sn	04 08 34.3	-0.3
TIPB	Shuangxi	0.37	301⇑	*i* P	Pn	04 08 24.3	+0.3
TIPB				*i* S	Sn	04 08 34.3	-0.5
ILA	Ilan	0.39	268	*i* P	Pn	04 08 24.6	+0.5
ILA				S	Sn	04 08 35.3	+0.4
SXI1	Grass Mountain	0.42	319	P	Pn	04 08 24.5	+0.1
SXI1				S	Sn	04 08 34.5	-0.9
NDS	Dongshan	0.45	251	P	Pn	04 08 24.9	+0.4
NDS				S	Sn	04 08 35.9	+0.4
NWF	Wu-fen Shan	0.46	309	*i* P	Pn	04 08 25.0	+0.3
NWF				S	Sn	04 08 35.4	-0.5
WFSB	Wu-fen Shan	0.46	309	*i* P	Pn	04 08 25.0	+0.4
WFSB				*i

NACB	Ninganchiao	0.80 222	P	Pn	04 08 27.6	0.0
NACB			S	Sn	04 08 40.6	-0.4
NNSB	Datong	0.80 244	P	Pn	04 08 28.5	+0.8
NNSB			S	Sn	04 08 41.4	+0.2
NNS	Nan Shan	0.81 245	*i* P	Pn	04 08 28.6	+0.9
NNS			*i* S	Sn	04 08 41.4	0.0
YOJ	Yonaguni jima	0.82 112	P	Pn	04 08 23.6	-4.1
YOJ	Yonaguni jima	0.82 112	*e*P	Pn	04 08 28.6	+0.9
YOJ			*e*S	Sn	04 08 42.0	+0.6
YOJ	Yonaguni jima	0.82 112	P	Pn	04 08 28.6	+0.9
YOJ			S	Sn	04 08 41.7	+0.4
PCYT	Pengchaiyu	0.85 354	P	Pn	04 08 28.8	+0.7
PCYT			S	Sn	04 08 41.9	0.0
ETLH	Xiulin Townshi	0.85 228	*i* P	Pn	04 08 28.6	+0.4
ETLH			S	Sn	04 08 41.6	-0.5
TWD	Chiawan	0.88 217	P	Pn	04 08 28.9	+0.5
TWD			S	Sn	04 08 42.2	-0.1
KSHI	Guanxi Townshi	0.91 270	P	Pn	04 08 29.6	+0.9
KSHI			S	Sn	04 08 43.9	+0.9
NCUH	Zhongli	0.92 282	*e*P	Pn	04 08 29.5	+0.7
NCUH			*e*S	Sn	04 08 43.7	+0.5
HWA	Hwalien	0.95 213	*e*P	Pn	04 08 29.7	+0.5
HWA			*e*S	Sn	04 08 44.8	+1.0
NFF	Wufeng Townshi	0.98 262	*i* P	Pn	04 08 29.9	+0.4
NFF			*e*S	Sn	04 08 44.1	-0.2
FUSS	Fushou	1.00 238	*i* P	Pn	04 08 31.0	+1.0
FUSS			S	Sn	04 08 45.1	-0.1
ETM	Tongmen	1.02 218	*e*P	Pn	04 08 29.9	0.0
ETM			S	Sn	04 08 44.2	-1.0
LXIB	Xiulin Townshi	1.03 223	P	Pn	04 08 30.1	-0.1
LXIB			S	Sn	04 08 44.7	-0.8
WHF	Hehuan Shan	1.04 233	*e*P	Pn	04 08 31.6	+0.9
WHF			*e*S	Sn	04 08 45.9	-0.4
TEYL	Yanliau Villag	1.05 210	*e*P	Pn	04 08 30.5	+0.2
TEYL			*e*S	Sn	04 08 45.7	0.0
TWT	Tachien	1.05 240	*e*P	Pn	04 08 31.8	+1.3
TWT			S	Sn	04 08 46.3	+0.3
LIOB	Emei	1.07 263	*i* P	Pn	04 08 31.0	+0.6
LIOB			*i* S	Sn	04 08 45.9	-0.2
TDCB	Techi	1.07 241	P	Pn	04 08 31.8	+1.2
TDCB			S	Sn	04 08 46.4	+0.1
NSTT	Nanjuang	1.08 262	*e*P	Pn	04 08 31.0	+0.4
NSTT			*e*S	Sn	04 08 45.8	-0.5
SBCB	Hsinchu	1.08 271	P	Pn	04 08 31.3	+0.7
SBCB			*e*S	Sn	04 08 46.7	+0.3
HSN	Hsinchu	1.10 271	P	Pn	04 08 30.4	-0.3
HSN			*e*S	Sn	04 08 46.4	-0.3
SHUL	Shoufeng	1.14 210	*e*P	Pn	04 08 31.7	+0.5
SHUL			*e*S	Sn	04 08 48.0	+0.6
ESL	Shilin	1.18 215	*e*P	Pn	04 08 31.6	-0.1
ESL			*e*S	Sn	04 08 46.9	-1.4
TEGC	Jichi Village	1.22 209	P	Pn	04 08 32.9	+0.7
TEGC			S	Sn	04 08 49.5	+0.5
OWD	Renai	1.23 228	P	Pn	04 08 33.1	+0.7
OWD			S	Sn	04 08 49.1	-0.5
WHP	Taichung City	1.23 246	P	Pn	04 08 33.6	+1.2
WHP			S	Sn	04 08 50.0	+0.5
WUSB	Renai	1.25 231	P	Pn	04 08 33.5	+0.8
WUSB			S	Sn	04 08 49.9	-0.1
WARBT	Fenglin Townsh	1.28 215	*e*P	Pn	04 08 32.4	-0.6
WARBT			*e*S	Sn	04 08 48.8	-1.8
NMLH	Miaoli	1.28 259	*i* P	Pn	04 08 33.7	+0.7
NMLH			S	Sn	04 08 50.7	0.0
EGFH	Guangfu	1.30 212	*e*P	Pn	04 08 33.7	+0.5
EGFH			*e*S	Sn	04 08 50.1	-0.8
NSY	Sanyi	1.34 255	*i* P	Pn	04 08 34.5	+0.8
NSY			S	Sn	04 08 52.4	+0.5
TWQ1	Liyutan	1.35 252	P	Pn	04 08 34.4	+0.6
TWQ1			S	Sn	04 08 52.2	+0.2
WCS	Beigang Elemen	1.36 238	P	Pn	04 08 34.9	+1.0
WCS			S	Sn	04 08 52.9	+0.6
VWDT	VWDT	1.39 223	P	Pn	04 08 35.0	+0.7
VWDT			*e*S	Sn	04 08 52.8	-0.1
HGSD	Ruisui	1.46 208	P	Pn	04 08 35.5	+0.4
HGSD			S	Sn	04 08 54.2	-0.1
SMLT	Sun Moon Lake	1.47 233	*e*P	Pn	04 08 37.0	+1.7
SMLT			*e*S	Sn	04 08 56.5	+1.8
EHYH	Wanrong	1.49 211	*e*P	Pn	04 08 35.3	-0.2
EHYH			*e*S	Sn	04 08 53.6	-1.5
EHY	Hungye	1.49 212	P	Pn	04 08 35.8	+0.3
EHY			*e*S	Sn	04 08 53.4	-1.7
SSLB	Suanglung	1.49 229	P	Pn	04 08 37.3	+1.7
SSLB	Suanglung	1.49 229	S	Sn	04 08 57.2	+2.0
SSLB	Suanglung	1.49 229	P	Pn	04 08 37.1	+1.6
SSLB			S	Sn	04 08 56.7	+1.6
YULB	Yu-li	1.60 210	P	Pn	04 08 37.0	+0.1
YULB	Yu-li	1.60 210	*e*P	Pn	04 08 36.1	-0.8
YULB			*e*S	Sn	04 08 55.4	-2.1
ECBN	Changbin	1.60 205	*e*P	Pn	04 08 37.3	+0.4
ECBN			*e*S	Sn	04 08 57.0	-0.6
WHYT	Xinyi Township	1.62 229	*e*P	Pn	04 08 39.5	+2.3
WHYT			S	Sn	04 09 00.2	+2.1
EYUL	Yuli	1.63 209	*e*P	Pn	04 08 36.2	-1.1
EYUL			*i* S	Sn	04 08 57.5	-0.6
WNT	Mingjian	1.63 237	P	Pn	04 08 37.7	+0.4
WNT			S	Sn	04 08 59.3	+1.0
TWF1	Yuli	1.63 210	*e*P	Pn	04 08 37.4	0.0
TWF1			*e*S	Sn	04 08 56.7	-1.6
WCH1	Changhua City	1.65 245	*e*P	Pn	04 08 38.0	+0.6
WCH1			S	Sn	04 08 59.0	+0.4
HATJ	Hateruma jima	1.65 116	*e*S	Sn	04 09 00.1	+1.5
YUS	Yu-Shan	1.70 221	P	Pn	04 08 39.8	+1.7
YUS			S	Sn	04 09 01.2	+0.5
CHKH	Chenggong	1.73 205	P	Pn	04 08 38.8	+0.2
CHKH			S	Sn	04 08 59.8	-0.8
JKRS	Kuro-shima	1.75 108	*e*P	Pn	04 08 40.1	+1.2
JKRS			*e*S	Sn	04 09 02.3	+1.3
FULB	Fuli	1.77 207	P	Pn	04 08 39.8	+0.7
FULB			*i* S	Sn	04 09 00.8	-0.6
ALS	Alishan	1.78 225	*e*P	Pn	04 08 41.4	+1.9
ALS			S	Sn	04 09 04.2	+2.1
CHN5	Tsauling	1.81 230	P	Pn	04 08 41.1	+1.5
CHN5			S	Sn	04 09 03.6	+1.3
CHKT	Chengkung	1.83 204	*e*P	Pn	04 08 39.4	-0.4
CHKT			*e*S	Sn	04 09 00.6	-2.2
WGK	Gukeng	1.83 234	*e*P	Pn	04 08 41.2	+1.4
WGK			*e*S	Sn	04 09 05.2	+2.4
JIJ	Ishigaki jima	1.84 103	*e*P	Pn	04 08 40.7	+0.8
JIJ			*e*S	Sn	04 09 03.3	+0.4
WDLH	Douliu	1.85 234	P	Pn	04 08 41.4	+1.3
WDLH			S	Sn	04 09 03.9	+0.7
EHD	Haiduan	1.85 209	*e*P	Pn	04 08 40.6	+0.5
EHD			*e*S	Sn	04 09 01.5	-1.8
ELDTW	Lidau	1.91 214	*e*P	Pn	04 08 41.5	+0.6
ELDTW			S	Sn	04 09 04.0	-0.7
JISG	Ishigakijimahi	1.95 95	*e*S	Sn	04 09 06.7	+1.2
WTK	Tuku	1.96 237	*e*P	Pn	04 08 42.7	+1.2
WTK			*e*S	Sn	04 09 06.2	+0.4
EDH	Donghe	1.97 204	*e*P	Pn	04 08 41.3	-0.3
EDH			S	Sn	04 09 04.6	-1.4
TPUB	Ta-pu	2.04 224	P	Pn	04 08 44.0	+1.4
TPUB	Ta-pu	2.04 224	S	Sn	04 09 09.1	+1.3
TPUB	Ta-pu	2.04 224	P	Pn	04 08 43.9	+1.4
TPUB			*e*S	Sn	04 09 08.9	+1.1
CHY	Chiayi	2.05 232	P	Pn	04 08 43.9	+1.2
CHY			*e*S	Sn	04 09 08.6	+0.8
STYH	Taoyuan	2.05 219	P	Pn	04 08 44.7	+2.0
STYH			S	Sn	04 09 09.9	+2.0
WTP	Ta-pu	2.09 223	P	Pn	04 08 44.7	+1.4
WTP			*e*S	Sn	04 09 10.3	+1.3
WSF	Szhu	2.12 238	*e*P	Pn	04 08 43.9	+0.3
WSF			*e*S	Sn	04 09 09.7	+0.3
TWK	Hsinying	2.16 226	P	Pn	04 08 45.5	+1.3
TWK			*e*S	Sn	04 09 11.8	+1.3
WSL	Shuilin Townsh	2.18 235	P	Pn	04 08 45.0	+0.6
WSL			S	Sn	04 09 10.9	0.0
SNST	Tainan City	2.19 225	*e*P	Pn	04 08 45.1	+0.6
SNST			S	Sn	04 09 11.6	+0.5
CHN1	Nanshi	2.19 224	P	Pn	04 08 45.9	+1.3
CHN1			S	Sn	04 09 11.8	+0.6
LDUT	Ludao	2.19 197	*e*P	Pn	04 08 44.3	-0.3
LDUT			*e*S	Sn	04 09 09.6	-1.6
TWGBT	Beinan	2.20 207	P	Pn	04 08 43.9	-0.7
TWGBT	Beinan	2.20 207	S	Sn	04 09 10.2	-1.2
TWGBT	Beinan	2.20 207	*e*P	Pn	04 08 44.2	-0.5
TWGBT			S	Sn	04 09 09.8	-1.6
TWG	Pinlang	2.20 208	*e*P	Pn	04 08 44.2	-0.5
TWG			S	Sn	04 09 09.6	-1.8
SCST	Cishan	2.44 220	*e*P	Pn	04 08 49.2	+1.5
MATB	Ma-tsu	2.44 305	*e*P	Pn	04 08 47.8	+0.1
ECL	Taimali	2.44 208	*e*P	Pn	04 08 47.6	-0.3
ECL			*e*S	Sn	04 09 15.4	-1.8
SSD	Sandimen	2.47 215	*e*P	Pn	04 08 50.9	+2.7
SSD			*e*S	Sn	04 09 19.0	+1.2
TSCK	Chigu Township	2.51 230	P	Pn	04 08 49.8	+1.1
TSCK			S	Sn	04 09 18.5	-0.2
MASBT	Mashibuluo	2.58 214	P	Pn	04 08 51.0	+1.3
MASBT			*e*S	Sn	04 09 21.3	+0.9
EAST	Anshuo	2.68 207	*e*P	Pn	04 08 50.4	-0.6
PHUB	P'eng-hu	2.69 243	*e*P	Pn	04 08 50.5	-0.6
PHUB			*e*S	Sn	04 09 21.0	-2.1
TAWH	Dawu Township	2.70 206	*e*P	Pn	04 08 50.7	-0.6
TAWH			*e*S	Sn	04 09 21.9	-1.4
LAY	Lan-yu	2.79 192	*e*P	Pn	04 08 50.7	-0.8
PTMZ	Houxiangcun	2.79 276	*e*P	Pn	04 08 52.0	-0.4
SCZT	Fangliau	2.79 211	*e*P	Pn	04 08 54.5	+2.0
SCZT			*e*S	Sn	04 09 26.5	+1.1
XPSS	Dashiqiu	2.79 321	*e*P	Pn	04 08 51.6	-0.8
LYUB	Lan-yu	2.82 191	*e*P	Pn	04 08 51.7	-1.2
LYUB			S	Sn	04 09 22.2	-3.9
VCHM	Qimei	2.96 239	*e*P	Pn	04 08 54.9	+0.1
VCHM			*e*S	Sn	04 09 28.2	-1.3
KNMB	Chin-men Tao	3.46 266	*e*P	Pn	04 09 00.8	-0.7
AXDP	Jialang	3.83 273	*e*P	Pn	04 09 06.0	-0.3

ASRS 09 04:18:29.6±0.3,54˚N±2˚×9˚0E±˚, h2km, MLh3.1/10, Error ellipse: s-maj=4.9km s-min=1.9km az=29.0, confirmed
NNC 09 04:18:30.5±5.9,53.73N×90.49E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=84.4km s-min=31.6km az=30.0, Suspected Mining explosion.
ISC 09 04:18:30.3±1.0,53.72N±0.05×90.21E±0.03,h0km,n22, σ0.95/42,5C,Southwestern Siberia

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VEH	Verkhnyaya Baz	0.47 172	⇑Pg	Pg	04 18 39.7	+0.3
VEH			Sg	Sg	04 18 46.4	+0.9
LUZB	Luzhba, Kemero	0.78 266	Pg	Pg	04 18 44.3	-0.9
LUZB			Sg	Sg	04 18 54.8	-0.6
DJO	Djoy, Khakassi	1.12 147	Pg	Pg	04 18 51.4	-0.4
DJO			Sg	Sb	04 19 07.2	-0.4
CERR	Cheremushki	1.13 140	Pg	Pg	04 18 51.5	-0.4
CERR			Sg	Sb	04 19 07.2	-0.8
KIYZ	Kiyzas, Kuzbas	1.47 265	Pg	Pn	04 18 56.9	-1.1
KIYZ			Sg	Sg	04 19 17.7	+0.3
KALT3	Kaltan 3	1.66 264	Pg	Pn	04 19 00.3	-0.4
KALT3			Sg	Sg	04 19 23.8	+0.2
KALT1	Kaltan 1	1.69 261	Pg	Pn	04 19 01.1	+0.1
KALT1			Sg	Sb	04 19 24.5	+0.5
TASR	Tashtagol	1.70 236	Pn	Pn	04 19 00.0	-1.2
TASR			Pg	Pg	04 19 03.0	+0.1
TASR			Sg	Sg	04 19 25.3	+0.5
ERU	Erunakovo, Kuz	1.72 285	Pg	Pn	04 19 01.8	+0.3
ERU			Sg	Sb	04 19 25.8	+0.3
KALT2	Kaltan 2	1.75 261	Pg	Pn	04 19 02.1	+0.2
KALT2			Sg	Sn	04 19 24.9	0.0
MALIN	Malinovka, Kuz	1.77 261	Pg	Pn	04 19 02.8	+0.6
MALIN			Sg	Sb	04 19 26.7	+0.2
KOTO	Kotino, Kuzbas	2.00 285	Pg	Pb	04 19 07.6	+0.2
KOTO			Sg	Sg	04 19 34.2	-0.1
ARDR	Aradan	2.25 119	Pg	Pg	04 19 12.6	-0.9
ARDR			Sg	Sg	04 19 43.8	+1.2
POMOR	Pomortsevo, Ku	2.28 289	Pg	Pb	04 19 12.2	0.0
POMOR			Sg	Sg	04 19 44.1	+0.7
ELT	Eltsovka	2.42 261	Pg	Pb	04 19 13.0	-1.6
ELT			Sg	Sb	04 19 46.2	+1.3
BJR3	Bachatsky-3 (S	2.45 284	Sg	Sg	04 19 49.5	+0.7
YALR	Yailyu, Altay	2.51 220	Pg	Pb	04 19 14.7	-1.6
YALR			Sg	Sb	04 19 48.8	+1.1
BJR1	Bachatsky 1, K	2.52 284	Pg	Pb	04 19 15.9	-0.4
BJR1			Sg	Sg	04 19 50.1	-0.9
TEL	Teeli	2.71 180	Pg	Pg	04 19 21.6	-0.6
TEL			Sg	Sg	04 19 57.1	-0.1
ZAA0	Zalesovo Array	3.20 276	⇑Pn	Pn	04 19 24.4	+2.6
	1.0nm,0.5s					
ZAA0			⇑Sn	Sb	04 20 06.0	-1.5
	3.0nm,0.8s					
KURBB	Kurchatov Arra	7.82 251	⇑Pn	Pn	04 20 26.4	+1.2
	2.6nm,0.3s					
MK31	Makanchi Array	8.59 219	⇑Pn	Pn	04 20 38.1	+2.3
	0.3nm,0.4s,baz=36,slow=12,SNR=8.8					

IDC 09 04:20:35.2±0.9,55.25N×166.85E,h0km,mb3.7/11, mbtmp3.7/13,ML3.6/2,MS3.2/11,Error ellipse: s-maj=29.6km s-min=15.6km az=2.0
KRSC 09 04:20:36.4±2.3,55.08N×166.79E,h39km±17km,Ml4.3
MOS 09 04:20:38.1±0.9,55.18N×166.87E,h38km,mb3.9/1,Error ellipse: s-maj=10.1km s-min=6.6km az=1.4
ISC 09 04:20:37.5±0.7,55.13N±0.05×166.91E±0.05,h19km,n95, σ1.47/131,mb3.7/11,MS3.3/8,Komandorsky Islands region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.54 278	PN	Pg	04 20 47.2	-1.2
BKI			S	Sg	04 20 54.8	-0.9
BKI	Bering	0.54 278	*e*P	Pg	04 20 47.3	-1.2
BKI			*e*S	Sg	04 20 54.9	-0.9
KBTR	Krutoberegovo	2.56 297	PN	Pn	04 21 15.6	-2.3
KBTR			S	Sn	04 21 46.5	-1.9
KBTR	Krutoberegovo	2.56 297	*e*P	Pn	04 21 15.6	-2.3
KBTR			*e*S	Sn	04 21 46.6	-1.9
KBG	Krutoberegovo	2.63 297	PN	Pn	04 21 17.1	-1.8
KBG			S	Sn	04 21 47.4	-2.9
KBG	Krutoberegovo	2.63 297	*e*P	Pn	04 21 17.2	-1.8
KBG			*e*S	Sn	04 21 47.4	-2.9
SMKR	Semkarok	3.40 298	PN	Pn	04 21 29.3	-0.2
SMKR			S	Sn	04 22 10.6	+1.4
SMKR	Semkarok	3.40 298	*e*P	Pn	04 21 29.3	-0.2
SMKR			*e*S	Sn	04 22 10.7	+1.4
BDR	Baidarnaya	3.52 297	*e*S	Sn	04 22 12.4	0.0
SRKR	Sorokina	3.58 298	PN	Pn	04 21 31.7	-0.3
SRKR			S	Sn	04 22 15.4	+1.7
SRKR	Sorokina	3.58 298	*e*P	Pn	04 21 31.7	-0.3
SRKR			*e*S	Sn	04 22 15.4	+1.7
ZLN	Zelenaya	3.58 287	PN	Pn	04 21 33.1	+1.1
ZLN			S	Sn	04 22 14.6	+0.8
ZLN	Zelenaya	3.58 287	*e*P	Pn	04 21 33.2	+1.1
ZLN			*e*S	Sn	04 22 14.6	+0.8
BZGR	Bezymyannyi-Gr	3.62 286	PN	Pn	04 21 33.1	+0.5
BZGR			S	Sn	04 22 16.4	+1.5
BZGR	Bezymyannyi-Gr	3.62 286	*e*P	Pn	04 21 33.1	+0.5
BZGR			*e*S	Sn	04 22 16.5	+1.5
BZP	Bezymyannyi-Pe	3.71 285	PN	Pn	04 21 34.4	+0.6
BZP			S	Sn	04 22 17.3	+0.3
BZP	Bezymyannyi-Pe	3.71 285	*e*P	Pn	04 21 34.5	+0.6
BZP			*e*S	Sn	04 22 17.4	+0.3
KLY	Klyuchi	3.73 291	PN	Pn	04 21 32.5	-1.5
KLY			S	Sn	04 22 14.3	-3.1
KLY	Klyuchi	3.73 291	*e*P	Pn	04 21 32.5	-1.5
KLY			*e*S	Sn	04 22 14.4	-3.1
TUMD	Tumrok D	3.73 274	PN	Pn	04 21 34.9	+0.8
TUMD			S	Sn	04 22 18.6	+1.1
TUMD	Tumrok D	3.73 274	*e*P	Pn	04 21 35.0	+0.8
TUMD			*e*S	Sn	04 22 18.6	+1.1
BZMR	Bezymyannaya	3.74 285	PN	Pn	04 21 34.3	+0.1
BZMR			S	Sn	04 22 19.1	+1.4
BZMR	Bezymyannaya	3.74 285	*e*P	Pn	04 21 34.4	+0.1
BZMR			*e*S	Sn	04 22 19.1	+1.4
BZWR	Bezymyannyi-We	3.74 286	PN	Pn	04 21 34.7	+0.4
BZWR			S	Sn	04 22 19.5	+1.7
BZWR	Bezymyannyi-We	3.74 286	*e*P	Pn	04 21 34.8	+0.4
BZWR			*e*S	Sn	04 22 19.5	+1.7
KZV	Kizimen	3.80 272	PN	Pn	04 21 36.0	+0.9
KZV			S	Sn	04 22 20.7	+1.4
KZV	Kizimen	3.80 272	*e*P	Pn	04 21 36.1	+0.9
KZV			*e*S	Sn	04 22 20.7	+1.4
KIRR	Kirishev	3.82 285	PN	Pn	04 21 36.1	+0.7
KIRR			S	Sn	04 22 20.6	+0.8
KIRR	Kirishev	3.82 285	*e*P	Pn	04 21 36.2	+0.7
KIRR			*e*S	Sn	04 22 20.6	+0.8
KMNR	Kamenistaya	3.85 282	PN	Pn	04 21 36.5	+0.7
KMNR			S	Sn	04 22 22.5	+2.0
KMNR	Kamenistaya	3.85 282	*e*P	Pn	04 21 36.6	+0.7
KMNR			*e*S	Sn	04 22 22.5	+2.0
KPT	Kopyto	3.89 285	PN	Pn	04 21 37.0	+0.7
KPT			S	Sn	04 22 23.4	+2.0
KPT	Kopyto	3.89 285	*e*P	Pn	04 21 37.0	+0.7
KPT			*e*S	Sn	04 22 23.5	+2.0
SRDR	Sredinnyy	4.24 289	PN	Pn	04 21 41.8	+0.8
SRDR			S	Sn	04 22 31.8	+1.8
SRDR	Sredinnyy	4.24 289	*e*P	Pn	04 21 41.9	+0.8
SRDR			*e*S	Sn	04 22 31.9	+1.8
KII	Karymskiy	4.47 259	PN	Pn	04 21 45.3	+1.0
KII	Karymskiy	4.47 259	*e*P	Pn	04 21 45.3	+1.0
KII			*e*S	Sn	04 22 33.8	-2.0
ESO	Esso	4.73 283	PN	Pn	04 21 48.9	+1.1
ESO	Esso	4.73 283	*e*P	Pn	04 21 49.0	+1.1
SHEM	Shemya Is, Ala	4.88 117	Pn	Pn	04 21 49.8	0.0
	8.0nm,0.3s,baz=275,slow=11,SNR=4.4					
SHEM			Sn	Sn	04 22 42.2	-3.6
	2.8nm,0.3s,baz=260,slow=17,SNR=1.8					
	48nm,0.8s					
SDLR	Sedlovina	5.06 252	PN	Pn	04 21 53.5	+1.1
SDLR	Sedlovina	5.06 252	*e*P	Pn	04 21 53.6	+1.1
SDLR			*e*S	Sn	04 22 48.4	-2.0
SMAR	Somma	5.11 252	PN	Pn	04 21 54.3	+1.1
SMAR	Somma	5.11 252	*e*P	Pn	04 21 54.3	+1.1
SMAR			*e*S	Sn	04 22 49.7	-2.1
UGLR	Uglovaya	5.12 251	PN	Pn	04 21 54.0	+0.7
UGLR	Uglovaya	5.12 251	*e*P	Pn	04 21 54.0	+0.7
KRER	Koryakskii	5.12 252	PN	Pn	04 21 54.7	+1.3
KRER	Koryakskii	5.12 252	*e*P	Pn	04 21 54.7	+1.3
KRER			*e*S	Sn	04 22 50.9	-1.2
AVH	Avacha	5.15 252	PN	Pn	04 21 55.7	+2.1
AVH	Avacha	5.15 252	*e*P	Pn	04 21 55.7	+2.1
AVH			*e*S	Sn	04 22 51.1	-1.3
KRX	Arik	5.16 253	PN	Pn	04 21 55.0	+1.2
KRX	Arik	5.16 253	*e*P	Pn	04 21 55.0	+1.2
KRX			*e*S	Sn	04 22 51.4	-1.4
KOK	Koryaka	5.19 253	PN	Pn	04 21 55.5	+1.3
KOK	Koryaka	5.19 253	*e*P	Pn	04 21 55.5	+1.3
KOK			*e*S	Sn	04 22 50.1	-3.5
DALK	Dalny	5.24 250	PN	Pn	04 21 54.2	-0.5
DALK	Dalny	5.24 250	*e*P	Pn	04 21 54.3	-0.5
DALK			*e*S	Sn	04 22 52.4	-2.2
PET	Petropavlovsk	5.30 250	*e*PN	Pn	04 21 56.7	+1.2
PET			*e*S	Sn	04 22 55.5	-0.5
PET			smax	smax		
	comp=N,101nm,0.6s					
PET			smax	smax		
	comp=E,92nm,0.8s					
PET	Petropavlovsk	5.30 250	*e*P	Pn	04 21 57.5	+2.0
PET			*e*S	Sn	04 22 53.9	-2.0
RUS	Russkaya	5.66 245	PN	Pn	04 22 01.0	+0.5
RUS	Russkaya	5.66 245	*e*P	Pn	04 22 01.1	+0.5
RUS			*e*S	Sn	04 23 03.7	-1.2
KRMR	Karymshinskiy	5.67 250	*e*S	Sn	04 23 05.0	-0.1
PETK	Petropavlovsk-	5.78 253	Pn	Pn	04 22 03.7	+1.4
	comp=E,2.2nm,0.3s,baz=72,slow=18,SNR=24					
PETK			Sn	Sn	04 23 11.1	+3.2
	comp=E,2.0nm,0.3s,baz=36,slow=2.8,SNR=6.5					
PETK			LR	LR	04 24 20.0	
	comp=E,167nm,20.5s,baz=48,slow=39					
	comp=E,4.7nm,0.5s					
MTVR	Mutnovka	5.81 246	PN	Pn	04 22 03.6	+0.9
MTVR	Mutnovka	5.81 246	*e*P	Pn	04 22 03.6	+0.9
MTVR			*e*S	Sn	04 23 08.7	-0.1
GRL	Gorelyy	5.83 247	PN	Pn	04 22 05.2	+2.2
GRL	Gorelyy	5.83 247	*e*P	Pn	04 22 05.2	+2.2
GRL			*e*S	Sn	04 23 08.2	-1.2
ASAK	Asacha	6.01 246	PN	Pn	04 22 06.9	+1.5
ASAK	Asacha	6.01 246	*e*P	Pn	04 22 07.0	+1.5
ASAK			*e*S	Sn	04 23 12.6	-1.1
KDTR	Khodutka, Kamc	6.23 241	*e*S	Sn	04 23 15.2	-3.9
SEY	Seymchan	10.80 322	LR	LR	04 27 24.1	
	comp=E,86nm,20.9s,baz=14,slow=38					
ASAJ	Asahikawa	19.11 245	LR	LR	04 31 55.2	
	comp=E,42nm,19.7s,baz=352,slow=36					
YAK	Yakutsk	20.36 305	LR	LR	04 33 25.6	
	comp=E,50nm,18.1s,baz=88,slow=38					
TIXI	Tiksi	23.11 330	P	P	04 25 41.2	-0.7
	comp=E,3.1nm,0.4s,baz=109,slow=11,SNR=3.6					
TIXI			LR	LR	04 34 50.4	
	comp=E,41nm,18.7s,baz=278,slow=37					
	comp=E,3.1nm,0.4s					
ILAR	Eielson Array	24.50 48	P	P	04 25 54.8	-0.4
	comp=E,0.4nm,0.7s,baz=259,slow=8.2,SNR=3.6					
	comp=E,0.4nm,0.7s					
H11N2	WAKE ISLAND Hy	35.34 180	T	T	05 04 34.2	
	baz=0.4,slow=76,SNR=244					
H11N3	WAKE ISLAND Hy	35.35 180	T	T	05 04 39.8	
	baz=0.4,slow=76,SNR=167					
H11N1	WAKE ISLAND Hy	35.36 180	T	T	05 04 40.1	
	baz=0.4,slow=76,SNR=172					
H11S1	WAKE ISLAND Hy	36.55 180	T	T	05 06 11.5	
	baz=360,slow=76					
H11S3	WAKE ISLAND Hy	36.57 180	T	T	05 06 13.9	
	baz=360,slow=76					
H11S2	WAKE ISLAND Hy	36.57 180	T	T	05 06 13.0	
	baz=360,slow=76					
SONM	Songino Array	37.31 285	P	P	04 27 48.2	-0.1
	comp=E,0.8nm,0.4s,baz=54,slow=7.3,SNR=4.4					
	comp=E,0.8nm,0.4s					
JOW	Kunigami	39.79 241	LR	LR	04 45 39.0	
	comp=E,55nm,18.9s,baz=302,slow=38					
KURK	Kurchatov	50.00 304	P	P	04 29 30.6	+0.5
KURBB	Kurchatov Arra	50.10 304	P	P	04 29 30.6	-0.3
	comp=E,2.2nm,0.6s,baz=53,slow=7.5,SNR=8.4					
	comp=E,2.2nm,0.6s					
MKAR	Makanchi Array	50.81 298	P	P	04 29 35.3	-1.1
	comp=E,1.3nm,0.7s,baz=53,slow=7.7,SNR=10					
	comp=E,1.3nm,0.7s					
NVAR	Mina Array Bea	51.31 76	P	P	04 29 41.9	+1.4
	comp=E,0.2nm,0.6s,baz=316,slow=6.8,SNR=2.6					
	comp=E,0.2nm,0.6s					
BVAR	Borovoye Array	52.19 311	P	P	04 29 46.2	-0.3
	comp=E,2.1nm,0.8s,baz=40,slow=7.8,SNR=9.8					
BVAR			LR	LR	04 53 16.3	
	comp=E,40nm,18.5s,baz=55,slow=38					
	comp=E,2.1nm,0.8s					
PDAR	Pinedale Array	53.02 66	P	P	04 29 53.8	+0.6
	comp=E,0.1nm,0.4s,baz=18,slow=7.5,SNR=1.9					
	comp=E,0.1nm,0.4s					
DAV	Davao City (W)	58.12 231	LR	LR	04 53 54.1	
	comp=E,31nm,21.8s,baz=14,slow=34					
CMAR	Chiang Mai Arr	62.48 263	LR	LR	05 00 53.1	
	comp=E,16nm,18.8s,baz=235,slow=39					
HNR	Honiara	64.58 188	LR	LR	04 58 28.7	
	comp=E,5.5nm,18.7s,baz=332,slow=35					
TXAR	Lajitas Array	66.17 73	P	P	04 31 24.6	+0.8
	comp=E,0.5nm,0.8s,baz=316,slow=4.7,SNR=6.3					
	comp=E,0.5nm,0.8s					
GNI	Garni	73.06 317	LR	LR	05 09 04.0	
	comp=E,23nm,18.4s,baz=332,slow=40					
BRTR	Keskin Array B	77.44 325	P	P	04 32 32.0	+0.6
	comp=E,0.4nm,0.6s,baz=44,slow=4.4,SNR=3.7					
	comp=E,0.4nm,0.6s					
WRA	Warramunga Arr	79.76 211	P	P	04 32 45.0	+1.0
	comp=E,0.2nm,0.8s,baz=24,slow=5.9,SNR=1.8					
	comp=E,0.2nm,0.8s					

IDC 09 04:29:43.0±3.5,6.27S×146.56E,h96km±27km,mb3.7/7, mbtmp4.0/9,MS3.0/2,Error ellipse: s-maj=33.9km s-min=25.1km az=104.0
ISC 09 04:29:44.5±1.1,6.3S±0.1×146.6E±0.2,h110km,n9, σ1.18/10,mb3.8/7,Eastern New Guinea region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.12 169	P	Pn	04 30 31.7	-0.3
	22nm,0.3s,baz=15,slow=4.4,SNR=12					
PMG			S	Sn	04 31 08.0	-0.7
	37nm,0.3s,baz=310,slow=23,SNR=2.0					
PMG			LR	LR	04 32 16.5	
	comp=Z,134nm,20.7s,baz=354,slow=48					
WRA	Warramunga Arr	18.01 220	P	P	04 33 46.2	-0.7
	1.2nm,0.4s,baz=40,slow=12,SNR=21					
ASAR	Alice Springs	21.11 214	P	P	04 34 20.6	0.0
	1.9nm,0.5s,baz=51,slow=8.9,SNR=23					
ASAR			LR	LR	04 43 30.9	
	comp=Z,58nm,18.8s,baz=36,slow=39					
	1.9nm,0.5s					
DZM	Mont Dzumac	24.77 131	P	P	04 34 56.0	-0.2
	1.1nm,0.5s,baz=292,slow=19,SNR=1.6					
	1.1nm,0.5s					
STKA	Stephens Creek	25.84 190	P	P	04 35 07.9	+2.2
	0.9nm,0.5s,baz=38,slow=6.7,SNR=2.9					
	0.9nm,0.5s					
PETK	Petropavlovsk-	59.95 8	P	P	04 39 38.7	-0.3
	12nm,1.1s,baz=201,slow=7.4,SNR=3.6					

12nm,1.1s
VNDA Vanda 71.61 177 P P 04 40 54.0 +0.5
0.8nm,0.6s,baz=331,slow=6.1,SNR=7.9
0.8nm,0.6s
MAW Mawson 81.79 203 P P 04 41 49.3 -1.5
1.8nm,0.9s,baz=109,slow=6.8,SNR=1.9
1.8nm,0.9s
QSPA South Pole Qui 83.64 180 P P 04 42 01.8 +1.1
0.9nm,0.6s,baz=358,slow=3.1,SNR=6.7
0.9nm,0.6s

IDC 09 04:30:01.4±3.2, 15°.40S×179°.61E, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/1, Error ellipse: s-maj=189.6km s-min=30.0km az=147.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.27**	**257**	P	P	04 38 05.9	+0.7
	0.3nm,0.7s,baz=89,slow=7.8,SNR=1.7						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**43.70**	**252**	P	P	04 38 08.2	-0.4
	3.7nm,0.8s,baz=83,slow=8.8,SNR=29						
ASAR				LR	LR	04 54 54.5	
	comp=Z,42nm,18.1s,baz=100,slow=34						
	3.7nm,0.8s						
ILAR	**Eielson Array**	**83.90**	**14**	P	P	04 42 32.7	0.0
	0.4nm,0.8s,baz=231,slow=5.7,SNR=4.1						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**86.87**	**44**	P	P	04 42 49.1	+0.7
	0.3nm,0.8s,baz=210,slow=2.5,SNR=2.3						
	0.3nm,0.8s						
GERES	**GERESS Array B**	**144.70**	**344**	PKP	PKPab	04 49 37.8	-1.2
	0.5nm,0.6s,baz=20,slow=3.3,SNR=5.1						

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*ROM **09** 04:45:27.2±0.2, 37°.86N±0°.02×16°.41E±0°.02, h35km±1km, ML2.9/112, Error ellipse: s-maj=2.0km s-min=1.2km az=316.0*
*THE **09** 04:45:35.9, 38°N±10°×1°7E±3°9, h0km, M2.9/4, mb3.8/2, MLh2.9/4*

ISC 09 04:45:28.0±1.3, 37°.87N±0°.04×16°.40E±0°.03, h33km±3km, n71, σ0°88/79, 1C-7D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOI	**Samo**	**0.34**	**306**	⇓P	**Pb**	**04 45 36.1**	**-0.1**
SOI				S	**Sn**	**04 45 42.0**	**+0.1**
SOI				AML	AML		
	comp=E,1340μm,0.3s						
SOI				AML	AML		
	comp=N,780μm,1.0s						
SOI				AML	AML		
	comp=N,780μm,1.0s						
SOI				AML	AML		
	comp=E,1341μm,0.3s						
SOI				AML	AML		
	comp=N,650μm,0.3s						
CEL	**Celeste**	**0.55**	**314**	⇓P	**Pb**	**04 45 39.0**	**-0.5**
CEL				S	**Sb**	**04 45 47.6**	**+0.1**
CEL				AML	AML		
	comp=E,1685μm,1.5s						
CEL				AML	AML		
	comp=N,1249μm,0.8s						
CEL				AML	AML		
	comp=N,1248μm,0.8s						
CEL				AML	AML		
	comp=E,1715μm,1.5s						
CEL				AML	AML		
	comp=N,1240μm,0.7s						
CEL				AML	AML		
	comp=E,1695μm,0.3s						
CEL				AML	AML		
	comp=E,1670μm,0.3s						
CEL				AML	AML		
	comp=N,1201μm,0.4s						
CEL				AML	AML		
	comp=N,1169μm,0.3s						
MTTG	**Motta San Giov**	**0.57**	**283**	⇓P	**Pn**	**04 45 39.6**	**-0.2**
MTTG				S	**Sb**	**04 45 48.4**	**+0.5**
MTTG				AML	AML		
	comp=N,1665μm,0.4s						
MTTG				AML	AML		
	comp=E,762μm,0.6s						
MTTG				AML	AML		
	comp=N,1665μm,1.6s						
MTTG				AML	AML		
	comp=E,762μm,0.6s						
MTTG				AML	AML		
	comp=N,1669μm,0.4s						
PLAC	**Placanica**	**0.57**	**3**	⇑P	**Pn**	**04 45 39.7**	**-0.1**
PLAC				AML	AML		
	comp=E,382μm,0.8s						
PLAC				AML	AML		
	comp=N,415μm,0.3s						
PLAC				AML	AML		
	comp=E,789μm,0.4s						
PLAC				AML	AML		
	comp=N,777μm,0.4s						
PLAC				AML	AML		
	comp=E,381μm,0.8s						
PLAC				AML	AML		
	comp=N,415μm,0.3s						
PLAC				AML	AML		
	comp=E,361μm,0.3s						
PLAC				AML	AML		
	comp=E,789μm,0.4s						
PLAC				AML	AML		
	comp=N,777μm,0.4s						
SICLA	**Scilla**	**0.66**	**305**	P	**Pn**	**04 45 40.5**	**-0.5**
SICLA				S	**Sn**	**04 45 50.2**	**0.0**
SICLA				AML	AML		
	comp=N,1705μm,0.5s						
SICLA				AML	AML		
	comp=E,1395μm,0.6s						
SICLA				AML	AML		
	comp=N,1706μm,0.5s						
SICLA				AML	AML		
	comp=E,1392μm,0.6s						
MSRU	**Castanea**	**0.80**	**299**	⇓P	**Pn**	**04 45 42.7**	**-0.3**
MSRU				S	**Sn**	**04 45 53.9**	**+0.2**
MSRU				AML	AML		
	comp=E,705μm,0.9s						
MSRU				AML	AML		
	comp=N,658μm,0.3s						
MSRU				AML	AML		
	comp=N,658μm,1.7s						
MSRU				AML	AML		
	comp=N,658μm,0.3s						
MSRU				AML	AML		
	comp=E,555μm,0.3s						
JOPP	**Joppolo**	**0.83**	**331**	P	**Pn**	**04 45 43.0**	**-0.4**
JOPP				S	**Sn**	**04 45 54.5**	**-0.1**
JOPP				AML	AML		
	comp=N,650μm,0.5s						
JOPP				AML	AML		
	comp=E,483μm,0.5s						
JOPP				AML	AML		
	comp=N,598μm,0.2s						
JOPP				AML	AML		
	comp=E,416μm,0.4s						
MPNC	**Port Mandanici**	**0.87**	**288**	⇓P	**Pn**	**04 45 43.9**	**0.0**
MPNC				S	**Sn**	**04 45 55.7**	**+0.3**
MPNC				AML	AML		
	comp=E,844μm,1.0s						
MPNC				AML	AML		
	comp=N,1010μm,0.3s						
MPNC				AML	AML		
	comp=N,1010μm,0.3s						
MPNC				AML	AML		
	comp=E,804μm,0.4s						
AIO	**Antillo**	**0.93**	**276**	⇓P	**Pn**	**04 45 45.2**	**+0.5**
AIO				S	**Sn**	**04 45 57.8**	**+0.9**
AIO				AML	AML		
	comp=E,342μm,0.4s						
AIO				AML	AML		
	comp=N,454μm,0.4s						
AIO				AML	AML		
	comp=N,453μm,0.4s						
AIO				AML	AML		
	comp=E,342μm,0.4s						
GRI	**Girifalco**	**0.95**	**1**	P	**Pn**	**04 45 44.6**	**-0.3**
GRI				AML	AML		
	comp=N,322μm,0.9s						
GRI				AML	AML		
	comp=E,334μm,0.7s						
GRI				AML	AML		
	comp=N,322μm,1.1s						
GRI				AML	AML		
	comp=N,263μm,0.4s						
GRI				AML	AML		
	comp=E,334μm,0.7s						
MILZ	**Milazzo**	**1.00**	**294**	P	**Pn**	**04 45 45.3**	**-0.4**
NOV	**Novara**	**1.01**	**279**	⇓P	**Pn**	**04 45 46.3**	**+0.4**
NOV				S	**Sn**	**04 46 00.1**	**+1.2**
NOV				AML	AML		
	comp=E,1215μm,1.6s						
NOV				AML	AML		
	comp=N,1020μm,0.6s						
NOV				AML	AML		
	comp=N,1020μm,1.4s						
NOV				AML	AML		
	comp=E,1215μm,0.4s						
NOV				AML	AML		
	comp=N,1019μm,0.3s						
NOV				AML	AML		
	comp=E,1193μm,0.4s						
ECTS	**Castiglione**	**1.01**	**271**	P	**Pn**	**04 45 46.2**	**+0.3**
ECTS				S	**Sn**	**04 45 59.7**	**+0.7**
ECTS				AML	AML		
	comp=N,282μm,0.9s						
ECTS				AML	AML		
	comp=N,283μm,0.9s						
ECTS				AML	AML		
	comp=E,262μm,1.0s						
ECTS				AML	AML		
	comp=N,283μm,1.1s						
ECTS				AML	AML		
	comp=N,261μm,0.3s						
ECTS				AML	AML		
	comp=E,248μm,0.4s						
AGST	**Augusta-Monte**	**1.12**	**237**	P	**Pn**	**04 45 46.2**	**-1.0**
AGST				S	**Sn**	**04 45 59.4**	**-2.0**
AGST				AML	AML		
	comp=E,1133μm,0.1s						
AGST				AML	AML		
	comp=N,1435μm,1.3s						
AGST				AML	AML		
	comp=E,1135μm,0.1s						
AGST				AML	AML		
	comp=N,1268μm,0.2s						
ENIC	**Nicolosi**	**1.12**	**258**	P	**Pn**	**04 45 48.4**	**+1.0**
ENIC				AML	AML		
	comp=E,339μm,0.7s						
ENIC				AML	AML		
	comp=E,339μm,1.3s						
ENIC				AML	AML		
	comp=N,234μm,0.8s						
ENIC				AML	AML		
	comp=N,218μm,0.2s						
ENIC				AML	AML		
	comp=E,303μm,0.2s						
EMSG	**Monte Spagnolo**	**1.15**	**268**	P	**Pn**	**04 45 48.5**	**+0.7**
EMSG				AML	AML		
	comp=N,1441μm,0.7s						
EMSG				AML	AML		
	comp=E,1341μm,0.5s						
HAGA	**Augusta**	**1.15**	**240**	P	**Pn**	**04 45 46.6**	**-1.1**
HAGA				AML	AML		
	comp=E,510μm,0.6s						
HAGA				AML	AML		
	comp=N,492μm,1.3s						
HAGA				AML	AML		
	comp=E,510μm,1.4s						
HAGA				AML	AML		
	comp=N,492μm,0.7s						
HAGA				AML	AML		
	comp=E,482μm,0.1s						
HAGA				AML	AML		
	comp=N,477μm,0.1s						
MUCR	**Ucria**	**1.22**	**278**	P	**Pn**	**04 45 49.3**	**+0.5**
MUCR				AML	AML		
	comp=E,172μm,0.4s						
MUCR				AML	AML		
	comp=N,212μm,0.3s						
MUCR				AML	AML		
	comp=N,212μm,1.7s						
MUCR				AML	AML		
	comp=N,212μm,0.3s						
MUCR				AML	AML		
	comp=E,172μm,0.4s						
EPZF	**Pizzo Felice**	**1.22**	**268**	P	**Pn**	**04 45 49.3**	**+0.5**
EPZF				AML	AML		
	comp=E,354μm,0.3s						
EPZF				AML	AML		
	comp=N,419μm,0.3s						
VPL	**Vulcano Piano**	**1.23**	**295**	P	**Pn**	**04 45 48.1**	**-0.7**
VPL				AML	AML		
	comp=E,554μm,0.5s						
VPL				AML	AML		
	comp=N,420μm,0.7s						
SSY	**Sortino**	**1.28**	**236**	P	**Pn**	**04 45 48.6**	**-0.9**
SSY				S	**Sn**	**04 46 03.5**	**-2.0**
SSY				AML	AML		
	comp=E,2860μm,0.6s						
SSY				AML	AML		
	comp=N,4980μm,0.9s						
SSY				AML	AML		
	comp=E,2362μm,0.1s						
SSY				AML	AML		
	comp=N,4463μm,0.1s						
IST3	**Stromboli F**	**1.30**	**315**	P	**Pn**	**04 45 49.9**	**0.0**
HLNI	**Lentini**	**1.32**	**247**	P	**Pn**	**04 45 49.2**	**-0.8**
HLNI				S	**Sn**	**04 46 04.5**	**-2.0**
HLNI				AML	AML		
	comp=E,732μm,0.7s						
HLNI				AML	AML		
	comp=N,506μm,0.9s						
HLNI				AML	AML		
	comp=E,732μm,1.3s						
HLNI				AML	AML		
	comp=N,506μm,1.1s						
HLNI				AML	AML		
	comp=E,709μm,0.1s						
HLNI				AML	AML		
	comp=N,481μm,0.1s						
TIP	**Timpagrande**	**1.33**	**12**	P	**Pn**	**04 45 50.5**	**+0.2**
TIP				AML	AML		
	comp=E,44μm,0.7s						
TIP				AML	AML		
	comp=N,59μm,1.3s						
TIP				AML	AML		
	comp=E,91μm,0.9s						
TIP				AML	AML		
	comp=N,72μm,0.9s						
MNO	**Monte Soro**	**1.35**	**273**	P	**Pn**	**04 45 51.7**	**+1.1**
MNO				AML	AML		
	comp=E,206μm,1.0s						
MNO				AML	AML		
	comp=E,205μm,1.0s						
MNO				AML	AML		
	comp=N,259μm,0.5s						
MNO				AML	AML		
	comp=N,259μm,1.5s						
MNO				AML	AML		
	comp=E,205μm,1.0s						
MNO				AML	AML		
	comp=N,259μm,0.5s						
MNO				AML	AML		
	comp=E,199μm,0.2s						
CAR1	**CAROLEI**	**1.39**	**354**	P	**Pn**	**04 45 51.0**	**0.0**
SPS2	**Spezzano della**	**1.42**	**358**	P	**Pn**	**04 45 51.9**	**+0.4**
MSFR	**San Fratello**	**1.44**	**277**	P	**Pn**	**04 45 52.6**	**+0.9**
MSFR				AML	AML		
	comp=E,115μm,1.6s						
MSFR				AML	AML		
	comp=N,104μm,1.5s						
GALF	**Gagliano Caste**	**1.46**	**264**	P	**Pn**	**04 45 52.8**	**+0.7**
GALF				AML	AML		
	comp=N,344μm,0.5s						
GALF				AML	AML		
	comp=E,290μm,0.7s						
GALF				AML	AML		
	comp=E,289μm,0.7s						
GALF				AML	AML		
	comp=N,343μm,0.5s						
GALF				AML	AML		
	comp=N,185μm,0.9s						
GALF				AML	AML		
	comp=E,120μm,1.1s						
LADO	**San Nicola del**	**1.48**	**18**	P	**Pn**	**04 45 52.7**	**+0.4**
CELI	**Celico**	**1.53**	**3**	P	**Pn**	**04 45 53.9**	**+0.9**
CELI				AML	AML		
	comp=E,180μm,1.6s						
CELI				AML	AML		
	comp=N,138μm,1.3s						
CELI				AML	AML		
	comp=N,138μm,0.7s						
CELI				AML	AML		
	comp=E,180μm,0.4s						
CELI				AML	AML		
	comp=N,67μm,0.5s						
CELI				AML	AML		
	comp=E,78μm,1.4s						
CELI				AML	AML		
	comp=N,125μm,1.2s						
CELI				AML	AML		
	comp=E,171μm,1.9s						
HPAC	**Pachino**	**1.56**	**222**	P	**Pn**	**04 45 53.7**	**+0.4**
HPAC				S	**Sn**	**04 46 12.6**	**+0.2**
HPAC				AML	AML		
	comp=E,896μm,0.9s						
HPAC				AML	AML		
	comp=N,870μm,1.2s						
HPAC				AML	AML		
	comp=E,653μm,0.2s						
HPAC				AML	AML		
	comp=N,720μm,0.3s						
IFIL	**Filicudi I Eol**	**1.60**	**296**	P	**Pn**	**04 45 53.9**	**0.0**
VAE	**Valguarnera**	**1.63**	**257**	AML	AML		
	comp=N,77μm,0.8s						
VAE				AML	AML		
	comp=E,136μm,1.3s						
TDS	**Terranova Siba**	**1.78**	**358**	P	**Pn**	**04 45 58.3**	**+1.9**
TDS				AML	AML		
	comp=E,56μm,1.3s						
TDS				AML	AML		
	comp=N,45μm,1.6s						
PLLN	**Pollina**	**1.79**	**274**	P	**Pn**	**04 45 58.1**	**+1.5**
PLLN				AML	AML		
	comp=E,231μm,0.8s						
PLLN				AML	AML		
	comp=N,277μm,0.8s						
PLLN				AML	AML		
	comp=N,277μm,1.2s						
PLLN				AML	AML		
	comp=N,277μm,0.8s						
PLLN				AML	AML		
	comp=E,231μm,0.8s						
PETRA	**Petralia Sopra**	**1.81**	**269**	P	**Pn**	**04 45 58.1**	**+1.1**
PETRA				AML	AML		
	comp=N,91μm,0.7s						
PETRA				AML	AML		
	comp=E,83μm,0.9s						
CPTP	**Pietraperzia**	**1.84**	**256**	P	**Pn**	**04 45 59.2**	**+2.0**
CPTP				AML	AML		
	comp=E,200μm,2.2s						
CPTP				AML	AML		
	comp=N,169μm,1.7s						
ALJA	**Alia**	**2.10**	**267**	P	**Pn**	**04 46 02.6**	**+1.7**
ALJA				AML	AML		
	comp=E,68μm,1.1s						
ALJA				AML	AML		
	comp=N,57μm,1.6s						
SCHR	**S. Chirico Rap**	**2.33**	**354**	P	**Pn**	**04 46 05.0**	**+0.9**
SCHR				AML	AML		
	comp=E,52μm,1.3s						
SCHR				AML	AML		
	comp=N,76μm,2.9s						
TAR1	**Taranto**	**2.74**	**14**	P	**Pn**	**04 46 08.1**	**-1.4**
TAR1				AML	AML		
	comp=N,103μm,0.1s						
TAR1				AML	AML		
	comp=E,163μm,0.2s						
LTRZ	**Laterza**	**2.75**	**7**	P	**Pn**	**04 46 08.5**	**-1.2**
MATE	**Matera**	**2.78**	**5**	P	**Pn**	**04 46 09.1**	**-1.1**
MATE				AML	AML		
	comp=E,62μm,1.5s						
MATE				AML	AML		
	comp=N,86μm,1.3s						
MATE				AML	AML		
	comp=N,86μm,0.7s						
MATE				AML	AML		
	comp=E,62μm,0.5s						
MATE				AML	AML		
	comp=E,47μm,0.1s						
MATE				AML	AML		
	comp=N,57μm,0.1s						
PZUN	**Potenza**	**2.81**	**351**	AML	AML		
	comp=N,74μm,0.8s						
PZUN				AML	AML		
	comp=N,167μm,0.9s						
PZUN				AML	AML		
	comp=E,64μm,0.7s						
PZUN				AML	AML		
	comp=E,148μm,0.9s						
ACER	**Acerenza**	**2.93**	**353**	P	**Pn**	**04 46 12.4**	**+0.2**
ACER				AML	AML		
	comp=E,189μm,1.3s						
ACER				AML	AML		
	comp=E,151μm,2.2s						
ACER				AML	AML		
	comp=N,218μm,1.2s						
ACER				AML	AML		
	comp=N,87μm,1.0s						
NOCI	**Noci**	**2.96**	**10**	P	**Pn**	**04 46 10.9**	**-1.6**
NOCI				AML	AML		
	comp=N,168μm,0.9s						
NOCI				AML	AML		
	comp=E,132μm,0.1s						
NOCI				AML	AML		
	comp=N,148μm,0.1s						
NOCI				AML	AML		
	comp=E,132μm,0.1s						
AMUR	**Altamura**	**3.03**	**3**	P	**Pn**	**04 46 12.5**	**-1.2**
AMUR				AML	AML		
	comp=E,100μm,1.4s						
AMUR				AML	AML		
	comp=N,99μm,1.3s						
AMUR				AML	AML		
	comp=E,100μm,0.6s						
AMUR				AML	AML		
	comp=N,68μm,0.1s						
AMUR				AML	AML		
	comp=E,70μm,0.2s						
PALZ	**Palazzo San Ge**	**3.08**	**354**	P	**Pn**	**04 46 14.2**	**-0.1**
PALZ				AML	AML		
	comp=N,320μm,2.3s						
PALZ				AML	AML		
	comp=E,329μm,2.3s						
MRVN	**Minervino Murg**	**3.19**	**357**	P	**Pn**	**04 46 15.1**	**-0.7**
MRVN				AML	AML		
	comp=N,85μm,0.2s						
MRVN				AML	AML		
	comp=E,53μm,0.2s						
CAPA	**Cerignola FG**	**3.31**	**352**	AML	AML		
	comp=N,123μm,1.5s						
CAPA				AML	AML		
	comp=E,258μm,1.4s						
CAPA				AML	AML		
	comp=E,149μm,1.9s						
CAPA				AML	AML		
	comp=N,355μm,2.2s						
VLS	**Valsamata**	**3.32**	**83**	P	**Pn**	**04 46 17.3**	**-0.3**
VLS	**Valsamata**	**3.32**	**83**	AML	AML		
	comp=N,102μm,0.4s						
VLS				AML	AML		
	comp=E,100μm,0.6s						
VLS				AML	AML		
	comp=N,84μm,0.3s						
VLS				AML	AML		
	comp=E,72μm,0.2s						
VSK1	**VASILIKIADES**	**3.33**	**79**	P	**Pn**	**04 46 17.9**	**+0.3**
FSK	**Fiskardo**	**3.33**	**79**	P	**Pn**	**04 46 17.8**	**+0.1**
ORTH	**Orthonies,Zaky**	**3.40**	**89**	P	**Pn**	**04 46 18.9**	**+0.2**
EVGI	**Lefkada island**	**3.43**	**76**	P	**Pn**	**04 46 19.4**	**+0.2**
RTZL	**Ratzakli, Kefa**	**3.46**	**85**	P	**Pn**	**04 46 19.2**	**-0.2**
LKD2	**Lefkada island**	**3.47**	**73**	P	**Pn**	**04 46 19.7**	**0.0**
TSLK	**Tsoukalades, L**	**3.48**	**73**	P	**Pn**	**04 46 19.9**	**+0.1**
NYDR	**Nydri-Lefkada**	**3.48**	**75**	P	**Pn**	**04 46 19.8**	**0.0**
MSAG	**Monte S. Angel**	**3.85**	**355**	AML	AML		
	comp=N,157μm,1.1s						
MSAG				AML	AML		
	comp=N,62μm,1.1s						
MSAG				AML	AML		
	comp=E,68μm,1.4s						
MSAG				AML	AML		
	comp=E,164μm,1.6s						
AMPL	**Ampelaki**	**3.92**	**73**	P	**Pn**	**04 46 26.3**	**+0.5**
AXS	**Araxos**	**3.94**	**84**	P	**Pn**	**04 46 27.1**	**+1.0**
MELA	**Melanico ??? S**	**3.95**	**346**	AML	AML		

comp=E,192µm,2.5s
MELA AML AML
comp=N,270µm,1.1s
MELA AML AML
comp=E,205µm,0.9s
MELA AML AML
comp=N,253µm,2.2s

PRMD Pramanda 4.03 64 P **Pn 04 46 28.4 +1.0**
PVO Paravola 4.10 78 P **Pn 04 46 29.6 +1.3**
KLV Kalavryta, Ach 4.55 86 P **Pn 04 46 34.9 +0.4**
VLI Veliai 5.34 100 P **Pn 04 46 46.6 +1.2**
KTHA Kythira Island 5.57 105 P **Pn 04 46 49.7 +1.2**
DION Dionisos Attik 5.96 86 P **Pn 04 46 54.2 +0.4**
comp=N,12nm,1.0s
KYMI Kymi, Euboea I 6.11 81 P **Pn 04 46 56.2 +0.3**

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*IDC **09** 04:52:20.9±2.4, 49°.75N×150°.95E, h358km±25km, mb2.9/7, mbtmp3.6/9, Error ellipse: s-maj=35.1km s-min=20.3km az=170.0*
ISC 09 04:52:20.1±1.2, 49°.7N±0°.2×150°.9E±0°.1, h350km, n9, σ0§60/9, mb3.1/7, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.46**	**49**	P			**Pn**	**04 53 45.2**	**+0.6**
	2.4nm,0.7s,baz=236,slow=9.7,SNR=6.0								
MJAR	**Matsushiro Arr**	**16.06**	**220**	P			**P**	**04 55 46.2**	**0.0**
	1.7nm,0.5s,baz=24,slow=10,SNR=6.8								
MKAR	**Makanchi Array**	**44.31**	**294**	P			**P**	**04 59 56.8**	**+0.5**
	0.5nm,0.7s,baz=66,slow=7.1,SNR=3.9								
	0.5nm,0.7s								
KURBB	**Kurchatov Arra**	**44.62**	**300**	P			**P**	**04 59 59.0**	**+0.4**
	0.4nm,0.5s,baz=68,slow=8.5,SNR=5.2								
	0.4nm,0.5s								
BVAR	**Borovoye Array**	**47.85**	**307**	P			**P**	**05 00 23.9**	**+0.4**
	0.7nm,0.4s,baz=60,slow=8.8,SNR=4.6								
	0.7nm,0.4s								
ARCES	**ARCESS Array B**	**54.55**	**339**	P			**P**	**05 01 12.2**	**-0.3**
	2.5nm,1.1s,baz=17,slow=6.9,SNR=1.6								
	2.5nm,1.1s								
FINES	**FINESS Array B**	**60.72**	**333**	P			**P**	**05 01 54.1**	**-1.0**
	1.0nm,0.6s,baz=25,slow=6.3,SNR=8.8								
	1.0nm,0.6s								
PDAR	**Pinedale Array**	**64.20**	**54**	P			**P**	**05 02 18.1**	**-0.5**
	0.2nm,0.4s,baz=327,slow=6.8,SNR=1.9								
	0.2nm,0.4s								
TXAR	**Lajitas Array**	**77.31**	**60**	P			**P**	**05 03 36.9**	**0.0**
	0.2nm,0.6s,baz=319,slow=6.8,SNR=2.4								
	0.2nm,0.6s								

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*IDC **09** 05:12:27.5±1.7, 52°.33S×142°.99E, h0km, mb3.7/5, mbtmp3.7/5, MS3.4/11, Error ellipse: s-maj=140.9km s-min=19.1km az=81.0*
ISC 09 05:12:28.8±1.9, 52°.3S±0°.2×147°.3E±°, h10km, n21, σ1§10/7, mb3.6/5, MS3.3/11, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**26.26**	**171**	P			**P**	**05 18 02.4**	**-1.2**
	0.3nm,0.3s,baz=268,slow=9.9,SNR=8.0								
	0.3nm,0.3s								
H01W1	**Cape Leeuwin H**	**26.86**	**299**	T			T	05 44 44.7	
	baz=141,slow=75,SNR=79								
H01W2	**Cape Leeuwin H**	**26.87**	**299**	T			T	05 44 40.9	
	baz=141,slow=75,SNR=81								
H01W3	**Cape Leeuwin H**	**26.88**	**299**	T			T	05 44 45.9	
	baz=141,slow=75,SNR=68								
ASAR	**Alice Springs**	**29.42**	**343**	P			**P**	**05 18 32.2**	**-0.1**
	0.5nm,0.7s,baz=165,slow=10.0,SNR=8.1								
ASAR					LR		LR	05 28 35.4	
	comp=Z,46nm,18.7s,baz=259,slow=33								
	0.5nm,0.7s								
WRA	**Warramunga Arr**	**32.99**	**345**	P			**P**	**05 19 04.0**	**+0.2**
	0.6nm,0.8s,baz=174,slow=7.4,SNR=5.1								
	0.6nm,0.8s								
DZM	**Mont Dzumac**	**35.24**	**40**	LR			LR	05 32 41.7	
	comp=Z,75nm,18.8s,baz=167,slow=34								
QSPA	**South Pole Qui**	**37.79**	**180**	P			**P**	**05 19 46.3**	**+1.5**
	2.8nm,0.9s,baz=4.3,slow=7.9,SNR=7.2								
QSPA					LR		LR	05 34 44.8	
	comp=Z,48nm,19.7s,baz=24,slow=35								
	2.8nm,0.9s								
MAW	**Mawson**	**39.64**	**216**	LR			LR	05 34 11.0	
	comp=Z,84nm,20.0s,baz=94,slow=33								
PMG	**Port Moresby**	**42.94**	**6**	LR			LR	05 37 31.3	
	comp=Z,34nm,19.4s,baz=150,slow=35								
BATI	**Baumata**	**44.80**	**333**	LR			LR	05 37 33.7	
	comp=Z,50nm,22.0s,baz=336,slow=34								
KAPI	**Kappang**	**50.88**	**330**	LR			LR	05 41 12.2	
	comp=Z,22nm,21.9s,baz=148,slow=34								
SNAA	**Sanae**	**53.95**	**193**	P			**P**	**05 21 51.5**	**-0.5**
	1.8nm,1.0s,baz=121,slow=6.5,SNR=3.8								
SNAA					LR		LR	05 44 03.4	
	comp=Z,64nm,20.1s,baz=190,slow=35								
	1.8nm,1.0s								
H04S1	**CROZET ISLANDS**	**55.45**	**236**	T			T	06 20 54.3	
	baz=130,slow=75,SNR=80								
H04S2	**CROZET ISLANDS**	**55.45**	**236**	T			T	06 20 56.2	
	baz=130,slow=75,SNR=87								
H04S3	**CROZET ISLANDS**	**55.47**	**236**	T			T	06 20 53.3	
	baz=130,slow=75,SNR=56								
DAV	**Davao City (W)**	**60.98**	**340**	LR			LR	05 49 40.5	
	comp=Z,16nm,19.1s,baz=347,slow=37								
CMAR	**Chiang Mai Arr**	**80.14**	**318**	LR			LR	05 59 13.4	
	comp=Z,11nm,20.1s,baz=170,slow=35								
BRDH	**Bariadhala**	**87.00**	**314**	LR			LR	06 06 38.9	
	comp=Z,60nm,18.5s,baz=234,slow=37								
ARCES	**ARCESS Array B**	**146.95**	**325**	PKPbc			**PKPbc**	**05 32 10.5**	**+0.6**
	0.4nm,0.5s,baz=84,slow=3.7,SNR=5.7								
GERES	**GERESS Array B**	**148.07**	**284**	PKPbc			**PKiKP**	**05 32 14.8**	**-0.7**
	1.4nm,0.9s,baz=116,slow=3.1,SNR=6.9								

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*IDC **09** 05:37:37.0±5.0, 0°.06N×123°.94E, h92km±52km, mb3.7/8, mbtmp4.1/10, MS3.1/1, Error ellipse: s-maj=34.6km s-min=15.6km az=62.0*
*NEIC **09** 05:37:38.8±1.6, 0°.05N±0°.06×123°.89E±0°.05, h105km±8km, mb4.3/12, Error ellipse: s-maj=11.2km s-min=4.4km az=217.0*
*DJA **09** 05:37:40.0±0.2, 0°.S±2°×12°.4E±°, h94km±6km, M4.5/17, mB4.7/1, mb4.7/7, MLv4.4/17, Mw(mB)4.0/1*
ISC 09 05:37:38.9±0.6, 0°.01S±0°.05×123°.85E±0°.05, h110km, n42, σ1§18/48, mb4.1/13, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.59**	**13**	P			**Pn**	**05 37 57.5**	**+1.1**
KMSI				S			**Sn**	**05 38 11.1**	**+1.6**
LUWI	**Luwuk**	**1.49**	**226**	P			**Pn**	**05 38 06.4**	**+0.8**
LUWI	**Luwuk**	**1.49**	**226**	P			**Pn**	**05 38 06.5**	**+0.9**
LUWI				S			**Sn**	**05 38 24.8**	**-1.1**
MRSI	**Marisa**	**1.97**	**284**	P			**Pn**	**05 38 10.4**	**-1.1**
APSI	**Ampana**	**2.38**	**248**	P			**Pn**	**05 38 19.0**	**+2.2**
SANI	**Sanana**	**2.95**	**134**	P			**Pn**	**05 38 21.9**	**-2.3**
TOLI2	**Tolitoli**	**3.27**	**290**				**Pn**	**05 38 28.0**	**-0.4**
TNTI	**Ternate**	**3.60**	**78**	Pn			**Pn**	**05 38 31.9**	**-1.0**
TNTI	**Ternate**	**3.60**	**78**	P			**Pn**	**05 38 32.5**	**-0.4**
TNTI				S			**Sn**	**05 39 16.9**	**+2.3**
KDI	**Kendari**	**4.11**	**197**	P			**Pn**	**05 38 39.7**	**-0.1**
KDI				S			**Sn**	**05 39 25.3**	**-1.8**
NLAI	**Namlea**	**4.57**	**135**	P			**Pn**	**05 38 45.5**	**-0.4**
NLAI				S			**Sn**	**05 39 35.9**	**-2.0**
SPSI	**Sidrap Palu**	**5.67**	**226**	P			**Pn**	**05 39 00.3**	**-0.5**
	0.2nm882nm39nm,0.6s								
MSAI	**Masohi**	**6.06**	**123**	P			**Pn**	**05 39 07.7**	**+1.6**
	159nm,0.8s								
MSAI				S			**Sn**	**05 40 13.5**	**-0.7**
	159nm,0.8s								
KAPI	**Kappang**	**6.44**	**219**	P			**Pn**	**05 39 11.1**	**-0.2**
	14nm,0.3s,baz=102,slow=5.8,SNR=2.5								
KAPI				S			**Sn**	**05 40 24.3**	**+0.8**
	8.6nm,0.4s,baz=102,slow=18,SNR=1.3								
MYLDM	**Lahad Datu**	**7.42**	**314**	Pn			**Pn**	**05 39 22.8**	**-1.8**
SWI	**Sorong**	**7.46**	**97**	P			**Pn**	**05 39 25.6**	**+0.6**
	0.2nm58nm,0.7s								
FAKI	**Fak Fak**	**8.88**	**109**				**Pn**	**05 39 41.4**	**-2.9**
FAKI	**Fak Fak**	**8.88**	**109**	P			**Pn**	**05 39 43.2**	**-1.1**
MTN	**Manton Dam**	**14.66**	**151**	Pn			**Pn**	**05 41 00.8**	**-0.2**
KNRA	**Kununurra**	**16.31**	**163**				**Pn**	**05 41 21.9**	**+0.4**
KNRA					IAmb		IAmb	05 41 44.3	
	comp=Z,10nm,1.1s								
FITZ	**Fitzroy Crossi**	**18.07**	**175**	P			**P**	**05 41 41.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**18.07**	**175**	P			**P**	**05 41 42.4**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=4.8,slow=7.6,SNR=8.1								

WB0	**Warramunga Arr**	**22.19**	**153**	P			**P**	**05 42 25.5**	**-0.9**
WB0					IAmb		IAmb	05 42 27.6	
	comp=Z,4.0nm,0.5s								
WRA	**Warramunga Arr**	**22.32**	**153**	P			**P**	**05 42 27.4**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=334,slow=9.9,SNR=30								
	comp=Z,1.9nm,0.4s								
COEN	**Coen**	**23.62**	**127**	P			**P**	**05 42 39.8**	**-0.4**
COEN					IAmb		IAmb	05 42 55.9	
	comp=Z,12nm,1.4s								
NACB	**Ninganchiao**	**24.14**	**355**	P			**P**	**05 42 44.5**	**-0.2**
AS31	**Alice Springs**	**25.46**	**158**	P			**P**	**05 42 56.8**	**0.0**
ASAR	**Alice Springs**	**25.46**	**158**	P			**P**	**05 42 57.2**	**+0.4**
ASAR	**Alice Springs**	**25.46**	**158**	P			**P**	**05 42 56.9**	**0.0**
	comp=Z,1.0nm,0.5s,baz=337,slow=7.6,SNR=30								
	comp=Z,1.0nm,0.5s								
JOW	**Kunigami**	**27.02**	**9**	LR			LR	05 56 15.6	
	comp=Z,35nm,19.1s,baz=106,slow=42								
STKA	**Stephens Creek**	**35.87**	**154**	P			**P**	**05 44 28.0**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=329,slow=8.3,SNR=3.3								
	comp=Z,1.1nm,0.5s								
MJAR	**Matsushiro Arr**	**38.73**	**19**	P			**P**	**05 44 51.2**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=187,slow=9.2,SNR=6.2								
	comp=Z,1.8nm,0.6s								
JMM	**Marumori**	**40.80**	**21**	P			**P**	**05 45 10.0**	**+0.6**
JMM					IAmb		IAmb	05 45 32.1	
	comp=Z,15nm,1.0s								
SONM	**Songino Array**	**50.01**	**345**	P			**P**	**05 46 21.4**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=154,slow=9.7,SNR=3.7								
	comp=Z,0.7nm,0.6s								
MKAR	**Makanchi Array**	**59.07**	**328**	P			**P**	**05 47 27.3**	**-0.3**
MKAR	**Makanchi Array**	**59.07**	**328**	P			**P**	**05 47 27.8**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=121,slow=9.0,SNR=13								
	comp=Z,1.8nm,0.5s								
MAKZ	**Makanchi**	**59.24**	**328**	P			**P**	**05 47 28.2**	**-0.6**
MAKZ					IAmb		IAmb	05 47 29.9	
	comp=Z,1.8nm,0.6s								
PETK	**Petropavlovsk-**	**59.96**	**23**	P			**P**	**05 47 33.5**	**0.0**
	comp=Z,3.6nm,0.8s,baz=232,slow=7.4,SNR=1.6								
	comp=Z,3.6nm,0.8s								
KURBB	**Kurchatov Arra**	**63.40**	**330**	P			**P**	**05 47 56.5**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=132,slow=6.1,SNR=14								
	comp=Z,1.3nm,0.5s								
VNDA	**Vanda**	**80.12**	**172**	P			**P**	**05 49 36.1**	**-0.1**
QSPA	**South Pole Qui**	**89.93**	**180**	P			**P**	**05 50 28.5**	**+3.0**
QSPA					IAmb		IAmb	05 50 43.9	
	comp=Z,4.3nm,1.4s								
CRQM	**Cirque**	**91.48**	**29**	P			**P**	**05 50 33.3**	**+0.3**

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*IDC **09** 05:38:46.1±0.5, 0°.81N×29°.13W, h0km, mb4.2/22, mbtmp4.2/23, ML4.6/1, MS4.0/60, Error ellipse: s-maj=20.5km s-min=11.9km az=137.0*
*NEIC **09** 05:38:48.0±1.4, 0°.76N±0°.09×29°.15W±0°.08, h10km±1km, mb4.9/53, Error ellipse: s-maj=17.4km s-min=12.3km az=324.0*
*GCMT **09** 05:38:51.0±0.2, 0°.91N±0°.02×29°.20W±0°.01, h18km±1km, MW4.8/105, Moment Tensor Solution. s26,c30; s105,c145; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.33±.08; Mθθ0.23±.09; Mϕϕ0.10±.08; Mrθ-0.28±.19; Mθϕ-2.33±.08; Mϕr-0.48±.20; Best double couple: M₀2.40800×10^16^ NP1:φs90.00000°, δ77.00000°, λ-171.00000°. NP2:φs358.00000°, δ81.00000°, λ-13.00000°. Principal axes: T 2.5040, Plg3.0000°, Azm45.0000°; N -0.1920, Plg74.0000°, Azm145.0000°; P -2.3120, Plg15.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 09 05:38:47.3±0.4, 0°.73N±0°.08×29°.13W±0°.07, h10km, n177, σ0§86/123, mb4.7/55, MS4.0/60, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.39**	**226**				**Pn**	**05 41 02.3**	**-0.5**
RCBR	**Riachuelo**	**9.39**	**226**	*e*P			**Pn**	**05 41 00.7**	**-2.2**
NBAN	**Anadia - AL**	**12.54**	**214**	*e*P			**Pn**	**05 41 45.0**	**-1.1**
SACV	**Santiago Islan**	**15.17**	**21**				**Pn**	**05 42 20.0**	**-1.8**
H10N3	**ASCENSION HYDR**	**16.89**	**121**	T			T	06 00 19.0	
	baz=300,slow=75,SNR=8030								
H10N2	**ASCENSION HYDR**	**16.89**	**120**	T			T	06 00 19.4	
	baz=300,slow=75,SNR=4689								
H10N1	**ASCENSION HYDR**	**16.91**	**121**	T			T	06 00 20.6	
	baz=300,slow=75,SNR=5593								
ASCN	**Ascension**	**17.06**	**121**	Pn			**Pn**	**05 42 44.0**	**-2.1**
H10S3	**ASCENSION HYDR**	**17.33**	**124**	T			T	06 00 48.1	
	baz=293,slow=74,SNR=4304								
H10S2	**ASCENSION HYDR**	**17.34**	**124**	T			T	06 00 51.0	
	baz=287,slow=74,SNR=4448								
MBO	**M'Bour**	**18.14**	**41**				**Pn**	**05 42 58.7**	**-0.9**
MBO					IAmb		IAmb	05 43 04.8	
	comp=Z,128nm,1.3s								
BBTS	**Babate**	**18.62**	**41**	P			**P**	**05 43 05.2**	**0.0**
	comp=Z,1.8nm,0.3s,baz=165,slow=20,SNR=6.6								
BBTS					LR		LR	05 48 28.9	
	comp=Z,656nm,19.6s,baz=168,slow=31								
	comp=Z,32nm,0.9s								
TMAB	**Tom-Au,PA,Br**	**19.21**	**261**	*e*P			**P**	**05 43 12.5**	**+0.8**
GUA01	**Guaratinga, BA**	**20.17**	**211**	*e*P			**P**	**05 43 22.1**	**-0.1**
SMTB	**Santa Maria do**	**20.71**	**242**	*e*P			**P**	**05 43 27.8**	**-0.4**
PRPB	**Parauapebas**	**21.76**	**251**	*e*P			**P**	**05 43 38.8**	**-0.6**
MDP	**Montagnes des**	**23.87**	**281**	LR			LR	05 51 19.8	
	comp=Z,160nm,21.2s,baz=88,slow=32								
BDFB	**Brasilia**	**24.75**	**228**	P			**P**	**05 44 09.0**	**-0.5**
BDFB	**Brasilia**	**24.75**	**228**	P			**P**	**05 44 09.9**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=63,slow=9.6,SNR=5.2								
BDFB					LR		LR	05 52 58.8	
	comp=Z,982nm,18.5s,baz=33,slow=34								
	comp=Z,3.9nm,0.8s								
DBIC	**Dimbokro**	**24.92**	**76**				**P**	**05 44 10.5**	**-0.4**
DBIC	**Dimbokro**	**24.92**	**76**	P			**P**	**05 44 10.9**	**0.0**
	comp=Z,82nm,1.1s,baz=279,slow=12,SNR=24								
DBIC					LR		LR	05 52 14.5	
	comp=Z,565nm,18.7s,baz=279,slow=32								
MAL2	**Monte Alegre,**	**25.20**	**264**	P			**P**	**05 44 15.2**	**+1.8**
MAL2					IAmb		IAmb	05 44 17.9	
	comp=Z,45nm,1.2s								
ITTB	**Itaituba**	**27.06**	**259**	*e*P			**P**	**05 44 29.5**	**-0.8**
ACRG	**Accra**	**29.28**	**80**	P			**P**	**05 44 49.3**	**-0.8**
MACI	**Morro de la Ar**	**29.91**	**23**	P			**P**	**05 44 56.0**	**+0.2**
BOAV	**Boa Vista**	**31.42**	**273**				**P**	**05 45 08.4**	**-0.7**
BOAV					IAmb		IAmb	05 45 10.0	
	comp=Z,13nm,1.0s								
BOAV	**Boa Vista**	**31.42**	**273**	*e*P			**P**	**05 45 07.5**	**-1.7**
TORD	**Torodi Ar. Bea**	**32.93**	**67**	IAmb			IAmb	05 45 43.5	
	comp=Z,12nm,0.8s								
TORD	**Torodi Ar. Bea**	**32.93**	**67**	P			**P**	**05 45 22.4**	**0.0**
	comp=Z,8.8nm,0.4s,baz=248,slow=5.9,SNR=2.1								
TORD					LR		LR	05 57 14.4	
	comp=Z,348nm,20.4s,baz=270,slow=34								
	comp=Z,8.8nm,0.4s								
AQDB	**Aquidauana**	**33.48**	**229**	P			**P**	**05 45 27.2**	**+0.2**
PTLB	**Pontes e Lacer**	**33.73**	**240**				**P**	**05 45 28.8**	**-0.5**
PTLB	**Pontes e Lacer**	**33.73**	**240**	*e*P			**P**	**05 45 29.6**	**+0.3**
SIV	**San Ignacio**	**35.65**	**241**	LR			LR	05 59 42.3	
	comp=Z,1µm,19.2s,baz=95,slow=35								
TEFE	**Tefe**	**35.73**	**263**	*e*P			**P**	**05 45 46.5**	**-0.2**
CMLA	**Cha da Macela**	**37.00**	**5**	P			**P**	**05 45 56.9**	**-0.3**
CPUP	**Villa Florida**	**38.25**	**223**	P			**P**	**05 46 08.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=38,slow=6.1,SNR=3.4								
CPUP					LR		LR	06 01 39.8	
	comp=Z,437nm,18.7s,baz=278,slow=36								
	comp=Z,0.6nm,0.8s								
MD31	**MD31**	**39.34**	**33**	P			**P**	**05 46 16.2**	**-0.9**
MD01	**Midelt array s**	**39.34**	**33**	P			**P**	**05 46 16.6**	**-0.6**
EDA	**Edea**	**39.36**	**85**	P			**P**	**05 46 17.8**	**+0.3**
MDT	**Midelt**	**39.39**	**33**	LR			LR	06 00 42.1	
	comp=Z,340nm,21.0s,baz=233,slow=34								
BAUV	**El Baul**	**39.59**	**283**	P			**P**	**05 46 18.9**	**-0.4**
BAUV					IAmb		IAmb	05 46 23.7	
	comp=Z,32nm,1.1s								
TAM	**Tamanrasset**	**40.19**	**54**				**P**	**05 46 25.0**	**+0.7**
SJG	**San Juan**	**40.25**	**298**	LR			LR	05 59 27.4	
	comp=Z,119nm,21.7s,baz=96,slow=31								
MORF	**Marmelete**	**41.01**	**25**	P			**P**	**05 46 31.9**	**+1.1**
MORF					IAmb		IAmb	05 46 36.1	
	comp=Z,46nm,1.3s								
MORF	**Marmelete**	**41.01**	**25**	*e*P			**P**	**05 46 31.8**	**+0.9**
MORF				*i*	IAmb		IAmb	05 46 40.8	
	comp=Z,61nm,1.7s								
PVAQ	**Vaqueiros**	**41.50**	**26**	P			**P**	**05 46 35.7**	**+0.9**
PCVE	**Castro Verde**	**41.55**	**26**	*e*P			**P**	**05 46 36.6**	**+1.4**
PCVE				*i*	IAmb		IAmb	05 46 43.8	
	comp=Z,36nm,1.6s								

LPAZ	**La Paz**	**42.03**	**245**	P			**P**	**05 46 40.3**	**+0.1**
LPAZ	**La Paz**	**42.03**	**245**	P			**P**	**05 46 40.7**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=72,slow=3.3,SNR=17								
LPAZ					LR		LR	06 03 47.5	
	comp=Z,452nm,18.2s,baz=66,slow=36								
	comp=Z,3.9nm,0.7s								
LPAZ	**La Paz**	**42.03**	**245**	*e*P			**P**	**05 46 39.6**	**-0.6**
SDV	**Santo Domingo**	**42.10**	**282**				**P**	**05 46 40.1**	**-0.2**
SDV					IAmb		IAmb	05 46 44.9	
	comp=Z,24nm,0.9s								
SDV	**Santo Domingo**	**42.10**	**282**	LR			LR	06 03 15.9	
	comp=Z,67nm,20.7s,baz=96,slow=35								
SDV	**Santo Domingo**	**42.10**	**282**	*e*P			**P**	**05 46 40.4**	**+0.1**
MOE	**Montemor**	**42.17**	**24**	*e*P			**P**	**05 46 41.2**	**+1.0**
EVO	**Evora**	**42.32**	**25**	*e*P			**P**	**05 46 42.2**	**+0.7**
EVO				*i*	IAmb		IAmb	05 47 10.7	
	comp=Z,24nm,1.9s								
PARRA	**Arraiolos**	**42.55**	**25**	*e*P			**P**	**05 46 43.9**	**+3.9**
PARRA				*i*	IAmb		IAmb	05 47 27.5	
	comp=Z,30nm,1.7s								
PSARD	**Sardoal**	**43.16**	**24**	*e*P			**P**	**05 46 49.5**	**+1.1**
PSARD				*i*	IAmb		IAmb	05 47 01.1	
	comp=Z,44nm,1.7s								
RUSC	**La Rusia**	**44.16**	**278**	P			**P**	**05 46 57.5**	**+0.2**
PVIS	**Viseu**	**44.22**	**23**	*e*P			**P**	**05 46 57.7**	**+0.8**
ESDC	**Sonseca Array**	**45.05**	**28**	P			**P**	**05 47 03.8**	**+0.2**
ESDC					IAmb		IAmb	05 47 10.2	
	comp=Z,20nm,1.7s								
ESDC	**Sonseca Array**	**45.05**	**28**	P			**P**	**05 47 03.3**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=227,slow=8.4,SNR=24								
ESDC					LR		LR	06 03 01.3	
	comp=Z,133nm,20.8s,baz=238,slow=32								
	comp=Z,4.7nm,0.8s								
ROSC	**El Rosal**	**45.31**	**276**	P			**P**	**05 47 05.5**	**-0.9**
ROSC					IAmb		IAmb	05 47 10.3	
	comp=Z,23nm,0.8s								
ROSC	**El Rosal**	**45.31**	**276**	P			**P**	**05 47 06.2**	**-0.1**
	comp=Z,21nm,0.8s,baz=121,slow=11,SNR=13								
ROSC					LR		LR	06 04 43.5	
	comp=Z,493nm,20.9s,baz=61,slow=34								
	comp=Z,21nm,0.8s								
PB06	**IPOC Station P**	**45.74**	**237**	P			**P**	**05 47 09.4**	**0.0**
PB06					IAmb		IAmb	05 48 55.6	
	comp=Z,13nm,0.8s								
FLOC	**Florencia**	**46.52**	**271**	P			**P**	**05 47 15.0**	**-0.6**
FLOC					IAmb		IAmb	05 47 25.7	
	comp=Z,14nm,1.2s								
GO02	**Mina Guanaco**	**46.84**	**234**	P			**P**	**05 47 18.0**	**-0.2**
GO02					IAmb		IAmb	05 47 23.5	
	comp=Z,20nm,1.1s								
EBR	**Ebro Roquetas**	**48.09**	**30**	P			**P**	**05 47 27.5**	**+0.2**
NNA	**Nana**	**49.03**	**253**	LR			LR	06 07 25.4	
	comp=Z,106nm,19.9s,baz=38,slow=35								
CFA	**Coronel Fontan**	**49.05**	**225**	LR			LR	06 08 28.2	
	comp=Z,231nm,18.7s,baz=140,slow=36								
KEST	**Kesra**	**49.89**	**41**	P			**P**	**05 47 42.0**	**+0.7**
KEST					IAmb		IAmb	05 48 38.1	
	comp=Z,29nm,1.3s								
KEST	**Kesra**	**49.89**	**41**	P			**P**	**05 47 42.2**	**+0.9**
	comp=Z,10nm,0.9s,baz=225,slow=1.4,SNR=6.9								
KEST					LR		LR	06 09 07.6	
	comp=Z,310nm,20.4s,baz=241,slow=37								
	comp=Z,10nm,0.9s								
TSUM	**Tsumeb**	**49.93**	**116**	LR			LR	06 05 43.7	
	comp=Z,107nm,18.2s,baz=144,slow=32								
MT08	**Bocatoma Ro**	**51.31**	**225**	P			**P**	**05 47 52.5**	**+0.2**
MT08					IAmb		IAmb	05 47 58.7	
	comp=Z,24nm,1.4s								
VA03	**San Esteban**	**51.32**	**226**	P			**P**	**05 47 52.9**	**+0.7**
VA03					IAmb		IAmb	05 49 38.3	
	comp=Z,60nm,1.9s								
VA06	**Catapilco**	**51.75**	**226**	P			**P**	**05 47 55.3**	**0.0**
MT09	**Talagante**	**52.17**	**225**	P			**P**	**05 47 58.0**	**-0.6**
QNGWA	**Qangwa**	**53.26**	**115**	P			**P**	**05 48 07.5**	**+0.6**
GRTLG	**Ghanzi**	**53.83**	**117**	P			**P**	**05 48 11.3**	**+0.3**
GRTLG					IAmb		IAmb	05 49

MMAI					LR	LR	06 21 22.6		
	comp=Z,61nm,18.2s,baz=294,slow=37								
	comp=Z,0.3nm,0.3s								
LUBAR	**Lubar, Ukraine**	**68.73**	**36**		P	**P**	**05 49 50.4**	**-1.0**	
BR105	**Keskin Array S**	**68.83**	**47**		P	**P**	**05 49 53.2**	**+0.8**	
	comp=Z,2.9nm,1.0s								
BR106	**Keskin Array S**	**68.83**	**47**		P	**P**	**05 49 52.9**	**+0.5**	
	comp=Z,2.6nm,0.9s								
BR131	**Keskin Array S**	**68.84**	**47**		P	**P**	**05 49 52.1**	**-0.3**	
BRTR	**Keskin Array B**	**68.84**	**47**		P	**P**	**05 49 52.2**	**-0.3**	
	comp=Z,1.9nm,0.9s,baz=229,slow=5.7,SNR=8.3								
BRTR					LR	LR	06 21 11.4		
	comp=Z,120nm,19.4s,baz=252,slow=37								
	comp=Z,1.9nm,0.9s								
MI28	**Mi28,Pidlybu**	**69.13**	**35**		P	**P**	**05 49 53.9**	**+0.1**	
FRB	**Frobisher Bay**	**69.22**	**342**		LR	LR	06 15 11.6		
	comp=Z,65nm,20.6s,baz=59,slow=32								
ILGA	**Ilgaz**	**69.31**	**46**		P	**P**	**05 49 54.7**	**-0.7**	
ILGA					IAmb	IAmb	05 49 57.0		
	comp=Z,6.8nm,1.2s								
ASF	**Jabal al Asfar**	**69.44**	**56**		LR	LR	06 22 02.2		
	comp=Z,105nm,18.9s,baz=287,slow=37								
AK13	**Malin Array Si**	**69.79**	**35**		P	**P**	**05 49 58.0**	**+0.1**	
AK19	**Malin Array Si**	**69.80**	**35**		P	**P**	**05 49 57.9**	**-0.1**	
AK20	**Malin Array Si**	**69.81**	**35**		P	**P**	**05 49 57.6**	**-0.4**	
KIEV	**Kiev**	**69.91**	**35**		P	**P**	**05 49 58.3**	**-0.3**	
KIEV					IAmb	IAmb	05 49 59.9		
	comp=Z,7.0nm,0.8s								
KIEV	**Kiev**	**69.91**	**35**		P	**P**	**05 49 58.7**	**+0.1**	
	comp=Z,39nm,0.9s								
AKASG	**Malin Array Be**	**69.92**	**35**		IAmb	IAmb	05 49 59.6		
	comp=Z,7.9nm,1.1s								
AKASG	**Malin Array Be**	**69.92**	**35**		P	**P**	**05 49 58.6**	**-0.1**	
	comp=Z,6.3nm,0.7s,baz=246,slow=6.5,SNR=9.8								
	comp=Z,6.3nm,0.7s								
AKBB	**Malin Array Si**	**69.92**	**35**		P	**P**	**05 49 58.3**	**-0.4**	
AKBB					IAmb	IAmb	05 49 59.9		
	comp=Z,7.5nm,0.8s								
AKBB	**Malin Array Si**	**69.92**	**35**		P	**P**	**05 49 58.7**	**0.0**	
AK03	**Malin Array Si**	**69.93**	**35**		P	**P**	**05 49 58.4**	**-0.3**	
PMSA	**Palmer Station**	**70.13**	**195**		LR	LR	06 20 10.7		
	comp=Z,46nm,18.5s,baz=360,slow=35								
BNN	**Bunyan**	**70.23**	**49**		P	**P**	**05 49 59.9**	**-1.2**	
BNN					IAmb	IAmb	05 50 42.3		
	comp=Z,16nm,1.7s								
BRDY	**Brady**	**72.47**	**303**		P	**P**	**05 50 13.7**	**-0.9**	
FINES	**FINESS Array B**	**73.43**	**24**		P	**P**	**05 50 19.8**	**+0.2**	
	comp=Z,4.0nm,0.8s,baz=224,slow=3.8,SNR=7.1								
FINES					LR	LR	06 19 13.9		
	comp=Z,142nm,21.1s,baz=238,slow=33								
	comp=Z,4.0nm,0.8s								
SNAA	**Sanae**	**74.24**	**172**		P	**P**	**05 50 25.9**	**+1.6**	
	comp=Z,1.2nm,0.9s,baz=302,slow=5.5,SNR=3.9								
	comp=Z,1.2nm,0.9s								
ULM	**Lac du Bonnet**	**74.74**	**322**		LR	LR	06 17 24.2		
	comp=Z,86nm,21.9s,baz=83,slow=31								
GURO	**Guroymak-BITLI**	**74.87**	**50**		P	**P**	**05 50 28.4**	**-0.3**	
SAND	**Sanderson**	**74.92**	**301**		P	**P**	**05 50 27.9**	**-1.2**	
RAYN	**Ar Rayn**	**75.63**	**66**		P	**P**	**05 50 33.7**	**+0.4**	
TXAR	**Lajitas Array**	**76.18**	**300**		P	**P**	**05 50 36.1**	**-0.2**	
	comp=Z,0.9nm,0.9s,baz=117,slow=6.9,SNR=8.7								
	comp=Z,0.9nm,0.9s								
TX31	**Lajitas Ar. Si**	**76.18**	**300**		P	**P**	**05 50 35.7**	**-0.7**	
TX31					IAmb	IAmb	05 51 01.3		
	comp=Z,18nm,1.8s								
KBZ	**Khabaz**	**76.56**	**45**		P	**P**	**05 50 38.9**	**+0.8**	
	comp=Z,1.2nm,0.6s,baz=195,slow=9.1,SNR=3.9								
KBZ					LR	LR	06 26 00.6		
	comp=Z,87nm,21.2s,baz=238,slow=37								
	comp=Z,1.2nm,0.6s								
GNI	**Garni**	**77.23**	**49**		LR	LR	06 25 57.9		
	comp=Z,89nm,21.2s,baz=264,slow=37								
ARCES	**ARCESS Array B**	**77.56**	**17**		LR	LR	06 19 31.7		
	comp=Z,71nm,20.6s,baz=227,slow=32								
ANMO	**Albuquerque**	**79.20**	**305**		LR	LR	06 20 31.1		
	comp=Z,170nm,21.9s,baz=173,slow=32								
SPITS	**Spitsbergen Ar**	**80.97**	**9**		LR	LR	06 21 06.6		
	comp=Z,60nm,18.9s,baz=262,slow=31								
RPN	**Rapa Nui**	**81.61**	**243**		LR	LR	06 23 45.3		
	comp=Z,86nm,20.2s,baz=310,slow=33								
PDAR	**Pinedale Array**	**82.47**	**313**		LR	LR	06 22 17.4		
	comp=Z,77nm,21.2s,baz=67,slow=32								
KIRV	**Kirov**	**83.41**	**31**		LR	LR	06 25 58.1		
	comp=Z,137nm,21.4s,baz=257,slow=34								
H04S3	**CROZET ISLANDS**	**84.38**	**137**		T	T	07 24 47.4		
	baz=277,slow=75,SNR=106								
H04S2	**CROZET ISLANDS**	**84.38**	**137**		T	T	07 24 47.8		
	baz=277,slow=75,SNR=142								
H04S1	**CROZET ISLANDS**	**84.39**	**137**		T	T	07 24 46.7		
	baz=277,slow=75,SNR=81								
YKA	**Yellowknife Ar**	**87.26**	**332**		LR	LR	06 26 47.9		
	comp=Z,54nm,20.8s,baz=280,slow=33								
PFO	**Pinyon Flats O**	**87.37**	**303**		LR	LR	06 26 57.7		
	comp=Z,50nm,21.6s,baz=55,slow=33								
AKTO	**Aktyubinsk**	**87.62**	**40**		LR	LR	06 30 50.0		
	comp=Z,41nm,21.8s,baz=244,slow=36								
ARTI	**Arti**	**88.02**	**34**		LR	LR	06 28 59.1		
	comp=Z,63nm,21.4s,baz=244,slow=34								
NEW	**Newport**	**88.12**	**318**		LR	LR	06 25 34.8		
	comp=Z,91nm,21.2s,baz=76,slow=32								
NVAR	**Mina Array Bea**	**88.90**	**308**		P	**P**	**05 51 43.6**	**+0.9**	
	comp=Z,0.3nm,0.8s,baz=91,slow=6.9,SNR=5.0								
NVAR					LR	LR	06 26 25.9		
	comp=Z,75nm,19.2s,baz=64,slow=32								
	comp=Z,0.3nm,0.8s								
QSPA	**South Pole Qui**	**90.80**	**180**		P	**P**	**05 51 53.0**	**+2.3**	
	comp=Z,1.4nm,1.0s,baz=256,slow=5.4,SNR=3.1								
	comp=Z,1.4nm,1.0s								
MAW	**Mawson**	**91.44**	**157**		LR	LR	06 23 50.0		
	comp=Z,42nm,21.6s,baz=273,slow=30								
YBH	**Yreka Blue Hor**	**92.20**	**312**		LR	LR	06 28 45.1		
	comp=Z,6.1nm,20.5s,baz=73,slow=32								
BBB	**Bella Bella**	**94.94**	**322**		LR	LR	06 30 37.0		
	comp=Z,59nm,19.9s,baz=58,slow=33								
DLBC	**Dease Lake**	**95.09**	**329**		LR	LR	06 29 13.1		
	comp=Z,44nm,21.5s,baz=44,slow=32								
BVAR	**Borovoye Array**	**95.15**	**37**		LR	LR	06 34 04.3		
	comp=Z,72nm,21.0s,baz=283,slow=35								
AAK	**Ala-Archa**	**99.51**	**47**		LR	LR	06 42 53.9		
	comp=Z,36nm,18.4s,baz=278,slow=39								
TBI	**Tubuai**	**117.97**	**244**		eLR	LR	06 33 23.6		
	comp=Z,334nm,30.5s								
PPT2	**Papeete2**	**119.15**	**250**		eLR	LR	06 33 53.2		
	comp=Z,70nm,22.8s								
CMAR	**Chiang Mai Arr**	**125.54**	**67**		PKP	**PKiKP**	**05 57 51.1**	**+0.8**	
	comp=Z,0.8nm,0.3s,baz=295,slow=2.1,SNR=5.1								
ASAR	**Alice Springs**	**151.88**	**145**		PKPbc	**PKPbc**	**05 58 42.8**	**-0.8**	
	comp=Z,3.1nm,0.8s,baz=200,slow=2.0,SNR=32								
WRA	**Warramunga Arr**	**154.97**	**141**		PKPab	**PKPab**	**05 59 03.8**	**-1.9**	
	comp=Z,0.7nm,0.8s,baz=195,slow=6.4,SNR=5.6								

*SOME **09** 05:45:21.2, 44°.30N×81°.60E, h20km*
*NNC **09** 05:45:23.6±3.8, 44°.40N×81°.33E, h0km, mb2.6, mpv2.1,*
Error ellipse: s-maj=83.6km s-min=11.5km az=123.0,
Suspected Mining explosion.

ISC 09 05:45:19.0±1.7, 44°.42N±0°.09×81°.4E±0°.1, h0km, n6,
σ1s90/9, 1C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**1.78**	**233**	⇓Pn	**Pg**	**05 45 53.6**	**+0.6**
	0.8nm,0.2s						
PDGK				⇓Sn	**Sg**	**05 46 18.9**	**+2.8**
	15nm,0.7s						
SHLS	**Shalkode**	**1.90**	**229**	*e*P	**Pn**	**05 45 52.2**	**-0.6**
	3.5nm,0.1s						
SHLS				*e*S	**Sn**	**05 46 14.3**	**-3.2**
	3.9nm,0.1s						
UZB	**Uzynbulak**	**2.16**	**235**	*e*P	**Pg**	**05 46 01.1**	**+0.8**
	1.8nm,0.2s						
UZB				*e*S	**Sg**	**05 46 29.4**	**+1.0**
	4.5nm,0.2s						
MAKZ	**Makanchi**	**2.42**	**9**	⇓Lg	Lg	05 46 41.1	
	2.8nm,0.7s						
MK31	**Makanchi Array**	**2.45**	**14**	⇑Pn	**Pg**	**05 46 06.6**	**+0.7**
	0.1nm,0.1s,baz=201,slow=13,SNR=17						
MK31				Lg	Lg	05 46 40.7	
	2.0nm,0.6s,baz=194,slow=30,SNR=8.6						
ARXS	**Arharly**	**2.59**	**267**	*e*P	**Pg**	**05 46 08.8**	**+0.2**
ARXS				*e*S	**Sg**	**05 46 42.7**	**+0.5**

*NOU **09** 05:49:51.8, 39°.00S×176°.28E, h76km, MLv3.7/15, North*
Island, New Zealand
*WEL **09** 05:49:52.9±0.4, 39°.3S×17°.6E±°, h63km±4km, M3.5/73,*

ML3.6/59, MLv3.5/73, Error ellipse: s-maj=3.7km
s-min=2.9km az=141.7, confirmed

ISC 09 05:49:51.4±1.3, 38°.95S±0°.03×176°.24E±0°.03, h87km±6km,
n147, σ0.82/161, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATZ	**Hinemaiaia**	**0.13**	**299**	P	**Pn**	**05 50 03.4**	**-0.5**
HATZ				S	**Sn**	**05 50 11.7**	**-1.4**
MRHZ	**Matea Rd**	**0.18**	**50**	P	**Pn**	**05 50 03.8**	**-0.3**
MRHZ				S	**Sn**	**05 50 11.9**	**-1.6**
BKZ	**Black Stump Fm**	**0.29**	**137**	P	**Pn**	**05 50 04.8**	**+0.2**
BKZ	**Black Stump Fm**	**0.29**	**137**	S	**Sn**	**05 50 14.2**	**-0.2**
BKZ	**Black Stump Fm**	**0.29**	**137**	P	**Pn**	**05 50 04.8**	**+0.2**
BKZ				S	**Sn**	**05 50 14.1**	**-0.2**
RITZ	**Rihia Road**	**0.30**	**265**	P	**Pn**	**05 50 04.9**	**+0.4**
RITZ				S	**Sn**	**05 50 14.4**	**+0.1**
WHTZ	**Whakaora**	**0.36**	**323**	P	**Pn**	**05 50 05.1**	**+0.1**
RATZ	**Rangitukua**	**0.37**	**283**	P	**Pn**	**05 50 04.9**	**-0.1**
ALRZ	**Allen Road**	**0.40**	**12**	P	**Pn**	**05 50 04.8**	**-0.4**
ALRZ				S	**Sn**	**05 50 14.7**	**-0.7**
KATZ	**Kakaramea**	**0.42**	**267**	P	**Pn**	**05 50 05.7**	**+0.3**
WPRZ	**Whakapapatarin**	**0.44**	**352**	P	**Pn**	**05 50 05.6**	**-0.4**
TMVZ	**Te Maari**	**0.45**	**248**	P	**Pn**	**05 50 06.0**	**+0.4**
TMVZ				S	**Sn**	**05 50 16.2**	**0.0**
ETVZ	**East Tongariro**	**0.45**	**246**	P	**Pn**	**05 50 06.1**	**+0.4**
ETVZ				S	**Sn**	**05 50 16.1**	**-0.1**
NTVZ	**North Tongarir**	**0.46**	**251**	P	**Pn**	**05 50 06.1**	**+0.3**
NTVZ				S	**Sn**	**05 50 16.2**	**-0.2**
WATZ	**Wairara**	**0.46**	**302**	P	**Pn**	**05 50 05.5**	**-0.1**
NMHZ	**Naumai**	**0.47**	**108**	P	**Pn**	**05 50 06.8**	**+1.1**
NMHZ				S	**Sn**	**05 50 18.4**	**+2.1**
PRRZ	**Plateau Road**	**0.47**	**15**	P	**Pn**	**05 50 05.2**	**-0.5**
PRRZ				S	**Sn**	**05 50 15.6**	**-0.6**
MTHZ	**Maungataniwha**	**0.48**	**78**	P	**Pn**	**05 50 06.0**	**+0.2**
MTHZ				S	**Sn**	**05 50 16.6**	**+0.1**
KRVZ	**Karewarewa**	**0.48**	**253**	P	**Pn**	**05 50 06.3**	**+0.4**
KWHZ	**Kaweka Forest**	**0.49**	**163**	P	**Pn**	**05 50 06.7**	**+0.7**
KWHZ				S	**Sn**	**05 50 18.2**	**+1.5**
OTVZ	**Oturere**	**0.49**	**245**	P	**Pn**	**05 50 06.6**	**+0.6**
OTVZ				S	**Sn**	**05 50 16.9**	**0.0**
NNVZ	**North Ngauruho**	**0.52**	**250**	P	**Pn**	**05 50 06.8**	**+0.6**
SNVZ	**South Ngauruho**	**0.52**	**243**	P	**Pn**	**05 50 06.9**	**+0.6**
SNVZ				S	**Sn**	**05 50 17.5**	**+0.2**
WTVZ	**West Tongariro**	**0.53**	**252**	P	**Pn**	**05 50 06.6**	**+0.3**
NGZ	**Ngauruhoe**	**0.54**	**246**	P	**Pn**	**05 50 06.9**	**+0.5**
TUVZ	**Tukino**	**0.55**	**235**	P	**Pn**	**05 50 07.1**	**+0.6**
HRRZ	**Handcock Road**	**0.56**	**4**	P	**Pn**	**05 50 06.4**	**-0.1**
KUTZ	**Kaahu Road**	**0.56**	**325**	P	**Pn**	**05 50 06.5**	**0.0**
MOVZ	**Moawhango**	**0.59**	**220**	P	**Pn**	**05 50 07.2**	**+0.5**
COVZ	**Chateau Observ**	**0.59**	**245**	P	**Pn**	**05 50 07.2**	**+0.3**
WHVZ	**Whangaehu Hut**	**0.60**	**237**	P	**Pn**	**05 50 07.6**	**+0.6**
MCHZ	**McNeill Hill**	**0.61**	**144**	P	**Pn**	**05 50 08.3**	**+1.5**
GRRZ	**Galatos Road**	**0.61**	**351**	P	**Pn**	**05 50 07.0**	**+0.1**
FWVZ	**Far West T-bar**	**0.61**	**240**	P	**Pn**	**05 50 07.6**	**+0.5**
MAVZ	**Matarangi**	**0.61**	**239**	P	**Pn**	**05 50 07.8**	**+0.5**
WNVZ	**Wahianoa**	**0.62**	**233**	P	**Pn**	**05 50 07.7**	**+0.6**
MUGZ	**Murupara**	**0.63**	**41**	P	**Pn**	**05 50 08.0**	**-0.2**
TWVZ	**Tauwewa**	**0.63**	**259**	P	**Pn**	**05 50 07.5**	**+0.3**
TRVZ	**Turoa**	**0.64**	**237**	P	**Pn**	**05 50 08.0**	**+0.6**
HSRZ	**Hossack Road**	**0.64**	**1**	P	**Pn**	**05 50 07.1**	**-0.1**
RRRZ	**Republican Roa**	**0.65**	**20**	P	**Pn**	**05 50 07.0**	**-0.3**
RAHZ	**Arahi**	**0.66**	**87**	P	**Pn**	**05 50 08.2**	**+0.9**
ARHZ	**Aropaoanui**	**0.67**	**118**	P	**Pn**	**05 50 08.5**	**+1.1**
RTZ	**Ruatahuna**	**0.67**	**60**	P	**Pn**	**05 50 07.7**	**+0.2**
KRHZ	**Kereru**	**0.70**	**172**	P	**Pn**	**05 50 08.7**	**+1.0**
HLRZ	**Highlands Stat**	**0.71**	**7**	P	**Pn**	**05 50 08.5**	**+0.7**
MTVZ	**Mangateitei**	**0.74**	**234**	P	**Pn**	**05 50 09.0**	**+0.9**
TARZ	**Mount Tarawera**	**0.75**	**16**	P	**Pn**	**05 50 08.3**	**0.0**
PKVZ	**Pokaka**	**0.77**	**244**	P	**Pn**	**05 50 09.2**	**+0.7**
UTU	**Utuhina**	**0.78**	**357**	P	**Pn**	**05 50 08.7**	**+0.2**
WHHZ	**Waihua**	**0.79**	**99**	P	**Pn**	**05 50 09.4**	**+0.9**
TLZ	**Tolley Road**	**0.83**	**318**	P	**Pn**	**05 50 09.3**	**+0.2**
MKRZ	**Makatiti**	**0.83**	**13**	P	**Pn**	**05 50 09.6**	**+0.4**
NGRZ	**Ngongotaha**	**0.85**	**357**	P	**Pn**	**05 50 09.5**	**+0.1**
OMRZ	**Omania**	**0.85**	**7**	P	**Pn**	**05 50 09.2**	**-0.4**
SNGZ	**Shannon Statio**	**0.88**	**79**	P	**Pn**	**05 50 10.3**	**+0.7**
KARZ	**Kaharoa**	**0.93**	**0**	P	**Pn**	**05 50 10.3**	**+0.1**
EDRZ	**Edgecumbe**	**0.93**	**25**	P	**Pn**	**05 50 10.1**	**-0.2**
LIRZ	**Lichensteins R**	**0.95**	**7**	P	**Pn**	**05 50 10.6**	**+0.1**
CKHZ	**Cape Kidnapper**	**0.96**	**137**	P	**Pn**	**05 50 11.8**	**+1.3**
PNHZ	**Pukenui**	**0.96**	**182**	P	**Pn**	**05 50 11.2**	**+0.7**
URZ	**Urewera**	**0.97**	**45**	P	**Pn**	**05 50 10.6**	**0.0**
URZ	**Urewera**	**0.97**	**45**	S	**Sn**	**05 50 24.5**	**-0.5**
URZ	**Urewera**	**0.97**	**45**	P	**Pn**	**05 50 10.6**	**0.0**
KAHZ	**Kahuranaki**	**0.97**	**150**	P	**Pn**	**05 50 12.0**	**+1.3**
MARZ	**Manawahe**	**1.03**	**20**	P	**Pn**	**05 50 11.2**	**-0.1**
RAGZ	**Rawiri**	**1.03**	**64**	P	**Pn**	**05 50 11.8**	**+0.5**
KNZ	**Kokohu**	**1.12**	**94**	P	**Pn**	**05 50 12.5**	**+0.2**
WPHZ	**Waipukurau**	**1.12**	**172**	P	**Pn**	**05 50 13.2**	**+0.8**
TSZ	**Takapari Road**	**1.12**	**191**	P	**Pn**	**05 50 13.2**	**+0.8**
KMRZ	**Kaimai**	**1.13**	**348**	P	**Pn**	**05 50 12.7**	**+0.2**
OPRZ	**Ohinepanea**	**1.14**	**13**	P	**Pn**	**05 50 12.4**	**-0.1**
VRZ	**Vera Road**	**1.16**	**261**	P	**Pn**	**05 50 13.0**	**+0.1**
HIZ	**Hauiti**	**1.17**	**292**	P	**Pn**	**05 50 13.5**	**+0.6**
HIZ	**Hauiti**	**1.17**	**292**	S	**Sn**	**05 50 29.5**	**+0.5**
HIZ	**Hauiti**	**1.17**	**292**	P	**Pn**	**05 50 13.5**	**+0.6**
PXZ	**Pawanui**	**1.18**	**156**	P	**Pn**	**05 50 13.9**	**+0.9**
MWZ	**Matawai**	**1.19**	**59**	P	**Pn**	**05 50 13.3**	**+0.1**
RIGZ	**Rimuhau**	**1.22**	**79**	P	**Pn**	**05 50 14.1**	**+0.5**
TGRZ	**Tauranga**	**1.22**	**1**	P	**Pn**	**05 50 13.8**	**+0.2**
WHRZ	**Whale Island**	**1.24**	**28**	P	**Pn**	**05 50 14.9**	**+1.0**
WAZ	**Wanganui**	**1.26**	**230**	P	**Pn**	**05 50 15.7**	**+1.7**
PRGZ	**Paritu Road**	**1.28**	**89**	P	**Pn**	**05 50 14.6**	**+0.2**
MHGZ	**Mahia Peninsul**	**1.31**	**99**	P	**Pn**	**05 50 15.4**	**+0.7**
DVHZ	**Dannevirke**	**1.34**	**182**	P	**Pn**	**05 50 15.4**	**+0.3**
TOZ	**Tahuroa Road**	**1.35**	**334**	P	**Pn**	**05 50 15.5**	**+0.4**
TKGZ	**Te Karaka**	**1.36**	**68**	P	**Pn**	**05 50 16.2**	**+0.9**
OHWZ	**Ohakea**	**1.44**	**209**	P	**Pn**	**05 50 17.9**	**+1.6**
POWZ	**Post Office Ro**	**1.48**	**194**	P	**Pn**	**05 50 17.2**	**+0.4**
RUGZ	**Raukumara Rang**	**1.50**	**49**	P	**Pn**	**05 50 17.0**	**+0.2**
LREZ	**Lake Rotokare**	**1.51**	**250**	P	**Pn**	**05 50 18.8**	**+1.8**
ANWZ	**Angora Road**	**1.52**	**173**	P	**Pn**	**05 50 17.8**	**+0.6**
TWGZ	**Tauwhareparae**	**1.57**	**61**	P	**Pn**	**05 50 18.8**	**+0.8**
DREZ	**Durham Road**	**1.60**	**261**	P	**Pn**	**05 50 20.2**	**+1.8**
CNGZ	**Carnagh Statio**	**1.61**	**74**	P	**Pn**	**05 50 19.2**	**+0.8**
PRWZ	**Pori Road**	**1.61**	**187**	P	**Pn**	**05 50 19.0**	**+0.5**
PREZ	**Palmer Road**	**1.66**	**256**	P	**Pn**	**05 50 21.5**	**+2.3**
MYRZ	**Mayor Island**	**1.67**	**0**	P	**Pn**	**05 50 20.0**	**+0.7**
NEZ	**North Egmont**	**1.70**	**259**	P	**Pn**	**05 50 21.5**	**+1.9**
HAZ	**Te Kaha**	**1.70**	**46**	P	**Pn**	**05 50 19.1**	**-0.5**
BFZ	**Birch Farm**	**1.73**	**180**	P	**Pn**	**05 50 19.9**	**-0.1**
BFZ	**Birch Farm**	**1.73**	**180**	S	**Sn**	**05 50 40.8**	**-0.8**
BFZ	**Birch Farm**	**1.73**	**180**	P	**Pn**	**05 50 19.9**	**-0.1**
KHEZ	**Kahui Hut**	**1.76**	**258**	P	**Pn**	**05 50 22.5**	**+2.0**
KHEZ	**Kahui Hut**	**1.76**	**258**	P	**Pn**	**05 50 22.3**	**+1.8**
PKE	**Pukeiti**	**1.77**	**261**	P	**Pn**	**05 50 22.0**	**+1.5**
MRZ	**Mangatainoka R**	**1.78**	**196**	P	**Pn**	**05 50 21.5**	**-0.1**
PKGZ	**Pakihiroa**	**1.81**	**54**	P	**Pn**	**05 50 21.4**	**+0.4**
PUZ	**Puketiti**	**1.81**	**62**	P	**Pn**	**05 50 21.2**	**+0.1**
TIWZ	**Tintock**	**1.84**	**188**	P	**Pn**	**05 50 21.5**	**0.0**
NBEZ	**Newall Road No**	**1.87**	**260**	P	**Pn**	**05 50 23.5**	**+1.7**
HOWZ	**Holdsworth Sta**	**2.02**	**196**	P	**Pn**	**05 50 23.3**	**-0.5**
MKAZ	**Moumakai**	**2.03**	**335**	P	**Pn**	**05 50 24.5**	**+0.5**
OGWZ	**Otaki Gorge**	**2.03**	**203**	P	**Pn**	**05 50 23.7**	**-0.3**
WMGZ	**Waiomatatini S**	**2.05**	**57**	P	**Pn**	**05 50 24.4**	**+0.2**
MXZ	**Matakaoa Point**	**2.14**	**50**	P	**Pn**	**05 50 25.7**	**+0.3**
MXZ	**Matakaoa Point**	**2.14**	**50**	S	**Sn**	**05 50 51.8**	**+0.5**
MXZ	**Matakaoa Point**	**2.14**	**50**	P	**Pn**	**05 50 25.8**	**+0.4**
KIW	**Kapiti Island**	**2.16**	**208**	P	**Pn**	**05 50 25.2**	**-0.5**
TMWZ	**Te Maipa**	**2.17**	**187**	P	**Pn**	**05 50 25.2**	**-0.5**
KUZ	**Kuaotunu**	**2.24**	**349**	P	**Pn**	**05 50 26.9**	**+0.2**
KUZ	**Kuaotunu**	**2.24**	**349**	P	**Pn**	**05 50 27.1**	**+0.4**
ETAZ	**East Tamaki Re**	**2.25**	**332**	P	**Pn**	**05 50 27.4**	**+0.6**
AWAZ	**Awhitu Peninsu**	**2.27**	**326**	P	**Pn**	**05 50 27.9**	**+0.8**
MTW	**Mount Morrison**	**2.27**	**194**	P	**Pn**	**05 50 26.2**	**-1.0**
WIAZ	**Waiheke Island**	**2.33**	**338**	P	**Pn**	**05 50 28.4**	**+0.5**
CAW	**Cannon Point**	**2.33**	**202**	P	**Pn**	**05 50 27.0**	**-0.9**
WTAZ	**Waiatarua**	**2.41**	**326**	P	**Pn**	**05 50 29.9**	**+1.0**
MBAZ	**Motutapu North**	**2.42**	**334**	P	**Pn**	**05 50 29.8**	**+0.6**
TRWZ	**Traveller**	**2.48**	**190**	P	**Pn**	**05 50 29.0**	**-0.9**
PAWZ	**Paruwai Farm**	**2.50**	**194**	P	**Pn**	**05 50 29.0**	**-1.3**
RVAZ	**Riverhead Bore**	**2.54**	**328**	P	**Pn**	**05 50 31.6**	**+0.9**
DUWZ	**D'Urville Isla**	**2.57**	**223**	P	**Pn**	**05 50 30.4**	**-0.7**
MSWZ	**Moikau Station**	**2.57**	**197**	P	**Pn**	**05 50 29.8**	**-1.4**
WEL	**Wellington**	**2.59**	**205**	P	**Pn**	**05 50 30.3**	**-1.0**
SNZO	**South Karori**	**2.63**	**206**	P	**Pn**	**05 50 30.9**	**-1.0**
BHW	**Baring Head**	**2.67**	**203**	P	**Pn**	**05 50 30.9**	**-1.5**
TCW	**Tory Channel**	**2.71**	**213**	P	**Pn**	**05 50 31.9**	**-1.1**
PLWZ	**Palliser**	**2.72**	**196**	P	**Pn**	**05 50 31.5**	**-1.6**
GRZ	**Great Barrier**	**2.77**	**347**	P	**Pn**	**05 50 34.3**	**+0.5**
TUWZ	**Tuamarina**	**3.03**	**215**	P	**Pn**	**05 50 36.7**	**-0.6**
NNZ	**Nelson**	**3.15**	**223**	P	**Pn**	**05 50 37.3**	**-1.6**
TKNZ	**Takaka Hill**	**3.26**	**229**	P	**Pn**	**05 50 39.0**	**-1.4**
BSWZ	**Blackbirch Sta**	**3.30**	**212**	P	**Pn**	**05 50 39.5**	**-1.4**
QRZ	**Quartz Range**	**3.41**	**236**	P	**Pn**	**05 50 43.1**	**+0.7**
MRNZ	**Matariki Terra**	**3.62**	**226**	P	**Pn**	**05 50 43.7**	**-1.5**
KHZ	**Kahutara**	**4.02**	**210**	P	**Pn**	**05 50 49.3**	**-1.4**

*IDC **09** 06:05:02.7±1.9, 38°.07N×89°.57E, h0km, mb3.2/2,*
mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=147.1km
s-min=22.7km az=58.0
*NNC **09** 06:05:07.4±3.8, 38°.67N×89°.78E, h0km, mb4.0, Error*
ellipse: s-maj=42.0km s-min=30.2km az=51.0

ISC 09 06:05:07.6±1.5, 38°.5N±0°.2×90°.1E±0°.2, h35km, n8,
σ1s10/12, 4C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**9.35**	**304**	⇑Pn	**Pn**	**06 07 20.8**	**+0.8**
	4.6nm,1.0s						
PDGK				⇓Sn	**Sn**	**06 09 02.8**	**-1.1**
	15nm,0.8s						
MK31	**Makanchi Array**	**10.06**	**328**	Pn	**Pn**	**06 07 29.4**	**-0.2**
	1.1nm,0.3s,baz=142,slow=14,SNR=34						
MK31				⇑Sn	**Sn**	**06 09 22.9**	**+1.9**
	1.6nm,0.6s,baz=140,slow=14,SNR=3.4						
MKAR	**Makanchi Array**	**10.06**	**328**	Pn	**Pn**	**06 07 29.9**	**+0.4**
	0.5nm,0.3s,baz=139,slow=14,SNR=17						
MKAR				Sn	**Sn**	**06 09 21.5**	**+0.5**
	0.4nm,0.3s,baz=144,slow=24,SNR=3.8						
	1.6nm,0.5s						
MAKZ	**Makanchi**	**10.20**	**327**	⇑Pn	**Pn**	**06 07 30.6**	**-0.9**
	1.3nm,0.6s						
MAKZ				⇑Sn	**Sn**	**06 09 25.3**	**+0.7**
	3.4nm,0.9s						
KURBB	**Kurchatov Arra**	**14.61**	**330**	Pn	**Pn**	**06 08 29.8**	**-1.8**
	baz=140,slow=12,SNR=5.4						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**15.84**	**348**	Pn	**P**	**06 08 51.6**	**+0.

COVE	Coope Vega, Sa	1.80	347	S	Sb	06 29 57.2	+0.8
RBALA	Bur	1.81	92	eP	Pn	06 29 31.6	-0.3
CUI	Cuipilapa	2.05	326	eP	Pn	06 29 37.0	+1.6
UPAL	Upala	2.18	332	S	Sb	06 30 08.1	+0.8
ESPN	Las Esperanzas	3.24	355	S	Sb	06 30 36.0	-1.8
ESPN	Las Esperanzas	3.24	355	P	Pn	06 29 53.9	+2.3

*NDI **09** 07:16:53.7±2.0,26.48N×95.83E,h48km±49km,ML3.5, MW3.3*

ISC 09 07:16:56.0±2.1,**26.55N**±0.06×**95.5E**±0.1,**h35**km,**n15**, σ2.92/23,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LKP	Lekhapani	0.84	23	eS		Sn		07 17 20.4	-2.1
LKP				IAML				07 17 21.3	
	comp=E,1μm,0.1s								
LKP				IAML				07 17 22.1	
	comp=N,1μm,0.3s								
KOHI	KOHIMA	1.49	236	eP		Pn		07 17 22.1	+1.8
KOHI				eS		Sn		07 17 42.2	+3.5
KOHI				IAML				07 17 50.7	
	comp=N,217nm,0.4s								
KOHI				IAML				07 17 51.6	
	comp=E,148nm,0.3s								
ITAN	ITANAGAR	1.68	291	eS		Sn		07 17 48.2	+5.0
ITAN				IAML				07 17 49.4	
	comp=E,560nm,0.2s								
ITAN				IAML				07 17 50.9	
	comp=N,611nm,0.1s								
ZIRO	ZIRO	1.75	304	eP		Pn		07 17 26.6	+2.6
ZIRO				eS		Sn		07 17 49.3	+4.2
ZIRO				IAML				07 17 52.7	
	comp=N,568nm,0.2s								
ZIRO				IAML				07 17 53.6	
	comp=E,558nm,0.5s								
IMP	Imphal	2.21	219	eP		Pn		07 17 30.1	-0.1
IMP				eS		Sn		07 17 56.3	0.0
TEZP	TEZPUR	2.40	272	eP		Pn		07 17 34.5	+1.7
TEZP				eS		Sn		07 18 02.8	+1.8
TEZP				IAML				07 18 04.9	
	comp=E,616nm,0.1s								
TEZP				IAML				07 18 05.3	
	comp=N,587nm,0.1s								
SHL	Shillong	3.38	254	eP		Pn		07 17 46.8	+0.3
SHL				eS		Sn		07 18 24.1	-1.4
TAWA	Tawang	3.39	289	eS		Sn		07 18 28.3	+2.5
TAWA				IAML				07 18 30.8	
	comp=N,256nm,0.1s								
TAWA				IAML				07 18 31.0	
	comp=E,311nm,0.1s								
ODAN	Odare	7.24	274	Sn		Sn		07 19 56.6	-4.2
	baz=287,slow=0.0								
RAMN	Ramite	7.95	275	Pn		Pn		07 18 47.6	-1.7
	baz=286,slow=0.0								
RAMN				Sn		Sn		07 20 13.5	-4.7
	comp=E,9.3nm,0.3s,baz=286,slow=0.0								
GUN	Gumba	8.65	281	Pn		Pn		07 19 00.2	+1.2
	baz=292,slow=0.0								
GUN				Sn		Sn		07 20 33.5	-2.1
	comp=E,14nm,0.4s,baz=292,slow=0.0								
PKI	Pulchoki	9.04	279	Pn		Pn		07 19 04.1	-0.2
	baz=289,slow=0.0								
PKIN	Phulchoki	9.05	279	Pn		Pn		07 19 04.2	-0.2
	baz=289,slow=0.0								
PKIN				Sn		Sn		07 20 40.6	-4.6
	comp=E,7.3nm,0.2s,baz=289,slow=0.0								
GKN	Gorkha	9.76	281	Sn		Sn		07 20 59.8	-2.6
	comp=E,11nm,0.3s,baz=290,slow=0.0								
DANN	Dangsing	10.57	282	Sn		Sn		07 21 19.1	-3.3
	comp=E,9.5nm,0.5s,baz=291,slow=0.0								

*IDC **09** 07:19:42.8±2.0,35.73N×35.39E,h0km,mb3.3/1, mbtmp3.3/3,ML3.4/2,Error ellipse: s-maj=48.4km s-min=12.9km az=81.0*

*ISK **09** 07:19:43.7,36.04N×35.96E,h17km,ML3.7/32*

*GRAL **09** 07:19:44.9±0.3,36.07N×36.14E,h3km±4km,MD3.6*

*AFAD **09** 07:19:44.2,36.08N×35.90E,h7km±2km,MW3.5*

*GII **09** 07:19:45.6±0.0,36.080N±0.002×35.816E±0.001,h10km, Mws3.4,confirmed*

*NIC **09** 07:19:48.7,35.86N×35.77E,h13km±31km,Ml3.3/9*

ISC 09 07:19:45.3±1.1,**36.09N**±0.02×**35.92E**±0.02,**h13**km±8km, **n124**,σ0.89/157,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TAHT	Tahtakopru-Hat	0.35	36	Pg		Pg		07 19 52.1	-0.4
TAHT				Sg		Sg		07 19 58.1	+0.7
RHAN	Hatay/Reyhanl	0.57	73	SPECP				07 19 56.0	
RHAN				P		Pg		07 19 56.1	-0.5
RHAN				S		Sg		07 20 04.6	+0.4
RHAN				*i* IAML				07 20 08.0	
	comp=N,3μm,0.6s								
RHAN				*i* IAML				07 20 10.0	
	comp=E,2μm,0.4s								
YURE	YUREGIR	0.77	342	P		Pb		07 20 00.9	+0.3
YURE				S		Sn		07 20 14.6	+1.1
HASA	Hatay-Hassa-Ha	0.80	34	SPECP				07 20 00.0	
HASA				P		Pg		07 20 00.1	-0.8
HASA				S		Sg		07 20 11.9	+0.6
HASA				*i* IAML				07 20 14.0	
	comp=E,2μm,0.4s								
HASA				*i* IAML				07 20 16.0	
	comp=N,3μm,0.3s								
CEYT	Ceyhan	0.93	351	Pg		Pg		07 20 03.1	-0.2
CEYT				Sg		Sn		07 20 17.4	+0.1
KUZU	Kuzuini	1.15	53	SPECP				07 20 00.0	
KUZU				P		Pb		07 20 06.0	-1.1
KUZU				S		Sb		07 20 22.1	0.0
KUZU				*i* IAML				07 20 28.0	
	comp=E,2μm,0.4s								
KUZU				*i* IAML				07 20 30.0	
	comp=N,2μm,0.4s								
KAMA	Osmaniye	1.25	28	SPECP				07 20 07.0	
KAMA				P		Pn		07 20 07.7	-0.8
KAMA				S		Sb		07 20 24.0	-0.8
KAMA				*i* IAML				07 20 26.0	
	comp=E,331nm,0.3s								
KAMA				*i* IAML				07 20 32.0	
	comp=N,226nm,0.6s								
KARA	Karaisali	1.36	329	Pn		Pn		07 20 09.4	-0.7
KARA				Sn		Sn		07 20 28.4	+0.4
MERS	Mersin	1.37	305	Pn		Pn		07 20 09.7	-0.6
MERS				Sn		Sn		07 20 28.4	+0.1
AKO	Adana	1.42	344	SPECP				07 20 10.0	
AKO				P		Pn		07 20 10.8	-0.1
AKO				S		Sg		07 20 31.6	+0.4
AKO				*i* IAML				07 20 33.0	
	comp=E,127nm,0.3s								
AKO				*i* IAML				07 20 34.0	
	comp=N,112nm,0.3s								
KIZK	Mersin	1.49	286	Pn		Pn		07 20 11.1	-0.7
KIZK				Sn		Sn		07 20 30.9	-0.2
GAZ	Gaziantep	1.50	43	Pn		Pn		07 20 10.9	-1.1
GAZ				Sn		Sn		07 20 30.1	-1.3
GAZ	Gaziantep	1.50	43	P		Pn		07 20 11.9	-0.1
GAZ				S		Sn		07 20 30.4	-1.1
GULE	Gulek	1.51	323	SPECP				07 20 12.0	
GULE				P		Pb		07 20 12.9	-0.4
GULE				S		Sg		07 20 33.8	-0.1
GULE				*i* IAML				07 20 35.0	
	comp=N,611nm,0.4s								
GULE				*i* IAML				07 20 40.0	
	comp=E,524nm,0.4s								
ANDN	Andirin	1.52	13	SPECP				07 20 12.0	
ANDN				P		Pn		07 20 12.1	-0.3
ANDN				S		Sb		07 20 33.3	+0.5
ANDN				*i* IAML				07 20 38.0	
	comp=N,538nm,0.6s								
ANDN				*i* IAML				07 20 41.0	
	comp=E,405nm,0.4s								
BEIL	Beino	1.56	172	eP		Pn		07 20 11.6	-1.2
BEIL				eS		Sn		07 20 31.4	-1.5
KHMN	Narli-Kahraman	1.63	37	Pn		Pn		07 20 12.9	-0.9
SILI	Silifke-Mersin	1.64	280	Pn		Pn		07 20 13.1	-0.8
NZIP	Nizip/Gaziante	1.70	55	P		Pn		07 20 14.1	-0.7
NZIP				S		Sb		07 20 39.1	+1.2
CMRD	Camardi-Nigde	1.74	335	Pn		Pn		07 20 14.9	-0.5
KARG	Kargicak-Mersi	1.80	274	Pn		Pn		07 20 15.1	-0.9
HWQ	Hawqa	1.81	179	eP		Pn		07 20 15.6	-0.7
HWQ				eS		Sn		07 20 38.4	-0.8
TISA	Tisan-Mersin	1.82	273	Pn		Pn		07 20 15.3	-1.0
KEBE	Keben-Mersin	1.82	282	Pn		Pn		07 20 15.9	-0.5
GZT	Gaziantep	1.82	46	P		Pn		07 20 16.1	-0.5
GZT				S		Sg		07 20 44.5	+0.4
FKH	Fakeheh	1.88	168	eP		Pn		07 20 16.1	-1.2
PARAL	Paralimni	1.89	235	P		Pn		07 20 16.4	-0.9
PARAL				S		Sn		07 20 39.6	-1.2
PARAL				AML		AML		07 20 53.5	
	1.0nm,0.9s								
PARAL				AML		AML		07 20 53.8	
	0.9nm,0.7s								
SAIM	ADANA	1.89	4	P		Pn		07 20 18.5	+1.1
SAIM				S		Sb		07 20 43.1	-0.1
AKK2	Akkuyu-Mersin	1.92	272	Pn		Pn		07 20 17.2	-0.6
AKK1	Akkuyu-Mersin	1.93	272	Pn		Pn		07 20 16.9	-1.0
OREN	Orenkoy-Mersin	2.00	274	Pn		Pn		07 20 18.1	-0.7
TEVE	Tevekalti-Mers	2.04	280	Pn		Pn		07 20 18.8	-0.6
YORU	Yoruktepe-Mers	2.04	273	Pn		Pn		07 20 18.6	-0.8
LFK	Lefkose	2.11	248	Pn		Pn		07 20 18.9	-1.5
MVOU	Mavrovouni	2.15	241	P		Pn		07 20 20.4	-0.6
MVOU				S		Sn		07 20 47.5	0.0
MVOU				AML		AML		07 20 56.9	
	0.5nm,0.6s								
MVOU				AML		AML		07 20 59.5	
	0.6nm,0.6s								
BHL	Bhannes	2.19	186	eP		Pn		07 20 21.2	-0.3
BERE	Bereket-Mersin	2.20	278	Pn		Pn		07 20 21.3	-0.4
AKCA	Adyaman/G¶l	2.21	39	P		Pn		07 20 21.9	0.0
AKCA				S		Sg		07 20 56.8	+0.3
TEKE	Tekeli-Mersin	2.28	272	Pn		Pn		07 20 22.1	-0.5
BOZY	Bozyazi-Mersin	2.39	271	Pn		Pn		07 20 23.6	-0.5
CSS	Mathiatis	2.40	243	Pn		Pn		07 20 23.3	-1.0
CSS	Mathiatis	2.40	243	P		Pn		07 20 23.7	-0.6
CSS	Mathiatis	2.40	243	P		Pn		07 20 24.6	+0.3
CSS				S		Sn		07 20 52.0	-1.5
CSS				AML		AML		07 21 05.5	
	0.3nm,0.6s								
CSS				AML		AML		07 21 09.0	
	0.2nm,0.6s								
DQRL	Deir Qamar	2.40	187	eP		Pn		07 20 23.9	-0.5
KRMN	Karaman	2.40	298	Pn		Pn		07 20 23.8	-0.6
YESY	Yesilyurt	2.43	315	Pn		Pn		07 20 24.8	-0.1
ASGA	Asgata	2.54	240	P		Pn		07 20 26.4	+0.1
ASGA				S		Sn		07 20 55.9	-1.2
ASGA				AML		AML		07 21 05.3	
	0.4nm,0.9s								
ASGA				AML		AML		07 21 10.0	
	0.4nm,0.7s								
QRWL	Qaraoun	2.54	185	eP		Pn		07 20 26.0	-0.4
XYLS	Xyliatos	2.58	246	P		Pn		07 20 26.9	0.0
XYLS				S		Sn		07 20 58.2	+0.1
XYLS				AML		AML		07 21 04.3	
	0.3nm,0.5s								
XYLS				AML		AML		07 21 13.9	
	0.6nm,0.7s								
RCY	Rachaya	2.59	182	eP		Pn		07 20 26.5	-0.6
RCY				eS		Sn		07 20 57.1	-1.3
SHBL	Chebaa	2.74	183	eP		Pn		07 20 28.6	-0.6
TROD	Troodos	2.74	246	P		Pn		07 20 29.6	+0.4
TROD				S		Sn		07 21 03.2	+0.8
TROD				AML		AML		07 21 20.0	
	0.6nm,0.6s								
TROD				AML		AML		07 21 24.2	
	0.5nm,0.7s								
NATI	Neve Ativ	2.83	183	P		Pn		07 20 30.4	+0.2
NATI	Neve Ativ	2.83	183	S		Sn		07 21 04.7	+0.6
SULT	Sultanhani-AKS	2.85	318	Pn		Pn		07 20 29.7	-0.9
ALFC	Alefka	2.87	252	P		Pn		07 20 28.2	-2.5
ALFC				S		Sn		07 20 59.9	-5.3
ALFC				AML		AML		07 21 08.5	
	0.4nm,0.4s								
ALFC				AML		AML		07 21 09.0	
	0.6nm,0.6s								
APOL	The Sanctuary	2.87	241	P		Pn		07 20 32.6	+1.8
APOL				S		Sn		07 21 04.4	-0.9
APOL				AML		AML		07 21 21.3	
	0.4nm,0.8s								
APOL				AML		AML		07 21 23.2	
	0.4nm,0.7s								
GEM	Giv'at Ha'Em	2.88	184	P		Pn		07 20 30.6	-0.3
GEM	Giv'at Ha'Em	2.88	184	S		Sn		07 21 05.4	0.0
HDMB	Hadim	2.90	288	Pn		Pn		07 20 31.6	+0.1
GAZI	Gazipasa	2.92	274	Pn		Pn		07 20 31.4	-0.1
HNTI	Hanita	3.06	192	P		Pn		07 20 33.1	-0.3
HNTI	Hanita	3.06	192	S		Sn		07 21 09.8	-0.1
MMC7	Mount Meron ar	3.09	188	P		Pn		07 20 33.4	-0.5
MMA0B	Mount Meron ar	3.10	188	P		Pn		07 20 34.2	+0.2
MMA0B	Mount Meron ar	3.10	188	S		Sn		07 21 11.1	+0.2
MMAI	Mount Meron Ar	3.10	188	Pg		Pn		07 20 32.5	-1.5
	17nm,0.3s,baz=2.9,slow=14,SNR=76								
MMAI				Lg		Lg		07 21 08.0	
	33nm,0.3s,baz=3.1,slow=29,SNR=17								
KSHT	Keshet	3.10	182	P		Pn		07 20 34.2	+0.2
KSHT	Keshet	3.10	182	S		Sn		07 21 11.7	+0.7
AKMS	Akamas	3.12	251	P		Pn		07 20 35.5	+1.3
AKMS				S		Sn		07 21 11.4	+0.1
AKMS				AML		AML		07 21 22.9	
	0.4nm,0.7s								
AKMS				AML		AML		07 21 23.9	
	0.4nm,0.9s								
ALAN	Alanya-ANTALYA	3.18	280	Pn		Pn		07 20 34.9	-0.1
KONT	Konya--Tatoy	3.40	304	Pn		Pn		07 20 38.6	+0.5
BLGI	Bet Lehem HaGe	3.40	190	P		Pn		07 20 38.4	+0.3
BLGI	Bet Lehem HaGe	3.40	190	S		Sn		07 21 18.2	-0.1
CHBY	Cihanbeyli	3.47	317	Pn		Pn		07 20 39.9	+0.8
SVRC	Sivrice-ELAZID	3.54	49	Pn		Pn		07 20 39.7	-0.4
LADK	Ladik-KONYA	3.54	308	Pn		Pn		07 20 39.3	-0.8
OFRI	`Ofer	3.55	193	P		Pn		07 20 39.8	-0.3
OFRI	`Ofer	3.55	193	S		Sn		07 21 20.8	-1.1
YOZ	Yozgat	3.58	352	Pn		Pn		07 20 40.5	-0.1
MMLI	Mount Malkishu	3.67	187	Pn		Pn		07 20 41.3	-0.5
MMLI	Mount Malkishu	3.67	187	P		Pn		07 20 42.4	+0.6
MMLI	Mount Malkishu	3.67	187	S		Sn		07 21 25.1	+0.2
MMLI	Mount Malkishu	3.67	187	P		Pn		07 20 42.9	+1.1
MMLI				S		Sn		07 21 23.7	-1.2
KAMT	Kaman	3.71	332	Pn		Pn		07 20 42.9	+0.4
HMDT	Nahal Hemdat	3.84	185	P		Pn		07 20 44.5	+0.4
HMDT	Nahal Hemdat	3.84	185	S		Sn		07 21 29.1	-0.1
DYBB	Diyarbakir	3.85	60	Pn		Pn		07 20 44.0	-0.4
SLTI	Sal'it	3.91	191	P		Pn		07 20 45.3	+0.2
SLTI	Sal'it	3.91	191	S		Sn		07 21 31.1	+0.2
BRTR	Keskin Array B	4.05	334	Pn		Pn		07 20 49.4	+2.1
	0.4nm,0.3s,baz=165,slow=13,SNR=6.3								
BRTR				Lg		Lg		07 21 55.0	
	0.2nm,0.3s,baz=164,slow=32,SNR=5.3								
	0.9nm,0.5s								
SALP	Salfit	4.06	189	P		Pn		07 20 47.3	+0.2
SALP	Salfit	4.06	189	S		Sn		07 21 35.2	+0.7
DSI	Dead Sea	4.53	186	P		Pn		07 20 53.9	+0.3
DSI	Dead Sea	4.53	186	S		Sn		07 21 46.3	+0.2
AMAZ	Amatzia	4.62	191	P		Pn		07 20 55.3	+0.4
AMAZ	Amatzia	4.62	191	S		Sn		07 21 48.9	+0.4
AMAZ	Amatzia	4.62	191	P		Pn		07 20 55.7	+0.7
AMAZ				S		Sn		07 21 46.7	-1.7
YTIR	Yattir	4.76	188	P		Pn		07 20 57.2	+0.3
YTIR	Yattir	4.76	188	S		Sn		07 21 53.0	+1.0
GHAJ	Ghor Haditha	4.78	184	P		Pn		07 20 58.0	+0.9
GHAJ	Ghor Haditha	4.78	184	S		Sn		07 21 53.2	+0.9
MSBI	Mazada	4.79	186	P		Pn		07 20 57.6	+0.5
MSBI	Mazada	4.79	186	S		Sn		07 21 53.0	+0.6
IDAN	Idan	5.27	186	P		Pn		07 21 04.3	+0.5
IDAN	Idan	5.27	186	S		Sn		07 22 04.7	+0.3
KZIT	Kziot	5.33	194	P		Pn		07 21 04.9	+0.3
KZIT	Kziot	5.33	194	S		Sn		07 22 06.2	+0.4
ZFRI	Zfri	5.56	187	P		Pn		07 21 08.3	+0.6
ZFRI	Zfri	5.56	187	S		Sn		07 22 11.7	+0.3
RMNI	Mount Ramon	5.56	190	P		Pn		07 21 08.6	+0.7
RMNI	Mount Ramon	5.56	190	S		Sn		07 22 12.5	+0.7
PRNI	Paran	5.77	188	P		Pn		07 21 11.2	+0.4
PRNI	Paran	5.77	188	S		Sn		07 22 17.8	+0.9
KRMI	Paran Flat	6.04	190	P		Pn		07 21 15.4	+1.0
KRMI	Paran Flat	6.04	190	S		Sn		07 22 23.9	+0.5
HRFI	Mount Harif	6.08	187	P		Pn		07 21 15.8	+0.8
HRFI	Mount Harif	6.08	187	S		Sn		07 22 25.4	+0.9
MBRI	Mt Berech	6.33	188	P		Pn		07 21 19.7	+1.2
MBRI	Mt Berech	6.33	188	S		Sn		07 22 31.7	+0.9
EIL	Elat	6.45	188	P		Pn		07 21 21.0	+0.9
EIL	Elat	6.45	188	S		Sn		07 22 34.5	+0.9
AKASG	Malin Array Be	15.38	344	Pn		Pn		07 23 23.8	+1.8
	0.7nm,0.3s,baz=155,slow=12,SNR=4.4								
	0.5nm,0.4s								
GERES	GERESS Array B	20.67	315	P		P		07 24 24.2	-0.7
	1.2nm,0.7s,baz=110,slow=11,SNR=7.7								
	1.2nm,0.7s								

*NIED **09** 07:20:39.3,38.17N×141.68E,h51km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr6.77; Mθθ-2.63; Mϕϕ-4.14; Mrθ1.32; Mθϕ-6.11; Mϕr4.94; Fault plane solution: M0 9.77000×10¹⁴ NP1: ϕs244.00000°,δ34.00000°,λ125.00000°. NP2: ϕs23.00000°,δ62.00000°,λ69.00000°.*

*JMA **09** 07:20:39.3±0.1,38.2N±0.3×141.7E±0.6,h51km,MD3.8/38, MV4.0/38,E OFF MIYAGI PREF .*

JMA Felt II J1 at E OFF MIYAGI PREF .

*IDC **09** 07:20:40.8±0.8,38.25N×141.84E,h65km±5km,mb3.7/18, mbtmp4.0/22,MS3.1/2,Error ellipse: s-maj=15.0km s-min=10.1km az=125.0*

ISC 09 07:20:39.9±0.8,**38.20N**±0.05×**141.70E**±0.07,**h54**km±5km, **n60**,σ1.40/61,**mb4.0**/18,**17D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.22	302	⇓*i* P			Pn	07 20 47.9	-1.0
JIKH				⇓S			Sn	07 20 53.7	-1.5
JIKH	Ishinomakikobu	0.22	302	A			A	07 20 47.9	
	comp=N,21nm,0.4s,comp=E,44nm,0.4s								
JIO	Ouri	0.38	313	⇓*i* P			Pn	07 20 49.4	-0.8
JIO				⇓S			Sn	07 20 56.2	-1.3
JIO	Ouri	0.38	313	A			A	07 20 49.4	
	comp=N,13nm,0.3s,comp=E,12nm,1.6s								
JKMT	Kesennumamotoy	0.64	344	⇓*i* P			Pn	07 20 52.4	-0.7
JKMT				⇓S			Sn	07 21 01.5	-1.2
JOFO	Osakifurukawao	0.74	304	A			A	07 20 53.6	
	comp=N,17nm,1.4s,comp=E,15nm,1.8s								
JMM	Marumori	0.79	246	P			Pn	07 20 53.6	-1.4
JMM	Marumori	0.79	246	S			Sn	07 21 03.7	-2.2
JMM	Marumori	0.79	246	⇓*i* P			Pn	07 20 53.5	-1.4
JMM				⇓S			Sn	07 21 03.7	-2.2
JMST	Minamisoumatoc	0.79	234	A			A	07 20 54.0	
	comp=N,8.0nm,4.2s,comp=E,7.0nm,0.3s								
JOU	Okura	0.83	282	⇓*i* P			Pn	07 20 54.9	-0.7
JOU				⇓S			Sn	07 21 06.2	-0.8
JOU	Okura	0.83	282	A			A	07 20 54.9	
	comp=N,6.0nm,0.6s,comp=E,10.0nm,0.5s								
JMK	Ichinoseki	0.84	334	⇓*i* P			Pn	07 20 55.3	-0.4
JMK				⇓S			Sn	07 21 06.6	-0.7
JMK	Ichinoseki	0.84	334	A			A	07 20 55.3	
	comp=N,5.0nm,0.8s,comp=E,4.0nm,0.7s								
OFUJ	Ofunato	0.89	359	⇓*i* P			Pn	07 20 55.6	-0.7
OFUJ				⇓S			Sn	07 21 07.1	-1.1
OFUJ	Ofunato	0.89	359	A			A	07 20 55.6	
	comp=N,2.0nm,0.6s,comp=E,4.0nm,0.7s								
JFK	Kawauchi	1.05	219	P			Pn	07 20 57.2	-1.3
JFK				S			Sn	07 21 10.1	-2.2
JOTO	OTAMA OYAMA	1.25	240	*i* P			Pn	07 21 00.4	-0.7
JYK	Kaneyama	1.27	305	⇓*i* P			Pn	07 21 01.1	-0.4
JYS	Shirataka	1.29	272	⇓*i* P			Pn	07 21 01.1	-0.5
JRG	Rokugo	1.46	326	⇓*i* P			Pn	07 21 04.2	+0.2
JRG	Rokugo	1.46	326	A			A	07 21 04.2	
	comp=N,3.0nm,0.6s,comp=E,4.0nm,0.5s								
JTM	Tenmabayashi	2.63	350	P			Pn	07 21 20.4	+0.4
JSD	Sado	2.72	268	P			Pn	07 21 20.4	-0.7
MJAR	Matsushiro Arr	3.23	240	P			Pn	07 21 28.9	+0.7
	comp=E,10nm,0.7s,baz=58,slow=11,SNR=25								
MJAR				S			Sn	07 22 11.2	+5.7
	comp=E,6.3nm,0.5s,baz=89,slow=27,SNR=5.1								
MJAR				LR			LR	07 22 58.4	
	comp=E,95nm,21.8s,baz=66,slow=41								
MAJO	Matsushiro	3.23	240	P			Pn	07 21 29.5	+1.3
ERM	Erimo	3.98	16	P			Pn	07 21 38.9	+0.6
JEM	Erimo	3.98	16	P			Pn	07 21 39.0	+0.7
JGF	Kuroka	4.34	235	P			Pn	07 21 45.0	+1.7
ASAJ	Asahikawa	5.96	6	P			Pn	07 22 05.1	-0.3
	comp=E,4.6nm,0.3s,baz=218,slow=11,SNR=8.4								
ASAJ				S			Sn	07 23 11.5	-0.8
	comp=E,5.8nm,0.6s,baz=232,slow=19,SNR=1.3								
USRK	Ussuriysk Ar.	9.46	312	P			Pn	07 22 54.4	+1.0
	comp=E,4.1nm,0.5s,baz=135,slow=15,SNR=7.6								
KSRS	Korea Array	10.92	270	P			Pn	07 23 14.9	+1.4
	comp=E,1.2nm,0.6s,baz=74,slow=13,SNR=1.7								
HILR	Hailar Array B	19.40	313	P			P	07 24 59.2	-2.2
	comp=E,1.7nm,0.5s,baz=123,slow=10,SNR=2.4								
SONM	Songino Array	27.34	302	P			P	07 26 20.0	+0.2
	comp=E,1.0nm,0.8s,baz=60,slow=5.8,SNR=4.0								
	comp=E,1.0nm,0.8s								
H11N2	WAKE ISLAND Hy 28.57	123		T			T	07 56 40.4	
	baz=316,slow=76,SNR=703								
H11N1	WAKE ISLAND Hy 28.58	123		T			T	07 56 41.0	
	baz=316,slow=76,SNR=622								
H11N3	WAKE ISLAND Hy 28.59	123		T			T	07 56

*IDC **09** 07:30:08.8±5.0,5˚.57S×148˚.53E, h61km±43km, mb3.8/5, mbtmp4.4/7, ML2.3/1, MS3.0/1, Error ellipse: s-maj=61.3km s-min=28.1km az=111.0*

*NEIC **09** 07:30:14.2±1.8,5˚.9S±0˚.1×148˚.4E±0˚.1, h103km±8km, mb4.4/15, Error ellipse: s-maj=23.6km s-min=9.6km az=124.0*

ISC 09 07:30:13.9±0.7,5˚.88S±0˚.10×148˚.3E±0˚.1, h100km, n35, σ1§22/35, mb4.4/15, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.69**	**198**		**Pn**	**07 31 08.8**	**-0.2**
PMG	**Port Moresby**	**3.69**	**198**	P	**Pn**	**07 31 09.3**	**+0.3**
	16nm,0.3s,baz=360,slow=4.0,SNR=22						
PMG				S	**Sn**	**07 31 48.5**	**-3.1**
	154nm,0.5s,baz=312,slow=23,SNR=8.6						
	184nm,0.5s						
PMG	**Port Moresby**	**3.69**	**198**	P	**Pn**	**07 31 09.6**	**+0.6**
RABL	**Rabaul**	**4.16**	**66**		**Pn**	**07 31 14.2**	**-1.1**
COEN	**Coen**	**9.50**	**212**	Pn	**Pn**	**07 32 26.8**	**-1.1**
MTSU	**Mount Surprise**	**12.80**	**198**	P	**Pn**	**07 33 14.3**	**+2.1**
	4.1nm,0.9s						
QIS	**Mount Isa**	**16.88**	**209**	P	**P**	**07 34 04.7**	**+0.2**
	15nm,1.0s						
MTN	**Manton Dam**	**18.32**	**247**	P	**P**	**07 34 20.6**	**+0.2**
WR8	**Warramunga Arr**	**19.41**	**223**	P	**P**	**07 34 32.9**	**+0.6**
WRAB	**Tennant Creek**	**19.50**	**223**	P	**P**	**07 34 34.2**	**+0.9**
	32nm,0.6s						
WRA	**Warramunga Arr**	**19.51**	**223**	P	**P**	**07 34 34.5**	**+1.1**
	38nm,0.6s,baz=49,slow=11,SNR=226						
EIDS	**Eidsvold**	**19.56**	**173**	P	**P**	**07 34 34.4**	**+0.6**
EIDS				IAmb	IAmb	07 34 43.0	
	comp=Z,22nm,1.5s						
QLP	**Quilpie**	**20.96**	**190**	P	**P**	**07 34 50.3**	**+1.4**
	comp=Z,33nm,1.2s						
AS31	**Alice Springs**	**22.49**	**217**		**P**	**07 35 05.3**	**+0.1**
AS31				IAmb	IAmb	07 35 06.3	
	comp=Z,8.0nm,0.5s						
ASAR	**Alice Springs**	**22.49**	**217**		**P**	**07 35 05.1**	**-0.2**
ASAR	**Alice Springs**	**22.49**	**217**	P	**P**	**07 35 05.7**	**+0.4**
	comp=Z,12nm,0.5s,baz=55,slow=8.9,SNR=232						
	comp=Z,12nm,0.5s						
AUALC	**St Philip's Co**	**22.52**	**217**	P	**P**	**07 35 06.3**	**+0.7**
	comp=Z,26nm,0.7s						
INKA	**Innaminka**	**22.91**	**198**	P	**P**	**07 35 09.7**	**+0.3**
INKA				IAmb	IAmb	07 35 10.9	
	comp=Z,8.3nm,0.8s						
AULRC	**Lightning Ridg**	**23.43**	**181**	P	**P**	**07 35 13.5**	**-0.7**
	comp=Z,22nm,0.7s						
FITZ	**Fitzroy Crossi**	**25.27**	**239**	P	**P**	**07 35 31.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**25.27**	**239**	P	**P**	**07 35 30.7**	**-0.3**
	comp=Z,23nm,0.5s						
STKA	**Stephens Creek**	**26.62**	**193**	P	**P**	**07 35 45.8**	**+2.7**
	comp=Z,2.2nm,0.5s,baz=24,slow=12,SNR=6.2						
	comp=Z,2.2nm,0.5s						
JNU	**Nakatsue**	**42.18**	**338**	P	**P**	**07 37 57.0**	**+0.1**
RAR	**Rarotonga**	**52.45**	**112**	LR	LR	07 59 21.1	
	comp=Z,16nm,19.1s,baz=262,slow=33						
CASY	**Casey**	**65.73**	**196**	P	**P**	**07 40 46.5**	**-1.1**
CASY				IAmb	IAmb	07 41 07.2	
	comp=Z,12nm,1.2s						
VNDA	**Vanda**	**71.96**	**177**	P	**P**	**07 41 25.9**	**-0.2**
VNDA	**Vanda**	**71.96**	**177**	P	**P**	**07 41 26.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=344,slow=5.2,SNR=2.4						
	comp=Z,0.3nm,0.6s						
K15K	**Wolf Creek Mou**	**77.99**	**22**	P	**P**	**07 42 01.3**	**+0.4**
K15K				IAmb	IAmb	07 42 25.1	
	comp=Z,18nm,1.4s						
ACHA	**Angle Creek He**	**78.14**	**27**	P	**P**	**07 41 59.9**	**-2.1**
ACHA				IAmb	IAmb	07 42 21.3	
	comp=Z,5.0nm,1.2s						
G18K	**Tagagawik**	**81.19**	**19**	P	**P**	**07 42 17.3**	**-0.9**
G18K				IAmb	IAmb	07 42 22.3	
	comp=Z,13nm,1.4s						
E19K	**Redstone River**	**82.57**	**18**	P	**P**	**07 42 25.5**	**+0.1**
E19K				IAmb	IAmb	07 42 31.6	
	comp=Z,7.2nm,1.2s						
D19K	**Kuna River**	**82.91**	**17**	P	**P**	**07 42 25.6**	**-1.6**
QSPA	**South Pole Qui**	**84.09**	**180**	P	**P**	**07 42 34.6**	**+1.1**
QSPA				IAmb	IAmb	07 42 36.0	
	comp=Z,3.0nm,1.0s						
QSPA	**South Pole Qui**	**84.09**	**180**	P	**P**	**07 42 35.1**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=17,slow=5.5,SNR=11						
	comp=Z,1.3nm,0.7s						
ILAR	**Eielson Array**	**84.85**	**23**	P	**P**	**07 42 35.2**	**-1.9**
	comp=Z,0.9nm,0.6s,baz=252,slow=4.9,SNR=15						
	comp=Z,0.9nm,0.6s						

IDC 09 07:50:01.5±3.2,18˚.11S×173˚.54W, h0km, mb3.8/3, mbtmp3.9/3, MS3.5/2, Error ellipse: s-maj=78.0km s-min=48.0km az=95.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.67**	**200**	P	P	07 54 54.1	+0.3
	3.5nm,0.4s,baz=39,slow=6.5,SNR=6.6						
	3.5nm,0.4s						
PPT	**Papeete**	**22.82**	**92**	LR	LR	08 01 56.8	
	comp=Z,29nm,19.5s,baz=251,slow=31						
WRA	**Warramunga Arr**	**49.15**	**259**	P	P	07 58 51.0	-0.5
	0.5nm,0.8s,baz=100,slow=6.8,SNR=1.3						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**49.20**	**254**	P	P	07 58 51.8	0.0
	1.1nm,0.6s,baz=89,slow=8.3,SNR=22						
	1.1nm,0.6s						
APG	**El Apazote**	**88.20**	**74**	LR	LR	08 35 07.9	
	comp=Z,97nm,19.9s,baz=156,slow=31						
BRTR	**Keskin Array B**	**148.13**	**318**	PKPbc	PKPbc	08 09 49.0	-0.7
	0.8nm,0.9s,baz=48,slow=2.1,SNR=3.6						

*IDC **09** 08:09:49.0±0.6,54˚.57N×161˚.13E, h0km, mb3.9/26, mbtmp4.0/29, ML4.4/3, MS3.3/6, Error ellipse: s-maj=15.5km s-min=10.9km az=135.0*

*KRSC **09** 08:09:54.0±1.0,54˚.36N×161˚.51E, h56km±23km, Ml4.5, Felt [IV-V] at kordon Kronoki; [IV] at kordon Valley of Geysers; [III-IV] at kordon Skala.*

*NEIC **09** 08:09:55.1±1.1,54˚.60N±0˚.08×161˚.4E±0˚.1, h45km±7km, mb4.2/11, Error ellipse: s-maj=11.4km s-min=10.9km az=137.0*

*MOS **09** 08:09:55.5±0.9,54˚.41N×161˚.45E, h57km, mb4.3/6, Error ellipse: s-maj=8.6km s-min=4.2km az=79.0*

ISC 09 08:09:56.1±0.9,54˚.41N±0˚.03×161˚.42E±0˚.04, h57km±8km, n151, σ1§49/213, mb4.0/32, MS3.7/6, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZV	**Kizimen**	**0.96**	**318**	PN	**Pn**	**08 10 13.3**	**-0.3**
KZV				S	**Sn**	**08 10 26.0**	**-0.6**
KZV	**Kizimen**	**0.96**	**318**	*e*P	**Pn**	**08 10 13.4**	**-0.3**
KZV				*e*S	**Sn**	**08 10 26.1**	**-0.6**
TUMD	**Tumrok D**	**0.99**	**324**	PN	**Pn**	**08 10 13.3**	**-0.6**
TUMD				S	**Sn**	**08 10 26.4**	**-0.7**
TUMD	**Tumrok D**	**0.99**	**324**	*e*P	**Pn**	**08 10 13.3**	**-0.6**
TUMD				*e*S	**Sn**	**08 10 26.5**	**-0.7**
KII	**Karymskiy**	**1.22**	**253**	PN	**Pn**	**08 10 16.9**	**0.0**
KII				S	**Sn**	**08 10 32.2**	**-0.2**
KII	**Karymskiy**	**1.22**	**253**	*e*P	**Pn**	**08 10 16.9**	**0.0**
KII				*e*S	**Sn**	**08 10 32.3**	**-0.2**
KMNR	**Kamenistaya**	**1.51**	**334**	PN	**Pn**	**08 10 22.3**	**+1.4**
KMNR				S	**Sn**	**08 10 43.0**	**+3.3**
KMNR	**Kamenistaya**	**1.51**	**334**	*e*P	**Pn**	**08 10 22.4**	**+1.4**
KMNR				*e*S	**Sn**	**08 10 43.0**	**+3.3**
BZGR	**Bezymyannyi-Gr**	**1.59**	**345**	PN	**Pn**	**08 10 22.9**	**+0.9**
BZGR				S	**Sn**	**08 10 43.3**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**1.59**	**345**	*e*P	**Pn**	**08 10 22.9**	**+0.9**
BZGR				*e*S	**Sn**	**08 10 43.4**	**+1.8**
BZMR	**Bezymyannaya**	**1.62**	**341**	PN	**Pn**	**08 10 23.2**	**+0.8**
BZMR				S	**Sn**	**08 10 43.0**	**+0.7**
BZMR	**Bezymyannaya**	**1.62**	**341**	*e*P	**Pn**	**08 10 23.2**	**+0.8**
BZMR				*e*S	**Sn**	**08 10 43.0**	**+0.7**
BZWR	**Bezymyannyi-We**	**1.65**	**342**	PN	**Pn**	**08 10 23.5**	**+0.7**
BZWR				S	**Sn**	**08 10 43.9**	**+0.9**
BZWR	**Bezymyannyi-We**	**1.65**	**342**	*e*P	**Pn**	**08 10 23.6**	**+0.7**
BZWR				*e*S	**Sn**	**08 10 44.0**	**+0.9**
ZLN	**Zelenaya**	**1.65**	**348**	PN	**Pn**	**08 10 23.9**	**+1.1**
ZLN				S	**Sn**	**08 10 43.3**	**+0.3**
ZLN	**Zelenaya**	**1.65**	**348**	*e*P	**Pn**	**08 10 24.0**	**+1.1**
ZLN				*e*S	**Sn**	**08 10 43.3**	**+0.3**
KIRR	**Kirishev**	**1.67**	**339**	PN	**Pn**	**08 10 24.3**	**+1.2**
KIRR				S	**Sn**	**08 10 44.6**	**+1.1**
KIRR	**Kirishev**	**1.67**	**339**	*e*P	**Pn**	**08 10 24.4**	**+1.2**
KIRR				*e*S	**Sn**	**08 10 44.6**	**+1.1**
KPT	**Kopyto**	**1.71**	**337**	PN	**Pn**	**08 10 24.7**	**+1.2**
KPT				S	**Sn**	**08 10 47.4**	**+3.1**
KPT	**Kopyto**	**1.71**	**337**	*e*P	**Pn**	**08 10 24.8**	**+1.2**
KPT				*e*S	**Sn**	**08 10 47.4**	**+3.1**
CIRR	**Tsirk**	**1.75**	**348**	PN	**Pn**	**08 10 25.3**	**+1.1**
CIRR				S	**Sn**	**08 10 47.5**	**+2.0**
CIRR	**Tsirk**	**1.75**	**348**	*e*P	**Pn**	**08 10 25.3**	**+1.1**
CIRR				*e*S	**Sn**	**08 10 47.6**	**+2.0**
KOZ	**Kozyrevsk**	**1.88**	**332**	PN	**Pn**	**08 10 27.0**	**+1.2**
KOZ				S	**Sn**	**08 10 50.9**	**+2.6**
KOZ	**Kozyrevsk**	**1.88**	**332**	*e*P	**Pn**	**08 10 27.1**	**+1.2**
KOZ				*e*S	**Sn**	**08 10 51.0**	**+2.6**
SDLR	**Sedlovina**	**1.88**	**234**	PN	**Pn**	**08 10 26.8**	**+0.9**
SDLR				S	**Sn**	**08 10 49.4**	**+0.8**
SDLR	**Sedlovina**	**1.88**	**234**	*e*P	**Pn**	**08 10 26.8**	**+0.9**
SDLR				*e*S	**Sn**	**08 10 49.5**	**+0.8**
KRER	**Koryakskii**	**1.93**	**236**	PN	**Pn**	**08 10 27.7**	**+1.0**
KRER				S	**Sn**	**08 10 49.8**	**-0.1**
KRER	**Koryakskii**	**1.93**	**236**	*e*P	**Pn**	**08 10 27.7**	**+1.0**
KRER				*e*S	**Sn**	**08 10 49.8**	**-0.1**
SMAR	**Somma**	**1.93**	**235**	PN	**Pn**	**08 10 27.4**	**+0.8**
SMAR				S	**Sn**	**08 10 50.7**	**+0.8**
SMAR	**Somma**	**1.93**	**235**	*e*P	**Pn**	**08 10 27.5**	**+0.8**
SMAR				*e*S	**Sn**	**08 10 50.8**	**+0.8**
KRX	**Arik**	**1.95**	**238**	PN	**Pn**	**08 10 27.0**	**+0.2**
KRX				S	**Sn**	**08 10 51.4**	**+1.2**
KRX	**Arik**	**1.95**	**238**	*e*P	**Pn**	**08 10 27.1**	**+0.2**
KRX				*e*S	**Sn**	**08 10 51.4**	**+1.2**
UGLR	**Uglovaya**	**1.95**	**233**	PN	**Pn**	**08 10 27.8**	**+0.9**
UGLR				S	**Sn**	**08 10 50.8**	**+0.5**
UGLR	**Uglovaya**	**1.95**	**233**	*e*P	**Pn**	**08 10 27.8**	**+0.9**
UGLR				*e*S	**Sn**	**08 10 50.9**	**+0.5**
AVH	**Avacha**	**1.96**	**235**	PN	**Pn**	**08 10 27.8**	**+0.9**
AVH				S	**Sn**	**08 10 52.5**	**+2.1**
AVH	**Avacha**	**1.96**	**235**	*e*P	**Pn**	**08 10 27.9**	**+0.9**
AVH				*e*S	**Sn**	**08 10 52.6**	**+2.1**
KLY	**Klyuchi**	**1.96**	**347**	PN	**Pn**	**08 10 27.0**	**+0.2**
KLY				S	**Sn**	**08 10 51.1**	**+0.8**
KLY	**Klyuchi**	**1.96**	**347**	*e*P	**Pn**	**08 10 27.1**	**+0.2**
KLY				*e*S	**Sn**	**08 10 51.1**	**+0.8**
KBTR	**Krutoberegovo**	**1.98**	**23**	PN	**Pn**	**08 10 27.8**	**+0.7**
KBTR				S	**Sn**	**08 10 52.9**	**+2.2**
KBTR	**Krutoberegovo**	**1.98**	**23**	*e*P	**Pn**	**08 10 27.9**	**+0.7**
KBTR				*e*S	**Sn**	**08 10 52.9**	**+2.2**
KOK	**Koryaka**	**1.99**	**237**	PN	**Pn**	**08 10 28.3**	**+0.9**
KOK				S	**Sn**	**08 10 53.7**	**+2.5**
KOK	**Koryaka**	**1.99**	**237**	*e*P	**Pn**	**08 10 28.4**	**+0.9**
KOK				*e*S	**Sn**	**08 10 53.7**	**+2.5**
KBG	**Krutoberegovo**	**1.99**	**21**	PN	**Pn**	**08 10 28.7**	**+1.4**
KBG				S	**Sn**	**08 10 54.2**	**+3.1**
KBG	**Krutoberegovo**	**1.99**	**21**	*e*P	**Pn**	**08 10 28.7**	**+1.4**
KBG				*e*S	**Sn**	**08 10 54.2**	**+3.1**
DALK	**Dalny**	**2.10**	**230**	PN	**Pn**	**08 10 29.4**	**+0.6**
DALK				S	**Sn**	**08 10 54.1**	**+0.4**
DALK	**Dalny**	**2.10**	**230**	*e*P	**Pn**	**08 10 29.4**	**+0.6**
DALK				*e*S	**Sn**	**08 10 54.2**	**+0.4**
INSR	**Institute**	**2.14**	**232**	PN	**Pn**	**08 10 30.5**	**+1.1**
INSR				S	**Sn**	**08 10 56.1**	**+1.3**
INSR	**Institute**	**2.14**	**232**	*e*P	**Pn**	**08 10 30.5**	**+1.1**
INSR				*e*S	**Sn**	**08 10 56.2**	**+1.3**
SRDR	**Sredinnyy**	**2.15**	**334**	PN	**Pn**	**08 10 30.2**	**+0.7**
SRDR	**Sredinnyy**	**2.15**	**334**	*e*P	**Pn**	**08 10 30.2**	**+0.7**
PET	**Petropavlovsk**	**2.15**	**231**		**Pn**	**08 10 29.9**	**+0.5**
PET	**Petropavlovsk**	**2.15**	**231**	ǁ *i* PN	**Pn**	**08 10 30.2**	**+0.7**
PET				*e*S	**Sn**	**08 10 55.7**	**+0.7**
PET				pmax	pmax		
	comp=Z,133nm,0.3s						
PET				smax	smax		
	comp=N,1μm,0.4s						
PET				smax	smax		
	comp=E,2μm,0.4s						
PET				MLR	MLR		
	comp=Z,58nm,19.0s						
PET	**Petropavlovsk**	**2.15**	**231**	*e*P	**Pn**	**08 10 30.2**	**+0.7**
PET				*e*S	**Sn**	**08 10 55.6**	**+0.7**
ESO	**Esso**	**2.18**	**315**	PN	**Pn**	**08 10 30.5**	**+0.6**
ESO				S	**Sn**	**08 10 56.5**	**+0.8**
ESO	**Esso**	**2.18**	**315**	*e*P	**Pn**	**08 10 30.6**	**+0.6**
ESO				*e*S	**Sn**	**08 10 56.5**	**+0.8**
SMKR	**Semkarok**	**2.18**	**1**	PN	**Pn**	**08 10 30.9**	**+1.0**
SMKR				S	**Sn**	**08 10 57.5**	**+1.7**
SMKR	**Semkarok**	**2.18**	**1**	*e*P	**Pn**	**08 10 31.0**	**+1.0**
SMKR				*e*S	**Sn**	**08 10 57.5**	**+1.7**
SRKR	**Sorokina**	**2.26**	**356**	PN	**Pn**	**08 10 32.1**	**+1.1**
SRKR				S	**Sn**	**08 10 58.2**	**+0.5**
SRKR	**Sorokina**	**2.26**	**356**	*e*P	**Pn**	**08 10 32.1**	**+1.1**
SRKR				*e*S	**Sn**	**08 10 58.3**	**+0.5**
KRMR	**Karymshinskiy**	**2.52**	**232**	PN	**Pn**	**08 10 35.8**	**+1.3**
KRMR				S	**Sn**	**08 11 05.8**	**+1.9**
KRMR	**Karymshinskiy**	**2.52**	**232**	*e*P	**Pn**	**08 10 35.8**	**+1.3**
KRMR				*e*S	**Sn**	**08 11 05.8**	**+1.9**
PEA0B	**Petropavlovsk-**	**2.56**	**241**		**Pn**	**08 10 35.6**	**+0.5**
PEA0B	**Petropavlovsk-**	**2.56**	**241**	*i* PN	**Pn**	**08 10 36.0**	**+0.9**
PETK	**Petropavlovsk-**	**2.56**	**241**	Pg	**Pn**	**08 10 35.0**	**-0.2**
	comp=Z,19nm,0.3s,baz=63,slow=17,SNR=184						
PETK				Lg	Lg	08 11 08.3	
	comp=Z,58nm,0.3s,baz=25,slow=27,SNR=9.9						
PETK	**Petropavlovsk-**	**2.56**	**241**	PN	**Pn**	**08 10 35.0**	**-0.2**
RUS	**Russkaya**	**2.63**	**223**	PN	**Pn**	**08 10 36.1**	**+0.1**
RUS				S	**Sn**	**08 11 06.0**	**-0.7**
RUS	**Russkaya**	**2.63**	**223**	*e*P	**Pn**	**08 10 36.2**	**+0.1**
RUS				*e*S	**Sn**	**08 11 06.1**	**-0.7**
GRL	**Gorelyy**	**2.73**	**228**	PN	**Pn**	**08 10 39.0**	**+1.5**
GRL				S	**Sn**	**08 11 11.9**	**+2.6**
GRL	**Gorelyy**	**2.73**	**228**	*e*P	**Pn**	**08 10 39.0**	**+1.5**
GRL				*e*S	**Sn**	**08 11 11.9**	**+2.6**
MTVR	**Mutnovka**	**2.73**	**226**	PN	**Pn**	**08 10 38.5**	**+0.9**
MTVR				S	**Sn**	**08 11 10.0**	**+0.6**
MTVR	**Mutnovka**	**2.73**	**226**	*e*P	**Pn**	**08 10 38.5**	**+0.9**
MTVR				*e*S	**Sn**	**08 11 10.1**	**+0.6**
BKI	**Bering**	**2.75**	**71**	PN	**Pn**	**08 10 36.9**	**-0.8**
BKI				S	**Sn**	**08 11 06.6**	**-3.1**
BKI	**Bering**	**2.75**	**71**	*e*P	**Pn**	**08 10 37.0**	**-0.8**
BKI				*e*S	**Sn**	**08 11 06.7**	**-3.1**
ASAK	**Asacha**	**2.92**	**228**	PN	**Pn**	**08 10 41.7**	**+1.6**
ASAK				S	**Sn**	**08 11 16.0**	**+1.9**
ASAK	**Asacha**	**2.92**	**228**	*e*P	**Pn**	**08 10 41.7**	**+1.6**
ASAK				*e*S	**Sn**	**08 11 16.0**	**+1.9**
APC	**Apacha**	**2.94**	**241**	PN	**Pn**	**08 10 41.9**	**+1.7**
APC				S	**Sn**	**08 11 16.9**	**+2.7**
APC	**Apacha**	**2.94**	**241**	*e*P	**Pn**	**08 10 42.0**	**+1.7**
APC				*e*S	**Sn**	**08 11 17.0**	**+2.7**
KDTR	**Khodutka, Kamc**	**3.29**	**219**	PN	**Pn**	**08 10 45.4**	**+0.4**
KDTR				S	**Sn**	**08 11 21.7**	**-1.2**
KDTR	**Khodutka, Kamc**	**3.29**	**219**	*e*P	**Pn**	**08 10 45.5**	**+0.4**
KDTR				*e*S	**Sn**	**08 11 21.8**	**-1.2**
SKR	**Severo-Kuril's**	**4.94**	**223**	*e*PN	Pn	08 11 12.9	+5.3
SKR				*e*S	**Sn**	**08 12 10.0**	**+6.7**
SKR				pmax	pmax		
	comp=Z,24nm,0.2s						
SKR				smax	smax		
	comp=N,220nm,0.5s						
SKR				smax	smax		
	comp=E,217nm,0.7s						
SKR				MLR	MLR		
	comp=Z,2μm,15.0s						
SHEM	**Shemya Is, Ala**	**7.74**	**97**	Pn	**Pn**	**08 11 45.0**	**-0.9**
SMY	**Shemya**	**7.74**	**97**	Pn	**Pn**	**08 11 45.5**	**-0.4**
SMY	**Shemya**	**7.74**	**97**	PN	**Pn**	**08 11 45.5**	**-0.4**
MA2	**Magadan**	**7.78**	**316**		**Pn**	**08 11 43.3**	**-3.2**
MA2	**Magadan**	**7.78**	**316**	Pn	**Pn**	**08 11 43.6**	**-2.9**
	comp=Z,0.7nm,0.3s,baz=140,slow=14,SNR=4.8						
	comp=Z,12nm,0.9s						
BILL	**Bilibino**	**13.87**	**8**	*i* P	**Pn**	**08 13 11.6**	**+2.1**
JKA	**Kamikawa-asahi**	**15.98**	**238**		**Pn**	**08 13 37.3**	**+0.3**
JKA				IAmb	IAmb	08 14 15.0	
	comp=Z,23nm,1.1s						
ASAJ	**Asahikawa**	**15.98**	**238**	Pn	**Pn**	**08 13 35.9**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=12,slow=5.4,SNR=7.4						
ASAJ				LR	LR	08 19 42.5	
	comp=Z,42nm,18.3s,baz=1.5,slow=37						
	comp=Z,3.9nm,0.7s						
YAK	**Yakutsk**	**18.21**	**307**	P	**P**	**08 14 02.0**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=125,slow=2.7,SNR=1.7						
YAK				LR	LR	08 20 48.2	
	comp=Z,52nm,19.3s,baz=112,slow=37						
	comp=Z,14nm,0.4s						
YAK	**Yakutsk**	**18.21**	**307**	*i* P	**P**	**08 14 02.0**	**-2.0**
YAK				pmax	pmax		
	comp=Z,99nm,3.0s						
JMM	**Marumori**	**21.73**	**229**	P	**P**	**08 14 43.4**	**+1.1**
TIXI	**Tiksi**	**22.24**	**333**	P	**P**	**08 14 45.5**	**-1.9**
TIXI				IAmb	IAmb	08 14 47.2	
	comp=Z,5.6nm,1.1s						
TIXI	**Tiksi**	**22.24**	**333**	LR	LR	08 23 46.9	
	comp=Z,53nm,18.4s,baz=26,slow=38						
TIXI	**Tiksi**	**22.24**	**333**	*i* P	**P**	**08 14 45.6**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,33nm,3.3s						
JSD	**Sado**	**22.74**	**233**	P	**P**	**08 14 54.2**	**+1.0**
JSD				IAmb	IAmb	08 15 08.8	
	comp=Z,14nm,0.9s						
D19K	**Kuna River**	**23.34**	**37**	P	**P**	**08 14 59.1**	**+0.2**
D19K				IAmb	IAmb	08 15 28.0	
	comp=Z,9.6nm,1.1s						
D20K	**Etivluk River**	**23.93**	**37**	P	**P**	**08 15 04.3**	**-0.1**
D20K				IAmb	IAmb	08 15 19.9	
	comp=Z,6.5nm,1.1s						
MJA0	**Matsu Arr-Jizo**	**23.96**	**231**	*e*P	**P**	**08 15 08.7**	**+3.8**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR	**Matsushiro Arr**	**23.98**	**231**	P	**P**	**08 15 05.5**	**+0.4**
MJAR	**Matsushiro Arr**	**23.98**	**231**	P	**P**	**08 15 05.8**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=27,slow=9.1,SNR=11						
	comp=Z,3.6nm,0.7s						
MJAR	**Matsushiro Arr**	**23.98**	**231**	P	**P**	**08 15 05.5**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
B20K	**Meade River**	**24.13**	**34**	P	**P**	**08 15 05.9**	**-0.2**
HILR	**Hailar Array B**	**25.83**	**276**	P	**P**	**08 15 21.2**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=77,slow=7.6,SNR=1.3						
HILR				LR	LR	08 26 14.0	
	comp=Z,66nm,20.3s,baz=20,slow=38						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**27.34**	**47**	P	**P**	**08 15 36.5**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=270,slow=8.4,SNR=2.4						
	comp=Z,0.2nm,0.7s						
KSRS	**Korea Array**	**28.45**	**247**	P	**P**	**08 15 45.2**	**0.0**
	comp=Z,0.8nm,0.6s,baz=43,slow=8.9,SNR=1.6						
	comp=Z,0.8nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.87**	**171**	T	T	08 53 42.9	
	baz=355,slow=76,SNR=735						
H11N3	**WAKE ISLAND Hy**	**34.88**	**171**	T	T	08 53 49.7	
	baz=355,slow=76,SNR=854						
H11N1	**WAKE ISLAND Hy**	**34.88**	**171**	T	T	08 53 48.9	
	baz=355,slow=76,SNR=616						
H11S1	**WAKE ISLAND Hy**	**36.06**	**171**	T	T	08 55 11.9	
	baz=352,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy**	**36.07**	**171**	T	T	08 55 16.1	
	baz=352,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**36.08**	**171**	T	T	08 55 26.3	
	baz=352,slow=76,SNR=8.5						
ZALV	**Zalesovo Beam**	**42.74**	**302**	LR	LR	08 36 52.2	
	comp=Z,46nm,18.0s,baz=31,slow=38						
LZDM	**Lanzhou Array**	**43.32**	**269**	P	**P**	**08 17 52.1**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=72,slow=11,SNR=1.4						
	comp=Z,1.0nm,0.3s						
SPITS	**Spitsbergen Ar**	**45.97**	**351**	P	**P**	**08 18 12.1**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=38,slow=7.3,SNR=11						
	comp=Z,2.2nm,0.5s						
KURK	**Kurchatov**	**47.71**	**302**	P	**P**	**08 18 24.1**	**-2.5**
KURK				IAmb	IAmb	08 18 26.9	
	comp=Z,1.8nm,0.7s						
KURK	**Kurchatov**	**47.71**	**302**	P	**P**	**08 18 24.5**	**-2.1**
KURBB	**Kurchatov Arra**	**47.81**	**301**	P	**P**	**08 18 24.5**	**-2.9**
	comp=Z,2.5nm,0.2s,baz=54,slow=8.3,SNR=6.3						
	comp=Z,2.5nm,0.2s						
MKAR	**Makanchi Array**	**48.30**	**295**	P	**P**	**08 18 28.3**	**-3.0**
MKAR	**Makanchi Array**	**48.30**	**295**	P	**P**	**08 18 28.4**	**-2.9**
	comp=Z,0.5nm,0.7s,baz=57,slow=8.8,SNR=4.3						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**48.30**	**295**	*e*P	**P**	**08 18 30.6**	**-0.7**
BVAR	**Borovoye Array**	**50.19**	**308**	P	**P**	**08 18 43.3**	**-2.3**
	comp=Z,1.0nm,0.4s,baz=74,slow=8.7,SNR=4.6						
	comp=Z,1.0nm,0.4s						
**

BO03					IAML			08 25 29.4	
	comp=E,23μm,0.1s								
MT01	**Popeta**	**0.66**	**58**	*eP*		**Pb**	**08 25 27.3**	**-0.7**
MT01				*eS*		**Sb**	**08 25 35.8**	**-1.0**
MT01	**Popeta**	**0.66**	**58**	*eP*		**Pb**	**08 25 27.2**	**-0.9**
MT01					IAML		08 25 38.3	
	comp=Z,3μm,0.4s								
BO01	**Tunca**	**0.71**	**105**	*i* P		**Pb**	**08 25 27.9**	**-1.1**
BO01				*eS*		**Sb**	**08 25 37.5**	**-1.0**
BO01					IAML		08 25 37.8	
	comp=N,9μm,0.2s								
BO01	**Tunca**	**0.71**	**105**	*eP*		**Pb**	**08 25 27.9**	**-1.1**
BO01				*eS*		**Sb**	**08 25 37.6**	**-0.9**
BO01					IAML		08 25 38.3	
	comp=Z,4μm,0.3s								
GO05	**Hualane**	**0.79**	**181**	⇑*iP*		**Pb**	**08 25 29.6**	**-0.8**
GO05				*eS*		**Sb**	**08 25 40.2**	**-0.6**
GO05					IAML		08 25 40.7	
	comp=N,5μm,0.3s								
GO05	**Hualane**	**0.79**	**181**	*eP*		**Pb**	**08 25 29.6**	**-0.8**
GO05				*eS*		**Sb**	**08 25 40.6**	**-0.1**
GO05					IAML		08 25 41.5	
	comp=Z,2μm,0.1s								
MT09	**Talagante**	**0.89**	**61**	*i* P		**Pb**	**08 25 30.8**	**-1.2**
MT09				*eS*		**Sb**	**08 25 42.6**	**-1.0**
MT09					IAML		08 25 43.5	
	comp=N,9μm,0.1s								
BO02	**Sierra Bellavi**	**1.10**	**122**	*eP*		**Pn**	**08 25 34.2**	**-0.8**
BO02				*eS*		**Sb**	**08 25 48.6**	**-1.0**
BO02					IAML		08 25 51.1	
	comp=N,13μm,0.2s								
BO02	**Sierra Bellavi**	**1.10**	**122**	*eP*		**Pn**	**08 25 33.5**	**-1.4**
BO04	**La Punta**	**1.11**	**79**⇓	*iP*		**Pn**	**08 25 34.4**	**-0.7**
BO04				*eS*		**Sb**	**08 25 48.9**	**-0.9**
BO04					IAML		08 25 50.3	
	comp=N,10μm,0.5s								
MT02	**Curacav**	**1.16**	**35**	*i* P		**Pn**	**08 25 34.5**	**-1.2**
MT02				*eS*		**Sb**	**08 25 48.7**	**-2.4**
MT02					IAML		08 25 49.3	
	comp=N,2μm,0.2s								
MT02	**Curacav**	**1.16**	**35**	*eP*		**Pn**	**08 25 34.5**	**-1.2**
MT02				*eS*		**Sb**	**08 25 49.3**	**-1.8**
MT02					IAML		08 25 50.1	
	comp=Z,1μm,0.1s								
VA01	**Torpederas**	**1.21**	**11**	*eP*		**Pn**	**08 25 35.7**	**-0.7**
VA01	**Torpederas**	**1.21**	**11**	*eP*		**Pn**	**08 25 35.9**	**-0.4**
MT05	**Renca**	**1.28**	**50**	*eP*		**Pn**	**08 25 37.0**	**-0.4**
MT05				*eS*		**Sn**	**08 25 53.6**	**-0.1**
MT05	**Renca**	**1.28**	**50**	*eP*		**Pn**	**08 25 36.3**	**-1.1**
MT05					IAML		08 25 54.8	
	comp=Z,2μm,0.7s								
MT15	**Las Vizcachas**	**1.33**	**63**	*eP*		**Pn**	**08 25 37.5**	**-0.6**
MT15				*eS*		**Sn**	**08 25 55.1**	**+0.2**
MT15					IAML		08 25 56.9	
	comp=N,9μm,0.3s								
MT03	**Universidad Ad**	**1.38**	**59**	*i* P		**Pn**	**08 25 38.1**	**-0.6**
MT03				*eS*		**Sn**	**08 25 56.3**	**+0.2**
MT03					IAML		08 25 57.1	
	comp=E,6μm,0.3s								
MT03	**Universidad Ad**	**1.38**	**59**	*eP*		**Pn**	**08 25 38.1**	**-0.6**
MT03				*eS*		**Sn**	**08 25 56.8**	**+0.6**
MT03					IAML		08 25 57.8	
	comp=Z,5μm,0.1s								
MT16	**CCHEN**	**1.40**	**56**	*eP*		**Pn**	**08 25 38.8**	**-0.2**
MT16				*eS*		**Sn**	**08 25 56.9**	**+0.1**
MT16					IAML		08 25 60.0	
	comp=N,1μm,0.8s								
MT14	**Cerro Cal¡n**	**1.41**	**55**	*eP*		**Pn**	**08 25 38.9**	**-0.3**
MT14				*eS*		**Sn**	**08 25 57.1**	**+0.1**
ROC1	**El Roble**	**1.45**	**32**	*eP*		**Pn**	**08 25 39.2**	**-0.7**
ROC1				*eS*		**Sn**	**08 25 58.7**	**+0.6**
ROCH	**El Roble**	**1.45**	**32**	*eP*			08 25 39.4	
ROCH				*eP*		**Pn**	**08 25 39.2**	**-0.7**
LMEL	**Las Melosas**	**1.47**	**76**	*eP*		**Pn**	**08 25 39.7**	**-0.4**
LMEL				*eS*		**Sn**	**08 25 58.7**	**+0.1**
LMEL					IAML		08 26 01.2	
	comp=N,5μm,0.5s								
LMEL	**Las Melosas**	**1.47**	**76**	*eP*		**Pn**	**08 25 39.8**	**-0.4**
LMEL				*eS*		**Sn**	**08 25 59.4**	**+0.8**
LMEL					IAML		08 26 02.1	
	comp=Z,2μm,0.3s								
PEL	**Peldehue**	**1.48**	**44**	*eP*		**Pn**	**08 25 40.1**	**-0.1**
PEL				*eS*		**Sn**	**08 25 58.6**	**-0.1**
PEL					IAML		08 26 04.0	
PEL	**Peldehue**	**1.48**	**44**	*eP*		Pn	08 25 34.6	-5.6
PEL					IAML		08 26 03.7	
	comp=Z,787nm,0.2s								
MT10	**Hacienda Santa**	**1.49**	**51**	*eP*		**Pn**	**08 25 40.3**	**0.0**
MT10				*eS*		**Sn**	**08 25 59.3**	**+0.4**
MT10					IAML		08 26 01.8	
	comp=N,4μm,0.3s								
ML02	**Panimavida**	**1.60**	**165**	*eP*		**Pn**	**08 25 41.4**	**-0.4**
ML02	**Panimavida**	**1.60**	**165**	*eP*		**Pn**	**08 25 41.5**	**-0.2**
ML02					IAML		08 26 10.1	
	comp=Z,646nm,0.5s								
MT04	**Ro Olivares**	**1.69**	**62**⇓	*iP*		**Pn**	**08 25 42.8**	**-0.4**
MT04				*eS*		**Sn**	**08 26 04.5**	**+0.4**
MT04	**Ro Olivares**	**1.69**	**62**	*eP*		**Pn**	**08 25 42.8**	**-0.4**
MT04				*eS*		**Sn**	**08 26 05.0**	**+0.9**
MT04					IAML		08 26 05.7	
	comp=Z,994nm,0.1s								
VA06	**Catapilco**	**1.73**	**18**	*eP*		**Pn**	**08 25 42.9**	**-0.7**
MT08	**Bocatoma Ro**	**1.76**	**65**	*eP*		**Pn**	**08 25 44.1**	**0.0**
MT08				*eS*		**Sn**	**08 26 07.1**	**+1.3**
MT08					IAML		08 26 10.0	
	comp=N,986nm,0.3s								
MT08	**Bocatoma Ro**	**1.76**	**65**	*eP*		**Pn**	**08 25 44.3**	**+0.1**
MT08				*eS*		**Sn**	**08 26 01.9**	**-3.9**
MT08				*eS*			08 26 07.2	
MT08					IAML		08 26 08.1	
	comp=Z,716nm,0.3s								
VA03	**San Esteban**	**1.84**	**39**	*i* P		**Pn**	**08 25 45.0**	**-0.2**
VA03				*eS*		**Sn**	**08 26 08.5**	**+0.8**
VA03					IAML		08 26 14.9	
	comp=E,2μm,0.1s								
VA03	**San Esteban**	**1.84**	**39**	*eP*		**Pn**	**08 25 45.1**	**-0.1**
VA03				*eS*		**Sb**	**08 26 10.8**	**-0.2**
VA03					IAML		08 26 12.7	
	comp=Z,1μm,0.8s								
CO04	**Los Peladeros**	**2.31**	**20**	*eP*		**Pn**	**08 25 50.8**	**-0.9**
BI02	**San Fabin de**	**2.50**	**168**	*eP*		**Pn**	**08 25 54.1**	**0.0**
BI02	**San Fabin de**	**2.50**	**168**	*eP*		**Pn**	**08 25 53.6**	**-0.6**
BI02					IAML		08 26 37.3	
	comp=Z,160nm,0.4s								
EDS3	**Malargue**	**2.59**	**128**	*eP*		**Pn**	**08 25 53.9**	**-1.5**
EDS3				*eS*		**Sb**	**08 26 30.4**	**-2.0**
BI05	**Punta Hualpn**	**2.73**	**202**	*eP*		**Pn**	**08 25 56.4**	**-0.9**
AAGR	**Agrelo**	**2.81**	**67**	*eP*		**Pn**	**08 25 57.0**	**-1.6**
RFA	**San Rafael**	**2.91**	**102**	*eP*		**Pn**	**08 26 00.4**	**+0.6**
RFA				*eS*		**Sb**	**08 26 48.9**	**+7.4**
AVIZ	**Vizcacheras**	**2.93**	**76**	*eP*		**Pn**	**08 26 01.7**	**+1.6**
ASAL	**Salagasta**	**3.05**	**59**	*eP*		**Pn**	**08 26 01.4**	**-0.3**
ASAL				*eS*		**Sb**	**08 26 51.9**	**+6.3**
CO02	**Combarbal**	**3.10**	**15**	*eP*		**Pn**	**08 26 01.9**	**-0.6**
CO02	**Combarbal**	**3.10**	**15**	*eP*		**Pn**	**08 26 01.9**	**-0.6**
CO02				*eS*		**Sn**	**08 26 43.4**	**+4.6**
CO02					IAML		08 26 55.9	
	comp=Z,198nm,0.4s								
RTLS	**Leoncito**	**3.27**	**43**	*eP*		**Pn**	**08 26 02.0**	**-2.9**
RTLS					IAML		08 27 12.2	
	comp=Z,204nm,0.7s								
CO03	**El Pedregal**	**3.52**	**17**	*eP*		**Pn**	**08 26 08.4**	**+0.1**
CO03				*eS*		**Sb**	**08 27 02.9**	**+3.6**
CO03					IAML		08 27 06.2	
	comp=Z,93nm,0.2s								
CO06	**Fray Jorge**	**3.54**	**4**	*eP*		**Pn**	**08 26 06.8**	**-1.6**
CFA	**Coronel Fontan**	**4.04**	**51**	*eP*		**Pn**	**08 26 16.0**	**+0.6**
GO04	**Tololo Observa**	**4.14**	**14**	*eP*		**Pn**	**08 26 15.8**	**-1.1**
GO04					IAML		08 27 32.7	
	comp=Z,106nm,0.2s								
ACCO	**Cerro Coronel**	**4.35**	**34**	*eS*		**Sb**	**08 27 21.9**	**-1.4**
LCO	**Las Campanas**	**5.29**	**12**	*eP*		**Pn**	**08 26 31.5**	**-1.2**
TCA	**Tanti**	**6.80**	**67**	*eP*		**Pn**	**08 26 56.3**	**+2.9**

*SNET **09** 08:32:51.6±1.1, 14°.34N×90°.37W, h192km, ML5.2*
*IDC **09** 08:32:51.3±0.3, 14°.54N×90°.11W, h199km±1km, mb4.4/30, mbtmp5.0/34, MS4.2/20, Error ellipse: s-maj=10.1km s-min=6.2km az=51.0*
*NEIC **09** 08:32:51.9, 14°.48N×90°.28W, h190km, Moment Tensor Solution. Duration: 2s1.0 Moment tensor: Scale 10^17 Nm; Mrr0.64; Mθθ-0.85; Mϕϕ0.21; Mrθ1.38; Mθϕ0.04;*
Mϕr-1.71; Fault plane solution: M₀2.33000×10^17 NP1: ϕs250.89000°, δ15.17000°, λ25.23000°. NP2: ϕs136.44000°, δ83.59000°, λ103.78000°. Principal axes: T 2.4823, Plg50.0000°, Azm61.0000°; N -0.3371, Plg14.0000°, Azm315.0000°; P -2.1452, Plg37.0000°, Azm214.0000°;
*NEIC **09** 08:32:51.9, 14°.48N×90°.28W, h190km*
*CATAC **09** 08:32:52.4±0.2, 14°N±2°×9°0W±°, h189km±1km, M5.5/78, mb5.8/19, mB5.9/20, MLv5.8/78, Mw(mB)5.5/20, MwMwp5.1/9, Mwp5.3/9, Error ellipse: s-maj=4.5km s-min=1.9km az=36.6, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.55; Mθθ-0.57; Mϕϕ0.02; Mrθ1.53; Mθϕ-0.35; Mϕr-2.14; Fault plane solution: M₀2.71684×10^17 NP1:ϕs142.61309°, δ87.69305°, λ94.19376°. NP2:ϕs261.37812°, δ4.78541°, λ28.84950°. Principal axes: T 2.9958, Plg47.1473°, Azm56.9736°; N -0.6915, Plg4.1904°, Azm322.4440°; P -2.3043, Plg42.5458°, Azm228.5883°; confirmed*
*MOS **09** 08:32:52.2±1.0, 14°.50N×90°.25W, h201km, mb5.1/26 Error ellipse: s-maj=9.2km s-min=6.2km az=99.7*
*GCG **09** 08:32:52.0±0.7, 14°.35N×90°.40W, h189km±4km, MD4.3, ML5.7*
*NEIC **09** 08:32:52.3±2.0, 14°.51N±0°.07×90°.27W±0°.07, h200km±1km, mb5.1/81, Mwb5.6/51, Mww5.5/65, Error ellipse: s-maj=13.8km s-min=9.9km az=216.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.22; Mθθ-0.56; Mϕϕ-0.66; Mrθ1.45; Mθϕ0.10; Mϕr-2.24; Fault plane solution: M₀2.87000×10^17 NP1:ϕs327.65000°, δ10.04000°, λ90.58000°. NP2:ϕs147.06000°, δ79.96000°, λ89.90000°. Principal axes: T 3.0900, Plg55.0000°, Azm57.0000°; N -0.4948, Plg0.0000°, Azm147.0000°; P -2.5952, Plg35.0000°, Azm237.0000°;*
*NEIC **09** 08:32:52, 14°.49N×90°.28W, h196km*
*GCMT **09** 08:32:54.3±0.1, 14°.54N±0°.01×90°.41W±0°.01, h199km, MW5.6/159, Moment Tensor Solution. s138,c251; s159,c308; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr1.05±.03; Mθθ-0.49±.03; Mϕϕ-0.55±.04; Mrθ1.71±.02; Mθϕ-0.03±.03; Mϕr-2.30±.02; Best double couple: M₀2.97000×10^17 NP1:ϕs329.00000°, δ8.00000°, λ96.00000°. NP2:ϕs144.00000°, δ82.00000°, λ89.00000°. Principal axes: T 3.2420, Plg53.0000°, Azm53.0000°; N -0.5400, Plg1.0000°, Azm144.0000°; P -2.6990, Plg37.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 08:32:51.1±0.3, 14°.43N±0°.03×90°.37W±0°.03, h203km±2km, h203km:pP-P, n967, σ1s36/1131, mb4.9/150, 3C-17D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
FG16	**Alotenango, Sa**	**0.20**	**221**	*i*	Op P	**Pn**	**08 33 15.5**	**+0.4**
FG16					IAML		08 33 19.8	
	comp=Z,167μm,0.5s							
PCG5	**San Vicente Pa**	**0.21**	**181**	*i*	P	**Pn**	**08 33 17.8**	**-0.3**
ESSG	**Sabana Grande**	**0.45**	**264**	*i*	P	**Pn**	**08 33 17.8**	**-0.6**
APG	**El Apazote**	**0.58**	**351**		P	**Pn**	**08 33 19.6**	**+0.5**
	comp=Z,2μm,0.4s,baz=156,slow=10.0							
APG					S	**S**	**08 33 40.9**	**-0.2**
	comp=Z,3μm,1.0s,baz=76,slow=19,SNR=57							
APG	**El Apazote**	**0.58**	**351**	*eP*		**Pn**	**08 33 19.7**	**+0.5**
APG				*i*	S	**S**	**08 33 40.7**	**-0.4**
JUAM	**Asuncion Mita**	**0.65**	**98**	*i*	P	**Pn**	**08 33 17.2**	**0.0**
JUAM				*eS*		**S**	**08 33 40.3**	**-0.7**
JUAM					IAML		08 33 42.5	
	comp=N,66μm,1.8s							
FAME	**Alcaldia de Sa**	**0.68**	**149**		P	**Pn**	**08 33 18.7**	**-0.7**
SLOZ	**Alcaldia de Sa**	**0.70**	**125**		P	**Pn**	**08 33 17.5**	**-1.9**
SLOZ	**Alcaldia de Sa**	**0.70**	**125**		S	**S**	**08 33 38.5**	**-3.0**
LOAL	**Lomas de Alarc**	**0.71**	**127**	*eP*		**Pn**	**08 33 19.6**	**0.0**
LOAL				*eS*		**S**	**08 33 41.1**	**-0.5**
LOAL	**Lomas de Alarc**	**0.71**	**127**		P	**Pn**	**08 33 19.1**	**-0.5**
LOAL	**Lomas de Alarc**	**0.71**	**127**		S	**S**	**08 33 40.8**	**-0.8**
RBDL	**Robledal**	**0.73**	**115**	*eP*		**Pn**	**08 33 19.6**	**-0.2**
RBDL				*eS*		**S**	**08 33 41.2**	**-0.8**
NUBE	**Las Nubes**	**0.78**	**132**	*eP*		**Pn**	**08 33 19.8**	**-0.2**
NUBE				*eS*		**S**	**08 33 40.8**	**-1.5**
NUBE	**Las Nubes**	**0.78**	**132**	*i*	P	**Pn**	**08 33 19.8**	**-0.2**
NUBE				*i*	S	**S**	**08 33 41.0**	**-1.4**
NUBE	**Las Nubes**	**0.78**	**132**		P	**Pn**	**08 33 19.4**	**-0.6**
ESSJ	**San Jos, E**	**0.87**	**188**	*i*	P	**Pn**	**08 33 19.0**	**-1.4**
ESSJ				*eS*		**S**	**08 33 39.3**	**-3.8**
RTR	**El Retiro**	**0.88**	**127**	*eP*		**Pn**	**08 33 21.0**	**+0.3**
UNIC	**Universidad Ca**	**0.91**	**119**	*eP*		**Pn**	**08 33 20.5**	**-0.2**
UNIC	**Universidad Ca**	**0.91**	**119**		P	**Pn**	**08 33 20.2**	**-0.5**
UNIC	**Universidad Ca**	**0.91**	**119**		S	**S**	**08 33 42.3**	**-1.2**
SNJE	**San Jose**	**0.93**	**127**	*eP*		**Pn**	**08 33 21.0**	**0.0**
SNJE				*eS*		**S**	**08 33 42.5**	**-1.4**
SBLS	**San Blas**	**0.93**	**129**	*eP*		**Pn**	**08 33 20.9**	**-0.1**
CEVE	**Cerro Verde**	**0.94**	**129**	*eP*		**Pn**	**08 33 21.1**	**0.0**
CEVE				*eS*		**S**	**08 33 43.8**	**-0.4**
CEVE	**Cerro Verde**	**0.94**	**129**		P	**Pn**	**08 33 20.9**	**-0.2**
CEVE	**Cerro Verde**	**0.94**	**129**		S	**S**	**08 33 44.4**	**+0.2**
MTO3	**Montecristo**	**0.98**	**92**			**Pn**	**08 33 21.1**	**-0.2**
MTO3	**Montecristo**	**0.98**	**92**	*eP*		**Pn**	**08 33 21.4**	**+0.1**
MTO3	**Montecristo**	**0.98**	**92**	*iP*		**Pn**	**08 33 21.4**	**+0.1**
MTO3	**Montecristo**	**0.98**	**92**		P	**Pn**	**08 33 21.1**	**-0.2**
MTO3	**Montecristo**	**0.98**	**92**		S	**S**	**08 33 43.5**	**-1.0**
ZAFR2	**Estanzuela, Za**	**1.00**	**81**	*iP*		**Pn**	**08 33 21.2**	**+0.1**
ZAFR2				*i*	S	**S**	**08 33 44.0**	**-0.3**
ESQI	**Esquipulas**	**1.01**	**82**			**Pn**	**08 33 21.5**	**+0.1**
ESQI	**Esquipulas**	**1.01**	**82**	*eP*		**Pn**	**08 33 21.8**	**+0.5**
ESQI	**Esquipulas**	**1.01**	**82**		P	**Pn**	**08 33 21.4**	**+0.1**
ESQI	**Esquipulas**	**1.01**	**82**		S	**S**	**08 33 44.6**	**+0.1**
AVCB	**Coban**	**1.04**	**358**	*i*	P	**Pn**	**08 33 22.6**	**+1.0**
AVCB				*i*	S	**S**	**08 33 46.9**	**+1.6**
AVCB					IAML		08 33 48.3	
	comp=E,107μm,0.9s							
SOKI	**Kika Raxquin**	**1.07**	**291**	*i*	P	**Pn**	**08 33 22.6**	**+0.4**
SOKI					IAML		08 33 51.3	
	comp=N,54μm,1.0s							
CEDA	**San Andres**	**1.13**	**123**	*eP*		**Pn**	**08 33 21.9**	**-0.3**
CEDA				*eS*		**S**	**08 33 44.9**	**-1.2**
CEDA	**San Andres**	**1.13**	**123**		P	**Pn**	**08 33 22.3**	**+0.1**
CEDA	**San Andres**	**1.13**	**123**		S	**S**	**08 33 46.4**	**+0.4**
JAYA	**Jayaque - finc**	**1.18**	**131**	*eP*		**Pn**	**08 33 22.2**	**-0.4**
JAYA	**Jayaque - finc**	**1.18**	**131**		P	**Pn**	**08 33 22.9**	**+0.2**
JAYA	**Jayaque - finc**	**1.18**	**131**		S	**S**	**08 33 46.7**	**-0.2**
QUEZ	**Alcaldia de Qu**	**1.22**	**119**	*eP*		**Pn**	**08 33 22.9**	**+0.2**
PMON	**Piamonte**	**1.25**	**125**	*eP*		**Pn**	**08 33 23.4**	**+0.2**
PMON				*eS*		**S**	**08 33 46.3**	**-1.4**
PMON	**Piamonte**	**1.25**	**125**		P	**Pn**	**08 33 23.2**	**+0.1**
PMON	**Piamonte**	**1.25**	**125**		S	**S**	**08 33 48.2**	**+0.5**
BOQS	**Boqueron**	**1.26**	**123**	*eP*		**Pn**	**08 33 23.2**	**-0.2**
PIC2	**El Picacho**	**1.28**	**122**	*eP*		**Pn**	**08 33 23.5**	**0.0**
RTAL	**Retalhuleu**	**1.29**	**274**			**Pn**	**08 33 23.2**	**-0.1**
RTAL	**Retalhuleu**	**1.29**	**274**		P	**Pn**	**08 33 23.0**	**-0.3**
RTAL	**Retalhuleu**	**1.29**	**274**		S	**S**	**08 33 48.3**	**+0.4**
MAGS	**Ministerio de**	**1.29**	**125**	*eP*		**Pn**	**08 33 23.4**	**0.0**
UEES	**Universidad Ev**	**1.31**	**123**	*eP*		**Pn**	**08 33 23.7**	**+0.1**
UEES	**Universidad Ev**	**1.31**	**123**		P	**Pn**	**08 33 23.6**	**+0.1**
UEES	**Universidad Ev**	**1.31**	**123**		S	**S**	**08 33 48.7**	**+0.2**
UESS	**Universidad de**	**1.34**	**122**	*eP*		**Pn**	**08 33 23.9**	**+0.2**
UTEC	**Universidad Te**	**1.35**	**122**	*eP*		**Pn**	**08 33 23.9**	**0.0**
UTEC	**Universidad Te**	**1.35**	**122**		P	**Pn**	**08 33 24.2**	**+0.3**
UTEC	**Universidad Te**	**1.35**	**122**		S	**S**	**08 33 51.9**	**+3.0**
IGN	**Direccin Gen**	**1.36**	**121**	*eP*		**Pn**	**08 33 24.1**	**+0.1**
IGN	**Direccin Gen**	**1.36**	**121**		P	**Pn**	**08 33 23.9**	**-0.1**
UDBS	**Universidad Do**	**1.38**	**121**		P	**Pn**	**08 33 24.0**	**-0.1**
LALI	**Alcalda de L**	**1.38**	**132**	*eP*		**Pn**	**08 33 24.1**	**0.0**
LALI	**Alcalda de L**	**1.38**	**132**		P	**Pn**	**08 33 24.5**	**+0.4**
LALI	**Alcalda de L**	**1.38**	**132**		S	**S**	**08 33 48.5**	**-0.8**
LFU	**La Fuente**	**1.40**	**119**	*eP*		**Pn**	**08 33 24.3**	**+0.1**
LOMA	**Loma Larga**	**1.40**	**124**	*eP*		**Pn**	**08 33 23.8**	**-0.6**
LOMA	**Loma Larga**	**1.40**	**124**		P	**Pn**	**08 33 24.1**	**-0.3**
HUEH	**Huehuetenango**	**1.41**	**309**			**Pn**	**08 33 24.7**	**+0.2**
HUEH	**Huehuetenango**	**1.41**	**309**		P	**Pn**	**08 33 24.8**	**+0.3**
HUEH	**Huehuetenango**	**1.41**	**309**		S	**S**	**08 33 51.8**	**+1.6**
LLGN	**La Laguna**	**1.41**	**101**	*eP*		**Pn**	**08 33 24.3**	**-0.1**
LLGN	**La Laguna**	**1.41**	**101**		P	**Pn**	**08 33 24.1**	**-0.3**
PANCS	**Alcalda de**	**1.41**	**125**	*eP*		**Pn**	**08 33 24.9**	**+0.5**
PANCS	**Alcalda de**	**1.41**	**125**		P	**Pn**	**08 33 25.1**	**+0.7**
LBRS	**Las Brisas**	**1.46**	**118**	*eP*		**Pn**	**08 33 24.8**	**0.0**
LFRS	**El Faro**	**1.50**	**122**	*eP*		**Pn**	**08 33 24.8**	**-0.5**
PAVA	**Las Pavas**	**1.56**	**117**	*eP*		**Pn**	**08 33 25.9**	**+0.1**
PAVA				*eS*		**S**	**08 33 51.4**	**-0.8**
PAVA	**Las Pavas**	**1.56**	**117**		P	**Pn**	**08 33 25.7**	**-0.1**
PAVA	**Las Pavas**	**1.56**	**117**		S	**S**	**08 33 52.3**	**0.0**
COEG	**Centro de Oper**	**1.66**	**119**		P	**Pn**	**08 33 23.0**	**-3.6**
COEG	**Centro de Oper**	**1.66**	**119**		S	**S**	**08 33 53.2**	**-0.5**
SNVI	**San Vicente**	**1.69**	**118**	*eP*		**Pn**	**08 33 27.1**	**+0.1**
UESV	**Universidad de**	**1.73**	**117**	*eP*		**Pn**	**08 33 27.2**	**0.0**
UESV	**Universidad de**	**1.73**	**117**		P	**Pn**	**08 33 27.1**	**-0.1**
TECO	**Alcaldia de Te**	**1.78**	**120**	*eP*		**Pn**	**08 33 27.5**	**-0.2**
TECO	**Alcaldia de Te**	**1.78**	**120**		P	**Pn**	**08 33 28.0**	**+0.3**
TECO	**Alcaldia de Te**	**1.78**	**120**		S	**S**	**08 33 56.2**	**+0.6**
PQSS	**Presa 15 de Se**	**1.93**	**114**	*eP*		**Pn**	**08 33 29.1**	**-0.1**
PQSS	**Presa 15 de Se**	**1.93**	**114**		P	**Pn**	**08 33 29.0**	**-0.1**
TECA	**Tecapa**	**2.04**	**117**	*eP*		**Pn**	**08 33 30.5**	**0.0**
IZABA	**Izabal, Puerto**	**2.16**	**53**		P	**Pn**	**08 33 31.8**	**+0.4**
CAHU	**Cacaocuatique**	**2.19**	**107**	*eP*		**Pn**	**08 33 32.6**	**+0.5**
PACA	**Pacayal**	**2.21**	**115**	*eP*		**Pn**	**08 33 32.5**	**+0.4**
PACA	**Pacayal**	**2.21**	**115**		P	**Pn**	**08 33 32.9**	**+0.8**
PACA	**Pacayal**	**2.21**	**115**		S	**S**	**08 34 06.2**	**+2.7**
LCY	**Lacayo**	**2.25**	**116**	*eP*		**Pn**	**08 33 32.7**	**+0.1**
RANC	**El Ranchito**	**2.25**	**116**	*eP*		**Pn**	**08 33 32.8**	**+0.2**
VSM	**San Miguel**	**2.27**	**116**	*eP*		**Pn**	**08 33 33.1**	**+0.2**
BLLM	**Bellamira**	**2.29**	**115**	*eP*		**Pn**	**08 33 33.0**	**0.0**
CNRM	**Centro Naciona**	**2.34**	**114**	*eP*		**Pn**	**08 33 33.4**	**0.0**
CNRM	**Centro Naciona**	**2.34**	**114**		P	**Pn**	**08 33 33.6**	**+0.2**
CCIG	**Comitan**	**2.51**	**317**			**Pn**	**08 33 36.8**	**+1.3**
CCIG	**Comitan**	**2.51**	**317**		P	**Pn**	**08 33 36.3**	**+0.8**
CCIG	**Comitan**	**2.51**	**317**		S	**S**	**08 34 09.9**	**+0.4**
PETF	**Flores**	**2.52**	**11**			**Pn**	**08 33 35.8**	**+0.4**
PETF	**Flores**	**2.52**	**11**		P	**Pn**	**08 33 35.6**	**+0.2**
PETF	**Flores**	**2.52**	**11**		S	**S**	**08 34 09.4**	**-0.2**
TISN	**La Caada**	**2.65**	**114**	*eP*		**Pn**	**08 33 36.9**	**+0.6**
LCND	**La Caada**	**2.65**	**114**		P	**Pn**	**08 33 37.5**	**+0.6**
CNCH	**Conchagua**	**2.72**	**115**	*eP*		**Pn**	**08 33 37.7**	**0.0**
CNCH	**Conchagua**	**2.72**	**115**		P	**Pn**	**08 33 37.8**	**0.0**
CNCH	**Conchagua**	**2.72**	**115**		S	**S**	**08 34 16.4**	**+2.8**
TGUH	**Tegucigalpa,Un**	**3.03**	**97**			**Pn**	**08 33 41.7**	**+0.4**
TGUH	**Tegucigalpa,Un**	**3.03**	**97**		P	**Pn**	**08 33 41.8**	**+0.4**
TGUH					S	**S**	**08 34 20.4**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.03**	**97**		P	**Pn**	**08 33 41.9**	**+0.6**
TGUH					S	**S**	**08 34 20.0**	**0.0**
POTN	**Potosi Cosigui**	**3.12**	**117**		P	**Pn**	**08 33 42.0**	**-0.4**
POTN					S	**S**	**08 34 23.5**	**+1.6**
CRIN	**San Cristobal**	**3.66**	**118**			**Pn**	**08 33 50.4**	**+1.5**
CRIN	**San Cristobal**	**3.66**	**118**		P	**Pn**	**08 33 49.7**	**+0.8**
CRIN	**San Cristobal**	**3.66**	**118**		P	**Pn**	**08 33 49.7**	**+0.8**
CRIN					S	**S**	**08 34 33.8**	**+0.2**
PKGN	**Cerro Pekin**	**3.73**	**118**		P	**Pn**	**08 33 50.7**	**+1.0**
POLN	**Al Sur del Vol**	**3.89**	**117**		P	**Pn**	**08 33 51.7**	**+0.1**
HELN	**Volcan Telica**	**3.89**	**117**			**Pn**	**08 33 51.3**	**-0.4**
CNGA	**Al SSO del Vol**	**4.05**	**118**		P	**Pn**	**08 33 54.6**

QUEP Quepos 7.84 129 P Pn 08 34 45.7 +3.3
QUEP Quepos 7.84 129 S S 08 36 10.2 -0.7
OCHAL Ojochal 8.45 128 P Pn 08 34 51.9 +1.6
OCHAL Ojochal 8.45 128 S S 08 36 21.6 -3.8
TLIG Tlapa 8.47 293 Pn 08 34 51.8 +1.2
TLIG Tlapa 8.47 293 P Pn 08 34 52.6 +2.0
TLIG Tlapa 8.47 293 S S 08 36 21.1 -5.0
SAIC Isla e San And 8.63 102 P Pn 08 34 53.6 +1.0
comp=N,15µmcomp=N,153nm,1.0s
DRK0 Durika 8.66 126 P Pn 08 34 55.7 +2.6
PRVC Isla de Provid 8.81 96 Pn 08 34 55.0 +0.1
PRVC Isla de Provid 8.81 96 P Pn 08 35 06.6 +12
PRVC Isla de Provid 8.81 96 P Pn 08 34 48.5 -6.4
PTJ1 Puerto Jimnez 9.07 129 S S 08 36 41.7 +1.5
PIRO Carate, Puerto 9.13 130 Pn 08 35 01.9 +2.9
PIRO Carate, Puerto 9.13 130 P Pn 08 35 02.5 +3.4
PIRO Carate, Puerto 9.13 130 S S 08 36 42.3 +0.6
CDITO Canoas 9.37 128 P Pn 08 35 04.2 +2.0
CDITO Canoas 9.37 128 S S 08 36 47.2 -0.3
BRU2 Volcan 9.38 126 Pn 08 35 02.8 +0.3
BRU2 Volcan 9.38 126 P Pn 08 35 02.8 +0.3
BRU2 Volcan 9.38 126 S S 08 36 46.1 -1.7
UNM Universidad Na 9.74 301 Pn 08 35 08.7 +1.6
UNM Universidad Na 9.74 301 P Pn 08 35 08.7 +1.6
SOR Soroa 10.86 39 Pn 08 35 22.2 +0.9
SOR Soroa 10.86 39 P Pn 08 35 22.2 +0.9
SOR Soroa 10.86 39 eP Pn 08 35 17.9 -3.4
CBCY The Bluff, Cay 11.44 61 P Pn 08 35 31.0 +2.3
CBCY S S 08 37 36.7 +0.6
BCIP Isla Barro Col 11.56 116 P Pn 08 35 32.8 +2.4
MOIG Morelia 11.59 298 P 08 35 34.4 -1.7
CAMR Camarioca 12.09 43 Pn 08 35 37.0 0.0
CAMR Camarioca 12.09 43 eP Pn 08 35 37.9 +0.9
CAMR eS S 08 37 57.4 +5.7
MTDJ Mount Denham 12.89 71 ⇑ iP Pn 08 35 45.9 -1.3
MTDJ i S S 08 38 14.7 +3.9
MTDJ i S S 08 38 15.6 +4.9
MTDJ i S S 08 38 19.5 +8.8
MTDJ Mount Denham 12.89 71 eP Pn 08 35 47.8 +0.6
MTDJ Mount Denham 12.89 71 P P 08 35 50.9 +0.4
LMGC Las Mercedes 13.94 64 eP Pn 08 35 59.8 -0.4
CHIV Chivirico 14.43 66 P P 08 36 08.2 +0.8
061Z Ochoppi 14.43 36 P P 08 36 07.6 +0.2
HBVL Hebbronville 14.77 330 P P 08 36 13.3 +2.1
MARVS Santiago de Cu 14.89 66 eP Pn 08 36 11.1 -0.8
PAYG Puerto Ayora 15.01 180 P 08 36 14.7 +0.8
RCC Rio Carpintero 15.07 66 eP Pn 08 36 13.7 -0.3
PINC Pinares de May 15.15 eP P 08 36 15.7 +0.2
SJCC San Jacinto, C 15.52 105 P P 08 36 20.1 +0.4
comp=N,6µmcomp=N,7µmcomp=N,679nm,1.1s
GTBY Guantanamo Bay 15.57 67 eP Pn 08 36 21.0 +0.9
GTBY Guantanamo Bay 15.57 67 P Pn 08 36 22.0 +1.9
comp=N,11µmcomp=N,15µmcomp=N,1µm,1.2s
060A Indiantown 15.64 35 P Pn 08 36 22.0 +1.1
DBBC Dabeiba 15.73 116 P Pn 08 36 25.3 +3.0
NMDO Nuevo Mundo 15.89 65 P Pn 08 36 25.5 +1.5
QMBU Quimbuelo 15.92 67 eP P 08 36 22.4 -1.7
735A Kenedy 15.93 336 P Pn 08 36 25.9 +1.5
DWPF Disney Wildern 15.95 30 P Pn 08 36 25.7 +1.1
UREC San Jos de Ur 16.00 113 P P 08 36 25.0 +0.1
comp=N,6µmcomp=N,2µmcomp=N,153nm,0.9s
SMRC Santa Marta, M 16.08 100 P Pn 08 36 26.5 +0.2
SMRC Santa Marta, M 16.08 100 P Pn 08 36 27.5 +1.2
comp=N,6µmcomp=N,4µmcomp=N,154nm,1.5s
833A Chaparral WMA, 16.17 330 P Pn 08 36 28.5 +1.2
HKT Hockley 16.25 343 P Pn 08 36 29.0 +0.8
HKT Hockley 16.25 343 i P Pn 08 36 28.9 +0.8
ARGC Ariguani, Magd 16.40 104 P Pn 08 36 31.8 +1.6
comp=N,6µmcomp=N,4µmcomp=N,332nm,1.1s
MASC Masc 16.43 67 eP Pn 08 36 31.0 +0.5
441A DeRidder 16.45 351 P Pn 08 36 32.9 +2.3
MLDN Muldoon 16.48 339 P Pn 08 36 32.1 +1.1
CBOC Ciudad Bolivar 16.49 120 P Pn 08 36 32.2 +0.8
comp=N,6µmcomp=N,2µmcomp=N,194nm,1.1s
656A Willston 16.54 25 P Pn 08 36 33.5 +1.8
553A Crawfordville 16.61 18 P Pn 08 36 34.1 +1.6
HELC Santa Helena 16.73 118 P Pn 08 36 34.9 +0.4
comp=N,3µmcomp=N,327nm,1.1s
BRAL Brewton 16.94 10 P Pn 08 36 37.5 +1.1
YOTC Yotoco, Valle 17.29 126 P Pn 08 36 40.2 -0.7
comp=N,3µmcomp=N,307nm,0.8s
GUY2C Guyana, Caldas 17.37 120 P Pn 08 36 41.9 -0.3
comp=N,5µmcomp=N,3µmcomp=N,241nm,0.7s
CRJC Cerrejon, Guaj 17.39 99 P Pn 08 36 41.4 -0.6
comp=N,6µmcomp=N,6µmcomp=N,426nm,1.2s
PTBC PUERTO BERRIO, 17.49 115 P P 08 36 40.6 -0.7
OCAC Ocana 17.81 108 P P 08 36 44.2 -0.7
BRJC Barrancabermej 17.93 113 P P 08 36 45.9 -0.2
comp=N,2µmcomp=N,173nm,1.1s
POPC Popayan, Colom 17.95 130 P Pn 08 36 49.0 +0.2
comp=N,6µmcomp=N,9µmcomp=N,1µm,1.0s
FLF1 Flavio Alfaro- 18.01 144 P Pn 08 36 50.5 +1.3
comp=N,4µmcomp=N,360nm,2.4s
URIC Uribia, Colomb 18.11 96 P P 08 36 48.7 +0.7
comp=N,6µmcomp=N,6µmcomp=N,367nm,1.3s
PAC1 Pacto, Paraso 18.14 140 P Pn 08 36 52.4 +1.5
comp=N,3µmcomp=N,227nm,1.5s
ORTC Ortega, Tolima 18.21 124 P Pn 08 36 51.1 -0.5
comp=N,5µmcomp=N,7µmcomp=N,566nm,1.3s
SPBC San Pablo de B 18.25 117 P P 08 36 50.7 +1.0
comp=N,5µmcomp=N,1µmcomp=N,164nm,0.8s
CMBC Cumbal 18.26 136 P Pn 08 36 53.2 +0.6
CUSE Cuicocha Este 18.36 139 P Pn 08 36 53.9 +0.1
comp=N,3µmcomp=N,159nm,0.8s
GCUF Volcan Galeras 18.38 134 P Pn 08 36 55.1 +1.1
comp=N,4µmcomp=N,303nm,0.8s
OTAV Otavalo 18.38 139 P Pn 08 36 54.0 0.0
OTAV Otavalo 18.38 139 P Pn 08 36 54.0 0.0
OTAV Otavalo 18.38 139 eP P 08 36 45.7 -5.7
OTAV Otavalo 18.38 139 P Pn 08 36 55.0 +1.0
comp=N,3µmcomp=N,2µmcomp=N,109nm,0.9s
CRUC La Cruz 18.42 133 P Pn 08 36 55.0 +0.7
TULM Tulcn-Chalpat 18.45 137 P Pn 08 36 56.5 +1.6
comp=N,6µmcomp=N,641nm,1.2s
ROSC El Rosal 18.46 120 P P 08 36 53.3 +1.1
ROSC El Rosal 18.46 120 P P 08 36 52.6 +0.4
comp=N,189nm,0.9s,baz=330,slow=16,SNR=52
ROSC El Rosal 18.46 120 P P 08 36 53.3 +1.1
ROSC El Rosal 18.46 120 P Pn 08 36 55.0 +0.2
comp=N,5µmcomp=N,3µmcomp=N,300nm,1.4s
PPLP Puerto Lpez 18.50 148 P Pn 08 36 55.1 +0.1
BARC Barichara 18.60 113 P P 08 36 53.7 +0.1
comp=N,3µmcomp=N,243nm,1.1s
PRAC Prado 18.61 123 P P 08 36 54.8 +1.2
comp=N,3µmcomp=N,272nm,1.2s
BETC Betania 18.80 127 P Pn 08 36 59.0 +0.5
BONI La Bonita 18.82 136 P Pn 08 37 00.7 +1.7
comp=N,4µmcomp=N,4µmcomp=N,380nm,1.1s
SDDR Presa de Saban 18.83 73 P Pn 08 36 57.3 -1.5
SDDR Presa de Saban 18.83 73 eP Pn 08 36 57.6 -1.2
SDDR Presa de Saban 18.83 73 P Pn 08 36 57.9 -0.9
comp=N,9µmcomp=N,6µmcomp=N,564nm,1.8s
CVER Cruz Verde, Cu 18.83 120 P Pn 08 36 59.3 0.0
comp=N,4µmcomp=N,309nm,1.0s
HPIG 18.94 313 P Pn 08 37 01.4 +1.2
RUSC La Rusia 19.00 115 P P 08 36 58.0 -0.2
RUSC La Rusia 19.00 115 P P 08 36 58.6 +0.4
comp=N,4µmcomp=N,2µmcomp=N,264nm,1.1s
CHIC Chingaza 19.06 119 P P 08 37 00.2 +1.4
comp=N,5µmcomp=N,2µmcomp=N,249nm,1.0s
TXAR Lajitas Array 19.27 323 P Pn 08 37 03.1 -0.8
comp=N,19nm,0.4s,baz=144,slow=10,SNR=448
TXAR PcP PcP 08 41 15.1 +0.7
comp=N,1.6nm,0.5s,baz=154,slow=3.1,SNR=6.9
TXAR ScP ScP 08 44 32.3 +1.2
comp=N,1.8nm,0.6s,baz=153,slow=5.4,SNR=13
154A Montrose 19.28 19 P P 08 37 01.7 +1.3
URMC La Uribe, Meta 19.30 124 P Pn 08 37 03.8 -0.6
comp=N,3µmcomp=N,236nm,1.3s
FLOC Florencia 19.35 130 P Pn 08 37 04.0 -1.0
FLOC Florencia 19.35 130 P Pn 08 37 03.8 -1.2
comp=N,4µmcomp=N,9µmcomp=N,834nm,1.4s
SC01 Santiago de Io 19.43 72 P Pn 08 37 04.2 -1.7
257A Skidaway Islan 19.44 24 P Pn 08 37 04.4 -1.5
CCAR Cane Creek 19.45 356 P P 08 37 03.6 +1.4
PIAT Ana Tenorio 19.46 141 P Pn 08 37 07.3 +0.6
comp=N,2µmcomp=N,179nm,1.0s
FW06 Azle 19.59 342 P P 08 37 04.4 +0.6
GRTK Grand Turk 19.60 66 eP P 08 37 05.5 +1.5
GRTK Grand Turk 19.60 66 P Pn 08 37 07.3 -0.6
GOGA Godfrey 19.91 17 P P 08 37 08.2 +0.9
GOGA Godfrey 19.91 17 P P 08 37 08.2 +0.9
SDD Santo Domingo 20.02 76 P P 08 37 10.0 +1.4

SDV Santo Domingo 20.09 104 P P 08 37 09.2 -0.5
SDV Santo Domingo 20.09 104 P P 08 37 09.0 -0.6
comp=N,204nm,0.6s,baz=285,slow=4.6,SNR=48
SDV S S 08 40 42.1 -2.2
comp=N,17nm,0.8s,baz=356,slow=19,SNR=4.3
SDV ScP ScP 08 44 34.5 +1.1
comp=N,5.6nm,0.5s,baz=289,slow=2.9,SNR=5.6
SDV Santo Domingo 20.09 104 eP P 08 37 01.9 -7.8
SDV Santo Domingo 20.09 104 P P 08 37 09.3 -0.3
MIAR Mount Ida 20.24 352 P P 08 37 11.6 +0.9
MIAR pmax pmax
comp=Z,235nm,0.8s
MACC Macarena, Meta 20.38 125 P P 08 37 14.5 +2.0
comp=Z,3µmcomp=Z,10µmcomp=Z,936nm,1.1s
SLBS Sierra La Lagu 20.64 299 P Pn 08 37 19.1 -1.8
PTLC Puerto Leguiza 20.93 131 P Pn 08 37 23.1 -1.5
comp=Z,4µmcomp=Z,8µmcomp=Z,751nm,1.1s
LPIG La Paz 21.11 300 P P 08 37 23.4 +3.3
comp=Z,67nm,1.1s,baz=174,slow=10,SNR=11
comp=Z,67nm,1.1s
MCRA Macar, Loja 21.34 150 P P 08 37 25.2 +2.6
WMOK Wichita Mounta 21.60 341 P P 08 37 24.7 -0.4
WMOK pmax pmax
comp=Z,324nm,1.2s
TKL Tuckaleechee C 21.95 14 P P 08 37 29.9 +1.4
comp=Z,496nm,0.8s,baz=192,slow=9.3,SNR=12
TKL ScP ScP 08 44 37.4 +0.1
comp=Z,4.4nm,0.6s,baz=136,slow=5.8,SNR=4.2
AGPR Aguadilla, PR 22.66 77 P P 08 37 36.9 +1.6
SJG San Juan 23.53 78 P P 08 37 41.7 -1.4
SJG San Juan 23.53 78 P P 08 37 42.1 -1.0
comp=Z,47nm,0.8s,baz=278,slow=3.9,SNR=16
comp=Z,47nm,0.8s
SJG San Juan 23.53 78 P P 08 37 41.7 -1.4
SJG San Juan 23.53 78 P P 08 37 42.8 -0.3
CCM Cathedral Cave 23.55 358 P P 08 37 43.8 +0.8
CCM pmax pmax
comp=Z,198nm,1.5s
HUMP Col San Antoni 23.82 78 P P 08 37 44.6 -1.1
WCI Wyandotte Cave 23.98 8 P P 08 37 47.9 +0.9
319A Douglas 24.18 317 P P 08 37 51.2 +2.2
DUN6 Lazy B Ranch 24.83 320 P P 08 37 57.5 +2.5
ANMO Allquerque 25.05 327 P P 08 37 59.4 +2.5
comp=Z,9.2nm,0.7s,baz=231,slow=10,SNR=46
ANMO pP pP 08 38 39.0 +1.7
comp=Z,7.4nm,0.8s,baz=238,slow=10,SNR=2.8
ANMO ScP ScP 08 44 46.8 +0.8
comp=Z,6.3nm,0.8s,baz=273,slow=8.2,SNR=8.1
comp=Z,9.2nm,0.7s
ANMO Albuquerque 25.05 327 iP P 08 37 58.7 +1.7
ANMO pmax pmax
comp=Z,14nm,1.0s
O49A Covington 26.20 11 P P 08 38 07.0 0.0
CBN Corbin Frederi 26.33 24 P P 08 38 08.7 +0.5
N38A Joes South For 26.39 355 P P 08 38 09.0 +0.3
Q56A Snyder Ridge, 26.43 20 P P 08 38 10.1 +1.1
ACSO Alum Creek Sta 26.51 13 P P 08 38 10.7 +0.9
SGC2 Sao Gabriel da 27.31 120 P P 08 38 15.7 -1.5
113A Mohawk Valley, 28.05 315 P P 08 38 25.4 +1.9
113A IAmb IAmb 08 39 08.8
comp=Z,58nm,1.6s
M52A Chesterland 28.13 14 P P 08 38 25.0 +0.9
MVL Millersville 28.28 23 P P 08 38 26.4 +0.8
NNA Nana 29.47 152 iP P 08 38 38.2 +1.9
NNA pmax pmax
comp=Z,80nm,1.8s
KNB Kanab 30.10 322 P P 08 38 42.5 +0.6
KNB IAmb IAmb 08 39 28.3
comp=Z,100nm,1.5s
KNB Kanab 30.10 322 P P 08 38 42.5 +0.6
KNB pmax pmax
comp=Z,100nm,1.5s
PFO Pinyon Flats O 30.39 314 iP P 08 38 46.8 +2.4
PFO pmax pmax
comp=Z,13nm,0.9s
PFO Pinyon Flats O 30.39 314 P P 08 38 47.3 +2.9
PFO PcP PcP 08 41 38.9 -0.3
PFO ScP ScP 08 45 03.5 +1.2
TEFE Tefe 31.12 123 eP P 08 38 49.7 -1.1
SADO Sadowa 31.71 15 P P 08 38 56.1 +0.4
comp=Z,109nm,0.5s,baz=224,slow=9.1,SNR=166
SADO S S 08 43 49.4 -0.7
comp=Z,21nm,1.0s,baz=348,slow=20,SNR=6.1
SADO ScP ScP 08 45 04.7 -1.7
comp=Z,8.8nm,0.6s,baz=253,slow=4.2,SNR=4.8
BOAV Boa Vista 31.80 109 eP P 08 38 54.8 -2.0
RSSD Black Hills 31.81 341 P P 08 38 58.3 +1.5
QSM Queen of Sheba 31.98 317 P P 08 39 00.0 +1.8
QSM IAmb IAmb 08 40 10.5
comp=Z,42nm,1.4s
M65A Busby, Falmout 32.00 29 P P 08 38 56.6 -1.6
baz=218
CCCA Chr Cany lake 32.07 316 P P 08 39 00.5 +1.5
CCCA IAmb IAmb 08 39 04.0
comp=Z,28nm,0.6s
E38A The Farm, Brul 32.09 358 P P 08 38 58.8 -0.2
CTU Camp Tracy 32.13 329 P P 08 39 01.4 +1.8
CTU IAmb IAmb 08 39 04.9
comp=Z,52nm,1.7s
L64A Middleborough 32.20 28 P P 08 39 00.4 +0.4
HRV Adam Dziewonsk 32.34 26 P P 08 39 02.6 +1.4
HRV pmax pmax
comp=Z,8.0nm,1.0s
HRV Adam Dziewonsk 32.34 26 P P 08 39 01.9 +0.6
PDAR Pinedale Array 32.72 333 P P 08 39 05.5 +0.7
comp=Z,6.5nm,0.8s,baz=135,slow=9.1,SNR=31
PDAR PcP PcP 08 41 45.2 -0.1
comp=Z,2.0nm,0.5s,baz=98,slow=5.5,SNR=20
PDAR ScP ScP 08 45 09.9 -0.2
comp=Z,5.1nm,0.7s,baz=139,slow=4.6,SNR=19
PDAR PKiKP PKiKP 08 49 10.8 -1.1
comp=Z,0.2nm,0.3s,baz=9.1,slow=2.4,SNR=4.4
comp=Z,6.5nm,0.8s
MACA Manacapuru-AM 34.22 118 eP P 08 39 16.6 -1.2
NVAR Mina Array Bea 34.35 319 P P 08 39 21.4 +2.5
NVAR Mina Array Bea 34.35 319 P P 08 39 21.9 +2.9
comp=Z,25nm,0.8s,baz=134,slow=8.1,SNR=194
NVAR pP pP 08 40 02.5 +0.8
comp=Z,37nm,1.0s,baz=130,slow=8.1,SNR=8.3
NVAR PcP PcP 08 41 51.3 +1.2
comp=Z,1.3nm,0.5s,baz=79,slow=1.6,SNR=7.4
NVAR ScP ScP 08 45 17.0 +1.0
comp=Z,12nm,0.7s,baz=119,slow=3.9,SNR=36
NVAR LR LR 08 57 00.7
comp=Z,194nm,18.0s,baz=130,slow=42
comp=Z,25nm,0.8s
ULM Lac du Bonnet 36.01 354 P P 08 39 32.3 -0.3
comp=Z,261nm,0.8s,baz=167,slow=9.2,SNR=139
ULM ScP ScP 08 45 21.4 0.0
comp=Z,9.1nm,0.8s,baz=153,slow=7.7,SNR=3.0
ULM Lac du Bonnet 36.01 354 iP P 08 39 32.5 -0.1
LPAZ La Paz 37.61 143 P P 08 39 47.8 +0.6
LPAZ IAmb IAmb 08 39 50.1
comp=Z,29nm,0.7s
LPAZ La Paz 37.61 143 P P 08 39 48.5 +1.4
comp=Z,27nm,0.6s,baz=331,slow=6.3,SNR=108
LPAZ PcP PcP 08 42 01.3 +0.7
comp=Z,6.8nm,0.6s,baz=349,slow=8.6,SNR=4.5
LPAZ ScP ScP 08 45 29.4 +0.6
comp=Z,7.7nm,1.0s,baz=22,slow=9.3,SNR=6.5
comp=Z,27nm,0.6s
LPAZ La Paz 37.61 143 eP P 08 39 47.7 +0.5
LPAZ La Paz 37.61 143 P P 08 39 48.2 +1.1
LPAZ PcP PcP 08 42 01.6 +1.0
LPAZ ScP ScP 08 45 30.1 +1.4
PB12 IPOC Station P 38.32 148 P 08 39 54.4 +1.9
PB12 IAmb IAmb 08 39 56.1
comp=Z,119nm,1.6s
F10A Beach Ranch, E 38.72 330 P P 08 39 56.2 +0.7
F10A IAmb IAmb 08 39 58.5
comp=Z,56nm,0.8s
KMRM Mail Ridge 38.83 318 P P 08 39 58.5 +2.0
KMRM IAmb IAmb 08 40 44.9
comp=Z,98nm,1.4s
ITTB Itaituba 39.09 116 eP P 08 39 56.9 -2.0
JCC Jacoby Creek, 39.35 318 P P 08 40 02.1 +1.4
JCC IAmb IAmb 08 40 49.0
comp=Z,141nm,1.4s
J04A Umpqua Nationa 39.54 323 P P 08 40 04.0 +1.5
J04A IAmb IAmb 08 40 49.3
comp=Z,64nm,1.0s
E09A Wood Farm, Sta 39.55 330 P P 08 40 03.6 +1.4
I04A Tendick Farm, 40.05 323 P P 08 40 07.3 +0.8
HAWA Hanford 40.16 328 P P 08 40 07.7 +0.4
PB08 IPOC Station P 40.19 148 P P 08 40 10.2 +1.9

VILB Vilhena 40.41 131 P P 08 40 09.2 -0.6
VILB Vilhena 40.41 131 eP P 08 40 08.9 -0.9
PB01 IPOC Station P 40.78 149 P P 08 40 14.9 +2.1
PB02 IPOC Station P 40.82 150 P P 08 40 15.1 +2.0
PB02 IAmb IAmb 08 40 17.0
comp=Z,226nm,2.0s
COR Corvallis 41.04 324 P P 08 40 16.4 +1.9
FFC Flin Flon 41.22 350 P P 08 40 16.9 +1.1
PB09 IPOC Station P 41.54 150 P P 08 40 21.3 +2.2
PB09 IAmb IAmb 08 40 23.4
comp=Z,148nm,1.7s
LON Longmire 41.57 327 P P 08 40 19.9 +1.0
LON Longmire 41.57 327 P P 08 40 19.9 +1.0
LON pmax pmax
comp=Z,12nm,0.8s
PB06 IPOC Station P 42.16 151 P P 08 40 23.9 -0.2
PB06 IAmb IAmb 08 40 27.8
comp=Z,197nm,2.0s
PDRB Porto dos Gac 42.20 126 eP P 08 40 22.6 -1.7
E03A Lebam 42.37 326 P P 08 40 26.1 +0.8
E03A IAmb IAmb 08 41 13.2
comp=Z,35nm,0.9s
CLDB Colider 42.51 124 eP P 08 40 24.2 -2.6
PTLB Pontes e Lacer 42.83 133 eP P 08 40 28.7 -0.6
GO02 Mina Guanaco 44.26 153 P P 08 40 42.9 +1.9
GO02 IAmb IAmb 08 40 45.0
comp=Z,35nm,0.8s
SCHQ Schefferville 44.29 19 P P 08 40 40.6 +0.1
SCHQ Schefferville 44.29 19 P P 08 40 40.8 +0.3
comp=Z,386nm,0.7s,baz=214,slow=6.8,SNR=411
SCHQ ScP ScP 08 45 52.6 -1.1
comp=Z,6.6nm,0.7s,baz=246,slow=16,SNR=2.3
SCHQ LR LR 09 00 41.3
comp=Z,358nm,18.2s,baz=220,slow=38
TMAB Tom-Au,PA,Br 45.08 108 eP P 08 40 44.8 -2.5
PRPB Parauapebas 45.13 114 eP P 08 40 45.2 -2.6
RPN Rapa Nui 45.23 204 LR LR 08 55 21.1
comp=Z,201nm,21.1s,baz=22,slow=30
CBB Campbell River 45.49 329 P P 08 40 50.8 +0.8
SALV Santo Antonio 45.63 130 eP P 08 40 50.7 -0.9
SNDB Serra Nova Dou 46.77 122 eP P 08 40 59.1 -1.3
LCO Las Campanas 47.18 156 P P 08 41 06.2 +2.4
LCO PcP PcP 08 42 33.9 +2.0
LCO ScP ScP 08 46 09.8 +3.3
AC05 El Transito 47.20 156 P P 08 41 05.9 +2.2
AC05 IAmb IAmb 08 42 35.4
comp=Z,65nm,0.9s
PP1B Ponte de Pedra 47.31 131 eP P 08 41 04.1 -0.6
BDQN Bodoquena, MS 47.89 136 eP P 08 41 08.2 -0.8
GO04 Tololo Observa 48.19 157 P P 08 41 13.2 +1.8
GO04 IAmb IAmb 08 42 38.7
comp=Z,59nm,0.9s
CO01 Juntas del Tor 48.28 156 P P 08 41 14.4 +2.2
SMTB Santa Maria do 48.33 116 eP P 08 41 10.3 -2.2
ARAG Araguaiana, MT 48.47 127 eP P 08 41 12.1 -1.4
AQDB Aquidauana 48.62 135 eP P 08 41 14.1 -0.5
CO03 El Pedregal 48.83 157 P P 08 41 18.8 +2.7
C2SB Chapadao do Su 49.55 131 eP P 08 41 21.5 -0.1
AMBA Amambai (Brazi 50.77 136 eP P 08 41 30.2 -0.6
YKA Yellowknife Ar 50.99 346 P P 08 41 32.2 +0.4
comp=Z,24nm,0.8s,baz=248,slow=5.9,SNR=34
YKA pP pP 08 42 17.9 +1.0
comp=Z,22nm,0.8s,baz=151,slow=7.0,SNR=7.9
comp=Z,24nm,0.8s
TOAD Toad River Com 51.33 338 P P 08 41 34.5 0.0
baz=135
BDFB Brasilia 51.43 124 P P 08 41 35.0 -1.0
BDFB IAmb IAmb 08 41 38.2
comp=Z,59nm,1.3s
BDFB Brasilia 51.43 124 P P 08 41 35.0 -1.0
comp=Z,16nm,0.5s,baz=298,slow=10.0,SNR=16
BDFB LR LR 09 04 12.6
comp=Z,218nm,18.8s,baz=316,slow=37
comp=Z,16nm,0.5s
BDFB Brasilia 51.43 124 P P 08 41 35.0 -1.0
BDFB pmax pmax
comp=Z,59nm,1.3s
FRB Frobisher Bay 51.55 12 LR LR 09 04 17.6
comp=Z,507nm,20.0s,baz=194,slow=37
CPUP Villa Florida 51.71 141 P P 08 41 37.1 -0.5
comp=Z,13nm,1.0s,baz=188,slow=7.9,SNR=59
CPUP PcP PcP 08 42 48.8 +0.6
comp=Z,2.7nm,0.7s,baz=182,slow=2.4,SNR=7.7
CPUP ScP ScP 08 46 28.1 +2.5
comp=Z,6.8nm,1.2s,baz=182,slow=6.0,SNR=10
comp=Z,13nm,1.0s
CPUP Villa Florida 51.71 141 P P 08 41 37.4 -0.3
CPUP pmax pmax
comp=Z,20nm,1.2s
CPUP Villa Florida 51.71 141 eP P 08 41 37.9 +0.1
CPUP Villa Florida 51.71 141 P P 08 41 37.8 +0.1
CPUP PcP PcP 08 42 48.1 -0.1
CPUP ScP ScP 08 46 28.1 +2.5
KOTAN Kotaneelee Air 51.84 339 P P 08 41 38.4 +0.3
baz=137,SNR=5.4
ITRB Iturama 51.96 130 eP P 08 41 39.2 -0.5
LIRD Liard River Hi 52.05 338 P P 08 41 40.1 +0.3
baz=134
T35M Bob Quinn 52.10 334 P P 08 41 41.2 +1.0
baz=128
SDBA SAO DESIDERIO 52.34 118 eP P 08 41 41.0 -1.6
CRAG Craig 52.51 331 P P 08 41 44.0 +0.9
baz=124
IPMB Ipameri, GO 52.59 126 eP P 08 41 43.3 -1.0
WRAK Wrangell Islan 52.69 332 P P 08 41 45.6 +1.2
baz=125
U33K Whale Pass 52.87 332 P P 08 41 46.9 +1.1
baz=124
DLBC Dease Lake 52.92 335 P P 08 41 47.0 +0.8
comp=Z,18nm,0.8s,baz=113,slow=7.5,SNR=21
DLBC pP pP 08 42 30.6 -1.6
comp=Z,9.8nm,0.7s,baz=145,slow=7.7,SNR=3.3
comp=Z,18nm,0.8s
DLBC Dease Lake 52.92 335 P P 08 41 46.6 +0.4
baz=129,SNR=8.6
S34M Telegraph Cree 53.05 334 P P 08 41 47.7 +0.6
baz=128
WTLY Watson Lake, Y 53.53 337 P P 08 41 51.3 +0.7
baz=131
R33M Jennings River 53.90 336 P P 08 41 54.1 +0.6
baz=129
PTGB Pitanga 53.95 136 eP P 08 41 53.2 -1.1
WRGLY Wrigley 53.96 342 P P 08 41 53.9 +0.3
baz=139
BB19B Bebedouro 54.15 130 eP P 08 41 54.3 -1.4
Q32M Nakina River 54.16 335 P P 08 41 55.0 -0.4
baz=127
PMNB Patos De Minas 54.29 126 eP P 08 41 56.7 -0.1
S32K Killisnoo 54.30 332 P P 08 41 55.3 -0.8
baz=124
SIT Sitka 54.41 332 P P 08 41 56.4 -0.5
baz=123
FRTB Fartura 54.80 133 eP P 08 41 59.8 -0.5
PSAL Palomas, Salto 55.12 146 eP P 08 42 03.6 +1.2
P32M Atlin 55.14 335 P P 08 42 01.8 -0.4
baz=126
P33M Teslin, Yukon 55.15 336 P P 08 42 01.6 -0.7
baz=127
S31K Pelican 55.31 332 P P 08 42 03.1 -0.2
baz=122
ITAB Concordia 55.61 138 eP P 08 42 05.3 -0.6
IVI Ivigtut 55.66 23 iP P 08 42 04.6 -1.2
IVI IAmb IAmb 08 42 06.9
comp=Z,189nm,1.0s
IVI Ivigtut 55.66 23 P P 08 42 05.8 0.0
RCLB Rio Claro- Sao 55.70 130 eP P 08 42 06.3 -0.5
SKAG Skagway 55.74 334 P P 08 42 05.0 -1.3
baz=124
N32M Quiet Lake 55.82 337 P P 08 42 07.5 +0.5
baz=127,SNR=7.9
MMPY Sheldon Lake, 56.07 339 P P 08 42 08.4 -0.4
baz=130,SNR=15
PLBC Pleasant Camp 56.18 334 P P 08 42 09.2 -0.3
baz=123
WHY Whitehorse 56.24 335 P P 08 42 09.8 -0.3
baz=125
DIAM Diamantina, MG 56.36 124 eP P 08 42 11.2 -0.4
VAO Valinhos 56.47 131 eP P 08 42 12.0 -0.2
SPB Sao Paulo 56.48 131 eP P 08 42 11.4 -0.8
NRS Narsarsuaq 56.70 24 iP P 08 42 11.6 -1.6
NRS IAmb IAmb 08 42 14.4
comp=Z,207nm,1.1s
O30N Mendenhall 56.79 335 P P 08 42 14.3 +0.4
baz=124,SNR=8.1
P30M Million Dollar 56.79 334 P P 08 42 13.6 -0.3

baz=123
P29M Windy Craggy 56.86 333 P 08 42 15.7 +1.3
P29M Windy Craggy 56.86 333 P P 08 42 14.2 -0.2
baz=122
M31M Drury Creek, Y 56.95 337 P P 08 42 15.3 +0.3
baz=126,SNR=5.2
BSCB Bom Sucesso 56.96 127 eP P 08 42 15.5 -0.2
CPSB Cacapava Do Su 57.02 142 eP P 08 42 16.0 +0.1
PET01 Itanhaem-SP 57.02 132 eP P 08 42 16.0 0.0
N31M Braeburn, Yuko 57.07 336 P P 08 42 15.7 -0.1
baz=125,SNR=6.3
HYT Haines Junctio 57.40 335 P P 08 42 19.1 +0.9
HYT IAmb IAmb 08 43 29.6
comp=Z,54nm,1.9s
HYT Haines Junctio 57.40 335 P P 08 42 17.7 -0.6
baz=122
RKT Rikitea 57.42 230 eS S 08 49 57.9 -2.0
comp=Z,3µm,28.5s
RKT eSS SS 08 53 46.7 -6.6
comp=Z,1µm,44.0s
RKT eLQ LQ 08 57 08.3
comp=Z,2µm,29.8s
O29M Mount Kennedy 57.57 334 P P 08 42 19.1 -0.3
baz=121
N30M Aishikik Lake 57.58 336 P P 08 42 19.1 -0.3
baz=123
PNL Peninsula 57.60 333 P P 08 42 19.7 +0.1
baz=120
RCBR Riachuelo 57.64 107 eP P 08 42 19.0 -1.6
RCBR Riachuelo 57.64 107 P P 08 42 19.4 -1.3
PARB Paraibuna 57.66 130 eP P 08 42 21.1 +0.5
MAJ01 Sao Joao Batis 57.78 136 eP P 08 42 21.4 +0.2
YUK6 Outpost Mounta 57.82 335 P P 08 42 20.7 -0.6
baz=122
CNLB Canela 57.85 139 eP P 08 42 22.5 +0.7
PLCA Paso Flores 57.88 162 P P 08 42 23.1 +1.4
PLCA Paso Flores 57.88 162 P P 08 42 23.0 +1.3
comp=Z,5.8nm,0.8s,baz=334,slow=8.4,SNR=15
PLCA pP pP 08 43 08.7 +0.9
comp=Z,14nm,1.1s,baz=342,slow=8.8,SNR=2.4
PLCA ScP ScP 08 46 55.8 +3.4
comp=Z,2.0nm,0.9s,baz=292,slow=4.1,SNR=3.0
PLCA LR LR 09 02 28.1
comp=Z,109nm,19.5s,baz=346,slow=31
comp=Z,5.8nm,0.8s
PLCA Paso Flores 57.88 162 eP P 08 42 23.3 +1.5
PLCA pmax pmax
comp=Z,6.0nm,0.8s
PLCA Paso Flores 57.88 162 eP P 08 42 23.5 +1.7
PLCA Paso Flores 57.88 162 P P 08 42 23.2 +1.4
PLCA pP pP 08 43 08.3 +0.5
PLCA PcP PcP 08 43 13.8 +2.0
PLTB Pedras Altas 57.90 143 P P 08 42 22.0 0.0
PLTB Pedras Altas 57.90 143 eP P 08 42 22.9 +0.9
M30M Minto, Yukon 58.08 337 P P 08 42 23.6 +0.7
M30M Minto, Yukon 58.08 337 P P 08 42 22.5 -0.4
baz=124,SNR=7.8
YUK4 Talbot Arm 58.15 335 P P 08 42 23.3 -0.3
baz=122
PINM Pinnacle 58.19 333 P P 08 42 24.0 +0.3
baz=119
MAYO Mayo, Yukon 58.33 338 P P 08 42 25.4 +0.9
MAYO IAmb IAmb 08 42 26.8
comp=Z,40nm,0.8s
MAYO Mayo, Yukon 58.33 338 P P 08 42 25.0 +0.4
baz=126,SNR=6.5
CMC01 Camacan, BA 58.34 118 eP P 08 42 24.2 -1.1
O28M Mount Upton 58.50 334 P P 08 42 25.4 -0.7
baz=120
YUK8 Steele Glacier 58.58 335 P P 08 42 26.2 -0.4
baz=120,SNR=6.3
SJMB Sao Joao De Ma 58.58 123 eP P 08 42 26.6 -0.3
TRQA Tornquist 58.61 154 P P 08 42 27.9 +1.1
TRQA IAmb IAmb 08 42 29.4
comp=Z,102nm,1.6s
TRQA Tornquist 58.61 154 P P 08 42 27.9 +1.1
TRQA pmax pmax
comp=Z,102nm,1.6s
TRQA Tornquist 58.61 154 eP P 08 42 28.6 +1.8
SFJD Kangerlussuaq 58.64 17 P P 08 42 26.9 +0.3
SFJD IAmb IAmb 08 43 21.5
comp=Z,73nm,1.4s
SFJD Kangerlussuaq 58.64 17 P P 08 42 26.2 -0.3
comp=Z,26nm,0.9s,baz=203,slow=5.3,SNR=4.4
comp=Z,26nm,0.9s
SFJD Kangerlussuaq 58.64 17 P P 08 42 26.9 +0.3
SFJD pmax pmax
comp=Z,73nm,1.4s
M29M Somme Creek 58.66 336 P P 08 42 26.5 -0.4
baz=122
GUA01 Guaratinga, BA 58.67 120 eP P 08 42 26.9 -0.7
VAS01 Vassouras-RJ 58.70 128 eP P 08 42 27.5 -0.3
POIN Pond Inlet 58.71 4 P P 08 42 27.2 +0.2
POIN IAmb IAmb 08 42 29.3
comp=Z,75nm,1.4s
NBAN Anadia - AL 58.74 111 eP P 08 42 26.9 -1.3
C36M Paulatuk 58.84 347 P P 08 42 27.3 -0.6
baz=141
LOGN Logan Glacier 58.87 334 P P 08 42 30.0 +1.5
LOGN IAmb IAmb 08 43 41.0
comp=Z,35nm,1.5s
L29M L29M 58.89 337 P P 08 42 28.6 +0.2
baz=123
BSFB Barra de Sao F 58.92 123 eP P 08 42 28.9 -0.4
MESA MESA 58.98 333 P P 08 42 28.6 -0.7
baz=118
J30M Hart River 59.06 339 P P 08 42 28.6 -1.1
baz=126,SNR=7.4
K29M Barlow Dome 59.07 338 P P 08 42 28.9 -0.9
baz=124
CTG Chitna Glacier 59.08 334 P P 08 42 28.9 -1.0
baz=119
YUK3 Moose Creek 59.11 335 P P 08 42 29.5 -0.7
baz=120,SNR=12
H31M Peel River 59.14 341 P P 08 42 29.9 -0.2
baz=128
DUB01 Friburgo-RJ 59.42 127 eP P 08 42 32.3 -0.4
I30M Mount Dempster 59.46 339 P P 08 42 32.5 +0.1
baz=126,SNR=16
RIB01 Linhares ES 59.53 123 eP P 08 42 33.1 -0.4
BVCY Beaver Creek 59.60 335 P P 08 42 34.1 +0.8
baz=120
CRQE Cirque 59.74 333 P P 08 42 34.6 +0.2
baz=117
CAM01 Campos-RJ 59.84 126 eP P 08 42 35.7 +0.2
DAWY Dawson 59.88 337 P P 08 42 34.9 -0.3
baz=122,SNR=6.4
KAIM Kayak Island 59.97 332 P P 08 42 36.0 +0.1
baz=115
M27K Edge Creek, AK 59.98 335 P P 08 42 36.7 +0.7
baz=119
F31M Tsiigehtchic 59.99 342 P P 08 42 36.1 +0.3
F31M IAmb IAmb 08 43 25.1
comp=Z,56nm,1.3s
F31M Tsiigehtchic 59.99 342 P P 08 42 35.5 -0.3
baz=130,SNR=10
MCARA McCarthy VSAT 60.00 334 P P 08 42 36.1 +0.1
baz=117,SNR=9.6
EPYK Eagle Plains 60.25 340 P P 08 42 37.4 -0.3
baz=126,SNR=5.2
ABR01 Abrolhos, BA 60.27 121 eP P 08 42 38.4 0.0
L27K Beaver Creek, 60.30 336 P P 08 42 38.6 +0.5
L27K Beaver Creek, 60.30 336 P P 08 42 38.6 +0.5
baz=119
RES Resolute Bay 60.31 359 P P 08 42 37.6 -0.2
comp=Z,53nm,0.6s,baz=180,slow=9.8,SNR=89
RES LR LR 09 10 55.4
comp=Z,119nm,19.0s,baz=178,slow=38
comp=Z,53nm,0.6s
G30M tAoh Zraii Nji 60.46 341 P P 08 42 38.3 -0.8
baz=127
M26K Nabesna, AK 60.46 335 P P 08 42 39.5 +0.3
baz=118,SNR=7.4
INK Inuvik 60.49 343 P P 08 42 39.6 +0.5
baz=130,SNR=22
BMRM Bremner River 60.50 333 P P 08 42 39.2 -0.3
baz=115,SNR=8.8
F30M Barrier River 60.71 342 P 08 42 41.0 +0.3
F30M IAmb IAmb 08 42 42.7
comp=Z,36nm,0.8s
F30M Barrier River 60.71 342 P P 08 42 40.5 -0.2
baz=128
H29M Whitestone 60.71 340 P P 08 42 40.7 0.0
baz=124
N25K Chitina, Valde 60.78 334 P P 08 42 41.3 -0.1
baz=116,SNR=16
I28M Miner Creek 60.82 339 P P 08 42 41.7 0.0
baz=122
EYAK Cordova Ski Ar 60.84 332 P P 08 42 41.5 -0.2
baz=114
K27K Chicken 60.88 337 P P 08 42 41.6 -0.3
baz=119
L26K Log Cabin Wild 60.90 335 P P 08 42 42.8 +0.7
L26K Log Cabin Wild 60.90 335 P P 08 42 42.2 +0.1
baz=118,SNR=5.7
G29M Pine Creek 60.99 341 P P 08 42 42.5 -0.2
baz=125
SAATT Saattut 61.08 14 iP P 08 42 42.2 -0.9
SAATT IAmb IAmb 08 42 44.4
comp=Z,43nm,0.8s
A36M Sachs Harbour 61.14 348 P 08 42 43.1 -0.4
A36M IAmb IAmb 08 42 44.5
comp=Z,48nm,1.0s
A36M Sachs Harbour 61.14 348 P P 08 42 43.1 -0.4
baz=141
NUUG Nuugaatsiaq 61.27 13 iP P 08 42 42.8 -1.6
NUUG IAmb IAmb 08 42 46.1
comp=Z,60nm,0.9s
KLU Klutina 61.30 333 P P 08 42 45.2 +0.2
baz=114,SNR=14
HARP HAARP 61.36 334 P P 08 42 45.5 +0.3
baz=116
P23K Montague Islan 61.38 331 P P 08 42 46.0 +0.7
baz=112
I27K Kandik River 61.50 338 P P 08 42 46.4 +0.3
baz=121
GLI Glacier Island 61.58 332 P P 08 42 47.0 +0.4
baz=113
SCRK Sand Creek 61.59 336 P P 08 42 46.8 -0.1
baz=117,SNR=6.2
M24K Tolsona, Glenn 61.67 334 P P 08 42 48.4 +1.1
baz=114,SNR=5.7
J26L Joseph Creek 61.68 337 P P 08 42 47.7 +0.3
baz=118
PAX Paxson 61.74 335 P P 08 42 48.4 +0.6
baz=116,SNR=8.1
H27K Steamboat Moun 61.79 339 P P 08 42 48.3 +0.3
baz=121
E29M Blow River 61.81 342 P P 08 42 48.9 +0.8
baz=126
I26K Coal Creek Min 61.91 338 P P 08 42 48.6 -0.2
baz=119
COYC Coyhaique 61.97 166 P P 08 42 51.3 +1.9
F28M Old Crow 61.98 341 P P 08 42 49.3 0.0
baz=123
SCM Sheep Creek Mo 62.05 333 P P 08 42 50.0 +0.1
baz=113
PWL Port Wells 62.13 332 P P 08 42 50.8 +0.4
baz=112
G27K Doyon Strip 62.14 340 P P 08 42 50.5 +0.2
G27K Doyon Strip 62.14 340 P P 08 42 50.9 +0.6
baz=121,SNR=10
M23K Glacier View 62.21 333 P P 08 42 51.5 +0.6
baz=113,SNR=7.6
K24K Donnelly Dome 62.22 336 P P 08 42 51.4 +0.4
baz=116,SNR=7.7
SEW Seward 62.38 331 P P 08 42 52.5 +0.5
baz=110
KNK Knik Glacier 62.39 333 P P 08 42 53.0 +0.9
baz=112,SNR=7.4
J25K Salcha River, 62.42 337 P P 08 42 53.2 +0.9
baz=116,SNR=18
E28M Babbage River 62.43 342 P P 08 42 52.5 +0.3
baz=124,SNR=24
SML Sawmill 62.48 333 P P 08 42 52.8 +0.1
baz=112,SNR=6.9
WAT6 Susitna Watana 62.53 334 P P 08 42 52.8 -0.3
baz=113,SNR=7.0
DHY Denali Highway 62.57 335 P P 08 42 53.2 -0.2
baz=114
D28M Stokes Point 62.61 343 P P 08 42 53.4 +0.1
baz=125
O22K Cooper Landing 62.63 331 P P 08 42 53.9 +0.3
baz=110
GHO Glory Hole Cre 62.73 333 P P 08 42 55.0 +0.6
GHO IAmb IAmb 08 42 56.2
comp=Z,27nm,0.9s
PMR Palmer 62.76 333 P P 08 42 54.9 +0.5
PMR Palmer 62.76 333 P P 08 42 54.9 +0.5
PMR pmax pmax
comp=Z,17nm,1.2s
PMR Palmer 62.76 333 P P 08 42 55.1 +0.7
baz=111,SNR=9.0
E27K Coleen River 62.84 341 P P 08 42 55.5 +0.5
baz=122
RC01 Rabbit Creek A 62.85 332 P P 08 42 56.3 +1.2
baz=110,SNR=9.7
BRSE Bradley Lake S 62.87 330 P P 08 42 56.0 +0.8
baz=109
G26K Porcupine Rive 62.94 339 P P 08 42 56.2 +0.7
baz=119
HDA Harding Lake 62.95 336 P P 08 42 56.2 +0.5
baz=115,SNR=12
WAT1 Susitna Watana 62.97 334 P P 08 42 55.0 -0.9
baz=112
ILAR Eielson Array 63.08 336 P P 08 42 56.5 0.0
comp=Z,19nm,1.1s,baz=116,slow=4.6,SNR=75
ILAR pP pP 08 43 44.0 +0.1
comp=Z,20nm,1.0s,baz=99,slow=6.4,SNR=11
ILAR PKPPKP P'P'df 09 11 54.5 -0.5
comp=Z,0.6nm,0.6s,baz=308,slow=4.6,SNR=8.3
ILAR LR LR 09 14 39.9
comp=Z,220nm,18.8s,baz=104,slow=40
comp=Z,19nm,1.1s
ILAR Eielson Array 63.08 336 eP P 08 42 56.5 0.0
ILAR pmax pmax
comp=Z,26nm,1.2s
TULEG Thule 63.14 6 iP P 08 42 56.8 +0.1
TULEG IAmb IAmb 08 42 57.5
comp=Z,90nm,1.2s
KDAK Kodiak Island 63.19 328 iP P 08 42 58.6 +1.2
KDAK pmax pmax
comp=Z,8.0nm,0.6s
KDAK Kodiak Island 63.19 328 P P 08 42 56.8 -0.5
baz=106
D27M Malcolm River 63.22 342 P P 08 42 57.0 -0.5
baz=123,SNR=11
M22K Willow 63.26 333 P P 08 42 57.3 -0.4
baz=110
HOM Homer 63.27 330 P P 08 42 57.3 -0.6
baz=108
Q20K Shuyak Island 63.33 329 P P 08 42 57.5 -0.8
baz=107
CAPN Captain Cook N 63.39 331 P P 08 42 57.8 -0.8
baz=109
OHAK Old Harbor 63.40 327 P P 08 42 58.1 -0.6
baz=105
F26K Sheenjek River 63.42 340 P P 08 42 58.9 +0.1
baz=119
POKR Poker Plat Res 63.43 337 P P 08 42 59.1 +0.2
baz=114
SUA Susitna One 63.44 332 P P 08 42 58.3 -0.8
baz=110
MCK McKinley 63.48 335 P P 08 42 59.2 0.0
baz=112,SNR=14
COLA College 63.49 336 iP P 08 42 59.5 +0.3
COLA pmax pmax
comp=Z,12nm,0.9s
COLA College 63.49 336 P P 08 42 58.9 -0.3
baz=114
COLA College 63.49 336 P P 08 42 59.5 +0.3
COLA PcP PcP 08 43 34.3 +0.3
COLA pP pP 08 43 47.0 +0.3
CUT Chulitna 63.55 333 P P 08 42 59.3 -0.3
baz=110,SNR=7.3
G25K Bearman Lake 63.66 339 P P 08 43 00.9 +0.6
baz=117
SII Sitkinak Islan 63.71 326 P P 08 43 00.0 -0.8
baz=104
NEA2 Nenana 63.86 336 P P 08 43 01.5 -0.2
baz=113
O20K Slope Mountain 63.87 330 P P 08 43 01.5 -0.4
baz=107
F25K Christian Rive 63.88 339 P P 08 43 01.5 -0.3
baz=117
H24K Noodor Dome 63.90 337 P P 08 43 01.4 -0.6
baz=114
TRF Thorofare Moun 63.93 334 P P 08 43 02.1 -0.2
baz=111,SNR=12
SKT Skwentna 63.96 333 P P 08 43 01.7 -0.8
baz=109,SNR=10
N20K Mount Spurr 64.02 332 P P 08 43 02.2 -0.6
baz=108,SNR=5.1
SPCR Spurr Chakacha 64.02 332 P P 08 43 02.1 -0.7
baz=108
P19K Oil Pt 64.04 330 P P 08 43 02.7 -0.2
baz=106
E25K Arctic Village 64.10 340 P P 08 43 03.5 +0.3
baz=118,SNR=9.9
G24K Hadweenzic Riv 64.12 338 P P 08 43 03.0 -0.4
baz=115,SNR=6.4
I23K Minto, Yukon-K 64.19 336 P P 08 43 04.4 +0.6
I23K IAmb IAmb 08 43 53.2
comp=Z,47nm,0.9s
I23K Minto, Yukon-K 64.19 336 P P 08 43 03.0 -0.8
baz=113,SNR=19
C27K Jago River 64.25 342 P P 08 43 04.1 0.0
baz=120,SNR=12
CHIR Chirikof Islan 64.32 325 P P 08 43 04.3 -0.5
baz=102
KIP Kipapa 64.32 287 iP P 08 43 09.4 +4.0
KIP pmax pmax
comp=Z,13nm,0.6s
BPAW Bear Paw Mtn. 64.45 335 P P 08 43 05.0 -0.6
baz=110
H23K Yukon River 64.53 337 P P 08 43 05.6 -0.4
baz=113
PPLA Purkeypile 64.55 333 P P 08 43 05.4 -1.0
baz=109
F24K Squaw Lake 64.62 339 P P 08 43 07.6 +1.0
F24K Squaw Lake 64.62 339 P P 08 43 06.1 -0.5
baz=115,SNR=6.4
M20K Styx River 64.65 332 P P 08 43 06.3 -0.7
baz=108
Q18K Katmai Hardscr 64.66 328 P P 08 43 06.2 -0.9
baz=104
MLY Manley 64.69 336 P P 08 43 07.4 +0.3
baz=111,SNR=5.4
O19K Port Alsworth 64.72 330 P P 08 43 06.1 -1.2
baz=106
C26K Camden Bay 64.75 342 P P 08 43 06.4 -0.9
baz=119
D25K Kavik River 64.92 341 P P 08 43 07.2 -1.3
baz=117
CHUM Lake Minchumin 64.93 334 P P 08 43 07.5 -1.1
baz=109
P18K Big Mountain, 64.95 329 P P 08 43 07.6 -1.2
baz=104
N19K Bonanza Creek 64.97 331 P P 08 43 08.2 -0.8
baz=106
Q17K Contact Creek 65.01 328 P P 08 43 08.1 -1.3
baz=103
G23K Bananza Creek 65.05 338 P P 08 43 08.3 -1.1
baz=113
E24K Your Creek 65.06 339 P P 08 43 09.3 -0.2
baz=115
O18K Koktuh Hills 65.06 330 P P 08 43 08.7 -0.8
baz=105,SNR=5.4
R17L Mt. Peulik Vol 65.11 327 P P 08 43 09.0 -0.9
baz=103
L20K Farewell, AK 65.16 333 P P 08 43 09.5 -0.7
baz=107,SNR=12
I21K Tanana 65.23 336 P P 08 43 09.8 -0.7
baz=110
H22K Ishtalitna Cre 65.25 337 P P 08 43 10.2 -0.4
baz=111,SNR=8.4
COLD Coldfoot 65.31 338 P P 08 43 10.6 -0.5
baz=113,SNR=8.6
SUMG Summit 65.41 15 P P 08 43 13.0 +1.0
SUMG Summit 65.41 15 iP P 08 43 11.2 -0.9
SUMG IAmb IAmb 08 43 14.7
comp=Z,43nm,0.6s
E23K Chandalar 65.44 339 P P 08 43 11.2 -0.7
baz=114
Q16K King Salmon 65.50 328 P P 08 43 11.8 -0.5
baz=103
P17K Kvichak River 65.51 329 P P 08 43 11.6 -0.8
baz=103
K20K Telida 65.51 334 P P 08 43 11.2 -1.2
baz=107
L19K White Mountain 65.52 332 P P 08 43 12.3 -0.1
baz=106
N18K Kilae Creek 65.60 331 P P 08 43 12.4 -0.5
baz=104
D24K Happy Valley 65.63 340 P P 08 43 12.7 -0.3
baz=115
TOLK Toolik Lake Re 65.66 340 P P 08 43 12.3 -1.0
baz=114
G22K Bettles 65.67 338 P P 08 43 12.9 -0.4
baz=111
H21K Melozitna Rive 65.72 336 P P 08 43 12.8 -0.8
baz=110
R16K Pilot Point 65.74 327 P P 08 43 12.5 -1.3
baz=102
M18K Stony River 65.77 331 P P 08 43 12.8 -1.3
baz=105
J20K Nowinka River 65.79 334 P P 08 43 12.7 -1.4
baz=108
C24K Franklin Bluff 65.83 341 P P 08 43 13.1 -1.1
baz=115
O17K Koliganek Bris 65.97 329 P P 08 43 14.5 -0.8
baz=103,SNR=6.9
NEEM North Greenlan 66.07 9 iP P 08 43 15.3 -0.7
NEEM IAmb IAmb 08 43 17.8
comp=Z,63nm,0.9s
I20K Naaghedeneel 66.11 335 P P 08 43 14.8 -1.4
baz=108
F22K John River 66.13 338 P P 08 43 14.7 -1.6
baz=111,SNR=6.3
D23K Nanushuk River 66.16 340 P P 08 43 15.2 -1.2
baz=113
N17K Nushagak Hills 66.18 330 P P 08 43 14.6 -2.0
baz=103
E22K Anaktuvuk Pass 66.23 339 P P 08 43 14.4 -2.5
baz=112
P16K Nushagak River 66.25 329 P P 08 43 15.3 -1.8
baz=102
G21K Allakaket 66.28 337 P P 08 43 15.5 -1.7
baz=109
L18K Granite Mounta 66.35 332 P P 08 43 17.1 -0.6
baz=104
J19K Poorman 66.36 334 P P 08 43 17.9 +0.2
J19K Poorman 66.36 334 P P 08 43 16.1 -1.7
baz=106,SNR=6.3
CHNA Chenabura Isl 66.37 324 P P 08 43 16.7 -1.3
baz=98
O16K Kokwok River B 66.42 329 P P 08 43 17.3 -0.8
baz=102
C23K Itkillik River 66.48 341 P P 08 43 17.8 -0.6
baz=113
H20K Anotleneega Mo 66.49 336 P P 08 43 18.1 -0.5
baz=107
PPT2 Papeete2 66.50 243 eP P 08 43 21.9 +2.4
PPT2 eS S 08 51 47.7 -6.3
comp=Z,181nm,27.8s
PPT2 eSS SS 08 56 14.8 -0.6
comp=Z,339nm,25.8s
PPT2 eLQ LQ 09 00 51.5
comp=Z,152nm,29.0s
PPT2 eLR LR 09 03 10.3
comp=Z,718nm,25.2s
comp=Z,318nm,24.8s
M17K Holitna River 66.50 331 P P 08 43 17.8 -0.9
baz=103
F21K Alatna River 66.50 338 P P 08 43 17.7 -1.0
baz=110
J18K Innoko River 66.68 333 P P 08 43 19.2 -0.6
baz=105
D22K Ayikyak River 66.80 340 P P 08 43 19.2 -1.3
baz=111
N16K Nishlik Lake 66.94 330 P P 08 43 20.9 -0.5
baz=102
SDPT Sand Point 66.95 324 P P 08 43 21.2 -0.4
baz=98
L17K Donlin 67.07 332 P P 08 43 21.9 -0.3
baz=103
GCSA Galena City Sc 67.09 335 P P 08 43 21.9 -0.4
baz=105
E21K Killik River 67.09 339 P P 08 43 20.6 -1.7
baz=110
H19K Roundabout Mou 67.12 336 P P 08 43 21.8 -0.7
baz=106
M16K Timber Creek 67.14 331 P P 08 43 21.9 -0.8
baz=102
K17K Iditarod 67.20 332 P P 08 43 22.7 -0.4
baz=103
O15K Ungalikthiuk R 67.21 328 P P 08 43 23.0 -0.1
baz=100
F20K Avaraart Lake 67.28 337 P P 08 43 23.3 -0.2
baz=107
L16K Owhat River 67.52 331 P P 08 43 24.6 -0.5
baz=102

N15K Kwethluk River 67.52 330 P P 08 43 24.9 -0.2
baz=100
B22K Teshekpuk Lake 67.57 341 P P 08 43 24.5 -0.7
baz=111
C21K Knifeblade Rid 67.61 340 P P 08 43 24.7 -0.9
baz=109
J17K VABM Dome 67.70 333 P P 08 43 25.7 -0.4
baz=102
B21K Ikpikpuk River 67.70 340 P P 08 43 25.4 -0.6
baz=109
H18K Honhosa River 67.80 335 P P 08 43 25.8 -1.0
baz=104
E20K Nigu River 67.81 338 P P 08 43 26.0 -0.9
baz=107
M15K Kasigluk River 67.91 330 P P 08 43 26.9 -0.6
baz=100
O14K Tigyukauivet M 67.95 328 P P 08 43 27.5 -0.3
baz=99
E19K Redstone River 67.96 338 P P 08 43 26.7 -1.0
baz=106
F19K Shaleruckik Mo 67.99 337 P P 08 43 27.1 -0.8
baz=105
D20K Etivluk River 68.10 339 P P 08 43 27.8 -0.8
baz=107
G18K Tagagawik 68.10 336 P P 08 43 27.9 -0.7
baz=104
BORG Borgarnes 68.14 26 P P 08 43 28.7 -0.2
comp=Z,24nm,0.9s,baz=220,slow=7.1,SNR=1.9
comp=Z,24nm,0.9s
N14K Kuskokwak Cree 68.27 329 P P 08 43 29.2 -0.5
baz=99
A22K Sinclair Lake 68.28 341 P P 08 43 28.5 -1.1
baz=110
J16K Anvik River 68.35 333 P P 08 43 29.7 -0.5
baz=101
H17K Granite Mounta 68.39 335 P P 08 43 30.6 +0.1
baz=102
L15K Ungalak Mounta 68.46 331 P P 08 43 31.1 +0.1
baz=100
I17K Unalakleet 68.51 333 P P 08 43 31.5 +0.3
baz=101
M14K Bethel 68.53 330 P P 08 43 31.4 0.0
baz=99,SNR=7.7
D19K Kuna River 68.56 338 P P 08 43 31.7 +0.2
baz=106
K15K Wolf Creek Mou 68.58 332 P P 08 43 32.0 +0.3
baz=100
F18K Selawik 68.66 336 P P 08 43 32.0 0.0
baz=103
B20K Meade River 68.67 340 P P 08 43 31.3 -0.8
baz=107
G17K Kiwalik Mounta 68.82 335 P P 08 43 33.1 0.0
baz=102
TBI Tubuai 68.91 238 *e*PKP1 P 08 43 26.9 -7.4
comp=Z,895nm,32.5s
TBI *e*S **S** **08 52 19.6 -2.7**
comp=Z,2µm,28.5s
TBI *e*SS **SS** **08 56 50.2 -2.1**
comp=Z,868nm,42.8s
TBI *e*LQ LQ 09 01 49.4
comp=Z,2µm,31.5s
TBI *e*LR LR 09 04 40.8
comp=Z,2µm,28.0s
TBI *e*LR LR 09 04 41.4
comp=Z,818nm,26.0s
L14K Kuka Creek 68.97 331 P P 08 43 34.0 0.0
baz=98
ALE Alert 69.04 4 P P 08 43 33.6 -0.6
M13K Dall Lake 69.16 329 P P 08 43 34.6 -0.7
baz=98
E18K Tukpahlearik C 69.21 337 P P 08 43 35.4 -0.1
baz=103
C19K Lookout Ridge 69.24 339 P P 08 43 35.4 -0.2
baz=104
H16K Elim 69.31 334 P P 08 43 36.3 +0.2
baz=100
G16K Koyuk River 69.49 335 P P 08 43 36.8 -0.4
baz=100
J14K Nanvaranak Lak 69.58 332 P P 08 43 37.9 +0.1
baz=98
E17K Hotham Inlet 69.60 337 P P 08 43 37.8 -0.1
baz=101,SNR=6.2
C18K Utukok River 69.70 338 P P 08 43 38.0 -0.5
baz=102
K13K Kusilvak Mount 69.98 331 P P 08 43 39.7 -0.5
baz=97
A19K Wainwright 70.01 340 P P 08 43 40.4 +0.2
baz=103
B18K Kokolik River 70.07 339 P P 08 43 40.5 -0.2
baz=102
G15K Niukluk 70.13 334 P P 08 43 40.6 -0.5
baz=98
D17K Noatak River 70.20 337 P P 08 43 40.8 -0.6
baz=100
RDOG Red Dog Mine 70.20 338 P P 08 43 41.2 -0.3
baz=101
UNV Unalaska Valle 70.30 322 P P 08 43 41.4 -0.9
baz=92
C17K DeLong Mountai 70.38 338 P P 08 43 43.1 +0.5
baz=101
F15K North Star Dit 70.49 335 P P 08 43 42.7 -0.5
baz=98
M11K Mekoryuk 70.57 329 P P 08 43 43.6 -0.2
baz=95
ANM Nome 70.63 334 P P 08 43 43.9 -0.3
baz=97
DBG Daneborg 70.86 16 *i* P P 08 43 45.0 -0.4
C16K Lisburne Hills 71.14 338 P P 08 43 46.0 -1.1
baz=98
F14K Arctic Creek 71.15 335 P P 08 43 46.3 -0.9
baz=97
TNA Tin City 71.82 335 P P 08 43 50.7 -0.5
baz=95
DAG Danmarks Havn 71.88 13 P P 08 43 50.7 -0.7
DAG pmax pmax
comp=Z,65nm,0.6s
DAG Danmarks Havn 71.88 13 *i* P P 08 43 50.2 -1.3
DAG IAmb IAmb 08 43 52.5
comp=Z,43nm,0.5s
P08K Saint George I 72.13 325 P P 08 43 52.8 -0.4
baz=91
SPIA Saint Paul Isl 72.52 326 P P 08 43 55.1 -0.4
baz=90
GAMB Gambell 73.34 333 P P 08 43 59.3 -0.9
baz=91
NOR Nord 73.45 8 *i* P P 08 43 59.2 -1.4
NOR IAmb IAmb 08 44 02.1
comp=Z,19nm,0.7s
JMIC Jan Mayen 73.81 20 LR LR 09 17 23.5
comp=Z,215nm,20.4s,baz=254,slow=36
PGAV Gavieira, Arco 74.68 50 *e*P P 08 44 07.9 -0.7
PGAV *i* IAmb IAmb 08 44 17.9
comp=Z,91nm,1.6s
PCAS Casmilo, Conde 74.70 52 *e*P P 08 44 08.2 -0.5
PCAS *i* IAmb IAmb 08 44 15.6
comp=Z,86nm,1.5s
PCAS *e*pP **pP** **08 44 59.7 +2.5**
PFVI Vila Bisbo 74.77 55 *e*P P 08 44 07.7 -1.4
PFVI *i* IAmb IAmb 08 44 12.9
comp=Z,81nm,1.7s
PTEO Sao Teotonio 74.80 55 *e*P P 08 44 09.1 -0.2
PTEO *i* IAmb IAmb 08 44 25.2
comp=Z,45nm,1.4s
MORF Marmelete 74.89 55 *e*P P 08 44 08.9 -0.9
MORF IAmb IAmb 08 44 12.6
comp=Z,40nm,1.3s
MORF Marmelete 74.89 55 *e*P P 08 44 08.3 -1.5
MORF *i* IAmb IAmb 08 44 12.5
comp=Z,41nm,1.4s
MORF Marmelete 74.89 55 *e*P P 08 44 08.9 -0.9
MOE Montemor 74.98 54 *e*P P 08 44 09.3 -1.0
MOE *i* IAmb IAmb 08 44 13.2
comp=Z,46nm,1.4s
PSARD Sardoal 75.01 52 *e*P P 08 44 09.3 -1.1
PSARD *i* IAmb IAmb 08 44 12.5
comp=Z,39nm,1.3s
PMTG Montargil 75.02 53 *e*P P 08 44 09.3 -1.2
PMTG *i* IAmb IAmb 08 44 13.2
comp=Z,64nm,1.6s
PMTG *e*pP **pP** **08 45 01.2 +2.1**
PVIS Viseu 75.09 51 *e*P P 08 44 09.5 -1.4
PVIS *e*pP **pP** **08 44 59.7 +0.2**
MESJ Messejana 75.17 54 *e*P P 08 44 10.3 -1.1
MESJ IAmb IAmb 08 44 13.1
comp=Z,45nm,1.5s
MESJ Messejana 75.17 54 *e*P P 08 44 10.3 -1.1
MESJ *i* IAmb IAmb 08 44 14.2
comp=Z,35nm,1.8s
MESJ Messejana 75.17 54 *e*P P 08 44 10.3 -1.1
PARRA Arraiolos 75.19 53 *e*P P 08 44 10.3 +3.3
PARRA *i* IAmb IAmb 08 44 14.3
comp=Z,42nm,1.5s
EVO Evora 75.25 53 *e*P P 08 44 11.0 -0.8
EVO *i* IAmb IAmb 08 44 14.7
comp=Z,28nm,1.6s
PCVE Castro Verde 75.33 54 *e*P P 08 44 11.6 -0.7
PCVE *i* IAmb IAmb 08 44 15.5
comp=Z,31nm,2.0s
MTE Manteigas 75.39 52 *e*P P 08 44 10.8 -1.8
MTE *i* IAmb IAmb 08 44 15.1
comp=Z,43nm,1.6s
MTE *e*pP **pP** **08 45 02.0 +0.7**
PBEJ Beja 75.42 54 *e*P P 08 44 11.9 -0.9
PBEJ *i* IAmb IAmb 08 44 16.6
comp=Z,43nm,1.5s
PBDV Barranco-do-Ve 75.47 55 *e*P P 08 44 12.4 -0.7
PBDV *i* IAmb IAmb 08 44 18.2
comp=Z,46nm,1.5s
PCBR Castelo Branco 75.51 52 *e*P P 08 44 12.0 -1.2
PCBR *i* IAmb IAmb 08 44 16.0
comp=Z,35nm,1.3s
PESTR Estremoz 75.53 53 P P 08 44 12.6 -0.8
PESTR IAmb IAmb 08 44 16.0
comp=Z,39nm,1.2s
PESTR Estremoz 75.53 53 *e*P P 08 44 13.1 -0.3
PESTR *i* IAmb IAmb 08 44 15.7
comp=Z,43nm,1.3s
PESTR *e*pP **pP** **08 45 03.9 +1.7**
PVAQ Vaqueiros 75.62 55 P P 08 44 12.9 -1.0
PVAQ Vaqueiros 75.62 55 *e*P P 08 44 13.1 -0.8
PVAQ *i* IAmb IAmb 08 44 17.2
comp=Z,48nm,1.6s
PVAQ *e*pP **pP** **08 45 04.9 +2.4**
PMRV Marv??o 75.62 53 *e*P P 08 44 12.7 -1.2
PMRV *i* IAmb IAmb 08 44 16.5
comp=Z,37nm,1.4s
PMRV *e*pP **pP** **08 45 04.9 +2.3**
MVO Moncorvo 75.69 51 *e*P P 08 44 13.3 -1.1
MVO *i* IAmb IAmb 08 44 17.6
comp=Z,54nm,1.4s
MVO *e*pP **pP** **08 45 03.3 +0.3**
PBRG Braganca 75.83 50 *e*P P 08 44 14.6 -0.5
PBRG *i* IAmb IAmb 08 44 21.7
comp=Z,45nm,1.7s
PBAR Barrancos 76.05 54 *e*P P 08 44 15.3 -1.1
PBAR *i* IAmb IAmb 08 44 20.0
comp=Z,40nm,1.8s
ADK Adak 76.53 321 P P 08 44 19.3 +0.5
ESK Eskdalemuir 76.67 36 P P 08 44 18.8 -0.7
ESK IAmb IAmb 08 44 21.3
comp=Z,41nm,1.0s
ESK Eskdalemuir 76.67 36 P P 08 44 18.8 -0.7
ESK pmax pmax
comp=Z,41nm,1.0s
EKA Eskdalemuir Ar 76.69 36 P P 08 44 17.9 -1.7
comp=Z,13nm,0.6s,baz=272,slow=5.8,SNR=37
EKA pP **pP** **08 45 06.5 -2.4**
comp=Z,6.3nm,0.7s,baz=274,slow=5.3,SNR=1.8
comp=Z,13nm,0.6s
EKA Eskdalemuir Ar 76.69 36 P P 08 44 17.6 -2.0
PAB San Pablo 77.94 52 P P 08 44 25.9 -1.0
PAB IAmb IAmb 08 45 18.6
comp=Z,40nm,1.4s
PAB San Pablo 77.94 52 P P 08 44 25.9 -1.0
PAB pmax pmax
comp=Z,40nm,1.5s
ESDC Sonseca Array 78.21 52 P P 08 44 27.1 -1.3
comp=Z,12nm,0.5s,baz=290,slow=4.6,SNR=74
ESDC pP **pP** **08 45 15.3 -2.1**
comp=Z,6.7nm,0.8s,baz=285,slow=5.5,SNR=2.5
ESDC LR LR 09 11 12.0
comp=Z,231nm,21.3s,baz=278,slow=30
comp=Z,12nm,0.5s
ESBB Sonseca Array 78.21 52 P P 08 44 27.6 -0.8
KBS Kingsbay 78.29 11 *i* P P 08 44 28.5 +0.5
KBS pmax pmax
comp=Z,65nm,1.9s
KBS Kingsbay 78.29 11 *i* P P 08 44 29.1 +1.1
MDT Midelt 78.83 59 LR LR 09 14 39.8
comp=Z,113nm,21.2s,baz=292,slow=32
SPA0 Spitsbergen Ar 79.35 12 *e*P P 08 44 34.3 +0.4
SPITS Spitsbergen Ar 79.35 12 P P 08 44 33.6 -0.3
comp=Z,12nm,0.6s,baz=254,slow=1.0,SNR=52
SPITS pP **pP** **08 45 21.9 -1.4**
comp=Z,18nm,1.1s,baz=328,slow=1.9,SNR=2.3
SPITS LR LR 09 21 39.7
comp=Z,172nm,19.5s,baz=266,slow=37
comp=Z,12nm,0.6s
SPITS Spitsbergen Ar 79.35 12 P P 08 44 34.7 +0.8
SPITS pmax pmax
comp=Z,142nm,1.8s
SPB2 Spitsbergen Ar 79.36 12 P P 08 44 34.9 +1.0
KMY Karmoy 80.59 31 *e*P P 08 44 40.4 -0.4
AKN Aaknes 80.77 28 *e*P P 08 44 43.1 +1.4
ODD1 Odda 81.12 30 *e*P P 08 44 43.6 0.0
BLS5 Blasjo 81.15 31 *e*P P 08 44 44.5 +0.8
BILL Bilibino 81.65 338 *i* P P 08 44 45.9 -0.3
BILL pmax pmax
comp=Z,23nm,1.1s
BILL Bilibino 81.65 338 P P 08 44 46.4 +0.2
BILL pP **pP** **08 45 36.2 +0.4**
DOMB Dombas 81.75 28 *e*P P 08 44 46.3 -0.6
HOPEN Hopen 81.77 12 *e*P P 08 44 48.2 +1.6
BSKQ Steenkerk 81.77 40 *d*P P 08 44 46.5 -0.7
comp=Z,11nm,1.3s
SNART Snartemo 81.78 32 *e*P P 08 44 47.2 +0.2
UCC Uccle 81.91 40 *d*P P 08 44 47.4 -0.5
comp=Z,12nm,1.2s
VAGH Vaagaholmen 82.16 23 *e*P P 08 44 50.5 +1.7
STOK Stokkvaagen 82.19 23 *e*P P 08 44 48.4 -0.5
DOU Dourbes 82.22 40 *d*P P 08 44 47.1 -2.4
comp=Z,11nm,1.1s
DOU *d*PcP **PcP** **08 44 53.8 -0.5**
BMRD Maredsous 82.28 40 *d*P P 08 44 46.7 -3.1
BMRD *d*x x 08 45 23.2
HOPE Hope Point 82.28 151 P P 08 44 50.9 +1.4
HOPE Hope Point 82.28 151 P P 08 44 50.9 +1.4
HOPE pmax pmax
comp=Z,179nm,1.2s
LEIR Leirfjorden 82.29 24 *e*P P 08 44 50.8 +1.3
NSS Namsos 82.31 25 *e*P P 08 44 51.1 +1.5
LOR Lormes 82.38 43 P P 08 44 51.8 +1.4
LOR pmax pmax
comp=Z,23nm,1.1s
BGES Gesves 82.46 40 *d*P P 08 44 49.8 -0.9
comp=Z,14nm,1.3s
STEI Steigen 82.49 22 *e*P P 08 44 50.5 0.0
RAUS Rausandaksla 82.54 23 *e*P P 08 44 52.9 +2.0
BCLA Clavier 82.59 40 *d*P P 08 44 51.0 -0.4
comp=Z,9.9nm,1.0s
RCHB Rochefort 82.60 40 *d*P P 08 44 51.2 -0.3
comp=Z,10nm,1.1s
RCHB *d*pP **pP** **08 45 42.8 +1.3**
KONO Kongsberg 82.64 30 *i* P P 08 44 53.1 +1.6
KONO pmax pmax
comp=Z,52nm,1.9s
FAUS Fauske 82.69 22 *e*P P 08 44 55.1 +3.6
MEM Membach 82.98 40 *d*P P 08 44 52.5 -0.9
comp=Z,9.8nm,1.2s
NB2 NORSAR Subarra 83.02 29 P P 08 44 53.8 +0.3
comp=Z,20nm,1.1s,baz=287,slow=5.3
NB2 pP **pP** **08 45 40.8 -2.6**
comp=Z,188nm,2.0s,baz=287,slow=5.3
NB2 NORSAR Subarra 83.02 29 P P 08 44 52.7 -0.8
NB2 pmax pmax
comp=Z,484nm,2.9s
NOA NORSAR Array B 83.02 29 P P 08 44 53.7 +0.2
comp=Z,3.0nm,0.7s,baz=288,slow=5.1,SNR=7.1
NOA pP **pP** **08 45 41.6 -1.7**
comp=Z,4.2nm,0.7s,baz=288,slow=5.2,SNR=3.2
comp=Z,3.0nm,0.7s
BHOU Houvegnez 83.04 40 *d*P P 08 44 53.7 -0.1
comp=Z,8.4nm,1.1s
NC602 NORSAR Array S 83.26 29 P P 08 44 55.1 +0.4
NC602 IAmb IAmb 08 45 49.4
comp=Z,130nm,1.7s
NORES NORESS Array B 83.26 29 P P 08 44 56.8 +2.2
WLF Walferdange 83.30 41 *d*P P 08 44 55.2 +0.1
comp=Z,11nm,1.1s
JETT Jettan, Norway 83.62 19 *e*P P 08 44 57.6 +1.2
SALU Saltoluokta 83.85 22 *e*P P 08 44 58.3 +0.8
DBIC Dimbokro 84.04 85 P P 08 44 57.7 -1.8
comp=Z,5.0nm,0.4s,baz=313,slow=4.4,SNR=11
comp=Z,5.0nm,0.4s
DBIC Dimbokro 84.04 85 P P 08 44 58.6 -0.9
DBIC pmax pmax
comp=Z,24nm,1.4s
HFS Hagfors 84.46 29 P P 08 44 60.0 -0.7
comp=Z,7.0nm,0.6s,baz=270,slow=1.5,SNR=32
HFS pP **pP** **08 45 49.5 -1.4**
comp=Z,8.6nm,1.0s,baz=228,slow=1.8,SNR=3.0
comp=Z,7.0nm,0.6s
BNI Bardonecchia 84.81 45 P P 08 45 02.8 -0.2
BNI Bardonecchia 84.81 45 P P 08 45 02.8 -0.2
BNI pmax pmax
comp=Z,17nm,1.1s
ARA0 ARCESS Array S 85.23 19 *e*P P 08 45 04.2 -0.2
ARCES ARCESS Array B 85.23 19 P P 08 45 04.1 -0.4
comp=Z,3.1nm,0.5s,baz=283,slow=4.4,SNR=43
ARCES pP **pP** **08 45 54.2 -0.4**
comp=Z,5.2nm,0.6s,baz=288,slow=5.0,SNR=2.4
ARCES PP **PP** **08 48 23.7 -0.8**
comp=Z,17nm,0.9s,baz=316,slow=8.5,SNR=12
ARCES PKKPbc **PKKPbc** **09 03 10.4 -1.1**
comp=Z,2.2nm,0.8s,baz=138,slow=2.6,SNR=11
ARCES LR LR 09 24 20.0
comp=Z,74nm,18.8s,baz=302,slow=36
comp=Z,3.1nm,0.5s
TUE Stuetta 86.22 43 P P 08 45 09.4 -0.6
comp=Z,119nm,1.1s
DAVA Damuels 86.33 42 *i* P P 08 45 09.7 -0.8
comp=Z,22nm,1.0s
DAVA *i* pP **pP** **08 45 59.7 -0.7**
comp=Z,45nm,1.6s
DAVA *i* PP **PP** **08 48 36.1 +1.9**
comp=Z,21nm,1.6s
GRA1 Grafenberg Arr 86.45 40 P P 08 45 10.6 -0.2
GRA1 IAmb IAmb 08 45 13.9
comp=Z,38nm,1.1s
GRF Grafenberg Arr 86.45 40 P P 08 45 10.6 -0.2
GRF pmax pmax
comp=Z,38nm,1.1s
GRFO Grafenberg 86.45 40 P P 08 45 11.0 +0.2
GRFO IAmb IAmb 08 45 13.8
comp=Z,32nm,1.0s
GRFO Grafenberg 86.45 40 P P 08 45 11.0 +0.2
GRFO pmax pmax
comp=Z,32nm,1.0s
DAVOX Davos/Dischmat 86.48 43 P P 08 45 10.1 -1.1
comp=Z,12nm,0.8s,baz=292,slow=5.5,SNR=15
DAVOX pP **pP** **08 46 01.2 -0.1**
comp=Z,3.8nm,0.9s,baz=319,slow=9.5,SNR=1.6
comp=Z,12nm,0.8s
FUORN Ofenpass-Fuorn 86.78 43 P P 08 45 12.2 -0.6
FUORN IAmb IAmb 08 45 16.2
comp=Z,27nm,0.9s
RETA Reutte 86.84 42 *i* P P 08 45 12.1 -0.7
comp=Z,23nm,1.0s,SNR=4.7
RETA *i* pP **pP** **08 46 03.7 +0.8**
comp=Z,28nm,1.4s
FETA Feichten 86.96 42 *e*P P 08 45 12.9 -0.7
comp=Z,15nm,0.7s,SNR=14
FETA *e*pP **pP** **08 46 04.5 +0.9**
comp=Z,31nm,2.3s
FETA *e*PP **PP** **08 48 38.6 -0.7**
comp=Z,21nm,1.5s
CLL Collm 87.02 38 P P 08 45 13.6 +0.1
CLL Collm 87.02 38 ↓ *i* P P 08 45 13.1 -0.4
CLL *i* *PP **pP** **08 46 03.4 -0.1**
CLL pmax pmax
comp=Z,19nm,1.0s
CLL Collm 87.02 38 P P 08 45 13.6 +0.1
comp=Z,23nm,1.1s
CLL Collm 87.02 38 ↓ *i* P P 08 45 13.1 -0.4
comp=Z,19nm,1.0s
CLL *e*PcP **PcP** **08 45 16.0 +0.6**
CLL *i* pP **pP** **08 46 03.4 -0.1**
comp=Z,21nm,1.1s
CLL *i* sP **sP** **08 46 26.4 +1.5**
comp=Z,11nm,1.2s
CLL *e*S **S** **08 55 28.0 -6.8**
CLL *e*PS **PnS** **08 56 55.0 -7.1**
MOTA Moosalm 87.11 42 *i* P P 08 45 12.8 -1.4
comp=Z,18nm,0.9s
MOTA *e*pP **pP** **08 46 00.8 -3.5**
comp=Z,28nm,1.6s
MOTA *e*PP **PP** **08 48 40.8 +0.4**
comp=Z,21nm,1.2s
SQTA Sankt Quirin 87.21 42 *e*P P 08 45 13.3 -1.3
comp=Z,4.4nm,0.5s
SQTA *e*pP **pP** **08 46 01.9 -2.9**
comp=Z,10nm,1.4s
SQTA *i* PP **PP** **08 48 41.7 +0.5**
comp=Z,29nm,1.6s
WATA Walderalm 87.42 42 *i* P P 08 45 14.2 -1.5
comp=Z,6.0nm,0.8s
WATA *e*pP **pP** **08 46 04.5 -1.3**
comp=Z,8.8nm,1.3s
WTTA Wattenberg 87.48 42 *i* P P 08 45 15.2 -0.8
comp=Z,3.7nm,0.6s
WTTA *i* pP **pP** **08 46 06.8 +0.6**
comp=Z,12nm,1.3s
WTTA *e*PP **PP** **08 48 42.7 -0.6**
comp=Z,24nm,1.5s
KHC Kasperske Hory 88.09 40 *i* P P 08 45 18.2 -0.5
KHC pmax pmax
comp=Z,12nm,1.0s
KHC Kasperske Hory 88.09 40 *e*P P 08 45 18.5 -0.2
KHC Kasperske Hory 88.09 40 P P 08 45 18.5 -0.2
LESA Schwarzleotal 88.09 41 *e*P P 08 45 19.5 +0.7
comp=Z,12nm,1.1s
LESA *i* pP **pP** **08 46 09.8 +0.8**
comp=Z,19nm,1.8s
LESA *e*PP **PP** **08 48 45.1 -3.1**
comp=Z,12nm,1.4s
ABTA Abfaltersbach 88.21 42 *e*P P 08 45 19.2 -0.1
comp=Z,18nm,1.0s
ABTA *e*pP **pP** **08 46 10.4 +0.7**
comp=Z,16nm,1.7s
ABTA *e*PP **PP** **08 48 49.7 +0.5**
comp=Z,16nm,1.2s
GEC2 GERESS Array S 88.27 40 P P 08 45 19.1 -0.5
GEC2 IAmb IAmb 08 46 11.4
comp=Z,44nm,1.8s
GERES GERESS Array B 88.27 40 P P 08 45 18.6 -1.0
comp=Z,2.6nm,0.7s,baz=300,slow=4.0,SNR=18
GERES pP **pP** **08 46 08.9 -0.9**
comp=Z,1.8nm,0.9s,baz=270,slow=2.7,SNR=2.3
comp=Z,2.6nm,0.7s
GERES GERESS Array B 88.27 40 *e*P P 08 45 19.1 -0.5
GERES pmax pmax
comp=Z,3.0nm,0.7s
ZVC Zvikov 88.36 39 *e*P P 08 45 20.1 +0.2
STAL STALIGIAL 88.50 43 P P 08 45 19.8 -0.9
STAL IAmb IAmb 08 45 28.5
comp=Z,21nm,1.1s
BIOA Bad Ischl, Aus 88.62 41 *e*P P 08 45 20.9 -0.3
comp=Z,16nm,1.2s
BIOA *i* pP **pP** **08 46 11.0 -0.6**
comp=Z,18nm,1.6s
BIOA *e*PP **PP** **08 48 52.7 +0.4**
comp=Z,14nm,1.5s
KBA Koelnbreinsper 88.64 42 *i* P P 08 45 21.3 -0.1
comp=Z,16nm,1.1s
KBA *i* pP **pP** **08 46 11.5 -0.3**
comp=Z,14nm,1.4s
KBA *e*PP **PP** **08 48 51.3 -1.3**
comp=Z,17nm,1.3s
APA Apatity 88.74 19 ‖ *e*P P 08 45 32.9 +12
MOA Molln 88.96 41 *e*P P 08 45 21.9 -0.9
comp=Z,4.6nm,0.6s
MOA *e*PP **PP** **08 48 55.3 +0.3**
comp=Z,11nm,1.3s
MYKA Terra Mystica 88.98 42 *e*P P 08 45 22.5 -0.5
comp=Z,12nm,1.1s
MYKA *i* pP **pP** **08 46 13.7 +0.4**
comp=Z,7.7nm,0.9s
MYKA *e*PP **PP** **08 48 52.5 -2.7**
comp=Z,15nm,1.5s
SEY Seymchan 89.01 336 P P 08 45 22.2 -0.4
comp=Z,6.0nm,1.0s,baz=125,slow=5.9,SNR=4.6
SEY LR LR 09 31 18.1
comp=Z,107nm,18.8s,baz=82,slow=39
comp=Z,6.0nm,1.0s
UPC Upice 89.08 38 *e*P P 08 45 23.7 +0.4
UPC Upice 89.08 38 *e*P P 08 45 23.7 +0.4
OSTC Ostas 89.18 38 *e*P P 08 45 23.6 -0.2
OSTC Ostas 89.18 38 *e*P P 08 45 23.6 -0.2
DPC Dobruska-Polom 89.32 38 *e*P P 08 45 23.8 -0.6

DPC	Dobruska-Polom	89.32	38	*e*P	P		08 45 23.8	-0.6
DPC	Dobruska-Polom	89.32	38	P	P		08 45 24.2	-0.2
KEST	Kesra	89.38	53	P	P		08 45 23.2	-1.9
	comp=Z,5.5nm,0.8s,baz=280,slow=6.4,SNR=4.0							
KEST				LR	LR		09 19 16.3	
	comp=Z,106nm,20.8s,baz=349,slow=31							
	comp=Z,5.5nm,0.8s							
FINES	FINESS Array B	89.44	25	P	P		08 45 24.4	-0.3
	comp=Z,1.3nm,0.5s,baz=297,slow=3.2,SNR=14							
FINES				PP	PP		08 48 57.0	-1.3
	comp=Z,6.4nm,0.9s,baz=286,slow=7.7,SNR=5.3							
FINES				PKKPbc	PKKPbc		09 03 00.8	-0.2
	comp=Z,14nm,1.3s,baz=116,slow=4.4,SNR=5.0							
FINES				LR	LR		09 23 59.3	
	comp=Z,149nm,21.3s,baz=300,slow=34							
	comp=Z,1.3nm,0.5s							
FINES	FINESS Array B	89.44	25	*e*P	P		08 45 25.0	+0.4
FINES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
OBKA	Obir	89.61	42	*i* pP	pP		08 46 13.9	-2.4
	comp=Z,12nm,1.4s							
OBKA				*e*PP	PP		08 48 58.2	-2.1
	comp=Z,16nm,1.2s							
KRUC	Moravsky	89.85	39	*e*P	P		08 45 25.4	-1.5
KRUC				*e*pP	pP		08 46 15.8	-1.5
SOKA	Soboth	89.86	42	*e*P	P		08 45 26.2	-0.9
	comp=Z,13nm,1.4s							
SOKA				*i* pP	pP		08 46 15.3	-2.3
	comp=Z,11nm,1.4s							
SOKA				*e*PP	PP		08 48 58.3	-4.0
	comp=Z,15nm,1.5s							
VRAC	Vranov	89.88	39	P	P		08 45 26.5	-0.5
	comp=Z,4.8nm,0.7s,baz=243,slow=2.2,SNR=2.4							
	comp=Z,4.8nm,0.7s							
VRAC	Vranov	89.88	39	*e*P	P		08 45 25.7	-1.3
VRAC				*e*pP	pP		08 46 16.5	-0.9
CONA	Conrad Observa	89.94	40	*e*P	P		08 45 27.5	+0.1
	comp=Z,10nm,1.9s,SNR=4.5							
CONA				*e*pP	pP		08 46 18.0	+0.1
	comp=Z,18nm,1.8s							
CONA				*e*PP	PP		08 49 00.8	-2.0
	comp=Z,9.5nm,1.5s							
ARSA	Arzberg	89.97	41	*i* P	P		08 45 26.6	-0.9
	comp=Z,6.0nm,1.3s							
ARSA				*e*PP	PP		08 49 04.0	+1.0
	comp=Z,9.5nm,1.4s							
TIXI	Tiksi	90.16	348	LR	LR		09 30 08.3	
	comp=Z,85nm,22.0s,baz=15,slow=38							
TIXI	Tiksi	90.16	348	*i* P	P		08 45 26.8	-1.0
TIXI				pmax	pmax			
	comp=Z,66nm,4.0s							
MORC	Moravsky Berou	90.27	38	*e*P	P		08 45 27.7	-1.2
MORC				*e*pP	pP		08 46 18.5	-0.8
RONA	Rosalia, Austr	90.29	40	*e*P	P		08 45 28.2	-0.9
	comp=Z,7.9nm,0.9s							
RONA				*e*pP	pP		08 46 19.1	-0.4
	comp=Z,13nm,1.6s							
RONA				*e*PP	PP		08 49 06.1	+0.5
	comp=Z,14nm,1.3s							
STEB	Steborice	90.34	38	*e*P	P		08 45 29.9	+0.7
MAUC	Maruska	90.60	38	*e*P	P		08 45 30.7	+0.3
MODS	Modra-Piesok	90.65	39	*e*P	P		08 45 31.1	+0.5
MODS				*e*			08 46 22.9	
MODS	Modra-Piesok	90.65	39	*e*P	P		08 45 31.1	+0.5
MODS				*e*pP	pP		08 46 22.9	+1.8
JAVC	Velka Javorina	90.70	39	*e*pP	pP		08 46 21.7	+0.3
PETK	Petropavlovsk-	91.18	326	P	P		08 45 34.5	+1.5
	comp=Z,3.1nm,0.8s,baz=92,slow=12,SNR=1.8							
	comp=Z,3.1nm,0.8s							
MA2	Magadan	91.42	334	LR	LR		09 33 24.8	
	comp=Z,85nm,18.0s,baz=83,slow=40							
LANS	Liptovska Anna	91.67	38	*e*P	P		08 45 37.2	+1.8
LANS	Liptovska Anna	91.67	38	*e*P	P		08 45 37.2	+1.8
VAE	Valguarnera	92.67	50	LR	LR		09 20 11.1	
	comp=Z,333nm,20.0s,baz=317,slow=31							
MNK	Minsk	93.81	31	*i* P	P		08 45 44.0	-1.0
MNK				*i*			08 49 31.4	
MNK				*i* PPP	PPP		08 51 32.3	
MNK				*i* S	SKSac		08 55 58.6	-1.5
MNK				*i* SS	SS		09 02 59.8	+0.4
MNK				*i* SSS	SSS		09 06 41.4	
MNK				pmax	pmax			
	comp=E,10.0nm,0.6s							
MNK				pmax	pmax			
	comp=Z,11nm,0.8s							
MNK				pmax	pmax			
	comp=N,15nm,0.8s							
MEZ	Mezhgor'ye	94.35	38	P	P		08 45 48.1	+0.4
RNPP5	Staryi Chortor	94.41	34	P	P		08 45 48.5	+0.6
BZS	Buzias	94.49	41	P	P		08 45 49.4	+1.1
BZS				pmax	pmax			
	comp=Z,8.0nm,0.8s							
DRGR		94.65	39	P	P		08 45 49.0	-0.2
DRGR				pmax	pmax			
	comp=Z,11nm,2.1s							
AKASG	Malin Array Be	96.50	34	P	P		08 45 55.5	-1.8
	comp=Z,0.4nm,0.3s,baz=246,slow=10,SNR=2.1							
AKASG				PP	PP		08 49 53.6	0.0
	comp=Z,0.5nm,0.3s,baz=309,slow=7.6,SNR=4.1							
	comp=Z,0.4nm,0.3s							
AKBB	Malin Array Si	96.50	34	*i* P	P		08 45 55.7	-1.6
AKBB				pmax	pmax			
	comp=Z,10.0nm,1.7s							
BELA	Belgrano 2	97.28	170	P	Pdif		08 46 00.7	+0.5
BELA				IAmb	IAmb		08 46 03.2	
	comp=Z,11nm,1.5s							
YAK	Yakutsk	97.54	342	LR	LR		09 39 06.7	
	comp=Z,45nm,18.8s,baz=37,slow=41							
OBN	Obninsk	97.58	28⇑	*e*P	P		08 46 01.9	-0.2
OBN				*i* *PP	pP		08 46 54.4	+1.8
OBN				*e**SP	sP		08 47 16.0	+2.1
OBN				*i*			08 50 03.3	
OBN				*e*			08 56 20.8	
OBN				*i* S	S		08 57 05.9	-3.2
OBN				*i*			08 58 37.6	
OBN				*e*SS	SS		09 03 55.0	+2.6
OBN				SSS	SSS		09 07 34.0	
OBN				pmax	pmax			
	comp=Z,13nm,0.5s							
OBN				MLR	MLR			
	comp=Z,100nm,18.0s							
SNAA	Sanae	102.81	161	Pdiff	Pdif		08 46 25.9	+0.9
	comp=Z,0.9nm,0.7s,baz=288,slow=4.8,SNR=3.0							
QSPA	South Pole Qui	104.38	180	Pdiff	Pdif		08 46 33.9	+1.7
	comp=Z,0.4nm,1.0s,baz=213,slow=4.3,SNR=0.9							
QSPA				PKKPbc	PKKPbc		09 02 18.8	-2.8
	comp=Z,0.6nm,0.5s,baz=340,slow=1.3,SNR=7.7							
BRTR	Keskin Array B	105.09	41	PP	PKiKP		08 50 52.1	+2.4
	comp=Z,1.5nm,1.0s,baz=305,slow=5.1,SNR=4.3							
KBZ	Khabaz	108.11	34	PP	PP		08 51 14.3	-6.1
	comp=Z,3.7nm,0.8s,baz=338,slow=5.1,SNR=6.3							
BVAR	Borovoye Array	110.81	12	PKiKP	PKiKP		08 51 00.6	+0.8
	comp=Z,1.7nm,0.6s,baz=351,slow=4.9,SNR=3.7							
ZALV	Zalesovo Beam	111.78	3	PKiKP	PKiKP		08 51 01.6	+0.1
	comp=Z,1.4nm,0.3s,baz=267,slow=1.8,SNR=6.9							
ZALV				PP	PP		08 51 45.0	-1.1
	comp=Z,18nm,1.1s,baz=340,slow=8.2,SNR=15							
KURBB	Kurchatov Arra	114.50	8	PKP	PKiKP		08 51 06.0	-0.8
	comp=Z,1.2nm,0.2s,baz=343,slow=2.0,SNR=8.1							
KURBB				SKP	SKPdf		08 54 23.8	+0.7
	comp=Z,1.0nm,0.2s,baz=351,slow=1.9,SNR=5.5							
KURBB				PKKPbc	PKKPbc		09 01 46.2	-1.8
	comp=Z,0.5nm,0.3s,baz=186,slow=3.0,SNR=6.9							
SONM	Songino Array	116.23	347	PKP	PKPdf		08 51 09.5	-1.0
	comp=Z,0.5nm,0.4s,baz=357,slow=1.8,SNR=2.4							
SONM				PP	PP		08 52 16.9	-0.9
	comp=Z,2.0nm,0.9s,baz=27,slow=4.8,SNR=3.9							
SONM				SKP	SKPdf		08 54 27.3	+0.6
	comp=Z,1.2nm,0.6s,baz=7.5,slow=0.4,SNR=4.8							
SONM				PKKPbc	PKKPbc		09 01 40.7	-1.5
	comp=Z,4.1nm,0.8s,baz=196,slow=3.4,SNR=14							
KSRS	Korea Array	117.08	326	PKP	PKPdf		08 51 12.2	0.0
	comp=Z,1.4nm,0.5s,baz=338,slow=2.1,SNR=5.6							
KSRS	Korea Array	117.08	326	*e*PKiKP	PKPdf		08 51 12.0	-0.2
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.5s							
SYO	Syowa Base	117.08	162‖	*e*Pdiff	Pdif		08 47 28.8	+0.4
SYO	Syowa Base	117.08	162⇑	*ep*Pdiff	pPdif		08 48 19.2	+0.4
MKAR	Makanchi Array	118.71	6	PKP	PKPdf		08 51 13.5	-1.6
	comp=Z,1.0nm,0.3s,baz=344,slow=3.1,SNR=27							
MKAR				PP	PP		08 52 29.8	-4.9
	comp=Z,3.5nm,1.0s,baz=7.8,slow=5.1,SNR=4.8							
MKAR				SKP	SKPdf		08 54 31.8	+0.4
	comp=Z,0.3nm,0.3s,baz=353,slow=2.2,SNR=5.1							
MKAR	Makanchi Array	118.71	6	*e*PKiKP	PKPdf		08 51 14.4	-0.8
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BOSA	Boshof	119.10	115	PKP	PKPdf		08 51 16.1	-0.4
	comp=Z,10nm,0.9s,baz=295,slow=2.4,SNR=18							
BOSA				SKP	SKPdf		08 54 33.7	+1.0
	comp=Z,2.7nm,0.8s,baz=236,slow=3.6,SNR=4.1							
HHC	Hu-ho-hao-te	121.36	341	*e*PKP	PKPdf		08 51 17.3	-3.2
WMQ	Urumqi	122.01	2	*e*PKP	PKiKP		08 51 22.9	+1.1
WMQ				LR	LR			
	comp=Z,190nm,20.7s							
BTO	Baotou	122.07	342	*e*PKP	PKPdf		08 51 20.6	-1.3
BTO				AMB	AMB			
	comp=Z,540nm,6.3s							
BTO				LR	LR			
	comp=Z,1μm,20.6s							
BTO				LR	LR			
	comp=Z,570nm,15.9s							
BTO				LR	LR			
	comp=Z,250nm,17.6s							
MAW	Mawson	124.07	168	PKP	PKiKP		08 51 25.2	+0.3
	comp=Z,6.8nm,0.5s,baz=150,slow=2.5,SNR=30							
GTA	Gaotai	125.60	350	*e*PKP	PKiKP		08 51 29.8	+0.6
NJ2	Nanjing	125.96	329	*e*PKP	PKiKP		08 51 31.6	+1.7
LZH	Lanzhou	127.99	345	*e*PKP	PKPdf		08 51 28.0	-5.5
LZH				sPKP	sPKPdf		08 52 46.8	-0.6
LZDM	Lanzhou Array	128.15	345	PKP	PKiKP		08 51 34.9	+0.3
	comp=Z,2.1nm,0.4s,baz=318,slow=5.8,SNR=1.2							
XAN	Xi'an	128.42	340	PKP	PKPdf		08 51 32.0	-2.2
XAN				sPKP	sPKPdf		08 52 49.5	+1.3
STKA	Stephens Creek	129.64	240	PKP	PKiKP		08 51 37.9	+0.7
	comp=Z,16nm,0.8s,baz=87,slow=2.4,SNR=34							
STKA				pPKP	pPKPdf		08 52 28.7	-0.5
	comp=Z,3.7nm,1.0s,baz=45,slow=6.4,SNR=1.5							
WRA	Warramunga Arr	137.03	256	PKhKP	PKPpre		08 51 40.8	
	comp=Z,4.9nm,0.6s,baz=91,slow=3.4,SNR=31							
WRA				PKP	PKiKP		08 51 52.0	-0.5
	comp=Z,20nm,0.9s,baz=86,slow=1.8,SNR=45							
WRA				pPKP	pPKPdf		08 52 42.9	-0.8
	comp=Z,2.3nm,0.8s,baz=78,slow=1.9,SNR=2.2							
WRA				SKP	SKPbc		08 55 07.2	+2.6
	comp=Z,15nm,1.1s,baz=84,slow=2.8,SNR=17							
ASAR	Alice Springs	137.30	251	PKhKP	PKPpre		08 51 40.8	
	comp=Z,4.3nm,0.6s,baz=108,slow=4.0,SNR=40							
ASAR				PKP	PKiKP		08 51 52.2	-0.8
	comp=Z,16nm,1.0s,baz=93,slow=2.1,SNR=21							
ASAR				pPKP	pPKPdf		08 52 43.6	-0.6
	comp=Z,1.5nm,0.7s,baz=93,slow=2.5,SNR=1.5							
ASAR				SKP	SKPbc		08 55 07.7	+2.4
	comp=Z,22nm,1.1s,baz=101,slow=3.3,SNR=32							
PZH	PanZhiHua	137.64	344	PKP	PKiKP		08 51 54.9	+1.1
OPO	Ambohidratompo	139.17	102	PKP	PKPdf		08 51 54.9	+0.1
	comp=Z,2.8nm,0.8s,baz=264,slow=10,SNR=2.5							
OPO				SKP	SKPdf		08 55 10.8	+0.4
	comp=Z,2.8nm,0.7s,baz=270,slow=2.0,SNR=3.3							
QIZ	Qiongzhong	141.25	329	PKP	PKPdf		08 51 59.3	+0.9
QIZ				sPKP	sPKPdf		08 53 08.1	-4.3
QIZ				PP	PP		08 55 03.3	+2.0
QIZ				SS	SS		09 13 16.3	+3.2
CMAR	Chiang Mai Arr	146.06	344	PKPbc	PKPdf		08 52 07.3	+0.6
	comp=Z,12nm,0.6s,baz=339,slow=3.2,SNR=48							
CMAR				pPKP	pPKPdf		08 52 58.6	-1.4
	comp=Z,9.5nm,0.8s,baz=339,slow=4.1,SNR=2.7							
CMAR				SKPbc	SKiKP		08 55 28.2	+0.2
	comp=Z,0.9nm,0.3s,baz=322,slow=3.0,SNR=5.0							
HYBB	Hyderabad (bro	146.52	19	*e*PKPbc	PKPbc		08 52 08.8	-0.6

*IDC **09** 08:53:47.9±0.5, 34.°65S×179.°55W, h0km, mb4.5/13, mbtmp4.5/16, ML4.7/3, MS3.9/17, Error ellipse: s-maj=20.9km s-min=16.3km az=99.0*

*WEL **09** 08:53:49.8±0.7, 35.°5S×17.°9W±1.°0, h12km, mB5.2/5, ML5.0/21, MLv4.9/20, Mw(mB)4.6/5, Error ellipse: s-maj=14.4km s-min=3.9km az=111.0, confirmed*

*NEIC **09** 08:53:50.3±1.4, 34.°81S±0.°04×179.°4W±0.°1, h19km±5km, mb4.8/20, Error ellipse: s-maj=17.3km s-min=3.6km az=107.0*

*NOU **09** 08:53:56.0, 35.°12S×179.°63W, h117km, ML4.4/14, East of North Island, N.Z.*

ISC 09 08:53:53.4±0.4, 34.°81S±0.°05×179.°43W±0.°07, h43km, n206, σ1.°81/204, mb4.7/24, MS3.9/17, 3C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.30	213			Pn	08 54 41.0	-1.7
MXZ	Matakaoa Point	3.30	213	P		Pn	08 54 42.2	-0.4
MXZ	Matakaoa Point	3.30	213	P		Pn	08 54 41.6	-1.0
MXZ	Matakaoa Point	3.30	213	P		Pn	08 54 41.9	-0.7
MXZ				S		Sn	08 55 19.0	-1.7
WMGZ	Waiomatatini S	3.47	209	P		Pn	08 54 45.1	+0.1
WMGZ				S		Sn	08 55 26.8	+1.9
PKGZ	Pakihiroa	3.66	213	P		Pn	08 54 47.4	-0.1
HAZ	Te Kaha	3.71	217	P		Pn	08 54 47.0	-1.1
HAZ				S		Sn	08 55 31.0	+0.4
PUZ	Puketiti	3.75	209	P		Pn	08 54 48.7	-0.1
PUZ				S		Sn	08 55 31.0	-0.8
RUGZ	Raukumara Rang	3.92	216	P		Pn	08 54 50.4	-0.9
RUGZ				S		Sn	08 55 36.6	+0.6
TWGZ	Tauwhareparae	3.96	211	P		Pn	08 54 51.2	-0.5
TWGZ				S		Sn	08 55 38.8	+1.9
CNGZ	Carnagh Statio	4.13	207	P		Pn	08 54 53.5	-0.5
CNGZ				S		Sn	08 55 42.5	+1.4
WHRZ	Whale Island	4.21	223	P		Pn	08 54 56.7	+1.7
TKGZ	Te Karaka	4.24	210	P		Pn	08 54 54.3	-1.1
MWZ	Matawai	4.29	214	P		Pn	08 54 55.2	-1.0
KUZ	Kuaotunu	4.39	242	P		Pn	08 54 57.0	-0.5
KUZ	Kuaotunu	4.39	242	P		Pn	08 54 57.1	-0.5
GRZ	Great Barrier	4.41	249	P		Pn	08 54 58.2	+0.3
URZ	Urewera	4.43	218	Pn		Pn	08 54 57.2	-0.9
	30nm,0.3s,baz=12,slow=7.7,SNR=212							
URZ				Sn		Sn	08 55 43.9	-4.5
	30nm,0.3s,baz=347,slow=18,SNR=3.4							
	283nm,0.6s							
URZ	Urewera	4.43	218	P		Pn	08 54 57.4	-0.7
URZ	Urewera	4.43	218	P		Pn	08 54 56.6	-1.5
URZ	Urewera	4.43	218	P		Pn	08 54 56.7	-1.4
OPRZ	Ohinepanea	4.44	226	P		Pn	08 54 57.4	-0.8
MARZ	Manawahe	4.46	224	P		Pn	08 54 58.3	-0.3
RAGZ	Rawiri	4.47	214	P		Pn	08 54 58.8	+0.1
RAGZ				S		Sn	08 55 46.1	-3.4
RIGZ	Rimuhau	4.50	209	P		Pn	08 54 58.2	-0.9
RIGZ				S		Sn	08 55 49.6	-0.5
EDRZ	Edgecumbe	4.51	222	P		Pn	08 55 01.2	+1.9
PRGZ	Paritu Road	4.64	207	P		Pn	08 54 59.8	-1.2
OMRZ	Omania	4.72	225	P		Pn	08 55 01.8	-0.4
TARZ	Mount Tarawera	4.74	223	P		Pn	08 55 05.3	+2.9
KARZ	Kaharoa	4.74	226	P		Pn	08 55 02.0	-0.4
SNGZ	Shannon Statio	4.74	212	P		Pn	08 55 02.2	-0.2
SNGZ				S		Sn	08 55 56.0	0.0
RTZ	Ruatahuna	4.77	216			Pn	08 55 00.9	-2.0
RTZ	Ruatahuna	4.77	216	P		Pn	08 55 02.0	-0.9
RRRZ	Republican Roa	4.80	222	P		Pn	08 55 02.9	-0.3
KNZ	Kokohu	4.80	208	P		Pn	08 55 01.2	-2.1
HLRZ	Highlands Stat	4.83	223	P		Pn	08 55 03.9	+0.2
MHGZ	Mahia Peninsul	4.83	205	P		Pn	08 55 01.9	-1.8
HSRZ	Hossack Road	4.94	224	P		Pn	08 55 05.7	+0.6
MKAZ	Moumakai	4.95	241	P		Pn	08 55 05.6	+0.3
RAHZ	Arahi	4.96	213	P		Pn	08 55 04.7	-0.8
RAHZ				S		Sn	08 55 58.8	-2.7
PRRZ	Plateau Road	4.99	221	P		Pn	08 55 05.0	-0.8
MTHZ	Maungataniwha	5.03	215	P		Pn	08 55 06.5	+0.1
MTHZ				S		Sn	08 56 02.1	-1.0
TOZ	Tahuroa Road	5.03	233			Pn	08 55 05.9	-0.4
TOZ	Tahuroa Road	5.03	233	P		Pn	08 55 05.9	-0.4
WHHZ	Waihua	5.03	211	P		Pn	08 55 05.4	-0.9
GRRZ	Galatos Road	5.04	224	P		Pn	08 55 09.5	+3.0
ALRZ	Allen Road	5.06	221	P		Pn	08 55 06.7	0.0
WPRZ	Whakapapataran	5.13	222	P		Pn	08 55 08.0	+0.3
EPAZ	Eden Park BICE	5.16	245	P		Pn	08 55 12.5	+4.3
HBAZ	Herne Bay Bore	5.16	245	P		Pn	08 55 12.7	+4.5
WCZ	Waipu Caves	5.21	256	P		Pn	08 55 09.1	+0.3
MRHZ	Matea Rd	5.22	218	P		Pn	08 55 08.6	-0.4
NMHZ	Naumai	5.24	214	P		Pn	08 55 08.8	-0.5
ARHZ	Aropaoanui	5.29	212	P		Pn	08 55 08.6	-1.2
KUTZ	Kaahu Road	5.30	225	P		Pn	08 55 10.2	+0.1
WTAZ	Waiatarua	5.31	245	P		Pn	08 55 11.9	+1.7
TLZ	Tolley Road	5.36	228	P		Pn	08 55 11.1	+0.2
BKZ	Black Stump Fm	5.44	216			Pn	08 55 09.5	-2.5
BKZ	Black Stump Fm	5.44	216	P		Pn	08 55 10.9	-1.1
BKZ	Black Stump Fm	5.44	216	P		Pn	08 55 09.7	-2.3
BKZ	Black Stump Fm	5.44	216	P		Pn	08 55 09.9	-2.1
WATZ	Wairara	5.50	224	P		Pn	08 55 12.9	+0.1
MCHZ	McNeill Hill	5.57	213	P		Pn	08 55 12.2	-1.6
CKHZ	Cape Kidnapper	5.59	209	P		Pn	08 55 11.5	-2.4
RATZ	Rangitukua	5.59	222	P		Pn	08 55 14.3	+0.2
RITZ	Rihia Road	5.62	221	P		Pn	08 55 14.6	+0.1
GLKZ	Green Lake	5.67	13	P		Pn	08 55 14.0	-1.2
GLKZ				S		Sn	08 56 16.3	-2.7
KWHZ	Kaweka Forest	5.68	214	P		Pn	08 55 13.8	-1.4
RAO	Raoul Island	5.68	13	Pn		Pn	08 55 13.2	-2.1
RAO	Raoul Island	5.68	13	Pn		Pn	08 55 13.1	-2.3
	47nm,0.3s,baz=158,slow=19,SNR=2.1							
RAO				Sn		Sn	08 56 17.6	-1.7
	38nm,0.3s,baz=96,slow=19,SNR=1.4							
	214nm,0.5s							
OUZ	Omahuta	5.74	264	P		Pn	08 55 15.8	-0.3
OUZ	Omahuta	5.74	264	P		Pn	08 55 15.7	-0.3
OUZ	Omahuta	5.74	264	P		Pn	08 55 15.6	-0.5
KAHZ	Kahuranaki	5.78	209	P		Pn	08 55 14.4	-2.3
TMVZ	Te Maari	5.80	221	P		Pn	08 55 15.5	-1.6
NTVZ	North Tongarir	5.80	221	P		Pn	08 55 15.7	-1.5
ETVZ	East Tongariro	5.81	221	P		Pn	08 55 15.6	-1.6
OTVZ	Oturere	5.86	221	P		Pn	08 55 16.2	-1.7
NNVZ	North Ngauruho	5.86	221	P		Pn	08 55 18.5	+0.6
WTVZ	West Tongariro	5.86	221	P		Pn	08 55 18.3	+0.4
KRHZ	Kereru	5.88	214	P		Pn	08 55 16.9	-1.1
SNVZ	South Ngauruho	5.89	221	P		Pn	08 55 17.3	-0.9
HIZ	Hauiti	5.90	229			Pn	08 55 16.8	-1.4
HIZ	Hauiti	5.90	229	P		Pn	08 55 17.8	-0.4
HIZ	Hauiti	5.90	229	P		Pn	08 55 18.1	-0.1
HIZ	Hauiti	5.90	229	P		Pn	08 55 18.1	-0.1
NGZ	Ngauruhoe	5.90	221	P		Pn	08 55 17.4	-1.0
COVZ	Chateau Observ	5.95	221	P		Pn	08 55 19.5	+0.4
MOVZ	Moawhango	5.99	219	P		Pn	08 55 18.6	-1.0
PXZ	Pawanui	5.99	208	P		Pn	08 55 17.2	-2.4
WNVZ	Wahianoa	6.01	220	P		Pn	08 55 19.6	-0.4
PNHZ	Pukenui	6.17	213	P		Pn	08 55 18.4	-3.7
WPHZ	Waipukurau	6.19	211	P		Pn	08 55 19.4	-2.9
VRZ	Vera Road	6.34	225	P		Pn	08 55 25.4	+1.1
DVHZ	Dannevirke	6.50	211	P		Pn	08 55 23.2	-3.4
BFZ	Birch Farm	6.79	209			Pn	08 55 27.0	-3.5
BFZ	Birch Farm	6.79	209	P		Pn	08 55 26.7	-3.8
BFZ	Birch Farm	6.79	209	P		Pn	08 55 27.3	-3.2
BFZ	Birch Farm	6.79	209	S		Sn	08 56 40.8	-5.7
MRZ	Mangatainoka R	7.06	213			Pn	08 55 31.8	-2.3
SNZO	South Karori	7.97	214	P		Pn	08 55 45.2	-1.4
BHW	Baring Head	7.97	213	Pn		Pn	08 55 42.2	-4.5
TUWZ	Tuamarina	8.42	216			Pn	08 55 49.7	-3.1
CTZ	Chatham Island	9.18	167	Pn		Pn	08 56 00.6	-2.6
CTZ	Chatham Island	9.18	167	P		Pn	08 56 01.9	-1.3
KHZ	Kahutara	9.38	214	P		Pn	08 56 01.6	-4.3
KHZ	Kahutara	9.38	214	P		Pn	08 56 02.6	-3.3
OXZ	Oxford	10.78	215			Pn	08 56 21.5	-3.7
RPZ	Rata Peaks	11.55	217	Pn		Pn	08 56 33.4	-2.2
	2.3nm,0.3s,baz=11,slow=16,SNR=6.2							
RPZ				Sn		Sn	08 58 28.5	-15
	4.0nm,0.3s,baz=96,slow=24,SNR=8.3							
	7.9nm,0.4s							
RPZ	Rata Peaks	11.55	217	P		Pn	08 56 33.5	-2.2
ODZ	Otahua Downs	12.74	214	P		Pn	08 56 46.3	-5.6
ODZ	Otahua Downs	12.74	214	P		Pn	08 56 47.2	-4.7
SYZ	Scrubby Hill	14.56	213	P		Pn	08 57 12.1	-4.5
MSVF	Nonsavu	17.15	352	P		P	08 57 50.4	-0.9
DZM	Mont Dzumac	17.73	312	P		P	08 57 59.8	+2.1
	16nm,0.8s,baz=126,slow=14,SNR=22							
DZM				LR	LR		09 03 29.6	
	comp=Z,729nm,20.5s,baz=161,slow=33							
RAR	Rarotonga	21.96

H03N3	**Juan Fernandez**	**79.26 123**	T	T	10 34 21.0		
	baz=237,slow=72,SNR=70						
H03N2	**Juan Fernandez**	**79.26 123**	T	T	10 34 19.8		
	baz=237,slow=72,SNR=56						
H03N1	**Juan Fernandez**	**79.28 123**	T	T	10 34 19.9		
	baz=237,slow=72,SNR=56						
PLCA	**Paso Flores**	**80.39 133**	P	**P**	**09 05 59.8**	**-0.7**	
PLCA			IAmb	IAmb	09 06 33.6		
	comp=Z,20nm,1.6s						
PLCA	**Paso Flores**	**80.39 133**	P	**P**	**09 06 02.8**	**+2.3**	
	comp=Z,4.3nm,1.0s,baz=205,slow=7.3,SNR=7.4						
PLCA			LR	LR	09 34 31.4		
	comp=Z,42nm,18.0s,baz=317,slow=30						
	comp=Z,4.3nm,1.0s						
SSLB	**Suanglung**	**81.18 307**	P	**P**	**09 06 04.3**	**-0.4**	
MJAR	**Matsushiro Arr**	**81.21 327**	P	**P**	**09 06 04.3**	**-0.2**	
MJAR			IAmb	IAmb	09 08 10.4		
	comp=Z,13nm,1.9s						
MJAR	**Matsushiro Arr**	**81.21 327**	P	**P**	**09 06 03.7**	**-0.8**	
	comp=Z,0.9nm,0.8s,baz=152,slow=8.0,SNR=2.1						
	comp=Z,0.9nm,0.8s						
MAJO	**Matsushiro**	**81.21 327**	P	**P**	**09 06 05.2**	**+0.6**	
MAJO			IAmb	IAmb	09 06 38.8		
	comp=Z,26nm,1.6s						
MJB9	**Matsu-Tunnel**	**81.22 327**	P	**P**	**09 06 04.8**	**+0.2**	
KSRS	**Korea Array**	**86.95 321**	P	**P**	**09 06 35.4**	**+1.7**	
	comp=Z,1.2nm,0.6s,baz=141,slow=6.7,SNR=5.8						
	comp=Z,1.2nm,0.6s						
LPIG	**La Paz**	**87.87 59**	LR	LR	09 36 39.0		
	comp=Z,48nm,21.1s,baz=248,slow=29						
NJ2	**Nanjing**	**88.22 312**	*e*P	**P**	**09 06 41.6**	**+1.6**	
NJ2			pmax	pmax			
	comp=Z,8.0nm,0.6s						
PETK	**Petropavlovsk-**	**89.78 346**	P	**P**	**09 06 47.4**	**+0.6**	
	comp=Z,10nm,0.9s,baz=135,slow=4.8,SNR=6.7						
PETK			LR	LR	09 43 30.5		
	comp=Z,34nm,19.4s,baz=359,slow=33						
	comp=Z,10nm,0.9s						
PFO	**Pinyon Flats O**	**90.06 48**	LR	LR	09 41 44.9		
	comp=Z,38nm,18.0s,baz=312,slow=32						
WHN	**Wuhan**	**90.06 308**	P	**P**	**09 06 52.3**	**+3.7**	
USRK	**Ussuriysk Ar.**	**90.18 327**	P	**P**	**09 06 49.9**	**+1.1**	
	comp=Z,1.7nm,0.6s,baz=140,slow=10,SNR=6.1						
	comp=Z,1.7nm,0.6s						
NVAR	**Mina Array Bea**	**92.27 43**	P	**P**	**09 07 00.7**	**+1.7**	
	comp=Z,1.0nm,0.8s,baz=224,slow=8.9,SNR=7.8						
NVAR			LR	LR	09 47 52.0		
	comp=Z,37nm,18.0s,baz=353,slow=35						
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**93.73 290**	P	**P**	**09 07 06.4**	**+0.5**	
	comp=Z,0.7nm,0.3s,baz=121,slow=3.9,SNR=2.0						
	comp=Z,0.7nm,0.3s						
PZH	**PanZhiHua**	**96.28 298**	P	**P**	**09 07 19.8**	**+2.2**	
ANMO	**Albuquerque**	**97.24 52**	LR	LR	09 46 56.1		
	comp=Z,50nm,18.7s,baz=188,slow=33						
LPAZ	**La Paz**	**97.39 116**	LR	LR	09 43 25.5		
	comp=Z,46nm,20.0s,baz=300,slow=30						
CPUP	**Villa Florida**	**98.15 130**	LR	LR	09 43 42.1		
	comp=Z,26nm,22.0s,baz=77,slow=30						
HHC	**Hu-ho-hao-te**	**98.43 314**	*e*P	Pdif	09 07 28.7	+1.8	
HHC			pmax	pmax			
	comp=Z,11nm,0.7s						
HHC			pmax	pmax			
	comp=Z,110nm,4.4s						
JTS	**Las Juntas de**	**99.44 84**	LR	LR	09 43 02.2		
	comp=Z,37nm,21.0s,baz=196,slow=30						
NEW	**Newport**	**99.63 37**	LR	LR	09 46 48.4		
	comp=Z,64nm,18.5s,baz=226,slow=32						
SONM	**Songino Array**	**105.59 318**	PP	**PP**	**09 12 20.8**	**-0.9**	
	comp=Z,0.8nm,0.4s,baz=222,slow=6.8,SNR=4.3						
WMQ	**Urumqi**	**114.96 307**	*e*PKP	**PKiKP**	**09 12 29.7**	**+0.3**	
WMQ			LR	LR			
	comp=Z,210nm,23.7s						
MKAR	**Makanchi Array**	**119.62 309**	PKP	**PKiKP**	**09 12 37.7**	**-0.6**	
	comp=Z,2.0nm,0.8s,baz=66,slow=3.0,SNR=12						
ZALV	**Zalesovo Beam**	**120.47 317**	PKP	**PKPdf**	**09 12 38.5**	**-1.0**	
	comp=Z,1.9nm,0.6s,baz=180,slow=1.5,SNR=7.9						
KSH	**Kashi**	**121.37 299**	PKP	**PKiKP**	**09 12 41.7**	**-0.4**	
KSH			sPKP		09 12 53.4		
KSH			PP	**PP**	**09 14 19.5**	**+5.4**	
KSH			AMB	AMB			
	comp=Z,450nm,17.9s						
KURBB	**Kurchatov Arra**	**123.19 312**	PKP	**PKiKP**	**09 12 44.5**	**-0.6**	
	comp=Z,3.7nm,0.7s,baz=111,slow=1.9,SNR=38						
BVAR	**Borovoye Array**	**128.63 313**	PKP	**PKiKP**	**09 12 55.5**	**-0.4**	
	comp=Z,2.5nm,0.6s,baz=90,slow=1.8,SNR=15						
SPITS	**Spitsbergen Ar**	**135.99 355**	PKP	**PKiKP**	**09 13 09.3**	**-0.8**	
	comp=Z,4.8nm,0.7s,baz=46,slow=4.8,SNR=4.6						
ARCES	**ARCESS Array B**	**142.59 346**	PKhKP	PKPpre	09 13 17.1		
	comp=Z,2.0nm,0.5s,baz=12,slow=2.5,SNR=3.7						
ARCES			PKP	**PKPdf**	**09 13 20.9**	**+0.2**	
	comp=Z,2.0nm,0.5s,baz=40,slow=1.8,SNR=17						
KBZ	**Khabaz**	**146.35 298**	PKPbc	**PKPbc**	**09 13 28.5**	**-0.7**	
	comp=Z,2.2nm,0.6s,baz=115,slow=6.4,SNR=6.6						
FINES	**FINESS Array B**	**148.78 336**	PKPbc	**PKiKP**	**09 13 35.5**	**-1.2**	
	comp=Z,14nm,0.6s,baz=44,slow=3.6,SNR=64						
MMAI	**Mount Meron Ar**	**151.12 276**	PKPbc	**PKiKP**	**09 13 42.1**	**-0.4**	
	comp=Z,4.3nm,0.6s,baz=93,slow=3.3,SNR=9.3						
DBIC	**Dimbokro**	**151.56 169**	PKPbc	**PKiKP**	**09 13 45.4**	**+1.5**	
	comp=Z,10nm,0.8s,baz=175,slow=2.1,SNR=10						
NB2	**NORSAR Subarra**	**152.87 349**	PKP	**PKiKP**	**09 13 45.8**	**+0.6**	
	comp=Z,4.1nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**152.87 349**	PKPbc	**PKiKP**	**09 13 45.5**	**+0.2**	
	comp=Z,2.2nm,0.8s,baz=21,slow=4.8,SNR=30						
NACGM	**Naroch**	**152.90 326**	*e*PKiKP	**PKiKP**	**09 13 46.1**	**+0.7**	
	comp=Z,33nm,0.9s,baz=53						
HFS	**Hagfors**	**153.25 345**	PKPbc	**PKiKP**	**09 13 46.2**	**+0.2**	
	comp=Z,12nm,0.7s,baz=114,slow=3.6,SNR=22						
BR104	**Keskin Array S**	**153.32 290**	PKP	**PKPbc**	**09 13 45.5**	**-1.4**	
BRTR	**Keskin Array B**	**153.32 290**	PKPbc	**PKiKP**	**09 13 46.5**	**-0.5**	
	comp=Z,2.8nm,0.7s,baz=137,slow=3.0,SNR=14						
BR105	**Keskin Array S**	**153.34 290**	PKP	**PKPbc**	**09 13 46.4**	**-0.5**	
BR106	**Keskin Array S**	**153.34 290**	PKP	**PKiKP**	**09 13 46.5**	**-0.5**	
AK03	**Malin Array Si**	**153.85 316**	PKP	**PKiKP**	**09 13 47.0**	**-0.5**	
AKASG	**Malin Array Be**	**153.86 316**	PKPbc	**PKiKP**	**09 13 47.5**	**0.0**	
	comp=Z,1.8nm,0.5s,baz=63,slow=2.5,SNR=11						
AKBB	**Malin Array Si**	**153.86 316**	PKP	**PKPbc**	**09 13 46.5**	**-1.0**	
AKBB			PKP	**PKiKP**	**09 13 47.0**	**-0.5**	
KIEV	**Kiev**	**153.87 316**	PKP	**PKPbc**	**09 13 46.7**	**-0.8**	
AK08	**Malin Array Si**	**153.87 316**	PKP	**PKiKP**	**09 13 47.1**	**-0.5**	
LUBAR	**Lubar, Ukraine**	**155.05 316**	PKP	PKPdf	09 13 48.5	+7.3	
CLL	**Collm**	**161.22 335**	*i* PKPab	**PKPab**	**09 14 33.9**	**+1.5**	

NNC 09 09:00:08.1±1.8, 43°33N×87°66E, h0km, mb3.6, mpv3.2, 1C-4D, Error ellipse: s-maj=19.8km s-min=15.3km az=77.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MK31	**Makanchi Array**	**5.14**	**314**	Pn		Pn	Pn	09 01 26.6	+0.1
	0.5nm,0.4s,baz=129,slow=14,SNR=7.4								
MK31				⇓Lg		Lg	Lg	09 02 53.1	
	11nm,1.0s,baz=130,slow=29,SNR=6.6								
MAKZ	**Makanchi**	**5.32**	**313**	⇓Pn		Pn	Pn	09 01 28.7	-0.2
	3.2nm,1.0s								
MAKZ				⇓Lg		Lg	Lg	09 02 55.0	
	7.2nm,0.8s								
PDGK	**Podgornoye**	**5.96**	**273**	⇓Pn		Pn	Pn	09 01 37.9	+0.1
	8.2nm,1.1s								
PDGK				⇑Lg		Lg	Lg	09 03 17.2	
	14nm,0.8s								

SCB 09 09:11:56.8±1.5, 21°56S×66°89W, h202km±10km, MB5.6, ML2.9/4, Error ellipse: s-maj=5.4km s-min=4.5km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MOCB	**Mochara**	**1.20**	**75**	Pg		Pn	Pn	09 12 29.0	+0.2
MOCB				Sg		S	S	09 12 53.1	-0.1
MOCB				IAML				09 12 53.9	
	37nm,0.3s								
YJA	**Yavi**	**1.41**	**116**	Pg		Pn	Pn	09 12 31.6	+1.2
PB09	**IPOC Station P**	**2.20**	**263**	Pg		Pn	Pn	09 12 39.1	+1.3
PB01	**IPOC Station P**	**2.48**	**282**	Pg		Pn	Pn	09 12 41.6	+0.9
PB01				Sg		S	S	09 13 14.5	+0.3
PB01				IAML				09 13 16.6	
	34nm,0.3s								
PB08	**IPOC Station P**	**2.55**	**303**	Pg		Pn	Pn	09 12 43.2	+1.4
PB02	**IPOC Station P**	**2.81**	**274**	Pg		Pn	Pn	09 12 45.1	+0.6
PB02				Sg		S	S	09 13 21.4	+0.4
PB02				IAML				09 13 21.8	
	33nm,0.2s								
GO01	**Chusmiza**	**2.87**	**311**	Pg		Pn	Pn	09 12 46.5	+1.0
PB11	**IPOC Station P**	**3.15**	**304**	Pg		Pn	Pn	09 12 48.5	0.0
PB11				Sg		S	S	09 13 27.6	-0.7
PB11				IAML				09 13 28.9	
	24nm,0.2s								
SOET	**ToroToro**	**3.58**	**17**	Pg		Pn	Pn	09 12 53.6	-0.2
PB16	**IPOC Station P**	**4.05**	**322**	Pg		Pn	Pn	09 13 00.6	+0.7
GO02	**Mina Guanaco**	**4.36**	**214**	Pg		Pn	Pn	09 13 03.7	+0.3
PB14	**IPOC Station P**	**4.45**	**226**	Pg		Pn	Pn	09 13 04.4	-0.2
BBOJ	**La Paz, Jacaqu**	**4.73**	**345**	Pg		Pn	Pn	09 13 09.5	+1.1
BBOE	**La Paz, Chanca**	**4.84**	**347**	Pg		Pn	Pn	09 13 10.9	+1.1
LPAZ	**La Paz**	**5.38**	**347**	Pg		Pn	Pn	09 13 16.7	0.0
BBOB	**La Paz, Bander**	**5.52**	**347**	Pg		Pn	Pn	09 13 18.5	0.0

*SKO **09** 09:14:55.2, 41°88N×20°94E, h10km, ML2.6*
*BEO **09** 09:14:56.8±0.6, 41°93N×20°91E, h2km±3km, ML2.2/7*
ISC 09 09:14:55.4±1.3, 41°89N±0°03×20°91E±0°03, h3km±12km, n27, σ0°67/41, 1D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
OHR	**Ohrid**	**0.78**	**186**	⇓*i* Pg		**Pg**	**Pg**	**09 15 10.3**	**0.0**
OHR				*i* Sg		**Sb**	**Sb**	**09 15 22.6**	**-0.1**
OHR				*e*Lg		Lg	Lg	09 15 23.6	
	comp=N,135nm,0.3s								
OHR				*e*Lg		Lg	Lg	09 15 23.7	
	comp=E,229nm,0.5s								
BARS	**Barje**	**1.14**	**35**	*i* Pg		**Pg**	**Pg**	**09 15 17.3**	**-0.1**
BARS				*i* Sg		**Sb**	**Sb**	**09 15 32.6**	**-0.5**
BARS	**Barje**	**1.14**	**35**	*e*Pg		**Pg**	**Pg**	**09 15 17.2**	**-0.1**
BARS				*e*Sg		**Sb**	**Sb**	**09 15 32.8**	**-0.3**
BOSS	**Bosilegrad**	**1.31**	**62**	*e*Pg		**Pn**	**Pn**	**09 15 20.1**	**-0.6**
BOSS				*e*Sg		**Sg**	**Sg**	**09 15 37.4**	**-0.2**
PDG	**Podgorica**	**1.35**	**294**	*e*Pg		**Pn**	**Pn**	**09 15 19.3**	**-1.8**
PDG				*e*Sg		**Sn**	**Sn**	**09 15 40.4**	**+0.9**
VAY	**Valandovo**	**1.36**	**114**	*i* Pg		**Pn**	**Pn**	**09 15 21.1**	**-0.3**
VAY				*e*Lg		Lg	Lg	09 15 39.4	
	comp=E,50nm,0.5s								
VAY				*i* Sg		**Sb**	**Sb**	**09 15 39.5**	**+0.1**
VAY				*e*Lg		Lg	Lg	09 15 39.8	
	comp=N,46nm,0.5s								
SJES	**Sjenica**	**1.54**	**333**	*e*Pg		**Pn**	**Pn**	**09 15 23.8**	**-0.1**
SJES				*e*Sg		**Sg**	**Sg**	**09 15 45.2**	**+0.4**
KKB	**Krupnik**	**1.66**	**91**	*i* Pg		**Pn**	**Pn**	**09 15 25.7**	**+0.3**
KNT	**Kendrikon**	**1.66**	**115**	*i* Pg		**Pn**	**Pn**	**09 15 25.4**	**0.0**
KNT				*i* Sg		**Sb**	**Sb**	**09 15 47.8**	**-0.1**
GOCS	**Kraljevo Serbi**	**1.67**	**359**	*e*Pg		**Pn**	**Pn**	**09 15 24.7**	**-1.0**
GOCS				*e*Sg		**Sb**	**Sb**	**09 15 48.1**	**-0.4**
IVAS	**Ivanjica**	**1.78**	**342**	*e*Pg		**Pn**	**Pn**	**09 15 26.1**	**-1.0**
IVAS				*e*Sg		**Sg**	**Sg**	**09 15 53.3**	**+0.8**
BOVS	**Bovan**	**1.84**	**18**	*e*Pg		**Pn**	**Pn**	**09 15 27.4**	**-0.5**
BOVS				*e*Sg		**Sg**	**Sg**	**09 15 54.0**	**-0.5**
VTS	**Vitosha**	**1.87**	**66**	*e*Pn		**Pn**	**Pn**	**09 15 30.1**	**-0.2**
VTS				*e*Sn		**Sn**	**Sn**	**09 15 52.9**	**+0.2**
ZAPS	**Zavoj**	**1.88**	**42**	*e*Pn		**Pb**	**Pb**	**09 15 31.0**	**+0.6**
ZAPS				*e*Sn		**Sb**	**Sb**	**09 15 54.1**	**-0.2**
GRUS	**Gruza**	**2.00**	**356**	*e*Pn		**Pn**	**Pn**	**09 15 30.8**	**+0.6**
RUDO	**Rudo**	**2.07**	**327**	*e*Pn		**Pn**	**Pn**	**09 15 32.1**	**+1.0**
TREB	**Trebinje**	**2.08**	**294**	*e*Pn		**Pb**	**Pb**	**09 15 33.5**	**-0.2**
TREB				*e*Sg		**Sg**	**Sg**	**09 16 02.1**	**+0.1**
LIT	**Litokhoron**	**2.15**	**146**	*i* Pn		**Pb**	**Pb**	**09 15 35.1**	**+0.2**
ZAGS	**Zajecar**	**2.15**	**26**	*e*Pn		**Pn**	**Pn**	**09 15 32.5**	**+0.3**
ZAGS	**Zajecar**	**2.15**	**26**	*e*Pg		**Pb**	**Pb**	**09 15 35.7**	**+0.6**
BBLS	**Lazi&#263i**	**2.27**	**331**	*e*Pn		**Pn**	**Pn**	**09 15 33.4**	**-0.5**
BBLS	**Lazi&#263i**	**2.27**	**331**	*e*Pg		**Pb**	**Pb**	**09 15 37.3**	**+0.3**
DIVS	**Divibare**	**2.31**	**343**	*e*Pn		**Pn**	**Pn**	**09 15 33.4**	**-1.1**
DIVS	**Divibare**	**2.31**	**343**	*e*Pg		**Pb**	**Pb**	**09 15 38.6**	**+0.8**
BORS2	**Bor- Borsko je**	**2.35**	**20**	*e*Pn		**Pb**	**Pb**	**09 15 37.2**	**-1.1**
TEKS	**Tekeris**	**2.85**	**340**	*e*Pn		**Pn**	**Pn**	**09 15 41.3**	**-0.5**
TEKS	**Tekeris**	**2.85**	**340**	*e*Pg		**Pb**	**Pb**	**09 15 48.3**	**+1.4**

*SJA **09** 09:40:25.3±0.8, 19°28S×69°43W, h104km±3km, ML3.8, MW3.8*
*GUC **09** 09:40:26.4±0.8, 19°33S×69°44W, h95km±3km, ML3.9*
*NEIC **09** 09:40:27.8±1.3, 19°34S±0°03×69°44W±0°06, h95km±5km, mb4.1/5, ML3.8(GUC), Error ellipse: s-maj=8.3km s-min=4.8km az=82.0*
ISC 09 09:40:27.2±0.8, 19°33S±0°02×69°46W±0°05, h95km±5km, n53, σ0°83/87, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GO01	**Chusmiza**	**0.42**	**144**	Pn		**Pn**	**Pn**	**09 40 42.4**	**-0.2**
GO01				Sn		**Sn**	**Sn**	**09 40 53.9**	**-0.1**
GO01	**Chusmiza**	**0.42**	**144**	⇓*i* P		**Pn**	**Pn**	**09 40 42.3**	**-0.2**
GO01				*e*S		**Sn**	**Sn**	**09 40 54.1**	**+0.2**
GO01				IAML				09 40 54.7	
	comp=E,16μm,0.2s								
GO01	**Chusmiza**	**0.42**	**144**	*i* P		**Pn**	**Pn**	**09 40 42.4**	**-0.2**
GO01				*i* S		**Sn**	**Sn**	**09 40 55.4**	**+1.5**
GO01				IAML				09 40 55.8	
	comp=Z,3μm,0.2s								
PB11	**IPOC Station P**	**0.47**	**203**			**Pn**	**Pn**	**09 40 42.6**	**0.0**
PB11				Sn		**Sn**	**Sn**	**09 40 54.3**	**+0.5**
PB11	**IPOC Station P**	**0.47**	**203**	⇓*i* P		**Pn**	**Pn**	**09 40 42.5**	**0.0**
PB11				*e*S		**Sn**	**Sn**	**09 40 54.5**	**+0.6**
PB11				IAML				09 40 55.1	
	comp=E,2μm,0.2s								
PB11	**IPOC Station P**	**0.47**	**203**	*i* P		**Pn**	**Pn**	**09 40 42.5**	**0.0**
PB11				*i* S		**Sn**	**Sn**	**09 40 55.8**	**+1.9**
PB11				IAML				09 40 58.9	
	comp=Z,1μm,0.1s								
PX02	**IPOC Station P**	**0.79**	**297**	*e*P		**Pn**	**Pn**	**09 40 44.5**	**-0.6**
PX02				*e*S		**Sn**	**Sn**	**09 40 58.5**	**-0.1**
PB08	**IPOC Station P**	**0.86**	**160**			**Pn**	**Pn**	**09 40 46.3**	**0.0**
PB08				Sn		**Sn**	**Sn**	**09 41 00.5**	**+0.1**
PB08	**IPOC Station P**	**0.86**	**160**	⇑*i* P		**Pn**	**Pn**	**09 40 46.2**	**0.0**
PB08				*e*S		**Sn**	**Sn**	**09 41 00.7**	**+0.3**
PB08				IAML				09 41 02.6	
	comp=E,3μm,0.2s								
PB08	**IPOC Station P**	**0.86**	**160**	*i* P		**Pn**	**Pn**	**09 40 45.9**	**-0.3**
PB08				*i* S		**Sn**	**Sn**	**09 41 01.3**	**+0.9**
PB08				IAML				09 41 03.0	
	comp=Z,1μm,0.2s								
PB16	**IPOC Station P**	**0.99**	**357**			**Pn**	**Pn**	**09 40 48.1**	**+0.4**
PB16				Sn		**Sn**	**Sn**	**09 41 04.1**	**+1.0**
PB16	**IPOC Station P**	**0.99**	**357**	⇑*i* P		**Pn**	**Pn**	**09 40 47.9**	**+0.2**
PB16				*e*S		**Sn**	**Sn**	**09 41 04.0**	**+1.0**
PB16				IAML				09 41 05.2	
	comp=E,3μm,0.5s								
PB16	**IPOC Station P**	**0.99**	**357**	*i* P		**Pn**	**Pn**	**09 40 48.2**	**+0.4**
PB16				*i* S		**Sn**	**Sn**	**09 41 02.9**	**-0.2**
PB16				IAML				09 41 05.9	
	comp=Z,3μm,0.2s								
PX03	**IPOC Station P**	**1.08**	**189**	*e*P		**Pn**	**Pn**	**09 40 47.6**	**-0.7**
PX03				*e*S		**Sn**	**Sn**	**09 41 04.2**	**0.0**
PX03				IAML				09 41 06.2	
	comp=N,1μm,0.1s								
PB12	**IPOC Station P**	**1.08**	**311**			**Pn**	**Pn**	**09 40 48.5**	**+0.1**
PB12				Sn		**Sn**	**Sn**	**09 41 04.8**	**+0.5**
PB12	**IPOC Station P**	**1.08**	**311**	⇑*i* P		**Pn**	**Pn**	**09 40 48.3**	**0.0**
PB12				*e*S		**Sn**	**Sn**	**09 41 04.6**	**+0.4**
PB12				IAML				09 41 09.6	
	comp=E,3μm,0.4s								
TA02	**Huaiquique**	**1.13**	**214**	*e*P		**Pn**	**Pn**	**09 40 48.5**	**-0.2**
TA02				*e*S		**Sn**	**Sn**	**09 41 05.1**	**+0.1**
TA02				IAML				09 41 08.2	
	comp=N,4μm,0.1s								
TA02	**Huaiquique**	**1.13**	**214**	*i* P		**Pn**	**Pn**	**09 40 48.4**	**-0.3**
TA02				*i* S		**Sn**	**Sn**	**09 41 06.6**	**+1.6**
TA02				IAML				09 41 10.3	
	comp=Z,937nm,0.3s								
AP01	**Chacalluta**	**1.27**	**319**			**Pn**	**Pn**	**09 40 50.2**	**-0.2**
AP01				Sn		**Sn**	**Sn**	**09 41 08.8**	**+1.0**
AP01	**Chacalluta**	**1.27**	**319**	*e*P		**Pn**	**Pn**	**09 40 50.6**	**+0.2**
AP01				*e*S		**Sn**	**Sn**	**09 41 08.5**	**+0.7**
AP01				IAML				09 41 13.7	
	comp=N,7μm,0.4s								
TA01	**Diego Aracena**	**1.41**	**209**			**Pn**	**Pn**	**09 40 51.8**	**-0.2**
TA01				Sn		**Sn**	**Sn**	**09 41 11.4**	**+0.5**
TA01	**Diego Aracena**	**1.41**	**209**	*e*P		**Pn**	**Pn**	**09 40 51.9**	**-0.2**
TA01				*e*S		**Sn**	**Sn**	**09 41 10.9**	**0.0**
TA01				IAML				09 41 18.8	
	comp=N,1μm,0.3s								
PATCX	**Punta Patache**	**1.62**	**204**			**Pn**	**Pn**	**09 40 55.0**	**+0.1**
PATCX	**Punta Patache**	**1.62**	**204**	*e*P		**Pn**	**Pn**	**09 40 54.8**	**0.0**
PATCX				*e*S		**Sn**	**Sn**	**09 41 15.9**	**+0.1**
PATCX				IAML				09 41 23.7	
	comp=E,1μm,0.4s								
PATCX	**Punta Patache**	**1.62**	**204**	*i* P		**Pn**	**Pn**	**09 40 55.0**	**+0.1**
PATCX				*i* S		**Sn**	**Sn**	**09 41 16.9**	**+1.1**
PATCX				IAML				09 41 21.6	
	comp=Z,548nm,0.5s								
PB01	**IPOC Station P**	**1.71**	**181**			**Pn**	**Pn**	**09 40 56.1**	**+0.1**
PB01				Sn		**Sn**	**Sn**	**09 41 17.9**	**+0.1**
PB01	**IPOC Station P**	**1.71**	**181**	⇑*i* P		**Pn**	**Pn**	**09 40 56.0**	**0.0**
PB01				*e*S		**Sn**	**Sn**	**09 41 18.3**	**+0.5**
PB01				IAML				09 41 22.9	
	comp=N,3μm,0.2s								
PB01	**IPOC Station P**	**1.71**	**181**	*i* P		**Pn**	**Pn**	**09 40 56.1**	**+0.1**
PB01				*i* S		**Sn**	**Sn**	**09 41 18.9**	**+1.2**
PB01				IAML				09 41 21.2	
	comp=Z,953nm,0.2s								
PB18	**Visviri**	**1.73**	**359**			**Pn**	**Pn**	**09 40 58.6**	**+1.9**
PB18	**Visviri**	**1.73**	**359**	*e*P		**Pn**	**Pn**	**09 40 58.8**	**+2.1**
PB02	**IPOC Station P**	**2.02**	**192**			**Pn**	**Pn**	**09 41 00.8**	**+0.8**
PB02	**IPOC Station P**	**2.02**	**192**	*e*P		**Pn**	**Pn**	**09 41 00.2**	**+0.2**
PB02				*e*S		**Sn**	**Sn**	**09 41 26.1**	**+1.0**
PB02				IAML				09 41 33.5	
	comp=N,3μm,0.3s								
PB02	**IPOC Station P**	**2.02**	**192**	*i* P		**Pn**	**Pn**	**09 41 00.5**	**+0.4**
PB02				*i* S		**Sn**	**Sn**	**09 41 25.8**	**+0.7**
PB02				IAML				09 41 34.3	
	comp=Z,2μm,0.2s								
PB09	**IPOC Station P**	**2.47**	**175**			**Pn**	**Pn**	**09 41 06.9**	**+1.0**
PB09	**IPOC Station P**	**2.47**	**175**	*e*P		**Pn**	**Pn**	**09 41 06.3**	**+0.4**
PB09				IAML				09 41 43.7	
	comp=E,554nm,0.4s								
PB09	**IPOC Station P**	**2.47**	**175**	*i* P		**Pn**	**Pn**	**09 41 06.5**	**+0.6**
PB09				*i* S		**Sn**	**Sn**	**09 41 35.9**	**+0.4**
PB09				IAML				09 41 41.3	
	comp=Z,435nm,1.1s								
PB03	**IPOC Station P**	**2.72**	**186**			**Pn**	**Pn**	**09 41 11.2**	**+1.9**
PB03	**IPOC Station P**	**2.72**	**186**	*e*P		**Pn**	**Pn**	**09 41 09.6**	**+0.3**
PB03				IAML				09 41 52.1	
	comp=E,595nm,0.3s								
PB03	**IPOC Station P**	**2.72**	**186**	*i* P		**Pn**	**Pn**	**09 41 09.9**	**+0.6**
PB03				*i* S		**Sn**	**Sn**	**09 41 42.6**	**+1.0**
PB03				IAML				09 41 51.4	
	comp=Z,504nm,0.3s								
LPAZ	**La Paz**	**3.28**	**23**			**Pn**	**Pn**	**09 41 18.1**	**+0.9**
LPAZ	**La Paz**	**3.28**	**23**	*i* P		**Pn**	**Pn**	**09 41 16.6**	**-0.6**
LPAZ				*i* S		**Sn**	**Sn**	**09 41 53.4**	**-2.2**
LPAZ				IAML				09 41 58.5	
	comp=Z,11nm,0.7s								
PB06	**IPOC Station P**	**3.36**	**182**			**Pn**	**Pn**	**09 41 19.2**	**+1.3**
PB06	**IPOC Station P**	**3.36**	**182**	*e*P		**Pn**	**Pn**	**09 41 18.2**	**+0.4**
PB06				IAML				09 42 09.0	
	comp=E,552nm,0.1s								

MEXI	**Barrio Mexico**	**0.33**	**79**	*eP*	**Pg**	09 59 40.9	+0.2
CENT	**San Jose**	**0.33**	**81**	*eP*	**Pb**	09 59 41.8	-0.5
DOMI	**Santo Domingo**	**0.33**	**72**	*eP*	**Pg**	09 59 41.1	+0.4
PICV	**PH. Pirrs**	**0.33**	**140**	*eP*	**Pg**	09 59 40.8	+0.1
BITO	**Garabito Jaco**	**0.33**	**218**	*eP*	**Pg**	09 59 41.5	+0.8
ROBF	**Roble, Puntare**	**0.34**	**287**	*eP*	**Pg**	09 59 41.2	+0.4
LUJA	**Lujan**	**0.34**	**82**	*eP*	**Pg**	09 59 40.9	+0.1
AMPA	**Desamparados**	**0.34**	**88**	*eP*	**Pg**	09 59 41.0	0.0
SJS	**Escuela Geolog**	**0.36**	**81**	*eP*	**Pg**	09 59 41.4	+0.2
LUPE	**Guadalupe**	**0.36**	**79**	*eP*	**Pg**	09 59 41.3	+0.1
ECI	**Escuela Centro**	**0.36**	**81**	*eP*	**Pg**	09 59 41.4	+0.2
SJS3	**Mercedes San J**	**0.36**	**81**	*eP*	**Pg**	09 59 41.5	+0.2
CORON	**Coronado**	**0.41**	**77**	*eP*	**Pg**	09 59 42.6	+0.4
LCR2	**La Lucha 2**	**0.42**	**109**	S	**Sg**	09 59 48.4	+0.4
VPL2	**V. Platanar**	**0.42**	**4**	*eP*	**Pg**	09 59 42.9	+0.4
QUEU	**Ciudad Quesada**	**0.44**	**357**	*eP*	**Pb**	09 59 43.8	-0.3
PITB	**Pirrs, San**	**0.44**	**120**	*eP*	**Pg**	09 59 43.0	+0.3
RAZU	**San Marcos de**	**0.44**	**120**	*eP*	**Pg**	09 59 42.7	-0.1
CVIMO	**Finca Echandi**	**0.48**	**73**	*eP*	**Pg**	09 59 43.9	+0.3
LLNJ	**Naranjito**	**0.51**	**143**	*eP*	**Pg**	09 59 44.7	+0.7
PIEC	**Cerro El Cedra**	**0.52**	**120**	*eP*	**Pg**	09 59 44.3	+0.1
PAQE	**Paquera**	**0.52**	**263**	*eP*	**Pg**	09 59 44.5	+0.3
REPA	**Paraso**	**0.54**	**96**	*eP*	**Pg**	09 59 44.5	0.0
SOCE	**Pocosol**	**0.54**	**338**	P	**Pg**	09 59 44.9	+0.4
SOCE	**Pocosol**	**0.54**	**338**	S	**Sb**	09 59 52.6	-1.0
SOCE	**Pocosol**	**0.54**	**338**	*eP*	**Pg**	09 59 45.0	+0.4
VICA	**Volcano Irazu**	**0.57**	**80**	*eP*	**Pg**	09 59 45.1	-0.1
PCAYA	**Pacayas**	**0.59**	**87**	*eP*	**Pg**	09 59 45.9	+0.3
CASO	**Castillo**	**0.64**	**330**	*eP*	**Pg**	09 59 46.5	0.0
FORC	**Fortuna**	**0.64**	**336**	*eP*	**Pg**	09 59 46.6	+0.2
VACR	**Volcan Arenal**	**0.64**	**336**	*eP*	**Pg**	09 59 46.8	+0.2
ARE1	**Arenal 1**	**0.65**	**334**	*eP*	**Pg**	09 59 47.0	+0.3
VARE2	**V. Arenal**	**0.65**	**332**	*eP*	**Pg**	09 59 47.0	+0.2
VTUN	**Crater Central**	**0.65**	**78**	*eP*	**Pg**	09 59 46.8	-0.1
VINA	**Juan Vinas**	**0.66**	**89**	*eP*	**Pg**	09 59 46.7	-0.2
CVTR	**Volcan Turrial**	**0.66**	**78**	*eP*	**Pg**	09 59 47.3	+0.4
CVTV	**Tajo**	**0.66**	**79**	*eP*	**Pg**	09 59 47.4	+0.4
CEDE	**Laguna Cedeo**	**0.67**	**334**	*eP*	**Pg**	09 59 47.4	+0.4
JTS	**Las Juntas de**	**0.67**	**307**	P	**Pg**	09 59 46.9	-0.2
JTS				S	**Sg**	09 59 56.0	+0.1
JTS	**Las Juntas de**	**0.67**	**307**	*eP*	**Pg**	09 59 47.0	-0.1
JUNT	**Juntas**	**0.67**	**306**	*eP*	**Pg**	09 59 47.3	+0.2
CVTG	**V. Turrialba,**	**0.68**	**67**	*eP*	**Pg**	09 59 47.4	+0.1
ABRB	**Las Abras (San**	**0.69**	**80**	*eP*	**Pg**	09 59 48.1	+0.5
PILE	**Guapiles**	**0.70**	**61**	*eP*	**Pg**	09 59 47.6	+0.1
REZ	**Monterrey de S**	**0.70**	**336**	*eP*	**Pb**	09 59 48.4	-0.2
TABAC	**Tabacon**	**0.71**	**330**	*eP*	**Pb**	09 59 48.5	-0.2
VERB	**Verbena**	**0.71**	**85**	*eP*	**Pg**	09 59 47.8	0.0
RESJ	**San Isidro (Tu**	**0.77**	**79**	*eP*	**Pg**	09 59 49.1	+0.1
COVE	**Coope Vega, Sa**	**0.83**	**1**	P	**Pg**	09 59 49.6	-0.6
COVE	**Coope Vega, Sa**	**0.83**	**1**	S	**Sg**	10 00 01.3	+0.2
NYURE	**Nandayure**	**0.84**	**278**	*eP*	**Pg**	09 59 50.0	-0.3
RVLA	**Villa Bonita**	**0.84**	**74**	*eP*	**Pg**	09 59 50.5	+0.2
LCOCO	**El Coco**	**0.86**	**76**	*eP*	**Pg**	09 59 50.7	-0.1
QUEB	**Quebradon, Cot**	**0.88**	**327**	*eP*	**Pg**	09 59 51.3	+0.2
TIMP	**Tierras Morena**	**0.92**	**319**	*eP*	**Pg**	09 59 51.7	-0.1
CMARA	**Lajas Hojancha**	**1.01**	**278**	P	**Pg**	09 59 52.8	-0.7
CMARA	**Lajas Hojancha**	**1.01**	**278**	S	**Sb**	10 00 07.7	+0.6
CMARA	**Lajas Hojancha**	**1.01**	**278**	*eP*	**Pg**	09 59 52.7	-0.7
BAGA	**Bagaces**	**1.05**	**308**	*eP*	**Pg**	09 59 54.2	-0.2
CUI	**Cuipilapa**	**1.07**	**316**	*eP*	**Pg**	09 59 54.6	-0.1
OCHAL	**Ojochal**	**1.08**	**136**	P	**Pg**	09 59 54.5	-0.4
OCHAL	**Ojochal**	**1.08**	**136**	S	**Sb**	10 00 09.6	+0.3
EDPE	**Pejibaye, P**	**1.10**	**131**	*eP*	**Pg**	09 59 54.8	-0.4
HORNC	**Hornillas**	**1.12**	**318**	*eP*	**Pg**	09 59 55.3	-0.3
VMAR	**Armenia, Volca**	**1.16**	**323**	*eP*	**Pg**	09 59 55.9	-0.5
UPAL	**Upala**	**1.17**	**330**	S	**Sn**	10 00 14.2	+2.6
UPAL	**Upala**	**1.17**	**330**	P	**Pn**	09 59 55.9	+0.6
VERH	**Veragua Rainfo**	**1.20**	**88**	*eP*	**Pb**	09 59 56.5	-0.6
GPS2	**Hotel Rincn d**	**1.27**	**313**	*eP*	**Pn**	09 59 57.7	-0.4
BURE	**Buenos Aires**	**1.27**	**124**	*eP*	**Pn**	09 59 57.6	-0.4
VRLE	**La Escondida,**	**1.30**	**314**	*eP*	**Pn**	09 59 58.4	-0.2
DRK0	**Durika**	**1.30**	**118**	P	**Pn**	09 59 57.5	-1.2
DRK0	**Durika**	**1.30**	**118**	S	**Sb**	10 00 15.6	-0.2
DRK0	**Durika**	**1.30**	**118**	*eP*	**Pn**	09 59 58.1	-0.6
ALIBA	**Liberia Airpor**	**1.32**	**302**	*eP*	**Pn**	09 59 58.6	-0.1
LAPC	**Finca la Perla**	**1.34**	**311**	*eP*	**Pn**	09 59 58.7	-0.3
LAES	**El Progreso Va**	**1.35**	**95**	*eP*	**Pn**	09 59 58.9	-0.2
ELI1	**Hacienda Flor**	**1.36**	**304**	*eP*	**Pn**	09 59 59.1	-0.1
FIMO	**Fila Mora**	**1.37**	**130**	*eP*	**Pb**	10 00 00.1	+0.1
LCRUZ	**La Cruz**	**1.69**	**315**	*eP*	**Pn**	10 00 04.6	+0.8
PTJ1	**Puerto Jimnez**	**1.73**	**141**	S	**Sb**	10 00 28.5	+0.7
ALCO	**Alturas Coton,**	**1.81**	**121**	*eP*	**Pn**	10 00 05.9	+0.2
PIRO	**Carate, Puerto**	**1.81**	**144**	P	**Pb**	10 00 07.2	-0.2
PIRO	**Carate, Puerto**	**1.81**	**144**	S	**Sb**	10 00 31.2	+0.9
CDITO	**Canoas**	**2.00**	**130**	S	**Sn**	10 00 34.2	+1.0
BRU2	**Volcan**	**2.01**	**122**	P	**Pb**	10 00 10.0	-0.9
BRU2	**Volcan**	**2.01**	**122**	S	**Sb**	10 00 35.7	-0.5
ESPN	**Las Esperanzas**	**2.30**	**3**	P	**Pn**	10 00 13.7	+1.5
ESPN	**Las Esperanzas**	**2.30**	**3**	S	**Sn**	10 00 39.0	-1.7
APQ2	**Apoyeque**	**2.97**	**321**	P	**Pn**	10 00 21.2	-0.3
APQ2				S	**Pg**	10 00 30.6	-0.5
MATN	**Matagalpa**	**3.37**	**334**	P	**Pn**	10 00 26.8	-0.3

IDC 09 10:12:54.3±2.6, 3°85N×126°98E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=231.6km s-min=27.1km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.72**	**163**	P	P	10 18 16.0	-1.5
	0.4nm,0.5s,baz=342,slow=10,SNR=4.8 0.4nm,0.5s						
ASAR	**Alice Springs**	**28.17**	**166**	P	P	10 18 50.5	+1.8
	0.1nm,0.4s,baz=339,slow=10,SNR=1.6 0.1nm,0.4s						
MKAR	**Makanchi Array**	**57.60**	**325**	P	P	10 22 46.0	-0.1
	0.3nm,0.3s,baz=128,slow=7.2,SNR=7.3 0.3nm,0.3s						

DJA 09 10:22:40.3±0.6, 6°S±3°×107°4E±°, h18km±5km, M4.2/11, mb4.8/1, MLv3.8/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.62**	**56**	P	Pg	10 22 53.2	+0.6
KASI				S	Sb	10 23 02.2	+1.3
LWLI	**Liwa**	**0.85**	**5**	P	Pg	10 22 57.0	0.0
LWLI				S	Sg	10 23 08.8	+0.6
KLI	**Kotabumi**	**1.33**	**41**	P	Pn	10 23 04.3	+0.3
KLI				S	Sb	10 23 22.0	+0.6
BLSI	**Bandar Lampung**	**1.35**	**68**	P	Pn	10 23 03.9	-0.4
BLSI				S	Sn	10 23 22.0	+0.1
MDSI	**Maura Dua**	**1.39**	**8**	P	Pn	10 23 04.6	-0.2
MDSI				S	Sn	10 23 22.4	-0.3
MNAI	**Manna**	**1.81**	**326**	P	Pn	10 23 10.8	+0.1
MNAI				S	Sn	10 23 33.8	+0.6
LHSI	**Lahat**	**2.08**	**347**	P	Pn	10 23 14.1	-0.2
LHSI				S	Sb	10 23 41.6	-1.5
KSI	**Kapahiang**	**2.60**	**328**	P	Pn	10 23 22.5	+0.9
KRJI	**Kerinci**	**4.52**	**326**	P	Pn	10 23 48.2	+0.3
PPSI	**Pulau Pagai**	**5.02**	**308**	P	Pn	10 23 54.0	-0.8

*MEX **09** 10:33:29.8±0.8, 15°.35N×93°.18W, h92km±8km, MD3.9*
*GCG **09** 10:33:30.0±1.1, 15°.36N×93°.24W, h41km±186km, MD4.0*
ISC 09 10:33:28.8±1.8, 15°.33N±0°.07×93°.19W±0°.07, h86km±14km, n13, σ0°78/26, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.37**	**355**	*eP*	**Pn**	**10 33 42.6**	**+0.3**
PCIG				*eS*	**Sn**	**10 33 52.5**	**+0.3**
PATR	**El Naranjo**	**0.94**	**103**	*eP*	**Pn**	**10 33 47.6**	**-0.2**
PATR				*eS*	**Sn**	**10 34 02.0**	**0.0**
PAVE	**Pavencul**	**0.98**	**98**	*eP*	**Pn**	**10 33 48.5**	**+0.2**
PAVE				*eS*	**Sn**	**10 34 03.6**	**+0.7**
THIG		**0.98**	**115**	*eP*	**Pn**	**10 33 47.9**	**-0.2**
THIG				*eS*	**Sn**	**10 34 01.8**	**-0.7**
THIG		**0.98**	**115**	*eP*	**Pn**	**10 33 48.4**	**+0.4**
THIG				*eS*	**Sn**	**10 34 02.2**	**-0.3**
CHUJ	**Union Juarez**	**1.07**	**103**	*eP*	**Pn**	**10 33 49.2**	**0.0**
CHUJ				*eS*	**Sn**	**10 34 04.5**	**-0.2**
SMCA	**Catarina**	**1.17**	**114**	*eP*	**Pn**	**10 33 50.1**	**-0.2**
SMCA				*eS*	**Sn**	**10 34 06.1**	**-0.4**
CCIG	**Comitan**	**1.39**	**47**	*eP*	**Pn**	**10 33 53.3**	**+0.2**
CCIG				*eS*	**Sn**	**10 34 10.4**	**-1.0**
CCIG	**Comitan**	**1.39**	**47**	*eP*	**Pn**	**10 33 54.3**	**+1.2**
CCIG				*eS*	**Sn**	**10 34 12.7**	**+1.3**
TGIG		**1.44**	**2**	*eP*	**Pn**	**10 33 53.8**	**0.0**
TGIG				*eS*	**Sn**	**10 34 11.2**	**-1.2**
TGIG		**1.44**	**2**	*eP*	**Pn**	**10 33 53.7**	**0.0**
TGIG				*eS*	**Sn**	**10 34 11.1**	**-1.4**
UXUV	**UXUV**	**2.18**	**335**	*eP*	**Pn**	**10 34 04.3**	**+1.0**
UXUV				*eS*	**Sn**	**10 34 28.1**	**-1.5**
NEUV	**Arroyo Zacate**	**3.45**	**314**	*eP*	**Pn**	**10 34 21.1**	**+0.8**
NEUV				*eS*	**Sn**	**10 34 59.8**	**-0.4**

*RSNC **09** 10:41:10.8±0.0, 7°N±1°×7°4W±°, h111km±1km, M3.4, mb3.8, ML3.0*
ISC 09 10:41:10.0±1.0, 6°57N±0°.03×73°53W±0°.04, h112km±7km, n32, σ1°15/58, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.34**	**87**	P	**Pn**	**10 41 27.1**	**+0.6**
BARC				S	**Sn**	**10 41 39.6**	**+0.7**
BRJC	**Barrancabermej**	**0.45**	**332**	P	**Pn**	**10 41 27.1**	**+0.3**
BRJC				S	**Sn**	**10 41 40.0**	**+0.6**
RUSC	**La Rusia**	**0.81**	**147**	P	**Pn**	**10 41 30.0**	**-0.1**
RUSC				S	**Sn**	**10 41 45.0**	**-0.1**
PTBC	**PUERTO BERRIO,**	**0.92**	**268**	P	**Pn**	**10 41 29.9**	**-0.7**
PTBC				S	**Sn**	**10 41 44.9**	**-1.3**
SPBC	**San Pablo de B**	**1.06**	**211**	P	**Pn**	**10 41 31.9**	**-0.2**
SPBC				S	**Sn**	**10 41 48.1**	**-0.8**
OCAC	**Ocana**	**1.67**	**7**	P	**Pn**	**10 41 39.2**	**+0.1**
OCAC				S	**Sn**	**10 42 01.6**	**+0.3**
ROSC	**El Rosal**	**1.89**	**205**	P	**Pn**	**10 41 43.3**	**+1.2**
ROSC				S	**Sn**	**10 42 06.2**	**-0.4**
CHIC	**Chingaza**	**1.94**	**186**	P	**Pn**	**10 41 42.2**	**-0.6**
CHIC				S	**Sn**	**10 42 08.1**	**+0.4**
HELC	**Santa Helena**	**2.02**	**259**	P	**Pn**	**10 41 44.3**	**+0.6**
HELC				S	**Sn**	**10 42 10.3**	**+0.8**
CVER	**Cruz Verde, Cu**	**2.11**	**195**	P	**Pn**	**10 41 45.9**	**+0.9**
CVER				S	**Sn**	**10 42 14.0**	**+2.4**
GUY2C	**Guyana, Caldas**	**2.27**	**234**	P	**Pn**	**10 41 48.0**	**+1.1**
GUY2C				S	**Sn**	**10 42 15.8**	**+0.6**
UREC	**San Jos de Ur**	**2.31**	**301**	P	**Pn**	**10 41 46.6**	**-0.4**
UREC				S	**Sn**	**10 42 15.0**	**-0.4**
RECRC	**Villamaria, Ca**	**2.42**	**229**	P	**Pn**	**10 41 49.8**	**+0.8**
RECRC				S	**Sn**	**10 42 21.6**	**+2.8**
CBOC	**Ciudad Bolivar**	**2.57**	**254**	P	**Pn**	**10 41 51.2**	**+0.7**
CBOC				S	**Sn**	**10 42 21.7**	**0.0**
DBBC	**Dabeiba**	**2.70**	**280**	P	**Pn**	**10 41 52.8**	**+0.6**
DBBC				S	**Sn**	**10 42 24.6**	**0.0**
PRAC	**Prado**	**3.15**	**206**	P	**Pn**	**10 41 57.6**	**-0.5**
PRAC				S	**Sn**	**10 42 35.1**	**-0.1**
ORTC	**Ortega, Tolima**	**3.15**	**213**	P	**Pn**	**10 41 58.1**	**0.0**
ORTC				S	**Sn**	**10 42 36.1**	**+0.8**
ARGC	**Ariguani, Magd**	**3.34**	**348**	P	**Pn**	**10 42 02.1**	**+1.5**
ARGC				S	**Sn**	**10 42 41.5**	**+1.8**
URMC	**La Uribe, Meta**	**3.41**	**194**	P	**Pn**	**10 42 02.1**	**+0.5**
URMC				S	**Sn**	**10 42 42.0**	**+0.5**
LCBC	**Los crdobas,**	**3.61**	**309**	P	**Pn**	**10 42 03.9**	**-0.3**
LCBC				S	**Sn**	**10 42 46.6**	**+0.4**
SDV	**Santo Domingo**	**3.67**	**51**	P	**Pn**	**10 42 05.3**	**+0.1**
SJCC	**San Jacinto, C**	**3.68**	**334**	P	**Pn**	**10 42 04.1**	**-1.1**
SJCC				S	**Sn**	**10 42 46.1**	**-1.9**
YOTC	**Yotoco, Valle**	**3.81**	**228**	P	**Pn**	**10 42 06.6**	**-0.3**
YOTC				S	**Sn**	**10 42 51.9**	**+0.9**
MACC	**Macarena, Meta**	**4.41**	**184**	P	**Pn**	**10 42 12.8**	**-2.2**
MACC				S	**Sn**	**10 43 01.0**	**-4.4**
CRJC	**Cerrejon, Guaj**	**4.46**	**8**	P	**Pn**	**10 42 15.3**	**-0.4**
CRJC				S	**Sn**	**10 43 06.5**	**-0.2**
URIC	**Uribia, Colomb**	**5.32**	**16**	P	**Pn**	**10 42 26.3**	**-0.8**
	14nm,1.3s						
URIC				S	**Sn**	**10 43 26.1**	**-1.1**
	14nm,1.3s						
FLOC	**Florencia**	**5.39**	**203**	P	**Pn**	**10 42 27.1**	**-1.1**
FLOC				S	**Sn**	**10 43 27.3**	**-1.8**
GTBY	**Guantanamo Bay**	**13.36**	**354**	*eP*	**Pn**	**10 44 15.9**	**+0.7**
RCC	**Rio Carpintero**	**13.51**	**351**	*eP*	**Pn**	**10 44 17.4**	**+0.3**
QMBU	**Quimbuelo**	**13.60**	**355**	*eP*	**Pn**	**10 44 19.5**	**+1.2**
LMGC	**Las Mercedes**	**13.83**	**346**	*eP*	**Pn**	**10 44 20.5**	**-0.8**
PINC	**Pinares de May**	**14.00**	**351**	*eP*	**Pn**	**10 44 23.8**	**+0.3**

WEL 09 10:58:21.9±1.5, 33°S±25°×17°9E±4°1, h235km±59km, M3.9/6, mB4.5/5, ML4.2/6, MLv4.0/6, Mw(mB)3.7/5, Error ellipse: s-maj=56.9km s-min=27.6km az=111.1, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.90**	**189**	P	Pn	10 59 36.3	+0.3
WMGZ				S	S	11 00 36.3	+1.3
HAZ	**Te Kaha**	**4.95**	**195**	P	Pn	10 59 35.7	-0.8
HAZ				S	S	11 00 36.9	+1.1
PKGZ	**Pakihiroa**	**5.00**	**192**	P	Pn	10 59 37.4	+0.3
PKGZ				S	S	11 00 36.8	-0.2
PUZ	**Puketiti**	**5.17**	**190**	P	Pn	10 59 37.2	-2.1
PUZ				S	S	11 00 39.8	-1.1
RUGZ	**Raukumara Rang**	**5.17**	**195**	P	Pn	10 59 40.3	+0.9
TWGZ	**Tauwhareparae**	**5.32**	**192**	P	Pn	10 59 43.1	+1.9
TWGZ				S	S	11 00 45.6	+1.4
MWZ	**Matawai**	**5.56**	**195**	P	Pn	10 59 44.2	0.0
MWZ				S	S	11 00 49.9	+0.2
URZ	**Urewera**	**5.59**	**199**	P	Pn	10 59 44.1	-0.4
URZ				S	S	11 00 50.4	+0.1
TKGZ	**Te Karaka**	**5.60**	**192**	P	Pn	10 59 43.7	-0.8
RIGZ	**Rimuhau**	**5.87**	**192**	P	Pn	10 59 47.6	-0.5
RIGZ				S	S	11 00 57.2	+0.4
PRGZ	**Paritu Road**	**6.06**	**191**	P	Pn	10 59 51.5	+1.0
BKZ	**Black Stump Fm**	**6.61**	**200**	P	Pn	10 59 58.4	+1.0
MCHZ	**McNeill Hill**	**6.81**	**198**	P	Pn	11 00 00.1	+0.1
KWHZ	**Kaweka Forest**	**6.87**	**199**	P	Pn	10 59 59.2	-1.6
CKHZ	**Cape Kidnapper**	**6.93**	**195**	P	Pn	11 00 01.7	+0.3
KRHZ	**Kereru**	**7.09**	**199**	P	Pn	11 00 02.6	-0.9
PNHZ	**Pukenui**	**7.39**	**199**	P	Pn	11 00 04.8	-2.5
PNHZ				S	S	11 01 30.0	-1.8
WPHZ	**Waipukurau**	**7.46**	**198**	P	Pn	11 00 08.3	+0.1

*NEIC **09** 10:59:10.8±0.9, 33°.257N±0°.008×116°.022W±0°.010, h10km±2km, Error ellipse: s-maj=3.0km s-min=1.4km az=300.0*
PAS 09 10:59:11.0±0.8, 33°.254N±0°.008×116°.000W±0°.010, h9km±8km, ML3.2/160, ML3.1/50(NEIC), Error ellipse: s-maj=1.2km s-min=1.2km az=202.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERRC	**Elmore Ranch**	**0.20**	**133**		Pg	10 59 15.5	+0.4
ERRC					Sg	10 59 19.5	+1.6
SLH	**Sleepy Hollow**	**0.22**	**254**		Pg	10 59 15.5	+0.1
SLH					Sg	10 59 19.3	+0.8
5271	**Bombay Beach**	**0.24**	**66**		Pg	10 59 16.2	+0.3
BOMB	**Bombay Beach**	**0.25**	**64**		Pn	10 59 21.0	+0.1
SUP	**Superstition M**	**0.33**	**154**		Pg	10 59 17.4	-0.2
SUP					Sg	10 59 22.1	+0.1
FRK	**Frink**	**0.34**	**64**		Pg	10 59 17.5	-0.2
FRK					Sg	10 59 22.1	0.0
BORC	**Borrego Spring**	**0.35**	**272**		Pg	10 59 17.6	-0.3
SWSC	**Sam W. Stewart**	**0.35**	**151**		Pg	10 59 17.7	-0.2
SWSC					Sg	10 59 22.8	+0.3
CRR	**Carrizo Plain**	**0.37**	**176**		Pg	10 59 18.1	0.0
CRR					Sg	10 59 23.6	+0.5
CLI2	**Calipatria 2**	**0.38**	**111**		Pg	10 59 18.7	+0.3
CLI2					Sb	10 59 25.2	-0.6
CTCC	**Cactus City**	**0.40**	**1**		Pg	10 59 18.8	-0.1
CTCC					Sg	10 59 23.9	-0.2
WEMD	**Westmorland, C**	**0.41**	**121**		Pg	10 59 19.6	+0.6
WEMD					Sb	10 59 26.4	-0.4
CTW	**Cottonwood Mou**	**0.44**	**14**		Pg	10 59 19.3	-0.2
CTW					Sg	10 59 25.4	+0.1
COK2	**Cook Ranch 2**	**0.46**	**150**		Pg	10 59 20.2	+0.3
COK2					Sb	10 59 27.5	-0.7
PMD	**Palm Desert**	**0.50**	**321**		Pg	10 59 20.0	-0.8
PMD				IAML		10 59 27.2	
	comp=E,1μm,0.1s						
PMD	**Palm Desert**	**0.50**	**321**		Sg	10 59 26.7	-0.7
IMPE	**Imperial**	**0.51**	**134**		Pb	10 59 21.5	-0.6
IMPE					Sb	10 59 29.7	+0.1
XPFO	**Pinon Flat**	**0.52**	**313**		Pg	10 59 20.6	-0.6
XPFO					Sg	10 59 27.4	-0.6
HAY	**Hayfield**	**0.52**	**30**		Pg	10 59 21.2	+0.1
HAY					Sg	10 59 28.8	+0.8
PFO	**Pinyon Flats O**	**0.53**	**313**		Pg	10 59 20.4	-0.8
PFO	**Pinyon Flats O**	**0.53**	**313**		Pg	10 59 20.6	-0.6
PFO					Sg	10 59 27.5	-0.6
JUEM	**Julian Eagle M**	**0.53**	**251**		Pg	10 59 21.1	-0.2
WESC	**Westside Schoo**	**0.54**	**155**		Pg	10 59 21.7	+0.2
WESC					Sb	10 59 30.3	-0.2
MATG	**Mataguay Scout**	**0.55**	**264**		Pg	10 59 21.3	-0.3
MATG					Sg	10 59 28.8	0.0
FRD	**Ford Ranch, An**	**0.56**	**296**		Pg	10 59 21.6	-0.2
FRD					Sg	10 59 29.2	0.0
FRD	**Ford Ranch, An**	**0.56**	**296**		Pg	10 59 21.6	-0.3
FRD					Sg	10 59 29.0	-0.2
SLVP	**Salvation Pass**	**0.58**	**91**		Pg	10 59 21.7	-0.5
SLVP					Sg	10 59 29.8	-0.1
SNDA	**J Saunders Pla**	**0.59**	**300**		Pg	10 59 22.2	-0.3
SNDA					Sg	10 59 30.7	+0.4
BC3	**Big Chuckawall**	**0.61**	**49**		Pg	10 59 22.4	-0.3
BC3				IAML		10 59 32.1	
	comp=N,721nm,0.4s						
BC3	**Big Chuckawall**	**0.61**	**49**		Sg	10 59 30.8	+0.1
BZNA	**Buzz No.'s Pla**	**0.61**	**293**		Pg	10 59 22.6	-0.2
BZNA					Sg	10 59 30.5	-0.2
YUH	**Yuha Desert**	**0.61**	**174**		Pg	10 59 22.4	-0.4
YUH				IAML		10 59 31.8	
	comp=N,710nm,0.2s						
YUH				IAML		10 59 32.2	
	comp=E,852nm,0.1s						
YUH	**Yuha Desert**	**0.61**	**174**		Sg	10 59 30.6	-0.1
IKP	**In-Ko-Pah, Jac**	**0.61**	**189**		Pg	10 59 22.3	-0.4
IKP					Sg	10 59 30.5	-0.2
DNR	**Dunn Ranch,Anz**	**0.61**	**301**		Pg	10 59 22.6	-0.3
DNR					Sg	10 59 31.5	+0.5
DNR				IAML		10 59 34.2	
	comp=E,2μm,0.3s						
DNR				IAML		10 59 35.2	
	comp=N,1μm,0.5s						
SNR	**Schaffner Ranc**	**0.61**	**129**		Pg	10 59 23.0	+0.2
SNR					Sb	10 59 33.4	+0.8
DREC	**Desert Rsrch C**	**0.65**	**134**		Pg	10 59 23.7	+0.3
DREC					Sb	10 59 34.5	+1.0
RMX	**La Rumorosa**	**0.65**	**186**		Pg	10 59 23.9	+0.3
RMX					Sb	10 59 33.3	-0.6
CRY	**Cary Ranch**	**0.69**	**297**		Pg	10 59 24.0	-0.3
CRY					Sg	10 59 33.1	-0.3
GVDA	**Garner Valley**	**0.70**	**306**		Pg	10 59 23.9	-0.6
GVDA					Sg	10 59 33.1	-0.5
5053	**Calexico**	**0.72**	**144**		Pg	10 59 24.8	-0.1
5053					Sb	10 59 35.7	0.0
PLM	**Palomar**	**0.73**	**278**		Pg	10 59 24.7	-0.3
PLM					Sg	10 59 34.5	-0.1
BELC	**Belle Mtn. Jos**	**0.74**	**0**		Pg	10 59 24.5	-0.8
BELC				IAML		10 59 35.8	
	comp=E,506nm,0.6s						
BELC	**Belle Mtn. Jos**	**0.74**	**0**		Sg	10 59 35.3	+0.2
EW2	**E Wide Canyon**	**0.77**	**334**		Pg	10 59 25.1	-0.6
EW2					Sg	10 59 36.1	+0.4
5054	**Holtville Bond**	**0.79**	**135**		Pg	10 59 25.6	-0.6
EML	**El Monte Cty P**	**0.80**	**243**		Pg	10 59 25.5	-0.8
EML					Sg	10 59 36.0	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**10.94**	**344**	Pn	Pn	11 03 24.4	-0.3
	baz=160,slow=12,SNR=1.0 1.3nm,1.0s						
GUMO	**Guam**	**12.69**	**167**	LR	LR	11 06 56.7	
	comp=Z,18nm,20.8s,baz=278,slow=29						
WRA	**Warramunga Arr**	**46.30**	**190**	P	P	11 09 14.3	-0.2
	0.8nm,0.5s,baz=9.4,slow=8.0,SNR=12 0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**53.61**	**315**	P	P	11 10 09.9	+0.1
	0.2nm,0.5s,baz=92,slow=8.1,SNR=2.6 0.2nm,0.5s						
FINES	**FINESS Array B**	**78.78**	**334**	P	P	11 12 51.2	0.0
	1.6nm,0.8s,baz=68,slow=5.9,SNR=8.4 1.6nm,0.8s						

*BJI **09** 11:16:57.4, 52˚.80N×160˚.30E, h10km, mB5.2/26, mb4.8/62, Ms5.2/62, Ms7 5.0/62*

*IDC **09** 11:16:57.2±0.5, 52˚.62N×160˚.57E, h0km, mb4.6/36, mbtmp4.7/41, ML5.0/4, MS4.5/59, Error ellipse: s-maj=12.4km s-min=9.8km az=149.0*

*KRSC **09** 11:16:57.3±1.8, 52˚.33N×161˚.05E, h54km±29km, Mc5.1, Ml5.1, Felt [II] at Petropavlovsk.*

*NEIC **09** 11:16:58.7±2.3, 52˚.50N±0˚.09×160˚.84E±0˚.10, h10km±1km, mb5.0/249, Error ellipse: s-maj=15.4km s-min=9.9km az=179.0*

*MOS **09** 11:17:01.0±1.0, 52˚.46N×160˚.78E, h56km, mb5.2/65, MS4.8/17, Error ellipse: s-maj=5.7km s-min=3.4km az=103.9*

MOS Felt (II) at Petropavlovsk-Kamchatskiy.

*GCMT **09** 11:17:02.7±0.2, 52˚.40N±0˚.02×160˚.97E±0˚.03, h20km, MW5.1/108, Moment Tensor Solution. s57,c77; s108,c178; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.14±.17; Mθθ=-2.31±.12; Mφφ=-1.83±.11; Mrθ=2.79±.24; Mrφ=-1.99±.07; Mθφ=1.87±.20; Best double couple: Ms=5.30 500×10^16 NP1:φ=224.00000°, δ=26.00000°, λ=81.00000°. NP2:φ=53.00000°, δ=65.00000°, λ=94.00000°. Principal axes: T 5.3530, Plg70.0000°, Azm332.0000°; N -0.0950, Plg4.0000°, Azm232.0000°; P -5.2580, Plg20.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 11:16:59.3±0.6, 52˚.54N±0˚.04×160˚.84E±0˚.03, h18km±2km, h21km: pP-P, n727, σ1=69/637, mb4.9/262, MS4.8/101, 32C-36D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALK	**Dalny**	**1.36**	**292**	PN	**Pg**	**11 17 24.5**	**-1.0**
DALK				S	**Sg**	**11 17 42.7**	**-0.5**
DALK	**Dalny**	**1.36**	**292**	*e*P	**Pg**	**11 17 24.5**	**-1.0**
DALK				*e*S	**Sg**	**11 17 42.8**	**-0.5**
UGLR	**Uglovaya**	**1.39**	**300**	PN	**Pg**	**11 17 25.2**	**-1.0**
UGLR	**Uglovaya**	**1.39**	**300**	*e*P	**Pg**	**11 17 25.2**	**-1.1**
SDLR	**Sedlovina**	**1.40**	**303**	PN	**Pg**	**11 17 25.1**	**-1.1**
SDLR	**Sedlovina**	**1.40**	**303**	*e*P	**Pg**	**11 17 25.1**	**-1.1**
PET	**Petropavlovsk**	**1.41**	**291**		**Pg**	**11 17 25.4**	**-1.2**
PET	**Petropavlovsk**	**1.41**	**291**	P	**Pb**	**11 17 25.2**	**+0.1**
PET	**Petropavlovsk**	**1.41**	**291**	⇑*i*PN	**Pg**	**11 17 25.3**	**-1.2**
PET				*e*S	**Sg**	**11 17 44.8**	**-0.1**
PET	comp=Z,360nm,0.6s			pmax	pmax		
PET	comp=N,10μm,0.6s			smax	smax		
PET	comp=E,18μm,0.8s			smax	smax		
PET	comp=Z,3μm,9.0s			MLR	MLR		
PET	comp=Z,5μm,9.0s			MLR	MLR		
PET	**Petropavlovsk**	**1.41**	**291**	*e*P	**Pg**	**11 17 25.4**	**-1.2**
PET				*e*S	**Sg**	**11 17 44.4**	**-0.6**
RUS	**Russkaya**	**1.43**	**267**	PN	**Pb**	**11 17 24.8**	**-0.5**
RUS	**Russkaya**	**1.43**	**267**	*e*P	**Pb**	**11 17 24.8**	**-0.5**
SMAR	**Somma**	**1.43**	**301**	PN	**Pb**	**11 17 25.4**	**-0.2**
SMAR	**Somma**	**1.43**	**301**	*e*P	**Pb**	**11 17 25.4**	**-0.2**
INSR	**Institute**	**1.45**	**292**	PN	**Pb**	**11 17 25.9**	**+0.1**
INSR				S	**Sg**	**11 17 45.2**	**-1.0**
INSR	**Institute**	**1.45**	**292**	*e*P	**Pb**	**11 17 26.0**	**+0.1**
INSR				*e*S	**Sg**	**11 17 46.3**	**-1.2**
AVH	**Avacha**	**1.46**	**301**	PN	**Pg**	**11 17 26.3**	**-1.2**
AVH	**Avacha**	**1.46**	**301**	*e*P	**Pg**	**11 17 26.3**	**-1.2**
KRER	**Koryakskii**	**1.48**	**302**	PN	**Pg**	**11 17 26.5**	**-1.3**
KRER	**Koryakskii**	**1.48**	**302**	*e*P	**Pg**	**11 17 26.6**	**-1.3**
KOK	**Koryaka**	**1.53**	**300**	PN	**Pb**	**11 17 27.2**	**0.0**
KOK	**Koryaka**	**1.53**	**300**	*e*P	**Pb**	**11 17 27.2**	**0.0**
KRX	**Arik**	**1.56**	**303**	PN	**Pb**	**11 17 27.4**	**-0.3**
KRX	**Arik**	**1.56**	**303**	*e*P	**Pb**	**11 17 27.4**	**-0.3**
MTVR	**Mutnovka**	**1.62**	**269**	PN	**Pb**	**11 17 27.9**	**-0.9**
MTVR	**Mutnovka**	**1.62**	**269**	*e*P	**Pb**	**11 17 28.0**	**-0.9**
KRMR	**Karymshinskiy**	**1.67**	**281**	PN	**Pn**	**11 17 28.3**	**+0.6**
KRMR	**Karymshinskiy**	**1.67**	**281**	*e*P	**Pn**	**11 17 28.3**	**+0.6**
GRL	**Gorelyy**	**1.69**	**271**	PN	**Pb**	**11 17 29.5**	**-0.4**
GRL	**Gorelyy**	**1.69**	**271**	*e*P	**Pb**	**11 17 29.5**	**-0.4**
KII	**Karymskiy**	**1.71**	**331**	PN	**Pb**	**11 17 30.4**	**+0.1**
KII	**Karymskiy**	**1.71**	**331**	*e*P	**Pb**	**11 17 30.4**	**+0.1**
ASAK	**Asacha**	**1.80**	**266**	PN	**Pb**	**11 17 30.9**	**-0.9**
ASAK	**Asacha**	**1.80**	**266**	*e*P	**Pb**	**11 17 30.9**	**-0.9**
KDTR	**Khodutka, Kamc**	**1.85**	**248**	PN	**Pn**	**11 17 29.7**	**-0.4**
KDTR				S	**Sn**	**11 17 51.4**	**-1.6**
KDTR	**Khodutka, Kamc**	**1.85**	**248**	*e*P	**Pn**	**11 17 29.7**	**-0.4**
KDTR				*e*S	**Sn**	**11 17 51.4**	**-1.6**
PEA0B	**Petropavlovsk-**	**1.99**	**288**		**Pb**	**11 17 34.0**	**-0.9**
PEA0B				Sn	**Sn**	**11 17 54.6**	**-1.9**
PEA0B	**Petropavlovsk-**	**1.99**	**288**	*i* PN	**Pb**	**11 17 33.8**	**-1.2**
PETK	**Petropavlovsk-**	**1.99**	**288**		**Pb**	**11 17 33.5**	**-1.5**
PETK	**Petropavlovsk-**	**1.99**	**288**	Pn	**Pn**	**11 17 32.4**	**+0.3**
	comp=Z,467nm,0.3s,baz=94,slow=18,SNR=388						
PETK				Sn	**Sn**	**11 17 55.9**	**-0.6**
	comp=Z,362nm,0.3s,baz=107,slow=33,SNR=8.8						
PETK				LR	LR	11 18 05.1	
	comp=Z,5μm,20.6s,baz=149,slow=38						
PETK	**Petropavlovsk-**	**1.99**	**288**	PN	**Pb**	**11 17 33.5**	**-1.5**
APC	**Apacha**	**2.27**	**281**	PN	**Pb**	**11 17 38.0**	**-1.7**
APC	**Apacha**	**2.27**	**281**	*e*P	**Pb**	**11 17 38.1**	**-1.7**
MIPR	**Malaya Ipel'ka**	**2.51**	**266**	PN	**Pn**	**11 17 41.3**	**+2.1**
MIPR	**Malaya Ipel'ka**	**2.51**	**266**	*e*P	**Pn**	**11 17 41.4**	**+2.1**
KZV	**Kizimen**	**2.60**	**353**	PN	**Pb**	**11 17 42.7**	**-2.7**
KZV	**Kizimen**	**2.60**	**353**	*e*P	**Pb**	**11 17 42.8**	**-2.7**
TUMD	**Tumrok D**	**2.68**	**355**	PN	**Pn**	**11 17 43.2**	**+1.6**
TUMD	**Tumrok D**	**2.68**	**355**	*e*P	**Pn**	**11 17 43.2**	**+1.6**
PAU	**Pauzhetka**	**2.71**	**248**	PN	**Pn**	**11 17 42.0**	**+0.1**
PAU	**Pauzhetka**	**2.71**	**248**	*e*P	**Pn**	**11 17 42.0**	**+0.1**
KMNR	**Kamenistaya**	**3.24**	**354**	PN	**Pb**	**11 17 52.9**	**-3.5**
KMNR	**Kamenistaya**	**3.24**	**354**	*e*P	**Pb**	**11 17 52.9**	**-3.5**
BZGR	**Bezymyannyi-Gr**	**3.41**	**359**	PN	**Pn**	**11 17 54.3**	**+2.7**
BZGR	**Bezymyannyi-Gr**	**3.41**	**359**	*e*P	**Pn**	**11 17 54.4**	**+2.7**
BZMR	**Bezymyannaya**	**3.41**	**357**	PN	**Pb**	**11 17 55.5**	**-3.7**
BZMR	**Bezymyannaya**	**3.41**	**357**	*e*P	**Pb**	**11 17 55.6**	**-3.7**
KIRR	**Kirishev**	**3.43**	**355**	PN	**Pb**	**11 17 55.3**	**-4.3**
KIRR	**Kirishev**	**3.43**	**355**	*e*P	**Pb**	**11 17 55.3**	**-4.3**
BZWR	**Bezymyannyi-We**	**3.44**	**357**	PN	**Pb**	**11 17 55.4**	**-4.3**
BZWR	**Bezymyannyi-We**	**3.44**	**357**	*e*P	**Pb**	**11 17 55.4**	**-4.3**
KPT	**Kopyto**	**3.45**	**354**	PN	**Pb**	**11 17 56.7**	**-3.2**
KPT	**Kopyto**	**3.45**	**354**	*e*P	**Pb**	**11 17 56.7**	**-3.2**
SKR	**Severo-Kuril's**	**3.48**	**240**	*e*PN	**Pn**	**11 17 52.2**	**-0.3**
SKR				*e*S	**Sn**	**11 18 30.4**	**-2.8**
SKR	comp=Z,360nm,0.6s			pmax	pmax		
SKR	comp=E,3μm,0.5s			smax	smax		
SKR	comp=N,3μm,0.7s			smax	smax		
SKR	comp=Z,8μm,16.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**3.48**	**240**	*e*P	**Pn**	**11 17 52.2**	**-0.3**
SKR				*e*S	**Sn**	**11 18 30.6**	**-2.7**
ZLN	**Zelenaya**	**3.48**	**360**	PN	**Pb**	**11 17 57.6**	**-2.9**
ZLN	**Zelenaya**	**3.48**	**360**	*e*P	**Pb**	**11 17 57.6**	**-2.9**
KOZ	**Kozyrevsk**	**3.57**	**351**	PN	**Pn**	**11 17 57.1**	**+3.3**
KOZ	**Kozyrevsk**	**3.57**	**351**	*e*P	**Pn**	**11 17 57.1**	**+3.3**
CIRR	**Tsirk**	**3.58**	**359**	PN	**Pb**	**11 17 58.9**	**-3.3**
CIRR	**Tsirk**	**3.58**	**359**	*e*P	**Pb**	**11 17 58.9**	**-3.3**
ESO	**Esso**	**3.62**	**341**	PN	**Pn**	**11 17 57.5**	**+3.1**
ESO	**Esso**	**3.62**	**341**	*e*P	**Pn**	**11 17 57.5**	**+3.1**
KLY	**Klyuchi**	**3.78**	**358**	PN	**Pn**	**11 17 58.9**	**+2.2**
KLY	**Klyuchi**	**3.78**	**358**	*e*P	**Pn**	**11 17 58.9**	**+2.2**
SRDR	**Sredinnyy**	**3.84**	**351**	PN	**Pn**	**11 18 00.2**	**+2.7**
SRDR	**Sredinnyy**	**3.84**	**351**	*e*P	**Pn**	**11 18 00.3**	**+2.7**
KBTR	**Krutoberegovo**	**3.85**	**17**	PN	**Pn**	**11 17 59.4**	**+1.7**
KBTR	**Krutoberegovo**	**3.85**	**17**	*e*P	**Pn**	**11 17 59.4**	**+1.7**
KBG	**Krutoberegovo**	**3.88**	**16**	PN	**Pn**	**11 18 00.3**	**+2.3**
KBG	**Krutoberegovo**	**3.88**	**16**	*e*P	**Pn**	**11 18 00.3**	**+2.3**
BKI	**Bering**	**4.04**	**47**	PN	**Pn**	**11 18 00.3**	**0.0**
BKI	**Bering**	**4.04**	**47**	*e*P	**Pn**	**11 18 00.3**	**0.0**
BKI				*e*S	**Sn**	**11 18 43.8**	**-3.3**
SMKR	**Semkarok**	**4.07**	**5**	PN	**Pn**	**11 18 02.9**	**+2.2**
SMKR	**Semkarok**	**4.07**	**5**	*e*P	**Pn**	**11 18 02.9**	**+2.2**
SRKR	**Sorokina**	**4.13**	**3**	PN	**Pn**	**11 18 04.9**	**+3.4**
SRKR	**Sorokina**	**4.13**	**3**	*e*P	**Pn**	**11 18 04.9**	**+3.4**
SHEM	**Shemya Is, Ala**	**8.07**	**83**	Pn	**Pn**	**11 18 55.9**	**+0.3**
	comp=Z,44nm,0.3s,baz=73,slow=2.7,SNR=30						
SHEM				Sn	**Sn**	**11 20 20.0**	**-6.3**
	comp=Z,20nm,0.3s,baz=249,slow=18,SNR=6.4						
SHEM				LR	LR	11 22 17.3	
	comp=Z,2μm,19.2s,baz=286,slow=39 comp=Z,114nm,0.3s						
SMY	**Shemya**	**8.07**	**83**		**Pn**	**11 18 56.1**	**+0.5**
SMY	**Shemya**	**8.07**	**83**	PN	**Pn**	**11 18 56.1**	**+0.5**
MA2	**Magadan**	**9.02**	**325**	Pn	**Pn**	**11 19 09.9**	**+1.4**
MA2	**Magadan**	**9.02**	**325**	Pn	**Pn**	**11 19 10.5**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=147,slow=12,SNR=4.9						
MA2				LR	LR	11 23 08.4	
	comp=Z,3μm,19.0s,baz=183,slow=42 comp=Z,9.4nm,0.7s						
OKH	**Okha**	**10.83**	**282**	*de*PN	Pn	11 19 21.5	-12
OKH				MLR	MLR		
OKH	comp=E,4μm,14.0s			MLR	MLR		
OKH	comp=Z,4μm,13.0s			MLR	MLR		
	comp=N,2μm,13.0s						
KUR	**Kuril'sk**	**11.23**	**235**	PN	**Pn**	**11 19 36.3**	**-2.5**
KUR				MLR	MLR		
KUR	comp=Z,3μm,15.0s			MLR	MLR		
KUR	comp=N,5μm,14.0s			MLR	MLR		
	comp=E,1μm,13.0s						
SEY	**Seymchan**	**11.34**	**340**	Pn	**Pn**	**11 19 42.0**	**+1.7**
	comp=E,8.8nm,1.1s,baz=126,slow=13,SNR=1.8						
SEY				LR	LR	11 24 23.6	
	comp=E,2μm,20.3s,baz=144,slow=40						
SEY	**Seymchan**	**11.34**	**340**	*e*PN	**Pn**	**11 19 42.1**	**+1.8**
SEY				pmax	pmax		
	comp=Z,35nm,1.6s						
TYV	**Tymovskoe**	**11.41**	**269**	*e*PN	**Pn**	**11 19 45.1**	**+3.9**
TYV				*e*S	**Sn**	**11 21 55.2**	**+7.1**
TYV	comp=Z,29nm,1.1s			pmax	pmax		
TYV	comp=Z,500nm,4.2s			pmax	pmax		
TYV	comp=N,1μm,5.9s			smax	smax		
TYV	comp=E,600nm,5.9s			smax	smax		
TYV	comp=Z,7μm,16.0s			MLR	MLR		
AMKA	**Amchitka**	**11.45**	**88**	Pn	**Pn**	**11 19 42.9**	**+1.1**
YSS	**Yuzhno-Sakhali**	**12.95**	**252**		**Pn**	**11 20 02.7**	**+0.4**
YSS	**Yuzhno-Sakhali**	**12.95**	**252**	P	**Pn**	**11 20 06.0**	**+3.7**
YSS	**Yuzhno-Sakhali**	**12.95**	**252**	*e*PN	**Pn**	**11 20 03.2**	**+0.9**
YSS	comp=Z,500nm,2.8s			pmax	pmax		
YSS	comp=Z,50nm,0.9s			pmax	pmax		
YSS	comp=E,3μm,12.0s			MLR	MLR		
YSS	comp=Z,6μm,12.0s			MLR	MLR		
YSS	comp=N,3μm,14.0s			MLR	MLR		
YUK	**Yuzh-Kuril'sk**	**13.09**	**235**	*i* PN	**Pn**	**11 20 01.5**	**-2.7**
RUSJ	**Misakicho**	**13.35**	**237**	PN	**Pn**	**11 20 07.8**	**0.0**
GLVR	**Golovnino**	**13.47**	**235**	PN	**Pn**	**11 20 05.3**	**-4.1**
KIWB	**Kanaga Island**	**13.51**	**84**	Pn	**Pn**	**11 20 10.8**	**+0.8**
NMR	**Nemuro--Hokkai**	**13.64**	**234**	*e*P	Pn	11 20 06.0	-5.7
GSTR	**Great Sitkin T**	**14.13**	**83**	Pn	**Pn**	**11 20 19.3**	**+0.9**
JKA	**Kamikawa-asahi**	**14.74**	**242**		**Pn**	**11 20 26.1**	**-0.6**
ASAJ	**Asahikawa**	**14.74**	**242**	Pn	**Pn**	**11 20 26.2**	**-0.6**
	comp=N,5.4nm,0.3s,baz=74,slow=10,SNR=45						
ASAJ				LR	LR	11 26 51.0	
	comp=N,2μm,18.4s,baz=52,slow=41 comp=N,35nm,0.6s						
ASAJ	**Asahikawa**	**14.74**	**242**	P	**Pn**	**11 20 26.1**	**-0.7**
ATKA	**Atka Island**	**15.24**	**81**	Pn	**Pn**	**11 20 34.1**	**+0.8**
ATKA				IAmb	IAmb	11 20 38.7	
	comp=Z,61nm,1.1s						
GRNR	**Gornyy**	**15.24**	**273**	⇑*i*P	**P**	**11 20 39.1**	**+0.8**
GRNR				pmax	pmax		
GRNR	comp=E,50nm,0.5s			pmax	pmax		
GRNR	comp=Z,80nm,0.6s			MLR	MLR		
GRNR	comp=E,2μm,14.0s			MLR	MLR		
GRNR	comp=N,1μm,13.0s			MLR	MLR		
GRNR	comp=Z,2μm,13.0s			MLR	MLR		
BILL	**Bilibino**	**15.77**	**8**		**Pn**	**11 20 41.5**	**+1.3**
BILL	**Bilibino**	**15.77**	**8**	*i* P	**P**	**11 20 42.7**	**-1.3**
BILL	comp=Z,23nm,0.7s			pmax	pmax		
ERM	**Erimo**	**15.92**	**236**	Pn	**Pn**	**11 20 37.5**	**-4.8**
ERM				IAmb	IAmb	11 20 46.1	
	comp=Z,62nm,0.6s						
ERM	**Erimo**	**15.92**	**236**	P	**Pn**	**11 20 37.5**	**-4.8**
ERM	comp=Z,62nm,0.6s			pmax	pmax		
TEY	**Ternei**	**17.59**	**254**	*e*P	**P**	**11 21 04.4**	**+0.1**
JTM	**Tenmabayashi**	**17.88**	**237**		Pn	11 20 58.5	-8.5
JTM				IAmb	IAmb	11 21 08.8	
	comp=Z,200nm,1.5s						
YAK	**Yakutsk**	**19.14**	**312**		**P**	**11 21 20.4**	**-0.8**
YAK				IAmb	IAmb	11 21 21.4	
	comp=Z,89nm,0.8s						
YAK	**Yakutsk**	**19.14**	**312**	P	**P**	**11 21 19.2**	**-2.0**
	comp=Z,7.9nm,0.3s,baz=302,slow=1.2,SNR=18						
YAK				LR	LR	11 29 37.7	
	comp=Z,2μm,18.7s,baz=110,slow=40 comp=Z,70nm,0.6s						
YAK	**Yakutsk**	**19.14**	**312**	*e*P	**P**	**11 21 19.7**	**-1.5**
YAK				*e*S	**Sn**	**11 24 54.9**	**-1.0**
YAK	comp=Z,114nm,1.2s			pmax	pmax		
YAK	comp=E,60nm,1.2s			pmax	pmax		
YAK	comp=N,27nm,1.3s			pmax	pmax		
YAK	comp=E,594nm,3.3s			smax	smax		
YAK	comp=N,379nm,3.6s			smax	smax		
YAK	comp=Z,2μm,16.0s			MLR	MLR		
YAK	comp=E,2μm,15.0s			MLR	MLR		
UNV	**Unalaska Valle**	**19.52**	**73**	P	**Pn**	**11 21 26.7**	**0.0**
ZEA	**Zeya**	**20.08**	**287**	*e*P	**P**	**11 21 30.8**	**-0.8**
ZEA	comp=E,20nm,1.1s			pmax	pmax		
ZEA	comp=N,10.0nm,1.5s			pmax	pmax		
ZEA	comp=Z,30nm,1.4s			pmax	pmax		
ZEA	comp=E,900nm,13.0s			MLR	MLR		
ZEA	comp=N,400nm,15.0s			MLR	MLR		
ZEA	comp=Z,1μm,14.0s			MLR	MLR		
JMM	**Marumori**	**20.27**	**232**	P	**P**	**11 21 31.3**	**-2.4**
JMM				IAmb	IAmb	11 21 48.0	
	comp=Z,34nm,0.7s						
JMM	**Marumori**	**20.27**	**232**	P	Pn	11 21 38.3	+2.6
USRK	**Ussuriysk Ar.**	**20.79**	**258**	P	**P**	**11 21 36.9**	**-2.4**
	comp=Z,27nm,0.9s,baz=57,slow=10.0,SNR=24 comp=Z,27nm,0.9s						
HEH	**HeiHe**	**20.88**	**277**	*e*P	**P**	**11 21 38.9**	**-1.3**
HEH	comp=Z,40nm,1.0s			pmax	pmax		
HEH	comp=Z,500nm,3.9s			pmax	pmax		
HEH	comp=Z,2μm,16.5s			LR	LR		
HEH	comp=Z,4μm,14.7s			LR	LR		
HEH	comp=Z,6μm,14.2s			LR	LR		
JSD	**Sado**	**21.38**	**236**	P	**P**	**11 21 43.7**	**-2.0**
JSD	comp=Z,33nm,0.6s			IAmb	IAmb	11 22 01.5	
JSD	**Sado**	**21.38**	**236**	P	**P**	**11 21 49.0**	**+3.3**
M14K	**Bethel**	**21.77**	**53**	P	**P**	**11 21 50.2**	**+0.5**
N14K	**Kuskokwak Cree**	**21.85**	**55**	IAmb	IAmb	11 22 09.1	
	comp=Z,48nm,1.1s						
MDJ	**Mudanjiang**	**22.00**	**261**	P	**P**	**11 21 50.6**	**-1.8**
MDJ	comp=Z,41nm,1.1s			IAmb	IAmb	11 22 04.2	
MDJ	**Mudanjiang**	**22.00**	**261**	P	**P**	**11 21 50.0**	**-2.4**
MDJ				S	**S**	**11 25 51.2**	**-3.1**
MDJ				ScP	**ScP**	**11 29 27.0**	**+0.8**
MDJ	comp=Z,28nm,1.2s			pmax	pmax		
MDJ	comp=Z,2μm,13.9s			LR	LR		
MDJ	comp=Z,2μm,13.8s			LR	LR		
MDJ	comp=Z,4μm,13.1s			LR	LR		
K15K	**Wolf Creek Mou**	**22.17**	**49**	P	**P**	**11 21 53.2**	**-0.8**
MAJO	**Matsushiro**	**22.57**	**234**		**P**	**11 21 57.2**	**-1.3**
MAJO	comp=Z,59nm,0.7s			IAmb	IAmb	11 22 03.9	
MAJO	**Matsushiro**	**22.57**	**234**	*i* P	**P**	**11 21 58.3**	**-0.2**
MAJO	comp=Z,63nm,0.8s			pmax	pmax		
MJAR	**Matsushiro Arr**	**22.57**	**234**	P	**P**	**11 21 58.8**	**+0.3**
	comp=Z,19nm,0.6s,baz=24,slow=11,SNR=38						
MJAR	comp=Z,1μm,20.9s,baz=39,slow=39 comp=Z,19nm,0.6s			LR	LR	11 31 24.2	
MJB9	**Matsu-Tunnel**	**22.57**	**234**	P	**P**	**11 21 57.9**	**-0.6**
MJB9	comp=Z,56nm,0.7s			IAmb	IAmb	11 22 04.9	
N15K	**Kwethluk River**	**22.66**	**55**	IAmb	IAmb	11 22 13.8	
	comp=Z,23nm,0.8s						
BNX	**BinXian**	**22.75**	**266**	⇓P	**P**	**11 21 58.8**	**-1.6**
BNX	comp=Z,55nm,1.2s			pmax	pmax		
M16K	**Timber Creek**	**23.26**	**53**	IAmb	IAmb	11 22 29.8	
	comp=Z,32nm,1.1s						
CNBA	**Chernabura Isl**	**23.34**	**69**	P	**P**	**11 22 06.4**	**+0.2**
CNBA	comp=Z,32nm,1.0s			IAmb	IAmb	11 22 10.1	
JGF	**Kuroka**	**23.73**	**234**	P	**P**	**11 22 09.0**	**-1.3**
JGF	comp=Z,103nm,1.5s			IAmb	IAmb	11 22 30.8	
JGF	**Kuroka**	**23.73**	**234**	P	**P**	**11 22 13.4**	**+3.0**
TIXI	**Tiksi**	**23.77**	**335**		**P**	**11 22 09.8**	**-0.6**
TIXI	comp=Z,32nm,0.6s			IAmb	IAmb	11 22 11.9	
TIXI	**Tiksi**	**23.77**	**335**	LR	LR	11 32 21.4	
	comp=Z,1μm,18.8s,baz=146,slow=39						
TIXI	**Tiksi**	**23.77**	**335**	*ce*P	**P**	**11 22 09.3**	**-1.1**
TIXI	comp=Z,30nm,0.7s			pmax	pmax		
M17K	**Holitna River**	**24.01**	**52**	IAmb	IAmb	11 22 26.4	
	comp=Z,133nm,1.9s						
INU	**Inuyama**	**24.10**	**234**	P	**P**	**11 22 12.5**	**-1.3**
INU	**Inuyama**	**24.10**	**234**	P	**P**	**11 22 16.9**	**+3.1**
J18K	**Innoko River**	**24.51**	**47**	IAmb	IAmb	11 22 31.7	
	comp=Z,21nm,0.9s						
N18K	**Kilae Creek**	**24.75**	**54**	IAmb	IAmb	11 22 32.6	
	comp=Z,20nm,0.8s						
H19K	**Roundabout Mou**	**24.94**	**42**	P	**P**	**11 22 21.5**	**+0.4**
H19K	comp=Z,22nm,1.1s			IAmb	IAmb	11 22 39.7	
CN2	**Changchun**	**24.95**	**264**	P	**P**	**11 22 20.1**	**-1.3**
CN2				S	**S**	**11 26 37.5**	**-6.5**
CN2	comp=Z,20nm,0.7s			pmax	pmax		
CN2	comp=Z,2μm,16.0s			LR	LR		
CN2	comp=Z,2μm,16.0s			LR	LR		
CN2	comp=Z,3μm,18.0s			LR	LR		
D19K	**Kuna River**	**25.06**	**35**	IAmb	IAmb	11 22 26.1	
	comp=Z,32nm,1.2s						
E19K	**Redstone River**	**25.07**	**37**	IAmb	IAmb	11 22 45.5	
	comp=Z,21nm,0.9s						
ACHA	**Angle Creek He**	**25.18**	**60**	P	**P**	**11 22 22.9**	**-0.6**
L19K	**White Mountain**	**25.27**	**50**	IAmb	IAmb	11 22 43.1	
	comp=Z,42nm,1.7s						
D20K	**Etivluk River**	**25.65**	**35**	IAmb	IAmb	11 22 30.9	
	comp=Z,34nm,1.4s						
HILR	**Hailar Array B**	**25.75**	**280**	P	**P**	**11 22 27.3**	**-1.4**
	comp=Z,4.4nm,0.4s,baz=88,slow=7.9,SNR=8.8						
HILR	comp=Z,1μm,18.3s,baz=70,slow=40 comp=Z,4.4nm,0.4s			LR	LR	11 33 52.5	
HIA	**Hailar**	**25.87**	**279**	IAmb	IAmb	11 22 30.9	
	comp=Z,90nm,1.6s						
HIA	**Hailar**	**25.87**	**279**	P	**P**	**11 22 28.9**	**-0.9**
HIA	**Hailar**	**25.87**	**279**	P	**P**	**11 22 28.1**	**-1.7**
HIA	comp=Z,31nm,1.3s			pmax	pmax		
Q19K	**Cape Douglas,**	**25.98**	**58**	P	**P**	**11 22 32.1**	**+1.4**
Q19K	comp=Z,77nm,1.3s			IAmb	IAmb	11 22 45.6	
IMAR	**Indian Mountai**	**26.11**	**41**	P	**P**	**11 22 32.4**	**+0.7**
B21K	**Ikpikpuk River**	**26.61**	**33**	IAmb	IAmb	11 22 59.7	
	comp=Z,40nm,1.1s						
KDAK	**Kodiak Island**	**26.68**	**60**		**P**	**11 22 37.5**	**+0.5**
KDAK	comp=Z,17nm,0.8s			IAmb	IAmb	11 22 49.0	
KDAK	**Kodiak Island**	**26.68**	**60**	P	**P**	**11 22 37.7**	**+0.8**
	comp=Z,8.6nm,0.9s,baz=224,slow=3.8,SNR=11						
KDAK	comp=Z,645nm,19.5s,baz=248,slow=38 comp=Z,8.6nm,0.9s			LR	LR	11 34 02.9	
KDAK	**Kodiak Island**	**26.68**	**60**	P	**P**	**11 22 37.5**	**+0.5**
KDAK	comp=Z,17nm,0.8s			pmax	pmax		
BOD	**Bodaibo**	**26.81**	**300**	*e*P	**P**	**11 22 36.3**	**-1.8**
BOD	comp=Z,70nm,1.6s			pmax	pmax		
JMN	**Monobe**	**26.96**	**236**	IAmb	IAmb	11 23 08.1	
	comp=Z,76nm,1.3s						
JMN	**Monobe**	**26.96**	**236**	P	**P**	**11 22 42.9**	**+3.2**
SNY	**Shenyang**	**27.20**	**262**	⇑P	**P**	**11 22 41.5**	**-0.3**
SNY	comp=Z,12nm,0.7s			pmax	pmax		
SNY	comp=Z,84nm,3.9s			pmax	pmax		
SNY	comp=Z,2μm,21.3s			LR	LR		
SN

ILAR Eielson Array 28.89 45 P **P** **11 22 57.2 +0.6**
comp=Z,0.9nm,0.6s,baz=260,slow=7.8,SNR=11
ILAR LR LR 11 36 24.8
comp=Z,584nm,18.2s,baz=264,slow=40
comp=Z,0.9nm,0.6s
JNU Nakatsue 28.99 240 P **P** **11 22 58.3 +0.4**
comp=Z,6.9nm,0.9s,baz=52,slow=7.4,SNR=12
comp=Z,6.9nm,0.9s
JNU Nakatsue 28.99 240 P **P** **11 23 00.5 +2.6**
D25K Kavik River 29.38 35 IAmb IAmb 11 23 22.4
comp=Z,13nm,0.8s
J25K Salcha River, 29.54 45 IAmb IAmb 11 23 31.4
comp=Z,38nm,2.0s
E25K Arctic Village 29.55 38 IAmb IAmb 11 23 26.5
comp=Z,23nm,1.6s
DL2 Dalian 30.17 259 P **P** **11 23 07.2 -1.0**
DL2 S **S** **11 28 05.0 -1.4**
DL2 pmax pmax
comp=Z,38nm,0.8s
DL2 pmax pmax
comp=Z,370nm,5.1s
DL2 LR LR
comp=Z,2µm,13.7s
DL2 LR LR
comp=Z,2µm,16.1s
DL2 LR LR
comp=Z,2µm,15.1s
CRQM Cirque 30.98 52 IAmb IAmb 11 23 28.2
comp=Z,12nm,0.9s
L27K Beaver Creek, 31.23 48 IAmb IAmb 11 23 40.9
comp=Z,56nm,2.0s
BCAR Beaver Creek A 31.25 48 **P** **11 23 19.8 +2.1**
F28M Old Crow 31.69 39 **P** **11 23 23.1 +1.7**
F28M IAmb IAmb 11 23 40.2
comp=Z,34nm,1.9s
E29M Blow River 32.41 37 IAmb IAmb 11 24 15.8
comp=Z,22nm,1.6s
L29M L29M 32.89 47 IAmb IAmb 11 23 46.3
comp=Z,38nm,1.6s
H11N2 WAKE ISLAND Hy 33.08 170 T T 11 59 11.5
baz=353,slow=76,SNR=128
H11N3 WAKE ISLAND Hy 33.10 169 T T 11 59 17.1
baz=353,slow=76,SNR=93
H11N1 WAKE ISLAND Hy 33.10 170 T T 11 59 12.5
baz=353,slow=76,SNR=86
I30M Mount Dempster 33.30 43 IAmb IAmb 11 24 00.3
comp=Z,23nm,1.8s
INK Inuvik 34.03 37 P **P** **11 23 43.4 +1.6**
INK IAmb IAmb 11 24 19.9
comp=Z,34nm,1.9s
INK Inuvik 34.03 37 P **P** **11 23 43.4 +1.6**
INK pmax pmax
comp=Z,34nm,1.9s
ULN Ulaanbaatar 34.07 284 P **P** **11 23 41.8 -0.7**
ULN IAmb IAmb 11 23 43.0
comp=Z,16nm,1.1s
ULN Ulaanbaatar 34.07 284 *ce*P **P** **11 23 41.5 -1.0**
ULN pmax pmax
comp=Z,19nm,1.3s
H11S1 WAKE ISLAND Hy 34.27 170 T T 12 01 27.8
baz=352,slow=76,SNR=6.5
H11S3 WAKE ISLAND Hy 34.28 170 T T 12 01 22.7
baz=352,slow=76,SNR=7.0
H11S2 WAKE ISLAND Hy 34.29 170 T T 12 01 22.8
baz=352,slow=76,SNR=3.7
TLY Talaya 34.34 292 *ce*P **P** **11 23 45.6 +0.9**
TLY pmax pmax
comp=Z,19nm,1.7s
SONM Songino Array 34.47 284 P **P** **11 23 45.2 -0.8**
SONM IAmb IAmb 11 23 48.2
comp=Z,20nm,1.7s
SONM Songino Array 34.47 284 P **P** **11 23 45.1 -0.8**
comp=Z,2.0nm,0.5s,baz=60,slow=7.5,SNR=12
SONM PcP **PcP** **11 26 21.3 +0.5**
comp=Z,1.4nm,0.7s,baz=96,slow=1.5,SNR=3.0
SONM LR LR 11 39 26.8
comp=Z,2µm,18.7s,baz=60,slow=39
comp=Z,2.0nm,0.5s
TIA Tai'an 34.64 259 P **P** **11 23 47.4 0.0**
TIA pmax pmax
comp=Z,21nm,0.8s
TIA LR LR
comp=Z,740nm,17.4s
TIA LR LR
comp=Z,2µm,17.3s
TIA LR LR
comp=Z,2µm,14.3s
HHC Hu-ho-hao-te 35.09 271 *e*P **P** **11 23 51.0 -0.4**
HHC S **S** **11 29 22.4 -0.7**
HHC ScS **ScS** **11 34 09.3 -1.8**
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,100nm,6.0s
HHC LR LR
comp=Z,2µm,14.5s
HHC LR LR
comp=Z,2µm,14.1s
HHC LR LR
comp=Z,2µm,14.5s
ZAK Zakamensk 35.11 290 *e*P **P** **11 23 50.2 -1.3**
ZAK pmax pmax
comp=Z,20nm,1.5s
HNS HongShan 35.32 263 ⇑P **P** **11 23 52.0 -1.2**
HNS S **S** **11 29 21.3 -5.0**
HNS pmax pmax
comp=Z,33nm,1.4s
HNS LR LR
comp=Z,1µm,19.9s
HNS LR LR
comp=Z,2µm,19.1s
HNS LR LR
comp=Z,2µm,16.7s
SSE Sheshan 35.87 249 P **P** **11 23 55.1 -2.9**
SSE S **S** **11 29 34.2 -0.7**
SSE pmax pmax
comp=Z,9.0nm,0.7s
SSE pmax pmax
comp=Z,250nm,4.4s
SSE LR LR
comp=Z,250nm,25.2s
SSE LR LR
comp=Z,330nm,24.7s
BTO Baotou 36.18 271 *e*P **P** **11 23 59.7 -1.0**
BTO pP **pwP** **11 24 10.0 +0.3**
BTO S **S** **11 29 37.4 -2.4**
BTO pmax pmax
comp=Z,24nm,1.0s
BTO pmax pmax
comp=Z,280nm,6.3s
BTO LR LR
comp=Z,5µm,13.3s
BTO LR LR
comp=Z,4µm,14.0s
BTO LR LR
comp=Z,6µm,14.6s
A36M Sachs Harbour 36.38 30 **P** **11 24 04.4 +2.5**
A36M IAmb IAmb 11 24 07.0
comp=Z,13nm,0.8s
NJ2 Nanjing 36.51 253 *e*P **P** **11 24 05.1 +1.6**
NJ2 pmax pmax
comp=Z,28nm,0.9s
NJ2 pmax pmax
comp=Z,290nm,3.8s
NJ2 LR LR
comp=Z,1µm,19.0s
NJ2 LR LR
comp=Z,710nm,14.2s
NJ2 LR LR
comp=Z,870nm,17.5s
DLBC Dease Lake 38.02 53 LR LR 11 42 46.5
comp=Z,249nm,18.1s,baz=282,slow=41
KNGR Kungurtug, Tuv 38.28 293 *i* P **P** **11 24 17.1 -1.4**
KNGR pmax pmax
comp=Z,27nm,1.5s
LYN LuoYang 38.56 262 P **P** **11 24 21.1 +0.3**
LYN pmax pmax
comp=Z,40nm,0.6s
LYN LR LR
comp=Z,3µm,19.6s
LYN LR LR
comp=Z,2µm,21.7s
LYN LR LR
comp=Z,4µm,16.6s
WHN Wuhan 40.25 256 P **P** **11 24 35.2 +0.2**
WHN LR LR
comp=Z,2µm,12.8s
WHN LR LR
comp=Z,4µm,13.7s
WHN LR LR
comp=Z,3µm,14.7s
XAN Xi'an 41.06 264 P **P** **11 24 41.1 -0.6**
XAN pmax pmax
comp=Z,11nm,1.0s
XAN LR LR
comp=Z,2µm,15.1s
XAN LR LR
comp=Z,2µm,17.5s
XAN LR LR
comp=Z,3µm,16.3s
BBB Bella Bella 41.75 61 LR LR 11 42 23.4
comp=Z,149nm,18.2s,baz=282,slow=36
LZH Lanzhou 42.79 271 *e*P **P** **11 24 55.1 -0.9**
LZH pP pP 11 24 58.8 -1.7
LZH sP sP 11 25 02.3 +0.1
LZH S **S** **11 31 13.0 -6.2**
LZH pmax pmax
comp=Z,20nm,1.2s
LZH pmax pmax
comp=Z,130nm,4.4s
LZH LR LR
comp=Z,2µm,14.1s
LZH LR LR
comp=Z,2µm,14.1s
LZH LR LR
comp=Z,2µm,14.4s
LZDM Lanzhou Array 42.97 271 P **P** **11 24 55.3 -2.3**
comp=Z,1.2nm,0.3s,baz=91,slow=7.4,SNR=3.5
LZDM LR LR 11 44 36.5
comp=Z,719nm,18.2s,baz=50,slow=39
comp=Z,1.2nm,0.3s
GTA Gaotai 43.12 277 *e*P **P** **11 24 57.5 -1.1**
GTA pmax pmax
comp=Z,9.0nm,1.5s
GTA LR LR
comp=Z,1µm,15.6s
GTA LR LR
comp=Z,1µm,15.3s
GTA LR LR
comp=Z,2µm,16.0s
YKA Yellowknife Ar 43.27 42 P **P** **11 25 00.5 +1.2**
comp=Z,2.6nm,0.9s,baz=298,slow=8.6,SNR=3.1
comp=Z,2.6nm,0.9s
ENH Enshi 43.35 260 P **P** **11 25 00.8 +0.4**
ZAA0 Zalesovo Array 43.46 303 P **P** **11 24 59.0 -1.9**
ZALV Zalesovo Beam 43.46 303 P **P** **11 24 58.8 -2.1**
ZALV Zalesovo Beam 43.46 303 P **P** **11 24 58.7 -2.2**
comp=Z,3.1nm,0.6s,baz=64,slow=6.8,SNR=17
ZALV PP **PP** **11 26 40.7 -1.1**
comp=Z,1.0nm,0.5s,baz=47,slow=12,SNR=1.6
ZALV LR LR 11 44 27.0
comp=Z,917nm,18.7s,baz=65,slow=38
comp=Z,3.1nm,0.6s
DGZ Jazzator, Alta 44.32 297 *i* P **P** **11 25 07.4 -0.7**
DGZ pmax pmax
comp=Z,37nm,1.3s
CD2 Chengdu 46.37 265 P **P** **11 25 23.5 -0.9**
CD2 S **S** **11 32 10.5 -0.4**
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 LR LR
comp=Z,2µm,16.7s
CD2 LR LR
comp=Z,2µm,16.1s
CD2 LR LR
comp=Z,2µm,13.1s
ZSN Zaisan 47.00 296 *e*P **P** **11 25 28.0 -1.1**
comp=Z,10.0nm,1.1s
ZSN Zaisan 47.00 296 *e*P **P** **11 25 28.0 -1.1**
ZSN pmax pmax
comp=Z,10.0nm,1.1s
WMQ Urumqi 47.58 290 *e*P **P** **11 25 33.4 -0.4**
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ LR LR
comp=Z,2µm,12.5s
WMQ LR LR
comp=Z,1µm,15.5s
WMQ LR LR
comp=Z,670nm,14.5s
SPA0 Spitsbergen Ar 47.76 351 *e*P **P** **11 25 35.8 +1.2**
SPITS Spitsbergen Ar 47.76 351 P **P** **11 25 35.1 +0.4**
comp=Z,20nm,0.5s,baz=60,slow=8.8,SNR=102
SPITS LR LR 11 46 53.8
comp=Z,625nm,18.4s,baz=22,slow=38
comp=Z,20nm,0.5s
SPB2 Spitsbergen Ar 47.76 351 P **P** **11 25 35.9 +1.3**
GYA Guiyang 47.83 259 P **P** **11 25 36.4 +0.5**
GYA LR LR
comp=Z,2µm,16.5s
GOMU GeErMu 48.21 278 P **P** **11 25 38.4 -0.7**
GOMU LR LR
comp=Z,1µm,17.0s
GOMU LR LR
comp=Z,1µm,14.7s
GOMU LR LR
comp=Z,2µm,15.2s
KURK Kurchatov 48.41 303 **P** **11 25 38.3 -1.7**
KURK Kurchatov 48.41 303 P **P** **11 25 38.7 -1.3**
KURK Kurchatov 48.41 303 *ce*P **P** **11 25 38.5 -1.5**
KURK pmax pmax
comp=Z,110nm,1.3s
KURBB Kurchatov Arra 48.51 303 P **P** **11 25 39.0 -1.8**
comp=Z,23nm,0.6s,baz=58,slow=7.5,SNR=146
KURBB LR LR 11 47 28.0
comp=Z,1µm,18.1s,baz=162,slow=38
comp=Z,23nm,0.6s
KURBB Kurchatov Arra 48.51 303 P **P** **11 25 39.1 -1.7**
B08A Colville Reser 48.55 61 IAmb IAmb 11 25 54.2
comp=Z,51nm,1.9s
NEEM North Greenlan 48.76 9 *i* P **P** **11 25 43.0 +0.3**
NEEM IAmb IAmb 11 25 46.5
comp=Z,17nm,0.6s
MK31 Makanchi Array 48.80 297 *i* P **P** **11 25 40.9 -2.2**
MK31 pmax pmax
comp=Z,39nm,1.3s
MKAR Makanchi Array 48.80 297 P **P** **11 25 41.6 -1.5**
MKAR Makanchi Array 48.80 297 P **P** **11 25 41.2 -1.9**
comp=Z,3.2nm,0.5s,baz=60,slow=7.2,SNR=40
comp=Z,3.2nm,0.5s
MKAR Makanchi Array 48.80 297 P **P** **11 25 41.6 -1.5**
MAKZ Makanchi 48.97 297 P **P** **11 25 42.8 -1.6**
MAKZ IAmb IAmb 11 25 44.5
comp=Z,22nm,1.1s
MAKZ Makanchi 48.97 297 P **P** **11 25 42.8 -1.6**
MAKZ pmax pmax
comp=Z,22nm,1.2s
NEW Newport 49.79 60 LR LR 11 47 27.0
comp=Z,239nm,18.7s,baz=284,slow=37
E09A Wood Farm, Sta 50.32 62 IAmb IAmb 11 26 07.9
comp=Z,11nm,0.8s
PZH PanZhiHua 50.76 263 P **P** **11 25 58.2 -0.2**
PZH S **S** **11 33 15.0 +1.9**
PZH LR LR
comp=Z,620nm,12.0s
PZH LR LR
comp=Z,440nm,11.4s
PZH LR LR
comp=Z,900nm,13.5s
YBH Yreka Blue Hor 50.79 70 LR LR 11 47 08.0
comp=Z,10nm,18.0s,baz=273,slow=36
DAG Danmarks Havn 50.96 360 P **P** **11 26 00.0 +1.0**
DAG pmax pmax
comp=Z,32nm,1.3s
DAG Danmarks Havn 50.96 360 *i* P **P** **11 25 59.2 +0.2**
DAG IAmb IAmb 11 26 02.1
comp=Z,18nm,0.7s
BVA0 Borovoye Array 51.09 309 *i* P **P** **11 25 58.9 -1.4**
BVAR Borovoye Array 51.09 309 P **P** **11 25 58.7 -1.7**
comp=Z,15nm,0.5s,baz=60,slow=7.9,SNR=81
BVAR LR LR 11 49 51.8
comp=Z,983nm,18.5s,baz=47,slow=39
comp=Z,15nm,0.5s
BORK Borovoye 51.11 309 *ce*P **P** **11 25 59.5 -1.0**
BORK pmax pmax
comp=Z,8.0nm,0.5s
KMI Kunming 51.18 261 P **P** **11 26 01.8 +0.2**
KMI pmax pmax
comp=Z,14nm,1.1s
KMI LR LR
comp=Z,1µm,18.7s
KMI LR LR
comp=Z,1µm,17.6s
KMI LR LR
comp=Z,1µm,14.6s
QIZ Qiongzhong 51.66 250 P **P** **11 26 04.6 -0.4**
QIZ S **S** **11 33 25.4 0.0**
QIZ LR LR
comp=Z,710nm,8.4s
QIZ LR LR
comp=Z,730nm,8.4s
QIZ LR LR
comp=Z,850nm,8.8s
BMO Blue Mountains 51.82 64 IAmb IAmb 11 26 19.2
comp=Z,26nm,1.9s
BRZS Berezniki 51.88 305 *e*P **P** **11 26 05.4 -1.0**
BRZS Berezniki 51.88 305 *e*P **P** **11 26 05.3 -1.0**
TDK Taldyqorghan 52.04 297 *e*P **P** **11 26 06.7 -1.0**
comp=Z,18nm,0.6s
TDK Taldyqorghan 52.04 297 *e*P **P** **11 26 06.6 -1.0**
TDK pmax pmax
comp=Z,17nm,0.6s
O03E Paynes Creek 52.24 71 **P** **11 26 10.9 +1.7**
SHLS Shalkode 52.65 294 *e*P **P** **11 26 09.4 -2.9**
comp=Z,4.7nm,0.5s
SHLS Shalkode 52.65 294 *e*P **P** **11 26 09.4 -2.9**
SHLS pmax pmax
comp=Z,5.0nm,0.5s
VADS Vadso 52.72 341 *e*P **P** **11 26 12.4 +0.2**
UZB Uzynbulak 52.90 295 *e*P **P** **11 26 12.9 -1.3**
UZB Uzynbulak 52.90 295 *e*P **P** **11 26 12.8 -1.3**
SVE Sverdlovsk 52.99 317 *e*P **P** **11 26 12.4 -2.0**
SATY Saty 53.30 295 *e*P **P** **11 26 15.9 -1.2**
comp=Z,11nm,1.1s
SATY Saty 53.30 295 *e*P **P** **11 26 15.8 -1.2**
SATY pmax pmax
comp=Z,11nm,1.1s
SLVN Son La 53.34 257 **P** **11 26 18.5 +0.9**
SLVN Son La 53.34 257 P **P** **11 26 18.1 +0.6**
BEKR Beckworth 53.36 70 IAmb IAmb 11 26 32.0
comp=Z,25nm,1.9s
LVZ Lovozero 53.38 338 P **P** **11 26 17.5 +0.3**
LVZ IAmb IAmb 11 26 19.4
comp=Z,23nm,0.9s
LVZ Lovozero 53.38 338 *ce*P **P** **11 26 18.2 +1.0**
LVZ pmax pmax
comp=Z,52nm,1.7s
LVZ Lovozero 53.38 338 P **P** **11 26 17.1 -0.1**
comp=Z,38nm,1.2s
DBG Daneborg 53.44 0 *i* P **P** **11 26 17.2 -0.3**
DBG IAmb IAmb 11 26 20.1
comp=Z,7.9nm,0.5s
MPK Martis Peak 53.93 71 P **P** **11 26 22.8 +0.9**
MPK IAmb IAmb 11 27 10.7
comp=Z,38nm,1.8s
ARA0 ARCESS Array S 53.95 342 *e*P **P** **11 26 21.3 0.0**
ARCES ARCESS Array B 53.95 342 P **P** **11 26 21.6 +0.2**
ARCES ARCESS Array B 53.95 342 P **P** **11 26 21.3 -0.1**
comp=Z,8.9nm,0.7s,baz=44,slow=8.8,SNR=17
ARCES LR LR 11 55 53.1
comp=Z,264nm,18.9s,baz=44,slow=43
comp=Z,8.9nm,0.7s
AAA Alma-Ata 54.02 296 *e*P **P** **11 26 21.1 -1.2**
comp=Z,8.7nm,0.4s
AAA Alma-Ata 54.02 296 *e*P **P** **11 26 21.1 -1.2**
AAA pmax pmax
comp=Z,9.0nm,0.4s
PAHR Pah Rah Range 54.02 70 IAmb IAmb 11 26 36.8
comp=Z,27nm,1.9s
TNSS Tian-Shan 54.12 296 *e*P **P** **11 26 21.9 -1.5**
TNSS Tian-Shan 54.12 296 *e*P **P** **11 26 21.9 -1.5**
ARTI Arti 54.21 318 **P** **11 26 22.4 -1.0**
ARTI Arti 54.21 318 LR LR 11 52 37.9
comp=Z,976nm,19.5s,baz=41,slow=40
ARTI Arti 54.21 318 *c* P **P** **11 26 22.5 -0.9**
ARTI 11 27 23.4
ARTI S **S** **11 33 58.6 -0.8**
ARTI SS **SKiKP** **11 37 29.9 -3.3**
ARTI pmax pmax
comp=Z,40nm,1.5s
ARTI MLR MLR
comp=Z,950nm,20.0s
PNTR Pine Nut 54.31 70 IAmb IAmb 11 26 44.8
comp=Z,12nm,0.7s
SUMG Summit 54.45 7 **P** **11 26 26.1 +0.6**
SUMG Summit 54.45 7 P **P** **11 26 26.1 +0.6**
SUMG pmax pmax
comp=Z,73nm,1.5s
SUMG Summit 54.45 7 *i* P **P** **11 26 26.0 +0.6**
SUMG IAmb IAmb 11 26 27.5
comp=Z,22nm,0.8s
TARG Taragay, Kyrgy 54.51 294 IAmb IAmb 11 27 42.1
comp=Z,32nm,1.8s
TARG Taragay, Kyrgy 54.51 294 P **P** **11 26 23.7 -2.6**
TARG pmax pmax
comp=Z,6.0nm,1.8s
CMB Columbia Colle 54.57 72 IAmb IAmb 11 26 41.1
comp=Z,19nm,1.8s
KDJ Kajisay 54.59 295 IAmb IAmb 11 26 27.0
comp=Z,14nm,0.8s
KDJ Kajisay 54.59 295 P **P** **11 26 24.4 -2.2**
KDJ pmax pmax
comp=Z,20nm,1.4s
KTK1 Kautokeino 54.82 343 *e*P **P** **11 26 27.6 0.0**
JETT Jettan, Norway 54.84 344 *e*P **P** **11 26 28.6 +0.8**
LSA Lhasa 54.91 274 IAmb IAmb 11 26 32.2
comp=Z,9.9nm,0.9s
TKM2 Tokmak 2 54.94 297 P **P** **11 26 27.9 -1.2**
SNR=11
TRO Tromso 55.01 345 *e*P **P** **11 26 29.1 +0.1**
TRO Tromso 55.01 345 P **P** **11 26 28.7 -0.3**
ULHL Ulahol 55.03 296 P **P** **11 26 29.1 -0.8**
SNR=7.0
BOOM Boomskoye usch 55.04 296 IAmb IAmb 11 26 30.5
comp=Z,8.4nm,0.8s
SGDS Sogindy 55.11 298 *e*P **P** **11 26 29.1 -1.1**
USP Ospenovka 55.30 298 P **P** **11 26 30.7 -0.9**
SNR=16
KBK Karagaybulak 55.47 297 P **P** **11 26 33.0 +0.1**
SNR=7.4
NVAR Mina Array Bea 55.51 70 P **P** **11 26 35.2 +1.9**
NVAR Mina Array Bea 55.51 70 P **P** **11 26 35.5 +2.2**
comp=Z,2.1nm,0.7s,baz=300,slow=7.4,SNR=27
NVAR LR LR 11 48 36.4
comp=Z,134nm,19.4s,baz=258,slow=34
comp=Z,2.1nm,0.7s
LHV Little Huntoon 55.51 70 IAmb IAmb 11 27 22.7
comp=Z,40nm,1.7s
SGF Sodankyl 55.54 340 P **P** **11 26 33.2 +0.4**
SGF pmax pmax
comp=Z,25nm,1.4s
ELK Elko 55.67 66 LR LR 11 48 45.2
comp=Z,171nm,19.4s,baz=311,slow=34
AAK Ala-Archa 55.73 297 **P** **11 26 33.9 -0.8**
AAK IAmb IAmb 11 26 35.2
comp=Z,16nm,1.1s
AAK Ala-Archa 55.73 297 P **P** **11 26 34.0 -0.8**
AAK Ala-Archa 55.73 297 P **P** **11 26 33.9 -0.8**
SNR=13
AAK Ala-Archa 55.73 297 *ce*P **P** **11 26 34.1 -0.7**
AAK pmax pmax
comp=Z,22nm,1.3s
MOOW Moose Ponds 56.09 61 IAmb IAmb 11 26 48.7
comp=Z,20nm,1.9s
EKS2 Erkin-Say 56.10 297 P **P** **11 26 37.1 -0.3**
SNR=12
KIRV Kirov 56.11 324 LR LR 11 53 44.0
comp=Z,961nm,18.3s,baz=40,slow=39
KIRV Kirov 56.11 324 *ce*P **P** **11 26 37.5 +0.5**
MSF Maaselka 56.29 338 P **P** **11 26 38.8 +0.5**
MSF pmax pmax
comp=Z,69nm,1.1s
ARLS Aral 56.35 296 P **P** **11 26 38.7 -0.5**
ARLS pmax pmax
comp=Z,13nm,1.0s
CWC Cottonwood Cre 57.00 72 IAmb IAmb 11 27 16.6
comp=Z,17nm,1.7s
KSH Kashi 57.04 293 P **P** **11 26 47.5 +3.4**
KSH pmax pmax
comp=Z,8.0nm,1.9s
KSH LR LR
comp=Z,420nm,17.9s
KSH LR LR
comp=Z,680nm,14.4s
KSH LR LR
comp=Z,600nm,18.0s
HWUT Hardware Ranch 57.11 63 IAmb IAmb 11 26 58.6
comp=Z,7.9nm,0.8s
STEI Steigen 57.14 345 *e*P **P** **11 26 44.2 0.0**
LOF Lofoten 57.21 346 *e*P **P** **11 26 44.7 0.0**

SPR3 Spring Creek 3 57.38 67 IAmb IAmb 11 27 02.0
comp=Z,36nm,2.0s
BW06 Boulder Array 57.40 61 IAmb IAmb 11 27 00.2
comp=Z,8.9nm,0.8s
DUG Dugway, Tooele 57.40 65 IAmb IAmb 11 27 24.9
comp=Z,9.9nm,1.1s
DUG Dugway, Tooele 57.40 65 P **P** **11 26 51.1 +4.4**
DUG pmax pmax
comp=Z,9.0nm,1.6s
PD31 Pinedale Array 57.40 61 IAmb IAmb 11 27 00.2
comp=Z,8.9nm,0.8s
PDAR Pinedale Array 57.40 61 P **P** **11 26 48.4 +1.6**
comp=Z,2.1nm,0.8s,baz=327,slow=3.0,SNR=16
PDAR LR LR 11 49 28.5
comp=Z,85nm,21.8s,baz=276,slow=34
comp=Z,2.1nm,0.8s
S11A Rachel 57.51 69 IAmb IAmb 11 27 19.8
comp=Z,15nm,1.1s
KK31 Karatay Array 57.55 300 IAmb IAmb 11 26 47.7
comp=Z,12nm,0.8s
KK31 Karatay Array 57.55 300 *i* P **P** **11 26 46.2 -1.3**
KKAR Karatay Array 57.55 300 P **P** **11 26 46.9 -0.6**
KKAR Karatay Array 57.55 300 P **P** **11 26 46.9 -0.6**
FAUS Fauske 57.63 345 *eP* **P** **11 26 47.9 +0.2**
KLMR Klimovskoe 57.66 330 *eP* **P** **11 26 46.3 -1.6**
KLMR pmax pmax
comp=Z,77nm,1.0s
KLMR MLR MLR
comp=Z,1μm,19.0s
ARK Arkit 57.67 298 P **P** **11 26 46.8 -1.8**
ARK pmax pmax
comp=Z,4.0nm,0.8s
FURC Furnace Creek, 57.69 71 IAmb IAmb 11 27 19.7
comp=Z,12nm,0.9s
OUL Oulu 57.69 339 P **P** **11 26 48.8 +0.7**
OUL pmax pmax
comp=Z,36nm,0.9s
TPNV Topopah Spring 57.70 70 IAmb IAmb 11 27 21.5
comp=Z,17nm,1.4s
BRLS Boroldav 57.96 300 *eP* **P** **11 26 51.1 +0.7**
BRLS Boroldav 57.96 300 *eP* **P** **11 26 51.1 +0.7**
GWY Greenwater Val 58.00 71 IAmb IAmb 11 27 05.3
comp=Z,34nm,2.0s
CCCA Chr Cany lake 58.05 72 IAmb IAmb 11 27 22.7
comp=Z,15nm,1.0s
CHTO Chiang Mai 58.24 259 P **P** **11 26 53.6 +0.9**
CHTO Chiang Mai 58.24 259 P **P** **11 26 53.6 +0.9**
CHTO Chiang Mai 58.24 259 P **P** **11 26 53.4 +0.8**
CHTO Chiang Mai 58.24 259 P **P** **11 26 53.6 +0.9**
CHTO pmax pmax
comp=Z,124nm,1.6s
JOF Joensuu 58.26 335 *eP* **P** **11 26 52.8 +0.7**
TRKS Terek-Say 58.30 298 P **P** **11 26 50.8 -2.2**
TRKS pmax pmax
comp=Z,4.0nm,0.8s
SFJD Kangerlussuaq 58.45 14 LR LR 11 55 16.7
comp=Z,430nm,18.1s,baz=347,slow=39
IUG luzhnay 58.47 299 *eP* **P** **11 26 53.0 -1.1**
comp=Z,17nm,0.9s
IUG luzhnay 58.47 299 *eP* **P** **11 26 53.0 -1.1**
IUG pmax pmax
comp=Z,17nm,0.9s
AB31 Akbulak array 58.50 311 IAmb IAmb 11 29 01.3
comp=Z,20nm,1.6s
AB31 Akbulak array 58.50 311 *eP* **P** **11 26 52.9 -1.1**
ABKAR Akbulak array 58.50 311 **P** **11 26 52.5 -1.5**
CM31 Chiang Mai Arr 58.51 259 IAmb IAmb 11 26 56.3
comp=Z,17nm,0.8s
CM31 Chiang Mai Arr 58.51 259 P **P** **11 26 56.0 +1.4**
SNR=7.8
CMAR Chiang Mai Arr 58.51 259 **P** **11 26 55.4 +0.9**
CMAR Chiang Mai Arr 58.51 259 P **P** **11 26 55.6 +1.1**
comp=Z,10nm,0.7s,baz=26,slow=6.9,SNR=58
CMAR LR LR 11 54 36.0
comp=Z,497nm,20.2s,baz=115,slow=39
comp=Z,10nm,0.7s
AKTO Aktyubinsk 58.53 313 LR LR 11 54 47.6
comp=Z,980nm,19.6s,baz=18,slow=39
VAGH Vaagaholmen 58.55 346 *eP* **P** **11 26 54.9 +0.9**
CHM Chimkent 58.58 300 *eP* **P** **11 26 53.7 -1.1**
CHM Chimkent 58.58 300 *eP* **P** **11 26 53.6 -1.1**
RAUS Rausandaksla 58.70 345 *eP* **P** **11 26 54.9 -0.3**
EVN Everest 58.80 276 IAmb IAmb 11 27 11.9
comp=Z,9.9nm,0.7s
ULM Lac du Bonnet 58.87 47 LR LR 11 54 40.6
comp=Z,363nm,18.6s,baz=340,slow=38
MOR8 Moi Rana 58.88 345 *eP* **P** **11 26 54.9 -1.6**
TMUT Trail Mountain 58.91 65 IAmb IAmb 11 27 11.1
comp=Z,6.0nm,0.6s
STOK Stokkvaagen 58.95 345 *eP* **P** **11 26 58.3 +1.4**
SZCU Shurtz Canyon 59.05 68 IAmb IAmb 11 27 49.0
comp=Z,14nm,1.6s
LEIR Leirfjorden 59.14 345 *eP* **P** **11 26 58.6 +0.4**
RSSD Black Hills 59.34 57 **P** **11 27 02.0 +1.8**
RSSD Black Hills 59.34 57 P **P** **11 27 02.0 +1.8**
RSSD pmax pmax
comp=Z,19nm,0.8s
SRU San Rafael Swe 59.42 65 IAmb IAmb 11 27 14.8
comp=Z,9.1nm,0.8s
KNB Kanab 59.61 68 IAmb IAmb 11 27 17.1
comp=Z,24nm,1.7s
BRDH Bariadhala 59.74 268 LR LR 11 55 23.5
comp=Z,505nm,18.5s,baz=35,slow=39
PFO Pinyon Flats O 59.93 73 LR LR 11 48 32.6
comp=Z,237nm,21.8s,baz=286,slow=32
HMU Henry Mountain 60.13 66 IAmb IAmb 11 27 19.8
comp=Z,12nm,0.7s
VAF Ylistaro 60.17 339 *eP* **P** **11 27 06.2 +0.8**
KEF Keuruu 60.46 338 *eP* **P** **11 27 07.9 +0.5**
PV22 Blue Mesa, Par 60.78 64 IAmb IAmb 11 27 32.1
comp=Z,9.6nm,1.1s
FINES FINESS Array B 60.81 337 P **P** **11 27 10.7 +1.0**
FINES FINESS Array B 60.81 337 P **P** **11 27 10.3 +0.6**
comp=Z,14nm,0.7s,baz=36,slow=8.0,SNR=75
FINES LR LR 11 57 02.2
comp=Z,436nm,18.4s,baz=28,slow=40
comp=Z,14nm,0.7s
PV20 West Nyswonger 60.82 64 IAmb IAmb 11 27 25.2
comp=Z,12nm,0.6s
PV19 Morning Glory 60.84 64 IAmb IAmb 11 27 23.9
comp=Z,11nm,0.7s
PV16 Nyswonger Mesa 60.87 64 IAmb IAmb 11 27 48.4
comp=Z,13nm,1.1s
PV18 Skein Mesa, Pa 60.92 64 IAmb IAmb 11 27 28.1
comp=Z,14nm,0.7s
PV13 Radium Mtn., P 61.03 64 IAmb IAmb 11 27 25.4
comp=Z,8.9nm,0.7s
MRSI Marisa 61.19 226 P **P** **11 27 13.1 +0.2**
comp=Z,30nm,1.3s
CHGR Chuyangaron 61.41 297 **P** **11 27 13.6 -0.7**
CHGR Chuyangaron 61.41 297 P **P** **11 27 13.6 -0.7**
CHGR pmax pmax
comp=Z,31nm,0.8s
BELG Belogornoye 61.43 320 *i* P **P** **11 27 14.2 +0.1**
BELG pmax pmax
comp=Z,18nm,1.5s
ISCO Idaho Springs 61.60 61 P P 11 27 21.7 +5.9
ISCO pmax pmax
comp=Z,10.0nm,1.7s
HNR Honiara 61.73 181 LR LR 11 49 59.8
comp=Z,222nm,21.4s,baz=20,slow=32
RAF Rauma 62.17 339 *eP* **P** **11 27 20.0 +1.1**
MEF Metsahovi 62.28 337 *eP* **P** **11 27 20.2 +0.5**
MOS Moscow 62.37 328 *eP* **P** **11 27 18.9 -1.4**
MOS *e* 11 27 30.1
MOS pmax pmax
comp=Z,200nm,1.4s
MOS pmax pmax
comp=Z,83nm,1.2s
MOS MLR MLR
comp=Z,1μm,19.0s
S22A 4UR Ranch, Cre 62.42 63 IAmb IAmb 11 27 35.4
comp=Z,27nm,1.9s
OBN Obninsk 63.23 328 LR LR 11 58 34.1
comp=Z,562nm,18.7s,baz=346,slow=40
OBN Obninsk 63.23 328 *c* *iP* **P** **11 27 25.8 -0.2**
OBN *i* *SP **pwP** **11 27 40.7 +7.0**
OBN *e* 11 27 55.6
OBN *i* 11 29 51.8
OBN *eS* **S** **11 36 00.6 +4.2**
OBN SS **SS** **11 39 56.0 -5.7**
OBN pmax pmax
comp=Z,108nm,1.7s
OBN MLR MLR
comp=Z,577nm,17.0s
OBN Obninsk 63.23 328 P **P** **11 27 26.1 +0.1**
comp=Z,29nm,0.5s
VSU Vasula 63.24 335 *eP* **P** **11 27 26.3 +0.1**
VSU Vasula 63.24 335 *ce* P **P** **11 27 26.2 +0.1**
VSU pmax pmax
comp=Z,99nm,1.7s
MOL Molde 63.31 347 *eP* **P** **11 27 27.8 +1.3**
AAL Aland 63.31 339 *eP* **P** **11 27 27.2 +0.7**
AKN Aaknes 63.77 347 *eP* **P** **11 27 30.4 +0.8**
SBUM Sibu 64.08 236 **P** **11 27 32.5 +0.3**
SBUM Sibu 64.08 236 P **P** **11 27 34.4 +2.2**
NB2 NORSAR Subarra 64.20 344 P **P** **11 27 32.7 +0.2**
comp=Z,5.5nm,0.5s,baz=20,slow=6.9
NB2 NORSAR Subarra 64.20 344 P **P** **11 27 32.6 +0.1**
NB2 pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 64.20 344 P **P** **11 27 32.6 +0.2**
comp=Z,5.4nm,0.7s,baz=20,slow=6.6,SNR=42
NOA LR LR 11 57 28.6
comp=Z,184nm,21.2s,baz=40,slow=38
comp=Z,5.4nm,0.7s
NORES NORESS Array B 64.43 344 P **P** **11 27 35.0 +1.1**
KBL Kabul 64.46 294 **P** **11 27 35.0 +0.2**
KBL IAmb IAmb 11 27 35.8
comp=Z,12nm,0.8s
KBL Kabul 64.46 294 P **P** **11 27 34.8 -0.1**
KBL Kabul 64.46 294 P **P** **11 27 35.0 +0.2**
KBL pmax pmax
comp=Z,12nm,0.8s
LPSR Galich'ya Gora 64.50 325 *eP* **P** **11 27 32.1 -2.4**
LPSR pmax pmax
comp=Z,30nm,0.8s
HFS Hagfors 64.61 343 P **P** **11 27 35.6 +0.4**
comp=Z,5.2nm,0.5s,baz=36,slow=5.5,SNR=30
HFS LR LR 12 00 19.2
comp=Z,454nm,18.5s,baz=30,slow=40
comp=Z,5.2nm,0.5s
VRH Novokhopyorsk 64.63 323 *eP* **P** **11 27 31.9 -3.4**
VRH pmax pmax
comp=Z,40nm,0.8s
ANMO Albuquerque 64.67 65 LR LR 11 54 00.4
comp=Z,157nm,20.7s,baz=37,slow=34
ANMO Albuquerque 64.67 65 *i* P **P** **11 27 37.3 +1.1**
ANMO pmax pmax
comp=Z,13nm,3.3s
SLIT Slitere, Latvi 65.09 337 *eP* **P** **11 27 39.5 +1.2**
VORR Voronezh 65.16 324 *eP* **P** **11 27 35.6 -3.2**
VORR pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 65.55 324 *eP* **P** **11 27 38.8 -2.5**
VSR pmax pmax
comp=Z,30nm,1.0s
VORD Divnogorie 65.71 324 *eP* **P** **11 27 40.3 -2.1**
VORD pmax pmax
comp=Z,20nm,1.0s
SCHQ Schefferville 65.93 28 P **P** **11 27 44.8 +1.0**
comp=Z,5.0nm,0.7s,baz=293,slow=1.8,SNR=4.3
comp=Z,5.0nm,0.7s
SPSI Sidrap Palu 66.11 226 P **P** **11 27 45.7 +0.4**
comp=Z,26nm,1.3s
BNSI Bone 66.35 225 P **P** **11 27 48.3 +1.4**
comp=Z,24nm,1.2s
MNK Minsk 66.39 332 *i* P **P** **11 27 46.8 +0.1**
MNK *i* 11 30 12.6
MNK *i* PPP PPP 11 31 49.2
MNK *i* S **S** **11 36 36.0 +0.5**
MNK *i* SS **SS** **11 40 55.7 +4.7**
MNK pmax pmax
comp=E,68nm,0.9s
MNK pmax pmax
comp=Z,36nm,0.8s
MNK pmax pmax
comp=N,22nm,0.7s
MNK MLR MLR
comp=N,572nm,17.0s
MNK MLR MLR
comp=E,618nm,17.0s
MNK MLR MLR
comp=Z,670nm,16.0s
PABE Paberze 66.57 335 *eP* **P** **11 27 48.6 +0.8**
KAPI Kappang 67.05 225 P **P** **11 27 51.7 +0.3**
comp=Z,4.0nm,0.5s,baz=61,slow=19,SNR=2.1
KAPI LR LR 11 59 34.9
comp=Z,66nm,19.6s,baz=112,slow=38
comp=Z,4.0nm,0.5s
MNTX Cornudas Mount 67.69 67 IAmb IAmb 11 28 09.4
comp=Z,20nm,1.9s
FABU Falkenberg 67.73 342 *i* P **P** **11 27 54.3 -0.8**
BBKI Banjar Baru 67.91 231 P **P** **11 27 57.8 +1.0**
SMWD Samnorwood 67.94 61 IAmb IAmb 11 28 10.3
comp=Z,16nm,1.0s
COEN Coen 67.96 199 P **P** **11 28 00.6 +3.6**
KULM Kulim 67.98 249 **P** **11 27 57.9 +0.6**
KULM Kulim 67.98 249 P **P** **11 27 58.5 +1.2**
DEL Delary 68.00 341 *i* P **P** **11 27 55.9 -1.0**
HRA Herat 68.30 298 IAmb IAmb 11 28 01.8
comp=Z,16nm,1.4s
BJUU Bjuv 68.54 341 *i* P **P** **11 28 00.7 +0.4**
VHRN Van Horn 68.59 67 IAmb IAmb 11 28 20.7
comp=Z,30nm,1.9s
LUNU Lund 68.88 341 ⇓ *i* P **P** **11 28 02.3 0.0**
MAK Makhachkala 68.89 314 *c* *iP* **P** **11 27 59.8 -2.9**
MAK *e* 11 30 31.3
MAK *e* PPP PPP 11 32 14.2
MAK *eS* **S** **11 37 01.6 -4.2**
MAK *eSS* **SS** **11 41 26.2 -4.0**
MAK pmax pmax
comp=Z,209nm,1.1s
MAK MLR MLR
comp=Z,985nm,18.0s
WMOK Wichita Mounta 68.99 60 IAmb IAmb 11 28 16.6
comp=Z,10nm,0.9s
GOF Gofitskoye 69.10 318 *ce* P **P** **11 28 04.0 0.0**
AK03 Malin Array Si 69.30 329 P **P** **11 28 04.8 -0.3**
AK21 Malin Array Si 69.31 330 P **P** **11 28 05.0 -0.1**
AKASG Malin Array Be 69.32 329 P **P** **11 28 06.1 +0.9**
AKASG Malin Array Be 69.32 329 P **P** **11 28 04.9 -0.3**
comp=Z,4.9nm,0.4s,baz=31,slow=6.1,SNR=38
AKASG LR LR 12 01 54.2
comp=Z,685nm,18.4s,baz=26,slow=39
comp=Z,4.9nm,0.4s
AKBB Malin Array Si 69.32 329 *ce* P **P** **11 28 05.2 0.0**
AKBB pmax pmax
comp=Z,50nm,1.5s
AKBB Malin Array Si 69.32 329 P **P** **11 28 04.8 -0.4**
KIEV Kiev 69.33 329 P **P** **11 28 05.5 +0.2**
KIEV Kiev 69.33 329 ⇓ P **P** **11 28 05.2 0.0**
KIEV Kiev 69.33 329 ⇓ P **P** **11 28 05.2 0.0**
KIEV Kiev 69.33 329 P **P** **11 28 04.9 -0.4**
comp=Z,2μmcomp=Z,115nm,1.4s
AK01 Malin Array Si 69.33 329 P **P** **11 28 05.1 -0.2**
MNHN Monahans 69.42 65 IAmb IAmb 11 28 19.5
comp=Z,9.5nm,0.7s
ERBR Yeremizino-Bor 69.59 320 *eP* **P** **11 28 07.2 +0.2**
ERBR *e* *PP **pwP** **11 28 17.4 +0.6**
ERBR *eS* **S** **11 37 15.8 +1.8**
ERBR pmax pmax
comp=Z,46nm,0.7s
ERBR MLR MLR
comp=Z,969nm,16.0s
MI28 Mi28,Pidlybu 69.59 330 P **P** **11 28 07.2 +0.3**
EDFI Ende, Flores 69.60 222 P **P** **11 28 06.9 -0.5**
comp=Z,9.6nm,0.9s
RNPP9 Sopachiv 69.69 332 P **P** **11 28 07.6 +0.1**
RNPP8 Varash 69.77 332 P **P** **11 28 08.2 +0.2**
AKT Akhty 69.98 313 *eP* **P** **11 28 07.7 -1.9**
AKT *e* 11 28 29.6
AKT *e* 11 30 42.0
AKT pmax pmax
comp=Z,45nm,1.6s
KIV Kislovodsk 70.15 317 **P** **11 28 11.3 +0.7**
KIV Kislovodsk 70.15 317 P **P** **11 28 11.1 +0.5**
KIV Kislovodsk 70.15 317 *eP* **P** **11 28 10.9 +0.3**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,609nm,18.0s
KIV Kislovodsk 70.15 317 P **P** **11 28 11.2 +0.7**
comp=Z,25nm,0.7s
SADO Sadowa 70.24 41 LR LR 12 01 46.7
comp=Z,246nm,18.6s,baz=326,slow=38
KBZ Khabaz 70.25 317 P **P** **11 28 11.3 +0.3**
comp=Z,13nm,0.9s,baz=90,slow=4.0,SNR=24
KBZ LR LR 12 04 19.8
comp=Z,716nm,18.7s,baz=12,slow=41
comp=Z,13nm,0.9s
KBZ Khabaz 70.25 317 *ce* P **P** **11 28 11.5 +0.5**
KBZ pmax pmax
comp=Z,38nm,1.5s
SHA1 Shidzhatmaz 70.34 317 *i* P **P** **11 28 12.3 +0.4**
LABN Labinsk 70.38 319 *eP* **P** **11 28 08.5 -3.4**
LABN *e* *PP **pwP** **11 28 18.5 -3.2**
LABN *eS* **S** **11 37 17.6 -5.7**
LABN pmax pmax
comp=Z,23nm,0.6s
LABN MLR MLR
comp=N,2μm,22.0s
LABN MLR MLR
comp=Z,980nm,18.0s
LABN MLR MLR
comp=E,1μm,18.0s
TX31 Lajitas Ar. Si 70.44 67 **P** **11 28 13.7 +1.1**
TX31 IAmb IAmb 11 28 33.8
comp=Z,22nm,1.8s
TXAR Lajitas Array 70.44 67 P **P** **11 28 13.6 +1.0**
comp=Z,1.7nm,0.5s,baz=300,slow=4.5,SNR=42
TXAR LR LR 11 57 16.3
comp=Z,107nm,20.0s,baz=293,slow=34
comp=Z,1.7nm,0.5s
LUBAR Lubar, Ukraine 70.46 330 P **P** **11 28 11.8 -0.4**
BSEG Bad Segeberg 71.08 342 P **P** **11 28 17.7 +1.8**
BSEG pmax pmax
comp=Z,12nm,1.1s
HORU Horodok 71.49 330 P **P** **11 28 19.7 +1.2**
ANN Anapa 71.54 321 *eP* **P** **11 28 17.4 -1.4**
ANN *e* *PP **pwP** **11 28 28.9 +0.2**
ANN *e* 11 31 01.9
ANN *eS* **S** **11 37 35.3 -1.3**
ANN *eSS* **SS** **11 42 16.8 +6.1**
ANN pmax pmax
comp=Z,15nm,0.6s
ANN MLR MLR
comp=Z,454nm,15.0s
ANN MLR MLR
comp=E,837nm,16.0s
ANN MLR MLR
comp=N,860nm,17.0s
EKA Eskdalemuir Ar 71.68 350 P **P** **11 28 19.8 +0.2**
comp=N,2.2nm,0.5s,baz=20,slow=5.8,SNR=11
comp=N,2.2nm,0.5s
HYBB Hyderabad (bro 71.71 275 *eP* **P** **11 28 22.2 +1.9**
BKNI Bangkinang 71.84 245 P **P** **11 28 22.3 +1.3**
BKNI Bangkinang 71.84 245 P **P** **11 28 20.1 -0.9**
SORM Soroca 71.85 329 ⇓ P **P** **11 28 20.8 +0.2**
SORM Soroca 71.85 329 ⇓ P **P** **11 28 20.8 +0.2**
KMPD K-Podol'skiy 72.06 330 P **pP** **11 28 22.1 -5.0**
KMPD P **P** **11 28 20.9 -1.0**
KWP Kalwaria Pacla 72.19 333 P **P** **11 28 23.2 +0.5**
comp=N,44nm,1.4s
SHIU Shidnytsya 72.38 332 P **P** **11 28 24.7 +0.8**
GNI Garni 72.39 314 **P** **11 28 25.2 +1.0**
GNI Garni 72.39 314 LR LR 12 05 02.2
comp=N,555nm,18.1s,baz=19,slow=40
GNI Garni 72.39 314 P **P** **11 28 25.4 +1.2**
GNI Garni 72.39 314 *ce* P **P** **11 28 26.0 +1.8**
GNI pmax pmax
comp=Z,34nm,1.3s
GNI Garni 72.39 314 P **P** **11 28 25.5 +1.2**
comp=Z,576nmcomp=Z,24nm,1.7s
OJC Ojcow 72.44 335 P **P** **11 28 25.4 +1.2**
comp=Z,15nm,1.7s
SIM Simferopol' 72.65 323 *eP* **P** **11 28 25.0 -0.5**
SIM *eS* S 11 37 38.6 -11
SIM pmax pmax
comp=Z,26nm,1.4s
KSV Kosov 72.70 331 P **P** **11 28 25.3 -0.5**
KSP Ksiaz 72.73 337 P **P** **11 28 29.9 +4.0**
MILM Milestii Mici 72.77 328 *eP* **P** **11 28 25.0 -1.2**
MILM *eL* L 12 01 26.0
MILM LRM MLR 12 04 27.0
comp=Z,700nm,17.5s
STHS Stebnicka Huta 72.79 334 *eP* **P** **11 28 27.0 +0.7**
STHS Stebnicka Huta 72.79 334 *eP* **P** **11 28 27.0 +0.7**
OSTC Ostas 73.01 337 *eP* **P** **11 28 28.5 +0.9**
OSTC MLR MLR
comp=Z,600nm,16.0s
OSTC Ostas 73.01 337 *eP* **P** **11 28 28.5 +0.9**
OSTC AMS AMS 12 07 20.0
comp=Z,600nm,16.0s
CHVC Chvalec 73.02 337 *eP* **P** **11 28 30.4 +2.7**
CHVC Chvalec 73.02 337 *eP* **P** **11 28 30.4 +2.7**
CLL Collm 73.03 340 IAmb IAmb 11 28 45.5
comp=Z,11nm,0.9s
CLL Collm 73.03 340 *i* P **P** **11 28 27.9 +0.2**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 73.03 340 P **P** **11 28 28.1 +0.4**
comp=Z,14nm,0.9s
CLL Collm 73.03 340 *i* P **P** **11 28 27.9 +0.2**
comp=Z,12nm,1.0s
CLL *i* PcP **PcP** **11 28 44.2 -0.2**
comp=Z,14nm,1.0s
CLL AMS AMS 12 02 00.0
comp=Z,200nm,20.8s
NIE Niedzica 73.04 334 P **P** **11 28 30.4 +2.6**
T47A Sharon Grove 73.10 51 P **P** **11 28 29.5 +1.2**
T47A IAmb IAmb 11 28 41.3
comp=Z,18nm,1.1s
UPC Upice 73.11 337 AMS AMS 12 07 30.0
comp=Z,600nm,15.5s
DPC Dobruska-Polom 73.18 337 P **P** **11 28 30.0 +1.4**
DPC pmax pmax
comp=Z,7.0nm,1.5s
DPC Dobruska-Polom 73.18 337 AMS AMS 12 07 20.0
comp=Z,700nm,17.0s
DPC Dobruska-Polom 73.18 337 P **P** **11 28 29.3 +0.7**
comp=Z,7.4nm,1.5s
OKC Ostrava-Krasne 73.21 336 P **P** **11 28 29.9 +1.2**
OKC pmax pmax
comp=Z,9.0nm,0.8s
OKC Ostrava-Krasne 73.21 336 AMS AMS 12 04 20.0
comp=Z,600nm,18.8s
STEB Steborice 73.21 336 *eP* **P** **11 28 30.0 +1.2**
RAKU Rahkiv 73.22 331 P **P** **11 28 28.9 0.0**
BUR08 Bucovina Ar. S 73.26 330 IAmb IAmb 11 28 42.7
comp=Z,7.9nm,0.7s
BURAR Bucovina Array 73.28 330 **P** **11 28 29.5 +0.1**
BURAR IAmb IAmb 11 28 32.4
comp=Z,12nm,0.5s
BURAR Bucovina Array 73.28 330 ⇑ P **P** **11 28 29.1 -0.2**
BURAR Bucovina Array 73.28 330 ⇑ P **P** **11 28 29.1 -0.2**
HOLU Holmets 73.28 333 P **P** **11 28 28.3 -0.9**
KRLC Kraliky 73.33 337 *eP* **P** **11 28 30.8 +1.3**
KRLC MLR MLR
comp=Z,600nm,18.3s
KRLC Kraliky 73.33 337 *eP* **P** **11 28 30.8 +1.3**
KRLC AMS AMS 12 06 20.0
comp=Z,600nm,18.3s
MORC Moravsky Berou 73.42 336 IAmb IAmb 11 28 46.2
comp=Z,5.6nm,0.7s
MORC Moravsky Berou 73.42 336 ⇓ P **P** **11 28 30.7 +0.6**
MORC Moravsky Berou 73.42 336 *eP* **P** **11 28 30.7 +0.6**
MORC Moravsky Berou 73.42 336 ⇓ P **P** **11 28 30.7 +0.6**
PVCC Panska Ves 73.42 338 AMS AMS 12 07 20.0
comp=Z,900nm,14.0s
BERU Beregovo 73.47 332 P **P** **11 28 30.6 +0.3**
LANS Liptovska Anna 73.50 335 *eP* **P** **11 28 32.8 +2.2**
LANS Liptovska Anna 73.50 335 *eP* **P** **11 28 32.8 +2.2**
RICC Richard 73.51 339 *eP* **P** **11 28 32.3 +1.8**
HSKC Hora Svate Kat 73.60 339 AMS AMS 12 07 20.0
comp=Z,700nm,18.7s
MAUC Maruska 73.73 336 *eP* **P** **11 28 32.3 +0.4**
TESR Tescani 73.82 329 P **P** **11 28 32.6 +0.2**
comp=Z,21nm,1.6s
KECS Kecovo 73.85 334 *eP* **P** **11 28 34.6 +2.1**
KECS Kecovo 73.85 334 *eP* **P** **11 28 34.6 +2.1**
PRA Prague 73.88 338 AMS AMS 12 07 30.0
comp=Z,1μm,13.3s
PRU Pruhonice 73.93 338 P **P** **11 28 32.6 -0.4**
PRU pmax pmax
comp=Z,6.0nm,1.1s
PRU Pruhonice 73.93 338 AMS AMS 12 07 30.0
comp=Z,1μm,16.4s
VRAC Vranov 74.08 337 LR LR 12 05 14.5
comp=Z,570nm,18.3s,baz=24,slow=39
VRAC Vranov 74.08 337 *eP* **P** **11 28 34.9 +1.0**
VRAC Vranov 74.08 337 P **P** **11 28 35.7 +1.8**
VRAC pmax pmax
comp=Z,9.0nm,1.0s
MDSI Maura Dua 74.15 240 P **P** **11 28 33.8 -0.9**
comp=Z,9.2nm,1.2s

JAVC	Velka Javorina	74.23 336	eP		P		11 28 34.5	-0.4
TLCR		74.30 327	⇓P		P		11 28 35.0	-0.2
TLCR		74.30 327	⇓P		P		11 28 35.0	-0.2
KOPT	Kop Dagi	74.32 316	IAmb	IAmb	11 28 53.7			
	comp=Z,20nm,0.9s							
KRUC	Moravsky	74.36 337	eP		P		11 28 36.1	+0.6
KRUC	Moravsky	74.36 337	P		P		11 28 36.7	+1.2
KRUC			pmax	pmax				
	comp=Z,9.0nm,1.7s							
VRI	Vrincioaia	74.37 329	⇑P		P		11 28 35.4	-0.3
VRI	Vrincioaia	74.37 329	⇑P		P		11 28 35.4	-0.3
DZM	Mont Dzumac	74.45 175	LR	LR	11 53 26.7			
	comp=Z,238nm,21.4s,baz=52,slow=29							
PSZ	Piszkesteto	74.52 334	IAmb	IAmb	11 28 49.4			
	comp=Z,36nm,1.6s							
PSZ	Piszkesteto	74.52 334	P		P		11 28 37.0	+0.4
PSZ			pmax	pmax				
	comp=Z,9.0nm,1.7s							
ZVC	Zvikov	74.53 338	eP		P		11 28 37.5	+1.0
ZVC			AMS	AMS	12 08 00.0			
	comp=Z,1μm,12.6s							
CFR	Carcaliu	74.53 327	⇓P		P		11 28 36.8	+0.3
CFR	Carcaliu	74.53 327	⇓P		P		11 28 36.8	+0.3
DOPR	Dopca	74.70 330	⇓P		P		11 28 38.1	+0.5
TPGR	Topolog	74.72 327	⇑P		P		11 28 38.1	+0.5
DRGR		74.76 332	⇓P		P		11 28 38.6	+0.6
DRGR		74.76 332	⇓P		P		11 28 38.6	+0.6
MODS	Modra-Piesok	74.78 336	eP		P		11 28 39.6	+1.6
MODS	Modra-Piesok	74.78 336	eP		P		11 28 39.6	+1.6
GRFO	Grafenberg	74.94 340	P		P		11 28 40.3	+1.5
GRFO	Grafenberg	74.94 340	P		P		11 28 40.3	+1.5
GRFO			pmax	pmax				
	comp=Z,54nm,1.6s							
KHC	Kasperske Hory	74.95 338	IAmb	IAmb	11 28 52.1			
	comp=Z,22nm,1.4s							
KHC	Kasperske Hory	74.95 338	ceP		P		11 28 40.7	+1.7
KHC			pmax	pmax				
	comp=Z,9.0nm,1.0s							
KHC	Kasperske Hory	74.95 338	eP		P		11 28 39.9	+0.9
KHC			ex		x	11 28 42.3		
KHC			AMS	AMS	12 08 10.0			
	comp=Z,1μm,15.3s							
KHC	Kasperske Hory	74.95 338	P		P		11 28 39.8	+0.8
	comp=Z,9.0nm,0.8s							
MLR	Muntele Rosu	74.95 329	IAmb	IAmb	11 28 53.2			
	comp=Z,26nm,1.4s							
MLR	Muntele Rosu	74.95 329	LR	LR	12 06 35.1			
	comp=Z,846nm,18.5s,baz=32,slow=40							
MLR	Muntele Rosu	74.95 329	⇓P		P		11 28 39.8	+0.6
MLR	Muntele Rosu	74.95 329	⇓P		P		11 28 39.8	+0.6
MLR	Muntele Rosu	74.95 329	P		P		11 28 40.3	+1.1
	comp=Z,11nm,0.6s							
MEM	Membach	75.05 344	dP		P		11 28 40.5	+1.0
	comp=Z,22nm,1.1s							
MEM	Membach	75.05 344	P		P		11 28 40.2	+0.8
MEM			pmax	pmax				
	comp=Z,40nm,1.2s							
BTNL	Ternell	75.05 344	dP		P		11 28 40.1	+0.6
	comp=Z,13nm,1.0s							
TIRR	Tirgusor	75.07 327	⇓P		P		11 28 39.9	+0.2
TIRR	Tirgusor	75.07 327	⇓P		P		11 28 39.9	+0.2
TIRR	Tirgusor	75.07 327	P		P		11 28 39.7	0.0
	comp=Z,406nmcomp=Z,18nm,1.6s							
CKRC	Cesky Krumlov	75.08 338	AMS	AMS	12 08 50.0			
	comp=Z,700nm,17.1s							
WET	Wettzell	75.10 339	P		P		11 28 41.2	+1.4
WET			pmax	pmax				
	comp=Z,8.0nm,0.9s							
QIS	Mount Isa	75.10 201	P		P		11 28 43.8	+3.8
BSTI	Sart Tilman	75.14 344	dP		P		11 28 38.3	-1.7
GERES	GERESS Array B	75.19 338	P		P		11 28 41.5	+1.0
	comp=Z,2.3nm,0.6s,baz=33,slow=5.9,SNR=17							
GERES			LR	LR	12 06 19.1			
	comp=Z,284nm,18.1s,baz=40,slow=40							
	comp=Z,2.3nm,0.6s							
VOIR		75.28 329	⇓P		P		11 28 41.6	+0.6
VOIR		75.28 329	⇓P		P		11 28 41.6	+0.6
VOIR		75.28 329	P		P		11 28 41.3	+0.3
	comp=Z,11nm,1.1s							
BHOU	Houvegnez	75.29 344	dP		P		11 28 38.4	-2.5
	comp=Z,13nm,1.2s							
BHOU			dpP		pP		11 28 43.3	-2.8
BSKQ	Steenkerk	75.32 345	dP		P		11 28 40.4	-0.6
BCLA	Clavier	75.35 344	dP		P		11 28 42.1	+0.9
	comp=Z,8.4nm,1.3s							
BGES	Gesves	75.42 344	dP		P		11 28 43.8	+2.2
ARR	Arges	75.47 330	⇓P		P		11 28 42.9	+0.8
CONA	Conrad Observa	75.55 337	epP		P		11 28 43.9	+1.4
	comp=Z,4.4nm,0.7s							
BMRD	Maredsous	75.55 344	dP		P		11 28 43.4	+1.0
RONA	Rosalia, Austr	75.65 336	epP		P		11 28 44.8	+1.7
	comp=Z,13nm,1.2s							
TKL	Tuckaleechee C	75.74 49	LR	LR	12 04 57.2			
	comp=Z,312nm,18.1s,baz=330,slow=38							
WRAB	Tennant Creek	75.76 206	P		P		11 28 47.4	+3.6
WRA	Warramunga Arr	75.77 206	P		P		11 28 44.3	+0.4
	comp=Z,2.7nm,0.9s,baz=18,slow=5.4,SNR=6.6							
	comp=Z,2.7nm,0.9s							
NGCH	Negor - Chabah	75.87 293	P		P		11 28 45.9	+1.3
MOA	Molln	76.00 338	ipP		P		11 28 45.9	+0.9
	comp=Z,2.7nm,0.7s							
GZR	Gura Zlata	76.01 331	⇓P		P		11 28 45.0	-0.2
GZR	Gura Zlata	76.01 331	⇓P		P		11 28 45.0	-0.2
BZS	Buzias	76.15 332	⇑P		P		11 28 46.0	+0.2
BZS	Buzias	76.15 332	⇑P		P		11 28 46.0	+0.2
ARSA	Arzberg	76.26 336	ipP		P		11 28 47.8	+1.3
	comp=Z,4.4nm,0.7s							
BIOA	Bad Ischl, Aus	76.30 338	epP		P		11 28 48.8	+2.1
	comp=Z,3.7nm,0.5s							
FITZ	Fitzroy Crossi	76.69 214	P		P		11 28 49.0	-0.1
	comp=Z,3.7nm,0.7s,baz=19,slow=7.1,SNR=7.4							
	comp=Z,3.7nm,0.7s							
LESA	Schwarzleotal	76.77 338	ipP		P		11 28 51.5	+2.1
	comp=Z,10nm,1.2s							
BFO	Black Forest	76.81 342	P		P		11 28 50.7	+1.1
BFO			pmax	pmax				
	comp=Z,37nm,1.8s							
SOKA	Soboth	76.92 337	epP		P		11 28 51.2	+0.9
	comp=Z,7.2nm,0.6s							
KBA	Koelnbreinsper	76.94 338	epP		P		11 28 52.2	+1.6
	comp=Z,28nm,0.8s							
KBA	Koelnbreinsper	76.94 338	P		P		11 28 52.3	+1.8
KBA			pmax	pmax				
	comp=Z,62nm,0.8s							
WATA	Walderalm	77.09 339	ipP		P		11 28 52.6	+1.2
	comp=Z,20nm,1.5s							
RETA	Reutte	77.12 340	ipP		P		11 28 52.6	+1.2
	comp=Z,6.5nm,0.9s							
ECH	Echery	77.14 342	P		P		11 28 52.8	+1.3
ECH			pmax	pmax				
	comp=Z,20nm,1.5s							
WTTA	Wattenberg	77.15 339	ipP		P		11 28 53.1	+1.5
	comp=Z,26nm,1.5s							
WTTA	Wattenberg	77.15 339	P		P		11 28 53.2	+1.5
WTTA			pmax	pmax				
	comp=Z,19nm,1.6s							
MOTA	Moosalm	77.19 339	ipP		P		11 28 53.1	+1.2
	comp=Z,17nm,1.1s							
OBKA	Obir	77.19 337	epP		P		11 28 54.1	+2.3
	comp=Z,11nm,0.7s							
BNN	Bunyan	77.22 319	IAmb	IAmb	11 28 54.2			
	comp=Z,13nm,0.7s							
PLVB	Pleven	77.26 329	⇑P		P		11 28 52.0	-0.2
SQTA	Sankt Quirin	77.28 339	epP		P		11 28 53.9	+1.5
	comp=Z,16nm,1.0s							
MYKA	Terra Mystica	77.29 337	ipP		P		11 28 54.4	+2.0
	comp=Z,17nm,1.6s							
BR106	Keskin Array S	77.33 321	P		P		11 28 53.2	+0.4
	comp=Z,93nmcomp=Z,9.1nm,1.1s							
BR131	Keskin Array S	77.33 321	P		P		11 28 53.2	+0.4
	SNR=10							
BRTR	Keskin Array B	77.33 321			P		11 28 53.0	+0.2
BRTR	Keskin Array B	77.33 321	P		P		11 28 52.9	0.0
	comp=Z,4.9nm,0.6s,baz=53,slow=3.5,SNR=31							
BRTR			LR	LR	12 08 54.2			
	comp=Z,329nm,18.2s,baz=50,slow=40							
	comp=Z,4.9nm,0.6s							
BRTR	Keskin Array B	77.33 321	iP		P		11 28 53.0	+0.2
BRTR			pmax	pmax				
	comp=Z,5.0nm,0.6s							
BR104	Keskin Array S	77.35 321	P		P		11 28 53.2	+0.3
	comp=Z,92nmcomp=Z,8.3nm,0.7s							
BR105	Keskin Array S	77.35 321	P		P		11 28 53.2	+0.3
	comp=Z,109nmcomp=Z,11nm,0.7s							
ABTA	Abfaltersbach	77.44 338	ipP		P		11 28 54.4	+1.2
	comp=Z,16nm,1.1s							
PRED	Cave del Predi	77.49 337	IAmb	IAmb	11 28 56.9			
	comp=Z,6.7nm,0.6s							
DAVA	Damuels	77.50 340	ipP		P		11 28 55.6	+2.0
	comp=Z,13nm,1.4s							
ANTO	Ankara	77.53 322	P		P		11 28 54.9	+1.0
FETA	Feichten	77.57 340	epP		P		11 28 55.6	+1.5
	comp=Z,7.0nm,0.7s							
BLKB	Belogradchik	77.65 330	⇓P		P		11 28 54.2	-0.2
KIRS	Kirsehir-Merke	77.74 320	⇓P		P		11 28 55.3	+0.2
DAVOX	Davos/Dischmat	77.98 340	LR	LR	12 10 00.5			
	comp=Z,237nm,18.6s,baz=54,slow=41							
SHME	Shamm	78.08 297	P		P		11 28 56.7	-0.3
BANOM	Banah	78.10 297	P		P		11 28 56.2	-1.0
GAZ	Gaziantep	78.10 317	IAmb	IAmb	11 29 13.1			
	comp=Z,16nm,0.7s							
CTI	Castel Tesino	78.30 339	IAmb	IAmb	11 29 10.8			
	comp=Z,22nm,1.4s							
TUE	Stuetta	78.39 340	IAmb	IAmb	11 29 04.4			
	comp=Z,13nm,0.8s							
TUE	Stuetta	78.39 340	P		P		11 28 59.8	+1.1
	comp=Z,79nm,0.8s							
BORA	Eskisehir	78.39 323	IAmb	IAmb	11 29 14.1			
	comp=Z,7.1nm,0.8s							
UOSS	Minazif	78.93 296			P		11 29 01.5	-0.2
UOSS	Minazif	78.93 296	P		P		11 29 00.9	-0.9
WSAR	Wadi Sarin	78.94 294	P		P		11 29 01.2	-0.6
HATD	Hatta, Dubai	79.06 296	P		P		11 29 01.8	-0.6
NAZ	Nazwa, Dubai	79.19 297	P		P		11 29 02.4	-0.7
ASHO	Ashiyiah	79.22 296	P		P		11 29 02.9	-0.4
WBK	Wadi Bani Khal	79.25 293	P		P		11 29 02.3	-1.2
JLN	Jalan Bani Buh	79.36 292	P		P		11 29 04.5	+0.4
	SNR=6.8							
SOHO	SOHO	79.39 296	P		P		11 29 03.1	-1.1
HOQ	Hoqain	79.40 295	P		P		11 29 03.3	-1.0
SMDO	Samad	79.41 294	P		P		11 29 03.8	-0.7
	SNR=6.1							
FAQ	Al Faqa, Dubai	79.42 297	P		P		11 29 03.7	-0.7
ASAR	Alice Springs	79.44 205	P		P		11 29 05.9	+1.5
	comp=Z,2.4nm,0.6s,baz=16,slow=5.3,SNR=19							
	comp=Z,2.4nm,0.6s							
ASUD	Al Ashush, Dub	79.66 297	P		P		11 29 05.4	-0.3
KNT	Kendrikon	79.82 329	P		P		11 29 07.0	+0.7
KNT			pmax	pmax				
	comp=Z,13nm,1.5s							
ALNE	Al Ain	79.88 296	P		P		11 29 06.2	-0.8
AJN	Ajban	79.90 297	P		P		11 29 06.2	-0.8
KBD	Kabd	79.97 305	P		P		11 29 06.6	-0.7
ARQ	Araqi	80.03 295	P		P		11 29 07.3	-0.5
QLP	Quilpie	80.11 195	P		P		11 29 11.6	+3.8
MANT	Manisa	80.31 324	IAmb	IAmb	11 29 20.0			
	comp=Z,16nm,1.1s							
JRN	Qarnain Island	80.74 299	P		P		11 29 10.5	-1.0
SHMA	Al-Shehemyia	81.00 301	P		P		11 29 12.3	-0.6
RAR	Rarotonga	81.05 143	LR	LR	12 01 33.5			
	comp=Z,220nm,18.7s,baz=278,slow=33							
MHTO	MHTO	81.09 293	P		P		11 29 13.2	-0.3
	SNR=13							
ELL	Elmali	81.36 322	IAmb	IAmb	11 29 29.8			
	comp=Z,10nm,0.9s							
GHWR	Ruwais	81.52 298	P		P		11 29 14.6	-1.1
CSS	Mathiatis	81.59 319	P		P		11 29 16.3	+0.4
	comp=Z,27nm,0.7s							
MBWA	Marble Bar	81.64 218	P		P		11 29 16.0	-0.1
MBWA			IAmb	IAmb	11 29 19.0			
	comp=Z,19nm,1.1s							
TRNA	Turayna	81.78 300	P		P		11 29 16.2	-0.9
PPT	Papeete	81.94 133	LR	LR	11 59 41.8			
	comp=Z,144nm,21.8s,baz=325,slow=31							
PPT2	Papeete2	81.96 133	eLR	LR	11 54 45.7			
	comp=Z,404nm,25.8s							
PPT2			eLR	LR	11 54 52.0			
	comp=Z,470nm,25.2s							
MZR	Muzera	81.97 297	P		P		11 29 17.4	-0.7
	SNR=6.7							
SMRA	Abu-Samra	81.98 300	P		P		11 29 17.4	-0.7
SLWR	Sila	82.07 299	P		P		11 29 17.5	-1.0
MMAI	Mount Meron Ar	82.42 316	P		P		11 29 20.6	+0.2
	comp=Z,8.1nm,0.6s,baz=34,slow=6.3,SNR=16							
MMAI			LR	LR	12 12 40.1			
	comp=Z,346nm,18.1s,baz=10.0,slow=41							
	comp=Z,8.1nm,0.6s							
ASF	Jabal al Asfar	82.51 315	LR	LR	12 11 36.9			
	comp=Z,310nm,18.3s,baz=4.3,slow=40							
TIP	Timpagrande	83.47 333	P		P		11 29 26.5	+0.8
	comp=Z,17nm,1.4s							
IDI	Anyia	84.48 325	LR	LR	12 12 12.0			
	comp=Z,267nm,19.0s,baz=352,slow=39							
DOK	Doka	85.14 294	P		P		11 29 33.3	-1.1
DMTO	DMTO	85.41 293	P		P		11 29 36.5	+0.8
EIL	Elat	85.50 315	LR	LR	12 12 20.0			
	comp=Z,284nm,21.5s,baz=348,slow=39							
RAYN	Ar Rayn	85.74 304			P		11 29 37.1	-0.4
RAYN	Ar Rayn	85.74 304	P		P		11 29 37.0	-0.4
RAYN	Ar Rayn	85.74 304	⇑P		P		11 29 37.4	0.0
WHFO	Wadi Hawf	85.90 294	P		P		11 29 36.6	-1.7
	SNR=7.2							
ABTO	Aybut	86.62 294	P		P		11 29 40.0	-1.8
	SNR=7.0							
TBI	Tubuai	87.08 135	eLR	LR	11 57 10.1			
	comp=Z,948nm,27.8s							
TBI			eLR	LR	11 57 16.5			
	comp=Z,1μm,24.8s							
ESDC	Sonseca Array	87.22 348			P		11 29 45.1	+0.7
ESDC			IAmb	IAmb	11 29 58.2			
	comp=Z,11nm,1.2s							
ESDC	Sonseca Array	87.22 348	P		P		11 29 44.8	+0.4
	comp=Z,2.9nm,0.7s,baz=2.2,slow=4.3,SNR=14							
	comp=Z,2.9nm,0.7s							
KEST	Kesra	88.64 337	P		P		11 29 51.2	-0.1
	comp=Z,4.0nm,0.6s,baz=79,slow=2.3,SNR=4.2							
KEST			LR	LR	12 14 59.7			
	comp=Z,300nm,18.1s,baz=32,slow=39							
	comp=Z,4.0nm,0.6s							
AUSMG	Snowy Mountain	89.23 190	P		P		11 29 53.8	+0.1
URZ	Urewera	91.53 167	LR	LR	12 04 39.1			
	comp=Z,109nm,20.2s,baz=350,slow=31							
MDT	Midelt	94.06 348	LR	LR	12 18 17.5			
	comp=Z,38nm,18.1s,baz=16,slow=39							
ATD	Arta Tunnel	97.11 299	LR	LR	12 19 22.4			
	comp=Z,12nm,19.1s,baz=30,slow=39							
PLCA	Paso Flores	143.55 92	PKP		PKiKP		11 36 34.3	-1.4
	comp=Z,0.7nm,0.7s,baz=342,slow=10,SNR=3.0							
SYO	Syowa Base	148.51 216	epPKPdf		P		11 36 45.0	-1.5
SYO	Syowa Base	148.51 216	ePKPbc		P		11 36 46.2	-0.3

*IDC **09** 11:23:40.0±3.9,2˚.44N×128˚.58E,h213km±40km, mb3.4/11, mbtmp4.1/12,MS4.3/1, Error ellipse: s-maj=31.0km s-min=10.6km az=72.0*

*NEIC **09** 11:23:42.4±0.8,2˚.5N±0˚.1×128˚.5E±0˚.2, h229km±7km, mb4.2/8,Error ellipse: s-maj=25.8km s-min=15.3km az=74.0*

*DJA **09** 11:23:43.3±0.4,2˚N±5˚×12˚8E±˚, h211km±4km,M4.1/12, mB4.8/2,mb4.0/7,MLv4.1/12,Mw(mB)4.1/2*

ISC 09 11:23:43.2±0.6,**2.39N**±0.07×**128.44E**±0.09,**h250**km,**n35,** σ1§**08**/**36**,**mb3.9**/13,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.94 214			Pn	11 24 23.3	-1.8
TNTI	Ternate	1.94 214		P	Pn	11 24 23.2	-1.9
SGSI	Sangihe	3.18 294		P	Pn	11 24 35.7	-1.9
SWI	Sorong	4.29 139		P	Pn	11 24 49.3	-1.2
SANI	Sanana	5.05 209		P	Pn	11 24 57.1	-2.5
NLAI	Namlea	5.75 193		P	Pn	11 25 07.1	-1.2
FAKI	Fak Fak	6.51 144		Pn	Pn	11 25 16.8	-0.9
FAKI	Fak Fak	6.51 144		P	Pn	11 25 16.9	-0.8
	0.1nm26nm,0.9s						
LUWI	Luwuk	6.61 239		P	Pn	11 25 18.9	-0.2
	0.2nm38nm,1.0s						
RKPI	Ransiki, Papua	6.92 124		P	Pn	11 25 22.4	-0.6
	3μm41nm,1.0s						
BATI	Baumata	13.39 201		P	Pn	11 26 44.0	0.0
	20nm,0.4s,baz=27,slow=2.3,SNR=2.2						
KNRA	Kununurra	17.96 179		P	P	11 27 36.3	+0.8
KNRA				IAmb	IAmb	11 27 36.9	
	comp=Z,8.0nm,0.5s						
FITZ	Fitzroy Crossi	20.55 188		P	P	11 28 02.2	-1.0
	comp=Z,1.2nm,0.5s,baz=3.5,slow=9.5,SNR=7.7						
	comp=Z,1.2nm,0.5s						
TPUB	Ta-pu	22.12 341		P	P	11 28 17.8	-0.6
WRA	Warramunga Arr	22.94 166		P	P	11 28 25.7	-0.2
	comp=Z,1.2nm,0.3s,baz=349,slow=9.7,SNR=15						
	comp=Z,1.2nm,0.3s						
AS31	Alice Springs	26.44 169		P	P	11 28 58.0	+0.5
ASAR	Alice Springs	26.44 169		P	P	11 28 58.1	+0.6
ASAR	Alice Springs	26.44 169		P	P	11 28 57.7	+0.2
	comp=Z,1.4nm,0.5s,baz=354,slow=7.9,SNR=62						
ASAR				PcP	PcP	11 32 16.7	+0.8
	comp=Z,0.6nm,0.4s,baz=345,slow=2.4,SNR=9.9						
	comp=Z,1.4nm,0.5s						
CMAR	Chiang Mai Arr	33.02 301		P	P	11 29 57.2	+1.9
	comp=Z,1.0nm,0.3s,baz=126,slow=7.5,SNR=4.6						
	comp=Z,1.0nm,0.3s						
KSRS	Korea Array	34.89 359		P	P	11 30 11.4	+0.3
	comp=Z,0.9nm,0.5s,baz=173,slow=9.7,SNR=7.4						
	comp=Z,0.9nm,0.5s						
MJAR	Matsushiro Arr	35.16 14		P	P	11 30 12.1	-1.4
	comp=Z,1.1nm,0.7s,baz=188,slow=10,SNR=3.0						
	comp=Z,1.1nm,0.7s						
BBOO	Buckleboo	35.75 169		P	P	11 30 19.2	+0.7
BBOO				IAmb	IAmb	11 30 44.2	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	36.30 161		P	P	11 30 24.0	+0.8
STKA	Stephens Creek	36.30 161		P	P	11 30 23.9	+0.7
	comp=Z,1.8nm,0.5s,baz=327,slow=8.7,SNR=7.0						
STKA				LR	LR	11 48 06.2	
	comp=Z,488nm,19.9s,baz=75,slow=40						
	comp=Z,1.8nm,0.5s						
SONM	Songino Array	49.11 340		P	P	11 32 06.2	+0.5
	comp=Z,0.8nm,0.8s,baz=161,slow=9.2,SNR=2.5						
	comp=Z,0.8nm,0.8s						
MK31	Makanchi Array	59.62 325		P	P	11 33 21.9	+0.8
MKAR	Makanchi Array	59.62 325		P	P	11 33 21.9	+0.8
	comp=Z,1.0nm,0.4s,baz=116,slow=8.3,SNR=14						
	comp=Z,1.0nm,0.4s						
MAKZ	Makanchi	59.81 325		P	P	11 33 23.0	+0.6
MAKZ				IAmb	IAmb	11 33 23.4	
	comp=Z,1.7nm,0.5s						
KURBB	Kurchatov Arra	63.78 327		P	P	11 33 49.2	+0.6
	comp=Z,2.5nm,0.6s,baz=128,slow=5.9,SNR=24						
	comp=Z,2.5nm,0.6s						
KURK	Kurchatov	63.78 327		P	P	11 33 49.3	+0.7
KURK				IAmb	IAmb	11 33 49.7	
	comp=Z,2.5nm,0.7s						
BVAR	Borovoye Array	69.36 327		P	P	11 34 24.1	+0.2
	comp=Z,0.4nm,0.4s,baz=142,slow=7.3,SNR=3.0						
	comp=Z,0.4nm,0.4s						
MT02	Curacav	144.24 151		PKPdf	PKPdf	11 42 50.2	+0.3
CO02	Combarbal	145.97 149		PKPab	PKiKP	11 42 55.9	-1.5
CO03	El Pedregal	146.42 149		PKPbc	PKPab	11 42 56.8	-0.2
CFA	Coronel Fontan	146.96 153		PKPbc	PKPab	11 42 57.6	-1.4
	comp=Z,0.4nm,0.3s,baz=202,slow=5.4,SNR=4.5						

*KRSC **09** 11:24:01.7±0.6,56˚.13N×162˚.83E,h27km±5km, Ml4.1,Felt [II] at Ust-Kamchatsk.*

*MOS **09** 11:24:02.6±0.7,56˚.19N×162˚.81E,h22km,mb3.7/1,Error ellipse: s-maj=9.8km s-min=5.5km az=60.1*

*IDC **09** 11:24:07.9±3.5,56˚.18N×162˚.08E,h47km±38km,mb3.2/6, mbtmp3.4/7,ML2.5/1,Error ellipse: s-maj=32.5km s-min=22.7km az=148.0*

ISC 09 11:24:03.7±0.8,**56.32N**±0˚.04×**162˚.77E**±0˚.03,**h26**km±5km, **n76,**σ1§**53**/**90**,**mb3.6**/6,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.07 211		PN	Pb	11 24 07.5	-0.7
KBG				S	Sb	11 24 11.0	-0.2
KBG	Krutoberegovo	0.07 211		eP	Pb	11 24 07.5	-0.7
KBG				eS	Sb	11 24 11.1	-0.2
KBTR	Krutoberegovo	0.11 167		PN	Pb	11 24 07.4	-1.1
KBTR	Krutoberegovo	0.11 167		eP	Pb	11 24 07.4	-1.1
SMKR	Semkarok	0.77 291		PN	Pn	11 24 18.5	-0.5
SMKR				S	Sn	11 24 30.7	+0.9
SMKR	Semkarok	0.77 291		eP	Pn	11 24 18.6	-0.5
SMKR				eS	Sn	11 24 30.7	+0.9
SRKR	Sorokina	0.95 291		PN	Pn	11 24 21.7	+0.2
SRKR				S	Sn	11 24 35.2	+1.0
SRKR	Sorokina	0.95 291		eP	Pn	11 24 21.7	+0.2
SRKR				eS	Sn	11 24 35.2	+1.0
ZLN	Zelenaya	1.14 256		PN	Pn	11 24 23.2	-0.9
ZLN	Zelenaya	1.14 256		eP	Pn	11 24 23.2	-0.9
CIRR	Tsirk	1.15 261		PN	Pn	11 24 23.4	-0.8
CIRR	Tsirk	1.15 261		eP	Pn	11 24 23.4	-0.8
BZGR	Bezymyannyi-Gr	1.22 253		PN	Pn	11 24 23.9	-1.3
BZGR	Bezymyannyi-Gr	1.22 253		eP	Pn	11 24 23.9	-1.3
BZWR	Bezymyannyi-We	1.32 255		PN	Pn	11 24 25.6	-1.0
BZWR	Bezymyannyi-We	1.32 255		eP	Pn	11 24 25.6	-1.0
BZMR	Bezymyannaya	1.33 254		PN	Pn	11 24 25.6	-1.2
BZMR	Bezymyannaya	1.33 254		eP	Pn	11 24 25.6	-1.2
KIRR	Kirishev	1.41 256		PN	Pn	11 24 27.1	-0.7
KIRR	Kirishev	1.41 256		eP	Pn	11 24 27.1	-0.7
KPT	Kopyto	1.47 257		PN	Pn	11 24 28.1	-0.5
KPT	Kopyto	1.47 257		eP	Pn	11 24 28.2	-0.5
KMNR	Kamenistaya	1.53 249		PN	Pn	11 24 29.2	-0.2
KMNR	Kamenistaya	1.53 249		eP	Pn	11 24 29.2	-0.2
KOZ	Kozyrevsk	1.64 262		PN	Pb	11 24 31.5	-1.7
KOZ	Kozyrevsk	1.64 262		eP	Pb	11 24 31.6	-1.7
SRDR	Sredinnyy	1.70 271		PN

baz=356,slow=76,SNR=75
KURK Kurchatov 47.38 301 P P 11 32 35.5 +0.3
KURBB Kurchatov Arra 47.49 301 P P 11 32 35.5 -0.6
comp=N,0.4nm,0.5s,baz=56,slow=8.0,SNR=4.7
comp=N,0.4nm,0.5s
MKAR Makanchi Array 48.19 295 P P 11 32 40.7 -0.9
comp=N,0.2nm,0.4s,baz=52,slow=7.5,SNR=2.5
comp=N,0.2nm,0.4s
FINES FINESS Array B 57.76 337 P P 11 33 53.2 +1.4
comp=N,1.6nm,0.8s,baz=3.4,slow=9.5,SNR=5.1
comp=N,1.6nm,0.8s
TXAR Lajitas Array 68.00 70 P P 11 35 03.2 +2.6
comp=N,0.1nm,0.6s,baz=324,slow=6.0,SNR=1.6
comp=N,0.1nm,0.6s
QSPA South Pole Qui 146.07 180 PKPbc PKPab 11 43 41.1 +0.6
comp=N,1.2nm,1.1s,baz=288,slow=2.1,SNR=2.2

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*BJI **09** 11:24:27.4, 19°.67S×176°.19W, h233km, mB5.4/13, mb5.1/51*
*MOS **09** 11:24:28.9±1.1, 20°.25S×176°.47W, h259km, mb5.2/33, Error ellipse: s-maj=10.7km s-min=9.4km az=166.7*
*NEIC **09** 11:24:29.1, 20°.25S×176°.40W, h237km*
*BGR **09** 11:24:29.2, 20°.74S×177°.23W, h255km±5km*
*NOU **09** 11:24:29.2, 20°.43S×176°.34W, h250km, mb5.2/84, Fiji Islands Region*
*NEIC **09** 11:24:30.6±1.9, 20°.29S±0°.09×176°.39W±0°.10, h255km±1km, mb5.1/536, Mwb5.7/40, Mww5.6/29, Error ellipse: s-maj=16.4km s-min=15.3km az=45.0, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=1.35; Mθθ=0.09; Mϕϕ=1.44; Mrθ=2.47; Mθϕ=0.56; Mϕr=2.56; Fault plane solution: M0 3.86000×10^17 NP1: ϕs=175.40000°, δ=14.69000°, λ=-135.45000°. NP2: ϕs=41.81000°, δ=79.75000°, λ=-79.42000°. Principal axes: T 3.8416, Plg=34.0000°, Azm=123.0000°; N 0.0382, Plg=10.0000°, Azm=220.0000°; P -3.8798, Plg=54.0000°, Azm=325.0000°;*
*NEIC **09** 11:24:30.7, 20°.24S×176°.34W, h270km*
*NEIC **09** 11:24:30.7, 20°.64S×176°.13W, h270km, Moment Tensor Solution. Duration: 3*2 Moment tensor: Scale 10^17 Nm; Mrr=0.67; Mθθ=0.08; Mϕϕ=0.59; Mrθ=-1.87; Mθϕ=0.26; Mϕr=-2.56; Fault plane solution: M0 3.24000×10^17 NP1: ϕs=189.59000°, δ=6.60000°, λ=-116.04000°. NP2: ϕs=35.79000°, δ=84.08000°, λ=-87.09000°. Principal axes: T 3.2327, Plg=39.0000°, Azm=123.0000°; N 0.0111, Plg=3.0000°, Azm=215.0000°; P -3.2439, Plg=51.0000°, Azm=309.0000°;*
*IDC **09** 11:24:30.5±1.5, 20°.24S×176°.56W, h255km±13km, mb4.6/31, mbtmp5.1/33 Error ellipse: s-maj=10.0km s-min=8.9km az=19.0*
*IPGP **09** 11:24:30.0, 20°.29S×176°.30W, h260km, Mw5.6, Fault plane solution: NP1: ϕs=164.00000°, δ=17.00000°, λ=-145.00000°. NP2: ϕs=40.00000°, δ=80.00000°, λ=-76.00000°.*
*GCMT **09** 11:24:32.6±0.1, 20°.36S±0°.01×176°.27W±0°.01, h259km, MW5.6/157, Moment Tensor Solution. s134,c239; s157,c286; Duration: 1*6 Moment tensor: Scale 10^17 Nm; Mrr=0.60±.03; Mθθ=0.16±.04; Mϕϕ=0.75±.04; Mrθ=1.86±.03; Mϕϕ=0.17±.03; Mϕr=2.67±.03; Best double couple: M0 3.33100×10^17 NP1: ϕs=164.00000°, δ=8.00000°, λ=-140.00000°. NP2: ϕs=34.00000°, δ=85.00000°, λ=-84.00000°. Principal axes: T 3.3440, Plg=39.0000°, Azm=119.0000°; N -0.0260, Plg=6.0000°, Azm=214.0000°; P -3.3180, Plg=50.0000°, Azm=311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 09 11:24:28.0±0.4, 20°.39S±0°.04×176°.29W±0°.03, h242km±3km, h242km; pP-P, n1159, σ1*51/993, mb5.1/352, 43C-56D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.97**	**295**			**Pn**	**11 25 57.8**	**+2.1**
MSVF	**Nonsavu**	**5.97**	**295**	P	Pn	Pn	**11 25 57.7**	**+2.0**
MSVF	**Nonsavu**	**5.97**	**295**	P	Pn	Pn	**11 25 56.1**	**+0.4**
MSVF				pmax	pmax			
	comp=Z,399nm,1.0s							
NIUE	**Niue**	**6.13**	**79**	P		**Pn**	**11 25 57.5**	**-0.2**
	comp=Z,0.0nmcomp=Z,2μm,1.3s							
NIUE				S		**S**	**11 27 03.0**	**-6.2**
NIUE	**Niue**	**6.13**	**79**			**Pn**	**11 25 57.9**	**+0.2**
NIUE	**Niue**	**6.13**	**79**	P		**Pn**	**11 25 57.8**	**+0.2**
NIUE	**Niue**	**6.13**	**79**	P		**Pn**	**11 25 57.2**	**-0.4**
NIUE				S		**S**	**11 27 03.9**	**-5.4**
AFI	**Afiamalu**	**7.75**	**34**			**Pn**	**11 26 18.1**	**-0.2**
AFI	**Afiamalu**	**7.75**	**34**	P		**Pn**	**11 26 18.9**	**+0.6**
AFI	**Afiamalu**	**7.75**	**34**	P		**Pn**	**11 26 18.1**	**-0.2**
RAO	**Raoul Island**	**8.95**	**189**	P		**Pn**	**11 26 37.1**	**+3.8**
	comp=Z,104nm,0.3s,baz=60,slow=20,SNR=1.4							
RAO				S		**S**	**11 28 08.1**	**-6.3**
	comp=Z,574nm,0.4s,baz=242,slow=20,SNR=5.4							
GLKZ	**Green Lake**	**8.96**	**189**	P		**Pn**	**11 26 33.0**	**-0.4**
GLKZ				S		**S**	**11 28 09.2**	**-5.4**
FUNA	**Funafuti**	**12.57**	**339**			**Pn**	**11 27 19.3**	**+0.3**
FUNA	**Funafuti**	**12.57**	**339**	P		**Pn**	**11 27 19.9**	**+0.9**
MARNC	**Mare, Loyalty**	**14.69**	**263**			**P**	**11 27 45.4**	**+0.5**
MARNC	**Mare, Loyalty**	**14.69**	**263**	P		**P**	**11 27 45.7**	**+0.7**
PINNC	**Pines Island,**	**15.30**	**259**			**Pn**	**11 27 54.5**	**+2.4**
PINNC	**Pines Island,**	**15.30**	**259**	P		**Pn**	**11 27 54.1**	**+2.0**
RAR	**Rarotonga**	**15.47**	**96**	P		**Pn**	**11 27 57.5**	**+3.3**
	comp=Z,135nm,0.9s,baz=252,slow=8.9,SNR=16							
RAR				S		**S**	**11 30 44.2**	**-0.1**
	comp=Z,18nm,0.8s,baz=175,slow=21,SNR=1.3							
RAR	**Rarotonga**	**15.47**	**96**	P		**Pn**	**11 27 55.8**	**+1.6**
YATNC	**Mamie plateau,**	**15.77**	**261**	P		**Pn**	**11 27 58.4**	**+0.6**
OUENC	**Ouen Island, N**	**15.84**	**260**	P		**Pn**	**11 27 59.2**	**+0.6**
DZM	**Mont Dzumac**	**16.19**	**261**	P		**Pn**	**11 28 04.1**	**+1.2**
	comp=Z,350nm,0.7s,baz=80,slow=16,SNR=119							
ONTNC	**Ouen Toro**	**16.19**	**260**			**Pn**	**11 28 03.2**	**+0.4**
ONTNC	**Ouen Toro**	**16.19**	**260**	P		**Pn**	**11 28 03.4**	**+0.6**
SANVU	**Saraoutou**	**16.46**	**285**	P		**P**	**11 28 04.6**	**+0.2**
SANVU	**Saraoutou**	**16.46**	**285**	P		**P**	**11 28 05.0**	**+0.6**
OUZ	**Omahuta**	**17.25**	**209**	P		**Pn**	**11 28 16.7**	**+1.6**
WCZ	**Waipu Caves**	**17.54**	**206**	P		**Pn**	**11 28 19.2**	**+0.7**
WMGZ	**Waiomatatini S**	**17.97**	**194**	P		**Pn**	**11 28 23.7**	**+0.2**
PKGZ	**Pakihiroa**	**18.09**	**194**	P		**P**	**11 28 22.2**	**+0.2**
KOUNC	**Koumac, New Ca**	**18.20**	**266**	P		**Pn**	**11 28 30.3**	**+3.9**
PUZ	**Puketiti**	**18.25**	**194**	P		**P**	**11 28 23.4**	**-0.3**
CNGZ	**Carnagh Statio**	**18.65**	**194**	P		**Pn**	**11 28 30.3**	**-1.2**
MWZ	**Matawai**	**18.67**	**195**	P		**P**	**11 28 26.7**	**-1.5**
TKGZ	**Te Karaka**	**18.69**	**194**	P		**P**	**11 28 22.8**	**-5.7**
TOZ	**Tahuroa Road**	**18.70**	**201**	P		**P**	**11 28 30.0**	**+1.4**
URZ	**Urewera**	**18.70**	**196**	P		**P**	**11 28 27.3**	**-1.3**
	comp=Z,26nm,0.3s,baz=282,slow=2.5,SNR=32							
URZ				S		**S**	**11 31 41.5**	**-7.0**
	comp=Z,40nm,0.8s,baz=247,slow=23,SNR=8.5							
URZ	**Urewera**	**18.70**	**196**	P		**P**	**11 28 27.4**	**-1.3**
RIGZ	**Rimuhau**	**18.96**	**194**	P		**P**	**11 28 30.1**	**-1.4**
SNGZ	**Shannon Statio**	**19.14**	**195**	P		**P**	**11 28 34.6**	**+1.2**
PRGZ	**Paritu Road**	**19.14**	**194**	P		**P**	**11 28 33.4**	**0.0**
MHGZ	**Mahia Peninsul**	**19.36**	**194**	P		**P**	**11 28 36.1**	**+0.5**
BFZ	**Birch Farm**	**21.21**	**196**	P		**P**	**11 28 57.6**	**+2.5**
MRZ	**Mangatainoka R**	**21.37**	**197**	P		**P**	**11 28 58.2**	**+1.6**
QRZ	**Quartz Range**	**22.49**	**203**	P		**P**	**11 29 08.7**	**+1.6**
TKNZ	**Takaka Hill**	**22.52**	**202**	P		**P**	**11 29 09.1**	**+1.7**
TUWZ	**Tuamarina**	**22.56**	**199**	P		**P**	**11 29 08.7**	**+1.1**
THZ	**Tophouse**	**23.19**	**201**	P		**P**	**11 29 16.0**	**+2.5**
KHZ	**Kahutara**	**23.58**	**199**	P		**P**	**11 29 20.7**	**+3.8**
KHZ	**Kahutara**	**23.58**	**199**	P		**P**	**11 29 17.1**	**+0.2**
TARA	**Tarawa**	**24.06**	**333**	P		**P**	**11 29 20.4**	**-1.2**
TARA	**Tarawa**	**24.06**	**333**	P		**P**	**11 29 20.5**	**-1.0**
LTZ	**Lake Taylor**	**24.31**	**201**	P		**P**	**11 29 26.4**	**+2.7**
INZ	**Inchbonnie**	**24.55**	**202**	P		**P**	**11 29 27.9**	**+2.2**
OXZ	**Oxford**	**24.88**	**201**	P		**P**	**11 29 29.6**	**+0.9**
OXZ				IAmb		IAmb	11 29 48.5	
	comp=Z,34nm,0.6s							
TBI	**Tubuai**	**25.06**	**102**	*e*P		**P**	**11 29 25.1**	**-5.5**
	comp=Z,984nm,28.5s							
TBI				*e*S		**S**	**11 33 39.0**	**+2.3**
	comp=Z,1μm,24.8s							
TBI				*es*S		**sS**	**11 34 59.1**	**-1.4**
	comp=Z,8μm,28.5s							
TBI				*e*LR		LR	11 36 05.4	
	comp=Z,4μm,30.2s							
HNR	**Honiara**	**25.38**	**292**	P		**P**	**11 29 35.1**	**+1.6**
HNR	**Honiara**	**25.38**	**292**	P		**P**	**11 29 34.0**	**+0.5**
HNR	**Honiara**	**25.38**	**292**	P		**P**	**11 29 35.1**	**+1.6**
HNR				pmax		pmax		
	comp=Z,130nm,1.0s							
PAE	**Paea**	**25.39**	**88**	*e*P		**P**	**11 29 33.2**	**-0.3**
	comp=Z,23nm,0.9s							
PAE				*e*LR		LR	11 36 20.1	
	comp=Z,307nm,28.7s							
PPT2	**Papeete2**	**25.40**	**88**	*e*P		**P**	**11 29 30.9**	**-2.9**
	comp=Z,126nm,1.1s							
PPT2				*e*S		**S**	**11 33 38.6**	**-3.8**
PPT2	comp=Z,369nm,25.2s			*es*S		**sS**	**11 35 04.1**	**-2.5**
	comp=Z,2μm,24.8s							
PPT2				*e*LR		LR	11 36 13.2	
	comp=Z,526nm,23.8s							
PPT2				*e*LR		LR	11 36 15.1	
	comp=Z,472nm,43.0s							
PPT	**Papeete**	**25.41**	**88**	P		**P**	**11 29 36.2**	**+2.5**
	comp=Z,69nm,0.6s,baz=86,slow=4.3,SNR=14							
	comp=Z,69nm,0.6s							
PPTF	**Pamatai, Papee**	**25.41**	**88**	P		**P**	**11 29 36.4**	**+2.5**
PPTF	**Pamatai, Papee**	**25.41**	**88**	P		**P**	**11 29 35.9**	**+2.0**
TIAR	**Tiarei**	**25.62**	**88**	*e*P		**P**	**11 29 36.1**	**+0.4**
	comp=Z,283nm,1.1s							
SAVO	**Savo Central**	**25.63**	**292**	P		**P**	**11 29 36.3**	**+0.5**
TVO	**Taravao**	**25.67**	**89**	*e*P		**P**	**11 29 38.5**	**+2.3**
	comp=Z,38nm,0.9s							
ODZ	**Otahua Downs**	**26.86**	**201**	P		**P**	**11 29 47.3**	**+0.9**
TW1H	**Toowoomba 1 Ha**	**29.81**	**250**	P		**P**	**11 30 13.5**	**+0.7**
EIDS	**Eidsvold**	**30.42**	**254**	P		**P**	**11 30 17.2**	**-1.0**
	comp=Z,30nm,0.8s							
EIDS	**Eidsvold**	**30.42**	**254**	P		**P**	**11 30 17.7**	**-0.5**
EIDS	**Eidsvold**	**30.42**	**254**	P		**P**	**11 30 17.0**	**-1.2**
ARMA	**Armidale**	**30.56**	**244**	P		**P**	**11 30 19.2**	**-0.3**
	comp=Z,29nm,0.8s							
ARMA	**Armidale**	**30.56**	**244**	P		**P**	**11 30 20.0**	**+0.5**
MGCD	**Mangrove Creek**	**31.64**	**239**	P		**P**	**11 30 29.2**	**+0.5**
	comp=Z,73nm,0.7s							
SYDH	**Sydney Hard Ro**	**32.09**	**239**	P		**P**	**11 30 32.2**	**-0.4**
AULRC	**Lightning Ridg**	**33.53**	**247**	P		**P**	**11 30 44.9**	**-0.2**
CNB	**Canberra Magne**	**33.62**	**236**	P		**P**	**11 30 44.2**	**-1.8**
	comp=Z,25nm,0.6s							
CAN	**Canberra**	**33.91**	**237**	P		**P**	**11 30 48.2**	**-0.2**
	comp=Z,19nm,0.6s							
CAN	**Canberra**	**33.91**	**237**	P		**P**	**11 30 47.9**	**-0.5**
CAN				IAmb		IAmb	11 30 50.5	
	comp=Z,58nm,1.6s							
CAN	**Canberra**	**33.91**	**237**	P		**P**	**11 30 47.9**	**-0.5**
CAN				pmax		pmax		
	comp=Z,58nm,1.6s							
CAN	**Canberra**	**33.91**	**237**	P		**P**	**11 30 47.6**	**-0.9**
TV1H	**Townsville Har**	**34.70**	**265**	P		**P**	**11 30 54.6**	**-0.7**
CMSA	**Cobar Meteorol**	**35.78**	**244**	P		**P**	**11 31 03.3**	**-1.1**
	comp=Z,49nm,1.1s							
CMSA	**Cobar Meteorol**	**35.78**	**244**	P		**P**	**11 31 03.4**	**-1.0**
QLP	**Quilpie**	**36.62**	**253**	P		**P**	**11 31 09.3**	**-2.3**
	comp=Z,85nm,0.6s							
QLP	**Quilpie**	**36.62**	**253**	P		**P**	**11 31 10.2**	**-1.4**
TAOE	**Nuku Hiva Isla**	**36.71**	**77**	*e*P		**P**	**11 31 08.7**	**-3.9**
	comp=Z,124nm,24.2s							
TAOE				*e*S		**S**	**11 36 33.1**	**-5.0**
	comp=Z,172nm,28.2s							
TAOE				*es*S		**sS**	**11 39 24.7**	**-5.2**
	comp=Z,2μm,25.1s							
TAOE				*e*LR		LR	11 41 25.1	
	comp=Z,409nm,23.1s							
PATS	**Pohnpei**	**36.82**	**315**	P		**P**	**11 31 12.4**	**-0.8**
	comp=Z,163nm,1.0s							
PATS	**Pohnpei**	**36.82**	**315**	P		**P**	**11 31 13.3**	**0.0**
PATS	**Pohnpei**	**36.82**	**315**	P		**P**	**11 31 13.6**	**+0.3**
PMG	**Port Moresby**	**36.88**	**282**	P		**P**	**11 31 13.9**	**0.0**
PMG	**Port Moresby**	**36.88**	**282**	P		**P**	**11 31 12.6**	**-1.3**
	comp=Z,114nm,0.9s,baz=88,slow=6.2,SNR=20							
	comp=Z,114nm,0.9s							
PMG	**Port Moresby**	**36.88**	**282**	P		**P**	**11 31 12.8**	**-1.1**
PMG	**Port Moresby**	**36.88**	**282**	*i* P		**P**	**11 31 12.3**	**-1.6**
PMG				pmax		pmax		
	comp=Z,185nm,1.1s							
PMG	**Port Moresby**	**36.88**	**282**	P		**P**	**11 31 12.9**	**-0.9**
MTSU	**Mount Surprise**	**37.20**	**267**	P		**P**	**11 31 15.1**	**-1.5**
	comp=Z,116nm,0.6s							
MTSU	**Mount Surprise**	**37.20**	**267**	P		**P**	**11 31 15.6**	**-0.9**
TOO	**Toolangi**	**37.26**	**234**	P		**P**	**11 31 17.7**	**+0.9**
JOHN	**Johnston Islan**	**37.48**	**11**	P		**P**	**11 31 20.3**	**+1.6**
TAU	**Tasmania Unive**	**37.84**	**225**	P		**P**	**11 31 22.0**	**+0.5**
TAU	**Tasmania Unive**	**37.84**	**225**	P		**P**	**11 31 22.0**	**+0.5**
TAU				pmax		pmax		
	comp=Z,184nm,1.8s							
RKT	**Rikitea**	**38.38**	**102**	*e*P		**P**	**11 31 25.8**	**-0.5**
	comp=Z,100nm,0.9s							
RKT				*e*S		**S**	**11 37 00.5**	**-2.4**
	comp=Z,1μm,25.0s							
RKT				*es*S		**sS**	**11 40 04.4**	**+1.7**
	comp=Z,5μm,32.5s							
RKT				*e*LR		LR	11 42 13.2	
	comp=Z,1μm,24.0s							
BRAT	**Ballarat**	**38.45**	**235**	P		**P**	**11 31 27.0**	**+0.3**
COEN	**Coen**	**39.18**	**273**	P		**P**	**11 31 32.1**	**-0.9**
	comp=Z,198nm,0.9s							
COEN	**Coen**	**39.18**	**273**	P		**P**	**11 31 32.4**	**-0.6**
COEN	**Coen**	**39.18**	**273**	P		**P**	**11 31 32.1**	**-0.9**
STKA	**Stephens Creek**	**39.28**	**244**	P		**P**	**11 31 32.4**	**-1.2**
	comp=Z,147nm,1.2s							
STKA	**Stephens Creek**	**39.28**	**244**	P		**P**	**11 31 33.3**	**-0.4**
STKA	**Stephens Creek**	**39.28**	**244**	P		**P**	**11 31 32.5**	**-1.2**
	comp=Z,14nm,0.7s,baz=93,slow=9.4,SNR=15							
	comp=Z,14nm,0.7s							
STKA	**Stephens Creek**	**39.28**	**244**	P		**P**	**11 31 33.2**	**-0.4**
STKA	**Stephens Creek**	**39.28**	**244**	P		**P**	**11 31 33.3**	**-0.4**
STKA				pmax		pmax		
	comp=Z,189nm,1.3s							
INKA	**Innaminka**	**39.75**	**251**	P		**P**	**11 31 38.0**	**+0.4**
QIS	**Mount Isa**	**41.22**	**262**	P		**P**	**11 31 46.8**	**-2.9**
QIS	**Mount Isa**	**41.22**	**262**	P		**P**	**11 31 48.0**	**-1.8**
AUMBR	**Murray Bridge**	**41.62**	**240**	P		**P**	**11 31 52.0**	**-0.7**
HTT	**Hallett**	**41.70**	**242**	P		**P**	**11 31 52.6**	**-0.9**
	comp=Z,11nm,1.1s							
HTT	**Hallett**	**41.70**	**242**	P		**P**	**11 31 52.4**	**-1.1**
HTT	**Hallett**	**41.70**	**242**	P		**P**	**11 31 53.0**	**-0.5**
WAKE	**Wake Island**	**42.82**	**336**	P		**P**	**11 32 01.6**	**-0.8**
BBOO	**Buckleboo**	**44.03**	**244**	P		**P**	**11 32 10.0**	**-2.1**
	comp=Z,26nm,0.9s							
BBOO	**Buckleboo**	**44.03**	**244**	P		**P**	**11 32 10.3**	**-1.8**
BBOO	**Buckleboo**	**44.03**	**244**	P		**P**	**11 32 10.1**	**-2.0**
KIP	**Kipapa**	**45.23**	**24**	P		**P**	**11 32 23.8**	**+2.3**
KIP	**Kipapa**	**45.23**	**24**	P		**P**	**11 32 22.9**	**+1.4**
KIP	**Kipapa**	**45.23**	**24**	*i* P		**P**	**11 32 22.3**	**+0.8**
KIP				pmax		pmax		
	comp=Z,551nm,3.5s							
KIP	**Kipapa**	**45.23**	**24**	P		**P**	**11 32 24.2**	**+2.6**
JAY	**Jayapura**	**45.53**	**287**	P		**P**	**11 32 23.6**	**-0.6**
	comp=Z,104nm,0.6s,baz=183,slow=4.8,SNR=38							
	comp=Z,104nm,0.6s							
JAY	**Jayapura**	**45.53**	**287**	P		**P**	**11 32 23.7**	**-0.5**
	comp=Z,3μmcomp=Z,231nm,1.2s							
GENI	**Genyem**	**45.98**	**287**	P		**P**	**11 32 28.3**	**+0.7**
GENI	**Genyem**	**45.98**	**287**	P		**P**	**11 32 27.3**	**-0.3**
	comp=Z,3μmcomp=Z,5μmcomp=Z,309nm,1.1s							
AS31	**Alice Springs**	**46.10**	**256**	P		**P**	**11 32 27.4**	**-1.2**
ASAR	**Alice Springs**	**46.10**	**256**	P		**P**	**11 32 26.9**	**-1.6**
ASAR	**Alice Springs**	**46.10**	**256**	P		**P**	**11 32 27.5**	**-1.0**
	comp=Z,53nm,0.7s,baz=92,slow=8.3,SNR=179							
ASAR				PcP		**PcP**	**11 34 00.3**	**-0.2**
	comp=Z,6.1nm,0.8s,baz=93,slow=3.7,SNR=2.0							
ASAR				ScP		**ScP**	**11 37 29.5**	**-1.0**
	comp=Z,5.3nm,1.0s,baz=101,slow=3.9,SNR=9.1							
ASAR				S		**S**	**11 38 49.5**	**-6.3**
	comp=Z,3.4nm,0.9s,baz=96,slow=16,SNR=10							
	comp=Z,53nm,0.7s							
AUALC	**St Philip's Co**	**46.12**	**256**	P		**P**	**11 32 27.6**	**-1.1**
WRAB	**Tennant Creek**	**46.20**	**262**	P		**P**	**11 32 27.5**	**-1.7**
WRAB				IAmb		IAmb	11 32 29.9	
	comp=Z,127nm,1.4s							
WRAB	**Tennant Creek**	**46.20**	**262**	P		**P**	**11 32 27.3**	**-2.0**
WRAB	**Tennant Creek**	**46.20**	**262**	*i* P		**P**	**11 32 26.9**	**-2.4**
WRAB				pmax		pmax		
	comp=Z,107nm,1.5s							
WRAB	**Tennant Creek**	**46.20**	**262**	P		**P**	**11 32 27.2**	**-2.0**
WRA	**Warramunga Arr**	**46.20**	**262**	P		**P**	**11 32 27.6**	**-1.7**
	comp=Z,12nm,0.3s,baz=94,slow=5.6,SNR=124							
WRA				ScP		**ScP**	**11 37 29.1**	**-1.8**
	comp=Z,1.4nm,1.0s,baz=95,slow=3.3,SNR=2.1							
WRA				S		**S**	**11 38 49.5**	**-7.7**
	comp=Z,2.0nm,0.9s,baz=91,slow=14,SNR=6.0							
	comp=Z,12nm,0.3s							
SMPI	**Sarmi**	**47.55**	**287**	P		**P**	**11 32 39.0**	**-0.8**
KDU	**Kakadu**	**49.55**	**271**	P		**P**	**11 32 53.1**	**-1.9**
	comp=Z,29nm,1.1s							
BAKI	**Biak**	**50.24**	**286**	P		**P**	**11 33 01.0**	**+0.8**
MTN	**Manton Dam**	**50.77**	**270**	P		**P**	**11 33 01.8**	**-2.2**
	comp=Z,57nm,0.8s							
FORT	**Forrest**	**50.81**	**246**	P		**P**	**11 33 02.2**	**-2.0**
	comp=Z,17nm,0.9s							
GUMO	**Guam**	**50.98**	**308**	P		**P**	**11 33 05.4**	**-0.1**
GUMO	**Guam**	**50.98**	**308**	P		**P**	**11 33 05.0**	**-0.5**
	comp=Z,441nm,0.8s,baz=168,slow=8.3,SNR=27							
GUMO	**Guam**	**50.98**	**308**	P		**P**	**11 33 05.7**	**+0.2**
GUMO	**Guam**	**50.98**	**308**	P		**P**	**11 33 05.4**	**-0.1**
GUMO				pmax		pmax		
	comp=Z,538nm,0.9s							
GUMO	**Guam**	**50.98**	**308**	P		**P**	**11 33 05.1**	**-0.5**
WRKA	**Warakurna**	**51.04**	**254**	P		**P**	**11 33 03.5**	**-2.6**
	comp=Z,19nm,1.2s							
DRS	**Darwin Rock St**	**51.10**	**270**	P		**P**	**11 33 06.3**	**-0.2**
AUDHS	**Darwin High Sc**	**51.16**	**270**	P		**P**	**11 33 05.5**	**-1.5**
RKPI	**Ransiki, Papua**	**51.85**	**285**	P		**P**	**11 33 10.3**	**-1.8**
	comp=Z,5μmcomp=Z,80nm,1.4s							
KNRA	**Kununurra**	**52.27**	**266**	P		**P**	**11 33 13.0**	**-2.2**
	comp=Z,177nm,0.7s							
FAKI	**Fak Fak**	**53.04**	**282**	P		**P**	**11 33 19.5**	**-1.4**
FAKI	**Fak Fak**	**53.04**	**282**	P		**P**	**11 33 19.7**	**-1.1**
FAKI	**Fak Fak**	**53.04**	**282**	P		**P**	**11 33 19.6**	**-1.2**
	comp=Z,2μmcomp=Z,94nm,1.4s							
BNDI	**Bandanaira**	**54.59**	**279**	P		**P**	**11 33 32.2**	**+0.2**
BNDI	**Bandanaira**	**54.59**	**279**	P		**P**	**11 33 31.2**	**-0.8**
	comp=Z,219nm,1.2s							
FITZ	**Fitzroy Crossi**	**54.63**	**262**	P		**P**	**11 33 30.5**	**-1.7**
	comp=Z,11nm,1.4s							
FITZ	**Fitzroy Crossi**	**54.63**	**262**	P		**P**	**11 33 31.6**	**-0.7**
	comp=Z,16nm,0.4s,baz=97,slow=4.0,SNR=86							
	comp=Z,16nm,0.4s							
FITZ	**Fitzroy Crossi**	**54.63**	**262**	P		**P**	**11 33 32.0**	**-0.3**
SWI	**Sorong**	**54.77**	**284**	P		**P**	**11 33 33.1**	**-0.2**
	comp=Z,3μmcomp=Z,270nm,1.5s							
MSAI	**Masohi**	**55.93**	**280**	P		**P**	**11 33 41.1**	**-0.5**
	comp=Z,60nm,0.5s							
AAI	**Ambon**	**56.48**	**279**	P		**P**	**11 33 44.7**	**-0.8**
	comp=Z,2μmcomp=Z,91nm,0.7s							
NLAI	**Namlea**	**57.66**	**279**	P		**P**	**11 33 53.4**	**-0.3**
	comp=Z,2μmcomp=Z,51nm,1.0s							
SBA	**Scott Base**	**58.09**	**184**	P		**P**	**11 33 59.0**	**+3.3**
SBA	**Scott Base**	**58.09**	**184**	P		**P**	**11 33 59.0**	**+3.3**
SBA				pmax		pmax		
	comp=Z,23nm,0.8s							
SOEI	**Soe**	**58.10**	**271**	P		**P**	**11 33 58.2**	**+1.3**
SOEI	**Soe**	**58.10**	**271**	P		**P**	**11 33 57.5**	**+0.6**
	comp=Z,2μmcomp=Z,2μmcomp=Z,136nm,0.7s							
VNDA	**Vanda**	**58.17**	**185**	P		**P**	**11 33 58.8**	**+2.5**
VNDA	**Vanda**	**58.17**	**185**	P		**P**	**11 33 58.5**	**+2.3**
	comp=Z,9.1nm,0.8s,baz=357,slow=7.4,SNR=65							
	comp=Z,9.1nm,0.8s							
VNDA	**Vanda**	**58.17**	**185**	P		**P**	**11 33 58.8**	**+2.5**
VNDA				pmax		pmax		
	comp=Z,13nm,1.0s							
VNDA	**Vanda**	**58.17**	**185**	P		**P**	**11 33 58.7**	**+2.5**
VNDA				ScP		**ScP**	**11 38 24.1**	**+2.5**
BATI	**Baumata**	**58.53**	**270**	P		**P**	**11 34 00.1**	**+0.3**
	comp=Z,61nm,0.7s,baz=292,slow=1.4,SNR=8.3							
	comp=Z,61nm,0.7s							
BATI	**Baumata**	**58.53**	**270**	P		**P**	**11 34 01.3**	**+1.5**
	comp=Z,2μmcomp=Z,69nm,0.8s							
TNTI	**Ternate**	**58.99**	**284**	P		**P**	**11 34 02.7**	**-0.2**
TNTI	**Ternate**	**58.99**	**284**	P		**P**	**11 34 03.0**	**+0.2**
TNTI	**Ternate**	**58.99**	**284**	P		**P**	**11 34 03.1**	**+0.2**
	comp=Z,938nmcomp=Z,2μmcomp=Z,119nm,1.1s							
SANI	**Sanana**	**59.14**	**280**	P		**P**	**11 34 03.5**	**-0.4**
SANI	**Sanana**	**59.14**	**280**	P		**P

JNU **Nakatsue** 73.31 316 P P 11 35 33.3 0.0
SBUM **Sibu** 73.57 279 P P 11 35 36.6 +1.3
ASAJ **Asahikawa** 74.41 331 P P 11 35 39.1 -0.2
comp=Z,40nm,1.1s,baz=213,slow=5.3,SNR=7.5
comp=Z,40nm,1.1s
UNV **Unalaska Valle** 74.41 6 IAmb IAmb 11 35 42.0
comp=Z,50nm,0.9s
UNV **Unalaska Valle** 74.41 6 P P 11 35 38.9 -0.2
UNV **Unalaska Valle** 74.41 6 P P 11 35 38.9 -0.2
baz=190,SNR=6.6
BBJI **Bungbulang** 74.41 268 P P 11 35 39.1 -1.1
NACB **Ninganchiao** 74.95 303 P P 11 35 42.2 -0.8
KSM **Kuching** 74.99 277 IAmb IAmb 11 35 45.3
comp=Z,67nm,1.3s
KSM **Kuching** 74.99 277 P P 11 35 44.3 +0.9
TPUB **Ta-pu** 75.27 302 P P 11 35 42.7 -2.1
YHNB **Yeheng** 75.37 304 P P 11 35 45.2 -0.3
DBJI **Dramaga** 75.55 268 P P 11 35 45.3 -1.4
FALS **False Pass** 75.75 8 P P 11 35 46.2 -0.6
baz=192
TPI **Tanjungpandan** 75.98 272 P P 11 35 49.0 -0.1
comp=Z,33nm,1.2s
CHNA **Chernabura Isl** 76.27 10 P P 11 35 50.1 +0.4
baz=196
PET **Petropavlovsk** 76.27 345 *ce* P P 11 35 51.5 +1.8
PET pmax pmax
comp=Z,269nm,1.7s
PET **Petropavlovsk** 76.27 345 P P 11 35 50.7 +1.0
comp=Z,54nm,1.6s
YSS **Yuzhno-Sakhali** 76.52 333 P P 11 35 51.3 -0.1
YSS **Yuzhno-Sakhali** 76.52 333 P P 11 35 51.8 +0.5
YSS **Yuzhno-Sakhali** 76.52 333 *e* P P 11 35 51.8 +0.5
YSS pmax pmax
comp=Z,50nm,1.0s
PEA0B **Petropavlovsk-** 76.59 344 P P 11 35 51.8 +0.3
PEA0B **Petropavlovsk-** 76.59 344 *i* P P 11 35 51.4 -0.2
PETK **Petropavlovsk-** 76.59 344 P P 11 35 51.6 0.0
PETK **Petropavlovsk-** 76.59 344 P P 11 35 50.8 -0.7
comp=Z,45nm,1.0s,baz=119,slow=7.4,SNR=21
comp=Z,45nm,1.0s
PETK **Petropavlovsk-** 76.59 344 P P 11 35 51.6 0.0
SDPT **Sand Point** 76.63 9 P P 11 35 52.2 +0.5
baz=195
S12K **Black Hills** 76.75 8 IAmb IAmb 11 35 53.9
comp=Z,48nm,0.9s
S12K **Black Hills** 76.75 8 P P 11 35 52.9 +0.5
baz=194
P08K **Saint George I** 76.90 4 P P 11 35 53.7 +0.6
baz=186
PKD **Bear Valley Ra** 76.94 44 IAmb IAmb 11 35 58.2
comp=Z,31nm,1.2s
CVS **Carmenet Viney** 77.21 41 IAmb IAmb 11 35 59.3
comp=Z,46nm,1.2s
HOPS **Hopland Field** 77.25 40 IAmb IAmb 11 35 59.9
comp=Z,46nm,1.3s
KCPM **Cahto Peak** 77.39 39 IAmb IAmb 11 36 00.9
comp=Z,62nm,1.4s
SPIA **Saint Paul Isl** 77.43 3 P P 11 35 56.2 +0.1
baz=186
PASC **Pasadena Art C** 77.45 46 IAmb IAmb 11 36 00.0
comp=Z,48nm,1.6s
KMPM **Mount Pierce** 77.55 38 IAmb IAmb 11 36 01.9
comp=Z,71nm,1.2s
MNRC **McLaughlin Min** 77.56 40 IAmb IAmb 11 36 01.9
comp=Z,65nm,1.3s
BAR **Barrett** 77.64 48 IAmb IAmb 11 36 01.4
comp=Z,53nm,1.9s
S14K **Fog Glacier** 77.67 9 P P 11 35 58.4 +0.8
baz=196
QZH **Quanzhou** 77.70 303 P P 11 35 59.5 +1.1
QZH pmax pmax
comp=Z,120nm,1.4s
TPO **Tropico Hills** 77.83 46 IAmb IAmb 11 36 03.3
comp=Z,92nm,1.5s
JCC **Jacoby Creek,** 77.86 38 IAmb IAmb 11 36 03.3
comp=Z,36nm,1.2s
KSRS **Korea Array** 77.88 318 P P 11 35 59.0 -0.1
comp=Z,9.3nm,1.0s,baz=138,slow=6.4,SNR=18
comp=Z,9.3nm,1.0s
KSRS **Korea Array** 77.88 318 P P 11 35 59.0 -0.1
KSAR **Wonju Array Be** 77.89 318 P P 11 35 59.5 +0.3
KSAR **Wonju Array Be** 77.89 318 P P 11 35 59.5 +0.3
CHIR **Chirikof Islan** 77.91 12 P P 11 35 60.0 +1.2
baz=200
KASI **Kota Agung** 78.00 269 P P 11 35 58.1 -2.2
comp=Z,78nm,1.0s
KHMM **Horse Mountain** 78.07 38 IAmb IAmb 11 36 04.8
comp=Z,38nm,1.1s
KRPM **Rodgers** 78.09 38 IAmb IAmb 11 36 04.9
comp=Z,49nm,1.2s
ISA **Isabella, Lake** 78.12 45 IAmb IAmb 11 36 05.0
comp=Z,66nm,1.4s
SMAI **San Martin Ant** 78.14 159 IAmb IAmb 11 36 04.8
comp=Z,40nm,1.0s
BORC **Borrego Spring** 78.15 48 IAmb IAmb 11 36 04.2
comp=Z,38nm,1.4s
DNR **Dunn Ranch,Anz** 78.17 47 IAmb IAmb 11 36 05.3
comp=Z,39nm,1.3s
O02D **Mt. Diablo Mer** 78.17 39 IAmb IAmb 11 36 05.5
comp=Z,49nm,1.1s
SUTB **Sutter Butte** 78.17 40 IAmb IAmb 11 36 04.3
comp=Z,91nm,1.8s
PFO **Pinyon Flats O** 78.31 47 *ce* P P 11 36 04.4 +2.7
PFO pmax pmax
comp=Z,35nm,1.5s
ORV **Oroville** 78.55 40 IAmb IAmb 11 36 06.6
comp=Z,36nm,1.4s
MDSI **Maura Dua** 78.65 269 P P 11 36 01.4 -2.5
comp=Z,43nm,1.0s
KBO **Bosley Butte** 78.66 37 IAmb IAmb 11 36 08.1
comp=Z,82nm,1.6s
INCN **Inchon** 78.71 317 P P 11 36 03.8 +0.1
INCN IAmb IAmb 11 36 06.5
comp=Z,46nm,1.1s
INCN **Inchon** 78.71 317 P P 11 36 04.8 +1.1
INCN **Inchon** 78.71 317 P P 11 36 03.8 +0.1
INCN pmax pmax
comp=Z,46nm,1.2s
N02D **Trinity Center** 78.73 38 IAmb IAmb 11 36 08.3
comp=Z,53nm,1.2s
CCCA **Chr Cany lake** 78.78 45 IAmb IAmb 11 36 08.6
comp=Z,68nm,1.4s
CLC **China Lake** 78.79 45 IAmb IAmb 11 36 08.5
comp=Z,30nm,1.1s
BELC **Belle Mtn. Jos** 78.84 47 IAmb IAmb 11 36 08.2
comp=Z,52nm,1.6s
SII **Sitkinak Islan** 78.88 12 P P 11 36 05.5 +1.4
baz=201
M02C **Callahan** 78.91 38 IAmb IAmb 11 36 09.4
comp=Z,56nm,1.2s
L02F **Cave Junction** 78.97 37 IAmb IAmb 11 36 09.4
comp=Z,46nm,1.5s
VLA **Vladivostok** 79.12 324 *i* P P 11 36 05.6 -0.1
VLA pmax pmax
comp=Z,48nm,1.0s
WAKR **Walker** 79.18 42 IAmb IAmb 11 36 10.8
comp=Z,42nm,1.2s
YBH **Yreka Blue Hor** 79.21 38 IAmb IAmb 11 36 10.8
comp=Z,31nm,1.1s
R16K **Pilot Point** 79.22 10 P P 11 36 07.3 +1.4
baz=198
M03C **McCloud** 79.26 38 IAmb IAmb 11 36 10.7
comp=Z,60nm,1.1s
PSTR **Posyet** 79.42 323 *i* P P 11 36 07.3 0.0
PNTR **Pine Nut** 79.43 41 IAmb IAmb 11 36 12.5
comp=Z,46nm,0.9s
BELA **Belgrano 2** 79.46 172 P P 11 36 07.8 +0.7
LHSI **Lahat** 79.48 270 P P 11 36 08.9 +0.5
R17L **Mt. Peulik Vol** 79.49 11 P P 11 36 08.0 +0.6
baz=199,SNR=8.8
IRM **Iron Mountain** 79.52 48 IAmb IAmb 11 36 12.8
comp=Z,54nm,1.4s
LHV **Little Huntoon** 79.62 43 IAmb IAmb 11 36 13.1
comp=Z,55nm,1.4s
GRAC **Grapevine Rang** 79.62 44 IAmb IAmb 11 36 13.2
comp=Z,67nm,1.4s
DSRI **Dabo** 79.64 273 P P 11 36 09.7 +0.4
SHOC **Shoshone, Teco** 79.72 46 IAmb IAmb 11 36 13.3
comp=Z,45nm,1.3s
113A **Mohawk Valley,** 79.74 49 IAmb IAmb 11 36 13.0
comp=Z,50nm,1.8s
L04D **Klamath Falls** 79.75 38 IAmb IAmb 11 36 13.3
comp=Z,43nm,1.0s
R18K **Karluk** 79.77 12 P P 11 36 09.3 +0.5
baz=201
USRK **Ussuriysk Ar.** 79.78 325 P P 11 36 09.8 +0.5
comp=Z,12nm,0.8s,baz=143,slow=4.4,SNR=17
comp=Z,12nm,0.8s
NVAR **Mina Array Bea** 79.85 43 P P 11 36 11.9 +1.9
NVAR **Mina Array Bea** 79.85 43 P P 11 36 12.2 +2.1
comp=Z,9.0nm,0.8s,baz=224,slow=7.2,SNR=55
NVAR PKPPKP P'P'df 12 03 02.2 +4.4
comp=Z,0.2nm,0.5s,baz=69,slow=2.1,SNR=4.2
comp=Z,9.0nm,0.8s
MTPC **Mountain Pass** 79.97 46 IAmb IAmb 11 36 15.2
comp=Z,38nm,1.3s
214A **Organ Pipe Nat** 80.00 51 IAmb IAmb 11 36 14.6
comp=Z,54nm,1.9s
I03D **Drain, OR** 80.12 36 IAmb IAmb 11 36 15.1
comp=Z,50nm,1.3s
Q17K **Contact Creek** 80.17 11 P P 11 36 12.1 +0.9
baz=199
O14K **Tigyukauivet M** 80.31 8 P P 11 36 12.8 +1.1
baz=194
TPNV **Topopah Spring** 80.33 45 IAmb IAmb 11 36 16.1
comp=Z,48nm,1.8s
KDAK **Kodiak Island** 80.35 13 P P 11 36 13.1 +1.2
KDAK **Kodiak Island** 80.35 13 P P 11 36 13.1 +1.2
KDAK pmax pmax
comp=Z,90nm,1.4s
KDAK **Kodiak Island** 80.35 13 P P 11 36 13.0 +1.0
baz=202
O15K **Ungalikthiuk R** 80.42 9 P P 11 36 13.2 +0.8
baz=196
Q16K **King Salmon** 80.43 10 P P 11 36 13.0 +0.7
baz=199,SNR=8.0
P16K **Nushagak River** 80.55 9 P P 11 36 14.0 +1.1
baz=197
BUCK **Buck Mountain** 80.64 36 IAmb IAmb 11 36 18.2
comp=Z,46nm,1.1s
Q18K **Katmai Hardscr** 80.69 11 P P 11 36 14.5 +0.6
baz=200,SNR=9.9
M11K **Mekoryuk** 80.90 5 P P 11 36 16.3 +1.5
baz=196
W13A **Hualapai Mount** 80.90 47 IAmb IAmb 11 36 19.5
comp=Z,39nm,1.5s
N14K **Kuskokwak Cree** 80.91 7 P P 11 36 15.9 +1.0
baz=194
P17K **Kvichak River** 80.96 10 P P 11 36 15.5 +0.4
baz=199,SNR=15
H04D **Lebanon** 80.99 36 IAmb IAmb 11 36 19.9
comp=Z,72nm,1.4s
BTDF **Butt Timah Da** 81.04 275 P P 11 36 17.7 +1.0
S11A **Rachel** 81.05 44 IAmb IAmb 11 36 20.6
comp=Z,41nm,1.4s
NJ2 **Nanjing** 81.05 309 ⇑ P P 11 36 16.8 +0.5
NJ2 pmax pmax
comp=Z,35nm,1.0s
O16K **Kokwok River B** 81.08 9 IAmb IAmb 11 36 17.3
comp=Z,38nm,1.0s
O16K **Kokwok River B** 81.08 9 P P 11 36 16.0 +0.3
baz=197,SNR=9.8
Q20K **Shuyak Island** 81.15 12 P P 11 36 17.4 +1.3
baz=203
SYI **Shuyak Island** 81.15 12 IAmb IAmb 11 36 18.9
comp=Z,36nm,1.1s
M13K **Dall Lake** 81.20 6 IAmb IAmb 11 36 19.8
comp=Z,38nm,0.9s
M13K **Dall Lake** 81.20 6 P P 11 36 17.9 +1.6
baz=192
N15K **Kwethluk River** 81.35 8 IAmb IAmb 11 36 20.0
comp=Z,98nm,1.6s
N15K **Kwethluk River** 81.35 8 P P 11 36 17.9 +0.7
baz=195
P18K **Big Mountain,** 81.35 11 IAmb IAmb 11 36 19.2
comp=Z,51nm,0.9s
P18K **Big Mountain,** 81.35 11 P P 11 36 17.2 -0.1
baz=200,SNR=12
MDJ **Mudanjiang** 81.36 324 P P 11 36 18.0 +0.4
MDJ pmax pmax
comp=Z,83nm,1.2s
MDJ **Mudanjiang** 81.36 324 P P 11 36 18.0 +0.4
PRN **Pahroc Range** 81.38 45 IAmb IAmb 11 36 22.8
comp=Z,38nm,1.2s
H04A **Detroit Lake** 81.39 36 IAmb IAmb 11 36 21.4
comp=Z,40nm,1.0s
O17K **Koliganek Bris** 81.40 10 P P 11 36 17.8 +0.4
baz=198,SNR=7.2
G04A **Mulino** 81.57 35 IAmb IAmb 11 36 23.6
comp=Z,47nm,1.0s
I05D **Terrebonne, OR** 81.64 36 IAmb IAmb 11 36 23.3
comp=Z,50nm,1.0s
TUC **Tucson** 81.65 51 P P 11 36 22.5 +2.9
TUC **Tucson** 81.65 51 P P 11 36 22.5 +2.9
TUC pmax pmax
comp=Z,28nm,1.2s
TUC **Tucson** 81.65 51 P P 11 36 22.6 +3.0
M14K **Bethel** 81.68 7 P P 11 36 20.1 +1.3
baz=194,SNR=8.6
M15K **Kasigluk River** 81.78 8 P P 11 36 20.7 +1.3
baz=195
O18K **Koktuh Hills** 81.79 11 P P 11 36 20.4 +0.9
baz=200,SNR=14
N16K **Nishlik Lake** 81.82 9 P P 11 36 21.0 +1.3
baz=197
E03A **Lebam** 81.86 34 IAmb IAmb 11 36 24.3
comp=Z,60nm,1.0s
P19K **Oil Pt** 81.96 12 P P 11 36 20.6 +0.2
baz=202
WVOR **Wild Horse Val** 82.02 39 IAmb IAmb 11 36 25.4
comp=Z,55nm,1.2s
WVOR **Wild Horse Val** 82.02 39 P P 11 36 23.9 +2.6
WVOR pmax pmax
comp=Z,32nm,1.4s
N17K **Nushagak Hills** 82.11 9 P P 11 36 21.2 +0.1
baz=198
GRNR **Gornyy** 82.15 332 ⇓ *i* P P 11 36 21.5 -0.1
GRNR pmax pmax
comp=Z,10.0nm,0.8s
L14K **Kuka Creek** 82.18 7 IAmb IAmb 11 36 24.6
comp=Z,50nm,1.0s
L14K **Kuka Creek** 82.18 7 P P 11 36 22.7 +1.3
baz=193
MAW **Mawson** 82.21 199 P P 11 36 23.6 +1.9
comp=Z,3.2nm,0.7s,baz=127,slow=2.6,SNR=9.1
comp=Z,3.2nm,0.7s
MAW **Mawson** 82.21 199 PKIKP P 11 36 23.6 +1.9
G05A **Wamic** 82.22 36 IAmb IAmb 11 36 26.1
comp=Z,54nm,1.1s
CNPM **China Poot** 82.23 13 IAmb IAmb 11 36 24.5
comp=Z,66nm,1.2s
X16A **Lo Mia Camp, P** 82.25 49 IAmb IAmb 11 36 26.9
comp=Z,40nm,1.2s
NLWA **Neilton Lookou** 82.26 33 IAmb IAmb 11 36 26.5
comp=Z,32nm,1.0s
O19K **Port Alsworth** 82.26 11 P P 11 36 22.8 +0.9
baz=201,SNR=20
HOM **Homer** 82.27 12 P P 11 36 23.2 +1.2
baz=203
M16K **Timber Creek** 82.32 8 P P 11 36 23.7 +1.4
baz=196,SNR=33
LCMT **Little Creek M** 82.37 46 IAmb IAmb 11 36 27.8
comp=Z,48nm,1.5s
N18K **Kilae Creek** 82.45 10 P P 11 36 23.3 +0.4
baz=199
O20K **Slope Mountain** 82.47 12 P P 11 36 23.9 +0.7
baz=202
I07A **Izee** 82.52 37 IAmb IAmb 11 36 28.0
comp=Z,44nm,1.1s
BRSE **Bradley Lake S** 82.53 13 P P 11 36 24.3 +0.9
baz=204,SNR=15
K13K **Kusilvak Mount** 82.56 6 IAmb IAmb 11 36 26.7
comp=Z,76nm,1.4s
K13K **Kusilvak Mount** 82.56 6 P P 11 36 24.8 +1.4
baz=191
CCUT **Cedar City** 82.58 46 IAmb IAmb 11 36 28.4
comp=Z,37nm,1.4s
L15K **Ungalaska Mounta** 82.64 7 P P 11 36 25.0 +1.1
baz=194,SNR=24
KNB **Kanab** 82.66 46 IAmb IAmb 11 36 29.6
comp=Z,80nm,1.5s
U15A **North Rim** 82.71 47 IAmb IAmb 11 36 30.1
comp=Z,87nm,1.5s
SPR3 **Spring Creek 3** 82.73 44 IAmb IAmb 11 36 28.9
comp=Z,38nm,1.5s
RED **Redoubt Volcan** 82.75 12 IAmb IAmb 11 36 26.3
comp=Z,60nm,1.2s
SZCU **Shurtz Canyon** 82.79 46 IAmb IAmb 11 36 30.1
comp=Z,41nm,1.4s
N19K **Bonanza Creek** 82.82 11 IAmb IAmb 11 36 26.7
comp=Z,37nm,1.2s
N19K **Bonanza Creek** 82.82 11 P P 11 36 25.2 +0.3
baz=201
WUAZ **Wupatki** 82.87 48 IAmb IAmb 11 36 29.9
comp=Z,46nm,1.3s
B04A **Port Angeles** 82.89 33 IAmb IAmb 11 36 29.7
comp=Z,34nm,1.0s
M17K **Holitna River** 82.90 9 P P 11 36 27.1 +1.9
baz=198,SNR=11
GNW **Green Mountain** 82.91 33 IAmb IAmb 11 36 29.5
comp=Z,48nm,1.2s
L16K **Owhat River** 82.92 8 P P 11 36 26.6 +1.3
baz=196
CLRS **Cowichan Lake** 83.08 32 IAmb IAmb 11 36 30.2
comp=Z,52nm,1.1s
ELK **Elko** 83.12 42 IAmb IAmb 11 36 31.0
comp=Z,33nm,1.2s
SEW **Seward** 83.13 13 IAmb IAmb 11 36 28.6
comp=Z,34nm,1.1s
SEW **Seward** 83.13 13 P P 11 36 27.1 +0.8
baz=205,SNR=5.0
CN2 **Changchun** 83.20 322 P P 11 36 27.0 -0.1
CN2 pmax pmax
comp=Z,50nm,0.9s
Q23K **Middleton Isla** 83.23 15 P P 11 36 28.3 +1.4
baz=208
K15K **Wolf Creek Mou** 83.23 7 P P 11 36 28.3 +1.4
baz=194
M18K **Stony River** 83.23 10 P P 11 36 27.9 +1.0
baz=199
BNX **BinXian** 83.27 324 ⇓ P P 11 36 26.8 -0.6
BNX pmax pmax
comp=Z,71nm,1.1s
CBB **Campbell River** 83.30 30 IAmb IAmb 11 36 31.4
comp=Z,54nm,1.1s
PGC **Sidney** 83.31 32 IAmb IAmb 11 36 31.3
comp=Z,34nm,0.8s
CAPN **Captain Cook N** 83.39 12 P P 11 36 29.1 +1.4
baz=204
F07A **Phinny Hill Vi** 83.39 36 IAmb IAmb 11 36 32.0
comp=Z,34nm,0.9s
O22K **Cooper Landing** 83.42 13 P P 11 36 29.2 +1.4
baz=205,SNR=5.6
J14K **Nanvaranak Lak** 83.47 6 IAmb IAmb 11 36 30.9
comp=Z,31nm,0.9s
J14K **Nanvaranak Lak** 83.47 6 P P 11 36 28.8 +0.8
baz=192
L17K **Donlin** 83.48 8 P P 11 36 29.9 +1.7
baz=197
P23K **Montague Islan** 83.49 14 P P 11 36 29.9 +1.7
baz=207
N20K **Mount Spurr** 83.58 11 P P 11 36 29.3 +0.5
baz=203,SNR=10
SPU **Mount Spurr** 83.60 12 IAmb IAmb 11 36 30.3
comp=Z,29nm,1.2s
MXC **Moxie City** 83.62 35 IAmb IAmb 11 36 33.2
comp=Z,40nm,1.1s
MTPU **Mount Pierson** 83.63 46 IAmb IAmb 11 36 35.1
comp=Z,58nm,1.4s
WHN **Wuhan** 83.68 306 P P 11 36 31.5 +1.6
TCRU **Three Creeks R** 83.75 45 IAmb IAmb 11 36 35.2
comp=Z,43nm,1.6s
L18K **Granite Mounta** 83.79 9 IAmb IAmb 11 36 33.1
comp=Z,50nm,1.0s
L18K **Granite Mounta** 83.79 9 P P 11 36 31.3 +1.6
baz=198
W18A **Petrified Fore** 83.82 49 IAmb IAmb 11 36 35.3
comp=Z,82nm,1.7s
LTY **Liberty** 83.84 34 IAmb IAmb 11 36 34.0
comp=Z,39nm,1.2s
STLK **Strandline Lak** 83.93 12 IAmb IAmb 11 36 31.9
comp=Z,21nm,0.9s
GAMB **Gambell** 83.96 2 P P 11 36 31.1 +0.6
baz=184
RC01 **Rabbit Creek A** 83.97 13 IAmb IAmb 11 36 33.0
comp=Z,56nm,1.1s
RC01 **Rabbit Creek A** 83.97 13 P P 11 36 31.8 +1.1
baz=205,SNR=8.3
121A **Cookes Peak, D** 83.97 52 IAmb IAmb 11 36 35.8
comp=Z,27nm,1.1s
CRAG **Craig** 83.98 23 P P 11 36 32.6 +1.8
baz=220
K17K **Iditarod** 84.04 8 IAmb IAmb 11 36 34.2
comp=Z,29nm,0.9s
K17K **Iditarod** 84.04 8 P P 11 36 31.9 +0.9
baz=197
L19K **White Mountain** 84.04 10 P P 11 36 31.9 +0.9
baz=200
M20K **Styx River** 84.05 11 IAmb IAmb 11 36 32.9
comp=Z,30nm,1.4s
M20K **Styx River** 84.05 11 P P 11 36 31.1 -0.1
baz=202,SNR=6.9
PWL **Port Wells** 84.05 13 P P 11 36 31.6 +0.5
baz=206,SNR=15
SUA **Susitna One** 84.11 12 P P 11 36 31.9 +0.4
baz=204,SNR=6.4
KAIM **Kayak Island** 84.14 16 P P 11 36 33.4 +1.8
baz=210
E08A **Dider Farm, El** 84.23 36 IAmb IAmb 11 36 36.2
comp=Z,40nm,1.0s
BMO **Blue Mountains** 84.24 38 IAmb IAmb 11 36 36.2
comp=Z,23nm,1.0s
MFID **Camas Ranch** 84.27 40 IAmb IAmb 11 36 36.6
comp=Z,41nm,1.2s
J16K **Anvik River** 84.30 7 P P 11 36 33.6 +1.3
baz=195
GLI **Glacier Island** 84.35 14 P P 11 36 33.4 +0.8
baz=207,SNR=6.0
DUG **Dugway, Tooele** 84.36 44 P P 11 36 35.5 +2.2
DUG pmax pmax
comp=Z,8.0nm,1.1s
EYAK **Cordova Ski Ar** 84.36 15 IAmb IAmb 11 36 35.1
comp=Z,27nm,0.9s
EYAK **Cordova Ski Ar** 84.36 15 P P 11 36 33.6 +1.0
EYAK **Cordova Ski Ar** 84.36 15 P P 11 36 33.6 +1.0
baz=209,SNR=5.6
TIA **Tai'an** 84.39 312 P P 11 36 32.9 -0.5
TIA pmax pmax
comp=Z,28nm,1.1s
SKT **Skwentna** 84.43 11 IAmb IAmb 11 39 14.6
comp=Z,21nm,0.5s
SKT **Skwentna** 84.43 11 P P 11 36 33.0 0.0
baz=203,SNR=9.9
V35K **Ketchikan** 84.43 24 P P 11 36 35.6 +2.6
baz=222
SIT **Sitka** 84.43 21 P P 11 36 35.3 +2.3
baz=218
U33K **Whale Pass** 84.47 23 P P 11 36 35.3 +2.0
baz=220
L20K **Farewell, AK** 84.48 10 P P 11 36 33.4 +0.2
baz=201,SNR=14
RAGM **Ragged Mountai** 84.48 15 IAmb IAmb 11 36 36.6
comp=Z,40nm,1.0s
M22K **Willow** 84.50 12 P P 11 36 33.5 +0.3
baz=205,SNR=22
KNK **Knik Glacier** 84.53 13 IAmb IAmb 11 36 35.9
comp=Z,36nm,1.0s
KNK **Knik Glacier** 84.53 13 P P 11 36 34.4 +0.9
baz=206,SNR=13
PMR **Palmer** 84.55 13 P P 11 36 33.9 +0.4
PMR **Palmer** 84.55 13 P P 11 36 33.8 +0.4
baz=206,SNR=14
HMU **Henry Mountain** 84.55 46 IAmb IAmb 11 36 38.4
comp=Z,55nm,1.7s
EPT **El Paso** 84.57 53 IAmb IAmb 11 36 38.3
comp=Z,58nm,1.4s
J17K **VABM Dome** 84.59 8 IAmb IAmb 11 36 36.9
comp=Z,40nm,0.8s
J17K **VABM Dome** 84.59 8 P P 11 36 35.0 +1.2
baz=196
BGLC **Bering Glacier** 84.60 16 P P 11 36 35.1 +1.3
baz=211
D08A **Wollman Farm,** 84.66 35 IAmb IAmb 11 36 38.4
comp=Z,46nm,1.0s
IPM **Ipoh** 84.71 277 IAmb IAmb 11 36 37.4
comp=Z,59nm,1.3s
IPM **Ipoh** 84.71 277 P P 11 36 35.0 -0.5
H03S2 **Juan Fernandez** 84.73 124 T T 13 09 32.6
baz=247
H03S1 **Juan Fernandez** 84.74 124 T T 13 09 27.5
baz=247,slow=74
H03S3 **Juan Fernandez** 84.75 124 T T 13 09 39.9
baz=247,slow=74
E09A **Wood Farm, Sta** 84.75 36 IAmb IAmb 11 36 38.5
comp=Z,39nm,1.1s
Q16A **Castle Valley** 84.77 45 IAmb IAmb 11 36 40.1
comp=Z,68nm,1.7s
S31K **Pelican** 84.85 20 P P 11 36 36.6 +1.6
baz=217
I17K **Unalakleet** 84.88 7 P P 11 36 35.9 +0.9
baz=195
SML **Sawmill** 84.91 13 IAmb IAmb 11 36 37.8
comp=Z,62nm,1.6s

SML	**Sawmill** baz=206,SNR=5.7	84.91	13	P	P	11 36 36.0	+0.6
TMUT	**Trail Mountain** comp=Z,37nm,1.3s	84.94	45	IAmb	IAmb	11 36 41.0	
F10A	**Beach Ranch, E** comp=Z,47nm,1.0s	84.94	37	IAmb	IAmb	11 36 39.4	
J18K	**Innoko River** baz=198,SNR=31	84.98	9	P	P	11 36 36.3	+0.7
WRAK	**Wrangell Islan** baz=221	84.98	23	P	P	11 36 38.2	+2.4
MESA	**MESA** baz=212,SNR=12	85.00	16	P	P	11 36 37.5	+1.4
BMRM	**Bremner River** baz=210,SNR=18	85.00	15	P	P	11 36 36.7	+0.8
S32K	**Killisnoo** baz=219	85.01	21	P	P	11 36 38.2	+2.4
M23K	**Glacier View** baz=207,SNR=11	85.02	13	P	P	11 36 36.7	+0.7
CUT	**Chulitna** baz=204,SNR=14	85.06	12	P	P	11 36 36.6	+0.6
ANM	**Nome** baz=190	85.10	5	P	P	11 36 36.8	+0.6
PLID	**Pearl Lake** comp=Z,32nm,1.2s	85.13	38	IAmb	IAmb	11 36 40.7	
COYC	**Coyhaique**	85.14	137	P	P	11 36 38.7	+1.7
COYC	comp=Z,32nm,0.9s			IAmb	IAmb	11 36 42.2	
SCM	**Sheep Creek Mo** baz=207,SNR=17	85.15	13	P	P	11 36 37.7	+1.0
KLU	**Klutina** comp=Z,52nm,1.4s	85.16	14	IAmb	IAmb	11 36 39.2	
KLU	**Klutina** baz=208,SNR=11	85.16	14	P	P	11 36 37.6	+0.9
PPLA	**Purkeypile** comp=Z,71nm,2.0s	85.16	11	IAmb	IAmb	11 38 04.7	
PPLA	**Purkeypile** baz=203	85.16	11	P	P	11 36 37.9	+1.2
CRQE	**Cirque** baz=211,SNR=13	85.19	16	P	P	11 36 37.9	+1.0
B08A	**Colville Reser** comp=Z,29nm,1.0s	85.23	34	IAmb	IAmb	11 36 40.5	
K20K	**Telida** baz=201	85.27	10	P	P	11 36 38.1	+0.9
VHRN	**Van Horn** comp=Z,48nm,1.4s	85.27	55	IAmb	IAmb	11 36 41.8	
PNL	**Peninsula** baz=214	85.28	18	P	P	11 36 38.7	+1.4
SRU	**San Rafael Swe** comp=Z,32nm,1.1s	85.30	45	IAmb	IAmb	11 36 42.0	
P17A	**Butcher Ranch,** comp=Z,39nm,1.4s	85.34	45	IAmb	IAmb	11 36 42.6	
KULM	**Kulim** comp=Z,28nm,1.3s	85.34	277	IAmb	IAmb	11 36 40.6	
KULM	**Kulim**	85.34	277	P	P	11 36 39.3	+0.7
LLLB	**Lillooet** comp=Z,29nm,0.9s	85.36	31	IAmb	IAmb	11 36 41.3	
R31K	**City Hall, Gus** baz=218	85.37	20	P	P	11 36 39.3	+1.7
MNTX	**Cornudas Mount** comp=Z,31nm,1.2s	85.38	54	IAmb	IAmb	11 36 42.1	
PCA	**Pinnacle** comp=Z,34nm,1.0s	85.39	17	IAmb	IAmb	11 36 43.3	
PINM	**Pinnacle** baz=214	85.39	17	P	P	11 36 39.6	+1.7
H16K	**Elim** baz=193	85.45	6	P	P	11 36 39.0	+1.1
C09A	**Chrisman Ranch** comp=Z,39nm,1.1s	85.46	35	IAmb	IAmb	11 36 42.0	
JLU	**Jordanelle** comp=Z,56nm,2.0s	85.46	44	IAmb	IAmb	11 36 42.7	
N25K	**Chitina, Valde** baz=210,SNR=36	85.56	15	P	P	11 36 39.6	+0.9
GLB	**Gilahina Butte** comp=Z,29nm,0.8s	85.61	15	IAmb	IAmb	11 36 41.5	
G15K	**Niukluk** baz=192	85.63	5	P	P	11 36 39.6	+0.8
J19K	**Poorman** comp=Z,56nm,1.6s	85.64	9	IAmb	IAmb	11 36 40.9	
J19K	**Poorman** baz=199,SNR=13	85.64	9	P	P	11 36 39.9	+1.0
M24K	**Tolsona, Glenn** baz=208,SNR=18	85.64	14	P	P	11 36 40.0	+1.0
TXAR	**Lajitas Array** comp=Z,10nm,0.9s,baz=216,slow=6.6,SNR=74 comp=Z,10nm,0.9s	85.65	57	P	P	11 36 42.3	+2.4
R32K	**Eaglecrest** baz=219	85.66	21	P	P	11 36 40.7	+1.6
WAT6	**Susitna Watana** baz=207,SNR=7.4	85.73	13	P	P	11 36 40.2	+0.7
P29M	**Windy Craggy** comp=Z,48nm,1.1s	85.73	19	IAmb	IAmb	11 36 43.1	
P29M	**Windy Craggy** baz=216,SNR=7.3	85.73	19	P	P	11 36 41.4	+1.9
MCARA	**McCarthy VSAT** comp=Z,48nm,1.1s	85.75	15	IAmb	IAmb	11 36 43.1	
MCARA	**McCarthy VSAT** baz=211,SNR=14	85.75	15	P	P	11 36 40.7	+1.2
WAT1	**Susitna Watana** baz=206	85.78	12	P	P	11 36 40.1	+0.4
LOGN	**Logan Glacier** comp=Z,48nm,1.0s	85.80	16	IAmb	IAmb	11 36 42.8	
CTG	**Chitna Glacier** baz=213,SNR=18	85.83	16	P	P	11 36 41.5	+1.4
CTGM	**Chitina Glacie** comp=Z,42nm,0.9s	85.83	16	IAmb	IAmb	11 36 43.0	
BSUT	**Blindstream Ca** comp=Z,36nm,1.7s	85.87	44	IAmb	IAmb	11 36 44.2	
TNA	**Tin City** baz=188	85.92	3	P	P	11 36 40.7	+0.5
PV10	**Paradox Valley** comp=Z,72nm,1.7s	85.93	47	IAmb	IAmb	11 36 45.8	
F14K	**Arctic Creek** baz=189	85.93	4	P	P	11 36 40.6	+0.3
PV19	**Morning Glory** comp=Z,36nm,1.3s	85.93	47	IAmb	IAmb	11 36 44.9	
PV18	**Skein Mesa, Pa** comp=Z,36nm,1.5s	85.95	47	IAmb	IAmb	11 36 45.0	
PV20	**West Nyswonger** comp=Z,62nm,1.5s	85.96	47	IAmb	IAmb	11 36 46.1	
O28M	**Mount Upton** comp=Z,34nm,0.9s	85.97	17	IAmb	IAmb	11 36 43.9	
O28M	**Mount Upton** baz=214	85.97	17	P	P	11 36 41.1	+0.1
H17K	**Granite Mounta** baz=195	85.98	7	P	P	11 36 41.0	+0.4
PV23	**Carpenter Ridg** comp=Z,20nm,0.9s	85.98	47	IAmb	IAmb	11 36 46.3	
KTH	**Kantishna Hill** comp=Z,45nm,1.0s	85.99	11	IAmb	IAmb	11 36 42.1	
PLBC	**Pleasant Camp** baz=217	86.00	19	P	P	11 36 43.0	+2.2
TRF	**Thorofare Moun** baz=204,SNR=40	86.01	11	P	P	11 36 40.8	-0.1
PV04	**Paradox Valley** comp=Z,56nm,1.9s	86.03	47	IAmb	IAmb	11 36 46.4	
J20K	**Nowinta River** comp=Z,37nm,0.9s	86.03	10	IAmb	IAmb	11 36 43.4	
J20K	**Nowinta River** baz=201,SNR=19	86.03	10	P	P	11 36 41.4	+0.6
O29M	**Mount Kennedy** comp=Z,38nm,1.2s	86.03	18	IAmb	IAmb	11 36 44.4	
O29M	**Mount Kennedy** baz=215	86.03	18	P	P	11 36 43.0	+2.0
CHUM	**Lake Minchumin** baz=202	86.05	10	P	P	11 36 40.7	-0.2
PV12	**Saucer Basin,** comp=Z,34nm,1.3s	86.06	47	IAmb	IAmb	11 36 46.9	
HEH	**HeiHe**	86.07	328	*e*P	P	11 36 40.8	-0.5
HEH	comp=Z,30nm,1.3s			pmax	pmax		
PSI	**Prapat**	86.08	274	P	P	11 36 41.9	-0.5
PSI	**Prapat**	86.08	274	P	P	11 36 41.0	-1.4
PSI	comp=Z,11nm,1.7s			pmax	pmax		
TASM	**ASL Pad, Albuq** comp=Z,28nm,1.5s	86.09	51	IAmb	IAmb	11 36 45.4	
TASM	**ASL Pad, Albuq** comp=Z,26nm,1.5s	86.09	51	IAmb	IAmb	11 36 45.4	
ANMO	**Albuquerque**	86.09	51	P	P	11 36 44.1	+2.1
ANMO	**Albuquerque**	86.09	51	P	P	11 36 44.1	+2.1
ANMO	comp=Z,27nm,1.5s			pmax	pmax		
ANMO	**Albuquerque**	86.09	51	P	P	11 36 44.1	+2.1
HARP	**HAARP** baz=209,SNR=7.6	86.13	14	P	P	11 36 42.0	+0.6
ALPN	**Alpine** comp=Z,39nm,1.4s	86.13	56	IAmb	IAmb	11 36 45.6	
G16K	**Koyuk River** baz=193	86.17	6	P	P	11 36 41.4	0.0
GCSA	**Galena City Sc** baz=198,SNR=9.0	86.17	8	P	P	11 36 41.1	-0.4
T35M	**Bob Quinn** baz=223	86.17	23	P	P	11 36 44.6	+2.9
LL01	**San Ignacio de**	86.22	134	P	P	11 36 45.2	+2.8
DHY	**Denali Highway** comp=Z,35nm,1.2s	86.25	13	IAmb	IAmb	11 36 44.4	
DHY	**Denali Highway** baz=207,SNR=12	86.25	13	P	P	11 36 42.8	+0.7
LL02	**Futaleuf**	86.27	135	P	P	11 36 44.8	+2.1
LL02	comp=Z,28nm,1.1s			IAmb	IAmb	11 36 47.9	
F15K	**North Star Dit** baz=191	86.28	5	P	P	11 36 41.7	-0.3
SKAG	**Skagway** baz=218	86.33	20	P	P	11 36 44.7	+2.3
NEW	**Newport**	86.35	35	P	P	11 36 44.8	+2.0
NEW	comp=Z,17nm,1.5s			pmax	pmax		
P30M	**Million Dollar** baz=217,SNR=14	86.36	19	P	P	11 36 44.3	+1.7
H18K	**Honhosa River** baz=197	86.37	7	P	P	11 36 42.2	-0.3
G17K	**Kiwalik Mounta** baz=195	86.45	6	P	P	11 36 42.8	0.0
BPAW	**Bear Paw Mtn.** baz=204	86.48	11	P	P	11 36 42.2	-0.9
YUK8	**Steele Glacier** baz=214,SNR=22	86.51	17	P	P	11 36 44.9	+1.3
MCK	**McKinley** baz=206,SNR=48	86.53	12	P	P	11 36 43.5	+0.3
S34M	**Telegraph Cree** comp=Z,45nm,1.1s	86.55	22	IAmb	IAmb	11 36 47.4	
S34M	**Telegraph Cree** baz=222,SNR=9.9	86.55	22	P	P	11 36 46.0	+2.6
PAX	**Paxson** comp=Z,30nm,1.2s	86.56	14	IAmb	IAmb	11 36 45.6	
PAX	**Paxson** baz=209,SNR=12	86.56	14	P	P	11 36 44.1	+0.5
I20K	**Naaghedeneel** baz=200	86.56	9	P	P	11 36 44.4	+1.1
YUK6	**Outpost Mounta** baz=215	86.62	17	P	P	11 36 45.8	+1.7
M26K	**Nabesna, AK** comp=Z,54nm,1.2s	86.63	15	IAmb	IAmb	11 36 46.8	
M26K	**Nabesna, AK** baz=211,SNR=25	86.63	15	P	P	11 36 45.2	+1.4
SEY	**Seymchan**	86.64	346	*e*P	P	11 36 42.4	-1.4
SEY	comp=Z,85nm,1.2s			pmax	pmax		
HNS	**HongShan**	86.66	312	⇓P	P	11 36 44.3	-0.2
HNS	comp=Z,38nm,1.2s			pmax	pmax		
YUK3	**Moose Creek** baz=213,SNR=34	86.74	16	P	P	11 36 46.0	+1.4
HYT	**Haines Junctio** comp=Z,40nm,1.2s	86.77	18	IAmb	IAmb	11 36 48.0	
HYT	**Haines Junctio** baz=216,SNR=11	86.77	18	P	P	11 36 46.2	+1.6
GSI	**Gunungsitoli**	86.83	273	P	P	11 36 47.1	+1.2
GSI	**Gunungsitoli** comp=Z,53nm,1.6s	86.83	273	P	P	11 36 47.1	+1.2
M27K	**Edge Creek, AK** baz=212,SNR=36	86.87	15	P	P	11 36 46.7	+1.6
YUK4	**Talkeetna** baz=215	86.87	17	P	P	11 36 47.4	+2.2
LYN	**LuoYang**	86.94	308	P	P	11 36 46.3	+0.4
LYN	comp=Z,100nm,1.0s			pmax	pmax		
BJT	**Baijiatuan**	86.94	315	P	P	11 36 47.2	+1.4
BJT	**Baijiatuan**	86.94	315	P	P	11 36 45.6	-0.2
BJT	comp=Z,22nm,2.5s			pmax	pmax		
Q32M	**Nakina River** comp=Z,22nm,1.0s	86.94	21	IAmb	IAmb	11 36 49.2	
Q32M	**Nakina River** baz=221	86.94	21	P	P	11 36 47.5	+1.9
BJI	**Beijing**	86.95	315	P	P	11 36 45.4	-0.4
BJI	comp=Z,11nm,1.7s			pmax	pmax		
P32M	**Atlin** baz=219	86.95	20	P	P	11 36 47.0	+1.6
H19K	**Roundabout Mou** baz=199	86.98	8	P	P	11 36 46.1	+0.8
G18K	**Tagagawik** comp=Z,70nm,1.7s	87.05	7	IAmb	IAmb	11 36 48.0	
G18K	**Tagagawik** baz=196	87.05	7	P	P	11 36 46.7	+0.9
L26K	**Log Cabin Wild** baz=211	87.09	14	P	P	11 36 47.4	+1.5
O30N	**Mendenhall** comp=Z,39nm,1.1s	87.14	18	IAmb	IAmb	11 36 49.7	
O30N	**Mendenhall** baz=217,SNR=14	87.14	18	P	P	11 36 48.4	+2.1
S22A	**4UR Ranch, Cre** comp=Z,28nm,1.3s	87.14	48	IAmb	IAmb	11 36 53.1	
H20K	**Anotleneega Mo** baz=200,SNR=11	87.16	9	P	P	11 36 47.6	+1.3
BVCY	**Beaver Creek** baz=213	87.17	16	P	P	11 36 48.0	+1.5
SYO	**Syowa Base**	87.18	192	⇓*i*pP	pP	11 37 51.8	+7.7
K24K	**Donnelly Dome** baz=208,SNR=13	87.23	13	P	P	11 36 48.4	+1.7
DLMT	**Dillon** comp=Z,38nm,1.3s	87.28	39	IAmb	IAmb	11 36 51.5	
NEA2	**Nenana** baz=205	87.28	11	P	P	11 36 47.5	+0.6
F17K	**Baldwin Pennin** baz=194	87.30	6	P	P	11 36 48.3	+1.4
ENH	**Enshi**	87.31	304	P	P	11 36 48.8	+1.0
I21K	**Tanana** baz=203	87.31	10	P	P	11 36 47.4	+0.4
DLBC	**Dease Lake** baz=223	87.33	22	P	P	11 36 49.1	+1.8
RIDG	**Independent Ri** baz=209	87.37	13	P	P	11 36 48.1	+0.8
MLY	**Manley** comp=Z,22nm,0.9s	87.38	11	IAmb	IAmb	11 36 49.0	
MLY	**Manley** baz=204	87.38	11	P	P	11 36 47.6	+0.2
LR05	**Currie**	87.39	132	P	P	11 36 50.4	+2.3
LR05	comp=Z,22nm,0.8s			IAmb	IAmb	11 36 52.6	
N30M	**Aishikik Lake** baz=216	87.40	18	P	P	11 36 48.6	+1.1
WHY	**Whitehorse** baz=218,SNR=6.4	87.42	19	P	P	11 36 48.8	+1.1
DOT	**Dot Lake** comp=Z,26nm,0.9s	87.47	14	IAmb	IAmb	11 36 50.4	
L27K	**Beaver Creek,** comp=Z,44nm,1.6s	87.48	15	IAmb	IAmb	11 36 50.8	
L27K	**Beaver Creek,** baz=212,SNR=12	87.48	15	P	P	11 36 49.1	+1.2
BCAR	**Beaver Creek A**	87.49	15	P	P	11 36 49.0	+1.1
HDA	**Harding Lake** comp=Z,29nm,0.9s	87.52	12	IAmb	IAmb	11 36 51.4	
HDA	**Harding Lake** baz=207,SNR=20	87.52	12	P	P	11 36 48.1	+0.1
CCB	**Clear Creek Bu** comp=Z,49nm,1.0s	87.57	12	IAmb	IAmb	11 36 50.1	
F18K	**Selawik** baz=196	87.62	7	P	P	11 36 49.2	+0.8
H21K	**Melozitna Rive** baz=202	87.62	10	P	P	11 36 49.4	+0.9
R33M	**Jennings River** baz=222	87.71	21	P	P	11 36 50.3	+1.1
P33M	**Teslin, Yukon** baz=220	87.72	20	P	P	11 36 50.7	+1.6
ODSA	**Odessa** comp=Z,30nm,1.2s	87.73	55	IAmb	IAmb	11 36 52.8	
I23K	**Minto, Yukon-K** comp=Z,58nm,1.6s	87.73	11	IAmb	IAmb	11 36 50.8	
I23K	**Minto, Yukon-K** baz=205	87.73	11	P	P	11 36 49.5	+0.6
COLA	**College**	87.76	12	P	P	11 36 49.9	+0.8
COLA	**College**	87.76	12	P	P	11 36 50.3	+1.2
COLA	**College**	87.76	12	P	P	11 36 49.9	+0.8
COLA	comp=Z,57nm,1.0s			pmax	pmax		
COLA	**College** baz=206	87.76	12	P	P	11 36 49.0	0.0
COLA	**College**	87.76	12	P	P	11 36 50.1	+1.0
SCRK	**Sand Creek**	87.77	14	P	P	11 36 50.2	+0.9
SCRK	comp=Z,73nm,1.7s			IAmb	IAmb	11 36 52.1	
SCRK	**Sand Creek**	87.77	14	P	P	11 36 50.4	+1.1
YPP	**Pitchstone Pla** comp=Z,44nm,2.0s	87.78	41	IAmb	IAmb	11 36 54.7	
IMAR	**Indian Mountai**	87.79	9	P	P	11 36 49.8	+0.6
PDAR	**Pinedale Array**	87.79	43	P	P	11 36 50.5	+0.4
PDAR	**Pinedale Array** comp=Z,1.6nm,0.8s,baz=196,slow=2.8,SNR=12 comp=Z,1.6nm,0.8s	87.79	43	P	P	11 36 51.4	+1.3
YHB	**Horse Butte** comp=Z,27nm,1.3s	87.79	40	IAmb	IAmb	11 36 54.5	
N31M	**Braeburn, Yuko** comp=Z,53nm,1.1s	87.80	18	IAmb	IAmb	11 36 52.7	
N31M	**Braeburn, Yuko** baz=218,SNR=9.9	87.80	18	P	P	11 36 50.2	+0.8
M29M	**Somme Creek** comp=Z,33nm,1.0s	87.82	17	IAmb	IAmb	11 36 52.8	
M29M	**Somme Creek** baz=215,SNR=17	87.82	17	P	P	11 36 51.0	+1.5
TROLL	**Troll, Antarti** comp=Z,278nm,0.6s	87.84	180	⇑P	P	11 36 50.2	+0.4
YHL	**Hebgen Lake** comp=Z,44nm,1.3s	87.85	40	IAmb	IAmb	11 36 55.0	
IL31	comp=Z,70nm,1.4s	87.86	12	IAmb	IAmb	11 36 51.6	
ILAR	**Eielson Array**	87.86	12	P	P	11 36 49.8	+0.2
ILAR	**Eielson Array** comp=Z,8.7nm,0.8s,baz=214,slow=5.1,SNR=55	87.86	12	P	P	11 36 49.4	-0.2
ILAR	comp=Z,2.3nm,0.9s,baz=225,slow=7.6,SNR=5.4 comp=Z,8.7nm,0.8s			PP	PP	11 40 17.2	-2.4
ILAR	**Eielson Array**	87.86	12	P	P	11 36 49.8	+0.2
E17K	**Hotham Inlet** baz=194,SNR=6.3	87.87	6	P	P	11 36 50.6	+1.1
YMR	**Madison River** comp=Z,30nm,1.3s	87.89	40	IAmb	IAmb	11 36 55.0	
BOZ	**Bozeman (W)** comp=Z,33nm,1.2s	87.98	39	IAmb	IAmb	11 36 54.8	
GYA	**Guiyang**	87.99	299	P	P	11 36 52.3	+1.0
GYA	comp=Z,23nm,1.6s			pmax	pmax		
J25K	**Salcha River,** comp=Z,53nm,1.4s	88.03	13	IAmb	IAmb	11 36 52.9	
J25K	**Salcha River,** baz=209,SNR=16	88.03	13	P	P	11 36 50.7	+0.3
F19K	**Shaleruckik Mo** baz=197	88.06	7	P	P	11 36 50.8	+0.4
POKR	**Poker Plat Res** baz=207,SNR=5.5	88.06	12	P	P	11 36 50.6	+0.1
H22K	**Ishtalitna Cre** baz=203	88.07	10	P	P	11 36 49.7	-0.9
SNAA	**Sanae** comp=Z,88nm,0.7s	88.07	178	⇑P	P	11 36 50.9	+0.1
SNAA	**Sanae**	88.07	178	P	P	11 36 51.7	+0.9
SNAA	**Sanae** comp=Z,3.9nm,0.8s,baz=192,slow=5.2,SNR=12 comp=Z,3.9nm,0.8s	88.07	178	P	P	11 36 51.2	+0.5
SNAA	**Sanae** comp=Z,6.0nm,1.1s	88.07	178	pmax	pmax		
SNAA	**Sanae**	88.07	178	P	P	11 36 51.7	+0.9
SNAA	comp=Z,18nm,1.3s			pmax	pmax		
SNAA	**Sanae**	88.07	178	*e*PKIKP	P	11 36 50.8	+0.1
VNA3	**Neumayer Olymp** comp=Z,18nm,0.8s	88.14	176	⇑P	P	11 36 52.2	+1.2
PLCA	**Paso Flores** comp=Z,5.3nm,0.9s,baz=238,slow=4.3,SNR=6.8 comp=Z,5.3nm,0.9s	88.18	133	P	P	11 36 54.0	+2.0
PLCA	**Paso Flores**	88.18	133	P	P	11 36 54.0	+2.0
K27K	**Chicken** comp=Z,37nm,1.1s	88.25	14	IAmb	IAmb	11 36 54.9	
K27K	**Chicken** baz=212	88.25	14	P	P	11 36 52.5	+1.1
H23K	**Yukon River** baz=205	88.31	11	P	P	11 36 52.4	+0.7
J26L	**Joseph Creek** baz=210	88.31	14	P	P	11 36 52.3	+0.4
G21K	**Allakaket** comp=Z,26nm,0.8s	88.32	9	IAmb	IAmb	11 36 54.3	
G21K	**Allakaket** baz=201	88.32	9	P	P	11 36 52.3	+0.6
ZEA	**Zeya**	88.32	330	*e*P	P	11 36 52.5	+0.5
ZEA	comp=Z,20nm,1.2s			pmax	pmax		
E18K	**Tukpahlearik C** baz=195	88.32	6	P	P	11 36 52.9	+1.3
N32M	**Quiet Lake** comp=Z,36nm,1.1s	88.35	19	IAmb	IAmb	11 36 55.5	
N32M	**Quiet Lake** baz=220	88.35	19	P	P	11 36 53.5	+1.4
MSTX	**Muleshoe** comp=Z,28nm,1.2s	88.36	53	IAmb	IAmb	11 36 55.6	
D17K	**Noatak River** baz=192	88.37	5	P	P	11 36 52.6	+0.7
M30M	**Minto, Yukon** comp=Z,37nm,1.1s	88.38	17	IAmb	IAmb	11 36 55.1	
M30M	**Minto, Yukon** baz=217,SNR=20	88.38	17	P	P	11 36 52.7	+0.6
L29M	**L29M** baz=215,SNR=45	88.45	16	P	P	11 36 53.5	+1.0
F20K	**Avaraart Lake** comp=Z,24nm,0.9s	88.52	8	IAmb	IAmb	11 36 55.2	
F20K	**Avaraart Lake** baz=199	88.52	8	P	P	11 36 52.3	-0.2
H24K	**Noodor Dome** baz=206	88.62	11	P	P	11 36 53.4	+0.2
YNE	**Yellowstone No** comp=Z,32nm,1.2s	88.65	41	IAmb	IAmb	11 36 58.4	
E19K	**Redstone River** baz=198	88.72	7	P	P	11 36 54.7	+1.2
RDOG	**Red Dog Mine** baz=192	88.73	5	P	P	11 36 54.0	+0.4
C16K	**Lisburne Hills** baz=190	88.77	4	P	P	11 36 53.4	-0.3
M31M	**Drury Creek, Y** comp=Z,21nm,1.1s	88.77	18	IAmb	IAmb	11 36 56.6	
M31M	**Drury Creek, Y** baz=219,SNR=8.4	88.77	18	P	P	11 36 55.0	+1.0
VNA1	**Neumayer--Stat** comp=Z,23nm,0.9s	88.82	176	⇑P	P	11 36 55.0	+0.8
DAWY	**Dawson** baz=214,SNR=30	88.92	15	P	P	11 36 55.4	+0.8
XLT	**XiLinHaoTe**	88.92	318	*e*P	P	11 36 56.3	+1.1
XLT	comp=Z,18nm,1.2s			pmax	pmax		
POST	**Post** comp=Z,25nm,1.2s	88.93	54	IAmb	IAmb	11 36 57.9	
MLSI	**Meulaboh, Aceh**	88.95	275	P	P	11 36 56.2	+0.3
F21K	**Alatna River** comp=Z,15nm,0.8s	88.98	9	IAmb	IAmb	11 36 57.1	
F21K	**Alatna River** baz=201	88.98	9	P	P	11 36 55.4	+0.6
G22K	**Bettles** baz=203	89.00	10	P	P	11 36 56.0	+1.2
G23K	**Bananza Creek** comp=Z,21nm,1.1s	89.04	10	IAmb	IAmb	11 36 57.8	
G23K	**Bananza Creek** baz=204	89.04	10	P	P	11 36 55.3	+0.2
BILL	**Bilibino**	89.10	354	P	P	11 36 56.0	+0.7
BILL	**Bilibino**	89.10	354	*i* P	P	11 36 54.9	-0.4
BILL	comp=Z,126nm,3.1s			pmax	pmax		
I26K	**Coal Creek Min** comp=Z,35nm,1.1s	89.10	13	IAmb	IAmb	11 36 58.3	
I26K	**Coal Creek Min** baz=211	89.10	13	P	P	11 36 56.6	+1.2
C17K	**DeLong Mountai** baz=192	89.12	5	P	P	11 36 55.6	+0.2
HNDO	**Hondo** comp=Z,40nm,1.8s	89.20	58	IAmb	IAmb	11 37 00.1	
K29M	**Barlow Dome** baz=216	89.21	16	P	P	11 36 57.2	+1.1
XAN	**Xi'an**	89.35	307	P	P	11 36 57.3	0.0
XAN				S	S	11 47 26.5	+0.1
XAN	comp=Z,81nm,1.0s			pmax	pmax		
XAN	comp=Z,540nm,5.7s			pmax	pmax		
TOAD	**Toad River Com** baz=227,SNR=30	89.39	24	P	P	11 36 59.1	+2.1
F22K	**John River** baz=202,SNR=8.2	89.44	9	P	P	11 36 58.2	+1.3
MAYO	**Mayo, Yukon** baz=217,SNR=8.7	89.45	17	P	P	11 36 58.9	+1.8
LIRD	**Liard River Hi** baz=226	89.45	23	P	P	11 36 59.4	+2.3
C18K	**Utukok River** baz=194	89.46	5	P	P	11 36 57.2	+0.2
G24K	**Hadweenzic Riv**	89.47	11	P	P	11 36 57.8	+0.7

baz=207
COLD Coldfoot 89.48 10 IAmb IAmb 11 37 00.2
comp=Z,29nm,0.9s
COLD Coldfoot 89.48 10 P **P** **11 36 58.6 +1.5**
baz=204,SNR=20
AMTX Amarillo 89.57 52 IAmb IAmb 11 37 01.1
comp=Z,29nm,1.4s
E20K Nigu River 89.61 7 P **P** **11 36 59.1 +1.3**
baz=199,SNR=22
D19K Kuna River 89.61 7 IAmb IAmb 11 37 00.1
comp=Z,25nm,0.8s
D19K Kuna River 89.61 7 P **P** **11 36 59.2 +1.4**
baz=197
K22A Casper 89.68 44 IAmb IAmb 11 37 06.9
comp=Z,30nm,1.5s
I27K Kandik River 89.69 14 P **P** **11 36 58.7 +0.5**
baz=212
HILR Hailar Array B 89.69 324 P **P** **11 36 58.7 +0.1**
comp=Z,10nm,0.7s,baz=133,slow=8.3,SNR=9.4
comp=Z,10nm,0.7s
G25K Bearman Lake 89.78 12 P **P** **11 37 00.4 +1.9**
baz=208
I28M Miner Creek 89.94 14 IAmb IAmb 11 37 02.0
comp=Z,21nm,0.8s
I28M Miner Creek 89.94 14 P **P** **11 37 00.4 +0.9**
baz=214,SNR=22
D20K Etivluk River 89.99 7 P **P** **11 36 60.0 +0.5**
baz=198
MMPY Sheldon Lake, 90.03 19 IAmb IAmb 11 37 03.3
comp=Z,44nm,1.1s
MMPY Sheldon Lake, 90.03 19 P **P** **11 37 01.6 +1.7**
baz=222,SNR=14
C19K Lookout Ridge 90.05 6 P **P** **11 37 01.5 +1.7**
baz=196
E21K Killik River 90.06 8 P **P** **11 37 00.7 +0.9**
baz=201
E22K Anaktuvuk Pass 90.07 9 IAmb IAmb 11 37 02.5
comp=Z,33nm,0.9s
E22K Anaktuvuk Pass 90.07 9 P **P** **11 37 00.7 +0.7**
baz=203
APMT Aspermont 90.09 54 IAmb IAmb 11 37 03.4
comp=Z,24nm,1.1s
B18K Kokolik River 90.11 5 P **P** **11 37 01.1 +1.2**
baz=194
J30M Hart River 90.11 16 IAmb IAmb 11 37 03.3
comp=Z,24nm,1.0s
J30M Hart River 90.11 16 P **P** **11 37 01.9 +1.6**
baz=217,SNR=15
F24K Squaw Lake 90.13 11 IAmb IAmb 11 37 03.2
comp=Z,17nm,0.9s
F24K Squaw Lake 90.13 11 P **P** **11 37 01.4 +1.2**
baz=206,SNR=13
ABTX Abilene, Hawle 90.17 55 IAmb IAmb 11 37 03.9
comp=Z,23nm,1.0s
H27K Steamboat Moun 90.24 13 IAmb IAmb 11 37 03.9
comp=Z,38nm,1.2s
H27K Steamboat Moun 90.24 13 P **P** **11 37 01.8 +1.0**
baz=212
E23K Chandalar 90.34 10 IAmb IAmb 11 37 03.9
comp=Z,26nm,1.1s
E23K Chandalar 90.34 10 P **P** **11 37 02.1 +0.9**
baz=205
EGMT Eagleton 90.34 38 IAmb IAmb 11 37 05.5
comp=Z,37nm,1.4s
G26K Porcupine Rive 90.39 12 P **P** **11 37 02.2 +0.9**
baz=210,SNR=17
HHC Hu-ho-hao-te 90.43 314 *e*P **P** **11 37 03.9 +1.6**
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,160nm,5.3s
E24K Your Creek 90.53 10 P **P** **11 37 03.6 +1.5**
baz=206,SNR=5.4
F25K Christian Rive 90.60 11 P **P** **11 37 04.3 +1.9**
baz=209,SNR=9.7
MT01 Popeta 90.60 127 IAmb IAmb 11 37 07.3
comp=Z,15nm,0.8s
I30M Mount Dempster 90.62 16 IAmb IAmb 11 37 05.5
comp=Z,36nm,1.0s
I30M Mount Dempster 90.62 16 P **P** **11 37 03.9 +1.2**
baz=217,SNR=22
C21K Knifeblade Rid 90.63 8 P **P** **11 37 02.3 -0.1**
baz=200
D22K Ayikyak River 90.64 8 P **P** **11 37 03.8 +1.2**
baz=202
BMAR Burnt Mountain 90.65 12 P **P** **11 37 04.3 +1.7**
KOTAN Kotaneelee Air 90.70 23 P **P** **11 37 03.8 +0.8**
baz=228,SNR=6.1
G27K Doyon Strip 90.71 13 P **P** **11 37 04.5 +1.7**
baz=212,SNR=12
KMI Kunming 90.73 296 P **P** **11 37 06.4 +2.2**
KMI pmax pmax
comp=Z,25nm,1.0s
TOLK Toolik Lake Re 90.88 9 IAmb IAmb 11 37 06.3
comp=Z,18nm,1.1s
TOLK Toolik Lake Re 90.88 9 P **P** **11 37 04.6 +0.9**
baz=205,SNR=5.4
H29M Whitestone 90.94 14 P **P** **11 37 05.1 +1.1**
baz=215,SNR=23
F26K Sheenjek River 90.97 12 IAmb IAmb 11 37 07.5
comp=Z,18nm,1.1s
F26K Sheenjek River 90.97 12 P **P** **11 37 05.7 +1.6**
baz=210,SNR=10
A19K Wainwright 90.99 5 P **P** **11 37 04.2 +0.2**
baz=194
D23K Nanushuk River 91.00 9 IAmb IAmb 11 37 07.3
comp=Z,28nm,0.9s
D23K Nanushuk River 91.00 9 P **P** **11 37 05.7 +1.6**
baz=204,SNR=10
E25K Arctic Village 91.08 11 IAmb IAmb 11 37 07.7
comp=Z,21nm,1.1s
E25K Arctic Village 91.08 11 P **P** **11 37 05.5 +0.9**
baz=209
B21K Ikpikpuk River 91.09 7 P **P** **11 37 04.8 +0.3**
baz=200
B20K Meade River 91.17 6 P **P** **11 37 05.0 +0.1**
baz=198
PLPT Palo Pinto 91.27 55 IAmb IAmb 11 37 09.1
comp=Z,30nm,1.2s
BTO Baotou 91.37 313 *e*P **P** **11 37 07.4 +0.7**
BTO S **S** **11 47 41.0 -3.7**
BTO pmax pmax
comp=Z,26nm,1.0s
BTO pmax pmax
comp=Z,910nm,9.5s
BTO LR LR
comp=Z,590nm,5.5s
BTO LR LR
comp=Z,290nm,5.6s
BTO LR LR
comp=Z,510nm,11.4s
D24K Happy Valley 91.46 10 P **P** **11 37 07.6 +1.4**
baz=206
EPYK Eagle Plains 91.46 15 P **P** **11 37 06.8 +0.4**
baz=217,SNR=12
G29M Pine Creek 91.59 14 IAmb IAmb 11 37 09.6
comp=Z,30nm,0.9s
G29M Pine Creek 91.59 14 P **P** **11 37 07.9 +0.9**
baz=216
CM31 Chiang Mai Arr 91.59 289 IAmb IAmb 11 37 10.9
comp=Z,21nm,1.1s
CMAR Chiang Mai Arr 91.59 289 P **P** **11 37 08.0 0.0**
CMAR Chiang Mai Arr 91.59 289 P **P** **11 37 08.3 +0.2**
comp=Z,10nm,0.9s,baz=118,slow=2.7,SNR=53
CMAR PP **PP** **11 40 47.5 -2.7**
comp=Z,1.5nm,0.9s,baz=115,slow=5.9,SNR=4.6
comp=Z,10nm,0.9s
H31M Peel River 91.60 16 IAmb IAmb 11 37 28.7
comp=Z,22nm,1.3s
H31M Peel River 91.60 16 P **P** **11 37 08.4 +1.4**
baz=219
CHTO Chiang Mai 91.72 289 P **P** **11 37 07.9 -0.7**
CHTO IAmb IAmb 11 37 11.0
comp=Z,13nm,0.8s
CHTO Chiang Mai 91.72 289 P **P** **11 37 09.8 +1.2**
CHTO Chiang Mai 91.72 289 P **P** **11 37 07.9 -0.7**
CHTO pmax pmax
comp=Z,13nm,0.8s
F28M Old Crow 91.76 13 IAmb IAmb 11 37 10.6
comp=Z,22nm,1.0s
F28M Old Crow 91.76 13 P **P** **11 37 08.6 +0.9**
baz=214,SNR=15
C23K Itkillik River 91.81 9 IAmb IAmb 11 37 10.8
comp=Z,29nm,0.9s
C23K Itkillik River 91.81 9 P **P** **11 37 09.0 +1.1**
baz=204
E27K Coleen River 91.89 12 IAmb IAmb 11 37 11.5
comp=Z,39nm,1.4s
E27K Coleen River 91.89 12 P **P** **11 37 09.3 +1.0**
baz=212,SNR=13
B22K Teshekpuk Lake 91.91 8 P **P** **11 37 09.1 +0.8**
baz=201
CO02 Combarbal 91.92 124 IAmb IAmb 11 37 13.9
comp=Z,34nm,1.1s
RSSD Black Hills 91.97 43 P **P** **11 37 10.9 +1.4**
RSSD Black Hills 91.97 43 P **P** **11 37 10.9 +1.4**
RSSD pmax pmax
comp=Z,35nm,1.1s
C24K Franklin Bluff 91.99 9 P **P** **11 37 09.9 +1.2**
baz=206
D25K Kavik River 92.00 10 P **P** **11 37 09.3 +0.4**
baz=208
G30M tAoh Zraii Nji 92.07 15 P **P** **11 37 09.9 +0.8**
baz=217,SNR=34
PZH PanZhiHua 92.08 297 P **P** **11 37 10.1 -0.2**
PZH pmax pmax
comp=Z,10.0nm,1.0s
CD2 Chengdu 92.08 302 P **P** **11 37 10.3 +0.2**
HKT Hockley 92.12 59 *i* P **P** **11 37 10.5 +0.3**
HKT pmax pmax
comp=Z,16nm,1.8s
Z35A Perchaven, San 92.29 55 IAmb IAmb 11 37 15.2
comp=Z,19nm,0.9s
A22K Sinclair Lake 92.35 7 P **P** **11 37 10.8 +0.5**
baz=200
A21K Barrow 92.48 6 P **P** **11 37 12.1 +1.2**
baz=198
YAK Yakutsk 92.62 338 P **P** **11 37 11.7 0.0**
YAK IAmb IAmb 11 37 12.4
comp=Z,25nm,0.9s
YAK Yakutsk 92.62 338 P **P** **11 37 11.2 -0.5**
comp=Z,15nm,0.6s,baz=176,slow=4.8,SNR=4.4
comp=Z,15nm,0.6s
YAK Yakutsk 92.62 338 *e*P **P** **11 37 09.3 -2.4**
YAK *e**PP **pwP** **11 38 15.1 +2.4**
YAK *e* 11 40 55.0
YAK *e*S **SKSac** **11 47 16.0 -5.4**
YAK *e* 11 47 52.2
YAK *e*SS **SS** **11 54 07.4 -6.1**
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,768nm,3.7s
YAK pmax pmax
comp=E,247nm,2.2s
YAK pmax pmax
comp=N,256nm,4.0s
YAK smax smax
comp=E,662nm,3.5s
YAK smax smax
comp=N,635nm,3.5s
E28M Babbage River 92.66 13 IAmb IAmb 11 37 14.7
comp=Z,24nm,0.9s
E28M Babbage River 92.66 13 P **P** **11 37 13.2 +1.3**
baz=214
F30M Barrier River 92.67 14 IAmb IAmb 11 37 16.2
comp=Z,18nm,0.9s
F30M Barrier River 92.67 14 P **P** **11 37 12.0 +0.1**
baz=218,SNR=11
C27K Jago River 92.73 11 P **P** **11 37 12.8 +0.7**
baz=210
C26K Camden Bay 92.77 10 P **P** **11 37 13.2 +0.9**
baz=209
E29M Blow River 92.83 13 IAmb IAmb 11 37 14.8
comp=Z,12nm,0.9s
E29M Blow River 92.83 13 P **P** **11 37 13.0 +0.4**
baz=216
D27M Malcolm River 92.91 12 IAmb IAmb 11 37 16.9
comp=Z,43nm,1.6s
D27M Malcolm River 92.91 12 P **P** **11 37 14.4 +1.4**
baz=213,SNR=6.7
FNO Franklin 92.93 54 IAmb IAmb 11 37 16.7
comp=Z,32nm,1.2s
WRGLY Wrigley 92.99 21 P **P** **11 37 14.9 +1.5**
baz=228
F31M Tsiigehtchic 93.03 15 P **P** **11 37 14.4 +0.9**
baz=219,SNR=18
R32A Long Quarter, 93.20 50 IAmb IAmb 11 37 17.8
comp=Z,23nm,1.2s
D28M Stokes Point 93.42 13 P **P** **11 37 16.0 +0.7**
baz=215
INK Inuvik 93.75 15 IAmb IAmb 11 37 19.0
comp=Z,29nm,1.1s
INK Inuvik 93.75 15 P **P** **11 37 18.3 +1.5**
baz=220,SNR=13
CFA Coronel Fontan 93.87 126 P **P** **11 37 20.2 +1.8**
comp=Z,3.4nm,0.9s,baz=261,slow=7.3,SNR=6.2
comp=Z,3.4nm,0.9s
LZH Lanzhou 93.98 307 *e*P **P** **11 37 19.8 +0.9**
LZH pP pwP 11 38 21.0 +0.7
LZH S **S** **11 48 10.6 +2.6**
LZH SS **SS** **11 54 34.5 0.0**
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,200nm,4.1s
LZH LR LR
comp=Z,270nm,17.2s
LZH LR LR
comp=Z,270nm,17.9s
LZH LR LR
comp=Z,170nm,17.5s
LZDM Lanzhou Array 94.04 307 P **P** **11 37 19.7 +0.3**
comp=Z,0.9nm,0.3s,baz=36,slow=5.5,SNR=5.5
comp=Z,0.9nm,0.3s
ULN Ulaanbaatar 96.33 319 P **P** **11 37 30.2 +0.9**
ULN IAmb IAmb 11 37 31.6
comp=Z,26nm,1.8s
ULN Ulaanbaatar 96.33 319 P **P** **11 37 30.2 +0.9**
ULN pmax pmax
comp=Z,26nm,1.8s
SONM Songino Array 96.73 319 P **P** **11 37 30.9 -0.2**
comp=Z,0.9nm,0.5s,baz=129,slow=3.2,SNR=8.5
SONM PP **PP** **11 41 23.6 -6.0**
comp=Z,0.9nm,0.8s,baz=109,slow=8.0,SNR=4.6
comp=Z,0.9nm,0.5s
C36M Paulatuk 96.89 16 P **P** **11 37 32.3 +1.2**
baz=228
FFC Flin Flon 97.76 34 *i* P **P** **11 37 34.0 -1.3**
GTA Gaotai 98.15 309 *e*P Pdif 11 37 38.7 +1.1
GTA pmax pmax
comp=Z,5.0nm,1.0s
A36M Sachs Harbour 98.37 14 P **P** **11 37 39.9 +2.2**
baz=228
TIXI Tiksi 99.06 345 P **Pdif** **11 37 40.7 0.0**
comp=Z,1.4nm,0.4s,baz=130,slow=6.4,SNR=7.6
comp=Z,1.4nm,0.4s
TIXI Tiksi 99.06 345 *i* P **Pdif** **11 37 40.0 -0.7**
TIXI pmax pmax
comp=Z,37nm,4.0s
TLY Talaya 99.80 322 *i* P **Pdif** **11 37 44.2 -0.4**
TLY pmax pmax
comp=Z,2.0nm,0.9s
LPAZ La Paz 100.62 112 P **Pdif** **11 37 52.8 +3.0**
comp=Z,1.1nm,0.8s,baz=301,slow=7.8,SNR=2.8
WMQ Urumqi 108.07 311 Pdif **Pdif** **11 38 22.5 +0.9**
WMQ LR LR
comp=Z,220nm,17.9s
ZALV Zalesovo Beam 111.41 321 PKiKP **PKiKP** **11 42 32.4 -0.6**
comp=Z,2.9nm,0.6s,baz=167,slow=1.7,SNR=14
MK31 Makanchi Array 112.29 313 *i* PKiKP **PKiKP** **11 42 33.5 -1.5**
MKAR Makanchi Array 112.29 313 Pdiff **Pdif** **11 38 40.1 -0.1**
comp=Z,0.4nm,0.8s,baz=90,slow=4.3,SNR=2.4
MKAR PKiKP **PKiKP** **11 42 33.7 -1.3**
comp=Z,2.4nm,0.5s,baz=133,slow=0.7,SNR=44
MKAR SKP **SKPdf** **11 45 44.9 -2.3**
comp=Z,1.0nm,0.8s,baz=173,slow=3.8,SNR=3.9
MKAR PKKPbc **PKKPbc** **11 53 28.2 +0.8**
comp=Z,0.2nm,0.5s,baz=272,slow=3.0,SNR=3.9
KURK Kurchatov 115.00 317 **PKiKP** **11 42 38.9 -1.0**
KURK Kurchatov 115.00 317 *i* PKiKP **PKiKP** **11 42 38.9 -1.0**
KURBB Kurchatov Arra 115.05 317 PKP **PKiKP** **11 42 38.7 -1.3**
comp=Z,4.5nm,0.7s,baz=94,slow=1.8,SNR=30
KURBB PKKPbc **PKKPbc** **11 53 18.1 0.0**
comp=Z,0.3nm,0.8s,baz=282,slow=4.6,SNR=4.1
KURBB Kurchatov Arra 115.05 317 PKiKP **PKiKP** **11 42 37.9 -2.2**
AAK Ala-Archa 117.49 308 **PKPdf** **11 42 45.1 -0.1**
AAK Ala-Archa 117.49 308 PKP **PKPdf** **11 42 44.7 -0.6**
comp=Z,2.3nm,0.8s,baz=178,slow=4.3,SNR=4.9
AAK Ala-Archa 117.49 308 PKiKP **PKPdf** **11 42 45.2 -0.1**
BVA0 Borovoye Array 120.02 320 *i* PKiKP **PKPdf** **11 42 48.6 -1.0**
BVAR Borovoye Array 120.02 320 PKP **PKPdf** **11 42 48.8 -0.8**
comp=Z,8.2nm,0.5s,baz=124,slow=0.9,SNR=54
BORK Borovoye 120.06 320 *i* PKiKP **PKPdf** **11 42 47.4 -2.3**
KK31 Karatay Array 120.43 309 *i* PKiKP **PKPdf** **11 42 49.6 -1.1**
KKAR Karatay Array 120.43 309 **PKPdf** **11 42 49.6 -1.1**
KKAR Karatay Array 120.43 309 PKiKP **PKPdf** **11 42 49.6 -1.1**
KBL Kabul 121.24 299 **PKiKP** **11 42 53.1 +0.1**
KBL Kabul 121.24 299 PKiKP **PKiKP** **11 42 53.1 +0.1**
SVE Sverdlovsk 124.80 326 *i* PKiKP **PKPdf** **11 42 58.2 -0.4**
SVE pmax pmax
comp=Z,21nm,1.0s
ARTI Arti 126.12 326 **PKPdf** **11 43 00.3 -0.9**
ARTI Arti 126.12 326 *i* PKiKP **PKPdf** **11 43 00.8 -0.4**
ARTI 11 44 53.7
ARTI 11 49 45.7
ARTI SP SP 11 54 34.8 -0.8
BOSA Boshof 127.03 204 PKP **PKiKP** **11 43 05.9 +1.3**
comp=Z,1.9nm,0.9s,baz=160,slow=1.1,SNR=3.6
AB31 Akbulak array 127.11 317 *i* PKiKP **PKPdf** **11 43 02.1 -1.2**
ABKAR Akbulak array 127.11 317 **PKPdf** **11 43 02.6 -0.7**
ARCES ARCESS Array B 129.09 350 **PKiKP** **11 43 07.2 0.0**
ARCES ARCESS Array B 129.09 350 PKhKP PKPpre 11 42 54.3
comp=Z,0.8nm,0.6s,baz=129,slow=0.6,SNR=6.7
ARCES PKP **PKPdf** **11 43 06.8 +0.3**
comp=Z,8.9nm,1.0s,baz=22,slow=1.5,SNR=27
ARCES ARCESS Array B 129.09 350 PKiKP **PKiKP** **11 43 07.2 0.0**
APA Apatity 129.24 346 *e*PKiKP **PKiKP** **11 43 08.9 +1.4**
KIRV Kirov 129.66 331 *i* PKiKP **PKPdf** **11 43 07.4 -0.4**
KLMR Klimovskoe 132.41 337 *e*PKiKP **PKPdf** **11 43 10.2 -2.8**
KLMR pmax pmax
comp=Z,17nm,1.1s
BELG Belogornoye 133.46 324 *i* PKiKP **PKPdf** **11 43 14.3 -0.9**
FINES FINESS Array B 136.10 345 PKhKP PKPpre 11 43 07.5
comp=Z,2.3nm,0.7s,baz=64,slow=4.4,SNR=6.4
MAK Makhachkala 137.08 312 *i* P **Pdif** **11 40 25.6 -4.9**
MAK *i* 11 43 21.9
MAK *e* 11 44 25.4
MAK *e* 11 46 06.0
MAK *e*PPP PPP 11 49 14.5
MAK *e* 11 50 10.3
MAK *e*SS SS 12 03 53.0 -2.1
MAK *e*SSS SSS 12 08 57.6
MAK pmax pmax
comp=Z,233nm,1.2s
AKT Akhty 137.34 310 *e*PKiKP **PKPdf** **11 43 19.2 -3.8**
OBN Obninsk 137.41 333⇓*e*PKiKP **PKPdf** **11 43 21.8 -0.7**
OBN 11 44 30.0
OBN 11 44 55.0
OBN 11 46 08.0
OBN *e* 11 50 08.5
OBN *e* 11 56 12.5
OBN pmax pmax
comp=Z,9.0nm,0.4s
NB2 NORSAR Subarra 139.04 354 PKP PKPpre 11 43 15.4
comp=Z,1.2nm,0.7s,baz=15,slow=3.0
NB2 pPKP **SKPbc** **11 46 37.8 +0.4**
comp=Z,0.9nm,0.7s,baz=8.3,slow=2.9
NOA NORSAR Array B 139.04 354 PKhKP PKPpre 11 43 15.6
comp=Z,1.7nm,0.7s,baz=16,slow=4.6,SNR=8.0
NOA SKPbc **SKPbc** **11 46 34.9 -2.5**
comp=Z,7.2nm,1.2s,baz=14,slow=2.7,SNR=4.8
HFS Hagfors 139.66 352 PKiKP PKPpre 11 43 17.4
comp=Z,4.7nm,0.5s,baz=73,slow=5.1,SNR=22
GNI Garni 139.89 309 *i* PKiKP **PKPdf** **11 43 27.4 -0.4**
KBZ Khabaz 139.97 315 PKP **PKPdf** **11 43 27.0 -0.5**
comp=Z,2.4nm,0.8s,baz=118,slow=6.4,SNR=5.1
KBZ Khabaz 139.97 315 *i* PKiKP **PKPdf** **11 43 26.2 -1.3**
KIV Kislovodsk 140.02 315 *i* PKiKP **PKPdf** **11 43 27.0 -0.8**
KIV pmax pmax
comp=Z,10.0nm,1.0s
SHA1 Shidzhatmaz 140.12 315 *i* PKiKP **PKPdf** **11 43 27.5 -0.7**
MNK Minsk 141.31 338 *i* PKiKP **PKPdf** **11 43 29.7 +0.1**
MNK *i* 11 44 38.0
MNK *i* 11 46 33.0
MNK *i* PPP PPP 11 49 42.6
MNK *i* 11 50 07.9
MNK *i* SS SS 12 04 43.3 +0.3
MNK *i* SSS SSS 12 10 03.2
MNK pmax pmax
comp=Z,14nm,0.8s
MNK pmax pmax
comp=E,8.0nm,0.7s
MNK pmax pmax
comp=N,15nm,1.0s
TJOU Tjoern 141.96 353 *i* P **PKPdf** **11 43 24.7 -5.9**
BORU Borasa 142.21 352 *e*P **PKPdf** **11 43 25.6 -5.5**
FABU Falkenberg 142.83 352 *i* P **PKPdf** **11 43 28.3 -4.0**
DEL Delary 143.18 351 *i* P PKPab 11 43 29.3 +0.2
AKASG Malin Array Be 143.67 332 PKPpre 11 43 30.6
AKASG Malin Array Be 143.67 332 PKhKP PKPpre 11 43 30.3
comp=N,5.0nm,0.4s,baz=39,slow=4.2,SNR=34
AKASG SKPbc **SKPbc** **11 46 48.2 -1.2**
comp=N,4.6nm,0.7s,baz=35,slow=2.2,SNR=17
AKASG Malin Array Be 143.67 332 PKiKP PKPab 11 43 30.6 -0.7
AKBB Malin Array Si 143.67 332 *i* PKiKP PKPab 11 43 30.2 -1.1
KIEV Kiev 143.69 332 PKPpre 11 43 30.3
KIEV Kiev 143.69 332 ⇓P PKPab 11 43 30.5 -0.8
KIEV Kiev 143.69 332 PKiKP PKPab 11 43 30.3 -1.0
BJUU Bjuv 143.69 351 *i* P PKPab 11 43 31.5 +0.3
MUD Monsted U'grnd 143.75 355 *i* P PKPbc 11 43 31.8 -0.3
LUNU Lund 144.06 351 *i* P **PKPab** **11 43 31.9 -0.6**
IDGL Inch Island, C 144.34 11 PKPdf **PKPdf** **11 43 34.8 -0.1**
RNPP2 Kostyukhnivka 144.56 336 PKP **PKPab** **11 43 34.5 -0.2**
RNPP5 Staryi Chortor 144.64 336 PKP **PKPab** **11 43 34.3 -0.6**
SSRD Sdr. Stenderup 144.68 354 *i* P **PKPdf** **11 43 35.2 -0.2**
EKA Eskdalemuir Ar 144.73 7 PKP PKPbc 11 43 34.9 -0.2
comp=N,20nm,0.7s,baz=333,slow=2.8,SNR=38
LODK Lodwar 144.86 246 PKPbc 11 43 36.8 -0.2
LUBAR Lubar, Ukraine 144.88 333 PKP PKPbc 11 43 34.7 -1.1
SIM Simferopol' 144.92 321 *i* PKiKP PKPbc 11 43 35.1 -1.0
SIM pmax pmax
comp=Z,120nm,1.2s
R9F13 Warsaw-Wawer 145.45 341 *e*PKP **PKPab** **11 43 37.8 -0.2**
R9F13 *ep*PKP **pPKPdf** **11 44 38.3 +0.3**
IGLA Glengowla, Co 145.52 14 PKPdf **PKPab** **11 43 38.4 +0.2**
ILTH Belurgan, Co L 145.55 10 PKPdf **PKPab** **11 43 38.5 +0.2**
GKP Gorka Klasztor 145.56 346 *e*PKPbc **PKPbc** **11 43 37.8 +0.1**
BEL Belsk 145.90 341 *e*PKPbc **PKPbc** **11 43 39.0 +0.2**
SORM Soroca 145.93 330 ⇓P **PKPdf** **11 43 38.4 +0.5**
SORM Soroca 145.93 330 ⇓PKP2 **PKPdf** **11 43 38.4 +0.5**
HLG Helgoland 146.11 356 *e*PKPbc **PKiKP** **11 43 41.9 -0.4**
baz=16,slow=2.5
BSEG Bad Segeberg 146.13 353 *e*PKPbc **PKPab** **11 43 40.1 -0.4**
baz=16,slow=2.5
DSB Dublin 146.29 11 PKPdf **PKPab** **11 43 40.9 -0.3**
KMPD K-Podol'skiy 146.47 332 PKP **PKPdf** **11 43 39.5 +0.7**
MILM Milestii Mici 146.56 328 ⇑P **PKPdf** **11 43 39.1 +0.1**
MILM Milestii Mici 146.56 328 ⇑PKiKP **PKPdf** **11 43 39.1 +0.1**
MILM Milestii Mici 146.56 328 ⇓*i* PKP **PKPdf** **11 43 38.0 -1.0**
comp=Z,210nm,1.2s
BNN Bunyan 146.79 311 **PKPbc** **11 43 41.4 -0.6**
GORT1 Trebel 146.93 352 *e*PKPbc **PKPab** **11 43 43.6 -0.1**
baz=16,slow=2.5
RUE Ruedersdorf 147.03 349 *e*PKPbc **PKPbc** **11 43 42.4 +0.4**
baz=16,slow=2.5
STNU Starunia 147.18 334 PKP **PKPbc** **11 43 41.8 -0.8**
SHIU Shidnytsya 147.22 336 PKP **PKPbc** **11 43 41.8 -0.9**
KSV Kosov 147.25 333 PKP **PKPbc** **11 43 41.7 -1.1**
RETH Rethem/Aller, 147.41 354 *e*PKPbc **PKiKP** **11 43 44.7 -0.3**
baz=16,slow=2.5
FLTG Flechtingen 147.58 351 *e*PKPbc **PKiKP** **11 43 44.9 -0.5**
baz=16,slow=2.5
OJC Ojcow 147.61 341 *e*PKPbc **PKPbc** **11 43 43.7 0.0**
OJC Ojcow 147.61 341 PKP **PKPdf** **11 43 41.9 +1.2**
VLDR Vladesti 147.67 327 ⇓P **PKPbc** **11 43 44.1 +0.1**
BURAR Bucovina Array 147.73 332 **PKPbc** **11 43 43.9 -0.4**
MEZ Mezhgor'ye 147.73 335 PKP **PKPbc** **11 43 42.8 -1.3**
TLCR 147.74 326 ⇓P **PKPbc** **11 43 44.7 +0.5**
TLCR 147.74 326 ⇓PKP2 **PKPbc** **11 43 44.7 +0.5**
STHS Stebnicka Huta 147.83 338 *e*PKP2 **PKPbc** **11 43 44.9 +0.6**
STHS Stebnicka Huta 147.83 338 *e*PKP **PKPbc** **11 43 44.9 +0.6**
STHS *e* 11 48.7
ASSE Asse, Remlinge 147.86 352 *e*PKPbc **PKiKP** **11 43 46.0 +0.1**
baz=16,slow=2.5
TESR Tescani 147.90 330 ⇓P **PKPbc** **11 43 44.3 -0.3**
BRTR Keskin Array B 147.94 314 PKP **PKPdf** **11 43 41.4 -0.3**
comp=Z,14nm,0.7s,baz=135,slow=3.9,SNR=40
BRTR PKPbc **PKPbc** **11 43 44.5 -0.7**
comp=Z,14nm,0.7s,baz=131,slow=2.6,SNR=43
BR104 Keskin Array S 147.94 314 PKP **PKPdf** **11 43 42.5 +0.8**
BR105 Keskin Array S 147.96 314 PKP **PKPdf** **11 43 42.3 +0.5**
KIRS Kirsehir-Merke 148.02 312 ⇑P **PKPbc** **11 43 44.9 -0.4**
KSP Ksiaz 148.03 345 *e*PKPbc **PKPbc** **11 43 45.3 +0.6**

KSP	**Ksiaz**	**148.03 345**		PKP	**PKPbc**	**11 43 43.3**	**-1.5**
NIE	**Niedzica**	**148.15 339**		*e*PKPbc	**PKPbc**	**11 43 45.8**	**+0.6**
ONER	**Baraj Valea Uz**	**148.15 330**	⇓	P	**PKPbc**	**11 43 44.9**	**-0.4**
HOLU	**Holmets**	**148.16 336**		PKP	**PKPdf**	**11 43 43.2**	**+1.6**
TPGR	**Topolog**	**148.17 326**	⇑	P	**PKPbc**	**11 43 45.3**	**0.0**
CLZ	**Clausthal**	**148.18 352**		*e*PKPbc	**PKiKP**	**11 43 47.1**	**+0.4**
	baz=16,slow=2.5							
CLL	**Collm**	**148.29 349**		*e*PKP2	**PKPbc**	**11 43 46.0**	**+0.6**
CLL				pmax	pmax			
	comp=Z,97nm,0.9s							
CLL	**Collm**	**148.29 349**		*e*PKPbc	**PKPbc**	**11 43 45.9**	**+0.5**
	baz=16,slow=2.5							
CLL	**Collm**	**148.29 349**		*e*PKPdf	**PKPdf**	**11 43 42.0**	**+0.3**
CLL				*e*PKPbc	**PKPbc**	**11 43 46.0**	**+0.6**
	comp=Z,97nm,0.9s							
CLL				*i* PKPab	**PKPab**	**11 43 50.3**	**+1.1**
	comp=Z,81nm,1.0s							
OSTC	**Ostas**	**148.31 345**		*e*PKP2	**PKiKP**	**11 43 46.5**	**-0.5**
OSTC	**Ostas**	**148.31 345**	⇑	*e*PKP	**PKiKP**	**11 43 46.5**	**-0.5**
CHVC	**Chvalec**	**148.32 345**		*e*PKP2	**PKPbc**	**11 43 46.3**	**+0.7**
CHVC	**Chvalec**	**148.32 345**	⇑	*e*PKP	**PKPbc**	**11 43 46.3**	**+0.7**
VRI	**Vrincioaia**	**148.33 329**	⇓	P	**PKPbc**	**11 43 45.3**	**-0.4**
VRI	**Vrincioaia**	**148.33 329**	⇓	PKP2	**PKPbc**	**11 43 45.3**	**-0.4**
PLOR	**Plostina**	**148.38 329**	⇑	P	**PKPbc**	**11 43 45.8**	**-0.1**
PLOR	**Plostina**	**148.38 329**	⇑	PKP2	**PKPbc**	**11 43 45.8**	**-0.1**
UPC	**Upice**	**148.41 345**		*e*PKP2	**PKPbc**	**11 43 46.3**	**+0.5**
UPC	**Upice**	**148.41 345**	⇑	*e*PKP	**PKPbc**	**11 43 46.3**	**+0.5**
TIRR	**Tirgusor**	**148.44 325**	⇑	P	**PKPbc**	**11 43 44.4**	**-1.6**
TIRR	**Tirgusor**	**148.44 325**	⇑	PKP2	**PKPbc**	**11 43 44.4**	**-1.6**
STEB	**Steborice**	**148.47 343**	⇑	*e*PKP	**PKPbc**	**11 43 46.4**	**+0.5**
DPC	**Dobruska-Polom**	**148.47 344**		*e*PKP2	**PKiKP**	**11 43 46.7**	**-0.7**
DPC	**Dobruska-Polom**	**148.47 344**	⇑	*e*PKP	**PKiKP**	**11 43 46.7**	**-0.7**
GTTG	**Gottingen**	**148.52 353**		*e*PKPbc	**PKiKP**	**11 43 47.7**	**+0.3**
	baz=16,slow=2.5							
BRG	**Berggiesshubel**	**148.53 348**		*e*PKPbc	**PKiKP**	**11 43 46.9**	**-0.5**
	baz=16,slow=2.5							
HARR	**Harsova**	**148.54 326**	⇑	P	**PKPbc**	**11 43 46.4**	**+0.1**
HARR	**Harsova**	**148.54 326**	⇑	PKP2	**PKPbc**	**11 43 46.4**	**+0.1**
NEUB	**Neuenburg**	**148.59 350**		*e*PKPbc	**PKiKP**	**11 43 48.0**	**+0.5**
	baz=16,slow=2.5							
KRLC	**Kraliky**	**148.61 344**		*e*PKP2	**PKPbc**	**11 43 47.0**	**+0.6**
KRLC	**Kraliky**	**148.61 344**	⇑	*e*PKP	**PKPbc**	**11 43 47.0**	**+0.6**
KRLC				*e*PKPAB	**PKPab**	**11 43 51.7**	**+1.1**
OZUR		**148.61 330**	⇓	P	**PKiKP**	**11 43 48.1**	**+0.2**
MFTR	**Murfatlar**	**148.62 325**	⇑	P	**PKiKP**	**11 43 47.4**	**-0.4**
LANS	**Liptovska Anna**	**148.65 340**		*e*PKP2	**PKiKP**	**11 43 47.7**	**-0.1**
LANS	**Liptovska Anna**	**148.65 340**		*e*PKP	**PKiKP**	**11 43 47.7**	**-0.1**
MORC	**Moravsky Berou**	**148.67 343**	⇑	P	**PKiKP**	**11 43 47.3**	**-0.5**
MORC	**Moravsky Berou**	**148.67 343**		*e*PKP	**PKPdf**	**11 43 43.0**	**+0.5**
MORC				*e*		11 43 48.3		
MORC	**Moravsky Berou**	**148.67 343**	⇑	PKP2	**PKiKP**	**11 43 47.3**	**-0.5**
PVCC	**Panska Ves**	**148.72 347**		*e*PKP2	**PKiKP**	**11 43 47.7**	**-0.1**
PVCC	**Panska Ves**	**148.72 347**	⇑	*e*PKP	**PKiKP**	**11 43 47.7**	**-0.1**
MANR	**Mangalia**	**148.76 324**	⇓	P	**PKPbc**	**11 43 46.2**	**+0.6**
HSKC	**Hora Svate Kat**	**148.88 348**	⇑	*e*PKP	**PKiKP**	**11 43 47.7**	**-0.5**
BUG	**Bochum--Univer**	**148.88 356**		*e*PKPbc	**PKiKP**	**11 43 47.5**	**-0.6**
	baz=16,slow=2.5							
KECS	**Kecovo**	**148.89 338**		*e*PKP2	**PKiKP**	**11 43 49.2**	**+1.0**
KECS	**Kecovo**	**148.89 338**		*e*PKP	**PKiKP**	**11 43 49.2**	**+1.0**
ISR	**Istrita**	**148.95 328**	⇓	P	**PKiKP**	**11 43 48.0**	**-0.5**
ISR	**Istrita**	**148.95 328**	⇓	PKP2	**PKiKP**	**11 43 48.0**	**-0.5**
MAUC	**Maruska**	**148.96 342**	⇑	*e*PKP	**PKiKP**	**11 43 48.0**	**-0.4**
MLR	**Muntele Rosu**	**148.98 329**	⇓	P	**PKPbc**	**11 43 47.1**	**-0.4**
MLR	**Muntele Rosu**	**148.98 329**	⇓	PKP2	**PKPbc**	**11 43 47.1**	**-0.4**
KASTN	**Kahler Asten**	**149.03 354**		*e*PKPbc	**PKiKP**	**11 43 48.7**	**+0.3**
	baz=16,slow=2.5							
MESR	**Messeneti**	**149.05 334**	⇑	P	**PKiKP**	**11 43 48.8**	**+0.1**
PSN	**Preselentsi**	**149.13 324**		P	**PKiKP**	**11 43 48.7**	**-0.2**
MMAI	**Mount Meron Ar**	**149.15 301**		PKPbc	**PKPbc**	**11 43 48.1**	**-0.2**
	comp=Z,9.4nm,0.5s,baz=75,slow=4.4,SNR=25							
MOX	**Moxa**	**149.17 350**		*e*PKPbc	**PKiKP**	**11 43 48.3**	**-0.4**
	baz=16,slow=2.5							
SAHE	**Sakarya_HENDEK**	**149.19 317**	⇑	P	**PKPbc**	**11 43 46.7**	**-1.4**
PLN	**Plauen**	**149.23 349**		*e*PKPbc	**PKiKP**	**11 43 48.7**	**-0.2**
	baz=16,slow=2.5							
PRU	**Pruhonice**	**149.23 346**		*e*PKP2	**PKPbc**	**11 43 48.2**	**+0.4**
PRU	**Pruhonice**	**149.23 346**	⇑	*e*PKP	**PKPbc**	**11 43 48.2**	**+0.4**
TANN	**Tannenbergstha**	**149.25 349**		*e*PKPbc	**PKiKP**	**11 43 48.6**	**-0.4**
	baz=16,slow=2.5							
MARR	**Marisel-Cluj**	**149.36 333**	⇓	P	**PKiKP**	**11 43 50.3**	**+0.9**
VRAC	**Vranov**	**149.36 343**	⇓	P	**PKiKP**	**11 43 48.9**	**-0.3**
VRAC	**Vranov**	**149.36 343**		*e*PKP	**PKPdf**	**11 43 44.9**	**+1.3**
VRAC				*e*		11 43 50.1		
VRAC	**Vranov**	**149.36 343**	⇓	PKP2	**PKiKP**	**11 43 48.9**	**-0.3**
DRGR		**149.44 334**	⇑	P	**PKPbc**	**11 43 48.4**	**-0.1**
DRGR		**149.44 334**	⇑	PKP2	**PKPbc**	**11 43 48.4**	**-0.1**
VOIR		**149.45 330**	⇓	P	**PKiKP**	**11 43 49.8**	**+0.2**
VOIR		**149.45 330**	⇓	PKP2	**PKiKP**	**11 43 49.8**	**+0.2**
JAVC	**Velka Javorina**	**149.46 342**		*e*PKP	**PKPbc**	**11 43 46.2**	**-2.3**
JAVC				*e*		11 43 51.2		
PSZ	**Piszkesteto**	**149.57 338**	⇑	P	**PKPbc**	**11 43 49.2**	**+0.3**
PSZ	**Piszkesteto**	**149.57 338**	⇑	PKP2	**PKPbc**	**11 43 49.2**	**+0.3**
BEBN	**Eben Emael**	**149.62 358**		*d*PKiKP	**PKiKP**	**11 43 50.2**	**+0.5**
KRUC	**Moravsky**	**149.64 343**		*e*PKP	**PKPdf**	**11 43 44.4**	**+0.4**
KRUC				*e*		11 43 49.1		
UCC	**Uccle**	**149.65 359**		*d*PKiKP	**PKiKP**	**11 43 49.4**	**-0.3**
TREC	**Trest**	**149.66 345**		*e*PKP2	**PKPbc**	**11 43 49.2**	**+0.3**
TREC	**Trest**	**149.66 345**	⇑	*e*PKP	**PKPbc**	**11 43 49.2**	**+0.3**
MANZ	**Manzenberg**	**149.72 349**		*e*PKPbc	**PKiKP**	**11 43 49.9**	**0.0**
	baz=16,slow=2.5							
MEM	**Membach**	**149.79 357**		*d*PKPbc	**PKPbc**	**11 43 48.7**	**-0.5**
MEM				*d*PKiKP	**PKiKP**	**11 43 50.3**	**+0.3**
BTNL	**Ternell**	**149.81 357**		*d*PKiKP	**PKPbc**	**11 43 49.6**	**+0.4**
ZVC	**Zvikov**	**149.83 346**	⇑	*e*PKP	**PKPbc**	**11 43 49.7**	**+0.4**
ZVC				*e*PKPAB	**PKPab**	**11 43 56.4**	**+0.8**
BSTI	**Sart Tilman**	**149.83 358**		*d*PKiKP	**PKiKP**	**11 43 49.9**	**-0.2**
PRD	**Provadia**	**149.84 324**		P	**PKiKP**	**11 43 50.8**	**+0.5**
NEF	**NEVSHA**	**149.84 324**		P	**PKiKP**	**11 43 52.0**	**+1.6**
SMOL	**Smolenice**	**149.84 342**		*e*PKP2	**PKiKP**	**11 43 50.5**	**+0.3**
ROTZ	**Rotzenmuhle**	**149.91 349**		*e*PKPbc	**PKiKP**	**11 43 50.2**	**-0.2**
	baz=16,slow=2.5							
TNS	**Taunus Mts**	**149.99 354**		*e*PKPbc	**PKiKP**	**11 43 50.6**	**0.0**
	baz=16,slow=2.5							
BCLA	**Clavier**	**150.01 358**		*d*PKiKP	**PKiKP**	**11 43 50.9**	**+0.4**
BCLA				*d*PKP	**PKPab**	**11 43 56.2**	**0.0**
MODS	**Modra-Piesok**	**150.01 342**		*e*PKP2	**PKiKP**	**11 43 50.9**	**+0.3**
MODS	**Modra-Piesok**	**150.01 342**		*e*PKP	**PKiKP**	**11 43 50.9**	**+0.3**
MODS				*e*		11 43 59.0		
LOT	**Lotru**	**150.03 331**	⇓	P	**PKPdf**	**11 43 46.0**	**+1.1**
BHOU	**Houvegnez**	**150.04 357**		*d*PKiKP	**PKiKP**	**11 43 50.7**	**+0.1**
BHOU				*d*PKP	**PKPab**	**11 43 55.5**	**-0.9**
BGES	**Gesves**	**150.05 358**		*d*PKiKP	**PKiKP**	**11 43 51.1**	**+0.5**
BGES				*d*PKP	**PKPab**	**11 43 56.8**	**+0.4**
BGES				*d*pPKP	**pPKPab**	**11 44 55.5**	**+3.3**
BMRD	**Maredsous**	**150.14 359**		*d*PKiKP	**PKPbc**	**11 43 50.3**	**+0.3**
BMRD				*d*PKP	**PKPab**	**11 43 57.0**	**+0.2**
GRF	**Grafenberg Arr**	**150.15 350**		*e*PKPab	**PKPab**	**11 43 58.3**	**+1.4**
	baz=12,slow=4.2							
CSS	**Mathiatis**	**150.16 305**			**PKPbc**	**11 43 50.0**	**-0.5**
SRO	**Srobarova**	**150.19 340**		*e*PKIKP	**PKiKP**	**11 43 51.1**	**+0.2**
SRO	**Srobarova**	**150.19 340**		*e*PKP	**PKiKP**	**11 43 51.1**	**+0.2**
SRO				*e*		11 44 00.1		
KHC	**Kasperske Hory**	**150.25 347**		*e*PKIKP	**PKPdf**	**11 43 45.5**	**+0.5**
KHC				*e*		11 43 57.5		
KHC	**Kasperske Hory**	**150.25 347**		*e*PKPDF	**PKPdf**	**11 43 45.5**	**+0.5**
KHC			⇑	*e*PKP	**PKPbc**	**11 43 50.7**	**+0.3**
KHC				*e*PKPAB	**PKPab**	**11 43 57.5**	**+0.1**
RCHB	**Rochefort**	**150.27 358**		*d*PKiKP	**PKiKP**	**11 43 51.9**	**+0.9**
RCHB				*d*PKP	**PKPab**	**11 43 56.6**	**-0.7**
SIRR	**Siria**	**150.29 334**	⇑	P	**PKPbc**	**11 43 49.8**	**-0.7**
DOU	**Dourbes**	**150.35 359**		*d*PKiKP	**PKPbc**	**11 43 50.3**	**-0.2**
DOU				*d*PKP	**PKPab**	**11 43 56.8**	**-0.8**
CKRC	**Cesky Krumlov**	**150.38 346**		*e*PKIKP	**PKPdf**	**11 43 46.1**	**+0.9**
CKRC				*e*		11 43 51.1		
CKRC	**Cesky Krumlov**	**150.38 346**		*e*PKPDF	**PKPdf**	**11 43 46.1**	**+0.9**
CKRC			⇑	*e*PKP	**PKiKP**	**11 43 51.1**	**-0.3**
WET	**Wettzell**	**150.38 348**		*e*PKPbc	**PKiKP**	**11 43 52.6**	**+1.2**
	baz=16,slow=2.5							
WET				*e*PKPab	**PKPab**	**11 43 59.3**	**+1.4**
	baz=12,slow=4.2							
GEC2	**GERESS Array S**	**150.50 347**		*e*PKPbc	**PKiKP**	**11 43 51.4**	**-0.3**
	baz=16,slow=2.5							
GEC2				*e*PKPab	**PKPab**	**11 44 00.4**	**+2.0**
	baz=12,slow=4.2							
GEC2				*ep*PKPbc	**pPKPab**	**11 44 57.1**	**-0.1**
GEC2				*ep*PKPab	**sPKPdf**	**11 45 01.6**	**-9.3**
GERES	**GERESS Array B**	**150.50 347**		PKPbc	**PKiKP**	**11 43 51.4**	**-0.3**
	comp=Z,23nm,0.7s,baz=50,slow=2.1,SNR=47							
GZR	**Gura Zlata**	**150.52 332**	⇓	P	**PKPbc**	**11 43 49.4**	**-1.8**
GZR	**Gura Zlata**	**150.52 332**	⇓	PKIKP	**PKPbc**	**11 43 49.4**	**-1.8**
SZH	**Strazhitsa**	**150.54 326**		P	**PKPbc**	**11 43 50.3**	**-0.9**
SZH	**Strazhitsa**	**150.54 326**		P	**PKiKP**	**11 43 52.3**	**+0.5**
WLF	**Walferdange**	**150.72 357**		*d*PKiKP	**PKiKP**	**11 43 51.9**	**-0.1**
WLF	**Walferdange**	**150.72 357**		*e*PKPbc	**PKiKP**	**11 43 52.9**	**+1.0**
	baz=16,slow=2.5							
WLF				*e*PKPab	**PKPab**	**11 44 00.7**	**+1.5**
	baz=12,slow=4.2							
JMB	**Yambol**	**150.77 324**		P	**PKPbc**	**11 43 50.8**	**-1.0**
CONA	**Conrad Observa**	**150.82 343**		*i* PKiKP	**PKiKP**	**11 43 52.3**	**-0.1**
	comp=Z,44nm,0.8s,SNR=16							
CONA				*i* PKP	**PKPab**	**11 44 01.7**	**+1.9**
	comp=Z,36nm,0.9s							
SRE	**Strehaia**	**150.89 331**	⇓	P	**PKiKP**	**11 43 52.5**	**0.0**
SRE	**Strehaia**	**150.89 331**	⇓	PKIKP	**PKiKP**	**11 43 52.5**	**0.0**
RONA	**Rosalia, Austr**	**150.91 342**		*i* PKP	**PKiKP**	**11 43 52.3**	**-0.2**
	comp=Z,40nm,0.7s,SNR=13							
RONA				*i* PKP	**PKPab**	**11 44 02.0**	**+1.9**
	comp=Z,36nm,0.9s							
PVL	**Pavlikeni**	**151.06 326**		P	**PKiKP**	**11 43 53.8**	**+0.9**
HERR	**Herculane**	**151.08 332**	⇓	P	**PKPbc**	**11 43 52.2**	**-0.2**
PLVB	**Pleven**	**151.16 327**	⇑	P	**PKPbc**	**11 43 52.5**	**-0.1**
MOA	**Molln**	**151.30 345**		*i* PKP	**PKiKP**	**11 43 53.1**	**-0.2**
	comp=Z,17nm,0.8s,SNR=5.8							
MOA				*i* PKP	**PKPab**	**11 44 02.9**	**+1.2**
	comp=Z,31nm,1.1s							
STU	**Stuttgart**	**151.34 352**		*e*PKPbc	**PKiKP**	**11 43 54.4**	**+1.1**
	baz=16,slow=2.5							
STU				*e*PKPab	**PKPab**	**11 44 03.4**	**+1.6**
	baz=12,slow=4.2							
MDVR	**Moldovita**	**151.46 333**	⇑	P	**PKPbc**	**11 43 53.2**	**-0.2**
MORH	**Mrgy, Hungar**	**151.48 338**	⇓	P	**PKPbc**	**11 43 52.5**	**-0.8**
ARSA	**Arzberg**	**151.53 343**		*i* PKP	**PKiKP**	**11 43 53.6**	**-0.2**
	comp=Z,15nm,1.2s							
ARSA				*i* PKP	**PKPab**	**11 44 03.6**	**+0.9**
	comp=Z,15nm,1.1s							
DIM	**Dimitrovgrad**	**151.59 324**		P	**PKPbc**	**11 43 52.9**	**-0.8**
BIOA	**Bad Ischl, Aus**	**151.60 346**		*i* PKP	**PKPbc**	**11 43 53.4**	**-0.1**
	comp=Z,23nm,1.0s,SNR=5.7							
BIOA				*i* PKP	**PKPab**	**11 44 04.6**	**+1.5**
	comp=Z,32nm,0.9s							
MPEP	**Malo Peshtene**	**151.62 328**		P	**PKiKP**	**11 43 54.9**	**+0.8**
FUR	**Furstenfeldbru**	**151.62 349**		*e*PKPbc	**PKiKP**	**11 43 55.4**	**+1.5**
	baz=16,slow=2.5							
FUR				*e*PKPab	**PKPab**	**11 44 04.7**	**+1.6**
	baz=12,slow=4.2							
RJOB	**Jochberg**	**151.74 347**		*e*PKPbc	**PKiKP**	**11 43 54.9**	**+0.7**
	baz=16,slow=2.5							
RJOB				*e*PKPab	**PKPab**	**11 44 04.9**	**+1.3**
	baz=12,slow=4.2							
BFO	**Black Forest**	**151.88 353**		*e*PKPbc	**PKiKP**	**11 43 55.9**	**+1.4**
	baz=16,slow=2.5							
BFO				*e*PKPab	**PKPab**	**11 44 05.5**	**+1.4**
	baz=12,slow=4.2							
PLD	**Plovdiv**	**151.97 325**		P	**PKPbc**	**11 43 54.3**	**-0.2**
KDZ	**Kurdzhali**	**152.00 324**		P	**PKPbc**	**11 43 53.6**	**-1.0**
KDZ	**Kurdzhali**	**152.00 324**		P	**PKiKP**	**11 43 55.4**	**+0.5**
KOGS	**Kog**	**152.05 341**		*i* PKPbc	**PKiKP**	**11 43 55.6**	**+0.8**
KOGS				*i* PKPab	**PKPab**	**11 44 06.0**	**+1.1**
LESA	**Schwarzleotal**	**152.06 347**		*i* PKP	**PKPbc**	**11 43 54.5**	**-0.1**
	comp=Z,16nm,0.9s							
LESA				*i* PKP	**PKPab**	**11 44 06.6**	**+1.5**
	comp=Z,38nm,1.1s							
ALN	**Alexandroupoli**	**152.09 322**		P	**PKPbc**	**11 43 51.9**	**-2.9**
SOKA	**Soboth**	**152.19 343**		*e*PKP	**PKPbc**	**11 43 54.7**	**-0.2**
	comp=Z,24nm,0.9s							
SOKA				*i* PKP	**PKPab**	**11 44 06.5**	**+0.9**
	comp=Z,39nm,1.2s							
PERS	**Pernice**	**152.21 343**		*i* PKPbc	**PKiKP**	**11 43 56.0**	**+0.7**
PERS				*i* PKPab	**PKPab**	**11 44 06.8**	**+1.1**
RDO	**Rodhopi**	**152.21 323**		P	**PKPbc**	**11 43 53.8**	**-1.3**
KBA	**Koelnbreinsper**	**152.24 346**		*i* PKP	**PKPbc**	**11 43 54.5**	**-0.7**
	comp=Z,18nm,0.7s							
KBA				*e*PKP	**PKPab**	**11 44 05.3**	**-0.7**
	comp=Z,34nm,0.8s							
UBR	**Ueberruh**	**152.28 351**		*e*PKPbc	**PKiKP**	**11 43 55.5**	**+0.2**
	baz=16,slow=2.5							
RZN	**Rozhen**	**152.29 325**		P	**PKiKP**	**11 43 54.8**	**-0.7**
RETA	**Reutte**	**152.37 350**		*i* PKiKP	**PKiKP**	**11 43 55.8**	**+0.3**
	comp=Z,24nm,1.2s,SNR=6.7							
RETA				*i* PKP	**PKPab**	**11 44 07.4**	**+1.1**
	comp=Z,9.8nm,0.5s							
WATA	**Walderalm**	**152.37 348**		*i* PKiKP	**PKiKP**	**11 43 55.7**	**0.0**
	comp=Z,32nm,1.0s,SNR=6.9							
WATA				*e*PKP	**PKPab**	**11 44 08.5**	**+2.0**
	comp=Z,44nm,1.3s							
VTS	**Vitosha**	**152.41 328**		P	**PKPbc**	**11 43 54.9**	**-0.8**
WTTA	**Wattenberg**	**152.43 348**		*i* PKP	**PKPbc**	**11 43 55.5**	**-0.1**
	comp=Z,47nm,1.3s,SNR=6.4							
WTTA				*i* PKP	**PKPab**	**11 44 08.0**	**+1.3**
	comp=Z,23nm,0.6s							
MOTA	**Moosalm**	**152.44 349**		*e*PKP	**PKPbc**	**11 43 55.5**	**-0.1**
	comp=Z,29nm,1.1s,SNR=5.3							
MOTA				*i* PKP	**PKPab**	**11 44 07.8**	**+1.1**
	comp=Z,24nm,0.8s							
OBKA	**Obir**	**152.48 344**		*e*PKP	**PKPbc**	**11 43 55.4**	**-0.2**
	comp=Z,10nm,0.9s							
OBKA				*i* PKP	**PKPab**	**11 44 06.7**	**-0.1**
	comp=Z,20nm,0.9s							
SQTA	**Sankt Quirin**	**152.55 349**		*i* PKP	**PKPbc**	**11 43 55.6**	**-0.2**
	comp=Z,25nm,0.8s							
SQTA				*i* PKP	**PKPab**	**11 44 08.2**	**+1.1**
	comp=Z,23nm,1.6s							
MYKA	**Terra Mystica**	**152.59 345**		*e*PKP	**PKPbc**	**11 43 55.0**	**-0.9**
	comp=Z,13nm,0.7s							
MYKA				*i* PKP	**PKPab**	**11 44 07.9**	**+0.7**
	comp=Z,25nm,0.8s							
EZN	**Ezine**	**152.60 320**		P	**PKPbc**	**11 43 54.7**	**-1.3**
EZN	**Ezine**	**152.60 320**	⇓	P	**PKPbc**	**11 43 55.4**	**-0.6**
EZN	**Ezine**	**152.60 320**	⇓	PKIKP	**PKPbc**	**11 43 55.4**	**-0.6**
DAVA	**Damuels**	**152.70 351**		*i* PKiKP	**PKiKP**	**11 43 56.6**	**+0.2**
	comp=Z,39nm,1.1s,SNR=8.8							
DAVA				*i* PKP	**PKPab**	**11 44 08.8**	**+1.0**
	comp=Z,22nm,0.7s							
ABTA	**Abfaltersbach**	**152.74 347**		*i* PKP	**PKPbc**	**11 43 55.6**	**-0.6**
	comp=Z,42nm,1.0s,SNR=6.0							
FETA	**Feichten**	**152.82 349**		*i* PKP	**PKPbc**	**11 43 56.5**	**0.0**
	comp=Z,31nm,1.2s							
FETA				*i* PKP	**PKPab**	**11 44 09.5**	**+1.1**
	comp=Z,26nm,1.2s							
KAVA	**Kavala**	**152.89 324**		P	**PKPbc**	**11 43 55.5**	**-1.1**
LJU	**Ljubljana**	**152.91 343**		*e*PKPdf	**PKPdf**	**11 43 50.5**	**+1.4**
LJU				*i* PKPbc	**PKiKP**	**11 43 57.9**	**+1.3**
LJU				*i* PKPab	**PKPab**	**11 44 09.1**	**+0.5**
MMB	**Musomishta**	**152.92 326**		P	**PKPbc**	**11 43 55.2**	**-1.5**
MMB	**Musomishta**	**152.92 326**		P	**PKiKP**	**11 43 56.9**	**+0.1**
KKB	**Krupnik**	**153.03 327**		P	**PKPbc**	**11 43 56.0**	**-0.9**
KKB	**Krupnik**	**153.03 327**		P	**PKiKP**	**11 43 57.7**	**+0.7**
BODT	**Bodrum**	**153.57 314**		P	**PKiKP**	**11 43 59.0**	**+0.7**
CHOS	**Chios island**	**153.64 318**		P	**PKPbc**	**11 43 57.8**	**-0.7**
VILL	**Villia**	**155.47 320**		P	**PKPdf**	**11 44 00.5**	**+7.6**
ANX	**Ano Chora**	**155.99 323**		P	PKPdf	11 44 02.9	+9.2
POLO	**Lamas de Olo**	**156.91 23**		*e*PKPab	**PKPab**	**11 44 27.9**	**+2.0**
PVRL	**Vila Real**	**157.03 22**		*e*PKPab	**PKPab**	**11 44 28.8**	**+2.4**
MVO	**Moncorvo**	**157.36 21**		*e*PKPab	**PKPab**	**11 44 30.8**	**+2.9**
PVIS	**Viseu**	**157.45 23**		*e*PKPab	**PKPab**	**11 44 30.5**	**+2.3**
PMOZ	**Porto Moniz, M**	**157.63 52**		*e*PKPab	PKPab	11 44 15.6	-14
PCAS	**Casmilo, Conde**	**157.78 25**		*e*PKPab	**PKPab**	**11 44 28.6**	**-1.0**
MTE	**Manteigas**	**157.85 23**		*e*PKPab	PKPab	11 44 20.5	-9.5
FUL	**Funchal**	**157.94 52**		*e*PKPab	PKPab	11 44 40.7	+10
PSBE	**So Bento**	**158.12 27**		*e*PKPab	**PKPab**	**11 44 31.1**	**0.0**
PSARD	**Sardoal**	**158.31 25**		*e*PKPab	**PKPab**	**11 44 33.9**	**+1.9**
PCBR	**Castelo Branco**	**158.37 24**		*e*PKPab	**PKPab**	**11 44 30.8**	**-1.3**
PMRV	**Marv??o**	**158.76 24**		*e*PKPab	**PKPab**	**11 44 35.7**	**+1.8**
PARRA	**Arraiolos**	**159.02 26**		*e*PKPab	**PKPab**	**11 44 36.7**	**+3.5**
MOE	**Montemor**	**159.13 27**		*e*PKPab	**PKPab**	**11 44 37.1**	**+1.6**
PESTR	**Estremoz**	**159.16 25**		*e*PKPab	**PKPab**	**11 44 37.4**	**+1.7**
EVO	**Evora**	**159.27 27**		*e*PKPab	**PKPab**	**11 44 38.1**	**+1.9**
ESDC	**Sonseca Array**	**159.68 17**			**PKPab**	**11 44 40.0**	**+2.1**
ESDC	**Sonseca Array**	**159.68 17**		PKP	**PKPdf**	**11 43 59.6**	**+1.5**
	comp=Z,0.7nm,0.9s,baz=95,slow=15,SNR=4.1							
ESDC				PKPab	**PKPab**	**11 44 39.6**	**+1.7**
	comp=Z,9.2nm,1.1s,baz=327,slow=4.0,SNR=20							
MESJ	**Messejana**	**159.76 28**			**PKPdf**	**11 43 56.0**	**-2.2**
MESJ	**Messejana**	**159.76 28**		PKIKP	**PKPdf**	**11 43 56.0**	**-2.2**
PBAR	**Barrancos**	**159.98 25**		*e*PKPab	**PKPab**	**11 44 41.5**	**+2.3**
PVAQ	**Vaqueiros**	**160.34 28**		*e*PKPab	**PKPab**	**11 44 43.2**	**+2.4**
PBDV	**Barranco-do-Ve**	**160.38 29**		*e*PKPab	PKPab	11 44 50.8	+10
KEST	**Kesra**	**163.93 343**		PKPab	**PKPab**	**11 44 56.6**	**-0.1**
	comp=Z,20nm,1.1s,baz=226,slow=0.5,SNR=7.6							
DBIC	**Dimbokro**	**164.03 147**		PKPab	**PKPab**	**11 44 58.6**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=163,slow=4.8,SNR=3.3							
TORD	**Torodi Ar. Bea**	**172.55 165**		PKPab	**PKPab**	**11 45 35.8**	**+0.7**
	comp=Z,2.8nm,0.4s,baz=135,slow=1.4,SNR=1.7							

*NEIC **09** 11:39:25.0±0.9, 19°.430N×0°.007×155°.610W±0°.009,*
h5km±3km, Error ellipse: s-maj=1.3km s-min=1.1km az=70.0

HVO 09 11:39:24.6±1.0, 19°.428N×0°.007×155°.622W±0°.009, h0km±6km, ML2.7/49, ML2.9/44(NEIC), Error ellipse: s-maj=1.3km s-min=1.0km az=77.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MWH	**Mokuaweoweo**	**0.06**	**23**		Pg	11 39 26.6	+0.7
MWH					IAML	11 39 30.7	
	comp=E,14μm,0.5s						
ALEP	**Alea Permanent**	**0.12**	**350**		Pg	11 39 27.9	+1.0
ALEP					Sg	11 39 30.2	+1.8

GCAM	**G?zelcaml?**	**1.15**	**152**	Pn	Pg	11 42 15.4	0.0	
BOZC	**Bozcaada**	**1.19**	**341**	Pn	Pg	11 42 16.4	+0.3	
BOZC				Sn	Sn	11 42 32.4	+0.1	
ODEM	**Odemis-Izmir**	**1.27**	**110**	Pn	Pb	11 42 17.6	+0.1	
GORD	**Gordes-Manisa**	**1.28**	**81**	Pn	Pb	11 42 17.6	-0.1	
AYDB	**Zeytinkoy-Aydi**	**1.31**	**126**	Pn	Pg	11 42 18.7	+0.3	
COMU	**Canakkale**	**1.38**	**357**	Pn	Pb	11 42 19.3	0.0	
GADA	**Gvkgeada**	**1.55**	**341**	Pn	Pb	11 42 21.9	-0.3	
LIA	**Limnos Island**	**1.58**	**318**	P	Pn	11 42 21.7	+0.1	
LMN1	**MIRINA LIMNOU**	**1.63**	**315**	P	Pn	11 42 21.8	-0.4	
LPK	**Lapseki**	**1.66**	**6**	Pn	Pn	11 42 22.7	+0.1	
GELI	**Tayfur-Gelibol**	**1.68**	**358**	Pn	Pn	11 42 23.5	+0.7	
SMTH	**Samothraki Isl**	**1.92**	**336**	P	Pn	11 42 26.4	+0.2	
ERIK	**Erikli-Kesan**	**1.95**	**359**	Pn	Pn	11 42 27.1	+0.6	
RKY	**Sarkoy-Tekirda**	**2.02**	**14**	Pn	Pn	11 42 28.4	+0.8	
ALN	**Alexandroupoli**	**2.21**	**350**	Pn	Pn	11 42 31.4	+1.3	
ALN	**Alexandroupoli**	**2.21**	**350**	P	Pn	11 42 29.9	-0.2	
SFL1	**Soufli**	**2.47**	**356**	P	Pn	11 42 33.9	+0.1	

*AEIC **09** 11:47:12.3±0.7,53˚.74N±0˚.06×163˚.08W±0˚.08,h35km±8km, Error ellipse: s-maj=10.2km s-min=5.5km az=154.0*
NEIC 09 11:47:14.4±0.9,53˚.86N±0˚.07×163˚.17W±0˚.07,h35km±2km, ML2.3/12,ML2.2(AEIC),Error ellipse: s-maj=12.1km s-min=6.0km az=337.0,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.01**	**352**	Pn	Pn	11 47 32.0	0.0
FALS	**False Pass**	**1.01**	**352**		Sn	11 47 45.1	+0.1
ISNN	**Isanotski Nort**	**1.04**	**340**		Pn	11 47 32.8	+0.4
ISNN					Sn	11 47 49.4	+3.6
SSBA	**Shishaldin**	**1.07**	**329**		Pn	11 47 32.6	-0.4
WEBT	**Westdahl Beart**	**1.19**	**309**		Pn	11 47 34.7	+0.3
DT1	**Dutton Round H**	**1.35**	**22**		Pn	11 47 36.6	-0.2
DT1					Sn	11 47 54.7	+1.3
DOL	**Dolgoi Island**	**1.50**	**30**		Pn	11 47 38.8	+0.1
DOL					Sn	11 47 58.1	+1.1
AKSA	**Akutan Strait**	**1.52**	**281**		Pn	11 47 38.7	-0.3
AKSA					Sn	11 47 59.3	+1.7
AKUT	**Akutan**	**1.56**	**281**	Pn	Pn	11 47 39.5	-0.1
AKUT	comp=N,25nm,0.6s			IAML		11 48 06.4	
AKUT	comp=E,26nm,1.1s			IAML		11 48 07.6	
AHB	**Akutan Harbor**	**1.59**	**280**		Pn	11 47 39.9	-0.1
AHB					Sn	11 48 00.1	+0.9
HAG	**Hague Volcano**	**1.63**	**26**		Pn	11 47 41.3	+0.7
AKBBA	**Akutan Broad B**	**1.65**	**279**		Pn	11 47 41.2	+0.3
AKBBA					Sn	11 48 02.8	+1.9
LVA	**Lava Point**	**1.72**	**281**	Pn	Pn	11 47 40.9	-0.9
LVA	comp=E,54nm,1.0s			IAML		11 48 16.0	
S12K	**Black Hills**	**1.95**	**19**		Sn	11 48 11.6	+3.3
S12K	**Black Hills**	**1.95**	**19**		Pn	11 47 45.5	+0.5
S12K	comp=E,18nm,0.7s			IAML		11 48 14.8	
UNV	**Unalaska Valle**	**1.98**	**271**		Sn	11 48 09.7	+0.9
UNV	**Unalaska Valle**	**1.98**	**271**		Pn	11 47 44.2	-1.1
MNAT	**Makushin Natee**	**2.08**	**272**		Pn	11 47 46.5	-0.3
MREP	**Makushin Rep't**	**2.12**	**270**		Pn	11 47 47.0	-0.3
MSW	**Makushin Switc**	**2.14**	**273**		Pn	11 47 47.4	-0.2
MSW					Sn	11 48 14.8	+1.8
SDPT	**Sand Point**	**2.16**	**45**		Pn	11 47 48.1	+0.3
SDPT					Sn	11 48 14.6	+1.2
SDPT	**Sand Point** comp=N,20nm,0.6s	**2.16**	**45**	IAML		11 48 26.4	
SDPT	comp=E,22nm,1.2s			IAML		11 48 55.0	

*SOME **09** 11:51:22.9,39˚.72N×72˚.52E,h10km*
*KRNET **09** 11:51:23.6±0.1,39˚.80N×72˚.50E,h14km,mb3.3*
*ISU **09** 11:51:26,39˚.84N×72˚.52E,h11km*
*NNC **09** 11:51:27.5±1.2,39˚.94N×72˚.54E,h0km±5km,mb3.8, mpv3.5,Error ellipse: s-maj=9.0km s-min=4.9km az=4.0*
ISC 09 11:51:24.0±0.8,39˚.81N±0˚.03×72˚.55E±0˚.02,h10km,n52, σ2$49/88,24C-26D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.66**	**241**	⇓*i*P	**Pg**	**11 51 35.7**	**-1.2**
DRK				⇓*i*S	**Sg**	**11 51 45.0**	**-0.6**
OHH	**Osh**	**0.74**	**14**	⇑*i*P	**Pg**	**11 51 37.9**	**-0.4**
OHH				⇑*i*S	**Sb**	**11 51 48.7**	**-0.5**
SFK	**Sufi-Kurgan**	**0.76**	**74**	⇑*i*P	**Pb**	**11 51 38.8**	**-0.7**
SFK				⇑*i*S	**Sb**	**11 51 50.3**	**+0.2**
FRG	**Fergana**	**0.81**	**314**	P	**Pn**	**11 51 41.0**	**-0.6**
FRG				S	**Sn**	**11 51 52.4**	**-1.3**
CHMI	**Chimion**	**0.91**	**301**	S	**Sn**	**11 51 55.3**	**-0.8**
ANR	**Andizhan**	**0.96**	**352**	S	**Sn**	**11 51 59.4**	**+2.1**
MINT	**Mingtut**	**1.37**	**299**	P	**Pg**	**11 51 53.2**	**+2.9**
MINT				S	**Sg**	**11 52 11.9**	**+3.7**
SALK	**Salom-Alik**	**1.45**	**42**	⇓*i*P	**Pg**	**11 51 51.3**	**-0.6**
SALK				⇓*i*S	**Sg**	**11 52 11.8**	**+1.1**
ARSB	**Arslanbob**	**1.55**	**12**	⇓*e*P	**Pg**	**11 51 52.9**	**-0.9**
ARSB				⇓*e*S	**Sg**	**11 52 15.3**	**+1.4**
KSNS	**Kasansay**	**1.56**	**330**	P	**Pg**	**11 51 55.8**	**+1.9**
KSNS				S	**Sg**	**11 52 17.1**	**+2.9**
CHDK	**Chadak**	**1.80**	**311**	P	**Pg**	**11 51 59.8**	**+1.3**
GAR	**Garm**	**1.91**	**246**	⇑*i*P	**Pb**	**11 51 58.5**	**-0.4**
GAR				⇑*i*S	**Sg**	**11 52 24.0**	**-1.3**
TRKS	**Terek-Say**	**2.03**	**329**	⇓*e*P	**Pb**	**11 51 59.6**	**-1.4**
TRKS				⇓*i*S	**Sb**	**11 52 25.9**	**-0.5**
ARK	**Arkit**	**2.04**	**348**	⇑*i*P	**Pb**	**11 52 01.1**	**-0.1**
ARK				⇑*i*S	**Sg**	**11 52 28.5**	**-1.0**
ARLS	**Aral**	**2.46**	**33**	⇑*i*P	**Pb**	**11 52 07.2**	**-1.1**
ARLS				⇑*i*S	**Sb**	**11 52 39.1**	**+0.4**
CHMG	**Chimgan**	**2.60**	**313**	P	**Pg**	**11 52 13.8**	**0.0**
CHMG				S	**Sg**	**11 52 48.1**	**+0.6**
JNKS	**Jany-Kuch**	**2.68**	**61**	⇑*e*P	**Pb**	**11 52 10.8**	**-1.4**
JNKS				⇑*e*S	**Sb**	**11 52 44.9**	**-0.4**
CHRV	**Charvak**	**2.69**	**314**	S	**Sg**	**11 52 51.9**	**+1.4**
TGS	**TashGRES**	**2.81**	**306**	S	Sg	11 53 07.8	+13
TVKS	**Tavaksay**	**2.82**	**310**	P	**Pg**	**11 52 17.6**	**-0.4**
TVKS				S	**Sg**	**11 52 54.7**	**+0.1**
UCH	**Uchtor**	**2.84**	**31**	⇓*e*P	**Pb**	**11 52 12.8**	**-2.3**
UCH				⇓*i*S	**Sb**	**11 52 48.6**	**-1.4**
CHGR	**Chuyangaron**	**2.87**	**247**	⇑*i*P	**Pb**	**11 52 12.2**	**-3.2**
CHGR				⇑*i*S	**Sb**	**11 52 47.7**	**-2.9**
MRKS	**Merke** 9.4nm,0.6s	**2.98**	**10**	Pg	**Pg**	**11 52 18.8**	**-2.3**
MRKS	61nm,0.4s			Lg	Lg	11 52 59.2	
MRKS	**Merke** 6.6nm,0.2s	**2.98**	**10**	*e*P	**Pg**	**11 52 18.9**	**-2.3**
MRKS	69nm,0.4s			*e*S	**Sg**	**11 52 59.3**	**-0.4**
EKS2	**Erkin-Say**	**3.00**	**18**	⇑*i*P	**Pb**	**11 52 14.7**	**-2.9**
EKS2				⇑*i*S	**Sb**	**11 52 52.0**	**-2.3**
IUG	**Iuzhnay** 19nm,0.2s	**3.02**	**322**	Pg	**Pg**	**11 52 20.5**	**-1.3**
IUG	123nm,0.8s			Lg	Lg	11 53 01.2	
AAK	**Ala-Archa** 4.3nm,0.6s	**3.19**	**27**	⇓Pn	**Pb**	**11 52 17.0**	**-3.8**
AAK	8.3nm,0.5s			⇑Lg	Lg	11 53 05.2	
AAK	**Ala-Archa**	**3.19**	**27**	⇓*e*P	**Pb**	**11 52 17.3**	**-3.5**
AAK				⇓*i*S	**Sb**	**11 52 56.6**	**-3.1**
CHM	**Chimkent** 69nm,0.2s	**3.35**	**319**	*e*P	**Pg**	**11 52 26.1**	**-2.1**
CHM	77nm,0.1s			*e*S	**Sg**	**11 53 11.6**	**-0.1**
KBK	**Karagaybulak**	**3.37**	**32**	⇓*e*P	**Pb**	**11 52 20.1**	**-3.9**
KBK				⇓*i*S	**Sb**	**11 53 01.1**	**-4.0**
FRU1	**Bishkek**	**3.39**	**27**	⇑*i*P	**Pb**	**11 52 20.1**	**-4.0**
FRU1				⇑*i*S	**Sb**	**11 53 01.6**	**-3.8**
CHMS	**Chumysh**	**3.59**	**27**	⇓*e*P	**Pn**	**11 52 22.8**	**+3.0**
CHMS				⇓*i*S	**Sn**	**11 53 06.1**	**+3.8**
KK31	**Karatay Array** 2.6nm,0.3s,baz=151,slow=12,SNR=37	**3.63**	**336**	Pn	**Pb**	**11 52 24.8**	**-3.5**
KK31	6.9nm,0.3s,baz=138,slow=18,SNR=5.9			⇓Sn	**Sn**	**11 53 06.1**	**+2.9**
KK31	17nm,0.6s,baz=153,slow=28,SNR=3.7			⇑Lg	Lg	11 53 19.3	
BOOM	**Boomskoye usch**	**3.71**	**43**	⇓*e*P	**Pn**	**11 52 24.8**	**+3.3**
BOOM				⇓*i*S	**Sn**	**11 53 09.3**	**+4.0**
ULHL	**Ulahol**	**3.71**	**48**	⇓*i*P	**Pn**	**11 52 24.7**	**+3.2**
ULHL				⇓*i*S	**Sn**	**11 53 09.4**	**+4.0**
USP	**Ospenovka**	**3.75**	**22**	⇓*e*P	**Pn**	**11 52 25.0**	**+3.0**
USP				⇓*i*S	**Sn**	**11 53 10.1**	**+3.8**
BRLS	**Boroldav** 5.4nm,0.2s	**3.81**	**329**	Pg	**Pb**	**11 52 31.7**	**+0.4**
BRLS	17nm,0.4s			Lg	Lg	11 53 21.3	
BRLS	**Boroldav** 0.7nm,0.1s	**3.81**	**329**	*e*P	**Pb**	**11 52 31.7**	**+0.4**
BRLS	17nm,0.4s			*e*S	**Sg**	**11 53 21.4**	**-5.0**
TKM2	**Tokmak 2**	**3.87**	**35**	⇓*e*P	**Pn**	**11 52 26.8**	**+3.1**
TKM2				⇓*i*S	**Sn**	**11 53 13.2**	**+3.9**
SGDS	**Sogindy** 2.0nm,0.3s	**3.96**	**23**	Pg	**Pg**	**11 52 36.5**	**-3.4**
SGDS	15nm,0.4s			Lg	Lg	11 53 29.4	
KST	**Kastek** 0.3nm,0.1s	**4.13**	**37**	*e*P	**Pg**	**11 52 39.5**	**-3.6**
KST	12nm,0.5s			*e*S	**Sg**	**11 53 34.5**	**-2.0**
DGS	**Degeres** 6.1nm,0.5s	**4.20**	**34**	Pg	**Pg**	**11 52 42.6**	**-1.8**
DGS	13nm,0.6s			Lg	Lg	11 53 39.3	
KDJ	**Kajisay**	**4.21**	**55**	⇑*i*P	**Pn**	**11 52 31.8**	**+3.5**
KDJ				⇑*i*S	**Sn**	**11 53 21.6**	**+4.0**
MTBS	**Maitube** 0.4nm,0.1s	**4.42**	**40**	*e*P	**Pg**	**11 52 45.1**	**-3.5**
MTBS	1.5nm,0.1s			*e*S	**Sg**	**11 53 44.3**	**-1.5**
TARG	**Taragay, Kyrgy**	**4.43**	**63**	⇑*e*P	**Pn**	**11 52 34.9**	**+3.3**
TARG				⇑*i*S	**Sn**	**11 53 27.1**	**+3.6**
IZV	**Izvestkoviy** 4.5nm,0.6s	**4.45**	**42**	Pg	**Pg**	**11 52 47.6**	**-1.5**
IZV	12nm,0.7s			Lg	Lg	11 53 47.8	
IZV	**Izvestkoviy** 0.4nm,0.1s	**4.45**	**42**	*e*P	**Pg**	**11 52 47.6**	**-1.5**
IZV	3.5nm,0.1s			*e*S	**Sg**	**11 53 48.6**	**+2.0**
KRBS	**Karabastau** 3.8nm,0.3s	**4.54**	**30**	Pg	**Pg**	**11 52 48.1**	**-2.7**
KRBS	16nm,0.5s			Lg	Lg	11 53 48.4	
TNSS	**Tian-Shan** 1.3nm,0.3s	**4.62**	**44**	Pg	**Pg**	**11 52 49.9**	**-2.6**
TNSS	4.1nm,0.6s			Lg	Lg	11 53 51.7	
TNSS	**Tian-Shan** 0.1nm,0.1s	**4.62**	**44**	*e*P	**Pg**	**11 52 49.9**	**-2.6**
TNSS	2.7nm,0.4s			*e*S	**Sg**	**11 53 52.6**	**+0.2**
KOTS	**Kotyrbulak** 3.1nm,0.1s	**4.84**	**44**	*e*P	**Pg**	**11 52 54.0**	**-2.8**
KOTS	15nm,0.2s			*e*S	**Sg**	**11 53 59.5**	**0.0**
KTBS	**Karatobe** 3.0nm,0.4s	**4.98**	**37**	Pg	**Pg**	**11 52 56.5**	**-2.8**
KTBS	16nm,0.4s			Lg	Lg	11 54 02.8	

*IDC **09** 11:58:36.9±2.2,9˚.93S×112˚.79E,h0km,mb3.6/6, mbtmp3.6/7,ML3.6/1,Error ellipse: s-maj=110.6km s-min=19.9km az=48.0*
ISC 09 11:58:38.2±2.9,10˚.5S±0˚.7×112˚.3E±0˚.7,h24km,n10, σ1$43/7,mb3.7/6,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=302,slow=15,SNR=6.3	**14.94**	**122**	Pn	**Pn**	**12 02 06.7**	**-1.4**
FITZ	0.1nm,0.3s,baz=342,slow=20,SNR=1.7			Sn	Sn	12 04 40.1	-13
WRA	**Warramunga Arr** 1.1nm,1.0s,baz=293,slow=12,SNR=4.1	**23.20**	**117**	P	**P**	**12 03 45.1**	**+1.6**
ASAR	**Alice Springs** 0.5nm,0.8s,baz=304,slow=9.8,SNR=6.8	**24.39**	**125**	P	**P**	**12 03 56.6**	**+1.7**
CMAR	**Chiang Mai Arr** 0.5nm,0.4s,baz=170,slow=8.1,SNR=4.9	**31.65**	**335**	P	**P**	**12 05 00.2**	**+0.4**
H08S2	**Diego Garcia H** baz=95	**39.43**	**271**	T	T	12 47 54.0	
H08S3	**Diego Garcia H** baz=95	**39.44**	**271**	T	T	12 47 51.2	
H08S1	**Diego Carcia H** baz=95	**39.45**	**271**	T	T	12 48 00.5	
SONM	**Songino Array** 0.4nm,0.4s,baz=163,slow=5.6,SNR=2.2	**58.30**	**355**	P	**P**	**12 08 31.4**	**+0.3**
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=151,slow=6.7,SNR=6.9	**63.03**	**337**	P	**P**	**12 09 02.7**	**-0.6**
BVAR	**Borovoye Array** 0.3nm,0.4s,baz=130,slow=4.5,SNR=2.4	**72.67**	**335**	P	**P**	**12 10 03.4**	**-0.5**

*AEIC **09** 12:04:44.0±0.9,54˚.58N±0˚.06×162˚.37W±0˚.06,h66km±6km, Error ellipse: s-maj=9.2km s-min=4.5km az=159.0*
NEIC 09 12:04:44.7±0.5,54˚.62N±0˚.09×162˚.35W±0˚.08,h71km±8km, ML2.5/10,ML2.2(AEIC),Error ellipse: s-maj=13.7km s-min=4.6km az=159.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DT1	**Dutton Round H**	**0.49**	**5**		Pn	12 04 57.2	-0.3
DT1					Sn	12 05 07.1	+0.2
DOL	**Dolgoi Island**	**0.60**	**28**		Pn	12 04 58.5	-0.1
DOL					Sn	12 05 09.4	+0.5
FALS	**False Pass**	**0.66**	**291**		Pn	12 04 58.8	-0.4
FALS	**False Pass**	**0.66**	**291**	Sn	Sn	12 05 09.8	-0.2
PS4A	**Pavlof South-4**	**0.78**	**21**		Pn	12 05 00.6	0.0
PS4A					Sn	12 05 13.1	+0.7
ISNN	**Isanotski Nort**	**0.86**	**285**		Pn	12 05 01.5	+0.1
ISNN					Sn	12 05 14.3	+0.4
PS1A	**Pavlof South-1**	**0.88**	**23**		Pn	12 05 01.8	+0.1
PS1A					Sn	12 05 15.0	+0.6
SSLS	**Shishaldin Sou**	**0.96**	**276**		Pn	12 05 02.8	-0.1
SSLS					Sn	12 05 16.7	+0.4
SSBA	**Shishaldin**	**1.04**	**279**		Pn	12 05 03.4	-0.4
S12K	**Black Hills**	**1.10**	**9**		Pn	12 05 03.8	-0.6
S12K				Sn	Sn	12 05 18.2	-1.0
SDPT	**Sand Point**	**1.30**	**55**		Pn	12 05 07.2	+0.1
SDPT	**Sand Point**	**1.30**	**55**	Sn	Sn	12 05 24.0	+0.1
SDPT	comp=E,61nm,0.3s			IAML		12 05 24.4	
SDPT	comp=N,78nm,0.4s			IAML		12 05 24.6	
WEBT	**Westdahl Beart**	**1.40**	**270**		Pn	12 05 08.3	-0.1
WEBT					Sn	12 05 25.1	-1.0
CNBA	**Chernabura Isl**	**1.61**	**82**	Pn	Pn	12 05 10.7	-0.4
CNBA	comp=E,38nm,3.0s			IAML		12 05 34.1	
CNBA	comp=N,36nm,3.2s			IAML		12 05 35.9	
AKSA	**Akutan Strait**	**2.02**	**257**		Pn	12 05 16.6	+0.1
AKSA					Sn	12 05 40.9	+0.1
AHB	**Akutan Harbor**	**2.09**	**257**		Pn	12 05 17.6	0.0
AHB					Sn	12 05 42.5	-0.1
ZRO	**Akutan Zero**	**2.19**	**257**		Pn	12 05 18.9	0.0
ZRO					Sn	12 05 44.3	-0.7
UNV	**Unalaska Valle**	**2.56**	**254**		Pn	12 05 23.5	-0.3
UNV	comp=N,28nm,3.5s			IAML		12 06 22.0	
UNV	comp=E,23nm,2.9s			IAML		12 06 48.4	
MNAT	**Makushin Natee**	**2.65**	**256**		Pn	12 05 25.0	-0.1
MSW	**Makushin Switc**	**2.69**	**257**		Pn	12 05 25.3	-0.5
MSW					Sn	12 05 56.5	-0.7
MREP	**Makushin Rep't**	**2.71**	**254**		Pn	12 05 25.6	-0.3

*NEIC **09** 12:12:56.7±1.7,47˚.593N±0˚.008×121˚.81W±0˚.01, h10km±1km,Error ellipse: s-maj=2.7km s-min=1.7km az=13.0*
SEA 09 12:12:57.4±1.0,47˚.60N±0˚.01×121˚.83W±0˚.02,h17km±1km, ML2.3/11,ML2.3/40(NEIC),Error ellipse: s-maj=2.0km s-min=1.5km az=109.0,Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELW	**Echo Lake**	**0.11**	**195**		Pg	12 13 00.9	-0.1
ELW					Sb	12 13 03.8	+0.2
C05A	**Tolt Reservoir**	**0.13**	**45**		Pg	12 13 01.0	-0.3
C05A					Sg	12 13 03.7	-0.2
EARN	**East Ridge Ele**	**0.20**	**313**		Sb	12 13 06.9	+0.8
HTW	**Haystack Looko**	**0.20**	**11**		Pg	12 13 02.0	-0.4
LEOT	**Leota Junior H**	**0.26**	**310**		Sb	12 13 08.7	+0.9
BLH	**Bald Hill**	**0.27**	**329**		Pn	12 13 07.4	+0.7
MPL	**Maple valley S**	**0.28**	**241**		Pg	12 13 03.6	+0.1
MPL					Sb	12 13 08.6	+0.2
SP2	**Seward Park 2**	**0.29**	**261**		Pb	12 13 04.0	-0.2
SP2					Sg	12 13 09.6	+0.9
MBPA	**Monroe Substat**	**0.30**	**352**		Pg	12 13 03.7	-0.2
MBPA					Sg	12 13 08.1	-0.1
BRKS	**Brookside Elem**	**0.35**	**296**		Sb	12 13 11.8	+1.5
GSM	**Grass Mountain**	**0.40**	**177**		Pg	12 13 05.2	-0.5
D05A	**Enumclaw**	**0.43**	**195**	Pg	Pg	12 13 06.0	-0.1
D05A				Sg	Sb	12 13 12.6	-0.1
D05A	comp=N,298nm,0.6s			IAML		12 13 13.2	
EVCC	**Everett Colleg**	**0.48**	**328**		Sb	12 13 15.3	+1.1
PAYL	**Puyallup Schoo**	**0.53**	**219**		Sb	12 13 16.3	+0.7
JCW	**Jim Creek**	**0.59**	**353**		Pg	12 13 08.4	-0.8
JCW					Sg	12 13 16.5	-0.7
GHW	**Garrison Hill**	**0.64**	**208**		Pg	12 13 09.5	-0.5
GMW	**Gold Mountain**	**0.65**	**265**		Pg	12 13 09.3	-0.9
RVC	**Mount Rainier-**	**0.67**	**189**		Pg	12 13 09.5	-1.1
B941	**Kapowsin**	**0.67**	**204**		Pg	12 13 09.2	-1.4
GNW	**Green Mountain**	**0.68**	**267**	Pg	Pg	12 13 09.5	-1.2
GNW				Sg	Sg	12 13 19.0	-0.7
FMW	**Mount Fremont**	**0.68**	**171**		Pg	12 13 09.5	-1.3
FMW					Sg	12 13 18.6	-1.3
B05A	**Bryant**	**0.69**	**345**		Pg	12 13 09.8	-1.1
WRW	**Wenatchee Ridg**	**0.69**	**68**		Pg	12 13 09.9	-1.1
GPW	**Glacier Peak**	**0.69**	**42**		Pg	12 13 10.2	-0.9
OBSR	**Observation Ro**	**0.70**	**179**		Pg	12 13 10.3	-1.0
C06D	**Leavenworth**	**0.70**	**63**		Pg	12 13 10.2	-1.1
PANH	**Panhandle Gap,**	**0.76**	**170**		Pg	12 13 10.8	-1.4
PANH					Sg	12 13 21.1	-1.1
LON	**Longmire**	**0.85**	**179**	Pg	Pb	12 13 12.3	-1.5
LON				Sg	Sb	12 13 23.6	-1.4
LON	comp=E,82nm,0.1s			IAML		12 13 24.1	
LON	comp=N,94nm,0.2s			IAML		12 13 25.9	
LTY	**Liberty**	**0.86**	**113**	Pg	Pb	12 13 13.1	-0.8
LTY				Sg	Sb	12 13 24.0	-1.2
LTY	comp=E,135nm,0.3s			IAML		12 13 24.8	
LTY	comp=N,96nm,0.2s			IAML		12 13 24.9	
RPW	**Rockport**	**0.87**	**14**		Pb	12 13 13.1	-1.0
TBM	**Table Mountain**	**0.94**	**117**		Pb	12 13 14.9	-0.4
ETW	**Entiat**	**1.01**	**89**		Pb	12 13 15.9	-0.7
NAC	**Naches**	**1.11**	**142**		Pb	12 13 17.4	-0.8
NLW	**Nelson Butte**	**1.11**	**64**		Pb	12 13 17.4	-0.8
B04A	**Port Angeles**	**1.22**	**293**		Pn	12 13 18.3	-1.4
B04A	**Port Angeles**	**1.22**	**293**		Pn	12 13 18.1	-1.6
B04A					Sb	12 13 35.4	-0.1
B04A	comp=E,33nm,1.6s			IAML		12 13 41.4	
B04A	comp=N,22nm,0.8s			IAML		12 13 44.2	
A04D	**Lummi Island**	**1.26**	**333**		Pn	12 13 19.8	-0.5
A04D	comp=N,49nm,0.3s			IAML		12 13 39.7	
A04D	comp=E,34nm,0.2s			IAML		12 13 40.2	
YA2	**Yakima**	**1.40**	**140**		Pn	12 13 22.6	+0.4
NLWA	**Neilton Lookou**	**1.40**	**262**		Pn	12 13 21.4	-0.9
WISH	**Wishkah**	**1.41**	**250**	Pn	Pn	12 13 22.3	0.0
WISH	comp=N,43nm,3.1s			IAML		12 13 53.1	
WISH	comp=E,47nm,2.9s			IAML		12 13 57.5	
MXC	**Moxie City**	**1.47**	**134**	Pn	Pn	12 13 23.6	+0.5
MXC				IAML		12 13 45.2	
PGC	comp=E,30nm,0.3s			IAML		12 13 42.5	
PGC	**Sidney**	**1.51**	**314**		Pn	12 13 22.7	-0.9
PGC	comp=E,48nm,0.2s			IAML		12 13 42.7	
PGC	comp=N,36nm,0.3s			IAML		12 13 42.7	
E03A	**Lebam**	**1.59**	**229**	Pn	Pn	12 13 25.0	+0.2
E03A	comp=E,27nm,0.8s			IAML		12 13 51.5	
SYMB	**Survey Mountai**	**1.63**	**307**		Pn	12 13 24.3	-1.2
WAH2	**Wahluke Slope**	**1.76**	**118**		Pn	12 13 27.4	+0.2
RADR	**Rader Ridge**	**1.79**	**230**	Pn	Pn	12 13 28.1	+0.5
RADR	comp=E,32nm,1.4s			IAML		12 13 59.6	
RADR	comp=N,35nm,2.7s			IAML		12 14 13.9	
GBL	**Gable Mountain**	**1.90**	**121**		Pn	12 13 30.0	+0.9
HAWA	**Hanford** comp=N,17nm,0.4s	**1.98**	**127**	IAML		12 14 00.3	
H2OWA	**Water**	**2.04**	**125**		Pb	12 13 32.9	-1.1
F03A	**Seaside**	**2.05**	**216**	Pn	Pn	12 13 32.1	+0.9
C09A	**Chrisman Ranch**	**2.41**	**84**	Pn	Pn	12 13 35.3	-0.8
BPEB	**Brooks Peninsu**	**4.68**	**305**		Pn	12 14 11.8	+4.5

*JMA **09** 13:07:47.6±0.2,29˚.7N±0˚.7×131˚.0E±0˚.8,h46km±1km, MV3.2/38,NEAR AMAMI-OSHIMA ISLAND*
ISC 09 13:07:47.5±2.0,29˚.69N±0˚.07×130˚.99E±0˚.09,h26km±17km, n22,σ0$64/30,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	**0.69**	**323**	P	**Pb**	**13 08 00.8**	**-0.2**
JYAK				*e*S	**Sb**	**13 08 10.5**	**+0.4**
JMTN	**Minamitane**	**0.71**	**354**	*i* P	**Pb**	**13 08 01.1**	**-0.3**
JTN	**Tanegashima 3**	**0.96**	**360**	P	**Pn**	**13 08 04.5**	**-0.9**
JNN	**Nakanoshima**	**0.98**	**279**	P	**Pn**	**13 08 05.8**	**+0.3**
JKC	**Kuchinoerabu**	**1.03**	**319**	P	**Pn**	**13 08 06.1**	**-0.2**
JTSR	**Tashiro 2**	**1.48**	**358**	P	**Pn**	**13 08 12.1**	**-0.3**
JTAJ	**Takarajima**	**1.65**	**252**	*e*P	**Pn**	**13 08 14.8**	**+0.1**
JAM	**Amami Oshima**	**1.75**	**224**	*e*P	**Pn**	**13 08 16.7**	**+0.5**
JAM				*e*S	**Sn**	**13 08 37.5**	**-0.2**
JNAR	**Kushima--Naru**	**1.85**	**8**	*e*P	**Pn**	**13 08 17.3**	**-0.2**
JNAR				*e*S	**Sn**	**13 08 40.3**	**+0.3**
JSU	**Suzuyama

Azm162.0000°;
*IDC **09** 13:26:11.8±0.4,67°41N±154°17W,h0km,mb4.3/26,*
mbtmp4.3/32,ML4.4/6,MS3.8/47 Error ellipse:
s-maj=12.9km s-min=9.6km az=43.0
ISC 09 13:26:11.9±0.5,67°09N±0°02±154°22W±0°02,h6km±3km,
n727,σ1ŝ33/716,mb4.7/108,MS3.8/51,9C-1D,Northern
Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
F21K	**Alatna River**	**0.32**	**64**		**Pg**	**13 26 17.6**	**-0.5**
F21K					**Sg**	**13 26 22.3**	**0.0**
F21K	**Alatna River**	**0.32**	**64**	IAML		13 26 22.9	
	comp=N,49μm,0.5s						
F21K				IAML		13 26 23.3	
	comp=E,95μm,0.5s						
F21K	**Alatna River**	**0.32**	**64**	P	**Pg**	**13 26 17.6**	**-0.5**
	baz=243,SNR=1000						
F21K				S	**Sg**	**13 26 22.0**	**-0.3**
	baz=243						
F20K	**Avaraart Lake**	**0.59**	**267**		**Pg**	**13 26 22.1**	**-1.2**
F20K				Sg	**Sg**	**13 26 29.5**	**-1.4**
F20K				IAML		13 26 32.5	
	comp=E,50μm,0.5s						
F20K				IAML		13 26 32.8	
	comp=N,50μm,0.4s						
F20K	**Avaraart Lake**	**0.59**	**267**	P	**Pg**	**13 26 22.2**	**-1.0**
	baz=88,SNR=1000						
F20K				S	**Sg**	**13 26 29.6**	**-1.3**
	baz=88						
G21K	**Allakaket**	**0.64**	**153**		**Pg**	**13 26 23.3**	**-0.9**
G21K					**Sg**	**13 26 31.4**	**-1.0**
G21K	**Allakaket**	**0.64**	**153**	P	**Pg**	**13 26 23.5**	**-0.6**
	baz=331						
G21K				S	**Sg**	**13 26 32.2**	**-0.2**
	baz=331						
F22K	**John River**	**0.90**	**61**		**Pg**	**13 26 27.8**	**-1.3**
F22K	**John River**	**0.90**	**61**	P	**Pg**	**13 26 27.8**	**-1.3**
	baz=242,SNR=1000						
F22K				S	**Sg**	**13 26 40.5**	**-0.3**
	baz=242						
G22K	**Bettles**	**1.08**	**98**		**Pg**	**13 26 30.7**	**-1.8**
G22K					**Pg**	**13 26 30.9**	**-1.7**
G22K					**Sg**	**13 26 45.8**	**-0.7**
G22K	**Bettles**	**1.08**	**98**	P	**Pg**	**13 26 30.8**	**-1.7**
	baz=278						
G22K				S	**Sn**	**13 26 48.2**	**-0.4**
	baz=278						
IMAR	**Indian Mountai**	**1.12**	**170**		**Pg**	**13 26 31.7**	**-1.7**
E19K	**Redstone River**	**1.23**	**289**		**Pg**	**13 26 33.6**	**-1.8**
E19K	**Redstone River**	**1.23**	**289**	Sg	**Sg**	**13 26 49.0**	**-2.4**
E19K	**Redstone River**	**1.23**	**289**	P	**Pg**	**13 26 33.6**	**-1.8**
	baz=108,SNR=1000						
E19K				S	**Sg**	**13 26 48.9**	**-2.4**
	baz=108						
E21K	**Killik River**	**1.37**	**4**		**Pn**	**13 26 36.5**	**-0.9**
E21K				IAML		13 26 57.0	
	comp=N,21μm,0.7s						
E21K	**Killik River**	**1.37**	**4**		**Sb**	**13 26 54.6**	**-0.9**
E21K	**Killik River**	**1.37**	**4**	P	**Pn**	**13 26 36.5**	**-0.9**
	baz=185,SNR=907						
E21K				S	**Sn**	**13 26 55.9**	**+0.1**
	baz=185						
E20K	**Nigu River**	**1.40**	**328**		**Pn**	**13 26 36.9**	**-1.0**
E20K					**Pb**	**13 26 37.2**	**-1.1**
E20K	**Nigu River**	**1.40**	**328**	P	**Pn**	**13 26 37.1**	**-0.8**
	baz=148						
E20K				S	**Sb**	**13 26 55.6**	**-0.8**
	baz=148						
E22K	**Anaktuvuk Pass**	**1.40**	**40**		**Pn**	**13 26 37.0**	**-0.9**
E22K				IAML		13 26 57.5	
	comp=E,8μm,1.1s						
E22K				IAML		13 27 06.4	
	comp=N,9μm,0.8s						
E22K	**Anaktuvuk Pass**	**1.40**	**40**		**Sb**	**13 26 55.4**	**-1.0**
E22K	**Anaktuvuk Pass**	**1.40**	**40**	P	**Pn**	**13 26 37.0**	**-0.9**
	baz=222,SNR=1000						
E22K				S	**Sb**	**13 26 55.5**	**-1.0**
	baz=222						
F19K	**Shaleruckik Mo**	**1.42**	**261**		**Pn**	**13 26 36.5**	**-1.7**
F19K					**Sb**	**13 26 55.6**	**-1.4**
F19K	**Shaleruckik Mo**	**1.42**	**261**	IAML		13 26 58.2	
	comp=N,20μm,0.7s						
F19K				IAML		13 26 58.8	
	comp=E,23μm,0.7s						
F19K	**Shaleruckik Mo**	**1.42**	**261**	P	**Pn**	**13 26 36.8**	**-1.3**
	baz=79						
F19K				S	**Sb**	**13 26 55.6**	**-1.4**
	baz=79						
H21K	**Melozitna Rive**	**1.54**	**158**		**Pn**	**13 26 39.0**	**-0.8**
H21K	**Melozitna Rive**	**1.54**	**158**	P	**Pn**	**13 26 39.2**	**-0.6**
	baz=338,SNR=1000						
H21K				S	**Sg**	**13 27 00.8**	**-0.6**
	baz=338						
COLD	**Coldfoot**	**1.57**	**83**		**Pn**	**13 26 39.7**	**-0.6**
COLD					**Sb**	**13 27 01.4**	**-0.1**
COLD	**Coldfoot**	**1.57**	**83**	IAML		13 27 06.1	
	comp=E,7μm,0.5s						
COLD	**Coldfoot**	**1.57**	**83**	P	**Pn**	**13 26 39.6**	**-0.6**
	baz=266,SNR=1000						
COLD				S	**Sn**	**13 27 00.4**	**-0.5**
	baz=266						
H20K	**Anotleneega Mo**	**1.62**	**190**		**Pn**	**13 26 40.0**	**-0.9**
H20K					**Sn**	**13 27 01.3**	**-0.8**
H20K	**Anotleneega Mo**	**1.62**	**190**	P	**Pn**	**13 26 39.9**	**-1.1**
	baz=8.3,SNR=1000						
H20K				S	**Sn**	**13 27 02.2**	**+0.1**
	baz=8.3						
H22K	**Ishtalitna Cre**	**1.65**	**135**	P	**Pn**	**13 26 40.6**	**-0.7**
	baz=316,SNR=640						
H22K				S	**Sn**	**13 27 01.8**	**-1.0**
	baz=316						
G23K	**Bananza Creek**	**1.70**	**101**		**Pn**	**13 26 40.9**	**-1.1**
G23K	**Bananza Creek**	**1.70**	**101**	P	**Pn**	**13 26 40.6**	**-1.4**
	baz=284,SNR=999						
G23K				S	**Sn**	**13 27 04.0**	**0.0**
	baz=284						
H19K	**Roundabout Mou**	**1.81**	**211**		**Pn**	**13 26 42.1**	**-1.2**
H19K	**Roundabout Mou**	**1.81**	**211**	P	**Pn**	**13 26 42.2**	**-1.2**
	baz=29,SNR=1000						
H19K				S	**Sn**	**13 27 06.4**	**-0.1**
	baz=29						
D20K	**Etivluk River**	**1.87**	**332**		**Pn**	**13 26 44.4**	**+0.1**
D20K	**Etivluk River**	**1.87**	**332**	IAML		13 27 14.9	
	comp=N,6μm,1.1s						
D20K				IAML		13 27 15.8	
	comp=E,12μm,0.7s						
D20K	**Etivluk River**	**1.87**	**332**	P	**Pn**	**13 26 44.5**	**+0.1**
	baz=151,SNR=1000						
D22K	**Ayikyak River**	**1.89**	**17**		**Pn**	**13 26 45.1**	**+0.4**
D22K	**Ayikyak River**	**1.89**	**17**	P	**Pn**	**13 26 45.1**	**+0.4**
	baz=199,SNR=1000						
E23K	**Chandalar**	**2.02**	**59**		**Pn**	**13 26 46.5**	**0.0**
E23K					**Sb**	**13 27 15.1**	**+0.8**
E23K	**Chandalar**	**2.02**	**59**	IAML		13 27 20.0	
	comp=N,7μm,0.8s						
E23K				IAML		13 27 26.6	
	comp=E,6μm,0.6s						
E23K	**Chandalar**	**2.02**	**59**	P	**Pn**	**13 26 46.5**	**0.0**
	baz=243,SNR=1000						
D19K	**Kuna River**	**2.05**	**315**		**Pn**	**13 26 46.4**	**-0.5**
D19K	**Kuna River**	**2.05**	**315**	P	**Pn**	**13 26 46.3**	**-0.5**
	baz=133,SNR=1000						
C21K	**Knifeblade Rid**	**2.09**	**354**		**Pn**	**13 26 47.7**	**+0.3**
C21K	**Knifeblade Rid**	**2.09**	**354**	P	**Pn**	**13 26 47.3**	**-0.1**
	baz=175						
C21K				S	**Sg**	**13 27 17.9**	**-1.1**
	baz=175						
I21K	**Tanana**	**2.12**	**154**	Pn	**Pn**	**13 26 47.2**	**-0.5**
I21K				IAML		13 27 29.1	
	comp=E,5μm,1.1s						
I21K	**Tanana**	**2.12**	**154**		**Sn**	**13 27 14.6**	**+0.3**
I21K	**Tanana**	**2.12**	**154**	P	**Pn**	**13 26 47.3**	**-0.5**
	baz=335,SNR=145						
G18K	**Tagagawik**	**2.14**	**238**		**Pn**	**13 26 46.3**	**-1.8**
G18K	**Tagagawik**	**2.14**	**238**	IAML		13 27 20.9	
	comp=N,7μm,0.6s						
G18K				IAML		13 27 23.5	
	comp=E,7μm,0.6s						
G18K	**Tagagawik**	**2.14**	**238**	P	**Pn**	**13 26 46.3**	**-1.8**
	baz=54,SNR=984						
F18K	**Selawik**	**2.20**	**260**		**Pn**	**13 26 47.3**	**-1.5**
F18K					**Pn**	**13 26 47.9**	**-0.9**
F18K	**Selawik**	**2.20**	**260**	P	**Pn**	**13 26 47.3**	**-1.5**
	baz=75,SNR=1000						
H23K	**Yukon River**	**2.26**	**122**		**Pn**	**13 26 49.0**	**-0.8**
H23K	**Yukon River**	**2.26**	**122**	IAML		13 27 32.9	
	comp=E,4μm,0.7s						
H23K	**Yukon River**	**2.26**	**122**	P	**Pn**	**13 26 49.0**	**-0.8**
	baz=305						
I20K	**Naaghedeneel**	**2.30**	**183**		**Pn**	**13 26 49.8**	**-0.4**
I20K	**Naaghedeneel**	**2.30**	**183**	P	**Pn**	**13 26 49.9**	**-0.3**
	baz=1.8						
D23K	**Nanushuk River**	**2.31**	**34**		**Pn**	**13 26 50.4**	**0.0**
D23K	**Nanushuk River**	**2.31**	**34**	P	**Pn**	**13 26 50.6**	**+0.2**
	baz=217						
TOLK	**Toolik Lake Re**	**2.35**	**46**		**Pn**	**13 26 51.0**	**0.0**
TOLK	**Toolik Lake Re**	**2.35**	**46**	IAML		13 27 32.7	
	comp=E,6μm,1.1s						
TOLK				IAML		13 27 38.8	
	comp=N,6μm,0.8s						
TOLK	**Toolik Lake Re**	**2.35**	**46**	P	**Pn**	**13 26 51.0**	**0.0**
	baz=231,SNR=1000						
E24K	**Your Creek**	**2.41**	**63**		**Pn**	**13 26 51.7**	**-0.1**
E24K	**Your Creek**	**2.41**	**63**	IAML		13 27 36.1	
	comp=N,3μm,0.8s						
E24K	**Your Creek**	**2.41**	**63**	P	**Pn**	**13 26 51.7**	**-0.1**
	baz=248,SNR=974						
F24K	**Squaw Lake**	**2.49**	**77**		**Pn**	**13 26 52.4**	**-0.5**
F24K	**Squaw Lake**	**2.49**	**77**	IAML		13 27 38.9	
	comp=E,3μm,0.7s						
F24K				IAML		13 27 40.1	
	comp=N,4μm,0.8s						
F24K	**Squaw Lake**	**2.49**	**77**	P	**Pn**	**13 26 52.4**	**-0.5**
	baz=262,SNR=1000						
MLY	**Manley**	**2.50**	**144**		**Pn**	**13 26 52.5**	**-0.6**
MLY	**Manley**	**2.50**	**144**	P	**Pn**	**13 26 52.5**	**-0.6**
	baz=326,SNR=93						
MLY				S	**Sn**	**13 27 23.5**	**-0.3**
	baz=326						
E18K	**Tukpahlearik C**	**2.50**	**281**		**Pn**	**13 26 52.5**	**-0.5**
E18K	**Tukpahlearik C**	**2.50**	**281**	IAML		13 27 37.1	
	comp=E,8μm,0.5s						
E18K	**Tukpahlearik C**	**2.50**	**281**	P	**Pn**	**13 26 52.5**	**-0.5**
	baz=96,SNR=595						
B21K	**Ikpikpuk River**	**2.55**	**357**		**Pn**	**13 26 53.0**	**-0.6**
B21K	**Ikpikpuk River**	**2.55**	**357**	P	**Pn**	**13 26 53.1**	**-0.6**
	baz=177,SNR=1000						
H18K	**Honhosa River**	**2.57**	**223**		**Pn**	**13 26 52.9**	**-1.1**
H18K				IAML		13 27 36.3	
	comp=E,5μm,1.1s						
H18K	**Honhosa River**	**2.57**	**223**	P	**Pn**	**13 26 52.9**	**-1.1**
	baz=39,SNR=389						
GCSA	**Galena City Sc**	**2.59**	**206**	P	**Pn**	**13 26 53.2**	**-1.0**
	baz=23,SNR=540						
GCSA				S	**Sn**	**13 27 25.4**	**-0.4**
	baz=23						
G24K	**Hadweenzic Riv**	**2.69**	**95**		**Pn**	**13 26 54.4**	**-1.2**
G24K	**Hadweenzic Riv**	**2.69**	**95**	IAML		13 27 39.7	
	comp=E,2μm,0.8s						
G24K				IAML		13 27 46.2	
	comp=N,2μm,1.1s						
G24K	**Hadweenzic Riv**	**2.69**	**95**	P	**Pn**	**13 26 54.3**	**-1.2**
	baz=281						
I23K	**Minto, Yukon-K**	**2.77**	**132**		**Pn**	**13 26 56.3**	**-0.4**
I23K	**Minto, Yukon-K**	**2.77**	**132**	P	**Pn**	**13 26 56.6**	**-0.1**
	baz=316,SNR=86						
I23K				S	**Sn**	**13 27 30.6**	**+0.2**
	baz=316						
H24K	**Noodor Dome**	**2.84**	**113**	P	**Pn**	**13 26 56.7**	**-1.0**
	baz=298,SNR=263						
C19K	**Lookout Ridge**	**2.86**	**318**		**Pn**	**13 26 57.4**	**-0.5**
C19K	**Lookout Ridge**	**2.86**	**318**	P	**Pn**	**13 26 57.2**	**-0.8**
	baz=134,SNR=68						
F17K	**Baldwin Pennin**	**2.86**	**260**	P	**Pn**	**13 26 56.9**	**-1.0**
	baz=74						
D24K	**Happy Valley**	**2.90**	**42**		**Pn**	**13 26 58.5**	**0.0**
D24K	**Happy Valley**	**2.90**	**42**	P	**Pn**	**13 26 58.1**	**-0.3**
	baz=227						
J20K	**Nowinta River**	**2.92**	**179**		**Pn**	**13 26 57.9**	**-0.8**
J20K	**Nowinta River**	**2.92**	**179**	IAML		13 27 43.0	
	comp=N,4μm,0.6s						
J20K				IAML		13 27 53.7	
	comp=E,3μm,0.7s						
J20K	**Nowinta River**	**2.92**	**179**	P	**Pn**	**13 26 58.0**	**-0.8**
	baz=359,SNR=157						
E17K	**Hotham Inlet**	**2.98**	**273**		**Pn**	**13 26 58.4**	**-1.1**
E17K	**Hotham Inlet**	**2.98**	**273**	P	**Pn**	**13 26 58.4**	**-1.1**
	baz=87,SNR=199						
E17K				S	**Sn**	**13 27 35.7**	**+0.3**
	baz=87						
G17K	**Kiwalik Mounta**	**3.05**	**242**		**Pn**	**13 26 58.4**	**-2.1**
G17K	**Kiwalik Mounta**	**3.05**	**242**	P	**Pn**	**13 26 58.3**	**-2.2**
	baz=56						
C23K	**Itkillik River**	**3.07**	**24**		**Pn**	**13 27 00.4**	**-0.3**
C23K	**Itkillik River**	**3.07**	**24**	P	**Pn**	**13 27 00.5**	**-0.3**
	baz=206,SNR=148						
C18K	**Utukok River**	**3.07**	**304**	P	**Pn**	**13 27 00.2**	**-0.7**
	baz=118,SNR=35						
B20K	**Meade River**	**3.13**	**341**		**Pn**	**13 27 00.8**	**-0.8**
B20K	**Meade River**	**3.13**	**341**	P	**Pn**	**13 27 00.8**	**-0.8**
	baz=159,SNR=28						
J19K	**Poorman**	**3.16**	**191**		**Pn**	**13 27 01.0**	**-1.0**
J19K	**Poorman**	**3.16**	**191**	IAML		13 27 54.9	
	comp=N,4μm,0.8s						
J19K				IAML		13 27 56.3	
	comp=E,3μm,0.7s						
J19K	**Poorman**	**3.16**	**191**	P	**Pn**	**13 27 01.1**	**-1.0**
	baz=9.6,SNR=183						
H17K	**Granite Mounta**	**3.17**	**230**		**Pn**	**13 27 00.7**	**-1.5**
H17K	**Granite Mounta**	**3.17**	**230**	IAML		13 27 58.1	
	comp=N,3μm,0.7s						
H17K	**Granite Mounta**	**3.17**	**230**	P	**Pn**	**13 27 00.7**	**-1.5**
	baz=45						
G25K	**Bearman Lake**	**3.21**	**92**		**Pn**	**13 27 01.7**	**-1.0**
G25K	**Bearman Lake**	**3.21**	**92**	P	**Pn**	**13 27 01.7**	**-1.0**
	baz=279,SNR=64						
G25K				S	**Sn**	**13 27 41.8**	**+0.6**
	baz=279						
NEA2	**Nenana**	**3.28**	**137**		**Pn**	**13 27 03.4**	**-0.3**
NEA2	**Nenana**	**3.28**	**137**	P	**Pn**	**13 27 03.6**	**0.0**
	baz=321,SNR=105						
NEA2				S	**Sn**	**13 27 42.1**	**-0.7**
	baz=321						
B22K	**Teshekpuk Lake**	**3.28**	**5**		**Pn**	**13 27 03.1**	**-0.5**
B22K	**Teshekpuk Lake**	**3.28**	**5**	IAML		13 28 03.4	
	comp=N,4μm,1.1s						
B22K	**Teshekpuk Lake**	**3.28**	**5**	P	**Pn**	**13 27 03.0**	**-0.7**
	baz=186,SNR=92						
B22K				S	**Sn**	**13 27 43.7**	**+0.7**
	baz=186						
BPAW	**Bear Paw Mtn.**	**3.28**	**154**		**Pn**	**13 27 04.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**3.28**	**154**	P	**Pn**	**13 27 03.6**	**-0.2**
	baz=337,SNR=13						
BPAW				S	**Sn**	**13 27 42.9**	**-0.2**
	baz=337						
CHUM	**Lake Minchumin**	**3.31**	**165**		**Pn**	**13 27 03.8**	**-0.3**
CHUM	**Lake Minchumin**	**3.31**	**165**	P	**Pn**	**13 27 03.9**	**-0.3**
	baz=346,SNR=246						
C24K	**Franklin Bluff**	**3.34**	**35**		**Pn**	**13 27 03.7**	**-0.8**
C24K	**Franklin Bluff**	**3.34**	**35**	P	**Pn**	**13 27 03.5**	**-1.0**
	baz=220						
F25K	**Christian Rive**	**3.36**	**77**		**Pn**	**13 27 04.0**	**-0.8**
F25K	**Christian Rive**	**3.36**	**77**	IAML		13 28 04.0	
	comp=E,2μm,1.1s						
F25K				IAML		13 28 04.7	
	comp=N,1μm,1.2s						
F25K	**Christian Rive**	**3.36**	**77**	P	**Pn**	**13 27 04.0**	**-0.8**
	baz=265,SNR=202						
POKR	**Poker Plat Res**	**3.40**	**122**		**Pn**	**13 27 04.8**	**-0.5**
POKR	**Poker Plat Res**	**3.40**	**122**	P	**Pn**	**13 27 04.7**	**-0.6**
	baz=308,SNR=294						
POKR				S	**Sn**	**13 27 44.7**	**-1.1**
	baz=308						
I53US	**FAIRBANKS INFR**	**3.42**	**128**	I	I	13 46 10.0	
	baz=313,slow=333,SNR=0.5						
COLA	**College**	**3.42**	**128**		**Pn**	**13 27 05.0**	**-0.5**
COLA				IAML		13 28 06.4	
	comp=N,3μm,0.6s						
COLA				IAML		13 28 08.2	
	comp=N,2μm,0.5s						
COLA	**College**	**3.42**	**128**	P	**Pn**	**13 27 05.8**	**+0.2**
COLA	**College**	**3.42**	**128**	*i* P	**Pn**	**13 27 04.7**	**-0.9**
COLA	**College**	**3.42**	**128**	P	**Pn**	**13 27 05.4**	**-0.2**
	baz=313						
COLA				S	**Sn**	**13 27 45.8**	**-0.6**
	baz=313						
E25K	**Arctic Village**	**3.47**	**69**	Pn	**Pn**	**13 27 05.9**	**-0.5**
E25K				IAML		13 28 14.7	
	comp=E,1μm,0.8s						
E25K				IAML		13 28 17.1	
	comp=N,1μm,1.0s						
E25K	**Arctic Village**	**3.47**	**69**	P	**Pn**	**13 27 05.5**	**-0.9**
	baz=256,SNR=105						
RDOG	**Red Dog Mine**	**3.47**	**290**		**Pn**	**13 27 06.4**	**+0.1**
RDOG				IAML		13 28 06.9	
	comp=E,3μm,0.8s						
RDOG				IAML		13 28 09.5	
	comp=N,3μm,1.1s						
RDOG	**Red Dog Mine**	**3.47**	**290**	P	**Pn**	**13 27 04.8**	**-1.6**
	baz=103						
RDOG				S	**Sn**	**13 27 48.0**	**+0.3**
	baz=103						
D17K	**Noatak River**	**3.48**	**284**		**Pn**	**13 27 05.2**	**-1.2**
D17K	**Noatak River**	**3.48**	**284**	P	**Pn**	**13 27 05.2**	**-1.2**
	baz=97,SNR=143						
BWN	**Browne**	**3.53**	**144**		**Pn**	**13 27 07.1**	**0.0**
BWN	**Browne**	**3.53**	**144**	IAML		13 28 27.0	
	comp=E,1μm,0.8s						
BWN				IAML		13 28 29.0	
	comp=N,1μm,1.2s						
CCB	**Clear Creek Bu**	**3.60**	**130**		**Pn**	**13 27 07.4**	**-0.6**
B18K	**Kokolik River**	**3.64**	**312**		**Pn**	**13 27 08.0**	**-0.6**
B18K	**Kokolik River**	**3.64**	**312**	P	**Pn**	**13 27 07.6**	**-0.9**
	baz=126						
WRH	**Wood River Hil**	**3.64**	**133**		**Pn**	**13 27 08.4**	**-0.2**
WRH				IAML		13 27 51.3	
	comp=E,1μm,0.7s						
C17K	**DeLong Mountai**	**3.68**	**296**		**Pn**	**13 27 08.4**	**-0.8**
C17K	**DeLong Mountai**	**3.68**	**296**	P	**Pn**	**13 27 08.1**	**-1.1**
	baz=109						
D25K	**Kavik River**	**3.69**	**49**	IAML		13 28 16.7	
	comp=E,1μm,1.1s						
D25K				IAML		13 28 18.9	
	comp=N,2μm,0.9s						
D25K	**Kavik River**	**3.69**	**49**	P	**Pn**	**13 27 08.1**	**-1.2**
	baz=236						
G16K	**Koyuk River**	**3.71**	**246**		**Pn**	**13 27 07.2**	**-2.2**
G16K	**Koyuk River**	**3.71**	**246**	P	**Pn**	**13 27 07.7**	**-1.8**
	baz=59						
K20K	**Telida**	**3.75**	**179**		**Pn**	**13 27 09.3**	**-0.8**
K20K	**Telida**	**3.75**	**179**	IAML		13 28 17.1	
	comp=E,2μm,0.8s						
K20K				IAML		13 28 17.5	
	comp=N,2μm,0.9s						
K20K	**Telida**	**3.75**	**179**	P	**Pn**	**13 27 09.3**	**-0.8**
	baz=359,SNR=64						
BM03	**Burnt Mountain**	**3.75**	**80**		**Pn**	**13 27 09.0**	**-1.1**
BMAR	**Burnt Mountain**	**3.76**	**80**		**Pn**	**13 27 09.2**	**-1.1**
J18K	**Innoko River**	**3.78**	**197**		**Pn**	**13 27 09.5**	**-1.1**
J18K	**Innoko River**	**3.78**	**197**	IAML		13 28 13.4	
	comp=N,1μm,1.1s						
J18K				IAML		13 28 15.3	
	comp=E,2μm,0.8s						
J18K	**Innoko River**	**3.78**	**197**	P	**Pn**	**13 27 09.6**	**-1.1**
	baz=15,SNR=142						
IL31		**3.80**	**124**		**Pn**	**13 27 10.3**	**-0.5**
ILAR	**Eielson Array**	**3.80**	**124**	Pn	**Pn**	**13 27 10.3**	**-0.5**
	comp=E,50nm,0.3s,baz=312,slow=14,SNR=1871						
ILAR				Sn	**Sn**	**13 27 53.8**	**-1.9**
	comp=E,75nm,0.3s,baz=312,slow=23,SNR=13						
	comp=E,197nm,0.4s						
KTH	**Kantishna Hill**	**3.81**	**157**		**Pn**	**13 27 10.4**	**-0.6**
F26K	**Sheenjek River**	**3.94**	**76**		**Pn**	**13 27 11.7**	**-1.0**
F26K	**Sheenjek River**	**3.94**	**76**	IAML		13 28 20.5	
	comp=N,1μm,1.1s						
F26K				IAML		13 28 22.5	
	comp=E,848nm,0.8s						
F26K	**Sheenjek River**	**3.94**	**76**	P	**Pn**	**13 27 11.7**	**-1.0**
	baz=265,SNR=79						
A22K	**Sinclair Lake**	**3.95**	**356**		**Pn**	**13 27 11.8**	**-1.0**
A22K	**Sinclair Lake**	**3.95**	**356**	P	**Pn**	**13 27 11.5**	**-1.3**
	baz=176						
A22K				S	**Sn**	**13 27 59.9**	**+0.6**
	baz=176						
TRF	**Thorofare Moun**	**4.01**	**154**		**Pn**	**13 27 13.6**	**-0.3**
TRF	**Thorofare Moun**	**4.01**	**154**	P	**Pn**	**13 27 13.7**	**-0.1**
	baz=337,SNR=129						
TRF				S	**Sn**	**13 27 60.0**	**-1.1**
	baz=337						
A19K	**Wainwright**	**4.01**	**324**		**Pn**	**13 27 13.1**	**-0.6**
A19K	**Wainwright**	**4.01**	**324**	P	**Pn**	**13 27 12.3**	**-1.3**
	baz=139						
MCK	**McKinley**	**4.03**	**144**		**Pn**	**13 27 13.6**	**-0.3**
MCK	**McKinley**	**4.03**	**144**	P	**Pn**	**13 27 13.6**	**-0.3**
MCK	**McKinley**	**4.03**	**144**	P	**Pn**	**13 27 13.7**	**-0.3**
	baz=329,SNR=152						
MCK				S	**Sn**	**13 28 00.7**	**-0.6**
	baz=329						
HDA	**Harding Lake**	**4.03**	**128**		**Pn**	**13 27 13.2**	**-0.8**
HDA				IAML		13 28 00.7	
	comp=E,1μm,0.7s						
HDA				IAML		13 28 00.8	
	comp=N,1μm,0.7s						
HDA	**Harding Lake**	**4.03**	**128**	P	**Pn**	**13 27 13.3**	**-0.7**
	baz=315,SNR=212						
HDA				S	**Sn**	**13 27 59.6**	**-1.7**
	baz=315						
G26K	**Porcupine Rive**	**4.09**	**87**		**Pn**	**13 27 13.2**	**-1.6**
G26K	**Porcupine Rive**	**4.09**	**87**	IAML		13 28 30.0	
	comp=N,2μm,1.1s						
G26K				IAML		13 28 31.4	
	comp=E,1μm,1.0s						
G26K	**Porcupine Rive**	**4.09**	**87**	P	**Pn**	**13 27 13.5**	**-1.4**
	baz=276,SNR=89						
G26K				S	**Sn**	**13 28 03.5**	**+0.5**
	baz=276						
H16K	**Elim**	**4.11**	**237**		**Pn**	**13 27 12.7**	**-2.3**
H16K					**Pn**	**13 27 14.0**	**-1.0**
H16K	**Elim**	**4.11**	**237**	P	**Pn**	**13 27 12.7**	**-2.3**
	baz=50						
I17K	**Unalakleet**	**4.19**	**223**	Pn	**Pn**	**13 27 16.0**	**-0.2**
I17K	**Unalakleet**	**4.19**	**223**	P	**Pn**	**13 27 14.4**	**-1.8**
	baz=37						
J17K	**VABM Dome**	**4.23**	**211**		**Pn**	**13 27 15.6**	**-1.2**
J17K				IAML		13 28 28.3	
	comp=N,1μm,0.9s						
J17K				IAML		13 28 39.2	
	comp=E,2μm,0.9s						
J17K	**VABM Dome**	**4.23**	**211**	P	**Pn**	**13 27 15.5**	**-1.2**
	baz=27,SNR=59						
PPLA	**Purkeypile**	**4.29**	**167**		**Pn**	**13 27 17.4**	**-0.3**
PPLA				IAML		13 28 32.3	
	comp=E,1μm,1.2s						
PPLA				IAML		13 28 40.1	
	comp=N,672nm,0.9s						
PPLA	**Purkeypile**	**4.29**	**167**	P	**Pn**	**13 27 17.7**	**-0

comp=N,496nm,0.8s
C27K Jago River 4.65 52 P Pn 13 27 21.9 -0.6
baz=242
J16K Anvik River 4.67 218 Pn 13 27 21.6 -1.1
J16K Anvik River 4.67 218 P Pn 13 27 21.5 -1.2
baz=32
K17K Iditarod 4.72 204 Pn 13 27 22.0 -1.4
K17K Iditarod 4.72 204 P Pn 13 27 21.7 -1.7
baz=20
K24K Donnelly Dome 4.82 129 Pn 13 27 24.2 -0.7
K24K Donnelly Dome 4.82 129 IAML 13 28 52.0
comp=E,1µm,1.1s
K24K IAML 13 28 52.8
comp=N,923nm,1.2s
K24K Donnelly Dome 4.82 129 P Pn 13 27 23.8 -1.0
baz=316,SNR=56
K24K S Sn **13 28 20.9 -0.1**
baz=316
I26K Coal Creek Min 4.83 107 Pn 13 27 23.6 -1.3
I26K IAML 13 28 56.1
comp=E,687nm,1.1s
I26K IAML 13 28 57.7
comp=N,648nm,1.0s
I26K Coal Creek Min 4.83 107 P Pn 13 27 23.9 -1.0
baz=296
I26K S Sn **13 28 18.3 -2.7**
baz=296
WAT7 Susitna Watana 4.84 149 Pn 13 27 25.3 +0.1
WAT1 Susitna Watana 4.90 148 Pn 13 27 26.2 +0.2
WAT1 Susitna Watana 4.90 148 P Pn 13 27 25.7 -0.3
baz=333
WAT1 S Sn **13 28 21.9 -1.1**
baz=333
L19K White Mountain 4.93 183 Pn 13 27 25.7 -0.7
L19K White Mountain 4.93 183 IAML 13 28 54.9
comp=N,850nm,0.9s
L19K IAML 13 29 02.1
comp=E,712nm,1.0s
L19K White Mountain 4.93 183 P Pn 13 27 26.2 -0.2
baz=2.6,SNR=129
E27K Coleen River 4.95 71 Pn 13 27 25.1 -1.5
E27K Coleen River 4.95 71 IAML 13 29 10.0
comp=E,450nm,1.0s
E27K Coleen River 4.95 71 P Pn 13 27 25.1 -1.5
baz=263,SNR=27
G27K Doyon Strip 4.95 87 Pn 13 27 25.7 -1.0
G27K Doyon Strip 4.95 87 P Pn 13 27 25.6 -1.0
baz=279,SNR=30
DHY Denali Highway 4.96 141 Pn 13 27 27.2 +0.4
DHY Denali Highway 4.96 141 P Pn 13 27 27.3 +0.4
baz=327,SNR=212
DHY S Sn **13 28 23.2 -1.2**
baz=327
CUT Chulitna 4.99 158 Pn 13 27 27.2 0.0
CUT Chulitna 4.99 158 IAML 13 29 09.2
comp=N,785nm,0.7s
CUT Chulitna 4.99 158 P Pn 13 27 27.8 +0.6
baz=342,SNR=61
L18K Granite Mounta 5.00 193 IAML 13 28 55.5
comp=E,660nm,1.1s
L18K IAML 13 29 14.2
comp=N,576nm,1.2s
L18K Granite Mounta 5.00 193 P Pn 13 27 26.7 -0.6
baz=11,SNR=138
L18K S Sn **13 28 25.6 +0.3**
baz=11
J26L Joseph Creek 5.09 116 Pn 13 27 27.9 -0.8
J26L Joseph Creek 5.09 116 IAML 13 28 50.7
comp=N,383nm,0.8s
J26L IAML 13 29 01.3
comp=E,445nm,1.0s
J26L Joseph Creek 5.09 116 P Pn 13 27 28.2 -0.4
baz=305,SNR=367
H27K Steamboat Moun 5.12 94 Pn 13 27 28.3 -0.7
H27K Steamboat Moun 5.12 94 IAML 13 29 07.2
comp=N,388nm,1.0s
H27K IAML 13 29 25.8
comp=E,474nm,1.1s
H27K Steamboat Moun 5.12 94 P Pn 13 27 28.6 -0.4
baz=285,SNR=18
F14K Arctic Creek 5.15 257 Pn 13 27 28.5 -0.9
F14K Arctic Creek 5.15 257 P Pn 13 27 28.9 -0.4
baz=66
F14K S Sn **13 28 27.3 -1.6**
baz=66
RIDG Independent Ri 5.15 126 IAML 13 29 08.0
comp=E,435nm,1.0s
RIDG IAML 13 29 08.3
comp=N,343nm,1.1s
RIDG Independent Ri 5.15 126 P Pn 13 27 28.9 -0.6
baz=314,SNR=14
ANM Nome 5.24 246 P Pn 13 27 28.8 -1.7
baz=56
ANM S Sn **13 28 28.7 -2.3**
baz=56
M20K Styx River 5.25 174 Pn 13 27 30.9 +0.2
M20K Styx River 5.25 174 IAML 13 29 02.5
comp=N,339nm,1.0s
M20K IAML 13 29 06.5
comp=E,473nm,1.1s
M20K Styx River 5.25 174 P Pn 13 27 31.0 +0.2
baz=355,SNR=456
M20K S Sn **13 28 29.9 -1.5**
baz=355
SKT Skwentna 5.25 166 Pn 13 27 30.8 0.0
SKT IAML 13 29 14.8
comp=N,456nm,1.2s
SKT IAML 13 29 32.2
comp=E,391nm,1.1s
SKT Skwentna 5.25 166 P Pn 13 27 30.8 0.0
baz=348,SNR=98
L17K Donlin 5.27 201 P Pn 13 27 30.1 -0.9
baz=17,SNR=88
SCRK Sand Creek 5.27 121 IAML 13 28 32.4
comp=E,342nm,0.7s
SCRK Sand Creek 5.27 121 P Pn 13 27 30.7 -0.5
baz=310,SNR=43
SCRK S Sn **13 28 30.4 -1.8**
baz=310
I27K Kandik River 5.29 100 Pn 13 27 30.4 -1.0
I27K Kandik River 5.29 100 P Pn 13 27 30.2 -1.1
baz=292,SNR=46
WAT6 Susitna Watana 5.30 146 P Pn 13 27 31.5 -0.1
baz=331,SNR=19
D27M Malcolm River 5.40 60 Pn 13 27 32.8 0.0
D27M Malcolm River 5.40 60 P Pn 13 27 32.9 0.0
baz=252,SNR=69
DOT Dot Lake 5.47 124 Pn 13 27 32.7 -1.1
PAX Paxson 5.55 134 Pn 13 27 35.2 +0.3
PAX Paxson 5.55 134 P Pn 13 27 35.2 +0.3
PAX Paxson 5.55 134 P Pn 13 27 35.2 +0.3
baz=322,SNR=331
PAX S Sn **13 28 37.1 -1.8**
baz=322
F28M Old Crow 5.57 78 Pn 13 27 33.6 -1.5
F28M Old Crow 5.57 78 P Pn 13 27 33.6 -1.5
baz=271,SNR=43
M22K Willow 5.64 160 Pn 13 27 35.3 -0.8
M22K Willow 5.64 160 P Pn 13 27 35.6 -0.5
baz=343,SNR=28
M18K Stony River 5.66 188 P Pn 13 27 35.9 -0.5
baz=6.1,SNR=231
M18K S Sn **13 28 38.7 -2.8**
baz=6.1
STLK Strandline Lak 5.70 168 Pn 13 27 36.9 -0.2
TNA Tin City 5.73 261 Pn 13 27 36.7 -0.6
TNA Tin City 5.73 261 P Pn 13 27 35.7 -1.6
baz=68
K15K Wolf Creek Mou 5.74 217 P Pn 13 27 36.2 -1.3
baz=30,SNR=16
E28M Babbage River 5.76 68 Pn 13 27 36.9 -0.8
E28M Babbage River 5.76 68 P Pn 13 27 36.5 -1.2
baz=261
SPNN North Nagishla 5.78 173 Pn 13 27 37.9 -0.2
GHO Glory Hole Cre 5.80 154 Pn 13 27 38.4 0.0
SUA Susitna One 5.84 163 Pn Pn 13 27 39.3 +0.3
SUA Susitna One 5.84 163 P Pn 13 27 39.1 +0.1
baz=346,SNR=21
L16K Owhat River 5.86 205 P Pn 13 27 37.3 -1.7
baz=20,SNR=29
M17K Holitna River 5.88 195 Pn 13 27 38.5 -0.8
M17K Holitna River 5.88 195 P Pn 13 27 38.5 -0.8
baz=12
M17K S Sn **13 28 45.2 -1.7**
baz=12
SML Sawmill 5.88 152 Pn 13 27 38.6 -0.8
SML Sawmill 5.88 152 P Pn 13 27 39.1 -0.3
baz=337,SNR=65
J14K Nanvaranak Lak 5.89 227 Pn 13 27 38.5 -1.0
J14K Nanvaranak Lak 5.89 227 P Pn 13 27 38.4 -1.0
baz=38,SNR=23
K27K Chicken 5.90 116 Pn 13 27 39.2 -0.4
K27K Chicken 5.90 116 P Pn 13 27 39.2 -0.4
baz=306
PMR Palmer 5.94 156 Pn 13 27 40.0 -0.1
PMR Palmer 5.94 156 P Pn 13 27 41.0 +0.8
PMR Palmer 5.94 156 P Pn 13 27 40.1 -0.1
PMR Palmer 5.94 156 P Pn 13 27 40.4 +0.2
baz=340,SNR=56
N20K Mount Spurr 5.97 171 P Pn 13 27 41.3 +0.5
baz=352,SNR=40
SPCR Spurr Chakacha 5.97 171 Pn 13 27 41.0 +0.3
SPCR Spurr Chakacha 5.97 171 P Pn 13 27 41.0 +0.3
baz=352,SNR=24
I28M Miner Creek 6.00 99 Pn 13 27 40.2 -0.8
I28M Miner Creek 6.00 99 P Pn 13 27 40.3 -0.8
baz=292,SNR=105
SPU Mount Spurr 6.00 170 Pn 13 27 41.5 +0.4
M23K Glacier View 6.01 149 P Pn 13 27 42.0 +0.8
baz=335,SNR=55
SCM Sheep Creek Mo 6.05 147 P Pn 13 27 42.5 +0.7
baz=333,SNR=110
SCM S Sn **13 28 51.8 +0.5**
baz=333
M24K Tolsona, Glenn 6.08 142 Pn 13 27 43.0 +0.9
M24K Tolsona, Glenn 6.08 142 P Pn 13 27 42.5 +0.4
baz=328,SNR=36
MENT Mentasta 6.09 128 P Pn 13 27 45.2 +2.9
HARP HAARP 6.09 136 Pn 13 27 42.3 0.0
HARP HAARP 6.09 136 P Pn 13 27 43.1 +0.8
baz=324,SNR=30
L26K Log Cabin Wild 6.14 126 Pn 13 27 41.8 -1.2
L26K Log Cabin Wild 6.14 126 P Pn 13 27 43.2 +0.3
baz=316,SNR=123
L26K S Sn **13 28 51.8 -1.6**
baz=316
D28M Stokes Point 6.18 62 Pn 13 27 44.4 +1.0
D28M Stokes Point 6.18 62 P Pn 13 27 42.9 -0.6
baz=256
KNK Knik Glacier 6.22 154 Pn 13 27 44.7 +0.6
KNK Knik Glacier 6.22 154 P Pn 13 27 44.3 +0.3
baz=338,SNR=42
L15K Ungalak Mounta 6.27 214 Pn 13 27 43.3 -1.4
L15K Ungalak Mounta 6.27 214 P Pn 13 27 43.4 -1.3
baz=27,SNR=16
N19K Bonanza Creek 6.30 181 P Pn 13 27 44.5 -0.8
baz=0.7,SNR=55
RC01 Rabbit Creek A 6.33 160 Pn 13 27 46.4 +0.9
RC01 Rabbit Creek A 6.33 160 P Pn 13 27 45.2 -0.4
baz=344,SNR=12
E29M Blow River 6.33 71 Pn 13 27 44.8 -0.8
E29M Blow River 6.33 71 P Pn 13 27 44.9 -0.7
baz=266,SNR=44
G29M Pine Creek 6.35 84 Pn 13 27 45.0 -0.8
G29M Pine Creek 6.35 84 P Pn 13 27 45.3 -0.5
baz=279,SNR=77
H29M Whitestone 6.36 91 Pn 13 27 45.1 -0.8
H29M Whitestone 6.36 91 P Pn 13 27 45.5 -0.4
baz=285,SNR=48
M16K Timber Creek 6.43 201 Pn 13 27 45.4 -1.5
M16K Timber Creek 6.43 201 P Pn 13 27 45.4 -1.5
baz=17
N18K Kilae Creek 6.47 187 P Pn 13 27 46.9 -0.6
baz=5.6,SNR=64
CAPN Captain Cook N 6.48 167 P Pn 13 27 47.6 0.0
baz=349
RDJH Redoubt Jeurge 6.55 174 Pn 13 27 48.5 -0.1
RDJH Pn **13 27 48.8 +0.1**
NCT North Crescent 6.58 174 Pn 13 27 48.7 -0.3
RDT Redoubt 6.59 172 Pn 13 27 48.9 -0.2
L27K Beaver Creek, 6.61 122 Pn 13 27 48.3 -1.1
L27K Beaver Creek, 6.61 122 P Pn 13 27 48.4 -1.0
baz=313,SNR=106
BC03 6.62 122 Pn 13 27 48.5 -0.9
BCAR Beaver Creek A 6.62 122 Pn Pn 13 27 48.6 -1.0
WACK Wrangell Chich 6.66 136 Pn 13 27 50.3 0.0
KLU Klutina 6.67 143 Pn 13 27 50.0 -0.3
KLU Klutina 6.67 143 P Pn 13 27 49.2 -1.1
baz=331,SNR=22
M26K Nabesna, AK 6.71 129 P Pn 13 27 50.4 -0.4
baz=319,SNR=15
N17K Nushagak Hills 6.71 193 Pn 13 27 50.3 -0.5
N17K Nushagak Hills 6.71 193 P Pn 13 27 50.3 -0.5
baz=9.8,SNR=58
PWL Port Wells 6.76 155 Pn 13 27 51.7 +0.2
PWL Port Wells 6.76 155 P Pn 13 27 51.3 -0.2
baz=340,SNR=17
SLKM Skilak Lake 6.83 163 Pn Pn 13 27 53.5 +1.0
L14K Kuka Creek 6.84 217 Pn 13 27 51.0 -1.5
L14K Kuka Creek 6.84 217 P Pn 13 27 50.6 -1.9
baz=29
DAWY Dawson 6.85 109 Pn 13 27 51.6 -1.1
DAWY Dawson 6.85 109 P Pn 13 27 51.5 -1.2
baz=303,SNR=20
K13K Kusilvak Mount 6.85 226 Pn 13 27 51.3 -1.4
K13K Kusilvak Mount 6.85 226 P Pn 13 27 50.9 -1.8
baz=36
N25K Chitina, Valde 6.90 138 P Pn 13 27 52.4 -1.0
baz=327,SNR=14
O19K Port Alsworth 6.92 180 Pn Pn 13 27 52.9 -0.7
O19K Port Alsworth 6.92 180 P Pn 13 27 52.9 -0.7
baz=0.1,SNR=15
O22K Cooper Landing 6.92 161 Pn 13 27 53.9 +0.2
O22K Cooper Landing 6.92 161 P Pn 13 27 53.2 -0.4
baz=345,SNR=16
N16K Nishlik Lake 6.93 199 Pn 13 27 52.7 -1.2
N16K Nishlik Lake 6.93 199 P Pn 13 27 52.9 -0.9
baz=15,SNR=64
EPYK Eagle Plains 6.97 88 Pn 13 27 53.0 -1.3
EPYK Eagle Plains 6.97 88 P Pn 13 27 52.9 -1.4
baz=284,SNR=36
M15K Kasigluk River 7.02 207 Pn 13 27 53.2 -1.7
M15K Kasigluk River 7.02 207 P Pn 13 27 52.8 -2.2
baz=21,SNR=16
G30M tAoh Zrail Nji 7.04 83 Pn 13 27 54.4 -0.9
G30M tAoh Zrail Nji 7.04 83 P Pn 13 27 54.0 -1.3
baz=279,SNR=40
O20K Slope Mountain 7.07 173 Pn 13 27 56.2 +0.5
O20K Slope Mountain 7.07 173 P Pn 13 27 54.4 -1.3
baz=355
M27K Edge Creek, AK 7.09 126 Pn 13 27 55.9 -0.3
M27K Edge Creek, AK 7.09 126 P Pn 13 27 55.1 -1.1
baz=317,SNR=67
IVE Iliamna Volcan 7.12 175 Pn 13 27 56.3 -0.2
F30M Barrier River 7.13 77 Pn 13 27 56.8 +0.3
F30M Barrier River 7.13 77 P Pn 13 27 55.6 -0.9
baz=274
ILS Iliamna Low So 7.17 175 Pn 13 27 57.3 0.0
M14K Bethel 7.21 212 Pn 13 27 56.7 -0.9
M14K Bethel 7.21 212 P Pn 13 27 56.9 -0.7
baz=25,SNR=14
GLB Gilahina Butte 7.25 136 Pn 13 27 58.5 +0.3
O18K Koktuh Hills 7.27 184 P Pn 13 27 57.5 -1.0
baz=2.8,SNR=31
SEW Seward 7.32 161 Pn 13 27 58.9 -0.2
SEW Seward 7.32 161 P Pn 13 27 58.0 -1.1
baz=345,SNR=6.4
BVCY Beaver Creek 7.38 123 P Pn 13 27 58.7 -1.3
baz=315
N15K Kwethluk River 7.42 203 Pn 13 27 58.7 -1.8
N15K Kwethluk River 7.42 203 P Pn 13 27 59.0 -1.5
baz=18,SNR=6.9
BMRM Bremner River 7.44 141 P Pn 13 28 00.5 -0.4
baz=329,SNR=16
O17K Koliganek Bris 7.45 191 P Pn 13 27 59.7 -1.2
baz=8.5,SNR=45
I30M Mount Dempster 7.46 96 Pn 13 28 00.7 -0.5
I30M Mount Dempster 7.46 96 P Pn 13 28 00.3 -0.9
baz=292,SNR=69
P19K Oil Pt 7.47 176 Pn 13 28 01.6 +0.3
P19K Oil Pt 7.47 176 P Pn 13 27 59.6 -1.7
baz=357,SNR=9.7
MCARA McCarthy VSAT 7.51 134 Pn 13 28 03.9 +2.2
MCARA McCarthy VSAT 7.51 134 P Pn 13 28 00.5 -1.2
baz=324,SNR=45
HIN Hinchinbrook I 7.53 149 Pn 13 28 01.6 -0.4
BRSE Bradley Lake S 7.53 166 P Pn 13 28 01.1 -1.0
baz=349,SNR=15
HOM Homer 7.54 170 P Pn 13 28 01.6 -0.6
baz=352
EYAK Cordova Ski Ar 7.55 146 Pn 13 28 02.4 +0.2
EYAK Cordova Ski Ar 7.55 146 P Pn 13 28 02.5 +0.3
baz=334
EYAK Cordova Ski Ar 7.55 146 P Pn 13 28 01.1 -1.1
baz=334
O16K Kokwok River B 7.72 195 Pn 13 28 03.4 -1.1
O16K Kokwok River B 7.72 195 P Pn 13 28 03.2 -1.4
baz=11,SNR=28
P18K Big Mountain, 7.74 184 P Pn 13 28 03.8 -1.1
baz=2.7,SNR=44
J30M Hart River 7.75 101 Pn 13 28 04.6 -0.5
J30M Hart River 7.75 101 P Pn 13 28 04.7 -0.5
baz=297,SNR=54
M13K Dall Lake 7.82 215 Pn 13 28 05.6 -0.3
M13K Dall Lake 7.82 215 P Pn 13 28 05.1 -0.8
baz=27
YUK2 White River 7.84 126 Pn 13 28 06.2 -0.2
L29M L29M 7.86 113 P Pn 13 28 05.9 -0.7
baz=307,SNR=36
N14K Kuskokwak Cree 7.92 208 Pn 13 28 06.0 -1.3
N14K Kuskokwak Cree 7.92 208 P Pn 13 28 05.9 -1.3
baz=22
F31M Tsiigehtchic 7.93 78 Pn 13 28 06.5 -0.9
F31M Tsiigehtchic 7.93 78 P Pn 13 28 06.4 -1.1
baz=277,SNR=19
INK Inuvik 7.95 72 Pn 13 28 07.2 -0.5
INK Inuvik 7.95 72 Pn Pn 13 28 07.5 -0.2
comp=E,3.8nm,0.3s,baz=287,slow=19,SNR=45
INK Lg Lg 13 30 17.9
comp=E,2.6nm,0.3s,baz=159,slow=14,SNR=1.9
INK LR LR 13 31 42.7
comp=E,741nm,18.6s,baz=286,slow=42
comp=E,10nm,0.5s
INK Inuvik 7.95 72 P Pn 13 28 06.6 -1.1
baz=271,SNR=12
YUK3 Moose Creek 7.97 125 Pn 13 28 07.6 -0.7
YUK3 Moose Creek 7.97 125 P Pn 13 28 07.4 -0.9
baz=318,SNR=17
BALM Baldy 7.98 134 Pn 13 28 07.5 -0.8
P17K Kvichak River 7.98 188 P Pn 13 28 06.8 -1.4
baz=6.1,SNR=12
GAMB Gambell 8.00 254 P Pn 13 28 06.7 -1.7
baz=58
CRQE Cirque 8.01 137 P Pn 13 28 08.1 -0.6
baz=327,SNR=14
H31M Peel River 8.05 90 P Pn 13 28 08.0 -1.2
baz=288
M29M Somme Creek 8.17 117 Pn 13 28 10.8 0.0
M29M Somme Creek 8.17 117 P Pn 13 28 10.5 -0.3
baz=311,SNR=74
Q19K Cape Douglas, 8.19 178 Pn 13 28 11.4 +0.3
P16K Nushagak River 8.26 194 P Pn 13 28 10.6 -1.4
baz=10
O15K Ungalikthiuk R 8.33 200 Pn 13 28 11.5 -1.5
O15K Ungalikthiuk R 8.33 200 P Pn 13 28 11.7 -1.3
baz=15
CTG Chitna Glacier 8.33 131 P Pn 13 28 12.8 -0.3
baz=323,SNR=36
Q23K Middleton Isla 8.46 152 P Pn 13 28 13.2 -1.5
baz=338
O14K Tigyukauivet M 8.47 205 Pn 13 28 13.1 -1.8
O14K Tigyukauivet M 8.47 205 P Pn 13 28 13.1 -1.8
baz=19
Q18K Katmai Hardscr 8.48 183 P Pn 13 28 12.7 -2.4
baz=1.9,SNR=9.1
BAGL Bagley Icefiel 8.51 135 Pn 13 28 14.7 -0.6
Q16K King Salmon 8.51 189 Pn 13 28 14.6 -0.8
Q16K King Salmon 8.51 189 P Pn 13 28 13.6 -1.8
baz=6.3,SNR=5.9
Q20K Shuyak Island 8.55 174 P Pn 13 28 14.8 -1.1
baz=355,SNR=7.8
M11K Mekoryuk 8.55 224 P Pn 13 28 14.0 -2.0
baz=33
YUK8 Steele Glacier 8.56 126 Pn 13 28 16.1 -0.3
YUK8 Steele Glacier 8.56 126 P Pn 13 28 15.9 -0.6
baz=319,SNR=9.9
KARR Katmai Rainbow 8.62 182 Pn 13 28 16.0 -1.0
KAHG Katmai Hook Gl 8.63 181 Pn 13 28 15.6 -1.5
M30M Minto, Yukon 8.68 113 Pn 13 28 16.6 -1.1
M30M Minto, Yukon 8.68 113 P Pn 13 28 16.5 -1.2
baz=309,SNR=8.8
KAWH Katmai 8.74 182 Pn 13 28 18.3 -0.4
MESA MESA 8.80 136 P Pn 13 28 18.1 -1.6
baz=327
O28M Mount Upton 8.83 129 P Pn 13 28 18.9 -1.2
baz=322,SNR=8.6
KAKN Katmai Knife C 8.83 183 Pn 13 28 19.3 -0.6
YUK4 Talbot Arm 8.88 123 P Pn 13 28 19.6 -1.1
baz=316
CNTC Contact Creek 8.89 186 Pn 13 28 19.7 -1.0
Q17K Contact Creek 8.89 186 P Pn 13 28 19.8 -1.0
baz=4.0
YUK6 Outpost Mounta 9.27 124 P Pn 13 28 24.8 -1.2
baz=318
YUK5 Granite Creek 9.29 122 Pn 13 28 26.1 -0.2
N30M Aishikik Lake 9.32 119 Pn 13 28 26.3 -0.3
N30M Aishikik Lake 9.32 119 P Pn 13 28 26.1 -0.5
baz=314,SNR=71
PINM Pinnacle 9.35 132 P Pn 13 28 25.9 -1.2
baz=324
KDAK Kodiak Island 9.37 175 Pn Pn 13 28 27.7 +0.5
comp=E,3.5nm,0.3s,baz=12,slow=7.3,SNR=48
KDAK LR LR 13 32 37.5
comp=E,805nm,18.1s,baz=355,slow=40
comp=E,26nm,0.8s
KDAK Kodiak Island 9.37 175 *i* P Pn 13 28 29.2 +2.0
KDAK Kodiak Island 9.37 175 P Pn 13 28 26.3 -0.8
baz=356
R17L Mt. Peulik Vol 9.54 187 P Pn 13 28 28.5 -1.1
baz=4.9
R18K Karluk 9.55 181 P Pn 13 28 29.2 -0.5
baz=0.4
HYT Haines Junctio 9.64 123 P Pn 13 28 30.9 -0.1
baz=318,SNR=11
R16K Pilot Point 9.68 191 P Pn 13 28 30.3 -1.0
baz=7.7
O29M Mount Kennedy 9.69 127 P Pn 13 28 31.0 -0.8
baz=321
N31M Braeburn, Yuko 9.75 116 P Pn 13 28 32.0 -0.5
baz=313,SNR=10.0
M31M Drury Creek, Y 9.78 111 P Pn 13 28 32.4 -0.4
baz=308,SNR=9.2
OHAK Old Harbor 9.91 177 Pn 13 28 34.0 -0.6
OHAK Old Harbor 9.91 177 P Pn 13 28 35.2 +0.7
OHAK Old Harbor 9.91 177 P Pn 13 28 34.2 -0.4
baz=358
PNL Peninsula 9.95 131 P Pn 13 28 34.7 -0.5
baz=324
O30N Mendenhall 10.15 120 Pn 13 28 38.1 +0.2
O30N Mendenhall 10.15 120 P Pn 13 28 36.8 -1.1
baz=316,SNR=10
P30M Million Dollar 10.35 124 P Pn 13 28 39.3 -1.4
baz=320
P29M Windy Craggy 10.48 128 P Pn 13 28 40.8 -1.6
baz=322
SII Sitkinak Islan 10.56 180 P Pn 13 28 41.7 -1.9
baz=360
WHY Whitehorse 10.65 118 Pn 13 28 46.0 +1.3
WHY Whitehorse 10.65 118 P Pn 13 28 44.3 -0.4
baz=315,SNR=6.3
MMPY Sheldon Lake, 10.70 104 Pn 13 28 46.0 +0.5
MMPY Sheldon Lake, 10.70 104 P Pn 13 28 45.0 -0.5
baz=304
N32M Quiet Lake 10.94 113 Pn 13 28 49.3 +0.5
N32M Quiet Lake 10.94 113 P Pn 13 28 47.5 -1.3
baz=312
PLBC Pleasant Camp 11.05 125 P Pn 13 28 48.4 -1.8
baz=321
S14K Fog Glacier 11.12 196 P Pn 13 28 50.2 -1.1
baz=11
A36M Sachs Harbour 11.17 51 Pn 13 28 49.9 -1.9
A36M Sachs Harbour 11.17 51 P Pn 13 28 48.9 -2.9
baz=258,SNR=35
C36M Paulatuk 11.36 65 Pn 13 28 53.7 -0.5
C36M Paulatuk 11.36 65 P Pn 13 28 52.2 -2.1
baz=273,SNR=6.9
SKAG Skagway 11.39 123 P Pn 13 28 52.9 -1.9
baz=320
P33M Teslin, Yukon 11.69 116 P Pn 13 28 57.3 -1.6
baz=315
P32M Atlin 11.83 120 P Pn 13 28 58.6 -2.3
baz=318
S12K Black Hills 12.01 202 P Pn 13 29 00.5 -2.8
baz=15
R31K City Hall, Gus 12.08 127 P Pn 13 29 02.5 -1.8
baz=324
SDPT Sand Point 12.15 197 P Pn 13 29 04.4 -0.7
SDPT Sand Point 12.15 197 P Pn 13 29 03.1 -2.0
baz=12
S31K Pelican 12.30 129 P Pn 13 29 05.9 -1.3

baz=325
SPIA Saint Paul Isl 12.40 224 P Pn 13 29 06.5 -2.1
baz=30
CHNA Chernabura Isl 12.56 194 P Pn 13 29 09.0 -1.8
baz=9.6
P08K Saint George I 12.71 222 P Pn 13 29 11.2 -1.7
baz=28
Q32M Nakina River 12.79 119 P Pn 13 29 12.5 -1.7
baz=318
R33M Jennings River 12.93 115 P Pn 13 29 14.5 -1.4
baz=316
FALS False Pass 13.03 204 P Pn 13 29 16.2 -1.0
baz=16
S32K Killisnoo 13.21 127 P Pn 13 29 18.2 -1.4
baz=325
WRGLY Wrigley 13.40 92 P Pn 13 29 21.0 -1.2
baz=300
DLBC Dease Lake 13.96 117 Pn **Pn 13 29 31.2 +1.2**
comp=E,3.1nm,0.3s,baz=297,slow=7.8,SNR=24
DLBC Lg Lg 13 33 28.4
comp=E,0.1nm,0.3s,baz=29,slow=25,SNR=8.7
comp=E,5.7nm,0.5s
DLBC Dease Lake 13.96 117 P Pn 13 29 29.7 -0.3
baz=318,SNR=12
UNV Unalaska Valle 14.55 210 Pn 13 29 37.9 -0.1
UNV Unalaska Valle 14.55 210 P Pn 13 29 38.4 +0.4
UNV Unalaska Valle 14.55 210 P Pn 13 29 37.3 -0.6
baz=19
WRAK Wrangell Islan 14.78 126 P Pn 13 29 40.2 -0.8
baz=325
U33K Whale Pass 14.79 128 P Pn 13 29 40.2 -0.9
baz=326
BILL Bilibino 14.94 292 Pn 13 29 41.0 -2.2
BILL Bilibino 14.94 292 *cePP* **13 29 39.6 -3.6**
BILL pmax pmax
comp=Z,29nm,0.8s
T35M Bob Quinn 15.01 121 P Pn 13 29 43.9 -0.3
baz=322
TOAD Toad River Com 15.40 108 P Pn 13 29 48.6 -0.7
baz=314
YKA Yellowknife Ar 17.25 87 P Pn 13 30 10.4 -2.6
comp=Z,1.4nm,0.4s,baz=103,slow=5.6,SNR=12
YKA LR LR 13 37 45.9
comp=Z,108nm,18.1s,baz=250,slow=40
YKAW1 Yellowknife Wh 17.30 87 P 13 30 15.2 +0.1
YKAW1 IAmb IAmb 13 30 40.0
comp=Z,43nm,1.4s
ATKA Atka Island 17.87 223 P P 13 30 25.5 +4.1
BBB Bella Bella 19.68 126 P Pn 13 30 43.9 +1.2
comp=Z,0.3nm,0.3s,baz=259,slow=4.6,SNR=3.2
comp=Z,17nm,1.1s
RES Resolute Bay 19.92 42 P P 13 30 43.6 -0.1
RES Resolute Bay 19.92 42 P P 13 30 41.4 -2.3
comp=Z,0.2nm,0.3s,baz=260,slow=9.8,SNR=9.3
RES S S 13 34 15.3 -12
comp=Z,9.6nm,0.7s,baz=346,slow=19,SNR=4.0
RES LR LR 13 40 24.6
comp=Z,281nm,20.0s,baz=230,slow=43
comp=Z,3.4nm,0.8s
RES Resolute Bay 19.92 42 P P 13 30 43.6 -0.1
RES pmax pmax
comp=Z,11nm,0.8s
SHEM Shemya Is, Ala 21.08 243 LR LR 13 38 22.9
comp=Z,177nm,21.8s,baz=324,slow=34
SEY Seymchan 22.33 285 LR LR 13 41 01.4
comp=Z,207nm,18.4s,baz=52,slow=40
SEY Seymchan 22.33 285 *eP* **P 13 31 13.8 +4.1**
SEY pmax pmax
comp=Z,28nm,1.4s
BLKN Baker Lake 23.35 69 P 13 31 19.2 -1.2
BLKN IAmb IAmb 13 31 25.7
comp=Z,40nm,1.2s
ILON Igloolik, Nuna 25.52 52 P P 13 31 40.2 -0.3
TIXI Tiksi 25.73 315 P P 13 31 42.3 0.0
TIXI IAmb IAmb 13 31 49.6
comp=Z,13nm,0.7s
TIXI Tiksi 25.73 315 LR LR 13 42 52.4
comp=Z,114nm,19.5s,baz=192,slow=39
TIXI Tiksi 25.73 315 *ceP* **P 13 31 45.1 +2.7**
TIXI pmax pmax
comp=Z,15nm,0.8s
NEW Newport 26.71 116 LR LR 13 41 52.5
comp=Z,259nm,18.9s,baz=314,slow=35
PEA0B Petropavlovsk- 26.90 263 P P 13 31 53.1 +0.1
PEA0B Petropavlovsk- 26.90 263 P P 13 31 53.2 +0.1
PEA0B pmax pmax
comp=Z,94nm,1.5s
PETK Petropavlovsk- 26.90 263 P P 13 31 52.9 -0.2
PETK Petropavlovsk- 26.90 263 P P 13 31 52.6 -0.5
comp=Z,2.7nm,0.6s,baz=57,slow=11,SNR=11
comp=Z,2.7nm,0.6s
PETK Petropavlovsk- 26.90 263 P P 13 31 52.9 -0.2
NEEM North Greenlan 28.55 26 *eP* P 13 32 13.5 +5.5
NEEM IAmb IAmb 13 32 37.5
comp=Z,20nm,1.1s
J05D Fort Rock, OR 29.72 127 P P 13 32 19.6 +1.1
J05D IAmb IAmb 13 32 27.6
comp=Z,13nm,1.5s
YBH Yreka Blue Hor 30.67 130 LR LR 13 45 51.0
comp=Z,13nm,18.4s,baz=310,slow=38
YAK Yakutsk 31.15 298 LR LR 13 46 43.0
comp=Z,152nm,18.0s,baz=43,slow=40
YAK Yakutsk 31.15 298 *eP* **P 13 32 32.8 +2.0**
YAK *e**PP **sP 13 32 36.4 +2.6**
YAK *e* 13 35 26.8
YAK *e*S **S 13 37 41.3 +4.9**
YAK *e*SS **SnSn 13 39 25.9 +8.5**
YAK *e* 13 43 04.0
YAK pmax pmax
comp=Z,10.0nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK smax smax
comp=N,605nm,4.2s
MCMT McKenzie Canyo 31.17 115 P P 13 32 33.3 +1.8
QLMT Earthquake Lak 31.68 113 P P 13 32 37.9 +2.0
YHL Hebgen Lake 31.75 113 IAmb IAmb 13 32 54.0
comp=Z,11nm,1.0s
YMR Madison River 31.99 113 IAmb IAmb 13 32 46.2
comp=Z,10nm,0.8s
YNE Yellowstone No 32.04 111 IAmb IAmb 13 32 46.2
comp=Z,8.1nm,0.7s
LOHW Long Hollow 33.03 113 IAmb IAmb 13 32 56.5
comp=Z,5.3nm,0.6s
ULM Lac du Bonnet 33.13 91 LR LR 13 47 29.7
comp=Z,97nm,21.0s,baz=330,slow=39
FRB Frobisher Bay 33.15 54 LR LR 13 47 33.9
comp=Z,180nm,20.8s,baz=290,slow=39
DAG Danmarks Havn 33.80 17 *iP* **P 13 32 52.0 -1.8**
DAG IAmb IAmb 13 32 53.7
comp=Z,5.0nm,0.6s
ELK Elko 33.95 121 LR LR 13 46 47.1
comp=Z,178nm,19.3s,baz=334,slow=36
BW06 Boulder Array 34.14 113 IAmb IAmb 13 33 09.8
comp=Z,15nm,1.4s
PD31 Pinedale Array 34.14 113 IAmb IAmb 13 33 09.8
comp=Z,15nm,1.4s
PDAR Pinedale Array 34.14 113 P P 13 32 58.4 +0.9
PDAR Pinedale Array 34.14 113 P P 13 32 59.0 +1.5
comp=Z,2.0nm,0.9s,baz=346,slow=5.4,SNR=13
PDAR LR LR 13 47 29.4
comp=Z,123nm,18.1s,baz=330,slow=37
comp=Z,2.0nm,0.9s
SUMG Summit 34.30 29 *iP* **P 13 32 58.3 -0.4**
SUMG IAmb IAmb 13 32 59.7
comp=Z,10.0nm,0.6s
SPITS Spitsbergen Ar 34.84 3 P P 13 32 58.9 -4.0
comp=Z,5.5nm,1.0s,baz=19,slow=9.2,SNR=0.7
comp=Z,5.5nm,1.0s
NVAR Mina Array Bea 35.05 127 P P 13 33 06.8 +1.5
comp=Z,1.2nm,0.9s,baz=321,slow=7.3,SNR=8.1
NVAR LR LR 13 47 28.7
comp=Z,135nm,20.5s,baz=328,slow=36
comp=Z,1.2nm,0.9s
BSUT Blindstream Ca 35.67 116 IAmb IAmb 13 33 28.0
comp=Z,20nm,1.4s
DBG Daneborg 35.77 20 *iP* **P 13 33 08.5 -2.3**
DBG IAmb IAmb 13 33 10.4
comp=Z,12nm,1.0s
SFJD Kangerlussuaq 35.91 41 LR LR 13 49 40.8
comp=Z,44nm,19.7s,baz=322,slow=40
RDMU Red Mountain 36.07 115 IAmb IAmb 13 33 25.5
comp=Z,8.5nm,1.0s
P18A Preston Nutter 36.66 116 P P 13 33 21.1 +1.9
P18A IAmb IAmb 13 33 36.3
comp=Z,15nm,0.8s
PV04 Paradox Valley 38.23 115 IAmb IAmb 13 33 41.0
comp=Z,15nm,1.3s
PV18 Skein Mesa, Pa 38.36 116 IAmb IAmb 13 33 48.5
comp=Z,20nm,1.2s
PV02 Paradox Valley 38.46 115 IAmb IAmb 13 33 42.0
comp=Z,13nm,0.7s
PV01 Paradox Valley 38.58 115 P P 13 33 36.8 +1.4
PV01 IAmb IAmb 13 33 42.5
comp=Z,12nm,0.7s
WUAZ Wupatki 39.97 120 P P 13 33 48.3 +1.4
ASAJ Asahikawa 40.05 268 LR LR 13 51 24.1
comp=Z,78nm,18.7s,baz=345,slow=38
PFO Pinyon Flats O 40.06 127 LR LR 13 51 27.7
comp=Z,94nm,18.2s,baz=332,slow=38
SCHQ Schefferville 40.46 63 P P 13 33 49.8 -0.9
comp=Z,13nm,0.8s,baz=318,slow=7.5,SNR=8.3
comp=Z,13nm,0.8s
TASM ASL Pad, Albuq 42.19 115 P P 13 34 07.2 +1.9
TASM ASL Pad, Albuq 42.19 115 IAmb IAmb 13 34 16.4
comp=Z,6.0nm,0.9s
ANMO Albuquerque 42.19 115 P P 13 34 07.5 +2.3
ANMO Albuquerque 42.19 115 LR LR 13 51 25.0
comp=Z,123nm,20.0s,baz=95,slow=36
ANMO Albuquerque 42.19 115 *ceP* **P 13 34 05.5 +0.3**
ANMO pmax pmax
comp=Z,5.0nm,0.8s
TRO Tromso 43.47 3 *eP* **P 13 34 14.9 0.0**
TRO IAmb IAmb 13 34 16.4
comp=Z,4.2nm,0.9s
JETT Jettan, Norway 43.57 3 *eP* **P 13 34 16.3 +0.5**
JETT IAmb IAmb 13 34 17.5
comp=Z,7.4nm,0.6s
ARCES ARCESS Array B 43.65 0 P P 13 34 14.1 -2.4
ARCES IAmb IAmb 13 34 58.1
comp=Z,22nm,1.4s
ARCES ARCESS Array B 43.65 0 P P 13 34 14.2 -2.2
comp=Z,3.7nm,0.8s,baz=352,slow=4.9,SNR=5.5
ARCES PcP **PcP 13 36 02.3 -1.0**
comp=Z,1.8nm,0.8s,baz=0.0,slow=4.5,SNR=2.1
ARCES LR LR 13 51 49.4
comp=Z,54nm,20.0s,baz=356,slow=36
comp=Z,3.7nm,0.8s
USRK Ussuriysk Ar. 44.12 277 P P 13 34 20.5 0.0
comp=Z,3.7nm,0.6s,baz=46,slow=7.5,SNR=6.0
comp=Z,3.7nm,0.6s
SADO Sadowa 44.14 81 LR LR 13 51 20.3
comp=Z,103nm,21.1s,baz=330,slow=34
KTK1 Kautokeino 44.16 1 *eP* **P 13 34 19.7 -0.8**
KTK1 IAmb IAmb 13 34 20.0
comp=Z,7.7nm,0.8s
MDJ Mudanjiang 44.70 280 P P 13 34 25.2 +0.1
MDJ pmax pmax
comp=Z,12nm,2.0s
LOF Lofoten 44.78 6 *eP* **P 13 34 25.5 0.0**
LOF IAmb IAmb 13 34 31.1
comp=Z,51nm,1.3s
STEI Steigen 45.06 6 *eP* **P 13 34 27.6 -0.1**
STEI IAmb IAmb 13 34 28.0
comp=Z,26nm,1.0s
CCM Cathedral Cave 45.15 97 P P 13 34 26.7 -2.0
CCM IAmb IAmb 13 34 34.0
comp=Z,10.0nm,0.7s
CCM Cathedral Cave 45.15 97 P P 13 34 26.7 -2.0
CCM pmax pmax
comp=Z,10.0nm,0.7s
WMOK Wichita Mounta 45.18 107 IAmb IAmb 13 34 53.2
comp=Z,3.7nm,0.8s
APA Apatity 45.51 356 *eP* **P 13 34 32.0 +0.7**
APA *e* 13 36 13.3
APA MLR MLR
comp=Z,264nm,6.5s
FAUS Fauske 45.60 6 *eP* **P 13 34 32.4 +0.3**
FAUS IAmb IAmb 13 34 33.5
comp=Z,42nm,1.6s
FCAR Ozark Folk Cen 46.70 100 P P 13 34 40.1 -0.9
FCAR IAmb IAmb 13 34 40.7
comp=Z,9.2nm,0.8s
LCAR Lake Charles 46.91 99 IAmb IAmb 13 34 49.0
comp=Z,5.0nm,0.9s
POHA Pohakuloa 47.32 182 P P 13 34 47.8 +1.5
OZNA Ozona 47.73 112 IAmb IAmb 13 34 56.4
comp=Z,6.3nm,0.8s
WVT Waverly 48.15 95 P P 13 34 49.5 -2.8
WVT IAmb IAmb 13 34 58.0
comp=Z,9.1nm,0.8s
WVT Waverly 48.15 95 P P 13 34 49.5 -2.8
WVT pmax pmax
comp=Z,9.0nm,0.8s
MJAR Matsushiro Arr 48.26 266 P P 13 34 54.2 +1.0
comp=Z,1.7nm,0.7s,baz=15,slow=8.4,SNR=9.0
MJAR LR LR 13 56 54.4
comp=Z,75nm,18.0s,baz=30,slow=38
comp=Z,1.7nm,0.7s
TXAR Lajitas Array 48.26 115 P P 13 34 53.0 -0.4
TXAR Lajitas Array 48.26 115 P P 13 34 54.7 +1.3
comp=Z,1.7nm,0.5s,baz=322,slow=5.7,SNR=24
TXAR LR LR 13 55 02.8
comp=Z,132nm,18.1s,baz=338,slow=36
comp=Z,1.7nm,0.5s
TXAR Lajitas Array 48.26 115 P P 13 34 53.0 -0.4
NSS Namsos 48.30 8 *eP* **P 13 34 52.9 -0.2**
NSS IAmb IAmb 13 34 58.7
comp=Z,17nm,1.0s
JCT Junction City 48.62 111 IAmb IAmb 13 35 03.6
comp=Z,13nm,0.9s
U49A Red Boiling Sp 48.62 93 IAmb IAmb 13 34 56.2
comp=Z,8.1nm,0.7s
X48A Hartselle 49.93 96 P P 13 35 03.5 -2.5
X48A IAmb IAmb 13 35 06.2
comp=Z,8.1nm,0.7s
TKL Tuckaleechee C 50.15 92 LR LR 13 57 39.8
comp=Z,151nm,18.2s,baz=324,slow=38
ULN Ulaanbaatar 50.19 300 *ceP* **P 13 35 09.5 +1.5**
ULN pmax pmax
comp=Z,11nm,2.5s
SONM Songino Array 50.44 300 P P 13 35 10.3 +0.4
comp=Z,3.4nm,0.7s,baz=27,slow=6.8,SNR=16
SONM LR LR 13 56 37.3
comp=Z,126nm,19.4s,baz=9.5,slow=36
comp=Z,3.4nm,0.7s
V53A Saluda 50.52 91 IAmb IAmb 13 35 16.2
comp=Z,13nm,0.8s
KNGR Kungurtug, Tuv 50.88 309 *iP* **P 13 35 14.6 +1.5**
KNGR pmax pmax
comp=Z,12nm,1.3s
ZAA0 Zalesovo Array 51.46 320 P P 13 35 15.8 -1.4
ZAA0 IAmb IAmb 13 35 21.6
comp=Z,6.2nm,0.8s
ZALV Zalesovo Beam 51.46 320 P P 13 35 15.5 -1.7
ZALV Zalesovo Beam 51.46 320 P P 13 35 16.9 -0.4
comp=Z,4.3nm,0.7s,baz=17,slow=6.7,SNR=19
ZALV LR LR 14 00 50.9
comp=Z,73nm,18.3s,baz=360,slow=41
comp=Z,4.3nm,0.7s
ZALV Zalesovo Beam 51.46 320 *iP* **P 13 35 19.7 +2.5**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
KSRS Korea Array 51.48 276 P P 13 35 18.5 +0.9
comp=Z,3.0nm,0.9s,baz=24,slow=7.6,SNR=9.0
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra 51.73 9 P P 13 35 17.9 -1.4
comp=Z,19nm,1.7s,baz=356,slow=7.4
NOA NORSAR Array B 51.73 9 P P 13 35 17.8 -1.4
comp=Z,1.5nm,0.8s,baz=355,slow=7.2,SNR=6.1
comp=Z,1.5nm,0.8s
FINES FINESS Array B 51.77 360 P P 13 35 16.9 -2.6
FINES FINESS Array B 51.77 360 P P 13 35 18.5 -1.0
comp=Z,5.7nm,0.9s,baz=4.3,slow=7.6,SNR=7.7
FINES LR LR 13 56 31.0
comp=Z,54nm,20.8s,baz=358,slow=35
comp=Z,5.7nm,0.9s
KLMR Klimovskoe 51.97 352 *eP* **P 13 35 19.4 -1.5**
KLMR pmax pmax
comp=Z,32nm,1.4s
HFS Hagfors 52.77 8 P P 13 35 24.4 -2.5
comp=Z,4.5nm,0.8s,baz=359,slow=5.9,SNR=6.3
comp=Z,4.5nm,0.8s
SVE Sverdlovsk 53.70 337 *eP* **P 13 35 36.5 +2.7**
SVE pmax pmax
comp=Z,16nm,1.2s
JNU Nakatsue 54.13 271 LR LR 13 59 32.6
comp=Z,42nm,18.8s,baz=20,slow=37
ARTI Arti 54.46 338 P 13 35 38.6 -0.8
ARTI Arti 54.46 338 LR LR 14 00 19.9
comp=Z,94nm,20.3s,baz=19,slow=38
ARTI Arti 54.46 338 *c iP* **P 13 35 38.1 -1.3**
ARTI 13 36 37.2
ARTI 13 37 38.4
ARTI S **S 13 43 19.0 +1.1**
ARTI SS **SS 13 46 55.7 -3.6**
ARTI pmax pmax
comp=Z,9.0nm,1.1s
DGZ Jazzator, Alta 54.62 316 *iP* **P 13 35 43.3 +2.5**
DGZ pmax pmax
comp=Z,5.0nm,1.2s
HHC Hu-ho-hao-te 54.71 292 *eP* **P 13 35 41.0 -0.5**
HHC pmax pmax
comp=Z,11nm,0.5s
HHC pmax pmax
comp=Z,110nm,4.8s
HHC LR LR
comp=N,330nm,10.6s
HHC LR LR
comp=E,160nm,10.8s
HHC LR LR
comp=Z,320nm,10.6s
BORK Borovoye 55.60 329 *iP* **P 13 35 48.5 +0.9**
BORK pmax pmax
comp=Z,14nm,0.8s
BVA0 Borovoye Array 55.60 329 *iP* **P 13 35 45.3 -2.4**
BVAR Borovoye Array 55.60 329 P P 13 35 47.0 -0.7
comp=Z,5.5nm,0.7s,baz=33,slow=7.0,SNR=17
BVAR LR LR 14 03 24.7
comp=Z,114nm,18.7s,baz=36,slow=40
comp=Z,5.5nm,0.7s
BVAR Borovoye Array 55.60 329 P P 13 35 47.0 -0.7
KURK Kurchatov 55.95 322 *iP* **P 13 35 51.9 +1.7**
KURK pmax pmax
comp=Z,15nm,1.0s
EKA Eskdalemuir Ar 55.99 19 P P 13 35 49.5 -0.9
comp=Z,3.4nm,0.6s,baz=330,slow=5.1,SNR=8.8
comp=Z,3.4nm,0.6s
KURBB Kurchatov Arra 56.06 322 P P 13 35 49.9 -1.0
comp=Z,6.5nm,0.8s,baz=26,slow=6.6,SNR=21
KURBB LR LR 14 02 08.1
comp=Z,88nm,19.0s,baz=158,slow=39
comp=Z,6.5nm,0.8s
HNS HongShan 56.59 287 ⇑*P* **P 13 35 57.7 +2.8**
HNS pmax pmax
comp=Z,19nm,0.8s
ZSN Zaisan 57.37 316 *eP* **P 13 36 02.5 +2.1**
ZSN Zaisan 57.37 316 *eP* **P 13 36 02.4 +2.1**
OBN Obninsk 57.85 353‖ *eP* **P 13 36 03.9 +0.4**
OBN *e**PP **sP 13 36 06.7 0.0**
OBN *i* *SP **pP 13 36 08.9 +3.1**
OBN *e*S **S 13 43 59.0 -3.9**
OBN pmax pmax
comp=Z,9.0nm,0.5s
OBN MLR MLR
comp=Z,68nm,18.0s
BRZS Berezniki 58.00 326 *eP* **P 13 36 06.3 +1.6**
BRZS Berezniki 58.00 326 *eP* **P 13 36 06.3 +1.6**
NACGM Naroch 58.33 359 *eP* **P 13 36 06.8 -0.1**
comp=Z,14nm,1.0s,baz=0.6
MK31 Makanchi Array 58.66 318 *iP* **P 13 36 10.5 +1.1**
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 58.66 318 P P 13 36 08.8 -0.6
MKAR Makanchi Array 58.66 318 P P 13 36 07.3 -2.1
comp=Z,1.0nm,0.6s,baz=45,slow=7.7,SNR=9.0
MKAR LR LR 14 03 25.6
comp=Z,107nm,20.4s,baz=6.0,slow=38
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 58.66 318 *iP* **P 13 36 07.6 -1.8**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MNK Minsk 58.72 359 *iP* **P 13 36 11.5 +1.8**
MNK *i* 13 38 21.9
MNK *i* PPP PPP 13 39 41.5
MNK *i* S **S 13 44 17.8 +3.5**
MNK pmax pmax
comp=N,9.0nm,0.7s
MNK pmax pmax
comp=E,27nm,1.0s
MNK pmax pmax
comp=Z,15nm,0.8s
MNK MLR MLR
comp=E,353nm,21.0s
MNK MLR MLR
comp=N,178nm,19.0s
MNK MLR MLR
comp=Z,41nm,14.0s
MAKZ Makanchi 58.73 318 P P 13 36 08.1 -1.8
MAKZ IAmb IAmb 13 36 14.0
comp=Z,10nm,1.2s
MAKZ Makanchi 58.73 318 P P 13 36 08.1 -1.8
MAKZ pmax pmax
comp=Z,10.0nm,1.3s
BELG Belogornoye 59.71 345 *iP* **P 13 36 18.1 +1.6**
BELG pmax pmax
comp=Z,7.0nm,0.8s
NJ2 Nanjing 59.75 281 *eP* **P 13 36 16.2 -0.9**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
WMQ Urumqi 59.91 312 *eP* **P 13 36 20.5 +2.4**
WMQ LR LR
comp=Z,130nm,17.7s
GTA Gaotai 60.11 301 *eP* **P 13 36 22.9 +3.3**
GTA pmax pmax
comp=Z,7.0nm,0.8s
GTA LR LR
comp=N,210nm,13.8s
GTA LR LR
comp=E,330nm,14.9s
GTA LR LR
comp=Z,330nm,12.7s
LPSR Galich'ya Gora 60.23 351 *eP* P 13 36 14.5 -5.6
LPSR pmax pmax
comp=Z,10.0nm,0.9s
AKTO Aktyubinsk 60.29 337 LR LR 14 02 55.9
comp=Z,58nm,21.0s,baz=335,slow=37
AB31 Akbulak array 61.13 335 P P 13 36 25.3 -1.0
AB31 Akbulak array 61.13 335 *iP* **P 13 36 25.2 -1.1**
ABKAR Akbulak array 61.13 335 P P 13 36 25.5 -0.8
TDK Taldyqorghan 61.33 320 *eP* **P 13 36 29.5 +1.8**
comp=Z,8.1nm,0.6s
TDK Taldyqorghan 61.33 320 *eP* **P 13 36 29.5 +1.8**
TDK pmax pmax
comp=Z,8.0nm,0.6s
CLL Collm 61.54 9 *eP* **P 13 36 28.0 -1.0**
VSR Storozhevoye 61.59 350 *eP* **P 13 36 27.5 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LZH Lanzhou 61.71 296 *eP* **P 13 36 34.0 +3.4**
LZH pP sP 13 36 37.6 +3.8
LZH sP pP 13 36 41.5 +8.6
LZH pmax pmax
comp=Z,33nm,1.3s
LZH LR LR
comp=N,460nm,14.1s
LZH LR LR
comp=E,510nm,15.1s
LZH LR LR
comp=Z,410nm,15.1s
LZDM Lanzhou Array 61.88 296 P P 13 36 32.1 +0.2
comp=Z,5.5nm,0.4s,baz=32,slow=8.5,SNR=2.2
comp=Z,5.5nm,0.4s
HSKC Hora Svate Kat 62.26 9 *eP* **P 13 36 36.3 +2.4**
OSTC Ostas 62.46 7 *eP* **P 13 36 35.2 -0.1**
OSTC Ostas 62.46 7 *eP* **P 13 36 35.2 -0.1**
UPC Upice 62.50 7 *eP* **P 13 36 39.3 +3.8**
UPC Upice 62.50 7 *eP* **P 13 36 39.3 +3.8**
AKASG Malin Array Be 62.51 358 P P 13 36 34.8 -0.7
comp=Z,9.1nm,0.7s,baz=2.8,slow=6.7,SNR=9.8
AKASG LR LR 14 05 34.5
comp=Z,44nm,18.1s,baz=352,slow=38
comp=Z,9.1nm,0.7s
DPC Dobruska-Polom 62.67 7 *eP* **P 13 36 36.6 -0.1**
DPC Dobruska-Polom 62.67 7 *eP* **P 13 36 36.6 -0.1**
SHLS Shalkode 62.78 318 *eP* **P 13 36 38.7 +1.1**
comp=Z,8.6nm,0.8s
SHLS Shalkode 62.78 318 *eP* **P 13 36 38.7 +1.1**
SHLS pmax pmax
comp=Z,9.0nm,0.8s
UZB Uzynbulak 62.90 319 *eP* **P 13 36 40.4 +1.8**
comp=Z,4.3nm,0.7s
UZB Uzynbulak 62.90 319 *eP* **P 13 36 40.3 +1.8**
UZB pmax pmax
comp=Z,4.0nm,0.7s
SATY Saty 63.14 319 *eP* **P 13 36 41.9 +1.7**
SATY Saty 63.14 319 *eP* **P 13 36 41.8 +1.7**
MDOK Medeo 63.39 320 *eP* **P 13 36 43.4 +1.6**
MDOK Medeo 63.39 320 *eP* **P 13 36 43.3 +1.6**
SGDS Sogindy 63.71 322 *eP* **P 13 36 45.5 +1.8**

comp=Z,5.6nm,1.0s
KHC Kasperske Hory 63.74 9 *ce*P **P 13 36 45.6 +1.8**
KHC pmax pmax
comp=Z,10.0nm,1.7s
GERES GERESS Array B 64.03 9 P **P 13 36 45.3 -0.5**
comp=Z,0.7nm,0.6s,baz=350,slow=6.8,SNR=4.8
comp=Z,0.7nm,0.6s
CKRC Cesky Krumlov 64.09 8 *eP* **P 13 36 42.4 -3.7**
CKRC Cesky Krumlov 64.09 8 *eP* **P 13 36 42.4 -3.7**
BOOM Boomskoye usch 64.30 321 P 13 36 46.3 -1.4
BOOM Boomskoye usch 64.30 321 P **P 13 36 46.3 -1.4**
BOOM pmax pmax
comp=Z,10.0nm,0.8s
KDJ Kajisay 64.33 320 P 13 36 47.6 -0.4
KDJ IAmb IAmb 13 36 53.1
comp=Z,9.2nm,0.9s
KDJ Kajisay 64.33 320 P **P 13 36 47.6 -0.4**
KDJ pmax pmax
comp=Z,9.0nm,0.9s
AAK Ala-Archa 64.51 322 LR LR 14 10 16.7
comp=Z,73nm,19.1s,baz=22,slow=41
AAK Ala-Archa 64.51 322 *ce*P **P 13 36 48.8 -0.3**
AAK pmax pmax
comp=Z,18nm,1.0s
TARG Taragay, Kyrgy 64.55 319 P 13 36 48.5 -1.2
TARG IAmb IAmb 13 37 13.7
comp=Z,5.3nm,0.9s
TARG Taragay, Kyrgy 64.55 319 P **P 13 36 48.5 -1.2**
TARG pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 64.99 325 P P 13 36 51.0 -1.1
KKAR Karatay Array 64.99 325 P P 13 36 51.0 -1.1
DZA Taraz 65.01 325 *eP* **P 13 36 53.9 +1.6**
DZA Taraz 65.01 325 *eP* **P 13 36 53.8 +1.6**
MOA Molln 65.06 9 *eP* P 13 36 47.5 -4.9
comp=Z,9.3nm,1.6s
RONA Rosalia, Austr 65.32 7 *ep*P **P 13 36 54.3 +0.2**
comp=Z,6.1nm,1.3s
MOTA Moosalm 65.35 11 *ep*P **P 13 36 54.5 0.0**
comp=Z,12nm,2.0s
LESA Schwarzleotal 65.39 10 *ep*P **P 13 36 55.1 +0.5**
comp=Z,7.8nm,1.4s
WATA Walderalm 65.40 11 *i* P **P 13 36 53.1 -1.6**
comp=Z,4.2nm,0.7s
SQTA Sankt Quirin 65.48 11 *ep*P **P 13 36 55.9 +0.6**
comp=Z,6.8nm,1.0s
IUG luzhnay 66.01 325 *eP* **P 13 37 00.5 +1.6**
comp=Z,10nm,0.9s
IUG luzhnay 66.01 325 *eP* **P 13 37 00.4 +1.6**
IUG pmax pmax
comp=Z,10.0nm,0.9s
CD2 Chengdu 66.41 293 P P 13 36 58.9 -2.5
PRED Cave del Predi 66.42 9 P **P 13 37 00.8 -0.5**
PRED IAmb IAmb 13 37 08.9
comp=Z,2.8nm,0.7s
GUMO Guam 66.43 248 LR LR 14 03 57.9
comp=Z,39nm,21.2s,baz=44,slow=34
KSH Kashi 67.09 320 P P 13 37 10.2 +4.4
KSH PcP **PcP 13 37 37.5 +3.6**
KSH pmax pmax
comp=Z,9.0nm,0.8s
ANN Anapa 68.09 351 *eP* **P 13 37 09.9 -1.9**
ANN *e**PP **pP 13 37 13.1 -1.0**
ANN *e* 13 39 39.0
ANN *e*S **S 13 46 09.9 -1.4**
ANN pmax pmax
comp=Z,5.0nm,0.5s
KIV Kislovodsk 68.54 347 *eP* **P 13 37 16.4 +1.6**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,51nm,17.0s
KBZ Khabaz 68.75 347 P **P 13 37 16.1 +0.2**
comp=Z,5.1nm,1.0s,baz=330,slow=4.6,SNR=13
KBZ LR LR 14 08 58.3
comp=Z,73nm,19.9s,baz=350,slow=38
comp=Z,5.1nm,1.0s
KBZ Khabaz 68.75 347 *ce*P **P 13 37 16.8 +0.9**
KBZ pmax pmax
comp=Z,6.0nm,0.8s
SHA1 Shidzhatmaz 68.76 347 *i* P **P 13 37 18.0 +1.7**
AKT Akhty 70.47 343 *eP* **P 13 37 29.2 +2.4**
PZH PanZhiHua 71.14 293 P **P 13 37 31.6 +0.6**
ESDC Sonseca Array 71.17 24 P **P 13 37 28.3 -2.7**
ESDC IAmb IAmb 13 37 43.5
comp=Z,6.0nm,1.2s
ESDC Sonseca Array 71.17 24 P **P 13 37 30.2 -0.7**
comp=Z,2.7nm,0.7s,baz=347,slow=6.2,SNR=15
ESDC LR LR 14 09 43.0
comp=Z,63nm,19.3s,baz=330,slow=37
comp=Z,2.7nm,0.7s
JTS Las Juntas de 72.56 105 LR LR 14 14 55.8
comp=Z,48nm,18.2s,baz=324,slow=40
SJG San Juan 72.73 85 LR LR 14 10 55.3
comp=Z,66nm,19.2s,baz=212,slow=37
BRTR Keskin Array B 73.35 354 P **P 13 37 43.4 -0.7**
comp=Z,1.0nm,0.7s,baz=8.6,slow=4.1,SNR=6.4
BRTR LR LR 14 12 26.8
comp=Z,21nm,21.7s,baz=1.0,slow=38
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 79.52 292 P **P 13 38 19.7 +0.5**
comp=Z,1.3nm,0.6s,baz=4.7,slow=6.2,SNR=10.0
CMAR LR LR 14 16 59.3
comp=Z,160nm,18.6s,baz=105,slow=38
comp=Z,1.3nm,0.6s
ASF Jabal al Asfar 80.69 350 LR LR 14 20 23.9
comp=Z,18nm,18.6s,baz=314,slow=40
HNR Honiara 83.14 225 LR LR 14 12 51.2
comp=Z,43nm,19.3s,baz=35,slow=34
PPT Papeete 84.47 176 LR LR 14 07 11.6
comp=Z,62nm,21.2s,baz=348,slow=29
PPT2 Papeete2 84.50 176 *e*LR LR 14 05 14.2
PPT2 comp=Z,115nm,24.2s *e*LR LR 14 05 20.2
comp=Z,81nm,23.5s
PMG Port Moresby 87.03 238 LR LR 14 11 49.8
comp=Z,44nm,20.6s,baz=154,slow=31
MDP Montagnes des 89.83 77 LR LR 14 20 43.7
comp=Z,63nm,18.6s,baz=114,slow=36
TBI Tubuai 90.23 176 *e*LR LR 14 07 50.7
comp=Z,544nm,31.8s
DZM Mont Dzumac 93.60 216 LR LR 14 16 09.3
comp=Z,206nm,20.3s,baz=188,slow=32
VNDA Vanda 146.80 196 PKPbc **PKPab 13 45 54.5 +0.6**
comp=Z,1.5nm,0.8s,baz=333,slow=5.0,SNR=8.4
QSPA South Pole Qui 156.91 180 PKPab **PKPab 13 46 37.8 +1.3**
comp=Z,0.9nm,0.6s,baz=160,slow=4.8,SNR=7.8
SNAA Sanae 169.00 127 PKPab **PKPab 13 47 32.1 +2.7**
comp=Z,0.8nm,0.7s,baz=209,slow=13,SNR=8.5

*NEIC **09** 13:34:29.2±0.7, 19°.406N±0°.008×155°.613W±0°.005, h2km±9km, Error ellipse: s-maj=1.2km s-min=0.6km az=196.0*

HVO 09 13:34:28.6±0.9, 19°.420N±0°.007×155°.630W±0°.009, h0km±8km, ML2.7/45, **ML2.7**/42(NEIC), **Error ellipse: s-maj=1.5km s-min=0.7km az=128.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWH	**Mokuaweoweo**	**0.07**	**26**		Pg	13 34 30.9	+0.8
ALEP	**Alea Permanent**	**0.12**	**354**		Pg	13 34 32.0	+1.0
ALEP					Sg	13 34 34.3	+1.7
AIN	**Ainahou**	**0.17**	**106**		Pg	13 34 32.7	+0.8
AIN	**Ainahou**	**0.17**	**106**	IAML		13 34 37.2	
	comp=E,7μm,0.4s						
AIN				IAML		13 34 37.5	
	comp=N,4μm,0.3s						
KHU	**Kahuku**	**0.17**	**175**		Pg	13 34 32.6	+0.7
HMH	**Humu'ula Sheep**	**0.23**	**37**		Pg	13 34 33.7	+0.7
MLH	**Mauna Loa**	**0.24**	**72**		Pg	13 34 33.9	+0.7
MLH	**Mauna Loa**	**0.24**	**72**	IAML		13 34 38.8	
	comp=E,1μm,0.5s						
MLH				IAML		13 34 40.1	
	comp=N,2μm,0.4s						
HTC	**Hot Caves**	**0.28**	**130**		Pg	13 34 34.3	+0.3
UWE	**Uwekahuna**	**0.32**	**90**		Pg	13 34 35.1	+0.5
HLP	**Hilina Pali**	**0.33**	**112**		Pg	13 34 35.3	+0.4
HLP				IAML		13 34 42.2	
	comp=N,1μm,0.4s						
HLP				IAML		13 34 45.5	
	comp=E,1μm,0.8s						
RSD	**Rainshed**	**0.34**	**83**		Pg	13 34 35.5	+0.5
RSD				IAML		13 34 46.2	
	comp=N,1μm,0.4s						
RSD				IAML		13 34 46.3	
	comp=E,1μm,0.5s						
HATHI	**Halema'uma'u T**	**0.35**	**89**	IAML		13 34 46.3	
	comp=N,1μm,0.8s						
POHA	**Pohakuloa**	**0.35**	**15**		Pg	13 34 36.0	+0.7
BYL	**Byron's Ledge**	**0.35**	**91**	IAML		13 34 42.0	
	comp=N,1μm,0.6s						
BYL				IAML		13 34 47.0	
	comp=E,1μm,0.5s						
PUH	**Pauahi**	**0.39**	**97**		Pg	13 34 36.0	-0.2
PUH				IAML		13 34 45.3	
	comp=E,736nm,0.7s						
PUH				IAML		13 34 47.8	
	comp=N,718nm,0.7s						
KNHH	**Kane Nui o Ham**	**0.44**	**95**		Pg	13 34 37.0	+0.1
STCH	**Steam Cracks**	**0.48**	**94**		Pg	13 34 37.4	-0.3
STCH				IAML		13 34 53.8	
	comp=N,468nm,0.4s						
JOKA	**Jonika Flow**	**0.59**	**89**		Pg	13 34 39.4	-0.5
JOKA				IAML		13 34 53.8	
	comp=N,339nm,1.1s						
HPAH	**Hawaii Prepara**	**0.61**	**354**		Pg	13 34 40.3	0.0

IGQ 09 13:37:15.4±0.4, 3°S±1°×8°1W±1°, h7km±1km, MLv4.1/34, **13C-3D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISPG	**Isla Puna-Puer**	**0.81**	**59**	⇑P	Pb	13 37 32.2	+0.4
ISPG				S	Sn	13 37 45.0	-0.6
ARNL	**Arenillas**	**0.82**	**101**	S	Sg	13 37 40.6	-1.2
ARNL				⇓P	Pg	13 37 30.6	-0.5
PU01	**PU01**	**0.86**	**48**	⇑P	Pn	13 37 33.6	-0.2
PU01				S	Sb	13 37 45.4	+1.0
MORR	**Playas El Morr**	**0.91**	**36**	S	Sg	13 37 44.0	-0.7
MORR				⇑P	Pg	13 37 32.4	-0.5
PU02	**PU02**	**0.99**	**55**	⇑P	Pg	13 37 33.9	-0.4
PU02				S	Sb	13 37 47.6	-0.4
LAMO	**ALAMOR**	**1.05**	**126**	P	Pb	13 37 36.1	+0.1
ACH2	**Ecuador-Machal**	**1.06**	**83**	P	Pg	13 37 34.8	-1.0
ALIBE	**La Libertad**	**1.14**	**1**	P	Pg	13 37 36.2	-1.0
PU03	**PU03**	**1.16**	**66**	⇑P	Pg	13 37 36.0	-1.7
SALI	**Salinas**	**1.20**	**354**	⇑P	Pb	13 37 37.3	-1.1
AMCR	**Ecuador-Macara**	**1.34**	**137**	P	Pn	13 37 40.4	-0.1
MCRA	**Macar, Loja**	**1.34**	**137**	S	Sb	13 37 56.3	-1.8
MCRA				⇓P	Pn	13 37 39.8	-0.7
PCRA	**Pucara 2**	**1.38**	**83**	S	Sb	13 37 58.1	-1.5
PCRA				P	Pn	13 37 38.5	-2.8
PU06	**PU06**	**1.57**	**52**	P	Pn	13 37 41.8	-1.8
GONZ	**Gonzanam**	**1.70**	**120**	P	Pn	13 37 45.6	-0.1
GONZ				S	Sn	13 38 07.2	-0.6
MILO	**Milagro-Astudi**	**1.71**	**50**	P	Pn	13 37 44.4	-1.2
PPLP	**Puerto Lpez**	**1.83**	**3**	P	Pn	13 37 45.4	-1.9
ZUMB	**Zumba**	**2.26**	**131**	S	Sn	13 38 22.0	+0.5
ZUMB				⇓P	Pb	13 37 55.0	-1.6
BOSC	**San Juan Bosco**	**2.38**	**84**	P	Pn	13 37 54.8	-0.1
BOSC				S	Sb	13 38 27.9	-0.4
JSCH	**Cashca Tororas**	**2.51**	**49**	P	Pn	13 37 53.8	-3.1
CHSH	**Refugio Sur-Vo**	**2.74**	**47**	P	Pn	13 37 58.9	-1.4
TAMH	**Tambohuasha Ch**	**2.78**	**49**	P	Pn	13 37 58.5	-2.2
BPAT	**Tunguraltua Vol**	**3.07**	**52**	P	Pn	13 38 04.0	-0.7
FLF1	**Flavio Alfaro-**	**3.18**	**19**	P	Pn	13 38 04.2	-1.7
PIS1	**Pisayambo**	**3.39**	**47**	P	Pn	13 38 09.3	+0.1
ILLI	**Illinizas Sur**	**3.41**	**39**	P	Pn	13 38 08.7	-0.7
VCES	**Cotopaxi**	**3.57**	**44**	P	Pn	13 38 11.5	-0.1
BREF	**Cotopaxi Volca**	**3.63**	**42**	P	Pn	13 38 12.9	+0.4
BTAM	**Cotopaxi Volca**	**3.66**	**43**	⇑P	Pn	13 38 13.0	+0.2
BTAM				S	Sn	13 38 57.1	+0.6
BVC2	**Cotopaxi Volca**	**3.66**	**42**	⇑P	Pn	13 38 13.1	+0.2
PKYU	**Pakayacu**	**3.70**	**62**	P	Pn	13 38 12.6	-0.3
GGPT	**Toaza - Volcan**	**3.86**	**36**	P	Pn	13 38 15.1	-0.5
GGPT				S	Sn	13 39 01.2	-0.2
ARDO	**Archidona, Ten**	**3.88**	**52**	P	Pn	13 38 15.5	0.0
ARDO				Pn	Pn	13 38 15.5	0.0
BV15	**Puerto Quito-O**	**3.89**	**25**	⇑P	Pn	13 38 13.1	-2.4
GGPC	**Guagua Pichinc**	**3.91**	**36**	⇑P	Pn	13 38 16.1	-0.3
TERV	**Terraza Guagua**	**3.91**	**35**	S	Sn	13 39 01.7	-1.1
TERV				⇑P	Pn	13 38 16.0	-0.4
ANTS	**Antisana-Sarah**	**3.94**	**43**	⇑P	Pn	13 38 16.2	-0.6
PULU	**Pululahua**	**4.13**	**35**	P	Pn	13 38 18.9	-0.3
PAC1	**Pacto, Paraso**	**4.18**	**30**	P	Pn	13 38 17.7	-2.0
OTAV	**Otavalo**	**4.34**	**34**	⇑P	Pn	13 38 21.3	-0.8
OTAV				S	Sn	13 39 11.1	-2.0
CUIC	**Cuicocha-Domo**	**4.44**	**34**	P	Pn	13 38 23.5	0.0
CUIC				S	Sn	13 39 15.1	-0.6
ANGU	**Angureal**	**4.45**	**40**	P	Pn	13 38 24.0	+0.2
CHL2	**Volc¡n Chiles**	**5.10**	**35**	P	Pn	13 38 34.8	+2.1

*IDC **09** 13:58:47.0±0.7, 57°.115N×25°.39W, h0km, mb4.3/6, mbtmp4.3/8, ML4.3/2, MS3.4/7, Error ellipse: s-maj=29.9km s-min=19.4km az=74.0*
*NEIC **09** 13:58:53.4±2.4, 57°.2S±0°.2×25°.2W±0°.3, h53km±11km, mb4.6/18, Error ellipse: s-maj=28.5km s-min=15.7km az=220.0*

ISC 09 13:58:52.3±0.7, 57°.2S±0°.1×25°.4W±0°.1, h35km, n46, σ1$27/36, mb4.6/12, **MS3.3**/5, **4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.91**	**290**	Pn	**Pn**	**14 00 33.9**	**+3.1**
VNA1	**Neumayer--Stat**	**15.37**	**158**	⇑P	**Pn**	**14 02 25.3**	**-0.8**
	comp=Z,2.3nm,0.2s						
VNA3	**Neumayer Olymp**	**15.59**	**161**	⇑P	**Pn**	**14 02 28.0**	**-0.9**
	comp=Z,3.0nm,0.2s						
ESPZ	**Base Esperanza**	**16.71**	**235**		**P**	**14 02 45.4**	**+0.1**
ESPZ				IAmb	IAmb	14 03 05.3	
	comp=Z,24nm,1.0s						
SNAA	**Sanae**	**17.30**	**156**	⇑P	**Pn**	**14 02 51.1**	**+0.4**
	comp=Z,71nm,0.4s						
SNAA	**Sanae**	**17.30**	**156**		**Pn**	**14 02 50.2**	**-0.4**
SNAA	**Sanae**	**17.30**	**156**	P	**Pn**	**14 02 49.9**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=325,slow=17,SNR=26						
SNAA				S	Sn	14 05 51.9	-10
	comp=Z,1.0nm,0.8s,baz=223,slow=17,SNR=2.5						
SNAA				LR	LR	14 07 53.4	
	comp=Z,65nm,22.0s,baz=14,slow=32						
	comp=Z,1.4nm,0.4s						
TROLL	**Troll, Antarti**	**18.78**	**153**	⇑P	**Pn**	**14 03 10.9**	**+2.0**
	comp=Z,74nm,0.4s						
EFI	**East Falkland**	**19.66**	**272**	P	**Pn**	**14 03 17.6**	**-1.7**
PMSA	**Palmer Station**	**19.93**	**232**	P	**P**	**14 03 19.6**	**-1.0**
PMSA				IAmb	IAmb	14 03 23.4	
	comp=Z,22nm,1.0s						
PMSA	**Palmer Station**	**19.93**	**232**	P	**P**	**14 03 19.0**	**-1.6**
	comp=Z,1.4nm,0.3s,baz=40,slow=19,SNR=22						
PMSA				LR	LR	14 09 59.5	
	comp=Z,148nm,18.1s,baz=104,slow=34						
	comp=Z,14nm,0.7s						
BELA	**Belgrano 2**	**21.02**	**185**		**P**	**14 03 31.0**	**-1.4**
BELA				IAmb	IAmb	14 03 35.6	
	comp=Z,12nm,0.6s						
MG02	**Cerro Sombrero**	**25.19**	**261**	P	**P**	**14 04 13.8**	**-0.3**
GO09	**Cerro Castillo**	**27.61**	**262**	P	**P**	**14 04 36.4**	**+0.4**
GO09				IAmb	IAmb	14 04 38.0	
	comp=Z,9.8nm,0.5s						
PLTB	**Pedras Altas**	**32.00**	**311**	P	**P**	**14 05 14.1**	**-0.9**
PLTB				IAmb	IAmb	14 05 18.1	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**33.06**	**180**		**P**	**14 05 26.9**	**+2.7**
QSPA				IAmb	IAmb	14 05 27.8	
	comp=Z,5.9nm,0.7s						
QSPA	**South Pole Qui**	**33.06**	**180**	P	**P**	**14 05 26.5**	**+2.4**
	comp=Z,6.3nm,0.6s,baz=190,slow=2.1,SNR=102						
	comp=Z,6.3nm,0.6s						
PLCA	**Paso Flores**	**33.17**	**280**	LR	LR	14 19 22.2	
	comp=Z,49nm,18.3s,baz=124,slow=37						
LMEL	**Las Melosas**	**38.14**	**288**	P	**P**	**14 06 09.1**	**+1.0**
CPUP	**Villa Florida**	**38.31**	**310**	P	**P**	**14 06 09.7**	**+0.4**
CPUP	**Villa Florida**	**38.31**	**310**	P	**P**	**14 06 08.1**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=56,slow=7.3,SNR=4.0						
	comp=Z,0.3nm,0.5s						
MAW	**Mawson**	**38.64**	**142**	LR	LR	14 19 53.4	
	comp=Z,42nm,19.6s,baz=283,slow=33						
MT02	**Curacav**	**39.08**	**288**	P	**P**	**14 06 14.1**	**-1.6**
MT02				IAmb	IAmb	14 06 40.8	
	comp=Z,17nm,1.2s						
CO02	**Combarbal**	**40.64**	**290**	P	**P**	**14 06 27.2**	**-1.7**
CO02				IAmb	IAmb	14 06 29.4	
	comp=Z,13nm,1.1s						
AC05	**El Transito**	**42.19**	**293**	P	**P**	**14 06 40.3**	**-1.3**
BOSA	**Boshof**	**45.32**	**73**	LR	LR	14 22 39.1	
	comp=Z,73nm,18.2s,baz=208,slow=32						
VNDA	**Vanda**	**45.47**	**182**	P	**P**	**14 07 07.5**	**+0.3**
VNDA	**Vanda**	**45.47**	**182**	P	**P**	**14 07 07.4**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=184,slow=5.8,SNR=19						
	comp=Z,1.9nm,0.7s						
LBTB	**Lobatse**	**48.42**	**70**	LR	LR	14 24 11.7	
	comp=Z,45nm,20.9s,baz=218,slow=32						
PTLB	**Pontes e Lacer**	**48.80**	**315**		**P**	**14 07 33.3**	**-0.5**
PTLB				IAmb	IAmb	14 07 35.4	
	comp=Z,6.0nm,0.7s						
H10S2	**ASCENSION HYDR**	**48.84**	**14**	T	T	15 00 29.2	
	baz=189,slow=74,SNR=40						
H10S3	**ASCENSION HYDR**	**48.84**	**14**	T	T	15 00 29.7	
	baz=31,slow=74,SNR=47						
GO01	**Chusmiza**	**49.38**	**301**	P	**P**	**14 07 38.1**	**-0.8**
GO01				IAmb	IAmb	14 07 40.1	
	comp=Z,4.5nm,0.6s						
H10N1	**ASCENSION HYDR**	**49.95**	**14**	T	T	15 01 53.7	
	baz=188,slow=75,SNR=9.7						
H10N3	**ASCENSION HYDR**	**49.96**	**14**	T	T	15 01 53.1	
	baz=188,slow=75,SNR=33						
H10N2	**ASCENSION HYDR**	**49.97**	**14**	T	T	15 01 54.6	
	baz=188,slow=75,SNR=22						
LPAZ	**La Paz**	**51.84**	**304**		**P**	**14 07 57.9**	**+0.4**
LPAZ	**La Paz**	**51.84**	**304**	P	**P**	**14 07 57.9**	**+0.4**
	comp=Z,8.5nm,0.5s,baz=157,slow=6.7,SNR=47						
	comp=Z,8.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.59**	**28**	P	**P**	**14 10 22.3**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=192,slow=4.4,SNR=1.8						
	comp=Z,1.2nm,0.3s						
SDV	**Santo Domingo**	**75.52**	**314**	LR	LR	14 46 35.9	
	comp=Z,15nm,18.6s,baz=256,slow=38						
ASAR	**Alice Springs**	**97.59**	**161**	P	**P**	**14 12 22.3**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=180,slow=3.9,SNR=15						
	comp=Z,0.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**123.74**	**110**	PKP	**PKPdf**	**14 17 45.7**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=234,slow=5.1,SNR=5.1						
FINES	**FINESS Array B**	**124.94**	**27**	PKP	**PKPdf**	**14 17 46.4**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=168,slow=4.0,SNR=5.8						
ARCES	**ARCESS Array B**	**131.64**	**21**	PKP	**PKPdf**	**14 17 58.0**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=239,slow=0.5,SNR=12						
SONM	**Songino Array**	**149.80**	**87**	PKPbc	**PKPbc**	**14 18 37.6**	**0.0**
	comp=Z,2.3nm,0.7s,baz=242,slow=3.7,SNR=9.6						
ILAR	**Eielson Array**	**151.61**	**310**	PKPbc	**PKiKP**	**14 18 41.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=139,slow=5.2,SNR=34						

*DNK **09** 14:00:01.8±0.7, 57°.69N×21°.59E, h0km, ML2.4(UPP), Suspected explosion*
*HEL **09** 14:00:01.8±0.5, 57°.61N×21°.53E, h0km, ML2.0, Explosion*
*EST **09** 14:00:02.2±0.2, 57°.70N×21°.52E, h0km, ML1.9(HEL), Explosion*
*IDC **09** 14:00:04.9±2.3, 57°.96N×21°.55E, h0km, mbtmp3.0/4, ML2.3/4, Error ellipse: s-maj=24.2km s-min=9.2km az=167.0*
*UPP **09** 14:00:04.9±1.2, 57°.78N×21°.18E, h0km, ML2.4, Presumed earthquake*
*BER **09** 14:00:04.7±1.5, 57°.73N×21°.46E, h0km, ML1.9, ML2.4(UPP), Suspected explosion*
*LVSN **09** 14:00:06.2±5.1, 57°.70N×22°.77E, h0km±13km, ML2.2*

ISC 09 14:00:01.8±0.8, 57°.80N±0°.03×21°.51E±0°.03, h0km, n87, σ1$07/109, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.46**	**112**	*eP*	**Pg**	**14 00 10.3**	**-0.1**
SLIT	**Slitere, Latvi**	**0.46**	**112**	*eP*	**Pg**	**14 00 10.3**	**-0.1**
SLIT				*eS*	**Sg**	**14 00 17.4**	**+1.1**
SLIT				AML	AML	14 00 31.6	
	comp=N,946nm,0.6s						
SLIT				AML	AML	14 00 41.9	
	comp=E,2μm,0.7s						
SLIT				AML	AML	14 00 42.1	
	comp=Z,1μm,0.8s						
SLIT	**Slitere, Latvi**	**0.46**	**112**	*eP*	**Pg**	**14 00 10.2**	**-0.3**
EE06	**Soera, Palade,**	**1.37**	**31**	*eP*	**Pg**	**14 00 27.6**	**-0.4**
EE06				*eS*	**Sn**	**14 00 47.4**	**+0.5**
GOTU	**Gotland**	**1.58**	**267**	P	**Pn**	**14 00 30.5**	**-0.5**
GOTU				S	**Sn**	**14 00 52.2**	**+0.2**
GOTU	**Gotland**	**1.58**	**267**	P	**Pn**	**14 00 30.5**	**-0.5**
GOTU				S	**Sn**	**14 00 52.2**	**+0.2**
GOTU	**Gotland**	**1.58**	**267**	P	**Pn**	**14 00 30.5**	**-0.5**
GOTU				S	**Sn**	**14 00 52.2**	**+0.2**
GOTU	**Gotland**	**1.58**	**267**	*eP*	**Pn**	**14 00 30.4**	**-0.5**
GOTU				*eSN*	**Sn**	**14 00 53.0**	**+1.0**
EE01	**Perakula, Nova**	**1.79**	**37**	*eP*	**Pn**	**14 00 34.8**	**+0.9**
EE01				*eS*	**Sg**	**14 00 59.8**	**+0.4**
EE08	**Sarghaua, Vand**	**2.15**	**65**	*ePB*	**Pb**	**14 00 40.4**	**-1.2**
EE08				*eSG*	**Sb**	**14 01 09.0**	**+0.2**
EE02	**Kiisa, Saku**	**2.18**	**49**	*ePB*	**Pb**	**14 00 41.5**	**-0.5**
EE02				*eSG*	**Sg**	**14 01 11.4**	**-0.3**
NYNU	**Nynaeshamn**	**2.20**	**305**	P	**Pn**	**14 00 41.0**	**+1.4**
NYNU	**Nynaeshamn**	**2.20**	**305**	P	**Pn**	**14 00 41.0**	**+1.4**
NYNU	**Nynaeshamn**	**2.20**	**305**	P	**Pn**	**14 00 41.0**	**+1.4**
TVF	**Tvarminne**	**2.24**	**23**	*eP*	**Pb**	**14 00 42.6**	**-0.4**
TVF				*eSB*	**Sg**	**14 01 12.9**	**-0.8**
TVF				smax	smax	14 01 17.2	
	comp=Z,6.2nm,0.2s						
NRTU	**Norrtaelje**	**2.41**	**323**	*eP*	**Pn**	**14 00 43.7**	**+1.3**
NRTU				*eSB*	**Sb**	**14 01 17.2**	**+1.1**
BYXU	**Byxelkrok**	**2.48**	**260**	P	**Pn**	**14 00 44.5**	**+1.2**
BYXU	**Byxelkrok**	**2.48**	**260**	P	**Pn**	**14 00 44.5**	**+1.2**
BYXU	**Byxelkrok**	**2.48**	**260**	P	**Pn**	**14 00 44.5**	**+1.2**
AAL	**Aland**	**2.51**	**342**	*eP*	**Pn**	**14 00 44.6**	**+0.9**
AAL	**Aland**	**2.51**	**342**	*eP*	**Pn**	**14 00 44.7**	**+0.9**
AAL				*eSG*	**Sg**	**14 01 22.3**	**0.0**
VIKU	**Vikbolandet**	**2.64**	**287**	P	**Pn**	**14 00 47.1**	**+1.5**
VIKU	**Vikbolandet**	**2.64**	**287**	P	**Pn**	**14 00 47.1**	**+1.5**
VIKU	**Vikbolandet**	**2.64**	**287**	P	**Pn**	**14 00 47.1**	**+1.5**
VSTU	**Vaestervik**	**2.67**	**269**	P	**Pn**	**14 00 47.2**	**+1.2**
VSTU	**Vaestervik**	**2.67**	**269**	P	**Pn**	**14 00 47.2**	**+1.2**
VSTU	**Vaestervik**	**2.67**	**269**	P	**Pn**	**14 00 47.2**	**+1.2**
PABE	**Paberze**	**2.67**	**148**	*eP*	**Pn**	**14 00 46.7**	**+0.7**
PABE	**Paberze**	**2.67**	**148**	*eP*	**Pn**	**14 00 46.5**	**+0.5**
PABE				AML	AML	14 00 55.3	
	comp=Z,20nm,0.1s						
PABE				*eS*	**Sn**	**14 01 19.4**	**+0.4**
PABE				AML	AML	14 01 28.6	
	comp=E,28nm,0.5s						
PABE				AML	AML	14 01 35.5	
	comp=N,32nm,0.5s						
EE03	**Tooma soojaam,**	**2.73**	**65**	*eP*	**Pn**	**14 00 48.6**	**+1.7**
EE03				*ePB*	**Pb**	**14 00 49.9**	**-1.5**
EE03				*eSB*	**Sb**	**

EKSU	**Eksjoe**	**3.34**	**269**	P		**Pn**	**14 00 55.7**	**+0.6**
EKSU	**Eksjoe**	**3.34**	**269**	P		**Pn**	**14 00 55.7**	**+0.6**
EKSU	**Eksjoe**	**3.34**	**269**	P		**Pn**	**14 00 55.7**	**+0.6**
PVF	**Pernaja**	**3.55**	**37**	*e*P		**Pn**	**14 01 00.5**	**+2.5**
VXJU	**Vaexsjoe**	**3.67**	**259**	P		**Pn**	**14 00 59.9**	**+0.3**
VXJU	**Vaexsjoe**	**3.67**	**259**	P		**Pn**	**14 00 59.9**	**+0.3**
VXJU	**Vaexsjoe**	**3.67**	**259**	P		**Pn**	**14 00 59.9**	**+0.3**
KPF	**Kankaanpaa**	**4.06**	**4**	*e*P		**Pn**	**14 01 06.5**	**+1.5**
KPF				*e*S		**Sn**	**14 01 54.8**	**+1.7**
VJF	**Virojoki**	**4.15**	**46**	*e*P		**Pn**	**14 01 08.1**	**+1.8**
FIA0	**FINESS Array S**	**4.33**	**30**	*e*P		**Pn**	**14 01 10.2**	**+1.5**
FINES	**FINESS Array B**	**4.33**	**30**	Pn		**Pn**	**14 01 09.5**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=213,slow=12,SNR=11							
FINES				Sn		**Sn**	**14 02 00.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=220,slow=22,SNR=6.9							
FINES				Lg		Lg	14 02 16.1	
	comp=Z,0.3nm,0.3s,baz=218,slow=24,SNR=3.4							
	comp=Z,4.9nm,1.0s							
DEL	**Delary**	**4.37**	**255**	*i* P		**Pn**	**14 01 08.7**	**-0.6**
HFS	**Hagfors**	**4.67**	**303**	Pn		**Pn**	**14 01 14.5**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=114,slow=15,SNR=26							
HFS				Sn		**Sn**	**14 02 09.1**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=115,slow=24,SNR=5.4							
HFS				Lg		Lg	14 02 28.3	
	comp=Z,1.2nm,0.3s,baz=115,slow=31,SNR=10							
	comp=Z,1.7nm,0.3s							
BORU	**Boraas**	**4.69**	**272**	*i* P		**Pn**	**14 01 15.0**	**+1.3**
KEF	**Keuruu**	**4.70**	**20**	*e*P		**Pn**	**14 01 15.4**	**+1.7**
KEF	**Keuruu**	**4.70**	**20**	*e*P		**Pn**	**14 01 15.9**	**+2.2**
FABU	**Falkenberg**	**4.82**	**264**	*e*P		**Pn**	**14 01 16.0**	**+0.5**
LUNU	**Lund**	**4.94**	**247**	*i* P		**Pn**	**14 01 16.8**	**-0.4**
KAF	**Kangasniemi**	**4.95**	**27**	*e*P		**Pn**	**14 01 18.9**	**+1.6**
BJUU	**Bjuv**	**4.96**	**253**	*i* P		**Pn**	**14 01 17.0**	**-0.4**
ONAU	**Onsala**	**5.17**	**270**	*i* P		**Pn**	**14 01 21.1**	**+0.7**
HEMU	**Hemsoen**	**5.19**	**342**	*e*P		**Pn**	**14 01 21.9**	**+1.4**
TJOU	**Tjoern**	**5.27**	**277**	*i* P		**Pn**	**14 01 22.3**	**+0.6**
VAF	**Ylistaro**	**5.29**	**6**	*e*P		**Pn**	**14 01 23.2**	**+1.2**
STRU	**Stroemstad**	**5.57**	**287**	*e*P		**Pn**	**14 01 26.6**	**+0.9**
STRU	**Stroemstad**	**5.57**	**287**	*i* P		**Pn**	**14 01 26.8**	**+1.1**
NC602	**NORSAR Array S**	**5.89**	**304**	*e*P		**Pn**	**14 01 31.3**	**+1.1**
NC602				IAML			14 03 09.6	
	comp=Z,2.0nm,0.6s							
NB201	**NORSAR Array S**	**6.14**	**306**	*e*P		**Pn**	**14 01 34.3**	**+0.6**
NB201				IAML			14 03 27.8	
	comp=Z,2.3nm,0.5s							
NOA	**NORSAR Array B**	**6.17**	**306**	Pn		**Pn**	**14 01 34.0**	**-0.1**
	baz=118,slow=11,SNR=6.6							
NOA				Lg		Lg	14 03 15.1	
	comp=Z,0.1nm,0.3s,baz=136,slow=24,SNR=6.1							
	comp=Z,0.1nm,0.4s							
NC303	**NORSAR Array S**	**6.20**	**308**	*e*P		**Pn**	**14 01 34.8**	**+0.4**
NC303				IAML			14 03 22.1	
	comp=Z,2.9nm,0.4s							
NAO01	**NORSAR Array S**	**6.23**	**304**	*e*P		**Pn**	**14 01 34.8**	**-0.1**
NBO00	**NORSAR Array S**	**6.36**	**305**	*e*P		**Pn**	**14 01 36.0**	**-0.6**
NC204	**NORSAR Array S**	**6.48**	**307**	*e*P		**Pn**	**14 01 38.2**	**-0.1**
JOF	**Joensuu**	**7.07**	**39**	*e*P		**Pn**	**14 01 46.3**	**0.0**
LEIR	**Leirfjorden**	**9.22**	**338**	*e*P		**Pn**	**14 02 16.1**	**+0.3**
RAUS	**Rausandaksla**	**9.34**	**341**	*e*P		**Pn**	**14 02 17.6**	**+0.2**
SALU	**Saltoluokta**	**9.71**	**353**	*e*P		**Pn**	**14 02 21.9**	**-0.7**
VAGH	**Vaagaholmen**	**9.74**	**340**	*e*P		**Pn**	**14 02 23.1**	**+0.2**
HEF	**Hetta**	**10.69**	**4**	*e*P		**Pn**	**14 02 34.4**	**-1.6**
ARCES	**ARCESS Array B**	**11.91**	**7**	Pn		**Pn**	**14 02 50.2**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=10							
	comp=Z,0.2nm,0.3s							

*NEIC **09** 14:05:04.3±1.9,21.5°N±0.1°×144.8°E±0.2, h87km±10km, mb4.4/14, Error ellipse: s-maj=25.1km s-min=15.3km az=74.0*
*IDC **09** 14:05:05.7±3.9,21.5°N×144.89°E, h99km±31km, mb3.8/12, mbtmp4.1/14, MS3.9/3, Error ellipse: s-maj=47.3km s-min=15.3km az=81.0*
ISC 09 14:05:05.5±0.8, 21.59°N±0.08°×144.8°E±0.2, h100km, n38, σ1°§40/37, mb4.2/20, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**5.98**	**337**			**Pn**	**14 06 30.6**	**-0.9**
JCJ	**Chichijima**	**5.98**	**337**	P		**Pn**	**14 06 31.1**	**-0.4**
	60nm,0.6s,baz=252,slow=20,SNR=5.4							
JCJ				S		**Sn**	**14 07 35.3**	**-3.3**
	27nm,0.3s,baz=295,slow=21,SNR=6.4							
JSG	**Sagara**	**14.28**	**337**	Pn		**Pn**	**14 08 22.2**	**-0.8**
MJAR	**Matsushiro Arr**	**15.97**	**340**	P		**P**	**14 08 46.8**	**+0.8**
	0.4nm,0.5s,baz=164,slow=6.2,SNR=7.8							
JNU	**Nakatsue**	**16.86**	**316**	Pn		**Pn**	**14 08 52.6**	**-2.8**
JNU	**Nakatsue**	**16.86**	**316**	P		**P**	**14 08 59.4**	**+3.6**
	3.7nm,0.5s,baz=132,slow=12,SNR=6.6							
KSRS	**Korea Array**	**21.53**	**321**	P		**P**	**14 09 49.9**	**+3.4**
	1.8nm,0.7s,baz=148,slow=8.5,SNR=11							
	1.8nm,0.7s							
SSLB	**Suanglung**	**22.11**	**280**	P		**P**	**14 09 53.1**	**+0.3**
SSLB				IAmb		IAmb	14 09 55.9	
	comp=Z,53nm,1.4s							
COEN	**Coen**	**35.36**	**183**	P		**P**	**14 11 51.5**	**-0.1**
COEN				IAmb		IAmb	14 11 53.7	
	comp=Z,4.9nm,0.7s							
MTN	**Manton Dam**	**36.76**	**203**	P		**P**	**14 12 03.2**	**-0.3**
MTN				IAmb		IAmb	14 12 15.0	
	comp=Z,12nm,1.3s							
KNRA	**Kununurra**	**40.24**	**204**	P		**P**	**14 12 31.8**	**-0.8**
SONM	**Songino Array**	**40.39**	**320**	P		**P**	**14 12 35.4**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=116,slow=6.6,SNR=2.7							
	comp=Z,1.1nm,0.8s							
WRA	**Warramunga Arr**	**42.53**	**195**	P		**P**	**14 12 51.5**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=19,slow=9.3,SNR=8.8							
	comp=Z,1.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**43.09**	**274**	P		**P**	**14 12 56.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=79,slow=9.1,SNR=2.4							
	comp=Z,0.4nm,0.5s							
FITZ	**Fitzroy Crossi**	**43.68**	**207**	P		**P**	**14 12 58.6**	**-2.0**
AS31	**Alice Springs**	**46.22**	**194**	P		**P**	**14 13 18.6**	**-2.0**
ASAR	**Alice Springs**	**46.22**	**194**	P		**P**	**14 13 20.0**	**-0.7**
ASAR	**Alice Springs**	**46.22**	**194**	P		**P**	**14 13 20.6**	**0.0**
	comp=Z,0.5nm,0.4s,baz=10,slow=7.4,SNR=22							
	comp=Z,0.5nm,0.4s							
BRDH	**Bariadhala**	**49.04**	**282**	LR		LR	14 33 51.6	
	comp=Z,243nm,20.4s,baz=202,slow=35							
INKA	**Innaminka**	**49.20**	**185**	P		**P**	**14 13 42.8**	**-0.8**
INKA				IAmb		IAmb	14 14 13.7	
	comp=Z,5.4nm,1.5s							
M13K	**Dall Lake**	**52.92**	**29**	P		**P**	**14 14 10.8**	**-0.3**
ZALV	**Zalesovo Beam**	**55.23**	**321**	P		**P**	**14 14 27.0**	**-1.0**
ZALV	**Zalesovo Beam**	**55.23**	**321**	P		**P**	**14 14 28.6**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=100,slow=8.0,SNR=7.4							
	comp=Z,1.3nm,0.5s							
MKAR	**Makanchi Array**	**55.88**	**313**	P		**P**	**14 14 32.4**	**-0.5**
MKAR	**Makanchi Array**	**55.88**	**313**	P		**P**	**14 14 33.8**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=88,slow=9.4,SNR=17							
MKAR				PcP		**PcP**	**14 15 30.8**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=74,slow=4.2,SNR=11							
	comp=Z,1.1nm,0.5s							
MAKZ	**Makanchi**	**56.10**	**313**	P		**P**	**14 14 35.1**	**+0.7**
MAKZ				IAmb		IAmb	14 14 35.9	
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**58.58**	**317**	P		**P**	**14 14 51.8**	**0.0**
KURK				IAmb		IAmb	14 14 53.0	
	comp=Z,1.7nm,0.5s							
KURBB	**Kurchatov Arra**	**58.63**	**317**	P		**P**	**14 14 52.8**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=93,slow=7.4,SNR=17							
	comp=Z,1.3nm,0.4s							
NWAO	**Narrogin (SRO)**	**60.27**	**207**	LR		LR	14 40 06.9	
	comp=Z,115nm,21.4s,baz=42,slow=35							
BVAR	**Borovoye Array**	**63.73**	**320**	P		**P**	**14 15 27.2**	**+0.7**
	comp=Z,2.9nm,0.4s,baz=91,slow=7.7,SNR=26							
	comp=Z,2.9nm,0.4s							
KK31	**Karatay Array**	**64.30**	**309**	P		**P**	**14 15 30.9**	**+0.4**
KK31				IAmb		IAmb	14 15 32.2	
	comp=Z,2.3nm,0.8s							
CHGR	**Chuyangaron**	**65.91**	**304**			**P**	**14 15 40.3**	**-0.7**
AB31	**Akbulak array**	**70.67**	**316**			**P**	**14 16 10.9**	**+0.5**
AB31				IAmb		IAmb	14 16 11.4	
	comp=Z,1.9nm,0.7s							
ARCES	**ARCESS Array B**	**79.50**	**342**	P		**P**	**14 17 02.5**	**+1.8**
	comp=Z,2.0nm,0.8s,baz=71,slow=8.1,SNR=12							
	comp=Z,2.0nm,0.8s							
GNI	**Garni**	**83.67**	**311**	LR		LR	14 58 05.6	
	comp=Z,22nm,19.8s,baz=7.5,slow=38							
FINES	**FINESS Array B**	**83.92**	**335**	P		**P**	**14 17 24.2**	**+0.1**
	comp=Z,2.8nm,0.4s,baz=69,slow=4.6,SNR=46							
	comp=Z,2.8nm,0.4s							
HFS	**Hagfors**	**89.40**	**338**	P		**P**	**14 17 50.2**	**-0.5**
	comp=Z,4.0nm,1.0s,baz=70,slow=5.2,SNR=5.1							
	comp=Z,4.0nm,1.0s							

PLCA	**Paso Flores**	**144.55**	**131**	PKP		**PKPdf**	**14 24 30.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=180,slow=1.0,SNR=1.5							

*IDC **09** 14:16:55.2±0.8,2.01°N×96.75°E, h0km, mb4.2/16, mbtmp4.2/18, ML3.6/2, MS3.7/19, Error ellipse: s-maj=24.5km s-min=16.2km az=41.0*
*BJI **09** 14:16:59.7,2.17°N×96.69°E, h31km, mB5.2/8, mb4.5/38, Ms4.3/2, Ms7 4.0/3*
*NEIC **09** 14:16:59.9±2.2,1.95°N±0.07°×96.8°E±0.1, h29km±5km, mb4.7/24, Error ellipse: s-maj=15.4km s-min=9.2km az=73.0*
*DJA **09** 14:16:59.0±0.3,2°N±1°×97°E±°, h37km±9km, M4.6/18, mB5.5/2, mb4.7/7, MLv4.5/18, Mw(mB)5.0/2*
ISC 09 14:16:59.4±0.9, 1.93N±0.04°×96.72E±0.05, h31km±7km, n123, σ1°§12/105, mb4.5/40, MS3.8/18, 1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.62**	**320**	P		**Pb**	**14 17 11.4**	**-0.4**
SNSI				S		**Sn**	**14 17 21.3**	**+0.4**
GSI	**Gunungsitoli**	**1.06**	**126**			**Pn**	**14 17 18.6**	**+0.4**
GSI	**Gunungsitoli**	**1.06**	**126**	P		**Pb**	**14 17 18.8**	**-0.4**
GSI	**Gunungsitoli**	**1.06**	**126**	P		**Pn**	**14 17 18.4**	**+0.2**
GSI				S		**Sb**	**14 17 33.0**	**+0.2**
KCSI	**Kotacane, Aceh**	**1.90**	**34**	P		**Pn**	**14 17 29.8**	**+0.1**
KCSI				S		**Sn**	**14 17 53.2**	**+0.6**
RPSI	**Rantau Prapat**	**2.33**	**71**			**Pn**	**14 17 36.3**	**+0.6**
MLSI	**Meulaboh, Aceh**	**2.34**	**352**	P		**Pn**	**14 17 34.8**	**-1.0**
MLSI				S		**Sn**	**14 18 03.0**	**-0.6**
PSI	**Prapat**	**2.37**	**69**	Pn		**Pn**	**14 17 35.8**	**-0.5**
	3.5nm,0.3s,baz=257,slow=8.6,SNR=34							
	22nm,0.5s							
PSI	**Prapat**	**2.37**	**69**	P		**Pn**	**14 17 36.6**	**+0.3**
PBSI	**Pulau Batu**	**2.52**	**142**	P		**Pn**	**14 17 39.0**	**+0.8**
PBSI				S		**Sn**	**14 18 07.4**	**-0.4**
MNSI	**Mandailing Nat**	**3.07**	**111**	P		**Pn**	**14 17 46.7**	**+0.8**
MNSI				S		**Sn**	**14 18 23.1**	**+1.5**
LHMI	**Lhok Sumawe**	**3.28**	**4**	P		**Pn**	**14 17 48.9**	**+0.1**
LHMI	**Lhok Sumawe**	**3.28**	**4**	P		**Pn**	**14 17 47.7**	**-1.1**
LHMI				S		**Sn**	**14 18 26.5**	**-0.3**
SISI	**Saibi**	**4.01**	**144**	P		**Pn**	**14 17 59.0**	**+0.2**
SISI				S		**Sn**	**14 18 44.7**	**-0.1**
PPI	**Padang Panjang**	**4.38**	**123**	P		**Pn**	**14 18 04.0**	**+0.2**
PPI				S		**Sn**	**14 18 54.4**	**+0.6**
PDSI	**Padang**	**4.69**	**127**	P		**Pn**	**14 18 08.3**	**+0.2**
IPM	**Ipoh**	**4.99**	**59**			**Pn**	**14 18 12.9**	**+0.7**
IPM	**Ipoh**	**4.99**	**59**	P		**Pn**	**14 18 13.0**	**+0.7**
KULM	**Kulim**	**5.15**	**50**			**Pn**	**14 18 14.3**	**-0.2**
KULM	**Kulim**	**5.15**	**50**	P		**Pn**	**14 18 14.4**	**-0.1**
PPSI	**Pulau Pagai**	**5.71**	**145**	P		**Pn**	**14 18 21.3**	**-0.8**
	0.6nm78nm,1.0s							
CMBY	**CAMPBELL BAY**	**5.76**	**331**	*e*P		Pn	14 18 28.4	+5.5
CMBY				*e*S		**Sn**	**14 19 29.1**	**+1.1**
CMBY				IAML			14 19 41.9	
	comp=E,590nm,0.6s							
CMBY				IAML			14 19 42.9	
	comp=N,480nm,0.5s							
KRJI	**Kerinci**	**6.20**	**130**	P		**Pn**	**14 18 28.7**	**-0.3**
MASI	**Maura Aman, Be**	**7.47**	**132**	P		**Pn**	**14 18 46.9**	**+0.5**
	comp=N,55nm,0.7s							
MASI				S		**Sn**	**14 20 11.6**	**+1.4**
	comp=N,55nm,0.7s							
MNAI	**Manna**	**8.82**	**135**	Pn		**Pn**	**14 19 05.0**	**0.0**
MNAI	**Manna**	**8.82**	**135**	P		**Pn**	**14 19 05.5**	**+0.5**
	comp=N,126nm,1.2s							
MDSI	**Maura Dua**	**9.81**	**131**	P		**Pn**	**14 19 18.3**	**-0.1**
LEM	**Lembang**	**13.93**	**129**	LR		LR	14 26 24.5	
	comp=N,181nm,19.0s,baz=287,slow=41							
SBUM	**Sibu**	**15.50**	**88**	P		**Pn**	**14 20 37.3**	**+1.4**
CMAR	**Chiang Mai Arr**	**16.57**	**7**			**Pn**	**14 20 50.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**16.57**	**7**	Pn		**Pn**	**14 20 47.8**	**-1.8**
	comp=N,0.3nm,0.3s,baz=198,slow=12,SNR=61							
CMAR				LR		LR	14 27 25.8	
	comp=N,204nm,21.4s,baz=180,slow=38							
	comp=N,9.1nm,0.8s							
PALK	**Pallekele**	**16.82**	**289**	Sn		Sn	14 23 44.2	-15
	comp=N,0.6nm,0.3s,baz=2.7,slow=15,SNR=4.2							
CHTO	**Chiang Mai**	**16.92**	**7**	P		**Pn**	**14 20 54.7**	**+0.7**
VIS	**Vishakhapatnam**	**20.47**	**321**	*e*P		Pn	14 21 37.5	+0.4
VIS				*e*S		**S**	**14 25 24.2**	**+1.6**
SLVN	**Son La**	**20.52**	**19**	P		**P**	**14 21 33.4**	**-2.0**
SLVN	**Son La**	**20.52**	**19**	P		**P**	**14 21 35.9**	**+0.6**
RAGD	**RAYAGADA**	**21.56**	**324**	*ex*		**P**	**14 21 49.8**	**+3.3**
RAGD				IAmb		IAmb	14 21 56.2	
	comp=Z,49nm,1.4s							
MYLDM	**Lahad Datu**	**21.97**	**81**			**P**	**14 21 46.5**	**-4.6**
MYLDM	**Lahad Datu**	**21.97**	**81**	P		**P**	**14 21 53.0**	**+2.0**
TNCH	**TengChong**	**23.03**	**4**	P		**P**	**14 22 02.3**	**0.0**
TNCH				pP		pP	14 22 09.7	-1.0
TNCH				pmax		pmax		
	comp=Z,27nm,0.9s							
KMI	**Kunming**	**23.78**	**14**	P		**P**	**14 22 09.3**	**-0.4**
KMI				pmax		pmax		
	comp=Z,10.0nm,0.7s							
SHL	**Shillong**	**23.96**	**349**	P		**P**	**14 22 07.4**	**-3.9**
SHL				IAmb		IAmb	14 22 11.8	
	comp=Z,31nm,0.9s							
SHL	**Shillong**	**23.96**	**349**	*e*P		**P**	**14 22 12.3**	**+1.0**
SHL				IAmb		IAmb	14 22 12.6	
	comp=Z,12nm,0.8s							
BOK	**Bokaro**	**24.13**	**335**	*e*P		**P**	**14 22 13.2**	**+0.4**
BOK				IAmb		IAmb	14 22 26.8	
	comp=Z,15nm,0.9s							
PZH	**PanZhiHua**	**24.90**	**11**	P		**P**	**14 22 20.5**	**+0.6**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
H08S2	**Diego Garcia H**	**25.97**	**248**	T		T	14 49 16.3	
	baz=69,slow=75,SNR=2785							
H08S3	**Diego Garcia H**	**25.98**	**248**	T		T	14 49 19.1	
	baz=69,slow=75,SNR=1533							
H08S1	**Diego Garcia H**	**25.99**	**248**	T		T	14 49 23.5	
	baz=69,slow=75,SNR=2219							
EVN	**Everest**	**27.56**	**341**	P		**P**	**14 22 44.8**	**+0.3**
LSA	**Lhasa**	**28.12**	**350**	P		**P**	**14 22 48.7**	**-0.6**
XAN	**Xi'an**	**33.92**	**18**	P		**P**	**14 23 38.0**	**-1.9**
XAN				pmax		pmax		
	comp=Z,13nm,1.3s							
LZH	**Lanzhou**	**34.62**	**10**	*e*P		**P**	**14 23 44.9**	**-1.2**
LZH				pP		pP	14 23 54.5	-0.4
LZH				sP		sP	14 23 58.7	0.0
LZH				pmax		pmax		
	comp=Z,14nm,1.3s							
LZH				pmax		pmax		
	comp=Z,150nm,4.1s							
LZH				LR		LR		
	comp=Z,240nm,13.4s							
LZH				LR		LR		
	comp=Z,270nm,14.1s							
LZH				LR		LR		
	comp=Z,110nm,14.1s							
FITZ	**Fitzroy Crossi**	**34.74**	**126**	LR		LR	14 39 25.5	
	comp=Z,72nm,20.7s,baz=336,slow=39							
DHRM	**DHARAMSHALA**	**35.77**	**330**	*e*P		**P**	**14 23 58.7**	**+2.7**
DHRM				IAmb		IAmb	14 24 09.9	
	comp=Z,5.8nm,0.7s							
NJ2	**Nanjing**	**36.50**	**33**	*e*P		**P**	**14 24 03.8**	**+1.7**
NJ2				pmax		pmax		
	comp=Z,12nm,0.6s							
GTA	**Gaotai**	**37.41**	**4**	*e*P		**P**	**14 24 10.3**	**+0.4**
GTA				pP		pP	14 24 18.5	-0.3
GTA				pmax		pmax		
	comp=Z,17nm,0.9s							
HNS	**HongShan**	**38.99**	**23**	||P		**P**	**14 24 23.4**	**+0.4**
HNS				pmax		pmax		
	comp=Z,10.0nm,1.1s							
H01W3	**Cape Leeuwin H**	**40.10**	**158**	T		T	15 07 08.5	
	baz=333,slow=76,SNR=29							
H01W2	**Cape Leeuwin H**	**40.11**	**158**	T		T	15 07 09.5	
	baz=333,slow=76,SNR=27							
H01W1	**Cape Leeuwin H**	**40.12**	**158**	T		T	15 07 19.8	
	baz=333,slow=76,SNR=38							
HHC	**Hu-ho-hao-te**	**41.00**	**17**	*e*P		**P**	**14 24 43.0**	**+3.2**
HHC				pmax		pmax		
	comp=Z,16nm,0.6s							
HHC				pmax		pmax		
	comp=Z,66nm,4.5s							
BJI	**Beijing**	**41.85**	**23**	P		**P**	**14 24 47.0**	**+0.4**
BJI				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KSH	**Kashi**	**41.91**	**336**	P		**P**	**14 24 47.5**	**+0.1**
KSH				pmax		pmax		

	comp=Z,4.0nm,0.8s							
WRA	**Warramunga Arr**	**42.83**	**122**	P		**P**	**14 24 54.5**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=300,slow=9.1,SNR=8.8							
	comp=Z,2.5nm,0.8s							
TARG	**Taragay, Kyrgy**	**43.12**	**339**	P		**P**	**14 24 58.2**	**+0.7**
TARG				IAmb		IAmb	14 25 09.5	
	comp=Z,11nm,1.1s							
KDJ	**Kajisay**	**43.70**	**339**	P		**P**	**14 25 02.8**	**+1.0**
KDJ				IAmb		IAmb	14 25 13.4	
	comp=Z,13nm,0.9s							
DRK	**Karamyk**	**43.72**	**332**	P		**P**	**14 25 02.9**	**+0.6**
GAR	**Garm**	**44.07**	**330**	IAmb		IAmb	14 25 16.9	
	comp=Z,16nm,1.1s							
ASAR	**Alice Springs**	**44.22**	**127**	P		**P**	**14 25 04.1**	**-2.0**
ASAR	**Alice Springs**	**44.22**	**127**	P		**P**	**14 25 06.5**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=308,slow=7.6,SNR=16							
	comp=Z,1.7nm,0.8s							
BOOM	**Boomskroe usch**	**44.47**	**338**	IAmb		IAmb	14 25 20.3	
	comp=Z,14nm,1.5s							
ARSB	**Arslanbob**	**44.68**	**334**	IAmb		IAmb	14 25 33.9	
	comp=Z,16nm,1.2s							
AAK	**Ala-Archa**	**45.15**	**337**	LR		LR	14 45 38.4	
	comp=Z,86nm,21.6s,baz=147,slow=38							
KSRS	**Korea Array**	**45.53**	**35**	P		**P**	**14 25 15.8**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=229,slow=9.6,SNR=9.6							
	comp=Z,4.3nm,0.9s							
MKAR	**Makanchi Array**	**46.42**	**346**	P		**P**	**14 25 22.7**	**-0.5**
MKAR	**Makanchi Array**	**46.42**	**346**	P		**P**	**14 25 23.2**	**0.0**
	comp=Z,7.3nm,0.8s,baz=159,slow=7.8,SNR=52							
MKAR				LR		LR	14 48 42.6	
	comp=Z,84nm,19.0s,baz=156,slow=41							
	comp=Z,7.3nm,0.8s							
SONM	**Songino Array**	**46.49**	**9**	P		**P**	**14 25 23.9**	**+0.1**
SONM				IAmb		IAmb	14 25 33.4	
	comp=Z,8.0nm,1.1s							
SONM	**Songino Array**	**46.49**	**9**	P		**P**	**14 25 23.8**	**-0.1**
	comp=Z,5.1nm,0.9s,baz=192,slow=9.0,SNR=20							
SONM				PcP		**PcP**	**14 26 58.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=188,slow=2.9,SNR=2.4							
	comp=Z,5.1nm,0.9s							
MAKZ	**Makanchi**	**46.51**	**346**	P		**P**	**14 25 23.3**	**-0.6**
MAKZ				IAmb		IAmb	14 25 24.8	
	comp=Z,6.4nm,0.8s							
KKAR	**Karatay Array**	**47.19**	**334**	P		**P**	**14 25 29.4**	**+0.1**
GUMO	**Guam**	**48.99**	**74**	LR		LR	14 45 28.4	
	comp=Z,41nm,21.9s,baz=238,slow=35							
KURBB	**Kurchatov Arra**	**50.91**	**345**	P		**P**	**14 25 58.0**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=167,slow=6.9,SNR=31							
	comp=Z,3.1nm,0.7s							
KURK	**Kurchatov**	**50.97**	**345**	P		**P**	**14 25 57.5**	**-0.5**
HILR	**Hailar Array B**	**51.36**	**19**	P		**P**	**14 26 00.8**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=198,slow=14,SNR=3.8							
	comp=Z,1.2nm,0.4s							
MJAR	**Matsushiro Arr**	**51.48**	**43**	P		**P**	**14 26 02.7**	**+0.5**
MJAR	**Matsushiro Arr**	**51.48**	**43**	P		**P**	**14 26 01.7**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=224,slow=5.4,SNR=5.9							
	comp=Z,1.8nm,0.9s							
ZALV	**Zalesovo Beam**	**52.77**	**351**	P		**P**	**14 26 10.9**	**-0.5**
ZALV	**Zalesovo Beam**	**52.77**	**351**	P		**P**	**14 26 11.4**	**0.0**
	comp=Z,13nm,0.8s,baz=182,slow=6.0,SNR=53							
ZALV				LR		LR	14 53 43.9	
	comp=Z,37nm,18.4s,baz=194,slow=42							
	comp=Z,13nm,0.8s							
BVAR	**Borovoye Array**	**55.41**	**341**	P		**P**	**14 26 30.5**	**-0.3**
	comp=

LEM	**Lembang**	**4.17**	**309**	Pg	Pn	14 51 56.5	+5.5
	2.3nm,0.3s,baz=102,slow=20,SNR=4.5						
LEM				Lg	Lg	14 52 44.9	
	4.4nm,0.3s,baz=285,slow=20,SNR=1.8						
SRBI	**Singaraja**	**4.52**	**72**	P	**Pn**	**14 51 58.0**	**+2.4**
TWSI	**Taliwang, Sumb**	**5.99**	**83**	P	**Pn**	**14 52 17.2**	**+1.4**
	0.1nm18nm,0.8s						
PLAI	**Plampang**	**6.86**	**85**	P	**Pn**	**14 52 29.0**	**+1.3**
FITZ	**Fitzroy Crossi**	**16.69**	**122**	Pn	**Pn**	**14 54 38.9**	**-1.9**
	0.1nm,0.3s,baz=307,slow=9.7,SNR=3.3						
	2.6nm,0.9s						
WRA	**Warramunga Arr**	**24.93**	**117**	P	**P**	**14 56 10.3**	**+0.6**
	1.1nm,0.8s,baz=291,slow=9.3,SNR=3.1						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**26.13**	**125**	P	**P**	**14 56 20.9**	**+0.2**
	1.0nm,0.6s,baz=302,slow=8.8,SNR=20						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**36.13**	**133**	P	**P**	**14 57 48.5**	**-0.1**
	1.4nm,0.7s,baz=300,slow=8.5,SNR=1.4						
STKA				LR	LR	15 15 52.6	
	comp=Z,35nm,18.6s,baz=6.7,slow=42						
	1.4nm,0.7s						
MKAR	**Makanchi Array**	**61.58**	**338**	P	**P**	**15 01 01.9**	**-1.5**
	1.3nm,0.4s,baz=152,slow=7.5,SNR=22						
	1.3nm,0.4s						
KURBB	**Kurchatov Arra**	**66.15**	**338**	P	**P**	**15 01 31.9**	**-1.4**
	0.4nm,0.6s,baz=156,slow=5.7,SNR=2.6						
	0.4nm,0.6s						

*IDC **09** 14:53:34.1±2.9,3.85S×134.81E,h0km,mb3.7/2, mbtmp3.9/5,ML3.8/3,MS3.2/1,Error ellipse: s-maj=122.1km s-min=25.9km az=84.0*

*DJA **09** 14:53:36.4±0.3,4.4°S±4.4°×13.5°E±.°,h10km,M4.3/13,mB5.7/1, mb4.5/6,MLv4.2/13,Mw(mB)5.2/1*

ISC 09 14:53:36.4±0.8,**3.96S**±0.07°×**134.87E**±0.06,**h23**km,**n16,** σ2.96/18,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**1.20**	**284**	P	**Pb**	**14 53 59.4**	**+1.0**
RKPI	**Ransiki, Papua**	**2.53**	**344**	P	**Pn**	**14 54 14.7**	**-1.4**
FAKI	**Fak Fak**	**2.81**	**292**	P	**Pn**	**14 54 19.7**	**-0.3**
BAKI	**Biak**	**3.02**	**24**	P	**Pn**	**14 54 20.7**	**-2.2**
SMPI	**Sarmi**	**4.31**	**63**	P	**Pn**	**14 54 40.5**	**-0.1**
SMPI				S	**Sn**	**14 55 28.4**	**-1.8**
SWI	**Sorong**	**4.74**	**310**	P	**Pn**	**14 54 45.1**	**-1.4**
BNDI	**Bandanaira**	**4.98**	**263**	P	**Pn**	**14 54 51.3**	**+1.5**
	0.6nm8μm104nm,1.3s						
GENI	**Genyem**	**5.47**	**76**	P	**Pn**	**14 54 54.9**	**-1.6**
	0.3nm43nm,0.9s						
JAY	**Jayapura**	**6.00**	**76**	P	**Pn**	**14 55 04.1**	**+0.1**
MMPI	**Merauke**	**7.08**	**129**	P	**Pn**	**14 55 23.4**	**+4.7**
WRA	**Warramunga Arr**	**15.89**	**182**	Pn	**Pn**	**14 57 19.5**	**+0.7**
	0.2nm,0.3s,baz=4.4,slow=11,SNR=5.4						
WRA				Sn	**Sn**	**15 00 08.2**	**-6.2**
	0.1nm,0.3s,baz=7.9,slow=20,SNR=2.4						
	3.8nm,1.3s						
FITZ	**Fitzroy Crossi**	**16.70**	**212**	Pn	**Pn**	**14 57 29.1**	**0.0**
	0.4nm,0.3s,baz=29,slow=14,SNR=8.8						
FITZ				Sn	**Sn**	**15 00 27.7**	**-6.4**
	0.3nm,0.3s,baz=102,slow=19,SNR=3.5						
	3.9nm,0.8s						
ASAR	**Alice Springs**	**19.61**	**183**	P	**P**	**14 58 06.5**	**+3.1**
	0.5nm,0.3s,baz=7.5,slow=11,SNR=38						
ASAR				S	S	15 01 36.2	-7.3
	0.3nm,0.7s,baz=359,slow=26,SNR=2.2						
	2.3nm,0.5s						
LEM	**Lembang**	**27.27**	**263**	LR	LR	15 11 17.1	
	comp=Z,50nm,21.0s,baz=4.5,slow=39						
MKAR	**Makanchi Array**	**68.49**	**324**	P	**P**	**15 04 37.6**	**+0.7**
	0.7nm,0.6s,baz=114,slow=7.5,SNR=9.2						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**72.58**	**326**	P	**P**	**15 05 02.5**	**+0.7**
	0.2nm,0.5s,baz=120,slow=5.6,SNR=3.3						
	0.2nm,0.5s						

*IDC **09** 15:01:49.6±1.1,0.22S×99.90E,h42km±6km,mb3.4/8, mbtmp3.7/8,Error ellipse: s-maj=53.9km s-min=13.8km az=58.0*

*DJA **09** 15:01:49.3±0.3,1.°S±3.°×9.°9E±.°,h40km±14km,M4.1/14, mb4.3/4,MLv4.0/14*

ISC 09 15:01:48.6±0.7,**0.56S**±0.04×**99.23E**±0.05,**h53**km,**n25,** σ1.958/32,**mb3.9/8,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.78**	**190**	P	**Pn**	**15 02 04.2**	**+0.7**
SISI				S	**Sn**	**15 02 14.8**	**+0.5**
PBSI	**Pulau Batu**	**1.07**	**298**	P	**Pn**	**15 02 07.7**	**+0.3**
PBSI				S	**Sn**	**15 02 23.2**	**+1.9**
PPI	**Padang Panjang**	**1.17**	**85**	P	**Pn**	**15 02 09.4**	**+0.7**
PPI				S	**Sn**	**15 02 24.4**	**+0.8**
PDSI	**Padang**	**1.28**	**106**	P	**Pn**	**15 02 10.8**	**+0.6**
PDSI				S	**Sn**	**15 02 27.1**	**+0.8**
MNSI	**Mandailing Nat**	**1.39**	**15**	P	**Pn**	**15 02 13.3**	**+1.7**
BKNI	**Bangkinang**	**2.01**	**64**	P	**Pn**	**15 02 22.0**	**+1.9**
SBSI	**Sibolga**	**2.12**	**351**	P	**Pn**	**15 02 20.5**	**-1.1**
PPSI	**Pulau Pagai**	**2.33**	**160**	P	**Pn**	**15 02 24.2**	**-0.2**
GSI	**Gunungsitoli**	**2.48**	**318**	P	**Pn**	**15 02 27.0**	**+0.4**
PSI	**Prapat**	**3.35**	**355**	P	**Pn**	**15 02 38.1**	**-0.4**
	8.5nm,0.3s,baz=250,slow=2.8,SNR=12						
MASI	**Maura Aman, Be**	**3.95**	**131**	P	**Pn**	**15 02 47.3**	**+0.5**
KCSI	**Kotacane, Aceh**	**4.31**	**340**	P	**Pn**	**15 02 53.3**	**+1.7**
MNAI	**Manna**	**5.30**	**135**	P	**Pn**	**15 03 06.2**	**+0.9**
	129nm,1.1s						
MDSI	**Maura Dua**	**6.30**	**128**	P	**Pn**	**15 03 19.5**	**+0.6**
H08S2	**Diego Garcia H**	**27.57**	**255**	T	T	15 35 24.5	
	baz=76,slow=76,SNR=105						
H08S3	**Diego Garcia H**	**27.57**	**255**	T	T	15 35 25.6	
	baz=76,slow=76,SNR=114						
H08S1	**Diego Carcia H**	**27.58**	**255**	T	T	15 35 27.9	
	baz=76,slow=76,SNR=109						
WRA	**Warramunga Arr**	**39.39**	**122**	P	**P**	**15 09 12.4**	**-1.1**
	0.6nm,0.6s,baz=309,slow=9.0,SNR=7.2						
WRA				pP	**pP**	**15 09 23.7**	**-3.2**
	0.7nm,0.6s,baz=308,slow=9.1,SNR=3.0						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**40.72**	**127**	P	**P**	**15 09 23.6**	**-0.9**
	0.5nm,0.6s,baz=302,slow=8.0,SNR=13						
ASAR				pP	**pP**	**15 09 35.4**	**-2.6**
	0.8nm,0.7s,baz=299,slow=7.6,SNR=5.9						
	0.5nm,0.6s						
SONM	**Songino Array**	**48.60**	**6**	P	**P**	**15 10 26.9**	**-0.1**
	0.6nm,0.6s,baz=194,slow=7.5,SNR=4.4						
SONM				pP	**pP**	**15 10 38.4**	**-2.8**
	0.7nm,0.7s,baz=195,slow=8.1,SNR=3.9						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**49.44**	**345**	P	**P**	**15 10 34.1**	**+0.8**
	0.4nm,0.6s,baz=156,slow=8.9,SNR=6.3						
MKAR				pP	**pP**	**15 10 46.5**	**-1.0**
	0.9nm,0.6s,baz=152,slow=8.2,SNR=6.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**53.96**	**344**	P	**P**	**15 11 08.1**	**+1.2**
	0.2nm,0.5s,baz=150,slow=7.5,SNR=5.0						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**55.62**	**350**	P	**P**	**15 11 18.4**	**-0.4**
	0.7nm,0.5s,baz=162,slow=7.4,SNR=4.1						
ZALV				pP	**pP**	**15 11 31.8**	**-1.5**
	1.9nm,0.6s,baz=165,slow=6.2,SNR=6.2						
	0.7nm,0.5s						
BVAR	**Borovoye Array**	**58.57**	**340**	P	**P**	**15 11 41.0**	**+1.2**
	0.5nm,0.5s,baz=129,slow=13,SNR=2.3						
BVAR				pP	**pP**	**15 11 53.1**	**-1.0**
	0.9nm,0.5s,baz=151,slow=8.2,SNR=5.0						
	0.5nm,0.5s						
QSPA	**South Pole Qui**	**89.40**	**180**	P	**P**	**15 14 43.8**	**+4.3**
	0.4nm,0.5s,baz=251,slow=1.4,SNR=7.8						
	0.4nm,0.5s						

GCG 09 15:05:32.8±0.9,**14.10N**×**91.35W**,**h57**km±8km,**MD3.7, ML4.0,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.33**	**355**	*e*P	Pn	15 05 47.1	+3.9
STG2				*e*S	Sn	15 05 57.5	+7.0
ESSG	**Sabana Grande**	**0.57**	**61**	*e*P	Pn	15 05 45.5	+0.1
SOKI	**Kika Raxquin**	**0.72**	**355**	*e*S	Sn	15 06 00.4	+2.1
FG16	**Alotenango, Sa**	**0.83**	**78**	*i* P	Pn	15 05 46.3	-2.5
FG16				*i* S	Sn	15 05 56.9	-3.5
FG16				IAML		15 05 59.9	
	comp=N,17μm,0.2s						
PCG5	**San Vicente Pa**	**0.95**	**83**	*i* P	Pn	15 05 47.7	-2.5
PCG5				*i* S	Sn	15 05 59.1	-3.9
ESSJ	**San Jos, E**	**0.98**	**123**	*i* P	Pn	15 05 45.1	-5.3
APG	**El Apazote**	**1.24**	**43**	*e*P	Pn	15 05 55.1	+0.9
NUBE	**Las Nubes**	**1.53**	**97**	*e*P	Pn	15 05 57.9	-0.1

RSNC 09 15:11:48.7±0.0,**7.°N**±1.°×**7.°3W**±.°,**h147**km±1km,**M2.9, mb3.6, ML2.8,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**183**	P	Pn	15 12 08.4	-0.6
BARC				S	Sn	15 12 23.7	-0.8
BRJC	**Barrancabermej**	**0.59**	**284**	P	Pn	15 12 10.0	-0.2
BRJC				S	Sn	15 12 27.1	+0.6
PAMC	**Pamplona, Colo**	**0.69**	**43**	P	Pn	15 12 11.4	0.0
PAMC				S	Sn	15 12 28.6	0.0
RUSC	**La Rusia**	**0.94**	**175**	P	Pn	15 12 12.2	-1.0
RUSC				S	Sn	15 12 31.0	-0.9
PTBC	**PUERTO BERRIO,**	**1.31**	**257**	P	Pn	15 12 14.7	-1.4
PTBC				S	Sn	15 12 36.1	-0.9
OCAC	**Ocana**	**1.41**	**354**	P	Pn	15 12 16.5	-0.8
OCAC				S	Sn	15 12 38.9	-0.2
SPBC	**San Pablo de B**	**1.47**	**218**	P	Pn	15 12 17.3	-0.6
SPBC				S	Sn	15 12 39.1	-1.1
CHIC	**Chingaza**	**2.26**	**194**	P	Pn	15 12 26.3	-0.9
CHIC				S	Sn	15 12 56.5	-0.2
ROSC	**El Rosal**	**2.28**	**210**	P	Pn	15 12 28.3	+0.8
ROSC				S	Sn	15 12 58.9	+1.7
HELC	**Santa Helena**	**2.43**	**255**	P	Pn	15 12 28.5	-0.7
HELC				S	Sn	15 13 00.7	+0.5
CVER	**Cruz Verde, Cu**	**2.46**	**201**	P	Pn	15 12 29.7	0.0
CVER				S	Sn	15 13 01.3	0.0
UREC	**San Jos de Ur**	**2.52**	**291**	P	Pn	15 12 28.3	-1.6
UREC				S	Sn	15 12 59.6	-2.0
GUY2C	**Guyana, Caldas**	**2.70**	**234**	P	Pn	15 12 32.3	-0.4
GUY2C				S	Sn	15 13 06.7	+0.2
CBOC	**Ciudad Bolivar**	**2.98**	**251**	P	Pn	15 12 35.8	-0.1
CBOC				S	Sn	15 13 11.5	-0.9
DBBC	**Dabeiba**	**3.02**	**274**	P	Pn	15 12 35.8	-0.5
DBBC				S	Sn	15 13 11.7	-1.4
ARGC	**Ariguani, Magd**	**3.19**	**341**	P	Pn	15 12 38.0	-0.4
ARGC				S	Sn	15 13 17.0	+0.1
SDV	**Santo Domingo**	**3.24**	**51**	P	Pn	15 12 38.0	-1.2
SDV				S	Sn	15 13 16.5	-1.8
PRAC	**Prado**	**3.54**	**209**	P	Pn	15 12 41.9	-1.0
PRAC				S	Sn	15 13 24.3	-0.6
ORTC	**Ortega, Tolima**	**3.56**	**216**	P	Pn	15 12 42.5	-0.8
ORTC				S	Sn	15 13 26.2	+0.6
SJCC	**San Jacinto, C**	**3.64**	**327**	P	Pn	15 12 42.6	-1.6
SJCC				S	Sn	15 13 24.0	-3.3
LCBC	**Los crdobas,**	**3.75**	**303**	P	Pn	15 12 45.3	-0.4
LCBC				S	Sn	15 13 29.1	-0.8
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	15 12 45.0	-0.8
URMC				S	Sn	15 13 29.0	-1.2
CRJC	**Cerrejon, Guaj**	**4.17**	**4**	P	Pn	15 12 48.5	-2.8
CRJC				S	Sn	15 13 36.9	-3.0
YOTC	**Yotoco, Valle**	**4.24**	**228**	P	Pn	15 12 50.9	-1.3
YOTC				S	Sn	15 13 41.4	-0.1
SMRC	**Santa Marta, M**	**4.43**	**346**	P	Pn	15 12 53.2	-1.4
SMRC				S	Sn	15 13 40.9	-5.0
MACC	**Macarena, Meta**	**4.70**	**188**	P	Pn	15 12 55.4	-2.8
MACC				S	Sn	15 13 48.3	-4.1
URIC	**Uribia, Colomb**	**4.98**	**13**	P	Pn	15 12 58.4	-3.4
URIC				S	Sn	15 13 55.3	-3.5
FLOC	**Florencia**	**5.77**	**206**	P	Pn	15 13 10.9	-1.5

*NEIC **09** 15:38:56.7±1.3,47.61N±0.01×121.79W±0.02,h16km±2km, Error ellipse: s-maj=2.3km s-min=1.8km az=51.0*

SEA 09 15:38:56.8±1.5,**47.60N**±0.01×**121.81W**±0.02,**h17**km±1km, **ML3.2**/20,**ML3.2**/72(NEIC),**Error ellipse: s-maj=2.6km s-min=1.5km az=61.0,Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELW	**Echo Lake**	**0.12**	**203**		Pg	15 39 00.3	-0.2
ELW					Sb	15 39 03.1	+0.1
TTW	**Tolt Reservoir**	**0.12**	**40**		Pg	15 39 00.4	-0.2
TTW					Sg	15 39 03.0	-0.1
C05A	**Tolt Reservoir**	**0.12**	**40**		Pg	15 39 00.4	-0.2
C05A					Sg	15 39 03.0	-0.1
CDMR	**Cedar Moraine**	**0.18**	**170**		Pg	15 39 01.1	-0.2
CDMR					Sg	15 39 04.4	0.0
HTW	**Haystack Looko**	**0.20**	**7**		Pg	15 39 01.3	-0.4
EARN	**East Ridge Ele**	**0.21**	**312**		Pg	15 39 01.8	+0.1
EARN					Sb	15 39 06.1	+0.4
LEOT	**Leota Junior H**	**0.27**	**309**		Pg	15 39 02.8	+0.2
LEOT					Sb	15 39 07.9	+0.5
BLH	**Bald Hill**	**0.28**	**327**		Pg	15 39 02.5	-0.4
BLH					Sg	15 39 06.7	-0.4
MPL	**Maple valley S**	**0.29**	**243**		Pg	15 39 02.9	-0.1
MPL					Sb	15 39 08.0	0.0
MBPA	**Monroe Substat**	**0.30**	**349**		Pg	15 39 03.0	-0.3
MBPA					Sg	15 39 07.5	-0.2
SP2	**Seward Park 2**	**0.30**	**262**		Pg	15 39 03.2	0.0
SP2					Sb	15 39 08.7	+0.3
FINN	**Finn Hill Juni**	**0.31**	**293**		Sb	15 39 10.0	+1.4
NIHS	**Ingelmoor High**	**0.32**	**297**		Sb	15 39 10.1	+1.3
EVGW	**Everett Gatewa**	**0.35**	**317**		Pg	15 39 03.7	-0.3
BRKS	**Brookside Elem**	**0.36**	**296**		Pb	15 39 04.6	-0.1
BRKS					Sb	15 39 11.2	+1.1
KNEL	**Kent Elementar**	**0.37**	**234**		Sb	15 39 11.5	+1.1
GSM	**Grass Mountain**	**0.40**	**179**		Pg	15 39 04.4	-0.6
LAWT	**Lawton Element**	**0.40**	**278**		Sn	15 39 13.3	-1.5
LYNC	**Lynnwood City**	**0.40**	**305**		Pg	15 39 04.9	-0.1
LYNC					Sb	15 39 11.6	+0.4
D05A	**Enumclaw**	**0.43**	**197**		Pg	15 39 05.3	-0.2
D05A					Sb	15 39 11.9	-0.1
D05A	**Enumclaw**	**0.43**	**197**	IAML		15 39 12.5	
	comp=N,3μm,0.5s						
D05A				IAML		15 39 14.4	
	comp=E,1μm,0.5s						
SWID	**South Whidbey**	**0.58**	**315**		Pg	15 39 07.8	-0.4
JCW	**Jim Creek**	**0.60**	**352**		Pg	15 39 07.7	-0.9
JCW					Sg	15 39 15.8	-0.8
GMW	**Gold Mountain**	**0.67**	**266**		Pg	15 39 08.5	-1.4
B941	**Kapowsin**	**0.68**	**205**		Pg	15 39 08.5	-1.5
FMW	**Mount Fremont**	**0.68**	**172**		Pg	15 39 08.8	-1.3
FMW					Sg	15 39 17.9	-1.1
GNW	**Green Mountain**	**0.69**	**267**		Pg	15 39 08.7	-1.6
C06D	**Leavenworth**	**0.69**	**62**		Pg	15 39 09.5	-0.9
C06D					Sg	15 39 18.8	-0.9
OBSR	**Observation Ro**	**0.70**	**181**		Pg	15 39 09.6	-1.0
PANH	**Panhandle Gap,**	**0.75**	**171**		Pg	15 39 10.2	-1.3
PANH					Sg	15 39 20.4	-1.0
LTY	**Liberty**	**0.84**	**114**		Pb	15 39 12.4	-0.6
LTY				IAML		15 39 24.3	
	comp=N,938nm,0.2s						
LON	**Longmire**	**0.85**	**180**		Pb	15 39 11.7	-1.4
LON				IAML		15 39 23.4	
	comp=E,754nm,0.1s						
LON				IAML		15 39 25.2	
	comp=N,1μm,0.2s						
B04A	**Port Angeles**	**1.23**	**292**		Pn	15 39 17.1	-2.1
A04D	**Lummi Island**	**1.27**	**332**		Pn	15 39 18.7	-1.0
A04D				IAML		15 39 39.0	
	comp=N,421nm,0.2s						
A04D				IAML		15 39 39.4	
	comp=E,374nm,0.2s						
NLWA	**Neilton Lookou**	**1.41**	**262**		Pn	15 39 20.7	-1.0
NLWA				IAML		15 39 43.0	
	comp=E,356nm,0.5s						
WISH	**Wishkah**	**1.42**	**251**		Pn	15 39 21.4	-0.3
MXC	**Moxie City**	**1.46**	**134**		Pn	15 39 22.7	+0.4
MXC				IAML		15 39 43.6	
	comp=N,236nm,0.7s						
MXC				IAML		15 39 43.7	
	comp=E,391nm,0.8s						
PGC	**Sidney**	**1.52**	**314**		Pn	15 39 21.8	-1.3
PGC				IAML		15 39 42.0	
	comp=N,381nm,0.4s						
E03A	**Lebam**	**1.60**	**229**		Pn	15 39 23.8	-0.4
E03A				IAML		15 39 50.9	
	comp=E,322nm,0.5s						
E07A	**Sunnyside**	**1.69**	**127**		Pn	15 39 26.0	+0.4
F04D	**Rainier, OR**	**1.73**	**209**		Pn	15 39 26.4	+0.3
WAH2	**Wahluke Slope**	**1.75**	**118**		Pn	15 39 26.8	+0.5
RADR	**Rader Ridge**	**1.80**	**230**		Pn	15 39 27.2	+0.1
RADR				IAML		15 39 58.0	
	comp=N,186nm,0.4s						
RADR				IAML		15 40 01.3	
	comp=E,196nm,0.8s						
B08A	**Colville Reser**	**1.83**	**65**		Pn	15 39 26.8	-0.6
B08A				IAML		15 39 54.3	
	comp=N,165nm,0.5s						
HAWA	**Hanford**	**1.97**	**127**		Pn	15 39 29.3	-0.1
HAWA				IAML		15 39 59.6	
	comp=N,216nm,0.4s						
CLRS	**Cowichan Lake**	**1.98**	**309**		Pn	15 39 28.9	-0.5
CLRS				IAML		15 39 54.0	
	comp=N,176nm,0.4s						
D08A	**Wollman Farm,**	**2.04**	**104**		Pn	15 39 29.0	-1.3
D08A				IAML		15 40 03.1	
	comp=N,163nm,0.3s						
F07A	**Phinny Hill Vi**	**2.14**	**142**		Pn	15 39 32.0	+0.4
F07A				IAML		15 40 14.7	
	comp=E,217nm,0.4s						
E08A	**Dider Farm, El**	**2.18**	**120**		Pn	15 39 32.6	+0.4
E08A				IAML		15 40 04.8	
	comp=E,184nm,0.4s						
E08A				IAML		15 40 06.7	
	comp=N,129nm,0.2s						
C09A	**Chrisman Ranch**	**2.39**	**84**		Pn	15 39 34.7	-0.5
G04A	**Mulino**	**2.44**	**191**	IAML		15 40 23.9	
	comp=N,169nm,1.1s						
G04A				IAML		15 40 29.9	
	comp=E,141nm,0.7s						
YPT	**Yellepit**	**2.50**	**127**		Pn	15 39 37.0	+0.4
YPT				IAML		15 40 25.4	
	comp=E,80nm,0.8s						
G03D	**McMinnville, O**	**2.59**	**203**		Pn	15 39 39.9	+2.0
G03D				IAML		15 40 15.4	
	comp=E,101nm,0.3s						
G03D				IAML		15 40 29.4	
	comp=N,103nm,0.7s						
LNOR	**Lincton Mounta**	**2.98**	**124**	IAML		15 40 35.2	
	comp=E,65nm,0.6s						
LLLB	**Lillooet**	**3.01**	**359**		Pn	15 39 44.2	+0.5
LLLB				IAML		15 40 35.0	
	comp=N,55nm,0.6s						
G08A	**Pilot Rock**	**3.04**	**139**		Pn	15 39 43.8	-0.3
G08A				IAML		15 40 37.3	
	comp=N,54nm,0.6s						
G08A				IAML		15 40 41.2	
	comp=E,50nm,0.5s						
H04D	**Lebanon**	**3.15**	**192**		Pn	15 39 47.6	+2.2
H04D				IAML		15 40 35.5	
	comp=N,55nm,0.8s						
H04D				IAML		15 40 36.2	
	comp=E,76nm,1.0s						
COR	**Corvallis**	**3.19**	**200**		Pn	15 39 46.1	0.0
COR				IAML		15 40 43.8	
	comp=E,41nm,0.8s						
NEW	**Newport**	**3.22**	**76**		Pn	15 39 46.6	+0.1
NEW				IAML		15 40 40.8	
	comp=E,61nm,0.5s						
NEW				IAML		15 40 41.1	
	comp=E,51nm,0.5s						
BMO	**Blue Mountains**	**4.16**	**130**		Pn	15 39 59.8	+0.3
PLID	**Pearl Lake**	**4.74**	**120**		Pn	15 40 08.3	+0.7

*IDC **09** 15:39:43.7±1.9,3.25S×128.98E,h0km,mb3.8/2, mbtmp3.8/3,ML3.5/1,MS3.3/3,Error ellipse: s-maj=151.0km s-min=29.1km az=68.0*

*DJA **09** 15:39:45.9±0.3,4.°S±3.°×12.°8E±.°,h10km,M4.0/12,mb4.6/1, MLv3.7/12*

ISC 09 15:39:46.2±0.8,**3.64S**±0.07°×**128.35E**±0.04,**h10**km,**n15,** σ0.959/16,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.16**	**255**	P	**Pg**	**15 39 49.8**	**+0.1**
AAI				S	**Sg**	**15 39 53.5**	**+1.3**
MSAI	**Masohi**	**0.65**	**63**	P	**Pg**	**15 39 58.7**	**-0.1**
MSAI				S	**Sg**	**15 40 07.3**	**0.0**
NLAI	**Namlea**	**1.31**	**288**	P	**Pn**	**15 40 09.7**	**-0.9**
BNDI	**Bandanaira**	**1.78**	**119**	P	**Pn**	**15 40 16.7**	**-0.3**
SANI	**Sanana**	**2.84**	**304**	P	**Pn**	**15 40 32.1**	**+0.4**
FAKI	**Fak Fak**	**3.96**	**80**	P	**Pn**	**15 40 47.7**	**+0.6**
SWI	**Sorong**	**4.01**	**47**	P	**Pn**	**15 40 48.4**	**+0.7**
SWI				S	**Sn**	**15 41 35.0**	**+0.2**
TNTI	**Ternate**	**4.50**	**347**	P	**Pn**	**15 40 54.4**	**0.0**
LUWI	**Luwuk**	**6.14**	**295**	P	**Pn**	**15 41 16.8**	**-0.3**
BATI	**Baumata**	**8.01**	**215**	LR	LR	15 45 22.0	
	comp=Z,89nm,18.4s,baz=169,slow=39						
WRA	**Warramunga Arr**	**17.22**	**161**	P	**P**	**15 43 48.6**	**0.0**
	0.2nm,0.3s,baz=342,slow=11,SNR=2.2						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**20.62**	**165**	P	**P**	**15 44 26.4**	**+0.5**
	7.7nm,0.7s,baz=348,slow=11,SNR=129						
ASAR				PcP	**PcP**	**15 48 36.2**	**-0.4**
	0.5nm,0.9s,baz=351,slow=2.0,SNR=4.6						
	7.7nm,0.7s						
STKA	**Stephens Creek**	**30.72**	**158**	LR	LR	16 00 53.2	
	comp=Z,30nm,20.6s,baz=215,slow=41						
MKAR	**Makanchi Array**	**64.54**	**327**	P	**P**	**15 50 22.9**	**-0.6**
	0.3nm,0.6s,baz=128,slow=6.1,SNR=3.8						
	0.3nm,0.6s						
AKASG	**Malin Array Be**	**98.59**	**321**	LR	LR	16 44 25.5	
	comp=Z,51nm,18.2s,baz=282,slow=39						

*IDC **09** 15:46:46.0±7.6,4.82S×152.66E,h119km±58km,mb3.4/5, mbtmp3.8/6,Error ellipse: s-maj=61.4km s-min=30.7km az=86.0*

ISC 09 15:46:43.3±1.4,**4.38S**±0.2×**152.9E**±0.3,**h100**km,**n7,** σ1.907/8,**mb3.5/5,New Britain region**

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

KMSI				S	Sn	16 09 09.6	+1.0	
SANI	Sanana	2.91	183	P	Pn	16 08 52.6	-0.4	
LUWI	Luwuk	3.86	240	P	Pn	16 09 06.1	0.0	
NLAI	Namlea	4.20	167	P	Pn	16 09 11.5	+0.8	
WRA	Warramunga Arr	22.20	159	P	P	16 13 01.6	-0.4	
	0.6nm,0.5s,baz=342,slow=11,SNR=6.0							
	0.6nm,0.5s							
ASAR	Alice Springs	25.54	163	P	P	16 13 34.7	+0.7	
	0.4nm,0.7s,baz=340,slow=7.3,SNR=12							
	0.4nm,0.7s							
MKAR	Makanchi Array	59.57	326	P	P	16 18 08.3	-0.1	
	0.2nm,0.5s,baz=115,slow=9.7,SNR=4.1							
	0.2nm,0.5s							
FINES	FINESS Array B	94.05	332	P	P	16 21 21.4	-1.2	
	1.8nm,0.9s,baz=80,slow=1.6,SNR=5.4							
	1.8nm,0.9s							

NOU ***09*** *16:16:39.4, 40˚.50S×176˚.87E, h36km, MLv3.3/8, North Island, New Zealand*
WEL ***09*** *16:16:41.4±0.9, 40˚.5±3˚.3×17˚.6E±˚, h20km±6km, M3.3/47, ML3.7/8, MLv3.3/47, Error ellipse: s-maj=4.0km s-min=3.4km az=122.4, confirmed*

ISC 09 16:16:40.7±1.0, **40˚.33S**±0˚.03×**176˚.60E**±0˚.04, **h31**km±4km, **n79**, σ**0**s**95**/**88**, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRHZ	Porangahau	0.07	20	P	Pn	16 16 46.5	+0.4
PRHZ				S	Sb	16 16 50.8	+1.0
ANWZ	Angora Road	0.16	218	P	Pn	16 16 47.7	+0.7
ANWZ				S	Sb	16 16 53.0	+2.2
WPHZ	Waipukurau	0.30	335	P	Pb	16 16 47.5	-0.8
WPHZ				S	Sb	16 16 52.3	-1.1
DVHZ	Dannevirke	0.34	276	P	Pb	16 16 48.0	-0.8
DVHZ				S	Sb	16 16 53.1	-1.2
PXZ	Pawanui	0.36	33	P	Pn	16 16 50.1	+0.3
PXZ				S	Sn	16 16 57.5	+1.7
BFZ	Birch Farm	0.44	218	P	Pn	16 16 51.2	+0.3
BFZ	Birch Farm	0.44	218	S	Sn	16 16 59.9	+2.1
BFZ	Birch Farm	0.44	218	P	Pn	16 16 51.4	+0.5
BFZ				S	Sn	16 16 59.6	+1.8
PNHZ	Pukenui	0.52	323	P	Pb	16 16 50.5	-1.1
PNHZ				S	Sb	16 16 57.5	-1.5
PRWZ	Pori Road	0.53	245	P	Pn	16 16 52.3	+0.2
TSZ	Takapari Road	0.56	299	P	Pb	16 16 51.0	-1.2
TSZ				S	Sb	16 16 58.2	-1.9
KAHZ	Kahuranaki	0.58	21	P	Pn	16 16 53.3	+0.5
KAHZ				S	Sn	16 17 03.2	+2.0
POWZ	Post Office Ro	0.64	265	P	Pb	16 16 53.3	-0.2
CPWZ	Castlepoint	0.65	208	P	Pn	16 16 55.2	+1.4
TIWZ	Tintock	0.70	231	P	Pn	16 16 55.1	+0.6
KRHZ	Kereru	0.71	345	P	Pb	16 16 54.0	-0.7
CKHZ	Cape Kidnapper	0.77	29	P	Pn	16 16 55.7	+0.3
MRZ	Mangatainoka R	0.85	247	P	Pn	16 16 56.6	+0.1
MCHZ	McNeill Hill	0.89	5	P	Pn	16 16 57.6	+0.5
KWHZ	Kaweka Forest	0.92	351	P	Pn	16 16 57.3	-0.2
TMWZ	Te Maipa	0.94	215	P	Pb	16 16 58.3	-0.3
OHWZ	Ohakea	0.99	277	P	Pn	16 16 59.4	+0.9
HOWZ	Holdsworth Sta	1.00	235	P	Pn	16 16 58.7	+0.1
ARHZ	Aropaoanui	1.11	16	P	Pn	16 17 00.8	+0.7
MOVZ	Moawhango	1.13	324	P	Pn	16 17 00.5	0.0
BKZ	Black Stump Fm	1.17	356	P	Pn	16 17 00.8	-0.2
BKZ	Black Stump Fm	1.17	356	P	Pn	16 17 01.0	0.0
MTW	Mount Morrison	1.17	225	P	Pn	16 17 00.7	-0.3
OGWZ	Otaki Gorge	1.19	246	P	Pn	16 17 01.5	+0.3
NMHZ	Naumai	1.25	7	P	Pn	16 17 02.6	+0.6
WNVZ	Wahianoa	1.27	322	P	Pn	16 17 03.3	+0.8
TRWZ	Traveller	1.27	213	P	Pn	16 17 02.1	-0.2
MTVZ	Mangateitei	1.29	317	P	Pn	16 17 03.5	+0.9
TUVZ	Tukino	1.29	325	P	Pn	16 17 03.8	+1.1
WHVZ	Whangaehu Hut	1.31	323	P	Pn	16 17 03.9	+0.8
TRVZ	Turoa	1.31	321	P	Pn	16 17 04.1	+1.0
MAVZ	Matarangi	1.33	323	P	Pn	16 17 04.3	+0.9
WHHZ	Waihua	1.35	21	P	Pn	16 17 04.0	+0.6
FWVZ	Far West T-bar	1.35	323	P	Pn	16 17 04.3	+0.8
SNVZ	South Ngauruho	1.36	327	P	Pn	16 17 04.8	+1.1
WAZ	Wanganui	1.37	294	P	Pn	16 17 05.2	+1.6
OTVZ	Oturere	1.37	328	P	Pn	16 17 04.7	+0.8
PAWZ	Paruwai Farm	1.38	220	P	Pn	16 17 03.5	-0.3
ETVZ	East Tongariro	1.38	330	P	Pn	16 17 04.7	+0.8
NGZ	Ngauruhoe	1.39	326	P	Pn	16 17 05.2	+1.1
KIW	Kapiti Island	1.39	247	P	Pn	16 17 04.2	+0.3
COVZ	Chateau Observ	1.40	324	P	Pn	16 17 05.1	+1.0
CAW	Cannon Point	1.40	236	P	Pn	16 17 03.8	-0.3
TMVZ	Te Maari	1.40	330	P	Pn	16 17 04.9	+0.7
NNVZ	North Ngauruho	1.42	327	P	Pn	16 17 05.4	+0.9
NTVZ	North Tongarir	1.43	330	P	Pn	16 17 05.3	+0.8
KRVZ	Karewarewa	1.44	329	P	Pn	16 17 06.1	+1.3
WTVZ	West Tongariro	1.45	327	P	Pn	16 17 06.1	+1.2
RAHZ	Arahi	1.46	15	P	Pn	16 17 05.5	+0.6
RITZ	Rihia Road	1.47	337	P	Pn	16 17 06.4	+1.3
MSWZ	Moikau Station	1.49	223	P	Pn	16 17 04.6	-0.7
MTHZ	Maungataniwha	1.49	7	P	Pn	16 17 05.5	+0.1
MRHZ	Matea Rd	1.50	354	P	Pn	16 17 06.3	+0.7
KATZ	Kakaramea	1.53	332	P	Pb	16 17 08.2	-0.3
KNZ	Kokohu	1.55	33	P	Pn	16 17 05.8	-0.3
MHGZ	Mahia Peninsul	1.55	41	P	Pn	16 17 04.3	-1.8
RATZ	Rangitukua	1.60	336	P	Pb	16 17 08.9	-0.7
PLWZ	Palliser	1.60	219	P	Pn	16 17 06.1	-0.8
SNGZ	Shannon Statio	1.65	20	P	Pn	16 17 07.8	+0.3
WEL	Wellington	1.69	235	P	Pn	16 17 08.2	+0.2
BHW	Baring Head	1.70	230	P	Pn	16 17 07.3	-0.8
PRGZ	Paritu Road	1.72	35	P	Pn	16 17 08.7	+0.1
SNZO	South Karori	1.74	235	P	Pb	16 17 08.6	-1.4
SNZO	South Karori	1.74	235	S	Sn	16 17 29.5	-0.3
WATZ	Wairara	1.76	337	P	Pb	16 17 11.5	-0.8
ALRZ	Allen Road	1.78	353	P	Pn	16 17 09.8	+0.5
RIGZ	Rimuhau	1.86	29	P	Pn	16 17 10.5	+0.1
MUGZ	Murupara	1.86	4	P	Pn	16 17 10.4	0.0
VRZ	Vera Road	1.87	310	P	Pn	16 17 12.5	+2.0
TCW	Tory Channel	1.97	243	P	Pn	16 17 11.5	-0.5
URZ	Urewera	2.11	11	P	Pn	16 17 13.2	-0.6
MWZ	Matawai	2.12	20	P	Pn	16 17 13.5	-0.5
HIZ	Hauiti	2.27	323	P	Pb	16 17 19.8	-1.1
KHZ	Kahutara	3.11	227	P	Pn	16 17 26.3	-1.2

NEIC ***09*** *16:25:25.8±0.9, 60˚.72N±0˚.03×151˚.66W±0˚.06, h79km±6km, Error ellipse: s-maj=4.6km s-min=4.4km az=153.0*

AEIC 09 16:25:26.9±0.8, **60˚.71N**±0˚.03×**151˚.68W**±0˚.06, **h78**km±6km, **ML3.4, ML3.6**/202(NEIC), **Error ellipse: s-maj=4.5km s-min=4.4km az=159.0, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPN	Captain Cook N	0.26	77		Pn	16 25 39.0	+0.3
RDT	Redoubt	0.39	249		Pn	16 25 38.4	-1.2
RDT					Sn	16 25 47.8	-1.1
SPU	Mount Spurr	0.51	339	Pn	Pn	16 25 39.4	-1.2
DFR	Drift River	0.51	257		Pn	16 25 39.6	-1.0
DFR					Sn	16 25 50.2	-0.6
SPCR	Spurr Chakacha	0.56	332		Pn	16 25 39.7	-1.3
SPCR					Sn	16 25 50.1	-1.3
RDJH	Redoubt Jeurge	0.57	258		Pn	16 25 40.2	-1.0
RDJH					Sn	16 25 50.9	-0.9
SPCN	Chakachatna No	0.57	335		Pn	16 25 40.1	-1.0
CKL	Chakachamna La	0.58	327		Pn	16 25 40.2	-1.1
RDSO	Redoubt South	0.59	244		Pn	16 25 40.3	-1.1
RDSO					Sn	16 25 51.5	-0.6
SPCP	Crater Peak Br	0.60	338		Pn	16 25 40.6	-0.9
SPCP					Sn	16 25 51.8	-0.6
SPCG	Spurr Capps Gl	0.61	344		Pn	16 25 40.5	-1.0
SPCG					Sn	16 25 51.7	-0.7
RDWB	Redoubt West	0.62	249		Pn	16 25 40.6	-1.1
RED	Redoubt Volcan	0.62	242		Pn	16 25 40.6	-1.0
RED				Sn	Sn	16 25 52.1	-0.4
NCT	North Crescent	0.64	257		Pn	16 25 40.8	-1.0
NCT					Sn	16 25 52.1	-0.8
SLKM	Skilak Lake	0.75	105		Pn	16 25 41.6	-1.3
SLKM	Skilak Lake	0.75	105		Sn	16 25 53.7	-1.1
O20K	Slope Mountain	0.79	217		Pn	16 25 42.9	-0.5
O20K					Sn	16 25 55.9	+0.2
STLK	Strandline Lak	0.79	355		Pn	16 25 42.4	-1.1
STLK				Sn	Sn	16 25 54.6	-1.2
STLK				IAML		16 25 56.2	
	comp=E,2μm,0.2s						
STLK				IAML		16 25 56.2	
	comp=N,1μm,0.7s						
FIS	Fire Island	0.83	58		Pn	16 25 43.8	0.0
FIS					IAML	16 26 01.7	
	comp=N,2μm,0.6s						
SUA	Susitna One	0.88	31		Pn	16 25 43.6	-0.9
SUA					IAML	16 25 57.5	
	comp=N,1μm,0.5s						
SUA					IAML	16 25 57.9	
	comp=E,1μm,0.6s						
SUA	Susitna One	0.88	31		Sn	16 25 57.0	-0.6
IVE	Iliamna Volcan	0.96	224		Sn	16 25 59.5	+0.2
O22K	Cooper Landing	0.99	103		Pn	16 25 44.3	-1.3
O22K					Sn	16 25 59.7	+0.1
RC01	Rabbit Creek A	1.02	67		Pn	16 25 44.9	-1.1
RC01	Rabbit Creek A	1.02	67		Sn	16 25 59.8	-0.5
ILSW	Iliamna Southw	1.03	226		Pn	16 25 45.5	-0.8
ILSW					IAML	16 26 03.9	
	comp=E,821nm,0.6s						
ILSW	Iliamna Southw	1.03	226		Sn	16 26 00.8	0.0
HOM	Homer	1.06	179		Pn	16 25 46.1	-0.3
HOM	Homer	1.06	179		Sn	16 26 01.8	+0.7
BRSE	Bradley Lake S	1.08	154		Pn	16 25 45.7	-1.1
BRSE					Sn	16 26 00.7	-1.0
CNPM	China Poot	1.21	169		Pn	16 25 47.5	-0.9
CNPM	China Poot	1.21	169		Sn	16 26 03.8	-0.8
SEW	Seward	1.26	118		Pn	16 25 47.1	-1.9
SEW					IAML	16 26 08.2	
	comp=E,868nm,0.4s						
SEW					IAML	16 26 10.5	
	comp=N,666nm,0.3s						
SEW	Seward	1.26	118		Sn	16 26 05.9	+0.3
SKT	Skwentna	1.27	3		Pn	16 25 48.3	-0.9
SKT					IAML	16 26 06.5	
	comp=E,1μm,0.8s						
SKT					IAML	16 26 07.9	
	comp=N,756nm,0.4s						
SKT	Skwentna	1.27	3		Sn	16 26 05.4	-0.6
M22K	Willow	1.29	35		Pn	16 25 48.8	-0.5
M22K	Willow	1.29	35		Sn	16 26 06.6	+0.5
P19K	Oil Pt	1.32	217		Pn	16 25 49.3	-0.5
P19K	Oil Pt	1.32	217		Sn	16 26 07.2	+0.3
M20K	Styx River	1.37	330		Pn	16 25 49.9	-0.6
M20K	Styx River	1.37	330		Sn	16 26 07.3	-0.9
N19K	Bonanza Creek	1.38	275		Pn	16 25 49.4	-1.3
O19K	Port Alsworth	1.41	250		Pn	16 25 49.6	-1.3
PMR	Palmer	1.52	53		Pn	16 25 50.9	-1.4
PMR					IAML	16 26 13.8	
	comp=N,582nm,0.3s						
PMR					IAML	16 26 15.2	
	comp=E,480nm,0.4s						
AU22	Augustine Moun	1.59	213		Pn	16 25 52.8	-0.5
PWL	Port Wells	1.65	83		Pn	16 25 52.3	-1.7
PWL					IAML	16 26 19.8	
	comp=E,814nm,0.4s						
GHO	Glory Hole Cre	1.70	50		Pn	16 25 53.6	-1.3
KNK	Knik Glacier	1.72	64		Pn	16 25 53.5	-1.4
CUT	Chulitna	1.83	21		Pn	16 25 55.8	-0.5
SML	Sawmill	1.96	54		Pn	16 25 56.8	-1.3
SML					IAML	16 26 28.8	
	comp=E,627nm,1.4s						
Q19K	Cape Douglas,	2.05	210		Pn	16 25 58.7	-0.6
L20K	Farewell, AK	2.06	330		Pn	16 25 58.8	-0.8
N18K	Kilae Creek	2.07	271		Pn	16 25 58.2	-1.5
L19K	White Mountain	2.12	315		Pn	16 25 59.8	-0.5
L19K					IAML	16 26 26.3	
	comp=E,229nm,0.4s						
L19K					IAML	16 26 45.2	
	comp=N,238nm,0.7s						
SYI	Shuyak Island	2.14	190		Pn	16 26 00.1	-0.5
SYI					IAML	16 26 33.1	
	comp=N,467nm,0.6s						
SYI					IAML	16 26 33.3	
	comp=E,336nm,0.4s						
M18K	Stony River	2.16	293		Pn	16 25 59.5	-1.3
PPLA	Purkeypile	2.21	354		Pn	16 26 01.4	-0.2
P18K	Big Mountain,	2.22	235		Pn	16 26 00.4	-1.3
SCM	Sheep Creek Mo	2.38	60		Pn	16 26 02.4	-1.4
SCM					IAML	16 26 40.3	
	comp=N,443nm,0.7s						
HIN	Hinchinbrook I	2.58	95	Pn	Pn	16 26 03.6	-2.9
HIN					IAML	16 26 48.7	
	comp=N,238nm,0.7s						
HIN					IAML	16 26 53.9	
	comp=E,275nm,0.6s						
WAT1	Susitna Watana	2.59	34		Pn	16 26 05.9	-0.8
WAT6	Susitna Watana	2.65	43		Pn	16 26 06.5	-1.1
KAHG	Katmai Hook Gl	2.66	214		Pn	16 26 07.3	-0.3
KARR	Katmai Rainbow	2.70	216		Pn	16 26 07.8	-0.3
N17K	Nushagak Hills	2.72	268		Pn	16 26 07.3	-1.1
N17K					IAML	16 26 39.0	
	comp=N,172nm,0.6s						
N17K					IAML	16 26 39.1	
	comp=E,136nm,0.6s						
TRF	Thorofare Moun	2.83	13		Pn	16 26 10.1	+0.2
TRF					IAML	16 26 47.8	
	comp=E,272nm,0.6s						
L18K	Granite Mounta	2.84	304		Pn	16 26 09.1	-0.9
O17K	Koliganek Bris	2.86	253		Pn	16 26 09.1	-1.1
KTH	Kantishna Hill	2.87	7		Pn	16 26 10.4	-0.1
M17K	Holitna River	2.88	286		Pn	16 26 09.5	-1.0
M17K	Holitna River	2.88	286	IAML		16 27 08.5	
	comp=N,133nm,0.7s						
M17K					IAML	16 27 12.9	
	comp=E,122nm,0.7s						
KLU	Klutina	2.90	72		Pn	16 26 08.9	-2.0
KLU	Klutina	2.90	72	IAML		16 26 52.4	
	comp=E,179nm,0.4s						
KLU					IAML	16 26 59.2	
	comp=N,225nm,0.5s						
DIV	Divide	2.91	79		Pn	16 26 08.7	-2.3
DIV					IAML	16 26 44.6	
	comp=E,156nm,0.4s						
DIV					IAML	16 26 44.9	
	comp=N,285nm,0.4s						
EYAK	Cordova Ski Ar	2.92	91		Pn	16 26 08.3	-2.8
EYAK					IAML	16 27 04.6	
	comp=N,144nm,0.7s						
MID	Middleton Isla	2.97	113		Pn	16 26 09.0	-2.7
MID					IAML	16 27 08.3	
	comp=E,158nm,1.7s						
MID					IAML	16 27 12.2	
	comp=N,186nm,2.4s						
KDAK	Kodiak Island	2.98	189		Pn	16 26 09.9	-1.9
KDAK					IAML	16 26 54.3	
	comp=N,145nm,0.9s						
KDAK					IAML	16 27 01.1	
	comp=N,131nm,0.7s						
M24K	Tolsona, Glenn	2.99	60		Pn	16 26 11.3	-0.8
RND	Reindeer	3.01	25		Pn	16 26 12.1	-0.3
RND					IAML	16 26 56.5	
	comp=N,116nm,0.4s						
RND					IAML	16 27 04.1	
	comp=E,121nm,0.7s						
KABU	Katmai Buttres	3.06	218		Pn	16 26 12.7	-0.3
ACHA	Angle Creek He	3.12	218		Pn	16 26 13.4	-0.5
DHY	Denali Highway	3.12	39		Pn	16 26 13.6	-0.4
DHY					IAML	16 26 58.1	
	comp=E,164nm,0.8s						
DHY					IAML	16 26 58.5	
	comp=N,154nm,0.6s						
MGLS	Mageik Landsli	3.14	216		Pn	16 26 13.5	-0.5
ANCK	Angle Creek	3.19	219		Pn	16 26 14.3	-0.4
CHUM	Lake Minchumin	3.20	355		Pn	16 26 14.2	-0.5
Q16K	King Salmon	3.25	233		Pn	16 26 14.9	-0.5
CNTC	Contact Creek	3.26	223		Pn	16 26 15.3	-0.5
MCK	McKinley	3.29	22		Pn	16 26 17.6	+1.4
MCK					IAML	16 26 59.1	
	comp=N,120nm,0.6s						
MCK					IAML	16 27 06.6	
	comp=E,100nm,0.6s						
KJL	Kejulik	3.33	218		Pn	16 26 16.8	+0.1
O16K	Kokwok River B	3.40	254		Pn	16 26 16.5	-1.0
BPAW	Bear Paw Mtn.	3.42	5	Pn	Pn	16 26 16.9	-0.9
BPAW					IAML	16 26 59.8	
	comp=N,144nm,0.6s						
BPAW					IAML	16 26 59.9	
	comp=E,137nm,0.4s						
R18K	Karluk	3.46	206		Pn	16 26 17.3	-1.1
BMRM	Bremner River	3.47	83		Pn	16 26 15.7	-2.9
BMRM	Bremner River	3.47	83	IAML		16 27 13.5	
	comp=N,185nm,0.6s						
BMRM					IAML	16 27 14.2	
	comp=E,156nm,0.6s						
N16K	Nishlik Lake	3.51	269		Pn	16 26 18.2	-0.8
N25K	Chitina, Valde	3.55	72		Pn	16 26 17.7	-2.0
N25K	Chitina, Valde	3.55	72	IAML		16 27 15.6	
	comp=E,73nm,0.5s						
N25K					IAML	16 27 21.5	
	comp=N,120nm,0.7s						
M16K	Timber Creek	3.58	278		Pn	16 26 19.1	-0.8
OHAK	Old Harbor	3.60	194		Pn	16 26 18.1	-2.2
OHAK					IAML	16 27 19.9	
	comp=E,61nm,1.5s						
J18K	Innoko River	3.64	322		Pn	16 26 20.2	-0.6
J20K	Nowinta River	3.66	343		Pn	16 26 20.1	-1.0
KAIM	Kayak Island	3.69	99		Pn	16 26 18.2	-3.4
KAIM	Kayak Island	3.69	99	IAML		16 27 04.0	
	comp=N,123nm,2.5s						
KAIM					IAML	16 27 12.4	
	comp=E,126nm,3.5s						
PAX	Paxson	3.71	50	IAML		16 27 18.6	
	comp=N,88nm,0.9s						
PAX					IAML	16 27 22.1	
	comp=E,88nm,0.4s						
K17K	Iditarod	3.74	305	IAML		16 27 04.4	
	comp=E,60nm,0.6s						
WACK	Wrangell Chich	3.76	67		Pn	16 26 21.0	-1.7
J19K	Poorman	3.77	333		Pn	16 26 21.9	-0.7
WASW	Wrangell South	3.82	68		Pn	16 26 21.8	-1.6
WAZA	Wrangell Mount	3.87	66		Pn	16 26 21.1	-3.1
GLB	Gilahina Butte	3.89	76		Pn	16 26 22.1	-2.2
GLB	Gilahina Butte	3.89	76	IAML		16 27 25.3	
	comp=E,55nm,0.7s						
GLB					IAML	16 27 33.3	
	comp=N,86nm,0.8s						
L16K	Owhat River	3.90	288		Pn	16 26 23.4	-1.0
PLK4	Peulik 4	3.92	220		Pn	16 26 24.4	-0.2
PLK4	Peulik 4	3.92	220	IAML		16 27 12.2	
	comp=E,63nm,1.9s						
PLK4					IAML	16 27 29.6	
	comp=N,71nm,2.6s						
VRDI	Verde Repeater	4.04	79		Pn	16 26 23.9	-2.6
VRDI	Verde Repeater	4.04	79	IAML		16 27 25.6	
	comp=N,46nm,0.9s						
K24K	Donnelly Dome	4.15	39		Pn	16 26 28.8	+1.1
KHIT	Khitrov Hills	4.17	90		Pn	16 26 24.5	-3.6
CRQM	Cirque	4.19	86		Pn	16 26 25.5	-3.0
CRQM	Cirque	4.19	86	IAML		16 27 38.7	
	comp=N,96nm,0.6s						
CRQM					IAML	16 27 47.1	
	comp=E,97nm,0.9s						
N15K	Kwethluk River	4.21	266	IAML		16 27 16.2	
	comp=E,63nm,0.6s						
N15K					IAML	16 27 17.5	
	comp=N,54nm,0.6s						
MCARA	McCarthy VSAT	4.26	77		Pn	16 26 27.1	-2.2
MCARA	McCarthy VSAT	4.26	77	IAML		16 27 41.5	
	comp=N,108nm,1.0s						
MCARA					IAML	16 27 49.2	
	comp=E,85nm,0.5s						
HDA	Harding Lake	4.31	28	IAML		16 27 19.4	
	comp=N,100nm,0.5s						
CCB	Clear Creek Bu	4.33	23	IAML		16 27 25.2	
	comp=E,35nm,0.6s						
TGL	Tana Glacier	4.34	86		Pn	16 26 27.4	-3.0
TGL	Tana Glacier	4.34	86	IAML		16 27 38.8	
	comp=N,76nm,0.5s						
TGL					IAML	16 27 48.1	
	comp=E,73nm,0.6s						
O15K	Ungalikthiuk R	4.38	253		Pn	16 26 30.5	-0.4
M15K	Kasigluk River	4.43	274		Pn	16 26 30.6	-0.9
M26K	Nabesna, AK	4.48	64	IAML		16 27 51.4	
	comp=N,56nm,0.6s						
M26K					IAML	16 28 01.2	
	comp=E,37nm,0.5s						
I21K	Tanana	4.49	358	IAML		16 27 56.7	
	comp=E,34nm,0.8s						
COLA	College	4.53	21		Pn	16 26 31.5	-1.4
BARK	Barkley Ridge	4.54	90		Pn	16 26 30.1	-3.1
KIAG	Kiagna River	4.57	83		Pn	16 26 30.9	-2.7
BALM	Baldy	4.57	82		Pn	16 26 31.1	-2.6
L26K	Log Cabin Wild	4.58	56	IAML		16 27 52.2	
	comp=N,62nm,0.5s						
L26K					IAML	16 28 02.3	
	comp=E,79nm,0.4s						
I23K	Minto, Yukon-K	4.58	12		Pn	16 26 32.6	-0.9
I23K	Minto, Yukon-K	4.58	12	IAML		16 27 56.6	
	comp=N,34nm,0.8s						
ISLE	Juniper Island	4.60	87	IAML		16 27 54.8	
	comp=E,66nm,1.0s						
ISLE					IAML	16 28 01.8	
	comp=N,60nm,1.2s						
DOT	Dot Lake	4.63	47	IAML		16 27 43.0	
	comp=E,71nm,0.6s						
DOT					IAML	16 27 50.2	
	comp=N,61nm,0.7s						
ILAR	Eielson Array	4.63	26		Pn	16 26 33.8	-0.5
BAGL	Bagley Icefiel	4.73	89		Pn	16 26 32.9	-2.7
L15K	Ungalak Mounta	4.84	286		Pn	16 26 36.0	-1.1
MESA	MESA	4.85	92		Pn	16 26 36.2	-1.2
MESA	MESA	4.85	92	IAML		16 27 26.6	
	comp=E,44nm,2.5s						
MESA					IAML	16 28 33.9	
	comp=N,70nm,3.6s						
GRNC	Granite Creek	4.87	85		Pn	16 26 35.2	-2.6
GRNC	Granite Creek	4.87	85	IAML		16 27 56.4	
	comp=N,36nm,0.6s						
J25K	Salcha River,	4.88	34	IAML		16 27 43.5	
	comp=E,66nm,0.9s						
J25K					IAML	16 27 44.9	
	comp=N,54nm,0.4s						
BARN	Barnard Glacie	4.91	82		Pn	16 26 36.2	-2.0
BARN	Barnard Glacie	4.91	82	IAML		16 28 07.6	
	comp=E,28nm,0.7s						
BARN					IAML	16 28 17.9	
	comp=N,28nm,1.1s						
YAH	Yahtse	4.92	90		Pn	16 26 35.5	-2.9
YAH	Yahtse	4.92	90	IAML		16 27 19.8	
	comp=N,69nm,3.9s						
YAH					IAML	16 29 45.2	
	comp=E,47nm,3.5s						
J16K	Anvik River	4.93	305		Pn	16 26 37.7	-0.7
M27K	Edge Creek, AK	4.97	66		Pn	16 26 38.0	-1.1
M27K	Edge Creek, AK	4.97	66	IA

O28M	Mount Upton	5.64	84		Pn	16 26 46.4	-1.8
PCA	Pinnacle	5.70	91		Pn	16 26 46.0	-2.9
M13K	Dall Lake	5.77	272		Pn	16 26 49.9	+0.1
G21K	Allakaket	5.88	353		Pn	16 26 50.9	-0.4
J14K	Nanvaranak Lak	6.00	295		Pn	16 26 52.6	-0.3
H16K	Elim	6.25	314		Pn	16 26 56.1	-0.3
YUK6	Outpost Mounta	6.52	82		Pn	16 26 58.3	-1.9
M29M	Somme Creek	6.54	69		Pn	16 26 59.1	-1.4
F20K	Avaraart Lake	6.61	346		Pn	16 27 01.0	-0.2
G16K	Koyuk River	6.75	319		Pn	16 27 02.7	-0.4
L29M	L29M	6.83	64		Pn	16 27 03.3	-1.0
HYT	Haines Junctio	6.94	83		Pn	16 27 04.1	-1.9
P29M	Windy Craggy	7.04	93		Pn	16 27 05.8	-1.3
N30M	Aishikik Lake	7.11	78		Pn	16 27 05.6	-2.6
I28M	Miner Creek	7.13	43		Pn	16 27 07.7	-0.8
E19K	Redstone River	7.19	343		Pn	16 27 07.7	-1.5
BM03	Burnt Mountain	7.41	22		Pn	16 27 11.6	-0.6
F15K	North Star Dit	7.70	316		Pn	16 27 16.4	+0.3
E17K	Hotham Inlet	7.79	329		Pn	16 27 17.9	+0.5
J30M	Hart River	8.05	55		Pn	16 27 20.9	-0.2

*NIED **09** 16:25:44.4, 30°.86N × 137°.57E, h520km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.75; Mθθ=1.54; Mφφ=-2.30; Mrθ=0.63; Mrφ=-0.23; Mθφ=-1.64; Fault plane solution: M0=2.59000×10¹⁵ NP1:φs=48.00000°, δ=43.00000°, λ=166.00000°. NP2:φs=148.00000°, δ=81.00000°, λ=48.00000°.*

*JMA **09** 16:25:44.4±0.2, 31°.N±2°. × 13°.8E±°, h520km, MV3.6/26, SHIKOKU BASIN*

*MOS **09** 16:25:46.3±1.0, 30°.94N × 137°.28E, h483km, mb4.4/15, Error ellipse: s-maj=13.4km s-min=6.4km az=109.6*

*NEIC **09** 16:25:47.5±2.2, 30°.95N±0°.10 × 137°.3E±0°.1, h480km±8km, mb4.4/29, Error ellipse: s-maj=17.4km s-min=13.7km az=109.0*

*IDC **09** 16:25:48.2±1.0, 30°.96N × 137°.31E, h488km±11km, mb3.3/18, mbtmp4.3/25, Error ellipse: s-maj=16.7km s-min=9.5km az=79.0*

ISC 09 16:25:47.5±0.4, 30°.90N±0°.05 × 137°.37E±0°.06, h489km, n158, σ1s58/168, mb4.0/39, 7C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO1	TONANKAI O.B.S	2.76	350	eP	P	16 26 57.0	+1.5
JHJ	Hachijo jima 2	3.02	42	P	P	16 26 57.7	+0.1
	279nm,0.8s,baz=70,slow=14,SNR=4.6						
JHJ2	Mitsune	3.03	43	P	P	16 26 58.4	+0.7
JHJ2	Mitsune	3.03	43	eP	P	16 26 56.8	-0.9
JTNC	Tanabenakahech	3.27	333	eP	P	16 26 59.7	+0.3
JIE	Ise	3.52	351	eP	P	16 27 02.1	+0.8
JIE				eS	S	16 28 01.1	-0.4
JMN	Monobe	4.08	315	P	P	16 27 07.0	+1.1
JMN	Monobe	4.08	315	P	P	16 27 06.8	+1.0
JMN	Monobe	4.08	315	S	S	16 28 09.1	-0.7
JTO	Tosashimizu	4.35	298	eP	P	16 27 08.8	+0.8
INU	Inuyama	4.45	356	P	P	16 27 09.3	+0.5
INU	Inuyama	4.45	356	P	P	16 27 09.6	+0.8
INU	Inuyama	4.45	356	S	S	16 28 16.1	+0.8
JOD2	Odawara 2	4.58	18	eP	P	16 27 09.5	-0.6
JOD2				eS	S	16 28 14.1	-3.4
JGF	Kuroka	4.69	360	P	P	16 27 11.8	+0.8
JGF	Kuroka	4.69	360	P	P	16 27 12.0	+1.0
BSO1	Boso 1	4.82	38	eP	P	16 27 10.0	-1.5
BSO1				eS	S	16 28 16.2	-4.1
JRY	Ryogami san	5.26	14	eP	P	16 27 16.1	-0.1
JRY				eS	S	16 28 23.9	-4.9
JHS	Saijyo	5.43	320	eP	P	16 27 18.0	+0.2
MJAR	Matsushiro Arr	5.67	7	P	P	16 27 19.5	-0.6
	11nm,0.5s,baz=173,slow=10,SNR=92						
MJAR				S	S	16 28 29.9	-6.0
	8.3nm,0.8s,baz=198,slow=12,SNR=9.0						
MAJO	Matsushiro	5.67	7		P	16 27 19.4	-0.6
MAJO	Matsushiro	5.67	7	P	P	16 27 19.7	-0.4
MAJO	Matsushiro	5.67	7	*i* P	P	16 27 19.2	-0.9
CBIJ	Chichi jima	5.67	131	eP	P	16 27 18.0	-2.3
CBIJ				eS	S	16 28 30.5	-5.5
JCJ	Chichijima	5.67	131	P	P	16 27 09.9	-10
	103nm,0.8s,baz=2.4,slow=17,SNR=17						
JCJ				S	S	16 28 22.9	-13
	118nm,0.5s,baz=284,slow=20,SNR=15						
MJA0	Matsu Arr-Jizo	5.67	7	eP	P	16 27 19.3	-0.9
MJA0				pmax	pmax		
	comp=Z,13nm,0.4s						
JNU	Nakatsue	5.94	294	P	P	16 27 22.8	0.0
JNU	Nakatsue	5.94	294	P	P	16 27 23.2	+0.4
	comp=Z,4.9nm,0.6s,baz=98,slow=5.3,SNR=9.4						
JNU	Nakatsue	5.94	294	P	P	16 27 23.0	+0.2
JSJ	Shimokoshiki	6.59	279	eP	P	16 27 29.2	0.0
JSD	Sado	7.16	6	P	P	16 27 34.6	-0.2
JMM	Marumori	7.50	21	P	P	16 27 37.2	-1.1
JMM	Marumori	7.50	21	P	P	16 27 37.9	-0.4
JAMN	Amaminishikomi	7.61	252	eP	P	16 27 39.6	0.0
JTU	Tsushima	7.62	300	P	P	16 27 40.1	+0.5
JOW	Kunigami	8.94	245	P	P	16 27 55.0	+1.4
	comp=Z,40nm,0.7s,baz=30,slow=11,SNR=6.8						
JOW	Kunigami	8.94	245	eP	P	16 27 52.8	-0.8
JOW	Kunigami	8.94	245	eP	P	16 27 55.1	+1.5
TJN	Taejon	9.96	306	P	P	16 28 03.8	-0.5
TJN	Taejon	9.96	306	P	P	16 28 04.5	+0.2
TJN	Taejon	9.96	306	P	P	16 28 03.8	-0.5
KSRS	Korea Array	10.19	312	P	P	16 28 07.0	+0.3
	comp=Z,7.7nm,0.4s,baz=127,slow=10,SNR=69						
KSRS	Korea Array	10.19	312	eP	P	16 28 06.6	-0.1
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KSAR	Wonju Array Be	10.21	312	P	P	16 28 06.0	-0.9
KSAR	Wonju Array Be	10.21	312	P	P	16 28 06.0	-0.9
KS19	Wonju Array Si	10.25	312	P	P	16 28 06.0	-1.4
JTM	Tenmabayashi	10.31	16	P	P	16 28 08.2	+0.3
JTM	Tenmabayashi	10.31	16	P	P	16 28 08.8	+0.9
JOT	Ohata	10.87	15	eP	P	16 28 14.5	+0.6
JOSM	Okushiri--Mats	11.29	8	eP	P	16 28 19.0	+0.7
ERM	Erimo	12.03	21	P	P	16 28 28.0	+1.8
ERM	Erimo	12.03	21	S	S	16 30 41.9	+4.9
JEM	Erimo	12.03	21	P	P	16 28 28.9	+2.7
JEM	Erimo	12.03	21	S	S	16 30 41.9	+4.9
VLA	Vladivostok	12.95	342	*i* P	P	16 28 33.5	-2.5
ASAJ	Asahikawa	13.82	16	P	P	16 28 46.8	+1.5
	comp=Z,9.6nm,0.4s,baz=234,slow=9.3,SNR=35						
ASAJ	Asahikawa	13.82	16	P	P	16 28 46.4	+1.1
JKA	Kamikawa-asahi	13.83	16	P	P	16 28 46.4	+1.1
USRK	Ussuriysk Ar.	13.94	344	P	P	16 28 46.6	+0.1
	comp=Z,42nm,0.6s,baz=172,slow=10,SNR=118						
MDJ	Mudanjiang	15.00	338	P	P	16 28 57.7	0.0
YHNB	Yeheng	15.45	250	P	P	16 29 00.3	-2.4
YHNB	Yeheng	15.45	250	P	P	16 29 01.1	-1.7
NACB	Ninganchiao	15.50	248	P	P	16 29 00.2	-3.0
NACB				IAmb	IAmb	16 29 06.9	
	comp=Z,26nm,1.1s						
NACB	Ninganchiao	15.50	248	P	P	16 29 02.3	-1.0
YULB	Yu-li	16.13	246	P	P	16 29 07.8	-2.1
YULB	Yu-li	16.13	246	P	P	16 29 08.8	-1.1
SSLB	Suanglung	16.20	248	P	P	16 29 09.1	-1.6
SSLB	Suanglung	16.20	248	P	P	16 29 10.0	-0.7
YSS	Yuzhno-Sakhali	16.56	13	P	P	16 29 15.9	+1.8
YSS	Yuzhno-Sakhali	16.56	13	eP	P	16 29 12.9	-1.2
YSS				eS	S	16 31 56.4	-7.6
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
TWG	Pinlang	16.61	245	P	P	16 29 12.5	-2.4
TPUB	Ta-pu	16.70	247	P	P	16 29 14.3	-1.6
TPUB	Ta-pu	16.70	247	P	P	16 29 14.9	-1.0
HIA	Hailar	22.67	329	P	P	16 30 09.9	-0.8
HIA				IAmb	IAmb	16 30 11.4	
	comp=Z,8.9nm,0.6s						
HIA	Hailar	22.67	329	P	P	16 30 09.9	-0.8
HIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HILR	Hailar Array B	22.88	330	P	P	16 30 12.7	+0.2
	comp=Z,4.5nm,0.5s,baz=139,slow=10.0,SNR=7.0						
	comp=Z,4.5nm,0.5s						
LZDM	Lanzhou Array	28.46	289	P	P	16 31 01.8	-0.7
	comp=Z,3.4nm,0.4s,baz=116,slow=6.7,SNR=2.1						
	comp=Z,3.4nm,0.4s						
ULN	Ulaanbaatar	28.66	315	*ce*P	P	16 31 02.5	-1.4
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SONM	Songino Array	29.05	314	P	P	16 31 07.2	0.0
	comp=Z,1.0nm,0.6s,baz=129,slow=8.9,SNR=6.6						
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	29.05	314	*e*P	P	16 31 08.0	+0.8
MA2	Magadan	30.07	14	P	P	16 31 14.3	-1.4
MA2	Magadan	30.07	14	P	P	16 31 14.3	-1.4
MA2				pmax	pmax		
	comp=Z,70nm,1.4s						
YAK	Yakutsk	31.54	353	*ce*P	P	16 31 29.5	+1.2
YAK				pmax	pmax		
	comp=Z,41nm,2.5s						
TOLI2	Tolitoli	33.54	211	P	P	16 31 43.4	-2.6
TOLI2				IAmb	IAmb	16 32 27.7	
	comp=Z,8.9nm,0.8s						
FAKI	Fak Fak	33.98	189	P	P	16 31 49.9	+0.1
SANI	Sanana	34.51	200	P	P	16 31 53.8	-0.4
LUWI	Luwuk	34.67	206	P	P	16 31 54.3	-1.2
LUWI				IAmb	IAmb	16 32 18.2	
	comp=Z,22nm,1.2s						
CHTO	Chiang Mai	36.71	260	P	P	16 32 12.1	-0.4
CHTO				IAmb	IAmb	16 32 13.6	
	comp=Z,10nm,0.8s						
CHTO	Chiang Mai	36.71	260	P	P	16 32 12.6	+0.1
CHTO	Chiang Mai	36.71	260	P	P	16 32 12.1	-0.4
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMAR	Chiang Mai Arr	36.87	259	P	P	16 32 14.2	+0.3
	comp=Z,3.3nm,0.7s,baz=53,slow=7.0,SNR=37						
	comp=Z,3.3nm,0.7s						
CMAR	Chiang Mai Arr	36.87	259	*e*P	P	16 32 14.2	+0.3
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL	Bilibino	40.84	16	P	P	16 32 46.0	+0.7
BILL				IAmb	IAmb	16 32 48.6	
	comp=Z,13nm,1.1s						
BILL	Bilibino	40.84	16	*ce*P	P	16 32 48.1	+2.7
BILL				pmax	pmax		
	comp=Z,21nm,2.5s						
TIXI	Tiksi	41.06	356	*ce*P	P	16 32 47.7	+0.6
TIXI				pmax	pmax		
	comp=Z,12nm,2.5s						
ATKA	Atka Island	41.09	44	P	P	16 32 46.5	-1.1
PMG	Port Moresby	41.16	165	P	P	16 32 47.2	-1.4
PMG				IAmb	IAmb	16 33 23.5	
	comp=Z,40nm,1.5s						
PMG	Port Moresby	41.16	165	P	P	16 32 47.2	-1.4
PMG				pmax	pmax		
	comp=Z,40nm,1.5s						
DGZ	Jazzator, Alta	41.59	312	*i* P	P	16 32 52.1	+0.3
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KULM	Kulim	42.87	241	P	P	16 33 02.9	+0.7
KULM	Kulim	42.87	241	P	P	16 33 02.6	+0.4
ZAA0	Zalesovo Array	43.85	317	P	P	16 33 09.0	-0.3
ZALV	Zalesovo Beam	43.85	317	P	P	16 33 08.1	-1.2
ZALV	Zalesovo Beam	43.85	317	P	P	16 33 08.9	-0.4
	comp=Z,1.4nm,0.3s,baz=95,slow=7.3,SNR=9.1						
	comp=Z,1.4nm,0.3s						
ZALV	Zalesovo Beam	43.85	317	*e*P	P	16 33 09.1	-0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MTN	Manton Dam	43.90	189	P	P	16 33 11.1	+0.9
MTN				IAmb	IAmb	16 33 11.6	
	comp=Z,7.8nm,0.5s						
MK31	Makanchi Array	44.81	307	*ce*P	P	16 33 17.6	+0.7
MKAR	Makanchi Array	44.81	307	P	P	16 33 16.4	-0.5
MKAR				PcP	PcP	16 34 48.9	+0.3
MKAR				ScP	ScP	16 37 54.0	0.0
MKAR	Makanchi Array	44.81	307	P	P	16 33 17.1	+0.2
	comp=Z,1.0nm,0.3s,baz=84,slow=10,SNR=32						
MKAR				PcP	PcP	16 34 48.2	-0.4
	comp=Z,0.2nm,0.3s,baz=81,slow=5.2,SNR=4.4						
MKAR				ScP	ScP	16 37 54.0	0.0
	comp=Z,0.4nm,0.6s,baz=81,slow=5.0,SNR=5.1						
	comp=Z,1.0nm,0.3s						
COEN	Coen	44.95	172	P	P	16 33 20.3	+2.0
COEN	Coen	44.95	172	P	P	16 33 18.8	+0.5
MAKZ	Makanchi	45.03	307	P	P	16 33 18.3	-0.3
MAKZ				IAmb	IAmb	16 33 19.2	
	comp=Z,2.4nm,0.3s						
MAKZ	Makanchi	45.03	307	P	P	16 33 18.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KNRA	Kununurra	47.04	191	P	P	16 33 35.3	+1.1
KNRA				IAmb	IAmb	16 33 36.2	
	comp=Z,12nm,0.5s						
KURK	Kurchatov	47.31	312		P	16 33 35.4	-0.5
KURK				IAmb	IAmb	16 33 37.0	
	comp=Z,5.4nm,0.5s						
KURK	Kurchatov	47.31	312	*ce*P	P	16 33 36.3	+0.4
KURBB	Kurchatov Arra	47.37	312	P	P	16 33 36.4	0.0
	comp=Z,5.8nm,0.6s,baz=93,slow=7.6,SNR=33						
	comp=Z,5.8nm,0.6s						
NRIK	Noril'sk	47.58	338	P	P	16 33 38.0	+0.4
	comp=Z,3.7nm,0.5s,baz=116,slow=9.2,SNR=9.7						
	comp=Z,3.7nm,0.5s						
GSI	Gunungsitoli	47.79	240	P	P	16 33 39.1	-0.9
GSI				IAmb	IAmb	16 33 41.1	
	comp=Z,42nm,1.2s						
GSI	Gunungsitoli	47.79	240	P	P	16 33 40.4	+0.4
FITZ	Fitzroy Crossi	50.00	195	P	P	16 33 55.8	-0.5
N15K	Kwethluk River	50.15	35	P	P	16 33 57.6	+0.7
N15K				IAmb	IAmb	16 34 10.6	
	comp=Z,18nm,1.2s						
WRAB	Tennant Creek	50.62	184	P	P	16 34 01.5	+0.7
WRAB	Tennant Creek	50.62	184	*ce*P	P	16 34 04.3	+3.5
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRA	Warramunga Arr	50.63	184	P	P	16 34 02.1	+1.2
	comp=Z,2.7nm,0.5s,baz=2.4,slow=8.1,SNR=43						
	comp=Z,2.7nm,0.5s						
M16K	Timber Creek	50.80	34	P	P	16 34 02.4	+0.8
M16K				IAmb	IAmb	16 34 37.9	
	comp=Z,9.5nm,1.3s						
BVA0	Borovoye Array	52.39	315	P	P	16 34 12.7	-0.6
BVAR	Borovoye Array	52.39	315	P	P	16 34 13.6	+0.3
	comp=Z,2.1nm,0.4s						
	comp=Z,2.1nm,0.4s						
BORK	Borovoye	52.43	315	*i* P	P	16 34 12.8	-0.7
KK31	Karatay Array	53.46	303		P	16 34 21.6	+0.4
KK31	Karatay Array	53.46	303	P	P	16 34 21.6	+0.4
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	Karatay Array	53.46	303		P	16 34 21.3	+0.1
KKAR	Karatay Array	53.46	303	P	P	16 34 21.3	+0.1
AS31	Alice Springs	54.36	184	P	P	16 34 28.4	+0.7
ASAR	Alice Springs	54.36	184	P	P	16 34 28.2	+0.6
ASAR	Alice Springs	54.36	184	P	P	16 34 28.5	+0.8
	comp=Z,1.5nm,0.6s,baz=18,slow=12,SNR=68						
	comp=Z,1.5nm,0.6s						
MBWA	Marble Bar	54.46	200	P	P	16 34 28.8	+0.4
ILAR	Eielson Array	56.47	30	P	P	16 34 42.4	+0.6
	comp=Z,0.3nm,0.8s,baz=261,slow=6.7,SNR=2.8						
	comp=Z,0.3nm,0.8s						
AB31	Akbulak array	59.42	312		P	16 35 02.6	+0.4
AB31	Akbulak array	59.42	312	*i* P	P	16 35 01.9	-0.3
POHA	Pohakuloa	60.87	83	P	P	16 35 14.7	+2.1
STKA	Stephens Creek	62.56	176	P	P	16 35 24.6	+1.6
	comp=Z,1.6nm,0.6s,baz=0.3,slow=7.9,SNR=3.9						
	comp=Z,1.6nm,0.6s						
CMSA	Cobar Meteorol	62.60	172	P	P	16 35 24.5	+1.3
MORW	Morawa	63.00	201	P	P	16 35 26.5	+0.6
BBOO	Buckleboo	63.38	181	P	P	16 35 29.9	+1.7
BLDU	Balldu	64.25	200	P	P	16 35 34.1	+0.2
NWAO	Narrogin (SRO)	66.28	198	P	P	16 35 47.9	+1.3
KLMR	Klimovskoe	67.16	328	eP	P	16 35 51.1	-0.6
KLMR				*e*		16 38 26.4	
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ARCES	ARCESS Array B	68.54	339	P	P	16 36 00.6	+0.5
ARCES				IAmb	IAmb	16 36 04.9	
	comp=Z,9.7nm,1.4s						
ARCES	ARCESS Array B	68.54	339	P	P	16 36 00.8	+0.8
	comp=Z,1.2nm,0.5s,baz=64,slow=8.5,SNR=20						
	comp=Z,1.2nm,0.5s						
ARCES	ARCESS Array B	68.54	339	eP	P	16 35 59.6	-0.5
FINES	FINESS Array B	72.65	332	P	P	16 36 24.3	-0.2
FINES	FINESS Array B	72.65	332	P	P	16 36 24.8	+0.3
	comp=Z,1.2nm,0.4s,baz=61,slow=5.8,SNR=18						
	comp=Z,1.2nm,0.4s						
FINES	FINESS Array B	72.65	332	eP	P	16 36 24.7	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	Hagfors	78.24	335	P	P	16 36 55.8	+0.1
	comp=Z,0.9nm,0.5s,baz=108,slow=4.8,SNR=10.0						
	comp=Z,0.9nm,0.5s						
NOA	NORSAR Array B	78.49	336	P	P	16 36 57.6	+0.6
	comp=Z,0.4nm,0.6s,baz=48,slow=5.3,SNR=3.6						
	comp=Z,0.4nm,0.6s						
BRTR	Keskin Array B	80.33	311	P	P	16 37 08.5	+1.1
	comp=Z,0.5nm,0.8s,baz=61,slow=6.8,SNR=2.5						
	comp=Z,0.5nm,0.8s						
QSPA	South Pole Qui	120.66	180	PKPdf	PKiKP	16 43 46.4	+3.8

GCG 09 16:30:16.3±0.9, 13°.81N × 90°.46W, h66km±13km, MD3.5, ML3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSJ	San Jos, E	0.25	189	*i* P	Pn	16 30 28.0	+1.3
PCG5	San Vicente Pa	0.41	11	eP	Pn	16 30 30.2	+2.0
FG16	Alotenango, Sa	0.46	354	eP	Pn	16 30 32.2	+3.5
NUBE	Las Nubes	0.67	82	eP	Pn	16 30 30.9	+0.2
NUBE				eS	Sn	16 30 42.6	+1.3
ESSG	Sabana Grande	0.67	328	eP	Pn	16 30 30.7	0.0
STG2	El Palmar, Qui	1.08	305	eS	Sn	16 30 59.9	+10
APG	El Apazote	1.19	360	eP	Pn	16 30 38.6	+1.4

IDC 09 16:37:24.4±4.1, 21°.78S × 178°.39W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=108.2km s-min=38.6km az=29.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	36.92	246	P	P	16 44 34.6	-0.5
	0.9nm,0.4s,baz=76,slow=12,SNR=2.2						
	0.9nm,0.4s						
ASAR	Alice Springs	43.89	258	P	P	16 45 32.7	-0.4
	1.5nm,0.5s,baz=95,slow=6.9,SNR=64						
	1.5nm,0.5s						
WRA	Warramunga Arr	44.08	263	P	P	16 45 34.9	+0.3
	1.8nm,0.4s,baz=104,slow=8.3,SNR=17						
	1.8nm,0.4s						
QSPA	South Pole Qui	68.30	180	P	P	16 48 27.5	+0.3
	1.0nm,0.7s,baz=320,slow=0.3,SNR=7.5						
	1.0nm,0.7s						
HFS	Hagfors	140.73	350	PKP	PKPdf	16 56 53.6	-2.1
	1.0nm,0.3s,baz=14,slow=0.6,SNR=11						

DJA 09 16:44:43.5±0.7, 8°S±5° × 12°4E±°, h270km±10km, M3.6/13, mb3.8/6, MLv3.5/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	1.77	247	P	Pn	16 45 26.1	+0.3
SOEI	Soe	1.84	168	P	Pn	16 45 26.3	-0.2
BATI	Baumata	2.26	186	P	Pn	16 45 30.8	+0.8
BATI				S	S	16 46 06.8	-0.2
EDFI	Ende, Flores	2.32	250	P	Pn	16 45 31.0	+0.4
BASI	Baing, Sumba	3.98	235	P	Pn	16 45 48.3	+0.3
KDI	Kendari	4.15	342	P	Pn	16 45 50.0	0.0
WBSI	Waikabubak, Su	4.76	249	P	Pn	16 45 56.7	-0.4
PLAI	Plampang	6.11	261	P	Pn	16 46 13.5	0.0
	0.1nm15nm,0.9s						
MSAI	Masohi	6.78	48	P	Pn	16 46 21.8	0.0
	30nm,0.7s						
LUWI	Luwuk	6.94	351	P	Pn	16 46 23.6	-0.2
	0.1nm19nm,1.0s						
TWSI	Taliwang, Sumb	6.98	263	P	Pn	16 46 23.9	-0.3

IDC 09 16:56:50.3±21.0, 28°.19S × 73°.88E, h0km, mb3.8/3, mbtmp3.8/3, MS3.3/2, Error ellipse: s-maj=503.8km s-min=50.0km az=66.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	42.53	257	LR	LR	17 20 40.7	
	comp=Z,24nm,18.5s,baz=26,slow=34						
CMAR	Chiang Mai Arr	52.33	31	P	P	17 06 04.2	+0.1
	0.3nm,0.7s,baz=225,slow=7.5,SNR=5.1						
	0.3nm,0.7s						
ASAR	Alice Springs	53.71	100	P	P	17 06 14.1	-0.3
	0.9nm,0.6s,baz=250,slow=6.7,SNR=25						
	0.9nm,0.6s						
WRA	Warramunga Arr	55.34	96	P	P	17 06 26.3	0.0
	2.0nm,0.7s,baz=254,slow=6.7,SNR=12						
	2.0nm,0.7s						
TGY	Tagaytay City	61.99	54	LR	LR	17 31 47.3	
	comp=Z,42nm,20.5s,baz=163,slow=34						

*SJA **09** 17:05:17.1±0.8, 24°.70S × 68°.00W, h143km±9km, ML3.5, MW3.5*

*IDC **09** 17:05:17.3±2.2, 24°.77S × 67°.79W, h108km±19km, mb3.6/2, mbtmp4.0/5, Error ellipse: s-maj=43.8km s-min=15.7km az=102.0*

*GUC **09** 17:05:19.1±0.8, 24°.70S × 67°.91W, h123km±10km, ML3.6*

ISC 09 17:05:18.3±0.8, 24°.65S±0°.04 × 67°.97W±0°.03, h129km±9km, n47, σ1s78/61, 3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		1.55	74	⇑ *i* P	Pn	17 05 47.7	+0.4
SALTA		1.55	74	*i* P	Pn	17 05 47.7	+0.4
SALTA				eS	Sn	17 06 06.2	-3.3
SALTA				IAML		17 06 16.1	
	comp=Z,98nm,0.5s						
GO02	Mina Guanaco	1.55	251	⇑ *i* P	Pn	17 05 48.3	+1.1
GO02				eS	Sn	17 06 10.3	+1.1
GO02	Mina Guanaco	1.55	251	eP	Pn	17 05 48.4	+1.2
GO02				eS	Sn	17 06 11.2	+2.0
GO02				IAML		17 06 12.6	
	comp=Z,838nm,0.3s						
AF01	San Pedro de A	1.70	354	IAML		17 06 15.9	
	comp=E,848nm,0.5s						
AF01	San Pedro de A	1.70	354	eP	Pn	17 06 05.6	+17
AF01				e

PB09				IAML		17 06 58.0	
	comp=Z,80nm,0.7s						
AHML	**Horco Molle**	**3.19**	**132**	*eP*	**Pn**	**17 06 09.8**	**+2.4**
AHML				*eS*	**Sn**	**17 06 47.3**	**+2.0**
YJA	**Yavi**	**3.34**	**43**	*eP*	**Pn**	**17 06 12.9**	**+3.1**
AC06	**Mina Casimiro**	**3.44**	**218**	*eP*	**Pn**	**17 06 09.9**	**-0.7**
GO03	**Copiapo**	**3.56**	**214**	*eP*	**Pn**	**17 06 11.6**	**-0.7**
GO03	**Copiapo**	**3.56**	**214**	*eP*	**Pn**	**17 06 12.0**	**-0.3**
GO03				*eS*	**Sn**	**17 06 54.0**	**-0.1**
GO03				IAML		17 06 54.8	
	comp=Z,100nm,0.3s						
PB02	**IPOC Station P**	**3.76**	**332**	*eP*	**Pn**	**17 06 15.6**	**+0.6**
PB02	**IPOC Station P**	**3.76**	**332**	*eP*	**Pn**	**17 06 15.6**	**+0.6**
PB02				*eS*	Sn	17 06 47.0	-12
PB02				IAML		17 07 11.5	
	comp=Z,137nm,0.3s						
PB01	**IPOC Station P**	**3.85**	**338**	*eP*	**Pn**	**17 06 17.0**	**+0.8**
PB01	**IPOC Station P**	**3.85**	**338**	*eP*	**Pn**	**17 06 17.2**	**+1.0**
PB01				*eS*	**Sn**	**17 07 03.8**	**+2.8**
PB01				IAML		17 07 14.5	
	comp=Z,38nm,0.3s						
VCA	**Vinchina**	**4.07**	**183**	*eP*	**Pn**	**17 06 20.4**	**+1.3**
AANI	**Anillaco**	**4.24**	**168**	*eP*	**Pn**	**17 06 23.1**	**+1.7**
AANI				IAML		17 07 17.1	
	comp=Z,43nm,0.8s						
AC04	**Llanos de Chal**	**4.50**	**217**	*eP*	**Pn**	**17 06 22.8**	**-1.8**
AC04	**Llanos de Chal**	**4.50**	**217**	*eP*	**Pn**	**17 06 23.5**	**-1.1**
AC04				IAML		17 07 20.3	
	comp=Z,57nm,0.5s						
AC05	**El Transito**	**4.65**	**206**	*eP*	**Pn**	**17 06 25.8**	**-0.9**
AC05				IAML		17 07 23.1	
	comp=Z,55nm,0.3s						
HMBC	**Humberstone**	**4.70**	**338**	*eP*	**Pn**	**17 06 27.7**	**+0.2**
HMBC				IAML		17 07 35.4	
	comp=Z,43nm,1.4s						
PB11	**IPOC Station P**	**5.11**	**342**	*eP*	**Pn**	**17 06 32.5**	**-0.6**
PB11				*eS*	**Sn**	**17 07 32.5**	**+1.2**
PB11				IAML		17 07 51.2	
	comp=Z,25nm,0.7s						
CFA	**Coronel Fontan**	**6.93**	**182**	P	**Pn**	**17 06 56.1**	**-1.1**
	comp=Z,3.8nm,0.3s,baz=335,slow=11,SNR=63						
CFA				S	**Sn**	**17 08 08.8**	**-5.9**
	comp=Z,2.1nm,0.3s,baz=238,slow=23,SNR=6.0						
LPAZ	**La Paz**	**8.32**	**359**	P	**Pn**	**17 07 18.2**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=165,slow=3.4,SNR=15						
SIV	**San Ignacio**	**10.78**	**38**	P	**Pn**	**17 07 47.7**	**-1.4**
	comp=Z,3.6nm,0.5s,baz=231,slow=11,SNR=18						
BDFB	**Brasilia**	**20.75**	**68**	P	**P**	**17 09 48.4**	**-0.7**
	comp=Z,3.1nm,0.5s,baz=229,slow=7.5,SNR=4.6						
	comp=Z,3.1nm,0.5s						
SNAA	**Sanae**	**59.03**	**160**	P	**P**	**17 15 05.4**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=323,slow=6.2,SNR=4.8						
	comp=Z,1.6nm,0.9s						
ASAR	**Alice Springs**	**127.49**	**206**	PKP	**PKiKP**	**17 24 09.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=129,slow=1.7,SNR=11						
ZALV	**Zalesovo Beam**	**144.38**	**28**	PKP	**PKPdf**	**17 24 39.2**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=305,slow=4.0,SNR=12						
MKAR	**Makanchi Array**	**147.59**	**39**	PKPbc	**PKPbc**	**17 24 47.3**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=299,slow=3.0,SNR=9.8						

IDC 09 17:21:11.7±1.5, 5.99N×127.45E, h0km, mb3.4/4, mbtmp3.5/5, ML4.0/1, MS3.6/1, Error ellipse: s-maj=66.7km s-min=19.7km az=57.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.14**	**300**	Pn	Pn	17 21 49.2	+0.4
	50nm,0.3s,baz=283,slow=7.0,SNR=1.4						
DAV				Sn	Sn	17 22 17.1	+1.0
	18nm,0.3s,baz=300,slow=18,SNR=6.0						
	116nm,0.3s						
WRA	**Warramunga Arr**	**26.65**	**165**	P	P	17 26 52.1	-0.2
	0.2nm,0.3s,baz=344,slow=9.3,SNR=1.8						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**30.14**	**168**	P	P	17 27 23.7	+0.2
	0.1nm,0.5s,baz=343,slow=8.7,SNR=5.3						
	0.1nm,0.5s						
LZDM	**Lanzhou Array**	**36.95**	**327**	LR	LR	17 44 51.6	
	comp=Z,101nm,21.8s,baz=70,slow=38						
MKAR	**Makanchi Array**	**56.14**	**324**	P	P	17 30 52.2	-0.9
	0.2nm,0.3s,baz=118,slow=7.6,SNR=7.6						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**60.25**	**326**	P	P	17 31 22.3	+0.5
	1.0nm,0.7s,baz=125,slow=6.0,SNR=11						
	1.0nm,0.7s						

*IDC **09** 17:26:05.0±3.0, 14°.29N×93°.38W, h0km, mb3.8/4, mbtmp3.7/6, ML3.5/2, MS3.1/5, Error ellipse: s-maj=78.6km s-min=28.6km az=22.0*

*NEIC **09** 17:26:06.9±2.6, 14°.43N±0°.03×93°.46W±0°.05, h10km±2km, mb4.1/37, Md4.1/59(MEX), Error ellipse: s-maj=8.1km s-min=5.7km az=258.0*

*MEX **09** 17:26:06.0±0.7, 14°.09N×93°.61W, h16km±999km, MD4.1*

*GCG **09** 17:26:10.0±1.4, 14°.27N×93°.25W, h28km, MD4.7*

ISC 09 17:26:04.0±0.8, 14°.25N±0°.05×93°.51W±0°.03, h10km, n90, σ2s25/107, mb4.1/17, MS3.2/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.37**	**61**		**Pb**	**17 26 28.3**	**-1.4**
THIG		**1.37**	**61**	*eP*	**Pb**	**17 26 28.3**	**-1.4**
THIG				*eS*	**Sb**	**17 26 45.5**	**-1.7**
THIG		**1.37**	**61**	*eP*	**Pb**	**17 26 28.4**	**-1.3**
PCIG		**1.47**	**11**		**Pb**	**17 26 31.1**	**-0.4**
PCIG		**1.47**	**11**	*eP*	**Pb**	**17 26 31.1**	**-0.4**
PCIG				*eS*	**Sn**	**17 26 49.3**	**-0.6**
PATR	**El Naranjo**	**1.50**	**55**		**Pg**	**17 26 31.4**	**-1.5**
PATR	**El Naranjo**	**1.50**	**55**	*eP*	**Pg**	**17 26 31.4**	**-1.5**
PATR				*eS*	**Sb**	**17 26 49.9**	**-1.5**
CHUJ	**Union Juarez**	**1.59**	**58**	*eP*	**Pb**	**17 26 32.8**	**-0.9**
CHUJ				*eS*	**Sg**	**17 26 54.2**	**-1.1**
PAVE	**Pavencul**	**1.59**	**54**		**Pg**	**17 26 32.9**	**-0.8**
PAVE					**Sg**	**17 26 54.5**	**-0.8**
PAVE	**Pavencul**	**1.59**	**54**	*eP*	**Pb**	**17 26 32.9**	**-0.8**
PAVE				*eS*	**Sg**	**17 26 54.5**	**-0.8**
RTAL	**Retalhuleu**	**1.78**	**81**		**Pn**	**17 26 34.5**	**-0.3**
RTAL	**Retalhuleu**	**1.78**	**81**	*eP*	**Pn**	**17 26 34.6**	**-0.3**
RTAL				*eS*	**Sn**	**17 26 55.9**	**-1.5**
CCIG	**Comitan**	**2.41**	**33**		**Pb**	**17 26 45.0**	**-2.6**
CCIG	**Comitan**	**2.41**	**33**		**Sg**	**17 27 19.6**	**-2.1**
CCIG	**Comitan**	**2.41**	**33**	*eP*	**Pb**	**17 26 45.3**	**-2.4**
CCIG				*eS*	**Sg**	**17 27 19.6**	**-2.1**
CCIG	**Comitan**	**2.41**	**33**	*eP*	**Pb**	**17 26 47.2**	**-0.4**
TGIG		**2.54**	**8**		**Pb**	**17 26 47.6**	**-2.1**
TGIG					**Sb**	**17 27 19.3**	**-1.8**
TGIG		**2.54**	**8**	*eP*	**Pb**	**17 26 47.6**	**-2.1**
TGIG				*eS*	**Sb**	**17 27 19.3**	**-1.8**
TGIG		**2.54**	**8**	*eP*	**Pb**	**17 26 48.6**	**-1.2**
HUIG	**Huatulco**	**2.93**	**301**	*eP*	**Pn**	**17 26 49.6**	**-1.2**
HUIG				*eS*	**Sn**	**17 27 19.7**	**-6.3**
APG	**El Apazote**	**3.04**	**75**	Pn	**Pn**	**17 26 52.9**	**+0.5**
	0.2nm,0.3s,baz=187,slow=13,SNR=15						
APG	**El Apazote**	**3.04**	**75**	*eP*	**Pb**	**17 26 54.1**	**-4.2**
UXUV	**UXUV**	**3.11**	**349**		**Pb**	**17 26 56.1**	**-3.4**
UXUV					**Sb**	**17 27 34.1**	**-3.4**
UXUV	**UXUV**	**3.11**	**349**	*eP*	**Pb**	**17 26 56.1**	**-3.4**
UXUV				*eS*	**Sb**	**17 27 34.1**	**-3.4**
CMIG	**Matias Romero**	**3.12**	**335**		**Pn**	**17 26 53.7**	**+0.3**
CMIG	**Matias Romero**	**3.12**	**335**	Pn	**Pn**	**17 26 53.9**	**+0.6**
	3.6nm,0.3s,baz=358,slow=23,SNR=15						
	10.0nm,0.4s						
PEIG	**Puerto Escondi**	**3.92**	**297**		**Pn**	**17 27 04.5**	**+0.1**
PEIG	**Puerto Escondi**	**3.92**	**297**	*eP*	**Pn**	**17 27 04.5**	**+0.1**
PEIG				*eS*	**Sn**	**17 27 43.2**	**-7.3**
MTO3	**Montecristo**	**4.02**	**87**		**Pn**	**17 27 07.7**	**+1.7**
ESQI	**Esquipulas**	**4.05**	**85**	Pn	**Pn**	**17 27 05.3**	**-0.9**
NEUV	**Arroyo Zacate**	**4.09**	**328**		**Pn**	**17 27 07.1**	**+0.5**
NEUV					**Sn**	**17 27 56.5**	**+2.0**
NEUV	**Arroyo Zacate**	**4.09**	**328**	*eP*	**Pn**	**17 27 07.1**	**+0.5**
NEUV				*eS*	**Sn**	**17 27 56.5**	**+2.0**
PNIG	**Pinotepa**	**4.94**	**296**		**Pn**	**17 27 18.8**	**+0.5**
PNIG	**Pinotepa**	**4.94**	**296**	*eP*	**Pn**	**17 27 18.8**	**+0.5**
TXIG	**Tlaxiaco**	**5.07**	**307**	*eP*	**Pn**	**17 27 24.1**	**+3.6**
TXIG				*eS*	**Sn**	**17 28 15.9**	**-3.4**
TOIG	**Toxpalan**	**5.13**	**319**		**Pn**	**17 27 24.7**	**+3.7**
TOIG	**Toxpalan**	**5.13**	**319**	*eP*	**Pn**	**17 27 24.7**	**+3.7**
TOIG				*eS*	**Sn**	**17 28 27.5**	**+7.1**
HLIG	**Huajuapan de L**	**5.45**	**311**		**Pn**	**17 27 26.9**	**+1.3**
HLIG					**Sn**	**17 28 29.1**	**+0.5**
HLIG	**Huajuapan de L**	**5.45**	**311**	*eP*	**Pn**	**17 27 26.9**	**+1.3**
HLIG				*eS*	**Sn**	**17 28 29.1**	**+0.5**
FTIG	**Fresnillo de T**	**5.74**	**310**		**Pn**	**17 27 31.3**	**+1.8**
FTIG	**Fresnillo de T**	**5.74**	**310**	*eP*	**Pn**	**17 27 31.3**	**+1.8**
CRIG	**Cruz Grande**	**5.96**	**295**	*eP*	**Pn**	**17 27 30.5**	**-1.8**
CRIG				*eS*	**Sn**	**17 28 33.5**	**-7.3**
JAUV	**Jalcomulco**	**5.99**	**329**		**Pn**	**17 27 32.8**	**0.0**
JAUV					**Sn**	**17 28 43.0**	**+1.5**
JAUV	**Jalcomulco**	**5.99**	**329**	*eP*	**Pn**	**17 27 32.8**	**0.0**
JAUV				*eS*	**Sn**	**17 28 43.0**	**+1.5**
TEIG	**Tepich**	**7.76**	**39**	Pn	**Pn**	**17 27 55.7**	**-1.5**
SAND	**Sanderson**	**17.54**	**334**		**P**	**17 30 10.1**	**+0.3**
TXAR	**Lajitas Array**	**17.71**	**330**		**P**	**17 30 13.4**	**+1.5**
TXAR	**Lajitas Array**	**17.71**	**330**	P	**P**	**17 30 15.0**	**+3.1**
	baz=154,slow=11,SNR=8.7						
	0.8nm,0.7s						
TX31	**Lajitas Ar. Si**	**17.71**	**330**		**P**	**17 30 12.9**	**+1.1**
OZNA	**Ozona**	**18.01**	**338**		**P**	**17 30 17.0**	**+1.9**
ALPN	**Alpine**	**18.56**	**331**	P	**Pn**	**17 30 23.8**	**+2.3**
VHRN	**Van Horn**	**19.55**	**329**		**Pn**	**17 30 33.2**	**-0.2**
VHRN				IAmb	IAmb	17 30 39.5	
	comp=Z,8.6nm,1.1s						
POST	**Post**	**20.09**	**340**	P	**P**	**17 30 37.7**	**-0.3**
DKNS	**Dickens**	**20.47**	**342**	P	Pn	17 30 43.0	-1.1
MNTX	**Cornudas Mount**	**20.49**	**330**	P	Pn	17 30 45.2	+0.8
ROSC	**El Rosal**	**21.09**	**114**	P	**P**	**17 30 50.1**	**+0.9**
ROSC				IAmb	IAmb	17 31 16.0	
	comp=Z,12nm,0.9s						
MSTX	**Muleshoe**	**21.35**	**338**		**P**	**17 30 52.9**	**+1.3**
MSTX				IAmb	IAmb	17 30 58.9	
	comp=Z,9.7nm,1.1s						
FCAR	**Ozark Folk Cen**	**21.58**	**3**	P	**P**	**17 30 52.7**	**-1.2**
FCAR				IAmb	IAmb	17 30 58.5	
	comp=Z,6.3nm,0.8s						
SMWD	**Samnorwood**	**21.63**	**345**	P	**P**	**17 30 55.0**	**+0.5**
FLOC	**Florencia**	**21.68**	**124**	P	**P**	**17 30 57.4**	**+2.3**
FLOC				IAmb	IAmb	17 31 33.1	
	comp=Z,9.2nm,1.0s						
AMTX	**Carrillo**	**21.83**	**342**		**P**	**17 30 58.0**	**+1.3**
HHAR	**Hobbs**	**21.94**	**359**		**P**	**17 30 58.1**	**+0.3**
HHAR				IAmb	IAmb	17 31 02.1	
	comp=Z,7.1nm,0.8s						
319A	**Douglas**	**22.36**	**322**	P	**P**	**17 31 05.0**	**+2.5**
319A				IAmb	IAmb	17 31 08.9	
	comp=Z,7.6nm,1.3s						
121A	**Cookes Peak, D**	**22.38**	**327**	P	**P**	**17 31 03.2**	**+0.5**
121A				IAmb	IAmb	17 31 25.2	
	comp=Z,7.2nm,1.1s						
CROK	**Carrier**	**22.52**	**351**	P	**P**	**17 31 04.2**	**+0.2**
PBMO	**Poplar Bluff**	**22.60**	**6**	P	**P**	**17 31 03.2**	**-1.7**
CRNM	**Carthage**	**22.99**	**331**	P	**P**	**17 31 09.8**	**+0.7**
TKL	**Tuckaleechee C**	**23.04**	**21**	LR	LR	17 40 00.1	
	comp=Z,46nm,21.3s,baz=152,slow=36						
Y22A	**Socorro**	**23.09**	**330**		**P**	**17 31 12.1**	**+1.9**
Y22A				IAmb	IAmb	17 31 15.4	
	comp=Z,4.2nm,0.8s						
BNM	**Barren Site**	**23.10**	**331**	P	**P**	**17 31 11.2**	**+0.8**
SBM	**South Baldy**	**23.22**	**330**	P	**P**	**17 31 14.5**	**+2.7**
LENM	**Lemitar**	**23.28**	**331**	P	**P**	**17 31 14.1**	**+1.9**
T47A	**Sharon Grove**	**23.35**	**13**	P	**P**	**17 31 10.3**	**-2.3**
T47A				IAmb	IAmb	17 31 47.4	
	comp=Z,5.9nm,1.0s						
RTBA	**Rita Blanca**	**23.59**	**341**	P	**P**	**17 31 15.7**	**+0.5**
RTBA				IAmb	IAmb	17 31 20.4	
	comp=Z,8.8nm,1.1s						
S44A	**Carbondale**	**23.65**	**8**	P	**P**	**17 31 14.2**	**-1.4**
CCM	**Cathedral Cave**	**23.79**	**4**	P	**P**	**17 31 16.6**	**-0.4**
TUC	**Tucson**	**23.92**	**322**		**P**	**17 31 21.2**	**+2.9**
SDCO	**Great Sand Dun**	**25.71**	**338**		**P**	**17 31 36.9**	**+2.0**
SDCO				IAmb	IAmb	17 32 07.4	
	comp=Z,7.3nm,1.4s						
PFO	**Pinyon Flats O**	**28.37**	**317**	LR	LR	17 44 38.1	
	comp=Z,54nm,18.5s,baz=132,slow=39						
PSUT	**Pine Spring**	**30.14**	**327**	P	**P**	**17 32 17.1**	**+2.6**
PSUT				IAmb	IAmb	17 32 21.5	
	comp=Z,3.4nm,1.2s						
PD31	**Pinedale Array**	**31.60**	**337**	P	**P**	**17 32 27.7**	**+0.3**
PD31				IAmb	IAmb	17 32 38.3	
	comp=Z,4.3nm,1.4s						
PDAR	**Pinedale Array**	**31.60**	**337**	P	**P**	**17 32 27.4**	**+0.1**
PDAR	**Pinedale Array**	**31.60**	**337**	P	**P**	**17 32 30.8**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=168,slow=3.1,SNR=3.7						
	comp=Z,0.2nm,0.3s						
NVAR	**Mina Array Bea**	**32.57**	**322**	P	**P**	**17 32 39.6**	**+3.8**
	comp=Z,1.4nm,0.8s,baz=140,slow=9.1,SNR=7.0						
NVAR				LR	LR	17 47 08.6	
	comp=Z,46nm,19.0s,baz=79,slow=39						
	comp=Z,1.4nm,0.8s						
PLID	**Pearl Lake**	**36.17**	**333**	P	**P**	**17 33 07.6**	**+0.6**
PLID				IAmb	IAmb	17 33 19.9	
	comp=Z,1.9nm,0.9s						
YBH	**Yreka Blue Hor**	**37.28**	**323**	LR	LR	17 48 34.6	
	comp=Z,4.5nm,18.6s,baz=105,slow=36						
SCHQ	**Scheffervill**	**45.51**	**21**	LR	LR	17 53 46.9	
	comp=Z,82nm,18.1s,baz=169,slow=37						
ILAR	**Eielson Array**	**62.04**	**337**	P	**P**	**17 36 26.0**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=142,slow=5.5,SNR=6.5						
	comp=Z,0.7nm,0.9s						
NOA	**NORSAR Array B**	**84.62**	**28**	P	**P**	**17 38 40.1**	**+2.4**
	comp=Z,1.3nm,0.9s,baz=289,slow=4.8,SNR=4.2						
	comp=Z,1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**145.26**	**339**	PKPbc	**PKPdf**	**17 45 44.1**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=339,slow=4.3,SNR=10						

*NEIC **09** 17:57:39.8±1.1, 8°.55S±0°.07×118°.33E±0°.06, h129km±6km, mb4.6/41, Error ellipse: s-maj=10.3km s-min=8.6km az=213.0*

*IDC **09** 17:57:41.1±1.4, 8°.44S×118°.54E, h141km±11km, mb3.9/15, mbtmp4.4/18, MS2.7/2, Error ellipse: s-maj=16.8km s-min=7.1km az=61.0*

*DJA **09** 17:57:41.3±0.2, 9°.5S×11°.8E±°, h111km±3km, M4.5/29, mB5.3/2, mb4.5/12, MLv4.6/29, Mw(mB)4.8/2*

ISC 09 17:57:41.5±0.3, 8.66S±0°.03×118.36E±0°.04, h152km, n158, σ2s20/175, mb4.3/34, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.60**	**254**	P	**Pn**	**17 58 00.2**	**-3.3**
PLAI	**Plampang**	**0.60**	**254**	P	**Pn**	**17 58 00.3**	**-3.3**
PLAI				S	**Sn**	**17 58 14.9**	**-5.5**
WBSI	**Waikabubak, Su**	**1.41**	**134**	P	**Pn**	**17 58 06.9**	**-3.4**
WBSI				S	**Sn**	**17 58 26.7**	**-5.7**
TWSI	**Taliwang, Sumb**	**1.46**	**267**	P	**Pn**	**17 58 08.0**	**-2.8**
TWSI				S	**Sn**	**17 58 29.1**	**-4.1**
WSI	**Waingapu**	**2.16**	**118**	P	**Pn**	**17 58 16.2**	**-2.4**
WSI				S	**Sn**	**17 58 42.9**	**-4.2**
BASI	**Baing, Sumba**	**2.68**	**125**	P	**Pn**	**17 58 22.9**	**-2.0**
DNP	**Denpasar**	**3.11**	**270**	P	**Pn**	**17 58 29.4**	**-1.0**
SRBI	**Singaraja**	**3.17**	**280**	P	**Pn**	**17 58 29.3**	**-1.7**
BSSI	**Bau Bau, Buton**	**3.28**	**40**	P	**Pn**	**17 58 30.6**	**-1.9**
EDFI	**Ende, Flores**	**3.29**	**92**	P	**Pn**	**17 58 31.4**	**-1.4**
EDFI				S	**Sn**	**17 59 09.5**	**-3.0**
BKSI	**Bulukumba**	**3.75**	**28**	P	**Pn**	**17 58 37.0**	**-1.6**
MMRI	**Maumere**	**3.83**	**90**		**Pn**	**17 58 37.8**	**-1.9**
MMRI				Sn	**Sn**	**17 59 20.9**	**-4.0**
MMRI	**Maumere**	**3.83**	**90**	P	**Pn**	**17 58 38.9**	**-0.8**
MMRI	**Maumere**	**3.83**	**90**	S	**Sn**	**17 59 23.8**	**-1.0**
MMRI	**Maumere**	**3.83**	**90**	P	**Pn**	**17 58 38.6**	**-1.1**
MMRI				S	**Sn**	**17 59 22.6**	**-2.2**
KAPI	**Kappang**	**3.88**	**21**		**Pn**	**17 58 37.5**	**-2.8**
KAPI				Sn	**Sn**	**17 59 20.5**	**-5.5**
KAPI	**Kappang**	**3.88**	**21**	P	**Pn**	**17 58 38.1**	**-2.2**
	81nm,0.6s,baz=189,slow=7.9,SNR=41						
KAPI				S	**Sn**	**17 59 19.5**	**-6.5**
	22nm,0.4s,baz=262,slow=20,SNR=3.9						
KAPI				LR	LR	18 00 20.7	
	comp=Z,62nm,20.4s,baz=218,slow=44						
KAPI	**Kappang**	**3.88**	**21**	P	**Pn**	**17 58 38.6**	**-1.7**
KAPI	**Kappang**	**3.88**	**21**	S	**Sn**	**17 59 22.9**	**-3.1**
JAGI	**Jajag, Banyuwa**	**4.17**	**272**		**Pn**	**17 58 41.3**	**-2.6**
JAGI	**Jajag, Banyuwa**	**4.17**	**272**	P	**Pn**	**17 58 41.4**	**-2.6**
JAGI	**Jajag, Banyuwa**	**4.17**	**272**	S	**Sn**	**17 59 29.5**	**-3.1**
JAGI	**Jajag, Banyuwa**	**4.17**	**272**	P	**Pn**	**17 58 41.4**	**-2.6**
ABJI	**Asem Bagus**	**4.17**	**282**	P	**Pn**	**17 58 43.7**	**-0.4**
BNSI	**Bone**	**4.58**	**22**	P	**Pn**	**17 58 49.2**	**-0.2**
KMMI	**Kalianget**	**4.64**	**290**	P	**Pn**	**17 58 50.6**	**+0.4**
BLJI	**Banyuglugur**	**4.80**	**281**	P	**Pn**	**17 58 52.5**	**+0.1**
SPSI	**Sidrap Palu**	**4.87**	**17**	P	**Pn**	**17 58 52.5**	**-0.8**
BBSI	**Bau Bau**	**5.24**	**53**	P	**Pn**	**17 58 58.1**	**0.0**
	48nm,0.8s						
BATI	**Baumata**	**5.45**	**107**	P	**Pn**	**17 58 59.7**	**-1.3**
	180nm,0.4s,baz=269,slow=2.5,SNR=149						
BATI				S	**Sn**	**17 59 58.5**	**-4.6**
	307nm,0.4s,baz=334,slow=21,SNR=13						
BATI	**Baumata**	**5.45**	**107**	P	**Pn**	**17 58 59.7**	**-1.3**
SOEI	**Soe**	**5.93**	**101**		**Pn**	**17 59 05.7**	**-1.7**
SOEI				Sn	**Sn**	**18 00 08.2**	**-6.5**
SOEI	**Soe**	**5.93**	**101**	P	**Pn**	**17 59 06.1**	**-1.4**
SOEI	**Soe**	**5.93**	**101**	S	**Sn**	**18 00 12.2**	**-2.5**
SOEI	**Soe**	**5.93**	**101**	P	**Pn**	**17 59 06.0**	**-1.4**
BBKI	**Banjar Baru**	**6.24**	**326**	P	**Pn**	**17 59 12.4**	**+0.9**
	0.2nm56nm,0.9s						
PCJI	**Pacitan**	**7.12**	**273**	P	**Pn**	**17 59 23.1**	**-0.1**
	0.3nm39nm,0.6s						
UGM	**Wanagama**	**7.79**	**275**	Pn	**Pn**	**17 59 29.7**	**-2.5**
UGM	**Wanagama**	**7.79**	**275**	P	**Pn**	**17 59 30.8**	**-1.4**
UGM	**Wanagama**	**7.79**	**275**	S	**Sn**	**18 00 58.2**	**-1.0**
UGM	**Wanagama**	**7.79**	**275**	P	**Pn**	**17 59 31.1**	**-1.1**
	51nm,1.4s						
LUWI	**Luwuk**	**8.75**	**30**	Pn	Pn	17 59 39.5	-5.5
KPJI	**Karang Pucung**	**9.43**	**277**	P	**Pn**	**17 59 54.3**	**+0.3**
	17nm,0.5s						
SANI	**Sanana**	**10.04**	**50**	P	**Pn**	**18 00 02.6**	**+0.5**
BBJI	**Bungbulang**	**10.67**	**276**	P	**Pn**	**18 00 09.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**11.75**	**144**		**Pn**	**18 00 22.6**	**-1.9**
FITZ	**Fitzroy Crossi**	**11.75**	**144**	P	**Pn**	**18 00 23.3**	**-1.2**
	14nm,0.6s,baz=344,slow=9.3,SNR=63						
FITZ				S	**Sn**	**18 02 26.3**	**-8.1**
	29nm,0.4s,baz=169,slow=21,SNR=22						
BNDI	**Bandanaira**	**12.18**	**71**	P	**Pn**	**18 00 28.3**	**-1.9**
KNRA	**Kununurra**	**12.32**	**125**		**Pn**	**18 00 29.4**	**-2.6**
MBWA	**Marble Bar**	**12.49**	**174**		**Pn**	**18 00 32.4**	**-1.7**
MBWA	**Marble Bar**	**12.49**	**174**	P	**Pn**	**18 00 32.7**	**-1.4**
SAUI	**Saumlaki**	**12.82**	**88**	Pn	**Pn**	**18 00 35.5**	**-2.9**
KSM	**Kuching**	**12.88**	**321**		**P**	**18 00 44.4**	**+0.4**
DRS	**Darwin Rock St**	**12.88**	**108**	P	**Pn**	**18 00 37.2**	**-2.0**
PSA00	**Pilbara Seismi**	**12.91**	**174**		**Pn**	**18 00 37.9**	**-1.6**
PSA00	**Pilbara Seismi**	**12.91**	**174**		**Pn**	**18 00 37.6**	**-2.0**
PSA00	**Pilbara Seismi**	**12.91**	**174**	P	**Pn**	**18 00 38.3**	**-1.3**
TNTI	**Ternate**	**12.98**	**44**	Pn	**Pn**	**18 00 36.6**	**-3.8**
MTN	**Manton Dam**	**13.22**	**109**		**Pn**	**18 00 39.9**	**-3.6**
MYLDM	**Lahad Datu**	**13.75**	**1**		**Pn**	**18 00 50.7**	**+0.4**
MYLDM	**Lahad Datu**	**13.75**	**1**	P	**Pn**	**18 00 50.2**	**-0.1**
GIRL	**Giralia**	**14.45**	**195**	Pn	**Pn**	**18 00 58.2**	**-0.8**
FAKI	**Fak Fak**	**14.95**	**68**		**Pn**	**18 01 01.5**	**-3.8**
FAKI	**Fak Fak**	**14.95**	**68**	P	**Pn**	**18 01 04.0**	**-1.3**
MNAI	**Manna**	**15.89**	**285**	Pn	**Pn**	**18 01 12.5**	**-4.4**
MNAI	**Manna**	**15.89**	**285**	P	**Pn**	**18 01 16.9**	**0.0**
MEEK	**Meekatharra**	**17.88**	**179**	P	**Pn**	**18 01 41.5**	**+0.7**
WRA	**Warramunga Arr**	**19.10**	**128**	P	**P**	**18 01 52.5**	**-0.1**
	11nm,0.5s,baz=304,slow=13,SNR=72						
WRA				S	**S**	**18 05 23.4**	**+2.1**
	4.1nm,0.5s,baz=291,slow=22,SNR=6.7						
WRA				ScP	**ScP**	**18 09 34.3**	**+1.7**
	1.6nm,0.7s,baz=320,slow=2.7,SNR=4.0						
WRAB	**Tennant Creek**	**19.10**	**128**		**P**	**18 01 51.5**	**-1.2**
WRAB				IAmb	IAmb	18 02 01.2	
	comp=Z,17nm,0.7s						
**

	comp=Z,2.6nm,0.4s						
WHZ	**Wether Hill Ro**	**56.30**	**140**	P	**P**	**18 07 07.9**	**+1.5**
SONM	**Songino Array**	**57.24**	**350**	P	**P**	**18 07 12.5**	**-0.6**
SONM				IAmb	IAmb	18 07 14.0	
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**57.24**	**350**	P	**P**	**18 07 12.2**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=172,slow=7.7,SNR=15						
	comp=Z,1.5nm,0.5s						
MRNZ	**Matariki Terra**	**57.88**	**134**	P	**P**	**18 07 19.3**	**+1.7**
HILR	**Hailar Array B**	**57.99**	**1**	P	**P**	**18 07 17.6**	**-0.5**
	comp=Z,1.4nm,0.4s,baz=169,slow=10,SNR=2.6						
	comp=Z,1.4nm,0.4s						
THZ	**Tophouse**	**58.10**	**134**	P	**P**	**18 07 20.8**	**+1.6**
TCW	**Tory Channel**	**58.92**	**133**	P	**P**	**18 07 26.4**	**+1.6**
WMQ	**Urumqi**	**59.18**	**335**	*eP*	**P**	**18 07 28.9**	**+2.4**
WMQ				LR	LR		
	comp=Z,130nm,20.9s						
HEH	**HeiHe**	**59.20**	**7**	*eP*	**P**	**18 07 25.6**	**-0.8**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BHW	**Baring Head**	**59.40**	**133**	P	**P**	**18 07 28.9**	**+0.8**
BKZ	**Black Stump Fm**	**60.00**	**130**	P	**P**	**18 07 33.8**	**+1.5**
MKAR	**Makanchi Array**	**63.87**	**333**	P	**P**	**18 07 56.3**	**-1.5**
MKAR	**Makanchi Array**	**63.87**	**333**	P	**P**	**18 07 56.9**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=152,slow=6.4,SNR=19						
	comp=Z,1.1nm,0.4s						
MAKZ	**Makanchi**	**64.02**	**333**	P	**P**	**18 07 57.1**	**-1.7**
ARSB	**Arslanbob**	**64.87**	**324**	P	**P**	**18 08 02.9**	**-1.7**
ARSB				IAmb	IAmb	18 08 41.4	
	comp=Z,4.8nm,0.9s						
KURBB	**Kurchatov Arra**	**68.39**	**334**	P	**P**	**18 08 25.3**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=142,slow=5.7,SNR=13						
	comp=Z,1.1nm,0.5s						
KURK	**Kurchatov**	**68.42**	**334**	P	**P**	**18 08 26.4**	**-0.4**
ZAA0	**Zalesovo Array**	**68.50**	**339**	P	**P**	**18 08 25.6**	**-1.6**
ZALV	**Zalesovo Beam**	**68.50**	**339**	P	**P**	**18 08 25.4**	**-1.8**
	comp=Z,2.1nm,0.5s,baz=141,slow=4.8,SNR=12						
	comp=Z,2.1nm,0.5s						
MAW	**Mawson**	**69.34**	**200**	P	**P**	**18 08 34.7**	**+2.6**
	comp=Z,2.3nm,0.7s,baz=103,slow=16,SNR=6.8						
	comp=Z,2.3nm,0.7s						
PEA0B	**Petropavlovsk-**	**70.02**	**24**	P	**P**	**18 08 36.8**	**+0.2**
PETK	**Petropavlovsk-**	**70.02**	**24**	P	**P**	**18 08 36.2**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=279,slow=2.9,SNR=5.9						
	comp=Z,2.6nm,0.6s						
YAK	**Yakutsk**	**71.03**	**6**	P	**P**	**18 08 42.2**	**-0.2**
YAK				IAmb	IAmb	18 08 43.4	
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**72.42**	**171**	P	**P**	**18 08 52.3**	**+1.7**
VNDA	**Vanda**	**72.42**	**171**	P	**P**	**18 08 53.2**	**+2.6**
	comp=Z,1.5nm,0.4s,baz=313,slow=6.6,SNR=32						
	comp=Z,1.5nm,0.4s						
SBA	**Scott Base**	**73.42**	**170**	P	**P**	**18 08 59.4**	**+2.9**
AB31	**Akbulak array**	**76.92**	**325**	P	**P**	**18 09 15.5**	**-1.5**
ABKAR	**Akbulak array**	**76.92**	**325**	P	**P**	**18 09 15.5**	**-1.5**
TIXI	**Tiksi**	**80.45**	**3**		**P**	**18 09 34.6**	**-1.2**
TIXI				IAmb	IAmb	18 09 36.1	
	comp=Z,4.0nm,0.8s						
QSPA	**South Pole Qui**	**81.33**	**180**	P	**P**	**18 09 45.2**	**+4.3**
QSPA	**South Pole Qui**	**81.33**	**180**	P	P	18 09 45.8	+5.0
	comp=Z,2.0nm,0.9s,baz=224,slow=0.5,SNR=9.0						
SNAA	**Sanae**	**91.15**	**196**	IAmb	IAmb	18 10 53.9	
	comp=Z,3.3nm,1.2s						
SNAA	**Sanae**	**91.15**	**196**	P	**P**	**18 10 31.3**	**+2.5**
	comp=Z,0.6nm,0.4s,baz=195,slow=10.0,SNR=6.2						
	comp=Z,0.6nm,0.4s						
CPUP	**Villa Florida**	**144.96**	**187**		**PKiKP**	**18 17 03.6**	**-1.6**
CPUP	**Villa Florida**	**144.96**	**187**	PKPbc	**PKiKP**	**18 17 03.5**	**-1.8**
	comp=Z,1.6nm,0.7s,baz=21,slow=3.9,SNR=12						
LPAZ	**La Paz**	**154.39**	**165**	PKPab	**PKPab**	**18 17 42.6**	**+2.4**
	comp=Z,1.1nm,0.5s,baz=177,slow=6.4,SNR=5.4						

*IDC **09** 18:31:11.7±2.3, 21.°69N×143.°09E, h263km±23km, mb3.2/6, mbtmp3.9/8, Error ellipse: s-maj=32.9km s-min=16.7km az=92.0*

*NEIC **09** 18:31:11.0±1.4, 21.°79N±0.°09×142.°9E±0.°3, h254km±11km, mb4.1/7, Error ellipse: s-maj=46.6km s-min=5.6km az=74.0*

ISC 09 18:31:10.5±0.9, 21.°68N±0.°07×142.°9E±0.°2, h250km, n23, σ1§29/24, mb3.5/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.43**	**353**	Pn	**Pn**	**18 32 29.9**	**-1.7**
JCJ	**Chichijima**	**5.43**	**353**	P	**Pn**	**18 32 33.0**	**+1.5**
	63nm,0.7s,baz=247,slow=23,SNR=1.5						
JCJ				S	**S**	**18 33 38.6**	**+2.3**
	59nm,0.5s,baz=254,slow=22,SNR=4.6						
JMN	**Monobe**	**14.40**	**328**	P	**Pn**	**18 34 23.2**	**-0.2**
JGF	**Kuroka**	**14.69**	**342**	P	**P**	**18 34 25.6**	**-1.2**
MJAR	**Matsushiro Arr**	**15.36**	**346**	P	**P**	**18 34 33.0**	**-1.3**
MJAR				IAmb	IAmb	18 34 36.3	
	comp=Z,2.6nm,1.2s						
MJAR	**Matsushiro Arr**	**15.36**	**346**	P	**Pn**	**18 34 35.2**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=168,slow=9.9,SNR=10						
MAJO	**Matsushiro**	**15.36**	**346**	P	**P**	**18 34 32.3**	**-2.0**
MAJO				IAmb	IAmb	18 34 51.9	
	comp=Z,21nm,1.4s						
MJB9	**Matsu-Tunnel**	**15.36**	**346**	P	**P**	**18 34 32.4**	**-1.9**
MJB9				IAmb	IAmb	18 34 46.5	
	comp=Z,14nm,1.5s						
JMM	**Marumori**	**16.23**	**354**	P	**P**	**18 34 43.9**	**0.0**
KSAR	**Wonju Array Be**	**20.37**	**324**	P	**P**	**18 35 27.0**	**-1.5**
KS19	**Wonju Array Si**	**20.43**	**324**	P	**P**	**18 35 28.0**	**-1.0**
PETK	**Petropavlovsk-**	**33.38**	**16**	P	**P**	**18 37 26.0**	**+0.7**
	comp=Z,11nm,1.1s,baz=253,slow=10,SNR=3.6						
	comp=Z,11nm,1.1s						
COEN	**Coen**	**35.41**	**179**	P	**P**	**18 37 43.9**	**+0.7**
COEN				IAmb	IAmb	18 37 59.8	
	comp=Z,8.8nm,1.4s						
CMAR	**Chiang Mai Arr**	**41.29**	**274**	P	**P**	**18 38 31.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**41.29**	**274**	P	**P**	**18 38 34.5**	**+2.5**
	comp=Z,0.4nm,0.5s,baz=76,slow=6.9,SNR=4.3						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**42.20**	**192**	P	**P**	**18 38 39.5**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=10,slow=8.4,SNR=6.6						
	comp=Z,0.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**42.98**	**204**	P	**P**	**18 38 45.6**	**+0.1**
ASAR	**Alice Springs**	**45.91**	**191**	P	**P**	**18 39 08.5**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=13,slow=8.1,SNR=7.1						
	comp=Z,0.3nm,0.7s						
BVAR	**Borovoye Array**	**62.50**	**320**	P	**P**	**18 41 07.3**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=96,slow=6.5,SNR=2.3						
	comp=Z,0.5nm,0.4s						
FINES	**FINESS Array B**	**83.08**	**334**	P	**P**	**18 43 07.1**	**-0.8**
FINES	**FINESS Array B**	**83.08**	**334**	P	**P**	**18 43 06.8**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=40,slow=7.4,SNR=4.7						
	comp=Z,1.2nm,0.9s						
PLCA	**Paso Flores**	**145.96**	**132**		**PKPdf**	**18 50 19.0**	**-0.8**
PLCA	**Paso Flores**	**145.96**	**132**	PKPbc	**PKPdf**	**18 50 19.3**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=255,slow=3.9,SNR=4.2						

*SDD **09** 18:36:23.2±2.1, 19.°21N×67.°10W, h22km±105km, MD3.5, ML3.0, MW3.2*

*NEIC **09** 18:36:24.5±1.6, 19.°08N±0.°07×67.°17W±0.°03, h19km±8km, ML2.8/15, Md3.2/16(RSPR), Error ellipse: s-maj=10.5km s-min=4.4km az=173.0*

*RSPR **09** 18:36:26.4, 19.°07N×67.°13W, h10km±31km, MD3.2/16*

ISC 09 18:36:21.6±1.5, 19.°17N±0.°05×67.°12W±0.°03, h4km±11km, n59, σ0§59/71, 12C-11D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.70**	**179**		**Pb**	**18 36 37.0**	**+0.6**
AGPR					**Sb**	**18 36 46.5**	**+0.1**
AGPR	**Aguadilla, PR**	**0.70**	**179**	⇑*e*Pg	**Pb**	**18 36 36.8**	**+0.3**
AGPR				⇑*e*Sg	**Sb**	**18 36 46.3**	**-0.2**
AGPR				IAML		18 36 47.4	
	comp=N,666nm,0.2s						
AGPR	**Aguadilla, PR**	**0.70**	**179**	⇑*i*P	**Pb**	**18 36 37.0**	**+0.6**
AGPR	**Aguadilla, PR**	**0.70**	**179**	*e*S	**Sb**	**18 36 46.5**	**+0.1**
IDE	**Isla Desecheo**	**0.85**	**203**		**Pb**	**18 36 39.3**	**+0.3**
IDE					**Sb**	**18 36 50.6**	**-0.1**
IDE	**Isla Desecheo**	**0.85**	**203**	⇑*i*P	**Pb**	**18 36 39.3**	**+0.3**
IDE	**Isla Desecheo**	**0.85**	**203**	*e*S	**Sb**	**18 36 50.6**	**-0.1**
EMPR	**Esperanza - Ma**	**0.89**	**141**		**Pn**	**18 36 41.3**	**+0.3**
EMPR					**Sn**	**18 36 54.5**	**+0.1**
EMPR	**Esperanza - Ma**	**0.89**	**141**	⇑*e*P	**Pn**	**18 36 41.3**	**+0.3**
EMPR	**Esperanza - Ma**	**0.89**	**141**	*e*S	**Sn**	**18 36 54.5**	**+0.1**
AOPR	**Arecibo Observ**	**0.89**	**157**		**Pb**	**18 36 39.9**	**+0.2**
AOPR	**Arecibo Observ**	**0.89**	**157**	⇓*e*Pg	**Pb**	**18 36 39.9**	**+0.2**
AOPR				⇓*e*Sg	**Sb**	**18 36 52.3**	**+0.3**
AOPR				IAML		18 37 01.1	
	comp=N,1μm,1.1s						
AOPR	**Arecibo Observ**	**0.89**	**157**	⇑*e*P	**Pb**	**18 36 40.0**	**+0.3**
PRSN	**Puerto Rico Se**	**0.95**	**181**		**Pb**	**18 36 40.7**	**0.0**
PRSN					**Sb**	**18 36 53.2**	**-0.5**
PRSN	**Puerto Rico Se**	**0.95**	**181**	⇑*e*P	**Pb**	**18 36 40.7**	**0.0**
PRSN	**Puerto Rico Se**	**0.95**	**181**	*e*S	**Sb**	**18 36 53.2**	**-0.5**
UUPR	**Utuado, UPR, P**	**0.99**	**157**		**Pb**	**18 36 41.5**	**+0.1**
UUPR					**Sb**	**18 36 54.6**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.99**	**157**	⇓*e*P	**Pb**	**18 36 41.5**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.99**	**157**	*e*S	**Sb**	**18 36 54.6**	**-0.3**
LSP	**Las Mesas**	**0.99**	**178**		**Pb**	**18 36 41.5**	**+0.1**
LSP					**Sg**	**18 36 53.1**	**-0.5**
LSP					**Sb**	**18 36 54.9**	**0.0**
LSP	**Las Mesas**	**0.99**	**178**	⇓*i*P	**Pb**	**18 36 41.5**	**+0.1**
LSP	**Las Mesas**	**0.99**	**178**	*e*S	**Sg**	**18 36 53.1**	**-0.5**
LSP	**Las Mesas**	**0.99**	**178**	*e*S	**Sb**	**18 36 54.9**	**0.0**
ECPR	**Experimental S**	**1.11**	**140**	⇑*e*P	**Pb**	**18 36 43.4**	**-0.1**
ECPR	**Experimental S**	**1.11**	**140**	*e*S	**Sn**	**18 37 00.8**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.16**	**179**		**Pg**	**18 36 43.9**	**0.0**
CRPR				IAML		18 37 02.2	
	comp=N,197nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.16**	**179**		**Sg**	**18 36 58.5**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.16**	**179**	⇑*e*Pg	**Pg**	**18 36 44.0**	**0.0**
CRPR				⇓*e*Sg	**Sg**	**18 36 58.5**	**-0.4**
CRPR				IAML		18 37 02.0	
	comp=N,230nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.16**	**179**	⇓*e*P	**Pg**	**18 36 44.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.16**	**179**	*e*S	**Sg**	**18 36 58.5**	**-0.4**
MLPR	**Magueyes Islan**	**1.20**	**176**	⇓*i*P	**Pg**	**18 36 44.5**	**-0.2**
MLPR	**Magueyes Islan**	**1.20**	**176**	*e*S	**Sg**	**18 36 59.8**	**-0.4**
OBIP	**Obispado Ponce**	**1.23**	**156**		**Pg**	**18 36 45.2**	**0.0**
OBIP					**Sg**	**18 37 00.4**	**-0.6**
OBIP	**Obispado Ponce**	**1.23**	**156**	IAML		18 37 02.1	
	comp=N,219nm,0.2s						
OBIP				IAML		18 37 06.1	
	comp=E,187nm,0.3s						
OBIP	**Obispado Ponce**	**1.23**	**156**	⇓*i*P	**Pg**	**18 36 45.2**	**0.0**
OBIP	**Obispado Ponce**	**1.23**	**156**	*e*S	**Sg**	**18 37 00.4**	**-0.6**
GCPR	**Guaynabo City**	**1.31**	**131**		**Pb**	**18 36 46.6**	**-0.2**
GCPR	**Guaynabo City**	**1.31**	**131**		**Sg**	**18 37 03.4**	**-0.3**
GCPR	**Guaynabo City**	**1.31**	**131**	⇑*e*P	**Pg**	**18 36 46.8**	**+0.1**
GCPR	**Guaynabo City**	**1.31**	**131**	*e*S	**Sg**	**18 37 03.4**	**-0.3**
SJG	**San Juan**	**1.40**	**139**		**Pn**	**18 36 47.7**	**-0.4**
SJG				IAML		18 37 12.5	
	comp=E,139nm,0.2s						
SJG				IAML		18 37 19.7	
	comp=E,135nm,0.3s						
SJG	**San Juan**	**1.40**	**139**	⇓*e*P	**Pg**	**18 36 49.7**	**+1.1**
SJG	**San Juan**	**1.40**	**139**	*e*S	**Sg**	**18 37 06.8**	**+0.1**
HUMP	**Col San Antoni**	**1.58**	**130**		**Pn**	**18 36 50.4**	**-0.2**
HUMP					**Sn**	**18 37 09.7**	**-1.8**
HUMP				IAML		18 37 19.2	
	comp=E,140nm,0.2s						
HUMP				IAML		18 37 22.9	
	comp=N,105nm,0.2s						
HUMP	**Col San Antoni**	**1.58**	**130**	⇑*e*P	**Pn**	**18 36 50.6**	**+0.1**
HUMP	**Col San Antoni**	**1.58**	**130**	*e*S	**Sn**	**18 37 11.0**	**-0.5**
HIDR	**Higuey Centro**	**1.61**	**249**	*e*Pg	**Pn**	**18 36 50.5**	**-0.5**
HIDR				IAML		18 37 19.2	
	comp=N,222nm,0.2s						
HIDR	**Higuey Centro**	**1.61**	**249**	⇑*e*P	**Pn**	**18 36 51.1**	**+0.1**
HIDR	**Higuey Centro**	**1.61**	**249**	*e*S	**Sb**	**18 37 13.0**	**+0.1**
MIDR	**Miches**	**1.83**	**264**	⇑*e*Pg	**Pb**	**18 36 54.7**	**-1.1**
MIDR				⇓*e*Sg	**Sg**	**18 37 20.3**	**-0.2**
MIDR				IAML		18 37 24.3	
	comp=N,45nm,0.3s						
MIDR	**Miches**	**1.83**	**264**	⇑*i*P	**Pb**	**18 36 55.6**	**-0.1**
MIDR	**Miches**	**1.83**	**264**	*e*S	**Sn**	**18 37 16.9**	**-0.7**
SMDR	**Samana, DR**	**1.96**	**274**	⇓*e*P	**Pn**	**18 36 55.6**	**-0.1**
SMDR	**Samana, DR**	**1.96**	**274**	*e*S	**Sb**	**18 37 21.9**	**-0.8**
DR12	**Loma Pena Alta**	**2.17**	**260**		**Pn**	**18 36 59.0**	**+0.3**
SDD	**Santo Domingo**	**2.74**	**255**	Pn	**Pn**	**18 37 06.6**	**+0.2**
SDD				IAML		18 38 29.5	
	comp=N,72nm,2.3s						
SDD				IAML		18 38 45.3	
	comp=E,58nm,2.2s						
BANI	**BANI**	**3.16**	**256**	Pn	**Pn**	**18 37 14.4**	**+2.0**
SDDR	**Presa de Saban**	**3.94**	**268**		**Pn**	**18 37 24.9**	**+1.8**
SDDR	**Presa de Saban**	**3.94**	**268**	⇑*e*P	**Pn**	**18 37 24.9**	**+1.8**

*JMA **09** 18:42:17.0±0.0, 34.°65N±0.°04×134.°47E±0.°07, h5km, MV3.1/20, HARIMANADA SETONAIKAI*

JMA Felt I J1 at HARIMANADA SETONAIKAI .

*IDC **09** 18:42:17.8±2.4, 34.°70N×134.°43E, h0km, mb3.3/1, mbtmp3.1/4, ML2.4/3, Error ellipse: s-maj=53.5km s-min=15.3km az=158.0*

ISC 09 18:42:18.0±0.9, 34.°66N±0.°03×134.°48E±0.°03, h10km, n12, σ1§43/23, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAD	**Aida**	**0.38**	**318**	*i* P	**Pg**	**18 42 24.6**	**-0.8**
JAD				S	**Sg**	**18 42 29.9**	**-0.5**
JAWN	**Awajishima-nag**	**0.39**	**116**	*i* P	**Pg**	**18 42 24.8**	**-0.9**
JAWN				S	**Sg**	**18 42 30.6**	**-0.4**
JKS	**Kasai**	**0.44**	**43**	*i* P	**Pg**	**18 42 26.0**	**-0.7**
JKS				S	**Sg**	**18 42 32.1**	**-0.4**
JJS	**Sakaide**	**0.53**	**238**	*i* P	**Pg**	**18 42 27.1**	**-1.3**
JJS				S	**Sg**	**18 42 34.3**	**-1.1**
JAI	**Aioi**	**0.87**	**181**	*i* P	**Pg**	**18 42 33.6**	**-1.1**
JKSM	**Kasumi**	**0.94**	**9**	P	**Pg**	**18 42 34.9**	**-1.1**
JKSM				S	**Sg**	**18 42 47.5**	**-0.8**
JWT	**Wachi**	**0.98**	**51**	*i* P	**Pg**	**18 42 35.7**	**-1.2**
JWT				S	**Sg**	**18 42 48.8**	**-0.9**
JHE	**Heguri**	**1.00**	**90**	P	**Pg**	**18 42 35.8**	**-1.4**
JHE				S	**Sg**	**18 42 48.8**	**-1.3**
JNU	**Nakatsue**	**3.36**	**244**	Pn	**Pn**	**18 43 11.9**	**+1.2**
	0.6nm,0.3s,baz=38,slow=2.3,SNR=9.3						
JNU				Sn	**Sn**	**18 43 52.0**	**+1.4**
	1.2nm,0.3s,baz=71,slow=5.6,SNR=4.0						
	3.5nm,0.4s						
MJAR	**Matsushiro Arr**	**3.57**	**57**	Pn	**Pn**	**18 43 14.8**	**+1.3**
	0.1nm,0.3s,baz=240,slow=15,SNR=9.9						
MJAR				Pg	**Pg**	**18 43 23.8**	**-2.6**
	0.8nm,0.3s,baz=235,slow=17,SNR=12						
MJAR				Sn	**Sn**	**18 43 59.0**	**+3.2**
	baz=164,slow=8.4						
MJAR				Lg	Lg	18 44 12.0	
	0.2nm,0.3s,baz=230,slow=31,SNR=10						
	0.8nm,0.4s						
KSRS	**Korea Array**	**6.00**	**300**	Pn	**Pn**	**18 43 48.0**	**+1.3**
	0.4nm,0.3s,baz=116,slow=14,SNR=5.2						
KSRS				Sn	**Sn**	**18 44 54.0**	**-1.5**
	0.2nm,0.3s,baz=121,slow=24,SNR=4.3						
	0.8nm,0.4s						
SONM	**Songino Array**	**24.72**	**311**	P	**P**	**18 47 40.0**	**+0.4**
	0.6nm,0.7s,baz=120,slow=11,SNR=3.8						
	0.6nm,0.7s						

IDC 09 18:46:19.4±2.3, 1.°81N×126.°43E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=310.4km s-min=23.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.97**	**161**	P	P	18 51 24.7	-1.0
	0.3nm,0.3s,baz=331,slow=9.2,SNR=2.5						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.35**	**164**	P	P	18 51 58.6	+1.3
	0.2nm,0.7s,baz=348,slow=9.0,SNR=4.1						
ASAR				PcP	PcP	18 55 21.7	-1.9
	0.1nm,0.4s,baz=359,slow=2.2,SNR=6.4						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**58.96**	**326**	P	P	18 56 20.4	-0.3
	0.1nm,0.4s,baz=112,slow=8.5,SNR=4.1						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.19**	**328**	P	P	18 56 50.5	+1.1
	0.2nm,0.4s,baz=126,slow=9.3,SNR=4.2						
	0.2nm,0.4s						

*IDC **09** 18:58:39.4±0.6, 52.°69N×132.°36W, h0km, mb4.1/16, mbtmp4.1/24, ML3.7/8, MS3.8/40, Error ellipse: s-maj=11.2km s-min=6.3km az=57.0*

*AEIC **09** 18:58:40.1±2.9, 52.°74N±0.°04×132.°40W±0.°08, h16km±3km, Error ellipse: s-maj=8.2km s-min=5.2km az=56.0*

*NEIC **09** 18:58:41.5, 52.°77N×132.°31W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=0.75; $M_{\theta\theta}$=0.72; $M_{\phi\phi}$=-0.32; $M_{r\theta}$=0.54; $M_{\theta\phi}$=0.46; $M_{\phi r}$=-0.09; Fault plane solution: M_0=1.00000×10^{16} NP1:ϕ_s317.00000°, δ32.00000°, λ113.00000°. NP2:ϕ_s110.00000°, δ61.00000°, λ77.00000°. Principal axes: T 1.0281, Plg71.0000°, Azm351.0000°; N 0.0256, Plg12.0000°, Azm117.0000°; P -1.0537, Plg15.0000°, Azm210.0000°;*

*PGC **09** 18:58:41.6±0.3, 52.°76N×132.°28W, h21km, ML4.7/23, Mw4.6, mb4.2(NEIC), 57km south of Village of Queen Charlotte, Bc Haida Gwaii Region*

*NEIC **09** 18:58:41.1±2.5, 52.°75N±0.°04×132.°32W±0.°06, h15km±3km, mb4.2/164, ML4.4(AEIC), Mwr4.6(OTT), Error ellipse: s-maj=6.6km s-min=5.0km az=196.0*

*GCMT **09** 18:58:44.3±0.4, 52.°65N±0.°03×132.°19W±0.°06, h18km±1km, MW4.8/80, Moment Tensor Solution. s16,c19; s80,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.83±.17; $M_{\theta\theta}$-1.21±.10; $M_{\phi\phi}$-0.62±.10; $M_{r\theta}$1.62±.27; $M_{\theta\phi}$0.76±.05; $M_{\phi r}$-0.13±.23; Best double couple: $M_0$2.40000×10^{16} NP1:ϕ_s318.00000°, δ27.00000°, λ119.00000°. NP2: ϕ_s106.00000°, δ66.00000°, λ76.00000°. Principal axes: T 2.5430, Plg66.0000°, Azm352.0000°; N -0.2930, Plg13.0000°, Azm112.0000°; P -2.2580, Plg20.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ANF **09** 18:58:51.3±1.2, 53.°58N×132.°29W, h0km, ML4.6/12 Error ellipse: s-maj=14.0km s-min=5.3km az=176.0*

ISC 09 18:58:40.4±1.1, 52.°68N±0.°03×132.°31W±0.°03, h11km±6km, n469, σ1§69/412, mb4.3/47, MS3.8/33, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG1B	**Mitchell Dam**	**0.28**	**23**	P	**Pg**	**18 58 46.6**	**+0.5**
HG1B				S	**Sg**	**18 58 49.8**	**-0.1**
BAIB	**Barry Inlet**	**0.35**	**106**	P	**Pb**	**18 58 49.6**	**+0.8**
BAIB				S	**Sb**	**18 58 55.0**	**+0.6**
MOBC	**Moresby Island**	**0.51**	**24**		**Pg**	**18 58 50.3**	**0.0**
MOBC				Sg	**Sg**	**18 58 56.1**	**-1.1**
MOBC	**Moresby Island**	**0.51**	**24**	P	**Pg**	**18 58 50.4**	**0.0**
MOBC				S	**Sg**	**18 58 56.9**	**-0.3**
DI2B	**Dawson Inlet**	**0.54**	**349**	P	**Pg**	**18 58 50.5**	**-0.4**
DI2B				S	**Sg**	**18 58 56.2**	**-1.7**
DIB	**Dawson Inlet,**	**0.54**	**349**		**Pg**	**18 58 50.4**	**-0.4**
DIB				Sg	**Sg**	**18 58 56.3**	**-1.6**
DIB	**Dawson Inlet,**	**0.54**	**349**	P	**Pg**	**18 58 50.5**	**-0.4**
DIB				S	**Sg**	**18 58 56.4**	**-1.6**
H02S2	**DAWSON INLET T**	**0.54**	**349**	Pg	**Pg**	**18 58 50.3**	**-0.6**
H02S2				Lg	Lg	18 58 56.4	
HG4B	**Hotspring**	**0.78**	**119**		**Pb**	**18 58 56.4**	**+0.4**
HG4B				Sg	**Sb**	**18 59 07.1**	**+0.5**
JEDB	**Jedway, Haida**	**0.78**	**119**	P	**Pb**	**18 58 56.6**	**+0.6**
JEDB				S	**Sb**	**18 59 07.3**	**+0.7**
PCLB	**Port Clements**	**1.05**	**353**	P	**Pg**	**18 58 59.4**	**-1.2**
PCLB				S	**Sg**	**18 59 12.2**	**-2.0**
BNAB	**Bonilla**	**1.30**	**50**	P	**Pn**	**18 59 03.2**	**-1.3**
BNAB				S	**Sg**	**18 59 19.6**	**-2.6**
NDB	**Naden**	**1.34**	**344**		**Pn**	**18 59 03.1**	**-2.0**
NDB					**Sg**	**18 59 19.6**	**-3.8**
NDB	**Naden**	**1.34**	**344**	P	**Pn**	**18 59 03.3**	**-1.8**
NDB				S	**Sg**	**18 59 19.5**	**-3.9**
MASB	**Masset**	**1.35**	**7**	P	**Pn**	**18 59 04.3**	**-0.9**
MASB				S	**Sb**	**18 59 22.3**	**-0.8**
GRNB	**Grenville Isla**	**1.84**	**49**	Pn	**Pn**	**18 59 10.7**	**-1.2**
GRNB				Pg	**Pb**	**18 59 13.0**	**-1.0**
GRNB				Sg	**Sn**	**18 59 35.6**	**+0.4**
GRIB	**Gribbell Islan**	**2.03**	**70**	Pn	**Pn**	**18 59 13.5**	**-1.0**
GRIB				Sg	**Sb**	**18 59 42.2**	**-0.3**
BUTB	**Butedale**	**2.36**	**79**	Pn	**Pn**	**18 59 18.6**	**-0.7**
BUTB				Pg	**Pb**	**18 59 22.4**	**-0.6**
BUTB				Sg	**Sb**	**18 59 52.2**	**-0.1**
KITB	**Kitimat**	**2.61**	**56**	Pn	**Pn**	**18 59 21.9**	**-0.5**
KITB				Sg	**

PABB Port Alberni 5.87 123 Pn Pn 19 00 10.5 +3.3
DLBC Dease Lake 5.92 12 Pn Pn 19 00 10.6 +2.6
5.7nm,0.3s,baz=151,slow=4.9,SNR=40
DLBC Sn Sn 19 01 14.4 -1.3
3.7nm,0.3s,baz=170,slow=18,SNR=3.8
DLBC Lg Lg 19 01 43.2
11nm,0.3s,baz=272,slow=13,SNR=12
9.6nm,0.3s
DLBC Dease Lake 5.92 12 P Pn 19 00 10.1 +2.1
baz=193
MGRB Mount Grey 6.07 124 Pn Pn 19 00 11.8 +1.7
BESE Bessie Mountai 6.09 347 Pn Pn 19 00 09.5 -0.9
SHB Sechelt 6.14 117 Pn Pn 19 00 13.2 +2.1
Q32M Nakina River 6.30 0 Pn Pn 19 00 14.2 +0.8
Q32M Nakina River 6.30 0 Pn Pn 19 00 14.2 +0.8
Q32M Sn Sn 19 01 24.1 -1.2
Q32M Sg Sb 19 01 52.5 +7.0
Q32M Nakina River 6.30 0 P Pn 19 00 14.3 +1.0
baz=180,SNR=11
CLRS Cowichan Lake 6.47 123 Pn Pn 19 00 16.4 +0.9
R33M Jennings River 6.78 6 Pn 19 00 21.1 +1.2
R33M Jennings River 6.78 6 Pn 19 00 21.2 +1.4
R33M Jennings River 6.78 6 P Pn 19 00 21.3 +1.4
baz=187
R33M Sg Sb 19 02 06.5 +7.4
baz=187
SYMB Survey Mountai 6.80 124 Pn Pn 19 00 24.2 +4.0
LLLB Lillooet 6.81 104 Pn 19 00 20.7 +0.4
LLLB Lillooet 6.81 104 Pn Pn 19 00 22.2 +1.9
BMTB Bullhead Mount 6.84 56 Pn Pn 19 00 20.9 +0.3
BMTB Sg Sg 19 02 13.2 -6.5
PGC Sidney 6.92 122 Pn Pn 19 00 21.7 0.0
NBC8 Simpson Ranch 6.95 52 Pn Pn 19 00 23.3 +1.2
P32M Atlin 6.97 354 Pn Pn 19 00 21.3 -1.2
P32M Atlin 6.97 354 Pn Pn 19 00 22.6 +0.2
P32M Atlin 6.97 354 P Pn 19 00 22.9 +0.4
baz=173
P32M Sg Sb 19 02 12.9 +8.2
baz=173
SNB Saturna Island 6.99 120 Pn Pn 19 00 26.0 +3.3
SKAG Skagway 7.01 347 Pn Pn 19 00 21.1 -1.7
SKAG Skagway 7.01 347 P Pn 19 00 23.9 +1.1
baz=164
PLBC Pleasant Camp 7.17 343 Pn Pn 19 00 24.7 -0.3
PLBC Pleasant Camp 7.17 343 P Pn 19 00 26.1 +1.0
baz=159
A04D Lummi Island 7.27 119 Pn Pn 19 00 27.0 +0.5
B04A Port Angeles 7.28 126 Pn Pn 19 00 27.0 +0.3
NBC5 NorthernBC 5 7.35 45 Pn Pn 19 00 28.2 +0.5
TOAD Toad River Com 7.36 30 Pn Pn 19 00 29.0 +1.3
TOAD Toad River Com 7.36 30 P Pn 19 00 29.0 +1.3
baz=216
NBC4 NorthernBC 4 7.47 62 Pn Pn 19 00 30.4 +1.1
P33M Teslin, Yukon 7.56 358 Pn 19 00 31.2 +0.6
P33M Teslin, Yukon 7.56 358 Pn Pn 19 00 31.4 +0.8
P33M Sn Sn 19 01 53.3 -2.9
P33M Teslin, Yukon 7.56 358 P Pn 19 00 31.3 +0.8
baz=177,SNR=26
NLWA Neilton Lookou 7.58 131 Pn 19 00 31.1 +0.3
LIRD Liard River Hi 7.59 25 P Pn 19 00 32.6 +1.7
baz=210
P29M Windy Craggy 7.60 339 Pn 19 00 28.5 -2.5
HDW Hoodsport 7.79 127 Pn Pn 19 00 37.6 +3.9
WISH Wishkah 7.83 132 Pn Pn 19 00 35.5 +1.3
P30M Million Dollar 7.89 343 Pn 19 00 33.0 -2.1
GNW Green Mountain 7.96 126 Pn Pn 19 00 37.1 +1.2
YKU2 Yakutat 7.99 332 Pn Pn 19 00 36.8 +0.5
WHY Whitehorse 8.13 351 Pn 19 00 38.5 +0.2
WHY Whitehorse 8.13 351 Pn Pn 19 00 38.7 +0.4
WHY Whitehorse 8.13 351 P Pn 19 00 38.7 +0.4
baz=169,SNR=15
WTMTA White Mountain 8.24 63 Sg Sg 19 02 53.3 -11
BCPM Bancas Point 8.35 334 Pn Pn 19 00 42.2 +0.9
RADR Rader Ridge 8.35 135 Pn Pn 19 00 42.9 +1.5
E03A Lebam 8.36 134 Pn Pn 19 00 44.8 +3.4
O30N Mendenhall 8.38 347 Pn 19 00 41.7 0.0
O30N Mendenhall 8.38 347 Pn Pn 19 00 42.3 +0.6
O30N Mendenhall 8.38 347 P Pn 19 00 43.5 +1.8
baz=164
YUK7 Dusty Glacier 8.50 340 Pn Pn 19 00 45.7 +2.1
N32M Quiet Lake 8.51 357 Pn Pn 19 00 44.6 +1.1
N32M Quiet Lake 8.51 357 P Pn 19 00 43.4 -0.1
baz=177
NBC6 NorthernBC 6 8.57 42 Pn Pn 19 00 48.2 +3.9
D05A Enumclaw 8.63 125 Pn Pn 19 00 48.6 +3.5
PCA Pinnacle 8.64 333 Pn Pn 19 00 45.1 -0.3
PCA Pinnacle 8.64 333 Pn Pn 19 00 45.2 -0.3
HYT Haines Junctio 8.65 343 Pn Pn 19 00 45.2 +0.3
HYT Haines Junctio 8.65 343 Pn Pn 19 00 45.6 +0.1
HYT Haines Junctio 8.65 343 P Pn 19 00 46.9 +1.4
baz=158
KOTAN Kotaneelee Air 8.76 28 Pn Pn 19 00 47.9 +1.1
KOTAN Kotaneelee Air 8.76 28 P Pn 19 00 48.1 +1.2
baz=215
F03A Seaside 8.84 136 Pn Pn 19 00 48.8 +0.7
FMW Mount Fremont 8.96 126 Pn Pn 19 00 54.2 +4.3
YUK5 Granite Creek 9.00 343 Pn Pn 19 00 42.9 -7.4
LON Longmire 9.02 127 Pn 19 00 52.4 +1.8
N31M Braeburn, Yuko 9.03 349 Pn 19 00 51.0 +0.3
N31M Braeburn, Yuko 9.03 349 Pn Pn 19 00 51.0 +0.3
N31M Braeburn, Yuko 9.03 349 P Pn 19 00 51.9 +1.2
baz=166
TGTN Hyland Airport 9.14 12 Pn 19 00 49.8 -2.3
TGTN Hyland Airport 9.14 12 Pn Pn 19 00 51.0 -1.2
TGTN Hyland Airport 9.14 12 P Pn 19 00 51.9 -0.2
baz=196
TABL Table Mountain 9.18 331 Pn Pn 19 00 53.4 +0.6
TABL Table Mountain 9.18 331 Pn Pn 19 00 53.1 +0.4
N30M Aishikik Lake 9.18 345 Pn 19 00 51.6 -1.1
N30M Aishikik Lake 9.18 345 Pn Pn 19 00 52.9 +0.2
N30M Aishikik Lake 9.18 345 P Pn 19 00 53.3 +0.6
baz=161
O28M Mount Upton 9.19 335 Pn Pn 19 00 54.7 +1.6
O28M Mount Upton 9.19 335 P Pn 19 00 54.6 +1.5
baz=148
MESA MESA 9.21 328 Pn Pn 19 00 53.0 -0.3
MESA MESA 9.21 328 Pn Pn 19 00 53.0 -0.3
MESA MESA 9.21 328 P Pn 19 00 54.9 +1.6
baz=140
LTY Liberty 9.25 121 Pn 19 00 55.4 +1.6
YAH Yahtse 9.29 330 Pn Pn 19 00 54.0 -0.5
B08A Colville Reser 9.33 112 Pn Pn 19 00 55.6 +0.9
LOGN Logan Glacier 9.45 333 Pn 19 00 55.9 -0.7
LOGN Logan Glacier 9.45 333 Pn Pn 19 00 57.1 +0.5
G03D McMinnville, O 9.54 138 Pn Pn 19 00 58.4 +0.7
GRNC Granite Creek 9.59 331 Pn Pn 19 00 57.5 -0.9
GRNC Granite Creek 9.59 331 Pn Pn 19 00 59.4 +0.9
FARO Faro, Yukon 9.60 357 Pn 19 00 57.4 -1.0
FARO Faro, Yukon 9.60 357 P Pn 19 00 59.3 +1.0
baz=176
M31M Drury Creek, Y 9.62 354 Pn 19 00 59.4 +0.7
M31M Drury Creek, Y 9.62 354 Pn Pn 19 00 60.0 +1.3
M31M Drury Creek, Y 9.62 354 P Pn 19 00 59.5 +0.9
baz=172,SNR=12
CTGM Chitina Glacie 9.66 333 Pn 19 00 58.9 -0.5
CTGM Chitina Glacie 9.66 333 Pn Pn 19 01 00.0 +0.7
CTG Chitna Glacier 9.66 333 P Pn 19 01 00.8 +1.4
baz=145
ISLE Juniper Island 9.66 329 Pn Pn 19 00 59.3 -0.1
BARN Barnard Glacie 9.83 332 Pn 19 01 01.3 -0.4
KAIM Kayak Island 9.89 322 Pn Pn 19 01 01.5 -0.9
MMPY Sheldon Lake, 9.99 3 Pn Pn 19 01 05.8 +2.1
MMPY Sn Sn 19 02 52.3 -3.4
MMPY Sheldon Lake, 9.99 3 P Pn 19 01 05.2 +1.5
baz=184,SNR=12
BALM Baldy 10.01 331 Pn Pn 19 01 05.6 +1.5
CRQE Cirque 10.02 328 P Pn 19 01 05.2 +0.9
baz=139
YUK3 Moose Creek 10.13 337 P Pn 19 01 04.9 -0.9
baz=150
E07A Sunnyside 10.13 122 Pn 19 01 06.3 +0.6
WAH2 Wahluke Slope 10.15 121 Pn 19 01 06.1 +0.1
PTPK Patty Peak 10.16 331 Pn Pn 19 01 07.3 +1.0
M30M Minto, Yukon 10.21 348 Pn Pn 19 01 06.9 +0.1
M30M Minto, Yukon 10.21 348 P Pn 19 01 06.5 -0.3
baz=164
D08A Wollman Farm, 10.30 118 Pn 19 01 09.5 +1.4
M29M Somme Creek 10.33 344 Pn Pn 19 01 09.8 +1.4
M29M Somme Creek 10.33 344 P Pn 19 01 08.6 +0.1
baz=158
HAWA Hanford 10.41 122 Pn 19 01 11.3 +1.8
MCARA McCarthy VSAT 10.48 331 P Pn 19 01 11.7 +1.2
baz=141

NEW Newport 10.64 108 Pn 19 01 12.5 -0.1
NEW Newport 10.64 108 Pn Pn 19 01 13.6 +0.9
0.2nm,0.3s,baz=306,slow=10,SNR=3.9
NEW Lg Lg 19 04 10.8
0.3nm,0.3s,baz=293,slow=10.0,SNR=7.4
NEW LR LR 19 05 17.1
comp=Z,404nm,20.5s,baz=298,slow=37
2.5nm,0.9s
BMRM Bremner River 10.68 326 P Pn 19 01 15.2 +2.0
baz=135
L29M L29M 10.90 346 Pn Pn 19 01 17.2 +0.9
L29M L29M 10.90 346 P Pn 19 01 17.0 +0.8
baz=161
M27K Edge Creek, AK 10.97 336 P Pn 19 01 18.8 +1.5
baz=148
N25K Chitina, Valde 11.14 328 P Pn 19 01 19.7 +0.1
baz=138
KLU Klutina 11.50 326 P Pn 19 01 25.4 +0.9
baz=134
K29M Barlow Dome 11.53 348 Pn Pn 19 01 25.7 +0.9
K29M Barlow Dome 11.53 348 P Pn 19 01 26.0 +1.2
baz=164
F10A Beach Ranch, E 11.90 118 Pn 19 01 29.0 -0.9
PWL Port Wells 11.99 319 P Pn 19 01 32.4 +1.3
baz=126
DAWY Dawson 12.00 345 P Pn 19 01 32.2 +1.0
baz=159
J30M Hart River 12.11 352 Pn Pn 19 01 34.0 +1.2
J30M Hart River 12.11 352 P Pn 19 01 34.0 +1.2
baz=168
BSMT Bassoo Peak 12.20 106 P Pn 19 01 40.2 +6.0
SCM Sheep Creek Mo 12.23 325 Pn 19 01 34.7 +0.3
SCM Sheep Creek Mo 12.23 325 P Pn 19 01 35.2 +0.8
baz=132
M23K Glacier View 12.34 324 P Pn 19 01 36.3 +0.4
baz=130
KNK Knik Glacier 12.37 321 P Pn 19 01 35.6 -0.7
baz=128
PAX Paxson 12.44 331 P Pn 19 01 37.9 +0.5
baz=140
JTMT Jette 12.55 106 P Pn 19 01 44.0 +5.1
KDAK Kodiak Island 12.63 302 Pn Pn 19 01 36.1 -3.7
0.1nm,0.3s,baz=269,slow=21,SNR=0.9
KDAK Sn Sn 19 03 55.2 -5.1
0.1nm,0.3s,baz=168,slow=14,SNR=1.4
KDAK LR LR 19 05 28.2
comp=Z,321nm,19.4s,baz=108,slow=32
1.8m,0.9s
RC01 Rabbit Creek A 12.68 318 P Pn 19 01 41.0 +0.5
baz=124
YBH Yreka Blue Hor 12.73 146 Pn Pn 19 01 46.8 +5.4
baz=341,slow=6.3
I30M Mount Dempster 12.75 352 P Pn 19 01 43.8 +2.2
I30M Mount Dempster 12.75 352 P Pn 19 01 43.1 +1.5
baz=169
PLID Pearl Lake 13.13 119 Pn 19 01 47.8 +0.9
H31M Peel River 13.21 356 P Pn 19 01 49.3 +1.6
H31M Peel River 13.21 356 P Pn 19 01 48.5 +0.8
baz=174
I28M Miner Creek 13.38 346 P Pn 19 01 50.8 +0.7
baz=159
YKA Yellowknife Ar 13.62 37 Pn Pn 19 01 52.6 -0.7
0.4nm,0.3s,baz=232,slow=13,SNR=10
YKA Lg Lg 19 05 51.6
0.4nm,0.3s,baz=71,slow=18,SNR=5.5
YKA LR LR 19 06 49.3
comp=Z,217nm,18.7s,baz=258,slow=36
4.3nm,0.6s
YKAW3 Yellowknife Wh 13.66 37 Pn 19 01 52.4 -1.5
SPU Mount Spurr 13.69 316 Pn 19 01 52.1 -2.2
I26K Coal Creek Min 13.81 341 P Pn 19 01 57.9 +2.0
baz=151
EPYK Eagle Plains 13.91 353 P Pn 19 01 58.0 +0.7
baz=169
ILAR Eielson Array 14.24 334 Pn Pn 19 02 01.1 -0.7
0.1nm,0.3s,baz=157,slow=12,SNR=6.7
ILAR Lg Lg 19 06 15.9
baz=117,slow=23,SNR=6.5
ILAR LR LR 19 07 25.2
comp=Z,648nm,19.7s,baz=151,slow=37
0.3nm,0.7s
TRF Thorofare Moun 14.32 326 Pn 19 02 02.4 -0.7
TRF Thorofare Moun 14.32 326 P Pn 19 02 04.8 +1.7
baz=130
G31M Satah River 14.33 357 P Pn 19 02 04.1 +1.2
G31M Satah River 14.33 357 P Pn 19 02 03.8 +0.9
baz=175
H27K Steamboat Moun 14.35 345 P Pn 19 02 04.1 +0.7
H27K Steamboat Moun 14.35 345 P Pn 19 02 04.7 +1.3
baz=157
M20K Styx River 14.49 318 P Pn 19 02 07.4 +2.2
baz=120
O18K Koktuh Hills 14.55 309 P Pn 19 02 09.7 +3.6
baz=109
G29M Pine Creek 14.56 351 P Pn 19 02 04.6 -1.5
baz=166
F31M Tsiigehtchic 14.83 358 P Pn 19 02 08.6 -1.1
baz=176
G27K Doyon Strip 14.91 346 P Pn 19 02 12.8 +1.9
baz=157
P17K Kvichak River 14.96 305 P P 19 02 14.9 -2.2
baz=105
HLID Hailey 15.00 120 Pn 19 02 10.6 -1.8
HLID IAmb IAmb 19 02 43.0
comp=Z,7.6nm,1.0s
M19K Big River Lodg 15.02 317 P P 19 02 18.9 +1.1
baz=118
F30M Barrier River 15.08 355 IAmb IAmb 19 02 18.1
comp=Z,17nm,1.1s
F30M Barrier River 15.08 355 P Pn 19 02 14.8 +1.7
F30M Barrier River 15.08 355 P Pn 19 02 13.8 +0.7
baz=172
EGMT Eagleton 15.11 99 Pn 19 02 13.0 -0.8
N18K Kilae Creek 15.16 311 P P 19 02 17.8 -1.7
baz=111
BEKR Beckworth 15.22 143 IAmb IAmb 19 02 27.3
comp=Z,15nm,1.2s
BOZ Bozeman (W) 15.24 109 IAmb IAmb 19 02 20.7
comp=Z,17nm,1.4s
H24K Noodor Dome 15.34 335 IAmb IAmb 19 02 27.6
comp=Z,16nm,1.3s
H24K Noodor Dome 15.34 335 P Pn 19 02 17.7 +1.0
baz=142
L19K White Mountain 15.34 317 P Pn 19 02 18.3 +1.6
baz=118
G26K Porcupine Rive 15.39 343 IAmb IAmb 19 03 01.8
comp=Z,9.7nm,1.2s
G26K Porcupine Rive 15.39 343 P Pn 19 02 15.4 -1.8
baz=153
F28M Old Crow 15.43 349 P Pn 19 02 19.3 +1.5
baz=162
O17K Koliganek Bris 15.44 307 P P 19 02 23.2 +0.7
baz=106,SNR=6.5
M18K Stony River 15.45 314 P Pn 19 02 20.4 +2.3
baz=114
K20K Telida 15.63 322 P P 19 02 24.0 -0.6
baz=123
G25K Bearman Lake 15.69 340 P Pn 19 02 20.0 -1.1
baz=147
INK Inuvik 15.69 358 Pn Pn 19 02 20.6 -0.5
comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=6.6
INK Lg Lg 19 06 51.4
comp=Z,0.1nm,0.3s,baz=89,slow=33,SNR=8.0
INK LR LR 19 08 43.5
comp=Z,761nm,19.1s,baz=350,slow=38
comp=Z,2.8nm,0.8s
INK Inuvik 15.69 358 P Pn 19 02 21.2 0.0
baz=177
N17K Nushagak Hills 15.71 310 P P 19 02 26.0 +0.5
baz=109
PAHR Pah Rah Range 15.72 140 IAmb IAmb 19 02 32.1
comp=Z,16nm,1.3s
MPK Mais Peak 15.84 143 IAmb IAmb 19 02 34.2
comp=Z,26nm,1.3s
O16K Kokwok River B 15.88 306 P P 19 02 28.2 +0.8
baz=104
CVS Carmenet Viney 15.88 151 IAmb IAmb 19 02 35.8
comp=Z,32nm,1.2s
G24K Hadweenzic Riv 15.94 338 P P 19 02 26.8 -1.2
baz=144
YHL Hebgen Lake 15.94 111 IAmb IAmb 19 03 01.9
comp=Z,17nm,1.1s
BMAR Burnt Mountain 15.96 343 Pn 19 02 24.0 -0.7
E29M Blow River 15.99 352 P P 19 02 27.1 -1.4
E29M Blow River 15.99 352 P Pn 19 02 25.2 +0.2
baz=167
F26K Sheenjek River 16.12 344 P Pn 19 02 27.6 +0.9
baz=153

J20K Nowinta River 16.12 324 P Pn 19 02 27.8 +1.1
baz=125
L18K Granite Mounta 16.13 316 IAmb IAmb 19 02 35.0
comp=Z,29nm,1.5s
L18K Granite Mounta 16.13 316 P P 19 02 30.3 +0.3
baz=115
M17K Holitna River 16.13 313 Pn 19 02 24.5 -2.4
M17K IAmb IAmb 19 02 34.6
comp=Z,22nm,0.8s
M17K Holitna River 16.13 313 P P 19 02 31.7 +1.6
baz=111,SNR=7.2
YMR Madison River 16.17 111 IAmb IAmb 19 02 37.2
comp=Z,16nm,1.0s
PNTR Pine Nut 16.18 142 Pn 19 02 26.0 -1.9
E27K Coleen River 16.19 348 P Pn 19 02 27.3 -0.3
baz=159,SNR=5.6
F25K Christian Rive 16.30 342 P Pn 19 02 30.9 +1.8
baz=150
YNR Norris Junctio 16.31 111 IAmb IAmb 19 02 38.7
comp=Z,18nm,1.2s
H22K Ishtalitna Cre 16.34 332 P P 19 02 32.7 +0.3
baz=135
E28M Babbage River 16.35 351 IAmb IAmb 19 02 36.8
comp=Z,21nm,1.0s
E28M Babbage River 16.35 351 P P 19 02 31.7 -0.8
baz=164
YNE Yellowstone No 16.52 109 IAmb IAmb 19 02 59.9
comp=Z,16nm,0.9s
H17A Grant Village 16.56 111 IAmb IAmb 19 03 06.5
comp=Z,29nm,1.4s
J19K Poorman 16.56 322 P P 19 02 35.1 +0.3
baz=122
G23K Bananza Creek 16.57 335 P P 19 02 35.2 +0.2
baz=139
H21K Melozitna Rive 16.60 329 P Pn 19 02 33.5 +0.6
baz=132
ELK Elko 16.66 129 Pn P 19 02 37.1 +0.6
comp=Z,0.1nm,0.3s,baz=326,slow=7.5,SNR=12
ELK LR LR 19 09 01.9
comp=Z,231nm,21.5s,baz=326,slow=37
comp=Z,3.9nm,1.0s
FLWY Flagg Ranch 16.68 112 Pn 19 02 31.0 -3.3
FLWY IAmb IAmb 19 02 48.1
comp=Z,29nm,1.4s
M16K Timber Creek 16.69 311 P P 19 02 37.0 +0.6
baz=108
J18K Innoko River 16.71 320 Pn 19 02 30.8 -3.4
J18K IAmb IAmb 19 02 40.1
comp=Z,11nm,0.8s
J18K Innoko River 16.71 320 P P 19 02 37.3 +0.8
baz=119
SDPT Sand Point 16.72 290 P P 19 02 40.9 +4.3
baz=87
E25K Arctic Village 16.75 343 IAmb IAmb 19 02 42.2
comp=Z,16nm,1.4s
E25K Arctic Village 16.75 343 P Pn 19 02 35.3 +0.5
baz=151
L17K Donlin 16.78 315 P P 19 02 39.4 +2.0
baz=112
TPAW Teton Pass 16.92 114 IAmb IAmb 19 03 07.0
comp=Z,21nm,1.1s
K17K Iditarod 17.02 316 IAmb IAmb 19 02 43.9
comp=Z,17nm,0.9s
K17K Iditarod 17.02 316 P P 19 02 41.3 +1.4
baz=114
LOHW Long Hollow 17.03 113 IAmb IAmb 19 03 22.7
comp=Z,16nm,1.2s
IMAR Indian Mountai 17.11 329 Pn 19 02 36.7 -2.5
D27M Malcolm River 17.11 349 P P 19 02 40.6 -0.4
baz=162
L16K Owhat River 17.15 312 IAmb IAmb 19 02 47.0
comp=Z,16nm,1.1s
L16K Owhat River 17.15 312 P P 19 02 44.1 +2.7
baz=109
H20K Anotleneega Mo 17.16 327 P Pn 19 02 39.7 -0.3
baz=128
C36M Paulatuk 17.17 10 Pn 19 02 37.2 -2.7
C36M IAmb IAmb 19 02 43.6
comp=Z,34nm,1.4s
NVAR Mina Array Bea 17.25 140 Pn 19 02 38.4 -3.0
NVAR Mina Array Bea 17.25 140 P P 19 02 45.3 +2.4
comp=Z,1.0nm,0.9s,baz=331,slow=14,SNR=6.3
NVAR LR LR 19 08 58.6
comp=Z,338nm,18.8s,baz=339,slow=36
E24K Your Creek 17.29 339 P P 19 02 43.1 +0.1
baz=145
LHV Little Huntoon 17.33 141 IAmb IAmb 19 03 23.9
comp=Z,22nm,1.4s
G21K Allakaket 17.39 331 P Pn 19 02 43.8 +1.1
baz=132
E23K Chandalar 17.53 338 P Pn 19 02 43.2 -1.4
E23K IAmb IAmb 19 02 51.2
comp=Z,20nm,1.4s
E23K Chandalar 17.53 338 P P 19 02 47.2 +1.6
baz=143
J17K VABM Dome 17.62 318 P P 19 02 48.3 +1.7
baz=115
H19K Roundabout Mou 17.71 326 P P 19 02 49.3 +1.8
baz=125
F22K John River 17.73 335 P P 19 02 50.4 +2.6
baz=137
C27K Jago River 17.82 347 P P 19 02 50.6 +1.9
baz=157
HWUT Hardware Ranch 17.87 120 IAmb IAmb 19 03 06.8
comp=Z,13nm,1.1s
TOLK Toolik Lake Re 17.99 339 P P 19 02 51.9 +1.2
baz=144
L15K Ungalak Mounta 18.05 311 P P 19 02 54.6 +3.2
baz=106
E22K Anaktuvuk Pass 18.10 336 P P 19 02 53.5 +1.6
baz=139
PD31 Pinedale Array 18.16 114 P Pn 19 02 50.6 -2.1
PDAR Pinedale Array 18.16 114 P Pn 19 02 50.7 -2.0
PDAR Pinedale Array 18.16 114 P P 19 02 56.4 +3.4
comp=Z,3.5nm,0.9s,baz=321,slow=11,SNR=22
H18K Honhosa River 18.18 323 P P 19 02 55.2 +2.5
baz=121
C26K Camden Bay 18.25 346 P P 19 02 54.7 +1.2
baz=155
K15K Wolf Creek Mou 18.26 313 P P 19 02 57.9 +4.2
baz=108
F20K Avaraart Lake 18.41 330 P P 19 02 57.0 +1.7
baz=130
GMN Gold Mountain 18.64 140 P P 19 02 57.7 -0.6
H17K Granite Mounta 18.64 322 P Pn 19 02 59.7 +1.5
baz=118
G18K Tagagawik 18.67 325 P Pn 19 02 59.9 +1.4
baz=122
F19K Shaleruckik Mo 18.91 328 P Pn 19 03 02.3 +1.0
baz=126
BSUT Blindstream Ca 19.06 121 IAmb IAmb 19 03 23.7
comp=Z,12nm,1.2s
E19K Redstone River 19.12 330 IAmb IAmb 19 03 38.6
comp=Z,25nm,1.4s
E19K Redstone River 19.12 330 P Pn 19 03 06.3 +2.4
baz=128
WCT Wildcat Mounta 19.33 139 IAmb IAmb 19 03 30.9
comp=Z,15nm,1.4s
A36M Sachs Harbour 19.63 7 P P 19 03 06.8 -1.7
A36M IAmb IAmb 19 03 16.3
comp=Z,18nm,1.2s
ISA Isabella, Lake 19.63 145 IAmb IAmb 19 03 18.7
comp=Z,10nm,1.0s
RDMU Red Mountain 19.66 119 P P 19 03 06.9 -2.5
RDMU IAmb IAmb 19 03 27.8
comp=Z,9.4nm,1.1s
K22A Casper 19.95 110 P P 19 03 09.5 -3.0
QSM Queen of Sheba 19.96 141 IAmb IAmb 19 03 25.4
comp=Z,22nm,1.3s
P18A Preston Nutter 19.99 122 IAmb IAmb 19 03 24.8
comp=Z,16nm,1.4s
Q16A Castle Valley 20.06 125 IAmb IAmb 19 03 24.8
comp=Z,14nm,1.4s
LRMC Laurel Mtn Rad 20.08 143 P P 19 03 12.5 -1.4
LRMC IAmb IAmb 19 03 19.9
comp=Z,9.4nm,1.0s
CCUT Cedar City 20.09 131 IAmb IAmb 19 03 25.8
comp=Z,9.2nm,1.0s
SZCU Shurtz Canyon 20.18 131 IAmb IAmb 19 03 20.3
comp=Z,15nm,1.2s
SRU San Rafael Swe 20.24 123 IAmb IAmb 19 03 26.4
comp=Z,21nm,1.2s
SHOC Shoshone, Teco 20.25 140 IAmb IAmb 19 03 23.1
comp=Z,23nm,1.2s
RSSD Black Hills 20.52 103 P P 19 03 17.0 -1.7
RSSD IAmb IAmb 19 03 24.3
comp=Z,25nm,1.4s
GSC Goldstone, Bar 20.57 142 IAmb IAmb 19 03 31.9

	comp=Z,15nm,1.1s						
LCMT	Little Creek M	20.59	132	IAmb	IAmb	19 03 31.7	
	comp=Z,14nm,1.1s						
O20A	White River Ci	20.68	118	P	P	19 03 18.2	-2.3
MTPC	Mountain Pass	20.89	139	IAmb	IAmb	19 03 34.7	
	comp=Z,17nm,1.0s						
V12A	Nelson	20.97	137	IAmb	IAmb	19 03 29.3	
	comp=Z,14nm,1.1s						
HMU	Henry Mountain	21.03	126	IAmb	IAmb	19 03 43.5	
	comp=Z,9.2nm,1.0s						
MWC	Mount Wilson	21.08	145	IAmb	IAmb	19 03 33.1	
	comp=Z,16nm,1.0s						
BFSC	Mount Baldy Ra	21.20	145	IAmb	IAmb	19 03 46.7	
	comp=Z,14nm,1.0s						
MDND	Maddock	21.34	90	P	P	19 03 25.6	-1.8
U15A	North Rim	21.50	131	IAmb	IAmb	19 03 34.7	
	comp=Z,12nm,1.1s						
PV14	Lion Creek, Pa	21.56	122	IAmb	IAmb	19 03 40.9	
	comp=Z,11nm,1.1s						
PV22	Blue Mesa, Par	21.56	122	IAmb	IAmb	19 04 16.2	
	comp=Z,18nm,1.0s						
PV19	Morning Glory	21.63	122	IAmb	IAmb	19 03 53.7	
	comp=Z,14nm,0.9s						
PV16	Nyswonger Mesa	21.67	122	IAmb	IAmb	19 03 38.8	
	comp=Z,14nm,1.0s						
PV17	East Wray Mesa	21.67	122	IAmb	IAmb	19 03 37.3	
	comp=Z,17nm,1.0s						
PV07	Paradox Valley	21.71	122	IAmb	IAmb	19 03 38.7	
	comp=Z,14nm,1.1s						
PV18	Skein Mesa, Pa	21.72	122	P	P	19 03 32.1	+0.5
PV03	Paradox Valley	21.74	122	IAmb	IAmb	19 03 38.5	
	comp=Z,11nm,1.1s						
PV05	Paradox Valley	21.75	123	IAmb	IAmb	19 03 56.9	
	comp=Z,17nm,1.1s						
BLKN	Baker Lake	21.91	44	P	P	19 03 33.1	-0.1
PV01	Paradox Valley	21.98	122	IAmb	IAmb	19 03 40.9	
	comp=Z,13nm,1.0s						
BELC	Belle Mtn. Jos	22.02	142	P	P	19 03 32.9	-2.0
BELC				IAmb	IAmb	19 03 47.1	
	comp=Z,15nm,1.2s						
PFO	Pinyon Flats O	22.20	143	LR	LR	19 11 58.3	
	comp=Z,174nm,18.6s,baz=344,slow=36						
IRM	Iron Mountain	22.21	140	IAmb	IAmb	19 03 49.1	
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	22.36	115	IAmb	IAmb	19 04 14.8	
	comp=Z,12nm,1.4s						
WUAZ	Wupatki	22.67	131	IAmb	IAmb	19 03 50.0	
	comp=Z,12nm,1.1s						
ULM	Lac du Bonnet	22.68	81	P	P	19 03 43.7	+2.1
	comp=Z,12nm,0.9s,baz=288,slow=9.7,SNR=5.9						
ULM				LR	LR	19 12 39.4	
	comp=Z,236nm,18.5s,baz=291,slow=37						
	comp=Z,12nm,0.9s						
MVCO	Mesa Verde	22.72	123		P	19 03 40.0	-2.4
MVCO				IAmb	IAmb	19 04 06.2	
	comp=Z,14nm,1.1s						
AGMN	Agassiz Nation	23.43	86		P	19 03 47.5	-1.9
SDCO	Great Sand Dun	23.89	118	IAmb	IAmb	19 03 58.7	
	comp=Z,5.2nm,1.1s						
ANMO	Albuquerque	25.52	124	LR	LR	19 14 28.5	
	comp=Z,151nm,18.3s,baz=50,slow=37						
121A	Cookes Peak, D	26.81	129	P	P	19 04 20.3	-0.5
121A				IAmb	IAmb	19 04 27.1	
	comp=Z,5.3nm,0.8s						
MNTX	Cornudas Mount	28.65	126	IAmb	IAmb	19 04 47.8	
	comp=Z,5.5nm,1.4s						
VHRN	Van Horn	29.59	127	IAmb	IAmb	19 04 57.0	
	comp=Z,3.2nm,0.9s						
WMOK	Wichita Mounta	29.77	114	P	P	19 04 46.5	-0.4
TXAR	Lajitas Array	31.43	127	P	P	19 05 03.0	+1.3
TXAR	Lajitas Array	31.43	127	P	P	19 05 04.6	+2.8
	comp=Z,2.7nm,1.0s,baz=331,slow=7.6,SNR=14						
	comp=Z,2.7nm,1.0s						
SHEM	Shemya Is, Ala	31.84	292	LR	LR	19 17 14.8	
	comp=Z,74nm,18.5s,baz=277,slow=35						
FRB	Frobisher Bay	33.88	46	LR	LR	19 18 26.0	
	comp=Z,87nm,19.3s,baz=274,slow=35						
SADO	Sadowa	35.24	81	LR	LR	19 20 27.3	
	comp=Z,524nm,19.2s,baz=234,slow=37						
TRQ	Mont Tremblant	37.21	76	P	P	19 05 50.5	-1.0
SCHQ	Schefferville	37.51	60	LR	LR	19 21 54.7	
	comp=Z,248nm,18.6s,baz=318,slow=37						
TKL	Tuckaleechee C	37.94	97	LR	LR	19 20 50.1	
	comp=Z,81nm,18.4s,baz=323,slow=35						
SEY	Seymchan	39.10	315	LR	LR	19 23 05.0	
	comp=Z,134nm,18.1s,baz=70,slow=38						
SFJD	Kangerlussuaq	40.18	37	LR	LR	19 23 42.5	
	comp=Z,484nm,19.4s,baz=296,slow=37						
MA2	Magadan	41.15	311	LR	LR	19 23 10.4	
	comp=Z,86nm,19.0s,baz=70,slow=36						
TIXI	Tiksi	43.71	333	LR	LR	19 28 05.8	
	comp=Z,90nm,18.6s,baz=7.5,slow=40						
SPITS	Spitsbergen Ar	48.01	8	LR	LR	19 29 23.0	
	comp=Z,90nm,18.6s,baz=306,slow=38						
YAK	Yakutsk	48.73	322	P	P	19 07 23.8	-0.6
YAK	Yakutsk	48.73	322	LR	LR	19 28 38.9	
	comp=Z,117nm,18.3s,baz=48,slow=37						
JTS	Las Juntas de	56.86	120	LR	LR	19 36 53.7	
	comp=Z,69nm,18.1s,baz=313,slow=40						
H11N2	WAKE ISLAND Hy	56.90	259	T	T	20 10 17.8	
	baz=39,slow=76,SNR=1282						
H11N3	WAKE ISLAND Hy	56.90	259	T	T	20 10 13.8	
	baz=39,slow=76,SNR=1153						
H11N1	WAKE ISLAND Hy	56.92	259	T	T	20 10 14.8	
	baz=39,slow=76,SNR=1089						
HEH	HeiHe	57.42	311	*e*P	P	19 08 29.2	+0.5
HEH				pmax	pmax		
	comp=Z,11nm,0.7s						
H11S1	WAKE ISLAND Hy	57.96	258	T	T	20 11 32.7	
	baz=39,slow=76,SNR=66						
H11S2	WAKE ISLAND Hy	57.97	258	T	T	20 11 34.7	
	baz=39,slow=76,SNR=55						
H11S3	WAKE ISLAND Hy	57.98	258	T	T	20 11 35.9	
	baz=39,slow=76,SNR=78						
SJG	San Juan	61.37	98	LR	LR	19 36 36.9	
	comp=Z,60nm,19.1s,baz=204,slow=37						
TAOE	Nuku Hiva Isla	61.65	189	*e*LR	LR	19 27 01.1	
	comp=Z,132nm,24.5s						
MJAR	Matsushiro Art	61.66	294	IAmb	IAmb	19 09 04.3	
	comp=Z,4.2nm,1.4s						
MJAR	Matsushiro Arr	61.66	294	P	P	19 08 57.9	-0.2
	comp=Z,0.9nm,0.7s,baz=48,slow=4.6,SNR=2.5						
	comp=Z,0.9nm,0.7s						
NB2	NORSAR Subarra	62.96	19	P	P	19 09 07.4	+0.9
	comp=Z,9.4nm,1.2s,baz=335,slow=6.9						
NOA	NORSAR Array B	62.96	19	P	P	19 09 07.7	+1.2
	comp=Z,1.9nm,0.9s,baz=336,slow=6.8,SNR=5.4						
NOA				LR	LR	19 38 17.8	
	comp=Z,75nm,18.4s,baz=265,slow=38						
	comp=Z,1.9nm,0.9s						
HFS	Hagfors	64.27	18	LR	LR	19 36 41.3	
	comp=Z,91nm,18.5s,baz=272,slow=36						
FINES	FINESS Array B	64.93	11	P	P	19 09 19.2	-0.1
	comp=Z,4.7nm,1.1s,baz=9.0,slow=7.1,SNR=6.3						
FINES				LR	LR	19 40 43.1	
	comp=Z,68nm,18.6s,baz=316,slow=39						
	comp=Z,4.7nm,1.1s						
RUSC	La Rusia	67.00	112	P	P	19 09 33.2	-0.7
SONM	Songino Array	68.09	322	IAmb	IAmb	19 09 42.9	
	comp=Z,3.5nm,1.4s						
SONM	Songino Array	68.09	322	P	P	19 09 40.5	+0.4
	comp=Z,0.5nm,0.8s,baz=54,slow=7.3,SNR=2.8						
SONM				LR	LR	19 39 39.7	
	comp=Z,76nm,20.5s,baz=34,slow=36						
	comp=Z,0.5nm,0.8s						
ZALV	Zalesovo Beam	69.34	338		P	19 09 47.3	-0.2
ZALV	Zalesovo Beam	69.34	338	P	P	19 09 47.5	0.0
	comp=Z,3.4nm,0.6s,baz=13,slow=5.0,SNR=17						
ZALV				LR	LR	19 43 54.9	
	comp=Z,52nm,18.4s,baz=27,slow=39						
	comp=Z,3.4nm,0.6s						
PPT2	Papeete2	71.56	197	*e*S	S	19 19 18.7	-1.6
	comp=Z,46nm,31.5s						
PPT2				*e*SS	SS	19 23 55.5	-0.5
	comp=Z,35nm,24.8s						
PPT2				*e*LR	LR	19 31 45.3	
	comp=Z,93nm,28.5s						
HHC	Hu-ho-hao-te	71.73	314	*e*P	P	19 10 02.1	-0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,4.2s						
BVAR	Borovoye Array	72.97	346	P	P	19 10 09.4	-0.1
	comp=Z,1.8nm,0.6s,baz=9.5,slow=4.5,SNR=8.5						
BVAR				LR	LR	19 46 04.8	
	comp=Z,40nm,18.4s,baz=358,slow=39						
	comp=Z,1.8nm,0.6s						
KURK	Kurchatov	73.72	340		P	19 10 13.5	-0.5
KURBB	Kurchatov Arra	73.83	340	P	P	19 10 15.2	+0.6
	comp=Z,2.3nm,0.6s,baz=20,slow=5.9,SNR=20						
	comp=Z,2.3nm,0.6s						
GERES	GERESS Array B	74.81	22	P	P	19 10 21.6	+1.1
	comp=Z,0.8nm,0.6s,baz=336,slow=6.2,SNR=6.1						
	comp=Z,0.8nm,0.6s						
VRAC	Vranov	75.02	20	LR	LR	19 44 05.1	
	comp=Z,118nm,18.5s,baz=310,slow=36						
RKT	Rikitea	75.51	183	*e*LR	LR	19 33 40.6	
	comp=Z,363nm,25.0s						
AKASG	Malin Array Be	75.82	12	IAmb	IAmb	19 10 27.9	
	comp=Z,5.3nm,1.4s						
AKASG	Malin Array Be	75.82	12	P	P	19 10 26.5	+0.4
	comp=Z,0.3nm,0.3s,baz=352,slow=5.3,SNR=7.6						
AKASG				LR	LR	19 45 19.4	
	comp=Z,85nm,18.1s,baz=325,slow=37						
	comp=Z,0.3nm,0.3s						
MOA	Molln	75.88	22	*i* pP	pP	19 10 29.3	-0.3
	comp=Z,6.8nm,1.2s						
MODS	Modra-Piesok	76.05	20	*e*P	P	19 10 30.3	+2.8
CONA	Conrad Observa	76.17	21	*i* pP	P	19 10 29.9	+1.6
	comp=Z,3.9nm,1.3s						
KBA	Koelnbreinsper	76.38	23	*i* pP	pP	19 10 32.3	-0.3
	comp=Z,8.8nm,1.3s						
RONA	Rosalia, Austr	76.48	21	*i* pP	P	19 10 31.6	+1.6
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	76.58	336	P	P	19 10 31.0	+0.4
	comp=Z,1.8nm,0.7s,baz=34,slow=5.1,SNR=19						
MKAR				LR	LR	19 49 50.3	
	comp=Z,66nm,18.3s,baz=0.5,slow=40						
	comp=Z,1.8nm,0.7s						
MAKZ	Makanchi	76.65	337		P	19 10 31.3	+0.4
AKTO	Aktyubinsk	76.89	353	LR	LR	19 46 27.0	
	comp=Z,80nm,19.9s,baz=8.5,slow=37						
SOKA	Soloth	77.16	22	*i* pP	P	19 10 36.2	+2.3
	comp=Z,5.8nm,1.2s						
TBI	Tubuai	77.17	196	*e*LR	LR	19 34 26.5	
	comp=Z,423nm,40.2s						
OBKA	Obir	77.20	23	*e*P	P	19 10 33.6	-0.6
	comp=Z,11nm,1.3s						
ESDC	Sonseca Array	77.71	38	IAmb	IAmb	19 11 00.8	
	comp=Z,5.3nm,1.4s						
ESDC	Sonseca Array	77.71	38	P	P	19 10 38.1	+1.0
	comp=Z,1.3nm,1.0s,baz=336,slow=4.3,SNR=4.4						
ESDC				LR	LR	19 43 22.2	
	comp=Z,90nm,18.1s,baz=322,slow=34						
	comp=Z,1.3nm,1.0s						
ABKAR	Akbulak array	77.91	352		P	19 10 36.8	-1.1
MDP	Montagnes des	79.70	95	LR	LR	19 45 47.0	
	comp=Z,26nm,20.7s,baz=306,slow=36						
MDT	Midelt	83.44	42	LR	LR	19 48 17.1	
	comp=Z,47nm,18.1s,baz=11,slow=36						
KBZ	Khabaz	83.88	3	P	P	19 11 10.9	+1.0
	comp=Z,1.8nm,0.9s,baz=26,slow=11,SNR=3.8						
	comp=Z,1.8nm,0.9s						
HNR	Honiara	84.35	247	LR	LR	19 45 28.2	
	comp=Z,31nm,18.3s,baz=48,slow=33						
KSH	Kashi	84.95	338	P	P	19 11 19.8	+4.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	87.17	11		P	19 11 25.5	-1.0
BRTR	Keskin Array B	87.17	11	P	P	19 11 26.9	+0.3
	comp=Z,1.6nm,0.9s,baz=5.7,slow=1.2,SNR=8.7						
	comp=Z,1.6nm,0.9s						
GNI	Garni	87.51	2	LR	LR	19 55 02.9	
	comp=Z,33nm,20.0s,baz=337,slow=39						
LPAZ	La Paz	88.08	120		P	19 11 30.6	-1.1
LPAZ	La Paz	88.08	120	P	P	19 11 31.9	+0.3
	comp=Z,1.1nm,0.6s,baz=349,slow=7.1,SNR=5.3						
	comp=Z,1.1nm,0.6s						
PZH	PanZhiHua	88.18	313	P	P	19 11 31.5	-0.1
MMAI	Mount Meron Ar	94.00	10	LR	LR	19 59 27.1	
	comp=Z,37nm,18.0s,baz=328,slow=39						
ASF	Jabal al Asfar	94.98	9	LR	LR	19 58 35.0	
	comp=Z,20nm,18.9s,baz=325,slow=38						
QSPA	South Pole Qui	142.48	180		PKPdf	19 18 10.6	-1.2
QSPA	South Pole Qui	142.48	180	PKP	PKPdf	19 18 12.5	+0.7
	comp=Z,0.8nm,0.7s,baz=143,slow=0.8,SNR=7.9						
BOSA	Boshof	150.78	43		PKPbc	19 18 31.4	-1.3
BOSA	Boshof	150.78	43	PKPbc	PKPbc	19 18 32.4	-0.3
	comp=Z,3.2nm,1.0s,baz=270,slow=1.3,SNR=4.2						
SNAA	Sanae	151.04	150		PKPbc	19 18 31.1	-0.8
SNAA	Sanae	151.04	150	PKPbc	PKPbc	19 18 33.0	+1.1
	comp=Z,4.6nm,1.1s,baz=257,slow=2.6,SNR=8.4						

IDC 09 19:03:01.0±2.0, 17.19S×177.54W, h0km, mb4.3/3, mbtmp4.3/3, MS3.5/2, Error ellipse: s-maj=58.1km s-min=43.8km az=20.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.70	241	LR	LR	19 24 59.1		
	comp=Z,53nm,19.7s,baz=217,slow=33							
WRA	Warramunga Arr	45.58	259	P	P	19 11 22.9		-0.3
	0.6nm,0.3s,baz=99,slow=7.0,SNR=6.9							
	0.6nm,0.3s							
ASAR	Alice Springs	45.79	254	P	P	19 11 24.8		0.0
	8.8nm,0.6s,baz=92,slow=7.7,SNR=177							
ASAR				LR	LR	19 30 04.2		
	comp=Z,57nm,19.2s,baz=304,slow=36							
	8.8nm,0.6s							
QSPA	South Pole Qui	72.86	180	P	P	19 14 31.8		+0.2
	1.6nm,0.9s,baz=79,slow=1.1,SNR=6.5							
	1.6nm,0.9s							
GERES	GERESS Array B	147.13	346	PKPbc	PKPbc	19 22 45.2		-1.0
	0.1nm,0.5s,baz=353,slow=3.1,SNR=3.8							

*IDC **09** 19:14:47.7±6.8, 5.67S×154.61E, h92km±58km, mb3.5/5, mbtmp3.8/6, ML4.2/1, MS3.3/1, Error ellipse: s-maj=32.1km s-min=15.4km az=52.0*

ISC 09 19:14:50.5±1.1, 5.75S±0.2×154.6E±0.2, h118km, n6, σ1s21/8, mb3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	19.91	146	P	P	19 19 11.9		-1.2
	0.7nm,0.3s,baz=264,slow=8.8,SNR=11							
DZM				S	S	19 22 52.4		+1.4
	2.1nm,0.4s,baz=97,slow=21,SNR=15							
DZM				LR	LR	19 25 36.3		
	comp=Z,90nm,18.5s,baz=357,slow=33							
	2.7nm,0.4s							
WRA	Warramunga Arr	24.24	232	P	P	19 19 57.2		+0.5
	0.9nm,0.3s,baz=57,slow=10.0,SNR=8.1							
	0.9nm,0.3s							
ASAR	Alice Springs	26.74	226	P	P	19 20 18.8		-0.5
	0.3nm,0.4s,baz=57,slow=9.3,SNR=15							
ASAR				PcP	PcP	19 23 38.2		-1.6
	0.3nm,0.6s,baz=48,slow=2.3,SNR=4.5							
	0.3nm,0.4s							
MKAR	Makanchi Array	82.17	319	P	P	19 26 59.1		+0.7
	0.6nm,0.6s,baz=103,slow=4.4,SNR=6.7							
	0.6nm,0.6s							
QSPA	South Pole Qui	84.27	180	P	P	19 27 09.5		+0.6
	0.3nm,0.4s,baz=207,slow=2.3,SNR=8.4							
	0.3nm,0.4s							
NVAR	Mina Array Bea	91.25	52	P	P	19 27 43.1		0.0
	0.4nm,0.7s,baz=260,slow=4.3,SNR=2.3							
	0.4nm,0.7s							

*KRSC **09** 19:15:33.6±1.1, 52.42N×160.93E, h55km±23km, Ml4.1*
*MOS **09** 19:15:34.8±0.9, 52.41N×160.92E, h54km, mb4.0/3, Error ellipse: s-maj=10.9km s-min=6.1km az=119.9*
*IDC **09** 19:15:49.2±1.3, 53.00N×158.86E, h98km±10km, mb3.3/11, mbtmp3.7/12, Error ellipse: s-maj=23.3km s-min=17.0km az=131.0*

ISC 09 19:15:36.3±1.9, 52.41N±0.08×160.85E±0.09, h42km±16km, n67, σ1s27/70, mb4.0/13, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DALK	Dalny	1.42	297	PN	Pn	19 15 59.0		-0.5
DALK				S	Sn	19 16 17.4		+0.5
DALK	Dalny	1.42	297	*e*P	Pn	19 15 59.1		-0.5
DALK				*e*S	Sn	19 16 17.5		+0.5
UGLR	Uglovaya	1.47	304	PN	Pn	19 16 00.1		-0.2
UGLR	Uglovaya	1.47	304	*e*P	Pn	19 16 00.1		-0.2
PET	Petropavlovsk	1.47	295	*e*P	Pn	19 15 59.7		-0.5
PET				*e*S	Sn	19 16 18.9		+0.7
PET				pmax	pmax			
	comp=Z,417nm,0.6s							
PET				smax	smax			
	comp=N,1μm,0.7s							
PET				smax	smax			
	comp=E,634nm,0.4s							
PET	Petropavlovsk	1.47	295	*e*P	Pn	19 15 59.7		-0.5
PET				*e*S	Sn	19 16 19.0		+0.7
SDLR	Sedlovina	1.47	307	PN	Pn	19 15 59.9		-0.5
SDLR	Sedlovina	1.47	307	*e*P	Pn	19 15 59.9		-0.5
SMAR	Somma	1.51	305	PN	Pn	19 16 00.5		-0.4
SMAR	Somma	1.51	305	*e*P	Pn	19 16 00.6		-0.4
INSR	Institute	1.51	296	PN	Pn	19 16 00.5		-0.3
INSR				S	Sn	19 16 19.7		+0.4
INSR	Institute	1.51	296	*e*P	Pn	19 16 00.6		-0.3
INSR				*e*S	Sn	19 16 19.7		+0.4
AVH	Avacha	1.54	304	PN	Pn	19 16 01.1		-0.2
AVH	Avacha	1.54	304	*e*P	Pn	19 16 01.1		-0.2
KRER	Koryakskii	1.56	306	PN	Pn	19 16 01.7		+0.1
KRER	Koryakskii	1.56	306	*e*P	Pn	19 16 01.8		+0.1
KOK	Koryaka	1.60	304	PN	Pn	19 16 02.2		0.0
KOK	Koryaka	1.60	304	*e*P	Pn	19 16 02.2		0.0
MTVR	Mutnovka	1.63	273	PN	Pn	19 16 02.5		-0.1
MTVR	Mutnovka	1.63	273	*e*P	Pn	19 16 02.5		-0.1
KRX	Arik	1.64	306	PN	Pn	19 16 02.1		-0.5
KRX	Arik	1.64	306	*e*P	Pn	19 16 02.1		-0.5
GRL	Gorelyy	1.70	276	PN	Pn	19 16 04.2		+0.6
GRL	Gorelyy	1.70	276	*e*P	Pn	19 16 04.2		+0.6
KRMR	Karymshinskiy	1.71	285	PN	Pn	19 16 03.1		-0.4
KRMR	Karymshinskiy	1.71	285	*e*P	Pn	19 16 03.1		-0.4
ASAK	Asacha	1.81	270	PN	Pn	19 16 05.3		+0.4
ASAK	Asacha	1.81	270	*e*P	Pn	19 16 05.4		+0.4
KDTR	Khodutka, Kamc	1.81	252	PN	Pn	19 16 04.0		-0.9
KDTR	Khodutka, Kamc	1.81	252	*e*P	Pn	19 16 04.0		-0.9
KII	Karymskiy	1.83	333	PN	Pn	19 16 05.7		+0.5
KII	Karymskiy	1.83	333	*e*P	Pn	19 16 05.7		+0.5
PEA0B	Petropavlovsk-	2.04	291	PN	Pn	19 16 08.4		+0.4
PEA0B				S	Sn	19 16 33.9		+1.7
PETK	Petropavlovsk-	2.04	291	P	Pn	19 16 07.1		-0.9
	comp=E,60nm,0.4s,baz=98,slow=18,SNR=315							
PETK				S	Sn	19 16 27.8		-4.4
	comp=E,62nm,0.5s,baz=93,slow=21,SNR=6.4							
APC	Apacha	2.31	284	PN	Pn	19 16 12.9		+1.2
APC	Apacha	2.31	284	*e*P	Pn	19 16 12.9		+1.2
KZV	Kizimen	2.73	353	PN	Pn	19 16 17.7		+0.1
KZV	Kizimen	2.73	353	*e*P	Pn	19 16 17.7		+0.1
TUMD	Tumrok D	2.81	355	PN	Pn	19 16 18.2		-0.4
TUMD				S	Sn	19 16 50.6		-0.6
TUMD	Tumrok D	2.81	355	*e*P	Pn	19 16 18.3		-0.4
TUMD				*e*S	Sn	19 16 50.6		-0.6
KMNR	Kamenistaya	3.37	354	PN	Pn	19 16 28.0		+1.7
KMNR	Kamenistaya	3.37	354	*e*P	Pn	19 16 28.1		+1.7
ESO	Esso	3.74	341	PN	Pn	19 16 33.0		+1.6
ESO	Esso	3.74	341	*e*P	Pn	19 16 33.0		+1.6
KBTR	Krutoberegovo	3.97	16	PN	Pn	19 16 34.1		-0.5
KBTR	Krutoberegovo	3.97	16	*e*P	Pn	19 16 34.1		-0.5
ASAJ	Asahikawa	14.69	243	P	Pn	19 19 00.4		-0.7
	comp=E,11nm,1.1s,baz=58,slow=15,SNR=2.0							
MJA0	Matsu Arr-Jizo	22.48	234	*e*P	P	19 20 36.6		+4.7
MJA0				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MJAR	Matsushiro Arr	22.50	234	P	P	19 20 34.2		+2.1
	comp=Z,1.3nm,0.7s,baz=15,slow=12,SNR=5.4							
	comp=Z,1.3nm,0.7s							
TIXI	Tiksi	23.89	336	P	P	19 20 42.7		-2.8
	comp=Z,1.8nm,0.3s,baz=114,slow=6.3,SNR=5.3							
	comp=Z,1.8nm,0.3s							
ILAR	Eielson Array	28.97	44	P	P	19 21 44.1		+13
	comp=Z,0.2nm,0.7s,baz=271,slow=9.4,SNR=2.2							
	comp=Z,0.2nm,0.7s							
H11N2	WAKE ISLAND Hy	32.96	169	T	T	19 58 31.2		
	baz=353							
H11N3	WAKE ISLAND Hy	32.97	169	T	T	19 57 42.9		
	baz=353,slow=74							
H11N1	WAKE ISLAND Hy	32.97	170	T	T	19 57 48.2		
	baz=353,slow=74							
SPITS	Spitsbergen Ar	47.88	351	P	P	19 24 10.4		+1.0
	comp=Z,13nm,0.9s,baz=55,slow=7.3,SNR=6.1							
KURK	Kurchatov	48.49	303	P	P	19 24 13.2		-1.2
KURBB	Kurchatov Arra	48.59	303	P	P	19 24 13.2		-1.9
	comp=Z,1.0nm,0.4s,baz=59,slow=7.7,SNR=3.8							
MKAR	Makanchi Array	48.87	297	P	P	19 24 15.2		-2.2
	comp=Z,0.2nm,0.4s,baz=48,slow=7.2,SNR=4.5							
	comp=Z,0.2nm,0.4s							
MKAR	Makanchi Array	48.87	297	*e*P	P	19 24 15.4		-2.0
ARCES	ARCESS Array B	54.08	342	P	P	19 24 55.6		-0.4
	comp=Z,2.5nm,1.0s,baz=48,slow=6.1,SNR=1.8							
	comp=Z,2.5nm,1.0s							
PDAR	Pinedale Array	57.45	61	P	P	19 25 33.3		+12
	comp=Z,0.2nm,0.6s,baz=317,slow=8.0,SNR=1.8							
	comp=Z,0.2nm,0.6s							
CMAR	Chiang Mai Arr	58.50	259	P	P	19 25 26.7		-1.5
	comp=Z,0.7nm,0.6s,baz=29,slow=5.1,SNR=5.3							
	comp=Z,0.7nm,0.6s							
CMAR	Chiang Mai Arr	58.50	259	*e*P	P	19 25 30.7		+2.5
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
FINES	FINESS Array B	60.93

ELIS	**Ellis County**	**1.85**	**236**			Pn	19 30 00.6	+0.7
ELIS				IAmb_Lg			19 30 25.2	
	comp=Z,10nm,0.7s							
FNO	**Franklin**	**1.85**	**177**			Pn	19 30 00.0	+0.1
KSU1	**Kansas State U**	**2.12**	**20**			Pn	19 30 04.2	+0.6
KSU1	**Kansas State U**	**2.12**	**20**			Pn	19 30 04.3	+0.8
RLO	**Rose Lookout**	**2.22**	**114**			Pn	19 30 06.2	+1.1
CBKS	**Cedar Bluff**	**2.44**	**315**	Pn		Pn	19 30 09.6	+1.5
X34A	**Smith Ranch, M**	**2.52**	**186**			Pn	19 30 10.0	+0.9
WMOK	**Wichita Mounta**	**2.58**	**204**			Pn	19 30 10.3	+0.4
WMOK	**Wichita Mounta**	**2.58**	**204**			Pn	19 30 10.5	+0.5
U38A	**Gravette**	**2.61**	**104**			Pn	19 30 11.4	+1.0
HHAR	**Hobbs**	**3.00**	**105**			Pn	19 30 16.6	+0.9
P38A	**Dawn**	**4.02**	**50**	Pn		Pn	19 30 29.2	-0.6
P38A				IAmb_Lg			19 31 36.2	
	comp=Z,12nm,0.8s							
AMTX	**Amarillo**	**4.04**	**238**	IAmb_Lg			19 31 38.8	
	comp=Z,9.8nm,0.7s							
MIAR	**Mount Ida**	**4.10**	**127**	IAmb_Lg			19 31 37.4	
	comp=Z,12nm,0.9s							
MGMO	**Mountain Grove**	**4.20**	**88**	Pn		Pn	19 30 32.7	+0.5
RTBA	**Rita Blanca**	**4.24**	**262**	IAmb_Lg			19 31 51.4	
	comp=Z,11nm,1.3s							
R40A	**Maddies Statio**	**4.33**	**73**	IAmb_Lg			19 31 53.5	
	comp=Z,10nm,0.7s							
KSCO	**Kaye Shedlock'**	**4.45**	**297**	IAmb_Lg			19 32 00.9	
	comp=Z,4.5nm,0.7s							
X40A	**Basin Creek Fa**	**4.62**	**123**	IAmb_Lg			19 31 56.1	
	comp=Z,9.0nm,0.9s							
T25A	**Trinidad**	**5.50**	**272**	IAmb_Lg			19 32 26.2	
	comp=Z,3.7nm,0.7s							

*JMA **09** 19:43:54.5±0.0, 34°.65N±0°.04×134°.47E±0°.07, h5km, MV3.2/20, HARIMANADA SETONAIKAI*
JMA Felt I J1 at HARIMANADA SETONAIKAI .
ISC 09 19:43:55.2±1.0, 34°.65N±0°.03×134°.47E±0°.03, h10km, n14, σ0s95/19, 4D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
JAD	**Aida**	**0.38**	**320**	*i* P		**Pg**	**19 44 02.2**		**-0.4**
JAD				S		**Sg**	**19 44 07.5**		**-0.1**
JAWN	**Awajishima-nag**	**0.40**	**115**	*i* P		**Pg**	**19 44 02.4**		**-0.6**
JKS	**Kasai**	**0.45**	**43**	⇓*i* P		**Pg**	**19 44 03.5**		**-0.5**
JKS				⇓S		**Sg**	**19 44 09.7**		**-0.4**
JJS	**Sakaide**	**0.52**	**238**	*i* P		**Pg**	**19 44 04.6**		**-0.7**
JAI	**Aioi**	**0.86**	**181**	*i* P		**Pg**	**19 44 11.0**		**-0.7**
JAI				S		**Sg**	**19 44 22.4**		**-0.5**
JKSM	**Kasumi**	**0.95**	**10**	*i* P		**Pg**	**19 44 12.5**		**-0.9**
JKSM				S		**Sg**	**19 44 25.1**		**-0.7**
JWT	**Wachi**	**0.99**	**50**	⇓*i* P		**Pg**	**19 44 13.2**		**-1.1**
JWT				⇓S		**Sg**	**19 44 26.6**		**-0.6**
JMN	**Monobe**	**1.04**	**208**	P		**Pg**	**19 44 14.2**		**-1.0**
JMN	**Monobe**	**1.04**	**208**	S		**Sg**	**19 44 28.5**		**-0.2**
INU	**Inuyama**	**2.21**	**71**	P		**Pn**	**19 44 32.8**		**+0.9**
JGF	**Kuroka**	**2.55**	**67**	P		**Pn**	**19 44 37.2**		**+0.5**
JNU	**Nakatsue**	**3.35**	**244**	P		**Pn**	**19 44 49.2**		**+1.6**
MAJO	**Matsushiro**	**3.58**	**57**	P		**Pn**	**19 44 53.0**		**+2.2**
JTU	**Tsushima**	**4.18**	**270**	P		**Pn**	**19 44 59.1**		**+0.1**

*AEIC **09** 19:49:48.1±0.9, 53°.59N±0°.03×163°.40W±0°.06, h27km±5km, Error ellipse: s-maj=5.4km s-min=4.4km az=76.0*
NEIC 09 19:49:49.0±0.9, 53°.60N±0°.03×163°.39W±0°.07, h33km±11km, ML2.8/12, ML2.5(AEIC), Error ellipse: s-maj=6.3km s-min=4.6km az=92.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SSLS	**Shishaldin Sou**	**1.17**	**342**			Pn	19 50 08.1		-1.1
SSLS						Sb	19 50 25.9		+0.1
SSBA	**Shishaldin**	**1.25**	**340**			Pn	19 50 09.1		-1.2
SSBA						Sn	19 50 26.3		+0.3
ISNN	**Isanotski Nort**	**1.26**	**350**			Pn	19 50 10.0		-0.3
ISNN						Sb	19 50 28.2		+0.1
FALS	**False Pass**	**1.26**	**359**			Pn	19 50 09.1		-1.2
FALS						Sn	19 50 25.4		-0.6
WEBT	**Westdahl Beart**	**1.28**	**322**			Pn	19 50 09.5		-1.0
WEBT						Sn	19 50 26.7		+0.1
AKSA	**Akutan Strait**	**1.47**	**292**			Pn	19 50 12.5		-0.6
AKSA						Sn	19 50 31.5		+0.3
AKUT	**Akutan**	**1.51**	**292**			Pn	19 50 13.0		-0.7
AKUT						Sn	19 50 32.1		-0.1
AKUT				IAML			19 50 37.4		
	comp=E,102nm,0.5s								
AKBBA	**Akutan Broad B**	**1.59**	**289**			Pn	19 50 14.5		-0.3
AKBBA						Sn	19 50 34.3		+0.1
ZRO	**Akutan Zero**	**1.61**	**289**			Sn	19 50 34.5		-0.3
DT1	**Dutton Round H**	**1.65**	**23**			Pn	19 50 14.6		-1.0
DT1						Sn	19 50 35.1		-0.5
LVA	**Lava Point**	**1.67**	**291**	Pn		Pn	19 50 15.4		-0.4
LVA				IAML			19 50 40.6		
	comp=E,75nm,1.2s								
LVA				IAML			19 50 53.8		
	comp=N,119nm,0.9s								
DOL	**Dolgoi Island**	**1.79**	**29**			Pn	19 50 17.9		+0.3
DOL						Sn	19 50 39.8		+0.7
UNV	**Unalaska Valle**	**1.87**	**279**			Pn	19 50 18.0		-0.7
UNV						Sn	19 50 41.0		-0.1
MNAT	**Makushin Natee**	**1.98**	**280**			Pn	19 50 20.3		+0.1
MNAT						Sn	19 50 44.2		+0.4
MREP	**Makushin Rep't**	**2.01**	**277**			Pn	19 50 20.6		-0.1
MREP						Sn	19 50 45.2		+0.6
MSW	**Makushin Switc**	**2.04**	**280**			Pn	19 50 21.1		+0.1
MSW						Sn	19 50 46.9		+1.5
PS1A	**Pavlof South-1**	**2.06**	**27**			Pn	19 50 22.2		+0.9
PS1A						Sn	19 50 47.5		+1.6
MGOD	**Makushin Gods**	**2.08**	**277**			Pn	19 50 21.8		+0.1
MGOD						Sn	19 50 47.3		+0.9
S12K	**Black Hills**	**2.25**	**20**			Pn	19 50 24.0		+0.2
S12K				IAML			19 50 58.0		
	comp=E,49nm,1.4s								
S12K				IAML			19 51 04.7		
	comp=N,52nm,0.6s								
SDPT	**Sand Point**	**2.44**	**43**			Pn	19 50 26.5		0.0
SDPT				IAML			19 51 20.4		
	comp=E,60nm,1.4s								

*IDC **09** 20:00:03.2±1.8, 27°.33N×56°.00E, h0km, mb3.8/13, mbtmp3.8/15, ML3.7/2, MS3.1/1, Error ellipse: s-maj=37.6km s-min=22.7km az=164.0*
*TEH **09** 20:00:05.2, 27°.41N×56°.02E, h6km, 39km*
*DSN **09** 20:00:07.5±0.9, 27°.41N×55°.79E, h15km, ML3.2/10, Error ellipse: s-maj=12.0km s-min=3.5km az=44.0*
*OMAN **09** 20:00:07.5±0.1, 27°.38N×55°.87E, h10km, mb4.2/5, ml3.5/20, Error ellipse: s-maj=1.0km s-min=0.6km az=24.0*
ISC 09 20:00:05.3±1.2, 27°.43N±0°.02×55°.98E±0°.03, h9km±8km, n96, σ1s60/115, mb3.8/19, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
GENO	**Geno**	**0.17**	**100**	Pg		**Pg**	**20 00 08.9**		**-0.2**
IBND	**Bandar-abas**	**0.50**	**88**	Pg		**Pb**	**20 00 15.8**		**-0.4**
SHME	**Shamm**	**1.38**	**174**	P		**Pg**	**20 00 32.4**		**+0.5**
	SNR=26								
SHME				S		**Sn**	**20 00 51.1**		**+1.9**
SHME	**Shamm**	**1.38**	**174**	*e*P		**Pg**	**20 00 31.9**		**0.0**
	SNR=26								
SHME				S		**Sn**	**20 00 51.0**		**+1.9**
LAR1	**LAR**	**1.44**	**280**	Pg		**Pg**	**20 00 34.8**		**+1.7**
BANOM	**Banah**	**1.53**	**169**	P		**Pg**	**20 00 34.8**		**+0.2**
BANOM				S		**Sg**	**20 00 54.7**		**+0.2**
BANOM	**Banah**	**1.53**	**169**	*e*P		**Pg**	**20 00 34.3**		**-0.4**
	SNR=74								
BANOM				S		**Sg**	**20 00 55.5**		**+1.0**
KHNJ	**Kahnooj**	**1.61**	**71**	Pg		**Pg**	**20 00 35.7**		**-0.5**
MASF	**Masafi**	**2.06**	**175**	P		**Pb**	**20 00 42.1**		**-0.7**
	SNR=12								
MASF				S		**Sb**	**20 01 08.7**		**+0.1**
MSFE	**Esma-Masafi**	**2.07**	**175**	*e*P		**Pb**	**20 00 41.8**		**-1.2**
	SNR=12								
MDH	**Madha**	**2.14**	**172**	P		**Pb**	**20 00 43.6**		**-0.7**
MDH				S		**Sb**	**20 01 09.7**		**-1.3**
MDH	**Madha**	**2.14**	**172**	P		**Pb**	**20 00 43.0**		**-1.3**
NGRK	**Negar Kerman**	**2.30**	**17**	Pn		**Pb**	**20 00 46.7**		**-0.5**
NAZ	**Nazwa, Dubai**	**2.45**	**187**	P		**Pb**	**20 00 47.8**		**-1.6**
NAZ	**Nazwa, Dubai**	**2.45**	**187**	P		**Pn**	**20 00 47.0**		**+1.5**
UOSS	**Minazif**	**2.48**	**175**	P		**Pb**	**20 00 47.9**		**-2.2**
UOSS	**Minazif**	**2.48**	**175**	*e*P		**Pn**	**20 00 47.2**		**+1.3**
	SNR=25								
LMD1	**Lamerd**	**2.50**	**269**	Pn		**Pb**	**20 00 49.8**		**-0.6**
HATD	**Hatta, Dubai**	**2.60**	**177**	P		**Pb**	**20 00 49.7**		**-2.4**
HATD				S		**Sn**	**20 01 21.0**		**+1.8**
HATD	**Hatta, Dubai**	**2.60**	**177**	P		**Pn**	**20 00 48.9**		**+1.5**
KRBR	**Kerman**	**2.63**	**15**	Pn		**Pb**	**20 00 52.0**		**-0.8**
FAQ	**Al Faqa, Dubai**	**2.70**	**187**	P		**Pn**	**20 00 51.1**		**+2.3**
FAQ				S		**Sn**	**20 01 23.0**		**+1.4**
ASHO	**Ashiyiah**	**2.74**	**178**	P		**Pn**	**20 00 51.6**		**+2.2**
	SNR=54								
ASHO				S		**Sn**	**20 01 24.7**		**+2.0**
ASHO	**Ashiyiah**	**2.74**	**178**	*e*P		**Pn**	**20 00 51.4**		**+1.9**
	SNR=54								
KBAM	**BAM**	**2.76**	**52**	Pn		**Pb**	**20 00 53.4**		**-1.5**
CHMN	**Cheshme madani**	**2.78**	**29**	Pn		**Pb**	**20 00 53.8**		**-1.5**
ASUD	**Al Ashush, Dub**	**2.85**	**192**	P		**Pb**	**20 00 54.0**		**-2.4**
	SNR=15								
ASUD	**Al Ashush, Dub**	**2.85**	**192**	*e*P		**Pn**	**20 00 52.7**		**+1.7**
	SNR=15								
KHGB	**Koh Gabri**	**2.97**	**8**	Pn		**Pb**	**20 00 56.7**		**-1.7**
AJN	**Ajban**	**2.99**	**198**	P		**Pn**	**20 00 55.0**		**+2.2**
KRM1	**Kerman Provinc**	**3.26**	**20**	Pn		**Pb**	**20 01 00.6**		**-2.9**
SOHO	**SOHO**	**3.32**	**171**	P		**Pn**	**20 00 59.7**		**+2.3**
ALNE	**Al Ain**	**3.37**	**184**	P		**Pn**	**20 00 59.3**		**+1.2**
	SNR=8.3								
ALNE				S		**Sn**	**20 01 39.4**		**+1.3**
ALNE	**Al Ain**	**3.37**	**184**	*i* P		**Pn**	**20 00 59.8**		**+1.7**
	SNR=8.3								
HOQ	**Hoqain**	**4.02**	**162**	P		**Pn**	**20 01 09.6**		**+2.6**
HOQ				S		**Sn**	**20 01 55.8**		**+1.6**
ARQ	**Araqi**	**4.11**	**173**	P		**Pn**	**20 01 11.0**		**+2.7**
	SNR=13								
ARQ				S		**Sn**	**20 01 57.7**		**+1.3**
MZWR	**Madinat Zayed**	**4.12**	**208**	S		**Sn**	**20 01 09.3**		**+1.0**
MZWR				S		**Sn**	**20 01 57.1**		**+0.5**
IMEH	**Mehriz**	**4.12**	**344**	Pn		**Pn**	**20 01 12.3**		**+3.7**
IBAF	**Bafgh**	**4.16**	**355**	Pn		**Pn**	**20 01 12.5**		**+3.4**
CHBR	**Chabahar**	**4.43**	**113**	Pn		**Pn**	**20 01 15.1**		**+2.4**
GHWR	**Ruwais**	**4.45**	**220**	P		**Pn**	**20 01 13.7**		**+0.8**
GHWR				S		**Sn**	**20 02 05.2**		**+0.5**
SMDO	**Samad**	**4.74**	**156**	P		**Pn**	**20 01 19.3**		**+2.3**
SHMA	**Al-Shehemyia**	**4.75**	**252**	P		**Pn**	**20 01 18.7**		**+1.6**
	SNR=14								
SHMA				S		**Sn**	**20 02 11.8**		**-0.5**
UMZA	**Um Al Zommool**	**4.76**	**189**	P		**Pn**	**20 01 18.6**		**+1.5**
WSAR	**Wadi Sarin**	**4.81**	**150**	P		**Pn**	**20 01 19.6**		**+1.7**
WSAR				S		**Sn**	**20 02 14.7**		**+0.8**
MZR	**Muzera**	**4.96**	**208**	P		**Pn**	**20 01 21.2**		**+1.3**
ICHK	**Chekchek**	**4.99**	**344**	Pn		**Pn**	**20 01 24.0**		**+3.5**
TRNA	**Turayna**	**5.06**	**239**	P		**Pn**	**20 01 21.1**		**-0.1**
	SNR=7.1								
TRNA				S		**Sn**	**20 02 19.7**		**-0.1**
	SNR=5.7								
NGCH	**Negor - Chabah**	**5.07**	**113**	Pn		**Pn**	**20 01 23.8**		**+2.4**
NGCH	**Negor - Chabah**	**5.07**	**113**	P		**Pn**	**20 01 23.7**		**+2.4**
	SNR=7.8								
SAKB	**Bahrain**	**5.08**	**255**	P		**Pn**	**20 01 21.7**		**+0.1**
SLWR	**Sila**	**5.11**	**230**	P		**Pn**	**20 01 23.3**		**+1.3**
SLWR				S		**Sn**	**20 02 21.2**		**0.0**
SMRA	**Abu-Samra**	**5.35**	**241**	P		**Pn**	**20 01 27.0**		**+1.6**
SMRA				S		**Sn**	**20 02 26.8**		**-0.3**
JMDO	**Jabal Madar**	**5.40**	**159**	P		**Pn**	**20 01 28.3**		**+2.3**
WBK	**Wadi Bani Khal**	**5.51**	**150**	P		**Pn**	**20 01 28.2**		**+0.6**
TPRV	**Parvadeh(Tabas**	**5.61**	**6**	Pn		**Pn**	**20 01 33.1**		**+4.1**
IKOO	**Kooshah**	**5.62**	**27**	Pn		**Pn**	**20 01 32.7**		**+3.4**
SRVN	**Saravan**	**5.71**	**89**	Pn		**Pn**	**20 01 32.9**		**+2.6**
IGAR	**Gharneh**	**6.02**	**326**	Pn		**Pn**	**20 01 37.1**		**+2.4**
ANAR	**Anarak**	**6.06**	**342**	Pn		**Pn**	**20 01 38.0**		**+2.8**
JLN	**Jalan Bani Buh**	**6.11**	**149**	P		**Pn**	**20 01 36.6**		**+0.8**
AFRZ	**Afriz**	**6.52**	**23**	Pn		**Pn**	**20 01 45.1**		**+3.5**
MHTO	**MHTO**	**6.67**	**164**	P		**Pn**	**20 01 45.0**		**+1.6**
	SNR=9.1								
KBD	**Kabd**	**7.51**	**285**	P		**Pn**	**20 01 55.4**		**+0.5**
DOK	**Doka**	**8.94**	**191**	P		**Pn**	**20 02 15.4**		**+0.9**
SHAO	**Shalim**	**9.37**	**182**	P		**Pn**	**20 02 21.7**		**+1.1**
	SNR=43								
WHFO	**Wadi Hawf**	**9.68**	**193**	P		**Pn**	**20 02 25.0**		**+0.1**
	SNR=27								
DMTO	**DMTO**	**9.72**	**186**	P		**Pn**	**20 02 25.0**		**-0.2**
	SNR=11								
RBK	**Rabkut**	**10.02**	**190**	P		**Pn**	**20 02 30.1**		**+0.7**
RAYN	**Ar Rayn**	**10.23**	**250**	P		**Pn**	**20 02 31.1**		**-1.3**
RAYN	**Ar Rayn**	**10.23**	**250**	P		**Pn**	**20 02 31.3**		**-1.1**
ABTO	**Aybut**	**10.33**	**194**	P		**Pn**	**20 02 33.1**		**-0.7**
	SNR=21								
GNI	**Garni**	**15.73**	**327**	Pn		**P**	**20 03 51.8**		**+0.6**
	0.6nm,0.3s,baz=99,slow=2.5,SNR=4.8 5.4nm,0.8s								
KBZ	**Khabaz**	**19.39**	**330**	P		**P**	**20 04 31.9**		**+0.5**
	0.1nm,0.3s,baz=137,slow=7.7,SNR=5.9 1.9nm,0.9s								
BRTR	**Keskin Array B**	**22.22**	**309**	P		**P**	**20 05 03.2**		**+0.9**
	1.6nm,0.7s,baz=132,slow=13,SNR=10 1.6nm,0.7s								
FURI	**Furi**	**24.64**	**225**	LR		LR	20 16 43.1		
	comp=Z,40nm,19.5s,baz=338,slow=41								
BVAR	**Borovoye Array**	**27.72**	**19**	P		**P**	**20 05 54.0**		**+0.2**
	1.1nm,0.6s,baz=194,slow=6.5,SNR=9.4								
BVAR						PcP	**PcP**	**20 09 11.2**	**+0.7**
	0.7nm,0.3s,baz=206,slow=2.5,SNR=8.8 1.1nm,0.6s								
MKAR	**Makanchi Array**	**28.31**	**40**	P		**P**	**20 05 58.8**		**-0.4**
	0.2nm,0.5s,baz=231,slow=9.2,SNR=1.9 0.2nm,0.5s								
AKASG	**Malin Array Be**	**30.87**	**326**	P		**P**	**20 06 20.7**		**-1.0**
	0.6nm,0.4s,baz=140,slow=9.3,SNR=2.3 0.6nm,0.4s								
ZALV	**Zalesovo Beam**	**33.92**	**31**	P		**P**	**20 06 48.5**		**0.0**
	0.5nm,0.3s,baz=232,slow=9.2,SNR=3.7 0.5nm,0.3s								
MOA	**Molln**	**38.22**	**314**	*i* P		**P**	**20 07 25.4**		**0.0**
	0.9nm,0.5s								
GERES	**GERESS Array B**	**38.88**	**315**	P		**P**	**20 07 31.6**		**+0.6**
	0.3nm,0.5s,baz=123,slow=7.1,SNR=2.9 0.3nm,0.5s								
FINES	**FINESS Array B**	**39.46**	**338**	P		**P**	**20 07 35.8**		**+0.3**
	2.2nm,0.7s,baz=143,slow=10,SNR=18 2.2nm,0.7s								
WTTA	**Wattenberg**	**39.78**	**312**	*i* P		**P**	**20 07 37.5**		**-1.2**
	1.5nm,0.5s								
WATA	**Walderalm**	**39.84**	**312**	*i* P		**P**	**20 07 38.7**		**-0.4**
	0.5nm,0.2s								
SQTA	**Sankt Quirin**	**40.06**	**312**	*i* P		**P**	**20 07 40.1**		**-0.8**
	1.7nm,0.4s								
MOTA	**Moosalm**	**40.16**	**312**	*i* P		**P**	**20 07 41.0**		**-0.8**
	1.2nm,0.5s								
FETA	**Feichten**	**40.33**	**311**	*i* P		**P**	**20 07 42.7**		**-0.5**
	2.3nm,0.5s								
DAVA	**Damuels**	**40.95**	**312**	*i* P		**P**	**20 07 47.6**		**-0.8**
	3.6nm,0.4s								
HFS	**Hagfors**	**43.46**	**331**	P		**P**	**20 08 08.4**		**0.0**
	2.2nm,0.4s,baz=127,slow=9.6,SNR=37 2.2nm,0.4s								
NB2	**NORSAR Subarra**	**44.97**	**331**	P		**P**	**20 08 19.9**		**-0.7**
	comp=Z,0.6nm,0.5s,baz=114,slow=7.9								
NOA	**NORSAR Array B**	**44.97**	**331**	P		**P**	**20 08 19.8**		**-0.7**
	comp=Z,0.9nm,0.7s,baz=117,slow=7.9,SNR=6.1 comp=Z,0.9nm,0.7s								
EKA	**Eskdalemuir Ar**	**50.46**	**321**	P		**P**	**20 09 03.2**		**0.0**
	comp=Z,0.6nm,0.6s,baz=86,slow=7.3,SNR=1.5 comp=Z,0.6nm,0.6s								
ESDC	**Sonseca Array**	**50.58**	**300**	P		**P**	**20 09 03.8**		**-0.6**
	comp=Z,0.9nm,1.0s,baz=80,slow=7.1,SNR=2.5 comp=Z,0.9nm,1.0s								
TORD	**Toledi Ar. Bea**	**52.48**	**266**	P		**P**	**20 09 18.0**		**-0.9**
	comp=Z,0.8nm,0.5s,baz=58,slow=9.2,SNR=11 comp=Z,0.8nm,0.5s								
ILAR	**Eielson Array**	**86.39**	**10**	P		**P**	**20 12 46.6**		**-1.0**
	comp=Z,0.3nm,0.7s,baz=339,slow=6.1,SNR=2.5 comp=Z,0.3nm,0.7s								

*IDC **09** 20:18:28.1±1.1, 60°.17N×153°.62W, h115km±13km, mb3.9/13, mbtmp4.3/17, MS3.1/2, Error ellipse: s-maj=15.8km s-min=10.0km az=99.0*
*NEIC **09** 20:18:30.1±1.4, 60°.06N±0°.05×153°.39W±0°.08, h150km±3km, Error ellipse: s-maj=6.7km s-min=5.9km az=171.0*
*AEIC **09** 20:18:31.3±1.8, 60°.03N±0°.04×153°.40W±0°.06, h146km±3km, ML3.9, mb4.4/14(NEIC), ML4.1/198(NEIC), Mwr4.0/17(SLM), Error ellipse: s-maj=6.5km s-min=4.0km az=183.0*
*NEIC **09** 20:18:31, 60°.11N×153°.37W, h168km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr0.58; Mθθ-1.11; Mφφ0.53; Mrθ-0.24; Mφθ0.14; Mrφ0.62; Fault plane solution: M0 1.17000×10^15 NP1:φ319.00000°, δ67.00000°, λ136.00000°. NP2:φ60.00000°, δ50.00000°, λ30.00000°. Principal axes: T 1.1749, Plg47.0000°, Azm267.0000°; N 0.0007, Plg42.0000°, Azm108.0000°; P -1.1756, Plg11.0000°, Azm9.0000°.*
ISC 09 20:18:30.5±0.6, 60°.06N±0°.04×153°.36W±0°.04, h151km±5km, n279, σ0s94/300, mb4.3/20, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
ILSW	**Iliamna Southw**	**0.13**	**127**			**Pn**	**20 18 50.3**		**-0.7**
ILSW				Sn		**Sn**	**20 19 05.6**		**-0.8**
ILSW				IAML			19 07.0		
	comp=E,1μm,0.6s								
IVE	**Iliamna Volcan**	**0.18**	**105**			**Pn**	**20 18 50.6**		**-0.4**
IVE						**Sn**	**20 19 06.7**		**+0.2**
ILS	**Iliamna Low So**	**0.18**	**126**			**Pn**	**20 18 50.6**		**-0.4**
ILS						**Sn**	**20 19 06.4**		**-0.1**
O20K	**Slope Mountain**	**0.37**	**87**			**Pn**	**20 18 51.3**		**-0.1**
O20K						**Sn**	**20 19 07.3**		**-0.1**
P19K	**Oil Pt**	**0.42**	**171**			**Pn**	**20 18 51.6**		**0.0**
P19K				Sn		**Sn**	**20 19 07.6**		**-0.1**
RED	**Redoubt Volcan**	**0.46**	**39**			**Pn**	**20 18 51.5**		**-0.3**
RED				Sn		**Sn**	**20 19 07.4**		**-0.8**
RED				IAML			20 19 08.1		
	comp=E,2μm,0.9s								
RED				IAML			20 19 08.4		
	comp=N,2μm,1.1s								
RDSO	**Redoubt South**	**0.50**	**38**			**Pn**	**20 18 51.8**		**-0.3**
RDSO						**Sn**	**20 19 08.0**		**-0.6**
RDWB	**Redoubt West**	**0.50**	**31**			**Pn**	**20 18 51.7**		**-0.4**
RDWB						**Sn**	**20 19 07.9**		**-0.7**
O19K	**Port Alsworth**	**0.50**	**286**			**Pn**	**20 18 51.3**		**-0.5**
O19K				Sn		**Sn**	**20 19 06.5**		**-1.7**
O19K				IAML			20 19 07.6		
	comp=E,4μm,0.5s								
O19K				IAML			20 19 08.0		
	comp=N,6μm,0.5s								
NCT	**North Crescent**	**0.54**	**23**			**Pn**	**20 18 51.9**		**-0.4**
NCT						**Sn**	**20 19 08.3**		**-0.7**
AUL	**Augustine Lava**	**0.69**	**183**			**Pn**	**20 18 53.1**		**+0.1**
AUL						**Sn**	**20 19 09.3**		**-0.8**
AU22	**Augustine Moun**	**0.70**	**180**			**Pn**	**20 18 52.8**		**-0.3**
AU22						**Sn**	**20 19 09.5**		**-0.7**
RDT	**Redoubt**	**0.70**	**42**			**Pn**	**20 18 52.7**		**-0.4**
RDT						**Sn**	**20 19 09.7**		**-0.7**
N19K	**Bonanza Creek**	**0.94**	**324**			**Pn**	**20 18 54.5**		**-0.5**
N19K				IAML			20 19 13.2		
	comp=N,1μm,0.7s								
N19K				IAML			20 19 13.5		
	comp=E,786nm,1.1s								
HOM	**Homer**	**0.95**	**114**			**Pn**	**20 18 55.1**		**+0.2**
HOM				Sn		**Sn**	**20 19 13.8**		**+0.2**
O18K	**Koktuh Hills**	**0.96**	**258**			**Sn**	**20 19 12.5**		**-1.1**
Q19K	**Cape Douglas,**	**1.15**	**188**			**Pn**	**20 18 56.3**		**-0.4**
Q19K				IAML			20 19 29.3		
	comp=E,3μm,0.9s								
Q19K	**Cape Douglas,**	**1.15**	**188**			**Sn**	**20 19 16.0**		**-0.7**
P18K	**Big Mountain,**	**1.16**	**235**			**Pn**	**20 18 56.1**		**-0.8**
P18K						**Sn**	**20 19 15.3**		**-1.6**
CNPM	**China Poot**	**1.20**	**116**			**Pn**	**20 18 57.2**		**0.0**
CNPM						**Sn**	**20 19 16.8**		**-0.7**
SPCR	**Spurr Chakacha**	**1.27**	**26**			**Sn**	**20 19 18.8**		**0.0**
BRLK	**Bradley Lake**	**1.28**	**103**			**Pn**	**20 18 58.0**		**+0.1**
BRLK				IAML			20 19 20.0		
	comp=E,3μm,0.3s								
BRLK				IAML			20 19 20.2		
	comp=N,2μm,0.3s								
SPU	**Mount Spurr**	**1.29**	**29**			**Pn**	**20 18 58.0**		**-0.1**
CAPN	**Captain Cook N**	**1.30**	**56**			**Pn**	**20 18 59.5**		**+1.5**
BRSE	**Bradley Lake S**	**1.36**	**103**			**Pn**	**20 18 58.9**		**+0.2**
N18K	**Kilae Creek**	**1.40**	**297**			**Pn**	**20 18 58.7

comp=E,808nm,0.7s
OHAK Old Harbor 2.85 179 P Pn 20 19 13.8 -2.2
OHAK Old Harbor 2.85 179 S Sn 20 19 47.5 -3.5
PLK4 Peulik 4 2.90 214 Pn 20 19 16.3 -0.3
PLK4 IAML 20 19 53.0
comp=E,224nm,1.1s
PLK4 IAML 20 19 55.8
comp=N,196nm,0.8s
PPLA Purkeypile 2.90 11 Pn 20 19 17.2 +0.6
PPLA IAML 20 19 54.2
comp=E,291nm,1.3s
PPLA IAML 20 19 56.8
comp=N,200nm,1.5s
M16K Timber Creek 2.93 292 Pn 20 19 17.4 +0.4
PLBL Peulik Blue Cr 2.98 219 Pn 20 19 17.0 -0.6
SML Sawmill 3.01 52 Pn 20 19 16.6 -1.4
SML IAML 20 19 54.5
comp=E,646nm,0.8s
SML IAML 20 19 56.3
comp=N,612nm,0.7s
L17K Donlin 3.17 313 Pn 20 19 19.5 -0.5
K20K Telida 3.32 354 Pn 20 19 22.0 0.0
R16K Pilot Point 3.33 223 Pn Pn 20 19 22.1 0.0
R16K IAML 20 20 03.4
comp=N,408nm,1.0s
R16K IAML 20 20 30.6
comp=E,311nm,1.6s
N15K Kwethluk River 3.37 275 Pn 20 19 23.2 +0.6
O15K Ungalikthiuk R 3.41 258 Pn 20 19 23.6 +0.6
O15K IAML 20 20 06.0
comp=N,104nm,1.3s
L16K Owhat River 3.42 302 Pn 20 19 23.2 +0.1
SCM Sheep Creek Mo 3.43 56 Pn 20 19 22.6 -0.8
SCM IAML 20 20 05.1
comp=N,702nm,0.9s
HIN Hinchinbrook I 3.44 81 Pn 20 19 22.4 -1.0
HIN IAML 20 20 03.4
comp=E,563nm,0.8s
HIN IAML 20 20 03.8
comp=N,529nm,0.8s
WAT7 Susitna Watana 3.52 36 Pn 20 19 23.8 -0.8
SII Sitkinak Islan 3.54 187 Pn 20 19 22.8 -2.0
K17K Iditarod 3.57 320 Pn 20 19 24.9 -0.2
K17K IAML 20 20 07.7
comp=N,154nm,1.4s
K17K IAML 20 20 08.2
comp=E,109nm,1.1s
MID Middleton Isla 3.61 97 Pn 20 19 25.2 -0.4
MID IAML 20 20 09.6
comp=N,445nm,0.6s
MID IAML 20 20 09.9
comp=E,222nm,0.9s
WAT1 Susitna Watana 3.61 38 Pn 20 19 24.5 -1.2
KTH Kantishna Hill 3.69 17 Pn 20 19 25.9 -0.8
KTH IAML 20 20 09.4
comp=E,138nm,0.6s
KTH IAML 20 20 10.2
comp=N,171nm,0.9s
M15K Kasigluk River 3.69 283 Pn 20 19 27.0 +0.2
TRF Thorofare Moun 3.70 22 Pn 20 19 26.4 -0.5
TRF IAML 20 20 12.3
comp=N,231nm,0.5s
TRF IAML 20 20 14.0
comp=E,211nm,0.8s
J18K Innoko River 3.77 336 Pn 20 19 27.1 -0.6
EYAK Cordova Ski Ar 3.81 79 Pn 20 19 27.8 -0.5
EYAK IAML 20 20 12.4
comp=N,222nm,0.9s
EYAK IAML 20 20 13.8
comp=E,196nm,1.0s
CHUM Lake Minchumin 3.86 7 Pn 20 19 28.6 -0.3
DIV Divide 3.89 71 Pn 20 19 28.6 -0.7
DIV IAML 20 20 15.4
comp=N,437nm,0.3s
DIV IAML 20 20 15.5
comp=E,393nm,0.4s
KLU Klutina 3.92 65 Pn 20 19 28.6 -1.0
RND Reindeer 3.98 31 Pn 20 19 29.9 -0.5
RND IAML 20 20 16.4
comp=E,122nm,0.5s
RND IAML 20 20 20.8
comp=N,118nm,0.7s
M24K Tolsona, Glenn 4.04 56 Pn 20 19 30.9 -0.4
J19K Poorman 4.09 346 Pn 20 19 31.4 -0.4
O14K Tigyukauivet M 4.09 262 Pn 20 19 32.2 +0.3
J20K Nowinta River 4.14 355 Pn 20 19 32.5 0.0
DHY Denali Highway 4.16 41 Pn 20 19 32.1 -0.8
DHY IAML 20 20 21.4
comp=N,361nm,0.5s
DHY IAML 20 20 23.2
comp=E,253nm,0.5s
ANPB Aniakchak Plen 4.17 220 Pn 20 19 31.8 -1.2
N14K Kuskokwak Cree 4.19 272 Pn 20 19 34.0 +0.9
N14K IAML 20 20 52.2
comp=N,70nm,1.9s
N14K IAML 20 21 13.0
comp=E,72nm,1.9s
BPAW Bear Paw Mtn. 4.20 14 Pn 20 19 32.6 -0.7
BPAW IAML 20 20 19.9
comp=N,64nm,1.3s
BPAW IAML 20 20 20.9
comp=E,65nm,0.6s
MCK McKinley 4.23 28 Pn 20 19 33.4 -0.3
MCK IAML 20 20 23.1
comp=N,169nm,0.5s
MCK IAML 20 20 26.1
comp=E,147nm,0.5s
L15K Ungalak Mounta 4.29 296 Pn 20 19 34.7 +0.2
J17K VABM Dome 4.31 323 Pn 20 19 34.0 -0.7
M14K Bethel 4.32 283 Pn 20 19 35.4 +0.5
RAGM Ragged Mountai 4.34 82 Pn 20 19 34.9 -0.3
BMRM Bremner River 4.42 74 Pn 20 19 36.0 -0.2
BMRM IAML 20 20 26.0
comp=E,387nm,0.5s
CHIR Chirikof Islan 4.42 197 Pn 20 19 33.9 -2.4
CHIR IAML 20 20 24.1
comp=N,234nm,0.6s
CHIR IAML 20 20 24.1
comp=E,178nm,0.7s
KAIM Kayak Island 4.49 88 Pn 20 19 37.2 +0.1
KAIM IAML 20 20 30.4
comp=N,250nm,1.1s
KAIM IAML 20 20 31.2
comp=E,227nm,0.7s
BWN Browne 4.51 22 Pn 20 19 37.2 -0.1
BWN IAML 20 20 52.5
comp=N,194nm,1.1s
BWN IAML 20 21 01.0
comp=E,164nm,1.4s
K15K Wolf Creek Mou 4.54 303 Pn 20 19 38.0 +0.2
HMT Hamilton 4.55 83 Pn 20 19 37.6 -0.3
HMT IAML 20 20 48.8
comp=N,296nm,0.5s
N25K Chitina, Valde 4.56 66 Pn 20 19 37.6 -0.4
N25K IAML 20 20 32.1
comp=N,298nm,0.7s
J16K Anvik River 4.73 316 Pn 20 19 39.5 -0.7
L14K Kuka Creek 4.76 290 Pn 20 19 41.2 +0.6
L14K IAML 20 20 57.8
comp=N,57nm,1.4s
PAX Paxson 4.77 49 Pn 20 19 40.2 -0.6
PAX IAML 20 20 35.0
comp=E,179nm,0.5s
PAX IAML 20 20 35.5
comp=N,158nm,0.8s
I20K Naaghedeneel 4.78 354 Pn 20 19 41.0 +0.2
I20K IAML 20 20 28.1
comp=N,132nm,0.8s
I20K IAML 20 21 18.9
comp=E,126nm,1.3s
WACK Wrangell Chich 4.79 62 Pn 20 19 41.5 +0.2
SUCK Suckling Hills 4.80 86 Pn 20 19 40.9 -0.3
SUCK IAML 20 20 37.8
comp=N,168nm,0.6s
SUCK IAML 20 20 38.9
comp=E,105nm,0.6s
BERG Berg Lake 4.83 82 Pn 20 19 41.2 -0.3
BERG IAML 20 20 44.6
comp=N,229nm,0.8s
BERG IAML 20 20 47.0
comp=E,287nm,0.9s
GLB Gilahina Butte 4.88 69 Pn 20 19 42.1 -0.2
GLB IAML 20 20 38.7
comp=E,126nm,0.8s
GLB IAML 20 20 41.0
comp=N,184nm,0.4s
WAZA Wrangell Mount 4.90 62 Pn 20 19 43.7 +0.9
VNHG Veniaminof 1 4.93 221 Pn 20 19 42.7 -0.4
M13K Dall Lake 4.99 278 Pn 20 19 44.5 +0.8
M13K IAML 20 22 38.4
comp=E,82nm,2.8s
M13K IAML 20 23 06.6
comp=N,86nm,3.1s
VNFG Fog Glacier, M 5.01 224 Pn 20 19 43.9 -0.3
VNFG IAML 20 20 42.7
comp=N,263nm,0.9s
VNFG IAML 20 20 58.2
comp=E,266nm,0.8s
VRDI Verde Repeater 5.01 72 Pn 20 19 44.2 0.0
VRDI IAML 20 20 42.2
comp=N,254nm,0.5s
VRDI IAML 20 20 42.4
comp=E,169nm,0.6s
WRH Wood River Hil 5.06 27 Pn 20 19 43.5 -1.1
WRH IAML 20 20 40.0
comp=E,68nm,0.5s
WRH IAML 20 20 40.5
comp=N,64nm,0.5s
CRQM Cirque 5.11 78 Pn 20 19 45.6 +0.1
MLY Manley 5.13 13 Pn 20 19 44.3 -1.2
VNKR Veniaminof 5 5.15 221 Pn 20 19 45.1 -0.8
I21K Tanana 5.17 6 Pn 20 19 45.2 -0.9
I21K IAML 20 20 43.2
comp=E,38nm,1.3s
I21K IAML 20 21 12.2
comp=N,32nm,1.4s
K24K Donnelly Dome 5.18 40 Pn 20 19 46.8 +0.5
MCARA McCarthy VSAT 5.24 71 Pn 20 19 47.1 +0.1
WAX Waxell Ridge 5.25 81 Pn 20 19 47.0 -0.2
SNH Sunshine Point 5.26 84 Pn 20 19 47.5 +0.2
SNH IAML 20 20 48.0
comp=N,146nm,0.9s
SNH IAML 20 20 49.1
comp=E,131nm,1.1s
TGL Tana Glacier 5.26 78 Pn 20 19 47.5 0.0
TGL IAML 20 20 45.4
comp=N,153nm,0.5s
TGL IAML 20 20 49.5
comp=E,178nm,0.4s
CCB Clear Creek Bu 5.27 27 Pn 20 19 46.2 -1.1
CCB IAML 20 22 25.5
comp=N,67nm,0.3s
CCB IAML 20 22 26.7
comp=E,66nm,0.1s
HDA Harding Lake 5.29 32 Pn 20 19 46.2 -1.4
BARK Barkley Ridge 5.42 82 Pn 20 19 49.6 +0.1
I23K Minto, Yukon-K 5.42 18 Pn 20 19 48.6 -0.8
COLA College 5.46 25 Pn 20 19 48.9 -0.9
COLA College 5.46 25 P Pn 20 19 49.1 -0.7
PTPK Patty Peak 5.48 73 Pn 20 19 50.0 -0.3
H20K Anotleneega Mo 5.49 353 Pn 20 19 50.2 -0.1
KIAG Kiagna River 5.50 76 Pn 20 19 50.4 -0.3
BALM Baldy 5.52 75 Pn 20 19 50.5 -0.4
J14K Nanvaranak Lak 5.59 303 Pn 20 19 52.1 +0.5
ILAR Eielson Array 5.60 30 Pn 20 19 50.2 -1.5
ILAR Eielson Array 5.60 30 P Pn 20 19 50.4 -1.4
comp=E,95nm,0.6s,baz=217,slow=14,SNR=1349
ILAR S **Sn 20 20 50.8 -4.4**
comp=E,11nm,0.4s,baz=194,slow=16,SNR=13
H18K Honhosa River 5.61 338 Pn 20 19 51.2 -0.6
H21K Melozitna River 5.62 2 Pn 20 19 51.6 -0.4
BAGL Bagley Icefiel 5.62 81 Pn 20 19 52.0 0.0
L26K Log Cabin Wild 5.63 54 Pn 20 19 52.6 +0.4
H19K Roundabout Mou 5.66 347 Pn 20 19 52.2 -0.4
DOT Dot Lake 5.68 47 Pn 20 19 52.3 -0.6
MESA MESA 5.70 84 Pn 20 19 53.6 +0.2
H17K Granite Mounta 5.75 331 Pn 20 19 53.0 -0.8
POKR Poker Plat Res 5.76 26 Pn 20 19 52.9 -1.0
GRNC Granite Creek 5.79 78 Pn 20 19 54.8 +0.3
YAH Yahtse 5.80 82 Pn 20 19 55.1 +0.5
BARN Barnard Glacie 5.86 75 Pn 20 19 55.7 +0.4
J25K Salcha River, 5.88 36 Pn 20 19 54.7 -0.9
IMAR Indian Mountai 5.95 358 Pn 20 19 56.3 0.0
RKAV Rock Avalanche 6.00 83 Pn 20 19 57.2 0.0
M27K Edge Creek, AK 6.00 63 Pn 20 19 58.1 +0.8
CTGM Chitina Glacie 6.01 76 Pn 20 19 57.8 +0.5
H23K Yukon River 6.04 15 Pn 20 19 57.3 -0.3
SDPT Sand Point 6.07 222 Pn Pn 20 19 56.4 -1.7
SDPT Sand Point 6.07 222 P Pn 20 19 56.4 -1.7
TABL Table Mountain 6.09 81 Pn 20 19 58.8 +0.3
CHX 6.13 85 Pn 20 19 58.8 -0.1
LOGN Logan Glacier 6.16 78 Pn 20 19 59.8 +0.4
CNBA Chernabura Isl 6.24 215 Pn 20 19 57.7 -2.6
SAMH Samovar Hills 6.29 84 Pn 20 20 01.0 0.0
BCAR Beaver Creek A 6.29 56 Pn 20 20 00.5 -0.5
YUK2 White River 6.34 69 Pn 20 20 01.0 -0.7
S12K Black Hills 6.38 231 Pn Pn 20 20 02.4 +0.2
G17K Kiwalik Mounta 6.40 332 Pn 20 20 01.3 -1.0
G21K Allakaket 6.48 359 Pn 20 20 03.1 -0.3
YUK3 Moose Creek 6.52 69 Pn 20 20 03.7 -0.5
PN7A Pavlof North-7 6.55 229 Pn 20 20 03.9 -0.6
PCA Pinnacle 6.56 84 Pn 20 20 05.1 +0.5
O28M Mount Upton 6.56 78 Pn 20 20 05.6 +0.8
K27K Chicken 6.62 48 Pn 20 20 05.0 -0.3
G16K Koyuk River 6.75 326 Pn 20 20 06.5 -0.5
G23K Bananza Creek 6.84 11 Pn 20 20 07.9 -0.3
DT1 Dutton Round H 6.90 228 Pn 20 20 08.1 -1.1
PNI Peninsula 7.04 87 Pn 20 20 10.3 -0.7
F19K Shaleruckik Mo 7.08 346 Pn 20 20 11.6 +0.3
F20K Avaraart Lake 7.09 352 Pn 20 20 11.6 +0.1
H25L Birch Creek 7.09 25 Pn 20 20 10.7 -0.9
F18K Selawik 7.14 339 Pn 20 20 11.1 -1.1
G24K Hadweenzic Riv 7.16 19 Pn 20 20 11.6 -1.0
F21K Alatna River 7.19 360 Pn 20 20 13.3 +0.5
COLD Coldfoot 7.33 10 Pn 20 20 13.7 -1.0
G25K Bearman Lake 7.47 23 Pn 20 20 15.5 -1.1
FALS False Pass 7.53 230 Pn Pn 20 20 17.0 -0.5
M29M Somme Creek 7.56 65 Pn 20 20 18.5 +0.4
YUK7 Dusty Glacier 7.58 80 Pn 20 20 18.3 +0.1
E19K Redstone River 7.62 349 Pn 20 20 19.2 +0.6
ISNN Isanotski Nort 7.68 232 Pn 20 20 18.2 -1.4
YUK5 Granite Creek 7.70 75 Pn 20 20 19.3 -0.7
I27K Kandik River 7.72 39 Pn 20 20 19.5 -0.5
F24K Squaw Lake 7.86 16 Pn 20 20 20.8 -1.1
SSPA Shishaldin 7.86 232 Pn 20 20 20.6 -1.5
P29M Windy Craggy 7.88 86 Pn 20 20 22.1 -0.1
E18K Tukpahleark C 8.05 340 Pn 20 20 23.1 -1.2
N30M Aishikik Lake 8.09 73 Pn 20 20 23.7 -1.2
G26K Porcupine Rive 8.12 28 Pn 20 20 23.9 -1.3
E22K Anaktuvuk Pass 8.13 4 Pn 20 20 25.4 -0.1
F25K Christian Rive 8.28 21 Pn 20 20 26.3 -1.2
E24K Your Creek 8.32 13 Pn 20 20 27.0 -0.9
E20K Nigu River 8.32 353 Pn 20 20 28.6 +0.6
BM03 Burnt Mountain 8.33 24 Pn 20 20 26.3 -1.9
BMAR Burnt Mountain 8.34 24 Pn 20 20 26.6 -1.7
TOLK Toolik Lake Re 8.76 9 Pn 20 20 33.7 -0.2
AKUT Akutan 8.99 234 Pn Pn 20 20 36.4 -0.5
AKUT Akutan 8.99 234 P Pn 20 20 36.2 -0.7
LVA Lava Point 9.08 235 Pn Pn 20 20 38.3 +0.2
SKAG Skagway 9.12 86 P Pn 20 20 41.6 +3.0
UNV Unalaska Valle 9.50 235 Pn 20 20 42.2 -1.5
MNAT Makushin Natee 9.54 235 Pn 20 20 42.9 -1.4
MSW Makushin Switc 9.56 236 Pn 20 20 43.4 -1.2
F28M Old Crow 9.61 32 Pn 20 20 43.4 -1.7
MREP Makushin Rep't 9.62 235 Pn 20 20 44.0 -1.5
MGOD Makushin Gods 9.69 236 Pn 20 20 44.2 -2.0
C23K Itkillik River 9.88 6 Pn 20 20 47.5 -1.1
SIT Sitka 9.88 100 Pn Pn 20 20 47.4 -1.3
JIS Juneau Island 9.90 92 Pn 20 20 47.8 -1.2
C27K Jago River 10.42 19 Pn 20 20 54.6 -1.1
E29M Blow River 10.69 32 Pn 20 20 58.8 -0.5
S34M Telegraph Cree 11.65 91 Pn Pn 20 21 13.1 +1.1
CRAG Craig 11.72 104 P P 20 21 17.3 -2.7
INK Inuvik 11.89 38 P Pn 20 21 14.7 -0.3
comp=E,16nm,0.7s,baz=255,slow=15,SNR=44
DLBC Dease Lake 12.03 88 P Pn 20 21 17.9 +0.8
comp=E,3.4nm,0.7s,baz=275,slow=15,SNR=3.9
ADK Adak 15.34 248 Pn Pn 20 21 58.7 -0.2
ADK Adak 15.34 248 P P 20 21 59.5 -0.7
C36M Paulatuk 15.41 41 Pn 20 21 58.9 -0.7
C36M IAmb IAmb 20 21 59.9
comp=Z,20nm,0.6s
KIWB Kanaga Island 15.58 249 Pn Pn 20 22 01.7 -0.1
KIWB IAmb IAmb 20 22 13.1
comp=Z,27nm,1.1s
A36M Sachs Harbour 16.30 31 Pn 20 22 09.2 -1.1
PETK Petropavlovsk- 27.27 277 P P 20 24 01.1 +0.7
comp=Z,5.4nm,1.0s,baz=67,slow=16,SNR=9.3
comp=Z,5.4nm,1.0s
MA2 Magadan 27.39 294 P P 20 24 02.5 +1.1
NVAR Mina Array Bea 30.91 119 P P 20 24 35.8 +2.9
comp=Z,0.6nm,0.8s,baz=335,slow=11,SNR=2.0
comp=Z,0.6nm,0.8s
NRIK Noril'sk 43.76 333 P P 20 26 20.3 +0.1
NRIK IAmb IAmb 20 26 21.2
comp=Z,5.4nm,0.5s
NRIK Noril'sk 43.76 333 P P 20 26 20.6 +0.4
comp=Z,4.1nm,0.3s,baz=57,slow=4.7,SNR=6.3
comp=Z,4.1nm,0.3s
TXAR Lajitas Array 45.17 110 P P 20 26 34.6 +2.5
comp=Z,0.2nm,0.7s,baz=330,slow=7.6,SNR=1.8
HILR Hailar Array B 47.60 298 P P 20 26 50.7 0.0
comp=Z,0.7nm,0.3s,baz=12,slow=7.7,SNR=2.2
comp=Z,0.7nm,0.3s
MJAR Matsushiro Arr 48.60 273 P P 20 26 58.4 -0.1
MJAR Matsushiro Arr 48.60 273 P P 20 26 58.6 +0.1
comp=Z,1.4nm,0.9s,baz=53,slow=6.4,SNR=3.9
comp=Z,1.4nm,0.9s
CN2 Changchun 49.29 289 P P 20 27 03.6 0.0
CN2 pmax pmax
comp=Z,10.0nm,0.6s
KSRS Korea Array 52.99 282 P P 20 27 32.1 +0.8
comp=Z,2.6nm,0.8s,baz=45,slow=6.9,SNR=9.0
comp=Z,2.6nm,0.8s
ULN Ulaanbaatar 54.31 305 P P 20 27 41.8 +0.8
ULN IAmb IAmb 20 27 42.8
comp=Z,4.6nm,1.2s
SONM Songino Array 54.61 306 P P 20 27 43.3 +0.2
SONM IAmb IAmb 20 27 45.0
comp=Z,2.9nm,0.6s
SONM **PcP 20 28 44.6 +0.5**
SONM Songino Array 54.61 306 P P 20 27 44.0 +0.9
comp=Z,3.9nm,0.7s,baz=44,slow=6.6,SNR=25
SONM PcP **PcP 20 28 44.3 +0.1**
comp=Z,0.4nm,0.3s,baz=46,slow=1.8,SNR=4.6
comp=Z,3.9nm,0.7s
ZAA0 Zalesovo Array 57.22 323 P P 20 28 01.2 -0.1
ZAA0 IAmb IAmb 20 28 02.1
comp=Z,4.8nm,0.6s
ZALV Zalesovo Beam 57.22 323 P P 20 28 01.1 -0.2
ZALV Zalesovo Beam 57.22 323 P P 20 28 01.6 +0.2
comp=Z,5.1nm,0.5s,baz=31,slow=6.9,SNR=29
comp=Z,5.1nm,0.5s
FINES FINESS Array B 58.82 0 P P 20 28 12.9 +0.5
comp=Z,4.6nm,1.1s,baz=356,slow=8.6,SNR=2.5
comp=Z,4.6nm,1.1s
KURK Kurchatov 61.88 325 P P 20 28 32.6 -0.7
KURK IAmb IAmb 20 28 33.5
comp=Z,2.8nm,0.5s
BVAR Borovoye Array 61.93 332 P P 20 28 33.2 -0.4
comp=Z,4.9nm,0.6s,baz=29,slow=6.8,SNR=27
comp=Z,4.9nm,0.6s
KURBB Kurchatov Arra 61.98 325 P P 20 28 33.2 -0.8
comp=Z,2.1nm,0.3s,baz=29,slow=6.4,SNR=8.8
comp=Z,2.1nm,0.3s
GTA Gaotai 64.24 305 eP P 20 28 49.6 +0.3
GTA pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 64.27 321 P P 20 28 48.6 -0.5
MKAR Makanchi Array 64.27 321 P P 20 28 48.4 -0.8
comp=Z,1.0nm,0.5s,baz=41,slow=6.9,SNR=18
comp=Z,1.0nm,0.5s
MAKZ Makanchi 64.36 321 P P 20 28 49.2 -0.5
AB31 Akbulak array 67.73 337 P P 20 29 10.6 -0.6
AB31 IAmb IAmb 20 29 11.4
comp=Z,3.2nm,0.7s
ABKAR Akbulak array 67.73 337 P P 20 29 10.3 -0.9
KK31 Karatay Array 71.08 328 P P 20 29 31.0 -0.9
KKAR Karatay Array 71.08 328 P P 20 29 31.4 -0.5
CMAR Chiang Mai Arr 82.67 294 P P 20 30 36.3 -0.7
CMAR Chiang Mai Arr 82.67 294 P P 20 30 36.5 -0.6
comp=Z,0.9nm,0.6s,baz=8.6,slow=5.2,SNR=8.2
comp=Z,0.9nm,0.6s
NNA Nana 93.67 108 LR LR 21 17 17.2
comp=Z,49nm,18.1s,baz=40,slow=38
QSPA South Pole Qui 149.86 180 PKiKP 20 38 03.2 +1.2
QSPA South Pole Qui 149.86 180 PKPbc PKiKP 20 38 03.8 +1.9
comp=Z,2.0nm,0.7s,baz=266,slow=0.7,SNR=15

*NNC **09** 20:45:23.2±2.4, 37°.09N×71°.14E, h168km±45km, mb2.5, mpv3.2, Error ellipse: s-maj=24.9km s-min=14.9km az=30.0*
ISC 09 20:45:16.3±1.3, 36°.70N±0°.09×71°.1E±0°.1, h150km, n7, σ2$16/14, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**3.99**	**129**	*eP*	**Pn**		**20 46 18.9**	**+2.4**
SRNI				*eS*	**Sn**		**20 47 05.5**	**+2.3**
SRNI				IAML			20 47 06.9	
	comp=N,97nm,0.2s							
SRNI				IAML			20 47 10.2	
	comp=E,140nm,0.2s							
TSSA	**Tissa**	**5.65**	**132**	*eP*	**Pn**		**20 46 39.6**	**+1.0**
TSSA				*eS*	**Sn**		**20 47 40.3**	**-2.5**
TSSA				IAML			20 47 43.4	
	comp=E,32nm,0.3s							
TSSA				IAML			20 47 43.4	
	comp=N,38nm,0.2s							
DHRM	**DHARAMSHALA**	**6.16**	**135**	*eP*	**Pn**		**20 46 46.2**	**+0.9**
DHRM				*eS*	**Sn**		**20 47 52.1**	**-2.8**
DHRM				IAML			20 47 53.9	
	comp=E,28nm,0.3s							
DHRM				IAML			20 47 54.3	
	comp=N,34nm,0.2s							
KK31	**Karatay Array**	**6.41**	**356**	P	**Pn**		**20 46 50.5**	**+2.1**
	comp=N,1.0nm,0.2s,baz=178,slow=12,SNR=54							
KK31				⇑S	**Sn**		**20 47 59.2**	**-1.5**
	comp=N,2.8nm,0.3s,baz=190,slow=22,SNR=17							
AAK	**Ala-Archa**	**6.47**	**23**	⇓P	**Pn**		**20 46 51.1**	**+1.7**
	comp=N,0.7nm,0.4s							
AAK				⇑S	**Sn**		**20 48 01.6**	**-0.7**
	comp=N,1.8nm,0.5s							
SMLA	**Simla**	**7.49**	**136**	*eP*	**Pn**		**20 47 02.4**	**-0.4**
SMLA				*eS*	**Sn**		**20 48 23.6**	**-2.9**
SMLA				IAML			20 48 24.7	
	comp=E,15nm,0.2s							
SMLA				IAML			20 48 25.0	
	comp=N,13nm,0.3s							
AB31	**Akbulak array**	**14.96**	**330**	P	**Pn**		**20 48 42.5**	**+0.6**
	comp=N,0.8nm,0.5s,baz=140,slow=11,SNR=15							
AB31				S	**Sn**		**20 51 23.7**	**-2.4**
	comp=N,0.3nm,0.3s,baz=153,slow=23,SNR=4.3							

*CATAC **09** 20:46:11.3±0.8, 9°.N±5°.×8°.4W±°, h5km±7km, M3.4/6, MLv3.4/6, Error ellipse: s-maj=11.6km s-min=7.2km az=19.3, confirmed*
*UCR **09** 20:46:12.4±0.8, 9°.43N×84°.47W, h15km±6km, MW3.7*
ISC 09 20:46:12.2±1.1, 9°.42N±0°.05×84°.46W±0°.03, h18km, n54, σ0$56/58, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PAR1A	**Puntarenas Pro**	**0.27**	**49**	*eP*		**Pg**	**20 46 18.6**	**+0.4**
PAR1A				*eS*		**Sb**	**20 46 23.8**	**+1.1**
PICV	**PH. Pirrs**	**0.33**	**52**	*eP*		**Pg**	**20 46 19.4**	**+0.1**
PICV				*eS*		**Sg**	**20 46 25.0**	**+0.7**
LLNJ	**Naranjito**	**0.36**	**81**	*eP*		**Pg**	**20 46 19.8**	**-0.1**
PURI	**Puriscal**	**0.45**	**19**	*eP*		**Pg**	**20 46 21.2**	**-0.2**
ACOS	**Acosta**	**0.48**	**38**	*eP*		**Pg**	**20 46 21.6**	**-0.3**
ACOS				*eS*		**Sg**	**20 46 28.3**	**-0.2**
PITB	**Pirrs, San**	**0.49**	**61**	*eP*		**Pg**	**20 46 22.0**	**-0.3**
PIEC	**Cerro El Cedra**	**0.54**	**68**	*eP*		**Pg**	**20 46 22.9**	**-0.1**
LCR2	**La Lucha 2**	**0.55**	**55**	P		**Pg**	**20 46 22.9**	**-0.5**
LCR2	**La Lucha 2**	**0.55**	**55**	S		**Sg**	**20 46 30.7**	**-0.1**
ATEO	**Atenas**	**0.56**	**8**	*eP*		**Pg**	**20 46 22.9**	**-0.5**
BELE	**Belen**	**0.61**	**26**	*eP*		**Pb**	**20 46 23.7**	**-0.8**
TCS1	**Tacares**	**0.64**	**14**	P		**Pb**	**20 46 24.6**	**-0.3**
TCS1	**Tacares**	**0.64**	**14**	*eP*		**Pb**	**20 46 24.6**	**-0.3**
CBL1	**Cabuya**	**0.64**	**285**	*eP*		**Pb**	**20 46 25.0**	**+0.1**
ECI	**Escuela Centro**	**0.66**	**38**	*eP*		**Pb**	**20 46 24.7**	**-0.5**
SJS3	**Mercedes San J**	**0.66**	**38**	*eP*		**Pb**	**20 46 24.8**	**-0.4**
HDC	**Heredia**	**0.67**	**31**	*eP*		**Pb**	**20 46 24.9**	**-0.6**
REPA	**Paraso**	**0.71**	**55**	*eP*		**Pb**	**20 46 25.4**	**-0.8**
BUS1	**Rivas**	**0.72**	**79**	*eP*		**Pb**	**20 46 25.5**	**-1.0**
VPS8	**V Poas**	**0.79**	**16**	*eP*		**Pb**	**20 46 27.3**	**-0.3**
VICA	**Volcano Irazu**	**0.83**	**47**	*eP*		**Pb**	**20 46 27.5**	**-0.8**
VINA	**Juan Vinas**	**0.85**	**56**	*eP*		**Pb**	**20 46 28.1**	**-0.5**
OCHAL	**Ojochal**	**0.87**	**112**	P		**Pb**	**20 46 27.8**	**-0.9**
CVTQ	**Turrialba Volc**	**0.90**	**50**	*eP*		**Pb**	**20 46 29.0**	**-0.5**

CVTV	Tajo	0.91	50	*e*P		Pb	20 46 29.2	-0.5
VTR0	Volcan Turrial	0.91	49	*e*P		Pb	20 46 29.4	-0.4
VTUN	Crater Central	0.91	49	*e*P		Pb	20 46 29.2	-0.6
CVTR	Volcan Turrial	0.91	49	*e*P		Pb	20 46 29.2	-0.6
EDPE	Pejibaye, P	0.92	106	*e*P		Pb	20 46 28.6	-1.0
VERB	Verbena	0.92	55	*e*P		Pb	20 46 29.2	-0.5
ABRB	Las Abras (San	0.94	51	*e*P		Pb	20 46 29.8	-0.3
ARTO	Ro Cuarto	0.95	15	*e*P		Pb	20 46 29.9	-0.2
JUNT	Juntas	0.99	330	*e*P		Pb	20 46 30.3	-0.5
JTS	Las Juntas de	0.99	331	P		Pb	20 46 30.2	-0.7
JTS	Las Juntas de	0.99	331	*e*P		Pb	20 46 29.8	-1.1
RESJ	San Isidro (Tu	1.01	53	*e*P		Pb	20 46 30.9	-0.4
CASO	Castillo	1.04	345	*e*P		Pb	20 46 31.3	-0.5
ARE1	Arenal 1	1.07	346	*e*P		Pb	20 46 31.9	-0.3
VARE2	V. Arenal	1.07	346	*e*P		Pb	20 46 31.8	-0.4
CEDE	Laguna Cedeo	1.09	347	*e*P		Pb	20 46 32.2	-0.4
DRK0	Durika	1.21	97	P		Pn	20 46 34.0	-0.4
DRK0				S		Sb	20 46 50.9	+0.8
DRK0	Durika	1.21	97	*e*P		Pn	20 46 33.6	-0.8
QUEB	Quebradon, Cot	1.27	340	*e*P		Pn	20 46 35.2	+0.1
JUD3	Juan Diaz 3	1.30	305	*e*P		Pn	20 46 35.4	-0.1
EDP2	Potrero Grande	1.33	107	*e*P		Pn	20 46 36.5	+0.6
VERH	Veragua Rainfo	1.35	68	*e*P		Pn	20 46 36.0	-0.3
TENO	El Achiote	1.37	338	*e*P		Pn	20 46 36.1	-0.4
CUI	Cuipilapa	1.41	331	*e*P		Pn	20 46 37.1	0.0
LAES	El Progreso Va	1.43	76	*e*P		Pn	20 46 37.8	+0.5
HORNC	Hornillas	1.47	331	*e*P		Pn	20 46 37.9	0.0
CEUA	Cerro Uatsi, L	1.51	82	*e*P		Pb	20 46 40.3	+0.5
VMAR	Armenia, Volca	1.53	335	*e*P		Pn	20 46 39.5	+0.9
VRLE	La Escondida,	1.63	327	*e*P		Pn	20 46 40.5	+0.4
ALCO	Alturas Coton,	1.67	106	*e*P		Pn	20 46 41.6	+0.8

NEIC ***09*** *21:03:55.5±1.3, 43.80N×0.06×105.37W×0.06, h0km±1km, ML3.1/40, Error ellipse: s-maj=10.7km s-min=7.6km az=346.0*

IDC ***09*** *21:03:55.6±2.2, 43.51N×105.32W, h0km, mbtmp3.7/3, ML3.5/3, Error ellipse: s-maj=61.0km s-min=9.1km az=151.0*

ISC 09 21:03:56.8±1.1**, 43.77N**±0.07×**105.35W**±0.07**, h0**km**, n31,** σ**0**s**74/31, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.01**	**69**	Pg	**Pg**	**21 04 15.7**	**-0.5**
K22A	**Casper**	**1.41**	**218**		**Pn**	**21 04 22.4**	**-1.6**
K22A	286nm,0.3s			IAML		21 04 48.2	
K22A	268nm,0.3s			IAML		21 04 49.5	
RLMT	**Red Lodge**	**3.11**	**297**		**Pn**	**21 04 47.1**	**-0.3**
RLMT	64nm,0.6s			IAML		21 05 46.5	
RLMT	51nm,0.7s			IAML		21 05 52.5	
PD31	**Pinedale Array**	**3.23**	**253**	Pn	**Pn**	**21 04 49.3**	**+0.2**
PDAR	**Pinedale Array**	**3.23**	**253**		**Pn**	**21 04 49.2**	**+0.2**
PDAR	**Pinedale Array**	**3.23**	**253**	Pn	**Pn**	**21 04 49.5**	**+0.4**
PDAR	2.8nm,0.3s,baz=72,slow=16,SNR=77			Lg	Lg	21 05 36.1	
YNE	12nm,0.3s,baz=160,slow=43,SNR=2.2 5.7nm,0.4s **Yellowstone No**	**3.56**	**292**		**Pn**	**21 04 52.8**	**-0.8**
YNE	comp=N,57nm,0.4s			IAML		21 05 54.2	
YNE	comp=E,55nm,0.4s			IAML		21 06 02.7	
OGNE	**Ogallala**	**3.74**	**138**		**Pn**	**21 04 57.3**	**+1.4**
LOHW	**Long Hollow**	**3.81**	**269**		**Pn**	**21 04 57.4**	**+0.4**
LOHW	comp=E,22nm,1.3s			IAML		21 06 22.4	
H17A	**Grant Village**	**3.82**	**281**		**Pn**	**21 04 57.1**	**0.0**
H17A	comp=E,26nm,1.2s			IAML		21 06 01.6	
H17A	comp=N,36nm,1.1s			IAML		21 06 06.3	
FLWY	**Flagg Ranch**	**3.88**	**276**		**Pn**	**21 04 58.3**	**+0.4**
FLWY	comp=N,37nm,2.1s			IAML		21 06 08.9	
YPP	**Pitchstone Pla**	**3.97**	**279**		**Pn**	**21 04 59.0**	**-0.2**
ISCO	**Idaho Springs**	**3.97**	**183**		**Pn**	**21 04 60.0**	**+0.7**
ISCO	comp=N,19nm,0.9s			IAML		21 06 06.6	
TPAW	**Teton Pass**	**4.08**	**268**		**Pn**	**21 05 01.6**	**+0.9**
TPAW	comp=N,27nm,1.4s			IAML		21 06 24.5	
TPAW	comp=N,37nm,0.7s			IAML		21 06 27.0	
YHH	**Holmes Hill**	**4.08**	**286**		**Pn**	**21 05 01.0**	**+0.2**
FXWY	**Fox Creek**	**4.12**	**270**		**Pn**	**21 05 02.4**	**+1.1**
O20A	**White River Ci**	**4.23**	**212**		**Pn**	**21 05 02.6**	**0.0**
E28A	**Huff**	**4.32**	**48**	Pn	**Pn**	**21 05 04.3**	**+0.4**
YHL	**Hebgen Lake**	**4.32**	**286**		**Pn**	**21 05 05.9**	**+1.8**
YHL	comp=E,29nm,3.8s			IAML		21 07 00.9	
RDMU	**Red Mountain**	**4.48**	**226**	Pn	**Pn**	**21 05 06.0**	**-0.2**
BOZ	**Bozeman (W)**	**4.84**	**294**		**Pn**	**21 05 11.3**	**+0.3**
BOZ	comp=E,18nm,1.2s			IAML		21 06 30.0	
BOZ	comp=E,18nm,2.5s			IAML		21 06 45.0	
EGMT	**Eagleton**	**5.25**	**326**		**Pn**	**21 05 16.0**	**-0.6**
HRY	**Holter Researc**	**5.44**	**305**		**Pn**	**21 05 19.1**	**-0.2**
PV23	**Carpenter Ridg**	**5.99**	**209**	Pn	**Pn**	**21 05 27.8**	**+0.9**
SDCO	**Great Sand Dun**	**6.02**	**181**	Pn	**Pn**	**21 05 27.2**	**-0.3**
PV11	**David Mesa, Pa**	**6.08**	**207**		**Pn**	**21 05 28.4**	**+0.2**
PV13	**Radium Mtn., P**	**6.19**	**206**		**Pn**	**21 05 30.2**	**+0.5**
ECSD	**EROS Data Cent**	**6.33**	**87**	Pn	**Pn**	**21 05 30.9**	**-0.4**
Q16A	**Castle Valley**	**6.53**	**224**	Pn	**Pn**	**21 05 34.0**	**-0.4**
ULM	**Lac du Bonnet**	**9.15**	**42**	Pn	**Pn**	**21 06 09.5**	**-0.6**
ULM	comp=E,3.4nm,0.3s,baz=224,slow=13,SNR=14			Lg	Lg	21 08 41.3	
NVAR	comp=E,0.8nm,0.3s,baz=125,slow=14,SNR=2.9 comp=E,6.5nm,0.3s **Mina Array Bea** comp=E,0.1nm,0.3s,baz=43,slow=13,SNR=5.4 comp=E,0.6nm,0.6s	**11.13**	**246**	Pn	**Pn**	**21 06 38.4**	**+0.9**

SDD ***09*** *21:16:34.1±2.9, 19.92N×73.12W, h22km±236km, MD3.6, ML3.1, MW3.0*

SSNC ***09*** *21:16:35.7±1.3, 19.55N×73.27W, h4km±9km, MD3.6, ML2.7*

ISC 09 21:16:34.0±1.3**, 19.81N**±0.09×**73.17W**±0.03**, h21**km±5km**, n18,** σ**0**s**95/35, 5C-3D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**1.06**	**290**	*e*P	**Pn**	**21 16 54.4**	**+0.8**
MASC				*e*S	**Sn**	**21 17 08.5**	**+0.8**
MASC	comp=N,231nm,0.1s			IAML		21 17 11.1	
MASC	comp=E,325nm,0.2s			IAML		21 17 11.5	
MCDR	**Montecristi**	**1.43**	**86**	↑*e*Pg	**Pn**	**21 16 57.8**	**-0.8**
MCDR				↓*e*Sg	**Sn**	**21 17 16.1**	**-0.7**
MCDR				↓*e*Sg	**Sb**	**21 17 18.2**	**+0.6**
MCDR	comp=N,357nm,0.6s			IAML		21 17 25.0	
QMBU	**Quimbuelo**	**1.59**	**284**	↑*e*Pg	**Pn**	**21 17 01.9**	**+1.0**
QMBU				*e*Sg	**Sb**	**21 17 23.2**	**+0.8**
QMBU	comp=N,289nm,0.2s			IAML		21 17 26.4	
QMBU	**Quimbuelo**	**1.59**	**284**	*e*P	**Pn**	**21 17 01.8**	**+0.9**
QMBU				*e*S	**Sn**	**21 17 21.6**	**+0.7**
QMBU	comp=E,240nm,0.3s			IAML		21 17 25.5	
QMBU	comp=N,290nm,0.2s			IAML		21 17 26.4	
GTBY	**Guantanamo Bay**	**1.83**	**274**	*e*P	**Pn**	**21 17 04.9**	**+0.7**
GTBY				*e*S	**Sn**	**21 17 26.0**	**-0.7**
GTBY	comp=N,42nm,0.2s			IAML		21 17 31.0	
GTBY	comp=N,47nm,0.2s			IAML		21 17 31.4	
NMDO	**Nuevo Mundo**	**1.86**	**294**	*e*P	**Pn**	**21 17 04.8**	**+0.2**
NMDO				*e*S	**Sb**	**21 17 29.1**	**-0.9**
NMDO	comp=E,71nm,0.2s			IAML		21 17 35.8	
NMDO	comp=N,64nm,0.1s			IAML		21 17 38.1	
MOAC	**Moa**	**1.88**	**297**	*e*P	**Pn**	**21 17 05.0**	**+0.1**
MOAC				*e*S	**Sn**	**21 17 28.8**	**+0.8**
MOAC				IAML		21 17 35.2	
MOAC	comp=N,61nm,0.1s			IAML		21 17 37.8	
SDDR	comp=E,84nm,0.2s **Presa de Saban**	**1.96**	**115**	*e*P	**Pn**	**21 17 07.0**	**+1.0**
SDDR				*e*S	**Sn**	**21 17 30.1**	**+0.1**
SDDR	comp=E,59nm,0.2s			IAML		21 17 37.7	
SDDR	comp=E,108nm,0.4s			IAML		21 17 41.0	
LUDR	**Luperon**	**2.09**	**87**	↑*e*Pg	**Pn**	**21 17 07.7**	**-0.1**
LUDR				↑*e*Sg	**Sn**	**21 17 34.0**	**+0.9**
RCC	**Rio Carpintero**	**2.38**	**275**	*e*P	**Pn**	**21 17 12.0**	**+0.2**
RCC				*e*S	**Sn**	**21 17 40.2**	**-0.2**
RCC	comp=N,28nm,0.2s			IAML		21 17 43.4	
RCC	comp=E,22nm,0.1s			IAML		21 17 46.1	
PODR	**Polo**	**2.42**	**132**	↓*e*Pg	**Pb**	**21 17 16.4**	**-0.6**
PODR				↑↑*e*Sg	**Sb**	**21 17 47.8**	**+1.2**
PODR	comp=N,66nm,0.9s			IAML		21 18 02.7	
PINC	**Pinares de May**	**2.55**	**286**	*e*P	**Pn**	**21 17 14.0**	**-0.1**
PINC				*e*S	**Sn**	**21 17 45.8**	**+1.3**
PINC	comp=N,43nm,0.1s			IAML		21 17 52.8	
PINC	comp=E,40nm,0.1s			IAML		21 17 54.7	
MARVS	**Santiago de Cu**	**2.57**	**275**	*e*P	**Pn**	**21 17 15.0**	**+0.6**
MARVS				*e*S	**Sn**	**21 17 45.3**	**+0.2**
MARVS	comp=N,22nm,0.2s			IAML		21 17 47.6	
MARVS	comp=E,27nm,0.3s			IAML		21 17 48.9	
HLGC	**Holguin**	**2.92**	**292**	*e*P	**Pn**	**21 17 20.1**	**+0.9**
HLGC				*e*S	**Sb**	**21 18 00.6**	**+0.1**
HLGC	comp=E,9.2nm,0.2s			IAML		21 18 05.0	
HLGC	comp=N,18nm,0.7s			IAML		21 18 06.2	
YAR	**Yar**	**3.05**	**281**	*e*P	**Pn**	**21 17 21.2**	**+0.2**
YAR				*e*S	**Sn**	**21 17 57.3**	**+0.5**
YAR	comp=N,7.4nm,0.5s			IAML		21 18 05.3	
YAR	comp=E,5.3nm,0.4s			IAML		21 18 06.1	
CHIV	**Chivirico**	**3.06**	**274**	*e*P	**Pn**	**21 17 21.9**	**+0.8**
CHIV				*e*S	**Sn**	**21 17 54.8**	**-2.2**
CHIV	comp=E,7.0nm,0.3s			IAML		21 17 59.6	
CHIV	comp=N,11nm,0.2s			IAML		21 18 00.4	
LMGC	**Las Mercedes**	**3.62**	**275**	*e*P	**Pn**	**21 17 27.9**	**-0.9**
LMGC				*e*S	**Sn**	**21 18 08.2**	**-2.6**
LMGC	comp=N,14nm,0.1s			IAML		21 18 13.2	
LMGC	comp=E,14nm,0.1s			IAML		21 18 15.6	
CCCC	**Cccc**	**4.52**	**289**	*e*P	Pn	21 17 36.2	-5.0
CCCC				*e*S	Sn	21 18 24.8	-8.4
CCCC	comp=N,3.3nm,0.3s			IAML		21 18 25.5	
CCCC	comp=E,2.4nm,0.2s			IAML		21 18 26.7	

DNK ***09*** *21:24:25.6±3.5, 71.96N×5.62E, h10km, ML2.0*

IDC ***09*** *21:24:35.4±0.7, 73.09N×6.27E, h0km, mb3.7/16, mbtmp3.7/22, ML3.2/6, MS3.5/35, Error ellipse: s-maj=15.6km s-min=12.7km az=60.0*

NAO ***09*** *21:24:37.6±0.4, 73.23N×6.28E, h15km, ML3.6*

BER ***09*** *21:24:38.6±3.1, 73.18N×6.46E, h10km, mb(Pn)4.4, ML3.6(NAO), Confirmed Earthquake*

KOLA ***09*** *21:24:41.2, 72.93N×7.19E, h0km, ML2.6, Error ellipse: s-maj=29.0km s-min=18.7km az=120.0, Norwegian sea*

UPP ***09*** *21:24:46.3±3.3, 72.80N×8.19E, h0km, ML1.9, Presumed earthquake*

ISC 09 21:24:37.1±0.6**, 73.16N**±0.05×**6.92E**±0.06**, h12**km**, n118,** σ**25**s**/114, mb3.7/15, MS3.4/31, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEA6	**Bear Island, N**	**3.63**	**63**	Pn	**Pn**	**21 25 34.2**	**+1.2**
BJO1	baz=256,slow=18 **Bjornoya**	**3.63**	**63**	*e*P	**Pn**	**21 25 33.8**	**+0.8**
BJO1	comp=E,34nm,0.7s			IAML		21 25 39.9	
HSPB	**Hornsund (broa**	**4.45**	**26**	Pn	**Pn**	**21 25 44.4**	**+0.2**
HSPB	**Hornsund (broa**	**4.45**	**26**	Pn	**Pn**	**21 25 44.4**	**+0.2**
JNE	**Jan Mayen East**	**5.17**	**252**	*e*P	**Pn**	**21 25 51.3**	**-2.8**
JNW	**Jan Mayen West**	**5.19**	**253**	*e*P	**Pn**	**21 25 51.6**	**-2.7**
TRO	**Tromso**	**5.22**	**127**	Pn	**Pn**	**21 25 56.5**	**+1.6**
TRO				Sn	**Sn**	**21 26 53.0**	**-1.9**
TRO	**Tromso**	**5.22**	**127**	*e*P	**Pn**	**21 25 56.2**	**+1.4**
TRO				*e*S	**Sn**	**21 26 50.8**	**-4.1**
TRO	comp=E,13nm,0.4s			IAML		21 26 55.9	
JMIC	**Jan Mayen**	**5.23**	**253**	Pn	**Pn**	**21 25 52.2**	**-2.8**
JMIC	**Jan Mayen**	**5.23**	**253**	Pn	**Pn**	**21 25 52.1**	**-2.9**
JMIC	comp=E,2.6nm,0.3s,baz=76,slow=7.4,SNR=6.2 comp=E,22nm,0.6s **Jan Mayen**	**5.23**	**253**	Pn	**Pn**	**21 25 52.2**	**-2.8**
BRBA	**Barentsburg A**	**5.24**	**17**	Pn	**Pn**	**21 25 55.1**	**+0.1**
BRBA	**Barentsburg A**	**5.24**	**17**	*e*P	**Pn**	**21 25 56.8**	**+1.7**
BRBB	**Barentsburg B**	**5.27**	**17**	Pn	**Pn**	**21 25 55.7**	**+0.2**
BRBB	**Barentsburg B**	**5.27**	**17**	*e*P	**Pn**	**21 25 56.5**	**+1.0**
JMI	**Jan Mayen**	**5.33**	**253**	Pn	**Pn**	**21 25 54.0**	**-2.3**
JMI	**Jan Mayen**	**5.33**	**253**	*e*P	**Pn**	**21 25 53.8**	**-2.5**
LOF	**Lofoten**	**5.51**	**153**	*e*P	**Pn**	**21 25 59.4**	**+0.6**
LOF	comp=E,24nm,0.6s			IAML		21 26 57.7	
SPA0	**Spitsbergen Ar**	**5.55**	**20**	Pn	**Pn**	**21 25 59.7**	**+0.4**
SPA0	baz=209,slow=16 **Spitsbergen Ar**	**5.55**	**20**	Pn	**Pn**	**21 25 59.7**	**+0.4**
SPA0	baz=209,slow=16			IAML		21 26 30.9	
SPITS	comp=E,6.8nm,0.7s **Spitsbergen Ar**	**5.55**	**20**	Pn	**Pn**	**21 26 00.1**	**+0.7**
JETT	baz=206,slow=17 comp=Z,3.8nm,0.3s **Jettan, Norway**	**5.63**	**123**	Pn	**Pn**	**21 26 02.0**	**+1.4**
JETT	**Jettan, Norway**	**5.63**	**123**	*e*P	**Pn**	**21 26 02.1**	**+1.6**
JETT				*e*S	**Sn**	**21 27 04.3**	**-0.8**
JETT	comp=Z,14nm,0.5s			IAML		21 27 08.8	
HAMF	**Hammerfest**	**5.79**	**108**	Pn	**Pn**	**21 26 03.3**	**+0.6**
HAMF				Sn	**Sn**	**21 27 05.4**	**-3.6**
KBS	**Kingsbay**	**5.92**	**9**	Pn	**Pn**	**21 26 03.6**	**-0.8**
KBS	**Kingsbay**	**5.92**	**9**	*e*P	**Pn**	**21 26 05.4**	**+1.1**
KBS	**Kingsbay**	**5.92**	**9**	*i* P	**Pn**	**21 26 06.8**	**+2.5**
KBS				*i* S	**Sb**	**21 27 26.5**	**-4.1**
STEI	**Steigen**	**5.94**	**148**	*e*P	**Pn**	**21 26 05.0**	**+0.4**
STEI	comp=Z,5.7nm,0.5s			IAML		21 27 15.4	
KIF	**Kilpisjarvi**	**6.14**	**126**	Pn	**Pn**	**21 26 08.6**	**+1.3**
KIF				Sn	**Sn**	**21 27 12.2**	**-5.1**
KIF	**Kilpisjarvi**	**6.14**	**126**	*e*P	**Pn**	**21 26 08.5**	**+1.2**
KIF				*e*S	**Sn**	**21 27 14.6**	**-2.7**
FAUS	**Fauske**	**6.46**	**150**	P	**Pn**	**21 26 12.7**	**+0.9**
FAUS				S	**Sn**	**21 27 20.4**	**-4.8**
FAUS	**Fauske**	**6.46**	**150**	*e*P	**Pn**	**21 26 12.0**	**+0.3**
FAUS	comp=Z,5.3nm,0.5s			IAML		21 27 26.4	
KOVU	**Salmi**	**6.61**	**132**	P	**Pn**	**21 26 15.7**	**+1.8**
KOVU				S	**Sn**	**21 27 25.4**	**-3.6**
KTK1	**Kautokeino**	**6.73**	**120**	Pn	**Pn**	**21 26 17.8**	**+2.3**
KTK1				Sn	**Sn**	**21 27 32.1**	**+0.2**
KTK1	**Kautokeino**	**6.73**	**120**	*e*P	**Pn**	**21 26 17.9**	**+2.4**
VAGH	**Vaagaholmen**	**6.82**	**158**	*e*P	**Pn**	**21 26 17.4**	**+0.7**
VAGH	comp=Z,8.5nm,0.5s			IAML		21 27 32.3	
KUA	**Kurravaara**	**6.87**	**133**	P	**Pn**	**21 26 18.8**	**+1.4**
KUA				S	**Sn**	**21 27 30.3**	**-5.1**
ARA0	**ARCESS Array S**	**6.96**	**112**	Pn	**Pn**	**21 26 20.0**	**+1.3**
ARA0	baz=305,slow=12 baz=312,slow=22			Sn	**Sn**	**21 27 34.0**	**-3.7**
ARA0	**ARCESS Array S** baz=305,slow=12	**6.96**	**112**	Pn	**Pn**	**21 26 20.0**	**+1.3**
ARA0				*e*P	**Pn**	**21 26 20.2**	**+1.5**
ARA0	baz=312,slow=22			Sn	**Sn**	**21 27 34.0**	**-3.7**
ARCES	**ARCESS Array B**	**6.96**	**112**	Pn	**Pn**	**21 26 20.2**	**+1.5**
ARCES	comp=Z,1.0nm,0.3s,baz=326,slow=11,SNR=51			Sn	**Sn**	**21 27 34.9**	**-2.8**
SALU	comp=Z,1.2nm,0.3s,baz=309,slow=20,SNR=9.9 comp=Z,2.7nm,0.3s **Saltoluokta**	**6.99**	**140**	P	**Pn**	**21 26 20.5**	**+1.3**
SALU	**Saltoluokta**	**6.99**	**140**	*e*P	**Pn**	**21 26 20.3**	**+1.2**
LANU	**Lannavaara**	**7.16**	**128**	P	**Pn**	**21 26 22.8**	**+1.4**
STOK	**Stokkvaagen**	**7.18**	**160**	*e*P	**Pn**	**21 26 22.9**	**+1.3**
STOK				IAML		21 27 44.0	
RAUS	comp=Z,8.4nm,0.6s **Rausandaksla**	**7.19**	**157**	*e*P	**Pn**	**21 26 22.8**	**+1.0**
RAUS				IAML		21 27 43.4	
KEV	comp=Z,13nm,0.5s **Kevo**	**7.23**	**108**	Pn	**Pn**	**21 26 23.1**	**+0.7**
KEV				Sn	**Sn**	**21 27 41.7**	**-2.6**
KEV	**Kevo**	**7.23**	**108**	*e*P	**Pn**	**21 26 23.1**	**+0.7**
HEF	**Hetta**	**7.28**	**123**	Pn	**Pn**	**21 26 24.7**	**+1.7**
HEF				Sn	**Sn**	**21 27 40.6**	**-4.8**
HEF	**Hetta**	**7.28**	**123**	Pn	**Pn**	**21 26 24.7**	**+1.7**
HEF				Sn	**Sn**	**21 27 40.6**	**-4.8**
LEIR	**Leirfjorden**	**7.40**	**160**	*e*P	**Pn**	**21 26 25.4**	**+0.7**
LEIR	comp=Z,12nm,0.4s			IAML		21 27 47.9	
MOR8	**Moi Rana**	**7.49**	**156**	*e*P	**Pn**	**21 26 26.9**	**+0.9**
MOR8	comp=Z,9.8nm,0.4s			IAML		21 27 49.7	
DAG	**Danmarks Havn**	**7.51**	**310**	*i* P	Pn	21 26 19.9	-6.3
DAG	comp=Z,4.0nm,0.3s			IAML		21 27 37.6	
DBG	**Daneborg**	**7.66**	**291**	Pn	Pn	21 26 21.4	-6.9
DBG				Sn	Sn	21 27 39.5	-15
DBG	**Daneborg**	**7.66**	**291**	*e*P	Pn	21 26 21.7	-6.6
DBG	**Daneborg**	**7.66**	**291**	*i* P	Pn	21 26 20.2	-8.1
DBG				*i* S	Sn	21 27 39.2	-16
VADS	**Vadso**	**7.68**	**102**	Pn	**Pn**	**21 26 30.3**	**+1.7**
VADS				Sn	**Sn**	**21 27 52.0**	**-3.3**
VADS	**Vadso**	**7.68**	**102**	P	**Pn**	**21 26 30.4**	**+1.9**
VADS				S	**Sn**	**21 27 50.2**	**-5.1**
VADS	**Vadso**	**7.68**	**102**	*e*P	**Pn**	**21 26 30.2**	**+1.7**
VADS				Sn	**Sn**	**21 27 52.0**	**-3.3**
PAJU	**Pajala**	**8.24**	**130**	P	**Pn**	**21 26 37.7**	**+1.4**
ERTU	**Ertsjaerv**	**8.44**	**134**	P	**Pn**	**21 26 40.0**	**+1.0**
HARU	**Harads**	**8.54**	**138**	P	**Pn**	**21 26 41.0**	**+0.8**
SJUU	**Sjulsmark**	**9.24**	**139**	P	**Pn**	**21 26 50.5**	**+0.7**
TERR	**Teriberka**	**9.86**	**100**	P	**Pn**	**21 26 58.1**	**-0.2**
TERR				S	**Sn**	**21 28 42.0**	**-6.7**
APA0	**Apatity Array**	**10.30**	**110**	P	**Pn**	**21 27 04.9**	**+0.5**
APA0				S	**Sn**	**21 28 52.6**	**-6.9**
KVDA	**Kovda**	**10.93**	**113**	P	**Pn**	**21 27 12.8**	**-0.1**
KVDA				S	**Sn**	**21 29 11.3**	**-3.6**
NB2	**NORSAR Subarra**	**12.29**	**170**	P	**Pn**	**21 27 31.7**	**+0.1**
NB2	baz=350,slow=14 **NORSAR Subarra** baz=350,slow=14	**12.29**	**170**	P	**Pn**	**21 27 31.7**	**+0.1**
NOA	**NORSAR Array B** baz=348,slow=12,SNR=7.6	**12.29**	**170**	Pn	**Pn**	**21 27 30.5**	**-1.1**
NOA	comp=Z,89nm,19.9s,baz=350,slow=36 comp=Z,0.4nm,0.5s			LR	LR	21 32 00.5	
NRA0	**NORESS Array S** baz=352,slow=16	**12.61**	**170**	P	**Pn**	**21 27 35.3**	**-0.7**
NRA0	**NORESS Array S** baz=352,slow=16	**12.61**	**170**	P	**Pn**	**21 27 35.3**	**-0.7**
HFS	**Hagfors** baz=352,slow=12	**13.35**	**165**	P	**Pn**	**21 27 45.9**	**0.0**
HFS	**Hagfors** comp=Z,0.3nm,0.3s,baz=3.1,slow=13,SNR=10	**13.35**	**165**	Pn	**Pn**	**21 27 45.4**	**-0.6**
HFS	comp=Z,149nm,18.3s,baz=282,slow=37 comp=Z,0.7nm,0.3s			LR	LR	21 32 42.8	
HFS	**Hagfors** baz=352,slow=12	**13.35**	**165**	P	**Pn**	**21 27 45.9**	**0.0**
FIA0	**FINESS Array S** baz=334,slow=16	**13.78**	**139**	P	**Pn**	**21 27 51.6**	**-0.3**
FIA0	**FINESS Array S** baz=334,slow=16	**13.78**	**139**	P	**Pn**	**21 27 51.6**	**-0.3**
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=335,slow=8.4,SNR=10	**13.78**	**139**	Pn	**Pn**	**21 27 52.0**	**+0.1**
FINES	comp=Z,232nm,20.1s,baz=300,slow=35 comp=Z,1.9nm,0.6s			LR	LR	21 32 42.6	
SFJD	**Kangerlussuaq** comp=Z,144nm,19.4s,baz=78,slow=34	**19.76**	**281**	LR	LR	21 35 33.1	
OBN	**Obninsk** comp=Z,5.3nm,0.5s,baz=302,slow=5.8,SNR=6.6 comp=Z,5.3nm,0.5s	**21.80**	**130**	P	**P**	**21 29 29.9**	**+1.4**
KIRV	**Kirov** comp=Z,110nm,18.8s,baz=308,slow=37	**21.96**	**109**	LR	LR	21 38 10.5	
VRAC	**Vranov** comp=Z,126nm,19.1s,baz=318,slow=36	**24.32**	**165**	LR	LR	21 39 01.8	
NRIK	**Noril'sk** comp=Z,1.6nm,0.3s,baz=50,slow=0.4,SNR=2.1	**24.34**	**58**	P	**P**	**21 29 55.2**	**+1.1**
NRIK	comp=Z,42nm,20.3s,baz=348,slow=39 comp=Z,1.6nm,0.3s			LR	LR	21 40 30.7	
AKASG	**Malin Array Be** comp=Z,1.1nm,0.6s,baz=346,slow=9.5,SNR=6.3	**24.53**	**144**	P	**P**	**21 29 55.8**	**-0.2**
AKASG	comp=Z,185nm,19.6s,baz=320,slow=35 comp=Z,1.1nm,0.6s			LR	LR	21 38 56.9	
GERES	**GERESS Array B** comp=Z,1.3nm,0.9s,baz=348,slow=10,SNR=8.2	**24.59**	**169**	P	**P**	**21 29 56.4**	**-0.3**
GERES	comp=Z,177nm,18.8s,baz=315,slow=35 comp=Z,1.3nm,0.9s			LR	LR	21 38 56.2	
RES	**Resolute Bay** comp=Z,87nm,18.9s,baz=14,slow=35	**25.00**	**322**	LR	LR	21 39 16.0	
DAVOX	**Davos/Dischmat** comp=Z,95nm,18.2s,baz=282,slow=35	**26.50**	**175**	LR	LR	21 40 07.3	
FRB	**Frobisher Bay** comp=Z,104nm,18.0s,baz=105,slow=35	**27.21**	**290**	LR	LR	21 40 19.4	
TIXI	**Tiksi** comp=Z,19nm,18.4s,baz=192,slow=39	**30.85**	**32**	LR	LR	21 44 45.8	
AKTO	**Aktyubinsk** comp=Z,135nm,18.9s,baz=328,slow=38	**31.52**	**108**	LR	LR	21 44 36.2	
BVAR	**Borovoye Array** comp=Z,1.1nm,0.7s,baz=316,slow=8.3,SNR=6.2 comp=Z,1.1nm,0.7s	**32.76**	**93**	P	**P**	**21 31 11.0**	**+1.7**
KBZ	**Khabaz** comp=Z,2.0nm,0.8s,baz=331,slow=2.0,SNR=3.9	**33.91**	**130**	P	**P**	**21 31 22.1**	**+2.7**
KBZ	comp=Z,87nm,21.5s,baz=345,slow=36 comp=Z,2.0nm,0.8s			LR	LR	21 45 17.6	
BRTR	**Keskin Array B** comp=Z,0.5nm,0.9s,baz=7.6,slow=3.7,SNR=3.8	**35.94**	**144**	P	**P**	**21 31 38.1**	**+1.1**
BRTR	comp=Z,71nm,18.6s,baz=331,slow=38 comp=Z,0.5nm,0.9s			LR	LR	21 47 20.2	
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.2s,baz=347,slow=6.1,SNR=3.9	**36.13**	**79**	P	**P**	**21 31 41.0**	**+2.6**
ZALV	comp=Z,55nm,19.0s,baz=324,slow=41 comp=Z,0.4nm,0.2s			L

PDAR	**Pinedale Array**	**56.53**	**308**	P	**P**	**21 34 19.4**	**+0.5**	
	comp=Z,0.5nm,0.9s,baz=328,slow=6.7,SNR=1.2							
PDAR				LR	LR	21 58 17.5		
	comp=Z,34nm,19.9s,baz=32,slow=36							
	comp=Z,0.5nm,0.9s							
ASAJ	**Asahikawa**	**59.11**	**36**	LR	LR	22 03 11.1		
	comp=Z,27nm,18.1s,baz=151,slow=39							
ELK	**Elko**	**59.73**	**312**	LR	LR	22 01 01.7		
	comp=Z,47nm,18.1s,baz=79,slow=37							
TORD	**Torodi Ar. Bea**	**60.07**	**186**	P	**P**	**21 34 44.5**	**+0.9**	
	comp=Z,0.9nm,0.8s,baz=12,slow=9.5,SNR=7.1							
	comp=Z,0.9nm,0.8s							
YBH	**Yreka Blue Hor**	**60.31**	**318**	LR	LR	22 01 30.4		
	comp=Z,6.6nm,18.0s,baz=26,slow=37							
NVAR	**Mina Array Bea**	**62.60**	**314**	LR	LR	22 04 05.8		
	comp=Z,53nm,18.3s,baz=34,slow=38							
ANMO	**Albuquerque**	**63.23**	**302**	LR	LR	22 02 31.0		
	comp=Z,66nm,18.8s,baz=124,slow=36							
TXAR	**Lajitas Array**	**67.87**	**298**	P	**P**	**21 35 33.7**	**-1.2**	
	comp=Z,0.3nm,0.9s,baz=331,slow=7.2,SNR=2.2							
TXAR				LR	LR	22 06 58.6		
	comp=Z,51nm,18.0s,baz=30,slow=38							
	comp=Z,0.3nm,0.9s							
CMAR	**Chiang Mai Arr**	**73.07**	**83**	P	**P**	**21 36 07.1**	**+0.4**	
	comp=Z,0.2nm,0.3s,baz=313,slow=3.2,SNR=4.6							
	comp=Z,0.2nm,0.3s							
ASAR	**Alice Springs**	**122.86**	**61**	PKP	**PKPdf**	**21 43 32.0**	**-0.3**	
	comp=Z,0.6nm,0.5s,baz=354,slow=1.8,SNR=13							
SNAA	**Sanae**	**144.74**	**185**	PKP	PKPbc	21 44 10.7	+0.1	
	comp=Z,1.1nm,0.7s,baz=326,slow=3.6,SNR=5.2							
QSPA	**South Pole Qui**	**163.11**	**180**	PKP	**PKPdf**	**21 44 39.0**	**+1.7**	
	comp=Z,0.6nm,1.0s,baz=138,slow=1.5,SNR=3.4							

*MDD **09** 21:30:31.0±0.6,36.°00N×4.°54W,h76km±7km,Mb2.3/15, Error ellipse: s-maj=4.5km s-min=4.0km az=151.0*
*CNRM **09** 21:30:31.4,35.°77N×4.°79W,h93km*
*SFS **09** 21:30:31.4,36.°02N×4.°58W,h71km,ML2.8/9,ML2.2/15, MLv1.9/15*
*INMG **09** 21:30:32.6±1.4,36.°12N×4.°66W,h75km±4km,ML1.9,Error ellipse: s-maj=4.8km s-min=4.0km az=141.0, #DIST_RANGE: #REGIONAL #IPMA_REGION: Alboran*

ISC 09 21:30:28.8±1.2,35.°99N±0.°03×4.°57W±0.°03,h94km±7km, n58,σ1s62/87,12C,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EMIJ	**Mijas**	**0.59**	**344**	Pn		**Pn**	**21 30 45.0**	**+0.3**
EMIJ	**Mijas**	**0.59**	**344**	P		**Pn**	**21 30 44.8**	**+0.1**
EMIJ				⇑*i*	IVmb_VC		21 30 46.3	
	297nm,SNR=3.1							
EMIJ				S		**Sn**	**21 30 54.7**	**-1.9**
ECEU	**Ceuta**	**0.66**	**262**	P		**Pn**	**21 30 46.8**	**+1.6**
ECEU				⇑*i*	IVmb_VC		21 30 48.3	
	559nm,SNR=2.1							
ECEU				S		**Sn**	**21 30 56.9**	**-0.7**
SMIR	**Smir Dam**	**0.72**	**245**	P		**Pn**	**21 30 46.6**	**+0.8**
SMIR	**Smir Dam**	**0.72**	**245**	S		**Sn**	**21 30 58.5**	**-0.1**
EMAL	**Malaga-Limoner**	**0.78**	**9**	Pn		**Pn**	**21 30 47.0**	**+0.6**
EMAL				Sn		**Sn**	**21 30 57.8**	**-1.7**
EJIF	**Jimena Fronter**	**0.86**	**303**	P		**Pn**	**21 30 49.9**	**+2.8**
EJIF				S		**Sn**	**21 30 59.9**	**-1.1**
ELGU	**Los Guajares,**	**1.16**	**41**	Pn		**Pn**	**21 30 50.9**	**+0.2**
ELGU				Sn		**Sn**	**21 31 05.4**	**-1.8**
ELGU	**Los Guajares,**	**1.16**	**41**	P		**Pn**	**21 30 50.0**	**-0.6**
ELGU				⇑*i*	IVmb_VC		21 30 52.7	
	240nm,SNR=1.1							
ELGU				S		**Sn**	**21 31 04.7**	**-2.4**
EGOR	**Sierra Gorda,**	**1.18**	**18**	P		**Pn**	**21 30 51.3**	**+0.3**
EGOR				⇑*i*	IVmb_VC		21 30 52.6	
	68nm,SNR=0.5							
EGOR				S		**Sn**	**21 31 06.9**	**-0.7**
E1302	**La Puebla de C**	**1.26**	**335**	P		**Pn**	**21 30 54.4**	**+2.6**
E1302				S		**Sn**	**21 31 09.7**	**+0.6**
ESPR	**Espera**	**1.35**	**311**	Sn		**Sn**	**21 31 09.9**	**-1.2**
ESPR	**Espera**	**1.35**	**311**	P		**Pn**	**21 30 54.9**	**+2.1**
ESPR				⇑*i*	IVmb_VC		21 30 58.1	
	98nm,SNR=0.8							
ESPR				S		**Sn**	**21 31 12.2**	**+1.1**
GOG	**Mont Gurugu**	**1.50**	**120**	P		**Pn**	**21 30 58.4**	**+3.6**
GOG	**Mont Gurugu**	**1.50**	**120**	S		**Sn**	**21 31 18.0**	**+3.5**
RSA	**Sarsar**	**1.50**	**223**	P		**Pn**	**21 30 54.1**	**-0.7**
RSA	**Sarsar**	**1.50**	**223**	S		**Sn**	**21 31 12.1**	**-2.4**
AKLM	**AKL**	**1.59**	**158**	P		**Pn**	**21 30 56.0**	**+0.1**
AKLM	**AKL**	**1.59**	**158**	S		**Sn**	**21 31 14.6**	**-1.9**
EADA	**Adamuz**	**2.17**	**360**	Sn		**Sn**	**21 31 27.9**	**-1.9**
EADA				Pn		**Pn**	**21 31 05.1**	**+1.7**
EADA	**Adamuz**	**2.17**	**360**	P		**Pn**	**21 31 05.0**	**+1.7**
EADA				⇑*i*	IVmb_VC		21 31 08.5	
	106nm,SNR=1.1							
EADA				S		**Sn**	**21 31 29.0**	**-0.8**
EQES	**Quesada**	**2.17**	**33**	P		**Pn**	**21 31 03.9**	**+0.4**
EQES				⇑*i*	IVmb_VC		21 31 08.0	
	35nm,SNR=0.2							
EQES				S		**Sn**	**21 31 30.1**	**+0.2**
ECAB	**El Cabril**	**2.19**	**342**	Pn		**Pn**	**21 31 04.7**	**+1.1**
ECAB				Sn		**Sn**	**21 31 28.4**	**-1.8**
ECAB	**El Cabril**	**2.19**	**342**	P		**Pn**	**21 31 04.8**	**+1.3**
ECAB				⇑*i*	IVmb_VC		21 31 05.6	
	72nm,SNR=0.6							
ECAB				S		**Sn**	**21 31 28.6**	**-1.5**
EMIN	**Mina Concepcio**	**2.44**	**317**	Pn		**Pn**	**21 31 08.2**	**+1.3**
EMIN				Sn		**Sn**	**21 31 34.3**	**-1.8**
EMIN	**Mina Concepcio**	**2.44**	**317**	P		**Pn**	**21 31 08.0**	**+1.1**
EMIN				⇑*i*	IVmb_VC		21 31 08.6	
	184nm,SNR=2.1							
EMIN				S		**Sn**	**21 31 34.7**	**-1.5**
IFR	**Ifrane**	**2.51**	**191**	Sn		**Sn**	**21 31 37.4**	**-0.7**
EGRO	**El Granado**	**2.80**	**304**	Pn		**Pn**	**21 31 13.2**	**+1.6**
EGRO				Sn		**Sn**	**21 31 43.8**	**-0.8**
EGRO	**El Granado**	**2.80**	**304**	P		**Pn**	**21 31 13.1**	**+1.5**
EGRO				⇑*i*	IVmb_VC		21 31 14.3	
	119nm,SNR=1.2							
EGRO				S		**Sn**	**21 31 43.1**	**-1.5**
PVAQ	**Vaqueiros**	**2.89**	**300**	*e*P		**Pn**	**21 31 14.8**	**+1.9**
PVAQ				*e*S		**Sn**	**21 31 45.6**	**-1.3**
PVAQ				*i*	IAML		21 31 47.3	
PVAQ				*i*	IAML		21 31 47.8	
PVAQ				*i*	IAML		21 31 53.2	
PSIM	**Granatula de C**	**2.90**	**13**	P		**Pn**	**21 31 14.5**	**+1.4**
PSIM				S		**Sn**	**21 31 45.3**	**-1.8**
PBAR	**Barrancos**	**2.94**	**319**	Pn		**Pn**	**21 31 15.0**	**+1.6**
PBAR				Sn		**Sn**	**21 31 46.1**	**-1.8**
PBAR	**Barrancos**	**2.94**	**319**	*e*P		**Pn**	**21 31 15.1**	**+1.6**
PBAR				*e*S		**Sn**	**21 31 46.3**	**-1.7**
PBAR				*i*	IAML		21 31 48.2	
PBAR				*i*	IAML		21 31 48.4	
PBAR				*i*	IAML		21 31 48.9	
PBDV	**Barranco-do-Ve**	**2.98**	**296**	Sn		**Sn**	**21 31 47.8**	**-1.1**
PBDV	**Barranco-do-Ve**	**2.98**	**296**	*e*S		**Sn**	**21 31 48.0**	**-0.9**
PBDV				*i*	IAML		21 31 52.2	
PBDV				*i*	IAML		21 31 55.6	
PBDV				*i*	IAML		21 31 59.7	
ZHG	**ZHG**	**3.06**	**214**	P		**Pn**	**21 31 16.2**	**+1.0**
ZHG	**ZHG**	**3.06**	**214**	S		**Sn**	**21 31 49.9**	**-1.1**
MD31	**MD31**	**3.12**	**183**	P		**Pn**	**21 31 16.3**	**+0.2**
MD31	**MD31**	**3.12**	**183**	S		**Sn**	**21 31 50.5**	**-2.1**
MDT	**Midelt**	**3.17**	**181**	P		**Pn**	**21 31 17.0**	**+0.3**
MDT	**Midelt**	**3.17**	**181**	S		**Sn**	**21 31 52.1**	**-1.7**
PCVE	**Castro Verde**	**3.23**	**301**	Pn		**Pn**	**21 31 18.9**	**+1.5**
PCVE	**Castro Verde**	**3.23**	**301**	*e*S		**Sn**	**21 31 54.1**	**-0.8**
EBAD	**Badajoz**	**3.37**	**326**	Pn		**Pn**	**21 31 20.7**	**+1.4**
EBAD				Sn		**Sn**	**21 31 57.1**	**-1.4**
EBAD	**Badajoz**	**3.37**	**326**	P		**Pn**	**21 31 21.2**	**+1.9**
EBAD				⇑*i*	IVmb_VC		21 31 21.6	
	69nm,SNR=0.7							
EBAD				S		**Sn**	**21 31 57.2**	**-1.2**
MESJ	**Messejana**	**3.46**	**303**	*e*P		**Pn**	**21 31 22.1**	**+1.6**
MESJ				*e*S		**Sn**	**21 31 58.9**	**-1.5**
MESJ				*i*	IAML		21 32 00.2	
MESJ				*i*	IAML		21 32 00.5	
MESJ				*i*	IAML		21 32 09.9	
PAB	**San Pablo**	**3.55**	**3**	⇑*i*	IVmb_VC		21 31 23.0	
	49nm,SNR=0.5							
PAB				P		**Pn**	**21 31 23.1**	**+1.3**
PAB				S		**Sn**	**21 32 00.5**	**-2.4**
PTEO	**Sao Teotonio**	**3.67**	**296**	*e*S		**Sn**	**21 32 05.2**	**-0.5**
PTEO				*i*	IAML		21 32 14.6	
PTEO				*i*	IAML		21 32 20.8	
PTEO				*i*	IAML		21 32 21.8	
EVO	**Evora**	**3.73**	**314**	Sn		**Sn**	**21 32 05.4**	**-1.8**
EVO	**Evora**	**3.73**	**314**	*e*P		**Pn**	**21 31 26.4**	**+2.1**
EVO				*e*S		**Sn**	**21 32 05.7**	**-1.5**
EVO				*i*	IAML		21 32 06.2	
EVO				*i*	IAML		21 32 06.2	
EVO				*i*	IAML		21 32 07.6	
PESTR	**Estremoz**	**3.74**	**321**	Pn		**Pn**	**21 31 26.2**	**+1.8**
PESTR	**Estremoz**	**3.74**	**321**	*e*P		**Pn**	**21 31 26.5**	**+2.2**
PESTR				*e*S		**Sn**	**21 32 05.7**	**-1.7**
MOE	**Montemor**	**3.93**	**311**	*e*S		**Sn**	**21 32 11.5**	**-0.5**
PARRA	**Arraiolos**	**3.94**	**317**	*e*P		Pn	21 31 28.9	-6.1
PARRA				*e*S		Sn	21 32 10.5	-16
PARRA				*i*	IAML		21 32 11.7	
PARRA				*i*	IAML		21 32 11.9	
PARRA				*i*	IAML		21 32 12.1	
PMRV	**Marv??o**	**4.09**	**328**	*e*P		**Pn**	**21 31 31.0**	**+1.9**
PMRV				*e*S		**Sn**	**21 32 14.0**	**-1.9**
PMRV				*i*	IAML		21 32 26.3	
PMRV				*i*	IAML		21 32 27.5	
PMRV				*i*	IAML		21 32 40.5	
PMTG	**Montargil**	**4.22**	**318**	*e*S		**Sn**	**21 32 16.7**	**-2.4**
PMTG				*i*	IAML		21 32 22.8	
PMTG				*i*	IAML		21 32 30.5	
PMTG				*i*	IAML		21 32 30.8	
PCBR	**Castelo Branco**	**4.47**	**330**	*e*S		**Sn**	**21 32 22.9**	**-2.2**
PSARD	**Sardoal**	**4.59**	**323**	*e*P		**Pn**	**21 31 37.6**	**+1.8**
PSARD				*e*S		**Sn**	**21 32 25.5**	**-2.4**
PSARD				*i*	IAML		21 32 27.7	
PSARD				*i*	IAML		21 32 31.5	
PSARD				*i*	IAML		21 32 39.3	

*IDC **09** 21:31:22.9±1.7,27.°97N×142.°26E,h0km,mb3.9/12, mbtmp3.9/14,ML3.2/2, Error ellipse: s-maj=58.3km s-min=12.3km az=80.0*
*NEIC **09** 21:31:24.3±1.3,28.°29N±0.°05×142.°7E±0.°1,h10km±1km, mb4.4/11, Error ellipse: s-maj=21.8km s-min=7.5km az=96.0*

ISC 09 21:31:23.4±0.9,28.°20N±0.°06×142.°7E±0.°2,h10km,n37, σ1s20/37,mb4.2/16,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	**Chichijima**	**1.19**	**203**			**Pb**	**21 31 48.0**	**+2.0**
JCJ						**Sn**	**21 32 04.0**	**+1.8**
JCJ	**Chichijima**	**1.19**	**203**	Pn		Pb	21 31 40.6	-5.4
	17nm,0.3s,baz=270,slow=22,SNR=8.7							
JCJ						**Sn**	**21 31 57.7**	**-3.7**
	94nm,0.3s,baz=235,slow=23,SNR=7.5							
JGF	**Kuroka**	**8.66**	**330**	Pn		**Pn**	**21 33 29.0**	**+0.1**
MJAR	**Matsushiro Arr**	**9.14**	**337**			**Pn**	**21 33 34.1**	**-1.4**
MJAR	**Matsushiro Arr**	**9.14**	**337**	Pn		**Pn**	**21 33 35.1**	**-0.3**
	0.2nm,0.3s,baz=162,slow=12,SNR=15							
	1.3nm,0.3s							
MAJO	**Matsushiro**	**9.14**	**337**	Pn		**Pn**	**21 33 35.3**	**-0.1**
JMM	**Marumori**	**9.77**	**351**	Pn		Pn	21 33 41.1	-2.9
KSRS	**Korea Array**	**15.46**	**310**	Pn		**Pn**	**21 35 02.5**	**+1.0**
	0.1nm,0.3s,baz=125,slow=11,SNR=4.9							
	0.6nm,0.5s							
YHNB	**Yeheng**	**19.41**	**264**	P		**P**	**21 35 50.1**	**+0.2**
YHNB					IAmb	IAmb	21 36 18.8	
	comp=Z,54nm,1.3s							
SSLB	**Suanglung**	**20.02**	**262**	P		**P**	**21 35 58.6**	**+2.0**
SSLB					IAmb	IAmb	21 36 25.5	
	comp=Z,56nm,1.5s							
SONM	**Songino Array**	**34.25**	**315**	P		**P**	**21 38 09.3**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=102,slow=7.3,SNR=3.5							
	comp=Z,0.6nm,1.0s							
CMAR	**Chiang Mai Arr**	**41.14**	**266**	P		**P**	**21 39 05.2**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=76,slow=8.3,SNR=4.7							
	comp=Z,0.3nm,0.3s							
WRA	**Warramunga Arr**	**48.53**	**191**	P		**P**	**21 40 07.0**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=13,slow=8.6,SNR=8.3							
	comp=Z,1.7nm,0.5s							
FITZ	**Fitzroy Crossi**	**48.89**	**202**	P		**P**	**21 40 10.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**48.89**	**202**	P		**P**	**21 40 07.4**	**-2.2**
	comp=Z,1.7nm,0.9s,baz=22,slow=11,SNR=2.0							
	comp=Z,1.7nm,0.8s							
ZALV	**Zalesovo Beam**	**48.96**	**318**	P		**P**	**21 40 09.6**	**-0.3**
ZALV	**Zalesovo Beam**	**48.96**	**318**	P		**P**	**21 40 09.9**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=98,slow=6.1,SNR=4.1							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	**50.13**	**309**	P		**P**	**21 40 18.4**	**-0.5**
MKAR	**Makanchi Array**	**50.13**	**309**	P		**P**	**21 40 18.8**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=93,slow=9.7,SNR=5.5							
	comp=Z,0.7nm,0.8s							
MAKZ	**Makanchi**	**50.35**	**309**	P		**P**	**21 40 19.8**	**-0.8**
MAKZ					IAmb	IAmb	21 40 58.7	
	comp=Z,3.5nm,1.1s							
GSI	**Gunungsitoli**	**50.71**	**246**	P		**P**	**21 40 23.7**	**+0.1**
ASAR	**Alice Springs**	**52.25**	**190**	P		**P**	**21 40 34.5**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=7.0,slow=6.8,SNR=5.5							
	comp=Z,0.2nm,0.4s							
KURK	**Kurchatov**	**52.54**	**314**	P		**P**	**21 40 37.1**	**+0.2**
KURK					IAmb	IAmb	21 40 38.5	
	comp=Z,9.4nm,1.2s							
KURBB	**Kurchatov Arra**	**52.60**	**314**	P		**P**	**21 40 37.8**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=90,slow=7.2,SNR=31							
	comp=Z,3.0nm,0.8s							
BVAR	**Borovoye Array**	**57.55**	**317**	P		**P**	**21 41 13.6**	**+0.6**
	comp=Z,3.0nm,0.5s,baz=91,slow=7.4,SNR=27							
	comp=Z,3.0nm,0.5s							
BMAR	**Burnt Mountain**	**57.67**	**26**	P		**P**	**21 41 14.2**	**+0.5**
F26K	**Sheenjek River**	**57.86**	**26**	P		**P**	**21 41 14.1**	**-0.9**
F26K					IAmb	IAmb	21 41 28.5	
	comp=Z,2.9nm,1.5s							
BCAR	**Beaver Creek A**	**58.74**	**31**	P		**P**	**21 41 21.1**	**-0.1**
AB31	**Akbulak array**	**64.66**	**314**			**P**	**21 42 02.0**	**+0.7**
AB31					IAmb	IAmb	21 42 13.3	
	comp=Z,2.2nm,0.8s							
ABKAR	**Akbulak array**	**64.66**	**314**	P		**P**	**21 42 02.0**	**+0.7**
FINES	**FINESS Array B**	**77.16**	**334**	P		**P**	**21 43 16.7**	**-0.4**
FINES	**FINESS Array B**	**77.16**	**334**	P		**P**	**21 43 18.0**	**+0.9**
	comp=Z,3.2nm,1.0s,baz=63,slow=5.7,SNR=5.7							
	comp=Z,3.2nm,1.0s							
KBZ	**Khabaz**	**77.59**	**313**	P		**P**	**21 43 20.1**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=78,slow=3.0,SNR=7.6							
	comp=Z,2.4nm,0.8s							
RAYN	**Ar Rayn**	**85.12**	**294**			**P**	**21 44 01.2**	**+1.0**
BR131	**Keskin Array S**	**85.59**	**313**	P		**P**	**21 44 02.0**	**-0.4**
BR131					IAmb	IAmb	21 44 06.6	
	comp=Z,1.5nm,0.8s							
BRTR	**Keskin Array B**	**85.59**	**313**	P		**P**	**21 44 02.1**	**-0.4**
BRTR	**Keskin Array B**	**85.59**	**313**	P		**P**	**21 44 03.2**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=95,slow=4.7,SNR=6.6							
	comp=Z,0.9nm,0.8s							

*IDC **09** 21:40:34.2±2.1,2.°07N×127.°74E,h0km,mb3.6/4, mbtmp3.6/4,MS3.5/1, Error ellipse: s-maj=175.7km s-min=22.3km az=68.0*
*DJA **09** 21:40:49.0±0.6,2.°N±2.°×12.°7E±.°,h87km±9km,M3.6/9, mb3.8/1,MLv3.6/9*

ISC 09 21:40:47.2±1.2,1.°90N±0.°07×127.°4E±0.°1,h112km,n10, σ1s21/12,mb3.5/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.12**	**184**	P		**Pn**	**21 41 10.0**	**+0.2**
TNTI				S		**Sn**	**21 41 24.4**	**-2.5**
SGSI	**Sangihe**	**2.61**	**313**	P		**Pn**	**21 41 27.8**	**-0.3**
SGSI				S		**Sn**	**21 41 58.6**	**-1.0**
KMSI	**Cibinong**	**3.70**	**249**	P		**Pn**	**21 41 43.1**	**+0.6**
KMSI				S		**Sn**	**21 42 25.0**	**-0.4**
SANI	**Sanana**	**4.18**	**200**	P		**Pn**	**21 41 49.0**	**0.0**
NLAI	**Namlea**	**5.11**	**184**	P		**Pn**	**21 42 03.0**	**+1.5**
WRA	**Warramunga Arr**	**22.73**	**163**	P		**P**	**21 45 38.7**	**-1.2**
	1.6nm,0.3s,baz=344,slow=11,SNR=9.4							
	1.6nm,0.3s							
ASAR	**Alice Springs**	**26.18**	**166**	P		**P**	**21 46 11.6**	**+0.2**
	0.6nm,0.4s,baz=345,slow=7.5,SNR=16							
	0.6nm,0.4s							
PSI	**Prapat**	**28.50**	**272**	LR		LR	22 00 21.2	
	comp=Z,86nm,19.9s,baz=222,slow=41							
MKAR	**Makanchi Array**	**59.46**	**326**	P		**P**	**21 50 39.6**	**+1.3**
	0.2nm,0.5s,baz=116,slow=8.2,SNR=4.0							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**63.66**	**328**	P		**P**	**21 51 06.9**	**+0.5**
	0.3nm,0.5s,baz=132,slow=7.6,SNR=2.3							
	0.3nm,0.5s							

*TAP **09** 22:16:26.6,24.°70N×122.°58E,h24km,ML3.0,C*
*JMA **09** 22:16:27.2±0.1,25.°N±1.°×122.°6E±0.°5,h20km±2km, MV2.4/9,NW OFF ISHIGAKIJIMA IS*

ISC 09 22:16:26.9±1.0,24.°68N±0.°03×122.°58E±0.°02,h22km±12km, n87,σ0s75/147,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JYNG	**Yonagunijimaku**	**0.41**	**124**	P		**Pb**	**22 16 35.3**	**-0.1**
JYNG				S		**Sb**	**22 16 41.2**	**-0.1**
EOS2	**EOS2**	**0.41**	**230**	*e*P		**Pb**	**22 16 36.1**	**+0.7**
YOJ	**Yonaguni jima**	**0.45**	**119**	P		**Pb**	**22 16 36.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.45**	**119**	S		**Sb**	**22 16 42.8**	**+0.3**
YOJ	**Yonaguni jima**	**0.45**	**119**	P		**Pb**	**22 16 36.3**	**0.0**
YOJ				S		**Sb**	**22 16 42.5**	**0.0**
YOJ	**Yonaguni jima**	**0.45**	**119**	*i* P		**Pb**	**22 16 36.2**	**0.0**
YOJ				*i* S		**Sb**	**22 16 42.6**	**0.0**
TWB1	**Santiao Chiao**	**0.63**	**302**	P		**Pb**	**22 16 38.8**	**-0.4**
TWB1				S		**Sb**	**22 16 46.3**	**-1.3**
TWC	**Suao**	**0.67**	**264**	*e*P		**Pb**	**22 16 39.0**	**-0.9**
TWC				*e*S		**Sb**	**22 16 48.8**	**+0.1**
ESAO	**Su ao**	**0.68**	**261**	*e*P		**Pb**	**22 16 40.6**	**-0.5**
ESAO				*e*S		**Sb**	**22 16 48.6**	**-0.4**
TIPB	**Shuangxi**	**0.74**	**293**	*i* P		**Pb**	**22 16 41.0**	**-0.1**
TIPB				S		**Sb**	**22 16 50.7**	**-0.2**
ILA	**Ilan**	**0.76**	**277**	*i* S		**Sn**	**22 16 52.1**	**-0.9**
SXI1	**Grass Mountain**	**0.76**	**303**	*i* P		**Pb**	**22 16 41.3**	**-0.2**
SXI1				S		**Sb**	**22 16 51.8**	**+0.3**
EWUT	**Wuta**	**0.76**	**252**	*e*P		**Pb**	**22 16 41.3**	**-0.3**
NDS	**Dongshan**	**0.78**	**267**	*e*P		**Pb**	**22 16 42.1**	**-0.6**
NDS				*e*S		**Sb**	**22 16 52.3**	**+0.2**
ENA	**Nanau**	**0.80**	**252**	*e*P		**Pb**	**22 16 42.0**	**-0.1**
ENA				*e*S		**Sb**	**22 16 51.0**	**-1.6**
NWF	**Wu-fen Shan**	**0.82**	**298**	*e*P		**Pn**	**22 16 42.5**	**-0.7**
NWF				*e*S		**Sb**	**22 16 53.4**	**+0.2**
WFSB	**Wu-fen Shan**	**0.82**	**298**	P		**Pn**	**22 16 42.5**	**-0.7**
WFSB				S		**Sb**	**22 16 53.3**	**+0.1**
TWE	**Neicheng**	**0.83**	**273**	*e*P		**Pb**	**22 16 41.9**	**-0.7**
TWE				*e*S		**Sb**	**22 16 53.0**	**-0.4**
EAHA	**Aohua**	**0.84**	**246**	P		**Pb**	**22 16 42.2**	**-0.4**
EAHA				*e*S		**Sb**	**22 16 53.1**	**-0.5**
TNOU	**National Taiwa**	**0.87**	**303**	P		**Pb**	**22 16 42.8**	**-0.5**
TNOU				S		**Sb**	**22 16 53.9**	**-0.5**
FUSB	**Fushanzhiwuyua**	**0.90**	**275**	*e*P		**Pn**	**22 16 44.0**	**-0.4**
FUSB				*e*S		**Sb**	**22 16 55.0**	**-0.6**
ENTT	**Nioudou**	**0.92**	**268**	*e*P		**Pn**	**22 16 44.3**	**-0.3**
ENTT				*e*S		**Sb**	**22 16 56.2**	**+0.2**
TWA	**Mucha**	**0.95**	**289**	*e*P		**Pn**	**22 16 44.7**	**-0.3**
TWA				*e*S		**Sb**	**22 16 56.5**	**-0.4**
LATG	**Datong**	**0.97**	**262**	*e*P		**Pn**	**22 16 45.0**	**-0.2**
LATG				*e*S		**Sn**	**22 16 57.8**	**-0.6**
NWLT	**Wulai**	**0.98**	**276**	*e*P		**Pb**	**22 16 45.6**	**+0.4**
NWLT				*e*S		**Sb**	**22 16 57.5**	**-0.3**
NHDH	**Xindian Distri**	**1.00**	**287**	*e*P		**Pb**	**22 16 45.4**	**0.0**
NHDH				*e*S		**Sb**	**22 16 58.0**	**-0.2**
ETL	**Fush Village**	**1.01**	**239**	*e*P		**Pb**	**22 16 45.7**	**-0.1**
ETL				*e*S		**Sb**	**22 16 58.4**	**-0.3**
YM01	**YM01**	**1.02**	**297**	*e*P		**Pn**	**22 16 45.5**	**-0.5**
YM01				*e*S		**Sb**	**22 16 58.6**	**-0.5**
NACB	**Ninganchiao**	**1.03**	**241**	P		**Pn**	**22 16 45.8**	**-0.2**
NACB	**Ninganchiao**	**1.03**	**241**	S		**Sb**	**22 16 58.6**	**-0.5**
NACB	**Ninganchiao**	**1.03**	**241**	P		**Pn**	**22 16 45.7**	**-0.3**
NACB				S		**Sb**	**22 16 58.4**	**-0.6**
YM08	**YM08**	**1.03**	**300**	*e*P		**Pn**	**22 16 45.6**	**-0.4**
YM08				*e*S		**Sb**	**22 16 58.1**	**-1.0**
TATO	**Taipei**	**1.03**	**287**	P		**Pb**	**22 16 48.5**	**+2.4**
TATO	**Taipei**	**1.03**	**287**	S		**Sb**	**22 16 58.8**	**-0.4

ISC 09 22:19:43.3±1.0, 18°17S±0'06×120°17E±0'06, h10km, n21, σ1°42/29, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAAN	**Eighty Mile Be**	**1.67**	**131**	**P**	**Pb**	**22 20 14.5**	**+0.3**
CAAN				S	Sg	22 20 36.9	-0.2
AUBRM	**Broome Senior**	**1.97**	**84**	**P**	**Pn**	**22 20 18.0**	**+1.3**
AUBRM				S	Sn	22 20 42.4	+0.9
MBWA	**Marble Bar**	**3.00**	**188**	**P**	**Pn**	**22 20 33.1**	**+2.0**
MBWA				S	Sn	22 21 07.4	+0.3
MBWA	**Marble Bar**	**3.00**	**188**	**P**	**Pn**	**22 20 33.0**	**+2.0**
PSAC1	**Pilbara Seismi**	**3.37**	**186**	**P**	**Pn**	**22 20 37.5**	**+1.5**
PSAC1				S	Sn	22 21 16.0	0.0
PSAC2	**Pilbara Seismi**	**3.39**	**184**	**P**	**Pn**	**22 20 38.3**	**+2.0**
PSAC2				S	Sn	22 21 16.7	+0.2
PSA00	**Pilbara Seismi**	**3.40**	**185**	**P**	**Pn**	**22 20 38.3**	**+1.8**
PSA00				S	Sn	22 21 16.0	-0.9
PSA00	**Pilbara Seismi**	**3.40**	**185**	**P**	**Pn**	**22 20 38.2**	**+1.8**
PSAB3	**Pilbara Seismi**	**3.42**	**185**	**P**	**Pn**	**22 20 38.3**	**+1.6**
PSAB3				S	Sn	22 21 17.9	+0.6
FITZ	**Fitzroy Crossi**	**5.20**	**90**	**P**	**Pn**	**22 21 00.0**	**-1.2**
GIRL	**Giralia**	**7.13**	**230**	**P**	**Pn**	**22 21 30.4**	**+2.7**
GIRL				S	Sn	22 22 46.3	-2.5
MEEK	**Meekatharra** comp=Z,0.1nmcomp=Z,12nm,1.3s	**8.55**	**189**	**P**	**Pn**	**22 21 48.2**	**+0.9**
MEEK	**Meekatharra**	**8.55**	**189**	**P**	**Pn**	**22 21 48.2**	**+0.9**
KNRA	**Kununurra** comp=Z,0.0nmcomp=Z,9.5nm,2.0s	**8.59**	**75**	**P**	**Pn**	**22 21 46.4**	**-1.3**
TWSI	**Taliwang, Sumb**	**9.90**	**341**	**P**	**Pn**	**22 22 06.1**	**+0.3**
WRKA	**Warakurna** comp=Z,0.0nmcomp=Z,1.7nm,1.7s	**10.19**	**134**	**P**	**Pn**	**22 22 09.0**	**-0.7**
MORW	**Morawa** comp=Z,16nm,1.8s	**11.49**	**198**	**P**	**Pn**	**22 22 26.4**	**-1.1**
MORW	**Morawa**	**11.49**	**198**	**P**	**Pn**	**22 22 27.6**	**+0.1**
BLDU	**Ballidu**	**12.79**	**194**	**P**	**Pn**	**22 22 45.9**	**+0.7**
KMBL	**Kambalda**	**13.23**	**174**	**P**	**Pn**	**22 22 49.4**	**-2.0**
MUN	**Mundaring**	**14.21**	**194**	**P**	**Pn**	**22 23 04.6**	**-0.1**

*IDC **09** 22:20:22.7±1.8, 33°32N×25°84E, h0km, mb3.5/2, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=236.1km s-min=26.6km az=141.0*
*ISK **09** 22:20:23.1, 35°62N×23°63E, h3km, ML3.1/17*
*ATH **09** 22:20:23.8, 35°61N×23°56E, h14km±1km, ML3.0/7, Manual Solution by P.Lantzourakis First location: 2019/11/09 22:21:32, This location: 2021/06/18 19:20:01 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **09** 22:20:24.1, 36°N±1°×2°4E±°, h6km±3km, M3.0/13, MLh3.0/13*

ISC 09 22:20:23.6±1.0, 35°64N±0°02×23°62E±0°03, h9km±8km, n68, σ0°98/87, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.34**	**311**	**P**	**Pg**	**22 20 30.7**	**+0.2**
ANKY				S	Sg	22 20 34.8	-0.2
ANKY	**Antikythira Is**	**0.34**	**311**	**P**	**Pg**	**22 20 30.7**	**+0.2**
ANKY				S	Sg	22 20 35.6	+0.5
CH01	**Chania**	**0.35**	**110**	**P**	**Pb**	**22 20 31.4**	**-0.6**
CH01				S	Sb	22 20 37.1	-0.5
CHAN	**Chania**	**0.36**	**109**	**P**	**Pb**	**22 20 31.8**	**-0.5**
CHAN				S	Sb	22 20 37.1	-0.9
CHAN	**Chania**	**0.36**	**109**	**P**	**Pb**	**22 20 31.9**	**-0.4**
CHAN				S	Sb	22 20 37.2	-0.9
CHNB	**Souda**	**0.40**	**112**	**P**	**Pb**	**22 20 32.4**	**-0.4**
CHNB				S	Sb	22 20 38.6	-0.4
KNDR	**Palaiochora Ch**	**0.40**	**179**	**Pg**	**Pg**	**22 20 31.4**	**-0.2**
KNDR				Sg	Sg	22 20 37.5	+0.6
KNDR	**Palaiochora Ch**	**0.40**	**179**	**P**	**Pg**	**22 20 31.3**	**-0.2**
KNDR				S	Sg	22 20 37.1	+0.3
KNDR	**Palaiochora Ch**	**0.40**	**179**	**P**	**Pg**	**22 20 31.1**	**-0.4**
KNDR				S	Sg	22 20 36.8	-0.1
KTHA	**Kythira Island**	**0.76**	**324**	**Pg**	**Pg**	**22 20 38.7**	**+0.3**
KTHA	**Kythira Island**	**0.76**	**324**	**P**	**Pg**	**22 20 38.4**	**0.0**
KTHA	**Kythira Island**	**0.76**	**324**	**P**	**Pg**	**22 20 38.3**	**0.0**
KTHA				S	Sg	22 20 48.8	+0.4
GVD	**Gavdhos**	**0.89**	**154**	**Pg**	**Pg**	**22 20 40.6**	**-0.1**
GVD				Sg	Sb	22 20 53.3	+0.2
GVD	**Gavdhos**	**0.89**	**154**	**P**	**Pg**	**22 20 40.5**	**-0.2**
GVD	**Gavdhos**	**0.89**	**154**	**P**	**Pb**	**22 20 40.9**	**-0.2**
GVD				S	Sb	22 20 53.2	+0.2
IDI	**Anoyia**	**1.09**	**108**	**Pn**	**Pg**	**22 20 44.6**	**-0.1**
IDI				Sn	Sn	22 21 00.2	-0.3
IDI	**Anoyia**	**1.09**	**108**	**P**	**Pg**	**22 20 44.4**	**-0.3**
IDI				S	Sg	22 20 58.8	-0.1
IDI	**Anoyia**	**1.09**	**108**	**P**	**Pb**	**22 20 45.0**	**+0.3**
IDI				S	Sb	22 20 59.3	+0.1
MNVA	**Monemvasia**	**1.15**	**336**	**P**	**Pn**	**22 20 46.7**	**+0.8**
MNVA				S	Sg	22 21 00.6	0.0
VLI	**Veliai**	**1.21**	**333**	**P**	**Pg**	**22 20 46.4**	**-0.5**
VLI				S	Sg	22 21 01.5	-1.1
VLI	**Veliai**	**1.21**	**333**	**P**	**Pg**	**22 20 46.4**	**-0.5**
VLI				S	Sg	22 21 01.5	-1.1
MHLO	**Agia Marina, M**	**1.23**	**31**	**S**	**Sn**	**22 21 04.2**	**+0.6**
MHLO	**Agia Marina, M**	**1.23**	**31**	**P**	**Pb**	**22 20 47.2**	**+0.2**
IACM	**Heraklion**	**1.23**	**105**	**S**	**Sn**	**22 21 04.4**	**+0.6**
IACM	**Heraklion**	**1.23**	**105**	**P**	**Pn**	**22 20 48.4**	**+1.4**
IACM				S	Sn	22 21 04.9	+1.2
THR9	**Santorini-Faro**	**1.58**	**63**	**P**	**Pn**	**22 20 52.8**	**+1.0**
THR9	**Santorini-Faro**	**1.58**	**63**	**P**	**Pb**	**22 20 53.1**	**+0.1**
SAP3	**Santorini-Thir**	**1.61**	**60**	**P**	**Pn**	**22 20 52.1**	**-0.1**
SAP3	**Santorini-Thir**	**1.61**	**60**	**P**	**Pn**	**22 20 52.1**	**-0.1**
THR6	**Thira Island,**	**1.61**	**63**	**P**	**Pn**	**22 20 52.9**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.63**	**62**	**P**	**Pn**	**22 20 52.9**	**+0.4**
SNT5	**Nea Kammeni, S**	**1.63**	**62**	**P**	**Pn**	**22 20 53.1**	**+0.7**
THR3	**Thira Island,**	**1.64**	**61**	**P**	**Pn**	**22 20 53.0**	**+0.4**
THR3	**Thira Island,**	**1.64**	**61**	**P**	**Pn**	**22 20 53.3**	**+0.8**
NPS	**Neapolis**	**1.67**	**102**	**S**	**Sg**	**22 21 16.9**	**-0.5**
NPS	**Neapolis**	**1.67**	**102**	**P**	**Pn**	**22 20 53.9**	**+0.8**
THERA	**Ancient Thera,**	**1.67**	**64**	**P**	**Pn**	**22 20 53.2**	**+0.1**
THERA	**Ancient Thera,**	**1.67**	**64**	**P**	**Pn**	**22 20 53.2**	**+0.1**
MET6	**Megalochori,Me**	**1.96**	**354**	**P**	**Pn**	**22 20 57.4**	**+0.4**
MET2	**Kameni Chora,**	**1.98**	**353**	**P**	**Pn**	**22 20 59.1**	**+1.7**
MET4	**Agioi Theodoro**	**1.99**	**355**	**P**	**Pn**	**22 20 58.2**	**+0.8**
MET5	**Makryloggos,Me**	**1.99**	**354**	**P**	**Pn**	**22 20 58.5**	**+1.0**
ITM	**Ithomi**	**2.06**	**319**	**Pn**	**Pb**	**22 21 00.5**	**-0.7**
ITM	**Ithomi**	**2.06**	**319**	**P**	**Pn**	**22 21 00.2**	**+1.8**
APE	**Apeiranthos**	**2.10**	**47**	**Pn**	**Pn**	**22 21 00.3**	**+1.2**
ZKR	**Zakros**	**2.19**	**103**	**Pn**	**Pn**	**22 21 01.6**	**+1.4**
ZKR	**Zakros**	**2.19**	**103**	**P**	**Pb**	**22 21 02.1**	**-1.3**
LTK	**Loutraki**	**2.44**	**348**	**P**	**Pn**	**22 21 04.2**	**+0.6**
DION	**Dionisos Attik**	**2.45**	**6**	**P**	**Pn**	**22 21 03.6**	**-0.2**
GUR	**Goura**	**2.51**	**336**	**P**	**Pn**	**22 21 06.0**	**+1.2**
VILL	**Villia**	**2.53**	**355**	**P**	**Pn**	**22 21 05.3**	**+0.3**
KLV	**Kalavryta, Ach**	**2.67**	**334**	**P**	**Pn**	**22 21 08.2**	**+1.3**
KARP	**Karpathos**	**2.89**	**91**	**Pn**	**Pn**	**22 21 10.2**	**+0.3**
KARP	**Karpathos**	**2.89**	**91**	**P**	**Pn**	**22 21 09.8**	**-0.1**
ANX	**Ano Chora**	**3.25**	**336**	**P**	**Pn**	**22 21 18.0**	**+1.1**
BODT	**Bodrum**	**3.30**	**63**	**Pn**	**Pn**	**22 21 17.5**	**+2.0**
CHOS	**Chios island**	**3.37**	**35**	**Pn**	**Pn**	**22 21 18.8**	**+2.4**
DAT	**Datca**	**3.38**	**70**	**Pn**	**Pn**	**22 21 18.5**	**+1.8**
GCAM	**G?zelcaml?**	**3.56**	**54**	**Pn**	**Pn**	**22 21 21.1**	**+2.1**
ARG	**Arkhangelos**	**3.70**	**80**	**Pn**	**Pn**	**22 21 22.4**	**+1.4**
ARG	**Arkhangelos**	**3.70**	**80**	**P**	**Pn**	**22 21 21.8**	**+0.8**
MLSB	**Milas**	**3.74**	**63**	**Pn**	**Pn**	**22 21 23.5**	**+2.0**
TURN	**Turunc**	**3.91**	**72**	**Pn**	**Pn**	**22 21 25.9**	**+2.1**
AYDB	**Zeytinkoy-Aydi**	**4.13**	**55**	**Pn**	**Pn**	**22 21 29.3**	**+2.3**
DALY	**Dalyan (Mula)**	**4.24**	**72**	**Pn**	**Pn**	**22 21 30.6**	**+2.3**
BRTR	**Keskin Array B** 0.1nm,0.3s,baz=223,slow=12,SNR=4.2 0.5nm,0.9s	**8.93**	**60**	**Pn**	**Pn**	**22 22 35.1**	**+2.3**
TORD	**Torodi Ar. Bea** 0.5nm,0.6s,baz=36,slow=12,SNR=5.3 0.5nm,0.6s	**29.87**	**227**	**P**	**P**	**22 26 31.3**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=268,slow=7.3,SNR=4.4 0.3nm,0.6s	**44.56**	**57**	**P**	**P**	**22 28 34.6**	**-1.2**

*KRSC **09** 22:25:32.6±1.2, 52°35N×159°55E, h60km±17km, Ml4.3, Felt [II] at Petropavlovsk.*
*MOS **09** 22:25:34.3±0.8, 52°31N×159°49E, h61km, mb3.9/1, Error ellipse: s-maj=13.5km s-min=5.5km az=90.8*
*IDC **09** 22:25:38.7±1.9, 52°67N×159°15E, h92km±13km, mb3.5/6, mbtmp3.8/6, Error ellipse: s-maj=29.5km s-min=21.6km az=101.0*

ISC 09 22:25:34.0±1.2, 52°36N±0°05×159°49E±0°07, h57km±10km, n76, σ1°36/108, mb3.8/6, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.60**	**277**	**PN**	**Pn**	**22 25 47.1**	**+0.2**
RUS				S	Sn	22 25 56.4	+0.2
RUS	**Russkaya**	**0.60**	**277**	***e*P**	**Pn**	**22 25 47.1**	**+0.2**
RUS				*e*S	Sn	22 25 56.5	+0.2
DALK	**Dalny**	**0.81**	**327**	**PN**	**Pn**	**22 25 49.5**	**+0.1**
DALK				S	Sn	22 26 00.6	-0.1
DALK	**Dalny**	**0.81**	**327**	***e*P**	**Pn**	**22 25 49.5**	**+0.1**
DALK				*e*S	Sn	22 26 00.6	-0.1
MTVR	**Mutnovka**	**0.81**	**279**	**PN**	**Pn**	**22 25 50.1**	**+0.6**
MTVR				S	Sn	22 26 00.6	-0.3
MTVR	**Mutnovka**	**0.81**	**279**	***e*P**	**Pn**	**22 25 50.2**	**+0.6**
MTVR				*e*S	Sn	22 26 00.7	-0.3
PET	**Petropavlovsk**	**0.84**	**323**	***d*iP**	**Pn**	**22 25 50.0**	**+0.2**
PET				*e*S	Sn	22 26 01.3	-0.1
PET	comp=Z,765nm,0.4s			pmax	pmax		
PET	comp=E,2μm,0.4s			smax	smax		
PET	comp=N,3μm,0.4s			smax	smax		
PET	**Petropavlovsk**	**0.84**	**323**	***e*P**	**Pn**	**22 25 49.9**	**+0.2**
PET				*e*S	Sn	22 26 01.5	+0.1
GRL	**Gorelyy**	**0.89**	**283**	**PN**	**Pn**	**22 25 51.7**	**+1.1**
GRL				S	Sn	22 26 04.4	+1.7
GRL	**Gorelyy**	**0.89**	**283**	***e*P**	**Pn**	**22 25 51.7**	**+1.1**
GRL				*e*S	Sn	22 26 04.5	+1.7
INSR	**Institute**	**0.89**	**323**	**PN**	**Pn**	**22 25 50.7**	**+0.3**
INSR				S	Sn	22 26 03.1	+0.6
INSR	**Institute**	**0.89**	**323**	***e*P**	**Pn**	**22 25 50.8**	**+0.3**
INSR				*e*S	Sn	22 26 03.2	+0.6
UGLR	**Uglovaya**	**0.94**	**335**	**PN**	**Pn**	**22 25 51.7**	**+0.5**
UGLR				S	Sn	22 26 05.2	+1.2
UGLR	**Uglovaya**	**0.94**	**335**	***e*P**	**Pn**	**22 25 51.8**	**+0.5**
UGLR				*e*S	Sn	22 26 05.2	+1.2
KRMR	**Karymshinskiy**	**0.95**	**300**	**PN**	**Pn**	**22 25 51.7**	**+0.4**
KRMR				S	Sn	22 26 04.9	+0.9
KRMR	**Karymshinskiy**	**0.95**	**300**	***e*P**	**Pn**	**22 25 51.8**	**+0.4**
KRMR				*e*S	Sn	22 26 05.0	+0.9
ASAK	**Asacha**	**0.97**	**272**	**PN**	**Pn**	**22 25 52.8**	**+1.1**
ASAK				S	Sn	22 26 06.7	+2.0
ASAK	**Asacha**	**0.97**	**272**	***e*P**	**Pn**	**22 25 52.8**	**+1.1**
ASAK				*e*S	Sn	22 26 06.7	+2.0
SDLR	**Sedlovina**	**0.99**	**339**	**PN**	**Pn**	**22 25 52.1**	**+0.2**
SDLR				S	Sn	22 26 05.5	+0.4
SDLR	**Sedlovina**	**0.99**	**339**	***e*P**	**Pn**	**22 25 52.1**	**+0.2**
SDLR				*e*S	Sn	22 26 05.6	+0.4
SMAR	**Somma**	**1.00**	**336**	**PN**	**Pn**	**22 25 52.2**	**+0.1**
SMAR	**Somma**	**1.00**	**336**	***e*P**	**Pn**	**22 25 52.2**	**+0.1**
AVH	**Avacha**	**1.01**	**334**	**PN**	**Pn**	**22 25 52.8**	**+0.6**
AVH				S	Sn	22 26 07.3	+1.7
AVH	**Avacha**	**1.01**	**334**	***e*P**	**Pn**	**22 25 52.9**	**+0.6**
AVH				*e*S	Sn	22 26 07.3	+1.7
KDTR	**Khodutka, Kamc**	**1.03**	**238**	**PN**	**Pn**	**22 25 52.7**	**+0.4**
KDTR				S	Sn	22 26 06.4	+0.6
KDTR	**Khodutka, Kamc**	**1.03**	**238**	***e*P**	**Pn**	**22 25 52.7**	**+0.4**
KDTR				*e*S	Sn	22 26 06.4	+0.6
KRER	**Koryakskii**	**1.05**	**335**	**PN**	**Pn**	**22 25 53.1**	**+0.4**
KRER				S	Sn	22 26 07.6	+1.0
KRER	**Koryakskii**	**1.05**	**335**	***e*P**	**Pn**	**22 25 53.1**	**+0.4**
KRER				*e*S	Sn	22 26 07.6	+1.0
KOK	**Koryaka**	**1.07**	**331**	**PN**	**Pn**	**22 25 53.5**	**+0.6**
KOK				S	Sn	22 26 09.3	+2.4
KOK	**Koryaka**	**1.07**	**331**	***e*P**	**Pn**	**22 25 53.6**	**+0.6**
KOK				*e*S	Sn	22 26 09.3	+2.4
KRX	**Arik**	**1.12**	**333**	**PN**	**Pn**	**22 25 54.1**	**+0.4**
KRX				S	Sn	22 26 09.0	+0.7
KRX	**Arik**	**1.12**	**333**	***e*P**	**Pn**	**22 25 54.1**	**+0.4**
KRX				*e*S	Sn	22 26 09.0	+0.7
PEA0B	**Petropavlovsk-**	**1.32**	**305**	**PN**	**Pn**	**22 25 57.1**	**+0.9**
PEA0B				S	Sn	22 26 14.8	+2.0
PETK	**Petropavlovsk-** comp=N,469nm,0.3s,baz=107,slow=20,SNR=1398	**1.32**	**305**	**P**	**Pn**	**22 25 56.3**	**+0.1**
PETK	comp=N,121nm,0.3s,baz=251,slow=25,SNR=6.4			S	Sn	22 26 14.0	+1.2
MIPR	**Malaya Ipel'ka**	**1.68**	**268**	**PN**	**Pn**	**22 26 03.5**	**+2.5**
MIPR	**Malaya Ipel'ka**	**1.68**	**268**	***e*P**	**Pn**	**22 26 03.6**	**+2.5**
MIPR				*e*S	Sn	22 26 25.4	+3.9
KII	**Karymskiy**	**1.68**	**359**	**PN**	**Pn**	**22 26 02.1**	**+1.0**
KII				S	Sn	22 26 23.2	+1.6
KII	**Karymskiy**	**1.68**	**359**	***e*P**	**Pn**	**22 26 02.1**	**+1.0**
KII				*e*S	Sn	22 26 23.2	+1.6
PAU	**Pauzhetka**	**1.88**	**243**	**PN**	**Pn**	**22 26 05.3**	**+1.5**
PAU	**Pauzhetka**	**1.88**	**243**	***e*P**	**Pn**	**22 26 05.3**	**+1.5**
SKR	**Severo-Kuril's**	**2.69**	**233**	***e*PN**	**Pn**	**22 26 15.7**	**+0.8**
SKR				*e*S	Sn	22 26 46.2	0.0
SKR	comp=Z,56nm,0.4s			pmax	pmax		
SKR	comp=E,353nm,0.4s			smax	smax		
SKR	comp=N,318nm,0.4s			smax	smax		
SKR	**Severo-Kuril's**	**2.69**	**233**	***e*P**	**Pn**	**22 26 15.5**	**+0.7**
SKR				*e*S	Sn	22 26 46.1	-0.1
KZV	**Kizimen**	**2.80**	**10**	**PN**	**Pn**	**22 26 17.3**	**+0.9**
KZV				S	Sn	22 26 49.0	-0.1
KZV	**Kizimen**	**2.80**	**10**	***e*P**	**Pn**	**22 26 17.4**	**+0.9**
KZV				*e*S	Sn	22 26 49.0	-0.1
TUMD	**Tumrok D**	**2.90**	**10**	**PN**	**Pn**	**22 26 18.3**	**+0.6**
TUMD				S	Sn	22 26 51.8	+0.5
TUMD	**Tumrok D**	**2.90**	**10**	***e*P**	**Pn**	**22 26 18.4**	**+0.6**
TUMD				*e*S	Sn	22 26 51.8	+0.5
KMNR	**Kamenistaya**	**3.43**	**7**	**PN**	**Pn**	**22 26 26.7**	**+1.7**
KMNR	**Kamenistaya**	**3.43**	**7**	***e*P**	**Pn**	**22 26 26.7**	**+1.7**
ESO	**Esso**	**3.60**	**353**	**PN**	**Pn**	**22 26 28.7**	**+1.4**
ESO	**Esso**	**3.60**	**353**	***e*P**	**Pn**	**22 26 28.7**	**+1.4**
BZP	**Bezymyannyi-Pe**	**3.61**	**9**	**PN**	**Pn**	**22 26 31.0**	**+3.4**
BZP	**Bezymyannyi-Pe**	**3.61**	**9**	***e*P**	**Pn**	**22 26 31.0**	**+3.4**
BZMR	**Bezymyannaya**	**3.63**	**9**	**PN**	**Pn**	**22 26 30.1**	**+2.3**
BZMR	**Bezymyannaya**	**3.63**	**9**	***e*P**	**Pn**	**22 26 30.1**	**+2.3**
KPT	**Kopyto**	**3.64**	**7**	**PN**	**Pn**	**22 26 30.2**	**+2.3**
KPT	**Kopyto**	**3.64**	**7**	***e*P**	**Pn**	**22 26 30.2**	**+2.3**
KOZ	**Kozyrevsk**	**3.71**	**3**	**PN**	**Pn**	**22 26 31.3**	**+2.5**
KOZ	**Kozyrevsk**	**3.71**	**3**	***e*P**	**Pn**	**22 26 31.3**	**+2.5**
KBTR	**Krutoberegovo**	**4.32**	**26**	**PN**	**Pn**	**22 26 38.2**	**+1.1**
KBTR	**Krutoberegovo**	**4.32**	**26**	***e*P**	**Pn**	**22 26 38.2**	**+1.1**
H11N2	**WAKE ISLAND Hy** baz=352,slow=76,SNR=41	**33.08**	**167**	**T**	**T**	23 08 06.8	
H11N3	**WAKE ISLAND Hy** baz=352,slow=76,SNR=47	**33.09**	**167**	**T**	**T**	23 08 08.6	
H11N1	**WAKE ISLAND Hy** baz=352,slow=76,SNR=50	**33.09**	**167**	**T**	**T**	23 08 05.2	
H11S1	**WAKE ISLAND Hy** baz=352,slow=76,SNR=5.2	**34.25**	**168**	**T**	**T**	23 08 42.1	
H11S3	**WAKE ISLAND Hy** baz=352,slow=76,SNR=8.7	**34.26**	**168**	**T**	**T**	23 08 43.8	
H11S2	**WAKE ISLAND Hy** baz=352,slow=76,SNR=3.7	**34.27**	**168**	**T**	**T**	23 08 45.4	
SPITS	**Spitsbergen Ar** comp=N,4.0nm,0.8s,baz=39,slow=9.3,SNR=9.8 comp=N,4.0nm,0.8s	**47.80**	**350**	**P**	**P**	**22 34 03.8**	**-1.2**
MKAR	**Makanchi Array** comp=N,0.2nm,0.7s,baz=64,slow=8.8,SNR=1.8 comp=N,0.2nm,0.7s	**48.14**	**296**	**P**	**P**	**22 34 05.0**	**-3.1**
BVAR	**Borovoye Array** comp=N,0.5nm,0.4s,baz=46,slow=8.3,SNR=6.2 comp=N,0.5nm,0.4s	**50.56**	**309**	**P**	**P**	**22 34 24.0**	**-2.4**
HFS	**Hagfors** comp=N,0.9nm,0.6s,baz=64,slow=6.6,SNR=5.3 comp=N,0.9nm,0.6s	**64.53**	**342**	**P**	**P**	**22 36 03.5**	**-0.9**
TXAR	**Lajitas Array** comp=N,0.4nm,0.6s,baz=311,slow=4.4,SNR=4.8 comp=N,0.4nm,0.6s	**71.27**	**66**	**P**	**P**	**22 36 48.9**	**+1.5**
ASAR	**Alice Springs** comp=N,0.6nm,0.6s,baz=14,slow=5.3,SNR=10 comp=N,0.6nm,0.6s	**78.94**	**204**	**P**	**P**	**22 37 32.5**	**+1.2**
VNDA	**Vanda** comp=N,0.8nm,0.8s,baz=358,slow=3.4,SNR=4.9	**129.62**	**179**	**PKP**	**PKiKP**	**22 44 37.3**	**+1.8**
H03N2	**Juan Fernandez** baz=314,slow=77,SNR=16	**134.57**	**89**	**T**	**T**	01 15 08.5	
H03N1	**Juan Fernandez** baz=314,slow=77,SNR=16	**134.58**	**89**	**T**	**T**	01 15 31.6	
H03N3	**Juan Fernandez** baz=314,slow=77,SNR=13	**134.59**	**89**	**T**	**T**	01 15 33.0	

*DNK **09** 22:39:28.9±3.3, 75°90N×60°03W, h0km±17km, ML2.9*
*IDC **09** 22:39:30.2±0.7, 76°18N×60°20W, h0km, mb3.4/13,*

mbtmp3.6/16, ML3.8/3, MS3.6/46, Error ellipse: s-maj=21.3km s-min=14.1km az=151.0

ISC 09 22:39:30.3±0.6, 76°08N±0°06×59°65W±0°05, h10km, n62, σ2°70/30, mb3.4/13, MS3.5/44, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULLO	**Kullorsuaq**	**1.63**	**157**	***e*P**	**Pn**	**22 39 54.9**	**-4.1**
KULLO				IAML		22 40 38.8	
	comp=Z,341nm,1.9s						
TULEG	**Thule**	**2.23**	**286**	***e*P**	**Pn**	**22 40 06.7**	**-0.6**
TULEG				*i* S	Sn	22 40 35.0	+0.2
TULEG				IAML		22 40 57.2	
	comp=Z,343nm,0.7s						
NEEM	**North Greenlan**	**2.40**	**51**	***e*P**	**Pn**	**22 40 09.7**	**-0.2**
NEEM				*e*S	Sb	22 40 44.0	+0.5
NEEM				IAML		22 40 58.8	
	comp=Z,109nm,0.7s						
I18DK	**QAANAAQ INFRAS** comp=Z,0.1nm,1.0s,baz=118,slow=325,SNR=4.4	**2.62**	**307**	I	I	22 58 40.0	
UPNV	**Upernavik**	**3.45**	**162**	***e*P**	**Pn**	**22 40 20.5**	**-3.5**
UPNV				*e*S	Sn	22 41 00.4	-4.4
UPNV				IAML		22 41 17.8	
	comp=Z,43nm,0.3s						
SUMG	**Summit**	**6.70**	**111**	***i*P**	**Pn**	**22 41 07.8**	**-1.1**
SUMG				*e*S	Sn	22 42 23.5	-1.9
SUMG				IAML		22 43 08.5	
	comp=Z,8.3nm,0.5s						
RES	**Resolute Bay** comp=Z,1.0nm,0.3s,baz=65,slow=9.8,SNR=9.7	**8.92**	**278**	Pn	**Pn**	**22 41 36.7**	**-2.3**
RES	comp=Z,1.0nm,0.3s,baz=224,slow=10,SNR=4.5 comp=Z,4.4nm,0.5s			Sn	**Sn**	**22 43 13.1**	**-6.2**
DAG	**Danmarks Havn**	**9.51**	**66**	***i*P**	**Pn**	**22 41 44.0**	**-3.0**
DAG				*i*P	Pn	22 41 44.0	-3.0
DAG				*e*S	Sn	22 43 28.0	-5.7
SFJD	**Kangerlussuaq** comp=Z,0.9nm,0.3s,baz=355,slow=13,SNR=1.7	**9.55**	**158**	Pn	**Pn**	**22 41 50.3**	**+2.7**
SFJD				LR	LR	22 45 33.1	
	comp=Z,408nm,18.4s,baz=358,slow=38 comp=Z,13nm,0.9s						
NOR	**Nord**	**9.68**	**37**	***i*P**	**Pn**	**22 41 48.4**	**-0.9**
FRB	**Frobisher Bay** comp=Z,212nm,19.3s,baz=32,slow=38	**12.74**	**198**	LR	LR	22 47 34.2	
JMIC	**Jan Mayen** comp=Z,282nm,21.4s,baz=326,slow=34	**14.89**	**83**	LR	LR	22 48 05.4	
SPITS	**Spitsbergen Ar** baz=278,slow=11 comp=Z,12nm,0.9s	**15.96**	**47**	Pn	**P**	**22 43 17.0**	**-1.0**
SCHQ	**Schefferville** comp=Z,7.3nm,0.8s,baz=12,slow=9.8,SNR=5.1 comp=Z,7.3nm,0.8s	**21.51**	**191**	**P**	**P**	**22 44 20.6**	**+1.6**
INK	**Inuvik** comp=Z,1.5nm,0.8s,baz=16,slow=12,SNR=4.2 comp=Z,1.5nm,0.8s	**22.23**	**289**	P	**P**	**22 44 24.9**	**-1.6**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.8s,baz=18,slow=11,SNR=4.1	**22.50**	**263**	P	**P**	**22 44 29.8**	**+0.3**
YKA	comp=Z,110nm,18.4s,baz=68,slow=35 comp=Z,0.4nm,0.8s			LR	LR	22 52 35.5	
ARCES	**ARCESS Array B** comp=Z,130nm,19.7s,baz=334,slow=36	**23.73**	**61**	LR	LR	22 53 59.0	
NOA	**NORSAR Array B** comp=Z,55nm,20.7s,baz=255,slow=35	**27.60**	**83**	LR	LR	22 55 31.7	
ILAR	**Eielson Array** comp=Z,34nm,19.1s,baz=112,slow=41	**28.16**	**295**	LR	LR	22 58 46.0	
HFS	**Hagfors** comp=Z,223nm,18.8s,baz=311,slow=33	**28.99**	**82**	LR	LR	22 55 29.5	
ULM	**Lac du Bonnet** comp=Z,86nm,19.4s,baz=354,slow=35	**29.62**	**230**	LR	LR	22 56 56.4	
FINES	**FINESS Array B** comp=Z,188nm,18.9s,baz=303,slow=34	**30.73**	**70**	LR	LR	22 56 50.1	
TIXI	**Tiksi** comp=Z,37nm,20.5s,baz=17,slow=33	**32.38**	**355**	L

comp=Z,43nm,18.0s,baz=2.0,slow=39
EIL Elat 62.55 78 LR LR 23 17 20.5
comp=Z,31nm,19.4s,baz=8.5,slow=36
MJAR Matsushiro Arr 67.07 344 LR LR 23 20 58.9
comp=Z,18nm,18.6s,baz=14,slow=37
CMAR Chiang Mai Arr 84.75 20 LR LR 23 31 57.8
comp=Z,25nm,18.0s,baz=5.0,slow=37

*IDC **09** 22:46:49.5±0.7,28˚.12N×104˚.95E,h0km,mb4.1/20, mbtmp4.1/22,ML4.3/2,MS2.7/1,Error ellipse: s-maj=21.4km s-min=13.8km az=47.0*
*MOS **09** 22:46:49.9±1.3,28˚.24N×105˚.02E,h12km,mb4.6/21,Error ellipse: s-maj=9.1km s-min=6.1km az=124.2*
*NEIC **09** 22:46:51.9±1.1,28˚.19N±0˚.06×104˚.98E±0˚.07,h10km±1km, mb4.5/40,Error ellipse: s-maj=11.2km s-min=9.5km az=153.0*
*BJI **09** 22:46:53.2,28˚.20N×105˚.03E,h10km,mB4.6/3,mb4.4/31, ML3.9/19,Ms4.1/16,Ms7 3.9/18*
ISC 09 22:46:52.2±0.4,28˚.23N±0˚.03×105˚.04E±0˚.03,h10km,n140, σ1§49/147,mb4.4/49,6C-3D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.28**	**140**	ǁPn	**Pn**	**22 47 30.3**	**+0.3**
GYA				Sn	**Sn**	**22 48 00.0**	**+1.7**
GYA				Sg	**Sg**	**22 48 09.1**	**+3.6**
GYA				smax	smax		
	comp=N,1μm,1.0s						
GYA				smax	smax		
	comp=E,1μm,1.0s						
CD2	**Chengdu**	**2.89**	**338**	Pn	**Pn**	**22 47 39.4**	**+1.0**
CD2				Pg	**Pb**	**22 47 48.6**	**+4.7**
CD2				Sn	**Sn**	**22 48 15.5**	**+2.2**
CD2				Sg	**Sg**	**22 48 27.3**	**+2.1**
CD2				smax	smax		
	comp=N,2μm,0.9s						
CD2				smax	smax		
	comp=E,4μm,0.9s						
PZH	**PanZhiHua**	**3.40**	**240**	Pn	**Pn**	**22 47 46.6**	**+1.2**
PZH				Pg	**Pb**	**22 47 56.9**	**+4.3**
PZH				Sg	**Sg**	**22 48 44.1**	**+2.6**
PZH				smax	smax		
	comp=N,190nm,1.0s						
PZH				smax	smax		
	comp=E,210nm,0.8s						
PZH				LR	LR		
	comp=N,700nm,5.2s						
PZH				LR	LR		
	comp=E,1μm,4.9s						
PZH				LR	LR		
	comp=Z,1μm,6.0s						
KMI	**Kunming**	**3.72**	**214**	Pn	**Pn**	**22 47 49.3**	**-0.6**
KMI				Pg	**Pb**	**22 48 01.0**	**+2.9**
KMI				Sg	**Sg**	**22 48 51.6**	**0.0**
KMI				smax	smax		
	comp=N,45nm,1.0s						
KMI				smax	smax		
	comp=E,75nm,1.0s						
KMI				LR	LR		
	comp=N,1μm,7.2s						
KMI				LR	LR		
	comp=E,1μm,6.4s						
KMI				LR	LR		
	comp=Z,850nm,6.9s						
ENH	**Enshi**	**4.38**	**61**		**Pn**	**22 48 01.2**	**+2.4**
TNCH	**TengChong**	**6.65**	**243**	Pn	**Pn**	**22 48 30.9**	**+0.7**
TNCH				Sn	**Sn**	**22 49 50.4**	**+4.3**
TNCH				Sg	**Sg**	**22 50 24.7**	**-1.0**
TNCH				smax	smax		
	comp=N,66nm,0.7s						
TNCH				smax	smax		
	comp=E,64nm,0.9s						
XAN	**Xi'an**	**6.68**	**29**	Pn	**Pn**	**22 48 31.4**	**+1.0**
XAN				Sn	**Sn**	**22 49 46.4**	**-0.1**
XAN				Sg	**Sg**	**22 50 25.6**	**-0.9**
XAN				smax	smax		
	comp=N,490nm,0.9s						
XAN				smax	smax		
	comp=E,370nm,0.9s						
XAN				LR	LR		
	comp=N,1μm,4.7s						
XAN				LR	LR		
	comp=E,690nm,4.2s						
XAN				LR	LR		
	comp=Z,760nm,5.5s						
SLVN	**Son La**	**6.95**	**189**		**Pn**	**22 48 34.7**	**+0.6**
LZDM	**Lanzhou Array**	**7.79**	**352**	Pn	**Pn**	**22 48 47.4**	**+1.6**
	baz=179,slow=13						
LZDM				Sn	**Sn**	**22 50 14.5**	**+0.3**
	baz=169,slow=24 7.0nm,0.4s						
LZH	**Lanzhou**	**7.90**	**353**	Pg	Pg	22 49 19.9	-3.5
LZH				Sg	Sg	22 50 59.6	-6.0
LZH				smax	smax		
	comp=N,130nm,1.4s						
LZH				smax	smax		
	comp=E,230nm,1.5s						
LZH				LR	LR		
	comp=N,320nm,9.3s						
LZH				LR	LR		
	comp=E,480nm,9.3s						
LZH				LR	LR		
	comp=Z,200nm,8.9s						
WHN	**Wuhan**	**8.44**	**72**	P	**Pn**	**22 48 55.2**	**+0.7**
WHN				S	**Sn**	**22 50 29.1**	**-0.8**
WHN				LR	LR		
	comp=Z,2μm,6.1s						
LYN	**LuoYang**	**8.94**	**43**	P	**Pn**	**22 49 01.0**	**-0.4**
LYN				pmax	pmax		
	comp=Z,33nm,0.7s						
LYN				LR	LR		
	comp=N,1μm,9.3s						
LYN				LR	LR		
	comp=E,970nm,9.0s						
LYN				LR	LR		
	comp=Z,980nm,9.2s						
GZH	**Guangzhou**	**9.07**	**123**	P	Pn	22 49 00.9	-2.3
GZH				S	**Sn**	**22 50 44.2**	**-1.3**
GZH				LR	LR		
	comp=N,2μm,5.2s						
GZH				LR	LR		
	comp=E,2μm,5.2s						
QIZ	**Qiongzhong**	**10.16**	**153**	P	**Pn**	**22 49 19.3**	**+1.1**
QIZ				S	**Sn**	**22 51 15.8**	**+3.5**
QIZ				LR	LR		
	comp=E,800nm,5.3s						
QIZ				LR	LR		
	comp=E,570nm,3.3s						
QIZ				LR	LR		
	comp=E,750nm,5.0s						
CM31	**Chiang Mai Arr**	**11.22**	**211**	Pn	**Pn**	**22 49 32.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**11.22**	**211**		**Pn**	**22 49 33.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**11.22**	**211**	Pn	**Pn**	**22 49 34.5**	**+1.8**
	comp=E,0.2nm,0.3s,baz=20,slow=12,SNR=24						
CMAR				LR	LR	22 54 11.7	
	comp=E,44nm,20.4s,baz=180,slow=40						
CMAR	**Chiang Mai Arr**	**11.22**	**211**	*i* P	**Pn**	**22 49 36.0**	**+3.3**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA	**Gaotai**	**11.96**	**340**	*e*P	**Pn**	**22 49 45.5**	**+2.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				LR	LR		
	comp=Z,200nm,13.1s						
GTA				LR	LR		
	comp=Z,170nm,12.4s						
GTA				LR	LR		
	comp=Z,160nm,12.0s						
SHL	**Shillong**	**12.04**	**260**		**Pn**	**22 49 42.7**	**-1.3**
SHL	**Shillong**	**12.04**	**260**	P	**Pn**	**22 49 42.7**	**-1.3**
HNS	**HongShan**	**12.23**	**39**	ǁP	**Pn**	**22 49 50.8**	**+4.5**
HNS				LR	LR		
	comp=Z,330nm,9.6s						
HNS				LR	LR		
	comp=Z,370nm,10.4s						
LSA	**Lhasa**	**12.25**	**280**		**Pn**	**22 49 46.1**	**-1.1**
LSA	**Lhasa**	**12.25**	**280**	P	Pn	22 49 43.2	-4.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LSA	**Lhasa**	**12.25**	**280**	P	**Pn**	**22 49 46.1**	**-1.1**
NJ2	**Nanjing**	**12.55**	**69**	*e*P	**Pn**	**22 49 52.4**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,390nm,8.5s						
NJ2				LR	LR		
	comp=Z,560nm,9.5s						
NJ2				LR	LR		
	comp=Z,630nm,7.6s						
BTO	**Baotou**	**13.01**	**17**	*e*P	**Pn**	**22 49 58.8**	**+1.7**
BTO				S	**Sn**	**22 52 25.8**	**+3.9**
BTO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BTO				LR	LR		
	comp=Z,210nm,4.8s						
HHC	**Hu-ho-hao-te**	**13.68**	**21**	*e*P	**Pn**	**22 50 06.6**	**+0.3**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TPUB	**Ta-pu**	**14.88**	**106**	Pn	**Pn**	**22 50 23.2**	**+0.6**
BJI	**Beijing**	**14.94**	**35**	P	**Pn**	**22 50 23.8**	**+0.4**
BJI				pP	P	22 50 27.1	-1.9
BJI				sP		22 50 30.7	
BJI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SSLB	**Suanglung**	**14.97**	**104**	Pn	**Pn**	**22 50 23.8**	**-0.2**
EVN	**Everest**	**16.09**	**273**		**Pn**	**22 50 36.5**	**-2.6**
SONM	**Songino Array**	**19.60**	**3**		**P**	**22 51 21.3**	**+0.7**
SONM	**Songino Array**	**19.60**	**3**	P	**P**	**22 51 20.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=186,slow=11,SNR=9.3						
	comp=Z,0.8nm,0.4s						
SONM	**Songino Array**	**19.60**	**3**	P	**P**	**22 51 21.3**	**+0.7**
SONM				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ULN	**Ulaanbaatar**	**19.66**	**4**	*i* P	**P**	**22 51 20.5**	**-0.8**
TJN	**Taejon**	**20.51**	**61**	P	**P**	**22 51 29.5**	**-1.0**
TJN	**Taejon**	**20.51**	**61**	P	**P**	**22 51 29.5**	**-1.0**
TJN				pmax	pmax		
	comp=Z,164nm,1.5s						
JOW	**Kunigami**	**20.65**	**88**	P	**P**	**22 51 30.8**	**-1.3**
JOW				IAmb	IAmb	22 52 03.7	
	comp=Z,27nm,1.0s						
JOW	**Kunigami**	**20.65**	**88**	P	**P**	**22 51 31.3**	**-0.8**
	comp=Z,9.8nm,0.4s,baz=277,slow=9.8,SNR=1.8						
	comp=Z,9.8nm,0.4s						
WMQ	**Urumqi**	**20.88**	**323**	*e*P	**P**	**22 51 36.0**	**+1.5**
KSAR	**Wonju Array Be**	**21.24**	**59**	P	**P**	**22 51 37.5**	**-0.8**
KSAR	**Wonju Array Be**	**21.24**	**59**	P	**P**	**22 51 37.5**	**-0.8**
KS19	**Wonju Array Si**	**21.24**	**58**	P	**P**	**22 51 37.6**	**-0.8**
KS19				IAmb	IAmb	22 51 54.8	
	comp=Z,32nm,1.4s						
KSRS	**Korea Array**	**21.27**	**59**	P	**P**	**22 51 37.9**	**-0.7**
	comp=Z,6.8nm,0.9s,baz=244,slow=11,SNR=11						
	comp=Z,6.8nm,0.9s						
CN2	**Changchun**	**22.58**	**41**	P	**P**	**22 51 52.7**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JNU	**Nakatsue**	**22.73**	**71**	P	**P**	**22 51 53.6**	**-0.7**
JNU				IAmb	IAmb	22 51 56.4	
	comp=Z,22nm,1.1s						
HILR	**Hailar Array B**	**24.09**	**24**	P	**P**	**22 52 08.7**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=188,slow=8.7,SNR=2.7						
	comp=Z,1.4nm,0.4s						
DGZ	**Jazzator, Alta**	**25.32**	**333**	*i* P	**P**	**22 52 18.2**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**25.71**	**322**	*i* P	**P**	**22 52 22.4**	**-0.2**
MK31				pmax	pmax		
	comp=Z,29nm,1.0s						
MKAR	**Makanchi Array**	**25.71**	**322**		**P**	**22 52 21.5**	**-1.0**
MKAR	**Makanchi Array**	**25.71**	**322**	P	**P**	**22 52 22.4**	**-0.2**
	comp=Z,18nm,1.0s,baz=128,slow=12,SNR=50						
	comp=Z,18nm,1.0s						
MAKZ	**Makanchi**	**25.89**	**322**		**P**	**22 52 23.4**	**-0.8**
MAKZ				IAmb	IAmb	22 52 28.9	
	comp=Z,22nm,1.1s						
MAKZ	**Makanchi**	**25.89**	**322**	P	**P**	**22 52 23.4**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.1s						
TARG	**Taragay, Kyrgy**	**25.94**	**308**		**P**	**22 52 24.4**	**-0.7**
TARG	**Taragay, Kyrgy**	**25.94**	**308**	P	**P**	**22 52 24.4**	**-0.7**
TARG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MYLDM	**Lahad Datu**	**26.25**	**148**		**P**	**22 52 27.9**	**+0.3**
KSH	**Kashi**	**26.52**	**303**	P	**P**	**22 52 32.7**	**+2.6**
KSH				pP	pP	22 52 36.9	+3.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**26.79**	**46**	P	**P**	**22 52 32.0**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=34,slow=4.8,SNR=4.0						
	comp=Z,2.2nm,0.7s						
BOOM	**Boomskoye usch**	**27.51**	**309**	P	**P**	**22 52 37.6**	**-1.4**
BOOM				IAmb	IAmb	22 52 46.2	
	comp=Z,6.3nm,1.1s						
BOOM	**Boomskoye usch**	**27.51**	**309**	P	**P**	**22 52 37.6**	**-1.4**
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AAK	**Ala-Archa**	**28.56**	**308**		**P**	**22 52 48.5**	**+0.1**
AAK	**Ala-Archa**	**28.56**	**308**	*i* P	**P**	**22 52 49.3**	**+0.9**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ZAA0	**Zalesovo Array**	**29.66**	**336**	P	**P**	**22 52 56.8**	**-1.0**
ZALV	**Zalesovo Beam**	**29.66**	**336**	P	**P**	**22 52 56.6**	**-1.1**
ZALV	**Zalesovo Beam**	**29.66**	**336**	P	**P**	**22 52 56.9**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=129,slow=9.5,SNR=10.0						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**29.66**	**336**	*i* P	**P**	**22 52 57.5**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**30.04**	**325**	P	**P**	**22 53 00.2**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=132,slow=9.6,SNR=20						
	comp=Z,2.8nm,0.7s						
KURK	**Kurchatov**	**30.05**	**326**		**P**	**22 53 00.6**	**-0.7**
KURK				IAmb	IAmb	22 53 03.8	
	comp=Z,3.8nm,0.7s						
KURK	**Kurchatov**	**30.05**	**326**	*ce*P	**P**	**22 53 01.8**	**+0.5**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KBL	**Kabul**	**31.25**	**291**	P	**P**	**22 53 11.3**	**-1.1**
KBL				IAmb	IAmb	22 53 14.7	
	comp=Z,4.6nm,0.9s						
KBL	**Kabul**	**31.25**	**291**	P	**P**	**22 53 11.3**	**-1.1**
KBL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	**Karatay Array**	**31.48**	**307**	P	P	22 53 10.8	-3.2
KK31				IAmb	IAmb	22 53 16.1	
	comp=Z,3.4nm,0.9s						
KK31	**Karatay Array**	**31.48**	**307**	P	P	22 53 10.8	-3.3
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**31.48**	**307**	P	P	22 53 12.2	-1.8
KKAR	**Karatay Array**	**31.48**	**307**	P	P	22 53 12.3	-1.8
CHGR	**Chuyangaron**	**31.52**	**299**	P	**P**	**22 53 13.6**	**-0.9**
CHGR				IAmb	IAmb	22 53 17.8	
	comp=Z,7.0nm,0.9s						
CHGR	**Chuyangaron**	**31.52**	**299**	P	**P**	**22 53 13.6**	**-0.9**
CHGR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BVAR	**Borovoye Array**	**35.56**	**324**	P	**P**	**22 53 49.0**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=193,slow=5.8,SNR=7.2						
	comp=Z,0.8nm,0.5s						
BORK	**Borovoye**	**35.61**	**324**	*ce*P	**P**	**22 53 51.1**	**+1.2**
BORK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
HRA	**Herat**	**36.87**	**291**	P	P	22 53 59.3	-1.9
AB31	**Akbulak array**	**40.22**	**314**	P	**P**	**22 54 27.9**	**-0.9**
ABKAR	**Akbulak array**	**40.22**	**314**	P	**P**	**22 54 28.2**	**-0.6**
NRIK	**Noril'sk**	**42.38**	**351**	P	**P**	**22 54 46.2**	**-0.2**
NRIK				IAmb	IAmb	22 54 52.1	
	comp=Z,14nm,1.4s						
NRIK	**Noril'sk**	**42.38**	**351**	P	**P**	**22 54 46.4**	**0.0**
	comp=Z,4.1nm,0.6s,baz=134,slow=8.1,SNR=7.5						
	comp=Z,4.1nm,0.6s						
NRIK	**Noril'sk**	**42.38**	**351**	*ce*P	**P**	**22 54 47.1**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	**Tiksi**	**45.41**	**10**	P	**P**	**22 55 09.8**	**-0.8**
TIXI				IAmb	IAmb	22 55 24.3	
	comp=Z,2.3nm,0.6s						
TIXI	**Tiksi**	**45.41**	**10**	*i* P	**P**	**22 55 10.1**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKT	**Akhty**	**48.04**	**302**	*e*P	**P**	**22 55 30.6**	**-1.2**
AKT				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIRV	**Kirov**	**48.56**	**325**	*ce*P	**P**	**22 55 35.2**	**-0.2**
KNRA	**Kununurra**	**49.33**	**149**	P	P	22 55 39.7	-1.9
KNRA				IAmb	IAmb	22 55 43.7	
	comp=Z,12nm,1.2s						
FITZ	**Fitzroy Crossi**	**50.19**	**154**	P	**P**	**22 55 46.9**	**-1.3**
GNI	**Garni**	**50.41**	**300**	*i* P	**P**	**22 55 49.0**	**-1.0**
MBWA	**Marble Bar**	**51.11**	**162**	P	**P**	**22 55 53.9**	**-1.3**
MBWA				IAmb	IAmb	22 56 18.6	
	comp=Z,8.6nm,1.0s						
KBZ	**Khabaz**	**51.46**	**305**	P	**P**	**22 55 56.9**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=17,slow=8.0,SNR=3.8						
	comp=Z,0.7nm,0.7s						
KIV	**Kislovodsk**	**51.60**	**305**		**P**	**22 55 57.8**	**-1.0**
KIV				IAmb	IAmb	22 56 01.6	
	comp=Z,8.1nm,0.8s						
KIV	**Kislovodsk**	**51.60**	**305**	*e*P	**P**	**22 55 58.7**	**-0.1**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SHA1	**Shidzhatmaz**	**51.63**	**305**	*i* P	**P**	**22 55 59.5**	**+0.2**
GURO	**Guroymak-BITLI**	**52.69**	**299**	P	**P**	**22 56 06.3**	**-0.8**
GURO				IAmb	IAmb	22 56 10.3	
	comp=Z,11nm,1.2s						
RAYN	**Ar Rayn**	**53.32**	**279**	P	**P**	**22 56 10.2**	**-1.6**
RAYN				IAmb	IAmb	22 56 13.1	
	comp=Z,2.9nm,0.8s						
RAYN	**Ar Rayn**	**53.32**	**279**	P	**P**	**22 56 10.2**	**-1.6**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLMR	**Klimovskoe**	**53.89**	**327**	*e*P	P	22 56 13.1	-2.3
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
OBN	**Obninsk**	**55.17**	**319**	ǁ*e*P	P	22 56 23.0	-1.7
OBN				*i* *PP	pP	22 56 25.6	-2.5
OBN				*i* *SP	sP	22 56 29.7	+0.3
OBN						22 57 23.0	
OBN				*e*		22 58 30.2	
OBN				*i* PPP	PPP	22 59 46.8	
OBN				S	**S**	**23 04 05.0**	**-2.7**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,75nm,15.0s						
PMG	**Port Moresby**	**55.29**	**126**	P	**P**	**22 56 28.2**	**+2.1**
PMG				pmax	pmax		
	comp=Z,35nm,1.2s						
WRA	**Warramunga Arr**	**55.64**	**146**	P	**P**	**22 56 26.8**	**-1.8**
	comp=Z,6.2nm,1.0s,baz=339,slow=8.2,SNR=12						
	comp=Z,6.2nm,1.0s						
COEN	**Coen**	**55.87**	**134**	P	**P**	**22 56 28.9**	**-1.4**
COEN				IAmb	IAmb	22 56 32.2	
	comp=Z,4.4nm,0.9s						
ILGA	**Ilgaz**	**58.56**	**303**	P	**P**	**22 56 47.9**	**-1.5**
ILGA				IAmb	IAmb	22 56 52.9	
	comp=Z,4.6nm,1.1s						
AS31	**Alice Springs**	**58.62**	**149**	P	**P**	**22 56 48.8**	**-0.8**
ASAR	**Alice Springs**	**58.62**	**149**	P	**P**	**22 56 48.0**	**-1.6**
ASAR	**Alice Springs**	**58.62**	**149**	P	**P**	**22 56 48.5**	**-1.2**
	comp=Z,3.3nm,0.5s,baz=330,slow=6.3,SNR=33						
	comp=Z,3.3nm,0.5s						
BR131	**Keskin Array S**	**58.90**	**301**	P	**P**	**22 56 50.5**	**-1.2**
BR131	**Keskin Array S**	**58.90**	**301**	P	**P**	**22 56 50.5**	**-1.2**
BR131				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	**58.90**	**301**	P	P	22 56 49.4	-2.2
BRTR	**Keskin Array B**	**58.90**	**301**	P	**P**	**22 56 50.4**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=100,slow=7.6,SNR=7.8						
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**58.90**	**301**	*i* P	**P**	**22 56 50.0**	**-1.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**59.96**	**315**	P	**P**	**22 56 57.0**	**-1.5**
	comp=Z,0.4nm,0.2s,baz=76,slow=6.1,SNR=4.4						
	comp=Z,0.4nm,0.2s						
AKASG	**Malin Array Be**	**59.96**	**315**	*ce*P	**P**	**22 57 00.4**	**+1.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	**Malin Array Si**	**59.96**	**315**	*ce*P	**P**	**22 56 59.9**	**+1.4**
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**60.21**	**337**	P	**P**	**22 56 59.3**	**-0.7**
ARCES	**ARCESS Array B**	**60.21**	**337**	P	**P**	**22 56 59.2**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=79,slow=6.3,SNR=6.4						
	comp=Z,1.3nm,0.6s						
ARCES	**ARCESS Array B**	**60.21**	**337**	P	**P**	**22 56 59.3**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,17nm,1.4s						
CSS	**Mathiatis**	**60.27**	**296**	P	**P**	**22 56 59.6**	**-1.4**
CSS				IAmb	IAmb	22 57 26.5	
	comp=Z,6.6nm,0.9s						
FINES	**FINESS Array B**	**60.41**	**327**	P	**P**	**22 57 00.7**	**-0.8**
FINES	**FINESS Array B**	**60.41**	**327**	P	**P**	**22 57 00.4**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=86,slow=6.4,SNR=11						
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**60.41**	**327**	*i* P	**P**	**22 57 03.4**	**+2.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ELL	**Elmali**	**62.47**	**299**	P	**P**	**22 57 14.4**	**-1.6**
ELL	**Elmali**	**62.47**	**299**	P	**P**	**22 57 14.5**	**-1.6**
ELL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KARP	**Karpathos**	**64.95**	**298**	P	**P**	**22 57 31.4**	**-0.9**
C19K	**Lookout Ridge**	**65.82**	**23**	P	**P**	**22 57 37.6**	**+0.2**
HFS	**Hagfors**	**66.61**	**327**	P	**P**	**22 57 41.5**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=114,slow=6.6,SNR=9.0						
	comp=Z,1.5nm,0.5s						
D20K	**Etivluk River**	**66.96**	**23**	P	**P**	**22 57 45.0**	**+0.3**
NC405	**NORSAR Array S**	**67.26**	**328**	P	**P**	**22 57 45.6**	**-1.0**
NB2	**NORSAR Subarra**	**67.52**	**328**	P	**P**	**22 57 46.9**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**67.52**	**328**	P	**P**	**22 57 47.1**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=74,slow=6.6,SNR=7.3						
	comp=Z,1.0nm,0.6s						
IMAR	**Indian Mountai**	**68.95**	**25**	P	**P**	**22 57 57.0**	**-0.1**
GERES	**GERESS Array B**	**70.14**	**315**	P	**P**	**22 58 04.3**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=58,slow=3.3,SNR=6.4						
	comp=Z,0.4nm,0.5s						
C27K	**Jago River**	**70.81**	**20**	P	**P**	**22 58 09.2**	**+0.7**
C27K				IAmb	IAmb	22 58 28.9	
	comp=Z,6.4nm,1.3s						
BMAR	**Burnt Mountain**	**71.61**	**22**	P	**P**	**22 58 14.0**	**+0.5**
ILAR	**Eielson Array**	**72.07**	**25**	P	**P**	**22 58 15.6**	**-0.6**
ILAR	**Eielson Array**	**72.07**	**25**	P	**P**	**22 58 16.6**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=309,slow=5.2,SNR=7.1						
	comp=Z,0.6nm,0.9s						

*THR **09** 22:48:52.8±0.0,37˚.73N×47˚.46E,h14km±7km,ML3.8*
*TEH **09** 22:48:52.0,37˚.68N×47˚.48E,h7km±28km*
ISC 09 22:48:52.3±0.8,37˚.78N±0˚.03×47˚.44E±0˚.04,h10km,n48, σ1§70/55,Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHSH	**Hashtrud**	**0.49**	**197**	Pg	**Pg**	**22 48 59.9**	**-2.0**
IHSH				Sg	**Sg**	**22 49 06.0**	**-2.4**
IHRS	**Heris**	**0.62**	**330**	Pg	**Pb**	**22 49 05.5**	**+0.1**
GRMI	**Germi**	**1.09**	**19**	Pg	**Pb**	**22 49 14.0**	**+0.7**
GRMI	**Germi**	**1.09**	**19**	*e*Pg	**Pb**	**22 49 13.9**	**+0.6**
GRMI				IAML		22 49 36.6	
	comp=Z,1μm,1.0s						
ITBZ	**Tabriz**	**1.12**	**295**	Pg	**Pb**	**22 49 13.9**	**+0.1**
ITBZ				Sg	**Sn**	**22 49 31.1**	**+1.4**
IAZR	**Azarshahr**	**

comp=Z,41nm,1.0s
IHSB Hasanabad 3.87 126 Pn **Pn** **22 49 53.3 +1.3**
DGRG David-gareji 4.00 337 P **Pb** **22 50 05.0 +2.2**
DGRG S **Sg** **22 51 01.1 +0.3**
IQOM Qom 4.14 134 Pn **Pn** **22 49 56.4 +0.5**
LGD Lagodekhi 4.16 348 P **Pb** **22 50 04.3 -1.2**
LGD S **Sg** **22 51 03.8 -1.9**
IPRN Peran 4.21 110 Pn **Pn** **22 49 58.3 +1.7**
IDMV Damavand 4.29 119 Pn **Pn** **22 50 00.4 +2.5**
IVRN Varamin 4.43 127 Pn **Pn** **22 50 01.2 +1.5**
TBLG Delisi 4.46 333 P **Pb** **22 50 12.4 +1.7**
TBLG S **Sg** **22 51 13.5 -2.1**
KHMZ Khomeyn 4.52 152 *e*Pn **Pn** **22 50 03.6 +2.6**
KHMZ IAML 22 51 26.5
comp=Z,20nm,1.0s
GHVR GHOM 4.53 135 *i* P **Pn** **22 50 02.3 +1.3**
GHVR IAML 22 51 26.7
comp=Z,66nm,1.0s
TRLG Trialeti 4.56 327 P **Pb** **22 50 15.2 +2.8**
BGD Bogdanovka 4.58 321 P **Pg** **22 50 17.9 -2.0**
IALA Alasht 4.62 110 Pn **Pn** **22 50 05.0 +2.5**
AKH Akhalkalaki 4.74 321 P **Pg** **22 50 19.6 -3.5**
QAMS Qamsar 5.16 140 Pn **Pn** **22 50 11.1 +1.3**
ISFB Sefidab 5.18 130 Pn **Pn** **22 50 10.9 +1.0**
SHTL Shatili 5.18 341 P **Pb** **22 50 22.3 -0.7**
IGLO Ghaloghah 5.26 102 Pn **Pn** **22 50 12.7 +1.5**
GARIG Gari 5.70 329 P **Pb** **22 50 34.1 +2.3**
IPIR Pirpir 5.81 150 Pn **Pn** **22 50 20.2 +1.4**
JHBN Jahan bin 6.13 153 Pn **Pn** **22 50 24.5 +1.3**
IZEF Zefreh 6.30 139 Pn **Pn** **22 50 26.9 +1.5**
ZNGN Zangian 6.30 153 Pn **Pn** **22 50 27.1 +1.5**
ANAR Anarak 6.87 130 Pn **Pn** **22 50 34.7 +1.5**
YZKH Yazd 7.95 130 *e*Pn **Pn** **22 50 49.7 +1.7**

GCG 09 22:56:14.9±0.5, 14°02'N×91°08'W, h82km±4km, MD3.4, ML3.8, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ESSG	**Sabana Grande**	**0.43**	**34**	*i* P		Pn	22 56 28.6	+0.2
ESSG				*i* S		Sn	22 56 39.3	+0.9
STG2	**El Palmar, Qui**	**0.50**	**325**	*e*S		Sn	22 56 45.8	+6.4
FG16	**Alotenango, Sa**	**0.60**	**66**	*e*P		Pn	22 56 29.4	-0.6
FG16				*i* S		Sn	22 56 41.3	+0.1
FG16				IAML			22 56 43.1	
	comp=N,6μm,0.2s							
PCG5	**San Vicente Pa**	**0.71**	**74**	*e*P		Pn	22 56 29.9	-1.0
APG	**El Apazote**	**1.14**	**31**	*e*P		Pn	22 56 36.8	+0.8

*IDC **09** 23:10:36.2±0.6, 59.°92S×25.°91W, h0km, mb4.2/10, mbtmp4.2/11, ML4.0/1, MS3.7/19, Error ellipse: s-maj=22.1km s-min=17.4km az=31.0*
*NEIC **09** 23:10:36.8±1.3, 60.°00S±0.°08×25.°6W±0.°2, h10km±1km, mb4.8/47, Error ellipse: s-maj=15.6km s-min=12.9km az=246.0*
*GCMT **09** 23:10:43.8±0.4, 60.°28S±0.°05×25.°11W±0.°06, h18km±1km, MW4.8/67, Moment Tensor Solution. s22,c26; s67,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.27±.20; $M_{\theta\theta}$-0.62±.12; $M_{\phi\phi}$-1.65±.12; $M_{r\theta}$0.01±.29; $M_{r\phi}$-0.64±.06; $M_{\theta\phi}$0.48±.26; Best double couple: M_o2.16700×10^{16} NP1:ϕ_s210.00000°, δ39.00000°, λ97.00000°. NP2: ϕ_s21.00000°, δ51.00000°, λ85.00000°. Principal axes: T 2.3300, Plg83.0000°, Azm259.0000°; N -0.3260, Plg4.0000°, Azm25.0000°; P -2.0050, Plg6.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 23:10:37.7±0.4, 59.°99S±0.°08×25.°75W±0.°08, h16km, n94, σ1°20/82, mb4.7/30, MS3.8/18, 7C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HOPE	**Hope Point**	**8.17**	**310**	Pn		**Pn**	**23 12 36.0**	**+0.5**
VNA1	**Neumayer--Stat**	**12.88**	**153**	⇑P		**Pn**	**23 13 38.5**	**-1.3**
	comp=Z,102nm,1.0s							
VNA3	**Neumayer Olymp**	**13.03**	**157**	⇑P		**Pn**	**23 13 39.6**	**-2.3**
	comp=Z,73nm,0.7s							
VNA3				⇑S		Sn	23 15 47.6	-19
	comp=E,27nm,0.6s							
VNA2	**Neumayer--Watz**	**13.28**	**153**	⇑P		Pn	23 13 40.2	-5.0
	comp=Z,16nm,0.5s,baz=316,slow=15							
SNAA	**Sanae**	**14.86**	**151**	⇑P		**Pn**	**23 14 03.2**	**-3.6**
	comp=Z,362nm,0.4s							
SNAA				⇑S		Sn	23 16 37.5	-13
	comp=E,451nm,0.7s							
SNAA	**Sanae**	**14.86**	**151**			**Pn**	**23 14 04.5**	**-2.4**
SNAA	**Sanae**	**14.86**	**151**	Pn		**Pn**	**23 14 04.8**	**-2.0**
	comp=E,5.5nm,0.3s,baz=308,slow=14,SNR=54							
SNAA				Sn		Sn	23 16 36.9	-14
	comp=E,0.6nm,0.3s,baz=94,slow=21,SNR=6.2							
SNAA				LR		LR	23 19 15.0	
	comp=E,108nm,20.6s,baz=12,slow=35							
TROLL	**Troll, Antarti**	**16.41**	**149**	⇑P		**Pn**	**23 14 24.5**	**-2.6**
	comp=Z,581nm,0.6s							
PMSA	**Palmer Station**	**18.17**	**238**	P		**Pn**	**23 14 48.6**	**-0.2**
PMSA	**Palmer Station**	**18.17**	**238**	P		**Pn**	**23 14 47.9**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=242,slow=13,SNR=5.4							
	comp=Z,4.2nm,0.8s							
BELA	**Belgrano 2**	**18.20**	**186**	P		**P**	**23 14 49.6**	**+0.1**
SMAI	**San Martin Ant**	**19.46**	**228**			**Pn**	**23 15 04.7**	**+0.2**
SMAI				IAmb		IAmb	23 15 17.0	
	comp=Z,42nm,1.0s							
EFI	**East Falkland**	**19.79**	**280**	P		**P**	**23 15 07.2**	**+0.3**
EFI				IAmb		IAmb	23 15 19.7	
	comp=Z,66nm,0.9s							
MG01	**Puerto William**	**22.78**	**264**	P		**P**	**23 15 36.8**	**-2.4**
MG02	**Cerro Sombrero**	**24.73**	**268**	P		**P**	**23 15 57.2**	**-0.7**
GO09	**Cerro Castillo**	**27.17**	**268**	P		**P**	**23 16 19.5**	**-0.6**
GO09				IAmb		IAmb	23 16 24.5	
	comp=Z,21nm,1.1s							
AY03	**Cochrane**	**29.88**	**274**	P		**P**	**23 16 45.0**	**+0.9**
QSPA	**South Pole Qui**	**30.25**	**180**	P		**P**	**23 16 46.5**	**-1.0**
QSPA				IAmb		IAmb	23 17 02.4	
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**30.25**	**180**	P		**P**	**23 16 52.0**	**+4.5**
	comp=Z,6.7nm,0.8s,baz=183,slow=3.0,SNR=34							
QSPA				LR		LR	23 28 53.7	
	comp=Z,159nm,18.6s,baz=192,slow=36							
TRQA	**Tornquist**	**31.70**	**297**			**P**	**23 17 00.5**	**+0.1**
TRQA				IAmb		IAmb	23 17 17.2	
	comp=Z,15nm,1.1s							
PLCA	**Paso Flores**	**33.59**	**285**	P		**P**	**23 17 16.9**	**-0.1**
PLCA	**Paso Flores**	**33.59**	**285**	P		**P**	**23 17 16.9**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=151,slow=5.9,SNR=12							
PLCA				LR		LR	23 30 55.1	
	comp=Z,204nm,18.3s,baz=157,slow=36							
	comp=Z,3.0nm,0.7s							
PLTB	**Pedras Altas**	**33.76**	**314**	P		**P**	**23 17 17.7**	**-0.7**
MAW	**Mawson**	**36.57**	**140**	P		**P**	**23 17 43.5**	**+1.3**
	comp=Z,3.3nm,1.0s,baz=252,slow=13,SNR=2.5							
MAW				LR		LR	23 31 20.0	
	comp=Z,213nm,19.1s,baz=261,slow=34							
	comp=Z,3.3nm,1.0s							
BI02	**San Fabin de**	**37.14**	**288**	P		**P**	**23 17 47.8**	**+0.3**
BI02				IAmb		IAmb	23 18 16.7	
	comp=Z,23nm,1.0s							
BI05	**Punta Hualpn**	**38.00**	**286**	P		**P**	**23 17 55.1**	**+0.5**
BO02	**Sierra Bellavi**	**38.42**	**290**	P		**P**	**23 17 58.8**	**+0.4**
BO01	**Tunca**	**38.90**	**291**			**P**	**23 18 02.5**	**+0.3**
BO04	**La Punta**	**39.00**	**291**	P		**P**	**23 18 03.6**	**+0.4**
BO04				IAmb		IAmb	23 18 20.3	
	comp=Z,15nm,0.8s							
MT08	**Bocatoma Ro**	**39.18**	**293**	P		**P**	**23 18 05.8**	**+1.0**
MT08				IAmb		IAmb	23 18 08.3	
	comp=Z,15nm,0.8s							
MT03	**Universidad Ad**	**39.37**	**292**	P		**P**	**23 18 06.5**	**+0.2**
MT03				IAmb		IAmb	23 18 28.5	
	comp=Z,29nm,0.8s							
MT16	**CCHEN**	**39.43**	**292**			**P**	**23 18 07.2**	**+0.5**
PEL	**Peldehue**	**39.74**	**292**			**P**	**23 18 10.1**	**+0.8**
VA03	**San Esteban**	**39.99**	**293**	P		**P**	**23 18 11.6**	**+0.1**
VA03				IAmb		IAmb	23 18 23.9	
	comp=Z,26nm,0.8s							
CPUP	**Villa Florida**	**40.03**	**313**	P		**P**	**23 18 10.4**	**-1.3**
CPUP	**Villa Florida**	**40.03**	**313**	P		**P**	**23 18 11.2**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=359,slow=8.5,SNR=4.5							
CPUP				LR		LR	23 35 27.8	
	comp=Z,27nm,19.0s,baz=12,slow=37							
	comp=Z,0.6nm,0.7s							

ZON	**Zonda**	**40.15**	**296**			**P**	**23 18 12.8**	**0.0**
SBA	**Scott Base**	**42.19**	**184**	P		**P**	**23 18 27.7**	**-1.2**
GO04	**Tololo Observa**	**42.28**	**294**			**P**	**23 18 30.9**	**+0.3**
GO04				IAmb		IAmb	23 18 33.4	
	comp=Z,15nm,0.8s							
VNDA	**Vanda**	**42.66**	**182**			**P**	**23 18 33.0**	**+0.2**
VNDA	**Vanda**	**42.66**	**182**	P		**P**	**23 18 35.3**	**+2.5**
	comp=Z,2.7nm,0.8s,baz=190,slow=5.9,SNR=9.7							
VNDA				LR		LR	23 35 22.7	
	comp=Z,69nm,18.9s,baz=166,slow=35							
	comp=Z,2.7nm,0.8s							
LCO	**Las Campanas**	**43.22**	**295**			**P**	**23 18 38.1**	**-0.1**
LCO				IAmb		IAmb	23 18 42.0	
	comp=Z,12nm,0.8s							
AC02	**Maricunga**	**44.39**	**299**			**P**	**23 18 48.0**	**+0.2**
AC02				IAmb		IAmb	23 18 51.2	
	comp=Z,8.4nm,0.8s							
BOSA	**Boshof**	**46.38**	**71**	P		**P**	**23 19 02.2**	**-1.0**
BOSA	**Boshof**	**46.38**	**71**	P		**P**	**23 19 03.8**	**+0.6**
	comp=Z,4.2nm,1.0s,baz=196,slow=9.3,SNR=5.3							
BOSA				LR		LR	23 34 32.9	
	comp=Z,94nm,18.6s,baz=203,slow=31							
	comp=Z,4.2nm,1.0s							
BDFB	**Brasilia**	**47.17**	**330**	P		**P**	**23 19 08.2**	**-1.3**
BDFB				IAmb		IAmb	23 19 57.7	
	comp=Z,6.3nm,1.1s							
BDFB	**Brasilia**	**47.17**	**330**	P		**P**	**23 19 09.5**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=134,slow=4.8,SNR=5.6							
BDFB				LR		LR	23 38 10.5	
	comp=Z,133nm,18.7s,baz=115,slow=35							
	comp=Z,1.8nm,0.5s							
LBTB	**Lobatse**	**49.58**	**69**	P		**P**	**23 19 26.3**	**-1.6**
LBTB	**Lobatse**	**49.58**	**69**	P		**P**	**23 19 28.8**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=227,slow=6.5,SNR=4.5							
LBTB				LR		LR	23 36 55.7	
	comp=Z,104nm,18.4s,baz=223,slow=32							
	comp=Z,2.6nm,0.8s							
PB01	**IPOC Station P**	**49.62**	**302**	P		**P**	**23 19 28.5**	**+0.3**
PB01				IAmb		IAmb	23 19 41.5	
	comp=Z,11nm,0.9s							
KGCAE	**Kacgae**	**49.88**	**64**	P		**P**	**23 19 28.9**	**-1.4**
KGCAE				IAmb		IAmb	23 19 57.8	
	comp=Z,16nm,1.1s							
CASY	**Casey**	**49.94**	**159**	P		**P**	**23 19 29.8**	**-0.2**
PTLB	**Pontes e Lacer**	**50.69**	**317**	P		**P**	**23 19 35.4**	**-0.8**
PTLB				IAmb		IAmb	23 19 37.4	
	comp=Z,5.9nm,0.7s							
GO01	**Chusmiza**	**50.72**	**303**	P		**P**	**23 19 36.9**	**-0.2**
SIV	**San Ignacio**	**50.87**	**314**	LR		LR	23 42 08.4	
	comp=Z,48nm,19.3s,baz=105,slow=37							
QNGWA	**Qangwa**	**52.34**	**60**	P		**P**	**23 19 48.3**	**-0.5**
QNGWA				IAmb		IAmb	23 20 48.2	
	comp=Z,22nm,1.6s							
MREMI	**Moremi**	**52.54**	**69**	P		**P**	**23 19 50.1**	**-0.1**
MREMI				IAmb		IAmb	23 19 57.3	
	comp=Z,14nm,1.1s							
LPAZ	**La Paz**	**53.30**	**306**	P		**P**	**23 19 56.6**	**+0.1**
LPAZ	**La Paz**	**53.30**	**306**	P		**P**	**23 19 56.5**	**0.0**
	comp=Z,2.9nm,0.5s,baz=116,slow=5.4,SNR=16							
LPAZ				LR		LR	23 42 52.7	
	comp=Z,60nm,20.5s,baz=142,slow=36							
	comp=Z,2.9nm,0.5s							
VILB	**Vilhena**	**53.37**	**317**	P		**P**	**23 19 54.9**	**-1.4**
VILB				IAmb		IAmb	23 19 56.5	
	comp=Z,9.9nm,0.7s							
LSZ	**Lusaka**	**59.21**	**65**	LR		LR	23 42 05.0	
	comp=Z,120nm,21.6s,baz=210,slow=32							
OPO	**Ambohidratompo**	**65.57**	**85**	LR		LR	23 44 44.3	
	comp=Z,59nm,19.4s,baz=354,slow=31							
BOAV	**Boa Vista**	**67.87**	**322**	P		**P**	**23 21 33.7**	**-1.4**
BOAV				IAmb		IAmb	23 22 14.5	
	comp=Z,22nm,1.8s							
MDP	**Montagnes des**	**68.27**	**331**	LR		LR	23 50 17.5	
	comp=Z,42nm,18.5s,baz=137,slow=35							
COHC	**Cochancay**	**70.39**	**302**			**P**	**23 21 51.5**	**+0.7**
OTAV	**Otavalo**	**72.48**	**303**	P		**P**	**23 22 03.8**	**-0.1**
OTAV				IAmb		IAmb	23 22 29.3	
	comp=Z,8.6nm,1.2s							
ROSC	**El Rosal**	**74.99**	**309**	LR		LR	23 59 32.1	
	comp=Z,40nm,18.0s,baz=54,slow=39							
TORD	**Torodi Ar. Bea**	**76.17**	**28**	P		**P**	**23 22 24.2**	**-0.5**
TORD				IAmb		IAmb	23 22 31.6	
	comp=Z,26nm,1.9s							
TORD	**Torodi Ar. Bea**	**76.17**	**28**	P		**P**	**23 22 26.6**	**+1.9**
	comp=Z,3.2nm,0.8s,baz=191,slow=5.3,SNR=8.8							
	comp=Z,3.2nm,0.8s							
BAUV	**El Baul**	**76.48**	**317**	P		**P**	**23 22 25.7**	**-0.9**
SDV	**Santo Domingo**	**77.33**	**314**			**P**	**23 22 31.0**	**-0.6**
SDV				IAmb		IAmb	23 22 33.0	
	comp=Z,7.2nm,0.8s							
SDV	**Santo Domingo**	**77.33**	**314**	LR		LR	23 56 46.8	
	comp=Z,78nm,21.3s,baz=136,slow=36							
JTS	**Las Juntas de**	**84.27**	**302**	LR		LR	00 03 00.7	
	comp=Z,29nm,19.0s,baz=114,slow=37							
FURI	**Furi**	**85.32**	**63**	LR		LR	23 58 34.7	
	comp=Z,67nm,18.6s,baz=179,slow=34							
PPT2	**Papeete2**	**90.41**	**232**	*e*LR		LR	23 52 26.8	
	comp=Z,60nm,24.5s							
PPT2				*e*LR		LR	23 52 37.0	
	comp=Z,111nm,26.8s							
TAOE	**Nuku Hiva Isla**	**94.18**	**244**	*e*LR		LR	23 54 11.6	
	comp=Z,201nm,23.9s							
ASAR	**Alice Springs**	**94.99**	**161**			**P**	**23 23 58.4**	**-1.0**
ASAR	**Alice Springs**	**94.99**	**161**	P		**P**	**23 23 59.5**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=186,slow=4.6,SNR=11							
ASAR				LR		LR	00 03 53.9	
	comp=Z,82nm,20.6s,baz=253,slow=34							
	comp=Z,0.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**122.93**	**112**	PKP		**PKiKP**	**23 29 34.0**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=217,slow=4.0,SNR=4.3							
PDAR	**Pinedale Array**	**123.02**	**299**			**PKPdf**	**23 29 32.8**	**+0.2**
PDAR	**Pinedale Array**	**123.02**	**299**	PKP		**PKPdf**	**23 29 32.6**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=133,slow=6.5,SNR=5.4							
NVAR	**Mina Array Bea**	**123.55**	**290**	PKP		**PKiKP**	**23 29 36.3**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=250,slow=3.9,SNR=2.9							
FINES	**FINESS Array B**	**127.51**	**28**	PKP		**PKiKP**	**23 29 41.0**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=239,slow=1.1,SNR=6.3							
KURBB	**Kurchatov Arra**	**138.19**	**68**	PKP		**PKiKP**	**23 30 02.5**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=234,slow=2.9,SNR=4.6							
YKA	**Yellowknife Ar**	**139.55**	**314**			**PKPdf**	**23 30 03.4**	**+0.6**
YKA	**Yellowknife Ar**	**139.55**	**314**	PKP		**PKPdf**	**23 30 04.2**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=135,slow=1.6,SNR=7.7							
ZALV	**Zalesovo Beam**	**143.29**	**68**	PKhKP		PKPpre	23 30 06.9	
	comp=Z,0.4nm,0.5s,baz=270,slow=2.9,SNR=3.5							
SONM	**Songino Array**	**150.01**	**92**			**PKPbc**	**23 30 27.0**	**+0.6**
SONM	**Songino Array**	**150.01**	**92**	PKPbc		**PKiKP**	**23 30 27.7**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=207,slow=2.6,SNR=12							
NRIK	**Noril'sk**	**151.50**	**43**	PKPbc		**PKiKP**	**23 30 29.8**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=207,slow=4.5,SNR=5.7							
KSAR	**Wonju Array Be**	**151.86**	**131**	PKPbc		**PKiKP**	**23 30 31.8**	**+0.5**
KSRS	**Korea Array**	**151.89**	**132**	PKPbc		**PKiKP**	**23 30 32.1**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=177,slow=3.3,SNR=4.1							
ILAR	**Eielson Array**	**153.18**	**306**			**PKPbc**	**23 30 33.2**	**+0.2**
ILAR	**Eielson Array**	**153.18**	**306**	PKPbc		**PKiKP**	**23 30 34.2**	**+1.1**
	comp=Z,2.4nm,0.8s,baz=161,slow=1.3,SNR=24							

RSNC 09 23:44:44.6±0.0, 5°N±1°×7°4W±°, h138km±1km, M2.3, mb3.4, mB5.0, ML2.2, Mw(mB)4.3, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SPBC	**San Pablo de B**	**0.36**	**308**	P		Pn	23 45 03.5	-0.5
SPBC				S		Sn	23 45 18.0	-0.7
ROSC	**El Rosal**	**0.79**	**222**	P		Pn	23 45 07.2	+0.3
ROSC				S		Sn	23 45 24.4	+0.5
CHIC	**Chingaza**	**0.80**	**176**	P		Pn	23 45 06.3	-0.8
CHIC				S		Sn	23 45 23.3	-0.8
RUSC	**La Rusia**	**0.84**	**57**	P		Pn	23 45 07.1	-0.3
RUSC				S		Sn	23 45 24.4	-0.3
CVER	**Cruz Verde, Cu**	**0.95**	**197**	P		Pn	23 45 08.5	+0.2
CVER				S		Sn	23 45 26.4	+0.1
PTBC	**PUERTO BERRIO,**	**1.29**	**329**	P		Pn	23 45 09.6	-1.4
PTBC				S		Sn	23 45 30.9	-0.3
BARC	**Barichara**	**1.30**	**28**	P		Pn	23 45 10.8	-0.7
BARC				S		Sn	23 45 31.4	-0.5
BRJC	**Barrancabermej**	**1.53**	**2**	P		Pn	23 45 13.4	-0.3
BRJC				S		Sn	23 45 36.1	+0.2
GUY2C	**Guyana, Caldas**	**1.58**	**263**	P		Pn	23 45 14.5	-0.2
GUY2C				S		Sn	23 45 38.0	+0.5
RECRC	**Villamaria, Ca**	**1.62**	**253**	P		Pn	23 45 15.2	0.0
RECRC				S		Sn	23 45 39.1	+0.6
HELC	**Santa Helena**	**1.89**	**294**	P		Pn	23 45 17.8	-0.3
HELC				S		Sn	23 45 43.3	-0.3
PRAC	**Prado**	**2.02**	**213**	P		Pn	23 45 18.3	-1.1
PRAC				S		Sn	23 45 45.0	-1.1

ORTC	**Ortega, Tolima**	**2.10**	**224**	P		Pn	23 45 19.1	-1.1
ORTC				S		Sn	23 45 47.2	-0.4
PAMC	**Pamplona, Colo**	**2.19**	**30**	P		Pn	23 45 21.6	-0.2
PAMC				S		Sn	23 45 49.9	-0.3
URMC	**La Uribe, Meta**	**2.25**	**195**	P		Pn	23 45 21.7	-0.4
URMC				S		Sn	23 45 50.8	-0.2
CBOC	**Ciudad Bolivar**	**2.25**	**281**	P		Pn	23 45 20.9	-1.4
CBOC				S		Sn	23 45 50.6	-0.6
OCAC	**Ocana**	**2.83**	**9**	P		Pn	23 45 28.9	-0.6
OCAC				S		Sn	23 46 04.3	+0.2
UREC	**San Jos de Ur**	**2.88**	**323**	P		Pn	23 45 27.5	-2.6
UREC				S		Sn	23 46 02.3	-2.8
SJCC	**San Jacinto, C**	**4.65**	**343**	P		Pn	23 45 50.8	-2.4
SJCC				S		Sn	23 46 41.4	-5.2
CRJC	**Cerrejon, Guaj**	**5.63**	**9**	P		Pn	23 46 04.8	-1.5
URIC	**Uribia, Colomb**	**6.48**	**16**	P		Pn	23 46 14.5	-3.2

*ISK **09** 23:44:54.9, 39.°63N×28.°66E, h5km, ML3.6/49*
*AFAD **09** 23:44:55.2, 39.°63N×28.°62E, h7km±2km, ML3.3*
*THE **09** 23:44:57.3, 40.°N±6.°×2.°9E±1.°0, h52km±28km, M3.2/11, MLh3.2/11*
*SOF **09** 23:44:58.7, 39.°90N±0.°02×28.°47E±0.°01, h10km±3km, MD3.5/5*

ISC 09 23:44:55.6±0.9, 39°63'N±0.°02×28°64'E±0.°02, h5km±6km, n122, σ0°65/147, 16C-13D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DST	**Dursunbey**	**0.03**	**213**	Pg		**Pg**	**23 44 56.6**	**-0.1**
DST				Sg		**Sg**	**23 44 57.4**	**-0.1**
DURS	**Dursunbey**	**0.13**	**258**	P		**Pg**	**23 44 58.4**	**+0.1**
DURS				S		**Sg**	**23 45 00.1**	**0.0**
ORLT	**Orhaneli**	**0.46**	**25**	Pg		**Pg**	**23 45 04.3**	**-0.2**
ORLT				Sg		**Sg**	**23 45 11.1**	**+0.5**
BKES	**Balkesir-Mer**	**0.56**	**281**	P		**Pg**	**23 45 06.1**	**-0.2**
BKES				S		**Sg**	**23 45 12.9**	**-0.6**
BKES				*i* IAML			23 45 14.0	
	comp=E,3μm,0.2s							
BLKS	**Balkesir-Sus**	**0.57**	**296**	P		**Pg**	**23 45 06.3**	**-0.3**
BLKS				S		**Sg**	**23 45 12.9**	**-1.2**
EMET	**Ktahya-Emet**	**0.58**	**115**	P		**Pg**	**23 45 06.7**	**-0.1**
DEMI	**Demirci**	**0.59**	**174**	P		**Pg**	**23 45 07.0**	**+0.2**
SMAA	**Simav-Kutahya**	**0.59**	**153**	Pg		**Pg**	**23 45 07.2**	**+0.3**
SMAA				Sg		**Sg**	**23 45 14.6**	**0.0**
SIMA	**Simav-Kutahya**	**0.60**	**154**	Pg		**Pg**	**23 45 07.2**	**0.0**
SIMA				Sg		**Sg**	**23 45 15.4**	**+0.3**
ULDT	**Uludag**	**0.64**	**36**	P		**Pg**	**23 45 07.3**	**-0.7**
ULDT				S		**Sg**	**23 45 15.1**	**-1.2**
TVSB	**Tavsanli**	**0.66**	**105**	Pg		**Pg**	**23 45 07.7**	**-0.6**
TVSB				Sg		**Sg**	**23 45 16.6**	**-0.3**
KCTX	**Karacabey (Bur**	**0.67**	**341**	Pg		**Pg**	**23 45 08.4**	**-0.1**
YYLC	**Yaylacik**	**0.69**	**11**	P		**Pg**	**23 45 08.6**	**-0.2**
SHAP	**Saphane-Kutahy**	**0.75**	**143**	Pg		**Pg**	**23 45 10.0**	**-0.1**
STEP	**BALIKESIR_Sava**	**0.76**	**251**	P		**Pg**	**23 45 09.6**	**-0.4**
STEP				S		**Sg**	**23 45 18.7**	**-1.2**
STEP				*i* IAML			23 45 21.0	
	comp=E,1μm,0.6s							
MDNY	**Mudanya-Bursa**	**0.77**	**14**	Pg		**Pg**	**23 45 09.7**	**-0.6**
AVDN	**Avdancik/Bursa**	**0.78**	**31**	P		**Pg**	**23 45 10.1**	**-0.5**
BALY	**Balya**	**0.79**	**279**	P		**Pg**	**23 45 10.8**	**0.0**
BALY				S		**Sg**	**23 45 20.1**	**-1.1**
BALY				*i* IAML			23 45 25.0	
	comp=N,857nm,0.9s							
GORD	**Gordes-Manisa**	**0.80**	**207**	Pg		**Pg**	**23 45 10.9**	**-0.1**
DOMA	**Ktahya-Doman**	**0.83**	**79**	P		**Pg**	**23 45 11.0**	**-0.5**
GEDZ	**Gediz**	**0.83**	**134**	Pg		**Pg**	**23 45 11.7**	**+0.1**
BAND	**Balkesir-Ban**	**0.84**	**331**	P		**Pg**	**23 45 11.2**	**-0.5**
GONE	**Gonen-Balikesi**	**0.84**	**300**	Pg		**Pg**	**23 45 11.4**	**-0.4**
GDZ	**Gediz**	**0.85**	**129**	P		**Pg**	**23 45 11.5**	**-0.3**
EDC	**Edincik**	**0.93**	**321**	Pg		**Pg**	**23 45 13.1**	**-0.4**
ARMT	**Armutlu**	**0.95**	**10**	Pg		**Pg**	**23 45 13.8**	**-0.1**
SOMA	**Soma-

ELND	**Elena**	**3.90**	**329**	⇓P	**Pn**	**23 45 55.9**	**-0.2**
LOZB	**Loznitsa**	**4.04**	**338**	⇑P	**Pn**	**23 45 57.3**	**-0.8**
SRS	**Serrai**	**4.13**	**293**	P	**Pn**	**23 45 59.4**	**0.0**
SZH	**Strazhitsa**	**4.15**	**332**	P	**Pn**	**23 45 59.1**	**-0.5**
SZH	**Strazhitsa**	**4.15**	**332**	*i* P	**Pn**	**23 45 59.9**	**+0.3**
MMB	**Musomishta**	**4.19**	**299**	P	**Pn**	**23 46 00.5**	**+0.4**
PLVB	**Pleven**	**4.82**	**323**	⇑P	**Pn**	**23 46 08.9**	**+0.2**
TIRR	**Tirgusor**	**4.83**	**358**	⇑P	**Pn**	**23 46 08.0**	**-0.9**
HARR	**Harsova**	**5.09**	**354**	⇓P	**Pn**	**23 46 12.8**	**+0.4**
ANX	**Ano Chora**	**5.33**	**261**	P	**Pn**	**23 46 16.9**	**+1.1**
TLCR		**5.56**	**1**	⇓P	**Pn**	**23 46 19.4**	**+0.5**
BLKB	**Belogradchik**	**5.99**	**314**	⇓P	**Pn**	**23 46 24.6**	**-0.3**
MLR	**Muntele Rosu**	**6.19**	**342**	⇑P	**Pn**	**23 46 27.7**	**0.0**
VLDR	**Vladesti**	**6.23**	**356**	⇑P	**Pn**	**23 46 27.5**	**-0.6**
VOIR		**6.38**	**337**	⇑P	**Pn**	**23 46 30.1**	**-0.2**
PLOR	**Plostina**	**6.39**	**347**	⇑P	**Pn**	**23 46 30.6**	**+0.3**
VRI	**Vrincioaia**	**6.39**	**348**	⇑P	**Pn**	**23 46 30.8**	**+0.4**
TURR	**Turia**	**6.71**	**344**	⇓P	**Pn**	**23 46 35.5**	**+0.8**
DOPR	**Dopca**	**6.77**	**340**	⇓P	**Pn**	**23 46 36.0**	**+0.4**
HERR	**Herculane**	**6.99**	**321**	⇑P	**Pn**	**23 46 37.5**	**-1.0**
GZR	**Gura Zlata**	**7.21**	**325**	⇓P	**Pn**	**23 46 41.3**	**-0.3**
MDVR	**Moldovita**	**7.28**	**317**	⇑P	**Pn**	**23 46 42.0**	**-0.5**
SORM	**Soroca**	**8.51**	**359**	⇓P	**Pn**	**23 46 59.8**	**+0.5**

*IDC **09** 23:55:28.4±1.1,23˚52N×46˚25W,h0km,mb3.8/11, mbtmp3.8/11,MS3.3/13,Error ellipse: s-maj=32.1km s-min=22.7km az=161.0*

ISC 09 23:55:30.0±0.9,23˚5N±0˚2×46˚2W±0˚1,h10km,n26, σ1§11/11,mb3.8/10,MS3.3/11,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**19.33**	**200**	LR	LR	00 05 38.1	
	comp=Z,54nm,20.7s,baz=42,slow=32						
SJG	**San Juan**	**19.38**	**258**	LR	LR	00 06 56.6	
	comp=Z,48nm,19.5s,baz=64,slow=36						
SDV	**Santo Domingo**	**27.52**	**242**	LR	LR	00 10 52.0	
	comp=Z,54nm,21.1s,baz=56,slow=34						
ROSC	**El Rosal**	**32.85**	**240**	LR	LR	00 15 41.5	
	comp=Z,57nm,18.3s,baz=39,slow=37						
SADO	**Sadowa**	**34.17**	**316**	LR	LR	00 13 58.6	
	comp=Z,50nm,21.9s,baz=148,slow=32						
BDFB	**Brasilia**	**38.96**	**183**	LR	LR	00 18 05.0	
	comp=Z,33nm,20.6s,baz=48,slow=35						
JTS	**Las Juntas de**	**39.19**	**257**	LR	LR	00 17 15.8	
	comp=Z,19nm,18.5s,baz=64,slow=33						
H10N2	**ASCENSION HYDR**	**43.96**	**131**	T	T	00 49 34.5	
	baz=317,slow=74,SNR=239						
H10N3	**ASCENSION HYDR**	**43.96**	**131**	T	T	00 49 37.5	
	baz=317,slow=74,SNR=237						
H10N1	**ASCENSION HYDR**	**43.98**	**131**	T	T	00 49 40.1	
	baz=317,slow=74,SNR=295						
H10S3	**ASCENSION HYDR**	**44.65**	**133**	T	T	00 50 29.9	
	baz=316,slow=74,SNR=516						
H10S2	**ASCENSION HYDR**	**44.67**	**133**	T	T	00 50 31.1	
	baz=264,slow=74,SNR=388						
LPAZ	**La Paz**	**44.99**	**210**	P	**P**	**00 03 46.5**	**+0.1**
	0.6nm,0.6s,baz=4.9,slow=9.3,SNR=1.4						
LPAZ				LR	LR	00 21 50.0	
	comp=Z,64nm,20.6s,baz=7.0,slow=35 0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**46.45**	**94**	P	**P**	**00 03 57.7**	**+0.3**
	0.7nm,0.8s,baz=310,slow=5.7,SNR=4.3 0.7nm,0.8s						
ULM	**Lac du Bonnet**	**46.70**	**318**	LR	LR	00 20 26.9	
	comp=Z,48nm,20.3s,baz=101,slow=32						
CPUP	**Villa Florida**	**50.71**	**193**	LR	LR	00 24 22.8	
	comp=Z,8.4nm,20.2s,baz=226,slow=34						
TXAR	**Lajitas Array**	**51.34**	**290**	P	**P**	**00 04 35.1**	**+0.2**
	0.2nm,0.7s,baz=93,slow=10,SNR=2.5 0.2nm,0.7s						
NOA	**NORSAR Array B**	**54.05**	**30**	P	**P**	**00 04 54.9**	**+0.5**
	0.8nm,0.8s,baz=254,slow=7.5,SNR=2.5						
NOA				LR	LR	00 23 18.3	
	comp=Z,74nm,18.4s,baz=250,slow=31 0.8nm,0.8s						
HFS	**Hagfors**	**54.98**	**32**	P	**P**	**00 05 01.6**	**+0.5**
	1.3nm,0.7s,baz=231,slow=9.1,SNR=4.6						
HFS				LR	LR	00 22 47.8	
	comp=Z,80nm,20.4s,baz=258,slow=30 1.3nm,0.7s						
PDAR	**Pinedale Array**	**55.12**	**307**	P	**P**	**00 05 03.3**	**+0.5**
	0.4nm,0.8s,baz=102,slow=6.0,SNR=3.5 0.4nm,0.8s						
FINES	**FINESS Array B**	**61.17**	**31**	P	**P**	**00 05 46.0**	**+1.5**
	5.3nm,1.1s,baz=254,slow=5.1,SNR=5.1 5.3nm,1.1s						
ARCES	**ARCESS Array B**	**61.79**	**22**	P	**P**	**00 05 49.8**	**+1.2**
	1.9nm,0.7s,baz=259,slow=7.7,SNR=8.6 1.9nm,0.7s						
AKASG	**Malin Array Be**	**63.07**	**44**	P	**P**	**00 05 55.8**	**-1.6**
	0.2nm,0.3s,baz=282,slow=5.8,SNR=2.1 0.2nm,0.3s						
BRTR	**Keskin Array B**	**67.84**	**55**	P	**P**	**00 06 28.2**	**-0.5**
	0.8nm,0.8s,baz=290,slow=5.1,SNR=4.0 0.8nm,0.8s						
ILAR	**Eielson Array**	**73.40**	**334**	P	**P**	**00 07 00.5**	**-1.5**
	0.7nm,0.8s,baz=69,slow=5.3,SNR=8.5 0.7nm,0.8s						
ARTI	**Arti**	**78.40**	**33**	LR	LR	00 38 12.7	
	comp=Z,107nm,18.1s,baz=288,slow=33						

*IDC **10** 00:13:15.2±0.9,23˚91N×121˚92E,h0km,mb3.6/10, mbtmp3.7/12,ML3.6/2,MS2.5/1,Error ellipse: s-maj=26.5km s-min=18.1km az=66.0*

*JMA **10** 00:13:20.4±0.1,23˚9N±0˚6×122˚0E±0˚8,h25km±3km, MV4.0/16,TAIWAN REGION*

*TAP **10** 00:13:21.2,23˚94N×121˚92E,h38km,ML4.5,C*

ISC 10 00:13:20.6±0.8,23˚90N±0˚02×121˚98E±0˚02,h38km±1km, n196,σ1§66/325,mb3.6/10,15C-61D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.35**	**282**	⇓*i*P	**Pn**	**00 13 29.3**	**+0.2**
HWA				S	**Sn**	**00 13 36.2**	**+0.3**
TEYL	**Yanliau Villag**	**0.35**	**264**	⇓*i*P	**Pn**	**00 13 29.4**	**+0.3**
TEYL				S	**Sn**	**00 13 35.9**	**+0.1**
TWD	**Chiawan**	**0.39**	**297**	⇓*i*P	**Pn**	**00 13 29.4**	**-0.2**
TWD				S	**Sn**	**00 13 35.3**	**-1.0**
SHUL	**Shoufeng**	**0.40**	**253**	⇓*i*P	**Pn**	**00 13 30.1**	**+0.5**
SHUL				S	**Sn**	**00 13 36.8**	**+0.4**
ETL	**Fush Village**	**0.41**	**308**	⇓*i*P	**Pn**	**00 13 29.6**	**-0.3**
ETL				S	**Sn**	**00 13 36.2**	**-0.6**
NACB	**Ninganchiao**	**0.44**	**308**	P	**Pn**	**00 13 30.1**	**-0.2**
NACB	**Ninganchiao**	**0.44**	**308**	S	**Sn**	**00 13 36.6**	**-0.7**
NACB	**Ninganchiao**	**0.44**	**308**	⇓*i*P	**Pn**	**00 13 29.9**	**-0.4**
NACB				S	**Sn**	**00 13 36.2**	**-1.2**
TEGC	**Jichi Village**	**0.45**	**244**	⇓*i*P	**Pn**	**00 13 30.8**	**+0.4**
TEGC				S	**Sn**	**00 13 37.9**	**+0.6**
ETM	**Tongmen**	**0.45**	**278**	⇓*i*P	**Pn**	**00 13 30.2**	**-0.2**
ETM				S	**Sn**	**00 13 37.0**	**-0.5**
EHP	**Heping Village**	**0.46**	**332**	P	**Pn**	**00 13 30.5**	**-0.1**
EHP				S	**Sn**	**00 13 37.3**	**-0.5**
EAHA	**Aohua**	**0.48**	**333**	⇓*i*P	**Pn**	**00 13 30.7**	**-0.1**
EAHA				S	**Sn**	**00 13 38.1**	**0.0**
ESL	**Shilin**	**0.51**	**260**	⇓*i*P	**Pn**	**00 13 30.9**	**-0.5**
ESL				S	**Sn**	**00 13 38.4**	**-0.5**
LXIB	**Xiulin Townshi**	**0.53**	**283**	⇓*i*P	**Pn**	**00 13 31.4**	**-0.5**
LXIB				S	**Sn**	**00 13 38.8**	**-0.9**
ETLH	**Xiulin Townshi**	**0.55**	**304**	⇓*i*P	**Pn**	**00 13 31.6**	**-0.5**
ETLH				S	**Sn**	**00 13 39.4**	**-0.6**
EGFH	**Guangfu**	**0.56**	**245**	*e*P	**Pn**	**00 13 31.9**	**-0.3**
EGFH				S	**Sn**	**00 13 40.2**	**+0.1**
ENA	**Nanau**	**0.57**	**337**	⇓*i*P	**Pn**	**00 13 32.1**	**-0.2**
ENA				S	**Sn**	**00 13 40.3**	**-0.1**
EWUT	**Wuta**	**0.57**	**341**	⇓*i*P	**Pn**	**00 13 32.3**	**-0.1**
EWUT				*i* S	**Sn**	**00 13 40.5**	**0.0**
WARBT	**Fenglin Townsh**	**0.57**	**251**	⇓*i*P	**Pn**	**00 13 31.9**	**-0.5**
WARBT				S	**Sn**	**00 13 39.9**	**-0.7**
HGSD	**Ruisui**	**0.65**	**231**	⇑*i*P	**Pn**	**00 13 33.3**	**-0.2**
ESAO	**Su ao**	**0.68**	**350**	*e*P	**Pn**	**00 13 34.4**	**+0.6**
ESAO				S	**Sn**	**00 13 44.1**	**+0.9**
WHF	**Hehuan Shan**	**0.70**	**290**	⇓*i*P	**Pn**	**00 13 33.9**	**-0.5**
WHF				S	**Sn**	**00 13 43.5**	**-0.6**
EHYH	**Wanrong**	**0.71**	**235**	P	**Pn**	**00 13 34.2**	**0.0**
TWC	**Suao**	**0.71**	**350**	⇓*i*P	**Pn**	**00 13 34.5**	**+0.3**
TWC				S	**Sn**	**00 13 44.3**	**+0.4**
EHY	**Hungye**	**0.72**	**237**	⇑*i*P	**Pn**	**00 13 34.1**	**-0.2**
OWD	**Renai**	**0.74**	**274**	⇓*i*P	**Pn**	**00 13 34.3**	**-0.4**
OWD				S	**Sn**	**00 13 43.9**	**-0.8**
LATG	**Datong**	**0.75**	**327**	⇓*i*P	**Pn**	**00 13 34.8**	**0.0**
LATG				S	**Sn**	**00 13 44.7**	**-0.3**
FUSS	**Fushou**	**0.75**	**297**	⇓*i*P	**Pn**	**00 13 35.1**	**+0.1**
FUSS				S	**Sn**	**00 13 45.4**	**+0.2**
NNSB	**Datong**	**0.76**	**314**	⇓*i*P	**Pn**	**00 13 34.9**	**0.0**
NNSB				S	**Sn**	**00 13 44.9**	**-0.2**
ECBN	**Changbin**	**0.76**	**220**	⇑*i*P	**Pn**	**00 13 34.9**	**+0.1**
ECBN				S	**Sn**	**00 13 44.8**	**-0.3**
NDS	**Dongshan**	**0.77**	**342**	⇓*i*P	**Pn**	**00 13 35.3**	**+0.4**
NDS				S	**Sn**	**00 13 45.8**	**+0.6**
NNS	**Nan Shan**	**0.77**	**314**	⇓*i*P	**Pn**	**00 13 35.0**	**-0.1**
NNS				S	**Sn**	**00 13 45.6**	**+0.1**
VWDT	**VWDT**	**0.78**	**259**	⇓*i*P	**Pn**	**00 13 35.6**	**+0.5**
VWDT				S	**Sn**	**00 13 44.9**	**-0.7**
WUSB	**Renai**	**0.79**	**277**	⇓*i*P	**Pn**	**00 13 35.6**	**+0.2**
WUSB				S	**Sn**	**00 13 45.9**	**-0.3**
YULB	**Yu-li**	**0.81**	**231**	P	**Pn**	**00 13 36.1**	**+0.6**
YULB	**Yu-li**	**0.81**	**231**	⇑*i*P	**Pn**	**00 13 35.4**	**-0.1**
YULB				S	**Sn**	**00 13 44.6**	**-1.7**
TWT	**Tachien**	**0.81**	**296**	⇓*i*P	**Pn**	**00 13 36.2**	**+0.5**
TWT				*e*S	**Sn**	**00 13 47.4**	**+0.7**
EYUL	**Yuli**	**0.82**	**228**	*e*P	**Pn**	**00 13 36.2**	**+0.5**
ENTT	**Nioudou**	**0.82**	**333**	⇓*i*P	**Pn**	**00 13 36.0**	**+0.2**
ENTT				S	**Sn**	**00 13 47.0**	**+0.3**
TDCB	**Techi**	**0.83**	**295**	⇓*i*P	**Pn**	**00 13 36.2**	**+0.4**
TDCB				*e*S	**Sn**	**00 13 45.8**	**-1.2**
TWF1	**Yuli**	**0.83**	**229**	⇑*i*P	**Pn**	**00 13 35.9**	**+0.1**
TWF1				*e*S	**Sn**	**00 13 46.4**	**-0.5**
TWE	**Neicheng**	**0.86**	**341**	⇓*i*P	**Pn**	**00 13 36.6**	**+0.4**
TWE				S	**Sn**	**00 13 48.0**	**+0.4**
ILA	**Ilan**	**0.88**	**346**	*e*P	**Pn**	**00 13 37.6**	**+1.1**
ILA				*e*S	**Sn**	**00 13 49.8**	**+1.6**
CHKH	**Chenggong**	**0.89**	**217**	*e*P	**Pn**	**00 13 37.3**	**-0.3**
CHKH				*e*S	**Sn**	**00 13 47.3**	**-1.0**
FUSB	**Fushanzhiwuyua**	**0.92**	**337**	⇓*i*P	**Pn**	**00 13 37.7**	**+0.5**
FUSB				S	**Sn**	**00 13 49.0**	**-0.3**
EGS		**0.94**	**357**	*e*P	**Pn**	**00 13 38.5**	**+1.2**
YHNB	**Yeheng**	**0.94**	**324**	P	**Pn**	**00 13 38.2**	**+0.8**
YHNB	**Yeheng**	**0.94**	**324**	S	**Sn**	**00 13 50.0**	**+0.3**
YHNB	**Yeheng**	**0.94**	**324**	⇓*i*P	**Pn**	**00 13 37.8**	**+0.4**
YHNB				*e*S	**Sn**	**00 13 49.2**	**-0.4**
FULB	**Fuli**	**0.94**	**222**	*e*P	**Pn**	**00 13 36.9**	**-0.4**
SSLB	**Suanglung**	**0.95**	**263**	P	**Pn**	**00 13 38.0**	**+0.6**
SSLB	**Suanglung**	**0.95**	**263**	⇓*i*P	**Pn**	**00 13 37.7**	**+0.3**
SSLB				*e*S	**Sn**	**00 13 49.1**	**-0.6**
NSK	**Sanguang**	**0.95**	**324**	⇓*i*P	**Pn**	**00 13 37.9**	**+0.3**
NSK				*e*S	**Sn**	**00 13 49.6**	**-0.4**
NWLT	**Wulai**	**0.97**	**334**	⇓*i*P	**Pn**	**00 13 38.2**	**+0.5**
NWLT				*e*S	**Sn**	**00 13 50.5**	**+0.1**
CHKT	**Chengkung**	**0.98**	**215**	⇑*i*P	**Pn**	**00 13 37.3**	**-0.5**
CHKT				*e*S	**Sn**	**00 13 49.0**	**-1.4**
SMLT	**Sun Moon Lake**	**0.99**	**269**	⇓*i*P	**Pn**	**00 13 38.7**	**+0.7**
SMLT				*e*S	**Sn**	**00 13 50.8**	**-0.1**
WHP	**Taichung City**	**1.01**	**292**	⇓*i*P	**Pn**	**00 13 39.2**	**+0.8**
WHP				*e*S	**Sn**	**00 13 52.7**	**+1.2**
TYC	**Yuchr**	**1.03**	**270**	⇓*i*P	**Pn**	**00 13 39.1**	**+0.7**
TYC				*e*S	**Sn**	**00 13 52.1**	**+0.5**
YUS	**Yu-Shan**	**1.03**	**247**	⇓P	**Pn**	**00 13 39.6**	**+0.7**
YUS				*e*S	**Sn**	**00 13 52.1**	**-0.2**
EHD	**Haiduan**	**1.03**	**224**	*e*P	**Pn**	**00 13 39.4**	**+0.8**
EHD				*e*S	**Sn**	**00 13 52.0**	**+0.2**
JYNG	**Yonagunijimaku**	**1.04**	**58**	*i* P	**Pn**	**00 13 39.6**	**+1.0**
JYNG				S	**Sn**	**00 13 53.0**	**+1.2**
WHYT	**Xinyi Township**	**1.05**	**259**	P	**Pn**	**00 13 40.0**	**+1.2**
WHYT				S	**Sn**	**00 13 53.5**	**+1.2**
ECS	**Chishang**	**1.06**	**221**	*e*P	**Pn**	**00 13 39.3**	**+0.3**
NFF	**Wufeng Townshi**	**1.07**	**313**	*e*P	**Pn**	**00 13 40.1**	**+1.0**
TIPB	**Shuangxi**	**1.07**	**353**	*e*P	**Pn**	**00 13 40.4**	**+0.9**
TIPB				*e*S	**Sn**	**00 13 54.1**	**+1.3**
YOJ	**Yonaguni jima**	**1.09**	**59**	P	**Pn**	**00 13 41.0**	**+1.6**
YOJ	**Yonaguni jima**	**1.09**	**59**	S	**Sn**	**00 13 54.6**	**+1.3**
YOJ	**Yonaguni jima**	**1.09**	**59**	P	**Pn**	**00 13 41.0**	**+1.6**
YOJ				S	**Sn**	**00 13 54.9**	**+1.6**
YOJ	**Yonaguni jima**	**1.09**	**59**	⇓P	**Pn**	**00 13 40.6**	**+1.2**
YOJ				S	**Sn**	**00 13 54.4**	**+1.1**
TWB1	**Santiao Chiao**	**1.10**	**0**	⇑P	**Pn**	**00 13 40.4**	**+0.9**
TWB1				*e*S	**Sn**	**00 13 53.7**	**+0.3**
EDH	**Donghe**	**1.11**	**214**	*e*P	**Pn**	**00 13 39.5**	**-0.2**
EDH				*e*S	**Sn**	**00 13 52.8**	**-1.0**
TWA	**Mucha**	**1.13**	**342**	⇓*i*P	**Pn**	**00 13 41.2**	**+1.2**
TWA				*e*S	**Sn**	**00 13 56.1**	**+1.8**
NHDH	**Xindian Distri**	**1.13**	**339**	*e*P	**Pn**	**00 13 41.3**	**+1.4**
NHDH				*e*S	**Sn**	**00 13 55.8**	**+1.6**
ELDTW	**Lidau**	**1.13**	**231**	⇑P	**Pn**	**00 13 40.0**	**-0.1**
ELDTW				*e*S	**Sn**	**00 13 54.1**	**-0.3**
KSHI	**Guanxi Townshi**	**1.14**	**320**	⇓P	**Pn**	**00 13 41.4**	**+1.6**
KSHI				*e*S	**Sn**	**00 13 55.9**	**+1.5**
ALS	**Alishan**	**1.15**	**250**	⇓P	**Pn**	**00 13 41.5**	**+1.1**
ALS				*e*S	**Sn**	**00 13 55.4**	**+0.5**
LIOB	**Emei**	**1.15**	**310**	⇓*i*P	**Pn**	**00 13 41.9**	**+1.7**
LIOB				*e*S	**Sn**	**00 13 56.5**	**+1.9**
WJS	**Zhushan**	**1.15**	**266**	⇑P	**Pn**	**00 13 42.2**	**+2.0**
WJS				*e*S	**Sn**	**00 13 57.2**	**+2.5**
NSTT	**Nanjuang**	**1.15**	**309**	⇓*i*P	**Pn**	**00 13 41.8**	**+1.6**
NSTT				S	**Sn**	**00 13 56.0**	**+1.3**
TATO	**Taipei**	**1.16**	**337**	P	**Pn**	**00 13 41.8**	**+1.5**
TATO	**Taipei**	**1.16**	**337**	S	**Sn**	**00 13 56.7**	**+1.9**
NWF	**Wu-fen Shan**	**1.18**	**351**	⇓P	**Pn**	**00 13 42.3**	**+1.7**
NWF				*e*S	**Sn**	**00 13 57.6**	**+2.1**
WFSB	**Wu-fen Shan**	**1.18**	**351**	⇑*i*P	**Pn**	**00 13 42.1**	**+1.6**
WFSB				*e*S	**Sn**	**00 13 57.1**	**+1.8**
WNT	**Mingjian**	**1.19**	**269**	⇓*i*P	**Pn**	**00 13 42.6**	**+1.9**
WNT				*e*S	**Sn**	**00 13 58.0**	**+2.4**
TWQ1	**Liyutan**	**1.19**	**292**	⇓*i*P	**Pn**	**00 13 42.6**	**+2.0**
TWQ1				*e*S	**Sn**	**00 13 57.8**	**+2.2**
SXI1	**Grass Mountain**	**1.19**	**355**	⇑*i*P	**Pn**	**00 13 42.0**	**+1.2**
SXI1				S	**Sn**	**00 13 57.9**	**+2.2**
NHY	**Taipei**	**1.19**	**342**	P	**Pn**	**00 13 42.6**	**+1.9**
NHY				*e*S	**Sn**	**00 13 57.8**	**+2.2**
TCU	**Taichung**	**1.22**	**282**	*e*P	**Pn**	**00 13 43.5**	**+2.4**
TCU				*e*S	**Sn**	**00 13 59.0**	**+2.7**
NSY	**Sanyi**	**1.22**	**295**	⇓*i*P	**Pn**	**00 13 44.1**	**+2.9**
CHN5	**Tsauling**	**1.23**	**256**	⇓P	**Pn**	**00 13 43.0**	**+1.7**
CHN5				*e*S	**Sn**	**00 13 58.4**	**+1.6**
NMLH	**Miaoli**	**1.25**	**300**	*e*P	**Pn**	**00 13 43.6**	**+2.0**
NMLH				*e*S	**Sn**	**00 13 59.8**	**+2.5**
TNOU	**National Taiwa**	**1.25**	**351**	*e*P	**Pn**	**00 13 43.2**	**+1.6**
TNOU				*e*S	**Sn**	**00 13 58.7**	**+1.4**
LONT	**Longtian**	**1.26**	**218**	*e*P	**Pn**	**00 13 41.6**	**-0.1**
LONT				*e*S	**Sn**	**00 13 57.4**	**0.0**
SBSB	**Hsinchu**	**1.27**	**315**	*e*P	**Pn**	**00 13 43.8**	**+2.0**
NCUH	**Zhongli**	**1.28**	**326**	⇓P	**Pn**	**00 13 43.4**	**+1.4**
NCUH				*e*S	**Sn**	**00 14 00.1**	**+2.1**
HSN	**Hsinchu**	**1.28**	**314**	*e*P	**Pn**	**00 13 43.6**	**+1.6**
HSN				*e*S	**Sn**	**00 14 00.2**	**+2.2**
YM01	**YM01**	**1.29**	**343**	⇓*i*P	**Pn**	**00 13 43.3**	**+1.1**
TWS1	**Kuangyinshan**	**1.30**	**337**	P	**Pn**	**00 13 43.7**	**+1.5**
TWS1				*e*S	**Sn**	**00 14 00.6**	**+2.3**
WDJ	**Dajia District**	**1.30**	**290**	*e*P	**Pn**	**00 13 44.0**	**+1.8**
WDJ				*e*S	**Sn**	**00 14 01.2**	**+2.9**
LDUT	**Ludao**	**1.31**	**201**	*e*P	**Pn**	**00 13 42.0**	**-0.3**
LDUT				*e*S	**Sn**	**00 13 57.2**	**-1.4**
WCHH	**Zhanghua**	**1.31**	**278**	⇓P	**Pn**	**00 13 44.6**	**+2.3**
WCHH				*e*S	**Sn**	**00 14 01.3**	**+2.7**
ZUZH	**Zhuzihu**	**1.31**	**343**	*e*P	**Pn**	**00 13 43.5**	**+1.0**
ZUZH				*e*S	**Sn**	**00 13 59.9**	**+1.1**
WGK	**Gukeng**	**1.32**	**261**	*e*P	**Pn**	**00 13 44.3**	**+1.9**
WGK				*e*S	**Sn**	**00 14 01.6**	**+2.9**
WCH1	**Changhua City**	**1.32**	**278**	*e*P	**Pn**	**00 13 44.6**	**+2.3**
WCH1				*e*S	**Sn**	**00 14 01.5**	**+2.6**
STYH	**Taoyuan**	**1.32**	**237**	⇑P	**Pn**	**00 13 43.8**	**+1.2**
STYH				*e*S	**Sn**	**00 13 59.6**	**+0.7**
YM08	**YM08**	**1.33**	**345**	*e*P	**Pn**	**00 13 43.3**	**+0.7**
YM08				*e*S	**Sn**	**00 13 59.5**	**+0.4**
WDL	**Douliou City**	**1.33**	**262**	*e*S	**Sn**	**00 14 01.8**	**+2.7**
WDLH	**Douliu**	**1.34**	**261**	*e*P	**Pn**	**00 13 45.0**	**+2.3**
WDLH				*e*S	**Sn**	**00 14 02.5**	**+3.3**
ANP	**Anpu**	**1.34**	**342**	*e*P	**Pn**	**00 13 43.8**	**+0.8**
NTST	**Danshui**	**1.34**	**339**	*e*P	**Pn**	**00 13 44.3**	**+1.4**
NTST				*e*S	**Sn**	**00 14 00.7**	**+1.2**
TWGBT	**Beinan**	**1.36**	**218**	P	**Pn**	**00 13 42.9**	**-0.2**
TWGBT	**Beinan**	**1.36**	**218**	⇑*i*P	**Pn**	**00 13 42.6**	**-0.4**
TWGBT				*e*S	**Sn**	**00 13 59.4**	**-0.5**
TWG	**Pinlang**	**1.36**	**218**	⇑*i*P	**Pn**	**00 13 42.6**	**-0.5**
TWG				*e*S	**Sn**	**00 13 59.8**	**-0.1**
TPUB	**Ta-pu**	**1.38**	**244**	P	**Pn**	**00 13 44.8**	**+1.5**
TPUB	**Ta-pu**	**1.38**	**244**	S	**Sn**	**00 14 02.7**	**+2.4**
TPUB	**Ta-pu**	**1.38**	**244**	⇑P	**Pn**	**00 13 45.2**	**+1.9**
TPUB				*e*S	**Sn**	**00 14 02.1**	**+1.8**
TTN	**Taitung**	**1.38**	**214**	*e*P	**Pn**	**00 13 43.7**	**+0.4**
TTN				*e*S	**Sn**	**00 14 01.1**	**+0.9**
TWY	**Chenhua**	**1.41**	**346**	*e*P	**Pn**	**00 13 45.1**	**+1.4**
WTP	**Ta-pu**	**1.41**	**243**	*e*P	**Pn**	**00 13 45.7**	**+1.8**
WTP				*e*S	**Sn**	**00 14 03.8**	**+2.6**
CHN2	**Minshiung**	**1.43**	**255**	*e*P	**Pn**	**00 13 46.5**	**+2.5**
CHN2				*e*S	**Sn**	**00 14 05.1**	**+3.6**
WTK	**Tuku**	**1.47**	**262**	*e*P	**Pn**	**00 13 47.1**	**+2.5**
WTK				*e*S	**Sn**	**00 14 05.6**	**+3.0**
CHY	**Chiayi**	**1.48**	**254**	*e*P	**Pn**	**00 13 47.1**	**+2.4**
CHY				*e*S	**Sn**	**00 14 05.8**	**+2.9**
TWK	**Hsinying**	**1.51**	**245**	*e*P	**Pn**	**00 13 47.3**	**+2.1**
TWK				*e*S	**Sn**	**00 14 06.7**	**+3.1**
CHN1	**Nanshi**	**1.51**	**242**	*e*P	**Pn**	**00 13 47.7**	**+2.5**
CHN1				*e*S	**Sn**	**00 14 06.6**	**+2.9**
SNST	**Tainan City**	**1.52**	**244**	*e*P	**Pn**	**00 13 47.8**	**+2.5**
SNST				*e*S	**Sn**	**00 14 07.2**	**+3.4**
WTCT	**Ta-ch'eng**	**1.56**	**269**	*e*P	**Pn**	**00 13 47.7**	**+2.0**
WTCT				*e*S	**Sn**	**00 14 08.0**	**+3.3**
ECL	**Taimali**	**1.61**	**216**	*e*P	**Pn**	**00 13 46.1**	**-0.4**
ECL				*e*S	**Sn**	**00 14 04.9**	**-1.0**
WSF	**Szhu**	**1.63**	**261**	*e*P	**Pn**	**00 13 48.9**	**+2.2**
WSF				*e*S	**Sn**	**00 14 09.7**	**+3.1**
WSL	**Shuilin Townsh**	**1.65**	**257**	*e*P	**Pn**	**00 13 49.5**	**+2.5**
WSL				*e*S	**Sn**	**00 14 10.5**	**+3.6**
IRIF	**Iriomote-Funau**	**1.66**	**75**	P	**Pn**	**00 13 48.4**	**+1.3**
IRIF				S	**Sn**	**00 14 08.8**	**+1.6**
HATJ	**Hateruma jima**	**1.68**	**84**	P	**Pn**	**00 13 48.7**	**+1.3**
HATJ				*e*S	**Sn**	**00 14 08.9**	**+1.3**
SSD	**Sandimen**	**1.69**	**227**	*e*P	**Pn**	**00 13 49.3**	**+1.7**
SSD				*e*S	**Sn**	**00 14 11.3**	**+3.3**
CHN3	**Shinhua**	**1.69**	**241**	*e*S	**Sn**	**00 14 12.9**	**+4.8**
SCST	**Cishan**	**1.70**	**234**	*e*P	**Pn**	**00 13 51.1**	**+3.4**
SCST				*e*S	**Sn**	**00 14 12.8**	**+4.6**
TSMG	**Majia**	**1.71**	**226**	*e*P	**Pn**	**00 13 49.9**	**+2.0**
TSMG				*e*S	**Sn**	**00 14 11.0**	**+2.5**
CHN8	**Yiju**	**1.71**	**251**	*e*S	**Sn**	**00 14 11.5**	**+2.9**
PCYT	**Pengchaiyu**	**1.72**	**3**	*e*P	**Pn**	**00 13 48.8**

*UPP **10** 00:32:58.4±0.0, 67°.83N×20°.21E, h1km, ML3.2, Suspected explosion*
*DNK **10** 00:32:58.7±1.1, 67°.85N×20°.17E, h0km, ML3.2(UPP), Explosion*
*HEL **10** 00:32:58.9±0.0, 67°.83N×20°.22E, h1km, ML2.4, ML3.2(UPP), ML2.8(BER), Confirmed Induced event*
*BER **10** 00:33:00.5±2.3, 67°.90N×20°.18E, h0km±26km, ML2.8, Confirmed Induced event*

ISC 10 00:32:57.8±0.5, 67°.83N±0°.02×20°.22E±0°.02, h0km, n95, σ0s97/131, mb3.5/8, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**18**	P		**Pg**		**00 33 01.1**	**+0.7**
	baz=218								
KUA				S		**Sg**		**00 33 03.0**	**+0.8**
KUA	**Kurravaara**	**0.14**	**18**	P		**Pg**		**00 33 01.1**	**+0.7**
	baz=218								
KUA				S		**Sg**		**00 33 03.0**	**+0.8**
KUA	**Kurravaara**	**0.14**	**18**	*i* P		**Pg**		**00 33 01.1**	**+0.7**
KUA				*i* S		**Sg**		**00 33 03.0**	**+0.8**
RATU	**Laukkuluspa**	**0.24**	**270**	P		**Pg**		**00 33 03.0**	**+0.6**
RATU				S		**Sg**		**00 33 06.1**	**+0.6**
RATU	**Laukkuluspa**	**0.24**	**270**	P		**Pg**		**00 33 03.0**	**+0.6**
RATU				S		**Sg**		**00 33 06.1**	**+0.6**
RATU	**Laukkuluspa**	**0.24**	**270**	*i* P		**Pg**		**00 33 03.0**	**+0.6**
RATU				*i* S		**Sg**		**00 33 06.1**	**+0.6**
KOVU	**Salmi**	**0.40**	**357**	P		**Pg**		**00 33 05.8**	**+0.3**
KOVU				S		**Sg**		**00 33 11.2**	**+0.6**
KOVU	**Salmi**	**0.40**	**357**	P		**Pg**		**00 33 05.8**	**+0.3**
KOVU				S		**Sg**		**00 33 11.2**	**+0.6**
KOVU	**Salmi**	**0.40**	**357**	*i* P		**Pg**		**00 33 05.8**	**+0.3**
KOVU				*i* S		**Sg**		**00 33 11.2**	**+0.6**
NIKU	**Nikkaluokta**	**0.45**	**276**	P		**Pg**		**00 33 06.8**	**+0.4**
NIKU				S		**Sg**		**00 33 13.0**	**+0.7**
NIKU	**Nikkaluokta**	**0.45**	**276**	P		**Pg**		**00 33 06.8**	**+0.4**
NIKU				S		**Sg**		**00 33 13.0**	**+0.7**
NIKU	**Nikkaluokta**	**0.45**	**276**	*i* P		**Pg**		**00 33 06.8**	**+0.4**
NIKU				*i* S		**Sg**		**00 33 13.0**	**+0.7**
LANU	**Lannavaara**	**0.70**	**71**	P		**Pg**		**00 33 11.6**	**+0.3**
LANU				S		**Sg**		**00 33 21.1**	**+0.7**
LANU	**Lannavaara**	**0.70**	**71**	P		**Pg**		**00 33 11.6**	**+0.3**
LANU				S		**Sg**		**00 33 21.1**	**+0.7**
LANU	**Lannavaara**	**0.70**	**71**	*e*P		**Pg**		**00 33 11.4**	**+0.1**
LANU				*e*S		**Sg**		**00 33 20.9**	**+0.5**
DUNU	**Dundret**	**0.72**	**169**	P		**Pg**		**00 33 11.9**	**+0.4**
DUNU				S		**Sg**		**00 33 21.9**	**+1.1**
DUNU	**Dundret**	**0.72**	**169**	P		**Pg**		**00 33 11.9**	**+0.4**
DUNU				S		**Sg**		**00 33 21.9**	**+1.1**
DUNU	**Dundret**	**0.72**	**169**	*i* P		**Pg**		**00 33 11.9**	**+0.4**
DUNU				*i* S		**Sg**		**00 33 21.9**	**+1.1**
MASU	**Masugnsbyn**	**0.77**	**118**	P		**Pg**		**00 33 13.0**	**+0.4**
MASU				S		**Sg**		**00 33 23.9**	**+1.3**
MASU	**Masugnsbyn**	**0.77**	**118**	P		**Pg**		**00 33 13.0**	**+0.4**
MASU				S		**Sg**		**00 33 23.9**	**+1.3**
MASU	**Masugnsbyn**	**0.77**	**118**	*i* P		**Pg**		**00 33 13.0**	**+0.4**
MASU				*i* S		**Sg**		**00 33 23.9**	**+1.3**
SALU	**Saltoluokta**	**0.80**	**237**	P		**Pg**		**00 33 13.2**	**+0.2**
SALU				S		**Sg**		**00 33 24.0**	**+0.7**
SALU	**Saltoluokta**	**0.80**	**237**	P		**Pg**		**00 33 13.2**	**+0.2**
SALU				S		**Sg**		**00 33 24.0**	**+0.7**
SALU	**Saltoluokta**	**0.80**	**237**	*i* P		**Pg**		**00 33 13.2**	**+0.2**
SALU				*i* S		**Sg**		**00 33 24.0**	**+0.7**
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P		**Pg**		**00 33 20.7**	**-0.1**
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P		**Pg**		**00 33 21.1**	**+0.3**
KIF				*e*S		**Sb**		**00 33 37.3**	**-0.2**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**		**00 33 23.7**	**-0.4**
PAJU				S		**Sg**		**00 33 42.3**	**+0.4**
PAJU	**Pajala**	**1.38**	**125**	P		**Pg**		**00 33 23.7**	**-0.4**
PAJU				S		**Sg**		**00 33 42.3**	**+0.4**
PAJU	**Pajala**	**1.38**	**125**	*e*P		**Pg**		**00 33 23.7**	**-0.4**
PAJU				*e*S		**Sg**		**00 33 42.3**	**+0.4**
HEF	**Hetta**	**1.41**	**64**	*e*P		**Pn**		**00 33 23.9**	**-0.8**
HEF	**Hetta**	**1.41**	**64**	*e*P		**Pn**		**00 33 24.1**	**-0.6**
HEF				*e*S		**Sg**		**00 33 42.5**	**-0.7**
ERTU	**Ertsjaerv**	**1.49**	**148**	P		**Pn**		**00 33 25.7**	**-0.1**
ERTU	**Ertsjaerv**	**1.49**	**148**	P		**Pn**		**00 33 25.7**	**-0.1**
ERTU	**Ertsjaerv**	**1.49**	**148**	*e*P		**Pn**		**00 33 25.7**	**-0.1**
KTK1	**Kautokeino**	**1.63**	**42**	*e*P		**Pn**		**00 33 27.7**	**-0.1**
KTK1				IAML				00 33 53.0	
	comp=Z,146nm,0.3s								
KTK1	**Kautokeino**	**1.63**	**42**	*e*P		**Pn**		**00 33 27.7**	**-0.1**
KTK1				IAML				00 33 53.0	
	comp=Z,146nm,0.3s								
HARU	**Harads**	**1.70**	**170**	P		**Pn**		**00 33 29.1**	**+0.5**
HARU	**Harads**	**1.70**	**170**	P		**Pn**		**00 33 29.1**	**+0.5**
HARU	**Harads**	**1.70**	**170**	*e*P		**Pn**		**00 33 29.1**	**+0.5**
JETT	**Jettan, Norway**	**1.74**	**2**	*e*P		**Pn**		**00 33 29.4**	**+0.1**
JETT				IAML				00 33 56.0	
	comp=Z,255nm,0.5s								
JETT	**Jettan, Norway**	**1.74**	**2**	*e*P		**Pn**		**00 33 29.4**	**+0.1**
JETT				IAML				00 33 56.0	
	comp=Z,255nm,0.5s								
TRO	**Tromso**	**1.88**	**346**	*e*P		**Pn**		**00 33 31.6**	**+0.5**
TRO	**Tromso**	**1.88**	**346**	*e*P		**Pn**		**00 33 31.8**	**+0.7**
TRO				*e*SG		**Sb**		**00 33 56.2**	**-0.6**
STEI	**Steigen**	**1.89**	**275**	*e*P		**Pb**		**00 33 32.7**	**-0.4**
STEI	**Steigen**	**1.89**	**275**	*e*P		**Pb**		**00 33 32.7**	**-0.4**
FAUS	**Fauske**	**1.94**	**259**	*e*P		**Pn**		**00 33 33.3**	**+1.3**
FAUS				IAML				00 34 03.6	
	comp=Z,145nm,0.5s								
FAUS	**Fauske**	**1.94**	**259**	*e*P		**Pn**		**00 33 33.3**	**+1.3**
FAUS				IAML				00 34 03.6	
	comp=Z,145nm,0.5s								
TOF	**Tornio**	**2.38**	**135**	*e*PB		**Pn**		**00 33 39.9**	**+1.8**
TOF				*e*SB		**Sb**		**00 34 10.4**	**-0.9**
TOF				smax	smax			00 34 17.2	
	comp=Z,16nm,0.1s								
SGF	**Sodankyl**	**2.44**	**96**	*e*PB		**Pb**		**00 33 41.0**	**-1.5**
SGF				*e*S		**Sn**		**00 34 09.8**	**+0.5**
SGF				smax	smax			00 34 17.1	
	comp=Z,12nm,0.1s								
LOF	**Lofoten**	**2.54**	**280**	*e*P		**Pn**		**00 33 40.0**	**-0.1**
LOF				IAML				00 34 23.3	
	comp=Z,67nm,0.4s								
LOF	**Lofoten**	**2.54**	**280**	*e*P		**Pn**		**00 33 40.0**	**-0.1**
LOF				IAML				00 34 23.3	
	comp=Z,67nm,0.4s								
RNF	**Rovaniemi**	**2.56**	**116**	*e*PB		**Pn**		**00 33 42.6**	**+2.1**
RNF				*e*SB		**Sb**		**00 34 15.8**	**-0.8**
RNF				smax	smax			00 34 21.2	
	comp=Z,24nm,0.1s								
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*P		**Pn**		**00 33 41.7**	**+0.9**
ARA0				IAML				00 34 17.3	
	comp=Z,48nm,0.8s								
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*P		**Pn**		**00 33 41.7**	**+0.9**
ARA0				IAML				00 34 17.3	
	comp=Z,48nm,0.8s								
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn		**Pn**		**00 33 41.4**	**+0.6**
	comp=Z,4.5nm,0.3s,baz=227,slow=15,SNR=124								
ARCES				Lg	Lg			00 34 15.3	
	comp=Z,14nm,0.3s,baz=225,slow=24,SNR=21								
	comp=Z,9.8nm,0.3s								
RAUS	**Rausandaksla**	**2.79**	**243**	*e*P		**Pn**		**00 33 44.3**	**+0.7**
MOR8	**Moi Rana**	**2.81**	**237**	*e*P		**Pn**		**00 33 44.8**	**+0.8**
MOR8				IAML				00 34 22.5	
	comp=Z,102nm,0.4s								
MOR8	**Moi Rana**	**2.81**	**237**	*e*P		**Pn**		**00 33 44.8**	**+0.8**
MOR8				IAML				00 34 22.5	
	comp=Z,102nm,0.4s								
VAGH	**Vaagaholmen**	**2.92**	**251**	*e*P		**Pn**		**00 33 45.8**	**+0.4**
VAGH	**Vaagaholmen**	**2.92**	**251**	*e*P		**Pn**		**00 33 45.8**	**+0.4**
HAMF	**Hammerfest**	**3.09**	**22**	*e*P		**Pn**		**00 33 48.6**	**+0.9**
HAMF				IAML				00 34 28.0	
	comp=Z,87nm,0.4s								
HAMF	**Hammerfest**	**3.09**	**22**	*e*P		**Pn**		**00 33 48.6**	**+0.9**
HAMF				IAML				00 34 28.0	
	comp=Z,87nm,0.4s								
KEV	**Kevo**	**3.14**	**49**	*e*P		**Pn**		**00 33 48.8**	**+0.4**
KEV	**Kevo**	**3.14**	**49**	*e*P		**Pn**		**00 33 48.8**	**+0.4**
STOK	**Stokkvaagen**	**3.19**	**245**	*e*P		**Pn**		**00 33 50.0**	**+0.9**
STOK	**Stokkvaagen**	**3.19**	**245**	*e*P		**Pn**		**00 33 50.0**	**+0.9**
LEIR	**Leirfjorden**	**3.28**	**242**	*e*P		**Pn**		**00 33 51.3**	**+0.9**
LEIR				IAML				00 34 42.3	
	comp=Z,47nm,0.5s								
LEIR	**Leirfjorden**	**3.28**	**242**	*e*P		**Pn**		**00 33 51.3**	**+0.9**
LEIR				IAML				00 34 42.3	
	comp=Z,47nm,0.5s								
VADS	**Vadso**	**4.02**	**51**	*e*P		**Pn**		**00 34 01.1**	**+0.6**
VADS	**Vadso**	**4.02**	**51**	*e*P		**Pn**		**00 34 01.1**	**+0.6**
NSS	**Namsos**	**4.71**	**229**	*e*P		**Pn**		**00 34 11.6**	**+1.6**
NSS	**Namsos**	**4.71**	**229**	*e*P		**Pn**		**00 34 11.6**	**+1.6**
VAF	**Ylistaro**	**4.91**	**167**	*e*P		**Pn**		**00 34 14.5**	**+1.7**
KEF	**Keuruu**	**6.01**	**159**	*e*P		**Pn**		**00 34 29.2**	**+1.4**
JOF	**Joensuu**	**6.75**	**132**	*e*P		**Pn**		**00 34 38.7**	**+0.7**
RAF	**Rauma**	**6.86**	**174**	*e*P		**Pn**		**00 34 40.4**	**+0.9**
FINES	**FINESS Array B**	**6.88**	**156**	Pn		**Pn**		**00 34 40.5**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=347,slow=13,SNR=36								
FINES				Pg		**Pb**		**00 35 00.5**	**+2.4**
	comp=Z,1.1nm,0.3s,baz=347,slow=17,SNR=13								
FINES				Sn		**Sn**		**00 35 58.4**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=347,slow=23,SNR=6.6								
FINES				Lg	Lg			00 36 27.4	
	comp=Z,2.9nm,0.3s,baz=342,slow=27,SNR=12								
	comp=Z,2.4nm,0.4s								
AAL	**Aland**	**7.68**	**181**	*e*P		**Pn**		**00 34 51.1**	**+0.4**
NOA	**NORSAR Array B**	**7.84**	**214**	Pn		**Pn**		**00 34 52.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=20,slow=11,SNR=20								
NOA				Sn		**Sn**		**00 36 16.9**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=12,slow=18,SNR=3.4								
NOA				Lg	Lg			00 37 00.9	
	comp=Z,0.1nm,0.3s,baz=8.6,slow=17,SNR=5.1								
	comp=Z,0.4nm,0.5s								
MEF	**Metsahovi**	**7.85**	**165**	*e*P		**Pn**		**00 34 53.3**	**+0.2**
HFS	**Hagfors**	**8.23**	**203**	Pn		**Pn**		**00 34 57.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=19,slow=13,SNR=27								
HFS				Sn		**Sn**		**00 36 29.5**	**-2.4**
	comp=Z,1.1nm,0.3s,baz=27,slow=23,SNR=8.1								
HFS				Lg	Lg			00 37 14.9	
	comp=Z,1.4nm,0.3s,baz=9.8,slow=28,SNR=4.1								
	comp=Z,0.9nm,0.3s								
SPITS	**Spitsbergen Ar**	**10.46**	**356**	Pn		Pn		00 35 20.9	-7.9
	baz=185,slow=16								
NACGM	**Naroch**	**13.33**	**163**	*e*P		**Pn**		**00 36 04.9**	**-3.1**
	baz=349								
AKASG	**Malin Array Be**	**17.75**	**161**	P		**Pn**		**00 37 06.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=348,slow=11,SNR=3.3								
GERES	**GERESS Array B**	**19.32**	**193**	P		**P**		**00 37 24.4**	**+0.1**
	baz=343,slow=12,SNR=3.0								
	comp=Z,0.4nm,0.7s								
ARTI	**Arti**	**20.79**	**105**	P		**P**		**00 37 39.7**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=332,slow=3.9,SNR=5.0								
	comp=Z,1.9nm,0.5s								
DAVOX	**Davos/Dischmat**	**21.77**	**199**	P		**P**		**00 37 51.6**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=0.0,slow=16,SNR=1.9								
	comp=Z,0.6nm,0.4s								
NRIK	**Norilsk**	**23.53**	**55**	P		**P**		**00 38 08.8**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=38,slow=3.3,SNR=3.8								
	comp=Z,0.7nm,0.4s								
BVAR	**Borovoye Array**	**27.85**	**97**	P		**P**		**00 38 48.7**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=326,slow=9.8,SNR=6.7								
	comp=Z,0.8nm,0.6s								
BRTR	**Keskin Array B**	**29.11**	**158**	P		**P**		**00 39 02.0**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=320,slow=3.7,SNR=2.3								
	comp=Z,0.3nm,0.6s								
KURBB	**Kurchatov Arra**	**32.84**	**92**	P		**P**		**00 39 31.6**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=324,slow=9.2,SNR=1.6								
MKAR	**Makanchi Array**	**37.40**	**92**	P		**P**		**00 40 11.9**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=335,slow=5.7,SNR=1.8								
	comp=Z,1.0nm,0.5s								
ILAR	**Eielson Array**	**47.37**	**353**	P		**P**		**00 41 33.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=1.8,slow=8.1,SNR=6.5								
	comp=Z,0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**55.96**	**202**	P		**P**		**00 42 36.5**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=17,slow=9.2,SNR=2.6								
	comp=Z,0.4nm,0.7s								
TXAR	**Lajitas Array**	**74.57**	**311**	P		**P**		**00 44 38.4**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=25,slow=5.3,SNR=2.8								
	comp=Z,0.2nm,0.6s								

*IDC **10** 01:02:25.3±1.5, 6°.91N×125°.61E, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=83.5km s-min=18.5km az=73.0*

ISC 10 01:02:30.3±1.5, 7°.1N±0°.2×125°.8E±0°.6, h35km, n6, σ2s14/7, mb4.0/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**24.99**	**180**	P		**P**		**01 07 48.7**	**-2.2**
	2.1nm,0.4s,baz=351,slow=10,SNR=9.8								
FITZ				S		**S**		**01 12 15.0**	**+2.3**
	1.1nm,0.9s,baz=52,slow=18,SNR=0.8								
	2.1nm,0.4s								
WRA	**Warramunga Arr**	**28.11**	**163**	P		**P**		**01 08 17.7**	**-1.4**
	0.4nm,0.3s,baz=344,slow=9.5,SNR=1.8								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**31.54**	**166**	P		**P**		**01 08 48.6**	**-0.8**
	1.3nm,0.5s,baz=349,slow=7.7,SNR=24								
	1.3nm,0.5s								
STKA	**Stephens Creek**	**41.54**	**160**	P		**P**		**01 10 15.6**	**+1.0**
	1.6nm,0.7s,baz=348,slow=14,SNR=2.9								
	1.6nm,0.7s								
MKAR	**Makanchi Array**	**54.33**	**324**	P		**P**		**01 11 52.2**	**-1.1**
	0.3nm,0.8s,baz=110,slow=5.3,SNR=1.8								
	0.3nm,0.8s								
KURBB	**Kurchatov Arra**	**58.47**	**327**	P		**P**		**01 12 24.5**	**+1.7**
	0.6nm,0.3s,baz=116,slow=5.3,SNR=1.6								
	0.6nm,0.3s								

*BUT **10** 01:28:32.1±0.9, 44°.79N±0°.01×111°.41W±0°.02, h13km±4km, Error ellipse: s-maj=2.6km s-min=1.0km az=58.0*

NEIC 10 01:28:33.2±0.7, 44°.81N±0°.02×111°.41W±0°.02, h10km±1km, ML3.0/48, ML3.1/29(BUT), Error ellipse: s-maj=3.4km s-min=2.9km az=35.0, Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QLMT	**Earthquake Lak**	**0.03**	**323**				Pg	01 28 35.4	0.0
YPDC	**Denny Creek**	**0.16**	**130**				Pg	01 28 36.9	+0.1
YHB	**Horse Butte**	**0.16**	**111**				Pg	01 28 37.0	+0.1
YHB							Sg	01 28 39.5	0.0
YHB				IAML				01 28 39.7	
	comp=E,4μm,0.2s								
YHL	**Hebgen Lake**	**0.17**	**76**				Pg	01 28 37.3	+0.3
YHL							Sg	01 28 40.3	+0.6
TPMT	**Tepee Creek**	**0.20**	**246**				Pg	01 28 38.0	+0.4
YMC	**Maple Creek**	**0.29**	**100**				Pg	01 28 39.4	+0.3
YPWB	**West Boundary**	**0.30**	**133**				Pg	01 28 39.7	+0.4
CMI	**Centennial Mou**	**0.32**	**208**				Pg	01 28 39.8	0.0
YMR	**Madison River**	**0.35**	**114**				Pg	01 28 40.4	+0.3
YMR							Sg	01 28 45.5	+0.7
YMR				IAML				01 28 45.7	
	comp=E,2μm,0.2s								
YMR				IAML				01 28 46.4	
	comp=N,2μm,0.4s								
YHH	**Holmes Hill**	**0.40**	**93**				Pg	01 28 41.4	+0.2
YPM	**Purple Mountai**	**0.41**	**112**				Pg	01 28 42.1	+0.6
YNM	**Yellowstone No**	**0.51**	**99**				Pg	01 28 43.7	+0.5
YNM				IAML				01 28 50.7	
	comp=N,954nm,0.1s								
YNM				IAML				01 28 51.0	
	comp=E,1μm,0.2s								
YNR	**Norris Junctio**	**0.53**	**100**				Pg	01 28 43.9	+0.3
YNR				IAML				01 28 51.2	
	comp=E,865nm,0.2s								
YMV	**Mammoth Vault**	**0.54**	**72**				Pb	01 28 44.5	-0.4
YFT	**Old Faithful**	**0.54**	**131**				Pg	01 28 44.0	+0.2
YFT							Sg	01 28 51.2	+0.2
YFT				IAML				01 28 51.4	
	comp=E,948nm,0.2s								
YFT				IAML				01 28 51.5	
	comp=N,1μm,0.2s								
BGMT	**Barton Gulch**	**0.62**	**314**				Pg	01 28 45.2	+0.1
MCID	**Moose Creek**	**0.64**	**165**				Pg	01 28 45.8	+0.1
YUF	**Upper Falls**	**0.65**	**98**				Pb	01 28 46.3	-0.4
YPP	**Pitchstone Pla**	**0.69**	**141**				Pg	01 28 46.8	+0.2
YPP				IAML				01 28 57.8	
	comp=E,463nm,0.2s								
YLT	**Little Thumb C**	**0.69**	**122**				Pn	01 28 48.6	-0.8
H17A	**Grant Village**	**0.72**	**125**				Pg	01 28 47.7	+0.4
MOMT	**Monida**	**0.73**	**253**				Pg	01 28 47.5	+0.1
LKWY	**Lake**	**0.76**	**108**				Pb	01 28 49.1	+0.5
BOZ	**Bozeman (W)**	**0.80**	**349**				Pg	01 28 48.5	-0.2
BOZ				IAML				01 29 00.5	
	comp=E,734nm,0.2s								
BOZ				IAML				01 29 04.1	
	comp=E,558nm,0.2s								
YPPC	**Pelican Cone**	**0.88**	**100**				Pn	01 28 52.1	+0.1
FLWY	**Flagg Ranch**	**0.89**	**145**				Pg	01 28 49.9	-0.4
FLWY				IAML				01 29 03.5	
	comp=E,372nm,0.4s								
FLWY				IAML				01 29 03.5	
	comp=E,327nm,0.3s								
YPSB	**Soda Butte**	**0.90**	**85**				Pb	01 28 51.0	0.0
YTP	**The Promontory**	**0.91**	**117**				Pg	01 28 50.3	-0.3
BZMT	**Bozeman Pass**	**0.94**	**27**				Pg	01 28 51.2	-0.1
DLMT	**Dillon**	**1.01**	**304**				Pg	01 28 52.5	0.0
DLMT				IAML				01 29 09.4	
	comp=E,434nm,0.5s								
DLMT				IAML				01 29 09.8	
	comp=E,290nm,0.2s								
YNE	**Yellowstone No**	**1.01**	**78**				Pg	01 28 52.5	-0.3
YNE				IAML				01 29 10.8	
	comp=N,361nm,0.3s								
MCMT	**McKenzie Canyo**	**1.02**	**271**				Pg	01 28 52.9	-0.1
YPK	**Parker Peak, Y**	**1.06**	**94**				Pg	01 28 54.0	+0.1
MSMT	**Mission Creek**	**1.11**	**42**				Pg	01 28 54.0	-0.5
MOOW	**Moose Ponds**	**1.16**	**156**				Pb	01 28 54.2	-1.3
FXWY	**Fox Creek**	**1.20**	**167**				Pb	01 28 55.0	-1.2
FXWY				IAML				01 29 16.3	
	comp=N,184nm,0.8s								
LRM	**Limekiln Ridge**	**1.25**	**324**				Pn	01 28 56.8	-0.2
HBMT	**Mount Humbug**	**1.30**	**320**				Pb	01 28 57.7	-0.1
LOHW	**Long Hollow**	**1.33**	**154**				Pn	01 28 57.3	-0.7
SXM	**Sixmile**	**1.35**	**6**				Pb	01 28 58.5	-0.1
TPAW	**Teton Pass**	**1.36**	**166**				Pn	01 28 58.1	-0.4
TPAW				IAML				01 29 20.7	
	comp=N,256nm,0.6s								
TPAW				IAML				01 29 20.8	
	comp=N,250nm,0.7s								
SNOW	**Snow King Moun**	**1.43**	**161**				Pn	01 28 59.5	+0.1
SNOW				IAML				01 29 22.8	
	comp=N,130nm,0.5s								
SNOW				IAML				01 29 22.8	
	comp=N,166nm,0.5s								
BUT	**Butte**	**1.45**	**326**				Pb	01 29 00.5	+0.1
BCYI	**Bear Canyon**	**1.51**	**251**				Pb	01 29 01.3	-0.2
HRY	**Holter Researc**	**1.92**	**351**				Pn	01 29 06.9	+0.8
BEMT	**Mount Belmont**	**2.04**	**342**				Pn	01 29 08.6	+0.7
AHID	**Auburn Hatcher**	**2.06**	**174**				Pn	01 29 09.2	+1.2
AHID				IAML				01 29 39.3	
	comp=N,145nm,0.6s								
BPMT	**Black Pine Rid**	**2.17**	**319**				Pn	01 29 10.2	+0.7
LYMT	**Lyon Mountain**	**2.25**	**344**				Pn	01 29 11.7	+1.1
PD31	**Pinedale Array**	**2.44**	**146**				Pn	01 29 14.9	+1.6
PDAR	**Pinedale Array**	**2.44**	**146**				Pb	01 29 16.1	-1.2
CHMT	**Chamberlain Mo**	**2.47**	**329**				Pn	01 29 14.5	+0.8
HLID	**Hailey**	**2.50**	**241**				Pn	01 29 15.2	+1.2
HLID				IAML				01 29 53.5	
	comp=N,89nm,0.4s								
OVMT	**Ovando**	**2.51**	**334**				Pn	01 29 15.2	+0.9
VCMT	**Victor**	**2.54**	**311**				Pn	01 29 15.4	+0.8
MSO	**Missoula**	**2.69**	**320**				Pn	01 29 17.4	+0.8
PCMT	**Pistol Creek**	**3.02**	**324**				Pn	01 29 21.9	+0.7
ALMT	**Alberton, Mont**	**3.07**	**317**				Pn	01 29 22.8	+0.9
SWMT	**Swartz Lake**	**3.24**	**327**				Pn	01 29 24.8	+0.6
PLID	**Pearl Lake**	**3.27**	**276**				Pn	01 29 26.3	+1.5
PLID				IAML				01 30 18.9	
	comp=N,42nm,0.5s								
FBMT	**Ferry Basin**	**3.34**	**322**				Pn	01 29 26.8	+1.2
NDMT	**Ninemile Divid**	**3.41**	**317**				Pn	01 29 27.6	+1.0
EGMT	**Eagleton**	**3.41**	**19**				Pn	01 29 27.8	+1.2
MFID	**Camas Ranch**	**3.48**	**248**				Pn	01 29 29.3	+1.8
YBMT	**Yellow Bay**	**3.55**	**330**				Pn	01 29 30.1	+1.7
JTMT	**Jette**	**3.55**	**327**				Pn	01 29 29.6	+1.2
BHMT	**Big Hole Peak**	**3.75**	**319**				Pn	01 29 32.5	+1.4
BSMT

AKT MLR MLR
comp=Z,789nm,2.0s
ASAO Ashtian 3.80 146 *e*Pn **Pn 02 14 46.5 +0.7**
ASAO IAML 02 15 57.5
comp=Z,530nm,1.0s
GLG1 Gilan-e-Gharb 3.81 200 Pn **Pn 02 14 46.2 +0.3**
IHSB Hasanabad 3.84 125 Pn **Pn 02 14 46.5 +0.3**
IDOB Doab 3.97 171 Pn **Pn 02 14 50.0 +1.8**
DGRG David-gareji 4.05 337 P **Pb 02 14 56.8 -1.6**
DGRG S **Sg 02 15 55.9 -0.9**
DGRG David-gareji 4.05 337 P **Pb 02 14 56.8 -1.6**
IPRN Peran 4.19 109 Pn **Pn 02 14 51.8 +0.8**
DAMV Damavand 4.20 119 *e*Pn **Pn 02 14 52.8 +1.5**
DAMV IAML 02 15 34.4
comp=Z,4.4nm,1.0s
LGD Lagodekhi 4.21 348 P **Pn 02 14 54.3 +3.1**
LGD S **Sg 02 16 01.6 -0.3**
LGD Lagodekhi 4.21 348 P **Pn 02 14 54.3 +3.1**
IDMV Damavand 4.27 119 Pn **Pn 02 14 53.4 +1.1**
KZR Kazreti 4.34 328 P **Pb 02 15 01.4 -1.9**
KZR S **Sb 02 16 00.6 +4.9**
GURO Guroymak-BITLI 4.35 283 **Pn 02 14 56.8 +3.6**
KZRT Kazreti 4.35 328 P **Pb 02 15 01.4 -2.0**
IVRN Varamin 4.40 127 Pn **Pn 02 14 54.5 +0.6**
KHMZ Khomeyn 4.47 152 *e*Pn **Pn 02 14 56.8 +1.7**
KHMZ IAML 02 16 25.6
comp=Z,210nm,1.0s
GHVR GHOM 4.50 135 *e*Pn **Pn 02 14 55.4 +0.2**
GHVR IAML 02 16 25.9
comp=Z,870nm,1.0s
TBLG Delisi 4.51 333 P **Pb 02 15 06.3 +0.1**
TBLG S **Sg 02 16 07.1 -4.5**
TBLG Delisi 4.51 333 P **Pb 02 15 06.3 +0.1**
TRLG Trialeti 4.60 327 P **Pb 02 15 09.3 +1.5**
TRLG S **Sg 02 16 10.0 -4.5**
TRLG Trialeti 4.60 327 P **Pb 02 15 09.3 +1.5**
IALA Alasht 4.60 109 Pn **Pn 02 14 58.0 +1.1**
BGD Bogdanovka 4.62 321 P **Pb 02 15 11.4 +3.2**
BGD Bogdanovka 4.62 321 P **Pb 02 15 11.4 +3.2**
AKH Akhalkalaki 4.78 322 P **Pb 02 15 13.8 +2.9**
AKH Akhalkalaki 4.78 322 P **Pb 02 15 13.8 +2.9**
ILAS Lasjerd 5.02 116 Pn **Pn 02 15 03.3 +0.7**
QAMS Qamsar 5.12 140 Pn **Pn 02 15 04.3 +0.4**
ISFB Sefidab 5.14 129 Pn **Pn 02 15 04.5 +0.3**
SHTL Shatili 5.23 341 P **Pb 02 15 15.2 -3.3**
SHTL S **Sg 02 16 29.0 -5.6**
MAK Makhachkala 5.23 0*c i*P **Pn 02 15 06.2 +1.0**
MAK *e*S **Sn 02 16 08.4 +2.7**
MAK pmax pmax
comp=Z,157nm,0.7s
MAK MLR MLR
comp=Z,1μm,14.0s
IGLO Ghaloghah 5.25 102 Pn **Pn 02 15 06.4 +0.7**
ALIG Mtskhetisjvari 5.26 327 P Pb 02 15 13.6 -5.3
MARD Mardin 5.31 268 **Pn 02 15 07.9 +1.4**
IKLH Kolahrood 5.54 141 Pn **Pn 02 15 11.1 +1.4**
TKB Tkibuli 5.74 325 P Pn 02 15 18.9 +6.6
TKB S **Sg 02 16 46.3 -4.8**
TKB Tkibuli 5.74 325 P Pn 02 15 18.9 +6.6
IPIR Pirpir 5.77 150 Pn **Pn 02 15 14.2 +1.3**
KOPT Kop Dagi 5.88 295 Pn 02 15 21.1 +6.6
JHBN Jahan bin 6.08 153 Pn **Pn 02 15 17.7 +0.4**
ZNGN Zangian 6.26 152 Pn **Pn 02 15 19.7 0.0**
IZEF Zefreh 6.26 139 Pn **Pn 02 15 21.2 +1.6**
IMND Minoodasht 6.35 92 Pn **Pn 02 15 19.5 -1.1**
NCK Nalchik 6.46 334 *i*P **Pn 02 15 23.4 +1.2**
NASN Na'in 6.59 137 *e*Pn **Pn 02 15 25.3 +1.1**
NASN IAML 02 17 41.4
comp=Z,120nm,1.0s
NEUR Neytrino 6.61 328 *i*P **Pn 02 15 23.7 -0.6**
ANAR Anarak 6.84 130 Pn **Pn 02 15 28.1 +0.6**
MRVT Maraveh tapeh 6.86 88 Pn **Pn 02 15 27.3 -0.3**
KBZ Khabaz 6.92 332 Pn Pn 02 15 33.6 +5.2
comp=Z,1.6nm,0.6s,baz=149,slow=11,SNR=4.3
KBZ Pg **Pb 02 15 49.2 +2.1**
comp=Z,0.2nm,0.3s,baz=159,slow=4.6,SNR=9.0
KBZ Lg Lg 02 17 20.6
comp=Z,0.4nm,0.3s,baz=130,slow=23,SNR=1.1
KBZ LR LR 02 18 33.1
comp=Z,582nm,18.3s,baz=139,slow=41
KBZ Khabaz 6.92 332 *i*P **Pn 02 15 30.0 +1.6**
SHA1 Shidzhatmaz 7.02 330 *i*P **Pn 02 15 30.5 +0.5**
SHRO Shahrood 7.08 102 *e*Pn **Pn 02 15 32.3 +1.5**
SHRO IAML 02 16 50.3
comp=Z,2.1nm,1.0s
KVAR Kislovodsk Arr 7.19 331 Pn Pn 02 15 37.0 +4.8
baz=81,slow=22
KVAR Lg Lg 02 17 34.8
baz=186,slow=18
KVAR LR LR 02 18 16.5
comp=Z,528nm,19.8s,baz=42,slow=37
comp=Z,3.8nm,0.7s
KIV Kislovodsk 7.19 331 Pn 02 15 38.0 +5.8
KIV Kislovodsk 7.19 331 ⇑P Pn 02 15 38.5 +6.2
KIV Kislovodsk 7.19 331 *e*P **Pn 02 15 34.6 +2.3**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,80nm,10.0s
ARPR Arapgir-MALATY 7.28 284 Pn 02 15 39.8 +6.3
KLNJ Kolanjah 7.53 152 Pn **Pn 02 15 36.9 -0.2**
YZKH Yazd 7.92 130 *e*Pn **Pn 02 15 42.9 +0.7**
YZKH IAML 02 18 09.8
comp=Z,48nm,1.0s
GOF Gofitskoye 8.04 337*ce*P Pn 02 15 49.3 +5.5
SOC Sochi 8.29 317 *e*P **Pn 02 15 44.6 -2.6**
SOC *e* 02 17 17.0
SOC MLR MLR
comp=Z,426nm,14.0s
TAPT Tabas- Tapeh t 8.34 107 Pn **Pn 02 15 49.6 +1.5**
ISFR Sfrayin 8.43 91 Pn **Pn 02 15 50.6 +1.1**
LABN Labinsk 8.56 326 *e*P **Pn 02 15 50.7 -0.3**
LABN *e*S **Sn 02 17 29.9 +2.1**
LABN pmax pmax
comp=Z,5.0nm,0.5s
TABS Tabas 8.86 114 *e*Pn **Pn 02 15 56.8 +1.6**
TKDS Koohdasht(Taba 8.88 115 Pn **Pn 02 15 56.2 +0.7**
TPRV Parvadeh(Tabas 8.88 119 Pn **Pn 02 15 55.8 +0.3**
TOKA Tokat 8.92 290 Pn 02 16 02.3 +6.3
IBAF Bafgh 9.06 130 Pn **Pn 02 15 59.0 +1.0**
IAKL Akhelmad 9.10 94 Pn **Pn 02 15 59.4 +0.8**
BNN Bunyan 9.19 281 Pn 02 16 05.2 +5.5
IPAY Payeh 9.32 94 Pn **Pn 02 16 02.2 +0.6**
ERBR Yeremizino-Bor 9.53 329 *e*P **Pn 02 16 03.4 -0.7**
ERBR *e*S **Sn 02 17 49.4 -1.9**
ERBR pmax pmax
comp=Z,14nm,0.8s
IKRD Kardeh 9.67 92 Pn **Pn 02 16 06.8 +0.4**
IMYA Miami 10.21 94 Pn **Pn 02 16 14.5 +0.7**
ASF Jabal al Asfar 10.27 241 Pn **Pn 02 16 14.9 +0.3**
comp=Z,0.4nm,0.3s,baz=48,slow=9.8,SNR=8.1
ASF Lg Lg 02 19 12.8
comp=Z,0.2nm,0.3s,baz=148,slow=19,SNR=1.9
ASF LR LR 02 20 39.6
comp=Z,135nm,21.7s,baz=41,slow=40
comp=Z,2.4nm,0.9s
ANN Anapa 10.33 316 *e*P Pn 02 16 21.7 +6.6
AFRZ Afriz 10.35 111 Pn **Pn 02 16 17.6 +1.9**
ITEG Tejag 10.41 114 Pn **Pn 02 16 18.1 +1.6**
NATI Neve Ativ 10.53 248 P **Pn 02 16 16.8 -1.2**
GEM Giv'at Ha'Em 10.61 248 P **Pn 02 16 18.2 -0.9**
TBJM Torbat-e-JAM 10.66 99 Pn **Pn 02 16 22.4 +2.5**
IKOO Kooshah 10.85 116 Pn **Pn 02 16 24.1 +1.6**
KRM1 Kerman Provinc 10.87 129 Pn **Pn 02 16 24.2 +1.4**
MMAI Mount Meron Ar 10.89 248 Pn **Pn 02 16 23.3 +0.3**
comp=Z,0.6nm,0.3s,baz=70,slow=22,SNR=5.4
MMAI Lg Lg 02 19 27.2
comp=Z,0.3nm,0.3s,baz=85,slow=31,SNR=2.1
comp=Z,2.6nm,0.8s
BR131 Keskin Array S 10.97 285 Pn 02 16 29.3 +5.2
BR131 Keskin Array S 10.97 285 P Pn 02 16 29.3 +5.2
BRTR Keskin Array B 10.97 285 Pn Pn 02 16 29.1 +5.0
comp=Z,0.1nm,0.3s,baz=104,slow=8.8,SNR=24
BRTR LR LR 02 20 41.8
comp=Z,140nm,18.0s,baz=284,slow=38
comp=Z,3.5nm,1.0s
BRTR Keskin Array B 10.97 285 *i*P Pn 02 16 29.8 +5.7
BRTR pmax pmax
comp=Z,4.0nm,0.9s
ILGA Ilgaz 11.13 292 Pn 02 16 33.5 +7.1
MMLI Mount Malkishu 11.17 245 P **Pn 02 16 24.2 -2.6**
BSRN Basiran 11.18 117 *i*P **Pn 02 16 28.7 +1.6**
SHRT Shahrakht 11.21 107 *i*P **Pn 02 16 29.2 +1.8**

ANTO Ankara 11.63 285 **Pn 02 16 37.8 +4.7**
ANTO Ankara 11.63 285 ⇑P Pn 02 16 38.3 +5.2
ANTO Ankara 11.63 285 P **Pn 02 16 37.8 +4.7**
SIM Simferopol' 12.34 310 *e*P **Pn 02 16 47.0 +4.4**
SIM pmax pmax
comp=Z,6.0nm,0.9s
SIM MLR MLR
comp=Z,70nm,12.0s
PRNI Paran 12.66 238 P **Pn 02 16 45.0 -2.2**
HRFI Mount Harif 12.84 237 P **Pn 02 16 47.0 -2.6**
MDUB Mudurnu 12.92 287 Pn 02 16 56.5 +5.9
EIL Elat 13.13 236 Pn **Pn 02 16 52.6 -1.0**
comp=Z,0.2nm,0.3s,baz=18,slow=7.1,SNR=3.8
EIL Lg Lg 02 20 41.5
comp=Z,0.1nm,0.3s,baz=85,slow=20,SNR=1.3
EIL LR LR 02 22 30.3
comp=Z,200nm,19.0s,baz=359,slow=40
comp=Z,3.3nm,1.0s
BORA Eskisehir 13.43 284 **Pn 02 17 01.5 +3.8**
ELL Elmali 14.01 271 **Pn 02 17 08.1 +2.5**
ELL Elmali 14.01 271 P **Pn 02 17 08.1 +2.5**
VRH Novokhopyorsk 14.07 345 *e*P **Pn 02 17 07.2 +0.9**
VRH pmax pmax
comp=Z,10.0nm,0.8s
RAYN Ar Rayn 14.26 187 Pn 02 17 03.9 -5.1
RAYN Ar Rayn 14.26 187 P Pn 02 17 03.9 -5.1
AB31 Akbulak array 14.64 34 **Pn 02 17 11.6 -2.5**
AB31 Akbulak array 14.64 34 *e*P **Pn 02 17 11.4 -2.7**
ABKAR Akbulak array 14.64 34 **Pn 02 17 11.6 -2.5**
BELG Belogornoye 14.67 0 Pn **Pn 02 17 13.3 -1.1**
comp=Z,2.5nm,0.3s,baz=115,slow=19,SNR=9.6
BELG Sn Sn 02 19 46.7 -10
comp=Z,0.2nm,0.3s,baz=199,slow=21,SNR=1.4
comp=Z,33nm,0.8s
BELG Belogornoye 14.67 0 *i*P **Pn 02 17 16.5 +2.1**
VSR Storozhevoye 14.71 339 *e*P **Pn 02 17 15.8 +0.8**
VSR pmax pmax
comp=Z,9.0nm,0.9s
AKTO Aktyubinsk 14.78 27 Pn **Pn 02 17 13.1 -2.9**
comp=Z,0.9nm,0.3s,baz=211,slow=11,SNR=14
AKTO Sn Sn 02 19 50.4 -9.5
comp=Z,0.1nm,0.3s,baz=307,slow=20,SNR=1.4
AKTO LR LR 02 24 52.4
comp=Z,71nm,21.6s,baz=150,slow=45
comp=Z,3.8nm,0.5s
MANT Manisa 14.89 279 **Pn 02 17 20.6 +2.8**
CTYL Yalikoy Yolu 15.23 290 ⇑P **P 02 17 25.4 -1.6**
BAND Balkesir-Ban 15.26 286 ⇑P **P 02 17 25.5 -1.9**
PURM Purcari 15.70 310 ⇓P **P 02 17 32.9 +0.7**
TLCR 15.81 304 ⇑P **P 02 17 32.5 -1.0**
TLCR 15.81 304 ⇑P **P 02 17 32.5 -1.0**
PHSR Pinarhisar 15.82 290 ⇑P **P 02 17 33.0 -0.6**
TPGR Topolog 15.96 302 ⇑P **P 02 17 34.1 -1.1**
LPSR Galich'ya Gora 16.02 341 *e*P **Pn 02 17 31.6 -0.7**
LPSR pmax pmax
comp=Z,50nm,0.9s
TLBR Topalu 16.11 301 ⇑P **P 02 17 35.9 -0.8**
HARR Harsova 16.23 302 ⇓P **P 02 17 37.9 -0.2**
HARR Harsova 16.23 302 ⇓P **P 02 17 37.9 -0.2**
CFR Carcaliu 16.25 303 ⇑P **P 02 17 38.4 0.0**
CFR Carcaliu 16.25 303 ⇑P **P 02 17 38.4 0.0**
KARP Karpathos 16.43 269 **Pn 02 17 38.9 +1.3**
MILM Milestii Mici 16.53 310 ⇑P **P 02 17 41.2 -0.2**
MILM Milestii Mici 16.53 310 ⇑P **P 02 17 41.2 -0.2**
MILM Milestii Mici 16.53 310 *e*P **Pn 02 17 38.0 -0.8**
comp=Z,140nm,1.5s
VLDR Vladesti 16.54 305 ⇓P **P 02 17 41.9 +0.4**
KIS Kishinev 16.56 310 ⇑P **P 02 17 42.3 +0.5**
KIS Kishinev 16.56 310 ⇑P **P 02 17 42.3 +0.5**
ALN Alexandroupoli 16.86 287 P **P 02 17 44.3 -0.8**
ALN Alexandroupoli 16.86 287 P **P 02 17 44.3 -0.8**
ALN pmax pmax
comp=Z,75nm,1.8s
BIR Birlad 16.99 306 ⇑P **P 02 17 46.7 +0.1**
BIR Birlad 16.99 306 ⇑P **P 02 17 46.7 +0.1**
GHRR 17.05 306 ⇓P **P 02 17 47.8 +0.6**
CHGR Chuyangaron 17.10 80 P **Pn 02 17 46.6 +0.5**
CHGR Chuyangaron 17.10 80 P **Pn 02 17 46.6 +0.5**
CHGR pmax pmax
comp=Z,16nm,0.9s
ODBI Odobesti 17.17 304 ⇓P **P 02 17 49.3 +0.7**
ELND Elena 17.23 294 ⇑P **P 02 17 50.4 +1.1**
RDO Rodhopi 17.26 288 P **Pn 02 17 47.8 -0.2**
ISR Istrita 17.30 302 ⇑P **P 02 17 50.8 +0.7**
ISR Istrita 17.30 302 ⇑P **P 02 17 50.8 +0.7**
ISR Istrita 17.30 302 P **Pn 02 17 49.4 +0.8**
comp=Z,36nm,1.0s
BISRR Bisoca 17.33 303 ⇑P **P 02 17 52.0 +1.7**
IASR Iasi 17.40 309 ⇓P **P 02 17 51.9 +0.9**
VRI Vrincioaia 17.42 304 ⇓P **P 02 17 52.9 +1.5**
VRI Vrincioaia 17.42 304 ⇓P **P 02 17 52.9 +1.5**
VRI Vrincioaia 17.42 304 P **Pn 02 17 50.9 +0.8**
comp=Z,25nm,1.0s
PLOR5 Plostina Array 17.46 304 P **Pn 02 17 51.3 +0.7**
comp=Z,25nm,0.9s
PLOR Plostina 17.47 304 ⇑P **P 02 17 52.8 +0.9**
PLOR Plostina 17.47 304 ⇑P **P 02 17 52.8 +0.9**
NEHR Nehoiu 17.56 303 ⇓P **P 02 17 54.4 +1.5**
CHM Chimkent 17.57 68 *e*P **P 02 17 52.9 -0.1**
CHM Chimkent 17.57 68 *e*P **P 02 17 52.9 -0.1**
TESR Tescani 17.71 306 P **Pn 02 17 54.1 +0.5**
comp=Z,24nm,1.1s
ONER Baraj Valea Uz 17.81 306 ⇓P **P 02 17 57.3 +1.6**
MLR Muntele Rosu 17.82 303 P **P 02 17 57.6 +1.7**
MLR Muntele Rosu 17.82 303 P **P 02 17 56.0 +0.2**
comp=Z,0.1nm,0.3s,baz=149,slow=6.9,SNR=3.3
MLR LR LR 02 27 02.6
comp=Z,231nm,19.3s,baz=88,slow=45
comp=Z,6.8nm,0.7s
MLR Muntele Rosu 17.82 303 ⇓P **P 02 17 56.9 +1.1**
MLR Muntele Rosu 17.82 303 P **P 02 17 57.6 +1.7**
MLR pmax pmax
comp=Z,20nm,0.9s
MLR Muntele Rosu 17.82 303 P **P 02 17 57.4 +1.5**
comp=Z,24nm,0.9s
BRLS Borolday 17.85 66⇑*i*P **Pn 02 17 54.7 -0.7**
BRLS Borolday 17.85 66*c i*P **Pn 02 17 54.6 -0.7**
IUG luzhnay 17.86 69⇑*i*P **P 02 17 56.5 +0.1**
comp=Z,38nm,1.0s
IUG luzhnay 17.86 69*c i*P **P 02 17 56.4 +0.1**
IUG pmax pmax
comp=Z,38nm,1.0s
PLD Plovdiv 17.94 291 P **P 02 18 00.8 +3.7**
PLD pmax pmax
comp=Z,59nm,1.3s
TURR Turia 17.95 304 ⇑P **P 02 17 58.2 +0.9**
OZUR 18.12 304 ⇓P **P 02 18 00.2 +1.1**
BOSR Bodos 18.19 304 ⇓P **P 02 18 00.7 +0.8**
AK09 Malin Array Si 18.26 321 P **Pn 02 18 00.5 +0.2**
AK07 Malin Array Si 18.26 320 P **Pn 02 18 00.5 +0.2**
AK10 Malin Array Si 18.27 321 P **Pn 02 18 00.5 +0.1**
AK06 Malin Array Si 18.28 320 P **Pn 02 18 00.8 +0.2**
IDI Anoyia 18.29 269 P **P 02 18 03.9 +2.8**
IDI Anoyia 18.29 269 P **P 02 18 02.0 +0.9**
comp=Z,8.5nm,0.9s,baz=50,slow=6.7,SNR=6.4
DOPR Dopca 18.34 304 ⇑P **P 02 18 02.7 +1.3**
AK01 Malin Array Si 18.34 321 P **Pn 02 18 01.4 +0.1**
AKASG Malin Array Be 18.34 321 P **Pn 02 18 00.6 -0.8**
AKASG Malin Array Be 18.34 321 P **Pn 02 18 00.8 -0.6**
comp=Z,1.0nm,0.3s,baz=128,slow=12,SNR=25
comp=Z,17nm,0.9s
AKASG Malin Array Be 18.34 321*ce*P **Pn 02 18 01.5 +0.1**
AKASG pmax pmax
comp=Z,13nm,0.8s
AKBB Malin Array Si 18.34 321*ce*P **Pn 02 17 59.6 -1.8**
AKBB Malin Array Si 18.34 321 P **Pn 02 18 01.4 0.0**
KIEV Kiev 18.35 321 P **Pn 02 18 01.5 +0.1**
KIEV Kiev 18.35 321 ⇓P **P 02 18 01.7 +0.2**
KIEV Kiev 18.35 321 ⇓P **P 02 18 01.7 +0.2**
KIEV Kiev 18.35 321 P **Pn 02 18 01.4 +0.1**
comp=Z,104nm,1.3s
KK31 Karatay Array 18.35 66 P **Pn 02 17 59.8 -1.7**
KK31 Karatay Array 18.35 66 *e*P **Pn 02 17 59.8 -1.7**
KKAR Karatay Array 18.35 66 P **Pn 02 17 60.0 -1.5**
KKAR Karatay Array 18.35 66 P **Pn 02 18 00.0 -1.5**
AK11 Malin Array Si 18.36 321 P **Pn 02 18 01.6 +0.1**
VOIR 18.40 302 ⇑P **P 02 18 03.5 +1.2**
VOIR 18.40 302 ⇑P **P 02 18 03.5 +1.2**
LUBAR Lubar, Ukraine 18.65 317 P **P 02 18 05.1 +0.3**
ARR Arges 18.66 301 ⇓P **Pn 02 18 06.2 +0.8**
KMPD K-Podol'skiy 18.69 312 P **Pn 02 18 05.1 -0.5**
KMPD P **P 02 18 04.6 -0.7**
MI29 MI29, Kamyanyy 18.88 318 P **P 02 18 07.4 0.0**

comp=Z,154nm,1.4s
SOH Sokhos 18.89 287 P **Pn 02 18 09.4 +1.2**
SOH pmax pmax
comp=Z,24nm,0.9s
MI30 MI30,Zelenitsa 18.89 320 P **P 02 18 07.2 -0.3**
comp=Z,40nm,1.3s
OBN Obninsk 18.90 340 P **P 02 18 07.4 -0.1**
OBN IAmb IAmb 02 18 15.8
comp=Z,26nm,0.6s
OBN Obninsk 18.90 340 P **Pn 02 18 07.9 -0.2**
comp=Z,1.9nm,0.3s,baz=126,slow=17,SNR=4.8
comp=Z,13nm,0.5s
OBN Obninsk 18.90 340 *e*P **Pn 02 18 08.8 +0.7**
OBN pmax pmax
comp=Z,48nm,1.7s
OBN MLR MLR
comp=Z,104nm,13.0s
DZA Taraz 18.91 67 *e*P **Pn 02 18 08.7 +0.3**
DZA Taraz 18.91 67 *e*P **Pn 02 18 08.6 +0.3**
HORU Horodok 19.02 314 P **P 02 18 08.9 -0.1**
HORU Horodok 19.02 314 P **P 02 18 09.2 +0.2**
BURAR Bucovina Array 19.04 308 P **Pn 02 18 09.8 -0.2**
BURAR IAmb IAmb 02 18 14.8
comp=Z,36nm,0.8s
BURAR Bucovina Array 19.04 308 ⇓P **Pn 02 18 10.4 +0.4**
BURAR Bucovina Array 19.04 308 ⇓P **Pn 02 18 10.4 +0.4**
THE Thessaloniki 19.18 286 P **Pn 02 18 12.1 +0.5**
THE pmax pmax
comp=Z,21nm,1.0s
MOS Moscow 19.20 343 *e*P **P 02 18 09.7 -1.1**
MOS *e*S **Sn 02 21 45.7 -1.1**
MOS pmax pmax
comp=Z,31nm,1.3s
KNT Kendrikon 19.25 288 P **Pn 02 18 14.8 +2.3**
KNT pmax pmax
comp=Z,17nm,1.7s
MI28 Mi28,Pidlybu 19.27 320 P **P 02 18 11.3 -0.3**
LOT Lotru 19.27 301 ⇑P **Pn 02 18 12.9 +0.1**
ARCR ARCALIA 19.39 306 ⇓P **Pn 02 18 13.8 -0.3**
KSV Kosov 19.42 310 P **P 02 18 12.9 -0.4**
KSV Kosov 19.42 310 P **P 02 18 13.3 0.0**
BLKB Belogradchik 19.65 295 ⇓P **Pn 02 18 17.4 0.0**
AGG Agios Georgios 19.72 282 P **P 02 18 17.6 +0.9**
AGG pmax pmax
comp=Z,24nm,1.3s
CJR Cluj-Napoca 19.75 305 ⇓P **Pn 02 18 18.7 +0.2**
CJR Cluj-Napoca 19.75 305 ⇓P **Pn 02 18 18.7 +0.2**
CBBR Cluj-Babes-Bol 19.80 305 ⇓P **P 02 18 18.3 +0.8**
RAKU Rahkiv 19.85 309 P **Pn 02 18 19.5 -0.1**
STNU Starunia 19.92 311 P **P 02 18 19.5 +0.7**
GZR Gura Zlata 19.93 300 ⇓P **P 02 18 19.9 +0.9**
GZR Gura Zlata 19.93 300 ⇓P **P 02 18 19.9 +0.9**
DEV Deva 19.97 302 ⇓P **Pn 02 18 20.5 -0.5**
DEV Deva 19.97 302 ⇓P **Pn 02 18 20.5 -0.5**
ARSB Arslanbob 20.00 72 P **P 02 18 18.4 -1.5**
ARSB Arslanbob 20.00 72 P **P 02 18 18.4 -1.5**
ARSB pmax pmax
comp=Z,31nm,1.2s
ARTI Arti 20.06 18 P **P 02 18 19.6 -0.5**
comp=Z,5.0nm,0.4s,baz=206,slow=5.4,SNR=18
ARTI S **S 02 21 55.0 -11**
comp=Z,4.4nm,0.8s,baz=248,slow=19,SNR=1.8
comp=Z,5.0nm,0.4s
HERR Herculane 20.07 299 ⇑P **P 02 18 21.4 +1.0**
BMR Baia Mare 20.14 307 ⇓P Pn 02 18 22.7 -0.3
BMR Baia Mare 20.14 307 ⇓P Pn 02 18 22.7 -0.3
MESR Meseseni 20.31 305 ⇑P **P 02 18 23.7 +0.6**
DRGR 20.36 304 ⇑P **P 02 18 24.1 +0.5**
DRGR 20.36 304 P Pn 02 18 24.8 -0.8
DRGR pmax pmax
comp=Z,29nm,1.0s
RNPP5 Staryi Chortor 20.37 318 P **P 02 18 23.8 +0.2**
RNPP8 Varash 20.44 319 P **P 02 18 24.7 +0.3**
MEZ Mezhgor'ye 20.44 309 P **P 02 18 24.9 +0.4**
RNPP9 Sopachiv 20.46 319 P **P 02 18 24.9 +0.3**
MORS Morshin 20.47 311 P **P 02 18 25.5 +0.8**
MDVR Moldovita 20.54 298 ⇑P **P 02 18 26.3 +0.7**
KORU Korolevo 20.54 308 P **P 02 18 26.0 +0.5**
TRSU Trosnyk 20.63 308 P **P 02 18 27.6 +1.1**
EKS2 Erkin-Say 20.67 68 P Pn 02 18 28.8 -0.7
SNR=15
BRIU Brid 20.68 309 P **P 02 18 27.6 +0.6**
LVV L'vov 20.69 313 P **P 02 18 27.0 -0.1**
LVV L'vov 20.69 313 P **P 02 18 27.6 +0.5**
BZS Buzias 20.78 300 ⇑P **P 02 18 28.6 +0.5**
BZS Buzias 20.78 300 P **P 02 18 29.4 +1.3**
BZS pmax pmax
comp=Z,18nm,0.8s
CEI Carei 20.80 307 ⇓P **P 02 18 29.1 +0.7**
SHIU Shidnytsya 20.82 311 P **P 02 18 29.3 +0.7**
KBN Korca 20.84 286 P Pn 02 18 33.8 +2.4
KBN pmax pmax
comp=Z,62nm,1.2s
BERU Beregovo 20.87 308 P **P 02 18 29.8 +0.7**
SIRR Siria 20.91 302 ⇓P **P 02 18 30.9 +1.4**
KIRV Kirov 20.91 3 P Pn 02 18 31.1 -0.9
comp=Z,30nm,0.9s,baz=143,slow=3.3,SNR=7.5
KIRV S **S 02 22 23.1 +0.6**
comp=Z,4.8nm,0.5s,baz=208,slow=19,SNR=1.4
KIRV LR LR 02 28 41.1
comp=Z,276nm,19.7s,baz=193,slow=43
comp=Z,30nm,0.9s
KIRV Kirov 20.91 3*ce*P **P 02 18 30.2 +0.8**
MUKU Mukachevo 20.93 309 P **P 02 18 30.4 +0.7**
MUKU pP **pP 02 18 33.2 +0.7**
SVE Sverdlovsk 21.03 20 *e*P **P 02 18 32.2 +1.5**
SVE *e*S **S 02 22 25.9 +1.0**
SVE pmax pmax
comp=Z,44nm,0.9s
HOLU Holmets 21.14 309 P **P 02 18 32.7 +0.7**
HOLU pP **pP 02 18 35.6 +0.8**
UCH Uchtor 21.19 69 P **P 02 18 34.0 +1.0**
SNR=12
AAK Ala-Archa 21.20 68 P **P 02 18 33.8 +0.9**
AAK Ala-Archa 21.20 68 P **P 02 18 33.6 +0.7**
comp=Z,8.4nm,1.0s,baz=244,slow=8.3,SNR=12
AAK LR LR 02 29 04.5
comp=Z,265nm,19.5s,baz=282,slow=43
comp=Z,8.4nm,1.0s
AAK Ala-Archa 21.20 68 P **P 02 18 34.4 +1.5**
SNR=8.7
AAK Ala-Archa 21.20 68*ce*P **P 02 18 34.3 +1.5**
AAK pmax pmax
comp=Z,17nm,1.3s
UZHM Uzhgorod 21.24 309 P **P 02 18 33.8 +0.8**
UZHM pP **pP 02 18 36.3 +0.5**
USP Ospenovka 21.26 66 P **P 02 18 34.1 +0.7**
SNR=9.5
FRU1 Bishkek 21.31 68 IAmb IAmb 02 18 36.9
comp=Z,64nm,1.1s
KWP Kalwaria Pacla 21.38 312 *e*P **P 02 18 34.7 +0.1**
KWP Kalwaria Pacla 21.38 312 P **P 02 18 35.1 +0.5**
KWP Kalwaria Pacla 21.38 312 P **P 02 18 35.2 +0.6**
comp=Z,123nm,1.0s
CHMS Chumysh 21.42 67 P **P 02 18 36.2 +1.2**
SNR=16
MNK Minsk 21.45 328 *i*P **P 02 18 34.1 -1.1**
comp=E,14nm,1.1s
MNK *i*P **P 02 18 34.1 -1.1**
comp=N,17nm,1.2s
MNK *i*P **P 02 18 34.1 -1.1**
comp=Z,21nm,0.9s,baz=133
MNK *i*PP **PnPn 02 18 54.5 -0.8**
MNK *i*PPP PPP 02 19 02.0
MNK *i*S **S 02 22 31.5 -1.7**
MNK *i*S **S 02 22 31.5 -1.7**
MNK *i*SS **SnSn 02 22 55.9 -0.2**
MNK *i*SSS SSS 02 23 09.0
MNK *i*LQ LQ 02 24 48.2
MNK *i*LR LR 02 26 28.9
MNK *i*LRM MLR 02 27 37.3
comp=Z,300nm,22.5s
MNK *i*LRM MLR 02 27 58.1
comp=E,398nm,16.8s
MNK *i*LRM MLR 02 27 58.1
comp=N,258nm,20.1s
MNK Minsk 21.45 328 *i*P **P 02 18 34.1 -1.1**
MNK *i*PPP PPP 02 19 02.0
MNK *i*S **S 02 22 31.5 -1.7**
MNK *i*SSS SSS 02 23 08.9
MNK pmax pmax
comp=E,14nm,1.1s
MNK pmax pmax
comp=Z,21nm,0.9s

MNK pmax pmax
comp=N,17nm,1.2s
MNK MLR MLR
comp=Z,300nm,23.0s
MNK MLR MLR
comp=N,258nm,20.0s
MNK MLR MLR
comp=E,398nm,17.0s
KBK Karagaybulak 21.54 68 P P 02 18 37.7 +1.2
SNR=13
BRZS Berezniki 21.82 48 *e*P P 02 18 39.9 +0.6
BRZS Berezniki 21.82 48 *e*P P 02 18 39.8 +0.6
TKM2 Tokmak 2 22.03 68 P P 02 18 42.5 +0.7
SNR=18
BORK Borovoye 22.06 39 *ce*P P 02 18 42.3 +0.5
BORK pmax pmax
comp=Z,33nm,1.3s
BVA0 Borovoye Array 22.08 39 *i* P P 02 18 42.2 +0.1
BVAR Borovoye Array 22.08 39 P P 02 18 42.2 +0.1
comp=Z,21nm,0.7s,baz=226,slow=8.1,SNR=41
BVAR PcP PcP 02 22 38.6 -0.9
comp=Z,1.0nm,0.7s,baz=250,slow=2.9,SNR=2.3
BVAR LR LR 02 29 59.5
comp=Z,93nm,20.0s,baz=243,slow=44
comp=Z,21nm,0.7s
STHS Stebnicka Huta 22.17 310 *e*P P 02 18 42.8 -0.3
STHS pmax pmax
comp=Z,7.0nm,0.9s
STHS Stebnicka Huta 22.17 310 *e*P P 02 18 42.8 -0.3
NACGM Naroch 22.19 327 *e*P P 02 18 43.5 +0.3
KSH Kashi 22.33 77 P P 02 18 42.7 -2.3
KSH pP pP 02 18 45.9 -2.0
KSH pmax pmax
comp=Z,23nm,0.8s
ULHL Ulahol 22.47 69 P P 02 18 48.5 +1.9
SNR=11
PSZ Piszkesteto 22.52 306 P P 02 18 47.1 +0.3
PSZ IAmb IAmb 02 19 03.0
comp=Z,21nm,0.9s
PSZ Piszkesteto 22.52 306 ⇓P P 02 18 47.8 +0.9
PSZ Piszkesteto 22.52 306 ⇓P P 02 18 47.8 +0.9
NIE Niedzica 22.75 310 *e*P P 02 18 49.9 +0.7
NIE Niedzica 22.75 310 P P 02 18 50.2 +1.0
NIE Niedzica 22.75 310 P P 02 18 49.8 +0.6
comp=Z,10nm,1.0s
MORH Mrgy, Hungar 22.93 301 ⇓P P 02 18 51.3 +0.2
MORH Mrgy, Hungar 22.93 301 P P 02 18 51.4 +0.2
comp=Z,8.7nm,2.5s
AAA Alma-Ata 23.01 67 *e*P P 02 18 52.9 +0.8
comp=Z,25nm,0.8s
AAA Alma-Ata 23.01 67 *e*P P 02 18 52.9 +0.8
AAA pmax pmax
comp=Z,25nm,0.8s
TNSS Tian-Shan 23.03 67 *e*P P 02 18 53.2 +0.6
TNSS Tian-Shan 23.03 67 *e*P P 02 18 53.2 +0.6
MDOK Medeo 23.11 67 *e*P P 02 18 53.9 +0.6
MDOK Medeo 23.11 67 *e*P P 02 18 53.8 +0.6
KDJ Kajisay 23.16 70 IAmb IAmb 02 18 58.0
comp=Z,32nm,1.0s
LANS Liptovska Anna 23.17 308 *e*P P 02 18 54.0 +0.3
LANS Liptovska Anna 23.17 308 *e*P P 02 18 53.9 +0.3
SUW Suwalki 23.29 322 *e*P P 02 18 55.1 +0.3
SUW Suwalki 23.29 322 P P 02 18 54.3 -0.4
SUW Suwalki 23.29 322 P P 02 18 54.3 -0.4
OJC Ojcow 23.34 311 P P 02 18 55.1 -0.2
OJC Ojcow 23.34 311 P P 02 18 55.1 -0.2
OJC Ojcow 23.34 311 P P 02 18 55.3 0.0
comp=Z,26nm,1.3s
SRO Srobarova 23.52 305 *e*P P 02 18 58.4 +1.3
SRO pmax pmax
comp=Z,5.0nm,0.8s
SRO Srobarova 23.52 305 *e*P P 02 18 58.4 +1.3
TARG Taragay, Kyrgy 23.63 71 IAmb IAmb 02 19 03.0
comp=Z,18nm,1.0s
KLMR Klimovskoe 23.68 350 *e*P P 02 18 57.7 -0.9
KLMR pmax pmax
comp=Z,47nm,1.1s
ARXS Arharly 23.75 65 *e*P P 02 19 00.8 +1.3
PABE Paberze 23.81 326 P P 02 19 00.1 +0.3
PABE IAmb IAmb 02 19 10.3
comp=Z,22nm,0.7s
SATY Saty 24.09 67 *e*P P 02 19 03.7 +0.8
comp=Z,13nm,1.0s
SATY Saty 24.09 67 *e*P P 02 19 03.6 +0.8
SATY pmax pmax
comp=Z,13nm,1.0s
JAVC Velka Javorina 24.21 307 *e*P P 02 19 04.4 +0.6
TDK Taldyqorghan 24.25 63 *e*P P 02 19 04.7 +0.5
comp=Z,32nm,0.9s
TDK Taldyqorghan 24.25 63 *e*P P 02 19 04.6 +0.5
TDK pmax pmax
comp=Z,32nm,0.9s
MAUC Maruska 24.25 308 *e*P P 02 19 04.3 +0.1
MODS Modra-Piesok 24.33 306 *e*P P 02 19 05.2 +0.4
MODS Modra-Piesok 24.33 306 *e*P P 02 19 05.2 +0.4
STEB Steborice 24.46 309 *e*P P 02 19 06.2 +0.1
UZB Uzynbulak 24.55 67 *e*P P 02 19 07.7 +0.6
UZB Uzynbulak 24.55 67 *e*P P 02 19 07.7 +0.6
MORC Moravsky Berou 24.56 309 ⇓P P 02 19 06.2 -0.8
MORC Moravsky Berou 24.56 309 *e*P P 02 19 07.5 +0.6
MORC Moravsky Berou 24.56 309 ⇓P P 02 19 06.2 -0.8
SOP Sopron 24.64 304 P P 02 19 08.2 +0.6
SOP pmax pmax
comp=Z,20nm,0.9s
VSU Vasula 24.74 334 *ce*P P 02 19 08.4 0.0
VSU pmax pmax
comp=Z,50nm,0.7s
RONA Rosalia, Austr 24.81 304 *e*P P 02 19 09.2 -0.1
comp=Z,14nm,1.1s
SHLS Shalkode 24.87 67 *e*P P 02 19 13.5 +3.6
comp=Z,17nm,0.9s
SHLS Shalkode 24.87 67 *e*P P 02 19 13.5 +3.6
SHLS pmax pmax
comp=Z,17nm,0.9s
VRAC Vranov 25.01 307 P P 02 19 11.2 +0.1
comp=Z,4.8nm,0.9s,baz=92,slow=12,SNR=6.3
comp=Z,4.8nm,0.9s
VRAC Vranov 25.01 307 ⇓P P 02 19 09.8 -1.2
VRAC Vranov 25.01 307 *e*P P 02 19 11.1 +0.1
KRUC Moravsky 25.07 307 *e*P P 02 19 11.4 -0.1
KRUC Moravsky 25.07 307 P P 02 19 12.5 +1.0
KRUC pmax pmax
comp=Z,36nm,0.8s
KRLC Kraliky 25.12 309 *e*P P 02 19 12.0 0.0
KRLC *e* 02 19 16.1
KRLC Kraliky 25.12 309 *e*P P 02 19 12.0 0.0
KRLC *ep*P sP 02 19 16.1 -0.3
CONA Conrad Observa 25.15 304 *i* P P 02 19 12.3 0.0
comp=Z,6.9nm,1.0s
ARSA Arzberg 25.24 302 P P 02 19 13.6 +0.5
ARSA IAmb IAmb 02 19 18.5
comp=Z,15nm,0.9s
ARSA Arzberg 25.24 302 *e*P P 02 19 13.2 +0.1
comp=Z,9.2nm,0.7s,SNR=7.4
SOKA Soboth 25.47 301 *e*P P 02 19 16.2 +0.9
comp=Z,8.0nm,0.8s
DPC Dobruska-Polom 25.48 310 *e*P P 02 19 15.5 +0.2
DPC Dobruska-Polom 25.48 310 *e*P P 02 19 15.5 +0.2
DPC Dobruska-Polom 25.48 310 P P 02 19 15.8 +0.5
comp=Z,7.5nm,1.1s
KURBB Kurchatov Arra 25.55 50 P P 02 19 16.7 +0.9
comp=Z,23nm,0.8s,baz=257,slow=9.3,SNR=104
KURBB PcP PcP 02 22 44.5 -2.3
comp=Z,0.4nm,0.3s,baz=247,slow=2.8,SNR=2.1
KURBB LR LR 02 31 32.7
comp=Z,68nm,19.9s,baz=178,slow=42
comp=Z,23nm,0.8s
KURBB Kurchatov Arra 25.55 50 P P 02 19 17.1 +1.3
OSTC Ostas 25.61 310 *e*P P 02 19 16.7 +0.3
OSTC Ostas 25.61 310 *e*P P 02 19 16.7 +0.3
KURK Kurchatov 25.63 50 P P 02 19 18.0 +1.5
KURK Kurchatov 25.63 50 PcP 02 22 44.5 -2.5
KURK Kurchatov 25.63 50 *ce*P P 02 19 18.2 +1.7
KURK pmax pmax
comp=Z,61nm,1.3s
KSP Ksiaz 25.65 311 *e*P P 02 19 18.8 +2.0
KSP Ksiaz 25.65 311 P P 02 19 17.6 +0.8
KSP Ksiaz 25.65 311 P P 02 19 17.5 +0.8
comp=Z,684nmcomp=Z,26nm,0.8s
CHVC Chvalec 25.72 310 *e*P P 02 19 18.0 +0.6
CHVC Chvalec 25.72 310 *e*P P 02 19 18.0 +0.6
UPC Upice 25.72 310 *e*P P 02 19 17.5 +0.1
UPC Upice 25.72 310 *e*P P 02 19 17.5 +0.1
OBKA Obir 25.78 300 *e*P P 02 19 20.3 +2.2
comp=Z,11nm,1.2s

MOA Molln 26.18 303 *e*P P 02 19 21.6 -0.1
comp=Z,9.7nm,1.8s,SNR=4.9
CKRC Cesky Krumlov 26.35 306 *e*P P 02 19 23.2 +0.1
CKRC Cesky Krumlov 26.35 306 *e*P P 02 19 23.2 +0.1
MYKA Terra Mystica 26.41 300 *ep*P pP 02 19 26.6 -0.3
comp=Z,1.8nm,0.5s
PRU Pruhonice 26.48 308 *e*P P 02 19 27.6 +3.3
PRU Pruhonice 26.48 308 *e*P P 02 19 27.6 +3.3
SEM Semipalatinsk 26.53 51 *e*P P 02 19 25.4 +0.4
comp=Z,19nm,1.9s
SEM Semipalatinsk 26.53 51 *e*P P 02 19 25.4 +0.4
SEM pmax pmax
comp=Z,19nm,1.9s
ZVC Zvikov 26.56 307 *e*P P 02 19 24.9 -0.1
ZVC *ep*P pP 02 19 29.0 +0.9
KBA Koelnbreinsper 26.68 301 *e*P P 02 19 26.0 -0.3
comp=Z,2.8nm,0.9s
GEC2 GERESS Array S 26.75 305 P P 02 19 27.0 +0.1
GERES GERESS Array B 26.75 305 P P 02 19 26.6 -0.2
comp=Z,3.6nm,0.7s,baz=101,slow=6.9,SNR=34
GERES PcP PcP 02 22 48.4 -1.5
comp=Z,0.5nm,0.6s,baz=121,slow=3.8,SNR=4.7
comp=Z,3.6nm,0.7s
KHC Kasperske Hory 26.89 306 *ce*P P 02 19 28.9 +0.9
KHC pmax pmax
comp=Z,13nm,1.7s
KHC Kasperske Hory 26.89 306 *e*P P 02 19 28.1 +0.1
KHC *ep*P sP 02 19 34.3 +1.9
KHC Kasperske Hory 26.89 306 P P 02 19 28.2 +0.2
comp=Z,7.5nm,1.4s
MAKZ Makanchi 26.94 59 P P 02 19 29.9 +1.4
MAKZ IAmb IAmb 02 19 34.1
comp=Z,18nm,0.8s
MAKZ Makanchi 26.94 59 P P 02 19 29.9 +1.4
MAKZ pmax pmax
comp=Z,18nm,0.9s
MK31 Makanchi Array 27.15 59 *i* P P 02 19 30.9 +0.5
MK31 pmax pmax
comp=Z,23nm,1.0s
MKAR Makanchi Array 27.15 59 P P 02 19 31.6 +1.2
MKAR Makanchi Array 27.15 59 P P 02 19 31.2 +0.8
comp=Z,14nm,0.9s,baz=266,slow=6.0,SNR=27
MKAR PcP PcP 02 22 48.3 -2.5
comp=Z,0.4nm,0.6s,baz=269,slow=3.7,SNR=1.6
comp=Z,14nm,0.9s
LESA Schwarzleotal 27.18 302 *e*P P 02 19 30.2 -0.5
comp=Z,3.6nm,1.0s
ABTA Abfaltersbach 27.20 301 *e*P P 02 19 30.6 -0.3
comp=Z,5.0nm,1.0s
FINES FINESS Array B 27.23 338 P P 02 19 30.3 -0.5
comp=Z,3.5nm,0.7s,baz=146,slow=9.3,SNR=14
comp=Z,3.5nm,0.7s
FINES FINESS Array B 27.23 338 *i* P P 02 19 31.2 +0.3
FINES pmax pmax
comp=Z,7.0nm,0.9s
HSKC Hora Svate Kat 27.33 309 *e*P P 02 19 38.2 +6.3
CLL Collm 27.77 310 *i* P P 02 19 36.1 +0.2
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL Collm 27.77 310 P P 02 19 36.9 +1.0
comp=Z,6.9nm,0.9s
CLL Collm 27.77 310 *i* P P 02 19 36.1 +0.2
comp=Z,8.0nm,1.1s
WTTA Wattenberg 27.86 301 P P 02 19 35.9 -1.0
comp=Z,10nm,1.1s,SNR=6.5
WATA Walderalm 27.91 302 *e*P P 02 19 36.3 -1.0
comp=Z,6.9nm,0.9s
SQTA Sankt Quirin 28.14 301 *e*P P 02 19 38.4 -1.0
comp=Z,5.7nm,0.7s,SNR=8.0
MOTA Moosalm 28.23 302 *e*P P 02 19 39.1 -1.1
comp=Z,11nm,0.9s,SNR=10
FETA Feichten 28.45 301 *e*P P 02 19 41.3 -0.8
comp=Z,4.0nm,0.7s,SNR=7.3
FUORN Ofenpass-Fuorn 28.73 300 P P 02 19 45.1 +0.4
FUORN IAmb IAmb 02 19 58.4
comp=Z,29nm,1.7s
ZSN Zaisan 28.97 58 *e*P P 02 19 47.3 +0.7
ZSN Zaisan 28.97 58 *e*P P 02 19 47.3 +0.7
DAVA Damuels 29.05 301 *e*P P 02 19 46.5 -1.0
comp=Z,14nm,0.8s
TUE Stuetta 29.35 300 P P 02 19 49.1 -1.1
TUE IAmb IAmb 02 19 53.2
comp=Z,49nm,2.0s
TUE Stuetta 29.35 300 P P 02 19 49.6 -0.6
comp=Z,38nm,1.3s
ZAA0 Zalesovo Array 30.24 45 IAmb IAmb 02 19 59.9
comp=Z,14nm,0.9s
ZALV Zalesovo Beam 30.24 45 P P 02 19 58.2 +0.5
comp=Z,7.3nm,0.6s,baz=262,slow=10,SNR=34
ZALV LR LR 02 34 12.2
comp=Z,124nm,18.1s,baz=283,slow=40
comp=Z,7.3nm,0.6s
ZALV Zalesovo Beam 30.24 45 *i* P P 02 19 58.2 +0.5
ZALV pmax pmax
comp=Z,8.0nm,0.6s
WMQ Urumqi 30.86 66 *e*P P 02 20 05.3 +1.9
WMQ pP sP 02 20 10.6 +2.8
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ pmax pmax
comp=Z,140nm,4.3s
DGZ Jazzator, Alta 30.92 54 ⇑*i* P P 02 20 05.4 +1.4
DGZ pmax pmax
comp=Z,13nm,1.0s
APA Apatity 30.92 350 *e*P P 02 20 02.6 -1.0
APA *e* 02 21 08.4
HFS Hagfors 30.96 327 P P 02 20 03.8 -0.3
comp=Z,16nm,0.7s,baz=132,slow=8.2,SNR=31
comp=Z,16nm,0.7s
OSL Oslo 32.17 326 *e*P P 02 20 15.5 +0.8
NC602 NORSAR Array S 32.19 327 *e*P P 02 20 15.5 +0.6
NORES NORESS Array B 32.19 327 P P 02 20 14.8 -0.1
NC405 NORSAR Array S 32.30 328 P P 02 20 15.7 -0.2
NB201 NORSAR Array S 32.45 328 *e*P P 02 20 15.8 -1.4
NB2 NORSAR Subarra 32.48 328 P P 02 20 17.0 -0.5
comp=Z,3.1nm,0.6s,baz=121,slow=8.6
NOA NORSAR Array B 32.48 328 P P 02 20 16.8 -0.7
comp=Z,6.1nm,0.8s,baz=122,slow=8.6,SNR=25
comp=Z,6.1nm,0.8s
NC303 NORSAR Array S 32.51 328 *e*P P 02 20 16.6 -1.0
NAO01 NORSAR Array S 32.53 327 *e*P P 02 20 17.2 -0.6
NBO00 NORSAR Array S 32.66 327 *e*P P 02 20 17.8 -1.2
NC204 NORSAR Array S 32.79 328 *e*P P 02 20 18.7 -1.5
DOMB Dombas 33.87 328 *e*P P 02 20 30.2 +0.6
ARCES ARCESS Array B 34.00 346 P P 02 20 30.9 +0.3
comp=Z,2.0nm,0.7s,baz=154,slow=11,SNR=7.6
comp=Z,2.0nm,0.7s
ODD1 Odda 34.04 324 *e*P P 02 20 33.5 +2.4
NSS Namsos 34.04 333 *e*P P 02 20 31.6 +0.6
MOR8 Moi Rana 34.22 337 *e*P P 02 20 33.0 +0.5
EVN Everest 34.27 95 P P 02 20 34.6 +0.5
EVN IAmb IAmb 02 20 38.0
comp=Z,13nm,0.8s
RAUS Rausandaksla 34.51 337 *e*P P 02 20 35.5 +0.5
LEIR Leirfjorden 34.60 336 *e*P P 02 20 36.1 +0.4
HYA Hoyanger 34.73 326 *e*P P 02 20 37.4 +0.5
MOL Molde 34.74 329 *e*P P 02 20 37.5 +0.5
FAUS Fauske 34.76 339 *e*P P 02 20 38.4 +1.2
STOK Stokkvaagen 34.77 336 *e*P P 02 20 37.4 +0.2
AKN Aaknes 34.80 328 *e*P P 02 20 37.5 0.0
BER Bergen 34.81 324 *e*P P 02 20 38.5 +0.8
VAGH Vaagaholmen 34.94 337 *e*P P 02 20 39.7 +1.1
STEI Steigen 35.15 340 *e*P P 02 20 40.5 0.0
KNGR Kungurtug, Tuv 37.45 53 *d*P P 02 21 03.1 +2.5
KNGR pmax pmax
comp=Z,23nm,1.2s
GOMU GeErMu 37.57 77 P P 02 21 03.1 +1.1
GOMU sP sP 02 21 07.6 +1.2
GOMU PcP PcP 02 23 19.7 -0.2
EKA Eskdalemuir Ar 38.04 314 P P 02 21 04.8 -0.5
comp=Z,5.7nm,0.6s,baz=102,slow=8.5,SNR=18
comp=Z,5.7nm,0.6s
NRIK Noril'sk 38.29 22 IAmb IAmb 02 21 09.7
comp=Z,14nm,1.5s
NRIK Noril'sk 38.29 22 P P 02 21 08.2 +0.9
comp=Z,1.4nm,0.5s,baz=231,slow=5.9,SNR=4.2
comp=Z,1.4nm,0.5s
NRIK Noril'sk 38.29 22 *ce*P P 02 21 09.3 +2.0
TAM Tamanrasset 38.82 260 P P 02 21 12.3 -0.1
TAM Tamanrasset 38.82 260 P P 02 21 12.3 -0.1
TAM pmax pmax
comp=Z,5.0nm,0.6s
SHL Shillong 39.39 95 P P 02 21 16.0 -1.2
SHL Shillong 39.39 95 P P 02 21 16.0 -1.2
SHL pmax pmax

comp=Z,12nm,0.9s
ESDC Sonseca Array 39.72 289 P P 02 21 17.9 -1.8
comp=Z,1.0nm,0.8s,baz=77,slow=8.5,SNR=5.1
ESDC PcP PcP 02 23 24.8 -1.4
comp=Z,1.0nm,0.9s,baz=34,slow=3.2,SNR=3.0
comp=Z,1.0nm,0.8s
GTA Gaotai 40.51 71 *e*P P 02 21 27.0 +0.7
GTA pmax pmax
comp=Z,10.0nm,0.9s
TLY Talaya 41.28 52 *ce*P P 02 21 35.3 +2.9
TLY pmax pmax
comp=Z,7.0nm,1.3s
SPITS Spitsbergen Ar 42.59 351 P P 02 21 44.0 +1.3
comp=Z,7.3nm,0.6s,baz=135,slow=8.3,SNR=12
comp=Z,7.3nm,0.6s
SONM Songino Array 43.47 57 IAmb IAmb 02 21 58.4
comp=Z,4.7nm,1.2s
SONM Songino Array 43.47 57 P P 02 21 51.2 +0.9
comp=Z,1.6nm,0.6s,baz=277,slow=9.4,SNR=6.5
SONM PcP PcP 02 23 37.5 -0.9
comp=Z,1.8nm,0.8s,baz=296,slow=4.6,SNR=6.4
comp=Z,1.6nm,0.6s
ULN Ulaanbaatar 43.90 57 *ce*P P 02 21 55.2 +1.3
ULN pmax pmax
comp=Z,37nm,1.7s
LZDM Lanzhou Array 44.47 74 P P 02 21 59.8 +0.9
comp=Z,10.0nm,0.7s,baz=279,slow=9.8,SNR=6.6
comp=Z,10.0nm,0.7s
LZH Lanzhou 44.54 74 *e*P P 02 22 00.8 +1.6
LZH pP sP 02 22 05.9 +2.2
LZH sP pP 02 22 08.6 +6.2
LZH pmax pmax
comp=Z,27nm,1.2s
LZH pmax pmax
comp=Z,230nm,3.8s
CD2 Chengdu 46.41 81 P P 02 22 14.3 +0.3
CD2 pmax pmax
comp=Z,30nm,1.0s
PZH PanZhiHua 46.76 87 P P 02 22 17.3 +0.5
TORD Torodi Ar. Bea 47.41 251 P P 02 22 20.2 -1.7
comp=Z,1.5nm,0.8s,baz=53,slow=9.5,SNR=14
comp=Z,1.5nm,0.8s
DBG Daneborg 48.06 340 *i* P P 02 22 27.1 +0.9
DBG IAmb IAmb 02 22 29.3
comp=Z,3.5nm,1.2s
SCO Scoresbysund 48.11 335 *i* P P 02 22 28.0 +1.5
DAG Danmarks Havn 48.17 344 *i* P P 02 22 27.0 +0.1
DAG IAmb IAmb 02 22 28.8
comp=Z,5.5nm,1.0s
KMI Kunming 48.20 88 P P 02 22 28.7 +0.5
KMI pmax pmax
comp=Z,18nm,0.9s
CHTO Chiang Mai 48.48 98 P P 02 22 33.0 +2.9
CMAR Chiang Mai Arr 48.68 98 P P 02 22 31.5 -0.1
comp=Z,1.7nm,0.3s,baz=302,slow=8.2,SNR=14
CMAR PcP PcP 02 23 55.3 -1.6
comp=Z,0.8nm,0.3s,baz=296,slow=4.1,SNR=1.2
CMAR LR LR 02 44 51.1
comp=Z,36nm,19.0s,baz=290,slow=38
comp=Z,1.7nm,0.3s
HHC Hu-ho-hao-te 48.73 65 *e*P P 02 22 33.7 +1.8
HHC pmax pmax
comp=Z,8.0nm,0.8s
XAN Xi'an 49.16 75 ⇓P P 02 22 36.0 +0.7
XAN pmax pmax
comp=Z,57nm,0.9s
XLT XiLinHaoTe 50.96 60 *e*P P 02 22 50.5 +1.7
XLT pmax pmax
comp=Z,12nm,1.3s
LYN LuoYang 51.66 73 P P 02 22 55.4 +1.3
LYN pmax pmax
comp=Z,29nm,0.8s
HILR Hailar Array B 51.73 52 P P 02 22 55.7 +1.3
comp=Z,8.3nm,0.8s,baz=270,slow=5.9,SNR=9.6
comp=Z,8.3nm,0.8s
TIXI Tiksi 52.02 23 P P 02 22 56.6 +0.4
TIXI Tiksi 52.02 23 *ce*P P 02 22 57.3 +1.1
TIXI pmax pmax
comp=Z,10.0nm,1.3s
HNS HongShan 52.23 68 ⇓P P 02 22 59.4 +1.2
HNS pmax pmax
comp=Z,10.0nm,0.7s
SUMG Summit 53.27 338 P P 02 23 07.8 +1.9
SUMG IAmb IAmb 02 24 35.7
comp=Z,25nm,1.4s
SUMG Summit 53.27 338 P P 02 23 07.8 +1.9
SUMG pmax pmax
comp=Z,25nm,1.4s
SUMG Summit 53.27 338 *i* P P 02 23 06.0 +0.1
SUMG IAmb IAmb 02 23 08.0
comp=Z,4.7nm,0.4s
YAK Yakutsk 54.00 35 LR LR 02 48 23.5
comp=Z,53nm,18.4s,baz=280,slow=38
ZEA Zeya 55.01 46 *e*P P 02 23 20.2 +1.8
ZEA pmax pmax
comp=Z,10.0nm,0.7s
NEEM North Greenlan 55.33 345 *i* P P 02 23 20.8 +0.1
NEEM IAmb IAmb 02 23 22.1
comp=Z,5.5nm,1.0s
LSZ Lusaka 55.74 203 LR LR 02 46 44.8
comp=Z,58nm,19.6s,baz=108,slow=36
OPO Ambohidratompo 55.99 180 LR LR 02 48 10.6
comp=Z,75nm,19.8s,baz=170,slow=37
HEH HeiHe 56.23 50 *e*P P 02 23 28.0 +0.8
HEH pmax pmax
comp=Z,27nm,0.9s
CN2 Changchun 57.34 57 P P 02 23 35.1 -0.2
CN2 pP pP 02 23 39.5 +1.0
CN2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 Nanjing 57.56 72 *e*P P 02 23 36.3 -0.6
NJ2 pmax pmax
comp=Z,22nm,0.5s
BNX BinXian 57.88 55 ⇓P P 02 23 39.4 +0.4
BNX pmax pmax
comp=Z,15nm,0.8s
SFJD Kangerlussuaq 58.90 333 LR LR 02 49 19.8
comp=Z,79nm,19.0s,baz=109,slow=36
SFJD Kangerlussuaq 58.90 333 *i* P P 02 23 45.1 -0.6
NRS Narsarsuaq 59.09 326 *i* P P 02 23 46.1 -1.1
USRK Usurijsk Ar. 61.48 55 P P 02 24 03.7 -0.1
comp=Z,15nm,0.8s,baz=282,slow=5.9,SNR=18
comp=Z,15nm,0.8s
KS19 Wonju Array Si 61.69 63 P P 02 24 06.0 +0.6
KSAR Wonju Array Be 61.73 63 P P 02 24 05.4 -0.2
KSAR Wonju Array Be 61.73 63 P P 02 24 05.4 -0.2
KSRS Korea Array 61.75 63 P P 02 24 05.8 0.0
comp=Z,15nm,0.9s,baz=286,slow=6.9,SNR=33
comp=Z,15nm,0.9s
TSUM Tsumeb 63.21 212 LR LR 02 52 09.2
comp=Z,89nm,18.5s,baz=278,slow=36
SEY Seymchan 63.37 30 LR LR 02 54 25.0
comp=Z,58nm,18.0s,baz=296,slow=38
SEY Seymchan 63.37 30 *e*P P 02 24 16.2 +0.1
SEY pmax pmax
comp=Z,22nm,1.6s
BILL Bilibino 65.12 21 *ce*P P 02 24 29.1 +1.6
BILL pmax pmax
comp=Z,15nm,1.3s
LBTB Lobatse 65.70 202 LR LR 02 52 31.5
comp=Z,71nm,19.1s,baz=16,slow=36
JOW Kunigami 67.27 73 LR LR 03 00 51.3
comp=Z,49nm,19.1s,baz=140,slow=42
TGY Tagaytay City 68.52 89 LR LR 02 59 39.2
comp=Z,117nm,18.3s,baz=200,slow=40
BOSA Boshof 69.19 201 P P 02 24 52.5 -1.4
comp=Z,2.3nm,0.8s,baz=315,slow=8.1,SNR=3.6
BOSA LR LR 02 55 54.1
comp=Z,70nm,19.5s,baz=24,slow=37
comp=Z,2.3nm,0.8s
MAJO Matsushiro 69.35 59 P P 02 24 54.5 -0.4
MAJO Matsushiro 69.35 59 P P 02 24 54.5 -0.4
MAJO pmax pmax
comp=Z,14nm,0.8s
MJAR Matsushiro Arr 69.35 59 P P 02 24 55.5 +0.5
MJAR IAmb IAmb 02 24 56.7
comp=Z,9.8nm,0.9s
MJAR Matsushiro Arr 69.35 59 P P 02 24 55.0 0.0
comp=Z,6.5nm,0.8s,baz=308,slow=3.3,SNR=23
comp=Z,6.5nm,0.8s
MJAR Matsushiro Arr 69.35 59 P P 02 24 55.5 +0.5
MJAR pmax pmax
comp=Z,10.0nm,0.9s
A21K Barrow 69.91 8 P P 02 24 58.7 +1.0
baz=340
A19K Wainwright 70.40 10 P P 02 25 01.8 +1.0
baz=336

A36M	Sachs Harbour	70.47	358	P		P	02 25 01.7 +0.6
A36M	Sachs Harbour baz=6.1,SNR=13	70.47	358	P		P	02 25 01.3 +0.2
B18K	Kokolik River baz=336	71.07	11	P		P	02 25 06.3 +1.5
B20K	Meade River baz=340	71.08	9	P		P	02 25 05.3 +0.3
B22K	Teshekpuk Lake baz=343	71.18	7	P		P	02 25 06.8 +1.2
PEA0B	Petropavlovsk-	71.30	37	*ce*P		P	02 25 08.7 +2.1
PETK	Petropavlovsk- comp=Z,17nm,1.1s,baz=282,slow=7.2,SNR=2.9 comp=Z,17nm,1.1s	71.30	37	P		P	02 25 05.7 -0.9
C16K	Lisburne Hills baz=333	71.50	12	P		P	02 25 07.9 +0.4
C19K	Lookout Ridge baz=338	71.62	10	P		P	02 25 09.1 +0.8
C17K	DeLong Mountai baz=335	71.67	11	P		P	02 25 10.0 +1.5
B21K	Ikpikpuk River baz=342	71.74	8	P		P	02 25 09.8 +0.9
C18K	Utukok River baz=336	71.81	11	P		P	02 25 10.2 +0.8
C23K	Itkillik River baz=345	71.94	6	P		P	02 25 10.7 +0.6
SCHQ	Schefferville comp=Z,8.3nm,0.5s,baz=48,slow=6.6,SNR=14 comp=Z,8.3nm,0.5s	72.04	326	P		P	02 25 10.5 -0.5
RDOG	Red Dog Mine baz=335	72.10	12	P		P	02 25 11.3 +0.1
C21K	Knifeblade Rid baz=342	72.17	8	P		P	02 25 12.2 +0.7
C24K	Franklin Bluff baz=347	72.21	6	P		P	02 25 13.0 +1.3
C26K	Camden Bay baz=350	72.29	4	P		P	02 25 12.9 +0.7
D20K	Etivluk River baz=340	72.37	9	P		P	02 25 13.0 +0.2
D19K	Kuna River baz=339	72.39	10	P		P	02 25 13.9 +1.0
D17K	Noatak River baz=335	72.39	12	P		P	02 25 14.0 +1.2
C27K	Jago River comp=Z,7.5nm,0.8s	72.65	4	IAmb		IAmb	02 25 16.4
C27K	Jago River baz=351	72.65	4	P		P	02 25 15.1 +0.7
D22K	Ayikyak River baz=343	72.66	8	P		P	02 25 15.5 +1.0
D24K	Happy Valley baz=346	72.75	6	P		P	02 25 15.6 +0.6
D23K	Nanushuk River baz=345	72.77	7	P		P	02 25 16.3 +1.2
D25K	Kavik River baz=348	72.78	5	P		P	02 25 15.5 +0.3
E20K	Nigu River baz=340	72.86	9	P		P	02 25 16.1 +0.4
E21K	Killik River baz=342	72.94	8	P		P	02 25 17.0 +0.8
E18K	Tukpahlearik C comp=Z,12nm,0.9s	73.03	11	IAmb		IAmb	02 25 20.9
E18K	Tukpahlearik C baz=337	73.03	11	P		P	02 25 17.6 +0.9
C36M	Paulatuk baz=7.0	73.06	357	P		P	02 25 17.2 +0.5
E17K	Hotham Inlet baz=336	73.16	12	P		P	02 25 18.1 +0.6
D28M	Stokes Point baz=355	73.16	2	P		P	02 25 18.5 +1.2
D27M	Malcolm River baz=353	73.16	3	P		P	02 25 18.5 +1.0
TOLK	Toolik Lake Re baz=346	73.19	6	P		P	02 25 18.6 +0.9
TNA	Tin City baz=331	73.44	15	P		P	02 25 20.9 +1.9
E22K	Anaktuvuk Pass baz=344	73.47	7	P		P	02 25 19.9 +0.6
E19K	Redstone River baz=340	73.48	10	P		P	02 25 20.4 +1.0
E23K	Chandalar baz=346	73.75	7	P		P	02 25 22.2 +1.1
F14K	Arctic Creek baz=333	73.83	14	P		P	02 25 21.9 +0.5
F17K	Baldwin Pennin baz=337	73.84	12	P		P	02 25 22.3 +0.9
E24K	Your Creek baz=347	73.84	6	P		P	02 25 21.7 +0.2
E28M	Babbage River comp=Z,5.3nm,0.8s	73.86	3	IAmb		IAmb	02 25 23.3
E28M	Babbage River baz=354	73.86	3	P		P	02 25 21.8 +0.2
F15K	North Star Dit baz=334	73.93	13	P		P	02 25 22.8 +0.8
F18K	Selawik baz=338	73.94	11	P		P	02 25 22.7 +0.7
F19K	Shaleruckik Mo baz=339	73.99	10	P		P	02 25 22.5 +0.2
E25K	Arctic Village baz=349	74.02	5	P		P	02 25 23.0 +0.5
F22K	John River baz=344	74.04	8	P		P	02 25 23.8 +1.2
F20K	Avaraart Lake comp=Z,5.8nm,0.8s	74.06	9	IAmb		IAmb	02 25 24.1
F20K	Avaraart Lake baz=341	74.06	9	P		P	02 25 23.1 +0.4
E29M	Blow River comp=Z,14nm,0.9s	74.13	2	IAmb		IAmb	02 25 24.8
E29M	Blow River baz=356,SNR=8.3	74.13	2	P		P	02 25 23.4 +0.3
F21K	Alatna River comp=Z,13nm,1.0s	74.17	8	IAmb		IAmb	02 25 25.2
F21K	Alatna River baz=343	74.17	8	P		P	02 25 24.2 +0.8
GAMB	Gambell baz=329	74.18	17	P		P	02 25 24.0 +0.6
E27K	Coleen River comp=Z,18nm,1.4s	74.19	3	IAmb		IAmb	02 25 25.5
E27K	Coleen River baz=352	74.19	3	P		P	02 25 24.1 +0.6
INK	Inuvik comp=Z,32nm,20.5s,baz=6.5,slow=40	74.28	0	LR		LR	03 03 03.6
INK	Inuvik baz=359	74.28	0	P		P	02 25 23.9 -0.1
F24K	Squaw Lake baz=347	74.43	6	P		P	02 25 25.0 0.0
COLD	Coldfoot comp=Z,5.7nm,0.9s	74.51	7	IAmb		IAmb	02 25 27.5
COLD	Coldfoot baz=346	74.51	7	P		P	02 25 25.8 +0.5
F25K	Christian Rive baz=349	74.53	5	P		P	02 25 25.8 +0.2
F26K	Sheenjek River baz=350	74.53	5	P		P	02 25 26.0 +0.5
G16K	Koyuk River baz=336	74.62	12	P		P	02 25 25.7 -0.2
G22K	Bettles baz=344	74.67	8	P		P	02 25 26.8 +0.5
G15K	Niuluk baz=335	74.69	13	P		P	02 25 25.9 -0.5
G18K	Tagagawik baz=339	74.75	11	P		P	02 25 27.5 +0.7
G17K	Kiwalik Mounta baz=337	74.80	12	P		P	02 25 28.1 +1.0
ANM	Nome baz=334	74.82	14	P		P	02 25 28.5 +1.3
F28M	Old Crow baz=354	74.84	3	P		P	02 25 27.5 +0.2
G21K	Allakaket comp=Z,9.1nm,0.8s	74.84	9	IAmb		IAmb	02 25 28.6
G21K	Allakaket baz=343	74.84	9	P		P	02 25 27.9 +0.6
F30M	Barrier River comp=Z,12nm,0.9s	74.96	1	IAmb		IAmb	02 25 28.7
F30M	Barrier River baz=357	74.96	1	P		P	02 25 28.7 +0.8
G23K	Bananza Creek baz=346	75.03	7	P		P	02 25 29.5 +1.1
F31M	Tsiigehtchic comp=Z,12nm,0.8s	75.15	0	IAmb		IAmb	02 25 29.9
F31M	Tsiigehtchic baz=359,SNR=5.0	75.15	0	P		P	02 25 29.4 +0.4
G24K	Hadweenzic Riv comp=Z,7.7nm,0.8s	75.27	6	IAmb		IAmb	02 25 31.4
G24K	Hadweenzic Riv baz=348	75.27	6	P		P	02 25 31.0 +1.3
G26K	Porcupine Rive comp=Z,9.1nm,0.8s	75.30	5	IAmb		IAmb	02 25 32.0
G26K	Porcupine Rive baz=351	75.30	5	P		P	02 25 30.4 +0.5
G25K	Bearman Lake baz=349	75.32	6	P		P	02 25 30.8 +0.8
IMAR	Indian Mountai	75.32	9	P		P	02 25 30.7 +0.6
H16K	Elim baz=336	75.33	13	P		P	02 25 31.1 +1.0
H19K	Roundabout Mou baz=341	75.41	10	P		P	02 25 31.5 +1.0
H17K	Granite Mounta baz=338	75.45	12	P		P	02 25 31.9 +1.1
H18K	Honhosa River baz=339	75.49	11	P		P	02 25 31.4 +0.4
G27K	Doyon Strip comp=Z,8.9nm,1.1s	75.56	4	IAmb		IAmb	02 25 33.6
G27K	Doyon Strip baz=352	75.56	4	P		P	02 25 32.0 +0.6
G30M	tAoh Zraii Nji comp=Z,13nm,1.1s	75.58	1	IAmb		IAmb	02 25 32.5
G30M	tAoh Zraii Nji baz=357	75.58	1	P		P	02 25 32.0 +0.4
G29M	Pine Creek baz=356	75.60	2	P		P	02 25 32.0 +0.3
H20K	Anotleneega Mo baz=342	75.65	9	P		P	02 25 32.2 +0.2
G31M	Satah River baz=358,SNR=9.4	75.67	1	P		P	02 25 32.1 +0.1
H22K	Ishtalitna Cre baz=345	75.68	8	P		P	02 25 33.2 +1.0
H21K	Melozitna Rive comp=Z,12nm,1.1s	75.75	9	IAmb		IAmb	02 25 34.5
H21K	Melozitna Rive baz=344	75.75	9	P		P	02 25 33.7 +1.2
H23K	Yukon River comp=Z,8.8nm,0.8s	75.94	7	IAmb		IAmb	02 25 36.0
H23K	Yukon River baz=346	75.94	7	P		P	02 25 33.6 0.0
H24K	Noodor Dome comp=Z,10nm,1.4s	76.08	6	IAmb		IAmb	02 25 36.4
H24K	Noodor Dome baz=348	76.08	6	P		P	02 25 35.5 +1.0
GCSA	Galena City Sc baz=340	76.09	10	P		P	02 25 35.4 +1.0
H27K	Steamboat Moun comp=Z,8.4nm,1.0s	76.14	4	IAmb		IAmb	02 25 36.8
H27K	Steamboat Moun baz=353	76.14	4	P		P	02 25 35.5 +0.7
EPYK	Eagle Plains baz=357	76.18	2	P		P	02 25 35.2 +0.2
H29M	Whitestone comp=Z,7.0nm,0.8s	76.29	2	IAmb		IAmb	02 25 36.8
H29M	Whitestone baz=355	76.29	2	P		P	02 25 36.0 +0.4
I17K	Unalakleet baz=337	76.29	12	P		P	02 25 36.4 +0.8
I21K	Tanana baz=344	76.31	8	P		P	02 25 36.7 +1.0
I20K	Naaghedeneel baz=342	76.37	9	P		P	02 25 36.7 +0.7
MLY	Manley baz=345	76.59	8	P		P	02 25 37.7 +0.3
I23K	Minto, Yukon-K baz=346	76.62	7	P		P	02 25 37.8 +0.3
I27K	Kandik River baz=353	76.76	4	P		P	02 25 38.6 +0.3
H31M	Peel River comp=Z,8.2nm,0.8s	76.79	1	IAmb		IAmb	02 25 39.3
H31M	Peel River baz=358	76.79	1	P		P	02 25 38.7 +0.2
J14K	Nanvaranak Lak baz=335	76.82	14	P		P	02 25 39.7 +1.2
POKR	Poker Plat Res baz=348	76.83	6	P		P	02 25 38.7 +0.1
J16K	Anvik River baz=338	76.87	13	P		P	02 25 39.8 +0.9
I26K	Coal Creek Min comp=Z,15nm,1.2s	76.97	5	IAmb		IAmb	02 25 40.8
I26K	Coal Creek Min baz=351	76.97	5	P		P	02 25 39.7 +0.3
J19K	Poorman comp=Z,12nm,1.2s	76.98	10	IAmb		IAmb	02 25 41.4
J19K	Poorman baz=341	76.98	10	P		P	02 25 40.6 +1.0
I28M	Miner Creek comp=Z,8.2nm,0.7s	77.00	3	IAmb		IAmb	02 25 40.6
I28M	Miner Creek baz=354,SNR=12	77.00	3	P		P	02 25 39.7 0.0
J20K	Nowinta River baz=343	77.01	10	P		P	02 25 40.8 +1.1
J17K	VABM Dome baz=339	77.02	12	P		P	02 25 40.5 +0.7
COLA	College	77.03	7	P		P	02 25 40.6 +0.8
COLA	College	77.03	7	*i* P		P	02 25 40.9 +1.1
COLA	comp=Z,13nm,0.9s			pmax		pmax	
COLA	College baz=348	77.03	7	P		P	02 25 40.3 +0.6
NEA2	Nenana baz=347	77.19	7	P		P	02 25 41.4 +0.7
IL31	comp=Z,22nm,2.0s	77.22	6	IAmb		IAmb	02 25 55.4
ILAR	Eielson Array	77.22	6	P		P	02 25 40.6 -0.2
ILAR	Eielson Array comp=Z,2.4nm,0.9s,baz=330,slow=4.8,SNR=20	77.22	6	P		P	02 25 40.8 -0.1
ILAR	comp=Z,0.7nm,1.0s,baz=356,slow=7.7,SNR=4.8			PP		PP	02 28 34.7 +0.7
ILAR	comp=Z,40nm,18.9s,baz=70,slow=39 comp=Z,2.4nm,0.9s			LR		LR	03 04 08.3
CCB	Clear Creek Bu	77.26	7	P		P	02 25 41.2 +0.1
CCB	comp=Z,9.9nm,1.2s			IAmb		IAmb	02 25 42.2
J18K	Innoko River baz=341	77.32	11	P		P	02 25 42.4 +0.9
I30M	Mount Dempster comp=Z,11nm,0.9s	77.34	2	IAmb		IAmb	02 25 42.8
I30M	Mount Dempster baz=357	77.34	2	P		P	02 25 41.8 +0.1
K13K	Kusilvak Mount baz=334	77.34	15	P		P	02 25 42.3 +0.7
BPAW	Bear Paw Mtn. baz=345	77.47	8	P		P	02 25 43.3 +1.0
J25K	Salcha River, comp=Z,17nm,1.8s	77.50	6	IAmb		IAmb	02 27 02.7
J25K	Salcha River, baz=350	77.50	6	P		P	02 25 42.4 -0.1
CHUM	Lake Minchumin baz=344,SNR=10	77.52	9	P		P	02 25 42.3 -0.2
HDA	Harding Lake baz=348	77.57	6	P		P	02 25 43.6 +0.7
K15K	Wolf Creek Mou baz=337	77.62	13	P		P	02 25 44.4 +1.3
J26L	Joseph Creek baz=351,SNR=5.5	77.74	5	P		P	02 25 44.2 +0.3
K17K	Iditarod baz=339	77.78	12	P		P	02 25 44.3 +0.2
K20K	Telida comp=Z,7.6nm,1.0s	77.80	10	IAmb		IAmb	02 25 45.9
K20K	Telida baz=343	77.80	10	P		P	02 25 44.2 0.0
J30M	Hart River comp=Z,13nm,1.1s	77.99	2	IAmb		IAmb	02 25 46.9
J30M	Hart River baz=357	77.99	2	P		P	02 25 45.3 -0.1
KTH	Kantishna Hill comp=Z,8.5nm,0.8s	78.00	8	IAmb		IAmb	02 25 46.9
MCK	McKinley	78.04	7	P		P	02 25 45.1 -0.4
MCK	comp=Z,11nm,1.1s			IAmb		IAmb	02 25 47.0
MCK	McKinley	78.04	7	P		P	02 25 45.1 -0.4
MCK	comp=Z,11nm,1.1s			pmax		pmax	
MCK	McKinley baz=347,SNR=5.9	78.04	7	P		P	02 25 45.8 +0.3
TRF	Thorofare Moun baz=346	78.17	8	P		P	02 25 46.7 +0.3
L15K	Ungalak Mounta baz=337	78.19	14	P		P	02 25 46.8 +0.5
SCRK	Sand Creek baz=351	78.23	5	P		P	02 25 46.8 +0.1
K24K	Donnelly Dome baz=349,SNR=9.6	78.27	6	P		P	02 25 47.4 +0.6
L14K	Kuka Creek baz=336	78.28	14	P		P	02 25 47.4 +0.7
K27K	Chicken comp=Z,8.3nm,0.9s	78.30	4	IAmb		IAmb	02 25 48.5
K27K	Chicken baz=352	78.30	4	P		P	02 25 47.6 +0.7
L17K	Donlin baz=339	78.33	12	P		P	02 25 47.9 +0.8
RND	Reindeer comp=Z,7.8nm,0.8s	78.37	7	IAmb		IAmb	02 25 47.7
DAWY	Dawson comp=Z,7.5nm,1.0s	78.40	3	IAmb		IAmb	02 25 48.6
DAWY	Dawson baz=354,SNR=6.4	78.40	3	P		P	02 25 47.5 0.0
PPLA	Purkeypile baz=344	78.49	9	P		P	02 25 48.4 +0.2
L18K	Granite Mounta baz=341	78.51	11	P		P	02 25 48.6 +0.6
L16K	Owhat River baz=338	78.53	13	P		P	02 25 50.0 +1.8
L20K	Farewell, AK baz=343	78.67	10	P		P	02 25 49.1 +0.1
K29M	Barlow Dome comp=Z,7.1nm,0.8s	78.69	2	IAmb		IAmb	02 25 50.6
K29M	Barlow Dome baz=356	78.69	2	P		P	02 25 49.5 +0.3
L19K	White Mountain comp=Z,10nm,1.2s	78.82	10	IAmb		IAmb	02 25 53.3
L19K	White Mountain baz=342	78.82	10	P		P	02 25 50.5 +0.7
DHY	Denali Highway baz=348	78.84	7	P		P	02 25 49.9 -0.2
M14K	Bethel baz=337	78.96	14	P		P	02 25 51.7 +1.2
WAT1	Susitna Watana baz=347	78.97	7	P		P	02 25 50.8 +0.1
M13K	Dall Lake baz=336	78.99	15	P		P	02 25 51.6 +0.9
YKA	Yellowknife Ar comp=Z,2.4nm,0.8s,baz=12,slow=4.6,SNR=4.5 comp=Z,2.4nm,0.8s	79.08	352	P		P	02 25 50.9 -0.3
PAX	Paxson baz=350	79.11	6	P		P	02 25 51.8 +0.3
M19K	Big River Lodg baz=342	79.15	10	P		P	02 25 52.4 +0.8
M17K	Holitna River baz=340	79.16	12	P		P	02 25 52.4 +0.7
CUT	Chulitna baz=346	79.19	8	P		P	02 25 52.2 +0.4
L26K	Log Cabin Wild baz=351	79.22	5	P		P	02 25 52.6 +0.5
M15K	Kasigluk River baz=338	79.25	14	P		P	02 25 53.3 +1.1
M16K	Timber Creek baz=339	79.26	13	P		P	02 25 53.0 +0.7
BCAR	Beaver Creek A	79.28	4	P		P	02 25 53.4 +1.0
L27K	Beaver Creek, comp=Z,7.6nm,0.9s	79.28	4	IAmb		IAmb	02 25 54.1
L27K	Beaver Creek, baz=352,SNR=5.8	79.28	4	P		P	02 25 52.7 +0.4
WAT6	Susitna Watana baz=348	79.29	7	P		P	02 25 53.1 +0.5
M18K	Stony River baz=341	79.33	11	P		P	02 25 53.4 +0.8
M20K	Styx River baz=344	79.34	10	P		P	02 25 53.4 +0.6
L29M	L29M baz=356	79.41	3	P		P	02 25 53.1 0.0
SKT	Skwentna baz=345,SNR=9.9	79.46	9	P		P	02 25 53.3 0.0
HARP	HAARP baz=350	79.70	6	P		P	02 25 54.8 +0.1
N14K	Kuskokwak Cree baz=337	79.78	14	P		P	02 25 56.2 +1.2
N16K	Nishlik Lake baz=339	79.81	13	P		P	02 25 56.3 +1.0
M22K	Willow baz=346	79.85	8	P		P	02 25 56.1 +0.7
N15K	Kwethluk River baz=338	79.85	14	P		P	02 25 56.2 +0.7
M26K	Nabena, AK baz=352	79.86	5	P		P	02 25 55.7 +0.1
M24K	Tolsona, Glenn baz=349	79.90	6	P		P	02 25 56.4 +0.6
M27K	Edge Creek, AK comp=Z,11nm,1.1s	79.98	4	IAmb		IAmb	02 25 58.8
M27K	Edge Creek, AK baz=352	79.98	4	P		P	02 25 56.5 +0.2
M30M	Minto, Yukon baz=356	79.98	2	P		P	02 25 56.4 +0.2
SML	Sawmill comp=Z,9.9nm,0.8s	79.99	8	IAmb		IAmb	02 25 57.1
SML	Sawmill baz=347	79.99	8	P		P	02 25 56.6 +0.3
MMPY	Sheldon Lake, baz=1.0	79.99	359	P		P	02 25 56.4 +0.1
N17K	Nushagak Hills baz=340	80.03	12	P		P	02 25 56.7 +0.3
SUA	Susitna One baz=345,SNR=5.0	80.05	9	P		P	02 25 56.5 -0.2
M29M	Somme Creek baz=355	80.06	3	P		P	02 25 56.5 -0.2
SCM	Sheep Creek Mo baz=348	80.06	7	P		P	02 25 57.2 +0.5
M23K	Glacier View baz=348	80.07	7	P		P	02 25 56.8 +0.2
N18K	Kilae Creek baz=341	80.09	11	P		P	02 25 57.6 +0.8
PMR	Palmer comp=Z,10.0nm,1.0s	80.11	8	IAmb		IAmb	02 25 58.0
PMR	Palmer baz=347	80.11	8	P		P	02 25 57.4 +0.6
N20K	Mount Spurr baz=344	80.12	10	P		P	02 25 57.7 +0.6
SPCR	Spurr Chakacha baz=344	80.12	10	P		P	02 25 57.9 +0.9
N19K	Bonanza Creek comp=Z,15nm,1.0s	80.18	11	IAmb		IAmb	02 25 59.8
N19K	Bonanza Creek baz=342,SNR=7.6	80.18	11	P		P	02 25 58.0 +0.7
SPIA	Saint Paul Isl baz=331	80.25	20	P		P	02 25 58.5 +0.9
KNK	Knik Glacier comp=Z,11nm,0.9s	80.36	8	IAmb		IAmb	02 25 59.7
KNK	Knik Glacier baz=347,SNR=5.2	80.36	8	P		P	02 25 59.1 +0.8
FARO	Faro, Yukon baz=359	80.39	0	P		P	02 25 58.6 +0.3
M31M	Drury Creek, Y baz=358	80.41	1	P		P	02 25 58.9 +0.4
O14K	Tigyukauivet M baz=337	80.48	14	P		P	02 25 59.6 +0.8
KLU	Klutina comp=Z,16nm,1.1s	80.53	6	IAmb		IAmb	02 26 01.0
KLU	Klutina baz=349,SNR=7.9	80.53	6	P		P	02 26 00.2 +1.0
N25K	Chitina, Valde baz=350	80.53	6	P		P	02 25 59.9 +0.7
RC01	Rabbit Creek A comp=Z,9.6nm,0.9s	80.54	8	IAmb		IAmb	02 26 00.2
RC01	Rabbit Creek A baz=346	80.54	8	P		P	02 26 00.1 +1.0
YUK3	Moose Creek baz=354	80.64	4	P		P	02 25 59.8 -0.1
CAPN	Captain Cook N baz=345	80.68	9	P		P	02 26 00.9 +1.1
O16K	Kokwok River B baz=340	80.75	13	P		P	02 26 01.3 +1.0
O17K	Koliganek Bris baz=340	80.76	12	P		P	02 26 01.0 +0.7
O19K	Port Alsworth baz=343	80.80	11	P		P	02 26 01.5 +1.0
O15K	Ungalikthiuk R baz=338	80.83	14	P		P	02 26 01.6 +0.9
MCARA	McCarthy VSAT baz=352	80.87	5	P		P	02 26 01.4 +0.5
PWL	Port Wells baz=347	80.92	8	P		P	02 26 01.8 +0.6
P08K	Saint George I baz=331	80.94	20	P		P	02 26 02.5 +1.1
O18K	Koktuh Hills baz=342	80.99	11	P		P	02 26 01.0 -0.6
TGTN	Hyland Airport baz=3.4	81.03	358	P		P	02 26 01.7 -0.2
SLKM	Skilak Lake comp=Z,23nm,1.5s	81.05	9	IAmb		IAmb	02 26 04.8
N30M	Aishikik Lake baz=356	81.09	2	P		P	02 26 01.6 -0.6
N31M	Braeburn, Yuko baz=357	81.10	2	P		P	02 26 01.2 -1.0
O22K	Cooper Landing baz=346	81.13	9	P		P	02 26 02.5 +0.2
O20K	Slope Mountain baz=344	81.15	10	P		P	02 26 01.9 -0.6
YUK4	Talbot Arm baz=355	81.15	3	P		P	02 26 01.8 -0.9

BMRM	**Bremner River**	**81.16**	**6**	P		**P**	02 26 02.1 -0.5
	baz=350						
YUK8	**Steele Glacier**	**81.16**	**4**	P		**P**	02 26 02.0 -0.8
	baz=354						
P16K	**Nushagak River**	**81.30**	**13**	P		**P**	02 26 03.5 +0.3
	baz=340						
CTG	**Chitna Glacier**	**81.40**	**4**	P		**P**	02 26 03.3 -0.6
	baz=353						
P17K	**Kvichak River**	**81.42**	**12**	P		**P**	02 26 04.0 +0.2
	baz=341						
P18K	**Big Mountain,**	**81.42**	**12**	P		**P**	02 26 04.0 +0.1
	baz=342						
N32M	**Quiet Lake**	**81.47**	**0**	P		**P**	02 26 03.7 -0.5
	baz=360						
P19K	**Oil Pt**	**81.48**	**10**	P		**P**	02 26 03.7 -0.6
	baz=344						
EYAK	**Cordova Ski Ar**	**81.48**	**7**	P		**P**	02 26 03.7 -0.5
	baz=349						
CRQE	**Cirque**	**81.49**	**5**	P		**P**	02 26 03.4 -1.0
	baz=352						
SEW	**Seward**	**81.53**	**8**	P		**P**	02 26 04.5 +0.1
	baz=346						
YUK6	**Outpost Mounta**	**81.57**	**3**	P		**P**	02 26 04.5 -0.5
	baz=355						
O28M	**Mount Upton**	**81.65**	**4**	P		**P**	02 26 05.1 -0.4
	baz=354						
HOM	**Homer**	**81.69**	**10**	P		**P**	02 26 06.1 +0.8
	baz=345						
HYT	**Haines Junctio**	**81.72**	**2**	P		**P**	02 26 05.3 -0.3
	baz=356						
BRSE	**Bradley Lake S**	**81.73**	**9**	P		**P**	02 26 05.5 -0.1
	baz=346						
O30N	**Mendenhall**	**81.81**	**2**	P		**P**	02 26 05.7 -0.3
	baz=357						
P23K	**Montague Islan**	**81.86**	**7**	P		**P**	02 26 06.4 +0.2
	baz=348						
Q16K	**King Salmon**	**81.87**	**12**	P		**P**	02 26 07.1 +0.9
	baz=341						
WHY	**Whitehorse**	**81.95**	**1**	P		**P**	02 26 06.2 -0.6
	baz=358						
BGLC	**Bering Glacier**	**82.11**	**5**	P		**P**	02 26 07.9 +0.5
	baz=351						
MESA	**MESA**	**82.14**	**5**	P		**P**	02 26 08.2 +0.2
	baz=352						
Q18K	**Katmai Hardscr**	**82.17**	**12**	P		**P**	02 26 07.8 -0.2
	baz=342						
O29M	**Mount Kennedy**	**82.20**	**3**	P		**P**	02 26 08.0 -0.1
	baz=355						
KAIM	**Kayak Island**	**82.21**	**6**	P		**P**	02 26 08.4 +0.4
	baz=350						
KOTAN	**Kotaneelee Air**	**82.25**	**356**	P		**P**	02 26 07.7 -0.5
	baz=6.7						
PINM	**Pinnacle**	**82.33**	**4**	P		**P**	02 26 08.5 -0.2
	baz=354						
P33M	**Teslin, Yukon**	**82.42**	**0**	P		**P**	02 26 09.3 +0.1
	baz=360						
P30M	**Million Dollar**	**82.44**	**2**	P		**P**	02 26 09.3 0.0
	baz=356						
WTLY	**Watson Lake, Y**	**82.47**	**358**	P		**P**	02 26 09.6 +0.1
	baz=2.9						
Q23K	**Middleton Isla**	**82.53**	**7**	P		**P**	02 26 10.3 +0.6
	baz=349						
Q20K	**Shuyak Island**	**82.60**	**10**	P		**P**	02 26 10.6 +0.5
	baz=344						
R16K	**Pilot Point**	**82.76**	**13**	P		**P**	02 26 11.5 +0.6
	baz=340						
PNL	**Peninsula**	**82.80**	**3**	P		**P**	02 26 10.9 -0.2
	baz=354						
P29M	**Windy Craggy**	**82.90**	**3**	P		**P**	02 26 12.2 +0.5
	baz=356						
R17L	**Mt. Peulik Vol**	**82.91**	**13**	P		**P**	02 26 12.1 +0.3
	baz=341						
P32M	**Atlin**	**83.03**	**1**	P		**P**	02 26 11.5 -0.9
	baz=359						
LIRD	**Liard River Hi**	**83.07**	**357**	P		**P**	02 26 12.1 -0.5
	baz=5.1						
PLBC	**Pleasant Camp**	**83.12**	**2**	P		**P**	02 26 12.3 -0.5
	baz=357						
SKAG	**Skagway**	**83.14**	**1**	P		**P**	02 26 12.2 -0.6
	baz=358						
R33M	**Jennings River**	**83.23**	**359**	P		**P**	02 26 13.6 +0.1
	baz=1.2						
KDAK	**Kodiak Island**	**83.37**	**11**	P		**P**	02 26 15.1 +1.1
	baz=344						
S14K	**Fog Glacier**	**83.58**	**15**	P		**P**	02 26 16.5 +1.2
	baz=339						
TOAD	**Toad River Com**	**83.59**	**356**	P		**P**	02 26 15.6 +0.3
	baz=5.8						
S12K	**Black Hills**	**83.59**	**16**	P		**P**	02 26 14.8 -0.5
	baz=337						
Q32M	**Nakina River**	**83.67**	**360**	P		**P**	02 26 16.2 +0.4
	baz=0.2						
OHAK	**Old Harbor**	**83.81**	**11**	P		**P**	02 26 16.9 +0.6
	baz=344						
DLBC	**Dease Lake**	**84.17**	**359**	LR		LR	03 11 11.1
	comp=Z,33nm,18.5s,baz=37,slow=41						
DLBC	**Dease Lake**	**84.17**	**359**	P		**P**	02 26 18.6 +0.3
	baz=1.9						
UNV	**Unalaska Valle**	**84.20**	**19**	P		**P**	02 26 18.5 +0.1
	baz=334						
SDPT	**Sand Point**	**84.26**	**16**	P		**P**	02 26 19.2 +0.5
	baz=338						
SII	**Sitkinak Islan**	**84.30**	**12**	P		**P**	02 26 19.4 +0.5
	baz=343						
NIKH	**Nikolski High**	**84.33**	**21**	P		**P**	02 26 20.6 +1.5
	baz=332						
R32K	**Eaglecrest**	**84.34**	**1**	P		**P**	02 26 19.6 +0.6
	baz=358						
S31K	**Pelican**	**84.62**	**2**	P		**P**	02 26 20.7 +0.3
	baz=357						
S34M	**Telegraph Cree**	**84.71**	**359**	P		**P**	02 26 21.3 +0.3
	baz=1.1						
CHIR	**Chirikof Islan**	**84.76**	**13**	P		**P**	02 26 21.8 +0.5
	baz=342						
CHNA	**Chernabura Isl**	**84.93**	**15**	P		**P**	02 26 22.7 +0.6
	baz=339						
S32K	**Killisnoo**	**85.15**	**1**	P		**P**	02 26 23.4 +0.2
	baz=358						
SIT	**Sitka**	**85.55**	**2**	P		**P**	02 26 25.5 +0.4
	baz=358						
T35M	**Bob Quinn**	**85.64**	**359**	P		**P**	02 26 25.8 +0.2
	baz=1.8						
U33K	**Whale Pass**	**86.52**	**0**	P		**P**	02 26 29.5 -0.4
	baz=360						
ULM	**Lac du Bonnet**	**86.62**	**337**	P		**P**	02 26 29.7 -0.9
	comp=Z,10nm,0.8s,baz=50,slow=4.0,SNR=4.9						
ULM				LR		LR	03 04 45.0
	comp=Z,56nm,18.4s,baz=72,slow=35						
	comp=Z,10nm,0.8s						
U35K	**Hyder**	**86.70**	**359**	P		**P**	02 26 30.5 -0.3
	baz=1.9						
CRAG	**Craig**	**87.17**	**0**	P		**P**	02 26 32.4 -0.7
	baz=360						
V35K	**Ketchikan**	**87.31**	**359**	P		**P**	02 26 33.6 -0.2
	baz=0.7						
NEW	**Newport**	**93.29**	**350**	LR		LR	03 09 40.4
	comp=Z,69nm,18.4s,baz=40,slow=36						
PAULI	**Pauline**	**93.81**	**320**	P		**P**	02 27 04.3 -0.3
TKL	**Tuckaleechee C**	**94.12**	**322**	LR		LR	03 09 20.9
	comp=Z,52nm,18.4s,baz=32,slow=35						
RSSD	**Black Hills**	**94.53**	**340**	P		**P**	02 27 07.8 -0.2
RSSD	**Black Hills**	**94.53**	**340**	P		**P**	02 27 07.8 -0.2
RSSD				pmax		pmax	
	comp=Z,18nm,1.7s						
PDAR	**Pinedale Array**	**97.20**	**343**	P		Pdif	02 27 21.4 +1.1
	comp=Z,0.4nm,0.8s,baz=12,slow=6.4,SNR=2.2						
	comp=Z,0.4nm,0.8s						
NVL	**N'lazarevskaya**	**111.18**	**192**	*i* PKIKP		**PKiKP**	**02 32 23.3 +3.5**
NVL				*e*			02 33 01.7
NVL				*e*PPP		PPP	02 35 20.1
NVL				*e*SS		SS	02 48 37.2 +4.9
NVL				*e*SSS		SSS	02 52 45.8
NVL				pmax		pmax	
	comp=Z,12nm,0.9s						
NVL				MLR		MLR	
	comp=Z,104nm,20.0s						
LPAZ	**La Paz**	**119.91**	**272**	PKP		**PKiKP**	**02 32 39.6 +0.6**
	comp=Z,0.4nm,0.5s,baz=236,slow=3.6,SNR=1.8						
QSPA	**South Pole Qui**	**127.55**	**180**	PKP		**PKPdf**	02 32 50.8 -0.6
	comp=Z,2.4nm,0.9s,baz=204,slow=1.3,SNR=7.2						

MDD **10** *02:15:05.0±0.6,35°.78N×4°.72W,h10km±3km,mb_Lg2.4/15, Error ellipse: s-maj=3.5km s-min=2.7km az=132.0*
IGIL **10** *02:15:05.5,35°.78N×4°.72W,h5km,ML1.4*
SFS **10** *02:15:05.5,35°.74N×4°.67W,h22km,ML2.7/9,ML2.3/11, MLv2.1/11*

CNRM **10** *02:15:05.2,35°.59N×4°.87W,h60km*
INMG **10** *02:15:06.8±1.8,35°.84N×4°.73W,h15km±5km,ML1.7, Error ellipse: s-maj=6.4km s-min=3.7km az=163.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*

ISC 10 02:15:02.7±1.2,35.73N±0.02×4.69W±0.02,h14km±9km, n56,σ1°47/91,2D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ECEU	**Ceuta**	**0.58**	**287**	Pg		**Pb**		**02 15 16.0**	**+1.3**
ECEU				Sg		**Sg**		**02 15 22.4**	**+0.5**
ECEU	**Ceuta**	**0.58**	**287**	Pg		**Pb**		**02 15 16.0**	**+1.3**
ECEU				Sg		**Sg**		**02 15 22.0**	**+0.1**
ECEU				*i* IVmb_Lg				02 15 23.8	
PALE	**Palemas**	**0.80**	**130**	P		**Pn**		**02 15 21.9**	**+2.4**
PALE	**Palemas**	**0.80**	**130**	S		**Sn**		**02 15 33.2**	**+2.0**
EMlJ	**Mijas**	**0.83**	**355**	Pg		**Pn**		**02 15 20.1**	**0.0**
EMlJ	**Mijas**	**0.83**	**355**	||Pg	**Pn**		**02 15 20.1**	**0.0**
EMlJ				Sg		**Sg**		**02 15 29.0**	**-0.9**
EJlF	**Jimena Fronter**	**0.96**	**319**	Pg		**Pn**		**02 15 22.3**	**+0.6**
EJlF				Sg		**Sb**		**02 15 34.0**	**+0.4**
EMAL	**Malaga-Limoner**	**1.05**	**11**	Pg		**Pn**		**02 15 23.7**	**+0.8**
EMAL				Sg		**Sg**		**02 15 35.8**	**-0.9**
AKLM	**AKL**	**1.39**	**151**	P		**Pn**		**02 15 26.6**	**-1.2**
AKLM	**AKL**	**1.39**	**151**	S		**Sn**		**02 15 42.9**	**-3.1**
ELGU	**Los Guajares,**	**1.42**	**37**	Pn		**Pg**		**02 15 29.9**	**-0.2**
ELGU				Sg		**Sb**		**02 15 46.9**	**-0.1**
ELGU	**Los Guajares,**	**1.42**	**37**	Pn		**Pg**		**02 15 30.1**	**+0.1**
ELGU				Sn		**Sg**		**02 15 47.3**	**-1.3**
ELGU				*i* IVmb_Lg				02 15 50.9	
EGOR	**Sierra Gorda,**	**1.45**	**19**	Pn		**Pb**		**02 15 29.5**	**-0.1**
EGOR				Sn		**Sb**		**02 15 47.5**	**-0.5**
EGOR				*i* IVmb_Lg				02 15 54.5	
GOG	**Mont Gurugu**	**1.47**	**110**	P		**Pb**		**02 15 30.8**	**+1.0**
GOG	**Mont Gurugu**	**1.47**	**110**	S		**Sb**		**02 15 50.3**	**+1.9**
ESPR	**Espera**	**1.48**	**321**	Pn		**Pn**		**02 15 29.6**	**+0.7**
ESPR				Sn		**Sn**		**02 15 47.0**	**-0.9**
ESPR				*i* IVmb_Lg				02 15 59.7	
EQUE	**Quentar**	**1.78**	**34**	Pn		**Pb**		**02 15 34.5**	**-0.7**
EQUE				Sn		**Sn**		**02 15 55.9**	**+0.3**
EQUE				Sg		**Sg**		**02 16 00.8**	**+0.7**
EQUE				*i* IVmb_Lg				02 16 04.7	
LCRM	**LCR**	**2.04**	**184**	P		**Pn**		**02 15 37.4**	**+0.6**
LCRM	**LCR**	**2.04**	**184**	S		**Sn**		**02 16 02.3**	**+0.1**
TAF	**Taforalt**	**2.07**	**116**	P		**Pn**		**02 15 38.9**	**+1.8**
TAF	**Taforalt**	**2.07**	**116**	S		**Sn**		**02 16 04.7**	**+1.9**
IFR	**Ifrane**	**2.24**	**189**	Pn		**Pn**		**02 15 40.6**	**+1.1**
IFR				Sn		**Sn**		**02 16 05.0**	**-2.0**
ECAB	**El Cabril**	**2.41**	**346**	Pn		**Pb**		**02 15 44.2**	**-1.7**
ECAB				Sn		**Sn**		**02 16 09.8**	**-1.2**
ECAB	**El Cabril**	**2.41**	**346**	Pn		**Pn**		**02 15 42.3**	**+0.6**
ECAB				Sn		**Sn**		**02 16 09.6**	**-1.5**
ECAB				*i* IVmb_Lg				02 16 13.3	
ECAB				Sg		**Sg**		**02 16 18.6**	**-1.6**
EADA	**Adamuz**	**2.43**	**2**	Pn		**Pb**		**02 15 45.6**	**-0.7**
EADA	**Adamuz**	**2.43**	**2**	Pn		**Pn**		**02 15 43.7**	**+1.7**
EADA				Sn		**Sn**		**02 16 10.3**	**-1.3**
EADA				Sg		**Sg**		**02 16 19.9**	**-1.0**
EADA				*i* IVmb_Lg				02 16 25.6	
EQES	**Quesada**	**2.44**	**32**	Pn		**Pb**		**02 15 44.6**	**-1.8**
EQES				Sn		**Sn**		**02 16 11.6**	**-0.3**
EQES				*i* IVmb_Lg				02 16 29.8	
EMIN	**Mina Concepcio**	**2.58**	**323**	Pn		**Pn**		**02 15 45.7**	**+1.7**
EMIN	**Mina Concepcio**	**2.58**	**323**	Pn		**Pn**		**02 15 45.7**	**+1.7**
EMIN				Sn		**Sn**		**02 16 14.0**	**-1.2**
EMIN				*i* IVmb_Lg				02 16 36.9	
ZHG	**ZHG**	**2.79**	**216**	P		**Pn**		**02 15 47.3**	**+0.3**
ZHG	**ZHG**	**2.79**	**216**	S		**Sn**		**02 16 19.2**	**-1.3**
MD31	**MD31**	**2.86**	**181**	P		**Pn**		**02 15 47.4**	**-0.5**
MD31	**MD31**	**2.86**	**181**	S		**Sn**		**02 16 18.3**	**-3.8**
EGRO	**El Granado**	**2.88**	**310**	Pn		**Pn**		**02 15 49.5**	**+1.4**
MDT	**Midelt**	**2.91**	**179**	P		**Pn**		**02 15 47.7**	**-0.9**
MDT	**Midelt**	**2.91**	**179**	S		**Sn**		**02 16 20.5**	**-3.0**
PVAQ	**Vaqueiros**	**2.96**	**305**	*e*P		**Pn**		**02 15 50.6**	**+1.4**
PVAQ				*e*S		**Sn**		**02 16 24.1**	**-0.4**
PVAQ				*i* IAML				02 16 25.8	
PVAQ				*i* IAML				02 16 29.1	
PVAQ				*i* IAML				02 16 29.6	
PVAQ	**Vaqueiros**	**2.96**	**305**	P		**Pn**		**02 15 49.2**	**+0.1**
PVAQ	**Vaqueiros**	**2.96**	**305**	S		**Sn**		**02 16 23.4**	**-1.0**
PBDV	**Barranco-do-Ve**	**3.02**	**301**	*e*P		**Pn**		**02 15 51.5**	**+1.5**
PBDV				*e*S		**Sn**		**02 16 25.1**	**-0.9**
PBAR	**Barrancos**	**3.08**	**323**	Pn		**Pn**		**02 15 52.5**	**+1.6**
PBAR				Sn		**Sn**		**02 16 26.8**	**-0.7**
PBAR	**Barrancos**	**3.08**	**323**	*e*P		**Pn**		**02 15 52.9**	**+2.0**
PBAR				*e*S		**Sn**		**02 16 27.2**	**-0.4**
PBAR				*i* IAML				02 16 29.2	
PBAR				*i* IAML				02 16 29.4	
PBAR				*i* IAML				02 16 33.8	
PSIM	**Granatula de C**	**3.17**	**13**	Pn		**Pn**		**02 15 53.7**	**+1.5**
PSIM				Sn		**Sn**		**02 16 28.6**	**-1.3**
PCVE	**Castro Verde**	**3.29**	**306**	*e*P		**Pn**		**02 15 55.2**	**+1.3**
PCVE				*e*S		**Sn**		**02 16 33.0**	**+0.2**
MESJ	**Messejana**	**3.53**	**308**	*e*P		**Pn**		**02 15 58.5**	**+1.5**
MESJ				*e*S		**Sn**		**02 16 37.2**	**-1.4**
MESJ				IAML				02 16 38.1	
	comp=E,1.0nm,0.2s								
MESJ	**Messejana**	**3.53**	**308**	*e*P		**Pn**		**02 15 58.9**	**+1.8**
MESJ				*e*S		**Sn**		**02 16 38.2**	**-0.5**
MESJ				*i* IAML				02 16 39.8	
MESJ				*i* IAML				02 16 42.3	
MESJ				*i* IAML				02 16 45.6	
EBAD	**Badajoz**	**3.54**	**329**	Pn		**Pn**		**02 15 59.2**	**+1.9**
EBAD				Sn		**Sn**		**02 16 38.2**	**-0.7**
EBAD	**Badajoz**	**3.54**	**329**	Pn		**Pn**		**02 15 59.5**	**+2.2**
EBAD				Sn		**Sn**		**02 16 37.9**	**-1.1**
EBAD				*i* IVmb_Lg				02 16 50.1	
PTEO	**Sao Teotonio**	**3.72**	**300**	*e*P		**Pn**		**02 16 01.1**	**+1.5**
PTEO				*e*S		**Sn**		**02 16 41.8**	**-1.4**
PAB	**San Pablo**	**3.82**	**4**	Pn		**Pn**		**02 16 03.2**	**+2.1**
PAB				Sn		**Sn**		**02 16 43.7**	**-2.1**
PAB				*i* IVmb_Lg				02 17 01.4	
EVO	**Evora**	**3.86**	**317**	*e*P		**Pn**		**02 15 53.7**	**+2.2**
EVO				*e*S		**Sn**		**02 16 46.3**	**-0.4**
EVO				*i* IAML				02 16 46.7	
EVO				*i* IAML				02 16 48.4	
EVO				*i* IAML				02 16 48.5	
PARRA	**Arraiolos**	**4.08**	**320**	||*e*P	Pn		02 16 07.2	-5.1
PARRA				*e*S		Sn		02 16 51.6	-14
PMRV	**Marv??o**	**4.27**	**331**	*e*P		**Pn**		**02 16 09.4**	**+2.2**
PMRV				*e*S		**Sn**		**02 16 57.0**	**+0.1**
PMTG	**Montargil**	**4.36**	**321**	*e*P		**Pn**		**02 16 11.0**	**+2.5**
PMTG				*e*S		**Sn**		**02 16 59.2**	**+0.1**
PSARD	**Sardoal**	**4.75**	**326**	*e*P		**Pn**		**02 16 16.5**	**+2.7**
PSARD				*e*S		**Sn**		**02 17 08.3**	**-0.3**
ETOR	**Torete**	**5.49**	**21**	Pn		**Pn**		**02 16 26.8**	**+2.8**
ETOR				Sn		**Sn**		**02 17 24.6**	**-2.4**
ETOR				*i* IVmb_Lg				02 17 30.3	

IDC 10 02:27:01.9±1.2,11°.38S×167°.17E,h0km,mb3.8/8, mbtmp3.8/8,MS3.4/7,Error ellipse: s-maj=37.0km s-min=28.2km az=96.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.36**	**285**	LR		LR		02 31 40.4	
	comp=Z,343nm,18.8s,baz=136,slow=38								
DZM	**Mont Dzumac**	**10.65**	**184**	LR		LR		02 32 45.6	
	comp=Z,60nm,18.5s,baz=231,slow=32								
PMG	**Port Moresby**	**19.78**	**274**	LR		LR		02 39 06.2	
	comp=Z,119nm,18.3s,baz=98,slow=37								
H11S2	**WAKE ISLAND Hy**	**29.69**	**359**	T		T		03 04 15.5	
	baz=178								
H11S3	**WAKE ISLAND Hy**	**29.69**	**359**	T		T		03 04 12.3	
	baz=178								
H11S1	**WAKE ISLAND Hy**	**29.71**	**359**	T		T		03 04 14.6	
	baz=178								
H11N1	**WAKE ISLAND Hy**	**30.90**	**359**	T		T		03 05 39.2	
	baz=183								
H11N3	**WAKE ISLAND Hy**	**30.91**	**360**	T		T		03 05 39.3	
	baz=183								
H11N2	**WAKE ISLAND Hy**	**30.92**	**360**	T		T		03 05 41.6	
	baz=183								
STKA	**Stephens Creek**	**31.18**	**225**	LR		LR		02 45 01.0	
	comp=Z,118nm,21.5s,baz=28,slow=35								
WRA	**Warramunga Arr**	**32.69**	**251**	P		P		02 33 36.3	+0.1
	0.6nm,0.7s,baz=82,slow=9.1,SNR=4.6								
	0.6nm,0.7s								
ASAR	**Alice Springs**	**33.90**	**244**	P		P		02 33 47.1	+0.3
	0.7nm,0.8s,baz=78,slow=7.6,SNR=7.1								
ASAR				LR		LR		02 46 49.6	
	comp=Z,85nm,19.2s,baz=274,slow=35								
	0.7nm,0.8s								
PPT	**Papeete**	**42.26**	**104**	LR		LR		02 49 41.3	
	comp=Z,33nm,21.0s,baz=205,slow=32								
VNDA	**Vanda**	**66.18**	**181**	P		P		02 37 49.0	-1.9
	0.3nm,0.4s,baz=339,slow=7.7,SNR=2.3								
	0.3nm,0.4s								
CMAR	**Chiang Mai Arr**	**73.53**	**293**	P		P		02 38 36.8	-0.4
	0.4nm,0.3s,baz=107,slow=7.9,SNR=1.1								
	0.4nm,0.3s								
QSPA	**South Pole Qui**	**78.62**	**180**	P		P		02 39 06.9	+1.4
	2.3nm,0.9s,baz=31,slow=1.2,SNR=6.6								
	2.3nm,0.9s								
SONM	**Songino Array**	**79.77**	**323**	P		P		02 39 12.3	+0.3
	0.5nm,0.6s,baz=134,slow=4.2,SNR=3.6								
	0.5nm,0.6s								
ILAR	**Eielson Array**	**83.39**	**18**	P		P		02 39 30.9	+0.3
	0.3nm,0.8s,baz=250,slow=5.6,SNR=4.6								
	0.3nm,0.8s								
PFO	**Pinyon Flats O**	**85.14**	**54**	LR		LR		03 10 46.7	
	comp=Z,39nm,19.1s,baz=16,slow=31								
MKAR	**Makanchi Array**	**94.72**	**317**	P		P		02 40 24.6	-0.7
	1.2nm,0.7s,baz=101,slow=5.6,SNR=8.8								
	1.2nm,0.7s								

NEIC **10** *02:36:50.5±1.9,20°.1S±0°.1×177°.9W±0°.1,h545km±9km, mb4.3/12,Error ellipse: s-maj=21.0km s-min=11.5km az=205.0*
IDC **10** *02:36:51.1±2.5,20°.32S×177°.91W,h563km±28km, mb3.1/12,mbtmp4.1/14,Error ellipse: s-maj=21.4km s-min=14.1km az=147.0*

ISC 10 02:36:49.6±0.5,20°.3S±0°.1×177°.84W±0°.09,h550km,n65, σ0°.80/65,mb3.8/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**303**	P		**P**		**02 38 18.7**	**+1.9**
NIUE	**Niue**	**7.55**	**82**	P		**P**		**02 38 43.0**	**0.0**
AFI	**Afiamalu**	**8.60**	**43**	P		**P**		**02 38 51.4**	**-2.1**
MARNC	**Mare, Loyalty**	**13.26**	**262**	P		**P**		**02 39 40.6**	**-0.7**
DZM	**Mont Dzumac**	**14.77**	**260**	P		**P**		**02 39 57.0**	**+0.1**
	2.0nm,0.5s,baz=72,slow=19,SNR=1.5								
URZ	**Urewera**	**18.43**	**193**	P		**P**		**02 40 30.6**	**-0.6**
	7.4nm,0.3s,baz=72,slow=9.6,SNR=9.0								
COEN	**Coen**	**37.72**	**273**	P		**P**		**02 43 19.7**	**+0.5**
STKA	**Stephens Creek**	**38.01**	**244**	P		**P**		**02 43 22.1**	**+0.9**
STKA	**Stephens Creek**	**38.01**	**244**	P		**P**		**02 43 22.2**	**+0.9**
	0.9nm,0.4s,baz=83,slow=9.8,SNR=7.2								
	0.9nm,0.4s								
BBOO	**Buckleboo**	**42.77**	**243**	P		**P**		**02 43 59.6**	**+0.3**
ASAR	**Alice Springs**	**44.71**	**257**	P		**P**		**02 44 14.1**	**-0.3**
ASAR	**Alice Springs**	**44.71**	**257**	P		**P**		**02 44 14.6**	**+0.1**
	1.8nm,0.7s,baz=90,slow=8.0,SNR=18								
ASAR				PcP		**PcP**		**02 45 45.1**	**+0.1**
	0.8nm,0.5s,baz=98,slow=4.0,SNR=8.5								
ASAR				S		**S**		**02 50 09.8**	**-1.8**
	0.7nm,0.6s,baz=94,slow=14,SNR=6.2								
	1.8nm,0.7s								
WRA	**Warramunga Arr**	**44.78**	**262**	P		**P**		**02 44 14.5**	**-0.5**
	1.3nm,0.5s,baz=98,slow=7.9,SNR=19								
	1.3nm,0.5s								
FITZ	**Fitzroy Crossi**	**53.20**	**262**	P		**P**		**02 45 17.7**	**+0.5**
QSPA	**South Pole Qui**	**69.77**	**180**	P		**P**		**02 47 04.3**	**-0.4**
	0.8nm,0.9s,baz=107,slow=3.4,SNR=1.9								
	0.8nm,0.9s								
JGF	**Kuroka**	**69.95**	**322**	P		**P**		**02 47 05.9**	**-0.2**
JGF				IAmb		IAmb		02 47 45.9	
	comp=Z,19nm,1.3s								
MJAR	**Matsushiro Arr**	**70.14**	**324**	P		**P**		**02 47 07.1**	**-0.1**
MJAR	**Matsushiro Arr**	**70.14**	**324**	P		**P**		**02 47 06.8**	**-0.4**
	comp=Z,2.7nm,0.5s,baz=161,slow=5.8,SNR=17								
	comp=Z,2.7nm,0.5s								
MAJO	**Matsushiro**	**70.14**	**324**	P		**P**		**02 47 07.3**	**+0.1**
MAJO				IAmb		IAmb		02 47 07.7	
	comp=Z,5.0nm,0.7s								
MJB9	**Matsu-Tunnel**	**70.14**	**324**	P		**P**		**02 47 07.4**	**+0.2**
MJB9				IAmb		IAmb		02 47 07.6	
	comp=Z,4.8nm,0.7s								
SSLB	**Suanglung**	**73.99**	**303**	P		**P**		**02 47 28.4**	**-1.4**
PETK	**Petropavlovsk-**	**76.12**	**345**	P		**P**		**02 47 41.2**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=166,slow=5.3,SNR=1.3								
	comp=Z,2.2nm,0.8s								
USRK	**Ussuriysk Ar.**	**78.88**	**326**	P		**P**		**02 47 55.8**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=116,slow=3.4,SNR=5.8								
	comp=Z,3.3nm,0.7s								
NVAR	**Mina Array Bea**	**80.78**	**43**	P		**P**		**02 48 07.2**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=239,slow=5.7,SNR=2.9								
	comp=

*TEH **10** 03:21:04.7, 37.67N×47.46E, h7km±18km*
*IDC **10** 03:21:04.7±0.9, 37.64N×47.50E, h0km, mb4.0/19, mbtmp4.0/27, ML3.7/6, MS3.2/6, Error ellipse: s-maj=16.8km s-min=9.5km az=14.0*
*THR **10** 03:21:05.5±0.0, 37.72N×47.43E, h14km±6km, ML4.0*
*MOS **10** 03:21:07.0±1.2, 38.09N×47.48E, h11km, mb4.3/11, Error ellipse: s-maj=8.8km s-min=5.0km az=114.7*

ISC 10 03:21:06.2±0.5, 37.80N±0.0×47.46E±0.0, h10km, n187, σ1971/204, mb4.1/28, MS3.2/4, 22C-6D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHSH	**Hashtrud**	**0.52**	**198**	Pg	Pg	03 21 12.5	-3.9
IHSH				Sg	**Sg**	**03 21 18.4**	**-4.9**
IHRS	**Heris**	**0.61**	**327**	Pg	**Pg**	**03 21 18.3**	**+0.1**
GRMI	**Germi**	**1.06**	**18**	Pg	**Pb**	**03 21 26.8**	**+0.1**
GRMI				Sg	**Sn**	**03 21 43.6**	**+1.4**
GRMI	**Germi**	**1.06**	**18**	*e*Pg	**Pb**	**03 21 26.7**	**-0.1**
GRMI				IAML		03 21 49.9	
	comp=Z,4μm,1.0s						
ITBZ	**Tabriz**	**1.13**	**293**	Pg	**Pb**	**03 21 26.6**	**-1.3**
ITBZ				Sg	**Sg**	**03 21 43.5**	**+0.9**
IAZR	**Azarshahr**	**1.18**	**265**	Pg	**Pb**	**03 21 26.9**	**-2.0**
GAS1	**Astara - Iran**	**1.23**	**61**	Pg	**Pb**	**03 21 29.2**	**-0.4**
GAS1				Sg	**Sn**	**03 21 46.8**	**+0.6**
CSN1	**Caspian**	**1.32**	**100**	Pg	**Pn**	**03 21 29.1**	**-1.6**
ZNJK	**Zanjan**	**1.49**	**139**	Pg	**Pn**	**03 21 30.6**	**-2.7**
ZNJK	**Zanjan**	**1.49**	**139**	*e*Pg	**Pn**	**03 21 30.6**	**-2.7**
ZNJK				IAML		03 22 06.7	
	comp=Z,3.5nm,1.0s						
ISHB	**Shabestar**	**1.54**	**289**	Pg	**Pn**	**03 21 33.9**	**0.0**
IMRD	**Marand**	**1.66**	**304**	Pg	**Pb**	**03 21 37.6**	**+0.6**
MAHB	**Mahabad**	**1.74**	**234**	Pg	**Pn**	**03 21 35.6**	**-1.0**
JIR1	**Jirandeh**	**2.16**	**120**	Pn	**Pn**	**03 21 42.3**	**-0.1**
SRSL	**SARDASHT**	**2.27**	**226**	*e*Pn	**Pn**	**03 21 44.3**	**+0.3**
SRSL				IAML		03 22 21.3	
	comp=Z,870nm,1.0s						
IGZV	**Ghazvin**	**2.62**	**122**	Pn	**Pn**	**03 21 49.0**	**+0.2**
QABG	**Abgarm-Qazvin**	**2.69**	**140**	Pn	**Pn**	**03 21 49.4**	**-0.4**
SNGE	**Sanandaj**	**2.70**	**182**	*e*Pn	**Pn**	**03 21 50.4**	**+0.4**
SNGE				IAML		03 22 39.0	
	comp=Z,13nm,1.0s						
SNQR	**Sonqor, Kerman**	**2.94**	**177**	Pn	**Pn**	**03 21 53.2**	**-0.1**
GNI	**Garni**	**3.16**	**319**	Pn	**Pb**	**03 22 01.0**	**-1.6**
	comp=Z,4.2nm,0.3s,baz=158,slow=11,SNR=25						
GNI				Pg	**Pg**	**03 22 07.0**	**+0.2**
	comp=Z,34nm,0.3s,baz=139,slow=2.3,SNR=65						
GNI				Lg	Lg	03 22 48.9	
	comp=Z,47nm,0.3s,baz=164,slow=15,SNR=8.0						
GNI				LR	LR	03 23 24.0	
	comp=Z,370nm,19.1s,baz=131,slow=42						
	comp=Z,58nm,0.6s						
GNI	**Garni**	**3.16**	**319**	*i* PN	**Pn**	**03 21 53.7**	**-2.5**
IDHR	**Dehrash**	**3.21**	**196**	Pn	**Pn**	**03 21 57.7**	**+0.8**
HAGD	**Aghdareh**	**3.27**	**155**	Pn	**Pn**	**03 21 56.3**	**-1.4**
THKV	**Tehran--Karaj**	**3.32**	**123**	*e*Pn	**Pn**	**03 21 59.3**	**+0.9**
THKV				IAML		03 22 56.8	
	comp=Z,320nm,1.0s						
VSHL	**Vashlovani**	**3.52**	**347**	P	**Pb**	**03 22 10.8**	**+2.1**
KCHF	**Cheshme Sefid,**	**3.54**	**186**	Pn	**Pn**	**03 22 01.4**	**+0.1**
IGHG	**Ghaleghazi**	**3.54**	**192**	Pn	**Pn**	**03 22 01.2**	**-0.2**
AKT	**Akhty**	**3.68**	**3**	*e*PN	**Pn**	**03 22 06.8**	**+3.5**
AKT				*e*		03 22 14.5	
AKT				*e*S	**Sb**	**03 22 51.6**	**-4.5**
AKT				*e*S	**Sg**	**03 23 04.7**	**+0.3**
AKT				pmax	pmax		
	comp=Z,94nm,0.7s						
AKT				smax	smax		
	comp=E,195nm,0.4s						
AKT				smax	smax		
	comp=N,210nm,0.5s						
AKT				smax	smax		
	comp=N,224nm,0.4s						
AKT				MLR	MLR		
	comp=Z,178nm,2.0s						
ASAO	**Ashtian**	**3.85**	**147**	*e*Pn	**Pn**	**03 22 05.7**	**-0.1**
ASAO				IAML		03 23 17.0	
	comp=Z,86nm,1.0s						
IHSB	**Hasanabad**	**3.87**	**126**	Pn	**Pn**	**03 22 05.6**	**-0.3**
GLG1	**Gilan-e-Gharb**	**3.89**	**199**	Pn	**Pn**	**03 22 06.8**	**+0.7**
DGRG	**David-gareji**	**3.99**	**337**	P	**Pb**	**03 22 18.1**	**+1.5**
DGRG				S	**Sg**	**03 23 13.6**	**-0.6**
DGRG	**David-gareji**	**3.99**	**337**	PN	**Pb**	**03 22 18.1**	**+1.5**
DGRG				S	**Sg**	**03 23 13.6**	**-0.6**
LGD	**Lagodekhi**	**4.14**	**347**	P	**Pb**	**03 22 19.6**	**+0.5**
LGD				S	**Sg**	**03 23 15.3**	**-3.7**
LGD	**Lagodekhi**	**4.14**	**347**	PN	**Pb**	**03 22 19.6**	**+0.5**
LGD				S	**Sg**	**03 23 15.3**	**-3.7**
IQOM	**Qom**	**4.15**	**134**	Pn	**Pn**	**03 22 09.3**	**-0.5**
IPRN	**Peran**	**4.20**	**110**	Pn	**Pn**	**03 22 11.5**	**+1.0**
IDMV	**Damavand**	**4.29**	**120**	Pn	**Pn**	**03 22 12.2**	**+0.4**
IVRN	**Varamin**	**4.43**	**128**	Pn	**Pn**	**03 22 13.6**	**-0.1**
TBLG	**Delisi**	**4.45**	**333**	P	**Pb**	**03 22 25.5**	**+1.0**
TBLG				S	**Sg**	**03 23 27.1**	**-2.0**
TBLG	**Delisi**	**4.45**	**333**	PN	**Pb**	**03 22 25.5**	**+1.0**
TBLG				S	**Sg**	**03 23 27.1**	**-2.0**
KHMZ	**Khomeyn**	**4.53**	**153**	*e*Pn	**Pn**	**03 22 16.3**	**+1.2**
KHMZ				IAML		03 23 39.6	
	comp=Z,47nm,1.0s						
GHVR	**GHOM**	**4.54**	**136**	*e*Pn	**Pn**	**03 22 14.9**	**-0.1**
GHVR				IAML		03 23 39.1	
	comp=Z,210nm,1.0s						
TRLG	**Trialeti**	**4.55**	**326**	P	**Pb**	**03 22 28.6**	**+2.4**
TRLG				S	**Sg**	**03 23 29.2**	**-3.0**
TRLG	**Trialeti**	**4.55**	**326**	PN	**Pb**	**03 22 28.6**	**+2.4**
TRLG				S	**Sg**	**03 23 29.2**	**-3.0**
BGD	**Bogdanovka**	**4.57**	**320**	P	**Pg**	**03 22 31.2**	**-2.5**
BGD	**Bogdanovka**	**4.57**	**320**	PN	**Pg**	**03 22 31.3**	**-2.5**
IALA	**Alasht**	**4.61**	**110**	Pn	**Pn**	**03 22 16.8**	**+0.5**
AKH	**Akhalkalaki**	**4.73**	**321**	P	**Pg**	**03 22 36.3**	**-0.6**
SHTL	**Shatili**	**5.16**	**341**	P	**Pb**	**03 22 35.3**	**-1.4**
SHTL				S	**Sg**	**03 23 47.8**	**-4.2**
QAMS	**Qamsar**	**5.16**	**141**	Pn	**Pn**	**03 22 24.0**	**+0.2**
ISFB	**Sefidab**	**5.18**	**130**	Pn	**Pn**	**03 22 23.5**	**-0.4**
ALIG	**Mtskhetisjvari**	**5.20**	**327**	PN	**Pb**	**03 22 39.9**	**+2.6**
ALIG				S	**Sg**	**03 23 49.7**	**-3.5**
IKIA	**Kiasar**	**5.23**	**106**	Pn	**Pn**	**03 22 25.7**	**+1.1**
IGLO	**Ghaloghah**	**5.25**	**102**	Pn	**Pn**	**03 22 25.8**	**+0.8**
IKLH	**Kolahrood**	**5.59**	**142**	Pn	**Pn**	**03 22 30.0**	**+0.4**
TKB	**Tkibuli**	**5.69**	**324**	P	**Pb**	**03 22 50.1**	**+4.5**
IPIR	**Pirpir**	**5.82**	**150**	Pn	**Pn**	**03 22 33.5**	**+0.5**
JHBN	**Jahan bin**	**6.15**	**154**	Pn	**Pn**	**03 22 37.0**	**-0.3**
NEUR	**Neytrino**	**6.55**	**328**	P	**Pn**	**03 22 42.2**	**+0.6**
KBZ	**Khabaz**	**6.86**	**331**	Pn	Pn	03 22 52.9	+6.1
	comp=Z,0.4nm,0.5s,baz=186,slow=18,SNR=1.6						
KBZ				Pg	**Pb**	**03 23 07.5**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=157,slow=9.0,SNR=3.8						
KBZ				Lg	Lg	03 24 41.5	
	comp=Z,0.1nm,0.3s,baz=51,slow=14,SNR=2.2						
KBZ	**Khabaz**	**6.86**	**331**	*i* P	**Pn**	**03 22 44.9**	**-1.9**
ANAR	**Anarak**	**6.88**	**130**	Pn	**Pn**	**03 22 47.4**	**+0.2**
SHA1	**Shidzhatmaz**	**6.96**	**330**	*i* P	**Pn**	**03 22 45.8**	**-2.7**
KVAR	**Kislovodsk Arr**	**7.13**	**331**	Pn	Pn	03 22 56.9	+6.3
	baz=234,slow=18						
KVAR				LR	LR	03 25 34.6	
	comp=Z,149nm,19.1s,baz=336,slow=37						
	comp=Z,1.4nm,0.3s						
KIV	**Kislovodsk**	**7.13**	**331**	*e*P	**Pn**	**03 22 50.5**	**-0.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SOC	**Sochi**	**8.24**	**317**	*e*P	Pn	03 23 01.6	-4.2
SOC				*e*		03 24 33.8	
SOC				MLR	MLR		
	comp=Z,93nm,12.0s						
ASF	**Jabal al Asfar**	**10.32**	**240**	LR	LR	03 28 08.9	
	comp=Z,103nm,18.0s,baz=87,slow=41						
MMAI	**Mount Meron Ar**	**10.94**	**248**	Pn	**Pn**	**03 23 41.3**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=4.1						
BR131	**Keskin Array S**	**10.97**	**284**	*i* P	**Pn**	**03 23 42.5**	**-0.8**
BRTR	**Keskin Array B**	**10.97**	**284**	Pn	**Pn**	**03 23 47.6**	**+4.4**
	comp=Z,0.7nm,0.8s,baz=98,slow=11,SNR=8.0						
BELG	**Belogornoye**	**14.59**	**0**	Pn	**Pn**	**03 24 31.7**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=114,slow=10.0,SNR=4.2						
BELG				Sn	**Sn**	**03 27 08.2**	**-6.1**
	comp=Z,0.3nm,0.3s,baz=153,slow=20,SNR=1.6						
BELG	**Belogornoye**	**14.59**	**0**	*i* P	**Pn**	**03 24 32.6**	**0.0**
AKTO	**Aktyubinsk**	**14.71**	**27**	Pn	**Pn**	**03 24 33.0**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=212,slow=8.5,SNR=5.7						
AKTO				Sn	**Sn**	**03 27 11.7**	**-5.5**
	comp=Z,0.1nm,0.3s,baz=193,slow=18,SNR=3.8						
	comp=Z,1.7nm,0.6s						
MILM	**Milestii Mici**	**16.49**	**309**	⇓P	**Pn**	**03 24 59.1**	**+1.6**
MILM	**Milestii Mici**	**16.49**	**309**	⇓P	**Pn**	**03 24 59.1**	**+1.6**
ODBI	**Odobesti**	**17.14**	**304**	P	**P**	**03 25 09.3**	**+1.9**
	comp=Z,162nmcomp=Z,8.7nm,0.9s						
SORM	**Soroca**	**17.34**	**313**	⇑P	**Pn**	**03 25 08.6**	**+0.4**
SORM	**Soroca**	**17.34**	**313**	⇑P	**Pn**	**03 25 08.6**	**+0.4**
PLOR5	**Plostina Array**	**17.43**	**304**	P	**P**	**03 25 12.4**	**+1.7**
	comp=Z,8.0nm,1.5s						
PLOR	**Plostina**	**17.44**	**304**	⇑P	**P**	**03 25 11.3**	**+0.6**
PLOR	**Plostina**	**17.44**	**304**	⇑P	**P**	**03 25 11.4**	**+0.6**
TESR	**Tescani**	**17.68**	**306**	P	**P**	**03 25 13.7**	**+0.3**
	comp=Z,7.5nm,1.1s						
ONER	**Baraj Valea Uz**	**17.78**	**305**	⇑P	**P**	**03 25 16.4**	**+1.9**
MLR	**Muntele Rosu**	**17.79**	**302**	P	**Pn**	**03 25 14.1**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=152,slow=17						
TURR	**Turia**	**17.93**	**304**	⇑P	**P**	**03 25 18.0**	**+1.9**
AK09	**Malin Array Si**	**18.21**	**321**	P	**P**	**03 25 19.8**	**+0.6**
AK09				pP	**pP**	**03 25 23.0**	**+0.5**
AK07	**Malin Array Si**	**18.21**	**320**	P	**P**	**03 25 19.7**	**+0.5**
AK07				pP	**pP**	**03 25 22.8**	**+0.3**
AK10	**Malin Array Si**	**18.22**	**320**	P	**P**	**03 25 20.0**	**+0.8**
AK10				pP	**pP**	**03 25 23.2**	**+0.7**
AK08	**Malin Array Si**	**18.24**	**321**	P	**P**	**03 25 20.2**	**+0.7**
AK05	**Malin Array Si**	**18.25**	**320**	P	**P**	**03 25 20.4**	**+0.7**
AKASG	**Malin Array Be**	**18.29**	**321**	P	**Pn**	**03 25 20.4**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=128,slow=12,SNR=6.8						
	comp=Z,3.8nm,0.8s						
AKASG	**Malin Array Be**	**18.29**	**321**	*e*P	**P**	**03 25 20.6**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKBB	**Malin Array Si**	**18.29**	**321**	*ce*P	**P**	**03 25 21.2**	**+1.1**
AKBB	**Malin Array Si**	**18.29**	**321**	P	**P**	**03 25 20.9**	**+0.8**
KIEV	**Kiev**	**18.30**	**321**	⇓P	**P**	**03 25 20.9**	**+0.8**
KIEV	**Kiev**	**18.30**	**321**	⇓P	**P**	**03 25 20.9**	**+0.8**
KIEV	**Kiev**	**18.30**	**321**	P	**P**	**03 25 20.9**	**+0.8**
	comp=Z,25nm,0.9s						
DOPR	**Dopca**	**18.31**	**303**	⇑P	**P**	**03 25 22.8**	**+2.4**
VOIR		**18.38**	**302**	⇑P	**P**	**03 25 24.1**	**+2.9**
VOIR		**18.38**	**302**	⇑P	**P**	**03 25 24.1**	**+2.9**
LUBAR	**Lubar, Ukraine**	**18.61**	**317**	P	**Pn**	**03 25 24.3**	**+0.5**
ARR	**Arges**	**18.64**	**301**	⇑P	**Pn**	**03 25 29.2**	**+4.9**
KMPD	**K-Podol'skiy**	**18.66**	**312**	P	**P**	**03 25 23.5**	**-0.6**
OBN	**Obninsk**	**18.83**	**340**	P	**P**	**03 25 26.3**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=71,slow=15,SNR=3.5						
	comp=Z,4.2nm,0.4s						
OBN	**Obninsk**	**18.83**	**340**	*e*P	**Pn**	**03 25 27.2**	**+0.7**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MI29	**MI29, Kamyanyy**	**18.83**	**318**	P	**Pn**	**03 25 27.0**	**+0.5**
	comp=Z,89nm,0.9s						
HORU	**Horodok**	**18.98**	**314**	P	**Pn**	**03 25 28.9**	**+0.5**
BURAR	**Bucovina Array**	**19.00**	**308**	⇓P	**Pn**	**03 25 29.4**	**+0.6**
BURAR	**Bucovina Array**	**19.00**	**308**	⇓P	**Pn**	**03 25 29.4**	**+0.6**
MOS	**Moscow**	**19.13**	**343**	*e*P	**P**	**03 25 29.8**	**+0.6**
LOT	**Lotru**	**19.25**	**301**	⇑P	**Pn**	**03 25 33.3**	**+1.6**
KSV	**Kosov**	**19.38**	**310**	P	**P**	**03 25 32.8**	**+0.7**
RAKU	**Rahkiv**	**19.82**	**308**	P	**Pn**	**03 25 39.1**	**+0.7**
STNU	**Starunia**	**19.89**	**311**	P	**P**	**03 25 38.8**	**+1.2**
GZR	**Gura Zlata**	**19.91**	**300**	⇑P	**P**	**03 25 37.3**	**-0.6**
GZR	**Gura Zlata**	**19.91**	**300**	⇑P	**P**	**03 25 37.3**	**-0.6**
ARTI	**Arti**	**19.98**	**18**	P	**P**	**03 25 38.3**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=226,slow=8.2,SNR=6.5						
	comp=Z,2.4nm,0.7s						
MARR	**Marisel-Cluj**	**20.02**	**304**	⇑P	**P**	**03 25 40.8**	**+1.6**
RNPP5	**Staryi Chortor**	**20.32**	**318**	P	**P**	**03 25 43.1**	**+0.8**
DRGR		**20.33**	**304**	⇑P	**P**	**03 25 44.0**	**+1.5**
DRGR		**20.33**	**304**	⇑P	**P**	**03 25 44.0**	**+1.5**
RNPP8	**Varash**	**20.39**	**318**	P	**P**	**03 25 43.8**	**+0.7**
MEZ	**Mezhgor'ye**	**20.41**	**309**	P	**P**	**03 25 44.5**	**+1.2**
RNPP9	**Sopachiv**	**20.42**	**319**	P	**P**	**03 25 44.0**	**+0.7**
MORS	**Morshin**	**20.43**	**311**	P	**P**	**03 25 44.8**	**+1.3**
SURR	**Surduc**	**20.44**	**301**	⇑P	**P**	**03 25 42.6**	**-1.0**
KORU	**Korolevo**	**20.51**	**308**	P	**P**	**03 25 46.0**	**+1.7**
BRIU	**Brid**	**20.64**	**308**	P	**P**	**03 25 47.3**	**+1.5**
LVV	**L'vov**	**20.65**	**313**	P	**P**	**03 25 46.9**	**+1.1**
SHIU	**Shidnytsya**	**20.78**	**311**	P	**P**	**03 25 48.6**	**+1.2**
KIRV	**Kirov**	**20.84**	**3**	P	Pn	03 25 49.9	-0.3
	comp=Z,6.4nm,0.6s,baz=134,slow=4.8,SNR=4.0						
	comp=Z,6.4nm,0.6s						
KIRV	**Kirov**	**20.84**	**3**	*i* P	**P**	**03 25 48.0**	**+0.2**
BERU	**Beregovo**	**20.84**	**308**	*e*P	**P**	**03 25 49.2**	**+1.3**
MUKU	**Mukachevo**	**20.89**	**309**	P	**P**	**03 25 49.9**	**+1.4**
SVE	**Sverdlovsk**	**20.96**	**21**	*e*P	Pn	03 25 52.5	+0.8
SVE				*e*S	**S**	**03 29 44.8**	**+2.4**
SVE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HOLU	**Holmets**	**21.11**	**309**	P	**P**	**03 25 52.2**	**+1.4**
AAK	**Ala-Archa**	**21.16**	**68**	P	**P**	**03 25 53.0**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=271,slow=8.8,SNR=4.2						
	comp=Z,0.7nm,0.3s						
AAK	**Ala-Archa**	**21.16**	**68**	*ce*P	**P**	**03 25 52.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
UZHM	**Uzhgorod**	**21.20**	**309**	P	**P**	**03 25 53.4**	**+1.6**
KWP	**Kalwaria Pacla**	**21.34**	**312**	P	**P**	**03 25 54.9**	**+1.6**
KWP	**Kalwaria Pacla**	**21.34**	**312**	P	**P**	**03 25 54.4**	**+1.1**
	comp=Z,37nm,1.0s						
MNK	**Minsk**	**21.40**	**328**	*i* P	**P**	**03 25 51.7**	**-2.2**
	comp=Z,7.0nm,0.7s,baz=133						
MNK				*i* PP	**PnPn**	**03 26 10.9**	**-2.9**
MNK				*i* PPP	PPP	03 26 18.9	
MNK				*i* S	**S**	**03 29 48.8**	**-2.4**
MNK				*i* SS	**SnSn**	**03 30 12.6**	**-1.3**
MNK				*i* SSS	SSS	03 30 25.5	
MNK				*i* LQ	LQ	03 32 15.7	
MNK				*i* LR	LR	03 33 34.3	
MNK				*i* LRM	MLR	03 34 39.8	
	comp=E,563nm,24.4s						
MNK				*i* LRM	MLR	03 34 54.1	
	comp=N,378nm,20.6s						
MNK				*i* LRM	MLR	03 35 08.0	
	comp=Z,49nm,11.8s						
MNK	**Minsk**	**21.40**	**328**	*i* P	**P**	**03 25 51.6**	**-2.2**
MNK				*i* PPP	PPP	03 26 18.9	
MNK				*i* S	**S**	**03 29 48.7**	**-2.4**
MNK				*i* SS	**SnSn**	**03 30 12.5**	**-1.3**
MNK				*i* SSS	SSS	03 30 25.5	
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=E,563nm,24.0s						
MNK				MLR	MLR		
	comp=N,378nm,21.0s						
MNK				MLR	MLR		
	comp=Z,49nm,12.0s						
BORK	**Borovoye**	**21.99**	**39**	*ce*P	**P**	**03 26 00.9**	**+0.6**
BORK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BVAR	**Borovoye Array**	**22.01**	**39**	P	**P**	**03 26 01.6**	**+1.1**
	comp=Z,5.1nm,0.7s,baz=232,slow=8.2,SNR=24						
	comp=Z,5.1nm,0.7s						
STHS	**Stebnicka Huta**	**22.13**	**310**	*e*P	**P**	**03 26 01.7**	**-0.2**
STHS	**Stebnicka Huta**	**22.13**	**310**	*e*P	**P**	**03 26 01.7**	**-0.2**
KSH	**Kashi**	**22.29**	**77**	P	**P**	**03 26 01.9**	**-1.9**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NIE	**Niedzica**	**22.71**	**309**	P	**P**	**03 26 09.6**	**+1.6**
	comp=Z,2.8nm,0.9s						
OJC	**Ojcow**	**23.30**	**311**	P	**P**	**03 26 15.6**	**+1.5**
	comp=Z,7.7nm,2.7s						
KLMR	**Klimovskoe**	**23.61**	**350**	*e*P	**P**	**03 26 15.1**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
VSU	**Vasula**	**24.68**	**334**	*ce*P	**P**	**03 26 26.4**	**-0.6**
VSU				pmax	pmax		
	comp=Z,13nm,0.7s						
KURBB	**Kurchatov Arra**	**25.48**	**50**	P	**P**	**03 26 36.5**	**+2.1**
	comp=Z,5.3nm,0.8s,baz=258,slow=9.6,SNR=22						
	comp=Z,5.3nm,0.8s						
KURK	**Kurchatov**	**25.57**	**50**	P	**P**	**03 26 36.5**	**+1.4**
KSP	**Ksiaz**	**25.62**	**311**	P	**P**	**03 26 39.5**	**+3.9**
KSP	**Ksiaz**	**25.62**	**311**	P	**P**	**03 26 38.2**	**+2.6**
	comp=Z,6.6nm,1.4s						
ZVC	**Zvikov**	**26.53**	**307**	*e*P	P	03 26 51.2	+7.3
GERES	**GERESS Array B**	**26.72**	**305**	P	**P**	**03 26 45.9**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=99,slow=8.2,SNR=6.7						
	comp=Z,0.7nm,0.7s						
GERES	**GERESS Array B**	**26.72**	**305**	*e*P	**P**	**03 26 46.5**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KHC	**Kasperske Hory**	**26.86**	**306**	*e*P	P	03 26 55.7	+8.8
KHC	**Kasperske Hory**	**26.86**	**306**	*e*P	P	03 26 55.7	+8.8
MK31	**Makanchi Array**	**27.10**	**59**	*i* P	**P**	**03 26 51.2**	**+2.1**
MKAR	**Makanchi Array**	**27.10**	**59**	P	**P**	**03 26 50.5**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=257,slow=9.3,SNR=10						
	comp=Z,3.1nm,0.9s						
FINES	**FINESS Array B**	**27.17**	**337**	P	**P**	**03 26 50.0**	**+0.5**
	comp=Z,3.7nm,1.0s,baz=146,slow=12,SNR=5.0						
	comp=Z,3.7nm,1.0s						
FINES	**FINESS Array B**	**27.17**	**337**	*e*P	**P**	**03 26 49.1**	**-0.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FURI	**Furi**	**29.85**	**198**	LR	LR	03 39 20.3	
	comp=Z,42nm,21.1s,baz=24,slow=37						
ZALV	**Zalesovo Beam**	**30.18**	**46**	P	**P**	**03 27 17.6**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=262,slow=10,SNR=11						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**30.18**	**46**	*e*P	**P**	**03 27 18.4**	**+2.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DGZ	**Jazzator, Alta**	**30.87**	**54**	*i* P	**P**	**03 27 23.9**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	**Hagfors**	**30.91**	**327**	P	**P**	**03 27 23.2**	**+0.4**
	comp=Z,4.6nm,0.7s,baz=136,slow=9.6,SNR=9.0						
	comp=Z,4.6nm,0.7s						
NB2	**NORSAR Subarra**	**32.42**	**328**	P	**P**	**03 27 36.0**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=123,slow=7.9						
NOA	**NORSAR Array B**	**32.42**	**328**	P	**P**	**03 27 36.2**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=122,slow=8.5,SNR=6.4						
NOA				LR	LR	03 41 27.2	
	comp=Z,48nm,18.2s,baz=265,slow=38						
	comp=Z,1.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**38.00**	**314**	P	**P**	**03 28 23.9**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=85,slow=7.3,SNR=3.5						
	comp=Z,1.4nm,0.7s						
NRIK	**Noril'sk**	**38.22**	**22**	LR	LR	03 46 37.5	
	comp=Z,43nm,18.5s,baz=320,slow=40						
SPITS	**Spitsbergen Ar**	**42.52**	**351**	P	**P**	**03 29 02.1**	**+0.8**
	comp=Z,4.8nm,0.9s,baz=200,slow=7.7,SNR=1.4						
	comp=Z,4.8nm,0.9s						
SONM	**Songino Array**	**43.41**	**57**	P	**P**	**03 29 08.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=289,slow=9.0,SNR=1.8						
	comp=Z,0.4nm,0.5s						
ULN	**Ulaanbaatar**	**43.84**	**57**	*i* P	**P**	**03 29 13.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**47.45**	**251**	P	**P**	**03 29 42.2**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=46,slow=9.0,SNR=3.2						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**48.67**	**99**	*ce*P	**P**	**03 29 53.2**	**+2.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TIXI	**Tiksi**	**51.95**	**23**	P	**P**	**03 30 15.5**	**+0.7**
	comp=Z,2.5nm,0.3s,baz=0.7,slow=3.4,SNR=3.7						
	comp=Z,2.5nm,0.3s						
HEH	**HeiHe**	**56.17**	**50**	*e*P	**P**	**03 30 47.4**	**+1.5**
HEH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSRS	**Korea Array**	**61.70**	**63**	P	**P**	**03 31 24.7**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=291,slow=7.0,SNR=8.9						
	comp=Z,3.3nm,0.8s						
KSRS	**Korea Array**	**61.70**	**63**	*e*P	**P**	**03 31 25.2**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR	**Matsushiro Arr**	**69.30**	**59**	P	**P**	**03 32

WRA	**Warramunga Arr**	**13.79**	**158**	Pn		**Pn**	**03 24 41.1 -3.7**
	3.9nm,0.3s,baz=342,slow=11,SNR=89						
WRA				Sn		Sn	03 27 06.8 -11
	0.8nm,0.3s,baz=330,slow=23,SNR=9.1						
	5.6nm,0.4s						
COEN	**Coen**	**15.60**	**117**	P		**Pn**	**03 25 07.6 -1.6**
COEN				IAmb		IAmb	03 25 16.1
	comp=Z,37nm,0.9s						
COEN	**Coen**	**15.60**	**117**	P		**Pn**	**03 25 07.2 -2.1**
MBWA	**Marble Bar**	**16.51**	**211**	P		**Pn**	**03 25 17.0 -3.9**
MBWA	**Marble Bar**	**16.51**	**211**	P		**Pn**	**03 25 19.4 -1.5**
PSA00	**Pilbara Seismi**	**16.79**	**210**	P		**Pn**	**03 25 21.2 -3.3**
PSA00	**Pilbara Seismi**	**16.79**	**210**			**Pn**	**03 25 21.4 -3.1**
PSA00				IAmb		IAmb	03 25 35.9
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**16.79**	**210**	P		**P**	**03 25 26.6 -0.1**
QIS	**Mount Isa**	**16.91**	**143**	P		**Pn**	**03 25 24.0 -2.0**
AS31	**Alice Springs**	**17.13**	**164**	P		**Pn**	**03 25 26.8 -2.0**
ASAR	**Alice Springs**	**17.13**	**164**	P		**Pn**	**03 25 26.9 -1.9**
ASAR	**Alice Springs**	**17.13**	**164**	Pn		**Pn**	**03 25 25.6 -3.1**
	comp=Z,1.2nm,0.3s,baz=334,slow=9.8,SNR=39						
ASAR				Sn		Sn	03 28 25.4 -14
	comp=Z,0.7nm,0.3s,baz=350,slow=26,SNR=4.3						
ASAR				LR		LR	03 32 22.8
	comp=Z,200nm,21.7s,baz=316,slow=39						
ASAR				ScP		**ScP**	**03 33 46.5 -2.2**
	comp=Z,1.1nm,0.7s,baz=320,slow=1.0,SNR=1.7						
	comp=Z,3.1nm,0.5s						
PMG	**Port Moresby**	**18.23**	**98**	P		**Pn**	**03 25 42.0 -0.5**
	comp=Z,27nm,1.0s,baz=290,slow=7.7,SNR=9.3						
PMG				LR		LR	03 34 23.5
	comp=Z,84nm,19.5s,baz=182,slow=43						
PMG	**Port Moresby**	**18.23**	**98**	P		**P**	**03 25 44.9 +2.2**
MTSU	**Mount Surprise**	**18.59**	**127**	P		**Pn**	**03 25 47.2 +0.3**
KSM	**Kuching**	**20.41**	**294**	P		**P**	**03 26 07.2 +0.6**
KSM				IAmb		IAmb	03 26 08.1
	comp=Z,22nm,0.8s						
KSM	**Kuching**	**20.41**	**294**	P		**P**	**03 26 07.3 +0.8**
GIRL	**Giralia**	**20.89**	**221**			**P**	**03 26 11.6 -0.1**
LEM	**Lembang**	**21.10**	**270**	P		**P**	**03 26 14.1 -0.2**
	comp=Z,14nm,0.3s,baz=9.6,slow=17,SNR=2.0						
LEM				LR		LR	03 35 46.9
	comp=Z,280nm,18.2s,baz=38,slow=41						
	comp=Z,14nm,0.3s						
TV1H	**Townsville Har**	**21.17**	**126**	P		**P**	**03 26 17.6 +2.8**
MEEK	**Meekatharra**	**21.71**	**206**	P		**P**	**03 26 21.1 +0.6**
FORT	**Forrest**	**23.53**	**182**	P		**P**	**03 26 39.7 +0.1**
FORT				IAmb		IAmb	03 26 48.5
	comp=Z,14nm,0.8s						
QLP	**Quilpie**	**24.24**	**145**	P		**P**	**03 26 47.6 +1.2**
MORW	**Morawa**	**24.95**	**207**			**P**	**03 26 53.0 +0.2**
MORW				IAmb		IAmb	03 27 00.5
	comp=Z,37nm,1.4s						
BBOO	**Buckleboo**	**26.40**	**166**	P		**P**	**03 27 05.4 -0.5**
BBOO				IAmb		IAmb	03 27 16.9
	comp=Z,15nm,0.9s						
STKA	**Stephens Creek**	**27.32**	**156**	P		**P**	**03 27 14.7 +0.5**
STKA	**Stephens Creek**	**27.32**	**156**	P		**P**	**03 27 11.0 -3.2**
	comp=Z,1.8nm,0.7s,baz=328,slow=13,SNR=4.8						
	comp=Z,1.8nm,0.7s						
NWAO	**Narrogin (SRO)**	**27.84**	**201**			**P**	**03 27 18.4 -0.5**
CMSA	**Cobar Meteorol**	**28.91**	**149**	P		**P**	**03 27 29.3 +0.9**
HNR	**Honiara**	**30.83**	**96**	LR		LR	03 39 39.2
	comp=Z,110nm,21.8s,baz=346,slow=36						
RPSI	**Rantau Prapat**	**31.45**	**287**	P		**P**	**03 27 50.8 -0.3**
RPSI				IAmb		IAmb	03 28 02.5
	comp=Z,14nm,0.9s						
PSI	**Prapat**	**31.48**	**287**	LR		LR	03 41 17.6
	comp=Z,182nm,18.4s,baz=80,slow=38						
PSI	**Prapat**	**31.48**	**287**	P		**P**	**03 27 53.2 +1.7**
CAN	**Canberra**	**33.59**	**149**			**P**	**03 28 11.5 +1.8**
AUSIS	**Research Schoo**	**33.61**	**149**	P		**P**	**03 28 10.4 +0.5**
JOW	**Kunigami**	**33.77**	**359**	LR		LR	03 43 05.0
	comp=Z,48nm,18.9s,baz=294,slow=38						
TOO	**Toolangi**	**33.85**	**156**			**P**	**03 28 12.9 +1.1**
TOO				IAmb		IAmb	03 28 28.0
	comp=Z,12nm,1.5s						
CMAR	**Chiang Mai Arr**	**38.97**	**311**	P		**P**	**03 28 55.4 -0.5**
	comp=Z,0.9nm,0.3s,baz=142,slow=7.2,SNR=7.3						
CMAR				LR		LR	03 46 14.8
	comp=Z,39nm,19.4s,baz=130,slow=38						
	comp=Z,0.9nm,0.3s						
DZM	**Mont Dzumac**	**39.13**	**116**	LR		LR	03 44 43.5
	comp=Z,70nm,20.0s,baz=342,slow=36						
JNU	**Nakatsue**	**40.08**	**3**	IAmb		IAmb	03 29 19.6
	comp=Z,41nm,1.5s						
JNU	**Nakatsue**	**40.08**	**3**	P		**P**	**03 29 05.5 +0.6**
	comp=Z,6.5nm,1.1s,baz=225,slow=4.3,SNR=1.7						
JNU				LR		LR	03 46 11.5
	comp=Z,62nm,18.5s,baz=138,slow=37						
	comp=Z,6.5nm,1.1s						
NJ2	**Nanjing**	**40.13**	**347**	*eP*		**P**	**03 29 09.1 +3.9**
NJ2				pmax		pmax	
	comp=Z,13nm,0.9s						
PZH	**PanZhiHua**	**42.56**	**323**	P		**P**	**03 29 27.8 +2.3**
MJAR	**Matsushiro Arr**	**44.33**	**11**	P		**P**	**03 29 40.0 +0.6**
	comp=Z,2.3nm,0.9s,baz=186,slow=8.9,SNR=5.9						
	comp=Z,2.3nm,0.9s						
KSRS	**Korea Array**	**44.37**	**359**	P		**P**	**03 29 39.9 +0.2**
	comp=Z,1.0nm,0.7s,baz=174,slow=8.5,SNR=5.3						
	comp=Z,1.0nm,0.7s						
LZDM	**Lanzhou Array**	**48.97**	**333**	P		**P**	**03 30 13.9 -2.4**
	comp=Z,1.2nm,0.3s,baz=134,slow=8.3,SNR=1.7						
LZH	**Lanzhou**	**49.01**	**333**	*eP*		P	03 30 23.4 +7.0
LZH				pP		pwP	03 30 35.6 +13
LZH				sP		sP	03 30 42.8 +23
LZH				pmax		pmax	
	comp=Z,24nm,1.3s						
PALK	**Pallekele**	**50.13**	**286**	LR		LR	03 53 23.2
	comp=Z,46nm,18.0s,baz=130,slow=38						
HHC	**Hu-ho-hao-te**	**50.34**	**343**	*eP*		**P**	**03 30 30.5 +4.2**
HHC				pmax		pmax	
	comp=Z,15nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.18**	**3**	P		**P**	**03 30 31.0 -1.5**
	comp=Z,1.9nm,0.7s,baz=160,slow=4.6,SNR=2.1						
	comp=Z,1.9nm,0.7s						
URZ	**Urewera**	**53.38**	**133**	LR		LR	03 52 58.2
	comp=Z,52nm,18.1s,baz=320,slow=36						
EVN	**Everest**	**53.55**	**313**	P		**P**	**03 30 51.0 -0.1**
EVN				IAmb		IAmb	03 31 05.0
	comp=Z,12nm,1.1s						
HILR	**Hailar Array B**	**57.02**	**353**	P		**P**	**03 31 14.9 -0.2**
	comp=Z,0.6nm,0.3s,baz=163,slow=10,SNR=1.7						
	comp=Z,0.6nm,0.3s						
SONM	**Songino Array**	**58.23**	**342**	P		**P**	**03 31 24.6 +0.8**
	comp=Z,1.6nm,0.8s,baz=159,slow=9.1,SNR=8.1						
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**67.73**	**327**	P		**P**	**03 32 26.6 -0.4**
	comp=Z,1.3nm,0.6s,baz=121,slow=7.5,SNR=8.7						
	comp=Z,1.3nm,0.6s						
AAK	**Ala-Archa**	**69.93**	**320**			**P**	**03 32 41.0 +0.2**
AAK				IAmb		IAmb	03 32 52.9
	comp=Z,4.2nm,0.9s						
AAK	**Ala-Archa**	**69.93**	**320**	P		**P**	**03 32 40.7 -0.1**
	comp=Z,0.8nm,0.4s,baz=180,slow=5.1,SNR=5.2						
	comp=Z,0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**71.22**	**334**	P		**P**	**03 32 47.2 -1.1**
ZALV	**Zalesovo Beam**	**71.22**	**334**	P		**P**	**03 32 47.4 -0.8**
	comp=Z,1.0nm,0.5s,baz=113,slow=1.9,SNR=15						
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**72.05**	**329**	P		**P**	**03 32 53.2 -0.1**
	comp=Z,2.2nm,0.7s,baz=130,slow=5.2,SNR=10						
	comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**72.06**	**329**			**P**	**03 32 53.6 +0.2**
SEY	**Seymchan**	**72.15**	**11**	P		**P**	**03 32 53.7 0.0**
	comp=Z,1.9nm,0.6s,baz=217,slow=20,SNR=2.1						
SEY				LR		LR	04 03 18.0
	comp=Z,31nm,20.3s,baz=32,slow=35						
	comp=Z,1.9nm,0.6s						
VNDA	**Vanda**	**72.45**	**173**	P		**P**	**03 32 55.2 -0.1**
VNDA				IAmb		IAmb	03 33 31.9
	comp=Z,5.2nm,1.4s						
VNDA	**Vanda**	**72.45**	**173**	P		**P**	**03 32 53.4 -1.9**
	comp=Z,0.6nm,0.7s,baz=318,slow=4.5,SNR=5.7						
VNDA				LR		LR	04 03 40.2
	comp=Z,28nm,20.3s,baz=334,slow=35						
	comp=Z,0.6nm,0.7s						
MAW	**Mawson**	**74.41**	**201**	LR		LR	04 03 28.7
	comp=Z,43nm,19.9s,baz=61,slow=34						
BVAR	**Borovoye Array**	**77.59**	**328**	P		**P**	**03 33 24.7 -0.7**
	comp=Z,1.3nm,0.7s,baz=122,slow=9.8,SNR=8.0						
	comp=Z,1.3nm,0.7s						
TIXI	**Tiksi**	**78.63**	**360**	P		**P**	**03 33 30.3 -0.4**
	comp=Z,1.1nm,0.4s,baz=208,slow=2.7,SNR=6.7						
TIXI				LR		LR	04 08 05.6
	comp=Z,20nm,20.3s,baz=92,slow=36						
	comp=Z,1.1nm,0.4s						

AB31	**Akbulak array**	**81.93**	**322**	P		**P**	**03 33 47.5 -1.5**
AB31				IAmb		IAmb	03 33 59.5
	comp=Z,3.7nm,1.0s						
ABKAR	**Akbulak array**	**81.93**	**322**	P		**P**	**03 33 46.3 -2.7**
QSPA	**South Pole Qui**	**82.84**	**180**	P		**P**	**03 33 53.9 +0.3**
	comp=Z,0.6nm,0.3s,baz=290,slow=5.5,SNR=6.5						
	comp=Z,0.6nm,0.3s						
AKTO	**Aktyubinsk**	**83.50**	**323**	P		**P**	**03 33 56.6 -0.5**
	comp=Z,1.9nm,0.9s,baz=124,slow=8.3,SNR=5.7						
	comp=Z,1.9nm,0.9s						
ARTI	**Arti**	**85.31**	**328**	P		**P**	**03 34 04.4 -1.8**
	comp=Z,0.9nm,0.2s,baz=63,slow=2.3,SNR=4.6						
	comp=Z,0.9nm,0.2s						
FURI	**Furi**	**91.28**	**279**	LR		LR	04 11 35.7
	comp=Z,29nm,20.2s,baz=134,slow=33						
ILAR	**Eielson Array**	**93.95**	**25**	P		**P**	**03 34 44.6 -2.3**
	comp=Z,0.5nm,0.9s,baz=271,slow=5.1,SNR=4.2						
	comp=Z,0.5nm,0.9s						
BRTR	**Keskin Array B**	**98.54**	**309**	LR		LR	04 27 55.1
	comp=Z,33nm,18.0s,baz=298,slow=40						
LBTB	**Lobatse**	**98.91**	**243**	LR		LR	04 16 18.9
	comp=Z,22nm,18.2s,baz=34,slow=33						
TORD	**Torodi Ar. Bea**	**127.74**	**281**	PKP		**PKPdf**	**03 40 34.6 -1.3**
	comp=Z,1.5nm,0.3s,baz=42,slow=3.7,SNR=1.3						
DBIC	**Dimbokro**	**134.08**	**272**	PKP		**PKPdf**	**03 40 48.1 +0.1**
	comp=Z,1.4nm,0.6s,baz=111,slow=8.6,SNR=1.1						
CPUP	**Villa Florida**	**146.19**	**170**	PKPbc		**PKPdf**	**03 41 06.0 -3.6**
	comp=Z,0.5nm,0.6s,baz=121,slow=0.6,SNR=4.0						
LPAZ	**La Paz**	**151.28**	**144**			**PKiKP**	**03 41 25.3 0.0**
LPAZ	**La Paz**	**151.28**	**144**	PKPbc		**PKPbc**	**03 41 24.9 +0.2**
	comp=Z,1.8nm,0.7s,baz=191,slow=5.2,SNR=6.2						

IDC 10 03:55:38.3±6.3, 4°53S×152°32E, h0km, mb3.4/3, mbtmp3.4/3, MS3.5/1, Error ellipse: s-maj=193.7km s-min=38.2km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.27**	**227**	P	P	04 00 48.6	+0.8
	0.5nm,0.6s,baz=53,slow=9.9,SNR=6.3						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**26.03**	**221**	P	P	04 01 12.6	-0.8
	0.1nm,0.4s,baz=48,slow=9.2,SNR=6.5						
	0.1nm,0.4s						
KAPI	**Kappang**	**32.46**	**268**	LR	LR	04 17 24.6	
	comp=Z,70nm,19.1s,baz=284,slow=40						
MKAR	**Makanchi Array**	**79.81**	**319**	P	P	04 07 48.9	+0.2
	1.2nm,0.9s,baz=102,slow=6.6,SNR=4.0						
	1.2nm,0.9s						

*IDC **10** 04:19:43.3±1.5, 3°.78N×127°.41E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=117.7km s-min=18.3km az=69.0*
*DJA **10** 04:19:46.8±0.8, 5°N±7°×12°7E±°, h104km±5km, M4.3/13, mB4.9/4, mb4.2/7, MLv4.3/13, Mw(mB)4.2/4*
ISC 10 04:19:45.6±3.0, 4°.6N±0°.3×126°.6E±0°.1, h100km, n20, σ0s85/12, mb3.6/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.42**	**230**	P	**Pn**	**04 20 10.6**	**-0.3**
SGSI				S	**Sn**	**04 20 30.0**	**-0.1**
TNTI	**Ternate**	**3.89**	**169**	P	**Pn**	**04 20 44.7**	**+1.3**
MRSI	**Marisa**	**6.22**	**229**	P	**Pn**	**04 21 15.4**	**+0.5**
SANI	**Sanana**	**6.65**	**185**	P	**Pn**	**04 21 19.4**	**-1.4**
LUWI	**Luwuk**	**6.80**	**214**	P	**Pn**	**04 21 24.2**	**+1.3**
	0.2nm2µm44nm,1.0s						
APSI	**Ampana**	**7.39**	**222**	P	**Pn**	**04 21 31.1**	**+0.2**
	0.1nm46nm,1.0s						
NLAI	**Namlea**	**7.81**	**176**	P	**Pn**	**04 21 36.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.59**	**182**	P	**P**	**04 24 37.7**	**-0.2**
	2.2nm,1.0s,baz=17,slow=11,SNR=1.8						
	2.2nm,1.0s						
WRA	**Warramunga Arr**	**25.56**	**163**	P	**P**	**04 25 04.8**	**-0.5**
	0.6nm,0.4s,baz=342,slow=9.3,SNR=17						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**28.99**	**166**	P	**P**	**04 25 35.6**	**-0.5**
	0.5nm,0.5s,baz=352,slow=7.4,SNR=10						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**38.99**	**160**	P	**P**	**04 27 02.6**	**+0.3**
	1.2nm,0.4s,baz=339,slow=9.0,SNR=3.8						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	**56.77**	**325**	P	P	04 29 36.5	+17
	0.4nm,0.7s,baz=132,slow=6.3,SNR=2.9						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**60.94**	**327**	P	P	04 30 05.1	+17
	0.5nm,0.8s,baz=126,slow=5.7,SNR=4.3						
	0.5nm,0.8s						
BVAR	**Borovoye Array**	**66.52**	**327**	P	P	04 30 43.8	+19
	0.6nm,0.6s,baz=103,slow=6.5,SNR=3.0						
	0.6nm,0.6s						
H03S2	**Juan Fernandez**	**142.46**	**144**	T	T	07 16 24.5	
	baz=219,slow=74,SNR=14						
H03S1	**Juan Fernandez**	**142.47**	**144**	T	T	07 16 26.7	
	baz=219,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**142.48**	**144**	T	T	07 16 27.0	
	baz=219,slow=74,SNR=15						
H03N3	**Juan Fernandez**	**142.73**	**143**	T	T	07 16 42.5	
	baz=222,slow=72,SNR=16						
H03N2	**Juan Fernandez**	**142.73**	**143**	T	T	07 16 25.0	
H03N1	**Juan Fernandez**	**142.75**	**143**	T	T	07 16 27.0	
	baz=222,slow=72,SNR=19						

*IDC **10** 04:26:36.3±2.0, 33°.54S×179°.02W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=76.6km s-min=47.0km az=12.0*
*WEL **10** 04:26:38.6±1.1, 34°.5S±14°×17°.9W±3°.2, h123km±46km, M4.3/7, mB4.6/2, ML4.6/9, MLv4.3/7, Mw(mB)3.9/2, Error ellipse: s-maj=45.6km s-min=4.8km az=112.5, confirmed*
ISC 10 04:26:43.2±1.7, 34°.15S±0°.1×178°.8W±0°.2, h50km, n21, σ1s91/32, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.31**	**211**	P	**Pn**	**04 27 46.2**	**0.0**
WMGZ				S	**Sn**	**04 28 31.2**	**-4.0**
PKGZ	**Pakihiroa**	**4.50**	**213**	P	**Pn**	**04 27 48.1**	**-0.6**
PKGZ				S	**Sn**	**04 28 43.2**	**+3.5**
HAZ	**Te Kaha**	**4.55**	**217**	P	**Pn**	**04 27 49.5**	**0.0**
HAZ				S	**Sn**	**04 28 45.1**	**+4.1**
PUZ	**Puketiti**	**4.59**	**211**	P	**Pn**	**04 27 50.2**	**+0.2**
PUZ				S	**Sn**	**04 28 44.6**	**+2.6**
RUGZ	**Raukumara Rang**	**4.76**	**216**	P	**Pn**	**04 27 51.1**	**-1.4**
TWGZ	**Tauwhareparae**	**4.79**	**212**	P	**Pn**	**04 27 53.1**	**+0.2**
TWGZ				S	**Sn**	**04 28 50.1**	**+3.0**
GLKZ	**Green Lake**	**4.93**	**9**	S	Sn	04 28 35.5	-15
MWZ	**Matawai**	**5.13**	**214**	P	**Pn**	**04 27 57.2**	**-0.3**
MWZ				S	**Sn**	**04 28 57.8**	**+2.4**
URZ	**Urewera**	**5.27**	**218**	Sn	**Sn**	**04 28 59.2**	**+0.4**
	3.5nm,0.3s,baz=84,slow=15,SNR=1.5						
URZ	**Urewera**	**5.27**	**218**	P	**Pn**	**04 27 58.4**	**-1.0**
URZ				S	**Sn**	**04 28 59.6**	**+0.7**
RIGZ	**Rimuhau**	**5.33**	**210**	P	**Pn**	**04 27 59.3**	**-0.9**
RIGZ				S	**Sn**	**04 29 01.8**	**+1.4**
KNZ	**Kokohu**	**5.63**	**209**	P	**Pn**	**04 28 02.9**	**-1.5**
KNZ				S	**Sn**	**04 29 06.7**	**-1.0**
MTHZ	**Maungataniwha**	**5.87**	**216**	P	**Pn**	**04 28 07.4**	**-0.2**
MTHZ				S	**Sn**	**04 29 13.9**	**+0.4**
BKZ	**Black Stump Fm**	**6.28**	**216**	P	**Pn**	**04 28 11.8**	**-1.4**
BKZ				S	**Sn**	**04 29 22.2**	**-1.5**
OUZ	**Omahuta**	**6.36**	**258**	P	**Pn**	**04 28 15.0**	**+0.7**
KWHZ	**Kaweka Forest**	**6.52**	**215**	P	**Pn**	**04 28 15.3**	**-1.2**
KWHZ				S	**Sn**	**04 29 28.6**	**-1.0**
TSZ	**Takapari Road**	**7.24**	**214**	P	**Pn**	**04 28 24.7**	**-1.7**
ASAR	**Alice Springs**	**42.38**	**271**	P	**P**	**04 34 30.9**	**-2.0**
	0.9nm,0.8s,baz=111,slow=7.6,SNR=8.5						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**43.71**	**276**	P	**P**	**04 34 41.1**	**-2.5**
	0.5nm,0.5s,baz=116,slow=7.8,SNR=8.7						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**148.38**	**337**	PKPbc	**PKPdf**	**04 46 21.7**	**+2.0**
	2.6nm,0.9s,baz=45,slow=4.1,SNR=8.4						
TORD	**Torodi Ar. Bea**	**159.09**	**181**	PKPab	**PKPab**	**04 47 15.3**	**+2.4**
	0.6nm,0.4s,baz=186,slow=1.4,SNR=0.8						

*IDC **10** 04:49:14.9±9.0, 36°.20N×70°.32E, h170km±83km, mb3.6/6, mbtmp3.8/9, MS3.3/2, Error ellipse: s-maj=63.2km s-min=40.4km az=154.0*
ISC 10 04:49:07.2±2.7, 35°.9N±0°.3×70°.5E±0°.3, h110km, n11, σ1s17/9, mb3.9/4, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.03**	**36**	P	**P**	**04 52 24.8**	**-0.6**
	1.1nm,0.7s,baz=212,slow=14,SNR=7.7						
KURBB	**Kurchatov Arra**	**15.82**	**19**	P	**Pn**	**04 52 44.0**	**+0.5**
	0.2nm,0.5s,baz=211,slow=11,SNR=2.3						
BVAR	**Borovoye Array**	**17.11**	**360**	P	**P**	**04 53 00.8**	**+1.4**
	0.3nm,0.5s,baz=180,slow=13,SNR=2.2						
ZALV	**Zalesovo Beam**	**20.63**	**25**	P	**P**	**04 53 38.3**	**+0.6**
	1.6nm,0.4s,baz=213,slow=11,SNR=7.3						
	1.6nm,0.4s						
KBZ	**Khabaz**	**22.48**	**299**	LR	LR	05 04 39.6	
	comp=Z,58nm,18.9s,baz=327,slow=42						
FINES	**FINESS Array B**	**37.73**	**327**	P	**P**	**04 56 12.0**	**+0.1**
	2.3nm,0.8s,baz=115,slow=12,SNR=4.5						
	2.3nm,0.8s						
ARCES	**ARCESS Array B**	**41.52**	**338**	P	**P**	**04 56 41.2**	**-2.1**
	1.3nm,0.8s,baz=119,slow=7.8,SNR=1.2						
	1.3nm,0.8s						
NOA	**NORSAR Array B**	**44.58**	**323**	P	**P**	**04 57 07.2**	**-0.9**
	0.4nm,0.8s,baz=98,slow=8.0,SNR=2.1						
	0.4nm,0.8s						
TIXI	**Tiksi**	**46.48**	**22**	P	**P**	**04 57 22.8**	**+0.1**
	2.4nm,0.2s,baz=260,slow=12,SNR=2.4						
	2.4nm,0.2s						
TORD	**Torodi Ar. Bea**	**65.26**	**269**	P	**P**	**04 59 38.0**	**+0.5**
	2.3nm,0.3s,baz=47,slow=7.0,SNR=2.3						
	2.3nm,0.3s						
YKA	**Yellowknife Ar**	**81.85**	**2**	LR	LR	05 41 39.3	
	comp=Z,18nm,18.6s,baz=297,slow=38						

*NEIC **10** 05:11:18.5±1.1, 22°.0S±0°.1×179°.4W±0°.2, h598km±11km, mb4.0/23, Error ellipse: s-maj=20.3km s-min=18.9km az=72.0*
*IDC **10** 05:11:20.8±6.7, 21°.54S×179°.81W, h616km±82km, mb3.2/7, mbtmp4.2/8, Error ellipse: s-maj=39.4km s-min=26.0km az=84.0*
ISC 10 05:11:18.2±0.7, 22°.0S±0°.1×179°.5W±0°.1, h592km, n38, σ1s15/36, mb4.0/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.80**	**331**	P	**P**	**05 12 50.3**	**+1.0**
MARNC	**Mare, Loyalty**	**11.58**	**270**	P	**P**	**05 13 53.0**	**+0.3**
DZM	**Mont Dzumac**	**13.02**	**267**	P	**P**	**05 14 06.4**	**-1.0**
	3.4nm,0.6s,baz=84,slow=17,SNR=6.0						
URZ	**Urewera**	**16.48**	**189**	P	**P**	**05 14 37.3**	**-2.8**
	33nm,1.0s,baz=280,slow=2.6,SNR=6.1						
URZ				S	S	05 17 15.1	-9.4
	39nm,1.1s,baz=151,slow=19,SNR=2.7						
MSWZ	**Moikau Station**	**19.87**	**192**	P	**P**	**05 15 09.2**	**-1.8**
THZ	**Tophouse**	**20.73**	**196**	P	**P**	**05 15 18.1**	**-0.6**
WHZ	**Wether Hill Ro**	**25.95**	**200**	P	**P**	**05 16 04.8**	**-0.2**
EIDS	**Eidsvold**	**27.11**	**257**	P	**P**	**05 16 16.1**	**+0.6**
EIDS				IAmb	IAmb	05 16 22.2	
	comp=Z,6.1nm,1.1s						
ARMA	**Armidale**	**27.16**	**246**	P	**P**	**05 16 17.6**	**+1.7**
TOO	**Toolangi**	**33.88**	**235**	P	**P**	**05 17 13.6**	**+0.4**
TOO				IAmb	IAmb	05 17 25.2	
	comp=Z,3.2nm,1.0s						
STKA	**Stephens Creek**	**35.88**	**246**	P	**P**	**05 17 30.5**	**+0.6**
STKA	**Stephens Creek**	**35.88**	**246**	P	**P**	**05 17 30.3**	**+0.4**
	comp=Z,3.0nm,0.5s,baz=77,slow=11,SNR=10.0						
	comp=Z,3.0nm,0.5s						
COEN	**Coen**	**36.29**	**276**	P	**P**	**05 17 33.4**	**-0.1**
COEN				IAmb	IAmb	05 17 43.1	
	comp=Z,4.0nm,1.1s						
MGBR	**Mount Gambier**	**37.69**	**236**	P	**P**	**05 17 45.3**	**+0.8**
BBOO	**Buckleboo**	**40.63**	**245**	P	**P**	**05 18 08.1**	**-0.1**
BBOO				IAmb	IAmb	05 18 34.8	
	comp=Z,6.7nm,1.1s						
AS31	**Alice Springs**	**42.81**	**258**	P	**P**	**05 18 25.7**	**+0.1**
ASAR	**Alice Springs**	**42.81**	**258**	P	**P**	**05 18 25.4**	**-0.2**
ASAR	**Alice Springs**	**42.81**	**258**	P	**P**	**05 18 25.6**	**0.0**
	comp=Z,3.2nm,0.6s,baz=99,slow=8.2,SNR=62						
	comp=Z,3.2nm,0.6s						
WRA	**Warramunga Arr**	**43.01**	**264**	P	**P**	**05 18 26.3**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=94,slow=7.9,SNR=42						
	comp=Z,0.9nm,0.3s						
FORT	**Forrest**	**47.41**	**248**	P	**P**	**05 19 00.3**	**-0.1**
FORT				IAmb	IAmb	05 19 00.7	
	comp=Z,5.1nm,0.

EMPR	**Esperanza - Ma**	**0.91**	**130**	*eS*		**Sn**	**05 21 28.2**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.96**	**148**			**Pb**	**05 21 15.2**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.96**	**148**	*eP*		**Pb**	**05 21 15.2**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.07**	**172**			**Pn**	**05 21 16.2**	**-0.6**
CRPR						**Sn**	**05 21 32.8**	**+1.1**
CRPR				IAML			05 21 38.5	
	comp=N,46nm,0.3s							
CRPR				IAML			05 21 38.7	
	comp=E,50nm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.07**	**172**	*eP*		**Pn**	**05 21 16.2**	**-0.6**
CRPR				*eSg*		**Sb**	**05 21 30.7**	**+0.3**
CRPR				IAML			05 21 40.2	
	comp=N,39nm,1.0s							
CRPR	**Cabo Rojo, PR**	**1.07**	**172**	*eP*		**Pn**	**05 21 16.2**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.07**	**172**	*eS*		**Sn**	**05 21 31.8**	**+0.1**
MLPR	**Magueyes Islan**	**1.11**	**169**	*eP*		**Pn**	**05 21 17.0**	**-0.6**
MLPR				*eSg*		**Sb**	**05 21 31.1**	**-0.7**
MLPR				IAML			05 21 36.6	
	comp=N,9.4nm,0.6s							
MLPR	**Magueyes Islan**	**1.11**	**169**	*eP*		**Pn**	**05 21 16.9**	**-0.6**
MLPR	**Magueyes Islan**	**1.11**	**169**	*eS*		**Sn**	**05 21 33.6**	**+0.8**
ECPR	**Experimental S**	**1.13**	**131**	*eP*		**Pn**	**05 21 16.9**	**-0.9**
ECPR	**Experimental S**	**1.13**	**131**	*eS*		**Sn**	**05 21 33.4**	**+0.2**
OBIP	**Obispado Ponce**	**1.19**	**149**			**Pn**	**05 21 18.1**	**-0.5**
OBIP				IAML			05 21 35.0	
	comp=E,40nm,0.4s							
OBIP				IAML			05 21 35.0	
	comp=N,48nm,0.5s							
OBIP	**Obispado Ponce**	**1.19**	**149**	*eP*		**Pn**	**05 21 18.1**	**-0.5**
OBIP	**Obispado Ponce**	**1.19**	**149**	*eS*		**Sn**	**05 21 34.9**	**+0.1**
GCPR	**Guaynabo City**	**1.35**	**124**			**Pn**	**05 21 20.8**	**0.0**
GCPR						**Sb**	**05 21 38.4**	**-0.1**
GCPR	**Guaynabo City**	**1.35**	**124**	*eP*		**Pn**	**05 21 20.7**	**0.0**
GCPR	**Guaynabo City**	**1.35**	**124**	*eS*		**Sb**	**05 21 38.6**	**+0.1**
SJG	**San Juan**	**1.42**	**132**	Pn		**Pn**	**05 21 21.3**	**-0.4**
SJG				IAML			05 21 41.3	
	comp=N,31nm,0.3s							
SJG				IAML			05 21 48.3	
	comp=N,33nm,0.3s							
SJG	**San Juan**	**1.42**	**132**	*eS*		**Sb**	**05 21 41.1**	**+0.5**
HIDR	**Higuey Centro**	**1.46**	**251**	*eP*		**Pn**	**05 21 22.5**	**+0.2**
HIDR				*eSg*		**Sb**	**05 21 42.1**	**+0.3**
HIDR				IAML			05 21 49.9	
	comp=N,48nm,0.2s							
HUMP	**Col San Antoni**	**1.62**	**124**			**Pn**	**05 21 24.6**	**0.0**
HUMP	**Col San Antoni**	**1.62**	**124**	*eP*		**Pn**	**05 21 24.6**	**0.0**
HUMP	**Col San Antoni**	**1.62**	**124**	*eS*		**Sb**	**05 21 46.3**	**-0.2**
MIDR	**Miches**	**1.70**	**267**	*eP*		**Pb**	**05 21 27.6**	**+0.3**
MIDR				IAML			05 21 51.8	
	comp=N,22nm,0.3s							
DR12	**Loma Pena Alta**	**2.03**	**262**	Pn		**Pb**	**05 21 32.2**	**-0.7**
HATOM	**Hato Mayor del**	**2.03**	**262**	*eP*		**Pb**	**05 21 32.4**	**-0.5**
HATOM				*eSg*		**Sb**	**05 21 59.0**	**+0.8**
HATOM				IAML			05 22 04.4	
	comp=N,16nm,0.9s							

*SJA **10** 05:22:46.0±0.8,26°.11S×71°.33W,h14km±3km, ML3.9, MW3.9*
*GUC **10** 05:22:47.2±0.8,26°.12S×71°.34W,h30km±8km, ML3.9*
*IDC **10** 05:22:49.8±1.0,26°.01S×70°.72W,h0km, mb3.8/5, mbtmp3.7/6,ML3.4/1,MS3.2/2,Error ellipse: s-maj=40.6km s-min=23.9km az=94.0*
*NEIC **10** 05:22:49.6±1.2,26°.14S±0°.04×71°.23W±0°.02,h17km±6km, mb4.0/5,Error ellipse: s-maj=5.4km s-min=2.1km az=180.0*

ISC 10 05:22:48.1±1.9,26°.14S±0°.03×71°.22W±0°.06,h6km±11km, n70,σ0s98/85,mb3.8/5,1C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
AC01	**Pan de Azucar**	**0.56**	**91**			**Pb**	**05 23 00.5**	**+0.2**
AC01					Sg	**Sg**	**05 23 06.1**	**0.0**
AC01	**Pan de Azucar**	**0.56**	**91**	*i*	P	**Pb**	**05 23 00.2**	**0.0**
AC01				*i*	S	**Sg**	**05 23 06.3**	**+0.2**
AC01	**Pan de Azucar**	**0.56**	**91**	*i*	P	**Pg**	**05 22 59.1**	**+0.3**
AC01				IAML			05 23 08.0	
	comp=Z,3μm,0.4s							
AC01				*i*	S	**Sb**	**05 23 08.1**	**-0.4**
AC06	**Mina Casimiro**	**1.44**	**148**			**Pn**	**05 23 15.0**	**+0.3**
AC06						**Sb**	**05 23 32.4**	**-1.5**
AC06	**Mina Casimiro**	**1.44**	**148**	*eP*		**Pn**	**05 23 14.6**	**-0.1**
AC06				*i*	S	**Sb**	**05 23 31.9**	**-2.1**
AC06				IAML			05 23 35.6	
	comp=E,2μm,0.4s							
PB14	**IPOC Station P**	**1.68**	**26**			**Pn**	**05 23 18.3**	**+0.1**
PB14	**IPOC Station P**	**1.68**	**26**	*eP*		**Pn**	**05 23 18.4**	**+0.1**
PB14				*i*	S	**Sn**	**05 23 39.5**	**-0.7**
PB14	**IPOC Station P**	**1.68**	**26**	*i*	P	**Pn**	**05 23 17.9**	**-0.3**
PB14				*i*	S	**Sb**	**05 23 40.8**	**-0.2**
PB14				IAML			05 23 50.1	
	comp=Z,491nm,0.7s							
GO03	**Copiapo**	**1.70**	**149**			**Pn**	**05 23 19.4**	**+1.1**
GO03					Sn	**Sn**	**05 23 40.1**	**-0.2**
GO03	**Copiapo**	**1.70**	**149**	*eP*		**Pn**	**05 23 19.0**	**+0.7**
GO03				*i*	S	**Sn**	**05 23 39.3**	**-1.0**
GO03				IAML			05 23 41.3	
	comp=E,1μm,0.3s							
GO03	**Copiapo**	**1.70**	**149**	*i*	P	**Pn**	**05 23 18.8**	**+0.5**
GO03				*i*	S	**Sb**	**05 23 42.3**	**+1.0**
GO03				IAML			05 23 45.3	
	comp=Z,1μm,0.3s							
GO02	**Mina Guanaco**	**1.76**	**57**			**Pb**	**05 23 20.7**	**-0.3**
GO02					Sn	**Sb**	**05 23 42.8**	**-0.6**
GO02	**Mina Guanaco**	**1.76**	**57**	*i*	P	**Pb**	**05 23 20.2**	**-0.7**
GO02				*i*	S	**Sn**	**05 23 42.5**	**+0.2**
GO02				IAML			05 23 48.4	
	comp=N,3μm,0.5s							
GO02	**Mina Guanaco**	**1.76**	**57**	*i*	P	**Pn**	**05 23 20.0**	**+0.7**
GO02				*i*	S	**Sg**	**05 23 44.4**	**-0.4**
GO02				IAML			05 23 51.4	
	comp=Z,2μm,0.5s							
AC02	**Maricunga**	**2.00**	**111**			**Pb**	**05 23 24.8**	**-0.3**
AC02	**Maricunga**	**2.00**	**111**	*i*	P	**Pb**	**05 23 24.4**	**-0.7**
AC02				*i*	S	**Sn**	**05 23 48.1**	**-0.3**
AC02				IAML			05 23 53.1	
	comp=E,2μm,0.5s							
AC02	**Maricunga**	**2.00**	**111**	*i*	P	**Pn**	**05 23 24.0**	**+1.2**
AC02				*i*	S	**Sb**	**05 23 51.1**	**+0.6**
AC02				IAML			05 23 53.3	
	comp=Z,1μm,0.3s							
AC04	**Llanos de Chal**	**2.06**	**176**			**Pn**	**05 23 22.9**	**-0.4**
AC04	**Llanos de Chal**	**2.06**	**176**	*eP*		**Pn**	**05 23 22.7**	**-0.5**
AC04				*i*	S	**Sn**	**05 23 46.4**	**-2.9**
AC04				IAML			05 24 03.5	
	comp=E,1μm,0.4s							
AC04	**Llanos de Chal**	**2.06**	**176**	*i*	P	**Pn**	**05 23 22.7**	**-0.5**
AC04				IAML			05 24 03.4	
	comp=Z,402nm,0.6s							
PB10	**IPOC Station P**	**2.68**	**13**	*eP*		**Pn**	**05 23 31.1**	**-0.7**
PB10				*i*	S	**Sn**	**05 24 02.4**	**-2.1**
PB10	**IPOC Station P**	**2.68**	**13**	*i*	P	**Pn**	**05 23 31.1**	**-0.7**
PB10				*i*	S	**Sn**	**05 24 04.7**	**+0.2**
PB10				IAML			05 24 30.9	
	comp=Z,135nm,1.0s							
AC05	**El Transito**	**2.82**	**163**			**Pn**	**05 23 35.6**	**+1.9**
AC05	**El Transito**	**2.82**	**163**	*eP*		**Pn**	**05 23 35.5**	**+1.8**
AC05				*i*	S	**Sn**	**05 24 10.2**	**+2.1**
AC05				IAML			05 24 19.2	
	comp=N,501nm,0.6s							
AC05	**El Transito**	**2.82**	**163**	*i*	P	**Pn**	**05 23 34.3**	**+0.6**
AC05				IAML			05 24 20.4	
	comp=Z,458nm,0.8s							
LCO	**Las Campanas**	**2.90**	**171**			**Pn**	**05 23 35.5**	**+0.5**
LCO	**Las Campanas**	**2.90**	**171**	*eP*		**Pn**	**05 23 35.5**	**+0.5**
LCO				*i*	S	**Sn**	**05 24 08.6**	**-1.7**
LCO	**Las Campanas**	**2.90**	**171**	*i*	P	**Pn**	**05 23 34.9**	**-0.1**
LCO				*i*	S	**Sn**	**05 24 11.4**	**+1.1**
LCO				IAML			05 24 32.8	
	comp=Z,630nm,0.7s							
PB05	**IPOC Station P**	**3.40**	**16**			**Pn**	**05 23 41.6**	**-0.1**
PB05	**IPOC Station P**	**3.40**	**16**	*i*	P	**Pn**	**05 23 41.5**	**-0.2**
PB05				IAML			05 25 01.2	
	comp=Z,120nm,0.7s							
PB06	**IPOC Station P**	**3.73**	**24**			**Pn**	**05 23 47.1**	**+0.8**
PB06	**IPOC Station P**	**3.73**	**24**	*i*	P	**Pn**	**05 23 46.7**	**+0.4**
PB06				IAML			05 24 59.5	
	comp=Z,232nm,0.7s							
GO04	**Tololo Observa**	**4.04**	**175**			**Pn**	**05 23 51.6**	**+1.0**
GO04	**Tololo Observa**	**4.04**	**175**	*i*	P	**Pn**	**05 23 51.0**	**+0.3**
GO04				IAML			05 25 09.9	
	comp=Z,262nm,0.6s							
PB03	**IPOC Station P**	**4.29**	**19**	Pn		**Pn**	**05 23 54.0**	**+0.1**
PB09	**IPOC Station P**	**4.69**	**23**			**Pn**	**05 24 00.6**	**+1.2**
PB09	**IPOC Station P**	**4.69**	**23**	*i*	P	**Pn**	**05 23 60.0**	**+0.5**
PB09				IAML			05 25 25.6	
	comp=Z,280nm,0.9s							
CO03	**El Pedregal**	**4.71**	**174**			**Pn**	**05 24 00.4**	**+0.7**
CO03	**El Pedregal**	**4.71**	**174**	*i*	P	**Pn**	**05 24 01.1**	**+1.4**
CO03				IAML			05 25 28.7	
	comp=Z,149nm,0.6s							
PB02	**IPOC Station P**	**4.95**	**14**			**Pn**	**05 24 03.0**	**-0.1**
PB02	**IPOC Station P**	**4.95**	**14**	*i*	P	**Pn**	**05 24 03.5**	**+0.4**
PB02				IAML			05 25 35.1	
	comp=Z,148nm,0.6s							
PB01	**IPOC Station P**	**5.31**	**18**			**Pn**	**05 24 08.1**	**0.0**
PB08	**IPOC Station P**	**6.26**	**18**	Pn		**Pn**	**05 24 21.5**	**+0.1**
PB11	**IPOC Station P**	**6.51**	**13**	Pn		**Pn**	**05 24 23.4**	**-1.2**
VA03	**San Esteban**	**6.63**	**175**			**Pn**	**05 24 28.4**	**+2.3**
GO01	**Chusmiza**	**6.70**	**17**			**Pn**	**05 24 27.0**	**-0.5**
PB12	**IPOC Station P**	**7.53**	**6**	Pn		**Pn**	**05 24 37.4**	**-1.1**
MT09	**Talagante**	**7.62**	**179**	Pn		**Pn**	**05 24 39.5**	**-0.2**
PB16	**IPOC Station P**	**7.93**	**12**	Pn		**Pn**	**05 24 44.4**	**+0.1**
H03N1	**Juan Fernandez**	**9.88**	**221**	T		T	05 35 32.1	
	baz=48,slow=71,SNR=121							
H03N2	**Juan Fernandez**	**9.89**	**221**	T		T	05 35 26.6	
	baz=48,slow=71,SNR=87							
H03N3	**Juan Fernandez**	**9.89**	**221**	T		T	05 35 31.1	
	baz=48,slow=71,SNR=77							
LPAZ	**La Paz**	**10.21**	**17**			**Pn**	**05 25 16.6**	**+0.8**
LPAZ	**La Paz**	**10.21**	**17**	Pn		**Pn**	**05 25 17.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=214,slow=7.6,SNR=4.8							
	comp=Z,0.9nm,0.6s							
TRQA	**Tornquist**	**14.22**	**149**	Pn		**Pn**	**05 26 09.7**	**-0.3**
PLTB	**Pedras Altas**	**16.40**	**114**	Pn		**Pn**	**05 26 38.5**	**-0.3**
VAO	**Valinhos**	**22.27**	**87**	P		**P**	**05 27 45.0**	**-1.1**
VAO				IAmb		IAmb	05 27 58.1	
	comp=Z,7.4nm,1.0s							
BDFB	**Brasilia**	**24.03**	**69**	P		**P**	**05 28 02.6**	**-1.4**
BDFB				IAmb		IAmb	05 28 06.4	
	comp=Z,4.1nm,1.2s							
BDFB	**Brasilia**	**24.03**	**69**	P		**P**	**05 28 02.0**	**-2.0**
	comp=Z,1.3nm,0.7s,baz=253,slow=9.1,SNR=3.4							
	comp=Z,1.3nm,0.7s							
RPN	**Rapa Nui**	**34.00**	**260**	LR		LR	05 39 12.2	
	comp=Z,28nm,20.4s,baz=320,slow=28							
MDP	**Montagnes des**	**35.90**	**33**	LR		LR	05 45 37.0	
	comp=Z,51nm,21.8s,baz=74,slow=38							
SNAA	**Sanae**	**58.64**	**160**	P		**P**	**05 32 45.0**	**-0.7**
SNAA				IAmb		IAmb	05 33 12.1	
	comp=Z,1.4nm,1.1s							
SNAA	**Sanae**	**58.64**	**160**	P		**P**	**05 32 46.5**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=262,slow=12,SNR=8.0							
	comp=Z,0.7nm,0.7s							
TXAR	**Lajitas Array**	**63.33**	**328**	P		**P**	**05 33 20.6**	**+2.5**
	comp=Z,0.2nm,0.8s,baz=131,slow=7.8,SNR=2.2							
	comp=Z,0.2nm,0.8s							
QSPA	**South Pole Qui**	**64.07**	**180**	P		**P**	**05 33 22.3**	**-0.3**
QSPA	**South Pole Qui**	**64.07**	**180**	P		P	05 33 28.0	+5.3
	comp=Z,0.4nm,0.5s,baz=152,slow=15,SNR=7.7							
	comp=Z,0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**80.90**	**71**	P		**P**	**05 35 03.9**	**+0.3**
	comp=Z,2.2nm,0.3s,baz=247,slow=4.6,SNR=1.5							
	comp=Z,2.2nm,0.3s							
KURBB	**Kurchatov Arra**	**146.34**	**35**	PKPbc		**PKPab**	**05 42 30.8**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=305,slow=3.3,SNR=1.9							
ZALV	**Zalesovo Beam**	**147.03**	**26**	PKPbc		**PKPab**	**05 42 32.8**	**0.0**
	comp=Z,1.8nm,0.7s,baz=303,slow=3.0,SNR=7.2							
MKAR	**Makanchi Array**	**150.59**	**39**	PKPbc		**PKiKP**	**05 42 41.7**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=298,slow=3.1,SNR=4.3							

*NOU **10** 05:38:13.1,38°.38S×178°.36E,h0km, MLv4.0/8, Off E. Coast of N. Island, N.Z.*
*WEL **10** 05:38:14.9±0.8,38°.5S±2°.2×17°.8E±°.1,h12km±5km, M3.7/30, ML4.1/11,MLv3.7/30,Error ellipse: s-maj=4.5km s-min=2.9km az=104.5,confirmed*

ISC 10 05:38:15.2±1.0,38°.24S±0°.02×178°.28E±0°.03,h19km±2km, n53,σ0s90/61,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
TBAS	**Tolaga Bay Are**	**0.13**	**173**			**Pg**	**05 38 18.8**	**-0.5**
PUZ	**Puketiti**	**0.17**	**354**			**Pb**	**05 38 18.7**	**-0.3**
PUZ						**Sb**	**05 38 22.2**	**+0.9**
TWGZ	**Tauwhareparae**	**0.24**	**286**			**Pb**	**05 38 19.9**	**-1.0**
TWGZ						**Sb**	**05 38 24.7**	**+0.1**
CNGZ	**Carnagh Statio**	**0.25**	**193**			**Pb**	**05 38 21.0**	**+0.1**
CNGZ						**Sg**	**05 38 27.5**	**+2.6**
TKGZ	**Te Karaka**	**0.39**	**240**			**Pg**	**05 38 22.9**	**-0.5**
TKGZ						**Sb**	**05 38 30.7**	**+1.3**
PKGZ	**Pakihiroa**	**0.41**	**337**			**Pg**	**05 38 22.6**	**-1.1**
WMGZ	**Waiomatatini S**	**0.44**	**14**			**Pg**	**05 38 24.1**	**-0.1**
WMGZ						**Sb**	**05 38 31.9**	**+1.2**
GHHS	**Gisborne Hospi**	**0.45**	**207**			**Pb**	**05 38 25.4**	**+0.7**
GWTS	**Gisborne Waipa**	**0.47**	**216**			**Pb**	**05 38 25.8**	**+0.8**
RUGZ	**Raukumara Rang**	**0.55**	**300**			**Pb**	**05 38 25.2**	**-1.2**
RUGZ						**Sg**	**05 38 33.3**	**-0.5**
MWZ	**Matawai**	**0.60**	**261**			**Pb**	**05 38 26.2**	**-0.9**
MWZ						**Sb**	**05 38 34.8**	**-0.3**
TDHS	**Te Araroa Dist**	**0.61**	**6**			**Pg**	**05 38 27.8**	**+0.4**
RIGZ	**Rimuhau**	**0.61**	**221**			**Pg**	**05 38 27.9**	**+0.4**
HAZ	**Te Kaha**	**0.63**	**321**			**Pb**	**05 38 26.5**	**-1.0**
HAZ						**Sb**	**05 38 36.0**	**+0.1**
MXZ	**Matakaoa Point**	**0.68**	**2**			**Pb**	**05 38 28.5**	**0.0**
MXZ	**Matakaoa Point**	**0.68**	**2**			**Sn**	**05 38 39.5**	**-0.5**
MXZ	**Matakaoa Point**	**0.68**	**2**			**Pb**	**05 38 28.6**	**0.0**
RAGZ	**Rawiri**	**0.72**	**249**			**Pb**	**05 38 29.0**	**-0.3**
PRGZ	**Paritu Road**	**0.74**	**205**			**Pb**	**05 38 29.8**	**+0.1**
KNZ	**Kokohu**	**0.91**	**211**			**Pb**	**05 38 31.3**	**-1.1**
SNGZ	**Shannon Statio**	**0.91**	**234**			**Pb**	**05 38 32.2**	**-0.3**
URZ	**Urewera**	**0.92**	**269**			**Pb**	**05 38 32.3**	**-0.3**
URZ	**Urewera**	**0.92**	**269**			**Sb**	**05 38 44.6**	**+0.1**
URZ	**Urewera**	**0.92**	**269**			**Pb**	**05 38 32.0**	**-0.6**
MHGZ	**Mahia Peninsul**	**0.95**	**198**			**Pb**	**05 38 32.5**	**-0.7**
RTZ	**Ruatahuna**	**1.09**	**250**			**Pb**	**05 38 35.4**	**-0.1**
WHRZ	**Whale Island**	**1.10**	**290**			**Pb**	**05 38 36.4**	**+0.6**
RAHZ	**Arahi**	**1.15**	**234**			**Pn**	**05 38 35.5**	**-0.9**
WHHZ	**Waihua**	**1.17**	**224**			**Pn**	**05 38 35.7**	**-0.9**
MUGZ	**Murupara**	**1.21**	**258**			**Pn**	**05 38 37.5**	**+0.3**
EDRZ	**Edgecumbe**	**1.22**	**276**			**Pb**	**05 38 38.4**	**+0.6**
MTHZ	**Maungataniwha**	**1.28**	**241**			**Pn**	**05 38 37.5**	**-0.8**
MARZ	**Manawahe**	**1.29**	**281**			**Pg**	**05 38 40.4**	**+0.1**
RRRZ	**Republican Roa**	**1.39**	**266**			**Pn**	**05 38 40.3**	**+0.6**
TARZ	**Mount Tarawera**	**1.40**	**270**			**Pn**	**05 38 40.5**	**+0.6**
OPRZ	**Ohinepanea**	**1.42**	**286**			**Pn**	**05 38 39.5**	**-0.5**
ARHZ	**Aropaoanui**	**1.43**	**224**			**Pn**	**05 38 39.5**	**-0.8**
NMHZ	**Naumai**	**1.43**	**233**			**Pn**	**05 38 39.5**	**-0.9**
PRRZ	**Plateau Road**	**1.50**	**260**			**Pn**	**05 38 41.8**	**+0.6**
OMRZ	**Omania**	**1.51**	**275**			**Pg**	**05 38 44.9**	**+0.5**
HLRZ	**Highlands Stat**	**1.52**	**269**			**Pb**	**05 38 43.9**	**+1.1**
HRRZ	**Handcock Road**	**1.58**	**264**			**Pb**	**05 38 44.7**	**+0.9**
HSRZ	**Hossack Road**	**1.60**	**267**			**Pn**	**05 38 43.2**	**+0.6**
BKZ	**Black Stump Fm**	**1.67**	**236**			**Pn**	**05 38 43.2**	**-0.4**
BKZ	**Black Stump Fm**	**1.67**	**236**			**Pn**	**05 38 42.9**	**-0.8**
TGRZ	**Tauranga**	**1.68**	**287**			**Pb**	**05 38 45.2**	**-0.3**
CKHZ	**Cape Kidnapper**	**1.69**	**213**			**Pn**	**05 38 42.1**	**-1.7**
MCHZ	**McNeill Hill**	**1.72**	**225**			**Pn**	**05 38 43.2**	**-1.0**
KWHZ	**Kaweka Forest**	**1.87**	**230**			**Pn**	**05 38 45.0**	**-1.3**
KAHZ	**Kahuranaki**	**1.90**	**215**			**Pn**	**05 38 44.5**	**-2.2**
HIZ	**Hauiti**	**2.71**	**263**			**Pn**	**05 38 58.5**	**+0.8**
KHEZ	**Kahui Hut**	**3.50**	**251**			**Pn**	**05 39 09.7**	**+1.0**
KHZ	**Kahutara**	**5.52**	**220**			**Pn**	**05 39 34.6**	**-1.8**

*GII **10** 05:45:05.9±0.0,29°.23N±0°.02×34°.707E±0°.009,h5km, Mws2.3,confirmed*
*SGS **10** 05:45:06.3,29°.18N×34°.76E,h15km, Ml1.9*
*HLW **10** 05:45:07.5,29°.17N×34°.80E,h17km±1km, Md1.7, Ml1.7*
*JSO **10** 05:45:08.3±1.8,29°N±11°×3°5E±1°,0,h13km±10km, M2.3/6, Md2.9/6, ML2.1/6, MLv2.2/6, MLv2.2/6*

ISC 10 05:45:06.5±0.9,29°.18N±0°.02×34°.86E±0°.04,h28km±6km, n44,σ0s59/47,Egypt

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
HBST	**Basata**	**0.12**	**286**			**Pb**	**05 45 11.0**	**-0.6**
HAQS	**Haql**	**0.14**	**160**			Pn	05 45 21.4	+8.4
HQLS		**0.21**	**56**			**Pb**	**05 45 12.3**	**-0.3**
HQLS		**0.21**	**56**			**Sb**	**05 45 16.6**	**-0.1**
JMOS	**Jabal al Moall**	**0.21**	**94**			**Sb**	**05 45 17.2**	**+0.5**
JMOS	**Jabal al Moall**	**0.21**	**94**			**Pb**	**05 45 12.7**	**+0.1**
NUB	**Nuweibaa**	**0.24**	**231**			**Pb**	**05 45 12.9**	**-0.1**
EIL	**Elat**	**0.49**	**9**			**Pb**	**05 45 16.1**	**-0.6**
EIL	**Elat**	**0.49**	**9**			**Sb**	**05 45 23.9**	**+0.3**
HDHB	**Dhahab**	**0.51**	**205**			**Pb**	**05 45 16.7**	**-0.2**
HDHB						**Sb**	**05 45 24.0**	**0.0**
BEOR	**Beer Ora**	**0.54**	**11**			**Pb**	**05 45 16.7**	**-0.7**
BEOR	**Beer Ora**	**0.54**	**11**			**Sb**	**05 45 25.5**	**+0.7**
MBRI	**Mt Berech**	**0.61**	**4**			**Pb**	**05 45 18.1**	**-0.6**
MBRI	**Mt Berech**	**0.61**	**4**			**Pb**	**05 45 18.1**	**-0.6**
MBRI	**Mt Berech**	**0.61**	**4**			**Sb**	**05 45 27.4**	**+0.4**
ELFZ	**Elifaz**	**0.62**	**12**			**Pb**	**05 45 18.9**	**0.0**
ELFZ	**Elifaz**	**0.62**	**12**			**Sb**	**05 45 28.3**	**+0.9**
SAMR	**Samar**	**0.66**	**12**			**Pb**	**05 45 18.9**	**-0.6**
SAMR	**Samar**	**0.66**	**12**			**Sb**	**05 45 28.9**	**+0.5**
JLOS		**0.71**	**129**			**Sb**	**05 45 30.6**	**+0.7**
JLOS		**0.71**	**129**			**Pb**	**05 45 20.3**	**-0.1**
YTVT	**Yotvata**	**0.73**	**13**			**Pb**	**05 45 20.9**	**+0.3**
YTVT	**Yotvata**	**0.73**	**13**			**Sb**	**05 45 30.8**	**+0.6**
BDAS	**Al Bad`**	**0.78**	**165**			**Sb**	**05 45 31.6**	**-0.1**
BDAS	**Al Bad`**	**0.78**	**165**			**Pb**	**05 45 20.9**	**-0.6**
HRFI	**Mount Harif**	**0.86**	**10**			**Pb**	**05 45 22.3**	**-0.6**
HRFI	**Mount Harif**	**0.86**	**10**			**Pn**	**05 45 22.3**	**-0.6**
HRFI	**Mount Harif**	**0.86**	**10**			**Sb**	**05 45 34.7**	**+0.6**
RSHS		**0.88**	**184**			**Pn**	**05 45 22.0**	**-1.2**
KRMI	**Paran Flat**	**0.94**	**353**			**Pn**	**05 45 23.2**	**-0.7**
KRMI						**Sb**	**05 45 36.4**	**+0.1**
KRMI	**Paran Flat**	**0.94**	**353**			**Pn**	**05 45 23.3**	**-0.6**
HKAT	**Jabal Katrina**	**1.01**	**229**			**Pn**	**05 45 24.9**	**-0.1**
HKAT						**Sn**	**05 45 38.2**	**-0.2**
AYUS	**`Aynunah**	**1.05**	**160**			**Pn**	**05 45 25.6**	**+0.2**
PRNI	**Paran**	**1.17**	**6**			**Pn**	**05 45 27.5**	**+0.4**
PRNI						**Sn**	**05 45 41.6**	**-0.6**
PRNI	**Paran**	**1.17**	**6**			**Pn**	**05 45 27.8**	**+0.4**
PRNI	**Paran**	**1.17**	**6**			**Sb**	**05 45 43.7**	**+0.8**
TR2	**Tor 2**	**1.28**	**232**			**Pn**	**05 45 29.0**	**+0.5**
ZFRI	**Zfri**	**1.39**	**11**			**Pb**	**05 45 31.5**	**-0.3**
ZFRI	**Zfri**	**1.39**	**11**			**Sb**	**05 45 50.6**	**+1.4**
RMNI	**Mount Ramon**	**1.41**	**356**			**Pn**	**05 45 31.3**	**+0.8**
RMNI	**Mount Ramon**	**1.41**	**356**			**Sb**	**05 45 49.9**	**+0.1**
TR1	**Tor 1**	**1.42**	**215**			**Pn**	**05 45 31.4**	**+0.9**
WTBKS	**WTBKS**	**1.43**	**140**			**Pn**	**05 45 30.9**	**+0.1**
HRDS	**Abu Rudays**	**1.45**	**251**			**Pn**	**05 45 31.7**	**+0.8**

*NOU **10** 06:01:47.5,37°.50S×176°.80E,h266km,MLv3.5/7,North Island, New Zealand*
*WEL **10** 06:01:58.9±0.9,38°.5S±5°.×17°.7E±°,h147km±8km,M3.0/32, ML2.7/7,MLv3.0/32,Error ellipse: s-maj=7.0km s-min=5.6km az=28.6,confirmed*

ISC 10 06:01:54.1±1.8,37°.84S±0°.05×176°.77E±0°.06, h191km±10km,n120,σ1s43/126,North Island

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

MTW	Mount Morrison	3.46 196	P	Pn	06 02 49.2	+0.4
CAW	Cannon Point	3.52 201	P	Pn	06 02 50.0	+0.5
OUZ	Omahuta	3.65 315	P	Pn	06 02 44.7	-6.5
TRWZ	Traveller	3.66 193	P	Pn	06 02 51.6	+0.4
PAWZ	Paruwai Farm	3.69 196	P	Pn	06 02 51.9	+0.2
DUWZ	D'Urville Isla	3.69 216	P	Pn	06 02 52.0	+0.3
MSWZ	Moikau Station	3.76 198	P	Pn	06 02 52.7	+0.2
WEL	Wellington	3.78 204	P	Pn	06 02 53.2	+0.5
BHW	Baring Head	3.86 202	P	Pn	06 02 53.8	+0.2
TCW	Tory Channel	3.88 209	P	Pn	06 02 54.0	0.0
PLWZ	Palliser	3.91 197	P	Pn	06 02 54.3	0.0
TUWZ	Tuamarina	4.20 210	P	Pn	06 02 58.8	+0.9
BSWZ	Blackbirch Sta	4.47 209	P	Pn	06 03 01.7	+0.3
MRNZ	Matariki Terra	4.72 220	P	Pn	06 03 04.3	-0.3
THZ	Tophouse	4.92 216	P	Pn	06 03 07.4	+0.2
KHZ	Kahutara	5.20 207	P	Pn	06 03 10.8	0.0
KHZ	Kahutara	5.20 207	P	Pn	06 03 10.8	0.0
LTZ	Lake Taylor	6.02 213	P	Pn	06 03 21.6	+0.2
OKCZ	Okains Bay	6.52 204	P	Pn	06 03 27.6	-0.3
MQZ	McQueen's Vall	6.64 207	P	Pn	06 03 28.1	-1.4
TMZ	Timaru	7.86 212	P	Pn	06 03 45.2	-0.1

*IDC **10** 06:11:56.8±6.6, 17.°91S×178.°32W, h536km±74km, mb3.2/8, mbtmp4.1/9, Error ellipse: s-maj=36.2km s-min=19.6km az=82.0*

ISC 10 06:12:00.3±0.8, 18.°0S±0.°2×178.°5W±0.°2, h579km, n11, σ0§90/11, mb3.6/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.74	251	P		P		06 15 05.8	-0.9
	5.1nm,0.6s,baz=92,slow=17,SNR=13								
STKA	Stephens Creek	38.53	241	P		P		06 18 34.8	+0.4
	4.3nm,0.5s,baz=106,slow=11,SNR=9.7								
	4.3nm,0.5s								
ASAR	Alice Springs	44.71	254	P		P		06 19 23.4	+0.2
	11nm,0.5s,baz=88,slow=8.8,SNR=245								
	11nm,0.5s								
VNDA	Vanda	60.37	185	P		P		06 21 12.6	-1.1
	0.4nm,0.7s,baz=12,slow=2.6,SNR=1.8								
	0.4nm,0.7s								
MJAR	Matsushiro Arr	67.92	323	P		P		06 22 02.7	+0.5
	0.8nm,0.4s,baz=154,slow=6.1,SNR=5.8								
	0.8nm,0.4s								
QSPA	South Pole Qui	72.07	180	P		P		06 22 27.8	+1.4
	1.1nm,0.6s,baz=12,slow=2.2,SNR=12								
	1.1nm,0.6s								
PETK	Petropavlovsk-	73.73	345	P		P		06 22 36.5	+0.6
	5.8nm,1.0s,baz=183,slow=6.4,SNR=1.6								
	5.8nm,1.0s								
ILAR	Eielson Array	85.97	13	P		P		06 23 38.3	-1.2
	0.2nm,0.4s,baz=211,slow=4.5,SNR=11								
	0.2nm,0.4s								
TXAR	Lajitas Array	86.09	58	P		P		06 23 40.9	-0.1
	0.2nm,0.8s,baz=241,slow=4.9,SNR=3.1								
	0.2nm,0.8s								
BRTR	Keskin Array B	144.78	315	PKP		PKPdf		06 30 32.8	+0.5
	0.3nm,0.4s,baz=64,slow=3.4,SNR=2.4								
GERES	GERESS Array B	147.66	345	PKPbc		PKPbc		06 30 40.3	-0.2
	0.4nm,0.5s,baz=22,slow=4.8,SNR=4.6								

*RSNC **10** 06:22:56.8±0.0, 4.°N±1.°×7.°6W±.°, h4km±2km, M3.7, mb4.3, mB5.6, ML3.4, Mw(mB)5.1*
*IDC **10** 06:23:01.9±3.2, 4.°04N×75.°94W, h46km±31km, mb3.3/6, mbtmp3.6/8, ML3.0/2, MS3.1/2, Error ellipse: s-maj=25.3km s-min=21.7km az=40.0*

ISC 10 06:22:55.1±0.6, 3.°77N±0.°02×75.°89W±0.°02, h10km, n48, σ1§94/67, mb3.6/6, Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOTC	Yotoco, Valle	0.50	296	P		P	Pb	06 23 05.6	-0.5
YOTC				S		S	Sb	06 23 12.9	-0.6
ORTC	Ortega, Tolima	0.66	78	P		P	Pg	06 23 07.2	-0.7
ORTC				S		S	Sg	06 23 15.1	-1.5
PRAC	Prado	1.01	93	P		P	Pb	06 23 13.7	-0.9
PRAC				S		S	Sg	06 23 26.6	-1.0
BETC	Betania	1.17	157	P		P	Pg	06 23 16.8	-0.8
BETC				S		S	Sb	06 23 31.7	-1.0
RECRC	Villamaria, Ca	1.30	24	P		P	Pn	06 23 18.2	-1.6
CMAN1	Manizales, Cal	1.35	16	P		P	Pn	06 23 19.4	-0.8
CMAN1				S		S	Sb	06 23 37.1	-0.9
POPC	Popayan, Colom	1.45	213	P		P	Pb	06 23 21.7	-0.6
POPC				S		S	Sg	06 23 41.4	-0.4
GUY2C	Guyana, Caldas	1.54	20	P		P	Pn	06 23 22.1	-1.0
GUY2C				S		S	Sn	06 23 42.9	-0.5
URMC	La Uribe, Meta	1.60	109	P		P	Pb	06 23 24.0	-0.7
URMC				S		S	Sg	06 23 44.9	-1.6
ROSC	El Rosal	1.90	56	P		P	Pb	06 23 29.6	-0.5
	651nm,0.3s,baz=247,slow=3.0,SNR=653								
ROSC				S		S	Sb	06 23 53.3	-0.7
	525nm,0.3s,baz=125,slow=23,SNR=6.8								
ROSC	El Rosal	1.90	56	P		P	Pb	06 23 29.8	-0.2
ROSC				S		S	Sb	06 23 53.2	-0.7
CVER	Cruz Verde, Cu	1.96	67	P		P	Pb	06 23 30.8	-0.4
CVER				S		S	Sb	06 23 55.4	-0.6
CBOC	Ciudad Bolivar	2.09	357	P		P	Pb	06 23 31.7	-1.5
CBOC				S		S	Sb	06 23 58.1	-1.1
FLOC	Florencia	2.18	174	P		P	Pb	06 23 34.1	-0.6
FLOC				S		S	Sg	06 24 03.7	-1.6
CHIC	Chingaza	2.32	68	P		P	Pb	06 23 35.6	-1.7
CHIC				S		S	Sn	06 24 02.9	+0.4
CRUC	La Cruz	2.43	206	P		P	Pb	06 23 39.8	+0.7
HELC	Santa Helena	2.44	9	P		P	Pn	06 23 36.7	+1.4
HELC				S		S	Sb	06 24 09.5	0.0
MACC	Macarena, Meta	2.60	128	P		P	Pb	06 23 39.3	-2.6
MACC				S		S	Sb	06 24 13.8	-0.1
SPBC	San Pablo de B	2.61	44	P		P	Pb	06 23 39.8	-2.2
SPBC				S		S	Sb	06 24 11.5	-2.7
SOLC	Bahia Solano	2.87	328	P		P	Pn	06 23 42.9	+1.9
SOLC				S		S	Sb	06 24 19.5	-2.2
GCUF	Volcan Galeras	2.91	210	P		P	Pb	06 23 45.8	-1.6
GCUF				S		S	Sb	06 24 21.8	-1.5
PTBC	PUERTO BERRIO,	3.10	27	P		P	Pn	06 23 46.0	+1.8
PTBC				S		S	Sb	06 24 24.6	-3.8
TUMC	Tumaco	3.43	236	P		P	Pn	06 23 52.0	+3.4
TUMC				S		S	Sb	06 24 34.2	-3.5
RUSC	La Rusia	3.51	53	P		P	Pn	06 23 51.8	+1.7
BONI	La Bonita	3.67	206	P		P	Pg	06 24 04.1	-1.5
PTLC	Puerto Leguiza	3.74	163	P		P	Pb	06 24 00.4	-0.8
BRJC	Barrancabermej	3.84	34	P		P	Pn	06 23 57.5	+3.3
BARC	Barichara	3.89	44	P		P	Pn	06 23 57.5	+2.3
UREC	San Jos de Ur	3.98	5	P		P	Pn	06 23 59.1	+2.9
CUSE	Cuicocha Este	4.25	216	P		P	Pb	06 24 06.9	-3.4
OTAV	Otavalo	4.34	216	P		P	Pb	06 24 07.2	-4.6
PAC1	Pacto, Paraso	4.53	220	P		P	Pb	06 24 09.7	-5.1
OCAC	Ocana	5.13	30	P		P	Pn	06 24 15.0	+2.9
SJCC	San Jacinto, C	6.13	7	P		P	Pn	06 24 28.4	+2.5
	43nm,1.9s								
BCIP	Isla Barro Col	6.64	324	P		P	Pn	06 24 35.5	+2.7
	37nm,1.4s								
SDV	Santo Domingo	7.29	46	P		P	Pn	06 24 43.7	+1.8
	3.8nm,0.3s,baz=185,slow=6.3,SNR=9.0								
SDV				S		S	Sn	06 26 01.8	-3.1
	5.2nm,0.3s,baz=35,slow=22,SNR=1.3								
	11nm,0.4s								
CRJC	Cerrejon, Guaj	7.80	22	P		P	Pn	06 24 50.2	+1.4
JTS	Las Juntas de	11.08	306	LR		LR	LR	06 30 16.2	
	comp=Z,64nm,19.9s,baz=101,slow=40								
APG	El Apazote	18.19	309	P		P	Pn	06 27 08.0	-0.1
	baz=83,slow=17,SNR=2.6								
	0.1nm,0.3s								
LPAZ	La Paz	21.35	159	P		P	P	06 27 49.1	+5.7
	0.4nm,0.6s,baz=333,slow=4.5,SNR=4.0								
	0.4nm,0.6s								
SIV	San Ignacio	24.50	144	LR		LR	LR	06 37 47.7	
	comp=Z,55nm,18.1s,baz=292,slow=36								
TXAR	Lajitas Array	36.61	317	PcP		PcP	P	06 32 26.6	+1.6
	0.1nm,0.4s,baz=134,slow=3.3,SNR=1.6								
PDAR	Pinedale Array	49.02	327	P		P	P	06 31 43.2	+0.7
	0.3nm,0.5s,baz=123,slow=7.3,SNR=4.7								
	0.3nm,0.5s								
NVAR	Mina Array Bea	51.75	318	P		P	P	06 32 04.9	+1.6
	0.6nm,0.8s,baz=129,slow=8.6,SNR=5.7								
NVAR				PcP		PcP	P	06 33 17.2	+0.7
	0.3nm,0.8s,baz=138,slow=2.6,SNR=2.0								
	0.6nm,0.8s								
ESDC	Sonseca Array	73.72	50	P		P	P	06 34 29.3	-0.3
	1.5nm,1.1s,baz=276,slow=3.7,SNR=2.5								
	1.5nm,1.1s								
ILAR	Eielson Array	78.57	336	P		P	P	06 34 56.2	-0.4
	0.5nm,1.0s,baz=122,slow=4.2,SNR=4.7								
	0.5nm,1.0s								
SNAA	Sanae	88.27	162	P		P		06 35 51.0	+4.5
	0.8nm,1.0s,baz=350,slow=7.0,SNR=1.8								
	0.8nm,1.0s								
ASAR	Alice Springs	145.09	233	PKPbc		PKPdf		06 42 33.2	-0.6
	0.6nm,0.5s,baz=110,slow=3.6,SNR=13								

*KRSC **10** 06:27:13.1±1.6, 52.°41N×160.°96E, h43km±24km, Ml3.6*
*IDC **10** 06:27:13.3±2.6, 52.°84N×160.°96E, h0km, mb3.7/2, mbtmp3.7/2, MS3.2/1, Error ellipse: s-maj=73.4km s-min=25.5km az=0.0*

ISC 10 06:27:13.2±1.3, 52.°58N±0.°09×160.°90E±0.°07, h14km, n29, σ1§01/28, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NLC	Nalytchevo	1.11	303	eP		P	Pg	06 27 34.7	0.0
DALK	Dalny	1.38	290	eP		P	Pb	06 27 38.6	-0.1
SDLR	Sedlovina	1.41	301	eP		P	Pg	06 27 39.3	-0.9
UGLR	Uglovaya	1.41	298	eP		P	Pg	06 27 39.9	-0.4
PET	Petropavlovsk	1.43	289	eP		P	Pb	06 27 39.4	-0.2
SMAR	Somma	1.44	299	eP		P	Pg	06 27 40.5	-0.5
RUS	Russkaya	1.46	265	eP		P	Pn	06 27 39.2	+0.1
RUS				eS		S	Sn	06 27 58.0	-0.1
INSR	Institute	1.48	290	eP		P	Pb	06 27 40.2	-0.1
AVH	Avacha	1.48	299	eP		P	Pg	06 27 40.9	-0.7
KRER	Koryakskii	1.49	300	eP		P	Pg	06 27 41.1	-0.7
KOK	Koryaka	1.54	299	eP		P	Pg	06 27 42.0	-0.8
KRX	Arik	1.57	301	eP		P	Pb	06 27 41.6	-0.4
MTVR	Mutnovka	1.66	268	eP		P	Pn	06 27 42.4	+0.4
KII	Karymskiy	1.70	330	eP		P	Pg	06 27 45.1	-0.8
KRMR	Karymshinskiy	1.70	280	eP		P	Pn	06 27 42.9	+0.5
GRL	Gorelyy	1.72	270	eP		P	Pb	06 27 44.4	-0.3
ASAK	Asacha	1.84	265	eP		P	Pn	06 27 45.3	+0.9
KDTR	Khodutka, Kamc	1.90	247	eP		P	Pn	06 27 44.2	-0.9
KDTR				eS		S	Sn	06 28 06.5	-2.3
PETK	Petropavlovsk-	2.01	287	Pn		P	Pn	06 27 47.6	+0.9
	6.4nm,0.3s,baz=94,slow=19,SNR=115								
PETK				Sn		S	Sb	06 28 15.5	+1.1
	6.2nm,0.3s,baz=105,slow=22,SNR=8.2								
MKZ	Mys Kozlova	2.05	14	eP		P	Pb	06 27 49.0	-1.1
APC	Apacha	2.30	280	eP		P	Pb	06 27 52.2	-2.1
KZV	Kizimen	2.57	352	eP		P	Pb	06 27 58.1	-1.0
TUMD	Tumrok D	2.65	354	eP		P	Pb	06 27 58.7	-1.7
JNU	Nakatsue	29.04	240	LR		LR		06 47 07.5	
	comp=Z,46nm,18.4s,baz=319,slow=41								
H11N2	WAKE ISLAND Hy	33.11	170	T		T		07 09 56.0	
	baz=353								
H11N3	WAKE ISLAND Hy	33.13	170	T		T		07 10 03.8	
	baz=353								
H11N1	WAKE ISLAND Hy	33.13	170	T		T		07 10 20.2	
	baz=353								
NVAR	Mina Array Bea	55.46	70	P		P	P	06 36 48.7	+1.2
	0.2nm,0.7s,baz=297,slow=5.7,SNR=2.1								
	0.2nm,0.7s								
FINES	FINESS Array B	60.79	337	P		P	P	06 37 25.1	+1.1
	3.3nm,1.1s,baz=34,slow=6.7,SNR=3.5								
	3.3nm,1.1s								

*IDC **10** 06:48:22.9±7.2, 11.°54S×166.°44E, h240km±73km, mb3.2/4, mbtmp3.8/5, Error ellipse: s-maj=68.4km s-min=30.3km az=152.0*

ISC 10 06:48:22.8±0.8, 11.°9S±0.°1×166.°7E±0.°2, h250km, n8, σ0§60/10, mb3.5/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.08	181	P		P		06 50 48.1	-0.1
	2.7nm,0.4s,baz=306,slow=23,SNR=9.9								
DZM				S		S		06 52 35.7	-0.2
	1.7nm,0.7s,baz=282,slow=20,SNR=1.0								
ASAR	Alice Springs	33.24	245	P		P		06 54 36.9	0.0
	0.2nm,0.4s,baz=69,slow=11,SNR=4.9								
ASAR				PcP		PcP		06 57 14.3	+1.0
	0.6nm,1.1s,baz=80,slow=2.8,SNR=2.2								
	0.2nm,0.4s								
ILAR	Eielson Array	84.06	18	P		P		07 00 24.6	-0.5
	1.0nm,0.7s,baz=237,slow=5.1,SNR=14								
	1.0nm,0.7s								
NVAR	Mina Array Bea	85.89	50	P		P		07 00 35.4	+0.3
	0.2nm,0.5s,baz=250,slow=3.9,SNR=2.7								
	0.2nm,0.5s								
MKAR	Makanchi Array	94.80	317	P		P		07 01 16.0	-0.2
	0.7nm,0.6s,baz=89,slow=4.8,SNR=4.5								
	0.7nm,0.6s								
ARCES	ARCESS Array B	117.42	346	PKP		PKiKP		07 06 38.6	+0.5
	2.5nm,0.9s,baz=72,slow=1.3,SNR=4.7								
FINES	FINESS Array B	122.93	339	PKP		PKPdf		07 06 49.1	+0.2
	1.4nm,0.9s,baz=98,slow=2.9,SNR=4.8								
ESDC	Sonseca Array	151.16	345	PKPab		PKPab		07 07 54.6	-0.8
	0.2nm,0.3s,baz=30,slow=2.5,SNR=1.3								

*EST **10** 06:52:52.6±0.2, 57.°64N×21.°56E, h0km, ML1.8(HEL), Explosion*
*DNK **10** 06:52:52.0±1.4, 57.°54N×21.°99E, h30km, ML2.2*
*HEL **10** 06:52:53.1±0.1, 57.°67N×21.°57E, h0km, ML1.8, Explosion*
*IDC **10** 06:52:53.1±2.8, 57.°73N×21.°68E, h0km, mbtmp2.9/3, ML2.1/3, Error ellipse: s-maj=27.8km s-min=11.6km az=166.0*
*LVSN **10** 06:52:55.9±4.0, 57.°58N×22.°73E, h0km±15km, ML2.1*
*UPP **10** 06:52:55.5±1.2, 57.°68N×21.°20E, h0km, ML2.4, Presumed earthquake*
*BER **10** 06:53:22.5±0.8, 58.°54N×17.°84E, h0km, ML1.2, Suspected explosion*

ISC 10 06:52:51.9±0.8, 57.°70N±0.°04×21.°55E±0.°02, h0km, n64, σ1§12/90, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	0.41	100	eP		P	Pg	06 53 00.0	+0.4
SLIT	Slitere, Latvi	0.41	100	eP		P	Pg	06 53 00.1	+0.5
SLIT				eS		S	Sg	06 53 06.0	+1.0
SLIT				AML	AML			06 53 29.4	
	comp=N,530nm,0.5s								
SLIT				AML	AML			06 53 31.8	
	comp=E,1μm,0.7s								
SLIT				AML	AML			06 53 32.0	
	comp=Z,692nm,0.8s								
SLIT	Slitere, Latvi	0.41	100	eP		P	Pg	06 53 00.1	+0.5
SLIT				eS		S	Sg	06 53 05.0	0.0
EE06	Soera, Palade,	1.44	28	eP		P	Pn	06 53 19.0	-0.2
EE06				eSB		S	Sn	06 53 39.3	+0.5
GOTU	Gotland	1.60	271	P		P	Pn	06 53 21.2	-0.1
GOTU				S		S	Sg	06 53 43.2	+0.1
GOTU	Gotland	1.60	271	P		P	Pn	06 53 21.2	-0.1
GOTU				S		S	Sg	06 53 43.2	+0.1
GOTU	Gotland	1.60	271	eP		P	Pn	06 53 21.2	-0.1
GOTU				ePN		P	Pb	06 53 22.1	-0.1
GOTU				eS		S	Sn	06 53 42.8	+0.1
GOTU				smax	smax			06 53 43.6	
	comp=Z,3.2nm,0.1s								
EE01	Perakula, Nova	1.86	35	eP		P	Pb	06 53 26.2	-0.5
EE01				ePG		P	Pg	06 53 26.8	-0.7
EE01				eSG		S	Sg	06 53 52.0	+0.4
EE08	Sarghaua, Vand	2.18	62	ePB		P	Pb	06 53 31.0	-1.1
EE08				eSB		S	Sb	06 53 59.1	-0.5
EE02	Kiisa, Saku	2.23	47	ePG		P	Pb	06 53 32.6	-0.4
EE02				eSG		S	Sg	06 54 02.9	-0.5
NYNU	Nynaeshamn	2.28	306	P		P	Pb	06 53 32.6	-1.2
NYNU	Nynaeshamn	2.28	306	P		P	Pb	06 53 32.6	-1.2
TVF	Tvarminne	2.32	22	ePB		P	Pb	06 53 34.0	-0.6
TVF				eSG		S	Sg	06 54 06.3	-0.1
TVF				smax	smax			06 54 08.6	
	comp=Z,4.5nm,0.1s								
BYXU	Byxelkrok	2.48	262	P		P	Pn	06 53 34.9	+1.4
BYXU	Byxelkrok	2.48	262	P		P	Pn	06 53 34.9	+1.4
NRTU	Norrtaelje	2.50	324	eP		P	Pn	06 53 35.2	+1.5
NRTU				ePB		P	Pb	06 53 37.0	-0.5
NRTU				eSB		S	Sb	06 54 08.8	0.0
NRTU				smax	smax			06 54 14.3	
	comp=Z,3.2nm,0.1s								
PABE	Paberze	2.58	148	eP		P	Pn	06 53 35.9	+1.1
PABE	Paberze	2.58	148	eP		P	Pn	06 53 36.0	+1.1
PABE				AML	AML			06 53 37.6	
	comp=Z,11nm,0.1s								
PABE				AML	AML			06 54 11.0	
	comp=N,31nm,0.4s								
PABE				AML	AML			06 54 14.3	
	comp=E,21nm,0.5s								
AAL	Aland	2.61	343	eP		P	Pn	06 53 36.3	+1.0
AAL				eS		S	Sn	06 54 09.3	+1.7
AAL				smax	smax			06 54 15.5	
	comp=Z,3.4nm,0.1s								
VSTU	Vaestervik	2.69	271	P		P	Pn	06 53 38.0	+1.7
VSTU	Vaestervik	2.69	271	P		P	Pn	06 53 38.0	+1.7
VIKU	Vikbolandet	2.69	289	P		P	Pn	06 53 38.0	+1.5
VIKU	Vikbolandet	2.69	289	P		P	Pn	06 53 38.0	+1.5
EE03	Tooma soojaam,	2.76	63	eP		P	Pn	06 53 39.1	+1.9
EE03				eSG		S	Sb	06 54 17.1	+0.8
VSU	Vasula	2.86	72	eP		P	Pn	06 53 38.4	-0.3
VSU	Vasula	2.86	72	eP		P	Pn	06 53 38.9	+0.2
VSU				AML	AML			06 53 42.9	
	comp=Z,14nm,0.2s								
VSU				AML	AML			06 54 29.1	
	comp=N,16nm,0.7s								
VSU				AML	AML			06 54 30.8	
	comp=E,31nm,0.4s								
VSU	Vasula	2.86	72	eP		P	Pn	06 53 38.9	+0.2
VSU				ePB		P	Pb	06 53 41.2	-2.5
VSU				eSB		S	Sb	06 54 19.2	+0.1
MEF	Metsahovi	2.92	29	eP		P	Pn	06 53 40.8	+1.2
MEF	Metsahovi	2.92	29	eP		P	Pn	06 53 43.2	-1.5
MEF				eS		S	Sb	06 54 20.6	-0.4
MEF				AML	AML			06 54 31.3	
	comp=N,7.0nm,0.4s								
MEF				AML	AML			06 54 32.3	
	comp=Z,6.8nm,0.7s								
MEF				AML	AML			06 54 35.8	
	comp=E,7.5nm,0.3s								
MEF	Metsahovi	2.92	29	ePB		P	Pb	06 53 43.3	-1.5
MEF				eSB		S	Sb	06 54 21.2	+0.3
MEF				smax	smax			06 54 23.3	
	comp=Z,2.6nm,0.1s								
HEL5	Espoo, Suvisaa	2.93	33	ePB		P	Pb	06 53 43.2	-1.8
HEL5				eSB		S	Sb	06 54 22.5	+1.2
OSKU	Oskarshamn	2.99	262	P		P	Pn	06 53 41.5	+1.0
OSKU	Oskarshamn	2.99	262	P		P	Pn	06 53 41.5	+1.0
HEL1	Helsinki	3.02	33	ePB		P	Pb	06 53 44.8	-1.7
HEL1				eSG		S	Sb	06 54 25.8	+1.8
HEL1				smax	smax			06 54 27.9	
	comp=Z,2.6nm,0.1s								
NUR	Nurmijarvi	3.24	28	ePB		P	Pb	06 53 47.7	-2.5
NUR				smax	smax			06 54 32.0	
	comp=Z,2.2nm,0.1s								
LNKU	Linkoeping	3.26	282	P		P	Pn	06 53 45.5	+1.3
LNKU	Linkoeping	3.26	282	P		P	Pn	06 53 45.5	+1.3
RAF	Rauma	3.33	2	eP		P	Pn	06 53 47.3	+2.2
RAF	Rauma	3.33	2	eP		P	Pn	06 53 46.9	+1.7
RAF				smax	smax			06 54 40.0	
	comp=Z,1.7nm,0.2s								
KPF	Kankaanpaa	4.15	3	eP		P	Pn	06 53 58.0	+1.6
DEL	Delary	4.37	257	e		P	Pn	06 53 58.9	-0.4
	baz=71,slow=9.3								
DEL				i P		P	Pn	06 53 59.6	+0.2
DEL				eS		S	Sn	06 54 50.1	-0.8
DEL				IAML				06 55 18.2	
	comp=Z,1.2nm,0.3s								
FIA0	FINESS Array S	4.40	30	eP		P	Pn	06 54 01.9	+2.1
FINES	FINESS Array B	4.40	30	Pn		Pn	Pn	06 54 00.9	+1.1
	comp=Z,0.2nm,0.3s,baz=208,slow=12,SNR=19								
FINES				Sn		Sn	Sn	06 54 52.2	+0.5
	comp=Z,0.3nm,0.3s,baz=214,slow=21,SNR=5.2								
FINES				Lg		Lg		06 55 10.0	
	comp=Z,0.8nm,0.3s,baz=213,slow=29,SNR=13								
	comp=Z,1.0nm,0.5s								
BORU	Boraas	4.71	273	i P		P	Pn	06 54 04.3	+0.2
KEF	Keuruu	4.78	19	eP		P	Pn	06 54 07.4	+2.3
FABU	Falkenberg	4.83	265	eP		P	Pn	06 54 06.9	+1.1
BJUU	Bjuv	4.95	254	i P		P	Pn	06 54 07.3	-0.1
ONAU	Onsala	5.20	271	i P		P	Pn	06 54 11.4	+0.7
RUF	Ruokolahti	5.30	42	eP		P	Pn	06 54 13.0	+0.9
TJOU	Tjoern	5.31	278	i P		P	Pn	06 54 12.5	+0.2
VAF	Ylistaro	5.38	5	eP		P	Pn	06 54 14.8	+1.4
STRU	Stroemstad	5.62	288	i P		P	Pn	06 54 17.2	+0.7
NC602	NORSAR Array S	5.97	305	eP		P	Pn	06 54 21.9	+0.5
NC602				IAML				06 55 48.2	
	comp=Z,1.1nm,0.7s								
NB201	NORSAR Array S	6.22	307	eP		P	Pn	06 54 25.8	+1.0
NB201				IAML				06 56 15.9	
	comp=Z,1.2nm,0.3s								
NOA	NORSAR Array B	6.25	307	Pn		Pn	Pn	06 54 24.7	-0.6
	baz=111,slow=13,SNR=8.4								
NOA				Sn		Sn	Sn	06 55 36.5	-0.8
	baz=133,slow=21,SNR=1.3								
NOA				Lg		Lg		06 56 08.5	
	baz=129,slow=25,SNR=4.3								
	comp=Z,0.2nm,0.4s								
NC303	NORSAR Array

ISC 10 07:21:30.1±0.4, 28°29S±0'.03×70°.62W±0'.04, h85km±3km, h85km:pP-P,n199,σ1°77/194,mb4.4/42,22C-8D,Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.41**	**281**			**Pn**	**07 21 45.8**	**+2.1**
AC04				Sn		**Sn**	**07 21 56.2**	**+2.4**
AC04	**Llanos de Chal**	**0.41**	**281**	⇓*i*P		**Pn**	**07 21 45.6**	**+2.0**
AC04				*i* S		**Sn**	**07 21 55.9**	**+2.2**
AC04				IAML			07 21 57.3	
	comp=E,66μm,0.2s							
AC04	**Llanos de Chal**	**0.41**	**281**	*i* P		**Pn**	**07 21 45.7**	**+2.1**
AC04				IAML			07 21 57.3	
	comp=Z,22μm,0.1s							
AC05	**El Transito**	**0.63**	**151**			**Pn**	**07 21 46.7**	**+1.0**
AC05				Sn		**Sn**	**07 21 57.6**	**+0.4**
AC05	**El Transito**	**0.63**	**151**	*eP*		**Pn**	**07 21 46.5**	**+0.8**
AC05				*i* S		**Sn**	**07 21 57.7**	**+0.4**
AC05				IAML			07 21 59.0	
	comp=N,54μm,0.3s							
AC05	**El Transito**	**0.63**	**151**	*i* P		**Pn**	**07 21 46.7**	**+1.0**
AC05				IAML			07 21 58.8	
	comp=Z,23μm,0.4s							
LCO	**Las Campanas**	**0.73**	**186**			**Pn**	**07 21 48.0**	**+1.2**
LCO				Sn		**Sn**	**07 22 00.5**	**+1.3**
LCO	**Las Campanas**	**0.73**	**186**	*eP*		**Pn**	**07 21 47.1**	**+0.3**
LCO				*i* S		**Sn**	**07 22 00.4**	**+1.3**
LCO	**Las Campanas**	**0.73**	**186**	*i* P		**Pn**	**07 21 48.1**	**+1.2**
LCO				*i* S		**Sn**	**07 21 59.7**	**+0.6**
LCO				IAML			07 22 01.8	
	comp=Z,141μm,0.3s							
GO03	**Copiapo**	**0.77**	**26**			**Pn**	**07 21 48.4**	**+1.4**
GO03	**Copiapo**	**0.77**	**26**	*eP*		**Pn**	**07 21 48.2**	**+1.2**
GO03				*i* S		**Sn**	**07 22 01.2**	**+1.7**
GO03				IAML			07 22 02.2	
	comp=E,51μm,0.2s							
GO03	**Copiapo**	**0.77**	**26**	⇓*i*P		**Pn**	**07 21 48.3**	**+1.3**
GO03				*i* S		**Sn**	**07 22 01.2**	**+1.7**
GO03				IAML			07 22 02.6	
	comp=Z,24μm,0.4s							
AC06	**Mina Casimiro**	**0.95**	**14**			**Pn**	**07 21 50.6**	**+1.6**
AC06	**Mina Casimiro**	**0.95**	**14**	⇑*i*P		**Pn**	**07 21 50.5**	**+1.6**
AC06				*i* S		**Sn**	**07 22 04.6**	**+1.5**
AC06				IAML			07 22 06.3	
	comp=N,47μm,0.3s							
CO05	**La Serena**	**1.71**	**198**			**Pn**	**07 21 59.2**	**+0.8**
CO05	**La Serena**	**1.71**	**198**	⇑*i*P		**Pn**	**07 21 59.2**	**+0.8**
CO05				*i* S		**Sn**	**07 22 18.5**	**-1.4**
CO05				IAML			07 22 23.1	
CO01	**Juntas del Tor**	**1.75**	**165**			**Pn**	**07 22 00.3**	**+1.2**
CO01	**Juntas del Tor**	**1.75**	**165**	⇑*i*P		**Pn**	**07 22 00.2**	**+1.1**
CO01				*i* S		**Sn**	**07 22 20.8**	**-0.2**
CO01				IAML			07 22 22.6	
	comp=N,10μm,0.3s							
CO01	**Juntas del Tor**	**1.75**	**165**	*i* P		**Pn**	**07 22 00.3**	**+1.2**
CO01				IAML			07 22 35.4	
	comp=Z,5μm,0.8s							
GO04	**Tololo Observa**	**1.89**	**185**			**Pn**	**07 22 01.9**	**+1.0**
GO04	**Tololo Observa**	**1.89**	**185**	⇑*i*P		**Pn**	**07 22 01.8**	**+0.9**
GO04				*i* S		**Sn**	**07 22 24.6**	**+0.3**
GO04	**Tololo Observa**	**1.89**	**185**	*i* P		**Pn**	**07 22 02.1**	**+1.3**
GO04				*i* S		**Sn**	**07 22 26.1**	**+1.8**
GO04				IAML			07 22 27.7	
	comp=Z,19μm,0.4s							
AC02	**Maricunga**	**1.96**	**43**			**Pn**	**07 22 03.8**	**+1.7**
AC02	**Maricunga**	**1.96**	**43**	⇑*i*P		**Pn**	**07 22 03.6**	**+1.5**
AC02	**Maricunga**	**1.96**	**43**	*i* P		**Pn**	**07 22 03.7**	**+1.7**
AC02				IAML			07 22 30.1	
	comp=Z,3μm,0.3s							
AROD	**Rodeo**	**2.13**	**152**	*i* P		**Pn**	**07 22 06.8**	**+2.6**
AC01	**Pan de Azucar**	**2.13**	**1**			**Pn**	**07 22 05.0**	**+1.0**
AC01	**Pan de Azucar**	**2.13**	**1**	*eP*		**Pn**	**07 22 04.9**	**+1.0**
AC01				*i* S		**Sn**	**07 22 25.1**	**-4.5**
AC01				IAML			07 22 42.2	
	comp=E,4μm,0.5s							
AC01	**Pan de Azucar**	**2.13**	**1**	*i* P		**Pn**	**07 22 05.0**	**+1.0**
AC01				IAML			07 22 34.1	
	comp=Z,4μm,0.6s							
VCA	**Vinchina**	**2.17**	**103**	⇓*i*P		**Pn**	**07 22 07.6**	**+3.0**
VCA				*i* S		**Sn**	**07 22 34.0**	**+3.1**
VCA				IAML			07 22 38.6	
	comp=N,8μm,0.3s							
VCA	**Vinchina**	**2.17**	**103**	*i* P		**Pn**	**07 22 07.6**	**+3.0**
VCA				IAML			07 22 39.1	
	comp=Z,4μm,0.4s							
AGUA	**GUANDACOL**	**2.22**	**123**	⇓*i*P		**Pn**	**07 22 08.5**	**+3.3**
AGUA				*i* S		**Sn**	**07 22 32.0**	**+0.1**
AGUA				IAML			07 22 39.1	
	comp=Z,7μm,0.5s							
ACDV	**Cuesta del Vie**	**2.29**	**145**	⇓*i*P		**Pn**	**07 22 08.9**	**+2.7**
ACDV				*i* S		**Sn**	**07 22 33.9**	**+0.2**
ACDV				IAML			07 22 40.0	
	comp=Z,2μm,0.5s							
CO06	**Fray Jorge**	**2.54**	**200**			**Pn**	**07 22 09.3**	**0.0**
CO06	**Fray Jorge**	**2.54**	**200**	⇑*i*P		**Pn**	**07 22 09.3**	**0.0**
CO03	**El Pedregal**	**2.54**	**181**			**Pn**	**07 22 10.5**	**+0.9**
CO03	**El Pedregal**	**2.54**	**181**	⇑*i*P		**Pn**	**07 22 10.4**	**+0.9**
CO03	**El Pedregal**	**2.54**	**181**	*i* P		**Pn**	**07 22 10.4**	**+0.9**
CO03				IAML			07 22 43.2	
	comp=Z,5μm,0.6s							
ACCO	**Cerro Coronel**	**2.67**	**150**	⇓*i*P		**Pn**	**07 22 14.5**	**+3.2**
ACCO				*i* S		**Sn**	**07 22 43.9**	**+1.0**
TINO	**Tinogasta**	**2.70**	**86**	⇓*i*P		**Pn**	**07 22 13.2**	**+1.5**
CO02	**Combarbal**	**2.93**	**186**			**Pn**	**07 22 15.0**	**+0.3**
CO02	**Combarbal**	**2.93**	**186**	⇑*i*P		**Pn**	**07 22 15.0**	**+0.3**
CO02	**Combarbal**	**2.93**	**186**	*i* P		**Pn**	**07 22 14.9**	**+0.3**
CO02				IAML			07 23 07.9	
	comp=Z,6μm,0.3s							
GO02	**Mina Guanaco**	**3.24**	**17**			**Pn**	**07 22 19.8**	**+0.7**
GO02	**Mina Guanaco**	**3.24**	**17**	*eP*		**Pn**	**07 22 19.8**	**+0.7**
AANI	**Anillaco**	**3.28**	**100**	*i* P		**Pn**	**07 22 21.5**	**+2.1**
AVFE	**Valle Fertil**	**3.63**	**131**	⇓*i*P		**Pn**	**07 22 25.5**	**+1.3**
AVFE				IAML			07 23 09.9	
	comp=Z,2μm,1.0s							
PB14	**IPOC Station P**	**3.65**	**3**			**Pn**	**07 22 24.3**	**-0.3**
PB14	**IPOC Station P**	**3.65**	**3**	⇑*i*P		**Pn**	**07 22 24.2**	**-0.4**
CO04	**Los Peladeros**	**3.76**	**185**	⇑*i*P		**Pn**	**07 22 26.1**	**+0.1**
CFA	**Coronel Fontan**	**3.90**	**149**	P		**Pn**	**07 22 28.9**	**+1.2**
	comp=Z,116nm,0.3s,baz=336,slow=13,SNR=691							
CFA				S		**Sn**	**07 23 11.6**	**-0.9**
	comp=Z,524nm,0.3s,baz=135,slow=20,SNR=23							
CYA	**Choya**	**4.25**	**93**	*i* P		**Pn**	**07 22 33.2**	**+0.7**
CYA				IAML			07 23 21.9	
	comp=Z,785nm,1.1s							
VA06	**Catapilco**	**4.30**	**188**			**Pn**	**07 22 32.7**	**-0.4**
VA03	**San Esteban**	**4.46**	**179**			**Pn**	**07 22 36.1**	**+0.6**
VA03	**San Esteban**	**4.46**	**179**	⇑*eP*		**Pn**	**07 22 36.1**	**+0.6**
PB10	**IPOC Station P**	**4.75**	**1**			**Pn**	**07 22 37.9**	**-1.5**
VA01	**Torpederas**	**4.80**	**190**			**Pn**	**07 22 38.4**	**-1.5**
PEL	**Peldehue**	**4.84**	**181**			**Pn**	**07 22 40.5**	**-0.1**
MT02	**Curacav**	**4.98**	**185**			**Pn**	**07 22 41.3**	**-1.0**
MT05	**Renca**	**5.09**	**181**			**Pn**	**07 22 43.5**	**-0.4**
MT16	**CCHEN**	**5.13**	**179**			**Pn**	**07 22 44.3**	**-0.2**
MT03	**Universidad Ad**	**5.19**	**179**			**Pn**	**07 22 45.1**	**-0.3**
PB05	**IPOC Station P**	**5.42**	**4**			**Pn**	**07 22 46.7**	**-1.9**
MT09	**Talagante**	**5.48**	**183**			**Pn**	**07 22 48.1**	**-1.2**
MT01	**Popeta**	**5.59**	**185**			**Pn**	**07 22 49.4**	**-1.3**
BO04	**La Punta**	**5.69**	**180**			**Pn**	**07 22 50.8**	**-1.3**
SLA	**San Lorenzo**	**5.80**	**53**	⇑*eP*		**Pn**	**07 22 55.2**	**+1.5**
TCA	**Tanti**	**6.05**	**122**	*eP*		**Pn**	**07 22 56.5**	**-0.7**
VA04	**Juan Fernndez**	**8.84**	**231**			**Pn**	**07 23 33.8**	**-1.2**
PB12	**IPOC Station P**	**9.63**	**2**			Pn	07 23 42.6	-3.3
PB16	**IPOC Station P**	**9.96**	**6**			**Pn**	**07 23 48.3**	**-2.6**
PB18	**Visviri**	**10.70**	**6**			**Pn**	**07 24 00.9**	**0.0**
LC02	**Puerto Saavedr**	**10.73**	**192**	Pn		**Pn**	**07 24 01.3**	**+0.6**
LR03	**Panguipulli**	**11.41**	**187**			**Pn**	**07 24 06.1**	**-3.8**
PSAL	**Palomas, Salto**	**11.65**	**107**	*eP*		**Pn**	**07 24 10.6**	**-2.7**
LR04	**Corral**	**11.80**	**191**			**Pn**	**07 24 11.5**	**-3.6**
LR05	**Currie**	**11.97**	**185**			**Pn**	**07 24 14.9**	**-2.6**
CPUP	**Villa Florida**	**11.98**	**84**			**Pn**	**07 24 15.3**	**-2.5**
CPUP	**Villa Florida**	**11.98**	**84**	P		**Pn**	**07 24 13.9**	**-3.8**
	comp=Z,0.7nm,0.6s,baz=269,slow=8.6,SNR=7.1							
TRQA	**Tornquist**	**12.13**	**146**			**Pn**	**07 24 18.9**	**-0.9**
LPAZ	**La Paz**	**12.16**	**11**			**Pn**	**07 24 19.5**	**-1.3**
LPAZ	**La Paz**	**12.16**	**11**	P		**Pn**	**07 24 19.1**	**-1.7**
	comp=Z,3.7nm,0.4s,baz=180,slow=9.9,SNR=51							
LPAZ				LR		LR	07 30 02.8	
	comp=Z,71nm,21.0s,baz=203,slow=42							
LPAZ	**La Paz**	**12.16**	**11**	*eP*		Pn	07 24 16.9	-3.9
PLCA	**Paso Flores**	**12.42**	**180**			**Pn**	**07 24 21.1**	**-2.5**
PLCA	**Paso Flores**	**12.42**	**180**	P		**Pn**	**07 24 20.8**	**-2.9**
	comp=Z,7.1nm,0.5s,baz=348,slow=10,SNR=20							
PLCA				LR		LR	07 28 47.8	
	comp=Z,53nm,18.8s,baz=9.0,slow=35							
PLCA	**Paso Flores**	**12.42**	**180**	*eP*		**Pn**	**07 24 21.5**	**-2.2**
MURT	**Porto Murtinho**	**13.51**	**64**	*eP*		**Pn**	**07 24 34.4**	**-3.8**
SIV	**San Ignacio**	**15.09**	**38**	P		**Pn**	**07 24 53.5**	**-5.2**
	comp=Z,12nm,0.5s,baz=228,slow=8.8,SNR=64							
SIV				LR		LR	07 31 30.4	
	comp=Z,120nm,21.4s,baz=226,slow=40							
CPSB	**Cacapava Do Su**	**15.13**	**102**	*eP*		**Pn**	**07 24 56.1**	**-3.1**
PLTB	**Pedras Altas**	**15.14**	**107**			**Pn**	**07 24 56.2**	**-3.1**
PLTB				IAmb		IAmb	07 25 14.3	
	comp=Z,24nm,0.8s							
PLTB	**Pedras Altas**	**15.14**	**107**	*eP*		**Pn**	**07 24 56.2**	**-3.1**
AQDB	**Aquidauana**	**15.65**	**63**			**Pn**	**07 25 03.1**	**-2.6**
AQDB				IAmb		IAmb	07 25 37.4	
	comp=Z,32nm,0.8s							
AQDB	**Aquidauana**	**15.65**	**63**	*eP*		**Pn**	**07 25 04.3**	**-1.4**
ITAB	**Concordia**	**16.40**	**91**			**Pn**	**07 25 14.2**	**-0.9**
ITAB				IAmb		IAmb	07 25 47.0	
	comp=Z,24nm,0.6s							
ITAB	**Concordia**	**16.40**	**91**	*eP*		**Pn**	**07 25 14.0**	**-1.1**
PTLB	**Pontes e Lacer**	**16.62**	**42**			**Pn**	**07 25 15.6**	**-2.2**
PTLB				IAmb		IAmb	07 25 21.5	
	comp=Z,25nm,1.0s							
PTLB	**Pontes e Lacer**	**16.62**	**42**	*eP*		**Pn**	**07 25 14.9**	**-2.9**
PTGB	**Pitanga**	**16.99**	**82**	*eP*		**Pn**	**07 25 21.2**	**-1.2**
PP1B	**Ponte de Pedra**	**17.96**	**57**	*eP*		**P**	**07 25 32.3**	**-1.4**
VILB	**Vilhena**	**18.09**	**35**	P		**P**	**07 25 33.6**	**-1.5**
VILB	**Vilhena**	**18.09**	**35**	*eP*		**P**	**07 25 34.4**	**-0.7**
SALV	**Santo Antonio**	**18.50**	**51**	*eP*		**P**	**07 25 37.8**	**-1.8**
C2SB	**Chapadao do Su**	**18.84**	**64**	*eP*		**P**	**07 25 43.5**	**+0.3**
FRTB	**Fartura**	**19.58**	**80**	*eP*		**P**	**07 25 51.8**	**+0.4**
ITRB	**Iturama**	**20.37**	**70**	*eP*		**P**	**07 26 00.1**	**+0.2**
PDRB	**Porto dos Gac**	**21.08**	**41**	*eP*		**P**	**07 26 07.4**	**-0.2**
BB19B	**Bebedouro**	**21.30**	**75**	*eP*		**P**	**07 26 09.8**	**-0.2**
ARAG	**Araguaiana, MT**	**21.43**	**58**	*eP*		**P**	**07 26 10.6**	**-0.7**
VAO	**Valinhos**	**21.95**	**82**	P		**P**	**07 26 16.1**	**-0.6**
VAO	**Valinhos**	**21.95**	**82**	*eP*		**P**	**07 26 16.8**	**-0.1**
CLDB	**Colider**	**22.21**	**42**	*eP*		**P**	**07 26 18.7**	**-0.9**
IPMB	**Ipameri, GO**	**22.98**	**68**	*eP*		**P**	**07 26 26.2**	**-1.5**
SNDB	**Serra Nova Dou**	**24.28**	**52**	*eP*		**P**	**07 26 38.9**	**-0.6**
BDFB	**Brasilia**	**24.40**	**64**	P		**P**	**07 26 40.7**	**0.0**
BDFB	**Brasilia**	**24.40**	**64**	P		**P**	**07 26 40.3**	**-0.4**
	comp=Z,5.9nm,0.5s,baz=237,slow=11,SNR=16							
BDFB				LR		LR	07 37 51.2	
	comp=Z,45nm,19.4s,baz=312,slow=41							
	comp=Z,5.9nm,0.5s							
TEFE	**Tefe**	**25.29**	**14**	*eP*		**P**	**07 26 49.8**	**+1.1**
NPGB	**Novo Progresso**	**25.59**	**37**	*eP*		**P**	**07 26 51.0**	**-0.4**
MACA	**Manacapuru-AM**	**26.72**	**23**	P		**P**	**07 27 01.0**	**-0.6**
MACA	**Manacapuru-AM**	**26.72**	**23**	*eP*		**P**	**07 27 02.0**	**+0.4**
ITTB	**Itaituba**	**27.68**	**33**	*eP*		**P**	**07 27 09.9**	**-0.3**
SLOR	**San Lorenzo -**	**28.42**	**343**	P		**P**	**07 27 16.4**	**-0.8**
SMTB	**Santa Maria do**	**29.05**	**53**	*eP*		**P**	**07 27 23.1**	**+0.7**
PRPB	**Parauapebas**	**29.54**	**46**	*eP*		**P**	**07 27 27.0**	**+0.3**
BOAV	**Boa Vista**	**32.01**	**19**	*eP*		**P**	**07 27 49.4**	**+0.9**
ROSC	**El Rosal**	**33.12**	**353**	LR		LR	07 40 04.7	
	comp=Z,55nm,20.0s,baz=198,slow=34							
RUSC	**La Rusia**	**34.06**	**356**			**P**	**07 28 08.2**	**+1.3**
RPN	**Rapa Nui**	**34.20**	**263**	LR		LR	07 39 13.4	
	comp=Z,35nm,19.3s,baz=93,slow=31							
PMSA	**Palmer Station**	**36.74**	**175**	LR		LR	07 43 30.4	
	comp=Z,70nm,18.5s,baz=316,slow=36							
SDV	**Santo Domingo**	**36.95**	**360**	LR		LR	07 42 49.2	
	comp=Z,16nm,18.9s,baz=22,slow=35							
BAUV	**El Baul**	**37.09**	**4**	P		**P**	**07 28 32.6**	**+0.3**
MDP	**Montagnes des**	**37.45**	**30**	LR		LR	07 45 34.2	
	comp=Z,47nm,19.1s,baz=180,slow=39							
JTS	**Las Juntas de**	**40.78**	**338**	LR		LR	07 43 49.8	
	comp=Z,24nm,20.0s,baz=108,slow=33							
BELA	**Belgrano 2**	**52.30**	**171**	P		**P**	**07 30 32.0**	**-0.3**
BELA				IAmb		IAmb	07 30 34.8	
	comp=Z,5.2nm,0.9s							
VNA3	**Neumayer Olymp**	**54.23**	**160**	⇑P		**P**	**07 30 47.6**	**+0.9**
	comp=Z,3.8nm,0.6s							
VNA3				⇑sP		**sP**	**07 31 19.0**	**+0.9**
VNA1	**Neumayer--Stat**	**54.49**	**159**	⇑P		**P**	**07 30 49.9**	**+1.4**
	comp=Z,4.2nm,1.0s							
VNA1				⇑sP		**sP**	**07 31 20.7**	**+0.8**
VNA2	**Neumayer--Watz**	**54.84**	**159**	⇑P		**P**	**07 30 52.7**	**+1.6**
	comp=Z,7.7nm,0.6s,baz=289,slow=7.4							
VNA2				⇑sP		**sP**	**07 31 22.7**	**+0.2**
	baz=290,slow=7.6							
SNAA	**Sanae**	**56.45**	**159**	⇑P		**P**	**07 31 03.5**	**+0.8**
	comp=Z,84nm,0.5s							
SNAA				⇑sP		**sP**	**07 31 34.1**	**0.0**
SNAA	**Sanae**	**56.45**	**159**	P		**P**	**07 31 03.8**	**+1.2**
SNAA	**Sanae**	**56.45**	**159**	P		**P**	**07 31 03.3**	**+0.7**
	comp=Z,3.9nm,0.5s,baz=282,slow=7.9,SNR=50							
SNAA				pP		**pP**	**07 31 23.7**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=287,slow=10,SNR=5.2							
SNAA				sP		**sP**	**07 31 32.8**	**-1.3**
	comp=Z,19nm,0.8s,baz=298,slow=6.6,SNR=20							
	comp=Z,3.9nm,0.5s							
TROLL	**Troll, Antarti**	**58.16**	**160**	⇑P		**P**	**07 31 15.6**	**+0.8**
	comp=Z,269nm,0.8s							
TROLL				⇑sP		**sP**	**07 31 46.9**	**+0.3**
QSPA	**South Pole Qui**	**61.93**	**180**	P		**P**	**07 31 42.3**	**+1.7**
QSPA	**South Pole Qui**	**61.93**	**180**	P		**P**	**07 31 44.9**	**+4.3**
	comp=Z,13nm,0.8s,baz=166,slow=1.0,SNR=87							
	comp=Z,13nm,0.8s							
HNDO	**Hondo**	**63.69**	**332**	P		**P**	**07 31 54.1**	**+1.6**
143A	**Socs Landing,**	**63.79**	**341**	P		**P**	**07 31 52.9**	**-0.1**
BRDY	**Brady**	**65.12**	**333**	IAmb		IAmb	07 32 40.5	
	comp=Z,4.6nm,0.9s							
SAND	**Sanderson**	**65.27**	**330**	IAmb		IAmb	07 32 07.0	
	comp=Z,7.8nm,1.2s							
TXAR	**Lajitas Array**	**65.43**	**328**	P		**P**	**07 32 05.4**	**+1.4**
TXAR	**Lajitas Array**	**65.43**	**328**	P		**P**	**07 32 06.7**	**+2.6**
	comp=Z,1.6nm,0.8s,baz=149,slow=8.2,SNR=20							
TXAR				pP		**pP**	**07 32 25.1**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=146,slow=8.4,SNR=3.7							
	comp=Z,1.6nm,0.8s							
OZNA	**Ozona**	**65.67**	**331**	IAmb		IAmb	07 32 08.9	
	comp=Z,6.4nm,0.8s							
MNHN	**Monahans**	**66.73**	**330**	IAmb		IAmb	07 32 15.8	
	comp=Z,7.4nm,1.2s							
LCAR	**Lake Charles**	**66.87**	**342**			**P**	**07 32 14.8**	**+1.9**
APMT	**Aspermont**	**67.36**	**333**	IAmb		IAmb	07 32 19.4	
	comp=Z,6.6nm,0.8s							
MNTX	**Cornudas Mount**	**68.22**	**328**			**P**	**07 32 23.5**	**+2.0**
FVM	**French Village**	**68.48**	**343**			**P**	**07 32 25.1**	**+2.1**
CCM	**Cathedral Cave**	**68.76**	**343**	P		**P**	**07 32 26.4**	**+1.7**
VNDA	**Vanda**	**69.92**	**191**	pP		pP	07 32 54.3	+0.5
	comp=Z,0.2nm,0.3s,baz=121,slow=5.9,SNR=2.3							
214A	**Organ Pipe Nat**	**72.11**	**323**	IAmb		IAmb	07 32 50.1	
	comp=Z,8.5nm,1.1s							
DBIC	**Dimbokro**	**72.23**	**72**	P		**P**	**07 32 47.2**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=270,slow=8.7,SNR=5.8							
DBIC				LR		LR	08 05 10.1	
	comp=Z,34nm,18.2s,baz=8.0,slow=36							
	comp=Z,2.9nm,0.7s							
T25A	**Trinidad**	**72.40**	**332**	IAmb		IAmb	07 32 51.5	
	comp=Z,6.7nm,1.0s							
WUAZ	**Wupatki**	**74.19**	**326**	IAmb		IAmb	07 33 02.4	
	comp=Z,5.8nm,1.0s							
MVCO	**Mesa Verde**	**74.22**	**329**	IAmb		IAmb	07 33 04.4	
	comp=Z,4.5nm,1.1s							
BC3	**Big Chuckawall**	**74.83**	**322**	IAmb		IAmb	07 33 05.7	
	comp=Z,4.0nm,0.8s							
PV13	**Radium Mtn., P**	**75.15**	**330**	IAmb		IAmb	07 33 07.4	
	comp=Z,3.8nm,0.7s							
PV05	**Paradox Valley**	**75.21**	**329**	IAmb		IAmb	07 33 07.5	
	comp=Z,3.8nm,0.8s							
PV18	**Skein Mesa, Pa**	**75.26**	**330**	IAmb		IAmb	07 33 08.0	
	comp=Z,8.1nm,0.9s							
KNB	**Kanab**	**76.09**	**326**	IAmb		IAmb	07 33 13.0	
	comp=Z,4.0nm,0.9s							
MTPU	**Mount Pierson**	**76.60**	**327**	IAmb		IAmb	07 33 15.9	
	comp=Z,3.3nm,0.7s							
SRU	**San Rafael Swe**	**76.69**	**329**	IAmb		IAmb	07 33 15.8	
	comp=Z,4.5nm,0.7s							
CCUT	**Cedar City**	**76.78**	**326**	IAmb		IAmb	07 33 17.6	
	comp=Z,5.5nm,0.9s							
Q16A	**Castle Valley**	**76.83**	**329**	IAmb		IAmb	07 33 17.1	
	comp=Z,8.2nm,1.2s							
P18A	**Preston Nutter**	**76.99**	**330**	IAmb		IAmb	07 33 17.6	
	comp=Z,4.7nm,0.8s							
P17A	**Butcher Ranch,**	**77.08**	**329**	IAmb		IAmb	07 33 18.2	
	comp=Z,5.0nm,0.8s							
RDMU	**Red Mountain**	**77.46**	**331**	IAmb		IAmb	07 33 20.2	
	comp=Z,6.3nm,0.9s							
PRN	**Pahroc Range**	**77.50**	**325**	IAmb		IAmb	07 33 55.9	
	comp=Z,4.1nm,0.9s							
PSUT	**Pine Spring**	**77.79**	**327**	IAmb		IAmb	07 33 23.0	
	comp=Z,6.6nm,1.1s							
MPU	**Maple Canyon**	**77.93**	**329**	IAmb		IAmb	07 33 22.9	
	comp=Z,5.0nm,0.9s							
BSUT	**Blindstream Ca**	**77.96**	**330**	IAmb		IAmb	07 33 23.5	
	comp=Z,5.5nm,0.9s							
MAW	**Mawson**	**78.30**	**164**	P		**P**	**07 33 21.4**	**+1.1**
	comp=Z,4.8nm,1.0s,baz=164,slow=6.4,SNR=6.1							
MAW				pP		**pP**	**07 33 44.0**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=232,slow=4.9,SNR=3.8							
	comp=Z,4.8nm,1.0s							
JLU	**Jordanelle**	**78.32**	**329**	IAmb		IAmb	07 33 25.0	
	comp=Z,4.2nm,0.8s							
HWUT	**Hardware Ranch**	**79.18**	**330**	IAmb		IAmb	07 33 29.2	
	comp=Z,6.4nm,0.8s							
PDAR	**Pinedale Array**	**79.27**	**332**	P		**P**	**07 33 28.4**	**+2.1**
	comp=Z,1.5nm,0.9s,baz=130,slow=7.4,SNR=8.4							
	comp=Z,1.5nm,0.8s							
NVAR	**Mina Array Bea**	**79.95**	**324**	P		**P**	**07 33 32.9**	**+2.9**
	comp=Z,0.9nm,0.9s,baz=142,slow=5.6,SNR=5.5							
	comp=Z,0.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**81.12**	**70**	P		**P**	**07 33 36.9**	**+0.4**
	comp=Z,6.7nm,0.2s,baz=273,slow=3.5,SNR=8.1							
	comp=Z,6.7nm,0.2s							
BOSA	**Boshof**	**81.65**	**118**	P		**P**	**07 33 37.8**	**-1.6**
BOSA				IAmb		IAmb	07 34 15.4	
	comp=Z,3.5nm,0.8s							
BOSA	**Boshof**	**81.65**	**118**	P		**P**	**07 33 41.9**	**+2.5**
	comp=Z,1.8nm,0.7s,baz=288,slow=3.2,SNR=6.4							
BOSA				pP		**pP**	**07 34 01.2**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=265,slow=2.9,SNR=2.4							
	comp=Z,1.8nm,0.7s							
ORV	**Oroville**	**82.46**	**323**	IAmb		IAmb	07 34 22.1	
	comp=Z,8.1nm,1.4s							
LSZ	**Lusaka**	**90.40**	**107**	LR		LR	08 12 32.3	
	comp=Z,56nm,19.5s,baz=230,slow=34							
ASAR	**Alice Springs**	**123.20**	**207**	PKP		**PKPdf**	**07 40 18.2**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=127,slow=1.8,SNR=4.6							
ASAR				pPKP		**pPKPdf**	**07 40 41.6**	**0.0**
	comp=Z,0.3nm,0.4s,baz=134,slow=1.7,SNR=2.0							
KURBB	**Kurchatov Arra**	**147.75**	**38**	PKPbc		**PKPbc**	**07 41 06.2**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=305,slow=3.1,SNR=12							
KURBB				pPKP		**pPKPdf**	**07 41 23.2**	**-2.6**
	comp=Z,0.6

*NNC **10** 07:44:17.1±2.3,41.22N×72.14E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=20.7km s-min=7.1km az=173.0*

ISC 10 07:44:15.3±1.4,**41.28N**±0.05×**72.15E**±0.03,**h1**km±11km, **n16**,σ1**21**/30,**12C-9D**,**Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.54**	**345**	⇑	*i*P	**Pg**	**07 44 24.2**	**-1.5**
ARK				⇑	*i*S	**Sg**	**07 44 30.5**	**-2.2**
ARSB	**Arslanbob**	**0.63**	**85**	⇓	*i*P	**Pg**	**07 44 27.3**	**0.0**
ARSB				⇓	*i*S	**Sg**	**07 44 35.7**	**+0.3**
TRKS	**Terek-Su**	**0.80**	**289**	⇑	*i*P	**Pg**	**07 44 30.3**	**-0.4**
TRKS				⇑	*i*S	**Sg**	**07 44 41.2**	**+0.1**
SALK	**Salom-Alik**	**1.32**	**107**	⇑	*i*P	**Pg**	**07 44 40.9**	**+0.3**
SALK				⇑	*i*S	**Sn**	**07 44 59.4**	**0.0**
MRKS	**Merke** 5.1nm,0.4s	**1.67**	**28**		P	**Pg**	**07 44 48.1**	**+0.7**
MRKS					S	**Sg**	**07 45 11.6**	**+2.6**
MRKS	**Merke** 5.1nm,0.4s	**1.67**	**28**		*e*P	**Pg**	**07 44 48.1**	**+0.7**
MRKS					*e*S	**Sg**	**07 45 11.6**	**+2.6**
ARLS	**Aral**	**1.73**	**70**	⇑	*e*P	**Pn**	**07 44 46.8**	**+0.1**
ARLS				⇑	*e*S	**Sb**	**07 45 09.8**	**-0.5**
IUG	**Iuzhnay** 18nm,0.3s	**1.81**	**299**		Pg	**Pg**	**07 44 51.5**	**+1.5**
IUG					Lg	Lg	07 45 17.4	
EKS2	**Erkin-Say** 21nm,0.4s	**1.84**	**41**	⇓	*i*P	**Pn**	**07 44 48.0**	**-0.2**
EKS2				⇓	*i*S	**Sn**	**07 45 11.5**	**-0.7**
UCH	**Uchtor**	**2.01**	**61**	⇓	*i*P	**Pn**	**07 44 51.4**	**+0.6**
UCH				⇓	*i*S	**Sb**	**07 45 17.6**	**-0.9**
KK31	**Karatay Array** 0.5nm,0.2s,baz=142,slow=18,SNR=18	**2.20**	**327**		Pn	**Pb**	**07 44 55.0**	**-0.9**
KK31				⇓	Sn	**Sb**	**07 45 25.7**	**+2.0**
AAK	**Ala-Archa** 1.1nm,0.2s,baz=142,slow=27,SNR=7.6 0.2nm,0.3s	**2.21**	**51**	⇑	Pn	**Pb**	**07 44 55.2**	**-1.0**
AAK				⇑	Sn	**Sg**	**07 45 26.0**	**-0.4**
AAK	**Ala-Archa** 0.8nm,0.6s	**2.21**	**51**	⇓	*i*P	**Pn**	**07 44 54.2**	**+0.8**
AAK				⇓	*i*S	**Sb**	**07 45 22.5**	**-1.7**
BRLS	**Borolday** 4.4nm,0.6s	**2.46**	**316**		Pg	**Pb**	**07 44 59.6**	**-0.7**
BRLS					Lg	Lg	07 45 31.2	
BRLS	**Borolday** 2.5nm,0.2s	**2.46**	**316**		*e*P	**Pb**	**07 44 59.6**	**-0.7**
BRLS					*e*S	**Sb**	**07 45 31.2**	**0.0**
USP	**Ospenovka**	**2.65**	**40**	⇑	*i*P	**Pn**	**07 45 00.0**	**+0.8**
USP				⇑	*i*S	**Sn**	**07 45 32.4**	**+0.5**

DJA 10 07:46:03.3±0.4,**3°S**±3°×**12°9E**±°,**h12**km±4km,**M3.7**/12, **mb4.2**/**3**,**MLv3.5**/**12**,**Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.63**	**137**		P	Pb	07 46 16.3	0.0
MSAI					S	Sn	07 46 27.6	-0.5
AAI	**Ambon**	**0.86**	**201**		P	Pg	07 46 19.7	-0.2
AAI					S	Sb	07 46 31.4	-0.2
NLAI	**Namlea**	**1.44**	**256**		P	Pb	07 46 30.0	-0.1
BNDI	**Bandanaira**	**2.15**	**139**		P	Pn	07 46 38.3	-0.7
SANI	**Sanana**	**2.64**	**288**		P	Pn	07 46 44.3	-1.5
SWI	**Sorong**	**3.41**	**54**		P	Pn	07 46 56.7	+0.4
SWI					S	Sn	07 47 38.2	+1.5
FAKI	**Fak Fak**	**3.74**	**91**		P	Pn	07 47 01.4	+0.4
FAKI					S	Sn	07 47 44.7	-0.3
APSI	**Ampana** 41nm,1.0s	**7.12**	**286**		P	Pn	07 47 49.1	+1.7

*TAP **10** 07:47:59.7,24.66N×122.41E,h18km,ML2.9,C*
*JMA **10** 07:48:00.6±0.1,25°N±1°×122.4E±0.4,h31km±2km, MV2.2/10,NW OFF ISHIGAKIJIMA IS*

ISC 10 07:47:59.5±1.0,**24.63N**±0.03×**122.41E**±0.02,**h16**km±8km, **n51**,σ0**47**/89,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.48**	**296**		*i*P	**Pb**	**07 48 09.7**	**+0.1**
EGS					*i*S	**Sb**	**07 48 16.4**	**-0.1**
TWC	**Suao**	**0.51**	**268**		*i*P	**Pg**	**07 48 09.3**	**-0.3**
TWC					S	**Sb**	**07 48 17.2**	**0.0**
ESAO	**Su ao**	**0.52**	**264**		P	**Pb**	**07 48 09.8**	**-0.3**
ESAO					*e*S	**Sb**	**07 48 17.8**	**+0.4**
JYNG	**Yonagunijimaku**	**0.52**	**110**		P	**Pb**	**07 48 10.6**	**+0.4**
JYNG					S	**Sb**	**07 48 17.6**	**+0.1**
TWB1	**Santiao Chiao**	**0.54**	**315**		*i*P	**Pg**	**07 48 10.0**	**-0.1**
TWB1					S	**Sg**	**07 48 16.8**	**-0.6**
YOJ	**Yonaguni jima**	**0.57**	**107**		P	**Pb**	**07 48 11.6**	**+0.5**
YOJ					*e*S	**Sb**	**07 48 19.4**	**+0.3**
YOJ	**Yonaguni jima**	**0.57**	**107**		P	**Pb**	**07 48 11.3**	**+0.1**
YOJ					S	**Sb**	**07 48 19.8**	**+0.7**
EWUT	**Wuta**	**0.60**	**252**		P	**Pb**	**07 48 11.4**	**-0.2**
EWUT					S	**Sb**	**07 48 20.3**	**+0.5**
ILA	**Ilan**	**0.61**	**283**		*e*S	**Sb**	**07 48 21.5**	**+1.2**
NDS	**Dongshan**	**0.63**	**270**		*i*P	**Pb**	**07 48 12.0**	**-0.1**
NDS					S	**Sb**	**07 48 21.7**	**+1.0**
TIPB	**Shuangxi**	**0.63**	**303**		P	**Pb**	**07 48 12.1**	**0.0**
TIPB					S	**Sb**	**07 48 21.1**	**+0.4**
ENA	**Nanau**	**0.64**	**252**		P	**Pg**	**07 48 12.0**	**-0.1**
ENA					*e*S	**Sb**	**07 48 21.6**	**+0.7**
SXI1	**Grass Mountain**	**0.67**	**314**		P	**Pb**	**07 48 13.0**	**+0.2**
SXI1					S	**Sb**	**07 48 22.8**	**+0.9**
EAHA	**Aohua**	**0.68**	**244**		*i*P	**Pb**	**07 48 13.2**	**+0.2**
EAHA					S	**Sb**	**07 48 23.2**	**+1.2**
TWE	**Neicheng**	**0.68**	**278**		*i*P	**Pg**	**07 48 12.5**	**-0.3**
TWE					*i*S	**Sb**	**07 48 22.8**	**+0.6**
NWF	**Wu-fen Shan**	**0.72**	**308**		P	**Pb**	**07 48 14.3**	**+0.6**
NWF					*e*S	**Sb**	**07 48 24.2**	**+0.8**
WFSB	**Wu-fen Shan**	**0.72**	**308**		P	**Pn**	**07 48 14.5**	**-0.5**
WFSB					S	**Sb**	**07 48 24.2**	**+0.9**
FUSB	**Fushanzhiwuyua**	**0.76**	**280**		*i*P	**Pg**	**07 48 14.1**	**-0.2**
FUSB					S	**Sb**	**07 48 25.4**	**+1.0**
ENTT	**Nioudou**	**0.77**	**271**		P	**Pb**	**07 48 14.6**	**+0.1**
ENTT					S	**Sb**	**07 48 25.3**	**+0.7**
TNOU	**National Taiwa**	**0.77**	**312**		P	**Pb**	**07 48 14.7**	**+0.1**
TNOU					*e*S	**Sb**	**07 48 25.6**	**+0.7**
LATG	**Datong**	**0.81**	**263**		*e*P	**Pb**	**07 48 15.2**	**0.0**
LATG					*e*S	**Sn**	**07 48 27.2**	**-0.9**
TWA	**Mucha**	**0.83**	**295**		P	**Pb**	**07 48 15.5**	**+0.1**
TWA					S	**Sb**	**07 48 26.9**	**+0.6**
NWLT	**Wulai**	**0.84**	**280**		P	**Pb**	**07 48 15.9**	**+0.3**
NWLT					S	**Sb**	**07 48 27.2**	**+0.5**
ETL	**Fush Village**	**0.85**	**237**		*e*P	**Pn**	**07 48 16.5**	**-0.4**
NACB	**Ninganchiao**	**0.87**	**239**		P	**Pb**	**07 48 16.3**	**+0.1**
NACB					S	**Sn**	**07 48 28.7**	**-0.7**
TATO	**Taipei**	**0.90**	**293**		P	**Pn**	**07 48 17.5**	**0.0**
TATO					S	**Sb**	**07 48 29.0**	**+0.4**
TAP	**Taipei**	**0.92**	**297**		*e*S	**Sn**	**07 48 30.3**	**-0.2**
YM01	**YM01**	**0.92**	**304**		*e*P	**Pg**	**07 48 17.5**	**+0.2**
YM01					*e*S	**Sg**	**07 48 29.8**	**+0.4**
YM08	**YM08**	**0.93**	**307**		*e*P	**Pg**	**07 48 17.7**	**+0.2**
YM08					S	**Sb**	**07 48 29.3**	**0.0**
YHNB	**Yeheng**	**0.94**	**273**		*e*P	**Pb**	**07 48 17.5**	**0.0**
YHNB					S	**Sg**	**07 48 30.1**	**0.0**
ETLH	**Xiulin Townshi**	**0.94**	**244**		*e*P	**Pg**	**07 48 17.9**	**+0.1**
ETLH					*e*S	**Sn**	**07 48 31.4**	**+0.1**
ZUZH	**Zhuzihu**	**0.95**	**304**		*e*P	**Pn**	**07 48 18.1**	**-0.1**
ZUZH					*e*S	**Sg**	**07 48 30.4**	**+0.1**
NNSB	**Datong**	**0.95**	**258**		*e*P	**Pg**	**07 48 17.8**	**-0.2**
NNSB					*e*S	**Sg**	**07 48 30.8**	**+0.2**
NNSH	**Datong**	**0.95**	**258**		*e*P	**Pb**	**07 48 17.6**	**-0.1**
NNSH					*e*S	**Sg**	**07 48 30.7**	**+0.2**
NSK	**Sanguang**	**0.96**	**273**		P	**Pg**	**07 48 18.1**	**+0.1**
NSK					S	**Sg**	**07 48 30.6**	**0.0**
NNS	**Nan Shan**	**0.96**	**259**		*e*P	**Pn**	**07 48 18.8**	**+0.4**
NNS					*e*S	**Sn**	**07 48 31.2**	**-0.7**
TWY	**Chenhua**	**0.97**	**311**		*e*P	**Pg**	**07 48 18.3**	**-0.1**
TWY					*e*S	**Sg**	**07 48 31.6**	**+0.4**
PCYT	**Pengchaiyu**	**1.04**	**343**		*e*P	**Pb**	**07 48 18.8**	**-0.4**
LXIB	**Xiulin Townshi**	**1.09**	**236**		*e*P	**Pg**	**07 48 20.6**	**0.0**
KSHI	**Guanxi Townshi**	**1.13**	**278**		*e*P	**Pg**	**07 48 21.1**	**-0.2**
KSHI					*e*S	**Sg**	**07 48 35.6**	**-0.5**
WHF	**Hehuan Shan**	**1.15**	**245**		*e*P	**Pg**	**07 48 21.5**	**-0.2**
NCU	**National Centr**	**1.16**	**287**		*e*P	**Pb**	**07 48 20.6**	**-0.6**
NCUH	**Zhongli**	**1.16**	**287**		*e*P	**Pb**	**07 48 21.0**	**-0.2**
NFF	**Wufeng Townshi**	**1.17**	**270**		*e*P	**Pg**	**07 48 22.1**	**-0.1**
IRIF	**Iriomote-Funau**	**1.24**	**103**		*e*P	**Pn**	**07 48 21.7**	**-0.5**
LIOB	**Emei**	**1.27**	**271**		*e*P	**Pg**	**07 48 24.4**	**+0.5**
NSTT	**Nanjuang**	**1.28**	**270**		*e*P	**Pg**	**07 48 24.3**	**+0.1**
VWDT	**VWDT**	**1.45**	**233**		*e*P	**Pg**	**07 48 27.4**	**+0.1**
VWDT					*e*S	**Sn**	**07 48 43.2**	**-0.5**
JKRS	**Kuro-shima**	**1.51**	**105**		P	**Pn**	**07 48 26.0**	**+0.2**
JKRS					*e*S	**Sn**	**07 48 45.2**	**0.0**
JIJ	**Ishigaki jima**	**1.60**	**99**		P	**Pn**	**07 48 26.5**	**-0.7**
JIJ					S	**Sn**	**07 48 46.4**	**-1.1**
JISG	**Ishigakijimahi**	**1.73**	**91**		*e*S	**Sn**	**07 48 51.1**	**+0.3**

*DNK **10** 07:52:47.7±1.4,57.56N×21.78E,h18km±53km,ML2.2*
*BER **10** 07:52:47.6±2.4,57.51N×21.83E,h0km,ML1.7, ML2.4(UPP),Suspected explosion*
*HEL **10** 07:52:48.0±0.1,57.67N×21.56E,h0km,ML1.7,Explosion*
*EST **10** 07:52:48.1±0.2,57.67N×21.55E,h0km,ML1.7(HEL), Explosion*
*IDC **10** 07:52:50.9±2.3,57.94N×21.46E,h0km,mbtmp2.9/4, ML2.1/4,Error ellipse: s-maj=23.2km s-min=8.8km az=168.0*
*UPP **10** 07:52:50.5±1.2,57.69N×21.20E,h0km,ML2.4,Presumed earthquake*
*LVSN **10** 07:52:51.2±4.6,57.65N×22.73E,h0km±18km,ML2.1*

ISC 10 07:52:46.9±0.8,**57.74N**±0.03×**21.51E**±0.03,**h0**km,**n86**, σ1**50**/115,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.43**	**105**		*e*P	**Pg**	**07 52 55.3**	**+0.1**
SLIT	**Slitere, Latvi**	**0.43**	**105**		*e*P	**Pg**	**07 52 55.1**	**-0.1**
SLIT					*e*S	**Sg**	**07 53 01.4**	**+0.6**
SLIT	comp=N,615nm,0.5s				AML	AML	07 53 22.6	
SLIT	comp=Z,644nm,0.8s				AML	AML	07 53 26.3	
SLIT	comp=E,1μm,0.7s				AML	AML	07 53 26.9	
SLIT	**Slitere, Latvi**	**0.43**	**105**		*e*P	**Pg**	**07 52 55.1**	**-0.1**
SLIT					*e*S	**Sg**	**07 53 00.3**	**-0.5**
EE06	**Soera, Palade,**	**1.42**	**29**		*e*P	**Pg**	**07 53 14.1**	**0.0**
EE06					*e*SN	**Sn**	**07 53 35.5**	**+2.2**
GOTU	**Gotland**	**1.58**	**269**		P	**Pn**	**07 53 16.3**	**+0.2**
GOTU					S	**Sn**	**07 53 38.1**	**+1.0**
GOTU	**Gotland**	**1.58**	**269**		P	**Pn**	**07 53 16.3**	**+0.2**
GOTU					S	**Sn**	**07 53 38.1**	**+1.0**
GOTU	**Gotland**	**1.58**	**269**		P	**Pn**	**07 53 16.3**	**+0.2**
GOTU					S	**Sn**	**07 53 38.1**	**+1.0**
GOTU	**Gotland**	**1.58**	**269**		*e*P	**Pn**	**07 53 16.1**	**+0.1**
GOTU					*e*S	**Sn**	**07 53 37.6**	**+0.5**
GOTU					smax	smax	07 53 38.6	
EE01	**Perakula, Nova**	**1.84**	**36**		*e*P	**Pb**	**07 53 21.3**	**-0.1**
EE01					*e*PG	**Pg**	**07 53 21.9**	**-0.2**
EE01					*e*SG	**Sg**	**07 53 46.7**	**+0.8**
EE08	**Sarghaua, Vand**	**2.18**	**64**		*e*P	**Pb**	**07 53 25.8**	**-1.3**
EE08					*e*SB	**Sb**	**07 53 54.0**	**-0.6**
VSVD	**Vaisvydziai**	**2.21**	**142**		*e*P	**Pn**	**07 53 24.2**	**-0.6**
EE02	**Kiisa, Saku**	**2.22**	**48**		*e*PB	**Pb**	**07 53 27.5**	**-0.3**
EE02					*e*SG	**Sg**	**07 53 57.7**	**-0.3**
NYNU	**Nynaeshamn**	**2.24**	**306**		P	**Pn**	**07 53 27.6**	**+2.4**
NYNU	**Nynaeshamn**	**2.24**	**306**		P	**Pn**	**07 53 27.6**	**+2.4**
NYNU	**Nynaeshamn**	**2.24**	**306**		P	**Pn**	**07 53 27.6**	**+2.4**
TVF	**Tvarminne**	**2.29**	**23**		*e*P	**Pb**	**07 53 28.3**	**-0.8**
TVF					*e*PB	**Pg**	**07 53 29.1**	**-1.7**
TVF					*e*SG	**Sg**	**07 54 00.0**	**-0.5**
TVF	comp=Z,3.5nm,0.1s				smax	smax	07 54 04.4	
NRTU	**Norrtaelje**	**2.45**	**323**		*e*P	**Pn**	**07 53 30.1**	**+2.1**
NRTU					*e*PB	**Pb**	**07 53 32.3**	**+0.5**
NRTU					*e*SB	**Sb**	**07 54 04.3**	**+1.8**
NRTU	comp=Z,2.8nm,0.1s				smax	smax	07 54 08.9	
BYXU	**Byxelkrok**	**2.47**	**261**		P	**Pn**	**07 53 29.9**	**+1.5**
BYXU	**Byxelkrok**	**2.47**	**261**		P	**Pn**	**07 53 29.9**	**+1.5**
BYXU	**Byxelkrok**	**2.47**	**261**		P	**Pn**	**07 53 29.9**	**+1.5**
AAL	**Aland**	**2.56**	**343**		*e*P	**Pn**	**07 53 31.1**	**+1.5**
AAL	**Aland**	**2.56**	**343**		*e*P	**Pn**	**07 53 31.1**	**+1.5**
AAL					*e*SB	**Sb**	**07 54 07.0**	**+1.3**
AAL	comp=Z,2.8nm,0.1s				smax	smax	07 54 11.4	
PABE	**Paberze**	**2.62**	**148**		*e*P	**Pn**	**07 53 29.9**	**-0.5**
PABE	**Paberze**	**2.62**	**148**		*e*P	**Pn**	**07 53 31.3**	**+0.9**
PABE					*e*S	**Sn**	**07 54 02.9**	**0.0**
PABE	comp=N,24nm,0.5s				AML	AML	07 54 06.0	
PABE	comp=Z,14nm,0.3s				AML	AML	07 54 06.6	
PABE	comp=E,22nm,0.4s				AML	AML	07 54 07.1	
VIKU	**Vikbolandet**	**2.66**	**289**		P	**Pn**	**07 53 33.0**	**+2.0**
VIKU	**Vikbolandet**	**2.66**	**289**		P	**Pn**	**07 53 33.0**	**+2.0**
VIKU	**Vikbolandet**	**2.66**	**289**		P	**Pn**	**07 53 33.0**	**+2.0**
VSTU	**Vaestervik**	**2.67**	**270**		P	**Pn**	**07 53 33.0**	**+1.9**
VSTU	**Vaestervik**	**2.67**	**270**		P	**Pn**	**07 53 33.0**	**+1.9**
VSTU	**Vaestervik**	**2.67**	**270**		P	**Pn**	**07 53 33.0**	**+1.9**
EE03	**Tooma soojaam,**	**2.76**	**64**		*e*P	**Pn**	**07 53 31.9**	**+1.6**
EE03					*e*SG	**Sb**	**07 54 12.2**	**+1.0**
VSU	**Vasula**	**2.87**	**73**		*e*P	**Pn**	**07 53 34.1**	**+0.3**
VSU	comp=Z,14nm,0.1s				AML	AML	07 53 38.1	
VSU	comp=E,25nm,0.7s				AML	AML	07 54 25.9	
VSU	comp=N,19nm,0.4s				AML	AML	07 54 27.1	
VSU	**Vasula**	**2.87**	**73**		*e*P	**Pn**	**07 53 33.9**	**+0.1**
VSU					*e*SB	**Sb**	**07 54 13.5**	**-0.9**
MEF	**Metsahovi**	**2.90**	**30**		*e*P	**Pn**	**07 53 36.0**	**+1.9**
MEF	**Metsahovi**	**2.90**	**30**		*e*P	**Pb**	**07 53 38.3**	**-1.0**
MEF	comp=E,7.0nm,0.3s				AML	AML	07 54 21.9	
MEF	comp=Z,7.0nm,0.3s				AML	AML	07 54 27.2	
MEF	comp=N,5.7nm,0.1s				AML	AML	07 54 28.8	
MEF	**Metsahovi**	**2.90**	**30**		*e*PB	**Pb**	**07 53 38.4**	**-0.9**
MEF					*e*SB	**Sb**	**07 54 16.1**	**+0.8**
MEF	comp=Z,6.9nm,0.6s				smax	smax	07 54 18.1	
HEL5	**Espoo, Suvisaa**	**2.91**	**34**		*e*PB	**Pb**	**07 53 37.9**	**-1.7**
HEL5	comp=Z,3.1nm,0.1s				smax	smax	07 54 20.0	
OSKU	**Oskarshamn**	**2.97**	**262**		P	**Pn**	**07 53 36.5**	**+1.3**
OSKU	**Oskarshamn**	**2.97**	**262**		P	**Pn**	**07 53 36.5**	**+1.3**
OSKU	**Oskarshamn**	**2.97**	**262**		P	**Pn**	**07 53 36.5**	**+1.3**
LNKU	**Linkoeping**	**3.23**	**281**		P	**Pn**	**07 53 40.6**	**+1.8**
LNKU	**Linkoeping**	**3.23**	**281**		P	**Pn**	**07 53 40.6**	**+1.8**
LNKU	**Linkoeping**	**3.23**	**281**		P	**Pn**	**07 53 40.6**	**+1.8**
RAF	**Rauma**	**3.29**	**2**		*e*P	**Pn**	**07 53 41.6**	**+1.9**
RAF	**Rauma**	**3.29**	**2**		*e*P	**Pn**	**07 53 41.5**	**+1.9**
RAF	comp=Z,1.9nm,0.1s				smax	smax	07 54 35.2	
PVF	**Pernaja**	**3.59**	**37**		*e*P	**Pn**	**07 53 46.3**	**+2.5**
VJF	**Virojoki**	**4.19**	**45**		*e*P	**Pn**	**07 53 54.9**	**+3.0**
DEL	**Delary** baz=93,slow=12	**4.36**	**256**		*e*	**Pn**	**07 53 53.0**	**-1.3**
DEL					*i*P	Pb	07 53 54.3	-10
DEL					*e*S	**Sn**	**07 54 44.7**	**-1.0**
DEL	comp=Z,1.4nm,0.3s				IAML		07 55 07.2	
FIA0	**FINESS Array S**	**4.38**	**30**		*e*P	**Pn**	**07 53 57.0**	**+2.5**
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=213,slow=12,SNR=17	**4.38**	**30**		Pn	**Pn**	**07 53 55.9**	**+1.4**
FINES					Sn	**Sn**	**07 54 47.8**	**+1.7**
FINES	comp=Z,0.4nm,0.3s,baz=219,slow=20,SNR=6.5				Lg	Lg	07 55 04.6	
BORU	**Boraas**	**4.69**	**272**		*i*P	**Pn**	**07 54 00.1**	**+1.3**
BORU	**Boraas**	**4.69**	**272**		*i*P	**Pn**	**07 54 00.1**	**+1.3**
HFS	**Hagfors** comp=Z,0.3nm,0.3s,baz=118,slow=15,SNR=11	**4.70**	**304**		Pn	**Pn**	**07 54 00.5**	**+1.5**
HFS					Sn	**Sn**	**07 54 51.2**	**-3.0**
HFS	comp=Z,0.4nm,0.3s,baz=112,slow=27,SNR=5.9				Lg	Lg	07 55 13.4	
KEF	**Keuruu**	**4.75**	**19**		*e*P	**Pn**	**07 54 01.7**	**+2.0**
FABU	**Falkenberg**	**4.82**	**265**		*e*P	**Pn**	**07 54 01.9**	**+1.4**
FABU	**Falkenberg**	**4.82**	**265**		*e*P	**Pn**	**07 54 01.9**	**+1.4**
LUNU	**Lund**	**4.92**	**248**		*i*P	**Pn**	**07 54 02.9**	**+0.8**
LUNU	**Lund**	**4.92**	**248**		*i*P	**Pn**	**07 54 02.9**	**+0.8**
BJUU	**Bjuv**	**4.94**	**254**		*i*P	**Pn**	**07 54 03.1**	**+0.8**
BJUU	**Bjuv**	**4.94**	**254**		*i*P	**Pn**	**07 54 03.1**	**+0.8**
ONAU	**Onsala**	**5.18**	**270**		*i*	**Pn**	**07 54 08.6**	**+3.1**
ONAU	**Onsala**	**5.18**	**270**		*i*	**Pn**	**07 54 08.6**	**+3.1**
TJOU	**Tjoern**	**5.28**	**277**		*i*P	**Pn**	**07 54 08.3**	**+1.3**
TJOU	**Tjoern**	**5.28**	**277**		*i*P	**Pn**	**07 54 08.3**	**+1.3**
VAF	**Ylistaro**	**5.35**	**6**		*e*P	**Pn**	**07 54 09.8**	**+2.0**
STRU	**Stroemstad**	**5.58**	**288**		*i*P	**Pn**	**07 54 12.2**	**+1.1**
STRU	**Stroemstad**	**5.58**	**288**		*i*P	**Pn**	**07 54 12.2**	**+1.1**
NC602	**NORSAR Array S**	**5.93**	**305**		*e*P	**Pn**	**07 54 16.4**	**+0.6**
NC602					*e*S	**Sn**	**07 55 25.2**	**+0.9**
NC602	comp=Z,1.2nm,0.7s				IAML		07 55 45.4	
NB201	**NORSAR Array S**	**6.18**	**307**		*e*P	**Pn**	**07 54 20.7**	**+1.4**
NB201					*e*S	**Sn**	**07 55 32.1**	**+1.5**
NB201	comp=Z,1.5nm,0.8s				IAML		07 55 33.6	
NOA	**NORSAR Array B** baz=129,slow=12,SNR=6.8	**6.21**	**306**		Pn	**Pn**	**07 54 20.4**	**+0.7**
NOA					Sn	**Sn**	**07 55 26.9**	**-4.5**
NOA	baz=112,slow=17,SNR=1.3				Lg	Lg	07 56 01.8	
NC303	**NORSAR Array S** baz=98,slow=19,SNR=4.7 comp=Z,0.2nm,0.7s	**6.23**	**308**		*e*P	**Pn**	**07 54 21.0**	**+0.9**
NC303					*e*S	**Sn**	**07 55 33.3**	**+1.4**
NC303	comp=Z,1.1nm,0.8s				IAML		07 55 48.2	
NAO01	**NORSAR Array S**	**6.26**	**304**		*e*P	**Pn**	**07 54 20.9**	**+0.4**
NAO01					*e*S	**Sn**	**07 55 31.5**	**-1.2**
HOMB	**Homborsund**	**6.93**	**280**		*i*	**Pn**	**07 54 28.5**	**-1.1**
HOMB	**Homborsund**	**6.93**	**280**		*i*	**Pn**	**07 54 28.5**	**-1.1**
SKAR	**Skarslia**	**7.39**	**299**		*e*P	**Pn**	**07 54 36.0**	**+0.1**
SKAR					*e*S	**Sn**	**07 55 57.1**	**-3.2**
SKAR	comp=Z,1.3nm,0.6s				IAML		07 56 08.7	
DOMB	**Dombas**	**7.59**	**310**		*e*P	**Pn**	**07 54 39.9**	**+1.2**
NSS	**Namsos**	**8.22**	**330**		*e*P	**Pn**	**07 54 47.8**	**+0.7**
NSS	comp=Z,1.3nm,0.6s				IAML		07 56 25.4	
MOL	**Molde**	**8.47**	**311**		*e*P	**Pn**	**07 54 50.9**	**+0.2**
LEIR	**Leirfjorden**	**9.27**	**338**		*e*P	**Pn**	**07 55 02.0**	**+0.4**
RAUS	**Rausandaksla**	**9.39**	**341**		*e*P	**Pn**	**07 55 03.1**	**-0.1**
STOK	**Stokkvaagen**	**9.48**	**339**		*e*P	**Pn**	**07 55 05.4**	**+0.9**
SALU	**Saltoluokta**	**9.77**	**353**		*e*P	**Pn**	**07 55 07.9**	**-0.5**
VAGH	**Vaagaholmen**	**9.79**	**340**		*e*P	**Pn**	**07 55 08.9**	**+0.2**
FAUS	**Fauske**	**10.08**	**346**		*e*P	**Pn**	**07 55 12.8**	**0.0**
HEF	**Hetta**	**10.75**	**4**		*e*P	**Pn**	**07 55 20.6**	**-1.3**
ARCES	**ARCESS Array B** comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=5.6 comp=Z,0.3nm,0.5s	**11.97**	**7**		Pn	**Pn**	**07 55 35.8**	**-2.7**

RSNC 10 07:55:04.3±0.0,**1°N**±13°×**8°0W**±1°3,**h206**km±15km,**M2.8, mB6.2,ML2.2,Mw(mB)5.8,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PAC1	**Pacto, Paraso**	**1.30**	**142**		P	Pn	07 55 36.4	-0.7
PAC1					S	S	07 56 01.2	-1.1
CUSE	**Cuicocha Este**	**1.55**	**130**		P	Pn	07 55 39.6	+0.1
CUSE					S	S	07 56 07.2	+0.8
GCUF	**Volcan Galeras**	**2.25**	**92**		P	Pn	07 55 47.0	+0.6
GCUF					S	S	07 56 20.3	+1.8
POPC	**Popayan, Colom**	**3.16**	**67**		P	Pn	07 55 55.1	-1.3
POPC					S	S	07 56 32.1	-4.5
FLOC	**Florencia**	**3.95**	**86**		P	Pn	07 56 09.2	+3.5
SOLC	**Bahia Solano**	**5.36**	**24**		P	Pn	07 56 17.9	-5.5

IDC 10 07:58:16.6±2.7,**29.46S×178.11W,h0**km,**mb4.0**/3, **mbtmp4.0**/3,**Error ellipse: s-maj=75.1km s-min=37.6km az=35.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 1.7nm,0.8s,baz=95,slow=12,SNR=3.7 1.7nm,0.8s	**34.61**	**256**		P	P	08 05 06.9	-0.5
ASAR	**Alice Springs** 0.9nm,0.6s,baz=109,slow=8.1,SNR=22	**43.07**	**266**		P	P	08 06 18.9	+0.4
ASAR	0.1nm,0.5s,baz=105,slow=4.3,SNR=1.1 0.9nm,0.6s				PcP

comp=Z,3.7nm,1.0s,baz=330,slow=0.9,SNR=8.2
comp=Z,3.7nm,1.0s
CMAR Chiang Mai Arr 76.09 294 P **P** **08 22 03.0 +1.2**
comp=Z,1.6nm,0.3s,baz=109,slow=5.8,SNR=4.9
comp=Z,1.6nm,0.3s
ARCES ARCESS Array B 121.76 345 PKP **PKPdf** **08 29 04.6 -0.8**
comp=Z,1.0nm,0.7s,baz=40,slow=2.2,SNR=4.3

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*IDC **10** 08:14:46.1±5.1,4.°63S×153.°55E,h75km±42km,mb3.8/8, mbtmp4.1/9,ML2.5/1,MS3.3/1,Error ellipse: s-maj=41.2km s-min=20.2km az=64.0*

ISC 10 08:14:47.3±1.0,4.7S±0.°1×153.°5E±0.°1,h85km,n9, σ1§34/11,mb3.8/8,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.84**	**233**	P	**Pn**	**08 16 40.5**	**+1.8**
	3.9nm,0.3s,baz=41,slow=11,SNR=6.8						
PMG				S	**Sn**	**08 18 04.0**	**-1.9**
	14nm,0.4s,baz=18,slow=20,SNR=3.6						
	8.5nm,0.3s						
DZM	**Mont Dzumac**	**21.36**	**145**	P	**P**	**08 19 26.8**	**-1.2**
	2.6nm,0.5s,baz=337,slow=13,SNR=7.8						
	2.6nm,0.5s						
ASAR	**Alice Springs**	**26.70**	**223**	P	**P**	**08 20 18.1**	**-0.7**
	0.6nm,0.4s,baz=56,slow=9.1,SNR=14						
ASAR				PcP	**PcP**	**08 23 40.0**	**-0.5**
	0.6nm,0.6s,baz=59,slow=2.6,SNR=8.0						
ASAR				LR	LR	08 30 33.4	
	comp=Z,56nm,18.9s,baz=302,slow=35						
	0.6nm,0.4s						
SONM	**Songino Array**	**66.59**	**327**	P	**P**	**08 25 28.4**	**-0.4**
	0.5nm,0.4s,baz=120,slow=6.1,SNR=3.7						
	0.5nm,0.4s						
VNDA	**Vanda**	**72.92**	**178**	P	**P**	**08 26 06.5**	**-0.5**
	1.6nm,0.7s,baz=333,slow=6.2,SNR=13						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**80.69**	**319**	P	**P**	**08 26 51.7**	**+0.5**
	0.6nm,0.5s,baz=100,slow=6.9,SNR=8.2						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**84.13**	**322**	P	**P**	**08 27 08.6**	**-0.4**
	0.4nm,0.4s,baz=104,slow=4.4,SNR=4.8						
	0.4nm,0.4s						
QSPA	**South Pole Qui**	**85.28**	**180**	P	**P**	**08 27 16.7**	**+2.1**
	3.8nm,0.6s,baz=21,slow=0.8,SNR=62						
	3.8nm,0.6s						
BVAR	**Borovoye Array**	**89.56**	**323**	P	**P**	**08 27 34.6**	**-0.7**
	1.3nm,0.7s,baz=93,slow=7.2,SNR=5.7						
	1.3nm,0.7s						

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*GUC **10** 08:19:27.7±0.6,26.°20S×70.°92W,h33km±3km, ML3.6*
*IDC **10** 08:19:38.6±4.9,25.°42S×70.°64W,h88km±44km,mb3.3/4, mbtmp3.6/5,MS3.2/1,Error ellipse: s-maj=44.6km s-min=27.5km az=82.0*

ISC 10 08:19:24.3±2.1,26.°19S±0.°04×71.°19W±0.°08,h9km±12km, n22,σ1§19/22,mb3.8/4,1D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC01	**Pan de Azucar**	**0.54**	**86**	⇓*i*P	**Pg**	**08 19 35.1**	**+0.4**
AC01				*i* S	**Sg**	**08 19 41.0**	**-0.7**
AC01				IAML		08 19 42.0	
	comp=E,9μm,0.3s						
AC06	**Mina Casimiro**	**1.38**	**147**	*e*P	**Pn**	**08 19 49.8**	**-0.1**
AC06				*i* S	**Sb**	**08 20 07.0**	**-1.2**
AC06				IAML		08 20 10.2	
	comp=E,1μm,0.2s						
GO03	**Copiapo**	**1.64**	**149**	*e*P	**Pn**	**08 19 53.9**	**+0.5**
GO03				*i* S	**Sn**	**08 20 13.6**	**-1.2**
GO03				IAML		08 20 16.0	
	comp=E,1μm,0.2s						
PB14	**IPOC Station P**	**1.71**	**25**	*e*P	**Pn**	**08 19 56.1**	**+1.4**
PB14				*e*S	**Sb**	**08 20 18.3**	**+0.3**
GO02	**Mina Guanaco**	**1.77**	**55**	*e*P	**Pn**	**08 19 55.5**	**+0.1**
GO02				*i* S	**Sn**	**08 20 16.8**	**-1.5**
GO02				IAML		08 20 23.5	
	comp=N,3μm,0.2s						
AC02	**Maricunga**	**1.96**	**110**	*e*P	**Pn**	**08 19 59.2**	**+1.0**
AC02				*i* S	**Sn**	**08 20 22.9**	**-0.3**
AC02				IAML		08 20 27.7	
	comp=E,1μm,0.3s						
AC04	**Llanos de Chal**	**2.01**	**177**	*e*P	Pn	08 19 57.5	-1.0
AC04				*e*S	**Sb**	**08 20 26.3**	**+0.1**
PB10	**IPOC Station P**	**2.73**	**12**	*e*P	**Pn**	**08 20 06.4**	**-1.9**
LCO	**Las Campanas**	**2.84**	**171**	*e*P	**Pn**	**08 20 10.4**	**+0.2**
PB05	**IPOC Station P**	**3.44**	**15**	*e*P	**Pn**	**08 20 16.3**	**-2.0**
AF01	**San Pedro de A**	**4.23**	**41**	*e*P	**Pn**	**08 20 31.1**	**+1.7**
H03N1	**Juan Fernandez**	**9.85**	**221**	T	T	08 32 06.2	
	baz=48,slow=71,SNR=162						
H03N2	**Juan Fernandez**	**9.86**	**221**	T	T	08 32 14.3	
	baz=48,slow=71,SNR=63						
H03N3	**Juan Fernandez**	**9.87**	**221**	T	T	08 32 05.2	
	baz=48,slow=71,SNR=123						
LPAZ	**La Paz**	**10.26**	**17**	P	**Pn**	**08 21 51.7**	**-0.6**
	comp=E,0.9nm,0.4s,baz=200,slow=7.0,SNR=11						
BDFB	**Brasilia**	**24.02**	**69**	P	**P**	**08 24 38.7**	**-1.2**
	comp=E,1.5nm,0.7s,baz=255,slow=16,SNR=3.0						
	comp=E,1.5nm,0.7s						
MDP	**Montagnes des**	**35.93**	**33**	LR	LR	08 41 32.8	
	comp=E,44nm,20.7s,baz=24,slow=38						
SNAA	**Sanae**	**58.58**	**160**	P	P	08 29 29.7	+8.6
	comp=E,1.3nm,1.0s,baz=256,slow=4.2,SNR=2.1						
	comp=E,1.3nm,1.0s						
TXAR	**Lajitas Array**	**63.39**	**328**	P	**P**	**08 29 56.1**	**+1.8**
	comp=E,0.2nm,0.7s,baz=150,slow=9.0,SNR=2.2						
	comp=E,0.2nm,0.7s						
QSPA	**South Pole Qui**	**64.02**	**180**	P	P	08 30 07.7	+10
	comp=E,1.0nm,0.9s,baz=121,slow=6.8,SNR=3.9						
	comp=E,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**146.37**	**35**	PKPbc	**PKPbc**	**08 39 05.9**	**+0.5**
	comp=E,0.4nm,0.8s,baz=306,slow=3.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**147.07**	**26**	PKPbc	**PKPbc**	**08 39 07.5**	**+0.2**
	comp=E,1.2nm,0.7s,baz=296,slow=4.6,SNR=4.0						

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*IDC **10** 08:24:04.1±5.6,36.°13N×71.°01E,h170km±52km,mb3.3/6, mbtmp3.8/10,Error ellipse: s-maj=40.9km s-min=23.6km az=27.0*
*NNC **10** 08:24:14.6±5.3,37.°02N×70.°78E,h184km±75km,mb2.8, mpv3.8,Error ellipse: s-maj=53.9km s-min=34.1km az=23.0*

ISC 10 08:24:07.8±0.8,36.°55N±0.°07×70.°97E±0.°09,h188km,n30, σ1§79/36,mb3.3/4,4C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRNI	**Srinagar**	**4.01**	**126**	*e*S	**Sn**	**08 25 59.4**	**+2.0**
SRNI				IAML		08 26 01.1	
	comp=N,621nm,0.3s						
SRNI				IAML		08 26 02.0	
	comp=E,688nm,0.2s						
JMU	**Jammu**	**5.01**	**139**	*e*S	**Sn**	**08 26 19.7**	**-0.8**
ALCI	**Alchi Leh**	**5.59**	**113**	*e*P	**Pn**	**08 25 28.7**	**-1.2**
ALCI				*e*S	**Sn**	**08 26 33.5**	**-1.0**
TSSA	**Tissa**	**5.65**	**129**	*e*P	**Pn**	**08 25 32.6**	**+2.1**
TSSA				*e*S	**Sn**	**08 26 33.4**	**-2.4**
TSSA				IAML		08 26 38.2	
	comp=N,200nm,0.2s						
TSSA				IAML		08 26 38.4	
	comp=E,222nm,0.4s						
UCH	**Uchtor**	**6.30**	**25**	P	**Pn**	**08 25 40.3**	**+1.2**
	SNR=71						
EKS2	**Erkin-Say**	**6.47**	**19**	P	**Pn**	**08 25 42.8**	**+1.7**
	SNR=16						
KK31	**Karatay Array**	**6.55**	**357**	⇑P	**Pn**	**08 25 43.3**	**+1.3**
	comp=E,4.2nm,0.2s,baz=175,slow=11,SNR=79						
KK31				⇓S	**Sn**	**08 26 52.3**	**-4.2**
	comp=E,14nm,0.3s,baz=176,slow=15,SNR=18						
AAK	**Ala-Archa**	**6.66**	**23**	P	**Pn**	**08 25 45.1**	**+1.6**
	comp=E,14nm,0.3s,baz=182,slow=7.5,SNR=61						
AAK				S	**Sn**	**08 26 56.6**	**-2.6**
	comp=E,6.6nm,0.4s,baz=313,slow=22,SNR=12						
AAK	**Ala-Archa**	**6.66**	**23**	P	**Pn**	**08 25 45.3**	**+1.8**
	SNR=22						
AAK	**Ala-Archa**	**6.66**	**23**	⇑P	**Pn**	**08 25 44.9**	**+1.4**
	comp=E,1.3nm,0.3s						
AAK				⇓S	**Sn**	**08 26 58.1**	**-1.1**
	comp=E,7.4nm,0.7s						
KBK	**Karagaybulak**	**6.83**	**26**	P	**Pn**	**08 25 48.5**	**+2.7**
	SNR=11						
BHK	**Bhakra**	**6.83**	**137**	IAML		08 27 03.7	
	comp=E,74nm,0.3s						
BHK				IAML		08 27 05.0	
	comp=N,82nm,0.4s						
BHK				*e*S	**Sn**	**08 27 05.3**	**+1.9**
USP	**Ospenovka**	**7.23**	**21**	P	**Pn**	**08 25 51.7**	**+0.8**
	SNR=13						
TKM2	**Tokmak 2**	**7.29**	**28**	P	**Pn**	**08 25 53.4**	**+1.6**
	SNR=36						
SMLA	**Simla**	**7.47**	**135**	*e*P	**Pn**	**08 25 55.4**	**+1.3**
SMLA				*e*S	**Sn**	**08 27 15.7**	**-2.7**
SMLA				IAML		08 27 21.1	
	comp=N,68nm,0.9s						
SMLA				IAML		08 27 21.1	
	comp=E,72nm,0.6s						
HNLY	**HANLEY**	**7.59**	**117**	*e*P	**Pn**	**08 25 57.6**	**+1.4**
HNLY				*e*S	**Sn**	**08 27 22.3**	**+0.2**
HNLY				IAML		08 27 24.9	
	comp=N,3.8nm,0.5s						
HNLY				IAML		08 27 34.8	
	comp=E,4.1nm,1.0s						
JOSI	**Joshimath**	**9.33**	**127**	*e*P	**Pn**	**08 26 19.5**	**+0.8**
KUDL	**Kundal**	**9.60**	**149**	*e*S	Sn	08 27 59.9	-9.1
KUDL				IAML		08 28 03.4	
	comp=E,29nm,0.6s						
KUDL				IAML		08 28 09.2	
	comp=N,16nm,0.8s						
MKAR	**Makanchi Array**	**13.26**	**36**	P	**Pn**	**08 27 09.7**	**+0.8**
	comp=N,0.2nm,0.3s,baz=204,slow=11,SNR=9.8						
AB31	**Akbulak array**	**15.03**	**331**	⇑P	**Pn**	**08 27 30.9**	**+0.3**
	comp=N,0.7nm,0.6s,baz=103,slow=9.3,SNR=14						
KURBB	**Kurchatov Arra**	**15.08**	**19**	P	**Pn**	**08 27 30.5**	**-0.7**
	comp=N,0.3nm,0.5s,baz=208,slow=11,SNR=2.0						
BVAR	**Borovoye Array**	**16.48**	**359**	P	**P**	**08 27 48.6**	**+1.1**
	comp=N,0.4nm,0.4s,baz=159,slow=12,SNR=4.2						
AKTO	**Aktyubinsk**	**16.72**	**330**	P	**Pn**	**08 27 52.6**	**+1.6**
	comp=N,1.4nm,0.4s,baz=162,slow=10,SNR=4.2						
AKTO	**Aktyubinsk**	**16.72**	**330**	⇑P	**Pn**	**08 27 52.7**	**+1.6**
	comp=N,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**P**	**08 28 25.1**	**+0.7**
	comp=N,0.9nm,0.4s,baz=224,slow=8.1,SNR=3.2						
	comp=N,0.9nm,0.4s						
FINES	**FINESS Array B**	**37.42**	**326**	P	**P**	**08 31 03.7**	**+1.3**
	comp=N,0.3nm,0.3s,baz=104,slow=9.2,SNR=5.5						
	comp=N,0.3nm,0.3s						
HFS	**Hagfors**	**43.01**	**322**	P	**P**	**08 31 49.5**	**+1.2**
	comp=N,2.2nm,0.9s,baz=88,slow=8.8,SNR=1.1						
	comp=N,2.2nm,0.9s						
NOA	**NORSAR Array B**	**44.32**	**323**	P	**P**	**08 31 59.6**	**+0.8**
	comp=N,0.2nm,0.5s,baz=87,slow=8.8,SNR=1.4						
	comp=N,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.69**	**269**	P	**P**	**08 34 30.4**	**-2.0**
	comp=N,2.6nm,0.4s,baz=40,slow=7.5,SNR=11						
	comp=N,2.6nm,0.4s						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**08 36 16.0**	**-2.7**
	comp=N,0.2nm,0.5s,baz=313,slow=5.4,SNR=6.8						
	comp=N,0.2nm,0.5s						

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*NNC **10** 08:33:18.2±5.4,50.°19N×76.°01E,h0km,mb2.7,mpv2.6, Error ellipse: s-maj=34.1km s-min=22.1km az=90.0, Suspected Mining explosion.*
*IDC **10** 08:33:21.0±1.1,50.°18N×76.°26E,h0km,mbtmp2.7/3, ML2.1/3,Error ellipse: s-maj=17.1km s-min=8.3km az=26.0*

ISC 10 08:33:15.1±1.1,50.°16N±0.°07×75.°67E±0.°06,h0km,n8, σ1§29/11,4C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**1.89**	**75**	Pg	**Pn**	**08 33 48.6**	**0.0**
	0.9nm,0.3s,baz=250,slow=16,SNR=27						
KURBB				Lg	Lg	08 34 09.8	
	0.2nm,0.3s,baz=247,slow=27,SNR=4.3						
KURBB	**Kurchatov Arra**	**1.89**	**75**	⇑Pg	**Pb**	**08 33 49.4**	**-1.1**
	1.6nm,0.1s,baz=252,slow=14						
KURBB				⇑Lg	Lg	08 34 11.2	
	3.1nm,0.1s,baz=262,slow=28						
KURK	**Kurchatov**	**1.97**	**72**	⇓Pg	**Pn**	**08 33 50.1**	**+0.4**
	0.8nm,0.2s						
KURK				⇓Lg	Lg	08 34 12.8	
	1.4nm,0.2s						
BVAR	**Borovoye Array**	**4.37**	**313**	Pn	**Pb**	**08 34 31.6**	**-1.1**
	baz=124,slow=18,SNR=11						
BVAR				Sn	**Sb**	**08 35 26.7**	**+0.8**
	baz=128,slow=20,SNR=2.9						
BVAR				Lg	Lg	08 35 47.1	
	0.1nm,0.3s,baz=126,slow=29,SNR=10						
	0.3nm,0.3s						
MK31	**Makanchi Array**	**5.54**	**125**	⇓Pg	**Pb**	**08 34 51.7**	**-1.0**
	0.1nm,0.2s,baz=312,slow=16,SNR=5.1						
MK31				⇑Sn	**Sn**	**08 35 44.3**	**+1.1**
	0.1nm,0.2s,baz=208,slow=14,SNR=3.2						
MK31				⇑Lg	Lg	08 36 03.9	
	0.4nm,0.3s,baz=320,slow=27,SNR=4.7						
MKAR	**Makanchi Array**	**5.54**	**125**	Pn	**Pn**	**08 34 40.1**	**+1.3**
	0.1nm,0.3s,baz=306,slow=13,SNR=7.3						
MKAR				Sn	**Sn**	**08 35 42.7**	**-0.5**
	0.3nm,0.3s,baz=323,slow=29,SNR=5.1						
MKAR				Lg	Lg	08 36 00.0	
	0.5nm,0.3s,baz=322,slow=27,SNR=6.1						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**6.80**	**53**	Pn	**Pn**	**08 34 58.3**	**+2.3**
	0.3nm,0.3s,baz=245,slow=15,SNR=5.4						
ZALV				Sn	**Sn**	**08 36 13.2**	**-0.8**
	0.2nm,0.3s,baz=236,slow=22,SNR=3.9						
	0.7nm,0.3s						
I46RU	**ZALESOVO INFRA**	**6.80**	**53**	I	I	09 11 20.0	
	baz=234,slow=334,SNR=0.8						

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*NNC **10** 08:45:16.9±0.6,42.°91N×78.°38E,h0km,mb2.4,mpv2.5, Error ellipse: s-maj=4.7km s-min=2.4km az=162.0*
*SOME **10** 08:45:17.3,42.°88N×78.°35E,h20km*
*KRNET **10** 08:45:17.0±0.1,42.°91N×78.°36E,h24km,mb2.6*

ISC 10 08:45:17.3±1.1,42.°90N±0.°02×78.°32E±0.°02,h2km±10km, n47,σ1§14/88,20C-8D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.17**	**21**	P	**Pg**	**08 45 20.4**	**-0.3**
	57nm,0.1s						
SATY				S	**Sg**	**08 45 22.8**	**-0.1**
	748nm,0.1s						
PRZ	**Przheval'sk**	**0.42**	**172**	⇑*i*P	**Pg**	**08 45 25.6**	**+0.3**
PRZ				⇑*i*S	**Sg**	**08 45 31.4**	**+0.6**
KURS	**Kuram**	**0.60**	**350**	P	**Pg**	**08 45 28.6**	**-0.2**
	1.1nm,0.2s						
KURS				S	**Sg**	**08 45 36.6**	**+0.1**
	2.6nm,0.1s						
KURS	**Kuram**	**0.60**	**350**	*e*P	**Pg**	**08 45 28.6**	**-0.2**
KURS				*e*S	**Sg**	**08 45 36.6**	**+0.1**
KPKS	**Kokpek**	**0.63**	**25**	P	**Pg**	**08 45 28.9**	**-0.4**
	0.3nm,0.2s						
KPKS				S	**Sg**	**08 45 37.1**	**-0.3**
	21nm,0.2s						
KPKS	**Kokpek**	**0.63**	**25**	*e*P	**Pg**	**08 45 28.9**	**-0.4**
KPKS				*e*S	**Sg**	**08 45 37.1**	**-0.3**
KPKS	**Kokpek**	**0.63**	**25**	*e*P	**Pg**	**08 45 28.9**	**-0.4**
	0.3nm,0.2s						
KPKS				*e*S	**Sg**	**08 45 37.1**	**-0.3**
	21nm,0.2s						
SHLS	**Shalkode**	**0.88**	**72**	P	**Pn**	**08 45 38.5**	**+1.8**
	2.6nm,0.2s						
SHLS				S	**Sn**	**08 45 53.8**	**+3.7**
	5.6nm,0.5s						
SHLS	**Shalkode**	**0.88**	**72**	*e*P	**Pn**	**08 45 38.5**	**+1.8**
SHLS				*e*S	**Sn**	**08 45 53.8**	**+3.7**
SHLS	**Shalkode**	**0.88**	**72**	*e*P	**Pn**	**08 45 38.5**	**+1.8**
	2.6nm,0.2s						
SHLS				*e*S	**Sn**	**08 45 53.8**	**+3.7**
	5.6nm,0.5s						
KOTS	**Kotyrbulak**	**0.95**	**291**	P	**Pg**	**08 45 35.7**	**+0.3**
	2.5nm,0.3s						
KOTS				S	**Sb**	**08 45 48.8**	**-0.7**
	15nm,0.2s						
KOTS	**Kotyrbulak**	**0.95**	**291**	*e*P	**Pg**	**08 45 35.7**	**+0.3**
KOTS				*e*S	**Sb**	**08 45 48.8**	**-0.7**
KOTS	**Kotyrbulak**	**0.95**	**291**	*e*P	**Pg**	**08 45 35.7**	**+0.3**
	2.5nm,0.3s						
KOTS				*e*S	**Sb**	**08 45 48.8**	**-0.7**
	15nm,0.2s						
PDGK	**Podgornoye**	**0.96**	**63**	⇑P	**Pg**	**08 45 33.9**	**-1.8**
	1.1nm,0.4s						
PDGK				⇓S	**Sg**	**08 45 46.4**	**-1.7**
	6.8nm,0.5s						
MDOK	**Medeo**	**0.97**	**286**	Pg	**Pg**	**08 45 35.9**	**0.0**
	0.4nm,0.2s						
MDOK				Lg	Lg	08 45 49.1	
	5.0nm,0.4s						
MDOK	**Medeo**	**0.97**	**286**	*e*P	**Pg**	**08 45 35.9**	**0.0**
MDOK				*e*S	**Sg**	**08 45 49.1**	**+0.7**
TNSS	**Tian-Shan**	**1.02**	**278**	P	**Pg**	**08 45 36.9**	**+0.1**
	0.5nm,0.2s						
TNSS				S	**Sg**	**08 45 50.8**	**+0.8**
	1.6nm,0.3s						
TNSS	**Tian-Shan**	**1.02**	**278**	*e*P	**Pg**	**08 45 36.9**	**+0.1**
TNSS				*e*S	**Sg**	**08 45 50.8**	**+0.8**
TNSS	**Tian-Shan**	**1.02**	**278**	*e*P	**Pg**	**08 45 36.9**	**+0.1**
	0.5nm,0.2s						
TNSS				*e*S	**Sg**	**08 45 50.8**	**+0.8**
	1.6nm,0.3s						
KDJ	**Kajisay**	**1.14**	**228**	⇑*i*P	**Pb**	**08 45 38.8**	**-1.0**
KDJ				⇑*i*S	**Sg**	**08 45 54.3**	**+0.4**
BLB	**Baldybastay**	**1.20**	**5**	P	**Pb**	**08 45 39.5**	**-1.4**
	8.1nm,0.3s						
BLB				S	**Sb**	**08 45 55.4**	**-1.5**
	8.7nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.23**	**198**	⇑*i*P	**Pb**	**08 45 39.9**	**-1.6**
TARG				⇑*i*S	**Sb**	**08 45 56.3**	**-1.6**
ARXS	**Arharly**	**1.36**	**345**	P	**Pn**	**08 45 42.3**	**-1.0**
	5.7nm,0.2s						
ARXS				S	**Sb**	**08 46 00.4**	**-1.0**
	4.6nm,0.2s						
ARXS	**Arharly**	**1.36**	**345**	*e*P	**Pn**	**08 45 42.3**	**-1.0**
	5.7nm,0.2s						
ARXS				*e*S	**Sb**	**08 46 00.4**	**-1.0**
	4.6nm,0.2s						
CHKK	**Chushkaly**	**1.36**	**315**	P	**Pg**	**08 45 43.9**	**+0.5**
	2.9nm,0.3s						
CHKK				S	**Sg**	**08 46 02.9**	**+1.9**
	23nm,0.4s						
CHKK	**Chushkaly**	**1.36**	**315**	*e*P	**Pg**	**08 45 43.9**	**+0.5**
	2.9nm,0.3s						
CHKK				*e*S	**Sg**	**08 46 02.9**	**+1.9**
	23nm,0.4s						
MTBS	**Maitube**	**1.41**	**280**	P	**Pg**	**08 45 45.1**	**+0.9**
	1.3nm,0.4s						
MTBS				S	**Sg**	**08 46 05.0**	**+2.5**
	7.5nm,0.2s						
MTBS	**Maitube**	**1.41**	**280**	*e*P	**Pg**	**08 45 45.1**	**+0.9**
	1.3nm,0.4s						
MTBS				*e*S	**Sg**	**08 46 05.0**	**+2.5**
	7.5nm,0.2s						
KTBS	**Karatobe**	**1.45**	**305**	P	**Pn**	**08 45 44.2**	**-0.3**
	1.0nm,0.2s						
KTBS				S	**Sb**	**08 46 03.3**	**-0.4**
	7.2nm,0.3s						
KTBS	**Karatobe**	**1.45**	**305**	*e*P	**Pn**	**08 45 44.2**	**-0.3**
KTBS				*e*S	**Sb**	**08 46 03.4**	**-0.4**
KNOS	**Konyrlen**	**1.59**	**23**	P	**Pb**	**08 45 46.8**	**-0.7**
	4.3nm,0.3s						
KNOS				S	**Sb**	**08 46 07.8**	**-0.2**
	5.5nm,0.2s						
ULHL	**Ulahol**	**1.67**	**248**	⇑*i*P	**Pn**	**08 45 47.5**	**-0.2**
ULHL				⇑*i*S	**Sb**	**08 46 09.7**	**-0.6**
KST	**Kastek**	**1.74**	**276**	P	**Pb**	**08 45 50.4**	**+0.5**
	1.5nm,0.3s						
KST				S	**Sg**	**08 46 14.0**	**+1.0**
	3.8nm,0.6s						
KST	**Kastek**	**1.74**	**276**	*e*P	**Pb**	**08 45 50.4**	**+0.5**
	1.5nm,0.3s						
KST				*e*S	**Sg**	**08 46 14.0**	**+1.0**
	3.8nm,0.6s						
BOOM	**Boomskoye usch**	**1.80**	**258**	⇑*i*P	**Pn**	**08 45 49.4**	**-0.1**
BOOM				⇑*i*S	**Sn**	**08 46 12.7**	**-0.3**
DGS	**Degeres**	**1.90**	**281**	Pg	**Pb**	**08 45 52.9**	**+0.2**
	1.2nm,0.3s						
DGS				Lg	Lg	08 46 18.3	
	9.6nm,0.5s						
TKM2	**Tokmak 2**	**2.00**	**272**	⇑*i*P	**Pn**	**08 45 52.4**	**+0.1**
TKM2				⇑*i*S	**Sn**	**08 46 17.8**	**-0.2**
KRBS	**Karabastau**	**2.09**	**293**	Pg	**Pb**	**08 45 55.2**	**-0.7**
	1.4nm,0.5s						
KRBS				Lg	Lg	08 46 22.7	
	1.7nm,0.4s						
KBK	**Karagaybulak**	**2.49**	**266**	⇑*i*P	**Pn**	**08 45 59.1**	**+0.1**
KBK				⇑*i*S	**Sn**	**08 46 29.5**	**-0.6**
KAPS	**Kapalarasan**	**2.50**	**17**	Pg	**Pb**	**08 46 02.6**	**-0.3**
	4.4nm,0.1s						
KAPS				Lg	Lg	08 46 35.0	
	18nm,0.3s						
JNKS	**Jany-Kuch**	**2.71**	**228**	⇓*e*P	**Pn**	**08 46 01.4**	**-0.6**
JNKS				⇓*e*S	**Sn**	**08 46 34.6**	**-0.9**
USP	**Ospenovka**	**2.82**	**279**	⇓*i*P	**Pn**	**08 46 03.7**	**+0.3**
USP				⇓*i*S	**Sn**	**08 46 37.4**	**-0.6**
AAK	**Ala-Archa**	**2.83**	**266**	⇑Pg	**Pb**	**08 46 08.7**	**+0.1**
	0.1nm,0.3s						
AAK				⇓Lg	Lg	08 46 45.9	
	0.9nm,0.5s						
AAK	**Ala-Archa**	**2.83**	**266**	*i* P	**Pn**	**08 46 03.8**	**+0.2**
AAK				*i* S	**Sn**	**08 46 37.6**	**-0.7**
UCH	**Uchtor**	**2.89**	**258**	⇓*i*P	**Pn**	**08 46 04.8**	**+0.1**
UCH				⇓*i*S	**Sn**	**08 46 39.2**	**-1.1**
ARLS	**Aral**	**3.14**	**252**	⇑*i*P	**Pn**	**08 46 07.9**	**+0.1**
ARLS				⇑*i*S	**Sn**	**08 46 44.6**	**-1.3**
MK31	**Makanchi Array**	**4.81**	**35**	⇑Pg	**Pb**	**08 46 42.3**	**0.0**
	0.1nm,0.2s						
MK31				⇑Lg	Lg	08 47 44.7	
	0.4nm,0.5s,baz=217,slow=30,SNR=4.3						

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*NEIC **10** 09:18:27.8±1.3,9.°67S±0.°04×152.°37E±0.°08,h10km±1km, mb4.5/21,Error ellipse: s-maj=13.5km s-min=5.4km az=73.0*
*IDC **10** 09:18:27.7±0.6,9.°52S×151.°86E,h0km,mb4.3/16, mbtmp4.3/19,ML4.0/3,MS3.8/34,Error ellipse: s-maj=22.4km s-min=15.9km az=85.0*
*DJA **10** 09:18:36.1±0.6,10.°5S±4.°×15.°2E±.°,h82km±6km,M4.5/18, mb4.5/18,mB5.5/5,MLv4.3/2,Mw(mB)5.0/5,MwMwp5.0/1, Mwp5.3/1*

**ISC 10 09:18:27.8±0.4,9.°65

MTN **Manton Dam** 21.02 259 P P 09 23 11.0 -0.9
MTN IAmb IAmb 09 23 17.9
comp=Z,30nm,0.9s
FAKI **Fak Fak** 21.03 287 P P 09 23 12.2 +0.2
FAKI IAmb IAmb 09 23 17.5
comp=Z,18nm,1.0s
FAKI **Fak Fak** 21.03 287 P P 09 23 15.4 +3.4
FAKI **Fak Fak** 21.03 287 P P 09 23 11.7 -0.3
comp=Z,602nmcomp=Z,31nm,1.9s
INKA **Innaminka** 21.05 210 P P 09 23 12.2 +0.2
INKA IAmb IAmb 09 23 18.5
comp=Z,18nm,1.0s
AUDHS **Darwin High Sc** 21.27 261 P P 09 23 17.2 +2.6
AS31 **Alice Springs** 22.45 229 P 09 23 26.8 -0.4
ASAR **Alice Springs** 22.45 229 P P 09 23 25.7 -1.5
ASAR **Alice Springs** 22.45 229 P P 09 23 26.3 -0.9
comp=Z,14nm,0.8s,baz=63,slow=10,SNR=114
ASAR LR LR 09 32 11.9
comp=Z,297nm,18.0s,baz=52,slow=37
comp=Z,14nm,0.8s
AUALC **St Philip's Co** 22.48 229 P P 09 23 27.6 +0.1
CMSA **Cobar Meteorol** 22.64 195 P P 09 23 29.5 +0.4
AUDCS **Dubbo College** 22.73 188 P P 09 23 32.5 +2.4
BNDI **Bandanaira** 22.81 281 P P 09 23 31.5 +0.4
comp=Z,87nm,1.3s
KNRA **Kununurra** 23.74 253 P 09 23 39.3 -1.2
KNRA IAmb IAmb 09 23 45.5
comp=Z,19nm,1.1s
GUMO **Guam** 24.24 342 LR LR 09 31 18.3
comp=Z,106nm,19.9s,baz=117,slow=32
STKA **Stephens Creek** 24.25 203 P P 09 23 44.1 -1.1
STKA **Stephens Creek** 24.25 203 P P 09 23 44.2 -0.9
comp=Z,9.9nm,0.9s,baz=0.3,slow=8.2,SNR=12
STKA LR LR 09 33 45.6
comp=Z,405nm,18.5s,baz=21,slow=38
comp=Z,9.9nm,0.9s
STKA **Stephens Creek** 24.25 203 P P 09 23 44.8 -0.4
NLAI **Namlea** 25.85 283 P P 09 23 59.9 +0.1
comp=Z,2µmcomp=Z,8µmcomp=Z,17nm,0.6s
HTT **Hallett** 26.70 206 P P 09 24 07.7 +0.4
FITZ **Fitzroy Crossi** 27.20 249 P P 09 24 10.7 -1.3
FITZ **Fitzroy Crossi** 27.20 249 LR LR 09 35 10.3
comp=Z,257nm,18.2s,baz=79,slow=37
FITZ **Fitzroy Crossi** 27.20 249 P P 09 24 11.3 -0.7
SANI **Sanana** 27.24 284 P P 09 24 14.4 +2.0
SANI **Sanana** 27.24 284 P P 09 24 12.3 -0.1
comp=Z,442nmcomp=Z,14nm,0.9s
BBOO **Buckleboo** 27.51 211 P P 09 24 13.3 -1.3
BBOO IAmb IAmb 09 24 24.7
comp=Z,8.2nm,0.9s
BBOO **Buckleboo** 27.51 211 P P 09 24 14.1 -0.5
BATI **Baumata** 28.23 266 LR LR 09 36 56.3
comp=Z,504nm,18.9s,baz=164,slow=40
SGSI **Sangihe** 29.80 295 P P 09 24 33.9 -1.3
EDFI **Ende, Flores** 30.25 269 P P 09 24 37.9 -1.4
comp=Z,9.3nm,0.8s
FORT **Forrest** 30.86 224 P P 09 24 43.6 -0.8
KAPI **Kappang** 32.62 276 LR LR 09 39 52.0
comp=Z,89nm,18.9s,baz=116,slow=40
URZ **Urewera** 36.16 146 LR LR 09 38 56.4
comp=Z,213nm,18.8s,baz=328,slow=34
JAGI **Jajag, Banyuwa** 37.70 269 P P 09 25 41.9 -2.0
JCJ **Chichijima** 37.82 345 LR LR 09 40 34.0
comp=Z,76nm,19.6s,baz=122,slow=35
NWAO **Narrogin (SRO)** 39.77 229 LR LR 09 41 27.7
comp=Z,181nm,19.4s,baz=27,slow=35
JOW **Kunigami** 43.12 328 LR LR 09 43 28.6
comp=Z,78nm,18.4s,baz=160,slow=35
LEM **Lembang** 44.31 270 LR LR 09 46 17.4
comp=Z,120nm,18.2s,baz=352,slow=38
INU **Inuyama** 47.03 343 P P 09 26 59.1 -0.4
JNU **Nakatsue** 47.18 335 LR LR 09 45 14.8
comp=Z,56nm,18.8s,baz=141,slow=34
MJAR **Matsushiro Arr** 47.82 345 P P 09 27 05.0 -0.6
MJAR **Matsushiro Arr** 47.82 345 P P 09 27 05.1 -0.6
comp=Z,1.7nm,0.7s,baz=180,slow=8.7,SNR=9.2
MJAR LR LR 09 44 52.7
comp=Z,47nm,19.3s,baz=163,slow=33
comp=Z,1.7nm,0.7s
NJ2 **Nanjing** 52.37 324 *e*P P 09 27 40.8 +0.5
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
USRK **Ussuriysk Ar.** 56.68 343 P P 09 28 11.3 0.0
comp=Z,5.3nm,1.0s,baz=145,slow=10,SNR=4.3
comp=Z,5.3nm,1.0s
PPT2 **Papeete2** 56.84 105 *e*S S 09 36 07.7 +0.6
comp=Z,34nm,25.8s
PPT2 *e*LR LR 09 44 47.4
comp=Z,49nm,26.8s
TBI **Tubuai** 57.12 112 *e*LR LR 09 44 47.0
comp=Z,403nm,43.5s
CMAR **Chiang Mai Arr** 59.61 298 P P 09 28 31.4 -1.0
comp=Z,2.3nm,0.3s,baz=112,slow=7.1,SNR=6.7
comp=Z,2.3nm,0.3s
PZH **PanZhiHua** 60.84 308 P P 09 28 42.8 +1.9
PETK **Petropavlovsk-** 62.67 4 P P 09 28 53.4 +0.8
comp=Z,11nm,0.9s,baz=160,slow=6.8,SNR=8.6
PETK LR LR 09 50 59.1
comp=Z,58nm,21.2s,baz=139,slow=31
comp=Z,11nm,0.9s
HHC **Hu-ho-hao-te** 62.73 326 *e*P P 09 28 55.6 +2.3
HHC pmax pmax
comp=Z,18nm,0.7s
CASY **Casey** 63.28 198 P P 09 28 56.5 +0.1
CASY IAmb IAmb 09 28 56.6
comp=Z,3.9nm,0.9s
LZH **Lanzhou** 64.42 318 *e*P P 09 29 05.7 +1.1
LZH pP pwP 09 29 10.2 +0.3
LZH sP sP 09 29 13.0 +4.8
LZH pmax pmax
comp=Z,26nm,1.2s
SHEM **Shemya Is, Ala** 64.87 14 LR LR 09 51 17.5
comp=Z,87nm,21.0s,baz=288,slow=30
HILR **Hailar Array B** 65.49 337 P P 09 29 10.6 -0.6
comp=Z,1.2nm,0.4s,baz=115,slow=6.7,SNR=4.5
comp=Z,1.2nm,0.4s
TAOE **Nuku Hiva Isla** 66.55 95 *e*LR LR 09 49 21.0
comp=Z,68nm,26.4s
VNDA **Vanda** 68.04 178 LR LR 09 58 03.6
comp=Z,48nm,18.2s,baz=320,slow=35
GTA **Gaotai** 68.92 319 *e*P P 09 29 34.8 +1.5
GTA pmax pmax
comp=Z,10.0nm,1.2s
SONM **Songino Array** 70.18 329 P P 09 29 41.9 +1.0
SONM **Songino Array** 70.18 329 P P 09 29 41.5 +0.6
comp=Z,4.0nm,0.8s,baz=144,slow=5.8,SNR=17
SONM LR LR 10 00 24.4
comp=Z,70nm,20.3s,baz=176,slow=36
comp=Z,4.0nm,0.8s
EVN **Everest** 73.50 303 P 09 30 01.4 -0.6
EVN IAmb IAmb 09 30 05.0
comp=Z,4.3nm,0.8s
QSPA **South Pole Qui** 80.34 180 P P 09 30 42.0 +2.8
QSPA IAmb IAmb 09 31 06.7
comp=Z,3.5nm,0.8s
QSPA **South Pole Qui** 80.34 180 P P 09 30 42.4 +3.3
comp=Z,0.7nm,0.7s,baz=284,slow=1.0,SNR=12
QSPA LR LR 10 06 49.1
comp=Z,26nm,18.4s,baz=4.5,slow=36
comp=Z,0.7nm,0.7s
KDAK **Kodiak Island** 80.69 26 LR LR 09 59 40.8
comp=Z,80nm,21.5s,baz=235,slow=31
MAW **Mawson** 80.94 203 P P 09 30 43.2 +1.0
comp=Z,1.2nm,0.7s,baz=80,slow=12,SNR=1.4
MAW LR LR 10 03 47.0
comp=Z,109nm,20.1s,baz=86,slow=34
comp=Z,1.2nm,0.7s
TIXI **Tiksi** 82.61 353 LR LR 10 06 53.4
comp=Z,38nm,19.9s,baz=191,slow=35
MKAR **Makanchi Array** 83.66 319 P P 09 30 56.0 -0.8
MKAR **Makanchi Array** 83.66 319 P P 09 30 57.0 +0.2
comp=Z,3.8nm,0.9s,baz=106,slow=5.7,SNR=18
comp=Z,3.8nm,0.9s
MAKZ **Makanchi** 83.87 319 P P 09 30 58.0 +0.1
ZALV **Zalesovo Beam** 84.91 327 P P 09 31 02.0 -0.9
ZALV **Zalesovo Beam** 84.91 327 P P 09 31 01.9 -1.0
comp=Z,2.3nm,0.7s,baz=115,slow=4.8,SNR=9.4
ZALV LR LR 10 10 40.0
comp=Z,77nm,18.1s,baz=246,slow=37
comp=Z,2.3nm,0.7s
IMAR **Indian Mountai** 85.08 19 P P 09 31 03.5 0.0
ILAR **Eielson Array** 86.80 22 P P 09 31 12.1 0.0
ILAR LR LR 10 05 25.1
comp=Z,51nm,19.4s,baz=9.5,slow=32
comp=Z,1.5nm,0.9s
KURBB **Kurchatov Arra** 87.31 322 P P 09 31 14.0 -0.8
comp=Z,0.7nm,0.8s,baz=106,slow=3.7,SNR=4.9
comp=Z,0.7nm,0.8s
AAK **Ala-Archa** 87.65 314 LR LR 10 11 59.2
comp=Z,54nm,19.0s,baz=309,slow=37
DAWY **Dawson** 89.38 24 P 09 31 23.6 -0.8
NRIK **Noril'sk** 90.37 341 LR LR 10 12 23.3
comp=Z,58nm,18.2s,baz=320,slow=36
BBB **Bella Bella** 91.22 37 LR LR 10 08 56.6
comp=Z,55nm,18.5s,baz=31,slow=33
DLBC **Dease Lake** 91.76 31 LR LR 10 07 24.1
comp=Z,28nm,19.2s,baz=265,slow=32
BVAR **Borovoye Array** 92.81 323 P P 09 31 39.0 -1.6
comp=Z,0.8nm,0.7s,baz=90,slow=4.3,SNR=2.0
comp=Z,0.8nm,0.7s
INK **Inuvik** 93.12 21 LR LR 10 10 31.9
comp=Z,34nm,19.1s,baz=358,slow=34
NVAR **Mina Array Bea** 95.43 52 P P 09 31 56.5 +3.2
comp=Z,3.1nm,1.0s,baz=253,slow=6.7,SNR=14
comp=Z,3.1nm,1.0s
PFO **Pinyon Flats O** 96.27 57 LR LR 10 06 33.6
comp=Z,38nm,20.2s,baz=16,slow=30
SNAA **Sanae** 97.19 188 LR LR 10 14 31.4
comp=Z,73nm,20.3s,baz=191,slow=35
NEW **Newport** 97.48 42 LR LR 10 09 14.6
comp=Z,60nm,19.6s,baz=300,slow=31
ARTI **Arti** 100.14 326 LR LR 10 21 24.8
comp=Z,37nm,18.0s,baz=5.5,slow=38
TORD **Torodi Ar. Bea** 151.01 280 PKPbc PKPbc 09 38 21.6 -0.5
comp=Z,2.3nm,0.3s,baz=58,slow=4.6,SNR=3.3

NNC 10 09:19:51.2±4.8, 43°35N×87°58E, h0km, mb3.6, mpv3.2, 5C-3D, Error ellipse: s-maj=35.8km s-min=27.9km az=117.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**5.09**	**314**	⇑Pn	Pn	09 21 08.4	-0.3
	1.1nm,0.6s,baz=126,slow=14,SNR=11						
MK31				⇑Sn	Sn	09 22 10.1	+2.0
	2.3nm,0.6s,baz=218,slow=21,SNR=2.8						
MK31				Lg	Lg	09 22 30.1	
	4.1nm,0.6s,baz=140,slow=28,SNR=4.7						
PDGK	**Podgornoye**	**5.90**	**273**	⇓Pn	Pn	09 21 20.7	+0.7
	1.5nm,0.5s						
PDGK				⇓Pg	Pb	09 21 36.1	+1.1
	2.5nm,0.8s						
PDGK				⇑Sn	Sn	09 22 30.8	+2.5
	5.8nm,0.8s						
PDGK				⇓Lg	Lg	09 22 55.5	
	12nm,0.9s						
KURBB	**Kurchatov Arra**	**9.54**	**323**	⇑Lg	Lg	09 24 56.2	
	8.0nm,0.8s						
KURK	**Kurchatov**	**9.57**	**323**	⇑Lg	Lg	09 24 57.8	
	2.8nm,1.0s						

*GCG **10** 09:35:07.6±2.0, 15°.61N×91°.43W, h6km±11km, MD3.6, ML3.4*
*CATAC **10** 09:35:08.7±0.3, 16°N±2°×9°2W±°, h2km±2km, M3.0/7, MLv3.0/7, Error ellipse: s-maj=5.5km s-min=2.9km az=44.5, confirmed*

ISC 10 09:35:05.7±1.2, 15.74N±0°.03×91.44W±0°.03, h7km±12km, n21, σ0.80/26, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUEH	**Huehuetenango**	**0.42**	**188**	*i* P	**Pg**	**09 35 14.1**	**+0.2**
HUEH				*i* S	**Sg**	**09 35 19.0**	**-0.5**
HUEH				IAML		09 35 19.3	
	comp=N,3µm,0.2s						
HUEH	**Huehuetenango**	**0.42**	**188**	P	**Pg**	**09 35 14.2**	**+0.2**
HUEH				S	**Sg**	**09 35 19.1**	**-0.5**
QUIS	**Sacapulas**	**0.56**	**143**	*e*P	**Pg**	**09 35 16.9**	**+0.5**
CCIG	**Comitan**	**0.86**	**309**	*e*P	**Pn**	**09 35 24.1**	**-0.3**
CCIG	**Comitan**	**0.86**	**309**	P	**Pn**	**09 35 24.2**	**-0.2**
CCIG	**Comitan**	**0.86**	**309**	S	**Sn**	**09 35 37.6**	**+0.2**
QUEO	**Labor Ovalle**	**0.86**	**185**	*i* P	**Pg**	**09 35 22.6**	**+0.2**
QUEO				*e*S	**Sg**	**09 35 33.3**	**-0.3**
QUEO				IAML		09 35 33.9	
	comp=N,2µm,0.2s						
SOKI	**Kika Raxquin**	**0.91**	**178**	*e*P	**Pg**	**09 35 23.5**	**+0.2**
AVCB	**Coban**	**1.03**	**105**	*e*P	**Pn**	**09 35 26.8**	**+0.1**
AVCB				*e*S	**Sb**	**09 35 40.5**	**+0.7**
AVCB				IAML		09 35 47.3	
	comp=N,2µm,0.3s						
SMCA	**Catarina**	**1.07**	**215**	*e*P	**Pg**	**09 35 25.7**	**-0.5**
APG	**El Apazote**	**1.19**	**128**	*i* P	**Pg**	**09 35 28.5**	**-0.1**
RTAL	**Retalhuleu**	**1.23**	**192**	P	**Pg**	**09 35 29.7**	**+0.3**
RTAL	**Retalhuleu**	**1.23**	**192**	S	**Sb**	**09 35 45.2**	**-0.3**
STG2	**El Palmar, Qui**	**1.30**	**177**	*e*P	Pn	09 35 25.0	-5.4
STG2				*i* S	Sb	09 35 37.2	-10
PETF	**Flores**	**1.91**	**52**	*e*P	**Pn**	**09 35 37.3**	**-1.4**
PETF				*e*S	**Sg**	**09 36 06.2**	**-1.0**
TGIG		**1.92**	**303**	*i* P	**Pg**	**09 35 42.3**	**-0.2**
TGIG				*e*S	**Sg**	**09 36 08.0**	**+0.6**
ZAFR2	**Estanzuela, Za**	**2.32**	**119**	*e*P	**Pn**	**09 35 42.4**	**-2.0**
ESQI	**Esquipulas**	**2.34**	**120**	P	**Pb**	**09 35 49.4**	**+1.1**
ESQI	**Esquipulas**	**2.34**	**120**	S	**Sb**	**09 36 19.3**	**+1.8**
NUBE	**Las Nubes**	**2.43**	**138**	S	**Sb**	**09 36 20.0**	**-0.1**
NUBE	**Las Nubes**	**2.43**	**138**	P	**Pb**	**09 35 50.1**	**+0.3**

*NEIC **10** 09:44:42.8±0.8, 33°.913N±0°.008×116°.725W±0°.008, h10km±1km, Error ellipse: s-maj=2.8km s-min=1.3km az=240.0*

PAS 10 09:44:43.3±0.7, 33°916N±0°008×116°727W±0°010, h16km±2km, ML3.4/212, ML3.3/104(NEIC), Error ellipse: s-maj=1.2km s-min=1.1km az=55.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEVC	**Devers**	**0.12**	**81**		Pg	09 44 47.0	-0.1
DEVC					Sb	09 44 49.9	-0.1
BBSC	**Beaumont Base**	**0.21**	**272**		Pb	09 44 52.3	+3.4
GVDA	**Garner Valley**	**0.25**	**170**		Sg	09 44 52.7	-0.1
GVDA	**Garner Valley**	**0.25**	**170**		Pg	09 44 48.5	-0.4
EW2	**E Wide Canyon**	**0.27**	**85**		Pg	09 44 48.8	-0.3
EW2					Sg	09 44 53.1	0.0
POB	**Polly Butte**	**0.28**	**216**		Pg	09 44 49.2	-0.2
POB					Sg	09 44 53.7	+0.1
HMTC	**Hemet**	**0.31**	**228**		Pg	09 44 49.7	-0.2
HMTC					Sg	09 44 54.2	-0.2
BLAC	**Blackrock camp**	**0.32**	**61**		Pg	09 44 49.7	-0.5
BLAC					Sg	09 44 54.5	-0.3
CFT	**Crafton Hills**	**0.34**	**291**		Pg	09 44 50.3	-0.2
CRY	**Cary Ranch**	**0.35**	**181**		Pg	09 44 50.3	-0.3
CRY					Sg	09 44 55.5	-0.1
DGR	**Domenigoni Val**	**0.35**	**222**		Pg	09 44 50.4	-0.3
DGR					Sg	09 44 55.4	-0.2
DNR	**Dunn Ranch,Anz**	**0.36**	**167**		Pg	09 44 50.5	-0.3
DNR				Sg	Sg	09 44 56.1	+0.3
PEC	**Perris**	**0.36**	**266**		Pg	09 44 50.4	-0.4
PEC					Sg	09 44 55.7	-0.2
SVD	**Seven Oaks Dam**	**0.36**	**302**		Pg	09 44 50.4	-0.4
SVD					Sg	09 44 55.9	0.0
SNDA	**J Saunders Pla**	**0.38**	**165**		Pg	09 44 50.8	-0.3
SNDA					Sg	09 44 56.7	+0.3
PFO	**Pinyon Flats O**	**0.38**	**144**		Pg	09 44 50.7	-0.4
PFO					Sg	09 44 56.1	-0.3
PFO	**Pinyon Flats O**	**0.38**	**144**		Pg	09 44 50.6	-0.4
PFO				IAML		09 44 56.6	
	4µm,0.4s						
PFO				IAML		09 44 56.6	
	4µm,0.4s						
PFO				Sg	Sg	09 44 56.0	-0.4
XPFO	**Pinon Flat**	**0.38**	**143**		Pg	09 44 50.7	-0.4
XPFO					Sg	09 44 55.9	-0.6
BBRC	**Big Bear Solar**	**0.38**	**335**		Pg	09 44 50.7	-0.5
BBRC					Sg	09 44 56.3	-0.4
PMD	**Palm Desert**	**0.40**	**132**		Sg	09 44 56.5	-0.3
PMD	**Palm Desert**	**0.40**	**132**		Pg	09 44 50.8	-0.6
PMD				IAML		09 44 56.8	
	comp=N,4µm,0.4s						
PMD				IAML		09 44 57.0	
	comp=E,4µm,0.2s						
BACC	**Bachelor Mtn.**	**0.40**	**221**		Pg	09 44 51.0	-0.4
BACC					Sg	09 44 56.6	-0.5
BZNA	**Buzz No.'s Pla**	**0.43**	**173**		Sg	09 44 51.6	-0.3
BZNA					Pg	09 44 57.9	0.0
FRD	**Ford Ranch, An**	**0.43**	**166**		Pg	09 44 51.4	-0.7
FRD					Sg	09 44 57.5	-0.5
FRD	**Ford Ranch, An**	**0.43**	**166**		Pg	09 44 51.6	-0.5
FRD					Sg	09 44 57.5	-0.6
SIL	**Silver Peak**	**0.44**	**349**		Pg	09 44 51.7	-0.6
SIL					Sg	09 44 58.2	-0.2
HLNC	**Highland**	**0.46**	**297**		Pg	09 44 52.1	-0.5
HLNC					Sg	09 44 58.8	0.0
GTM	**Goat Mountain**	**0.49**	**39**		Pg	09 44 52.1	-0.9
GTM					Sg	09 44 58.9	-0.9
CFSC	**Central Fire S**	**0.50**	**292**		Pg	09 44 53.0	-0.3
CFSC					Sg	09 45 00.4	+0.3
MURC	**Murrieta**	**0.50**	**231**		Pg	09 44 52.7	-0.6
MURC					Sg	09 44 59.9	-0.2
RSBC	**Riverside Bore**	**0.50**	**277**		Pg	09 44 52.6	-0.7
RSBC					Sg	09 44 59.5	-0.6
RSBC	**Riverside Bore**	**0.50**	**277**		Pg	09 44 52.7	-0.6
RSBC					Sg	09 44 59.6	-0.5
CLTC	**Calectric**	**0.52**	**290**		Pg	09 44 53.4	-0.3
CLTC					Sb	09 45 01.3	-0.1
RVR	**Riverside**	**0.55**	**278**		Pg	09 44 53.3	-0.8
RVR					Sg	09 45 00.9	-0.6
PLM	**Palomar**	**0.57**	**191**		Pg	09 44 54.1	-0.6
TPC	**Twentynine Pal**	**0.59**	**71**		Pg	09 44 54.2	-0.9
BELC	**Belle Mtn. Jos**	**0.61**	**82**		Pg	09 44 54.7	-0.7
BELC	**Belle Mtn. Jos**	**0.61**	**82**		Sg	09 45 03.0	-0.5
FON	**Fontana**	**0.62**	**287**		Pg	09 44 54.8	-0.7
FON					Sg	09 45 03.0	-0.8
ELS	**Elsinore Mount**	**0.64**	**246**		Pg	09 44 55.0	-1.0
ELS				IAML		09 45 03.9	
	comp=E,1µm,0.4s						
ELS				IAML		09 45 04.2	
	comp=N,959nm,0.3s						
ELS	**Elsinore Mount**	**0.64**	**246**		Sg	09 45 03.7	-0.8
CTCC	**Cactus City**	**0.67**	**113**		Pg	09 44 55.8	-0.6
CTCC					Sg	09 45 05.0	-0.3
BORC	**Borrego Spring**	**0.69**	**158**		Pg	09 44 56.2	-0.7
BORC				IAML		09 45 06.2	
	comp=E,2µm,0.2s						
BORC				IAML		09 45 06.3	
	comp=N,1µm,0.3s						
BORC	**Borrego Spring**	**0.69**	**158**		Sg	09 45 05.4	-0.7
CRNC	**Corona**	**0.69**	**267**		Pg	09 44 55.9	-1.1
CRNC					Sg	09 45 05.2	-1.0
MLSC	**Mira Loma**	**0.70**	**278**		Pg	09 44 55.9	-1.1
MLSC					Sg	09 45 05.1	-1.2
MATG	**Mataguay Scout**	**0.72**	**175**		Pg	09 44 56.8	-0.6
MATG					Sg	09 45 06.3	-0.6
CTW	**Cottonwood Mou**	**0.75**	**108**		Pg	09 44 57.0	-0.9
CTW					Sg	09 45 07.3	-0.6
CHNC	**Chino**	**0.80**	**276**		Pb	09 44 57.7	-1.1
CHNC					Sb	09 45 08.7	-0.7
VTV	**Victorville**	**0.81**	**322**		Pb	09 44 58.3	-0.9
VTV					Sb	09 45 08.8	-1.2
SLH	**Sleepy Hollow**	**0.82**	**151**		Pb	09 44 58.7	-0.5
SLH					Sg	09 45 10.4	+0.3
BFSC	**Mount Baldy Ra**	**0.84**	**293**		Pb	09 44 58.5	-1.1
BFSC	**Mount Baldy Ra**	**0.84**	**293**		Sb	09 45 09.7	-0.9
JUEM	**Julian Eagle M**	**0.84**	**173**		Pb	09 44 58.7	-0.9
JUEM					Sb	09 45 09.9	-0.8
SSK	**Sunset Peak**	**0.85**	**290**		Pb	09 44 58.9	-0.9
ADO	**Adelanto Recei**	**0.86**	**317**		Pb	09 44 59.5	-0.5
ADO					Sb	09 45 11.3	0.0
GORC	**Green Oak Ranc**	**0.87**	**209**		Pb	09 44 58.6	-1.3
GORC					Sb	09 45 10.0	-1.4
SALN	**Salton City**	**0.89**	**136**		Pb	09 44 59.8	-0.5
SALN	**Salton City**	**0.89**	**136**		Sg	09 45 12.2	0.0
PSRC	**Puddingstone R**	**0.92**	**281**		Pb	09 44 59.7	-1.1
PSRC					Sb	09 45 11.9	-0.8
DPP	**Dos Picos Cty**	**0.93**	**191**		Pb	09 44 59.8	-1.3
DPP				IAML		09 45 12.6	
	comp=E,818nm,0.3s						
DPP				IAML		09 45 12.8	
	comp=N,598nm,0.1s						
CPE	**Camp Elliot**	**1.07**	**197**		Pb	09 45 02.1	-1.3
CPE				IAML		09 45 17.4	
	comp=N,737nm,0.3s						
MWC	**Mount Wilson**	**1.15**	**286**		Pb	09 45 03.6	-1.3
MWC				IAML		09 45 21.3	
	comp=N,456nm,0.4s						
MWC				IAML		09 45 21.4	
	comp=E,678nm,0.5s						
BAR	**Barrett**	**1.23**	**178**		Pn	09 45 04.9	-1.0
BAR				IAML		09 45 21.9	
	comp=E,474nm,0.3s						
BAR				IAML		09 45 22.0	
	comp=N,492nm,0.2s						
PASC	**Pasadena Art C**	**1.24**	**282**		Pn	09 45 04.9	-1.0
DANC	**Danby, Needles**	**1.33**	**57**		Pn	09 45 05.8	-1.3
DANC				IAML		09 45 25.9	
	comp=E,715nm,0.6s						
DANC				IAML		09 45 27.3	
	comp=N,648nm,0.4s						
TJX	**Tijuana**	**1.43**	**191**		Pn	09 45 08.2	-0.3
TJX				IAML		09 45 37.8	
	comp=E,404nm,0.8s						
TJX				IAML		09 45 40.2	
	comp=N,441nm,0.8s						
YUH	**Yuha Desert**	**1.43**	**152**		Pn	09 45 06.9	-1.7
TPO	**Tropico Hills**	**1.57**	**308**		Pn	09 45 10.0	-0.6
TPO				IAML		09 45 38.5	
	comp=N,352nm,0.7s						
TPO				IAML		09 45 41.0	
	comp=E,285nm,0.7s						
CBX	**Cerro Bola**	**1.60**	**178**	Pn	Pn	09 45 10.8	-0.2
CBX				IAML		09 45 35.4	
	comp=N,394nm,0.7s						
CCCA	**Chr Cany lake**	**1.69**	**342**		Pn	09 45 11.9	-0.3
CCCA				IAML		09 45 39.0	
	comp=E,430nm,0.9s						
OSI	**Osito Audit: C**	**1.79**	**293**		Pn	09 45 13.5	-0.1
OSI				IAML		09 45 46.1	
	comp=E,270nm,0.5s						
OSI				IAML		09 45 46.4	
	comp=N,239nm,0.8s						
WSHM	**Spangler Hills**	**1.79**	**340**		Pn	09 45 12.9	-0.8
WSHM				IAML		09 45 43.1	
	comp=N,169nm,0.5s						
WSHM				IAML		09 45 44.7	
	comp=N,246nm,0.7s						
MTPC	**Mountain Pass**	**1.84**	**31**		Pn	09 45 13.3	-1.0
MTPC				IAML		09 45 42.0	
	comp=E,223nm,0.5s						
BLYC	**Blythe**	**1.84**	**95**		Pn	09 45 12.1	-2.2
BLYC				IAML		09 45 43.2	
	comp=N,260nm,0.5s						
BLYC				IAML		09 45 43.9	
	comp=E,182nm,0.5s						
SHOC	**Shoshone, Teco**	**2.01**	**10**		Pn	09 45 15.9	-0.8
ESJX	**Sierra Juarez**	**2.02**	**161**		Pn	09 45 16.2	-0.6
ESJX				IAML		09 45 46.4	
	comp=E,222nm,0.6s						
ESJX				IAML		09 45 46.4	
	comp=N,135nm,0.6s						
QSM	**Queen of Sheba**	**2.05**	**357**		Pn	09 45 16.6	-0.5
QSM				IAML		09 45 49.2	
	comp=N,154nm,0.5s						
QSM				IAML		09 45 50.9	
	comp=E,174nm,0.5s						
ISA	**Isabella, Lake**	**2.26**	**321**		Pn	09 45 19.6	-0.5
GWY	**Greenwater Val**	**2.27**	**1**		Pn	09 45 19.4	-0.9
GWY				IAML		09 45 56.6	
	comp=E,134nm,0.8s						
GWY				IAML		09 46 00.0	
	comp=N,118nm,0.4s						
V12A	**Nelson**	**2.38**	**40**		Pn	09 45 20.9	-0.8
V12A				IAML		09 45 59.6	
	comp=N,99nm,0.4s						
V12A				IAML		09 45 59.6	
	comp=E,120nm,0.5s						
FURC	**Furnace Creek,**	**2.55**	**358**		Pn	09 45 23.6	-0.3
FURC				IAML		09 46 13.9	
	comp=N,127nm,0.7s						
FURC				IAML		09 46 14.2	
	comp=E,158nm,0.8s						
113A	**Mohawk Valley,**	**2.73**	**114**	Pn	Pn	09 45 24.8	-1.6
VES	**Vestal, Richgr**	**2.73**	**315**	Pn	Pn	09 45 26.1	-0.3
VES				IAML		09 46 15.0	
	comp=E,151nm,1.0s						
VES				IAML		09 46 15.2	
	comp=N,159nm,0.8s						
CWC	**Cottonwood Cre**	**2.75**	**337**		Pn	09 45 26.7	-0.2
WCT	**Wildcat Mounta**	**2.87**	**2**		Pn	09 45 28.4	-0.2
WCT				IAML		09 46 15.1	
	comp=E,70nm,0.5s						
SHPR	**Sheep Range**	**2.88**	**26**		Pn	09 45 28.5	-0.2

TPNV	**Topopah Spring**	**3.05**	**7**	Pn	Pn	09 45 31.0	-0.1
TPNV				IAML		09 46 27.1	
	comp=E,49nm,0.5s						
Y14A	**Wickenburg**	**3.09**	**89**		Pn	09 45 30.5	-1.0
Y14A				IAML		09 46 21.1	
	comp=N,110nm,0.3s						
Y14A				IAML		09 46 25.1	
	comp=E,68nm,0.5s						
DSP	**Deep Springs**	**3.59**	**344**		Pn	09 45 38.7	+0.4
PRN	**Pahroc Range**	**3.74**	**21**		Pn	09 45 41.0	+0.5
214A	**Organ Pipe Nat**	**3.83**	**120**	Pn	Pn	09 45 40.8	-0.9
PMPB	**Monarch Peak**	**4.05**	**306**	Pn	Pn	09 45 44.2	-0.5
MDPB	**Devils Postpil**	**4.17**	**333**		Pn	09 45 48.4	+1.9
LCMT	**Little Creek M**	**4.20**	**42**		Pn	09 45 46.9	+0.1
HULI	**Fort Hunter Li**	**4.26**	**301**	Pn	Pn	09 45 46.1	-1.4
HULI				IAML		09 48 34.0	
	comp=N,40nm,2.4s						
X16A	**Lo Mia Camp, P**	**4.41**	**82**	Pn	Pn	09 45 48.6	-1.2
U15A	**North Rim**	**4.41**	**54**		Pn	09 45 50.0	+0.1
KNB	**Kanab**	**4.44**	**45**		Pn	09 45 50.6	+0.4
NV11	**Mina Array Sit**	**4.65**	**346**	Pn	Pn	09 45 53.8	+0.7
CMB	**Columbia Colle**	**5.07**	**325**	Pn	Pn	09 45 58.9	+0.2
MHC	**Mount Hamilton**	**5.26**	**312**	Pn	Pn	09 46 01.0	-0.4
MHC				IAML		09 47 35.3	
	comp=N,14nm,1.2s						
MHC				IAML		09 47 43.8	
	comp=E,18nm,4.1s						

UPA ***10*** *09:50:57.6±2.4,5˚.36N×75˚.62W, h105km±20km, ML5.2*
RSNC ***10*** *09:50:57.5±0.0,5˚N±1˚×7˚6W±˚, h108km±2km, M4.0, mb4.5, mB5.0, ML3.6, Mw(mB)4.3, MwMwp6.1, Mwp6.1*
IDC ***10*** *09:50:58.6±0.9,5˚.35N×75˚.55W, h128km±8km, mb3.8/20, mbtmp4.2/23, MS2.7/3, Error ellipse: s-maj=17.2km s-min=12.1km az=53.0*
NEIC ***10*** *09:50:58.3±2.7,5˚.31N±0˚.08×75˚.62W±0˚.08, h127km±8km, mb4.6/14, Error ellipse: s-maj=11.4km s-min=10.7km az=48.0*

ISC 10 09:50:56.7±0.6,5˚39N±0˚.03×75˚63W±0˚.03, h113km±5km, n119, σ1§37/163, mb4.3/26, 1C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUY2C	**Guyana, Caldas**	**0.32**	**122**	P	**Pn**	**09 51 13.3**	**-0.1**
GUY2C				S	**Sn**	**09 51 25.1**	**-0.9**
CMAN1	**Manizales, Cal**	**0.34**	**161**	P	**Pn**	**09 51 13.3**	**0.0**
CMAN1				S	**Sn**	**09 51 25.1**	**-0.7**
RECRC	**Villamaria, Ca**	**0.51**	**147**	P	**Pn**	**09 51 14.7**	**+0.1**
RECRC				S	**Sn**	**09 51 26.7**	**-1.3**
CBOC	**Ciudad Bolivar**	**0.60**	**321**	P	**Pn**	**09 51 14.9**	**+0.1**
CBOC				S	**Sn**	**09 51 28.0**	**-0.4**
HELC	**Santa Helena**	**0.80**	**7**	*i*P	**Pn**	**09 51 16.9**	**+0.2**
HELC				AMP		09 51 17.4	
	comp=Z,32μm,0.2s						
HELC				*e*S	**Sn**	**09 51 31.6**	**0.0**
HELC	**Santa Helena**	**0.80**	**7**	P	**Pn**	**09 51 16.8**	**+0.2**
HELC				S	**Sn**	**09 51 31.3**	**-0.3**
MEDEC	**Medelln, Ant**	**0.88**	**3**	P	**Pn**	**09 51 17.1**	**-0.1**
MEDEC				S	**Sn**	**09 51 32.5**	**-0.1**
ROSC	**El Rosal**	**1.42**	**113**	P	**Pn**	**09 51 24.9**	**+1.7**
ROSC	**El Rosal**	**1.42**	**113**	P	**Pn**	**09 51 24.6**	**+1.5**
	comp=Z,1μm,0.5s,baz=0.3,slow=1.8,SNR=702						
ROSC				S	**Sn**	**09 51 45.2**	**+2.2**
	comp=Z,2μm,0.7s,baz=150,slow=22,SNR=8.2						
ROSC				LR	LR	09 52 11.9	
	comp=Z,732nm,19.0s,baz=335,slow=55						
ROSC	**El Rosal**	**1.42**	**113**	P	**Pn**	**09 51 24.8**	**+1.7**
ROSC				S	**Sn**	**09 51 45.3**	**+2.2**
ORTC	**Ortega, Tolima**	**1.52**	**165**	P	**Pn**	**09 51 24.4**	**+0.4**
ORTC				S	**Sn**	**09 51 44.5**	**-0.3**
YOTC	**Yotoco, Valle**	**1.57**	**207**	P	**Pn**	**09 51 23.9**	**-0.8**
YOTC				S	**Sn**	**09 51 45.9**	**0.0**
SPBC	**San Pablo de B**	**1.57**	**81**	P	**Pn**	**09 51 25.1**	**+0.5**
SPBC				S	**Sn**	**09 51 45.9**	**0.0**
PTBC	**PUERTO BERRIO,**	**1.63**	**46**	P	**Pn**	**09 51 25.6**	**+0.3**
PTBC				S	**Sn**	**09 51 45.9**	**-1.1**
CVER	**Cruz Verde, Cu**	**1.78**	**119**	P	**Pn**	**09 51 29.2**	**+1.7**
CVER				S	**Sn**	**09 51 52.8**	**+1.9**
PRAC	**Prado**	**1.83**	**156**	P	**Pn**	**09 51 28.2**	**+0.5**
PRAC				S	**Sn**	**09 51 52.3**	**+0.9**
SOLC	**Bahia Solano**	**1.95**	**295**	P	**Pn**	**09 51 29.3**	**+0.1**
SOLC				S	**Sn**	**09 51 54.2**	**+0.2**
CHIC	**Chingaza**	**2.04**	**112**	P	**Pn**	**09 51 32.2**	**+1.5**
CHIC				S	**Sn**	**09 51 57.2**	**+0.6**
UREC	**San Jos de Ur**	**2.34**	**2**	*e*P	**Pn**	**09 51 34.8**	**+0.6**
UREC				AMP		09 51 37.5	
	comp=Z,2μm,0.1s						
UREC				*e*S	**Sn**	**09 52 04.1**	**+1.1**
UREC	**San Jos de Ur**	**2.34**	**2**	P	**Pn**	**09 51 34.8**	**+0.6**
UREC				S	**Sn**	**09 52 02.3**	**-0.7**
BRJC	**Barrancabermej**	**2.45**	**50**	P	**Pn**	**09 51 35.8**	**+0.3**
BRJC				S	**Sn**	**09 52 04.1**	**-1.3**
URMC	**La Uribe, Meta**	**2.47**	**150**	P	**Pn**	**09 51 36.1**	**+0.1**
URMC				S	**Sn**	**09 52 04.8**	**-1.3**
RUSC	**La Rusia**	**2.58**	**79**		**Pn**	**09 51 38.4**	**+0.6**
RUSC	**La Rusia**	**2.58**	**79**	P	**Pn**	**09 51 38.3**	**+0.6**
RUSC				S	**Sn**	**09 52 09.4**	**+0.1**
BETC	**Betania**	**2.70**	**176**	P	**Pn**	**09 51 38.8**	**-0.1**
BETC				S	**Sn**	**09 52 09.6**	**-1.8**
BARC	**Barichara**	**2.71**	**64**	P	**Pn**	**09 51 40.0**	**+0.8**
BARC				S	**Sn**	**09 52 11.4**	**-0.5**
PTAC	**Punta Ardita,**	**2.78**	**309**	*e*P	**Pn**	**09 51 39.4**	**-0.4**
PTAC				AMP		09 51 41.5	
	comp=Z,22μm,0.1s						
PTAC				*e*S	**Sn**	**09 52 12.5**	**-0.5**
PTAC	**Punta Ardita,**	**2.78**	**309**	P	**Pn**	**09 51 39.4**	**-0.4**
PTAC				S	**Sn**	**09 52 10.4**	**-2.7**
POPC	**Popayan, Colom**	**3.02**	**200**	P	**Pn**	**09 51 42.7**	**-0.6**
POPC				S	**Sn**	**09 52 16.1**	**-3.0**
LCBC	**Los crdobas,**	**3.52**	**348**	P	**Pn**	**09 51 50.9**	**+1.2**
OCAC	**Ocana**	**3.64**	**39**	P	**Pn**	**09 51 51.9**	**+0.4**
OCAC				S	**Sn**	**09 52 33.4**	**-0.4**
MACC	**Macarena, Meta**	**3.69**	**151**	P	**Pn**	**09 51 51.5**	**-0.4**
FLOC	**Florencia**	**3.79**	**180**		**Pn**	**09 51 52.6**	**-0.7**
FLOC	**Florencia**	**3.79**	**180**	P	**Pn**	**09 51 52.9**	**-0.4**
FLOC				S	**Sn**	**09 52 34.4**	**-2.7**
CRUC	**La Cruz**	**4.02**	**199**	P	**Pn**	**09 51 57.3**	**+0.6**
CRUC				S	**Sn**	**09 52 43.0**	**-0.2**
TOTI	**Torti**	**4.41**	**323**	*e*P	**Pn**	**09 52 02.2**	**+0.6**
TOTI				AMP		09 52 02.9	
	comp=Z,444nm,0.2s						
GCUF	**Volcan Galeras**	**4.48**	**202**	P	**Pn**	**09 52 02.8**	**-0.2**
GCUF				S	**Sn**	**09 52 51.7**	**-2.7**
SJCC	**San Jacinto, C**	**4.50**	**6**	*e*P	**Pn**	**09 52 03.0**	**+0.2**
SJCC	**San Jacinto, C**	**4.50**	**6**	P	**Pn**	**09 52 02.5**	**-0.3**
SJCC				S	**Sn**	**09 52 52.9**	**-1.3**
ARGC	**Ariguani, Magd**	**4.64**	**17**	P	**Pn**	**09 52 05.9**	**+1.1**
ARGC				S	**Sn**	**09 52 57.6**	**-0.1**
TUMC	**Tumaco**	**4.70**	**221**	P	**Pn**	**09 52 05.8**	**+0.2**
TUMC				S	**Sn**	**09 52 58.9**	**-0.2**
PEDA3	**Pedasi**	**4.85**	**296**	*e*P	**Pn**	**09 52 08.0**	**+0.4**
CMBC	**Cumbal**	**4.94**	**206**	P	**Pn**	**09 52 10.8**	**+1.7**
ACHO3	**Achotines, Los**	**4.94**	**294**	*e*P	**Pn**	**09 52 09.1**	**+0.3**
ACHO3				*e*S	**Sn**	**09 53 04.5**	**-0.3**
TOSI3	**Tonosi**	**5.18**	**293**	*e*P	**Pn**	**09 52 12.5**	**+0.5**
AZU	**Azuero**	**5.19**	**298**	*e*P	**Pn**	**09 52 12.5**	**+0.3**
AZU				AMP		09 52 13.3	
	comp=Z,3μm,0.2s						
AZU				*e*S	**Sn**	**09 53 08.6**	**-2.3**
PTLC	**Puerto Leguiza**	**5.25**	**171**	P	Pn	09 52 17.4	+4.4
	comp=Z,940nmcomp=Z,57nm,0.7s						
UPA	**Univ. de Panam**	**5.26**	**313**	*e*P	**Pn**	**09 52 12.0**	**-1.1**
CHIT3	**Chitre**	**5.39**	**298**	*e*P	**Pn**	**09 52 15.5**	**+0.7**
CHIT3				AMP		09 52 16.4	
	comp=Z,698nm,0.2s						
CHIT3				*e*S	**Sn**	**09 53 15.3**	**-0.5**
ZANG	**Zanguenga, Cho**	**5.49**	**310**	*e*P	**Pn**	**09 52 16.0**	**-0.2**
ZANG				*e*S	**Sn**	**09 53 17.3**	**-0.9**
PESE3	**Pese, Herrera**	**5.54**	**297**	*e*P	**Pn**	**09 52 18.1**	**+1.2**
CACAO	**El Cacao, Vera**	**5.55**	**291**	*i*P	**Pn**	**09 52 17.0**	**+0.1**
CACAO				AMP		09 52 17.3	
	comp=Z,4μm,0.1s						
CACAO				*e*S	**Sn**	**09 53 16.0**	**-3.5**
BCIP	**Isla Barro Col**	**5.61**	**312**		**Pn**	**09 52 16.9**	**-0.8**
BCIP	**Isla Barro Col**	**5.61**	**312**	*e*P	**Pn**	**09 52 16.7**	**-1.0**
BCIP				*e*S	**Sn**	**09 53 20.7**	**-0.3**
BCIP	**Isla Barro Col**	**5.61**	**312**	P	**Pn**	**09 52 16.8**	**-1.0**
	comp=Z,50nm,0.6s						
CRIS3	**El Cristo, Coc**	**5.71**	**300**	*e*P	**Pn**	**09 52 19.5**	**+0.3**
CUSE	**Cuicocha Este**	**5.76**	**209**	P	**Pn**	**09 52 20.9**	**+0.6**
MARI3	**Mariato, Verag**	**5.78**	**293**	*e*P	**Pn**	**09 52 21.1**	**+1.0**
OTAV	**Otavalo**	**5.84**	**209**		**Pn**	**09 52 21.2**	**-0.2**
OTAV	**Otavalo**	**5.84**	**209**	P	**Pn**	**09 52 20.5**	**-0.9**
	comp=Z,15nm,0.8s						
SMRC	**Santa Marta, M**	**5.90**	**14**	P	**Pn**	**09 52 22.8**	**+1.1**
	comp=Z,44nm,0.8s						
SMRC				S	**Sn**	**09 53 24.3**	**-3.8**
	comp=Z,44nm,0.8s						
STIA3	**Santiago, Vera**	**5.95**	**297**	*e*P	**Pn**	**09 52 24.1**	**+1.8**
GMAL	**Guarumal, Vera**	**6.04**	**293**	*i*P	**Pn**	**09 52 25.3**	**+1.6**
SDV	**Santo Domingo**	**6.05**	**55**		**Pn**	**09 52 24.2**	**+0.2**
SDV	**Santo Domingo**	**6.05**	**55**	P	**Pn**	**09 52 24.4**	**+0.4**
	comp=Z,45nm,0.4s,baz=237,slow=11,SNR=35						
SDV				S	**Sn**	**09 53 29.2**	**-2.9**
	comp=Z,86nm,0.4s,baz=57,slow=21,SNR=13						
SDV				LR	LR	09 54 39.0	
	comp=Z,27nm,18.2s,baz=24,slow=37						
MESA3	**La Mesa, Verag**	**6.16**	**297**	*e*P	**Pn**	**09 52 27.1**	**+1.9**
URIC	**Uribia, Colomb**	**7.23**	**30**	P	**Pn**	**09 52 37.9**	**-1.8**
URIC				S	**Sn**	**09 53 53.2**	**-7.1**
BRU2	**Volcan**	**7.78**	**296**		**Pn**	**09 52 49.9**	**+2.6**
PIRO	**Carate, Puerto**	**8.21**	**292**	Pn	**Pn**	**09 52 54.9**	**+1.8**
BAUV	**El Baul**	**8.32**	**64**		**Pn**	**09 52 52.0**	**-2.5**
PRVC	**Isla de Provid**	**9.74**	**325**	P	**Pn**	**09 53 13.1**	**-0.7**
SGC2	**Sao Gabriel da**	**10.25**	**122**	P	**Pn**	**09 53 16.8**	**-3.9**
JTS	**Las Juntas de**	**10.44**	**298**	P	**Pn**	**09 53 25.7**	**+2.5**
	comp=Z,11nm,1.0s,baz=100,slow=4.5,SNR=4.3						
JTS				LR	LR	09 57 30.7	
	comp=Z,63nm,21.8s,baz=96,slow=37						
JUD3	**Juan Diaz 3**	**10.90**	**296**	Pn	**Pn**	**09 53 29.7**	**+0.1**
ESPN	**Las Esperanzas**	**10.91**	**309**	Pn	**Pn**	**09 53 30.1**	**+0.5**
MTDJ	**Mount Denham**	**12.89**	**352**	Pn	**Pn**	**09 53 57.4**	**+1.5**
BOAV	**Boa Vista**	**15.37**	**101**		**Pn**	**09 54 24.5**	**-3.0**
BOAV				IAmb	IAmb	09 54 38.1	
	comp=Z,11nm,0.6s						
SJG	**San Juan**	**15.67**	**35**	P	**P**	**09 54 33.3**	**+0.3**
	comp=Z,7.5nm,0.6s,baz=180,slow=6.1,SNR=2.2						
LPAZ	**La Paz**	**22.79**	**161**		**P**	**09 55 48.7**	**-1.9**
LPAZ	**La Paz**	**22.79**	**161**	P	**P**	**09 55 50.5**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=333,slow=12,SNR=9.2						
	comp=Z,1.7nm,0.6s						
MDP	**Montagnes des**	**22.90**	**90**	LR	LR	10 06 16.4	
	comp=Z,40nm,19.9s,baz=0.5,slow=40						
Z47A	**Carrollton**	**29.99**	**339**	P	**P**	**09 56 56.1**	**+1.5**
V48A	**Smith Brothers**	**31.91**	**343**	P	**P**	**09 57 13.2**	**+1.7**
V48A				IAmb	IAmb	09 57 14.8	
	comp=Z,12nm,0.8s						
WVT	**Waverly**	**32.58**	**341**	P	**P**	**09 57 18.8**	**+1.5**
WVT				IAmb	IAmb	09 57 19.4	
	comp=Z,6.0nm,0.6s						
T47A	**Sharon Grove**	**33.15**	**343**	P	**P**	**09 57 23.9**	**+1.6**
TXAR	**Lajitas Array**	**35.62**	**315**	P	**P**	**09 57 45.2**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=128,slow=9.0,SNR=9.6						
TXAR				PcP	**PcP**	**10 00 11.7**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=120,slow=4.7,SNR=15						
	comp=Z,0.2nm,0.5s						
PV13	**Radium Mtn., P**	**44.41**	**322**	P	**P**	**09 58 56.2**	**-0.4**
PV13				IAmb	IAmb	09 58 59.5	
	comp=Z,10nm,1.4s						
LR05	**Currie**	**45.52**	**176**	P	**P**	**09 59 05.0**	**0.0**
LR05				IAmb	IAmb	09 59 06.1	
	comp=Z,9.6nm,0.6s						
PLCA	**Paso Flores**	**46.14**	**175**	P	**P**	**09 59 09.7**	**-0.2**
PLCA	**Paso Flores**	**46.14**	**175**	P	**P**	**09 59 10.2**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=356,slow=7.7,SNR=7.8						
	comp=Z,1.2nm,0.6s						
PDAR	**Pinedale Array**	**47.81**	**326**	P	**P**	**09 59 23.9**	**+0.7**
PDAR	**Pinedale Array**	**47.81**	**326**	P	**P**	**09 59 24.1**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=127,slow=9.4,SNR=17						
PDAR				PcP	**PcP**	**10 00 50.0**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=190,slow=3.0,SNR=1.8						
	comp=Z,1.6nm,0.6s						
ULM	**Lac du Bonnet**	**47.83**	**343**	P	**P**	**09 59 22.7**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=138,slow=8.2,SNR=2.4						
	comp=Z,3.4nm,0.5s						
SCHQ	**Schefferville**	**49.80**	**7**	P	**P**	**09 59 39.0**	**+1.2**
	comp=Z,8.8nm,0.8s,baz=174,slow=7.4,SNR=5.6						
	comp=Z,8.8nm,0.8s						
NVAR	**Mina Array Bea**	**50.75**	**317**	P	**P**	**09 59 47.5**	**+2.0**
	comp=Z,1.3nm,0.8s,baz=135,slow=7.2,SNR=10						
NVAR				PcP	**PcP**	**10 01 02.0**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=95,slow=3.6,SNR=14						
	comp=Z,1.3nm,0.8s						
COYC	**Coyhaique**	**50.84**	**177**	P	**P**	**09 59 44.6**	**-1.1**
COYC				IAmb	IAmb	09 59 58.7	
	comp=Z,16nm,1.4s						
SACV	**Santiago Islan**	**51.97**	**75**	P	**P**	**09 59 54.2**	**-0.5**
G08A	**Pilot Rock**	**54.73**	**324**	P	**P**	**10 00 15.7**	**+1.1**
BBB	**Bella Bella**	**63.45**	**327**	P	**P**	**10 01 14.9**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=169,slow=5.2,SNR=1.2						
	comp=Z,4.2nm,0.8s						
YKA	**Yellowknife Ar**	**63.76**	**341**	P	**P**	**10 01 15.9**	**-0.4**
	comp=Z,3nm,0.8s,baz=126,slow=6.9,SNR=8.7						
	comp=Z,2.3nm,0.8s						
DBIC	**Dimbokro**	**70.34**	**85**	P	**P**	**10 01 58.1**	**-0.7**
	comp=Z,5.9nm,1.0s,baz=183,slow=2.1,SNR=3.4						
	comp=Z,5.9nm,1.0s						
ESDC	**Sonseca Array**	**72.48**	**50**	P	**P**	**10 02 12.3**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=274,slow=5.4,SNR=6.8						
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.47**	**78**	P	**P**	**10 02 34.1**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=305,slow=6.1,SNR=1.3						
	comp=Z,1.8nm,0.3s						
ILAR	**Eielson Array**	**77.20**	**335**	P	**P**	**10 02 38.1**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=118,slow=4.8,SNR=12						
	comp=Z,1.2nm,0.8s						
RND	**Reindeer**	**77.72**	**334**	P	**P**	**10 02 41.5**	**+0.5**
RND				IAmb	IAmb	10 02 42.8	
	comp=Z,9.9nm,0.7s						
BPAW	**Bear Paw Mtn.**	**78.79**	**334**	P	**P**	**10 02 46.7**	**-0.1**
BPAW				IAmb	IAmb	10 02 48.0	
	comp=Z,9.4nm,0.8s						
NOA	**NORSAR Array B**	**83.79**	**29**	P	**P**	**10 03 13.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=274,slow=6.2,SNR=3.5						
	comp=Z,0.6nm,0.7s						
HFS	**Hagfors**	**85.03**	**30**	P	**P**	**10 03 20.3**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=305,slow=4.9,SNR=4.4						
	comp=Z,1.1nm,0.6s						
SPITS	**Spitsbergen Ar**	**85.17**	**12**	P	**P**	**10 03 21.3**	**+1.4**
	comp=Z,2.3nm,0.6s,baz=292,slow=7.6,SNR=1.0						
	comp=Z,2.3nm,0.6s						
GERES	**GERESS Array B**	**85.54**	**41**	P	**P**	**10 03 23.2**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=259,slow=1.4,SNR=6.6						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**88.87**	**20**	P	**P**	**10 03 38.2**	**+0.4**
	comp=Z,2.5nm,1.0s,baz=278,slow=4.4,SNR=6.4						
	comp=Z,2.5nm,1.0s						
SNAA	**Sanae**	**89.74**	**162**	P	**P**	**10 03 41.0**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=309,slow=6.5,SNR=2.4						
	comp=Z,0.8nm,0.9s						
FINES	**FINESS Array B**	**90.87**	**28**	P	**P**	**10 03 47.8**	**+0.5**
	comp=Z,4.2nm,1.1s,baz=329,slow=1.1,SNR=4.0						
	comp=Z,4.2nm,1.1s						
MKAR	**Makanchi Array**	**124.48**	**18**	PKP	**PKPdf**	**10 09 41.2**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=326,slow=1.9,SNR=2.4						
HHC	**Hu-ho-hao-te**	**133.51**	**352**	*e*P	**PKiKP**	**10 10 02.0**	**+0.4**
NJ2	**Nanjing**	**140.29**	**341**	*e*P	**PKPdf**	**10 10 12.0**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,14nm,1.2s						
ASAR	**Alice Springs**	**146.25**	**234**	PKPbc	**PKPbc**	**10 10 23.7**	**-1.3**
	comp=Z,2.6nm,0.4s,baz=119,slow=3.8,SNR=71						
PZH	**PanZhiHua**	**148.19**	**4**	PKP	**PKPdf**	**10 10 24.8**	**-2.2**
CMAR	**Chiang Mai Arr**	**155.70**	**13**	PKPab	**PKPab**	**10 11 02.9**	**-2.0**
	comp=Z,0.9nm,0.4s,baz=330,slow=3.6,SNR=6.4						

NEIC ***10*** *10:22:17.4±2.0,34˚.38N±0˚.01×97˚.41W±0˚.02, h5km±2km, Error ellipse: s-maj=2.0km s-min=1.6km az=111.0*

NEIC 10 10:22:17.4±2.1,34˚39N±0˚.01×97˚40W±0˚.02, h5km±1km, mb_Lg2.5/27, ML2.7/16, ML2.7/34, Error ellipse: s-maj=2.6km s-min=2.2km az=292.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
X34A	**Smith Ranch, M**	**0.42**	**301**		Pg	10 22 26.2	+0.7
X34A					Sb	10 22 33.4	-0.6
X34A				IAML		10 22 34.2	
	comp=N,951nm,0.3s						
LOOK	**Love County**	**0.43**	**156**		Pb	10 22 26.8	-0.7
LOOK				IAML		10 22 39.6	
	comp=N,972nm,0.6s						
LOOK				IAML		10 22 40.0	
	comp=E,749nm,0.8s						
FNO	**Franklin**	**0.87**	**360**		Pg	10 22 33.7	-0.3
FNO					Sb	10 22 46.3	-0.6
OKCSW	**OKLAHOMA CITY**	**1.01**	**358**		Pb	10 22 37.3	-0.1
OKCSW					Sg	10 22 50.6	+0.5
OKCSW				IAML		10 22 52.8	
	comp=N,265nm,0.5s						
OKCSW				IAML		10 22 53.0	
	comp=E,178nm,0.2s						
Z35A	**Perchaven, San**	**1.06**	**174**		Pg	10 22 37.5	-0.3
WTFS	**Witchita Falls**	**1.08**	**235**		Pg	10 22 37.5	-0.7
WTFS					Sg	10 22 52.1	-0.1
OK004	**Okla Sci Mus**	**1.13**	**357**		Pg	10 22 38.8	-0.4
OK004					Sb	10 22 54.3	-0.2
WMOK	**Wichita Mounta**	**1.20**	**287**		Pg	10 22 38.6	-1.8
WMOK					Sg	10 22 55.7	-0.1
BCOK	**Bluff Creek, N**	**1.28**	**352**		Pg	10 22 41.2	-0.7
BCOK					Sg	10 22 58.6	+0.1
OK029	**Liberty Lake**	**1.41**	**358**		Pn	10 22 42.8	-0.9
FW06	**Azle**	**1.42**	**186**		Pn	10 22 42.9	-0.9
DEOK	**Depew**	**1.63**	**27**		Pn	10 22 46.5	-0.2
CSTR	**Hydro, Custer**	**1.64**	**320**		Pn	10 22 46.4	-0.6
CSTR					Sg	10 23 10.3	+0.1
OK052	**Battle Ridge R**	**1.67**	**17**		Pn	10 22 47.2	-0.2
FW07	**Weatherford**	**1.71**	**191**		Pb	10 22 49.3	0.0
PLPT	**Palo Pinto**	**1.75**	**206**		Pn	10 22 48.4	0.0
QUOK	**Quay**	**1.86**	**17**		Pn	10 22 50.0	0.0
TREL	**Terrell**	**1.98**	**146**		Pn	10 22 52.1	+0.5
TREL				IAmb_Lg		10 23 20.3	
	comp=Z,16nm,0.7s						
TUL3	**Leonard**	**2.01**	**40**		Pn	10 22 52.0	0.0
TUL3				IAmb_Lg		10 23 24.0	
	comp=Z,25nm,0.8s						
FW13	**Cleburne**	**2.03**	**181**		Pn	10 22 52.7	+0.4
OK048	**Pawnee Station**	**2.06**	**10**		Pn	10 22 53.0	+0.4
CROK	**Carrier**	**2.17**	**347**	IAmb_Lg		10 23 30.1	
	comp=Z,22nm,0.7s						
Z38A	**Mt. Pleasant**	**2.30**	**119**	IAmb_Lg		10 23 33.8	
	comp=Z,27nm,0.8s						
ABTX	**Abilene, Hawle**	**2.57**	**227**	IAmb_Lg		10 23 40.7	
	comp=Z,20nm,0.8s						
T35A	**Sooner Cattle**	**2.62**	**16**	IAmb_Lg		10 23 46.8	
	comp=Z,12nm,0.7s						
BRDY	**Brady**	**3.38**	**204**	IAmb_Lg		10 24 10.3	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**3.57**	**279**	IAmb_Lg		10 24 13.4	
	comp=Z,15nm,0.7s						
435B	**Jarrell**	**3.60**	**183**	IAmb_Lg		10 24 18.2	
	comp=Z,20nm,1.1s						
POST	**Post**	**3.67**	**250**	IAmb_Lg		10 24 21.8	
	comp=Z,12nm,0.8s						
HNDO	**Hondo**	**5.10**	**199**	IAmb_Lg		10 25 13.5	
	comp=Z,9.8nm,0.9s						
MNHN	**Monahans**	**5.44**	**238**	IAmb_Lg		10 25 13.8	
	comp=Z,8.3nm,0.9s						
DRIO	**Del Rio**	**5.66**	**210**	IAmb_Lg		10 25 28.6	
	comp=Z,6.1nm,0.8s						

IDC 10 10:24:24.0±10.0,9˚13S×127˚33E, h137km±63km, mb3.4/1, mbtmp3.3/4, Error ellipse: s-maj=80.8km s-min=53.0km az=173.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.06**	**190**	P	Pn	10 26 31.6	-0.1
	0.6nm,0.2s,baz=8.7,slow=9.5,SNR=13						
FITZ				S	Sn	10 28 12.7	+0.5
	1.2nm,0.8s,baz=315,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**12.71**	**149**	P	Pn	10 27 19.2	-0.7
	0.4nm,0.8s,baz=322,slow=12,SNR=8.3						
WRA				S	Sn	10 29 40.7	+0.3
	0.3nm,0.5s,baz=332,slow=12,SNR=

	comp=Z,1.3nm,0.8s								
HILR	**Hailar Array B**	**62.49**	**335**	P		**P**	**10 37 03.7**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=134,slow=8.3,SNR=2.2								
	comp=Z,1.6nm,0.6s								
LZDM	**Lanzhou Array**	**62.80**	**315**	P		**P**	**10 37 05.6**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=97,slow=7.4,SNR=5.9								
	comp=Z,1.3nm,0.3s								
SONM	**Songino Array**	**67.70**	**327**	P		**P**	**10 37 36.7**	**-0.1**
SONM				IAmb		IAmb	10 37 38.9		
	comp=Z,1.7nm,0.7s								
SONM	**Songino Array**	**67.70**	**327**	P		**P**	**10 37 37.3**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=138,slow=4.6,SNR=7.1								
	comp=Z,1.3nm,0.4s								
SHL	**Shillong**	**67.94**	**300**	P		**P**	**10 37 38.4**	**-0.4**
VNDA	**Vanda**	**72.10**	**178**	P		**P**	**10 38 02.6**	**-0.4**
VNDA	**Vanda**	**72.10**	**178**	P		**P**	**10 38 02.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=337,slow=6.8,SNR=13								
	comp=Z,1.3nm,0.6s								
BILL	**Bilibino**	**73.84**	**5**	P		**P**	**10 38 14.3**	**+1.0**
K15K	**Wolf Creek Mou**	**75.53**	**20**	P		**P**	**10 38 24.1**	**+0.9**
K15K				IAmb		IAmb	10 38 49.0		
	comp=Z,5.7nm,1.1s								
J17K	**VABM Dome**	**77.11**	**20**	P		**P**	**10 38 33.5**	**+1.4**
J17K				IAmb		IAmb	10 38 39.5		
	comp=Z,5.5nm,1.2s								
CNPM	**China Poot**	**77.69**	**25**	P		**P**	**10 38 35.3**	**-0.2**
CNPM				IAmb		IAmb	10 38 43.3		
	comp=Z,10nm,1.0s								
MKAR	**Makanchi Array**	**81.82**	**319**	P		**P**	**10 38 57.9**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=108,slow=5.1,SNR=5.8								
	comp=Z,0.8nm,0.6s								
ILAR	**Eielson Array**	**82.23**	**22**	P		**P**	**10 38 58.7**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=251,slow=3.7,SNR=11								
	comp=Z,0.5nm,0.6s								
ZALV	**Zalesovo Beam**	**82.55**	**326**	P		**P**	**10 38 59.6**	**-2.1**
	comp=Z,0.9nm,0.4s,baz=121,slow=4.6,SNR=4.0								
	comp=Z,0.9nm,0.4s								
QSPA	**South Pole Qui**	**84.48**	**180**	P		**P**	**10 39 13.3**	**+1.9**
QSPA	**South Pole Qui**	**84.48**	**180**	P		**P**	**10 39 13.4**	**+1.9**
	comp=Z,10.0nm,0.7s,baz=337,slow=0.9,SNR=143								
KURBB	**Kurchatov Arra**	**85.26**	**322**	P		**P**	**10 39 14.2**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=92,slow=5.2,SNR=1.8								
KURBB				LR		LR	11 15 58.0		
	comp=Z,309nm,20.8s,baz=161,slow=34								
	comp=Z,0.7nm,0.4s								
MAW	**Mawson**	**85.52**	**203**	P		**P**	**10 39 15.5**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=116,slow=6.9,SNR=11								
	comp=Z,2.6nm,0.6s								
BVAR	**Borovoye Array**	**90.68**	**323**	P		**P**	**10 39 39.9**	**-1.5**
	comp=Z,0.6nm,0.5s,baz=108,slow=4.7,SNR=3.1								
	comp=Z,0.6nm,0.5s								
NVAR	**Mina Array Bea**	**91.33**	**52**	P		**P**	**10 39 45.3**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=279,slow=3.7,SNR=2.8								
	comp=Z,0.3nm,0.7s								

IDC ***10*** *10:35:53.7±0.6,28.˙04S×13.˙29W,h0km,mb4.2/17, mbtmp4.2/17,MS3.9/19,Error ellipse: s-maj=18.2km s-min=15.6km az=150.0*

NEIC ***10*** *10:35:55.7±1.1,28.˙0S±0.˙1×13.˙23W±0.˙09,h10km±1km, mb4.7/32,Error ellipse: s-maj=19.6km s-min=11.7km az=155.0*

GCMT ***10*** *10:35:57.8±0.3,28.˙01S±0.˙03×13.˙32W±0.˙02,h13km±1km, MW4.8/87,Moment Tensor Solution. s19,c20; s87,c113; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~1.56±. 14; Mθθ~0.02±.09; Mϕϕ 1.58±.10; Mrθ 1.52±.33; Mθϕ~0.78±.06; Mϕr~0.21±.21; Best double couple: M₀2.30200×10¹⁶ NP1:ϕs183.00000°,δ39.00000°,λ-41.00000°. NP2: ϕs307.00000°,δ65.00000°,λ-122.00000°. Principal axes: T 2.0960, Plg14.0000°, Azm60.0000°; N 0.4110, Plg28.0000°, Azm322.0000°; P -2.5080, Plg57.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 10:35:55.3±0.4,27.˙94S±0.˙09×13.˙27W±0.˙09,h10km,n73, σ1§10/61,mb4.5/32,MS4.0/19,5D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**18.92**	**356**	T		T	10 59 51.4	
	baz=176,slow=74,SNR=86							
H10S3	**ASCENSION HYDR**	**18.93**	**356**	T		T	11 00 00.2	
	baz=44,slow=74,SNR=83							
ASCN	**Ascension**	**19.93**	**357**	P		**P**	**10 40 25.8**	**-1.6**
H10N1	**ASCENSION HYDR**	**20.02**	**356**	T		T	11 01 16.1	
	baz=177,slow=79,SNR=11							
H10N3	**ASCENSION HYDR**	**20.02**	**356**	T		T	11 01 10.3	
	baz=177,slow=79,SNR=18							
H10N2	**ASCENSION HYDR**	**20.04**	**356**	T		T	11 01 18.5	
	baz=177,slow=79,SNR=9.2							
WIN	**Windhoek**	**27.94**	**86**	P		**P**	**10 41 44.7**	**-1.5**
WIN				IAmb		IAmb	10 41 50.5	
	comp=Z,11nm,1.2s							
TSUM	**Tsumeb**	**29.52**	**80**	P		**P**	**10 41 59.5**	**-0.8**
TSUM	**Tsumeb**	**29.52**	**80**	P		**P**	**10 41 59.6**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=249,slow=14,SNR=1.6							
TSUM				LR		LR	10 52 11.0	
	comp=Z,362nm,18.5s,baz=322,slow=33							
	comp=Z,1.8nm,0.7s							
KOOLE	**Kule**	**30.55**	**88**	P		**P**	**10 42 07.8**	**-1.6**
KOOLE				IAmb		IAmb	10 42 15.6	
	comp=Z,9.0nm,0.8s							
GRTLG	**Ghanzi**	**31.94**	**86**	P		**P**	**10 42 20.9**	**-0.7**
GRTLG				IAmb		IAmb	10 42 25.5	
	comp=Z,6.9nm,0.9s							
ONGWA	**Qangwa**	**32.53**	**83**	P		**P**	**10 42 25.7**	**-1.1**
XAUDM	**Khaudum**	**33.05**	**81**	P		**P**	**10 42 30.7**	**-0.7**
XAUDM				IAmb		IAmb	10 42 33.9	
	comp=Z,5.1nm,0.8s							
BOSA	**Boshof**	**33.84**	**100**	P		**P**	**10 42 37.1**	**-1.0**
BOSA				IAmb		IAmb	10 42 56.7	
	comp=Z,8.7nm,0.8s							
BOSA	**Boshof**	**33.84**	**100**	P		**P**	**10 42 37.6**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=256,slow=18,SNR=6.0							
BOSA				LR		LR	10 54 19.3	
	comp=Z,275nm,18.1s,baz=222,slow=33							
	comp=Z,3.1nm,0.8s							
BDFB	**Brasilia**	**34.38**	**284**	P		**P**	**10 42 42.5**	**-0.5**
BDFB				IAmb		IAmb	10 42 46.9	
	comp=Z,8.8nm,1.1s							
BDFB	**Brasilia**	**34.38**	**284**	P		**P**	**10 42 41.7**	**-1.3**
	comp=Z,4.4nm,0.9s,baz=119,slow=8.0,SNR=6.3							
BDFB				LR		LR	10 54 13.8	
	comp=Z,225nm,21.6s,baz=136,slow=32							
	comp=Z,4.4nm,0.9s							
LBTB	**Lobatse**	**34.81**	**94**	P		**P**	**10 42 45.7**	**-0.9**
LBTB				IAmb		IAmb	10 42 54.5	
	comp=Z,7.8nm,0.9s							
LBTB	**Lobatse**	**34.81**	**94**	P		**P**	**10 42 45.8**	**-0.8**
LBTB				LR		LR	10 54 22.8	
	comp=Z,219nm,21.0s,baz=252,slow=32							
	comp=Z,6.7nm,0.9s							
DBIC	**Dimbokro**	**35.35**	**15**	P		**P**	**10 42 49.0**	**-2.1**
	comp=Z,4.2nm,0.9s,baz=225,slow=1.4,SNR=2.1							
DBIC				LR		LR	10 53 59.3	
	comp=Z,79nm,18.9s,baz=188,slow=31							
KSANE	**Kasane**	**36.68**	**82**	P		**P**	**10 43 03.1**	**+0.4**
KSANE				IAmb		IAmb	10 43 10.6	
	comp=Z,15nm,1.2s							
CPUP	**Villa Florida**	**39.09**	**262**	P		**P**	**10 43 23.1**	**+0.2**
CPUP	**Villa Florida**	**39.09**	**262**	P		**P**	**10 43 23.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=81,slow=2.4,SNR=3.0							
CPUP				LR		LR	10 56 31.0	
	comp=Z,64nm,21.6s,baz=313,slow=32							
	comp=Z,0.3nm,0.6s							
LSZ	**Lusaka**	**40.36**	**81**	P		**P**	**10 43 33.6**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=248,slow=8.7,SNR=3.3							
LSZ				LR		LR	10 58 59.6	
	comp=Z,359nm,18.0s,baz=246,slow=34							
	comp=Z,1.4nm,0.4s							
TRQA	**Tornquist**	**41.67**	**243**	P		**P**	**10 43 43.9**	**-0.3**
VNA1	**Neumayer--Stat**	**42.85**	**178**	⇓P		**P**	**10 43 51.9**	**-1.2**
	comp=Z,4.8nm,0.8s							
VNA2	**Neumayer--Watz**	**43.16**	**177**	⇓P		**P**	**10 43 54.7**	**-1.0**
	comp=Z,17nm,0.6s,baz=343,slow=9.8							
TORD	**Torodi Ar. Bea**	**43.34**	**21**	P		**P**	**10 43 57.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**43.34**	**21**	P		**P**	**10 43 59.0**	**+1.2**
	comp=Z,2.4nm,0.4s,baz=205,slow=7.9,SNR=13							
TORD				LR		LR	10 58 27.9	
	comp=Z,248nm,20.5s,baz=167,slow=31							
	comp=Z,2.4nm,0.4s							
VNA3	**Neumayer Olymp**	**43.39**	**178**	⇓P		**P**	**10 43 56.5**	**-1.1**
	comp=Z,5.5nm,0.7s							
SNAA	**Sanae**	**44.16**	**175**	⇓P		**P**	**10 44 02.5**	**-1.4**
	comp=Z,36nm,0.7s							
SNAA	**Sanae**	**44.16**	**175**			**P**	**10 44 02.5**	**-1.4**
SNAA	**Sanae**	**44.16**	**175**	P		**P**	**10 44 02.7**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=339,slow=8.6,SNR=6.9							
SNAA				LR		LR	10 58 15.9	
	comp=Z,74nm,20.5s,baz=12,slow=30							
	comp=Z,1.8nm,0.9s							
TROLL	**Troll, Antarti**	**44.97**	**173**	⇓P		**P**	**10 44 09.5**	**-0.9**
	comp=Z,256nm,1.0s							
SIV	**San Ignacio**	**45.64**	**275**	LR		LR	11 01 08.5	
	comp=Z,209nm,19.4s,baz=106,slow=33							
ZON	**Zonda**	**47.82**	**252**	P		**P**	**10 44 32.5**	**-0.8**
PLCA	**Paso Flores**	**48.22**	**239**	P		**P**	**10 44 36.0**	**-0.3**
PLCA				IAmb		IAmb	10 44 43.4	
	comp=Z,12nm,1.4s							
PLCA	**Paso Flores**	**48.22**	**239**	P		**P**	**10 44 36.3**	**0.0**
	comp=Z,3.2nm,1.1s,baz=98,slow=7.1,SNR=4.9							
PLCA				LR		LR	11 01 19.9	
	comp=Z,67nm,21.8s,baz=84,slow=32							
	comp=Z,3.2nm,1.1s							
PMSA	**Palmer Station**	**48.64**	**206**	LR		LR	11 00 18.1	
	comp=Z,122nm,20.7s,baz=50,slow=30							
BO02	**Sierra Bellavi**	**49.02**	**247**	P		**P**	**10 44 42.0**	**-0.5**
AC02	**Maricunga**	**49.24**	**258**	P		**P**	**10 44 44.6**	**-0.3**
AC02				IAmb		IAmb	10 44 57.8	
	comp=Z,12nm,1.4s							
MT09	**Talagante**	**49.35**	**248**	P		**P**	**10 44 43.8**	**-1.4**
GO02	**Mina Guanaco**	**50.09**	**259**			**P**	**10 44 51.0**	**0.0**
MDP	**Montagnes des**	**50.20**	**305**	LR		LR	11 03 56.8	
	comp=Z,78nm,20.0s,baz=153,slow=34							
LPAZ	**La Paz**	**51.76**	**271**	P		**P**	**10 45 02.5**	**-1.6**
	comp=Z,1.5nm,0.9s,baz=112,slow=19,SNR=4.8							
LPAZ				LR		LR	11 05 34.6	
	comp=Z,127nm,19.8s,baz=102,slow=34							
	comp=Z,1.5nm,0.9s							
MAW	**Mawson**	**59.22**	**154**	P		**P**	**10 45 56.2**	**-0.1**
	comp=Z,4.6nm,0.8s,baz=272,slow=9.0,SNR=7.1							
	comp=Z,4.6nm,0.8s							
MD31	**MD31**	**61.01**	**8**	P		**P**	**10 46 09.5**	**+0.4**
MD31				IAmb		IAmb	10 46 13.0	
	comp=Z,10nm,1.2s							
MD01	**Midelt array s**	**61.01**	**8**	P		**P**	**10 46 10.1**	**+0.9**
NNA	**Nana**	**61.22**	**271**	LR		LR	11 11 53.7	
	comp=Z,129nm,19.3s,baz=118,slow=35							
FURI	**Furi**	**62.14**	**62**	LR		LR	11 12 45.6	
	comp=Z,188nm,18.6s,baz=183,slow=36							
QSPA	**South Pole Qui**	**62.29**	**180**			**P**	**10 46 19.4**	**+1.9**
QSPA	**South Pole Qui**	**62.29**	**180**	P		**P**	**10 46 20.6**	**+3.2**
	comp=Z,11nm,0.8s,baz=221,slow=5.5,SNR=45							
SDV	**Santo Domingo**	**66.42**	**295**			**P**	**10 46 46.0**	**+0.6**
SDV	**Santo Domingo**	**66.42**	**295**	LR		LR	11 14 23.6	
	comp=Z,98nm,18.0s,baz=108,slow=35							
ROSC	**El Rosal**	**67.19**	**289**	LR		LR	11 16 15.6	
	comp=Z,127nm,18.4s,baz=145,slow=36							
COHC	**Cochancay**	**67.69**	**279**	P		**P**	**10 46 53.9**	**+0.6**
COHC				IAmb		IAmb	10 47 02.1	
	comp=Z,5.1nm,1.5s							
ESDC	**Sonseca Array**	**67.82**	**8**	P		**P**	**10 46 54.0**	**+0.5**
	comp=Z,1.6nm,1.1s,baz=187,slow=6.9,SNR=3.1							
	comp=Z,1.6nm,1.1s							
SBA	**Scott Base**	**74.45**	**180**			**P**	**10 47 33.6**	**+0.4**
SBA				IAmb		IAmb	10 47 34.6	
	comp=Z,6.2nm,0.8s							
VNDA	**Vanda**	**74.75**	**179**			**P**	**10 47 35.0**	**+0.1**
VNDA	**Vanda**	**74.75**	**179**	P		**P**	**10 47 35.1**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=180,slow=1.0,SNR=15							
VNDA				LR		LR	11 16 29.0	
	comp=Z,131nm,20.4s,baz=150,slow=33							
	comp=Z,2.0nm,0.7s							
TUE	**Stuetta**	**76.84**	**16**	P		**P**	**10 47 47.7**	**+0.2**
TUE				IAmb		IAmb	10 48 15.0	
	comp=Z,13nm,1.4s							
CTI	**Castel Tesino**	**77.03**	**18**	P		**P**	**10 47 49.0**	**+0.6**
CTI				IAmb		IAmb	10 47 50.0	
	comp=Z,8.4nm,1.3s							
GERES	**GERESS Array B**	**80.15**	**18**	P		**P**	**10 48 05.2**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=211,slow=6.7,SNR=3.6							
	comp=Z,0.7nm,0.9s							
BRTR	**Keskin Array B**	**80.24**	**35**			**P**	**10 48 07.2**	**+0.9**
BRTR	**Keskin Array B**	**80.24**	**35**	P		**P**	**10 48 07.9**	**+1.6**
	comp=Z,3.5nm,0.9s,baz=223,slow=4.3,SNR=18							
	comp=Z,3.5nm,0.9s							
MLR	**Muntele Rosu**	**81.32**	**27**	P		**P**	**10 48 12.1**	**+0.2**
AKASG	**Malin Array Be**	**86.84**	**25**	P		**P**	**10 48 39.8**	**+0.2**
AKASG				IAmb		IAmb	10 48 40.7	
	comp=Z,5.3nm,1.1s							
AKASG	**Malin Array Be**	**86.84**	**25**	P		**P**	**10 48 40.1**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=224,slow=4.7,SNR=7.7							
	comp=Z,1.6nm,0.7s							
NB2	**NORSAR Subarra**	**90.87**	**12**	P		**P**	**10 49 00.9**	**+2.3**
	comp=Z,1.3nm,1.0s,baz=202,slow=4.8							
NOA	**NORSAR Array B**	**90.87**	**12**	P		**P**	**10 49 00.9**	**+2.3**
	comp=Z,2.7nm,1.0s,baz=202,slow=4.8,SNR=4.5							
	comp=Z,2.7nm,1.0s							
ASAR	**Alice Springs**	**119.71**	**145**	PKP		**PKPdf**	**10 54 45.3**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=212,slow=2.8,SNR=5.0							
KSRS	**Korea Array**	**146.19**	**64**	PKPbc		**PKPbc**	**10 55 35.4**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=276,slow=4.5,SNR=10							
MJAR	**Matsushiro Arr**	**154.47**	**63**	PKPbc		**PKiKP**	**10 55 56.0**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=273,slow=3.6,SNR=3.4							

IDC ***10*** *10:46:03.5±0.5,40.˙30N×143.˙89E,h0km,mb4.8/32, mbtmp4.8/40,ML4.1/7,MS4.7/64,Error ellipse: s-maj=12.9km s-min=10.9km az=176.0*

BJI ***10*** *10:46:04.1,40.˙30N×143.˙64E,h10km,mB5.5/71,mb5.3/88, Ms5.5/97,Ms7 5.3/92*

NIED ***10*** *10:46:04.6,40.˙28N×143.˙83E,h17km,MW5.2,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr5.06; Mθθ 1.81; Mϕϕ -6.87; Mrθ 0.61; Mθϕ -3.09; Mϕr 2.11; Fault plane solution: M₀6.82000×10¹⁶ NP1: ϕs199.00000°,δ36.00000°,λ92.00000°. NP2:ϕs17.00000°, δ54.00000°,λ88.00000°.*

JMA ***10*** *10:46:04.6±0.2,40.˙3N±0.˙7×14.˙4E±˚,h17km,MD5.4/40, MW5.3/40,FAR E OFF SANRIKU*

NEIC ***10*** *10:46:05.1,40.˙25N×143.˙99E,h12km*

NEIC ***10*** *10:46:05.1,40.˙25N×143.˙99E,h12km,Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10¹⁶Nm; Mrr3.81; Mθθ-1.16; Mϕϕ-2.66; Mrθ 1.89; Mθϕ-1.16; Mϕr6.54; Fault plane solution: M₀7.69000×10¹⁶ NP1: ϕs214.41000°,δ14.20000°,λ106.21000°. NP2: ϕs17.71000°,δ76.37000°,λ85.96000°. Principal axes: T 7.9839, Plg58.0000°, Azm282.0000°; N -0.6309, Plg4.0000°, Azm19.0000°; P -7.3530, Plg31.0000°, Azm111.0000°;*

MOS ***10*** *10:46:05.7±1.0,40.˙40N×143.˙77E,h16km,mb5.5/74, MS5.3/24 Error ellipse: s-maj=6.5km s-min=3.6km az=115.3*

NEIC ***10*** *10:46:05.0±1.4,40.˙26N±0.˙06×143.˙99E±0.˙09,h10km±1km, mb5.3/73,Mww5.2/16,Error ellipse: s-maj=12.8km s-min=8.2km az=128.0*

BGR ***10*** *10:46:09.4,40.˙71N×144.˙76E,h33km,mb5.3,Ms5.1*

GCMT ***10*** *10:46:10.0±0.1,40.˙25N±0.˙01×143.˙96E±0.˙01,h12km, MW5.3/143,Moment Tensor Solution. s87,c141; s143,c275; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.59±.01; Mθθ-0.04±.01; Mϕϕ-0.55±.01; Mrθ0.34±.02; Mθϕ-0.18±.01; Mϕr0.70±.02; Best double couple: M₀0.98800×10¹⁷ NP1:ϕs190.00000°,δ19.00000°, λ77.00000°. NP2:ϕs24.00000°,δ71.00000°,λ95.00000°. Principal axes: T 0.9830, Plg63.0000°, Azm301.0000°; N 0.0100, Plg4.0000°, Azm202.0000°; P -0.9920, Plg26.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 10:46:06.4±0.5,40.˙29N±0.˙03×143.˙96E±0.˙03,h20km±1km, h19km:pP-P,n974,σ1§63/920,mb5.2/223,MS5.1/115, 57C-49D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTH	**Tanohata**	**1.64**	**258**	*i* P		**Pn**	**10 46 31.7**	**-2.6**
JTH	**Tanohata**	**1.64**	**258**	A		A	10 46 31.7	
	comp=N,65nm,3.6s,comp=E,43nm,4.3s							
JKEN	**Kujiedanarisaw**	**1.72**	**268**	P		**Pn**	**10 46 32.6**	**-2.6**
JKEN	**Kujiedanarisaw**	**1.72**	**268**	A		A	10 46 32.6	
	comp=N,61nm,6.0s,comp=E,58nm,2.3s							
MIYJ	**Miyakonagasawa**	**1.79**	**247**	*i* P		**Pn**	**10 46 34.1**	**-2.2**
MIYJ	**Miyakonagasawa**	**1.79**	**247**	A		A	10 46 34.1	
	comp=N,44nm,5.4s,comp=E,48nm,6.2s							
ERM	**Erimo**	**1.82**	**341**			**Pn**	**10 46 35.9**	**-0.8**
ERM	**Erimo**	**1.82**	**341**	P		**Pn**	**10 46 36.1**	**-0.6**
ERM	**Erimo**	**1.82**	**341**	S		**Sn**	**10 46 59.2**	**0.0**
ERM	**Erimo**	**1.82**	**341**	P		**Pn**	**10 46 35.9**	**-0.8**
JEM	**Erimo**	**1.82**	**341**	P		**Pn**	**10 46 36.1**	**-0.7**
JEM	**Erimo**	**1.82**	**341**	S		**Sn**	**10 46 59.3**	**0.0**
JEM	**Erimo**	**1.82**	**341**	P		**Pn**	**10 46 36.0**	**-0.7**
JEM				S		**Sn**	**10 46 58.9**	**-0.3**
JEM	**Erimo**	**1.82**	**341**	A		A	10 46 36.0	
	comp=N,44nm,4.3s,comp=E,71nm,3.8s							
JANG	**Nango**	**1.87**	**273**	*i* P		**Pn**	**10 46 35.0**	**-2.4**
JANG	**Nango**	**1.87**	**273**	A		A	10 46 35.0	
	comp=N,30nm,4.4s,comp=E,39nm,4.1s							
JKZ	**Kuzumaki**	**2.04**	**262**	A		A	10 46 37.6	
	comp=N,40nm,4.1s,comp=E,49nm,3.9s							
JTHR	**Tokachihiroo**	**2.06**	**346**	A		A	10 46 39.2	
	comp=N,38nm,5.1s,comp=E,71nm,4.0s							
JARK	**Aomorirokkasho**	**2.10**	**291**	A		A	10 46 38.6	
	comp=N,48nm,5.7s,comp=E,55nm,6.1s							
OFUJ	**Ofunato**	**2.14**	**236**	A		A	10 46 39.2	
	comp=N,36nm,3.0s,comp=E,45nm,5.4s							
JNBK	**Urakawa-nobuka**	**2.18**	**336**	*i* P		**Pn**	**10 46 41.1**	**-0.5**
JNBK	**Urakawa-nobuka**	**2.18**	**336**	A		A	10 46 41.1	
	comp=N,63nm,5.6s,comp=E,63nm,2.4s							
JOM	**Ohasama**	**2.21**	**249**	*i* P		**Pn**	**10 46 40.6**	**-1.3**
JOM	**Ohasama**	**2.21**	**249**	A		A	10 46 40.6	
	comp=N,53nm,4.9s,comp=E,32nm,4.7s							
JAHD	**Aomorihigashid**	**2.21**	**297**	A		A	10 46 40.4	
	comp=N,51nm,3.7s,comp=E,50nm,1.7s							
JTM	**Tenmabayashi**	**2.26**	**284**			**Pn**	**10 46 42.3**	**-0.3**
JTM	**Tenmabayashi**	**2.26**	**284**	P		**Pn**	**10 46 41.4**	**-1.2**
JTM	**Tenmabayashi**	**2.26**	**284**	S		**Sn**	**10 47 09.1**	**-0.8**
JTM	**Tenmabayashi**	**2.26**	**284**	P		**Pn**	**10 46 41.0**	**-1.7**
JTM	**Tenmabayashi**	**2.26**	**284**	A		A	10 46 41.0	
	comp=N,52nm,4.1s,comp=E,49nm,10.1s							
JCH	**Churui**	**2.36**	**349**	P		**Pn**	**10 46 43.1**	**-1.0**
JCH				S		**Sn**	**10 47 11.7**	**-0.8**
JCH	**Churui**	**2.36**	**349**	A		A	10 46 43.1	
	comp=N,34nm,2.9s,comp=E,54nm,4.2s							
JSZI	**Iwateshizukuis**	**2.37**	**258**	A		A	10 46 42.4	
	comp=N,139nm,4.4s,comp=E,141nm,2.0s							
JSHD	**Hidakashinhida**	**2.40**	**333**	A		A	10 46 43.7	
	comp=N,82nm,2.7s,comp=E,83nm,2.0s							
JKMT	**Kesennumamotoy**	**2.42**	**233**	A		A	10 46 43.3	
	comp=N,34nm,3.2s,comp=E,38nm,5.5s							
JOT	**Ohata**	**2.46**	**297**	P		**Pn**	**10 46 43.9**	**-1.5**
JOT	**Ohata**	**2.46**	**297**	A		A	10 46 43.9	
	comp=N,41nm,4.1s,comp=E,43nm,5.0s							
JMK	**Ichinoseki**	**2.50**	**239**	*i* P		**Pn**	**10 46 44.6**	**-1.4**
JMK	**Ichinoseki**	**2.50**	**239**	A		A	10 46 44.6	
	comp=N,51nm,3.6s,comp=E,30nm,2.4s							
JAH	**Hinai**	**2.54**	**269**	*i* P		**Pn**	**10 46 45.5**	**-1.1**
JAH	**Hinai**	**2.54**	**269**	A		A	10 46 45.5	
	comp=N,38nm,2.6s,comp=E,49nm,1.6s							
JOB	**Onbets**	**2.61**	**358**	A		A	10 46 47.5	
	comp=N,45nm,3.0s,comp=E,35nm,6.2s							
JRG	**Rokugo**	**2.71**	**252**	A		A	10 46 47.3	
	comp=N,55nm,3.4s,comp=E,41nm,4.1s							
JKB	**Kayabe**	**2.73**	**307**	A		A	10 46 47.9	
	comp=N,33nm,4.6s,comp=E,28nm,3.5s							
JIO	**Ouri**	**2.73**	**229**	A		A	10 46 47.7	
	comp=N,18nm,6.2s,comp=E,21nm,10.7s							
JBT2	**Biratori 2**	**2.76**	**335**	A		A	10 46 49.0	
	comp=N,37nm,4.9s,comp=E,39nm,3.6s							
JAK	**Akkeshi**	**2.76**	**11**	P		**Pn**	**10 46 48.5**	**-1.0**
JAK				S		**Sn**	**10 47 20.8**	**-1.5**
JAK	**Akkeshi**	**2.76**	**11**	A		A	10 46 48.5	
	comp=N,30nm,2.2s,comp=E,32nm,3.6s							
JIKH	**Ishinomakikobu**	**2.77**	**225**	A		A	10 46 48.3	
	comp=N,20nm,3.0s,comp=E,27nm,5.2s							
JHHS	**Hirosakihyakuz**	**2.77**	**279**	A		A	10 46 48.1	
	comp=N,117nm,3.2s,comp=E,102nm,3.2s							
JIAM	**Iburiatsuma**	**2.79**	**327**	A		A	10 46 49.2	
	comp=N,129nm,4.6s,comp=E,92nm,4.5s							
JSI2	**Shiura 2**	**2.80**	**287**	A		A	10 46 48.8	
	comp=N,34nm,3.4s,comp=E,60nm,5.5s							

comp=Z,2μm,1.1s
YUK smax smax
comp=N,3μm,0.5s
YUK smax smax
comp=E,8μm,0.5s
YUK MLR MLR
comp=Z,13μm,13.0s
YUK MLR MLR
comp=N,13μm,10.0s
JSK Shakotan 4.01 321 A A 10 47 06.5
comp=N,17nm,3.2s,comp=E,20nm,5.1s
ONAJ Iwakimizuishiy 4.03 219 A A 10 47 06.3
comp=N,12nm,4.8s,comp=E,13nm,9.2s
JAW Awa shima 4.08 245 A A 10 47 06.8
comp=N,43nm,3.5s,comp=E,36nm,4.0s
JNS Sasagawa 4.38 237 A A 10 47 11.0
comp=N,27nm,8.0s,comp=E,17nm,6.3s
JSS Shosan 4.39 340 A A 10 47 12.3
comp=N,26nm,5.8s,comp=E,27nm,3.7s
JFY Yanaizu 4.39 230 A A 10 47 11.3
comp=N,14nm,4.8s,comp=E,16nm,4.9s
JHO Hitachi 4.54 217 A A 10 47 13.5
comp=N,11nm,5.0s,comp=E,9.0nm,5.3s
JSB Shiboa 4.58 225 A A 10 47 14.0
comp=N,23nm,6.3s,comp=E,29nm,8.1s
JHYU Hitachinakayam 4.75 215 A A 10 47 16.6
comp=N,9.0nm,4.5s,comp=E,13nm,4.6s
JSE Soyaes 4.77 348 A A 10 47 17.8
comp=N,14nm,3.9s,comp=E,12nm,4.2s
JUON Uonuma 4.91 233 A A 10 47 18.6
comp=N,13nm,7.0s,comp=E,12nm,6.5s
JIZZ Izumozaki 4.93 238 A A 10 47 18.8
comp=N,68nm,3.7s,comp=E,73nm,3.5s
JSD Sado 4.97 245 **Pn** **10 47 18.6 -1.3**
JSD Sado 4.97 245 P **Pn** **10 47 19.3 -0.6**
JSD Sado 4.97 245 A A 10 47 19.2
comp=N,17nm,4.9s,comp=E,11nm,11.1s
JIHU Itakohorinouch 5.09 213 A A 10 47 21.5
comp=N,58nm,4.9s,comp=E,94nm,4.5s
JKT Katashina 5.10 228 A A 10 47 21.3
comp=N,12nm,7.0s,comp=E,9.0nm,5.1s
JRR Rishiri 5.22 339 A A 10 47 23.9
comp=N,68nm,6.4s,comp=E,52nm,4.7s
JAG Ashikaga 5.24 224 A A 10 47 23.2
comp=N,7.0nm,7.9s,comp=E,8.0nm,6.3s
JWK2 Keihoku 5.25 344 A A 10 47 24.4
comp=N,16nm,7.0s,comp=E,15nm,6.8s
JSMT Sammumatsuo 5.41 212 A A 10 47 25.8
comp=N,64nm,5.3s,comp=E,81nm,5.0s
JJN Nakama 5.54 237 A A 10 47 27.3
comp=N,21nm,6.8s,comp=E,28nm,3.5s
JGK Kuni 5.59 230 A A 10 47 28.2
comp=N,13nm,7.4s,comp=E,13nm,7.1s
TOK Tokyo 5.67 217 A A 10 47 29.4
comp=N,39nm,5.2s,comp=E,61nm,5.8s
KUR Kuril'sk 5.72 29 *e*P **Pn** **10 47 29.6 -0.6**
KUR *i* S **Sn** **10 48 31.6 -3.5**
KUR pmax pmax
comp=Z,454nm,0.5s
KUR smax smax
comp=E,1μm,0.6s
KUR smax smax
comp=N,1μm,0.5s
KUR smax smax
comp=N,9μm,4.0s
KUR smax smax
comp=E,8μm,4.0s
KUR MLR MLR
comp=Z,6μm,11.0s
MAJO Matsushiro 5.86 232 **Pn** **10 47 31.9 -0.3**
MAJO Matsushiro 5.86 232 P **Pn** **10 47 32.2 -0.1**
MAJO Matsushiro 5.86 232 *c i*P **Pn** **10 47 32.1 -0.2**
MJAR Matsushiro Arr 5.86 232 **Pn** **10 47 31.5 -0.8**
MJAR Matsushiro Arr 5.86 232 Pn **Pn** **10 47 31.8 -0.4**
comp=Z,2.4nm,0.3s,baz=39,slow=11,SNR=139
MJAR Sn Sn 10 48 30.1 -8.8
comp=Z,0.3nm,0.3s,baz=251,slow=29,SNR=4.2
comp=Z,36nm,0.4s
MJB9 Matsu-Tunnel 5.86 232 **Pn** **10 47 32.5 +0.2**
JSZ Suzu 5.88 243 A A 10 47 32.0
comp=N,9.0nm,9.5s,comp=E,6.0nm,10.0s
JKUC kamogawauchiur 5.92 211 A A 10 47 33.1
comp=N,22nm,6.0s,comp=E,21nm,4.1s
JNG Nsakai 6.02 232 A A 10 47 34.1
comp=N,10.0nm,4.9s,comp=E,12nm,5.6s
JYO Yokosk 6.09 215 A A 10 47 35.4
comp=N,21nm,3.9s,comp=E,28nm,3.6s
TATJ Tateyama 2 6.16 213 A A 10 47 36.4
comp=N,30nm,4.3s,comp=E,48nm,3.8s
YSS Yuzhno-Sakhali 6.72 353 **Pn** **10 47 43.8 -0.1**
YSS Yuzhno-Sakhali 6.72 353 P **Pn** **10 47 45.0 +1.1**
YSS Yuzhno-Sakhali 6.72 353 ⇑*e*P **Pn** **10 47 45.7 +1.8**
YSS *e*S **Sn** **10 48 59.9 +0.1**
YSS pmax pmax
comp=E,160nm,0.9s
YSS pmax pmax
comp=Z,120nm,0.9s
YSS smax smax
comp=N,220nm,1.1s
YSS smax smax
comp=E,150nm,1.1s
YSS MLR MLR
comp=Z,8μm,14.0s
YSS MLR MLR
comp=N,9μm,13.0s
JGF Kuroka 7.01 230 **Pn** **10 47 47.7 -0.3**
JGF Kuroka 7.01 230 P **Pn** **10 47 49.2 +1.2**
TEY Ternei 7.20 314 ⇑*e*P **Pn** **10 47 50.6 +0.1**
TEY pmax pmax
comp=Z,80nm,1.1s
TEY pmax pmax
comp=N,50nm,1.1s
TEY pmax pmax
comp=E,70nm,1.1s
TEY MLR MLR
comp=E,400nm,13.0s
TEY MLR MLR
comp=Z,400nm,13.0s
TEY MLR MLR
comp=N,300nm,12.0s
JSG Sagara 7.24 221 P **Pn** **10 47 52.4 +1.2**
INU Inuyama 7.38 230 **Pn** **10 47 52.5 -0.6**
INU Inuyama 7.38 230 P **Pn** **10 47 53.7 +0.6**
JHJ2 Mitsune 7.90 206 P **Pn** **10 47 59.2 -1.0**
JHJ Hachijo jima 2 7.90 206 Pn Pn 10 47 56.6 -3.6
comp=N,45nm,0.3s,baz=38,slow=19,SNR=13
JHJ Sn Sn 10 49 20.4 -8.7
comp=N,60nm,0.3s,baz=53,slow=20,SNR=6.8
JHJ LR LR 10 51 17.4
comp=N,5μm,21.5s,baz=49,slow=40
UGL Uglegorsk 8.89 352 *e*P **Pn** **10 48 13.2 -0.5**
UGL *e*S **Sn** **10 49 49.5 -3.6**
UGL pmax pmax
comp=Z,1μm,8.6s
UGL smax smax
comp=E,2μm,6.2s
UGL smax smax
comp=N,2μm,2.7s
UGL MLR MLR
comp=Z,7μm,11.0s
UGL MLR MLR
comp=N,7μm,15.0s
UGL MLR MLR
comp=E,5μm,10.0s
USRK Ussuriysk Ar. 9.69 298 Pn **Pn** **10 48 24.8 0.0**
comp=E,6.4nm,0.3s,baz=102,slow=13,SNR=86
comp=E,141nm,0.8s
JMN Monobe 10.38 234 **Pn** **10 48 34.0 -0.2**
JMN Monobe 10.38 234 P **Pn** **10 48 34.7 +0.5**
TYV Tymovskoe 10.61 356 *e*P **Pn** **10 48 37.0 -0.3**
TYV *e*S **Sn** **10 50 36.6 +1.2**
TYV pmax pmax
comp=Z,1μm,4.0s
TYV pmax pmax
comp=Z,89nm,1.0s
TYV smax smax
comp=N,1μm,5.1s
TYV smax smax
comp=E,2μm,5.1s
TYV MLR MLR
comp=Z,14μm,14.0s
TYV MLR MLR
comp=N,14μm,14.0s
MDJ Mudanjiang 11.46 297 **Pn** **10 48 48.9 0.0**
MDJ Mudanjiang 11.46 297 P **Pn** **10 48 49.7 +0.8**
MDJ S **Sn** **10 51 02.6 +6.4**
MDJ pmax pmax
comp=N,58nm,0.9s
MDJ pmax pmax
comp=N,3μm,8.0s
MDJ LR LR
comp=N,12μm,13.4s
MDJ LR LR
comp=N,11μm,13.7s
MDJ LR LR
comp=N,20μm,12.7s
GRNR Gornyy 11.73 336 ⇓*i*P **Pn** **10 48 53.0 +0.5**
GRNR pmax pmax
comp=N,20nm,0.8s
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR MLR MLR
comp=E,5μm,15.0s
JNU Nakatsue 12.69 240 **Pn** **10 49 04.4 -1.4**
JNU Nakatsue 12.69 240 Pn **Pn** **10 49 04.9 -1.0**
comp=E,1.3nm,0.3s,baz=65,slow=7.5,SNR=15
JNU LR LR 10 54 22.1
comp=E,10μm,18.4s,baz=46,slow=39
comp=E,32nm,0.9s
JNU Nakatsue 12.69 240 P **Pn** **10 49 05.2 -0.7**
KSRS Korea Array 12.81 262 Pn **Pn** **10 49 08.4 +1.0**
comp=E,0.5nm,0.3s,baz=71,slow=14,SNR=14
comp=E,6.2nm,1.0s
KSAR Wonju Array Be 12.85 262 **Pn** **10 49 07.9 0.0**
KSAR Wonju Array Be 12.85 262 P **Pn** **10 49 07.9 0.0**
NKL Nikolayevsk 13.06 351 *e*P **Pn** **10 49 07.6 -3.0**
NKL *e*S **Sn** **10 51 42.4 +7.2**
NKL pmax pmax
comp=E,131nm,1.2s
NKL pmax pmax
comp=N,128nm,1.3s
NKL pmax pmax
comp=Z,152nm,1.3s
NKL smax smax
comp=E,887nm,4.3s
NKL smax smax
comp=N,760nm,4.4s
NKL MLR MLR
comp=E,23μm,14.0s
NKL MLR MLR
comp=N,5μm,13.0s
NKL MLR MLR
comp=Z,18μm,13.0s
JCJ Chichijima 13.24 187 Pn Pn 10 49 00.3 -13
comp=Z,9.1nm,0.3s,baz=97,slow=24,SNR=6.1
JCJ Sn Sn 10 51 18.1 -22
comp=Z,16nm,0.3s,baz=290,slow=22,SNR=6.9
BNX BinXian 13.27 300 ⇓P **Pn** **10 49 13.0 -0.7**
BNX S **Sn** **10 51 42.4 +1.8**
BNX pmax pmax
comp=Z,140nm,1.1s
BNX pmax pmax
comp=Z,2μm,7.6s
BNX LR LR
comp=Z,6μm,11.9s
BNX LR LR
comp=Z,8μm,14.1s
BNX LR LR
comp=Z,9μm,14.1s
OKH Okha 13.28 357 *d i*P **Pn** **10 49 11.3 -2.4**
OKH *e*S **Sn** **10 51 35.4 -5.3**
OKH pmax pmax
comp=Z,300nm,14.1s
OKH smax smax
comp=E,600nm,14.7s
OKH MLR MLR
comp=Z,10μm,16.0s
SKR Severo-Kuril's 13.43 35 *e*P **P** **10 49 29.7 +4.7**
SKR pmax pmax
comp=Z,300nm,4.0s
SKR MLR MLR
comp=Z,9μm,15.0s
CN2 Changchun 14.19 290 P **Pn** **10 49 25.6 -0.6**
CN2 S **Sn** **10 52 04.0 +1.0**
CN2 SS **S** **10 52 20.2 -3.4**
CN2 pmax pmax
comp=Z,50nm,1.1s
CN2 pmax pmax
comp=Z,1μm,9.0s
CN2 LR LR
comp=Z,5μm,13.0s
CN2 LR LR
comp=Z,5μm,13.0s
CN2 LR LR
comp=Z,6μm,12.0s
HEH HeiHe 15.29 316 *e*P **Pn** **10 49 37.4 -3.6**
HEH pP **P** **10 49 41.0 -4.7**
HEH S **Sn** **10 52 29.1 -0.6**
HEH pmax pmax
comp=Z,32nm,1.0s
HEH pmax pmax
comp=Z,1μm,8.0s
HEH LR LR
comp=Z,6μm,13.6s
HEH LR LR
comp=Z,10μm,14.0s
HEH LR LR
comp=Z,15μm,14.1s
SNY Shenyang 15.45 282 ⇓P **Pn** **10 49 42.2 -0.9**
SNY S **Sn** **10 52 32.4 -1.3**
SNY pmax pmax
comp=Z,78nm,1.7s
SNY pmax pmax
comp=Z,1μm,8.2s
SNY LR LR
comp=Z,3μm,14.6s
SNY LR LR
comp=Z,5μm,14.5s
SNY LR LR
comp=Z,7μm,13.8s
PETK Petropavlovsk- 15.87 32 Pn **Pn** **10 49 46.6 -2.0**
PETK Petropavlovsk- 15.87 32 Pn **Pn** **10 49 46.7 -1.9**
comp=Z,0.7nm,0.3s,baz=206,slow=13,SNR=4.9
comp=Z,7.9nm,0.9s
PET Petropavlovsk 16.20 33 *e*P P 10 50 07.3 +11
PET *e*S **S** **10 52 59.7 -4.9**
PET pmax pmax
comp=Z,50nm,1.5s
PET MLR MLR
comp=Z,5μm,14.0s
PET MLR MLR
comp=Z,4μm,15.0s
DL2 Dalian 17.26 273 P **Pn** **10 50 03.7 -2.5**
DL2 S **Sn** **10 53 16.4 -1.3**
DL2 pmax pmax
comp=Z,190nm,1.5s
DL2 pmax pmax
comp=Z,2μm,7.3s
DL2 LR LR
comp=Z,3μm,17.9s
DL2 LR LR
comp=Z,3μm,18.2s
DL2 LR LR
comp=Z,2μm,17.1s
ZEA Zeya 17.56 326 *e*P **Pn** **10 50 07.5 -2.4**
ZEA pmax pmax
comp=E,40nm,1.1s
ZEA pmax pmax
comp=N,50nm,1.4s
ZEA pmax pmax
comp=Z,110nm,1.2s
ZEA pmax pmax
comp=N,300nm,2.0s
ZEA pmax pmax
comp=Z,500nm,2.1s
ZEA MLR MLR
comp=E,2μm,14.0s
ZEA MLR MLR
comp=N,2μm,15.0s
ZEA MLR MLR
comp=Z,4μm,15.0s
JOW Kunigami 18.70 229 P **P** **10 50 22.9 -0.6**
JOW Kunigami 18.70 229 P **P** **10 50 23.7 +0.2**
comp=Z,1.0nm,0.3s,baz=30,slow=16,SNR=4.0
comp=Z,5.8nm,0.5s
HIA Hailar 19.32 306 P **P** **10 50 28.6 -1.7**
HIA Hailar 19.32 306 P **P** **10 50 30.9 +0.6**
HIA Hailar 19.32 306 P **P** **10 50 28.6 -1.7**
HIA pmax pmax
comp=Z,95nm,1.2s
HILR Hailar Array B 19.41 307 P **P** **10 50 28.9 -2.4**
comp=Z,191nm,0.9s,baz=112,slow=11,SNR=67
HILR LR LR 10 57 37.6
comp=Z,677nm,21.4s,baz=100,slow=36
SSE Sheshan 20.60 251 P **P** **10 50 42.4 -1.9**
SSE S **S** **10 54 31.6 -2.1**
SSE pmax pmax
comp=Z,19nm,0.7s
SSE pmax pmax
comp=Z,330nm,4.0s
SSE LR LR
comp=Z,2μm,15.0s
SSE LR LR
comp=Z,1μm,16.0s
XLT XiLinHaoTe 20.95 289 *e*P **P** **10 50 46.0 -2.2**
XLT sP sP 10 50 53.4 -1.1
XLT S **S** **10 54 33.8 -7.0**
XLT SS **SnSn** **10 54 59.8 -1.9**
XLT pmax pmax
comp=Z,60nm,1.9s
XLT pmax pmax
comp=Z,550nm,6.2s
XLT LR LR
comp=Z,5μm,12.3s
XLT LR LR
comp=Z,5μm,11.8s
BJI Beijing 21.20 278 P **P** **10 50 48.5 -2.2**
BJI pP **pP** **10 50 52.4 -3.0**
BJI sP **sP** **10 50 55.8 -1.3**
BJI PP **PnPn** **10 51 11.9 +1.7**
BJI S **S** **10 54 38.0 -7.6**
BJI pmax pmax
comp=Z,20nm,1.4s
BJI pmax pmax
comp=Z,350nm,8.3s
BJI LR LR
comp=Z,2μm,15.0s
BJI LR LR
comp=Z,1μm,12.8s
BJI LR LR
comp=Z,3μm,13.6s
BJT Baijiatuau 21.21 278 P **P** **10 50 48.4 -2.5**
BJT IAmb IAmb 10 51 04.6
comp=Z,218nm,1.6s
BJT Baijiatuau 21.21 278 P **P** **10 50 48.4 -2.5**
BJT pmax pmax
comp=Z,218nm,1.6s
TIA Tai'an 21.43 268 P **P** **10 50 50.2 -3.0**
TIA S S 10 54 38.6 -12
TIA pmax pmax
comp=Z,58nm,0.8s
TIA pmax pmax
comp=Z,960nm,9.6s
TIA LR LR
comp=Z,5μm,12.2s
TIA LR LR
comp=Z,7μm,12.4s
TIA LR LR
comp=Z,9μm,14.1s
NJ2 Nanjing 21.82 256 *e*P **P** **10 50 55.1 -2.3**
NJ2 sP **sP** **10 51 04.5 +0.8**
NJ2 S **S** **10 55 00.4 +2.7**
NJ2 pmax pmax
comp=Z,51nm,1.0s
NJ2 pmax pmax
comp=Z,780nm,4.0s
NJ2 LR LR
comp=Z,4μm,16.1s
NJ2 LR LR
comp=Z,3μm,16.1s
NJ2 LR LR
comp=Z,5μm,15.2s
HNS HongShan 22.92 272 ⇓P **P** **10 51 05.3 -3.8**
HNS S **S** **10 55 12.5 -5.5**
HNS pmax pmax
comp=Z,60nm,1.2s
HNS LR LR
comp=Z,4μm,13.5s
HNS LR LR
comp=Z,3μm,11.9s
HNS LR LR
comp=Z,4μm,13.2s
YAK Yakutsk 23.43 343 *e*P **P** **10 51 11.8 -2.2**
YAK *e**PP **sP** **10 51 21.8 +1.2**
YAK *e*PPP PPP 10 51 45.1
YAK *e*S **S** **10 55 20.6 -5.5**
YAK *e*SSS SSS 10 56 07.2
YAK pmax pmax
comp=Z,50nm,0.9s
YAK pmax pmax
comp=N,27nm,1.0s
YAK smax smax
comp=E,702nm,3.0s
YAK smax smax
comp=N,686nm,2.5s
YAK MLR MLR
comp=Z,5μm,17.0s
YAK MLR MLR
comp=N,4μm,15.0s
YAK MLR MLR
comp=E,2μm,14.0s
CIT Chita 23.92 310 *e*P **P** **10 51 16.2 -2.8**
CIT *e* 10 51 49.0
CIT *e* 10 52 03.0
CIT *e*S **S** **10 55 32.2 -2.1**
CIT pmax pmax
comp=Z,522nm,2.3s
SHEM Shemya Is, Ala 23.99 49 LR LR 11 00 01.7
comp=Z,235nm,21.7s,baz=259,slow=35
TATO Taipei 24.22 238 P **P** **10 51 21.8 -0.1**
TATO IAmb IAmb 10 51 24.2
comp=Z,154nm,1.1s
YHNB Yeheng 24.51 237 **P** **10 51 23.6 -1.0**
YHNB IAmb IAmb 10 51 37.0
comp=Z,83nm,1.3s
YHNB Yeheng 24.51 237 P **P** **10 51 24.5 -0.1**
HHC Hu-ho-hao-te 24.54 282 *e*P **P** **10 51 23.2 -1.7**
HHC sP sP 10 51 32.6 +1.3
HHC S **S** **10 55 41.1 -3.5**
HHC sS pS 10 55 50.7 +0.6
HHC pmax pmax
comp=Z,37nm,1.2s
HHC pmax pmax
comp=Z,900nm,6.0s
HHC LR LR
comp=Z,2μm,13.1s
HHC LR LR
comp=Z,3μm,14.7s
HHC LR LR
comp=Z,5μm,14.4s
TIY Taiyuan 24.57 274 *e*P **P** **10 51 26.4 +1.3**
TIY S **S** **10 55 42.4 -2.6**
TIY pmax pmax
comp=Z,44nm,1.5s
TIY pmax pmax
comp=Z,870nm,4.7s
TIY LR LR
comp=Z,3μm,15.1s
TIY LR LR
comp=Z,2μm,12.4s
TIY LR LR
comp=Z,3μm,13.7s
NACB Ninganchiao 24.72 236 P **P** **10 51 24.7 -1.7**
NACB Ninganchiao 24.72 236 P **P** **10 51 26.5 +0.1**
SSLB Suanglung 25.40 237 P **P** **10 51 31.2 -1.5**
SSLB IAmb IAmb 10 51 48.5
comp=Z,88nm,1.5s
SSLB Suanglung 25.40 237 P **P** **10 51 32.8 +0.1**
YULB Yu-li 25.47 235 P **P** **10 51 30.7 -2.5**
YULB Yu-li 25.47 235 P **P** **10 51 33.5 +0.3**
LYN LuoYang 25.57 267 P **P** **10 51 32.0 -2.1**
LYN pP pP 10 51 35.1 -4.0
LYN S **S** **10 55 55.6 -5.3**
LYN sS pS 10 56 00.8 -6.0
LYN pmax pmax
comp=Z,160nm,1.2s
LYN pmax pmax
comp=Z,2μm,7.0s
LYN LR LR
comp=Z,5μm,12.0s
LYN LR LR
comp=Z,5μm,11.4s
LYN LR LR
comp=Z,16μm,13.4s
BTO Baotou 25.74 282 *e*P **P** **10 51 36.0 +0.3**
BTO sP **pwP** **10 51 43.6 -1.1**
BTO S **S** **10 56 06.1 +2.4**
BTO pmax pmax
comp=Z,150nm,1.5s

BTO pmax pmax
comp=Z,2µm,7.4s
BTO LR LR
comp=Z,6µm,13.0s
BTO LR LR
comp=Z,5µm,14.9s
BTO LR LR
comp=Z,7µm,13.9s
WHN Wuhan 25.91 257 P **P** **10 51 37.6 +0.4**
WHN sP **pwP** **10 51 45.7 -0.5**
WHN S **S** **10 56 05.9 -0.4**
WHN pmax pmax
comp=Z,500nm,1.3s
WHN pmax pmax
comp=Z,2µm,4.9s
WHN LR LR
comp=Z,18µm,14.9s
WHN LR LR
comp=Z,12µm,13.3s
WHN LR LR
comp=Z,14µm,17.6s
TPUB Ta-pu 25.96 236 P **P** **10 51 35.7 -2.0**
TPUB lAmb lAmb 10 51 54.4
comp=Z,112nm,1.3s
TPUB Ta-pu 25.96 236 P **P** **10 51 37.8 +0.1**
BOD Bodaibo 26.00 322 *e*P **P** **10 51 37.3 -0.4**
BOD pmax pmax
comp=Z,257nm,1.2s
TWGBT Beinan 26.02 235 P **P** **10 51 38.5 +0.2**
TWG Pinlang 26.03 235 P **P** **10 51 37.6 -0.7**
QZH Quanzhou 26.16 242 P **P** **10 51 38.8 -0.6**
QZH S **S** **10 56 13.6 +3.4**
QZH pmax pmax
comp=Z,100nm,1.5s
QZH pmax pmax
comp=Z,1µm,8.4s
QZH LR LR
comp=Z,4µm,18.6s
QZH LR LR
comp=Z,5µm,19.6s
QZH LR LR
comp=Z,4µm,13.1s
ULN Ulaanbaatar 27.37 298 P **P** **10 51 51.1 +0.7**
ULN lAmb lAmb 10 51 52.2
comp=Z,58nm,1.2s
ULN Ulaanbaatar 27.37 298*c i*P **P** **10 51 50.1 -0.3**
ULN pmax pmax
comp=Z,76nm,1.6s
SONM Songino Array 27.81 298 P **P** **10 51 55.0 +0.7**
SONM lAmb lAmb 10 52 04.8
comp=Z,68nm,1.2s
SONM Songino Array 27.81 298 P **P** **10 51 54.0 -0.3**
comp=Z,22nm,0.9s,baz=97,slow=8.8,SNR=82
comp=Z,22nm,0.9s
SONM Songino Array 27.81 298 P **P** **10 51 55.0 +0.7**
SONM pmax pmax
comp=Z,68nm,1.2s
CNSH ChangSha 28.20 254 P **P** **10 51 58.5 +0.7**
CNSH S **S** **10 56 45.3 +2.8**
CNSH pmax pmax
comp=Z,40nm,1.3s
CNSH LR LR
comp=Z,4µm,12.6s
CNSH LR LR
comp=Z,5µm,12.5s
CNSH LR LR
comp=Z,5µm,13.5s
H11N2 WAKE ISLAND Hy 28.39 129 T T 11 21 40.5
baz=322,slow=73,SNR=69
H11N1 WAKE ISLAND Hy 28.40 129 T T 11 21 43.8
baz=322,slow=73,SNR=87
H11N3 WAKE ISLAND Hy 28.41 129 T T 11 21 44.7
baz=322,slow=73,SNR=120
XAN Xi'an 28.48 269 P **P** **10 52 00.6 +0.3**
XAN PP **PnPn** **10 52 50.5 +0.7**
XAN S **S** **10 56 49.8 +2.9**
XAN pmax pmax
comp=Z,66nm,1.3s
XAN pmax pmax
comp=Z,1µm,7.9s
XAN LR LR
comp=Z,4µm,14.3s
XAN LR LR
comp=Z,5µm,12.9s
XAN LR LR
comp=Z,7µm,13.4s
H11S1 WAKE ISLAND Hy 29.23 131 T T 11 22 53.4
baz=323,slow=74
H11S3 WAKE ISLAND Hy 29.24 131 T T 11 22 56.1
baz=323,slow=74
H11S2 WAKE ISLAND Hy 29.25 131 T T 11 22 48.4
baz=323
IRK Irkutsk 29.55 307 *e*P **P** **10 52 09.7 +0.1**
IRK pmax pmax
comp=Z,184nm,1.6s
ENH Enshi 29.70 261 P **P** **10 52 10.4 -0.7**
TLY Talaya 29.86 306 **P** **10 52 12.2 -0.2**
TLY lAmb lAmb 10 52 18.0
comp=Z,45nm,1.0s
TLY Talaya 29.86 306*c i*P **P** **10 52 12.6 +0.2**
TLY pmax pmax
comp=Z,68nm,1.2s
ZAK Zakamensk 29.98 303 *e*P **P** **10 52 13.0 -0.5**
ZAK pmax pmax
comp=Z,48nm,1.8s
BILL Bilibino 30.34 16*c i*P **P** **10 52 17.7 +1.3**
BILL pmax pmax
comp=Z,46nm,1.0s
LZH Lanzhou 31.62 275 *e*P **P** **10 52 28.0 -0.2**
LZH pP pP 10 52 31.9 -1.2
LZH sP sP 10 52 35.0 +0.3
LZH PP **PnPn** **10 53 26.8 -5.0**
LZH PcP **PcP** **10 55 21.4 +1.3**
LZH S **S** **10 57 38.6 +2.3**
LZH sS sS 10 57 45.9 +2.5
LZH SS **SnSn** **10 59 20.8 -1.5**
LZH pmax pmax
comp=Z,64nm,1.3s
LZH pmax pmax
comp=Z,610nm,4.5s
LZH LR LR
comp=Z,4µm,14.4s
LZH LR LR
comp=Z,3µm,13.7s
LZH LR LR
comp=Z,3µm,13.7s
GULI GuiLin 31.73 252 P **P** **10 52 28.6 -0.5**
GULI S **S** **10 57 34.6 -3.4**
GULI pmax pmax
comp=Z,35nm,1.3s
GULI pmax pmax
comp=Z,760nm,4.9s
GULI LR LR
comp=Z,3µm,14.9s
GULI LR LR
comp=Z,4µm,15.2s
GULI LR LR
comp=Z,3µm,14.4s
LZDM Lanzhou Array 31.77 275 P **P** **10 52 29.6 -0.2**
comp=Z,2.0nm,0.3s,baz=55,slow=13,SNR=13
LZDM S **S** **10 57 39.6 +0.5**
comp=Z,1.0nm,0.3s,baz=61,slow=38,SNR=1.7
LZDM LR LR 11 04 42.4
comp=Z,1µm,20.7s,baz=90,slow=35
comp=Z,2.0nm,0.3s
TIXI Tiksi 32.34 351 P **P** **10 52 33.7 -0.2**
TIXI lAmb lAmb 10 52 34.9
comp=Z,32nm,1.0s
TIXI Tiksi 32.34 351 LR LR 11 07 57.8
comp=Z,4µm,18.4s,baz=174,slow=41
TIXI Tiksi 32.34 351 ⇓*i*P **P** **10 52 34.0 +0.1**
TIXI pmax pmax
comp=Z,39nm,1.1s
GTA Gaotai 33.64 283 P **P** **10 52 46.0 +0.2**
GTA PP **PnPn** **10 53 56.5 -1.1**
GTA S **S** **10 58 06.3 -1.3**
GTA pmax pmax
comp=Z,160nm,1.1s
GTA pmax pmax
comp=Z,950nm,9.1s
GTA LR LR
comp=Z,2µm,14.2s
GTA LR LR
comp=Z,4µm,14.5s
GTA LR LR
comp=Z,5µm,14.9s

KNGR Kungurtug, Tuv 33.66 304 ⇓*i*P **P** **10 52 46.7 +0.8**
CD2 Chengdu 33.76 267 P **P** **10 52 45.7 -1.1**
CD2 S **S** **10 58 10.2 +0.8**
CD2 pmax pmax
comp=Z,70nm,1.1s
CD2 pmax pmax
comp=Z,790nm,5.9s
CD2 LR LR
comp=Z,10µm,13.3s
CD2 LR LR
comp=Z,3µm,14.0s
CD2 LR LR
comp=Z,6µm,14.0s
GYA Guiyang 33.80 257 ⇓P **P** **10 52 47.6 +0.2**
GYA sP pwP 10 52 55.9 -1.2
GYA S **S** **10 58 09.3 -1.1**
GYA pmax pmax
comp=Z,89nm,1.2s
GYA pmax pmax
comp=Z,830nm,6.8s
GYA LR LR
comp=Z,5µm,14.2s
GYA LR LR
comp=Z,3µm,13.4s
GYA LR LR
comp=Z,4µm,15.9s
MIDW Midway 33.91 99 P **P** **10 52 46.9 -1.1**
P08K Saint George I 34.12 46 P **P** **10 52 51.5 +1.9**
baz=261
NIKH Nikolski High 34.17 52 P **P** **10 52 51.3 +1.2**
baz=267
GAMB Gambell 34.90 33 P **P** **10 52 58.1 +1.8**
baz=249
UNV Unalaska Valle 35.61 51 P **P** **10 53 03.9 +1.4**
baz=268
QIZ Qiongzhong 36.11 244 P **P** **10 53 07.3 +0.1**
QIZ S **S** **10 58 47.5 +1.7**
QIZ LR LR
comp=Z,3µm,18.2s
QIZ LR LR
comp=Z,2µm,14.9s
QIZ LR LR
comp=Z,3µm,12.7s
M11K Mekoryuk 36.48 40 P **P** **10 53 11.8 +1.9**
baz=259
DAV Davao City (W) 36.95 211 LR LR 11 09 03.4
comp=Z,2µm,19.0s,baz=50,slow=37
TNA Tin City 37.04 31 P **P** **10 53 16.9 +2.3**
baz=251
FALS False Pass 37.44 49 P **P** **10 53 20.0 +2.0**
baz=269
PZH PanZhiHua 37.48 262 P **P** **10 53 18.6 -0.3**
PZH sP **pP** **10 53 23.4 -0.5**
PZH S **S** **10 59 07.0 +0.2**
PZH pmax pmax
comp=Z,90nm,1.5s
PZH LR LR
comp=Z,2µm,14.7s
PZH LR LR
comp=Z,3µm,14.8s
PZH LR LR
comp=Z,4µm,14.6s
KMI Kunming 37.48 259 ⇑P **P** **10 53 18.7 -0.4**
KMI S **S** **10 59 09.0 +2.0**
KMI pmax pmax
comp=Z,54nm,1.2s
KMI pmax pmax
comp=Z,690nm,6.4s
KMI LR LR
comp=Z,4µm,14.5s
KMI LR LR
comp=Z,2µm,18.3s
KMI LR LR
comp=Z,3µm,13.7s
K13K Kusilvak Mount 37.50 37 P **P** **10 53 20.6 +2.0**
baz=259
F14K Arctic Creek 37.65 31 P **P** **10 53 21.9 +2.1**
baz=253
ANM Nome 37.78 33 P **P** **10 53 22.7 +1.8**
baz=255
M13K Dall Lake 37.88 40 P **P** **10 53 23.5 +1.8**
baz=262
J14K Nanvaranak Lak 38.16 36 P **P** **10 53 26.7 +2.6**
baz=259
S12K Black Hills 38.22 48 P **P** **10 53 27.3 +2.6**
baz=269
L14K Kuka Creek 38.33 39 P **P** **10 53 28.0 +2.5**
baz=262
F15K North Star Dit 38.38 31 P **P** **10 53 27.7 +1.8**
baz=254
GOMU GeErMu 38.42 280 P **P** **10 53 27.6 +0.5**
GOMU sP pP 10 53 32.0 0.0
GOMU PcP **PcP** **10 55 40.7 +0.5**
GOMU S **S** **10 59 22.4 +1.1**
GOMU pmax pmax
comp=Z,83nm,1.9s
GOMU LR LR
comp=Z,730nm,12.9s
GOMU LR LR
comp=Z,990nm,14.9s
G15K Niukluk 38.45 33 P **P** **10 53 28.4 +2.0**
baz=256
M14K Bethel 38.60 40 P **P** **10 53 29.5 +1.6**
baz=263
N14K Kuskokwak Cree 38.65 41 P **P** **10 53 30.1 +1.8**
baz=264
O14K Tigyukauivet M 38.81 42 P **P** **10 53 31.4 +1.8**
baz=266
SLVN Son La 38.84 253 P **P** **10 53 30.1 -0.3**
C16K Lisburne Hills 38.90 27 P **P** **10 53 32.1 +1.9**
baz=250
L15K Ungalak Mounta 38.95 38 P **P** **10 53 32.4 +1.6**
baz=262
K15K Wolf Creek Mou 39.01 37 P **P** **10 53 33.4 +2.1**
baz=262
H16K Elim 39.11 33 P **P** **10 53 33.8 +1.7**
baz=258
SDPT Sand Point 39.12 48 P **P** **10 53 34.4 +2.1**
baz=271
M15K Kasigluk River 39.22 40 P **P** **10 53 34.8 +1.8**
baz=264
G16K Koyuk River 39.23 32 P **P** **10 53 35.1 +2.1**
baz=257
N15K Kwethluk River 39.47 41 P **P** **10 53 36.9 +1.8**
baz=266
D17K Noatak River 39.53 29 P **P** **10 53 38.4 +2.9**
baz=254,SNR=6.3
O15K Ungalikthiuk R 39.54 42 P **P** **10 53 37.9 +2.2**
baz=267
J16K Anvik River 39.58 36 P **P** **10 53 38.4 +2.4**
baz=261
S14K Fog Glacier 39.63 47 P **P** **10 53 38.5 +1.9**
baz=271
I17K Unalakleet 39.64 35 P **P** **10 53 38.6 +2.1**
baz=260
CHNA Chernabura Isl 39.65 49 P **P** **10 53 38.9 +2.2**
baz=272
RDOG Red Dog Mine 39.70 28 P **P** **10 53 39.7 +2.8**
baz=253
C17K DeLong Mountai 39.73 27 P **P** **10 53 39.3 +2.1**
baz=252
E17K Hotham Inlet 39.84 30 P **P** **10 53 40.4 +2.3**
baz=256,SNR=12
L16K Owhat River 39.91 38 P **P** **10 53 40.3 +1.6**
baz=264
F17K Baldwin Pennin 39.91 31 P **P** **10 53 37.6 -1.0**
F17K Baldwin Pennin 39.91 31 P **P** **10 53 40.5 +1.9**
baz=257,SNR=7.6
G17K Kiwalik Mounta 39.95 32 P **P** **10 53 40.7 +1.7**
baz=259,SNR=14
M16K Timber Creek 40.09 39 P **P** **10 53 42.2 +1.9**
baz=266
N16K Nishlik Lake 40.15 40 P **P** **10 53 43.0 +2.2**
baz=266
H17K Granite Mounta 40.15 33 P **P** **10 53 42.7 +2.0**
baz=260
DGZ Jazzator, Alta 40.20 303*c i*P **P** **10 53 42.1 +0.6**
DGZ pmax pmax
comp=Z,137nm,0.9s
J17K VABM Dome 40.28 36 P **P** **10 53 41.5 -0.3**
J17K VABM Dome 40.28 36 P **P** **10 53 43.4 +1.6**
baz=263
E18K Tukpahlearik C 40.38 29 P **P** **10 53 43.5 +0.9**
E18K Tukpahlearik C 40.38 29 P **P** **10 53 44.5 +1.9**
baz=256
O16K Kokwok River B 40.44 42 P **P** **10 53 45.6 +2.4**
baz=268

B18K Kokolik River 40.47 26 P **P** **10 53 45.2 +1.9**
baz=253
C18K Utukok River 40.48 27 P **P** **10 53 45.0 +1.6**
baz=254
L17K Donlin 40.50 38 P **P** **10 53 46.0 +2.4**
baz=265
K17K Iditarod 40.55 37 P **P** **10 53 46.5 +2.4**
baz=264
F18K Selawik 40.57 31 P **P** **10 53 46.1 +2.0**
baz=258,SNR=9.4
R16K Pilot Point 40.70 45 P **P** **10 53 46.4 +1.1**
baz=271
TNCH TengChong 40.72 262 P **P** **10 53 46.5 +0.4**
TNCH S **S** **10 59 56.3 +0.6**
TNCH pmax pmax
comp=Z,71nm,0.5s
TNCH pmax pmax
comp=Z,980nm,3.2s
TNCH LR LR
comp=Z,2µm,14.1s
TNCH LR LR
comp=Z,980nm,10.9s
TNCH LR LR
comp=Z,3µm,15.5s
G18K Tagagawik 40.83 32 P **P** **10 53 48.7 +2.3**
baz=260
H18K Honhosa River 40.83 33 P **P** **10 53 45.3 -1.1**
H18K lAmb lAmb 10 54 13.9
comp=Z,50nm,1.1s
H18K Honhosa River 40.83 33 P **P** **10 53 48.2 +1.8**
baz=261,SNR=8.6
M17K Holitna River 40.85 39 P **P** **10 53 48.2 +1.6**
baz=266
N17K Nushagak Hills 40.93 40 P **P** **10 53 48.7 +1.5**
baz=268
C19K Lookout Ridge 41.16 27 P **P** **10 53 50.6 +1.6**
baz=256
Q16K King Salmon 41.17 43 P **P** **10 53 50.7 +1.5**
baz=270
NRIK Noril'sk 41.20 333 P **P** **10 53 49.1 -0.1**
NRIK Noril'sk 41.20 333 P **P** **10 53 48.9 -0.4**
comp=Z,7.7nm,0.8s,baz=104,slow=15,SNR=16
NRIK LR LR 11 12 24.4
comp=Z,3µm,19.0s,baz=102,slow=38
comp=Z,7.7nm,0.8s
NRIK Noril'sk 41.20 333*c i*P **P** **10 53 49.3 0.0**
NRIK pmax pmax
comp=Z,36nm,1.4s
WMQ Urumqi 41.24 294 *e*P **P** **10 53 51.1 +1.0**
WMQ PP **PnPn** **10 55 31.4 +1.6**
WMQ S **S** **11 00 05.2 +2.4**
WMQ pmax pmax
comp=Z,52nm,0.9s
WMQ pmax pmax
comp=Z,420nm,5.9s
WMQ LR LR
comp=Z,3µm,15.5s
WMQ LR LR
comp=Z,3µm,16.7s
WMQ LR LR
comp=Z,2µm,18.9s
L18K Granite Mounta 41.26 38 P **P** **10 53 51.1 +1.2**
baz=266
ZAA0 Zalesovo Array 41.28 310 P **P** **10 53 49.7 -0.4**
ZAA0 lAmb lAmb 10 53 51.7
comp=Z,56nm,1.0s
ZALV Zalesovo Beam 41.28 310 P **P** **10 53 49.6 -0.5**
comp=Z,33nm,0.8s,baz=89,slow=7.5,SNR=102
comp=Z,33nm,0.8s
P17K Kvichak River 41.28 42 P **P** **10 53 52.0 +2.0**
baz=270
J18K Innoko River 41.34 36 P **P** **10 53 51.8 +1.2**
baz=265
F19K Shaleruckik Mo 41.34 31 P **P** **10 53 52.6 +2.1**
baz=260
R17L Mt. Peulik Vol 41.35 45 P **P** **10 53 52.5 +1.7**
baz=272
GCSA Galena City Sc 41.41 34 P **P** **10 53 52.7 +1.7**
baz=263
D19K Kuna River 41.54 28 P **P** **10 53 54.2 +2.1**
baz=258
N18K Kilae Creek 41.58 40 P **P** **10 53 54.0 +1.5**
baz=269
M18K Stony River 41.63 39 P **P** **10 53 54.0 +1.1**
baz=268
E19K Redstone River 41.66 30 P **P** **10 53 54.8 +1.7**
baz=260,SNR=14
H19K Roundabout Mou 41.68 33 P **P** **10 53 55.6 +2.4**
baz=263,SNR=22
CHIR Chirikof Islan 41.85 47 P **P** **10 53 56.6 +1.7**
baz=274
J19K Poorman 41.87 35 P **P** **10 53 56.9 +2.0**
baz=265,SNR=11
P18K Big Mountain, 41.90 42 P **P** **10 53 57.2 +2.0**
baz=271
O18K Koktuh Hills 41.91 41 P **P** **10 53 56.8 +1.6**
baz=270
L19K White Mountain 42.12 38 P **P** **10 53 58.7 +1.7**
baz=268
D20K Etivluk River 42.12 28 P **P** **10 53 58.5 +1.6**
baz=259
F20K Avaraart Lake 42.18 30 P **P** **10 53 59.3 +2.0**
baz=262,SNR=6.6
E20K Nigu River 42.19 29 P **P** **10 53 59.6 +2.1**
baz=260,SNR=20
B20K Meade River 42.20 26 P **P** **10 53 59.5 +2.1**
baz=257
N19K Bonanza Creek 42.27 40 P **P** **10 53 59.9 +1.6**
baz=270
ZSN Zaisan 42.29 300 ⇑*i*P **P** **10 53 58.4 -0.1**
comp=Z,74nm,1.4s
ZSN Zaisan 42.29 300*c i*P **P** **10 53 58.4 -0.1**
ZSN pmax pmax
comp=Z,74nm,1.4s
H20K Anotleneega Mo 42.33 33 P **P** **10 54 00.7 +2.1**
baz=264,SNR=8.5
M19K Big River Lodg 42.33 38 P **P** **10 54 00.5 +1.8**
baz=269
O19K Port Alsworth 42.35 41 P **P** **10 54 00.4 +1.6**
baz=271
I20K Naaghedeneel 42.43 34 P **P** **10 54 01.5 +2.1**
baz=265
K20K Telida 42.52 36 P **P** **10 54 01.8 +1.5**
baz=267
J20K Nowinta River 42.53 35 P **P** **10 54 01.1 +0.9**
baz=266
SWI Sorong 42.57 199 P **P** **10 54 01.6 +0.6**
comp=Z,14nm,0.9s
L20K Farewell, AK 42.58 37 P **P** **10 54 02.5 +1.8**
baz=268
JAY Jayapura 42.70 185 LR LR 11 10 22.7
comp=Z,855nm,19.4s,baz=1.0,slow=34
C21K Knifeblade Rid 42.85 27 P **P** **10 54 05.2 +2.4**
baz=260
P19K Oil Pt 42.91 42 P **P** **10 54 05.6 +2.1**
baz=272
M20K Styx River 42.92 38 P **P** **10 54 05.1 +1.5**
baz=270
G21K Allakaket 42.99 31 P **P** **10 54 05.4 +1.5**
baz=264,SNR=23
B21K Ikpikpuk River 42.99 27 P **P** **10 54 06.4 +2.5**
baz=260,SNR=15
E21K Killik River 43.03 29 P **P** **10 54 06.6 +2.3**
baz=262
F21K Alatna River 43.07 30 P **P** **10 54 05.7 +1.1**
baz=264
A22K Sinclair Lake 43.13 25 P **P** **10 54 06.7 +1.7**
baz=258
H21K Melozitna Rive 43.20 33 P **P** **10 54 06.6 +0.9**
baz=266,SNR=8.8
CHUM Lake Minchumin 43.33 35 P **P** **10 54 08.2 +1.6**
baz=268
KDAK Kodiak Island 43.36 44*de*P **P** **10 54 07.0 -0.1**
KDAK pmax pmax
comp=Z,92nm,1.5s
KDAK Kodiak Island 43.36 44 P **P** **10 54 08.1 +1.1**
baz=275
PPLA Purkeypile 43.37 37 P **P** **10 54 08.7 +1.5**
baz=270
N20K Mount Spurr 43.37 39 P **P** **10 54 08.8 +1.6**
baz=271
Q20K Shuyak Island 43.40 43 P **P** **10 54 08.4 +1.1**
baz=274
B22K Teshekpuk Lake 43.52 26 P **P** **10 54 10.4 +2.3**
baz=260
I21K Tanana 43.52 33 P **P** **10 54 10.4 +2.2**
baz=267,SNR=12
D22K Ayikyak River 43.56 28 P **P** **10 54 10.2 +1.6**

baz=263,SNR=13
F22K John River 43.60 30 P P 10 54 10.7 +1.8
baz=265
SKT Skwentna 43.68 38 P P 10 54 11.3 +1.7
baz=271
HOM Homer 43.72 41 P P 10 54 12.2 +2.3
baz=273
E22K Anaktuvuk Pass 43.80 29 P P 10 54 12.0 +1.5
baz=264,SNR=32
H22K Ishtalitna Cre 43.80 32 P P 10 54 11.9 +1.3
baz=267,SNR=8.6
G22K Bettles 43.81 31 P P 10 54 12.1 +1.6
baz=266
BPAW Bear Paw Mtn. 43.91 35 P P 10 54 11.6 +0.1
BPAW Bear Paw Mtn. 43.91 35 P P 10 54 12.7 +1.3
baz=269
KTH Kantishna Hill 43.94 36 P P 10 54 12.2 +0.5
LSA Lhasa 43.96 273 P P 10 54 09.1 -3.7
LSA S S 11 00 35.9 -8.0
LSA pmax pmax
comp=Z,14nm,1.3s
LSA LR LR
comp=Z,990nm,15.5s
LSA LR LR
comp=Z,720nm,14.4s
LSA LR LR
comp=Z,1μm,15.5s
MLY Manley 44.04 34 P P 10 54 13.8 +1.3
MLY Manley 44.04 34 P P 10 54 13.7 +1.2
baz=269,SNR=13
CHTO Chiang Mai 44.05 254 P P 10 54 13.9 +0.8
CHTO pmax pmax
comp=Z,25nm,2.0s
SUA Susitna One 44.07 39 P P 10 54 13.9 +1.1
baz=272
MK31 Makanchi Array 44.16 300*c iP* P 10 54 13.8 +0.2
MKAR Makanchi Array 44.16 300 P P 10 54 13.3 -0.4
MKAR Makanchi Array 44.16 300 P P 10 54 12.9 -0.7
comp=Z,53nm,0.9s,baz=75,slow=6.4,SNR=178
MKAR LR LR 11 14 52.3
comp=Z,707nm,18.5s,baz=77,slow=39
comp=Z,53nm,0.9s
MKAR Makanchi Array 44.16 300 P P 10 54 13.3 -0.4
BRSE Bradley Lake S 44.17 41 P P 10 54 14.3 +0.7
baz=274
TRF Thorofare Moun 44.23 36 P P 10 54 15.0 +0.9
baz=271
CUT Chulitna 44.26 37 P P 10 54 15.0 +0.9
baz=272
CMAR Chiang Mai Arr 44.28 254 P P 10 54 15.6 +0.7
comp=Z,4.2nm,0.8s,baz=49,slow=7.8,SNR=26
CMAR LR LR 11 14 55.8
comp=Z,958nm,18.2s,baz=55,slow=39
comp=Z,4.2nm,0.8s
CMAR Chiang Mai Arr 44.28 254 *i* P P 10 54 16.1 +1.2
CMAR pmax pmax
comp=Z,4.0nm,0.8s
D23K Nanushuk River 44.29 28 P P 10 54 15.3 +0.9
baz=265,SNR=14
FAKI Fak Fak 44.32 197 P P 10 54 14.8 -0.4
FAKI Fak Fak 44.32 197 P P 10 54 16.7 +1.5
FAKI Fak Fak 44.32 197 P P 10 54 16.3 +1.1
comp=Z,20nm,0.8s
COLD Coldfoot 44.34 31 P P 10 54 13.8 -1.0
COLD Coldfoot 44.34 31 P P 10 54 16.1 +1.2
baz=267,SNR=5.4
MAKZ Makanchi 44.36 300 P P 10 54 14.7 -0.6
MAKZ Makanchi 44.36 300 P P 10 54 15.3 0.0
G23K Bananza Creek 44.39 31 P P 10 54 16.2 +0.9
baz=268,SNR=11
C23K Itkillik River 44.40 27 P P 10 54 16.1 +0.9
C23K IAmb IAmb 10 54 35.3
comp=Z,70nm,1.1s
C23K Itkillik River 44.40 27 P P 10 54 15.6 +0.4
baz=264,SNR=12
MRSI Marisa 44.40 212 P P 10 54 15.4 -0.4
comp=Z,52nm,1.2s
H23K Yukon River 44.55 33 P P 10 54 16.9 +0.4
baz=269
RC01 Rabbit Creek A 44.57 39 P P 10 54 16.5 -0.3
baz=274
BWN Browne 44.58 35 P P 10 54 16.9 +0.1
E23K Chandalar 44.61 29 P P 10 54 17.4 +0.4
baz=266
SEM Semipalatinsk 44.62 305 *eP* P 10 54 17.0 -0.5
comp=Z,69nm,1.3s
SEM Semipalatinsk 44.62 305 *eP* P 10 54 17.0 -0.5
SEM pmax pmax
comp=Z,69nm,1.3s
O22K Cooper Landing 44.62 40 P P 10 54 16.8 -0.3
baz=274
I23K Minto, Yukon-K 44.62 34 P P 10 54 17.0 0.0
baz=270
TOLK Toolik Lake Re 44.66 29 P P 10 54 17.7 +0.2
baz=266,SNR=8.8
NEA2 Nenana 44.75 34 P P 10 54 18.1 0.0
baz=271
SEW Seward 44.79 41 P P 10 54 18.3 -0.1
baz=275
MCK McKinley 44.83 36 P P 10 54 18.8 0.0
MCK McKinley 44.83 36 P P 10 54 18.8 0.0
MCK pmax pmax
comp=Z,28nm,1.2s
MCK McKinley 44.83 36 P P 10 54 18.6 -0.2
baz=272
PMR Palmer 44.83 39 P P 10 54 18.9 +0.1
baz=274
D24K Happy Valley 44.97 28 P P 10 54 20.4 +0.6
baz=266
WAT1 Susitna Watana 45.03 37 P P 10 54 21.0 +0.6
baz=273
E24K Your Creek 45.04 29 P P 10 54 20.3 -0.1
baz=268,SNR=21
C24K Franklin Bluff 45.05 27 P P 10 54 20.7 +0.3
baz=266
KNK Knik Glacier 45.17 39 P P 10 54 21.6 +0.1
baz=274
SML Sawmill 45.20 38 P P 10 54 21.3 -0.5
baz=274
SANI Sanana 45.23 206 P P 10 54 21.7 -0.7
H24K Noodor Dome 45.24 33 P P 10 54 22.0 0.0
baz=270
F24K Squaw Lake 45.25 30 P P 10 54 21.9 -0.2
baz=269,SNR=13
COLA College 45.27 34⇑ *iP* P 10 54 24.2 +2.0
COLA pmax pmax
comp=Z,30nm,0.8s
COLA College 45.27 34 P P 10 54 22.0 -0.2
baz=271
PWL Port Wells 45.27 40 P P 10 54 22.5 +0.2
baz=275
G24K Hadweenzic Riv 45.40 31 P P 10 54 23.4 +0.2
baz=270
WAT6 Susitna Watana 45.42 37 P P 10 54 23.4 -0.3
baz=274
POKR Poker Plat Res 45.44 34 P P 10 54 23.2 -0.4
baz=272,SNR=11
SHL Shillong 45.48 268 P P 10 54 24.7 0.0
SHL pmax pmax
comp=Z,35nm,1.6s
DHY Denali Highway 45.56 36 P P 10 54 24.7 0.0
baz=274
KURK Kurchatov 45.56 306 P P 10 54 24.9 +0.2
KURK Kurchatov 45.56 306 *c iP* P 10 54 24.8 +0.1
KURK pmax pmax
comp=Z,125nm,1.0s
MSAI Masohi 45.56 201 P P 10 54 27.3 +2.3
KURBB Kurchatov Arra 45.64 306 P P 10 54 24.7 -0.6
comp=Z,68nm,0.9s,baz=77,slow=8.8,SNR=255
comp=Z,68nm,0.9s
KURBB Kurchatov Arra 45.64 306 P P 10 54 24.9 -0.4
HDA Harding Lake 45.67 35 P P 10 54 25.1 -0.3
baz=273
SCM Sheep Creek Mo 45.67 38 P P 10 54 25.8 +0.2
baz=275
ILAR Eielson Array 45.68 34 P P 10 54 26.0 +0.5
comp=Z,8.0nm,0.7s,baz=272,slow=7.7,SNR=58
ILAR LR LR 11 13 50.7
comp=Z,651nm,20.6s,baz=275,slow=36
comp=Z,8.0nm,0.7s
APSI Ampana 45.78 212 P P 10 54 28.8 +2.0
comp=Z,50nm,1.2s
P23K Montague Islan 45.82 41 P P 10 54 25.8 -0.9
baz=277
D25K Kavik River 45.85 28 P P 10 54 26.6 -0.3
baz=268
G25K Bearman Lake 45.94 31 P P 10 54 27.3 -0.2
baz=271
AAI Ambon 46.09 202 P P 10 54 31.4 +2.2
comp=Z,2μmcomp=Z,36nm,0.7s
F25K Christian Rive 46.11 30 P P 10 54 28.5 -0.5
baz=271
E25K Arctic Village 46.13 29 P P 10 54 28.4 -0.7
baz=270
M24K Tolsona, Glenn 46.19 38 P P 10 54 28.8 -0.8
baz=276
K24K Donnelly Dome 46.22 35 P P 10 54 29.4 -0.4
baz=274
J25K Salcha River, 46.34 34 P P 10 54 29.9 -0.9
baz=274
KLU Klutina 46.37 39 P P 10 54 30.5 -0.6
baz=276,SNR=6.9
C26K Camden Bay 46.37 27 P P 10 54 30.3 -0.5
baz=269,SNR=8.0
BNDI Bandanaira 46.43 200 P P 10 54 33.6 +1.7
PAX Paxson 46.43 36 P P 10 54 29.8 -1.8
baz=275
HARP HAARP 46.63 37 P P 10 54 32.5 -0.5
baz=276
F26K Sheenjek River 46.68 30 P P 10 54 32.3 -1.1
baz=272,SNR=11
C27K Jago River 46.79 27 P P 10 54 33.5 -0.7
baz=271
G26K Porcupine Rive 46.85 31 P P 10 54 35.0 +0.4
baz=273
N25K Chitina, Valde 46.99 38 P P 10 54 36.2 +0.3
baz=277
SCRK Sand Creek 47.00 35 P P 10 54 36.1 +0.1
baz=276,SNR=13
BMRM Bremner River 47.07 39 P P 10 54 36.1 -0.4
baz=278
PDGK Podgornoye 47.08 296 P P 10 54 34.7 -2.2
J26L Joseph Creek 47.13 34 P P 10 54 36.4 -0.6
baz=276
SHLS Shalkode 47.15 296 *eP* P 10 54 34.8 -2.7
SHLS Shalkode 47.15 296 *eP* P 10 54 34.8 -2.7
I26K Coal Creek Min 47.23 33 P P 10 54 36.5 -1.1
baz=275
TDK Taldyqorghan 47.27 298 *eP* P 10 54 38.0 -0.3
TDK Taldyqorghan 47.27 298 *eP* P 10 54 38.0 -0.3
KAIM Kayak Island 47.32 41 P P 10 54 37.6 -0.8
baz=279
L26K Log Cabin Wild 47.39 36 P P 10 54 38.5 -0.4
baz=277,SNR=16
E27K Coleen River 47.62 29 P P 10 54 40.5 -0.2
baz=274,SNR=9.7
M26K Nabesna, AK 47.63 37 P P 10 54 40.2 -0.7
baz=278,SNR=5.7
MCARA McCarthy VSAT 47.77 38 P P 10 54 40.5 -1.4
baz=279
D27M Malcolm River 47.77 28 P P 10 54 40.9 -1.0
baz=273
H27K Steamboat Moun 47.81 32 P P 10 54 40.6 -1.5
baz=276
K27K Chicken 47.83 35 P P 10 54 41.8 -0.5
baz=277
CRQE Cirque 47.84 39 P P 10 54 42.5 0.0
baz=279
SATY Saty 47.91 296⇑ *iP* P 10 54 42.9 -0.5
comp=Z,36nm,1.4s
SATY Saty 47.91 296 *c iP* P 10 54 42.9 -0.5
SATY pmax pmax
comp=Z,36nm,1.4s
L27K Beaver Creek, 48.07 36 P P 10 54 43.6 -0.6
baz=278,SNR=6.2
EVN Everest 48.12 274 P P 10 54 45.3 -0.6
EVN IAmb IAmb 10 54 51.6
comp=Z,44nm,0.9s
M27K Edge Creek, AK 48.15 37 P P 10 54 44.4 -0.7
baz=279
F28M Old Crow 48.31 30 P P 10 54 44.8 -1.3
baz=276
E28M Babbage River 48.34 29 P P 10 54 45.6 -0.6
baz=275
MESA MESA 48.49 40 P P 10 54 46.5 -1.3
baz=281
I28M Miner Creek 48.55 33 P P 10 54 47.7 -0.3
baz=278
D28M Stokes Point 48.56 28 P P 10 54 47.3 -0.6
baz=275
CHKK Chushkaly 48.61 297 *eP* P 10 54 48.5 -0.1
CHKK Chushkaly 48.61 297 *eP* P 10 54 48.5 -0.1
BVCY Beaver Creek 48.61 37 P P 10 54 46.8 -1.7
baz=280
CTG Chitna Glacier 48.64 39 P P 10 54 47.7 -1.1
baz=280
TARG Taragay, Kyrgy 48.80 295 P P 10 54 51.8 +1.1
TARG pmax pmax
comp=Z,45nm,1.3s
MDOK Medeo 48.81 297 *eP* P 10 54 50.1 -0.3
MDOK Medeo 48.81 297 *eP* P 10 54 50.0 -0.3
AAA Alma-Ata 48.88 297 *eP* P 10 54 50.7 -0.2
comp=Z,16nm,0.5s
AAA Alma-Ata 48.88 297 *eP* P 10 54 50.6 -0.2
AAA pmax pmax
comp=Z,16nm,0.5s
YUK3 Moose Creek 48.91 38 P P 10 54 49.5 -1.5
baz=280,SNR=5.2
TNSS Tian-Shan 48.92 296 *eP* P 10 54 51.0 -0.6
TNSS Tian-Shan 48.92 296 *eP* P 10 54 50.9 -0.6
E29M Blow River 48.97 29 P P 10 54 49.3 -1.7
baz=277
DAWY Dawson 48.99 35 P P 10 54 50.5 -0.9
baz=279
H29M Whitestone 49.08 32 P P 10 54 51.0 -1.0
baz=278
G29M Pine Creek 49.12 31 P P 10 54 50.9 -1.4
baz=278
O28M Mount Upton 49.23 39 P P 10 54 52.4 -1.2
baz=282
YUK8 Steele Glacier 49.33 38 P P 10 54 53.0 -1.3
baz=282
PINM Pinnacle 49.34 40 P P 10 54 53.1 -1.0
baz=282
BRZS Berezniki 49.42 306⇑ *iP* P 10 54 54.9 0.0
BRZS Berezniki 49.42 306 *c iP* P 10 54 54.8 0.0
PMG Port Moresby 49.53 176 LR LR 11 14 58.7
comp=Z,225nm,19.6s,baz=332,slow=35
BNSI Bone 49.58 212 P P 10 54 57.0 +0.8
comp=Z,40nm,1.6s
M29M Somme Creek 49.70 37 P P 10 54 56.3 -0.5
baz=282
EPYK Eagle Plains 49.71 31 P P 10 54 55.9 -0.9
baz=280,SNR=7.4
L29M L29M 49.72 36 P P 10 54 56.0 -0.9
baz=281
G30M tAoh Zraii Nji 49.80 30 P P 10 54 57.1 -0.4
baz=280
BOOM Boomskoye usch 49.81 296 P P 10 54 58.2 +0.1
BOOM Boomskoye usch 49.81 296 P P 10 54 58.2 +0.1
BOOM pmax pmax
comp=Z,70nm,1.0s
K29M Barlow Dome 49.84 35 P P 10 54 56.5 -1.4
baz=281
YUK4 Talbot Arm 49.85 38 P P 10 54 56.4 -1.7
baz=282
PNL Peninsula 49.86 40 P P 10 54 56.9 -1.1
baz=283
F30M Barrier River 49.87 30 P P 10 54 56.7 -1.1
baz=280,SNR=9.2
TKM2 Tokmak 2 49.89 297 P P 10 54 58.9 +0.2
SNR=73
BVA0 Borovoye Array 49.91 311 *i* P P 10 54 58.9 +0.5
BVAR Borovoye Array 49.91 311 P P 10 54 58.3 -0.1
comp=Z,20nm,0.9s,baz=78,slow=7.9,SNR=62
BVAR S S 11 02 10.5 +3.1
comp=Z,1.0nm,0.5s,baz=68,slow=17,SNR=3.5
BVAR LR LR 11 16 41.4
comp=Z,465nm,18.7s,baz=69,slow=37
comp=Z,20nm,0.9s
BORK Borovoye 49.94 311 *c iP* P 10 54 59.0 +0.3
BORK pmax pmax
comp=Z,67nm,1.0s
I30M Mount Dempster 50.06 33 P P 10 54 58.1 -1.5
baz=281
O29M Mount Kennedy 50.11 39 P P 10 54 57.8 -2.3
baz=283
J30M Hart River 50.21 34 P P 10 54 58.8 -1.9
baz=282
KAPI Kappang 50.28 212 LR LR 11 18 31.3
comp=Z,240nm,18.2s,baz=22,slow=39
SGDS Sogindy 50.35 298 *eP* P 10 55 01.9 -0.1
comp=Z,34nm,1.3s
KBK Karagaybulak 50.43 297 P P 10 55 03.9 +1.2
SNR=27
M30M Minto, Yukon 50.43 36 P P 10 55 01.0 -1.3
baz=283
CHMS Chumysh 50.44 297 P P 10 55 03.4 +0.7
SNR=5.1
HYT Haines Junctio 50.51 38 P P 10 55 01.5 -1.5
baz=284,SNR=15
USP Ospenovka 50.51 298 P P 10 55 04.0 +0.8
SNR=17
N30M Aishikik Lake 50.55 38 P P 10 55 01.6 -1.7
baz=284
G31M Satah River 50.57 30 P P 10 55 01.2 -2.0
baz=281
INK Inuvik 50.58 29 P P 10 55 05.5 +2.3
INK pmax pmax
comp=Z,23nm,1.2s
INK Inuvik 50.58 29 P P 10 55 02.1 -1.1
baz=281,SNR=7.2
MAYO Mayo, Yukon 50.60 35 P P 10 55 01.2 -2.4
baz=283
F31M Tsiigehtchic 50.67 30 P P 10 55 01.8 -2.1
baz=281
P29M Windy Craggy 50.69 40 P P 10 55 02.9 -1.4
baz=284
AAK Ala-Archa 50.75 297 LR LR 11 18 32.1
comp=Z,1μm,18.1s,baz=75,slow=38
AAK Ala-Archa 50.75 297 P P 10 55 05.8 +0.7
SNR=15
AAK Ala-Archa 50.75 297 *c iP* P 10 55 04.8 -0.3
AAK pmax pmax
comp=Z,43nm,1.4s
H31M Peel River 50.77 32 P P 10 55 04.7 -0.2
baz=282,SNR=8.3
UCH Uchtor 50.89 296 P P 10 55 07.7 +1.1
SNR=12
P30M Million Dollar 50.94 39 P P 10 55 05.2 -1.0
baz=285
KSH Kashi 50.95 293 P P 10 55 11.2 +4.6
KSH sP pwP 10 55 19.9 +3.5
KSH PP PP 10 57 09.4 +6.5
KSH S S 11 02 30.1 +7.6
KSH pmax pmax
comp=Z,31nm,4.1s
KSH pmax pmax
comp=Z,6μm,14.2s
KSH LR LR
comp=Z,4μm,14.0s
KSH LR LR
comp=Z,4μm,13.8s
N31M Braeburn, Yuko 51.16 37 P P 10 55 06.0 -1.8
baz=284
O30N Mendenhall 51.19 38 P P 10 55 06.2 -1.8
baz=285
EKS2 Erkin-Say 51.23 297 P P 10 55 09.5 +0.8
SNR=13
PLBC Pleasant Camp 51.41 40 P P 10 55 08.5 -1.1
baz=286
M31M Drury Creek, Y 51.61 36 P P 10 55 10.1 -1.1
baz=285
WHY Whitehorse 51.80 38 P P 10 55 11.7 -1.0
baz=286
S31K Pelican 51.89 42 P P 10 55 12.3 -1.0
baz=287
SKAG Skagway 51.91 40 P P 10 55 12.4 -1.0
baz=286
R31K City Hall, Gus 52.01 41 P P 10 55 12.7 -1.4
baz=287
FARO Faro, Yukon 52.07 36 P P 10 55 13.2 -1.4
baz=286
KULM Kulim 52.17 240 P P 10 55 15.9 0.0
KULM IAmb IAmb 10 55 18.4
comp=Z,54nm,1.4s
KIP Kipapa 52.32 93⇓ *eP* P 10 55 18.8 +1.9
A36M Sachs Harbour 52.49 23 P P 10 55 15.9 -1.6
baz=285
IPM Ipoh 52.53 239 P P 10 55 18.7 +0.1
IPM IAmb IAmb 10 55 29.9
comp=Z,49nm,1.3s
SIT Sitka 52.63 43 P P 10 55 17.8 -1.0
baz=288
P32M Atlin 52.66 39 P P 10 55 18.0 -1.1
baz=288
R32K Eaglecrest 52.67 41 P P 10 55 18.1 -0.9
baz=288
DZA Taraz 52.79 298 *eP* P 10 55 20.2 -0.1
comp=Z,30nm,1.2s
DZA Taraz 52.79 298 *eP* P 10 55 20.1 -0.1
DZA pmax pmax
comp=Z,30nm,1.2s
S32K Killisnoo 52.89 42 P P 10 55 19.4 -1.2
baz=288
MMPY Sheldon Lake, 52.89 35 P P 10 55 19.1 -1.6
baz=287
P33M Teslin, Yukon 52.90 38 P P 10 55 19.7 -1.2
baz=288
EDFI Ende, Flores 52.96 208 P P 10 55 20.7 -1.0
comp=Z,28nm,1.5s
SOEI Soe 53.02 205 P P 10 55 22.8 +0.6
KK31 Karatay Array 53.26 299 P P 10 55 23.3 -0.4
KK31 IAmb IAmb 10 55 24.9
comp=Z,41nm,1.1s
KK31 Karatay Array 53.26 299 P P 10 55 23.3 -0.4
KK31 pmax pmax
comp=Z,41nm,1.1s
KKAR Karatay Array 53.26 299 P P 10 55 22.8 -0.9
KKAR Karatay Array 53.26 299 P P 10 55 22.8 -0.9
Q32M Nakina River 53.57 40 P P 10 55 24.3 -1.6
baz=289
BATI Baumata 53.64 205 LR LR 11 17 01.3
comp=Z,640nm,21.3s,baz=14,slow=35
BRLS Boroldav 53.74 299 *eP* P 10 55 28.6 +1.3
comp=Z,27nm,1.4s
BRLS Boroldav 53.74 299 *eP* P 10 55 28.5 +1.3
BRLS pmax pmax
comp=Z,27nm,1.4s
KDU Kakadu 53.77 194 P P 10 55 27.8 +0.3
comp=Z,5.5nm,0.8s
IUG luzhnay 53.97 298 *eP* P 10 55 29.0 0.0
IUG luzhnay 53.97 298 *eP* P 10 55 29.0 0.0
R33M Jennings River 54.05 39 P P 10 55 26.9 -2.4
baz=290
SVE Sverdlovsk 54.06 318 *eP* P 10 55 30.2 +1.0
SVE *eS* S 11 03 04.8 +0.6
SVE pmax pmax
comp=Z,73nm,1.1s
SVE MLR MLR
comp=Z,5μm,14.0s
DSRI Dabo 54.13 232 P P 10 55 31.5 +1.2
comp=Z,2μmcomp=Z,10nm,1.2s
MTN Manton Dam 54.19 195 P P 10 55 29.5 -1.1
MTN IAmb IAmb 10 56 11.2
comp=Z,45nm,1.6s
CHM Chimkent 54.19 298 *eP* P 10 55 30.4 -0.2
comp=Z,29nm,1.3s
CHM Chimkent 54.19 298 *eP* P 10 55 30.3 -0.2
CHM pmax pmax
comp=Z,29nm,1.3s
TPI Tanjungpandan 54.20 227 P P 10 55 31.5 +0.7
comp=Z,22nm,1.6s
CRAG Craig 54.33 44 P P 10 55 29.6 -1.6
baz=291
WRAK Wrangell Islan 54.40 43 P P 10 55 30.1 -1.6
baz=291
S34M Telegraph Cree 54.48 41 P P 10 55 30.4 -1.9
baz=291
DLBC Dease Lake 54.84 40 LR LR 11 19 06.1
comp=Z,194nm,20.4s,baz=274,slow=36
GAR Garm 55.14 294 P P 10 55 37.4 -0.1
PSI Prapat 55.17 239 LR LR 11 20 56.2
comp=Z,978nm,18.1s,baz=34,slow=38
PSI Prapat 55.17 239 P P 10 55 38.1 +0.1
PSI pmax pmax
comp=Z,20nm,1.2s
RPSI Rantau Prapat 55.25 239 P P 10 55 38.1 -0.3
ARTI Arti 55.38 318 LR LR 11 22 06.9
comp=Z,2μm,19.9s,baz=71,slow=39
BKNI Bangkinang 55.68 236 P P 10 55 41.8 +0.3
CHGR Chuyangaron 56.10 294 P P 10 55 44.5 +0.1
CHGR Chuyangaron 56.10 294 P P 10 55 44.5 +0.1
CHGR pmax pmax
comp=Z,134nm,1.0s
GSI Gunungsitoli 57.17 239 P P 10 55 52.2 0.0
GSI Gunungsitoli 57.17 239 P P 10 55 53.0 +0.8
comp=Z,84nm,2.1s
AB31 Akbulak array 57.39 309 P P 10 55 52.8 -0.5
AB31 IAmb IAmb 10 55 55.0
comp=Z,45nm,0.8s

AB31 Akbulak array 57.39 309 P **P** **10 55 52.8 -0.5**
ABKAR Akbulak array 57.39 309 P **P** **10 55 53.0 -0.3**
LHSI Lahat 57.44 230 P **P** **10 55 54.3 +0.3**
comp=Z,38nm,0.9s
MDSI Maura Dua 57.59 229 P **P** **10 55 54.9 -0.1**
LEM Lembang 57.60 224 LR LR 11 22 11.0
comp=Z,407nm,19.2s,baz=9.5,slow=38
SPITS Spitsbergen Ar 57.72 349 P **P** **10 55 55.8 +0.6**
comp=Z,9.3nm,1.0s,baz=58,slow=5.4,SNR=6.7
SPITS LR LR 11 23 52.7
comp=Z,1μm,18.1s,baz=24,slow=39
comp=Z,9.3nm,1.0s
KBS Kingsbay 57.79 350 P **P** **10 55 56.9 +1.2**
KBS IAmb IAmb 10 55 58.6
comp=Z,49nm,1.0s
KBS Kingsbay 57.79 350*c iP* **P** **10 55 57.3 +1.6**
KBS pmax pmax
comp=Z,59nm,1.1s
KBS Kingsbay 57.79 350 *i* P **P** **10 55 57.2 +1.6**
NOR Nord 57.92 357 *i* P **P** **10 55 56.6 +0.1**
NOR IAmb IAmb 10 55 59.0
comp=Z,26nm,1.2s
AKTO Aktyubinsk 58.01 311 LR LR 11 22 46.3
comp=Z,950nm,19.4s,baz=47,slow=38
AKTO Aktyubinsk 58.01 311 P **P** **10 55 56.9 -0.7**
KBL Kabul 58.13 290 P **P** **10 55 58.1 -0.9**
KBL IAmb IAmb 10 55 59.8
comp=Z,44nm,0.9s
KBL Kabul 58.13 290 P **P** **10 55 58.1 -0.9**
KBL pmax pmax
comp=Z,44nm,1.0s
BBB Bella Bella 58.36 46 LR LR 11 17 58.8
comp=Z,198nm,21.9s,baz=303,slow=33
KIRV Kirov 58.87 322 LR LR 11 23 53.9
comp=Z,1μm,18.3s,baz=45,slow=39
KIRV Kirov 58.87 322*c iP* **P** **10 56 04.1 +0.7**
RES Resolute Bay 58.95 15 P **P** **10 56 04.1 +0.4**
RES IAmb IAmb 10 56 19.7
comp=Z,28nm,0.8s
RES Resolute Bay 58.95 15 LR LR 11 24 29.4
comp=Z,658nm,19.9s,baz=343,slow=39
RES Resolute Bay 58.95 15 P **P** **10 56 04.1 +0.4**
RES pmax pmax
comp=Z,28nm,0.9s
LVZ Lovozero 59.96 336 P **P** **10 56 10.6 -0.4**
comp=Z,21nm,1.0s
YKA Yellowknife Ar 59.99 32 P **P** **10 56 11.2 +0.1**
comp=Z,2.9nm,0.8s,baz=299,slow=7.5,SNR=5.8
comp=Z,2.9nm,0.8s
YKA Yellowknife Ar 59.99 32 *i* P **P** **10 56 15.0 +3.8**
YKA pmax pmax
comp=Z,3.0nm,0.9s
HYBB Hyderabad (bro 60.29 268 *e*P **P** **10 56 13.9 0.0**
APA Apatity 60.54 336⇓ *i*P **P** **10 56 13.8 -1.0**
APA *i* 10 56 58.6
APA *i* S **S** **11 04 26.6 -2.6**
APA *i* SS **SS** **11 08 22.7 -3.9**
WRAB Tennant Creek 60.58 190 P **P** **10 56 15.0 -0.6**
WRAB Tennant Creek 60.58 190 P **P** **10 56 16.2 +0.6**
WRAB Tennant Creek 60.58 190*d iP* **P** **10 56 15.5 -0.1**
WRAB pmax pmax
comp=Z,23nm,1.4s
QIS Mount Isa 60.67 185 P **P** **10 56 15.6 -0.7**
comp=Z,5.7nm,1.0s
ARCES ARCESS Array B 61.65 339 P **P** **10 56 22.8 +0.4**
comp=Z,8.6nm,0.9s,baz=49,slow=7.2,SNR=6.5
ARCES LR LR 11 28 44.9
comp=Z,1μm,18.5s,baz=20,slow=42
comp=Z,8.6nm,0.9s
KLMR Klimovskoe 62.07 328 *e*P **P** **10 56 23.1 -2.2**
KLMR *e* 10 58 39.9
KLMR pmax pmax
comp=Z,86nm,1.4s
KLMR MLR MLR
comp=Z,1μm,17.0s
NEEM North Greenlan 62.16 4 *i* P **P** **10 56 25.4 -0.7**
NEEM IAmb IAmb 10 56 29.3
comp=Z,20nm,0.7s
DAG Danmarks Havn 62.70 356 P **P** **10 56 30.2 +1.0**
DAG pmax pmax
comp=Z,33nm,2.2s
DAG Danmarks Havn 62.70 356 *i* P **P** **10 56 29.0 -0.2**
DAG IAmb IAmb 10 56 30.9
comp=Z,20nm,1.0s
SGF Sodankyl 62.72 337 P **P** **10 56 30.7 +1.2**
SGF pmax pmax
comp=Z,48nm,1.6s
BELG Belogornoye 62.78 317 *i* P **P** **10 56 30.7 +0.5**
BELG pmax pmax
comp=Z,19nm,1.0s
HRA Herat 63.04 293 P **P** **10 56 32.5 0.0**
HRA IAmb IAmb 10 56 34.4
comp=Z,26nm,1.0s
JOF Joensuu 64.03 332 *eP* **P** **10 56 38.8 +0.5**
ASAR Alice Springs 64.31 190 P **P** **10 56 39.6 -0.9**
comp=Z,5.9nm,1.0s,baz=7.3,slow=5.5,SNR=27
ASAR LR LR 11 23 25.1
comp=Z,197nm,21.9s,baz=1.5,slow=35
ASAR PKP2bc P'P'bc 11 25 37.0 +8.2
comp=Z,0.5nm,0.8s,baz=184,slow=2.8,SNR=4.1
comp=Z,5.9nm,1.0s
PNT Penticton 64.47 46 P **P** **10 56 43.4 +2.0**
DBG Daneborg 65.19 355 *i* P **P** **10 56 45.5 -0.2**
DBG IAmb IAmb 10 56 47.1
comp=Z,171nm,2.3s
MOS Moscow 65.82 323 *eP* **P** **10 56 47.6 -2.4**
MOS *e* 10 59 13.1
MOS *eS* **S** **11 05 32.5 -2.9**
MOS pmax pmax
comp=Z,82nm,1.5s
MOS MLR MLR
comp=Z,1μm,16.0s
NEW Newport 66.42 46 LR LR 11 25 51.5
comp=Z,143nm,20.6s,baz=320,slow=36
VRH Novokhopyorsk 66.50 318 *eP* **P** **10 56 52.9 -1.6**
VRH pmax pmax
comp=Z,30nm,1.0s
VRH MLR MLR
comp=Z,3μm,14.0s
WRKA Warakurna 66.61 195 P **P** **10 56 54.4 -1.0**
comp=Z,5.4nm,2.9s
OBN Obninsk 66.68 323 P **P** **10 56 55.3 -0.2**
comp=Z,20nm,0.4s,baz=45,slow=4.3,SNR=12
comp=Z,20nm,0.4s
OBN Obninsk 66.68 323 *eP* **P** **10 56 56.1 +0.6**
OBN *e* 10 57 23.7
OBN *e* 10 59 21.4
OBN *e*PPP PPP 11 00 56.8
OBN pmax pmax
comp=Z,81nm,1.3s
OBN MLR MLR
comp=Z,1μm,16.0s
KEF Keuruu 66.78 333 *eP* **P** **10 56 55.9 -0.1**
YBH Yreka Blue Hor 66.80 54 LR LR 11 20 00.4
comp=Z,8.9nm,20.0s,baz=296,slow=30
FINES FINESS Array B 66.86 332 P **P** **10 56 56.8 +0.3**
FINES FINESS Array B 66.86 332 P **P** **10 56 56.4 -0.1**
comp=Z,28nm,0.8s,baz=45,slow=7.2,SNR=51
comp=Z,28nm,0.8s
FINES FINESS Array B 66.86 332 *i* P **P** **10 56 57.4 +0.8**
FINES pmax pmax
comp=Z,28nm,0.8s
VAF Ylistaro 66.90 335 *eP* **P** **10 56 57.3 +0.5**
LPSR Galich'ya Gora 67.08 320 *eP* **P** **10 56 57.5 -0.6**
LPSR pmax pmax
comp=Z,50nm,0.9s
LPSR MLR MLR
comp=Z,2μm,14.0s
SUMG Summit 67.42 1 *i* P **P** **10 57 00.8 +0.3**
SUMG IAmb IAmb 10 57 03.0
comp=Z,14nm,0.6s
VORR Voronezh 67.50 319 *eP* **P** **10 57 00.1 -0.7**
VORR pmax pmax
comp=Z,40nm,1.0s
VORR MLR MLR
comp=Z,3μm,12.0s
VSR Storozhevoye 67.79 319 *eP* **P** **10 57 01.3 -1.4**
VSR pmax pmax
comp=Z,20nm,0.9s
VSR MLR MLR
comp=Z,2μm,14.0s
VORD Divnogorie 67.88 319 *eP* **P** **10 57 02.2 -1.0**
VORD pmax pmax
comp=Z,20nm,1.0s
MAK Makhachkala 68.02 308*c iP* P 10 56 54.9 -9.3
MAK *e*PPP PPP 11 01 08.1
MAK *e*SS SS 11 10 17.9 -6.0
MAK pmax pmax
comp=Z,158nm,1.1s
MAK MLR MLR
comp=Z,2μm,14.0s
RAF Rauma 68.64 334 *eP* **P** **10 57 07.4 -0.4**
VSU Vasula 68.65 330 *eP* **P** **10 57 07.7 -0.2**
VSU Vasula 68.65 330*c iP* **P** **10 57 07.4 -0.5**
VSU pmax pmax
comp=Z,47nm,1.0s
AKT Akhty 68.73 307 *eP* **P** **10 57 08.3 -0.6**
AKT *e* 10 57 32.3
AKT *e* 10 59 40.1
AKT *eS* **S** **11 06 08.4 -2.8**
AKT pmax pmax
comp=Z,76nm,1.0s
AKT MLR MLR
comp=Z,2μm,13.0s
MSO Missoula 69.01 46 **P** **10 57 10.3 -0.3**
SEKA Sheki 69.22 307 P **P** **10 57 13.0 +1.1**
GOF Gofitskoye 69.40 312*ceP* **P** **10 57 13.5 +0.6**
GOF *eS* **S** **11 06 20.0 +1.2**
MNGR Mingechevir, A 69.54 306 P **P** **10 57 15.9 +2.1**
LKRN Lenkeran, Azer 69.69 304 P **P** **10 57 15.9 +1.2**
DDFL Dedoflistskaro 69.74 307 P **P** **10 57 16.7 +1.6**
NCK Nalchik 70.02 310⇓ *i*P **P** **10 57 18.3 +1.6**
NCK pmax pmax
comp=Z,63nm,1.2s
GANJ Ganja 70.08 307 P **P** **10 57 18.1 +0.9**
KVAR Kislovodsk Arr 70.27 311 P **P** **10 57 18.8 +0.5**
comp=Z,24nm,1.0s,baz=40,slow=16,SNR=9.4
KVAR LR LR 11 31 37.0
comp=Z,371nm,18.6s,baz=276,slow=39
comp=Z,24nm,1.0s
KIV Kislovodsk 70.27 311 P **P** **10 57 19.2 +0.9**
KIV Kislovodsk 70.27 311⇑ P **P** **10 57 18.1 -0.3**
KIV Kislovodsk 70.27 311 *eP* **P** **10 57 19.0 +0.7**
KIV *eS* **S** **11 06 31.5 +2.3**
KIV *eSS* **SS** **11 11 02.7 +3.9**
KIV pmax pmax
comp=Z,120nm,3.8s
KIV pmax pmax
comp=Z,93nm,1.1s
KIV Kislovodsk 70.27 311 P **P** **10 57 18.1 -0.3**
comp=Z,1μmcomp=Z,103nm,1.2s
KBZ Khabaz 70.28 311 P **P** **10 57 18.9 +0.6**
comp=Z,30nm,0.9s,baz=60,slow=2.7,SNR=43
KBZ LR LR 11 33 23.2
comp=Z,664nm,18.0s,baz=28,slow=40
comp=Z,30nm,0.9s
KBZ Khabaz 70.28 311*c iP* **P** **10 57 19.0 +0.7**
KBZ pmax pmax
comp=Z,61nm,1.1s
SHA1 Shidzhatmaz 70.42 311*c iP* **P** **10 57 20.0 +0.6**
NEUR Neytrino 70.68 311 *i* P **P** **10 57 22.6 +1.6**
NEUR pmax pmax
comp=Z,21nm,1.6s
ISAL Salakas 70.89 328 *eP* **P** **10 57 23.9 +2.1**
MNK Minsk 70.90 326 *i* P **P** **10 57 22.5 +0.6**
MNK *i* 10 59 58.8
MNK *i* PPP PPP 11 01 42.0
MNK *i* S **S** **11 06 39.1 +3.1**
MNK *i* SS **SS** **11 11 12.9 +5.1**
MNK pmax pmax
comp=N,33nm,1.0s
MNK pmax pmax
comp=Z,70nm,0.9s
MNK pmax pmax
comp=E,41nm,1.0s
MNK MLR MLR
comp=Z,2μm,17.0s
MNK MLR MLR
comp=N,1μm,16.0s
MNK MLR MLR
comp=E,1μm,15.0s
LABN Labinsk 70.97 313 *eP* **P** **10 57 20.3 -2.2**
LABN *eS* **S** **11 06 34.7 -2.4**
LABN pmax pmax
comp=Z,43nm,0.8s
GNI Garni 71.35 307 P **P** **10 57 25.3 +0.2**
GNI Garni 71.35 307 P **P** **10 57 25.3 +0.2**
comp=Z,10nm,0.4s,baz=102,slow=14,SNR=16
GNI LR LR 11 31 49.3
comp=Z,426nm,19.6s,baz=30,slow=38
comp=Z,10nm,0.4s
GNI Garni 71.35 307*ceP* **P** **10 57 26.6 +1.5**
GNI pmax pmax
comp=Z,58nm,1.3s
NVAR Mina Array Bea 71.47 55 P **P** **10 57 26.9 +1.0**
comp=Z,3.3nm,0.8s,baz=302,slow=6.0,SNR=27
NVAR LR LR 11 25 09.3
comp=Z,126nm,21.4s,baz=298,slow=33
comp=Z,3.3nm,0.8s
NAX Nakhchivan 71.47 306 P **P** **10 57 26.9 +1.2**
PABE Paberze 71.81 329 P **P** **10 57 27.5 +0.2**
PABE Paberze 71.81 329 *eP* **P** **10 57 28.1 +0.8**
STKA Stephens Creek 71.84 182 P **P** **10 57 28.7 +1.1**
comp=Z,2.1nm,0.8s,baz=313,slow=9.7,SNR=3.9
STKA LR LR 11 29 18.5
comp=Z,232nm,20.2s,baz=1.7,slow=36
comp=Z,2.1nm,0.8s
HFS Hagfors 71.93 336 P **P** **10 57 28.3 +0.3**
comp=Z,22nm,0.9s,baz=35,slow=5.3,SNR=18
comp=Z,22nm,0.9s
NB2 NORSAR Subarra 71.94 338 P **P** **10 57 27.9 -0.2**
comp=Z,41nm,1.0s,baz=36,slow=6.2
NB2 NORSAR Subarra 71.94 338 P **P** **10 57 25.7 -2.4**
NB2 pmax pmax
comp=Z,15nm,1.1s
NOA NORSAR Array B 71.94 338 P **P** **10 57 27.3 -0.7**
comp=Z,15nm,0.9s,baz=36,slow=6.0,SNR=42
NOA PP **PP** **11 00 03.9 -3.3**
comp=Z,1.3nm,0.8s,baz=39,slow=7.6,SNR=3.2
NOA LR LR 11 33 04.0
comp=Z,784nm,19.4s,baz=40,slow=39
comp=Z,15nm,0.9s
ELK Elko 71.95 52 LR LR 11 28 42.1
comp=Z,178nm,19.5s,baz=306,slow=36
NORES NORESS Array B 72.09 338 P **P** **10 57 29.2 +0.3**
VSLR Vesyoloye 72.09 312⇓ *eP* **P** **10 57 30.0 +0.7**
VSLR pmax pmax
comp=Z,57nm,1.3s
SOC Sochi 72.19 312*c iP* **P** **10 57 29.5 -0.3**
SOC *e* 11 00 09.4
SOC *e*PPP PPP 11 01 52.1
SOC *eS* **S** **11 06 53.1 +1.8**
SOC *eSS* **SS** **11 11 23.7 -4.4**
SOC *eSSS* SSS 11 14 43.4
SOC pmax pmax
comp=Z,27nm,1.4s
SFJD Kangerlussuaq 72.46 6 LR LR 11 31 39.5
comp=Z,575nm,19.3s,baz=351,slow=38
ANN Anapa 72.69 314 *eP* **P** **10 57 32.3 -0.5**
ANN *e* 11 00 11.1
ANN *eS* **S** **11 06 57.7 +0.8**
ANN pmax pmax
comp=Z,66nm,1.8s
AK03 Malin Array Si 72.91 323 P **P** **10 57 33.2 -0.8**
AKASG Malin Array Be 72.92 323 P **P** **10 57 34.5 +0.4**
AKASG IAmb IAmb 10 57 36.0
comp=Z,31nm,1.1s
AKASG Malin Array Be 72.92 323 P **P** **10 57 33.8 -0.3**
comp=Z,20nm,0.8s,baz=45,slow=6.2,SNR=80
AKASG PP **PP** **11 00 15.7 -0.2**
comp=Z,2.7nm,0.8s,baz=45,slow=9.2,SNR=4.3
AKASG LR LR 11 33 58.4
comp=Z,1μm,19.6s,baz=44,slow=39
comp=Z,20nm,0.8s
AKASG Malin Array Be 72.92 323 *i* P **P** **10 57 34.9 +0.8**
AKASG pmax pmax
comp=Z,21nm,0.8s
AKBB Malin Array Si 72.92 323 P **P** **10 57 34.5 +0.5**
AKBB Malin Array Si 72.92 323*c iP* **P** **10 57 34.3 +0.2**
AKBB pmax pmax
comp=Z,66nm,1.0s
AKBB Malin Array Si 72.92 323 P **P** **10 57 33.3 -0.8**
AK23 Malin Array Si 72.93 323 P **P** **10 57 33.3 -0.8**
AK04 Malin Array Si 72.94 323 P **P** **10 57 33.3 -0.8**
KIEV Kiev 72.94 323⇑ P **P** **10 57 34.6 +0.5**
KIEV Kiev 72.94 323 P **P** **10 57 34.6 +0.5**
KIEV Kiev 72.94 323 P **P** **10 57 33.3 -0.8**
comp=Z,227nm,1.0s
AK22 Malin Array Si 72.95 323 P **P** **10 57 33.4 -0.8**
AK09 Malin Array Si 72.96 323 P **P** **10 57 33.5 -0.7**
AK08 Malin Array Si 72.96 323 P **P** **10 57 33.5 -0.7**
AK11 Malin Array Si 72.97 323 P **P** **10 57 33.5 -0.8**
AK10 Malin Array Si 72.98 323 P **P** **10 57 33.6 -0.8**
AK18 Malin Array Si 72.98 323 P **P** **10 57 33.6 -0.8**
AK20 Malin Array Si 73.00 323 P **P** **10 57 33.7 -0.8**
FRB Frobisher Bay 73.14 14 LR LR 11 34 53.8
comp=Z,726nm,18.2s,baz=346,slow=40
SUW Suwalki 73.20 328 *eP* **P** **10 57 36.1 +0.4**
MI28 Mi28,Pidlybu 73.48 324 P **P** **10 57 36.6 -0.7**
RNPP9 Sopachiv 73.93 325 P **P** **10 57 39.9 -0.1**
PDAR Pinedale Array 73.98 47 P **P** **10 57 41.4 +0.7**
comp=Z,4.1nm,0.8s,baz=294,slow=4.5,SNR=26
PDAR LR LR 11 32 37.5
comp=Z,53nm,19.2s,baz=330,slow=38
comp=Z,4.1nm,0.8s
TCUT Toone Canyon 73.98 50 P **P** **10 57 40.8 0.0**
TCUT IAmb IAmb 10 58 13.8
comp=Z,67nm,1.9s
RNPP8 Varash 74.00 325 P **P** **10 57 40.3 -0.1**
RNPP5 Staryi Chortor 74.06 325 P **P** **10 57 40.7 0.0**
LUBAR Lubar, Ukraine 74.14 323 P **P** **10 57 41.0 -0.3**
SIM Simferopol' 74.38 316 *eP* **P** **10 57 44.2 +1.4**
BORG Borgarnes 74.66 354 LR LR 11 31 47.9
comp=Z,256nm,18.8s,baz=4.1,slow=37
SORM Soroca 75.12 321⇑ P **P** **10 57 47.5 +0.6**
SORM Soroca 75.12 321 P **P** **10 57 47.5 +0.6**
HORU Horodok 75.26 323 P **P** **10 57 49.1 +1.4**
MARD Mardin 75.53 307 P **P** **10 57 50.3 +0.6**
PFO Pinyon Flats O 75.60 58 LR LR 11 24 36.1
comp=Z,184nm,21.5s,baz=301,slow=31
PFO Pinyon Flats O 75.60 58⇑ *eP* **P** **10 57 51.6 +1.4**
PFO pmax pmax
comp=Z,13nm,1.5s
ULM Lac du Bonnet 75.69 35 P **P** **10 57 50.4 +0.2**
comp=Z,5.7nm,0.6s,baz=315,slow=6.9,SNR=4.1
ULM LR LR 11 32 05.5
comp=Z,221nm,20.2s,baz=336,slow=36
comp=Z,5.7nm,0.6s
KMPD K-Podol'skiy 75.71 323 P **P** **10 57 49.8 -0.5**
KMPD P **P** **10 57 49.8 -0.5**
MILM Milestii Mici 75.75 320⇑ *iP* **P** **10 57 49.5 -1.0**
comp=Z,180nm,2.3s
MILM *e*L L 11 33 33.0
MILM LRM MLR 11 35 36.0
comp=Z,1μm,14.5s
BEL Belsk 75.79 328 *eP* **P** **10 57 51.8 +1.1**
COP Copenhagen 75.89 334 *i* P **P** **10 57 52.2 +1.0**
COP IAmb IAmb 10 57 57.1
comp=Z,37nm,0.7s
LVV L'vov 75.90 325 P **P** **10 57 53.1 +1.7**
MORS Morshin 76.46 324 P **P** **10 57 56.5 +1.9**
STNU Starunia 76.50 324 P **P** **10 57 54.3 -0.5**
KSV Kosov 76.53 323 P **P** **10 57 56.0 +1.0**
NWAO Narrogin (SRO) 76.93 203 LR LR 11 32 27.8
comp=Z,252nm,19.4s,baz=334,slow=36
BUR08 Bucovina Ar. S 76.95 323 P **P** **10 57 58.8 +1.2**
BUR08 IAmb IAmb 10 57 59.9
comp=Z,23nm,0.8s
TLCR 76.96 319⇑ P **P** **10 57 59.0 +1.5**
TLCR 76.96 319 P **P** **10 57 58.9 +1.5**
BURAR Bucovina Array 76.97 322⇓ P **P** **10 57 58.5 +0.9**
BURAR Bucovina Array 76.97 322 P **P** **10 57 58.5 +0.9**
TESR Tescani 77.08 321⇑ P **P** **10 57 59.2 +1.1**
MEZ Mezhgor'ye 77.09 324 P **P** **10 57 58.0 -0.2**
CFR Carcaliu 77.31 319⇑ P **P** **10 57 59.6 +0.1**
CFR Carcaliu 77.31 319 P **P** **10 57 59.5 +0.1**
ONER Baraj Valea Uz 77.33 321⇑ P **P** **10 58 01.2 +1.6**
TPGR Topolog 77.39 319⇓ P **P** **10 58 01.0 +1.0**
STHS Stebnicka Huta 77.42 326 *eP* **P** **10 58 01.2 +1.2**
STHS pmax pmax
comp=Z,15nm,1.1s
STHS Stebnicka Huta 77.42 326 *eP* **P** **10 58 01.2 +1.2**
OJC Ojcow 77.42 327 *eP* **P** **10 58 00.7 +0.7**
OJC Ojcow 77.42 327 P **P** **10 58 01.4 +1.4**
OJC Ojcow 77.42 327 P **P** **10 57 59.6 -0.4**
comp=Z,54nm,1.7s
ODBI Odobesti 77.42 320⇑ P **P** **10 58 01.4 +1.4**
BNN Bunyan 77.48 311 P **P** **10 58 02.0 +1.3**
BNN IAmb IAmb 10 58 03.3
comp=Z,38nm,1.3s
MUKU Mukachevo 77.50 324 P **P** **10 58 00.1 -0.4**
VRI Vrincioaia 77.51 320⇓ P **P** **10 58 01.7 +1.0**
VRI Vrincioaia 77.51 320 P **P** **10 58 01.6 +1.0**
KORU Korolevo 77.52 324 P **P** **10 58 00.2 -0.4**
PLOR5 Plostina Array 77.56 320 P **P** **10 58 00.4 -0.5**
PLOR Plostina 77.56 321⇑ P **P** **10 58 01.7 +0.8**
PLOR Plostina 77.56 321 P **P** **10 58 01.7 +0.8**
HOLU Holmets 77.58 325 P **P** **10 58 00.6 -0.3**
TRSU Trosnyk 77.65 324 P **P** **10 58 03.7 +2.4**
ARCR ARCALIA 77.76 323⇑ P **P** **10 58 02.9 +1.0**
OZUR 77.80 321⇑ P **P** **10 58 03.4 +1.1**
NIE Niedzica 77.82 326 *eP* **P** **10 58 02.9 +0.6**
RUE Ruedersdorf 78.01 331 *eP* **P** **10 58 04.7 +1.6**
comp=Z,65nm,1.2s,baz=34,slow=5.4
BSEG Bad Segeberg 78.03 334 *eP* **P** **10 58 05.0 +1.7**
comp=Z,23nm,1.0s,baz=34,slow=5.4
DOPR Dopca 78.08 321⇓ P **P** **10 58 05.2 +1.4**
ISR Istrita 78.14 320⇓ P **P** **10 58 05.2 +1.1**
ISR Istrita 78.14 320 P **P** **10 58 05.2 +1.1**
BR131 Keskin Array S 78.16 312 *i* P **P** **10 58 04.8 +0.3**
BRTR Keskin Array B 78.16 312 P **P** **10 58 03.8 -0.7**
comp=Z,6.4nm,1.1s,baz=44,slow=5.0,SNR=24
BRTR PP **PP** **11 01 00.3 -0.2**
comp=Z,3.7nm,0.9s,baz=65,slow=6.3,SNR=5.3
BRTR LR LR 11 39 54.9
comp=Z,658nm,18.0s,baz=7.5,slow=41
comp=Z,6.4nm,1.1s
BRTR Keskin Array B 78.16 312 *i* P **P** **10 58 05.5 +1.0**
BRTR pmax pmax
comp=Z,8.0nm,1.2s
MLR Muntele Rosu 78.16 321 P **P** **10 58 05.1 +0.7**
MLR IAmb IAmb 10 58 29.0
comp=Z,29nm,1.3s
MLR Muntele Rosu 78.16 321 LR LR 11 36 55.0
comp=Z,1μm,18.0s,baz=22,slow=39
MLR Muntele Rosu 78.16 321⇓ P **P** **10 58 05.8 +1.4**
MLR Muntele Rosu 78.16 321 P **P** **10 58 05.7 +1.4**
KSP Ksiaz 78.36 329 *eP* **P** **10 58 06.1 +0.9**
KSP Ksiaz 78.36 329 P **P** **10 58 06.9 +1.7**
LANS Liptovska Anna 78.38 326 *eP* **P** **10 58 07.9 +2.5**
LANS pmax pmax
comp=Z,17nm,1.1s
LANS Liptovska Anna 78.38 326 *eP* **P** **10 58 07.9 +2.5**
CJR Cluj-Napoca 78.38 323⇑ P **P** **10 58 06.4 +0.9**
CJR Cluj-Napoca 78.38 323 P **P** **10 58 06.4 +0.9**
OKC Ostrava-Krasne 78.40 328 P **P** **10 58 07.4 +2.0**
OKC Ostrava-Krasne 78.40 328 AMS AMS 11 41 50.0
comp=Z,1μm,13.9s
GORT1 Trebel 78.47 333 *eP* **P** **10 58 07.5 +1.8**
comp=Z,72nm,1.4s,baz=34,slow=5.4
STEB Steborice 78.47 328 *eP* **P** **10 58 07.4 +1.5**
ANTO Ankara 78.53 313 P **P** **10 58 08.3 +1.8**
ANTO pmax pmax
comp=Z,29nm,1.2s
OSTC Ostas 78.61 329 AMS AMS 11 36 50.0
comp=Z,2μm,11.0s
MARR Marisel-Cluj 78.63 323⇑ P **P** **10 58 08.4 +1.5**
VOIR 78.63 321⇓ P **P** **10 58 08.1 +1.2**
VOIR 78.63 321 P **P** **10 58 08.1 +1.2**
CHVC Chvalec 78.65 329 *eP* **P** **10 58 08.0 +1.1**
CHVC MLR MLR
comp=Z,2μm,12.4s
CHVC Chvalec 78.65 329 *eP* **P** **10 58 08.0 +1.1**
CHVC AMS AMS 11 36 40.0
comp=Z,2μm,12.4s
MORC Moravsky Berou 78.69 328⇓ P **P** **10 58 08.4 +1.2**
MORC Moravsky Berou 78.69 328 *eP* **P** **10 58 08.8 +1.7**
MORC Moravsky Berou 78.69 328 P **P** **10 58 08.5 +1.4**
MORC pmax pmax
comp=Z,35nm,1.9s
DRGR 78.73 323⇑ P **P** **10 58 08.6 +1.1**
DRGR 78.73 323 P **P** **10 58 08.5 +1.1**
UPC Upice 78.73 329 *eP* **P** **10 58 09.3 +2.0**
UPC Upice 78.73 329 *eP* **P** **10 58 09.3 +2.0**
DPC Dobruska-Polom 78.73 329 *eP* **P** **10 58 08.6 +1.3**
DPC MLR MLR
comp=Z,1μm,13.4s
DPC Dobruska-Polom 78.73 329 *eP* **P** **10 58 08.6 +1.3**
DPC AMS AMS 11 41 50.0
comp=Z,1μm,13.4s
KRLC Kraliky 78.77 328 *eP* **P** **10 58 08.2 +0.7**
KRLC MLR MLR
comp=Z,1μm,16.7s
KRLC Kraliky 78.77 328 *eP* **P** **10 58 08.2 +0.7**

KRLC AMS AMS 11 41 50.0
comp=Z,1μm,16.7s
ARR Arges 78.88 321 ⇓P **P 10 58 09.4 +1.1**
MAUC Maruska 78.89 327 *e*P **P 10 58 10.1 +1.9**
FLTG Flechtingen 79.04 333 *e*P **P 10 58 09.9 +1.1**
comp=Z,40nm,1.1s,baz=34,slow=5.4
PSZ Piszkesteto 79.14 325 P **P 10 58 11.0 +1.4**
PSZ IAmb IAmb 10 58 12.5
comp=Z,51nm,1.1s
PSZ Piszkesteto 79.14 325 ⇑P **P 10 58 10.8 +1.2**
PSZ Piszkesteto 79.14 325 *e*P **P 10 58 10.9 +1.2**
PSZ Piszkesteto 79.14 325 P **P 10 58 11.0 +1.4**
PSZ pmax pmax
comp=Z,51nm,1.1s
BRG Berggiesshubel 79.24 330 *e*P **P 10 58 11.1 +1.1**
comp=Z,236nm,2.6s,baz=34,slow=5.4
LOT Lotru 79.24 322 ⇓P **P 10 58 11.6 +1.3**
CLL Collm 79.24 331 *i* P **P 10 58 10.9 +0.9**
CLL pmax pmax
comp=Z,36nm,1.1s
CLL MLR MLR
comp=Z,1μm,21.6s
CLL Collm 79.24 331 *e*P **P 10 58 10.9 +0.9**
comp=Z,29nm,1.0s,baz=34,slow=5.4
CLL Collm 79.24 331 *i* P **P 10 58 10.9 +0.9**
comp=Z,36nm,1.1s
CLL *e*S **S 11 08 17.0 +8.2**
CLL AMS AMS 11 31 00.0
comp=N,1μm,20.7s
CLL AMS AMS 11 31 00.0
comp=E,2μm,21.4s
CLL AMS AMS 11 36 00.0
comp=Z,1μm,21.6s
PVCC Panska Ves 79.27 330 *e*P **P 10 58 12.1 +1.9**
PVCC MLR MLR
comp=Z,2μm,16.5s
PVCC Panska Ves 79.27 330 *e*P **P 10 58 12.1 +1.9**
PVCC AMS AMS 11 37 20.0
comp=Z,2μm,16.5s
RAZG Razgrad 79.28 319 ⇓P **P 10 58 11.8 +1.4**
DEV Deva 79.32 322 P **P 10 58 12.7 +2.1**
RETH Rethem/Aller, 79.35 334 *e*P **P 10 58 12.1 +1.6**
comp=Z,57nm,1.4s,baz=34,slow=5.4
JAVC Velka Javorina 79.35 327 *e*P **P 10 58 13.4 +2.6**
ASSE Asse, Remlinge 79.40 333 *e*P **P 10 58 12.3 +1.5**
comp=Z,222nm,2.5s,baz=34,slow=5.4
VRAC Vranov 79.44 328 LR LR 11 35 06.5
comp=Z,908nm,20.2s,baz=20,slow=37
VRAC Vranov 79.44 328 ⇑P **P 10 58 12.7 +1.5**
VRAC Vranov 79.44 328 *e*P **P 10 58 12.9 +1.7**
VRAC Vranov 79.44 328 P **P 10 58 12.7 +1.5**
SIRR Siria 79.61 323 ⇓P **P 10 58 13.6 +1.5**
HSKC Hora Svate Kat 79.64 331 AMS AMS 11 40 10.0
comp=Z,2μm,11.8s
PRA Prague 79.69 330 AMS AMS 11 37 40.0
comp=Z,2μm,11.6s
PRU Pruhonice 79.72 330 *e*P **P 10 58 14.1 +1.5**
PRU MLR MLR
comp=Z,2μm,19.4s
PRU Pruhonice 79.72 330 *e*P **P 10 58 14.1 +1.5**
PRU AMS AMS 11 37 30.0
comp=Z,2μm,19.4s
KRUC Moravsky 79.72 328 *e*P **P 10 58 14.2 +1.5**
SMOL Smolenice 79.72 327 *e*P **P 10 58 14.9 +2.2**
SMOL pmax pmax
comp=Z,20nm,1.3s
GZR Gura Zlata 79.74 322 ⇓P **P 10 58 13.6 +0.6**
GZR Gura Zlata 79.74 322 P **P 10 58 13.6 +0.6**
CLZ Clausthal 79.75 333 *e*P **P 10 58 14.5 +1.7**
comp=Z,45nm,1.2s,baz=34,slow=5.4
NEUB Neuenburg 79.77 332 *e*P **P 10 58 14.3 +1.4**
comp=Z,31nm,1.0s,baz=34,slow=5.4
MODS Modra-Piesok 79.90 327 *e*P **P 10 58 15.9 +2.2**
MODS pmax pmax
comp=Z,79nm,1.3s
MODS Modra-Piesok 79.90 327 *e*P **P 10 58 15.9 +2.2**
SRO Srobarova 79.90 326 *e*P **P 10 58 15.9 +2.3**
SRO pmax pmax
comp=Z,52nm,1.2s
SRO Srobarova 79.90 326 *e*P **P 10 58 15.9 +2.3**
TREC Trest 79.90 329 *e*P **P 10 58 14.7 +1.0**
TREC MLR MLR
comp=Z,1μm,19.2s
TREC Trest 79.90 329 *e*P **P 10 58 14.7 +1.0**
TREC AMS AMS 11 38 40.0
comp=Z,1μm,19.2s
ELND Elena 80.06 319 ⇓P **P 10 58 14.6 -0.1**
ZST Bratislava 80.11 327 *e*P **P 10 58 17.1 +2.3**
ZST pmax pmax
comp=Z,8.0nm,1.5s
ZST Bratislava 80.11 327 *e*P **P 10 58 17.1 +2.3**
BZS Buzias 80.11 323 ⇑P **P 10 58 15.1 +0.2**
BZS Buzias 80.11 323 P **P 10 58 15.1 +0.2**
GTTG Gottingen 80.13 333 *e*P **P 10 58 16.6 +1.7**
comp=Z,26nm,1.0s,baz=34,slow=5.4
PHSR Pinarhisar 80.15 317 ⇓P **P 10 58 16.8 +1.6**
TANN Tannenbergstha 80.16 331 *e*P **P 10 58 16.6 +1.5**
comp=Z,65nm,2.1s,baz=34,slow=5.4
PLN Plauen 80.22 331 *e*P **P 10 58 16.8 +1.4**
comp=Z,9.3nm,1.4s,baz=34,slow=5.4
IBBN Ibbenburen 80.24 334 *e*P **P 10 58 16.7 +1.3**
comp=Z,41nm,1.1s,baz=34,slow=5.4
MOX Moxa 80.29 331 *e*P **P 10 58 16.8 +1.0**
comp=Z,28nm,1.3s,baz=34,slow=5.4
MOX *e*L L 11 36 59.3
comp=Z,901nm,20.4s
ZVC Zvikov 80.29 329 AMS AMS 11 37 50.0
comp=Z,2μm,17.6s
HERR Herculane 80.30 322 ⇑P **P 10 58 15.9 0.0**
PLVB Pleven 80.34 320 ⇓P **P 10 58 16.2 0.0**
RAR Rarotonga 80.53 128 LR LR 11 28 48.9
comp=Z,309nm,19.5s,baz=292,slow=32
MANZ Manzenberg 80.64 331 *e*P **P 10 58 19.2 +1.5**
comp=Z,5.2nm,1.2s,baz=34,slow=5.4
EKA Eskdalemuir Ar 80.70 342 P **P 10 58 16.9 -0.9**
comp=Z,6.3nm,0.9s,baz=27,slow=6.4,SNR=6.5
comp=Z,6.3nm,0.9s
MDVR Moldovita 80.70 322 ⇓P **P 10 58 18.1 -0.1**
UBBA Unterbreizbach 80.72 332 *e*P **P 10 58 19.2 +1.3**
comp=Z,53nm,1.8s,baz=34,slow=5.4
CKRC Cesky Krumlov 80.75 329 *e*P **P 10 58 19.4 +1.2**
CKRC MLR MLR
comp=Z,1μm,18.2s
CKRC Cesky Krumlov 80.75 329 *e*P **P 10 58 19.4 +1.2**
CKRC AMS AMS 11 41 10.0
comp=Z,1μm,18.2s
KHC Kasperske Hory 80.78 330 P **P 10 58 19.2 +0.8**
KHC IAmb IAmb 10 58 21.1
comp=Z,36nm,1.1s
KHC Kasperske Hory 80.78 330*c**e*P **P 10 58 19.2 +0.8**
KHC pmax pmax
comp=Z,39nm,1.1s
KHC Kasperske Hory 80.78 330 *e*P **P 10 58 19.1 +0.6**
KHC *ep*P **pP 10 58 23.7 +0.2**
KHC AMS AMS 11 38 10.0
comp=Z,2μm,14.7s
ROTZ Rotzenmuhle 80.79 331 *e*P **P 10 58 20.3 +1.9**
comp=Z,13nm,1.5s,baz=34,slow=5.4
CONA Conrad Observa 80.83 328 *i* pP **P 10 58 20.7 +1.8**
comp=Z,20nm,1.1s,SNR=11
RONA Rosalia, Austr 80.83 327 *ep*P **P 10 58 20.7 +1.9**
comp=Z,31nm,1.0s,SNR=12
KASTN Kahler Asten 80.95 334 *e*P **P 10 58 20.5 +1.2**
comp=Z,30nm,1.4s,baz=34,slow=5.4
GERES GERESS Array B 80.96 329 P **P 10 58 19.8 +0.3**
comp=Z,4.6nm,0.9s,baz=30,slow=6.2,SNR=27
GERES LR LR 11 38 36.4
comp=Z,2μm,18.0s,baz=11,slow=39
comp=Z,4.6nm,0.9s
ANMO Albuquerque 80.99 52 LR LR 11 33 16.3
comp=Z,106nm,19.8s,baz=68,slow=35
ANMO Albuquerque 80.99 52⇑*e*P **P 10 58 22.0 +2.0**
ANMO pmax pmax
comp=Z,14nm,1.6s
MORH Mrgy, Hungar 81.00 325 ⇑P **P 10 58 20.1 +0.6**
WET Wettzell 81.04 330 *e*P **P 10 58 21.6 +1.7**
comp=Z,34nm,1.2s,baz=34,slow=5.4
BLKB Belogradchik 81.12 321 ⇑P **P 10 58 21.0 +0.6**
BUG Buchum--Univer 81.14 334 *e*P **P 10 58 21.4 +1.2**
comp=Z,49nm,1.3s,baz=34,slow=5.4
GRF Grafenberg Arr 81.21 331 *e*P **P 10 58 22.7 +2.0**
comp=Z,62nm,1.2s,baz=34,slow=5.4
GRF *e*L L 11 37 50.4
comp=Z,758nm,19.9s
RAYN Ar Rayn 81.23 293 P **P 10 58 21.8 +0.5**
I37A Lemond, Waseca 81.47 38 P **P 10 58 23.3 +1.1**
I37A IAmb IAmb 10 58 26.1
comp=Z,31nm,0.9s
ARSA Arzberg 81.51 327 *i* pP **P 10 58 23.7 +1.3**
comp=Z,13nm,1.0s,SNR=5.6
MOA Molln 81.54 328 *i* pP **P 10 58 23.7 +1.2**
comp=Z,17nm,1.7s
SCHQ Schefferville 81.65 17 P **P 10 58 23.9 +0.9**
comp=Z,7.5nm,0.9s,baz=356,slow=13,SNR=3.0
SCHQ LR LR 11 40 04.1
comp=Z,650nm,18.1s,baz=351,slow=40
comp=Z,7.5nm,0.9s
MMAI Mount Meron Ar 81.67 306 P **P 10 58 24.0 +0.5**
comp=Z,3.8nm,0.7s,baz=34,slow=10,SNR=4.4
MMAI LR LR 11 38 51.0
comp=Z,624nm,18.5s,baz=24,slow=39
comp=Z,3.8nm,0.7s
TNS Taunus Mts 81.77 333 *e*P **P 10 58 24.9 +1.2**
comp=Z,27nm,1.2s,baz=34,slow=5.4
BIOA Bad Ischl, Aus 81.92 329 *ep*P **P 10 58 26.1 +1.6**
comp=Z,19nm,1.0s,SNR=9.3
SOKA Soboth 82.17 327 *i* pP **P 10 58 26.6 +0.7**
comp=Z,28nm,0.9s,SNR=15
BEBN Eben Emael 82.21 335 *d*P **P 10 58 26.1 +0.2**
RJOB Jochberg 82.22 329 *e*P **P 10 58 28.0 +1.9**
comp=Z,23nm,0.9s,baz=34,slow=5.4
BTNL Ternell 82.25 334 *d*P **P 10 58 26.9 +0.8**
comp=Z,8.6nm,1.0s
MEM Membach 82.27 334 *d*P **P 10 58 27.4 +1.2**
comp=Z,14nm,1.3s
ELL Elmali 82.33 312 P **P 10 58 28.4 +1.4**
ELL pmax pmax
comp=Z,53nm,1.0s
BSTI Sart Tilman 82.43 335 *d*P **P 10 58 28.4 +1.3**
FUR Furstenfeldbru 82.45 330 *e*P **P 10 58 28.9 +1.6**
comp=Z,47nm,1.0s,baz=34,slow=5.4
BHOU Houvegnez 82.48 334 *d*P **P 10 58 26.7 -0.7**
comp=Z,6.6nm,1.2s
OBKA Obir 82.50 327 *ep*P **P 10 58 28.3 +0.6**
comp=Z,13nm,0.9s
LESA Schwarzleotal 82.52 329 *i* pP **P 10 58 28.9 +1.2**
comp=Z,24nm,1.1s,SNR=9.5
KBA Koelnbreinsper 82.53 328 *i* pP **P 10 58 29.2 +1.3**
comp=Z,23nm,1.0s
UCC Uccle 82.64 335 *d*P **P 10 58 27.9 -0.3**
BCLA Clavier 82.66 335 *d*P **P 10 58 29.4 +1.1**
comp=Z,7.9nm,1.3s
STU Stuttgart 82.72 332 P **P 10 58 30.3 +1.7**
STU pmax pmax
comp=Z,81nm,1.1s
STU Stuttgart 82.72 332 *e*P **P 10 58 29.6 +1.0**
comp=Z,57nm,0.9s,baz=34,slow=5.4
BGES Gesves 82.76 335 *d*P **P 10 58 29.7 +0.9**
comp=Z,9.5nm,1.2s
MYKA Terra Mystica 82.78 328 *ep*P **P 10 58 29.7 +0.6**
comp=Z,20nm,1.2s
BSKQ Steinkerk 82.85 336 *d*P **P 10 58 29.8 +0.6**
comp=Z,7.7nm,1.0s
RCHB Rochefort 82.91 335 *d*P **P 10 58 29.9 +0.3**
comp=Z,8.5nm,1.2s
BMRD Maredsous 82.93 335 *d*P **P 10 58 30.1 +0.4**
comp=Z,12nm,1.2s
GBAS Gorenja Brezov 83.01 327 *e*P **P 10 58 29.9 -0.3**
WATA Walderalm 83.02 330 *ep*P **P 10 58 31.5 +1.1**
comp=Z,26nm,1.2s,SNR=7.9
WLF Walferdange 83.03 334 *d*P **P 10 58 31.0 +0.8**
WTTA Wattenberg 83.06 330 *ep*P **P 10 58 31.8 +1.2**
comp=Z,16nm,1.1s,SNR=7.6
ABTA Abfaltersbach 83.14 329 *e*P **P 10 58 31.2 +0.3**
comp=Z,14nm,1.3s
MOTA Moosalm 83.19 330 *ep*P **P 10 58 32.3 +1.0**
comp=Z,22nm,1.0s,SNR=8.9
JAVS Javornik 83.20 327 *e*P **P 10 58 30.3 -1.0**
RETA Reutte 83.21 330 *i* pP **P 10 58 32.3 +1.1**
comp=Z,19nm,1.1s,SNR=7.7
SQTA Sankt Quirin 83.26 330 *ep*P **P 10 58 32.8 +1.2**
comp=Z,21nm,1.3s,SNR=10
BFO Black Forest 83.40 332 *e*P **P 10 58 33.4 +1.1**
comp=Z,107nm,1.9s,baz=34,slow=5.4
CIMO Cimolais 83.52 329 P **P 10 58 32.9 0.0**
CIMO IAmb IAmb 10 58 33.8
comp=Z,23nm,1.3s
FETA Feichten 83.61 330 *ep*P **P 10 58 34.5 +1.1**
comp=Z,19nm,1.2s,SNR=10
PDG Podgorica 83.65 322 ⇓P **P 10 58 34.9 +1.4**
DAVA Damuels 83.71 331 *ep*P **P 10 58 35.0 +1.0**
comp=Z,20nm,1.1s,SNR=8.5
DAVOX Davos/Dischmat 84.13 330 LR LR 11 39 55.1
comp=Z,1μm,19.7s,baz=48,slow=38
EIL Elat 84.23 304 LR LR 11 40 43.4
comp=Z,277nm,18.4s,baz=1.0,slow=39
PPT Papeete 84.37 118 LR LR 11 29 20.4
comp=Z,484nm,21.5s,baz=306,slow=31
PPT2 Papeete2 84.39 119 *e*PKP2 **P 10 58 36.4 -1.2**
comp=Z,79nm,25.0s
PPT2 Papeete2 84.39 119 *e*S **SKSac 11 08 57.5 -2.9**
PPT2 *e*SS **SS 11 14 29.1 -4.5**
comp=Z,126nm,24.2s
PPT2 *e*LQ LQ 11 20 54.6
comp=Z,126nm,23.5s
PPT2 *e*LR LR 11 24 58.5
comp=Z,280nm,28.5s
PPT2 *e*LR LR 11 24 59.0
comp=Z,897nm,21.5s
PPT2 *e*LR LR 11 24 59.0
comp=Z,803nm,22.8s
TUE Stuetta 84.59 330 P **P 10 58 39.0 +0.5**
TUE IAmb IAmb 10 58 40.8
comp=Z,31nm,1.2s
TAOE Nuku Hiva Isla 85.08 106 *e*PKP2 **P 10 58 39.8 -1.5**
comp=Z,46nm,22.9s
TAOE Nuku Hiva Isla 85.08 106 *e*PP PP 11 01 50.8 -7.9
comp=Z,24nm,24.5s
TAOE *e*S **SKSac 11 09 03.8 -1.4**
comp=Z,132nm,26.7s
TAOE Nuku Hiva Isla 85.08 106 *e*LR LR 11 25 24.6
comp=Z,774nm,21.2s
LPIG La Paz 85.87 62 LR LR 11 36 58.8
comp=Z,96nm,18.4s,baz=317,slow=36
IDI Anoyia 86.19 314 LR LR 11 42 39.8
comp=Z,377nm,18.3s,baz=328,slow=39
TXAR Lajitas Array 86.58 54 P **P 10 58 49.5 +0.9**
comp=Z,3.9nm,0.9s,baz=311,slow=4.5,SNR=29
TXAR LR LR 11 40 28.6
comp=Z,102nm,18.2s,baz=336,slow=38
comp=Z,3.9nm,0.9s
SADO Sadowa 86.89 29 LR LR 11 41 50.5
comp=Z,323nm,18.8s,baz=353,slow=38
CCM Cathedral Cave 87.09 40 P **P 10 58 53.5 +2.7**
CCM pmax pmax
comp=Z,19nm,0.9s
TBI Tubuai 88.54 122 *e*S **S 11 09 37.5 -5.3**
comp=Z,803nm,26.5s
TBI Tubuai 88.54 122 *e*LR LR 11 26 48.0
comp=Z,2μm,24.5s
VAE Valguarnera 89.84 322 LR LR 11 45 56.7
comp=Z,796nm,18.6s,baz=344,slow=40
TKL Tuckaleechee C 92.59 37 LR LR 11 42 38.4
comp=Z,325nm,20.0s,baz=339,slow=37
KEST Kesra 93.59 325 LR LR 11 47 34.1
comp=Z,950nm,18.7s,baz=19,slow=40
ESDC Sonseca Array 95.20 336 P **P 10 59 29.4 +0.7**
comp=Z,0.9nm,0.8s,baz=21,slow=5.8,SNR=2.9
ESDC LR LR 11 49 11.3
comp=Z,681nm,18.1s,baz=24,slow=40
comp=Z,0.9nm,0.8s
FURI Furi 95.75 287 LR LR 11 49 03.9
comp=Z,339nm,18.1s,baz=36,slow=40
RKT Rikitea 98.17 113 *e*LR LR 11 31 25.8
comp=Z,3μm,34.8s
TORD Torodi Ar. Bea 116.34 318 PKP **PKPdf 11 04 48.7 -0.4**
comp=Z,0.4nm,0.5s,baz=26,slow=4.7,SNR=3.8
VNDA Vanda 118.06 176 PKP **PKiKP 11 04 51.1 +0.6**
comp=Z,0.8nm,1.0s,baz=314,slow=3.0,SNR=4.1
MAW Mawson 123.34 207 PKP **PKPdf 11 05 00.5 -0.3**
comp=Z,2.5nm,0.9s,baz=63,slow=6.8,SNR=4.2
DBIC Dimbokro 125.15 321 PKP **PKPdf 11 05 06.6 +0.6**
comp=Z,4.5nm,0.9s,baz=18,slow=4.1,SNR=3.1
QSPA South Pole Qui 130.03 180 PKP **PKiKP 11 05 15.4 +0.9**
comp=Z,1.3nm,0.6s,baz=313,slow=1.5,SNR=19
TROLL Troll, Antarti 142.95 199 ⇓P **PKPdf 11 05 33.8 -3.8**
comp=Z,153nm,0.7s
LPAZ La Paz 143.31 59 PKP **PKPdf 11 05 39.7 -0.8**
comp=Z,2.0nm,0.8s,baz=345,slow=6.0,SNR=6.2
SNAA Sanae 144.44 197 ⇓P **PKPab 11 05 38.3 -0.2**
comp=Z,153nm,0.7s
SNAA Sanae 144.44 197 PKP **PKPab 11 05 38.0 -0.4**
comp=Z,6.3nm,0.8s,baz=102,slow=2.9,SNR=32
VNA2 Neumayer--Watz 146.00 196 ⇑P **PKPab 11 05 44.3 +0.2**
comp=Z,12nm,0.6s,baz=126,slow=3.9
VNA3 Neumayer Olymp 146.22 195 ⇓P **PKPdf 11 05 44.0 +0.9**
comp=Z,5.1nm,0.5s
VNA1 Neumayer--Stat 146.40 196 ⇓P **PKPbc 11 05 45.4 +0.6**
comp=Z,10nm,0.9s
BDFB Brasilia 153.32 26 PKPbc **PKPbc 11 06 03.9 +0.2**
comp=Z,2.7nm,0.7s,baz=85,slow=4.9,SNR=5.5
PLCA Paso Flores 153.86 102 PKPbc **PKiKP 11 06 04.6 +0.5**
comp=Z,3.5nm,0.8s,baz=249,slow=3.1,SNR=8.2
CPUP Villa Florida 157.49 58 PKPab **PKPab 11 06 31.8 -1.3**
comp=Z,0.2nm,0.3s,baz=286,slow=2.6,SNR=4.5

*CATAC **10** 10:54:49.1±0.6, 11°N±3°×8°7W±°, h14km±5km, M3.8/23, MLv3.8/23, Error ellipse: s-maj=8.7km s-min=4.3km az=48.1, confirmed*
*UCR **10** 10:54:53.3±0.9, 10°.97N×86°.80W, h12km±12km, MW3.9*
ISC 10 10:54:50.2±2.0, **10°.86N**±0°.05×**86°.98W**±0°.08, **h15**km±11km, **n62**, σ0.95/70, **4C-10D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**1.28**	**46**	⇓P	**Pn**	**10 55 13.9**	**+0.3**
NADN				S	**Sg**	**10 55 32.6**	**+1.0**
NADN	**Granada**	**1.28**	**46**	*e*P	**Pn**	**10 55 13.7**	**+0.1**
LCRUZ	**La Cruz**	**1.34**	**81**	*e*P	**Pn**	**10 55 14.6**	**+0.2**
COPN	**Copaltepe**	**1.37**	**16**	⇑P	**Pn**	**10 55 15.1**	**+0.3**
COPN	**Copaltepe**	**1.37**	**16**	*e*P	**Pn**	**10 55 15.0**	**+0.2**
MAS3	**Al N del Volca**	**1.40**	**34**	⇓P	**Pn**	**10 55 15.0**	**-0.3**
ABCN	**Banco Central**	**1.42**	**28**	P	**Pn**	**10 55 15.6**	**+0.1**
ELI1	**Hacienda Flor**	**1.42**	**99**	*e*P	**Pg**	**10 55 17.1**	**-0.4**
UNAN	**Cigeo UNAN**	**1.43**	**29**	⇑P	**Pn**	**10 55 15.7**	**+0.2**
ALIBA	**Liberia Airpor**	**1.43**	**101**	*e*P	**Pb**	**10 55 17.2**	**+0.6**
ALIBA				*e*S	**Sb**	**10 55 34.9**	**+0.2**
TISN	**Laguna Tiscapa**	**1.45**	**29**	⇓P	**Pn**	**10 55 16.2**	**+0.3**
CARN	**Rivas**	**1.47**	**77**	⇑P	**Pn**	**10 55 16.6**	**+0.5**
CARN				S	**Sg**	**10 55 38.0**	**+0.4**
CARN	**Rivas**	**1.47**	**77**	*e*P	**Pn**	**10 55 16.6**	**+0.5**
MGAN	**Managua**	**1.47**	**29**	S	**Sg**	**10 55 37.4**	**-0.2**
MGAN	**Managua**	**1.47**	**29**	⇓P	**Pn**	**10 55 16.5**	**+0.4**
MGAN	**Managua**	**1.47**	**29**	*e*P	**Pn**	**10 55 16.3**	**+0.2**
AMTN	**Mateare**	**1.47**	**21**	P	**Pn**	**10 55 16.7**	**+0.5**
MORN	**Al O del Volca**	**1.47**	**62**	P	**Pn**	**10 55 17.2**	**+0.9**
SAJU	**San Juanillo,**	**1.48**	**122**	*e*P	**Pb**	**10 55 17.4**	**+0.1**
APQ2	**Apoyeque**	**1.48**	**26**	⇓P	**Pn**	**10 55 16.1**	**-0.1**
APQ2	**Apoyeque**	**1.48**	**26**	⇓P	**Pn**	**10 55 16.6**	**+0.3**
APQ2				S	**Sg**	**10 55 37.4**	**-0.4**
CONN	**Concepcion**	**1.50**	**62**	P	**Pb**	**10 55 17.9**	**+0.1**
WILN	**Americas 2**	**1.51**	**31**	⇓P	**Pn**	**10 55 16.9**	**+0.2**
WILN				S	**Sg**	**10 55 39.2**	**+0.3**
LAPC	**Finca la Perla**	**1.52**	**93**	*e*P	**Pn**	**10 55 17.6**	**+0.6**
LAPC				*e*S	**Sn**	**10 55 35.0**	**-1.6**
JUD3	**Juan Diaz 3**	**1.57**	**116**	*e*P	**Pn**	**10 55 18.8**	**+1.1**
VRLE	**La Escondida,**	**1.59**	**92**	*e*P	**Pn**	**10 55 18.7**	**+0.8**
GPS2	**Hotel Rincn d**	**1.60**	**94**	*e*P	**Pn**	**10 55 19.1**	**+1.0**
GPS1	**Guardaparques**	**1.60**	**93**	*e*P	**Pn**	**10 55 19.1**	**+1.0**
BUAI	**Buenos Aires**	**1.62**	**89**	*e*P	**Pb**	**10 55 19.3**	**-0.4**
CNGA	**Al SSO del Vol**	**1.65**	**9**	P	**Pn**	**10 55 19.5**	**+0.8**
CNGN	**Cerro Negro**	**1.65**	**10**	S	**Sb**	**10 55 41.8**	**+0.7**
CNGN	**Cerro Negro**	**1.65**	**10**	⇓P	**Pn**	**10 55 19.5**	**+0.7**
CNGN	**Cerro Negro**	**1.65**	**10**	*e*P	**Pn**	**10 55 19.4**	**+0.7**
PLVR	**Palo Verde**	**1.68**	**107**	*e*P	**Pg**	**10 55 23.6**	**+1.1**
MOM3	**MOM3**	**1.70**	**15**	⇑P	**Pn**	**10 55 19.7**	**+0.3**
MOM3				S	**Sb**	**10 55 43.8**	**+1.3**
BAGA	**Bagaces**	**1.72**	**101**	*e*P	**Pb**	**10 55 21.1**	**-0.4**
CMARA	**Lajas Hojancha**	**1.74**	**118**	S	**Sn**	**10 55 40.7**	**-1.3**
CMARA	**Lajas Hojancha**	**1.74**	**118**	*e*P	**Pn**	**10 55 21.2**	**+1.2**
POLN	**Al Sur del Vol**	**1.79**	**5**	P	**Pn**	**10 55 20.0**	**-0.6**
CUI	**Cuipilapa**	**1.79**	**96**	*e*P	**Pn**	**10 55 22.1**	**+1.4**
PKGN	**Cerro Pekin**	**1.80**	**0**	⇓P	**Pn**	**10 55 21.9**	**+1.2**
PKGN				S	**Sn**	**10 55 44.2**	**+0.9**
CRIN	**San Cristobal**	**1.83**	**358**	P	**Pn**	**10 55 20.9**	**-0.3**
CRIN	**San Cristobal**	**1.83**	**358**	S	**Sb**	**10 55 47.1**	**+0.8**
VMAR	**Armenia, Volca**	**1.83**	**91**	*e*P	**Pn**	**10 55 22.6**	**+1.4**
NYURE	**Nandayure**	**1.90**	**117**	*e*P	**Pn**	**10 55 23.8**	**+1.7**
UPAL	**Upala**	**1.93**	**89**	*e*P	**Pn**	**10 55 23.6**	**+1.1**
TIMP	**Tierras Morena**	**1.95**	**98**	*e*P	**Pg**	**10 55 28.0**	**+0.4**
TENO	**El Achiote**	**1.97**	**94**	*e*P	**Pn**	**10 55 24.5**	**+1.3**
QUEB	**Quebradon, Cot**	**2.06**	**96**	*e*P	**Pg**	**10 55 29.2**	**-0.5**
JTS	**Las Juntas de**	**2.07**	**106**	P	**Pn**	**10 55 25.7**	**+1.2**
JTS	**Las Juntas de**	**2.07**	**106**	*e*P	**Pn**	**10 55 26.4**	**+1.9**
TABAC	**Tabacon**	**2.20**	**99**	*e*P	**Pg**	**10 55 32.1**	**-0.4**
CASO	**Castillo**	**2.25**	**101**	*e*P	**Pb**	**10 55 31.8**	**+1.3**
ARE1	**Arenal 1**	**2.26**	**100**	*e*P	**Pg**	**10 55 32.8**	**-0.7**
VARE2	**V. Arenal**	**2.26**	**100**	*e*P	**Pb**	**10 55 29.9**	**-0.8**
CEDE	**Laguna Cedeo**	**2.27**	**99**	*e*P	**Pg**	**10 55 33.0**	**-0.7**
LIMN	**Finca el Limon**	**2.27**	**15**	⇓P	**Pn**	**10 55 27.6**	**+0.3**
VACR	**Volcan Arenal**	**2.29**	**99**	*e*P	**Pg**	**10 55 33.5**	**-0.8**
MATN	**Matagalpa**	**2.30**	**27**	P	**Pn**	**10 55 26.7**	**-1.0**
FORC	**Fortuna**	**2.30**	**100**	*e*P	**Pg**	**10 55 33.3**	**-1.1**
PICV	**PH. Pirrs**	**3.00**	**114**	*e*P	**Pb**	**10 55 41.0**	**-2.5**
BUS1	**Rivas**	**3.44**	**112**	*e*P	**Pb**	**10 55 48.0**	**-3.1**

*CNRM **10** 10:55:36.1, 36°.62N×8°.09W, h2km*
*IGIL **10** 10:55:40.7, 36°.80N×8°.17W, h27km, ML1.8*
*INMG **10** 10:55:40.3±1.6, 36°.80N×8°.16W, h26km±4km, ML1.7, Error ellipse: s-maj=3.2km s-min=3.2km az=163.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Faro*
*SFS **10** 10:55:40.7, 36°.83N×8°.16W, h38km, ML2.5/8, ML2.0/11, MLv1.7/11*
*MDD **10** 10:55:40.4±1.4, 36°.84N×8°.13W, h26km±7km, mb_Lg2.4/3, Error ellipse: s-maj=11.0km s-min=4.8km az=174.0*
ISC 10 10:55:37.3±1.5, **36.76N**±0°.04×**8°.16W**±0°.03, **h25**km±14km, **n39**, σ1**°21**/66, **1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.52**	**21**	Pg	**Pn**	**10 55 50.1**	**+1.0**
PBDV				Sg	**Sn**	**10 55 57.1**	**-0.1**
PBDV	**Barranco-do-Ve**	**0.52**	**21**	⇓*e*P	**Pn**	**10 55 50.1**	**+1.0**
PBDV				*e*S	**Sn**	**10 55 57.1**	**-0.1**
PBDV				*i* IAML		10 55 57.8	
PBDV				*i* IAML		10 55 58.1	
PBDV				*i* IAML		10 55 59.1	
PFVI	**Vila Bisbo**	**0.65**	**305**	Pg	**Pn**	**10 55 52.1**	**+1.1**
PFVI				Sg	**Sn**	**10 56 00.4**	**-0.1**
PFVI	**Vila Bisbo**	**0.65**	**305**	*e*P	**Pn**	**10 55 52.1**	**+1.1**
PFVI				*e*S	**Sn**	**10 56 00.4**	**-0.1**
PFVI				*i* IAML		10 56 01.8	
PFVI				*i* IAML		10 56 04.5	
PFVI				*i* IAML		10 56 06.1	
PFVI	**Vila Bisbo**	**0.65**	**305**	P	**Pn**	**10 55 51.7**	**+0.7**
PFVI	**Vila Bisbo**	**0.65**	**305**	S	**Sn**	**10 56 01.2**	**+0.7**
MORF	**Marmelete**	**0.67**	**324**	*e*P	**Pn**	**10 55 52.2**	**+0.9**
MORF				*e*S	**Sn**	**10 56 00.8**	**-0.3**
MORF				IAML		10 56 03.4	
	comp=E,76nm,0.2s						
MORF	**Marmelete**	**0.67**	**324**	*e*P	**Pn**	**10 55 52.2**	**+0.9**
MORF				*e*S	**Sn**	**10 56 01.2**	**+0.2**
MORF				*i* IAML		10 56 02.8	
MORF				*i* IAML		10 56 03.4	
MORF				*i* IAML		10 56 03.5	
PVAQ	**Vaqueiros**	**0.73**	**29**	*e*P	**Pn**	**10 55 53.2**	**+1.2**
PVAQ				*e*S	**Sn**	**10 56 02.0**	**-0.5**
PVAQ				*i* IAML		10 56 03.8	
PVAQ				*i* IAML		10 56 04.3	
PVAQ				*i* IAML		10 56 04.8	
PVAQ	**Vaqueiros**	**0.73**	**29**	P	**Pn**	**10 55 52.8**	**+0.7**
PCVE	**Castro Verde**	**0.88**	**6**	Pg	**Pn**	**10 55 55.3**	**+1.2**
PCVE				Sg	**Sn**	**10 56 05.6**	**-0.4**
PCVE	**Castro Verde**	**0.88**	**6**	*e*P	**Pn**	**10 55 55.2**	**+1.2**
PCVE				*e*S	**Sn**	**10 56 05.7**	**-0.3**
PCVE				*i* IAML		10 56 06.5	
PCVE				*i* IAML		10 56 06.5	
PCVE				*i* IAML		10 56 07.0	
PTEO	**Sao Teotonio**	**0.90**	**330**	*e*P	**Pn**	**10 55 55.7**	**+1.2**
PTEO				*e*S	**Sn**	**10 56 07.4**	**+0.7**
PTEO				*i* IAML		10 56 10.2	
PTEO				*i* IAML		10 56 11.2	
PTEO				*i* IAML		10 56 11.6	
**

MESJ					*e*S		**Sn**	**10 56 10.8**	**-0.2**
MESJ					*i* IAML			10 56 11.4		
MESJ					*i* IAML			10 56 11.5		
MESJ					*i* IAML			10 56 24.4		
PBEJ	**Beja**	**1.28**	**10**		*e*S		**Sb**	**10 56 16.5**	**-0.4**
PBEJ					*i* IAML			10 56 18.2		
PBEJ					*i* IAML			10 56 18.3		
PBEJ					*i* IAML			10 56 20.0		
EMIN	**Mina Concepcio**	**1.55**	**49**		Pn		**Pb**	**10 56 05.6**	**+0.3**
EMIN					Sn		**Sn**	**10 56 22.2**	**-0.6**
EMIN	**Mina Concepcio**	**1.55**	**49**		Pg		**Pb**	**10 56 05.9**	**+0.5**
EMIN					Sg		**Sb**	**10 56 24.4**	**-0.3**
EMIN					*i* IVmb_Lg			10 56 35.8		
PBAR	**Barrancos**	**1.67**	**32**		Sn		**Sn**	**10 56 24.6**	**-1.0**
PBAR	**Barrancos**	**1.67**	**32**		S		**Sn**	**10 56 25.1**	**-0.5**
PBAR					*i* IAML			10 56 27.6		
PBAR					*i* IAML			10 56 27.6		
PBAR					*i* IAML			10 56 29.8		
MOE	**Montemor**	**1.77**	**355**		*e*P		**Pb**	**10 56 07.6**	**-1.4**
MOE					S		**Sn**	**10 56 27.0**	**-1.0**
MOE					*i* IAML			10 56 38.1		
MOE					*i* IAML			10 56 39.9		
MOE					*i* IAML			10 56 43.0		
EVO	**Evora**	**1.77**	**4**		Pn		**Pn**	**10 56 07.4**	**+1.0**
EVO					Sn		**Sn**	**10 56 26.3**	**-1.8**
EVO	**Evora**	**1.77**	**4**		S		**Sn**	**10 56 27.3**	**-0.9**
EVO					*i* IAML			10 56 30.4		
EVO					*i* IAML			10 56 31.0		
EVO					*i* IAML			10 56 38.6		
ESPR	**Espera**	**1.85**	**86**		Pn		**Pb**	**10 56 09.2**	**-1.2**
ESPR					Sn		**Sn**	**10 56 30.9**	**+0.8**
PARRA	**Arraiolos**	**2.05**	**3**		*e*P		**Pn**	**10 56 11.1**	**-0.7**
PARRA					S		**Sn**	**10 56 33.4**	**-4.5**
PARRA					*i* IAML			10 56 46.0		
PARRA					*i* IAML			10 56 48.5		
PARRA					*i* IAML			10 56 49.6		
PESTR	**Estremoz**	**2.15**	**12**		P		**Pb**	**10 56 14.7**	**-0.9**
PESTR	**Estremoz**	**2.15**	**12**		S		**Sb**	**10 56 44.9**	**+3.1**
EBAD	**Badajoz**	**2.19**	**24**		Pn		**Pn**	**10 56 13.6**	**+1.5**
EBAD					Sn		**Sn**	**10 56 38.7**	**+0.3**
EBAD	**Badajoz**	**2.19**	**24**		Pn		**Pn**	**10 56 13.1**	**+1.0**
EBAD					Sn		**Sn**	**10 56 37.2**	**-1.2**
EBAD					*i* IVmb_Lg			10 56 40.1		
PMTG	**Montargil**	**2.31**	**359**		*e*P		**Pn**	**10 56 14.7**	**+1.0**
PMTG					S		**Sn**	**10 56 40.7**	**-0.6**
PMTG					*i* IAML			10 56 41.8		
PMTG					*i* IAML			10 56 42.4		
PMTG					*i* IAML			10 56 43.8		
ECAB	**El Cabril**	**2.54**	**58**		Pn		**Pn**	**10 56 18.1**	**+1.1**
ECAB					Sn		**Sn**	**10 56 44.7**	**-2.5**
PMRV	**Marv??o**	**2.73**	**13**		S		**Sn**	**10 56 50.3**	**-1.5**
PSARD	**Sardoal**	**2.83**	**360**		*e*P		**Pn**	**10 56 22.1**	**+1.1**
PSARD					S		**Sn**	**10 56 53.3**	**-1.1**
PSARD					*i* IAML			10 56 54.0		
PSARD					*i* IAML			10 56 54.9		
PSARD					*i* IAML			10 56 55.4		
PCBR	**Castelo Branco**	**3.12**	**10**		*e*P		**Pn**	**10 56 25.9**	**+1.0**
PCBR					S		**Sn**	**10 57 00.8**	**-0.6**
EADA	**Adamuz**	**3.18**	**63**		Pn		**Pn**	**10 56 27.1**	**+1.4**
EADA					Sn		**Sn**	**10 57 01.2**	**-1.7**
MD31	**MD31**	**4.79**	**143**		P		**Pn**	**10 56 48.4**	**+0.5**
MD31	**MD31**	**4.79**	**143**		S		**Sn**	**10 57 41.9**	**-0.7**

IDC ***10*** *10:59:43.8±3.2, 4.°61S×134.°23E, h0km, mb3.7/2, mbtmp3.8/3, ML4.0/1, Error ellipse: s-maj=214.8km s-min=30.6km az=73.0*
DJA ***10*** *10:59:58.7±0.3, 4.°5S×13.°4E±.°, h58km±10km, M4.2/13, mB6.8/1, mb4.2/5, MLv4.1/13, Mw(mB)6.7/1*
ISC 10 10:59:50.7±1.0, **4.°6S**±0.°1×**134.°17E**±0.°08, **h50**km, **n15,** σ1**§30**/14, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**1.04**	**334**	P		**Pn**		**11 00 09.8**	**+0.9**
FAKI	**Fak Fak**	**2.54**	**311**	P		**Pn**		**11 00 28.7**	**-0.7**
BAKI	**Biak**	**3.90**	**30**	P		**Pn**		**11 00 47.9**	**-0.2**
BNDI	**Bandanaira**	**4.25**	**271**	P		Pn		11 00 58.3	+5.4
BNDI				S		**Sn**		**11 01 42.5**	**+1.2**
SAUI	**Saumlaki**	**4.41**	**220**	P		Pn		11 01 08.8	+14
SWI	**Sorong**	**4.71**	**322**	P		**Pn**		**11 00 58.5**	**-0.7**
SMPI	**Sarmi**	**5.22**	**60**	P		Pn		11 01 15.1	+8.8
MSAI	**Masohi**	**5.37**	**283**	P		**Pn**		**11 01 09.2**	**+0.9**
MSAI				S		**Sn**		**11 02 07.7**	**-1.2**
JAY	**Jayapura**	**6.85**	**73**	P		**Pn**		**11 01 30.7**	**+1.8**
NLAI	**Namlea**	**7.18**	**281**	P		**Pn**		**11 01 35.6**	**+2.5**
NLAI				S		**Sn**		**11 02 52.6**	**-0.8**
SANI	**Sanana**	**8.55**	**287**	P		**Pn**		**11 01 51.4**	**-0.5**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=356,slow=12,SNR=2.6	**15.25**	**179**	Pn		Pn		11 03 15.3	-7.6
ASAR	**Alice Springs** 0.5nm,0.3s,baz=6.6,slow=11,SNR=52	**18.96**	**181**	P		**P**		**11 04 06.4**	**-1.5**
ASAR	0.3nm,0.7s,baz=359,slow=27,SNR=1.2 2.1nm,0.5s			S		Sn		11 07 24.3	-16
STKA	**Stephens Creek** 1.1nm,0.8s,baz=348,slow=17,SNR=2.1 1.1nm,0.8s	**28.02**	**166**	P		**P**		**11 05 36.7**	**-0.4**
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=116,slow=8.2,SNR=3.5 0.4nm,0.7s	**68.59**	**325**	P		**P**		**11 10 49.0**	**+0.5**

MOS ***10*** *11:12:08.1±0.9, 43.°39N×139.°41E, h212km, mb4.4/32, Error ellipse: s-maj=7.2km s-min=5.4km az=112.6*
NEIC ***10*** *11:12:09.0±1.0, 43.°33N±0.°09×139.°4E±0.°1, h206km±12km, mb4.4/22, Error ellipse: s-maj=15.2km s-min=10.9km az=127.0*
JMA ***10*** *11:12:08.8±0.2, 43.°3N±0.°9×13.°9E±.°, h213km±1km, MV4.1/38, NW OFF SHAKOTAN PEN*
SKHL ***10*** *11:12:08.5±0.6, 43.°30N×139.°40E, h195km±5km, mb5.4/4, msha5.4/4*
IDC ***10*** *11:12:09.3±0.7, 43.°36N×139.°37E, h212km±7km, mb3.8/21, mbtmp4.3/28, Error ellipse: s-maj=12.8km s-min=8.9km az=162.0*
ISC 10 11:12:09.0±0.5, **43.°33N**±0.°04×**139.°41E**±0.°04, **h211**km±4km, **n394,** σ1**§19**/419, **mb4.3**/68, **30C-28D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.78**	**88**	⇓P		**Pn**		**11 12 38.6**	**+0.1**
JSK				⇓S		**S**		**11 13 02.0**	**+0.6**
JSH	**Shimam**	**0.83**	**146**	⇓P		**Pn**		**11 12 38.7**	**-0.2**
JSH				⇓*e*S		**S**		**11 13 01.5**	**-0.5**
JHST	**Hiyamasetana**	**0.97**	**159**	⇓*e*P		**Pn**		**11 12 39.8**	**+0.1**
JOSM	**Okushiri--Mats**	**1.25**	**178**	⇓P		**Pn**		**11 12 42.0**	**+0.4**
JOSM				⇓*e*S		**S**		**11 13 07.3**	**+0.5**
JYM2	**Yakumo 2**	**1.41**	**149**	⇓P		**Pn**		**11 12 43.1**	**+0.2**
JYM2				⇓*e*S		**S**		**11 13 09.6**	**+0.7**
JISS	**Ishikarishitsu**	**1.47**	**92**	P		**Pn**		**11 12 43.9**	**+0.7**
JISS				*e*S		**S**		**11 13 12.1**	**+2.4**
JNB	**Noboribetsu**	**1.48**	**125**	⇓P		**Pn**		**11 12 43.5**	**+0.1**
JEW	**Eniwo**	**1.57**	**108**	⇓*e*P		**Pn**		**11 12 44.8**	**+0.6**
JEW				⇓*e*S		**S**		**11 13 13.9**	**+2.5**
JHR	**Hokuryu**	**1.73**	**75**	*e*P		**Pn**		**11 12 46.4**	**+0.8**
JOMM	**Oshimamatsumae**	**1.86**	**166**	P		**Pn**		**11 12 47.3**	**+0.4**
JSS	**Shosan**	**2.06**	**58**	*e*P		**Pn**		**11 12 49.7**	**+0.8**
JOT	**Ohata**	**2.30**	**148**	⇓*e*P		**Pn**		**11 12 50.9**	**-0.4**
JRBN	**Rebuntou**	**2.40**	**29**	*e*P		**Pn**		**11 12 52.5**	**+0.2**
JRBN				*e*S		**S**		**11 13 25.7**	**-0.3**
ASAJ	**Asahikawa** 58nm,0.4s,baz=251,slow=8.8,SNR=181	**2.44**	**70**	P		**Pn**		**11 12 53.6**	**+0.8**
ASAJ	130nm,1.0s,baz=234,slow=18,SNR=9.8			S		**S**		**11 13 28.7**	**+2.1**
ASAJ	**Asahikawa**	**2.44**	**70**	PN		**Pn**		**11 12 52.6**	**-0.2**
JKA	**Kamikawa-asahi**	**2.44**	**70**			**Pn**		**11 12 52.6**	**-0.2**
JKA	**Kamikawa-asahi**	**2.44**	**70**	*e*P		**Pn**		**11 12 52.6**	**-0.2**
JKK2	**Kamakawa 2**	**2.48**	**76**	P		**Pn**		**11 12 54.0**	**+0.7**
JKK2				*e*S		**S**		**11 13 29.0**	**+1.5**
TEY	**Ternei**	**2.64**	**311**	⇑*e*PN		**Pn**		**11 12 54.9**	**-0.1**
TEY				*e*				11 13 30.3	
TEY	comp=E,220nm,0.6s			pmax	pmax				
TEY	comp=E,340nm,0.6s			pmax	pmax				
TEY	comp=N,200nm,0.5s			pmax	pmax				
TEY	**Ternei**	**2.64**	**311**	*e*P		**Pn**		**11 12 54.9**	**-0.1**
TEY				AMB	AMB			11 12 55.4	
TEY	comp=N,80nm,0.2s			*e*S		**S**		**11 13 29.5**	**-1.2**
TEY				A	A			11 13 31.8	
TEY	comp=N,60nm,0.3s			A	A			11 13 31.8	
JWK2	**Keihoku**	**2.67**	**41**	*e*P		**Pn**		**11 12 56.6**	**+1.3**
JNBK	**Urakawa-nobuka**	**2.67**	**112**	*e*P		**Pn**		**11 12 54.8**	**-0.6**
JSE	**Soyaes**	**2.80**	**53**	*e*P		**Pn**		**11 12 57.4**	**+0.6**
JSE				*e*S		**S**		**11 13 35.6**	**+1.7**
JTM	**Tenmabayashi**	**2.83**	**154**			**Pn**		**11 12 56.6**	**-0.6**
JCH	**Churui**	**2.99**	**103**	*e*P		**Pn**		**11 12 57.8**	**-1.1**
JCH				*e*S		**S**		**11 13 35.0**	**-2.6**
ERM	**Erimo**	**3.06**	**114**			**Pn**		**11 13 00.2**	**+0.4**
ERM	**Erimo**	**3.06**	**114**	PN		**Pn**		**11 13 00.2**	**+0.4**
JAR	**Ashorobuto**	**3.18**	**89**	*e*P		**Pn**		**11 13 01.2**	**0.0**
JAR				S		**S**		**11 13 41.5**	**-0.2**
JTKR	**Abashiri--Toko**	**3.33**	**77**	P		**Pn**		**11 13 03.3**	**+0.4**
JTKR				*e*S		**S**		**11 13 46.3**	**+1.5**
JANG	**Nango**	**3.35**	**151**	*e*P		**Pn**		**11 13 01.5**	**-1.8**
AKK	**Akkeshi**	**3.98**	**93**	*e*P		**Pn**		**11 13 10.0**	**-0.9**
AKK				*e*S		**S**		**11 13 55.7**	**-3.5**
RUSJ	**Misakicho**	**4.30**	**78**	⇓*i*PN		**Pn**		**11 13 16.1**	**+1.3**
YSS	**Yuzhno-Sakhali**	**4.33**	**32**			**Pn**		**11 13 15.3**	**+0.3**
YSS	**Yuzhno-Sakhali**	**4.33**	**32**	*e*PN		**Pn**		**11 13 16.0**	**+1.0**
YSS				*e*S		**S**		**11 14 06.8**	**0.0**
YSS	comp=Z,30nm,0.8s			pmax	pmax				
YSS	comp=N,70nm,0.7s			smax	smax				
YSS	comp=E,30nm,1.0s			smax	smax				
YSS	**Yuzhno-Sakhali**	**4.33**	**32**	*e*P		**Pn**		**11 13 15.6**	**+0.6**
YSS				*e*S		**S**		**11 14 06.9**	**+0.1**
NMR	**Nemuro--Hokkai**	**4.61**	**87**	⇓*i*PN		**Pn**		**11 13 17.1**	**-1.5**
NMR				*i* S		**S**		**11 14 08.9**	**-4.2**
NMR	**Nemuro--Hokkai**	**4.61**	**87**	*i* P		**Pn**		**11 13 17.2**	**-1.4**
NMR				*i* S		**S**		**11 14 09.0**	**-4.2**
YUK	**Yuzh-Kuril'sk**	**4.73**	**79**	*c i*PN		**Pn**		**11 13 20.3**	**+0.2**
YUK				*e*S		**S**		**11 14 18.5**	**+2.5**
YUK	comp=Z,362nm,0.3s			pmax	pmax				
YUK	comp=N,311nm,0.3s			smax	smax				
YUK	comp=E,154nm,0.3s			smax	smax				
YUK	**Yuzh-Kuril'sk**	**4.73**	**79**	*i* P		**Pn**		**11 13 20.3**	**+0.2**
YUK				AMB	AMB			11 13 20.8	
YUK	comp=E,370nm,0.4s			*e*S		**S**		**11 14 17.2**	**+1.2**
YUK				A	A			11 14 18.6	
YUK	comp=E,240nm,0.5s			A	A			11 14 18.6	
YUK	comp=E,230nm,0.5s			A	A			11 14 18.6	
JSD	**Sado**	**5.36**	**190**			**Pn**		**11 13 28.9**	**+0.6**
JSD	**Sado**	**5.36**	**190**	P		**Pn**		**11 13 29.0**	**+0.8**
SHO	**Shikotan**	**5.41**	**82**	*e*P		**Pn**		**11 13 32.7**	**+3.9**
SHO				AMB	AMB			11 13 34.8	
SHO	comp=E,200nm,0.6s			*e*S		**S**		**11 14 33.0**	**+1.3**
SHO				A	A			11 14 35.8	
SHO	comp=E,210nm,0.5s			A	A			11 14 35.8	
USRK	**Ussuriysk Ar.** comp=E,13nm,0.6s,baz=85,slow=14,SNR=20	**5.45**	**282**	P		**Pn**		**11 13 28.2**	**-1.0**
JMM	**Marumori**	**5.56**	**169**			**Pn**		**11 13 29.4**	**-1.3**
JMM	**Marumori**	**5.56**	**169**	P		**Pn**		**11 13 29.6**	**-1.2**
KUR	**Kuril'sk**	**6.36**	**70**	*e*PN		**Pn**		**11 13 39.6**	**-1.3**
KUR				*e*S		**S**		**11 14 54.7**	**+1.0**
KUR	**Kuril'sk**	**6.36**	**70**	*e*P		**Pn**		**11 13 41.3**	**+0.4**
KUR				AMB	AMB			11 13 42.0	
KUR	comp=E,160nm,0.4s			*e*S		**S**		**11 14 54.2**	**+0.5**
KUR				A	A			11 14 57.4	
KUR	comp=E,40nm,0.5s			A	A			11 14 57.4	
KUR	comp=E,70nm,0.5s			A	A			11 14 57.4	
MJB9	**Matsu-Tunnel**	**6.84**	**188**			**Pn**		**11 13 47.8**	**+0.5**
MAJO	**Matsushiro**	**6.84**	**188**			**Pn**		**11 13 46.8**	**-0.5**
MAJO	**Matsushiro**	**6.84**	**188**	P		**Pn**		**11 13 47.0**	**-0.3**
MAJO	**Matsushiro**	**6.84**	**188**	*d i*PN		**Pn**		**11 13 47.3**	**0.0**
MJAR	**Matsushiro Arr**	**6.84**	**188**			**Pn**		**11 13 47.0**	**-0.3**
MJAR	**Matsushiro Arr** comp=E,22nm,0.8s,baz=6.6,slow=14,SNR=85	**6.84**	**188**	P		**Pn**		**11 13 47.5**	**+0.2**
MDJ	**Mudanjiang**	**7.20**	**284**	Pn		**Pn**		**11 13 52.0**	**+0.2**
GRNR	**Gornyy**	**7.71**	**346**	⇑*i*PN		**Pn**		**11 13 58.6**	**+0.3**
GRNR	comp=Z,20nm,0.5s			pmax	pmax				
TYV	**Tymovskoe**	**7.85**	**15**	*e*PN		**Pn**		**11 14 01.0**	**+0.9**
TYV				*e*S		**S**		**11 15 30.1**	**+1.3**
TYV	comp=Z,18nm,1.3s			pmax	pmax				
TYV	comp=Z,700nm,4.2s			pmax	pmax				
TYV	comp=N,9.0nm,1.6s			smax	smax				
TYV	comp=E,17nm,1.6s			smax	smax				
TYV	comp=N,400nm,4.3s			smax	smax				
TYV	comp=E,500nm,4.3s			smax	smax				
TYV	**Tymovskoe**	**7.85**	**15**	*e*P		**Pn**		**11 14 01.3**	**+1.2**
TYV				*e*S		**S**		**11 15 30.1**	**+1.3**
JGF	**Kuroka**	**7.88**	**192**			**Pn**		**11 14 00.4**	**-0.3**
JGF	**Kuroka**	**7.88**	**192**	P		**Pn**		**11 14 00.5**	**-0.3**
INU	**Inuyama**	**8.19**	**194**			**Pn**		**11 14 04.1**	**-0.5**
INU	**Inuyama**	**8.19**	**194**	P		**Pn**		**11 14 04.8**	**+0.2**
BNX	**BinXian**	**8.91**	**290**	⇓P		**Pn**		**11 14 14.2**	**+0.4**
BNX	comp=Z,9.0nm,0.9s			pmax	pmax				
JHJ	**Hachijo jima 2** comp=Z,118nm,0.3s,baz=323,slow=20,SNR=16	**10.20**	**178**	P		**Pn**		**11 14 26.6**	**-4.0**
JHJ	comp=Z,218nm,0.8s,baz=319,slow=15,SNR=2.5			S		S		11 16 14.2	-11
JMN	**Monobe**	**10.52**	**206**	Pn		**Pn**		**11 14 35.1**	**+0.3**
KSRS	**Korea Array** comp=Z,5.1nm,0.9s,baz=52,slow=14,SNR=8.3	**10.54**	**240**	P		**Pn**		**11 14 36.0**	**+1.1**
KSRS	**Korea Array**	**10.54**	**240**	PN		**Pn**		**11 14 36.0**	**+1.1**
KSAR	**Wonju Array Be**	**10.57**	**240**			**Pn**		**11 14 35.2**	**-0.2**
KSAR	**Wonju Array Be**	**10.57**	**240**	PN		**Pn**		**11 14 35.2**	**-0.2**
KSAR	**Wonju Array Be**	**10.57**	**240**	*e*P		**Pn**		**11 14 35.2**	**-0.2**
HEH	**HeiHe**	**10.74**	**314**	*e*P		**Pn**		**11 14 36.3**	**-1.1**
JNU	**Nakatsue**	**12.20**	**216**	Pn		**Pn**		**11 14 53.0**	**-3.0**
JNU	**Nakatsue** comp=Z,3.8nm,0.8s,baz=22,slow=19,SNR=2.0	**12.20**	**216**	P		**Pn**		**11 14 58.0**	**+2.0**
ZEA	**Zeya**	**13.14**	**327**	*e*PN		**Pn**		**11 15 07.1**	**-0.5**
ZEA	comp=Z,10.0nm,0.5s			pmax	pmax				
ZEA	**Zeya**	**13.14**	**327**	*e*P		**Pn**		**11 15 07.1**	**-0.5**
HIA	**Hailar**	**14.82**	**300**	⇑*e*P		**Pn**		**11 15 28.4**	**+0.1**
HILR	**Hailar Array B** comp=Z,8.3nm,0.4s,baz=106,slow=11,SNR=18	**14.89**	**302**	P		**Pn**		**11 15 29.3**	**0.0**
PEA0B	**Petropavlovsk-**	**15.58**	**45**	P		**P**		**11 15 35.9**	**-1.4**
PEA0B	**Petropavlovsk-**	**15.58**	**45**	P		**P**		**11 15 35.9**	**-1.4**
PEA0B	comp=Z,106nm,1.4s			pmax	pmax				
PETK	**Petropavlovsk-**	**15.58**	**45**	P		**P**		**11 15 36.8**	**-0.6**
PETK	**Petropavlovsk-** comp=Z,3.9nm,1.0s,baz=234,slow=5.9,SNR=4.2	**15.58**	**45**	P		**Pn**		**11 15 38.2**	**+0.6**
MA2	**Magadan**	**17.69**	**19**	P		**P**		**11 15 59.5**	**-0.9**
MA2	**Magadan**	**17.69**	**19**	P		**P**		**11 15 59.5**	**-0.9**
MA2	comp=Z,87nm,1.5s			pmax	pmax				
MA2	**Magadan**	**17.69**	**19**	*e*P		**P**		**11 15 59.5**	**-0.9**
YAK	**Yakutsk**	**19.59**	**346**	*e*P		**P**		**11 16 18.4**	**-2.4**
YAK	comp=Z,24nm,0.8s			pmax	pmax				
YAK	comp=E,4.0nm,1.0s			pmax	pmax				
YAK	comp=N,11nm,1.0s			pmax	pmax				
HHC	**Hu-ho-hao-te**	**20.78**	**273**	*e*P		**P**		**11 16 32.3**	**-1.6**
HHC	comp=Z,13nm,0.7s			pmax	pmax				
ULN	**Ulaanbaatar**	**22.99**	**293**	P		**P**		**11 16 55.6**	**+0.3**
ULN	**Ulaanbaatar**	**22.99**	**293**	⇑*i*P		**P**		**11 16 55.5**	**+0.3**
ULN	comp=Z,8.0nm,2.5s			pmax	pmax				
ULN	**Ulaanbaatar**	**22.99**	**293**	*e*P		**P**		**11 16 55.5**	**+0.3**
SONM	**Songino Array**	**23.43**	**293**	P		**P**		**11 16 59.6**	**+0.5**
SONM	**Songino Array** comp=Z,2.0nm,0.5s,baz=90,slow=9.3,SNR=11	**23.43**	**293**	P		**P**		**11 16 58.9**	**-0.3**
SONM	**Songino Array** comp=Z,2.0nm,0.5s	**23.43**	**293**	P		**P**		**11 16 59.7**	**+0.5**
SONM	comp=Z,3.0nm,1.4s			pmax	pmax				
TLY	**Talaya**	**25.35**	**302**	P		**P**		**11 17 15.4**	**-1.0**
TLY	comp=Z,7.9nm,0.9s			lAmb	lAmb			11 17 57.5	
TLY	**Talaya**	**25.35**	**302**	*de*P		**P**		**11 17 16.5**	**+0.1**
TLY	comp=Z,11nm,1.1s			pmax	pmax				
TLY	**Talaya**	**25.35**	**302**	*e*P		**P**		**11 17 16.5**	**+0.1**
BILL	**Bilibino**	**28.55**	**21**	P		**P**		**11 17 43.0**	**-1.6**
BILL	**Bilibino**	**28.55**	**21**	⇑*e*P		**P**		**11 17 44.0**	**-0.6**
BILL	comp=Z,15nm,2.0s			pmax	pmax				
BILL	**Bilibino**	**28.55**	**21**	*e*P		**P**		**11 17 44.0**	**-0.6**
TIXI	**Tiksi**	**28.86**	**353**	P		**P**		**11 17 44.7**	**-2.6**
TIXI	comp=Z,9.6nm,1.4s			lAmb	lAmb			11 17 45.7	
TIXI	**Tiksi**	**28.86**	**353**	⇑*i*P		**P**		**11 17 44.9**	**-2.4**
TIXI	comp=Z,14nm,2.4s			pmax	pmax				
TIXI	**Tiksi**	**28.86**	**353**	*e*P		**P**		**11 17 44.9**	**-2.4**
KNGR	**Kungurtug, Tuv**	**29.18**	**299**	⇑*e*P		**P**		**11 17 51.1**	**+0.5**
KIWB	**Kanaga Island**	**30.12**	**58**	P		**P**		**11 17 58.1**	**-0.5**
SPIA	**Saint Paul Isl** baz=268	**34.20**	**48**	P		**P**		**11 18 33.3**	**-0.8**
GAMB	**Gambell** baz=257	**34.33**	**36**	P		**P**		**11 18 34.5**	**-0.6**
P08K	**Saint George I** baz=270	**34.57**	**49**	P		**P**		**11 18 37.2**	**-0.1**
PZH	**PanZhiHua**	**34.81**	**254**	P		**P**		**11 18 40.7**	**+0.8**
NIKH	**Nikolski High** baz=276	**35.13**	**56**	P		**P**		**11 18 42.2**	**+0.1**
DGZ	**Jazzator, Alta**	**35.72**	**299**	⇑*i*P		**P**		**11 18 48.8**	**+1.4**
DGZ	comp=Z,9.0nm,0.9s			pmax	pmax				
ZAA0	**Zalesovo Array**	**36.73**	**306**			**P**		**11 18 55.8**	**+0.1**
ZAA0	comp=Z,25nm,1.2s			lAmb	lAmb			11 18 56.8	
ZALV	**Zalesovo Beam**	**36.73**	**306**			**P**		**11 18 55.6**	**-0.1**
ZALV	**Zalesovo Beam** comp=Z,12nm,0.5s,baz=88,slow=8.5,SNR=48	**36.73**	**306**	P		**P**		**11 18 56.0**	**+0.3**
ZALV	comp=Z,1.8nm,0.4s,baz=100,slow=3.4,SNR=7.1			PcP		**PcP**		**11 21 13.0**	**-0.3**
ZALV	comp=Z,3.1nm,0.7s,baz=80,slow=4.2,SNR=10 comp=Z,12nm,0.5s			ScP		**ScP**		**11 24 40.2**	**+0.6**
ZALV	**Zalesovo Beam**	**36.73**	**306**	*i* P		**P**		**11 18 56.1**	**+0.4**
ZALV	comp=Z,13nm,0.5s			pmax	pmax				
F14K	**Arctic Creek** baz=260	**36.94**	**34**	P		**P**		**11 18 56.9**	**-0.4**
NRIK	**Noril'sk** comp=Z,2.6nm,0.5s,baz=110,slow=8.2,SNR=4.9	**36.94**	**332**	P		**P**		**11 18 55.8**	**-1.5**
NRIK	**Noril'sk** comp=Z,2.6nm,0.5s	**36.94**	**332**	⇑*e*P		**P**		**11 18 55.7**	**-1.6**
NRIK	comp=Z,2.0nm,0.6s			pmax	pmax				
WMQ	**Urumqi**	**36.96**	**289**	*e*P		**P**		**11 18 59.1**	**+1.2**
WMQ				pP	pP			11 19 42.3	+1.7
WMQ				S	S			**11 24 29.2**	**+2.1**
WMQ	comp=Z,10.0nm,0.9s			pmax	pmax				
WMQ	comp=N,440nm,12.3s			LR	LR				
WMQ	comp=E,490nm,13.1s			LR	LR				
WMQ	comp=Z,250nm,15.9s			LR	LR				
F15K	**North Star Dit**	**37.66**	**34**	P		**P**		**11 19 04.2**	**+0.8**
F15K	comp=Z,18nm,1.2s			lAmb	lAmb			11 19 40.1	
M13K	**Dall Lake** baz=270	**37.85**	**43**	P		**P**		**11 19 05.5**	**+0.5**
L14K	**Kuka Creek** baz=269	**38.19**	**41**	P		**P**		**11 19 08.9**	**+1.2**
M14K	**Bethel** baz=271	**38.54**	**42**	P		**P**		**11 19 10.6**	**-0.1**
H16K	**Elim** baz=265	**38.55**	**36**	P		**P**		**11 19 11.6**	**+0.8**
D17K	**Noatak River** baz=261	**38.59**	**31**	P		**P**		**11 19 11.4**	**+0.3**
C17K	**DeLong Mountai** baz=260	**38.69**	**30**	P		**P**		**11 19 11.8**	**-0.1**
E17K	**Hotham Inlet** baz=263	**38.98**	**32**	P		**P**		**11 19 14.0**	**-0.3**
F17K	**Baldwin Pennin**	**39.13**	**33**	P		**P**		**11 19 15.3**	**-0.2**
F17K	comp=Z,8.9nm,1.1s			lAmb	lAmb			11 19 45.3	
F17K	**Baldwin Pennin** baz=264	**39.13**	**33**	P		**P**		**11 19 15.1**	**-0.5**
M15K	**Kasigluk River** baz=272	**39.16**	**42**	P		**P**		**11 19 16.0**	**+0.1**
G17K	**Kiwalik Mounta** baz=266	**39.29**	**35**	P		**P**		**11 19 16.8**	**-0.1**
C18K	**Utukok River** baz=262	**39.44**	**30**	P		**P**		**11 19 17.7**	**-0.5**
N15K	**Kwethluk River** baz=273	**39.48**	**43**	P		**P**		**11 19 18.0**	**-0.5**
E18K	**Tukpahlearik C** baz=264	**39.49**	**32**	P		**P**		**11 19 18.2**	**-0.3**
H17K	**Granite Mounta** baz=267	**39.57**	**36**	P		**P**		**11 19 19.5**	**+0.3**
MK31	**Makanchi Array**	**39.74**	**295**	*d i*P		**P**		**11 19 20.8**	**-0.1**
MKAR	**Makanchi Array** com

N18K Kilae Creek 41.52 42 P P 11 19 36.1 +0.8
baz=276
H20K Anotleneega Mo 41.70 35 P P 11 19 32.4 -4.2
baz=271
C21K Knifeblade Rid 41.80 29 P P 11 19 33.2 -4.2
baz=267
CHTO Chiang Mai 41.84 247 P P 11 19 39.5 +1.2
A22K Sinclair Lake 41.86 27 P P 11 19 38.3 +0.5
baz=265
B21K Ikpikpuk River 41.88 29 P P 11 19 38.2 +0.2
baz=267
O18K Koktuh Hills 41.95 43 P P 11 19 36.7 -2.0
baz=277
J20K Nowinta River 42.06 37 P P 11 19 40.2 +0.7
baz=273
CMAR Chiang Mai Arr 42.09 247 P P 11 19 41.4 +1.1
comp=Z,0.5nm,0.3s,baz=38,slow=7.0,SNR=4.1
comp=Z,0.5nm,0.3s
K20K Telida 42.15 38 P P 11 19 41.0 +0.7
baz=274
N19K Bonanza Creek 42.19 42 P P 11 19 41.9 +1.1
baz=277
F21K Alatna River 42.24 32 P P 11 19 41.2 +0.2
baz=270
G21K Allakaket 42.24 33 P P 11 19 41.4 +0.5
baz=271
B22K Teshekpuk Lake 42.33 28 P P 11 19 41.7 +0.1
baz=267
D22K Ayikyak River 42.54 30 P P 11 19 43.7 +0.3
baz=269
H21K Melozitna Rive 42.55 35 P P 11 19 44.0 +0.4
baz=273
M20K Styx River 42.72 40 P P 11 19 46.5 +1.5
baz=277
F22K John River 42.74 32 P P 11 19 45.6 +0.6
baz=271
E22K Anaktuvuk Pass 42.87 31 P P 11 19 46.1 +0.1
baz=271,SNR=9.4
CHUM Lake Minchumin 42.88 37 P P 11 19 47.3 +1.1
baz=275
I21K Tanana 42.93 35 P P 11 19 47.3 +0.8
baz=274
G22K Bettles 43.02 33 P P 11 19 47.9 +0.7
baz=273
H22K Ishtalitna Cre 43.13 34 P P 11 19 49.1 +1.0
baz=274
D23K Nanushuk River 43.27 30 P P 11 19 49.6 +0.5
baz=271
C23K Itkillik River 43.28 28 P P 11 19 49.0 -0.2
baz=270
BPAW Bear Paw Mtn. 43.45 37 P P 11 19 51.6 +0.9
baz=276
SKT Skwentna 43.46 40 P P 11 19 52.1 +1.3
baz=278
MLY Manley 43.46 35 P P 11 19 51.3 +0.5
baz=275
COLD Coldfoot 43.52 32 P P 11 19 52.1 +0.9
baz=274
G23K Bananza Creek 43.62 33 P P 11 19 52.9 +0.8
baz=274
TOLK Toolik Lake Re 43.68 30 P P 11 19 52.8 +0.3
baz=273
E23K Chandalar 43.69 31 P P 11 19 53.3 +0.7
baz=273,SNR=5.1
HOM Homer 43.76 43 P P 11 19 55.5 +2.3
baz=280
TRF Thorofare Moun 43.83 38 P P 11 19 55.3 +1.4
baz=277
H23K Yukon River 43.89 34 P P 11 19 55.2 +1.1
baz=276
D24K Happy Valley 43.93 29 P P 11 19 55.3 +0.9
baz=273
C24K Franklin Bluff 43.95 29 P P 11 19 54.9 +0.3
baz=272,SNR=6.1
CUT Chulitna 43.98 39 P P 11 19 56.5 +1.6
baz=278
I23K Minto, Yukon-K 44.03 35 P P 11 19 56.2 +0.9
baz=276
E24K Your Creek 44.11 31 P P 11 19 56.9 +0.9
baz=274
BRSE Bradley Lake S 44.20 43 P P 11 19 59.3 +2.6
baz=281
F24K Squaw Lake 44.39 32 P P 11 19 59.2 +1.0
baz=275
MCK McKinley 44.39 37 P P 11 19 59.7 +1.5
baz=278
TARG Taragay, Kyrgy 44.51 290 P P 11 19 59.8 -0.1
TARG pmax pmax
comp=Z,7.0nm,0.6s
H24K Noodor Dome 44.57 34 P P 11 20 00.5 +0.9
baz=277
G24K Hadweenzic Riv 44.63 33 P P 11 20 01.2 +1.2
baz=276
COLA College 44.70 35⇑ *e*P P 11 20 01.6 +1.1
COLA pmax pmax
comp=Z,7.0nm,0.6s
COLA College 44.70 35 P P 11 20 02.1 +1.5
baz=278
WAT1 Susitna Watana 44.70 38 P P 11 20 02.4 +1.7
baz=279
CCB Clear Creek Bu 44.75 36 P 11 20 01.6 +0.6
KDJ Kajisay 44.77 291 P P 11 20 02.2 +0.5
KDJ pmax pmax
comp=Z,10.0nm,0.8s
D25K Kavik River 44.79 29 P P 11 20 02.2 +0.9
baz=275
POKR Poker Plat Res 44.84 35 P P 11 20 03.2 +1.5
baz=278
SML Sawmill 44.98 40 P P 11 20 04.5 +1.7
baz=281
KNK Knik Glacier 44.99 40 P P 11 20 05.1 +2.2
baz=281
WAT6 Susitna Watana 45.11 39 P P 11 20 00.5 -3.6
baz=280
ILAR Eielson Array 45.12 35 P P 11 20 04.3 +0.4
comp=Z,3.4nm,0.6s,baz=281,slow=7.8,SNR=59
comp=Z,3.4nm,0.6s
HDA Harding Lake 45.16 36 P P 11 20 02.5 -1.7
baz=279
DHY Denali Highway 45.19 38 P P 11 19 58.5 -6.2
baz=280,SNR=6.1
E25K Arctic Village 45.20 31 P P 11 19 58.5 -6.0
baz=277
F25K Christian Rive 45.23 31 P P 11 20 02.2 -2.6
baz=277
C26K Camden Bay 45.25 28 P P 11 20 05.5 +0.7
baz=276
BVA0 Borovoye Array 45.35 308 *e*P P 11 20 07.0 +1.1
BVAR Borovoye Array 45.35 308 P P 11 20 06.3 +0.4
comp=Z,16nm,0.4s,baz=72,slow=7.9,SNR=66
BVAR PcP **PcP** 11 21 42.3 +0.8
comp=Z,1.1nm,0.7s,baz=93,slow=3.5,SNR=2.7
BVAR ScP **ScP** 11 25 14.6 +0.8
comp=Z,1.0nm,0.8s,baz=72,slow=4.7,SNR=2.8
comp=Z,16nm,0.4s
BORK Borovoye 45.39 308 *de*P P 11 20 06.9 +0.8
BORK pmax pmax
comp=Z,9.0nm,0.6s
C27K Jago River 45.69 28 P P 11 20 09.0 +0.7
baz=277,SNR=15
K24K Donnelly Dome 45.77 37 P P 11 20 09.8 +0.8
baz=281
F26K Sheenjek River 45.79 31 P P 11 20 09.9 +0.7
baz=278
J25K Salcha River, 45.79 36 P P 11 20 09.8 +0.5
baz=280
G26K Porcupine Rive 46.04 32 P P 11 20 12.2 +1.2
baz=279
PAX Paxson 46.06 38 P P 11 20 12.8 +1.4
baz=282
KLU Klutina 46.17 40 P P 11 20 13.6 +1.4
baz=283
HARP HAARP 46.32 39 P P 11 20 09.9 -3.4
baz=283
AAK Ala-Archa 46.39 293 P P 11 20 14.7 +0.4
AAK Ala-Archa 46.39 293 *d* iP P 11 20 14.6 +0.3
AAK pmax pmax
comp=Z,2.0nm,0.5s
AAK Ala-Archa 46.39 293 *e*P P 11 20 14.6 +0.3
SCRK Sand Creek 46.51 36 P P 11 20 16.1 +1.2
baz=282,SNR=8.8
J26L Joseph Creek 46.58 36 P P 11 20 16.3 +0.9
baz=282
I26K Coal Creek Min 46.59 34 P P 11 20 16.3 +1.0
baz=282
E27K Coleen River 46.66 30 P P 11 20 16.6 +0.7
baz=280
D27M Malcolm River 46.71 29 P P 11 20 17.1 +0.8
baz=280
ARLS Aral 46.83 292 P P 11 20 16.8 -0.9
G27K Doyon Strip 46.89 32 P P 11 20 18.9 +1.2
baz=281
L26K Log Cabin Wild 47.00 37 P P 11 20 20.5 +2.0
baz=283
H27K Steamboat Moun 47.06 33 P P 11 20 20.6 +1.5
baz=282
I27K Kandik River 47.16 34 P P 11 20 21.2 +1.4
baz=282
M26K Nabesna, AK 47.30 38 P P 11 20 22.6 +1.6
baz=284
K27K Chicken 47.32 36 P P 11 20 17.6 -3.4
baz=284
E28M Babbage River 47.33 30 P P 11 20 16.7 -4.3
baz=282
F28M Old Crow 47.41 31 P P 11 20 22.9 +1.2
baz=282
D28M Stokes Point 47.47 28 P P 11 20 17.8 -4.2
baz=282
MCARA McCarthy VSAT 47.55 40 P P 11 20 18.5 -4.3
baz=285
L27K Beaver Creek, 47.66 37 P P 11 20 21.1 -2.6
baz=285
CRQE Cirque 47.68 40 P P 11 20 19.5 -4.4
baz=286
M27K Edge Creek, AK 47.82 38 P P 11 20 26.8 +1.7
baz=285
I28M Miner Creek 47.88 34 P P 11 20 27.5 +2.1
baz=284
ARSB Arslanbob 47.97 292 P 11 20 26.9 +0.4
ARSB IAmb IAmb 11 20 28.3
comp=Z,16nm,0.6s
ARSB Arslanbob 47.97 292 P P 11 20 26.9 +0.4
ARSB pmax pmax
comp=Z,16nm,0.6s
E29M Blow River 47.97 30 P P 11 20 20.7 -5.2
baz=283
G29M Pine Creek 48.27 32 P P 11 20 25.7 -2.6
baz=284
H29M Whitestone 48.31 33 P P 11 20 25.1 -3.5
baz=285
DAWY Dawson 48.45 35 P P 11 20 31.5 +1.8
baz=286
KKAR Karatay Array 48.86 295 P P 11 20 33.0 -0.1
KKAR Karatay Array 48.86 295 P P 11 20 33.0 -0.1
EPYK Eagle Plains 48.91 32 P P 11 20 31.4 -1.8
baz=286,SNR=9.9
F30M Barrier River 48.93 30 P P 11 20 31.5 -1.7
baz=286
G30M tAoh Zraii Nji 48.94 31 P P 11 20 30.7 -2.7
baz=286,SNR=5.4
TRKS Terek-Say 49.12 293 P P 11 20 35.9 +0.6
TRKS pmax pmax
comp=Z,8.0nm,0.9s
L29M L29M 49.27 37 P P 11 20 30.7 -5.3
baz=287
K29M Barlow Dome 49.31 35 P P 11 20 34.4 -1.9
baz=287
M29M Somme Creek 49.32 37 P P 11 20 33.7 -2.7
baz=288
SVE Sverdlovsk 49.51 315 *e*P P 11 20 39.1 +1.3
SVE pmax pmax
comp=Z,24nm,0.9s
INK Inuvik 49.56 29 P 11 20 39.0 +1.1
INK IAmb IAmb 11 20 39.9
comp=Z,13nm,0.7s
INK Inuvik 49.56 29 P P 11 20 39.0 +1.1
INK pmax pmax
comp=Z,13nm,0.7s
INK Inuvik 49.56 29 P P 11 20 39.3 +1.3
baz=287,SNR=16
J30M Hart River 49.59 34 P P 11 20 39.9 +1.5
baz=288
G31M Satah River 49.69 31 P P 11 20 32.9 -6.0
baz=287
F31M Tsiigehtchic 49.73 30 P P 11 20 35.8 -3.4
baz=287
H31M Peel River 50.01 32 P P 11 20 40.5 -0.9
baz=288
M30M Minto, Yukon 50.01 37 P P 11 20 37.2 -4.4
baz=289
MAYO Mayo, Yukon 50.07 35 P P 11 20 44.3 +2.4
baz=289
N30M Aishikik Lake 50.25 38 P P 11 20 46.0 +2.6
baz=290
HYT Haines Junctio 50.27 39 P P 11 20 42.9 -0.7
baz=290
P29M Windy Craggy 50.57 41 P P 11 20 45.9 +0.1
baz=290
P30M Million Dollar 50.77 40 P P 11 20 45.7 -1.6
baz=291
N31M Braeburn, Yuko 50.83 38 P P 11 20 49.1 +1.5
baz=290
O30N Mendenhall 50.94 39 P P 11 20 45.9 -2.6
baz=291
A36M Sachs Harbour 51.04 23 P P 11 20 48.5 -0.5
baz=291,SNR=6.8
M31M Drury Creek, Y 51.20 37 P P 11 20 50.5 +0.1
baz=291
WHY Whitehorse 51.54 39 P P 11 20 52.0 -1.0
baz=292
FARO Faro, Yukon 51.64 37 P P 11 20 54.1 +0.4
baz=292
CHGR Chuyangaron 51.80 290 P 11 20 55.3 0.0
CHGR Chuyangaron 51.80 290 P P 11 20 55.3 0.0
CHGR pmax pmax
comp=Z,22nm,0.7s
MMPY Sheldon Lake, 52.39 36 P P 11 20 58.2 -0.9
baz=293
P33M Teslin, Yukon 52.66 39 P P 11 21 01.9 +0.7
baz=294
AB31 Akbulak array 52.85 306 P P 11 21 03.0 +0.3
AB31 IAmb IAmb 11 21 03.9
comp=Z,8.7nm,0.5s
AB31 Akbulak array 52.85 306 *e*P P 11 21 03.2 +0.6
ABKAR Akbulak array 52.85 306 P 11 21 03.0 +0.3
AKTO Aktyubinsk 53.45 308 P P 11 21 07.3 +0.2
R33M Jennings River 53.84 39 P P 11 21 10.6 +0.6
baz=296
SPITS Spitsbergen Ar 54.05 348 P P 11 21 11.0 0.0
comp=Z,1.4nm,0.3s,baz=69,slow=5.2,SNR=12
comp=Z,1.4nm,0.3s
SPITS Spitsbergen Ar 54.05 348 P P 11 21 11.0 0.0
KIRV Kirov 54.37 320 *ce*P P 11 21 13.7 +0.2
VADS Vadso 56.15 337 *e*P P 11 21 26.2 +0.1
ARA0 ARCESS Array S 57.58 338 *e*P P 11 21 36.3 +0.2
ARCES ARCESS Array B 57.58 338 P P 11 21 36.3 +0.2
comp=Z,1.6nm,0.4s,baz=51,slow=6.6,SNR=25
comp=Z,1.6nm,0.4s
BELG Belogornoye 58.24 314 *de*P P 11 21 41.4 +0.5
BELG pmax pmax
comp=Z,3.0nm,0.8s
KTK1 Kautokeino 58.54 338 *e*P P 11 21 42.9 +0.1
JETT Jettan, Norway 58.94 339 *e*P P 11 21 46.6 +1.0
YKA Yellowknife Ar 59.18 31 P P 11 21 46.5 -0.7
comp=Z,1.3nm,0.8s,baz=298,slow=6.6,SNR=5.2
comp=Z,1.3nm,0.8s
TRO Tromso 59.27 339 *e*P P 11 21 47.6 -0.2
NEEM North Greenlan 59.32 3 *i* P P 11 21 46.9 -1.5
NEEM IAmb IAmb 11 21 50.0
comp=Z,7.5nm,1.1s
DAG Danmarks Havn 59.37 354 *i* P P 11 21 48.0 -0.3
DAG IAmb IAmb 11 21 49.4
comp=Z,4.7nm,0.6s
STEI Steigen 61.43 339 *e*P P 11 22 02.0 -0.4
FAUS Fauske 61.82 339 *e*P P 11 22 05.3 +0.4
DBG Daneborg 61.85 354 *i* P P 11 22 05.5 +0.5
OBN Obninsk 62.19 321 *e*P P 11 22 08.1 +0.5
OBN *e* 11 22 46.5
OBN *e**PP **pP** **11 22 53.8 -1.3**
OBN *e**SP **sP** **11 23 18.9 +1.0**
OBN *e* 11 24 26.7
OBN pmax pmax
comp=Z,3.0nm,0.6s
OBN Obninsk 62.19 321 *e*P P 11 22 08.1 +0.5
FINES FINESS Array B 62.56 330 P P 11 22 09.1 -0.9
comp=Z,6.9nm,0.6s,baz=51,slow=6.4,SNR=56
comp=Z,6.9nm,0.6s
FINES FINESS Array B 62.56 330 *i* P P 11 22 09.8 -0.2
FINES pmax pmax
comp=Z,7.0nm,0.6s
VAGH Vaagaholmen 62.84 339 *e*P P 11 22 11.8 +0.1
RAUS Rausandaksla 62.85 338 *e*P P 11 22 11.5 -0.4
MOR8 Moi Rana 62.94 338 *e*P P 11 22 10.7 -1.8
VSU Vasula 64.29 327⇑ *e*P P 11 22 20.7 -0.6
VSU pmax pmax
comp=Z,45nm,2.0s
SUMG Summit 64.38 359 *i* P P 11 22 22.8 +0.6
SUMG IAmb IAmb 11 22 24.4
comp=Z,8.4nm,0.6s
KIV Kislovodsk 65.72 308 *e*P P 11 22 32.5 +1.6
KIV pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 65.72 308 *e*P P 11 22 32.5 +1.6
KIV Kislovodsk 65.72 308 P P 11 22 32.5 +1.6
comp=Z,15nm,0.8s
KBZ Khabaz 65.73 308 P P 11 22 31.8 +0.9
comp=Z,4.1nm,0.7s,baz=79,slow=2.4,SNR=8.8
comp=Z,4.1nm,0.7s
KBZ Khabaz 65.73 308 *ce*P P 11 22 32.2 +1.3
KBZ pmax pmax
comp=Z,4.0nm,0.7s
KBZ Khabaz 65.73 308 *e*P P 11 22 32.2 +1.3
SHA1 Shidzhatmaz 65.86 308⇓ *e*P P 11 22 33.1 +1.0
NEUR Neytrino 66.13 307⇓ *e*P P 11 22 35.2 +1.5
NEUR pmax pmax
comp=Z,4.0nm,1.4s
MNK Minsk 66.47 324 *i* P P 11 22 35.0 -0.4
MNK *i**PP **pP** **11 23 24.0 +0.8**
MNK *i* 11 25 04.4
MNK *i* PPP PPP 11 26 43.8
MNK *i* S **S** **11 31 08.8 +0.5**
MNK *i* SS **SS** **11 35 30.8 +2.5**
MNK pmax pmax
comp=Z,11nm,0.8s
ASAR Alice Springs 66.86 185 P P 11 22 37.2 -0.9
comp=Z,0.1nm,0.4s,baz=1.6,slow=6.0,SNR=4.6
VSLR Vesyoloye 67.54 309⇑ *e*P P 11 22 40.8 -1.5
VSLR pmax pmax
comp=Z,19nm,1.1s
DOMB Dombas 67.64 337 *e*P P 11 22 42.7 +0.1
HFS Hagfors 67.74 334 P P 11 22 43.5 +0.2
comp=Z,3.9nm,0.4s,baz=46,slow=6.2,SNR=53
comp=Z,3.9nm,0.4s
NB2 NORSAR Subarra 67.81 336 P P 11 22 44.0 +0.3
comp=Z,1.9nm,0.5s,baz=36,slow=6.5
NOA NORSAR Array B 67.81 336 P P 11 22 43.7 0.0
comp=Z,4.4nm,0.8s,baz=36,slow=6.3,SNR=19
comp=Z,4.4nm,0.8s
NC602 NORSAR Array S 67.95 335 *e*P P 11 22 44.2 -0.3
NORES NORESS Array B 67.95 335 P P 11 22 44.5 -0.1
AK03 Malin Array Si 68.42 320 P P 11 22 47.5 -0.1
AKASG Malin Array Be 68.43 320 P P 11 22 47.7 0.0
comp=Z,4.1nm,0.5s,baz=46,slow=6.4,SNR=25
comp=Z,4.1nm,0.5s
AKBB Malin Array Si 68.43 320 *d* iP P 11 22 47.6 -0.1
AKBB pmax pmax
comp=Z,7.0nm,0.6s
AKBB Malin Array Si 68.43 320 P P 11 22 47.7 0.0
AK01 Malin Array Si 68.44 320 P P 11 22 47.6 -0.2
KIEV Kiev 68.44 320 P P 11 22 47.7 -0.1
KIEV Kiev 68.44 320 P P 11 22 47.4 -0.4
AK09 Malin Array Si 68.46 320 P P 11 22 47.8 -0.1
AK08 Malin Array Si 68.46 320 P P 11 22 47.8 -0.1
AK22 Malin Array Si 68.46 320 P P 11 22 47.8 -0.1
AK21 Malin Array Si 68.47 320 P P 11 22 47.9 0.0
AK13 Malin Array Si 68.57 320 P P 11 22 48.7 +0.1
RNPP9 Sopachiv 69.47 322 P P 11 22 54.5 +0.4
NVAR Mina Array Bea 72.46 54 P P 11 23 13.8 +1.2
comp=Z,0.5nm,0.7s,baz=308,slow=5.3,SNR=4.5
comp=Z,0.5nm,0.7s
BURAR Bucovina Array 72.47 320 ⇑P P 11 23 09.7 -2.7
BURAR Bucovina Array 72.47 320 ⇑P P 11 23 09.7 -2.7
TESR Tescani 72.57 318 ⇑P P 11 23 13.5 +0.7
ONER Baraj Valea Uz 72.82 318 ⇑P P 11 23 14.6 +0.3
STHS Stebnicka Huta 72.97 323 *e*P P 11 23 15.7 +0.5
STHS pmax pmax
comp=Z,4.0nm,0.6s
STHS Stebnicka Huta 72.97 323 *e*P P 11 23 15.7 +0.5
VRI Vrincioaia 72.99 318 ⇑P P 11 23 16.1 +0.8
VRI Vrincioaia 72.99 318 ⇑P P 11 23 16.1 +0.8
OJC Ojcow 73.00 324 P P 11 23 15.9 +0.6
BR131 Keskin Array S 73.60 309 *e*P P 11 23 19.9 +0.7
BRTR Keskin Array B 73.60 309 P P 11 23 19.6 +0.4
comp=Z,1.1nm,0.6s,baz=60,slow=2.4,SNR=6.4
comp=Z,1.1nm,0.6s
LANS Liptovska Anna 73.94 324 *e*P P 11 23 22.7 +1.8
LANS pmax pmax
comp=Z,2.0nm,0.9s
LANS Liptovska Anna 73.94 324 *e*P P 11 23 22.7 +1.8
VOIR 74.12 318 ⇑P P 11 23 23.0 +1.0
VOIR 74.12 318 ⇑P P 11 23 23.0 +1.0
MORC Moravsky Berou 74.28 325 ⇑P P 11 23 23.8 +1.0
MORC Moravsky Berou 74.28 325 *e*P P 11 23 23.6 +0.8
MORC Moravsky Berou 74.28 325 ⇑P P 11 23 23.8 +1.0
PDAR Pinedale Array 74.35 46 P P 11 23 23.0 -0.5
comp=Z,0.4nm,0.6s,baz=316,slow=4.6,SNR=5.2
comp=Z,0.4nm,0.6s
ARR Arges 74.37 318 ⇓P P 11 23 25.0 +1.5
CLL Collm 74.90 328 ⇑ iP P 11 23 26.9 +0.6
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 74.90 328 ⇑ *i* P P 11 23 26.9 +0.6
comp=Z,7.0nm,0.8s
JAVC Velka Javorina 74.93 324 *e*P P 11 23 27.6 +1.0
VRAC Vranov 75.04 325 *e*P P 11 23 27.3 +0.2
SURR Surduc 75.28 320 ⇑P P 11 23 23.8 -4.8
KRUC Moravsky 75.31 325 *e*P P 11 23 29.6 +0.9
KHC Kasperske Hory 76.41 327 *c* iP P 11 23 34.9 0.0
KHC pmax pmax
comp=Z,3.0nm,0.7s
CONA Conrad Observa 76.42 325 *i* P P 11 23 36.3 +1.3
comp=Z,2.5nm,0.9s
EKA Eskdalemuir Ar 76.70 339 P P 11 23 35.7 -0.6
comp=Z,0.4nm,0.3s,baz=28,slow=5.6,SNR=6.0
comp=Z,0.4nm,0.3s
PFO Pinyon Flats O 76.81 56⇓ *e*P P 11 23 39.8 +2.2
PFO pmax pmax
comp=Z,30nm,3.8s
WATA Walderalm 78.65 327 *i* P P 11 23 47.9 +0.5
comp=Z,3.1nm,0.8s
MOTA Moosalm 78.83 327 *i* P P 11 23 49.0 +0.5
comp=Z,7.3nm,1.0s
RETA Reutte 78.85 327 *e*P P 11 23 49.4 +0.9
comp=Z,3.4nm,0.8s
FETA Feichten 79.24 327 *i* P P 11 23 51.2 +0.5
comp=Z,1.3nm,0.7s
DAVA Damuels 79.36 328 *e*P P 11 23 51.7 +0.4
comp=Z,6.2nm,1.0s
TXAR Lajitas Array 87.43 51 P P 11 24 34.2 +1.5
comp=Z,0.1nm,0.4s,baz=322,slow=3.7,SNR=1.9
ESDC Sonseca Array 90.98 333 P P 11 24 49.3 +0.3
comp=Z,0.4nm,0.5s,baz=20,slow=4.1,SNR=4.9
comp=Z,0.4nm,0.5s
QSPA South Pole Qui 133.07 180 SKPbc **SKPbc** 11 34 05.6 -0.2
comp=Z,1.7nm,1.0s,baz=353,slow=3.6,SNR=3.9
SNAA Sanae 146.22 200 PKPbc **PKPdf** 11 31 22.4 +0.6
comp=Z,0.6nm,0.7s,baz=154,slow=5.2,SNR=7.4

IDC ***10*** *11:31:10.1±2.0,33.08S×178.16W,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=55.9km s-min=38.4km az=59.0*
WEL ***10*** *11:32:08.9±1.4,33.3S×32.3×17.9W×3.1,h459km±41km, mB4.3/8,ML4.7/11,MLv4.5/6,Mw(mB)3.5/8,Error ellipse: s-maj=51.8km s-min=27.5km az=136.7,confirmed*
ISC 10 11:32:07.5±2.3,33.0S±0.2×179.1W±0.3,h450km,n22,
σ0=0.93/24,mb3.0/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.28**	**202**	P	P	**11 33 35.3**	**+0.8**
WMGZ				S	S	**11 34 47.2**	**+1.8**
HAZ	**Te Kaha**	**5.45**	**207**	P	P	**11 33 35.5**	**-0.6**
HAZ				S	S	**11 34 48.8**	**+0.3**
PUZ	**Puketiti**	**5.56**	**202**	P	P	**11 33 37.4**	**+0.1**
PUZ				S	S	**11 34 50.5**	**-0.1**
RUGZ	**Raukumara Rang**	**5.67**	**207**	P	P	**11 33 38.1**	**-0.4**
RUGZ				S	S	**11 34 52.0**	**-0.8**
TWGZ	**Tauwhareparae**	**5.75**	**204**	P	P	**11 33 39.7**	**+0.5**
TKGZ	**Te Karaka**	**6.03**	**204**	P	P	**11 33 42.7**	**+0.7**
MWZ	**Matawai**	**6.05**	**206**	P	P	**11 33 41.1**	**-1.1**
OPRZ	**Ohinepanea**	**6.05**	**215**	P	P	**11 33 42.8**	**+0.5**
URZ	**Urewera**	**6.15**	**209**	P	P	**11 33 41.7**	**-1.5**
URZ				S	S	**11 34 59.5**	**-2.0**
RIGZ	**Rimuhau**	**6.30**	**203**	P	P	**11 33 45.6**	**+0.8**
MUGZ	**Murupara**	**6.47**	**210**	P	P	**11 33 46.9**	**+0.3**
TOZ	**Tahuroa Road**	**6.52**	**221**	P	P	**11 33 47.6**	**+0.6**
PRRZ	**Plateau Road**	**6.66**	**212**	P	P	**11 33 48.9**	**+0.4**

RAHZ	Arahi	6.72 207	P	P	11 33 50.0	+0.8		
MTHZ	Maungataniwha	6.76 208	P	P	11 33 49.8	+0.1		
BKZ	Black Stump Fm	7.17 209	P	P	11 33 54.0	0.0		
HIZ	Hauiti	7.43 220	P	P	11 33 58.2	+1.5		
OTVZ	Oturere	7.53 213	P	P	11 33 57.7	-0.1		
ASAR	Alice Springs	42.14 270	P	P	11 39 11.1	-8.1		
	0.2nm,0.5s,baz=114,slow=8.3,SNR=6.6							
	0.2nm,0.5s							
WRA	Warramunga Arr	43.36 275	P	P	11 39 19.4	-9.4		
	0.5nm,0.3s,baz=116,slow=8.0,SNR=2.6							
	0.5nm,0.3s							
VNDA	Vanda	45.48 186	P	P	11 39 29.8	-15		
	0.3nm,0.5s,baz=45,slow=10.0,SNR=7.6							
	0.3nm,0.5s							
FINES	FINESS Array B	147.19 338	PKPbc	PKPdf	11 50 55.0	-0.4		
	1.7nm,0.5s,baz=43,slow=4.0,SNR=24							

DJA 10 11:48:39.0±0.7, 5°N±6°×12°7E±°, h142km±6km, M4.0/11, mB5.4/1, mb3.9/7, MLv4.1/11, Mw(mB)4.9/1, Taluad Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.10	240	P	Pn	11 49 13.8	-1.0
SGSI				S	Sn	11 49 42.1	-0.2
SWI	Sorong	6.82	145	P	Pn	11 50 16.0	-0.7
	0.1nm14nm,1.0s						
MRSI	Marisa	6.87	232	P	Pn	11 50 18.6	+1.3
SANI	Sanana	6.90	191	P	Pn	11 50 16.4	-1.3
	0.0nm6.5nm,0.5s						
NLAI	Namlea	7.95	182	P	Pn	11 50 32.3	+0.5

*SIGU **10** 11:53:57.8±0.1, 45°.6N±0°.8×26°.4E±0°.8, h154km, mb2.8/3, MD3.1/12*
*IDC **10** 11:53:57.4±4.0, 45°.73N×26°.54E, h180km±86km, mb2.8/2, mbtmp3.4/7, Error ellipse: s-maj=80.3km s-min=18.9km az=75.0*
*SOF **10** 11:53:58.7, 45°.68N±0°.05×26°.28E±0°.03, h100km±3km, MD3.7/6*
*MCSM **10** 11:53:58.7±0.3, 46°N±3°×2°6E±°, h144km±3km, mb3.7, mB4.8, MLv3.3, Mw(mB)4.0*
*BUC **10** 11:53:58.6±0.2, 45°.54N×26°.33E, h146km±1km, ml3.8/73, Error ellipse: s-maj=1.3km s-min=1.1km az=4.0*

ISC 10 11:53:56.6±0.8, 45°.57N±0°.02×26°.35E±0°.02, h161km±4km, n147, σ1s12/218, 88C-53D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEHR	Nehoiu	0.15	194	↑P	Pn	11 54 19.2	+1.0
NEHR				↓S	Sn	11 54 34.3	-0.3
BISRR	Bisoca	0.26	96	↑P	Pn	11 54 19.4	+1.0
BISRR				↑S	Sn	11 54 34.7	-0.3
BISRR	Bisoca	0.26	96	P	Pn	11 54 19.6	+1.2
MLR	Muntele Rosu	0.29	254	↑P	Pn	11 54 19.3	+0.7
MLR				↓S	Sn	11 54 35.2	-0.1
MLR	Muntele Rosu	0.29	254	P	Pn	11 54 19.3	+0.7
MLR				S	Sn	11 54 35.8	+0.5
PLOR	Plostina	0.35	37	↑P	Pn	11 54 19.1	+0.5
PLOR				↓S	Sn	11 54 34.8	-0.8
PLOR5	Plostina Array	0.35	39	P	Pn	11 54 19.2	+0.6
PLOR5				S	Sn	11 54 36.0	+0.4
VRI	Vrincioaia	0.40	42	↑P	Pn	11 54 19.5	+0.7
VRI				↑S	Sn	11 54 35.0	-0.8
VRI	Vrincioaia	0.40	42	P	Pn	11 54 19.4	+0.7
VRI				S	Sn	11 54 36.4	+0.6
ISR	Istrita	0.48	163	↑P	Pn	11 54 20.0	+0.9
ISR				↑S	Sn	11 54 34.8	-1.5
ISR	Istrita	0.48	163	P	Pn	11 54 20.1	+0.9
GRER		0.48	113	↑S	Sn	11 54 34.8	-1.5
ODBI	Odobesti	0.53	69	P	Pn	11 54 21.1	+1.8
ODBI				S	Sn	11 54 38.6	+1.9
TURR	Turia	0.53	334	↑P	Pn	11 54 20.1	+0.7
TURR				↑S	Sn	11 54 36.5	-0.4
PANC	Panciu	0.64	62	↑P	Pn	11 54 21.0	+1.1
PANC				↑S	Sn	11 54 37.8	+0.2
OZUR		0.65	323	↑P	Pn	11 54 20.5	+0.5
OZUR				↑S	Sn	11 54 36.8	-1.3
BOSR	Bodos	0.69	317	↓P	Pn	11 54 21.0	+0.7
BOSR				↓S	Sn	11 54 37.6	-0.9
PLAR	PLOIESTI	0.70	199	↑P	Pn	11 54 21.1	+0.8
PLAR				↓S	Sn	11 54 37.6	-0.7
COSR	Cosmesti PH	0.73	67	↑P	Pn	11 54 21.4	+1.0
COSR				↓S	Sn	11 54 39.4	+0.7
ONER	Baraj Valea Uz	0.76	3	↑P	Pn	11 54 21.6	+0.9
ONER				↓S	Sn	11 54 38.6	-0.6
DOPR	Dopca	0.78	301	↓P	Pn	11 54 21.4	+0.7
DOPR				↓S	Sn	11 54 39.0	-0.3
GHRR		0.89	56	↑P	Pn	11 54 22.8	+1.3
GHRR				↓S	Sn	11 54 41.0	+0.4
GHRR		0.89	56	P	Pn	11 54 22.8	+1.3
GHRR				S	Sn	11 54 41.6	+1.0
SULR		0.90	184	↑P	Pn	11 54 22.5	+0.9
SULR				↑S	Sn	11 54 39.9	-0.8
VOIR		0.92	262	↑P	Pn	11 54 22.4	+0.5
VOIR				↑S	Sn	11 54 40.3	-1.0
VOIR		0.92	262	P	Pn	11 54 22.4	+0.5
VOIR				S	Sn	11 54 40.7	-0.5
TUDR		0.93	88	↑P	Pn	11 54 22.6	+0.8
TUDR				↑S	Sn	11 54 40.7	-0.4
TESR	Tescani	0.96	13	↑P	Pn	11 54 22.8	+0.7
TESR				↑S	Sn	11 54 40.7	-1.1
TESR	Tescani	0.96	13	P	Pn	11 54 22.8	+0.7
TESR				S	Sn	11 54 40.6	-1.1
IZVR	Izvoarele	1.00	91	↑P	Pn	11 54 23.0	+0.7
IZVR				↑S	Sn	11 54 41.3	-0.8
SCHL	Schela	1.05	93	↑P	Pn	11 54 23.6	+0.9
SCHL				↓S	Sn	11 54 42.6	-0.1
SCHLR	Schela	1.05	95	↑P	Pn	11 54 23.6	+0.8
SCHLR				↑S	Sn	11 54 42.1	-0.7
NEGRR	Negrea	1.08	91	↑P	Pn	11 54 24.3	+1.3
NEGRR				↓S	Sn	11 54 43.2	-0.1
VARL	Varlezi	1.10	72	↓P	Pn	11 54 24.4	+1.2
VARL				↓S	Sn	11 54 44.0	+0.4
BIR	Birlad	1.13	52	↑P	Pn	11 54 24.6	+1.2
BIR				↑S	Sn	11 54 44.6	+0.5
LEHL	Lehliu	1.15	163	↓P	Pn	11 54 24.9	+1.3
LEHL				↑S	Sn	11 54 44.5	+0.1
SCTR	Scanteiesti	1.16	84	↑P	Pn	11 54 25.1	+1.4
SCTR				↑S	Sn	11 54 44.9	+0.3
CIOR	Ciorogarla	1.17	197	↑S	Sn	11 54 44.8	0.0
BUC	Bucharest	1.17	189	↓P	Pn	11 54 24.1	+0.2
BUC				↓S	Sn	11 54 44.8	0.0
AMRR	Amara	1.19	144	↑P	Pn	11 54 24.8	+0.8
AMRR				↑S	Sn	11 54 45.4	+0.4
TATR	Tatarca	1.20	88	↑P	Pn	11 54 25.4	+1.4
TATR				↑S	Sn	11 54 45.2	+0.1
GISR	Galati	1.21	96	↑P	Pn	11 54 25.5	+1.3
GISR				↑S	Sn	11 54 45.8	+0.6
ARR	Arges	1.22	261	↑P	Pn	11 54 25.4	+1.0
ARR				↑S	Sn	11 54 44.9	-0.8
VLDR	Vladesti	1.25	77	↓P	Pn	11 54 25.7	+1.3
VLDR				↑S	Sn	11 54 46.4	+0.5
BUC1	Bucharest	1.25	191	↑P	Pn	11 54 25.7	+1.2
BUC1				↑S	Sn	11 54 46.0	+0.1
BUC1	Bucharest	1.25	191	↑P	Pn	11 54 25.7	+1.2
BUC1				↑S	Sn	11 54 46.0	+0.1
GIUM	Giurgiulesti	1.31	93	↑P	Pn	11 54 26.4	+1.3
GIUM				↑S	Sn	11 54 47.9	+0.9
GIUM	Giurgiulesti	1.31	93	P	Pn	11 54 26.3	+1.3
GIUM				S	Sn	11 54 47.8	+0.9
CFR	Carcaliu	1.32	107	↑P	Pn	11 54 26.1	+0.9
CFR				↑S	Sn	11 54 46.6	-0.5
BIZ	Bicaz	1.38	353	↑S	Sn	11 54 49.1	+0.8
SGRR	Singureni	1.38	191	↑S	Sn	11 54 47.7	-0.4
HUMR	Humele	1.43	223	↑P	Pn	11 54 27.0	+0.8
HUMR				↓S	Sn	11 54 49.0	0.0
HARR	Harsova	1.43	128	↑P	Pn	11 54 27.4	+1.1
VASR	Vaslui	1.47	43	↓P	Pn	11 54 27.5	+0.9
MDB	Medias	1.49	293	↓P	Pn	11 54 28.4	+1.6
TLBR	Topalu	1.58	130	↑P	Pn	11 54 29.1	+1.2
TLBR				↓S	Sn	11 54 51.0	-0.8
TPGR	Topolog	1.63	115	↑P	Pn	11 54 29.2	+0.9
TPGR				↑S	Sn	11 54 51.9	-0.9
COPA	Copaceanca	1.65	210	↓P	Pn	11 54 29.3	+0.8
COPA				↓S	Sn	11 54 52.6	-0.4
CVDA	Cernavoda	1.73	135	↑P	Pn	11 54 30.8	+1.5
CVDA				↓S	Sn	11 54 54.0	-0.4
TLCR		1.78	102	↑P	Pn	11 54 31.2	+1.2
TLCR				↑S	Sn	11 54 56.0	+0.4
ICOR	Ion Corvin	1.79	144	↓S	Sn	11 54 55.9	+0.2
LOT	Lotru	1.82	267	↓P	Pn	11 54 31.3	+0.9
LOT				↑S	Sn	11 54 56.9	+0.4
TIRR	Tirgusor	1.84	127	↑P	Pn	11 54 31.9	+1.2
TIRR				↓S	Sn	11 54 56.4	-0.4
TIRR	Tirgusor	1.84	127	P	Pn	11 54 31.8	+1.2
RAZG	Razgrad	2.01	177	↓P	Pn	11 54 33.5	+1.0
RAZG				↓S	Sn	11 54 59.5	-0.8
MFTR	Murfatlar	2.03	133	↑P	Pn	11 54 34.0	+1.3
MFTR				↑S	Sn	11 55 00.3	-0.3
ZIMR		2.04	200	↓S	Sn	11 54 59.8	-1.0
TSCT	Constanta Port	2.17	130	↑S	Sn	11 55 03.8	+0.5
MILM	Milestii Mici	2.18	51	↑P	Pn	11 54 34.6	+0.3
MILM	Milestii Mici	2.18	51	↑P	Pn	11 54 34.5	+0.2
	190nm,0.1s						
MILM				*i* S	Sn	11 55 01.2	-2.4
	260nm,0.1s						
BURAR	Bucovina Array	2.19	340	↓P	Pn	11 54 36.9	+2.3
BURAR				↓S	Sn	11 55 05.7	+1.7
EFOR	EFORIE	2.21	132	↓S	Sn	11 55 04.4	+0.2
LOZB	Loznitsa	2.21	175	↓P	Pn	11 54 35.8	+0.9
LOZB				↓S	Sn	11 55 03.9	-0.4
CJR	Cluj-Napoca	2.22	302	↑P	Pn	11 54 36.2	+1.2
KIS	Kishinev	2.23	49	↓P	Pn	11 54 36.3	+1.3
KIS	Kishinev	2.23	49	P	Pn	11 54 36.2	+1.3
KIS	Kishinev	2.23	49	*e*P	Pn	11 54 35.9	+0.9
	94nm,0.1s						
KIS				*i* S	Sn	11 55 03.7	-1.0
	710nm,0.7s						
CBBR	Cluj-Babes-Bol	2.28	303	↓P	Pn	11 54 36.8	+1.2
PSN	Preselentsi	2.32	146	*i* P	Pn	11 54 37.9	+1.8
PSN				*i* S	Sn	11 55 07.0	+0.4
SZH	Strazhitsa	2.32	187	*i* P	Pn	11 54 37.2	+1.0
SZH				*i* S	Sn	11 55 06.0	-0.7
MANR	Mangalia	2.38	137	↓P	Pn	11 54 38.4	+1.7
SRE	Strehaia	2.40	249	↑P	Pn	11 54 38.0	+0.9
SRE				↑S	Sn	11 55 07.7	-0.6
MARR	Marisel-Cluj	2.50	297	↑P	Pn	11 54 40.0	+1.7
PLVB	Pleven	2.51	210	↓P	Pn	11 54 39.3	+0.9
GZR	Gura Zlata	2.52	267	↑P	Pn	11 54 40.1	+1.6
GZR				↑S	Sn	11 55 11.9	+1.0
PRD	Provadia	2.53	162	*i* P	Pn	11 54 40.0	+1.4
PURM	Purcari	2.63	67	↑P	Pn	11 54 41.2	+1.4
PURM				↓S	Sn	11 55 13.0	-0.2
ELND	Elena	2.67	187	↓P	Pn	11 54 41.4	+1.1
ELND				↓S	Sn	11 55 13.6	-0.5
DRGR		2.80	297	↓P	Pn	11 54 42.8	+0.8
VALD	Valchedram	2.80	229	*e*P	Pn	11 54 43.1	+1.2
HERR	Herculane	2.86	257	↓P	Pn	11 54 43.1	+0.5
RAKU	Rahkiv	2.87	329	*i* P	Pn	11 54 44.9	+2.1
RAKU				pmax	pmax	11 54 46.0	
RAKU				*i* S	Sn	11 55 20.1	+1.5
RAKU				smax	smax	11 55 22.8	
RAKU	Rahkiv	2.87	329	P	Pn	11 54 44.1	+1.3
BMR	Baia Mare	2.88	318	↓P	Pn	11 54 44.0	+1.2
KSV	Kosov	2.88	343	*i* P	Pn	11 54 45.0	+2.2
KSV	Kosov	2.88	343	P	Pn	11 54 44.1	+1.3
MPEP	Malo Peshtene	2.90	221	*i* P	Pn	11 54 44.6	+1.5
SORM	Soroca	2.91	28	*i* P	Pn	11 54 44.1	+0.9
NSLU	Nyzhne Selyshc	2.93	334	*i* P	Pn	11 54 49.9	+6.5
KMPD	K-Podol'skiy	2.99	1	Pn	Pn	11 54 44.7	+0.5
KMPD				Pn	Pn	11 54 44.1	-0.1
JMB	Yambol	3.08	177	*i* P	Pn	11 54 46.9	+1.4
NDNU	Novodnistrovsk	3.10	13	*i* P	Pn	11 54 46.8	+1.2
NDNU				*i* S	Sn	11 55 25.0	+1.3
NDNU	Novodnistrovsk	3.10	13	P	Pn	11 54 46.7	+1.2
BLKB	Belogradchik	3.27	235	↓P	Pn	11 54 48.0	+0.2
BZS	Buzias	3.32	272	↓P	Pn	11 54 49.7	+1.3
NE56	Odesa	3.35	69	Pn	Pn	11 54 49.6	+0.9
MDVR	Moldovita	3.37	258	↓P	Pn	11 54 50.5	+1.4
STNU	Starunia	3.38	339	P	Pn	11 54 50.0	+0.9
STNU				S	Sn	11 55 30.8	+0.8
KORU	Korolevo	3.40	321	*i* P	Pn	11 54 51.4	+2.1
KORU	Korolevo	3.40	321	P	Pn	11 54 50.1	+0.8
KORU				S	Sn	11 55 30.1	-0.2
MEZ	Mezhgor'ye	3.52	328	↑*i*P	Pn	11 54 53.5	+2.6
MEZ	Mezhgor'ye	3.52	328	P	Pn	11 54 52.6	+1.7
BRIU	Brid	3.58	322	↓*i*P	Pn	11 54 53.9	+2.2
BRIU	Brid	3.58	322	P	Pn	11 54 53.3	+1.6
BERU	Beregovo	3.67	318	↑*i*P	Pn	11 54 55.3	+2.4
BERU	Beregovo	3.67	318	P	Pn	11 54 54.2	+1.3
MUKU	Mukachevo	3.82	320	↓*i*P	Pn	11 54 56.7	+2.0
MUKU	Mukachevo	3.82	320	P	Pn	11 54 56.3	+1.6
HOLU	Holmets	4.01	319	↓*i*P	Pn	11 54 59.2	+2.1
HOLU	Holmets	4.01	319	P	Pn	11 54 58.5	+1.4
KDZ	Kurdzhali	4.01	191	*i* P	Pn	11 54 58.5	+1.2
LUBAR	Lubar, Ukraine	4.45	12	Pn	Pn	11 55 04.1	+1.2
STHS	Stebnicka Huta	5.17	320	*e*P	Pn	11 55 12.9	+0.5
SEV	Sevastopol'	5.29	99	*e*P	Pn	11 55 14.5	+0.6
SEV				pmax	pmax	11 55 16.1	
SEV				*e*S	Sn	11 56 13.2	-1.2
SEV				smax	smax	11 56 15.7	
AK07	Malin Array Si	5.33	20	P	Pn	11 55 15.7	+1.2
AK06	Malin Array Si	5.37	20	P	Pn	11 55 15.9	+1.0
AK14	Malin Array Si	5.39	19	P	Pn	11 55 15.5	+0.3
AK17	Malin Array Si	5.43	19	P	Pn	11 55 16.6	+0.9
AK02	Malin Array Si	5.43	20	P	Pn	11 55 17.0	+1.2
AK11	Malin Array Si	5.45	19	P	Pn	11 55 16.8	+0.9
AK18	Malin Array Si	5.46	18	Pn	Pn	11 55 17.0	+0.8
KIEV	Kiev	5.47	19	Pn	Pn	11 55 17.3	+1.1
	0.3nm19nm,0.7s						
AKASG	Malin Array Be	5.48	20	P	Pn	11 55 16.7	+0.3
	0.8nm,0.3s,baz=206,slow=12,SNR=7.6						
AKASG				S	Sn	11 56 14.2	-4.7
	3.3nm,0.6s,baz=200,slow=22,SNR=6.1						
AKBB	Malin Array Si	5.48	20	P	Pn	11 55 17.3	+0.9
RNPP5	Staryi Chortor	5.67	357	Pn	Pn	11 55 19.8	+0.9
RNPP8	Varash	5.78	357	Pn	Pn	11 55 21.3	+1.0
RNPP1	Kostyukhnivka	5.79	356	Pn	Pn	11 55 21.5	+1.0
RNPP9	Sopachiv	5.85	357	Pn	Pn	11 55 22.4	+1.1
SUDU	Sudak	6.15	93	*e*P	Pn	11 55 27.0	+1.7
SUDU				pmax	pmax	11 55 28.5	
SUDU				*e*S	Sn	11 56 35.1	+0.2
SUDU				smax	smax	11 56 37.8	
BR105	Keskin Array S	7.93	135	Pn	Pn	11 55 50.3	+1.1
BRTR	Keskin Array B	7.94	135	P	Pn	11 55 51.2	+2.0
	0.3nm,0.4s,baz=317,slow=7.9,SNR=2.4						
FINES	FINESS Array B	15.90	360	P	Pn	11 57 30.9	-0.4
	2.7nm,0.9s,baz=180,slow=11,SNR=4.4						
HFS	Hagfors	16.41	337	P	Pn	11 57 36.1	-1.4
	4.6nm,1.5s,baz=146,slow=10,SNR=2.5						
NOA	NORSAR Array B	17.86	336	P	P	11 57 52.2	-1.1
	0.4nm,0.6s,baz=154,slow=9.1,SNR=1.7						
EKA	Eskdalemuir Ar	21.02	308	P	P	11 58 26.8	-0.5
	0.8nm,0.7s,baz=98,slow=9.3,SNR=1.8						
	0.8nm,0.7s						
ESDC	Sonseca Array	22.98	266	P	P	11 58 48.5	+1.4
	0.7nm,0.9s,baz=58,slow=11,SNR=1.5						
	0.7nm,0.9s						
TORD	Torodi Ar. Bea	38.49	221	P	P	12 01 02.3	-0.8
	1.1nm,0.5s,baz=20,slow=7.7,SNR=4.5						

*NOU **10** 11:57:37.1, 30°.20S×177°.29W, h18km, mb4.7/27, Kermadec Islands, New Zealand*
*IDC **10** 11:57:43.4±1.1, 29°.97S×177°.95W, h49km±9km, mb4.0/14, mbtmp4.3/16, ML4.1/2, MS3.9/19, Error ellipse: s-maj=18.7km s-min=13.7km az=109.0*
*NEIC **10** 11:57:45.3±2.0, 29°.82S±0°.10×178°.0W±0°.2, h56km±7km, mb4.8/25, Error ellipse: s-maj=20.6km s-min=13.8km az=93.0*

ISC 10 11:57:43.0±0.4, 30°.12S±0°.04×177°.88W±0°.07, h50km, n157, σ1s98/134, mb4.7/34, MS3.9/19, 6C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	0.85	358	P	Pn	11 57 57.5	-1.3
GLKZ				S	Sn	11 58 07.8	-2.5
RAO	Raoul Island	0.86	358	P	Pn	11 57 57.7	-1.2
RAO	Raoul Island	0.86	358	P	Pn	11 57 58.0	-1.0
	12μm,0.2s,baz=150,slow=20,SNR=237						
RAO				S	Sn	11 58 08.8	-1.7
	38μm,0.3s,baz=197,slow=19,SNR=25						
RAO	Raoul Island	0.86	358	P	Pn	11 57 57.7	-1.2
WMGZ	Waiomatatini S	8.27	201	P	Pn	11 59 37.9	-2.4
WMGZ				S	Sn	12 01 11.8	-0.6
PKGZ	Pakihiroa	8.42	202	P	Pn	11 59 39.2	-3.2
PKGZ				S	Sn	12 01 14.7	-1.4
HAZ	Te Kaha	8.43	204	P	Pn	11 59 39.9	-2.5
PUZ	Puketiti	8.55	201	P	Pn	11 59 40.4	-3.8
PUZ				S	Sn	12 01 15.8	-3.5
RUGZ	Raukumara Rang	8.65	204	P	Pn	11 59 43.2	-2.4
RUGZ				S	Sn	12 01 20.3	-1.5
WCZ	Waipu Caves	8.73	226	P	Pn	11 59 54.4	+7.8
TWGZ	Tauwhareparae	8.74	202	P	Pn	11 59 43.3	-3.4
TWGZ				S	Sn	12 01 22.6	-1.2
OUZ	Omahuta	8.80	232	P	Pn	11 59 55.0	+7.4
CNGZ	Carnagh Statio	8.95	200	P	Pn	11 59 46.3	-3.3
TKGZ	Te Karaka	9.02	202	P	Pn	11 59 48.4	-2.1
MWZ	Matawai	9.03	204	P	Pn	11 59 46.5	-4.3
MWZ				S	Sn	12 01 29.1	-2.0
URZ	Urewera	9.12	206	P	Pn	11 59 48.0	-3.8
	20nm,0.9s,baz=0.0,slow=2.0,SNR=12						
URZ				S	Sn	12 01 30.4	-2.6
	60nm,0.7s,baz=38,slow=19,SNR=16						
URZ	Urewera	9.12	206	P	Pn	11 59 48.3	-3.5
URZ	Urewera	9.12	206	P	Pn	11 59 48.3	-3.5
URZ				S	Sn	12 01 31.0	-2.0
RIGZ	Rimuhau	9.29	202	P	Pn	11 59 50.5	-3.8
SNGZ	Shannon Statio	9.50	203	P	Pn	11 59 54.6	-2.5
KNZ	Kokohu	9.61	201	P	Pn	11 59 53.6	-4.9
NMHZ	Naumai	9.97	205	P	Pn	12 00 00.2	-3.4
BKZ	Black Stump Fm	10.14	206	P	Pn	12 00 03.9	-2.1
HIZ	Hauiti	10.30	214	P	Pn	12 00 07.5	-0.6
HIZ	Hauiti	10.30	214	P	Pn	12 00 09.7	+1.6
MCHZ	McNeill Hill	10.31	204	P	Pn	12 00 04.8	-3.4
KWHZ	Kaweka Forest	10.39	205	P	Pn	12 00 04.7	-4.8
SNVZ	South Ngauruho	10.50	209	P	Pn	12 00 07.4	-3.5
BFZ	Birch Farm	11.57	203	P	Pn	12 00 22.5	-3.0
SNZO	South Karori	12.68	206	P	Pn	12 00 38.8	-1.7
MSVF	Nonsavu	12.88	342	P	Pn	12 00 42.4	-1.0
NIUE	Niue	13.15	35	P	Pn	12 00 40.3	-6.9
QRZ	Quartz Range	13.22	214	P	Pn	12 00 47.3	-0.7
CTZ	Chatham Island	13.63	176	P	Pn	12 00 48.6	-4.9
CTZ	Chatham Island	13.63	176	P	Pn	12 00 51.8	-1.7
MARNC	Mare, Loyalty	15.32	301	P	P	12 01 18.6	-1.3
YATNC	Mamie plateau,	15.85	297	P	P	12 01 25.7	-0.1
RPZ	Rata Peaks	16.18	210	P	P	12 01 27.5	-1.9
	2.3nm,0.3s,baz=63,slow=18,SNR=6.4						
RPZ				S	Sn	12 04 09.1	-16
	7.9nm,0.7s,baz=25,slow=14,SNR=1.5						
	8.9nm,0.5s						
RPZ	Rata Peaks	16.18	210	P	P	12 01 27.2	-2.1
DZM	Mont Dzumac	16.19	296	P	P	12 01 34.0	+4.3
	9.6nm,1.0s,baz=121,slow=18,SNR=4.5						
DZM				LR	LR	12 06 23.2	
	comp=Z,591nm,20.9s,baz=145,slow=32						
ODZ	Otahua Downs	17.43	208	P	Pn	12 01 40.9	-1.5
JCZ	Jackson Bay	17.49	214	P	Pn	12 01 42.3	-1.0
RAR	Rarotonga	18.56	66	P	Pn	12 01 56.1	-0.3
	1.6nm,0.3s,baz=248,slow=5.4,SNR=6.6						
RAR				S	Sn	12 05 01.6	-21
	21nm,0.8s,baz=189,slow=19,SNR=2.2						
	48nm,1.2s						
FUNA	Funafuti	21.66	352	P	P	12 02 25.7	-3.7
FUNA				IAmb	IAmb	12 02 37.5	
	comp=Z,103nm,1.5s						
ARMA	Armidale	26.30	262	P	P	12 03 18.0	+3.9
SYDH	Sydney Hard Ro	26.82	254	P	P	12 03 22.5	+3.9
EIDS	Eidsvold	27.83	272	P	P	12 03 28.6	+0.9
CNB	Canberra Magne	27.96	251	P	P	12 03 32.2	+3.2
CAN	Canberra	28.26	251	P	P	12 03 32.8	+1.2
CAN				IAmb	IAmb	12 03 54.9	
	comp=Z,17nm,1.0s						
CAN	Canberra	28.26	251	P	P	12 03 34.3	+2.7
PPT2	Papeete2	28.65	71	*e*LR	LR	12 10 41.0	
	comp=Z,605nm,27.0s						
PPT2				*e*LR	LR	12 10 48.5	
	comp=Z,434nm,29.2s						
PPT	Papeete	28.66	71	LR	LR	12 12 00.5	
	comp=Z,115nm,21.3s,baz=250,slow=30						
HNR	Honiara	29.20	310	LR	LR	12 13 17.8	
	comp=Z,173nm,19.1s,baz=176,slow=32						
TOO	Toolangi	31.17	246	P	P	12 03 58.8	+1.5
CMSA	Cobar Meteorol	31.23	258	P	P	12 04 00.5	+2.7
QLP	Quilpie	33.43	267	P	P	12 04 19.0	+1.9
CTA	Charters Tower	33.86	279	LR	LR	12 16 51.0	
	comp=Z,7.9nm,18.0s,baz=80,slow=34						
STKA	Stephens Creek	34.64	257	P	P	12 04 28.8	+1.2
	comp=Z,10nm,0.5s,baz=96,slow=

	comp=Z,13nm,1.0s							
QSPA	**South Pole Qui**	**59.99**	**180**	P		P	12 07 49.5	+5.3
	comp=Z,5.4nm,0.6s,baz=52,slow=1.6,SNR=19							
QSPA	**South Pole Qui**	**59.99**	**180**	P		P	12 07 50.3	+6.1
EDFI	**Ende, Flores**	**60.12**	**277**	P		**P**	**12 07 44.4**	**-1.4**
	comp=Z,6.2nm,0.8s							
KAPI	**Kappang**	**63.66**	**280**	LR		LR	12 37 27.9	
	comp=Z,56nm,18.1s,baz=92,slow=38							
MAW	**Mawson**	**72.61**	**201**	P		**P**	**12 09 05.7**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=139,slow=9.3,SNR=7.4							
	comp=Z,2.9nm,0.7s							
MDSI	**Maura Dua**	**77.33**	**272**	P		**P**	**12 09 30.4**	**-2.5**
SYO	**Syowa Base**	**77.41**	**193**⇑*eP*			**P**	**12 09 33.0**	**+0.7**
JGF	**Kuroka**	**77.76**	**324**	P		**P**	**12 09 34.8**	**+0.1**
JGF				IAmb		IAmb	12 10 08.0	
	comp=Z,16nm,1.4s							
MJAR	**Matsushiro Arr**	**78.07**	**325**	P		**P**	**12 09 35.8**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=148,slow=5.9,SNR=2.8							
	comp=Z,1.3nm,0.7s							
TROLL	**Troll, Antarti**	**78.15**	**180**	⇑P		**P**	**12 09 37.7**	**+1.1**
	comp=Z,529nm,1.0s							
SNAA	**Sanae**	**78.43**	**178**	⇑P		**P**	**12 09 38.8**	**+0.7**
	comp=Z,44nm,0.4s							
SNAA	**Sanae**	**78.43**	**178**	P		**P**	**12 09 38.6**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=189,slow=7.1,SNR=14							
	comp=Z,1.0nm,0.4s							
VNA3	**Neumayer Olymp**	**78.58**	**176**	⇑P		**P**	**12 09 39.3**	**+0.5**
	comp=Z,11nm,0.7s							
VNA2	**Neumayer--Watz**	**79.01**	**177**	⇑P		**P**	**12 09 42.2**	**+1.0**
	comp=Z,2.6nm,0.3s,baz=148,slow=6.2							
VNA1	**Neumayer--Stat**	**79.24**	**176**	⇑P		**P**	**12 09 42.8**	**+0.3**
	comp=Z,5.1nm,0.6s							
H03S2	**Juan Fernandez**	**80.53**	**124**	T		T	13 39 20.2	
	baz=239,slow=74,SNR=188							
H03S1	**Juan Fernandez**	**80.55**	**124**	T		T	13 39 21.5	
	baz=239,slow=74,SNR=187							
H03S3	**Juan Fernandez**	**80.55**	**124**	T		T	13 39 20.4	
	baz=239,slow=74,SNR=181							
H03N3	**Juan Fernandez**	**80.72**	**123**	T		T	13 39 34.0	
	baz=236,slow=73							
H03N2	**Juan Fernandez**	**80.73**	**123**	T		T	13 39 18.4	
	baz=236,slow=73,SNR=35							
H03N1	**Juan Fernandez**	**80.74**	**123**	T		T	13 39 19.4	
	baz=236,slow=73							
JKA	**Kamikawa-asahi**	**82.24**	**332**	P		**P**	**12 09 59.6**	**+0.9**
ASAJ	**Asahikawa**	**82.24**	**332**	LR		LR	12 42 06.9	
	comp=Z,48nm,19.0s,baz=184,slow=32							
PLCA	**Paso Flores**	**82.62**	**133**	P		**P**	**12 10 00.5**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=223,slow=19,SNR=2.4							
	comp=Z,1.1nm,0.8s							
SHEM	**Shemya Is, Ala**	**82.79**	**355**	LR		LR	12 41 32.8	
	comp=Z,36nm,20.0s,baz=324,slow=32							
UNV	**Unalaska Valle**	**84.19**	**7**	P		**P**	**12 10 07.7**	**-0.7**
KSRS	**Korea Array**	**84.20**	**320**	P		**P**	**12 10 07.1**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=140,slow=5.5,SNR=4.4							
	comp=Z,0.8nm,0.7s							
PSI	**Prapat**	**85.51**	**276**	LR		LR	12 52 28.6	
	comp=Z,147nm,18.4s,baz=181,slow=38							
PEA0B	**Petropavlovsk-**	**85.57**	**346**	P		**P**	**12 10 16.9**	**+1.5**
PETK	**Petropavlovsk-**	**85.57**	**346**	P		**P**	**12 10 16.8**	**+1.4**
PETK	**Petropavlovsk-**	**85.57**	**346**	P		**P**	**12 10 16.5**	**+1.1**
	comp=Z,3.5nm,0.6s,baz=158,slow=5.2,SNR=15							
	comp=Z,3.5nm,0.6s							
BO02	**Sierra Bellavi**	**85.76**	**128**	P		**P**	**12 10 18.4**	**+1.2**
BO02				IAmb		IAmb	12 10 33.5	
	comp=Z,14nm,1.2s							
MT02	**Curacav**	**86.37**	**126**	P		**P**	**12 10 20.5**	**+0.4**
S12K	**Black Hills**	**86.54**	**9**	P		**P**	**12 10 19.8**	**-0.4**
QSM	**Queen of Sheba**	**87.21**	**45**	P		**P**	**12 10 24.4**	**+0.5**
QSM				IAmb		IAmb	12 10 46.7	
	comp=Z,4.6nm,1.1s							
NVAR	**Mina Array Bea**	**87.96**	**43**	P		**P**	**12 10 28.7**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=248,slow=5.0,SNR=6.9							
	comp=Z,0.5nm,0.7s							
KDAK	**Kodiak Island**	**90.11**	**13**	LR		LR	12 42 45.5	
	comp=Z,42nm,21.8s,baz=92,slow=30							
N15K	**Kwethluk River**	**91.14**	**9**	P		**P**	**12 10 42.5**	**+0.7**
TXAR	**Lajitas Array**	**92.15**	**57**	P		**P**	**12 10 48.5**	**+1.1**
	comp=Z,0.3nm,0.9s,baz=249,slow=5.1,SNR=1.9							
	comp=Z,0.3nm,0.9s							
MA2	**Magadan**	**93.05**	**345**	LR		LR	12 46 57.5	
	comp=Z,65nm,20.2s,baz=124,slow=32							
CMAR	**Chiang Mai Arr**	**93.41**	**289**	P		**P**	**12 10 53.9**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=120,slow=5.8,SNR=4.7							
	comp=Z,0.5nm,0.3s							
SEY	**Seymchan**	**95.73**	**347**	LR		LR	12 52 56.9	
	comp=Z,42nm,18.0s,baz=138,slow=35							
ILAR	**Eielson Array**	**97.63**	**13**	P		**P**	**12 11 10.9**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=212,slow=5.7,SNR=5.0							
	comp=Z,0.3nm,0.8s							
MKAR	**Makanchi Array**	**117.67**	**310**	PKP		**PKPdf**	**12 16 21.9**	**-1.4**
	comp=Z,3.7nm,7.5s,baz=85,slow=1.7,SNR=8.9							
ZALV	**Zalesovo Beam**	**117.89**	**318**	PKP		**PKPdf**	**12 16 22.4**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=98,slow=4.4,SNR=2.7							
KURBB	**Kurchatov Arra**	**120.97**	**314**	PKP		**PKPdf**	**12 16 28.4**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=98,slow=1.9,SNR=11							
BVAR	**Borovoye Array**	**126.28**	**316**	PKP		**PKiKP**	**12 16 39.6**	**-0.4**
	comp=Z,2.0nm,0.4s,baz=90,slow=1.4,SNR=11							
SPITS	**Spitsbergen Ar**	**131.43**	**356**	PKP		**PKiKP**	**12 16 49.2**	**-0.5**
	comp=Z,9.5nm,1.0s,baz=56,slow=3.6,SNR=1.8							
ARCES	**ARCESS Array B**	**138.34**	**348**	PKiKP		PKPpre	12 16 53.3	
	comp=Z,0.5nm,0.4s,baz=26,slow=1.8,SNR=9.1							
FINES	**FINESS Array B**	**144.92**	**340**	PKP		**PKPbc**	**12 17 12.3**	**-0.7**
	comp=Z,11nm,0.5s,baz=46,slow=4.0,SNR=133							
KBZ	**Khabaz**	**145.04**	**304**	PKP		**PKPdf**	**12 17 14.9**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=63,slow=2.3,SNR=4.6							
NB2	**NORSAR Subarra**	**148.49**	**352**	PKP		**PKPbc**	**12 17 23.0**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=16,slow=4.3							
NOA	**NORSAR Array B**	**148.49**	**352**	PKPbc		**PKPbc**	**12 17 23.2**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=15,slow=2.8,SNR=13							
HFS	**Hagfors**	**148.99**	**349**	PKPbc		**PKPbc**	**12 17 24.2**	**-0.5**
	comp=Z,5.2nm,0.7s,baz=27,slow=1.6,SNR=17							
AKASG	**Malin Array Be**	**151.14**	**323**	PKPbc		**PKPbc**	**12 17 29.5**	**-0.7**
	comp=Z,3.0nm,0.4s,baz=49,slow=3.6,SNR=18							
MMAI	**Mount Meron Ar**	**151.56**	**284**	PKPbc		**PKiKP**	**12 17 32.6**	**+0.3**
	comp=Z,4.2nm,0.5s,baz=64,slow=4.0,SNR=6.1							
BRTR	**Keskin Array B**	**152.56**	**299**	PKPbc		**PKiKP**	**12 17 34.1**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=86,slow=1.9,SNR=10.0							
EKA	**Eskdalemuir Ar**	**154.52**	**7**	PKPbc		**PKiKP**	**12 17 39.9**	**+2.3**
	comp=Z,1.0nm,0.8s,baz=356,slow=2.2,SNR=1.3							
EKA				PKPab		**PKPab**	**12 17 52.1**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=349,slow=3.1,SNR=5.4							
GERES	**GERESS Array B**	**159.32**	**338**	PKPab		**PKPab**	**12 18 09.3**	**-3.9**
	comp=Z,0.3nm,0.4s,baz=25,slow=5.3,SNR=2.2							
TORD	**Torodi Ar. Bea**	**163.11**	**179**	PKPab		**PKPab**	**12 18 31.3**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=178,slow=2.0,SNR=5.2							

IDC 10 12:03:15.0±260.0, 56°89N×42°47E, h0km, Error ellipse: s-maj=108.3km s-min=76.0km az=91.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**2.89**	**269**	I	I	12 20 40.0	
	baz=87,slow=317,SNR=3.1						
I31KZ	**AKTYUBINSK INF**	**11.27**	**119**	I	I	13 15 00.0	
	baz=319,slow=327,SNR=0.7						
I46RU	**ZALESOVO INFRA**	**23.93**	**79**	I	I	14 28 30.0	
	baz=292,slow=333,SNR=1.7						

*SOME **10** 12:18:51.6,41.10N×70.62E,h5km*
*NNC **10** 12:18:52.3±2.7,41.16N×70.64E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=21.4km s-min=8.3km az=23.0*
*KRNET **10** 12:18:52.2±0.1,41.18N×70.61E,h14km,mb2.9*
*ISU **10** 12:18:53,41.16N×70.54E,h15km*
ISC 10 12:18:50.8±0.8, 41°23N±0.02×70°58E±0.02, h10km, n31, σ1§89/54, 18C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHDK	**Chadak**	**0.29**	**154**	P	**Pg**	**12 18 55.7**	**-1.0**
CHDK				S	**Sg**	**12 18 59.1**	**-1.5**
TRKS	**Terek-Say**	**0.51**	**55**⇓*iP*		**Pb**	**12 19 02.0**	**-0.1**
TRKS				⇓*iS*	**Sb**	**12 19 09.4**	**-0.3**
CHMG	**Chimgan**	**0.54**	**307**	P	**Pg**	**12 19 00.6**	**-0.7**
CHMG				S	**Sg**	**12 19 07.7**	**-0.7**
CHRV	**Charvak**	**0.63**	**311**	P	**Pg**	**12 19 02.0**	**-1.0**
CHRV				S	**Sg**	**12 19 10.8**	**-0.4**
TVKS	**Tavaksay**	**0.78**	**296**	P	**Pg**	**12 19 05.4**	**-0.5**
TVKS				S	**Sg**	**12 19 15.7**	**-0.3**
TGS	**TashGRES**	**0.82**	**284**	S	**Sn**	**12 19 27.3**	**+6.6**
IUG	**luzhnay**	**1.00**	**336**	P	**Pn**	**12 19 13.4**	**+2.3**
	79nm,0.3s						
IUG				S	**Sn**	**12 19 29.9**	**+4.5**
	222nm,0.2s						

ARK	**Arkit**	**1.18**	**61**⇑*iP*			**Pg**	**12 19 14.9**	**+1.4**
ARK				⇑*iS*		**Sn**	**12 19 31.4**	**+1.6**
FRG	**Fergana**	**1.25**	**133**	S		**Sn**	**12 19 36.6**	**+5.2**
TSTA	**Tashata**	**1.58**	**114**	P		**Pg**	**12 19 22.9**	**+1.8**
ARSB	**Arslanbob**	**1.81**	**86**⇑*eP*			**Pg**	**12 19 25.8**	**+0.2**
ARSB				⇑*eS*		**Sg**	**12 19 49.7**	**+0.6**
OHH	**Osh**	**1.81**	**112**⇑*eP*			**Pg**	**12 19 24.7**	**-0.9**
OHH				⇑*eS*		**Sg**	**12 19 49.7**	**+0.5**
KK31	**Karatay Array**	**1.87**	**358**	⇓Pg		**Pg**	**12 19 27.0**	**+0.3**
	6.4nm,0.2s,baz=187,slow=17,SNR=54							
KK31				Lg		Lg	12 19 51.9	
	23nm,0.2s,baz=185,slow=30,SNR=17							
BRLS	**Borolday**	**1.88**	**343**	P		**Pn**	**12 19 23.4**	**+0.3**
	3.3nm,0.2s							
BRLS				S		**Sn**	**12 19 46.6**	**-0.3**
	51nm,0.3s							
BRLS	**Borolday**	**1.88**	**343**	*eP*		**Pn**	**12 19 23.4**	**+0.3**
	3.3nm,0.2s							
BRLS				*eS*		**Sn**	**12 19 46.6**	**-0.3**
	51nm,0.3s							
DRK	**Karamyk**	**1.98**	**152**⇑*iP*			**Pg**	**12 19 28.0**	**-0.9**
DRK				⇑*iS*		**Sg**	**12 19 54.3**	**-0.3**
GAR	**Garm**	**2.24**	**185**⇑*iP*			**Pg**	**12 19 32.0**	**-1.8**
GAR				⇑*iS*		**Sg**	**12 20 00.9**	**-1.9**
SALK	**Salom-Alik**	**2.47**	**97**⇓*iP*			**Pb**	**12 19 35.4**	**-0.1**
SALK				⇓*iS*		**Sb**	**12 20 06.8**	**+0.7**
MRKS	**Merke**	**2.48**	**52**	Pg		**Pg**	**12 19 37.9**	**-0.6**
	6.5nm,0.4s							
MRKS				Lg		Lg	12 20 11.3	
	47nm,0.5s							
MRKS	**Merke**	**2.48**	**52**	*eP*		**Pg**	**12 19 37.9**	**-0.6**
	6.5nm,0.4s							
MRKS				*eS*		**Sg**	**12 20 11.3**	**+0.6**
	47nm,0.5s							
SFK	**Sufi-Kurgan**	**2.54**	**118**⇓*iP*			**Pb**	**12 19 36.2**	**-0.4**
SFK				⇓*iS*		**Sb**	**12 20 08.0**	**+0.1**
EKS2	**Erkin-Say**	**2.78**	**58**⇑*iP*			**Pb**	**12 19 40.1**	**-0.6**
EKS2				⇑*iS*		**Sb**	**12 20 15.1**	**+0.3**
CHGR	**Chuyangaron**	**2.80**	**204**⇑*iP*			**Pb**	**12 19 39.7**	**-1.2**
CHGR				⇑*iS*		**Sb**	**12 20 14.4**	**-0.9**
ARLS	**Aral**	**2.88**	**76**⇑*eP*			**Pb**	**12 19 41.3**	**-1.1**
ARLS				⇑*iS*		**Sb**	**12 20 17.1**	**-0.6**
UCH	**Uchtor**	**3.11**	**70**⇓*iP*			**Pb**	**12 19 44.8**	**-1.6**
UCH				⇓*iS*		**Sb**	**12 20 23.1**	**-1.4**
AAK	**Ala-Archa**	**3.24**	**63**	⇓Pg		**Pg**	**12 19 52.9**	**0.0**
	0.2nm,0.2s							
AAK				⇓Lg		Lg	12 20 36.3	
	0.8nm,0.3s							
AAK	**Ala-Archa**	**3.24**	**63**⇓*eP*			**Pb**	**12 19 46.5**	**-2.0**
AAK				⇓*iS*		**Sb**	**12 20 26.2**	**-1.9**
CHMS	**Chumysh**	**3.57**	**59**⇑*iP*			**Pb**	**12 19 50.9**	**-3.2**
CHMS				⇑*iS*		**Sb**	**12 20 33.8**	**-3.6**
DGS	**Degeres**	**4.34**	**61**	Pg		**Pg**	**12 20 11.2**	**-2.9**
	1.2nm,0.4s							
DGS				Lg		Lg	12 21 08.4	
	5.7nm,0.5s							
KST	**Kastek**	**4.39**	**64**	Pg		**Pg**	**12 20 12.4**	**-2.5**
	1.0nm,0.5s							
KST				Lg		Lg	12 21 10.8	
	7.6nm,0.8s							
KST	**Kastek**	**4.39**	**64**	*eP*		**Pg**	**12 20 12.4**	**-2.5**
	1.0nm,0.5s							
KST				*eS*		**Sg**	**12 21 10.8**	**-1.0**
	7.6nm,0.8s							

*IDC **10** 12:47:50.1±0.7,2.82S×129.30E, h0km,mb3.9/12, mbtmp4.0/16,ML4.0/4,MS3.2/4, Error ellipse: s-maj=32.5km s-min=14.2km az=76.0*
*DJA **10** 12:47:55.0±0.2,3.5S×12.9E±*, h10km,M4.4/16,mB5.0/2, mb4.6/13,MLv4.3/16,Mw(mB)4.4/2*
*NEIC **10** 12:47:57.5±1.2,3.15S±0.08×128.84E±0.08, h37km±5km, mb4.3/12, Error ellipse: s-maj=13.8km s-min=8.8km az=46.0*
ISC 10 12:47:56.0±0.5, 3.06S±0.05×128.87E±0.04, h33km, n65, σ1§68/68, mb4.0/15, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.29**	**168**	P	**Pb**	**12 48 02.9**	**-0.7**
MSAI				S	**Sb**	**12 48 08.5**	**-0.3**
AAI	**Ambon**	**0.92**	**227**	P	**Pb**	**12 48 13.2**	**-0.2**
NLAI	**Namlea**	**1.77**	**264**	P	**Pb**	**12 48 27.2**	**-0.7**
BNDI	**Bandanaira**	**1.78**	**145**	P	**Pb**	**12 48 26.4**	**-1.6**
SANI	**Sanana**	**3.05**	**289**	P	**Pn**	**12 48 41.6**	**-0.3**
SANI				S	**Sn**	**12 49 16.1**	**-1.2**
SWI	**Sorong**	**3.24**	**48**	P	**Pn**	**12 48 46.4**	**+1.9**
SWI				S	**Sn**	**12 49 23.9**	**+1.9**
FAKI	**Fak Fak**	**3.38**	**88**		**Pn**	**12 48 42.2**	**+1.7**
FAKI	**Fak Fak**	**3.38**	**88**	P	**Pn**	**12 48 43.1**	**+1.8**
FAKI	**Fak Fak**	**3.38**	**88**	S	**Sn**	**12 49 27.1**	**+1.6**
FAKI	**Fak Fak**	**3.38**	**88**	P	**Pn**	**12 48 48.2**	**+1.7**
TNTI	**Ternate**	**4.09**	**338**	Pn	**Pn**	**12 48 57.8**	**+1.5**
SAUI	**Saumlaki**	**5.45**	**154**	Pn	**Pn**	**12 49 15.5**	**+0.5**
RKPI	**Ransiki, Papua**	**5.52**	**74**	P	**Pn**	**12 49 17.2**	**+1.2**
KMSI	**Cibinong**	**6.08**	**306**	P	**Pn**	**12 49 23.5**	**0.0**
LUWI	**Luwuk**	**6.41**	**288**		**Pn**	**12 49 29.1**	**+0.9**
LUWI	**Luwuk**	**6.41**	**288**	P	**Pn**	**12 49 31.3**	**+3.1**
LUWI	**Luwuk**	**6.41**	**288**	S	**Sn**	**12 50 43.5**	**+3.2**
LUWI	**Luwuk**	**6.41**	**288**	P	**Pn**	**12 49 29.3**	**+1.1**
	0.2nm69nm,0.8s						
APSI	**Ampana**	**7.52**	**286**	P	**Pn**	**12 49 45.6**	**+2.1**
	0.3nm70nm,0.9s						
MRSI	**Marisa**	**7.77**	**297**	P	**Pn**	**12 49 47.5**	**+0.7**
	0.2nm32nm,1.0s						
BATI	**Baumata**	**8.78**	**216**	Pn	**Pn**	**12 50 04.5**	**+3.8**
	4.3nm,0.3s,baz=315,slow=1.4,SNR=2.1						
BATI				LR	LR	12 53 42.5	
	comp=Z,238nm,20.5s,baz=243,slow=38						
	14nm,0.4s						
BNSI	**Bone**	**8.84**	**261**	P	**Pn**	**12 50 04.4**	**+2.8**
	20nm,0.7s						
BSSI	**Bau Bau, Buton**	**8.89**	**250**	P	**Pn**	**12 50 04.1**	**+1.8**
	57nm,0.7s						
BKSI	**Bulukumba**	**9.01**	**255**	P	**Pn**	**12 50 06.1**	**+2.3**
	457nm29nm,0.9s						
TOLI2	**Tolitoli**	**9.08**	**297**	Pn	**Pn**	**12 50 06.2**	**+1.4**
EDFI	**Ende, Flores**	**9.10**	**231**	P	**Pn**	**12 50 08.1**	**+2.9**
	17nm,0.8s						
SPSI	**Sidrap Palu**	**9.13**	**264**	P	**Pn**	**12 50 05.9**	**+0.5**
	17nm,0.7s						
KAPI	**Kappang**	**9.30**	**258**	Pn	Pn	12 50 12.8	+5.0
	1.7nm,0.3s,baz=88,slow=8.6,SNR=18						
KAPI				LR	LR	12 54 51.2	
	comp=Z,69nm,18.6s,baz=47,slow=43						
	25nm,0.7s						
KAPI	**Kappang**	**9.30**	**258**	P	Pn	12 50 13.2	+5.4
MTN	**Manton Dam**	**9.97**	**167**		**Pn**	**12 50 16.0**	**-1.1**
KNRA	**Kununurra**	**12.54**	**180**	Pn	**Pn**	**12 50 51.6**	**-0.5**
MYLDM	**Lahad Datu**	**13.20**	**308**	Pn	**Pn**	**12 51 03.0**	**+1.7**
FITZ	**Fitzroy Crossi**	**15.27**	**192**	Pn	**Pn**	**12 51 27.1**	**-2.2**
FITZ	**Fitzroy Crossi**	**15.27**	**192**	Pn	**Pn**	**12 51 29.7**	**+0.4**
	0.4nm,0.3s,baz=19,slow=12,SNR=13						
	1.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.27**	**192**	P	**P**	**12 51 35.4**	**+1.6**
WRAB	**Tennant Creek**	**17.60**	**163**	P	**Pn**	**12 51 58.7**	**-0.2**
WRAB	**Tennant Creek**	**17.60**	**163**	P	**P**	**12 51 59.9**	**+0.3**
WRA	**Warramunga Arr**	**17.61**	**163**	P	**Pn**	**12 51 57.6**	**-1.3**
	0.3nm,0.3s,baz=333,slow=12,SNR=5.8						
	4.4nm,0.7s						
MBWA	**Marble Bar**	**20.07**	**206**	P	**P**	**12 52 25.8**	**-0.8**
MBWA				IAmb	IAmb	12 52 50.0	
	comp=Z,15nm,1.1s						
QIS	**Mount Isa**	**20.30**	**150**	P	**P**	**12 52 30.1**	**+0.9**
PSA00	**Pilbara Seismi**	**20.38**	**205**	P	**P**	**12 52 28.7**	**-1.4**
PSA00				IAmb	IAmb	12 52 30.2	
	comp=Z,10nm,0.6s						
AS31	**Alice Springs**	**21.05**	**167**		**P**	**12 52 37.4**	**0.0**
AS31				IAmb	IAmb	12 52 52.2	
	comp=Z,4.1nm,0.6s						
ASAR	**Alice Springs**	**21.05**	**167**	P	**P**	**12 52 37.3**	**-0.1**
	comp=Z,5.7nm,0.4s,baz=346,slow=11,SNR=164						
ASAR				S	**S**	**12 56 26.8**	**-3.4**
	comp=Z,2.5nm,0.8s,baz=349,slow=22,SNR=12						
ASAR				PcP	**PcP**	**12 56 43.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=343,slow=1.3,SNR=4.4						
ASAR				ScP	**ScP**	**13 00 20.1**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=338,slow=2.2,SNR=1.6						
ASAR				LR	LR	13 01 20.2	
	comp=Z,74nm,18.5s,baz=308,slow=38						
	comp=Z,5.7nm,0.4s						
AUALC	**St Philip's Co**	**21.07**	**167**	P	**P**	**12 52 38.4**	**+0.8**
INKA	**Innaminka**	**27.04**	**156**	P	**P**	**12 53 35.0**	**-0.3**
JOW	**Kunigami**	**29.73**	**359**	LR	LR	13 03 52.4	
	comp=Z,60nm,19.8s,baz=309,slow=33						
BBOO	**Buckleboo**	**30.35**	**168**	P	**P**	**12 54 04.5**	**-0.3**
RPSI	**Rantau Prapat**	**30.47**	**281**	P	**P**	**12 54 06.1**	**0.0**
RPSI				IAmb	IAmb	12 54 07.8	
	comp=Z,3.9nm,0.8s						
STKA	**Stephens Creek**	**31.07**	**159**	P	**P**	**12 54 09.9**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=326,slow=3.6,SNR=3.1						
	comp=Z,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**36.41**	**307**	P	**P**	**12 54 57.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=122,slow=8.6,SNR=5.0						
	comp=Z,0.3nm,0.3s						
MJAR	**Matsushiro Arr**	**40.35**	**12**	P	**P**	**12 55 27.4**	**-3.3**
	comp=Z,1.1nm,0.9s,baz=182,slow=9.5,SNR=2.4						
	comp=Z,1.1nm,0.9s						
HILR	**Hailar Array B**	**53.00**	**353**	P	**P**	**12 57 05.5**	**-4.1**
	comp=Z,0.9nm,0.4s,baz=164,slow=12,SNR=1.8						
	comp=Z,0.9nm,0.4s						
SONM	**Songino Array**	**54.37**	**342**	P	**P**	**12 57 18.4**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=147,slow=8.1,SNR=1.7						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**64.34**	**326**	P	**P**	**12 58 28.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=119,slow=8.4,SNR=8.6						
	comp=Z,0.8nm,0.7s						
MAKZ	**Makanchi**	**64.52**	**326**	P	**P**	**12 58 30.1**	**+0.4**
MAKZ				IAmb	IAmb	12 58 49.6	
	comp=Z,3.7nm,1.3s						
ZALV	**Zalesovo Beam**	**67.58**	**334**	P	**P**	**12 58 46.3**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=111,slow=11,SNR=2.2						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**68.59**	**328**	P	**P**	**12 58 55.6**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=129,slow=5.4,SNR=21						
	comp=Z,1.5nm,0.7s						
KKAR	**Karatay Array**	**69.66**	**318**	P	**P**	**12 59 01.9**	**-0.5**
BVAR	**Borovoye Array**	**74.15**	**328**	P	**P**	**12 59 29.5**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=120,slow=5.8,SNR=2.2						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**76.47**	**173**	P	**P**	**12 59 41.9**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=323,slow=7.4,SNR=3.6						
	comp=Z,0.4nm,0.5s						
L18K	**Granite Mounta**	**85.49**	**27**	P	**P**	**13 00 32.6**	**+2.2**
J18K	**Innoko River**	**85.81**	**26**	P	**P**	**13 00 33.6**	**+1.7**
QSPA	**South Pole Qui**	**86.89**	**180**	P	**P**	**13 00 38.9**	**+1.6**
QSPA				IAmb	IAmb	13 00 53.0	
	comp=Z,4.3nm,1.4s						
QSPA	**South Pole Qui**	**86.89**	**180**	P	**P**	**13 00 39.3**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=338,slow=2.6,SNR=10.0						
	comp=Z,1.5nm,0.8s						
CPUP	**Villa Florida**	**150.17**	**169**	PKPbc	**PKPbc**	**13 07 44.4**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=226,slow=5.9,SNR=3.5						

*IDC **10** 12:48:27.2±2.1,24.21N×36.55E, h0km,mb3.6/4, mbtmp3.6/6,ML3.3/1,MS3.1/4, Error ellipse: s-maj=47.3km s-min=26.1km az=157.0*
ISC 10 12:48:28.8±1.9, 24.3N±0.2×36.5E±0.2, h10km, n11, σ0§88/7, mb3.5/4, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**5.56**	**346**	LR	LR	12 52 10.1

*IDC **10** 13:12:48.4±1.3,27.°63N×111.°70W,h0km,mb3.7/3, mbtmp3.7/10,ML3.6/6,MS3.6/21,Error ellipse: s-maj=18.7km s-min=10.3km az=40.0*

*MEX **10** 13:12:50.9±1.4,27.°70N×111.°70W,h10km,MD4.4*

ISC 10 13:12:49.1±1.2,27.76N±0.03×111.73W±0.03,h3km±9km, n45,σ2s03/42,MS3.6/14,9C-6D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.64**	**226**	⇑*iP*	**Pg**	**13 13 01.6**	**+0.2**
SRIG				*eS*	**Sg**	**13 13 09.7**	**+0.1**
SRIG	**Santa Rosalia**	**0.64**	**226**	*eP*	**Pg**	**13 13 01.6**	**+0.2**
SRIG				*eS*	**Sg**	**13 13 10.1**	**+0.5**
GUYB	**Guaymas**	**0.77**	**80**	*eP*	**Pg**	**13 13 03.4**	**-0.5**
GUYB				*eS*	**Sg**	**13 13 13.1**	**-0.7**
GUYB				IAML		13 13 14.7	
	comp=N,5μm,0.3s						
GUYB				⇓*e*		13 13 14.7	
GUYB				IAML		13 13 15.0	
	comp=E,10μm,0.4s						
GUYB	**Guaymas**	**0.77**	**80**	*i* P	**Pg**	**13 13 03.6**	**-0.2**
GUYB				*i* S	**Sg**	**13 13 13.4**	**-0.4**
BKIRB	**Bahia Kino**	**1.11**	**347**	⇓*eP*	**Pg**	**13 13 09.1**	**-1.4**
SFQB	**San Francisqui**	**1.19**	**303**	⇓*eP*	**Pg**	**13 13 09.2**	**-2.7**
SFQB				*eS*	**Sg**	**13 13 24.4**	**-2.9**
SFQB				⇓*e*		13 13 29.9	
SFQB				IAML		13 13 29.9	
	comp=E,3μm,0.4s						
SFQB				IAML		13 13 32.1	
	comp=N,4μm,0.9s						
SNIRB	**San Nicol¡s**	**1.23**	**173**	⇓*iP*	**Pg**	**13 13 10.5**	**-2.1**
SNIRB				IAML		13 13 33.3	
	comp=N,2μm,0.6s						
SNIRB				*e*		13 13 33.3	
SNIRB				IAML		13 13 33.5	
	comp=E,2μm,0.5s						
SNIRB				⇑*e*		13 13 33.5	
HSIG		**1.43**	**28**	*eP*	**Pn**	**13 13 13.7**	**-2.2**
HSIG				IAML		13 13 35.6	
	comp=E,3μm,0.3s						
HSIG				*e*		13 13 35.6	
HSIG				⇑*e*		13 13 39.4	
HSIG				IAML		13 13 39.4	
	comp=N,2μm,0.6s						
HSIG		**1.43**	**28**	*eP*	**Pn**	**13 13 13.7**	**-2.2**
HSIG				*eS*	**Sn**	**13 13 34.5**	**-0.8**
NE77	**Loreto B.C.S**	**1.77**	**169**	*eP*	**Pn**	**13 13 18.7**	**-2.0**
NE77				⇓*e*		13 14 03.1	
BAHB	**Baha de los**	**2.00**	**306**	⇓*e*	**Sg**	**13 13 54.8**	**+1.4**
BAHB				IAML		13 13 54.8	
	comp=E,1μm,0.7s						
BAHB				⇑*e*		13 13 56.1	
BAHB				IAML		13 13 56.1	
	comp=N,889nm,0.8s						
BAHB	**Baha de los**	**2.00**	**306**	*eP*	Pn	13 13 10.4	-13
BAHB				*eS*	Sn	13 13 33.8	-16
NE74	**Guerrero Negro**	**2.04**	**277**	⇑*eP*	**Pn**	**13 13 22.7**	**-1.7**
UAGRB	**Rancho Ultima**	**2.23**	**169**	*eP*	**Pn**	**13 13 23.9**	**-3.1**
PLIB	**Puerto Liberta**	**2.31**	**339**	*eP*	**Pn**	**13 13 26.2**	**-1.9**
PLIB				*eS*	**Sn**	**13 13 53.2**	**-3.8**
PLIB				⇑*e*		13 14 16.4	
PLIB				IAML		13 14 16.4	
	comp=E,881nm,0.7s						
PLIB				⇑*e*		13 14 28.5	
PLIB				IAML		13 14 28.5	
	comp=N,618nm,0.9s						
LAPR	**La Primavera**	**2.78**	**349**	⇓*eP*	**Pn**	**13 13 33.7**	**-0.8**
CSIG	**Choix**	**3.13**	**107**	*eP*	**Pn**	**13 13 36.8**	**-2.6**
CSIG				*eS*	**Sn**	**13 14 12.8**	**-4.4**
NZIG	**Nacozari, Sono**	**3.22**	**36**	*eP*	**Pb**	**13 13 49.1**	**+2.0**
NZIG				*eS*	**Sg**	**13 14 31.8**	**-0.8**
TSIG	**Topolobambo**	**3.23**	**131**	*e*	**Pg**	**13 13 50.9**	**-0.2**
LPIG	**La Paz**	**3.86**	**160**	Pn	**Pn**	**13 13 47.9**	**-1.5**
	comp=N,10nm,0.3s,baz=279,slow=1.2,SNR=8.0						
LPIG				Lg	Lg	13 14 46.6	
	baz=174,slow=19						
LPIG				LR	LR	13 15 20.4	
	comp=N,415nm,18.3s,baz=260,slow=41						
	comp=N,25nm,0.5s						
SLBS	**Sierra La Lagu**	**4.37**	**158**	*eP*	**Pn**	**13 13 57.1**	**+0.6**
SLBS	**Sierra La Lagu**	**4.37**	**158**	*eP*	**Pn**	**13 13 56.4**	**-0.1**
MNTX	**Cornudas Mount**	**6.77**	**53**	*eP*	**Pn**	**13 14 28.3**	**-1.1**
MNTX				*eS*	**Sn**	**13 15 42.0**	**-5.0**
PFO	**Pinyon Flats O**	**7.11**	**326**	Pn	**Pn**	**13 14 36.2**	**+2.0**
	comp=N,0.1nm,0.3s,baz=125,slow=7.7,SNR=5.3						
PFO				Sn	**Sn**	**13 15 56.1**	**+0.4**
	comp=N,0.2nm,0.3s,baz=87,slow=5.9,SNR=3.6						
PFO				Lg	Lg	13 16 38.4	
	comp=N,0.2nm,0.3s,baz=133,slow=8.7,SNR=10						
PFO				LR	LR	13 17 12.5	
	comp=N,346nm,19.2s,baz=144,slow=36						
	comp=N,2.9nm,0.8s						
TXAR	**Lajitas Array**	**7.26**	**76**	Pn	**Pn**	**13 14 36.5**	**+0.2**
	comp=N,8.8nm,0.5s,baz=250,slow=13,SNR=240						
TXAR				Sn	**Sn**	**13 15 58.3**	**-1.0**
	comp=N,1.4nm,0.3s,baz=264,slow=15,SNR=1.6						
TXAR				Lg	Lg	13 16 35.7	
	comp=N,3.0nm,0.3s,baz=266,slow=31,SNR=7.4						
TXAR				LR	LR	13 17 35.4	
	comp=N,656nm,19.1s,baz=262,slow=40						
ANMO	**Albuquerque**	**8.46**	**31**	Pn	**Pn**	**13 14 55.0**	**+2.3**
	comp=N,0.2nm,0.3s,baz=304,slow=13,SNR=8.4						
ANMO				Lg	Lg	13 17 14.9	
	comp=N,2.3nm,0.3s,baz=193,slow=20,SNR=13						
ANMO				LR	LR	13 18 22.2	
	comp=N,126nm,18.1s,baz=293,slow=39						
	comp=N,1.1nm,0.5s						
NVAR	**Mina Array Bea**	**11.98**	**334**	Pn	**Pn**	**13 15 43.1**	**+2.2**
	comp=N,0.1nm,0.3s,baz=159,slow=16,SNR=8.7						
NVAR				Lg	Lg	13 19 12.8	
	baz=124,slow=16,SNR=2.1						
NVAR				LR	LR	13 20 30.6	
	comp=N,124nm,20.0s,baz=144,slow=38						
	comp=N,0.6nm,0.6s						
ELK	**Elko**	**13.27**	**348**	Pn	**Pn**	**13 16 01.1**	**+2.5**
	comp=N,0.3nm,0.3s,baz=164,slow=15,SNR=9.1						
ELK				Lg	Lg	13 19 54.3	
	comp=N,0.1nm,0.3s,baz=6.9,slow=3.5,SNR=5.3						
ELK				LR	LR	13 21 20.3	
	comp=N,260nm,18.9s,baz=180,slow=38						
	comp=N,0.6nm,0.3s						
PDAR	**Pinedale Array**	**15.07**	**6**	Pn	**P**	**13 16 30.6**	**+1.9**
	comp=N,0.1nm,0.3s,baz=178,slow=11,SNR=12						
PDAR				Lg	Lg	13 20 49.1	
	comp=N,0.1nm,0.3s,baz=175,slow=22,SNR=6.1						
	comp=N,1.3nm,0.7s						
YBH	**Yreka Blue Hor**	**16.58**	**330**	LR	LR	13 22 57.2	
	comp=N,15nm,19.6s,baz=245,slow=36						
CMIG	**Matias Romero**	**18.82**	**121**	LR	LR	13 23 33.7	
	comp=N,184nm,19.1s,baz=185,slow=34						
NEW	**Newport**	**20.89**	**350**	P	Pn	13 17 34.2	-0.8
	comp=N,2.9nm,0.8s,baz=168,slow=12,SNR=14						
NEW				LR	LR	13 26 17.7	
	comp=N,145nm,18.9s,baz=178,slow=38						
	comp=N,2.9nm,0.8s						
TKL	**Tuckaleechee C**	**24.99**	**65**	P	**P**	**13 18 14.3**	**+0.2**
	comp=N,5.3nm,0.8s,baz=221,slow=10,SNR=6.9						
TKL				LR	LR	13 29 02.2	
	comp=N,249nm,18.1s,baz=261,slow=39						
	comp=N,5.3nm,0.8s						
ULM	**Lac du Bonnet**	**25.50**	**24**	LR	LR	13 28 54.7	
	comp=N,224nm,18.1s,baz=214,slow=38						
BBB	**Bella Bella**	**27.31**	**338**	LR	LR	13 30 14.0	
	comp=N,166nm,19.9s,baz=179,slow=38						
JTS	**Las Juntas de**	**30.59**	**119**	LR	LR	13 31 48.8	
	comp=N,94nm,18.4s,baz=325,slow=37						
DLBC	**Dease Lake**	**33.21**	**342**	LR	LR	13 33 01.5	
	comp=N,194nm,18.5s,baz=64,slow=36						
YKA	**Yellowknife Ar**	**34.78**	**358**	LR	LR	13 36 26.0	
	comp=N,85nm,18.2s,baz=312,slow=41						
SDV	**Santo Domingo**	**43.02**	**108**	LR	LR	13 42 02.6	
	comp=N,36nm,18.7s,baz=275,slow=41						
ILAR	**Eielson Array**	**43.18**	**339**	P	**P**	**13 20 52.0**	**+1.0**
	comp=N,0.4nm,0.9s,baz=156,slow=6.5,SNR=9.0						
ILAR				LR	LR	13 37 32.8	
	comp=N,81nm,19.1s,baz=111,slow=34						
	comp=N,0.4nm,0.9s						
RPN	**Rapa Nui**	**54.62**	**177**	LR	LR	13 40 08.0	
	comp=N,42nm,21.6s,baz=9.5,slow=30						
MDP	**Montagnes des**	**60.37**	**101**	LR	LR	13 52 59.4	
	comp=N,37nm,18.2s,baz=77,slow=40						
VRAC	**Vranov**	**90.53**	**31**	LR	LR	14 08 36.6	
	comp=N,194nm,18.1s,baz=346,slow=37						
HNR	**Honiara**	**92.86**	**261**	LR	LR	14 00 43.5	
	comp=N,40nm,19.8s,baz=286,slow=31						
URZ	**Urewera**	**93.47**	**228**	LR	LR	14 00 06.1	
	comp=N,45nm,19.3s,baz=344,slow=30						

*AEIC **10** 13:25:42.2±1.1,53.°44N±0.°05×163.°57W±0.°07,h20km±7km, Error ellipse: s-maj=7.9km s-min=5.5km az=145.0*

NEIC 10 13:25:41.1±1.2,53.°45N±0.°05×163.°54W±0.°07,h10km±2km, ML2.8/16,ML2.7(AEIC),Error ellipse: s-maj=8.5km s-min=6.7km az=156.0,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLS	**Shishaldin Sou**	**1.29**	**348**		Pn	13 26 04.8	-0.5
SSLS					Sg	13 26 22.8	+0.1
WEBT	**Westdahl Beart**	**1.35**	**328**		Pn	13 26 05.5	-0.4
WEBT					Sg	13 26 24.6	+0.1
SSBA	**Shishaldin**	**1.37**	**346**		Pn	13 26 05.9	-0.4
SSBA					Sn	13 26 24.7	+0.2
ISNN	**Isanotski Nort**	**1.39**	**354**		Pb	13 26 07.0	-0.2
ISNN					Sg	13 26 26.7	+0.9
FALS	**False Pass**	**1.41**	**3**		Sn	13 26 25.0	-0.4
FALS	**False Pass**	**1.41**	**3**		Pn	13 26 06.2	-0.6
AKSA	**Akutan Strait**	**1.46**	**299**		Pn	13 26 06.9	-0.5
AKSA					Sn	13 26 25.4	-1.1
AKUT	**Akutan**	**1.49**	**298**		Pn	13 26 07.0	-0.9
AKUT				IAML		13 26 34.9	
	comp=E,99nm,0.9s						
AHB	**Akutan Harbor**	**1.51**	**297**		Pn	13 26 07.7	-0.5
AKBBA	**Akutan Broad B**	**1.56**	**296**		Pn	13 26 09.0	+0.1
ZRO	**Akutan Zero**	**1.59**	**295**		Sn	13 26 28.3	-1.5
LVA	**Lava Point**	**1.64**	**297**		Pn	13 26 09.6	-0.4
LVA	**Lava Point**	**1.64**	**297**	IAML		13 26 39.6	
	comp=E,93nm,0.7s						
UNV	**Unalaska Valle**	**1.81**	**284**	Pn	Pn	13 26 11.6	-0.7
DT1	**Dutton Round H**	**1.82**	**23**		Pn	13 26 11.8	-0.5
MNAT	**Makushin Natee**	**1.92**	**284**		Pn	13 26 13.0	-0.8
MSW	**Makushin Switc**	**1.99**	**285**		Pn	13 26 14.8	+0.1
MGOD	**Makushin Gods**	**2.02**	**281**		Pn	13 26 15.3	+0.2
HAG	**Hague Volcano**	**2.10**	**26**		Pn	13 26 16.8	+0.5
S12K	**Black Hills**	**2.42**	**20**	Pn	Pn	13 26 20.6	0.0
S12K				IAML		13 26 59.4	
	comp=E,51nm,1.1s						
S12K				IAML		13 26 59.8	
	comp=N,59nm,0.6s						
SDPT	**Sand Point**	**2.61**	**42**		Pn	13 26 23.6	+0.3
SDPT	**Sand Point**	**2.61**	**42**	IAML		13 27 17.8	
	comp=N,58nm,1.1s						
SDPT				IAML		13 27 25.3	
	comp=E,51nm,1.1s						
OKTU	**Okmok Mt. Tuli**	**2.70**	**270**		Pn	13 26 24.9	+0.4
CNBA	**Chernabura Isl**	**2.70**	**58**	Pn	Pn	13 26 24.4	-0.1
CNBA				IAML		13 27 46.5	
	comp=E,32nm,1.2s						
OKCE	**Okmok Cone E**	**2.77**	**271**		Pn	13 26 26.5	+1.0
NIKH	**Nikolski High**	**3.23**	**264**	Pn	Pn	13 26 31.8	-0.1
NIKH				IAML		13 27 31.0	
	comp=E,33nm,1.1s						
O15K	**Ungalikthiuk R**	**6.10**	**18**	Pn	Pn	13 27 11.7	+0.5
OHAK	**Old Harbor**	**6.96**	**53**	Pn	Pn	13 27 21.6	-1.3
N19K	**Bonanza Creek**	**8.86**	**30**	Pn	Pn	13 27 49.1	-0.1
SEW	**Seward**	**10.19**	**44**	Pn	Pn	13 28 07.0	-0.2
SUA	**Susitna One**	**10.56**	**35**	Pn	Pn	13 28 12.2	-0.2

*NEIC **10** 13:28:08.0±1.2,28.°54N±0.°08×104.°77E±0.°09,h10km±1km, mb4.6/28,Error ellipse: s-maj=14.0km s-min=13.2km az=267.0*

*IDC **10** 13:28:11.5±3.0,28.°52N×104.°81E,h43km±30km,mb3.6/10, mbtmp3.8/13,ML4.0/3,MS3.7/2,Error ellipse: s-maj=22.4km s-min=17.7km az=65.0*

ISC 10 13:28:08.8±0.5,28.52N±0.07×104.79E±0.07,h19km,n52, σ0s74/50,mb4.4/22,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	**Enshi**	**4.46**	**66**		**Pn**	**13 29 17.6**	**+2.2**
LZDM	**Lanzhou Array**	**7.47**	**353**	P	**Pn**	**13 29 58.0**	**+0.9**
	baz=186,slow=13						
	2.9nm,0.4s						
CHTO	**Chiang Mai**	**11.05**	**210**	Pn	**Pn**	**13 30 46.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**11.36**	**209**		**Pn**	**13 30 51.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**11.36**	**209**	P	**Pn**	**13 30 52.0**	**+1.8**
	0.2nm,0.3s,baz=14,slow=12,SNR=9.1						
	0.9nm,0.8s						
TPUB	**Ta-pu**	**15.17**	**106**	P	**P**	**13 31 45.9**	**-1.2**
TPUB				IAmb	IAmb	13 31 55.9	
	comp=Z,60nm,1.4s						
EVN	**Everest**	**15.85**	**272**	Pn	**Pn**	**13 31 51.8**	**+0.2**
SONM	**Songino Array**	**19.32**	**3**	P	**P**	**13 32 32.8**	**-0.1**
SONM	**Songino Array**	**19.32**	**3**	P	**P**	**13 32 33.0**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=5.6						
	comp=Z,0.5nm,0.4s						
JOW	**Kunigami**	**20.86**	**89**	P	**P**	**13 32 49.5**	**-0.3**
JOW				IAmb	IAmb	13 33 10.6	
	comp=Z,32nm,1.4s						
KS19	**Wonju Array Si**	**21.28**	**59**	P	**P**	**13 32 54.2**	**0.0**
KS19				IAmb	IAmb	13 33 24.6	
	comp=Z,51nm,1.4s						
KSRS	**Korea Array**	**21.31**	**59**	P	**P**	**13 32 54.4**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=241,slow=10,SNR=8.2						
	comp=Z,2.6nm,0.7s						
JNU	**Nakatsue**	**22.84**	**72**	P	**P**	**13 33 11.7**	**+0.7**
JNU				IAmb	IAmb	13 33 25.7	
	comp=Z,45nm,1.5s						
HILR	**Hailar Array B**	**23.92**	**25**	P	**P**	**13 33 21.8**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=196,slow=9.9,SNR=3.1						
	comp=Z,1.4nm,0.4s						
MKAR	**Makanchi Array**	**25.34**	**322**	P	**P**	**13 33 34.0**	**-0.5**
MKAR	**Makanchi Array**	**25.34**	**322**	P	**P**	**13 33 34.3**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=125,slow=11,SNR=9.9						
	comp=Z,1.8nm,0.7s						
JMN	**Monobe**	**25.39**	**71**	P	**P**	**13 33 35.1**	**0.0**
JMN				IAmb	IAmb	13 33 37.9	
	comp=Z,14nm,0.9s						
MAKZ	**Makanchi**	**25.52**	**322**	P	**P**	**13 33 36.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**26.75**	**47**	P	**P**	**13 33 46.9**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=257,slow=12,SNR=7.6						
	comp=Z,3.4nm,0.6s						
ZALV	**Zalesovo Beam**	**29.30**	**336**	P	**P**	**13 34 09.8**	**-0.1**
ZALV	**Zalesovo Beam**	**29.30**	**336**	P	**P**	**13 34 09.7**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=124,slow=7.4,SNR=3.8						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**29.67**	**325**	P	**P**	**13 34 12.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=134,slow=9.5,SNR=5.1						
	comp=Z,0.5nm,0.5s						
KURK	**Kurchatov**	**29.68**	**326**	P	**P**	**13 34 14.6**	**+1.3**
GAR	**Garm**	**30.34**	**299**	P	**P**	**13 34 20.0**	**+0.6**
GAR				IAmb	IAmb	13 35 02.6	
	comp=Z,9.3nm,1.4s						
LUWI	**Luwuk**	**34.08**	**147**	P	**P**	**13 34 51.8**	**-0.5**
LUWI				IAmb	IAmb	13 35 16.1	
	comp=Z,6.4nm,0.8s						
BVAR	**Borovoye Array**	**35.20**	**324**	P	**P**	**13 35 01.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=107,slow=7.7,SNR=2.5						
	comp=Z,0.2nm,0.3s						
AB31	**Akbulak array**	**39.85**	**314**	P	**P**	**13 35 41.1**	**+0.1**
ABKAR	**Akbulak array**	**39.85**	**314**	P	**P**	**13 35 41.2**	**+0.2**
MA2	**Magadan**	**43.93**	**32**	LR	LR	13 54 16.4	
	comp=Z,42nm,18.3s,baz=302,slow=36						
TIXI	**Tiksi**	**45.16**	**10**	P	**P**	**13 36 22.9**	**-1.0**
TIXI				IAmb	IAmb	13 36 23.7	
	comp=Z,2.6nm,0.6s						
PETK	**Petropavlovsk-**	**45.66**	**42**	P	**P**	**13 36 27.6**	**-0.5**
PET	**Petropavlovsk**	**46.21**	**43**	P	**P**	**13 36 32.8**	**+0.4**
KNRA	**Kununurra**	**49.69**	**149**	P	**P**	**13 36 59.8**	**+0.1**
PSA00	**Pilbara Seismi**	**51.88**	**162**	P	**P**	**13 37 16.4**	**+0.2**
PSA00				IAmb	IAmb	13 37 42.9	
	comp=Z,7.3nm,1.5s						
AS31	**Alice Springs**	**58.99**	**149**	P	**P**	**13 38 05.8**	**-1.6**
ASAR	**Alice Springs**	**58.99**	**149**	P	**P**	**13 38 05.7**	**-1.7**
ASAR	**Alice Springs**	**58.99**	**149**	P	**P**	**13 38 06.0**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=326,slow=6.7,SNR=9.8						
	comp=Z,0.8nm,0.8s						
FINES	**FINESS Array B**	**60.04**	**327**	P	**P**	**13 38 13.6**	**-0.5**
	comp=Z,3.1nm,1.1s,baz=27,slow=5.8,SNR=3.5						
	comp=Z,3.1nm,1.1s						
EIL	**Elat**	**60.14**	**290**	LR	LR	14 06 14.5	
	comp=Z,109nm,19.4s,baz=2.0,slow=38						
C19K	**Lookout Ridge**	**65.64**	**23**	P	**P**	**13 38 51.5**	**+0.1**
INKA	**Innaminka**	**65.71**	**145**	P	**P**	**13 38 51.8**	**-0.4**
INKA				IAmb	IAmb	13 39 28.6	
	comp=Z,2.4nm,1.2s						
B20K	**Meade River**	**66.19**	**22**	P	**P**	**13 38 54.9**	**0.0**
D20K	**Etivluk River**	**66.78**	**23**	P	**P**	**13 38 58.6**	**-0.1**
D20K				IAmb	IAmb	13 39 36.4	
	comp=Z,9.2nm,1.4s						
BBOO	**Buckleboo**	**67.84**	**152**	P	**P**	**13 39 05.9**	**+0.1**
BBOO				IAmb	IAmb	13 39 29.1	
	comp=Z,10nm,1.2s						
K17K	**Iditarod**	**68.11**	**30**	P	**P**	**13 39 07.7**	**+0.5**
K17K				IAmb	IAmb	13 39 20.6	
	comp=Z,15nm,1.4s						
M17K	**Holitna River**	**68.95**	**31**	P	**P**	**13 39 12.3**	**-0.1**
N17K	**Nushagak Hills**	**69.38**	**32**	P	**P**	**13 39 15.9**	**+0.8**
GERES	**GERESS Array B**	**69.78**	**315**	P	**P**	**13 39 17.4**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=69,slow=8.3,SNR=4.1						
	comp=Z,0.4nm,0.5s						
BMAR	**Burnt Mountain**	**71.42**	**22**	P	**P**	**13 39 28.2**	**+0.7**
F28M	**Old Crow**	**72.87**	**21**	P	**P**	**13 39 35.9**	**-0.2**
M27K	**Edge Creek, AK**	**75.07**	**26**	P	**P**	**13 39 49.3**	**0.0**
M27K				IAmb	IAmb	13 40 03.4	
	comp=Z,6.5nm,1.4s						
QSPA	**South Pole Qui**	**118.31**	**180**	PKP	**PKiKP**	**13 46 54.7**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=316,slow=3.7,SNR=1.7						

*NEIC **10** 13:39:17.1±1.3,10.°31S±0.°09×161.°27E±0.°08,h52km±7km, mb4.6/26,Error ellipse: s-maj=14.9km s-min=9.2km az=219.0*

*IDC **10** 13:39:19.1±2.1,10.°31S×161.°14E,h70km±17km,mb3.7/14, mbtmp4.1/15,MS3.7/10,Error ellipse: s-maj=23.5km s-min=13.6km az=80.0*

ISC 10 13:39:17.4±0.5,10.39S±0.07×161.26E±0.08,h61km,n54, σ1s34/49,mb4.3/25,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.60**	**306**		**Pn**	**13 39 42.5**	**-1.0**
HNR	**Honiara**	**1.60**	**306**	P	**Pn**	**13 39 42.8**	**-0.6**
	932nm,0.5s,baz=150,slow=7.1,SNR=147						
HNR				S	**Sn**	**13 40 02.2**	**-0.9**
	1μm,0.4s,baz=6.9,slow=14,SNR=8.2						
HNR				LR	LR	13 40 32.9	
	comp=Z,1μm,19.6s,baz=104,slow=50						
SANVU	**Saraoutou**	**7.67**	**132**		**Pn**	**13 41 06.2**	**-0.3**
DZM	**Mont Dzumac**	**12.64**	**157**	P	**Pn**	**13 42 15.8**	**+1.3**
	3.0nm,0.3s,baz=21,slow=9.9,SNR=61						
DZM				S	**Sn**	**13 44 28.0**	**-5.6**
	4.4nm,0.4s,baz=22,slow=22,SNR=5.7						
MARNC	**Mare, Loyalty**	**12.81**	**150**	Pn	**Pn**	**13 42 17.0**	**+0.4**
PMG	**Port Moresby**	**13.92**	**273**	LR	LR	13 47 41.0	
	comp=Z,256nm,19.9s,baz=134,slow=36						
EIDS	**Eidsvold**	**17.75**	**212**	P	**P**	**13 43 21.8**	**+1.3**
FUNA	**Funafuti**	**17.79**	**86**		**Pn**	**13 43 20.2**	**-0.8**
FUNA				IAmb	IAmb	13 43 56.7	
	comp=Z,82nm,1.2s						
INKA	**Innaminka**	**25.89**	**225**	P	**P**	**13 44 44.7**	**+1.0**
STKA	**Stephens Creek**	**28.07**	**217**	P	**P**	**13 45 04.2**	**+0.9**
STKA	**Stephens Creek**	**28.07**	**217**	P	**P**	**13 45 03.9**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=23,slow=8.2,SNR=6.3						
STKA				LR	LR	13 55 04.8	
	comp=Z,143nm,20.4s,baz=27,slow=34						
	comp=Z,0.8nm,0.6s						
GUMO	**Guam**	**28.84**	**325**	LR	LR	13 55 42.0	
	comp=Z,68nm,21.3s,baz=102,slow=34						
AS31	**Alice Springs**	**29.22**	**240**	P	**P**	**13 45 11.9**	**-1.8**
ASAR	**Alice Springs**	**29.23**	**240**	P	**P**	**13 45 11.6**	**-2.1**
ASAR	**Alice Springs**	**29.23**	**240**	P	**P**	**13 45 13.2**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=62,slow=10.0,SNR=11						
ASAR				LR	LR	13 56 54.6	
	comp=Z,148nm,18.3s,baz=48,slow=36						
	comp=Z,0.7nm,0.6s						
TOO	**Toolangi**	**30.56**	**205**	P	**P**	**13 45 25.5**	**+0.1**
TOO				IAmb	IAmb	13 45 45.9	
	comp=Z,11nm,1.5s						
BKZ	**Black Stump Fm**	**31.72**	**157**	P	**P**	**13 45 35.7**	**+0.2**
BBOO	**Buckleboo**	**32.19**	**222**	P	**P**	**13 45 40.4**	**+0.7**
BBOO				IAmb	IAmb	13 45 41.2	
	comp=Z,6.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**35.31**	**253**	P	**P**	**13 46 06.5**	**-0.5**
RAR	**Rarotonga**	**38.91**	**111**	LR	LR	14 02 06.0	
	comp=Z,79nm,19.3s,baz=259,slow=35						
PSA00	**Pilbara Seismi**	**41.21**	**249**	P	**P**	**13 46 56.9**	**+0.3**
PPT	**Papeete**	**48.13**	**104**	LR	LR	14 04 34.2	
	comp=Z,29nm,19.9s,baz=0.5,slow=31						
HON	**Honolulu**	**50.93**	**52**	P	**P**	**13 48 12.0**	**-0.9**
MJAR	**Matsushiro Arr**	**51.47**	**336**	P	**P**	**13 48 15.3**	**-1.4**
MJAR	**Matsushiro Arr**	**51.47**	**336**	P	**P**	**13 48 15.6**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=172,slow=8.7,SNR=7.6						
	comp=Z,1.1nm,0.7s						
MAJO	**Matsushiro**	**51.48**	**336**	P	**P**	**13 48 15.8**	**-1.0**
MAJO				IAmb	IAmb	13 48 37.6	
	comp=Z,10nm,1.2s						
LEM	**Lembang**	**53.10**	**269**	LR	LR	14 12 41

*AEIC **10** 13:48:29.6±1.4,51°.9N±0°.1×171°.71W±0°.06,h33^{km},7^{km}, Error ellipse: s-maj=15.2km s-min=4.9km az=169.0*

NEIC 10 13:48:29.0±1.4,51°.9N±0°.1×171°.69W±0°.03,h35^{km},2^{km}, ML3.7/16,ML3.2(AEIC),Error ellipse: s-maj=22.9km s-min=3.1km az=172.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**1.47**	**48**		Pn	13 48 53.0	+0.1
CLES	**Cleveland East**	**1.47**	**48**		Sn	13 49 10.3	-0.6
CLCO	**Concord Point,**	**1.53**	**51**		Pn	13 48 53.5	-0.3
CLCO					Sn	13 49 12.7	+0.4
KOSE	**Korovin Southe**	**1.54**	**290**		Pn	13 48 54.0	0.0
KOSE					Sn	13 49 13.0	+0.2
KOFP	**Korovin Flat P**	**1.55**	**287**		Pn	13 48 53.7	-0.5
KOFP					Sn	13 49 12.4	-0.6
ATKA	**Atka Island**	**1.59**	**284**		Sn	13 49 12.1	-1.8
ATKA	**Atka Island**	**1.59**	**284**		Pn	13 48 53.7	-0.9
KOKV	**Korovin Volcan**	**1.61**	**290**		Pn	13 48 54.6	-0.4
KOKL	**Mount Kliuchef**	**1.62**	**288**		Pn	13 48 54.9	-0.3
KOWE	**Korovin West**	**1.67**	**289**		Pn	13 48 55.7	0.0
NIKH	**Nikolski High**	**2.07**	**56**		Pn	13 49 00.6	-0.6
NIKH	comp=E,398nm,0.7s			IAML		13 49 33.7	
NIKH	**Nikolski High**	**2.07**	**56**		Sn	13 49 24.0	-1.7
OKSP	**Okmok Steeple**	**2.50**	**55**		Pn	13 49 07.1	-0.1
OKTU	**Okmok Mt. Tuli**	**2.70**	**54**		Pn	13 49 10.8	+0.9
OKFG	**Magazine Ridge**	**2.78**	**54**		Pn	13 49 12.0	+1.0
ETKA	**Kagalaska Isla**	**2.93**	**272**		Pn	13 49 13.6	+0.6
ADK	**Adak**	**3.10**	**273**		Pn	13 49 15.5	+0.1
ADK	comp=E,189nm,0.6s			IAML		13 50 07.1	
ADK	comp=E,151nm,0.7s			IAML		13 50 07.3	
KIWB	**Kanaga Island**	**3.39**	**272**	Pn	Pn	13 49 19.6	+0.2
KIWB	comp=N,160nm,0.8s			IAML		13 50 18.6	
MGOD	**Makushin Gods**	**3.51**	**54**		Pn	13 49 22.0	+1.0
MSW	**Makushin Switc**	**3.62**	**53**		Pn	13 49 23.7	+1.2
UNV	**Unalaska Valle**	**3.72**	**55**	Pn	Pn	13 49 24.7	+0.8
LVA	**Lava Point**	**4.12**	**54**	Pn	Pn	13 49 30.3	+0.8
LVA	comp=N,97nm,0.9s			IAML		13 50 43.5	
LVA	comp=E,71nm,1.0s			IAML		13 50 45.3	
P08K	**Saint George I**	**4.92**	**14**	Pn	Pn	13 49 40.9	+0.5
P08K	comp=E,76nm,1.1s			IAML		13 52 08.5	
P08K	comp=N,88nm,1.1s			IAML		13 52 52.4	
AMKA	**Amchitka**	**5.64**	**269**	Pn	Pn	13 49 49.3	-0.9
SDPT	**Sand Point**	**7.53**	**58**	Pn	Pn	13 50 16.2	0.0

*EST **10** 13:48:38.9±0.1,57°.66N×21°.54E,h0^{km},ML1.8(HEL), Explosion*
*HEL **10** 13:48:39.1±0.1,57°.67N×21°.55E,h0^{km},ML1.8, Explosion*
*DNK **10** 13:48:39.3±1.3,57°.52N×21°.99E,h40^{km}±37^{km},ML2.2*
*UPP **10** 13:48:40.6±1.2,57°.73N×21°.35E,h0^{km},ML2.3, Presumed earthquake*
*IDC **10** 13:48:41.8±2.2,57°.87N×21°.47E,h0^{km},mbtmp3.0/4, ML2.2/4, Error ellipse: s-maj=22.8km s-min=8.4km az=169.0*
*LVSN **10** 13:48:42.0±6.1,57°.71N×21°.70E,h0^{km}±77^{km},ML2.2*

ISC 10 13:48:38.5±0.8,57°.71N±0°.03×21°.55E±0°.03,h0^{km},n67, σ1§25/87,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.41**	**101**	*e*P	**Pg**	**13 48 46.1**	**-0.1**
SLIT	**Slitere, Latvi**	**0.41**	**101**	*e*P	**Pg**	**13 48 46.3**	**0.0**
SLIT				*e*S	**Sg**	**13 48 53.1**	**+1.6**
SLIT	comp=N,677nm,0.7s			AML	AML	13 49 15.4	
SLIT	comp=E,1μm,0.6s			AML	AML	13 49 17.8	
SLIT	comp=Z,920nm,0.6s			AML	AML	13 49 18.0	
SLIT	**Slitere, Latvi**	**0.41**	**101**	*e*P	**Pg**	**13 48 46.2**	**-0.1**
SLIT				*e*S	**Sg**	**13 48 51.4**	**-0.1**
EE06	**Soera, Palade,**	**1.44**	**28**	*e*P	**Pn**	**13 49 05.1**	**-0.7**
EE06				*e*S	**Sg**	**13 49 24.7**	**-0.1**
GOTU	**Gotland**	**1.60**	**270**	P	**Pn**	**13 49 07.4**	**-0.6**
GOTU				S	**Sn**	**13 49 29.7**	**+0.3**
GOTU	**Gotland**	**1.60**	**270**	P	**Pn**	**13 49 07.4**	**-0.6**
GOTU				S	**Sn**	**13 49 29.7**	**+0.3**
GOTU	**Gotland**	**1.60**	**270**	*e*P	**Pn**	**13 49 07.3**	**-0.6**
GOTU				*e*S	**Sn**	**13 49 28.3**	**-1.0**
GOTU	comp=Z,4.2nm,0.1s			smax	smax	13 49 30.0	
EE01	**Perakula, Nova**	**1.86**	**35**	*e*P	**Pn**	**13 49 12.3**	**+0.8**
EE01				*e*PG	**Pb**	**13 49 12.9**	**-0.4**
EE01				*e*SG	**Sb**	**13 49 37.8**	**+0.8**
VSVD	**Vaisvydziai**	**2.17**	**142**	*e*P	**Pn**	**13 49 15.4**	**-0.5**
EE08	**Sarghaua, Vand**	**2.17**	**62**	*e*PB	**Pn**	**13 49 17.0**	**+1.1**
EE08				*e*SG	**Sb**	**13 49 46.2**	**0.0**
EE02	**Kiisa, Saku**	**2.23**	**47**	*e*PB	**Pb**	**13 49 18.7**	**-0.9**
EE02				*e*SG	**Sb**	**13 49 49.0**	**+1.3**
NYNU	**Nynaeshamn**	**2.28**	**306**	P	**Pn**	**13 49 18.6**	**+1.3**
NYNU	**Nynaeshamn**	**2.28**	**306**	P	**Pn**	**13 49 18.6**	**+1.3**
TVF	**Tvarminne**	**2.32**	**22**	*e*PB	**Pn**	**13 49 20.1**	**+2.2**
TVF				*e*SG	**Sb**	**13 49 51.4**	**+1.1**
TVF	comp=Z,6.3nm,0.1s			smax	smax	13 49 54.8	
BYXU	**Byxelkrok**	**2.49**	**262**	P	**Pn**	**13 49 21.0**	**+0.8**
BYXU	**Byxelkrok**	**2.49**	**262**	P	**Pn**	**13 49 21.0**	**+0.8**
NRTU	**Norrtaelje**	**2.50**	**324**	P	**Pn**	**13 49 21.8**	**+1.5**
NRTU	**Norrtaelje**	**2.50**	**324**	P	**Pn**	**13 49 21.8**	**+1.5**
NRTU	**Norrtaelje**	**2.50**	**324**	*e*P	**Pn**	**13 49 21.3**	**+1.0**
NRTU				*e*SG	**Sb**	**13 49 56.6**	**+1.2**
NRTU	comp=Z,3.6nm,0.1s			smax	smax	13 50 00.1	
PABE	**Paberze**	**2.58**	**148**	*e*P	**Pn**	**13 49 22.5**	**+1.0**
PABE	**Paberze**	**2.58**	**148**	AML	AML	13 49 30.5	
PABE	comp=Z,13nm,0.4s			*e*S	**Sn**	**13 49 54.4**	**+0.9**
PABE				AML	AML	13 49 57.2	
PABE	comp=N,24nm,0.4s			AML	AML	13 50 04.6	
PABE	comp=E,18nm,0.2s			AML	AML	13 50 04.6	
AAL	**Aland**	**2.61**	**343**	P	**Pn**	**13 49 22.3**	**+0.4**
AAL	**Aland**	**2.61**	**343**	*e*P	**Pn**	**13 49 22.3**	**+0.4**
AAL	**Aland**	**2.61**	**343**	P	**Pn**	**13 49 22.3**	**+0.4**
AAL	**Aland**	**2.61**	**343**	*e*P	**Pn**	**13 49 22.2**	**+0.4**
AAL				*e*SG	**Sb**	**13 50 00.2**	**+1.6**
AAL	comp=Z,3.0nm,0.1s			smax	smax	13 50 04.4	
VSTU	**Vaestervik**	**2.69**	**271**	P	**Pn**	**13 49 24.2**	**+1.2**
VSTU	**Vaestervik**	**2.69**	**271**	P	**Pn**	**13 49 24.2**	**+1.2**
VIKU	**Vikbolandet**	**2.70**	**289**	P	**Pn**	**13 49 24.0**	**+0.9**
VIKU	**Vikbolandet**	**2.70**	**289**	P	**Pn**	**13 49 24.0**	**+0.9**
EE03	**Tooma soojaam,**	**2.75**	**63**	*e*P	**Pn**	**13 49 25.0**	**+1.2**
EE03				*e*SG	**Sb**	**13 50 03.4**	**+0.6**
VSU	**Vasula**	**2.85**	**72**	*e*P	**Pn**	**13 49 25.1**	**-0.1**
VSU	**Vasula**	**2.85**	**72**	*e*P	**Pn**	**13 49 25.2**	**-0.1**
VSU	comp=Z,15nm,0.5s			AML	AML	13 49 29.0	
VSU	comp=N,22nm,0.3s			AML	AML	13 50 14.5	
VSU	comp=E,45nm,0.7s			AML	AML	13 50 16.7	
VSU	comp=Z,15nm,0.6s			AML	AML	13 50 17.2	
VSU	**Vasula**	**2.85**	**72**	*e*P	**Pn**	**13 49 25.1**	**-0.2**
VSU				*e*SB	**Sb**	**13 50 04.5**	**-1.2**
MEF	**Metsahovi**	**2.92**	**29**	*e*P	**Pn**	**13 49 26.9**	**+0.7**
MEF	**Metsahovi**	**2.92**	**29**	*e*P	**Pb**	**13 49 29.7**	**-1.6**
MEF	comp=N,6.4nm,0.5s			AML	AML	13 50 14.8	
MEF	comp=Z,7.6nm,0.8s			AML	AML	13 50 15.0	
MEF	comp=E,8.2nm,0.5s			AML	AML	13 50 15.1	
MEF	**Metsahovi**	**2.92**	**29**	*e*PB	**Pb**	**13 49 29.4**	**-2.0**
MEF				*e*SB	**Sb**	**13 50 07.6**	**+0.1**
MEF	comp=Z,3.9nm,0.1s			smax	smax	13 50 11.1	
HEL5	**Espoo, Suvisaa**	**2.93**	**33**	smax	smax	13 50 11.1	
OSKU	**Oskarshamn**	**2.99**	**262**	P	**Pn**	**13 49 27.7**	**+0.6**
OSKU	**Oskarshamn**	**2.99**	**262**	P	**Pn**	**13 49 27.7**	**+0.6**
FIBU	**Brunna**	**3.10**	**317**	P	**Pn**	**13 49 29.9**	**+1.3**
FIBU	**Brunna**	**3.10**	**317**	P	**Pn**	**13 49 29.9**	**+1.3**
BACU	**Backbrunna**	**3.16**	**315**	P	**Pn**	**13 49 30.6**	**+1.1**
BACU	**Backbrunna**	**3.16**	**315**	P	**Pn**	**13 49 30.6**	**+1.1**
LNKU	**Linkoeping**	**3.26**	**282**	P	**Pn**	**13 49 31.7**	**+0.9**
LNKU	**Linkoeping**	**3.26**	**282**	P	**Pn**	**13 49 31.7**	**+0.9**
RAF	**Rauma**	**3.33**	**2**	*e*P	**Pn**	**13 49 32.9**	**+1.2**
RAF	**Rauma**	**3.33**	**2**	*e*P	**Pn**	**13 49 32.6**	**+0.9**
EKSU	**Eksjoe**	**3.36**	**270**	P	**Pn**	**13 49 33.4**	**+1.2**
EKSU	**Eksjoe**	**3.36**	**270**	P	**Pn**	**13 49 33.4**	**+1.2**
PVF	**Pernaja**	**3.61**	**36**	*e*P	**Pn**	**13 49 35.6**	**0.0**
KPF	**Kankaanpaa**	**4.15**	**3**	*e*P	**Pn**	**13 49 44.2**	**+1.2**
KPF	comp=Z,1.2nm,0.1s			smax	smax	13 50 35.8	
DEL	**Delary**	**4.37**	**257**	*i* P	**Pn**	**13 49 45.6**	**-0.5**
DEL				*i* S	**Sb**	**13 50 53.0**	**+3.8**
DEL	comp=Z,1.7nm,0.3s			IAML		13 50 58.4	
FINES	**FINESS Array B**	**4.40**	**30**	Pn	**Pn**	**13 49 47.7**	**+1.2**
FINES	comp=Z,0.3nm,0.3s,baz=206,slow=12,SNR=19			Pg	**Pb**	**13 49 57.0**	**+0.5**
FINES	comp=Z,0.3nm,0.3s,baz=215,slow=12,SNR=11			Sn	**Sn**	**13 50 40.1**	**+1.8**
FINES	comp=Z,0.3nm,0.3s,baz=220,slow=21,SNR=6.9			Lg	Lg	13 50 55.8	
BORU	**Boraas**	**4.72**	**273**	*i* P	**Pn**	**13 49 52.2**	**+1.4**
HFS	**Hagfors**	**4.74**	**304**	Pn	**Pn**	**13 49 51.7**	**+0.5**
HFS	comp=Z,0.3nm,0.3s,baz=122,slow=16,SNR=12			Sn	**Sn**	**13 50 45.1**	**-1.7**
HFS	comp=Z,0.2nm,0.3s,baz=112,slow=27,SNR=1.6			Lg	Lg	13 51 05.4	
KEF	**Keuruu**	**4.78**	**19**	*e*P	**Pn**	**13 49 53.4**	**+1.7**
FABU	**Falkenberg**	**4.84**	**265**	*e*P	**Pn**	**13 49 53.3**	**+0.9**
LUNU	**Lund**	**4.93**	**248**	*e*P	**Pn**	**13 49 52.3**	**-1.4**
BJUU	**Bjuv**	**4.95**	**254**	*i* P	**Pn**	**13 49 54.1**	**0.0**
ONAU	**Onsala**	**5.20**	**271**	*i* P	**Pn**	**13 49 57.9**	**+0.5**
TJOU	**Tjoern**	**5.31**	**278**	*e*P	**Pn**	**13 49 59.6**	**+0.7**
VAF	**Ylistaro**	**5.38**	**5**	*e*P	**Pn**	**13 50 00.7**	**+0.7**
NB201	**NORSAR Array S**	**6.22**	**307**	*e*P	**Pn**	**13 50 12.1**	**+0.6**
NOA	**NORSAR Array B**	**6.25**	**307**	Pn	**Pn**	**13 50 12.2**	**+0.3**
NOA	baz=118,slow=11,SNR=6.9			Sn	**Sn**	**13 51 19.0**	**-5.0**
NOA	baz=231,slow=23,SNR=4.0			Lg	Lg	13 51 51.7	
NOA	baz=107,slow=12,SNR=4.3						
NAO01	**NORSAR Array S**	**6.30**	**304**	*e*P	**Pn**	**13 50 12.2**	**-0.5**
JOF	**Joensuu**	**7.12**	**39**	*e*P	**Pn**	**13 50 23.8**	**-0.1**
ARCES	**ARCESS Array B**	**12.00**	**7**	Pn	**Pn**	**13 51 27.2**	**-3.3**

comp=Z,0.1nm,0.2s
comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=6.3
comp=Z,1.1nm,0.8s

*IDC **10** 13:59:36.9±0.5,55°.46S×27°.50W,h0^{km},mb4.5/13, mbtmp4.5/14,ML4.4/1,MS3.7/9, Error ellipse: s-maj=21.8km s-min=15.4km az=69.0*
*NEIC **10** 13:59:42.2±1.0,55°.6S±0°.1×27°.6W±0°.2,h33^{km}±5^{km}, mb4.9/46, Error ellipse: s-maj=17.8km s-min=11.7km az=207.0*

ISC 10 13:59:38.6±0.4,55°.51S±0°.07×27°.51W±0°.08,h10^{km},n94, σ1§10/78,mb4.8/27,MS3.8/9,5C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.33**	**280**		**Pn**	**14 00 57.8**	**-0.3**
VNA1	**Neumayer--Stat**	**17.37**	**158**	⇑P	**P**	**14 03 43.3**	**+1.2**
VNA1	comp=Z,15nm,0.8s						
VNA3	**Neumayer Olymp**	**17.57**	**161**	⇑P	**Pn**	**14 03 43.7**	**+0.5**
VNA3	comp=Z,11nm,0.6s						
VNA2	**Neumayer--Watz**	**17.76**	**158**	⇑P	**Pn**	**14 03 46.1**	**+0.5**
VNA2	comp=Z,17nm,0.7s,baz=307,slow=16						
EFI	**East Falkland**	**18.45**	**269**	P	**Pn**	**14 03 55.0**	**+0.8**
EFI	comp=Z,190nm,2.0s			IAmb	IAmb	14 04 01.8	
SNAA	**Sanae**	**19.31**	**156**	⇑P	**P**	**14 04 03.1**	**-0.5**
SNAA	comp=Z,310nm,0.6s						
SNAA	**Sanae**	**19.31**	**156**		**P**	**14 04 02.4**	**-1.1**
SNAA	**Sanae**	**19.31**	**156**	P	**P**	**14 04 03.2**	**-0.4**
SNAA	comp=Z,1.1nm,0.3s,baz=307,slow=8.9,SNR=50						
SNAA	comp=Z,13nm,0.7s						
PMSA	**Palmer Station**	**20.12**	**228**	P	**P**	**14 04 11.8**	**-0.5**
PMSA	comp=Z,48nm,1.1s			IAmb	IAmb	14 04 18.1	
PMSA	**Palmer Station**	**20.12**	**228**	P	**P**	**14 04 12.0**	**-0.3**
PMSA	comp=Z,60nm,1.3s,baz=212,slow=12,SNR=1.5			LR	LR	14 10 43.6	
PMSA	comp=Z,240nm,19.6s,baz=84,slow=33						
PMSA	comp=Z,60nm,1.3s						
TROLL	**Troll, Antarti**	**20.81**	**154**	⇑P	**P**	**14 04 19.6**	**-0.4**
TROLL	comp=Z,358nm,0.5s						
BELA	**Belgrano 2**	**22.61**	**184**		**P**	**14 04 37.8**	**-1.2**
TRQA	**Tornquist**	**28.94**	**293**		**P**	**14 05 37.9**	**0.0**
LL06	**Loncomilla**	**32.49**	**275**	P	**P**	**14 06 08.8**	**-0.3**
QSPA	**South Pole Qui**	**34.74**	**180**	P	**P**	**14 06 30.6**	**+1.9**
QSPA	comp=Z,7.8nm,0.6s			IAmb	IAmb	14 06 34.2	
QSPA	**South Pole Qui**	**34.74**	**180**	P	**P**	**14 06 30.3**	**+1.6**
QSPA	comp=Z,6.4nm,0.6s,baz=241,slow=0.9,SNR=50			LR	LR	14 19 47.8	
QSPA	comp=Z,175nm,20.1s,baz=196,slow=35						
QSPA	comp=Z,6.4nm,0.6s						
QSPA	**South Pole Qui**	**34.74**	**180**	P	**P**	**14 06 32.0**	**+3.3**
CPUP	**Villa Florida**	**36.32**	**311**	P	**P**	**14 06 41.9**	**-0.5**
CPUP	**Villa Florida**	**36.32**	**311**	P	**P**	**14 06 41.5**	**-0.9**
CPUP	comp=Z,1.0nm,0.8s,baz=3.7,slow=7.4,SNR=8.3			LR	LR	14 20 10.1	
CPUP	comp=Z,19nm,20.3s,baz=14,slow=34						
CPUP	comp=Z,1.0nm,0.8s						
CPUP	**Villa Florida**	**36.32**	**311**	P	**P**	**14 06 42.2**	**-0.2**
BO01	**Tunca**	**36.56**	**287**	P	**P**	**14 06 44.2**	**-0.2**
BO04	**La Punta**	**36.60**	**288**	P	**P**	**14 06 45.0**	**+0.2**
BO04	comp=Z,22nm,1.4s			IAmb	IAmb	14 07 06.9	
MT09	**Talagante**	**36.97**	**288**	P	**P**	**14 06 47.5**	**-0.6**
MT09	comp=Z,26nm,1.3s			IAmb	IAmb	14 07 13.9	
MT01	**Popeta**	**37.05**	**287**	P	**P**	**14 06 47.8**	**-0.8**
MT01	comp=Z,31nm,1.4s			IAmb	IAmb	14 08 01.2	
ZON	**Zonda**	**37.46**	**292**		**P**	**14 06 51.5**	**-0.6**
ZON	comp=Z,14nm,0.7s			IAmb	IAmb	14 06 52.2	
VA03	**San Esteban**	**37.51**	**289**	P	**P**	**14 06 53.0**	**+0.4**
CO02	**Combarbal**	**38.95**	**290**	P	**P**	**14 07 05.0**	**+0.2**
CO01	**Juntas del Tor**	**39.44**	**292**		**P**	**14 07 09.2**	**+0.2**
CO01	comp=Z,15nm,0.7s			IAmb	IAmb	14 07 11.0	
CO05	**La Serena**	**40.09**	**291**	P	**P**	**14 07 14.2**	**+0.1**
AC05	**El Transito**	**40.44**	**293**	P	**P**	**14 07 17.4**	**+0.2**
AC05	comp=Z,19nm,0.7s			IAmb	IAmb	14 07 18.5	
LCO	**Las Campanas**	**40.53**	**293**		**P**	**14 07 17.9**	**-0.1**
LCO	comp=Z,15nm,0.8s			IAmb	IAmb	14 07 21.3	
MAW	**Mawson**	**40.70**	**144**	P	**P**	**14 07 18.2**	**-0.4**
MAW	comp=Z,3.1nm,0.7s,baz=218,slow=6.5,SNR=10			LR	LR	14 22 39.9	
MAW	comp=Z,45nm,21.1s,baz=250,slow=34						
MAW	comp=Z,3.1nm,0.7s						
AC04	**Llanos de Chal**	**41.37**	**293**		**P**	**14 07 24.7**	**0.0**
AC06	**Mina Casimiro**	**41.68**	**295**	P	**P**	**14 07 26.6**	**-0.7**
AC06	comp=Z,11nm,0.8s			IAmb	IAmb	14 07 27.9	
BDFB	**Brasilia**	**42.80**	**330**	IAmb	IAmb	14 07 60.0	
BDFB	comp=Z,27nm,2.0s						
BDFB	**Brasilia**	**42.80**	**330**	P	**P**	**14 07 34.6**	**-2.0**
BDFB	comp=Z,0.9nm,0.4s,baz=74,slow=12,SNR=1.9			LR	LR	14 24 23.3	
BDFB	comp=Z,91nm,19.4s,baz=133,slow=35						
BDFB	comp=Z,0.9nm,0.4s						
GO02	**Mina Guanaco**	**43.08**	**297**		**P**	**14 07 39.1**	**0.0**
GO02	comp=Z,15nm,0.7s			IAmb	IAmb	14 07 51.1	
PB09	**IPOC Station P**	**45.72**	**300**	P	**P**	**14 08 01.2**	**+1.2**
PB09	comp=Z,16nm,1.1s			IAmb	IAmb	14 08 13.8	
BOSA	**Boshof**	**46.02**	**77**	P	**P**	**14 08 02.6**	**+0.3**
BOSA	comp=Z,28nm,1.7s			IAmb	IAmb	14 08 38.5	
BOSA	**Boshof**	**46.02**	**77**	P	**P**	**14 08 02.4**	**+0.1**
BOSA	comp=Z,5.0nm,0.7s,baz=203,slow=7.6,SNR=9.8			LR	LR	14 23 23.3	
BOSA	**Boshof**	**46.02**	**77**	P	**P**	**14 08 02.7**	**+0.4**
PB01	**IPOC Station P**	**46.48**	**301**	P	**P**	**14 08 06.2**	**+0.3**
PB01	comp=Z,13nm,0.7s			IAmb	IAmb	14 08 07.5	
SBA	**Scott Base**	**46.61**	**184**		**P**	**14 08 06.7**	**+0.5**
SBA	**Scott Base**	**46.61**	**184**	P	**P**	**14 08 06.4**	**+0.3**
PTLB	**Pontes e Lacer**	**46.78**	**316**		**P**	**14 08 07.9**	**-0.2**
PB08	**IPOC Station P**	**47.08**	**302**	IAmb	IAmb	14 08 15.2	
VNDA	**Vanda**	**47.11**	**183**		**P**	**14 08 09.7**	**-0.3**
VNDA	**Vanda**	**47.11**	**183**	P	**P**	**14 08 10.1**	**0.0**
VNDA	**Vanda**	**47.11**	**183**	P	**P**	**14 08 10.0**	**0.0**
LKGWB	**Lokgwabe**	**47.39**	**69**	P	**P**	**14 08 15.7**	**+2.7**
H10S2	**ASCENSION HYDR**	**47.53**	**17**	T	T	15 00 06.6	
H10S3	**ASCENSION HYDR**	**47.54**	**17**	T	T	14 59 49.9	
PB11	**IPOC Station P**	**47.65**	**301**	IAmb	IAmb	14 08 17.4	
H04S2	**CROZET ISLANDS**	**47.94**	**115**	T	T	15 00 21.8	
H04S3	**CROZET ISLANDS**	**47.95**	**115**	T	T	15 00 07.9	
H04S1	**CROZET ISLANDS**	**47.96**	**115**	T	T	15 00 25.6	
CCD	**Concordia, Ant**	**48.24**	**170**	P	**P**	**14 08 18.2**	**-1.1**
H10N1	**ASCENSION HYDR**	**48.65**	**17**	T	T	15 01 11.9	
H10N3	**ASCENSION HYDR**	**48.65**	**17**	T	T	15 01 58.3	
H10N2	**ASCENSION HYDR**	**48.67**	**17**	T	T	15 01 57.1	
PB16	**IPOC Station P**	**48.80**	**302**	P	**P**	**14 08 24.8**	**+0.3**
LBTB	**Lobatse**	**49.03**	**74**	P	**P**	**14 08 26.1**	**+0.4**
LBTB				IAmb	IAmb	14 08 26.9	
LBTB	**Lobatse**	**49.03**	**74**	P	**P**	**14 08 26.1**	**+0.4**
LBTB				pP	**pwP**	**14 08 35.6**	**0.0**
LPAZ	**La Paz**	**49.91**	**305**	IAmb	IAmb	14 08 34.6	
LPAZ	**La Paz**	**49.91**	**305**	P	**P**	**14 08 33.7**	**+0.7**
LPAZ	**La Paz**	**49.91**	**305**	P	**P**	**14 08 33.8**	**+0.7**
LPAZ				sP	**pwP**	**14 08 48.3**	**+5.6**
QNGWA	**Qangwa**	**51.13**	**65**	P	**P**	**14 08 42.2**	**+0.5**
QNGWA	comp=Z,27nm,1.8s			IAmb	IAmb	14 09 30.1	
LSZ	**Lusaka**	**58.35**	**69**	LR	LR	14 31 09.7	
BOAV	**Boa Vista**	**63.74**	**323**	P	**P**	**14 10 09.5**	**-0.9**
DBIC	**Dimbokro**	**64.75**	**25**	LR	LR	14 33 46.6	
COHC	**Cochancay**	**67.23**	**302**		**P**	**14 10 32.8**	**-0.2**
BAUV	**El Baul**	**72.53**	**318**	P	**P**	**14 11 05.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**72.67**	**30**	IAmb	IAmb	14 13 06.4	
TORD	**Torodi Ar. Bea**	**72.67**	**30**	P	**P**	**14 11 06.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**72.67**	**30**	P	**P**	**14 11 06.7**	**+0.3**
TORD	comp=Z,82nm,20.4s,baz=48,slow=30			LR	LR	14 35 35.6	
SDV	**Santo Domingo**	**73.50**	**315**	P	**P**	**14 11 11.4**	**-0.1**
SDV				IAmb	IAmb	14 11 12.3	
URZ	**Urewera**	**84.26**	**199**	P	**P**	**14 12 10.1**	**-0.1**
TBI	**Tubuai**	**87.28**	**231**	*e*LR	LR	14 40 06.6	
PPT2	**Papeete2**	**92.35**	**234**	*e*LR	LR	14 42 21.3	
PPT2				*e*LR	LR	14 42 23.8	
STKA	**Stephens Creek**	**92.47**	**171**	P	**P**	**14 12 49.8**	**+0.1**
MESJ	**Messejana**	**94.43**	**15**	P	**P**	**14 12 59.6**	**+1.4**
ESDC	**Sonseca Array**	**96.92**	**18**	IAmb	IAmb	14 14 58.0	
ESDC	**Sonseca Array**	**96.92**	**18**	P	**P**	**14 13 10.4**	**+0.9**
ASAR	**Alice Springs**	**99.56**	**163**	P	**Pdif**	**14 13 20.4**	**-1.7**
ASAR	**Alice Springs**	**99.56**	**163**	P	**Pdif**	**14 13 20.8**	**-1.3**
AS31	**Alice Springs**	**99.56**	**163**	P	**Pdif**	**14 13 20.5**	**-1.6**
NVAR	**Mina Array Bea**	**121.01**	**294**	PKP	**PKiKP**	**14 18 30.9**	**-0.2**
FINES	**FINESS Array B**	**122.99**	**28**	PKP	**PKPdf**	**14 18 34.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**125.43**	**110**	PKP	**PKPdf**	**14 18 39.0**	**-0.7**
ARCES	**ARCESS Array B**	**130.50**	**22**	PKP	**PKPdf**	**14 18 47.1**	**-0.7**
BVAR	**Borovoye Array**	**134.64**	**57**	PKP	**PKPdf**	**14 18 54.9**	**-1.2**
ZALV	**Zalesovo Beam**	**142.29**	**63**	PKhKP	PKPpre	14 19 05.5	
NRIK	**Noril'sk**	**148.69**	**38**	PKPbc	**PKPbc**	**14 19 24.2**	**-0.1**
ILAR	**Eielson Array**	**149.62**	**312**	PKPbc	**PKPbc**	**14 19 26.1**	**-0.8**
SONM	**Songino Array**	**150.87**	**86**	PKPbc	**PKPbc**	**14 19 29.9**	**-0.7**
SONM				PKPab	**PKPab**	**14 19 36.9**	**-1.1**

comp=Z,0.6nm,0.8s,baz=198,slow=3.2,SNR=2.9
comp=Z,1.6nm,0.8s
comp=Z,1.1nm,1.8s
comp=Z,0.6nm,0.8s,baz=198,slow=4.1,SNR=1.6
comp=Z,0.6nm,0.8s
comp=Z,0.8nm,0.7s,baz=187,slow=3.9,SNR=14
comp=Z,0.8nm,0.7s
comp=Z,3.0nm,0.6s,baz=136,slow=2.8,SNR=4.0
comp=Z,2.4nm,0.6s,baz=134,slow=1.6,SNR=17
comp=Z,0.4nm,0.4s,baz=232,slow=3.9,SNR=5.3
comp=Z,1.7nm,0.6s,baz=197,slow=1.3,SNR=7.9
comp=Z,1.3nm,0.6s,baz=207,slow=1.9,SNR=6.1
comp=Z,0.6nm,0.5s,baz=228,slow=3.7,SNR=2.3
comp=Z,2.4nm,0.8s,baz=201,slow=0.5,SNR=6.0
comp=Z,10.0nm,0.8s,baz=130,slow=1.6,SNR=92
comp=Z,4.5nm,0.7s,baz=225,slow=3.2,SNR=23
comp=Z,1.8nm,0.6s,baz=224,slow=2.2,SNR=6.3

*IDC **10** 14:23:58.9±0.4,60°.82S×51°.11W,h0^{km},mb4.7/13, mbtmp4.7/14,ML4.2/1,MS4.2/26, Error ellipse: s-maj=19.8km s-min=12.9km az=77.0*
*MOS **10** 14:23:59.8±0.9,60°.82S×50°.85W,h14^{km},mb5.5/17, Error ellipse: s-maj=23.8km s-min=8.5km az=97.5*
*

VNA3 Neumayer Olymp 19.13 139 ⇓P **Pn 14 28 26.7 +2.9**
comp=Z,25nm,0.8s
VNA3 ⇑S Sn 14 31 46.0 -12
VNA1 Neumayer--Stat 19.48 137 ⇓P **Pn 14 28 30.7 +2.7**
comp=Z,40nm,0.8s
VNA1 ⇓S **Sn 14 31 56.5 -10**
VNA2 Neumayer--Watz 19.80 138 ⇓P **P 14 28 29.1 -1.2**
comp=Z,23nm,1.0s,baz=280,slow=11
VNA2 ⇓S **S 14 32 03.0 -10**
baz=157,slow=28
COYC Coyhaique 19.83 311 P 14 28 31.5 +0.7
SNAA Sanae 21.35 140 ⇓P **P 14 28 50.7 +3.6**
comp=Z,1µm,0.9s
SNAA ⇓S **S 14 32 37.7 -6.1**
SNAA Sanae 21.35 140 P 14 28 49.7 +2.5
SNAA IAmb IAmb 14 28 58.3
comp=Z,240nm,1.5s
SNAA Sanae 21.35 140 P **P 14 28 50.3 +3.1**
comp=Z,22nm,0.8s,baz=281,slow=8.6,SNR=47
SNAA S **S 14 32 37.4 -6.4**
comp=Z,2.5nm,0.9s,baz=286,slow=18,SNR=1.8
SNAA LR LR 14 35 18.6
comp=Z,1µm,21.4s,baz=314,slow=32
comp=Z,22nm,0.8s
SNAA Sanae 21.35 140⇓*eP* **P 14 28 48.4 +1.3**
SNAA pmax pmax
comp=Z,188nm,1.5s
LL02 Futaleuf 21.82 315 P **P 14 28 51.3 -1.0**
LL01 San Ignacio de 22.73 315 P **P 14 28 59.7 -2.3**
TROLL Troll, Antarti 23.05 140 ⇓P **P 14 29 08.7 +3.4**
comp=Z,2µm,1.1s
PLCA Paso Flores 23.59 320 P 14 29 08.9 -2.0
PLCA IAmb IAmb 14 29 16.6
comp=Z,105nm,1.4s
PLCA Paso Flores 23.59 320 P **P 14 29 09.1 -1.8**
comp=Z,33nm,1.1s,baz=160,slow=9.7,SNR=40
PLCA LR LR 14 38 23.7
comp=Z,536nm,18.5s,baz=168,slow=37
comp=Z,33nm,1.1s
PLCA Paso Flores 23.59 320⇓*eP* **P 14 29 09.7 -1.2**
LL05 Los Muermos 23.96 315 P P 14 29 11.6 -2.8
LL05 IAmb IAmb 14 29 34.0
comp=Z,155nm,1.4s
TRQA Tornquist 23.98 338 P 14 29 14.0 -0.6
TRQA IAmb IAmb 14 29 16.2
comp=Z,141nm,1.4s
TRQA Tornquist 23.98 338 P **P 14 29 14.0 -0.6**
TRQA pmax pmax
comp=Z,141nm,1.4s
LR05 Currie 24.51 318 P 14 29 17.6 -1.9
LR05 IAmb IAmb 14 29 30.1
comp=Z,54nm,1.2s
NVL N'lazarevskaya 26.13 138⇓*eP* **P 14 29 35.6 +1.8**
NVL *e* 14 30 14.1
NVL *e*PPP PPP 14 30 23.4
NVL *e*S **S 14 34 08.6 +3.8**
NVL *e*SS **SnSn 14 35 08.7 +6.1**
NVL pmax pmax
comp=Z,11nm,1.4s
NVL MLR MLR
comp=Z,148nm,19.0s
ML02 Panimavida 28.44 323 P P 14 29 53.0 -1.8
ML02 IAmb IAmb 14 29 56.0
comp=Z,53nm,1.2s
BO02 Sierra Bellavi 29.16 325 P 14 29 59.9 -1.5
PLTB Pedras Altas 29.27 355 P 14 30 03.1 +0.8
PLTB IAmb IAmb 14 30 04.5
comp=Z,29nm,1.0s
PLTB Pedras Altas 29.27 355*eP* **P 14 30 03.4 +1.1**
QSPA South Pole Qui 29.27 180 P P 14 30 06.8 +4.6
QSPA IAmb IAmb 14 30 13.9
comp=Z,33nm,1.1s
QSPA South Pole Qui 29.27 180 P P 14 30 07.3 +5.1
comp=Z,19nm,1.0s,baz=164,slow=4.0,SNR=42
QSPA LR LR 14 44 47.4
comp=Z,690nm,18.1s,baz=160,slow=42
BO01 Tunca 29.62 325 P 14 30 04.5 -0.9
BO04 La Punta 29.87 326 P **P 14 30 06.8 -0.8**
MT09 Talagante 30.17 325 IAmb IAmb 14 30 10.2
comp=Z,52nm,1.0s
PSAL Palomas, Salto 30.22 348*eP* **P 14 30 11.0 +0.4**
MT03 Universidad Ad 30.31 326 P **P 14 30 10.9 -0.7**
MT03 IAmb IAmb 14 30 11.9
comp=Z,57nm,0.9s
MT05 Renca 30.46 326 P **P 14 30 11.9 -1.0**
PEL Peldehue 30.68 326 IAmb IAmb 14 30 15.3
comp=Z,63nm,1.2s
PEL Peldehue 30.68 326 P P 14 30 15.1 +0.3
PEL pmax pmax
comp=Z,52nm,1.7s
VA03 San Esteban 31.01 327 IAmb IAmb 14 30 19.2
comp=Z,41nm,0.9s
CFA Coronel Fontan 31.52 331 LR LR 14 43 17.1
comp=Z,329nm,20.8s,baz=172,slow=37
ZON Zonda 31.68 330 IAmb IAmb 14 30 29.4
comp=Z,57nm,1.9s
GO04 Tololo Observa 33.53 328 IAmb IAmb 14 30 40.6
comp=Z,20nm,0.8s
CO01 Juntas del Tor 33.53 329 IAmb IAmb 14 30 41.8
comp=Z,26nm,0.9s
MAJ01 Sao Joao Batis 33.58 3*eP* **P 14 30 41.9 +1.6**
ITAB Concordia 33.73 358*eP* **P 14 30 43.1 +1.6**
LCO Las Campanas 34.61 328 P 14 30 48.8 -0.6
LCO IAmb IAmb 14 30 49.7
comp=Z,24nm,0.9s
LCO Las Campanas 34.61 328 P P 14 30 48.8 -0.6
LCO pmax pmax
comp=Z,24nm,1.0s
AC05 El Transito 34.67 329 IAmb IAmb 14 30 50.6
comp=Z,30nm,1.2s
CPUP Villa Florida 34.91 350 P P 14 30 51.0 -0.7
comp=Z,1.9nm,0.8s,baz=25,slow=8.0,SNR=18
CPUP PcP **PcP 14 33 23.8 -0.5**
comp=Z,1.0nm,0.9s,baz=294,slow=5.2,SNR=3.1
CPUP LR LR 14 44 03.1
comp=Z,59nm,21.2s,baz=29,slow=35
comp=Z,1.9nm,0.8s
SYO Syowa Base 35.61 142⇓*eP* **P 14 30 54.0 -3.3**
GO03 Copiapo 35.84 330 IAmb IAmb 14 31 00.2
comp=Z,31nm,0.8s
AC06 Mina Casimiro 36.10 330 IAmb IAmb 14 31 02.5
comp=Z,30nm,0.9s
PTGB Pitanga 36.24 358*eP* **P 14 31 04.3 +1.0**
AC02 Maricunga 36.31 332 IAmb IAmb 14 31 05.8
comp=Z,34nm,0.9s
PET01 Itanhaem-SP 36.74 5*eP* **P 14 31 08.5 +1.1**
AC01 Pan de Azucar 37.32 330 IAmb IAmb 14 31 19.8
comp=Z,71nm,1.6s
SPB Sao Paulo 37.42 5 P **P 14 31 13.8 +0.6**
SPB IAmb IAmb 14 31 15.9
comp=Z,50nm,0.8s
SPB Sao Paulo 37.42 5*eP* **P 14 31 14.8 +1.6**
PARB Paraibuna 37.78 8*eP* **P 14 31 18.1 +1.8**
SLP01 Ubatuba-SP 37.82 9*eP* **P 14 31 17.9 +1.2**
VAO Valinhos 38.03 6 P 14 31 19.8 +1.3
VAO IAmb IAmb 14 31 20.9
comp=Z,36nm,0.9s
VAO Valinhos 38.03 6*eP* **P 14 31 19.5 +1.0**
RCLB Rio Claro- Sao 38.59 5*eP* **P 14 31 24.8 +1.6**
VAS01 Vassouras-RJ 39.00 11*eP* **P 14 31 28.5 +1.9**
DUB01 Friburgo-RJ 39.30 12*eP* **P 14 31 30.7 +1.6**
SBA Scott Base 39.53 192 P 14 31 33.0 +2.6
SBA Scott Base 39.53 192 P **P 14 31 33.1 +2.6**
SBA pmax pmax
comp=Z,13nm,1.2s
CAM01 Campos-RJ 39.63 13*eP* **P 14 31 33.4 +1.6**
PB10 IPOC Station P 39.84 331 IAmb IAmb 14 31 34.4
comp=Z,34nm,0.9s
BB19B Bebedouro 39.90 3*eP* **P 14 31 34.5 +0.4**
VNDA Vanda 40.30 190 P P 14 31 39.1 +2.3
VNDA Vanda 40.30 190 P P 14 31 39.1 +2.3
comp=Z,1.9nm,1.1s,baz=161,slow=6.5,SNR=4.5
VNDA PcP **PcP 14 33 41.3 +1.4**
comp=Z,3.9nm,1.1s,baz=222,slow=4.0,SNR=3.7
VNDA LR LR 14 50 53.4
comp=Z,175nm,18.1s,baz=148,slow=40
comp=Z,1.9nm,1.1s
PB03 IPOC Station P 41.07 333 IAmb IAmb 14 31 44.8
comp=Z,45nm,1.0s
PB09 IPOC Station P 41.20 334 IAmb IAmb 14 31 46.8
comp=Z,33nm,1.0s
ITRB Iturama 41.22 1*eP* **P 14 31 45.9 +0.9**
PB02 IPOC Station P 41.80 333 IAmb IAmb 14 31 51.2
comp=Z,38nm,1.0s
PB01 IPOC Station P 41.98 333 IAmb IAmb 14 31 52.7
comp=Z,49nm,1.1s

C2SB Chapadao do Su 42.17 357*eP* **P 14 31 54.0 +1.2**
PATCX Punta Patache 42.34 333 IAmb IAmb 14 31 55.5
comp=Z,50nm,1.0s
IPMB Ipameri, GO 42.97 4*eP* **P 14 31 59.8 +0.5**
MAW Mawson 43.02 149 P **P 14 32 02.4 +3.2**
comp=Z,14nm,1.0s,baz=215,slow=9.0,SNR=15
MAW PcP **PcP 14 33 50.1 +1.1**
comp=Z,4.6nm,0.8s,baz=329,slow=4.8,SNR=2.8
MAW LR LR 14 48 56.0
comp=Z,2µm,20.6s,baz=233,slow=35
comp=Z,14nm,1.0s
GO01 Chusmiza 43.25 334 P **P 14 32 01.6 -0.5**
GO01 IAmb IAmb 14 32 03.7
comp=Z,40nm,1.1s
PP1B Ponte de Pedra 43.41 354*eP* **P 14 32 03.2 +0.4**
PB12 IPOC Station P 44.51 333 P 14 32 12.1 +0.3
PB12 IAmb IAmb 14 32 13.1
comp=Z,47nm,1.0s
PB16 IPOC Station P 44.61 334 IAmb IAmb 14 32 15.2
comp=Z,24nm,1.0s
GUA01 Guaratinga, BA 45.03 15*eP* **P 14 32 16.6 +0.8**
SALV Santo Antonio 45.14 353*eP* **P 14 32 17.6 +0.9**
ARAG Araguaiana, MT 45.20 359*eP* **P 14 32 17.9 +0.8**
BDFB Brasilia 45.30 4 P 14 32 18.5 +0.4
BDFB IAmb IAmb 14 32 20.0
comp=Z,39nm,1.0s
BDFB Brasilia 45.30 4 P **P 14 32 18.9 +0.7**
comp=Z,29nm,0.9s,baz=176,slow=4.5,SNR=43
BDFB LR LR 14 49 37.3
comp=Z,168nm,21.2s,baz=156,slow=34
comp=Z,29nm,0.9s
PTLB Pontes e Lacer 45.85 349 P 14 32 22.0 -0.2
PTLB IAmb IAmb 14 32 23.8
comp=Z,60nm,1.5s
PTLB Pontes e Lacer 45.85 349*eP* **P 14 32 22.5 +0.3**
CMC01 Camacan, BA 46.27 15*eP* **P 14 32 26.1 +0.5**
LPAZ La Paz 46.32 337 P 14 32 26.1 -0.7
LPAZ IAmb IAmb 14 32 45.2
comp=Z,26nm,1.4s
LPAZ La Paz 46.32 337 P **P 14 32 26.8 0.0**
comp=Z,6.0nm,0.8s,baz=176,slow=4.4,SNR=20
LPAZ LR LR 14 52 50.7
comp=Z,512nm,20.1s,baz=172,slow=38
comp=Z,6.0nm,0.8s
LPAZ La Paz 46.32 337*eP* **P 14 32 26.7 0.0**
LPAZ La Paz 46.32 337 P **P 14 32 26.0 -0.7**
comp=Z,111nm,1.4s
VILB Vilhena 48.42 348*eP* **P 14 32 42.8 +0.5**
SDBA SAO DESIDERIO 48.67 8*eP* **P 14 32 44.5 +0.1**
SNDB Serra Nova Dou 48.91 359*eP* **P 14 32 46.5 +0.4**
PDRB Porto dos Gac 49.45 352*eP* **P 14 32 50.7 +0.3**
CLDB Colider 50.13 354*eP* **P 14 32 55.2 -0.2**
RPN Rapa Nui 51.46 284 LR LR 14 49 56.1
comp=Z,74nm,18.1s,baz=137,slow=30
SMTB Santa Maria do 52.05 4*eP* **P 14 33 09.9 0.0**
CASY Casey 52.32 171 P 14 33 12.6 +1.3
NNA Nana 52.47 327 LR LR 14 53 36.1
comp=Z,224nm,19.2s,baz=170,slow=34
NNA Nana 52.47 327⇓*eP* **P 14 33 13.3 +0.2**
NNA pmax pmax
comp=Z,46nm,0.9s
NPGB Novo Progresso 53.91 354*eP* **P 14 33 23.9 +0.3**
PRPB Parauapebas 54.67 1*eP* **P 14 33 29.6 +0.4**
CZSB Cruzeiro do Su 55.58 333 IAmb IAmb 14 33 35.6
comp=Z,22nm,0.8s
CZSB Cruzeiro do Su 55.58 333*eP* **P 14 33 35.2 -0.5**
H04S2 CROZET ISLANDS 55.87 126 T T 15 34 42.5
baz=220,slow=76,SNR=70
H04S3 CROZET ISLANDS 55.88 126 T T 15 34 52.3
baz=220,slow=76,SNR=60
H04S1 CROZET ISLANDS 55.88 126 T T 15 34 51.2
baz=220,slow=76,SNR=73
ITTB Itaituba 56.59 354*eP* **P 14 33 42.5 -0.3**
MACA Manacapuru-AM 58.15 348*eP* **P 14 33 53.3 -0.5**
TEFE Tefe 58.27 344*eP* **P 14 33 54.4 -0.3**
H10S2 ASCENSION HYDR 58.40 43 T T 15 37 30.3
baz=200,slow=74,SNR=21
H10S3 ASCENSION HYDR 58.40 43 T T 15 37 30.4
baz=20,slow=74,SNR=27
TMAB Tom-Au,PA,Br 58.48 3*eP* **P 14 33 56.5 +0.2**
BOSA Boshof 58.74 93 P 14 33 59.0 +0.9
BOSA IAmb IAmb 14 34 06.0
comp=Z,43nm,1.4s
BOSA Boshof 58.74 93 P **P 14 33 59.2 +1.2**
comp=Z,10.0nm,0.9s,baz=222,slow=5.8,SNR=16
BOSA LR LR 14 54 49.2
comp=Z,378nm,18.8s,baz=208,slow=31
comp=Z,10.0nm,0.9s
H10N3 ASCENSION HYDR 59.49 43 T T 15 38 52.0
baz=199,slow=75,SNR=19
H10N1 ASCENSION HYDR 59.49 43 T T 15 38 52.3
baz=199,slow=75,SNR=16
H10N2 ASCENSION HYDR 59.51 43 T T 15 38 52.7
baz=199,slow=75,SNR=18
WIN Windhoek 59.84 82 P 14 34 05.9 +0.1
WIN IAmb IAmb 14 34 08.6
comp=Z,36nm,1.2s
WIN Windhoek 59.84 82 P **P 14 34 05.9 +0.1**
WIN pmax pmax
comp=Z,36nm,1.2s
KOOLE Kule 60.98 85*i* P **P 14 34 14.9 +1.3**
LBTB Lobatse 61.91 91 P **P 14 34 20.3 +0.5**
LBTB Lobatse 61.91 91 LR LR 14 56 27.8
comp=Z,374nm,20.2s,baz=200,slow=31
LBTB Lobatse 61.91 91 P **P 14 34 20.3 +0.5**
LBTB pmax pmax
comp=Z,44nm,1.2s
SGC2 Sao Gabriel da 61.91 342 P P 14 34 19.5 -0.2
comp=Z,48nm,1.0s
KGCAE Kacgae 62.07 87*i* P **P 14 34 22.2 +1.3**
COHC Cochancay 62.23 327 P P 14 34 22.0 +0.2
comp=Z,30nm,1.1s
KDWAN Kaudwane 62.83 89 IAmb IAmb 14 34 28.4
comp=Z,32nm,1.2s
KDWAN Kaudwane 62.83 89*i* P **P 14 34 27.3 +1.3**
GRTLG Ghanzi 62.85 85*i* P **P 14 34 27.4 +1.1**
POGA Pongola 62.92 98 P P 14 34 27.5 +1.1
POGA IAmb IAmb 14 34 38.0
comp=Z,25nm,1.1s
PIAT Ana Tenorio 63.38 329 P P 14 34 30.3 +0.3
comp=Z,32nm,1.3s
LPHEP Lephephe 63.42 90*i* P **P 14 34 31.2 +1.3**
BOAV Boa Vista 63.63 349*eP* **P 14 34 31.3 +0.2**
BOAV Boa Vista 63.63 349 P P 14 34 29.6 -1.5
comp=Z,724nmcomp=Z,82nm,1.0s
PTLC Puerto Leguiza 63.69 333 P P 14 34 30.3 -1.3
comp=Z,952nmcomp=Z,83nm,1.3s
QNGWA Qangwa 64.39 84 IAmb IAmb 14 34 39.0
comp=Z,30nm,1.1s
QNGWA Qangwa 64.39 84*i* P **P 14 34 38.1 +1.7**
OTAV Otavalo 64.62 329 P P 14 34 38.1 -0.1
OTAV Otavalo 64.62 329 P P 14 34 38.1 -0.1
OTAV pmax pmax
comp=Z,84nm,1.3s
OTAV Otavalo 64.62 329*eP* **P 14 34 39.2 +1.0**
OTAV Otavalo 64.62 329 P P 14 34 38.5 +0.3
comp=Z,587nmcomp=Z,52nm,1.3s
MACC Macarena, Meta 65.40 335 P P 14 34 40.3 -2.5
comp=Z,533nmcomp=Z,24nm,0.9s
BROLN Tlhalogang 66.06 90*i* P **P 14 34 48.0 +0.8**
POPC Popayan, Colom 66.41 332 P P 14 34 49.3 -0.2
comp=Z,15nm,1.3s
PRAC Prado 67.14 334 P P 14 34 54.3 +0.3
comp=Z,52nm,1.5s
KSANE Kasane 67.81 87 IAmb IAmb 14 35 00.6
comp=Z,29nm,1.1s
KSANE Kasane 67.81 87*i* P **P 14 34 59.7 +1.4**
ROSC El Rosal 68.12 335 P P 14 34 59.3 -1.2
comp=Z,13nm,0.4s,baz=144,slow=4.2,SNR=9.1
ROSC LR LR 15 05 07.1
comp=Z,244nm,19.8s,baz=259,slow=36
comp=Z,13nm,0.4s
GUY2C Guyana, Caldas 68.71 334 P P 14 35 02.6 -1.7
comp=Z,584nmcomp=Z,68nm,1.1s
BAUV El Baul 71.00 342 P 14 35 17.4 -0.4
SDV Santo Domingo 71.36 339 P 14 35 18.4 -1.8
SDV IAmb IAmb 14 35 20.8
comp=Z,12nm,0.7s
SDV Santo Domingo 71.36 339 LR LR 15 08 41.0
comp=Z,139nm,18.4s,baz=224,slow=38
SDV Santo Domingo 71.36 339*eP* **P 14 35 19.6 -0.6**
SDV Santo Domingo 71.36 339 P **P 14 35 18.8 -1.4**
comp=Z,17nm,1.0s
LSZ Lusaka 71.44 88 P 14 35 21.7 +0.9
LSZ IAmb IAmb 14 35 23.5
comp=Z,17nm,1.0s

LSZ Lusaka 71.44 88 LR LR 15 03 28.1
comp=Z,254nm,18.6s,baz=164,slow=33
LSZ Lusaka 71.44 88 P **P 14 35 21.7 +0.9**
LSZ pmax pmax
comp=Z,17nm,1.0s
ARGC Ariguani, Magd 72.98 336 P **P 14 35 29.5 -0.2**
TBI Tubuai 73.93 251*e*LR LR 14 58 04.2
comp=Z,2µm,31.2s
TBI *e*LR LR 14 58 10.4
comp=Z,948nm,29.8s
TOZ Tahuroa Road 74.64 217 P **P 14 35 38.0 -1.3**
TOZ IAmb IAmb 14 35 41.5
comp=Z,35nm,1.1s
JTS Las Juntas de 75.96 325 LR LR 15 03 31.7
comp=Z,78nm,22.0s,baz=136,slow=31
JTS Las Juntas de 75.96 325*d* P **P 14 35 47.0 -0.1**
JTS pmax pmax
comp=Z,35nm,1.1s
DBIC Dimbokro 76.35 47 IAmb IAmb 14 37 14.3
comp=Z,20nm,1.4s
DBIC Dimbokro 76.35 47 P **P 14 35 50.0 +0.8**
comp=Z,4.6nm,0.9s,baz=227,slow=7.5,SNR=2.6
comp=Z,4.6nm,0.9s
OPO Ambohidratompo 77.78 106 LR LR 15 03 52.6
comp=Z,147nm,20.6s,baz=9.5,slow=31
PPT2 Papeete2 78.96 254*e*LR LR 15 00 25.4
comp=Z,224nm,29.8s
PPT2 *e*LR LR 15 00 25.9
comp=Z,355nm,28.0s
PPT Papeete 78.98 254 LR LR 15 03 35.7
comp=Z,64nm,20.5s,baz=162,slow=30
SIUN Universidad Ur 79.18 326 IAmb IAmb 14 36 05.1
comp=Z,16nm,1.0s
SJG San Juan 79.76 345 LR LR 15 13 22.8
comp=Z,53nm,19.1s,baz=200,slow=37
TOO Toolangi 80.91 193 P **P 14 36 14.8 +0.6**
comp=Z,7.9nm,1.0s
MTO3 Montecristo 81.14 322 IAmb IAmb 14 37 02.7
comp=Z,26nm,1.4s
TAOE Nuku Hiva Isla 81.99 266*e*LR LR 15 01 57.4
comp=Z,260nm,27.6s
CAN Canberra 82.69 196 P **P 14 36 25.2 +1.5**
comp=Z,30nm,1.7s
CAN Canberra 82.69 196 P **P 14 36 23.3 -0.4**
CAN Canberra 82.69 196 P **P 14 36 23.3 -0.4**
CAN pmax pmax
comp=Z,62nm,1.5s
TORD Torodi Ar. Bea 84.73 51 P **P 14 36 34.5 +0.3**
comp=Z,5.9nm,0.9s,baz=205,slow=4.1,SNR=2.6
comp=Z,5.9nm,0.9s
CMIG Matias Romero 85.39 318 LR LR 15 07 57.3
comp=Z,91nm,21.0s,baz=174,slow=31
HTT Hallett 85.61 188 P **P 14 36 39.3 +0.7**
comp=Z,9.8nm,1.3s
NWAO Narrogin (SRO) 85.94 170 LR LR 15 14 56.5
comp=Z,164nm,18.9s,baz=246,slow=36
MUN Mundaring 86.79 169 P **P 14 36 44.6 +0.3**
comp=Z,40nm,1.2s
STKA Stephens Creek 86.94 191 P **P 14 36 45.2 +0.1**
comp=Z,3.0nm,0.8s,baz=136,slow=8.9,SNR=5.5
STKA LR LR 15 14 18.8
comp=Z,174nm,19.6s,baz=202,slow=35
comp=Z,3.0nm,0.8s
FORT Forrest 88.58 179 P **P 14 36 51.9 -1.1**
comp=Z,18nm,1.9s
INKA Innaminka 91.11 190 P 14 37 05.0 +0.2
MSVF Nonsavu 92.38 226⇓*eP* **P 14 37 10.6 -0.3**
MSVF pmax pmax
comp=Z,19nm,1.5s
ASAR Alice Springs 95.59 184 P 14 37 24.5 -1.0
ASAR Alice Springs 95.59 184 P **P 14 37 25.1 -0.4**
comp=Z,7.5nm,1.1s,baz=170,slow=4.6,SNR=26
ASAR PKKP **PKKPbc 14 54 13.2 -0.2**
comp=Z,0.7nm,0.9s,baz=15,slow=1.6,SNR=4.8
comp=Z,7.5nm,1.1s
AS31 Alice Springs 95.59 184 P 14 37 24.3 -1.3
LPIG La Paz 97.36 307 LR LR 15 13 43.5
comp=Z,86nm,18.4s,baz=132,slow=31
FURI Furi 97.47 85 LR LR 15 19 53.2
comp=Z,128nm,18.2s,baz=178,slow=34
HKT Hockley 97.71 322⇓*eP* **P 14 37 33.9 -0.7**
HKT pmax pmax
comp=Z,4.0nm,0.6s
H08S1 Diego Carcia H 98.64 123 T T 16 28 10.4
baz=204,slow=76,SNR=18
H08S2 Diego Garcia H 98.65 123 T T 16 28 12.5
baz=204,slow=76,SNR=21
H08S3 Diego Garcia H 98.66 123 T T 16 28 13.5
baz=204,slow=76,SNR=40
WRAB Tennant Creek 99.28 185⇓*eP* **Pdif 14 37 41.0 -1.2**
WRAB pmax pmax
comp=Z,9.0nm,1.9s
TXAR Lajitas Array 99.68 315 LR LR 15 15 47.1
comp=Z,137nm,20.6s,baz=143,slow=31
GERES GERESS Array B 121.12 44 PKP **PKPdf 14 42 50.8 -1.2**
comp=Z,1.3nm,0.8s,baz=198,slow=0.8,SNR=9.9
BR131 Keskin Array S 121.30 64⇓*i*PKIKP **PKPdf 14 42 51.4 -1.3**
BRTR Keskin Array B 121.30 64 PKP **PKPdf 14 42 51.8 -0.8**
comp=Z,0.4nm,0.5s,baz=32,slow=36,SNR=3.8
KHC Kasperske Hory 121.32 44⇑*i*PKIKP **PKPdf 14 42 48.7 -3.6**
KMPD K-Podol'skiy 125.54 53 PKP **PKPdf 14 42 59.1 -1.2**
ANN Anapa 127.05 63*i* PKIKP **PKiKP 14 43 10.3 +6.5**
ANN pmax pmax
comp=Z,25nm,0.7s
VSLR Vesyolcye 127.14 66⇓*i*PKIKP **PKPdf 14 43 03.7 +0.1**
RNPP5 Staryi Chortor 127.47 50 PKP **PKiKP 14 43 04.5 +0.1**
NEUR Neytrino 128.18 68⇓*e*PKIKP **PKPdf 14 43 05.7 -0.1**
AK16 Malin Array Si 128.26 53 PKP **PKPdf 14 43 05.0 -0.4**
AK02 Malin Array Si 128.28 53 PKP **PKPdf 14 43 04.9 -0.6**
KIEV Kiev 128.31 53 PKP **PKPdf 14 43 05.1 -0.4**
AKASG Malin Array Be 128.33 53 PKP **PKPdf 14 43 04.4 -1.2**
comp=Z,1.2nm,0.6s,baz=253,slow=2.0,SNR=4.9
AKBB Malin Array Si 128.33 53⇓*e*PKIKP **PKPdf 14 43 03.9 -1.6**
AKBB Malin Array Si 128.33 53 PKP **PKPdf 14 43 05.2 -0.3**
SHA1 Shidzhatmaz 128.53 68⇓*e*PKIKP **PKPdf 14 43 05.8 -0.7**
KBZ Khabaz 128.63 68 PKP **PKPdf 14 43 05.6 -0.7**
comp=Z,2.7nm,0.9s,baz=174,slow=0.6,SNR=4.8
KBZ Khabaz 128.63 68⇓*e*PKIKP **PKPdf 14 43 05.9 -0.4**
KIV Kislovodsk 128.71 67*e*PKIKP **PKPdf 14 43 06.2 -0.5**
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV Kislovodsk 128.71 67 PKP **PKPdf 14 43 06.2 -0.5**
NCK Nalchik 128.77 69⇑*e*PKIKP **PKPdf 14 43 06.2 -0.5**
HFS Hagfors 130.60 37 PKP **PKPdf 14 43 08.6 -1.0**
comp=Z,5.0nm,1.1s,baz=149,slow=6.6,SNR=4.1
NOA NORSAR Array B 130.64 35 PKP **PKiKP 14 43 10.2 -0.4**
comp=Z,0.9nm,0.8s,baz=205,slow=2.0,SNR=3.9
YKA Yellowknife Ar 132.30 326 PKP **PKPdf 14 43 12.2 -0.6**
comp=Z,2.5nm,0.9s,baz=163,slow=0.6,SNR=5.4
CMAR Chiang Mai Arr 132.44 140 PKP **PKPdf 14 43 14.7 +0.3**
comp=Z,2.9nm,0.8s,baz=228,slow=3.7,SNR=20
OBN Obninsk 134.57 54*e*PKIKP **PKPdf 14 43 17.0 -0.2**
OBN *e* 14 45 49.3
OBN *e*PPP PPP 14 48 44.5
OBN pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 135.44 42 PKP **PKPdf 14 43 18.2 -0.4**
comp=Z,3.4nm,1.0s,baz=180,slow=3.8,SNR=3.8
EVN Everest 136.56 120 PKPdf 14 43 20.5 -2.2
MMPY Sheldon Lake, 137.44 318 PKPdf 14 43 20.5 -1.9
MMPY Sheldon Lake, 137.44 318 P **PKPdf 14 43 22.8 +0.4**
baz=135
O30N Mendenhall 137.79 313 P **PKPdf 14 43 23.7 +0.5**
baz=134
FARO Faro, Yukon 137.86 316 P **PKPdf 14 43 24.0 +0.8**
baz=134
N31M Braeburn, Yuko 138.18 314 PKPdf 14 43 23.1 -0.7
N31M Braeburn, Yuko 138.18 314 P **PKPdf 14 43 24.4 +0.6**
baz=133
M31M Drury Creek, Y 138.19 316 PKPdf 14 43 23.5 -0.3
M31M Drury Creek, Y 138.19 316 P **PKPdf 14 43 23.7 -0.1**
baz=134
M30M Minto, Yukon 139.27 315 P **PKPdf 14 43 25.9 +0.1**
baz=132
YUK8 Steele Glacier 139.46 312 P **PKPdf 14 43 27.1 +0.7**
baz=132
MESA MESA 139.54 310 P **PKPdf 14 43 26.8 +0.3**
baz=131
KLMR Klimovskoe 139.70 49*e*PKIKP **PKPdf 14 43 21.0 -5.5**
KLMR pmax pmax
comp=Z,18nm,1.6s
M29M Somme Creek 139.76 314 P **PKPdf 14 43 27.5 +0.7**
baz=131
L29M L29M 140.08 315 PKPdf 14 43 24.0 -3.2
L29M L29M 140.08 315 P **PKPdf 14 43 27.8 +0.5**
baz=131

CHM	Chimkent	140.25	90	*e*PKP	PKPdf	14 43 28.3	+0.1	
CHM	Chimkent	140.25	90	*e*PKIKP	PKPdf	14 43 28.3	+0.1	
KAIM	Kayak Island	140.31	308	P	PKPdf	14 43 27.8	+0.2	
	baz=130							
K29M	Barlow Dome	140.35	316	P	PKPdf	14 43 28.6	+0.8	
	baz=130							
J30M	Hart River	140.43	318	P	PKPdf	14 43 28.8	+0.8	
	baz=130							
H31M	Peel River	140.59	320	P	PKPdf	14 43 28.5	+0.4	
	baz=130							
BVCY	Beaver Creek	140.59	313	P	PKPdf	14 43 29.2	+1.0	
	baz=130							
AB31	Akbulak array	140.61	75		PKPpre	14 43 22.1		
ABKAR	Akbulak array	140.61	75		PKPpre	14 43 21.6		
BRLS	Boroldoy	140.90	90	*e*PKP	PKPdf	14 43 28.9	-0.4	
BRLS	Boroldoy	140.90	90	*e*PKIKP	PKPdf	14 43 28.9	-0.4	
M27K	Edge Creek, AK	140.92	312	P	PKPdf	14 43 29.6	+0.7	
	baz=129							
ARCES	ARCESS Array B	140.95	33	PKhKP	PKPpre	14 43 21.1		
ARCES	comp=Z,4.8nm,0.9s,baz=356,slow=3.6,SNR=6.8			PKP	PKPdf	14 43 27.6	-1.0	
	comp=Z,9.1nm,1.1s,baz=207,slow=2.9,SNR=7.0							
BMRM	Bremner River	141.05	309	P	PKPdf	14 43 29.3	+0.2	
	baz=129							
ARSB	Arslanbob	141.14	94		PKPdf	14 43 26.9	-3.1	
ARSB	Arslanbob	141.14	94	PKIKP	PKPdf	14 43 26.9	-3.1	
KSH	Kashi	141.20	99	PKP	PKPdf	14 43 24.3	-5.9	
KK31	Karatay Array	141.28	90		PKPpre	14 43 25.8		
KK31	Karatay Array	141.28	90	PKIKP	PKPdf	14 43 25.8	-4.2	
KKAR	Karatay Array	141.28	90		PKPpre	14 43 25.4		
KKAR	Karatay Array	141.28	90	PKIKP	PKPdf	14 43 25.4	-4.6	
F31M	Tsiigehtchic	141.45	322	P	PKPdf	14 43 30.4	+0.9	
	baz=129							
EPYK	Eagle Plains	141.70	320	P	PKPdf	14 43 30.7	+0.6	
	baz=128							
L26K	Log Cabin Wild	141.87	312	P	PKPdf	14 43 31.0	+0.5	
	baz=128							
KLU	Klutina	141.88	309	P	PKPdf	14 43 30.6	0.0	
	baz=128							
G30M	tAoh Zraii Nji	141.92	321		PKPdf	14 43 29.1	-1.4	
G30M	tAoh Zraii Nji	141.92	321	P	PKPdf	14 43 30.8	+0.4	
	baz=128							
INK	Inuvik	141.93	323	PKhKP	PKPpre	14 43 23.6		
INK	comp=Z,2.3nm,0.9s,baz=131,slow=5.8,SNR=3.4			PKP	PKPdf	14 43 30.4	+0.1	
	comp=Z,3.2nm,0.9s,baz=91,slow=4.6,SNR=5.6							
INK	Inuvik	141.93	323	P	PKPdf	14 43 31.1	+0.8	
	baz=128							
K27K	Chicken	142.04	314	P	PKPdf	14 43 30.7	0.0	
	baz=128							
A36M	Sachs Harbour	142.08	331		PKPpre	14 43 26.6		
A36M	Sachs Harbour	142.08	331	P	PKPdf	14 43 31.3	+0.8	
	baz=130							
H29M	Whitestone	142.13	319	P	PKPdf	14 43 31.6	+0.7	
	baz=128							
HARP	HAARP	142.15	311	P	PKPdf	14 43 31.3	+0.4	
	baz=128							
OHAK	Old Harbor	142.16	300	P	PKPdf	14 43 31.4	+0.4	
	baz=129							
I28M	Miner Creek	142.17	317	P	PKPdf	14 43 31.5	+0.5	
	baz=127							
SCRK	Sand Creek	142.68	313		PKPpre	14 43 28.9		
I27K	Kandik River	142.83	317	P	PKPdf	14 43 33.1	+1.0	
	baz=126							
J26L	Joseph Creek	142.84	314		PKPpre	14 43 28.7		
AAK	Ala-Archa	142.87	94		PKPdf	14 43 31.5	-1.6	
AAK	Ala-Archa	142.87	94	*c i*PKIKP	PKPdf	14 43 30.4	-2.7	
H27K	Steamboat Moun	143.17	317		PKPpre	14 43 29.4		
E29M	Blow River	143.28	322		PKPpre	14 43 30.1		
E29M	Blow River	143.28	322	P	PKPdf	14 43 33.7	+0.9	
	baz=126							
DHY	Denali Highway	143.37	311	P	PKPdf	14 43 33.6	+0.3	
	baz=126							
BOOM	Boomskoye usch	143.47	96		PKPdf	14 43 33.0	-1.1	
BOOM	Boomskoye usch	143.47	96	PKIKP	PKPdf	14 43 33.0	-1.1	
J25K	Salcha River,	143.54	314	P	PKPdf	14 43 32.8	-0.6	
	baz=125,SNR=11							
G27K	Doyon Strip	143.54	318	P	PKPdf	14 43 33.9	+0.6	
	baz=125							
SGDS	Sogindy	143.55	93	*e*PKP	PKPdf	14 43 34.0	-0.1	
P19K	Oil Pt	143.63	303	P	PKPdf	14 43 33.8	+0.1	
	baz=127							
M22K	Willow	143.64	308	P	PKPdf	14 43 34.0	+0.5	
	baz=126							
O20K	Slope Mountain	143.64	304	P	PKPdf	14 43 34.1	+0.4	
	baz=126							
WAT1	Susitna Watana	143.67	310	P	PKPdf	14 43 34.1	+0.4	
	baz=125							
R17L	Mt. Peulik Vol	143.72	299	P	PKPdf	14 43 34.6	+0.7	
	baz=128							
E28M	Babbage River	143.90	321		PKPpre	14 43 31.8		
E28M	Babbage River	143.90	321	P	PKPdf	14 43 34.7	+0.9	
	baz=124							
N20K	Mount Spurr	144.13	306	P	PKPdf	14 43 34.9	+0.3	
	baz=125							
SPCR	Spurr Chakacha	144.13	306	P	PKPdf	14 43 34.9	+0.3	
	baz=125							
ILAR	Eielson Array	144.17	313	PKP	PKPbc	14 43 32.6	-0.1	
	comp=Z,11nm,0.9s,baz=163,slow=2.1,SNR=74							
P18K	Big Mountain,	144.30	302	P	PKPdf	14 43 34.8	-0.1	
	baz=126							
E27K	Coleen River	144.30	320	P	PKPdf	14 43 35.1	+0.5	
	baz=123							
SKT	Skwentna	144.31	307	P	PKPdf	14 43 34.4	-0.4	
	baz=125							
KBS	Kingsbay	144.42	17		PKPdf	14 43 34.2	-0.3	
KBS	Kingsbay	144.42	17	PKIKP	PKPdf	14 43 34.2	-0.3	
AAA	Alma-Ata	144.48	96	*e*PKP	PKPdf	14 43 35.6	-0.2	
AAA	Alma-Ata	144.48	96	*e*PKIKP	PKPdf	14 43 35.5	-0.2	
MDOK	Medeo	144.51	96	*e*PKP	PKPdf	14 43 35.5	-0.4	
MDOK				*e*PP	PP	14 46 52.6	-0.2	
MDOK	Medeo	144.51	96	*e*PKIKP	PKPdf	14 43 35.5	-0.4	
MDOK				*e*		14 46 52.6		
POKR	Poker Plat Res	144.55	314	P	PKPab	14 43 33.6	-0.1	
	baz=124,SNR=7.2							
O18K	Koktuh Hills	144.56	303	P	PKPab	14 43 33.5	-0.4	
	baz=126							
COLA	College	144.57	313		PKPab	14 43 33.6	-0.1	
COLA	College	144.57	313	*c i*PKIKP	PKPbc	14 43 33.9	+0.1	
COLA	College	144.57	313	P	PKPbc	14 43 33.9	+0.1	
	baz=124							
SPITS	Spitsbergen Ar	144.61	19	PKP	PKPbc	14 43 33.8	+0.1	
	comp=Z,29nm,0.9s,baz=135,slow=28,SNR=7.5							
TRF	Thorofare Moun	144.67	310	P	PKPab	14 43 34.1	-0.2	
	baz=124,SNR=12							
D27M	Malcolm River	144.68	322		PKPdf	14 43 35.1	-0.2	
D27M	Malcolm River	144.68	322	P	PKPab	14 43 33.9	-0.2	
	baz=123							
P17K	Kvichak River	144.69	301	P	PKPab	14 43 33.8	-0.5	
	baz=126,SNR=7.6							
N19K	Bonanza Creek	144.81	304	P	PKPab	14 43 34.3	-0.6	
	baz=125							
BMAR	Burnt Mountain	144.84	318		PKPab	14 43 34.0	-0.7	
F26K	Sheenjek River	144.84	319	P	PKPab	14 43 34.4	-0.3	
	baz=122							
NEA2	Nenana	144.85	312		PKPab	14 43 34.5	-0.3	
NEA2	Nenana	144.85	312	P	PKPab	14 43 34.5	-0.3	
	baz=123,SNR=9.8							
M20K	Styx River	144.88	306	P	PKPab	14 43 34.5	-0.6	
	baz=124,SNR=15							
G25K	Bearman Lake	144.99	316	P	PKPab	14 43 35.2	+0.1	
	baz=122							
S12K	Black Hills	145.04	293	P	PKPbc	14 43 34.8	-0.9	
	baz=128							
PPLA	Purkeypile	145.08	308	P	PKPbc	14 43 35.5	-0.3	
	baz=123,SNR=18							
SATY	Saty	145.09	97	*e*PKP	PKPdf	14 43 36.7	-0.2	
SATY				*e*PP	PP	14 46 56.3	+0.1	
SATY	Saty	145.09	97	*e*PKIKP	PKPdf	14 43 36.7	-0.2	
SATY				*e*		14 46 56.2		
H24K	Noodor Dome	145.10	314	P	PKPbc	14 43 35.4	-0.2	
	baz=122,SNR=14							
FALS	False Pass	145.14	291	P	PKPbc	14 43 35.0	-0.9	
	baz=128							
P16K	Nushagak River	145.24	300	P	PKPbc	14 43 35.5	-0.7	
	baz=125							
I23K	Minto, Yukon-K	145.26	313	P	PKPbc	14 43 35.9	-0.2	
	baz=122							
F25K	Christian Rive	145.28	318	P	PKPdf	14 43 36.3	0.0	
	baz=122,SNR=29							
BPAW	Bear Paw Mtn.	145.29	311	P	PKPbc	14 43 36.1	-0.2	
	baz=123,SNR=73							
O17K	Koliganek Bris	145.29	301	P	PKPbc	14 43 35.9	-0.5	
	baz=125,SNR=5.8							
N18K	Kilae Creek	145.31	303	P	PKPbc	14 43 35.9	-0.5	
	baz=124							
M19K	Big River Lodg	145.39	306	P	PKPbc	14 43 36.3	-0.4	
	baz=124							
G24K	Hadweenzic Riv	145.42	316	P	PKPab	14 43 36.8	0.0	
	baz=122							
L20K	Farewell, AK	145.51	307	P	PKPdf	14 43 36.1	-0.8	
	baz=123,SNR=11							
E25K	Arctic Village	145.53	319	P	PKPab	14 43 37.1	-0.1	
	baz=121,SNR=27							
CD2	Chengdu	145.58	139	PKPbc	PKPdf	14 43 37.7	-0.3	
O16K	Kokwok River B	145.61	301	P	PKPdf	14 43 36.7	-0.3	
	baz=124							
CHUM	Lake Minchumin	145.66	310	P	PKPdf	14 43 37.0	0.0	
	baz=122,SNR=20							
SHLS	Shalkode	145.67	98	*e*PKP	PKPdf	14 43 38.0	+0.1	
SHLS				*e*PP	PP	14 47 00.8	+1.1	
SHLS	Shalkode	145.67	98	*e*PKP2	PKPdf	14 43 38.0	+0.1	
SHLS				*e*		14 47 00.7		
H23K	Yukon River	145.68	314	P	PKPdf	14 43 36.9	-0.1	
	baz=121							
MLY	Manley	145.69	312	P	PKPdf	14 43 37.2	0.0	
	baz=122,SNR=48							
C27K	Jago River	145.71	322	P	PKPab	14 43 37.6	-0.2	
	baz=120							
L19K	White Mountain	145.73	306	P	PKPdf	14 43 37.1	-0.1	
	baz=123,SNR=5.4							
M18K	Stony River	145.73	305	P	PKPdf	14 43 37.0	-0.2	
	baz=123							
N17K	Nushagak Hills	145.75	303	P	PKPbc	14 43 37.9	+0.1	
	baz=124							
SVE	Sverdlovsk	145.83	66	*e*PKP2	PKPbc	14 43 37.9	-0.2	
SVE				pmax	pmax			
	comp=Z,27nm,1.2s							
JOW	Kunigami	145.87	179		PKPbc	14 43 39.1	-0.1	
JOW	Kunigami	145.87	179	PKPbc	PKPab	14 43 40.1	+0.5	
	comp=Z,24nm,1.0s,baz=182,slow=4.1,SNR=5.2							
UNV	Unalaska Vale	145.93	288	P	PKPdf	14 43 37.8	0.0	
	baz=128							
F24K	Squaw Lake	145.98	317	P	PKPab	14 43 38.9	0.0	
	baz=120,SNR=43							
K20K	Telida	146.05	308	P	PKPdf	14 43 38.1	+0.4	
	baz=122							
O15K	Ungalikthiuk R	146.10	299	P	PKPdf	14 43 37.7	-0.2	
	baz=124							
I21K	Tanana	146.22	312	P	PKPbc	14 43 38.8	-0.2	
	baz=121,SNR=36							
C26K	Camden Bay	146.22	322	P	PKPab	14 43 39.3	-0.4	
	baz=119,SNR=12							
G23K	Bananza Creek	146.30	315	P	PKPab	14 43 40.0	-0.2	
	baz=120,SNR=41							
M17K	Holitna River	146.34	304	P	PKPab	14 43 40.4	0.0	
	baz=123,SNR=17							
H22K	Ishtalitna Cre	146.36	313	P	PKPbc	14 43 39.8	+0.3	
	baz=120,SNR=34							
N16K	Nishlik Lake	146.38	302	P	PKPab	14 43 40.6	-0.1	
	baz=123							
D25K	Kavik River	146.38	320	P	PKPbc	14 43 39.3	-0.3	
	baz=119							
E24K	Your Creek	146.45	318	P	PKPab	14 43 40.3	-0.5	
	baz=119,SNR=34							
L18K	Granite Mounta	146.47	305	P	PKPab	14 43 40.6	-0.3	
	baz=122,SNR=34							
NIKH	Nikolski High	146.49	285	P	PKPbc	14 43 39.6	-0.6	
	baz=129							
J20K	Nowinta River	146.51	309	P	PKPbc	14 43 39.6	-0.4	
	baz=121,SNR=8.3							
TDK	Taldyqorghan	146.53	95	*e*PKP	PKPdf	14 43 39.2	0.0	
TDK	Taldyqorghan	146.53	95	*e*PKIKP	PKPdf	14 43 39.1	0.0	
COLD	Middle Fork	146.61	316	P	PKPab	14 43 40.9	-0.4	
	baz=119,SNR=13							
ENH	Enshi	146.64	148		PKPdf	14 43 39.4	-0.4	
M16K	Timber Creek	146.75	302	P	PKPab	14 43 41.6	-0.5	
	baz=122,SNR=11							
H21K	Melozitna Rive	146.76	312	P	PKPbc	14 43 40.7	0.0	
	baz=120							
O14K	Tigyukauivet M	146.76	299	P	PKPbc	14 43 40.9	+0.1	
	baz=124							
N15K	Kwethluk River	146.77	301	P	PKPab	14 43 41.4	-0.7	
	baz=123							
E23K	Chandalar	146.82	317	P	PKPbc	14 43 40.7	-0.2	
	baz=118							
G22K	Bettles	146.91	315	P	PKPbc	14 43 41.3	+0.2	
	baz=119							
I20K	Naaghedeneel	146.94	310	P	PKPbc	14 43 41.5	+0.3	
	baz=120							
J19K	Poorman	146.97	309	P	PKPbc	14 43 41.5	+0.2	
	baz=120							
GOMU	GeErMu	147.04	123	PKPbc	PKPdf	14 43 41.7	+0.9	
GOMU				PP	PP	14 47 09.8	+2.0	
D24K	Happy Valley	147.07	319	P	PKPbc	14 43 41.4	0.0	
	baz=117							
L17K	Donlin	147.07	304	P	PKPbc	14 43 42.0	+0.3	
	baz=121							
TOLK	Toolik Lake Re	147.08	318	P	PKPbc	14 43 41.7	+0.2	
	baz=118,SNR=18							
J18K	Innoko River	147.13	307	P	PKPbc	14 43 42.3	+0.5	
	baz=120							
BRZS	Berezniki	147.20	83	*e*PKP	PKPdf	14 43 40.2	+0.1	
BRZS	Berezniki	147.20	83	*e*PKIKP	PKPdf	14 43 40.2	+0.1	
IMAR	Indian Mountai	147.25	312		PKPdf	14 43 40.5	+0.9	
C24K	Franklin Bluff	147.29	320	P	PKPbc	14 43 41.9	-0.1	
	baz=117							
M15K	Kasigluk River	147.30	301	P	PKPbc	14 43 42.5	+0.2	
	baz=122							
N14K	Kuskokwak Cree	147.31	299	P	PKPbc	14 43 42.2	-0.1	
	baz=122							
L16K	Owhat River	147.33	303		PKPbc	14 43 43.0	+0.7	
L16K	Owhat River	147.33	303	P	PKPbc	14 43 42.6	+0.3	
	baz=121,SNR=10							
K17K	Iditarod	147.37	305	P	PKPbc	14 43 42.9	+0.4	
	baz=120							
F22K	John River	147.42	316	P	PKPbc	14 43 42.8	+0.3	
	baz=118							
G21K	Allakaket	147.42	313	P	PKPbc	14 43 43.0	+0.5	
	baz=118,SNR=15							
H20K	Anotleneega Mo	147.43	311	P	PKPbc	14 43 43.1	+0.5	
	baz=119,SNR=28							
D23K	Nanushuk River	147.58	318	P	PKPbc	14 43 43.5	+0.6	
	baz=116							
E22K	Anaktuvuk Pass	147.58	317	P	PKPbc	14 43 43.1	+0.1	
	baz=117,SNR=10							
F21K	Alatna River	147.74	315	P	PKPbc	14 43 43.8	+0.5	
	baz=117,SNR=9.1							
GCSA	Galena City Sc	147.82	309	P	PKiKP	14 43 44.5	-1.0	
	baz=118,SNR=7.3							
M14K	Bethel	147.86	301	P	PKPbc	14 43 43.8	0.0	
	baz=121							
C23K	Itkillik River	147.94	320	P	PKPbc	14 43 44.2	+0.4	
	baz=115							
J17K	VABM Dome	148.02	306	P	PKPbc	14 43 44.9	+0.8	
	baz=119,SNR=12							
BORK	Borovoye	148.02	77	*ce*PKIKP	PKPdf	14 43 40.6	-0.7	
H19K	Roundabout Mou	148.03	311	P	PKPbc	14 43 44.8	+0.7	
	baz=118,SNR=7.0							
WHN	Wuhan	148.03	155	PKPbc	PKPbc	14 43 45.8	+0.6	
BVAR	Borovoye Array	148.04	77	PKPbc	PKPbc	14 43 45.1	+0.5	
	comp=Z,16nm,0.9s,baz=182,slow=3.2,SNR=19							
L15K	Ungalak Mounta	148.14	302	P	PKPbc	14 43 44.8	+0.2	
	baz=120							
D22K	Ayikyak River	148.20	318	P	PKPbc	14 43 45.1	+0.6	
	baz=115,SNR=11							
M13K	Dall Lake	148.27	299	P	PKiKP	14 43 45.6	-0.8	
	baz=121							
E21K	Killik River	148.44	317	P	PKPbc	14 43 45.5	+0.3	
	baz=115							
F20K	Avaraart Lake	148.45	314	P	PKPbc	14 43 45.1	-0.1	
	baz=116,SNR=7.8							
K15K	Wolf Creek Mou	148.46	303	P	PKPbc	14 43 45.1	-0.3	
	baz=119							
L14K	Kuka Creek	148.47	301	P	PKPbc	14 43 45.2	-0.2	
	baz=120							
J16K	Anvik River	148.57	305	P	PKPbc	14 43 45.9	+0.3	
	baz=118							
H18K	Honhosa River	148.57	309	P	PKPbc	14 43 46.2	+0.6	
	baz=117							
I17K	Unalakleet	148.89	306	P	PKPbc	14 43 46.8	+0.5	
	baz=118							
P08K	Saint George I	148.97	290	P	PKPbc	14 43 47.0	+0.2	
	baz=124							
C21K	Knifeblade Rid	149.00	318	P	PKiKP	14 43 47.2	-0.7	
	baz=113							
G18K	Tagagawik	149.01	311	P	PKiKP	14 43 47.3	-0.7	
	baz=116							
B22K	Teshekpuk Lake	149.03	320	P	PKPbc	14 43 46.8	+0.3	
	baz=112							
H17K	Granite Mounta	149.06	308	P	PKPbc	14 43 46.7	-0.1	
	baz=116,SNR=5.3							
F19K	Shaleruckik Mo	149.09	313	P	PKPbc	14 43 47.2	+0.4	
	baz=115							
E20K	Nigu River	149.12	316	P	PKPbc	14 43 47.3	+0.3	
	baz=114							
B21K	Ikpikpuk River	149.13	318	P	PKPbc	14 43 47.1	+0.3	
	baz=113,SNR=6.7							
E19K	Redstone River	149.15	314	P	PKPbc	14 43 47.1	+0.2	
	baz=114							
D20K	Etivluk River	149.44	316	P	PKiKP	14 43 48.2	-0.6	
	baz=113							
M11K	Mekoryuk	149.48	298	P	PKiKP	14 43 48.5	-0.5	
	baz=120							
J14K	Nanvaranak Lak	149.50	303	P	PKiKP	14 43 48.5	-0.5	
	baz=118							
K13K	Kusilvak Mount	149.58	301	P	PKPbc	14 43 48.5	+0.4	
	baz=118							
G17K	Kiwalik Mounta	149.59	309	P	PKPbc	14 43 48.5	+0.4	
	baz=115,SNR=9.2							
SPIA	Saint Paul Isl	149.61	290	P	PKPbc	14 43 48.6	+0.3	
	baz=123							
F18K	Selawik	149.67	312	P	PKPbc	14 43 48.6	+0.4	
	baz=114,SNR=7.6							
MK31	Makanchi Array	149.70	96	*de*PKIKP	PKPdf	14 43 42.3	-2.0	
MKAR	Makanchi Array	149.70	96	PKPbc	PKPbc	14 43 48.7	-0.3	
	comp=Z,12nm,0.9s,baz=258,slow=4.6,SNR=32							
A22K	Sinclair Lake	149.75	321	P	PKiKP	14 43 48.9	-0.3	
	baz=110							
H16K	Elim	149.82	307	P	PKPbc	14 43 49.0	+0.3	
	baz=116							
D19K	Kuna River	149.87	315	P	PKPbc	14 43 49.1	+0.3	
	baz=112							
XAN	Xi'an	150.05	145	PKPbc	PKPbc	14 43 48.4	-1.9	
B20K	Meade River	150.09	319	P	PKiKP	14 43 49.7	-0.3	
	baz=110							
WMQ	Urumqi	150.10	106	*e*PKPbc	PKiKP	14 43 50.7	-0.3	
LZDM	Lanzhou Array	150.19	135	PKPbc	PKPbc	14 43 51.1	+0.2	
	comp=Z,3.1nm,0.4s,baz=164,slow=1.1,SNR=5.1							
LZDM				PKPab	PKPab	14 43 57.7	+0.7	
	comp=Z,6.5nm,0.5s,baz=209,slow=8.5,SNR=4.7							
G16K	Koyuk River	150.19	308	P	PKiKP	14 43 50.1	-0.2	
	baz=114							
F17K	Baldwin Pennin	150.19	311	P	PKPbc	14 43 49.8	+0.3	
	baz=113							
NJ2	Nanjing	150.29	162	*e*P	PKPbc	14 43 50.7	-0.1	
NJ2				pmax	pmax			
	comp=Z,20nm,1.0s							
E18K	Tukpahlearik C	150.34	313	P	PKiKP	14 43 50.3	-0.3	
	baz=112,SNR=14							
LZH	Lanzhou	150.35	136	*e*PKPbc	PKPdf	14 43 38.8	-7.1	
LZH				pPKP	PKiKP	14 43 52.0	+0.1	
LZH				PKPbc	PKPab	14 43 58.2	+0.7	
A21K	Barrow	150.36	321	P	PKiKP	14 43 50.5	-0.1	
	baz=108							
KURBB	Kurchatov Arra	150.46	87	PKP	PKPdf	14 43 44.2	-1.1	
	comp=Z,1.6nm,0.2s,baz=241,slow=2.2,SNR=9.8							
KURBB				PKPbc	PKPbc	14 43 50.6	0.0	
	comp=Z,13nm,0.9s,baz=233,slow=3.3,SNR=18							
KURK	Kurchatov	150.56	87		PKPdf	14 43 50.6	-0.3	
KURK	Kurchatov	150.56	87		PKPdf	14 43 44.8	-0.6	
KURK	Kurchatov	150.56	87	*d i*PKIKP	PKPdf	14 43 44.0	-1.5	
C19K	Lookout Ridge	150.59	316	P	PKiKP	14 43 50.8	-0.4	
	baz=110,SNR=7.6							
E17K	Hotham Inlet	150.65	312	P	PKiKP	14 43 50.9	-0.3	
	baz=112							
G15K	Niukluk	150.67	307	P	PKPbc	14 43 51.0	+0.3	
	baz=114,SNR=5.6							
C18K	Utukok River	150.98	315	P	PKPbc	14 43 51.6	+0.1	
	baz=110							
ANM	Nome	151.03	306	P	PKPbc	14 43 51.7	+0.2	
	baz=114							
F15K	North Star Dit	151.19	308	P	PKPbc	14 43 51.9	0.0	
	baz=112							
D17K	Noatak River	151.32	313	P	PKiKP	14 43 52.7	0.0	
	baz=110							
RDOG	Red Dog Mine	151.38	313	P	PKPbc	14 43 52.4	+0.1	
	baz=109							
B18K	Kokolik River	151.42	316	P	PKiKP	14 43 52.6	-0.1	
	baz=108							
A19K	Wainwright	151.43	318	P	PKiKP	14 43 52.5	-0.2	
	baz=107							
LYN	LuoYang	151.46	150	PKPbc	PKiKP	14 43 53.8	-0.2	
C17K	DeLong Mountai	151.61	314	P	PKiKP	14 43 53.3	0.0	
	baz=108							
F14K	Arctic Creek	151.75	307	P	PKiKP	14 43 54.0	+0.4	
	baz=112							
GTA	Gaotai	151.81	127	*e*PKPbc	PKPdf	14 43 48.2	+0.2	
C16K	Lisburne Hills	152.31	313	P	PKiKP	14 43 55.2	+0.5	
	baz=107							
TNA	Tin City	152.40	307	P	PKiKP	14 43 55.1	+0.2	
	baz=110							
GAMB	Gambell	153.28	302	P	PKPbc	14 43 56.4	-0.2	
	baz=111							
MJAR	Matsushiro Arr	154.89	197		PKPab	14 44 16.1	-0.2	
MJAR	Matsushiro Arr	154.89	197	PKPbc	PKiKP	14 44 02.9	+1.9	
	comp=Z,1.2nm,0.8s,baz=131,slow=3.5,SNR=4.4							
MJAR				PKPab	PKPab	14 44 17.1	+0.8	
	comp=Z,9.3nm,1.1s,baz=182,slow=5.1,SNR=14							
MJAR	Matsushiro Arr	154.89	197	PKP2	PKPab	14 44 16.1	-0.2	
ZALV	Zalesovo Beam	155.55	87	PKP	PKPdf	14 43 50.9	-1.7	
	comp=Z,0.4nm,0.3s,baz=270,slow=3.0,SNR=4.2							
ZALV				PKPab	PKPab	14 44 19.2	+0.4	
	comp=Z,0.3nm,0.3s,baz=223,slow=4.4,SNR=4.2							
KSRS	Korea Array

TPB06			S	Sb	14 24 24.2	-0.8
PECS	**Pecos**	**0.56 296**		Pg	14 24 16.4	+0.4
PECS				Sb	14 24 25.1	-0.9
PECS			IAML		14 24 34.6	
	269nm,0.5s					
PECS			IAML		14 24 35.4	
	236nm,0.6s					
PECS	**Pecos**	**0.56 296**	P	Pg	14 24 16.6	+0.7
PECS			S	Sb	14 24 25.1	-0.9
TPB07	**Mentone**	**0.57 324**	S	Sb	14 24 25.8	-0.3
TPB12	**Southwest of T**	**0.59 279**	P	Pg	14 24 17.1	+0.6
TPB12			S	Sb	14 24 25.8	-1.0
TPB13	**Reeves - Culbe**	**0.65 312**	S	Sb	14 24 28.2	-0.4
ALPN	**Alpine**	**0.81 203**		Pg	14 24 20.8	+0.2
ALPN				Sb	14 24 32.3	-0.7
ALPN	**Alpine**	**0.81 203**	P	Pg	14 24 20.9	+0.3
ALPN			S	Sb	14 24 32.3	-0.7
TPB11	**China Draw**	**1.04 322**	P	Pn	14 24 26.9	+0.4
TPB11			S	Sb	14 24 40.1	+0.4
TMB02	**Rankin**	**1.06 86**	P	Pg	14 24 25.8	+0.2
TMB02			S	Sg	14 24 39.1	-0.2
TPB09	**Culberson Coun**	**1.09 307**	S	Sn	14 24 42.5	-0.4
ODSA	**Odessa**	**1.17 32**		Pg	14 24 27.4	-0.2
ODSA				Sb	14 24 44.0	+0.4
ODSA	**Odessa**	**1.17 32**	P	Pg	14 24 27.7	+0.1
ODSA			S	Sb	14 24 44.0	+0.4
NM01	**Eunice**	**1.23 355**	P	Pn	14 24 30.1	+0.8
NM01			S	Sn	14 24 46.2	-0.3
CLNB	**Carlsbad**	**1.25 336**		Pb	14 24 29.2	-0.1
CLNB	**Carlsbad**	**1.25 336**	P	Pn	14 24 30.5	+1.0
CLNB			S	Sn	14 24 46.6	-0.2
CLN7	**Carlsbad 7**	**1.37 341**		Pn	14 24 30.8	-0.2
CLN7	**Carlsbad 7**	**1.37 341**	P	Pg	14 24 31.9	+0.5
HTMS	**Hat Mesa**	**1.38 347**		Pn	14 24 31.3	0.0
HTMS	**Hat Mesa**	**1.38 347**	P	Pg	14 24 32.4	+0.8
HTMS			S	Sn	14 24 51.3	+1.3
GDL2	**Guadalupe Moun**	**1.42 320**		Pb	14 24 32.2	-0.1
GDL2				Sb	14 24 50.7	-0.1
CBET	**Carlsbad E Tow**	**1.43 335**		Pg	14 24 33.1	+0.6
CBET	**Carlsbad E Tow**	**1.43 335**	P	Pg	14 24 33.1	+0.6
VHRN	**Van Horn**	**1.50 258**		Pn	14 24 33.3	+0.3
VHRN				Sg	14 24 53.9	+0.4
VHRN			IAML		14 24 57.5	
	38nm,0.5s					
VHRN			IAML		14 24 58.7	
	107nm,0.3s					
VHRN	**Van Horn**	**1.50 258**	P	Pb	14 24 33.5	-0.2
VHRN			S	Sg	14 24 53.8	+0.4
TMB06	**Greenwood**	**1.52 55**	S	Sg	14 24 54.8	+0.7
SAND	**Sanderson**	**1.53 139**		Pn	14 24 33.4	+0.2
SAND				Sg	14 24 56.2	+1.9
SAND	**Sanderson**	**1.53 139**	P	Pg	14 24 34.3	-0.2
SAND			S	Sg	14 24 56.2	+1.9
TMB04	**Seminole**	**1.64 24**	P	Pn	14 24 35.4	+0.5
TMB04			S	Sg	14 24 58.0	+0.1
TX31	**Lajitas Ar. Si**	**1.81 191**		Sg	14 25 03.2	-0.1
TX31	**Lajitas Ar. Si**	**1.81 191**	P	Pb	14 24 38.7	-0.2
TX31			S	Sg	14 25 03.2	-0.1
OZNA	**Ozona**	**1.86 96**		Pb	14 24 39.0	-0.6
OZNA				Sg	14 25 05.0	+0.3
OZNA			IAmb_Lg		14 25 06.2	
	comp=Z,18nm,1.0s					
OZNA	**Ozona**	**1.86 96**	P	Pb	14 24 39.6	0.0
OZNA			S	Sg	14 25 05.0	+0.3
MNTX	**Cornudas Mount**	**1.89 288**		Pn	14 24 39.1	+1.0
MNTX				Sg	14 25 06.2	+0.4
MNTX			IAML		14 25 08.7	
	comp=Z,28nm,0.7s					
MNTX			IAML		14 25 08.9	
	comp=Z,22nm,0.8s					
MNTX	**Cornudas Mount**	**1.89 288**	P	Pb	14 24 39.8	-0.4
MNTX			S	Sg	14 25 06.2	+0.4
TMB05	**Klondike**	**1.93 38**	P	Pb	14 24 40.3	-0.5
TMB05			S	Sg	14 25 06.2	-0.8
CPRX	**Cap Rock**	**1.97 345**		Pb	14 24 40.7	-0.9
CPRX	**Cap Rock**	**1.97 345**	P	Pb	14 24 41.6	0.0
SGCY	**Sterling City**	**2.00 66**		Sb	14 25 08.0	+0.6
SGCY	**Sterling City**	**2.00 66**	P	Pb	14 24 42.2	+0.1
SGCY			S	Sb	14 25 08.0	+0.6
SN07	**Snyder 07**	**2.82 45**		Pn	14 24 52.0	+1.0
DRIO	**Del Rio**	**2.85 126**	Pn	Pn	14 24 52.0	+0.5
DRIO			IAmb_Lg		14 25 40.5	
	comp=Z,20nm,0.7s					
JCT	**Junction City**	**3.06 101**	IAmb_Lg		14 25 48.6	
	comp=Z,23nm,1.0s					
DKNS	**Dickens**	**3.23 37**	IAmb_Lg		14 25 50.9	
	comp=Z,14nm,0.8s					
ABTX	**Abilene, Hawle**	**3.44 63**	IAmb_Lg		14 26 03.0	
	comp=Z,10nm,0.8s					
BRDY	**Brady**	**3.67 86**	IAmb_Lg		14 26 08.1	
	comp=Z,13nm,0.7s					
HNDO	**Hondo**	**3.80 114**	IAmb_Lg		14 26 15.4	
	comp=Z,13nm,0.9s					
435B	**Jarrell**	**4.90 92**	IAmb_Lg		14 26 41.4	
	comp=Z,9.5nm,0.8s					
WMOK	**Wichita Mounta**	**5.22 45**	IAML		14 27 31.1	
	comp=Z,17nm,4.6s					
WMOK			IAML		14 28 21.2	
	comp=Z,17nm,5.0s					
TUC	**Tucson**	**6.51 282**	IAmb_Lg		14 27 35.3	
	comp=Z,1.2nm,1.1s					
TUC	**Tucson**	**6.51 282**	IAmb_Lg		14 27 35.3	
	comp=Z,1.1nm,1.1s					

*IDC **10** 14:28:33.0±0.8, 60°.78S×51°.13W, h0km, mb4.1/7, mbtmp4.2/8, ML3.3/1, Error ellipse: s-maj=26.9km s-min=19.8km az=75.0*
*NEIC **10** 14:28:35.2±1.5, 60°.86S±0°.09×51°.0W±0°.2, h10km±1km, mb4.7/24, Error ellipse: s-maj=15.8km s-min=12.2km az=139.0*
ISC 10 14:28:35.4±0.5, 60°.85S±0°.07×51°.07W±0°.08, h10km, n47, σ1§41/40, mb4.6/16, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESPZ	**Base Esperanza**	**3.78**	**225**	Pn			**Pn**	**14 29 33.6**	**+0.1**
PMSA	**Palmer Station**	**7.13**	**231**				**Pn**	**14 30 17.9**	**-1.5**
PMSA	**Palmer Station**	**7.13**	**231**	Pn			**Pn**	**14 30 17.6**	**-1.9**
	0.6nm,0.3s,baz=341,slow=17,SNR=0.8								
PMSA				Sn			**Sn**	**14 31 41.6**	**+1.2**
	0.7nm,0.3s,baz=332,slow=23,SNR=2.5 16nm,1.0s								
HOPE	**Hope Point**	**10.21**	**56**	Pn			Pn	14 30 58.2	-3.5
MG02	**Cerro Sombrero**	**12.77**	**301**	Pn			**Pn**	**14 31 38.2**	**+1.4**
BELA	**Belgrano 2**	**17.92**	**169**	P			**Pn**	**14 32 43.1**	**-1.1**
SNAA	**Sanae**	**21.52**	**140**	P			**P**	**14 33 25.1**	**+1.1**
SNAA	**Sanae**	**21.52**	**140**	P			**P**	**14 33 25.2**	**+1.1**
	5.4nm,0.9s,baz=298,slow=6.3,SNR=5.2 5.4nm,0.9s								
LL06	**Loncomilla**	**23.13**	**313**	P			**P**	**14 33 41.7**	**+0.4**
PLCA	**Pao Flores**	**23.43**	**320**	P			**P**	**14 33 44.2**	**-0.2**
PLCA				IAmb			IAmb	14 33 45.1	
	comp=Z,17nm,1.4s								
PLCA	**Paso Flores**	**23.43**	**320**	P			**P**	**14 33 42.9**	**-1.6**
	comp=Z,3.9nm,1.0s,baz=143,slow=8.7,SNR=5.2 comp=Z,3.9nm,1.0s								
TRQA	**Tornquist**	**23.82**	**338**	P			**P**	**14 33 48.8**	**+0.5**
BI05	**Punta Hualpn**	**27.90**	**320**	P			**P**	**14 34 24.9**	**-0.3**
QSPA	**South Pole Qui**	**29.39**	**180**	IAmb			IAmb	14 34 45.7	
	comp=Z,5.3nm,1.0s								
QSPA	**South Pole Qui**	**29.39**	**180**	P			**P**	**14 34 39.5**	**+1.1**
	comp=Z,4.0nm,0.9s,baz=162,slow=6.5,SNR=3.8 comp=Z,4.0nm,0.9s								
MT09	**Talagante**	**30.01**	**325**	P			**P**	**14 34 44.0**	**-0.2**
MT09				IAmb			IAmb	14 34 44.9	
	comp=Z,15nm,1.1s								
MT02	**Curacav**	**30.54**	**326**	P			**P**	**14 34 48.9**	**+0.2**
MT02				IAmb			IAmb	14 35 26.4	
	comp=Z,38nm,1.4s								
ZON	**Zonda**	**31.52**	**330**	P			**P**	**14 34 56.7**	**-0.8**
ZON				IAmb			IAmb	14 35 05.2	
	comp=Z,10nm,1.4s								
GO04	**Tololo Observa**	**33.37**	**328**	P			**P**	**14 35 13.6**	**-0.2**
LCO	**Las Campanas**	**34.45**	**329**	P			**P**	**14 35 23.4**	**+0.1**
LCO				IAmb			IAmb	14 35 47.4	
	comp=Z,14nm,1.2s								
PB05	**IPOC Station P**	**40.23**	**332**	P			**P**	**14 36 11.3**	**-0.8**
PB05				IAmb			IAmb	14 36 34.3	
	comp=Z,8.7nm,1.1s								
AQDB	**Aquidauana**	**40.46**	**353**	P			**P**	**14 36 14.5**	**+0.6**
BDFB	**Brasilia**	**45.20**	**4**	P			**P**	**14 36 52.9**	**+0.5**
BDFB				IAmb			IAmb	14 36 54.0	
	comp=Z,5.2nm,0.7s								
BDFB	**Brasilia**	**45.20**	**4**	P			**P**	**14 36 51.4**	**-1.1**
	comp=Z,5.1nm,0.7s,baz=213,slow=4.8,SNR=6.4 comp=Z,5.1nm,0.7s								
LPAZ	**La Paz**	**46.16**	**337**	P			**P**	**14 36 59.7**	**-0.9**
LPAZ	**La Paz**	**46.16**	**337**	P			**P**	**14 37 00.5**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=267,slow=9.3,SNR=3.7 comp=Z,0.8nm,0.6s								
SUR	**Sutherland**	**53.59**	**92**	P			**P**	**14 37 57.1**	**+0.5**
H10S2	**ASCENSION HYDR**	**58.39**	**44**	T			T	15 41 60.0	
	baz=199								
H10S3	**ASCENSION HYDR**	**58.39**	**44**	T			T	15 42 12.0	
	baz=21								
BOSA	**Boshof**	**58.86**	**93**	IAmb			IAmb	14 38 38.4	
	comp=Z,25nm,1.5s								
BOSA	**Boshof**	**58.86**	**93**	P			**P**	**14 38 33.2**	**-0.9**
	comp=Z,4.8nm,1.1s,baz=182,slow=7.4,SNR=3.8 comp=Z,4.8nm,1.1s								
H10N3	**ASCENSION HYDR**	**59.48**	**43**	T			T	15 43 26.0	
	baz=199								
H10N1	**ASCENSION HYDR**	**59.48**	**43**	T			T	15 43 26.0	
	baz=199								
H10N2	**ASCENSION HYDR**	**59.50**	**43**	T			T	15 43 25.4	
	baz=199								
LBTB	**Lobatse**	**62.02**	**92**	P			**P**	**14 38 55.3**	**-0.5**
LBTB				IAmb			IAmb	14 39 01.4	
	comp=Z,5.0nm,0.8s								
POGA	**Pongola**	**63.05**	**98**	P			**P**	**14 39 01.8**	**-0.7**
BOAV	**Boa Vista**	**63.49**	**349**	P			**P**	**14 39 05.2**	**-0.2**
BOAV				IAmb			IAmb	14 39 06.5	
	comp=Z,8.3nm,0.8s								
QNGWA	**Qangwa**	**64.50**	**84**	P			**P**	**14 39 11.9**	**-0.3**
QNGWA				IAmb			IAmb	14 39 36.0	
	comp=Z,5.5nm,1.1s								
RUSC	**La Rusia**	**68.74**	**336**	P			**P**	**14 39 38.5**	**-1.1**
RUSC				IAmb			IAmb	14 39 39.6	
	comp=Z,4.1nm,0.7s								
ASAR	**Alice Springs**	**95.70**	**185**	P			**P**	**14 42 00.1**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=166,slow=4.2,SNR=5.1 comp=Z,0.6nm,0.9s								
GIRL	**Giralia**	**95.96**	**166**	P			**P**	**14 42 00.6**	**-1.8**
ILAR	**Eielson Array**	**144.00**	**313**	PKP			**PKPab**	**14 48 07.0**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=151,slow=2.0,SNR=6.9								
SPITS	**Spitsbergen Ar**	**144.53**	**19**	PKP			**PKPab**	**14 48 08.1**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=270,slow=2.9,SNR=5.7								
BVAR	**Borovoye Array**	**148.13**	**77**	PKPbc			**PKPdf**	**14 48 18.6**	**+1.9**
	comp=Z,4.6nm,0.8s,baz=254,slow=2.1,SNR=4.2								
MKAR	**Makanchi Array**	**149.83**	**96**	PKPbc			**PKPdf**	**14 48 23.2**	**+3.5**
	comp=Z,2.1nm,1.0s,baz=266,slow=1.9,SNR=4.2								
KURBB	**Kurchatov Arra**	**150.57**	**87**	PKPbc			**PKPdf**	**14 48 24.5**	**+3.9**
	comp=Z,1.2nm,0.2s,baz=242,slow=2.8,SNR=5.3								
KURK	**Kurchatov**	**150.67**	**87**				**PKPdf**	**14 48 24.5**	**+3.7**

*IDC **10** 14:34:25.9±0.9, 52°.61N×160°.88E, h0km, mb3.9/18, mbtmp3.9/20, ML3.9/2, MS3.0/5, Error ellipse: s-maj=22.4km s-min=17.1km az=156.0*
*KRSC **10** 14:34:26.9±1.3, 52°.36N×161°.07E, h47km±22km, Ml4.4*
*NEIC **10** 14:34:28.7±1.6, 52°.6N±0°.1×160°.98E±0°.04, h18km±5km, mb4.5/15, Error ellipse: s-maj=16.3km s-min=2.5km az=190.0*
*MOS **10** 14:34:29.6±1.1, 52°.46N×160°.91E, h46km, mb4.3/12, Error ellipse: s-maj=7.8km s-min=4.8km az=115.3*
ISC 10 14:34:30.1±0.9, 52°.45N±0°.05×160°.95E±0°.04, h34km±3km, n131, σ1§22/135, mb4.1/31, 8C-5D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**1.21**	**307**	PN			**Pn**	**14 34 49.8**	**-0.7**
NLC	**Nalytchevo**	**1.21**	**307**	*e*P			**Pn**	**14 34 49.8**	**-0.7**
DALK	**Dalny**	**1.45**	**294**	PN			**Pn**	**14 34 53.8**	**0.0**
DALK	**Dalny**	**1.45**	**294**	*e*P			**Pn**	**14 34 53.8**	**0.0**
RUS	**Russkaya**	**1.49**	**270**	PN			**Pn**	**14 34 54.3**	**0.0**
RUS				S			**Sn**	**14 35 13.1**	**+0.6**
RUS	**Russkaya**	**1.49**	**270**	*e*P			**Pn**	**14 34 54.3**	**0.0**
RUS				*e*S			**Sn**	**14 35 13.2**	**+0.6**
UGLR	**Uglovaya**	**1.50**	**301**	PN			**Pn**	**14 34 55.0**	**+0.5**
UGLR	**Uglovaya**	**1.50**	**301**	*e*P			**Pn**	**14 34 55.1**	**+0.5**
SDLR	**Sedlovina**	**1.50**	**304**	PN			**Pn**	**14 34 54.6**	**0.0**
SDLR	**Sedlovina**	**1.50**	**304**	*e*P			**Pn**	**14 34 54.6**	**0.0**
PET	**Petropavlovsk**	**1.51**	**293**				**Pn**	**14 34 54.3**	**-0.3**
PET	**Petropavlovsk**	**1.51**	**293**	*i*P			**Pn**	**14 34 54.7**	**+0.1**
PET				*e*S			**Sn**	**14 35 13.9**	**+0.9**
PET				pmax	pmax				
	comp=Z,629nm,0.5s								
PET				smax	smax				
	comp=N,1μm,0.5s								
PET				smax	smax				
	comp=E,1μm,0.5s								
PET	**Petropavlovsk**	**1.51**	**293**	*i*P			**Pn**	**14 34 54.6**	**+0.1**
PET				*e*S			**Sn**	**14 35 14.9**	**+1.9**
SMAR	**Somma**	**1.53**	**303**	PN			**Pn**	**14 34 54.9**	**-0.2**
SMAR	**Somma**	**1.53**	**303**	*e*P			**Pn**	**14 34 54.9**	**-0.2**
INSR	**Institute**	**1.55**	**294**	PN			**Pn**	**14 34 55.3**	**+0.2**
INSR	**Institute**	**1.55**	**294**	*e*P			**Pn**	**14 34 55.4**	**+0.2**
AVH	**Avacha**	**1.57**	**302**	PN			**Pn**	**14 34 55.9**	**+0.4**
AVH	**Avacha**	**1.57**	**302**	*e*P			**Pn**	**14 34 56.0**	**+0.4**
KRER	**Koryakskii**	**1.58**	**304**	PN			**Pn**	**14 34 56.1**	**+0.3**
KRER	**Koryakskii**	**1.58**	**304**	*e*P			**Pn**	**14 34 56.2**	**+0.3**
KOK	**Koryaka**	**1.63**	**302**	PN			**Pn**	**14 34 57.0**	**+0.6**
KOK	**Koryaka**	**1.63**	**302**	*e*P			**Pn**	**14 34 57.1**	**+0.6**
KRX	**Arik**	**1.66**	**304**	PN			**Pn**	**14 34 56.6**	**-0.2**
KRX	**Arik**	**1.66**	**304**	*e*P			**Pn**	**14 34 56.7**	**-0.2**
MTVR	**Mutnovka**	**1.69**	**272**	PN			**Pn**	**14 34 57.4**	**+0.2**
MTVR	**Mutnovka**	**1.69**	**272**	*e*P			**Pn**	**14 34 57.4**	**+0.2**
KRMR	**Karymshinskiy**	**1.76**	**284**	PN			**Pn**	**14 34 58.1**	**+0.1**
KRMR				S			**Sb**	**14 35 21.7**	**-1.6**
KRMR	**Karymshinskiy**	**1.76**	**284**	*e*P			**Pn**	**14 34 58.1**	**+0.1**
KRMR				*e*S			**Sb**	**14 35 21.7**	**-1.6**
GRL	**Gorelyy**	**1.76**	**274**	PN			**Pn**	**14 34 59.0**	**+0.9**
GRL	**Gorelyy**	**1.76**	**274**	*e*P			**Pn**	**14 34 59.0**	**+0.9**
KII	**Karymskiy**	**1.82**	**331**	PN			**Pn**	**14 34 59.9**	**+0.9**
KII	**Karymskiy**	**1.82**	**331**	*e*P			**Pn**	**14 34 59.9**	**+0.9**
ASAK	**Asacha**	**1.87**	**269**	PN			**Pn**	**14 35 00.2**	**+0.6**
ASAK	**Asacha**	**1.87**	**269**	*e*P			**Pn**	**14 35 00.3**	**+0.6**
KDTR	**Khodutka, Kamc**	**1.88**	**251**	PN			**Pn**	**14 34 59.2**	**-0.5**
KDTR				S			**Sn**	**14 35 21.5**	**-0.7**
KDTR	**Khodutka, Kamc**	**1.88**	**251**	*e*P			**Pn**	**14 34 59.3**	**-0.5**
KDTR				*e*S			**Sn**	**14 35 21.5**	**-0.7**
PEA0B	**Petropavlovsk-**	**2.08**	**290**				**Pn**	**14 35 02.9**	**+0.4**
PEA0B	**Petropavlovsk-**	**2.08**	**290**	*c*	*i*PN		**Pn**	**14 35 03.0**	**+0.5**
PETK	**Petropavlovsk-**	**2.08**	**290**				**Pn**	**14 35 02.3**	**-0.1**
PETK	**Petropavlovsk-**	**2.08**	**290**	Pn			**Pn**	**14 35 02.1**	**-0.4**
	comp=E,69nm,0.3s,baz=87,slow=16,SNR=551								
PETK				Sn			**Sb**	**14 35 30.5**	**-2.1**
	comp=E,56nm,0.3s,baz=291,slow=14,SNR=10								
MKZ	**Mys Kozlova**	**2.16**	**12**	PN			**Pn**	**14 35 03.7**	**+0.2**
MKZ				S			**Sn**	**14 35 29.0**	**0.0**
MKZ	**Mys Kozlova**	**2.16**	**12**	*e*P			**Pn**	**14 35 03.7**	**+0.2**
MKZ				*e*S			**Sn**	**14 35 29.1**	**0.0**
APC	**Apacha**	**2.35**	**283**	PN			**Pn**	**14 35 07.5**	**+1.3**
APC	**Apacha**	**2.35**	**283**	*e*P			**Pn**	**14 35 07.6**	**+1.3**
MIPR	**Malaya Ipel'ka**	**2.57**	**268**	PN			**Pn**	**14 35 10.7**	**+1.5**
MIPR	**Malaya Ipel'ka**	**2.57**	**268**	*e*P			**Pn**	**14 35 10.8**	**+1.5**
KZV	**Kizimen**	**2.69**	**352**	PN			**Pn**	**14 35 12.4**	**+1.3**
KZV	**Kizimen**	**2.69**	**352**	*e*P			**Pn**	**14 35 12.4**	**+1.3**
PAU	**Pauzhetka**	**2.74**	**251**	PN			**Pn**	**14 35 11.8**	**+0.3**
PAU	**Pauzhetka**	**2.74**	**251**	*e*P			**Pn**	**14 35 11.9**	**+0.3**
TUMD	**Tumrok D**	**2.78**	**354**	PN			**Pn**	**14 35 12.9**	**+0.9**
TUMD	**Tumrok D**	**2.78**	**354**	*e*P			**Pn**	**14 35 12.9**	**+0.9**
KMNR	**Kamenistaya**	**3.34**	**353**	PN			**Pn**	**14 35 23.2**	**+3.4**
KMNR	**Kamenistaya**	**3.34**	**353**	*e*P			**Pn**	**14 35 23.2**	**+3.4**
SKR	**Severo-Kuril's**	**3.50**	**241**	*e*PN			**Pn**	**14 35 19.0**	**-2.9**
SKR				pmax	pmax				
	comp=Z,34nm,0.6s								
SKR	**Severo-Kuril's**	**3.50**	**241**	*e*P			**Pn**	**14 35 21.9**	**0.0**
ESO	**Esso**	**3.72**	**340**	PN			**Pn**	**14 35 26.9**	**+1.9**
ESO	**Esso**	**3.72**	**340**	*e*P			**Pn**	**14 35 26.9**	**+1.9**
KBTR	**Krutoberegovo**	**3.92**	**15**	PN			**Pn**	**14 35 29.0**	**+1.3**
KBTR	**Krutoberegovo**	**3.92**	**15**	*e*P			**Pn**	**14 35 29.0**	**+1.3**
SHEM	**Shemya Is, Ala**	**8.02**	**83**				**Pn**	**14 36 23.1**	**-0.8**
SHEM	**Shemya Is, Ala**	**8.02**	**83**	Pn			**Pn**	**14 36 23.4**	**-0.5**
	comp=Z,4.2nm,0.3s,baz=49,slow=1.5,SNR=6.5								
SHEM				Sn			**Sn**	**14 37 50.3**	**-3.0**
	comp=Z,3.5nm,0.3s,baz=247,slow=18,SNR=7.4								
SHEM				LR			LR	14 39 56.7	
	comp=Z,52nm,18.8s,baz=282,slow=41 comp=Z,43nm,0.9s								
MA2	**Magadan**	**9.13**	**325**	LR			LR	14 40 29.4	
	comp=Z,92nm,20.3s,baz=198,slow=40								
MA2	**Magadan**	**9.13**	**325**	*e*PN			**Pn**	**14 36 39.1**	**0.0**
SEY	**Seymchan**	**11.45**	**340**	LR			LR	14 42 02.0	
	comp=Z,114nm,18.2s,baz=108,slow=40								
SEY	**Seymchan**	**11.45**	**340**	*e*PN			**Pn**	**14 37 10.7**	**-0.2**
SEY				pmax	pmax				
	comp=Z,25nm,1.9s								
JKA	**Kamikawa-asahi**	**14.76**	**243**				**Pn**	**14 37 56.1**	**0.0**
ASAJ	**Asahikawa**	**14.76**	**243**	Pn			**Pn**	**14 37 56.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=70,slow=15,SNR=6.7 comp=Z,4.3nm,0.7s								
BILL	**Bilibino**	**15.85**	**7**	*e*P			**Pn**	**14 38 10.6**	**+0.4**
BILL				pmax	pmax				
	comp=Z,14nm,2.0s								
GAMB	**Gambell**	**18.19**	**41**	Pn			**Pn**	**14 38 35.9**	**-3.6**
GAMB				IAmb			IAmb	14 39 16.2	
	comp=Z,57nm,1.3s								
YAK	**Yakutsk**	**19.25**	**312**	LR			LR	14 47 00.0	
	comp=Z,44nm,20.0s,baz=36,slow=39								
YAK	**Yakutsk**	**19.25**	**312**	*e*P			**P**	**14 38 50.5**	**-0.6**
YAK				*e*S			**S**	**14 42 22.4**	**-4.6**
YAK				pmax	pmax				
	comp=Z,13nm,0.9s								
YAK				pmax	pmax				
	comp=E,5.0nm,1.3s								
YAK				smax	smax				
	comp=N,518nm,3.9s								
YAK				smax	smax				
	comp=E,295nm,3.5s								
MJA0	**Matsu Arr-Jizo**	**22.55**	**234**	*e*P			**P**	**14 39 29.5**	**+2.5**
MJA0				pmax	pmax				
	comp=Z,2.0nm,0.5s								
MAJO	**Matsushiro**	**22.57**	**234**	P			**P**	**14 39 28.7**	**+1.5**
MAJO	**Matsushiro**	**22.57**	**234**	*e*P			**P**	**14 39 28.7**	**+1.5**
MAJO				pmax	pmax				
	comp=Z,18nm,2.3s								
MJAR	**Matsushiro Arr**	**22.57**	**234**	P			**P**	**14 39 28.4**	**+1.2**
MJAR	**Matsushiro Arr**	**22.57**	**234**	P			**P**	**14 39 28.9**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=22,slow=11,SNR=11								
MJAR				LR			LR	14 48 31.5	
	comp=Z,59nm,19.6s,baz=67,slow=37 comp=Z,1.3nm,0.6s								
MJAR	**Matsushiro Arr**	**22.57**	**234**	P			**P**	**14 39 28.4**	**+1.2**
MJAR				pmax	pmax				
	comp=Z,4.0nm,1.4s								
TIXI	**Tiksi**	**23.88**	**335**	P			**P**	**14 39 38.5**	**-1.4**
TIXI				IAmb			IAmb	14 39 40.0	
	comp=Z,9.2nm,1.4s								
TIXI	**Tiksi**	**23.88**	**335**	*i*P			**P**	**14 39 39.0**	**-0.9**
TIXI				pmax	pmax				
	comp=Z,6.0nm,1.2s								
N19K	**Bonanza Creek**	**25.44**	**53**	P			**P**	**14 39 54.6**	**+0.3**
N19K				IAmb			IAmb	14 40 19.6	
	comp=Z,24nm,1.5s								
KDAK	**Kodiak Island**	**26.67**	**60**	P			**P**	**14 40 04.6**	**-0.8**
KDAK				IAmb			IAmb	14 40 22.3	
	comp=Z,24nm,1.1s								
KDAK	**Kodiak Island**	**26.67**	**60**	P			**P**	**14 40 04.6**	**-0.8**
KDAK				pmax	pmax				
	comp=Z,24nm,1.2s								
H11N2	**WAKE ISLAND Hy**	**32.98**	**170**	T			T	15 16 49.5	
	baz=353,slow=76,SNR=21								
H11N3	**WAKE ISLAND Hy**	**33.00**	**170**	T			T	15 16 44.9	
	baz=353,slow=76,SNR=15								
H11N1	**WAKE ISLAND Hy**	**33.00**	**170**	T			T	15 17 00.5	
	baz=353,slow=76,SNR=19								
ULN	**Ulaanbaatar**	**34.15**	**284**	*e*P			**P**	**14 41 11.9**	**+0.1**
ULN				pmax	pmax				
	comp=Z,5.0nm,1.4s								
H11S1	**WAKE ISLAND Hy**	**34.17**	**170**	T			T	15 18 58.0	
	baz=352								
H11S3	**WAKE ISLAND Hy**	**34.18**	**170**	T			T	15 18 55.1	
	baz=352								
H11S2	**WAKE ISLAND Hy**	**34.19**	**170**	T			T	15 18

GERES	**GERESS Array B**	**75.30**	**338**	P		**P**	**14 46 10.6**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=29,slow=8.2,SNR=2.3							
	comp=Z,0.4nm,0.8s							
BRTR	**Keskin Array B**	**77.45**	**321**	P		**P**	**14 46 22.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=28,slow=5.8,SNR=2.2							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**79.39**	**205**	P		**P**	**14 46 33.6**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=11,slow=5.3,SNR=5.3							
	comp=Z,0.2nm,0.6s							

AFAD ***10*** *14:39:38.4, 36.21°N×31.48°E, h18km±3km, MW3.1*
ISK ***10*** *14:39:38.0, 36.12°N×31.49°E, h25km, ML2.8/16*
NIC ***10*** *14:39:40.5, 36.15°N×31.99°E, h45km±13km, Ml2.4/7*
ISC 10 14:39:37.4±1.1, 36.02N±0.03×31.49E±0.03, h32km±12km, n37, σ1s42/53, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ALAN	**Alanya-ANTALYA**	**0.69**	**39**	Pg		**Pn**		**14 39 51.1**	**+0.2**
ALAN				Sg		**Sb**		**14 40 00.0**	**-0.3**
GAZI	**Gazipasa**	**0.70**	**72**	SPECP				14 39 51.0	
GAZI				P		**Pn**		**14 39 52.0**	**+1.0**
GAZI				S		**Sb**		**14 40 00.3**	**-0.3**
GAZI				*i* IAML				14 40 02.0	
	comp=N,348nm,0.5s								
GAZI	**Gazipasa**	**0.70**	**72**	Pg		**Pn**		**14 39 52.0**	**+1.0**
GAZI				Sg		**Sn**		**14 40 02.2**	**+1.5**
AKUM	**Antalya-Kumluc**	**0.98**	**288**	SPECP				14 39 56.0	
AKUM				P		**Pn**		**14 39 56.2**	**+1.3**
AKUM				S		**Sn**		**14 40 09.5**	**+2.0**
AKUM				*i* IAML				14 40 15.0	
	comp=E,185nm,0.6s								
BOZY	**Bozyazi-Mersin**	**1.20**	**86**	Pn		**Pb**		**14 39 59.4**	**-0.2**
AKMS	**Akamas**	**1.22**	**145**	P		**Pb**		**14 40 00.6**	**+0.8**
AKMS				S		**Sb**		**14 40 16.1**	**+0.9**
AKMS				AML		AML		14 40 24.9	
	0.3nm,0.5s								
AKMS				AML		AML		14 40 25.6	
	0.3nm,0.4s								
HDMB	**Hadim**	**1.23**	**40**	Pn		**Pb**		**14 39 59.4**	**-0.9**
ALFC	**Alefka**	**1.25**	**134**	P		**Pn**		**14 39 59.6**	**+1.0**
ALFC				S		**Sn**		**14 40 14.9**	**+0.6**
ALFC				AML		AML		14 40 19.7	
	0.3nm,0.2s								
ALFC				AML		AML		14 40 21.2	
	0.3nm,0.2s								
ERMK	**Ermenek**	**1.30**	**61**	SPECP				14 40 02.0	
ERMK				P		**Pb**		**14 40 02.1**	**+0.6**
ERMK				S		**Sb**		**14 40 21.9**	**+4.0**
ERMK				*i* IAML				14 40 25.0	
	comp=E,144nm,0.4s								
TEKE	**Tekeli-Mersin**	**1.32**	**84**	Pn		**Pb**		**14 40 01.3**	**-0.3**
KORT	**Korkueli**	**1.34**	**317**	SPECP				14 40 01.0	
KORT				P		**Pb**		**14 40 01.5**	**-0.5**
KORT	**Korkueli**	**1.34**	**317**	Pn		**Pb**		**14 40 00.7**	**-1.4**
SEYD	**Seydisehir-KON**	**1.41**	**11**	Pn		**Pb**		**14 40 01.7**	**-1.5**
BERE	**Bereket-Mersin**	**1.44**	**76**	Pn		**Pb**		**14 40 02.8**	**-0.9**
SEDI	**Konya, Seydise**	**1.44**	**8**	SPECP				14 40 01.0	
SEDI				P		**Pn**		**14 40 01.7**	**+0.3**
SEDI				S		**Sb**		**14 40 20.1**	**-1.6**
SEDI				*i* IAML				14 40 25.0	
	comp=N,70nm,0.5s								
ELL	**Elmali**	**1.47**	**300**	Pn		**Pb**		**14 40 02.9**	**-1.3**
BUCA	**Burdur, Bucak-**	**1.50**	**330**	P		**Pb**		**14 40 05.3**	**+0.6**
AKAS	**Kas**	**1.54**	**278**	P		**Pn**		**14 40 02.1**	**-0.6**
TROD	**Troodos**	**1.55**	**133**	P		**Pn**		**14 40 04.2**	**+1.2**
TROD				S		**Sn**		**14 40 21.9**	**-0.2**
TROD				AML		AML		14 40 38.8	
	0.1nm,0.5s								
TROD				AML		AML		14 40 42.6	
	0.1nm,0.4s								
YORU	**Yoruktepe-Mers**	**1.55**	**85**	Pn		**Pb**		**14 40 04.7**	**-0.9**
XYLS	**Xyliatos**	**1.62**	**128**	P		**Pn**		**14 40 04.3**	**+0.6**
XYLS				S		**Sn**		**14 40 22.7**	**-0.9**
XYLS				AML		AML		14 40 26.5	
	0.2nm,0.3s								
XYLS				AML		AML		14 40 26.9	
	0.2nm,0.4s								
TEVE	**Tevekalti-Mers**	**1.63**	**75**	Pn		**Pn**		**14 40 05.5**	**+1.6**
GULN	**MERSIN_Gulnar**	**1.67**	**84**	SPECP				14 40 06.0	
GULN				P		**Pb**		**14 40 06.3**	**-1.2**
GULN				S		**Sb**		**14 40 27.3**	**-0.8**
GULN				*i* IAML				14 40 32.0	
	comp=N,32nm,0.4s								
KKBE	**Karaman, Kazim**	**1.67**	**44**	SPECP				14 40 07.0	
KKBE				P		**Pb**		**14 40 07.2**	**-0.4**
KKBE				S		**Sb**		**14 40 30.6**	**+2.4**
KKBE				*i* IAML				14 40 32.0	
	comp=N,74nm,0.4s								
LFK	**Lefkose**	**1.82**	**113**	Pn		**Pb**		**14 40 08.9**	**-1.2**
KRMN	**Karaman**	**1.83**	**51**	Pn		**Pn**		**14 40 07.9**	**+1.2**
CSS	**Mathiatis**	**1.83**	**125**	P		**Pn**		**14 40 06.6**	**-0.1**
CSS				S		**Sn**		**14 40 26.7**	**-2.1**
CSS				AML		AML		14 40 44.8	
	0.1nm,0.5s								
CSS				AML		AML		14 40 45.1	
	0.1nm,0.5s								
KEBE	**Keben-Mersin**	**1.84**	**76**	Pn		**Pn**		**14 40 08.5**	**+1.7**
ASGA	**Asgata**	**1.89**	**130**	S		**Sn**		**14 40 29.7**	**-0.4**
ASGA				AML		AML		14 40 40.8	
	0.1nm,0.7s								
ASGA				AML		AML		14 40 46.0	
	0.1nm,0.6s								
SILI	**Silifke-Mersin**	**2.00**	**79**	Pn		**Pn**		**14 40 10.9**	**+2.1**
MVOU	**Mavrovouni**	**2.01**	**119**	P		**Pn**		**14 40 08.8**	**-0.2**
MVOU				S		**Sn**		**14 40 30.6**	**-2.5**
MVOU				AML		AML		14 40 46.6	
	0.1nm,0.4s								
MVOU				AML		AML		14 40 48.4	
	0.1nm,0.5s								
KIZK	**Mersin**	**2.19**	**77**	P		**Pb**		**14 40 14.8**	**-1.5**
KIZK				S		**Sb**		**14 40 42.5**	**-0.6**
KIZK				*i* IAML				14 40 48.0	
	comp=N,11nm,0.4s								
KIZK	**Mersin**	**2.19**	**77**	Pn		**Pn**		**14 40 13.6**	**+2.1**
YVAC	**Isparta, Yalva**	**2.25**	**355**	P		**Pn**		**14 40 13.8**	**+1.2**
LADK	**Ladik-KONYA**	**2.28**	**18**	Pn		**Pn**		**14 40 13.9**	**+1.0**
ALIN	**Konya, Altinte**	**2.53**	**26**	P		**Pn**		**14 40 17.1**	**+0.8**
KERG	**Konya-Eregli**	**2.53**	**56**	SPECP				14 40 19.0	
KERG				P		**Pb**		**14 40 19.9**	**-2.3**
KERG				*i* IAML				14 40 41.0	
	comp=N,40nm,1.2s								
KERG				S		**Sb**		**14 40 50.2**	**-2.7**
KERG				*i* IAML				14 40 52.0	
	comp=E,29nm,0.9s								

ISK ***10*** *14:42:58.9, 36.39N×29.24E, h11km, ML2.9/14*
AFAD ***10*** *14:42:59.2, 36.41N×29.26E, h26km, ML2.7*
THE ***10*** *14:43:00.0, 36°N±11°×2°9E±1°5, h13km±22km, M2.7/6, MLh2.7/6*
ATH ***10*** *14:43:00.2, 36.37N×29.32E, h50km±10km, ML2.9/6, Manual Solution by D.Makaris First location: 2019/11/10 14:44:24, This location: 2019/11/10 15:10:46 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
GII ***10*** *14:43:03.0±0.0, 35.770N±0.003×29.576E±0.001, h3km, Mws2.9, confirmed*
ISC 10 14:42:58.7±0.9, 36.36N±0.03×29.30E±0.02, h32km±6km, n70, σ1s57/93, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IZZE	**Mula-Seydike**	**0.10**	**322**	P		**Pb**		**14 43 03.8**	**-0.5**
IZZE				*i* IAML				14 43 07.0	
	comp=N,4μm,0.2s								
IZZE				*i* IAML				14 43 07.0	
	comp=E,7μm,0.4s								
IZZE				S		**Sb**		**14 43 07.4**	**-0.7**
AKAS	**Kas**	**0.28**	**117**	P		**Pn**		**14 43 06.8**	**+0.1**
AKAS				S		**Sb**		**14 43 13.3**	**+2.1**
AKAS				*i* IAML				14 43 15.0	
	comp=N,2μm,0.9s								
AKAS	**Kas**	**0.28**	**117**	Pg		**Pn**		**14 43 06.8**	**+0.1**
FETY	**Fethiye**	**0.33**	**328**	P		Pb		14 42 56.9	-10
FETY				S		Sb		14 43 01.9	-10
DEMR	**Demre-Antalya**	**0.50**	**104**	Pg		**Pn**		**14 43 09.9**	**+0.2**
DEMR				Sg		**Sn**		**14 43 18.6**	**+1.4**
KNIK	**Mula-Seydike**	**0.53**	**24**	P		**Pb**		**14 43 09.3**	**-0.5**
KNIK				S		**Sb**		**14 43 17.4**	**-0.1**
KNIK				*i* IAML				14 43 19.0	
	comp=N,345nm,0.4s								
KNIK				*i* IAML				14 43 20.0	
	comp=E,331nm,0.6s								
SABU	**Mula-Dalaman**	**0.54**	**330**	P		**Pb**		**14 43 09.1**	**-0.6**
CAME	**Cameli-Denizli**	**0.58**	**0**	Pg		**Pb**		**14 43 10.0**	**-0.7**
CAME				Sg		**Sb**		**14 43 18.6**	**-0.3**
ELL	**Elmali**	**0.63**	**51**	Pg		**Pb**		**14 43 11.4**	**+0.1**
DALY	**Dalyan (Mula)**	**0.69**	**312**	Pg		**Pb**		**14 43 11.7**	**-0.6**
CAEL	**Denizli, Camel**	**0.76**	**1**	P		**Pn**		**14 43 13.0**	**-0.1**
AKUM	**Antalya-Kumluc**	**0.84**	**92**	P		**Pb**		**14 43 16.3**	**+1.5**
GOLH	**Golhisar**	**0.90**	**13**	P		**Pn**		**14 43 15.5**	**+0.2**
GOLH				S		**Sb**		**14 43 28.7**	**+1.0**
GOLH				*i* IAML				14 43 31.0	
	comp=N,217nm,0.8s								
GOLH				*i* IAML				14 43 31.0	
	comp=E,206nm,0.5s								
DNZT	**Denizli-Tavas-**	**0.94**	**347**	P		**Pn**		**14 43 16.4**	**+0.6**
DNZT				P		**Pb**		**14 43 16.6**	**0.0**
TURN	**Turunc**	**0.95**	**296**	P		**Pn**		**14 43 16.7**	**+1.0**
TURN				S		**Sn**		**14 43 28.5**	**+0.3**
TURN				*i* IAML				14 43 31.0	
	comp=N,123nm,0.4s								
TURN				*i* IAML				14 43 33.0	
	comp=E,129nm,0.4s								
TURN	**Turunc**	**0.95**	**296**	Pg		**Pn**		**14 43 16.1**	**+0.4**
ARG	**Arkhangelos**	**0.96**	**262**	Pg		**Pb**		**14 43 16.8**	**0.0**
ARG	**Arkhangelos**	**0.96**	**262**	P		**Pb**		**14 43 16.8**	**0.0**
ARG				S		**Sb**		**14 43 30.4**	**+1.2**
ARG	**Arkhangelos**	**0.96**	**262**	P		**Pb**		**14 43 17.0**	**+0.2**
ARG				S		**Sb**		**14 43 30.6**	**+1.5**
KORT	**Korkueli**	**1.06**	**52**	P		**Pb**		**14 43 19.6**	**+1.1**
KORT	**Korkueli**	**1.06**	**52**	Pn		**Pb**		**14 43 20.1**	**+1.5**
APMY	**Acipayam-Deniz**	**1.11**	**0**	Pg		**Pb**		**14 43 19.7**	**+0.3**
YER	**Yerkesik**	**1.13**	**314**	Pg		**Pb**		**14 43 20.5**	**+0.9**
YER	**Yerkesik**	**1.13**	**314**	P		**Pb**		**14 43 20.6**	**+0.9**
YER				S		**Sb**		**14 43 36.6**	**+2.6**
TAVA	**DENIZLI_Tavas**	**1.15**	**344**	P		**Pn**		**14 43 19.3**	**+0.7**
TAVA				S		**Sn**		**14 43 34.2**	**+0.9**
TAVA				*i* IAML				14 43 37.0	
	comp=N,135nm,0.5s								
MULA	**Mugla, Merkez-**	**1.19**	**319**	P		**Pn**		**14 43 20.5**	**+1.3**
ANTB	**Antalya**	**1.22**	**63**	Pn		**Pb**		**14 43 22.9**	**+1.8**
DNIZ	**Denizli-Tavas-**	**1.28**	**351**	P		**Pb**		**14 43 22.6**	**+0.3**
DNIZ				S		**Sb**		**14 43 39.0**	**+0.5**
DNIZ				*i* IAML				14 43 41.0	
	comp=N,618nm,0.5s								
INCE	**Denizli-Bozkur**	**1.37**	**9**	P		**Pb**		**14 43 23.9**	**+0.2**
INCE				S		**Sb**		**14 43 42.7**	**+1.8**
INCE				*i* IAML				14 43 43.0	
	comp=E,201nm,0.8s								
DATC	**Datca-Mugla**	**1.38**	**287**	Pn		**Pb**		**14 43 23.8**	**-0.1**
BUCA	**Burdur, Bucak-**	**1.40**	**46**	P		**Pb**		**14 43 25.1**	**+0.9**
DAT	**Datca**	**1.44**	**285**	Pn		**Pb**		**14 43 24.8**	**-0.1**
DAT	**Datca**	**1.44**	**285**	P		**Pn**		**14 43 24.2**	**+1.6**
DAT				S		**Sb**		**14 43 43.2**	**+0.4**
BRDR	**BURDUR-Merkez**	**1.47**	**24**	P		**Pb**		**14 43 26.0**	**+0.6**
BCK	**Bucak**	**1.51**	**43**	Pn		**Pb**		**14 43 26.5**	**+0.4**
ESEN	**Aydn-Nazilli**	**1.63**	**332**	P		**Pn**		**14 43 27.0**	**+1.9**
ESEN				S		**Sb**		**14 43 47.9**	**-0.2**
ESEN				*i* IAML				14 43 50.0	
	comp=E,85nm,0.8s								
BODT	**Bodrum**	**1.75**	**294**	P		**Pn**		**14 43 28.8**	**+2.0**
BODT				S		**Sb**		**14 43 52.2**	**+0.5**
ISP	**Isparta**	**1.76**	**33**	P		**Pn**		**14 43 28.6**	**+1.6**
KARP	**Karpathos**	**1.92**	**246**	P		**Pn**		**14 43 30.9**	**+1.8**
KARP				S		**Sn**		**14 43 54.1**	**+2.0**
KARP	**Karpathos**	**1.92**	**246**	P		**Pn**		**14 43 31.0**	**+1.8**
SMG	**Samos**	**2.39**	**305**	P		**Pn**		**14 43 37.0**	**+1.3**
SMG				S		**Sn**		**14 44 05.9**	**+2.1**
SMG	**Samos**	**2.39**	**305**	P		**Pn**		**14 43 36.8**	**+1.2**
SMG				S		**Sn**		**14 44 04.1**	**+0.3**
ZKR	**Zakros**	**2.80**	**245**	P		**Pn**		**14 43 43.7**	**+2.5**
ZKR	**Zakros**	**2.80**	**245**	P		**Pn**		**14 43 43.4**	**+2.1**
ZKR				S		**Sn**		**14 44 15.4**	**+1.5**
AKMS	**Akamas**	**2.81**	**118**	P		**Pn**		**14 43 42.6**	**+1.2**
AKMS				S		**Sn**		**14 44 14.2**	**0.0**
ALFC	**Alefka**	**2.94**	**113**	P		**Pn**		**14 43 43.8**	**+0.6**
ALFC				S		**Sn**		**14 44 17.9**	**+0.5**
THERA	**Ancient Thera,**	**3.09**	**271**	P		**Pn**		**14 43 46.2**	**+1.0**
NATA	**Nata**	**3.10**	**120**	P		**Pn**		**14 43 46.6**	**+1.2**
NPS	**Neapolis**	**3.19**	**251**	P		**Pn**		**14 43 48.0**	**+1.3**
CHOS	**Chios island**	**3.28**	**309**	P		**Pn**		**14 43 50.0**	**+2.1**
CHOS				S		**Sn**		**14 44 27.5**	**+1.5**
EAG2	**Marmaro, Chios**	**3.35**	**312**	P		**Pn**		**14 43 49.6**	**+0.9**
CSS	**Mathiatis**	**3.56**	**112**	P		**Pn**		**14 43 53.7**	**+1.9**
CSS	**Mathiatis**	**3.56**	**112**	P		**Pn**		**14 43 53.4**	**+1.6**
ASGA	**Asgata**	**3.58**	**115**	P		**Pn**		**14 43 53.6**	**+1.6**
IDI	**Anoyia**	**3.74**	**255**	P		**Pn**		**14 43 55.4**	**+1.1**
MVOU	**Mavrovouni**	**3.77**	**110**	P		**Pn**		**14 43 55.4**	**+0.8**
KARY	**Karystos**	**4.23**	**295**	P		**Pn**		**14 44 01.9**	**+1.0**
RODP	**Rodopos**	**4.57**	**262**	P		**Pn**		**14 44 06.2**	**+0.6**
DION	**Dionisos Attik**	**4.62**	**293**	P		**Pn**		**14 44 07.8**	**+1.6**
MMA0B	**Mount Meron ar**	**6.03**	**122**	P		**Pn**		**14 44 26.6**	**+0.9**
MMA0B	**Mount Meron ar**	**6.03**	**122**	S		**Sn**		**14 45 31.8**	**-2.0**
GEM	**Giv'at Ha'Em**	**6.10**	**119**	P		**Pn**		**14 44 27.8**	**+1.1**
PRNI	**Paran**	**7.66**	**140**	P		**Pn**		**14 44 48.2**	**+0.2**
PRNI	**Paran**	**7.66**	**140**	S		**Sn**		**14 46 08.7**	**-5.0**
KRMI	**Paran Flat**	**7.70**	**142**	P		**Pn**		**14 44 48.3**	**-0.4**
KRMI	**Paran Flat**	**7.70**	**142**	S		**Sn**		**14 46 09.3**	**-5.5**
MBRI	**Mt Berech**	**8.06**	**143**	P		**Pn**		**14 44 53.5**	**-0.1**
MBRI	**Mt Berech**	**8.06**	**143**	S		**Sn**		**14 46 19.1**	**-4.6**
EIL	**Elat**	**8.18**	**143**	P		**Pn**		**14 44 54.8**	**-0.4**
EIL	**Elat**	**8.18**	**143**	S		**Sn**		**14 46 21.9**	**-4.8**

DNK ***10*** *14:49:43.4±1.2, 57.52N×22.19E, h6km±29km, ML2.2*
UPP ***10*** *14:49:45.5±2.3, 57.59N×21.89E, h0km, ML2.2, Presumed earthquake*
EST ***10*** *14:49:47.8±0.1, 57.68N×21.53E, h0km, ML1.8(HEL), Explosion*
BER ***10*** *14:49:47.5±0.4, 57.25N×21.23E, h0km, ML1.6, Suspected explosion*
HEL ***10*** *14:49:47.7±0.1, 57.68N×21.54E, h0km, ML1.8, Explosion*
IDC ***10*** *14:49:49.6±2.2, 57.88N×21.54E, h0km, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=23.2km s-min=8.9km az=169.0*
LVSN ***10*** *14:49:50.9±4.8, 57.67N×22.72E, h0km±19km, ML2.1*
ISC 10 14:49:46.7±0.8, 57.69N±0.03×21.52E±0.02, h0km, n80, σ1s42/101, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.42**	**98**	*e*P		**Pg**		**14 49 55.0**	**+0.4**
SLIT	**Slitere, Latvi**	**0.42**	**98**	*e*P		**Pg**		**14 49 54.9**	**+0.2**
SLIT				*e*S		**Sg**		**14 50 00.7**	**+0.7**
SLIT				AML		AML		14 50 26.2	
	comp=N,582nm,0.6s								
SLIT				AML		AML		14 50 26.4	
	comp=E,1μm,0.6s								
SLIT				AML		AML		14 50 26.6	
	comp=Z,783nm,0.7s								
SLIT	**Slitere, Latvi**	**0.42**	**98**	*e*P		**Pg**		**14 49 54.9**	**+0.2**
SLIT				*e*S		**Sg**		**14 50 00.2**	**+0.2**
EE06	**Soera, Palade,**	**1.46**	**28**	*e*P		**Pn**		**14 50 13.7**	**-0.6**
EE06				*e*S		**Sg**		**14 50 33.3**	**-0.4**
GOTU	**Gotland**	**1.59**	**271**	*e*P		**Pn**		**14 50 16.1**	**0.0**
GOTU				*e*S		**Sn**		**14 50 37.2**	**0.0**
GOTU				smax		smax		14 50 38.7	
	comp=Z,4.2nm,0.1s								
EE01	**Perakula, Nova**	**1.88**	**35**	*e*P		**Pn**		**14 50 20.9**	**+0.9**
EE01				*e*PN		**Pb**		**14 50 21.3**	**-0.6**
EE01				*e*SG		**Sb**		**14 50 46.5**	**+0.6**
VSVD	**Vaisvydziai**	**2.16**	**141**	*e*P		**Pn**		**14 50 24.1**	**+0.2**
EE08	**Sarghaua, Vand**	**2.20**	**62**	*e*P		**Pn**		**14 50 25.6**	**+1.2**
EE08				*e*SB		**Sb**		**14 50 54.2**	**-0.8**
EE02	**Kiisa, Saku**	**2.25**	**47**	*e*PB		**Pn**		**14 50 27.2**	**+2.1**
EE02				*e*SG		**Sb**		**14 50 57.5**	**+1.0**
NYNU	**Nynaeshamn**	**2.28**	**307**	P		**Pn**		**14 50 27.2**	**+1.7**
NYNU				S		**Sb**		**14 50 59.0**	**+1.7**
NYNU	**Nynaeshamn**	**2.28**	**307**	P		**Pn**		**14 50 27.2**	**+1.7**
NYNU				S		**Sb**		**14 50 59.0**	**+1.7**
TVF	**Tvarminne**	**2.34**	**22**	*e*PB		**Pn**		**14 50 28.5**	**+2.1**
TVF				*e*SG		**Sb**		**14 50 59.8**	**+0.7**
TVF				smax		smax		14 51 04.0	
	comp=Z,4.3nm,0.1s								
BYXU	**Byxelkrok**	**2.47**	**263**	P		**Pn**		**14 50 29.6**	**+1.5**
BYXU	**Byxelkrok**	**2.47**	**263**	P		**Pn**		**14 50 29.6**	**+1.5**
NRTU	**Norrtaelje**	**2.50**	**324**	P		**Pn**		**14 50 30.0**	**+1.4**
NRTU	**Norrtaelje**	**2.50**	**324**	P		**Pn**		**14 50 30.0**	**+1.4**
NRTU	**Norrtaelje**	**2.50**	**324**	*e*P		**Pn**		**14 50 29.9**	**+1.4**
NRTU				*e*SB		**Sn**		**14 51 03.0**	**+3.2**
NRTU				smax		smax		14 51 07.3	
	comp=Z,2.9nm,0.1s								
PABE	**Paberze**	**2.57**	**147**	*e*P		**Pn**		**14 50 30.6**	**+1.1**
PABE	**Paberze**	**2.57**	**147**	*e*P		**Pn**		**14 50 30.8**	**+1.3**
PABE				AML		AML		14 50 31.1	
	comp=Z,14nm,0.1s								
PABE				*e*S		**Sn**		**14 51 03.5**	**+2.0**
PABE				AML		AML		14 51 05.7	
	comp=E,25nm,0.3s								
PABE				AML		AML		14 51 21.8	
	comp=N,22nm,0.6s								
AAL	**Aland**	**2.62**	**343**	*e*P		**Pn**		**14 50 30.9**	**+0.7**
AAL	**Aland**	**2.62**	**343**	*e*P		**Pn**		**14 50 30.9**	**+0.7**
AAL				*e*SB		**Sb**		**14 51 06.6**	**-0.6**
AAL				smax		smax		14 51 11.8	
	comp=Z,3.9nm,0.1s								
VSTU	**Vaestervik**	**2.68**	**272**	P		**Pn**		**14 50 32.8**	**+1.8**
VSTU	**Vaestervik**	**2.68**	**272**	P		**Pn**		**14 50 32.8**	**+1.8**
VIKU	**Vikbolandet**	**2.69**	**290**	P		**Pn**		**14 50 32.7**	**+1.5**
VIKU	**Vikbolandet**	**2.69**	**290**	P		**Pn**		**14 50 32.7**	**+1.5**
EE03	**Tooma soojaam,**	**2.77**	**63**	*e*P		**Pn**		**14 50 33.6**	**+1.3**
EE03				*e*SB		**Sb**		**14 51 09.8**	**-1.8**
VSU	**Vasula**	**2.88**	**72**	*e*P		**Pn**		**14 50 33.5**	**-0.2**
VSU	**Vasula**	**2.88**	**72**	*e*P		**Pn**		**14 50 33.7**	**0.0**
VSU				AML		AML		14 51 20.9	
	comp=N,23nm,0.4s								
VSU				AML		AML		14 51 24.4	
	comp=Z,16nm,0.6s								
VSU				AML		AML		14 51 25.4	
	comp=E,50nm,0.6s								
VSU	**Vasula**	**2.88**	**72**	*e*P		**Pn**		**14 50 33.6**	**-0.2**
VSU				*e*S		**Sn**		**14 51 09.0**	**0.0**
MEF	**Metsahovi**	**2.94**	**29**	*e*P		**Pn**		**14 50 35.1**	**+1.0**
MEF	**Metsahovi**	**2.94**	**29**	*e*P		**Pn**		**14 50 37.9**	**+3.3**
MEF				AML		AML		14 51 20.0	
	comp=Z,7.3nm,0.8s								
MEF				AML		AML		14 51 24.5	
	comp=N,6.4nm,0.4s								
MEF				AML		AML		14 51 25.8	
	comp=E,8.2nm,0.7s								
MEF	**Metsahovi**	**2.94**	**29**	*e*PB		**Pn**		**14 50 37.9**	**+3.3**
MEF				*e*SB		**Sb**		**14 51 15.8**	**-0.5**
MEF				smax		smax		14 51 19.6	
	comp=Z,3.3nm,0.1s								
OSKU	**Oskarshamn**	**2.97**	**263**	P		**Pn**		**14 50 36.3**	**+1.3**
OSKU	**Oskarshamn**	**2.97**	**263**	P		**Pn**		**14 50 36.3**	**+1.3**
FIBU	**Brunna**	**3.11**	**317**	P		**Pn**		**14 50 38.4**	**+1.6**
FIBU	**Brunna**	**3.11**	**317**	P		**Pn**		**14 50 38.4**	**+1.6**
BACU	**Backbrunna**	**3.16**	**315**	P		**Pn**		**14 50 39.4**	**+1.7**
BACU	**Backbrunna**	**3.16**	**315**	P		**Pn**		**14 50 39.4**	**+1.7**
LNKU	**Linkoeping**	**3.25**	**282**	P		**Pn**		**14 50 40.4**	**+1.4**
LNKU	**Linkoeping**	**3.25**	**282**	P		**Pn**		**14 50 40.4**	**+1.4**
EKSU	**Eksjoe**	**3.35**	**271**	P		**Pn**		**14 50 41.5**	**+1.3**
EKSU	**Eksjoe**	**3.35**	**271**	P		**Pn**		**14 50 41.5**	**+1.3**
RAF	**Rauma**	**3.35**	**2**	*e*P		**Pn**		**14 50 41.6**	**+1.4**
RAF	**Rauma**	**3.35**	**2**	*e*P		**Pn**		**14 50 41.1**	**+0.9**
OSTU	**Oestervaala**	**3.42**	**320**	P		**Pn**		**14 50 42.6**	**+1.4**
OSTU	**Oestervaala**	**3.42**	**320**	P		**Pn**		**14 50 42.6**	**+1.4**
VXJU	**Vaexsjoe**	**3.65**	**261**	P		**Pn**		**14 50 45.3**	**+0.9**
VXJU	**Vaexsjoe**	**3.65**	**261**	P		**Pn**		**14 50 45.3**	**+0.9**
ASKU	**Askersund**	**3.74**	**292**	P		**Pn**		**14 50 47.3**	**+1.8**
ASKU	**Askersund**	**3.74**	**292**	P		**Pn**		**14 50 47.3**	**+1.8**
NRAU	**Nora**	**3.88**	**302**	P		**Pn**		**14 50 48.9**	**+1.3**
NRAU	**Nora**	**3.88**	**302**	P		**Pn**		**14 50 48.9**	**+1.3**
FALU	**Falun**	**4.07**	**316**	P		**Pn**		**14 50 51.5**	**+1.4**
FALU	**Falun**	**4.07**	**316**	P		**Pn**		**14 50 51.5**	**+1.4

HGSD	**Ruisui**	**1.01 254**	P		**Pg**	**15 13 22.2**	**+0.5**
HGSD			*e*S		**Sg**	**15 13 34.5**	**-0.4**
LXIB	**Xiulin Townshi**	**1.01 285**	*e*P		**Pb**	**15 13 22.3**	**+0.4**
LXIB			*e*S		**Sb**	**15 13 36.3**	**+1.0**
ETLH	**Xiulin Townshi**	**1.02 296**	P		**Pn**	**15 13 22.3**	**-0.2**
ETLH			S		**Sb**	**15 13 35.8**	**+0.5**
TWC	**Suao**	**1.02 325**	P		**Pn**	**15 13 23.2**	**+0.7**
EHYH	**Wanrong**	**1.08 256**	P		**Pn**	**15 13 23.9**	**+0.5**
EHYH			*i* S		**Sb**	**15 13 37.8**	**+0.6**
EHY	**Hungye**	**1.10 256**	*e*P		**Pb**	**15 13 23.8**	**+0.5**
EHY			*e*S		**Sb**	**15 13 38.6**	**+0.9**
NDS	**Dongshan**	**1.11 321**	P		**Pn**	**15 13 24.6**	**+0.9**
YULB	**Yu-li**	**1.15 251**	P		**Pb**	**15 13 24.2**	**0.0**
YULB	**Yu-li**	**1.15 251**	S		**Sg**	**15 13 39.5**	**+0.1**
YULB	**Yu-li**	**1.15 251**	P		**Pb**	**15 13 24.7**	**+0.4**
YULB			S		**Sg**	**15 13 39.0**	**-0.5**
CHKH	**Chenggong**	**1.16 240**	*e*S		**Sg**	**15 13 38.2**	**-1.3**
LATG	**Datong**	**1.16 311**	*e*P		**Pn**	**15 13 24.7**	**+0.1**
TWF1	**Yuli**	**1.17 249**	*e*P		**Pb**	**15 13 24.7**	**+0.3**
TWF1			*e*S		**Sg**	**15 13 40.0**	**+0.1**
WHF	**Hehuan Shan**	**1.18 289**	P		**Pb**	**15 13 25.1**	**+0.2**
WHF			S		**Sb**	**15 13 40.3**	**-0.1**
EGS		**1.18 335**	*e*P		**Pn**	**15 13 25.3**	**+0.5**
NNSB	**Datong**	**1.20 303**	P		**Pn**	**15 13 25.6**	**+0.4**
TWE	**Neicheng**	**1.21 322**	*e*P		**Pn**	**15 13 25.5**	**+0.4**
ENTT	**Nioudou**	**1.21 316**	P		**Pn**	**15 13 26.0**	**+0.9**
OWD	**Renai**	**1.21 279**	*e*P		**Pg**	**15 13 25.6**	**0.0**
OWD			*e*S		**Sg**	**15 13 40.8**	**-0.6**
NNS	**Nan Shan**	**1.22 303**	*e*P		**Pn**	**15 13 25.8**	**+0.4**
NNS			*e*S		**Sn**	**15 13 41.8**	**-0.2**
CHKT	**Chengkung**	**1.23 237**	*e*S		**Sb**	**15 13 39.8**	**-1.5**
FUSS	**Fushou**	**1.23 293**	*e*P		**Pn**	**15 13 25.9**	**+0.2**
VWDT	**VWDT**	**1.23 270**	P		**Pg**	**15 13 26.1**	**+0.2**
VWDT			S		**Sb**	**15 13 41.5**	**0.0**
FULB	**Fuli**	**1.23 243**	*e*P		**Pn**	**15 13 24.3**	**-1.2**
FULB			*e*S		**Sb**	**15 13 40.7**	**-0.8**
HATJ	**Hateruma jima**	**1.24 76**	*e*S		**Sg**	**15 13 42.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.27 63**	P		**Pg**	**15 13 26.7**	**+0.2**
WUSB	**Renai**	**1.27 280**	*e*P		**Pn**	**15 13 26.4**	**+0.3**
FUSB	**Fushanzhiwuyua**	**1.28 320**	*e*P		**Pg**	**15 13 26.7**	**-0.2**
TWT	**Tachien**	**1.29 292**	*e*P		**Pg**	**15 13 27.7**	**+0.7**
TWT			*e*S		**Sb**	**15 13 43.1**	**-0.2**
TDCB	**Techi**	**1.31 292**	*e*P		**Pg**	**15 13 27.6**	**+0.2**
TWB1	**Santiao Chiao**	**1.31 340**	*e*P		**Pn**	**15 13 26.5**	**-0.1**
EHD	**Haiduan**	**1.33 243**	*e*P		**Pn**	**15 13 26.8**	**+0.1**
TIPB	**Shuangxi**	**1.34 333**	*e*P		**Pg**	**15 13 27.9**	**0.0**
NWLT	**Wulai**	**1.35 318**	*e*P		**Pg**	**15 13 27.9**	**-0.2**
YHNB	**Yeheng**	**1.35 312**	P		**Pg**	**15 13 27.8**	**-0.4**
YHNB	**Yeheng**	**1.35 312**	*e*P		**Pg**	**15 13 27.8**	**-0.4**
NSK	**Sanguang**	**1.37 311**	*e*P		**Pn**	**15 13 27.6**	**+0.2**
SSLB	**Suanglung**	**1.41 271**	P		**Pn**	**15 13 28.9**	**+0.4**
SSLB	**Suanglung**	**1.41 271**	*e*P		**Pn**	**15 13 28.4**	**+0.6**
SXI1	**Grass Mountain**	**1.43 337**	*e*P		**Pb**	**15 13 28.7**	**-0.3**
LDUT	**Ludao**	**1.44 221**	*e*P		**Pn**	**15 13 27.8**	**-0.5**
SMLT	**Sun Moon Lake**	**1.46 275**	*e*P		**Pn**	**15 13 28.8**	**+0.2**
TWA	**Mucha**	**1.46 326**	*e*P		**Pb**	**15 13 29.3**	**-0.1**
ELDTW	**Lidau**	**1.47 247**	*e*P		**Pn**	**15 13 28.2**	**-0.5**
JKRS	**Kuro-shima**	**1.47 71**	P		**Pb**	**15 13 29.8**	**+0.3**
JKRS			S		**Sn**	**15 13 48.1**	**+0.2**
WCS	**Beigang Elemen**	**1.47 282**	*e*P		**Pb**	**15 13 29.8**	**+0.2**
TYC	**Yuchr**	**1.50 275**	*e*P		**Pb**	**15 13 30.4**	**+0.3**
WHYT	**Xinyi Township**	**1.50 268**	*e*P		**Pb**	**15 13 30.8**	**+0.6**
TATO	**Taipei**	**1.51 323**	P		**Pg**	**15 13 31.3**	**+0.2**
KSHI	**Guanxi Townshi**	**1.56 310**	*e*P		**Pg**	**15 13 32.5**	**+0.4**
ALS	**Alishan**	**1.56 261**	*e*P		**Pb**	**15 13 31.7**	**+0.3**
LIOB	**Emei**	**1.60 303**	*e*P		**Pg**	**15 13 33.2**	**+0.2**
NSTT	**Nanjuang**	**1.60 303**	*e*P		**Pg**	**15 13 32.7**	**-0.3**
YM01	**YM01**	**1.60 329**	*e*P		**Pn**	**15 13 30.5**	**-0.1**
JIJ	**Ishigaki jima**	**1.62 68**	P		**Pn**	**15 13 31.2**	**+0.3**
ZUZH	**Zhuzihu**	**1.63 328**	*e*P		**Pb**	**15 13 32.1**	**-0.3**
YM08	**YM08**	**1.63 330**	*e*P		**Pb**	**15 13 31.9**	**-0.5**
WNT	**Mingjian**	**1.66 274**	*e*P		**Pg**	**15 13 34.0**	**0.0**
TWQ1	**Liyutan**	**1.67 291**	*e*P		**Pg**	**15 13 33.8**	**-0.5**
TPUB	**Ta-pu**	**1.77 255**	P		**Pb**	**15 13 34.7**	**0.0**
JISG	**Ishigakijimahi**	**1.85 64**	P		**Pn**	**15 13 34.9**	**+0.9**
JISG			*e*S		**Sn**	**15 13 57.1**	**-0.4**
JTJ	**Tarama**	**2.20 66**	*e*P		**Pn**	**15 13 40.2**	**+1.5**

*SJA **10** 15:18:20.0±0.7,28.°85S×67.°18W,h144km±3km, ML3.6, MW3.7*
*NEIC **10** 15:18:21.6±0.6,28.°87S±0.°05×67.°4W±0.°1,h159km±14km, mb4.2/2, Error ellipse: s-maj=16.2km s-min=3.3km az=116.0*
*IDC **10** 15:18:22.9±1.4,29.°03S×67.°26W,h148km±13km,mb3.4/6, mbtmp3.7/11, Error ellipse: s-maj=25.6km s-min=15.0km az=100.0*

ISC 10 15:18:21.2±0.7,28.°82S±0.°03×67.°21W±0.°04,h141km±5km, n64,σ1°33/88,mb3.9/5,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AANI	**Anillaco**	**0.24**	**88**	*e*P	**Pn**	**15 18 40.7**	**+0.1**
AANI				*e*S	**Sn**	**15 18 54.6**	**-0.8**
TINO	**Tinogasta**	**0.82**	**337**	*e*P	**Pn**	**15 18 44.5**	**+0.8**
TINO				*e*S	**Sn**	**15 19 01.3**	**+0.4**
VCA	**Vinchina**	**0.88**	**275**	*e*P	**Pn**	**15 18 44.4**	**+0.2**
VCA				*e*S	**Sn**	**15 19 01.3**	**-0.4**
VCA				IAML		15 19 05.0	
	comp=Z,1μm,0.4s						
CYA	**Choya**	**1.29**	**73**	*e*P	**Pn**	**15 18 48.6**	**+0.7**
CYA				*e*S	**Sn**	**15 19 07.9**	**-0.4**
CYA				IAML		15 19 10.5	
	comp=Z,198nm,0.3s						
AGUA	**GUANDACOL**	**1.30**	**239**	*i* P	**Pn**	**15 18 48.1**	**-0.1**
AGUA				*e*S	**Sn**	**15 19 07.7**	**-0.9**
AVFE	**Valle Fertil**	**1.84**	**187**	*e*P	**Pn**	**15 18 53.6**	**-0.5**
AVFE				*e*S	**Sn**	**15 19 17.8**	**-1.5**
AVFE				IAML		15 19 18.8	
	comp=Z,395nm,0.3s						
ACDV	**Cuesta del Vie**	**2.14**	**231**	*e*P	**Pn**	**15 18 57.7**	**+0.1**
ACDV				*e*S	**Sn**	**15 19 25.3**	**-0.4**
ACDV				IAML		15 19 26.3	
	comp=Z,128nm,0.6s						
ACHE	**Chepes**	**2.38**	**169**	*e*P	**Pn**	**15 19 00.6**	**0.0**
ACHE				*e*S	**Sn**	**15 19 29.1**	**-1.7**
AROD	**Rodeo**	**2.39**	**235**	*e*P	**Pn**	**15 19 01.1**	**+0.3**
AROD				*e*S	**Sn**	**15 19 31.5**	**+0.3**
ACCO	**Cerro Coronel**	**2.39**	**222**	*e*P	**Sn**	**15 19 00.6**	**-0.3**
ACCO				*e*S	**Sn**	**15 19 30.3**	**-1.0**
AC02	**Maricunga**	**2.61**	**319**		**Pn**	**15 19 04.3**	**+0.6**
AC02	**Maricunga**	**2.61**	**319**	*e*P	**Pn**	**15 19 04.2**	**+0.4**
AC02				*e*S	**Sn**	**15 19 33.8**	**-2.6**
AHML	**Horco Molle**	**2.62**	**40**	*e*P	**Pn**	**15 19 02.7**	**-0.8**
AHML				*e*S	**Sn**	**15 19 30.1**	**-5.9**
AC05	**El Transito**	**2.69**	**269**		**Pn**	**15 19 04.2**	**-0.2**
AC05	**El Transito**	**2.69**	**269**	*e*P	**Pn**	**15 19 04.5**	**+0.1**
AC05				*e*S	**Sn**	**15 19 37.6**	**0.0**
AC05				IAML		15 19 39.2	
	comp=Z,167nm,1.2s						
RTLL	**Cerro Villicun**	**2.73**	**203**	*e*P	**Pn**	**15 19 04.5**	**-0.3**
RTLL				*e*S	**Sn**	**15 19 37.3**	**-1.2**
RTLL				IAML		15 19 40.6	
	comp=Z,190nm,0.3s						
CO01	**Juntas del Tor**	**2.77**	**245**		**Pn**	**15 19 05.7**	**+0.2**
CO01	**Juntas del Tor**	**2.77**	**245**	*e*P	**Pn**	**15 19 06.6**	**+1.1**
CO01				*e*S	**Sn**	**15 19 40.5**	**+0.9**
CFA	**Coronel Fontan**	**2.92**	**198**	P	**Pn**	**15 19 06.6**	**-0.5**
	comp=Z,10nm,0.3s,baz=267,slow=18,SNR=572						
CFA				S	**Sn**	**15 19 40.5**	**-2.1**
	comp=Z,84nm,0.3s,baz=285,slow=22,SNR=60						
CFA	**Coronel Fontan**	**2.92**	**198**	*e*P	**Pn**	**15 19 06.6**	**-0.5**
CFA				*e*S	**Sn**	**15 19 41.2**	**-1.5**
GO03	**Copiapo**	**2.94**	**294**		**Pn**	**15 19 07.2**	**-0.3**
GO03	**Copiapo**	**2.94**	**294**	*e*P	**Pn**	**15 19 07.5**	**0.0**
GO03				*e*S	**Sn**	**15 19 41.6**	**-1.5**
GO03				IAML		15 19 43.5	
	comp=Z,431nm,0.3s						
SJA	**San Juan**	**2.94**	**203**	*e*P	**Pn**	**15 19 06.2**	**-1.4**
SJA				*e*S	**Sn**	**15 19 42.2**	**-1.0**
SJA				IAML		15 19 42.6	
	comp=Z,98nm,0.2s						
ZON	**Zonda**	**3.00**	**205**		**Pn**	**15 19 07.8**	**-0.4**
ZON	**Zonda**	**3.00**	**205**	*e*P	**Pn**	**15 19 08.0**	**-0.3**
ZON				*e*S	**Sn**	**15 19 43.4**	**-1.3**
ZON				IAML		15 19 47.2	
	comp=Z,91nm,0.3s						
LCO	**Las Campanas**	**3.07**	**266**		**Pn**	**15 19 08.7**	**-0.6**
LCO	**Las Campanas**	**3.07**	**266**	*e*P	**Pn**	**15 19 09.1**	**-0.2**
LCO				*e*S	**Sn**	**15 19 46.4**	**0.0**
LCO				IAML		15 19 49.1	
	comp=Z,262nm,0.3s						
AC06	**Mina Casimiro**	**3.14**	**297**		**Pn**	**15 19 09.7**	**-0.3**
TCA	**Tanti**	**3.38**	**139**	*e*P	**Pn**	**15 19 12.8**	**-0.4**
TCA				*e*S	**Sn**	**15 19 51.3**	**-2.1**
TCA				IAML		15 19 52.4	
	comp=Z,99nm,0.6s						
GO04	**Tololo Observa**	**3.41**	**246**		**Pn**	**15 19 12.8**	**-0.9**
GO04	**Tololo Observa**	**3.41**	**246**	*e*P	**Pn**	15 18 58.0	-16
GO04				*e*S	**Sn**	**15 19 54.2**	**-0.1**
GO04				IAML		15 19 55.0	
	comp=Z,144nm,0.3s						
AC04	**Llanos de Chal**	**3.46**	**279**		**Pn**	**15 19 12.5**	**-1.6**
AC04	**Llanos de Chal**	**3.46**	**279**	*e*P	**Pn**	**15 19 11.9**	**-2.2**
AC04				*e*S	**Sn**	**15 19 52.5**	**-2.6**
AC04				IAML		15 20 01.7	
	comp=Z,67nm,0.8s						
RTLS	**Leoncito**	**3.48**	**211**	*e*P	**Pn**	**15 19 14.4**	**-0.3**
RTLS				*e*S	**Sn**	**15 19 55.2**	**-0.8**
RTLS				IAML		15 19 57.0	
	comp=Z,156nm,0.3s						
CO03	**El Pedregal**	**3.63**	**236**		**Pn**	**15 19 15.2**	**-1.2**
CO03	**El Pedregal**	**3.63**	**236**	*e*S	**Sn**	**15 19 58.9**	**-0.5**
CO03				IAML		15 20 01.4	
	comp=Z,55nm,0.2s						
CO05	**La Serena**	**3.68**	**252**	Pn	**Pn**	**15 19 15.7**	**-1.3**
AC01	**Pan de Azucar**	**4.02**	**311**		**Pn**	**15 19 21.0**	**-0.6**
AC01	**Pan de Azucar**	**4.02**	**311**	*e*P	**Pn**	**15 19 21.1**	**-0.5**
AC01				*e*S	**Sn**	**15 20 05.0**	**-3.3**
CO02	**Combarbal**	**4.06**	**233**	Pn	**Pn**	**15 19 21.0**	**-1.1**
GO02	**Mina Guanaco**	**4.22**	**329**		**Pn**	**15 19 24.9**	**+0.5**
GO02	**Mina Guanaco**	**4.22**	**329**	*e*P	**Pn**	**15 19 24.5**	**+0.1**
GO02				*e*P	**Pn**	**15 19 24.5**	**+0.1**
AAGR	**Agrelo**	**4.47**	**198**	IAML		15 20 19.1	
	comp=Z,45nm,0.7s						
PB14	**IPOC Station P**	**5.06**	**325**		**Pn**	**15 19 35.6**	**-0.1**
MT04	**Ro Olivares**	**5.21**	**208**	IAML		15 20 41.3	
	comp=Z,11nm,0.3s						
MT05	**Renca**	**5.47**	**213**	Pn	**Pn**	**15 19 39.6**	**-1.1**
BO04	**La Punta**	**5.92**	**209**	Pn	**Pn**	**15 19 45.3**	**-1.4**
BO02	**Sierra Bellavi**	**6.69**	**206**	Pn	**Pn**	**15 19 55.5**	**-1.5**
CPUP	**Villa Florida**	**9.11**	**77**	P	**Pn**	**15 20 30.9**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=162,slow=11,SNR=1.6						
TRQA	**Tornquist**	**10.19**	**156**	Pn	**Pn**	**15 20 43.6**	**-0.2**
PLCA	**Paso Flores**	**12.20**	**192**	P	**Pn**	**15 21 08.3**	**-2.0**
	comp=Z,0.7nm,0.9s,baz=336,slow=20,SNR=1.4						
LPAZ	**La Paz**	**12.50**	**356**	P	**P**	**15 21 19.6**	**-1.5**
	comp=Z,3.0nm,0.5s,baz=159,slow=7.7,SNR=13						
SIV	**San Ignacio**	**13.97**	**25**	P	**P**	**15 21 36.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=164,slow=6.4,SNR=2.5						
SNAA	**Sanae**	**54.90**	**160**	P	**P**	**15 27 36.5**	**-0.3**
SNAA				IAmb	IAmb	15 28 10.8	
	comp=Z,5.3nm,1.4s						
SNAA	**Sanae**	**54.90**	**160**	P	**P**	**15 27 36.8**	**0.0**
	comp=Z,0.7nm,0.7s,baz=291,slow=5.5,SNR=2.3						
	comp=Z,0.7nm,0.7s						
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**15 28 19.1**	**-3.1**
QSPA				IAmb	IAmb	15 28 59.5	
	comp=Z,6.0nm,1.5s						
QSPA	**South Pole Qui**	**61.40**	**180**	P	**P**	**15 28 21.0**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=253,slow=3.2,SNR=5.7						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**67.51**	**326**	P	**P**	**15 29 04.2**	**+1.8**
	comp=Z,0.2nm,0.8s,baz=145,slow=9.5,SNR=3.5						
	comp=Z,0.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.50**	**68**	P	**P**	**15 30 09.2**	**+2.0**
	comp=Z,1.6nm,0.3s,baz=258,slow=5.5,SNR=2.1						
	comp=Z,1.6nm,0.3s						
BOSA	**Boshof**	**78.74**	**116**	P	**P**	**15 30 09.7**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=310,slow=3.2,SNR=5.2						
	comp=Z,1.5nm,0.5s						
PDAR	**Pinedale Array**	**81.19**	**330**	P	**P**	**15 30 22.6**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=132,slow=6.6,SNR=4.5						
	comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**146.27**	**40**	PKPbc	**PKPbc**	**15 37 45.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=301,slow=3.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**147.66**	**31**	PKPbc	**PKPbc**	**15 37 50.3**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=297,slow=1.9,SNR=4.1						
MKAR	**Makanchi Array**	**150.22**	**45**	PKPbc	**PKPbc**	**15 37 55.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=290,slow=3.2,SNR=3.0						

*NEIC **10** 15:22:07.8±1.1,53.°46N±0.°03×160.°98W±0.°08,h10km±2km, mb3.9/10, ML3.4/16, ML3.1(AEIC), Error ellipse: s-maj=7.7km s-min=5.5km az=257.0*
*AEIC **10** 15:22:07.9±1.5,53.°34N±0.°08×160.°97W±0.°09,h28km±7km, Error ellipse: s-maj=11.4km s-min=7.2km az=163.0*
*IDC **10** 15:22:11.6±1.9,53.°38N×159.°88W,h0km,mb3.7/3, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=40.1km s-min=24.6km az=161.0*

ISC 10 15:22:09.8±0.9,53.°36N±0.°07×160.°91W±0.°05,h35km,n65, σ1°12/64,mb3.9/3,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.66**	**28**		**Pn**	**15 22 35.5**	**-0.8**
CNBA					**Sn**	**15 22 55.1**	**-1.2**
DT1	**Dutton Round H**	**1.93**	**336**		**Pn**	**15 22 39.1**	**-0.9**
DT1					**Sn**	**15 23 02.3**	**-0.8**
SDPT	**Sand Point**	**2.01**	**7**		**Pn**	**15 22 40.4**	**-0.8**
SDPT					**Sn**	**15 23 04.5**	**-0.6**
HAG	**Hague Volcano**	**2.05**	**344**		**Pn**	**15 22 41.7**	**0.0**
PS4A	**Pavlof South-4**	**2.07**	**345**		**Pn**	**15 22 41.9**	**-0.1**
PS4A					**Sn**	**15 23 08.0**	**+1.5**
FALS	**False Pass**	**2.10**	**316**		**Sn**	**15 23 06.3**	**-1.1**
FALS	**False Pass**	**2.10**	**316**		**Pn**	**15 22 41.4**	**-1.1**
PS1A	**Pavlof South-1**	**2.12**	**347**		**Pn**	**15 22 42.6**	**-0.1**
PS1A					**Sn**	**15 23 08.9**	**+1.1**
ISNN	**Isanotski Nort**	**2.24**	**312**		**Pn**	**15 22 43.9**	**-0.5**
S12K	**Black Hills**	**2.44**	**345**		**Sn**	**15 23 17.1**	**+1.4**
S12K	**Black Hills**	**2.44**	**345**		**Pn**	**15 22 47.2**	**0.0**
S12K				IAML		15 23 19.1	
	comp=E,200nm,0.3s						
S12K				IAML		15 23 19.4	
	comp=N,311nm,0.4s						
VNKR	**Veniaminof 5**	**2.82**	**18**		**Pn**	**15 22 53.1**	**+0.7**
AKUT	**Akutan**	**2.99**	**287**	Pn	**Pn**	**15 22 54.0**	**-0.6**
AKUT				IAML		15 23 29.8	
	comp=N,90nm,0.7s						
AKUT				IAML		15 23 34.9	
	comp=E,66nm,0.6s						
AHB	**Akutan Harbor**	**3.01**	**287**		**Pn**	**15 22 54.1**	**-0.8**
AHB					**Sn**	**15 23 28.4**	**-1.3**
AKBBA	**Akutan Broad B**	**3.07**	**286**		**Pn**	**15 22 55.0**	**-0.8**
AKV	**Akutan Volcano**	**3.10**	**286**		**Pn**	**15 22 55.7**	**-0.4**
AKLV	**Akutan Long Va**	**3.10**	**287**		**Pn**	**15 22 55.1**	**-1.0**
AKMO	**Akutan Morgan**	**3.12**	**286**		**Pn**	**15 22 55.6**	**-0.8**
AKGG	**Akutan Green G**	**3.13**	**288**		**Pn**	**15 22 56.1**	**-0.5**
LVA	**Lava Point**	**3.14**	**287**	Pn	**Pn**	**15 22 56.5**	**-0.3**
LVA				IAML		15 23 33.1	
	comp=E,104nm,0.6s						
LVA				IAML		15 23 36.3	
	comp=N,150nm,0.7s						
UNV	**Unalaska Valle**	**3.37**	**281**		**Pn**	**15 22 58.6**	**-1.1**
MSW	**Makushin Switc**	**3.54**	**281**		**Pn**	**15 23 01.4**	**-0.8**
MGOD	**Makushin Gods**	**3.58**	**279**		**Pn**	**15 23 02.1**	**-0.7**
OKTU	**Okmok Mt. Tuli**	**4.27**	**273**		**Pn**	**15 23 11.5**	**-0.8**
OKCE	**Okmok Cone E**	**4.34**	**274**		**Pn**	**15 23 12.7**	**-0.5**
R16K	**Pilot Point**	**4.62**	**23**	Pn	**Pn**	**15 23 17.1**	**0.0**
NIKH	**Nikolski High**	**4.79**	**269**	Pn	**Pn**	**15 23 17.9**	**-1.5**
NIKH				IAML		15 24 10.2	
	comp=N,45nm,0.8s						
NIKH				IAML		15 24 17.4	
	comp=E,39nm,1.2s						
R18K	**Karluk**	**5.59**	**38**	Pn	**Pn**	**15 23 30.1**	**-0.2**
ANCK	**Angle Creek**	**5.73**	**30**		**Pn**	**15 23 33.0**	**+0.6**
ACHA	**Angle Creek He**	**5.79**	**31**	Pn	**Pn**	**15 23 32.5**	**-0.7**
O15K	**Unga Ilkthiuk R**	**5.86**	**5**	Pn	**Pn**	**15 23 33.6**	**-0.5**
O14K	**Tigyukauivet M**	**5.91**	**358**	Pn	**Pn**	**15 23 34.1**	**-0.6**
KDAK	**Kodiak Island**	**6.48**	**43**		**Pn**	**15 23 41.7**	**-0.7**
KDAK	**Kodiak Island**	**6.48**	**43**	Pn	**Pn**	**15 23 41.4**	**-1.0**
	comp=E,0.7nm,0.3s,baz=202,slow=6.1,SNR=13						
KDAK				Sn	**Sn**	**15 24 49.7**	**-5.3**
	comp=E,0.7nm,0.3s,baz=41,slow=15,SNR=7.3						
	comp=E,1.9nm,0.3s						
N14K	**Kuskokwak Cree**	**6.60**	**357**	Pn	**Pn**	**15 23 43.0**	**-1.1**
P18K	**Big Mountain,**	**6.82**	**25**	Pn	**Pn**	**15 23 45.8**	**-1.4**
N17K	**Nushagak Hills**	**7.47**	**14**	Pn	**Pn**	**15 23 55.3**	**-0.8**
K15K	**Wolf Creek Mou**	**8.97**	**358**	Pn	**Pn**	**15 24 16.1**	**-0.5**
KNK	**Knik Glacier**	**10.49**	**35**	Pn	**Pn**	**15 24 36.8**	**-0.6**
KLU	**Klutina**	**11.45**	**39**		**Pn**	**15 24 49.8**	**-0.9**
BERG	**Berg Lake**	**11.73**	**46**	Pn	**Pn**	**15 24 54.2**	**-0.2**
K24K	**Donnelly Dome**	**13.07**	**31**	Pn	**Pn**	**15 25 12.4**	**-0.3**
ILAR	**Eielson Array**	**13.48**	**26**	Pn	**Pn**	**15 25 15.6**	**-2.6**
	comp=E,0.1nm,0.3s,baz=222,slow=13,SNR=6.0						
	comp=E,0.3nm,0.3s						
SCRK	**Sand Creek**	**13.76**	**33**	Pn	**Pn**	**15 25 20.6**	**-1.5**
COLD	**Coldfoot**	**14.85**	**16**	P	**P**	**15 25 42.5**	**+0.2**
E22K	**Anaktuvuk Pass**	**15.45**	**13**	Pn	**Pn**	**15 25 44.4**	**-0.3**
E22K				IAmb	IAmb	15 25 58.2	
	comp=Z,9.7nm,1.4s						
D20K	**Etivluk River**	**15.54**	**6**	P	**P**	**15 25 50.3**	**+0.4**
D20K				IAmb	IAmb	15 26 04.3	
	comp=Z,7.8nm,1.1s						
E24K	**Your Creek**	**15.91**	**17**	Pn	**Pn**	**15 25 50.6**	**-0.1**
TOLK	**Toolik Lake Re**	**16.24**	**15**	Pn	**Pn**	**15 25 54.9**	**0.0**
D23K	**Nanushuk River**	**16.38**	**13**	Pn	**Pn**	**15 25 56.7**	**+0.1**
D23K				IAmb	IAmb	15 26 25.7	
	comp=Z,13nm,1.4s						
C23K	**Itkillik River**	**17.20**	**12**	Pn	**Pn**	**15 26 06.3**	**-0.6**
C24K	**Franklin Bluff**	**17.35**	**14**	Pn	**Pn**	**15 26 07.9**	**-0.9**
C24K				IAmb	IAmb	15 26 19.2	
	comp=Z,6.6nm,0.8s						
H31M	**Peel River**	**18.15**	**36**	P	**P**	**15 26 19.1**	**+0.4**
H31M				IAmb	IAmb	15 26 54.5	
	comp=Z,16nm,1.5s						
INK	**Inuvik**	**19.79**	**30**	P	**P**	**15 26 37.0**	**+0.5**
INK				IAmb	IAmb	15 27 00.9	
	comp=Z,7.1nm,1.3s						
INK	**Inuvik**	**19.79**	**30**	P	**Pn**	**15 26 38.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=195,slow=18,SNR=1.9						
	comp=Z,2.1nm,1.0s						
PETK	**Petropavlovsk-**	**24.53**	**286**	P	P	15 27 38.1	+12
	comp=Z,3.3nm,0.9s,baz=69,slow=8.9,SNR=4.8						
	comp=Z,3.3nm,0.9s						
O02D	**Mt. Diablo Mer**	**28.88**	**102**	P	**P**	**15 28 06.0**	**+1.0**
H11N2	**WAKE ISLAND Hy**	**41.72**	**229**	T	T	16 16 00.5	
	baz=26,slow=74						
H11N3	**WAKE ISLAND Hy**	**41.72**	**229**	T	T	16 16 05.6	
	baz=26,slow=74						
H11N1	**WAKE ISLAND Hy**	**41.73**	**229**	T	T	16 15 53.9	
	baz=26						
H11S1	**WAKE ISLAND Hy**	**42.87**	**228**	T	T	16 17 25.6	
	baz=26,slow=76,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**42.89**	**228**	T	T	16 17 28.0	
	baz=26,slow=76,SNR=2.7						
H11S3	**WAKE ISLAND Hy**	**42.89**	**228**	T	T	16 17 26.7	
	baz=26,slow=76,SNR=2.9						
TXAR	**Lajitas Array**	**47.68**	**97**	P	**P**	**15 30 44.6**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=333,slow=11,SNR=1.3						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**65.70**	**329**	P	P	15 32 59.5	+9.3
	comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=6.0						
	comp=Z,0.4nm,0.4s						

*NEIC **10** 15:28:39.8±0.7,6.°14S±0.°08×130.°1E±0.°1,h144km±10km, mb4.3/13, Error ellipse: s-maj=14.8km s-min=10.9km az=86.0*
*DJA **10** 15:28:40.3±0.3,6.°5S±2.°×13.°0E±

ISC 10 15:37:23.2±0.9, 52°50N±0′.06×160°.77E±0′.06, h43km±7km, n98, σ1°79/102, mb4.0/15, 3C-2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
NLC	**Nalytchevo**	**1.09**	**308**	PN	**Pn**		**15 37 40.2**	**-1.8**
NLC	**Nalytchevo**	**1.09**	**308**	*e*P	**Pn**		**15 37 40.2**	**-1.8**
DALK	**Dalny**	**1.33**	**294**	PN	**Pn**		**15 37 44.2**	**-1.0**
DALK	**Dalny**	**1.33**	**294**	*e*P	**Pn**		**15 37 44.3**	**-1.0**
UGLR	**Uglovaya**	**1.38**	**302**	PN	**Pn**		**15 37 45.2**	**-0.8**
UGLR	**Uglovaya**	**1.38**	**302**	*e*P	**Pn**		**15 37 45.2**	**-0.8**
RUS	**Russkaya**	**1.38**	**268**	PN	**Pn**		**15 37 44.6**	**-1.3**
RUS				S	**Sn**		**15 38 03.4**	**+0.5**
RUS	**Russkaya**	**1.38**	**268**	*e*P	**Pn**		**15 37 44.6**	**-1.3**
RUS				*e*S	**Sn**		**15 38 03.5**	**+0.5**
SDLR	**Sedlovina**	**1.38**	**305**	PN	**Pn**		**15 37 45.0**	**-1.0**
SDLR	**Sedlovina**	**1.38**	**305**	*e*P	**Pn**		**15 37 45.1**	**-1.0**
PET	**Petropavlovsk**	**1.39**	**293**		**Pn**		**15 37 44.9**	**-1.2**
PET	**Petropavlovsk**	**1.39**	**293**	*i*P	**Pn**		**15 37 45.0**	**-1.0**
PET				*e*S	**Sn**		**15 38 06.6**	**+3.5**
PET				pmax	pmax			
	comp=Z,238nm,0.6s							
PET				smax	smax			
	comp=E,496nm,0.6s							
PET				smax	smax			
	comp=N,557nm,0.9s							
PET	**Petropavlovsk**	**1.39**	**293**	*i*P	**Pn**		**15 37 45.0**	**-1.0**
SMAR	**Somma**	**1.42**	**303**	PN	**Pn**		**15 37 45.7**	**-0.9**
SMAR	**Somma**	**1.42**	**303**	*e*P	**Pn**		**15 37 45.8**	**-0.9**
INSR	**Institute**	**1.43**	**294**	PN	**Pn**		**15 37 45.7**	**-0.9**
INSR	**Institute**	**1.43**	**294**	*e*P	**Pn**		**15 37 45.8**	**-0.9**
AVH	**Avacha**	**1.45**	**303**	PN	**Pn**		**15 37 46.2**	**-0.7**
AVH	**Avacha**	**1.45**	**303**	*e*P	**Pn**		**15 37 46.3**	**-0.7**
KRER	**Koryakskii**	**1.47**	**304**	PN	**Pn**		**15 37 46.4**	**-0.9**
KRER	**Koryakskii**	**1.47**	**304**	*e*P	**Pn**		**15 37 46.4**	**-0.9**
KOK	**Koryaka**	**1.52**	**302**	PN	**Pn**		**15 37 47.4**	**-0.5**
KOK	**Koryaka**	**1.52**	**302**	*e*P	**Pn**		**15 37 47.4**	**-0.5**
KRX	**Arik**	**1.54**	**305**	PN	**Pn**		**15 37 47.2**	**-1.1**
KRX	**Arik**	**1.54**	**305**	*e*P	**Pn**		**15 37 47.2**	**-1.1**
MTVR	**Mutnovka**	**1.58**	**270**	PN	**Pn**		**15 37 47.7**	**-1.1**
MTVR	**Mutnovka**	**1.58**	**270**	*e*P	**Pn**		**15 37 47.8**	**-1.1**
KRMR	**Karymshinskiy**	**1.64**	**283**	PN	**Pn**		**15 37 48.2**	**-1.2**
KRMR				S	**Sn**		**15 38 12.6**	**+3.3**
KRMR	**Karymshinskiy**	**1.64**	**283**	*e*P	**Pn**		**15 37 48.3**	**-1.2**
KRMR				*e*S	**Sn**		**15 38 12.7**	**+3.3**
GRL	**Gorelyy**	**1.65**	**273**	PN	**Pn**		**15 37 49.4**	**-0.3**
GRL	**Gorelyy**	**1.65**	**273**	*e*P	**Pn**		**15 37 49.5**	**-0.3**
KII	**Karymskiy**	**1.73**	**333**	PN	**Pn**		**15 37 50.8**	**0.0**
KII	**Karymskiy**	**1.73**	**333**	*e*P	**Pn**		**15 37 50.8**	**0.0**
ASAK	**Asacha**	**1.76**	**267**	PN	**Pn**		**15 37 50.4**	**-0.8**
ASAK	**Asacha**	**1.76**	**267**	*e*P	**Pn**		**15 37 50.5**	**-0.8**
KDTR	**Khodutka, Kamc**	**1.80**	**248**	PN	**Pn**		**15 37 49.3**	**-2.3**
KDTR				S	**Sn**		**15 38 11.4**	**-1.8**
KDTR	**Khodutka, Kamc**	**1.80**	**248**	*e*P	**Pn**		**15 37 49.3**	**-2.3**
KDTR				*e*S	**Sn**		**15 38 11.4**	**-1.8**
PEA0B	**Petropavlovsk-**	**1.96**	**289**		**Pn**		**15 37 53.6**	**-0.3**
PEA0B	**Petropavlovsk-**	**1.96**	**289**	*c i*PN	**Pn**		**15 37 54.7**	**+0.8**
PETK	**Petropavlovsk-**	**1.96**	**289**		**Pn**		**15 37 52.9**	**-1.0**
PETK	**Petropavlovsk-**	**1.96**	**289**	P	**Pn**		**15 37 54.3**	**+0.4**
	comp=N,60nm,0.4s,baz=94,slow=16,SNR=420							
PETK				S	**Sn**		**15 38 13.6**	**-3.7**
	comp=N,42nm,0.7s,baz=80,slow=20,SNR=4.4							
PETK	**Petropavlovsk-**	**1.96**	**289**	PN	**Pn**		**15 37 52.9**	**-1.0**
PETK							15 38 13.6	
MKZ	**Mys Kozlova**	**2.14**	**15**	PN	**Pn**		**15 37 54.1**	**-2.2**
MKZ				S	**Sn**		**15 38 19.6**	**-2.0**
MKZ	**Mys Kozlova**	**2.14**	**15**	*e*P	**Pn**		**15 37 54.2**	**-2.2**
MKZ				*e*S	**Sn**		**15 38 19.6**	**-2.0**
APC	**Apacha**	**2.24**	**282**	PN	**Pn**		**15 37 57.7**	**+0.1**
APC	**Apacha**	**2.24**	**282**	*e*P	**Pn**		**15 37 57.8**	**+0.1**
MIPR	**Malaya Ipel'ka**	**2.47**	**266**	PN	**Pn**		**15 38 00.7**	**-0.1**
MIPR	**Malaya Ipel'ka**	**2.47**	**266**	*e*P	**Pn**		**15 38 00.8**	**-0.1**
KZV	**Kizimen**	**2.63**	**354**	PN	**Pn**		**15 38 02.7**	**-0.5**
KZV	**Kizimen**	**2.63**	**354**	*e*P	**Pn**		**15 38 02.8**	**-0.5**
TUMD	**Tumrok D**	**2.72**	**356**	PN	**Pn**		**15 38 04.3**	**0.0**
TUMD	**Tumrok D**	**2.72**	**356**	*e*P	**Pn**		**15 38 04.4**	**0.0**
KMNR	**Kamenistaya**	**3.28**	**355**	PN	**Pn**		**15 38 14.1**	**+2.0**
KMNR	**Kamenistaya**	**3.28**	**355**	*e*P	**Pn**		**15 38 14.1**	**+2.0**
SKR	**Severo-Kuril's**	**3.42**	**240**	*e*PN	**Pn**		**15 38 12.8**	**-1.1**
SKR				*e*S	**Sn**		**15 38 52.7**	**-0.5**
SKR				pmax	pmax			
	comp=Z,90nm,0.9s							
SKR				smax	smax			
	comp=N,83nm,0.7s							
SKR				smax	smax			
	comp=E,73nm,0.8s							
SKR				MLR	MLR			
	comp=Z,300nm,12.0s							
ESO	**Esso**	**3.64**	**341**	PN	**Pn**		**15 38 17.6**	**+0.7**
ESO	**Esso**	**3.64**	**341**	*e*P	**Pn**		**15 38 17.7**	**+0.7**
KBTR	**Krutoberegovo**	**3.91**	**17**	PN	**Pn**		**15 38 19.5**	**-1.0**
KBTR	**Krutoberegovo**	**3.91**	**17**	*e*P	**Pn**		**15 38 19.5**	**-1.0**
SEY	**Seymchan**	**11.37**	**340**	LR	LR		15 44 59.7	
	comp=Z,68nm,20.7s,baz=94,slow=41							
SEY	**Seymchan**	**11.37**	**340**	*e*PN	Pn		15 39 57.5	-5.2
JKA	**Kamikawa-asahi**	**14.68**	**242**	P	**P**		**15 40 55.2**	**+1.9**
ASAJ	**Asahikawa**	**14.68**	**242**	P	**P**		**15 40 55.2**	**+1.9**
ANM	**Nome**	**21.09**	**42**	P	**P**		**15 42 06.2**	**+2.7**
ANM				IAmb	IAmb		15 42 34.2	
	comp=Z,32nm,1.1s							
ANM	**Nome**	**21.09**	**42**	P	**P**		**15 42 06.3**	**+2.7**
ANM				pmax	pmax			
	comp=Z,32nm,1.1s							
MJA0	**Matsu Arr-Jizo**	**22.49**	**234**	*e*P	**P**		**15 42 23.4**	**+4.6**
MJAR	**Matsushiro Arr**	**22.51**	**234**	P	**P**		**15 42 18.4**	**-0.6**
MJAR	**Matsushiro Arr**	**22.51**	**234**	P	**P**		**15 42 20.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=16,slow=12,SNR=4.2							
	comp=Z,0.4nm,0.5s							
MJAR	**Matsushiro Arr**	**22.51**	**234**	P	**P**		**15 42 18.4**	**-0.6**
MJAR				pmax	pmax			
	comp=Z,3.0nm,1.4s							
K17K	**Iditarod**	**23.77**	**49**	P	**P**		**15 42 34.4**	**+3.0**
K17K				IAmb	IAmb		15 42 41.5	
	comp=Z,13nm,1.2s							
TIXI	**Tiksi**	**23.79**	**335**	*i*P	**P**		**15 42 25.0**	**-6.4**
TIXI				pmax	pmax			
	comp=Z,4.0nm,1.5s							
P18K	**Big Mountain,**	**25.19**	**57**	P	**P**		**15 42 47.1**	**+2.8**
JMN	**Monobe**	**26.90**	**236**	P	**P**		**15 43 00.9**	**+0.9**
JMN				IAmb	IAmb		15 43 45.1	
	comp=Z,26nm,1.1s							
O22K	**Cooper Landing**	**27.86**	**54**	P	**P**		**15 43 12.6**	**+4.3**
O22K				IAmb	IAmb		15 43 38.5	
	comp=Z,20nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**33.05**	**169**	T	T		16 19 43.1	
	baz=349							
H11N3	**WAKE ISLAND Hy**	**33.07**	**169**	T	T		16 20 10.8	
	baz=349							
H11N1	**WAKE ISLAND Hy**	**33.07**	**169**	T	T		16 19 45.0	
	baz=349							
H11S1	**WAKE ISLAND Hy**	**34.24**	**170**	T	T		16 21 11.8	
	baz=355							
H11S3	**WAKE ISLAND Hy**	**34.25**	**170**	T	T		16 21 44.6	
	baz=355							
H11S2	**WAKE ISLAND Hy**	**34.26**	**170**	T	T		16 21 23.6	
	baz=355							
SPITS	**Spitsbergen Ar**	**47.79**	**351**	P	**P**		**15 45 54.9**	**-0.6**
	comp=Z,12nm,1.1s,baz=51,slow=11,SNR=5.6							
	comp=Z,12nm,1.1s							
KURK	**Kurchatov**	**48.40**	**303**	P	**P**		**15 45 58.6**	**-1.9**
KURK	**Kurchatov**	**48.40**	**303**	*e*P	**P**		**15 45 58.8**	**-1.7**
KURK				pmax	pmax			
	comp=Z,8.0nm,3.2s							
KURBB	**Kurchatov Arra**	**48.50**	**303**	P	**P**		**15 45 59.8**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=58,slow=7.3,SNR=6.5							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	**48.78**	**296**	P	**P**		**15 46 01.3**	**-2.3**
	comp=Z,0.2nm,0.4s,baz=49,slow=9.7,SNR=1.7							
	comp=Z,0.2nm,0.4s							
KMPM	**Mount Pierce**	**50.88**	**72**	P	**P**		**15 46 22.1**	**+2.5**
BVAR	**Borovoye Array**	**51.08**	**309**	P	**P**		**15 46 19.1**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=59,slow=8.6,SNR=3.9							
	comp=Z,0.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**58.47**	**259**	P	**P**		**15 47 15.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=16,slow=9.0,SNR=5.2							
	comp=Z,0.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**58.47**	**259**	*i*P	**P**		**15 47 15.6**	**+0.8**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
FIA1	**FINESS Array S**	**60.83**	**337**	P	**P**		**15 47 30.2**	**-0.2**
FINES	**FINESS Array B**	**60.83**	**337**	P	**P**		**15 47 30.2**	**-0.2**
FINES	**FINESS Array B**	**60.83**	**337**	P	**P**		**15 47 30.3**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=14,slow=5.9,SNR=7.9							
	comp=Z,0.6nm,0.5s							
FINES	**FINESS Array B**	**60.83**	**337**	P	**P**		**15 47 30.2**	**-0.2**
OBN	**Obninsk**	**63.24**	**328**	*e*P	**P**		**15 47 42.2**	**-4.4**
OBN				*e*PP	**pP**		**15 47 57.4**	**-0.9**
OBN				*e*SP	**sP**		**15 48 04.1**	**+1.2**
OBN				*e*			15 48 19.8	
OBN				*e*			15 50 01.6	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.8s							
OBN				MLR	MLR			
	comp=Z,82nm,11.0s							
HFS	**Hagfors**	**64.64**	**342**	P	**P**		**15 47 54.8**	**-1.0**
	comp=Z,5.8nm,1.2s,baz=31,slow=3.9,SNR=1.5							
	comp=Z,5.8nm,1.2s							
AKASG	**Malin Array Be**	**69.33**	**329**	IAmb	IAmb		15 48 28.3	
	comp=Z,2.5nm,1.1s							
AKASG	**Malin Array Be**	**69.33**	**329**	P	**P**		**15 48 24.2**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=30,slow=6.9,SNR=2.6							
	comp=Z,0.5nm,0.5s							
BELA	**Belgrano 2**	**153.91**	**173**		**PKPab**		**15 57 32.8**	**+3.2**

DJA 10 15:47:49.0±0.4, 6°S.3°×13°1E.°, h147km±8km, M4.1/12, mB5.2/4, mb3.9/5, MLv4.1/12, Mw(mB)4.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BNDI	**Bandanaira**	**1.68**	**330**	P	Pn		15 48 19.8	-0.5
BNDI				S	Sn		15 48 44.3	+0.1
SAUI	**Saumlaki**	**2.06**	**165**	P	Pn		15 48 24.1	-0.6
MSAI	**Masohi**	**3.19**	**325**	P	Pn		15 48 39.1	+0.5
FAKI	**Fak Fak**	**3.39**	**26**	P	Pn		15 48 40.6	-0.7
AAI	**Ambon**	**3.42**	**312**	P	Pn		15 48 41.8	+0.2
KMPI	**Kaimana, Papua**	**3.74**	**52**	P	Pn		15 48 45.8	0.0
NLAI	**Namlea**	**4.54**	**307**	P	Pn		15 48 57.3	+0.9
SWI	**Sorong**	**5.11**	**6**	P	Pn		15 49 03.3	-0.6
RKPI	**Ransiki, Papua**	**5.60**	**38**	P	Pn		15 49 10.1	-0.4
SANI	**Sanana**	**6.15**	**309**	P	Pn		15 49 17.9	+0.2

*MOS **10** 16:02:10.5±1.1, 27°.90N×56°.40E, h13km, mb4.5/18, Error ellipse: s-maj=9.7km s-min=6.5km az=104.9*
*DSN **10** 16:02:11.7±2.0, 28°.24N×56°.48E, h30km, ML4.1/15, Error ellipse: s-maj=25.2km s-min=12.5km az=57.0*
*SGS **10** 16:02:12.8, 28°.12N×56°.64E, h7km, Ml4.2*
*NEIC **10** 16:02:12.9±1.6, 27°.92N±0°.08×56°.37E±0°.09, h10km±1km, mb4.6/59, Error ellipse: s-maj=13.7km s-min=12.7km az=77.0*
*TEH **10** 16:02:13.9, 28°.02N×56°.43E, h8km±35km*
*OMAN **10** 16:02:13.9±0.1, 27°.93N×56°.46E, h10km, mb4.7/13, ml4.4/18, ms2.7/3, Error ellipse: s-maj=2.2km s-min=1.1km az=230.0*
*THR **10** 16:02:14.4±0.0, 27°.94N×56°.46E, h14km±584km, ML4.2*
*IDC **10** 16:02:17.4±3.1, 27°.94N×56°.44E, h52km±26km, mb3.9/24, mbtmp4.1/29, ML4.1/5, MS3.6/11, Error ellipse: s-maj=18.7km s-min=11.6km az=162.0*

ISC 10 16:02:15.2±1.1, 27°.97N±0°.03×56°.42E±0°.03, h31km±8km, n280, σ1°37/291, mb4.4/76, MS3.5/9, 4C-8D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
IBND	**Bandar-abas**	**0.53**	**168**	Pg	**Pb**		**16 02 25.4**	**-0.7**
IBND				Sg	**Sn**		**16 02 34.7**	**+0.2**
GENO	**Geno**	**0.60**	**201**	Pg	**Pb**		**16 02 37.2**	**-0.4**
KHNJ	**Kahnooj**	**1.14**	**91**	Pg	**Pb**		**16 02 35.1**	**0.0**
KHNJ				Sg	**Sb**		**16 02 51.5**	**+0.7**
NGRK	**Negar Kerman**	**1.69**	**9**	Pg	**Pb**		**16 02 45.8**	**-0.2**
LAR1	**LAR**	**1.83**	**261**	Pn	**Pb**		**16 02 47.2**	**-0.9**
SHME	**Shamm**	**1.93**	**187**	P	**Pn**		**16 02 47.0**	**+1.1**
	SNR=12							
SHME	**Shamm**	**1.93**	**187**	*e*P	**Pn**		**16 02 46.3**	**+0.4**
	SNR=18							
KRBR	**Kerman**	**2.03**	**8**	Pn	**Pb**		**16 02 50.4**	**-1.3**
KRBR	**Kerman**	**2.03**	**8**	*i*P	**Pb**		**16 02 51.1**	**-0.6**
KRBR				IAML			16 03 20.6	
	comp=Z,2μm,1.0s							
BANOM	**Banah**	**2.04**	**183**	P	**Pn**		**16 02 48.8**	**+1.3**
BANOM				S	**Sn**		**16 03 14.3**	**+2.3**
BANOM	**Banah**	**2.04**	**183**	*e*P	**Pn**		**16 02 48.1**	**+0.6**
	SNR=19							
BANOM				S	**Sb**		**16 03 15.7**	**-0.9**
CHMN	**Cheshme madani**	**2.13**	**27**	Pn	**Pb**		**16 02 51.8**	**-1.5**
KBAM	**BAM**	**2.14**	**56**	Pn	**Pb**		**16 02 51.6**	**-1.8**
KHGB	**Koh Gabri**	**2.40**	**1**	Pn	**Pb**		**16 02 55.6**	**-2.4**
UMQ	**Umm Al-Quwin**	**2.52**	**196**	P	**Pn**		**16 02 54.7**	**+0.6**
JHRM	**Jahrom**	**2.56**	**283**	Pn	**Pb**		**16 02 57.7**	**-2.9**
MASF	**Masafi**	**2.60**	**185**	P	**Pn**		**16 02 56.8**	**+1.6**
	SNR=45							
MASF				S	**Sn**		**16 03 28.7**	**+3.0**
MSFE	**Esma-Masafi**	**2.61**	**185**	*e*P	**Pn**		**16 02 55.8**	**+0.4**
	SNR=40							
KRM1	**Kerman Provinc**	**2.63**	**16**	Pn	**Pb**		**16 02 58.8**	**-3.1**
MDH	**Madha**	**2.66**	**182**	P	**Pn**		**16 02 56.3**	**+0.2**
MDH				S	**Sn**		**16 03 29.1**	**+1.9**
MDH	**Madha**	**2.66**	**182**	*e*P	**Pn**		**16 02 55.9**	**-0.1**
	SNR=17							
LMD1	**Lamerd**	**2.95**	**259**	Pn	**Pn**		**16 03 03.0**	**+3.0**
LMD1	**Lamerd**	**2.95**	**259**	*i*P	**Pn**		**16 03 03.5**	**+3.5**
LMD1				IAML			16 04 00.9	
	comp=Z,1μm,1.0s							
ZRDN	**Zarand Kerman**	**2.99**	**2**	Pn	**Pn**		**16 03 03.6**	**+2.8**
UOSS	**Minazif**	**3.02**	**184**		**Pn**		**16 02 59.4**	**-1.5**
UOSS	**Minazif**	**3.02**	**184**	P	**Pn**		**16 03 02.3**	**+1.4**
UOSS				S	**Sn**		**16 03 36.1**	**+0.1**
NAZ	**Nazwa, Dubai**	**3.04**	**193**	P	**Pn**		**16 03 03.0**	**+1.7**
	SNR=18							
NAZ	**Nazwa, Dubai**	**3.04**	**193**	*i*P	**Pn**		**16 03 03.0**	**+1.7**
	SNR=18							
HATD	**Hatta, Dubai**	**3.14**	**185**	P	**Pn**		**16 03 03.5**	**+0.9**
	SNR=30							
HATD	**Hatta, Dubai**	**3.14**	**185**	*i*P	**Pn**		**16 03 03.6**	**+0.9**
	SNR=30							
ASHO	**Ashiyiah**	**3.29**	**186**	P	**Pn**		**16 03 06.5**	**+1.8**
	SNR=223							
ASHO	**Ashiyiah**	**3.29**	**186**	*i*P	**Pn**		**16 03 06.1**	**+1.4**
	SNR=223							
FAQ	**Al Faqa, Dubai**	**3.29**	**193**	P	**Pn**		**16 03 06.7**	**+2.0**
	SNR=16							
FAQ				S	**Sn**		**16 03 45.9**	**+3.0**
FAQ	**Al Faqa, Dubai**	**3.29**	**193**	*i*P	**Pn**		**16 03 06.0**	**+1.3**
	SNR=16							
ASUD	**Al Ashush, Dub**	**3.47**	**197**	P	**Pn**		**16 03 09.6**	**+2.5**
	SNR=126							
ASUD	**Al Ashush, Dub**	**3.47**	**197**	*i*P	**Pn**		**16 03 09.4**	**+2.3**
	SNR=125							
AJN	**Ajban**	**3.63**	**201**	P	**Pn**		**16 03 11.3**	**+2.1**
	SNR=10							
AJN	**Ajban**	**3.63**	**201**	*i*P	**Pn**		**16 03 10.9**	**+1.6**
	SNR=20							
IBAF	**Bafgh**	**3.69**	**349**	Pn	**Pn**		**16 03 12.5**	**+2.2**
IMEH	**Mehriz**	**3.75**	**336**	Pn	**Pn**		**16 03 13.8**	**+2.6**
SHI	**Shiraz**	**3.81**	**297**	Pn	**Pn**		**16 03 14.6**	**+2.6**
SOHO	**SOHO**	**3.82**	**178**	P	**Pn**		**16 03 10.7**	**-1.2**
SOHO	**SOHO**	**3.82**	**178**	*i*P	**Pn**		**16 03 10.5**	**-1.4**
	SNR=38							
ALNE	**Al Ain**	**3.94**	**189**	P	**Pn**		**16 03 15.1**	**+1.4**
	SNR=65							
ALNE	**Al Ain**	**3.94**	**189**	*i*P	**Pn**		**16 03 14.7**	**+1.0**
	SNR=65							
CHBR	**Chabahar**	**4.33**	**122**	*e*Pn	**Pn**		**16 03 21.0**	**+2.0**
CHBR				IAML			16 04 17.2	
	comp=Z,88nm,1.0s							
HOQ	**Hoqain**	**4.44**	**169**	P	**Pn**		**16 03 19.4**	**-1.1**
	SNR=35							
HOQ				S	**Sn**		**16 04 11.2**	**0.0**
KAZ2	**Kazeron-Fars-I**	**4.48**	**293**	Pn	**Pn**		**16 03 23.8**	**+2.6**
ICHK	**Chekchek**	**4.60**	**338**	Pn	**Pn**		**16 03 25.7**	**+2.7**
ARQ	**Araqi**	**4.61**	**179**	P	**Pn**		**16 03 23.9**	**+1.0**
	SNR=208							
BSRN	**Basiran**	**4.63**	**30**	Pn	**Pn**		**16 03 26.5**	**+3.3**
BSRN	**Basiran**	**4.63**	**30**	*e*Pn	**Pn**		**16 03 26.3**	**+3.1**
BSRN				IAML			16 04 50.2	
	comp=Z,130nm,1.0s							
NHDN	**Nehbandan**	**4.65**	**42**	Pn	**Pn**		**16 03 26.3**	**+2.7**
YZKH	**Yazd**	**4.68**	**341**	*e*Pn	**Pn**		**16 03 26.7**	**+2.8**
YZKH				IAML			16 04 56.3	
	comp=Z,98nm,1.0s							
MZWR	**Madinat Zayed**	**4.77**	**209**	P	**Pn**		**16 03 26.1**	**+1.0**
MZWR				S	**Sn**		**16 04 21.8**	**+2.5**
NGCH	**Negor - Chabah**	**4.96**	**121**	P	**Pn**		**16 03 28.1**	**+0.5**
	SNR=17							
NGCH				S	**Sn**		**16 04 22.4**	**-1.5**
IKOO	**Kooshah**	**4.97**	**26**	Pn	**Pn**		**16 03 31.1**	**+3.0**
SMDO	**Samad**	**5.11**	**163**	P	**Pn**		**16 03 29.6**	**-0.2**
	SNR=15							
WSAR	**Wadi Sarin**	**5.12**	**157**	P	**Pn**		**16 03 29.6**	**-0.2**
	SNR=16							
KLNJ	**Kolanjah**	**5.18**	**307**	Pn	**Pn**		**16 03 33.4**	**+2.4**
KLNJ	**Kolanjah**	**5.18**	**307**	*e*Pn	**Pn**		**16 03 33.3**	**+2.3**
KLNJ				IAML			16 04 37.3	
	comp=Z,290nm,1.0s							
IRAM	**Ramesheh**	**5.19**	**319**	Pn	**Pn**		**16 03 33.7**	**+2.7**
SHMA	**Al-Shehemyia**	**5.30**	**248**	P	**Pn**		**16 03 33.5**	**+1.2**
	SNR=58							
SHMA				S	**Sn**		**16 04 32.6**	**+0.2**
SRVN	**Saravan**	**5.33**	**95**	Pn	**Pn**		**16 03 35.8**	**+2.9**
SRVN	**Saravan**	**5.33**	**95**	*i*P	**Pn**		**16 03 36.1**	**+3.2**
SRVN				IAML			16 05 29.9	
	comp=Z,43nm,1.0s							
SAKB	**Bahrain**	**5.61**	**251**	P	**Pn**		**16 03 37.6**	**+1.0**
SAKB				S	**Sn**		**16 04 41.4**	**+1.5**
MZR	**Muzera**	**5.61**	**209**	P	**Pn**		**16 03 36.6**	**0.0**
	SNR=7.4							
MZR	**Muzera**	**5.61**	**209**	P	**Pn**		**16 03 36.6**	**0.0**
TRNA	**Turayna**	**5.67**	**237**	P	**Pn**		**16 03 38.1**	**+0.7**
	SNR=36							
TABS	**Tabas**	**5.70**	**6**	*e*Pn	Pn		16 03 42.2	+4.4
TABS				IAML			16 05 40.5	
	comp=Z,70nm,1.0s							
ANAR	**Anarak**	**5.70**	**337**	Pn	**Pn**		**16 03 40.4**	**+2.5**
NASN	**Na'in**	**5.74**	**328**	*e*Pn	**Pn**		**16 03 41.3**	**+2.7**
NASN				IAML			16 05 16.8	
	comp=Z,38nm,1.0s							
SLWR	**Sila**	**5.76**	**229**	P	Pn		**16 03 39.8**	**+1.3**
JMDO	**Jabal Madar**	**5.78**	**164**	P	**Pn**		**16 03 39.5**	**+0.6**
WBK	**Wadi Bani Khal**	**5.81**	**156**	P	**Pn**		**16 03 39.0**	**-0.4**
	SNR=12							
IGAR	**Gharneh**	**5.82**	**320**	Pn	**Pn**		**16 03 42.2**	**+2.5**
AFRZ	**Afriz**	**5.88**	**22**	Pn	**Pn**		**16 03 43.1**	**+2.7**
IBRJ	**Brojen**	**5.95**	**313**	Pn	**Pn**		**16 03 44.0**	**+2.4**
SMRA	**Abu-Samra**	**5.96**	**239**	P	**Pn**		**16 03 43.5**	**+2.2**
SMRA				S	**Sn**		**16 04 48.1**	**-0.4**
SHBH2	**SHBH2**	**6.00**	**231**	P	Pn		**16 03 42.5**	**+0.5**
IZEF	**Zefreh**	**6.05**	**325**	Pn	**Pn**		**16 03 44.6**	**+1.8**
SHBH1	**SHBH1**	**6.22**	**226**	P	Pn		**16 03 46.4**	**+1.5**
ZNGN	**Zangian**	**6.35**	**312**	Pn	**Pn**		**16 03 49.3**	**+2.2**
BTHS		**6.35**	**233**	P	**Pn**		**16 03 47.3**	**+0.6**
JLN	**Jalan Bani Buh**	**6.40**	**154**	P	**Pn**		**16 03 47.0**	**-0.4**
	SNR=15							
JHBN	**Jahan bin**	**6.55**	**312**	Pn	**Pn**		**16 03 52.1**	**+2.4**
SHRT	**Shahrakht**	**6.57**	**30**	*i*P	**Pn**		**16 03 53.4**	**+3.6**
SHRT				IAML			16 06 06.7	
	comp=Z,35nm,1.0s							
SHOFU	**Shofu**	**6.65**	**245**	P	**Pn**		**16 03 51.6**	**+0.7**
IPIR	**Pirpir**	**6.70**	**316**	Pn	**Pn**		**16 03 54.2**	**+2.4**
IKLH	**Kolahrood**	**6.77**	**323**	Pn	**Pn**		**16 03 55.3**	**+2.6**
NHFOF	**Ain Dar Gosp**	**6.81**	**251**	P	**Pn**		**16 03 54.2**	**+1.0**
ARIRA	**AirJ**	**6.93**	**257**	P	**Pn**		**16 03 55.2**	**+0.5**
MHTO	**MHTO**	**7.09**	**168**	P	**Pn**		**16 03 57.5**	**+0.6**
	SNR=26							
MHTO				P	**Pn**		**16 03 57.

ISP Isparta 23.79 301 ||| eP P 16 07 27.1 +1.7
ISP pmax pmax
comp=Z,10.0nm,0.8s

AKAS Kas 24.11 297 P P 16 07 28.7 +0.3
AKAS IAmb IAmb 16 07 57.9
comp=Z,9.7nm,0.8s

BORA Eskisehir 24.51 306 P 16 07 32.6 +0.6
BELG Belogornoye 25.27 347 ||| eP P 16 07 37.6 -0.9
BELG pmax pmax
comp=Z,4.0nm,0.9s

FURI Furi 25.29 225 LR LR 16 18 55.7
comp=Z,55nm,19.6s,baz=46,slow=40

KARP Karpathos 25.93 294 P P 16 07 44.9 0.0
KARP Karpathos 25.93 294 P P 16 07 45.8 +0.9
comp=Z,58nm,1.0s

EVN Everest 26.82 83 P P 16 07 54.4 +0.7
BORK Borovoye 27.09 19 || eP P 16 07 55.3 +0.2
BORK pmax pmax
comp=Z,3.0nm,1.1s

BVAR Borovoye Array 27.09 19 P P 16 07 55.6 +0.5
comp=Z,2.1nm,0.6s,baz=194,slow=7.0,SNR=11
BVAR PcP PcP 16 11 15.0 -0.4
comp=Z,0.5nm,0.4s,baz=223,slow=2.7,SNR=4.9
BVAR ScP ScP 16 14 52.7 -0.9
comp=Z,0.8nm,0.8s,baz=116,slow=3.4,SNR=3.8
comp=Z,2.1nm,0.6s

MK31 Makanchi Array 27.65 40 d iP P 16 08 01.3 +1.1
MKAR Makanchi Array 27.65 40 P P 16 08 01.0 +0.8
MKAR Makanchi Array 27.65 40 P P 16 08 01.0 +0.8
comp=Z,1.0nm,0.4s,baz=231,slow=8.4,SNR=27
comp=Z,1.0nm,0.4s

MKAR Makanchi Array 27.65 40 i P P 16 08 01.5 +1.3
MKAR pmax pmax
comp=Z,1.0nm,0.4s

IDI Anoyia 27.74 293 P P 16 08 01.1 0.0
IDI IAmb IAmb 16 08 30.7
comp=Z,10nm,1.0s

KURBB Kurchatov Arra 28.16 31 P P 16 08 05.1 +0.4
comp=Z,0.6nm,0.2s,baz=230,slow=8.6,SNR=10
comp=Z,0.6nm,0.2s

KURK Kurchatov 28.27 30 P P 16 08 05.1 -0.5
KURK Kurchatov 28.27 30 || eP P 16 08 05.8 +0.2
KURK pmax pmax
comp=Z,14nm,4.0s

AK10 Malin Array Si 30.57 325 P P 16 08 25.8 -0.2
AK06 Malin Array Si 30.59 325 P P 16 08 25.7 -0.5
AK08 Malin Array Si 30.59 325 P P 16 08 25.7 -0.5
AK02 Malin Array Si 30.63 325 P P 16 08 26.6 +0.1
AK12 Malin Array Si 30.64 325 P P 16 08 26.7 0.0
AKASG Malin Array Be 30.64 325 P P 16 08 26.8 +0.1
comp=Z,1.4nm,0.6s,baz=132,slow=8.1,SNR=8.9
comp=Z,1.4nm,0.6s

AKBB Malin Array Si 30.64 325 P P 16 08 25.1 -1.5
AKBB IAmb IAmb 16 08 35.1
comp=Z,8.6nm,0.8s

AKBB Malin Array Si 30.64 325 d iP P 16 08 25.2 -1.5
AKBB pmax pmax
comp=Z,10.0nm,0.9s

KIEV Kiev 30.65 325 P P 16 08 25.1 -1.6
KIEV IAmb IAmb 16 08 35.1
comp=Z,8.1nm,0.8s

KIEV Kiev 30.65 325 P P 16 08 25.1 -1.6
KIEV pmax pmax
comp=Z,8.0nm,0.9s

KIEV Kiev 30.65 325 P P 16 08 26.1 -0.6
comp=Z,45nm,0.8s

AK11 Malin Array Si 30.66 325 P P 16 08 26.4 -0.4
AK04 Malin Array Si 30.69 325 P P 16 08 26.7 -0.3
OBN Obninsk 30.70 338 eP P 16 08 27.2 +0.1
OBN e 16 09 26.0
OBN e 16 11 25.0
OBN pmax pmax
comp=Z,4.0nm,0.7s

OBN Obninsk 30.70 338 P P 16 08 26.6 -0.5
comp=Z,20nm,0.5s

AK18 Malin Array Si 30.74 325 P P 16 08 27.0 -0.5
AK22 Malin Array Si 30.76 325 P P 16 08 27.3 -0.4
LUBAR Lubar, Ukraine 30.95 323 P P 16 08 29.0 -0.4
KIRV Kirov 30.99 353 || eP P 16 08 31.0 +1.4
BURAR Bucovina Array 31.19 317 P P 16 08 32.5 +0.8
MI28 Mi28,Pidlybu 31.57 324 P P 16 08 34.7 -0.2
DGZ Jazzator, Alta 32.11 39 || iP P 16 08 40.5 +0.7
DGZ pmax pmax
comp=Z,3.0nm,0.7s

RNPP5 Staryi Chortor 32.67 324 P P 16 08 44.8 +0.3
RNPP9 Sopachiv 32.77 324 P P 16 08 45.4 +0.1
ZAA0 Zalesovo Array 33.26 31 P 16 08 49.8 +0.2
ZAA0 IAmb IAmb 16 08 58.2
comp=Z,4.8nm,0.8s

ZALV Zalesovo Beam 33.26 31 P 16 08 49.4 -0.2
ZALV Zalesovo Beam 33.26 31 P P 16 08 49.8 +0.2
comp=Z,3.5nm,0.5s,baz=241,slow=9.2,SNR=21
ZALV PcP PcP 16 11 29.3 -2.1
comp=Z,0.4nm,0.5s,baz=222,slow=1.9,SNR=1.7
ZALV LR LR 16 24 08.2
comp=Z,124nm,20.2s,baz=302,slow=39
comp=Z,3.5nm,0.5s

PABE Paberze 36.07 329 P P 16 09 14.2 +0.4
RONA Rosalia, Austr 36.79 313 eP P 16 09 20.5 +0.3
comp=Z,5.6nm,0.8s

VSU Vasula 36.80 334 || eP P 16 09 19.7 -0.3
VSU pmax pmax
comp=Z,26nm,1.4s

GTA Gaotai 37.54 61 eP P 16 09 27.1 +0.3
GTA pmax pmax
comp=Z,4.0nm,0.9s

CHVC Chvalec 37.90 318 eP P 16 09 30.2 +0.7
CHVC Chvalec 37.90 318 eP P 16 09 30.2 +0.7
FDMO Fiordimonte 37.91 305 P P 16 09 30.3 +0.6
FDMO IAmb IAmb 16 10 14.0
comp=Z,15nm,1.4s

MOA Molln 38.14 313 eP P 16 09 31.8 +0.2
comp=Z,1.8nm,0.7s

BIOA Bad Ischl, Aus 38.51 313 i pP P 16 09 35.5 +0.8
comp=Z,1.6nm,0.4s

ZVC Zvikov 38.65 315 eP P 16 09 36.3 +0.5
GERES GERESS Array B 38.78 314 P P 16 09 36.9 -0.2
comp=Z,1.0nm,0.8s,baz=107,slow=8.9,SNR=8.3
comp=Z,1.0nm,0.8s

KHC Kasperske Hory 38.94 315 P P 16 09 38.6 +0.3
KHC IAmb IAmb 16 09 58.9
comp=Z,10nm,1.5s

KHC Kasperske Hory 38.94 315 P P 16 09 38.7 +0.3
KHC pmax pmax
comp=Z,10.0nm,1.5s

KHC Kasperske Hory 38.94 315 eP P 16 09 38.4 +0.1
KHC Kasperske Hory 38.94 315 P P 16 09 38.1 -0.2
comp=Z,5.3nm,1.4s

ABTA Abfaltersbach 39.02 311 eP P 16 09 39.2 +0.1
comp=Z,3.3nm,0.8s

LESA Schwarzleotal 39.07 312 eP P 16 09 39.6 +0.2
comp=Z,2.2nm,0.4s,SNR=4.0

FINES FINESS Array B 39.11 337 P P 16 09 40.2 +0.7
FINES FINESS Array B 39.11 337 P P 16 09 39.6 +0.2
comp=Z,1.1nm,0.4s,baz=134,slow=9.6,SNR=19
comp=Z,1.1nm,0.4s

FINES FINESS Array B 39.11 337 i P P 16 09 40.2 +0.7
FINES pmax pmax
comp=Z,1.0nm,0.4s

WTTA Wattenberg 39.72 311 eP P 16 09 44.7 -0.3
comp=Z,3.9nm,0.7s,SNR=6.2

WATA Walderalm 39.77 311 eP P 16 09 44.9 -0.5
comp=Z,2.0nm,0.6s

SQTA Sankt Quirin 39.99 311 eP P 16 09 46.8 -0.4
comp=Z,6.8nm,0.6s,SNR=10

CMAR Chiang Mai Arr 40.04 94 PcP PcP 16 11 53.0 +0.6
comp=Z,0.4nm,0.4s,baz=290,slow=5.1,SNR=4.7
CMAR LR LR 16 28 42.5
comp=Z,59nm,18.0s,baz=15,slow=40

MOTA Moosalm 40.09 311 i P P 16 09 47.7 -0.3
comp=Z,3.6nm,0.5s

FETA Feichten 40.27 311 i P P 16 09 49.4 -0.2
comp=Z,4.3nm,0.6s

RETA Reutte 40.35 311 i P P 16 09 49.0 -1.1
comp=Z,2.7nm,0.6s

KEST Kesra 40.41 293 IAmb IAmb 16 10 09.0
comp=Z,20nm,1.3s

KEST Kesra 40.41 293 P P 16 09 51.6 +0.8
comp=Z,2.4nm,0.4s,baz=164,slow=1.8,SNR=4.8
comp=Z,2.4nm,0.4s

FUORN Ofenpass-Fuorn 40.51 310 P P 16 09 51.9 +0.3
DAVA Damuels 40.89 311 eP P 16 09 54.1 -0.6
comp=Z,11nm,0.6s,SNR=12

TUE Stuetta 41.10 310 P P 16 09 56.9 +0.4
TUE IAmb IAmb 16 10 31.0
comp=Z,9.3nm,1.4s

TUE Stuetta 41.10 310 P P 16 09 55.8 -0.7
comp=Z,22nm,2.0s

SENIN Lac Senin/Sane 42.48 309 P P 16 10 07.4 -0.4
SENIN IAmb IAmb 16 10 08.9
comp=Z,11nm,1.4s

BNI Bardonecchia 42.75 307 P P 16 10 09.1 -0.8
BNI IAmb IAmb 16 10 14.6
comp=Z,14nm,1.4s

BNI Bardonecchia 42.75 307 P P 16 10 09.1 -0.8
BNI pmax pmax
comp=Z,14nm,1.4s

HFS Hagfors 43.19 330 P P 16 10 13.2 +0.1
comp=Z,2.1nm,0.4s,baz=133,slow=9.4,SNR=34
comp=Z,2.1nm,0.4s

SONM Songino Array 43.28 49 P P 16 10 14.1 0.0
comp=Z,1.2nm,1.0s,baz=268,slow=5.5,SNR=5.2
SONM LR LR 16 29 03.7
comp=Z,90nm,18.7s,baz=320,slow=37
comp=Z,1.2nm,1.0s

ULN Ulaanbaatar 43.73 49 ↑ eP P 16 10 18.2 +0.4
ULN pmax pmax
comp=Z,6.0nm,1.3s

NORES NORESS Array B 44.41 330 P P 16 10 22.8 -0.1
NC405 NORSAR Array S 44.51 331 P P 16 10 23.6 -0.1
NC405 IAmb IAmb 16 10 36.6
comp=Z,12nm,1.2s

NB201 NORSAR Array S 44.66 331 P P 16 10 24.5 -0.4
NB2 NORSAR Subarra 44.70 331 P P 16 10 24.6 -0.6
comp=Z,1.0nm,0.6s,baz=114,slow=7.9

NB2 NORSAR Subarra 44.70 331 P P 16 10 24.7 -0.5
NOA NORSAR Array B 44.70 331 P P 16 10 24.9 -0.3
comp=Z,1.1nm,0.6s,baz=116,slow=7.9,SNR=7.1
comp=Z,1.1nm,0.6s

BMRD Maredsous 44.77 314 d P P 16 10 26.8 +0.9
comp=Z,5.4nm,2.0s

NBO00 NORSAR Array S 44.88 330 P P 16 10 26.7 0.0
KEV Kevo 45.13 346 P P 16 10 29.2 +0.8
KEV Kevo 45.13 346 P P 16 10 29.2 +0.8
KEV pmax pmax
comp=Z,45nm,1.3s

ARCES ARCESS Array B 45.28 345 P P 16 10 29.4 -0.3
comp=Z,5.1nm,1.1s,baz=359,slow=4.9,SNR=5.7
comp=Z,5.1nm,1.1s

EKA Eskdalemuir Ar 50.30 320 P P 16 11 08.6 -0.2
comp=Z,0.6nm,0.4s,baz=88,slow=7.4,SNR=7.8
comp=Z,0.6nm,0.4s

ESK Eskdalemuir 50.32 320 P P 16 11 08.2 -0.7
ESK Eskdalemuir 50.32 320 P P 16 11 08.2 -0.7
ESK pmax pmax
comp=Z,38nm,1.4s

ESBB Sonseca Array 50.65 300 P P 16 11 11.2 -0.6
ESBB IAmb IAmb 16 11 23.4
comp=Z,11nm,1.4s

ESDC Sonseca Array 50.65 300 P P 16 11 11.9 +0.2
comp=Z,1.2nm,0.4s,baz=75,slow=7.1,SNR=21
comp=Z,1.2nm,0.4s

PAB San Pablo 50.96 300 P P 16 11 13.9 -0.2
PAB San Pablo 50.96 300 P P 16 11 13.9 -0.2
PAB pmax pmax
comp=Z,26nm,1.4s

HILR Hailar Array B 52.23 47 P P 16 11 23.0 -0.4
comp=Z,0.6nm,0.4s,baz=273,slow=7.4,SNR=2.8
comp=Z,0.6nm,0.4s

MD01 Midelt array s 52.35 291 P P 16 11 25.1 +0.4
MD31 MD31 52.35 291 P P 16 11 25.1 +0.5
MD31 IAmb IAmb 16 12 09.2
comp=Z,10nm,1.4s

TORD Torodi Ar. Bea 52.91 266 P P 16 11 28.1 -0.7
comp=Z,6.8nm,0.8s,baz=64,slow=7.0,SNR=24
comp=Z,6.8nm,0.8s

SPITS Spitsbergen Ar 53.41 350 P P 16 11 30.0 -1.6
comp=Z,5.5nm,0.9s,baz=144,slow=11,SNR=1.6
comp=Z,5.5nm,0.9s

SPITS Spitsbergen Ar 53.41 350 P P 16 11 30.0 -1.6
PESTR Estremoz 53.55 299 P P 16 11 33.0 -0.3
YAK Yakutsk 57.89 32 LR LR 16 39 40.8
comp=Z,81nm,18.8s,baz=310,slow=39

TIXI Tiksi 58.20 21 P P 16 12 06.0 0.0
TIXI IAmb IAmb 16 12 36.8
comp=Z,5.0nm,1.4s

TIXI Tiksi 58.20 21 P P 16 12 06.0 0.0
TIXI pmax pmax
comp=Z,5.0nm,1.4s

MDJ Mudanjiang 59.38 53 P P 16 12 15.6 +0.9
MDJ IAmb IAmb 16 12 31.8
comp=Z,14nm,1.4s

KDWAN Kaudwane 59.54 214 P P 16 12 16.1 +0.1
KDWAN IAmb IAmb 16 12 17.1
comp=Z,9.4nm,0.8s

KSRS Korea Array 59.62 61 P P 16 12 15.4 -0.9
comp=Z,1.2nm,0.5s,baz=277,slow=7.1,SNR=9.6
comp=Z,1.2nm,0.5s

LBTB Lobatse 60.46 212 P P 16 12 22.9 +0.6
LBTB IAmb IAmb 16 12 24.1
comp=Z,10nm,1.2s

LBTB Lobatse 60.46 212 P P 16 12 22.9 +0.6
LBTB pmax pmax
comp=Z,10.0nm,1.2s

DBIC Dimbokro 61.57 262 P P 16 12 29.4 -0.6
DBIC Dimbokro 61.57 262 P P 16 12 29.5 -0.6
comp=Z,1.8nm,0.3s,baz=77,slow=7.1,SNR=5.6
comp=Z,1.8nm,0.3s

BOSA Boshof 63.69 210 P P 16 12 43.8 -0.1
BOSA Boshof 63.69 210 P P 16 12 44.0 +0.1
comp=Z,2.3nm,0.5s,baz=28,slow=6.9,SNR=7.3
comp=Z,2.3nm,0.5s

B22K Teshekpuk Lake 79.67 10 P P 16 14 19.9 +0.6
B22K IAmb IAmb 16 14 40.6
comp=Z,10nm,1.2s

C18K Utukok River 79.78 13 P P 16 14 20.3 +0.3
D23K Nanushuk River 81.33 10 P P 16 14 29.3 +0.9
D23K IAmb IAmb 16 14 39.1
comp=Z,4.5nm,1.1s

E25K Arctic Village 82.81 8 P P 16 14 36.8 +0.6
E25K IAmb IAmb 16 14 46.3
comp=Z,2.4nm,0.7s

IMAR Indian Mountai 83.53 12 P P 16 14 40.0 +0.2
BMAR Burnt Mountain 83.59 8 P P 16 14 41.3 +1.0
INK Inuvik 83.73 4 P P 16 14 40.9 +0.1
INK IAmb IAmb 16 14 50.9
comp=Z,2.4nm,1.0s

INK Inuvik 83.73 4 P P 16 14 40.9 +0.1
INK pmax pmax
comp=Z,2.0nm,1.0s

G24K Hadweenzic Riv 83.90 9 P P 16 14 42.8 +1.0
G24K IAmb IAmb 16 14 52.4
comp=Z,3.5nm,0.8s

F30M Barrier River 84.28 5 P P 16 14 44.0 +0.3
F31M Tsiigehtchic 84.58 4 P P 16 14 45.4 +0.2
J20K Nowinta River 85.08 13 P P 16 14 48.1 +0.3
J20K IAmb IAmb 16 15 30.6
comp=Z,8.2nm,1.4s

ILAR Eielson Array 85.79 10 P P 16 14 50.5 -0.8
comp=Z,0.4nm,0.5s,baz=317,slow=4.6,SNR=12
comp=Z,0.4nm,0.5s

J26L Joseph Creek 86.52 9 P P 16 14 55.2 +0.2
J26L IAmb IAmb 16 15 04.9
comp=Z,4.2nm,0.8s

K27K Chicken 87.16 8 P P 16 14 58.7 +0.6
K27K IAmb IAmb 16 14 59.4
comp=Z,8.1nm,1.2s

K29M Barlow Dome 87.84 6 P P 16 15 01.9 +0.4
K29M IAmb IAmb 16 15 02.7
comp=Z,7.7nm,1.2s

AS31 Alice Springs 90.60 116 P P 16 15 15.1 +0.2
ASAR Alice Springs 90.60 116 P P 16 15 15.2 +0.3
ASAR Alice Springs 90.60 116 P P 16 15 14.8 -0.2
comp=Z,0.9nm,0.7s,baz=305,slow=4.6,SNR=29
comp=Z,0.9nm,0.7s

ASAR Alice Springs 90.60 116 P P 16 15 15.3 +0.3

*AEIC **10** 16:04:33.9±1.3,51.54N±0.06×167.7W±0.1,h5km±9km, Error ellipse: s-maj=11.8km s-min=7.4km az=124.0*
NEIC 10 16:04:31.8±1.6,51.36N±0.03×167.8W±0.1,h10km±2km, ML2.9/10,ML2.5(AEIC),Error ellipse: s-maj=12.4km s-min=4.6km az=109.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.75**	**339**				Pn	16 05 02.6	+0.5
NIKH							Sn	16 05 24.4	0.0
NIKH	**Nikolski High**	**1.75**	**339**	IAML				16 05 26.2	
	comp=N,146nm,0.6s								
NIKH				IAML				16 05 27.3	
	comp=E,153nm,0.9s								

CLCO Concord Point, 1.86 321 Pn 16 05 03.1 -0.7
OKSP Okmok Steeple 1.93 351 Pn 16 05 04.8 +0.2
OKSP Sn 16 05 27.2 -1.8
OKTU Okmok Mt. Tuli 2.04 356 Pn 16 05 06.2 0.0
OKWR Okmok West Rim 2.10 353 Pn 16 05 05.7 -1.3
OKWE Okmok W'ng Wal 2.14 353 Pn 16 05 05.5 -2.1
MGOD Makushin Gods 2.51 13 Pn 16 05 12.5 -0.2
MREP Makushin Rep't 2.54 14 Pn 16 05 13.8 +0.7
UNV Unalaska Valle 2.62 17 Pn 16 05 14.8 +0.8
UNV Sn 16 05 46.5 +0.7
MNAT Makushin Natee 2.62 15 Pn 16 05 14.0 -0.2
MSW Makushin Switc 2.64 13 Pn 16 05 13.1 -1.3
AKMO Akutan Morgan 2.95 21 Pn 16 05 18.8 +0.1
AKMO Sn 16 05 54.8 +0.7
AKRB Akutan Reef Bi 2.97 20 Pn 16 05 18.8 -0.2
LVA Lava Point 3.01 20 Pn Pn 16 05 18.8 -0.7
LVA IAML 16 05 42.7
comp=E,26nm,1.0s
LVA IAML 16 06 30.0
comp=N,51nm,1.2s
AKUT Akutan 3.04 23 Pn Pn 16 05 20.1 +0.1
AKUT IAML 16 05 40.7
comp=E,23nm,1.2s
AKUT IAML 16 05 58.2
comp=N,15nm,0.9s
AKGG Akutan Green G 3.05 20 Pn 16 05 19.1 -1.0
AKSA Akutan Strait 3.06 24 Pn 16 05 20.8 +0.5
FALS False Pass 4.39 35 Pn Pn 16 05 37.5 -0.9
DT1 Dutton Round H 5.01 39 Pn 16 05 46.9 0.0
S12K Black Hills 5.54 36 Pn Pn 16 05 51.6 -2.6
SDPT Sand Point 5.93 45 Pn Pn 16 05 59.3 -0.3
CNBA Chernabura Isl 6.04 52 Pn Pn 16 06 01.8 +0.7

*NEIC **10** 16:14:21.2,7.15S×75.76W,h120km,Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10^16^Nm; Mrr-3.36; Mθθ0.17; Mϕϕ3.20; Mrθ-0.35; Mθϕ-0.31; Mϕr0.90; Fault plane solution: M0.3.44000×10^16^ NP1: ϕs358.07000°,δ37.22000°,λ-83.58000°. NP2: ϕs170.03000°,δ53.05000°,λ-94.85000°. Principal axes: T 3.3578, Plg8.0000°, Azm263.0000°; N 0.1502, Plg4.0000°, Azm173.0000°; P -3.5080, Plg81.0000°, Azm57.0000°;*

*MOS **10** 16:14:21.1±0.9,7.24S×75.86W,h125km,mb5.1/31 Error ellipse: s-maj=10.8km s-min=6.1km az=101.2*

*IDC **10** 16:14:21.2±0.7,7.26S×75.86W,h118km±5km, mb4.7/22, mbtmp5.1/28,MS3.7/9, Error ellipse: s-maj=13.4km s-min=8.1km az=75.0*

*NEIC **10** 16:14:21.2,7.25S×75.86W,h120km*

*NEIC **10** 16:14:21.6±1.6,7.24S±0.05×75.85W±0.06,h117km±5km, mb5.2/754,Mww5.0/20,Error ellipse: s-maj=8.9km s-min=5.5km az=123.0*

*VAO **10** 16:14:22.1±0.6,7.23S×75.65W,h120km±4km,mb5.4*

*GCMT **10** 16:14:23.6±0.2,7.30S±0.02×75.94W±0.02,h130km±1km, MW5.0/118,Moment Tensor Solution. s71,c81; s118,c174; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-4.00±.07; Mθθ-0.61±.09; Mϕϕ4.61±.11; Mrθ-0.14±.07; Mθϕ0.62±.11; Mϕr0.29±.10; Best double couple: M04.35400×10^16^ NP1:ϕs10.00000°,δ43.00000°, λ-86.00000°. NP2:ϕs184.00000°,δ47.00000°, λ-94.00000°. Principal axes: T 4.6910, Plg2.0000°, Azm277.0000°; N -0.6700, Plg3.0000°, Azm187.0000°; P -4.0180, Plg86.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 16:14:20.8±0.5,7.26S±0.04×75.84W±0.05,h118km±4km, h118km:pP-P,n1076,σ1s01/762,mb5.2/426,8C-38D, Northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**3.15**	**99**				**Pn**	**16 15 11.2**	**+2.2**
CZSB	**Cruzeiro do Su**	**3.15**	**99**	**eP**			**Pn**	**16 15 11.3**	**+2.3**
CZSB	**Cruzeiro do Su**	**3.15**	**99**	P			**Pn**	**16 15 11.2**	**+2.2**
NNA	**Nana**	**4.80**	**192**				**Pn**	**16 15 32.3**	**+1.1**
NNA						Sn	**Sn**	**16 16 19.1**	**-6.8**
NNA	**Nana**	**4.80**	**192**	P			**Pn**	**16 15 32.6**	**+1.4**
	185nm,0.3s,baz=357,slow=7.0,SNR=102								
NNA						S	**Sn**	**16 16 23.6**	**-2.3**
	423nm,0.3s,baz=321,slow=13,SNR=8.0								
NNA	**Nana**	**4.80**	**192**	P			**Pn**	**16 15 32.3**	**+1.1**
MCRA	**Macar, Loja**	**5.00**	**305**	P			**Pn**	**16 15 31.4**	**-2.4**
COHC	**Cochancay**	**5.85**	**324**				**Pn**	**16 15 45.3**	**0.0**
COHC	**Cochancay**	**5.85**	**324**	P			**Pn**	**16 15 44.9**	**-0.4**
	22μm2μm,0.6s								
PIAT	**Ana Tenorio**	**6.67**	**339**	P			**Pn**	**16 15 55.9**	**-0.9**
	3μm5μm446nm,1.0s								
SLOR	**San Lorenzo -**	**7.00**	**338**				**Pn**	**16 16 02.2**	**+0.8**
PTLC	**Puerto Leguiza**	**7.45**	**8**	P			Pn	16 16 02.1	-4.9
PPLP	**Puerto Lpez**	**7.51**	**319**	P			**Pn**	**16 16 07.5**	**-0.3**
	5μm426nm,0.4s								
BONI	**La Bonita**	**7.84**	**348**	P			**Pn**	**16 16 12.1**	**-0.4**
	4μm193nm,0.8s								
OTAV	**Otavalo**	**7.89**	**341**				**Pn**	**16 16 14.1**	**+0.8**
OTAV	**Otavalo**	**7.89**	**341**	P			**Pn**	**16 16 14.1**	**+0.8**
OTAV	**Otavalo**	**7.89**	**341**	**eP**			**Pn**	**16 16 14.1**	**+0.8**
OTAV	**Otavalo**	**7.89**	**341**	P			**Pn**	**16 16 13.8**	**+0.5**
	1μm141nm,0.9s								
CUSE	**Cuicocha Este**	**7.94**	**341**	P			**Pn**	**16 16 15.4**	**+1.5**
	4μm176nm,0.5s								
PAC1	**Pacto, Paraso**	**8.03**	**338**	P			**Pn**	**16 16 16.6**	**+1.6**
	4μm390nm,0.6s								
TULM	**Tulcn-Chalpat**	**8.16**	**346**	P			**Pn**	**16 16 17.6**	**+0.7**
	2μm268nm,0.8s								
CMBC	**Cumbal**	**8.38**	**346**	P			**Pn**	**16 16 20.1**	**+0.1**
GCUF	**Volcan Galeras**	**8.56**	**350**	P			**Pn**	**16 16 23.4**	**+1.0**
	1μm126nm,0.7s								
FLOC	**Florencia**	**8.79**	**1**				**Pn**	**16 16 25.0**	**-0.1**
FLOC	**Florencia**	**8.79**	**1**	P			**Pn**	**16 16 25.7**	**+0.7**
	3μm114nm,0.5s								
CRUC	**La Cruz**	**8.84**	**353**	P			**Pn**	**16 16 26.8**	**+0.8**
TUMC	**Tumaco**	**9.47**	**342**	P			**Pn**	**16 16 35.2**	**+0.9**
	254nm,1.1s								
MACC	**Macarena, Meta**	**9.55**	**12**	P			**Pn**	**16 16 34.1**	**-1.3**
	2μm124nm,0.7s								
POPC	**Popayan, Colom**	**9.77**	**355**	P			**Pn**	**16 16 40.4**	**+1.9**
	544nm43nm,0.9s								
BETC	**Betania**	**9.88**	**2**	P			**Pn**	**16 16 41.2**	**+1.3**
URMC	**La Uribe, Meta**	**10.54**	**8**	P			**Pn**	**16 16 48.6**	**-0.2**
	2μm131nm,0.8s								
PRAC	**Prado**	**10.94**	**5**	P			**Pn**	**16 16 54.5**	**+0.3**
	1μm126nm,0.9s								
ORTC	**Ortega, Tolima**	**11.11**	**3**	P			**Pn**	**16 16 56.9**	**+0.5**
	2μm159nm,1.0s								
YOTC	**Yotoco, Valle**	**11.18**	**357**	P			**Pn**	**16 16 57.3**	**-0.1**
	34nm,0.9s								
SGC2	**Sao Gabriel da**	**11.31**	**52**	P			**Pn**	**16 16 56.5**	**-2.6**
LPAZ	**La Paz**	**11.72**	**141**				**Pn**	**16 17 03.0**	**-2.0**
LPAZ	**La Paz**	**11.72**	**141**	P			**Pn**	**16 17 04.2**	**-0.9**
	20nm,0.5s,baz=330,slow=11,SNR=87								
LPAZ				LR			LR	16 22 49.0	
	comp=Z,148nm,20.3s,baz=313,slow=43								
LPAZ	**La Paz**	**11.72**	**141**	**eP**			**Pn**	**16 17 02.8**	**-2.3**
TEFE	**Tefe**	**11.76**	**72**	**eP**			**Pn**	**16 17 02.4**	**-2.6**
CVER	**Cruz Verde, Cu**	**11.83**	**9**	P			**Pn**	**16 17 05.9**	**-0.5**
CHIC	**Chingaza**	**12.00**	**10**	P			**Pn**	**16 17 08.1**	**-0.4**
	868nm110nm,0.7s								
ROSC	**El Rosal**	**12.11**	**7**				**Pn**	**16 17 11.9**	**+1.9**
ROSC	**El Rosal**	**12.11**	**7**	P			**Pn**	**16 17 11.2**	**+1.2**
	9.5nm,0.5s,baz=69,slow=24,SNR=6.6								
ROSC				LR			LR	16 23 02.5	
	comp=Z,186nm,18.2s,baz=241,slow=43								
ROSC	**El Rosal**	**12.11**	**7**	P			**Pn**	**16 17 10.0**	**0.0**
	1μm123nm,0.8s								
GUY2C	**Guyana, Caldas**	**12.41**	**2**	P			**Pn**	**16 17 15.5**	**+1.5**
	1μm139nm,0.7s								
PB12	**IPOC Station P**	**12.50**	**155**				**Pn**	**16 17 14.8**	**+0.1**
MAPC	**Malpelo**	**12.58**	**333**	P			**Pn**	**16 17 14.8**	**-1.0**
	5μm179nm,0.9s								
PB16	**IPOC Station P**	**12.62**	**151**				**Pn**	**16 17 16.8**	**0.0**
SPBC	**San Pablo de B**	**12.95**	**8**	P			**Pn**	**16 17 22.5**	**+1.9**
	2μm141nm,0.9s								
CBOC	**Ciudad Bolivar**	**13.04**	**359**	P			**Pn**	**16 17 23.8**	**+1.9**
	837nm107nm,0.9s								
RUSC	**La Rusia**	**13.35**	**12**				**Pn**	**16 17 26.2**	**-0.1**
RUSC	**La Rusia**	**13.35**	**12**	P			**Pn**	**16 17 26.0**	**-0.2**
	902nm69nm,0.6s								
HELC	**Santa Helena**	**13.36**	**1**	P			**Pn**	**16 17 26.1**	**-0.2**
	497nm56nm,0.9s								
PTBC	**PUERTO BERRIO,**	**13.78**	**6**	P			**Pn**	**16 17 32.2**	**+0.9**

672nm83nm,0.9s
PB11 IPOC Station P 13.80 155 Pn 16 17 31.3 -0.5
GO01 Chusmiza 13.92 153 Pn 16 17 33.3 -0.2
HMBC Humberstone 14.17 157 Pn 16 17 36.1 -0.4
DBBC Dabeiba 14.19 359 P **P 16 17 39.3 -1.1**
6µm92nm, 1.0s
TA01 Diego Aracena 14.32 158 Pn 16 17 38.2 0.0
PB08 IPOC Station P 14.36 154 Pn 16 17 39.1 +0.1
PATCX Punta Patache 14.56 158 Pn 16 17 41.5 +0.1
UREC San Jos de Ur 14.91 1 P **Pn 16 17 46.9 +1.1**
961nm110nm,1.3s
PB01 IPOC Station P 15.02 156 P **Pn 16 17 47.2 +0.1**
PB02 IPOC Station P 15.11 158 P **Pn 16 17 48.5 +0.2**
OCAC Ocana 15.60 9 P **P 16 17 55.5 -0.7**
219nm,0.8s
MACA Manacapuru-AM 15.63 76 Pn 16 17 52.0 -2.8
MACA Manacapuru-AM 15.63 76 *e*P **Pn 16 17 51.7 -3.1**
PB09 IPOC Station P 15.79 157 Pn 16 17 57.1 +0.2
PAYG Puerto Ayora 15.82 294 Pn 16 17 57.0 -0.1
PB03 IPOC Station P 15.83 159 P **P 16 17 59.2 +0.4**
CAPC Capurgana 15.86 355 P **P 16 18 00.4 +1.5**
2µm179nm,1.1s
VILB Vilhena 16.40 111 P **Pn 16 18 02.9 -1.4**
VILB Vilhena 16.40 111 *e*P **Pn 16 18 02.6 -1.7**
PB05 IPOC Station P 16.43 161 P **P 16 18 05.2 -0.1**
SDV Santo Domingo 16.86 18 P **P 16 18 10.8 +0.7**
79nm,0.6s,baz=190,slow=12,SNR=47
SDV S **Sn 16 21 14.7 -3.1**
13nm,0.6s,baz=27,slow=9.5,SNR=1.7
SDV Santo Domingo 16.86 18 *e*P **P 16 18 11.0 +0.8**
SDV Santo Domingo 16.86 18 P **P 16 18 10.9 +0.8**
1µm162nm,0.9s
SIV San Ignacio 16.86 122 P **Pn 16 18 09.3 -0.6**
39nm,0.5s,baz=4.0,slow=4.6
SJCC San Jacinto, C 17.05 2 P **P 16 18 12.0 -0.2**
1µm143nm,0.9s
ARGC Ariguani, Magd 17.08 5 P **Pn 16 18 14.9 +2.4**
2µm112nm,0.7s
PB14 IPOC Station P 18.04 164 P **P 16 18 23.6 +0.4**
BOAV Boa Vista 18.05 58 P **P 16 18 23.5 +0.4**
PTLB Pontes e Lacer 18.28 118 P **P 16 18 25.1 -0.4**
CRJC Cerrejon, Guaj 18.40 9 P **P 16 18 26.5 -0.5**
3µm417nm,0.9s
GO02 Mina Guanaco 18.78 162 Pn 16 18 33.0 -0.1
URIC Uribia, Colomb 19.22 12 P **P 16 18 35.1 -0.8**
1µm193nm,0.8s
PDRB Porto dos Gac 19.34 104 *e*P **P 16 18 36.6 -0.6**
AC01 Pan de Azucar 19.44 166 P **P 16 18 38.6 +0.4**
SOCE Pocosol 19.58 333 Pn 16 18 43.3 +1.0
JTS Las Juntas de 19.65 332 Pn 16 18 43.0 -0.1
JTS Las Juntas de 19.65 332 P **P 16 18 41.3 +0.7**
20nm,0.9s,baz=156,slow=6.3,SNR=8.6
JTS LR LR 16 25 41.7
comp=Z,95nm,21.3s,baz=130,slow=35
JTS Las Juntas de 19.65 332 *d i*P **Pn 16 18 43.7 +0.6**
JTS pmax pmax
comp=Z,64nm,1.8s
JUD3 Juan Diaz 3 19.82 331 P **P 16 18 42.8 +0.3**
ITTB Itaituba 20.21 83 *e*P **P 16 18 45.3 -1.3**
AC02 Maricunga 20.49 163 P **P 16 18 50.5 +0.4**
PCRV Puerto La Cruz 20.60 33 *e*P Pn 16 18 52.8 -1.5
AC06 Mina Casimiro 20.66 166 P **P 16 18 51.7 +0.4**
SALV Santo Antonio 21.51 115 *e*P **P 16 18 59.9 -0.7**
LCO Las Campanas 22.17 168 P **P 16 19 08.6 +0.9**
LCO Las Campanas 22.17 168 P **P 16 19 08.6 +0.9**
MAL2 Monte Alegre, 22.20 77 P **P 16 19 07.2 -0.7**
BDQN Bodoquena, MS 22.67 127 *e*P **P 16 19 11.8 -0.7**
TRN Trinidad (W) 22.87 39 *e*P **P 16 19 14.3 -0.1**
PP1B Ponte de Pedra 22.88 119 *e*P **P 16 19 14.6 0.0**
AQDB Aquidauana 23.52 126 P **P 16 19 20.1 -0.3**
AQDB Aquidauana 23.52 126 *e*P **P 16 19 20.3 -0.1**
GRFF Grenada Fort F 23.76 36 *e*P **P 16 19 18.6 -4.1**
GRHS Sauteurs 23.96 36 *e*P **P 16 19 24.8 +0.4**
GCMP Grenada, Carri 24.29 36 *e*P **P 16 19 25.4 -2.0**
SNDB Serra Nova Dou 24.64 103 *e*P **P 16 19 31.1 +0.3**
ARAG Araguaiana, MT 24.98 112 *e*P **P 16 19 33.6 -0.1**
SVB Belmont 25.02 35 *e*P **P 16 19 33.3 -0.8**
C2SB Chapadao do Su 25.13 119 *e*P **P 16 19 36.2 +1.2**
MTDJ Mount Denham 25.38 356 P **P 16 19 39.4 +2.1**
SLBI Saint Lucia, B 25.78 35 *e*P **P 16 19 41.4 +0.4**
SLBI Saint Lucia, B 25.78 35 *e*P **P 16 19 47.7 +6.8**
VA03 San Esteban 25.85 170 IAmb IAmb 16 20 12.8
comp=Z,53nm,1.1s
PRPB Paraupebas 25.87 89 *e*P **P 16 19 41.2 -0.7**
CPUP Villa Florida 25.89 139 P **P 16 19 42.1 +0.3**
CPUP Villa Florida 25.89 139 P **P 16 19 42.5 +0.6**
comp=Z,4.9nm,0.5s,baz=181,slow=9.7,SNR=41
comp=Z,4.9nm,0.5s
CRPR Cabo Rojo, PR 26.54 19 P **P 16 19 47.7 -0.1**
CRPR IAmb IAmb 16 19 50.0
comp=Z,37nm,0.7s
DR12 Loma Pena Alta 26.65 14 P **P 16 19 49.4 +0.5**
DSLB Salisbury 26.70 32 *e*P **P 16 19 51.2 +2.0**
OBIP Obispado Ponce 26.74 20 IAmb IAmb 16 19 51.4
comp=Z,55nm,0.8s
MT09 Talagante 26.77 171 IAmb IAmb 16 19 52.5
comp=Z,58nm,1.1s
SJG San Juan 26.96 21 P **P 16 19 51.5 0.0**
SJG San Juan 26.96 21 P **P 16 19 51.5 0.0**
SJG pmax pmax
comp=Z,264nm,1.4s
SJG San Juan 26.96 21 P **P 16 19 52.1 +0.6**
BO04 La Punta 27.04 170 IAmb IAmb 16 19 55.5
comp=Z,65nm,1.1s
CHIV Chivirico 27.07 359 IAmb IAmb 16 20 24.6
comp=Z,148nm,1.9s
HUMP Col San Antoni 27.10 21 IAmb IAmb 16 20 04.3
comp=Z,35nm,0.8s
ITRB Ituiutaba 27.64 119 *e*P **P 16 19 57.7 0.0**
SMTB Santa Maria do 28.02 95 *e*P **P 16 20 01.1 0.0**
TMAB Tom-Au,PA,Br 28.06 81 *e*P **P 16 20 00.3 -1.2**
ANWB Willy Bob 28.39 29 P **P 16 20 03.9 -0.4**
BDFB Brasilia 28.49 109 P **P 16 20 04.9 -0.5**
BDFB IAmb IAmb 16 20 06.8
comp=Z,67nm,1.3s
BDFB Brasilia 28.49 109 P **P 16 20 05.9 +0.6**
comp=Z,25nm,0.5s,baz=277,slow=11,SNR=46
BDFB pP **pP 16 20 32.6 +1.5**
comp=Z,12nm,0.6s,baz=260,slow=12,SNR=2.9
BDFB LR LR 16 32 06.3
comp=Z,130nm,18.3s,baz=345,slow=37
comp=Z,25nm,0.5s
PTGB Pitanga 28.61 130 *e*P **P 16 20 06.2 -0.1**
IPMB Ipameri, GO 28.95 114 *e*P **P 16 20 09.2 -0.2**
PSAL Palomas, Salto 29.20 147 *e*P **P 16 20 13.0 +1.6**
BB19B Bebedouro 29.76 120 *e*P **P 16 20 15.4 -1.1**
TEIG Tepich 29.93 336 P **P 16 20 17.5 -0.4**
TEIG IAmb IAmb 16 20 19.8
comp=Z,58nm,0.9s
ITAB Concordia 30.01 134 P **P 16 20 18.3 -0.3**
ITAB Concordia 30.01 134 *e*P **P 16 20 17.8 -0.8**
PMNB Patos De Minas 30.72 114 *e*P **P 16 20 24.5 -0.6**
SDBA SAO DESIDERIO 30.89 102 *e*P **P 16 20 25.7 -0.9**
RCLB Rio Claro- Sao 31.15 122 *e*P **P 16 20 28.5 -0.3**
CPSB Cacapava Do Su 31.17 140 *e*P **P 16 20 29.3 +0.5**
SPB Sao Paulo 31.74 124 IAmb IAmb 16 20 36.5
comp=Z,46nm,1.0s
SPB Sao Paulo 31.74 124 *e*P **P 16 20 33.6 -0.2**
VAO Valinhos 31.87 123 IAmb IAmb 16 20 35.7
comp=Z,104nm,1.7s
VAO Valinhos 31.87 123 *e*P **P 16 20 34.8 -0.3**
PLTB Pedras Altas 32.01 143 *e*P **P 16 20 37.4 +1.3**
PET01 Itanhaem-SP 32.17 125 *e*P **P 16 20 36.4 -1.2**
MAJ01 Sao Joao Batis 32.38 131 *e*P **P 16 20 39.0 -0.4**
LR04 Corral 32.55 177 IAmb IAmb 16 20 43.1
comp=Z,37nm,0.9s
BSCB Bom Sucesso 32.99 118 *e*P **P 16 20 45.0 0.0**
TRQA Tornquist 33.13 160 P **P 16 20 45.5 -0.4**
TRQA IAmb IAmb 16 20 47.4
comp=Z,34nm,1.2s
TRQA Tornquist 33.13 160 P **P 16 20 45.5 -0.4**
TRQA pmax pmax
comp=Z,35nm,1.2s
PARB Paraibuna 33.13 122 *e*P **P 16 20 46.2 0.0**
DIAM Diamantina, MG 33.17 112 *e*P **P 16 20 46.6 -0.1**
SLP01 Ubatuba-SP 33.52 122 *e*P **P 16 20 49.7 +0.2**
PLCA Paso Flores 33.66 173 P **P 16 20 51.2 +0.7**
PLCA **PcP 16 23 28.4 +0.5**
PLCA Paso Flores 33.66 173 P **P 16 20 51.6 +1.1**
comp=Z,11nm,0.6s,baz=345,slow=9.8,SNR=46
PLCA PcP **PcP 16 23 28.6 +0.7**
comp=Z,11nm,0.8s,baz=344,slow=4.0,SNR=10
comp=Z,11nm,0.6s
PLCA Paso Flores 33.66 173 *e*P **P 16 20 51.1 +0.7**
PLCA Paso Flores 33.66 173 P **P 16 20 51.5 +1.0**
VAS01 Vassouras-RJ 34.60 119 *e*P **P 16 20 59.1 +0.3**
LL01 San Ignacio de 35.11 176 IAmb IAmb 16 21 04.3
comp=Z,18nm,0.6s
DUB01 Friburgo-RJ 35.46 118 *e*P **P 16 21 05.8 -0.3**
SJMB Sao Joao De Ma 35.56 112 *e*P **P 16 21 06.4 -0.6**
LL02 Futaleuf 35.96 175 IAmb IAmb 16 21 11.7
comp=Z,57nm,1.7s
CAM01 Campos-RJ 36.01 117 *e*P **P 16 21 09.2 -1.6**
GUA01 Guaratinga, BA 36.40 108 *e*P **P 16 21 14.4 +0.2**
RIB01 Linhares ES 36.43 113 *e*P **P 16 21 14.4 -0.1**
CMC01 Camacan, BA 36.47 106 *e*P **P 16 21 14.6 -0.2**
ALF01 Guarapari-ES 36.48 115 *e*P **P 16 21 14.8 0.0**
RPN Rapa Nui 37.41 234 LR LR 16 32 26.2
comp=Z,162nm,19.8s,baz=78,slow=29
ABR01 Abrolhos, BA 37.70 110 *e*P **P 16 21 24.5 -0.7**
COYC Coyhaique 38.31 176 IAmb IAmb 16 21 31.9
comp=Z,31nm,0.7s
COYC Coyhaique 38.31 176 P **P 16 21 31.0 +1.1**
TIGA Tifton 39.19 349 IAmb IAmb 16 21 38.8
comp=Z,53nm,1.1s
NBAN Anadia - AL 39.20 96 *e*P **P 16 21 37.0 -0.7**
352A Blakely 39.49 348 IAmb IAmb 16 21 41.3
comp=Z,72nm,1.0s
RCBR Riachuelo 39.70 90 P **P 16 21 41.6 -0.4**
RCBR IAmb IAmb 16 21 43.4
comp=Z,25nm,0.7s
RCBR Riachuelo 39.70 90 P **P 16 21 41.6 -0.4**
RCBR pmax pmax
comp=Z,25nm,0.7s
RCBR Riachuelo 39.70 90 P **P 16 21 42.4 +0.4**
154A Montrose 40.25 350 P **P 16 21 46.7 +0.5**
250A Grady 40.27 346 P **P 16 21 45.8 -0.5**
250A IAmb IAmb 16 21 47.5
comp=Z,55nm,0.9s
NHSC New Hope 40.35 354 P **P 16 21 47.8 +0.8**
HBVL Hebbronville 40.66 328 IAmb IAmb 16 21 52.6
comp=Z,30nm,0.9s
GOGA Godfrey 41.09 350 IAmb IAmb 16 21 54.3
comp=Z,44nm,0.8s
LRAL Lakeview Retre 41.45 346 IAmb IAmb 16 21 56.9
comp=Z,54nm,1.0s
146A Union 41.62 343 IAmb IAmb 16 21 58.5
comp=Z,44nm,1.0s
JSC Jenkinsville 41.63 353 IAmb IAmb 16 21 59.0
comp=Z,31nm,1.0s
Y52A Lilburn 41.63 350 IAmb IAmb 16 21 58.0
comp=Z,20nm,0.7s
HKT Hockley 41.69 334 *de*P **P 16 21 59.0 +1.1**
HKT pmax pmax
comp=Z,16nm,1.1s
HODGE Hodges 41.71 352 IAmb IAmb 16 21 59.1
comp=Z,28nm,0.8s
X58A Rowland 41.72 356 IAmb IAmb 16 21 59.9
comp=Z,33nm,0.7s
Z47A Carrollton 41.88 345 IAmb IAmb 16 22 00.2
comp=Z,45nm,0.8s
BIRD Birdtown, Kers 41.90 354 IAmb IAmb 16 22 01.3
comp=Z,42nm,0.9s
MLDN Muldoon 42.10 332 IAmb IAmb 16 22 04.4
comp=Z,63nm,0.9s
PAULI Pauline 42.23 353 IAmb IAmb 16 22 04.0
comp=Z,51nm,1.0s
SNAG San Augustine 42.36 336 IAmb IAmb 16 22 05.4
comp=Z,114nm,1.6s
W57A Gilead 42.36 355 IAmb IAmb 16 22 05.0
comp=Z,60nm,0.9s
X51A Calhoun 42.46 349 IAmb IAmb 16 22 04.7
comp=Z,29nm,0.8s
KMSC Kings Mountain 42.49 353 IAmb IAmb 16 22 06.1
comp=Z,61nm,1.1s
BG3 Lake Jocassee 42.55 351 IAmb IAmb 16 22 06.6
comp=Z,47nm,1.1s
FPAL Fort Paine 42.59 348 IAmb IAmb 16 22 05.8
comp=Z,30nm,0.8s
V58A Windy Hill, Pi 42.93 356 IAmb IAmb 16 22 09.6
comp=Z,43nm,1.0s
W50A Signal Mountai 43.16 349 IAmb IAmb 16 22 10.7
comp=Z,48nm,0.7s
435B Jarrell 43.19 332 IAmb IAmb 16 22 13.1
comp=Z,50nm,0.7s
CPCT Cooper Cave 43.26 350 IAmb IAmb 16 22 11.6
comp=Z,30nm,0.7s
SWET Sewanee 43.31 348 IAmb IAmb 16 22 11.4
comp=Z,39nm,0.8s
Z41A Richland Creek 43.40 339 IAmb IAmb 16 22 13.1
comp=Z,34nm,0.9s
OXF Oxford 43.48 344 IAmb IAmb 16 22 13.0
comp=Z,69nm,1.3s
DRIO Del Rio 43.57 328 IAmb IAmb 16 22 15.1
comp=Z,38nm,0.8s
PLAL Pickwick Lake 43.57 345 IAmb IAmb 16 22 13.1
comp=Z,33nm,0.9s
U56A King 43.58 355 IAmb IAmb 16 22 15.3
comp=Z,57nm,1.0s
CCAR Cane Creek 43.65 341 IAmb IAmb 16 22 15.1
comp=Z,68nm,1.0s
WLAR White Oak Lake 43.90 339 IAmb IAmb 16 22 17.7
comp=Z,66nm,1.0s
U54A Nelsons Funny 43.91 353 IAmb IAmb 16 22 17.2
comp=Z,51nm,1.1s
TZTN Tazewell 44.17 351 IAmb IAmb 16 22 18.3
comp=Z,28nm,0.6s
Z38A Mt. Pleasant 44.21 337 IAmb IAmb 16 22 20.6
comp=Z,93nm,1.3s
BLA Blacksburg 44.44 355 IAmb IAmb 16 24 02.9
comp=Z,32nm,0.8s
WVT Waverly 44.60 346 P **P 16 22 19.6 -1.8**
WVT Waverly 44.60 346 P **P 16 22 19.6 -1.8**
WVT pmax pmax
comp=Z,17nm,0.8s
WVT Waverly 44.60 346 P **P 16 22 19.9 -1.5**
WVT PcP **PcP 16 24 01.8 -0.5**
UALR University of 44.62 341 IAmb IAmb 16 22 22.2
comp=Z,69nm,0.9s
MIAR Mount Ida 44.83 339 P **P 16 22 23.6 +0.4**
MIAR pmax pmax
comp=Z,20nm,0.9s
R58B Mineral 45.03 358 IAmb IAmb 16 22 27.0
comp=Z,64nm,0.9s
OZNA Ozona 45.03 329 IAmb IAmb 16 22 26.9
comp=Z,63nm,1.8s
WHAR Wooly Hollow 45.07 341 IAmb IAmb 16 22 25.7
comp=Z,52nm,0.9s
S54A Dingess, Beckl 45.11 354 IAmb IAmb 16 22 26.7
comp=Z,25nm,0.9s
TXAR Lajitas Array 45.17 325 P **P 16 22 27.3 +1.1**
TXAR **PcP 16 24 04.5 -0.1**
TXAR Lajitas Array 45.17 325 P **P 16 22 27.0 +0.8**
comp=Z,7.2nm,0.7s,baz=148,slow=8.7,SNR=89
TXAR PcP **PcP 16 24 05.0 +0.4**
comp=Z,5.3nm,0.8s,baz=130,slow=4.5,SNR=9.1
comp=Z,7.2nm,0.7s
TXAR Lajitas Array 45.17 325 P **P 16 22 27.3 +1.1**
TXAR 16 24 04.5
T47A Sharon Grove 45.26 347 IAmb IAmb 16 24 05.1
comp=Z,36nm,0.8s
LCAR Lake Charles 45.44 343 IAmb IAmb 16 22 28.2
comp=Z,36nm,0.9s
R55A Marlinton 45.48 355 IAmb IAmb 16 24 07.0
comp=Z,36nm,0.9s
FCAR Ozark Folk Cen 45.57 341 IAmb IAmb 16 22 29.2
comp=Z,27nm,0.7s
SGCY Sterling City 45.83 330 IAmb IAmb 16 22 32.8
comp=Z,76nm,1.3s
PBMO Poplar Bluff 45.89 344 IAmb IAmb 16 24 07.2
comp=Z,25nm,0.8s
R50A Paris 45.99 351 IAmb IAmb 16 22 32.7
comp=Z,31nm,0.7s
Q56A Snyder Ridge, 46.17 356 IAmb IAmb 16 22 36.1
comp=Z,68nm,1.0s
CGM3 Cape Girardeau 46.17 345 IAmb IAmb 16 22 33.7
comp=Z,36nm,1.2s
MNHN Monahans 46.22 328 IAmb IAmb 16 22 36.0
comp=Z,22nm,0.6s
Q54A Coxs Mills 46.24 355 IAmb IAmb 16 22 34.9
comp=Z,28nm,0.6s
WCI Wyandotte Cave 46.29 349 P **P 16 22 33.7 -0.9**
WCI IAmb IAmb 16 22 34.5
comp=Z,37nm,1.1s
WCI Wyandotte Cave 46.29 349 P **P 16 22 33.7 -0.9**
WCI pmax pmax
comp=Z,37nm,1.2s
WCI Wyandotte Cave 46.29 349 P **P 16 22 33.5 -1.1**
WCI PcP **PcP 16 24 08.0 -0.1**
USIN University of 46.32 347 IAmb IAmb 16 22 34.1
comp=Z,29nm,0.7s
S44A Carbondale 46.44 345 IAmb IAmb 16 22 36.3
comp=Z,32nm,0.8s
SDMD Soldier's Deli 46.44 359 IAmb IAmb 16 22 37.9
comp=Z,29nm,0.7s
SIUC Southern Illin 46.45 345 IAmb IAmb 16 22 36.4
comp=Z,41nm,0.9s
HHAR Hobbs 46.53 340 IAmb IAmb 16 22 37.3
comp=Z,33nm,0.9s
P57A Homestead Farm 46.55 358 IAmb IAmb 16 22 39.5
comp=Z,87nm,1.7s
Q51A Peebles 46.57 352 IAmb IAmb 16 24 10.3
comp=Z,25nm,0.8s
EFI East Falkland 46.65 165 *de*P **P 16 22 38.8 +1.6**
EFI pmax pmax
comp=Z,62nm,1.0s
MGMO Mountain Grove 46.78 342 IAmb IAmb 16 22 39.0
comp=Z,95nm,1.1s
P53A Whipple 46.79 354 IAmb IAmb 16 24 11.1
comp=Z,36nm,0.9s
RLO Rose Lookout 46.80 339 IAmb IAmb 16 22 40.0
comp=Z,52nm,1.0s
POST Post 46.94 330 IAmb IAmb 16 22 41.6
comp=Z,76nm,1.0s
PSUB Penn St. - Bra 46.95 0 IAmb IAmb 16 22 41.8
comp=Z,51nm,0.8s
FVM French Village 47.02 344 IAmb IAmb 16 22 40.5
comp=Z,41nm,0.8s
WMOK Wichita Mounta 47.06 334 P **P 16 22 41.2 +0.5**
WMOK pmax pmax
comp=Z,30nm,1.2s
OLIL Olney 47.16 347 IAmb IAmb 16 24 12.1
comp=Z,50nm,1.2s
BLO Bloomington 47.25 349 IAmb IAmb 16 24 12.3
comp=Z,39nm,0.7s
PAGS Pennsylvania G 47.26 359 IAmb IAmb 16 22 44.4
comp=Z,74nm,1.1s
CCM Cathedral Cave 47.31 343 P **P 16 22 41.1 -1.5**
CCM IAmb IAmb 16 24 12.7
comp=Z,40nm,0.8s
CCM Cathedral Cave 47.31 343 P **P 16 22 41.1 -1.5**
CCM pmax pmax
comp=Z,40nm,0.8s
CCM Cathedral Cave 47.31 343 P **P 16 22 41.6 -1.0**
CCM PcP **PcP 16 24 12.1 +0.3**
QUOK Quay 47.44 337 IAmb IAmb 16 22 45.0
comp=Z,64nm,0.9s
O52A Adamsville 47.46 354 IAmb IAmb 16 22 44.3
comp=Z,28nm,0.7s
Q44A Meyer Farm, Va 47.53 346 IAmb IAmb 16 22 45.2
comp=Z,29nm,0.7s
O53A New Philadelph 47.53 354 IAmb IAmb 16 22 45.5
comp=Z,120nm,1.7s
SSPA Standing Stone 47.69 358 P **P 16 22 45.6 +0.1**
SSPA IAmb IAmb 16 22 47.1
comp=Z,46nm,0.7s
SSPA Standing Stone 47.69 358 P **P 16 22 46.4 +0.9**
ACSO Alum Creek Sta 47.71 353 IAmb IAmb 16 22 46.1
comp=Z,24nm,0.8s
P46A Rosedale 47.81 348 IAmb IAmb 16 24 14.2
comp=Z,25nm,0.8s
R40A Maddies Statio 47.83 343 IAmb IAmb 16 22 47.2
comp=Z,31nm,1.1s
O49A Covington 47.86 351 IAmb IAmb 16 24 14.1
comp=Z,30nm,1.0s
N58A Sunbury 47.87 359 IAmb IAmb 16 22 49.0
comp=Z,42nm,0.8s
T35A Sooner Cattle 48.02 338 IAmb IAmb 16 22 49.5
comp=Z,66nm,1.3s
PAMR Moraine State 48.12 356 IAmb IAmb 16 22 50.4
comp=Z,58nm,1.1s
ELIS Ellis County 48.46 334 IAmb IAmb 16 22 53.6
comp=Z,47nm,0.9s
AMTX Amarillo 48.50 331 IAmb IAmb 16 24 17.6
comp=Z,28nm,0.8s
SFIN Lafayette 48.52 349 IAmb IAmb 16 22 50.9
comp=Z,26nm,0.7s
OK038 West end E0370 48.52 335 IAmb IAmb 16 22 53.3
comp=Z,54nm,1.0s
M63A Gales Ferry 48.55 4 P **P 16 22 52.4 +0.4**
N49A Columbus Grove 48.55 352 IAmb IAmb 16 22 51.8
comp=Z,22nm,0.7s
KSPA Keystone Colle 48.58 0 IAmb IAmb 16 22 54.6
comp=Z,58nm,1.1s
KAN14 Manchester OK 48.62 336 IAmb IAmb 16 22 54.3
comp=Z,101nm,1.6s
M50A Fremont 48.87 353 IAmb IAmb 16 22 54.9
comp=Z,43nm,0.8s
P40A Paris 48.91 343 IAmb IAmb 16 22 54.8
comp=Z,24nm,0.8s
UCCT U. Connecticut 48.93 4 IAmb IAmb 16 22 57.4
comp=Z,57nm,0.9s
L64A Middleborough 49.17 5 P **P 16 22 56.9 +0.2**
L64A IAmb IAmb 16 22 58.3
comp=Z,60nm,1.1s
L59A Walton 49.22 1 P **P 16 22 58.2 +1.1**
BCX Boston College 49.54 5 IAmb IAmb 16 23 00.9
comp=Z,19nm,0.7s
L61B Northampton 49.55 3 IAmb IAmb 16 23 01.0
comp=Z,32nm,0.7s
WES Weston 49.58 4 IAmb IAmb 16 23 01.3
comp=Z,34nm,0.6s
HRV Adam Dziewonsk 49.68 4 P **P 16 23 00.7 0.0**
HRV Adam Dziewonsk 49.68 4 P **P 16 23 00.7 0.0**
HRV pmax pmax
comp=Z,47nm,0.8s
HRV Adam Dziewonsk 49.68 4 P **P 16 23 01.7 +1.0**
K62A Royalston 49.79 3 IAmb IAmb 16 23 03.6
comp=Z,45nm,0.9s
L46A Eue Claire 49.96 350 IAmb IAmb 16 23 02.2
comp=Z,46nm,1.0s
319A Douglas 49.98 322 IAmb IAmb 16 23 05.5
comp=Z,36nm,1.0s
RTBA Rita Blanca 50.26 332 IAmb IAmb 16 24 24.1
comp=Z,32nm,0.7s
L42A Oliver, Polo 50.63 347 IAmb IAmb 16 23 06.9
comp=Z,26nm,0.6s
ABQ Albuquerque 50.96 327 IAmb IAmb 16 23 13.1
comp=Z,23nm,1.0s
ANMO Albuquerque 50.96 327 P **P 16 23 10.0 -0.8**
ANMO IAmb IAmb 16 23 13.0
comp=Z,22nm,0.9s
ANMO Albuquerque 50.96 327 *d i*P **P 16 23 11.3 +0.6**
ANMO pmax pmax
comp=Z,26nm,1.0s
ANMO Albuquerque 50.96 327 P **P 16 23 11.4 +0.7**
ANMO pP **pP 16 23 37.6 -1.1**
TASM ASL Pad, Albuq 50.96 327 IAmb IAmb 16 23 13.1
comp=Z,23nm,0.9s
TASM ASL Pad, Albuq 50.96 327 IAmb IAmb 16 23 13.1
comp=Z,23nm,0.9s
K43A Burlington 51.01 348 IAmb IAmb 16 23 10.2
comp=Z,49nm,1.0s
L40A Anamosa 51.06 345 IAmb IAmb 16 23 10.9
comp=Z,40nm,1.0s
VT1 Waterbury 51.43 3 IAmb IAmb 16 23 15.4
comp=Z,31nm,0.6s
TUC Tucson 51.55 322 P **P 16 23 14.2 -0.8**
TUC Tucson 51.55 322 P **P 16 23 14.2 -0.8**
TUC pmax pmax
comp=Z,11nm,0.9s
TUC Tucson 51.55 322 P **P 16 23 15.9 +0.9**
T25A Trinidad 51.62 331 IAmb IAmb 16 23 17.7
comp=Z,40nm,0.9s
H62A Milan 51.77 4 IAmb IAmb 16 23 18.1
comp=Z,22nm,0.7s
SADO Sadowa 51.87 357 IAmb IAmb 16 23 17.1
comp=Z,34nm,0.8s
WVL Waterville 51.88 6 IAmb IAmb 16 23 19.4
comp=Z,53nm,1.1s
WBO Williamsburg 52.02 1 IAmb IAmb 16 23 19.7
comp=Z,30nm,0.8s
KSCO Kaye Shedlock' 52.32 334 IAmb IAmb 16 23 22.2
comp=Z,38nm,0.7s
214A Organ Pipe Nat 52.58 320 IAmb IAmb 16 23 24.8
comp=Z,31nm,1.0s
X18A Snowflake 52.60 324 IAmb IAmb 16 23 25.0
comp=Z,30nm,1.3s
SDCO Great Sand Dun 52.63 330 IAmb IAmb 16 23 25.0
comp=Z,35nm,0.8s
TRQ Mont Tremblant 53.25 1 IAmb IAmb 16 23 28.6
comp=Z,52nm,1.3s
S22A 4UR Ranch, Cre 53.30 329 IAmb IAmb 16 23 29.8
comp=Z,35nm,1.6s
SFX San Felipe 53.32 318 P **P 16 23 28.5 +0.5**
SFX IAmb IAmb 16 23 29.9
comp=Z,21nm,1.1s
X16A Lo Mia Camp, P 53.40 323 IAmb IAmb 16 23 30.9

comp=Z,17nm,0.8s
I37A **Lemond, Waseca** 53.45 344 IAmb IAmb 16 23 27.9
comp=Z,24nm,0.8s
OGNE **Ogallala** 53.67 335 IAmb IAmb 16 23 31.9
comp=Z,42nm,0.8s
WUAZ **Wupatki** 54.12 324 IAmb IAmb 16 23 36.2
comp=Z,26nm,1.0s
ECSD **EROS Data Cent** 54.13 342 IAmb IAmb 16 23 33.9
comp=Z,61nm,1.4s
VTX **Valle De La Tr** 54.17 317 P **P** **16 23 33.7 -0.6**
ISCO **Idaho Springs** 54.31 332 P **P** **16 23 35.9 +0.5**
SPMN **Marine on St.** 54.42 345 IAmb IAmb 16 23 35.6
comp=Z,35nm,0.9s
PV01 **Paradox Valley** 54.48 328 IAmb IAmb 16 23 38.5
comp=Z,22nm,0.8s
PV15 **Paradox Valley** 54.59 329 IAmb IAmb 16 23 39.5
comp=Z,36nm,1.0s
PV13 **Radium Mtn., P** 54.63 328 IAmb IAmb 16 23 39.3
comp=Z,36nm,0.8s
PV03 **Paradox Valley** 54.72 328 IAmb IAmb 16 23 39.9
comp=Z,20nm,1.0s
PV05 **Paradox Valley** 54.72 328 IAmb IAmb 16 23 39.6
comp=Z,24nm,0.8s
PV12 **Saucer Basin,** 54.74 328 IAmb IAmb 16 23 40.3
comp=Z,57nm,1.2s
PV18 **Skein Mesa, Pa** 54.74 328 IAmb IAmb 16 23 40.0
comp=Z,34nm,0.9s
PV11 **David Mesa, Pa** 54.76 328 IAmb IAmb 16 23 40.3
comp=Z,43nm,1.4s
LMQ **La Malbaie** 54.79 5 IAmb IAmb 16 23 40.1
comp=Z,38nm,0.7s
PV17 **East Wray Mesa** 54.79 328 IAmb IAmb 16 23 40.3
comp=Z,44nm,1.6s
PV20 **West Nyswonger** 54.84 328 IAmb IAmb 16 23 40.8
comp=Z,82nm,1.7s
PV04 **Paradox Valley** 54.85 328 IAmb IAmb 16 23 41.0
comp=Z,74nm,1.9s
PV14 **Lion Creek, Pa** 54.90 328 IAmb IAmb 16 23 40.9
comp=Z,50nm,1.8s
PV10 **Paradox Valley** 54.91 328 IAmb IAmb 16 23 40.6
comp=Z,76nm,1.7s
VLDQ **Val d'Or** 55.15 359 IAmb IAmb 16 23 42.1
comp=Z,39nm,1.1s
E38A **The Farm, Brul** 55.42 347 IAmb IAmb 16 23 43.0
comp=Z,38nm,0.9s
HMU **Henry Mountain** 55.49 327 IAmb IAmb 16 23 46.9
comp=Z,19nm,0.9s
IRM **Iron Mountain** 55.50 320 IAmb IAmb 16 23 46.0
comp=Z,32nm,1.1s
O20A **White River Ci** 55.83 330 IAmb IAmb 16 23 47.9
comp=Z,24nm,0.9s
BELC **Belle Mtn. Jos** 55.94 320 IAmb IAmb 16 23 49.2
comp=Z,25nm,1.3s
PFO **Pinyon Flats O** 55.99 319 P **P** **16 23 48.4 +1.0**
PFO **Pinyon Flats O** 55.99 319 *d i* P **P** **16 23 48.3 +0.9**
PFO pmax pmax
comp=Z,25nm,1.1s
PFO **Pinyon Flats O** 55.99 319 P **P** **16 23 48.4 +1.0**
PFO PcP **PcP** **16 24 44.6 +0.1**
KNB **Kanab** 56.01 324 IAmb IAmb 16 23 49.8
comp=Z,22nm,0.8s
PKCU **Pink Cliffs** 56.01 325 IAmb IAmb 16 23 50.0
comp=Z,24nm,1.1s
SRU **San Rafael Swe** 56.23 328 IAmb IAmb 16 23 50.5
comp=Z,14nm,0.8s
LCMT **Little Creek M** 56.25 324 IAmb IAmb 16 23 51.2
comp=Z,17nm,0.9s
Q16A **Castle Valley** 56.44 327 IAmb IAmb 16 23 53.5
comp=Z,38nm,1.6s
P18A **Preston Nutter** 56.47 328 IAmb IAmb 16 24 47.8
comp=Z,17nm,0.9s
P17A **Butcher Ranch,** 56.61 328 IAmb IAmb 16 23 53.2
comp=Z,20nm,0.8s
EYMN **Ely** 56.68 347 IAmb IAmb 16 23 51.5
comp=Z,32nm,0.8s
TMUT **Trail Mountain** 56.73 328 IAmb IAmb 16 23 54.1
comp=Z,33nm,1.7s
RDMU **Red Mountain** 56.82 330 IAmb IAmb 16 24 48.6
comp=Z,17nm,0.8s
CCCA **Chr Cany lake** 57.77 320 IAmb IAmb 16 24 02.1
comp=Z,30nm,1.2s
JLU **Jordanelle** 57.81 328 IAmb IAmb 16 24 52.9
comp=Z,16nm,0.9s
FURC **Furnace Creek,** 58.06 321 IAmb IAmb 16 24 03.9
comp=Z,29nm,1.1s
DUG **Dugway, Tooele** 58.23 327 IAmb IAmb 16 24 05.0
comp=Z,79nm,1.7s
DUG **Dugway, Tooele** 58.23 327 P **P** **16 24 04.1 +1.0**
DUG pmax pmax
comp=Z,29nm,1.2s
PDAR **Pinedale Array** 58.48 331 P **P** **16 24 03.9 -1.0**
PDAR PcP **PcP** **16 24 53.6 -0.6**
PDAR **Pinedale Array** 58.48 331 P **P** **16 24 04.8 -0.1**
comp=Z,4.2nm,0.7s,baz=131,slow=6.7,SNR=20
PDAR PcP **PcP** **16 24 54.0 -0.2**
comp=Z,4.9nm,0.6s,baz=151,slow=3.0,SNR=13
comp=Z,4.2nm,0.7s
HWUT **Hardware Ranch** 58.60 329 IAmb IAmb 16 24 06.7
comp=Z,25nm,0.7s
VES **Vestal, Richgr** 59.07 320 IAmb IAmb 16 24 10.7
comp=Z,16nm,0.8s
AHID **Auburn Hatcher** 59.23 330 IAmb IAmb 16 24 10.8
comp=Z,14nm,0.8s
ULM **Lac du Bonnet** 59.86 345 P **P** **16 24 13.1 -0.8**
comp=Z,67nm,0.8s,baz=152,slow=7.0,SNR=37
ULM PcP **PcP** **16 24 59.0 -0.2**
comp=Z,13nm,0.5s,baz=183,slow=4.4,SNR=5.8
comp=Z,67nm,0.8s
ULM **Lac du Bonnet** 59.86 345 *ce* P **P** **16 24 12.6 -1.3**
FLWY **Flagg Ranch** 60.02 332 IAmb IAmb 16 24 17.2
comp=Z,32nm,1.1s
NVAR **Mina Array Bea** 60.19 322 P **P** **16 24 17.2 +0.5**
NVAR **Mina Array Bea** 60.19 322 P **P** **16 24 17.8 +1.1**
comp=Z,6.0nm,0.7s,baz=138,slow=7.0,SNR=40
comp=Z,6.0nm,0.7s
LHV **Little Huntoon** 60.20 322 IAmb IAmb 16 24 18.8
comp=Z,16nm,0.9s
YFT **Old Faithful** 60.37 332 IAmb IAmb 16 24 21.4
comp=Z,21nm,1.2s
YNE **Yellowstone No** 60.41 333 IAmb IAmb 16 24 19.3
comp=Z,18nm,0.7s
RYN **Ryan** 60.45 322 IAmb IAmb 16 24 20.3
comp=Z,32nm,1.9s
HULI **Fort Hunter Li** 60.58 318 P **P** **16 24 20.3 +1.2**
YMR **Madison River** 60.59 332 IAmb IAmb 16 24 21.5
comp=Z,23nm,0.9s
YHB **Horse Butte** 60.76 332 IAmb IAmb 16 24 22.6
comp=Z,30nm,0.8s
PNTR **Pine Nut** 61.39 322 IAmb IAmb 16 24 27.0
comp=Z,17nm,0.9s
BOZ **Bozeman (W)** 61.60 332 IAmb IAmb 16 24 27.6
comp=Z,36nm,1.2s
PAHR **Pah Rah Range** 61.65 323 IAmb IAmb 16 24 28.6
comp=Z,16nm,0.9s
MPK **Martis Peak** 61.78 322 IAmb IAmb 16 24 29.8
comp=Z,23nm,1.1s
DLMT **Dillon** 61.88 331 IAmb IAmb 16 24 30.2
comp=Z,42nm,1.7s
MFID **Camas Ranch** 62.10 328 IAmb IAmb 16 24 31.2
comp=Z,33nm,0.9s
SCHQ **Schefferville** 62.32 6 P **P** **16 24 29.9 -0.5**
SCHQ **Schefferville** 62.32 6 P **P** **16 24 30.7 +0.2**
comp=Z,20nm,0.8s,baz=190,slow=3.9,SNR=21
comp=Z,20nm,0.8s
BEKR **Beckworth** 62.33 322 IAmb IAmb 16 24 33.0
comp=Z,17nm,0.9s
EGMT **Eagleton** 62.63 335 IAmb IAmb 16 24 33.6
comp=Z,19nm,0.8s
ORV **Oroville** 62.84 322 IAmb IAmb 16 24 36.5
comp=Z,37nm,1.0s
HATC **Hat Creek Radi** 63.58 323 IAmb IAmb 16 24 40.7
comp=Z,34nm,1.1s
MSO **Missoula** 63.59 332 IAmb IAmb 16 24 40.9
comp=Z,51nm,1.2s
TAOE **Nuku Hiva Isla** 63.62 264 *e* LR LR 16 43 44.2
comp=Z,117nm,28.3s
O02D **Mt. Diablo Mer** 64.01 321 P **P** **16 24 41.0 -1.0**
M03C **McCloud** 64.26 323 IAmb IAmb 16 24 44.5
comp=Z,32nm,1.1s
K05A **Summer Lake** 64.43 325 IAmb IAmb 16 24 47.0
comp=Z,36nm,1.0s
I07A **Izee** 64.52 327 IAmb IAmb 16 24 47.1
comp=Z,32nm,1.1s
KHBM **Hayfork Bally** 64.56 322 IAmb IAmb 16 24 47.3
comp=Z,21nm,0.9s
KMRM **Mail Ridge** 64.60 321 IAmb IAmb 16 24 47.6
comp=Z,25nm,0.9s
L04D **Klamath Falls** 64.94 324 IAmb IAmb 16 24 49.2
comp=Z,40nm,1.2s
KHMM **Horse Mountain** 65.00 322 IAmb IAmb 16 24 50.5
comp=Z,18nm,0.8s
PINE **Pine Mountain** 65.13 326 IAmb IAmb 16 24 52.2
comp=Z,20nm,0.8s
KRPM **Rodgers** 65.34 322 IAmb IAmb 16 24 52.9
comp=Z,36nm,1.1s
J04A **Umpqua Nationa** 65.45 325 IAmb IAmb 16 24 52.9
comp=Z,39nm,0.8s
KSXB **Camp Six Broad** 65.64 322 IAmb IAmb 16 24 55.4
comp=Z,52nm,1.4s
I05D **Terrebonne, OR** 65.70 326 IAmb IAmb 16 24 54.8
comp=Z,20nm,0.8s
K02D **Willamette Mer** 66.03 323 IAmb IAmb 16 24 56.8
comp=Z,32nm,1.1s
NEW **Newport** 66.12 331 P **P** **16 24 55.8 +0.3**
NEW pmax pmax
comp=Z,24nm,0.9s
G05A **Wamic** 66.25 327 IAmb IAmb 16 24 58.7
comp=Z,30nm,1.0s
E07A **Sunnyside** 66.33 328 IAmb IAmb 16 24 58.8
comp=Z,26nm,0.9s
C09A **Chrisman Ranch** 66.36 330 IAmb IAmb 16 25 27.0
comp=Z,17nm,0.7s
HOOD **Mount Hood Mea** 66.49 327 IAmb IAmb 16 25 00.0
comp=Z,25nm,1.2s
KEBM **Edson Butte** 66.53 323 IAmb IAmb 16 25 00.3
comp=Z,38nm,1.1s
BUCK **Buck Mountain** 66.54 325 IAmb IAmb 16 24 59.3
comp=Z,33nm,1.0s
G04A **Mulino** 66.87 326 IAmb IAmb 16 25 01.6
comp=Z,35nm,0.9s
COR **Corvallis** 66.95 325 P **P** **16 25 01.2 +0.4**
COR IAmb IAmb 16 25 02.8
comp=Z,45nm,1.1s
COR **Corvallis** 66.95 325 P **P** **16 25 01.2 +0.4**
COR pmax pmax
comp=Z,45nm,1.1s
I02E **Swisshome, OR** 66.98 324 IAmb IAmb 16 25 02.9
comp=Z,35nm,1.1s
D05A **Enumclaw** 67.85 328 IAmb IAmb 16 25 07.8
comp=Z,37nm,0.8s
NLWA **Neilton Lookou** 68.98 327 IAmb IAmb 16 25 15.7
comp=Z,26nm,0.8s
A04D **Lummi Island** 69.20 329 IAmb IAmb 16 25 16.6
comp=Z,46nm,1.0s
IVI **Ivigtut** 71.61 14 *i* P **P** **16 25 28.1 -0.9**
TBI **Tubuai** 72.14 248 *e* S **S** **16 34 47.2 +0.8**
comp=Z,2µm,37.2s
TBI **Tubuai** 72.14 248 *e* LR LR 16 47 52.2
comp=Z,954nm,39.0s
DBIC **Dimbokro** 72.15 81 P **P** **16 25 33.6 +0.3**
DBIC IAmb IAmb 16 25 34.7
comp=Z,78nm,1.1s
DBIC **Dimbokro** 72.15 81 P **P** **16 25 33.9 +0.5**
comp=Z,39nm,0.6s,baz=280,slow=5.3,SNR=48
DBIC LR LR 16 54 57.4
comp=Z,104nm,18.9s,baz=350,slow=34
comp=Z,39nm,0.6s
DBIC **Dimbokro** 72.15 81 P **P** **16 25 33.8 +0.5**
NRS **Narsarsuaq** 72.24 15 *i* P **P** **16 25 31.0 -1.9**
PPT2 **Papeete2** 72.38 254 *e* P **P** **16 25 35.4 +0.7**
comp=Z,46nm,23.5s
PPT2 *e* S **S** **16 34 43.4 -6.0**
comp=Z,88nm,26.5s
PPT2 **Papeete2** 72.38 254 *e* LR LR 16 47 47.5
comp=Z,224nm,30.5s
PPT2 *e* LR LR 16 47 51.0
comp=Z,250nm,29.8s
PPT **Papeete** 72.38 254 LR LR 16 48 51.5
comp=Z,81nm,19.3s,baz=118,slow=29
NUUK **Nuuk** 73.52 11 *i* P **P** **16 25 39.9 -0.5**
BELA **Belgrano 2** 73.71 172 IAmb IAmb 16 25 43.5
comp=Z,37nm,1.3s
YKAW1 **Yellowknife Wh** 75.60 343 IAmb IAmb 16 25 52.9
comp=Z,24nm,0.7s
VNA3 **Neumayer Olymp** 75.62 162 ⇓P **P** **16 25 53.4 +0.9**
comp=Z,20nm,0.7s
YKA **Yellowknife Ar** 75.64 343 P **P** **16 25 51.6 -1.1**
YKA **Yellowknife Ar** 75.64 343 P **P** **16 25 52.5 -0.2**
comp=Z,18nm,0.9s,baz=159,slow=10,SNR=48
YKA pP **pP** **16 26 21.9 -0.6**
comp=Z,3.8nm,1.0s,baz=140,slow=6.4,SNR=1.5
comp=Z,18nm,0.9s
YKAW3 **Yellowknife Wh** 75.69 343 IAmb IAmb 16 25 54.1
comp=Z,53nm,1.2s
VNA1 **Neumayer--Stat** 75.85 161 ⇓P **P** **16 25 55.2 +1.5**
comp=Z,48nm,0.9s
VNA2 **Neumayer--Watz** 76.21 162 ⇓P **P** **16 25 56.5 +0.6**
comp=Z,36nm,0.6s,baz=290,slow=5.1
SFJD **Kangerlussuaq** 76.27 10 *i* P **P** **16 25 55.3 -0.8**
SFJD IAmb IAmb 16 25 56.5
comp=Z,22nm,0.6s
ACRG **Accra** 76.54 82 P **P** **16 25 57.8 -1.1**
ACRG IAmb IAmb 16 25 59.9
comp=Z,43nm,0.6s
MORF **Marmelete** 76.65 49 *e* P **P** **16 26 00.9 +2.0**
PTEO **Sao Teotonio** 76.68 49 *e* P **P** **16 26 01.0 +1.9**
PMAFR **Mafra** 76.75 47 *e* P **P** **16 26 00.5 +1.0**
TOAD **Toad River Com** 76.79 336 P **P** **16 26 00.0 +0.7**
baz=129
MESJ **Messejana** 77.15 49 *e* P **P** **16 26 03.0 +1.2**
MESJ IAmb IAmb 16 26 03.8
comp=Z,19nm,0.9s
MESJ **Messejana** 77.15 49 *e* P **P** **16 26 03.2 +1.5**
MESJ **Messejana** 77.15 49 *e* P **P** **16 26 03.0 +1.2**
KOTAN **Kotaneelee Air** 77.16 337 P **P** **16 26 02.3 +1.1**
baz=131
PCVE **Castro Verde** 77.22 49 *e* P **P** **16 26 03.8 +1.7**
PCVE *i* IAmb IAmb 16 26 04.9
comp=Z,77nm,1.4s
MOE **Montemor** 77.29 48 *e* P **P** **16 26 04.0 +1.5**
PSBE **So Bento** 77.31 47 *e* P **P** **16 26 03.8 +1.2**
PBEJ **Beja** 77.48 49 *e* P **P** **16 26 04.2 +0.6**
PBEJ *i* IAmb IAmb 16 26 04.7
comp=Z,41nm,1.4s
LIRD **Liard River Hi** 77.49 336 P **P** **16 26 03.7 +0.5**
129
V35K **Ketchikan** 77.53 331 P **P** **16 26 04.6 +1.2**
baz=123
PMTG **Montargil** 77.57 47 *e* P **P** **16 26 04.4 +0.4**
PARRA **Arraiolos** 77.62 48 *e* P P 16 26 05.3 +5.1
PCAS **Casmilo, Conde** 77.71 46 *e* P **P** **16 26 05.8 +1.0**
PSARD **Sardoal** 77.80 47 *e* P **P** **16 26 06.1 +0.8**
T35M **Bob Quinn** 77.81 333 IAmb IAmb 16 26 07.3
comp=Z,32nm,0.8s
T35M **Bob Quinn** 77.81 333 P **P** **16 26 06.3 +1.2**
baz=124
SNAA **Sanae** 77.83 162 ⇓P **P** **16 26 05.9 +0.9**
comp=Z,612nm,0.6s
SNAA **Sanae** 77.83 162 P **P** **16 26 05.7 +0.7**
SNAA IAmb IAmb 16 26 06.9
comp=Z,67nm,1.2s
SNAA **Sanae** 77.83 162 P **P** **16 26 05.9 +0.9**
comp=Z,22nm,0.6s,baz=274,slow=7.0,SNR=189
comp=Z,22nm,0.6s
PESTR **Estremoz** 77.96 48 P **P** **16 26 07.0 +0.7**
PESTR IAmb IAmb 16 26 09.2
comp=Z,53nm,1.3s
PESTR **Estremoz** 77.96 48 *e* P **P** **16 26 07.4 +1.1**
PBAR **Barrancos** 78.14 49 *e* P **P** **16 26 08.3 +1.1**
ILULI **Ilulissat** 78.20 9 *i* P **P** **16 26 06.6 -0.3**
ILULI IAmb IAmb 16 26 07.9
comp=Z,55nm,0.8s
MD01 **Midelt array s** 78.29 54 P **P** **16 26 09.5 +1.1**
PMRV **Marv??o** 78.30 47 *e* P **P** **16 26 08.2 +0.1**
CRAG **Craig** 78.34 331 P **P** **16 26 09.5 +1.7**
baz=122
PVIS **Viseu** 78.37 46 *e* P **P** **16 26 09.1 +0.6**
PCBR **Castelo Branco** 78.37 47 *e* P **P** **16 26 09.2 +0.8**
WRAK **Wrangell Islan** 78.47 332 P **P** **16 26 09.6 +1.0**
baz=122
MTE **Manteigas** 78.51 46 *e* P **P** **16 26 10.0 +0.7**
PGAV **Gavieira, Arco** 78.54 45 *e* P **P** **16 26 09.8 +0.3**
DLBC **Dease Lake** 78.54 334 P **P** **16 26 10.3 +1.2**
baz=125
PCAB **Cabril** 78.62 45 *e* P **P** **16 26 10.3 +0.5**
POLO **Lamas de Olo** 78.67 45 *e* P **P** **16 26 10.4 +0.2**
U33K **Whale Pass** 78.67 331 P **P** **16 26 11.0 +1.3**
baz=122
PVRL **Vila Real** 78.69 46 *e* P **P** **16 26 11.0 +0.7**
S34M **Telegraph Cree** 78.73 333 P **P** **16 26 11.3 +1.3**
baz=124
WRGLY **Wrigley** 78.99 340 IAmb IAmb 16 26 13.1
comp=Z,48nm,1.1s
WRGLY **Wrigley** 78.99 340 P **P** **16 26 12.3 +1.0**
baz=132
WTLY **Watson Lake, Y** 79.01 336 IAmb IAmb 16 27 25.4
comp=Z,19nm,0.4s
WTLY **Watson Lake, Y** 79.01 336 P **P** **16 26 12.4 +0.8**
baz=126
MVO **Moncorvo** 79.14 46 *e* P **P** **16 26 13.5 +0.8**
R33M **Jennings River** 79.49 335 P **P** **16 26 15.3 +1.0**
baz=124
TROLL **Troll, Antarti** 79.55 162 ⇓P **P** **16 26 15.4 +1.0**
comp=Z,2µm,0.8s
PBRG **Braganca** 79.56 45 *e* P **P** **16 26 15.4 +0.4**
TORD **Torodi Ar. Bea** 79.62 75 P **P** **16 26 16.0 +0.3**
comp=Z,13nm,0.6s,baz=67,slow=32,SNR=18
TORD pP **pP** **16 26 46.3 +0.5**
comp=Z,9.8nm,0.9s,baz=300,slow=4.5,SNR=4.1
comp=Z,13nm,0.6s
Q32M **Nakina River** 79.81 334 P **P** **16 26 17.4 +1.3**
baz=123
POIN **Pond Inlet** 79.81 359 IAmb IAmb 16 26 17.0
comp=Z,34nm,0.9s
S32K **Killisnoo** 80.06 332 IAmb IAmb 16 26 19.2
comp=Z,33nm,0.9s
S32K **Killisnoo** 80.06 332 P **P** **16 26 18.6 +1.4**
baz=121
SIT **Sitka** 80.20 331 P **P** **16 26 17.8 -0.1**
baz=120
R32K **Eaglecrest** 80.45 333 P **P** **16 26 20.7 +1.4**
baz=121
PAB **San Pablo** 80.57 48 P **P** **16 26 20.6 +0.1**
PAB **San Pablo** 80.57 48 P **P** **16 26 20.6 +0.1**
PAB pmax pmax
comp=Z,22nm,0.8s
P33M **Teslin, Yukon** 80.72 335 P **P** **16 26 21.7 +0.9**
baz=123
BESE **Bessie Mountai** 80.75 333 IAmb IAmb 16 26 23.2
comp=Z,35nm,0.9s
P32M **Atlin** 80.77 334 P **P** **16 26 22.1 +1.0**
baz=122
ESDC **Sonseca Array** 80.89 48 P **P** **16 26 22.1 0.0**
ESDC **Sonseca Array** 80.89 48 P **P** **16 26 22.9 +0.7**
comp=Z,16nm,1.0s,baz=258,slow=5.9,SNR=45
comp=Z,16nm,1.0s
S31K **Pelican** 81.08 332 P **P** **16 26 23.7 +1.1**
baz=119
N32M **Quiet Lake** 81.34 336 P **P** **16 26 24.8 +0.8**
baz=122
SKAG **Skagway** 81.41 334 P **P** **16 26 25.2 +0.8**
baz=120
RAR **Rarotonga** 81.78 250 LR LR 16 53 05.6
comp=Z,56nm,22.0s,baz=286,slow=28
WHY **Whitehorse** 81.83 335 P **P** **16 26 27.3 +0.6**
baz=121
PLBC **Pleasant Camp** 81.87 333 P **P** **16 26 27.9 +1.1**
baz=119
FARO **Faro, Yukon** 82.03 336 P **P** **16 26 28.4 +0.8**
baz=122,SNR=5.4
STCH **Steam Cracks** 82.37 291 P **P** **16 26 31.0 +0.6**
O30N **Mendenhall** 82.40 335 P **P** **16 26 30.6 +1.0**
baz=120,SNR=8.4
M31M **Drury Creek, Y** 82.43 336 IAmb IAmb 16 26 31.5
comp=Z,76nm,1.7s
M31M **Drury Creek, Y** 82.43 336 P **P** **16 26 30.4 +0.7**
baz=121,SNR=15
P30M **Million Dollar** 82.46 334 P **P** **16 26 31.1 +1.1**
baz=119
KULLO **Kullorsuaq** 82.50 5 *i* P **P** **16 26 29.7 -0.1**
KULLO IAmb IAmb 16 26 30.9
comp=Z,24nm,0.7s
P29M **Windy Craggy** 82.57 333 IAmb IAmb 16 26 32.3
comp=Z,22nm,0.8s
P29M **Windy Craggy** 82.57 333 P **P** **16 26 31.3 +0.8**
baz=118,SNR=7.1
N31M **Braeburn, Yuko** 82.62 335 IAmb IAmb 16 26 32.5
comp=Z,31nm,0.8s
N31M **Braeburn, Yuko** 82.62 335 P **P** **16 26 31.6 +0.8**
baz=120,SNR=11
QSPA **South Pole Qui** 82.84 180 P **P** **16 26 35.0 +3.0**
QSPA IAmb IAmb 16 26 37.3
comp=Z,68nm,1.1s
QSPA **South Pole Qui** 82.84 180 P **P** **16 26 35.7 +3.7**
comp=Z,53nm,1.0s,baz=158,slow=1.5,SNR=208
QSPA PKKPbc **PKKPbc** **16 44 55.7 -2.4**
comp=Z,2.1nm,1.1s,baz=289,slow=3.6,SNR=6.4
QSPA **South Pole Qui** 82.84 180 P **P** **16 26 36.7 +4.7**
HYT **Haines Junctio** 83.03 334 IAmb IAmb 16 26 35.3
comp=Z,33nm,1.4s
HYT **Haines Junctio** 83.03 334 P **P** **16 26 34.2 +1.2**
baz=118,SNR=7.3
N30M **Aishikik Lake** 83.16 335 IAmb IAmb 16 26 35.8
comp=Z,64nm,1.1s
N30M **Aishikik Lake** 83.16 335 P **P** **16 26 34.8 +1.3**
baz=119
IWEX **Carrickbyrne,** 83.22 35 P **P** **16 26 34.1 +0.2**
SUMG **Summit** 83.23 11 P **P** **16 26 33.3 -0.8**
SUMG **Summit** 83.23 11 P **P** **16 26 33.3 -0.8**
SUMG pmax pmax
comp=Z,72nm,0.9s
SUMG **Summit** 83.23 11 *i* P **P** **16 26 33.3 -0.8**
SUMG IAmb IAmb 16 26 36.0
comp=Z,61nm,0.8s
O29M **Mount Kennedy** 83.25 334 IAmb IAmb 16 26 36.1
comp=Z,33nm,1.1s
O29M **Mount Kennedy** 83.25 334 P **P** **16 26 34.8 +0.7**
baz=117,SNR=11
C36M **Paulatuk** 83.27 345 P **P** **16 26 34.9 +1.1**
baz=132
PNL **Peninsula** 83.33 333 P **P** **16 26 35.5 +1.0**
baz=117
CCA1 **Carnmenellis** 83.37 38 *e* P **P** **16 26 35.3 +0.5**
CCA1 IAmb IAmb 16 26 36.5
comp=Z,52nm,0.7s
YUK6 **Outpost Mounta** 83.46 334 P **P** **16 26 36.6 +1.3**
baz=118,SNR=9.6
M30M **Minto, Yukon** 83.58 336 IAmb IAmb 16 26 37.1
comp=Z,29nm,1.2s
M30M **Minto, Yukon** 83.58 336 P **P** **16 26 35.9 +0.2**
baz=119,SNR=16
DSB **Dublin** 83.75 34 P **P** **16 26 37.6 +0.9**
TULEG **Thule** 83.76 2 P **P** **16 26 37.1 +0.9**
TULEG **Thule** 83.76 2 *i* P **P** **16 26 36.1 -0.1**
TULEG IAmb IAmb 16 26 37.8
comp=Z,90nm,1.0s
YUK4 **Talbot Arm** 83.77 334 P **P** **16 26 37.8 +1.0**
baz=118,SNR=7.0
IDGL **Inch Island, C** 83.80 33 P **P** **16 26 37.2 +0.4**
PINM **Pinnacle** 83.91 333 P **P** **16 26 38.3 +0.9**
baz=116,SNR=5.2
PCA **Pinnacle** 83.91 333 IAmb IAmb 16 26 39.3
comp=Z,28nm,1.0s
ILTH **Belurgan, Co L** 84.06 34 P **P** **16 26 38.5 +0.4**
O28M **Mount Upton** 84.18 334 P **P** **16 26 40.1 +1.1**
baz=116
M29M **Somme Creek** 84.20 335 IAmb IAmb 16 26 40.8
comp=Z,35nm,0.7s
M29M **Somme Creek** 84.20 335 P **P** **16 26 39.8 +0.9**
baz=118,SNR=36
YUK8 **Steele Glacier** 84.22 334 P **P** **16 26 40.0 +0.7**
baz=116,SNR=12
H31M **Peel River** 84.30 339 IAmb IAmb 16 26 40.8
comp=Z,47nm,1.2s
H31M **Peel River** 84.30 339 P **P** **16 26 39.9 +0.7**
baz=122
L29M **L29M** 84.38 336 P **P** **16 26 40.2 +0.5**
baz=118
J30M **Hart River** 84.39 338 P **P** **16 26 40.6 +0.7**
baz=120
TABL **Table Mountain** 84.46 333 IAmb IAmb 16 26 42.1
comp=Z,27nm,0.8s
K29M **Barlow Dome** 84.49 337 P **P** **16 26 40.5 +0.2**
baz=119,SNR=8.0
YAH **Yahtse** 84.70 333 IAmb IAmb 16 26 43.2
comp=Z,22nm,0.6s
MESA **MESA** 84.72 333 P **P** **16 26 42.5 +0.8**
baz=114
I30M **Mount Dempster** 84.73 338 IAmb IAmb 16 26 43.0
comp=Z,31nm,0.7s
I30M **Mount Dempster** 84.73 338 P **P** **16 26 42.0 +0.5**
baz=120
YUK3 **Moose Creek** 84.74 334 P **P** **16 26 42.3 +0.6**
baz=116,SNR=21
CTGM **Chitina Glacie** 84.77 334 IAmb IAmb 16 26 43.3
comp=Z,22nm,0.6s
CTG **Chitna Glacier** 84.77 334 P **P** **16 26 42.7 +0.9**
baz=115,SNR=13
GRNC **Granite Creek** 84.86 333 IAmb IAmb 16 26 44.1
comp=Z,28nm,0.9s
G31M **Satah River** 84.87 340 IAmb IAmb 16 26 42.7
comp=Z,23nm,0.6s

G31M **Satah River** 84.87 340 P P 16 26 42.1 +0.1
baz=122,SNR=11
TAM **Tamanrasset** 84.89 66 P P 16 26 44.6 +1.3
TAM pmax pmax
comp=Z,36nm,0.9s
F31M **Tsiigehtchic** 84.97 341 IAmb IAmb 16 26 43.6
comp=Z,48nm,1.4s
F31M **Tsiigehtchic** 84.97 341 P P 16 26 42.6 +0.2
baz=122,SNR=10
ISLE **Juniper Island** 85.06 333 IAmb IAmb 16 26 44.4
comp=Z,20nm,0.7s
BVCY **Beaver Creek** 85.18 335 P P 16 26 44.5 +0.8
baz=116,SNR=13
WAX **Waxell Ridge** 85.23 333 IAmb IAmb 16 26 45.5
comp=Z,17nm,0.6s
LEWI **Lewis, Hebride** 85.28 30 eP P 16 26 44.9 +0.7
LEWI IAmb IAmb 16 26 45.9
comp=Z,28nm,0.8s
MCH1 **Michaelchurch** 85.28 36 eP P 16 26 44.5 +0.1
MCH1 IAmb IAmb 16 26 45.4
comp=Z,12nm,0.7s
BGLC **Bering Glacier** 85.30 332 P P 16 26 44.3 +0.1
baz=113
DAWY **Dawson** 85.32 337 IAmb IAmb 16 26 45.6
comp=Z,30nm,1.4s
DAWY **Dawson** 85.32 337 P P 16 26 44.5 +0.1
baz=117
A36M **Sachs Harbour** 85.32 346 P P 16 26 43.8 -0.3
baz=131,SNR=28
LAWE **Loch Awe, Argy** 85.34 32 eP P 16 26 44.1 -0.5
LAWE IAmb IAmb 16 26 45.7
comp=Z,13nm,0.9s
MONM **Monmouth** 85.35 37 eP P 16 26 45.1 +0.4
MONM IAmb IAmb 16 26 46.3
comp=Z,14nm,0.7s
TGL **Tana Glacier** 85.35 333 IAmb IAmb 16 26 46.4
comp=Z,48nm,1.3s
INK **Inuvik** 85.37 342 IAmb IAmb 16 26 45.7
comp=Z,34nm,1.1s
INK **Inuvik** 85.37 342 P P 16 26 44.8 +0.3
INK pmax pmax
comp=Z,33nm,1.6s
INK **Inuvik** 85.37 342 P P 16 26 44.7 +0.2
baz=123,SNR=15
EPYK **Eagle Plains** 85.42 339 IAmb IAmb 16 26 46.0
comp=Z,24nm,1.0s
EPYK **Eagle Plains** 85.42 339 P P 16 26 45.1 +0.2
baz=120,SNR=9.5
CRQE **Cirque** 85.47 333 P P 16 26 45.7 +0.4
baz=113,SNR=5.3
CRQM **Cirque** 85.49 333 IAmb IAmb 16 26 47.1
comp=Z,91nm,1.6s
HLM1 **Long Mynd** 85.51 36 eP P 16 26 45.3 -0.2
HLM1 IAmb IAmb 16 26 46.6
comp=Z,11nm,0.8s
SCO **Scoresbysund** 85.51 16 iP P 16 26 45.4 +0.3
SCO IAmb IAmb 16 26 46.5
comp=Z,11nm,0.8s
G30M **tAoh Zraii Nji** 85.56 340 P P 16 26 46.0 +0.5
baz=120
M27K **Edge Creek, AK** 85.59 335 IAmb IAmb 16 26 47.6
comp=Z,43nm,1.0s
M27K **Edge Creek, AK** 85.59 335 P P 16 26 46.5 +0.7
baz=115
MCARA **McCarthy VSAT** 85.69 334 IAmb IAmb 16 26 48.2
comp=Z,43nm,0.9s
MCARA **McCarthy VSAT** 85.69 334 P P 16 26 47.0 +0.8
baz=114,SNR=14
NEEM **North Greenlan** 85.72 5 iP P 16 26 46.2 -0.3
NEEM IAmb IAmb 16 26 47.8
comp=Z,56nm,0.7s
F30M **Barrier River** 85.73 341 IAmb IAmb 16 26 47.6
comp=Z,41nm,1.3s
F30M **Barrier River** 85.73 341 P P 16 26 46.5 +0.2
baz=121
KAIM **Kayak Island** 85.75 332 P P 16 26 47.1 +0.6
baz=112
VRDI **Verde Repeater** 85.81 333 IAmb IAmb 16 26 48.6
comp=Z,45nm,1.0s
BCAR **Beaver Creek A** 85.85 335 P P 16 26 46.9 -0.1
L27K **Beaver Creek,** 85.86 335 IAmb IAmb 16 26 48.9
comp=Z,32nm,0.8s
L27K **Beaver Creek,** 85.86 335 P P 16 26 47.6 +0.5
baz=115
H29M **Whitestone** 85.94 339 IAmb IAmb 16 26 48.6
comp=Z,25nm,0.9s
H29M **Whitestone** 85.94 339 P P 16 26 47.6 +0.3
baz=118
GLB **Gilahina Butte** 86.06 333 IAmb IAmb 16 26 49.6
comp=Z,52nm,1.3s
M26K **Nabesna, AK** 86.08 335 P P 16 26 48.5 +0.3
baz=114
LINV **Loch Inver, As** 86.10 30 eP P 16 26 48.8 +0.5
LINV IAmb IAmb 16 26 50.8
comp=Z,16nm,0.8s
INVG **Invergeldie, C** 86.11 32 eP P 16 26 48.0 -0.4
INVG IAmb IAmb 16 26 49.5
comp=Z,8.7nm,0.7s
G29M **Pine Creek** 86.14 340 IAmb IAmb 16 26 49.4
comp=Z,35nm,0.9s
G29M **Pine Creek** 86.14 340 P P 16 26 48.6 +0.2
baz=118
I28M **Miner Creek** 86.15 338 P P 16 26 48.7 +0.1
baz=117
ESK **Eskdalemuir** 86.20 33 eP P 16 26 49.2 +0.4
ESK IAmb IAmb 16 26 50.4
comp=Z,9.1nm,0.9s
BMRM **Bremner River** 86.23 333 IAmb IAmb 16 26 50.5
comp=Z,47nm,1.2s
BMRM **Bremner River** 86.23 333 P P 16 26 49.5 +0.6
baz=112,SNR=8.3
EKA **Eskdalemuir Ar** 86.23 33 P P 16 26 49.1 +0.1
comp=Z,9.3nm,0.8s,baz=244,slow=5.8,SNR=20
EKA PKKP PKKPdf 16 44 43.2 +0.9
comp=Z,0.5nm,0.5s,baz=57,slow=2.6,SNR=3.4
comp=Z,9.3nm,0.8s
K27K **Chicken** 86.37 336 P P 16 26 50.6 +1.1
baz=114
LBWR **Ladybower, Pea** 86.44 35 eP P 16 26 50.8 +0.7
LBWR IAmb IAmb 16 26 52.0
comp=Z,25nm,0.9s
N25K **Chitina, Valde** 86.47 333 IAmb IAmb 16 26 51.6
comp=Z,48nm,1.8s
N25K **Chitina, Valde** 86.47 333 P P 16 26 50.5 +0.4
baz=112
L26K **Log Cabin Wild** 86.48 335 P P 16 26 50.5 +0.4
baz=113,SNR=9.2
EYAK **Cordova Ski Ar** 86.60 332 P P 16 26 50.8 +0.1
baz=111
EDMD **Edmundbyers** 86.73 34 eP P 16 26 51.6 +0.1
EDMD IAmb IAmb 16 26 53.3
comp=Z,19nm,0.8s
E29M **Blow River** 86.81 341 IAmb IAmb 16 26 52.6
comp=Z,34nm,0.8s
E29M **Blow River** 86.81 341 P P 16 26 51.6 +0.1
baz=119
DIV **Divide** 86.82 333 IAmb IAmb 16 26 52.9
comp=Z,33nm,0.9s
I27K **Kandik River** 86.85 338 P P 16 26 52.0 +0.1
baz=115,SNR=13
BIGH **Upper Bighouse** 86.86 30 eP P 16 26 52.4 +0.4
BIGH IAmb IAmb 16 26 53.4
comp=Z,25nm,0.7s
HARP **HAARP** 87.01 334 P P 16 26 52.9 +0.2
baz=112,SNR=5.2
KLU **Klutina** 87.02 333 P P 16 26 53.1 +0.2
baz=111,SNR=19
DOT **Dot Lake** 87.02 335 IAmb IAmb 16 26 54.0
comp=Z,37nm,0.9s
H27K **Steamboat Moun** 87.09 338 P P 16 26 53.0 -0.1
baz=115,SNR=8.3
F28M **Old Crow** 87.11 340 P P 16 26 52.9 -0.2
baz=117,SNR=9.7
SCRK **Sand Creek** 87.12 336 IAmb IAmb 16 26 54.5
comp=Z,27nm,0.9s
SCRK **Sand Creek** 87.12 336 P P 16 26 53.3 0.0
baz=113,SNR=20
J26L **Joseph Creek** 87.15 336 IAmb IAmb 16 26 54.8
comp=Z,46nm,1.0s
J26L **Joseph Creek** 87.15 336 P P 16 26 53.6 +0.2
baz=113
P23K **Montague Islan** 87.18 331 P P 16 26 53.4 -0.1
baz=110
I26K **Coal Creek Min** 87.31 337 IAmb IAmb 16 26 55.0
comp=Z,26nm,1.3s
I26K **Coal Creek Min** 87.31 337 P P 16 26 54.0 -0.1
baz=114
M24K **Tolsona, Glenn** 87.35 334 P P 16 26 55.1 +0.7
baz=111,SNR=24
PAX **Paxson** 87.36 335 P P 16 26 54.3 -0.2
baz=111,SNR=25
G27K **Doyon Strip** 87.38 339 P P 16 26 54.2 -0.2
baz=115,SNR=18
RIDG **Independent Ri** 87.38 335 P P 16 26 54.8 +0.3
baz=112
E28M **Babbage River** 87.44 341 P P 16 26 54.1 -0.5
baz=117,SNR=15
D28M **Stokes Point** 87.53 342 P P 16 26 54.7 -0.3
baz=118
SCM **Sheep Creek Mo** 87.77 333 P P 16 26 56.5 +0.1
baz=110,SNR=9.6
K24K **Donnelly Dome** 87.79 335 IAmb IAmb 16 26 57.6
comp=Z,16nm,0.8s
K24K **Donnelly Dome** 87.79 335 P P 16 26 56.8 +0.4
baz=111,SNR=6.1
PWL **Port Wells** 87.90 332 IAmb IAmb 16 26 57.4
comp=Z,28nm,0.8s
PWL **Port Wells** 87.90 332 P P 16 26 56.9 -0.1
baz=109,SNR=7.7
J25K **Salcha River,** 87.92 336 P P 16 26 57.4 +0.4
baz=112
M23K **Glacier View** 87.93 333 P P 16 26 57.2 +0.1
baz=109,SNR=8.7
E27K **Coleen River** 87.94 340 IAmb IAmb 16 26 58.3
comp=Z,23nm,1.0s
E27K **Coleen River** 87.94 340 P P 16 26 57.1 0.0
baz=115
KNK **Knik Glacier** 88.14 333 IAmb IAmb 16 26 59.3
comp=Z,18nm,1.0s
KNK **Knik Glacier** 88.14 333 P P 16 26 58.2 +0.2
baz=109
DBG **Daneborg** 88.18 13 iP P 16 26 57.3 -0.7
DBG IAmb IAmb 16 27 00.1
comp=Z,20nm,1.1s
SEW **Seward** 88.19 331 IAmb IAmb 16 26 59.1
comp=Z,40nm,1.0s
SEW **Seward** 88.19 331 P P 16 26 58.2 -0.1
baz=108,SNR=7.1
D27M **Malcolm River** 88.19 341 IAmb IAmb 16 26 59.8
comp=Z,35nm,0.8s
D27M **Malcolm River** 88.19 341 P P 16 26 58.6 +0.3
baz=116
WAT6 **Susitna Watana** 88.20 334 P P 16 26 58.6 +0.1
baz=109,SNR=33
G26K **Porcupine Rive** 88.20 339 IAmb IAmb 16 26 59.4
comp=Z,14nm,0.9s
G26K **Porcupine Rive** 88.20 339 P P 16 26 58.3 0.0
baz=113
DHY **Denali Highway** 88.21 334 IAmb IAmb 16 26 59.6
comp=Z,14nm,0.8s
DHY **Denali Highway** 88.21 334 P P 16 26 58.7 +0.1
baz=110,SNR=8.8
SML **Sawmill** 88.21 333 P P 16 26 58.6 +0.2
baz=109,SNR=28
O22K **Cooper Landing** 88.43 332 P P 16 26 59.5 +0.1
baz=108
HDA **Harding Lake** 88.48 336 P P 16 26 59.5 -0.2
baz=110,SNR=14
PMR **Palmer** 88.50 333 IAmb IAmb 16 27 00.2
comp=Z,14nm,0.7s
PMR **Palmer** 88.50 333 P P 16 26 59.6 -0.1
baz=108,SNR=6.8
SBA **Scott Base** 88.51 191 P P 16 27 00.4 +0.8
SBA **Scott Base** 88.51 191 P P 16 27 00.4 +0.8
SBA pmax pmax
comp=Z,9.0nm,1.0s
SBA **Scott Base** 88.51 191 P P 16 27 01.0 +1.4
IL31 88.58 336 IAmb IAmb 16 27 01.1
comp=Z,20nm,0.8s
ILAR **Eielson Array** 88.58 336 P P 16 26 59.5 -0.6
ILAR pP 16 27 32.7 +1.8
ILAR **Eielson Array** 88.58 336 P P 16 26 59.9 -0.2
comp=Z,14nm,0.8s,baz=134,slow=3.1,SNR=145
ILAR pP pP 16 27 32.5 +1.6
comp=Z,4.1nm,0.9s,baz=141,slow=3.8,SNR=3.4
ILAR PP PP 16 30 29.4 -0.7
comp=Z,2.3nm,0.8s,baz=104,slow=6.9,SNR=12
ILAR PKKP PKKPdf 16 44 39.4 +0.9
comp=Z,0.3nm,0.6s,baz=296,slow=3.5,SNR=4.6
comp=Z,14nm,0.8s
RC01 **Rabbit Creek A** 88.62 332 P P 16 27 00.5 +0.2
baz=108
F26K **Sheenjek River** 88.62 339 IAmb IAmb 16 27 02.0
comp=Z,21nm,0.8s
F26K **Sheenjek River** 88.62 339 P P 16 27 01.0 +0.7
baz=113,SNR=22
WAT1 **Susitna Watana** 88.63 334 P P 16 27 00.3 -0.1
baz=109
BOST **Ostende** 88.64 38 dP P 16 27 00.5 -0.1
comp=Z,14nm,1.1s
BMAR **Butt Mountain** 88.68 339 P P 16 27 00.5 -0.1
H25L **Birch Creek** 88.70 338 P P 16 27 01.5 +1.0
baz=111
BRSE **Bradley Lake S** 88.70 331 P P 16 27 00.9 +0.1
baz=107,SNR=6.4
CCB **Clear Creek Bu** 88.91 336 IAmb IAmb 16 27 02.7
comp=Z,27nm,0.7s
POKR **Poker Plat Res** 88.92 336 P P 16 27 02.0 +0.4
baz=110,SNR=14
WRH **Wood River Hil** 88.97 336 IAmb IAmb 16 27 03.1
comp=Z,27nm,0.8s
G25K **Bearman Lake** 88.98 338 P P 16 27 02.9 +1.1
baz=111,SNR=14
M22K **Willow** 89.00 333 P P 16 27 02.2 +0.1
baz=107,SNR=11
COLA **College** 89.01 336 P P 16 27 02.5 +0.5
COLA **College** 89.01 336 dP P 16 27 02.2 +0.2
COLA pmax pmax
comp=Z,61nm,0.9s
COLA **College** 89.01 336 P P 16 27 02.2 +0.2
baz=109
COLA **College** 89.01 336 P P 16 27 02.6 +0.6
MCK **McKinley** 89.08 335 IAmb IAmb 16 27 03.7
comp=Z,28nm,1.0s
MCK **McKinley** 89.08 335 P P 16 27 02.7 +0.2
baz=108,SNR=15
KDAK **Kodiak Island** 89.09 329 LR LR 17 08 32.5
comp=Z,55nm,18.3s,baz=57,slow=36
KDAK **Kodiak Island** 89.09 329 eP P 16 27 03.0 +0.4
KDAK pmax pmax
comp=Z,41nm,1.1s
KDAK **Kodiak Island** 89.09 329 P P 16 27 02.9 +0.4
baz=105
HOM **Homer** 89.12 331 P P 16 27 01.5 -1.1
baz=106
F25K **Christian Rive** 89.12 339 IAmb IAmb 16 27 04.2
comp=Z,14nm,0.7s
F25K **Christian Rive** 89.12 339 P P 16 27 03.6 +1.0
baz=111,SNR=22
CAPN **Captain Cook N** 89.19 332 P P 16 27 02.3 -0.7
baz=106
SUA **Susitna One** 89.20 332 P P 16 27 03.7 +0.5
baz=107,SNR=6.8
Q20K **Shuyak Island** 89.21 329 P P 16 27 03.7 +0.6
baz=105
BSKQ **Steenkerk** 89.21 39 dP P 16 27 03.6 +0.3
comp=Z,8.7nm,1.0s
C27K **Jago River** 89.24 341 IAmb IAmb 16 27 04.9
comp=Z,36nm,0.9s
C27K **Jago River** 89.24 341 P P 16 27 03.7 +0.6
baz=113,SNR=31
ORIF **Oris-en-Rattie** 89.25 45 P P 16 27 04.8 +1.0
ORIF pmax pmax
comp=Z,30nm,0.8s
CUT **Chulitna** 89.26 333 P P 16 27 03.5 +0.3
baz=107,SNR=16
E25K **Arctic Village** 89.28 339 IAmb IAmb 16 27 05.3
comp=Z,21nm,0.8s
E25K **Arctic Village** 89.28 339 P P 16 27 04.3 +0.9
baz=112,SNR=23
OHAK **Old Harbor** 89.31 328 P P 16 27 04.0 +0.4
baz=104
H24K **Noodor Dome** 89.34 337 P P 16 27 04.3 +0.6
baz=109
NEA2 **Nenana** 89.41 336 P P 16 27 04.2 +0.2
baz=108,SNR=34
UCC **Uccle** 89.42 39 dP P 16 27 03.5 -0.8
DOU **Dourbes** 89.42 39 dP P 16 27 04.6 +0.3
comp=Z,19nm,1.0s
G24K **Hadweenzic Riv** 89.47 338 P P 16 27 05.1 +0.8
baz=110,SNR=28
BMRD **Maredsous** 89.57 39 dP P 16 27 05.4 +0.4
comp=Z,14nm,1.2s
TRF **Thorofare Moun** 89.58 334 P P 16 27 05.0 0.0
baz=107,SNR=29
VNDA **Vanda** 89.59 191 P P 16 27 05.9 +1.2
comp=Z,7.0nm,0.7s,baz=124,slow=4.9,SNR=52
VNDA PKKP PKKPdf 16 44 35.4 -0.4
comp=Z,0.4nm,0.7s,baz=283,slow=3.9,SNR=2.2
comp=Z,7.0nm,0.7s
VNDA **Vanda** 89.59 191 P P 16 27 05.9 +1.2
VNDA pmax pmax
comp=Z,8.0nm,0.8s
VNDA **Vanda** 89.59 191 P P 16 27 06.1 +1.4
I23K **Minto, Yukon-K** 89.70 336 P P 16 27 05.5 +0.2
baz=108,SNR=40
SKT **Skwentna** 89.70 333 P P 16 27 05.5 +0.1
baz=106,SNR=53
O20K **Slope Mountain** 89.71 331 P P 16 27 05.5 0.0
baz=105
SPU **Mount Spurr** 89.73 332 IAmb IAmb 16 27 06.6
comp=Z,17nm,1.0s
C26K **Camden Bay** 89.73 341 P P 16 27 06.5 +1.1
baz=112,SNR=11
BGES **Gesves** 89.79 39 dP P 16 27 06.5 +0.4
comp=Z,14nm,1.0s
N20K **Mount Spurr** 89.80 332 P P 16 27 05.9 -0.1
baz=105
RCHB **Rochefort** 89.83 39 dP P 16 27 06.4 +0.2
ALE **Alert** 89.87 2 P P 16 27 06.3 +0.5
KTH **Kantishna Hill** 89.88 334 IAmb IAmb 16 27 07.3
comp=Z,34nm,0.9s
F24K **Squaw Lake** 89.90 339 IAmb IAmb 16 27 07.7
comp=Z,12nm,0.9s
F24K **Squaw Lake** 89.90 339 P P 16 27 07.0 +0.8
baz=109,SNR=12
DAG **Danmarks Havn** 89.91 11 P P 16 27 06.2 +0.2
DAG pmax pmax
comp=Z,36nm,0.9s
DAG **Danmarks Havn** 89.91 11 iP P 16 27 04.2 -1.8
DAG IAmb IAmb 16 27 06.5
comp=Z,18nm,0.8s
BCLA **Clavier** 89.93 39 dP P 16 27 07.0 +0.3
comp=Z,7.0nm,1.1s
ILSW **Iliamna Southw** 89.93 331 IAmb IAmb 16 27 08.5
comp=Z,33nm,0.9s
WIN **Windhoek** 89.95 113 IAmb IAmb 16 27 09.5
comp=Z,14nm,0.8s
WIN **Windhoek** 89.95 113 P P 16 27 08.9 +1.2
WIN pmax pmax
comp=Z,19nm,2.2s
H23K **Yukon River** 89.98 337 IAmb IAmb 16 27 07.7
comp=Z,50nm,1.8s
H23K **Yukon River** 89.98 337 P P 16 27 06.8 +0.1
baz=108
D25K **Kavik River** 89.99 340 P P 16 27 07.1 +0.4
baz=111
R18K **Karluk** 90.01 328 P P 16 27 07.2 +0.3
baz=104
BPAW **Bear Paw Mtn.** 90.06 335 P P 16 27 06.9 -0.1
baz=106,SNR=46
BSTI **Sart Tilman** 90.13 39 dP P 16 27 08.1 +0.5
comp=Z,2.9nm,0.9s
MLY **Manley** 90.22 336 P P 16 27 07.8 0.0
baz=107,SNR=24
BEBN **Eben Emael** 90.24 39 dP P 16 27 08.7 +0.6
comp=Z,18nm,0.9s
CHIR **Chirikof Islan** 90.25 326 P P 16 27 08.7 +0.6
baz=102
PPLA **Purkeypile** 90.25 334 P P 16 27 08.3 +0.2
baz=105,SNR=15
E24K **Your Creek** 90.30 339 IAmb IAmb 16 27 09.9
comp=Z,15nm,0.9s
E24K **Your Creek** 90.30 339 P P 16 27 08.5 +0.3
baz=109,SNR=13
KEST **Kesra** 90.30 54 IAmb IAmb 16 27 13.0
comp=Z,24nm,1.1s
KEST **Kesra** 90.30 54 P P 16 27 09.5 +0.6
comp=Z,12nm,0.7s,baz=303,slow=4.7,SNR=8.6
comp=Z,12nm,0.7s
WLF **Walferdange** 90.32 40 IAmb IAmb 16 27 10.2
comp=Z,28nm,0.9s
WLF **Walferdange** 90.32 40 dP P 16 27 09.2 +0.7
comp=Z,20nm,0.9s
WLF **Walferdange** 90.32 40 P P 16 27 09.3 +0.7
WLF pmax pmax
comp=Z,33nm,1.1s
BHOU **Houvegnez** 90.36 39 dP P 16 27 09.3 +0.5
comp=Z,8.6nm,1.2s
M20K **Styx River** 90.41 332 IAmb IAmb 16 27 09.6
comp=Z,18nm,1.0s
M20K **Styx River** 90.41 332 P P 16 27 08.5 -0.3
baz=105,SNR=7.2
MEM **Membach** 90.41 39 dP P 16 27 09.1 +0.1
comp=Z,7.0nm,1.4s
G23K **Bananza Creek** 90.44 338 IAmb IAmb 16 27 10.7
comp=Z,21nm,0.8s
G23K **Bananza Creek** 90.44 338 P P 16 27 09.6 +0.8
baz=107,SNR=16
BTNL **Ternell** 90.48 39 dP P 16 27 09.7 +0.4
comp=Z,6.1nm,0.9s
Q18K **Katmai Hardscr** 90.54 329 P P 16 27 09.6 +0.1
baz=103
O19K **Port Alsworth** 90.56 331 P P 16 27 08.7 -0.7
baz=104
CHUM **Lake Minchumin** 90.56 335 P P 16 27 09.1 -0.3
baz=105,SNR=11
COLD **Coldfoot** 90.66 338 IAmb IAmb 16 27 11.8
comp=Z,12nm,0.8s
COLD **Coldfoot** 90.66 338 P P 16 27 09.7 0.0
baz=107,SNR=7.5
E23K **Chandalar** 90.69 339 IAmb IAmb 16 27 11.0
comp=Z,9.0nm,0.6s
E23K **Chandalar** 90.69 339 P P 16 27 10.4 +0.3
baz=108,SNR=9.4
ECH **Echery** 90.71 42 IAmb IAmb 16 27 12.2
comp=Z,30nm,1.5s
H22K **Ishtalitna Cre** 90.72 337 P P 16 27 09.9 -0.2
baz=106
D24K **Happy Valley** 90.76 340 IAmb IAmb 16 27 11.0
comp=Z,13nm,0.7s
D24K **Happy Valley** 90.76 340 P P 16 27 10.1 0.0
baz=108,SNR=7.9
I21K **Tanana** 90.77 336 P P 16 27 09.8 -0.5
baz=106
N19K **Bonanza Creek** 90.78 331 P P 16 27 09.8 -0.7
baz=103
TOLK **Toolik Lake Re** 90.86 339 IAmb IAmb 16 27 11.5
comp=Z,10nm,0.7s
TOLK **Toolik Lake Re** 90.86 339 P P 16 27 10.7 0.0
baz=108,SNR=5.4
TSUM **Tsumeb** 90.86 109 P P 16 27 11.6 -0.4
TSUM IAmb IAmb 16 27 47.0
comp=Z,19nm,0.9s
L20K **Farewell, AK** 90.90 333 P P 16 27 10.5 -0.5
baz=104
C24K **Franklin Bluff** 90.90 341 P P 16 27 11.6 +0.8
baz=108
O18K **Koktuh Hills** 90.91 330 P P 16 27 10.8 -0.3
baz=103
M19K **Big River Lodg** 90.99 332 IAmb IAmb 16 27 12.4
comp=Z,12nm,0.8s
M19K **Big River Lodg** 90.99 332 P P 16 27 11.2 -0.2
baz=104
K20K **Telida** 91.19 334 IAmb IAmb 16 27 13.0
comp=Z,22nm,1.1s
K20K **Telida** 91.19 334 P P 16 27 11.9 -0.4
baz=104,SNR=7.3
H21K **Melozitna Rive** 91.23 336 P P 16 27 12.3 -0.2
baz=105,SNR=7.4
L19K **White Mountain** 91.27 333 IAmb IAmb 16 27 12.8
comp=Z,9.7nm,0.9s
L19K **White Mountain** 91.27 333 P P 16 27 12.3 -0.4
baz=103
D23K **Nanushuk River** 91.34 340 IAmb IAmb 16 27 14.8
comp=Z,24nm,0.9s
D23K **Nanushuk River** 91.34 340 P P 16 27 13.8 +0.9
baz=107
BUG **Bochum--Univer** 91.34 38 P P 16 27 12.5 -0.7
BUG pmax pmax
comp=Z,21nm,1.2s
P17K **Kvichak River** 91.39 329 P P 16 27 13.2 -0.1
baz=102
Q16K **King Salmon** 91.39 329 P P 16 27 14.1 +0.8
baz=102
J20K **Nowinta River** 91.42 335 IAmb IAmb 16 27 14.0
comp=Z,37nm,1.6s
J20K **Nowinta River** 91.42 335 P P 16 27 13.0 -0.3
baz=104
N18K **Kilae Creek** 91.42 331 IAmb IAmb 16 27 14.1
comp=Z,22nm,0.9s
N18K **Kilae Creek** 91.42 331 P P 16 27 13.4 -0.1
baz=102

F22K	**John River** baz=105	91.47	338	P		**P**		16 27 14.0	+0.5
E22K	**Anaktuvuk Pass** comp=Z,12nm,0.8s	91.51	339	IAmb		IAmb		16 27 14.9	
E22K	**Anaktuvuk Pass** baz=106,SNR=9.9	91.51	339	P		**P**		16 27 13.9	+0.2
SLE	**Schleitheim**	91.52	42	P		**P**		16 27 14.8	+0.6
SLE	comp=Z,19nm,1.3s			pmax		pmax			
M18K	**Stony River** baz=102	91.57	332	P		**P**		16 27 14.5	+0.5
C23K	**Itkillik River** baz=107	91.57	340	P		**P**		16 27 14.5	+0.6
IMAR	**Indian Mountai**	91.69	336	P		**P**		16 27 14.0	-0.5
I20K	**Naaghedeneel** baz=103	91.70	335	P		**P**		16 27 15.0	+0.5
G21K	**Allakaket** comp=Z,15nm,0.8s	91.72	337	IAmb		IAmb		16 27 16.1	
G21K	**Allakaket** baz=104	91.72	337	P		**P**		16 27 15.1	+0.4
O17K	**Koliganek Bris** baz=101	91.83	330	P		**P**		16 27 15.4	+0.1
F21K	**Alatna River** comp=Z,10nm,0.5s	91.89	338	IAmb		IAmb		16 28 36.8	
F21K	**Alatna River** baz=104	91.89	338	P		**P**		16 27 15.9	+0.4
J19K	**Poorman** baz=102	92.01	334	P		**P**		16 27 16.1	+0.1
D22K	**Ayikyak River** comp=Z,42nm,1.8s	92.01	339	IAmb		IAmb		16 30 42.7	
D22K	**Ayikyak River** baz=105	92.01	339	P		**P**		16 27 16.4	+0.4
N17K	**Nushagak Hills** baz=101	92.02	331	P		**P**		16 27 16.2	+0.1
H20K	**Anotleneega Mo** baz=103	92.03	336	P		**P**		16 27 16.5	+0.4
SYO	**Syowa Base**	92.09	161	‖ *i* P		**P**		16 27 17.0	+0.6
L18K	**Granite Mounta** baz=102	92.12	332	P		**P**		16 27 16.6	0.0
CHNA	**Chernabura Isl** baz=99	92.28	325	P		**P**		16 27 17.3	-0.1
O16K	**Kokwok River B** baz=100	92.29	330	P		**P**		16 27 17.6	+0.2
M17K	**Holitna River** comp=Z,19nm,0.8s	92.31	332	IAmb		IAmb		16 27 18.5	
M17K	**Holitna River** baz=101	92.31	332	P		**P**		16 27 17.8	+0.3
E21K	**Killik River** comp=Z,14nm,0.8s	92.36	339	IAmb		IAmb		16 27 18.8	
E21K	**Killik River** baz=104	92.36	339	P		**P**		16 27 17.6	0.0
J18K	**Innoko River** comp=Z,13nm,1.1s	92.38	334	IAmb		IAmb		16 27 18.9	
J18K	**Innoko River** baz=101	92.38	334	P		**P**		16 27 18.1	+0.3
DAVA	**Damuels** comp=Z,7.7nm,0.7s	92.38	43	*i* P		**P**		16 27 18.9	+0.6
S14K	**Fog Glacier** baz=99	92.50	326	P		**P**		16 27 18.8	+0.2
B22K	**Teshekpuk Lake** baz=104	92.63	341	P		**P**		16 27 19.4	+0.6
H19K	**Roundabout Mou** comp=Z,18nm,0.8s	92.67	336	IAmb		IAmb		16 27 20.6	
H19K	**Roundabout Mou** baz=102	92.67	336	P		**P**		16 27 19.5	+0.5
GCSA	**Galena City Sc** baz=101	92.70	335	P		**P**		16 27 19.9	+0.7
F20K	**Avaraart Lake** baz=102	92.70	337	P		**P**		16 27 19.0	-0.2
N16K	**Nishlik Lake** baz=100	92.78	331	P		**P**		16 27 20.3	+0.6
C21K	**Knifeblade Rid** baz=103	92.81	339	P		**P**		16 27 20.2	+0.5
NOR	**Nord**	92.83	7	*i* P		**P**		16 27 18.7	-0.9
NOR	comp=Z,7.8nm,0.9s			IAmb		IAmb		16 27 21.1	
L17K	**Donlin** baz=100	92.84	332	P		**P**		16 27 20.3	+0.4
B21K	**Ikpikpuk River** baz=103	92.86	340	P		**P**		16 27 20.2	+0.4
SDPT	**Sand Point** baz=98	92.87	325	P		**P**		16 27 20.0	-0.1
FETA	**Feichten** comp=Z,7.5nm,1.2s	92.92	43	*e*P		**P**		16 27 21.0	+0.1
K17K	**Iditarod** comp=Z,24nm,1.1s	92.95	333	IAmb		IAmb		16 27 21.8	
K17K	**Iditarod** baz=100	92.95	333	P		**P**		16 27 20.9	+0.5
M16K	**Timber Creek** comp=Z,16nm,0.8s	92.97	331	IAmb		IAmb		16 27 22.8	
M16K	**Timber Creek** baz=100	92.97	331	P		**P**		16 27 21.6	+1.1
O15K	**Ungalikthiuk R** baz=99	93.10	329	P		**P**		16 27 22.4	+1.3
E20K	**Nigu River** baz=102	93.12	338	P		**P**		16 27 21.9	+0.7
MOTA	**Moosalm** comp=Z,6.1nm,0.8s	93.22	43	*i* P		**P**		16 27 22.0	-0.3
MUD	**Monsted U'grnd**	93.24	34	*i* P		**P**		16 27 22.4	+0.6
MUD	comp=Z,31nm,0.9s			IAmb		IAmb		16 27 24.1	
SQTA	**Sankt Quirin** comp=Z,17nm,1.3s	93.27	43	*e*P		**P**		16 27 22.5	0.0
L16K	**Owhat River** comp=Z,12nm,0.8s	93.32	332	IAmb		IAmb		16 27 24.1	
L16K	**Owhat River** baz=99	93.32	332	P		**P**		16 27 23.1	+1.0
E19K	**Redstone River** comp=Z,28nm,1.5s	93.36	338	IAmb		IAmb		16 27 23.0	
E19K	**Redstone River** baz=101	93.36	338	P		**P**		16 27 22.2	0.0
TEOL	**Teolo** comp=Z,10nm,0.8s	93.36	45	IAmb		IAmb		16 27 23.8	
D20K	**Etivluk River** baz=101	93.37	339	P		**P**		16 27 22.9	+0.6
N15K	**Kwethluk River** baz=99	93.38	330	P		**P**		16 27 23.2	+0.7
H18K	**Honhosa River** comp=Z,14nm,0.7s	93.39	335	IAmb		IAmb		16 27 24.1	
H18K	**Honhosa River** baz=100	93.39	335	P		**P**		16 27 22.6	+0.1
J17K	**VABM Dome** baz=99	93.41	333	P		**P**		16 27 23.2	+0.7
CTI	**Castel Tesino**	93.43	44	P		**P**		16 27 23.4	+0.2
CTI	**Castel Tesino**	93.43	44	P		**P**		16 27 23.4	+0.2
CTI	comp=Z,58nm,1.9s			pmax		pmax			
F19K	**Shaleruckik Mo** comp=Z,17nm,1.4s	93.45	337	IAmb		IAmb		16 27 27.2	
F19K	**Shaleruckik Mo** baz=100	93.45	337	P		**P**		16 27 22.6	0.0
WATA	**Walderalm** comp=Z,5.9nm,0.9s	93.53	43	*e*P		**P**		16 27 23.5	-0.2
WTTA	**Wattenberg** comp=Z,10.0nm,0.9s	93.56	43	*e*P		**P**		16 27 23.9	+0.1
WTTA	**Wattenberg**	93.56	43	P		**P**		16 27 24.7	+0.8
WTTA	comp=Z,15nm,1.3s			pmax		pmax			
G18K	**Tagagawik** baz=100	93.64	336	P		**P**		16 27 24.1	+0.6
M15K	**Kasigluk River** baz=98	93.75	331	P		**P**		16 27 24.4	+0.3
B20K	**Meade River** baz=101	93.81	340	P		**P**		16 27 24.0	-0.2
S12K	**Black Hills** baz=97	93.81	326	P		**P**		16 27 24.8	+0.2
O14K	**Tigyukauivet M** baz=98	93.84	329	P		**P**		16 27 25.5	+0.9
D19K	**Kuna River** comp=Z,12nm,0.9s	93.87	339	IAmb		IAmb		16 27 26.1	
D19K	**Kuna River** baz=100	93.87	339	P		**P**		16 27 25.1	+0.4
A21K	**Barrow** baz=101	93.88	341	P		**P**		16 27 25.2	+0.8
CIMO	**Cimolais** comp=Z,12nm,1.3s	94.01	44	IAmb		IAmb		16 27 28.5	
H17K	**Granite Mounta** baz=98	94.01	335	P		**P**		16 27 25.7	+0.4
J16K	**Anvik River** baz=98	94.07	333	P		**P**		16 27 26.3	+0.7
ABTA	**Abfaltersbach** comp=Z,6.2nm,1.1s	94.10	44	*e*P		**P**		16 27 26.5	+0.3
N14K	**Kuskokwak Cree** baz=97	94.14	330	P		**P**		16 27 26.5	+0.5
F18K	**Selawik** baz=98	94.15	337	P		**P**		16 27 26.4	+0.6
QNGWA	**Qangwa** comp=Z,13nm,1.1s	94.16	110	IAmb		IAmb		16 27 29.2	
STAL	**STALIGIAL** comp=Z,5.8nm,0.7s	94.19	44	IAmb		IAmb		16 31 01.0	
I17K	**Unalakleet** baz=98	94.20	334	P		**P**		16 27 27.0	+0.9
L15K	**Ungalak Mounta** baz=97	94.27	332	P		**P**		16 27 27.4	+0.9
LESA	**Schwarzleotal** comp=Z,9.1nm,1.4s	94.29	43	*i* P		**P**		16 27 27.4	+0.4
K15K	**Wolf Creek Mou** baz=97	94.36	332	P		**P**		16 27 28.0	+1.1
M14K	**Bethel** baz=97	94.38	331	P		**P**		16 27 27.8	+0.8
G17K	**Kiwalik Mounta** baz=98	94.40	335	P		**P**		16 27 28.0	+1.0
XAUDM	**Khaudum** comp=Z,17nm,1.2s	94.47	109	IAmb		IAmb		16 27 31.3	
C19K	**Lookout Ridge** baz=98	94.50	339	P		**P**		16 27 28.3	+0.9
E18K	**Tukpahlearik C** baz=98	94.63	337	P		**P**		16 27 28.2	+0.1
F17K	**Baldwin Pennin** baz=97	94.76	336	P		**P**		16 27 29.1	+0.5
L14K	**Kuka Creek** baz=96	94.80	331	P		**P**		16 27 29.1	+0.2
MYKA	**Terra Mystica** comp=Z,8.2nm,1.1s	94.86	44	*e*P		**P**		16 27 29.9	+0.2
NB2	**NORSAR Subarra** comp=Z,8.5nm,1.1s,baz=263,slow=4.8	94.87	29	P		**P**		16 27 29.9	+0.6
NOA	**NORSAR Array B** comp=Z,3.8nm,1.0s,baz=265,slow=4.8,SNR=6.9	94.87	29	P		**P**		16 27 30.0	+0.7
CLL	**Collm** comp=Z,3.8nm,1.0s	94.89	39	*e*P		**P**		16 27 30.0	+0.4
CLL	comp=Z,5.0nm,0.7s			pmax		pmax			
CLL	**Collm** comp=Z,5.0nm,0.7s	94.89	39	*e*Pdif		**P**		16 27 30.0	+0.4
H16K	**Elim** baz=96	94.96	334	P		**P**		16 27 30.0	+0.4
C18K	**Utukok River** baz=97	95.01	339	P		**P**		16 27 30.0	+0.1
M13K	**Dall Lake** baz=96	95.02	330	P		**P**		16 27 31.0	+1.1
KHC	**Kasperske Hory**	95.05	41	*de*P		**P**		16 27 31.7	+1.2
KHC	comp=Z,7.0nm,1.7s			pmax		pmax			
KHC	**Kasperske Hory**	95.05	41	*e*P		**P**		16 27 32.8	+2.3
E17K	**Hotham Inlet** baz=96	95.06	337	P		**P**		16 27 30.4	+0.4
G16K	**Koyuk River** baz=96	95.09	335	P		**P**		16 27 30.8	+0.6
GERES	**GERESS Array B** comp=Z,1.2nm,0.8s,baz=264,slow=3.8,SNR=10.0	95.11	42	P		**P**		16 27 31.2	+0.4
GERES	comp=Z,0.7nm,0.7s,baz=48,slow=2.0,SNR=6.6			PKKP		**PKKPdf**		16 44 25.4	-1.2
A19K	**Wainwright** baz=97	95.16	340	P		**P**		16 27 30.7	+0.3
B18K	**Kokolik River** baz=96	95.31	339	P		**P**		16 27 31.6	+0.4
J14K	**Nanvaranak Lak** baz=95	95.35	332	P		**P**		16 27 31.7	+0.4
MOA	**Molln** comp=Z,4.9nm,1.1s	95.40	43	*i* P		**P**		16 27 32.4	+0.4
ZVC	**Zvikov**	95.48	41	*e*P		**P**		16 27 33.4	+1.1
CKRC	**Cesky Krumlov**	95.50	42	*e*P		**P**		16 27 35.8	+3.3
CKRC	**Cesky Krumlov**	95.50	42	*e*P		**P**		16 27 35.8	+3.3
RDOG	**Red Dog Mine** baz=95	95.58	338	P		**P**		16 27 32.6	+0.2
D17K	**Noatak River** baz=95	95.61	337	P		**P**		16 27 32.7	+0.2
C17K	**DeLong Mountai** baz=95	95.72	338	P		**P**		16 27 33.3	+0.2
G15K	**Niukluk** baz=95	95.76	335	P		**P**		16 27 33.2	-0.1
K13K	**Kusilvak Mount** baz=94	95.79	332	P		**P**		16 27 34.0	+0.6
HFS	**Hagfors** comp=Z,4.7nm,0.8s,baz=222,slow=2.0,SNR=6.5	96.01	30	P		**P**		16 27 34.7	+0.3
F15K	comp=Z,4.7nm,0.8s **North Star Dit** baz=94	96.07	335	P		**P**		16 27 35.8	+1.2
UNV	**Unalaska Valle** baz=94	96.19	323	P		**P**		16 27 36.1	+0.7
ARSA	**Arzberg** comp=Z,6.6nm,1.1s	96.20	43	IAmb		IAmb		16 27 37.0	
BOSA	**Boshof** comp=Z,5.4nm,0.8s,baz=243,slow=2.2,SNR=9.8	96.21	120	P		**P**		16 27 35.7	-0.6
ANM	comp=Z,5.4nm,0.8s **Nome** baz=94	96.30	334	P		**P**		16 27 35.8	+0.1
M11K	**Mekoryuk** baz=93	96.43	330	P		**P**		16 27 36.4	0.0
CONA	**Conrad Observa** comp=Z,2.4nm,0.7s	96.47	43	*i* P		**P**		16 27 37.4	+0.4
C16K	**Lisburne Hills** baz=93	96.50	338	P		**P**		16 27 35.7	+1.0
RONA	**Rosalia, Austr** comp=Z,10.0nm,1.1s	96.75	43	*i* P		**P**		16 27 38.4	+0.2
F14K	**Arctic Creek** baz=93	96.75	335	P		**P**		16 27 38.7	+1.0
KRUC	**Kravsky**	96.89	41	*e*P		**P**		16 27 39.6	+0.8
DPC	**Dobruska-Polom**	96.91	40	*e*P		**P**		16 27 39.7	+0.8
DPC	**Dobruska-Polom**	96.91	40	*e*P		**P**		16 27 39.7	+0.8
VRAC	**Vranov**	97.04	41	*e*P		Pdif		16 27 40.3	+0.8
VRAC	**Vranov**	97.04	41	P		Pdif		16 27 40.4	+0.9
VRAC	comp=Z,8.0nm,1.2s			pmax		pmax			
KRLC	**Kraliky**	97.19	40	*e*P		Pdif		16 27 41.2	+1.0
KRLC	**Kraliky**	97.19	40	*e*P		Pdif		16 27 41.2	+1.0
TNA	**Tin City** baz=91	97.42	335	P		Pdif		16 27 41.7	+0.9
MODS	**Modra-Piesok**	97.44	42	*e*P		Pdif		16 27 42.2	+0.9
MODS	**Modra-Piesok**	97.44	42	*e*PDIFF		Pdif		16 27 42.2	+0.9
NIKH	**Nikolski High** baz=92	97.56	322	P		Pdif		16 27 42.0	+0.3
MORC	**Moravsky Berou**	97.67	41	*e*P		Pdif		16 27 43.3	+0.9
MORC	**Moravsky Berou**	97.67	41	P		Pdif		16 27 45.3	+2.9
MORC	comp=Z,5.0nm,1.4s			pmax		pmax			
STEB	**Steborice**	97.83	41	*e*P		Pdif		16 27 44.4	+1.4
MAUC	**Maruska**	97.84	41	*e*P		Pdif		16 27 44.6	+1.5
P08K	**Saint George I** baz=91	98.05	326	P		**P**		16 27 43.6	-0.2
SPIA	**Saint Paul Isl** baz=90	98.44	327	P		Pdif		16 27 46.0	+0.5
MAW	**Mawson** comp=Z,2.1nm,0.7s,baz=263,slow=12,SNR=3.0	99.77	165	P		**Pdif**		16 27 51.9	+0.6
ARCES	comp=Z,2.1nm,0.7s **ARCESS Array B** comp=Z,5.4nm,1.0s,baz=328,slow=4.3,SNR=5.6	100.73	21	P		**Pdif**		16 27 55.5	0.0
FINES	**FINESS Array B** comp=Z,3.2nm,0.9s,baz=203,slow=29,SNR=2.3	102.04	29	P		**Pdif**		16 28 01.9	+0.5
FINES	comp=Z,1.7nm,0.6s,baz=48,slow=2.1,SNR=16			PKKPbc		**PKKPbc**		16 44 05.3	-2.4
APA	**Apatity**	103.97	22	‖ *e*P		**Pdif**		16 28 14.2	+4.3
OBN	**Obninsk**	108.67	34	*i* P		**Pdif**		16 28 29.8	-1.2
OBN				*e*				16 33 02.4	
OBN				*e*PPP		PPP		16 35 21.6	
OBN	comp=Z,4.0nm,0.9s			pmax		pmax			
BRTR	**Keskin Array B** comp=Z,0.5nm,0.8s,baz=316,slow=6.0,SNR=3.2	109.58	51	Pdiff		**Pdif**		16 28 36.1	+0.4
KIRV	**Kirov**	114.01	28	‖ *i* PKIKP		**PKiKP**		16 32 46.2	+0.4
SHA1	**Shidzhatmaz**	115.44	45	*c i* PKIKP		**PKPdf**		16 32 49.6	+0.3
KBZ	**Khabaz** comp=Z,5.1nm,0.8s,baz=276,slow=2.7,SNR=8.9	115.61	45	PKP		**PKPdf**		16 32 49.8	+0.5
KBZ	comp=Z,1.0nm,0.8s,baz=41,slow=6.1,SNR=4.1			PKKPbc		**PKKPbc**		16 43 24.8	+1.0
KBZ	**Khabaz**	115.61	45	*d i* PKIKP		**PKPdf**		16 32 49.5	+0.2
BELG	**Belogornoye**	115.75	35	‖ *i* PKIKP		**PKiKP**		16 32 49.1	-0.2
PETK	**Petropavlovsk-** comp=Z,4.1nm,0.9s,baz=86,slow=2.3,SNR=2.0	117.10	327	PKP		**PKPdf**		16 32 51.2	-0.7
AKT	**Akhty**	119.67	46	*e*PKIKP		**PKiKP**		16 33 00.5	+3.0
RAYN	**Ar Rayn**	121.57	67			**PKiKP**		16 33 01.6	0.0
RAYN	**Ar Rayn**	121.57	67	PKIKP		**PKiKP**		16 33 01.6	0.0
YAK	**Yakutsk**	122.19	346	*e*PKIKP		**PKPdf**		16 32 59.8	-1.6
YAK	comp=Z,11nm,1.0s			pmax		pmax			
YAK	comp=N,4.0nm,1.4s			pmax		pmax			
YAK	comp=E,4.0nm,1.3s			pmax		pmax			
AKTO	**Aktyubinsk**	122.42	33	PKIKP		**PKPdf**		16 33 02.1	-0.1
AB31	**Akbulak array**	124.11	33			**PKPdf**		16 33 05.4	-0.1
AB31	**Akbulak array**	124.11	33	*i* PKIKP		**PKiKP**		16 33 05.8	0.0
ABKAR	**Akbulak array**	124.11	33			**PKPdf**		16 33 05.4	-0.1
CMSA	**Cobar Meteorol**	124.67	224	P		**PKiKP**		16 33 07.5	0.0
BORK	**Borovoye**	126.70	25	*d i* PKIKP		**PKPdf**		16 33 10.6	+0.2
BVA0	**Borovoye Array**	126.74	25	*i* PKIKP		**PKiKP**		16 33 10.9	0.0
BVAR	**Borovoye Array** comp=E,8.4nm,0.7s,baz=270,slow=1.5,SNR=35	126.74	25	PKIKP		**PKiKP**		16 33 10.9	0.0
BVAR	**Borovoye Array**	126.74	25	PKIKP		**PKiKP**		16 33 11.0	0.0
STKA	**Stephens Creek**	127.17	220	P		**PKiKP**		16 33 12.4	0.0
STKA	**Stephens Creek**	127.17	220			**PKPdf**		16 33 11.4	-0.6
STKA	**Stephens Creek** comp=E,15nm,0.6s,baz=109,slow=3.3,SNR=43	127.17	220	PKP		**PKPdf**		16 33 12.2	+0.2
STKA	**Stephens Creek**	127.17	220	*d i* PKIKP		**PKPdf**		16 33 11.7	-0.3
HTT	**Hallett**	127.79	217	P		**PKiKP**		16 33 13.6	-0.1
YSS	**Yuzhno-Sakhali**	128.51	327	*e*PKIKP		**PKPdf**		16 33 13.5	-0.5
YSS	comp=Z,10.0nm,0.6s			pmax		pmax			
QLP	**Quilpie**	128.60	228	P		**PKiKP**		16 33 16.2	+0.7
BBOO	**Buckleboo**	129.91	215	P		**PKPdf**		16 33 17.5	+0.3
BBOO	**Buckleboo**	129.91	215			**PKPdf**		16 33 16.4	-0.7
INKA	**Innaminka**	130.39	224			**PKPdf**		16 33 17.7	-0.5
RABL	**Rabaul**	130.76	258			**PKPdf**		16 33 19.0	-0.3
ZALV	**Zalesovo Beam**	130.89	15			**PKPdf**		16 33 17.8	-0.5
ZALV	**Zalesovo Beam** comp=Z,13nm,0.5s,baz=318,slow=2.0,SNR=87	130.89	15	PKP		**PKPdf**		16 33 18.5	+0.2
KURK	**Kurchatov**	131.76	22			**PKPdf**		16 33 19.4	-0.6
KURK	**Kurchatov**	131.76	22	*d i* PKIKP		**PKPdf**		16 33 20.4	+0.4
KURBB	**Kurchatov Arra** comp=Z,17nm,0.9s,baz=316,slow=2.5,SNR=71	131.80	22	PKP		**PKiKP**		16 33 20.8	-0.4
KURBB				PKKP		**PKKPdf**		16 43 14.2	-3.1
MTSU	comp=Z,0.3nm,0.7s,baz=168,slow=2.1,SNR=5.4 **Mount Surprise**	133.01	237	P		**PKiKP**		16 33 24.0	-0.6
DGZ	**Jazzator, Alta**	135.43	15	‖ *i* PKIKP		**PKPdf**		16 33 27.5	+0.3
QIS	**Mount Isa**	135.52	231	P		**PKPdf**		16 33 28.5	+0.4
HILR	**Hailar Array B** comp=Z,11nm,0.8s,baz=110,slow=1.7,SNR=11	135.85	345	PKP		**PKPdf**		16 33 26.9	-0.9
USRK	**Ussuriysk Ar.** comp=Z,6.2nm,0.8s,baz=18,slow=0.8,SNR=12	135.91	331	PKP		**PKPdf**		16 33 27.5	-0.5
AAK	**Ala-Archa**	136.12	32			**PKPdf**		16 33 28.8	+0.1
AAK	**Ala-Archa** comp=Z,7.8nm,0.8s,baz=206,slow=2.9,SNR=13	136.12	32	PKP		**PKPdf**		16 33 29.5	+0.8
AAK	**Ala-Archa**	136.12	32	*d i* PKIKP		**PKiKP**		16 33 30.0	-0.4
MK31	**Makanchi Array**	136.37	22	*d i* PKIKP		**PKPdf**		16 33 28.6	-0.3
MKAR	**Makanchi Array**	136.37	22			**PKPdf**		16 33 28.2	-0.6
MKAR	**Makanchi Array** comp=Z,0.3nm,0.4s,baz=308,slow=1.8,SNR=4.9	136.37	22	PKhKP		PKPpre		16 33 15.8	
MKAR				PKP		**PKPdf**		16 33 28.9	0.0
MKAR	comp=Z,9.4nm,0.8s,baz=329,slow=1.9,SNR=34			SKKPbc		SKKPbc		16 45 46.5	-2.5
KNGR	comp=Z,1.2nm,1.0s,baz=104,slow=6.1,SNR=3.9 **Kungurtug, Tuv**	136.44	6	⇑ *e*PKIKP		**PKPdf**		16 33 29.4	+0.4
BNX	**BinXian**	136.72	336	⇑ P		**PKPdf**		16 33 28.8	-0.7
BNX	comp=Z,10.0nm,0.9s			pmax		pmax			
ZAK	**Zakamensk**	137.01	1	*e*PKIKP		**PKPdf**		16 33 29.8	-0.3
ZAK	comp=Z,10.0nm,1.6s			pmax		pmax			
MJAR	**Matsushiro Arr** comp=Z,1.5nm,0.7s,baz=55,slow=2.1,SNR=3.9	137.42	318	PKhKP		PKPpre		16 33 20.7	
MJAR				PKP		**PKPdf**		16 33 30.6	-0.5
MAJO	comp=Z,7.8nm,1.0s,baz=76,slow=1.9,SNR=7.1 **Matsushiro**	137.43	318	*d i* PKIKP		**PKPdf**		16 33 30.2	-0.9
AS31	**Alice Springs**	137.70	223			PKPpre		16 33 22.8	
ASAR	**Alice Springs**	137.70	223			PKPpre		16 33 24.2	
ASAR	**Alice Springs** comp=Z,2.6nm,0.6s,baz=128,slow=3.6,SNR=46	137.70	223	PKhKP		PKPpre		16 33 21.9	
ASAR				PKP		**PKPdf**		16 33 31.6	-0.4
ASAR	comp=Z,13nm,0.8s,baz=124,slow=2.0,SNR=39			PKKP		**PKKPdf**		16 43 02.7	-2.8
ASAR	comp=Z,0.3nm,1.0s,baz=294,slow=2.3,SNR=4.1			SKKPbc		SKKPbc		16 45 40.6	-1.8
CN2	comp=Z,0.8nm,1.0s,baz=304,slow=4.8,SNR=6.6 **Changchun**	139.10	336	PKP		**PKiKP**		16 33 38.0	+1.8
KSH	**Kashi**	139.11	34	PKP		**PKiKP**		16 33 35.5	-1.1
ULN	**Ulaanbaatar**	139.46	357	*c i* PKIKP		**PKiKP**		16 33 36.4	-0.7
SONM	**Songino Array** comp=Z,1.8nm,0.6s,baz=337,slow=2.9,SNR=12	139.52	358	PKhKP		PKPpre		16 33 24.8	
SONM				PKP		**PKPdf**		16 33 33.6	-1.2
WRAB	comp=Z,5.9nm,0.9s,baz=57,slow=0.7,SNR=15 **Tennant Creek**	139.84	227	*d i* PKIKP		**PKPdf**		16 33 35.7	-0.3
WMQ	**Urumqi**	140.83	19	PKP		**PKPdf**		16 33 37.7	+0.5
WMQ	comp=Z,72nm,18.1s			LR		LR			
XLT	**XiLinHaoTe**	142.04	346	*e*PKP		**PKPdf**		16 33 34.7	-4.7
KSRS	**Korea Array** comp=Z,11nm,0.9s,baz=36,slow=3.4,SNR=17	142.99	328	PKhKP		PKPpre		16 33 36.8	
KSRS				PKP		**PKPdf**		16 33 41.8	+0.7
JNU	comp=Z,18nm,0.8s,baz=11,slow=1.4,SNR=27 **Nakatsue**	144.28	320	PKhKP		PKPpre		16 33 40.6	
KDU	comp=Z,11nm,0.8s,baz=225,slow=0.8,SNR=8.9 **Kakadu**	145.58	235	P		**PKPdf**		16 33 46.4	+0.1
BJI	**Beijing**	145.63	344	PKPbc		**PKPdf**		16 33 45.5	-0.1
HHC	**Hu-ho-hao-te**	145.90	350	*e*P		**PKPbc**		16 33 47.2	+0.1
HHC	comp=Z,58nm,1.1s			pmax		pmax			
BTO	**Baotou**	146.38	352	*e*PKPbc		**PKPbc**		16 33 48.0	-0.5
BTO	**Baotou**	146.38	352	pPKP		pPKPdf		16 34 14.1	-5.1
BTO	**Baotou**	146.38	352	sPKP				16 34 22.6	
BTO	**Baotou**	146.38	352	PP		PP		16 36 47.6	-23
MTN	**Manton Dam**	146.57	233	P		**PKPdf**		16 33 48.6	+0.6
KNRA	**Kununurra**	146.63	227	P		**PKPbc**		16 33 50.2	+0.5
FITZ	**Fitzroy Crossi**	147.07	220	P		**PKPdf**		16 33 49.5	+0.8
PSAB3	**Pilbara Seismi**	147.45	208	P		**PKPbc**		16 33 52.1	+0.2
PSAC2	**Pilbara Seismi**	147.46	208	P		**PKPbc**		16 33 52.1	+0.1
PSA00	**Pilbara Seismi**	147.47	208	P		**PKPdf**		16 33 49.9	+0.6
PSA00	**Pilbara Seismi**	147.47	208			**PKPdf**		16 33 48.1	-1.2
PSAC1	**Pilbara Seismi**	147.53	208	P		**PKPdf**		16 33 49.9	+0.5
GTA	**Gaotai**	147.75	6	*e*PKPbc		**PKPdf**		16 33 49.9	+0.5
GTA				pPKP		pPKPdf		16 34 13.9	-8.0
MBWA	**Marble Bar**	147.88	208	P		**PKPbc**		16 33 53.2	+0.2
MBWA	**Marble Bar**	147.88	208			**PKPbc**		16 33 52.5	-0.5
HNS	**HongShan**

	comp=N,822nm,0.2s							
IZZE				S	Sb	16 21 59.2	0.0	
AKAS	**Kas**	**0.30**	**118**	Pg	Pb	16 21 58.4	-0.3	
AKAS				Sg	Sb	16 22 05.4	+1.9	
FETY	**Fethiye**	**0.31**	**329**	P	Pb	16 21 49.0	-10	
FETY				S	Sb	16 21 53.0	-11	
SABU	**Mula-Dalaman**	**0.52**	**331**	P	Pb	16 22 01.2	-1.0	
SABU				S	Sb	16 22 08.9	-0.3	
CAME	**Cameli-Denizli**	**0.57**	**2**	Pg	Pb	16 22 02.2	-0.9	
CAME				Sg	Sb	16 22 10.3	-0.7	
ELL	**Elmali**	**0.63**	**53**	Pg	Pb	16 22 03.8	-0.3	
DALY	**Dalyan (Mula)**	**0.67**	**312**	Pg	Pb	16 22 03.6	-1.1	
TURN	**Turunc**	**0.92**	**296**	P	Pb	16 22 08.1	-0.9	
TURN				S	Sn	16 22 21.4	-0.1	
TURN				*i* IAML		16 22 23.0		
	comp=N,64nm,0.4s							
TURN	**Turunc**	**0.92**	**296**	Pg	Pb	16 22 08.6	-0.4	
DNZT	**Denizli-Tavas-**	**0.93**	**347**	P	Pb	16 22 08.5	-0.6	
DNZT				S	Sn	16 22 21.5	-0.3	
ARG	**Arkhangelos**	**0.94**	**261**	Pg	Pb	16 22 08.9	-0.4	
ARG	**Arkhangelos**	**0.94**	**261**	P	Pb	16 22 08.7	-0.6	
ARG				S	Sn	16 22 22.2	+0.2	
ARG	**Arkhangelos**	**0.94**	**261**	P	Pb	16 22 09.1	-0.2	
ARG				S	Sn	16 22 22.7	+0.8	
KORT	**Korkueli**	**1.07**	**54**	Pn	Pb	16 22 11.9	+0.4	
APMY	**Acipayam-Deniz**	**1.10**	**1**	Pg	Pn	16 22 11.6	+0.1	
YER	**Yerkesik**	**1.10**	**314**	P	Pb	16 22 12.7	+0.6	
YER				S	Sn	16 22 28.9	+2.8	
TAVA	**DENIZLI_Tavas**	**1.13**	**345**	P	Pn	16 22 11.9	0.0	
TAVA				S	Sn	16 22 27.5	+0.7	
TAVA				*i* IAML		16 22 29.0		
	comp=N,61nm,0.6s							
MULA	**Mugla, Merkez-**	**1.17**	**319**	P	Pb	16 22 13.1	-0.1	
MULA				*i* IAML		16 22 35.0		
	comp=E,30nm,0.3s							
DATC	**Datca-Mugla**	**1.36**	**287**	Pn	Pn	16 22 14.9	-0.1	
DAT	**Datca**	**1.42**	**285**	Pn	Pn	16 22 15.7	-0.2	
DAT	**Datca**	**1.42**	**285**	P	Pb	16 22 17.4	0.0	
DAT				S	Sb	16 22 35.4	+0.4	
YAZI	**Mula-Dat§a-**	**1.50**	**282**	P	Pn	16 22 17.1	+0.1	
YAZI				S	Sn	16 22 35.5	-0.3	
YAZI				*i* IAML		16 22 40.0		
	comp=N,34nm,0.6s							
YAZI				*i* IAML		16 22 44.0		
	comp=E,20nm,0.5s							
BCK	**Bucak**	**1.51**	**44**	Pn	Pn	16 22 17.9	+0.7	
ESEN	**Aydn-Nazilli**	**1.61**	**333**	P	Pn	16 22 18.3	-0.1	
ESEN				S	Sb	16 22 39.8	-0.7	
ESEN				*i* IAML		16 22 42.0		
	comp=E,41nm,0.8s							
BDRM	**Kayabasi**	**1.63**	**296**	P	Pn	16 22 19.6	+0.8	
BDRM				S	Sb	16 22 40.1	-1.0	
BDRM				*i* IAML		16 22 45.0		
	comp=E,25nm,0.3s							
AYDN	**Tasoluk**	**1.71**	**319**	P	Pb	16 22 21.4	-0.9	
AYDN				S	Sb	16 22 43.9	+0.6	
AYDN				*i* IAML		16 22 49.0		
	comp=N,21nm,0.4s							
ISP	**Isparta**	**1.76**	**34**	P	Pb	16 22 22.3	-0.9	
ISP				S	Sb	16 22 45.0	0.0	
NAZL	**Nazilli-Aydin**	**1.77**	**334**	Pn	Pn	16 22 20.8	0.0	
KARP	**Karpathos**	**1.90**	**245**	P	Pn	16 22 23.0	+0.5	
KARP				S	Sn	16 22 46.1	+0.4	
KARP	**Karpathos**	**1.90**	**245**	P	Pn	16 22 22.9	+0.3	
KARP				S	Sn	16 22 45.0	-0.8	
AYDB	**Zeytinkoy-Aydi**	**1.92**	**325**	Pn	Pn	16 22 22.9	0.0	
SMG	**Samos**	**2.37**	**305**	P	Pn	16 22 29.8	+1.0	
SMG				S	Sn	16 22 58.5	+1.4	
SMG	**Samos**	**2.37**	**305**	P	Pn	16 22 30.1	+1.3	
ZKR	**Zakros**	**2.79**	**244**	P	Pn	16 22 34.7	0.0	
ALFC	**Alefka**	**2.96**	**113**	P	Pn	16 22 36.1	-1.0	
NATA	**Nata**	**3.12**	**120**	P	Pn	16 22 38.2	-1.0	
NPS	**Neapolis**	**3.18**	**251**	P	Pn	16 22 39.5	-0.6	
IDI	**Anoyia**	**3.73**	**254**	P	Pn	16 22 47.5	-0.1	
DION	**Dionisos Attik**	**4.59**	**293**	P	Pn	16 22 59.9	+0.4	

*IDC **10** 16:28:35.5±1.3,38°.64N×139°.62E, h0km, mb3.5/3, mbtmp3.6/8, ML3.1/5, Error ellipse: s-maj=30.3km s-min=18.5km az=114.0*
*JMA **10** 16:28:37.5±0.1,38°.7N±0°.2×139°.5E±0°.3, h14km±1km, MV3.8/38, W OFF YAMAGATA PREF*
JMA Felt II J1 at W OFF YAMAGATA PREF .
*NIED **10** 16:28:37.5, 38°.66N×139°.47E, h14km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.89; Mθθ0.22; Mϕϕ-2.10; Mrθ-1.23; Mθϕ-0.53; Mϕr-1.37; Fault plane solution: M₀2.77000×10¹⁴ NP1: ϕs352.00000°, δ29.00000°, λ54.00000°. NP2: ϕs212.00000°, δ67.00000°, λ108.00000°.*

ISC 10 16:28:37.7±0.9, 38°.66N±0°.03×139°.49E±0°.03, h13km±6km, n17, σ0°69/27, mb3.7/3, 12D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JYA	**Atsumi**	**0.19**	**112**	⇓*i*P		**Pg**	**16 28 42.1**	**+0.2**
JYA				⇓*e*S		**Sg**	**16 28 45.5**	**+0.7**
JAW	**Awa shima**	**0.28**	**223**	⇓*i*P		**Pg**	**16 28 43.1**	**-0.4**
JAW				⇓S		**Sg**	**16 28 47.4**	**0.0**
JYYZ	**Yamagatayuza**	**0.49**	**44**	⇓*i*P		**Pg**	**16 28 48.7**	**0.0**
JYYZ				⇓S		**Sb**	**16 28 55.9**	**+0.7**
JTB	**Tobi-shima**	**0.54**	**5**	*i*P		**Pg**	**16 28 47.7**	**-0.4**
JTB				*e*S		**Sg**	**16 28 55.0**	**-0.3**
JYS	**Shirataka**	**0.63**	**134**	⇓*i*P		**Pg**	**16 28 49.5**	**-0.4**
JYS				⇓*e*S		**Sg**	**16 28 58.4**	**+0.1**
JYK	**Kaneyama**	**0.72**	**69**	⇓*i*P		**Pg**	**16 28 51.4**	**-0.3**
JYK				⇓S		**Sg**	**16 29 01.3**	**+0.1**
JNS	**Sasagawa**	**0.85**	**189**	*i*P		**Pg**	**16 28 53.5**	**-0.7**
JNS				*e*S		**Sg**	**16 29 04.7**	**-0.6**
JOU	**Okura**	**0.96**	**107**	⇓*i*P		**Pb**	**16 28 55.7**	**-0.5**
JOU				⇓S		**Sb**	**16 29 08.8**	**0.0**
MJAR	**Matsushiro Arr**	**2.35**	**206**	Pn		**Pn**	**16 29 15.8**	**-0.2**
	0.9nm,0.3s,baz=27,slow=15,SNR=48							
MJAR					Sn	**Sn**	**16 29 45.0**	**+0.3**
	3.0nm,0.3s,baz=17,slow=34,SNR=11							
	5.2nm,0.3s							
ASAJ	**Asahikawa**	**5.93**	**22**	Pn		**Pn**	**16 30 04.8**	**-0.2**
	0.3nm,0.3s,baz=259,slow=14,SNR=5.1							
	7.4nm,1.1s							
ASAJ	**Asahikawa**	**5.93**	**22**	P		**Pn**	**16 30 04.9**	**-0.2**
USRK	**Ussuriysk Ar.**	**7.90**	**317**	Pn		**Pn**	**16 30 30.6**	**-1.5**
	0.3nm,0.3s,baz=129,slow=14,SNR=6.0							
	0.8nm,0.3s							
JNU	**Nakatsue**	**8.91**	**234**	Pn		**Pn**	**16 30 46.4**	**+0.3**
	0.2nm,0.3s,baz=152,slow=13,SNR=1.3							
	6.8nm,1.0s							
KSRS	**Korea Array**	**9.21**	**266**	Pn		**Pn**	**16 30 51.6**	**+1.6**
	1.3nm,0.3s,baz=73,slow=14,SNR=23							
KSRS					Sn	**Sn**	**16 32 34.1**	**+0.6**
	1.5nm,0.3s,baz=76,slow=24,SNR=15							
	2.4nm,0.3s							
KURBB	**Kurchatov Arra**	**43.81**	**306**	P		**P**	**16 36 44.4**	**+1.4**
	0.4nm,0.7s,baz=84,slow=8.5,SNR=2.7							
	0.4nm,0.7s							
ILAR	**Eielson Array**	**48.95**	**33**	P		**P**	**16 37 22.4**	**-0.7**
	0.5nm,0.7s,baz=273,slow=6.2,SNR=7.6							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**62.22**	**186**	P		**P**	**16 38 58.8**	**-0.2**
	0.4nm,0.7s,baz=21,slow=3.2,SNR=4.4							
	0.4nm,0.7s							

*CATAC **10** 17:55:45.9±0.8, 13°.N±4°.×9°.0W±°, h25km±3km, M3.1/6, MLv3.1/6, Error ellipse: s-maj=8.8km s-min=4.0km az=22.3, confirmed*
*SNET **10** 17:55:47.7±1.5, 13°.16N×89°.55W, h47km, ML2.7*

ISC 10 17:55:46.8±2.8, 13°.1N±0°.1×89°.54W±0°.09, h43km, n26, σ0°58/30, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LALI	**Alcalda de L**	**0.49**	**26**	S		**Sn**	**17 56 05.4**	**+0.3**
JAYA	**Jayaque - finc**	**0.61**	**8**	*e*P		**Pn**	**17 55 58.9**	**-0.4**
JAYA				*e*S		**Sn**	**17 56 08.2**	**0.0**
JAYA	**Jayaque - finc**	**0.61**	**8**	P		**Pn**	**17 55 58.8**	**-0.4**
JAYA	**Jayaque - finc**	**0.61**	**8**	S		**Sn**	**17 56 07.2**	**-0.9**
PANCS	**Alcalda de**	**0.66**	**32**	P		**Pn**	**17 55 59.7**	**-0.2**
LOMA	**Loma Larga**	**0.69**	**31**	S		**Sn**	**17 56 10.0**	**-0.1**
PMON	**Piamonte**	**0.69**	**18**	S		**Sn**	**17 56 10.2**	**+0.1**
UTEC	**Universidad Te**	**0.73**	**27**	S		**Sn**	**17 56 10.4**	**-0.5**
IGN	**Direccin Gen**	**0.75**	**29**	S		**Sn**	**17 56 11.3**	**-0.1**
CEDA	**San Andres**	**0.76**	**11**	S		**Sn**	**17 56 12.8**	**+1.1**
CEVE	**Cerro Verde**	**0.78**	**354**	*e*P		**Pn**	**17 56 01.2**	**-0.5**
CEVE	**Cerro Verde**	**0.78**	**354**	P		**Pn**	**17 56 01.1**	**-0.5**
CEVE	**Cerro Verde**	**0.78**	**354**	S		**Sn**	**17 56 12.9**	**+0.6**
NUBE	**Las Nubes**	**0.88**	**345**	*e*P		**Pn**	**17 56 02.6**	**-0.4**
NUBE				*e*S		**Sn**	**17 56 14.7**	**0.0**
NUBE	**Las Nubes**	**0.88**	**345**	P		**Pn**	**17 56 02.5**	**-0.4**
PAVA	**Las Pavas**	**0.88**	**42**	*e*P		**Pn**	**17 56 02.7**	**-0.3**
PAVA				*e*S		**Sn**	**17 56 14.9**	**+0.3**
TECO	**Alcaldia de Te**	**0.89**	**57**	S		**Sn**	**17 56 13.9**	**-0.7**
UNIC	**Universidad Ca**	**0.93**	**360**	P		**Pn**	**17 56 03.9**	**+0.4**
UESV	**Universidad de**	**0.94**	**51**	S		**Sn**	**17 56 15.0**	**-0.9**
SLOZ	**Alcaldia de Sa**	**1.00**	**346**	S		**Sn**	**17 56 18.4**	**+1.0**
LLGN	**La Laguna**	**1.25**	**28**	S		**Sn**	**17 56 24.8**	**+1.1**
PACA	**Pacayal**	**1.26**	**70**	*e*P		**Pn**	**17 56 08.6**	**+0.6**
PACA				*e*S		**Sn**	**17 56 24.4**	**+0.6**
MTO3	**Montecristo**	**1.35**	**7**	P		**Pn**	**17 56 09.3**	**-0.2**
MTO3	**Montecristo**	**1.35**	**7**	S		**Sn**	**17 56 26.8**	**+0.4**
CNRM	**Centro Naciona**	**1.40**	**72**	S		**Sn**	**17 56 27.5**	**+0.3**
LCND	**La Caada**	**1.63**	**81**	P		**Pn**	**17 56 12.7**	**-0.3**

*SDD **10** 18:29:44.5±3.3, 18°.10N×65°.22W, h12km±237km, MD3.8, ML4.1, MW3.7*
*IDC **10** 18:29:45.5±1.0, 18°.02N×65°.31W, h0km, mb3.8/8, mbtmp3.9/10, ML3.2/2, MS2.9/1, Error ellipse: s-maj=30.2km s-min=9.9km az=1.0*
*NEIC **10** 18:29:46.2±1.7, 17°.86N±0°.05×65°.37W±0°.04, h10km±1km, ML4.0/25, Md3.9/17(RSPR), Error ellipse: s-maj=10.1km s-min=3.7km az=32.0*
*RSPR **10** 18:29:51.7, 18°.05N×65°.51W, h10km±31km, MD3.9/17*

ISC 10 18:29:45.7±1.3, 17°.92N±0°.06×65°.33W±0°.03, h6km±8km, n93, σ1°43/108, mb4.0/7, 12C-17D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HUMP	**Col San Antoni**	**0.54**	**294**			**Pb**	**18 29 57.3**	**-0.5**
HUMP					Sg	**Sb**	**18 30 04.4**	**-1.4**
HUMP					IAML		18 30 06.5	
	comp=N,13μm,0.2s							
HUMP	**Col San Antoni**	**0.54**	**294**	⇓*i*P		**Pb**	**18 29 57.5**	**-0.3**
HUMP	**Col San Antoni**	**0.54**	**294**	*e*S		**Sb**	**18 30 04.7**	**-1.1**
SJG	**San Juan**	**0.81**	**284**			**Pg**	**18 30 01.3**	**0.0**
SJG						**Sg**	**18 30 12.2**	**+0.5**
SJG					IAML		18 30 13.4	
	comp=N,7μm,0.2s							
SJG	**San Juan**	**0.81**	**284**	Pg		**Pg**	**18 30 01.5**	**+0.3**
	comp=N,643nm,0.3s,baz=98,slow=16,SNR=636							
SJG				Lg		Lg	18 30 11.7	
	comp=N,232nm,0.3s,baz=81,slow=23,SNR=6.5							
SJG	**San Juan**	**0.81**	**284**	⇑*e*Pg		**Pg**	**18 30 01.7**	**+0.4**
SJG				⇑*e*Sg		**Sg**	**18 30 12.2**	**+0.5**
SJG	**San Juan**	**0.81**	**284**	⇓*i*P		**Pb**	**18 30 01.8**	**-0.4**
SJG	**San Juan**	**0.81**	**284**	*e*P		**Pg**	**18 30 01.5**	**+0.3**
SJG				*e*S		**Sg**	**18 30 12.3**	**+0.5**
GCPR	**Guaynabo City**	**0.82**	**298**			**Pg**	**18 30 01.8**	**+0.4**
GCPR	**Guaynabo City**	**0.82**	**298**			**Sg**	**18 30 12.2**	**+0.1**
GCPR	**Guaynabo City**	**0.82**	**298**	⇓*i*P		**Pb**	**18 30 02.0**	**-0.4**
GCPR	**Guaynabo City**	**0.82**	**298**	*e*S		**Sg**	**18 30 12.2**	**+0.1**
ECPR	**Experimental S**	**1.06**	**292**	⇑*i*P		**Pg**	**18 30 06.2**	**+0.1**
ECPR	**Experimental S**	**1.06**	**292**	*e*S		**Sg**	**18 30 19.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.22**	**276**			**Pb**	**18 30 07.8**	**-1.5**
OBIP					Sn	**Sb**	**18 30 25.5**	**+0.1**
OBIP					IAML		18 30 28.4	
	comp=N,3μm,0.8s							
OBIP					IAML		18 30 29.1	
	comp=E,2μm,0.5s							
OBIP	**Obispado Ponce**	**1.22**	**276**	⇓*i*P		**Pb**	**18 30 09.2**	**-0.2**
OBIP	**Obispado Ponce**	**1.22**	**276**	*e*S		**Sg**	**18 30 24.5**	**-0.6**
EMPR	**Esperanza - Ma**	**1.27**	**296**			**Pg**	**18 30 10.3**	**+0.2**
EMPR						**Sb**	**18 30 26.4**	**-0.3**
EMPR	**Esperanza - Ma**	**1.27**	**296**	⇓*i*P		**Pg**	**18 30 10.3**	**+0.2**
EMPR	**Esperanza - Ma**	**1.27**	**296**	*e*S		**Sb**	**18 30 26.4**	**-0.3**
UUPR	**Utuado, UPR, P**	**1.36**	**284**			**Pn**	**18 30 11.0**	**-0.4**
UUPR						**Sb**	**18 30 28.6**	**-0.9**
UUPR	**Utuado, UPR, P**	**1.36**	**284**	⇑*i*P		**Pn**	**18 30 11.0**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.36**	**284**	*e*S		**Sb**	**18 30 28.6**	**-0.9**
AOPR	**Arecibo Observ**	**1.42**	**288**			**Pn**	**18 30 11.6**	**-0.7**
AOPR	**Arecibo Observ**	**1.42**	**288**	⇑*e*Pg		**Pn**	**18 30 11.7**	**-0.5**
AOPR				⇑*e*Sg		**Sb**	**18 30 30.1**	**-1.0**
AOPR					IAML		18 30 35.1	
	comp=N,6μm,0.3s							
AOPR	**Arecibo Observ**	**1.42**	**288**	⇓*i*P		**Pn**	**18 30 11.8**	**-0.4**
AOPR	**Arecibo Observ**	**1.42**	**288**	*e*P		**Pn**	**18 30 11.9**	**-0.4**
AOPR				*e*S		**Sb**	**18 30 30.1**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.48**	**272**			**Pb**	**18 30 13.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.48**	**272**	⇑*e*P		**Pb**	**18 30 13.6**	**-0.1**
MLPR	**Magueyes Islan**	**1.64**	**272**	⇑*e*Pg		**Pn**	**18 30 14.9**	**-0.2**
MLPR				⇓*e*Sg		**Sb**	**18 30 36.7**	**-0.6**
MLPR					IAML		18 30 43.7	
	comp=N,309nm,0.6s							
MLPR	**Magueyes Islan**	**1.64**	**272**	⇑*i*P		**Pn**	**18 30 15.5**	**+0.3**
MLPR	**Magueyes Islan**	**1.64**	**272**	*e*S		**Sb**	**18 30 37.1**	**-0.1**
LSP	**Las Mesas**	**1.69**	**279**			**Pb**	**18 30 17.0**	**-0.3**
LSP						**Sg**	**18 30 41.3**	**+1.1**
LSP	**Las Mesas**	**1.69**	**279**	⇑*e*P		**Pb**	**18 30 17.0**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.70**	**273**			**Pn**	**18 30 15.8**	**-0.2**
CRPR					IAML		18 30 47.4	
	comp=N,1μm,0.7s							
CRPR	**Cabo Rojo, PR**	**1.70**	**273**			**Sg**	**18 30 41.9**	**+1.5**
CRPR	**Cabo Rojo, PR**	**1.70**	**273**	⇓*e*Pg		**Pn**	**18 30 15.5**	**-0.5**
CRPR				⇑*e*Sg		**Sg**	**18 30 43.2**	**+2.9**
CRPR					IAML		18 30 47.2	
	comp=N,2μm,0.5s							
CRPR	**Cabo Rojo, PR**	**1.70**	**273**	⇓*e*P		**Pn**	**18 30 16.2**	**+0.2**
PRSN	**Puerto Rico Se**	**1.75**	**280**			**Pb**	**18 30 17.7**	**-0.7**
PRSN						**Sg**	**18 30 43.0**	**+0.8**
PRSN	**Puerto Rico Se**	**1.75**	**280**	⇓*e*Pg		**Pb**	**18 30 17.6**	**-0.7**
PRSN				⇓*e*Sg		**Sg**	**18 30 42.1**	**0.0**
PRSN					IAML		18 30 43.8	
	comp=N,6μm,0.3s							
PRSN	**Puerto Rico Se**	**1.75**	**280**	⇑*e*P		**Pb**	**18 30 17.7**	**-0.7**
AGPR	**Aguadilla, PR**	**1.78**	**288**	⇓*e*Pg		**Pn**	**18 30 17.8**	**+0.6**
AGPR				⇓*e*Sg		**Sb**	**18 30 41.4**	**-0.1**
AGPR					IAML		18 30 49.0	
	comp=N,2μm,0.5s							
AGPR	**Aguadilla, PR**	**1.78**	**288**	⇓*i*P		**Pb**	**18 30 18.2**	**-0.6**
SABA	**Saba**	**2.01**	**98**	Pn		**Pn**	**18 30 19.1**	**-1.2**
SABA					IAML		18 31 06.3	
	comp=E,1μm,0.5s							
SABA					IAML		18 31 10.7	
	comp=N,851nm,0.3s							
SABA	**Saba**	**2.01**	**98**			**Sb**	**18 30 47.6**	**-0.4**
IDE	**Isla Desecheo**	**2.09**	**283**			**Pb**	**18 30 23.5**	**-0.6**
IDE						**Sb**	**18 30 49.5**	**-1.0**
IDE	**Isla Desecheo**	**2.09**	**283**	⇓*i*P		**Pb**	**18 30 23.5**	**-0.6**
SEUS	**St. Eustatius**	**2.28**	**100**	Pn		**Pn**	**18 30 22.4**	**-1.6**
SEUS					IAML		18 31 01.1	
	comp=N,560nm,0.1s							
SKI	**Saint Kitts**	**2.54**	**103**	*e*P		**Pn**	**18 30 29.2**	**+1.6**
MBFL	**Flemmings, Mon**	**3.19**	**111**	*e*P		**Pn**	**18 30 38.0**	**+1.4**
HIDR	**Higuey Centro**	**3.29**	**282**	⇓*e*P		**Pn**	**18 30 40.9**	**+3.0**
ANWB	**Willy Bob**	**3.38**	**94**			**Pn**	**18 30 40.0**	**+0.9**
ANWB	**Willy Bob**	**3.38**	**94**	*e*P		**Pn**	**18 30 40.2**	**+1.0**
ANWB				*e*S		**Sn**	**18 31 19.2**	**-0.5**
MIDR	**Miches**	**3.69**	**287**	*e*P		**Pn**	**18 30 47.3**	**-4.1**
DHSZ	**Broadband at M**	**3.78**	**115**	*e*P		**Pn**	**18 30 46.1**	**+1.4**
ATGZ	**Broadband at L**	**3.89**	**117**	*e*P		**Pn**	**18 30 47.4**	**+1.2**
SMDR	**Samana, DR**	**3.91**	**291**	⇑*e*P		**Pn**	**18 30 49.0**	**+2.6**
ABD	**La Joyeuse, An**	**3.94**	**111**	Pn		**Pn**	**18 30 46.6**	**-0.3**
ABD					IAML		18 31 24.6	
	comp=E,183nm,2.8s							
ABD					IAML		18 31 44.0	
	comp=N,190nm,3.0s							
ABD	**La Joyeuse, An**	**3.94**	**111**	⇓*i*P		**Pn**	**18 30 48.2**	**+1.3**
ABD	**La Joyeuse, An**	**3.94**	**111**	*e*S		**Sn**	**18 31 32.8**	**-0.7**
DR12	**Loma Pena Alta**	**3.94**	**283**	Pn		**Pn**	**18 30 45.1**	**-1.9**
MMLZ	**Guadeloupe Bro**	**3.97**	**118**	*e*P		**Pn**	**18 30 48.8**	**+1.6**
CBE	**Ff, Capester**	**4.01**	**117**			**Pn**	**18 30 49.7**	**+1.9**
CBE	**Ff, Capester**	**4.01**	**117**			**Sn**	**18 31 33.2**	**-1.9**
CBE	**Ff, Capester**	**4.01**	**117**	⇑*i*P		**Pn**	**18 30 49.7**	**+1.9**
TBG	**Guadaloupe-3**	**4.08**	**120**	*e*P		**Pn**	**18 30 49.5**	**+0.7**
MAGL	**Barre de l'Ile**	**4.34**	**116**	Pn		**Pn**	**18 30 54.2**	**+1.8**
MAGL					IAML		18 33 40.1	
	comp=N,219nm,2.2s							
DSDZ	**La Diserade, G**	**4.38**	**111**	*e*P		**Pn**	**18 30 54.4**	**+1.5**
DSLB	**Salisbury**	**4.49**	**123**	*e*P		**Pn**	**18 30 54.8**	**+0.5**
BANI	**BANI**	**4.81**	**276**	Pn		**Pn**	**18 30 56.2**	**-2.6**
BIM	**Bigot**	**5.31**	**129**			**Pn**	**18 31 05.6**	**-0.1**
BIM					IAML		18 32 34.8	
	comp=E,100nm,2.7s							
BIM					IAML		18 32 52.9	
	comp=N,94nm,1.9s							
BIM	**Bigot**	**5.31**	**129**	*e*P		**Pn**	**18 31 05.5**	**-0.2**
SC01	**Santiago de lo**	**5.33**	**287**			**Sn**	**18 32 11.9**	**+4.1**
MPOM	**Morne Pois Mar**	**5.51**	**128**	Pn		**Pn**	**18 31 09.2**	**+0.7**
SLBI	**Saint Lucia, B**	**5.71**	**132**	*e*P		**Pn**	**18 31 10.8**	**-0.3**
SDDR	**Presa de Saban**	**5.75**	**281**			Pn	18 31 16.7	+4.8
SDDR	**Presa de Saban**	**5.75**	**281**	⇑*e*P		Pn	18 31 16.7	+4.8
SDDR	**Presa de Saban**	**5.75**	**281**	*e*P		Pn	18 31 16.8	+4.9
SDDR	**Presa de Saban**	**5.75**	**281**	*e*S		**Sb**	**18 32 28.1**	**-7.9**
SVB	**Belmont**	**6.07**	**139**	*e*		**Pn**	**18 31 15.6**	**-0.5**
SDV	**Santo Domingo**	**10.36**	**211**	Pn		**Pn**	**18 32 17.6**	**+2.4**
	comp=N,0.9nm,0.3s,baz=28,slow=10,SNR=6.5							
SDV					Sn	**Sn**	**18 34 11.4**	**-0.4**
	comp=N,0.7nm,0.3s,baz=341,slow=20,SNR=1.4							
	comp=N,3.5nm,0.4s							
RUSC	**La Rusia**	**14.15**	**213**			**Pn**	**18 33 06.8**	**-0.6**
BOAV	**Boa Vista**	**16.13**	**162**	Pn		**Pn**	**18 33 30.2**	**-3.2**
MDP	**Montagnes des**	**17.78**	**134**	P		**P**	**18 33 55.1**	**+0.2**
	comp=N,0.2nm,0.3s,baz=293,slow=17,SNR=1.9							
	comp=N,4.7nm,0.9s							
TXAR	**Lajitas Array**	**36.76**	**295**	P		**P**	**18 36 55.4**	**+0.9**
	comp=N,0.2nm,0.5s,baz=102,slow=11,SNR=5.4							
TXAR				PcP		**PcP**	**18 39 16.4**	**-0.6**
	comp=N,0.4nm,0.6s,baz=60,slow=2.6,SNR=5.2							
	comp=N,0.2nm,0.5s							
CPUP	**Villa Florida**	**44.67**	**170**	LR		LR	19 00 36.4	
	comp=N,13nm,18.0s,baz=289,slow=41							
PDAR	**Pinedale Array**	**44.82**	**313**	P		**P**	**18 38 02.6**	**+1.6**
	comp=N,0.2nm,0.6s,baz=94,slow=6.1,SNR=2.1							
	comp=N,0.2nm,0.6s							
YKA	**Yellowknife Ar**	**55.99**	**335**	P		**P**	**18 39 25.5**	**+0.5**
	comp=N,1.6nm,0.9s,baz=125,slow=6.8,SNR=3.1							
	comp=N,1.6nm,0.9s							
ESDC	**Sonseca Array**	**56.86**	**54**	P		**P**	**18 39 32.1**	**+0.5**
	comp=N,1.8nm,1.1s,baz=265,slow=6.1,SNR=3.7							
	comp=N,1.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**64.46**	**84**	P		**P**	**18 40 23.8**	**+0.1**
	comp=N,1.0nm,1.0s,baz=270,slow=5.6,SNR=2.8							
	comp=N,1.0nm,1.0s							
ILAR	**Eielson Array**	**70.35**	**333**	P		**P**	**18 40 58.8**	**-1.4**
	comp=N,0.2nm,0.7s,baz=110,slow=4.0,SNR=5.1							
	comp=N,0.2nm,0.7s							
ARCES	**ARCESS Array B**	**73.65**	**21**	P		**P**	**18 41 20.1**	**+0.2**
	comp=N,5.8nm,1.0s,baz=265,slow=5.3,SNR=4.1							
	comp=N,5.8nm,1.0s							
FINES	**FINESS Array B**	**75.11**	**30**	P		**P**	**18 41 28.8**	**+0.3**
	comp=N,6.2nm,1.1s,baz=297,slow=4.2,SNR=5.9							
	comp=N,6.2nm,1.1s							

*IDC **10** 18:30:39.8±3.6, 3°.47S×127°.87E, h0km, mb3.7/4, mbtmp

TWD				S	Sg	19 04 53.9	+0.9
TWA	**Mucha**	**0.54**	**328**	*e*P	Pg	19 04 47.1	+0.7
TWA				S	Sb	19 04 55.9	+0.2
NHDH	**Xindian Distri**	**0.56**	**322**	*e*P	Pb	19 04 47.7	-0.4
NHDH				*e*S	Sb	19 04 55.6	-0.5
NWF	**Wu-fen Shan**	**0.56**	**349**	P	Pg	19 04 47.4	+0.7
NWF				*e*S	Sg	19 04 54.1	+0.1
WFSB	**Wu-fen Shan**	**0.56**	**349**	*e*P	Pg	19 04 47.6	+0.8
WFSB				*e*S	Sb	19 04 55.4	-0.8
SXI1	**Grass Mountain**	**0.57**	**358**⇑	*i*P	Pg	19 04 47.5	+0.5
SXI1				*e*S	Sg	19 04 55.6	+1.1
NHY	**Taipei**	**0.59**	**330**	*e*P	Pb	19 04 48.3	-0.4
NHY				*e*S	Sg	19 04 56.4	+1.1
HWA	**Hwalien**	**0.61**	**207**	*e*P	Pb	19 04 49.6	+0.6
HWA				*e*S	Sb	19 04 57.5	-0.2
TAP	**Taipei**	**0.63**	**325**	*e*P	Pb	19 04 49.5	+0.3
TAP				*e*S	Sb	19 04 58.4	+0.2
TNOU	**National Taiwa**	**0.63**	**349**	*e*P	Pg	19 04 48.9	+0.6
TNOU				*e*S	Sg	19 04 56.7	+0.1
FUSS	**Fushou**	**0.66**	**245**	*e*P	Pg	19 04 48.9	+0.1
FUSS				*e*S	Sb	19 04 59.3	-0.1
ETM	**Tongmen**	**0.67**	**214**	*e*P	Pg	19 04 49.3	+0.4
LXIB	**Xiulin Townshi**	**0.67**	**222**	P	Pg	19 04 48.9	0.0
LXIB				*e*S	Sg	19 04 58.5	+0.7
YM01	**YM01**	**0.69**	**334**	*i*P	Pb	19 04 50.4	0.0
WHF	**Hehuan Shan**	**0.69**	**237**	*i*P	Pg	19 04 48.8	-0.6
WHF				*e*S	Sb	19 04 59.4	-1.2
KSHI	**Guanxi Townshi**	**0.71**	**291**	*e*P	Pb	19 04 50.9	+0.2
KSHI				*e*S	Sb	19 05 00.6	+0.1
ZUZH	**Zhuzihu**	**0.71**	**333**	*e*P	Pb	19 04 50.9	+0.1
TWT	**Tachien**	**0.71**	**248**	*e*P	Pb	19 04 51.0	+0.2
YM08	**YM08**	**0.72**	**337**	*i*P	Pb	19 04 50.8	-0.1
NFF	**Wufeng Townshi**	**0.72**	**279**	*e*P	Pb	19 04 50.5	-0.4
NFF				S	Sg	19 04 59.2	-0.1
TWS1	**Kuangyinshan**	**0.72**	**323**	*e*P	Pb	19 04 51.4	+0.5
TDCB	**Techi**	**0.73**	**248**	*e*P	Pb	19 04 51.1	0.0
ANP	**Anpu**	**0.74**	**332**	P	Pb	19 04 51.2	-0.1
NTST	**Danshui**	**0.76**	**327**	*e*P	Pb	19 04 52.5	+1.0
NTST				*e*S	Sn	19 05 04.3	-0.5
SHUL	**Shoufeng**	**0.80**	**203**	*e*P	Pn	19 04 53.1	-0.5
SHUL				*e*S	Sn	19 05 04.7	-1.0
TWY	**Chenhua**	**0.80**	**340**	P	Pb	19 04 52.8	+0.7
LIOB	**Emei**	**0.82**	**279**	*i*P	Pb	19 04 52.6	+0.1
LIOB				*e*S	Sb	19 05 03.4	-0.3
ESL	**Shilin**	**0.83**	**211**	*e*P	Pg	19 04 51.7	-0.2
NSTT	**Nanjuang**	**0.83**	**278**	*i*P	Pb	19 04 52.6	0.0
NSTT				*e*S	Sg	19 05 04.7	+0.7
OWD	**Renai**	**0.87**	**230**	P	Pg	19 04 52.6	-0.2
OWD				S	Sg	19 05 04.6	+0.4
WUSB	**Renai**	**0.89**	**234**	*i*P	Pg	19 04 53.3	+0.1
WUSB				*e*S	Sb	19 05 06.3	+0.3
HSN	**Hsinchu**	**0.89**	**288**	*e*S	Sn	19 05 07.3	-0.7
WHP	**Taichung City**	**0.91**	**254**	*i*P	Pb	19 04 54.0	-0.1
WHP				S	Sb	19 05 06.7	+0.4
WARBT	**Fenglin Townsh**	**0.93**	**211**	P	Pg	19 04 53.6	-0.3
WARBT				*e*S	Sb	19 05 07.4	+0.4
JYNG	**Yonagunijimaku**	**0.95**	**94**	*e*P	Pg	19 04 54.7	+0.4
JYNG				*e*S	Sb	19 05 07.6	0.0
EGFH	**Guangfu**	**0.96**	**207**	*e*P	Pg	19 04 54.2	-0.1
YOJ	**Yonaguni jima**	**1.01**	**93**	*e*P	Pg	19 04 55.9	+0.4
YOJ				S	Sg	19 05 09.4	+0.8
WCS	**Beigang Elemen**	**1.02**	**243**	*e*P	Pg	19 04 55.6	+0.1
VWDT	**VWDT**	**1.03**	**222**	*e*P	Pb	19 04 56.2	0.0
SMLT	**Sun Moon Lake**	**1.12**	**235**	*e*P	Pb	19 04 57.8	+0.1
SSLB	**Suanglung**	**1.14**	**230**	*e*P	Pg	19 04 57.6	-0.2
TYC	**Yuchr**	**1.14**	**237**	*e*P	Pb	19 04 58.1	+0.2
YUJB	**Yu-li**	**1.25**	**206**	*e*P	Pn	19 05 00.1	+0.2
WHYT	**Xinyi Township**	**1.26**	**230**	*e*P	Pg	19 04 59.0	-1.2
WNT	**Mingjian**	**1.28**	**240**	*e*P	Pg	19 05 02.5	+1.9
TWF1	**Yuli**	**1.29**	**206**	*e*P	Pg	19 05 00.9	+0.1
ALS	**Alishan**	**1.42**	**225**	*e*P	Pb	19 05 03.0	0.0
CHN5	**Tsauling**	**1.45**	**231**	*e*P	Pg	19 05 04.2	+0.4
WDLH	**Douliu**	**1.50**	**237**	*e*P	Pg	19 05 06.3	+1.5
EHD	**Haiduan**	**1.51**	**205**	*e*P	Pb	19 05 04.3	0.0
ELDTW	**Lidau**	**1.56**	**212**	*e*P	Pn	19 05 04.7	+0.5
IRIF	**Iriomote-Funau**	**1.68**	**96**	*e*P	Pn	19 05 05.0	-0.7
IRIF				*e*S	Sn	19 05 26.4	-1.0
HATJ	**Hateruma jima**	**1.80**	**105**	*e*P	Pn	19 05 07.8	+0.4
HATJ				*e*S	Sn	19 05 29.9	-0.5
JKRS	**Kuro-shima**	**1.94**	**98**	*e*P	Pn	19 05 09.5	+0.1
JKRS				*e*S	Sn	19 05 33.6	-0.4
JIJ	**Ishigaki jima**	**2.05**	**94**	*e*P	Pn	19 05 11.2	+0.4
JIJ				*e*S	Sn	19 05 35.2	-1.3
JISG	**Ishigakijimahi**	**2.19**	**88**	*e*P	Pn	19 05 12.3	-0.5
JISG				*e*S	Sn	19 05 38.7	-1.5
PHUB	**P'eng-hu**	**2.36**	**245**	*e*P	Pn	19 05 16.4	+1.3
PHUB				S	Sb	19 05 47.7	-0.3

*BER **10** 19:14:21.3±3.6, 73˚.82N×9˚.34E, h10km, mb(Pn)4.1, ML3.1(NAO), Confirmed Earthquake*
*NAO **10** 19:14:21.6±0.8, 73˚.93N×9˚.63E, h15km, ML3.1*
*KOLA **10** 19:14:22.4, 73˚.53N×9˚.53E, h0km, ML2.1, Error ellipse: s-maj=91.4km s-min=25.4km az=140.0, Norwegian sea*

ISC 10 19:14:17.4±1.5, 73˚.79N±0˚.06×9˚.50E±0˚.09, h10km, n43, σ3s05/61, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEA6	**Bear Island, N**	**2.71**	**70**	Pn	**Pn**	**19 15 02.4**	**+1.6**
	baz=271,slow=18						
BEA6				Sn	**Sn**	**19 15 33.2**	**-0.3**
	baz=271,slow=37						
BRBA	**Barentsburg A**	**4.45**	**13**	Pn	**Pn**	**19 15 25.6**	**+0.8**
BRBA	**Barentsburg A**	**4.45**	**13**	*e*P	**Pn**	**19 15 25.4**	**+0.6**
BRBB	**Barentsburg B**	**4.48**	**13**	Pn	**Pn**	**19 15 25.8**	**+0.6**
BRBB	**Barentsburg B**	**4.48**	**13**	*e*P	**Pn**	**19 15 25.7**	**+0.5**
SPA0	**Spitsbergen Ar**	**4.71**	**17**	Pn	**Pn**	**19 15 30.5**	**+2.0**
	baz=191,slow=14						
SPA0	**Spitsbergen Ar**	**4.71**	**17**	Pn	**Pn**	**19 15 30.5**	**+2.0**
	baz=191,slow=14						
HOPEN	**Hopen**	**4.83**	**48**	Pn	**Pn**	**19 15 30.5**	**+0.5**
HOPEN	**Hopen**	**4.83**	**48**	*e*P	**Pn**	**19 15 30.8**	**+0.9**
TRO	**Tromso**	**5.12**	**140**	Pn	**Pn**	**19 15 37.0**	**+3.1**
TRO				Sn	**Sn**	**19 16 31.7**	**-1.3**
TRO	**Tromso**	**5.12**	**140**	Pn	**Pn**	**19 15 37.0**	**+3.1**
TRO				Sn	**Sn**	**19 16 31.7**	**-1.3**
KBS	**Kingsbay**	**5.20**	**5**	Pn	**Pn**	**19 15 35.6**	**+0.5**
KBS	**Kingsbay**	**5.20**	**5**	*e*P	**Pn**	**19 15 35.1**	**0.0**
HAMF	**Hammerfest**	**5.36**	**119**	Pn	**Pn**	**19 15 41.4**	**+4.0**
HAMF				Sn	**Sn**	**19 16 36.8**	**-2.3**
HAMF	**Hammerfest**	**5.36**	**119**	Pn	**Pn**	**19 15 41.4**	**+4.0**
HAMF				Sn	**Sn**	**19 16 36.8**	**-2.3**
JETT	**Jettan, Norway**	**5.46**	**136**	Pn	**Pn**	**19 15 42.7**	**+4.0**
JETT				Sn	**Sn**	**19 16 42.5**	**+1.0**
JETT	**Jettan, Norway**	**5.46**	**136**	Pn	**Pn**	**19 15 42.7**	**+4.0**
JETT				Sn	**Sn**	**19 16 42.5**	**+1.0**
JETT				IAML		19 16 45.7	
	comp=Z,4.1nm,0.2s						
LOF	**Lofoten**	**5.84**	**165**	*e*P	**Pn**	**19 15 44.9**	**+1.1**
LOF				IAML		19 16 47.8	
	comp=Z,9.5nm,0.4s						
KIF	**Kilpisjarvi**	**6.00**	**138**	Pn	**Pn**	**19 15 49.0**	**+2.9**
KIF				Sn	**Sn**	**19 16 53.6**	**-1.1**
KIF	**Kilpisjarvi**	**6.00**	**138**	Pn	**Pn**	**19 15 49.0**	**+2.9**
KIF				Sn	**Sn**	**19 16 53.6**	**-1.1**
STEI	**Steigen**	**6.18**	**159**	*e*P	**Pn**	**19 15 51.0**	**+2.5**
STEI				IAML		19 16 58.4	
	comp=Z,2.6nm,0.9s						
KTK1	**Kautokeino**	**6.49**	**131**	*e*P	**Pn**	**19 15 57.2**	**+4.5**
ARA0	**ARCESS Array S**	**6.59**	**122**	Pn	**Pn**	**19 15 57.4**	**+3.2**
	baz=314,slow=14						
ARA0				Sn	**Sn**	**19 17 07.9**	**-1.5**
	baz=319,slow=37						
ARA0	**ARCESS Array S**	**6.59**	**122**	Pn	**Pn**	**19 15 57.4**	**+3.2**
	baz=314,slow=14						
ARA0				Sn	**Sn**	**19 17 07.9**	**-1.5**
	baz=319,slow=37						
ARCES	**ARCESS Array B**	**6.59**	**122**	P	**Pn**	**19 15 58.5**	**+4.3**
ARCES				S	**Sn**	**19 17 08.0**	**-1.3**
FAUS	**Fauske**	**6.72**	**161**	*e*P	**Pn**	**19 15 59.2**	**+3.3**
FAUS				*e*S	**Sn**	**19 17 07.3**	**-5.0**
FAUS				IAML		19 17 11.7	
	comp=Z,2.7nm,0.5s						
KEV	**Kevo**	**6.80**	**118**	Pn	**Pn**	**19 16 01.6**	**+4.5**
KEV				Sn	**Sn**	**19 17 11.7**	**-2.7**
KEV	**Kevo**	**6.80**	**118**	*e*P	**Pn**	**19 16 01.4**	**+4.4**
KEV				Sn	**Sn**	**19 17 11.7**	**-2.7**
HEF	**Hetta**	**7.07**	**133**	*e*P	**Pn**	**19 16 04.6**	**+3.8**
SALU	**Saltoluokta**	**7.09**	**151**	*e*P	**Pn**	**19 16 03.9**	**+2.8**
VADS	**Vadso**	**7.15**	**111**	Pn	**Pn**	**19 16 06.1**	**+4.2**
VADS				Sn	**Sn**	**19 17 21.1**	**-2.0**
VADS	**Vadso**	**7.15**	**111**	P	**Pn**	**19 16 05.7**	**+3.8**
VADS				S	**Sn**	**19 17 20.7**	**-2.4**
VADS	**Vadso**	**7.15**	**111**	*e*P	**Pn**	**19 16 05.1**	**+3.2**
VADS				*e*S	**Sn**	**19 17 21.1**	**-2.0**
VAGH	**Vaagaholmen**	**7.21**	**168**	*e*P	**Pn**	**19 16 04.4**	**+1.8**
VAGH				IAML		19 17 36.4	
	comp=Z,3.5nm,1.0s						
RAUS	**Rausandaksla**	**7.54**	**166**	*e*P	**Pn**	**19 16 10.3**	**+3.1**
RAUS				*e*S	**Sn**	**19 17 27.0**	**-5.7**
RAUS				IAML		19 17 30.2	
	comp=Z,2.5nm,0.3s						
STOK	**Stokkvaagen**	**7.59**	**169**	*e*P	**Pn**	**19 16 10.7**	**+2.9**
LEIR	**Leirfjorden**	**7.81**	**169**	*e*P	**Pn**	**19 16 12.4**	**+1.5**
MOR8	**Moi Rana**	**7.84**	**165**	*e*P	**Pn**	**19 16 09.9**	**-1.4**
TERR	**Teriberka**	**9.28**	**107**	S	**Sn**	**19 18 09.8**	**-5.4**
APA0	**Apatity Array**	**9.87**	**117**	S	**Sn**	**19 18 24.4**	**-5.3**
LVZ	**Lovozero**	**10.07**	**113**	S	**Sn**	**19 18 29.0**	**-5.8**
SCO	**Scoresbysund**	**10.12**	**267**	*i*P	Pn	19 16 38.4	-4.0
KVDA	**Kovda**	**10.55**	**120**	S	**Sn**	**19 18 42.1**	**-4.3**

*IDC **10** 19:18:06.2±5.0, 5˚.61S×154˚.45E, h101km±45km, mb3.5/4, mbtmp4.1/5, MS2.7/1, Error ellipse: s-maj=33.2km s-min=25.5km az=10.0*

ISC 10 19:18:08.0±1.2, 5˚.7S±0˚.2×154˚.4E±0˚.1, h118km, n9, σ1s33/7, mb3.6/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.08**	**243**	P	**Pn**	**19 20 03.3**	**+0.7**
	58nm,0.6s,baz=49,slow=8.8,SNR=36						
PMG				S	**Sn**	**19 21 30.5**	**-1.8**
	6.6nm,0.8s,baz=41,slow=20,SNR=1.0						
PMG				LR	LR	19 23 19.5	
	comp=Z,48nm,18.3s,baz=310,slow=38						
DZM	**Mont Dzumac**	**19.99**	**146**	P	**P**	**19 22 31.4**	**-0.1**
	6.7nm,0.7s,baz=311,slow=11,SNR=17 6.7nm,0.7s						
WRA	**Warramunga Arr**	**24.11**	**232**	P	**P**	**19 23 14.0**	**+1.0**
ASAR	**Alice Springs**	**26.62**	**226**	P	**P**	**19 23 36.0**	**+0.3**
	0.8nm,0.5s,baz=48,slow=9.6,SNR=34 0.8nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**26.93**	**26**	T	T	19 51 36.1	
	baz=197,slow=77						
H11S2	**WAKE ISLAND Hy**	**26.93**	**26**	T	T	19 51 35.9	
	baz=197,slow=77						
H11S1	**WAKE ISLAND Hy**	**26.95**	**26**	T	T	19 51 37.4	
	baz=197,slow=77						
CMAR	**Chiang Mai Arr**	**59.72**	**295**	P	**P**	**19 28 01.7**	**+0.9**
	0.4nm,0.3s,baz=115,slow=7.2,SNR=4.2 0.4nm,0.3s						
ILAR	**Eielson Array**	**82.40**	**22**	P	**P**	**19 30 15.5**	**-1.2**
	0.3nm,0.7s,baz=244,slow=5.7,SNR=4.2 0.3nm,0.7s						

WEL 10 19:28:15.9±0.6, 33˚S±12˚×18˚0W±2˚9, h33km, M4.2/8, mB4.9/4, ML4.3/11, MLv4.3/8, Mw(mB)4.1/4, Error ellipse: s-maj=40.2km s-min=4.0km az=112.3, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.45**	**19**	P	Pn	19 29 16.9	-4.1
GLKZ				S	Sn	19 30 12.9	+1.2
WMGZ	**Waiomatatini S**	**4.62**	**200**	P	Pn	19 29 26.0	+2.7
WMGZ				S	Sn	19 30 17.9	+2.1
PKGZ	**Pakihiroa**	**4.76**	**203**	P	Pn	19 29 25.5	+0.2
PKGZ				S	Sn	19 30 20.7	+1.4
HAZ	**Te Kaha**	**4.76**	**206**	P	Pn	19 29 26.9	+1.6
HAZ				S	Sn	19 30 23.0	+3.7
PUZ	**Puketiti**	**4.89**	**200**	P	Pn	19 29 27.8	+0.7
PUZ				S	Sn	19 30 21.5	-1.2
RUGZ	**Raukumara Rang**	**4.99**	**205**	P	Pn	19 29 30.3	+1.8
RUGZ				S	Sn	19 30 26.9	+1.9
TWGZ	**Tauwhareparae**	**5.08**	**202**	P	Pn	19 29 32.0	+2.3
TWGZ				S	Sn	19 30 28.0	+0.9
CNGZ	**Carnagh Statio**	**5.29**	**199**	P	Pn	19 29 31.8	-0.8
MWZ	**Matawai**	**5.37**	**205**	P	Pn	19 29 35.2	+1.5
MWZ				S	Sn	19 30 34.2	-0.2
URZ	**Urewera**	**5.46**	**208**	P	Pn	19 29 35.9	+1.1
URZ				S	Sn	19 30 37.5	+1.0
MUGZ	**Murupara**	**5.78**	**209**	P	Pn	19 29 40.3	+0.9
MUGZ				S	Sn	19 30 46.2	+1.7
SNGZ	**Shannon Statio**	**5.83**	**204**	P	Pn	19 29 41.3	+1.2
SNGZ				S	Sn	19 30 46.6	+0.8
MHGZ	**Mahia Peninsul**	**6.00**	**199**	P	Pn	19 29 42.7	+0.3
MHGZ				S	Sn	19 30 46.8	-3.1
KRHZ	**Kereru**	**6.95**	**207**	P	Pn	19 29 55.6	+0.2
KRHZ				S	Sn	19 31 09.6	-3.6
PNHZ	**Pukenui**	**7.25**	**206**	P	Pn	19 29 58.8	-0.7
PNHZ				S	Sn	19 31 16.3	-4.3

WEL 10 19:28:46.0±1.2, 34˚S±18˚×177˚9W±2˚8, h33km, M4.1/3, ML4.2/10, MLv4.1/3, Error ellipse: s-maj=42.0km s-min=8.7km az=122.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.41**	**209**	P	Pn	19 29 49.1	-1.5
WMGZ				S	Sn	19 30 45.8	+5.0
PKGZ	**Pakihiroa**	**4.59**	**212**	P	Pn	19 29 52.9	-0.1
PKGZ				S	Sn	19 30 48.5	+3.2
HAZ	**Te Kaha**	**4.64**	**215**	P	Pn	19 29 55.3	+1.6
HAZ				S	Sn	19 30 50.5	+4.2
RUGZ	**Raukumara Rang**	**4.85**	**214**	P	Pn	19 29 57.2	+0.4
RUGZ				S	Sn	19 30 53.3	+1.4
TWGZ	**Tauwhareparae**	**4.89**	**210**	P	Pn	19 30 00.0	+2.8
TWGZ				S	Sn	19 30 52.3	-0.5
CNGZ	**Carnagh Statio**	**5.07**	**207**	P	Pn	19 29 59.0	-0.6
CNGZ				S	Sn	19 30 57.1	+0.2
MWZ	**Matawai**	**5.22**	**213**	P	Pn	19 30 01.5	-0.2
MWZ				S	Sn	19 31 02.3	+1.5
URZ	**Urewera**	**5.36**	**216**	P	Pn	19 30 03.4	-0.2
URZ				S	Sn	19 31 04.8	+0.7
SNGZ	**Shannon Statio**	**5.67**	**211**	P	Pn	19 30 08.4	+0.5
SNGZ				S	Sn	19 31 12.8	+0.8
MUGZ	**Murupara**	**5.70**	**217**	P	Pn	19 30 08.3	+0.1
MUGZ				S	Sn	19 31 11.5	-1.0
MHGZ	**Mahia Peninsul**	**5.77**	**206**	P	Pn	19 30 10.1	+0.9
MHGZ				S	Sn	19 31 13.9	-0.4
KRHZ	**Kereru**	**6.81**	**213**	S	Sn	19 31 37.6	-2.3
PNHZ	**Pukenui**	**7.11**	**212**	P	Pn	19 30 24.5	-3.1
PNHZ				S	Sn	19 31 44.7	-2.6

DJA 10 19:36:56.4±0.4, 10˚S±3˚×127˚4E±˚, h10km, M4.0/10, mb4.2/4, MLv3.9/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.17**	**311**	P	Pg	19 37 01.0	+0.8
SOEI				S	Sg	19 37 03.6	+0.7
BATI	**Baumata**	**0.80**	**245**	P	Pb	19 37 12.2	-0.2
BATI				S	Sb	19 37 24.3	+1.0
MMRI	**Maumere**	**2.46**	**300**	P	Pn	19 37 37.7	+1.1
EDFI	**Ende, Flores**	**2.90**	**292**	P	Pn	19 37 43.5	+0.8
BASI	**Baing, Sumba**	**3.78**	**264**	P	Pn	19 37 54.7	-0.1
WSI	**Waingapu**	**4.05**	**272**	P	Pn	19 37 58.5	0.0
WBSI	**Waikabubak, Su**	**4.94**	**272**	P	Pn	19 38 10.4	-0.4
BKSI	**Bulukumba**	**6.20**	**317**	P	Pn	19 38 28.0	0.0
	0.1nm16nm,0.7s						
TWSI	**Taliwang, Sumb**	**7.50**	**278**	P	Pn	19 38 46.2	+0.2
	22nm,1.1s						

*IDC **10** 20:09:38.4±6.0, 1˚.09N×126˚.42E, h0km, mb3.5/2, mbtmp3.5/2, MS2.9/2, Error ellipse: s-maj=744.6km s-min=24.6km az=66.0*
*DJA **10** 20:09:47.7±0.5, 1˚N±3˚×127˚6E±˚, h90km±13km, M3.5/12, MLv3.5/12*

ISC 10 20:09:48.5±1.2, 0˚.93N±0˚.07×125˚.99E±0˚.08, h100km, n11, σ2s41/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**96**	P	**Pn**	**20 10 12.2**	**-1.2**
KMSI	**Cibinong**	**2.04**	**260**	P	**Pn**	**20 10 20.6**	**-1.0**
SGSI	**Sangihe**	**2.78**	**350**	P	**Pn**	**20 10 28.3**	**-3.1**
SANI	**Sanana**	**2.96**	**180**	P	**Pn**	**20 10 30.7**	**-3.1**
LUWI	**Luwuk**	**3.77**	**239**	P	**Pn**	**20 10 42.8**	**-1.8**
NLAI	**Namlea**	**4.29**	**165**	P	**Pn**	**20 10 50.6**	**-1.1**
DAV	**Davao City (W)**	**6.11**	**356**	LR	LR	20 13 21.7	
	comp=Z,38nm,20.8s,baz=314,slow=37						
WRA	**Warramunga Arr**	**22.30**	**159**	P	**P**	**20 14 37.9**	**0.0**
ASAR	**Alice Springs**	**25.63**	**163**	P	**P**	**20 15 09.9**	**+0.9**
	0.3nm,0.5s,baz=344,slow=11,SNR=7.6 0.3nm,0.5s						
JOW	**Kunigami**	**25.85**	**5**	LR	LR	20 24 54.1	
	comp=Z,96nm,19.7s,baz=307,slow=36						
MKAR	**Makanchi Array**	**59.44**	**327**	P	**P**	**20 19 43.8**	**+2.8**
	0.3nm,0.3s,baz=120,slow=7.7,SNR=9.5 0.3nm,0.3s						

*NNC **10** 20:10:47.4±0.7, 44˚.81N×80˚.94E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=5.8km s-min=4.6km az=111.0*
*SOME **10** 20:10:47.7, 44˚.85N×80˚.97E, h25km*

ISC 10 20:10:45.8±1.5, 44˚.91N±0˚.07×81˚.15E±0˚.05, h17km±16km, n33, σ0s93/47, 3C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**1.32**	**287**	P	**Pg**	**20 11 10.2**	**-1.2**
	9.1nm,0.1s						
KAPS				S	**Sb**	**20 11 26.2**	**-0.9**
	60nm,0.1s						
KNOS	**Konyrlen**	**1.51**	**249**	P	**Pb**	**20 11 13.2**	**-0.4**
	12nm,0.1s						
KNOS				S	**Sn**	**20 11 31.2**	**-0.5**
	17nm,0.2s						
KTMS	**Ketmen**	**1.57**	**202**	P	**Pn**	**20 11 12.7**	**-0.4**
	3.1nm,0.1s						
KTMS				S	**Sn**	**20 11 30.6**	**-2.6**
	14nm,0.2s						
KTMS	**Ketmen**	**1.57**	**202**	*e*P	**Pn**	**20 11 12.7**	**-0.4**
	3.1nm,0.1s						
KTMS				*e*S	**Sn**	**20 11 30.6**	**-2.6**
	14nm,0.2s						
TDK	**Taldyqorghan**	**1.95**	**274**	P	**Pb**	**20 11 21.2**	**+0.2**
	41nm,0.2s						
TDK				S	**Sb**	**20 11 45.7**	**+0.6**
	91nm,0.3s						
TDK	**Taldyqorghan**	**1.95**	**274**	*e*P	**Pb**	**20 11 21.2**	**+0.2**
	41nm,0.2s						
TDK				*e*S	**Sb**	**20 11 45.6**	**+0.6**
	91nm,0.3s						
MK31	**Makanchi Array**	**2.05**	**22**	⇓Pn	**Pg**	**20 11 24.0**	**-1.1**
	0.4nm,0.2s,baz=206,slow=13,SNR=96						
MK31				⇑Sn	**Sg**	**20 11 51.7**	**+0.1**
	2.6nm,0.2s,baz=205,slow=24,SNR=14						
BLB	**Baldybastay**	**2.08**	**248**	Pg	**Pb**	**20 11 23.6**	**+0.4**
	46nm,0.2s						
BLB				Lg	Lg	20 11 49.6	
	70nm,0.2s						
SHLS	**Shalkode**	**2.13**	**215**	P	**Pn**	**20 11 21.8**	**+0.9**
	12nm,0.1s						
SHLS				S	**Sn**	**20 11 46.7**	**-0.4**
	80nm,0.3s						
SHLS	**Shalkode**	**2.13**	**215**	*e*P	**Pn**	**20 11 21.8**	**+0.9**
	12nm,0.1s						
SHLS				*e*S	**Sn**	**20 11 46.7**	**-0.4**
	80nm,0.3s						
KPKS	**Kokpek**	**2.29**	**232**	Pg	**Pb**	**20 11 26.7**	**0.0**
	0.2nm,0.1s						
KPKS				Lg	Lg	20 11 55.1	
	42nm,0.2s						
ARXS	**Arharly**	**2.48**	**255**	Pg	**Pb**	**20 11 30.6**	**+0.6**
	9.4nm,0.2s						
ARXS				Lg	Lg	20 12 01.3	
	44nm,0.2s						
ARXS	**Arharly**	**2.48**	**255**	*e*P	**Pb**	**20 11 30.6**	**+0.6**
ARXS				*e*S	**Sb**	**20 12 01.3**	**+1.1**
KURS	**Kuram**	**2.57**	**238**	Pg	**Pb**	**20 11 31.9**	**+0.4**
	20nm,1.5s						
KURS				Lg	Lg	20 12 04.1	
	10nm,0.4s						
SATY	**Saty**	**2.71**	**228**	Pg	**Pb**	**20 11 34.3**	**+0.3**
	3.3nm,0.1s						
SATY				Lg	Lg	20 12 07.8	
	28nm,0.1s						
CHKK	**Chushkaly**	**3.17**	**252**	Pg	**Pb**	**20 11 41.9**	**+0.2**
	13nm,0.4s						
CHKK				Lg	Lg	20 12 20.5	
	22nm,0.2s						
CHKK	**Chushkaly**	**3.17**	**252**	*e*P	**Pb**	**20 11 41.9**	**+0.2**
	13nm,0.4s						
CHKK				*e*S	**Sb**	**20 12 20.5**	**+0.6**
	22nm,0.2s						
KOTS	**Kotyrbulak**	**3.36**	**242**	Pg	**Pb**	**20 11 46.0**	**+0.9**
	3.6nm,0.4s						
KOTS				Lg	Lg	20 12 27.6	
	18nm,0.2s						
KOTS	**Kotyrbulak**	**3.36**	**242**	*e*P	**Pb**	**20 11 46.0**	**+0.9**

BLGl	**Bet Lehem HaGe**	**0.34**	**247**	P		Pg	20 15 40.5	+0.3	
BLGl	**Bet Lehem HaGe**	**0.34**	**247**	S		Sb	20 15 46.7	-1.3	
GEM	**Giv'at Ha'Em**	**0.35**	**14**	P		Pb	20 15 41.5	-1.0	
GEM	**Giv'at Ha'Em**	**0.35**	**14**	S		Sb	20 15 47.5	-1.0	
NATI	**Neve Ativ**	**0.42**	**20**	P		Pg	20 15 42.5	+0.8	
NATI	**Neve Ativ**	**0.42**	**20**	S		Sb	20 15 48.8	-1.5	
MMLI	**Mount Malkishu**	**0.44**	**196**	P		Pg	20 15 42.5	+0.3	
MMLI	**Mount Malkishu**	**0.44**	**196**	S		Sb	20 15 50.1	-0.9	
HMDT	**Nahal Hemdat**	**0.61**	**183**	P		Pb	20 15 46.3	-0.6	
HMDT	**Nahal Hemdat**	**0.61**	**183**	S		Sb	20 15 55.2	-0.6	

NEIC ***10*** *20:20:49.4±1.2, 19°.545N±0°.010×155°.89W±0°.01, h10km±1km, Error ellipse: s-maj=2.5km s-min=1.9km az=258.0*

HVO 10 20:20:49.0±1.3, 19°.52N±0°.01×155°.94W±0°.02, h11km±2km, ML2.3/23, ML2.5/32(NEIC), Error ellipse: s-maj=2.8km s-min=1.5km az=58.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KKH	**Kailua Kona**	**0.16**	**331**			Pg	20 20 53.0	+0.4
KKH						Sg	20 20 56.0	+0.8
HUH	**Hualalai**	**0.19**	**29**			Pg	20 20 53.0	-0.4
HUH					IAML		20 21 00.5	
	comp=N,1μm,0.2s							
ALEP	**Alea Permanent**	**0.28**	**85**			Pg	20 20 55.0	+0.2
MWH	**Mokuaweoweo**	**0.32**	**95**			Pg	20 20 55.5	-0.2
MWH					IAML		20 21 06.6	
	comp=E,807nm,0.3s							
KHU	**Kahuku**	**0.41**	**131**			Pg	20 20 57.0	-0.1
KHU						Sg	20 21 02.9	+0.4
HMH	**Humu'ula Sheep**	**0.44**	**78**			Pg	20 20 57.3	-0.3
HMH					IAML		20 21 09.1	
	comp=N,342nm,0.2s							
HMH					IAML		20 21 10.1	
	comp=E,444nm,0.6s							
HMH	**Humu'ula Sheep**	**0.44**	**78**			Sg	20 21 03.5	0.0
POHA	**Pohakuloa**	**0.45**	**58**			Pg	20 20 57.5	-0.5
POHA					IAML		20 21 10.8	
	comp=E,352nm,0.5s							
POHA	**Pohakuloa**	**0.45**	**58**			Sg	20 21 03.5	-0.4
AIN	**Ainahou**	**0.47**	**107**			Pg	20 20 57.7	-0.6
AIN					IAML		20 21 10.2	
	comp=N,486nm,0.4s							
AIN	**Ainahou**	**0.47**	**107**			Sg	20 21 04.2	-0.4
MLH	**Mauna Loa**	**0.52**	**92**			Pg	20 20 58.4	-0.8
MLH					IAML		20 21 06.2	
	comp=E,429nm,0.3s							
MLH					IAML		20 21 11.3	
	comp=N,410nm,0.5s							
MLH	**Mauna Loa**	**0.52**	**92**			Sg	20 21 05.4	-0.7
HPAH	**Hawaii Prepara**	**0.56**	**24**			Pg	20 20 58.9	-1.1
HPAH						Sg	20 21 06.1	-1.2
HTC	**Hot Caves**	**0.58**	**118**			Pg	20 20 59.4	-0.9
WRMHI	**West Rim**	**0.61**	**100**			Pg	20 20 59.4	-1.5
WRMHI						Sg	20 21 07.5	-1.4
UWE	**Uwekahuna**	**0.61**	**99**			Pg	20 20 59.6	-1.3
UWE					IAML		20 21 11.5	
	comp=N,321nm,1.1s							
UWE	**Uwekahuna**	**0.61**	**99**			Sg	20 21 07.7	-1.4
SDHHI	**Sand Hill**	**0.62**	**102**			Pg	20 20 59.4	-1.6
SDHHI						Sg	20 21 08.0	-1.2
OBL	**Observatory Le**	**0.62**	**99**			Pg	20 20 59.6	-1.5
OBL						Sg	20 21 07.9	-1.5
RSD	**Rainshed**	**0.62**	**95**			Pg	20 20 59.9	-1.2
RSD					IAML		20 21 11.3	
	comp=E,364nm,3.1s							
RSD					IAML		20 21 18.4	
	comp=N,250nm,2.7s							
RSD	**Rainshed**	**0.62**	**95**			Sg	20 21 07.8	-1.5
UWB	**Uwekahuna Bluf**	**0.63**	**98**			Pg	20 20 59.6	-1.6
UWB						Sg	20 21 08.0	-1.5
HLP	**Hilina Pali**	**0.63**	**110**			Pg	20 20 59.7	-1.6
HLP						Sg	20 21 08.2	-1.4
RIM	**Rim**	**0.64**	**101**			Pg	20 20 59.7	-1.7
RIM						Sg	20 21 07.9	-1.9
SBLHI	**Steaming Bluff**	**0.64**	**98**			Pg	20 21 00.0	-1.4
SBLHI						Sg	20 21 07.9	-1.9
KKO	**Keanakako'i**	**0.64**	**100**			Pg	20 20 59.9	-1.6
KKO						Sg	20 21 08.1	-1.9
HATHI	**Halema'uma'u T**	**0.64**	**98**			Pg	20 20 59.8	-1.7
HATHI						Sg	20 21 08.2	-1.8
HATHI	**Halema'uma'u T**	**0.64**	**98**		IAML		20 21 17.0	
	comp=E,229nm,1.8s							
HATHI					IAML		20 21 22.6	
	comp=N,264nm,2.1s							
PUH	**Pauahi**	**0.69**	**102**			Pg	20 21 00.6	-1.9
PUH	**Pauahi**	**0.69**	**102**		IAML		20 21 12.2	
	comp=E,267nm,4.4s							

BJI ***10*** *20:35:01.0, 22°.23S×173°.67W, h10km, mB5.7/11, mb5.4/32, Ms5.2/4, Ms7 4.8/7*

NEIC ***10*** *20:35:04.3±2.3, 21°.9S±0°.1×174°.5W±0°.1, h10km±1km, mb4.9/35, Error ellipse: s-maj=24.8km s-min=14.9km az=151.0*

IDC ***10*** *20:35:04.5±0.5, 22°.22S×174°.75W, h0km, mb4.5/18, mbtmp4.5/20, ML3.9/2, MS4.6/45, Error ellipse: s-maj=19.0km s-min=14.7km az=102.0*

MOS ***10*** *20:35:04.7±1.5, 22°.22S×174°.90W, h10km, mb5.3/18, Error ellipse: s-maj=13.1km s-min=9.7km az=116.9*

GCMT ***10*** *20:35:08.3±0.2, 22°.22S±0°.02×174°.09W±0°.02, h18km, MW5.0/93, Moment Tensor Solution. s60,c76; s93,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.41±.14; $M_{\theta\theta}$-0.82±.09; $M_{\phi\phi}$-2.59±.09; $M_{r\theta}$-0.05±.24; $M_{r\phi}$0.59±.06; $M_{\theta\phi}$3.30±.22; Best double couple: M_{ϕ}4.51100×10^{16} NP1:χ_{ϕ}158.00000°, δ22.00000°, λ75.00000°. NP2: ϕ_s354.00000°, δ69.00000°, λ96.00000°. Principal axes: T 4.8770, Plg66.0000°, Azm275.0000°; N -0.7310, Plg6.0000°, Azm172.0000°; P -4.1450, Plg23.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 20:35:04.0±0.3, 22°.12S±0°.06×174°.41W±0°.05, h10km, n287, σ1§99/249, mb5.0/71, MS4.6/48, 48C-36D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.18**	**55**	P		**Pn**	**20 36 19.2**	**-2.3**
	comp=Z,514nm,0.9s							
NIUE				S		Sn	20 37 10.8	-11
NIUE	**Niue**	**5.18**	**55**			**Pn**	**20 36 19.2**	**-2.3**
NIUE					Sn	**Sn**	**20 37 14.2**	**-7.2**
RAO	**Raoul Island**	**7.77**	**203**	Pn		**Pn**	**20 36 56.5**	**-0.7**
	comp=Z,94nm,0.3s,baz=60,slow=20,SNR=1.9							
RAO					Sn	Sn	20 38 18.8	-6.5
	comp=Z,92nm,0.3s,baz=73,slow=19,SNR=6.2							
MSVF	**Nonsavu**	**8.33**	**300**			**Pn**	**20 37 03.9**	**-1.0**
MSVF	**Nonsavu**	**8.33**	**300**	P		**Pn**	**20 37 03.9**	**-1.0**
AFI	**Afiamalu**	**8.54**	**17**			**Pn**	**20 37 06.3**	**-1.6**
AFI	**Afiamalu**	**8.54**	**17**	P		**Pn**	**20 37 07.8**	**-0.1**
RAR	**Rarotonga**	**13.64**	**89**			Pn	20 38 12.6	-4.9
RAR	**Rarotonga**	**13.64**	**89**	Pn		Pn	20 38 13.4	-4.1
	comp=Z,12nm,0.3s,baz=268,slow=6.3,SNR=42							
RAR					Sn	Sn	20 40 33.5	-16
	comp=Z,1.7nm,0.3s,baz=92,slow=22,SNR=1.2							
RAR					LR	LR	20 44 02.4	
	comp=Z,2μm,18.5s,baz=262,slow=38							
URZ	**Urewera**	**17.66**	**203**	P		**Pn**	**20 39 08.1**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=173,slow=6.2,SNR=3.0							
URZ					S	Sn	20 42 05.9	-21
	comp=Z,9.6nm,0.6s,baz=173,slow=9.0,SNR=1.5							
URZ					LR	LR	20 44 45.5	
	comp=Z,1μm,20.2s,baz=1.0,slow=33							
	comp=Z,31nm,1.1s							
DZM	**Mont Dzumac**	**17.75**	**267**	P		**Pn**	**20 39 10.5**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=92,slow=17,SNR=11							
	comp=Z,12nm,0.9s							
SANVU	**Saraoutou**	**18.62**	**288**			**P**	**20 39 16.5**	**-5.3**
SANVU					IAmb	IAmb	20 39 25.4	
	comp=Z,114nm,1.0s							
BKZ	**Black Stump Fm**	**18.69**	**203**	P		**P**	**20 39 19.8**	**-2.6**
TBI	**Tubuai**	**23.04**	**98**	*e*P		**P**	**20 40 05.1**	**-4.4**
	comp=Z,1μm,37.8s							
TBI				*e*S		S	20 44 10.1	-10
	comp=Z,6μm,26.5s							
TBI				*e*LR		LR	20 45 32.3	
	comp=Z,3μm,21.8s							
TBI				*e*LR		LR	20 45 33.4	
	comp=Z,1μm,24.0s							
PPT2	**Papeete2**	**23.77**	**84**	*e*PKIKP		P	20 40 09.2	-7.8
	comp=Z,99nm,24.2s							
PPT2				*e*S		**S**	**20 44 23.7**	**-9.0**
	comp=Z,359nm,24.2s							
PPT2				*e*LR		LR	20 45 48.0	
	comp=Z,983nm,22.5s							
PPT2				*e*LR		LR	20 45 54.0	
	comp=Z,1μm,21.2s							
HNR	**Honiara**	**27.66**	**293**	LR		LR	20 52 40.7	
	comp=Z,645nm,18.0s,baz=153,slow=38							
ARMA	**Armidale**	**31.46**	**248**	P		**P**	**20 41 24.9**	**-1.1**
ARMA					IAmb	IAmb	20 41 27.0	
	comp=Z,14nm,0.9s							
EIDS	**Eidsvold**	**31.70**	**257**	P		**P**	**20 41 26.2**	**-1.8**
	comp=Z,15nm,0.9s							
EIDS	**Eidsvold**	**31.70**	**257**	P		**P**	**20 41 26.5**	**-1.6**
EIDS					IAmb	IAmb	20 41 27.3	
	comp=Z,10nm,0.7s							
TAOE	**Nuku Hiva Isla**	**35.45**	**74**	*e*S		**S**	**20 47 36.7**	**+0.5**
	comp=Z,212nm,24.9s							
TAOE				*e*LR		LR	20 51 08.4	
	comp=Z,725nm,21.1s							
RKT	**Rikitea**	**36.34**	**99**	*e*LR		LR	20 51 30.2	
	comp=Z,2μm,24.8s							
CMSA	**Cobar Meteorol**	**36.65**	**247**	P		**P**	**20 42 08.9**	**-2.0**
	comp=Z,17nm,0.8s							
CTA	**Charters Tower**	**36.69**	**266**	LR		LR	20 57 14.9	
	comp=Z,22nm,18.1s,baz=62,slow=37							
MTSU	**Mount Surprise**	**38.87**	**268**	P		**P**	**20 42 28.7**	**-1.2**
	comp=Z,9.4nm,0.8s							
PMG	**Port Moresby**	**38.97**	**283**	*c* i P		**P**	**20 42 29.1**	**-1.5**
PMG					pmax	pmax		
	comp=Z,14nm,0.8s							
STKA	**Stephens Creek**	**40.16**	**246**	P		**P**	**20 42 38.7**	**-1.7**
STKA	**Stephens Creek**	**40.16**	**246**	P		**P**	**20 42 39.5**	**-0.9**
STKA					IAmb	IAmb	20 42 42.3	
	comp=Z,43nm,1.1s							
STKA	**Stephens Creek**	**40.16**	**246**	P		**P**	**20 42 39.1**	**-1.3**
	comp=Z,4.1nm,0.8s,baz=85,slow=11,SNR=6.1							
STKA					LR	LR	20 59 10.2	
	comp=Z,1μm,18.3s,baz=77,slow=36							
	comp=Z,4.1nm,0.8s							
STKA	**Stephens Creek**	**40.16**	**246**	P		**P**	**20 42 39.5**	**-0.9**
STKA					pmax	pmax		
	comp=Z,43nm,1.1s							
COEN	**Coen**	**41.03**	**274**	P		**P**	**20 42 45.3**	**-2.5**
COEN					IAmb	IAmb	20 42 47.3	
	comp=Z,24nm,1.2s							
QIS	**Mount Isa**	**42.74**	**263**	P		**P**	**20 43 01.3**	**-0.5**
	comp=Z,8.2nm,2.1s							
BBOO	**Buckleboo**	**44.87**	**245**	P		**P**	**20 43 18.1**	**-0.7**
BBOO					IAmb	IAmb	20 43 24.1	
	comp=Z,16nm,1.1s							
AS31	**Alice Springs**	**47.43**	**258**			**P**	**20 43 37.2**	**-1.9**
ASAR	**Alice Springs**	**47.43**	**258**	P		**P**	**20 43 37.4**	**-1.7**
	comp=Z,19nm,0.8s,baz=90,slow=8.4,SNR=146							
ASAR					PcP	**PcP**	**20 45 10.7**	**+1.1**
	comp=Z,4.6nm,1.1s,baz=102,slow=3.9,SNR=4.1							
ASAR					LR	LR	21 04 10.7	
	comp=Z,1μm,18.0s,baz=107,slow=37							
	comp=Z,19nm,0.8s							
WRAB	**Tennant Creek**	**47.70**	**263**			**P**	**20 43 38.8**	**-2.4**
WRAB					IAmb	IAmb	20 43 39.6	
	comp=Z,10nm,0.8s							
WRAB	**Tennant Creek**	**47.70**	**263**	P		**P**	**20 43 38.8**	**-2.4**
WRAB					pmax	pmax		
	comp=Z,11nm,0.9s							
WRA	**Warramunga Arr**	**47.71**	**263**	P		**P**	**20 43 39.2**	**-2.0**
KDU	**Kakadu**	**51.33**	**271**	P		**P**	**20 44 06.8**	**-2.1**
	comp=Z,7.6nm,1.3s							
FORT	**Forrest**	**51.75**	**248**	P		**P**	**20 44 10.1**	**-1.8**
FORT					IAmb	IAmb	20 44 13.9	
	comp=Z,13nm,0.8s							
WRKA	**Warakurna**	**52.26**	**255**	P		**P**	**20 44 13.6**	**-2.3**
	comp=Z,12nm,0.7s							
MTN	**Manton Dam**	**52.53**	**271**	P		**P**	**20 44 17.2**	**-0.6**
KNRA	**Kununurra**	**53.90**	**266**	P		**P**	**20 44 26.4**	**-1.5**
	comp=Z,21nm,1.2s							
KNRA	**Kununurra**	**53.90**	**266**			**P**	**20 44 26.4**	**-1.5**
KNRA					IAmb	IAmb	20 44 29.1	
	comp=Z,17nm,0.9s							
FITZ	**Fitzroy Crossi**	**56.14**	**263**	P		**P**	**20 44 42.9**	**-1.2**
	comp=Z,3.5nm,1.2s							
FITZ	**Fitzroy Crossi**	**56.14**	**263**			**P**	**20 44 43.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**56.14**	**263**	LR		LR	21 09 07.2	
	comp=Z,930nm,18.4s,baz=88,slow=37							
SBA	**Scott Base**	**56.51**	**185**	P		**P**	**20 44 49.5**	**+3.6**
SBA					IAmb	IAmb	20 44 54.0	
	comp=Z,16nm,1.3s							
SBA	**Scott Base**	**56.51**	**185**	P		**P**	**20 44 49.5**	**+3.6**
SBA					pmax	pmax		
	comp=Z,16nm,1.3s							
VNDA	**Vanda**	**56.63**	**186**	P		**P**	**20 44 48.1**	**+1.4**
VNDA	**Vanda**	**56.63**	**186**	P		**P**	**20 44 49.6**	**+2.9**
	comp=Z,1.7nm,0.8s,baz=22,slow=6.8,SNR=7.1							
VNDA					LR	LR	21 04 37.1	
	comp=Z,285nm,20.6s,baz=17,slow=31							
	comp=Z,1.7nm,0.8s							
SWI	**Sorong**	**56.89**	**284**	P		**P**	**20 44 48.5**	**-1.0**
	comp=Z,48nm,0.9s							
RPN	**Rapa Nui**	**58.80**	**109**	LR		LR	21 05 24.0	
	comp=Z,675nm,18.1s,baz=278,slow=31							
BATI	**Baumata**	**60.30**	**271**	LR		LR	21 12 55.2	
	comp=Z,857nm,18.0s,baz=152,slow=38							
BATI	**Baumata**	**60.30**	**271**	P		**P**	**20 45 12.5**	**-0.9**
	comp=Z,31nm,0.7s							
KLBR	**Kellerberrin**	**60.42**	**245**	P		**P**	**20 45 13.3**	**-0.6**
	comp=Z,34nm,0.9s							
PSAB3	**Pilbara Seismi**	**60.55**	**257**	P		P	20 45 08.6	-6.4
NWAO	**Narrogin (SRO)**	**60.65**	**244**	LR		LR	21 10 23.2	
	comp=Z,417nm,19.2s,baz=7.5,slow=35							
MBWA	**Marble Bar**	**60.77**	**257**	P		**P**	**20 45 15.1**	**-1.4**
	comp=Z,19nm,0.9s							
SANI	**Sanana**	**61.17**	**280**	P		**P**	**20 45 16.5**	**-2.8**
	comp=Z,401nmcomp=Z,16nm,1.2s							
MORW	**Morawa**	**62.32**	**248**	P		**P**	**20 45 26.1**	**-0.8**
	comp=Z,25nm,1.0s							
MORW	**Morawa**	**62.32**	**248**	P		**P**	**20 45 26.8**	**0.0**
EDFI	**Ende, Flores**	**62.62**	**271**	P		**P**	**20 45 26.6**	**-2.6**
	comp=Z,22nm,0.8s							
WSI	**Waingapu**	**63.60**	**270**	P		**P**	**20 45 34.4**	**-1.2**
LUWI	**Luwuk**	**64.52**	**280**	P		**P**	**20 45 39.9**	**-1.7**
	comp=Z,1μmcomp=Z,19nm,1.1s							
DAV	**Davao City (W)**	**65.53**	**289**	LR		LR	21 13 24.0	
	comp=Z,309nm,18.0s,baz=155,slow=35							
PLAI	**Plampang**	**66.23**	**270**	P		**P**	**20 45 50.7**	**-2.0**
	comp=Z,38nm,1.0s							
TOLI2	**Tolitoli**	**67.21**	**281**	P		**P**	**20 45 57.0**	**-1.9**
TOLI2					IAmb	IAmb	20 46 00.3	
	comp=Z,9.5nm,0.8s							
QSPA	**South Pole Qui**	**67.96**	**180**	P		**P**	**20 46 05.5**	**+2.5**
QSPA					IAmb	IAmb	20 46 12.3	
	comp=Z,19nm,1.2s							
QSPA	**South Pole Qui**	**67.96**	**180**	P		**P**	**20 46 05.0**	**+2.0**
	comp=Z,6.3nm,0.9s,baz=67,slow=2.5,SNR=10							
QSPA					LR	LR	21 11 33.1	
	comp=Z,641nm,20.7s,baz=42,slow=32							
	comp=Z,6.3nm,0.9s							
JHJ	**Hachijo jima 2**	**70.19**	**320**	LR		LR	21 17 30.9	
	comp=Z,174nm,18.2s,baz=102,slow=36							
TGY	**Tagaytay City**	**72.87**	**293**	LR		LR	21 16 05.7	
	comp=Z,154nm,20.4s,baz=140,slow=34							
MJAR	**Matsushiro Arr**	**73.52**	**322**	P		**P**	**20 46 37.2**	**+0.2**
MJAR	**Matsushiro Arr**	**73.52**	**322**	P		**P**	**20 46 37.7**	**+0.7**
	comp=Z,4.2nm,0.9s,baz=156,slow=5.2,SNR=11							
	comp=Z,4.2nm,0.9s							
MAJO	**Matsushiro**	**73.52**	**322**	P		**P**	**20 46 36.6**	**-0.4**
MAJO					IAmb	IAmb	20 46 45.7	
	comp=Z,12nm,1.1s							
MAJO	**Matsushiro**	**73.52**	**322**	*e*P		**P**	**20 46 37.9**	**+0.8**
MAJO					pmax	pmax		
	comp=Z,15nm,1.2s							
SHEM	**Shemya Is, Ala**	**75.20**	**353**	LR		LR	21 15 37.8	
	comp=Z,368nm,19.6s,baz=114,slow=32							
ASAJ	**Asahikawa**	**76.78**	**330**	P		**P**	**20 46 59.2**	**+3.6**
	comp=Z,12nm,0.8s,baz=201,slow=3.9,SNR=7.2							
ASAJ					LR	LR	21 17 16.4	
	comp=Z,466nm,20.0s,baz=160,slow=33							
	comp=Z,12nm,0.8s							
LPIG	**La Paz**	**77.40**	**57**	LR		LR	21 14 47.7	
	comp=Z,692nm,19.2s,baz=229,slow=31							
TPUB	**Ta-pu**	**77.67**	**301**	P		**P**	**20 47 00.5**	**-0.6**
PFO	**Pinyon Flats O**	**78.21**	**46**	LR		LR	21 20 27.4	
	comp=Z,286nm,18.2s,baz=231,slow=35							
PET	**Petropavlovsk**	**78.41**	**344**	*e*P		P	20 47 10.1	+5.6
PET				*e*S		**S**	**20 57 05.0**	**+5.0**
PET					smax	smax		
	comp=N,92nm,0.6s							
PMSA	**Palmer Station**	**78.46**	**156**	LR		LR	21 14 10.2	
	comp=N,229nm,19.4s,baz=307,slow=30							
PEA0B	**Petropavlovsk-**	**78.73**	**343**	⇑*e*P		**P**	**20 47 08.8**	**+2.5**
PETK	**Petropavlovsk-**	**78.73**	**343**	P		**P**	**20 47 08.3**	**+1.9**
	comp=N,7.4nm,0.8s,baz=134,slow=6.4,SNR=5.9							
PETK					LR	LR	21 17 50.2	
	comp=N,297nm,19.6s,baz=146,slow=33							
	comp=N,7.4nm,0.8s							
YSS	**Yuzhno-Sakhali**	**78.87**	**332**	*e*P		**P**	**20 47 10.1**	**+2.9**
YSS				*e*S		**S**	**20 57 04.2**	**-1.1**
YSS					pmax	pmax		
	comp=Z,20nm,1.0s							
YSS					smax	smax		
	comp=N,200nm,6.2s							
YSS					smax	smax		
	comp=E,300nm,7.3s							
IRM	**Iron Mountain**	**79.41**	**46**			**P**	**20 47 11.4**	**+0.8**
IRM					IAmb	IAmb	20 47 18.5	
	comp=Z,12nm,1.4s							
YBH	**Yreka Blue Hor**	**79.52**	**37**	LR		LR	21 15 50.6	
	comp=Z,36nm,19.6s,baz=246,slow=31							
NVAR	**Mina Array Bea**	**79.96**	**41**	P		**P**	**20 47 17.6**	**+3.9**
	comp=Z,2.6nm,0.9s,baz=226,slow=9.0,SNR=9.7							
NVAR					LR	LR	21 16 07.3	
	comp=Z,400nm,19.4s,baz=257,slow=31							
	comp=Z,2.6nm,0.9s							
KSRS	**Korea Array**	**80.33**	**317**	P		**P**	**20 47 17.5**	**+2.1**
	comp=Z,3.1nm,0.8s,baz=137,slow=6.3,SNR=7.0							
	comp=Z,3.1nm,0.8s							
MDSI	**Maura Dua**	**80.38**	**269**	P		**P**	**20 47 14.3**	**-1.9**
	comp=Z,20nm,0.8s							
MAW	**Mawson**	**81.16**	**199**	P		**P**	**20 47 20.9**	**+1.5**
	comp=Z,5.0nm,0.7s,baz=130,slow=8.5,SNR=19							
MAW					LR	LR	21 21 41.6	
	comp=Z,581nm,19.3s,baz=120,slow=35							
	comp=Z,5.0nm,0.7s							
VLA	**Vladivostok**	**81.55**	**323**	⇓*e*P		**P**	**20 47 24.2**	**+2.4**
VLA					pmax	pmax		
	comp=Z,74nm,1.3s							
KDAK	**Kodiak Island**	**81.66**	**12**	LR		LR	21 17 37.2	
	comp=Z,216nm,20.3s,baz=192,slow=31							
PSTR	**Posyet**	**81.85**	**322**	⇓*e*P		**P**	**20 47 25.5**	**+2.1**
TYV	**Tymovskoe**	**81.92**	**334**	*e*P		**P**	**20 47 21.7**	**-1.8**
TYV					pmax	pmax		
	comp=Z,19nm,1.4s							
TYV					pmax	pmax		
	comp=Z,300nm,5.3s							
USRK	**Ussuriysk Ar.**	**82.20**	**324**	P		**P**	**20 47 28.8**	**+3.6**
	comp=Z,11nm,0.9s,baz=78,slow=1.6,SNR=8.3							
	comp=Z,11nm,0.9s							
H03S2	**Juan Fernandez**	**82.31**	**123**	T		T	22 19 27.5	
	baz=247,slow=74,SNR=18							
H03S1	**Juan Fernandez**	**82.33**	**123**	T		T	22 19 28.6	
	baz=247,slow=74,SNR=25							
H03S3	**Juan Fernandez**	**82.33**	**123**	T		T	22 19 27.3	
	baz=247,slow=74,SNR=19							
H03N2	**Juan Fernandez**	**82.45**	**123**	T		T	22 19 30.8	
	baz=237,slow=73							
H03N3	**Juan Fernandez**	**82.45**	**123**	T		T	22 19 30.8	
	baz=237,slow=73							
H03N1	**Juan Fernandez**	**82.47**	**123**	T		T	22 19 30.8	
	baz=237,slow=73							
MASI	**Maura Aman, Be**	**82.67**	**270**	P		**P**	**20 47 27.9**	**-0.5**
	comp=Z,78nm,1.4s							
NJ2	**Nanjing**	**83.50**	**308**	*e*P		**P**	**20 47 32.9**	**+0.7**
NJ2					pmax	pmax		
	comp=Z,8.0nm,0.8s							
MDJ	**Mudanjiang**	**83.78**	**323**	P		**P**	**20 47 36.5**	**+3.1**
MDJ					pmax	pmax		
	comp=Z,40nm,0.9s							
BBB	**Bella Bella**	**84.29**	**27**	LR		LR	21 20 59.3	
	comp=Z,256nm,18.3s,baz=220,slow=33							
D08A	**Wollman Farm,**	**85.07**	**34**	P		**P**	**20 47 39.3**	**-0.6**
TXAR	**Lajitas Array**	**85.15**	**56**	P		**P**	**20 47 44.7**	**+3.9**
	comp=Z,2.9nm,1.1s,baz=212,slow=4.4,SNR=9.6							
TXAR					LR	LR	21 19 13.6	
	comp=Z,395nm,18.9s,baz=236,slow=31							
	comp=Z,2.9nm,1.1s							
CN2	**Changchun**	**85.64**	**321**	P		**P**	**20 47 44.4**	**+1.6**
CN2					sS	sS	20 58 25.3	+7.6
CN2					pmax	pmax		
	comp=Z,20nm,1.0s							
CN2					pmax	pmax		
	comp=Z,220nm,5.5s							
BNX	**BinXian**	**85.69**	**323**	⇑P		**P**	**20 47 45.0**	**+2.0**
BNX					pmax	pmax		
	comp=Z,28nm,0.9s							
PLCA	**Paso Flores**	**85.72**	**132**	P		**P**	**20 47 44.6**	**+1.0**
PLCA	**Paso Flores**	**85.72**	**132**	P		**P**	**20 47 46.5**	**+2.9**
	comp=Z,0.9nm,0.6s,baz=37,slow=3.3,SNR=3.1							
PLCA					LR	LR	21 19 37.5	
	comp=Z,267nm,18.7s,baz=247,slow=31							
	comp=Z,0.9nm,0.6s							
ANMO	**Albuquerque**	**85.84**	**50**	LR		LR	21 20 36.4	
	comp=Z,757nm,18.9s,baz=338,slow=32							
SYO	**

BJI	**Beijing**	**89.41**	**314**	P	**P**	**20 48 03.3 +2.3**	
BJI				pP	**pwP**	**20 48 07.7 -1.9**	
BJI				SKS	**SKSac**	**20 58 31.7 +0.4**	
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,110nm,5.2s						
F19K	**Shaleruckik Mo**	**89.56**	**7**	IAmb	IAmb	20 48 11.8	
	comp=Z,7.0nm,0.9s						
APG	**El Apazote**	**90.10**	**74**	LR	LR	21 21 43.2	
	comp=Z,12nm,20.2s,baz=81,slow=31						
ZEA	**Zeya**	**90.69**	**330**	*e*P	P	20 48 17.2 +11	
ZEA				*e*		21 00 16.2	
BILL	**Bilibino**	**91.02**	**353**	⇓*e*P	**P**	**20 48 09.3 +1.4**	
BILL				pmax	pmax		
	comp=Z,23nm,2.2s						
XAN	**Xi'an**	**91.78**	**306**	P	**P**	**20 48 14.6 +2.3**	
XAN				SKS	**SKSac**	**20 58 46.7 +1.3**	
XAN				S	**ScS**	**20 59 20.7 +4.6**	
XAN				pmax	pmax		
	comp=Z,55nm,0.8s						
XAN				pmax	pmax		
	comp=Z,260nm,4.5s						
HILR	**Hailar Array B**	**92.12**	**324**	LR	LR	21 24 28.2	
	comp=Z,121nm,21.9s,baz=225,slow=32						
HHC	**Hu-ho-hao-te**	**92.89**	**313**	*e*P	**P**	**20 48 18.0 +0.7**	
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMI	**Kunming**	**93.07**	**296**	P	**P**	**20 48 21.6 +2.9**	
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
KMI				LR	LR		
	comp=Z,300nm,17.8s						
JTS	**Las Juntas de**	**93.31**	**80**	LR	LR	21 22 02.1	
	comp=Z,139nm,18.1s,baz=278,slow=30						
CMAR	**Chiang Mai Arr**	**93.81**	**288**	P	**P**	**20 48 23.9 +1.9**	
	comp=Z,9.0nm,0.8s,baz=131,slow=3.0,SNR=74						
CMAR				LR	LR	21 29 42.6	
	comp=Z,95nm,19.2s,baz=120,slow=35						
	comp=Z,9.0nm,0.8s						
CHTO	**Chiang Mai**	**93.94**	**289**	P	**P**	**20 48 24.2 +1.7**	
CHTO	**Chiang Mai**	**93.94**	**289**	P	**P**	**20 48 24.2 +1.7**	
CHTO				pmax	pmax		
	comp=Z,15nm,0.7s						
PZH	**PanZhiHua**	**94.42**	**297**	P	**P**	**20 48 25.2 +0.4**	
YAK	**Yakutsk**	**94.89**	**337**	LR	LR	21 27 56.1	
	comp=Z,156nm,18.7s,baz=120,slow=33						
YAK	**Yakutsk**	**94.89**	**337**	⇓*e*P	**P**	**20 48 27.0 +1.2**	
YAK				pmax	pmax		
	comp=Z,42nm,3.1s						
YKA	**Yellowknife Ar**	**96.61**	**24**	LR	LR	21 28 46.1	
	comp=Z,148nm,18.4s,baz=270,slow=33						
LPAZ	**La Paz**	**98.35**	**111**	LR	LR	21 27 06.1	
	comp=Z,306nm,18.0s,baz=258,slow=32						
ULN	**Ulaanbaatar**	**98.79**	**318**	⇑*e*P	Pdif	20 48 45.7 +1.6	
ULN				pmax	pmax		
	comp=Z,28nm,4.0s						
SONM	**Songino Array**	**99.18**	**318**	P	**Pdif**	**20 48 44.0 -1.8**	
SONM	**Songino Array**	**99.18**	**318**	P	**Pdif**	**20 48 48.6 +2.8**	
	comp=Z,0.5nm,0.7s,baz=137,slow=7.9,SNR=4.0						
SONM				LR	LR	21 29 14.5	
	comp=Z,96nm,20.1s,baz=106,slow=33						
	comp=Z,0.5nm,0.7s						
ULM	**Lac du Bonnet**	**99.71**	**40**	LR	LR	21 31 13.0	
	comp=Z,529nm,18.1s,baz=194,slow=34						
WMQ	**Urumqi**	**110.52**	**310**	*e*PKP	**PKiKP**	**20 53 36.2 -0.6**	
WMQ				LR	LR		
	comp=Z,140nm,19.1s						
DGZ	**Jazzator, Alta**	**111.73**	**316**	⇑*i*PKIKP	**PKiKP**	**20 53 39.5 +0.5**	
MK31	**Makanchi Array**	**114.75**	**313**	⇑*i*PKIKP	PKPdf	20 53 43.9 -0.8	
MKAR	**Makanchi Array**	**114.75**	**313**	PKP	**PKiKP**	**20 53 45.3 +0.5**	
	comp=Z,0.9nm,0.9s,baz=48,slow=3.9,SNR=4.6						
KURK	**Kurchatov**	**117.46**	**317**	⇓*i*PKIKP	**PKiKP**	**20 53 50.8 +1.0**	
KURBB	**Kurchatov Arra**	**117.51**	**317**	PKP	**PKPdf**	**20 53 49.8 -0.1**	
	comp=Z,1.2nm,0.2s,baz=71,slow=2.1,SNR=6.4						
AAK	**Ala-Archa**	**119.93**	**307**	⇑*i*PKIKP	**PKPdf**	**20 53 54.9 -0.1**	
BVAR	**Borovoye Array**	**122.47**	**320**	PKP	**PKiKP**	**20 54 00.3 +0.7**	
	comp=Z,1.1nm,0.7s,baz=163,slow=1.0,SNR=7.4						
BORK	**Borovoye**	**122.51**	**320**	⇑*i*PKIKP	**PKiKP**	**20 53 59.7 +0.1**	
BORK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
SPITS	**Spitsbergen Ar**	**123.65**	**357**	PKP	**PKiKP**	**20 54 02.1 +0.8**	
	comp=Z,9.5nm,0.9s,baz=104,slow=16,SNR=1.8						
ARCES	**ARCESS Array B**	**131.08**	**351**	PKP	**PKiKP**	**20 54 16.7 +0.5**	
	comp=Z,2.7nm,0.8s,baz=11,slow=2.5,SNR=7.9						
KIRV	**Kirov**	**132.02**	**331**	⇑*i*PKIKP	**PKiKP**	**20 54 19.9 +1.5**	
KLMR	**Klimovskoe**	**134.68**	**337**	*e*PKIKP	**PKPdf**	**20 54 21.3 -1.0**	
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
OBN	**Obninsk**	**139.75**	**333**	*e*PKIKP	**PKiKP**	**20 54 33.8 -0.4**	
OBN				*e*		20 57 27.7	
OBN				*e*PPP	PPP	21 00 31.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VSU	**Vasula**	**140.63**	**343**	⇑*e*PKIKP	**PKPdf**	**20 54 31.1 -2.2**	
NOA	**NORSAR Array B**	**140.91**	**356**	PKhKP	PKPpre	20 54 29.3	
	comp=Z,1.1nm,0.9s,baz=6.3,slow=2.6,SNR=3.6						
NOA				PKP	pPKPdf	20 54 35.1 -0.2	
	comp=Z,0.7nm,0.9s,baz=3.0,slow=1.6,SNR=1.7						
HFS	**Hagfors**	**141.59**	**353**	PKhKP	PKPpre	20 54 28.5	
	comp=Z,2.0nm,0.7s,baz=14,slow=1.8,SNR=5.1						
NCK	**Nalchik**	**142.05**	**313**	⇓*e*PKIKP	**PKPdf**	**20 54 33.7 -2.7**	
KIV	**Kislovodsk**	**142.48**	**314**	*i* PKIKP	**PKPdf**	**20 54 38.8 +1.5**	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHA1	**Shidzhatmaz**	**142.58**	**314**	⇓*e*PKIKP	**PKPdf**	**20 54 34.6 -3.1**	
ERBR	**Yeremizino-Bor**	**143.13**	**318**	*i* PKIKP	**PKiKP**	**20 54 41.4 -0.1**	
LABN	**Labinsk**	**143.47**	**316**	*i* PKIKP	**PKPdf**	**20 54 39.3 +0.4**	
LABN				pmax	pmax		
	comp=Z,11nm,0.6s						
ANN	**Anapa**	**145.46**	**319**	*i* PKIKP	**PKPdf**	**20 54 43.2 +0.9**	
ANN				*e*		20 54 51.2	
ANN				pmax	pmax		
	comp=Z,33nm,0.9s						
SUW	**Suwalki**	**145.48**	**342**	*e*PKP	**PKPdf**	**20 54 43.3 +1.3**	
AKASG	**Malin Array Be**	**146.01**	**333**		**PKPab**	**20 54 44.4 0.0**	
AKASG	**Malin Array Be**	**146.01**	**333**	PKPbc	**PKPab**	**20 54 45.0 +0.6**	
	comp=Z,8.4nm,0.7s,baz=42,slow=4.2,SNR=39						
AKASG	**Malin Array Be**	**146.01**	**333**	PKP2	**PKPab**	**20 54 44.4 0.0**	
KIEV	**Kiev**	**146.02**	**333**		**PKPab**	**20 54 49.0 +0.5**	
KIEV	**Kiev**	**146.02**	**333**	PKP2	**PKPab**	**20 54 44.9 +0.5**	
EKA	**Eskdalemuir Ar**	**146.19**	**9**	PKPbc	**PKPab**	**20 54 46.0 +1.1**	
	comp=Z,2.5nm,0.8s,baz=336,slow=3.1,SNR=4.1						
SIM	**Simferopol'**	**147.37**	**321**	*i* PKP2	**PKiKP**	**20 54 50.6 +0.4**	
SIM				pmax	pmax		
	comp=Z,22nm,0.8s						
BEL	**Belsk**	**148.09**	**342**	*e*PKP	**PKPab**	**20 54 51.9 -0.6**	
SORM	**Soroca**	**148.29**	**330**	⇑P	**PKiKP**	**20 54 51.6 -0.4**	
SORM	**Soroca**	**148.29**	**330**	⇑PKP2	**PKiKP**	**20 54 51.6 -0.4**	
GAZ	**Gaziantep**	**148.87**	**306**		**PKiKP**	**20 54 54.3 +0.6**	
ILGA	**Ilgaz**	**149.70**	**315**		**PKiKP**	**20 54 56.5 +1.1**	
VLDR	**Vladesti**	**150.07**	**328**	⇓P	**PKiKP**	**20 54 56.0 +0.2**	
BURAR	**Bucovina Array**	**150.07**	**333**	⇑P	**PKPab**	**20 54 58.3 -2.5**	
BURAR	**Bucovina Array**	**150.07**	**333**	⇑PKP2	**PKPab**	**20 54 58.3 -2.5**	
GHRR		**150.24**	**329**	⇑P	**PKiKP**	**20 54 58.4 +2.2**	
CLL	**Collm**	**150.30**	**351**	*i* PKIKP	**PKiKP**	**20 54 57.3 +1.2**	
CLL				pmax	pmax		
	comp=Z,17nm,0.9s						
CLL	**Collm**	**150.30**	**351**	*i* PKPbc	**PKiKP**	**20 54 57.3 +1.2**	
	comp=Z,17nm,0.9s						
BRTR	**Keskin Array B**	**150.40**	**313**		**PKiKP**	**20 54 57.1 +0.2**	
BRTR	**Keskin Array B**	**150.40**	**313**	PKPbc	**PKiKP**	**20 54 57.8 +0.9**	
	comp=Z,4.2nm,0.8s,baz=128,slow=3.5,SNR=34						
BRTR	**Keskin Array B**	**150.40**	**313**	PKIKP	**PKiKP**	**20 54 57.1 +0.2**	
OSTC	**Ostas**	**150.42**	**346**	*e*PKIKP	**PKiKP**	**20 54 58.0 +1.6**	
OSTC	**Ostas**	**150.42**	**346**	⇑*e*PKP	**PKiKP**	**20 54 58.0 +1.6**	
CHVC	**Chvalec**	**150.43**	**346**	*e*PKIKP	**PKiKP**	**20 54 58.4 +2.0**	
CHVC	**Chvalec**	**150.43**	**346**	⇑*e*PKP	**PKiKP**	**20 54 58.4 +2.0**	
KIRS	**Kirsehir-Merke**	**150.48**	**312**	⇑P	**PKiKP**	**20 54 58.1 +1.2**	
CFR	**Carcaliu**	**150.50**	**327**	⇑P	**PKiKP**	**20 54 56.9 +0.3**	
CFR	**Carcaliu**	**150.50**	**327**	⇑PKIKP	**PKiKP**	**20 54 56.9 +0.3**	
UPC	**Upice**	**150.51**	**346**	*e*PKIKP	**PKiKP**	**20 54 58.7 +2.1**	
UPC	**Upice**	**150.51**	**346**	⇑*e*PKP	**PKiKP**	**20 54 58.7 +2.1**	
ONER	**Baraj Valea Uz**	**150.52**	**330**	⇑P	**PKiKP**	**20 54 58.8 +2.0**	
DPC	**Dobruska-Polom**	**150.59**	**346**	*e*PKIKP	**PKiKP**	**20 54 58.8 +2.0**	
DPC	**Dobruska-Polom**	**150.59**	**346**	⇑*e*PKP	**PKiKP**	**20 54 58.8 +2.0**	
STEB	**Steborice**	**150.63**	**344**	⇑*e*PKP	**PKiKP**	**20 54 58.5 +1.7**	
VRI	**Vrincioaia**	**150.71**	**329**	⇓P	**PKiKP**	**20 54 58.7 +1.6**	
VRI	**Vrincioaia**	**150.71**	**329**	⇓PKIKP	**PKiKP**	**20 54 58.7 +1.6**	
KRLC	**Kraliky**	**150.74**	**345**	*e*PKIKP	**PKiKP**	**20 54 58.9 +1.8**	
KRLC	**Kraliky**	**150.74**	**345**	⇑*e*PKP	**PKiKP**	**20 54 58.9 +1.8**	
PLOR	**Plostina**	**150.76**	**329**	⇓P	**PKiKP**	**20 54 58.7 +1.4**	
PLOR	**Plostina**	**150.76**	**329**	⇓PKIKP	**PKiKP**	**20 54 58.7 +1.4**	
PVCC	**Panska Ves**	**150.78**	**348**	*e*PKIKP	**PKiKP**	**20 54 59.2 +2.1**	
PVCC				*e*		20 55 03.1	
PVCC	**Panska Ves**	**150.78**	**348**	⇑*e*PKP	**PKiKP**	**20 54 59.2 +2.1**	
PVCC				*e*PKPAB	**PKPab**	**20 55 03.1 -0.4**	
MORC	**Moravsky Berou**	**150.83**	**344**	⇑P	**PKiKP**	**20 54 59.3 +2.0**	
MORC	**Moravsky Berou**	**150.83**	**344**	*e*PKP	**PKiKP**	**20 54 58.7 +1.4**	
MORC	**Moravsky Berou**	**150.83**	**344**	⇑PKIKP	**PKiKP**	**20 54 59.3 +2.0**	
LANS	**Liptovska Anna**	**150.86**	**341**	*e*PKIKP	**PKiKP**	**20 55 00.4 +3.0**	
LANS	**Liptovska Anna**	**150.86**	**341**	*e*PKP	**PKiKP**	**20 55 00.4 +3.0**	
ANTO	**Ankara**	**150.90**	**314**	⇓P	**PKiKP**	**20 54 58.6 +0.8**	
ANTO	**Ankara**	**150.90**	**314**	⇓PKIKP	**PKiKP**	**20 54 58.6 +0.8**	
TURR	**Turia**	**150.91**	**330**	⇓P	**PKiKP**	**20 54 59.3 +1.8**	
OZUR		**150.98**	**330**	⇓P	**PKiKP**	**20 54 59.2 +1.5**	
MAUC	**Maruska**	**151.13**	**343**	⇑*e*PKP	**PKiKP**	**20 54 59.9 +2.0**	
DOPR	**Dopca**	**151.26**	**331**	⇓P	**PKiKP**	**20 54 59.9 +1.7**	
PRU	**Pruhonice**	**151.31**	**348**	*e*PKIKP	**PKiKP**	**20 55 00.0 +1.8**	
PRU	**Pruhonice**	**151.31**	**348**	⇑*e*PKP	**PKiKP**	**20 55 00.0 +1.8**	
MLR	**Muntele Rosu**	**151.36**	**329**	⇑P	**PKiKP**	**20 55 00.4 +1.8**	
MLR	**Muntele Rosu**	**151.36**	**329**	⇑PKIKP	**PKiKP**	**20 55 00.4 +1.8**	
UCC	**Uccle**	**151.36**	**2**	*d*PKP	**PKiKP**	**20 55 00.2 +2.0**	
CJR	**Cluj-Napoca**	**151.46**	**334**	⇑P	**PKiKP**	**20 54 59.3 +0.6**	
CJR	**Cluj-Napoca**	**151.46**	**334**	⇑PKIKP	**PKiKP**	**20 54 59.3 +0.6**	
VRAC	**Vranov**	**151.50**	**345**	*e*PKP	**PKiKP**	**20 55 02.3 +3.7**	
MMAI	**Mount Meron Ar**	**151.52**	**299**	PKPbc	**PKiKP**	**20 55 01.2 +1.9**	
	comp=Z,8.1nm,0.8s,baz=70,slow=2.9,SNR=12						
MEM	**Membach**	**151.56**	**359**	*d*PKP	**PKiKP**	**20 55 00.3 +1.6**	
JAVC	**Velka Javorina**	**151.64**	**343**	*e*PKP	**PKiKP**	**20 55 02.2 +3.2**	
MARR	**Marisel-Cluj**	**151.68**	**334**	⇓P	**PKiKP**	**20 55 01.8 +2.6**	
DRGR		**151.75**	**335**	⇑P	**PKiKP**	**20 55 00.8 +1.5**	
DRGR		**151.75**	**335**	⇑PKIKP	**PKiKP**	**20 55 00.8 +1.5**	
KRUC	**Moravsky**	**151.78**	**345**	*e*PKP	**PKiKP**	**20 55 01.1 +1.9**	
PSZ	**Piszkesteto**	**151.82**	**339**	⇑P	**PKiKP**	**20 55 00.1 +0.7**	
PSZ	**Piszkesteto**	**151.82**	**339**	⇑PKIKP	**PKiKP**	**20 55 00.1 +0.7**	
VOIR		**151.82**	**330**	⇑P	**PKiKP**	**20 55 01.7 +2.2**	
VOIR		**151.82**	**330**	⇑PKIKP	**PKiKP**	**20 55 01.7 +2.2**	
BMRD	**Maredsous**	**151.87**	**1**	*d*PKP	**PKiKP**	**20 55 01.2 +1.9**	
ZVC	**Zvikov**	**151.90**	**348**	⇑*e*PKP	**PKiKP**	**20 55 01.6 +2.1**	
ARR	**Arges**	**152.06**	**331**	⇓P	**PKiKP**	**20 55 02.3 +2.3**	
DOU	**Dourbes**	**152.07**	**1**	*d*PKP	**PKiKP**	**20 55 00.4 +0.7**	
MODS	**Modra-Piesok**	**152.19**	**343**	*e*PKP	**PKiKP**	**20 55 03.2 +3.1**	
KHC	**Kasperske Hory**	**152.31**	**349**	*e*PKIKP	**PKiKP**	**20 55 02.4 +2.0**	
KHC				*e*		20 55 06.3	
KHC	**Kasperske Hory**	**152.31**	**349**	⇑*e*PKP	**PKiKP**	**20 55 02.4 +2.0**	
KHC				*e*PKPAB	**PKPab**	**20 55 06.3 -3.6**	
LOT	**Lotru**	**152.39**	**332**	⇑P	**PKiKP**	**20 55 02.2 +1.5**	
CKRC	**Cesky Krumlov**	**152.47**	**347**	*e*PKIKP	**PKiKP**	**20 55 02.8 +2.1**	
CKRC	**Cesky Krumlov**	**152.47**	**347**	⇑*e*PKP	**PKiKP**	**20 55 02.8 +2.1**	
WLF	**Walferdange**	**152.51**	**359**	*d*PKP	**PKiKP**	**20 55 01.6 +1.0**	
GERES	**GERESS Array B**	**152.56**	**348**	PKPbc	**PKiKP**	**20 55 03.0 +2.0**	
	comp=Z,1.7nm,0.8s,baz=29,slow=3.0,SNR=14						
GERES	**GERESS Array B**	**152.56**	**348**	PKIKP	**PKiKP**	**20 55 03.0 +2.0**	
SIRR	**Siria**	**152.60**	**335**	⇑P	**PKiKP**	**20 55 02.8 +1.8**	
SURR	**Surduc**	**152.84**	**334**	⇓P	**PKPbc**	**20 54 58.0 -3.2**	
GZR	**Gura Zlata**	**152.86**	**333**	⇓P	**PKiKP**	**20 55 02.1 +0.4**	
GZR	**Gura Zlata**	**152.86**	**333**	⇓PKIKP	**PKiKP**	**20 55 02.1 +0.4**	
CONA	**Conrad Observa**	**152.96**	**345**	pPKP	**PKiKP**	**20 55 03.8 +2.0**	
	comp=Z,9.0nm,1.7s						
BZS	**Buzias**	**153.15**	**335**	⇓P	**PKiKP**	**20 55 03.0 +0.9**	
BZS	**Buzias**	**153.15**	**335**	⇓PKIKP	**PKiKP**	**20 55 03.0 +0.9**	
HERR	**Herculane**	**153.42**	**333**	⇓P	**PKiKP**	**20 55 04.4 +1.7**	
MORH	**Mrgy, Hungar**	**153.72**	**339**	⇑P	**PKiKP**	**20 55 05.0 +1.8**	
BLKB	**Belogradchik**	**154.30**	**331**	⇓P	**PKPbc**	**20 55 02.5 -2.1**	
MOTA	**Moosalm**	**154.44**	**351**	*e*pPKP	**PKiKP**	**20 55 06.5 +1.5**	
	comp=Z,5.8nm,1.1s						
WTTA	**Wattenberg**	**154.44**	**350**	*e*pPKP	**PKiKP**	**20 55 06.9 +1.9**	
	comp=Z,2.9nm,0.9s						
PAB	**San Pablo**	**160.67**	**24**	PKIKP	**PKPdf**	**20 55 03.7 -0.8**	
DBIC	**Dimbokro**	**161.62**	**145**	PKP	**PKPdf**	**20 55 08.7 +2.5**	
	comp=Z,3.0nm,0.8s,baz=133,slow=10,SNR=1.9						
TORD	**Torodi Ar. Bea**	**170.34**	**157**	PKP	**PKPdf**	**20 55 14.7 +1.6**	
	comp=Z,0.7nm,0.9s,baz=207,slow=1.6,SNR=3.3						
TORD				PKPab	**pPKPab**	**20 56 31.9 +1.5**	
	comp=Z,1.2nm,1.0s,baz=198,slow=4.6,SNR=3.7						

*IDC **10**21:21:43.0±2.6, 22°.54N×143°.75E, h48km±23km, mb3.7/16, mbtmp4.0/18, ML3.9/2, Error ellipse: s-maj=23.3km s-min=13.6km az=84.0*
*NEIC **10**21:21:52.3±1.7, 22°.55N±0°.08×143°.7E±0°.2, h126km±3km, mb4.5/11, Error ellipse: s-maj=22.3km s-min=11.1km az=73.0*

ISC 10 21:21:50.8±0.5, **22°.49N**±0°.07×**143°.7E**±0°.1, **h118**km, **n48**, σ1°**07**/48, **mb4.1**/21, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.79**	**344**		**Pn**	**21 23 02.5**	**+1.8**
JCJ				Sn	**Sn**	**21 23 55.4**	**+0.1**
JCJ	**Chichijima**	**4.79**	**344**	P	Pn	21 22 54.1	-6.6
	38nm,0.3s,baz=88,slow=22,SNR=22						
JCJ				S	Sn	21 23 45.2	-10
	164nm,0.5s,baz=277,slow=22,SNR=11						
	108nm,0.3s						
JHJ	**Hachijo jima 2**	**11.14**	**343**	S	Sn	21 26 17.6	-11
	59nm,0.6s,baz=236,slow=20,SNR=1.2						
JGF	**Kuroka**	**14.19**	**338**	Pn	**Pn**	**21 25 06.9**	**+0.6**
MJAR	**Matsushiro Arr**	**14.79**	**342**	Pn	**Pn**	**21 25 14.1**	**+0.1**
MJAR	**Matsushiro Arr**	**14.79**	**342**	P	**Pn**	**21 25 10.0**	**-3.9**
	0.1nm,0.3s,baz=164,slow=11,SNR=6.3						
MJAR				S	Sn	21 27 46.2	-11
	0.7nm,0.8s,baz=135,slow=22,SNR=1.8						
	0.5nm,0.4s						
MAJO	**Matsushiro**	**14.79**	**342**	Pn	**Pn**	**21 25 12.8**	**-1.2**
JMM	**Marumori**	**15.53**	**351**	Pn	**Pn**	**21 25 23.0**	**-0.1**
JMM				IAmb	IAmb	21 25 38.0	
	comp=Z,60nm,1.4s						
KSRS	**Korea Array**	**20.18**	**321**	P	**P**	**21 26 14.8**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=355,slow=15,SNR=2.1						
	comp=Z,0.8nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**21.89**	**96**	T	T	21 49 25.8	
	baz=283,slow=75,SNR=2.2						
H11S1	**WAKE ISLAND Hy**	**21.90**	**96**	T	T	21 49 25.0	
	baz=283,slow=75,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**21.91**	**96**	T	T	21 49 26.6	
	baz=283,slow=75,SNR=4.0						
COEN	**Coen**	**36.23**	**181**	P	**P**	**21 28 43.5**	**+1.0**
COEN				IAmb	IAmb	21 28 55.2	
	comp=Z,20nm,1.5s						
KNRA	**Kununurra**	**40.66**	**202**	P	**P**	**21 29 18.9**	**-0.6**
KNRA				IAmb	IAmb	21 29 47.0	
	comp=Z,23nm,1.5s						
WB0	**Warramunga Arr**	**42.98**	**193**	P	**P**	**21 29 38.5**	**+0.1**
WB0				IAmb	IAmb	21 30 13.4	
	comp=Z,8.9nm,1.5s						
WR8	**Warramunga Arr**	**43.14**	**193**	P	**P**	**21 29 40.1**	**+0.4**
WR8				IAmb	IAmb	21 30 09.0	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**43.15**	**193**	P	**P**	**21 29 40.2**	**+0.4**
WB2				IAmb	IAmb	21 30 20.1	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**43.16**	**193**	P	**P**	**21 29 39.3**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=14,slow=8.1,SNR=13						
WRA				PcP	**PcP**	**21 31 28.1**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=8.2,slow=3.6,SNR=5.5						
	comp=Z,1.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**44.04**	**205**	P	**P**	**21 29 47.7**	**+0.8**
ASAR	**Alice Springs**	**46.86**	**192**	P	**P**	**21 30 08.1**	**-1.0**
ASAR					**PcP**	**21 31 40.1**	**-0.2**
ASAR	**Alice Springs**	**46.86**	**192**	P	**P**	**21 30 08.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=16,slow=9.9,SNR=21						
ASAR				PcP	**PcP**	**21 31 40.8**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=28,slow=4.2,SNR=2.8						
	comp=Z,0.9nm,0.6s						
EVN	**Everest**	**51.37**	**288**	P	**P**	**21 30 45.7**	**+1.4**
EVN				IAmb	IAmb	21 30 47.3	
	comp=Z,2.5nm,0.6s						
STKA	**Stephens Creek**	**54.10**	**182**	P	**P**	**21 31 02.3**	**-1.1**
STKA	**Stephens Creek**	**54.10**	**182**	P	**P**	**21 31 02.2**	**-1.1**
	comp=Z,2.6nm,0.5s,baz=344,slow=7.5,SNR=6.8						
	comp=Z,2.6nm,0.5s						
MKAR	**Makanchi Array**	**54.52**	**312**	P	**P**	**21 31 06.2**	**-0.3**
MKAR	**Makanchi Array**	**54.52**	**312**	P	**P**	**21 31 07.2**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=87,slow=8.8,SNR=13						
	comp=Z,1.4nm,0.7s						
KURBB	**Kurchatov Arra**	**57.28**	**317**	P	**P**	**21 31 26.2**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=96,slow=7.8,SNR=8.8						
	comp=Z,0.9nm,0.4s						
ILAR	**Eielson Array**	**61.12**	**27**	P	**P**	**21 31 52.1**	**-0.1**
ILAR	**Eielson Array**	**61.12**	**27**	P	**P**	**21 31 50.8**	**-1.4**
	comp=Z,0.2nm,0.7s,baz=248,slow=4.8,SNR=5.5						
	comp=Z,0.2nm,0.7s						
EYAK	**Cordova Ski Ar**	**61.13**	**32**	P	**P**	**21 31 53.5**	**+1.2**
BVAR	**Borovoye Array**	**62.38**	**319**	P	**P**	**21 32 01.4**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=90,slow=7.1,SNR=25						
	comp=Z,2.7nm,0.5s						
YKA	**Yellowknife Ar**	**75.53**	**28**	P	**P**	**21 33 22.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=249,slow=6.4,SNR=4.3						
	comp=Z,0.3nm,0.6s						
KBZ	**Khabaz**	**82.17**	**314**	P	**P**	**21 33 58.9**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=90,slow=6.1,SNR=7.5						
	comp=Z,3.3nm,0.8s						
NVAR	**Mina Array Bea**	**82.28**	**52**	P	**P**	**21 33 59.4**	**-0.2**
NVAR	**Mina Array Bea**	**82.28**	**52**	P	**P**	**21 33 59.5**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=291,slow=4.8,SNR=5.1						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**82.67**	**335**	P	**P**	**21 34 01.2**	**+0.4**
FINES	**FINESS Array B**	**82.67**	**335**	P	**P**	**21 33 59.8**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=60,slow=5.1,SNR=12						
	comp=Z,0.6nm,0.5s						
PDAR	**Pinedale Array**	**86.49**	**45**	P	**P**	**21 34 19.7**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=237,slow=38,SNR=1.7						
	comp=Z,0.1nm,0.4s						
AKASG	**Malin Array Be**	**87.14**	**325**	P	**P**	**21 34 23.0**	**-0.4**
AKASG	**Malin Array Be**	**87.14**	**325**	P	**P**	**21 34 22.1**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=52,slow=5.1,SNR=2.1						
	comp=Z,0.3nm,0.4s						
HFS	**Hagfors**	**88.18**	**337**	P	**P**	**21 34 26.7**	**-1.5**
	comp=Z,2.0nm,0.9s,baz=88,slow=8.8,SNR=1.8						
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**90.15**	**314**	P	**P**	**21 34 35.5**	**-2.5**
BRTR	**Keskin Array B**	**90.15**	**314**	P	**P**	**21 34 38.1**	**0.0**
	comp=Z,0.4nm,0.7s,baz=73,slow=6.4,SNR=3.8						
	comp=Z,0.4nm,0.7s						
SCHQ	**Schefferville**	**98.66**	**17**	PKiKP	**PKiKP**	**21 39 48.1**	**+0.8**
	comp=Z,4.4nm,0.7s,baz=247,slow=18,SNR=2.1						
PLCA	**Paso Flores**	**145.91**

SOCE	**Pocosol**	**2.24 114**	P	Pn	21 35 33.9	+0.8
RCPN	**Sur Rio San Ju**	**2.27 15**	P	Pn	21 35 33.6	-0.1
YUSH	**Yuscaran**	**2.62 357**	P	Pn	21 35 39.2	+0.8
PACA	**Pacayal**	**2.66 324**	P	Pn	21 35 39.2	+0.1
PACA	**Pacayal**	**2.66 324**	S	Sn	21 36 12.1	+1.6
CVTR	**Volcan Turrial**	**3.16 114**	*e*P	Pb	21 35 50.7	-2.8
VTR0	**Volcan Turrial**	**3.16 114**	*e*P	Pb	21 35 51.1	-2.4
PIEC	**Cerro El Cedra**	**3.18 122**	*e*P	Pb	21 35 50.8	-2.9
BUS1	**Rivas**	**3.39 121**	*e*P	Pn	21 35 52.7	+3.4
DRK0	**Durika**	**3.96 121**	*e*P	Pn	21 35 59.0	+2.1

NEIC ***10*** *22:07:59.1±1.2,33°.868N±0°.006×116°.207W±0°.009, h10km±1km, Error ellipse: s-maj=2.9km s-min=1.5km az=106.0*

PAS 10 22:07:59.5±1.2,**33°.868N**±0°.009×**116°.20W**±0°.01, **h8**km±7km,**Mwr3.5**/**4**,**ML3.5**/120(NEIC),**Error ellipse: s-maj=1.3km s-min=1.3km az=52.0,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EW2	**E Wide Canyon**	**0.19 292**		Pg		22 08 06.8	+3.4
BELC	**Belle Mtn. Jos**	**0.21 51**		Pg		22 08 03.8	-0.1
BELC				IAML		22 08 04.3	
	comp=N,7μm,0.4s						
BELC				Sg	Sg	22 08 06.8	0.0
BELC				IAML		22 08 08.5	
	comp=E,11μm,0.4s						
BLAC	**Blackrock camp**	**0.26 321**		Pg		22 08 04.7	0.0
BLAC				Sg		22 08 08.5	+0.3
TPC	**Twentynine Pal**	**0.27 27**		Pg		22 08 04.6	-0.2
PMD	**Palm Desert**	**0.27 215**	Pg	Pg		22 08 04.4	-0.4
PMD			Sg	Sg		22 08 08.2	-0.2
CTCC	**Cactus City**	**0.27 141**		Pn		22 08 09.0	-0.9
DEVC	**Devers**	**0.33 282**		Pg		22 08 06.0	+0.1
DEVC				Sg		22 08 10.8	+0.6
CTW	**Cottonwood Mou**	**0.33 125**		Pg		22 08 06.1	+0.1
CTW				Sg		22 08 10.9	+0.5
XPFO	**Pinon Flat**	**0.34 220**		Pg		22 08 05.8	-0.4
XPFO				Sg		22 08 10.5	-0.1
PFO	**Pinyon Flats O**	**0.34 221**		Pg		22 08 05.8	-0.4
PFO			Sg	Sg		22 08 10.4	-0.2
PFO	**Pinyon Flats O**	**0.34 221**		Pg		22 08 05.8	-0.4
PFO				Sg		22 08 10.7	0.0
GVDA	**Garner Valley**	**0.45 244**		Pg		22 08 07.8	-0.4
GVDA				Sg		22 08 13.8	-0.2
GTM	**Goat Mountain**	**0.45 343**		Pg		22 08 08.0	-0.2
GTM				Sg		22 08 14.2	+0.1
HAY	**Hayfield**	**0.46 110**		Pg		22 08 08.9	+0.5
HAY				Sg		22 08 15.4	+1.1
SNDA	**J Saunders Pla**	**0.47 228**		Pg		22 08 08.4	-0.3
SNDA				Sg		22 08 15.1	+0.3
DNR	**Dunn Ranch,Anz**	**0.47 230**		Pg		22 08 08.4	-0.3
DNR			Sg	Sg		22 08 15.1	+0.2
DNR				IAML		22 08 15.8	
	comp=N,4μm,0.5s						
FRD	**Ford Ranch, An**	**0.50 222**		Pg		22 08 09.0	-0.3
FRD				Sg		22 08 16.0	+0.1
FRD	**Ford Ranch, An**	**0.50 222**		Pg		22 08 08.9	-0.3
FRD				Sg		22 08 15.9	0.0
CRY	**Cary Ranch**	**0.54 236**		Pg		22 08 09.7	-0.3
CRY				Sg		22 08 17.2	0.0
BZNA	**Buzz No.'s Pla**	**0.54 226**		Pg		22 08 09.7	-0.3
BZNA				Sg		22 08 17.2	0.0
BORC	**Borrego Spring**	**0.63 197**		Pg		22 08 11.2	-0.4
BORC				IAML		22 08 22.2	
	comp=E,2μm,0.3s						
BORC				IAML		22 08 23.0	
	comp=N,2μm,0.6s						
BORC	**Borrego Spring**	**0.63 197**		Sg		22 08 19.6	-0.2
POB	**Polly Butte**	**0.63 254**		Pg		22 08 11.3	-0.4
POB				Sg		22 08 19.8	-0.2
BOMB	**Bombay Beach**	**0.64 142**		Pg		22 08 11.6	-0.1
BOMB				Sb		22 08 21.5	-0.3
BC3	**Big Chuckawall**	**0.65 109**		Pg		22 08 12.1	-0.1
BC3				IAML		22 08 21.6	
	comp=N,3μm,0.6s						
BC3				IAML		22 08 24.6	
	comp=E,3μm,0.6s						
BC3	**Big Chuckawall**	**0.65 109**		Sg		22 08 20.6	0.0
BBSC	**Beaumont Base**	**0.66 275**		Pg		22 08 11.8	-0.4
BBSC				Sg		22 08 20.7	0.0
FRK	**Frink**	**0.66 135**		Pg		22 08 11.7	-0.5
FRK				Sg		22 08 21.1	+0.4
SLH	**Sleepy Hollow**	**0.68 184**		Pg		22 08 12.2	-0.3
SLH				Sg		22 08 21.6	+0.3
HMTC	**Hemet**	**0.69 257**		Pg		22 08 12.3	-0.6
HMTC				Sg		22 08 21.1	-0.7
SIL	**Silver Peak**	**0.71 313**		Pg		22 08 12.7	-0.5
SIL				Sg		22 08 22.8	+0.3
DGR	**Domenigoni Val**	**0.71 252**		Pg		22 08 12.6	-0.6
DGR				Sg		22 08 21.9	-0.6
BBRC	**Big Bear Solar**	**0.72 303**		Pg		22 08 12.8	-0.6
BBRC				Sg		22 08 22.9	+0.1
BACC	**Bachelor Mtn.**	**0.75 250**		Pg		22 08 13.3	-0.7
BACC				Sg		22 08 23.0	-0.6
PLM	**Palomar**	**0.76 227**		Pg		22 08 13.6	-0.5
PLM				Sg		22 08 23.8	-0.1
MATG	**Mataguay Scout**	**0.77 210**		Pg		22 08 13.7	-0.6
MATG				Sg		22 08 24.1	-0.2
CFT	**Crafton Hills**	**0.78 283**		Pg		22 08 14.2	-0.3
SVD	**Seven Oaks Dam**	**0.79 288**		Pg		22 08 13.8	-0.8
SVD				Sg		22 08 24.7	-0.2
PEC	**Perris**	**0.80 272**		Pg		22 08 14.3	-0.7
PEC				Sg		22 08 24.7	-0.8
ERRC	**Elmore Ranch**	**0.81 157**		Pg		22 08 14.6	-0.5
ERRC				Sb		22 08 26.9	0.0
JUEM	**Julian Eagle M**	**0.85 203**		Pg		22 08 15.3	-0.6
JUEM				Sg		22 08 26.5	-0.5
MURC	**Murrieta**	**0.88 252**		Pg		22 08 15.5	-0.9
MURC				Sg		22 08 26.9	-0.9
HLNC	**Highland**	**0.89 287**		Sg		22 08 28.2	+0.1
CLI2	**Calipatria 2**	**0.91 145**		Pg		22 08 15.8	-1.0
IRM	**Iron Mountain**	**0.92 71**		Pg		22 08 16.7	-0.4
IRM				IAML		22 08 31.9	
	comp=E,2μm,0.4s						
HEC	**Hector,Ludlow**	**0.97 353**		Pg		22 08 17.5	-0.6
SLVP	**Salvation Pass**	**0.97 130**		Pg		22 08 16.3	-1.9
WEMD	**Westmorland, C**	**0.97 148**		Pg		22 08 16.8	-1.4
SWSC	**Sam W. Stewart**	**0.98 160**		Pg		22 08 16.6	-1.7
RVR	**Riverside**	**0.99 278**		Pg		22 08 17.6	-0.9
CRR	**Carrizo Plain**	**1.00 169**		Pg		22 08 17.0	-1.6
GMRC	**Granite Mounta**	**1.02 26**		Pg		22 08 18.2	-0.9
DANC	**Danby, Needles**	**1.02 41**		Pg		22 08 18.4	-0.7
DANC				IAML		22 08 38.8	
	comp=E,2μm,0.6s						
DANC				IAML		22 08 39.6	
	comp=N,2μm,0.6s						
ELS	**Elsinore Mount**	**1.05 258**		Pg		22 08 18.3	-1.3
ELS				IAML		22 08 32.3	
	comp=N,846nm,0.6s						
DPP	**Dos Picos Cty**	**1.07 216**		Pg		22 08 18.6	-1.4
DPP				IAML		22 08 33.3	
	comp=N,739nm,0.5s						
COK2	**Cook Ranch 2**	**1.09 159**		Pg		22 08 18.6	-1.8
IMPE	**Imperial**	**1.10 151**		Pg		22 08 19.8	-0.8
EML	**El Monte Cty P**	**1.12 209**		Pg		22 08 19.4	-1.5
GORC	**Green Oak Ranc**	**1.12 231**		Pg		22 08 19.4	-1.6
MLSC	**Mira Loma**	**1.14 277**		Pg		22 08 20.3	-1.2
WESC	**Westside Schoo**	**1.17 161**		Pb		22 08 21.4	-0.6
IKP	**In-Ko-Pah, Jac**	**1.22 177**		Pb		22 08 20.4	-2.4
CPE	**Camp Elliot**	**1.24 218**		Pn		22 08 21.2	-1.8
CPE				IAML		22 08 38.2	
	comp=N,1μm,0.3s						
CPE				IAML		22 08 38.6	
	comp=E,714nm,0.3s						
YUH	**Yuha Desert**	**1.24 169**		Pn		22 08 20.4	-2.7
BAR	**Barrett**	**1.25 199**		Pn		22 08 21.1	-2.2
BAR				IAML		22 08 39.6	
	comp=E,1μm,0.3s						
BAR				IAML		22 08 40.5	
	comp=N,587nm,0.6s						
BFSC	**Mount Baldy Ra**	**1.27 287**		Pn		22 08 22.2	-1.4
BFSC				IAML		22 08 42.2	
	comp=E,791nm,0.5s						
BFSC				IAML		22 08 43.5	
	comp=N,622nm,0.5s						
SGL	**Mount Signal**	**1.28 162**		Pn		22 08 20.8	-2.8
SDRC	**San Diego Road**	**1.29 209**		Pn		22 08 22.1	-1.7
COA	**Coachella**	**1.34 138**		Pn		22 08 22.2	-2.3
DUZA	**Dulzura**	**1.35 201**		Pn		22 08 22.9	-1.8
BLYC	**Blythe**	**1.40 94**		Pn		22 08 23.0	-2.3
BLYC				IAML		22 08 45.6	
	comp=E,1μm,0.4s						
BLYC				IAML		22 08 46.2	
	comp=N,1μm,0.8s						
GLA	**Glamis**	**1.41 125**		Pn		22 08 23.4	-2.0
GLA				IAML		22 08 49.2	
	comp=N,1μm,0.6s						
GLA				IAML		22 08 50.6	
	comp=E,1μm,0.8s						
GSC	**Goldstone, Bar**	**1.52 341**		Pn		22 08 25.5	-1.5
GSC				IAML		22 08 51.2	
	comp=N,447nm,0.7s						
GSC				IAML		22 08 53.2	
	comp=E,922nm,1.1s						
TJX	**Tijuana**	**1.53 208**		Pn		22 08 26.4	-0.7
TJX				IAML		22 09 01.2	
	comp=E,946nm,0.7s						
TJX				IAML		22 09 02.9	
	comp=N,881nm,0.6s						
NEE2	**Needles Airpor**	**1.58 55**		Pn		22 08 28.3	+0.5
MWC	**Mount Wilson**	**1.59 283**		Pn		22 08 27.7	-0.4
CBX	**Cerro Bola**	**1.60 194**		Pn		22 08 26.7	-1.5
CPBX	**Cerro Prieto**	**1.63 152**		Pn		22 08 28.3	-0.1
CPBX				IAML		22 09 10.2	
	comp=N,718nm,0.7s						
CPBX				IAML		22 09 14.7	
	comp=E,825nm,0.8s						
PASC	**Pasadena Art C**	**1.68 281**	Pn	Pn		22 08 29.2	0.0
PASC				IAML		22 08 51.4	
	comp=N,852nm,0.5s						
PASC				IAML		22 08 52.8	
	comp=E,654nm,0.4s						
MTPC	**Mountain Pass**	**1.70 18**	Pn	Pn		22 08 28.5	-1.1
MTPC				IAML		22 08 54.4	
	comp=E,502nm,0.3s						
MTPC				IAML		22 08 55.4	
	comp=N,316nm,0.5s						
ESJX	**Sierra Juarez**	**1.87 174**		Pn		22 08 30.4	-1.5
ESJX				IAML		22 08 59.4	
	comp=E,311nm,0.5s						
CCCA	**Chr Cany lake**	**1.91 330**		Pn		22 08 31.6	-0.8
TPO	**Tropico Hills**	**1.96 302**		Pn		22 08 31.9	-1.1
TPO				IAML		22 09 05.5	
	comp=E,369nm,0.5s						
TPO				IAML		22 09 08.5	
	comp=N,491nm,0.6s						
LRMC	**Laurel Mtn Rad**	**2.02 323**		Pn		22 08 32.7	-1.3
LRMC				IAML		22 09 13.8	
	comp=E,310nm,0.8s						
SHOC	**Shoshone, Teco**	**2.03 358**	Pn	Pn		22 08 33.1	-0.8
WSHM	**Spangler Hills**	**2.03 329**		Pn		22 08 32.7	-1.4
WSHM				IAML		22 09 06.5	
	comp=E,247nm,0.3s						
CCX	**Cicese**	**2.03 191**		Pn		22 08 33.4	-0.6
CCX				IAML		22 09 05.5	
	comp=N,623nm,0.5s						
V12A	**Nelson**	**2.16 30**		Pn		22 08 35.0	-0.8
QSM	**Queen of Sheba**	**2.16 345**		Pn		22 08 34.9	-0.9
QSM				IAML		22 09 08.5	
	comp=N,329nm,0.6s						
QSM				IAML		22 09 08.9	
	comp=E,329nm,0.3s						
OSI	**Osito Audit: C**	**2.22 290**	Pn	Pn		22 08 36.5	-0.2
OSI				IAML		22 09 16.1	
	comp=E,261nm,0.9s						
CLC	**China Lake**	**2.26 330**		Pn		22 08 35.7	-1.5
CLC				IAML		22 09 11.7	
	comp=E,188nm,0.8s						
W13A	**Hualapai Mount**	**2.27 57**		Pn		22 08 37.0	-0.5
W13A				IAML		22 09 11.3	
	comp=N,191nm,1.0s						
W13A				IAML		22 09 18.9	
	comp=E,187nm,0.8s						
113A	**Mohawk Valley,**	**2.31 118**		Pn		22 08 35.2	-2.6
GWY	**Greenwater Val**	**2.34 351**		Pn		22 08 37.3	-1.2
MPMC	**Manual Prospec**	**2.43 334**		Pn		22 08 38.5	-1.1
MPMC				IAML		22 09 18.2	
	comp=N,210nm,0.6s						
MPMC				IAML		22 09 19.3	
	comp=E,207nm,0.6s						
VTX	**Valle De La Tr**	**2.49 172**	Pn	Pn		22 08 40.1	-0.3
VTX				IAML		22 09 18.3	
	comp=E,187nm,0.6s						
ISA	**Isabella, Lake**	**2.59 314**		Pn		22 08 40.6	-1.2
FURC	**Furnace Creek,**	**2.65 348**	Pn	Pn		22 08 42.3	-0.2
Y14A	**Wickenburg**	**2.66 88**		Pn		22 08 41.6	-1.0
Y14A				IAML		22 09 28.6	
	comp=E,334nm,0.7s						
SHPR	**Sheep Range**	**2.77 18**		Pn		22 08 43.6	-0.7
WCT	**Wildcat Mounta**	**2.94 353**	Pn	Pn		22 08 46.2	-0.3
CWC	**Cottonwood Cre**	**2.99 329**		Pn		22 08 47.0	-0.4
TPNV	**Topopah Spring**	**3.07 359**		Pn		22 08 48.3	-0.2
TPNV				IAML		22 09 37.5	
	comp=E,141nm,0.4s						
TPNV				IAML		22 09 41.4	
	comp=E,204nm,0.5s						
PIX	**Pinacate**	**3.26 134**	Pn	Pn		22 08 50.5	-0.4
GRAC	**Grapevine Rang**	**3.26 343**		Pn		22 08 51.0	0.0
GRAC				IAML		22 09 48.9	
	comp=E,189nm,0.5s						
214A	**Organ Pipe Nat**	**3.43 123**		Pn		22 08 51.5	-1.8
GMN	**Gold Mountain**	**3.53 346**		Pn		22 08 54.6	-0.2
PRN	**Pahroc Range**	**3.65 14**		Pn		22 08 56.7	+0.3
DSP	**Deep Springs**	**3.78 338**		Pn		22 08 57.9	-0.1
S11A	**Rachel**	**3.79 5**	Pn	Pn		22 08 58.6	+0.4
LCMT	**Little Creek M**	**3.96 37**		Pn		22 09 00.4	-0.1
X16A	**Lo Mia Camp, P**	**3.98 81**		Pn		22 09 00.2	-0.8
U15A	**North Rim**	**4.09 50**		Pn		22 09 02.5	-0.1
PKD	**Bear Valley Ra**	**4.13 301**		Pn		22 09 00.8	-2.1
KNB	**Kanab**	**4.18 40**		Pn		22 09 04.0	+0.3
WUAZ	**Wupatki**	**4.30 66**		Pn		22 09 05.3	-0.1
WUAZ				IAML		22 10 18.1	
	comp=E,74nm,0.5s						
WUAZ				IAML		22 10 22.6	
	comp=E,79nm,1.0s						
CCUT	**Cedar City**	**4.34 31**		Pn		22 09 05.9	-0.1
MDPB	**Devils Postpil**	**4.43 329**	Pn	Pn		22 09 07.1	-0.1
PMPB	**Monarch Peak**	**4.45 303**	Pn	Pn		22 09 07.6	+0.4
SZCU	**Shurtz Canyon**	**4.50 33**		Pn		22 09 08.3	+0.2
R11B	**Troy Canyon, C**	**4.50 6**		Pn		22 09 07.9	-0.2
LHV	**Little Huntoon**	**4.76 338**		Pn		22 09 11.3	-0.1
PKCU	**Pink Cliffs**	**4.77 40**		Pn		22 09 11.9	0.0
BBGB	**Big Mountain B**	**4.80 306**	Pn	Pn		22 09 10.7	-1.4
TUC	**Tucson**	**4.80 107**		Pn		22 09 09.8	-2.3
NV11	**Mina Array Sit**	**4.82 341**		Pn		22 09 11.8	-0.8
PSUT	**Pine Spring**	**5.03 21**		Pn		22 09 15.7	+0.3
RYN	**Ryan**	**5.11 339**	Pn	Pn		22 09 15.0	-1.4
X18A	**Snowflake**	**5.22 81**		Pn		22 09 18.2	+0.3
WAKR	**Walker**	**5.32 331**	Pn	Pn		22 09 19.9	+0.5
SPR3	**Spring Creek 3**	**5.34 16**		Pn		22 09 19.0	-0.8
W18A	**Petrified Fore**	**5.48 75**	Pn	Pn		22 09 21.2	-0.4
TCRU	**Three Creeks R**	**5.62 32**	Pn	Pn		22 09 23.1	-0.5
MPK	**Martis Peak**	**6.23 331**	Pn	Pn		22 09 32.4	+0.4
PAHR	**Pah Rah Range**	**6.36 337**	Pn	Pn		22 09 34.1	+0.5
DUG	**Dugway, Tooele**	**6.87 22**	Pn	Pn		22 09 40.4	-0.2
121A	**Cookes Peak, D**	**7.17 98**		Pn		22 09 44.4	-0.5
PV13	**Radium Mtn., P**	**7.35 52**	Pn	Pn		22 09 46.8	-0.5
PV03	**Paradox Valley**	**7.38 52**	Pn	Pn		22 09 47.6	-0.1

KRNET ***10*** *22:19:40.0±0.1,41°.84N×79°.07E,h17km,mb3.2*
SOME ***10*** *22:19:40.2,41°.92N×79°.02E,h10km*
NNC ***10*** *22:19:41.7±1.3,41°.95N×79°.12E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=8.8km s-min=4.8km az=154.0*

ISC 10 22:19:41.5±1.3,**41°.90N**±0°.05×**79°.05E**±0°.04,**h10**km,**n53,** σ**1°42/88,19C-20D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.76 321**		⇑*i*P		**Pg** 22 19 55.8	**-0.3**
PRZ				⇑*i*S		**Sb** 22 20 07.2	**-0.1**
TARG	**Taragay, Kyrgy**	**0.94 260**		⇓*e*P		**Pg** 22 19 57.9	**-1.8**
TARG				⇓*i*S		**Sg** 22 20 11.4	**-0.6**
SATY	**Saty**	**1.25 338**		P		**Pb** 22 20 04.7	**-0.6**
	13nm,0.1s						
SATY				S		**Sn** 22 20 22.2	**0.0**
	153nm,0.1s						
SHLS	**Shalkode**	**1.29 14**		P		**Pn** 22 20 06.5	**+0.7**
	51nm,0.1s						
SHLS				S		**Sn** 22 20 25.6	**+2.4**
	49nm,0.2s						
SHLS	**Shalkode**	**1.29 14**		*e*P		**Pn** 22 20 06.5	**+0.7**
	51nm,0.1s						
SHLS				*e*S		**Sn** 22 20 25.6	**+2.4**
	49nm,0.2s						
KDJ	**Kajisay**	**1.41 280**		⇓*i*P		**Pn** 22 20 06.5	**-0.9**
KDJ				⇓*i*S		**Sb** 22 20 25.6	**-0.5**
PDGK	**Podgornoye**	**1.47 13**		⇓P		**Pn** 22 20 07.3	**-0.8**
	9.7nm,0.3s						
PDGK				⇑S		**Sn** 22 20 27.8	**+0.3**
	19nm,0.3s						
KPKS	**Kokpek**	**1.59 350**		P		**Pn** 22 20 10.4	**+0.5**
	0.1nm,0.1s						
KPKS				S		**Sg** 22 20 32.0	**-0.7**
	147nm,0.2s						
KPKS	**Kokpek**	**1.59 350**		*e*P		**Pn** 22 20 10.4	**+0.5**
	0.1nm,0.1s						
KPKS				*e*S		**Sg** 22 20 32.0	**-0.7**
	147nm,0.2s						
KURS	**Kuram**	**1.71 338**		P		**Pb** 22 20 13.2	**+0.1**
	25nm,0.2s						
KURS				S		**Sg** 22 20 36.5	**-0.1**
	38nm,0.2s						
KTMS	**Ketmen**	**1.82 31**		P		**Pn** 22 20 13.4	**+0.3**
	4.8nm,0.1s						
KTMS				S		**Sn** 22 20 36.9	**+0.6**
	17nm,0.1s						
KTMS	**Ketmen**	**1.82 31**		*e*P		**Pn** 22 20 13.4	**+0.3**
	4.8nm,0.1s						
KTMS				*e*S		**Sn** 22 20 36.9	**+0.6**
	17nm,0.1s						
MDOK	**Medeo**	**1.94 311**		Pg		**Pb** 22 20 16.8	**-0.3**
	31nm,0.2s						
MDOK				Lg		Lg 22 20 43.3	
	80nm,0.5s						
KOTS	**Kotyrbulak**	**1.96 314**		Pg		**Pb** 22 20 17.3	**0.0**
	28nm,0.1s						
KOTS				Lg		Lg 22 20 43.9	
	242nm,0.3s						
KOTS	**Kotyrbulak**	**1.96 314**		*e*P		**Pb** 22 20 17.3	**0.0**
	28nm,0.1s						
KOTS				*e*S		**Sg** 22 20 43.9	**-0.4**
	242nm,0.3s						
KNDC	**Almaty**	**2.02 311**		⇑Pg		**Pb** 22 20 18.4	**-0.1**
	44nm,0.5s						
KNDC				⇑Lg		Lg 22 20 47.0	
	44nm,0.7s						
AAA	**Alma-Ata**	**2.05 310**		Pg		**Pb** 22 20 19.3	**+0.5**
	109nm,0.2s						
AAA				Lg		Lg 22 20 47.4	
	8.2nm,0.2s						
AAA	**Alma-Ata**	**2.05 310**		*e*P		**Pb** 22 20 19.3	**+0.5**
	109nm,0.2s						
AAA				*e*S		**Sg** 22 20 47.4	**+0.1**
	8.2nm,0.2s						
ULHL	**Ulahol**	**2.12 280**		⇓*i*P		**Pn** 22 20 18.2	**+1.0**
ULHL				⇓*i*S		**Sb** 22 20 46.1	**-0.4**
IZV	**Izvestkoviy**	**2.13 303**		Pg		**Pb** 22 20 19.9	**-0.4**
	47nm,0.2s						
IZV				Lg		Lg 22 20 48.4	
	95nm,0.2s						
IZV	**Izvestkoviy**	**2.13 303**		*e*P		**Pb** 22 20 19.9	**-0.4**
	47nm,0.2s						
IZV				*e*S		**Sg** 22 20 48.4	**-1.5**
	95nm,0.2s						
BLB	**Baldybastay**	**2.24 349**		Pg		**Pb** 22 20 21.5	**-0.6**
	48nm,0.3s						
BLB				Lg		Lg 22 20 50.9	
	335nm,0.3s						
MTBS	**Maitube**	**2.29 303**		Pg		**Pb** 22 20 22.5	**-0.5**
	31nm,0.2s						
MTBS				Lg		Lg 22 20 53.0	
	47nm,0.3s						
MTBS	**Maitube**	**2.29 303**		*e*P		**Pb** 22 20 22.5	**-0.5**
	31nm,0.2s						
MTBS				*e*S		**Sg** 22 20 53.0	**-2.2**
	47nm,0.3s						
BOOM	**Boomskoye usch**	**2.38 285**		⇑*i*P		**Pn** 22 20 21.7	**+0.9**
BOOM				⇑*i*S		**Sb** 22 20 52.3	**-1.8**
KNOS	**Konyrlen**	**2.46 2**		Pg		**Pb** 22 20 25.5	**-0.4**
	11nm,0.1s						
KNOS				Lg		Lg 22 20 57.8	
	119nm,0.3s						
CHKK	**Chushkaly**	**2.47 323**		Pg		**Pb** 22 20 26.3	**+0.2**
	28nm,0.3s						
CHKK				Lg		Lg 22 20 59.3	
	226nm,0.2s						
CHKK	**Chushkaly**	**2.47 323**		*e*P		**Pb** 22 20 26.2	**+0.2**
	28nm,0.3s						
CHKK				*e*S		**Sg** 22 20 59.3	**-1.6**
	226nm,0.2s						
ARXS	**Arharly**	**2.48 339**		Pg		**Pb** 22 20 26.0	**-0.2**
	4.8nm,0.2s						
ARXS				Lg		Lg 22 20 58.7	
	89nm,0.3s						
ARXS	**Arharly**	**2.48 339**		*e*P		**Pb** 22 20 26.0	**-0.2**
	4.8nm,0.2s						
ARXS				*e*S		**Sb** 22 20 58.7	**+1.8**
	89nm,0.3s						
KTBS	**Karatobe**	**2.51 317**		Pg		**Pb** 22 20 27.6	**+0.9**
	9.6nm,0.2s						
KTBS				Lg		Lg 22 21 01.5	
	86nm,0.2s						
KST	**Kastek**	**2.55 298**		Pg		**Pb** 22 20 27.6	**+0.1**
	12nm,0.2s						
KST				Lg		Lg 22 21 01.8	
	80nm,0.5s						
KST	**Kastek**	**2.55 298**		*e*P		**Pb** 22 20 27.6	**+0.1**
	12nm,0.2s						
KST				*e*S		**Sg** 22 21 01.8	**-1.6**
	80nm,0.5s						
JNKS	**Jany-Kuch**	**2.68 253**		⇓*i*P		**Pn** 22 20 25.7	**+0.7**
JNKS				⇓*i*S		**Sn** 22 20 58.7	**+1.0**
TKM2	**Tokmak 2**	**2.75 293**		⇓*i*P		**Pn** 22 20 27.2	**+1.3**
TKM2				⇓*i*S		**Sn** 22 21 01.6	**+2.3**
DGS	**Degeres**	**2.77 300**		Pg		**Pb** 22 20 31.7	**+0.7**
	16nm,0.3s						
DGS				Lg		Lg 22 21 08.7	
	34nm,0.4s						
KUU	**Kurty**	**2.81 316**		Pg		**Pb** 22 20 32.1	**+0.3**
	3.3nm,0.0s						
KUU				Lg		Lg 22 21 09.1	

0.2nm,0.3s,baz=205,slow=13,SNR=23
MK31 ⇑Sn **Sn 22 22 07.1 +2.3**
0.2nm,0.2s,baz=200,slow=24,SNR=4.8
MK31 Lg Lg 22 22 29.8
2.6nm,0.9s,baz=201,slow=29,SNR=3.7
KK31 Karatay Array 6.42 284 ⇑Pn Pb 22 21 26.4 -6.9
0.4nm,0.3s,baz=147,slow=12,SNR=12
KK31 ⇓Pg Pg 22 21 36.0 -8.5
0.4nm,0.3s,baz=155,slow=16,SNR=6.1
KK31 ⇑Sn **Sn 22 22 35.2 +5.7**
0.8nm,0.3s
KK31 ⇑Lg Lg 22 23 03.1
0.5nm,0.3s

RSNC 10 22:25:57.9±0.0, 4°N±1′×7°7W±°, h115km±2km, M2.4, mb4.0, mB4.9, ML2.2, Mw(mB)4.2, Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.47**	**20**	P			Pn	22 26 14.9	-0.4
YOTC				S			Sn	22 26 28.3	-0.1
POPC	**Popayan, Colom**	**1.01**	**189**	P			Pn	22 26 18.9	-1.0
POPC				S			Sn	22 26 34.6	-1.8
ORTC	**Ortega, Tolima**	**1.31**	**74**	P			Pn	22 26 22.4	-0.5
ORTC				S			Sn	22 26 41.5	-0.4
BETC	**Betania**	**1.37**	**129**	P			Pn	22 26 23.0	-0.5
BETC				S			Sn	22 26 42.5	-0.5
PRAC	**Prado**	**1.63**	**84**	P			Pn	22 26 26.1	-0.5
PRAC				S			Sn	22 26 47.8	-0.7
RECRC	**Villamaria, Ca**	**1.82**	**39**	P			Pn	22 26 28.9	-0.6
RECRC				S			Sn	22 26 52.5	-1.0
CRUC	**La Cruz**	**2.01**	**193**	P			Pn	22 26 31.2	-0.4
CRUC				S			Sn	22 26 57.2	-0.1
GUY2C	**Guyana, Caldas**	**2.02**	**34**	P			Pn	22 26 31.0	-0.9
GUY2C				S			Sn	22 26 56.5	-1.3
URMC	**La Uribe, Meta**	**2.15**	**98**	P			Pn	22 26 32.3	-0.8
URMC				S			Sn	22 26 59.9	-0.1
CBOC	**Ciudad Bolivar**	**2.36**	**12**	P			Pn	22 26 35.6	-0.3
CBOC				S			Sn	22 27 05.5	+0.5
GCUF	**Volcan Galeras**	**2.44**	**200**	P			Pn	22 26 36.8	-0.5
GCUF				S			Sn	22 27 06.3	-1.2
CVER	**Cruz Verde, Cu**	**2.62**	**68**	P			Pn	22 26 39.6	+0.1
HELC	**Santa Helena**	**2.81**	**20**	P			Pn	22 26 41.9	0.0
HELC				S			Sn	22 27 16.2	+0.5
CHIC	**Chingaza**	**2.98**	**69**	P			Pn	22 26 44.2	+0.1
CHIC				S			Sn	22 27 18.8	-0.9
PTBC	**PUERTO BERRIO,**	**3.61**	**34**	P			Pn	22 26 51.4	-0.8
PTBC				S			Sn	22 27 32.4	-1.9
OTAV	**Otavalo**	**3.81**	**211**	P			Pn	22 26 54.7	-0.6
OTAV				S			Sn	22 27 39.4	-0.2
RUSC	**La Rusia**	**4.14**	**55**	P			Pn	22 26 59.6	-0.1
CRJC	**Cerrejon, Guaj**	**8.26**	**26**	P			Pn	22 27 53.9	-1.1
CRJC				S			Sn	22 29 26.2	-0.5

IDC 10 22:55:01.1±1.6, 22°25N×117°90E, h0km, mb3.5/4, mbtmp3.6/5, ML4.3/1, Error ellipse: s-maj=56.1km s-min=26.4km az=65.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**18.16**	**261**	P			Pn	22 59 14.4	-0.5
	0.4nm,0.3s,baz=79,slow=10,SNR=5.5								
	0.6nm,0.3s								
SONM	**Songino Array**	**27.15**	**343**	P			P	23 00 45.5	-0.6
	0.6nm,0.8s,baz=168,slow=9.0,SNR=4.2								
	0.6nm,0.8s								
MKAR	**Makanchi Array**	**37.71**	**319**	P			P	23 02 18.8	+0.4
	0.6nm,0.7s,baz=116,slow=9.2,SNR=4.1								
	0.6nm,0.7s								
KURBB	**Kurchatov Arra**	**41.72**	**323**	P			P	23 02 51.8	+0.1
	0.3nm,0.5s,baz=119,slow=7.2,SNR=3.1								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**48.23**	**160**	P			P	23 03 43.7	-0.1
	0.4nm,0.5s,baz=347,slow=9.6,SNR=5.2								
	0.4nm,0.5s								

IDC 10 23:05:36.2±4.1, 26°48N×142°33E, h0km, mb3.8/2, mbtmp3.7/3, ML1.8/1, Error ellipse: s-maj=281.7km s-min=17.2km az=84.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.62**	**348**	Pn			Pn	23 05 52.3	-0.1
	44nm,0.3s,baz=120,slow=20,SNR=177								
JCJ				Sn			Sn	23 06 03.2	+0.2
	104nm,0.3s,baz=243,slow=23,SNR=41								
MJAR	**Matsushiro Arr**	**10.62**	**342**	Pn			Pn	23 08 10.7	+1.0
	baz=152,slow=13,SNR=1.3								
	0.8nm,0.3s								
WRA	**Warramunga Arr**	**46.80**	**190**	P			P	23 14 07.1	-0.6
	0.3nm,0.5s,baz=12,slow=8.7,SNR=5.2								
	0.3nm,0.5s								
FINES	**FINESS Array B**	**78.55**	**334**	P			P	23 17 39.9	+0.6
	1.5nm,0.8s,baz=57,slow=5.9,SNR=7.5								
	1.5nm,0.8s								

*NEIC **10** 23:18:11.6±2.4, 33°83N±0°01×116°19W±0°01, h10km±5km, Error ellipse: s-maj=1.8km s-min=1.7km az=144.0*

PAS 10 23:18:12.0±2.0, 33°869N±0°010×116°197W±0°005, h8km±6km, ML3.1/181, ML3.0/114(NEIC), Error ellipse: s-maj=1.5km s-min=0.5km az=197.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EW2	**E Wide Canyon**	**0.19**	**292**				Pg	23 18 19.1	+3.2
BELC	**Belle Mtn. Jos**	**0.21**	**51**				Pg	23 18 16.4	0.0
BELC					Sg		Sg	23 18 19.2	-0.1
BELC					IAML			23 18 20.8	
	comp=N,2μm,0.2s								
BELC					IAML			23 18 21.0	
	comp=E,3μm,0.4s								
BLAC	**Blackrock camp**	**0.26**	**321**				Pn	23 18 20.9	-1.4
TPC	**Twentynine Pal**	**0.27**	**27**				Pg	23 18 17.1	-0.2
PMD	**Palm Desert**	**0.27**	**214**				Pg	23 18 17.1	-0.3
PMD					Sg		Sg	23 18 20.9	0.0
CTCC	**Cactus City**	**0.27**	**141**				Pg	23 18 17.6	+0.1
DEVC	**Devers**	**0.32**	**282**				Pg	23 18 18.5	+0.1
DEVC							Sg	23 18 23.1	+0.4
CTW	**Cottonwood Mou**	**0.33**	**125**				Pg	23 18 18.6	+0.1
CTW							Sg	23 18 23.4	+0.5
XPFO	**Pinon Flat**	**0.34**	**220**				Pg	23 18 18.3	-0.4
XPFO							Sg	23 18 22.9	-0.2
PFO	**Pinyon Flats O**	**0.34**	**221**				Pn	23 18 23.0	-0.3
PFO	**Pinyon Flats O**	**0.34**	**221**				Pg	23 18 18.3	-0.4
PFO					Sg		Sg	23 18 23.1	-0.1
PFO					IAML			23 18 23.5	
	comp=E,360nm,0.5s								
PFO					IAML			23 18 26.2	
	comp=E,244nm,0.5s								
GTM	**Goat Mountain**	**0.45**	**343**				Pg	23 18 20.5	-0.2
GTM							Sg	23 18 26.7	+0.1
GVDA	**Garner Valley**	**0.45**	**243**				Pg	23 18 20.4	-0.4
GVDA							Sg	23 18 26.3	-0.3
HAY	**Hayfield**	**0.46**	**111**				Pg	23 18 21.3	+0.4
HAY							Sg	23 18 27.9	+1.0
SNDA	**J Saunders Pla**	**0.47**	**228**				Sg	23 18 27.7	+0.4
DNR	**Dunn Ranch,Anz**	**0.47**	**230**				Pg	23 18 21.0	-0.2
DNR							Sg	23 18 27.6	+0.3
DNR					IAML			23 18 27.8	
	comp=N,1μm,0.2s								
FRD	**Ford Ranch, An**	**0.50**	**222**				Sg	23 18 28.4	0.0
CRY	**Cary Ranch**	**0.54**	**236**				Sg	23 18 29.4	-0.2
BZNA	**Buzz No.'s Pla**	**0.54**	**226**				Sg	23 18 29.4	-0.3
BORC	**Borrego Spring**	**0.63**	**197**				Pg	23 18 23.7	-0.4
BORC					Sg		Sg	23 18 32.0	-0.3
BORC					IAML			23 18 32.3	
	comp=E,857nm,0.2s								
BORC					IAML			23 18 35.2	
	comp=N,741nm,0.5s								
POB	**Polly Butte**	**0.63**	**253**				Pg	23 18 23.8	-0.4
POB							Sg	23 18 32.1	-0.4
BOMB	**Bombay Beach**	**0.64**	**142**				Pg	23 18 24.1	-0.1
BBSC	**Beaumont Base**	**0.65**	**275**				Pg	23 18 24.3	-0.3
BBSC							Sg	23 18 33.2	0.0
BC3	**Big Chuckawall**	**0.66**	**109**				Pg	23 18 24.6	-0.1
BC3							Sg	23 18 33.5	+0.3
BC3					IAML			23 18 35.2	
	comp=N,846nm,0.5s								
BC3					IAML			23 18 37.1	
	comp=E,695nm,0.6s								
FRK	**Frink**	**0.66**	**135**				Pg	23 18 24.2	-0.5
FRK							Sg	23 18 33.2	-0.1
SLH	**Sleepy Hollow**	**0.68**	**184**				Pg	23 18 24.9	-0.2
SLH							Sg	23 18 34.2	+0.3
HMTC	**Hemet**	**0.69**	**257**				Pg	23 18 24.8	-0.6
HMTC							Sg	23 18 33.7	-0.7
SIL	**Silver Peak**	**0.71**	**313**				Sg	23 18 35.1	+0.1
DGR	**Domenigoni Val**	**0.71**	**252**				Sg	23 18 34.4	-0.7
BBRC	**Big Bear Solar**	**0.72**	**303**				Pg	23 18 25.3	-0.6
BBRC							Sg	23 18 35.1	-0.2
BACC	**Bachelor Mtn.**	**0.75**	**250**				Sg	23 18 35.5	-0.7
PLM	**Palomar**	**0.76**	**227**				Sg	23 18 36.4	-0.1
MATG	**Mataguay Scout**	**0.77**	**210**				Pg	23 18 26.3	-0.5
MATG							Sg	23 18 36.6	-0.2
CFT	**Crafton Hills**	**0.78**	**283**				Pg	23 18 26.7	-0.3
SVD	**Seven Oaks Dam**	**0.79**	**288**				Pg	23 18 26.4	-0.7
SVD							Sg	23 18 37.3	-0.1
ERRC	**Elmore Ranch**	**0.81**	**157**				Pg	23 18 27.1	-0.5
ERRC							Sb	23 18 39.4	-0.1
JUEM	**Julian Eagle M**	**0.85**	**203**				Pg	23 18 27.8	-0.7
JUEM							Sg	23 18 38.9	-0.7
CLI2	**Calipatria 2**	**0.91**	**145**				Pg	23 18 28.3	-1.2
IRM	**Iron Mountain**	**0.92**	**71**				Pg	23 18 29.0	-0.7
IRM					Sg		Sg	23 18 41.4	-0.2
IRM					IAML			23 18 42.6	
	comp=E,596nm,0.2s								
DANC	**Danby, Needles**	**1.02**	**41**				Pg	23 18 31.0	-0.7
DANC					IAML			23 18 50.5	
	comp=N,380nm,0.5s								
DANC					IAML			23 18 51.3	
	comp=E,361nm,0.6s								
ELS	**Elsinore Mount**	**1.05**	**258**				Pg	23 18 31.3	-0.9
ELS					Sg		Sg	23 18 44.3	-1.5
ELS					IAML			23 18 44.6	
	comp=N,332nm,0.2s								
ELS					IAML			23 18 45.4	
	comp=E,229nm,0.2s								
DPP	**Dos Picos Cty**	**1.07**	**216**				Pg	23 18 31.3	-1.2
DPP					Sg		Sg	23 18 45.8	-0.6
DPP					IAML			23 18 47.9	
	comp=N,228nm,0.3s								
CPE	**Camp Elliot**	**1.24**	**218**				Pn	23 18 34.0	-1.6
CPE					Sg		Sb	23 18 49.9	-1.8
CPE					IAML			23 18 51.0	
	comp=N,430nm,0.2s								
CPE					IAML			23 18 51.2	
	comp=E,395nm,0.2s								
YUH	**Yuha Desert**	**1.24**	**169**				Pn	23 18 34.9	-0.8
YUH					Sg		Sb	23 18 48.0	-3.8
BAR	**Barrett**	**1.25**	**199**				Pn	23 18 33.0	-1.9
BAR					Sg		Sb	23 18 50.7	-1.5
BAR					IAML			23 18 51.5	
	comp=N,340nm,0.1s								
BAR					IAML			23 18 52.0	
	comp=E,395nm,0.4s								
BFSC	**Mount Baldy Ra**	**1.27**	**287**				Pn	23 18 35.0	-1.2
BFSC					IAML			23 18 54.7	
	comp=E,195nm,0.5s								
BLYC	**Blythe**	**1.40**	**94**				Pn	23 18 37.9	+0.1
BLYC					Sg		Sg	23 18 56.9	-0.1
BLYC					IAML			23 18 58.0	
	comp=E,287nm,0.3s								
BLYC					IAML			23 18 58.2	
	comp=N,253nm,0.7s								
GLA	**Glamis**	**1.41**	**125**				Pn	23 18 35.9	-2.1
GLA							Pb	23 18 38.1	-0.4
GLA					IAML			23 19 01.4	
	comp=N,291nm,0.5s								
GLA					IAML			23 19 03.0	
	comp=E,324nm,0.9s								
GSC	**Goldstone, Bar**	**1.52**	**341**				Pn	23 18 38.1	-1.4
GSC							Sb	23 18 59.8	-0.1
GSC					IAML			23 19 01.6	
	comp=E,215nm,0.4s								
TJX	**Tijuana**	**1.53**	**208**				Pn	23 18 38.9	-0.8
TJX					IAML			23 19 02.2	
	comp=E,234nm,0.7s								
TJX					IAML			23 19 04.4	
	comp=N,215nm,0.5s								
NEE2	**Needles Airpor**	**1.58**	**55**				Pn	23 18 40.5	+0.1
CBX	**Cerro Bola**	**1.60**	**194**				Pn	23 18 40.3	-0.4
CPBX	**Cerro Prieto**	**1.63**	**152**				Pn	23 18 40.9	0.0
CPBX					IAML			23 19 24.9	
	comp=N,176nm,0.5s								
CPBX					IAML			23 19 27.1	
	comp=E,231nm,0.5s								
PASC	**Pasadena Art C**	**1.68**	**281**				Pn	23 18 41.0	-0.7
PASC					IAML			23 19 03.8	
	comp=N,204nm,0.5s								
PASC					IAML			23 19 05.3	
	comp=E,178nm,0.4s								
MTPC	**Mountain Pass**	**1.70**	**18**				Pn	23 18 42.0	-0.1
MTPC					IAML			23 19 07.0	
	comp=E,160nm,0.3s								
MTPC					IAML			23 19 07.8	
	comp=N,96nm,0.4s								
ESJX	**Sierra Juarez**	**1.87**	**174**				Pn	23 18 43.0	-1.5
CCCA	**Chr Cany lake**	**1.91**	**330**				Pn	23 18 45.8	+0.9
TPO	**Tropico Hills**	**1.96**	**302**				Pn	23 18 45.8	+0.2
TPO					IAML			23 19 18.0	
	comp=E,92nm,0.8s								
TPO					IAML			23 19 20.9	
	comp=N,110nm,0.6s								
LRMC	**Laurel Mtn Rad**	**2.02**	**323**				Pn	23 18 46.1	-0.5
LRMC					IAML			23 19 19.5	
	comp=E,71nm,0.4s								
SHOC	**Shoshone, Teco**	**2.03**	**358**				Pn	23 18 45.6	-0.9
WSHM	**Spangler Hills**	**2.03**	**329**				Pn	23 18 47.0	+0.4
WSHM					IAML			23 19 18.9	
	comp=E,98nm,0.2s								
V12A	**Nelson**	**2.16**	**30**				Pb	23 18 51.6	+0.2
QSM	**Queen of Sheba**	**2.16**	**345**				Pb	23 18 51.8	+0.3
QSM					IAML			23 19 21.4	
	comp=E,91nm,0.3s								
QSM					IAML			23 19 23.8	
	comp=N,77nm,0.4s								
OSI	**Osito Audit: C**	**2.22**	**290**	Pn			Pn	23 18 47.9	-1.3
OSI							Pb	23 18 53.0	+0.5
OSI					IAML			23 19 29.7	
	comp=E,61nm,0.9s								
OSI					IAML			23 19 31.7	
	comp=N,119nm,0.7s								
CLC	**China Lake**	**2.26**	**330**	Pg			Pb	23 18 53.5	+0.4
CLC					IAML			23 19 17.8	
	comp=E,118nm,0.2s								
W13A	**Hualapai Mount**	**2.27**	**57**				Pn	23 18 49.2	-0.8
W13A				Pg			Pb	23 18 54.2	+0.8
113A	**Mohawk Valley,**	**2.31**	**118**				Pn	23 18 47.9	-2.5
113A				Pg			Pg	23 18 55.4	-0.9
GWY	**Greenwater Val**	**2.34**	**351**				Pn	23 18 50.0	-1.0
MPMC	**Manual Prospec**	**2.43**	**334**				Pn	23 18 51.5	-0.7
MPMC					IAML			23 19 30.6	
	comp=N,52nm,0.6s								
VTX	**Valle De La Tr**	**2.50**	**172**	Pn			Pn	23 18 51.4	-1.6
VTX					IAML			23 20 01.7	
	comp=N,47nm,0.5s								
VTX					IAML			23 20 05.6	
	comp=E,47nm,1.2s								
ISA	**Isabella, Lake**	**2.59**	**314**				Pn	23 18 53.2	-1.1
Y14A	**Wickenburg**	**2.66**	**88**				Pb	23 19 00.5	+0.6
Y14A					IAML			23 19 40.7	
	comp=E,70nm,0.6s								
SHPR	**Sheep Range**	**2.76**	**18**				Pn	23 18 56.2	-0.6
SHPR				Pg			Pg	23 19 03.9	-1.1
WCT	**Wildcat Mounta**	**2.94**	**353**				Pg	23 19 06.7	-1.7
WCT					IAML			23 19 45.4	
	comp=N,36nm,0.5s								
WCT					IAML			23 19 48.7	
	comp=E,28nm,0.6s								
CWC	**Cottonwood Cre**	**2.99**	**330**				Pn	23 18 58.9	-1.0
CWC				Pg			Pb	23 19 07.2	+1.5
TPNV	**Topopah Spring**	**3.07**	**359**				Pn	23 19 02.3	+1.3
TPNV					IAML			23 19 49.9	
	comp=E,36nm,0.4s								
TPNV					IAML			23 19 53.8	
	comp=E,52nm,0.5s								
GRAC	**Grapevine Rang**	**3.26**	**343**	IAML				23 20 08.8	
	comp=E,45nm,0.8s								
WUAZ	**Wupatki**	**4.30**	**66**	IAML				23 20 27.4	
	comp=E,15nm,0.5s								
WUAZ					IAML			23 20 35.1	
	comp=E,18nm,1.0s								

ISC 10 23:31:17.9±0.9, 44°42N±0°02×15°18E±0°03, h9km±8km, n22, σ0°870/42, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VIRC	**Vir**	**0.16**	**215**	*i*	Pg		**Pg**	**23 31 20.9**	**-0.3**
VIRC					Sg		**Sg**	**23 31 23.7**	**+0.1**
NVLJ	**Novalja**	**0.26**	**303**	*e*	Pg		**Pg**	**23 31 22.8**	**-0.4**
NVLJ					Sg		**Sg**	**23 31 26.9**	**+0.2**
UDBI	**Udbina**	**0.43**	**76**	*e*	Pg		**Pg**	**23 31 26.5**	**+0.1**
UDBI					Sg		**Sb**	**23 31 33.3**	**-1.0**
RABC	**Rab**	**0.43**	**319**	*e*	Pg		**Pg**	**23 31 25.8**	**-0.5**
RABC					Sg		**Sg**	**23 31 32.7**	**+0.6**
DUGI	**Dugi Otok**	**0.44**	**191**	*e*	Pg		**Pg**	**23 31 26.1**	**-0.3**
DUGI					Sg		**Sg**	**23 31 32.5**	**+0.3**
PLIT	**Plitvice**	**0.56**	**35**	*e*	Pg		**Pg**	**23 31 28.4**	**-0.3**
PLIT					Sg		**Sg**	**23 31 36.5**	**+0.4**
MORI	**Morici**	**0.67**	**145**	*e*	Pg		**Pg**	**23 31 30.3**	**-0.5**
MORI					Sg		**Sg**	**23 31 40.5**	**+0.8**
ZIRJ	**Zirje**	**0.84**	**156**	*i*	Pg		**Pg**	**23 31 33.1**	**-0.9**
ZIRJ					Sg		**Sb**	**23 31 46.0**	**+0.2**
KIJV	**Kijevo**	**0.98**	**115**	*e*	Pg		**Pg**	**23 31 35.7**	**-0.9**
KIJV					Sg		**Sb**	**23 31 50.4**	**+0.5**
RIY	**Rijeka**	**1.03**	**332**	*e*	Pg		**Pg**	**23 31 36.9**	**-0.8**
RIY					Sg		**Sn**	**23 31 52.7**	**-0.3**
BOJS	**Bojanci**	**1.08**	**3**	*i*	Pg		**Pg**	**23 31 38.8**	**+0.1**
BOJS				*i*	Sg		**Sn**	**23 31 53.5**	**-0.8**
BOJS					IAML			23 31 58.0	
	comp=Z,3.3nm,0.1s								
GBRS	**Gornja Briga**	**1.14**	**347**	*i*	Pg		**Pb**	**23 31 38.9**	**-0.8**
GBRS				*e*	Sg		**Sn**	**23 31 55.3**	**-0.4**
GBRS					IAML			23 32 03.3	
	comp=Z,1.7nm,0.1s								
KNDS	**Knezji Dol**	**1.24**	**333**	*i*	Pg		**Pn**	**23 31 40.5**	**-0.9**
KNDS				*e*	Sg		**Sn**	**23 31 59.4**	**+1.1**
KNDS					IAML			23 32 02.8	
	comp=Z,2.8nm,0.2s								
SKDS	**Skadanscina**	**1.40**	**324**	*i*	Pg		**Pn**	**23 31 43.7**	**+0.2**
SKDS				*i*	Sg		**Sg**	**23 32 03.9**	**+1.2**
SKDS					IAML			23 32 06.3	
	comp=Z,3.1nm,0.2s								
VISS	**Visnje**	**1.40**	**350**	*i*	Pg		**Pg**	**23 31 44.5**	**-0.2**
VISS				*i*	Sg		**Sg**	**23 32 03.7**	**+0.8**
VISS					IAML			23 32 06.0	
	comp=Z,4.4nm,0.2s								
CRES	**Cresnjevec Ost**	**1.42**	**8**	*e*	Sg		**Sg**	**23 32 03.6**	**+0.2**
CRES					IAML			23 32 07.9	
	comp=Z,2.8nm,0.2s								
CEY	**Cerknica**	**1.42**	**338**	*i*	Pg		**Pb**	**23 31 44.8**	**+0.3**
CEY				*i*	Sg		**Sg**	**23 32 05.1**	**+1.6**
CEY					IAML			23 32 06.8	
	comp=Z,2.6nm,0.2s								
HVAR	**Hvar**	**1.55**	**143**	*i*	Pn		**Pn**	**23 31 46.1**	**+0.6**
HVAR					Sn		**Sg**	**23 32 07.9**	**+0.3**
GBAS	**Gorenja Brezov**	**1.60**	**341**	*i*	Sg		**Sg**	**23 32 09.6**	**+0.3**
GBAS					IAML			23 32 14.0	
	comp=Z,1.6nm,0.1s								
JAVS	**Javornik**	**1.67**	**332**	*i*	Pg		**Pn**	**23 31 48.0**	**+0.6**
JAVS				*i*	Sg		**Sg**	**23 32 11.7**	**+0.1**
JAVS					IAML			23 32 19.7	
	comp=Z,1.1nm,0.1s								
RICI	**Ricice**	**1.69**	**123**	*e*	Pn		**Pb**	**23 31 48.8**	**-0.3**
RICI					Sn		**Sg**	**23 32 12.1**	**0.0**
LSTV	**Lastovo**	**2.07**	**142**	*i*	Pn		**Pn**	**23 31 54.4**	**+1.7**
LSTV					Sn		**Sb**	**23 32 20.5**	**-0.8**

*IDC **11** 00:12:21.6±3.1, 26°.39N×58°.17E, h0km, mb3.8/18, mbtmp3.8/20, ML4.0/2, MS3.3/5, Error ellipse: s-maj=61.5km s-min=18.7km az=170.0*
*DSN **11** 00:12:27.4±2.7, 27°.48N×58°.15E, h30km, ML3.7/13, Error ellipse: s-maj=36.2km s-min=21.2km az=164.0*
*NEIC **11** 00:12:27.9±1.5, 27°.07N±0°.07×58°.01E±0°.07, h10km±1km, mb4.1/22, Error ellipse: s-maj=12.3km s-min=9.0km az=38.0*
*THR **11** 00:12:29.8±0.0, 27°.07N×57°.87E, h14km±486km, ML4.0*
*TEH **11** 00:12:31.9, 27°.06N×57°.89E, h45km*
*OMAN **11** 00:12:33.3±0.1, 26°.90N×57°.83E, h10km, mb4.5/9, ml3.9/19, Error ellipse: s-maj=1.7km s-min=1.0km az=232.0*

ISC 11 00:12:32.6±1.0, 27°.10N±0°.05×57°.95E±0°.04, h40km±12km, n154, σ1°53/172, mb4.0/33, MS3.4/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.30**	**286**		Pg		**Pn**	**00 12 55.0**	**+0.8**
GENO	**Geno**	**1.61**	**281**		Pg		**Pn**	**00 13 00.1**	**+1.4**
BANOM	**Banah**	**1.89**	**232**		P		**Pn**	**00 13 03.9**	**+1.6**
SHME	**Shamm** SNR=42	**1.93**	**238**		P		**Pn**	**00 13 05.6**	**+2.7**
SHME	**Shamm** SNR=42	**1.93**	**238**	*e*	P		**Pn**	**00 13 04.7**	**+1.8**
SHME					S		**Sn**	**00 13 30.7**	**+4.7**
MDH	**Madha** SNR=23	**2.33**	**220**		P		**Pn**	**00 13 09.0**	**+0.5**
MDH					S		**Sn**	**00 13 36.7**	**+0.9**
MDH	**Madha**	**2.33**	**220**		P		**Pn**	**00 13 08.1**	**-0.3**
MASF	**Masafi** SNR=7.9	**2.36**	**223**		P		**Pn**	**00 13 09.8**	**+1.0**
MASF					S		**Sn**	**00 13 37.1**	**+0.5**
	SNR=44								
MSFE	**Esma-Masafi** SNR=57	**2.37**	**223**	*e*	P		**Pn**	**00 13 08.8**	**-0.2**
UOSS	**Minazif**	**2.66**	**217**	Pn			**Pn**	**00 13 12.8**	**-0.2**
UOSS	**Minazif**	**2.66**	**217**				**Pn**	**00 13 12.1**	**-0.9**
UOSS							**Sn**	**00 13 42.6**	**-1.4**
UOSS	**Minazif**	**2.66**	**217**		P		**Pn**	**00 13 13.4**	**+0.5**
UOSS					S		**Sn**	**00 13 43.7**	**-0.3**
UOSS	**Minazif**	**2.66**	**217**		P		**Pn**	**00 13 12.6**	**-0.4**
CHBR	**Chabahar**	**2.72**	**123**	Pn			**Pn**	**00 13 14.8**	**+1.0**
CHBR	**Chabahar**	**2

ARQ Araqi 3.97 199 P Pn 00 13 33.8 +2.8
SNR=106
SRVN Saravan 3.97 85 Pn Pn 00 13 33.3 +2.2
SRVN Saravan 3.97 85 *e*Pn Pn 00 13 33.7 +2.6
SRVN IAML 00 15 04.9
comp=Z,46nm,1.0s
SMDO Samad 4.03 179 P Pn 00 13 33.0 +1.1
SNR=36
SMDO S Sn 00 14 18.3 +0.5
JHRM Jahrom 4.12 291 Pn Pn 00 13 34.1 +1.0
LMD1 Lamerd 4.27 274 Pn Pn 00 13 35.2 +0.1
WBK Wadi Bani Khal 4.57 168 Pn Pn 00 13 39.8 +0.6
WBK Wadi Bani Khal 4.57 168 P Pn 00 13 40.0 +0.8
SNR=121
WBK S Sn 00 14 30.4 -0.6
NHDN Nehbandan 4.65 23 Pn Pn 00 13 42.1 +1.7
JMDO Jabal Madar 4.71 178 P Pn 00 13 43.0 +1.8
SNR=51
JMDO S Sn 00 14 37.2 +2.5
IBAF Bafgh 4.93 336 Pn Pn 00 13 45.5 +1.2
BSRN Basiran 4.95 12 *e*Pn Pn 00 13 44.9 +0.3
BSRN IAML 00 15 17.2
comp=Z,80nm,1.0s
UMZA Um Al Zommool 5.05 211 P Pn 00 13 47.1 +1.3
UMZA S Sn 00 14 43.6 +0.7
JLN Jalan Bani Buh 5.11 165 P Pn 00 13 47.1 +0.6
SNR=20
IMEH Mehriz 5.17 326 Pn Pn 00 13 49.2 +1.5
GHWR Ruwais 5.55 237 P Pn 00 13 53.0 +0.4
GHWR S Sn 00 14 56.5 +1.3
MZR Muzera 5.75 226 P Pn 00 13 56.6 +1.2
ICHK Chekchek 5.98 330 Pn Pn 00 13 59.9 +1.1
TPRV Parvadeh(Tabas 6.01 350 Pn Pn 00 14 00.7 +1.6
YZKH Yazd 6.03 332 *e*Pn Pn 00 14 00.7 +1.4
YZKH IAML 00 15 56.8
comp=Z,24nm,1.0s
DSBU Dashti - Bushe 6.06 283 Pn Pn 00 13 59.4 -0.4
KAZ2 Kazeron-Fars-I 6.08 296 Pn Pn 00 13 59.7 -0.4
MHTO MHTO 6.09 180 P Pn 00 14 02.0 +1.9
SNR=33
MHTO S Sn 00 15 10.2 +1.7
AFRZ Afriz 6.37 8 Pn Pn 00 14 05.4 +1.4
SHMA Al-Shehemyia 6.38 260 P Pn 00 14 05.0 +0.9
SNR=35
SHMA S Sn 00 15 17.1 +1.4
TRNA Turayna 6.51 250 P Pn 00 14 07.0 +1.1
SNR=22
TRNA S Sn 00 15 19.9 +1.0
SNR=9.4
TKDS Koohdasht(Taba 6.53 354 Pn Pn 00 14 08.2 +2.0
TABS Tabas 6.57 354 *e*Pn Pn 00 14 08.7 +2.0
TABS IAML 00 16 18.1
comp=Z,33nm,1.0s
KLNJ Kolanjah 6.79 306 Pn Pn 00 14 10.5 +0.5
SHRT Shahrakht 6.83 17 *e*Pn Pn 00 14 11.8 +1.5
SHRT IAML 00 16 32.5
comp=Z,16nm,1.0s
SMRA Abu-Samra 6.83 251 P Pn 00 14 12.0 +1.7
SNR=7.1
SMRA S Sn 00 15 26.9 +0.2
ANAR Anarak 7.08 330 Pn Pn 00 14 14.5 +0.7
NASN Na'in 7.22 323 *e*Pn Pn 00 14 17.1 +1.2
NASN IAML 00 16 28.2
comp=Z,11nm,1.0s
IGAR Gharneh 7.37 317 Pn Pn 00 14 18.3 +0.5
IBRJ Brojen 7.54 311 Pn Pn 00 14 21.3 +1.0
IZEF Zefreh 7.56 321 Pn Pn 00 14 21.2 +0.8
ZNGN Zangian 7.95 311 Pn Pn 00 14 25.8 0.0
JHBN Jahan bin 8.14 311 Pn Pn 00 14 28.5 0.0
HRA Herat 8.15 26 Pn Pn 00 14 28.4 -0.1
IPIR Pirpir 8.28 314 Pn Pn 00 14 30.5 +0.1
IKLH Kolahrood 8.29 320 Pn Pn 00 14 31.9 +1.4
ISFB Sefidab 8.74 327 Pn Pn 00 14 37.7 +1.3
DOK Doka 9.15 203 P Pn 00 14 42.7 +0.7
SNR=19
DOK S Sn 00 16 22.8 -1.0
DMTO DMTO 9.74 197 P Pn 00 14 51.0 +0.7
SNR=14
WHFO Wadi Hawf 9.92 204 P Pn 00 14 51.4 -1.3
SNR=48
RBK Rabkut 10.16 201 P Pn 00 14 58.0 +2.0
SNR=7.0
RBK S Sn 00 16 48.7 0.0
SNR=6.1
ABTO Aybut 10.61 205 P Pn 00 15 00.4 -1.8
SNR=64
ABTO S Sn 00 16 58.5 -1.4
RAYN Ar Rayn 11.81 255 Pn 00 15 15.7 -2.9
RAYN Ar Rayn 11.81 255 *i* P Pn 00 15 15.2 -3.3
SNR=9.7
GAR Garm 15.74 38 Pn Pn 00 16 08.9 -2.6
DRK Karamyk 16.90 40 Pn Pn 00 16 22.8 -3.6
GNI Garni 17.01 323 P Pn 00 16 28.1 +0.5
GNI Garni 17.01 323 Pn P 00 16 32.0 +2.8
comp=Z,0.5nm,0.3s,baz=66,slow=8.3,SNR=4.4
GNI LR LR 00 23 46.0
comp=Z,68nm,19.4s,baz=54,slow=39
comp=Z,3.0nm,0.7s
GURO Guroymak-BITLI 17.56 315 P Pn 00 16 34.5 +0.1
MARD Mardin 17.72 309 Pn 00 16 35.6 -0.8
KK31 Karatay Array 18.95 29 P Pn 00 16 51.1 -0.1
KKAR Karatay Array 18.95 29 P P 00 16 50.6 +0.3
ASF Jabal al Asfar 18.98 290 Pn P 00 16 49.9 -0.9
comp=Z,0.5nm,0.3s,baz=122,slow=2.2,SNR=7.5
ASF Sn S 00 20 31.9 +7.6
comp=Z,0.1nm,0.3s,baz=49,slow=21,SNR=2.4
comp=Z,3.4nm,0.6s
KOPT Kop Dagi 19.39 316 P P 00 16 54.2 -1.1
KOPT IAmb IAmb 00 17 07.8
comp=Z,6.7nm,0.9s
GHAJ Ghor Haditha 19.98 287 P P 00 16 59.7 -1.8
GHAJ IAmb IAmb 00 17 08.5
comp=Z,9.5nm,0.8s
MMAI Mount Meron Ar 20.37 292 P P 00 17 05.7 -0.2
comp=Z,1.7nm,0.7s,baz=129,slow=12,SNR=4.3
MMAI LR LR 00 26 30.9
comp=Z,63nm,18.8s,baz=102,slow=41
comp=Z,1.7nm,0.7s
EIL Elat 20.39 283 P P 00 17 04.5 -1.6
comp=Z,5.9nm,1.0s,baz=104,slow=5.7,SNR=7.8
comp=Z,5.9nm,1.0s
KBZ Khabaz 20.58 328 P Pn 00 17 10.4 0.0
comp=Z,1.6nm,0.9s,baz=126,slow=8.7,SNR=1.8
comp=Z,1.6nm,0.9s
KVAR Kislovodsk Arr 20.85 328 P Pn 00 17 13.8 +0.2
comp=Z,1.4nm,0.7s,baz=353,slow=8.1,SNR=1.6
comp=Z,1.4nm,0.7s
BNN Bunyan 21.88 308 P P 00 17 20.2 -1.9
BNN IAmb IAmb 00 17 30.1
comp=Z,4.3nm,0.7s
TOKA Tokat 22.13 312 P P 00 17 24.0 -0.8
TOKA IAmb IAmb 00 17 28.8
comp=Z,5.7nm,1.0s
AB31 Akbulak array 22.17 3 P P 00 17 25.0 -0.1
AB31 IAmb IAmb 00 17 30.0
comp=Z,6.1nm,0.8s
ABKAR Akbulak array 22.17 3 P P 00 17 24.8 -0.2
BR131 Keskin Array S 23.80 308 P P 00 17 40.9 -0.9
BR131 IAmb IAmb 00 17 44.8
comp=Z,4.2nm,1.0s
BR131 Keskin Array S 23.80 308 P P 00 17 43.5 +1.7
SNR=6.9
BRTR Keskin Array B 23.80 308 P P 00 17 41.0 -0.9
BRTR Keskin Array B 23.80 308 P P 00 17 43.0 +1.2
comp=Z,1.9nm,0.6s,baz=123,slow=10,SNR=18
comp=Z,1.9nm,0.6s
ANTO Ankara 24.45 308 P P 00 17 46.4 -1.3
ISP Isparta 25.41 302 P P 00 17 55.5 -1.0
ISP IAmb IAmb 00 18 04.3
comp=Z,4.7nm,0.9s
EVN Everest 25.59 81 P P 00 17 59.6 +0.7
EVN IAmb IAmb 00 18 06.6
comp=Z,3.3nm,0.8s
ELL Elmali 25.59 299 P P 00 17 56.4 -1.8
MDUB Mudurnu 25.81 308 P P 00 18 00.4 +0.3
MKAR Makanchi Array 27.46 38 P P 00 18 14.3 -0.6
comp=Z,0.3nm,0.6s,baz=214,slow=11,SNR=2.5
MKAR LR LR 00 31 14.5
comp=Z,54nm,19.4s,baz=1.0,slow=41
comp=Z,0.3nm,0.6s
BVAR Borovoye Array 27.51 16 P P 00 18 15.0 -0.1
comp=Z,1.1nm,0.5s,baz=196,slow=9.5,SNR=8.0
comp=Z,1.1nm,0.5s
KURBB Kurchatov Arra 28.25 28 P P 00 18 21.4 -0.3
comp=Z,0.4nm,0.5s,baz=228,slow=8.6,SNR=4.7
comp=Z,0.4nm,0.5s
KURK Kurchatov 28.36 28 P P 00 18 21.4 -1.2
WMQ Urumqi 29.20 47 *e*P P 00 18 34.0 +3.6
AKASG Malin Array Be 32.13 325 IAmb IAmb 00 19 01.8
comp=Z,2.1nm,0.9s
AKASG Malin Array Be 32.13 325 P P 00 18 55.5 -0.6
comp=Z,0.7nm,0.5s,baz=134,slow=9.1,SNR=2.3
comp=Z,0.7nm,0.5s
ZALV Zalesovo Beam 33.33 29 P P 00 19 05.0 -1.5
comp=Z,0.7nm,0.3s,baz=251,slow=9.2,SNR=7.3
comp=Z,0.7nm,0.3s
RONA Rosalia, Austr 38.37 314 *i* P P 00 19 50.3 +0.5
comp=Z,1.6nm,0.5s
CONA Conrad Observa 38.72 314 *e*P P 00 19 52.4 -0.4
comp=Z,0.5nm,0.4s
SOKA Soboth 38.91 312 *e*P P 00 19 53.0 -1.5
comp=Z,0.9nm,0.7s
PZH PanZhiHua 38.94 81 P P 00 19 56.7 +1.7
MOA Molln 39.72 313 *i* P P 00 20 01.5 +0.4
comp=Z,1.3nm,0.5s
CKRC Cesky Krumlov 39.97 315 *e*P P 00 20 04.0 +0.9
BIOA Bad Ischl, Aus 40.09 313 *i* P P 00 20 04.5 +0.3
comp=Z,1.2nm,0.5s
KBA Koelnbreinsper 40.13 312 *e*P P 00 20 04.8 0.0
comp=Z,0.8nm,0.5s
ZVC Zvikov 40.22 316 *e*P P 00 20 05.8 +0.6
GERES GERESS Array B 40.36 315 P P 00 20 05.5 -1.0
comp=Z,0.9nm,0.7s,baz=109,slow=7.6,SNR=7.4
comp=Z,0.9nm,0.7s
FINES FINESS Array B 40.43 337 P P 00 20 07.1 +0.3
comp=Z,2.0nm,0.6s,baz=128,slow=9.2,SNR=17
comp=Z,2.0nm,0.6s
KHC Kasperske Hory 40.52 315 *e*P P 00 20 07.4 -0.3
ABTA Abfaltersbach 40.61 311 *i* P P 00 20 09.6 +1.0
comp=Z,0.8nm,0.5s
LESA Schwarzleotal 40.66 312 *i* P P 00 20 09.0 +0.1
comp=Z,1.3nm,0.5s
WTTA Wattenberg 41.31 312 *i* P P 00 20 14.7 +0.2
comp=Z,3.9nm,0.5s
SQTA Sankt Quirin 41.59 312 *i* P P 00 20 16.5 -0.1
comp=Z,1.9nm,0.3s
MOTA Moosalm 41.68 312 *i* P P 00 20 17.1 -0.3
comp=Z,2.2nm,0.7s
FETA Feichten 41.87 311 *i* P P 00 20 16.9 -2.0
comp=Z,1.1nm,0.4s
DAVA Damuels 42.49 311 *i* P P 00 20 23.9 -0.1
comp=Z,2.2nm,0.5s
HFS Hagfors 44.61 330 P P 00 20 40.3 -0.4
comp=Z,1.0nm,0.4s,baz=133,slow=8.5,SNR=7.9
comp=Z,1.0nm,0.4s
NRIK Noril'sk 45.67 14 IAmb IAmb 00 20 53.8
comp=Z,1.6nm,0.6s
NRIK Noril'sk 45.67 14 P P 00 20 48.7 -0.3
comp=Z,1.1nm,0.3s,baz=193,slow=8.4,SNR=3.5
comp=Z,1.1nm,0.3s
HHC Hu-ho-hao-te 45.86 58 *e*P P 00 20 52.3 +1.2
HHC pmax pmax
comp=Z,11nm,0.5s
HHC pmax pmax
comp=Z,60nm,5.2s
NOA NORSAR Array B 46.12 331 P P 00 20 53.0 +0.3
comp=Z,0.7nm,0.8s,baz=101,slow=7.1,SNR=3.4
NOA LR LR 00 44 43.8
comp=Z,78nm,21.5s,baz=305,slow=42
comp=Z,0.7nm,0.8s
ARCES ARCESS Array B 46.47 345 IAmb IAmb 00 21 03.1
comp=Z,1.8nm,0.8s
ARCES ARCESS Array B 46.47 345 P P 00 20 55.2 -0.1
comp=Z,2.8nm,1.1s,baz=137,slow=9.3,SNR=6.0
comp=Z,2.8nm,1.1s
ESDC Sonseca Array 52.26 301 P P 00 21 38.1 -1.9
comp=Z,0.8nm,0.6s,baz=66,slow=6.9,SNR=7.2
comp=Z,0.8nm,0.6s
ILAR Eielson Array 86.41 10 P P 00 25 06.7 -3.8
ILAR Eielson Array 86.41 10 P P 00 25 10.0 -0.5
comp=Z,0.3nm,0.7s,baz=341,slow=6.3,SNR=3.0
ILAR LR LR 01 09 37.2
comp=Z,21nm,18.0s,baz=60,slow=40
comp=Z,0.3nm,0.7s

KRNET ***11*** *00:16:10.6±0.1, 41°.37N×77°.71E, h14km, mb3.1*
NNC ***11*** *00:16:11.0±2.2, 41°.35N×77°.74E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=15.0km s-min=9.8km az=172.0*
SOME ***11*** *00:16:11.4, 41°.38N×77°.75E, h15km*
ISC 11 00:16:12.4±1.7, 41°.44N±0°.06×77°.67E±0°.03, h1km±12km, n44, σ1°19/69, 21C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.31**	**20**	⇑*i*P		**Pg**		**00 16 17.5**	**-0.8**
TARG				⇑*i*S		**Sg**		**00 16 23.0**	**+0.6**
KDJ	**Kajisay**	**0.78**	**332**	⇑*i*P		**Pg**		**00 16 26.8**	**-0.6**
KDJ				⇑*i*S		**Sg**		**00 16 38.6**	**+1.1**
PRZ	**Przheval'sk**	**1.18**	**27**	⇓*i*P		**Pg**		**00 16 33.9**	**-1.1**
PRZ				⇑*i*S		**Sb**		**00 16 50.8**	**-0.7**
ULHL	**Ulahol**	**1.33**	**308**	⇑*i*P		**Pn**		**00 16 36.8**	**-1.6**
ULHL				⇑*i*S		**Sg**		**00 16 55.8**	**+0.5**
JNKS	**Jany-Kuch**	**1.56**	**257**	⇑*i*P		**Pn**		**00 16 39.8**	**-1.7**
JNKS				⇑*i*S		**Sn**		**00 17 01.5**	**-1.1**
BOOM	**Boomskoye usch**	**1.66**	**310**	⇓*i*P		**Pn**		**00 16 42.6**	**-0.2**
BOOM				⇓*i*S		**Sb**		**00 17 05.9**	**+0.5**
SATY	**Saty**	**1.71**	**19**	P		**Pb**		**00 16 44.1**	**-0.6**
	10nm,0.2s								
SATY				S		**Sg**		**00 17 07.4**	**+0.1**
	21nm,0.1s								
IZV	**Izvestkoviy**	**1.78**	**334**	P		**Pb**		**00 16 45.0**	**-0.9**
	11nm,0.4s								
IZV				S		**Sb**		**00 17 09.1**	**+0.3**
	34nm,0.2s								
IZV	**Izvestkoviy**	**1.78**	**334**	*e*P		**Pb**		**00 16 45.0**	**-0.9**
	11nm,0.4s								
IZV				*e*S		**Sb**		**00 17 09.1**	**+0.3**
	34nm,0.2s								
MDOK	**Medeo**	**1.78**	**345**	Pg		**Pb**		**00 16 45.4**	**-0.6**
	8.7nm,0.3s								
MDOK				Lg		Lg		00 17 10.1	
	14nm,0.4s								
KOTS	**Kotyrbulak**	**1.84**	**347**	P		**Pb**		**00 16 46.4**	**-0.5**
	20nm,0.2s								
KOTS				S		**Sg**		**00 17 11.5**	**0.0**
	48nm,0.2s								
KOTS	**Kotyrbulak**	**1.84**	**347**	*e*P		**Pb**		**00 16 46.4**	**-0.5**
	20nm,0.2s								
KOTS				*e*S		**Sg**		**00 17 11.5**	**0.0**
	48nm,0.2s								
KNDC	**Almaty**	**1.85**	**344**	⇓Pn		**Pb**		**00 16 46.9**	**-0.2**
	7.4nm,0.4s								
KNDC				⇓Sn		**Sg**		**00 17 13.3**	**+1.4**
	46nm,0.5s								
MTBS	**Maitube**	**1.92**	**332**	Pg		**Pb**		**00 16 48.3**	**0.0**
	6.5nm,0.2s								
MTBS				Lg		Lg		00 17 14.7	
	19nm,0.2s								
MTBS	**Maitube**	**1.92**	**332**	*e*P		**Pb**		**00 16 48.3**	**0.0**
	6.5nm,0.2s								
MTBS				*e*S		**Sg**		**00 17 14.7**	**+0.5**
	19nm,0.2s								
KST	**Kastek**	**2.04**	**322**	Pg		**Pg**		**00 16 51.0**	**-0.5**
	5.8nm,0.2s								
KST				Lg		Lg		00 17 19.2	
	28nm,0.2s								
KST	**Kastek**	**2.04**	**322**	*e*P		**Pg**		**00 16 51.0**	**-0.5**
	5.8nm,0.2s								
KST				*e*S		**Sg**		**00 17 19.2**	**+1.2**
	28nm,0.2s								
KURS	**Kuram**	**2.08**	**10**	Pg		**Pb**		**00 16 50.6**	**-0.4**
	17nm,0.9s								
KURS				Lg		Lg		00 17 18.6	
	11nm,0.8s								
TKM2	**Tokmak 2**	**2.13**	**315**	⇓*i*P		**Pn**		**00 16 49.9**	**+0.5**
TKM2				⇓*i*S		**Sb**		**00 17 18.6**	**-0.5**
KPKS	**Kokpek**	**2.16**	**20**	Pg		**Pb**		**00 16 52.1**	**-0.3**
	6.4nm,0.2s								
KPKS				Lg		Lg		00 17 21.2	
	22nm,0.4s								
SHLS	**Shalkode**	**2.17**	**37**	Pg		**Pg**		**00 16 55.5**	**+1.5**
	8.6nm,0.2s								
SHLS				Lg		Lg		00 17 27.6	
	44nm,0.3s								
SHLS	**Shalkode**	**2.17**	**37**	*e*P		**Pg**		**00 16 55.5**	**+1.5**
	8.6nm,0.2s								
SHLS				*e*S		**Sg**		**00 17 27.6**	**+5.3**
	44nm,0.3s								
DGS	**Degeres**	**2.29**	**323**	Pg		**Pg**		**00 16 55.1**	**-1.0**
	5.1nm,0.4s								
DGS				Lg		Lg		00 17 26.4	
	66nm,0.5s								
PDGK	**Podgornoye**	**2.32**	**35**	⇑Pg		**Pb**		**00 16 53.1**	**-2.0**
	4.9nm,0.7s								
PDGK				⇓Lg		Lg		00 17 25.2	
	24nm,0.6s								
KBK	**Karagaybulak**	**2.36**	**302**	⇑*e*P		**Pn**		**00 16 52.8**	**+0.4**
KBK				⇑*i*S		**Sb**		**00 17 23.8**	**-1.7**
KTBS	**Karatobe**	**2.39**	**343**	Pg		**Pb**		**00 16 55.8**	**-0.3**
	7.5nm,0.5s								
KTBS				Lg		Lg		00 17 28.7	
	14nm,0.3s								
CHKK	**Chushkaly**	**2.47**	**349**	Pg		**Pb**		**00 16 57.4**	**-0.1**
	7.3nm,0.2s								
CHKK				Lg		Lg		00 17 30.9	
	27nm,0.4s								
CHKK	**Chushkaly**	**2.47**	**349**	*e*P		**Pb**		**00 16 57.4**	**-0.1**
	7.3nm,0.2s								
CHKK				*e*S		**Sg**		**00 17 30.6**	**-1.0**
	27nm,0.4s								
UCH	**Uchtor**	**2.48**	**290**	⇑*i*P		**Pn**		**00 16 54.6**	**+0.2**
UCH				⇑*i*S		**Sn**		**00 17 26.7**	**+1.1**
ARLS	**Aral**	**2.54**	**281**	⇑*e*P		**Pn**		**00 16 55.4**	**+0.5**
ARLS				⇑*e*S		**Sn**		**00 17 27.3**	**+0.8**
KUU	**Kurty**	**2.64**	**339**	Pg		**Pb**		**00 17 00.3**	**-0.2**
	4.9nm,0.1s								
KUU				Lg		Lg		00 17 35.3	
	16nm,0.2s								
KUU	**Kurty**	**2.64**	**339**	*e*P		**Pb**		**00 17 00.3**	**-0.2**
	4.9nm,0.1s								
KUU				*e*S		**Sb**		**00 17 35.3**	**+1.9**
	16nm,0.2s								
AAK	**Ala-Archa**	**2.65**	**298**	⇑Pg		**Pb**		**00 17 00.9**	**+0.2**
	1.4nm,0.7s								
AAK				⇑Lg		Lg		00 17 38.9	
	1.8nm,0.4s								
KRBS	**Karabastau**	**2.69**	**328**	Pg		**Pb**		**00 17 01.1**	**-0.3**
	4.4nm,0.2s								
KRBS				Lg		Lg		00 17 37.8	
	6.2nm,0.2s								
BLB	**Baldybastay**	**2.72**	**12**	Pg		**Pb**		**00 17 01.4**	**-0.6**
	7.7nm,0.2s								
BLB				Lg		Lg		00 17 37.2	
	23nm,0.3s								
ARXS	**Arharly**	**2.78**	**2**	Pg		**Pb**		**00 17 00.5**	**-2.3**
	3.5nm,0.4s								
ARXS				Lg		Lg		00 17 37.8	
	26nm,0.5s								
ARXS	**Arharly**	**2.78**	**2**	*e*P		**Pb**		**00 17 02.8**	**0.0**
ARXS				*e*S		**Sg**		**00 17 39.7**	**-1.8**
KTMS	**Ketmen**	**2.83**	**44**	Pg		**Pb**		**00 17 02.3**	**-1.4**
	2.0nm,0.2s								
KTMS				Lg		Lg		00 17 39.7	
	13nm,0.3s								
KTMS	**Ketmen**	**2.83**	**44**	*e*P		**Pb**		**00 17 02.3**	**-1.4**
	2.0nm,0.2s								
KTMS				*e*S		**Sb**		**00 17 39.0**	**+0.1**
	13nm,0.3s								
SALK	**Salom-Alik**	**2.96**	**260**	⇑*e*P		**Pn**		**00 17 00.6**	**0.0**
SALK				⇑*i*S		**Sn**		**00 17 37.0**	**+0.2**
SGDS	**Sogindy**	**3.02**	**313**	Pg		**Pb**		**00 17 07.6**	**+0.7**
	1.0nm,0.2s								
SGDS				Lg		Lg		00 17 47.9	
	19nm,0.3s								
MRKS	**Merke**	**3.55**	**293**	Pg		**Pg**		**00 17 19.1**	**-1.3**
	3.0nm,0.4s								
MRKS				Lg		Lg		00 18 07.4	
	12nm,0.3s								
MRKS	**Merke**	**3.55**	**293**	*e*P		**Pg**		**00 17 19.1**	**-1.3**
	3.0nm,0.4s								
MRKS				*e*S		**Sg**		**00 18 07.4**	**+0.9**
	12nm,0.3s								
KK31	**Karatay Array**	**5.56**	**290**	⇑Pg		**Pb**		**00 17 52.9**	**+2.7**
	1.3nm,0.8s,baz=120,slow=4								
KK31				⇑Lg		Lg		00 19 11.3	
	1.9nm,0.7s,baz=122,slow=28,SNR=4.6								

NEIC ***11*** *00:28:03.0±1.7, 57°.97S±0°.08×25°.6W±0°.2, h75km±5km, mb4.7/34, Error ellipse: s-maj=14.1km s-min=10.9km az=69.0*
IDC ***11*** *00:28:03.3±4.4, 57°.88S×25°.50W, h75km±40km, mb4.0/11, mbtmp4.3/13, ML4.2/2, MS3.5/8, Error ellipse: s-maj=19.5km s-min=13.8km az=58.0*
ISC 11 00:28:00.2±0.4, 57°.93S±0°.07×25°.57W±0°.08, h49km, n197, σ0s81/185, mb4.5/21, MS3.5/6, 6C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.11**	**296**	Pn		**Pn**		**00 29 44.8**	**+3.3**
VNA1	**Neumayer--Stat**	**14.71**	**157**	⇑P		**Pn**		**00 31 24.7**	**-0.3**
	comp=Z,7.1nm,0.3s								
VNA3	**Neumayer Olymp**	**14.91**	**160**	⇑P		**Pn**		**00 31 27.2**	**-0.5**
	comp=Z,5.4nm,0.3s								
VNA3				⇑S		Sn		00 33 57.7	-14
VNA2	**Neumayer--Watz**	**15.11**	**157**	⇑P		**Pn**		**00 31 28.2**	**-2.0**
	comp=Z,4.6nm,0.2s,baz=319,slow=14								
SNAA	**Sanae**	**16.66**	**155**	⇑P		**Pn**		**00 31 51.1**	**+1.2**
	comp=Z,125nm,0.3s								
SNAA	**Sanae**	**16.66**	**155**			**Pn**		**00 31 50.7**	**+0.8**
SNAA	**Sanae**	**16.66**	**155**	P		**Pn**		**00 31 51.1**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=320,slow=15,SNR=46								
SNAA				S		Sn		00 34 44.0	-10
	comp=Z,0.7nm,0.6s,baz=190,slow=22,SNR=2.2								
SNAA				LR		LR		00 36 44.8	
	comp=Z,57nm,20.6s,baz=11,slow=31								
	comp=Z,6.1nm,0.4s								
TROLL	**Troll, Antarti**	**18.16**	**152**	⇑P		**P**		**00 32 08.5**	**+0.2**
	comp=Z,122nm,0.2s								
PMSA	**Palmer Station**	**19.41**	**233**			**Pn**		**00 32 23.9**	**+0.6**
PMSA						IAmb	IAmb	00 32 35.6	
	comp=Z,30nm,1.1s								
PMSA	**Palmer Station**	**19.41**	**233**	P		**Pn**		**00 32 23.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=111,slow=11,SNR=2.7								
PMSA				LR		LR		00 38 32.1	
	comp=Z,138nm,19.3s,baz=128,slow=32								
	comp=Z,12nm,0.9s								
EFI	**East Falkland**	**19.61**	**275**			**Pn**		**00 32 25.2**	**-0.6**
EFI						IAmb	IAmb	00 32 45.7	
	comp=Z,82nm,1.4s								
BELA	**Belgrano 2**	**20.27**	**186**			**P**		**00 32 31.1**	**0.0**
MG02	**Cerro Sombrero**	**24.99**	**263**	P		**P**		**00 33 17.1**	**-1.9**
QSPA	**South Pole Qui**	**32.31**	**180**	P		**P**		**00 34 25.8**	**+1.6**
QSPA						IAmb	IAmb	00 34 29.4	
	comp=Z,12nm,1.3s								
QSPA	**South Pole Qui**	**32.31**	**180**	P		**P**		**00 34 25.2**	**+0.9**
	comp=Z,3.8nm,0.8s,baz=207,slow=5.5,SNR=7.7								
	comp=Z,3.8nm,0.8s								
PLCA	**Paso Flores**	**33.22**	**281**	P		**P**		**00 34 32.4**	**+0.1**
PLCA	**Paso Flores**	**33.22**	**281**	P		**P**		**00 34 32.9**	**+0.5**
	comp=Z,1.7nm,0.4s,baz=136,slow=5.2,SNR=9.4								
PLCA				LR		LR		00 47 35.8	
	comp=Z,47nm,18.2s,baz=105,slow=35								
	comp=Z,1.7nm,0.4s								
MAW	**Mawson**	**38.11**	**142**	P		**P**		**00 35 14.1**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=221,slow=8.4,SNR=7.0								
	comp=Z,2.4nm,0.9s								
VAO	**Valinhos**	**38.16**	**327**	P		**P**		**00 35 14.4**	**-0.3**
VAO						IAmb	IAmb	00 35 18.0	
	comp=Z,13nm,1.1s								
CPUP	**Villa Florida**	**38.72**	**311**	P		**P**		**00 35 18.4**	**-0.9**
CPUP	**Villa Florida**	**38.72**	**311**	P		**P**		**00 35 19.8**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=23,slow=8.1,SNR=5.2								
	comp=Z,0.4nm,0.4s								
MT01	**Popeta**	**38.81**	**288**	P		**P**		**00 35 18.9**	**-1.2**
RIB01	**Linhares ES**	**40.08**	**338**	*e*P		**P**		**00 35 31.0**	**+0.3**
SJMB	**Sao Joao De Ma**	**40.84**	**337**	*e*P		**P**		**00 35 37.5**	**+0.5**
DIAM	**Diamantina, MG**	**41.78**	**334**	*e*P		**P**		**00 35 45.6**	**+0.7**
PMNB	**Patos De Minas**	**42.25**	**330**	*e*P		**P**		**00 35 49.8**	**+1.1**
GUA01	**Guaratinga, BA**	**42.63**	**340**	*e*P		**P**		**00 35 52.2**	**+0.7**
MURT	**Porto Murtinho**	**43.02**	**314**	*e*P		**P**		**00 35 53.6**	**-1.2**
IPMB	**Ipameri, GO**	**43.27**	**328**	*e*P		**P**		**00 35 56.5**	**-0.4**
AQDB	**Aquidauana**	**43.39**	**317**	*e*P		**P**		**00 35 56.6**	**-1.1**
CMC01	**Camacan, BA**	**43.77**	**340**	*e*P		**P**		**00 36 01.8**	**+1.0**
VNDA	**Vanda**	**44.73**	**182**			**P**		**00 36 09.1**	**+1.3**
**

comp=Z,4.6nm,0.6s
BOSA Boshof 45.63 72 P **P** **00 36 15.9 +0.2**
BOSA IAmb IAmb 00 36 19.0
comp=Z,8.9nm,1.4s
BOSA Boshof 45.63 72 P **P** **00 36 16.3 +0.5**
comp=Z,2.3nm,0.9s,baz=154,slow=3.0,SNR=2.0
BOSA LR LR 00 51 09.1
comp=Z,79nm,19.4s,baz=212,slow=30
comp=Z,2.3nm,0.9s
H04S2 CROZET ISLANDS 46.00 111 T T 01 26 47.9
baz=226,slow=75,SNR=31
H04S3 CROZET ISLANDS 46.01 111 T T 01 26 51.3
baz=226,slow=75,SNR=11
H04S1 CROZET ISLANDS 46.02 111 T T 01 26 52.9
baz=226,slow=75,SNR=13
SALV Santo Antonio 47.60 319 *e*P **P** **00 36 29.0 -2.1**
SDBA SAO DESIDERIO 47.75 334 *e*P **P** **00 36 33.1 +0.8**
LBTB Lobatse 48.76 70 LR LR 00 53 20.5
comp=Z,56nm,19.5s,baz=188,slow=31
PB08 IPOC Station P 49.26 301 P **P** **00 36 42.5 -1.7**
PB08 IAmb IAmb 00 36 42.7
comp=Z,4.2nm,0.9s
PTLB Pontes e Lacer 49.26 315 **P** **00 36 43.3 -0.6**
PTLB IAmb IAmb 00 36 45.2
comp=Z,4.8nm,0.9s
H10S2 ASCENSION HYDR 49.58 14 T T 01 31 20.9
baz=188,slow=74,SNR=49
H10S3 ASCENSION HYDR 49.59 14 T T 01 31 21.1
baz=32,slow=74,SNR=57
PB11 IPOC Station P 49.82 301 P **P** **00 36 47.2 -1.0**
PB11 IAmb IAmb 00 37 12.7
comp=Z,9.0nm,1.3s
SNDB Serra Nova Dou 49.86 326 *e*P **P** **00 36 48.2 -0.2**
TSUM Tsumeb 49.89 58 LR LR 00 53 38.1
comp=Z,51nm,19.2s,baz=29,slow=31
H10N1 ASCENSION HYDR 50.70 14 T T 01 32 44.8
baz=191,slow=72
H10N3 ASCENSION HYDR 50.70 14 T T 01 32 44.6
baz=191,slow=72
H10N2 ASCENSION HYDR 50.72 14 T T 01 32 46.8
baz=191,slow=72
SMTB Santa Maria do 51.82 332 *e*P **P** **00 37 04.2 +1.0**
CASY Casey 51.83 159 P **P** **00 37 02.9 +0.3**
CASY IAmb IAmb 00 37 39.8
comp=Z,5.8nm,1.2s
PDRB Porto dos Gac 51.94 320 *e*P **P** **00 37 03.3 -0.8**
VILB Vilhena 51.95 315 **P** **00 37 03.2 -0.9**
VILB IAmb IAmb 00 37 05.7
comp=Z,9.3nm,1.0s
VILB Vilhena 51.95 315 *e*P **P** **00 37 03.3 -0.9**
LPAZ La Paz 52.18 305 **P** **00 37 06.2 -0.3**
LPAZ IAmb IAmb 00 37 08.6
comp=Z,3.7nm,0.4s
LPAZ La Paz 52.18 305 P **P** **00 37 06.2 -0.3**
comp=Z,2.7nm,0.4s,baz=85,slow=6.6,SNR=16
comp=Z,2.7nm,0.4s
LPAZ La Paz 52.18 305 *e*P **P** **00 37 04.1 -2.4**
RCBR Riachuelo 52.59 347 *e*P **P** **00 37 11.4 +2.5**
PRPB Parauapebas 54.97 330 *e*P **P** **00 37 27.4 +1.2**
NPGB Novo Progresso 55.76 323 *e*P **P** **00 37 32.2 +0.2**
LSZ Lusaka 58.28 66 LR LR 00 59 40.4
comp=Z,55nm,18.6s,baz=192,slow=33
ITTB Itaituba 58.41 324 *e*P **P** **00 37 50.7 +0.1**
MAL2 Monte Alegre, 60.16 327 P **P** **00 38 03.3 +0.6**
MACA Manacapuru-AM 61.18 319 P **P** **00 38 08.9 -0.7**
MACA IAmb IAmb 00 38 09.7
comp=Z,7.7nm,0.7s
TEFE Tefe 62.30 315 *e*P **P** **00 38 16.3 -0.9**
BOAV Boa Vista 66.31 321 **P** **00 38 42.9 -0.5**
BOAV IAmb IAmb 00 38 43.6
comp=Z,6.4nm,0.5s
BOAV Boa Vista 66.31 321 *e*P **P** **00 38 42.7 -0.7**
DBIC Dimbokro 66.54 23 P **P** **00 38 45.5 +0.6**
DBIC IAmb IAmb 00 38 46.2
comp=Z,21nm,1.4s
DBIC Dimbokro 66.54 23 P **P** **00 38 44.0 -0.9**
comp=Z,4.8nm,0.4s,baz=208,slow=5.9,SNR=14
comp=Z,4.8nm,0.4s
COHC Cochancay 69.40 301 P **P** **00 39 02.7 -0.2**
OTAV Otavalo 71.43 303 P **P** **00 39 16.1 +0.3**
OTAV Otavalo 71.43 303 *e*P **P** **00 39 14.8 -1.0**
RUSC La Rusia 74.20 310 P **P** **00 39 31.0 -1.3**
TORD Torodi Ar. Bea 74.29 28 P **P** **00 39 31.9 -0.2**
comp=Z,2.4nm,0.4s,baz=184,slow=4.5,SNR=29
comp=Z,2.4nm,0.4s
BAUV El Baul 75.04 316 P **P** **00 39 35.9 -0.6**
BAUV IAmb IAmb 00 40 14.3
comp=Z,21nm,1.3s
RPZ Rata Peaks 77.77 192 P **P** **00 39 49.4 -2.4**
CBE Ff, Capester 79.51 325 P **P** **00 40 00.6 -0.8**
DSZ Denniston Nort 79.63 193 P **P** **00 40 00.1 -1.9**
MXZ Matakaoa Point 82.77 199 P **P** **00 40 19.4 +0.7**
HUMP Col San Antoni 82.81 322 P **P** **00 40 19.2 +0.4**
HUMP IAmb IAmb 00 40 26.1
comp=Z,20nm,1.2s
GCPR Guaynabo City 83.04 322 P **P** **00 40 18.9 -1.2**
GCPR IAmb IAmb 00 40 46.0
comp=Z,12nm,1.0s
CRPR Cabo Rojo, PR 83.10 321 P **P** **00 40 19.8 -0.6**
ASAR Alice Springs 96.92 161 P **P** **00 41 25.8 -0.4**
ASAR Alice Springs 96.92 161 P **P** **00 41 25.3 -0.9**
comp=Z,0.9nm,0.8s,baz=183,slow=3.3,SNR=9.1
comp=Z,0.9nm,0.8s
WRA Warramunga Arr 100.64 161 P **Pdif** **00 41 42.0 -0.8**
comp=Z,0.4nm,0.8s,baz=195,slow=4.3,SNR=2.7
PDAR Pinedale Array 122.08 300 PKP **PKPdf** **00 46 46.9 -1.7**
comp=Z,0.6nm,0.3s,baz=145,slow=4.4,SNR=6.5
NVAR Mina Array Bea 122.92 291 PKP **PKPdf** **00 46 50.3 -0.1**
comp=Z,0.4nm,0.5s,baz=106,slow=3.6,SNR=5.9
CMAR Chiang Mai Arr 123.58 110 PKP **PKPdf** **00 46 50.7 -1.2**
comp=Z,0.5nm,0.3s,baz=239,slow=4.2,SNR=4.5
FINES FINESS Array B 125.64 28 PKP **PKPdf** **00 46 54.2 -0.2**
comp=Z,1.5nm,0.5s,baz=151,slow=3.2,SNR=20
ARCES ARCESS Array B 132.37 22 PKP **PKPdf** **00 47 07.1 0.0**
comp=Z,3.4nm,0.8s,baz=242,slow=2.1,SNR=7.2
YKA Yellowknife Ar 138.15 316 PKP **PKPdf** **00 47 17.9 -0.2**
comp=Z,0.3nm,0.3s,baz=120,slow=2.2,SNR=7.1
FARO Faro, Yukon 145.44 308 P **PKPab** **00 47 32.3 +0.7**
baz=116
N30M Aishikik Lake 146.71 306 P **PKPab** **00 47 36.8 +0.3**
baz=115
YUK6 Outpost Mounta 147.04 304 P **PKPab** **00 47 37.4 -0.6**
baz=115
M30M Minto, Yukon 147.04 307 P **PKPbc** **00 47 36.1 +0.1**
baz=114,SNR=7.0
MAYO Mayo, Yukon 147.08 310 P **PKPbc** **00 47 36.4 +0.3**
baz=113
H31M Peel River 147.29 314 P **PKPbc** **00 47 36.5 -0.1**
baz=111
YUK4 Talbot Arm 147.34 305 P **PKPbc** **00 47 38.1 +1.0**
baz=115,SNR=8.4
F31M Tsiigehtchic 147.62 317 P **PKPbc** **00 47 37.4 0.0**
baz=109
J30M Hart River 147.63 311 P **PKPbc** **00 47 38.0 +0.3**
baz=111
M29M Somme Creek 147.70 307 P **PKPbc** **00 47 38.4 +0.4**
baz=113
O28M Mount Upton 147.78 303 P **PKPbc** **00 47 39.2 +0.7**
baz=115
YUK8 Steele Glacier 147.80 304 P **PKPbc** **00 47 38.8 +0.3**
baz=114,SNR=11
INK Inuvik 147.81 318 P **PKPbc** **00 47 37.9 0.0**
baz=108
L29M L29M 147.82 308 P **PKPbc** **00 47 38.6 +0.4**
baz=112
K29M Barlow Dome 147.84 309 P **PKPbc** **00 47 38.1 -0.2**
baz=112
I30M Mount Dempster 147.88 312 P **PKPbc** **00 47 38.9 +0.5**
baz=110
YUK3 Moose Creek 148.30 305 P **PKPbc** **00 47 40.1 +0.4**
baz=113
CTG Chitna Glacier 148.37 303 P **PKPbc** **00 47 40.5 +0.7**
baz=114,SNR=22
EPYK Eagle Plains 148.39 314 P **PKPbc** **00 47 39.8 +0.2**
baz=108
G30M tAoh Zraii Nji 148.39 315 P **PKPbc** **00 47 40.4 +0.8**
baz=108
F30M Barrier River 148.42 317 P **PKPbc** **00 47 39.8 +0.2**
baz=107
DAWY Dawson 148.69 309 P **PKPbc** **00 47 40.3 -0.1**
baz=110,SNR=22
BVCY Beaver Creek 148.72 306 P **PKPbc** **00 47 40.9 +0.3**
baz=112
H29M Whitestone 148.98 313 P **PKPbc** **00 47 41.4 +0.4**
baz=108
G29M Pine Creek 149.05 315 P **PKPbc** **00 47 41.4 +0.2**
baz=107

CRQE Cirque 149.08 302 P **PKPbc** **00 47 41.7 +0.2**
baz=113
M27K Edge Creek, AK 149.14 305 P **PKPbc** **00 47 42.0 +0.2**
baz=111
MCARA McCarthy VSAT 149.29 303 P **PKPbc** **00 47 42.6 +0.6**
baz=112,SNR=14
I28M Miner Creek 149.36 312 P **PKPbc** **00 47 42.5 +0.4**
baz=108
L27K Beaver Creek, 149.37 307 P **PKPbc** **00 47 42.3 +0.1**
baz=110
E29M Blow River 149.40 318 P **PKPbc** **00 47 41.8 -0.2**
baz=104
M26K Nabesna, AK 149.65 305 P **PKPbc** **00 47 43.0 +0.1**
baz=111
K27K Chicken 149.80 308 P **PKiKP** **00 47 43.9 -0.1**
baz=108,SNR=26
BMRM Bremner River 149.84 302 P **PKiKP** **00 47 45.0 +0.7**
baz=112
NRIK Noril'sk 149.90 41 PKPbc **PKPbc** **00 47 42.5 -0.6**
NRIK Noril'sk 149.90 41 PKPbc **PKPbc** **00 47 43.0 -0.2**
comp=Z,0.7nm,0.5s,baz=284,slow=4.2,SNR=4.1
SONM Songino Array 149.93 88 PKPbc **PKPbc** **00 47 43.9 -0.2**
comp=Z,3.8nm,0.5s,baz=225,slow=3.6,SNR=22
SONM PKPab **PKPab** **00 47 49.9 0.0**
comp=Z,0.6nm,0.5s,baz=208,slow=3.6,SNR=4.2
F28M Old Crow 149.93 316 P **PKPbc** **00 47 43.8 +0.5**
baz=104
L26K Log Cabin Wild 150.01 306 P **PKiKP** **00 47 44.4 -0.1**
baz=109
E28M Babbage River 150.03 318 P **PKiKP** **00 47 43.3 -0.2**
baz=103
N25K Chitina, Valde 150.07 303 P **PKiKP** **00 47 45.0 +0.2**
baz=111
I27K Kandik River 150.08 312 P **PKiKP** **00 47 44.0 +0.1**
baz=106
EYAK Cordova Ski Ar 150.21 301 P **PKiKP** **00 47 45.0 +0.1**
baz=112
H27K Steamboat Moun 150.21 313 P **PKiKP** **00 47 44.5 +0.4**
baz=105
G27K Doyon Strip 150.41 314 P **PKiKP** **00 47 44.7 +0.2**
baz=104
J26L Joseph Creek 150.56 309 P **PKiKP** **00 47 45.4 +0.4**
baz=107
SCRK Sand Creek 150.58 308 P **PKiKP** **00 47 45.9 +0.1**
baz=107,SNR=16
HARP HAARP 150.59 304 P **PKiKP** **00 47 45.8 +0.1**
baz=109
I26K Coal Creek Min 150.61 311 P **PKiKP** **00 47 45.6 -0.1**
baz=106
KLU Klutina 150.63 302 P **PKiKP** **00 47 46.1 +0.2**
baz=110
D27M Malcolm River 150.67 319 P **PKiKP** **00 47 46.1 +0.3**
baz=100
E27K Coleen River 150.69 317 P **PKiKP** **00 47 45.7 -0.1**
baz=102
RIDG Independent Ri 150.88 307 P **PKiKP** **00 47 46.5 +0.1**
baz=107
PAX Paxson 150.91 305 P **PKiKP** **00 47 46.4 -0.1**
baz=108
M24K Tolsona, Glenn 150.95 304 P **PKiKP** **00 47 47.4 +0.8**
baz=109
G26K Porcupine Rive 151.26 314 P **PKiKP** **00 47 47.2 +0.2**
baz=102
J25K Salcha River, 151.34 309 P **PKiKP** **00 47 47.1 +0.3**
baz=105
SCM Sheep Creek Mo 151.37 303 P **PKiKP** **00 47 47.7 +0.2**
baz=109
PWL Port Wells 151.51 300 P **PKiKP** **00 47 48.1 +0.4**
baz=110
M23K Glacier View 151.54 302 P **PKiKP** **00 47 48.0 +0.3**
baz=109
F26K Sheenjek River 151.54 315 P **PKiKP** **00 47 48.1 +0.5**
baz=101
C27K Jago River 151.69 319 P **PKiKP** **00 47 48.3 +0.6**
baz=97
KNK Knik Glacier 151.75 301 P **PKiKP** **00 47 47.7 -0.1**
baz=109
DHY Denali Highway 151.77 305 P **PKiKP** **00 47 49.1 +0.7**
baz=107
WAT6 Susitna Watana 151.79 304 P **PKiKP** **00 47 48.4 0.0**
baz=107
SML Sawmill 151.82 302 P **PKiKP** **00 47 48.5 +0.2**
baz=108
H25L Birch Creek 151.91 312 P **PKiKP** **00 47 48.2 +0.3**
baz=102
HDA Harding Lake 151.95 308 P **PKiKP** **00 47 48.2 +0.1**
baz=104
ILAR Eielson Array 152.01 309 PKPbc **PKPbc** **00 47 48.2 -0.1**
comp=Z,7.2nm,0.5s,baz=137,slow=3.6,SNR=136
F25K Christian River 152.09 315 P **PKiKP** **00 47 49.6 +0.9**
baz=100
G25K Bearman Lake 152.12 313 P **PKiKP** **00 47 50.0 +1.3**
baz=101
E25K Arctic Village 152.14 316 P **PKiKP** **00 47 49.7 +0.9**
baz=99
WAT1 Susitna Watana 152.22 304 P **PKiKP** **00 47 49.1 +0.2**
baz=106
D25K Kavik River 152.59 318 P **PKiKP** **00 47 49.8 0.0**
baz=96
MCK McKinley 152.62 306 P **PKiKP** **00 47 50.3 +0.4**
baz=104
G24K Hadweenzic Riv 152.64 313 P **PKiKP** **00 47 50.6 +0.8**
baz=100
H24K Noodor Dome 152.65 311 P **PKiKP** **00 47 50.2 +0.3**
baz=101
CUT Chulitna 152.86 303 P **PKiKP** **00 47 50.9 +0.5**
baz=106
NEA2 Nenana 152.88 308 P **PKiKP** **00 47 50.1 -0.1**
baz=103
F24K Squaw Lake 152.93 314 P **PKiKP** **00 47 51.0 +0.5**
baz=98
I23K Minto, Yukon-K 153.12 309 P **PKiKP** **00 47 50.4 -0.3**
baz=101
TRF Thorofare Moun 153.14 305 P **PKiKP** **00 47 51.1 0.0**
baz=104
E24K Your Creek 153.22 316 P **PKiKP** **00 47 51.6 +0.5**
baz=96
SKT Skwentna 153.32 302 P **PKiKP** **00 47 51.5 +0.1**
baz=106
H23K Yukon River 153.32 310 P **PKiKP** **00 47 51.5 +0.2**
baz=100
N20K Mount Spurr 153.40 300 P **PKiKP** **00 47 51.7 +0.2**
baz=107
C24K Franklin Bluff 153.43 319 P **PKiKP** **00 47 52.3 +0.9**
baz=93
D24K Happy Valley 153.44 318 P **PKiKP** **00 47 51.8 +0.4**
baz=94
BPAW Bear Paw Mtn. 153.59 306 P **PKiKP** **00 47 52.4 +0.5**
baz=102
G23K Bananza Creek 153.65 312 P **PKiKP** **00 47 52.8 +0.9**
baz=98
MLY Manley 153.67 309 P **PKiKP** **00 47 53.1 +1.0**
baz=101
TOLK Toolik Lake Re 153.68 317 P **PKiKP** **00 47 52.9 +0.9**
baz=94
COLD Coldfoot 153.78 314 P **PKiKP** **00 47 53.4 +1.2**
baz=97
PPLA Purkeypile 153.85 303 P **PKiKP** **00 47 52.7 +0.1**
baz=104
M20K Styx River 154.02 301 P **PKiKP** **00 47 52.7 -0.2**
baz=105
CHUM Lake Minchumin 154.12 306 P **PKiKP** **00 47 52.7 -0.2**
baz=102
G22K Bettles 154.25 313 P **PKiKP** **00 47 54.1 +1.0**
baz=96
E22K Anaktuvuk Pass 154.47 315 P **PKiKP** **00 47 53.8 +0.2**
baz=93
F22K John River 154.57 314 P **PKiKP** **00 47 54.8 +1.0**
baz=94
H21K Melozitna Rive 154.63 310 P **PKiKP** **00 47 54.7 +0.8**
baz=98
F21K Alatna River 155.05 313 P 00 47 55.3
baz=94
H20K Anotleneega Mo 155.46 309 P PKPdf 00 47 57.3 +11
baz=96

IDC ***11*** *00:28:18.1±0.7, 16°.83N×122°.51E, h0km, mb4.0/24, mbtmp4.1/26, ML4.2/2, MS3.6/5, Error ellipse: s-maj=19.7km s-min=12.7km az=100.0*
NEIC ***11*** *00:28:24.1±1.7, 16°.83N±0°.07×122°.5E±0°.1, h35km±2km, mb4.6/25, Error ellipse: s-maj=21.2km s-min=10.7km az=100.0*
ISC 11 00:28:23.7±0.6,**16°.78N**±0°.08×**122°.59E**±0°.10,**h40**km,**n81,**
σ1**s38**/74,**mb4.4**/39,**MS3.6**/4,**1C, Luzon**

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

TGY Tagaytay City 3.10 211 Pn **Pn** **00 29 10.4 +0.2**
162nm,0.3s,baz=20,slow=2.9,SNR=13
TGY Lg Lg 00 29 55.6
174nm,0.3s,baz=46,slow=7.3,SNR=3.8
TGY LR LR 00 30 19.1
comp=Z,433nm,19.2s,baz=330,slow=39
283nm,0.3s
TWG Pinlang 6.18 347 Pn **Pn** **00 29 51.6 -0.8**
YULB Yu-li 6.69 350 **Pn** **00 30 00.1 +0.6**
TPUB Ta-pu 6.75 344 Pn **Pn** **00 29 59.5 -0.8**
SSLB Suanglung 7.14 348 **Pn** **00 30 05.7 0.0**
YOJ Yonaguni jima 7.66 3 Pn **Pn** **00 30 11.6 -1.1**
YHNB Yeheng 7.93 352 **Pn** **00 30 16.6 0.0**
JOW Kunigami 11.31 27 **Pn** **00 31 00.8 -2.0**
JOW Kunigami 11.31 27 Pn **Pn** **00 30 59.5 -3.3**
1.5nm,0.3s,baz=210,slow=16,SNR=2.3
JOW Sn **Sn** **00 33 09.3 +1.4**
0.8nm,0.3s,baz=300,slow=20,SNR=1.5
18nm,0.7s
LYN LuoYang 19.89 335 *e*P **P** **00 32 51.7 0.0**
LYN sP pP 00 32 58.9 -2.8
LYN pmax pmax
comp=Z,12nm,0.6s
KSRS Korea Array 21.13 12 P **P** **00 33 03.1 -1.9**
comp=Z,2.2nm,0.6s,baz=197,slow=11,SNR=6.6
comp=Z,2.2nm,0.6s
HNS HongShan 21.69 343 ⇑P **P** **00 33 15.8 +4.7**
HNS pmax pmax
comp=Z,32nm,0.9s
CMAR Chiang Mai Arr 22.60 278 P **P** **00 33 20.0 -1.1**
comp=Z,1.0nm,0.3s,baz=85,slow=8.6,SNR=6.1
CMAR LR LR 00 41 23.3
comp=Z,56nm,21.6s,baz=90,slow=35
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 24.07 32 P **P** **00 33 34.4 -1.0**
comp=Z,1.1nm,0.6s,baz=121,slow=11,SNR=1.8
comp=Z,1.1nm,0.6s
LZDM Lanzhou Array 25.44 322 P **P** **00 33 47.1 -1.1**
comp=Z,0.9nm,0.3s,baz=156,slow=5.7,SNR=1.7
comp=Z,0.9nm,0.3s
USRK Ussuriysk Ar. 28.47 14 P **P** **00 34 14.3 -0.6**
comp=Z,3.6nm,0.8s,baz=176,slow=8.7,SNR=3.1
comp=Z,3.6nm,0.8s
SONM Songino Array 33.72 340 IAmb IAmb 00 35 02.0
comp=Z,2.5nm,0.8s
SONM Songino Array 33.72 340 P **P** **00 35 01.4 +0.1**
comp=Z,2.2nm,0.7s,baz=155,slow=10,SNR=17
SONM LR LR 00 50 27.3
comp=Z,160nm,18.2s,baz=168,slow=40
comp=Z,2.2nm,0.7s
WB0 Warramunga Arr 38.12 162 P **P** **00 35 38.4 -0.7**
WRA Warramunga Arr 38.27 162 P **P** **00 35 40.9 +0.5**
comp=Z,1.8nm,0.7s,baz=342,slow=9.2,SNR=7.7
comp=Z,1.8nm,0.7s
WR8 Warramunga Arr 38.33 162 P **P** **00 35 40.1 -0.7**
WR8 IAmb IAmb 00 35 47.1
comp=Z,9.5nm,1.3s
AS31 Alice Springs 41.69 164 P **P** **00 36 12.1 +3.4**
ASAR Alice Springs 41.69 164 P **P** **00 36 10.8 +2.1**
ASAR Alice Springs 41.69 164 P **P** **00 36 09.3 +0.6**
comp=Z,1.2nm,0.7s,baz=351,slow=7.8,SNR=6.9
comp=Z,1.2nm,0.7s
H11S3 WAKE ISLAND Hy 41.98 81 T T 01 21 06.5
baz=275,slow=74,SNR=1610
H11S1 WAKE ISLAND Hy 41.99 81 T T 01 21 05.7
baz=275,slow=74,SNR=1116
H11S2 WAKE ISLAND Hy 42.00 81 T T 01 21 05.8
baz=275,slow=74,SNR=797
H11N1 WAKE ISLAND Hy 42.09 79 T T 01 21 10.2
baz=274,slow=75,SNR=515
H11N2 WAKE ISLAND Hy 42.09 79 T T 01 21 12.5
baz=274,slow=75,SNR=683
H11N3 WAKE ISLAND Hy 42.10 79 T T 01 21 13.1
baz=274,slow=75,SNR=480
MKAR Makanchi Array 44.73 321 P **P** **00 36 32.5 -0.6**
MKAR Makanchi Array 44.73 321 P **P** **00 36 33.0 -0.1**
comp=Z,0.4nm,0.4s,baz=104,slow=8.7,SNR=8.1
comp=Z,0.4nm,0.4s
PEA0B Petropavlovsk- 45.46 29 P **P** **00 36 38.8 0.0**
PETK Petropavlovsk- 45.46 29 P **P** **00 36 39.7 +1.0**
PETK Petropavlovsk- 45.46 29 P **P** **00 36 39.9 +1.1**
comp=Z,5.1nm,0.6s,baz=207,slow=3.1,SNR=6.5
comp=Z,5.1nm,0.6s
ZALV Zalesovo Beam 47.23 330 P **P** **00 36 51.5 -1.1**
comp=Z,0.7nm,0.6s,baz=126,slow=7.5,SNR=4.3
comp=Z,0.7nm,0.6s
MA2 Magadan 47.41 19 P **P** **00 36 55.7 +1.8**
comp=Z,50nm,1.6s
KURK Kurchatov 48.72 324 P **P** **00 37 04.1 -0.1**
KURBB Kurchatov Arra 48.73 324 P **P** **00 37 04.1 -0.1**
comp=Z,1.4nm,0.2s,baz=120,slow=8.2,SNR=5.8
comp=Z,1.4nm,0.2s
GAR Garm 50.47 307 P **P** **00 37 17.2 -0.6**
KBL Kabul 50.82 301 P **P** **00 37 20.5 -0.2**
KBL IAmb IAmb 00 37 28.3
comp=Z,3.3nm,0.7s
CHGR Chuyangaron 51.30 306 P **P** **00 37 23.3 -0.8**
CHGR IAmb IAmb 00 37 31.5
comp=Z,7.8nm,0.6s
SHEM Shemya Is, Ala 53.82 36 LR LR 00 56 59.3
comp=Z,49nm,21.9s,baz=137,slow=32
BVAR Borovoye Array 54.32 324 P **P** **00 37 45.9 -0.1**
comp=Z,1.2nm,0.5s,baz=106,slow=7.2,SNR=8.7
comp=Z,1.2nm,0.5s
NRIK Noril'sk 56.87 346 P **P** **00 38 03.4 -0.6**
NRIK IAmb IAmb 00 38 14.8
comp=Z,5.1nm,0.7s
NRIK Noril'sk 56.87 346 P **P** **00 38 04.2 +0.1**
comp=Z,1.4nm,0.3s,baz=136,slow=7.7,SNR=7.2
comp=Z,1.4nm,0.3s
AB31 Akbulak array 59.66 318 P **P** **00 38 22.8 -1.1**
AB31 IAmb IAmb 00 38 34.8
comp=Z,3.7nm,1.1s
ABKAR Akbulak array 59.66 318 P **P** **00 38 22.2 -1.7**
KBZ Khabaz 71.22 311 P **P** **00 39 38.7 0.0**
comp=Z,1.5nm,0.8s,baz=68,slow=11,SNR=1.6
comp=Z,1.5nm,0.8s
ILAR Eielson Array 75.20 26 P **P** **00 39 59.7 -2.2**
ILAR Eielson Array 75.20 26 P **P** **00 40 03.4 +1.5**
comp=Z,0.2nm,0.6s,baz=258,slow=3.8,SNR=5.1
comp=Z,0.2nm,0.6s
ARCES ARCESS Array B 76.88 339 P **P** **00 40 10.2 -1.1**
ARCES ARCESS Array B 76.88 339 P **P** **00 40 11.5 +0.1**
comp=Z,4.2nm,1.0s,baz=46,slow=5.2,SNR=4.0
comp=Z,4.2nm,1.0s
I28M Miner Creek 77.96 25 P **P** **00 40 18.7 +1.2**
I28M IAmb IAmb 00 40 23.9
comp=Z,4.6nm,1.1s
CTGM Chitina Glacie 78.41 30 P **P** **00 40 21.4 +1.2**
CTGM IAmb IAmb 00 40 57.0
comp=Z,10.0nm,1.3s
FINES FINESS Array B 78.50 331 P **P** **00 40 20.1 -0.3**
FINES FINESS Array B 78.50 331 P **P** **00 40 20.3 -0.2**
comp=Z,1.7nm,0.5s,baz=65,slow=5.9,SNR=27
comp=Z,1.7nm,0.5s
BRTR Keskin Array B 78.69 308 P **P** **00 40 21.8 -0.4**
comp=Z,0.1nm,0.3s,baz=84,slow=6.3,SNR=1.8
comp=Z,0.1nm,0.3s
AKASG Malin Array Be 79.30 320 P **P** **00 40 24.3 -0.8**
comp=Z,0.2nm,0.2s,baz=64,slow=5.9,SNR=4.8
comp=Z,0.2nm,0.2s
AK10 Malin Array Si 79.31 320 P **P** **00 40 26.5 +1.4**
KIEV Kiev 79.31 320 P **P** **00 40 27.2 +2.1**
comp=Z,25nm,0.8s
KIEV pP **PcP** **00 40 31.4 -1.9**
comp=Z,25nm,0.8s
L29M L29M 79.32 27 P **P** **00 40 26.7 +1.7**
M29M Somme Creek 79.36 28 P **P** **00 40 26.0 +0.7**
M29M IAmb IAmb 00 40 42.1
comp=Z,8.5nm,1.4s
K29M Barlow Dane 79.38 26 P **P** **00 40 26.1 +0.7**
AK14 Malin Array Si 79.39 320 P **P** **00 40 26.4 +0.8**
BCPM Bancas Point 79.47 30 P **P** **00 40 29.9 +4.0**
NACGM Naroch 79.73 324 *e*P **P** **00 40 36.1 +8.7**
comp=Z,20nm,0.8s,baz=75
M30M Minto, Yukon 80.06 28 P **P** **00 40 29.7 +0.6**
M30M IAmb IAmb 00 40 41.3
comp=Z,7.5nm,1.4s
LUBAR Lubar, Ukraine 80.40 319 P **P** **00 40 33.8 +2.7**
A36M Sachs Harbour 80.78 17 P **P** **00 40 32.8 +0.2**
A36M IAmb IAmb 00 40 53.0
comp=Z,6.8nm,1.0s
O30N Mendenhall 80.93 29 P **P** **00 40 34.5 +0.7**
O30N IAmb IAmb 00 40 36.4
comp=Z,7.5nm,1.4s
KMPD K-Podol'skiy 81.58 318 P **P** **00 40 39.0 +1.6**
C36M Paulatuk 82.32 19 P **P** **00 40 41.3 +0.4**

C36M					IAmb	IAmb	00 41 17.4	
	comp=Z,6.3nm,0.8s							
SIT	**Sitka**	**82.49**	**33**	P	**P**		**00 40 42.2**	**+0.2**
UZHM	**Uzhgorod**	**84.20**	**319**	P	**P**		**00 40 51.7**	**+0.7**
HFS	**Hagfors**	**84.66**	**332**	P	**P**		**00 40 52.5**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=82,slow=3.1,SNR=12							
	comp=Z,1.3nm,0.5s							
NB2	**NORSAR Subarra**	**85.37**	**333**	P	**P**		**00 40 56.0**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=64,slow=4.8							
NOA	**NORSAR Array B**	**85.37**	**333**	P	**P**		**00 40 56.0**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=64,slow=4.9,SNR=9.6							
NOA				LR	LR		01 23 27.9	
	comp=Z,87nm,18.1s,baz=295,slow=39							
	comp=Z,1.4nm,0.6s							
KSP	**Ksiaz**	**87.05**	**322**	P	**P**		**00 41 06.7**	**+1.6**
YKA	**Yellowknife Ar**	**89.25**	**23**	P	**P**		**00 41 15.4**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=304,slow=4.7,SNR=4.8							
	comp=Z,1.1nm,0.6s							
GERES	**GERESS Array B**	**89.40**	**321**	P	**P**		**00 41 16.6**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=29,slow=5.3,SNR=1.7							
	comp=Z,0.2nm,0.4s							

IDC ***11*** *00:52:32.5±0.8,51.77N×175.48W,h0km,mb3.8/10, mbtmp3.8/13,ML3.5/3,MS3.3/3,Error ellipse: s-maj=26.2km s-min=17.5km az=162.0*

AEIC ***11*** *00:52:37.9±2.2,51.58N±0.06×175.25W±0.05,h41km±5km, Error ellipse: s-maj=8.6km s-min=4.2km az=172.0*

NEIC ***11*** *00:52:40.1±2.7,51.67N±0.06×175.30W±0.05,h51km±6km, mb3.9/118,ML3.9(AEIC),Error ellipse: s-maj=9.2km s-min=4.2km az=170.0*

ISC 11 00:52:37.2±1.4,51.57N±0.07×175.26W±0.03,h32km±7km, n206,σ1.38/205,mb4.0/29,MS3.2/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.59**	**316**		**Pn**	**00 52 49.9**	**+0.4**
GSIG					**Sn**	**00 52 59.0**	**+1.0**
GSMY	**Great Sitkin M**	**0.69**	**314**		**Pn**	**00 52 51.4**	**+0.7**
GSMY					**Sn**	**00 53 01.8**	**+1.4**
GSCK	**Great Sitkin C**	**0.72**	**309**		**Pn**	**00 52 51.8**	**+0.7**
GSCK					**Sn**	**00 53 02.3**	**+1.2**
GSTR	**Great Sitkin T**	**0.73**	**317**		**Pn**	**00 52 52.3**	**+1.0**
GSTR					**Sn**	**00 53 02.1**	**+0.7**
GSTD	**Great Sitkin T**	**0.74**	**312**		**Pn**	**00 52 52.2**	**+0.7**
GSTD					**Sn**	**00 53 02.7**	**+1.0**
ETKA	**Kagalaska Isla**	**0.78**	**293**		**Pb**	**00 52 52.2**	**-0.1**
ETKA					**Sn**	**00 53 03.1**	**+0.6**
GSSP	**Great Sitkin S**	**0.78**	**313**		**Pn**	**00 52 52.8**	**+0.8**
ATKA	**Atka Island**	**0.92**	**45**		**Pb**	**00 52 54.1**	**-0.5**
ATKA					**Sb**	**00 53 05.9**	**-0.6**
ADAG	**Mount Adagdak**	**0.93**	**297**		**Pn**	**00 52 55.6**	**+1.5**
ADAG					**Sn**	**00 53 07.8**	**+1.4**
ADK	**Adak**	**0.94**	**290**		**Pb**	**00 52 54.8**	**-0.3**
ADK	**Adak**	**0.94**	**290**		**Sb**	**00 53 07.2**	**-0.1**
KOKL	**Mount Kliuchef**	**1.00**	**40**		**Pn**	**00 52 55.9**	**+0.8**
KOKL					**Sn**	**00 53 09.1**	**+0.9**
KOFP	**Korovin Flat P**	**1.01**	**45**		**Pn**	**00 52 56.0**	**+0.8**
KOWE	**Korovin West**	**1.01**	**37**		**Pb**	**00 52 56.3**	**+0.1**
KOKV	**Korovin Volcan**	**1.04**	**40**		**Pb**	**00 52 56.8**	**0.0**
KOSE	**Korovin Southe**	**1.08**	**43**		**Pn**	**00 52 57.1**	**+1.0**
KIWB	**Kanaga Island**	**1.21**	**284**		**Pn**	**00 52 58.7**	**+0.7**
KIMD	**Kanaga Island**	**1.25**	**280**		**Pn**	**00 52 59.0**	**+0.5**
TAPA	**Tanaga Point A**	**1.61**	**280**		**Pn**	**00 53 04.6**	**+1.1**
TAFL	**Tanaga Flats**	**1.66**	**278**		**Pn**	**00 53 05.1**	**+1.1**
TANO	**Tanaga North**	**1.82**	**282**		**Pn**	**00 53 08.0**	**+1.7**
GALAA	**Gareloi Lava P**	**2.20**	**276**		**Pn**	**00 53 13.1**	**+1.6**
GAKI	**Gareloi-Kavalg**	**2.22**	**271**		**Pn**	**00 53 12.9**	**+1.2**
GANO	**Gareloi North**	**2.22**	**278**		**Pn**	**00 53 13.0**	**+1.2**
CEPE	**Semis' Perret**	**3.19**	**279**		**Pn**	**00 53 26.6**	**+1.5**
CERB	**Semis' Cerberu**	**3.20**	**279**		**Pn**	**00 53 27.5**	**+2.2**
AMKA	**Amchitka**	**3.41**	**269**		**Pn**	**00 53 29.3**	**+1.2**
CLES	**Cleveland East**	**3.53**	**67**	Pn	**Pn**	**00 53 33.4**	**+3.6**
LSSA	**Little Sitkin**	**3.89**	**278**		**Pn**	**00 53 35.6**	**+0.8**
NIKH	**Nikolski High**	**4.18**	**68**	Pn	**Pn**	**00 53 40.6**	**+1.9**
UNV	**Unalaska Valle**	**5.79**	**63**	Pn	**Pn**	**00 54 02.5**	**+1.8**
P08K	**Saint George I**	**6.06**	**31**	Pn	**Pn**	**00 54 04.0**	**-0.4**
SPIA	**Saint Paul Isl**	**6.34**	**26**	Pn	**Pn**	**00 54 11.9**	**+3.7**
SDPT	**Sand Point**	**9.59**	**61**	Pn	**Pn**	**00 54 54.0**	**+1.2**
CNBA	**Chernabura Isl**	**9.95**	**65**	Pn	**Pn**	**00 54 58.3**	**+0.5**
M11K	**Mekoryuk**	**10.18**	**26**	Pn	**Pn**	**00 55 02.0**	**+1.1**
O14K	**Tigyukauivet M**	**11.05**	**40**	Pn	**Pn**	**00 55 16.2**	**+3.3**
M13K	**Dall Lake**	**11.07**	**32**	Pn	**Pn**	**00 55 12.4**	**-0.8**
N14K	**Kuskokwak Cree**	**11.32**	**37**	Pn	**Pn**	**00 55 20.4**	**+3.9**
O15K	**Ungalikthiuk R**	**11.60**	**43**	Pn	**Pn**	**00 55 23.2**	**+2.8**
M14K	**Bethel**	**11.79**	**34**	Pn	**Pn**	**00 55 26.1**	**+3.1**
L14K	**Kuka Creek**	**11.99**	**30**	Pn	**Pn**	**00 55 26.4**	**+0.8**
N15K	**Kwethluk River**	**12.09**	**39**	Pn	**Pn**	**00 55 26.6**	**-0.4**
O16K	**Kokwok River B**	**12.57**	**44**	Pn	**Pn**	**00 55 36.7**	**+3.1**
L16K	**Owhat River**	**13.32**	**34**	Pn	**Pn**	**00 55 46.8**	**+3.0**
M17K	**Holitna River**	**13.87**	**38**	Pn	**Pn**	**00 55 51.5**	**+0.2**
OHAK	**Old Harbor**	**13.96**	**58**	Pn	**Pn**	**00 55 51.2**	**-1.3**
OHAK				P	**P**	**00 56 01.0**	**+0.8**
N18K	**Kilae Creek**	**14.09**	**42**	Pn	**Pn**	**00 55 56.4**	**+2.1**
K17K	**Iditarod**	**14.41**	**33**	Pn	**Pn**	**00 56 01.1**	**+2.3**
KDAK	**Kodiak Island**	**14.47**	**56**	Pn	**Pn**	**00 56 00.0**	**+0.5**
KDAK				P	**P**	**00 56 06.4**	**+0.5**
KDAK	**Kodiak Island**	**14.47**	**56**	Pn	**Pn**	**00 55 59.4**	**-0.2**
	0.4nm,0.3s,baz=169,slow=0.6,SNR=14						
KDAK				Sn	**Sn**	**00 58 35.8**	**-3.0**
	0.2nm,0.3s,baz=280,slow=18,SNR=1.6						
	8.2nm,0.8s						
I17K	**Unalakleet**	**14.54**	**26**	Pn	**Pn**	**00 56 01.9**	**+1.5**
J17K	**VABM Dome**	**14.64**	**30**	P	**P**	**00 56 09.8**	**+2.0**
L18K	**Granite Mounta**	**14.66**	**36**	P	**P**	**00 56 06.7**	**-1.2**
N19K	**Bonanza Creek**	**14.75**	**43**	P	**P**	**00 56 08.2**	**-0.9**
SYI	**Shuyak Island**	**14.82**	**53**	Pn	**Pn**	**00 56 05.5**	**+1.3**
RED	**Redoubt Volcan**	**15.31**	**46**	P	**P**	**00 56 16.1**	**+0.8**
L19K	**White Mountain**	**15.33**	**38**	P	**P**	**00 56 16.6**	**+1.2**
L19K				IAmb	IAmb	00 56 21.6	
	comp=Z,10nm,0.9s						
G16K	**Koyuk River**	**15.37**	**21**	P	**P**	**00 56 16.0**	**+0.3**
J16K	**Innoko River**	**15.45**	**32**	P	**P**	**00 56 17.1**	**+0.3**
J18K				IAmb	IAmb	00 56 22.6	
	comp=Z,11nm,1.5s						
H17K	**Granite Mounta**	**15.58**	**25**	P	**P**	**00 56 20.2**	**+2.1**
H17K				IAmb	IAmb	00 56 25.5	
	comp=Z,7.4nm,0.9s						
CNPM	**China Poot**	**15.68**	**50**	Pn	**Pn**	**00 56 16.5**	**+0.9**
M20K	**Styx River**	**15.85**	**41**	P	**P**	**00 56 22.1**	**+0.9**
M20K				IAmb	IAmb	00 56 30.8	
	comp=Z,14nm,1.3s						
H18K	**Honhosa River**	**16.16**	**26**	P	**P**	**00 56 26.8**	**+2.2**
H18K				IAmb	IAmb	00 56 55.0	
	comp=Z,18nm,1.4s						
J19K	**Poorman**	**16.17**	**32**	P	**P**	**00 56 25.2**	**+0.5**
STLK	**Strandline Lak**	**16.21**	**43**	P	**P**	**00 56 26.2**	**+1.0**
STLK				IAmb	IAmb	00 56 31.5	
	comp=Z,14nm,1.5s						
K20K	**Telida**	**16.31**	**35**	P	**P**	**00 56 27.8**	**+1.6**
SLKM	**Skilak Lake**	**16.51**	**47**	Pn	**Pn**	**00 56 26.7**	**+0.6**
SKT	**Skwentna**	**16.56**	**42**	P	**P**	**00 56 30.9**	**+1.9**
SKT				IAmb	IAmb	00 56 46.1	
	comp=Z,11nm,1.3s						
PETK	**Petropavlovsk-**	**16.57**	**286**	Pn	**Pn**	**00 56 24.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=93,slow=10,SNR=2.7						
	comp=Z,1.1nm,0.7s						
SEW	**Seward**	**16.73**	**49**	Pn	**Pn**	**00 56 27.2**	**-1.6**
PPLA	**Purkeypile**	**16.75**	**39**	P	**P**	**00 56 33.4**	**+2.1**
PPLA				IAmb	IAmb	00 56 41.8	
	comp=Z,19nm,1.3s						
J20K	**Nowinta River**	**16.79**	**33**	P	**P**	**00 56 32.7**	**+1.2**
RC01	**Rabbit Creek A**	**16.95**	**46**	Pn	**Pn**	**00 56 31.7**	**+0.1**
PWL	**Port Wells**	**17.50**	**47**	Pn	**Pn**	**00 56 37.0**	**-1.6**
PWL				IAmb	IAmb	00 56 37.1	
	comp=Z,21nm,1.5s						
GHO	**Glory Hole Cre**	**17.58**	**44**		**Pn**	**00 56 40.0**	**+0.5**
GHO				IAmb	IAmb	00 56 54.9	
	comp=Z,17nm,1.5s						
KTH	**Kantishna Hill**	**17.59**	**38**		**P**	**00 56 41.5**	**+1.0**
KTH				IAmb	IAmb	00 56 47.4	
	comp=Z,9.0nm,0.9s						
F19K	**Shaleruckik Mo**	**17.62**	**23**		**Pn**	**00 56 40.5**	**+0.6**
KNK	**Knik Glacier**	**17.64**	**46**	Pn	**Pn**	**00 56 39.5**	**-0.9**
KNK				IAmb	IAmb	00 56 51.4	
	comp=Z,21nm,1.3s						
TRF	**Thorofare Moun**	**17.78**	**38**	P	**P**	**00 56 44.2**	**+1.5**
TRF				IAmb	IAmb	00 56 49.9	
	comp=Z,9.1nm,1.2s						
SML	**Sawmill**	**17.85**	**45**		**Pn**	**00 56 43.4**	**+0.6**
SML				IAmb	IAmb	00 56 54.7	
	comp=Z,14nm,1.3s						
BPAW	**Bear Paw Mtn.**	**17.86**	**36**		**P**	**00 56 45.1**	**+1.7**
BPAW				IAmb	IAmb	00 57 00.5	
	comp=Z,13nm,1.3s						
IMAR	**Indian Mountai**	**18.10**	**29**	P	**P**	**00 56 48.1**	**+2.2**
I21K	**Tanana**	**18.14**	**32**	P	**P**	**00 56 48.7**	**+2.3**
H21K	**Melozitna Rive**	**18.17**	**30**	P	**P**	**00 56 49.7**	**+2.9**
HIN	**Hinchinbrook I**	**18.22**	**50**	P	**Pn**	**00 56 47.1**	**-0.3**
E19K	**Redstone River**	**18.24**	**22**		**P**	**00 56 49.4**	**+1.8**
SCM	**Sheep Creek Mo**	**18.30**	**45**	P	**Pn**	**00 56 48.3**	**-0.2**
SCM				IAmb	IAmb	00 56 59.3	
	comp=Z,11nm,1.0s						
F20K	**Avaraart Lake**	**18.30**	**25**		**P**	**00 56 49.6**	**+1.4**
RND	**Reindeer**	**18.32**	**40**	P	**Pn**	**00 56 48.9**	**+0.2**
I20K	**Utukok River**	**18.42**	**16**	P	**P**	**00 56 50.1**	**+0.5**
C18K				IAmb	IAmb	00 57 14.7	
	comp=Z,14nm,1.2s						
MCK	**McKinley**	**18.45**	**39**	P	**P**	**00 56 50.2**	**+0.4**
MCK				IAmb	IAmb	00 56 54.1	
	comp=Z,9.3nm,1.2s						
MLY	**Manley**	**18.47**	**34**		**P**	**00 56 51.4**	**+1.2**
G21K	**Allakaket**	**18.53**	**28**	Pn	**Pn**	**00 56 53.3**	**+2.2**
DHY	**Denali Highway**	**18.77**	**41**	P	**P**	**00 56 54.5**	**+0.9**
DHY				IAmb	IAmb	00 57 11.5	
	comp=Z,8.9nm,1.3s						
D19K	**Kuna River**	**18.89**	**20**	P	**P**	**00 56 55.9**	**+1.3**
D19K				IAmb	IAmb	00 57 24.8	
	comp=Z,13nm,1.4s						
M24K	**Tolsona, Glenn**	**18.91**	**45**	P	**P**	**00 56 56.5**	**+1.5**
M24K				IAmb	IAmb	00 56 58.1	
	comp=Z,13nm,1.1s						
I23K	**Minto, Yukon-K**	**19.02**	**34**	P	**Pn**	**00 56 57.7**	**+0.7**
F21K	**Alatna River**	**19.03**	**26**	P	**Pn**	**00 56 58.5**	**+1.4**
RAGM	**Ragged Mountai**	**19.09**	**51**	P	**P**	**00 56 56.9**	**-0.1**
C19K	**Lookout Ridge**	**19.11**	**17**	P	**P**	**00 56 58.3**	**+1.2**
BMRM	**Bremner River**	**19.27**	**49**	P	**P**	**00 56 59.4**	**+0.5**
BMRM				IAmb	IAmb	00 57 27.2	
	comp=Z,12nm,1.3s						
HMT	**Hamilton**	**19.28**	**51**	P	**P**	**00 56 59.2**	**+0.2**
CCB	**Clear Creek Bu**	**19.33**	**37**	P	**P**	**00 56 59.0**	**-0.5**
H23K	**Yukon River**	**19.34**	**33**	P	**P**	**00 57 00.4**	**+0.7**
D20K	**Etivluk River**	**19.39**	**21**	Pn	**Pn**	**00 57 02.1**	**+0.8**
D20K				IAmb	IAmb	00 57 17.5	
	comp=Z,12nm,1.3s						
N25K	**Chitina, Valde**	**19.45**	**47**	P	**P**	**00 57 01.8**	**+0.8**
N25K				IAmb	IAmb	00 57 08.2	
	comp=Z,16nm,1.5s						
SUCK	**Suckling Hills**	**19.46**	**52**	P	**P**	**00 57 02.7**	**+1.8**
PAX	**Paxson**	**19.53**	**43**	P	**P**	**00 57 01.8**	**0.0**
BERG	**Berg Lake**	**19.56**	**51**	P	**P**	**00 57 02.7**	**+0.6**
G23K	**Bananza Creek**	**19.72**	**30**		**Pn**	**00 57 05.7**	**+0.4**
G23K				IAmb	IAmb	00 57 30.4	
	comp=Z,11nm,1.4s						
K24K	**Donnelly Dome**	**19.73**	**40**	P	**P**	**00 57 04.8**	**+0.9**
IL31		**19.73**	**37**	P	**P**	**00 57 04.7**	**+0.8**
IL31				IAmb	IAmb	00 57 07.0	
	comp=Z,3.4nm,0.4s						
ILAR	**Eielson Array**	**19.73**	**37**	P	**P**	**00 57 04.7**	**+0.8**
ILAR	**Eielson Array**	**19.73**	**37**	P	**P**	**00 57 02.2**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=225,slow=9.0,SNR=30						
	comp=Z,0.5nm,0.3s						
GLB	**Gilahina Butte**	**19.77**	**48**	P	**P**	**00 57 03.8**	**-0.5**
GLB				IAmb	IAmb	00 57 16.6	
	comp=Z,7.5nm,1.4s						
E21K	**Killik River**	**19.79**	**23**	P	**P**	**00 57 05.0**	**+0.4**
VRDI	**Verde Repeater**	**19.88**	**49**	P	**P**	**00 57 07.0**	**+1.2**
VRDI				IAmb	IAmb	00 57 32.8	
	comp=Z,14nm,1.4s						
CRQM	**Cirque**	**19.91**	**50**	P	**P**	**00 57 08.1**	**+2.0**
H24K	**Noodor Dome**	**19.92**	**34**		**P**	**00 57 07.8**	**+1.9**
H24K				IAmb	IAmb	00 57 08.1	
	comp=Z,8.3nm,1.3s						
COLD	**Coldfoot**	**19.98**	**29**		**P**	**00 57 08.3**	**+1.7**
COLD				IAmb	IAmb	00 57 14.4	
	comp=Z,6.5nm,1.2s						
WAX	**Waxell Ridge**	**19.99**	**51**	P	**P**	**00 57 07.6**	**+0.8**
TGL	**Tana Glacier**	**20.06**	**50**	P	**P**	**00 57 09.5**	**+1.9**
E22K	**Anaktuvuk Pass**	**20.13**	**26**	P	Pn	**00 57 10.3**	**+0.1**
E22K				IAmb	IAmb	00 57 39.1	
	comp=Z,8.2nm,1.4s						
J25K	**Salcha River,**	**20.24**	**38**	P	**P**	**00 57 09.6**	**+0.2**
J25K				IAmb	IAmb	00 57 15.0	
	comp=Z,5.7nm,0.6s						
ISLE	**Juniper Island**	**20.27**	**51**	P	**P**	**00 57 11.3**	**+1.4**
B20K	**Meade River**	**20.33**	**18**	P	**P**	**00 57 11.6**	**+1.3**
DOT	**Dot Lake**	**20.37**	**42**	P	**P**	**00 57 10.8**	**-0.1**
DOT				IAmb	IAmb	00 57 15.5	
	comp=Z,7.3nm,0.8s						
M26K	**Nabesna, AK**	**20.41**	**45**	P	**P**	**00 57 13.3**	**+2.0**
M26K				IAmb	IAmb	00 57 17.8	
	comp=Z,6.5nm,1.3s						
D22K	**Ayikyak River**	**20.44**	**23**	P	**P**	**00 57 12.6**	**+1.1**
D22K				IAmb	IAmb	00 57 17.0	
	comp=Z,5.7nm,0.7s						
L26K	**Log Cabin Wild**	**20.45**	**44**	P	**P**	**00 57 12.5**	**+0.7**
YAH	**Yahtse**	**20.51**	**52**	P	**P**	**00 57 14.2**	**+1.6**
YAH				IAmb	IAmb	00 57 20.3	
	comp=Z,9.9nm,1.0s						
SCRK	**Sand Creek**	**20.53**	**41**		**P**	**00 57 12.3**	**-0.4**
G24K	**Hadweenzic Riv**	**20.53**	**32**	P	**P**	**00 57 14.0**	**+1.5**
G24K				IAmb	IAmb	00 57 34.3	
	comp=Z,8.0nm,1.3s						
B21K	**Ikpikpuk River**	**20.55**	**21**	P	**P**	**00 57 14.1**	**+1.5**
GRNC	**Granite Creek**	**20.57**	**51**	P	**P**	**00 57 13.0**	**-0.3**
GRNC				IAmb	IAmb	00 57 25.7	
	comp=Z,14nm,1.3s						
BARN	**Barnard Glacie**	**20.69**	**50**	P	**P**	**00 57 15.6**	**+1.1**
BARN				IAmb	IAmb	00 57 32.4	
	comp=Z,7.5nm,1.3s						
TABL	**Table Mountain**	**20.82**	**51**		**P**	**00 57 17.8**	**+1.9**
CTGM	**Chitina Glacie**	**20.82**	**50**	P	**P**	**00 57 16.9**	**+1.0**
F24K	**Squaw Lake**	**20.87**	**30**		**P**	**00 57 18.3**	**+2.0**
M27K	**Edge Creek, AK**	**20.90**	**46**		Pn	**00 57 19.6**	**+0.2**
M27K				IAmb	IAmb	00 57 27.4	
	comp=Z,9.6nm,1.5s						
J26L	**Joseph Creek**	**20.90**	**40**		**P**	**00 57 16.9**	**+0.2**
LOGN	**Logan Glacier**	**20.95**	**50**	P	**P**	**00 57 19.7**	**+2.4**
LOGN				IAmb	IAmb	00 57 24.9	
	comp=Z,9.2nm,1.5s						
D23K	**Nanushuk River**	**21.01**	**25**	P	**P**	**00 57 19.2**	**+1.5**
D23K				IAmb	IAmb	00 57 36.0	
	comp=Z,14nm,1.4s						
E24K	**Your Creek**	**21.03**	**28**	P	**P**	**00 57 19.7**	**+1.7**
TOLK	**Toolik Lake Re**	**21.09**	**26**	P	**P**	**00 57 20.1**	**+1.6**
TOLK				IAmb	IAmb	00 57 30.9	
	comp=Z,12nm,1.5s						
L27K	**Beaver Creek,**	**21.12**	**44**	P	**P**	**00 57 19.3**	**+0.3**
BCAR	**Beaver Creek A**	**21.14**	**44**	P	**P**	**00 57 20.0**	**+0.8**
PCA	**Pinnacle**	**21.20**	**53**	P	**P**	**00 57 20.3**	**+0.5**
K27K	**Chicken**	**21.33**	**41**	P	**P**	**00 57 21.4**	**+0.3**
K27K				IAmb	IAmb	00 57 45.9	
	comp=Z,6.0nm,1.1s						
O28M	**Mount Upton**	**21.34**	**51**	P	**P**	**00 57 21.5**	**-0.1**
O28M				IAmb	IAmb	00 57 21.8	
	comp=Z,12nm,1.5s						
B22K	**Teshekpuk Lake**	**21.36**	**20**	P	**P**	**00 57 21.6**	**+0.2**
I26K	**Coal Creek Min**	**21.39**	**38**	P	**P**	**00 57 21.9**	**+0.2**
I26K				IAmb	IAmb	00 57 46.7	
	comp=Z,6.7nm,1.1s						
BCPM	**Bancas Point**	**21.49**	**53**	P	**P**	**00 57 19.7**	**-3.2**
F25K	**Christian Rive**	**21.62**	**31**	P	**P**	**00 57 25.0**	**+0.7**
D24K	**Happy Valley**	**21.63**	**26**	P	**P**	**00 57 25.6**	**+1.3**
D24K				IAmb	IAmb	00 57 39.2	
	comp=Z,11nm,1.2s						
C23K	**Itkillik River**	**21.64**	**23**		**P**	**00 57 25.9**	**+1.5**
BMAR	**Burnt Mountain**	**21.88**	**32**	P	**P**	**00 57 28.2**	**+1.1**
G26K	**Porcupine Rive**	**21.91**	**33**	P	**P**	**00 57 27.6**	**+0.3**
G26K				IAmb	IAmb	00 57 28.1	
	comp=Z,6.4nm,1.4s						
E25K	**Arctic Village**	**21.94**	**30**	P	**P**	**00 57 28.8**	**+1.1**
E25K				IAmb	IAmb	00 57 31.0	
	comp=Z,7.8nm,1.1s						
C24K	**Franklin Bluff**	**22.04**	**25**	P	**P**	**00 57 30.1**	**+1.4**
C24K				IAmb	IAmb	00 57 40.1	
	comp=Z,7.5nm,1.1s						
F26K	**Sheenjek River**	**22.16**	**32**	P	**P**	**00 57 31.0**	**+0.9**
F26K				IAmb	IAmb	00 57 39.3	
	comp=Z,5.9nm,1.5s						
H27K	**Steamboat Moun**	**22.39**	**36**	P	**P**	**00 57 33.4**	**+0.9**
D25K	**Kavik River**	**22.41**	**27**	P	**P**	**00 57 33.2**	**+0.5**
D25K				IAmb	IAmb	00 57 56.9	
	comp=Z,7.2nm,1.3s						
P29M	**Windy Craggy**	**22.41**	**54**	P	**P**	**00 57 34.2**	**+1.4**
DAWY	**Dawson**	**22.46**	**42**	P	**P**	**00 57 34.2**	**+0.9**
M29M	**Somme Creek**	**22.46**	**47**	P	**P**	**00 57 34.5**	**+1.1**
M29M				IAmb	IAmb	00 57 55.3	
	comp=Z,6.9nm,1.5s						
HYT	**Haines Junctio**	**22.65**	**51**	P	**P**	**00 57 36.6**	**+1.2**
HYT				IAmb	IAmb	00 57 43.5	
	comp=Z,6.7nm,1.4s						
I28M	**Miner Creek**	**22.69**	**39**		**P**	**00 57 35.7**	**-0.1**
L29M	**L29M**	**22.76**	**45**	P	**P**	**00 57 37.4**	**+0.9**
K29M	**Barlow Dome**	**23.20**	**44**		**P**	**00 57 41.9**	**+0.8**
K29M				IAmb	IAmb	00 57 43.1	
	comp=Z,2.9nm,0.8s						
E27K	**Coleen River**	**23.24**	**32**	P	**P**	**00 57 41.7**	**+0.3**
M30M	**Minto, Yukon**	**23.25**	**47**	P	**P**	**00 57 42.0**	**+0.5**
C27K	**Jago River**	**23.35**	**28**	P	**P**	**00 57 43.1**	**+0.7**
C27K				IAmb	IAmb	00 57 47.9	
	comp=Z,7.8nm,1.4s						
H29M	**Whitestone**	**23.56**	**38**	P	**P**	**00 57 44.1**	**-0.4**
G29M	**Pine Creek**	**23.94**	**36**	P	**P**	**00 57 47.4**	**-0.7**
I30M	**Mount Dempster**	**24.04**	**40**	P	**P**	**00 57 49.1**	**0.0**
I30M				IAmb	IAmb	00 57 55.2	
	comp=Z,3.4nm,1.0s						
E28M	**Babbage River**	**24.11**	**32**		**P**	**00 57 50.1**	**+0.5**
E28M				IAmb	IAmb	00 57 51.9	
	comp=Z,4.1nm,1.1s						
E29M	**Blow River**	**24.56**	**33**	P	**P**	**00 57 55.1**	**+1.3**
E29M				IAmb	IAmb	00 57 59.3	
	comp=Z,3.1nm,0.8s						
G30M	**tAoh Zraii Nji**	**24.63**	**36**	P	**P**	**00 57 54.4**	**0.0**
G30M				IAmb	IAmb	00 57 59.9	
	comp=Z,6.2nm,1.3s						
ASAJ	**Asahikawa**	**28.92**	**272**	LR	LR	01 12 40.4	
	comp=Z,33nm,18.1s,baz=345,slow=42						
H11N2	**WAKE ISLAND Hy**	**34.73**	**210**	T	T	01 36 11.6	
	baz=18,slow=76,SNR=125						
H11N3	**WAKE ISLAND Hy**	**34.74**	**210**	T	T	01 36 12.2	
	baz=18,slow=76,SNR=119						
H11N1	**WAKE ISLAND Hy**	**34.75**	**210**	T	T	01 36 13.0	
	baz=18,slow=76,SNR=122						
H11S1	**WAKE ISLAND Hy**	**34.75**	**210**	T	T	01 38 04.6	
	baz=19,slow=76,SNR=188						
H11S2	**WAKE ISLAND Hy**	**35.95**	**210**	T	T	01 38 04.3	
	baz=19,slow=76,SNR=193						
H11S3	**WAKE ISLAND Hy**	**35.95**	**210**	T	T	01 38 10.7	
	baz=19,slow=76,SNR=124						
PDAR	**Pinedale Array**	**44.13**	**75**	P	**P**	**01 00 43.9**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=310,slow=4.1,SNR=25						
	comp=Z,1.8nm,0.6s						
SONM	**Songino Array**	**48.53**	**298**	PcP	**PcP**	**01 02 41.8**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=28,slow=3.9,SNR=2.1						
GUMO	**Guam**	**49.60**	**235**	LR	LR	01 19 01.9	
	comp=Z,23nm,20.6s,baz=140,slow=32						
TXAR	**Lajitas Array**	**56.43**	**84**	P	**P**	**01 02 16.4**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=312,slow=4.6,SNR=3.6						
	comp=Z,0.1nm,0.4s						
ARCES	**ARCESS Array B**	**58.26**	**352**	P	**P**	**01 02 26.3**	**-1.7**
	comp=Z,2.0nm,0.8s,baz=11,slow=5.1,SNR=1.6						
ARCES				PcP	**PcP**	**01 03 18.4**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=26,slow=6.9,SNR=3.5						
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**60.47**	**315**	P	**P**	**01 02 42.5**	**-0.9**
KURBB	**Kurchatov Arra**	**60.58**	**315**	P	**P**	**01 02 42.5**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=42,slow=6.4,SNR=4.1						
	comp=Z

comp=Z,51nm,21.6s,baz=182,slow=24
GNI Lg Lg 00 59 36.0
373nm,0.3s,baz=233,slow=20,SNR=9.3
GNI Garni 1.73 347 Pn **Pb** **00 59 14.7 +0.8**
GNI Garni 1.73 347 ⇓*iP* **Pn** **00 59 12.7 +0.4**
GNI ⇑*iS* **Sb** **00 59 36.4 +0.6**
GNI Garni 1.73 347 *d iPN* **Pn** **00 59 12.5 +0.3**
GNI Garni 1.73 347 Pb **Pn** **00 59 12.6 +0.4**
AKDM Akdamar-Van 1.80 267 Pn **Pn** **00 59 14.9 +1.8**
AKDM Sn **Sn** **00 59 36.0 +0.7**
QRD Qoradiz 1.89 57 P **Pn** **00 59 16.0 +1.8**
QRD S **Sg** **00 59 42.6 +0.1**
KAPZ Kaputan 1.91 347 *e*P **Pn** **00 59 15.5 +0.8**
KAPZ *e*S **Sb** **00 59 41.4 +0.5**
METS Metsamor 1.92 332 *e*P **Pn** **00 59 14.8 +0.2**
METS *e*S **Sn** **00 59 40.2 +1.2**
IHSH Hashtrud 1.96 125 Pn **Pn** **00 59 16.4 +1.0**
VNNZ Vanand 1.98 326 *e*P **Pb** **00 59 17.7 -0.4**
VNNZ *e*S **Sg** **00 59 45.3 -0.3**
ADCV BITLIS_Adilcev 2.02 281 SPECP
00 59 16.0
ADCV P **Pn** **00 59 17.0 +0.8**
ADCV S **Sg** **00 59 46.8 +0.2**
ADCV BITLIS_Adilcev 2.02 281 Pn **Pn** **00 59 16.9 +0.8**
ARUZ Aruch 2.03 334 *e*P **Pn** **00 59 17.1 +0.9**
ARUZ *e*S **Sb** **00 59 44.3 -0.1**
AMBZ Amberd 2.08 338 *e*P **Pn** **00 59 17.8 +0.9**
AMBZ *e*S **Sb** **00 59 45.5 -0.2**
KOTA Agri, Merkez-K 2.09 311 SPECP
00 59 17.0
KOTA P **Pn** **00 59 18.0 +0.9**
KOTA S **Sg** **00 59 50.3 +1.4**
AGRB Hanur-Agry 2.09 303 Pn **Pn** **00 59 19.2 +2.1**
AGRB Sn **Sn** **00 59 44.2 +0.9**
DORK Agr/Tutak/Do 2.15 296 SPECP
00 59 18.0
DORK P **Pn** **00 59 18.4 +0.6**
AGDM Agdam 2.18 40 P **Pn** **00 59 20.4 +2.2**
AGDM S **Sg** **00 59 50.8 -1.0**
BLQ Beylaqan 2.19 54 P **Pb** **00 59 20.6 -0.8**
BLQ S **Sg** **00 59 51.0 -1.0**
PERV Siirt/Pervari- 2.20 257 SPECP
00 59 19.0
PERV P **Pn** **00 59 19.6 +0.9**
PERV S **Sg** **00 59 53.8 +1.2**
MLAZ Malazgirt-MUS 2.23 289 Pn **Pn** **00 59 21.5 +2.5**
GDB GEDABAY 2.29 9 P **Pn** **00 59 21.8 +1.9**
GDB S **Sb** **00 59 53.6 +1.8**
GANJ Ganja 2.33 20 P **Pn** **00 59 22.4 +2.1**
GANJ S **Sg** **00 59 55.6 -1.1**
GANJ Ganja 2.33 20 PN **Pn** **00 59 22.3 +2.1**
BRDA Brd 2.33 39 P **Pb** **00 59 25.0 +1.0**
BRDA S **Sg** **00 59 59.1 +2.3**
YRD Yardimli 2.38 78 P **Pn** **00 59 23.1 +2.1**
YRD S **Sg** **00 59 58.1 0.0**
LRK Lerik 2.42 85 P **Pn** **00 59 23.4 +1.8**
LRK S **Sg** **00 59 58.1 -1.4**
DIGO Kars 2.44 324 SPECP
00 59 23.0
DIGO P **Pn** **00 59 23.4 +1.5**
LSVT Lusahovit 2.45 359 *e*P **Pb** **00 59 25.6 -0.5**
LSVT *e*S **Sg** **00 59 59.0 -1.7**
GURO Guroymak-BITLI 2.54 273 **Pn** **00 59 24.6 +1.4**
GURO Guroymak-BITLI 2.54 273 Pn **Pn** **00 59 25.3 +2.1**
EAK Akyaka 2.56 331 SPECP
00 59 26.0
EAK P **Pb** **00 59 26.8 -1.3**
GLBA Clilabad 2.57 71 P **Pn** **00 59 26.0 +2.5**
GLBA S **Sg** **01 00 04.1 -0.1**
EATA Eleskirt 2.57 304 SPECP
00 59 27.0
EATA P **Pb** **00 59 27.9 -0.3**
EATA S **Sg** **01 00 05.4 +1.1**
ZRD Zardab 2.61 45 P **Pb** **00 59 29.5 +0.8**
ZRD S **Sg** **01 00 05.0 -0.7**
SRTK Saratovka 2.70 345 *e*P **Pn** **00 59 27.4 +1.9**
SRTK *e*S **Sb** **01 00 02.1 -1.5**
MNGR Mingechevir, A 2.71 31 P **Pb** **00 59 31.6 +1.3**
MNGR S **Sb** **01 00 04.2 +0.7**
MNGR Mingechevir, A 2.71 31 PN **Pn** **00 59 26.4 +1.0**
BOZK Kars-Merkez-Bo 2.77 321 P **Pb** **00 59 32.5 +1.0**
LKRN Lenkeran, Azer 2.77 84 P **Pn** **00 59 28.7 +2.4**
LKRN S **Sg** **01 00 10.6 -0.1**
LKRN Lenkeran, Azer 2.77 84 PN **Pn** **00 59 28.6 +2.4**
ASTR Astara 2.77 87 P **Pn** **00 59 28.5 +2.2**
ASTR S **Sg** **01 00 10.1 -0.6**
GAS1 Astara - Iran 2.81 90 Pn **Pn** **00 59 28.5 +1.7**
SAAT Saatly 2.83 59 P **Pb** **00 59 30.7 -1.6**
SAAT S **Sb** **01 00 08.4 +1.4**
VSHL Vashlovani 2.90 17 P **Pb** **00 59 31.8 -1.8**
VSHL S **Sg** **01 00 16.9 +1.9**
DGRG David-gareji 2.99 2 P **Pb** **00 59 35.9 +0.7**
DGRG S **Sg** **01 00 18.3 +0.6**
DGRG David-gareji 2.99 2 *e*PN **Pb** **00 59 35.9 +0.7**
DGRG *e*S **Sg** **01 00 18.3 +0.6**
KZRT Kazreti 3.00 347 *e*PN **Pb** **00 59 33.1 -2.2**
HOMI Horasan 3.05 302 P **Pb** **00 59 37.0 +0.7**
DDFL Dedoflistskaro 3.05 12 P **Pb** **00 59 35.5 -0.8**
VRTB Varto-Mus 3.06 284 Pn **Pn** **00 59 32.8 +2.5**
KOPR Koprukoy-ERZUR 3.06 301 Pn **Pn** **00 59 32.9 +2.5**
SENK Senkaya-Erzuru 3.08 314 Pn **Pn** **00 59 33.3 +2.6**
SEKA Sheki 3.12 28 P **Pb** **00 59 37.7 +0.3**
SEKA S **Sb** **01 00 18.1 +2.4**
SEKA Sheki 3.12 28 PN **Pn** **00 59 33.4 +2.2**
QBL Gabala 3.18 38 P **Pb** **00 59 38.0 -0.4**
QBL S **Sb** **01 00 19.5 +2.0**
TRLG Trialeti 3.20 344 P **Pb** **00 59 37.8 -1.1**
TRLG S **Sg** **01 00 22.0 -2.6**
TRLG Trialeti 3.20 344 *e*PN **Pb** **00 59 37.7 -1.1**
IML Ismayilli 3.24 43 P **Pn** **00 59 35.0 +2.2**
IML S **Sb** **01 00 18.4 -0.7**
AKH Akhalkalaki 3.25 336 P **Pb** **00 59 38.6 -1.0**
AKH Akhalkalaki 3.25 336 Pn **Pn** **00 59 36.3 +3.3**
AKH Akhalkalaki 3.25 336 *e*PN **Pb** **00 59 38.6 -1.0**
ZNJK Zanjan 3.25 122 Pn **Pn** **00 59 34.2 +1.0**
ALIB &Aumlli-Bayram 3.27 62 P **Pb** **00 59 37.8 -2.1**
TBLG Delisi 3.29 353 P **Pb** **00 59 40.5 +0.2**
TBLG S **Sg** **01 00 24.6 -2.9**
TBLG Delisi 3.29 353 Pn **Pn** **00 59 36.9 +3.4**
TBLG Delisi 3.29 353 *e*PN **Pb** **00 59 40.5 +0.2**
TBLG *e*S **Sg** **01 00 24.6 -2.9**
ZKTA Zakatala 3.34 18 P **Pb** **00 59 39.9 -1.2**
ZKTA S **Sn** **01 00 17.8 +3.8**
KARO Karliova-Bingo 3.40 286 Pn **Pn** **00 59 37.6 +2.5**
AKDA Akdag 3.44 300 P **Pb** **00 59 44.9 +1.9**
LGD Lagodekhi 3.45 12 *e*PN **Pn** **00 59 38.1 +2.4**
PQL Pirkuli 3.47 47 P **Pn** **00 59 39.6 +3.5**
PQL S **Sb** **01 00 24.4 -1.3**
XNQ Khinaliq 3.50 38 P **Pn** **00 59 38.8 +2.3**
XNQ S **Sb** **01 00 25.8 -0.9**
GBS Qobustan 3.52 53 P **Pn** **00 59 40.3 +3.6**
GBS S **Sb** **01 00 27.6 +0.5**
AKT Akhty 3.56 31 *e*PN **Pb** **00 59 42.3 -2.7**
AKT *e* 00 59 48.7
AKT *e*S **Sn** **01 00 21.4 +1.9**
AKT *e* 01 00 32.3
AKT *e* 01 00 41.0
AKT pmax pmax
comp=Z,112nm,0.4s
AKT smax smax
comp=N,227nm,0.5s
AKT smax smax
comp=E,316nm,0.5s
AKT smax smax
comp=E,210nm,0.4s
AKT MLR MLR
comp=Z,313nm,2.0s
BNGB Bingl 3.62 280 Pn **Pn** **00 59 41.5 +3.4**
ATGJ Altiaghaj 3.71 49 P **Pn** **00 59 41.4 +2.1**
ATGJ S **Sb** **01 00 31.0 -1.7**
MARD Mardin 3.73 253 **Pn** **00 59 40.1 +0.5**
YEDI Yedisu-Bingol 3.81 286 Pn **Pn** **00 59 43.4 +2.7**
QUBA Quba, Azerbaij 3.81 40 P **Pn** **00 59 43.6 +2.9**
QSAR Qusar 3.82 36 P **Pn** **00 59 43.6 +2.8**
ALIG Mtskhetisjvari 3.84 342 *e*PN **Pb** **00 59 47.2 -2.5**
IDHR Dehrash 3.86 166 Pn **Pn** **00 59 42.7 +1.2**
JIR1 Jirandeh 4.01 114 Pn **Pn** **00 59 44.9 +1.4**
KOPT Kop Dagi 4.01 294 **Pn** **00 59 46.1 +2.5**
GUDG Gudauri 4.04 352 P **Pn** **00 59 48.3 +4.3**
GUDG Gudauri 4.04 352 *e*PN **Pn** **00 59 48.3 +4.3**
SNQR Sonqor, Kerman 4.07 151 Pn **Pn** **00 59 46.3 +1.9**
SHTL Shatili 4.19 359 P **Pb** **00 59 55.9 +0.2**
SHTL S **Sg** **01 00 51.6 -4.7**
SHTL Shatili 4.19 359 *e*PN **Pb** **00 59 55.9 +0.2**
TKB Tkibuli 4.25 337 P **Pb** **00 59 57.2 +0.5**
TKB Tkibuli 4.25 337 *e*PN **Pb** **00 59 57.2 +0.5**
GLG1 Gilan-e-Gharb 4.37 173 Pn **Pn** **00 59 49.2 +0.9**

QABG Abgarm-Qazvin 4.41 127 Pn **Pn** **00 59 50.3 +1.2**
IGZV Ghazvin 4.46 116 Pn **Pn** **00 59 51.4 +1.7**
HAGD Aghdareh 4.79 138 Pn **Pn** **00 59 55.1 +0.9**
MAK Makhachkala 4.81 20*c iPN* **Pn** **00 59 53.4 -0.9**
MAK *e*S **Sn** **01 00 49.7 -0.3**
MAK pmax pmax
comp=Z,358nm,1.7s
MAK MLR MLR
comp=Z,425nm,14.0s
MZPU Pul - Mazandar 5.41 110 Pn **Pn** **01 00 04.5 +1.8**
KBZ Khabaz 5.56 342 Pn **Pn** **01 00 05.2 +0.7**
comp=Z,0.2nm,0.3s,baz=140,slow=13,SNR=6.6
KBZ Sn **Sn** **01 01 09.6 +1.1**
comp=Z,0.2nm,0.3s,baz=215,slow=19,SNR=1.3
KBZ Lg Lg 01 01 36.0
comp=Z,0.3nm,0.3s,baz=136,slow=8.6,SNR=1.5
comp=Z,1.9nm,1.0s
KBZ Khabaz 5.56 342 *de*P **Pn** **01 00 07.9 +3.4**
SHA1 Shidzhatmaz 5.63 340⇓*eP* **Pn** **01 00 09.6 +3.8**
KVAR Kislovodsk Arr 5.82 341 Pn **Pn** **01 00 08.7 +0.4**
baz=101,slow=19
KVAR Lg Lg 01 01 43.0
baz=242,slow=21
KVAR LR LR 01 02 09.6
comp=Z,111nm,20.1s,baz=288,slow=36
comp=Z,1.5nm,0.8s
KIV Kislovodsk 5.82 341 Pn **Pn** **01 00 11.8 +3.4**
KIV Kislovodsk 5.82 341 *e*P **Pn** **01 00 09.1 +0.8**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,46nm,9.0s
GAZ Gaziantep 6.50 261 **Pg** **01 00 47.1 +0.8**
SOC Sochi 6.62 322 *e*P **Pn** **01 00 19.2 +0.1**
SOC *e* 01 01 35.7
SOC pmax pmax
comp=Z,13nm,0.7s
SOC MLR MLR
comp=Z,148nm,11.0s
ISFB Sefidab 6.96 124 Pn **Pn** **01 00 25.4 +1.4**
TOKA Tokat 7.05 288 Pn **Pn** **01 00 28.6 +3.4**
BNN Bunyan 7.38 276 Pn **Pn** **01 00 31.9 +2.2**
ANN Anapa 8.63 320 *e*P **Pn** **01 00 46.8 +0.1**
ANN pmax pmax
comp=Z,6.0nm,0.3s
BR104 Keskin Array S 9.12 281 P **Pn** **01 00 57.5 +3.8**
comp=Z,2.7nm,0.9s
BR131 Keskin Array S 9.13 282 **Pn** **01 00 55.5 +1.8**
BR131 Keskin Array S 9.13 282 ⇓*iP* **Pn** **01 00 57.4 +3.7**
BRTR Keskin Array B 9.13 282 Pn **Pn** **01 00 55.6 +1.8**
comp=Z,0.1nm,0.3s,baz=102,slow=14,SNR=21
BRTR LR LR 01 04 45.0
comp=Z,96nm,18.9s,baz=92,slow=40
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 9.13 282 *i* P **Pn** **01 00 57.5 +3.7**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BR105 Keskin Array S 9.14 282 P **Pn** **01 00 57.7 +3.8**
comp=Z,3.6nm,1.0s
BR106 Keskin Array S 9.14 282 P **Pn** **01 00 57.7 +3.8**
comp=Z,26nmcomp=Z,3.2nm,0.7s
ASF Jabal al Asfar 9.28 230 Pn **Pn** **01 00 55.7 0.0**
comp=Z,0.1nm,0.3s,baz=107,slow=3.2,SNR=4.3
ASF Sn **Sn** **01 02 40.7 +0.5**
comp=Z,0.1nm,0.3s,baz=76,slow=18,SNR=1.0
ASF Lg Lg 01 03 37.1
comp=Z,0.1nm,0.3s,baz=59,slow=21,SNR=1.9
ASF LR LR 01 05 03.4
comp=Z,118nm,19.3s,baz=83,slow=42
comp=Z,1.0nm,0.6s
MMAI Mount Meron Ar 9.68 239 Pn **Pn** **01 01 01.3 0.0**
comp=Z,0.2nm,0.3s,baz=228,slow=11,SNR=1.2
MMAI Lg Lg 01 03 48.1
comp=Z,0.3nm,0.3s,baz=256,slow=28,SNR=1.4
MMAI LR LR 01 05 19.4
comp=Z,199nm,19.4s,baz=62,slow=42
comp=Z,0.8nm,0.6s
ISP Isparta 11.63 271⇓*eP* **Pn** **01 01 32.0 +4.1**
EIL Elat 12.24 227 LR LR 01 06 57.3
comp=Z,99nm,19.9s,baz=24,slow=41
VRH Novokhopyorsk 12.98 350 *eP* **Pn** **01 01 44.9 -1.4**
VRH pmax pmax
comp=Z,8.0nm,1.0s
VORD Divnogorie 13.20 343 *eP* **P** **01 01 59.0 -0.3**
VORD pmax pmax
comp=Z,10.0nm,0.9s
KHAM Kharkiv 13.21 334 P Pn 01 01 45.1 -4.3
VSR Storozhevoye 13.46 343 *eP* Pn 01 01 58.3 +5.5
VSR pmax pmax
comp=Z,10.0nm,1.0s
BELG Belgornoye 14.03 6 Pn **Pn** **01 02 00.3 -0.2**
comp=Z,0.9nm,0.3s,baz=165,slow=20,SNR=6.2
comp=Z,5.1nm,0.8s
BELG Belogornoye 14.03 6*de*P **Pn** **01 02 02.8 +2.3**
BELG pmax pmax
comp=Z,6.0nm,1.0s
LPSR Galich'ya Gora 14.81 345 *eP* **Pn** **01 02 14.4 +3.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
RAYN Ar Rayn 14.89 179 **Pn** **01 02 12.3 -0.2**
RAYN Ar Rayn 14.89 179 P **Pn** **01 02 12.3 -0.2**
AKTO Aktyubinsk 15.01 33 Pn **Pn** **01 02 12.1 -1.9**
comp=Z,0.4nm,0.3s,baz=218,slow=3.4,SNR=9.7
AKTO Sn **Sn** **01 04 54.9 -5.4**
comp=Z,0.1nm,0.3s,baz=24,slow=18,SNR=1.5
comp=Z,2.7nm,0.5s
AB31 Akbulak array 15.09 40 **Pn** **01 02 13.3 -1.7**
AB31 IAmb IAmb 01 02 28.2
comp=Z,2.9nm,0.8s
ABKAR Akbulak array 15.09 40 **Pn** **01 02 14.1 -0.9**
RDO Rodhopi 15.40 286 **Pn** **01 02 20.2 +1.1**
PLOR5 Plostina Array 15.62 304 P **Pn** **01 02 21.9 -0.2**
comp=Z,7.0nm,1.1s
MLR Muntele Rosu 15.97 302 Pn **Pn** **01 02 27.2 +0.6**
comp=Z,0.1nm,0.3s,baz=286,slow=20,SNR=2.5
comp=Z,2.7nm,1.1s
UOSS Minazif 16.36 142 Pn **Pn** **01 02 31.8 +0.2**
UOSS IAmb IAmb 01 02 43.3
comp=Z,7.0nm,0.8s
IDI Anoyia 16.61 265 Pn **Pn** **01 02 35.2 +0.4**
IDI Anoyia 16.61 265 Pn **Pn** **01 02 35.0 +0.2**
comp=Z,1.3nm,0.3s,baz=46,slow=12,SNR=15
comp=Z,7.7nm,0.5s
AK09 Malin Array Si 16.61 322 P **Pn** **01 02 30.9 -3.8**
AK08 Malin Array Si 16.64 322 P **Pn** **01 02 31.4 -3.6**
AK12 Malin Array Si 16.69 322 P **Pn** **01 02 32.1 -3.6**
AKASG Malin Array Be 16.70 322 Pn **Pn** **01 02 34.3 -1.4**
baz=133,slow=11,SNR=9.8
comp=Z,0.6nm,0.5s
AKBB Malin Array Si 16.70 322⇑*eP* **P** **01 02 38.0 -0.1**
AKBB pmax pmax
comp=Z,14nm,1.3s
KIEV Kiev 16.70 322 P **P** **01 02 38.7 +0.6**
KIEV IAmb IAmb 01 02 43.8
comp=Z,13nm,1.2s
KIEV Kiev 16.70 322 P **P** **01 02 38.7 +0.6**
KIEV pmax pmax
comp=Z,13nm,1.3s
KIEV Kiev 16.70 322 P **Pn** **01 02 31.7 -4.1**
comp=Z,36nm,1.1s
AK15 Malin Array Si 16.74 322 P **Pn** **01 02 32.6 -3.7**
KMPD K-Podol'skiy 16.93 313 P **Pn** **01 02 37.5 -1.2**
LUBAR Lubar, Ukraine 16.95 318 P **Pn** **01 02 36.5 -2.4**
MI29 MI29, Kamyanyy 17.20 320 P **Pn** **01 02 39.1 -3.0**
comp=Z,79nm,1.0s
MI30 MI30,Zelenitsa 17.23 321 P **Pn** **01 02 39.3 -3.2**
comp=Z,17nm,1.0s
BURAR Bucovina Array 17.23 308 Pn **Pn** **01 02 44.1 +1.5**
BURAR Bucovina Array 17.23 308 P **Pn** **01 02 44.1 +1.5**
BUR08 Bucovina Ar. S 17.26 309 Pn **Pn** **01 02 44.2 +1.3**
BUR08 IAmb IAmb 01 03 10.1
comp=Z,11nm,1.4s
MI28 Mi28,Pidlybu 17.60 321 P **Pn** **01 02 42.3 -4.8**
OBN Obninsk 17.67 343⇑*eP* **P** **01 02 50.5 +1.8**
OBN pmax pmax
comp=Z,19nm,0.8s
OBN MLR MLR
comp=Z,184nm,20.0s
RNPP2 Kostyukhnivka 18.74 320 P **P** **01 02 55.3 -5.3**
RNPP2 pP **Pn** **01 03 00.1 -0.9**
RNPP1 Kostyukhnivka 18.81 320 P **P** **01 02 57.1 -4.3**
KBL Kabul 19.50 94 P **P** **01 03 10.1 +0.7**
KBL Kabul 19.50 94 P **P** **01 03 10.1 +0.7**
KBL pmax pmax
comp=Z,3.0nm,0.8s
GAR Garm 19.54 81 P **P** **01 03 11.0 +1.3**

KK31 Karatay Array 19.64 68 **P** **01 03 11.9 +1.2**
KK31 IAmb IAmb 01 03 18.1
comp=Z,8.2nm,0.9s
KK31 Karatay Array 19.64 68 P **P** **01 03 11.9 +1.2**
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 19.64 68 **P** **01 03 12.3 +1.6**
KKAR Karatay Array 19.64 68 P **P** **01 03 12.3 +1.6**
MNK Minsk 19.93 329 *i* P **P** **01 03 13.9 +0.3**
comp=E,5.0nm,0.7s
MNK *i* P **P** **01 03 13.9 +0.3**
comp=N,6.0nm,0.8s
MNK *i* P **P** **01 03 13.9 +0.3**
comp=Z,9.0nm,0.9s,baz=136
MNK *i* PP **PnPn** **01 03 29.9 +0.6**
MNK *i* PPP PPP 01 03 37.6
MNK *i* S **Sn** **01 06 59.8 +0.7**
MNK *i* SS **SnSn** **01 07 17.6 +4.1**
MNK *i* SSS SSS 01 07 30.5
MNK *i* LQ LQ 01 09 16.9
MNK *i* LR LR 01 12 19.4
MNK *i* LRM MLR 01 14 06.4
comp=E,144nm,15.6s
MNK *i* LRM MLR 01 14 10.8
comp=Z,187nm,17.3s
MNK *i* LRM MLR 01 14 24.7
comp=N,133nm,14.9s
MNK Minsk 19.93 329 *i* P **P** **01 03 13.9 +0.3**
MNK *i* PPP PPP 01 03 37.5
MNK *i* S **Sn** **01 06 59.8 +0.7**
MNK *i* SSS SSS 01 07 30.5
MNK pmax pmax
comp=E,5.0nm,0.7s
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK pmax pmax
comp=Z,9.0nm,0.9s
MNK MLR MLR
comp=E,144nm,16.0s
MNK MLR MLR
comp=Z,187nm,17.0s
MNK MLR MLR
comp=N,133nm,15.0s
ARTI Arti 19.95 22 P **P** **01 03 14.0 +0.1**
comp=N,0.6nm,0.3s,baz=213,slow=5.0,SNR=9.4
ARTI LR LR 01 13 44.6
comp=N,179nm,20.0s,baz=311,slow=45
comp=N,6.0nm,0.8s
ARTI Arti 19.95 22 P **P** **01 03 14.0 +0.1**
KIRV Kirov 20.32 6 P **P** **01 03 17.6 -0.2**
comp=N,14nm,0.8s,baz=187,slow=3.3,SNR=5.9
comp=N,14nm,0.8s
KIRV Kirov 20.32 6*ceP* **P** **01 03 17.3 -0.5**
SVE Sverdlovsk 21.00 24 *eP* 01 03 33.2
SVE pmax pmax
comp=Z,18nm,1.0s
ARSB Arslanbob 21.43 74 P **P** **01 03 30.1 0.0**
ARSB IAmb IAmb 01 03 40.1
comp=Z,13nm,1.0s
ARSB Arslanbob 21.43 74 P **P** **01 03 30.1 0.0**
ARSB pmax pmax
comp=Z,13nm,1.0s
SUW Suwalki 21.66 323 P **P** **01 03 35.2 +2.9**
SUW Suwalki 21.66 323 P **P** **01 03 35.3 +2.9**
BORK Borovoye 22.61 42⇑*eP* **P** **01 03 43.4 +0.9**
BORK pmax pmax
comp=Z,8.0nm,0.9s
BVAR Borovoye Array 22.63 42 P **P** **01 03 42.7 -0.1**
comp=Z,3.3nm,0.7s,baz=242,slow=11,SNR=12
comp=Z,3.3nm,0.7s
KLMR Klimovskoe 22.70 353 *eP* **P** **01 03 43.4 0.0**
KLMR *e* 01 07 34.8
KLMR pmax pmax
comp=Z,27nm,1.5s
RONA Rosalia, Austr 22.97 303 *i* P **P** **01 03 47.0 +0.6**
comp=Z,5.8nm,1.2s
VSU Vasula 23.34 335⇓*eP* **P** **01 03 53.4 +3.4**
VSU pmax pmax
comp=Z,27nm,1.2s
MOA Molln 24.34 303 *eP* **P** **01 04 00.3 +0.5**
comp=Z,5.2nm,1.2s
BIOA Bad Ischl, Aus 24.73 302 *eP* **P** **01 04 03.4 +0.1**
comp=Z,8.0nm,1.8s
KBA Koelnbreinsper 24.82 301 *i* P **P** **01 04 06.3 +2.0**
comp=Z,2.4nm,0.7s
GERES GERESS Array B 24.92 305 P **P** **01 04 04.7 -0.4**
comp=Z,1.0nm,0.8s,baz=93,slow=9.4,SNR=9.8
comp=Z,1.0nm,0.8s
KHC Kasperske Hory 25.06 305⇓*eP* **P** **01 04 06.7 +0.4**
KHC pmax pmax
comp=Z,14nm,2.0s
LESA Schwarzleotal 25.33 301 *eP* **P** **01 04 12.2 +3.5**
comp=Z,4.3nm,0.9s
ABTA Abfaltersbach 25.34 300 *i* P **P** **01 04 11.4 +2.4**
comp=Z,7.6nm,1.4s
FINES FINESS Array B 25.91 339 P **P** **01 04 13.7 -0.1**
comp=Z,2.7nm,0.7s,baz=132,slow=11,SNR=8.8
comp=Z,2.7nm,0.7s
FINES FINESS Array B 25.91 339 *i* P **P** **01 04 14.8 +1.0**
FINES pmax pmax
comp=Z,2.0nm,0.6s
SQTA Sankt Quirin 26.29 300 *eP* **P** **01 04 15.9 -1.6**
comp=Z,0.2nm,0.3s
MOTA Moosalm 26.37 301 *eP* **P** **01 04 17.4 -1.0**
comp=Z,8.8nm,1.4s
KURBB Kurchatov Arra 26.41 52 P **P** **01 04 19.1 +0.7**
comp=Z,2.9nm,0.5s,baz=264,slow=9.4,SNR=15
comp=Z,2.9nm,0.5s
KURK Kurchatov 26.49 52⇑*eP* **P** **01 04 20.1 +0.9**
KURK pmax pmax
comp=Z,6.0nm,0.9s
FETA Feichten 26.59 300 *eP* **P** **01 04 20.3 0.0**
comp=Z,10nm,1.7s
DAVA Damuels 27.20 300 *eP* **P** **01 04 28.2 +2.5**
comp=Z,0.8nm,0.5s
MK31 Makanchi Array 28.27 61*ceP* **P** **01 04 36.0 +0.7**
MKAR Makanchi Array 28.27 61 P **P** **01 04 35.9 +0.7**
MKAR Makanchi Array 28.27 61 P **P** **01 04 36.4 +1.1**
comp=Z,3.9nm,0.7s,baz=267,slow=6.8,SNR=21
comp=Z,3.9nm,0.7s
HFS Hagfors 29.42 328 P **P** **01 04 44.4 -0.9**
comp=Z,2.0nm,0.7s,baz=144,slow=11,SNR=10
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 30.94 328 P **P** **01 04 57.2 -1.5**
comp=Z,1.1nm,0.9s,baz=124,slow=8.8,SNR=3.8
comp=Z,1.1nm,0.9s
ZALV Zalesovo Beam 30.97 47 P **P** **01 04 58.8 -0.2**
comp=Z,0.5nm,0.4s,baz=253,slow=9.4,SNR=2.9
comp=Z,0.5nm,0.4s
DGZ Jazzator, Alta 31.91 56⇑*eP* **P** **01 05 08.5 +1.0**
DGZ pmax pmax
comp=Z,7.0nm,1.0s
WMQ Urumqi 32.13 67 *eP* **P** **01 05 12.5 +3.0**
WMQ LR LR
comp=Z,140nm,23.9s
EVN Everest 36.05 94 P **P** **01 05 45.2 +1.0**
EKA Eskdalemuir Ar 36.29 314 P **P** **01 05 43.7 -1.6**
comp=Z,0.8nm,0.6s,baz=105,slow=9.6,SNR=2.1
comp=Z,0.8nm,0.6s
TAM Tamanrasset 37.28 257 P **P** **01 05 54.6 +0.4**
TAM IAmb IAmb 01 05 59.5
comp=Z,5.5nm,1.0s
TAM Tamanrasset 37.28 257 P **P** **01 05 54.6 +0.4**
TAM pmax pmax
comp=Z,6.0nm,1.0s
ESDC Sonseca Array 37.85 288 P **P** **01 05 57.0 -1.8**
comp=Z,1.4nm,0.9s,baz=68,slow=8.3,SNR=5.9
comp=Z,1.4nm,0.9s
NRIK Noril'sk 38.26 23⇑*eP* **P** **01 06 02.1 +0.3**
NRIK pmax pmax
comp=Z,7.0nm,1.8s
KNGR Kungurtug, Tuv 38.41 54⇓*eP* **P** **01 06 05.0 +1.6**
KNGR pmax pmax
comp=Z,12nm,1.4s
SPITS Spitsbergen Ar 41.60 351 P **P** **01 06 28.3 -1.2**
comp=Z,6.6nm,0.9s,baz=140,slow=8.3,SNR=5.8
comp=Z,6.6nm,0.9s
ULN Ulaanbaatar 44.94 57⇑*eP* **P** **01 06 58.0 +1.0**
ULN pmax pmax
comp=Z,5.0nm,1.3s
TORD Torodi Ar. Bea 46.04 249 P **P** **01 07 03.9 -2.0**
comp=Z,0.5nm,0.7s,baz=39,slow=9.2,SNR=4.8
comp=Z,0.5nm,0.7s
HHC Hu-ho-hao-te 49.99 65 *eP* **P** **01 07 37.4 +1.1**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax

	comp=Z,96nm,5.2s							
CMAR	**Chiang Mai Arr**	**50.48**	**98**	P		**P**	**01 07 39.1**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=298,slow=8.3,SNR=8.6							
	comp=Z,0.8nm,0.3s							
CMAR	**Chiang Mai Arr**	**50.48**	**98**	*c*eP		**P**	**01 07 40.0**	**-0.2**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
TIXI	**Tiksi**	**52.03**	**24**⇑	*e*P		**P**	**01 07 51.6**	**+0.5**
TIXI				pmax		pmax		
	comp=Z,14nm,3.0s							
ZEA	**Zeya**	**55.72**	**45**	*e*P		P	01 08 03.6	-15
ZEA				pmax		pmax		
	comp=N,10.0nm,0.4s							
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.5s							
BILL	**Bilibino**	**65.05**	**21**⇓	*e*P		**P**	**01 09 21.0**	**-0.9**
BILL				pmax		pmax		
	comp=Z,10.0nm,1.5s							
BOSA	**Boshof**	**69.30**	**199**	P		**P**	**01 09 48.5**	**-0.8**
	comp=Z,1.9nm,1.0s,baz=56,slow=7.3,SNR=3.7							
	comp=Z,1.9nm,1.0s							
PETK	**Petropavlovsk-**	**71.73**	**36**	LR		LR	01 47 02.6	
	comp=Z,54nm,19.2s,baz=351,slow=40							

GII ***11*** *01:03:18.9±0.0,29.°188N±0.°002×34.°752E±0.°001,h10km, Mws2.8,confirmed*
SGS ***11*** *01:03:19.5,29.°14N×34.°76E,h3km,Ml1.9*
HLW ***11*** *01:03:19.6,29.°16N×34.°88E,h23km±1km,Ml2.9*
JSO ***11*** *01:03:19.2±1.8,29.°N±12.°×3.°5E±.°,h10km±4km,M3.2/25, Md3.9/23,ML3.4/25,MLv3.2/25,MLv3.2/25*

ISC 11 01:03:19.7±0.9,29.°18N±0.°02×34.°82E±0.°03,h26km±6km, n80,σ0°88/81,1C,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HBST	**Basata**	**0.08**	**298**	P	**Pb**	**01 03 24.3**	**-0.1**
HAQS	**Haql**	**0.15**	**144**	P	Pn	01 03 34.5	+8.1
NUB	**Nuweibaa**	**0.21**	**225**	P	**Pb**	**01 03 25.9**	**+0.3**
HQLS		**0.25**	**60**	P	**Pb**	**01 03 25.4**	**-0.7**
HQLS		**0.25**	**60**	S	**Sb**	**01 03 29.7**	**-0.9**
JMOS	**Jabal al Moall**	**0.26**	**92**	P	**Pb**	**01 03 25.9**	**-0.3**
JMOS	**Jabal al Moall**	**0.26**	**92**	S	**Sb**	**01 03 30.1**	**-0.5**
ELOT	**Eilot**	**0.42**	**18**	P	**Pb**	**01 03 28.0**	**-0.7**
ELOT	**Eilot**	**0.42**	**18**	S	**Sb**	**01 03 35.3**	**+0.4**
HDHB	**Dhahab**	**0.48**	**201**	P	**Pb**	**01 03 29.7**	**0.0**
EIL	**Elat**	**0.51**	**13**	⇑P	**Pb**	**01 03 29.3**	**-0.8**
EIL	**Elat**	**0.51**	**13**	S	**Sb**	**01 03 36.8**	**-0.4**
BEOR	**Beer Ora**	**0.55**	**15**	P	**Pb**	**01 03 30.1**	**-0.7**
BEOR	**Beer Ora**	**0.55**	**15**	S	**Sb**	**01 03 38.4**	**0.0**
MBRI	**Mt Berech**	**0.62**	**8**	P	**Pb**	**01 03 31.3**	**-0.8**
MBRI	**Mt Berech**	**0.62**	**8**	P	**Pb**	**01 03 31.3**	**-0.8**
MBRI	**Mt Berech**	**0.62**	**8**	S	**Sb**	**01 03 40.5**	**0.0**
ELFZ	**Elifaz**	**0.64**	**15**	P	**Pb**	**01 03 31.5**	**-0.9**
ELFZ	**Elifaz**	**0.64**	**15**	S	**Sb**	**01 03 41.3**	**+0.4**
SAMR	**Samar**	**0.68**	**15**	P	**Pb**	**01 03 32.0**	**-0.9**
SAMR	**Samar**	**0.68**	**15**	S	**Sb**	**01 03 42.0**	**0.0**
JLOS		**0.74**	**126**	S	**Sb**	**01 03 43.3**	**-0.5**
JLOS				P	**Pb**	**01 03 33.3**	**-0.7**
YTVT	**Yotvata**	**0.74**	**16**	P	**Pb**	**01 03 33.2**	**-0.9**
YTVT	**Yotvata**	**0.74**	**16**	S	**Sb**	**01 03 43.8**	**0.0**
BDAS	**Al Bad`**	**0.78**	**161**	P	**Pb**	**01 03 34.0**	**-0.8**
BDAS	**Al Bad`**	**0.78**	**161**	S	**Sb**	**01 03 44.3**	**-0.7**
LOTA	**Lotan**	**0.84**	**16**	P	**Pb**	**01 03 35.0**	**-0.7**
LOTA	**Lotan**	**0.84**	**16**	S	**Sb**	**01 03 46.6**	**-0.1**
RSHS		**0.87**	**181**	P	**Pb**	**01 03 34.9**	**-1.4**
HRFI	**Mount Harif**	**0.88**	**13**	P	**Pb**	**01 03 35.3**	**-1.1**
HRFI	**Mount Harif**	**0.88**	**13**	P	**Pb**	**01 03 35.4**	**-0.9**
HRFI	**Mount Harif**	**0.88**	**13**	S	**Sb**	**01 03 47.6**	**-0.1**
KRMI	**Paran Flat**	**0.94**	**355**	P	**Pb**	**01 03 36.4**	**-1.0**
KRMI	**Paran Flat**	**0.94**	**355**	P	**Pb**	**01 03 36.5**	**-0.9**
KRMI	**Paran Flat**	**0.94**	**355**	S	**Sn**	**01 03 49.9**	**0.0**
YAHL	**Yahel**	**0.94**	**17**	P	**Pn**	**01 03 37.4**	**+0.1**
YAHL	**Yahel**	**0.94**	**17**	S	**Sn**	**01 03 49.9**	**0.0**
HKAT	**Jabal Katrina**	**0.97**	**228**	P	**Pn**	**01 03 37.6**	**-0.2**
HKAT				S	**Sb**	**01 03 51.0**	**+0.5**
AYUS	**`Aynunah**	**1.06**	**158**	P	**Pn**	**01 03 38.5**	**-0.3**
KRABS	**KRABS**	**1.14**	**160**	P	**Pb**	**01 03 40.6**	**-0.1**
PRNI	**Paran**	**1.18**	**8**	P	**Pn**	**01 03 40.7**	**+0.1**
PRNI	**Paran**	**1.18**	**8**	P	**Pn**	**01 03 40.8**	**+0.1**
PRNI	**Paran**	**1.18**	**8**	S	**Sb**	**01 03 57.0**	**+0.5**
TR1	**Tor 1**	**1.39**	**213**	P	**Pn**	**01 03 43.2**	**-0.3**
ZFRI	**Zfri**	**1.41**	**13**	P	**Pn**	**01 03 44.1**	**+0.5**
ZFRI	**Zfri**	**1.41**	**13**	P	**Pn**	**01 03 44.7**	**-0.8**
ZFRI	**Zfri**	**1.41**	**13**	S	**Sb**	**01 04 03.7**	**-0.8**
HRDS	**Abu Rudays**	**1.41**	**251**	P	**Pn**	**01 03 43.8**	**+0.1**
RMNI	**Mount Ramon**	**1.42**	**358**	P	**Pn**	**01 03 44.4**	**+0.6**
RMNI	**Mount Ramon**	**1.42**	**358**	S	**Sb**	**01 04 03.2**	**0.0**
WTBKS	**WTBKS**	**1.45**	**138**	P	**Pn**	**01 03 43.8**	**-0.6**
EYHV	**Ein Yahav**	**1.52**	**14**	P	**Pb**	**01 03 46.4**	**-0.8**
EYHV	**Ein Yahav**	**1.52**	**14**	S	**Sb**	**01 04 07.0**	**+0.9**
MWLHS	**Almuwaylih**	**1.55**	**157**	P	**Pn**	**01 03 46.8**	**+1.1**
KZIT	**Kziot**	**1.76**	**348**	P	**Pn**	**01 03 49.2**	**+0.7**
KZIT	**Kziot**	**1.76**	**348**	P	**Pn**	**01 03 49.4**	**+0.8**
KZIT	**Kziot**	**1.76**	**348**	S	**Sb**	**01 04 12.4**	**-0.7**
TBKS	**Tabuk**	**1.79**	**122**	P	**Pb**	**01 03 50.5**	**-1.3**
DESA	**DESA**	**2.04**	**144**	P	**Pn**	**01 03 52.6**	**+0.1**
URD07	**Al Anba**	**2.16**	**133**	P	**Pb**	**01 04 00.0**	**+1.8**
MSBI	**Mazada**	**2.18**	**12**	P	**Pn**	**01 03 55.4**	**+1.2**
YTIR	**Yattir**	**2.19**	**7**	P	**Pn**	**01 03 55.5**	**+0.9**
YTIR	**Yattir**	**2.19**	**7**	P	**Pn**	**01 03 55.2**	**+0.6**
YTIR	**Yattir**	**2.19**	**7**	S	**Sb**	**01 04 08.2**	**-2.3**
GHAJ	**Ghor Haditha**	**2.22**	**17**	P	**Pn**	**01 03 56.2**	**+1.4**
URD10	**Hayder**	**2.24**	**116**	P	**Pb**	**01 04 00.5**	**+1.0**
SWQJ	**Swaqa**	**2.32**	**27**	P	**Pb**	**01 03 59.8**	**-1.2**
AMAZ	**Amatzia**	**2.35**	**2**	P	**Pn**	**01 03 57.8**	**+1.2**
DSI	**Dead Sea**	**2.44**	**11**	P	**Pn**	**01 03 59.0**	**+1.2**
UJAP	**Al Uja**	**2.82**	**11**	P	**Pn**	**01 04 04.2**	**+1.1**
SALP	**Salfit**	**2.90**	**6**	P	**Pn**	**01 04 05.3**	**+1.1**
BALJ	**Balqa**	**2.99**	**14**	P	**Pn**	**01 04 06.7**	**+1.3**
SLTI	**Sal'it**	**3.06**	**4**	P	**Pn**	**01 04 07.5**	**+1.1**
HMDT	**Nahal Hemdat**	**3.13**	**11**	P	**Pn**	**01 04 08.6**	**+1.3**
HSUJ	**Al Zarqa**	**3.15**	**22**	P	**Pn**	**01 04 08.9**	**+1.2**
QRNJ	**Al-Qirein**	**3.21**	**12**	P	**Pn**	**01 04 09.8**	**+1.3**
MMLI	**Mount Malkishu**	**3.29**	**9**	P	**Pn**	**01 04 11.0**	**+1.4**
OFRI	**`Ofer**	**3.44**	**2**	P	**Pn**	**01 04 12.9**	**+1.3**
ASF	**Jabal al Asfar**	**3.48**	**30**	P	**Pn**	**01 04 13.2**	**+0.9**
SHMJ	**Saham**	**3.63**	**13**	P	**Pn**	**01 04 15.3**	**+1.0**

NOU ***11*** *01:15:08.8,35.°05S×178.°79E,h295km,mb4.4/7,Off E. Coast of N. Island, N.Z.*
WEL ***11*** *01:15:23.9±1.1,36.°S±12.°×17.°8E±1.°0,h182km±19km, M3.9/12,ML4.3/11,MLv3.9/12,Error ellipse: s-maj=15.8km s-min=12.8km az=30.1,confirmed*

ISC 11 01:15:19.0±3.3,35.°7S±0.°1×178.°5E±0.°1,h235km±16km, n35,σ1°68/43,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.82**	**184**	P	**Pn**	**01 15 59.8**	**+1.3**
MXZ	**Matakaoa Point**	**1.82**	**184**	P	**Pn**	**01 15 59.6**	**+1.1**
MXZ				S	**S**	**01 16 27.1**	**-2.5**
WMGZ	**Waiomatatini S**	**2.07**	**181**	P	**Pn**	**01 16 02.6**	**+1.8**
WMGZ				S	**S**	**01 16 33.0**	**-0.8**
HAZ	**Te Kaha**	**2.08**	**195**	P	**Pn**	**01 16 01.8**	**+1.0**
HAZ				S	**S**	**01 16 31.7**	**-2.2**
PKGZ	**Pakihiroa**	**2.14**	**188**	P	**Pn**	**01 16 03.1**	**+1.6**
RUGZ	**Raukumara Rang**	**2.30**	**195**	P	**Pn**	**01 16 04.0**	**+0.8**
PUZ	**Puketiti**	**2.33**	**184**	P	**Pn**	**01 16 04.7**	**+1.3**
PUZ				S	**S**	**01 16 36.2**	**-2.1**
KUZ	**Kuaotunu**	**2.42**	**245**	P	**Pn**	**01 16 04.2**	**-0.1**
TWGZ	**Tauwhareparae**	**2.46**	**189**	P	**Pn**	**01 16 06.9**	**+2.1**
MWZ	**Matawai**	**2.69**	**196**	P	**Pn**	**01 16 08.7**	**+1.6**
URZ	**Urewera**	**2.73**	**203**	P	**Pn**	**01 16 08.7**	**+1.2**
URZ	**Urewera**	**2.73**	**203**	P	**Pn**	**01 16 08.8**	**+1.3**
URZ				S	**S**	**01 16 44.4**	**-1.4**
TKGZ	**Te Karaka**	**2.73**	**190**	P	**Pn**	**01 16 09.2**	**+1.7**
CNGZ	**Carnagh Statio**	**2.74**	**184**	P	**Pn**	**01 16 09.6**	**+2.0**
RAGZ	**Rawiri**	**2.87**	**196**	P	**Pn**	**01 16 11.0**	**+1.8**
RAGZ				S	**S**	**01 16 49.3**	**+0.6**
TARZ	**Mount Tarawera**	**2.93**	**211**	P	**Pn**	**01 16 12.7**	**+2.8**
MKAZ	**Moumakai**	**2.98**	**242**	P	**Pn**	**01 16 11.3**	**+1.1**
RIGZ	**Rimuhau**	**3.01**	**190**	P	**Pn**	**01 16 12.1**	**+1.5**
RIGZ				S	**S**	**01 16 50.3**	**-1.1**
MUGZ	**Murupara**	**3.04**	**206**	P	**Pn**	**01 16 12.4**	**+1.5**
MUGZ				S	**S**	**01 16 50.6**	**-1.3**
TOZ	**Tahuroa Road**	**3.09**	**229**	P	**Pn**	**01 16 13.5**	**+2.0**
RTZ	**Ruatahuna**	**3.10**	**202**	P	**Pn**	**01 16 13.1**	**+1.4**
SNGZ	**Shannon Statio**	**3.16**	**196**	P	**Pn**	**01 16 14.1**	**+1.8**
KNZ	**Kokohu**	**3.33**	**190**	P	**Pn**	**01 16 15.2**	**+1.0**
MHGZ	**Mahia Peninsul**	**3.43**	**187**	P	**Pn**	**01 16 17.0**	**+1.6**
TLZ	**Tolley Road**	**3.48**	**221**	P	**Pn**	**01 16 18.7**	**+2.8**
BKZ	**Black Stump Fm**	**3.75**	**204**	P	**Pn**	**01 16 20.7**	**+1.5**
BKZ	**Black Stump Fm**	**3.75**	**204**	P	**Pn**	**01 16 20.4**	**+1.2**
HIZ	**Hauiti**	**3.98**	**225**	P	**Pn**	**01 16 25.5**	**+3.6**
OUZ	**Omahuta**	**3.99**	**276**	P	**Pn**	**01 16 22.3**	**+0.3**
NGZ	**Ngauruhoe**	**4.11**	**213**	P	**Pn**	**01 16 25.6**	**+2.1**
PXZ	**Pawanui**	**4.46**	**196**	P	**Pn**	**01 16 28.2**	**+0.7**
TSZ	**Takapari Road**	**4.74**	**204**	P	**Pn**	**01 16 31.6**	**+0.6**
BFZ	**Birch Farm**	**5.23**	**199**	P	**Pn**	**01 16 37.3**	**+0.3**
SNZO	**South Karori**	**6.29**	**207**	P	**Pn**	**01 16 50.1**	**-0.2**
KHZ	**Kahutara**	**7.68**	**208**	P	**Pn**	**01 17 07.4**	**-0.6**

IDC ***11*** *02:17:42.3±3.1, 18.°97N×144.°84E,h149km±30km,mb3.4/7, mbtmp3.9/8,Error ellipse: s-maj=34.3km s-min=19.0km az=99.0*
NEIC ***11*** *02:17:48.7±1.4, 18.°7N±0.°1×145.°4E±0.°2,h191km±8km, mb4.2/19,Error ellipse: s-maj=31.8km s-min=11.0km az=126.0*

ISC 11 02:17:48.1±0.7,18.°67N±0.°09×145.°1E±0.°2,h200km,n34, σ1°36/29,mb4.1/18,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.05**	**182**	P	**Pn**	**02 19 02.2**	**-1.0**
	65nm,0.8s,baz=11,slow=19,SNR=2.2						
GUMO				S	**Sn**	**02 20 00.5**	**-2.1**
	39nm,0.5s,baz=6.9,slow=19,SNR=1.4						
H11S3	**WAKE ISLAND Hy**	**20.50**	**87**	T	T	02 43 33.4	
	baz=275						
H11S1	**WAKE ISLAND Hy**	**20.51**	**87**	T	T	02 43 16.3	
	baz=275						
H11S2	**WAKE ISLAND Hy**	**20.51**	**87**	T	T	02 43 40.9	
	baz=275						
H11N1	**WAKE ISLAND Hy**	**20.64**	**84**	T	T	02 43 40.4	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**20.64**	**83**	T	T	02 43 42.4	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**20.66**	**84**	T	T	02 43 43.2	
	baz=274						
WB0	**Warramunga Arr**	**39.61**	**196**	P	**P**	**02 25 01.5**	**+1.1**
WR0	**Warramunga Arr**	**39.75**	**196**	P	**P**	**02 25 03.9**	**+2.4**
WR0				IAmb	IAmb	02 25 45.9	
	comp=Z,12nm,1.4s						
WR8	**Warramunga Arr**	**39.76**	**196**	P	**P**	**02 25 02.3**	**+0.7**
WR8				IAmb	IAmb	02 25 40.0	
	comp=Z,9.6nm,1.4s						
WRAB	**Tennant Creek**	**39.78**	**196**	P	**P**	**02 25 03.0**	**+1.2**
WRAB				IAmb	IAmb	02 25 12.4	
	comp=Z,9.6nm,1.4s						
WB2	**Warramunga Arr**	**39.78**	**196**	P	**P**	**02 25 02.8**	**+1.0**
WB2				IAmb	IAmb	02 25 04.2	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**39.79**	**196**	P	**P**	**02 25 02.8**	**+0.9**
	comp=Z,1.5nm,0.3s,baz=14,slow=8.6,SNR=26						
WRA				PcP	**PcP**	**02 27 04.6**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=21,slow=3.3,SNR=1.3						
	comp=Z,1.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.22**	**209**	P	**P**	**02 25 15.5**	**+1.9**
ASAR	**Alice Springs**	**43.46**	**195**	P	**P**	**02 25 32.7**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=16,slow=7.1,SNR=5.7						
	comp=Z,0.4nm,0.4s						
MBWA	**Marble Bar**	**46.72**	**213**	P	**P**	**02 25 59.5**	**+2.2**
MBWA				IAmb	IAmb	02 26 10.9	
	comp=Z,13nm,1.2s						
H18K	**Honhosa River**	**59.40**	**24**	P	**P**	**02 27 29.7**	**+0.4**
C19K	**Lookout Ridge**	**60.63**	**20**	P	**P**	**02 27 39.2**	**+1.6**
C19K				IAmb	IAmb	02 28 15.0	
	comp=Z,7.7nm,1.1s						
J20K	**Nowinta River**	**60.75**	**26**	P	**P**	**02 27 38.8**	**+0.5**
J20K				IAmb	IAmb	02 27 39.7	
	comp=Z,10nm,1.5s						
KURBB	**Kurchatov Arra**	**60.94**	**318**	P	P	02 27 36.6	-3.3
	comp=Z,0.1nm,0.3s,baz=95,slow=8.0,SNR=4.2						
	comp=Z,0.1nm,0.3s						
SKT	**Skwentna**	**61.26**	**29**	P	**P**	**02 27 41.8**	**-0.1**
D20K	**Etivluk River**	**61.45**	**21**	P	**P**	**02 27 44.1**	**+1.1**
BPAW	**Bear Paw Mtn.**	**62.05**	**27**	P	**P**	**02 27 47.6**	**+0.5**
BPAW				IAmb	IAmb	02 27 59.7	
	comp=Z,4.5nm,1.2s						
D22K	**Ayikyak River**	**62.84**	**21**	P	**P**	**02 27 53.6**	**+1.3**
ILAR	**Eielson Array**	**63.94**	**26**	P	**P**	**02 27 57.7**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=254,slow=5.0,SNR=5.9						
	comp=Z,0.5nm,0.8s						
J25K	**Salcha River,**	**64.55**	**27**	P	**P**	**02 28 02.9**	**-0.7**
BMAR	**Burnt Mountain**	**65.38**	**24**	P	**P**	**02 28 10.5**	**+1.6**
BVAR	**Borovoye Array**	**66.12**	**320**	P	**P**	**02 28 11.3**	**-2.5**
	comp=Z,0.7nm,0.4s,baz=120,slow=4.5,SNR=3.3						
	comp=Z,0.7nm,0.4s						
H27K	**Steamboat Moun**	**66.39**	**25**	P	**P**	**02 28 15.8**	**+0.5**
H27K				IAmb	IAmb	02 28 35.2	
	comp=Z,7.1nm,1.5s						
L29M	**L29M**	**67.56**	**29**	P	**P**	**02 28 24.0**	**+1.3**
L29M				IAmb	IAmb	02 28 50.1	
	comp=Z,7.1nm,1.4s						
I05D	**Terrebonne, OR**	**79.69**	**47**	P	**P**	**02 29 34.4**	**+0.7**
I05D				IAmb	IAmb	02 30 06.6	
	comp=Z,5.9nm,1.4s						
NVAR	**Mina Array Bea**	**83.63**	**52**	P	**P**	**02 29 54.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=262,slow=6.2,SNR=8.0						
	comp=Z,0.6nm,0.6s						
TPNV	**Topopah Spring**	**85.66**	**53**	P	**P**	**02 30 04.1**	**-0.7**
FINES	**FINESS Array B**	**86.66**	**335**	P	**P**	**02 30 07.8**	**-1.1**
	comp=Z,2.1nm,1.0s,baz=90,slow=8.3,SNR=1.2						
	comp=Z,2.1nm,1.0s						

SJA ***11*** *02:19:44.7±0.8,27.°67S×71.°70W,h12km±4km,ML4.1, MW3.8*
NEIC ***11*** *02:19:50.7±1.4,27.°73S±0.°03×71.°29W±0.°02,h22km±7km, mb4.1/4,ML4.1(GUC),Error ellipse: s-maj=5.1km s-min=2.2km az=160.0*
GUC ***11*** *02:19:52.4±0.6,27.°79S×71.°23W,h34km±2km,ML4.1*
IDC ***11*** *02:19:55.1±3.4,27.°74S×71.°21W,h53km±28km,mb3.6/4, mbtmp3.7/8,ML3.5/3,Error ellipse: s-maj=40.7km s-min=16.0km az=81.0*

ISC 11 02:19:46.8±1.5,27.°69S±0.°03×71.°51W±0.°04,h5km±10km, n108,σ1°78/132,mb4.2/4,6C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.64**	**144**		**Pb**	**02 20 01.1**	**+0.6**
AC04				Sg	**Sg**	**02 20 07.6**	**0.0**
AC04	**Llanos de Chal**	**0.64**	**144**	⇓*i*P	**Pb**	**02 20 01.1**	**+0.6**
AC04				*e*S	**Sg**	**02 20 07.7**	**+0.2**
AC04				IAML		02 20 08.2	
	comp=E,29μm,0.2s						
AC04	**Llanos de Chal**	**0.64**	**144**	*e*P	**Pg**	**02 20 00.1**	**+0.9**
AC06	**Mina Casimiro**	**1.07**	**73**		**Pb**	**02 20 08.1**	**+0.1**
AC06				Sg	**Sb**	**02 20 19.8**	**-2.5**
AC06	**Mina Casimiro**	**1.07**	**73**	⇓*i*P	**Pb**	**02 20 08.1**	**+0.1**
AC06				*e*S	**Sb**	**02 20 20.0**	**-2.3**
GO03	**Copiapo**	**1.13**	**86**		**Pb**	**02 20 08.8**	**-0.1**
GO03				Sg	**Sb**	**02 20 20.7**	**-3.3**
GO03	**Copiapo**	**1.13**	**86**	*e*P	**Pb**	**02 20 08.5**	**-0.5**
GO03				*e*S	**Sb**	**02 20 20.9**	**-3.1**
GO03	**Copiapo**	**1.13**	**86**	*e*P	**Pb**	**02 20 08.8**	**-0.1**
GO03				*e*S	**Sb**	**02 20 22.1**	**-1.9**
GO03				IAML		02 20 23.6	
	comp=Z,4μm,0.7s						
LCO	**Las Campanas**	**1.50**	**152**		**Pn**	**02 20 15.3**	**+0.6**
LCO					**Sn**	**02 20 32.1**	**-2.6**
LCO	**Las Campanas**	**1.50**	**152**	*e*P	**Pn**	**02 20 14.9**	**+0.2**
LCO				*e*S	**Sn**	**02 20 32.4**	**-2.4**
LCO	**Las Campanas**	**1.50**	**152**	*e*P	**Pn**	**02 20 14.5**	**-0.2**
LCO				*e*S	**Sn**	**02 20 32.8**	**-1.9**
LCO				IAML		02 20 34.1	
	comp=Z,6μm,0.3s						
AC05	**El Transito**	**1.58**	**137**	Pn	**Pn**	**02 20 15.6**	**-0.1**
AC05	**El Transito**	**1.58**	**137**	⇑*i*P	**Pn**	**02 20 16.1**	**+0.4**
AC05				*e*S	**Sn**	**02 20 33.3**	**-3.3**
AC05				IAML		02 20 37.6	
	comp=N,5μm,0.6s						
AC05	**El Transito**	**1.58**	**137**	*e*P	**Pn**	**02 20 16.1**	**+0.4**
AC05				*e*S	**Sb**	**02 20 36.4**	**-0.6**
AC05				IAML		02 20 36.9	
	comp=Z,1μm,0.3s						
AC01	**Pan de Azucar**	**1.73**	**28**	Pn	**Pn**	**02 20 18.6**	**+0.9**
AC01	**Pan de Azucar**	**1.73**	**28**	⇑*i*P	**Pn**	**02 20 19.2**	**+1.5**
AC01				*e*S	**Sn**	**02 20 39.4**	**-0.8**
AC01	**Pan de Azucar**	**1.73**	**28**	*e*P	**Pn**	**02 20 18.4**	**+0.8**
CO05	**La Serena**	**2.24**	**174**	Pn	**Pn**	**02 20 24.8**	**+0.2**
CO05	**La Serena**	**2.24**	**174**	*e*P	**Pn**	**02 20 25.5**	**+0.9**
AC02	**Maricunga**	**2.28**	**69**	*e*P	**Pb**	**02 20 27.8**	**-1.0**
AC02				*e*S	**Sn**	**02 20 54.2**	**-0.1**
AC02				IAML		02 20 57.7	
	comp=E,1μm,0.2s						
AC02	**Maricunga**	**2.28**	**69**	*e*P	**Pn**	**02 20 27.1**	**+1.5**
AC02				*e*S	**Sg**	**02 20 58.7**	**-1.4**
AC02				IAML		02 20 58.9	
	comp=Z,795nm,0.6s						
GO04	**Tololo Observa**	**2.55**	**166**	Pn	**Pn**	**02 20 29.9**	**+0.7**
GO04	**Tololo Observa**	**2.55**	**166**	⇑*e*P	**Pn**	**02 20 30.1**	**+1.0**
GO04	**Tololo Observa**	**2.55**	**166**	*e*P	**Pn**	**02 20 29.5**	**+0.3**
GO04				*e*S	**Sb**	**02 21 06.4**	**+1.3**
GO04				IAML		02 21 14.2	
	comp=Z,1μm,0.6s						
CO01	**Juntas del Tor**	**2.60**	**152**	Pn	**Pn**	**02 20 30.9**	**+1.1**
CO01	**Juntas del Tor**	**2.60**	**152**	*e*P	**Pn**	**02 20 31.6**	**+1.8**
CO01				*e*S	**Sn**	**02 21 01.2**	**-0.7**
CO01				IAML		02 21 13.5	
	comp=N,1μm,0.4s						
CO01	**Juntas del Tor**	**2.60**	**152**	*e*P	**Pn**	**02 20 30.9**	**+1.1**
CO01				*e*S	**Sn**	**02 21 01.4**	**-0.5**
CO01				IAML		02 21 11.4	
	comp=Z,570nm,1.0s						
CO06	**Fray Jorge**	**2.98**	**182**	Pn	**Pn**	**02 20 34.7**	**-0.1**
GO02	**Mina Guanaco**	**3.04**	**35**	Pn	**Pn**	**02 20 37.5**	**+1.5**
GO02	**Mina Guanaco**	**3.04**	**35**	*e*P	**Pn**	**02 20 37.4**	**+1.5**
GO02				IAML		02 21 16.6	
	comp=E,343nm,0.2s						
GO02	**Mina Guanaco**	**3.04**	**35**	*e*P	**Pn**	**02 20 37.9**	**+2.0**
GO02				*e*S	**Sn**	**02 21 10.1**	**-2.8**
GO02				IAML		02 21 29.2	
	comp=Z,567nm,0.8s						
AROD	**Rodeo**	**3.05**	**145**	*e*P	**Pb**	**02 20 39.3**	**-2.5**
AROD				*e*S	**Sn**	**02 21 10.1**	**-2.9**
AROD				*e*S	**Sb**	**02 21 20.1**	**+0.7**
AGUA	**GUANDACOL**	**3.20**	**125**	*e*P	Pn	02 20 20.0	-18
AGUA				*e*S	**Sn**	**02 21 16.6**	**+0.1**
AGUA				IAML		02 21 32.3	
	comp=Z,450nm,0.6s						
PB14	**IPOC Station P**	**3.20**	**18**	Pn	**Pn**	**02 20 38.7**	**+0.6**
PB14	**IPOC Station P**	**3.20**	**18**	⇑*e*P	**Pn**	**02 20 39.0**	**+0.8**
PB14	**IPOC Station P**	**3.20**	**18**	*e*P	**Pn**	**02 20 38.8**	**+0.6**
PB14				*e*P	Pb	02 20 39.3	-5.1
PB14				*e*S	**Sn**	**02 21 16.4**	**-0.5**
CO03	**El Pedregal**	**3.22**	**167**	Pn	**Pn**	**02 20 39.0**	**+0.7**
CO03	**El Pedregal**	**3.22**	**167**	*e*P	**Pn**	**02 20 39.3**	**+1.1**
CO03				*e*S	**Sb**	**02 21 21.1**	**-3.1**
CO03				IAML		02 21 31.4	
	comp=Z,350nm,0.9s						
CO02	**Combarbal**	**3.53**	**173**	Pn	**Pn**	**02 20 42.5**	**0.0**
CO02	**Combarbal**	**3.53**	**173**	*e*P	**Pn**	**02 20 43.0**	**+0.4**
CO02				*e*S	**Sn**	**02 21 26.1**	**+1.3**
CO02				IAML		02 21 38.6	
	comp=Z,702nm,0.5s						
ACCO	**Cerro Coronel**	**3.59**	**144**	*e*P	**Pn**	**02 20 47.2**	**+3.6**
ACCO				*e*S	**Sb**	**02 21 37.5**	**+2.4**
PB10	**IPOC Station P**	**4.24**	**12**	Pn	**Pn**	**02 20 52.5**	**+0.4**
PB10	**IPOC Station P**	**4.24**	**12**	*e*P	**Pn**	**02 20 52.8**	**+0.6**
PB10	**IPOC

TXAR	Lajitas Array	64.52	329	P	P	02 30 26.6	+1.7
TXAR	Lajitas Array	64.52	329	P	P	02 30 26.9	+2.0
	comp=Z,0.3nm,0.7s,baz=150,slow=7.3,SNR=5.0						
	comp=Z,0.3nm,0.7s						
MNTX	Cornudas Mount	67.30	329	P	P	02 30 45.0	+2.3
TORD	Torodi Ar. Bea	81.65	70	P	P	02 32 06.6	0.0
	comp=Z,0.9nm,0.9s,baz=246,slow=1.4,SNR=4.9						
	comp=Z,0.9nm,0.9s						
H11S2	WAKE ISLAND Hy	126.09	273	T	T	04 58 05.9	
	baz=112,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	126.10	273	T	T	04 58 06.8	
	baz=112,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	126.11	273	T	T	04 58 06.0	
	baz=112,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	126.34	275	T	T	04 58 26.5	
	baz=112						
H11N1	WAKE ISLAND Hy	126.36	275	T	T	04 58 28.1	
	baz=112						
H11N2	WAKE ISLAND Hy	126.36	275	T	T	04 58 31.4	
	baz=112						
WRA	Warramunga Arr	126.45	211	PKP	PKPdf	02 38 52.0	+0.3
	comp=Z,0.3nm,0.4s,baz=161,slow=1.6,SNR=6.8						
KURBB	Kurchatov Arra	147.74	37	PKPbc	PKPbc	02 39 33.9	+1.4
	comp=Z,0.8nm,0.5s,baz=304,slow=3.2,SNR=8.1						
ZALV	Zalesovo Beam	148.52	27	PKPbc	PKPbc	02 39 34.6	+0.3
	comp=Z,2.1nm,0.6s,baz=318,slow=4.0,SNR=10						
MKAR	Makanchi Array	151.94	40	PKPbc	PKPbc	02 39 43.4	+0.5
	comp=Z,1.2nm,0.7s,baz=308,slow=1.7,SNR=5.6						

IDC 11 02:21:39.3±1.2, 30°39N×140°61E, h283km±22km, mb3.2/5, mbtmp3.8/7, Error ellipse: s-maj=86.8km s-min=23.4km az=69.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	3.56	157	P	Pn	02 22 40.4	+0.4
	30nm,0.3s,baz=341,slow=18,SNR=11						
JCJ				S	S	02 23 28.3	0.0
	43nm,0.7s,baz=323,slow=20,SNR=1.5						
MJAR	Matsushiro Arr	6.45	343	P	Pn	02 23 13.4	-0.2
	0.7nm,0.3s,baz=125,slow=7.6,SNR=8.2						
ZALV	Zalesovo Beam	46.12	317	P	P	02 29 33.4	-2.0
	0.3nm,0.3s,baz=134,slow=4.2,SNR=2.1						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	49.77	313	P	P	02 30 04.1	+0.7
	0.2nm,0.3s,baz=91,slow=8.7,SNR=3.2						
	0.2nm,0.3s						
BVAR	Borovoye Array	54.70	316	P	P	02 30 40.1	+0.7
	1.0nm,0.4s,baz=82,slow=7.3,SNR=5.2						
	1.0nm,0.4s						
FINES	FINESS Array B	74.39	333	P	P	02 32 45.9	0.0
	2.9nm,1.0s,baz=46,slow=4.0,SNR=5.6						
	2.9nm,1.0s						
NOA	NORSAR Array B	80.05	338	P	P	02 33 17.3	-0.1
	0.6nm,1.0s,baz=47,slow=4.9,SNR=2.0						
	0.6nm,1.0s						

IDC 11 02:25:43.7±2.0, 36°59N×141°10E, h0km, mb3.5/4, mbtmp3.5/6, ML2.8/2, MS3.1/1, Error ellipse: s-maj=36.8km s-min=27.3km az=150.0

JMA 11 02:25:44.4±0.1, 36°7N±0°4×14°1E±°, h52km±2km, MV3.3/34, E OFF IBARAKI PREF

ISC 11 02:25:42.4±2.0, 36°66N±0°04×141°35E±0°07, h7km±11km, n31, σ1°75/35, mb3.4/4, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.63	315	eP	Pn	02 25 57.5	-0.3
ONAJ				eS	Sn	02 26 07.2	-1.0
JHO	Hitachi	0.63	266	eP	Pn	02 25 58.0	+0.2
JHO				eS	Sn	02 26 08.2	0.0
JHYU	Hitachinakayam	0.70	243	⇓P	Pn	02 25 59.3	+0.6
JHYU				⇓eS	Sn	02 26 10.2	+0.4
JFFD	Fukushimafurud	0.77	304	eP	Pn	02 25 59.6	-0.1
JFFD				eS	Sn	02 26 10.5	-1.0
JFK	Kawauchi	0.80	332	iP	Pn	02 25 59.7	-0.5
JFK				eS	Sn	02 26 11.2	-1.2
JOTO	OTAMA OYAMA	1.21	318	eP	Pg	02 26 06.9	+1.2
JOTO				eS	Sg	02 26 23.1	+1.7
JMM	Marumori	1.28	340	P	Pn	02 26 06.3	-0.5
JMM	Marumori	1.28	340	S	Sb	02 26 22.7	-0.9
JMM	Marumori	1.28	340	eP	Pn	02 26 06.1	-0.7
JMM				eS	Sb	02 26 22.4	-1.2
JAG	Ashikaga	1.55	262	eP	Pg	02 26 11.5	-0.6
JOU	Okura	1.79	342	eP	Pn	02 26 14.2	+0.4
JOU				eS	Sn	02 26 36.2	-0.5
JIO	Ouri	1.79	360	eP	Pn	02 26 12.4	-1.4
JIO				eS	Sn	02 26 32.6	-4.2
MJAR	Matsushiro Arr	2.53	268	Pn	Pn	02 26 24.8	+0.8
	1.0nm,0.3s,baz=88,slow=14,SNR=28						
MJAR				Sn	Sn	02 26 54.6	-0.6
	0.5nm,0.3s,baz=102,slow=31,SNR=4.7						
	10.0nm,0.5s						
MAJO	Matsushiro	2.54	268	P	Pb	02 26 27.4	-0.9
JSD	Sado	2.82	300	P	Pb	02 26 30.3	-2.9
JGF	Kuroka	3.40	253	P	Pb	02 26 40.9	-2.2
JGF	Kuroka	3.40	253	S	Sb	02 27 23.3	-1.5
JHJ	Hachijo jima 2	3.76	201	Pn	Pn	02 26 40.3	-0.6
	5.2nm,0.3s,baz=0.0,slow=8.1,SNR=1.7						
JHJ				Sn	Sn	02 27 21.0	-4.5
	4.6nm,0.3s,baz=25,slow=14,SNR=1.6						
	132nm,1.0s						
JTM	Tenmabayashi	4.12	357	P	Pn	02 26 45.8	-0.1
ERM	Erimo	5.53	14	P	Pn	02 27 04.4	-0.7
SONM	Songino Array	27.95	305	P	P	02 31 33.8	+0.2
	0.6nm,0.7s,baz=126,slow=7.3,SNR=2.2						
	0.6nm,0.7s						
H11N2	WAKE ISLAND Hy	28.00	120	T	T	03 00 47.4	
	baz=313,slow=75,SNR=52						
H11N1	WAKE ISLAND Hy	28.01	120	T	T	03 00 51.9	
	baz=313,slow=75,SNR=54						
H11N3	WAKE ISLAND Hy	28.02	120	T	T	03 00 52.9	
	baz=313,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	28.70	122	T	T	03 01 42.9	
	baz=315,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	28.70	122	T	T	03 01 44.3	
	baz=315,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.71	122	T	T	03 01 45.4	
	baz=315,slow=76,SNR=15						
CMAR	Chiang Mai Arr	41.36	256	LR	LR	02 51 43.8	
	comp=Z,23nm,20.6s,baz=245,slow=38						
MKAR	Makanchi Array	44.28	302	P	P	02 33 52.0	-0.7
	0.4nm,0.7s,baz=68,slow=9.4,SNR=1.7						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	46.19	308	P	P	02 34 09.4	+1.7
	0.7nm,0.7s,baz=84,slow=8.1,SNR=5.5						
	0.7nm,0.7s						
ILAR	Eielson Array	49.83	32	P	P	02 34 40.4	+4.6
	0.3nm,0.9s,baz=278,slow=7.3,SNR=2.5						
	0.3nm,0.9s						

KRNET 11 02:33:04.1±0.1, 39°.11N×70°.20E, mb3.0

ISC 11 02:33:04.5±1.0, 39°03N±0°07×70°21E±0°05, h13km, n8, σ2°02/14, 10C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	0.09	109	⇓eP	Pg	02 33 07.0	-0.5
GAR				⇓eS	Sg	02 33 09.3	-0.3
CHGR	Chuyangaron	0.90	246	⇓eP	Pg	02 33 21.8	-0.1
CHGR				⇑eS	Sg	02 33 34.8	+1.0
DRK	Karamyk	1.31	69	⇑eP	Pn	02 33 28.8	0.0
DRK				⇑eS	Sn	02 33 47.0	+0.6
OHH	Osh	2.48	52	⇑eP	Pb	02 33 47.4	-1.6
OHH				⇑eS	Sb	02 34 18.3	-1.2
SFK	Sufi-Kurgan	2.73	68	⇓eP	Pn	02 33 50.9	+2.7
SFK				⇓eS	Sb	02 34 25.2	-1.6
SALK	Salom-Alik	3.34	55	⇓eP	Pn	02 33 59.0	+2.5
SALK				⇓eS	Sn	02 34 39.3	+3.2
KK31	Karatay Array	4.08	3	⇑Pn	Pb	02 34 12.7	-3.5
	0.4nm,0.3s,baz=186,slow=14,SNR=12						
KK31				⇑Pg	Pg	02 34 23.6	+1.0
	0.7nm,0.5s,baz=195,slow=16,SNR=4.4						
KK31				⇑Lg	Lg	02 35 20.2	
	1.3nm,0.4s,baz=188,slow=29						
AAK	Ala-Archa	4.85	41	⇑Pn	Pn	02 34 23.1	+5.7
	0.2nm,0.5s						
AAK				⇓Lg	Lg	02 35 46.2	
	0.3nm,0.6s						

JSN 11 03:02:36.4±0.8, 18°.57N×77°.92W, h24km±13km, MD3.4

SSNC 11 03:02:36.0±0.9, 18°.74N×77°.66W, h25km±11km, MD2.7, ML1.6

ISC 11 03:02:33.3±1.9, 18°8N±0°.1×77°7W±0°2, h17km±25km, n8, σ1°00/15, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTDJ	Mount Denham	0.61	170	eP	Pg	03 02 45.3	-0.2
MTDJ				eS	Sg	03 02 52.9	-0.9
MTDJ				IAML		03 02 53.6	
	comp=Z,189nm,0.3s						
MTDJ				IAML		03 02 53.7	
	115nm,0.3s						
STH	Stony Hill	1.10	133	iP	Pg	03 02 55.6	+1.0
LMGC	Las Mercedes	1.37	26	eP	Pb	03 02 58.6	+0.2
LMGC				eS	Sn	03 03 15.4	+0.1
LMGC				IAML		03 03 15.9	
	comp=E,9.5nm,0.1s						
LMGC				IAML		03 03 16.0	
	comp=N,14nm,0.1s						
CHIV	Chivirico	1.63	46	eP	Pn	03 03 02.1	+1.0
CHIV				eS	Sn	03 03 21.7	-0.1
CHIV				IAML		03 03 23.3	
	comp=E,1.5nm,0.1s						
CHIV				IAML		03 03 23.6	
	comp=N,1.1nm,0.1s						
YAR	Yar	1.95	38	eP	Pb	03 03 07.5	-0.9
YAR				eS	Sn	03 03 29.3	-0.5
YAR				eSg	Sb	03 03 31.2	-1.3
MARVS	Santiago de Cu	2.02	55	eP	Pn	03 03 07.7	+1.1
RCC	Rio Carpintero	2.17	58	eP	Pn	03 03 09.6	+0.9
RCC				eS	Sn	03 03 34.5	-0.8
GTBY	Guantanamo Bay	2.63	65	eP	Pn	03 03 16.3	+1.3
GTBY				eS	Sn	03 03 45.5	-1.0

CNRM 11 03:28:36.1, 36°.00N×9°.47W, h15km, ML3.6

SFS 11 03:28:39.5, 36°.12N×9°.65W, h32km, mb4.2/4, ML3.7/16, ML4.2/17, MLv3.7/17

MDD 11 03:28:39.5±0.4, 36°.12N×9°.71W, h37km±13km, mb_Lg3.6/41, Error ellipse: s-maj=5.1km s-min=2.7km az=70.0

IGIL 11 03:28:41.2, 36°.23N×9°.52W, h15km, ML2.7

INMG 11 03:28:41.2±1.3, 36°.15N×9°.60W, h29km±7km, ML2.7, Error ellipse: s-maj=4.3km s-min=2.9km az=63.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente

ISC 11 03:28:38.9±1.4, 36°14N±0°.04×9°54W±0°06, h35km, n121, σ1°81/205, 1C-3D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSVI	Cabo S. Vicent	0.98	26	eS	Sn	03 29 10.1	+1.2
PSVI				iIAML		03 29 11.1	
PSVI				iIAML		03 29 11.9	
PFVI	Vila Bisbo	1.14	30	S	Sn	03 29 12.9	+0.1
PFVI				P	Pn	03 29 59.3	+1.0
PFVI	Vila Bisbo	1.14	30	⇓iP	Pn	03 29 59.5	+1.2
PFVI				eS	Sn	03 29 13.2	+0.3
PFVI				iIAML		03 29 14.3	
PFVI				iIAML		03 29 14.3	
PFVI				iIAML		03 29 14.8	
PLAGO	Lagos	1.17	35	eS	Sn	03 29 14.7	+1.2
PLAGO				iIAML		03 29 15.3	
PLAGO				iIAML		03 29 17.5	
PLAGO				iIAML		03 29 17.9	
PPOR	Portimao	1.28	39	eS	Sn	03 29 17.0	+0.9
PPOR				iIAML		03 29 17.2	
PPOR				iIAML		03 29 18.8	
PALJ	Aljezur	1.32	27	eS	Sn	03 29 18.2	+1.2
PALJ				iIAML		03 29 19.0	
PALJ				iIAML		03 29 19.2	
MORF	Marmelete	1.36	31	eP	Pn	03 29 02.8	+1.3
MORF				eS	Sn	03 29 18.6	+0.3
MORF				IAML		03 29 20.4	
	comp=N,202nm,0.2s						
MORF	Marmelete	1.36	31	⇓iP	Pn	03 29 02.8	+1.3
MORF				eS	Sn	03 29 18.8	+0.5
MORF				iIAML		03 29 20.6	
MORF				iIAML		03 29 20.8	
MORF				iIAML		03 29 21.6	
PALBU	Albufeira	1.41	47	eS	Sn	03 29 21.0	+1.7
PALBU				iIAML		03 29 25.3	
PTEO	Sao Teotonio	1.55	25	⇓eP	Pn	03 29 05.1	+1.2
PTEO				eS	Sn	03 29 23.1	+0.4
PTEO				iIAML		03 29 24.6	
PTEO				iIAML		03 29 24.7	
PTEO				iIAML		03 29 24.7	
PFARO	Faro	1.57	55	eS	Sn	03 29 26.4	+3.1
PBDV	Barranco-do-Ve	1.69	49	S	Sn	03 29 27.3	+0.8
PBDV				P	Pn	03 29 08.1	+2.1
PBDV	Barranco-do-Ve	1.69	49	eP	Pn	03 29 07.8	+1.8
PBDV				eS	Sn	03 29 27.5	+1.0
PBDV				iIAML		03 29 30.6	
PBDV				iIAML		03 29 37.4	
PBDV				iIAML		03 29 42.6	
PSINE	Sines	1.89	16	eP	Pn	03 29 09.8	+1.1
PSINE				eS	Sn	03 29 31.8	+0.5
PSINE				iIAML		03 29 33.7	
PCVE	Castro Verde	1.91	38	P	Pn	03 29 10.6	+1.6
PCVE				S	Sn	03 29 32.3	+0.5
PCVE	Castro Verde	1.91	38	eP	Pn	03 29 10.7	+1.8
PCVE				eS	Sn	03 29 33.0	+1.2
PCVE				iIAML		03 29 34.3	
PCVE				iIAML		03 29 34.9	
PCVE				iIAML		03 29 34.9	
PVAQ	Vaqueiros	1.93	49	eP	Pn	03 29 10.9	+1.8
PVAQ				eS	Sn	03 29 33.0	+0.7
PVAQ				iIAML		03 29 33.8	
PVAQ				iIAML		03 29 33.9	
PVAQ				iIAML		03 29 34.0	
PVAQ	Vaqueiros	1.93	49	P	Pn	03 29 13.0	+3.8
PVAQ	Vaqueiros	1.93	49	S	Sn	03 29 34.7	+2.5
MESJ	Messejana	2.00	31	eP	Pn	03 29 11.6	+1.4
MESJ				eS	Sn	03 29 33.9	0.0
MESJ				IAML		03 29 36.4	
	comp=N,27nm,0.1s						
MESJ	Messejana	2.00	31	eP	Pn	03 29 11.6	+1.4
MESJ				eS	Sn	03 29 34.9	+1.0
MESJ				iIAML		03 29 36.0	
MESJ				iIAML		03 29 36.0	
MESJ				iIAML		03 29 40.0	
EGRO	El Granado	2.16	49	P	Pn	03 29 13.7	+1.4
EGRO				S	Sn	03 29 38.6	+0.8
EGRO	El Granado	2.16	49	Pn	Pn	03 29 14.6	+2.3
EGRO				Sn	Sn	03 29 39.4	+0.6
EGRO				iIVmb_Lg		03 29 41.2	
PBEJ	Beja	2.31	35	eP	Pn	03 29 15.6	+1.2
PBEJ				eS	Sn	03 29 41.7	+0.1
PBEJ				iIAML		03 29 43.3	
PBEJ				iIAML		03 29 43.5	
PBEJ				iIAML		03 29 43.7	
AML02	Lavradio	2.55	9	eP	Pn	03 29 19.0	+1.3
MOE	Montemor	2.56	21	eP	Pn	03 29 19.1	+1.2
MOE				eS	Sn	03 29 48.0	+0.3
MOE				iIAML		03 29 50.4	
MOE				iIAML		03 29 51.1	
MOE				iIAML		03 29 51.2	
AML01	Serafina, Lisb	2.60	6	eP	Pn	03 29 19.7	+1.2
AML01				eS	Sn	03 29 49.5	+0.6
AML01				iIAML		03 29 51.2	
AML01				iIAML		03 29 52.5	
AML01				iIAML		03 29 57.2	
AML04	Campo deTiro d	2.68	11	eP	Pn	03 29 21.1	+1.6
AML04				eS	Sn	03 29 51.2	+0.4
AML04				iIAML		03 29 57.8	
AML04				iIAML		03 29 59.3	
AML03	Fanhoes/Loures	2.75	6	eP	Pn	03 29 21.5	+1.0
AML03				eS	Sn	03 29 52.3	-0.3
AML03				iIAML		03 29 55.3	
AML03				iIAML		03 29 56.0	
AML03				iIAML		03 29 56.5	
EMIN	Mina Concepcio	2.81	54	P	Pn	03 29 23.6	+2.3
EMIN				S	Sn	03 29 54.4	+0.5
EMIN	Mina Concepcio	2.81	54	Pn	Pn	03 29 23.4	+2.1
EMIN				Sn	Sn	03 29 53.8	-0.1
EMIN				iIVmb_Lg		03 29 56.2	
PMAFR	Mafra	2.82	4	S	Sn	03 29 53.8	-0.4
PMAFR				P	Pn	03 29 21.6	+0.2
PMAFR	Mafra	2.82	4	⇑eP	Pn	03 29 22.2	+0.8
PMAFR				eS	Sn	03 29 53.8	-0.4
PMAFR				iIAML		03 29 55.5	
PMAFR				iIAML		03 29 56.3	
PMAFR				iIAML		03 29 56.4	
CNIL	Conil	2.82	84	P	Pn	03 29 24.3	+2.8
PBAR	Barrancos	2.85	44	P	Pn	03 29 23.0	+1.2
PBAR				S	Sn	03 29 55.1	+0.2
PBAR	Barrancos	2.85	44	eP	Pn	03 29 23.4	+1.6
PBAR				eS	Sn	03 29 54.8	0.0
PBAR				iIAML		03 29 57.1	
PBAR				iIAML		03 29 57.5	
PBAR				iIAML		03 29 58.6	
PBEN	Benavente	2.86	11	eP	Pn	03 29 23.1	+1.2
PBEN				eS	Sn	03 29 54.8	-0.3
PARRA	Arraiolos	2.92	24	eP	Pn	03 29 23.7	+3.9
PARRA				eS	Sn	03 29 56.3	+5.1
PARRA				iIAML		03 29 58.1	
PARRA				iIAML		03 29 59.0	
PARRA				iIAML		03 29 59.3	
ESPR	Espera	3.05	75	P	Pn	03 29 26.5	+1.9
ESPR				S	Sn	03 30 01.3	+1.4
ESPR	Espera	3.05	75	Pn	Pn	03 29 26.6	+2.0
ESPR				Sn	Sn	03 30 01.0	+1.1
ESPR				iIVmb_Lg		03 30 02.9	
PMTG	Montargil	3.10	19	eP	Pn	03 29 26.1	+0.8
PMTG				eS	Sn	03 30 00.2	-0.9
PMTG				iIAML		03 30 02.1	
PMTG				iIAML		03 30 02.9	
PMTG				iIAML		03 30 03.4	
PESTR	Estremoz	3.13	29	P	Pn	03 29 26.0	+0.3
PESTR				S	Sn	03 30 01.2	-0.4
PESTR	Estremoz	3.13	29	eP	Pn	03 29 26.9	+1.1
PESTR				eS	Sn	03 30 01.5	-0.4
PESTR				iIAML		03 30 03.1	
PESTR				iIAML		03 30 03.5	
PESTR				iIAML		03 30 03.8	
PESTR	Estremoz	3.13	29	P	Pn	03 29 27.6	+1.9
PESTR	Estremoz	3.13	29	S	Sn	03 30 04.1	+2.2
EBAD	Badajoz	3.29	37	P	Pn	03 29 28.5	+0.5
EBAD				S	Sn	03 30 05.5	-0.4
EBAD	Badajoz	3.29	37	Pn	Pn	03 29 29.1	+1.2
EBAD				Sn	Sn	03 30 06.1	+0.3
EBAD				iIVmb_Lg		03 30 07.3	
EJIF	Jimena Fronter	3.30	83	Pn	Pn	03 29 30.9	+2.9
EJIF				Sn	Sn	03 30 06.5	+0.4
AVE	Averroes	3.33	148	P	Pn	03 29 29.3	+0.9
AVE				S	Sn	03 30 06.0	-0.8
AVE	Averroes	3.33	148	P	Pn	03 29 27.7	-0.8
ECEU	Ceuta	3.38	93	Pn	Pn	03 29 31.6	+2.5
ECEU				Sn	Sn	03 30 08.9	+0.9
ECEU				iIVmb_Lg		03 30 16.8	
PSBE	So Bento	3.42	10	eP	Pn	03 29 30.9	+1.2
PSBE				eS	Sn	03 30 08.7	-0.3
PSBE				iIAML		03 30 10.7	
PSBE				iIAML		03 30 14.2	
PSBE				iIAML		03 30 14.7	
ZHG	ZHG	3.59	138	P	Pn	03 29 34.0	+1.9
ZHG	ZHG	3.59	138	S	Sn	03 30 12.1	-1.3
PSARD	Sardoal	3.62	17	eP	Pn	03 29 33.5	+1.0
PSARD				eS	Sn	03 30 12.8	-1.2
PSARD				iIAML		03 30 14.2	
PSARD				iIAML		03 30 14.5	
PSARD				iIAML		03 30 15.9	
UMV12	Villanueva de	3.62	74	Pn	Pn	03 29 34.3	+1.8
UMV12				Sn	Sn	03 30 14.8	+0.8
PMRV	Marv??o	3.70	27	eP	Pn	03 29 34.4	+0.9
PMRV				eS	Sn	03 30 14.8	-1.0
PMRV				iIAML		03 30 16.3	
PMRV				iIAML		03 30 17.4	
PMRV				iIAML		03 30 17.9	
ECAB	El Cabril	3.81	58	S	Sn	03 30 17.6	-1.2
ECAB				P	Pn	03 29 36.4	+1.3
ECAB	El Cabril	3.81	58	Pn	Pn	03 29 36.9	+1.8
ECAB				Sn	Sn	03 30 18.4	-0.4
ECAB				iIVmb_Lg		03 30 21.8	
EMIJ	Mijas	3.87	82	P	Pn	03 29 36.6	+0.8
EMIJ	Mijas	3.87	82	Pn	Pn	03 29 37.6	+1.7
EMIJ				Sn	Sn	03 30 21.1	+1.0
SRHM	Skhour des Reh	3.90	159	P	Pn	03 29 36.6	+0.2
SRHM	Skhour des Reh	3.90	159	S	Sn	03 30 20.9	-0.1
PCAS	Casmilo, Conde	3.99	12	eP	Pn	03 29 38.7	+1.1
PCAS				eS	Sn	03 30 22.1	-1.0
PCAS				iIAML		03 30 24.8	
PCAS				iIAML		03 30 26.4	
PCAS				iIAML		03 30 28.8	
PCBR	Castelo Branco	4.04	23	eP	Pn	03 29 39.2	+1.1
PCBR				eS	Sn	03 30 23.0	-1.2
PCBR				iIAML		03 30 24.5	
PCBR				iIAML		03 30 24.6	
PCBR				iIAML		03 30 25.3	
EMAL	Malaga-Limoner	4.16	80	P	Pn	03 29 41.8	+1.9
EMAL				S	Sn	03 30 28.4	+1.1
EADA	Adamuz	4.45	61	P	Pn	03 29 45.2	+1.4
EADA				S	Sn	03 30 32.7	-1.7
EADA	Adamuz	4.45	61	Pn	Pn	03 29 45.9	+2.0
EADA				Sn	Sn	03 30 33.9	-0.5
EADA				iIVmb_Lg		03 30 36.8	
EGOR	Sierra Gorda,	4.47	76	Pn	Pn	03 29 46.2	+2.0
EGOR				Sn	Sn	03 30 36.0	+0.8
EGOR				iIVmb_Lg		03 30 58.6	
IFR	Ifrane	4.47	125	P	Pn	03 29 44.2	-0.1
IFR				S	Sn	03 30 32.2	-3.0
MTE	Manteigas	4.53	20	eP	Pn	03 29 45.9	+0.9
MTE				eS	Sn	03 30 35.0	-1.5
MTE				iIAML		03 30 37.2	
MTE				iIAML		03 30 37.3	
MTE				iIAML		03 30 37.4	
LCRM	LCR	4.56	121	P	Pn	03 29 44.2	-1.2
LCRM	LCR	4.56	121	S	Sn	03 30 36.6	-0.7
PVIS	Viseu	4.75	15	eP	Pn	03 29 48.8	+0.8
PVIS				eS	Sn	03 30 40.5	-1.3
EPLA	Plasencia	4.77	34	Pn	Pn	03 29 49.8	+1.5
EPLA				Sn	Sn	03 30 41.0	-1.4
EPLA				iIVmb_Lg		03 30 42.9	
ELGU	Los Guajares,	4.81	80	Pn	Pn	03 29 50.0	+1.1
ELGU				Sn	Sn	03 30 44.1	+0.6
ELGU				iIVmb_Lg		03 30 50.2	
AKLM	AKL	4.91	108	P	Pn	03 29 48.0	-2.3
AKLM	AKL	4.91	108	S	Sn	03 30 42.2	-3.8
EQUE	Quentar	5.01	76	Pn	Pn	03 29 54.2	+2.5
EQUE				Sn	Sn	03 30 48.4	0.0
EQUE				iIVmb_Lg		03 31 13.7	
TISM	Timmit	5.10	149	P	Pn	03 29 50.3	-2.5
TISM	Timmit	5.10	149	S	Sn	03 30 46.3	-4.2
OUK	Oukaimeden	5.11	164	P	Pn	03 29 51.0	-2.3
OUK	Oukaimeden	5.11	164	S	Sn	03 30 48.3	-3.0
MD31	MD31	5.12	128	P	Pn	03 29 51.8	-1.3
MD31	MD31	5.12	128	S	Sn	03 30 48.8	-2.3
E0803	Jimena (Jaen)	5.14	69	Pn	Pn	03 29 54.9	+1.6

TIO				S	Sn	03 30 57.8	-3.6	
TIO	**Tiouine**	**5.54**	**159**	P	Pn	**03 29 56.7**	**-2.2**	
TIO	**Tiouine**	**5.54**	**159**	S	Sn	**03 30 58.7**	**-2.7**	
ESDC	**Sonseca Array**	**5.64**	**50**	Pn	Pn	**03 30 01.8**	**+1.5**	
ESDC				Sn	Sn	**03 31 01.0**	**-2.9**	
ESDC				*i* IVmb_Lg		03 31 10.0		
ESBB	**Sonseca Array**	**5.64**	**50**	Pn	Pn	**03 30 01.6**	**+1.3**	
ESBB				Sn	Sn	**03 31 01.1**	**-2.8**	
TTIG	**Tnine Tigouga,**	**5.65**	**170**	P	Pn	**03 29 57.5**	**-3.0**	
PCAB	**Cabril**	**5.69**	**11**	*eP*	Pn	**03 30 01.6**	**+0.8**	
PCAB				*eS*	Sn	**03 31 01.7**	**-3.2**	
PCAB				*i* IAML		03 31 05.5		
PCAB				*i* IAML		03 31 07.5		
EJUZ	**Juzbado, Salam**	**5.70**	**29**	Pn	Pn	**03 30 01.6**	**+0.5**	
EJUZ				Sn	Sn	**03 31 02.9**	**-2.5**	
OUZM	**OUZ**	**5.71**	**155**	P	Pn	**03 29 59.5**	**-1.7**	
OUZM	**OUZ**	**5.71**	**155**	S	Sn	**03 31 04.1**	**-1.6**	
ELOB	**Lobios**	**5.83**	**11**	Pn	Pn	**03 30 03.0**	**+0.1**	
ELOB				Sn	Sn	**03 31 05.7**	**-2.9**	
ELOB				*i* IVmb_Lg		03 31 07.0		
PGAV	**Gavieira, Arco**	**5.90**	**9**	*eP*	Pn	**03 30 04.2**	**+0.4**	
PGAV				*eS*	Sn	**03 31 06.3**	**-4.0**	
PGAV				*i* IAML		03 31 10.7		
PGAV				*i* IAML		03 31 11.5		
PGAV				*i* IAML		03 31 11.8		
EZAM	**Zamans**	**6.04**	**6**	Pn	Pn	**03 30 05.9**	**+0.2**	
EZAM				Sn	Sn	**03 31 10.4**	**-3.0**	
EZAM				*i* IVmb_Lg		03 31 16.5		
PBRG	**Braganca**	**6.06**	**20**	*eP*	Pn	**03 30 07.1**	**+1.1**	
PBRG				*eS*	Sn	**03 31 11.0**	**-3.1**	
PBRG				*i* IAML		03 31 14.6		
PBRG				*i* IAML		03 31 14.6		
PBRG				*i* IAML		03 31 17.0		
GUD	**Guadarrama**	**6.17**	**42**	Pn	Pn	**03 30 08.6**	**+1.1**	
GUD				Sn	Sn	**03 31 15.0**	**-2.0**	
GUD				*i* IVmb_Lg		03 31 17.5		
ECAL	**Calabor**	**6.19**	**20**	P	Pn	**03 30 08.5**	**+0.7**	
ECAL				S	Sn	**03 31 15.1**	**-2.2**	
ECAL	**Calabor**	**6.19**	**20**	Pn	Pn	**03 30 08.7**	**+0.9**	
ECAL				Sn	Sn	**03 31 13.5**	**-3.8**	
ECAL				*i* IVmb_Lg		03 31 17.3		
UCM	**Universidad Co**	**6.47**	**48**	P	Pn	**03 30 13.3**	**+1.7**	
UCM				S	Sn	**03 31 21.8**	**-2.4**	
EAGO	**Agolada(Pontev**	**6.75**	**9**	Pn	Pn	**03 30 15.3**	**-0.1**	
EAGO				Sn	Sn	**03 31 26.4**	**-4.6**	
EAGO				*i* IVmb_Lg		03 31 32.4		
EMAZ	**Mazaricos**	**6.81**	**3**	Pn	Pn	**03 30 16.0**	**-0.3**	
EMAZ				Sn	Sn	**03 31 27.3**	**-5.4**	
EMAZ				*i* IVmb_Lg		03 31 37.1		
ETOB	**Tobarra**	**6.83**	**66**	P	Pn	**03 30 17.7**	**+1.1**	
ETOB				S	Sn	**03 31 30.6**	**-2.6**	
ETOB	**Tobarra**	**6.83**	**66**	Pn	Pn	**03 30 18.2**	**+1.6**	
ETOB				Sn	Sn	**03 31 30.9**	**-2.3**	
ETOB				*i* IVmb_Lg		03 31 36.9		
ZGR	**Zagora**	**6.84**	**150**	P	Pn	**03 30 14.8**	**-2.0**	
ZGR	**Zagora**	**6.84**	**150**	S	Sn	**03 31 30.3**	**-3.3**	
EVIV	**Cofrentes, Val**	**7.37**	**62**	Pn	Pn	**03 30 24.5**	**+0.6**	
EVIV				Sn	Sn	**03 31 44.0**	**-2.2**	
EVIV				*i* IVmb_Lg		03 32 05.2		
ETOR	**Torete**	**7.50**	**49**	Pn	Pn	**03 30 27.8**	**+2.0**	
ETOR				Sn	Sn	**03 31 45.8**	**-3.8**	
ETOR				*i* IVmb_Lg		03 32 02.1		

DJA 11 03:48:43.5±0.4,3°S±4°×12°8E±°, h12km±4km, M3.9/6, mb5.7/2, mb4.6/2, MLv3.5/6, Mw(mB)5.3/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.33**	**221**	P	Pb	03 48 51.6	+0.3
AAI				S	Sb	03 48 56.7	+0.2
MSAI	**Masohi**	**0.53**	**80**	P	Pb	03 48 55.0	+0.3
TNTI	**Ternate**	**4.31**	**346**	S	Sb	03 50 53.3	+2.0
RKPI	**Ransiki, Papua**	**6.07**	**72**	P	Pn	03 50 12.3	-0.9

DJA 11 03:48:47.5±0.8,0°S±3°×12°3E±°, h30km±9km, M4.2/15, mB5.6/1, mb4.2/7, MLv4.2/15, Mw(mB)5.1/1
IDC 11 03:48:58.6±8.5,0°.85S×122°.33E, h168km±86km, mb3.0/4, mbtmp3.6/6, Error ellipse: s-maj=87.8km s-min=19.2km az=53.0

ISC 11 03:48:46.9±1.1,0°.32S±0°.08×122°.93E±0°.08, h50km, n18, σ1°51/20, mb3.4/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.74**	**193**	P	Pn	**03 49 02.3**	**+1.2**
LUWI				S	Sn	**03 49 13.0**	**+1.5**
MRSI	**Marisa**	**1.27**	**309**	P	Pn	**03 49 08.1**	**-0.2**
APSI	**Ampana**	**1.41**	**245**	P	Pn	**03 49 12.0**	**+1.8**
MPSI	**Mapaga**	**3.10**	**282**	P	Pn	**03 49 34.0**	**+0.6**
SANI	**Sanana**	**3.50**	**119**	P	Pn	**03 49 38.1**	**-0.8**
SPSI	**Sidrap Palu**	**4.81**	**221**	P	Pn	**03 49 57.6**	**+0.8**
BNSI	**Bone**	**4.94**	**215**	P	Pn	**03 50 00.0**	**+1.4**
NLAI	**Namlea**	**5.08**	**125**	P	Pn	**03 50 02.5**	**+2.0**
KAPI	**Kappang** 6.2nm,0.3s,baz=37,slow=12,SNR=5.5	**5.64**	**214**	P	Pn	**03 50 08.7**	**+0.4**
KAPI	22nm,0.4s,baz=37,slow=20,SNR=14			S	Sn	**03 51 08.1**	**-3.7**
BKSI	**Bulukumba** 0.1nm13nm,0.7s	**5.71**	**209**	P	Pn	**03 50 10.0**	**+0.8**
BSSI	**Bau Bau, Buton**	**6.28**	**203**	P	Pn	**03 50 18.4**	**+1.4**
EDFI	**Ende, Flores** 8.3nm,0.6s	**8.47**	**188**	P	Pn	**03 50 47.8**	**+0.7**
FAKI	**Fak Fak**	**9.66**	**106**	P	Pn	**03 51 03.3**	**-0.1**
FITZ	**Fitzroy Crossi** 1.7nm,0.7s,baz=354,slow=9.2,SNR=2.4	**17.87**	**172**	P	Pn	**03 52 52.0**	**+0.1**
WRA	**Warramunga Arr** 0.9nm,0.7s,baz=333,slow=9.6,SNR=14 0.9nm,0.7s	**22.48**	**151**	P	**P**	**03 53 40.9**	**-1.3**
ASAR	**Alice Springs** 0.7nm,0.6s,baz=335,slow=8.3,SNR=8.1 0.7nm,0.6s	**25.54**	**156**	P	**P**	**03 54 10.9**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=124,slow=8.7,SNR=2.2 0.3nm,0.4s	**58.85**	**328**	P	**P**	**03 58 39.0**	**-1.5**
KURBB	**Kurchatov Arra** 0.2nm,0.6s,baz=124,slow=8.1,SNR=2.7 0.2nm,0.6s	**63.20**	**330**	P	**P**	**03 59 11.7**	**+1.8**

IDC 11 04:30:29.9±1.9,50°.42S×112°.92E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=84.7km s-min=21.5km az=111.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H** 1.6nm,0.8s,baz=24,SNR=24	**15.54**	**4**	T	T	04 49 49.9	
H01W1	**Cape Leeuwin H** baz=183,slow=74,SNR=26	**15.54**	**4**	T	T	04 49 52.0	
H01W3	**Cape Leeuwin H** baz=183,slow=74,SNR=26	**15.55**	**4**	T	T	04 49 52.8	
ASAR	**Alice Springs** 0.2nm,0.3s,baz=207,slow=10,SNR=2.6 0.2nm,0.3s	**31.30**	**39**	P	P	04 36 50.7	-1.0
VNDA	**Vanda** 1.7nm,0.8s,baz=289,slow=9.7,SNR=11 1.7nm,0.8s	**32.69**	**162**	P	P	04 37 02.4	-1.0
WRA	**Warramunga Arr** 0.9nm,0.9s,baz=213,slow=7.8,SNR=4.9 0.9nm,0.9s	**34.83**	**37**	P	P	04 37 23.1	+0.6
QSPA	**South Pole Qui** 1.7nm,0.7s,baz=299,slow=4.9,SNR=8.8 1.7nm,0.7s	**39.71**	**180**	P	P	04 38 04.8	+1.2
SNAA	**Sanae** 1.6nm,0.8s,baz=131,slow=9.6,SNR=8.2 1.6nm,0.8s	**50.12**	**202**	P	P	04 39 25.6	-0.7
TXAR	**Lajitas Array** 0.2nm,0.8s,baz=266,slow=3.1,SNR=3.9	**145.40**	**114**	PKPbc	PKPbc	04 50 09.2	-0.3

IDC 11 04:31:48.3±5.1,21°.75S×176°.86W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=279.5km s-min=52.9km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 2.0nm,0.5s,baz=96,slow=7.8,SNR=17 2.0nm,0.5s	**45.28**	**258**	P	P	04 40 08.2	+0.1
WRA	**Warramunga Arr** 1.5nm,0.6s,baz=101,slow=7.8,SNR=13 1.5nm,0.6s	**45.49**	**263**	P	P	04 40 09.7	-0.1
FITZ	**Fitzroy Crossi** 1.2nm,0.5s,baz=113,slow=7.9,SNR=7.0 1.2nm,0.5s	**53.93**	**263**	P	P	04 41 13.7	-0.4
BRTR	**Keskin Array B** 0.2nm,0.5s,baz=46,slow=4.2,SNR=1.7	**148.47**	**312**	PKPbc	PKPbc	04 51 36.6	-0.7
MMAI	**Mount Meron Ar** 1.0nm,0.3s,baz=90,slow=2.2,SNR=5.1	**149.35**	**298**	PKPbc	PKPbc	04 51 39.3	-0.4

IDC 11 04:32:29.4±0.8,50°.21S×112°.53E, h0km, mb4.1/7, mbtmp4.1/7, Error ellipse: s-maj=37.4km s-min=19.0km az=104.0

ISC 11 04:32:30.9±0.8,50°.2S±0°.1×112°.6E±0°.2, h10km, n12, σ0°68/9, mb4.1/7, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H** baz=183,slow=74,SNR=100	**15.35**	**5**	T	T	04 51 48.5	
H01W1	**Cape Leeuwin H** baz=183,slow=74,SNR=108	**15.36**	**5**	T	T	04 51 51.8	
H01W3	**Cape Leeuwin H** baz=183,slow=74,SNR=106	**15.37**	**5**	T	T	04 51 51.8	
VNDA	**Vanda** 1.6nm,0.8s,baz=285,slow=9.0,SNR=9.8 1.6nm,0.8s	**32.95**	**162**	P	**P**	**04 39 04.6**	**-0.5**
FITZ	**Fitzroy Crossi** 1.9nm,0.7s,baz=200,slow=9.4,SNR=5.2 1.9nm,0.7s	**33.71**	**23**	P	**P**	**04 39 11.3**	**-0.9**
WRA	**Warramunga Arr** 1.1nm,0.8s,baz=204,slow=10,SNR=4.7 1.1nm,0.8s	**34.80**	**38**	P	**P**	**04 39 22.0**	**+0.3**
QSPA	**South Pole Qui** 1.8nm,0.8s,baz=312,slow=8.0,SNR=5.8 1.8nm,0.8s	**39.91**	**180**	P	**P**	**04 40 05.6**	**+0.9**
SNAA	**Sanae** 2.0nm,0.8s,baz=135,slow=9.0,SNR=9.6 2.0nm,0.8s	**50.23**	**202**	P	**P**	**04 41 26.1**	**-0.4**
BOSA	**Boshof** 5.3nm,1.0s,baz=104,slow=4.2,SNR=3.8 5.3nm,1.0s	**66.95**	**253**	P	**P**	**04 43 23.4**	**-0.3**
CMAR	**Chiang Mai Arr** 1.0nm,0.3s,baz=190,slow=6.6,SNR=4.1 1.0nm,0.3s	**69.42**	**346**	P	**P**	**04 43 39.8**	**+0.8**
TXAR	**Lajitas Array** 0.5nm,0.9s,baz=185,slow=6.2,SNR=4.8	**145.69**	**114**	PKPbc	**PKPab**	**04 52 09.9**	**-0.2**
PDAR	**Pinedale Array** 0.6nm,0.8s,baz=301,slow=3.4,SNR=5.6	**150.38**	**88**	PKPbc	**PKPbc**	**04 52 22.1**	**-0.1**

IDC 11 04:34:49.5±0.6,50°.28S×112°.37E, h0km, mb4.4/10, mbtmp4.4/11, ML2.6/1, MS4.0/15, Error ellipse: s-maj=31.2km s-min=14.0km az=109.0
NEIC 11 04:34:51.5±1.6,50°.3S±0°.1×112°.4E±0°.2, h10km±1km, mb4.7/16, Error ellipse: s-maj=18.6km s-min=16.4km az=326.0

ISC 11 04:34:50.9±0.5,50°.27S±0°.09×112°.4E±0°.2, h10km, n51, σ0°99/42, mb4.6/14, MS4.0/14, 1C, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H** baz=183,slow=74,SNR=384	**15.41**	**5**	T	T	04 54 10.8	
H01W1	**Cape Leeuwin H** baz=183,slow=74,SNR=387	**15.41**	**5**	T	T	04 54 11.3	
H01W3	**Cape Leeuwin H** baz=183,slow=74,SNR=328	**15.42**	**5**	T	T	04 54 12.0	
CASY	**Casey**	**16.09**	**183**	P	**P**	**04 38 40.0**	**-0.2**
NWAO	**Narrogin (SRO)** 1.0nm,0.3s,baz=178,slow=8.0,SNR=5.7	**17.69**	**13**	P	**P**	**04 38 59.1**	**+1.0**
NWAO	comp=Z,402nm,18.2s,baz=236,slow=32 9.9nm,1.0s			LR	LR	04 44 21.2	
MORW	**Morawa**	**21.35**	**9**	P	**P**	**04 39 38.7**	**+0.6**
MORW	comp=Z,49nm,1.4s			lAmb	lAmb	04 39 45.9	
STKA	**Stephens Creek** comp=Z,127nm,20.1s,baz=206,slow=32	**28.38**	**61**	LR	LR	04 50 02.2	
MAW	**Mawson** comp=Z,1.0nm,0.7s,baz=89,slow=12,SNR=3.9	**29.79**	**216**	P	**P**	**04 40 57.5**	**+0.2**
MAW	comp=Z,236nm,18.1s,baz=82,slow=32 comp=Z,1.0nm,0.7s			LR	LR	04 50 57.7	
ASAR	**Alice Springs**	**31.39**	**40**	P	**P**	**04 41 12.9**	**+1.0**
ASAR	**Alice Springs** comp=Z,1.9nm,0.6s,baz=208,slow=8.1,SNR=14	**31.39**	**40**	P	**P**	**04 41 11.6**	**-0.3**
ASAR	comp=Z,0.8nm,0.8s,baz=189,slow=0.5,SNR=7.1			PcP	**PcP**	**04 44 04.8**	**-0.6**
ASAR	comp=Z,266nm,19.9s,baz=216,slow=33 comp=Z,1.9nm,0.6s			LR	LR	04 52 14.0	
VNDA	**Vanda**	**32.93**	**162**	P	**P**	**04 41 24.9**	**+0.1**
VNDA	comp=Z,6.9nm,0.8s			lAmb	lAmb	04 41 32.1	
VNDA	**Vanda** comp=Z,4.0nm,0.7s,baz=298,slow=9.1,SNR=20	**32.93**	**162**	P	**P**	**04 41 25.0**	**+0.1**
VNDA	comp=Z,172nm,19.6s,baz=308,slow=35 comp=Z,4.0nm,0.7s			LR	LR	04 53 54.3	
FITZ	**Fitzroy Crossi**	**33.79**	**23**	P	**P**	**04 41 34.4**	**+1.5**
FITZ	**Fitzroy Crossi** comp=Z,10.0nm,0.9s,baz=204,slow=8.3,SNR=15	**33.79**	**23**	P	**P**	**04 41 33.5**	**+0.6**
FITZ	comp=Z,373nm,18.2s,baz=204,slow=35 comp=Z,10.0nm,0.9s			LR	LR	04 54 26.1	
WRA	**Warramunga Arr** comp=Z,4.2nm,0.8s,baz=204,slow=8.4,SNR=17	**34.90**	**38**	P	**P**	**04 41 42.4**	**-0.1**
WRA	comp=Z,158nm,18.0s,baz=218,slow=35 comp=Z,4.2nm,0.8s			LR	LR	04 55 17.1	
WRAB	**Tennant Creek**	**34.91**	**38**	P	**P**	**04 41 42.6**	**0.0**
WRAB	comp=Z,6.1nm,0.6s			lAmb	lAmb	04 42 05.7	
WR8	**Warramunga Arr**	**34.95**	**38**	P	**P**	**04 41 43.3**	**+0.3**
WB0	**Warramunga Arr**	**35.08**	**38**	P	**P**	**04 41 43.8**	**-0.3**
QSPA	**South Pole Qui**	**39.86**	**180**	P	**P**	**04 42 27.1**	**+2.7**
QSPA	comp=Z,7.9nm,0.7s			lAmb	lAmb	04 42 34.3	
QSPA	**South Pole Qui** comp=Z,4.3nm,0.6s,baz=322,slow=1.3,SNR=26	**39.86**	**180**	P	**P**	**04 42 24.4**	**+0.1**
QSPA	comp=Z,192nm,18.9s,baz=324,slow=35 comp=Z,4.3nm,0.6s			LR	LR	04 58 13.4	
LEM	**Lembang** comp=Z,276nm,18.3s,baz=176,slow=32	**43.48**	**353**	LR	LR	04 58 21.6	
KAPI	**Kappang** comp=Z,160nm,19.9s,baz=167,slow=33	**45.52**	**10**	LR	LR	04 59 59.9	
TROLL	**Troll, Antarti** comp=Z,68nm,0.7s	**48.62**	**203**	⇑P	**P**	**04 43 34.8**	**+0.5**
PMG	**Port Moresby** comp=Z,107nm,19.7s,baz=198,slow=34	**49.84**	**47**	LR	LR	05 03 30.2	
FAKI	**Fak Fak**	**50.08**	**26**	P	**P**	**04 43 44.9**	**-1.0**
SNAA	**Sanae**	**50.15**	**202**	P	**P**	**04 43 46.6**	**+0.7**
SNAA	**Sanae**	**50.15**	**202**	P	**P**	**04 43 46.4**	**+0.5**
SNAA	**Sanae** comp=Z,6.6nm,0.8s,baz=140,slow=9.2,SNR=34	**50.15**	**202**	P	**P**	**04 43 45.8**	**0.0**
SNAA	comp=Z,168nm,18.3s,baz=191,slow=35 comp=Z,6.6nm,0.8s			LR	LR	05 04 02.5	
BELA	**Belgrano 2**	**50.53**	**189**	P	**P**	**04 43 48.6**	**0.0**
BELA	comp=Z,13nm,1.0s			lAmb	lAmb	04 43 55.5	
VNA2	**Neumayer--Watz** baz=122,slow=11	**51.73**	**201**	P	**P**	**04 43 54.9**	**-2.9**
VNA3	**Neumayer Olymp**	**52.02**	**200**	P	**P**	**04 43 57.1**	**-2.9**
VNA1	**Neumayer--Stat**	**52.13**	**201**	P	**P**	**04 44 01.8**	**+1.1**
JAY	**Jayapura** comp=Z,177nm,20.4s,baz=214,slow=35	**53.27**	**36**	LR	LR	05 05 55.9	
PSI	**Prapat** comp=Z,240nm,18.1s,baz=180,slow=34	**54.12**	**343**	LR	LR	05 05 41.1	
BOSA	**Boshof**	**66.84**	**253**	P	**P**	**04 45 42.8**	**-0.2**
BOSA	comp=Z,5.6nm,1.0s			lAmb	lAmb	04 45 44.7	
BOSA	**Boshof** comp=Z,2.7nm,0.8s,baz=89,slow=2.8,SNR=4.4 comp=Z,2.7nm,0.8s	**66.84**	**253**	P	**P**	**04 45 42.4**	**-0.6**
LBTB	**Lobatse** comp=Z,98nm,21.1s,baz=142,slow=30	**69.22**	**256**	LR	LR	05 08 54.8	
CMAR	**Chiang Mai Arr**	**69.45**	**346**	P	**P**	**04 45 58.9**	**-0.2**
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.6s,baz=190,slow=5.6,SNR=12 comp=Z,2.0nm,0.6s	**69.45**	**346**	P	**P**	**04 45 59.7**	**+0.6**
SHL	**Shillong**	**77.66**	**341**	P	**P**	**04 46 48.0**	**+0.5**
EVN	**Everest**	**81.12**	**337**	P	**P**	**04 47 06.7**	**-0.2**
EVN	comp=Z,6.3nm,0.8s			lAmb	lAmb	04 47 14.7	
LSA	**Lhasa**	**81.82**	**341**	P	**P**	**04 47 11.0**	**+0.7**
PLCA	**Paso Flores** comp=Z,4.1nm,1.1s	**89.34**	**178**	P lAmb	**P** lAmb	**04 47 47.8** 04 47 59.6	**+0.4**
PLCA	**Paso Flores** comp=Z,2.1nm,0.8s,baz=162,slow=2.6,SNR=6.1 comp=Z,2.1nm,0.8s	**89.34**	**178**	P	**P**	**04 47 47.4**	**-0.1**
ILAR	**Eielson Array** comp=Z,0.4nm,0.8s,baz=250,slow=2.2,SNR=4.5	**138.06**	**39**	PKP	**PKPdf**	**04 54 13.0**	**-1.5**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.6s,baz=231,slow=6.3,SNR=3.8	**142.54**	**88**	PKP	**PKiKP**	**04 54 25.8**	**-1.0**
TXAR	**Lajitas Array**	**145.75**	**114**		**PKPdf**	**04 54 29.7**	**+0.2**
TXAR	**Lajitas Array** comp=Z,1.6nm,0.9s,baz=195,slow=5.4,SNR=16	**145.75**	**114**	PKPbc	**PKPbc**	**04 54 30.2**	**+0.3**
PDAR	**Pinedale Array**	**150.48**	**88**		**PKPbc**	**04 54 41.7**	**-0.6**
PDAR	**Pinedale Array** comp=Z,2.2nm,0.8s,baz=226,slow=2.2,SNR=17	**150.48**	**88**	PKPbc	**PKPbc**	**04 54 42.5**	**+0.2**
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.5s,baz=206,slow=5.1,SNR=4.3	**151.92**	**46**	PKPbc	**PKPbc**	**04 54 44.6**	**-0.1**

BER 11 04:56:28.2±2.1,81°.04N×3°.55W, h10km, mb(Pn)3.0, ML1.6(DNK), Confirmed Earthquake
FCIAR 11 04:56:29.0,80°.78N×3°.03W, h10km, station OMEGA has station magnitude of 4.00
DNK 11 04:56:29.8±1.6,81°.06N×2°.98W, h36km±14km, ML1.6
KOLA 11 04:56:30.4,81°.34N×0°.66W, h0km, ML2.1, Greenland sea, Arctic Ocean, Knipovich ridge, north

ISC 11 04:56:23.4±1.0,80°.99N±0°.06×3°.47W±0°.04, h10km, n22, σ3°16/37, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.10**	**293**	*eP*	**Pn**	**04 57 01.0**	**+2.5**
NOR				*i* S	**Sn**	**04 57 26.4**	**+1.8**
NOR	comp=Z,6.1nm,0.9s			IAML		04 57 35.9	
NOR	**Nord**	**2.10**	**293**	*eP*	**Pn**	**04 57 01.0**	**+2.5**
NOR				*i* S	**Sn**	**04 57 26.4**	**+1.8**
NOR	comp=Z,6.1nm,0.9s			IAML		04 57 35.9	
KBS	**Kingsbay**	**3.40**	**120**	P	**Pn**	**04 57 19.4**	**+3.1**
KBS				S	**Sn**	**04 57 54.4**	**-2.2**
KBS	**Kingsbay**	**3.40**	**120**	*eP*	**Pn**	**04 57 18.5**	**+2.2**
KBS	comp=Z,5.5nm,0.9s			IAML		04 57 58.0	
KBS	**Kingsbay**	**3.40**	**120**	*i* P	**Pn**	**04 57 18.7**	**+2.4**
KBS				*i* S	**Sn**	**04 57 54.7**	**-1.9**
BRBB	**Barentsburg B**	**4.32**	**123**	P	**Pn**	**04 57 32.9**	**+3.9**
BRBB				S	**Sn**	**04 58 20.4**	**+1.1**
BRBB	**Barentsburg B**	**4.32**	**123**	*eP*	**Pn**	**04 57 33.3**	**+4.3**
BRBB				*eS*	**Sn**	**04 58 20.0**	**+0.7**
BRBA	**Barentsburg A**	**4.35**	**123**	*eP*	**Pn**	**04 57 34.0**	**+4.6**
SPA0	**Spitsbergen Ar**	**4.55**	**118**	*eP*	**Pn**	**04 57 35.3**	**+3.1**
SPA0				*eS*	**Sn**	**04 58 23.1**	**-1.9**
SPA0	**Spitsbergen Ar**	**4.55**	**118**	*eP*	**Pn**	**04 57 35.2**	**+3.1**
SPA0	comp=Z,3.7nm,1.0s			IAML		04 58 51.1	
SPITS	**Spitsbergen Ar**	**4.55**	**118**	P	**Pn**	**04 57 35.8**	**+3.6**
SPITS				S	**Sn**	**04 58 23.7**	**-1.3**
DAG	**Danmarks Havn**	**5.14**	**222**	*i* P	**Pn**	**04 57 43.5**	**+3.3**
DAG				*i* S	**Sn**	**04 58 38.2**	**-1.2**
DAG	comp=Z,2.3nm,0.5s			IAML		04 58 51.2	
DAG	**Danmarks Havn**	**5.14**	**222**	*i* P	**Pn**	**04 57 43.5**	**+3.3**
DAG				*i* S	**Sn**	**04 58 38.2**	**-1.2**
DAG	comp=Z,2.3nm,0.5s			IAML		04 58 51.2	
HSPB	**Hornsund (broa**	**5.38**	**128**	P	**Pn**	**04 57 47.2**	**+3.8**
HSPB	**Hornsund (broa**	**5.38**	**128**	*eP*	**Pn**	**04 57 46.7**	**+3.2**
HOPEN	**Hopen**	**7.06**	**114**	P	**Pn**	**04 58 08.6**	**+2.1**
HOPEN				*eS*	**Sn**	**04 59 22.2**	**-4.5**
DBG	**Daneborg**	**7.57**	**217**	*i* P	**Pn**	**04 58 16.7**	**+3.2**
DBG				*i* S	**Sn**	**04 59 35.3**	**-3.8**
DBG	comp=Z,1.8nm,1.1s			IAML		04 59 46.0	
DBG	**Daneborg**	**7.57**	**217**	*i* P	**Pn**	**04 58 16.7**	**+3.2**
DBG				*i* S	**Sn**	**04 59 35.3**	**-3.8**
DBG	comp=Z,1.8nm,1.1s			IAML		04 59 46.0	
ZFI2	**Zemlya Franca-**	**7.88**	**66**	*eP*	**Pn**	**04 58 19.7**	**+1.9**
ZFI2				S	**Sn**	**04 59 41.3**	**-5.5**
OMEGA	**Omega** comp=Z,18nm,2.8s	**7.90**	**66**	*eP*	**Pn**	**04 58 19.8**	**+1.8**
OMEGA	comp=Z,41nm,3.1s			S	**Sn**	**04 59 41.7**	**-5.6**
NEEM	**North Greenlan**	**9.31**	**273**	*i* P	**Pn**	**04 58 39.6**	**+2.0**
NEEM	**North Greenlan**	**9.31**	**273**	*i* P	**Pn**	**04 58 39.6**	**+2.0**

KRSC 11 05:06:27.8±1.6,50°.33N×157°.07E, h50km±19km, MI4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.70**	**300**	*i* P	Pn	05 06 41.3	-0.2
SKR				*eS*	Sn	05 06 50.3	-1.2
PAU	**Pauzhetka**	**1.15**	**352**	*eP*	Pn	05 06 49.3	+1.8
PAU				*eS*	Sn	05 07 04.0	+1.9
KDTR	**Khodutka, Kamc**	**1.61**	**23**	*eP*	Pn	05 06 56.0	+2.3
KDTR				*eS*	Sn	05 07 15.9	+2.6
ASAK	**Asacha**	**2.12**	**14**	*eP*	Pn	05 07 04.0	+3.2
MTVR	**Mutnovka**	**2.27**	**18**	*eP*	Pn	05 07 05.7	+2.9
MTVR				*eS*	Sn	05 07 33.2	+3.6
RUS	**Russkaya**	**2.29**	**23**	*eP*	Pn	05 07 05.5	+2.5
RUS				*eS*	Sn	05 07 32.3	+2.3
GRL	**Gorelyy**	**2.31**	**15**	*eP*	Pn	05 07 06.6	+3.1
KRMR	**Karymshinskiy**	**2.59**	**14**	*eP*	Pn	05 07 10.6	+3.5
APC	**Apacha**	**2.60**	**1**	*eP*	Pn	05 07 09.8	+2.6
PET	**Petropavlovsk**	**2.87**	**19**	*eP*	Pn	05 07 14.3	+3.3
PET				*eS*	Sn	05 07 48.2	+4.0
DALK	**Dalny**	**2.90**	**21**	*eP*	Pn	05 07 14.2	+2.9
DALK				*eS*	Sn	05 07 48.6	+3.6
UGLR	**Uglovaya**	**3.08**	**20**	*eP*	Pn	05 07 17.9	+3.9
AVH	**Avacha**	**3.12**	**19**	*eP*	Pn	05 07 18.7	+4.3
KOK	**Koryaka**	**3.12**	**18**	*eP*	Pn	05 07 19.1	+4.6
SMAR	**Somma**	**3.13**	**19**	*eP*	Pn	05 07 18.7	+4.0
KRER	**Koryakskii**	**3.15**	**19**	*eP*	Pn	05 07 19.4	+4.4
SDLR	**Sedlovina**	**3.16**	**20**	*eP*	Pn	05 07 18.3	+3.3
NLC	**Nalytchevo**	**3.18**	**26**	*eP*	Pn	05 07 17.1	+2.0
KRX	**Arik**	**3.19**	**17**	*eP*	Pn	05 07 19.6	+4.1
MKZ	**Mys Kozlova**	**5.10**	**32**	*eP*

comp=Z,52nm,20.5s,baz=276,slow=30
TBI Tubuai 21.68 106 *e*S S 05 17 35.6 +0.7
2µm,33.8s
TBI *e*LR LR 05 18 36.2
1µm,25.8s
TBI *e*LR LR 05 18 49.8
985nm,29.2s
URZ Urewera 21.68 203 P P 05 13 43.3 +8.7
9.0nm,0.6s,baz=58,slow=3.4,SNR=5.4
URZ S Sn 05 17 48.3 +4.7
17nm,1.0s,baz=242,slow=22,SNR=1.9
9.0nm,0.6s
QRZ Quartz Range 25.73 208 P P 05 14 23.6 +9.3
QRZ Quartz Range 25.73 208 S S 05 18 56.8 +14
THZ Tophouse 26.35 206 P **P** **05 14 19.3 -0.6**
HNR Honiara 28.54 285 LR LR 05 24 39.1
comp=Z,67nm,19.8s,baz=105,slow=34
TAOE Nuku Hiva Isla 32.51 77 *e*LR LR 05 23 17.4
120nm,24.0s
CNB Canberra Magne 37.84 236 P **P** **05 16 04.3 +3.5**
AUMTS Mt Stromlo 38.13 236 P **P** **05 16 06.9 +3.7**
CAN Canberra 38.13 236 P P 05 16 08.4 +5.2
CMSA Cobar Meteorol 40.05 243 P **P** **05 16 21.6 +2.3**
PMG Port Moresby 40.45 277 LR LR 05 30 42.7
comp=Z,87nm,20.6s,baz=121,slow=33
TOO Toolangi 41.45 234 P **P** **05 16 29.7 -1.1**
H11S2 WAKE ISLAND Hy 42.34 329 T T 05 59 26.3
baz=144,slow=76,SNR=1.9
H11S3 WAKE ISLAND Hy 42.36 329 T T 05 59 27.0
baz=144,slow=76,SNR=1.9
H11S1 WAKE ISLAND Hy 42.36 329 T T 05 59 23.4
baz=144,slow=76,SNR=3.7
BRAT Ballarat 42.65 234 P **P** **05 16 44.3 +3.8**
STKA Stephens Creek 43.56 243 P **P** **05 16 48.5 +0.5**
5.5nm,0.8s,baz=93,slow=10,SNR=6.9
STKA LR LR 05 33 24.9
comp=Z,84nm,18.2s,baz=28,slow=34
5.5nm,0.8s
INKA Innaminka 44.02 249 P **P** **05 16 52.1 +0.4**
HTT Hallett 45.97 241 P **P** **05 17 09.2 +1.9**
BBOO Buckleboo 48.31 242 P **P** **05 17 24.9 -0.6**
WR0 Warramunga Arr 50.16 259 P **P** **05 17 38.7 -1.1**
WR8 Warramunga Arr 50.20 259 P **P** **05 17 38.8 -1.4**
WB0 Warramunga Arr 50.33 259 P **P** **05 17 39.0 -2.1**
AS31 Alice Springs 50.33 254 P **P** **05 17 39.9 -1.2**
AS31 IAmb IAmb 05 17 41.6
comp=Z,4.8nm,0.8s
ASAR Alice Springs 50.33 254 P **P** **05 17 39.9 -1.2**
ASAR Alice Springs 50.33 254 P **P** **05 17 40.1 -1.0**
comp=Z,18nm,0.8s,baz=88,slow=7.9,SNR=8.1
ASAR LR LR 05 37 25.8
comp=Z,62nm,19.9s,baz=340,slow=34
comp=Z,18nm,0.8s
WB2 Warramunga Arr 50.34 259 P **P** **05 17 39.1 -2.1**
WRAB Tennant Creek 50.34 259 P **P** **05 17 39.0 -2.2**
WRAB Tennant Creek 50.34 259 P **P** **05 17 40.0 -1.2**
WRA Warramunga Arr 50.35 259 P **P** **05 17 39.0 -2.3**
WRA Warramunga Arr 50.35 259 P **P** **05 17 39.4 -1.9**
comp=Z,13nm,0.9s,baz=93,slow=6.9,SNR=39
comp=Z,13nm,0.9s
MTN Manton Dam 54.72 267 P **P** **05 18 10.7 -3.0**
MTN IAmb IAmb 05 18 11.8
comp=Z,5.5nm,0.8s
FORT Forrest 55.09 245 P **P** **05 18 15.5 -0.7**
KNRA Kununurra 56.33 263 P **P** **05 18 23.3 -2.0**
RPN Rapa Nui 57.98 111 LR LR 05 38 13.1
comp=Z,25nm,22.0s,baz=308,slow=30
SBA Scott Base 60.15 185 **P** **05 18 51.8 +0.8**
SBA IAmb IAmb 05 18 58.5
comp=Z,3.9nm,0.8s
VNDA Vanda 60.30 186 P **P** **05 18 54.1 +1.9**
VNDA Vanda 60.30 186 P P 05 18 57.6 +5.5
comp=Z,2.1nm,0.9s,baz=11,slow=6.9,SNR=10
comp=Z,2.1nm,0.9s
SOEI Soe 62.02 269 P **P** **05 19 03.5 -1.4**
JCJ Chichijima 63.46 315 LR LR 05 42 11.0
comp=Z,62nm,19.3s,baz=136,slow=32
PSA00 Pilbara Seismi 63.48 255 P **P** **05 19 13.3 -1.2**
PSA00 Pilbara Seismi 63.48 255 P **P** **05 19 13.2 -1.2**
PSA00 IAmb IAmb 05 19 13.4
comp=Z,9.4nm,0.8s
MBWA Marble Bar 63.66 255 P **P** **05 19 14.3 -1.3**
LUWI Luwuk 66.10 277 P **P** **05 19 28.7 -2.9**
CASY Casey 68.00 205 P **P** **05 19 42.3 -0.5**
JYT Yasato 70.76 321 P **P** **05 20 00.5 +0.2**
QSPA South Pole Qui 71.43 180 P **P** **05 20 05.5 +1.4**
QSPA IAmb IAmb 05 20 11.3
comp=Z,5.5nm,0.9s
QSPA South Pole Qui 71.43 180 P P 05 20 09.8 +5.7
comp=Z,3.6nm,0.8s,baz=81,slow=1.2,SNR=12
comp=Z,3.6nm,0.8s
SHEM Shemya Is, Ala 72.06 351 P **P** **05 20 08.8 +1.1**
SHEM Shemya Is, Ala 72.06 351 LR LR 05 46 11.8
comp=Z,43nm,21.6s,baz=116,slow=32
SMY Shemya 72.06 351 P **P** **05 20 08.7 +1.0**
MJAR Matsushiro Arr 72.17 320 P **P** **05 20 08.7 -0.2**
MJAR IAmb IAmb 05 20 16.9
comp=Z,7.4nm,1.5s
MJAR Matsushiro Arr 72.17 320 LR LR 05 46 08.0
comp=Z,37nm,20.4s,baz=100,slow=32
MHC Mount Hamilton 73.21 40 P **P** **05 20 16.5 +1.3**
MWC Mount Wilson 73.56 44 P **P** **05 20 17.4 0.0**
BAR Barrett 73.58 46 P **P** **05 20 17.4 +0.1**
BAR IAmb IAmb 05 20 20.9
comp=Z,5.5nm,1.1s
DPP Dos Picos Cty 73.59 46 P **P** **05 20 17.9 +0.6**
DPP IAmb IAmb 05 20 19.5
comp=Z,6.5nm,1.0s
ELS Elsinore Mount 73.64 45 P **P** **05 20 18.4 +0.7**
ELS IAmb IAmb 05 20 20.1
comp=Z,5.7nm,1.1s
ESJX Sierra Juarez 73.70 47 P **P** **05 20 18.1 -0.1**
ESJX IAmb IAmb 05 20 21.1
comp=Z,5.8nm,1.0s
MNRC McLaughlin Min 73.73 38 P **P** **05 20 17.6 -0.4**
LPIG La Paz 73.74 57 LR LR 05 45 28.9
comp=Z,60nm,18.1s,baz=8.0,slow=30
BFSC Mount Baldy Ra 73.83 45 P **P** **05 20 18.7 -0.2**
BFSC IAmb IAmb 05 20 20.3
comp=Z,5.6nm,1.1s
VES Vestal, Richgr 73.87 43 P **P** **05 20 19.4 +0.6**
YUH Yuha Desert 74.08 47 P **P** **05 20 20.2 0.0**
BORC Borrego Spring 74.10 46 P **P** **05 20 20.5 +0.2**
DNR Dunn Ranch,Anz 74.13 46 P **P** **05 20 21.4 +0.7**
DNR IAmb IAmb 05 20 23.3
comp=Z,7.3nm,0.9s
ISA Isabella, Lake 74.15 43 P **P** **05 20 22.1 +1.4**
ISA IAmb IAmb 05 20 23.0
comp=Z,7.0nm,1.2s
PFO Pinyon Flats O 74.27 46 P **P** **05 20 22.7 +1.3**
PFO IAmb IAmb 05 20 24.7
comp=Z,7.8nm,1.3s
PMD Palm Desert 74.35 46 P **P** **05 20 22.6 +0.9**
SUTB Sutter Butte 74.35 38 P **P** **05 20 22.4 +0.8**
SUTB IAmb IAmb 05 21 01.5
comp=Z,4.1nm,0.7s
O02D Mt. Diablo Mer 74.39 37 P **P** **05 20 23.4 +1.4**
O02D IAmb IAmb 05 20 27.4
comp=Z,8.7nm,1.2s
CMB Columbia Colle 74.42 40 P **P** **05 20 23.0 +0.9**
LRMC Laurel Mtn Rad 74.56 44 P **P** **05 20 23.3 +0.2**
LRMC IAmb IAmb 05 20 25.4
comp=Z,4.7nm,1.0s
ORV Oroville 74.73 38 P **P** **05 20 24.5 +0.7**
WSHM Spangler Hills 74.75 44 P **P** **05 20 24.7 +0.6**
CCCA Chr Cany lake 74.79 44 P **P** **05 20 25.4 +1.0**
CCCA IAmb IAmb 05 20 26.8
comp=Z,4.5nm,1.0s
BELC Belle Mtn. Jos 74.81 46 **P** **05 20 26.0 +1.4**
BELC IAmb IAmb 05 20 27.0
comp=Z,4.9nm,1.0s
CLC China Lake 74.81 43 P **P** **05 20 25.4 +0.9**
CWC Cottonwood Cre 74.88 43 P **P** **05 20 25.0 +0.1**
CWC IAmb IAmb 05 20 27.3
comp=Z,8.1nm,1.4s
ASAJ Asahikawa 74.91 328 LR LR 05 50 18.2
comp=Z,30nm,18.1s,baz=355,slow=34
MDPB Devils Postpil 74.97 41 P **P** **05 20 26.0 +0.4**
BC3 Big Chuckawall 74.98 46 **P** **05 20 26.9 +1.3**
BC3 IAmb IAmb 05 20 28.3
comp=Z,9.0nm,1.2s
GSC Goldstone, Bar 75.03 44 P **P** **05 20 25.9 +0.1**
GSC IAmb IAmb 05 20 28.1
comp=Z,5.4nm,1.1s
O03E Paynes Creek 75.03 38 P **P** **05 20 26.6 +0.9**

PIX Pinacate 75.21 49 P **P** **05 20 26.7 -0.1**
PIX IAmb IAmb 05 20 29.4
comp=Z,5.3nm,1.1s
WAKR Walker 75.30 40 P **P** **05 20 28.8 +1.4**
WAKR IAmb IAmb 05 20 29.6
comp=Z,5.1nm,1.1s
QSM Queen of Sheba 75.38 44 P **P** **05 20 28.7 +1.1**
QSM IAmb IAmb 05 20 30.0
comp=Z,7.8nm,1.0s
MPK Martis Peak 75.43 39 P **P** **05 20 28.3 +0.1**
MPK IAmb IAmb 05 20 35.3
comp=Z,6.8nm,1.1s
YBH Yreka Blue Hor 75.47 36 P **P** **05 20 29.0 +0.8**
YBH IAmb IAmb 05 20 30.3
comp=Z,7.6nm,1.1s
YBH Yreka Blue Hor 75.47 36 LR LR 05 43 52.5
comp=Z,6.0nm,21.5s,baz=264,slow=28
IRM Iron Mountain 75.48 46 **P** **05 20 29.7 +1.4**
IRM IAmb IAmb 05 20 31.1
comp=Z,9.6nm,1.1s
PNTR Pine Nut 75.56 40 P **P** **05 20 29.5 +0.6**
PNTR IAmb IAmb 05 20 31.8
comp=Z,7.9nm,1.1s
GWY Greenwater Val 75.64 43 P **P** **05 20 30.1 +0.7**
113A Mohawk Valley, 75.65 48 P **P** **05 20 30.2 +0.9**
GRAC Grapevine Rang 75.67 42 P **P** **05 20 30.8 +1.5**
GRAC IAmb IAmb 05 20 36.5
comp=Z,9.6nm,1.4s
BLYC Blythe 75.67 47 P **P** **05 20 31.1 +1.7**
BLYC IAmb IAmb 05 20 32.3
comp=Z,10.0nm,1.2s
FURC Furnace Creek, 75.68 43 P **P** **05 20 29.8 +0.5**
FURC IAmb IAmb 05 20 31.8
comp=Z,4.2nm,1.0s
LHV Little Huntoon 75.71 41 P **P** **05 20 29.8 +0.4**
LHV IAmb IAmb 05 20 32.2
comp=Z,8.5nm,1.2s
SHOC Shoshone, Teco 75.73 44 P **P** **05 20 30.5 +0.8**
SHOC IAmb IAmb 05 20 32.0
comp=Z,7.9nm,1.0s
214A Organ Pipe Nat 75.89 49 P **P** **05 20 31.2 +0.5**
214A IAmb IAmb 05 20 33.8
comp=Z,6.0nm,1.1s
SMRI Semarang 75.89 267 P **P** **05 20 31.2 +0.1**
GMN Gold Mountain 75.92 42 P **P** **05 20 31.7 +0.6**
GMN IAmb IAmb 05 20 33.4
comp=Z,4.3nm,0.9s
RYN Ryan 75.93 41 P **P** **05 20 30.8 -0.2**
NVAR Mina Array Bea 75.95 41 P **P** **05 20 32.4 +1.2**
NVAR Mina Array Bea 75.95 41 P P 05 20 22.2 -8.9
comp=Z,0.7nm,0.7s,baz=228,slow=11,SNR=7.2
NVAR LR LR 05 46 34.9
comp=Z,73nm,19.6s,baz=31,slow=30
comp=Z,0.7nm,0.7s
MTPC Mountain Pass 75.96 45 P **P** **05 20 31.9 +0.7**
MTPC IAmb IAmb 05 20 33.9
comp=Z,7.6nm,1.4s
WCT Wildcat Mounta 76.02 43 P **P** **05 20 32.0 +0.6**
NV11 Mina Array Sit 76.04 41 P **P** **05 20 32.0 +0.4**
NV11 IAmb IAmb 05 20 33.9
comp=Z,6.6nm,1.1s
TPNV Topopah Spring 76.36 43 P **P** **05 20 33.9 +0.5**
V12A Nelson 76.57 45 P **P** **05 20 35.5 +0.9**
V12A IAmb IAmb 05 20 38.1
comp=Z,4.9nm,1.1s
SHPR Sheep Range 76.81 44 P **P** **05 20 36.8 +0.7**
Y14A Wickenburg 76.83 47 P **P** **05 20 36.3 +0.2**
Y14A IAmb IAmb 05 20 39.0
comp=Z,5.4nm,0.9s
W13A Hualapai Mount 76.86 46 P **P** **05 20 36.9 +0.4**
S11A Rachel 77.09 43 P **P** **05 20 37.9 +0.4**
S11A IAmb IAmb 05 20 40.1
comp=Z,5.9nm,0.9s
PRN Pahroc Range 77.40 43 P **P** **05 20 39.8 +0.5**
PRN IAmb IAmb 05 20 42.4
comp=Z,11nm,1.4s
G03D McMinnville, O 77.52 33 P **P** **05 20 39.6 +0.1**
TUC Tucson 77.53 50 P **P** **05 20 41.5 +1.4**
TUC IAmb IAmb 05 20 43.7
comp=Z,5.2nm,0.9s
R11B Troy Canyon, C 77.61 42 P **P** **05 20 41.1 +0.6**
R11B IAmb IAmb 05 20 43.0
comp=Z,6.8nm,1.5s
PINE Pine Mountain 77.81 35 P **P** **05 20 42.1 +0.6**
PINE IAmb IAmb 05 20 51.3
comp=Z,7.6nm,1.3s
KDAK Kodiak Island 77.85 11 LR LR 05 47 49.1
comp=Z,47nm,19.1s,baz=6.3,slow=31
319A Douglas 78.15 51 P **P** **05 20 44.8 +1.3**
319A IAmb IAmb 05 20 47.9
comp=Z,7.6nm,1.0s
X16A Lo Mia Camp, P 78.18 47 P **P** **05 20 45.0 +1.2**
X16A IAmb IAmb 05 20 47.2
comp=Z,5.9nm,1.0s
LCMT Little Creek M 78.36 44 P **P** **05 20 45.8 +1.1**
CCUT Cedar City 78.59 44 P **P** **05 20 45.5 -0.5**
CCUT IAmb IAmb 05 20 49.5
comp=Z,5.9nm,1.3s
KNB Kanab 78.65 45 P **P** **05 20 46.9 +0.6**
KNB IAmb IAmb 05 20 53.4
comp=Z,6.4nm,1.4s
U15A North Rim 78.68 45 P **P** **05 20 47.6 +1.0**
U15A IAmb IAmb 05 20 50.0
comp=Z,7.9nm,1.3s
HPIG 78.77 57 P **P** **05 20 48.6 +1.4**
SZCU Shurtz Canyon 78.79 44 P **P** **05 20 48.1 +1.0**
WUAZ Wupatki 78.81 47 P **P** **05 20 47.4 +0.2**
WUAZ IAmb IAmb 05 20 50.6
comp=Z,6.5nm,1.2s
PSUT Pine Spring 78.82 43 P **P** **05 20 47.5 +0.2**
DUN6 Lazy B Ranch 78.88 50 P **P** **05 20 48.6 +1.0**
P18K Big Mountain, 78.97 9 P **P** **05 20 48.5 +1.1**
ELK Elko 79.23 40 P **P** **05 20 49.1 -0.3**
ELK Elko 79.23 40 LR LR 05 47 56.7
comp=Z,55nm,19.0s,baz=55,slow=30
X18A Snowflake 79.28 48 P **P** **05 20 49.8 0.0**
X18A IAmb IAmb 05 20 54.1
comp=Z,8.8nm,1.4s
MTPU Mount Pierson 79.64 44 P **P** **05 20 51.9 0.0**
TCRU Three Creeks R 79.78 43 P **P** **05 20 54.0 +1.5**
TCRU IAmb IAmb 05 20 56.0
comp=Z,6.5nm,1.2s
121A Cookes Peak, D 79.83 51 P **P** **05 20 53.5 +0.7**
121A IAmb IAmb 05 20 56.9
comp=Z,5.5nm,1.0s
BELA Belgrano 2 80.64 172 **P** **05 20 55.0 -1.3**
BELA IAmb IAmb 05 20 59.1
comp=Z,6.4nm,1.0s
PMSA Palmer Station 80.75 156 LR LR 05 49 44.2
comp=Z,28nm,21.9s,baz=344,slow=30
MNTX Cornudas Mount 81.21 52 P **P** **05 21 01.7 +1.6**
MNTX IAmb IAmb 05 21 04.0
comp=Z,7.3nm,1.2s
LENM Lemitar 81.22 50 P **P** **05 21 00.6 +0.3**
TX31 Lajitas Ar. Si 81.43 55 P **P** **05 21 02.2 +0.8**
TXAR Lajitas Array 81.43 55 P **P** **05 21 02.0 +0.6**
TXAR Lajitas Array 81.43 55 P P 05 20 53.6 -7.8
comp=Z,0.4nm,0.8s,baz=231,slow=7.9,SNR=4.9
comp=Z,0.4nm,0.8s
ALPN Alpine 81.92 54 P **P** **05 21 05.3 +1.2**
ALPN IAmb IAmb 05 21 08.2
comp=Z,9.5nm,1.3s
PV13 Radium Mtn., P 81.94 45 P **P** **05 21 04.7 +0.6**
PV16 Nyswonger Mesa 81.96 45 P **P** **05 21 04.2 +0.1**
PV16 IAmb IAmb 05 21 08.4
comp=Z,10nm,1.5s
PV23 Carpenter Ridg 81.97 45 P **P** **05 21 05.3 +1.1**
PV23 IAmb IAmb 05 21 07.4
comp=Z,5.9nm,0.9s
TASM ASL Pad, Albuq 81.97 49 P **P** **05 21 05.1 +0.8**
TASM ASL Pad, Albuq 81.97 49 P **P** **05 21 03.7 -0.5**
TASM IAmb IAmb 05 21 07.8
comp=Z,3.4nm,1.0s
TASM ASL Pad, Albuq 81.97 49 P **P** **05 21 04.8 +0.6**
TASM IAmb IAmb 05 21 07.8
comp=Z,3.3nm,1.0s
ABQ Albuquerque 81.97 49 P **P** **05 21 04.4 +0.1**
ABQ IAmb IAmb 05 21 08.7
comp=Z,8.0nm,1.5s
PV03 Paradox Valley 81.97 45 P **P** **05 21 03.7 -0.5**
ANMO Albuquerque 81.97 49 P **P** **05 21 04.2 0.0**
ANMO IAmb IAmb 05 21 08.7
comp=Z,8.7nm,1.5s
ANMO Albuquerque 81.97 49 P **P** **05 21 06.3 +2.0**
ANMO IAmb IAmb 05 21 08.7
comp=Z,8.2nm,1.4s
ANMO Albuquerque 81.97 49 P **P** **05 21 06.3 +2.0**
ANMO IAmb IAmb 05 21 08.7
comp=Z,7.8nm,1.4s
ANMO Albuquerque 81.97 49 LR LR 05 51 39.9
comp=Z,74nm,19.6s,baz=128,slow=32
PV02 Paradox Valley 82.02 45 P **P** **05 21 05.2 +0.6**
PV01 Paradox Valley 82.10 45 P **P** **05 21 05.1 +0.2**
PV01 IAmb IAmb 05 21 08.9
comp=Z,6.8nm,1.5s
GDL2 Guadalupe Moun 82.21 52 P **P** **05 21 06.3 +0.9**
H03S2 Juan Fernandez 82.43 123 T T 06 52 22.0
baz=250,slow=75,SNR=7.2
H03S1 Juan Fernandez 82.44 123 T T 06 52 22.7
baz=250,slow=75,SNR=4.3
H03S3 Juan Fernandez 82.44 123 T T 06 52 24.0
baz=250,slow=75,SNR=6.0
NEW Newport 82.71 34 LR LR 05 52 16.6
comp=Z,68nm,19.2s,baz=172,slow=32
NJ2 Nanjing 83.06 307 *e*P **P** **05 21 11.3 +1.6**
NJ2 pmax pmax
comp=Z,11nm,0.5s
S22A 4UR Ranch, Cre 83.09 47 P **P** **05 21 11.6 +1.4**
S22A IAmb IAmb 05 21 13.8
comp=Z,2.7nm,0.8s
O20A White River Ci 83.35 44 P **P** **05 21 10.8 -0.5**
MA2 Magadan 83.60 342 P **P** **05 21 12.7 +0.8**
BPMT Black Pine Rid 83.61 36 P **P** **05 21 12.0 -0.6**
CMIG Matias Romero 83.84 70 LR LR 05 52 50.6
comp=Z,50nm,18.4s,baz=203,slow=32
DRIO Del Rio 83.86 56 P **P** **05 21 14.4 +0.5**
PD31 Pinedale Array 83.88 41 P **P** **05 21 14.4 +0.3**
PDAR Pinedale Array 83.88 41 P **P** **05 21 13.5 -0.6**
PDAR Pinedale Array 83.88 41 P P 05 21 03.9 -10
comp=Z,0.4nm,0.8s,baz=180,slow=1.5,SNR=3.5
comp=Z,0.4nm,0.8s
YMR Madison River 84.05 39 P **P** **05 21 15.1 +0.2**
MSTX Muleshoe 84.20 51 P **P** **05 21 16.3 +0.5**
F15K North Star Dit 84.28 3 P **P** **05 21 16.6 +1.4**
MAW Mawson 85.12 198 P **P** **05 21 21.4 +1.7**
comp=Z,4.0nm,0.9s,baz=161,slow=4.5,SNR=6.0
MAW LR LR 06 03 45.2
comp=Z,18nm,18.8s,baz=69,slow=38
comp=Z,4.0nm,0.9s
ILAR Eielson Array 85.38 11 P P 05 21 09.3 -11
comp=Z,0.6nm,0.8s,baz=234,slow=5.6,SNR=6.8
comp=Z,0.6nm,0.8s
PLCA Paso Flores 86.46 132 LR LR 05 52 58.3
comp=Z,40nm,18.6s,baz=254,slow=30
SNAA Sanae 89.63 177 P **P** **05 21 42.0 +0.5**
SNAA IAmb IAmb 05 21 50.5
comp=Z,7.0nm,1.5s
SNAA Sanae 89.63 177 P **P** **05 21 42.4 +0.9**
comp=Z,1.5nm,0.8s,baz=197,slow=5.4,SNR=8.0
comp=Z,1.5nm,0.8s
JTS Las Juntas de 90.61 79 LR LR 05 54 12.6
comp=Z,49nm,19.2s,baz=64,slow=30
XAN Xi'an 91.48 305 P **P** **05 21 50.4 -0.3**
XAN pmax pmax
comp=Z,4.0nm,0.6s
HHC Hu-ho-hao-te 92.09 312 *e*P **P** **05 21 54.1 +0.7**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,130nm,5.2s
PZH PanZhiHua 94.78 296 P **P** **05 22 07.5 +1.3**
ULM Lac du Bonnet 95.68 39 LR LR 05 57 19.1
comp=Z,102nm,18.5s,baz=11,slow=31
LPAZ La Paz 97.58 110 LR LR 05 56 52.6
comp=Z,34nm,19.6s,baz=50,slow=30
BVAR Borovoye Array 121.15 321 PKP **PKPdf** **05 27 30.1 -6.6**
comp=Z,0.9nm,0.6s,baz=67,slow=4.8,SNR=3.7
BRTR Keskin Array B 149.39 319 PKPbc **PKPdf** **05 28 26.9 -2.2**
comp=Z,1.2nm,0.7s,baz=77,slow=1.9,SNR=7.5
GERES GERESS Array B 149.50 352 PKPbc **PKPdf** **05 28 24.4 -4.5**
comp=Z,1.3nm,0.9s,baz=340,slow=2.0,SNR=7.9
CONA Conrad Observa 150.06 349 *i* PKP **PKPdf** **05 28 28.1 -1.6**
comp=Z,4.5nm,1.2s
RONA Rosalia, Austr 150.20 348 *i* PKP **PKPdf** **05 28 28.2 -1.8**
comp=Z,5.9nm,1.4s
LESA Schwarzleotal 151.02 353 *i* pPKP pPKPdf 05 28 35.9 +1.8
comp=Z,6.1nm,1.1s
WTTA Wattenberg 151.28 355 *i* PKP **PKPdf** **05 28 30.5 -1.3**
comp=Z,5.6nm,0.9s
SOKA Soboth 151.41 350 *i* PKP **PKPdf** **05 28 31.1 -0.9**
comp=Z,4.6nm,0.9s
OBKA Obir 151.66 350 *e*pPKP pPKPdf 05 28 36.5 +1.3
comp=Z,4.1nm,0.8s
ABTA Abfaltersbach 151.70 353 *i* PKP **PKPdf** **05 28 31.4 -1.0**
comp=Z,10nm,1.0s

NEIC ***11*** *05:11:01.4±1.4,5.67N±0.07×126.7E±0.1,h80km±7km, mb4.4/19,Error ellipse: s-maj=19.0km s-min=8.6km az=68.0*
DJA ***11*** *05:11:01.4±0.8,6.7N±3.1×12.7E±.1,h21km±7km,M4.9/12, mB5.4/7,mb5.0/6,MLv4.9/12,Mw(mB)4.8/7*
IDC ***11*** *05:11:02.8±1.3,5.70N×126.55E,h100km±11km,mb4.0/17, mbtmp4.3/18,Error ellipse: s-maj=34.2km s-min=10.2km az=69.0*

ISC 11 05:11:00.8±1.2,5.68N±0.04×126.71E±0.09,h79km±10km, n66,σ1$71/78,mb4.4/27,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.78**	**321**	Pn	**Pn**	**05 11 30.1**	**+0.3**
DAV				Sn	**Sn**	**05 11 52.8**	**+1.0**
DAV	**Davao City (W)**	**1.78**	**321**	P	**Pn**	**05 11 29.5**	**-0.3**
	265nm,0.3s,baz=167,slow=4.1,SNR=5.9						
DAV				S	**Sn**	**05 11 53.1**	**+1.3**
	1µm,0.3s,baz=261,slow=17,SNR=12						
SGSI	**Sangihe**	**2.30**	**211**	P	**Pn**	**05 11 37.9**	**+1.1**
SGSI				S	**Sn**	**05 12 06.0**	**+1.7**
TNTI	**Ternate**	**4.92**	**172**	Pn	**Pn**	**05 12 12.2**	**-0.1**
TNTI	**Ternate**	**4.92**	**172**	P	**Pn**	**05 12 14.0**	**+1.7**
TNTI				S	**Sn**	**05 13 08.7**	**+0.8**
KMSI	**Cibinong**	**5.76**	**208**	P	**Pn**	**05 12 25.0**	**+1.3**
	1.5nm309nm,0.6s						
MRSI	**Marisa**	**7.03**	**223**	P	**Pn**	**05 12 41.7**	**+0.6**
MRSI				S	**Sn**	**05 13 56.0**	**-3.5**
TOLI2	**Tolitoli**	**7.46**	**233**	Pn	**Pn**	**05 12 44.6**	**-2.3**
SANI	**Sanana**	**7.71**	**185**	P	**Pn**	**05 12 47.7**	**-2.7**
SANI				S	**Sn**	**05 14 08.2**	**-8.1**
LUWI	**Luwuk**	**7.75**	**211**	Pn	**Pn**	**05 12 52.1**	**+1.2**
LUWI	**Luwuk**	**7.75**	**211**	P	**Pn**	**05 12 53.0**	**+2.1**
	3µm183nm,0.8s						
LUWI				S	**Sn**	**05 14 22.7**	**+5.5**
	3µm183nm,0.8s						
MYLDM	**Lahad Datu**	**8.19**	**267**	Pn	**Pn**	**05 12 55.9**	**-1.0**
APSI	**Ampana**	**8.27**	**218**	P	**Pn**	**05 12 58.2**	**+0.1**
	1µm110nm,1.1s						
NLAI	**Namlea**	**8.87**	**177**	P	**Pn**	**05 13 05.4**	**-0.8**
KAPI	**Kappang**	**12.69**	**213**	Pn	**Pn**	**05 13 57.8**	**-0.6**
KAPI	**Kappang**	**12.69**	**213**	P	**Pn**	**05 13 58.8**	**+0.4**
	18nm,0.6s,baz=18,slow=8.1,SNR=15						
SBUM	**Sibu**	**14.80**	**258**		**P**	**05 14 30.8**	**+0.8**
SOEI	**Soe**	**15.52**	**189**	Pn	**Pn**	**05 14 35.1**	**-0.3**
SOEI				IAmb	IAmb	05 14 51.6	
	comp=Z,21nm,0.7s						
MTN	**Manton Dam**	**18.92**	**167**	P	**P**	**05 15 14.7**	**-0.7**
MTN				IAmb	IAmb	05 15 24.3	
	comp=Z,7.7nm,0.5s						
KNRA	**Kununurra**	**21.32**	**175**	P	**P**	**05 15 41.2**	**-0.1**
KNRA				IAmb	IAmb	05 15 42.9	
	comp=Z,16nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.65**	**183**	P	**P**	**05 16 04.9**	**-0.3**
COEN	**Coen**	**25.45**	**140**	P	**P**	**05 16 21.4**	**-0.2**
COEN				IAmb	IAmb	05 16 42.8	
	comp=Z,6.1nm,0.8s						
WB0	**Warramunga Arr**	**26.39**	**164**	P	**P**	**05 16 29.2**	**-0.8**
WRAB	**Tennant Creek**	**26.54**	**164**	P	**P**	**05 16 31.2**	**-0.2**
WRAB				IAmb	IAmb	05 16 37.1	
	comp=Z,8.1nm,0.6s						
WRA	**Warramunga Arr**	**26.54**	**164**	P	**P**	**05 16 30.7**	**-0.8**
WRA	**Warramunga Arr**	**26.54**	**164**	P	**P**	**05 16 31.4**	**0.0**
	comp=Z,4.8nm,0.7s,baz=343,slow=10,SNR=22						
WRA				PcP	**PcP**	**05 19 54.4**	**0.0**
	comp=Z,0.8nm,0.7s,baz=334,slow=2.4,SNR=3.5						
	comp=Z,4.8nm,0.7s						
WR8	**Warramunga Arr**	**26.60**	**163**	P	**P**	**05 16 31.5**	**-0.5**
WR8				IAmb	IAmb	05 16 38.0	
	comp=Z,9.3nm,0.7s						
PSA00	**Pilbara Seismi**	**27.91**	**194**	P	**P**	**05 16 42.7**	**-0.9**
PSA00				IAmb	IAmb	05 16 48.0	
	comp=Z,10nm,0.9s						

AS31	**Alice Springs**	**30.00**	**167**	P	**P**	**05 17 02.4**	**+0.2**
ASAR	**Alice Springs**	**30.00**	**167**	P	**P**	**05 17 02.9**	**+0.7**
ASAR	**Alice Springs**	**30.00**	**167**	P	**P**	**05 17 02.4**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=343,slow=7.0,SNR=17						
ASAR				PcP	**PcP**	**05 20 03.2**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=344,slow=2.4,SNR=8.9						
	comp=Z,1.5nm,0.4s						
PZH	**PanZhiHua**	**31.57**	**314**	P	**P**	**05 17 18.7**	**+2.6**
LZH	**Lanzhou**	**36.83**	**328**	*e*P	**P**	**05 18 05.8**	**+4.2**
LZH				sP	sP	05 18 31.1	+2.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
HHC	**Hu-ho-hao-te**	**37.56**	**341**	*e*P	**P**	**05 18 11.7**	**+4.1**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,93nm,5.3s						
USRK	**Ussuriysk Ar.**	**38.65**	**6**	P	**P**	**05 18 16.6**	**0.0**
	comp=Z,2.5nm,0.6s,baz=187,slow=5.6,SNR=2.6						
	comp=Z,2.5nm,0.6s						
BBOO	**Buckleboo**	**39.29**	**168**	P	**P**	**05 18 22.3**	**+0.2**
STKA	**Stephens Creek**	**39.95**	**160**	P	**P**	**05 18 27.3**	**-0.3**
STKA				PcP	**PcP**	**05 20 32.1**	**+0.4**
STKA	**Stephens Creek**	**39.95**	**160**	P	**P**	**05 18 28.3**	**+0.7**
	comp=Z,7.9nm,0.8s,baz=344,slow=8.6,SNR=9.3						
STKA				PcP	**PcP**	**05 20 32.2**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=37,slow=5.1,SNR=3.1						
	comp=Z,7.9nm,0.8s						
ARMA	**Armidale**	**43.10**	**148**	P	**P**	**05 18 53.4**	**-0.1**
ARMA				IAmb	IAmb	05 19 20.6	
	comp=Z,10nm,1.1s						
SONM	**Songino Array**	**45.46**	**341**	P	**P**	**05 19 12.3**	**+0.1**
SONM	**Songino Array**	**45.46**	**341**	P	**P**	**05 19 12.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=148,slow=8.5,SNR=1.7						
SONM				PcP	**PcP**	**05 20 49.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=158,slow=4.2,SNR=3.6						
	comp=Z,0.6nm,0.6s						
DZM	**Mont Dzumac**	**47.69**	**127**	P	**P**	**05 19 31.0**	**+1.1**
	comp=Z,8.6nm,1.0s,baz=297,slow=4.5,SNR=5.1						
	comp=Z,8.6nm,1.0s						
MKAR	**Makanchi Array**	**55.96**	**325**	P	**P**	**05 20 29.6**	**-1.4**
MKAR	**Makanchi Array**	**55.96**	**325**	P	**P**	**05 20 29.9**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=117,slow=7.5,SNR=27						
	comp=Z,1.5nm,0.4s						
KURK	**Kurchatov**	**60.10**	**327**	P	**P**	**05 20 59.1**	**-0.7**
KURK				IAmb	IAmb	05 21 01.5	
	comp=Z,5.3nm,1.1s						
KURBB	**Kurchatov Arra**	**60.10**	**327**	P	**P**	**05 20 58.1**	**-1.7**
	comp=Z,1.1nm,0.3s,baz=126,slow=7.0,SNR=5.2						
	comp=Z,1.1nm,0.3s						
BVAR	**Borovoye Array**	**65.69**	**327**	P	**P**	**05 21 35.9**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=90,slow=6.4,SNR=6.2						
	comp=Z,1.0nm,0.5s						
ABKAR	**Akbulak array**	**70.64**	**320**	P	**P**	**05 22 07.9**	**0.0**
CASY	**Casey**	**72.74**	**187**	P	**P**	**05 22 20.6**	**+0.5**
CASY				IAmb	IAmb	05 22 21.9	
	comp=Z,4.2nm,1.1s						
IMAR	**Indian Mountai**	**80.58**	**24**	P	**P**	**05 23 05.1**	**+0.7**
ILAR	**Eielson Array**	**83.36**	**26**	P	**P**	**05 23 19.0**	**0.0**
ILAR	**Eielson Array**	**83.36**	**26**	P	**P**	**05 23 18.2**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=279,slow=7.1,SNR=4.7						
	comp=Z,0.9nm,1.0s						
BMAR	**Burnt Mountain**	**84.30**	**23**	P	**P**	**05 23 24.8**	**+1.0**
VNDA	**Vanda**	**85.35**	**173**		**P**	**05 23 29.2**	**+0.5**
VNDA	**Vanda**	**85.35**	**173**	P	**P**	**05 23 28.1**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=319,slow=5.2,SNR=6.0						
	comp=Z,1.4nm,0.9s						
SPITS	**Spitsbergen Ar**	**88.58**	**349**	P	**P**	**05 23 43.9**	**-0.6**
	comp=Z,6.2nm,1.0s,baz=94,slow=8.4,SNR=5.1						
	comp=Z,6.2nm,1.0s						
ARCES	**ARCESS Array B**	**88.62**	**340**	P	**P**	**05 23 44.1**	**-0.8**
ARCES	**ARCESS Array B**	**88.62**	**340**	P	**P**	**05 23 43.3**	**-1.5**
	comp=Z,2.7nm,0.7s,baz=77,slow=5.2,SNR=12						
	comp=Z,2.7nm,0.7s						
BRTR	**Keskin Array B**	**88.77**	**310**	P	**P**	**05 23 45.7**	**-0.6**
BRTR	**Keskin Array B**	**88.77**	**310**	P	**P**	**05 23 45.1**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=80,slow=4.8,SNR=2.2						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**90.12**	**332**	P	**P**	**05 23 51.2**	**-0.8**
FINES	**FINESS Array B**	**90.12**	**332**	P	**P**	**05 23 51.1**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=74,slow=6.8,SNR=16						
	comp=Z,1.1nm,0.5s						
HFS	**Hagfors**	**96.30**	**332**	P	**P**	**05 24 19.2**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=68,slow=5.5,SNR=1.7						
	comp=Z,1.2nm,0.7s						
NOA	**NORSAR Array B**	**97.04**	**334**	P	**P**	**05 24 21.7**	**-2.1**
	comp=Z,0.7nm,0.9s,baz=61,slow=7.1,SNR=2.1						
	comp=Z,0.7nm,0.9s						
TXAR	**Lajitas Array**	**120.42**	**51**	PKP	**PKPdf**	**05 29 42.7**	**-1.3**
	comp=Z,0.4nm,1.0s,baz=346,slow=1.9,SNR=2.7						
PLCA	**Paso Flores**	**141.82**	**159**	PKP	**PKPdf**	**05 30 22.5**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=216,slow=5.1,SNR=3.9						

IDC 11 05:14:16.0±2.4, 22°.04S×178°.29W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=69.3km s-min=40.6km az=34.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.92**	**258**	P	P	05 22 24.4	-0.5
	0.8nm,0.5s,baz=92,slow=8.4,SNR=5.4						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**44.14**	**264**	P	P	05 22 26.8	+0.2
	2.2nm,0.6s,baz=97,slow=8.3,SNR=12						
	2.2nm,0.6s						
QSPA	**South Pole Qui**	**68.04**	**180**	P	P	05 25 17.0	-0.1
	1.3nm,0.7s,baz=51,slow=4.3,SNR=6.9						
	1.3nm,0.7s						
HFS	**Hagfors**	**141.01**	**350**	PKP	PKPdf	05 33 47.8	0.0
	0.7nm,0.4s,baz=3.8,slow=4.3,SNR=4.8						
BRTR	**Keskin Array B**	**147.65**	**310**	PKPbc	PKPbc	05 34 02.3	-0.6
	0.4nm,0.7s,baz=69,slow=7.9,SNR=2.3						

IDC 11 05:16:05.8±4.0, 5°.18N×125°.68E, h288km±39km, mb3.4/8, mbtmp4.0/8, Error ellipse: s-maj=128.4km s-min=13.0km az=69.0

ISC 11 05:16:06.9±1.0, 5°.2N±0°.4×125°.7E±0°.9, h300km, n8, σ1s06/10, mb3.6/8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.38**	**162**	P	**P**	**05 21 17.6**	**+1.1**
	1.0nm,0.6s,baz=343,slow=10,SNR=6.9						
WRA				S	**S**	**05 25 28.7**	**+1.5**
	0.2nm,0.5s,baz=342,slow=17,SNR=1.4						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**29.77**	**165**	P	**P**	**05 21 46.5**	**-0.1**
	0.2nm,0.3s,baz=343,slow=8.7,SNR=1.8						
ASAR				PcP	**PcP**	**05 24 43.0**	**+0.9**
	0.5nm,0.6s,baz=351,slow=2.9,SNR=4.2						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**39.85**	**159**	P	**P**	**05 23 10.1**	**-1.9**
	1.0nm,0.5s,baz=325,slow=9.9,SNR=3.6						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**55.79**	**325**	P	**P**	**05 25 13.0**	**-0.3**
	0.4nm,0.4s,baz=118,slow=7.4,SNR=6.7						
	0.4nm,0.4s						
NRIK	**Noril'sk**	**68.78**	**346**	P	**P**	**05 26 38.8**	**+0.3**
	1.5nm,0.4s,baz=159,slow=8.6,SNR=3.8						
	1.5nm,0.4s						
VNDA	**Vanda**	**85.00**	**173**	P	**P**	**05 28 08.4**	**+0.1**
	0.6nm,0.5s,baz=270,slow=1.0,SNR=6.8						
	0.6nm,0.5s						
ARCES	**ARCESS Array B**	**88.74**	**340**	P	**P**	**05 28 26.5**	**+0.1**
	1.6nm,0.8s,baz=77,slow=4.9,SNR=4.4						
	1.6nm,0.8s						
FINES	**FINESS Array B**	**90.08**	**332**	P	**P**	**05 28 33.0**	**+0.2**
	1.8nm,0.9s,baz=76,slow=5.1,SNR=4.0						
	1.8nm,0.9s						

SSNC 11 05:22:14.4±1.5, 18°.88N×76°.23W, h20km±58km, MD2.7, ML1.1
JSN 11 05:22:16.5±1.6, 18°.76N×76°.30W, h18km±21km, MD2.7

ISC 11 05:22:11.8±1.1, 18°.95N±0°.06×76°.26W±0°.07, h10km, n9, σ1s03/14, 1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STH	**Stony Hill**	**1.01**	**211**	‖ *i*P	**Pg**	**05 22 31.2**	**0.0**
CHIV	**Chivirico**	**1.04**	**352**	*e*P	**Pb**	**05 22 33.0**	**+1.1**
CHIV				*e*S	**Sg**	**05 22 45.8**	**+0.6**
CHIV				IAML		05 22 46.6	
	comp=E,4.1nm,0.1s						
CHIV				IAML		05 22 46.6	
	comp=N,2.1nm,0.2s						

HOJ	**Hope**	**1.04**	**206**	*i* P	**Pg**	**05 22 32.0**	**+0.1**
MARVS	**Santiago de Cu**	**1.10**	**18**	*e*P	**Pb**	**05 22 34.4**	**+1.4**
MARVS				*e*S	**Sb**	**05 22 47.1**	**-0.4**
MARVS				*e*Sg	**Sg**	**05 22 48.4**	**+1.0**
MARVS				IAML		05 22 54.3	
	comp=E,2.1nm,0.1s						
MARVS				IAML		05 22 54.5	
	comp=N,2.5nm,0.1s						
RCC	**Rio Carpintero**	**1.17**	**27**	*e*P	**Pn**	**05 22 32.9**	**-1.4**
RCC				IAML		05 22 54.6	
	comp=N,1.5nm,0.1s						
LMGC	**Las Mercedes**	**1.31**	**328**	*e*P	**Pn**	**05 22 35.9**	**-0.3**
LMGC				*e*S	**Sb**	**05 22 52.2**	**-1.4**
LMGC				IAML		05 22 53.6	
	comp=E,5.2nm,0.1s						
LMGC				IAML		05 22 54.1	
	comp=N,5.8nm,0.1s						
GTBY	**Guantanamo Bay**	**1.46**	**48**	*e*P	**Pn**	**05 22 37.5**	**-0.7**
PINC	**Pinares de May**	**1.60**	**16**	*e*P	**Pn**	**05 22 40.5**	**+0.4**
PINC				*e*S	**Sn**	**05 22 59.2**	**-1.6**
PINC				IAML		05 23 03.3	
	comp=N,6.0nm,0.1s						
PINC				IAML		05 23 04.1	
	comp=E,5.8nm,0.1s						
QMBU	**Quimbuelo**	**1.85**	**47**	*e*P	**Pn**	**05 22 43.3**	**-0.4**

NEIC 11 05:29:13.8±1.1, 10°.91S±0°.06×166°.4E±0°.2, h158km±8km, mb4.3/18, Error ellipse: s-maj=25.6km s-min=6.0km az=75.0
IDC 11 05:29:16.5±5.7, 10°.95S×166°.27E, h189km±54km, mb3.7/12, mbtmp4.2/13, Error ellipse: s-maj=31.8km s-min=19.6km az=170.0

ISC 11 05:29:12.1±0.6, 10°.83S±0°.09×166°.3E±0°.1, h146km, n43, σ0s89/43, mb4.2/20, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.67**	**169**		**Pn**	**05 30 22.0**	**+0.9**
MARNC	**Mare, Loyalty**	**10.72**	**171**	Pn	**Pn**	**05 31 41.1**	**-0.6**
DZM	**Mont Dzumac**	**11.18**	**179**	P	**Pn**	**05 31 50.5**	**+2.6**
	16nm,0.6s,baz=78,slow=6.4,SNR=48						
PINNC	**Pines Island,**	**11.77**	**175**	Pn	**Pn**	**05 31 55.8**	**+0.3**
BKZ	**Black Stump Fm**	**29.64**	**164**	P	**P**	**05 35 03.1**	**-0.7**
BFZ	**Birch Farm**	**31.00**	**165**	P	**P**	**05 35 14.1**	**-1.7**
WR8	**Warramunga Arr**	**31.94**	**250**	P	**P**	**05 35 24.3**	**0.0**
WR8				IAmb	IAmb	05 35 24.6	
	comp=Z,4.3nm,0.9s						
WB0	**Warramunga Arr**	**32.00**	**250**	P	**P**	**05 35 24.6**	**-0.2**
WB0				IAmb	IAmb	05 35 25.2	
	comp=Z,7.7nm,0.7s						
WRAB	**Tennant Creek**	**32.07**	**250**	P	**P**	**05 35 25.1**	**-0.4**
WRAB				IAmb	IAmb	05 35 25.7	
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**32.09**	**250**	P	**P**	**05 35 25.1**	**-0.5**
WRA	**Warramunga Arr**	**32.09**	**250**	P	**P**	**05 35 25.2**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=82,slow=9.0,SNR=24						
	comp=Z,3.9nm,0.7s						
ASAR	**Alice Springs**	**33.39**	**243**	P	**P**	**05 35 35.4**	**-1.6**
	comp=Z,1.6nm,0.9s,baz=72,slow=10.0,SNR=13						
	comp=Z,1.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.98**	**255**	P	**P**	**05 36 32.7**	**0.0**
VNDA	**Vanda**	**66.72**	**181**	P	**P**	**05 39 47.4**	**+0.5**
CM31	**Chiang Mai Arr**	**72.54**	**293**	P	**P**	**05 40 23.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**72.54**	**293**	P	**P**	**05 40 23.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**72.54**	**293**	P	**P**	**05 40 24.5**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=116,slow=4.0,SNR=11						
	comp=Z,1.4nm,0.3s						
LZDM	**Lanzhou Array**	**75.08**	**312**	P	**P**	**05 40 39.5**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=72,slow=9.3,SNR=1.5						
	comp=Z,1.6nm,0.3s						
L18K	**Granite Mounta**	**78.30**	**17**	P	**P**	**05 40 57.0**	**+1.3**
L18K				IAmb	IAmb	05 41 01.2	
	comp=Z,9.6nm,1.4s						
L19K	**White Mountain**	**78.80**	**17**	P	**P**	**05 40 59.2**	**+0.8**
L19K				IAmb	IAmb	05 40 59.6	
	comp=Z,5.4nm,1.0s						
SONM	**Songino Array**	**78.83**	**324**	P	**P**	**05 40 58.9**	**-0.1**
SONM	**Songino Array**	**78.83**	**324**	P	**P**	**05 40 59.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=127,slow=3.9,SNR=4.9						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**79.17**	**180**	P	**P**	**05 41 01.0**	**+0.4**
QSPA				IAmb	IAmb	05 41 10.6	
	comp=Z,4.5nm,1.4s						
QSPA	**South Pole Qui**	**79.17**	**180**	P	**P**	**05 41 00.1**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=337,slow=2.3,SNR=2.3						
	comp=Z,0.6nm,0.7s						
J20K	**Nowinta River**	**80.56**	**16**	P	**P**	**05 41 08.4**	**+0.6**
J20K				IAmb	IAmb	05 41 28.9	
	comp=Z,7.5nm,1.4s						
M24K	**Tolsona, Glenn**	**81.53**	**21**	P	**P**	**05 41 13.8**	**+0.7**
IMAR	**Indian Mountai**	**82.07**	**15**	P	**P**	**05 41 16.3**	**+0.6**
IL31		**83.13**	**18**	P	**P**	**05 41 21.0**	**-0.2**
IL31				IAmb	IAmb	05 41 21.5	
	comp=Z,3.5nm,0.9s						
ILAR	**Eielson Array**	**83.13**	**18**	P	**P**	**05 41 21.2**	**-0.1**
ILAR	**Eielson Array**	**83.13**	**18**	P	**P**	**05 41 20.9**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=246,slow=5.3,SNR=28						
	comp=Z,1.2nm,0.7s						
BCAR	**Beaver Creek A**	**83.69**	**21**	P	**P**	**05 41 24.7**	**+0.4**
NVAR	**Mina Array Bea**	**85.46**	**50**	P	**P**	**05 41 33.6**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=237,slow=9.1,SNR=6.0						
	comp=Z,0.9nm,0.9s						
BMAR	**Burnt Mountain**	**85.64**	**17**	P	**P**	**05 41 35.4**	**+1.5**
PDAR	**Pinedale Array**	**92.99**	**47**	P	**P**	**05 42 09.0**	**-0.4**
PDAR	**Pinedale Array**	**92.99**	**47**	P	**P**	**05 42 09.1**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=132,slow=2.2,SNR=4.2						
	comp=Z,0.6nm,0.9s						
ZAA0	**Zalesovo Array**	**93.71**	**324**	P	**P**	**05 42 11.1**	**-1.0**
ZAA0				IAmb	IAmb	05 42 11.4	
	comp=Z,3.4nm,1.1s						
ZALV	**Zalesovo Beam**	**93.71**	**324**	P	**P**	**05 42 11.0**	**-1.1**
ZALV	**Zalesovo Beam**	**93.71**	**324**	P	**P**	**05 42 11.0**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=111,slow=3.3,SNR=6.9						
	comp=Z,1.8nm,0.8s						
MK31	**Makanchi Array**	**93.75**	**317**	P	**P**	**05 42 11.7**	**-0.8**
MKAR	**Makanchi Array**	**93.75**	**317**	P	**P**	**05 42 12.1**	**-0.4**
MKAR	**Makanchi Array**	**93.75**	**317**	P	**P**	**05 42 11.8**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=95,slow=5.2,SNR=8.5						
	comp=Z,1.7nm,0.7s						
TXAR	**Lajitas Array**	**95.23**	**61**	P	**P**	**05 42 20.8**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=260,slow=4.9,SNR=2.4						
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**116.27**	**346**	PKP	**PKPdf**	**05 47 35.9**	**-1.8**
	comp=Z,2.7nm,0.8s,baz=20,slow=3.9,SNR=4.9						

IDC 11 05:45:25.0±5.3, 20°.94S×176°.29W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=175.7km s-min=103.0km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.05**	**245**	P	P	05 52 53.8	0.0
	0.7nm,0.4s,baz=98,slow=8.6,SNR=1.6						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**45.98**	**257**	P	P	05 53 50.3	0.0
	1.6nm,0.5s,baz=99,slow=8.1,SNR=14						
ASAR				PcP	PcP	05 55 26.9	-0.4
	0.3nm,0.5s,baz=95,slow=4.1,SNR=1.9						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**46.13**	**262**	P	P	05 53 51.2	-0.3
	1.1nm,0.5s,baz=100,slow=8.5,SNR=13						
	1.1nm,0.5s						

SKHL 11 06:43:53.3±0.2, 43°.10N×145°.80E, h57km±2km, mb4.5/3
JMA 11 06:43:53.1±0.1, 43°.2N±0°.5×145°.6E±0°.6, h59km±1km, MV2.9/38, OFF NEMURO PENINSULA

ISC 11 06:43:52.9±1.8, 43°.17N±0°.07×145°.64E±0°.06, h59km±10km, n15, σ0s35/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.21**	**22**	P	**Pn**	**06 44 02.4**	**+0.1**
NEM2				S	**Sn**	**06 44 09.0**	**0.0**
NMR	**Nemuro--Hokkai**	**0.21**	**19**	*i* P	**Pn**	**06 44 02.3**	**+0.1**
NMR				*i* S	**Sn**	**06 44 08.9**	**-0.1**
JKHN	**Kushirohamanak**	**0.36**	**256**	P	**Pn**	**06 44 03.6**	**+0.3**
JKHN				*e*S	**Sn**	**06 44 11.1**	**+0.2**
GLVR	**Golovnino**	**0.57**	**351**	*i* P	**Pn**	**06 44 05.8**	**+0.3**
GLVR				AMB	AMB	06 44 07.1	
	290nm,0.2s						
GLVR				*i* S	**Sn**	**06 44 15.2**	**+0.5**
GLVR				A	A	06 44 18.1	
	1μm,0.2s						
GLVR				A	A	06 44 18.1	
	2μm,0.2s						
AKK	**Akkeshi**	**0.60**	**255**	*e*P	**Pn**	**06 44 05.8**	**-0.1**
JAK	**Akkeshi**	**0.71**	**256**	*i* P	**Pn**	**06 44 07.0**	**-0.1**
JAK				*e*S	**Sn**	**06 44 17.3**	**-0.4**
JNSB	**Nemuroshibetsu**	**0.76**	**323**	*i* P	**Pn**	**06 44 07.7**	**0.0**
JNSB				*e*S	**Sn**	**06 44 18.4**	**-0.3**
JNK	**Nakash**	**0.79**	**302**	P	**Pn**	**06 44 07.7**	**-0.4**
JNK				*e*S	**Sn**	**06 44 18.1**	**-1.2**
JRA	**Rausu**	**0.85**	**334**	*i* P	**Pn**	**06 44 09.1**	**+0.2**
JRA				*e*S	**Sn**	**06 44 20.8**	**0.0**
YUK	**Yuzh-Kuril'sk**	**0.88**	**11**	*i* P	**Pn**	**06 44 09.2**	**0.0**
YUK				AMB	AMB	06 44 09.5	
	160nm,0.2s						
YUK				*i* S	**Sn**	**06 44 21.1**	**-0.2**
YUK				A	A	06 44 22.0	
	740nm,0.2s						
YUK				A	A	06 44 22.0	
	1μm,0.2s						
SHO	**Shikotan**	**1.11**	**51**	*i* P	Pn	06 44 19.5	+7.2
SHO				AMB	AMB	06 44 20.1	
	100nm,0.2s						
SHO				*e*S	Sn	06 44 33.4	+6.6
SHO				A	A	06 44 34.6	
	270nm,0.2s						
SHO				A	A	06 44 34.6	
	240nm,0.2s						
JOB	**Onbets**	**1.35**	**259**	*e*P	**Pn**	**06 44 15.7**	**+0.2**
JOB				*e*S	**Sn**	**06 44 32.3**	**-0.1**
JAR	**Ashorobuto**	**1.37**	**276**	*e*P	**Pn**	**06 44 16.0**	**+0.3**
JAR				*e*S	**Sn**	**06 44 33.0**	**0.0**
JTKR	**Abashiri--Toko**	**1.49**	**303**	P	**Pn**	**06 44 17.9**	**+0.6**
JTKR				*e*S	**Sn**	**06 44 36.0**	**+0.2**
KUR	**Kuril'sk**	**2.61**	**37**	*e*P	**Pn**	**06 44 32.4**	**-0.2**
KUR				AMB	AMB	06 44 35.0	
	80nm,0.6s						
KUR				*e*S	**Sn**	**06 45 03.0**	**0.0**
KUR				A	A	06 45 07.5	
	50nm,0.6s						
KUR				A	A	06 45 07.5	
	90nm,0.6s						

DJA 11 06:46:23.0±0.4, 0°.S±4°.×12°.3E±°, h66km±10km, M3.5/10, mb3.3/1, MLv3.5/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.85**	**195**	P	Pn	06 46 40.3	+0.8
LUWI				S	Sn	06 46 53.4	+1.7
MRSI	**Marisa**	**1.25**	**303**	P	Pn	06 46 43.9	-0.7
KMSI	**Cibinong**	**1.26**	**52**	P	Pn	06 46 44.0	-0.7
APSI	**Ampana**	**1.51**	**243**	P	Pn	06 46 48.4	+0.4
MPSI	**Mapaga**	**3.14**	**280**	P	Pn	06 47 11.0	+0.9
SANI	**Sanana**	**3.51**	**121**	P	Pn	06 47 14.7	-0.5

IDC 11 07:11:33.9±0.6, 28°.32S×178°.28W, h184km±6km, mb3.9/16, mbtmp4.4/18, MS2.8/1, Error ellipse: s-maj=16.1km s-min=12.4km az=162.0
NEIC 11 07:11:35.0±1.5, 28°.31S±0°.09×178°.3W±0°.2, h184km±6km, mb4.5/106, Error ellipse: s-maj=21.8km s-min=13.2km az=80.0

ISC 11 07:11:34.8±0.4, 28°.70S±0°.05×178°.42W±0°.08, h200km, n149, σ1s94/121, mb4.5/66, 1C-3D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**0.69**	**142**	P	**Pn**	**07 12 02.8**	**+0.1**
RIZ				S	**Sn**	**07 12 28.4**	**+3.9**
RAO	**Raoul Island**	**0.70**	**141**		**Pn**	**07 12 02.9**	**+0.1**
RAO					**Sn**	**07 12 25.2**	**+0.6**
RAO	**Raoul Island**	**0.70**	**141**	P	**Pn**	**07 12 03.0**	**+0.2**
	9μm,0.3s,baz=82,slow=6.9,SNR=74						
RAO				S	**Sn**	**07 12 22.9**	**-1.7**
	4μm,0.4s,baz=261,slow=23,SNR=4.1						
RAO				LR	LR	07 12 26.5	
	comp=Z,474nm,18.5s,baz=338,slow=53						
RAO	**Raoul Island**	**0.70**	**141**	P	**Pn**	**07 12 02.8**	**+0.1**
RAO				S	**Sn**	**07 12 28.4**	**+3.8**
GLKZ	**Green Lake**	**0.71**	**142**	P	**Pn**	**07 12 03.0**	**+0.2**
MXZ	**Matakaoa Point**	**9.25**	**196**	S	**Sn**	**07 15 27.2**	**-0.6**
HAZ	**Te Kaha**	**9.57**	**198**	P	**Pn**	**07 13 46.1**	**-2.4**
HAZ				S	**Sn**	**07 15 35.7**	**+0.3**
PUZ	**Puketiti**	**9.75**	**196**	P	**Pn**	**07 13 50.1**	**-0.6**
PUZ				S	**Sn**	**07 15 38.1**	**-1.6**
MWZ	**Matawai**	**10.18**	**198**	P	**Pn**	**07 13 54.3**	**-2.1**
MWZ				S	**Sn**	**07 15 48.5**	**-1.6**
URZ	**Urewera**	**10.23**	**200**	P	**Pn**	**07 13 54.1**	**-2.9**
	12nm,0.8s,baz=241,slow=2.5,SNR=9.9						
URZ				S	**Sn**	**07 15 49.6**	**-1.6**
	30nm,0.4s,baz=72,slow=23,SNR=12						
URZ	**Urewera**	**10.23**	**200**	P	**Pn**	**07 13 56.2**	**-0.7**
URZ				S	**S**	**07 15 50.4**	**-1.2**
NMHZ	**Naumai**	**11.10**	**200**	P	**Pn**	**07 14 05.1**	**-3.1**
NMHZ				S	**Sn**	**07 16 10.5**	**-1.5

comp=Z,13nm,0.8s,baz=157,slow=5.3,SNR=25
comp=Z,13nm,0.8s

MAJO	**Matsushiro**	**76.64**	**325**			**P**		**07 23 03.4**	**-0.1**
MJB9	**Matsu-Tunnel**	**76.65**	**325**		P	**P**		**07 23 03.9**	**+0.4**
JNU	**Nakatsue**	**78.05**	**318**		P	**P**		**07 23 11.6**	**+0.2**
TROLL	**Troll, Antarti**	**79.56**	**180**		⇑P	**P**		**07 23 22.1**	**+2.9**
	comp=Z,138nm,0.6s								
SNAA	**Sanae**	**79.86**	**179**		⇓P	**P**		**07 23 23.1**	**+2.4**
	comp=Z,34nm,0.8s								
SNAA	**Sanae**	**79.86**	**179**		P	**P**		**07 23 23.6**	**+2.9**
SNAA	**Sanae**	**79.86**	**179**		P	**P**		**07 23 23.2**	**+2.4**
	comp=Z,0.9nm,0.6s,baz=195,slow=11,SNR=8.5								
	comp=Z,0.9nm,0.6s								
VNA3	**Neumayer Olymp**	**80.02**	**176**		⇓P	**P**		**07 23 23.8**	**+2.2**
	comp=Z,4.5nm,0.7s								
KIWB	**Kanaga Island**	**80.21**	**1**		P	**P**		**07 23 21.6**	**-1.0**
ADK	**Adak**	**80.25**	**1**		P	**P**		**07 23 21.4**	**-1.4**
ATKA	**Atka Island**	**80.64**	**3**		P	**P**		**07 23 23.1**	**-1.7**
VNA1	**Neumayer--Stat**	**80.68**	**177**		⇓P	**P**		**07 23 27.8**	**+2.7**
	comp=Z,5.1nm,0.9s								
NIKH	**Nikolski High**	**81.75**	**6**		P	**P**		**07 23 29.5**	**-1.2**
KSRS	**Korea Array**	**82.82**	**320**		P	**P**		**07 23 37.0**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=134,slow=4.9,SNR=7.0								
	comp=Z,3.1nm,0.7s								
KSAR	**Wonju Array Be**	**82.83**	**320**		P	**P**		**07 23 37.2**	**+0.5**
KS19	**Wonju Array Si**	**82.89**	**320**		P	**P**		**07 23 37.4**	**+0.5**
PLCA	**Paso Flores**	**83.93**	**133**		P	**P**		**07 23 45.1**	**+2.5**
PLCA	**Paso Flores**	**83.93**	**133**		P	**P**		**07 23 44.9**	**+2.3**
	comp=Z,1.3nm,0.7s,baz=246,slow=4.8,SNR=4.2								
	comp=Z,1.3nm,0.7s								
PEA0B	**Petropavlovsk-**	**84.08**	**346**		P	**P**		**07 23 42.5**	**-0.2**
PETK	**Petropavlovsk-**	**84.08**	**346**		P	**P**		**07 23 42.3**	**-0.4**
PETK	**Petropavlovsk-**	**84.08**	**346**		P	**P**		**07 23 41.8**	**-0.9**
	comp=Z,7.4nm,0.6s,baz=111,slow=7.1,SNR=11								
	comp=Z,7.4nm,0.6s								
BAR	**Barrett**	**84.61**	**48**			**P**		**07 23 45.7**	**-0.2**
DPP	**Dos Picos Cty**	**84.63**	**48**		P	**P**		**07 23 45.8**	**-0.2**
DPP					IAmb	IAmb		07 23 46.4	
	comp=Z,8.1nm,1.0s								
ESJX	**Sierra Juarez**	**84.67**	**49**		P	**P**		**07 23 46.1**	**-0.2**
ESJX					IAmb	IAmb		07 23 47.4	
	comp=Z,5.6nm,0.9s								
ELS	**Elsinore Mount**	**84.73**	**47**		P	**P**		**07 23 46.4**	**-0.1**
ELS					IAmb	IAmb		07 23 47.2	
	comp=Z,7.1nm,1.0s								
BFSC	**Mount Baldy Ra**	**84.96**	**47**		IAmb	IAmb		07 23 48.2	
	comp=Z,20nm,1.4s								
TPO	**Tropico Hills**	**85.00**	**46**		IAmb	IAmb		07 23 48.1	
	comp=Z,9.3nm,0.8s								
BORC	**Borrego Spring**	**85.14**	**48**		IAmb	IAmb		07 23 49.3	
	comp=Z,9.6nm,1.0s								
DNR	**Dunn Ranch,Anz**	**85.19**	**48**		IAmb	IAmb		07 23 49.8	
	comp=Z,13nm,1.0s								
PFO	**Pinyon Flats O**	**85.33**	**48**			**P**		**07 23 49.7**	**+0.1**
PFO					IAmb	IAmb		07 23 50.4	
	comp=Z,8.2nm,1.1s								
ISA	**Isabella, Lake**	**85.36**	**45**		IAmb	IAmb		07 23 50.4	
	comp=Z,8.9nm,0.9s								
PMD	**Palm Desert**	**85.41**	**48**		IAmb	IAmb		07 23 50.5	
	comp=Z,7.4nm,1.1s								
USRK	**Ussuriysk Ar.**	**85.55**	**327**		P	**P**		**07 23 50.9**	**+0.7**
	comp=Z,9.0nm,0.7s,baz=125,slow=1.6,SNR=8.4								
	comp=Z,9.0nm,0.7s								
LRMC	**Laurel Mtn Rad**	**85.73**	**46**		IAmb	IAmb		07 23 52.2	
	comp=Z,11nm,1.1s								
CMB	**Columbia Colle**	**85.75**	**42**		IAmb	IAmb		07 23 51.7	
	comp=Z,7.2nm,0.9s								
BELC	**Belle Mtn. Jos**	**85.87**	**48**		IAmb	IAmb		07 23 53.2	
	comp=Z,9.8nm,0.8s								
KHBM	**Hayfork Bally**	**85.91**	**39**		IAmb	IAmb		07 23 53.1	
	comp=Z,9.3nm,0.9s								
WSHM	**Spangler Hills**	**85.93**	**46**		IAmb	IAmb		07 23 53.1	
	comp=Z,10nm,1.0s								
CLC	**China Lake**	**86.00**	**45**		IAmb	IAmb		07 23 53.4	
	comp=Z,13nm,1.1s								
BC3	**Big Chuckawall**	**86.01**	**48**		IAmb	IAmb		07 23 54.2	
	comp=Z,17nm,1.4s								
GSC	**Goldstone, Bar**	**86.17**	**46**		IAmb	IAmb		07 23 54.3	
	comp=Z,14nm,1.1s								
N02D	**Trinity Center**	**86.41**	**39**			**P**		**07 23 55.0**	**+0.4**
N02D					IAmb	IAmb		07 23 55.9	
	comp=Z,10nm,1.1s								
O03E	**Paynes Creek**	**86.45**	**40**			**P**		**07 23 55.0**	**+0.1**
IRM	**Iron Mountain**	**86.53**	**48**		IAmb	IAmb		07 23 56.6	
	comp=Z,13nm,1.1s								
QSM	**Queen of Sheba**	**86.55**	**46**		IAmb	IAmb		07 23 56.0	
	comp=Z,14nm,1.4s								
M02C	**Callahan**	**86.61**	**38**		IAmb	IAmb		07 23 56.9	
	comp=Z,11nm,1.1s								
WAKR	**Walker**	**86.62**	**42**		IAmb	IAmb		07 23 56.6	
	comp=Z,6.1nm,1.0s								
BLYC	**Blythe**	**86.68**	**49**			**P**		**07 23 56.5**	**+0.5**
BLYC					IAmb	IAmb		07 23 57.2	
	comp=Z,6.2nm,1.0s								
GWY	**Greenwater Val**	**86.82**	**46**		IAmb	IAmb		07 23 57.2	
	comp=Z,5.2nm,1.0s								
SHOC	**Shoshone, Teco**	**86.88**	**46**		IAmb	IAmb		07 23 57.6	
	comp=Z,13nm,1.1s								
GRAC	**Grapevine Rang**	**86.90**	**45**		IAmb	IAmb		07 23 57.9	
	comp=Z,7.2nm,0.8s								
PNTR	**Pine Nut**	**86.91**	**42**		IAmb	IAmb		07 23 58.5	
	comp=Z,5.4nm,0.7s								
LHV	**Little Huntoon**	**87.01**	**43**		P	**P**		**07 23 56.9**	**-0.5**
LHV					IAmb	IAmb		07 23 58.3	
	comp=Z,7.8nm,1.1s								
MTPC	**Mountain Pass**	**87.08**	**47**		IAmb	IAmb		07 23 59.2	
	comp=Z,8.5nm,1.1s								
NVAR	**Mina Array Bea**	**87.25**	**43**		P	**P**		**07 23 58.4**	**-0.5**
NVAR	**Mina Array Bea**	**87.25**	**43**		P	**P**		**07 23 57.8**	**-1.2**
	comp=Z,3.2nm,0.7s,baz=222,slow=8.4,SNR=24								
	comp=Z,3.2nm,0.7s								
TPNV	**Topopah Spring**	**87.56**	**45**		IAmb	IAmb		07 24 01.1	
	comp=Z,6.7nm,1.1s								
Y14A	**Wickenburg**	**87.80**	**49**		IAmb	IAmb		07 24 02.4	
	comp=Z,7.4nm,0.8s								
TUC	**Tucson**	**88.34**	**52**		P	**P**		**07 24 04.7**	**+0.6**
TUC					IAmb	IAmb		07 24 05.7	
	comp=Z,15nm,1.5s								
PRN	**Pahroc Range**	**88.59**	**45**		IAmb	IAmb		07 24 06.5	
	comp=Z,10nm,1.2s								
J05D	**Fort Rock, OR**	**88.78**	**38**		IAmb	IAmb		07 24 07.4	
	comp=Z,8.5nm,1.3s								
PINE	**Pine Mountain**	**89.28**	**38**			**P**		**07 24 08.5**	**+0.2**
I05D	**Terrebonne, OR**	**89.44**	**37**		IAmb	IAmb		07 24 09.0	
	comp=Z,6.4nm,0.8s								
KNB	**Kanab**	**89.77**	**47**		IAmb	IAmb		07 24 11.8	
	comp=Z,6.1nm,1.0s								
WUAZ	**Wupatki**	**89.82**	**49**		IAmb	IAmb		07 24 12.2	
	comp=Z,5.6nm,1.1s								
PSUT	**Pine Spring**	**90.03**	**45**		IAmb	IAmb		07 24 15.2	
	comp=Z,3.9nm,0.9s								
X18A	**Snowflake**	**90.19**	**50**		IAmb	IAmb		07 24 14.0	
	comp=Z,5.0nm,0.9s								
MTPU	**Mount Pierson**	**90.78**	**46**		IAmb	IAmb		07 24 17.1	
	comp=Z,5.9nm,0.9s								
GNW	**Green Mountain**	**90.88**	**34**		IAmb	IAmb		07 24 16.1	
	comp=Z,5.5nm,0.9s								
TX31	**Lajitas Ar. Si**	**91.78**	**57**		P	**P**		**07 24 20.5**	**+0.3**
TXAR	**Lajitas Array**	**91.78**	**57**		P	**P**		**07 24 20.2**	**+0.1**
TXAR	**Lajitas Array**	**91.78**	**57**		P	**P**		**07 24 19.8**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=205,slow=6.9,SNR=12								
	comp=Z,1.0nm,0.8s								
MNTX	**Cornudas Mount**	**91.80**	**55**		IAmb	IAmb		07 24 20.5	
	comp=Z,3.2nm,0.8s								
Y22A	**Socorro**	**91.90**	**52**		IAmb	IAmb		07 24 21.7	
	comp=Z,4.6nm,1.0s								
MPU	**Maple Canyon**	**92.30**	**45**		IAmb	IAmb		07 24 22.9	
	comp=Z,3.2nm,0.9s								
CMAR	**Chiang Mai Arr**	**92.49**	**290**		P	**P**		**07 24 25.9**	**+2.3**
	comp=Z,1.5nm,0.3s,baz=141,slow=3.3,SNR=7.0								
	comp=Z,1.5nm,0.3s								
ANMO	**Albuquerque**	**92.81**	**51**		P	**P**		**07 24 24.7**	**-0.2**
ANMO					IAmb	IAmb		07 24 25.6	
	comp=Z,4.9nm,1.5s								
PDAR	**Pinedale Array**	**95.16**	**44**		P	**P**		**07 24 34.4**	**-1.2**
PDAR	**Pinedale Array**	**95.16**	**44**		P	**P**		**07 24 34.0**	**-1.6**
	comp=Z,1.2nm,0.8s,baz=204,slow=3.3,SNR=8.9								
	comp=Z,1.2nm,0.8s								
IMAR	**Indian Mountai**	**96.27**	**10**		P	**P**		**07 24 39.6**	**-0.1**
ILAR	**Eielson Array**	**96.36**	**13**		P	**P**		**07 24 38.5**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=223,slow=5.9,SNR=9.8								
	comp=Z,0.9nm,0.8s								
BMAR	**Burnt Mountain**	**99.15**	**13**		P	**Pdif**		**07 24 53.1**	**+0.4**
SONM	**Songino Array**	**101.64**	**318**		P	**Pdif**		**07 25 05.1**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=145,slow=5.3,SNR=2.2								
MKAR	**Makanchi Array**	**116.40**	**311**		PKP	**PKPdf**		**07 29 54.0**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=101,slow=1.2,SNR=7.4								

ZALV	**Zalesovo Beam**	**116.52**	**319**		PKP	**PKPdf**		**07 29 53.8**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=70,slow=1.7,SNR=4.1								
NRIK	**Noril'sk**	**117.94**	**336**		PKP	**PKPdf**		**07 29 55.8**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=98,slow=6.0,SNR=4.2								
KURBB	**Kurchatov Arra**	**119.65**	**314**		PKP	**PKPdf**		**07 30 00.1**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=106,slow=1.9,SNR=27								
BVAR	**Borovoye Array**	**124.93**	**317**		PKP	**PKiKP**		**07 30 10.8**	**-0.2**
	comp=Z,4.8nm,0.6s,baz=95,slow=1.3,SNR=26								
SPITS	**Spitsbergen Ar**	**129.99**	**356**		PKP	**PKPdf**		**07 30 19.6**	**0.0**
	comp=Z,5.4nm,0.7s,baz=141,slow=5.0,SNR=1.7								
ARCES	**ARCESS Array B**	**136.86**	**348**		PKhKP	PKPpre		07 30 23.7	
	comp=Z,1.2nm,0.6s,baz=1.8,slow=3.8,SNR=6.4								
ARCES					PKP	**PKiKP**		**07 30 34.0**	**-0.5**
	comp=Z,4.9nm,0.7s,baz=11,slow=1.7,SNR=15								
FINES	**FINESS Array B**	**143.43**	**340**		PKhKP	PKPpre		07 30 41.3	
	comp=Z,2.7nm,0.6s,baz=53,slow=3.8,SNR=23								
KBZ	**Khabaz**	**143.84**	**306**		PKP	PKPbc		07 30 44.7	+0.4
	comp=Z,7.5nm,1.1s,baz=184,slow=1.7,SNR=7.1								
NB2	**NORSAR Subarra**	**147.02**	**351**		PKP	**PKPbc**		**07 30 52.3**	**-1.1**
	comp=Z,3.7nm,0.5s,baz=13,slow=2.9								
NOA	**NORSAR Array B**	**147.02**	**351**		PKPbc	**PKPbc**		**07 30 52.5**	**-0.8**
	comp=Z,11nm,0.8s,baz=16,slow=4.6,SNR=26								
HFS	**Hagfors**	**147.51**	**349**		PKPbc	**PKPbc**		**07 30 53.8**	**-0.9**
	comp=Z,17nm,0.7s,baz=46,slow=4.3,SNR=34								
AKASG	**Malin Array Be**	**149.72**	**324**			**PKiKP**		**07 31 00.9**	**-0.5**
AKASG	**Malin Array Be**	**149.72**	**324**		PKPbc	**PKPbc**		**07 31 00.5**	**0.0**
	comp=Z,13nm,0.6s,baz=46,slow=3.2,SNR=52								
BALJ	**Balqa**	**150.50**	**285**		PKPbc	**PKiKP**		**07 31 05.2**	**+1.5**
MMAI	**Mount Meron Ar**	**150.72**	**287**		PKPbc	**PKiKP**		**07 31 05.5**	**+1.3**
	comp=Z,14nm,0.6s,baz=95,slow=4.6,SNR=15								
ILGA	**Ilgaz**	**151.07**	**304**		PKPbc	**PKiKP**		**07 31 05.5**	**+0.6**
BRTR	**Keskin Array B**	**151.44**	**301**		PKPbc	**PKiKP**		**07 31 05.5**	**0.0**
	comp=Z,3.9nm,0.6s,baz=143,slow=5.1,SNR=20								
EKA	**Eskdalemuir Ar**	**153.17**	**6**		PKPbc	**PKPbc**		**07 31 07.9**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=321,slow=2.3,SNR=6.8								
EKA					PKPab	**PKPab**		**07 31 19.3**	**-1.4**
	comp=Z,3.2nm,0.6s,baz=328,slow=2.6,SNR=7.7								
BURAR	**Bucovina Array**	**153.68**	**322**		PKPab	**PKPab**		**07 31 24.1**	**+0.7**
BORA	**Eskisehir**	**153.78**	**303**		PKPab	**PKPab**		**07 31 24.8**	**+0.7**

IDC 11 07:11:55.3±7.8, 27°62S×177°11W, h0km, mb4.4/4, mbtmp4.4/4, MS3.6/2, Error ellipse: s-maj=200.4km s-min=40.9km az=37.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.95**	**253**	P	P	07 18 57.1	-0.6
	9.4nm,0.9s,baz=82,slow=8.8,SNR=1.6						
	9.4nm,0.9s						
ASAR	**Alice Springs**	**44.12**	**264**	P	P	07 20 04.8	-0.8
	3.3nm,0.8s,baz=109,slow=8.3,SNR=9.6						
	3.3nm,0.8s						
WRA	**Warramunga Arr**	**44.85**	**269**	P	P	07 20 12.6	+1.0
	2.8nm,0.5s,baz=108,slow=7.8,SNR=7.4						
	2.8nm,0.5s						
RPN	**Rapa Nui**	**59.45**	**107**	LR	LR	07 44 56.2	
	comp=Z,13nm,18.0s,baz=337,slow=33						
QSPA	**South Pole Qui**	**62.48**	**180**	P	P	07 22 20.3	0.0
	3.4nm,0.8s,baz=25,slow=0.8,SNR=3.8						
	3.4nm,0.8s						
DAV	**Davao City (W)**	**65.21**	**293**	LR	LR	07 47 40.1	
	comp=Z,147nm,21.9s,baz=32,slow=33						

NNC 11 07:12:36.2±0.8, 49°96N×78°42E, h0km, mb2.6, mpv2.4, Error ellipse: s-maj=15.6km s-min=2.8km az=85.0, Suspected Mining explosion.
IDC 11 07:12:38.8±1.0, 50°07N×78°74E, h0km, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=13.0km s-min=7.0km az=64.0

ISC 11 07:12:37.3±2.9, 50°00N±0°06×78°4E±0°3, h0km, n15, σ0s71/25, 10C-13D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.59**	**8**	⇓P	**Pg**	**07 12 48.8**	**+0.2**
KUR07				⇓S	**Sb**	**07 12 58.1**	**-1.3**
KUR06	**Kurchatov Arra**	**0.61**	**8**	⇓P	**Pg**	**07 12 49.0**	**0.0**
KUR06				⇑S	**Sb**	**07 12 58.7**	**-1.2**
KUR14	**Kurchatov Arra**	**0.63**	**12**	⇓P	**Pg**	**07 12 49.0**	**-0.3**
KUR14				⇑S	**Sg**	**07 12 58.5**	**+1.1**
KUR15	**Kurchatov Arra**	**0.63**	**10**	⇓P	**Pg**	**07 12 49.1**	**-0.2**
KUR15				⇓S	**Sb**	**07 12 59.3**	**-1.2**
KURBB	**Kurchatov Arra**	**0.63**	**8**	Pg	**Pg**	**07 12 49.6**	**+0.3**
	0.8nm,0.3s,baz=165,slow=18,SNR=25						
KURBB				Lg	Lg	07 12 59.0	
	0.7nm,0.3s,baz=166,slow=32,SNR=7.8						
KURBB	**Kurchatov Arra**	**0.63**	**8**	⇑P	**Pg**	**07 12 49.2**	**-0.1**
	5.8nm,0.3s						
KURBB				⇓S	**Sg**	**07 12 58.7**	**+1.2**
	14nm,0.7s						
KUR16	**Kurchatov Arra**	**0.63**	**7**	⇑P	**Pg**	**07 12 49.4**	**0.0**
KUR16				⇑S	**Sb**	**07 12 59.7**	**-0.9**
KUR17	**Kurchatov Arra**	**0.63**	**5**	⇓P	**Pg**	**07 12 49.8**	**+0.4**
KUR17				⇓S	**Sb**	**07 12 59.9**	**-0.7**
KUR05	**Kurchatov Arra**	**0.65**	**9**	⇓P	**Pg**	**07 12 49.6**	**-0.1**
KUR05				⇑S	**Sg**	**07 12 59.0**	**+0.9**
KUR04	**Kurchatov Arra**	**0.67**	**9**	⇓P	**Pg**	**07 12 50.0**	**-0.1**
KUR04				⇓S	**Sg**	**07 12 59.5**	**+0.7**
MAKZ	**Makanchi**	**3.99**	**142**	⇓Pg	**Pb**	**07 13 48.9**	**+0.4**
	0.3nm,0.5s						
MAKZ				⇑Lg	Lg	07 14 38.5	
	5.3nm,1.1s						
MK31	**Makanchi Array**	**4.13**	**140**	⇑Pn	**Pn**	**07 13 41.2**	**-0.4**
	0.1nm,0.3s,baz=138,slow=19,SNR=10						
MK31				⇑Pg	**Pb**	**07 13 51.6**	**+0.7**
	0.5nm,0.5s,baz=322,slow=12,SNR=8.0						
MK31				⇑Lg	Lg	07 14 44.1	
	2.3nm,0.6s,baz=336,slow=26,SNR=3.5						
MKAR	**Makanchi Array**	**4.13**	**140**	Pn	**Pn**	**07 13 41.3**	**-0.3**
	0.1nm,0.3s,baz=322,slow=10,SNR=13						
MKAR				Pg	**Pb**	**07 13 50.9**	**+0.1**
	0.2nm,0.3s,baz=325,slow=15,SNR=7.6						
MKAR				Lg	Lg	07 14 42.0	
	0.5nm,0.3s,baz=330,slow=28,SNR=8.0						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**5.60**	**43**	Pn	**Pn**	**07 14 01.7**	**-0.1**
	0.3nm,0.3s,baz=226,slow=14,SNR=3.1						
	0.6nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.61**	**43**	I	I	07 46 30.0	
	baz=221,slow=339,SNR=2.6						

AFAD 11 07:13:53.3, 36°51N×28°97E, h7km±1km, ML2.5
ISK 11 07:13:53.7, 36°54N×28°97E, h7km, ML2.8/10

ISC 11 07:13:53.9±1.1, 36°52N±0°04×28°97E±0°03, h10km±9km, n19, σ0s59/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZZE	**Mula-Seydike**	**0.22**	**113**	P	**Pg**	**07 13 58.1**	**-0.3**
IZZE				S	**Sg**	**07 14 01.5**	**0.0**
IZZE				*i* IAML		07 14 02.0	
	comp=E,2μm,0.2s						
IZZE				*i* IAML		07 14 03.0	
	comp=N,3μm,0.4s						
SABU	**Mula-Dalaman**	**0.30**	**359**	P	**Pg**	**07 13 59.8**	**-0.1**
SABU				S	**Sg**	**07 14 04.6**	**+0.6**
SABU				*i* IAML		07 14 06.0	
	comp=E,669nm,0.4s						
SABU				*i* IAML		07 14 08.0	
	comp=N,882nm,0.7s						
DALY	**Dalyan (Mula)**	**0.39**	**319**	Pg	**Pg**	**07 14 01.4**	**-0.1**
DALY				Sg	**Sg**	**07 14 07.3**	**+0.6**
CAME	**Cameli-Denizli**	**0.49**	**32**	Pg	**Pg**	**07 14 03.6**	**0.0**
CAME				Sg	**Sg**	**07 14 10.7**	**+0.6**
KNIK	**Mula-Seydike**	**0.58**	**56**	P	**Pg**	**07 14 04.4**	**-0.7**
KNIK				S	**Sb**	**07 14 13.8**	**-0.7**
KNIK				*i* IAML		07 14 16.0	
	comp=E,164nm,0.4s						
AKAS	**Kas**	**0.59**	**119**	P	**Pb**	**07 14 05.6**	**-0.7**
AKAS				S	**Sb**	**07 14 15.4**	**+0.6**
AKAS				*i* IAML		07 14 16.0	
	comp=E,419nm,0.6s						
AKAS				*i* IAML		07 14 18.0	
	comp=N,746nm,0.6s						
AKAS	**Kas**	**0.59**	**119**	Pg	**Pb**	**07 14 05.8**	**-0.5**
AKAS				Sg	**Sb**	**07 14 14.8**	**0.0**
TURN	**Turunc**	**0.64**	**293**	P	**Pg**	**07 14 05.9**	**-0.3**
TURN				S	**Sb**	**07 14 15.3**	**-0.8**
TURN				*i* IAML		07 14 16.0	
	comp=N,182nm,0.7s						
ELL	**Elmali**	**0.79**	**73**	Pg	**Pg**	**07 14 09.1**	**+0.1**
DEMR	**Demre-Antalya**	**0.81**	**111**	Pg	**Pb**	**07 14 09.8**	**-0.2**
DEMR				Sg	**Sb**	**07 14 21.5**	**+0.6**
GOLH	**Golhisar**	**0.85**	**33**	P	**Pg**	**07 14 09.3**	**-1.0**
GOLH				S	**Sb**	**07 14 22.4**	**-0.1**
TAVA	**DENIZLI_Tavas**	**0.94**	**357**	P	**Pg**	**07 14 11.2**	**-0.8**
TAVA				S	**Sb**	**07 14 24.8**	**-0.2**
TAVA				*i* IAML		07 14 27.0	
	comp=N,131nm,0.5s						
TAVA				*i* IAML		07 14 27.0	
	comp=E,114nm,0.6s						
APMY	**Acipayam-Deniz**	**0.98**	**15**	Pg	**Pb**	**07 14 12.8**	**-0.3**
DNIZ	**Denizli-Tavas-**	**1.10**	**3**	P	**Pg**	**07 14 14.2**	**-0.9**
AKUM	**Antalya-Kumluc**	**1.12**	**100**	P	**Pn**	**07 14 16.0**	**+0.3**
KORT	**Korkueli**	**1.20**	**66**	Pn	**Pn**	**07 14 17.3**	**+0.4**
BASM	**Basmaki-Afyon**	**1.64**	**31**	Pn	**Pb**	**07 14 23.9**	**-0.3**
KULA	**Kula-Manisa**	**2.00**	**353**	Pn	**Pn**	**07 14 28.8**	**+0.9**
SHUT	**Suhut-Afyon**	**2.38**	**31**	Pn	**Pn**	**07 14 34.0**	**+0.9**

DSN 11 07:23:29.4±2.4, 27°67N×55°21E, h10km, ML2.6/5, Error ellipse: s-maj=55.0km s-min=16.0km az=48.0
TEH 11 07:23:30.1, 27°07N×58°02E, h60km
OMAN 11 07:23:31.0±1.3, 26°89N×58°07E, h10km, ml2.9/11, Error ellipse: s-maj=12.9km s-min=9.3km az=96.0

ISC 11 07:23:28.9±3.2, 27°06N±0°07×57°99E±0°06, h10km±24km, n33, σ1s36/45, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**1.35**	**287**	Pg	**Pn**	**07 23 54.0**	**+0.3**
GENO	**Geno**	**1.65**	**282**	Pg	**Pn**	**07 23 58.6**	**+0.5**
BANOM	**Banah**	**1.89**	**234**	P	**Pn**	**07 24 02.5**	**+1.3**
BANOM				S	**Sb**	**07 24 29.3**	**+2.1**
BANOM	**Banah**	**1.89**	**234**	P	**Pn**	**07 24 01.9**	**+0.7**
BANOM				S	**Sb**	**07 24 29.2**	**+2.1**
SHME	**Shamm**	**1.94**	**239**	P	**Pn**	**07 24 02.3**	**+0.5**
MDH	**Madha**	**2.32**	**221**	P	**Pn**	**07 24 07.9**	**+0.8**
MDH				S	**Sn**	**07 24 36.1**	**+0.5**
MASF	**Masafi**	**2.35**	**225**	P	**Pb**	**07 24 11.5**	**+0.2**
MASF				S	**Sb**	**07 24 40.4**	**0.0**
MSFE	**Esma-Masafi**	**2.36**	**225**	P	**Pn**	**07 24 09.3**	**+1.6**
UOSS	**Minazif**	**2.65**	**218**	P	**Pb**	**07 24 16.6**	**+0.2**
UOSS				S	**Sn**	**07 24 44.5**	**+0.8**
UOSS	**Minazif**	**2.65**	**218**	P	**Pb**	**07 24 15.1**	**-1.3**
HATD	**Hatta, Dubai**	**2.78**	**217**	P	**Pb**	**07 24 17.4**	**-1.2**
HATD				S	**Sn**	**07 24 46.7**	**-0.4**
HATD	**Hatta, Dubai**	**2.78**	**217**	P	**Pn**	**07 24 16.4**	**+3.0**
NGRK	**Negar Kerman**	**2.81**	**337**	Pn	**Pn**	**07 24 14.1**	**0.0**
CHMN	**Cheshme madani**	**2.82**	**352**	Pn	**Pn**	**07 24 14.6**	**+0.3**
ASHO	**Ashiyiah**	**2.93**	**217**	P	**Pb**	**07 24 19.7**	**-1.6**
ASHO				S	**Sb**	**07 24 55.9**	**-1.4**
ASHO	**Ashiyiah**	**2.93**	**217**	P	**Pn**	**07 24 18.0**	**+2.4**
KRBR	**Kerman**	**3.11**	**340**	Pn	**Pn**	**07 24 18.6**	**+0.4**
SOHO	**SOHO**	**3.19**	**205**	P	**Pn**	**07 24 19.1**	**0.0**
SOHO				S	**Sn**	**07 24 57.0**	**-0.3**
NGCH	**Negor - Chabah**	**3.29**	**120**	P	**Pn**

RUGZ	**Raukumara Rang**	**1.10**	**60**	P	**Pn**	**07 37 53.3**	**-0.1**
TOZ	**Tahuroa Road**	**1.10**	**315**	P	**Pn**	**07 37 54.2**	**+0.9**
KRHZ	**Kereru**	**1.12**	**184**	P	**Pn**	**07 37 54.9**	**+1.4**
MTVZ	**Mangateitei**	**1.17**	**222**	P	**Pn**	**07 37 55.5**	**+1.6**
PKVZ	**Pokaka**	**1.17**	**229**	P	**Pn**	**07 37 55.5**	**+1.5**
PRGZ	**Paritu Road**	**1.17**	**110**	P	**Pn**	**07 37 55.5**	**+1.5**
CKHZ	**Cape Kidnapper**	**1.23**	**158**	P	**Pn**	**07 37 56.5**	**+2.0**
TWGZ	**Tauwhareparae**	**1.23**	**74**	P	**Pn**	**07 37 56.1**	**+1.5**
MYRZ	**Mayor Island**	**1.25**	**351**	P	**Pn**	**07 37 55.8**	**+1.0**
HIZ	**Hauiti**	**1.27**	**270**	P	**Pn**	**07 37 56.5**	**+1.5**
HIZ	**Hauiti**	**1.27**	**270**	P	**Sn**	**07 38 15.1**	**+1.0**
HIZ	**Hauiti**	**1.27**	**270**	P	**Pn**	**07 37 56.6**	**+1.5**
MHGZ	**Mahia Peninsul**	**1.28**	**120**	P	**Pn**	**07 37 56.9**	**+1.8**
HAZ	**Te Kaha**	**1.28**	**54**	P	**Pn**	**07 37 55.2**	**+0.1**
KAHZ	**Kahuranaki**	**1.31**	**166**	P	**Pn**	**07 37 57.3**	**+1.9**
CNGZ	**Carnagh Statio**	**1.36**	**89**	P	**Pn**	**07 37 55.7**	**-0.2**
PNHZ	**Pukenui**	**1.41**	**189**	P	**Pn**	**07 37 57.6**	**+1.1**
PUZ	**Puketiti**	**1.47**	**73**	P	**Pn**	**07 37 57.1**	**-0.1**
PXZ	**Pawanui**	**1.54**	**169**	P	**Pn**	**07 37 59.5**	**+1.6**
WPHZ	**Waipukurau**	**1.54**	**181**	P	**Pn**	**07 37 59.3**	**+1.3**
TSZ	**Takapari Road**	**1.59**	**194**	P	**Pn**	**07 37 59.6**	**+1.0**
WMGZ	**Waiomatatini S**	**1.68**	**66**	P	**Pn**	**07 38 00.5**	**+0.9**
WAZ	**Wanganui**	**1.69**	**223**	P	**Pn**	**07 38 01.6**	**+1.9**
MXZ	**Matakaoa Point**	**1.73**	**57**	P	**Pn**	**07 38 00.1**	**-0.1**
MXZ	**Matakaoa Point**	**1.73**	**57**	S	**Sn**	**07 38 23.8**	**+0.4**
MXZ	**Matakaoa Point**	**1.73**	**57**	P	**Pn**	**07 38 01.0**	**+0.7**
PRHZ	**Porangahau**	**1.75**	**176**	P	**Pn**	**07 38 01.7**	**+1.3**
MKAZ	**Moumakai**	**1.76**	**323**	P	**Pn**	**07 38 01.8**	**+1.3**
DVHZ	**Dannevirke**	**1.79**	**188**	P	**Pn**	**07 38 01.6**	**+0.7**
KUZ	**Kuaotunu**	**1.87**	**341**	P	**Pn**	**07 38 02.9**	**+1.0**
KUZ	**Kuaotunu**	**1.87**	**341**	P	**Pn**	**07 38 02.7**	**+0.8**
ANWZ	**Angora Road**	**1.94**	**180**	P	**Pn**	**07 38 04.0**	**+1.3**
POWZ	**Post Office Ro**	**1.95**	**196**	P	**Pn**	**07 38 03.6**	**+0.8**
ETAZ	**East Tamaki Re**	**1.99**	**321**	P	**Pn**	**07 38 04.8**	**+1.4**
WIAZ	**Waiheke Island**	**2.03**	**328**	P	**Pn**	**07 38 05.1**	**+1.3**
AWAZ	**Awhitu Peninsu**	**2.06**	**314**	P	**Pn**	**07 38 05.5**	**+1.4**
PRWZ	**Pori Road**	**2.07**	**191**	P	**Pn**	**07 38 05.4**	**+1.1**
KHEZ	**Kahui Hut**	**2.07**	**247**	P	**Pn**	**07 38 04.3**	**-0.1**
KHEZ	**Kahui Hut**	**2.07**	**247**	P	**Pn**	**07 38 06.8**	**+2.4**
MBAZ	**Motutapu North**	**2.15**	**324**	P	**Pn**	**07 38 06.7**	**+1.4**
BFZ	**Birch Farm**	**2.16**	**185**	P	**Pn**	**07 38 05.6**	**+0.1**
BFZ	**Birch Farm**	**2.16**	**185**	P	**Sn**	**07 38 32.3**	**-0.6**
BFZ	**Birch Farm**	**2.16**	**185**	P	**Pn**	**07 38 06.1**	**+0.6**
MRZ	**Mangatainoka R**	**2.25**	**198**	P	**Pn**	**07 38 06.9**	**+0.4**
TIWZ	**Tintock**	**2.30**	**191**	P	**Pn**	**07 38 07.9**	**+0.7**
CPWZ	**Castlepoint**	**2.39**	**185**	P	**Pn**	**07 38 09.7**	**+1.3**
HOWZ	**Holdsworth Sta**	**2.48**	**197**	P	**Pn**	**07 38 09.7**	**+0.1**
TMWZ	**Te Maipa**	**2.62**	**190**	P	**Pn**	**07 38 11.6**	**+0.3**
SNZO	**South Karori**	**3.10**	**206**	P	**Pn**	**07 38 16.8**	**-0.7**
SNZO	**South Karori**	**3.10**	**206**	S	**Sn**	**07 38 53.2**	**-1.1**
QRZ	**Quartz Range**	**3.82**	**232**	P	**Pn**	**07 38 28.0**	**+1.0**
QRZ	**Quartz Range**	**3.82**	**232**	S	**Sn**	**07 39 10.1**	**-1.2**
KHZ	**Kahutara**	**4.49**	**209**	P	**Pn**	**07 38 34.5**	**-1.4**
KHZ	**Kahutara**	**4.49**	**209**	S	**Sn**	**07 39 24.5**	**-2.7**
ODZ	**Otahua Downs**	**7.84**	**212**	P	**Pn**	**07 39 18.9**	**-2.1**

*ASRS **11** 07:54:39.0±1.7, 53.79°N×91.02°E, h0km, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 11 07:54:45.2±4.3, 53.53°N×90.81°E, h0km, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=44.4km s-min=27.1km az=25.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**3.58**	**279**	Pn	Pn	07 55 43.8	+1.8
	0.8nm,0.3s,baz=95,slow=13,SNR=7.7						
ZALV				Lg	Lg	07 56 37.2	
	1.5nm,0.3s,baz=93,slow=25,SNR=9.4						
	1.7nm,0.5s						
KURBB	**Kurchatov Arra**	**8.11**	**254**	Pn	Pn	07 56 43.7	-0.3
	0.1nm,0.3s,baz=66,slow=14,SNR=1.7						
KURBB				Sn	Sn	07 58 15.2	-1.1
	baz=309,slow=49,SNR=1.0						
KURBB				Lg	Lg	07 59 02.8	
	0.1nm,0.3s,baz=67,slow=32,SNR=7.2						
	1.7nm,0.2s						
MKAR	**Makanchi Array**	**8.68**	**222**	Pn	Pn	07 56 52.3	+0.4
	0.1nm,0.3s,baz=37,slow=13,SNR=1.9						
	0.4nm,0.6s						
I34MN	**SONGINO INFRAS**	**11.43**	**114**	I	I	09 00 40.0	
	baz=310,slow=326,SNR=0.4						

*SSNC **11** 08:30:02.3±0.9, 18.37°N×76.62°W, h0km±4km, MD2.8, ML1.4*
*JSN **11** 08:30:02.1±0.9, 18.14°N×76.59°W, h16km±8km, MD2.5*

ISC 11 08:30:00.6±1.5, 18.29°N±0.08°×76.59°W±0.06°, h18km±11km, n13, σ0°78/21, 1C-1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**0.25**	**211** ⇓	*i* P	**Pg**	**08 30 06.0**	**-0.3**
STH	**Stony Hill**	**0.29**	**224** ⇑	*i* P	**Pg**	**08 30 06.7**	**-0.3**
HOJ	**Hope**	**0.32**	**208**	*i* P	**Pb**	**08 30 07.4**	**-0.3**
MTDJ	**Mount Denham**	**0.90**	**266**	*i* P	**Pb**	**08 30 18.2**	**+0.5**
MTDJ	**Mount Denham**	**0.90**	**266**	*e*P	**Pb**	**08 30 18.7**	**+1.0**
MTDJ				*e*S	**Sb**	**08 30 30.1**	**+0.7**
MTDJ				IAML		08 30 31.2	
	28nm,0.2s						
MTDJ				IAML		08 30 31.3	
	comp=Z,15nm,0.2s						
CHIV	**Chivirico**	**1.69**	**6**	*e*P	**Pn**	**08 30 29.0**	**-0.2**
CHIV				*e*S	**Sn**	**08 30 48.8**	**-1.6**
CHIV				IAML		08 30 51.6	
	comp=E,1.1nm,0.1s						
CHIV				IAML		08 30 51.6	
	comp=N,0.7nm,0.1s						
LMGC	**Las Mercedes**	**1.81**	**348**	*e*P	**Pn**	**08 30 30.2**	**-0.7**
LMGC				*e*S	**Sn**	**08 30 52.4**	**-0.9**
LMGC				IAML		08 30 53.8	
	comp=E,9.1nm,0.1s						
LMGC				IAML		08 30 53.9	
	comp=N,14nm,0.1s						
MARVS	**Santiago de Cu**	**1.82**	**21**	*e*P	**Pn**	**08 30 31.7**	**+0.6**
MARVS				*e*S	**Sn**	**08 30 52.8**	**-1.0**
MARVS				IAML		08 30 55.5	
	comp=E,1.7nm,0.1s						
MARVS				IAML		08 30 55.6	
	comp=N,4.7nm,0.2s						
RCC	**Rio Carpintero**	**1.90**	**26**	*e*P	**Pn**	**08 30 32.3**	**+0.2**
RCC				*e*S	**Sn**	**08 30 55.3**	**-0.3**
GTBY	**Guantanamo Bay**	**2.15**	**40**	*e*P	**Pn**	**08 30 36.5**	**+0.9**
GTBY				*e*S	**Sn**	**08 31 01.6**	**-0.2**
GTBY				IAML		08 31 05.7	
	comp=N,2.0nm,0.1s						
PINC	**Pinares de May**	**2.31**	**19**	*e*P	**Pn**	**08 30 38.2**	**+0.3**
PINC				*e*S	**Sn**	**08 31 05.4**	**-0.5**
PINC				IAML		08 31 09.2	
	comp=E,3.4nm,0.1s						
PINC				IAML		08 31 09.7	
	comp=N,3.5nm,0.1s						
QMBU	**Quimbuelo**	**2.54**	**41**	*e*P	**Pn**	**08 30 41.5**	**+0.6**
QMBU				*e*S	**Sn**	**08 31 10.9**	**-0.6**
QMBU				IAML		08 31 12.6	
	comp=N,3.3nm,0.3s						
HLGC	**Holguin**	**2.64**	**11**	*e*P	**Pn**	**08 30 43.3**	**+1.0**

*SJA **11** 08:30:01.6±1.2, 20.42°S×69.08W, h119km±11km, ML3.3, MW3.5*
*GUC **11** 08:30:04.0±0.8, 20.40°S×69.06W, h102km±4km, ML3.3*

ISC 11 08:30:03.9±1.7, 20.43°S±0.04°×69.07°W±0.08°, h108km±10km, n28, σ0°79/39, 8C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.29**	**345** ⇑	*e*P	**Pn**	**08 30 19.7**	**-0.3**
PB08				*e*S	**Sn**	**08 30 31.5**	**-0.3**
PB08				IAML		08 30 32.7	
	comp=E,2μm,0.2s						
PB08	**IPOC Station P**	**0.29**	**345**	*i* P	**Pn**	**08 30 19.1**	**-0.8**
PB08				IAML		08 30 33.0	
	comp=Z,1μm,0.2s						
PX03	**IPOC Station P**	**0.52**	**272**	*e*P	**Pn**	**08 30 20.1**	**-0.7**
PX03				*e*S	**Sn**	**08 30 33.6**	**+0.1**
PX03				IAML		08 30 35.0	
	comp=N,2μm,0.3s						
PB01	**IPOC Station P**	**0.73**	**212** ⇑	*e*P	**Pn**	**08 30 22.5**	**0.0**
PB01				*e*S	**Sn**	**08 30 37.1**	**+0.8**
PB01				IAML		08 30 39.1	
	comp=N,2μm,0.2s						
PB01	**IPOC Station P**	**0.73**	**212**	*i* P	**Pn**	**08 30 21.8**	**-0.6**
PB01				IAML		08 30 38.6	
	comp=Z,1μm,0.2s						
GO01	**Chusmiza**	**0.76**	**351**	*e*P	**Pn**	**08 30 22.9**	**-0.3**
GO01				*e*S	**Sn**	**08 30 37.4**	**-0.2**
GO01	**Chusmiza**	**0.76**	**351**	*i* P	**Pn**	**08 30 22.2**	**-1.0**
GO01				IAML		08 30 40.4	
	comp=Z,970nm,0.1s						
PB11	**IPOC Station P**	**0.86**	**320** ⇑	*e*P	**Pn**	**08 30 23.5**	**-0.2**
PB11				*e*S	**Sn**	**08 30 38.7**	**+0.1**
PB11	**IPOC Station P**	**0.86**	**320**	*i* P	**Pn**	**08 30 22.8**	**-0.9**
PB11				IAML		08 30 40.0	
	comp=Z,1μm,0.2s						
TA02	**Huaiquique**	**1.00**	**279**	*e*P	**Pn**	**08 30 25.1**	**+0.2**
TA02				*e*S	**Sn**	**08 30 41.6**	**+0.7**
TA02	**Huaiquique**	**1.00**	**279**	*i* P	**Pn**	**08 30 24.6**	**-0.3**
TA02				IAML		08 30 43.2	
	comp=Z,927nm,0.1s						
TA01	**Diego Aracena**	**1.05**	**262** ⇑	*e*P	**Pn**	**08 30 25.3**	**-0.1**
TA01				*e*S	**Sn**	**08 30 42.0**	**+0.4**
TA01				IAML		08 30 42.9	
	comp=N,523nm,0.4s						
TA01	**Diego Aracena**	**1.05**	**262**	*i* P	**Pn**	**08 30 24.6**	**-0.8**
TA01				IAML		08 30 45.7	
	comp=Z,229nm,0.4s						
PATCX	**Punta Patache**	**1.08**	**249** ⇑	*e*P	**Pn**	**08 30 26.0**	**+0.1**
PATCX				*e*S	**Sn**	**08 30 43.3**	**+0.7**
PATCX				IAML		08 30 45.8	
	comp=E,635nm,0.3s						
PATCX	**Punta Patache**	**1.08**	**249**	*i* P	**Pn**	**08 30 25.6**	**-0.4**
PATCX				IAML		08 30 45.6	
	comp=Z,542nm,0.4s						
PB02	**IPOC Station P**	**1.18**	**221** ⇑	*e*P	**Pn**	**08 30 27.3**	**+0.3**
PB02				*e*S	**Sn**	**08 30 45.4**	**+1.1**
PB02				IAML		08 30 47.2	
	comp=E,1μm,0.2s						
PB02	**IPOC Station P**	**1.18**	**221**	*i* P	**Pn**	**08 30 26.6**	**-0.3**
PB02				IAML		08 30 49.2	
	comp=Z,662nm,0.3s						
PB09	**IPOC Station P**	**1.37**	**187** ⇑	*e*P	**Pn**	**08 30 29.7**	**+0.4**
PB09				*e*S	**Sn**	**08 30 49.7**	**+1.2**
PB09				IAML		08 30 50.7	
	comp=N,553nm,0.5s						
PB09	**IPOC Station P**	**1.37**	**187**	*i* P	**Pn**	**08 30 29.1**	**-0.1**
PB09				IAML		08 30 50.4	
	comp=Z,327nm,0.5s						
PB03	**IPOC Station P**	**1.73**	**201** ⇑	*e*P	**Pn**	**08 30 33.6**	**-0.1**
PB03				IAML		08 30 57.2	
	comp=E,300nm,0.4s						
PB03	**IPOC Station P**	**1.73**	**201**	*i* P	**Pn**	**08 30 33.1**	**-0.6**
PB03				IAML		08 31 04.3	
	comp=Z,327nm,0.2s						
PB16	**IPOC Station P**	**2.12**	**349**	*e*P	**Pn**	**08 30 39.8**	**+0.9**
PB16				*e*S	**Sn**	**08 31 07.5**	**+1.9**
PB16	**IPOC Station P**	**2.12**	**349**	*i* P	**Pn**	**08 30 39.1**	**+0.2**
PB16				IAML		08 31 12.8	
	comp=Z,58nm,0.3s						
PB12	**IPOC Station P**	**2.16**	**327**	*i* P	**Pn**	**08 30 37.3**	**-1.6**
PB12				IAML		08 31 11.0	
	comp=Z,68nm,0.2s						
PB06	**IPOC Station P**	**2.32**	**191**	*i* P	**Pn**	**08 30 40.4**	**-0.6**
PB06				IAML		08 31 16.4	
	comp=Z,163nm,0.4s						
PB05	**IPOC Station P**	**2.63**	**203**	*i* P	**Pn**	**08 30 44.3**	**-0.9**
PB05				IAML		08 31 23.2	
	comp=Z,56nm,0.9s						
PB10	**IPOC Station P**	**3.37**	**204**	*i* P	**Pn**	**08 30 53.1**	**-1.6**
PB10				IAML		08 31 54.9	
	comp=Z,27nm,1.0s						
GO02	**Mina Guanaco**	**4.74**	**186**	*i* P	**Pn**	**08 31 12.6**	**-0.9**
GO02				IAML		08 32 10.7	
	comp=Z,29nm,0.4s						

IDC 11 08:37:37.9±3.0, 3.86°S×135.62°E, h0km, mb3.7/1, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=100.9km s-min=31.4km az=85.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.03**	**184**	Pn	Pn	08 41 22.8	-2.1
	0.2nm,0.3s,baz=4.3,slow=13,SNR=6.5						
WRA				Sn	Sn	08 44 16.1	-7.5
	0.1nm,0.3s,baz=4.3,slow=23,SNR=2.9						
	0.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**17.20**	**214**	P	Pn	08 41 39.2	-0.5
	0.3nm,0.3s,baz=39,slow=15,SNR=7.1						
FITZ				S	Sn	08 44 38.3	-13
	2.0nm,0.6s,baz=72,slow=9.6,SNR=3.8						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**19.76**	**185**	P	Pn	08 42 10.8	-0.3
	0.3nm,0.3s,baz=5.4,slow=12,SNR=48						
	2.1nm,0.5s						
MKAR	**Makanchi Array**	**68.85**	**324**	P	P	08 48 44.3	0.0
	0.6nm,0.8s,baz=116,slow=6.6,SNR=2.3						
	0.6nm,0.8s						

*IDC **11** 08:49:27.8±1.5, 41.07°S×172.69°E, h58km±21km, mb3.2/5, mbtmp3.6/7, ML3.8/2, MS3.2/2, Error ellipse: s-maj=24.8km s-min=9.1km az=127.0*
*NOU **11** 08:49:30.3, 41.32°S×172.97°E, h108km, MLv4.4/24, South Island, New Zealand*
*WEL **11** 08:49:32.3±0.9, 41°S±6'×17°3E±', h98km±6km, M4.2/52, ML4.1/7, MLv4.2/52, Error ellipse: s-maj=8.5km s-min=7.4km az=134.9, confirmed*

ISC 11 08:49:31.1±0.9, 41.33°S±0.03°×173.00°E±0.04°, h120km±5km, n115, σ1°03/122, mb3.4/5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTWS	**Nelson Brightw**	**0.11**	**123**	P	**Pn**	**08 49 47.6**	**+0.1**
BTWS				S	**Sn**	**08 49 59.0**	**-0.9**
MRNZ	**Matariki Terra**	**0.20**	**249**	P	**Pn**	**08 49 47.3**	**-0.4**
MRNZ				S	**Sn**	**08 49 58.8**	**-1.4**
MOTS	**Motueka DOC wo**	**0.20**	**2**	P	**Pn**	**08 49 47.4**	**-0.3**
MOTS				S	**Sn**	**08 49 58.6**	**-1.6**
NELH	**Nelson Hospita**	**0.21**	**79**	P	**Pn**	**08 49 47.9**	**+0.2**
NELH				S	**Sn**	**08 49 59.9**	**-0.3**
NCBS	**Nelson Council**	**0.22**	**75**	P	**Pn**	**08 49 47.6**	**-0.1**
NCBS				S	**Sn**	**08 49 59.2**	**-1.0**
MATW	**Matariki Wadsw**	**0.25**	**246**	P	**Pn**	**08 49 47.6**	**-0.2**
TKNZ	**Takaka Hill**	**0.30**	**354**	P	**Pn**	**08 49 47.5**	**-0.6**
TKNZ				S	**Sn**	**08 49 58.9**	**-1.9**
NNZ	**Nelson**	**0.30**	**69**	P	**Pn**	**08 49 47.8**	**-0.2**
NNZ				S	**Sn**	**08 49 59.9**	**-0.8**
KLDS	**Kikiwa Line De**	**0.36**	**195**	P	**Pn**	**08 49 48.3**	**0.0**
WVFS	**Wairau Valley**	**0.39**	**138**	P	**Pn**	**08 49 48.8**	**+0.4**
THZ	**Tophouse**	**0.44**	**189**	P	**Pn**	**08 49 48.9**	**+0.1**
THZ				S	**Sn**	**08 50 01.5**	**-0.6**
TSFS	**Takaka Scotts**	**0.50**	**344**	P	**Pn**	**08 49 48.5**	**-0.5**
HAVS	**Havelock**	**0.59**	**85**	P	**Pn**	**08 49 50.0**	**+0.4**
QRZ	**Quartz Range**	**0.62**	**324**	P	**Pn**	**08 49 49.0**	**-0.8**
QRZ	**Quartz Range**	**0.62**	**324**	S	**Sn**	**08 50 01.6**	**-2.3**
QRZ	**Quartz Range**	**0.62**	**324**	P	**Pn**	**08 49 49.2**	**-0.6**
KASC	**Karamea School**	**0.67**	**276**	P	**Pn**	**08 49 50.1**	**-0.1**
BWRS	**Waikakaho Road**	**0.69**	**100**	P	**Pn**	**08 49 50.8**	**+0.5**
MCASZ	**Murchison**	**0.69**	**227**	P	**Pn**	**08 49 50.6**	**+0.3**
TUWZ	**Tuamarina**	**0.71**	**98**	P	**Pn**	**08 49 51.0**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.76**	**121**	P	**Pn**	**08 49 51.3**	**+0.3**
DUWZ	**D'Urville Isla**	**0.87**	**53**	P	**Pn**	**08 49 52.4**	**+0.4**
TCW	**Tory Channel**	**0.97**	**83**	P	**Pn**	**08 49 53.2**	**+0.5**
DSZ	**Denniston Nort**	**0.99**	**245**	P	**Pn**	**08 49 52.6**	**-0.4**
CMWZ	**Cape Campbell**	**1.00**	**115**	P	**Pn**	**08 49 53.6**	**+0.5**
KHZ	**Kahutara**	**1.16**	**160**	P	**Pn**	**08 49 55.1**	**+0.4**
KHZ	**Kahutara**	**1.16**	**160**	S	**Sn**	**08 50 11.9**	**-0.7**
KHZ	**Kahutara**	**1.16**	**160**	P	**Pn**	**08 49 55.3**	**+0.6**
SNZO	**South Karori**	**1.28**	**90**	P	**Pn**	**08 49 55.0**	**-1.0**
SNZO	**South Karori**	**1.28**	**90**	S	**Sn**	**08 50 14.4**	**-0.5**
WEL	**Wellington**	**1.33**	**89**	P	**Pn**	**08 49 56.6**	**0.0**
BHW	**Baring Head**	**1.41**	**94**	P	**Pn**	**08 49 57.1**	**-0.4**
KIW	**Kapiti Island**	**1.52**	**73**	P	**Pn**	**08 49 58.7**	**0.0**
LTZ	**Lake Taylor**	**1.55**	**200**	P	**Pn**	**08 49 59.5**	**+0.4**
CAW	**Cannon Point**	**1.57**	**83**	P	**Pn**	**08 49 59.0**	**-0.3**
GVZ	**Greta Valley S**	**1.64**	**179**	P	**Pn**	**08 50 00.6**	**+0.4**
MSWZ	**Moikau Station**	**1.69**	**94**	P	**Pn**	**08 50 00.2**	**-0.6**
PLWZ	**Palliser**	**1.71**	**99**	P	**Pn**	**08 50 00.5**	**-0.6**
OGWZ	**Otaki Gorge**	**1.72**	**73**	P	**Pn**	**08 50 00.8**	**-0.2**
INZ	**Inchbonnie**	**1.81**	**219**	P	**Pn**	**08 50 02.3**	**+0.1**
PAWZ	**Paruwai Farm**	**1.83**	**92**	P	**Pn**	**08 50 01.7**	**-0.7**
AMCZ	**Amberley**	**1.86**	**188**	P	**Pn**	**08 50 03.0**	**+0.1**
MTW	**Mount Morrison**	**1.89**	**86**	P	**Pn**	**08 50 02.5**	**-0.7**
HOWZ	**Holdsworth Sta**	**1.95**	**78**	P	**Pn**	**08 50 03.2**	**-0.7**
TRWZ	**Traveller**	**2.02**	**93**	P	**Pn**	**08 50 04.4**	**-0.4**
NMEZ	**Namu Road**	**2.03**	**20**	P	**Pn**	**08 50 05.6**	**+0.8**
MRZ	**Mangatainoka R**	**2.06**	**72**	P	**Pn**	**08 50 04.4**	**-0.9**
OHWZ	**Ohakea**	**2.08**	**58**	P	**Pn**	**08 50 05.7**	**+0.2**
OXZ	**Oxford**	**2.12**	**199**	P	**Pn**	**08 50 05.4**	**-0.6**
LREZ	**Lake Rotokare**	**2.15**	**30**	P	**Pn**	**08 50 07.7**	**+1.3**
NBEZ	**Newall Road No**	**2.16**	**18**	P	**Pn**	**08 50 07.2**	**+0.6**
PREZ	**Palmer Road**	**2.17**	**24**	P	**Pn**	**08 50 07.5**	**+0.7**
KHEZ	**Kahui Hut**	**2.17**	**21**	P	**Pn**	**08 50 07.1**	**+0.3**
KHEZ	**Kahui Hut**	**2.17**	**21**	S	**Sn**	**08 50 34.0**	**-0.1**
KHEZ	**Kahui Hut**	**2.17**	**21**	P	**Pn**	**08 50 07.2**	**+0.4**
WAZ	**Wanganui**	**2.18**	**45**	P	**Pn**	**08 50 07.6**	**+0.8**
TMWZ	**Te Maipa**	**2.19**	**85**	P	**Pn**	**08 50 06.2**	**-0.8**
TIWZ	**Tintock**	**2.25**	**77**	P	**Pn**	**08 50 06.8**	**-0.9**
PKE	**Pukeiti**	**2.26**	**20**	P	**Pn**	**08 50 08.5**	**+0.6**
POWZ	**Post Office Ro**	**2.30**	**67**	P	**Pn**	**08 50 07.4**	**-0.9**
DREZ	**Durham Road**	**2.33**	**24**	P	**Pn**	**08 50 09.0**	**+0.3**
PRWZ	**Pori Road**	**2.38**	**72**	P	**Pn**	**08 50 08.5**	**-0.9**
MQZ	**McQueen's Vall**	**2.39**	**186**	P	**Pn**	**08 50 08.5**	**-0.9**
OKCZ	**Okains Bay**	**2.39**	**179**	P	**Pn**	**08 50 09.4**	**-0.1**
WVZ	**Waitaha Valley**	**2.42**	**223**	P	**Pn**	**08 50 09.5**	**-0.4**
MHCZ	**Mount Hutt**	**2.44**	**205**	P	**Pn**	**08 50 09.4**	**-0.8**
MHEZ	**Mangahewa**	**2.47**	**25**	P	**Pn**	**08 50 11.4**	**+0.9**
RACZ	**Rakaia**	**2.48**	**195**	P	**Pn**	**08 50 10.0**	**-0.6**
BFZ	**Birch Farm**	**2.54**	**76**	P	**Pn**	**08 50 09.9**	**-1.5**
BFZ	**Birch Farm**	**2.54**	**76**	S	**Sn**	**08 50 40.8**	**-1.5**
BFZ	**Birch Farm**	**2.54**	**76**	P	**Pn**	**08 50 10.1**	**-1.3**
AKCZ	**Akaroa Harbour**	**2.54**	**182**	P	**Pn**	**08 50 11.0**	**-0.4**
VRZ	**Vera Road**	**2.58**	**32**	P	**Pn**	**08 50 12.6**	**+0.6**
TSZ	**Takapari Road**	**2.58**	**62**	P	**Pn**	**08 50 10.9**	**-1.1**
DVHZ	**Dannevirke**	**2.61**	**68**	P	**Pn**	**08 50 11.0**	**-1.3**
MTVZ	**Mangateitei**	**2.71**	**45**	P	**Pn**	**08 50 13.4**	**-0.2**
PKVZ	**Pokaka**	**2.71**	**42**	P	**Pn**	**08 50 13.5**	**-0.2**
WACZ	**Wakanui South**	**2.75**	**198**	P	**Pn**	**08 50 13.5**	**-0.6**
ANWZ	**Angora Road**	**2.77**	**73**	P	**Pn**	**08 50 13.4**	**-0.9**
RPZ	**Rata Peaks**	**2.79**	**210**	P	**Pn**	**08 50 13.4**	**-1.2**
	27nm,0.3s,baz=23,slow=1.7,SNR=80						
RPZ				S	**Sn**	**08 50 45.6**	**-2.5**
	91nm,0.3s,baz=18,slow=20,SNR=16						
	72nm,0.4s						
RPZ	**Rata Peaks**	**2.79**	**210**	P	**Pn**	**08 50 13.3**	**-1.3**
RPZ	**Rata Peaks**	**2.79**	**210**	S	**Sn**	**08 50 46.0**	**-2.1**
RPZ	**Rata Peaks**	**2.79**	**210**	P	**Pn**	**08 50 13.5**	**-1.0**
TRVZ	**Turoa**	**2.81**	**45**	P	**Pn**	**08 50 15.1**	**0.0**
PNHZ	**Pukenui**	**2.81**	**61**	P	**Pn**	**08 50 13.6**	**-1.4**
WNVZ	**Wahianoa**	**2.82**	**46**	P	**Pn**	**08 50 15.0**	**-0.2**
WHVZ	**Whangaehu Hut**	**2.84**	**45**	P	**Pn**	**08 50 15.4**	**-0.1**
MOVZ	**Moawhango**	**2.85**	**48**	P	**Pn**	**08 50 14.7**	**-0.8**
TUVZ	**Tukino**	**2.89**	**45**	P	**Pn**	**08 50 16.0**	**-0.1**
WPHZ	**Waipukurau**	**2.90**	**65**	P	**Pn**	**08 50 14.8**	**-1.3**
TWVZ	**Taurewa**	**2.93**	**40**	P	**Pn**	**08 50 16.3**	**-0.2**
ARCZ	**Arundel**	**2.94**	**207**	P	**Pn**	**08 50 15.4**	**-1.2**
PRHZ	**Porangahau**	**2.96**	**70**	P	**Pn**	**08 50 15.8**	**-1.0**
WTVZ	**West Tongariro**	**2.97**	**43**	P	**Pn**	**08 50 16.7**	**-0.4**
NNVZ	**North Ngauruho**	**2.97**	**43**	P	**Pn**	**08 50 16.7**	**-0.4**
HIZ	**Hauiti**	**3.15**	**27**	P	**Pn**	**08 50 18.8**	**-0.6**
HIZ	**Hauiti**	**3.15**	**27**	S	**Sn**	**08 50 55.5**	**-1.1**
BKZ	**Black St

RDT						Sn	09 10 54.1	-0.9	
O19K	**Port Alsworth**	0.60	272			Pn	09 10 38.9	-0.3	
O19K				IAML			09 10 54.5		
	comp=E,482nm,0.5s								
O19K				IAML			09 10 55.0		
	comp=N,431nm,0.4s								
AUL	**Augustine Lava**	0.81	192			Pn	09 10 40.9	+0.2	
AU22	**Augustine Moun**	0.82	189			Pn	09 10 40.6	-0.1	
AU22						Sn	09 10 57.8	-0.2	
AGU	**Augustine-Summ**	0.83	191			Pn	09 10 41.1	+0.1	
HOM	**Homer**	0.91	124			Pn	09 10 42.8	+0.6	
HOM				IAML			09 11 01.4		
	comp=N,710nm,0.5s								
HOM				IAML			09 11 01.8		
	comp=E,715nm,0.3s								
HOM	**Homer**	0.91	124			Sn	09 10 60.0	+0.7	
N19K	**Bonanza Creek**	0.93	314			Pn	09 10 41.5	-0.2	
CKL	**Chakachamna La**	1.09	20			Pn	09 10 43.2	+0.1	
O18K	**Koktuh Hills**	1.10	254			Pn	09 10 42.6	-0.5	
O18K						Sn	09 11 01.2	-1.1	
SPCR	**Spurr Chakacha**	1.12	23			Sn	09 11 03.2	+0.4	
SPU	**Mount Spurr**	1.14	27			Pn	09 10 43.5	0.0	
CAPN	**Captain Cook N**	1.14	58			Pn	09 10 45.0	+1.7	
CNPM	**China Poot**	1.15	124			Pn	09 10 44.0	+0.5	
CNPM	**China Poot**	1.15	124			Sn	09 11 03.1	0.0	
BRLK	**Bradley Lake**	1.20	109			Pn	09 10 44.3	+0.3	
BRSE	**Bradley Lake S**	1.27	109			Pn	09 10 45.4	+0.7	
BRSE						Sn	09 11 04.4	-0.8	
Q19K	**Cape Douglas,**	1.28	192			Pn	09 10 44.8	-0.1	
Q19K				IAML			09 11 09.3		
	comp=N,528nm,1.0s								
Q19K				IAML			09 11 11.9		
	comp=E,412nm,1.3s								
Q19K	**Cape Douglas,**	1.28	192			Sn	09 11 04.5	-0.9	
P18K	**Big Mountain,**	1.33	235			Pn	09 10 44.8	-0.6	
N18K	**Kilae Creek**	1.47	291			Pn	09 10 46.3	-0.4	
STLK	**Strandline Lak**	1.47	25			Pn	09 10 46.9	+0.2	
STLK				IAML			09 11 13.7		
	comp=N,70nm,0.5s								
SLKM	**Skilak Lake**	1.48	76			Pn	09 10 47.0	+0.2	
SLKM	**Skilak Lake**	1.48	76			Sn	09 11 07.8	-1.2	
SYI	**Shuyak Island**	1.61	166			Pn	09 10 48.2	-0.1	
SYI						Sn	09 11 10.6	-1.0	
SYI	**Shuyak Island**	1.61	166	IAML			09 11 12.3		
	comp=N,456nm,0.5s								
SYI				IAML			09 11 13.3		
	comp=E,319nm,0.5s								
M20K	**Styx River**	1.71	360			Pn	09 10 49.6	+0.1	
O22K	**Cooper Landing**	1.71	78			Pn	09 10 49.8	+0.4	
O22K	**Cooper Landing**	1.71	78			Sn	09 11 12.2	-1.3	
FIS	**Fire Island**	1.73	54	Pn		Pn	09 10 50.8	+1.3	
FIS				IAML			09 11 19.9		
	comp=E,486nm,0.3s								
SUA	**Susitna One**	1.74	41			Pn	09 10 50.0	+0.2	
SUA				IAML			09 11 15.4		
	comp=E,439nm,0.4s								
SUA				IAML			09 11 15.5		
	comp=N,523nm,0.7s								
SUA	**Susitna One**	1.74	41			Sn	09 11 14.5	+0.3	
KAHC	**Katmai Hardscr**	1.81	213			Pn	09 10 50.4	-0.3	
KAHC						Sn	09 11 14.8	-0.9	
SEW	**Seward**	1.83	91			Pn	09 10 51.1	+0.4	
SEW				IAML			09 11 19.3		
	comp=N,249nm,0.6s								
SEW				IAML			09 11 20.7		
	comp=E,268nm,0.3s								
SEW	**Seward**	1.83	91			Sn	09 11 14.1	-1.7	
KAHG	**Katmai Hook Gl**	1.84	204			Pn	09 10 51.0	0.0	
KAHG						Sn	09 11 15.8	-0.4	
M19K	**Big River Lodg**	1.84	341			Pn	09 10 50.9	0.0	
KARR	**Katmai Rainbow**	1.87	206			Pn	09 10 51.4	+0.2	
KARR						Sn	09 11 16.5	-0.3	
M18K	**Stony River**	1.87	316			Pn	09 10 50.7	-0.4	
M18K						Sn	09 11 15.3	-1.4	
RC01	**Rabbit Creek A**	1.90	60			Pn	09 10 51.3	-0.2	
RC01				IAML			09 11 17.5		
	comp=N,345nm,0.3s								
RC01				IAML			09 11 17.9		
	comp=E,336nm,0.3s								
RC01	**Rabbit Creek A**	1.90	60			Sn	09 11 16.4	-0.9	
SKT	**Skwentna**	1.97	22			Pn	09 10 52.3	0.0	
SKT				IAML			09 11 25.6		
	comp=E,54nm,0.3s								
SKT				IAML			09 11 27.9		
	comp=N,43nm,0.4s								
KAWH	**Katmai**	2.00	206			Pn	09 10 52.8	0.0	
KAWH						Sn	09 11 18.5	-0.9	
KVTA	**Katmai Vly 10**	2.12	213			Pn	09 10 54.2	0.0	
KAKN	**Katmai Knife C**	2.13	209			Pn	09 10 54.3	-0.1	
M22K	**Willow**	2.15	41			Pn	09 10 54.4	0.0	
L19K	**White Mountain**	2.18	338			Pn	09 10 54.8	-0.1	
L19K				IAML			09 11 23.4		
	comp=N,37nm,1.0s								
L19K				IAML			09 11 23.6		
	comp=E,50nm,0.8s								
ACHA	**Angle Creek He**	2.28	211			Pn	09 10 56.2	+0.1	
ANCK	**Angle Creek**	2.33	213			Pn	09 10 56.9	+0.2	
L20K	**Farewell, AK**	2.34	351			Pn	09 10 57.1	+0.4	
Q16K	**King Salmon**	2.35	232			Pn	09 10 57.3	+0.4	
PMR	**Palmer**	2.41	52			Pn	09 10 56.6	-1.0	
PMR				IAML			09 11 27.5		
	comp=N,114nm,0.1s								
PMR				IAML			09 11 28.0		
	comp=E,114nm,0.4s								
PMR	**Palmer**	2.41	52	P		Pn	09 10 56.2	-1.4	
PMR	**Palmer**	2.41	52	S		Sn	09 11 26.3	-1.8	
M17K	**Holitna River**	2.45	302	Pn		Pn	09 10 57.8	-0.2	
PWL	**Port Wells**	2.46	72			Pn	09 10 57.4	-0.9	
KJL	**Kejulik**	2.48	212			Pn	09 10 58.9	+0.4	
O16K	**Kokwok River B**	2.58	259			Pn	09 10 59.9	+0.2	
GHO	**Glory Hole Cre**	2.59	50			Pn	09 10 59.0	-0.9	
GHO	**Glory Hole Cre**	2.59	50	IAML			09 11 31.5		
	comp=E,195nm,0.7s								
GHO				IAML			09 11 31.9		
	comp=N,220nm,0.4s								
KNK	**Knik Glacier**	2.60	59			Pn	09 10 58.9	-1.0	
CUT	**Chulitna**	2.62	30			Pn	09 11 00.3	+0.1	
CUT	**Chulitna**	2.62	30	IAML			09 11 34.7		
	comp=N,129nm,0.5s								
L18K	**Granite Mounta**	2.68	321			Pn	09 11 00.8	-0.2	
R18K	**Karluk**	2.71	195			Pn	09 11 00.0	-1.3	
R18K	**Karluk**	2.71	195	IAML			09 11 37.6		
	comp=N,242nm,0.4s								
PPLA	**Purkeypile**	2.77	9			Pn	09 11 02.9	+0.7	
SML	**Sawmill**	2.85	53			Pn	09 11 02.1	-1.0	
SML				IAML			09 11 37.3		
	comp=E,136nm,0.3s								
SML				IAML			09 11 37.8		
	comp=N,125nm,0.3s								
P23K	**Montague Islan**	2.87	91			Pn	09 11 04.2	+0.9	
P23K	**Montague Islan**	2.87	91	IAML			09 11 40.6		
	comp=E,214nm,0.4s								
OHAK	**Old Harbor**	2.96	182	Pn		Pn	09 11 02.9	-1.6	
OHAK				IAML			09 11 38.1		
	comp=N,78nm,0.3s								
OHAK				IAML			09 11 39.3		
	comp=E,129nm,0.3s								
OHAK	**Old Harbor**	2.96	182	P		Pn	09 11 02.6	-1.9	
M16K	**Timber Creek**	3.00	289			Pn	09 11 05.3	+0.3	
PLK4	**Peulik 4**	3.06	215			Pn	09 11 06.3	+0.5	
PLK4	**Peulik 4**	3.06	215	IAML			09 11 43.4		
	comp=E,35nm,1.4s								
PLK4				IAML			09 11 47.4		
	comp=N,34nm,1.2s								
M23K	**Glacier View**	3.09	56			Pn	09 11 05.3	-0.8	
K20K	**Telida**	3.22	352			Pn	09 11 08.1	+0.3	
SCM	**Sheep Creek Mo**	3.27	57			Pn	09 11 07.6	-0.7	
SCM	**Sheep Creek Mo**	3.27	57	IAML			09 11 48.5		
	comp=E,130nm,1.0s								
SCM				IAML			09 11 48.9		
	comp=N,101nm,0.7s								
HIN	**Hinchinbrook I**	3.30	83	Pn		Pn	09 11 10.1	+1.2	
HIN				IAML			09 11 48.0		
	comp=N,133nm,0.4s								
WAT7	**Susitna Watana**	3.36	36			Pn	09 11 09.4	-0.3	
WAT1	**Susitna Watana**	3.44	37			Pn	09 11 10.3	-0.4	
L16K	**Owhat River**	3.46	299			Pn	09 11 11.0	+0.1	
WAT6	**Susitna Watana**	3.54	45			Pn	09 11 11.4	-0.7	
KTH	**Kantishna Hill**	3.54	16			Pn	09 11 11.9	-0.1	
KTH	**Kantishna Hill**	3.54	16	IAML			09 11 52.9		
	comp=E,16nm,0.6s								
KTH				IAML			09 11 55.2		
	comp=N,14nm,1.2s								
O15K	**Ungalikthiuk R**	3.55	256			Pn	09 11 12.8	+0.7	
TRF	**Thorofare Moun**	3.55	21			Pn	09 11 12.3	+0.1	
TRF				IAML			09 11 56.6		
	comp=N,22nm,0.5s								
TRF				IAML			09 12 00.0		
	comp=E,22nm,0.7s								
K17K	**Iditarod**	3.56	318			Pn	09 11 12.3	+0.1	
K17K				IAML			09 11 54.6		
	comp=E,18nm,0.9s								
K17K				IAML			09 11 55.0		
	comp=N,24nm,1.3s								
SII	**Sitkinak Islan**	3.67	189	P		Pn	09 11 12.3	-1.4	
EYAK	**Cordova Ski Ar**	3.68	81			Pn	09 11 13.9	+0.2	
EYAK	**Cordova Ski Ar**	3.68	81	IAML			09 11 56.9		
	comp=E,61nm,0.4s								
EYAK				IAML			09 11 59.5		
	comp=N,50nm,0.5s								
EYAK	**Cordova Ski Ar**	3.68	81	P		Pn	09 11 13.7	0.0	
J18K	**Innoko River**	3.72	334			Pn	09 11 14.1	-0.1	
CHUM	**Lake Minchumin**	3.74	5			Pn	09 11 14.6	+0.1	
DIV	**Divide**	3.74	72			Pn	09 11 15.4	+0.8	
DIV				IAML			09 11 59.8		
	comp=E,73nm,0.4s								
KLU	**Klutina**	3.76	66			Pn	09 11 13.9	-0.9	
M15K	**Kasigluk River**	3.79	281			Pn	09 11 15.7	+0.5	
RND	**Reindeer**	3.82	30			Pn	09 11 15.4	-0.2	
RND	**Reindeer**	3.82	30	IAML			09 12 02.0		
	comp=E,15nm,0.6s								
RND				IAML			09 12 03.3		
	comp=N,16nm,0.3s								
M24K	**Tolsona, Glenn**	3.88	57			Pn	09 11 16.3	-0.1	
M24K	**Tolsona, Glenn**	3.88	57	IAML			09 12 17.7		
	comp=E,84nm,1.0s								
DHY	**Denali Highway**	3.99	41			Pn	09 11 17.8	-0.2	
DHY	**Denali Highway**	3.99	41	IAML			09 12 05.9		
	comp=E,27nm,0.4s								
DHY				IAML			09 12 06.8		
	comp=N,35nm,0.5s								
J20K	**Nowinta River**	4.04	354			Pn	09 11 19.2	+0.8	
BPAW	**Bear Paw Mtn.**	4.06	13			Pn	09 11 18.7	0.0	
BPAW				IAML			09 12 13.1		
	comp=N,8.7nm,1.5s								
MCK	**McKinley**	4.08	27			Pn	09 11 19.5	+0.5	
MCK				IAML			09 12 06.7		
	comp=E,11nm,0.4s								
MCK				IAML			09 12 08.3		
	comp=N,12nm,0.6s								
GOAT	**Goat Mountain**	4.18	81			Pn	09 11 19.6	-0.8	
RAGM	**Ragged Mountai**	4.21	83	Pn		Pn	09 11 21.6	+0.9	
BMRM	**Bremner River**	4.27	76			Pn	09 11 20.6	-1.0	
BMRM	**Bremner River**	4.27	76	IAML			09 12 10.6		
	comp=E,73nm,0.5s								
J17K	**VABM Dome**	4.29	321			Pn	09 11 21.4	-0.3	
J17K				IAML			09 12 29.4		
	comp=E,9.4nm,1.5s								
BWN	**Browne**	4.36	22	IAML			09 12 53.6		
	comp=E,33nm,1.3s								
BWN				IAML			09 13 09.0		
	comp=N,34nm,0.8s								
N25K	**Chitina, Valde**	4.40	67			Pn	09 11 22.7	-0.6	
HARP	**HAARP**	4.44	56			Pn	09 11 23.6	-0.1	
NICHA	**Nichawak Mount**	4.56	85			Pn	09 11 25.7	+0.3	
CHIR	**Chirikof Islan**	4.57	198			Pn	09 11 23.8	-1.7	
CHIR	**Chirikof Islan**	4.57	198	P		Pn	09 11 23.9	-1.5	
K15K	**Wolf Creek Mou**	4.59	301			Pn	09 11 26.6	+1.0	
K15K				IAML			09 14 00.2		
	comp=N,6.6nm,1.4s								
PAX	**Paxson**	4.60	49			Pn	09 11 25.9	0.0	
PAX	**Paxson**	4.60	49	IAML			09 12 18.6		
	comp=N,24nm,0.8s								
PAX				IAML			09 12 19.1		
	comp=E,20nm,0.6s								
WACK	**Wrangell Chich**	4.64	63			Pn	09 11 26.1	-0.4	
WASW	**Wrangell South**	4.69	64			Pn	09 11 26.9	-0.2	
BERG	**Berg Lake**	4.69	83	Pn		Pn	09 11 27.7	+0.6	
GLB	**Gilahina Butte**	4.73	70			Pn	09 11 27.2	-0.4	
GLB	**Gilahina Butte**	4.73	70	IAML			09 12 23.1		
	comp=E,37nm,0.6s								
GLB				IAML			09 12 24.9		
	comp=N,36nm,0.6s								
J16K	**Anvik River**	4.73	314			Pn	09 11 27.4	-0.1	
J16K	**Anvik River**	4.73	314	IAML			09 13 07.0		
	comp=N,8.9nm,1.1s								
J16K				IAML			09 14 44.1		
	comp=E,7.6nm,1.3s								
NEA2	**Nenana**	4.81	21			Pn	09 11 28.3	-0.3	
L14K	**Kuka Creek**	4.84	288			Pn	09 11 30.1	+1.2	
L14K	**Kuka Creek**	4.84	288	IAML			09 12 10.9		
	comp=N,11nm,1.5s								
L14K				IAML			09 13 13.4		
	comp=E,15nm,1.4s								
VRDI	**Verde Repeater**	4.86	73			Pn	09 11 29.1	-0.4	
VRDI	**Verde Repeater**	4.86	73	IAML			09 12 27.6		
	comp=E,28nm,0.5s								
WRH	**Wood River Hil**	4.91	26			Pn	09 11 29.3	-0.5	
WRH				IAML			09 12 46.2		
	comp=E,7.7nm,1.5s								
KHIT	**Khitrov Hills**	4.91	83			Pn	09 11 30.2	+0.1	
MLY	**Manley**	4.99	12			Pn	09 11 30.4	-0.7	
K24K	**Donnelly Dome**	5.02	40			Pn	09 11 32.6	+1.3	
K24K	**Donnelly Dome**	5.02	40	IAML			09 12 32.9		
	comp=N,31nm,0.3s								
K24K				IAML			09 12 34.0		
	comp=E,39nm,0.7s								
I21K	**Tanana**	5.05	5			Pn	09 11 31.6	-0.1	
CCB	**Clear Creek Bu**	5.12	27			Pn	09 11 32.1	-0.5	
CCB	**Clear Creek Bu**	5.12	27	IAML			09 12 40.3		
	comp=E,5.5nm,1.4s								
TGL	**Tana Glacier**	5.12	79	Pn		Pn	09 11 33.6	+0.8	
HDA	**Harding Lake**	5.13	31			Pn	09 11 32.4	-0.4	
HDA	**Harding Lake**	5.13	31	IAML			09 12 30.3		
	comp=E,17nm,0.6s								
HDA				IAML			09 12 32.4		
	comp=N,16nm,0.5s								
MENT	**Mentasta**	5.28	54			Pn	09 11 35.1	+0.4	
MENT				IAML			09 12 45.2		
	comp=N,16nm,0.6s								
MENT				IAML			09 12 51.9		
	comp=E,21nm,0.8s								
I23K	**Minto, Yukon-K**	5.28	17			Pn	09 11 34.2	-0.6	
I23K	**Minto, Yukon-K**	5.28	17	IAML			09 12 34.7		
	comp=N,4.4nm,1.4s								
RIDG	**Independent Ri**	5.29	44	IAML			09 12 51.0		
	comp=E,19nm,0.7s								
RIDG				IAML			09 12 53.9		
	comp=N,14nm,1.0s								
COLA	**College**	5.31	25			Pn	09 11 34.9	-0.2	
COLA				IAML			09 12 40.2		
	comp=N,15nm,0.4s								
COLA				IAML			09 12 48.2		
	comp=N,14nm,0.5s								
COLA	**College**	5.31	25	P		Pn	09 11 34.7	-0.4	
VNKR	**Veniaminof 5**	5.32	221			Pn	09 11 35.3	0.0	
PTPK	**Patty Peak**	5.33	74			Pn	09 11 35.9	+0.2	
KIAG	**Kiagna River**	5.36	77			Pn	09 11 35.8	-0.3	
M26K	**Nabesna, AK**	5.36	61	IAML			09 12 38.8		
	comp=E,33nm,0.5s								
BALM	**Baldy**	5.38	76			Pn	09 11 35.3	-0.9	
IL13	**Eielson Array**	5.39	29			Pn	09 11 35.8	-0.6	
H20K	**Anotleneega Mo**	5.40	352			Pn	09 11 36.7	+0.3	
IL31		5.44	29			Pn	09 11 36.5	-0.4	
ILAR	**Eielson Array**	5.44	29			Pn	09 11 36.6	-0.3	
ILAR	**Eielson Array**	5.44	29	P		Pn	09 11 36.4	-0.5	
	comp=E,26nm,0.5s,baz=216,slow=14,SNR=577								
ILAR				S		Sn	09 12 37.3	-1.3	
	comp=E,1.6nm,0.6s,baz=208,slow=19,SNR=5.4								
L26K	**Log Cabin Wild**	5.47	54			Pn	09 11 38.2	+0.8	
DOT	**Dot Lake**	5.51	47			Pn	09 11 38.2	+0.2	
J25K	**Salcha River,**	5.72	36			Pn	09 11 40.7	-0.1	
SCRK	**Sand Creek**	5.74	44			Pn	09 11 40.5	-0.5	
IMAR	**Indian Mountai**	5.84	357			Pn	09 11 42.8	+0.6	
H23K	**Yukon River**	5.90	14			Pn	09 11 43.5	+0.4	
TABL	**Table Mountain**	5.96	82			Pn	09 11 44.9	+0.8	
LOGN	**Logan Glacier**	6.02	79			Pn	09 11 45.5	+0.7	
L27K	**Beaver Creek,**	6.11	57			Pn	09 11 46.0	+0.1	
J26L	**Joseph Creek**	6.21	42			Pn	09 11 46.9	-0.4	
SDPT	**Sand Point**	6.24	222			Pn	09 11 46.5	-1.1	
SDPT	**Sand Point**	6.24	222	P		Pn	09 11 46.0	-1.6	
BVCY	**Beaver Creek**	6.32	64			Pn	09 11 49.9	+1.2	
YUK3	**Moose Creek**	6.37	70			Pn	09 11 50.6	+1.2	
CHNA	**Chernabura Isl**	6.39	216	P		Pn	09 11 48.0	-1.7	
CNBA	**Chernabura Isl**	6.40	216			Pn	09 11 47.5	-2.3	
O28M	**Mount Upton**	6.42	79			Pn	09 11 52.0	+1.7	
S12K	**Black Hills**	6.54	231			Pn	09 11 52.9	+1.2	
PNL	**Peninsula**	6.92	88	P		Pn	09 11 59.1	+2.4	
H25L	**Birch Creek**	6.94	25			Pn	09 11 56.6	-0.3	
G24K	**Hadweenzic Riv**	7.02	19			Pn	09 11 57.8	-0.1	
DT1	**Dutton Round H**	7.07	228			Pn	09 11 58.6	-0.1	
COLD	**Coldfoot**	7.20	9			Pn	09 12 00.4	+0.1	
M29M	**Somme Creek**	7.41	66			Pn	09 12 04.3	+1.0	
AKUT	**Akutan**	9.15	234	P		Pn	09 12 25.1	-1.4	
JIS	**Juneau Island**	9.78	93	P		Pn	09 12 38.0	+3.1	
SIT	**Sitka**	9.79	101	P		Pn	09 12 38.3	+3.4	
YKA	**Yellowknife Ar**	18.43	66	P		P	09 14 22.1	+0.4	
	comp=E,1.1nm,0.7s,baz=291,slow=13,SNR=4.1								
PETK	**Petropavlovsk-**	27.38	277	P		P	09 15 49.7	+0.4	
	comp=E,3.5nm,0.9s,baz=55,slow=7.8,SNR=2.6								
	comp=E,3.5nm,0.9s								
ZALV	**Zalesovo Beam**	57.20	323	P		P	09 19 49.3	+0.2	
	comp=E,0.7nm,0.5s,baz=42,slow=7.9,SNR=2.2								
	comp=E,0.7nm,0.5s								
BVAR	**Borovoye Array**	61.88	332	P		P	09 20 21.0	-0.3	
	comp=E,1.0nm,0.6s,baz=22,slow=5.1,SNR=4.4								
	comp=E,1.0nm,0.6s								

VAO ***11*** *09:19:58.4±1.7, 14°.95S×73°.59W, h10km, mb4.4*
NEIC ***11*** *09:20:15.7±2.5, 14°.83S±0°.08×72°.61W±0°.07, h94km±4km, mb4.2/11, Error ellipse: s-maj=13.9km s-min=7.5km az=214.0*
IDC ***11*** *09:20:16.3±1.4, 14°.27S×72°.33W, h96km±14km, mb3.8/4, mbtmp4.1/8, MS3.0/1, Error ellipse: s-maj=35.7km s-min=10.5km az=25.0*

ISC 11 09:20:16.3±0.7, 14°.79S±0°.08×72°.58W±0°.07, h114km, n50, σ1°68/48, mb4.1/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB18	**Visviri**	4.07	133		Pn	Pn	09 21 16.1	-1.0
AP01	**Chacalluta**	4.15	149			Pn	09 21 16.9	-0.9
PB12	**IPOC Station P**	4.37	151			Pn	09 21 20.0	-0.7
LPAZ	**La Paz**	4.54	110			Pn	09 21 26.1	+2.6
LPAZ	**La Paz**	4.54	110	P		Pn	09 21 24.9	+1.4
	18nm,0.4s,baz=305,slow=8.0,SNR=159							
LPAZ				S		Sn	09 22 15.7	+0.1
	11nm,0.7s,baz=295,slow=8.5,SNR=3.5							
LPAZ	**La Paz**	4.54	110	*eP*		Pn	09 21 21.1	-2.4
PB16	**IPOC Station P**	4.59	141			Pn	09 21 25.3	+1.1
NNA	**Nana**	5.00	303			Pn	09 21 29.1	-0.2
NNA	**Nana**	5.00	303	P		Pn	09 21 29.0	-0.2
	42nm,0.4s,baz=124,slow=12,SNR=24							
NNA				S		Sn	09 22 24.1	-1.9
	82nm,0.4s,baz=195,slow=20,SNR=8.7							
PB11	**IPOC Station P**	5.67	151			Pn	09 21 37.2	-1.2
GO01	**Chusmiza**	5.83	147			Pn	09 21 41.0	+0.2
TA01	**Diego Aracena**	6.18	159			Pn	09 21 43.1	-1.9
PB08	**IPOC Station P**	6.24	149			Pn	09 21 45.6	-0.7
PATCX	**Punta Patache**	6.42	159	Pn		Pn	09 21 46.1	-2.4
PB01	**IPOC Station P**	6.88	155			Pn	09 21 53.7	-0.9
PB02	**IPOC Station P**	6.97	159			Pn	09 21 54.1	-1.9
PB09	**IPOC Station P**	7.65	156			Pn	09 22 04.3	-0.9
PB03	**IPOC Station P**	7.70	160			Pn	09 22 03.7	-2.1
PB05	**IPOC Station P**	8.33	165	Pn		Pn	09 22 11.5	-2.8
PB10	**IPOC Station P**	8.88	168	Pn		Pn	09 22 19.3	-2.5
SIV	**San Ignacio**	11.16	98	P		Pn	09 22 51.3	-1.3
	2.8nm,0.5s,baz=289,slow=11,SNR=23							
SIV				S		Sn	09 24 50.2	-5.3
	2.4nm,0.7s,baz=274,slow=18,SNR=3.5							
VILB	**Vilhena**	12.16	83	*eP*		Pn	09 23 04.9	-0.9
AC02	**Maricunga**	12.41	166	Pn		Pn	09 23 09.0	-0.5
SALV	**Santo Antonio**	16.32	96	*eP*		Pn	09 23 59.0	+0.1
MACA	**Manacapuru-AM**	16.47	47			Pn	09 24 00.1	-0.5
MACA				IAmb		IAmb	09 24 03.1	
	comp=Z,13nm,0.7s							
MACA	**Manacapuru-AM**	16.47	47	*eP*		Pn	09 23 59.4

MTN Manton Dam 6.19 181 Pn 09 22 28.7 +0.8
SRPI Serui, Papua 6.87 47 P **Pn 09 22 37.7 +0.4**
comp=Z,1.5nmcomp=Z,5µmcomp=Z,172nm,0.5s
SANI Sanana 6.92 311 P **Pn 09 22 39.7 +1.8**
SANI Sanana 6.92 311 S **Sn 09 23 56.0 +0.7**
SANI Sanana 6.92 311 P **Pn 09 22 38.3 +0.4**
comp=Z,0.5nmcomp=Z,1µmcomp=Z,127nm,0.7s
BAKI Biak 7.26 42 P **Pn 09 22 45.2 +2.6**
SOEI Soe 7.56 245 Pn 09 22 47.3 +0.4
SOEI Soe 7.56 245 P **Pn 09 22 47.7 +0.9**
SOEI Soe 7.56 245 P **Pn 09 22 47.6 +0.8**
comp=Z,3.2nmcomp=Z,2µmcomp=Z,240nm,0.8s
WAMI Wamena 7.93 70 P Pn 09 22 56.7 +4.9
BATI Baumata 8.29 244 Pn Pn 09 22 51.7 -5.0
comp=Z,19nm,0.3s,baz=112,slow=11,SNR=6.1
BATI Sn **Sn 09 24 24.2 -4.7**
comp=Z,40nm,0.3s,baz=49,slow=20,SNR=9.4
comp=Z,17nm,0.3s
BATI Baumata 8.29 244 P **Pn 09 22 57.6 +0.9**
comp=Z,2µmcomp=Z,118nm,0.7s
SMPI Sarmi 8.76 59 P **Pn 09 23 03.9 +0.7**
comp=Z,74nm,0.6s
MMPI Merauke 9.26 102 P **Pn 09 23 12.6 +2.6**
KNRA Kununurra 9.32 195 P **Pn 09 23 10.1 -0.7**
comp=Z,162nm,0.7s
KNRA S **Sn 09 24 46.8 -7.4**
KNRA Kununurra 9.32 195 Pn 09 23 10.4 -0.4
EDFI Ende, Flores 9.69 257 P **Pn 09 23 17.5 +1.6**
comp=Z,33nm,0.8s
GENI Genyem 9.77 66 P **Pn 09 23 18.0 +1.1**
comp=Z,95nm,0.5s
LUWI Luwuk 10.09 303 P **Pn 09 23 21.6 +0.3**
comp=Z,4µmcomp=Z,64nm,0.5s
JAY Jayapura 10.29 67 Pn **Pn 09 23 23.8 -0.2**
comp=Z,6.4nm,0.3s,baz=255,slow=12,SNR=11
JAY Sn **Sn 09 25 14.5 -3.5**
comp=Z,5.0nm,0.3s,baz=195,slow=20,SNR=9.5
comp=Z,30nm,0.7s
JAY Jayapura 10.29 67 P **Pn 09 23 26.0 +1.9**
comp=Z,40nm,0.9s
BSSI Bau Bau, Buton 10.68 272 P **Pn 09 23 30.7 +1.3**
comp=Z,70nm,1.1s
APSI Ampana 11.11 300 P **Pn 09 23 37.2 +1.9**
comp=Z,1µmcomp=Z,65nm,0.8s
BKSI Bulukumba 11.12 276 P **Pn 09 23 36.9 +1.5**
comp=Z,35nm,0.7s
BNSI Bone 11.29 281 P **Pn 09 23 39.3 +1.6**
comp=Z,2µmcomp=Z,35nm,1.0s
KAPI Kappang 11.53 277 Pn Pn 09 23 32.6 -8.4
comp=Z,1.9nm,0.3s,baz=90,slow=8.1,SNR=1.7
KAPI LR LR 09 27 48.4
comp=Z,263nm,22.0s,baz=112,slow=37
comp=Z,6.3nm,0.4s
KAPI Kappang 11.53 277⇑*i*P **Pn 09 23 39.2 -1.8**
MRSI Marisa 11.64 307 P **Pn 09 23 43.2 +0.6**
comp=Z,1µmcomp=Z,60nm,1.0s
WBSI Waikabubak, Su 12.10 255 P **Pn 09 23 48.6 -0.2**
comp=Z,89nm,0.8s
FITZ Fitzroy Crossi 12.64 205 P **Pn 09 23 52.6 -3.6**
FITZ Fitzroy Crossi 12.64 205 Pn 09 23 53.3 -2.9
FITZ Fitzroy Crossi 12.64 205 Pn **Pn 09 23 53.0 -3.3**
comp=Z,14nm,0.3s,baz=29,slow=15,SNR=186
FITZ Sn Sn 09 26 05.3 -10
comp=Z,14nm,0.3s,baz=87,slow=17,SNR=11
FITZ LR LR 09 29 48.1
comp=Z,184nm,18.3s,baz=20,slow=42
comp=Z,41nm,0.4s
FITZ Fitzroy Crossi 12.64 205 P **Pn 09 23 53.4 -2.8**
TOLI2 Tolitoli 12.95 306 Pn 09 23 57.6 -2.8
TOLI2 Tolitoli 12.95 306 P **Pn 09 24 01.1 +0.7**
MPSI Mapaga 13.25 301 P **Pn 09 24 05.0 +0.5**
comp=Z,20nm,0.8s
WB0 Warramunga Arr 13.43 167 Pn **Pn 09 24 03.7 -3.2**
PLAI Plampang 13.51 260 P **Pn 09 24 05.5 -2.5**
PLAI Plampang 13.51 260 P **Pn 09 24 05.4 -2.5**
comp=Z,658nmcomp=Z,47nm,0.8s
WRAB Tennant Creek 13.58 167 Pn 09 24 05.2 -3.7
WRAB Tennant Creek 13.58 167 P **Pn 09 24 05.8 -3.1**
WRAB Tennant Creek 13.58 167 P **Pn 09 24 05.2 -3.7**
WRA Warramunga Arr 13.59 167 Pn Pn 09 24 03.7 -5.3
WRA Warramunga Arr 13.59 167 Pn **Pn 09 24 05.3 -3.6**
comp=Z,6.2nm,0.3s,baz=341,slow=13,SNR=108
WRA Sn Sn 09 26 25.2 -13
comp=Z,10nm,0.3s,baz=345,slow=23,SNR=10
WRA Warramunga Arr 13.59 167 P Pn 09 24 03.7 -5.3
COEN Coen 13.83 123 P **Pn 09 24 11.4 -0.8**
comp=Z,45nm,0.7s
COEN Coen 13.83 123 Pn 09 24 11.4 -0.8
COEN Coen 13.83 123 P **Pn 09 24 10.2 -2.0**
TWSI Taliwang, Sumb 14.37 261 P **Pn 09 24 18.0 -1.5**
comp=Z,28nm,0.8s
PMG Port Moresby 16.02 101 Pn **P 09 24 42.8 -0.2**
comp=Z,121nm,0.8s,baz=279,slow=7.7,SNR=38
PMG Sn **Sn 09 27 29.3 -8.1**
comp=Z,2.1nm,0.3s,baz=270,slow=19,SNR=5.7
PMG LR LR 09 31 49.9
comp=Z,111nm,18.9s,baz=335,slow=40
PMG Port Moresby 16.02 101 P **Pn 09 24 38.3 -2.3**
PMG Port Moresby 16.02 101 P **Pn 09 24 38.5 -2.1**
PMG Port Moresby 16.02 101⇓*eP* **Pn 09 24 41.0 +0.4**
PMG pmax pmax
comp=Z,2.0nm,0.3s
QIS Mount Isa 16.06 150 P **Pn 09 24 39.6 -1.5**
comp=Z,24nm,0.5s
QIS Mount Isa 16.06 150 P **Pn 09 24 39.0 -2.1**
BBKI Banjar Baru 16.62 280 P **P 09 24 50.6 +0.9**
JAGI Jajag, Banyuwa 17.03 263 P **Pn 09 24 51.6 -1.6**
JAGI Jajag, Banyuwa 17.03 263 P **Pn 09 24 51.9 -1.4**
JAGI Jajag, Banyuwa 17.03 263 P **Pn 09 24 50.5 -2.8**
comp=Z,24nm,0.6s
AS31 Alice Springs 17.14 172 Pn 09 24 52.6 -2.1
ASAR Alice Springs 17.14 172 Pn 09 24 53.1 -1.5
ASAR Alice Springs 17.14 172 P **Pn 09 24 52.6 -2.0**
comp=Z,13nm,0.5s,baz=346,slow=10.0,SNR=160
ASAR S Sn 09 27 51.6 -13
comp=Z,22nm,0.8s,baz=356,slow=27,SNR=9.8
ASAR Alice Springs 17.14 172 P **Pn 09 24 53.2 -1.5**
KMMI Kalianget 17.14 268 P **P 09 24 55.7 +0.2**
comp=Z,70nm,1.0s
MTKI Muara Teweh, K 17.24 288 P **P 09 24 56.8 +0.2**
comp=Z,118nm,0.8s
MYLDM Lahad Datu 17.29 312 P **Pn 09 24 56.5 +0.1**
BLJI Banyuglugur 17.53 265 P **Pn 09 24 59.4 0.0**
comp=Z,2µmcomp=Z,139nm,0.7s
MBWA Marble Bar 18.24 216 P **P 09 25 05.9 -1.6**
comp=Z,32nm,0.8s
MBWA Marble Bar 18.24 216 P 09 25 06.2 -1.4
MBWA Marble Bar 18.24 216 P **P 09 25 06.7 -0.9**
MBWA IAmb IAmb 09 25 16.6
comp=Z,22nm,0.8s
MBWA Marble Bar 18.24 216 P **P 09 25 05.7 -1.9**
PSAC2 Pilbara Seismi 18.46 215 P **P 09 25 09.4 -0.5**
comp=Z,24nm,0.7s
PSAC1 Pilbara Seismi 18.49 216 P **P 09 25 09.8 -0.5**
comp=Z,43nm,0.8s
PSA00 Pilbara Seismi 18.50 215 P **P 09 25 10.2 -0.1**
comp=Z,30nm,0.8s
PSA00 Pilbara Seismi 18.50 215 P **P 09 25 09.4 -1.0**
PSA00 Pilbara Seismi 18.50 215 P 09 25 08.8 -1.5
PSA00 IAmb IAmb 09 25 11.7
comp=Z,8.4nm,1.1s
PSA00 Pilbara Seismi 18.50 215 P **P 09 25 09.6 -0.8**
PSAB3 Pilbara Seismi 18.51 215 P **P 09 25 10.0 -0.4**
comp=Z,34nm,0.7s
WRKA Warakurna 18.53 188 P **P 09 25 09.7 -1.0**
comp=Z,21nm,0.5s
PCJI Pacitan 19.95 264 P **P 09 25 25.0 -1.2**
comp=Z,50nm,0.8s
SBUM Sibu 21.01 295 P 09 25 36.9 -0.8
SBUM IAmb IAmb 09 25 39.6
comp=Z,56nm,1.2s
SBUM Sibu 21.01 295 P **P 09 25 37.3 -0.4**
KPJI Karang Pucung 22.14 267 P **P 09 25 49.5 -0.4**
comp=Z,51nm,0.7s
KSM Kuching 22.38 290 P **P 09 25 50.6 -1.8**
KSM IAmb IAmb 09 25 52.6
comp=Z,22nm,0.6s
MEEK Meekatharra 23.25 210 P **P 09 25 58.9 -2.4**
QLP Quilpie 23.40 150 P **P 09 26 04.9 +2.2**
comp=Z,48nm,0.7s
QLP Quilpie 23.40 150 P **P 09 26 01.3 -1.4**
BBJI Bungbulang 23.41 267 P **P 09 26 01.1 -1.9**
CNJI Cibinong 23.93 267 P **P 09 26 05.4 -2.2**
FORT Forrest 24.22 187 P **P 09 26 09.5 -0.6**
FORT IAmb IAmb 09 26 41.0
comp=Z,25nm,0.8s

KMBL Kambalda 26.13 198 P **P 09 26 29.1 +1.6**
comp=Z,19nm,1.0s
BBOO Buckleboo 26.45 171 P **P 09 26 29.9 -0.4**
STKA Stephens Creek 26.93 160 IAmb IAmb 09 27 16.2
comp=Z,61nm,1.1s
STKA Stephens Creek 26.93 160 P **P 09 26 36.3 +1.6**
comp=Z,2.1nm,0.4s,baz=334,slow=9.3,SNR=15
STKA S S 09 31 22.4 +15
comp=Z,2.0nm,0.7s,baz=341,slow=18,SNR=1.4
STKA LR LR 09 39 03.1
comp=Z,98nm,19.5s,baz=8.2,slow=40
comp=Z,2.1nm,0.4s
STKA Stephens Creek 26.93 160 P **P 09 26 32.7 -2.0**
STKA Stephens Creek 26.93 160⇑*iP* **P 09 26 36.9 +2.2**
MDSI Maura Dua 27.00 273 P **P 09 26 35.6 +0.1**
BLDU Ballidu 27.49 208 P **P 09 26 38.4 -1.3**
HTT Hallett 27.62 166 P **P 09 26 38.1 -2.8**
KLBR Kellerberrin 27.86 205 P **P 09 26 44.7 +1.7**
comp=Z,78nm,0.8s
KLBR Kellerberrin 27.86 205 P **P 09 26 42.3 -0.7**
CMSA Cobar Meteorol 28.24 153 P **P 09 26 43.4 -3.0**
HNR Honiara 28.57 98 LR LR 09 38 33.2
comp=Z,81nm,22.0s,baz=329,slow=37
MUN Mundaring 28.87 207 P **P 09 26 49.6 -2.3**
NWAO Narrogin (SRO) 29.23 205 LR LR 09 39 25.2
comp=Z,118nm,18.2s,baz=358,slow=38
NWAO Narrogin (SRO) 29.23 205 P **P 09 26 53.1 -2.1**
KULM Kulim 32.73 290 P **P 09 27 24.4 -1.9**
JOW Kunigami 33.38 355 LR LR 09 41 04.1
comp=Z,50nm,18.9s,baz=117,slow=36
RPSI Rantau Prapat 33.55 285 P 09 27 34.0 +0.7
RPSI IAmb IAmb 09 27 35.5
comp=Z,30nm,0.8s
PSI Prapat 33.58 285 LR LR 09 44 38.8
comp=Z,140nm,18.0s,baz=100,slow=43
PSI Prapat 33.58 285 P **P 09 27 34.1 +0.3**
PSI pmax pmax
comp=Z,30nm,0.8s
GSI Gunungsitoli 34.50 282 P **P 09 27 42.3 +0.7**
comp=Z,53nm,0.9s
MLSI Meulaboh, Aceh 36.41 286 P **P 09 27 58.0 0.0**
JNU Nakatsue 39.52 360 LR LR 09 47 52.7
comp=Z,37nm,18.0s,baz=164,slow=41
NJ2 Nanjing 40.23 344⇓*eP* **P 09 28 32.0 +2.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
WHN Wuhan 40.34 337 P **P 09 28 31.5 +0.8**
WHN pmax pmax
comp=Z,50nm,0.6s
CM31 Chiang Mai Arr 40.44 309 P **P 09 28 31.4 -0.3**
CM31 IAmb IAmb 09 28 32.4
comp=Z,22nm,0.9s
CMAR Chiang Mai Arr 40.44 309 P 09 28 31.2 -0.5
CMAR Chiang Mai Arr 40.44 309 P **P 09 28 30.1 -1.7**
comp=Z,11nm,0.8s,baz=125,slow=7.6,SNR=63
CMAR PcP **PcP 09 30 35.2 +1.4**
comp=Z,1.9nm,0.3s,baz=142,slow=3.5,SNR=7.8
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 40.44 309 *i* P **P 09 28 31.6 -0.2**
CMAR pmax pmax
comp=Z,9.0nm,0.6s
CHTO Chiang Mai 40.64 309 P **P 09 28 32.6 -0.8**
CHTO IAmb IAmb 09 28 34.4
comp=Z,29nm,0.8s
CHTO Chiang Mai 40.64 309 P **P 09 28 32.6 -0.8**
CHTO pmax pmax
comp=Z,29nm,0.9s
KMI Kunming 42.00 320 P **P 09 28 44.8 0.0**
KMI pmax pmax
comp=Z,15nm,0.7s
MJAR Matsushiro Arr 43.43 8 P **P 09 28 55.0 -0.9**
comp=Z,1.6nm,0.7s,baz=193,slow=9.0,SNR=4.5
comp=Z,1.6nm,0.7s
MJAR Matsushiro Arr 43.43 8 P **P 09 28 55.0 -0.9**
MJAR pmax pmax
comp=Z,19nm,1.7s
MAJO Matsushiro 43.43 8⇑*eP* **P 09 28 55.8 -0.1**
MAJO pmax pmax
comp=Z,5.0nm,0.6s
PZH PanZhiHua 43.61 320 P **P 09 29 00.6 +3.0**
KSRS Korea Array 43.95 356 P **P 09 28 59.7 -0.3**
comp=Z,0.7nm,0.5s,baz=173,slow=8.5,SNR=2.3
KSRS LR LR 09 47 32.0
comp=Z,12µm,20.4s,baz=160,slow=37
comp=Z,0.7nm,0.5s
LYN LuoYang 44.62 338 P **P 09 29 05.5 0.0**
LYN pmax pmax
comp=Z,22nm,0.7s
XAN Xi'an 45.62 334⇑P **P 09 29 12.4 -1.1**
XAN pP pP 09 29 21.2 -6.1
XAN S **S 09 35 54.5 +2.7**
XAN pmax pmax
comp=Z,29nm,0.6s
XAN pmax pmax
comp=Z,200nm,6.1s
BJI Beijing 48.46 345 P **P 09 29 36.2 +0.8**
BJI pmax pmax
comp=Z,5.0nm,0.5s
MSHR Mys Shultsa 48.96 360*ceP* **P 09 29 40.2 +1.0**
MSHR pmax pmax
comp=Z,43nm,2.5s
LZDM Lanzhou Array 49.63 331 P **P 09 29 45.1 +0.3**
comp=Z,4.5nm,0.5s,baz=141,slow=9.3,SNR=7.6
comp=Z,4.5nm,0.5s
LZH Lanzhou 49.66 331*eP* **P 09 29 45.8 +0.9**
LZH sP pP 09 30 01.5 +2.3
LZH pmax pmax
comp=Z,19nm,1.2s
SHL Shillong 49.85 311 IAmb IAmb 09 29 46.6
comp=Z,29nm,1.0s
HHC Hu-ho-hao-te 50.58 341*eP* **P 09 29 56.0 +4.3**
HHC pmax pmax
comp=Z,7.0nm,0.5s
HHC pmax pmax
comp=Z,26nm,5.1s
BTO Baotou 50.88 339*eP* **P 09 29 56.5 +2.5**
BTO sP **sP 09 30 13.6 -1.0**
BTO PP **PP 09 31 48.5 -2.5**
BTO S **S 09 37 12.1 +6.1**
BTO SS **SS 09 40 33.6 -8.1**
BTO pmax pmax
comp=Z,15nm,0.6s
BTO pmax pmax
comp=Z,280nm,5.8s
BTO LR LR
comp=Z,300nm,7.6s
BTO LR LR
comp=Z,180nm,5.5s
BTO LR LR
comp=Z,270nm,6.5s
ASAJ Asahikawa 51.53 10 LR LR 09 50 31.2
comp=Z,55nm,21.4s,baz=170,slow=35
XLT XiLinHaoTe 52.12 346*eP* **P 09 30 00.9 -2.2**
XLT sP pP 09 30 19.0 +1.6
XLT pmax pmax
comp=Z,10.0nm,0.8s
LSA Lhasa 52.78 315 IAmb IAmb 09 30 09.9
comp=Z,21nm,0.7s
LSA Lhasa 52.78 315 P **P 09 30 05.2 -3.5**
LSA pmax pmax
comp=Z,29nm,0.8s
GTA Gaotai 54.24 330 P **P 09 30 19.9 +1.0**
GTA pP pP 09 30 29.8 -3.6
GTA PcP **PcP 09 31 24.5 +2.0**
GTA pmax pmax
comp=Z,17nm,0.9s
GOMU GeErMu 54.60 324 P **P 09 30 22.1 +0.3**
GOMU pP pP 09 30 32.6 -3.7
GOMU S **S 09 38 03.1 +5.8**
HILR Hailar Array B 56.83 351 P **P 09 30 36.2 -0.9**
comp=Z,0.8nm,0.3s,baz=150,slow=12,SNR=2.6
comp=Z,0.8nm,0.3s
TYV Tymovskoe 58.09 9*eP* **P 09 30 41.6 -4.3**
TYV pmax pmax
comp=Z,100nm,2.9s
TYV pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 58.29 341 P **P 09 30 47.9 +0.3**
ULN IAmb IAmb 09 30 49.4
comp=Z,17nm,1.4s
ULN Ulaanbaatar 58.29 341⇓*iP* **P 09 30 48.3 +0.7**
ULN pmax pmax
comp=Z,4.0nm,0.5s
SONM Songino Array 58.48 341 P **P 09 30 50.2 +1.3**
SONM IAmb IAmb 09 30 50.9
comp=Z,10nm,1.4s

SONM Songino Array 58.48 341 P **P 09 30 49.4 +0.5**
comp=Z,2.7nm,0.5s,baz=152,slow=6.5,SNR=16
comp=Z,2.7nm,0.5s
ZEA Zeya 60.22 357*eP* **P 09 31 02.1 +1.5**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
CASY Casey 61.27 189 P **P 09 31 10.1 +2.5**
CASY IAmb IAmb 09 31 10.7
comp=Z,11nm,1.4s
PETK Petropavlovsk- 63.59 17 P **P 09 31 25.6 +2.4**
comp=Z,1.7nm,0.6s,baz=212,slow=7.0,SNR=1.7
comp=Z,1.7nm,0.6s
WMQ Urumqi 63.75 326*eP* **P 09 31 27.4 +2.8**
DGZ Jazzator, Alta 67.76 331⇑*iP* **P 09 31 50.8 +0.4**
DGZ pmax pmax
comp=Z,6.0nm,0.6s
MA2 Magadan 67.80 11 LR LR 10 01 47.3
comp=Z,27nm,18.3s,baz=12,slow=36
YAK Yakutsk 68.46 359 P 09 31 55.2 +0.9
YAK Yakutsk 68.46 359*eP* **P 09 31 54.7 +0.4**
YAK *e**PP **pP 09 32 04.8 -4.5**
YAK *e* 09 32 19.2
YAK *e* 09 34 25.3
YAK *e*PPP PPP 09 36 05.1
YAK *e*S **S 09 40 54.2 +3.1**
YAK *e**SS **pS 09 41 11.7 +3.3**
YAK *e*SS **SS 09 45 18.9 +2.8**
YAK pmax pmax
comp=Z,41nm,0.9s
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,158nm,5.3s
YAK pmax pmax
comp=N,99nm,4.1s
YAK pmax pmax
comp=E,165nm,4.5s
YAK smax smax
comp=N,98nm,3.5s
YAK smax smax
comp=E,46nm,2.8s
KSH Kashi 68.57 317 P **P 09 31 57.2 +1.5**
KSH pmax pmax
comp=E,19nm,0.9s
MK31 Makanchi Array 68.58 326*c iP* **P 09 31 55.9 +0.4**
MKAR Makanchi Array 68.58 326 P 09 31 56.1 +0.6
MKAR Makanchi Array 68.58 326 P **P 09 31 55.9 +0.5**
comp=E,14nm,0.6s,baz=124,slow=7.8,SNR=93
comp=E,14nm,0.6s
MKAR Makanchi Array 68.58 326 P **P 09 31 56.1 +0.6**
MAKZ Makanchi 68.77 326 P 09 31 56.1 -0.4
MAKZ IAmb IAmb 09 31 58.1
comp=Z,20nm,1.0s
MAKZ Makanchi 68.77 326 P **P 09 31 56.2 -0.4**
MAKZ pmax pmax
comp=Z,20nm,1.0s
AAK Ala-Archa 71.05 319 P 09 32 12.0 +1.1
AAK IAmb IAmb 09 32 12.9
comp=Z,22nm,1.2s
AAK Ala-Archa 71.05 319⇓*iP* **P 09 32 11.6 +0.7**
AAK pmax pmax
comp=Z,10.0nm,0.9s
OHH Osh 71.20 317 P **P 09 32 11.1 -0.7**
KBL Kabul 71.46 310 P 09 32 13.3 -0.3
KBL IAmb IAmb 09 32 15.1
comp=Z,17nm,0.8s
KBL Kabul 71.46 310 P **P 09 32 13.3 -0.3**
KBL pmax pmax
comp=Z,17nm,0.9s
ZAA0 Zalesovo Array 71.79 333 IAmb IAmb 09 32 16.1
comp=Z,5.4nm,0.7s
ZALV Zalesovo Beam 71.79 333 P **P 09 32 14.2 -0.6**
comp=Z,4.1nm,0.5s,baz=130,slow=5.4,SNR=20
comp=Z,4.1nm,0.5s
ARK Arkit 72.33 318 P **P 09 32 19.5 +1.0**
VNDA Vanda 72.68 173 P 09 32 22.0 +2.1
VNDA Vanda 72.68 173 P **P 09 32 21.9 +2.1**
comp=Z,1.6nm,0.5s,baz=317,slow=9.2,SNR=16
VNDA LR LR 10 02 18.6
comp=Z,31nm,18.9s,baz=344,slow=34
comp=Z,1.6nm,0.5s
VNDA Vanda 72.68 173 P **P 09 32 22.0 +2.1**
VNDA pmax pmax
comp=Z,3.0nm,1.1s
TRKS Terek-Say 72.76 317 P **P 09 32 21.7 +0.5**
KURBB Kurchatov Arra 72.83 328 P **P 09 32 21.3 +0.2**
comp=Z,2.2nm,0.4s,baz=128,slow=5.0,SNR=18
comp=Z,2.2nm,0.4s
KURK Kurchatov 72.83 328 P 09 32 21.2 0.0
KURK IAmb IAmb 09 33 13.1
comp=Z,7.9nm,0.8s
KURK Kurchatov 72.83 328 P **P 09 32 21.2 0.0**
KURK pmax pmax
comp=Z,8.0nm,0.8s
KK31 Karatay Array 73.86 318 IAmb IAmb 09 32 29.0
comp=Z,10nm,1.1s
KKAR Karatay Array 73.86 318 P 09 32 27.6 +0.2
KKAR Karatay Array 73.86 318 P **P 09 32 27.6 +0.2**
MAW Mawson 75.75 202 P **P 09 32 39.7 +1.9**
comp=Z,4.5nm,0.5s,baz=69,slow=9.6,SNR=19
MAW LR LR 10 04 08.9
comp=Z,24nm,19.4s,baz=55,slow=34
comp=Z,4.5nm,0.5s
HRA Herat 76.69 308 P **P 09 32 43.5 -0.6**
HRA IAmb IAmb 09 32 45.4
comp=Z,12nm,1.2s
TIXI Tiksi 78.12 359 P 09 32 50.6 -0.4
TIXI IAmb IAmb 09 32 52.2
comp=Z,6.4nm,0.8s
TIXI Tiksi 78.12 359⇓*iP* **P 09 32 50.8 -0.2**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
BVAR Borovoye Array 78.40 327 P **P 09 32 52.9 0.0**
comp=Z,2.0nm,0.4s,baz=123,slow=5.3,SNR=16
comp=Z,2.0nm,0.4s
BORK Borovoye 78.44 327⇑*iP* **P 09 32 53.2 0.0**
BORK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 81.49 346 IAmb IAmb 09 33 10.5
comp=Z,7.4nm,0.8s
NRIK Noril'sk 81.49 346 P **P 09 33 09.8 +0.5**
comp=Z,5.4nm,0.6s,baz=127,slow=7.4,SNR=17
comp=Z,5.4nm,0.6s
NRIK Noril'sk 81.49 346⇑*iP* **P 09 33 09.9 +0.6**
NRIK pmax pmax
comp=Z,8.0nm,0.8s
VOI Vohitsoka 82.42 249 P **P 09 33 16.1 +0.7**
ABKAR Akbulak array 82.97 321 P 09 33 17.5 0.0
QSPA South Pole Qui 83.36 180 P **P 09 33 23.8 +4.5**
QSPA IAmb IAmb 09 33 24.9
comp=Z,9.5nm,0.9s
QSPA South Pole Qui 83.36 180 P **P 09 33 23.4 +4.1**
comp=Z,6.2nm,0.7s,baz=308,slow=1.9,SNR=45
comp=Z,6.2nm,0.7s
SYO Syowa Base 84.46 201⇓*iP* **P 09 33 26.8 +2.1**
SYO Syowa Base 84.46 201⇓*ePcP* **PcP 09 33 30.6 +2.4**
TAOE Nuku Hiva Isla 87.64 99 *e*LR LR 10 01 30.2
comp=Z,39nm,24.6s
KDAK Kodiak Island 88.26 31 LR LR 10 10 39.1
comp=Z,38nm,19.8s,baz=1.8,slow=34
RAYN Ar Rayn 88.71 294 P 09 33 46.7 +0.2
RAYN Ar Rayn 88.71 294 P **P 09 33 46.7 +0.2**
RAYN pmax pmax
comp=Z,12nm,0.7s
KIRV Kirov 91.34 329⇓*iP* **P 09 33 59.9 +2.1**
ILAR Eielson Array 92.48 25 P **P 09 34 01.8 -1.3**
comp=Z,0.3nm,0.8s,baz=263,slow=5.2,SNR=4.5
KMBO Kilima Mbogo 93.82 268 *i* P **P 09 34 12.6 +1.9**
KMBO pmax pmax
comp=Z,4.0nm,0.5s
TROLL Troll, Antarti 94.83 194⇓P **P 09 34 15.8 +1.8**
comp=Z,143nm,0.6s
SNAA Sanae 96.31 193⇓P **P 09 34 21.0 +0.3**
comp=Z,30nm,0.6s
SNAA Sanae 96.31 193 IAmb IAmb 09 34 22.9
comp=Z,18nm,2.0s
SNAA Sanae 96.31 193 P **P 09 34 22.4 +1.8**
comp=Z,1.5nm,0.7s,baz=130,slow=16,SNR=6.1
SNAA LR LR 10 18 18.8
comp=Z,41nm,18.2s,baz=22,slow=36
comp=Z,1.5nm,0.7s
KLMR Klimovskoe 96.57 330*eP* **P 09 34 18.9 -2.9**
KLMR pmax pmax
comp=Z,20nm,1.6s

ASF	**Jabal al Asfar**	**97.14**	**302**	LR	LR	10 26 01.7	
	comp=Z,30nm,18.1s,baz=342,slow=40						
OBN	**Obninsk**	**98.05**	**325**⇑	*eP*	**P**	**09 34 26.9**	**-1.7**
OBN				*e*		09 38 35.1	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EIL	**Elat**	**98.68**	**299**	LR	LR	10 25 34.9	
	comp=Z,19nm,18.1s,baz=351,slow=40						
ARCES	**ARCESS Array B**	**101.65**	**340**	P		**Pdif**	**09 34 43.7**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=83,slow=4.0,SNR=6.2						
MNK	**Minsk**	**103.11**	**324**	*i* P		**Pdif**	**09 34 46.8**	**-4.4**
	comp=E,12nm,0.8s						
MNK				*i* P		**Pdif**	**09 34 46.8**	**-4.4**
	comp=N,9.0nm,0.7s						
MNK				*i* P		**Pdif**	**09 34 46.8**	**-4.4**
	comp=Z,8.0nm,0.8s,baz=83						
MNK				*i* PP		**PP**	**09 39 01.6**	**-4.8**
MNK				*i* PPP		PPP	09 41 12.5	
MNK				*i* S		**Sdif**	**09 46 29.9**	**-3.0**
MNK				*i* SS		**SS**	**09 53 42.0**	**-2.1**
MNK				*i* SSS		SSS	09 57 37.1	
MNK				*i* LQ		LQ	10 15 12.0	
MNK				*i* LR		LR	10 18 32.1	
MNK				*i* LRM		MLR	10 19 32.9	
	comp=E,459nm,20.7s						
MNK				*i* LRM		MLR	10 19 43.6	
	comp=N,599nm,24.3s						
MNK				*i* LRM		MLR	10 21 03.4	
	comp=Z,83nm,10.5s						
MNK	**Minsk**	**103.11**	**324**	*i* P		**Pdif**	**09 34 46.8**	**-4.4**
MNK				*i*			09 39 01.6	
MNK				*i* S		**Sdif**	**09 46 29.8**	**-3.0**
MNK				*i* SS		**SS**	**09 53 42.0**	**-2.1**
MNK				*i* SSS		SSS	09 57 37.0	
MNK				pmax	pmax			
	comp=N,9.0nm,0.7s						
MNK				pmax	pmax			
	comp=E,12nm,0.8s						
MNK				pmax	pmax			
	comp=Z,8.0nm,0.8s						
MNK				MLR	MLR			
	comp=E,459nm,21.0s						
MNK				MLR	MLR			
	comp=N,599nm,24.0s						
MNK				MLR	MLR			
	comp=Z,83nm,11.0s						
GERES	**GERESS Array B**	**112.91**	**321**	PKiKP		**PKiKP**	**09 39 29.6**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=64,slow=2.3,SNR=4.0						
PDAR	**Pinedale Array**	**115.75**	**46**	PKP		**PKPdf**	**09 39 36.7**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=300,slow=4.8,SNR=2.1						
EKA	**Eskdalemuir Ar**	**119.41**	**332**	PKP		**PKiKP**	**09 39 42.1**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=32,slow=3.4,SNR=3.9						
TXAR	**Lajitas Array**	**123.69**	**59**	PKP		**PKiKP**	**09 39 51.1**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=285,slow=2.2,SNR=5.5						
PLCA	**Paso Flores**	**128.80**	**159**	PKP		**PKiKP**	**09 40 02.3**	**+1.6**
	comp=Z,1.3nm,0.9s,baz=203,slow=7.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**129.93**	**282**	PKP		**PKiKP**	**09 40 04.1**	**+0.5**
	comp=Z,2.3nm,0.3s,baz=68,slow=5.1,SNR=1.5						
DBIC	**Dimbokro**	**136.39**	**273**	PKP		**PKiKP**	**09 40 16.3**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=96,slow=0.7,SNR=3.0						
MCWV	**Mont Chateau**	**136.85**	**36**			**PKPdf**	**09 40 15.5**	**+0.3**
CPUP	**Villa Florida**	**146.21**	**166**	PKPbc		**PKPab**	**09 40 34.9**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=147,slow=1.0,SNR=15						
LPAZ	**La Paz**	**150.25**	**140**	PKP		**PKPdf**	**09 40 41.6**	**+1.8**
	comp=Z,4.9nm,0.4s,baz=259,slow=0.8,SNR=5.0						
LPAZ				PKPbc		**PKiKP**	**09 40 47.7**	**+1.9**
	comp=Z,4.9nm,0.4s,baz=232,slow=0.9,SNR=46						

IDC ***11*** *09:32:28.1±0.8, 15°.64S×176°.08W, h147km±7km, mb3.5/9, mbtmp3.9/10, Error ellipse: s-maj=35.8km s-min=15.2km az=144.0*

ISC 11 09:32:28.3±0.7,**15°.6S**±0°.2×**176°.1W**±0°.2,**h150**km,**n11,** σ0**89**/16,**mb3.6**/9,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**17.74**	**246**	P	**Pn**	**09 36 26.2**	**0.0**
	5.9nm,1.0s,baz=60,slow=20,SNR=2.3						
STKA	**Stephens Creek**	**41.70**	**239**	P	**P**	**09 40 02.8**	**+0.3**
	1.2nm,0.5s,baz=85,slow=12,SNR=3.8						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**47.29**	**257**	P	**P**	**09 40 46.1**	**-0.9**
	1.3nm,0.8s,baz=94,slow=7.9,SNR=27						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**47.59**	**252**	P	**P**	**09 40 49.2**	**-0.2**
	3.2nm,0.4s,baz=92,slow=7.9,SNR=34						
ASAR				PcP	**PcP**	**09 42 17.0**	**+0.2**
	0.4nm,0.6s,baz=96,slow=3.6,SNR=2.7						
	3.2nm,0.4s						
VNDA	**Vanda**	**62.89**	**185**	P	**P**	**09 42 38.5**	**+0.5**
	0.3nm,0.6s,baz=66,slow=1.1,SNR=1.8						
	0.3nm,0.6s						
PETK	**Petropavlovsk-**	**72.10**	**344**	P	**P**	**09 43 37.3**	**+1.3**
	5.1nm,0.9s,baz=160,slow=5.4,SNR=3.1						
	5.1nm,0.9s						
NVAR	**Mina Array Bea**	**76.24**	**43**	P	**P**	**09 44 02.0**	**+1.4**
	0.5nm,0.8s,baz=244,slow=9.0,SNR=3.0						
NVAR				pP	**pwP**	**09 44 38.4**	**-1.0**
	0.5nm,0.8s,baz=242,slow=4.1,SNR=1.9						
	0.5nm,0.8s						
TXAR	**Lajitas Array**	**82.89**	**57**	P	**P**	**09 44 36.6**	**0.0**
	0.5nm,0.9s,baz=241,slow=4.9,SNR=5.7						
TXAR				pP	**pP**	**09 45 12.4**	**-1.2**
	0.2nm,0.7s,baz=243,slow=5.0,SNR=3.3						
	0.5nm,0.9s						
ILAR	**Eielson Array**	**83.19**	**12**	P	**P**	**09 44 37.1**	**-0.1**
	0.9nm,0.7s,baz=210,slow=5.1,SNR=12						
ILAR				pP	**pP**	**09 45 14.7**	**+0.5**
	0.1nm,0.4s,baz=200,slow=4.7,SNR=1.3						
	0.9nm,0.7s						
PDAR	**Pinedale Array**	**84.17**	**43**	P	**P**	**09 44 42.8**	**-0.2**
	0.2nm,0.5s,baz=226,slow=5.0,SNR=3.7						
PDAR				pP	**pP**	**09 45 19.9**	**-0.3**
	0.2nm,0.6s,baz=239,slow=5.7,SNR=2.3						
	0.2nm,0.5s						
BRTR	**Keskin Array B**	**144.68**	**319**	PKP	**PKPab**	**09 51 45.1**	**-1.6**
	1.3nm,0.8s,baz=82,slow=3.1,SNR=7.2						

IDC ***11*** *09:47:28.0±1.8, 36°.15N×142°.05E, h0km, mb3.5/3, mbtmp3.5/6, ML3.1/3, Error ellipse: s-maj=35.0km s-min=22.6km az=79.0*
JMA ***11*** *09:47:31.1±0.4, 36°.3N±0°.7×14°.2E±°, h66km, MV3.3/36, FAR E OFF IBARAKI PREF*

ISC 11 09:47:31.6±1.3,**36°.3N**±0°.06×**141°.8E**±0°.09,**h23**km,**n19,** σ0**93**/22,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**1.05**	**276**	P	**Pn**	**09 47 50.1**	**-0.8**
JHYU				S	**Sn**	**09 48 05.3**	**+0.4**
JHO	**Hitachi**	**1.13**	**290**	*i* P	**Pn**	**09 47 50.7**	**-1.3**
JIHU	**Itakohorinouch**	**1.13**	**257**	P	**Pb**	**09 47 52.1**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.23**	**315**	P	**Pn**	**09 47 51.9**	**-1.5**
JFK	**Kawauchi**	**1.39**	**325**	P	**Pn**	**09 47 54.9**	**-0.8**
BSO3	**Boso 3**	**1.81**	**219**	P	**Pn**	**09 48 01.8**	**+0.6**
JOTO	**OTAMA OYAMA**	**1.82**	**317**	P	**Pn**	**09 48 01.5**	**0.0**
JMM	**Marumori**	**1.85**	**332**	P	**Pn**	**09 48 01.0**	**-0.9**
JAG	**Ashikaga**	**1.97**	**276**	P	**Pn**	**09 48 03.5**	**-0.2**
JFY	**Yanaizu**	**2.10**	**304**	P	**Pn**	**09 48 06.0**	**+0.5**
JKT	**Katashina**	**2.19**	**285**	P	**Pn**	**09 48 07.2**	**+0.5**
JRY	**Ryogami san**	**2.42**	**266**	*i* P	**Pn**	**09 48 09.7**	**-0.2**
JOD2	**Odawara 2**	**2.47**	**248**	P	**Pn**	**09 48 10.9**	**+0.4**
MJAR	**Matsushiro Arr**	**2.98**	**277**	Pn	**Pn**	**09 48 17.6**	**0.0**
	0.7nm,0.3s,baz=97,slow=9.9,SNR=38						
MJAR				Sn	**Sb**	**09 48 58.3**	**-1.8**
	0.5nm,0.3s,baz=104,slow=10,SNR=4.8						
	6.2nm,0.5s						
JHJ	**Hachijo jima 2**	**3.56**	**210**	Pn	**Pn**	**09 48 24.3**	**-1.1**
	16nm,0.3s,baz=28,slow=15,SNR=5.8						
JHJ				Sn	**Sn**	**09 49 06.2**	**-0.6**
	21nm,0.3s,baz=38,slow=19,SNR=6.5						
	32nm,0.4s						
ASAJ	**Asahikawa**	**7.89**	**4**	Pn	**Pn**	**09 49 24.4**	**-0.6**
	0.3nm,0.3s,baz=176,slow=19,SNR=1.0						
	1.7nm,0.7s						
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**09 53 27.2**	**+1.5**
	0.8nm,0.8s,baz=108,slow=8.2,SNR=3.8						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**09 55 45.2**	**+1.0**
	0.5nm,0.6s,baz=82,slow=12,SNR=2.5						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**56.32**	**189**	P	**P**	**09 57 10.5**	**-0.3**
	0.3nm,0.8s,baz=7.6,slow=7.4,SNR=14						
	0.3nm,0.8s						

NIED ***11*** *09:50:11.6, 37°.14N×140°.33E, h114km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.43; Mθθ 0.78; Mφφ 0.64; Mrθ-0.19; Mrφ 5.26; Mθφ 3.33; Fault plane solution: M₀6.33000×10¹⁴ NP1:φ₀88.00000°, δ56.00000°, λ-11.00000°. NP2:φ₀184.00000°, δ81.00000°, λ-145.00000°.*
NEIC ***11*** *09:50:11.4±2.0, 37°.19N±0°.06×140°.37E±0°.07, h115km±4km, mb4.4/13 Error ellipse: s-maj=9.4km s-min=6.7km az=133.0*
JMA ***11*** *09:50:11.6±0.1, 37°.1N±0°.4×140°.3E±0°.5, h114km, MD3.8/40, MV3.9/40, MID FUKUSHIMA PREF*
JMA Felt II J1 at MID FUKUSHIMA PREF .

ISC 11 09:50:11.0±0.7,**37°.19N**±0°.04×**140°.31E**±0°.05,**h115**km±5km, **n78,** σ1**48**/75,**mb4.1**/18,**14D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFFD	**Fukushimafurud**	**0.22**	**116**	*i* P	**Pn**	**09 50 27.6**	**+0.5**
JFFD				S	**Sn**	**09 50 39.2**	**0.0**
JFFD	**Fukushimafurud**	**0.22**	**116**	A	A	09 50 27.6	
	comp=N,11nm,0.3s,comp=E,9.0nm,0.7s						
JOTO	**OTAMA OYAMA**	**0.37**	**3**	*i* P	**Pn**	**09 50 28.7**	**+0.9**
JOTO				S	**Sn**	**09 50 41.1**	**+0.8**
ONAJ	**Iwakimizuishiy**	**0.40**	**103**	*i* P	**Pn**	**09 50 28.4**	**+0.5**
ONAJ				S	**Sn**	**09 50 40.7**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.40**	**103**	A	A	09 50 28.4	
	comp=N,19nm,0.3s,comp=E,19nm,0.2s						
JFK	**Kawauchi**	**0.48**	**68**	*i* P	**Pn**	**09 50 28.9**	**+0.5**
JFY	**Yanaizu**	**0.53**	**294**	⇓*i* P	**Pn**	**09 50 29.6**	**+0.9**
JFY				⇓S	**Sn**	**09 50 42.6**	**+0.7**
JHO	**Hitachi**	**0.61**	**160**	A	A	09 50 29.3	
	comp=N,6.0nm,0.5s,comp=E,10.0nm,0.2s						
JMST	**Minamisoumatoc**	**0.70**	**40**	A	A	09 50 30.7	
	comp=N,5.0nm,0.5s,comp=E,3.0nm,0.4s						
JMM	**Marumori**	**0.78**	**29**		**Pn**	**09 50 31.3**	**+0.8**
JMM	**Marumori**	**0.78**	**29**	⇓*i* P	**Pn**	**09 50 31.3**	**+0.8**
JMM				⇓S	**Sn**	**09 50 45.7**	**+0.5**
JHYU	**Hitachinakayam**	**0.88**	**165**	A	A	09 50 31.5	
	comp=N,27nm,0.4s,comp=E,27nm,0.8s						
JKT	**Katashina**	**0.95**	**244**	⇓*i* P	**Pn**	**09 50 33.1**	**+0.9**
JYT	**Yasato**	**0.96**	**186**	A	A	09 50 32.4	
	comp=N,10.0nm,0.3s,comp=E,30nm,0.3s						
JUON	**Uonuma**	**1.00**	**271**	⇓*i* P	**Pn**	**09 50 33.4**	**+0.8**
JUON				⇓S	**Sn**	**09 50 49.7**	**+0.7**
JNS	**Sasagawa**	**1.01**	**309**	*i* P	**Pn**	**09 50 33.4**	**+0.7**
JNS				S	**Sn**	**09 50 49.4**	**+0.3**
JAG	**Ashikaga**	**1.03**	**222**	⇓*i* P	**Pn**	**09 50 33.4**	**+0.4**
JAG				⇓S	**Sn**	**09 50 49.6**	**+0.1**
JYS	**Shirataka**	**1.05**	**349**	*i* P	**Pn**	**09 50 34.5**	**+1.3**
JYS				eS	**Sn**	**09 50 51.6**	**+1.8**
JOU	**Okura**	**1.21**	**13**	⇓*i* P	**Pn**	**09 50 36.0**	**+1.2**
JAW	**Awa shima**	**1.52**	**327**	*i* P	**Pn**	**09 50 39.3**	**+0.9**
JRY	**Ryogami san**	**1.63**	**225**	⇓*i* P	**Pn**	**09 50 40.0**	**+0.3**
JYK	**Kaneyama**	**1.73**	**1**	⇓*i* P	**Pn**	**09 50 42.1**	**+1.2**
MJAR	**Matsushiro Arr**	**1.81**	**250**		**Pn**	**09 50 42.6**	**+0.8**
MJAR	**Matsushiro Arr**	**1.81**	**250**	P	**Pn**	**09 50 42.4**	**+0.5**
	comp=E,216nm,0.4s,baz=61,slow=11,SNR=248						
MJAR				S	**Sn**	**09 51 06.7**	**+1.4**
	comp=E,9.9nm,0.3s,baz=64,slow=14,SNR=4.5						
MJAR				LR	LR	09 51 32.7	
	comp=E,91nm,19.0s,baz=56,slow=43						
MAJO	**Matsushiro**	**1.81**	**250**		**Pn**	**09 50 43.0**	**+1.1**
MAT	**Matsushiro**	**1.81**	**250**	*i* P	**Pn**	**09 50 42.8**	**+0.9**
MJB9	**Matsu-Tunnel**	**1.81**	**250**		**Pn**	**09 50 43.9**	**+2.0**
JSD	**Sado**	**1.84**	**298**		**Pn**	**09 50 42.7**	**+0.6**
JSD	**Sado**	**1.84**	**298**	*i* P	**Pn**	**09 50 42.7**	**+0.6**
JSD				S	**Sn**	**09 51 06.4**	**+0.5**
JMK	**Ichinoseki**	**1.90**	**22**	⇓*i* P	**Pn**	**09 50 43.7**	**+0.7**
JMK				⇓S	**Sn**	**09 51 08.0**	**+0.6**
JGF	**Kuroka**	**2.86**	**237**		**Pn**	**09 50 56.4**	**+1.0**
INU	**Inuyama**	**3.23**	**236**		**Pn**	**09 51 00.8**	**+0.6**
JTM	**Tenmabayashi**	**3.64**	**9**	Pn	**Pn**	**09 51 06.6**	**+1.0**
JHJ	**Hachijo jima 2**	**4.08**	**186**	P	**Pn**	**09 51 10.3**	**-1.3**
	comp=E,94nm,0.3s,baz=11,slow=5.2,SNR=16						
JHJ				S	**Sn**	**09 51 54.1**	**-4.4**
	comp=E,170nm,0.3s,baz=0.0,slow=19,SNR=15						
JHJ2	**Mitsune**	**4.09**	**186**	Pn	**Pn**	**09 51 10.7**	**-0.9**
ERM	**Esso**	**5.30**	**24**	Pn	**Pn**	**09 51 27.6**	**-0.2**
JMN	**Monobe**	**6.28**	**239**	Pn	**Pn**	**09 51 41.7**	**+0.4**
ASAJ	**Asahikawa**	**7.13**	**13**	P	**Pn**	**09 51 50.8**	**-1.9**
	comp=E,4.6nm,0.3s,baz=196,slow=13,SNR=25						
ASAJ				S	**Sn**	**09 53 07.2**	**-4.9**
	comp=E,7.4nm,0.5s,baz=162,slow=20,SNR=2.7						
JKA	**Kamikawa-asahi**	**7.13**	**13**		**Pn**	**09 51 50.8**	**-1.9**
JKA					**Sn**	**09 53 07.2**	**-4.9**
USRK	**Ussuriysk Ar.**	**9.43**	**321**	P	**Pn**	**09 52 25.1**	**+1.4**
	comp=E,4.9nm,0.7s,baz=136,slow=12,SNR=7.2						
KSRS	**Korea Array**	**9.87**	**275**	P	**Pn**	**09 52 30.8**	**+1.1**
	comp=E,3.3nm,0.9s,baz=88,slow=14,SNR=5.6						
JCJ	**Chichijima**	**10.19**	**171**	P	Pn	09 52 22.0	-12
	comp=E,94nm,1.0s,baz=0.0,slow=20,SNR=2.5						
JCJ				S	Sn	09 54 04.5	-22
	comp=E,33nm,0.3s,baz=351,slow=19,SNR=6.7						
HILR	**Hailar Array B**	**19.32**	**316**	P	**P**	**09 54 22.3**	**-4.8**
	comp=E,1.0nm,0.3s,baz=121,slow=10,SNR=4.2						
TPUB	**Ta-pu**	**21.87**	**236**	P	**P**	**09 54 53.2**	**-1.4**
SONM	**Songino Array**	**26.97**	**304**	IAmb	IAmb	09 55 43.9	
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**26.97**	**304**	P	**P**	**09 55 41.5**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=106,slow=9.2,SNR=17						
	comp=Z,3.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.99**	**120**	T	T	10 26 18.6	
	baz=313,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**28.99**	**120**	T	T	10 26 20.3	
	baz=313,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**29.00**	**120**	T	T	10 26 21.2	
	baz=313,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**29.69**	**122**	T	T	10 27 11.0	
	baz=314,slow=76,SNR=37						
H11S3	**WAKE ISLAND Hy**	**29.69**	**122**	T	T	10 27 11.0	
	baz=314,slow=76,SNR=23						
H11S2	**WAKE ISLAND Hy**	**29.70**	**122**	T	T	10 27 13.3	
	baz=314,slow=76,SNR=24						
ZAA0	**Zalesovo Array**	**41.16**	**312**	IAmb	IAmb	09 57 45.1	
	comp=Z,5.4nm,0.8s						
ZALV	**Zalesovo Beam**	**41.16**	**312**		**P**	**09 57 43.9**	**+0.1**
ZALV	**Zalesovo Beam**	**41.16**	**312**	P	**P**	**09 57 44.3**	**+0.5**
	comp=Z,6.2nm,0.8s,baz=95,slow=7.2,SNR=18						
	comp=Z,6.2nm,0.8s						
MKAR	**Makanchi Array**	**43.29**	**302**	P	**P**	**09 58 01.2**	**0.0**
	comp=Z,2.2nm,0.6s,baz=79,slow=9.7,SNR=13						
	comp=Z,2.2nm,0.6s						
C18K	**Utukok River**	**44.53**	**26**	P	**P**	**09 58 12.5**	**+1.6**
KURBB	**Kurchatov Arra**	**45.21**	**308**	P	**P**	**09 58 17.0**	**+0.6**
	comp=Z,4.2nm,0.6s,baz=83,slow=7.7,SNR=14						
	comp=Z,4.2nm,0.6s						
D20K	**Etivluk River**	**46.18**	**27**	P	**P**	**09 58 23.8**	**0.0**
D20K				IAmb	IAmb	09 58 49.2	
	comp=Z,12nm,1.4s						
KDAK	**Kodiak Island**	**47.57**	**42**	P	**P**	**09 58 35.3**	**+0.6**
BVAR	**Borovoye Array**	**49.82**	**312**	P	**P**	**09 58 53.2**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=88,slow=10,SNR=3.8						
	comp=Z,1.1nm,0.5s						
ILAR	**Eielson Array**	**49.83**	**32**	P	**P**	**09 58 52.0**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=275,slow=7.4,SNR=8.9						
	comp=Z,0.8nm,0.8s						
D25K	**Kavik River**	**49.90**	**26**	P	**P**	**09 58 53.7**	**+1.3**
D25K				IAmb	IAmb	09 59 09.4	
	comp=Z,6.1nm,1.4s						
I30M	**Mount Dempster**	**54.20**	**31**	P	**P**	**09 59 24.6**	**+0.3**
I30M				IAmb	IAmb	09 59 27.6	
	comp=Z,5.6nm,0.8s						
INK	**Inuvik**	**54.65**	**27**	P	**P**	**09 59 28.6**	**+1.2**
INK				IAmb	IAmb	09 59 29.2	
	comp=Z,1.8nm,0.7s						
WRAB	**Tennant Creek**	**57.09**	**187**	P	**P**	**09 59 43.8**	**-1.6**
WRAB				IAmb	IAmb	10 00 06.5	
	comp=Z,6.3nm,1.4s						
WR8	**Warramunga Arr**	**57.10**	**187**	P	**P**	**09 59 43.8**	**-1.6**
WR8				IAmb	IAmb	09 59 55.1	
	comp=Z,4.3nm,1.2s						
WRA	**Warramunga Arr**	**57.10**	**187**	P	**P**	**09 59 45.1**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=5.5,slow=7.0,SNR=8.0						
	comp=Z,0.4nm,1.0s						
AB31	**Akbulak array**	**57.16**	**310**	P	**P**	**09 59 46.1**	**+0.5**
ABKAR	**Akbulak array**	**57.16**	**310**	P	**P**	**09 59 45.7**	**0.0**
ASAR	**Alice Springs**	**60.83**	**187**	P	**P**	**10 00 12.1**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=18,slow=9.3,SNR=1.4						
	comp=Z,0.2nm,0.8s						

NVAR	**Mina Array Bea**	**75.60**	**53**	P	**P**	**10 01 44.9**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=304,slow=5.5,SNR=6.7						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**78.18**	**45**	P	**P**	**10 01 59.0**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=306,slow=4.0,SNR=2.7						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**90.72**	**52**	P	**P**	**10 03 00.9**	**-0.3**
TXAR	**Lajitas Array**	**90.72**	**52**	P	**P**	**10 03 02.5**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=311,slow=4.5,SNR=5.3						
	comp=Z,0.3nm,0.6s						
H03N2	**Juan Fernandez**	**147.91**	**95**	T	T	12 55 16.3	
	baz=291,slow=76,SNR=11						
H03N3	**Juan Fernandez**	**147.93**	**95**	T	T	12 55 17.4	
	baz=291,slow=76,SNR=7.2						
H03N1	**Juan Fernandez**	**147.93**	**95**	T	T	12 55 14.3	
	baz=291,slow=76,SNR=7.1						

NEIC ***11*** *09:58:14.9±1.4, 19°.02N±0°.07×145°.9E±0°.2, h108km±10km, mb4.4/15, Error ellipse: s-maj=33.7km s-min=10.8km az=90.0*
IDC ***11*** *09:58:16.3±3.0, 18°.95N×145°.84E, h124km±26km, mb3.5/7, mbtmp3.8/9, Error ellipse: s-maj=50.1km s-min=14.8km az=91.0*

ISC 11 09:58:14.1±1.0,**19°.04N**±0°.06×**145°.8E**±0°.3,**h109**km,**n29,** σ0**96**/27,**mb4.2**/12,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.50**	**190**	Pn	**Pn**	**09 59 33.5**	**-0.2**
GUMO				Sn	**Sn**	**10 00 36.3**	**+0.6**
GUMO	**Guam**	**5.50**	**190**	P	**Pn**	**09 59 36.2**	**+2.5**
	19nm,0.3s,baz=15,slow=19,SNR=2.7						
GUMO				S	**Sn**	**10 00 35.3**	**-0.4**
	34nm,0.3s,baz=0.0,slow=20,SNR=5.2						
JCJ	**Chichijima**	**8.70**	**338**	Sn	**Sn**	**10 01 52.4**	**-1.0**
JCJ	**Chichijima**	**8.70**	**338**	P	Pn	10 00 11.3	-5.7
	18nm,0.6s,baz=280,slow=23,SNR=1.1						
JCJ				S	Sn	10 01 44.2	-9.1
	37nm,0.9s,baz=168,slow=23,SNR=1.5						
JGF	**Kuroka**	**18.12**	**337**	P	**Pn**	**10 02 18.4**	**-0.4**
JGF				IAmb	IAmb	10 03 01.3	
	comp=Z,45nm,1.5s						
MJAR	**Matsushiro Arr**	**18.69**	**341**	P	**Pn**	**10 02 24.7**	**-0.7**
MJAR				IAmb	IAmb	10 03 08.2	
	comp=Z,5.9nm,1.4s						
MJAR	**Matsushiro Arr**	**18.69**	**341**	P	**Pn**	**10 02 26.0**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=172,slow=9.3,SNR=4.4						
MAJO	**Matsushiro**	**18.69**	**341**	P	**Pn**	**10 02 24.7**	**-0.8**
MAJO				IAmb	IAmb	10 02 55.7	
	comp=Z,27nm,1.4s						
MJB9	**Matsu-Tunnel**	**18.69**	**341**	P	**Pn**	**10 02 25.8**	**+0.3**
MJB9				IAmb	IAmb	10 02 56.7	
	comp=Z,28nm,1.5s						
JMM	**Marumori**	**19.27**	**348**	P	**Pn**	**10 02 31.5**	**-0.8**
H11S3	**WAKE ISLAND Hy**	**19.75**	**88**	T	T	10 23 43.3	
	baz=275,slow=74,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**19.76**	**88**	T	T	10 23 41.5	
	baz=275,slow=74,SNR=6.7						
H11S2	**WAKE ISLAND Hy**	**19.77**	**88**	T	T	10 23 40.3	
	baz=275,slow=74,SNR=4.9						
KSRS	**Korea Array**	**24.13**	**323**	P	**P**	**10 03 21.3**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=146,slow=8.7,SNR=4.5						
	comp=Z,1.1nm,0.6s						
COEN	**Coen**	**32.89**	**185**	P	**P**	**10 04 36.3**	**-1.7**
MTN	**Manton Dam**	**34.84**	**206**	P	**P**	**10 04 54.3**	**-0.6**
MTN				IAmb	IAmb	10 05 01.2	
	comp=Z,7.8nm,1.1s						
WB0	**Warramunga Arr**	**40.16**	**197**	P	**P**	**10 05 39.4**	**-0.3**
WB0				IAmb	IAmb	10 06 14.7	
	comp=Z,7.3nm,1.4s						
WR8	**Warramunga Arr**	**40.31**	**197**	P	**P**	**10 05 40.8**	**-0.2**
WR8				IAmb	IAmb	10 05 41.9	
	comp=Z,9.6nm,1.4s						
WRAB	**Tennant Creek**	**40.33**	**197**	P	**P**	**10 05 41.3**	**+0.2**

ARCO					IAML			10 04 18.1	
	comp=Z,135nm,0.5s								
ASAL	**Salagasta**	**2.71**	**99**	*eP*		**Pb**		**10 03 40.0**	**+0.7**
ASAL				*eS*		**Sg**		**10 04 21.8**	**+3.7**
AAGR	**Agrelo**	**2.82**	**109**	*eP*		**Pb**		**10 03 41.6**	**+0.4**
AAGR				*eS*		**Sg**		**10 04 21.5**	**-0.3**
AAGR					IAML			10 04 26.4	
	comp=Z,175nm,1.2s								
ZON	**Zonda**	**2.90**	**78**	*eP*		**Pb**		**10 03 41.6**	**-1.0**
ZON				*eS*		**Sb**		**10 04 20.6**	**+2.7**
ZON					IAML			10 04 26.4	
	comp=Z,67nm,0.8s								
AROD	**Rodeo**	**2.96**	**48**	*eP*		**Pb**		**10 03 44.6**	**+0.8**
AROD				*eS*		**Sb**		**10 04 21.1**	**+1.2**
ACCO	**Cerro Coronel**	**2.98**	**58**	*eP*		Pn		10 03 24.8	-13
ACCO				*eS*		**Sb**		**10 04 20.6**	**+0.3**
ACDV	**Cuesta del Vie**	**3.19**	**52**	*eP*		**Pb**		**10 03 46.2**	**-1.4**
ACDV					IAML			10 04 28.1	
	comp=Z,58nm,1.1s								
ACDV				*eS*		**Sb**		**10 04 28.3**	**+2.0**

IDC 11 10:09:22.0±1.5, 28°75N×104°39E, h0km, mb3.4/3, mbtmp3.5/4, ML4.1/1, Error ellipse: s-maj=59.5km s-min=28.2km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.39**	**207**	Pn		Pn	10 12 08.0	+1.9
	0.4nm,0.3s,baz=14,slow=17,SNR=13							
CMAR				Sn		Sn	10 14 03.0	-11
	baz=9.3,slow=27							
	1.6nm,0.6s							
MKAR	**Makanchi Array**	**24.95**	**322**	P		P	10 14 47.3	+0.3
	0.7nm,0.7s,baz=130,slow=10,SNR=4.0							
	0.7nm,0.7s							
WRA	**Warramunga Arr**	**56.39**	**146**	P		P	10 19 06.4	+1.1
	0.2nm,0.4s,baz=331,slow=7.4,SNR=6.5							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**59.36**	**148**	P		P	10 19 24.3	-1.8
	0.4nm,0.7s,baz=322,slow=6.5,SNR=6.2							
	0.4nm,0.7s							

IDC 11 10:27:43.3±1.3, 5°27S×151°31E, h0km, mb3.8/7, mbtmp3.8/8, ML2.1/1, MS3.1/1, Error ellipse: s-maj=54.8km s-min=19.5km az=124.0
NEIC 11 10:27:52.2±1.6, 5°36S±0°06×151°44E±0°07, h65km±9km, mb4.0/15, Error ellipse: s-maj=10.4km s-min=9.2km az=86.0

ISC 11 10:27:50.9±0.8, 5°45S±0°09×151°4E±0°1, h57km, n26, σ1s21/26, mb4.0/15, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**1.45**	**31**			**Pn**	**10 28 15.2**	**+0.3**
MANU	**Manus Island**	**5.28**	**310**	Pn		**Pn**	**10 29 07.6**	**+0.4**
PMG	**Port Moresby**	**5.77**	**227**			**Pn**	**10 29 16.1**	**+2.0**
PMG						**Sn**	**10 30 20.5**	**+1.5**
PMG	**Port Moresby**	**5.77**	**227**	Pn		**Pn**	**10 29 11.6**	**-2.5**
	3.4nm,0.3s,baz=42,slow=5.4,SNR=8.6							
PMG				Sn		**Sn**	**10 30 19.0**	**0.0**
	3.2nm,0.3s,baz=128,slow=23,SNR=7.6							
	9.8nm,0.8s							
WB0	**Warramunga Arr**	**21.85**	**228**	P		**P**	**10 32 38.5**	**-0.4**
WR0	**Warramunga Arr**	**21.86**	**227**	P		**P**	**10 32 40.1**	**+1.1**
WR0				IAmb		IAmb	10 32 58.8	
	comp=Z,10nm,1.3s							
WR8	**Warramunga Arr**	**21.89**	**227**	P		**P**	**10 32 40.0**	**+0.6**
WR8				IAmb		IAmb	10 33 12.5	
	comp=Z,6.4nm,1.1s							
WRAB	**Tennant Creek**	**21.98**	**228**	P		**P**	**10 32 42.0**	**+1.7**
WRAB				IAmb		IAmb	10 32 55.9	
	comp=Z,6.4nm,1.1s							
WB2	**Warramunga Arr**	**21.99**	**228**	P		**P**	**10 32 42.2**	**+1.8**
WB2				IAmb		IAmb	10 33 00.2	
	comp=Z,7.6nm,1.2s							
WRA	**Warramunga Arr**	**21.99**	**228**	P		**P**	**10 32 39.9**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=53,slow=9.8,SNR=12							
	comp=Z,1.7nm,0.7s							
DZM	**Mont Dzumac**	**22.01**	**140**	LR		LR	10 39 03.2	
	comp=Z,47nm,18.7s,baz=214,slow=31							
INKA	**Innaminka**	**24.39**	**203**	P		**P**	**10 33 03.4**	**-0.6**
INKA				IAmb		IAmb	10 33 12.2	
	comp=Z,8.6nm,1.4s							
KNRA	**Kununurra**	**24.46**	**244**	P		**P**	**10 33 04.7**	**0.0**
KNRA				IAmb		IAmb	10 33 08.5	
	comp=Z,5.1nm,0.8s							
AS31	**Alice Springs**	**24.75**	**221**	P		**P**	**10 33 08.2**	**+0.8**
ASAR	**Alice Springs**	**24.76**	**221**	P		**P**	**10 33 07.0**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=58,slow=9.1,SNR=25							
	comp=Z,2.2nm,0.8s							
FITZ	**Fitzroy Crossi**	**28.15**	**241**	P		**P**	**10 33 38.2**	**+0.2**
SONM	**Songino Array**	**66.15**	**329**	IAmb		IAmb	10 38 34.5	
	comp=Z,2.0nm,1.2s							
SONM	**Songino Array**	**66.15**	**329**	P		**P**	**10 38 33.2**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=134,slow=4.2,SNR=2.5							
	comp=Z,0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**80.93**	**327**	P		**P**	**10 39 58.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=140,slow=4.7,SNR=1.8							
	comp=Z,0.3nm,0.3s							
MLY	**Manley**	**81.98**	**21**	P		**P**	**10 40 04.9**	**+0.4**
MLY				IAmb		IAmb	10 40 31.2	
	comp=Z,3.0nm,1.2s							
ILAR	**Eielson Array**	**83.27**	**22**	P		**P**	**10 40 10.5**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=251,slow=5.6,SNR=15							
	comp=Z,0.8nm,0.7s							
KURK	**Kurchatov**	**83.44**	**322**	P		**P**	**10 40 10.3**	**-2.0**
KURBB	**Kurchatov Arra**	**83.46**	**322**	P		**P**	**10 40 10.3**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=98,slow=5.7,SNR=4.1							
	comp=Z,0.5nm,0.7s							
J25K	**Salcha River,**	**83.78**	**23**	P		**P**	**10 40 13.5**	**-0.3**
J25K				IAmb		IAmb	10 40 39.3	
	comp=Z,2.2nm,1.0s							
QSPA	**South Pole Qui**	**84.52**	**180**	P		**P**	**10 40 17.8**	**+0.1**
NVAR	**Mina Array Bea**	**93.56**	**52**	P		**P**	**10 41 02.4**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=252,slow=7.0,SNR=7.3							
	comp=Z,0.8nm,0.8s							

JSN 11 10:38:09.7±0.4, 18°20N×76°45W, h14km±12km, MD3.2
SSNC 11 10:38:11.1±0.9, 18°32N×76°54W, h7km±7km, MD3.7, ML2.7

ISC 11 10:38:05.1±1.4, 18°22N±0°07×76°33W±0°06, h18km, n16, σ0s83/21, 2C-2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GWJ	**Greenwich**	**0.41**	**249**	⇓*iP*		**Pn**	**10 38 15.5**	**-0.8**
HOJ	**Hope**	**0.46**	**242**	⇑*iP*		**Pn**	**10 38 16.4**	**-0.4**
STH	**Stony Hill**	**0.48**	**252**	⇑*iP*		**Pn**	**10 38 16.7**	**-0.5**
MTDJ	**Mount Denham**	**1.15**	**270**	⇑*iP*		**Pg**	**10 38 27.9**	**+0.5**
MTDJ	**Mount Denham**	**1.15**	**270**	*eP*		**Pg**	**10 38 27.7**	**+0.3**
MTDJ					IAML		10 38 42.1	
	comp=Z,511nm,0.3s							
MTDJ					IAML		10 38 42.2	
	667nm,0.4s							
CHIV	**Chivirico**	**1.75**	**357**	*eP*		**Pg**	**10 38 37.7**	**-1.0**
CHIV				*eS*		**Sb**	**10 38 57.8**	**-0.4**
CHIV					IAML		10 39 03.1	
	comp=E,21nm,0.1s							
CHIV					IAML		10 39 04.4	
	comp=N,19nm,0.1s							
MARVS	**Santiago de Cu**	**1.81**	**13**	*eP*		**Pg**	**10 38 39.7**	**-0.3**
MARVS				*eS*		**Sb**	**10 39 01.2**	**+1.0**
MARVS					IAML		10 39 03.1	
	comp=E,56nm,0.2s							
MARVS					IAML		10 39 03.2	
	comp=N,62nm,0.2s							
RCC	**Rio Carpintero**	**1.86**	**19**	*eP*		**Pg**	**10 38 40.7**	**-0.2**
RCC				*eS*		**Sb**	**10 39 02.5**	**+1.0**
RCC				*eSg*		**Sg**	**10 39 04.3**	**-0.8**
RCC					IAML		10 39 06.3	
	comp=E,20nm,0.1s							
RCC					IAML		10 39 06.7	
	comp=N,19nm,0.1s							
LMGC	**Las Mercedes**	**1.94**	**341**	*eP*		**Pb**	**10 38 39.6**	**-0.4**
LMGC				*eS*		**Sn**	**10 39 00.1**	**-1.1**
LMGC					IAML		10 39 04.0	
	comp=N,207nm,0.1s							
LMGC					IAML		10 39 04.1	
	comp=E,145nm,0.1s							
GTBY	**Guantanamo Bay**	**2.05**	**34**	*eP*		**Pg**	**10 38 44.1**	**-0.4**
GTBY					IAML		10 39 12.3	
	comp=E,60nm,0.2s							
GTBY					IAML		10 39 14.1	
	comp=E,50nm,0.2s							
PINC	**Pinares de May**	**2.31**	**13**	*eP*		**Pb**	**10 38 46.2**	**0.0**
PINC					IAML		10 39 18.2	
	comp=N,92nm,0.1s							
PINC					IAML		10 39 18.3	
	comp=E,108nm,0.1s							
QMBU	**Quimbuelo**	**2.43**	**36**	*eP*		**Pb**	**10 38 48.9**	**+0.5**
QMBU					IAML		10 39 20.3	
	comp=N,48nm,0.2s							
QMBU					IAML		10 39 24.2	
	comp=E,49nm,0.2s							
NMDO	**Nuevo Mundo**	**2.65**	**28**	*eP*		**Pb**	**10 38 52.0**	**0.0**
MOAC	**Moa**	**2.75**	**28**	*eP*		**Pb**	**10 38 53.4**	**-0.2**
MASC	**Masc**	**2.77**	**45**	*eP*		**Pb**	**10 38 54.8**	**+0.6**
MGV	**Manicaragua**	**5.17**	**319**	*eP*		**Pn**	**10 39 23.8**	**+2.2**

NAO 11 10:52:35.8, 43°85N×3°23E, h10km, MB4.8
IDC 11 10:52:44.6±0.5, 44°54N×4°62E, h0km, mb4.3/23, mbtmp4.3/33, ML4.5/7, MS4.2/83, Error ellipse: s-maj=14.5km s-min=10.8km az=151.0
BGR 11 10:52:44.3±0.5, 44°49N×4°39E, h10km, ML5.6/19, Error ellipse: s-maj=17.8km s-min=7.8km az=130.0
BNS 11 10:52:44.9±0.6, 44°45N×4°49E, h10km, ML5.3
MOS 11 10:52:45.7±1.1, 44°77N×4°78E, h14km, mb5.0/36, MS4.2/13, Error ellipse: s-maj=6.8km s-min=3.2km az=49.0
BGS 11 10:52:45.3±2.6, 44°57N×4°62E, h10km, MW4.9(NEIC)
PRU 11 10:52:45.4, 44°62N×4°07E, h63km, M5.0
BJI 11 10:52:45.1, 45°15N×4°58E, h8km, mB5.1/8, mb4.7/32, Ms5.0/18, Ms7 4.7/18
MED_RC 11 10:52:45.0±0.3, 44°44N×4°33E, h10km, MW5.0/55, Moment Tensor Solution. Mantle waves: s55,c86; Duration: 1s2 Moment tensor: Scale 10^16Nm; Mrr2.43±.05; Mθθ-1.23±.05; Mϕϕ-1.20±.04; Mrθ-0.25±.19; Mθϕ-1.13±.04; Mϕr-2.59±.16; Best double couple: M0 3.49000×10^16 NP1:ϕs61.00000°, δ27.00000°, λ129.00000°. NP2:ϕs199.00000°, δ69.00000°, λ72.00000°. Principal axes: T 3.8000, Plg62.0000°, Azm83.0000°; N -0.6000, Plg16.0000°, Azm206.0000°; P -3.1900, Plg22.0000°, Azm303.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
STR 11 10:52:45.8±0.0, 44°53N±0°04×4°64E±0°03, h2km, MLv5.2/11, LOCSAT earthModelID auvergne_taup-2.11 preliminary
LDG 11 10:52:46.1±0.0, 44°54N×4°65E, h2km, Md4.9/7, Ml5.4/49, Error ellipse: s-maj=1.0km s-min=0.8km az=20.0
GCMT 11 10:52:46.5±0.2, 44°63N±0°02×4°76E±0°02, h12km, MW4.9/120, Moment Tensor Solution. s37,c48; s120,c170; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.98±.05; Mθθ-1.30±.06; Mϕϕ-1.68±.06; Mrθ-0.60±.23; Mθϕ-0.82±.04; Mϕr1.26±.22; Best double couple: M0 2.92500×10^16 NP1:ϕs231.00000°, δ40.00000°, λ116.00000°. NP2:ϕs19.00000°, δ55.00000°, λ70.00000°. Principal axes: T 3.4320, Plg72.0000°, Azm237.0000°; N -1.0140, Plg16.0000°, Azm31.0000°; P -2.4170, Plg8.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 11 10:52:46.7, 44°62N×4°66E, h12km
NEIC 11 10:52:46.5±2.4, 44°61N±0°01×4°64E±0°07, h10km±1km, mb5.0/237, Mwr4.8/26, Mww4.8/24, Error ellipse: s-maj=8.3km s-min=2.8km az=263.0, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr1.77; Mθθ-1.02; Mϕϕ-0.76; Mrθ0.17; Mθϕ-0.57; Mϕr0.78; Fault plane solution: M0 1.83000×10^16 NP1:ϕs37.52000°, δ56.90000°, λ76.61000°. NP2:ϕs241.08000°, δ35.41000°, λ109.56000°. Principal axes: T 1.9941, Plg74.0000°, Azm270.0000°; N -0.4056, Plg11.0000°, Azm45.0000°; P -1.5885, Plg11.0000°, Azm137.0000°;
NEIC 11 10:52:46.7, 44°63N×4°64E, h10km
NEIC 11 10:52:46.7, 44°52N×4°66E, h12km, Moment Tensor Solution. Duration: 1s4 Moment tensor: Scale 10^16Nm; Mrr2.22; Mθθ-1.09; Mϕϕ-1.13; Mrθ0.89; Mθϕ-0.81; Mϕr0.35; Fault plane solution: M0 2.30000×10^16 NP1: ϕs217.51000°, δ33.96000°, λ76.88000°. NP2:ϕs53.21000°, δ57.04000°, λ98.69000°. Principal axes: T 2.4533, Plg76.0000°, Azm350.0000°; N -0.3564, Plg7.0000°, Azm228.0000°; P -2.0969, Plg12.0000°, Azm137.0000°;
INMG 11 10:52:47.6±2.6, 44°56N×4°59E, h24km±10km, ML4.4 Error ellipse: s-maj=9.6km s-min=5.0km az=115.0, #DIST_RANGE: REGIONAL #IPMA_REGION: France
MDD 11 10:52:47.4±0.2, 44°55N×4°68E, h7km±1km, Mb4.9/40, M_mb4.4/36, Error ellipse: s-maj=2.1km s-min=1.1km az=151.0

ISC 11 10:52:45.9±0.6, 44°57N±0°01×4°62E±0°01, h12km±3km, n932, σ1s84/1060, mb4.9/170, MS4.3/90, 81C-52D, France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VIVF	**Saint-Julien-l**	**0.29**	**7**	*eP*	g	**Pg**	**10 52 51.6**	**-0.3**
VIVF				*eSg*		**Sg**	**10 52 56.4**	**+0.5**
	192μm,0.7s							
SSB	**Saint Sauveur**	**0.71**	**355**			**Pg**	**10 52 59.6**	**-0.1**
SSB	**Saint Sauveur**	**0.71**	**355**	⇑Pg		**Pg**	**10 52 59.5**	**-0.3**
SSB				Sg		**Sb**	**10 53 10.3**	**+0.2**
SAUF	**chteau de Sau**	**0.72**	**151**	⇓Pg		**Pg**	**10 52 58.8**	**-1.0**
LASF	**Ste Croix**	**0.74**	**228**	*eP*	g	**Pg**	**10 52 59.1**	**-1.1**
LASF				*eSg*		**Sg**	**10 53 09.1**	**-0.7**
	39μm,0.4s							
RUSF	**Rustrel**	**0.88**	**135**	Pg		**Pg**	**10 53 02.1**	**-0.8**
SMRF	**Simiane la Rot**	**0.91**	**130**	*eP*	g	**Pg**	**10 53 02.5**	**-0.9**
SMRF	**Simiane la Rot**	**0.91**	**130**	*eP*	n	**Pn**	**10 53 04.0**	**-0.5**
SMRF				*eSg*		**Sg**	**10 53 13.8**	**-1.4**
SMRF				*eSn*		**Sb**	**10 53 16.4**	**+0.8**
	76μm,1.0s							
ORIF	**Oris-en-Rattie**	**0.96**	**68**	*eP*	g	**Pg**	**10 53 03.6**	**-0.9**
ORIF				*eSg*		**Sg**	**10 53 16.6**	**-0.4**
	15μm,0.5s							
ORIF	**Oris-en-Rattie**	**0.96**	**68**	⇑P		**Pg**	**10 53 03.6**	**-0.9**
ORIF				S		**Sb**	**10 53 18.2**	**+0.9**
ORIF				AML	AML			
	comp=N,27250μm,1.6s							
ORIF				AML	AML			
	comp=E,31750μm,0.8s							
ORIF				AML	AML			
	comp=N,27250μm,0.4s							
ORIF				AML	AML			
	comp=E,31750μm,1.2s							
ORIF	**Oris-en-Rattie**	**0.96**	**68**	⇑Pg		**Pg**	**10 53 03.5**	**-0.9**
MLYF	**Mely**	**1.01**	**125**	⇓Pg		**Pg**	**10 53 04.5**	**-0.8**
MLYF				Pn		**Pn**	**10 53 06.1**	**+0.2**
BSTF	**la Bastide-des**	**1.01**	**133**	Pg		**Pg**	**10 53 04.7**	**-0.6**
GRN	**Grenoble**	**1.04**	**49**	⇑Pg		**Pg**	**10 53 05.2**	**-0.8**
GRN				Sg		**Sb**	**10 53 20.0**	**+0.3**
COLF	**Collangettes**	**1.16**	**326**	⇑Pg		**Pb**	**10 53 07.8**	**-0.1**
COLF				Sg		**Sn**	**10 53 24.5**	**+0.7**
LAJAS	**L'Hospitalet-d**	**1.17**	**240**	⇑Pg		**Pb**	**10 53 07.3**	**-0.8**
LAJAS				Sg		**Sn**	**10 53 24.4**	**+0.2**
LBL	**Lubilhac**	**1.18**	**305**	⇑Pg		**Pb**	**10 53 08.1**	**-0.3**
ARBF	**Arbois**	**1.19**	**154**	Pg		**Pb**	**10 53 06.7**	**-1.8**
ARBF				Pn		**Pg**	**10 53 09.3**	**+0.5**
ARBF				Sg		**Sg**	**10 53 24.0**	**-0.3**
BLAF	**les Blancs**	**1.19**	**121**	⇓Pg		**Pb**	**10 53 07.1**	**-1.4**
BLAF				Sg		**Sb**	**10 53 23.1**	**-0.8**
OGDI	**Digne**	**1.29**	**110**	P		**Pn**	**10 53 08.0**	**-1.9**
OGDI	**Digne**	**1.29**	**110**	⇑Pg		**Pn**	**10 53 07.9**	**-1.9**
OGDI				Sg		**Sb**	**10 53 25.0**	**-1.6**
OGSM	**Saint Maurice**	**1.29**	**36**	⇑Pn		**Pn**	**10 53 09.2**	**-0.6**
OGSM				Pg		**Pg**	**10 53 10.4**	**-0.3**
OGSM				Sg		**Sg**	**10 53 27.4**	**-0.1**
ARTF	**Artigues**	**1.30**	**139**	Pn		**Pn**	**10 53 07.8**	**-2.1**
LEPF	**PUYLOUBIER**	**1.30**	**143**	Pn		**Pn**	**10 53 07.8**	**-2.2**
OGAG	**Argentiere**	**1.38**	**94**	P		**Pn**	**10 53 10.9**	**-0.2**
OGAG	**Argentiere**	**1.38**	**94**	⇑Pn		**Pn**	**10 53 10.8**	**-0.4**
OGAG				Sg		**Sg**	**10 53 30.8**	**+0.5**
CREF	**Crivoux**	**1.43**	**90**	⇓Pn		**Pn**	**10 53 11.1**	**-0.8**
CREF				Pg		**Pb**	**10 53 12.8**	**+0.2**
CREF				Sg		**Sb**	**10 53 30.9**	**0.0**
LEUC	**Leucamp**	**1.49**	**278**	⇑Pn		**Pn**	**10 53 12.1**	**-0.4**
LEUC				Pg		**Pg**	**10 53 14.3**	**-0.2**
LEUC				Sn		**Sg**	**10 53 34.3**	**+0.5**
TRIGF	**Trigance**	**1.52**	**122**	⇓Pn		**Pn**	**10 53 11.5**	**-1.6**
JAUF	**Jausiers**	**1.53**	**94**	⇓Pn		**Pn**	**10 53 12.3**	**-0.9**
JAUF				Pg		**Pb**	**10 53 13.8**	**-0.5**
JAUF				Sn		**Sn**	**10 53 33.3**	**+0.1**
BNI	**Bardonecchia**	**1.54**	**71**	Pn		**Pb**	**10 53 14.1**	**-0.4**
BNI				Sn		**Sg**	**10 53 35.0**	**-0.5**
BNI	**Bardonecchia**	**1.54**	**71**			**Pn**	**10 53 13.2**	**-0.2**
BNI	**Bardonecchia**	**1.54**	**71**	P		**Pn**	**10 53 13.4**	**0.0**
BNI	**Bardonecchia**	**1.54**	**71**	P		**Pn**	**10 53 13.8**	**+0.5**
BNI				S		**Sb**	**10 53 34.0**	**-0.1**
BNI				AML	AML			
	comp=N,11900μm,0.8s							
BNI				AML	AML			
	comp=N,11900μm,1.2s							
BNI				AML	AML			
	comp=E,13050μm,1.1s							
MBDF	**Montbardon**	**1.54**	**83**	*ePg*		**Pn**	**10 53 13.0**	**-0.4**
MBDF				*eSg*		**Sb**	**10 53 34.5**	**+0.4**
	comp=E,11μm,0.8s							
SURF	**Saint Ours**	**1.57**	**92**	P		**Pn**	**10 53 13.3**	**-0.5**
SURF	**Saint Ours**	**1.57**	**92**	⇑Pn		**Pn**	**10 53 13.4**	**-0.4**
SURF				Pg		**Pb**	**10 53 14.7**	**-0.3**
SURF				Sn		**Sn**	**10 53 34.3**	**+0.1**
PLDF	**La Plantade**	**1.57**	**334**	⇑Pn		**Pn**	**10 53 13.2**	**-0.5**
PLDF				Pg		**Pg**	**10 53 13.6**	**0.0**
PLDF				Sn		**Sg**	**10 53 37.3**	**+0.8**
RRL	**Rocca Remolon**	**1.58**	**76**	P		**Pn**	**10 53 13.7**	**-0.4**
RRL	**Rocca Remolon**	**1.58**	**76**	⇓P		**Pn**	**10 53 14.4**	**+0.3**
RRL				S		**Sg**	**10 53 36.5**	**-0.5**
RRL				AML	AML			
	comp=E,17600μm,1.6s							
RRL				AML	AML			
	comp=E,17600μm,0.4s							
RRL				AML	AML			
	comp=N,23900μm,1.0s							
RRL	**Rocca Remolon**	**1.58**	**76**	⇑Pn		**Pn**	**10 53 13.7**	**-0.4**
OGMY	**Moye**	**1.59**	**34**	⇑Pn		**Pn**	**10 53 13.5**	**-0.4**
OGMY				Sn		**Sn**	**10 53 34.4**	**-0.1**
OGMO	**Fort Saint-Gob**	**1.60**	**66**	P		**Pn**	**10 53 14.3**	**+0.2**
OGMO	**Fort Saint-Gob**	**1.60**	**66**	⇑Pn		**Pn**	**10 53 14.1**	**0.0**
OGMO				Pg		**Pg**	**10 53 16.7**	**+0.1**
CFF	**Clermont-Ferra**	**1.60**	**319**	⇑Pn		**Pn**	**10 53 14.3**	**+0.1**
CFF				Pg		**Pg**	**10 53 17.2**	**+0.6**
CFF				Sg		**Sg**	**10 53 39.6**	**+2.1**
ENAUX	**Enaux**	**1.61**	**106**	Pn		**Pn**	**10 53 13.4**	**-1.0**
ENAUX				Sn		**Sn**	**10 53 34.3**	**-0.8**
OG35	**Corcelles**	**1.62**	**24**	⇑Pn		**Pn**	**10 53 13.7**	**-0.7**
SALSA	**La sagne**	**1.64**	**114**	Pn		**Pn**	**10 53 13.9**	**-0.8**
FLAF	**Flassans-sur-l**	**1.67**	**135**	Pn		**Pn**	**10 53 13.3**	**-1.7**
FRNF	**Fournols**	**1.68**	**300**	⇑Pn		**Pn**	**10 53 15.1**	**0.0**
FRNF				Pg		**Pg**	**10 53 17.7**	**-0.3**
FRNF				Sn		**Sg**	**10 53 40.2**	**+0.4**
LPL	**La Plagne**	**1.77**	**57**	*ePn*		**Pn**	**10 53 16.4**	**-0.2**
LPL				*eSg*		**Sg**	**10 53 42.0**	**-0.9**
	comp=N,5μm,0.5s							
LPG	**La Plagne**	**1.77**	**58**	*ePn*		**Pn**	**10 53 16.2**	**-0.5**
LPG	**La Plagne**	**1.77**	**58**	*ePg*		**Pg**	**10 53 19.4**	**-0.5**
LPG				*eSn*		**Sn**	**10 53 38.3**	**-1.1**
LPG				*eSg*		**Sg**	**10 53 42.3**	**-0.7**
	comp=N,5μm,0.5s							
ISO	**Isola**	**1.78**	**102**	P		**Pn**	**10 53 16.4**	**-0.2**
ISO	**Isola**	**1.78**	**102**	⇑Pn		**Pn**	**10 53 15.8**	**-0.9**
ISO				Sn		**Sn**	**10 53 38.5**	**-0.8**
PZZ	**Stroppo**	**1.79**	**91**	P		**Pn**	**10 53 16.3**	**-0.4**
PZZ	**Stroppo**	**1.79**	**91**	⇑P		**Pn**	**10 53 16.3**	**-0.4**
PZZ				S		**Sn**	**10 53 39.3**	**-0.1**
PZZ				AML	AML			
	comp=E,17150μm,0.9s							
PZZ				AML	AML			
	comp=N,24250μm,0.9s							
PZZ				AML	AML			
	comp=E,17150μm,1.1s							
PZZ				AML	AML			
	comp=N,24250μm,1.1s							
PZZ	**Stroppo**	**1.79**	**91**	⇑Pn		**Pn**	**10 53 16.3**	**-0.4**
PZZ				Sn		**Sn**	**10 53 39.4**	**0.0**
SLVF	**La Salvetat-Pe**	**1.80**	**259**	⇑Pn		**Pn**	**10 53 16.2**	**-0.6**
SLVF				Pg		**Pg**	**10 53 19.8**	**-0.6**
RSL	**Roselend**	**1.81**	**51**	⇑Pn		**Pn**	**10 53 16.8**	**-0.3**
RSL				Pg		**Pg**	**10 53 19.8**	**-0.8**
RSL				Sn		**Sn**	**10 53 39.8**	**-0.2**
CLAF	**Gruissan**	**1.81**	**218**	Pn		**Pn**	**10 53 15.0**	**-1.9**
CLAF				Pg		**Pb**	**10 53 18.8**	**-0.2**
AGO	**Saint Agoulin**	**1.82**	**325**	⇑Pn		**Pn**	**10 53 16.8**	**-0.3**
AGO				Pg		**Pg**	**10 53 20.7**	**-0.2**
AGO				Sg		**Sg**	**10 53 45.9**	**+1.5**
LMR	**La Mourre**	**1.84**	**131**	*ePn*		**Pn**	**10 53 15.5**	**-1.8**
LMR	**La Mourre**	**1.84**	**131**	*ePg*		**Pb**	**10 53 19.4**	**-0.1**
LMR				*eSn*		**Sn**	**10 53 38.8**	**-1.7**
LMR				*eSg*		**Sb**	**10 53 42.1**	**-0.3**
	comp=N,2μm,0.3s							
CALF	**Calern**	**1.84**	**115**	Pn		**Pn**	**10 53 16.2**	**-1.3**
CALF				Pg		**Pg**	**10 53 20.7**	**-0.6**
CAF	**Calviac**	**1.86**	**282**	*ePn*		**Pn**	**10 53 17.7**	**+0.1**
CAF	**Calviac**	**1.86**	**282**	*ePg*		**Pg**	**10 53 21.0**	**-0.5**
CAF				*eSn*		**Sn**	**10 53 41.0**	**-0.1**
CAF				*eSg*		**Sg**	**10 53 45.7**	**+0.1**
	comp=N,19μm,0.6s							
BHB	**Bricherasio**	**1.90**	**81**	P		**Pn**	**10 53 18.2**	**-0.1**
BHB	**Bricherasio**	**1.90**	**81**	P		**Pn**	**10 53 18.9**	**+0.7**
BHB				AML	AML			

ENR					AML	AML				
	comp=N,10670µm,0.7s									
ENR					AML	AML				
	comp=E,6240µm,1.1s									
ENR	**Entracque**	**2.04**	**99**	⇑Pn	**Pn**	**10 53 19.7**	**-0.4**			
ENR				Sn	**Sn**	**10 53 44.7**	**-0.8**			
EILF	**Villa Eilenroc**	**2.08**	**119**	P	**Pn**	**10 53 20.0**	**-0.6**			
EILF	**Villa Eilenroc**	**2.08**	**119**	Pn	**Pn**	**10 53 19.2**	**-1.3**			
EILF				Pg	**Pg**	**10 53 24.8**	**-0.9**			
TURF	**col de Turini**	**2.08**	**106**	P	**Pn**	**10 53 20.5**	**-0.2**			
TURF	**col de Turini**	**2.08**	**106**	Pn	**Pn**	**10 53 19.8**	**-1.0**			
TURF				Pg	**Pg**	**10 53 25.2**	**-0.6**			
TURF				Sn	**Sn**	**10 53 46.7**	**+0.1**			
ESCA	**l'Escarene**	**2.11**	**109**	P	**Pn**	**10 53 20.7**	**-0.4**			
ESCA	**l'Escarene**	**2.11**	**109**	⇓Pn	**Pn**	**10 53 20.2**	**-0.9**			
OGSI	**Sixt**	**2.12**	**44**	Pn	**Pn**	**10 53 21.1**	**-0.2**			
OGSI				Sn	**Sn**	**10 53 47.7**	**0.0**			
MTLF	**Montolieu**	**2.13**	**236**	*e*Pn	**Pn**	**10 53 20.8**	**-0.5**			
MTLF	**Montolieu**	**2.13**	**236**	*e*Pg	**Pb**	**10 53 24.8**	**+0.4**			
MTLF				*e*Sn	**Sn**	**10 53 46.4**	**-1.2**			
MTLF				*e*Sg	**Sg**	**10 53 53.3**	**-0.9**			
	comp=E,20µm,0.6s									
MTLF	**Montolieu**	**2.13**	**236**	⇑Pn	**Pn**	**10 53 20.2**	**-1.1**			
MTLF				Pg	**Pg**	**10 53 26.3**	**-0.4**			
SBF	**Sospel**	**2.14**	**108**	*e*Pn	**Pn**	**10 53 20.5**	**-1.1**			
SBF	**Sospel**	**2.14**	**108**	*e*Pg	**Pb**	**10 53 25.3**	**+0.6**			
SBF				*e*Sn	**Sn**	**10 53 46.8**	**-1.3**			
SBF				*e*Sg	**Sb**	**10 53 52.4**	**+1.1**			
	comp=E,4µm,0.3s									
SMF	**Signal de Mont**	**2.15**	**345**	*e*Pn	**Pn**	**10 53 21.7**	**+0.1**			
SMF	**Signal de Mont**	**2.15**	**345**	*e*Pg	**Pg**	**10 53 26.7**	**-0.4**			
SMF				*e*Sn	**Sn**	**10 53 48.7**	**+0.5**			
SMF				*e*Sg	**Sg**	**10 53 54.9**	**-0.1**			
	comp=E,6µm,0.4s									
SAOF	**Saorge**	**2.19**	**104**	P	**Pn**	**10 53 21.8**	**-0.4**			
SAOF	**Saorge**	**2.19**	**104**	P	**Pn**	**10 53 21.9**	**-0.3**			
SAOF	**Saorge**	**2.19**	**104**	Pn	**Pn**	**10 53 21.2**	**-0.9**			
SAOF				Pg	**Pg**	**10 53 26.8**	**-1.0**			
SAOF				Sn	**Sn**	**10 53 49.2**	**+0.1**			
PIAF	**les Granges de**	**2.20**	**101**	Pn	**Pn**	**10 53 21.9**	**-0.4**			
PIAF				Sn	**Sn**	**10 53 49.8**	**+0.4**			
REMY	**Saint-Rhmy-en**	**2.20**	**54**	P	**Pn**	**10 53 22.9**	**+0.4**			
REMY				AML	AML					
	comp=E,16000µm,1.1s									
REMY				AML	AML					
	comp=N,26600µm,0.8s									
REMY				AML	AML					
	comp=N,26600µm,1.2s									
REMY	**Saint-Rhmy-en**	**2.20**	**54**	Pn	**Pn**	**10 53 22.9**	**+0.4**			
BURY	**Giardini Botan**	**2.25**	**109**	Pn	**Pn**	**10 53 22.4**	**-0.6**			
GIMEL	**St. Georges /**	**2.28**	**30**	P	**Pn**	**10 53 22.8**	**-0.7**			
GIMEL				AML	AML					
	comp=E,13150µm,1.6s									
GIMEL				AML	AML					
	comp=N,12400µm,0.9s									
GIMEL				AML	AML					
	comp=N,12400µm,1.1s									
GIMEL				AML	AML					
	comp=E,13150µm,0.4s									
GIMEL	**St. Georges /**	**2.28**	**30**	⇑Pn	**Pn**	**10 53 23.0**	**-0.5**			
CABF	**La Chapelle**	**2.29**	**26**	*e*Pn	**Pn**	**10 53 23.0**	**-0.6**			
CABF	**La Chapelle**	**2.29**	**26**	*e*Pg	**Pg**	**10 53 29.1**	**-0.7**			
CABF				*e*Sg	**Sg**	**10 53 58.4**	**-1.0**			
	comp=E,16µm,0.7s									
RJF	**Les Rejaudoux**	**2.33**	**290**	*e*Pn	**Pn**	**10 53 24.1**	**+0.1**			
RJF	**Les Rejaudoux**	**2.33**	**290**	*e*Pg	**Pg**	**10 53 29.8**	**-0.7**			
RJF				*e*Sn	**Sn**	**10 53 51.6**	**-1.0**			
RJF				*e*Sg	**Sg**	**10 54 00.5**	**-0.1**			
	comp=E,12µm,0.6s									
CIRO	**Champorcher**	**2.33**	**63**	P	**Pn**	**10 53 25.1**	**+0.8**			
CIRO				AML	AML					
	comp=E,5430µm,1.0s									
CIRO				AML	AML					
	comp=N,6010µm,0.8s									
CIRO				AML	AML					
	comp=N,6010µm,1.2s									
CIRO				AML	AML					
	comp=E,5430µm,1.0s									
CIRO	**Champorcher**	**2.33**	**63**	Pn	**Pn**	**10 53 25.1**	**+0.8**			
GBOS	**Grotte di Boss**	**2.33**	**97**	P	**Pn**	**10 53 24.3**	**+0.1**			
GBOS				AML	AML					
	comp=E,4640µm,1.3s									
GBOS				AML	AML					
	comp=N,8905µm,1.6s									
GBOS				AML	AML					
	comp=E,4640µm,0.7s									
GBOS	**Grotte di Boss**	**2.33**	**97**	Pn	**Pn**	**10 53 23.6**	**-0.5**			
GBOS				Sn	**Sn**	**10 53 51.9**	**-0.8**			
MGRO	**Montegrosso**	**2.35**	**102**	P	**Pn**	**10 53 24.3**	**-0.2**			
MGRO				AML	AML					
	comp=E,10390µm,0.9s									
MGRO				AML	AML					
	comp=N,17850µm,1.6s									
MGRO				AML	AML					
	comp=E,10450µm,1.1s									
MGRO				AML	AML					
	comp=N,18100µm,1.6s									
MGRO				AML	AML					
	comp=N,17850µm,0.4s									
MGRO				AML	AML					
	comp=N,18100µm,0.4s									
MGRO				AML	AML					
	comp=E,10390µm,1.1s									
MGRO	**Montegrosso**	**2.35**	**102**	Pn	**Pn**	**10 53 24.1**	**-0.4**			
MGRO				Sn	**Sn**	**10 53 53.8**	**+0.4**			
BGF	**Bois d'Agland**	**2.35**	**329**	*e*Pn	**Pn**	**10 53 24.8**	**+0.4**			
BGF	**Bois d'Agland**	**2.35**	**329**	*e*Pg	**Pg**	**10 53 30.5**	**-0.4**			
BGF				*e*Sg	**Sg**	**10 54 01.3**	**-0.1**			
	comp=E,21µm,0.5s									
RIVEL	**MONT RIVEL**	**2.37**	**22**	⇑Pn	**Pn**	**10 53 23.9**	**-0.8**			
PLYF	**Puligny Montra**	**2.39**	**2**	Pn	**Pn**	**10 53 24.0**	**-0.9**			
PLYF				Pg	**Pg**	**10 53 30.8**	**-0.9**			
AVF	**Avril sur Loir**	**2.40**	**339**	*e*Pn	**Pn**	**10 53 24.9**	**-0.1**			
AVF	**Avril sur Loir**	**2.40**	**339**	*e*Pg	**Pg**	**10 53 31.4**	**-0.4**			
AVF				*e*Sn	**Sn**	**10 53 54.5**	**+0.3**			
AVF				*e*Sg	**Sg**	**10 54 02.7**	**-0.1**			
	comp=E,20µm,0.7s									
MONC	**Moncucco Torin**	**2.41**	**77**	P	**Pn**	**10 53 26.0**	**+0.9**			
MONC				AML	AML					
	comp=E,13200µm,0.9s									
MONC				AML	AML					
	comp=N,17050µm,1.0s									
TRAV	**Traversella**	**2.41**	**66**	P	**Pn**	**10 53 26.1**	**+0.9**			
TRAV				AML	AML					
	comp=N,5785µm,0.9s									
TRAV				AML	AML					
	comp=E,5975µm,0.9s									
TRAV	**Traversella**	**2.41**	**66**	Pn	**Pn**	**10 53 25.9**	**+0.7**			
AIGLE	**Aigle**	**2.42**	**42**	⇑Pn	**Pn**	**10 53 25.1**	**-0.2**			
AIGLE				Sn	**Sn**	**10 53 54.1**	**-0.8**			
TCF	**Toulx Ste Croi**	**2.42**	**316**	*e*Pn	**Pn**	**10 53 26.1**	**+0.8**			
TCF	**Toulx Ste Croi**	**2.42**	**316**	*e*Pg	**Pg**	**10 53 31.9**	**-0.3**			
TCF				*e*Sg	**Sg**	**10 54 03.5**	**-0.1**			
	comp=E,4µm,0.4s									
SJAF	**Saint Jean de**	**2.44**	**212**	Pn	**Pn**	**10 53 23.5**	**-2.0**			
SJAF				Pg	**Pg**	**10 53 31.0**	**-1.6**			
IMI	**Imperia**	**2.44**	**104**	P	**Pn**	**10 53 25.0**	**-0.7**			
IMI				AML	AML					
	comp=E,11750µm,1.5s									
IMI				AML	AML					
	comp=N,15000µm,1.2s									
IMI				AML	AML					
	comp=E,11750µm,0.5s									
MONQ	**Montcuq**	**2.46**	**267**	⇑Pn	**Pn**	**10 53 25.4**	**-0.5**			
MONQ				Pg	**Pg**	**10 53 32.7**	**-0.4**			
EJON	**La Jonquera**	**2.46**	**211**	Pn	**Pn**	**10 53 24.8**	**-1.2**			
EJON	**La Jonquera**	**2.46**	**211**	Pn	**Pn**	**10 53 25.4**	**-0.6**			
EJON				⇑iVmb_VC		10 53 27.1				
	comp=E,2µm,SNR=4.8									
EJON				Pg	**Pg**	**10 53 31.9**	**-1.3**			
EJON				Sn	**Sg**	**10 54 03.6**	**-1.4**			
FNEB	**Nbias**	**2.47**	**228**	Pn	**Pn**	**10 53 24.8**	**-1.2**			
DIX	**Grande Dixence**	**2.48**	**51**	P	**Pn**	**10 53 27.1**	**+0.7**			
DIX				AML	AML					
	comp=E,19250µm,0.6s									
DIX				AML	AML					
	comp=N,28850µm,0.9s									
DIX				AML	AML					
	comp=N,28850µm,1.1s									
DIX	**Grande Dixence**	**2.48**	**51**	Pn	**Pn**	**10 53 26.8**	**+0.4**			
DIX				Sn	**Sn**	**10 53 57.2**	**+0.4**			
FILF	**Fillols**	**2.50**	**217**	Pn	**Pn**	**10 53 26.7**	**+0.2**			
RORO	**Rocca Rossa**	**2.51**	**99**	P	**Pn**	**10 53 26.8**	**+0.2**			
RORO				AML	AML					
	comp=E,5520µm,1.2s									
RORO				AML	AML					
	comp=N,7920µm,1.6s									
RORO				AML	AML					
	comp=E,5520µm,0.8s									
RORO				AML	AML					
	comp=N,7920µm,0.4s									
RORO	**Rocca Rossa**	**2.51**	**99**	⇑Pn	**Pn**	**10 53 26.4**	**-0.2**			
RORO				Sn	**Sn**	**10 53 57.1**	**0.0**			
DUNF	**Dun**	**2.55**	**234**	Pn	**Pn**	**10 53 26.2**	**-1.0**			
CARF	**Carcanieres**	**2.60**	**225**	Pn	**Pn**	**10 53 26.6**	**-1.3**			
SENIN	**Lac Senin/Sane**	**2.60**	**45**	Pn	**Pn**	**10 53 28.8**	**+0.8**			
SENIN				Sn	**Sn**	**10 53 59.2**	**-0.5**			
SENIN				Sg	**Sg**	**10 54 09.3**	**-0.3**			
SENIN	**Lac Senin/Sane**	**2.60**	**45**		**Pn**	**10 53 28.2**	**+0.2**			
SSF	**Saint Saulge**	**2.61**	**343**	*e*Pn	**Pn**	**10 53 27.7**	**-0.3**			
SSF	**Saint Saulge**	**2.61**	**343**	*e*Pg	**Pg**	**10 53 35.1**	**-0.9**			
SSF				*e*Sn	**Sn**	**10 53 59.5**	**-0.2**			
SSF				*e*Sg	**Sg**	**10 54 08.9**	**-0.9**			
	comp=N,5µm,0.4s									
CANO	**Canova, Maglio**	**2.62**	**97**	P	**Pn**	**10 53 27.9**	**-0.2**			
CANO				AML	AML					
	comp=N,7935µm,1.5s									
CANO				AML	AML					
	comp=E,21050µm,0.9s									
CANO				AML	AML					
	comp=N,7935µm,0.5s									
CANO	**Canova, Maglio**	**2.62**	**97**	⇓Pn	**Pn**	**10 53 27.9**	**-0.2**			
SATI	**Passo dei Sala**	**2.64**	**59**	P	**Pn**	**10 53 29.9**	**+1.2**			
SATI				AML	AML					
	comp=N,4710µm,1.0s									
SATI				AML	AML					
	comp=N,4710µm,1.0s									
SATI				AML	AML					
	comp=E,3975µm,1.0s									
SATI	**Passo dei Sala**	**2.64**	**59**	Pn	**Pn**	**10 53 29.7**	**+1.0**			
ROTM	**Rocchetta Tana**	**2.67**	**83**	Pn	**Pn**	**10 53 30.4**	**+1.6**			
QLNO	**Quiliano**	**2.68**	**94**	P	**Pn**	**10 53 28.6**	**-0.3**			
QLNO				AML	AML					
	comp=E,5305µm,1.2s									
QLNO				AML	AML					
	comp=N,8660µm,1.3s									
QLNO				AML	AML					
	comp=N,8660µm,0.7s									
BRANT	**Les Verrieres**	**2.70**	**28**	Pn	**Pn**	**10 53 28.1**	**-1.2**			
BRANT				Sn	**Sn**	**10 54 02.6**	**+0.6**			
BRANT				Sg	**Sg**	**10 54 13.9**	**+1.2**			
BRANT	**Les Verrieres**	**2.70**	**28**	⇑Pn	**Pn**	**10 53 28.4**	**-0.9**			
TORNY	**Torny/Romont**	**2.75**	**36**	⇑Pn	**Pn**	**10 53 29.4**	**-0.5**			
LOR	**Lormes**	**2.75**	**349**	*e*Pn	**Pn**	**10 53 29.5**	**-0.4**			
	baz=176									
LOR	**Lormes**	**2.75**	**349**	*e*Pg	**Pg**	**10 53 37.4**	**-1.3**			
LOR				*e*Sg	**Sg**	**10 54 12.6**	**-1.7**			
	comp=N,5µm,0.4s									
LOR	**Lormes**	**2.75**	**349**	Pn	**Pn**	**10 53 30.0**	**+0.1**			
LOR				Pg	**Pg**	**10 53 38.0**	**-0.6**			
MMK	**Mattmark**	**2.79**	**57**	P	**Pn**	**10 53 32.1**	**+1.5**			
MMK				AML	AML					
	comp=N,906µm,0.8s									
MMK				AML	AML					
	comp=E,764µm,0.9s									
LFF	**La Frestale**	**2.79**	**279**	*e*Pn	**Pn**	**10 53 30.4**	**0.0**			
LFF	**La Frestale**	**2.79**	**279**	*e*Pg	**Pg**	**10 53 38.1**	**-1.3**			
LFF				*e*Sn	**Sn**	**10 54 04.0**	**0.0**			
LFF				*e*Sg	**Sg**	**10 54 14.5**	**-1.0**			
	comp=E,20µm,0.7s									
EMBD	**Embd, Matterta**	**2.80**	**53**	Pn	**Pn**	**10 53 31.3**	**+0.6**			
PCP	**Piancastagn**	**2.81**	**89**	Pn	**Pn**	**10 53 30.8**	**+0.1**			
PCP				Pg	**Pg**	**10 53 38.7**	**-1.0**			
PCP				Sn	**Sn**	**10 54 04.6**	**+0.2**			
PCP	**Piancastagn**	**2.81**	**89**	P	**Pn**	**10 53 31.0**	**+0.4**			
PCP				AML	AML					
	comp=E,4765µm,1.5s									
PCP				AML	AML					
	comp=N,4535µm,1.6s									
PCP				AML	AML					
	comp=N,4535µm,0.4s									
PCP				AML	AML					
	comp=E,4765µm,0.5s									
PCP	**Piancastagn**	**2.81**	**89**	Pn	**Pn**	**10 53 31.1**	**+0.4**			
GENF	**Genat**	**2.82**	**233**	⇑Pn	**Pn**	**10 53 29.7**	**-1.2**			
VALC	**Valcebollere**	**2.88**	**222**	Pn	**Pn**	**10 53 30.7**	**-1.1**			
STFL	**Fournets-Luisa**	**2.88**	**27**	Pn	**Pn**	**10 53 30.7**	**-1.0**			
BOUC	**Bouclans**	**2.91**	**22**	Pn	**Pn**	**10 53 30.6**	**-1.5**			
ABJF	**Abjat-sur-Band**	**2.92**	**292**	Pn	**Pn**	**10 53 32.7**	**+0.6**			
CRAS	**Crastes**	**2.93**	**255**	Pn	**Pn**	**10 53 30.2**	**-2.1**			
MLS	**Moulis**	**3.02**	**239**	Pn	**Pn**	**10 53 32.5**	**-1.1**			
PAND	**Andorre**	**3.03**	**229**	Pn	**Pn**	**10 53 33.9**	**0.0**			
CHMF	**Charmoille**	**3.03**	**27**	⇑Pn	**Pn**	**10 53 32.4**	**-1.4**			
HYF	**Humbligny**	**3.04**	**334**	*e*Pn	**Pn**	**10 53 34.8**	**+1.0**			
HYF	**Humbligny**	**3.04**	**334**	*e*Pg	**Pg**	**10 53 42.8**	**-1.2**			
HYF				*e*Sn	**Sn**	**10 54 09.0**	**-1.1**			
HYF				*e*Sg	**Sg**	**10 54 22.9**	**-0.5**			
SARZ	**Sarezzano**	**3.07**	**83**	P	**Pn**	**10 53 34.9**	**+0.7**			
SARZ				AML	AML					
	comp=N,3150µm,0.8s									
SARZ				AML	AML					
	comp=E,3825µm,1.1s									
SARZ				AML	AML					
	comp=N,3130µm,1.5s									
SARZ				AML	AML					
	comp=N,3130µm,0.5s									
SARZ				AML	AML					
	comp=E,3420µm,1.2s									
SALF	**Salau**	**3.08**	**235**	Pn	**Pn**	**10 53 33.0**	**-1.5**			
FIESA	**Fiescheralp**	**3.08**	**51**	Pn	**Pn**	**10 53 35.2**	**+0.5**			
FIESA				Sn	**Sn**	**10 54 11.9**	**+0.3**			
FIESA				Sg	**Sg**	**10 54 26.7**	**+1.8**			
RNCA	**Ronca, Sant'Ol**	**3.10**	**90**	Pn	**Pn**	**10 53 35.2**	**+0.6**			
CEST	**Esterri de Car**	**3.14**	**232**		**Pn**	**10 53 37.8**	**+2.5**			
CORI	**Orista**	**3.20**	**217**		**Pn**	**10 53 36.5**	**+0.5**			
VARE	**Varese**	**3.21**	**65**	P	**Pn**	**10 53 36.4**	**+0.2**			
VARE				AML	AML					
	comp=E,3055µm,1.1s									
VARE				AML	AML					
	comp=E,3055µm,0.9s									
VARE				AML	AML					
	comp=N,4200µm,0.9s									
HASLI	**Hasliberg/Brie**	**3.30**	**47**	Pn	**Pn**	**10 53 37.7**	**+0.1**			
HASLI				Sn	**Sn**	**10 54 14.9**	**-1.9**			
HASLI				Sg	**Sg**	**10 54 32.6**	**+0.7**			
GORR	**Gorreto**	**3.34**	**88**	Pn	**Pn**	**10 53 38.7**	**+0.8**			
BOURR	**Bourrignon**	**3.36**	**32**	⇑Pn	**Pn**	**10 53 36.7**	**-1.6**			
MUGIO	**Muggio**	**3.40**	**65**	P	**Pn**	**10 53 39.5**	**+0.6**			
MUGIO				AML	AML					
	comp=E,2035µm,0.9s									
MUGIO				AML	AML					
	comp=N,1920µm,1.2s									
MUGIO				AML	AML					
	comp=N,1920µm,0.8s									
FUSIO	**Fusio**	**3.41**	**55**	P	**Pn**	**10 53 40.0**	**+1.0**			
FUSIO				AML	AML					
	comp=E,2595µm,1.0s									
FUSIO				AML	AML					
	comp=N,2735µm,1.0s									
FUSIO				AML	AML					
	comp=E,2595µm,1.0s									
RONF	**Ronchamp**	**3.44**	**23**	Pn	**Pn**	**10 53 37.5**	**-1.9**			
EPF	**Esparros**	**3.46**	**245**	*e*Pn	**Pn**	**10 53 39.5**	**-0.2**			
EPF	**Esparros**	**3.46**	**245**	*e*Pg	**Pg**	**10 53 49.9**	**-2.3**			
EPF				*e*Sg	**Sg**	**10 54 37.2**	**+0.2**			
	comp=E,11µm,0.6s									
MLZA	**Monlezun-d-Arm**	**3.50**	**259**	Pn	**Pn**	**10 53 40.2**	**+0.1**			
BALST	**Balsthal**	**3.50**	**37**	*e*Pn	**Pn**	**10 53 38.8**	**-1.5**			
BALST				*e*Sg	**Sg**	**10 54 37.8**	**-0.5**			
BALST	**Balsthal**	**3.50**	**37**	⇑Pn	**Pn**	**10 53 38.7**	**-1.5**			
MSSA	**Maissana**	**3.52**	**92**		**Pn**	**10 53 40.1**	**-0.3**			
LRVF	**chteau la Riv**	**3.53**	**278**	Pn	**Pn**	**10 53 41.6**	**+1.0**			
HINF	**Hinteralfeld**	**3.60**	**25**	*e*Pn	**Pn**	**10 53 39.2**	**-2.4**			
HINF	**Hinteralfeld**	**3.60**	**25**	*e*Pg	**Pg**	**10 53 53.2**	**-1.7**			
HINF				*e*Sn	**Sn**	**10 54 22.6**	**-1.5**			
HINF				*e*Sg	**Sg**	**10 54 39.6**	**-1.9**			
	comp=E,3µm,0.5s									
ILLF	**Illfurth**	**3.61**	**30**	Pn	**Pn**	**10 53 39.9**	**-1.8**			
LABF	**Labassere**	**3.63**	**247**	Pn	**Pn**	**10 53 40.6**	**-1.3**			
HAU	**Haudompre**	**3.64**	**19**	*e*Pn	**Pn**	**10 53 40.3**	**-1.8**			
HAU	**Haudompre**	**3.64**	**19**	*e*Pg	**Pg**	**10 53 54.1**	**-1.5**			
HAU				*e*Sn	**Sn**	**10 54 23.4**	**-1.6**			
HAU				*e*Sg	**Sg**	**10 54 41.0**	**-1.8**			
	comp=E,2µm,0.3s									
SFTF	**Sexfontaines**	**3.65**	**4**	*e*Pn	**Pn**	**10 53 41.6**	**-0.6**			
SFTF	**Sexfontaines**	**3.65**	**4**	*e*Pg	**Pg**	**10 53 54.3**	**-1.5**			
SFTF				*e*Sn	**Sn**	**10 54 23.3**	**-1.9**			
SFTF				*e*Sg	**Sg**	**10 54 41.7**	**-1.4**			
	comp=E,2µm,0.4s									
PYLO	**Lourdes**	**3.68**	**248**	Pn	**Pn**	**10 53 42.9**	**+0.2**			
VIEF	**Viey**	**3.73**	**245**	Pn	**Pn**	**10 53 44.2**	**+0.7**			
PGF	**Pioggiola**	**3.77**	**121**	*e*Pn	**Pn**	**10 53 42.2**	**-1.7**			
PGF				*e*Sn	**Sn**	**10 54 24.2**	**-4.1**			
	comp=E,134nm,0.2s									
PGF	**Pioggiola**	**3.77**	**121**	P	**Pn**	**10 53 41.7**	**-2.3**			
PGF				AML	AML					
	comp=E,1345µm,1.2s									
PGF				AML	AML					
	comp=N,1300µm,1.6s									
PGF	**Pioggiola**	**3.77**	**121**	Pn	**Pn**	**10 53 42.1**	**-1.9**			
PLMA	**Palmaria, Port**	**3.79**	**96**	P	**Pn**	**10 53 43.6**	**-0.5**			
PLMA				AML	AML					
	comp=E,1600µm,1.0s									
PLMA				AML	AML					
	comp=N,1390µm,1.6s									
PLMA				AML	AML					
	comp=N,1390µm,0.4s									
PLMA				AML	AML					
	comp=E,1600µm,1.0s									
MORSI	**Morsiglia**	**3.79**	**114**	Pn	**Pn**	**10 53 42.1**	**-2.1**			
MDI	**Monti di Nese**	**3.80**	**70**	P	**Pn**	**10 53 44.1**	**-0.3**			
MDI				AML	AML					
	comp=E,2080µm,0.8s									
MDI				AML	AML					
	comp=E,2065µm,0.8s									
MDI				AML	AML					
	comp=N,1685µm,1.3s									
MDI				AML	AML					
	comp=N,1680µm,1.3s									
MDI				AML	AML					
	comp=E,2080µm,1.2s									
MDI				AML	AML					
	comp=E,2065µm,1.2s									
ENDD	**Endenburg**	**3.82**	**33**	Pn	**Pn**	**10 53 42.2**	**-2.3**			
ETNF	**Estrennes**	**3.82**	**14**	Pn	**Pn**	**10 53 43.1**	**-1.5**			
CLF	**Chambon-Foret**	**3.83**	**336**	Pn	**Pn**	**10 53 46.3**	**+1.7**			
CLF				Pg	**Pg**	**10 53 59.1**	**-0.1**			
CLF				Sg	**Sg**	**10 54 49.0**	**+0.2**			
CLF	**Chambon-Foret**	**3.83**	**336**		**Pn**	**10 53 45.8**	**+1.2**			
CLF	**Chambon-Foret**	**3.83**	**336**	Pn	**Pn**	**10 53 46.0**	**+1.4**			
TUE	**Stuetta**	**3.83**	**59**	Pn	**Pn**	**10 53 45.7**	**+0.9**			
TUE				Sn	**Sn**	**10 54 28.3**	**-1.6**			
TUE	**Stuetta**	**3.83**	**59**		**Pn**	**10 53 45.8**	**+0.9**			
TUE	**Stuetta**	**3.83**	**59**	P	**Pn**	**10 53 45.8**	**+0.9**			
TUE				AML	AML					
	comp=E,1575µm,0.8s									
TUE				AML	AML					
	comp=N,2170µm,1.3s									
TUE				AML	AML					
	comp=N,2100µm,1.3s									
TUE				AML	AML					
	comp=E,1550µm,0.8s									
TUE				AML	AML					
	comp=N,2100µm,0.7s									
TUE				AML	AML					
	comp=N,2170µm,0.7s									
TUE	**Stuetta**	**3.83**	**59**	Pn	**Pn**	**10 53 45.8**	**+0.9**			
SULZ	**Cheisacher**	**3.83**	**38**	*e*Pn	**Pn**	**10 53 43.0**	**-1.7**			
SULZ				*e*Pg	**Pg**	**10 54 00.8**	**+1.6**			
SULZ				*e*Sg	**Sg**	**10 54 49.2**	**+0.4**			
SULZ	**Cheisacher**	**3.83**	**38**	Pn	**Pn**	**10 53 42.9**	**-1.9**			
WALT	**Westhalten**	**3.87**	**27**	Pn	**Pn**	**10 53 43.0**	**-2.2**			
CHIF	**Chize**	**3.88**	**296**	Pn	**Pn**	**10 53 45.9**	**+0.6**			
MFF	**Saint Martin d**	**3.92**	**303**	*e*Pn	**Pn**	**10 53 46.6**	**+0.8**			
MFF	**Saint Martin d**	**3.92**	**303**	*e*Pn	**Pn**	**10 53 46.8**	**+0.9**			
	baz=120									
MFF	**Saint Martin d**	**3.92**	**303**	*e*Pg	**Pg**	**10 53 59.5**	**-1.4**			
MFF	**Saint Martin d**	**3.92**	**303**	*e*Pg	**Pg**	**10 53 59.9**	**-1.0**			
MFF				*e*Sn	**Sn**	**10 54 31.9**	**+0.1**			
MFF				*e*Sg	**Sg**	**10 54 49.1**	**-2.5**			
	comp=N,946nm,0.3s									
MFF				*e*Sg	**Sb**	**10 54 50.3**	**+8.1**			
	comp=N,5µm,0.7s									
MFF	**Saint Martin d**	**3.92**	**303**	Pn	**Pn**	**10 53 46.7**	**+0.8**			
REYF	**Montagne du Re**	**3.93**	**249**	Pn	**Pn**	**

BERNI Berninapass 4.22 62 P **Pn** 10 53 51.3 +1.0
BERNI AML AML
comp=E,1290µm,1.0s
BERNI AML AML
comp=N,1110µm,1.6s
BERNI AML AML
comp=E,1290µm,1.0s
BERNI AML AML
comp=N,1110µm,0.4s
ORDF Ordiarp 4.24 253 Pn **Pn** 10 53 49.1 -1.3
CARD Cardoso 4.24 95 P **Pn** 10 53 49.5 -0.8
CARD S **Sn** 10 54 38.1 -1.7
CARD AML AML
comp=E,1180µm,0.8s
CARD AML AML
comp=N,1275µm,1.1s
CDF Champ du Feu 4.26 25 *e*Pn **Pn** 10 53 47.9 -2.8
CDF Champ du Feu 4.26 25 *e*Pg **Pg** 10 54 05.8 -1.7
CDF *e*Sn **Sn** 10 54 37.6 -2.8
CDF *e*Sg **Sg** 10 55 00.2 -2.4
comp=N,2µm,0.5s
ZELS Zelsheim 4.28 28 Pn **Pn** 10 53 48.6 -2.2
GSCL Gusciola 4.28 91 P **Pn** 10 53 51.4 +0.5
GSCL AML AML
comp=N,2375µm,1.6s
GSCL AML AML
comp=E,2115µm,1.1s
GSCL AML AML
comp=N,2375µm,0.4s
WLS Welschbruch 4.28 25 Pn **Pn** 10 53 48.5 -2.5
DAVOX Davos/Dischmat 4.30 57 Pn **Pn** 10 53 52.5 +1.2
comp=N,17nm,0.3s,baz=245,slow=11,SNR=73
DAVOX Sn **Sn** 10 54 38.0 -3.5
comp=N,25nm,0.3s,baz=239,slow=11,SNR=5.2
DAVOX Lg Lg 10 55 05.8
comp=N,30nm,0.3s,baz=266,slow=18,SNR=3.3
DAVOX LR LR 10 55 49.4
comp=N,4µm,19.6s,baz=206,slow=43
comp=N,53nm,0.3s
TSDF Thoir-sur-Di 4.30 319 Pn **Pn** 10 53 52.4 +1.3
BDI Bagni Di Lucca 4.32 95 P **Pn** 10 53 50.6 -0.9
BDI AML AML
comp=E,1157µm,1.6s
BDI AML AML
comp=N,1465µm,1.0s
BDI AML AML
comp=E,870µm,1.3s
BDI AML AML
comp=N,1460µm,1.1s
BDI AML AML
comp=E,870µm,0.7s
BDI AML AML
comp=N,1465µm,1.0s
BDI AML AML
comp=N,1460µm,0.9s
BDI AML AML
comp=E,1157µm,0.4s
MANO Manonville 4.35 11 Pn **Pn** 10 53 51.5 -0.4
IRAF Chalets d'Irat 4.37 251 Pn **Pn** 10 53 51.3 -1.0
MABI Malga Bissina 4.41 68 P **Pn** 10 53 52.8 -0.1
MABI AML AML
comp=E,415µm,0.8s
MABI AML AML
comp=N,562µm,0.8s
MAGA Magasa 4.42 72 P **Pn** 10 53 52.7 -0.2
MAGA AML AML
comp=E,4115µm,0.6s
MAGA AML AML
comp=E,4115µm,1.4s
MAGA AML AML
comp=N,1895µm,0.7s
OSSF Osses 4.45 255 Pn **Pn** 10 53 52.2 -1.0
FUORN Ofenpass-Fuorn 4.46 61 Pn **Pn** 10 53 54.8 +1.2
FUORN Sn **Sn** 10 54 47.9 +2.4
FUORN Ofenpass-Fuorn 4.46 61 **Pn** 10 53 54.8 +1.2
FUORN Ofenpass-Fuorn 4.46 61 P **Pn** 10 53 54.9 +1.2
FUORN AML AML
comp=E,1208µm,1.0s
FUORN AML AML
comp=N,1144µm,0.9s
RONC Roncone 4.46 69 P **Pn** 10 53 53.9 +0.2
RONC AML AML
comp=E,2075µm,0.8s
RONC AML AML
comp=N,2905µm,0.7s
RONC AML AML
comp=N,1990µm,0.6s
RONC AML AML
comp=E,2870µm,1.1s
RONC AML AML
comp=E,2075µm,1.2s
RONC AML AML
comp=N,2905µm,1.3s
BRMO Bormio 4.47 63 P **Pn** 10 53 54.8 +1.2
BRMO AML AML
comp=E,1016µm,1.1s
BRMO AML AML
comp=N,608µm,1.0s
SJPF Ste Jean 4.47 253 *e*Pn **Pn** 10 53 52.7 -0.8
SJPF Ste Jean 4.47 253 *e*Pg **Pg** 10 54 09.3 -2.2
SJPF *e*Sn **Sn** 10 54 43.7 -1.8
SJPF *e*Sg **Sg** 10 55 06.8 -2.7
comp=N,10µm,0.8s
SDOF Saint-Denis-d' 4.51 291 Pn **Pn** 10 53 54.9 +0.9
HOHE HOHENGOEFT 4.54 25 Pn **Pn** 10 53 52.2 -2.3
BFO Black Forest 4.55 33 Pn **Pn** 10 53 52.0 -2.7
BFO Sn **Sn** 10 54 43.6 -3.9
BFO Black Forest 4.55 33 **Pn** 10 53 51.8 -2.9
BFO Black Forest 4.55 33 *e*Pn **Pn** 10 53 51.8 -2.9
BFO *e*Pg **Pg** 10 54 13.2 +0.2
BFO *e*Sn **Sn** 10 54 43.5 -4.0
BFO *e*Sg **Sg** 10 55 15.1 +3.1
BFO Black Forest 4.55 33 Pn **Pn** 10 53 51.6 -3.1
ZCCA Zocca 4.55 91 **Pn** 10 53 56.9 +2.2
MBAL Monte Baldo - 4.56 73 P **Pn** 10 53 54.7 -0.1
MBAL AML AML
comp=E,854µm,1.3s
MBAL AML AML
comp=N,1135µm,1.1s
MBAL AML AML
comp=E,927µm,0.9s
MBAL AML AML
comp=N,696µm,0.9s
MBAL AML AML
comp=E,854µm,0.7s
MBAL AML AML
comp=E,927µm,1.1s
MBAL AML AML
comp=N,1135µm,0.9s
CLEV Clevilliers 4.56 332 Pn **Pn** 10 53 55.5 +0.7
DAVA Damuels 4.57 52 *i* Pn **Pn** 10 53 55.8 +0.8
comp=N,23nm,0.2s,SNR=23
DAVA *i* Sn **Sn** 10 54 48.9 +0.8
comp=N,291nm,0.3s
VARA Varagna 4.61 72 P **Pn** 10 53 55.8 +0.2
VARA AML AML
comp=E,1480µm,0.8s
VARA AML AML
comp=N,1780µm,1.6s
VARA AML AML
comp=E,1875µm,1.5s
VARA AML AML
comp=N,1390µm,0.8s
VARA AML AML
comp=N,1780µm,0.4s
VARA AML AML
comp=E,1875µm,0.5s
VARA AML AML
comp=E,1480µm,1.2s
VARA AML AML
comp=N,1390µm,1.2s
OPP Oppenau 4.63 31 Pn **Pn** 10 53 52.9 -2.9
MOSI Grossmontoni 4.64 62 P **Pn** 10 53 57.6 +1.6
MOSI AML AML
comp=E,2500µm,1.5s
MOSI AML AML
comp=N,4675µm,0.9s
MOSI AML AML
comp=N,4675µm,1.1s
MOSI AML AML
comp=E,2500µm,0.5s
CARE Lago del Cares 4.66 64 P **Pn** 10 53 57.5 +1.2
CARE AML AML
comp=E,904µm,1.6s
CARE AML AML
comp=N,1045µm,0.9s
CARE AML AML
comp=E,1008µm,1.5s
CARE AML AML
comp=N,1045µm,1.1s
CARE AML AML
comp=N,1079µm,0.9s
CARE AML AML
comp=E,904µm,0.4s
CARE AML AML
comp=E,1008µm,0.5s
CIEL Dossenheim-sur 4.66 23 Pn **Pn** 10 53 53.5 -2.6
LUSI Trento, Gardas 4.67 70 P **Pn** 10 53 56.2 -0.2
LUSI AML AML
comp=E,1089µm,0.9s
LUSI AML AML
comp=N,1225µm,1.0s
MAHO Mahon 4.68 183 Pn **Pn** 10 53 56.4 +0.1
MAHO Sn **Sn** 10 54 45.7 -4.8
MAHO Mahon 4.68 183 **Pn** 10 53 55.5 -0.8
ESAC San Caprasio 4.69 234 Pn **Pn** 10 53 56.7 +0.2
ESAC ⇑*i*Vmb_VC 10 53 57.9
comp=N,1µm,SNR=2.0
ESAC Pg **Pg** 10 54 14.0 -1.6
ESAC Sg **Sg** 10 55 16.3 0.0
GUT Gutenstein 4.69 40 Pn **Pn** 10 53 54.1 -2.4
GAGG Gaggia 4.72 69 P **Pn** 10 53 57.5 +0.4
GAGG AML AML
comp=E,1990µm,1.2s
GAGG AML AML
comp=N,2095µm,1.1s
GAGG AML AML
comp=E,2115µm,1.1s
GAGG AML AML
comp=N,2020µm,1.2s
GAGG AML AML
comp=N,2020µm,0.8s
GAGG AML AML
comp=E,1990µm,0.8s
VOEL Voellerdingen 4.72 20 Pn **Pn** 10 53 54.9 -2.0
MOCL Monte Cuccoli 4.74 95 P **Pn** 10 53 56.6 -0.7
MOCL AML AML
comp=E,821µm,1.6s
MOCL AML AML
comp=N,870µm,1.3s
MOCL AML AML
comp=E,821µm,0.4s
ERTA Horta de San J 4.79 223 Pn **Pn** 10 53 59.3 +1.3
ERTA ⇑*i*Vmb_VC 10 53 59.4
comp=E,915nm,SNR=2.6
AGLI Aglientu 4.80 134 P **Pn** 10 53 55.6 -2.4
AGLI AML AML
comp=E,618µm,1.1s
AGLI AML AML
comp=N,570µm,1.6s
AGLI AML AML
comp=E,618µm,0.9s
AGLI AML AML
comp=N,570µm,0.4s
DOSS Dosso del Somm 4.82 72 P **Pn** 10 53 58.2 -0.2
DOSS AML AML
comp=E,1565µm,0.7s
DOSS AML AML
comp=N,1070µm,1.4s
DOSS AML AML
comp=E,1105µm,1.4s
DOSS AML AML
comp=N,1070µm,0.6s
DOSS AML AML
comp=E,1105µm,0.6s
DOSS AML AML
comp=N,1585µm,0.7s
EBR Ebro Roquetas 4.82 221 **Pn** 10 53 59.2 +0.9
EBR Ebro Roquetas 4.82 221 P **Pn** 10 53 59.2 +0.9
BABA Baden-Baden-Ne 4.83 29 Pn **Pn** 10 53 55.9 -2.5
EARA Aranguren 4.84 250 Pn **Pn** 10 54 01.3 +2.7
EARA ⇑*i*Vmb_VC 10 54 02.9
comp=N,1µm,SNR=3.1
EARA Sn **Sn** 10 55 00.8 +6.2
NEUF Neufchef 4.86 11 Pn **Pn** 10 53 59.4 +0.6
CASP Castiglione de 4.86 109 **Pn** 10 53 58.1 -0.8
CASP Castiglione de 4.86 109 P **Pn** 10 53 57.3 -1.6
CASP AML AML
comp=E,597µm,1.6s
CASP AML AML
comp=N,584µm,1.6s
CASP AML AML
comp=N,584µm,0.4s
CASP AML AML
comp=E,597µm,0.4s
OZOL Ozolo 4.88 66 P **Pn** 10 54 00.7 +1.4
OZOL AML AML
comp=E,1795µm,0.9s
OZOL AML AML
comp=N,1420µm,1.2s
OZOL AML AML
comp=E,1970µm,0.9s
OZOL AML AML
comp=N,1120µm,1.3s
OZOL AML AML
comp=E,1795µm,1.1s
OZOL AML AML
comp=E,1970µm,1.1s
OZOL AML AML
comp=N,1420µm,0.8s
OZOL AML AML
comp=N,1120µm,0.7s
OSSC Osservatorio P 4.89 100 **Pn** 10 53 59.3 0.0
SZBH soultz borehol 4.90 26 Pn **Pn** 10 53 56.9 -2.5
UBR Ueberruh 4.92 49 *e*Pn **Pn** 10 53 59.4 -0.4
UBR *e*Sn **Sn** 10 54 54.6 -2.0
UBR *e*Sg **Sg** 10 55 25.0 +1.1
FETA Feichten 4.92 58 *i* Pn **Pn** 10 54 01.0 +1.1
comp=N,75nm,0.4s,SNR=42
FETA *e*Sn **Sn** 10 54 57.2 +0.3
comp=N,282nm,0.5s
LEMB Lembach 4.96 25 Pn **Pn** 10 53 57.4 -2.8
PANI Panarotta 4.96 70 P **Pn** 10 54 00.5 0.0
PANI S **Sn** 10 54 57.1 -0.8
PANI AML AML
comp=E,933µm,1.5s
PANI AML AML
comp=N,975µm,0.8s
PANI AML AML
comp=N,975µm,1.2s
PANI AML AML
comp=E,933µm,0.5s
ETOS Mallorca 4.98 196 Pn **Pn** 10 53 59.1 -1.4
ETOS Sn **Sn** 10 54 52.9 -5.2
TEOL Teolo 5.06 79 **Pn** 10 54 00.9 -0.7
TEOL Teolo 5.06 79 P **Pn** 10 54 00.9 -0.7
TEOL AML AML
comp=E,3155µm,1.3s
TEOL AML AML
comp=N,2975µm,1.0s
TEOL AML AML
comp=N,2975µm,1.0s
TEOL AML AML
comp=E,3155µm,0.7s
CTI Castel Tesino 5.17 71 **Pn** 10 54 03.6 +0.4
CTI Castel Tesino 5.17 71 P **Pn** 10 54 03.6 +0.4
CTI Castel Tesino 5.17 71 P **Pn** 10 54 03.4 +0.2
CTI AML AML
comp=E,716µm,0.8s
CTI AML AML
comp=N,1475µm,0.7s
CTI AML AML
comp=N,1475µm,1.3s
CTI AML AML
comp=E,716µm,1.2s
ZIAN Ziano 5.18 68 P **Pn** 10 54 04.1 +0.8
ZIAN AML AML
comp=E,814µm,1.0s
ZIAN AML AML
comp=N,832µm,1.0s
ZIAN AML AML
comp=E,814µm,1.0s
ZIAN AML AML
comp=N,830µm,1.0s
ZIAN AML AML
comp=E,814µm,1.0s
ZIAN AML AML
comp=N,830µm,1.0s
RETA Reutte 5.18 54 *i* Pn **Pn** 10 54 03.5 +0.3
comp=N,58nm,0.3s,SNR=40
RETA *i* Sn **Sn** 10 55 00.2 -2.8
comp=N,317nm,0.6s
LDF La Druitiere 5.19 323 *e*Pn **Pn** 10 54 03.6 +0.3
LDF La Druitiere 5.19 323 *e*Pg **Pg** 10 54 22.8 -2.4
LDF *e*Sn **Sn** 10 54 59.3 -3.8
LDF *e*Sg **Sg** 10 55 29.5 -2.8
comp=N,3µm,0.6s
WLF Walferdange 5.21 11 Pn **Pn** 10 54 03.4 -0.1
WLF Walferdange 5.21 11 **Pn** 10 54 04.6 +1.1
WLF Walferdange 5.21 11 *d*P **Pn** 10 54 04.3 +0.7
WLF Walferdange 5.21 11 P **Pn** 10 54 04.6 +1.1
WLF Walferdange 5.21 11 *e*Pn **Pn** 10 54 04.7 +1.1
CGRP Cima Grappa 5.24 73 Pn **Pn** 10 54 03.7 -0.5
CGRP Sn **Sn** 10 55 04.9 +0.3
STU Stuttgart 5.25 35 Pn **Pn** 10 54 01.1 -3.2
STU Sn **Sn** 10 55 00.5 -4.2
STU Stuttgart 5.25 35 **Pn** 10 54 02.1 -2.1
STU Stuttgart 5.25 35 P **Pn** 10 54 02.1 -2.1
STU Stuttgart 5.25 35 *e*Pn **Pn** 10 54 01.2 -3.0
STU *e*Sg **Sg** 10 55 32.8 -1.6
MOTA Moosalm 5.30 56 *i* Pn **Pn** 10 54 05.3 +0.2
comp=N,17nm,0.3s,SNR=50
MOTA *i* Sn **Sn** 10 55 06.8 +0.6
comp=N,210nm,0.4s
ROSI Rosskopf 5.31 61 Pn **Pn** 10 54 06.9 +1.7
ROSI Sn **Sn** 10 55 06.6 +0.3
ROSI Rosskopf 5.31 61 P **Pn** 10 54 06.5 +1.4
SQTA Sankt Quirin 5.31 58 *i* Pn **Pn** 10 54 05.8 +0.7
comp=N,66nm,0.3s,SNR=47
SQTA *i* Sn **Sn** 10 55 06.6 +0.3
comp=N,206nm,0.5s
GRR Gorron 5.38 317 *e*Pn **Pn** 10 54 05.5 -0.4
GRR Gorron 5.38 317 *e*Pg **Pg** 10 54 26.2 -2.6
GRR *e*Sn **Sn** 10 55 05.2 -2.6
GRR *e*Sg **Sg** 10 55 35.6 -2.9
comp=N,2µm,0.6s
FLN La Foliniere 5.47 322 *e*Pn **Pn** 10 54 07.4 +0.2
baz=137
FLN La Foliniere 5.47 322 *e*Pg **Pg** 10 54 29.8 -0.8
FLN *e*Sn **Sn** 10 55 08.0 -2.1
FLN *e*Sg **Sg** 10 55 38.8 -2.7
comp=N,3µm,0.7s
AGOR Agordo 5.50 69 P **Pn** 10 54 08.6 +0.9
BAIF Baives 5.50 357 *e*Pn **Pn** 10 54 07.1 -0.5
BAIF Baives 5.50 357 *e*Pg **Pg** 10 54 28.4 -2.8
BAIF *e*Sn **Sn** 10 55 07.8 -3.0
BAIF *e*Sg **Sg** 10 55 39.1 -3.3
comp=N,2µm,0.7s
DOU Dourbes 5.53 360 *d*P **Pn** 10 54 08.1 +0.1
DOU *d*S **Sn** 10 55 07.5 -4.1
comp=E,1µm,1.0s
GIVF Givet 5.54 1 *e*Pn **Pn** 10 54 08.2 0.0
GIVF *e*Sn **Sn** 10 55 09.3 -2.4
GIVF *e*Sg **Sg** 10 55 40.5 -3.1
comp=E,3µm,0.8s
WATA Walderalm 5.58 58 *i* Pn **Pn** 10 54 09.2 +0.3
comp=E,6.7nm,0.6s,SNR=17
WATA *i* Sn **Sn** 10 55 12.2 -0.9
comp=E,208nm,0.5s
WTTA Wattenberg 5.59 59 *i* Pn **Pn** 10 54 09.6 +0.6
comp=E,48nm,0.3s,SNR=80
WTTA *i* Sn **Sn** 10 55 13.8 +0.6
comp=E,160nm,0.4s
WTTA Wattenberg 5.59 59 P **Pn** 10 54 09.4 +0.4
EMOS Mosqueruela 5.64 224 Pn **Pn** 10 54 09.7 -0.1
EMOS ⇑*i*Vmb_VC 10 54 12.4
comp=E,756nm,SNR=2.1
BMRD Maredsous 5.74 1 *d*P **Pn** 10 54 11.2 +0.3
BMRD *d*S **Sn** 10 55 15.9 -0.7
comp=N,1µm,0.0s
BGES Gesves 5.83 3 *d*P **Pn** 10 54 12.3 +0.2
BGES *d*S **Sn** 10 55 16.7 -2.2
FUR Furstenfeldbru 5.84 50 *e*Sn **Sn** 10 55 15.3 -4.0
BHOU Houvegnez 5.87 9 *d*P **Pn** 10 54 13.2 +0.6
BHOU *d*S **Sn** 10 55 18.7 -1.1
comp=E,1µm,0.0s
BCLA Clavier 5.87 4 *d*P **Pn** 10 54 13.4 +0.6
BCLA *d*S **Sg** 10 55 53.3 -1.1
E0901 Celadas (Terue 5.89 228 Pn **Pn** 10 54 13.3 +0.1
E0901 ⇑*i*Vmb_VC 10 54 14.5
comp=E,4µm,SNR=11
E0901 Sn **Sn** 10 55 22.0 +1.4
HILG Hillesheim 5.89 13 *e*Sn **Sn** 10 55 20.3 -0.2
comp=E,876nm,0.8s
BGG Burgeitz 5.93 17 *e*Pn **Pn** 10 54 13.8 +0.3
BGG *e*Sn **Sn** 10 55 21.2 -0.3
comp=E,758nm,1.1s
ABTA Abfaltersbach 5.94 66 *i* Pn **Pn** 10 54 14.9 +1.1
comp=E,27nm,0.3s,SNR=19
ABTA *i* Sn **Sn** 10 55 23.5 +1.6
comp=E,268nm,0.7s
ELAN Lanestosa 5.97 260 Pn **Pn** 10 54 14.2 0.0
ELAN ⇑*i*Vmb_VC 10 54 15.3
comp=E,1µm,SNR=3.5
ELAN Sn **Sn** 10 55 22.0 -0.5
NAST IGS Nastaetten 6.04 20 *e*Sn **Sn** 10 55 22.6 -1.6
comp=E,556nm,0.8s
EIBI Ibiza 6.05 205 Sn **Sn** 10 55 19.2 -5.2
MEM Membach 6.12 8 *d*P **Pn** 10 54 15.1 -1.0
MEM *d*S **Sn** 10 55 24.8 -1.2
comp=N,1µm,0.0s
VSL Villasalto 6.18 143 **Pn** 10 54 15.1 -1.9
SGMF Saint Gilles 6.18 309 *e*Pn **Pn** 10 54 16.6 -0.4
SGMF *e*Sg **Sg** 10 56 00.5 -3.7
comp=N,2µm,0.6s
ETOR Torete 6.18 235 Pn **Pn** 10 54 17.4 +0.3
ETOR ⇑*i*Vmb_VC 10 54 19.1
comp=N,608nm,SNR=2.0
ETOR Sn **Sn** 10 55 32.4 +4.6
KLL Kalltalsperre 6.19 10 *e*Pn **Pn** 10 54 16.6 -0.4
KLL *e*Sn **Sn** 10 55 26.2 -1.6
DREG Dreilaegerbach 6.20 10 *e*Pn **Pn** 10 54 16.6 -0.6
DREG *e*Sn **Sn** 10 55 26.0 -1.9
comp=N,527nm,1.0s
STB Steinbach 6.21 13 *e*Pn **Pn** 10 54 17.0 -0.4
STB *e*Sn **Sn** 10 55 26.6 -1.8
comp=N,632nm,0.8s
TNS Taunus Mts 6.22 23 *e*Pn **Pn** 10 54 15.6 -2.0
TNS *e*Pg **Pg** 10 54 44.4 -0.6
TNS *e*Sg **Sg** 10 56 07.2 +1.6
KOE Koeppel 6.23 19 *e*Pn **Pn** 10 54 17.3 -0.4
KOE *e*Sn **Sn** 10 55 27.9 -0.8
comp=N,1µm,0.8s
UCC Uccle 6.24 358 **Pn** 10 54 17.8 +0.1
UCC Uccle 6.24 358 *d*P **Pn** 10 54 17.5 -0.2
UCC Uccle 6.24 358 P **Pn** 10 54 17.8 +0.1
BEBN Eben Emael 6.27 6 *d*P **Pn** 10 54 18.6 +0.4
LESA Schwarzleotal 6.30 60 *i* Pn **Pn** 10 54 19.0 +0.4
comp=N,24nm,0.6s,SNR=26
LESA *e*Sn **Sn** 10 55 28.6 -1.9
comp=N,102nm,0.3s
QUIF Quistinic 6.35 305 *e*Pn **Pn** 10 54 18.8 -0.5
QUIF Quistinic 6.35 305 *e*Pg **Pg** 10 54 44.0 -3.5
QUIF *e*Sg **Sg** 10 56 06.2 -3.5
comp=N,3µm,0.6s
JUE Julich 6.46 10 *e*Sn **Sn** 10 55 33.3 -1.0
comp=N,3µm,1.0s
ECHE Chera 6.48 222 Pn **Pn** 10 54 21.1 0.0
ECHE Chera 6.48 222 Pn **Pn** 10 54 23.1 +1.9
RJOB Jochberg 6.50 58 *e*Pn **Pn** 10 54 21.4 0.0
RJOB *e*Sn **Sn** 10 55 33.2 -2.4
KBA Koelnbreinsper 6.59 65 *i* Pn **Pn** 10 54 24.6 +1.8
comp=N,20nm,0.3s,SNR=19
KBA *e*Sn **Sn** 10 55 39.5 +1.6
comp=N,74nm,0.7s
BNS Bensberg 6.63 14 *e*Sn **Sn** 10 55 37.9 -0.6
comp=N,754nm,0.8s
CADS Cadrg 6.63 72 *i* Pn **Pn** 10 54 23.1 0.0
CADS *i* Sn **Sn** 10 55 37.8 -0.9
ROSF Rostrenen 6.63 307 *e*Pn **Pn** 10 54 22.6 -0.5
ROSF *e*Sn **Sn** 10 55 37.2 -1.4
ROSF *e*Sg **Sg** 10 56 14.7 -3.8
comp=N,4µm,0.7s
ROSF Rostrenen 6.63 307 *e*P **Pn** 10 54 23.0 -0.1
MYKA Terra Mystica 6.66 69 *i* Pn **Pn** 10 54 23.9 +0.4
comp=N,44nm,0.5s,SNR=14
MYKA *i* Sn **Sn** 10 55 40.5 +1.1
comp=N,32nm,0.9s
RODG Roetgen-Dahlhe 6.66 8 *e*Sn **Sn** 10 55 39.3 -0.1
comp=N,1µm,1.1s
HOBG Hohbusch 6.67 15 *e*Pn **Pn** 10 54 23.6 -0.1
HOBG *e*Sn **Sn** 10 55 39.2 -0.5
comp=N,828nm,0.7s
AQU L'Aquila 6.76 106 Pn **Pn** 10 54 26.8 +1.8
comp=N,0.5nmcomp=N,124nm,0.9s
GRFO Grafenberg 6.82 39 **Pn** 10 54 25.2 -0.5

GRFO	**Grafenberg**	**6.82**	**39**	P		**Pn**	**10 54 25.2**	**-0.5**
GRF	**Grafenberg Arr**	**6.82**	**39**	*e*Pn		**Pn**	**10 54 23.2**	**-2.6**
GRF				*e*Sg		**Sg**	**10 56 27.5**	**+2.9**
HMNX	**Herstmonceux**	**6.93**	**337**	*e*P		**Pn**	**10 54 28.4**	**+1.2**
LAUG	**Laupendahl**	**6.96**	**12**	*e*Pn		**Pn**	**10 54 27.4**	**-0.3**
LAUG				*e*Sn		**Sn**	**10 55 44.8**	**-1.9**
	comp=N,307nm,1.3s							
YEBES	**Yebes (Guadala**	**6.98**	**237**	Pn		**Pn**	**10 54 27.9**	**-0.2**
YEBES				⇑*i*IVmb_VC			10 54 29.6	
	comp=N,2µm,SNR=4.6							
ELSH	**Elham, Standar**	**6.99**	**342**	*e*P		**Pn**	**10 54 29.1**	**+1.1**
BIOA	**Bad Ischl, Aus**	**7.00**	**60**	*i* Pn		**Pn**	**10 54 27.5**	**-0.7**
	comp=N,15nm,0.3s,SNR=18							
BIOA				*e*Sn		**Sn**	**10 55 45.6**	**-2.1**
	comp=N,199nm,0.5s							
BUG	**Bochum--Univer**	**7.10**	**14**	*e*Pn		**Pn**	**10 54 29.6**	**0.0**
KASTN	**Kahler Asten**	**7.11**	**20**	*e*Pn		**Pn**	**10 54 27.7**	**-2.1**
UCM	**Universidad Co**	**7.21**	**237**	Pn		**Pn**	**10 54 30.5**	**-0.6**
UCM				Sn		**Sn**	**10 55 51.1**	**-1.8**
EARI	**Arriondas**	**7.21**	**263**	Pn		**Pn**	**10 54 30.3**	**-0.8**
EARI				⇑*i*IVmb_VC			10 54 33.1	
	comp=N,1µm,SNR=3.0							
EARI				Sn		**Sn**	**10 55 45.8**	**-7.2**
UBBA	**Unterbreizbach**	**7.23**	**28**	*e*Pn		**Pn**	**10 54 28.3**	**-2.9**
UBBA				*e*Pg		**Pg**	**10 55 05.0**	**+0.8**
OBKA	**Obir**	**7.24**	**71**	*i* Pn		**Pn**	**10 54 32.0**	**+0.5**
	comp=N,15nm,0.5s,SNR=7.0							
OBKA				*e*Sn		**Sn**	**10 55 52.1**	**-1.6**
	comp=N,63nm,0.8s							
WET	**Wettzell**	**7.28**	**48**	*e*Pn		**Pn**	**10 54 30.4**	**-1.6**
WET				*e*Sn		**Sn**	**10 55 48.5**	**-6.1**
ROTZ	**Rotzenmuhle**	**7.33**	**42**	*e*Pn		**Pn**	**10 54 30.1**	**-2.6**
ROTZ				*e*Sn		**Sn**	**10 55 49.1**	**-6.7**
MANZ	**Manzenberg**	**7.43**	**41**	*e*Pn		**Pn**	**10 54 31.8**	**-2.4**
MANZ				*e*Sn		**Sn**	**10 55 50.8**	**-7.6**
MOA	**Molln**	**7.45**	**60**	*i* Pn		**Pn**	**10 54 33.6**	**-0.8**
	comp=N,23nm,0.4s,SNR=14							
MOA				*i* Sn		**Sn**	**10 55 59.0**	**+0.1**
	comp=N,82nm,0.4s							
ETOB	**Tobarra**	**7.51**	**220**	Pn		**Pn**	**10 54 35.3**	**0.0**
ETOB				Sn		**Sn**	**10 55 56.9**	**-3.5**
ETOB	**Tobarra**	**7.51**	**220**	Pn		**Pn**	**10 54 35.1**	**-0.1**
ETOB				⇑*i*IVmb_VC			10 54 37.0	
	comp=N,527nm,SNR=1.4							
GEC2	**GERESS Array S**	**7.56**	**52**	*e*Pn		**Pn**	**10 54 34.3**	**-1.7**
GEC2				*e*Sn		**Sn**	**10 55 55.7**	**-6.1**
GERES	**GERESS Array B**	**7.56**	**52**	Pn		**Pn**	**10 54 34.6**	**-1.5**
	comp=N,2.0nm,0.3s,baz=239,slow=12,SNR=95							
GERES				Sn		Sn	10 55 51.3	-10
	comp=N,2.2nm,0.3s,baz=273,slow=9.6,SNR=16							
	comp=N,31nm,0.4s							
BOJS	**Bojanci**	**7.59**	**79**	*i* Pn		**Pn**	**10 54 35.9**	**-0.5**
BOJS				*i* Sn		**Sn**	**10 55 59.2**	**-3.1**
BOJS				*e*			10 56 54.6	
SOKA	**Soboth**	**7.60**	**70**	*i* Pn		**Pn**	**10 54 37.2**	**+0.7**
	comp=N,6.1nm,0.3s,SNR=9.6							
SOKA				*i* Sn		**Sn**	**10 56 01.3**	**-1.3**
	comp=N,37nm,0.9s							
KHC	**Kasperske Hory**	**7.65**	**50**	*e*PN		**Pn**	**10 54 35.7**	**-1.5**
KHC				*ex*		x	10 55 20.0	
KHC				*e*SN		**Sn**	**10 55 57.3**	**-6.4**
KHC				*e*SG		**Sg**	**10 56 58.6**	**+7.4**
	comp=N,542nm,1.0s							
KHC	**Kasperske Hory**	**7.65**	**50**	Pn		**Pn**	**10 54 35.7**	**-1.5**
	comp=N,1.6nmcomp=N,2µmcomp=N,120nm,0.7s							
MOX	**Moxa**	**7.70**	**35**	*e*Pn		**Pn**	**10 54 34.1**	**-3.7**
MOX				*e*Sn		**Sn**	**10 55 59.4**	**-5.5**
MOX				*e*Sg		**Sg**	**10 56 56.6**	**+3.8**
CKRC	**Cesky Krumlov**	**7.90**	**54**	*e*P		**Pn**	**10 54 39.1**	**-1.5**
CKRC				*e*			10 56 03.2	
CKRC	**Cesky Krumlov**	**7.90**	**54**	*e*PN		**Pn**	**10 54 39.1**	**-1.5**
CKRC				*e*SN		**Sn**	**10 56 03.2**	**-6.7**
ELMS	**Elmsett, Ipswi**	**7.91**	**343**	*e*P		**Pn**	**10 54 41.2**	**+0.6**
ESDC	**Sonseca Array**	**8.04**	**235**			**Pn**	**10 54 41.6**	**-0.9**
ESDC	**Sonseca Array**	**8.04**	**235**	Pn		**Pn**	**10 54 41.1**	**-1.4**
	comp=N,5.0nm,0.3s,baz=52,slow=14,SNR=163							
ESDC				Lg	Lg		10 57 01.1	
	comp=N,5.3nm,0.3s,baz=55,slow=29,SNR=4.5							
ESDC				LR	LR		10 57 51.0	
	comp=N,712nm,20.4s,baz=58,slow=38							
	comp=N,41nm,0.6s							
ARSA	**Arzberg**	**8.06**	**67**	*i* Pn		**Pn**	**10 54 42.9**	**+0.1**
	comp=N,12nm,0.6s,SNR=10							
ARSA				*i* Sn		**Sn**	**10 56 13.1**	**-0.8**
	comp=N,37nm,0.6s							
ZVC	**Zvikov**	**8.15**	**50**	*e*PN		**Pn**	**10 54 42.7**	**-1.3**
ZVC				*e*SN		**Sn**	**10 56 08.3**	**-7.8**
PAB	**San Pablo**	**8.35**	**236**	Pn		**Pn**	**10 54 45.8**	**-1.0**
PAB				⇑*i*IVmb_VC			10 54 47.7	
	comp=N,590nm,SNR=4.5							
PAB	**San Pablo**	**8.35**	**236**			**Pn**	**10 54 46.0**	**-0.8**
PAB	**San Pablo**	**8.35**	**236**	⇓P		**Pn**	**10 54 45.7**	**-1.1**
HSKC	**Hora Svate Kat**	**8.48**	**41**	*e*PN		**Pn**	**10 54 46.3**	**-2.2**
HSKC				*e*SG		**Sg**	**10 57 20.6**	**+2.8**
	comp=N,5µm,3.2s							
CONA	**Conrad Observa**	**8.48**	**63**	*i* Pn		**Pn**	**10 54 47.5**	**-1.2**
	comp=N,9.6nm,0.3s,SNR=11							
CONA				*i* Sn		**Sn**	**10 56 19.6**	**-4.7**
	comp=N,47nm,0.4s							
WACR	**West Acre**	**8.58**	**343**	*e*P		**Pn**	**10 54 50.5**	**+0.7**
EPON	**Pontenova**	**8.59**	**266**	Pn		**Pn**	**10 54 51.5**	**+1.5**
EPON				Sn		**Sn**	**10 56 25.5**	**-1.2**
PRA	**Prague**	**8.64**	**47**	*e*P		**Pn**	**10 54 50.2**	**-0.5**
PRA				pmax	pmax			
	comp=Z,1µm,1.1s							
PRA	**Prague**	**8.64**	**47**	*e*PN		**Pn**	**10 54 50.2**	**-0.5**
PRA				*e*SG		**Sg**	**10 57 26.6**	**+3.6**
	comp=Z,1µm,1.1s							
PRU	**Pruhonice**	**8.65**	**48**	*e*P		**Pn**	**10 54 48.6**	**-2.2**
PRU				*e*			10 56 22.6	
PRU				pmax	pmax			
	comp=N,439nm,0.9s							
PRU	**Pruhonice**	**8.65**	**48**	*e*PN		**Pn**	**10 54 48.6**	**-2.2**
PRU				*e*SN		**Sn**	**10 56 22.6**	**-5.7**
PRU				*e*SG		**Sg**	**10 57 29.3**	**+6.0**
	comp=N,439nm,0.9s							
RONA	**Rosalia, Austr**	**8.69**	**65**	*i* Pn		**Pn**	**10 54 50.8**	**-0.6**
	comp=N,37nm,0.4s,SNR=17							
RONA				*i* Sn		**Sn**	**10 56 25.8**	**-3.6**
	comp=N,83nm,0.9s							
ECAL	**Calabor**	**8.70**	**256**	Pn		**Pn**	**10 54 50.6**	**-0.9**
ECAL				Sn		**Sn**	**10 56 26.2**	**-3.4**
CCA1	**Carnmenellis**	**8.73**	**314**	*e*P		**Pn**	**10 54 53.2**	**+1.3**
PBRG	**Braganca**	**8.75**	**256**	*e*Pn		**Pn**	**10 54 52.6**	**+0.3**
PBRG				*e*Sn		Sn	10 56 39.9	+9.1
PBRG				*e*Sg		**Sg**	**10 57 18.5**	**-8.1**
PBRG				*i* IAML			10 57 37.0	
PBRG				*i* IAML			10 57 49.0	
PBRG				*i* IAML			10 57 57.5	
CLL	**Collm**	**8.78**	**37**	*e*P		**Pn**	**10 54 49.0**	**-3.6**
CLL	**Collm**	**8.78**	**37**	*e*Pn		**Pn**	**10 54 49.0**	**-3.6**
CLL				*e*Pg		**Pg**	**10 55 30.0**	**-3.8**
CLL				*e*(Sn)		**Sn**	**10 56 24.0**	**-7.4**
CLL				LH			10 57 00.0	
	comp=N,2µm,19.4s							
CLL				LH			10 57 00.0	
	comp=E,2µm,18.3s							
CLL				*e*Sb		Sg	10 57 03.0	-24
CLL				*e*Sg		Sg	10 57 26.0	-1.3
	comp=Z,395nm,1.0s							
CLL				AMS		AMS	10 58 00.0	
MONM	**Monmouth**	**8.80**	**328**	*e*P		**Pn**	**10 54 52.6**	**-0.3**
MONM				IAmb		IAmb	10 54 54.5	
	comp=Z,58nm,0.7s							
TREC	**Trest**	**8.81**	**54**	*e*P		**Pn**	**10 54 51.5**	**-1.5**
TREC				*e*			10 56 25.6	
TREC	**Trest**	**8.81**	**54**	*e*PN		**Pn**	**10 54 51.5**	**-1.5**
TREC				*e*SN		**Sn**	**10 56 25.6**	**-6.6**
BLY	**Banja Luka**	**8.96**	**84**	⇑P		**Pn**	**10 54 54.3**	**-0.7**
PVCC	**Panska Ves**	**8.98**	**45**	*e*P		**Pn**	**10 54 55.1**	**-0.3**
PVCC	**Panska Ves**	**8.98**	**45**	*e*PN		**Pn**	**10 54 55.1**	**-0.3**
MCH1	**Michaelchurch**	**9.00**	**328**	*e*P		**Pn**	**10 54 55.7**	**+0.1**
MCH1				IAmb		IAmb	10 54 59.5	
	comp=Z,60nm,0.7s							
CWF	**Charnwood Fore**	**9.07**	**337**	*e*P		**Pn**	**10 54 56.1**	**-0.4**
MVO	**Moncorvo**	**9.21**	**252**	*e*Pn		**Pn**	**10 54 57.7**	**-0.8**
MVO				*e*Sn		**Sn**	**10 56 37.0**	**-5.1**
MVO				*i* IAML			10 57 55.6	
MVO				*i* IAML			10 57 58.3	
MVO				*i* IAML			10 58 03.8	
KRUC	**Moravsky**	**9.24**	**57**	*e*PN		**Pn**	**10 54 56.6**	**-2.3**
KRUC				*e*SN		**Sn**	**10 56 39.4**	**-3.3**
HLM1	**Long Mynd**	**9.38**	**331**	*e*P		**Pn**	**10 55 00.9**	**+0.1**
HLM1				IAmb		IAmb	10 55 04.3	
	comp=Z,43nm,0.6s							
EADA	**Adamuz**	**9.41**	**230**	Pn		**Pn**	**10 55 00.1**	**-1.3**
VRAC	**Vranov**	**9.46**	**56**	Pn		**Pn**	**10 55 00.1**	**-1.9**
	comp=Z,3.6nm,0.3s,baz=248,slow=15,SNR=11							
VRAC				Sn		Sn	10 56 36.4	-12
	comp=Z,3.8nm,0.3s,baz=325,slow=23,SNR=6.3							
VRAC				Lg		Lg	10 57 53.0	
	baz=143,slow=17							
VRAC				LR		LR	10 58 36.3	
	comp=Z,746nm,20.7s,baz=258,slow=37							
	comp=Z,17nm,0.5s							
VRAC	**Vranov**	**9.46**	**56**	*e*PN		**Pn**	**10 55 00.2**	**-1.8**
VRAC				*e*SN		**Sn**	**10 56 45.4**	**-2.8**
MODS	**Modra-Piesok**	**9.53**	**62**	*e*P		**Pn**	**10 55 01.2**	**-1.7**
MODS				*e*			10 56 44.4	
MODS	**Modra-Piesok**	**9.53**	**62**	*e*PN		**Pn**	**10 55 01.2**	**-1.7**
MODS				*e*SN		**Sn**	**10 56 44.4**	**-5.4**
MODS				*e*SG			10 57 56.0	
KEST	**Kesra**	**9.54**	**156**			**Pn**	**10 55 05.1**	**+2.0**
KEST	**Kesra**	**9.54**	**156**	Pn		**Pn**	**10 55 02.4**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=348,slow=4.2,SNR=8.1							
KEST				Sn		Sn	10 56 37.1	-13
	comp=Z,0.3nm,0.3s,baz=149,slow=17,SNR=0.7							
KEST				LR		LR	10 58 34.9	
	comp=Z,3µm,18.1s,baz=352,slow=37							
	comp=Z,5.6nm,0.5s							
EQTA	**Presa de Quent**	**9.55**	**222**	Pn		**Pn**	**10 55 02.1**	**-1.2**
EQTA				Sn		**Sn**	**10 56 44.1**	**-6.5**
PVRL	**Vila Real**	**9.63**	**254**	*e*Pn		**Pn**	**10 55 04.5**	**+0.1**
PVRL				*e*Sg		Sn	10 57 51.7	+59
PVRL				*i* IAML			10 58 13.3	
PVRL				*i* IAML			10 58 17.1	
PVRL				*i* IAML			10 58 28.3	
STNC	**Stoke**	**9.64**	**335**	*e*P		**Pn**	**10 55 04.7**	**+0.3**
POLO	**Lamas de Olo**	**9.64**	**255**	*e*Pn		**Pn**	**10 55 03.8**	**-0.8**
POLO				*e*Sn		**Sn**	**10 56 47.5**	**-5.4**
POLO				*i* IAML			10 58 11.4	
POLO				*i* IAML			10 58 11.9	
POLO				*i* IAML			10 58 23.8	
SMOL	**Smolenice**	**9.67**	**61**	*e*P		**Pn**	**10 55 04.4**	**-0.4**
SMOL				*e*			10 56 46.2	
RSBS	**Rosebush, Pemb**	**9.67**	**323**	*e*P		**Pn**	**10 55 04.0**	**-0.8**
PCAB	**Cabril**	**9.68**	**257**	*e*Pn		**Pn**	**10 55 04.5**	**-0.4**
PCAB				*e*Sn		Sn	10 57 02.8	+9.2
PCAB				*e*Sg			10 57 52.7	
PCAB				*i* IAML			10 58 02.0	
PCAB				*i* IAML			10 58 05.7	
PCAB				*i* IAML			10 58 25.3	
UPC	**Upice**	**9.72**	**48**	*e*P		**Pn**	**10 55 04.1**	**-1.4**
UPC				*e*			10 56 46.8	
UPC	**Upice**	**9.72**	**48**	*e*PN		**Pn**	**10 55 04.1**	**-1.4**
UPC				*e*SN		**Sn**	**10 56 46.8**	**-7.8**
MATE	**Matera**	**9.73**	**110**	⇑P		**Pn**	**10 55 05.3**	**-0.4**
PGAV	**Gavieira, Arco**	**9.76**	**259**	*e*Pn		**Pn**	**10 55 05.6**	**-0.5**
PGAV				*e*Sn		**Sn**	**10 56 56.8**	**+1.1**
PGAV				*i* IAML			10 58 30.4	
PGAV				*i* IAML			10 58 32.1	
PGAV				*i* IAML			10 59 06.0	
LBWR	**Ladybower, Pea**	**9.77**	**337**	*e*P		**Pn**	**10 55 05.2**	**-1.0**
LBWR				IAmb		IAmb	10 55 15.1	
	comp=Z,96nm,0.7s							
FOEL	**Foel Wylfa**	**9.80**	**331**	*e*P		**Pn**	**10 55 07.2**	**+0.7**
FOEL				IAmb		IAmb	10 55 09.8	
	comp=Z,65nm,0.7s							
DPC	**Dobruska-Polom**	**9.81**	**50**	*e*P		**Pn**	**10 55 05.2**	**-1.5**
DPC				*e*			10 56 48.3	
DPC	**Dobruska-Polom**	**9.81**	**50**	*e*PN		**Pn**	**10 55 05.2**	**-1.5**
DPC				*e*SN		**Sn**	**10 56 48.3**	**-8.4**
DPC	**Dobruska-Polom**	**9.81**	**50**	Pn		**Pn**	**10 55 05.8**	**-0.9**
	comp=Z,22nm,1.1s							
OSTC	**Ostas**	**9.86**	**48**	*e*P		**Pn**	**10 55 06.4**	**-1.0**
OSTC	**Ostas**	**9.86**	**48**	*e*PN		**Pn**	**10 55 06.4**	**-1.0**
MTE	**Manteigas**	**9.90**	**249**	*e*Pn		**Pn**	**10 55 07.4**	**-0.7**
KRLC	**Kraliky**	**9.92**	**52**	*e*P		**Pn**	**10 55 06.7**	**-1.6**
KRLC	**Kraliky**	**9.92**	**52**	*e*PN		**Pn**	**10 55 06.7**	**-1.6**
JAVC	**Velka Javorina**	**9.94**	**60**	*e*PN		**Pn**	**10 55 08.0**	**-0.5**
PVIS	**Viseu**	**9.99**	**252**	*e*Pn		**Pn**	**10 55 09.8**	**+0.5**
PVIS				*e*Sn		**Sn**	**10 55 55.0**	**-6.4**
MORH	**Mrgy, Hungar**	**10.00**	**76**	⇓P		**Pn**	**10 55 08.4**	**-0.9**
MORH	**Mrgy, Hungar**	**10.00**	**76**	Pn		**Pn**	**10 55 07.7**	**-1.7**
	comp=Z,19nm,0.9s							
PCBR	**Castelo Branco**	**10.14**	**246**	*e*Pn		**Pn**	**10 55 10.4**	**-0.9**
PCBR				*e*Sn		**Sn**	**10 56 59.1**	**-5.9**
MORC	**Moravsky Berou**	**10.22**	**55**			**Pn**	**10 55 10.5**	**-1.9**
MORC	**Moravsky Berou**	**10.22**	**55**	⇓P		**Pn**	**10 55 11.2**	**-1.2**
MORC	**Moravsky Berou**	**10.22**	**55**	*e*PN		**Pn**	**10 55 09.7**	**-2.7**
MORC				*e*SN		**Sn**	**10 57 02.3**	**-4.6**
VAE	**Valguarnera**	**10.23**	**130**	LR		LR	10 59 11.5	
	comp=Z,2µm,18.6s,baz=302,slow=38							
PMRV	**Marv??o**	**10.31**	**244**	*e*Pn		**Pn**	**10 55 12.3**	**-1.3**
PMRV				*e*Sn		**Sn**	**10 57 03.5**	**-5.6**
TIP	**Timpagrande**	**10.53**	**117**	⇑P		**Pn**	**10 55 17.8**	**+1.2**
PCAS	**Casmilo, Conde**	**10.71**	**250**	*e*Pn		**Pn**	**10 55 18.7**	**-0.4**
PCAS				*e*Sn		**Sn**	**10 57 18.9**	**-0.1**
PSARD	**Sardoal**	**10.72**	**247**	*e*Pn		**Pn**	**10 55 18.5**	**-0.7**
PSARD				*e*Sn		**Sn**	**10 57 12.2**	**-6.9**
PESTR	**Estremoz**	**10.76**	**242**			**Pn**	**10 55 18.4**	**-1.3**
PESTR	**Estremoz**	**10.76**	**242**	*e*Pn		**Pn**	**10 55 18.6**	**-1.1**
PESTR				*e*Sn		**Sn**	**10 57 15.4**	**-4.6**
PBAR	**Barrancos**	**10.84**	**238**	*e*Pn		**Pn**	**10 55 21.2**	**+0.4**
PBAR				*e*Sn		**Sn**	**10 57 15.8**	**-6.2**
PDG	**Podgorica**	**10.85**	**96**	⇑P		**Pn**	**10 55 20.6**	**-0.3**
IWEX	**Carrickbyrne,**	**10.86**	**320**	P		**Pn**	**10 55 20.8**	**-0.3**
IWEX				S		**Sn**	**10 57 24.7**	**+2.2**
PMTG	**Montargil**	**11.04**	**245**	*e*Pn		**Pn**	**10 55 22.2**	**-1.4**
PMTG				*e*Sn		**Sn**	**10 57 21.8**	**-5.3**
PARRA	**Arraiolos**	**11.07**	**243**	*e*Pn		Pn	10 55 22.2	-11
PARRA				*e*Sn		Sn	10 57 19.4	-24
PSZ	**Piszkesteto**	**11.10**	**67**			**Pn**	**10 55 24.1**	**-0.3**
PSZ	**Piszkesteto**	**11.10**	**67**	⇑P		**Pn**	**10 55 24.4**	**0.0**
EDMD	**Edmundbyers**	**11.12**	**340**	*e*P		**Pn**	**10 55 23.6**	**-1.0**
LANS	**Liptovska Anna**	**11.15**	**60**	*e*P		**Pn**	**10 55 23.8**	**-1.3**
LANS	**Liptovska Anna**	**11.15**	**60**	*e*PN		**Pn**	**10 55 23.8**	**-1.3**
DSB	**Dublin**	**11.29**	**324**	Pn		**Pn**	**10 55 25.0**	**-2.0**
DSB				Sn		**Sn**	**10 57 28.1**	**-4.9**
DSB	**Dublin**	**11.29**	**324**	P		Pn	10 55 33.7	+6.7
DSB				S		**Sn**	**10 57 33.8**	**+0.8**
MOE	**Montemor**	**11.44**	**243**	*e*Pn		**Pn**	**10 55 27.0**	**-2.0**
MOE				*e*Sn		**Sn**	**10 57 37.1**	**+0.4**
KECS	**Kecovo**	**11.61**	**65**	*e*P		**Pn**	**10 55 30.9**	**-0.4**
KECS				*e*			10 57 34.8	
KECS	**Kecovo**	**11.61**	**65**	*e*PN		**Pn**	**10 55 30.9**	**-0.4**
KECS	**Kecovo**	**11.61**	**65**	*e*SN		**Sn**	**10 57 34.8**	**-6.0**
PVAQ	**Vaqueiros**	**11.75**	**237**	*e*Pn		Pn	10 55 38.1	+4.8
NIE	**Niedzica**	**11.75**	**60**	Pn		**Pn**	**10 55 32.3**	**-1.0**
MESJ	**Messejana**	**11.77**	**240**	*e*Pn		**Pn**	**10 55 33.4**	**-0.2**
MESJ				*e*Sn		**Sn**	**10 57 44.8**	**-0.1**
PCVE	**Castro Verde**	**11.79**	**238**	*e*Pn		**Pn**	**10 55 33.4**	**-0.5**
ILTH	**Belurgan, Co L**	**11.85**	**327**	P		Pn	10 55 40.5	+5.9
ESK	**Eskdalemuir**	**11.87**	**338**			**Pn**	**10 55 34.2**	**-0.7**
ESK	**Eskdalemuir**	**11.87**	**338**	*e*P		**Pn**	**10 55 34.4**	**-0.5**
ESK				IAmb		IAmb	10 55 35.4	
	comp=Z,63nm,0.6s							
ESK	**Eskdalemuir**	**11.87**	**338**	P		**Pn**	**10 55 34.2**	**-0.7**
EKA	**Eskdalemuir Ar**	**11.88**	**338**	Pn		**Pn**	**10 55 33.7**	**-1.2**
	comp=Z,51nm,0.6s,baz=155,slow=14,SNR=90							
EKA				Sn		Sn	10 57 38.2	-9.0
	baz=152,slow=16							
EKA				Lg		Lg	10 59 12.6	
	baz=140,slow=28							
EKB	**Eskdalemuir**	**11.88**	**338**	Pn		**Pn**	**10 55 34.4**	**-0.7**
PBDV	**Barranco-do-Ve**	**11.98**	**237**	*e*Pn		**Pn**	**10 55 36.3**	**-0.2**
PBDV				*e*Sn		**Sn**	**10 57 48.0**	**-2.1**
NEWG	**New Galloway**	**11.99**	**335**	*e*P		**Pn**	**10 55 36.2**	**-0.4**
NEWG				IAmb		IAmb	10 55 38.6	
	comp=Z,26nm,0.8s							
BZS	**Buzias**	**12.06**	**79**	⇓P		**Pn**	**10 55 38.1**	**+0.6**
BZS	**Buzias**	**12.06**	**79**	⇓P		**Pn**	**10 55 38.1**	**+0.6**
SIRR	**Siria**	**12.10**	**76**	⇑P		**Pn**	**10 55 37.6**	**-0.5**
MDVR	**Moldovita**	**12.17**	**83**	⇑P		**Pn**	**10 55 38.2**	**-0.9**
STHS	**Stebnicka Huta**	**12.34**	**61**	*e*P		**Pn**	**10 55 40.1**	**-1.2**
STHS	**Stebnicka Huta**	**12.34**	**61**	*e*PN		**Pn**	**10 55 40.1**	**-1.2**
VAL	**Valentia**	**12.34**	**312**	S		**Sn**	**10 56 06.4**	**+7.9**
EDI	**Edinburgh**	**12.41**	**339**	*e*P		**Pn**	**10 55 41.8**	**-0.4**
HERR	**Herculane**	**12.66**	**82**	⇓P		**Pn**	**10 55 45.0**	**-0.8**
IGLA	**Glengowla, Co**	**12.74**	**319**	P		Pn	10 55 53.3	+6.5
IGLA				S		**Sn**	**10 58 08.6**	**+0.1**
DRGR		**12.85**	**74**	⇓P		**Pn**	**10 55 48.3**	**0.0**
DRGR		**12.85**	**74**	⇓P		**Pn**	**10 55 48.3**	**0.0**
HOLU	**Holmets**	**12.85**	**66**	Pn		**Pn**	**10 55 48.3**	**0.0**
GZR	**Gura Zlata**	**12.88**	**80**	⇓P		**Pn**	**10 55 48.7**	**-0.1**
GZR	**Gura Zlata**	**12.88**	**80**	⇓P		**Pn**	**10 55 48.7**	**-0.1**
BERU	**Beregovo**	**12.97**	**67**	Pn		**Pn**	**10 55 50.0**	**+0.1**
BLKB	**Belogradchik**	**13.02**	**88**	⇓P		**Pn**	**10 55 49.7**	**-0.9**
IDGL	**Inch Island, C**	**13.09**	**328**	S		**Sn**	**10 58 14.8**	**-2.1**
BRIU	**Brid**	**13.23**	**67**	Pn		**Pn**	**10 55 53.1**	**-0.4**
R9F13	**Warsaw-Wawer**	**13.36**	**49**	*e*P		**Pn**	**10 55 52.9**	**-2.3**
R9F13				*e*S		Sn	10 58 01.4	-22
LOT	**Lotru**	**13.58**	**80**	⇑P		**Pn**	**10 55 59.0**	**+0.6**
MEZ	**Mezhgor'ye**	**13.59**	**66**	Pn		**Pn**	**10 55 58.3**	**0.0**
MDT	**Mideit**	**13.76**	**215**	LR		LR	11 01 14.2	
	comp=Z,437nm,18.1s,baz=46,slow=37							
ARR	**Arges**	**14.19**	**80**	⇓P		**Pn**	**10 56 07.2**	**+0.5**
STNU	**Starunia**	**14.26**	**66**	Pn		**Pn**	**10 56 07.9**	**+0.3**
KPL	**Plockton**	**14.31**	**337**	*e*P		**Pn**	**10 56 07.8**	**-0.4**
KPL				IAmb		IAmb	10 56 09.2	
	comp=Z,20nm,0.7s							
VOIR		**14.48**	**79**	⇑P		**Pn**	**10 56 11.4**	**+0.7**
VOIR		**14.48**	**79**	⇑P		**Pn**	**10 56 11.4**	**+0.7**
KSV	**Kosov**	**14.58**	**68**	Pn		**Pn**	**10 56 10.1**	**-1.8**
BURAR	**Bucovina Array**	**14.61**	**71**			**Pn**	**10 56 12.1**	**-0.3**
BURAR	**Bucovina Array**	**14.61**	**71**	⇑P		**Pn**	**10 56 12.3**	**-0.1**
BURAR	**Bucovina Array**	**14.61**	**71**	⇑P		**Pn**	**10 56 12.3**	**-0.1**
DOPR	**Dopca**	**14.69**	**77**	⇓P		**Pn**	**10 56 14.0**	**+0.6**
MLR	**Muntele Rosu**	**15.10**	**79**	Pn		**Pn**	**10 56 20.5**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=149,slow=15,SNR=3.1							
MLR				LR		LR	11 02 33.8	
	comp=Z,775nm,18.2s,baz=272,slow=39							
	comp=Z,1.7nm,0.6s							
MLR	**Muntele Rosu**	**15.10**	**79**	⇓P		**Pn**	**10 56 19.6**	**+0.4**
SUW	**Suwalki**	**15.32**	**45**	*e*P		**P**	**10 56 27.3**	**+0.8**
KONO	**Kongsberg**	**15.40**	**10**	*i* P		**Pn**	**10 56 22.0**	**-0.9**
ELND	**Elena**	**15.45**	**89**	⇑P		**Pn**	**10 56 22.5**	**-1.0**
TESR	**Tescani**	**15.55**	**75**	⇓P		**Pn**	**10 56 25.2**	**+0.3**
ISR	**Istrita**	**15.56**	**80**	⇑P		**Pn**	**10 56 25.1**	**0.0**
ISR	**Istrita**

OBN MLR MLR
comp=Z,472nm,12.0s
ANN Anapa 23.25 78 *e*P **P 10 57 50.1 -2.9**
ANN *e**PP **pP 10 57 53.3 -3.1**
ANN *e* 10 58 15.7
ANN *e*S **S 11 02 02.9 -1.9**
ANN pmax pmax
comp=Z,53nm,1.0s
ANN MLR MLR
comp=Z,820nm,18.0s
ANN MLR MLR
comp=N,613nm,12.0s
ANN MLR MLR
comp=E,388nm,13.0s
MOS Moscow 23.68 50 *e*P **P 10 57 54.7 -2.5**
MOS *e*S **S 11 02 04.6 -7.1**
MOS *e* 11 09 08.6
MOS pmax pmax
comp=Z,600nm,2.2s
MOS pmax pmax
comp=Z,195nm,1.5s
MOS MLR MLR
comp=Z,900nm,10.0s
LPSR Galich'ya Gora 23.89 58 *e*P **P 10 57 57.0 -2.2**
LPSR pmax pmax
comp=Z,50nm,0.9s
BNN Bunyan 23.91 93 P 10 58 00.7 +1.0
VSR Storozhevoye 23.93 62 *e*P **P 10 57 57.8 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 24.00 62 *e*P **P 10 57 58.0 -2.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
SOC Sochi 25.12 80 *e*P **P 10 58 10.0 -0.5**
SOC *e*PPP PPP 10 58 50.5
SOC *e*S **S 11 02 35.8 +0.8**
SOC *e*SS **SnSn 11 03 25.5 +1.1**
SOC *e*SSS SSS 11 03 39.7
SOC MLR MLR
comp=Z,341nm,19.0s
ERBR Yeremizino-Bor 25.20 75 *e*P **P 10 58 09.8 -1.4**
ERBR *e*S **S 11 02 33.9 -2.2**
ERBR pmax pmax
comp=Z,29nm,0.7s
ERBR MLR MLR
comp=Z,488nm,13.0s
VRH Novokhopyorsk 25.54 62 *e*P **P 10 58 11.7 -2.6**
VRH pmax pmax
comp=Z,10.0nm,0.8s
ARPR Arapgir-MALATY 25.59 91 IAmb IAmb 10 58 29.6
comp=Z,20nm,0.9s
KLMR Klimovskoe 26.26 39 *e*P **P 10 58 19.6 -1.1**
KLMR S **S 11 02 51.6 -1.0**
KLMR pmax pmax
comp=Z,46nm,1.2s
KLMR MLR MLR
comp=Z,2µm,13.0s
MMAI Mount Meron Ar 26.47 105 P **P 10 58 23.7 +0.8**
comp=Z,5.6nm,0.7s,baz=316,slow=10,SNR=5.2
MMAI LR LR 11 10 23.3
comp=Z,348nm,21.4s,baz=274,slow=40
comp=Z,5.6nm,0.7s
KIV Kislovodsk 27.11 78 *e*P **P 10 58 26.7 -1.9**
KIV *e*S **S 11 03 05.4 -1.2**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,187nm,15.0s
SHA1 Shidzhatmaz 27.14 78 *i* P **P 10 58 29.0 -0.1**
ARCES ARCESS Array B 27.18 16 IAmb IAmb 10 58 30.9
comp=Z,36nm,1.6s
ARCES ARCESS Array B 27.18 16 P **P 10 58 29.9 +0.9**
comp=Z,3.4nm,0.9s,baz=212,slow=4.3,SNR=6.9
ARCES LR LR 11 09 07.1
comp=Z,533nm,20.9s,baz=220,slow=36
comp=Z,3.4nm,0.9s
ARCES ARCESS Array B 27.18 16 P **P 10 58 29.9 +0.9**
ARCES pmax pmax
comp=Z,36nm,1.6s
JMIC Jan Mayen 27.27 351 LR LR 11 09 32.9
comp=Z,482nm,18.6s,baz=128,slow=37
NEUR Neytrino 27.30 79 *i* P **P 10 58 30.5 0.0**
KBZ Khabaz 27.31 78 P **P 10 58 31.5 +1.2**
comp=Z,5.6nm,0.8s,baz=311,slow=8.6,SNR=9.3
comp=Z,5.6nm,0.8s
KBZ Khabaz 27.31 78*ce*P **P 10 58 29.5 -0.8**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
APA Apatity 27.60 24‖ *e*P **P 10 58 35.3 +2.6**
APA MLR MLR
comp=Z,2µm,7.9s
NCK Nalchik 27.86 78 *i* P **P 10 58 35.5 +0.1**
NCK pmax pmax
comp=Z,9.0nm,0.8s
ASF Jabal al Asfar 27.98 105 LR LR 11 11 55.9
comp=Z,302nm,20.1s,baz=303,slow=41
EIL Elat 28.19 112 LR LR 11 12 58.2
comp=Z,194nm,19.5s,baz=337,slow=43
BELG Belogornoye 29.19 59 *i* P **P 10 58 47.3 +0.3**
BELG pmax pmax
comp=Z,3.0nm,1.1s
GNI Garni 29.76 84*ce*P **P 10 58 52.3 -0.1**
GNI pmax pmax
comp=Z,11nm,1.0s
KIRV Kirov 30.52 47*ce*P **P 10 58 58.4 -0.3**
MAK Makhachkala 30.75 78*d i*P **P 10 58 56.7 -4.2**
MAK *e*S **S 11 03 59.4 -4.3**
MAK pmax pmax
comp=Z,254nm,1.4s
MAK MLR MLR
comp=Z,224nm,12.0s
AKT Akhty 31.40 80 *e*P **P 10 59 07.2 +0.4**
AKT pmax pmax
comp=Z,20nm,0.7s
AKT MLR MLR
comp=Z,401nm,18.0s
TORD Torodi Ar. Bea 31.41 185 LR LR 11 12 11.1
comp=Z,512nm,18.6s,baz=356,slow=37
SPITS Spitsbergen Ar 34.04 4 LR LR 11 14 59.2
comp=Z,198nm,18.2s,baz=189,slow=39
BBTS Babate 34.81 218 LR LR 11 16 17.5
comp=Z,238nm,18.3s,baz=170,slow=41
ARTI Arti 35.29 51 LR LR 11 16 10.5
comp=Z,442nm,18.3s,baz=254,slow=40
AKTO Aktyubinsk 35.88 61 LR LR 11 14 29.3
comp=Z,186nm,18.9s,baz=338,slow=36
SVE Sverdlovsk 36.50 50 *e*P **P 10 59 51.6 +0.8**
SVE pmax pmax
comp=Z,35nm,1.3s
SVE MLR MLR
comp=Z,638nm,10.0s
SFJD Kangerlussuaq 36.56 327 LR LR 11 14 04.4
comp=Z,1µm,18.0s,baz=84,slow=35
AB31 Akbulak array 37.36 63 P 10 59 58.8 +0.6
ABKAR Akbulak array 37.36 63 P 10 59 58.3 +0.1
DBIC Dimbokro 38.65 195 P **P 11 00 09.0 -0.3**
comp=Z,2.2nm,0.6s,baz=51,slow=7.6,SNR=5.5
DBIC LR LR 11 17 03.9
comp=Z,355nm,19.7s,baz=27,slow=38
comp=Z,2.2nm,0.6s
DBIC Dimbokro 38.65 195 P **P 11 00 09.0 -0.3**
DBIC pmax pmax
comp=Z,12nm,1.1s
RAYN Ar Rayn 39.32 109 P 11 00 15.7 +0.7
RAYN Ar Rayn 39.32 109 P **P 11 00 15.7 +0.7**
RAYN pmax pmax
comp=Z,4.0nm,0.8s
BORK Borovoye 42.68 54*ce*P **P 11 00 42.8 +0.5**
BORK pmax pmax
comp=Z,23nm,1.7s
BVAR Borovoye Array 42.73 54 P **P 11 00 43.4 +0.7**
comp=Z,5.2nm,0.7s,baz=283,slow=7.5,SNR=19
BVAR LR LR 11 20 18.0
comp=Z,327nm,20.4s,baz=286,slow=39
comp=Z,5.2nm,0.7s
FRB Frobisher Bay 44.08 322 LR LR 11 18 03.4
comp=Z,538nm,19.4s,baz=83,slow=34
BRZS Berezniki 45.05 58 *e*P **P 11 01 02.3 +1.0**
BRZS Berezniki 45.05 58 *e*P **P 11 01 02.3 +1.0**
SCHQ Schefferville 45.42 310 LR LR 11 16 43.8
comp=Z,622nm,21.7s,baz=94,slow=32
BRLS Borolday 45.95 68 *e*P **P 11 01 09.5 +0.8**
BRLS Borolday 45.95 68 *e*P **P 11 01 09.4 +0.8**
FURI Furi 46.16 130 LR LR 11 22 13.4
comp=Z,156nm,18.9s,baz=126,slow=38
KK31 Karatay Array 46.37 67 P 11 01 12.6 +0.7
KK31 IAmb IAmb 11 01 13.9
comp=Z,40nm,1.9s
KK31 Karatay Array 46.37 67 P **P 11 01 12.6 +0.7**
KK31 pmax pmax
comp=Z,40nm,1.9s
KKAR Karatay Array 46.37 67 P 11 01 12.6 +0.7
KKAR Karatay Array 46.37 67 P **P 11 01 12.6 +0.7**
ATD Arta Tunnel 46.43 123 LR LR 11 22 14.3
comp=Z,4.7nm,19.2s,baz=44,slow=38
IUG luzhnay 46.47 69 *e*P **P 11 01 13.5 +0.6**
comp=Z,7.4nm,0.7s
IUG luzhnay 46.47 69 *e*P **P 11 01 13.4 +0.6**
IUG pmax pmax
comp=Z,7.0nm,0.7s
NRIK Noril'sk 46.76 29 IAmb IAmb 11 01 23.9
comp=Z,28nm,1.6s
NRIK Noril'sk 46.76 29 P **P 11 01 15.2 +0.6**
comp=Z,2.9nm,0.7s,baz=286,slow=7.4,SNR=4.8
comp=Z,2.9nm,0.7s
NRIK Noril'sk 46.76 29 *i* P **P 11 01 15.0 +0.4**
NRIK pmax pmax
comp=Z,20nm,2.0s
DZA Taraz 47.00 67 *e*P **P 11 01 17.8 +0.8**
comp=Z,4.0nm,0.5s
DZA Taraz 47.00 67 *e*P **P 11 01 17.7 +0.8**
DZA pmax pmax
comp=Z,4.0nm,0.5s
KURBB Kurchatov Arra 48.29 55 P **P 11 01 26.8 +0.1**
comp=Z,6.5nm,0.6s,baz=296,slow=9.2,SNR=31
KURBB LR LR 11 23 59.5
comp=Z,250nm,20.9s,baz=199,slow=39
comp=Z,6.5nm,0.6s
KURK Kurchatov 48.31 55 P 11 01 27.0 +0.2
KURK IAmb IAmb 11 01 28.7
comp=Z,12nm,0.8s
KURK Kurchatov 48.31 55*ce*P **P 11 01 26.2 -0.7**
KURK pmax pmax
comp=Z,19nm,1.0s
ARSB Arslanbob 48.81 68 IAmb IAmb 11 01 35.0
comp=Z,16nm,0.8s
SGDS Sogindy 48.91 65 *e*P **P 11 01 32.5 +0.8**
AAK Ala-Archa 49.20 66 P 11 01 35.2 +1.2
AAK Ala-Archa 49.20 66 LR LR 11 24 12.1
comp=Z,302nm,18.5s,baz=314,slow=38
AAK Ala-Archa 49.20 66*ce*P **P 11 01 34.5 +0.5**
AAK pmax pmax
comp=Z,16nm,1.7s
RES Resolute Bay 50.00 340 LR LR 11 23 13.7
comp=Z,723nm,18.3s,baz=45,slow=37
ZALV Zalesovo Beam 50.50 49 P 11 01 43.8 +0.2
ZALV Zalesovo Beam 50.50 49 P **P 11 01 44.1 +0.5**
comp=Z,4.1nm,0.8s,baz=288,slow=8.3,SNR=12
ZALV LR LR 11 25 42.4
comp=Z,216nm,20.2s,baz=277,slow=39
comp=Z,4.1nm,0.8s
TNSS Tian-Shan 50.60 65 *e*P **P 11 01 45.4 +0.4**
TNSS Tian-Shan 50.60 65 *e*P **P 11 01 45.4 +0.4**
MDOK Medeo 50.61 64 *e*P **P 11 01 45.3 +0.6**
MDOK Medeo 50.61 64 *e*P **P 11 01 45.3 +0.6**
TDK Taldyqorghan 50.62 62 *e*P **P 11 01 45.4 +0.8**
TDK Taldyqorghan 50.62 62 *e*P **P 11 01 45.4 +0.8**
SATY Saty 51.53 64 *e*P **P 11 01 52.5 +0.8**
SATY Saty 51.53 64 *e*P **P 11 01 52.4 +0.8**
KSH Kashi 51.68 69 P **P 11 01 54.1 +1.3**
KSH pmax pmax
comp=Z,14nm,0.8s
TARG Taragay, Kyrgy 51.79 66 IAmb IAmb 11 02 11.7
comp=Z,14nm,0.9s
MAKZ Makanchi 51.99 58 P 11 01 55.8 +0.9
MAKZ Makanchi 51.99 58 P **P 11 01 55.8 +0.9**
SHLS Shalkode 52.16 63 *e*P **P 11 01 59.2 +2.9**
comp=Z,8.9nm,0.6s
SHLS Shalkode 52.16 63 *e*P **P 11 01 59.2 +2.9**
SHLS pmax pmax
comp=Z,9.0nm,0.6s
MK31 Makanchi Array 52.19 58 *i* P **P 11 01 56.5 +0.1**
MKAR Makanchi Array 52.19 58 P 11 01 56.9 +0.5
MKAR Makanchi Array 52.19 58 P **P 11 01 56.7 +0.3**
comp=Z,5.1nm,0.7s,baz=305,slow=7.0,SNR=18
MKAR LR LR 11 26 05.7
comp=Z,196nm,18.8s,baz=282,slow=38
comp=Z,5.1nm,0.7s
ZSN Zaisan 53.43 56 *e*P **P 11 02 06.5 +0.9**
comp=Z,13nm,1.3s
ZSN Zaisan 53.43 56 *e*P **P 11 02 06.4 +0.9**
ZSN pmax pmax
comp=Z,13nm,1.3s
DGZ Jazzator, Alta 53.84 53 *i* P **P 11 02 08.7 0.0**
DGZ pmax pmax
comp=Z,13nm,0.9s
KMBO Kilima Mbogo 53.97 138 LR LR 11 27 26.8
comp=Z,359nm,18.1s,baz=284,slow=39
SADO Sadowa 56.90 302 LR LR 11 23 50.7
comp=Z,157nm,21.7s,baz=118,slow=33
WMQ Urumqi 56.98 59 *e*P **P 11 02 33.6 +2.4**
WMQ LR LR
comp=Z,790nm,14.7s
WMQ LR LR
comp=Z,170nm,13.3s
N58A Sunbury 57.50 297 P **P 11 02 35.3 +0.4**
N58A IAmb IAmb 11 02 38.5
comp=Z,23nm,1.1s
TIXI Tiksi 57.59 18 P 11 02 35.4 +0.3
TIXI IAmb IAmb 11 02 37.4
comp=Z,18nm,1.8s
TIXI Tiksi 57.59 18 LR LR 11 30 06.3
comp=Z,175nm,20.0s,baz=10,slow=39
TIXI Tiksi 57.59 18*ce*P **P 11 02 35.8 +0.8**
TIXI pmax pmax
comp=Z,12nm,2.5s
SSPA Standing Stone 58.36 298 P **P 11 02 42.2 +1.3**
R58B Mineral 59.86 295 P 11 02 53.7 +2.4
R58B IAmb IAmb 11 02 55.0
comp=Z,14nm,1.0s
T57A Hurt 61.31 295 IAmb IAmb 11 03 05.2
comp=Z,12nm,1.1s
YKA Yellowknife Ar 62.78 333 P **P 11 03 09.6 -1.1**
comp=Z,2.9nm,0.9s,baz=40,slow=7.1,SNR=4.2
YKA LR LR 11 29 25.1
comp=Z,322nm,20.2s,baz=48,slow=35
comp=Z,2.9nm,0.9s
W57A Gilead 62.88 294 IAmb IAmb 11 03 16.6
comp=Z,14nm,1.2s
ULM Lac du Bonnet 63.09 315 P **P 11 03 14.1 +1.1**
comp=Z,4.5nm,0.6s,baz=29,slow=4.5,SNR=3.8
ULM LR LR 11 28 35.2
comp=Z,728nm,19.4s,baz=14,slow=34
comp=Z,4.5nm,0.6s
INK Inuvik 63.17 344 LR LR 11 30 29.4
comp=Z,205nm,21.7s,baz=1.0,slow=36
LSZ Lusaka 63.31 154 P 11 03 17.4 +2.6
LSZ IAmb IAmb 11 03 18.0
comp=Z,12nm,1.2s
LSZ Lusaka 63.31 154 LR LR 11 33 59.4
comp=Z,449nm,18.4s,baz=342,slow=39
LSZ Lusaka 63.31 154 P **P 11 03 17.4 +2.6**
LSZ pmax pmax
comp=Z,12nm,1.2s
MDP Montagnes des 63.46 249 LR LR 11 26 34.6
comp=Z,250nm,20.7s,baz=36,slow=32
D27M Malcolm River 63.69 347 IAmb IAmb 11 03 20.7
comp=Z,6.8nm,1.0s
S51A Beattyville 63.71 298 IAmb IAmb 11 03 19.1
comp=Z,13nm,1.1s
R50A Paris 63.78 299 IAmb IAmb 11 05 28.5
comp=Z,9.1nm,0.8s
SJG San Juan 63.90 270 LR LR 11 29 14.9
comp=Z,32nm,18.1s,baz=33,slow=34
E29M Blow River 63.93 345 IAmb IAmb 11 03 21.9
comp=Z,16nm,1.1s
V53A Saluda 64.40 296 IAmb IAmb 11 03 25.4
comp=Z,14nm,1.1s
D25K Kavik River 64.42 349 IAmb IAmb 11 04 02.4
comp=Z,12nm,1.4s
TSUM Tsumeb 64.56 166 LR LR 11 32 05.5
comp=Z,463nm,19.9s,baz=328,slow=37
E27K Coleen River 64.75 347 IAmb IAmb 11 03 27.6
comp=Z,7.1nm,1.1s
YAK Yakutsk 64.96 25 P **P 11 03 25.1 +0.1**
YAK Yakutsk 64.96 25 LR LR 11 34 33.3
comp=Z,186nm,21.2s,baz=322,slow=39
YAK Yakutsk 64.96 25 *e*P **P 11 03 24.9 -0.1**
YAK *e**PP **pP 11 03 28.2 -0.8**
YAK *e* 11 03 57.7
YAK *e* 11 05 45.2
YAK *e*PPP PPP 11 07 19.6
YAK *e*S **S 11 12 07.4 +1.2**
YAK *e*SS **SS 11 16 17.5 +0.5**
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,96nm,4.3s
YAK pmax pmax
comp=E,56nm,3.5s
YAK pmax pmax
comp=N,74nm,3.5s
YAK smax smax
comp=N,73nm,3.8s
YAK smax smax
comp=E,12nm,2.2s
YAK MLR MLR
comp=Z,252nm,28.0s
YAK MLR MLR
comp=N,624nm,20.0s
YAK MLR MLR
comp=E,123nm,15.0s
TKL Tuckaleechee C 65.03 296 LR LR 11 29 03.3
comp=E,246nm,22.0s,baz=58,slow=34
SONM Songino Array 65.26 47 P **P 11 03 27.8 +0.4**
SONM IAmb IAmb 11 03 30.3
comp=Z,17nm,1.8s
SONM Songino Array 65.26 47 P **P 11 03 28.4 +1.0**
comp=Z,1.4nm,0.6s,baz=294,slow=9.4,SNR=8.3
SONM LR LR 11 35 01.6
comp=Z,313nm,19.2s,baz=310,slow=39
comp=Z,1.4nm,0.6s
E25K Arctic Village 65.42 348 IAmb IAmb 11 04 52.5
comp=Z,35nm,2.0s
ULN Ulaanbaatar 65.58 46 P **P 11 03 29.8 +0.2**
ULN Ulaanbaatar 65.58 46 *i* P **P 11 03 29.7 +0.2**
ULN pmax pmax
comp=Z,4.0nm,1.0s
F26K Sheenjek River 65.60 347 IAmb IAmb 11 04 12.3
comp=Z,32nm,1.9s
CPCT Cooper Cave 65.64 296 IAmb IAmb 11 05 20.0
comp=Z,9.1nm,0.9s
EVN Everest 65.67 74 P 11 03 31.0 0.0
EVN IAmb IAmb 11 04 04.0
comp=Z,33nm,1.9s
U49A Red Boiling Sp 65.78 298 IAmb IAmb 11 03 33.5
comp=Z,7.9nm,0.8s
GOMU GeErMu 65.84 62 P **P 11 03 31.6 -0.1**
GOMU PcP **PcP 11 04 02.3 -0.4**
GOMU S **S 11 12 17.6 -1.0**
W50A Signal Mountai 66.30 297 IAmb IAmb 11 05 08.3
comp=Z,13nm,0.8s
Y52A Lilburn 66.33 295 IAmb IAmb 11 03 37.0
comp=Z,9.8nm,1.0s
CLTN Cedars of Leba 66.39 298 IAmb IAmb 11 04 34.5
comp=Z,5.4nm,0.8s
I30M Mount Dempster 66.41 343 IAmb IAmb 11 03 37.9
comp=Z,7.3nm,1.0s
H27K Steamboat Moun 66.50 346 IAmb IAmb 11 03 39.0
comp=Z,12nm,1.1s
BILL Bilibino 66.87 7 *i* P **P 11 03 37.9 +0.6**
BILL pmax pmax
comp=Z,3.0nm,1.2s
GTA Gaotai 66.91 57 *e*P **P 11 03 38.2 0.0**
GTA sP sP 11 03 46.1 +2.6
GTA pmax pmax
comp=Z,7.0nm,0.7s
GTA LR LR
comp=Z,360nm,16.0s
GTA LR LR
comp=Z,260nm,16.4s
GTA LR LR
comp=Z,260nm,18.5s
I28M Miner Creek 66.92 345 IAmb IAmb 11 03 40.9
comp=Z,10nm,1.1s
V48A Smith Brothers 66.92 298 IAmb IAmb 11 04 20.4
comp=Z,8.7nm,0.7s
J30M Hart River 66.97 343 IAmb IAmb 11 03 42.2
comp=Z,13nm,1.4s
WVT Waverly 67.31 299 P **P 11 03 39.8 -0.7**
WVT Waverly 67.31 299 P **P 11 03 39.8 -0.7**
WVT pmax pmax
comp=Z,16nm,0.5s
E19K Redstone River 67.46 353 IAmb IAmb 11 03 44.6
comp=Z,6.5nm,0.7s
ECSD EROS Data Cent 67.62 310 IAmb IAmb 11 03 45.4
comp=Z,10nm,1.1s
DAWY Dawson 68.05 344 IAmb IAmb 11 03 48.8
comp=Z,15nm,1.2s
J26L Joseph Creek 68.44 346 IAmb IAmb 11 03 51.2
comp=Z,11nm,1.2s
K27K Chicken 68.60 345 IAmb IAmb 11 03 51.9
comp=Z,35nm,2.0s
L29M L29M 68.64 343 IAmb IAmb 11 03 52.8
comp=Z,8.6nm,1.1s
H21K Meloiztna Rive 68.72 350 IAmb IAmb 11 03 53.8
comp=Z,27nm,1.6s
ILAR Eielson Array 68.74 347 P **P 11 03 50.8 +1.7**
comp=Z,1.9nm,1.0s,baz=27,slow=4.4,SNR=14
ILAR LR LR 11 34 52.8
comp=Z,126nm,21.3s,baz=32,slow=37
comp=Z,1.9nm,1.0s
LRAL Lakeview Retre 68.75 296 IAmb IAmb 11 03 51.1
comp=Z,8.6nm,0.7s
BCAR Beaver Creek A 69.42 344 P 11 03 55.2 +1.8
L27K Beaver Creek, 69.43 344 IAmb IAmb 11 04 11.1
comp=Z,31nm,2.0s
L26K Log Cabin Wild 69.75 345 IAmb IAmb 11 04 00.5
comp=Z,9.5nm,1.3s
SEY Seymchan 69.80 15 LR LR 11 37 56.8
comp=Z,73nm,19.1s,baz=338,slow=39
MCK McKinley 70.03 348 IAmb IAmb 11 04 05.7
comp=Z,23nm,1.5s
DHY Denali Highway 70.40 347 IAmb IAmb 11 04 08.3
comp=Z,13nm,1.2s
ZEA Zeya 70.51 32 *e*P **P 11 04 02.1 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
HILR Hailar Array B 70.55 39 P **P 11 04 02.1 +1.5**
comp=Z,4.4nm,0.8s,baz=316,slow=6.2,SNR=5.0
comp=Z,4.4nm,0.8s
DLBC Dease Lake 70.70 337 LR LR 11 35 58.1
comp=Z,353nm,18.0s,baz=30,slow=37
RSSD Black Hills 71.31 314 P 11 04 06.1 +0.6
RSSD IAmb IAmb 11 04 08.8
comp=Z,6.5nm,0.9s
RSSD Black Hills 71.31 314 P **P 11 04 06.1 +0.6**
RSSD pmax pmax
comp=Z,7.0nm,0.9s
EGMT Eagleton 71.32 320 IAmb IAmb 11 04 12.5
comp=Z,23nm,1.2s
BAUV El Baul 71.43 264 P 11 04 05.8 -0.5
LZDM Lanzhou Array 71.50 58 P **P 11 04 07.8 +0.9**
comp=Z,1.7nm,0.4s,baz=308,slow=7.3,SNR=4.5
comp=Z,1.7nm,0.4s
LZH Lanzhou 71.50 57 *e*P **P 11 04 08.8 +2.1**
LZH sP sP 11 04 16.4 +4.4
LZH pmax pmax
comp=Z,15nm,1.3s
LZH LR LR
comp=Z,330nm,17.2s
LZH LR LR
comp=Z,360nm,16.1s
LZH LR LR
comp=Z,300nm,17.2s
LBTB Lobatse 71.85 160 LR LR 11 37 39.1
comp=Z,371nm,18.1s,baz=343,slow=38
MA2 Magadan 72.55 17 LR LR 11 39 57.1
comp=Z,78nm,18.7s,baz=324,slow=39
HHC Hu-ho-hao-te 72.68 49 *e*P **P 11 04 14.6 +0.9**
HHC pmax pmax
comp=Z,14nm,0.5s
HHC pmax pmax
comp=Z,100nm,4.9s
HHC LR LR
comp=Z,250nm,15.0s
HHC LR LR
comp=Z,340nm,15.0s
HHC LR LR
comp=Z,430nm,18.3s
XLT XiLinHaoTe 72.89 45 *e*P **P 11 04 16.0 +1.2**
XLT pP sP 11 04 21.7 +1.6
XLT pmax pmax
comp=Z,8.0nm,0.8s
XLT pmax pmax

	comp=Z,130nm,4.7s						
XLT				LR	LR		
	comp=Z,410nm,19.6s						
XLT				LR	LR		
	comp=Z,390nm,12.8s						
HEH	**HeiHe**	**73.28**	**34**	*e*P	**P**	**11 04 17.7**	**+0.9**
HEH				pmax	pmax		
	comp=Z,16nm,0.8s						
HEH				LR	LR		
	comp=Z,310nm,16.5s						
HEH				LR	LR		
	comp=Z,430nm,19.2s						
HEH				LR	LR		
	comp=Z,320nm,15.2s						
SDV	**Santo Domingo**	**73.32**	**266**		**P**	**11 04 19.0**	**+1.1**
SDV				IAmb	IAmb	11 04 21.5	
	comp=Z,13nm,0.9s						
SDV	**Santo Domingo**	**73.32**	**266**	LR	LR	11 30 60.0	
	comp=Z,100nm,21.8s,baz=69,slow=31						
K22A	**Casper**	**73.63**	**314**	IAmb	IAmb	11 06 58.2	
	comp=Z,7.9nm,0.8s						
YNE	**Yellowstone No**	**73.64**	**318**	IAmb	IAmb	11 04 23.4	
	comp=Z,35nm,1.7s						
OPO	**Ambohidratompo**	**73.86**	**138**	LR	LR	11 37 47.3	
	comp=Z,146nm,20.4s,baz=181,slow=37						
YMP	**Mirror Lake Pl**	**73.91**	**318**	IAmb	IAmb	11 04 25.3	
	comp=Z,23nm,1.5s						
MSO	**Missoula**	**74.11**	**321**	P	**P**	**11 04 22.5**	**+0.5**
MSO				IAmb	IAmb	11 04 28.5	
	comp=Z,21nm,1.7s						
NEW	**Newport**	**74.39**	**324**	P	**P**	**11 04 24.5**	**+1.0**
NEW				IAmb	IAmb	11 04 31.2	
	comp=Z,21nm,1.5s						
NEW	**Newport**	**74.39**	**324**	LR	LR	11 36 30.6	
	comp=Z,689nm,18.2s,baz=37,slow=35						
NEW	**Newport**	**74.39**	**324**	P	**P**	**11 04 24.5**	**+1.0**
NEW				pmax	pmax		
	comp=Z,21nm,1.5s						
DLMT	**Dillon**	**74.60**	**319**	IAmb	IAmb	11 04 29.2	
	comp=Z,20nm,1.3s						
LOHW	**Long Hollow**	**74.96**	**317**	IAmb	IAmb	11 04 40.3	
	comp=Z,17nm,2.0s						
PALK	**Pallekele**	**75.02**	**95**	LR	LR	11 41 00.4	
	comp=Z,72nm,18.7s,baz=324,slow=39						
PDAR	**Pinedale Array**	**75.08**	**316**	P	**P**	**11 04 27.4**	**-0.5**
PDAR	**Pinedale Array**	**75.08**	**316**	P	**P**	**11 04 28.4**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=53,slow=5.2,SNR=11						
PDAR				LR	LR	11 36 01.9	
	comp=Z,366nm,18.5s,baz=28,slow=35						
	comp=Z,1.0nm,0.6s						
ISCO	**Idaho Springs**	**75.20**	**312**	IAmb	IAmb	11 04 32.9	
	comp=Z,24nm,1.4s						
TPAW	**Teton Pass**	**75.22**	**317**	IAmb	IAmb	11 04 32.2	
	comp=Z,30nm,1.9s						
BOSA	**Boshof**	**75.23**	**161**	P	**P**	**11 04 28.6**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=344,slow=7.4,SNR=2.4						
BOSA				LR	LR	11 39 36.7	
	comp=Z,413nm,18.4s,baz=22,slow=37						
	comp=Z,2.8nm,0.9s						
BOSA	**Boshof**	**75.23**	**161**	P	**P**	**11 04 28.6**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,62nm,1.9s						
B08A	**Colville Reser**	**75.24**	**325**		**P**	**11 04 29.2**	**+0.8**
B08A				IAmb	IAmb	11 06 09.3	
	comp=Z,20nm,1.8s						
BBB	**Bella Bella**	**75.38**	**332**	LR	LR	11 37 51.4	
	comp=Z,418nm,18.6s,baz=52,slow=36						
BCYI	**Bear Canyon**	**75.78**	**319**	IAmb	IAmb	11 04 35.0	
	comp=Z,28nm,2.0s						
XAN	**Xi'an**	**75.93**	**56**	P	**P**	**11 04 33.9**	**+1.3**
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
F10A	**Beach Ranch, E**	**76.22**	**322**	IAmb	IAmb	11 04 40.7	
	comp=Z,9.1nm,1.0s						
KDAK	**Kodiak Island**	**76.26**	**348**	LR	LR	11 41 12.5	
	comp=Z,131nm,19.8s,baz=33,slow=38						
O20A	**White River Ci**	**76.34**	**313**	IAmb	IAmb	11 04 38.7	
	comp=Z,27nm,1.3s						
E08A	**Dider Farm, El**	**76.60**	**324**	IAmb	IAmb	11 04 39.8	
	comp=Z,8.8nm,1.2s						
WAH2	**Wahluke Slope**	**76.60**	**324**	IAmb	IAmb	11 04 40.2	
	comp=Z,24nm,1.4s						
SDCO	**Great Sand Dun**	**76.62**	**310**	IAmb	IAmb	11 05 07.5	
	comp=Z,6.7nm,0.9s						
PZH	**PanZhiHua**	**76.64**	**66**	P	**P**	**11 04 38.5**	**+1.6**
LTY	**Liberty**	**76.66**	**325**	IAmb	IAmb	11 07 19.3	
	comp=Z,17nm,1.8s						
HWUT	**Hardware Ranch**	**76.93**	**316**	IAmb	IAmb	11 04 42.0	
	comp=Z,13nm,1.1s						
BMO	**Blue Mountains**	**77.13**	**322**	IAmb	IAmb	11 04 42.5	
	comp=Z,15nm,1.2s						
BSUT	**Blindstream Ca**	**77.33**	**315**	IAmb	IAmb	11 05 08.5	
	comp=Z,27nm,2.0s						
S22A	**4UR Ranch, Cre**	**77.34**	**311**	IAmb	IAmb	11 04 45.1	
	comp=Z,13nm,1.3s						
MFID	**Camas Ranch**	**77.58**	**320**	IAmb	IAmb	11 04 45.7	
	comp=Z,9.7nm,1.2s						
JLU	**Jordanelle**	**77.63**	**316**	IAmb	IAmb	11 04 46.1	
	comp=Z,13nm,1.3s						
P18A	**Preston Nutter**	**77.75**	**314**	IAmb	IAmb	11 04 49.4	
	comp=Z,12nm,1.2s						
PV22	**Blue Mesa, Par**	**77.81**	**313**	IAmb	IAmb	11 04 47.0	
	comp=Z,15nm,1.2s						
PV21	**Cone Mtn., Par**	**77.89**	**313**	IAmb	IAmb	11 04 47.6	
	comp=Z,17nm,1.1s						
PV16	**Nyswonger Mesa**	**78.04**	**313**	IAmb	IAmb	11 04 48.6	
	comp=Z,26nm,1.3s						
PV03	**Paradox Valley**	**78.05**	**312**	IAmb	IAmb	11 04 51.1	
	comp=Z,34nm,1.7s						
PV13	**Radium Mtn., P**	**78.10**	**312**	IAmb	IAmb	11 04 48.8	
	comp=Z,14nm,1.2s						
BGU	**Big Grassy Mou**	**78.17**	**317**	IAmb	IAmb	11 04 49.1	
	comp=Z,14nm,1.3s						
SRU	**San Rafael Swe**	**78.28**	**314**	IAmb	IAmb	11 04 49.3	
	comp=Z,17nm,1.2s						
PV05	**Paradox Valley**	**78.31**	**312**	IAmb	IAmb	11 06 59.8	
	comp=Z,30nm,2.0s						
MVCO	**Mesa Verde**	**78.64**	**312**	IAmb	IAmb	11 04 52.1	
	comp=Z,14nm,1.2s						
ANMO	**Albuquerque**	**79.19**	**309**		**P**	**11 04 52.0**	**+1.0**
ANMO	**Albuquerque**	**79.19**	**309**	LR	LR	11 38 16.6	
	comp=Z,733nm,19.6s,baz=138,slow=34						
ANMO	**Albuquerque**	**79.19**	**309**	P	**P**	**11 04 52.0**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TASM	**ASL Pad, Albuq**	**79.19**	**309**	IAmb	IAmb	11 04 55.0	
	comp=Z,5.7nm,1.1s						
HMU	**Henry Mountain**	**79.28**	**313**	IAmb	IAmb	11 04 54.8	
	comp=Z,14nm,1.1s						
G03D	**McMinnville, O**	**79.37**	**325**	IAmb	IAmb	11 04 56.3	
	comp=Z,23nm,1.0s						
ELK	**Elko**	**79.38**	**318**	IAmb	IAmb	11 04 56.6	
	comp=Z,13nm,1.3s						
ELK	**Elko**	**79.38**	**318**	LR	LR	11 38 37.6	
	comp=Z,505nm,18.3s,baz=36,slow=35						
PINE	**Pine Mountain**	**79.56**	**323**	IAmb	IAmb	11 04 58.0	
	comp=Z,13nm,1.2s						
PETK	**Petropavlovsk-**	**79.99**	**16**	LR	LR	11 45 51.2	
	comp=Z,96nm,18.5s,baz=352,slow=40						
CMAR	**Chiang Mai Arr**	**80.27**	**74**	P	**P**	**11 04 57.1**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=305,slow=6.4,SNR=9.0						
	comp=Z,0.5nm,0.6s						
SPR3	**Spring Creek 3**	**80.29**	**316**	IAmb	IAmb	11 05 01.9	
	comp=Z,16nm,1.4s						
K05A	**Summer Lake**	**80.40**	**323**	IAmb	IAmb	11 05 59.1	
	comp=Z,34nm,1.8s						
ALPN	**Alpine**	**80.89**	**304**	IAmb	IAmb	11 05 19.2	
	comp=Z,8.0nm,0.8s						
TXAR	**Lajitas Array**	**81.66**	**303**	P	**P**	**11 05 06.2**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=54,slow=13,SNR=6.3						
TXAR				LR	LR	11 40 35.3	
	comp=Z,151nm,19.6s,baz=36,slow=35						
	comp=Z,0.8nm,0.6s						
YSS	**Yuzhno-Sakhali**	**81.67**	**28**	*e*P	**P**	**11 05 04.9**	**+1.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,17.0s						
YSS				MLR	MLR		
	comp=E,200nm,18.0s						
121A	**Cookes Peak, D**	**81.71**	**308**	IAmb	IAmb	11 05 08.9	
	comp=Z,18nm,1.3s						
PRN	**Pahroc Range**	**81.88**	**316**	IAmb	IAmb	11 05 14.2	
	comp=Z,7.9nm,1.1s						
YBH	**Yreka Blue Hor**	**81.99**	**323**	LR	LR	11 41 02.8	
	comp=Z,26nm,18.9s,baz=60,slow=35						
JTS	**Las Juntas de**	**82.57**	**277**	LR	LR	11 36 41.4	
	comp=Z,168nm,19.6s,baz=0.0,slow=32						
SHEM	**Shemya Is, Ala**	**82.66**	**6**	LR	LR	11 45 28.4	
	comp=Z,37nm,18.6s,baz=321,slow=38						
NVAR	**Mina Array Bea**	**82.66**	**318**	P	**P**	**11 05 10.2**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=72,slow=4.4,SNR=4.0						
NVAR				LR	LR	11 40 51.2	
	comp=Z,501nm,18.9s,baz=42,slow=35						
	comp=Z,0.3nm,0.5s						
W13A	**Hualapai Mount**	**83.07**	**313**	IAmb	IAmb	11 05 24.8	
	comp=Z,14nm,1.8s						
NJ2	**Nanjing**	**83.09**	**51**	*e*P	**P**	**11 05 12.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PTLB	**Pontes e Lacer**	**83.13**	**241**		**P**	**11 05 12.9**	**+1.1**
PTLB				IAmb	IAmb	11 05 15.7	
	comp=Z,9.7nm,1.4s						
APG	**El Apazote**	**83.18**	**284**	LR	LR	11 35 52.4	
	comp=Z,26nm,21.6s,baz=252,slow=31						
ORV	**Oroville**	**83.23**	**321**	IAmb	IAmb	11 05 14.7	
	comp=Z,12nm,1.6s						
319A	**Douglas**	**83.42**	**308**	IAmb	IAmb	11 05 18.1	
	comp=Z,16nm,1.3s						
TUC	**Tucson**	**83.55**	**310**		**P**	**11 05 15.4**	**+1.4**
TUC				IAmb	IAmb	11 05 18.7	
	comp=Z,18nm,1.5s						
TUC	**Tucson**	**83.55**	**310**	P	**P**	**11 05 15.4**	**+1.4**
TUC				pmax	pmax		
	comp=Z,18nm,1.5s						
KSRS	**Korea Array**	**83.62**	**42**	P	**P**	**11 05 15.4**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=308,slow=4.2,SNR=2.1						
	comp=Z,1.0nm,0.6s						
MTPC	**Mountain Pass**	**83.63**	**315**	IAmb	IAmb	11 05 19.4	
	comp=Z,14nm,1.3s						
GWY	**Greenwater Val**	**83.64**	**316**	IAmb	IAmb	11 05 19.6	
	comp=Z,17nm,1.1s						
SHOC	**Shoshone, Teco**	**83.67**	**315**	IAmb	IAmb	11 05 19.5	
	comp=Z,16nm,1.1s						
ASAJ	**Asahikawa**	**84.11**	**29**	LR	LR	11 44 43.0	
	comp=Z,138nm,19.2s,baz=351,slow=37						
CWC	**Cottonwood Cre**	**84.14**	**317**	IAmb	IAmb	11 05 56.2	
	comp=Z,12nm,1.8s						
CLC	**China Lake**	**84.39**	**316**	IAmb	IAmb	11 05 24.4	
	comp=Z,14nm,1.8s						
GSC	**Goldstone, Bar**	**84.41**	**315**	IAmb	IAmb	11 05 22.3	
	comp=Z,31nm,1.9s						
BLYC	**Blythe**	**84.45**	**313**	IAmb	IAmb	11 05 23.2	
	comp=Z,10nm,1.0s						
IRM	**Iron Mountain**	**84.46**	**314**	IAmb	IAmb	11 05 23.4	
	comp=Z,14nm,1.4s						
LRMC	**Laurel Mtn Rad**	**84.70**	**316**	IAmb	IAmb	11 05 24.4	
	comp=Z,9.8nm,1.4s						
SIV	**San Ignacio**	**84.75**	**242**	LR	LR	11 41 30.9	
	comp=Z,98nm,18.5s,baz=73,slow=34						
CMIG	**Matias Romero**	**84.76**	**289**	LR	LR	11 38 54.8	
	comp=Z,199nm,21.7s,baz=30,slow=33						
113A	**Mohawk Valley,**	**84.81**	**312**	IAmb	IAmb	11 05 24.6	
	comp=Z,9.2nm,1.1s						
ISA	**Isabella, Lake**	**84.95**	**317**	IAmb	IAmb	11 05 25.6	
	comp=Z,12nm,1.2s						
BC3	**Big Chuckawall**	**85.01**	**314**	IAmb	IAmb	11 05 26.0	
	comp=Z,6.9nm,1.1s						
BELC	**Belle Mtn. Jos**	**85.02**	**314**	IAmb	IAmb	11 05 26.4	
	comp=Z,12nm,1.2s						
PFO	**Pinyon Flats O**	**85.56**	**314**	LR	LR	11 41 42.0	
	comp=Z,198nm,20.8s,baz=28,slow=34						
HSIG		**86.14**	**308**	IAmb	IAmb	11 05 31.4	
	comp=Z,6.3nm,1.0s						
JNU	**Nakatsue**	**88.53**	**43**	LR	LR	11 49 35.1	
	comp=Z,244nm,18.8s,baz=329,slow=38						
MJAR	**Matsushiro Arr**	**88.98**	**36**	LR	LR	11 49 37.2	
	comp=Z,128nm,18.1s,baz=338,slow=38						
LPIG	**La Paz**	**89.50**	**304**	LR	LR	11 46 01.6	
	comp=Z,160nm,18.0s,baz=34,slow=36						
LPAZ	**La Paz**	**89.51**	**247**	LR	LR	11 43 25.4	
	comp=Z,182nm,19.9s,baz=44,slow=34						
CPUP	**Villa Florida**	**90.39**	**232**	LR	LR	11 44 10.6	
	comp=Z,24nm,19.7s,baz=256,slow=34						
PSI	**Prapat**	**91.12**	**85**	LR	LR	11 52 47.1	
	comp=Z,122nm,18.5s,baz=254,slow=40						
JOW	**Kunigami**	**92.29**	**48**	LR	LR	11 51 15.1	
	comp=Z,248nm,18.1s,baz=328,slow=38						
NNA	**Nana**	**92.32**	**256**	LR	LR	11 45 00.7	
	comp=Z,71nm,20.0s,baz=12,slow=34						
JCJ	**Chichijima**	**98.83**	**38**	LR	LR	11 56 16.8	
	comp=Z,84nm,18.5s,baz=304,slow=39						
NVL	**N'lazarevskaya**	**115.14**	**177**	*e*PKIKP	**PKiKP**	**11 11 26.7**	**+1.1**
NVL				*e*		11 12 26.3	
NVL				*e*PPP	PPP	11 14 52.4	
NVL				*e*SS	SS	11 28 25.1	+2.2
NVL				*e*SSS	SSS	11 32 41.4	
NVL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**131.82**	**76**	PKP	**PKPdf**	**11 11 59.0**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=333,slow=1.9,SNR=3.2						
TAOE	**Nuku Hiva Isla**	**133.15**	**309**	*e*LR	LR	11 54 28.3	
	comp=Z,185nm,23.0s						
ASAR	**Alice Springs**	**133.95**	**80**	PKP	**PKiKP**	**11 12 04.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=318,slow=2.1,SNR=12						
ASAR	**Alice Springs**	**133.95**	**80**	PKIKP	**PKiKP**	**11 12 04.0**	**-0.5**
QSPA	**South Pole Qui**	**134.43**	**180**	PKP	**PKiKP**	**11 12 04.0**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=231,slow=1.8,SNR=9.7						
RKT	**Rikitea**	**140.73**	**289**	*e*LR	LR	11 57 47.8	
	comp=Z,5μm,42.2s						
STKA	**Stephens Creek**	**144.30**	**84**	PKP	**PKPab**	**11 12 19.5**	**-0.2**
	comp=Z,6.2nm,0.6s,baz=323,slow=5.1,SNR=13						
PPT2	**Papeete2**	**145.47**	**313**	*e*LR	LR	12 00 05.2	
	comp=Z,176nm,25.5s						
PPT2				*e*LR	LR	12 00 07.6	
	comp=Z,178nm,23.2s						
VNDA	**Vanda**	**145.69**	**171**		**PKPab**	**11 12 24.3**	**+0.8**
VNDA	**Vanda**	**145.69**	**171**	PKPbc	**PKPab**	**11 12 24.2**	**+0.7**
	comp=Z,5.4nm,0.9s,baz=251,slow=4.7,SNR=21						
SBA	**Scott Base**	**145.85**	**173**	PKPdf	**PKPab**	**11 12 24.7**	**+0.6**
SBA	**Scott Base**	**145.85**	**173**	PKP2	**PKPab**	**11 12 24.7**	**+0.6**
TBI	**Tubuai**	**150.05**	**306**	*e*LR	LR	12 02 17.5	
	comp=Z,666nm,24.2s						

*LVSN **11** 10:58:48.1±3.5,57.°70N×24.°60E,h1km±11km,ML2.1*
*EST **11** 10:58:50.8±0.1,59.°20N×27.°93E,h0km,ML1.7(HEL),*
Explosion

HEL 11 10:58:51.4±0.3,59.°22N×27.°88E,h0km,ML1.7,
Suspected explosion,Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.16**	**359**	*e*P	Pg	10 58 53.9	-0.5
EE04				*e*S	Sg	10 58 56.0	-0.5
EE03	**Tooma soojaam,**	**0.90**	**248**	*e*P	Pg	10 59 07.3	-1.3
EE03				*e*S	Sg	10 59 18.9	-1.4
VSU	**Vasula**	**0.96**	**219**	*e*P	Pg	10 59 07.7	-2.1
VSU				*e*S	Sg	10 59 20.8	-1.5
VSU				AML	AML	10 59 27.0	
	comp=N,36nm,0.3s						
VSU				AML	AML	10 59 31.2	
	comp=E,40nm,0.3s						
VSU				AML	AML	10 59 59.2	
	comp=Z,22nm,0.2s						
VSU	**Vasula**	**0.96**	**219**	*e*P	Pg	10 59 07.6	-2.2
VSU				*e*S	Sg	10 59 20.1	-2.2
VJF	**Virojoki**	**1.34**	**353**	*e*P	Pg	10 59 14.9	-2.1
VJF				smax	smax	10 59 31.8	
	comp=Z,6.0nm,0.2s						
VJF				*e*SB	Sg	10 59 33.1	-1.2
EE08	**Sarghaua, Vand**	**1.48**	**249**	*e*PG	Pn	10 59 17.7	-1.5
EE08				*e*SB	Sg	10 59 37.4	-1.5
EE02	**Kiisa, Saku**	**1.64**	**270**	*e*PG	Pn	10 59 20.8	-0.6
EE02				*e*S	Sn	10 59 41.1	-2.1
PVF	**Pernaja**	**1.68**	**323**	*e*PN	Pn	10 59 21.7	-0.3
PVF				smax	smax	10 59 41.7	
	comp=Z,3.5nm,0.2s						
HEL1	**Helsinki**	**1.80**	**304**	*e*PG	Pn	10 59 23.9	+0.3
HEL1				*e*SN	Sn	10 59 47.2	0.0
HEL5	**Espoo, Suvisaa**	**1.83**	**301**	*e*PG	Pn	10 59 24.5	+0.4
HEL5				smax	smax	10 59 46.1	
	comp=Z,5.8nm,0.2s						
HEL5				*e*S	Sn	10 59 47.2	-0.8
MEF	**Metsahovi**	**2.03**	**301**	*e*P	Pn	10 59 27.9	+1.1
MEF				*e*S	Sn	10 59 53.8	+0.9
MEF				AML	AML	10 59 54.4	
	comp=N,15nm,0.2s						
MEF				AML	AML	10 59 55.2	
	comp=E,6.5nm,0.4s						
MEF				AML	AML	10 59 55.8	
	comp=Z,5.9nm,0.2s						
MEF	**Metsahovi**	**2.03**	**301**	*e*PG	Pn	10 59 27.8	+1.0
MEF				*e*SB	Sn	10 59 53.3	+0.5
MEF				smax	smax	10 59 55.8	
	comp=Z,5.8nm,0.1s						
NUR	**Nurmijarvi**	**2.08**	**310**	*e*PG	Pn	10 59 28.3	+0.8
NUR				smax	smax	10 59 53.3	
	comp=Z,4.6nm,0.2s						
NUR				*e*SB	Sn	10 59 54.7	+0.6
EE01	**Perakula, Nova**	**2.19**	**272**	*e*P	Pn	10 59 29.7	+0.7
EE01				*e*PB	Pb	10 59 30.0	-1.9
EE01				*e*SB	Sn	10 59 57.9	+1.2
RUF	**Ruokolahti**	**2.28**	**13**	*e*P	Pn	10 59 29.8	-0.4
RUF				*e*PB	Pb	10 59 30.6	-2.8
RUF				smax	smax	10 59 58.8	
	comp=Z,2.3nm,0.2s						
RUF				*e*SG	Sb	11 00 01.2	-0.8
FIA0	**FINESS Array S**	**2.41**	**339**	*e*P	Pn	10 59 31.9	-0.1
FIA0				*e*PB	Pb	10 59 33.1	-2.5
FIA0				*e*SG	Sb	11 00 05.3	-0.5
FIA1	**FINESS Array S**	**2.41**	**339**	*e*P	Pn	10 59 31.8	-0.3
FIA1				*e*PB	Pb	10 59 33.1	-2.5
FIA1				*e*SG	Sb	11 00 05.1	-0.7
TVF	**Tvarminne**	**2.44**	**287**	*e*PG	Pb	10 59 34.5	-1.6
TVF				smax	smax	11 00 03.4	
	comp=Z,1.6nm,0.2s						
TVF				*e*SB	Sb	11 00 05.7	-1.0
EE06	**Soera, Palade,**	**2.61**	**267**	*e*PB	Pn	10 59 36.5	+1.7
EE06				*e*SB	Sb	11 00 10.3	-1.2
KAF	**Kangasniemi**	**3.01**	**346**	*e*PB	Pn	10 59 42.8	+2.5
KAF				smax	smax	11 00 19.8	
	comp=Z,2.0nm,0.2s						
KAF				*e*SG	Sb	11 00 23.1	0.0
RAF	**Rauma**	**3.56**	**303**	*e*P	Pn	10 59 48.6	+0.8
KPF	**Kankaanpaa**	**3.89**	**315**	*e*P	Pn	10 59 53.3	+0.9
JOF	**Joensuu**	**4.07**	**23**	*e*P	Pn	10 59 54.9	0.0

*NEIC **11** 11:00:32.2±1.1,35.°13N±0.°02×95.°37W±0.°02,h5km±1km,*
mb_Lg3.0/86,ML2.9/10,ML3.3/14,Error ellipse:
s-maj=4.3km s-min=2.9km az=130.0

NEIC 11 11:00:32.4±1.1,35.°14N±0.°02×95.°38W±0.°02,h6km±4km,
Error ellipse: s-maj=3.8km s-min=2.1km az=152.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUL3	**Leonard**	**0.84**	**336**		Pg	11 00 48.6	-0.1
TUL3					Sg	11 00 59.9	+0.3
RLO	**Rose Lookout**	**1.07**	**16**		Pg	11 00 52.4	-0.5
RLO					Sb	11 01 07.6	+0.1
RLO				IAML		11 01 09.2	
	comp=E,1μm,0.2s						
RLO				IAML		11 01 14.1	
	comp=N,735nm,0.2s						
DEOK	**Depew**	**1.16**	**308**		Pg	11 00 54.2	-0.4
DEOK					Sg	11 01 09.6	0.0
DEOK				IAML		11 01 14.4	
	comp=E,614nm,0.3s						
DEOK				IAML		11 01 14.6	
	comp=N,771nm,0.4s						
OK052	**Battle Ridge R**	**1.44**	**307**		Pn	11 00 59.1	-0.1
OK052					Sg	11 01 18.8	-0.1
QUOK	**Quay**	**1.50**	**314**		Pn	11 00 59.9	0.0
QUOK					Sg	11 01 20.3	-0.3
U38A	**Gravette**	**1.53**	**31**		Pn	11 01 00.3	0.0
U38A					Sn	11 01 20.7	+0.1
MIAR	**Mount Ida**	**1.59**	**111**		Pn	11 01 01.5	+0.3
MIAR					Sb	11 01 22.9	+0.3
HHAR	**Hobbs**	**1.64**	**45**		Pn	11 01 02.0	+0.2
HHAR					Sb	11 01 24.0	+0.1
FNO	**Franklin**	**1.66**	**275**		Pn	11 01 02.8	+0.6
FNO					Sg	11 01 25.6	-0.3
OKCSW	**OKLAHOMA CITY**	**1.71**	**280**		Pn	11 01 03.3	+0.6
OK048	**Pawnee Station**	**1.80**	**316**		Pn	11 01 04.8	+0.7
OK029	**Liberty Lake**	**1.82**	**292**		Pn	11 01 05.0	+0.7
Z38A	**Mt. Pleasant**	**1.90**	**170**		Pn	11 01 06.3	+0.9
Z38A				IAmb_Lg		11 01 35.6	
	comp=Z,98nm,0.9s						
T35A	**Sooner Cattle**	**2.00**	**333**		Pb	11 01 08.5	-0.8
X34A	**Smith Ranch, M**	**2.09**	**256**		Pn	11 01 08.6	+0.5
X34A				IAmb_Lg		11 01 43.8	
	comp=Z,59nm,0.8s						
X40A	**Basin Creek Fa**	**2.19**	**106**		Pn	11 01 10.4	+1.0
X40A				IAmb_Lg		11 01 46.8	
	comp=Z,64nm,0.8s						
WLAR	**White Oak Lake**	**2.37**	**127**	Pn	Pb	11 01 13.7	-1.7
WLAR				IAmb_Lg		11 01 47.3	
	comp=Z,67nm,0.8s						
Z35A	**Perchaven, San**	**2.38**	**221**		Pn	11 01 12.8	+0.8
TREL	**Terrell**	**2.47**	**194**		Pn	11 01 13.6	+0.4
TREL				IAmb_Lg		11 01 56.4	
	comp=Z,54nm,1.0s						
UALR	**University of**	**2.52**	**97**	Pn	Pn	11 01 15.7	+1.8
UALR				IAmb_Lg		11 01 54.7	
	comp=Z,41nm,0.7s						
WHAR	**Wooly Hollow**	**2.53**	**86**		Pn	11 01 15.4	+1.3
FCAR	**Ozark Folk Cen**	**2.76**	**73**		Pn	11 01 17.9	+0.7
FW06	**Azle**	**2.82**	**221**		Pn	11 01 19.7	+1.7
WMOK	**Wichita Mounta**	**2.83**	**263**	Pn	Pn	11 01 19.2	+1.0
Z41A	**Richland Creek**	**2.84**	**131**		Pn	11 01 19.5	+1.2
Z41A				IAmb_Lg		11 02 03.4	
	comp=Z,27nm,0.8s						
OK038	**West end E0370**	**3.05**	**297**	IAmb_Lg		11 02 10.4	
	comp=Z,30nm,0.8s						
237A	**Washetta, Mont**	**3.15**

OLIL	**Olney** comp=Z,34nm,0.9s	**6.84**	**56**	IAmb_Lg		11 04 11.7	
T47A	**Sharon Grove** comp=Z,20nm,0.9s	**6.95**	**72**	IAmb_Lg		11 04 20.7	
T25A	**Trinidad** comp=Z,17nm,0.9s	**7.58**	**288**	IAmb_Lg		11 04 38.7	
L40A	**Anamosa** comp=Z,22nm,0.8s	**7.64**	**24**	IAmb_Lg		11 04 37.6	
OGNE	**Ogallala** comp=Z,23nm,0.8s	**7.82**	**320**	IAmb_Lg		11 04 58.2	
U49A	**Red Boiling Sp** comp=Z,9.2nm,1.0s	**7.92**	**77**	IAmb_Lg		11 04 52.4	
K30B	**Basset** comp=Z,25nm,0.8s	**8.22**	**338**	IAmb_Lg		11 05 08.6	
JFWS	**Jewell Farm** comp=Z,21nm,0.8s	**8.73**	**26**	IAmb_Lg		11 05 15.0	

*AEIC **11** 11:00:53.6±0.3,54°.2N±0°.2×165°.6W±0°.2,h122km±4km, Error ellipse: s-maj=31.2km s-min=6.5km az=154.0*
NEIC 11 11:00:53.6±0.3,54°.0N±0°.2×165°.4W±0°.2,h125km±5km, ML3.1/16,ML2.7(AEIC),Error ellipse: s-maj=33.0km s-min=8.2km az=151.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.21**	**312**		Pn	11 01 10.7	0.0
AKSA					Sn	11 01 23.9	+0.1
AKUT	**Akutan**	**0.25**	**305**		Pn	11 01 10.8	0.0
AKUT					Sn	11 01 23.8	-0.1
AKUT	**Akutan** comp=N,266nm,0.3s	**0.25**	**305**	IAML		11 01 24.2	
AKUT	comp=E,335nm,0.4s			IAML		11 01 25.7	
AHB	**Akutan Harbor**	**0.26**	**299**		Pn	11 01 10.9	0.0
AHB					Sn	11 01 23.8	-0.3
AKBBA	**Akutan Broad B**	**0.32**	**290**		Pn	11 01 11.0	-0.2
AKBBA					Sn	11 01 24.4	0.0
ZRO	**Akutan Zero**	**0.34**	**287**		Pn	11 01 11.0	-0.2
ZRO					Sn	11 01 24.6	0.0
AKMO	**Akutan Morgan**	**0.36**	**286**		Pn	11 01 11.3	0.0
AKMO					Sn	11 01 24.6	-0.1
LVA	**Lava Point**	**0.39**	**296**		Pn	11 01 11.3	-0.2
LVA					Sn	11 01 25.0	-0.1
UNV	**Unalaska Valle**	**0.65**	**257**		Pn	11 01 13.1	+0.1
UNV					Sn	11 01 27.8	+0.1
WEBT	**Westdahl Beart**	**0.72**	**33**		Pn	11 01 13.5	0.0
MNAT	**Makushin Natee**	**0.75**	**262**		Pn	11 01 13.6	-0.1
MREP	**Makushin Rep't**	**0.80**	**257**		Pn	11 01 14.2	0.0
MSW	**Makushin Switc**	**0.80**	**265**		Sn	11 01 29.5	-0.4
FALS	**False Pass**	**1.46**	**53**		Pn	11 01 21.3	+0.6
OKFG	**Magazine Ridge**	**1.59**	**249**		Pn	11 01 22.1	-0.2
OKTU	**Okmok Mt. Tuli**	**1.67**	**250**		Pn	11 01 23.1	-0.1
OKNC	**Okmok New Cone**	**1.69**	**253**		Pn	11 01 23.0	-0.4
DT1	**Dutton Round H**	**2.15**	**57**		Pn	11 01 29.1	+0.1
NIKH	**Nikolski High**	**2.29**	**245**		Pn	11 01 31.0	+0.2
NIKH	**Nikolski High** comp=N,84nm,1.3s	**2.29**	**245**	IAML		11 02 19.2	
NIKH	comp=E,75nm,1.2s			IAML		11 02 26.2	
PS1A	**Pavlof South-1**	**2.57**	**55**		Pn	11 01 35.1	+0.7
S12K	**Black Hills**	**2.59**	**47**		Pn	11 01 34.4	-0.3
S12K	**Black Hills** comp=E,70nm,1.4s	**2.59**	**47**	IAML		11 02 14.5	
CLCO	**Concord Point,**	**2.84**	**247**		Pn	11 01 38.2	+0.3
SDPT	**Sand Point**	**3.18**	**63**		Pn	11 01 42.4	+0.2
SDPT	**Sand Point** comp=E,53nm,1.2s	**3.18**	**63**	IAML		11 02 20.0	
CNBA	**Chernabura Isl**	**3.51**	**74**	Pn	Pn	11 01 46.7	+0.1
CNBA	comp=E,31nm,1.5s			IAML		11 02 27.7	
CNBA	comp=N,26nm,1.4s			IAML		11 02 33.4	
N15K	**Kwethluk River**	**6.84**	**23**	Pn	Pn	11 02 30.9	-0.3

*IDC **11** 11:09:58.5±6.7,17°.14S×179°.00W,h569km±81km,mb3.1/8, mbtmp4.0/9,Error ellipse: s-maj=58.4km s-min=26.6km az=141.0*
ISC 11 11:09:55.5±0.9,17°.2S±0°.3×178°.8W±0°.2,h533km,n9, σ0s93/9,mb3.5/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 6.0nm,1.0s,baz=59,slow=19,SNR=6.2	**14.71**	**248**	P	**P**	**11 13 04.0**	**+1.7**
STKA	**Stephens Creek** 1.8nm,0.4s,baz=106,slow=10,SNR=8.0	**38.64**	**240**	P	**P**	**11 16 32.4**	**-1.0**
WRA	**Warramunga Arr** 1.1nm,0.5s,baz=94,slow=8.1,SNR=43	**44.38**	**259**	P	**P**	**11 17 18.0**	**-0.9**
ASAR	**Alice Springs** 10nm,0.6s,baz=88,slow=8.0,SNR=264	**44.62**	**254**	P	**P**	**11 17 20.1**	**-0.7**
NVAR	**Mina Array Bea** 0.3nm,0.6s,baz=253,slow=4.7,SNR=4.4	**79.17**	**44**	P	**P**	**11 21 05.5**	**0.0**
MAW	**Mawson** 0.8nm,0.2s,baz=127,slow=5.1,SNR=2.1	**84.41**	**200**	P	**P**	**11 21 31.4**	**0.0**
ILAR	**Eielson Array** 0.2nm,0.4s,baz=205,slow=4.2,SNR=5.5	**85.27**	**13**	P	**P**	**11 21 35.5**	**0.0**
TXAR	**Lajitas Array** 0.5nm,0.7s,baz=222,slow=5.8,SNR=5.8	**85.94**	**58**	P	**P**	**11 21 40.0**	**+0.3**
PDAR	**Pinedale Array** 0.3nm,0.6s,baz=186,slow=2.0,SNR=4.4	**87.10**	**44**	P	**P**	**11 21 45.0**	**+0.1**

*JMA **11** 11:12:32.7±0.1,41°.5N±0°.3×142°.0E±0°.5,h62km±1km, MV3.3/39,E OFF AOMORI PREF*
*IDC **11** 11:12:34.5±1.9,41°.51N×142°.06E,h80km±15km,mb3.5/10, mbtmp3.7/14,Error ellipse: s-maj=25.0km s-min=13.7km az=114.0*
ISC 11 11:12:33.0±0.9,41°.46N±0°.04×142°.03E±0°.05,h64km±8km, n36,σ0s95/43,mb3.9/10,12D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.56**	**249**	⇓*i*P	**Pn**	**11 12 45.9**	**-0.1**
JAHD				⇓eS	**Sn**	**11 12 55.5**	**+0.1**
JARK	**Aomorirokkasho**	**0.68**	**228**	⇓*i*P	**Pn**	**11 12 46.9**	**-0.4**
JARK				⇓S	**Sn**	**11 12 57.0**	**-0.7**
JOT	**Ohata**	**0.75**	**264**	⇓*i*P	**Pn**	**11 12 47.7**	**-0.4**
JOT				⇓S	**Sn**	**11 12 59.0**	**-0.1**
JKB	**Kayabe**	**0.86**	**300**	⇓*i*P	**Pn**	**11 12 48.8**	**-0.7**
JKB				⇓S	**Sn**	**11 13 00.8**	**-0.8**
JNBK	**Urakawa-nobuka**	**0.98**	**33**	P	**Pn**	**11 12 50.3**	**-0.6**
JTM	**Tenmabayashi**	**0.99**	**227**	⇓*i*P	**Pn**	**11 12 51.2**	**+0.1**
JTM				⇓S	**Sn**	**11 13 04.5**	**-0.1**
JEM	**Erimo**	**1.01**	**56**	P	**Pn**	**11 12 50.9**	**-0.4**
JANG	**Nango**	**1.16**	**200**	P	**Pn**	**11 12 52.9**	**-0.4**
JANG				S	**Sn**	**11 13 07.5**	**-0.9**
JSR	**Shiriuchi**	**1.22**	**274**	*i*P	**Pn**	**11 12 54.0**	**-0.1**
JSR				S	**Sn**	**11 13 09.6**	**-0.1**
JNB	**Noboribetsu**	**1.25**	**324**	*i*P	**Pn**	**11 12 53.6**	**-0.8**
JNB				S	**Sn**	**11 13 09.4**	**-1.0**
JBT2	**Biratori 2**	**1.34**	**10**	eP	**Pn**	**11 12 55.7**	**+0.1**
JBT2				eS	**Sn**	**11 13 13.4**	**+0.9**
JYM2	**Yakumo 2**	**1.41**	**298**	⇓*i*P	**Pn**	**11 12 56.8**	**+0.2**
JYM2				⇓S	**Sn**	**11 13 14.6**	**+0.5**
JEW	**Eniwo**	**1.44**	**343**	P	**Pn**	**11 12 57.0**	**0.0**
JEW				S	**Sn**	**11 13 14.5**	**-0.6**
JCH	**Churui**	**1.52**	**40**	P	**Pn**	**11 12 58.1**	**+0.1**
JOMM	**Oshimamatsumae**	**1.52**	**273**	P	**Pn**	**11 12 57.9**	**-0.2**
JOMM				S	**Sn**	**11 13 16.6**	**-0.4**
JAH	**Hinai**	**1.66**	**220**	P	**Pn**	**11 13 00.6**	**+0.6**
ASAJ	**Asahikawa** 14nm,0.4s,baz=223,slow=12,SNR=52	**2.68**	**9**	P	**Pn**	**11 13 15.0**	**+1.1**
ASAJ	13nm,0.4s,baz=222,slow=5.5,SNR=6.1			S	**Sn**	**11 13 46.3**	**+1.1**
MJAR	**Matsushiro Arr** 0.8nm,0.6s,baz=24,slow=16,SNR=4.4	**5.75**	**212**	P	**Pn**	**11 13 58.2**	**+2.4**
USRK	**Ussuriysk Ar.** 1.1nm,0.6s,baz=91,slow=16,SNR=1.4	**7.87**	**294**	P	**Pn**	**11 14 26.3**	**+1.5**
KSRS	**Korea Array** 1.9nm,0.6s,baz=63,slow=13,SNR=6.0	**11.62**	**254**	P	**Pn**	**11 15 19.4**	**+3.5**
SONM	**Songino Array** 0.5nm,0.5s,baz=104,slow=11,SNR=2.4	**25.98**	**296**	P	**P**	**11 17 58.7**	**-1.0**
	0.5nm,0.5s						
H11N2	**WAKE ISLAND Hy** baz=321,slow=76,SNR=12	**30.26**	**128**	T	T	11 51 06.2	
H11N1	**WAKE ISLAND Hy** baz=321,slow=76,SNR=16	**30.27**	**128**	T	T	11 51 04.7	
H11N3	**WAKE ISLAND Hy** baz=321,slow=76,SNR=11	**30.28**	**128**	T	T	11 51 05.3	
H11S1	**WAKE ISLAND Hy** baz=323,slow=76,SNR=9.4	**31.10**	**130**	T	T	11 52 15.6	
H11S3	**WAKE ISLAND Hy** baz=323,slow=76,SNR=6.0	**31.11**	**130**	T	T	11 52 15.2	
H11S2	**WAKE ISLAND Hy** baz=323,slow=76,SNR=5.5	**31.12**	**130**	T	T	11 52 16.8	
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=100,slow=8.6,SNR=2.7	**39.41**	**308**	P	**P**	**11 19 56.0**	**-0.3**
	0.8nm,0.5s						
MKAR	**Makanchi Array** 0.9nm,0.7s,baz=87,slow=11,SNR=4.4	**42.31**	**298**	P	**P**	**11 20 20.2**	**-0.1**
	0.9nm,0.7s						
KURBB	**Kurchatov Arra** 1.5nm,0.4s,baz=78,slow=8.7,SNR=6.1	**43.77**	**305**	P	**P**	**11 20 31.8**	**-0.2**
	1.5nm,0.4s						
ILAR	**Eielson Array** 0.4nm,0.8s,baz=275,slow=9.1,SNR=4.7	**45.54**	**35**	P	**P**	**11 20 46.5**	**+0.5**
	0.4nm,0.8s						
BVAR	**Borovoye Array** 0.9nm,0.5s,baz=70,slow=9.0,SNR=5.0	**48.04**	**310**	P	**P**	**11 21 05.7**	**+0.1**
	0.9nm,0.5s						
WRA	**Warramunga Arr** 1.0nm,1.1s,baz=6.3,slow=7.1,SNR=5.8	**61.51**	**188**	P	**P**	**11 22 42.5**	**-0.7**
	1.0nm,1.1s						
FINES	**FINESS Array B** 1.1nm,0.7s,baz=46,slow=6.0,SNR=1.6	**65.14**	**332**	P	**P**	**11 23 06.6**	**-0.1**
	1.1nm,0.7s						
HFS	**Hagfors** 0.8nm,0.6s,baz=44,slow=4.4,SNR=1.0	**70.26**	**335**	P	**P**	**11 23 38.7**	**-0.2**
	0.8nm,0.6s						
AKASG	**Malin Array Be** 0.7nm,0.4s,baz=44,slow=5.2,SNR=2.8	**71.11**	**322**	P	**P**	**11 23 42.7**	**-1.6**
	0.7nm,0.4s						

*IDC **11** 11:15:54.9±2.3,21°.16S×67°.17W,h170km±21km,mb3.8/14, mbtmp4.2/18,Error ellipse: s-maj=21.1km s-min=11.3km az=69.0*
*NEIC **11** 11:15:56.0±2.1,21°.36S±0°.06×67°.27W±0°.09,h182km±6km, mb4.4/38,Mwr4.3(GUC),Error ellipse: s-maj=12.0km s-min=8.8km az=84.0*
*SJA **11** 11:15:56.4±1.7,21°.33S×67°.32W,h175km,ML4.2,MW4.1*
*SCB **11** 11:15:56.2±1.1,21°.34S×67°.33W,h180km±8km,MB5.0, ML4.6/4,Error ellipse: s-maj=3.6km s-min=2.8km az=0.0*
*VAO **11** 11:15:57.2±1.1,21°.19S×67°.08W,h206km±8km,mb4.4*
*GUC **11** 11:15:57.2±0.7,21°.33S×67°.56W,h213km±5km,ML4.5*
ISC 11 11:15:55.6±0.6,21°.34S±0°.04×67°.33W±0°.04,h184km±6km, n165,σ1s38/189,mb4.2/26,15C-4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.58**	**87**	Pg	**Pn**	**11 16 30.1**	**+0.9**
MOCB				Sg	**Sn**	**11 16 55.3**	**+0.2**
MOCB	2μm,0.3s			IAML		11 17 00.6	
AF01	**San Pedro de A**	**1.79**	**206**		**Pn**	**11 16 31.0**	**-0.1**
AF01	**San Pedro de A**	**1.79**	**206**	⇑*e*P	**Pn**	**11 16 33.7**	**+2.7**
PB09	**IPOC Station P**	**1.84**	**255**		**Pn**	**11 16 33.2**	**+1.8**
PB09	**IPOC Station P**	**1.84**	**255**	⇓*i*P	**Pn**	**11 16 33.2**	**+1.8**
PB09				*i* S	**Sn**	**11 17 00.7**	**+1.5**
PB09	**IPOC Station P**	**1.84**	**255**	Pg	**Pn**	**11 16 33.2**	**+1.8**
PB09	**IPOC Station P**	**1.84**	**255**	*e*P	**Pn**	**11 16 33.0**	**+1.6**
PB09				eS	**Sn**	**11 17 01.9**	**+2.7**
PB09	comp=Z,461nm,0.4s			IAML		11 17 04.0	
YJA	**Yavi**	**1.89**	**117**	⇓*e*P	**Pn**	**11 16 33.5**	**+1.3**
YJA	**Yavi**	**1.89**	**117**	Pg	**Pn**	**11 16 33.3**	**+1.1**
YJA	**Yavi**	**1.89**	**117**	*e*P	**Pn**	**11 16 33.8**	**+1.6**
YJA				eS	**Sn**	**11 17 01.2**	**+0.7**
YJA	comp=Z,433nm,0.6s			IAML		11 17 02.3	
PB01	**IPOC Station P**	**2.03**	**278**		**Pn**	**11 16 34.2**	**+0.8**
PB01	**IPOC Station P**	**2.03**	**278**	⇑*i*P	**Pn**	**11 16 34.0**	**+0.6**
PB01				*i* S	**Sn**	**11 17 02.5**	**-0.2**
PB01	comp=E,2μm,0.2s			IAML		11 17 04.9	
PB01	**IPOC Station P**	**2.03**	**278**	Pg	**Pn**	**11 16 34.5**	**+1.1**
PB01				Sg	**Sn**	**11 17 02.9**	**+0.2**
PB01	comp=E,2μm,0.2s			IAML		11 17 04.9	
PB01	**IPOC Station P**	**2.03**	**278**	*e*P	**Pn**	**11 16 34.4**	**+0.9**
PB01				eS	**Sn**	**11 17 04.3**	**+1.6**
PB01	comp=Z,898nm,0.2s			IAML		11 17 05.9	
PB08	**IPOC Station P**	**2.08**	**305**		**Pn**	**11 16 35.7**	**+1.5**
PB08	**IPOC Station P**	**2.08**	**305**	⇑*i*P	**Pn**	**11 16 35.7**	**+1.5**
PB08				*i* S	**Sn**	**11 17 05.2**	**+1.0**
PB08	comp=N,2μm,0.3s			IAML		11 17 07.3	
PB08	**IPOC Station P**	**2.08**	**305**	Pg	**Pn**	**11 16 35.7**	**+1.5**
PB08	**IPOC Station P**	**2.08**	**305**	*e*P	**Pn**	**11 16 35.1**	**+0.9**
PB08				eS	**Sn**	**11 17 05.8**	**+1.6**
PB08	comp=Z,587nm,0.4s			IAML		11 17 06.6	
PX03	**IPOC Station P**	**2.34**	**293**	*i* P	**Pn**	**11 16 36.7**	**-0.2**
PX03				*i* S	**Sn**	**11 17 08.4**	**-0.4**
PB03	**IPOC Station P**	**2.36**	**252**		**Pn**	**11 16 38.1**	**+1.0**
PB03	**IPOC Station P**	**2.36**	**252**	⇑*i*P	**Pn**	**11 16 38.0**	**+0.9**
PB03				eS	**Sn**	**11 17 09.1**	**-0.3**
PB03	comp=E,683nm,0.2s			IAML		11 17 11.3	
PB03	**IPOC Station P**	**2.36**	**252**	*e*P	**Pn**	**11 16 38.0**	**+0.9**
PB03				eS	**Sn**	**11 17 09.6**	**+0.2**
PB03	comp=Z,537nm,0.5s			IAML		11 17 15.4	
PB02	**IPOC Station P**	**2.39**	**270**		**Pn**	**11 16 38.2**	**+0.8**
PB02	**IPOC Station P**	**2.39**	**270**	*i* P	**Pn**	**11 16 38.2**	**+0.8**
PB02				*i* S	**Sn**	**11 17 09.1**	**-0.7**
PB02	comp=E,3μm,0.4s			IAML		11 17 14.3	
PB02	**IPOC Station P**	**2.39**	**270**	Pg	**Pn**	**11 16 38.2**	**+0.8**
PB02				Sg	**Sn**	**11 17 09.7**	**-0.2**
PB02	comp=E,2μm,0.3s			IAML		11 17 10.6	
PB02	**IPOC Station P**	**2.39**	**270**	*e*P	**Pn**	**11 16 38.2**	**+0.8**
PB02				eS	**Sn**	**11 17 10.0**	**+0.2**
PB02	comp=Z,3μm,0.4s			IAML		11 17 10.9	
GO01	**Chusmiza**	**2.41**	**313**		**Pn**	**11 16 38.9**	**+0.9**
GO01	**Chusmiza**	**2.41**	**313**	⇑*i*P	**Pn**	**11 16 39.0**	**+0.9**
GO01				*i* S	**Sn**	**11 17 11.8**	**+0.9**
GO01	comp=N,2μm,0.1s			IAML		11 17 20.2	
GO01	**Chusmiza**	**2.41**	**313**	Pg	**Pn**	**11 16 39.1**	**+1.1**
GO01	**Chusmiza**	**2.41**	**313**	*e*P	**Pn**	**11 16 39.3**	**+1.2**
GO01				eS	**Sn**	**11 17 15.6**	**+4.7**
GO01				eS		11 17 16.4	
GO01	comp=Z,462nm,0.4s			IAML		11 17 21.6	
AOVT	**TarijaAcel**	**2.45**	**95**	Pg	**Pn**	**11 16 38.8**	**+0.6**
PB06	**IPOC Station P**	**2.49**	**236**		**Pn**	**11 16 39.5**	**+1.0**
PB06	**IPOC Station P**	**2.49**	**236**	⇑*i*P	**Pn**	**11 16 39.5**	**+1.0**
PB06				*i* S	**Sn**	**11 17 12.1**	**+0.1**
PB06	comp=E,917nm,0.5s			IAML		11 17 14.4	
PB06	**IPOC Station P**	**2.49**	**236**	Pg	**Pn**	**11 16 39.7**	**+1.2**
PB06	**IPOC Station P**	**2.49**	**236**	*e*P	**Pn**	**11 16 39.3**	**+0.8**
PB06				eS	**Sn**	**11 17 12.9**	**+1.0**
PB06	comp=Z,549nm,0.3s			IAML		11 17 15.4	
HJA	**Humahuaca**	**2.58**	**137**	*e*P	**Pn**	**11 16 41.5**	**+1.7**
HJA				eS	**Sn**	**11 17 14.9**	**+0.6**
HJA	comp=Z,381nm,0.6s			IAML		11 17 19.1	
HMBC	**Humberstone**	**2.61**	**293**		**Pn**	**11 16 40.3**	**+0.3**
PB11	**IPOC Station P**	**2.68**	**305**		**Pn**	**11 16 41.4**	**+0.5**
PB11	**IPOC Station P**	**2.68**	**305**	⇑*i*P	**Pn**	**11 16 41.4**	**+0.5**
PB11				eS	**Sn**	**11 17 15.1**	**-1.0**
PB11	**IPOC Station P**	**2.68**	**305**	Pg	**Pn**	**11 16 41.1**	**+0.2**
PB11				Sg	**Sn**	**11 17 15.4**	**-0.7**
PB11	comp=Z,3μm,0.2s			IAML		11 17 18.0	
PB11	**IPOC Station P**	**2.68**	**305**	*e*P	**Pn**	**11 16 41.3**	**+0.5**
PB11				eS	**Sn**	**11 17 16.4**	**+0.3**
PB11				eS		11 17 16.4	
PB11	comp=Z,2μm,0.3s			IAML		11 17 19.0	

PATCX	**Punta Patache**	**2.68**	**281**		**Pn**	**11 16 41.4**	**+0.6**
PATCX	**Punta Patache**	**2.68**	**281**	⇑*i*P	**Pn**	**11 16 41.2**	**+0.4**
PATCX				*i* S	**Sn**	**11 17 14.7**	**-1.2**
PATCX	**Punta Patache**	**2.68**	**281**	*e*P	**Pn**	**11 16 41.3**	**+0.6**
PATCX				*e*P		11 16 41.4	
PATCX				eS	**Sn**	**11 17 16.1**	**+0.2**
PATCX	comp=Z,883nm,0.5s			IAML		11 17 20.3	
TA01	**Diego Aracena**	**2.77**	**286**		**Pn**	**11 16 41.8**	**0.0**
TA01	**Diego Aracena**	**2.77**	**286**	⇑*i*P	**Pn**	**11 16 41.7**	**0.0**
TA01				*i* S	**Sn**	**11 17 15.7**	**-1.9**
TA01	comp=E,2μm,0.3s			IAML		11 17 17.1	
TA01	**Diego Aracena**	**2.77**	**286**	*e*P	**Pn**	**11 16 41.8**	**0.0**
TA01				eS	**Sn**	**11 17 16.1**	**-1.5**
TA01				eS		11 17 16.4	
TA01	comp=Z,737nm,0.5s			IAML		11 17 21.3	
SOEO	**Opoqueri**	**2.81**	**349**	Pg	**Pn**	**11 16 44.1**	**+1.4**
TA02	**Huaiquique**	**2.83**	**292**	*i* P	**Pn**	**11 16 42.3**	**0.0**
TA02	**Huaiquique**	**2.83**	**292**	*e*P	**Pn**	**11 16 42.9**	**+0.5**
TA02				eS	**Sn**	**11 17 17.6**	**-1.2**
TA02	comp=Z,2μm,0.1s			IAML		11 17 18.8	
SALTA		**3.02**	**163**	⇑*i*P	**Pn**	**11 16 47.4**	**+2.2**
SALTA		**3.02**	**163**	*e*P	**Pn**	**11 16 47.4**	**+2.2**
SALTA				eS	Sn	11 17 37.7	+14
PB05	**IPOC Station P**	**3.06**	**240**		**Pn**	**11 16 46.0**	**+0.8**
PB05	**IPOC Station P**	**3.06**	**240**	⇑*i*P	**Pn**	**11 16 46.1**	**+0.8**
PB05				*i* S	**Sn**	**11 17 22.5**	**-1.5**
PB05	comp=N,510nm,0.3s			IAML		11 17 24.1	
PB05	**IPOC Station P**	**3.06**	**240**	*e*P	**Pn**	**11 16 45.7**	**+0.4**
PB05				eS	**Sn**	**11 17 23.3**	**-0.8**
PB05	comp=Z,260nm,0.7s			IAML		11 17 24.9	
SOET	**ToroToro**	**3.51**	**24**	Pg	**Pn**	**11 16 51.5**	**+0.4**
PX02	**IPOC Station P**	**3.58**	**311**	*e*P	**Pn**	**11 16 49.5**	**-2.2**
PB16	**IPOC Station P**	**3.62**	**325**		**Pn**	**11 16 54.1**	**+1.4**
PB16	**IPOC Station P**	**3.62**	**325**	⇑*i*P	**Pn**	**11 16 54.0**	**+1.4**
PB16				*i* S	**Sn**	**11 17 36.9**	**-0.3**
PB16	**IPOC Station P**	**3.62**	**325**	Pg	**Pn**	**11 16 54.2**	**+1.4**
PB16	**IPOC Station P**	**3.62**	**325**	*e*P	**Pn**	**11 16 53.4**	**+0.8**
PB16				eS	**Sn**	**11 17 39.6**	**+2.4**
PB16	comp=Z,440nm,0.6s			IAML		11 17 40.6	
PB10	**IPOC Station P**	**3.69**	**233**		**Pn**	**11 16 53.3**	**+0.5**
PB10	**IPOC Station P**	**3.69**	**233**	*i* P	**Pn**	**11 16 53.0**	**+0.1**
PB10	**IPOC Station P**	**3.69**	**233**	*e*P	**Pn**	**11 16 53.0**	**+0.1**
PB10				eS	**Sn**	**11 17 35.9**	**-1.9**
PB10	comp=Z,148nm,0.4s			IAML		11 17 39.0	
SLA	**San Lorenzo**	**3.77**	**154**	⇑*e*P	**Pn**	**11 16 55.6**	**+1.5**
SLA	**San Lorenzo**	**3.77**	**154**	*e*P	**Pn**	**11 16 55.7**	**+1.7**
SLA				eS	**Sn**	**11 17 41.1**	**+1.2**
SLA	comp=Z,475nm,2.9s			IAML		11 18 05.3	
PB12	**IPOC Station P**	**3.91**	**313**		**Pn**	**11 16 54.7**	**-1.1**
PB12	**IPOC Station P**	**3.91**	**313**	⇑*i*P	**Pn**	**11 16 54.6**	**-1.1**
PB12	**IPOC Station P**	**3.91**	**313**	*e*P	**Pn**	**11 16 54.8**	**-1.1**
PB12	comp=Z,467nm,0.2s			IAML		11 17 46.0	
AP01	**Chacalluta**	**4.09**	**316**	*i* P	**Pn**	**11 16 57.1**	**-0.9**
PB18	**Visviri**	**4.24**	**331**		**Pn**	**11 17 02.7**	**+2.2**
PB14	**IPOC Station P**	**4.33**	**220**		**Pn**	**11 17 01.7**	**+0.4**
PB14	**IPOC Station P**	**4.33**	**220**	Pg	**Pn**	**11 17 02.2**	**+0.7**
GO02	**Mina Guanaco**	**4.34**	**208**		**Pn**	**11 17 02.0**	**+0.5**
GO02	**Mina Guanaco**	**4.34**	**208**	⇑*i*P	**Pn**	**11 17 01.9**	**+0.5**
GO02				eS	**Sn**	**11 17 52.2**	**-0.9**
GO02	**Mina Guanaco**	**4.34**	**208**	Pg	**Pn**	**11 17 02.0**	**+0.5**
BBOJ	**La Paz, Jacaqu**	**4.41**	**349**	Pg	**Pn**	**11 17 03.9**	**+1.2**
BBOE	**La Paz, Chanca**	**4.54**	**352**	Pg	**Pn**	**11 17 05.4**	**+1.1**
BBOD	**La Paz, Gloria**	**4.83**	**345**	Pg	**Pn**	**11 17 09.0**	**+1.0**
LPAZ	**La Paz**	**5.08**	**351**		**Pn**	**11 17 12.4**	**+1.0**
LPAZ	**La Paz** comp=Z,73nm,0.4s,baz=146,slow=4.4,SNR=286	**5.08**	**351**	P	**Pn**	**11 17 11.2**	**-0.1**
LPAZ	**La Paz**	**5.08**	**351**	Pg	**Pn**	**11 17 11.5**	**+0.2**
LPAZ	**La Paz**	**5.08**	**351**	*e*P	**Pn**	**11 17 12.3**	**+1.0**
BBOB	**La Paz, Bander**	**5.22**	**352**	Pg	**Pn**	**11 17 13.9**	**+0.8**
AC01	**Pan de Azucar**	**5.65**	**211**		**Pn**	**11 17 17.2**	**-0.9**
AC02	**Maricunga**	**5.72**	**196**		**Pn**	**11 17 19.6**	**+0.2**
AC05	**El Transito**	**7.93**	**199**		**Pn**	**11 17 46.1**	**-2.0**
SIV	**San Ignacio** comp=Z,14nm,0.4s,baz=226,slow=9.3,SNR=104	**7.96**	**49**	P	**Pn**	**11 17 45.7**	**-2.8**
SIV	comp=Z,7.2nm,0.5s,baz=239,slow=19,SNR=7.1			S	Sn	11 19 03.3	-15
LCO	**Las Campanas**	**8.23**	**201**		**Pn**	**11 17 49.3**	**-2.9**
CO01	**Juntas del Tor**	**8.96**	**196**		**Pn**	**11 18 00.8**	**-0.9**
MURT	**Porto Murtinho**	**9.06**	**94**	*e*P	**Pn**	**11 18 00.8**	**-2.0**
PTLB	**Pontes e Lacer**	**9.73**	**54**		**Pn**	**11 18 09.2**	**-2.5**
PTLB	**Pontes e Lacer**	**9.73**	**54**	*e*P	**Pn**	**11 18 09.0**	**-2.7**
ZON	**Zonda**	**10.24**	**186**		**Pn**	**11 18 17.0**	**-1.2**
CFA	**Coronel Fontan** comp=Z,2.9nm,0.3s,baz=322,slow=9.9,SNR=29	**10.26**	**184**	P	**Pn**	**11 18 16.8**	**-1.7**
CFA	comp=Z,1.9nm,0.3s,baz=233,slow=18,SNR=3.6			S	**Sn**	**11 20 05.4**	**-7.3**
CPUP	**Villa Florida**	**10.42**	**120**		**Pn**	**11 18 20.5**	**0.0**
CPUP	**Villa Florida** comp=Z,2.0nm,0.7s,baz=155,slow=13,SNR=17	**10.42**	**120**	P	**Pn**	**11 18 19.9**	**-0.6**
CPUP	comp=Z,0.5nm,0.5s,baz=176,slow=15,SNR=0.9			S	Sn	11 20 06.7	-10
VILB	**Vilhena**	**10.77**	**40**		**Pn**	**11 18 23.5**	**-1.7**
VILB	**Vilhena**	**10.77**	**40**

comp=Z,92nm,0.7s
319A Douglas 66.07 321 IAmb IAmb 11 26 25.2
comp=Z,4.2nm,0.7s
ANMO Albuquerque 67.18 326 IAmb IAmb 11 26 35.6
comp=Z,1.5nm,1.0s
ANMO Albuquerque 67.18 326 P **P** **11 26 30.8 +0.7**
comp=Z,1.5nm,0.8s,baz=234,slow=9.5,SNR=6.3
comp=Z,1.5nm,0.8s
QSPA South Pole Qui 68.86 180 P **P** **11 26 42.6 +2.5**
QSPA IAmb IAmb 11 26 45.2
comp=Z,3.2nm,0.6s
QSPA South Pole Qui 68.86 180 P **P** **11 26 43.0 +3.0**
comp=Z,2.8nm,0.5s,baz=350,slow=1.1,SNR=52
comp=Z,2.8nm,0.5s
SDCO Great Sand Dun 68.87 328 IAmb IAmb 11 26 42.7
comp=Z,2.6nm,0.8s
WUAZ Wupatki 70.28 323 IAmb IAmb 11 26 52.0
comp=Z,3.8nm,0.9s
KNB Kanab 72.17 323 IAmb IAmb 11 27 03.8
comp=Z,8.9nm,1.1s
PDAR Pinedale Array 74.71 329 P **P** **11 27 16.1 +0.8**
comp=Z,0.5nm,0.4s,baz=123,slow=8.6,SNR=16
comp=Z,0.5nm,0.4s
ULM Lac du Bonnet 75.62 342 IAmb IAmb 11 27 41.4
comp=Z,7.2nm,1.1s
ULM Lac du Bonnet 75.62 342 P **P** **11 27 19.6 -0.3**
comp=Z,4.5nm,0.6s,baz=95,slow=3.1,SNR=4.5
comp=Z,4.5nm,0.6s
TORD Torodi Ar. Bea 75.92 70 IAmb IAmb 11 27 21.8
comp=Z,3.0nm,0.7s
TORD Torodi Ar. Bea 75.92 70 P **P** **11 27 21.3 -1.2**
comp=Z,2.8nm,0.4s,baz=267,slow=2.9,SNR=1.7
comp=Z,2.8nm,0.4s
ELK Elko 76.14 324 P **P** **11 27 24.2 +0.8**
comp=Z,1.2nm,0.9s,baz=96,slow=5.8,SNR=5.5
comp=Z,1.2nm,0.9s
NVAR Mina Array Bea 76.28 321 P **P** **11 27 25.6 +1.3**
comp=Z,1.2nm,0.9s,baz=147,slow=6.3,SNR=7.9
comp=Z,1.2nm,0.9s
VNDA Vanda 77.26 190 P **P** **11 27 31.3 +2.3**
comp=Z,0.7nm,0.7s,baz=116,slow=4.1,SNR=3.1
comp=Z,0.7nm,0.7s
YBH Yreka Blue Hor 80.99 321 P **P** **11 27 48.9 -0.9**
comp=Z,0.1nm,0.7s,baz=68,slow=3.2,SNR=2.7
BOSA Boshof 82.22 118 IAmb IAmb 11 28 16.1
comp=Z,12nm,1.3s
BOSA Boshof 82.22 118 P **P** **11 27 56.6 -0.2**
comp=Z,3.1nm,0.8s,baz=258,slow=8.4,SNR=2.4
comp=Z,3.1nm,0.8s
MAW Mawson 84.06 163 P **P** **11 28 06.5 +1.4**
comp=Z,1.7nm,0.5s,baz=217,slow=7.1,SNR=10
comp=Z,1.7nm,0.5s
ESDC Sonseca Array 84.69 44 IAmb IAmb 11 28 10.5
comp=Z,2.8nm,1.1s
ESDC Sonseca Array 84.69 44 P **P** **11 28 09.0 +0.1**
comp=Z,2.2nm,0.8s,baz=250,slow=6.0,SNR=8.5
comp=Z,2.2nm,0.8s
YKA Yellowknife Ar 91.53 340 P **P** **11 28 41.0 +0.2**
comp=Z,1.8nm,0.6s,baz=158,slow=10.0,SNR=8.0
comp=Z,1.8nm,0.6s
ASAR Alice Springs 130.72 206 PKP **PKPdf** **11 34 46.1 +0.5**
comp=Z,1.4nm,0.6s,baz=136,slow=1.8,SNR=14
PETK Petropavlovsk- 133.30 324 PKP **PKPdf** **11 34 50.7 +1.4**
comp=Z,3.3nm,0.9s,baz=86,slow=2.0,SNR=1.9
WRA Warramunga Arr 133.82 209 PKP **PKPdf** **11 34 52.0 +0.6**
comp=Z,1.1nm,0.5s,baz=153,slow=1.7,SNR=17
BVAR Borovoye Array 134.82 35 PKP **PKPdf** **11 34 52.3 0.0**
comp=Z,0.7nm,0.7s,baz=343,slow=4.5,SNR=3.0
KURK Kurchatov 140.38 34 **PKPdf** **11 35 01.6 -0.9**
KURBB Kurchatov Arra 140.39 34 PKP **PKPdf** **11 35 01.6 -1.0**
comp=Z,0.6nm,0.8s,baz=288,slow=2.4,SNR=4.6
ZALV Zalesovo Beam 141.17 26 PKP **PKPdf** **11 35 02.4 -1.4**
comp=Z,1.9nm,0.6s,baz=289,slow=3.6,SNR=7.7
MKAR Makanchi Array 144.63 37 PKP **PKPab** **11 35 09.9 +0.5**
comp=Z,6.1nm,0.7s,baz=337,slow=2.7,SNR=41
SONM Songino Array 153.08 9 PKPbc **PKPbc** **11 35 31.1 -0.3**
comp=Z,1.3nm,0.6s,baz=288,slow=1.4,SNR=5.9

*IDC **11** 11:22:02.0±5.3,7°.84S×129°.32E,h204km±54km,mb3.0/2, mbtmp3.7/6,Error ellipse: s-maj=51.3km s-min=20.7km az=50.0*
ISC 11 11:22:01.2±1.4,**7°.91S**±0°.10×**129°.4E**±0°.1,**h200**km,**n6,**
σ**2s21**/10,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.14**	**248**	P		**Pn**	**11 23 30.4**	**0.0**
	19nm,0.3s,baz=124,slow=5.2,SNR=2.5							
BATI				S		**Sn**	**11 24 40.2**	**-0.7**
	24nm,0.3s,baz=57,slow=18,SNR=6.8							
FITZ	**Fitzroy Crossi**	**10.78**	**200**	P		**Pn**	**11 24 32.8**	**+2.2**
	2.1nm,0.6s,baz=30,slow=16,SNR=28							
FITZ				S		**Sn**	**11 26 30.4**	**-0.5**
	3.3nm,0.4s,baz=192,slow=21,SNR=8.0							
WRA	**Warramunga Arr**	**12.88**	**159**	P		**Pn**	**11 24 59.0**	**+1.7**
	1.5nm,0.6s,baz=337,slow=13,SNR=28							
WRA				S		**S**	**11 27 16.5**	**-4.5**
	2.7nm,0.4s,baz=332,slow=23,SNR=6.7							
ASAR	**Alice Springs**	**16.25**	**165**	P		**Pn**	**11 25 39.9**	**+1.2**
	0.4nm,0.8s,baz=340,slow=11,SNR=26							
ASAR				S		**S**	**11 28 40.0**	**+1.8**
	0.6nm,0.4s,baz=348,slow=26,SNR=6.8							
MKAR	**Makanchi Array**	**68.67**	**327**	P		**P**	**11 32 43.4**	**+0.4**
	0.2nm,0.4s,baz=112,slow=6.2,SNR=2.3							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**72.99**	**329**	P		**P**	**11 33 07.8**	**-1.0**
	0.2nm,0.4s,baz=123,slow=5.0,SNR=1.9							
	0.2nm,0.4s							

*IGIL **11** 11:38:03.3,36°.96N×13°.70W,h31km,ML2.6*
*MDD **11** 11:38:03.9±1.0,37°.27N×13°.33W,h0km,Mb4.6/13, M_mb4.1/13,Error ellipse: s-maj=8.1km s-min=6.7km az=60.0*
*INMG **11** 11:38:05.2±1.0,36°.96N×13°.69W,h14km±7km,ML3.0, Error ellipse: s-maj=4.3km s-min=3.7km az=94.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*
*CNRM **11** 11:38:08.6,36.83N×13°.06W,h91km*
ISC 11 11:38:03.0±2.6,**37°.11N**±0°.05×**13°.2W**±0°.1,**h10**km,**n84,**
σ**2s14**/139,**13C,Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.48**	**88**	P		**Pn**	**11 38 59.3**	**+2.1**
PFVI				S		**Sn**	**11 39 39.0**	**+0.6**
PFVI	**Vila Bisbo**	**3.48**	**88**	⇑*i*P		**Pn**	**11 38 59.2**	**+2.1**
PFVI				*e*S		**Sn**	**11 39 39.3**	**+0.9**
PFVI				*i* IAML			11 39 40.7	
PFVI				*i* IAML			11 39 41.4	
PFVI				*i* IAML			11 39 42.4	
PFVI	**Vila Bisbo**	**3.48**	**88**	P		**Pn**	**11 38 58.9**	**+1.7**
AML01	**Serafina, Lisb**	**3.56**	**62**	*e*P		**Pn**	**11 39 00.2**	**+2.0**
AML01				*e*S		**Sn**	**11 39 41.5**	**+1.3**
AML01				*i* IAML			11 39 43.4	
AML01				*i* IAML			11 39 46.2	
AML01				*i* IAML			11 39 48.8	
PTEO	**Sao Teotonio**	**3.58**	**82**	*e*P		**Pn**	**11 39 00.8**	**+2.3**
PTEO				*e*S		**Sn**	**11 39 41.7**	**+0.8**
PTEO				*i* IAML			11 39 45.5	
PTEO				*i* IAML			11 39 49.0	
PTEO				*i* IAML			11 39 54.4	
PMAFR	**Mafra**	**3.59**	**58**	Pn		**Pn**	**11 39 00.9**	**+2.2**
PMAFR				Sn		**Sn**	**11 39 42.3**	**+1.3**
PMAFR	**Mafra**	**3.59**	**58**	*e*P		**Pn**	**11 39 00.8**	**+2.2**
PMAFR				*e*S		**Sn**	**11 39 41.8**	**+0.7**
PMAFR				*i* IAML			11 39 47.4	
PMAFR				*i* IAML			11 39 47.5	
PMAFR				*i* IAML			11 39 47.6	
MORF	**Marmelete**	**3.62**	**86**	*e*P		**Pn**	**11 39 01.1**	**+2.0**
MORF				*e*S		**Sn**	**11 39 43.2**	**+1.3**
MORF				IAML			11 39 45.2	
	comp=E,26nm,0.1s							
MORF	**Marmelete**	**3.62**	**86**	*e*P		**Pn**	**11 39 01.1**	**+2.0**
MORF				*e*S		**Sn**	**11 39 42.7**	**+0.7**
MORF				*i* IAML			11 39 45.2	
MORF				*i* IAML			11 39 46.6	
MORF				*i* IAML			11 39 47.4	
AML03	**Fanhoes/Loures**	**3.64**	**60**	*e*P		**Pn**	**11 39 01.7**	**+2.3**
AML03				*e*S		**Sn**	**11 39 42.8**	**+0.4**
AML03				*i* IAML			11 39 48.5	
AML03				*i* IAML			11 39 48.5	
AML03				*i* IAML			11 39 49.0	
AML04	**Campo deTiro d**	**3.79**	**63**	*e*P		**Pn**	**11 39 03.6**	**+2.2**
AML04				*e*S		**Sn**	**11 39 49.5**	**+3.6**
AML04				*i* IAML			11 39 50.8	
AML04				*i* IAML			11 39 53.5	
AML04				*i* IAML			11 39 54.9	
AML05	**Montejunto**	**3.85**	**56**	*e*P		**Pn**	**11 39 04.8**	**+2.5**
AML05				*e*S		**Sn**	**11 39 48.9**	**+1.2**
AML05				*i* IAML			11 39 53.1	
AML05				*i* IAML			11 39 53.4	
AML05				*i* IAML			11 39 53.6	
MESJ	**Messejana**	**4.01**	**78**	*e*P		**Pn**	**11 39 06.4**	**+1.9**
MESJ				*e*S		**Sn**	**11 39 52.4**	**+0.8**
MESJ				IAML			11 39 57.0	
	comp=N,6.1nm,0.2s							
MESJ	**Messejana**	**4.01**	**78**	*e*P		**Pn**	**11 39 06.7**	**+2.2**
MESJ				*e*S		**Sn**	**11 39 52.9**	**+1.4**
MESJ				*i* IAML			11 39 58.0	
MESJ				*i* IAML			11 39 58.2	
MESJ				*i* IAML			11 40 02.3	
MOE	**Montemor**	**4.08**	**68**	*e*P		**Pn**	**11 39 07.4**	**+2.0**
MOE				*e*S		**Sn**	**11 39 54.3**	**+1.1**
MOE				*i* IAML			11 39 57.5	
MOE				*i* IAML			11 39 58.3	
MOE				*i* IAML			11 40 00.3	
PCVE	**Castro Verde**	**4.13**	**81**	Pn		**Pn**	**11 39 08.4**	**+2.3**
PCVE				Sn		**Sn**	**11 39 56.0**	**+1.6**
PCVE	**Castro Verde**	**4.13**	**81**	*e*P		**Pn**	**11 39 08.3**	**+2.2**
PCVE				*e*S		**Sn**	**11 39 55.3**	**+0.8**
PCVE				*i* IAML			11 40 01.2	
PCVE				*i* IAML			11 40 01.7	
PCVE				*i* IAML			11 40 02.1	
PBDV	**Barranco-do-Ve**	**4.20**	**87**	Pn		**Pn**	**11 39 09.6**	**+2.5**
PBDV				Sn		**Sn**	**11 39 58.8**	**+2.7**
PBDV	**Barranco-do-Ve**	**4.20**	**87**	*e*P		**Pn**	**11 39 08.8**	**+1.7**
PBDV				*e*S		**Sn**	**11 39 57.2**	**+1.1**
PBDV				*i* IAML			11 40 02.8	
PBDV				*i* IAML			11 40 04.1	
PBDV				*i* IAML			11 40 04.5	
PSBE	**So Bento**	**4.20**	**54**	*e*P		**Pn**	**11 39 09.2**	**+2.1**
PSBE				*e*S		**Sn**	**11 39 58.0**	**+1.7**
PSBE				*i* IAML			11 40 01.3	
PSBE				*i* IAML			11 40 03.0	
PSBE				*i* IAML			11 40 03.1	
PBEJ	**Beja**	**4.32**	**76**	*e*P		**Pn**	**11 39 10.9**	**+2.2**
PBEJ				*e*S		**Sn**	**11 40 00.2**	**+1.1**
PBEJ				*i* IAML			11 40 04.1	
PBEJ				*i* IAML			11 40 08.6	
PVAQ	**Vaqueiros**	**4.37**	**85**	*e*P		**Pn**	**11 39 11.6**	**+2.2**
PVAQ				*e*S		**Sn**	**11 40 00.5**	**+0.2**
PVAQ				*i* IAML			11 40 04.9	
PVAQ				*i* IAML			11 40 05.9	
PVAQ				*i* IAML			11 40 08.8	
PVAQ	**Vaqueiros**	**4.37**	**85**	P		**Pn**	**11 39 11.1**	**+1.7**
PVAQ	**Vaqueiros**	**4.37**	**85**	S		**Sn**	**11 40 01.5**	**+1.1**
PMTG	**Montargil**	**4.37**	**62**	*e*P		**Pn**	**11 39 11.2**	**+1.8**
PMTG				*e*S		**Sn**	**11 40 00.0**	**-0.3**
PMTG				*i* IAML			11 40 04.0	
PMTG				*i* IAML			11 40 04.5	
PMTG				*i* IAML			11 40 06.2	
PARRA	**Arraiolos**	**4.40**	**66**	*e*P		**Pg**	**11 39 11.5**	**-2.1**
PARRA				*e*S		**Sg**	**11 40 02.2**	**+0.8**
PARRA				*i* IAML			11 40 04.2	
PARRA				*i* IAML			11 40 05.0	
PARRA				*i* IAML			11 40 08.6	
EGRO	**El Granado**	**4.56**	**83**	Pn		**Pn**	**11 39 14.3**	**+2.3**
EGRO				Sn		**Sn**	**11 40 05.7**	**+0.7**
EGRO	**El Granado**	**4.56**	**83**	Pn		**Pn**	**11 39 14.4**	**+2.3**
EGRO				⇑*i*Vmb_VC			11 39 17.6	
	comp=N,373nm,SNR=3.8							
EGRO				Sn		**Sn**	**11 40 05.8**	**+0.7**
PSARD	**Sardoal**	**4.66**	**56**	*e*P		**Pn**	**11 39 15.6**	**+2.1**
PSARD				*e*S		**Sn**	**11 40 08.1**	**+0.5**
PSARD				*i* IAML			11 40 10.1	
PSARD				*i* IAML			11 40 11.1	
PSARD				*i* IAML			11 40 11.3	
PCAS	**Casmilo, Conde**	**4.70**	**50**	*e*P		**Pn**	**11 39 15.5**	**+1.6**
PCAS				*e*S		**Sn**	**11 40 08.8**	**+0.3**
PCAS				*i* IAML			11 40 11.4	
PCAS				*i* IAML			11 40 12.0	
PCAS				*i* IAML			11 40 12.3	
PESTR	**Estremoz**	**4.75**	**67**	Pn		**Pn**	**11 39 16.5**	**+1.9**
PESTR				Sn		**Sn**	**11 40 11.0**	**+1.2**
PESTR	**Estremoz**	**4.75**	**67**	*e*P		**Pn**	**11 39 16.7**	**+2.1**
PESTR				*e*S		**Sn**	**11 40 10.6**	**+0.8**
PESTR				*i* IAML			11 40 14.5	
PESTR				*i* IAML			11 40 14.6	
PESTR				*i* IAML			11 40 22.3	
PESTR	**Estremoz**	**4.75**	**67**	P		**Pn**	**11 39 16.3**	**+1.7**
PESTR	**Estremoz**	**4.75**	**67**	S		**Sn**	**11 40 12.5**	**+2.6**
PMPST	**Porto Santo, M**	**4.78**	**214**	*e*S		Sn	11 39 52.0	-19
PMPST				*i* IAML			11 39 53.6	
PMPST				*i* IAML			11 39 53.9	
PMPST				*i* IAML			11 39 55.4	
PBAR	**Barrancos**	**4.99**	**76**	Pn		**Pn**	**11 39 19.9**	**+2.0**
PBAR				Sn		**Sn**	**11 40 16.1**	**+0.5**
PBAR	**Barrancos**	**4.99**	**76**	*e*P		**Pn**	**11 39 20.1**	**+2.2**
PBAR				*e*S		**Sn**	**11 40 16.9**	**+1.3**
PBAR				*i* IAML			11 40 25.0	
PBAR				*i* IAML			11 40 25.7	
PBAR				*i* IAML			11 40 30.1	
PMRV	**Marv??o**	**5.11**	**61**	*e*P		**Pn**	**11 39 21.6**	**+2.0**
PMRV				*e*S		**Sn**	**11 40 19.1**	**+0.5**
PMRV				*i* IAML			11 40 20.9	
PMRV				*i* IAML			11 40 21.2	
PMRV				*i* IAML			11 40 21.4	
EBAD	**Badajoz**	**5.14**	**70**	Pn		**Pn**	**11 39 21.6**	**+1.5**
EBAD				Sn		**Sn**	**11 40 19.4**	**-0.1**
EBAD	**Badajoz**	**5.14**	**70**	Pn		**Pn**	**11 39 21.5**	**+1.5**
EBAD				⇑*i*Vmb_VC			11 39 23.2	
	comp=N,567nm,SNR=4.3							
EBAD				Sn		**Sn**	**11 40 19.5**	**+0.1**
EMIN	**Mina Concepcio**	**5.22**	**81**	Pn		**Pn**	**11 39 23.2**	**+2.1**
EMIN				Sn		**Sn**	**11 40 23.4**	**+2.1**
EMIN	**Mina Concepcio**	**5.22**	**81**	Pn		**Pn**	**11 39 23.0**	**+1.9**
EMIN				Sn		**Sn**	**11 40 20.8**	**-0.6**
PCBR	**Castelo Branco**	**5.24**	**57**	*e*P		**Pn**	**11 39 23.4**	**+2.1**
PCBR				*e*S		**Sn**	**11 40 21.8**	**0.0**
PCBR				*i* IAML			11 40 24.8	
PCBR				*i* IAML			11 40 25.2	
PCBR				*i* IAML			11 40 25.7	
PVIS	**Viseu**	**5.47**	**47**	*e*P		**Pn**	**11 39 26.6**	**+2.0**
PVIS				*e*S		**Sn**	**11 40 26.7**	**-0.9**
MTE	**Manteigas**	**5.49**	**52**	*e*S		**Sn**	**11 40 27.8**	**-0.4**
MTE				*i* IAML			11 40 31.0	
MTE				*i* IAML			11 40 31.1	
MTE				*i* IAML			11 40 31.2	
ESPR	**Espera**	**5.87**	**90**	Pn		**Pn**	**11 39 32.5**	**+2.5**
ESPR				Sn		**Sn**	**11 40 38.4**	**+1.1**
ESPR	**Espera**	**5.87**	**90**	Pn		**Pn**	**11 39 32.7**	**+2.7**
ESPR				⇑*i*Vmb_VC			11 39 34.6	
	comp=N,396nm,SNR=2.6							
PVRL	**Vila Real**	**5.94**	**44**	*e*P		**Pn**	**11 39 32.4**	**+1.4**
PVRL				*e*S		**Sn**	**11 40 38.0**	**-1.2**
PVRL				*i* IAML			11 40 40.5	
PVRL				*i* IAML			11 40 41.0	
PVRL				*i* IAML			11 40 42.9	
POLO	**Lamas de Olo**	**5.96**	**43**	*e*P		**Pn**	**11 39 32.7**	**+1.3**
POLO				*e*S		**Sn**	**11 40 37.9**	**-1.9**
POLO				*i* IAML			11 40 40.8	
POLO				*i* IAML			11 40 41.2	
POLO				*i* IAML			11 40 42.7	
AVE	**Averroes**	**6.06**	**127**	S		**Sn**	**11 40 40.7**	**-1.5**
PCAB	**Cabril**	**6.08**	**39**	*e*P		**Pn**	**11 39 34.1**	**+1.2**
PCAB				*e*S		**Sn**	**11 40 40.6**	**-2.0**
PCAB				*i* IAML			11 40 43.5	
PCAB				*i* IAML			11 40 45.1	
PCAB				*i* IAML			11 40 45.5	
PGAV	**Gavieira, Arco**	**6.16**	**37**	*e*P		**Pn**	**11 39 35.1**	**+1.1**
PGAV				*e*S		**Sn**	**11 40 41.7**	**-2.8**
PGAV				*i* IAML			11 40 42.4	
PGAV				*i* IAML			11 40 45.6	
PGAV				*i* IAML			11 40 48.6	
ELOB	**Lobios**	**6.18**	**38**	Pn		**Pn**	**11 39 35.3**	**+0.9**
ELOB				⇑*i*Vmb_VC			11 39 36.9	
	comp=N,384nm,SNR=1.4							
ELOB				Sn		**Sn**	**11 40 40.4**	**-4.7**
ECAB	**El Cabril**	**6.24**	**79**	Pn		**Pn**	**11 39 37.4**	**+2.3**
ECAB				Sn		**Sn**	**11 40 46.0**	**-0.4**
ECAB	**El Cabril**	**6.24**	**79**	Pn		**Pn**	**11 39 37.2**	**+2.1**
ECAB				⇑*i*Vmb_VC			11 39 38.0	
	comp=N,280nm,SNR=2.8							
ECAB				Sn		**Sn**	**11 40 45.1**	**-1.4**
MVO	**Moncorvo**	**6.26**	**48**	*e*P		**Pn**	**11 39 36.8**	**+1.3**
MVO				*e*S		**Sn**	**11 40 46.4**	**-0.8**
MVO				*i* IAML			11 40 48.3	
MVO				*i* IAML			11 40 48.4	
MVO				*i* IAML			11 40 51.7	
EPLA	**Plasencia**	**6.29**	**60**	Pn		**Pn**	**11 39 37.6**	**+1.7**
EPLA				⇑*i*Vmb_VC			11 39 38.9	
	comp=N,249nm,SNR=1.5							
EPLA				Sn		**Sn**	**11 40 47.2**	**-0.7**
SRHM	**Skhour des Reh**	**6.35**	**135**	P		**Pn**	**11 39 36.8**	**+0.1**
SRHM	**Skhour des Reh**	**6.35**	**135**	S		**Sn**	**11 40 45.7**	**-3.6**
ZHG	**ZHG**	**6.48**	**122**	P		**Pn**	**11 39 38.8**	**+0.3**
ZHG	**ZHG**	**6.48**	**122**	S		**Sn**	**11 40 49.2**	**-3.2**
PBRG	**Braganca**	**6.84**	**45**	*e*S		**Sn**	**11 40 59.5**	**-1.8**
PBRG				*i* IAML			11 41 05.0	
PBRG				*i* IAML			11 41 09.4	
PBRG				*i* IAML			11 41 09.5	
EAGO	**Agolada(Pontev**	**6.90**	**33**	Pn		**Pn**	**11 39 43.4**	**-0.7**
EAGO				⇑*i*Vmb_VC			11 39 49.0	
	comp=N,422nm,SNR=1.3							
EAGO				Sn		**Sn**	**11 40 55.6**	**-7.1**
EADA	**Adamuz**	**6.91**	**79**	Pn		**Pn**	**11 39 46.2**	**+1.9**
EADA				Sn		**Sn**	**11 41 04.1**	**+1.1**
EADA	**Adamuz**	**6.91**	**79**	Pn		**Pn**	**11 39 45.7**	**+1.3**
EADA				⇑*i*Vmb_VC			11 39 46.9	
	comp=N,182nm,SNR=1.4							
EADA				Sn		**Sn**	**11 41 02.2**	**-0.8**
ECAL	**Calabor**	**6.93**	**44**	Pn		**Pn**	**11 39 46.5**	**+1.9**
ECAL				Sn		**Sn**	**11 41 02.5**	**-1.1**
ECAL	**Calabor**	**6.93**	**44**	Pn		**Pn**	**11 39 45.2**	**+0.6**
ECAL				⇑*i*Vmb_VC			11 39 48.4	
	comp=N,220nm,SNR=1.0							
ECAL				Sn		**Sn**	**11 41 00.0**	**-3.6**
OUK	**Oukaimeden**	**7.35**	**142**	P		**Pn**	**11 39 51.1**	**+0.3**
OUK	**Oukaimeden**	**7.35**	**142**	S		**Sn**	**11 41 09.3**	**-5.1**
PAB	**San Pablo**	**7.36**	**68**	Pn		**Pn**	**11 39 51.8**	**+1.3**
PAB				⇑*i*Vmb_VC			11 39 53.3	
	comp=N,370nm,SNR=3.3							
PAB				Sn		**Sn**	**11 41 11.6**	**-2.4**
IFR	**Ifrane**	**7.50**	**116**	Sn		**Sn**	**11 41 16.0**	**-1.7**
EPON	**Pontenova**	**7.73**	**35**	Pn		**Pn**	**11 39 56.2**	**+0.6**
EPON				Sn		**Sn**	**11 41 16.0**	**-7.2**
TISM	**Timmit**	**7.74**	**132**	P		**Pn**	**11 39 54.1**	**-1.6**
GUD	**Guadarrama**	**7.87**	**61**	⇑*i*Vmb_VC			11 39 58.6	
	comp=N,136nm,SNR=1.3							
GUD				Pn		**Pn**	**11 39 58.8**	**+1.1**
TIO	**Tiouine**	**7.89**	**140**	Pn		**Pn**	**11 39 57.7**	**-0.1**
TIO				Sn		**Sn**	**11 41 21.7**	**-5.5**
TIO	**Tiouine**	**7.89**	**140**	P		**Pn**	**11 39 56.9**	**-0.9**
TIO	**Tiouine**	**7.89**	**140**	S		**Sn**	**11 41 22.5**	**-4.8**
MD31	**MD31**	**8.10**	**119**	P		**Pn**	**11 40 01.5**	**+0.7**
MD31	**MD31**	**8.10**	**119**	S		**Sn**	**11 41 28.0**	**-4.5**
OUZM	**OUZ**	**8.16**	**137**	P		**Pn**	**11 40 01.5**	**-0.2**
OUZM	**OUZ**	**8.16**	**137**	S		**Sn**	**11 41 30.4**	**-3.6**
MDT	**Midelt**	**8.24**	**119**	P		**Pn**	**11 40 03.4**	**+0.7**
MDT	**Midelt**	**8.24**	**119**	S		**Sn**	**11 41 32.0**	**-3.8**
ETOR	**Torete**	**9.42**	**63**	Pn		**Pn**	**11 40 20.8**	**+2.0**
ETOR				⇑*i*Vmb_VC			11 40 26.3	
	comp=N,269nm,SNR=1.1							

*IDC **11** 11:42:30.7±3.6,14°.24S×167°.45E,h144km±31km, mb4.1/17,mbtmp4.5/17,Error ellipse: s-maj=21.4km s-min=13.6km az=87.0*
*NEIC **11** 11:42:37.0±2.0,14°.3S±0°.1×167°.3E±0°.1,h194km±2km, mb4.5/41,Error ellipse: s-maj=18.3km s-min=14.6km az=109.0*
ISC 11 11:42:37.1±0.5,**14°.28S**±0°.07×**167°.35E**±0°.09,**h200**km,**n85,**
σ**1s17**/86,**mb4.5**/42,**3C-2D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.17**	**187**			**Pn**	**11 43 07.5**	**-0.5**
MARNC	**Mare, Loyalty**	**7.19**	**175**	Pn		**Pn**	**11 44 19.4**	**-0.4**
DZM	**Mont Dzumac**	**7.80**	**186**	P		Pn	11 44 21.6	-6.2
	1.4nm,0.3s,baz=73,slow=10,SNR=9.5							
ONTNC	**Ouen Toro**	**8.03**	**186**	Pn		**Pn**	**11 44 32.1**	**+1.4**
PINNC	**Pines Island,**	**8.29**	**179**	Pn		**Pn**	**11 44 36.0**	**+2.0**
MSVF	**Nonsavu**	**10.85**	**110**	Pn		**Pn**	**11 45 06.9**	**-0.4**
EIDS	**Eidsvold**	**18.84**	**232**	P		**Pn**	**11 46 43.8**	**-1.2**
EIDS				IAmb		IAmb	11 46 44.8	
	comp=Z,16nm,0.8s							
ARMA	**Armidale**	**21.62**	**219**			**P**	**11 47 12.8**	**+1.1**
ARMA				IAmb		IAmb	11 47 38.9	
	comp=Z,13nm,1.1s							
COEN	**Coen**	**23.45**	**268**	P		**P**	**11 47 29.8**	**+1.1**
COEN				IAmb		IAmb	11 47 30.3	
	comp=Z,8.6nm,0.7s							
CAN	**Canberra**	**26.68**	**215**	P		**P**	**11 47 58.0**	**+0.3**
CAN				IAmb		IAmb	11 48 19.6	
	comp=Z,25nm,1.4s							
INKA	**Innaminka**	**28.14**	**237**			**P**	**11 48 10.6**	**-0.1**
INKA				IAmb		IAmb	11 48 11.7	
	comp=Z,4.5nm,0.7s							
STKA	**Stephens Creek**	**29.34**	**229**			**P**	**11 48 22.2**	**+0.9**
STKA	**Stephens Creek**	**29.34**	**229**	P		**P**	**11 48 22.1**	**+0.9**
	comp=Z,21nm,0.5s,baz=50,slow=8.8,SNR=42							
STKA				PcP		**PcP**	**11 51 21.8**	**-0.9**
	comp=Z,2.9nm,0.7s,baz=113,slow=2.5,SNR=3.6							
	comp=Z,21nm,0.5s							
TOO	**Toolangi**	**30.26**	**216**	P		**P**	**11 48 30.4**	**+1.1**

TPUB	**Ta-pu**	**59.02 309**	P		**P**		**11 52 15.4**	**-0.8**
JKA	**Kamikawa-asahi**	**62.35 340**	P		**P**		**11 52 39.8**	**+1.6**
VNDA	**Vanda**	**63.31 181**	P		**P**		**11 52 44.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=6.7,slow=6.5,SNR=6.8							
	comp=Z,0.9nm,0.7s							
KSRS	**Korea Array**	**63.41 326**	P		**P**		**11 52 46.1**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=149,slow=8.1,SNR=3.5							
	comp=Z,1.7nm,0.8s							
SBA	**Scott Base**	**63.58 180**	P		**P**		**11 52 46.7**	**+0.8**
CASY	**Casey**	**63.97 202**	P		**P**		**11 52 48.7**	**0.0**
CASY			IAmb		IAmb		11 52 49.4	
	comp=Z,7.2nm,0.7s							
NJ2	**Nanjing**	**65.41 316**	*e*P		**P**		**11 53 00.2**	**+1.7**
NJ2			pmax		pmax			
	comp=Z,8.0nm,0.5s							
PETK	**Petropavlovsk-**	**67.62 354**	P		**P**		**11 53 13.2**	**+1.1**
PETK	**Petropavlovsk-**	**67.62 354**	P		**P**		**11 53 12.9**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=165,slow=6.4,SNR=7.9							
	comp=Z,3.1nm,0.7s							
BNX	**BinXian**	**69.78 331**	⇑P		**P**		**11 53 25.6**	**0.0**
BNX			pmax		pmax			
	comp=Z,17nm,0.6s							
XAN	**Xi'an**	**73.44 312**	⇓P		**P**		**11 53 47.0**	**-0.8**
XAN			pmax		pmax			
	comp=Z,8.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**74.84 294**	P		**P**		**11 53 57.1**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=121,slow=4.0,SNR=13							
	comp=Z,1.8nm,0.6s							
HHC	**Hu-ho-hao-te**	**75.29 320**	*e*P		**P**		**11 53 59.8**	**+1.4**
HHC			pmax		pmax			
	comp=Z,11nm,0.7s							
HHC			pmax		pmax			
	comp=Z,96nm,5.7s							
PZH	**PanZhiHua**	**75.52 303**	P		**P**		**11 54 02.3**	**+2.3**
QSPA	**South Pole Qui**	**75.75 180**	P		**P**		**11 54 03.3**	**+2.7**
QSPA	**South Pole Qui**	**75.75 180**	P		**P**		**11 54 02.4**	**+1.9**
	comp=Z,3.3nm,0.8s,baz=341,slow=1.6,SNR=29							
	comp=Z,3.3nm,0.8s							
LZDM	**Lanzhou Array**	**78.12 312**	P		**P**		**11 54 16.2**	**+1.6**
	comp=Z,1.7nm,0.4s,baz=123,slow=10,SNR=1.9							
	comp=Z,1.7nm,0.4s							
ULN	**Ulaanbaatar**	**81.82 324**	P		**P**		**11 54 35.5**	**+1.6**
SONM	**Songino Array**	**82.18 324**	P		**P**		**11 54 36.4**	**+0.6**
SONM	**Songino Array**	**82.18 324**	P		**P**		**11 54 36.0**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=146,slow=4.5,SNR=10							
	comp=Z,1.3nm,0.4s							
MAW	**Mawson**	**82.33 202**	P		**P**		**11 54 35.9**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=128,slow=6.3,SNR=16							
	comp=Z,4.3nm,0.6s							
GTA	**Gaotai**	**82.41 314**	*e*P		**P**		**11 54 38.8**	**+1.6**
GTA			pmax		pmax			
	comp=Z,7.0nm,0.9s							
IL31		**86.08 18**	P		**P**		**11 54 54.1**	**-0.6**
IL31			IAmb		IAmb		11 55 13.7	
	comp=Z,12nm,1.5s							
ILAR	**Eielson Array**	**86.08 18**	P		**P**		**11 54 53.1**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=239,slow=5.2,SNR=23							
	comp=Z,1.4nm,0.7s							
NVAR	**Mina Array Bea**	**86.92 49**	P		**P**		**11 54 59.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=232,slow=5.9,SNR=3.8							
	comp=Z,0.3nm,0.6s							
EVN	**Everest**	**88.47 299**	P		**P**		**11 55 08.4**	**+0.5**
EVN			IAmb		IAmb		11 55 08.9	
	comp=Z,6.3nm,0.6s							
TROLL	**Troll, Antarti**	**93.31 185**	⇑P		**P**		**11 55 28.1**	**-0.9**
	comp=Z,116nm,0.5s							
SNAA	**Sanae**	**94.00 183**	⇑P		**P**		**11 55 29.5**	**-2.6**
	comp=Z,31nm,0.7s							
SNAA	**Sanae**	**94.00 183**	IAmb		IAmb		11 55 55.7	
	comp=Z,3.9nm,1.3s							
SNAA	**Sanae**	**94.00 183**	P		**P**		**11 55 30.7**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=203,slow=9.2,SNR=7.7							
	comp=Z,1.4nm,0.7s							
VNA3	**Neumayer Olymp**	**94.66 181**	⇓P		**P**		**11 55 33.1**	**-1.9**
	comp=Z,4.5nm,0.6s							
MKAR	**Makanchi Array**	**96.93 316**	P		**P**		**11 55 45.3**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=95,slow=5.9,SNR=15							
	comp=Z,2.2nm,0.6s							
ZALV	**Zalesovo Beam**	**97.08 324**	P		**P**		**11 55 45.6**	**-0.5**
ZALV	**Zalesovo Beam**	**97.08 324**	P		**P**		**11 55 45.4**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=116,slow=4.4,SNR=10.0							
	comp=Z,2.3nm,0.7s							
ARCES	**ARCESS Array B**	**119.84 345**	PKP		**PKPdf**		**12 01 02.6**	**-0.3**
	comp=Z,2.5nm,0.5s,baz=80,slow=2.3,SNR=41							
FINES	**FINESS Array B**	**125.34 338**	PKP		**PKPdf**		**12 01 13.2**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=71,slow=1.8,SNR=7.7							
NB2	**NORSAR Subarra**	**130.21 345**	PKPdf		**PKPdf**		**12 01 23.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=26,slow=1.8							
NOA	**NORSAR Array B**	**130.21 345**	PKP		**PKPdf**		**12 01 20.6**	**-2.4**
	comp=Z,0.8nm,0.7s,baz=334,slow=1.9,SNR=4.2							
AKASG	**Malin Array Be**	**130.41 326**	PKP		**PKPdf**		**12 01 22.8**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=54,slow=2.1,SNR=4.4							
BRTR	**Keskin Array B**	**132.28 311**	PKP		**PKPdf**		**12 01 27.0**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=102,slow=3.0,SNR=5.1							
KEST	**Kesra**	**150.91 321**			**PKiKP**		**12 02 07.5**	**+0.4**
KEST	**Kesra**	**150.91 321**	PKPbc		**PKiKP**		**12 02 07.3**	**+0.2**
	comp=Z,15nm,0.7s,baz=52,slow=1.2,SNR=10							
ESDC	**Sonseca Array**	**153.57 345**	PKPab		**PKPab**		**12 02 25.9**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=6.5,slow=4.2,SNR=5.9							

*TIR **11** 11:56:28.9, 40.46N×20.78E, h7km±3km, Ml2.6/2*
*ATH **11** 11:56:29.3, 40.48N×20.86E, h8km±2km, ML2.2/8, Manual Solution by N.Liadopoulou First location: 2019/11/11 11:57:47, This location: 2019/11/11 12:36:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*
*SKO **11** 11:56:30.4, 40.51N×20.80E, h14km, ML2.4*

ISC 11 11:56:29.0±1.0, 40.49N±0.02×20.81E±0.03, h7km±8km, n27, σ0.70/41, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.14**	**353**	Pg	**Pg**	**11 56 31.6**	**-0.5**
KBN				Sg	**Sg**	**11 56 34.2**	**+0.1**
KBN				AML	AML	11 56 34.8	
	9.4nm,0.4s						
NEST	**Nestorio**	**0.20**	**111**	Pg	**Pg**	**11 56 33.0**	**0.0**
NEST				S	**Sg**	**11 56 36.6**	**+0.8**
NEST				AML	AML	11 56 38.0	
	3.2nm,0.3s						
NEST	**Nestorio**	**0.20**	**111**	P	**Pg**	**11 56 33.1**	**0.0**
NEST				S	**Sg**	**11 56 35.6**	**-0.1**
PENT	**Pentalofos**	**0.38**	**139**	P	**Pg**	**11 56 36.0**	**-0.6**
PENT				S	**Sg**	**11 56 41.9**	**+0.3**
LMS2	**Laimos Florina**	**0.43**	**36**	P	**Pg**	**11 56 37.0**	**-0.4**
LMS2				S	**Sg**	**11 56 43.4**	**+0.3**
OHR	**Ohrid**	**0.62**	**359**	*i* Pg	**Pg**	**11 56 41.5**	**+0.5**
OHR				*i* Sg	**Sb**	**11 56 51.3**	**0.0**
OHR				*e*Lg	Lg	11 56 51.8	
	comp=E,216nm,0.5s						
OHR				*e*Lg	Lg	11 56 52.4	
	comp=N,89nm,0.5s						
KZN	**Kozani**	**0.76**	**103**	P	**Pg**	**11 56 43.4**	**-0.1**
KZN				S	**Sg**	**11 56 54.3**	**+0.9**
JAN	**Janina**	**0.83**	**178**	P	**Pg**	**11 56 45.2**	**+0.3**
JAN				S	**Sg**	**11 56 56.0**	**+0.3**
IGT	**Igoumenitsa**	**1.02**	**201**	P	**Pg**	**11 56 48.1**	**-0.5**
IGT				Sg	**Sb**	**11 57 02.7**	**+0.1**
IGT	**Igoumenitsa**	**1.02**	**201**	*i* Pg	**Pg**	**11 56 48.2**	**-0.5**
IGT				*i* Sg	**Sn**	**11 57 04.1**	**-0.1**
IGT	**Igoumenitsa**	**1.02**	**201**	P	**Pg**	**11 56 48.1**	**-0.5**
IGT				S	**Sb**	**11 57 03.0**	**+0.5**
TETR	**Tetrakomo, Epi**	**1.20**	**162**	P	**Pb**	**11 56 51.1**	**-0.9**
THL	**Klokotos Trika**	**1.30**	**134**	P	**Pn**	**11 56 52.6**	**-1.0**
THL				S	**Sb**	**11 57 09.7**	**-1.0**
LIT	**Litokhoron**	**1.34**	**106**	*i* Pg	**Pb**	**11 56 54.9**	**+0.4**
LIT				*i* Sg	**Sg**	**11 57 14.6**	**+2.4**
LIT	**Litokhoron**	**1.34**	**106**	P	**Pn**	**11 56 53.3**	**-0.9**
LIT				S	**Sb**	**11 57 10.5**	**-1.4**
LKD2	**Lefkada island**	**1.70**	**184**	P	**Pn**	**11 56 59.5**	**+0.4**
KNT	**Kendrikon**	**1.72**	**66**	P	**Pn**	**11 56 59.5**	**+0.1**
EVR	**Evrytania**	**1.75**	**153**	P	**Pn**	**11 57 00.0**	**+0.2**
NYDR	**Nydri-Lefkada**	**1.77**	**183**	P	**Pn**	**11 57 00.0**	**0.0**
MAKR	**Makrakomi, Fth**	**1.79**	**145**	P	**Pn**	**11 57 00.3**	**0.0**
AGG	**Agios Georgios**	**1.87**	**141**	P	**Pn**	**11 57 01.5**	**0.0**
FSK	**Fiskardo**	**2.03**	**185**	P	**Pn**	**11 57 03.8**	**+0.2**
ANX	**Ano Chora**	**2.08**	**155**	P	**Pn**	**11 57 05.2**	**+0.9**
EFP	**Efpalio**	**2.22**	**157**	P	**Pn**	**11 57 06.7**	**+0.4**
SERG	**Sergoula**	**2.28**	**155**	P	**Pn**	**11 57 08.1**	**+1.0**
VLS	**Valsamata**	**2.31**	**184**	P	**Pn**	**11 57 08.1**	**+0.6**
TRIZ	**Trizonia**	**2.33**	**155**	P	**Pn**	**11 57 07.9**	**+0.2**

*KOLA **11** 12:09:24.4, 67.62N×33.88E, h0km, ML1.4, Error ellipse: s-maj=2.8km s-min=1.2km az=140.0, Khibiny, mines Rasvumchorr, Central*

HEL 11 12:09:25.3±0.2, 67.76N×33.72E, h0km, ML1.2, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.23**	**212**	P	Pg	12 09 27.5	-2.2
APA0	**Apatity Array**	**0.32**	**241**	P	Pg	12 09 30.4	-1.0
APA0				S	Sg	12 09 35.0	-0.5
LVZ	**Lovozero**	**0.38**	**68**	P	Pg	12 09 31.9	-0.7
LVZ				S	Sg	12 09 37.3	-0.2
LVZ	**Lovozero**	**0.38**	**68**	PG	Pg	12 09 32.0	-0.5
LVZ				SG	Sg	12 09 37.2	-0.3
KVDA	**Kovda**	**1.12**	**197**	P	Pg	12 09 43.1	-3.7
KVDA				S	Sg	12 09 55.5	-5.9
TERR	**Teriberka**	**1.54**	**19**	P	Pn	12 09 53.8	-0.1
TERR				S	Sg	12 10 14.9	+0.3
VRF	**Varrio**	**1.56**	**271**	PN	Pn	12 09 54.1	-0.2
	baz=88						
VRF				smax	smax	12 10 12.2	
	comp=Z,1.4nm,0.2s						
VRF				SN	Sn	12 10 14.8	-0.5
RAJF	**Raja-Jooseppi**	**2.15**	**292**	PG	Pn	12 10 03.6	+1.3
RAJF				SG	Sb	12 10 31.5	-0.7
OLKF	**Oulanka, Finla**	**2.23**	**231**	PB	Pn	12 10 04.2	+0.8
OLKF				SN	Sn	12 10 29.5	-2.1
OLKF				smax	smax	12 10 31.4	
	comp=Z,0.8nm,0.2s						
KU6	**Riekki**	**2.31**	**223**	smax	smax	12 10 33.5	
	comp=Z,0.7nm,0.2s						
KU6				SN	Sn	12 10 33.8	+0.3
KEV	**Kevo**	**3.16**	**312**	PB	Pn	12 10 17.4	+1.2
ARA0	**ARCESS Array S**	**3.49**	**304**	PN	Pn	12 10 21.3	+0.5
	baz=118						
ARCES	**ARCESS Array B**	**3.49**	**304**	P	Pn	12 10 21.1	+0.3
RMF	**Romuvaara**	**3.88**	**205**	SN	Sn	12 11 10.4	-1.9

HEL 11 12:09:55.9±0.2, 60.02N×23.92E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.31**	**50**	PG	Pg	12 10 01.1	-0.7
MEF				SG	Sg	12 10 01.9	-3.8
TVF	**Tvarminne**	**0.38**	**243**	PG	Pg	12 10 02.6	-0.6
	baz=64						
TVF				SG	Sg	12 10 07.7	-0.5
HEL5	**Espoo, Suvisaa**	**0.42**	**76**	PG	Pg	12 10 03.6	-0.3
HEL5				SG	Sg	12 10 08.8	-0.6
NUR	**Nurmijarvi**	**0.61**	**36**	PG	Pg	12 10 07.1	-0.4
	baz=213						
NUR				smax	smax	12 10 15.4	
	comp=Z,2.2nm,0.2s						
PVF	**Pernaja**	**1.10**	**61**	PB	Pg	12 10 16.4	-0.6
PVF				smax	smax	12 10 29.4	
	comp=Z,2.9nm,0.2s						
RAF	**Rauma**	**1.47**	**314**	PG	Pn	12 10 22.3	-1.3
RAF				smax	smax	12 10 40.0	
	comp=Z,2.6nm,0.2s						
FIA0	**FINESS Array S**	**1.78**	**36**	PG	Pn	12 10 27.4	-0.4
FIA0				smax	smax	12 10 48.8	
	comp=Z,1.9nm,0.2s						
AAL	**Aland**	**1.98**	**276**	SG	Sb	12 10 57.9	+0.1
KPF	**Kankaanpaa**	**2.03**	**334**	PG	Pb	12 10 32.6	-1.1
	baz=154						
KPF				smax	smax	12 10 56.3	
	comp=Z,1.6nm,0.2s						
KPF				SG	Sg	12 11 00.4	-0.7
KEF	**Keuruu**	**2.20**	**12**	PG	Pn	12 10 35.1	+1.4
	baz=194						
HEMU	**Hemsoen**	**3.89**	**316**	SB	Sb	12 11 48.8	-4.1

*DNK **11** 12:14:24.4±5.8, 55.93N×15.64E, h0km, ML2.1, ML2.5(UPP), Explosion*

UPP 11 12:14:24.4±0.4, 56.00N×15.55E, h0km, ML2.5, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VXJU	**Vaexsjoe**	**0.98**	**340**	P	Pg	12 14 42.8	-0.4
VXJU				S	Sg	12 14 55.6	-0.3
VXJU	**Vaexsjoe**	**0.98**	**340**	P	Pg	12 14 42.8	-0.4
VXJU				S	Sg	12 14 55.6	-0.3
DEL	**Delary**	**1.05**	**297**	P	Pg	12 14 44.0	-0.5
DEL				S	Sg	12 14 57.8	-0.1
DEL	**Delary**	**1.05**	**297**	*i* P	Pg	12 14 44.0	-0.5
DEL				P	Pn	12 14 48.4	+2.1
DEL				*i* S	Sg	12 14 57.8	-0.2
DEL				S	Sb	12 14 57.8	-1.8
OSKU	**Oskarshamn**	**1.23**	**14**	P	Pg	12 14 47.3	-0.7
OSKU				S	Sg	12 15 04.3	+0.3
OSKU	**Oskarshamn**	**1.23**	**14**	P	Pg	12 14 47.3	-0.7
OSKU				S	Sg	12 15 04.3	+0.3
LUNU	**Lund**	**1.24**	**253**	P	Pg	12 14 47.4	-0.8
LUNU	**Lund**	**1.24**	**253**	*i* P	Pg	12 14 47.4	-0.8
LUNU				P	Pb	12 14 47.4	-1.3
LUNU				*i* S	Sg	12 15 01.5	-2.8
BYXU	**Byxelkrok**	**1.52**	**31**	P	Pn	12 14 52.4	-0.4
BYXU	**Byxelkrok**	**1.52**	**31**	P	Pn	12 14 52.4	-0.4
EKSU	**Eksjoe**	**1.58**	**355**	P	Pn	12 14 53.4	-0.3
EKSU	**Eksjoe**	**1.58**	**355**	P	Pn	12 14 53.4	-0.3
GNOU	**Gnosjoe**	**1.63**	**323**	P	Pn	12 14 54.0	-0.3
GNOU	**Gnosjoe**	**1.63**	**323**	P	Pn	12 14 54.0	-0.3
FABU	**Falkenberg**	**1.86**	**304**	*i* P	Pn	12 14 57.0	-0.4
FABU				*i* S	Sb	12 15 22.3	-0.7
BORU	**Boraas**	**2.24**	**318**	*e*P	Pb	12 15 04.2	-1.5
ONAU	**Onsala**	**2.44**	**306**	*i* P	Pn	12 15 05.2	-0.2
TJOU	**Tjoern**	**2.96**	**315**	*i* P	Pn	12 15 12.3	-0.2

UPP 11 12:14:28.7±0.4, 55.99N×15.54E, h0km, ML2.5, Suspected explosion, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VXJU	**Vaexsjoe**	**1.00**	**341**	P	Pg	12 14 47.4	-0.3
	baz=113						
VXJU				S	Sg	12 15 00.5	-0.2
VXJU	**Vaexsjoe**	**1.00**	**341**	P	Pg	12 14 47.4	-0.3
	baz=113						
VXJU				S	Sg	12 15 00.5	-0.2
DEL	**Delary**	**1.05**	**298**	S	Sg	12 15 02.5	0.0
DEL	**Delary**	**1.05**	**298**	S	Sg	12 15 02.5	0.0
LUNU	**Lund**	**1.23**	**254**	P	Pg	12 14 51.7	-0.6
LUNU	**Lund**	**1.23**	**254**	P	Pg	12 14 51.7	-0.6
OSKU	**Oskarshamn**	**1.25**	**14**	P	Pg	12 14 52.2	-0.5
OSKU	**Oskarshamn**	**1.25**	**14**	P	Pg	12 14 52.2	-0.5
BYXU	**Byxelkrok**	**1.54**	**31**	P	Pn	12 14 56.8	-0.5
BYXU	**Byxelkrok**	**1.54**	**31**	P	Pn	12 14 56.8	-0.5
GNOU	**Gnosjoe**	**1.64**	**324**	P	Pn	12 14 58.4	-0.3
GNOU	**Gnosjoe**	**1.64**	**324**	P	Pn	12 14 58.4	-0.3

*NEIC **11** 12:18:25.9±1.3, 12.61S±0.08×167.0E±0.2, h198km±5km, mb4.0/14, Error ellipse: s-maj=22.4km s-min=10.3km az=78.0*
*IDC **11** 12:18:29.2±4.9, 12.77S×166.93E, h231km±47km, mb3.5/11, mbtmp3.9/12, Error ellipse: s-maj=30.9km s-min=22.4km az=171.0*

ISC 11 12:18:28.0±0.7, 12.74S±0.08×167.0E±0.2, h220km, n27, σ1.9/12/25, mb3.9/15, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.70**	**177**		**Pn**	**12 19 14.1**	**-1.2**
MARNC	**Mare, Loyalty**	**8.74**	**174**	Pn	**Pn**	**12 20 29.9**	**-0.9**
DZM	**Mont Dzumac**	**9.30**	**183**	P	**Pn**	**12 20 40.5**	**+2.5**
	1.6nm,0.4s,baz=342,slow=21,SNR=9.6						
DZM				S	**S**	**12 22 20.7**	**-2.0**
	3.6nm,0.9s,baz=103,slow=18,SNR=1.7						
EIDS	**Eidsvold**	**19.60**	**228**	P	**P**	**12 22 40.5**	**+0.8**
EIDS				IAmb	IAmb	12 22 42.6	
	comp=Z,3.9nm,0.8s						
ARMA	**Armidale**	**22.64**	**217**	P	**P**	**12 23 11.2**	**+0.7**
WR8	**Warramunga Arr**	**31.99**	**253**	P	**P**	**12 24 32.8**	**-1.1**
WB0	**Warramunga Arr**	**32.07**	**253**	P	**P**	**12 24 33.8**	**-0.7**
WRA	**Warramunga Arr**	**32.14**	**253**	P	**P**	**12 24 33.6**	**-1.6**
	comp=Z,0.9nm,0.9s,baz=83,slow=8.9,SNR=3.3						
	comp=Z,0.9nm,0.9s						
AS31	**Alice Springs**	**33.21**	**246**	P	**P**	**12 24 43.8**	**-0.7**
ASAR	**Alice Springs**	**33.22**	**246**	P	**P**	**12 24 43.1**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=75,slow=10.0,SNR=15						
	comp=Z,0.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**40.20**	**257**	P	**P**	**12 25 43.4**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=88,slow=8.1,SNR=1.7						
	comp=Z,1.7nm,0.9s						
VNDA	**Vanda**	**64.83**	**181**	IAmb	IAmb	12 29 15.5	
	comp=Z,3.6nm,1.5s						
VNDA	**Vanda**	**64.83**	**181**	P	**P**	**12 28 43.4**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=25,slow=7.0,SNR=4.1						
	comp=Z,0.5nm,0.6s						
SBA	**Scott Base**	**65.11**	**180**	P	**P**	**12 28 46.7**	**+2.0**
SBA					IAmb	IAmb	12 28 48.0	
	comp=Z,2.6nm,0.9s						
CASY	**Casey**	**65.28**	**202**	P	**P**	**12 28 46.7**	**+0.8**
CASY					IAmb	IAmb	12 29 27.8	
	comp=Z,3.9nm,1.3s						
CMAR	**Chiang Mai Arr**	**73.94**	**294**	P	**P**	**12 29 40.7**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=125,slow=4.4,SNR=5.0						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**80.77**	**323**	IAmb	IAmb	12 30 29.0	
	comp=Z,2.2nm,1.4s						
SONM	**Songino Array**	**80.77**	**323**	P	**P**	**12 30 16.3**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=117,slow=5.0,SNR=2.2						
	comp=Z,0.3nm,0.3s						
IL31		**84.72**	**18**	P	**P**	**12 30 36.4**	**-0.3**
IL31					IAmb	IAmb	12 30 37.2	
	comp=Z,2.7nm,0.7s						
ILAR	**Eielson Array**	**84.72**	**18**	P	**P**	**12 30 36.5**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=246,slow=5.3,SNR=54						
	comp=Z,2.1nm,0.6s						
J25K	**Salcha River,**	**85.07**	**19**	P	**P**	**12 30 38.8**	**+0.2**
J25K					IAmb	IAmb	12 30 40.8	
	comp=Z,3.1nm,0.7s						
SCRK	**Sand Creek**	**85.08**	**20**	P	**P**	**12 30 39.1**	**+0.3**
SCRK					IAmb	IAmb	12 31 01.0	
	comp=Z,2.8nm,1.4s						
NVAR	**Mina Array Bea**	**86.15**	**49**	P	**P**	**12 30 45.1**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=226,slow=6.0,SNR=4.3						
	comp=Z,0.7nm,0.9s						
MKAR	**Makanchi Array**	**95.61**	**317**	P	**P**	**12 31 27.9**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=80,slow=5.9,SNR=5.4						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**95.66**	**324**	P	**P**	**12 31 27.4**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=117,slow=5.2,SNR=2.5						
	comp=Z,0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**98.78**	**320**	P		Pdif	12 31 43.3	+0.8
	comp=Z,0.3nm,0.3s,baz=46,slow=4.5,SNR=4.1						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**118.28**	**346**	PKP		**PKPdf**	**12 36 48.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=77,slow=2.0,SNR=10.0						

*GCG **11** 12:20:41.3±3.0, 15.86N×95.25W, h33km±45km, MD4.8, ML4.3*
*MEX **11** 12:20:42.7±0.8, 15.78N×95.23W, h56km±19km, MD4.2*

ISC 11 12:20:40.7±2.0, 15.71N±0.04×95.20W±0.02, h32km±19km, n49, σ2.3/13/93, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.88**	**274**	*e*P	**Pn**	**12 20 56.9**	**0.0**
HUIG				*e*S	**Sn**	**12 21 08.5**	**-0.1**
HUIG	**Huatulco**	**0.88**	**274**	*i* P	**Pn**	**12 20 56.9**	**0.0**
HUIG				*i* S	**Sn**	**12 21 08.3**	**-0.3**
UXUV	**UXUV**	**1.89**	**32**	*e*P	**Pn**	**12 21 10.5**	**-0.3**
UXUV				*e*S	**Sn**	**12 21 31.0**	**-2.6**
PEIG	**Puerto Escondi**	**1.90**	**279**	*e*P	**Pn**	**12 21 11.1**	**+0.1**
PEIG				*e*S	**Sn**	**12 21 32.5**	**-1.3**
OXLC	**Oaxaca**	**1.97**	**313**	*e*P	**Pn**	**12 21 12.8**	**+0.6**
OXLC				*e*S	**Sn**	**12 21 37.4**	**+1.4**
OXBJ	**Oaxaca**	**1.99**	**313**	*e*P	**Pb**	**12 21 16.1**	**-0.3**
OXBJ				*e*S	**Sn**	**12 21 38.2**	**+1.8**
VHO	**Vista Hermosa**	**2.00**	**313**	*i* P	**Pn**	**12 21 12.4**	**-0.2**
VHO				*e*S	**Sn**	**12 21 37.6**	**+1.0**
NEUV	**Arroyo Zacate**	**2.07**	**344**	*e*P	**Pn**	**12 21 12.9**	**-0.5**
NEUV				*e*S	**Sn**	**12 21 37.9**	**-0.3**
TGIG		**2.26**	**62**	*i* P	**Pn**	**12 21 15.9**	**-0.1**
TGIG				*e*S	**Sn**	**12 21 42.4**	**-0.4**
TGIG		**2.26**	**62**	*i* P	**Pn**	**12 21 16.3**	**+0.3**
TGIG				*i* S	**Sn**	**12 21 42.1**	**-0.8**
TGIG				IAML		12 21 44.5	
	comp=N,1μm,0.5s						
TGBT	**Tuxtla Gutierr**	**2.29**	**62**	*i* P	**Pn**	**12 21 17.7**	**+1.4**
TGBT				*e*S	**Sn**	**12 21 44.1**	**+0.7**
TUIG	**Tuzandepetl**	**2.43**	**18**	*e*P	**Pn**	**12 21 18.4**	**+0.2**
TUIG				*e*S	**Sn**	**12 21 45.6**	**-1.3**
YOIG	**Yosondua**	**2.52**	**297**

IDC 11 12:26:23.7±1.5, 18°04S×175°56W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=49.6km s-min=36.5km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.28**	**259**	P	P	12 34 59.4	+0.1
	1.0nm,0.5s,baz=97,slow=7.0,SNR=27						
WRA				PcP	PcP	12 36 28.2	-2.4
	0.7nm,1.1s,baz=93,slow=2.9,SNR=1.1						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**47.37**	**254**	P	P	12 35 00.7	+0.7
	8.0nm,0.6s,baz=90,slow=8.5,SNR=222						
ASAR				PcP	PcP	12 36 28.1	-2.8
	0.3nm,0.5s,baz=103,slow=3.6,SNR=2.0						
	8.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**55.68**	**260**	P	P	12 36 02.4	+0.1
	0.8nm,0.3s,baz=101,slow=9.3,SNR=13						
	0.8nm,0.3s						
QSPA	**South Pole Qui**	**72.02**	**180**	P	P	12 37 50.2	+0.9
	0.8nm,0.8s,baz=34,slow=11,SNR=2.1						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**85.43**	**12**	P	P	12 39 03.6	+0.9
	0.1nm,0.6s,baz=212,slow=5.6,SNR=4.5						
	0.1nm,0.6s						

*IDC **11** 12:53:08.7±2.1, 21°61N×143°13E, h243km±22km, mb3.2/6, mbtmp3.8/7, Error ellipse: s-maj=50.8km s-min=14.8km az=80.0*

ISC 11 12:53:08.7±1.3, 21°6N±0°1×143°3E±0°4, h250km, n8, σ0§73/9, mb3.5/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.53**	**349**	P	**Pn**	**12 54 31.4**	**+0.5**
	27nm,0.4s,baz=99,slow=23,SNR=12						
JCJ				S	**S**	**12 55 35.6**	**-1.1**
	18nm,0.4s,baz=285,slow=23,SNR=1.8						
KSRS	**Korea Array**	**20.64**	**323**	P	**P**	**12 57 30.4**	**+0.9**
	0.9nm,0.5s,baz=148,slow=9.6,SNR=4.4						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**42.25**	**193**	P	**P**	**13 00 38.0**	**+0.2**
	1.3nm,0.6s,baz=13,slow=9.0,SNR=26						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**45.96**	**192**	P	**P**	**13 01 06.5**	**-0.7**
	0.2nm,0.5s,baz=13,slow=6.5,SNR=8.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**57.65**	**317**	P	**P**	**13 02 32.5**	**-0.5**
	0.3nm,0.4s,baz=77,slow=5.8,SNR=2.4						
	0.3nm,0.4s						
BVAR	**Borovoye Array**	**62.80**	**320**	P	**P**	**13 03 07.4**	**-0.3**
	0.6nm,0.3s,baz=104,slow=7.0,SNR=5.3						
	0.6nm,0.3s						
ARCES	**ARCESS Array B**	**79.02**	**342**	P	**P**	**13 04 45.0**	**+0.3**
	3.6nm,1.2s,baz=62,slow=5.5,SNR=3.8						
	3.6nm,1.2s						
PLCA	**Paso Flores**	**145.62**	**131**	PKPbc	**PKPab**	**13 12 19.0**	**+0.1**
	8.1nm,1.3s,baz=265,slow=4.4,SNR=3.1						

WEL 11 12:56:42.1±1.0, 34°S±10°×17°8E±1°4, h580km±17km, M3.9/7, MLv3.9/7, Error ellipse: s-maj=18.6km s-min=12.2km az=103.9, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUZ	**Kuaotunu**	**3.50**	**213**	P	P	12 58 02.9	+0.3
WCZ	**Waipu Caves**	**3.73**	**234**	P	P	12 58 03.8	-0.3
WIAZ	**Waiheke Island**	**3.83**	**218**	P	P	12 58 05.3	+0.5
MBAZ	**Motutapu North**	**3.93**	**221**	P	P	12 58 06.4	+1.0
HAZ	**Te Kaha**	**3.94**	**184**	P	P	12 58 04.0	-1.5
HAZ				S	S	12 59 11.9	-1.8
OUZ	**Omahuta**	**3.96**	**248**	P	P	12 58 04.9	-0.8
WMGZ	**Waiomatatini S**	**4.00**	**176**	P	P	12 58 04.6	-1.3
WMGZ				S	S	12 59 14.3	-0.3
PKGZ	**Pakihiroa**	**4.04**	**180**	P	P	12 58 06.8	+0.6
ETAZ	**East Tamaki Re**	**4.06**	**219**	P	P	12 58 07.5	+1.1
MKAZ	**Moumakai**	**4.06**	**215**	P	P	12 58 07.5	+1.1
RUGZ	**Raukumara Rang**	**4.15**	**184**	P	P	12 58 05.9	-1.2
TWGZ	**Tauwhareparae**	**4.35**	**181**	P	P	12 58 09.2	+0.7
TWGZ				S	S	12 59 23.9	+4.5
TOZ	**Tahuroa Road**	**4.43**	**208**	P	P	12 58 10.5	+1.4
URZ	**Urewera**	**4.50**	**190**	P	P	12 58 06.5	-3.1
URZ				S	S	12 59 19.2	-2.1
MWZ	**Matawai**	**4.53**	**186**	P	P	12 58 09.1	-0.8
MWZ				S	S	12 59 22.1	+0.3
TKGZ	**Te Karaka**	**4.62**	**182**	P	P	12 58 10.9	+0.4
RAGZ	**Rawiri**	**4.70**	**186**	P	P	12 58 11.3	+0.1
MUGZ	**Murupara**	**4.77**	**193**	P	P	12 58 10.4	-1.4
RTZ	**Ruatahuna**	**4.87**	**190**	P	P	12 58 12.3	-0.3
RIGZ	**Rimuhau**	**4.88**	**183**	P	P	12 58 12.1	-0.5
RIGZ				S	S	12 59 28.2	+1.3
MTHZ	**Maungataniwha**	**5.12**	**191**	P	P	12 58 14.6	0.0
MTHZ				S	S	12 59 31.5	+1.0
NMHZ	**Naumai**	**5.37**	**191**	P	P	12 58 16.7	0.0
BKZ	**Black Stump Fm**	**5.49**	**193**	P	P	12 58 16.6	-1.1
TMVZ	**Te Maari**	**5.62**	**199**	P	P	12 58 19.8	+0.9
ETVZ	**East Tongariro**	**5.64**	**199**	P	P	12 58 19.2	+0.2
GLKZ	**Green Lake**	**5.68**	**38**	P	P	12 58 20.7	+1.2
MCHZ	**McNeill Hill**	**5.72**	**191**	P	P	12 58 19.3	-0.3
MCHZ				S	S	12 59 40.9	+1.3
TUVZ	**Tukino**	**5.78**	**199**	P	P	12 58 20.4	+0.1
WNVZ	**Wahianoa**	**5.85**	**199**	P	P	12 58 20.4	-0.5
KRHZ	**Kereru**	**5.97**	**193**	P	P	12 58 22.1	+0.3
KAHZ	**Kahuranaki**	**6.04**	**189**	P	P	12 58 23.2	+0.7
PNHZ	**Pukenui**	**6.27**	**193**	P	P	12 58 25.0	+0.5
PXZ	**Pawanui**	**6.28**	**189**	P	P	12 58 24.8	+0.3
TSZ	**Takapari Road**	**6.46**	**195**	P	P	12 58 26.2	+0.1
PRHZ	**Porangahau**	**6.54**	**190**	P	P	12 58 27.8	+1.0
DVHZ	**Dannevirke**	**6.65**	**193**	P	P	12 58 28.2	+0.3
BFZ	**Birch Farm**	**7.01**	**192**	P	P	12 58 31.3	+0.2

*HLW **11** 13:43:05.1, 25°81N×35°42E, h42km±12km, Ml2.8*
*SGS **11** 13:43:06.6, 26°01N×35°74E, h1km, Ml2.1*

ISC 11 13:42:59.1±0.9, 25°89N±0°03×35°45E±0°03, h10km, n30, σ1§18/34, Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NADB	**Abo Dabab**	**1.01**	**238**	P	**Pn**	**13 43 21.8**	**+2.5**
NADB				S	**Sn**	**13 43 33.9**	**+0.3**
EWJHS	**Al Wajh**	**1.12**	**76**	P	**Pn**	**13 43 22.3**	**+1.4**
EWJHS	**Al Wajh**	**1.12**	**76**	S	**Sb**	**13 43 34.5**	**-0.8**
WJHS		**1.20**	**45**	P	**Pg**	**13 43 24.0**	**+1.8**
WJHS		**1.20**	**45**	S	**Sg**	**13 43 37.2**	**-0.6**
HAGS	**Hagol**	**1.56**	**196**	P	**Pg**	**13 43 28.8**	**-0.1**
BIDS	**Bi'r al Bayda'**	**1.67**	**54**	P	**Pg**	**13 43 31.3**	**+0.1**
BIDS	**Bi'r al Bayda'**	**1.67**	**54**	S	**Sn**	**13 43 49.8**	**-0.2**
MWLHS	**Almuwaylih**	**1.86**	**2**	S	**Sn**	**13 43 53.9**	**-0.6**
MWLHS				P	**Pg**	**13 43 34.1**	**-0.6**
URD05	**Al Faraah**	**1.91**	**45**	S	**Sb**	**13 43 56.8**	**-1.2**
URD05	**Al Faraah**	**1.91**	**45**	P	**Pg**	**13 43 35.1**	**-0.6**
URD03	**Al Ula**	**1.96**	**66**	P	**Pg**	**13 43 35.8**	**-0.9**
OLAS	**OLAS**	**2.00**	**79**	S	**Sn**	**13 43 58.2**	**+0.1**
OLAS	**OLAS**	**2.00**	**79**	P	**Pb**	**13 43 36.0**	**+0.4**
URD04	**Abu Rakah**	**2.02**	**53**	S	**Sn**	**13 43 58.4**	**-0.2**
URD04	**Abu Rakah**	**2.02**	**53**	P	**Pg**	**13 43 36.5**	**-1.3**
URD07	**Al Anba**	**2.07**	**30**	S	**Sb**	**13 44 01.4**	**-1.4**
URD07	**Al Anba**	**2.07**	**30**	P	**Pg**	**13 43 38.0**	**-0.9**
HHRG	**Al Ghardaqah**	**2.14**	**309**	P	**Pb**	**13 43 36.9**	**-1.2**
HHRG				S	**Sn**	**13 44 00.0**	**-1.6**
URD01	**URD01**	**2.25**	**61**	P	**Pb**	**13 43 40.2**	**+0.3**
URD01				S	**Sb**	**13 44 07.2**	**-0.8**
URD15	**Abu Rakah**	**2.25**	**52**	S	**Sn**	**13 44 05.6**	**+1.0**
URD15	**Abu Rakah**	**2.25**	**52**	P	**Pb**	**13 43 40.2**	**+0.2**
AYUS	**`Aynunah**	**2.30**	**356**	P	**Pg**	**13 43 41.3**	**-1.9**
LNY08	**LNY08**	**2.33**	**111**	P	**Pb**	**13 43 40.4**	**-1.0**
BRNS	**Bernies**	**2.35**	**211**	P	**Pb**	**13 43 40.5**	**-1.2**
TBKS	**Tabuk**	**2.52**	**23**	P	**Pb**	**13 43 44.7**	**+0.2**
BDAS	**Al Bad`**	**2.55**	**353**	P	**Pb**	**13 43 44.7**	**-0.3**
URD14	**Abu Rakah**	**2.57**	**52**	P	**Pb**	**13 43 45.0**	**-0.5**
JLOS		**2.84**	**1**	P	**Pb**	**13 43 49.7**	**-0.3**
HAQS	**Haql**	**3.19**	**352**	P	**Pg**	**13 44 03.5**	**+3.3**

*NEIC **11** 13:45:39.8±1.3, 3°6S±0°1×150°9E±0°1, h415km±8km, mb4.3/35, Error ellipse: s-maj=20.5km s-min=15.4km az=84.0*
*IDC **11** 13:45:39.4±3.0, 3°65S×150°96E, h414km±33km, mb3.3/11, mbtmp4.0/12, Error ellipse: s-maj=29.5km s-min=15.5km az=100.0*

ISC 11 13:45:38.6±0.6, 3°63S±0°08×151°0E±0°1, h400km, n66, σ0§99/66, mb4.1/29, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.32**	**115**	P	**Pn**	**13 46 33.6**	**+2.6**
MANU	**Manus Island**	**3.92**	**294**	P	**Pn**	**13 46 52.5**	**+2.4**
PMG	**Port Moresby**	**6.87**	**213**	P	**P**	**13 47 22.4**	**+0.9**
PMG	**Port Moresby**	**6.87**	**213**	P	**P**	**13 47 22.5**	**+1.0**
	11nm,0.5s,baz=42,slow=6.3,SNR=9.2						
PMG				S	S	13 48 34.3	-10
	18nm,0.6s,baz=32,slow=8.2,SNR=3.6						
COEN	**Coen**	**12.82**	**216**	P	**P**	**13 48 27.9**	**+0.4**
MTSU	**Mount Surprise**	**15.82**	**204**	P	**P**	**13 49 01.8**	**+1.7**
TV1H	**Townsville Har**	**16.06**	**194**	P	**P**	**13 49 04.5**	**+1.9**
AUNRC	**North Rockhamp**	**19.61**	**181**	P	**P**	**13 49 39.7**	**+0.2**
QIS	**Mount Isa**	**20.14**	**212**	P	**P**	**13 49 44.3**	**-0.2**
EIDS	**Eidsvold**	**21.62**	**180**	P	**P**	**13 49 57.8**	**-0.1**
EIDS	**Eidsvold**	**21.62**	**180**	P	**P**	**13 49 58.1**	**+0.2**
WB0	**Warramunga Arr**	**22.77**	**224**	P	**P**	**13 50 08.0**	**-0.5**
WB0				IAmb	IAmb	13 50 32.2	
	comp=Z,12nm,1.5s						
WR8	**Warramunga Arr**	**22.83**	**223**	P	**P**	**13 50 08.4**	**-0.6**
WRA	**Warramunga Arr**	**22.93**	**224**	P	**P**	**13 50 08.2**	**-1.7**
WRA	**Warramunga Arr**	**22.93**	**224**	P	**P**	**13 50 09.4**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=49,slow=9.4,SNR=14						
	comp=Z,2.8nm,0.8s						
QLP	**Quilpie**	**23.72**	**195**	P	**P**	**13 50 18.2**	**+1.3**
AULRC	**Lightning Ridg**	**25.82**	**186**	P	**P**	**13 50 35.8**	**+0.2**
AS31	**Alice Springs**	**25.85**	**218**	P	**P**	**13 50 34.8**	**-1.2**
ASAR	**Alice Springs**	**25.86**	**218**	P	**P**	**13 50 34.6**	**-1.4**
ASAR	**Alice Springs**	**25.86**	**218**	P	**P**	**13 50 35.0**	**-1.1**
	comp=Z,3.0nm,0.6s,baz=56,slow=8.5,SNR=96						
	comp=Z,3.0nm,0.6s						
INKA	**Innaminka**	**25.89**	**201**	P	**P**	**13 50 35.1**	**-1.0**
INKA				IAmb	IAmb	13 50 36.3	
	comp=Z,6.5nm,0.6s						
ARMA	**Armidale**	**26.66**	**179**	P	**P**	**13 50 43.9**	**+0.8**
ARMA				IAmb	IAmb	13 50 45.3	
	comp=Z,12nm,0.8s						
ARMA	**Armidale**	**26.66**	**179**	P	**P**	**13 50 44.1**	**+1.0**
CMSA	**Cobar Meteorol**	**28.20**	**190**	P	**P**	**13 50 56.6**	**0.0**
FITZ	**Fitzroy Crossi**	**28.66**	**238**	P	**P**	**13 50 59.5**	**-1.3**
STKA	**Stephens Creek**	**29.45**	**196**	P	**P**	**13 51 05.9**	**-1.7**
STKA				IAmb	IAmb	13 51 07.2	
	comp=Z,28nm,1.0s						
STKA	**Stephens Creek**	**29.45**	**196**	P	**P**	**13 51 06.5**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=18,slow=13,SNR=5.2						
	comp=Z,2.9nm,0.7s						
CAN	**Canberra**	**31.59**	**183**	P	**P**	**13 51 27.0**	**+0.8**
CAN				IAmb	IAmb	13 51 47.1	
	comp=Z,22nm,1.5s						
BBOO	**Buckleboo**	**32.21**	**204**	P	**P**	**13 51 30.2**	**-1.4**
MGBR	**Mount Gambier**	**35.25**	**194**	P	**P**	**13 51 57.7**	**+0.4**
RTZ	**Ruatahuna**	**42.13**	**149**	P	**P**	**13 52 53.9**	**+0.1**
RTZ				IAmb	IAmb	13 53 30.1	
	comp=Z,38nm,1.3s						
TUWZ	**Tuamarina**	**42.92**	**154**	P	**P**	**13 52 60.0**	**0.0**
CMAR	**Chiang Mai Arr**	**55.72**	**295**	P	**P**	**13 54 35.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=112,slow=6.2,SNR=1.7						
	comp=Z,0.2nm,0.3s						
PEA0B	**Petropavlovsk-**	**56.81**	**5**	P	**P**	**13 54 43.6**	**+0.8**
PETK	**Petropavlovsk-**	**56.81**	**5**	P	**P**	**13 54 43.3**	**+0.5**
PETK	**Petropavlovsk-**	**56.81**	**5**	P	**P**	**13 54 42.9**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=175,slow=7.9,SNR=8.1						
	comp=Z,2.8nm,0.8s						
SONM	**Songino Array**	**64.36**	**328**	P	**P**	**13 55 32.7**	**-0.9**
SONM	**Songino Array**	**64.36**	**328**	P	**P**	**13 55 34.9**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=150,slow=6.3,SNR=4.0						
	comp=Z,0.6nm,0.6s						
CASY	**Casey**	**68.60**	**196**	P	**P**	**13 55 58.2**	**-1.3**
VNDA	**Vanda**	**74.07**	**178**	P	**P**	**13 56 31.0**	**-0.6**
VNDA	**Vanda**	**74.07**	**178**	P	**P**	**13 56 32.5**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=337,slow=8.9,SNR=7.9						
	comp=Z,0.9nm,0.6s						
K15K	**Wolf Creek Mou**	**74.96**	**21**	P	**P**	**13 56 37.7**	**+0.8**
M16K	**Timber Creek**	**75.11**	**23**	P	**P**	**13 56 37.7**	**-0.1**
CNPM	**China Poot**	**77.47**	**26**	P	**P**	**13 56 50.8**	**-0.2**
M20K	**Styx River**	**77.89**	**24**	P	**P**	**13 56 52.9**	**-0.5**
M20K				IAmb	IAmb	13 56 57.1	
	comp=Z,16nm,1.4s						
G18K	**Tagagawik**	**78.22**	**19**	P	**P**	**13 56 55.3**	**+0.4**
G18K				IAmb	IAmb	13 57 25.3	
	comp=Z,7.9nm,1.2s						
ZALV	**Zalesovo Beam**	**79.17**	**327**	P	**P**	**13 56 58.8**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=111,slow=6.3,SNR=2.0						
	comp=Z,0.5nm,0.5s						
PWL	**Port Wells**	**79.38**	**26**	P	**P**	**13 57 00.7**	**-0.6**
PWL				IAmb	IAmb	13 57 01.9	
	comp=Z,8.6nm,0.9s						
SML	**Sawmill**	**79.83**	**25**	P	**P**	**13 57 03.4**	**-0.3**
C19K	**Lookout Ridge**	**79.97**	**16**	P	**P**	**13 57 04.4**	**+0.1**
C19K				IAmb	IAmb	13 57 27.7	
	comp=Z,7.0nm,1.1s						
RND	**Reindeer**	**80.37**	**23**	P	**P**	**13 57 06.0**	**-0.6**
RND				IAmb	IAmb	13 57 06.7	
	comp=Z,5.2nm,0.9s						
MLY	**Manley**	**80.46**	**21**	P	**P**	**13 57 06.8**	**-0.2**
MLY				IAmb	IAmb	13 57 08.3	
	comp=Z,3.7nm,0.9s						
I23K	**Minto, Yukon-K**	**81.03**	**22**	P	**P**	**13 57 09.4**	**-0.4**
G23K	**Bananza Creek**	**81.57**	**20**	P	**P**	**13 57 12.9**	**+0.3**
G23K				IAmb	IAmb	13 57 15.7	
	comp=Z,6.2nm,1.4s						
IL31		**81.78**	**23**	P	**P**	**13 57 12.4**	**-1.3**
IL31				IAmb	IAmb	13 57 13.3	
	comp=Z,3.2nm,0.8s						
ILAR	**Eielson Array**	**81.78**	**23**	P	**P**	**13 57 12.0**	**-1.7**
ILAR	**Eielson Array**	**81.78**	**23**	P	**P**	**13 57 12.4**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=244,slow=5.5,SNR=22						
	comp=Z,1.9nm,0.7s						
J25K	**Salcha River,**	**82.29**	**23**	P	**P**	**13 57 16.0**	**-0.5**
J25K				IAmb	IAmb	13 57 17.0	
	comp=Z,6.1nm,0.8s						
SCRK	**Sand Creek**	**82.57**	**24**	P	**P**	**13 57 18.0**	**0.0**
SCRK				IAmb	IAmb	13 57 29.1	
	comp=Z,5.5nm,1.3s						
J26L	**Joseph Creek**	**82.95**	**23**	P	**P**	**13 57 19.9**	**0.0**
BMAR	**Burnt Mountain**	**83.79**	**21**	P	**P**	**13 57 24.6**	**+0.6**
C27K	**Jago River**	**85.01**	**19**	P	**P**	**13 57 29.6**	**-0.2**
C27K				IAmb	IAmb	13 57 34.9	
	comp=Z,4.9nm,1.2s						
K29M	**Barlow Dome**	**85.19**	**25**	P	**P**	**13 57 30.8**	**-0.3**
K29M				IAmb	IAmb	13 57 33.0	
	comp=Z,5.7nm,0.9s						
BVAR	**Borovoye Array**	**87.21**	**323**	P	**P**	**13 57 40.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=126,slow=7.3,SNR=6.5						
	comp=Z,0.6nm,0.3s						
F31M	**Tsiigehtchic**	**87.72**	**22**	P	**P**	**13 57 42.6**	**-0.3**
F31M				IAmb	IAmb	13 57 55.6	
	comp=Z,7.2nm,1.4s						
NVAR	**Mina Array Bea**	**92.81**	**52**	P	**P**	**13 58 06.3**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=283,slow=5.1,SNR=2.6						
	comp=Z,0.2nm,0.6s						

*NEIC **11** 13:59:01.4±1.4, 6°0S±0°1×149°51E±0°10, h95km±12km, mb4.2/15, Error ellipse: s-maj=17.6km s-min=10.5km az=140.0*
*IDC **11** 13:59:03.2±3.8, 5°87S×149°29E, h109km±32km, mb3.6/4, mbtmp4.0/6, Error ellipse: s-maj=51.1km s-min=19.1km az=98.0*

ISC 11 13:59:01.6±0.8, 5°92S±0°09×149°5E±0°1, h100km, n24, σ1§10/26, mb4.3/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.18**	**57**	Pn	**Pn**	**13 59 49.1**	**-0.6**
PMG	**Port Moresby**	**4.16**	**213**		**Pn**	**14 00 02.4**	**-0.5**
PMG					**Sn**	**14 00 50.0**	**-0.5**
PMG	**Port Moresby**	**4.16**	**213**	P	**Pn**	**14 00 02.6**	**-0.3**
	22nm,0.3s,baz=28,slow=5.3,SNR=38						
PMG				S	**Sn**	**14 00 52.1**	**+1.6**
	136nm,0.3s,baz=142,slow=23,SNR=19						
JAY	**Jayapura**	**9.38**	**291**	P	**Pn**	**14 01 14.8**	**+0.8**
	5.5nm,0.9s,baz=126,slow=15,SNR=4.3						
SAUI	**Saumlaki**	**18.16**	**262**	Pn	**Pn**	**14 03 08.2**	**+0.8**
MTN	**Manton Dam**	**19.36**	**248**	P	**P**	**14 03 18.6**	**-0.8**
MTN				IAmb	IAmb	14 03 37.3	
	comp=Z,12nm,1.4s						
EIDS	**Eidsvold**	**19.40**	**176**	P	**P**	**14 03 20.1**	**+0.3**
EIDS				IAmb	IAmb	14 03 38.7	
	comp=Z,18nm,1.4s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WB0	**Warramunga Arr**	**20.12**	**225**	P	**P**	**14 03 27.1**	**-0.6**
WB0				IAmb	IAmb	14 03 28.0	
	comp=Z,8.3nm,0.7s						
WRAB	**Tennant Creek**	**20.25**	**225**	P	**P**	**14 03 28.6**	**-0.5**
WRAB				IAmb	IAmb	14 03 29.4	
	comp=Z,8.7nm,0.7s						
WRA	**Warramunga Arr**	**20.27**	**225**	P	**P**	**14 03 27.7**	**-1.7**
WRA	**Warramunga Arr**	**20.27**	**225**	P	**P**	**14 03 28.9**	**-0.4**
	comp=Z,8.7nm,0.6s,baz=51,slow=11,SNR=61						
	comp=Z,8.7nm,0.6s						
KNRA	**Kununurra**	**22.52**	**243**	P	**P**	**14 03 52.0**	**-1.3**
KNRA				IAmb	IAmb	14 04 24.6	
	comp=Z,21nm,1.3s						
AS31	**Alice Springs**	**23.15**	**219**	P	**P**	**14 03 58.9**	**-0.6**
ASAR	**Alice Springs**	**23.15**	**219**	P	**P**	**14 03 58.4**	**-1.1**
ASAR	**Alice Springs**	**23.15**	**219**	P	**P**	**14 03 58.9**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=51,slow=8.9,SNR=71						
	comp=Z,1.2nm,0.4s						
INKA	**Innaminka**	**23.23**	**200**	P	**P**	**14 03 58.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**26.23**	**240**	P	**P**	**14 04 26.4**	**-1.0**
FITZ				IAmb	IAmb	14 04 29.2	
	comp=Z,2.4nm,1.2s						
FORT	**Forrest**	**31.88**	**217**	P	**P**	**14 05 17.0**	**-0.4**
FORT				IAmb	IAmb	14 05 20.0	
	comp=Z,19nm,1.1s						
MBWA	**Marble Bar**	**32.55**	**239**	P	**P**	**14 05 21.8**	**-1.7**
MBWA				IAmb	IAmb	14 05 48.3	
	comp=Z,25nm,1.3s						
GIRL	**Giralia**	**37.84**	**240**	P	**P**	**14 06 08.1**	**-0.7**
PEA0B	**Petropavlovsk-**	**59.22**	**6**	P	**P**	**14 08 52.5**	**+0.4**
PETK	**Petropavlovsk-**	**59.22**	**6**	P	**P**	**14 08 52.1**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=170,slow=7.6,SNR=9.2						
	comp=Z,1.9nm,0.8s						
QSPA	**South Pole Qui**	**84.05**	**180**	P	**P**	**14 11 23.0**	**+2.1**
QSPA				IAmb	IAmb	14 11 55.5	
	comp=Z,2.5nm,1.2s						
QSPA	**South Pole Qui**	**84.05**	**180**	P	**P**	**14 11 23.1**	**+2.1**
	comp=Z,0.6nm,1.0s,baz=249,slow=0.8,SNR=7.0						
	comp=Z,0.6nm,1.0s						

TAP 11 14:04:23.3, 23°59N×120°79E, h16km, ML1.5, 1C-1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALS	**Alishan**	**0.08**	**167**	⇑P	P	14 04 27.3	+0.4
ALS				*i* S	Sg	14 04 30.1	+0.9
CHN5	**Tsauling**	**0.10**	**276**	*i* P	Pg	14 04 27.1	+0.4
CHN5				*i* S	Sg	14 04 30.1	+1.0
WHYT	**Xinyi Township**	**0.12**	**30**	*i* P	Pb	14 04 27.3	0.0
WHYT				*i* S	Sb	14 04 30.2	+0.2
YUS	**Yu-Shan**	**0.18**	**123**	⇓P	Pb	14 04 28.8	+0.3
YUS				*i* S	Sb	14 04 32.8	+0.8
WGK	**Gukeng**	**0.23**	**296**	*i* P	Pb	14 04 29.2	+0.2
WGK				*i* S	Sb	14 04 33.9	+1.0
WDLH	**Douliu**	**0.25**	**294**	*i* P	Pb	14 04 29.6	+0.2
WDLH				*i* S	Sb	14 04 34.4	+0.8
SSLB	**Suanglung**	**0.25**	**38**	*i* P	Pb	14 04 29.3	-0.2
SSLB				*i* S	Sb	14 04 33.8	+0.1
CHN4	**Tsaushan**	**0.29**	**217**	*i* P	Pb	14 04 30.3	+0.1
CHN4				S	Sb	14 04 35.9	+1.0
WNT	**Mingjian**	**0.30**	**342**	*e*P	Pb	14 04 30.7	+0.3
WNT				*i* S	Sb	14 04 36.0	+0.9
SMLT	**Sun Moon Lake**	**0.31**	**19**	*i* P	Pb	14 04 30.6	0.0
SMLT				*i* S	Sb	14 04 36.5	+1.0
TPUB	**Ta-pu**	**0.32**	**207**	*i* P	Pb	14 04 30.5	-0.1
TPUB				*i* S	Sb	14 04 36.1	+0.5
TYC	**Yuchr**	**0.32**	**12**	*i* P	Pb	14 04 30.8	+0.1
TYC				*i* S	Sb	14 04 36.5	+0.9
CHY	**Chiayi**	**0.34**	**255**	*e*P	Pb	14 04 31.1	+0.1
CHY				*i* S	Sb	14 04 37.2	+0.9
VWDT	**VWDT**	**0.37**	**63**	*i* P	Pb	14 04 31.8	+0.3
VWDT				S	Sb	14 04 37.2	+0.3
WTP	**Ta-pu**	**0.37**	**205**	*i* P	Pb	14 04 31.5	-0.1
WTP				*i* S	Sb	14 04 37.6	+0.4
STYH	**Taoyuan**	**0.41**	**181**	*i* P	Pg	14 04 31.8	+0.1
STYH				*i* S	Sb	14 04 38.2	-0.1
TWK	**Hsinying**	**0.42**	**221**	*i* P	Pb	14 04 32.4	0.0
TWK	

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
DUNU	**Dundret** baz=38	**0.05**	**244**	P	Pg	14 05 09.0	+0.2
DUNU				S	Sg	14 05 09.9	+0.5
MASU	**Masugnsbyn**	**0.60**	**58**	P	Pg	14 05 19.1	-0.2
RATU	**Laukkuluspa**	**0.80**	**329**	P	Pg	14 05 22.8	-0.4

TRN 11 14:09:25.0, 18°.28N × 63°.25W, h24 km, MD3.7, North-west of Anguilla., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
SKI	**Saint Kitts**	**1.05**	**153**	*e*P	Pb	14 09 45.8	+1.2
SKI				*e*S	Sn	14 10 00.6	+2.4
SKOC	**St. Kitts, UWI**	**1.09**	**153**	*e*P	Pb	14 09 46.5	+1.2
SKOC				*e*S	Sn	14 10 01.1	+2.0
ANWB	**Willy Bob**	**1.52**	**113**	*e*P	Pb	14 09 52.8	+0.4
ANWB				*e*S	Sb	14 10 12.3	+1.1
MBFL	**Flemmings, Mon**	**1.81**	**147**	*e*P	Pb	14 09 56.8	-0.7
MBFL				*e*S	Sb	14 10 20.1	+0.3
MLYT	**Lee's Yard**	**1.84**	**147**	*e*S	Sb	14 10 20.4	-0.4
DHSZ	**Broadband at M**	**2.44**	**144**	*e*P	Pn	14 10 04.4	+1.1
DHSZ				*e*S	Sn	14 10 34.4	+1.9
ATGZ	**Broadband at L**	**2.61**	**146**	*e*P	Pn	14 10 07.2	+1.6
ATGZ				*e*S	Sn	14 10 38.7	+2.1
MMLZ	**Guadeloupe Bro**	**2.68**	**146**	*e*P	Pn	14 10 08.7	+2.0
MMLZ				*e*S	Sn	14 10 41.0	+2.6
DSDZ	**La Diserade, G**	**2.85**	**133**	*e*P	Pn	14 10 10.4	+1.4
DSDZ				*e*S	Sn	14 10 43.7	+1.1
TBG	**Guadaloupe-3**	**2.85**	**147**	*e*P	Pn	14 10 10.8	+1.7
TBG				*e*S	Sn	14 10 45.1	+2.4
DSLB	**Salisbury**	**3.32**	**148**	*e*P	Pn	14 10 17.5	+2.1
DSLB				*e*S	Sn	14 10 56.1	+2.0
AOPR	**Arecibo Observ**	**3.33**	**272**	*e*P	Pn	14 10 17.5	+1.8
AOPR				*e*S	Sn	14 10 56.3	+1.8
BIM	**Bigot**	**4.28**	**151**	*e*P	Pn	14 10 31.7	+3.0

IDC 11 14:22:50.0±7.5, 18°.80S × 177°.35W, h0 km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=293.3km s-min=119.6km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
WRA	**Warramunga Arr** 0.8nm,0.7s,baz=97,slow=7.7,SNR=13 0.8nm,0.7s	**45.47**	**260**	P	P	14 31 10.9	-0.4
ASAR	**Alice Springs** 1.1nm,0.8s,baz=91,slow=7.8,SNR=23 1.1nm,0.8s	**45.52**	**255**	P	P	14 31 11.8	+0.1
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=48,slow=4.6,SNR=4.3	**141.81**	**333**	PKP	PKPdf	14 42 22.6	-1.0

IDC 11 14:27:45.1±1.6, 4°.51N × 125°.71E, h0 km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=115.3km s-min=19.4km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
FITZ	**Fitzroy Crossi** 1.4nm,0.5s,baz=352,slow=10,SNR=10 1.4nm,0.5s	**22.46**	**180**	P	P	14 32 46.9	+0.8
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=339,slow=10,SNR=8.1 0.4nm,0.5s	**25.74**	**161**	P	P	14 33 16.6	-0.9
ASAR	**Alice Springs** 0.3nm,0.5s,baz=341,slow=7.0,SNR=19 0.3nm,0.5s	**29.12**	**164**	P	P	14 33 48.1	+0.2
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=123,slow=8.4,SNR=8.5 0.3nm,0.4s	**56.34**	**325**	P	P	14 37 27.4	-0.5
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=129,slow=6.6,SNR=4.6 0.5nm,0.5s	**60.54**	**328**	P	P	14 37 57.7	+0.6

*LVSN **11** 14:33:58.7±0.7, 58°.87N × 24°.01E, h0 km±11 km, ML1.4*
HEL 11 14:33:29.8±0.4, 60°.70N × 28°.97E, h0 km, ML1.4, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
VJF	**Virojoki** baz=75	**0.72**	**257**	PG	Pg	14 33 43.0	-0.6
VJF				SG	Sg	14 33 51.9	-0.9
VJF				smax	smax	14 33 52.4	
	comp=Z,4.2nm,0.2s						
RUF	**Ruokolahti**	**0.72**	**359**	PB	Pg	14 33 43.4	-0.3
RUF				smax	smax	14 33 52.4	
	comp=Z,4.3nm,0.2s						
RUF				SG	Sg	14 33 52.7	-0.3
FIA0	**FINESS Array S** baz=121	**1.59**	**299**	PG	Pn	14 33 58.0	-1.2
FIA0				smax	smax	14 34 17.5	
	comp=Z,2.5nm,0.2s						
KAF	**Kangasniemi**	**1.91**	**319**	PG	Pn	14 34 04.2	+0.6
KAF				smax	smax	14 34 26.6	
	comp=Z,2.6nm,0.2s						
KAF				SG	Sn	14 34 28.7	+0.4
NUR	**Nurmijarvi** baz=82	**2.14**	**267**	PG	Pb	14 34 08.2	-1.2
NUR				smax	smax	14 34 33.3	
	comp=Z,1.4nm,0.2s						
NUR				SG	Sn	14 34 35.1	+1.1
MEF	**Metsahovi**	**2.32**	**260**	*e*S	Sn	14 34 39.2	+0.9
MEF				AML	AML	14 34 43.0	
	comp=N,6.3nm,0.6s						
MEF				AML	AML	14 34 47.2	
	comp=E,4.6nm,0.6s						
MEF				AML	AML	14 34 57.1	
	comp=Z,5.9nm,0.6s						
MEF	**Metsahovi** comp=Z,1.1nm,0.2s	**2.32**	**260**	smax	smax	14 34 38.5	
MEF				SG	Sb	14 34 41.8	+0.2
SUF	**Sumiainen** comp=Z,0.6nm,0.2s	**2.43**	**328**	smax	smax	14 34 41.6	
SUF				SG	Sb	14 34 44.6	-0.2
KEF	**Keuruu**	**2.46**	**308**	PG	Pb	14 34 13.3	-1.5
KEF				smax	smax	14 34 42.4	
	comp=Z,1.1nm,0.2s						
KEF				SG	Sb	14 34 44.1	-1.5
JOF	**Joensuu** baz=209	**2.48**	**26**	PG	Pb	14 34 14.5	-0.8
JOF				SG	Sb	14 34 46.1	-0.3
VSU	**Vasula**	**2.52**	**208**	*e*P	Pg	14 34 23.4	+5.4
VSU				AML	AML	14 34 35.6	
	comp=E,11nm,0.4s						
VSU				*e*S	Sn	14 34 42.1	-1.2
VSU				AML	AML	14 34 43.8	
	comp=Z,9.8nm,0.3s						
VSU				AML	AML	14 34 53.4	
	comp=N,14nm,0.5s						
NIF	**Nilsia** comp=Z,0.7nm,0.2s	**2.75**	**349**	smax	smax	14 34 50.9	
NIF				SG	Sb	14 34 53.1	-0.9
SLIT	**Slitere, Latvi**	**4.62**	**231**	*e*S	Pn	14 34 43.5	+2.8

*IDC **11** 14:37:10.1±0.7, 15°.51S × 173°.23W, h0 km, mb3.8/8, mbtmp3.9/9, ML3.2/1, MS3.7/37, Error ellipse: s-maj=28.9km s-min=19.3km az=149.0*
*NEIC **11** 14:37:13.9±1.4, 15°.30S±0°.08 × 173°.3W±0°.1, h10 km±1 km, mb4.6/74, Error ellipse: s-maj=22.1km s-min=12.6km az=288.0*
*NOU **11** 14:37:14.9, 15°.36S × 172°.94W, h11 km, mb4.6/10, Samoa Islands Region*
ISC 11 14:37:16.1±0.5, 15°.35S±0°.07 × 173°.05W±0°.08, h29 km, n119, σ1°89/68, mb4.5/40, MS3.8/36, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
AFI	**Afiamalu**	**1.89**	**41**		**Pn**	**14 37 46.1**	**-0.5**
AFI	**Afiamalu**	**1.89**	**41**	P	**Pn**	**14 37 46.3**	**-0.3**
NIUE	**Niue**	**4.76**	**142**		**Pn**	**14 38 25.3**	**-0.6**
NIUE	**Niue**	**4.76**	**142**	P	**Pn**	**14 38 25.4**	**-0.5**
RAR	**Rarotonga**	**13.89**	**117**	Pn	**Pn**	**14 40 29.5**	**-1.6**
RAR	**Rarotonga** 1.0nm,0.3s,baz=260,slow=8.4,SNR=8.2	**13.89**	**117**	Pn	**Pn**	**14 40 28.7**	**-2.3**
RAR				Sn	Sn	14 42 48.4	-16
	0.5nm,0.3s,baz=349,slow=14,SNR=1.3						
RAR				LR	LR	14 44 32.9	
	comp=Z,115nm,18.3s,baz=260,slow=32						
	9.0nm,0.6s						
MARNC	**Mare, Loyalty**	**18.95**	**248**	P	**Pn**	**14 41 37.7**	**+1.9**
DZM	**Mont Dzumac** comp=Z,67nm,18.7s,baz=41,slow=31	**20.53**	**248**	LR	LR	14 47 38.5	
PPT	**Papeete** comp=Z,83nm,20.2s,baz=308,slow=30	**22.62**	**99**	LR	LR	14 48 31.9	
PPT2	**Papeete2** 69nm,27.2s	**22.62**	**99**	*e*P	**P**	**14 42 14.8**	**-0.1**
PPT2				*e*S	**S**	**14 46 16.2**	**-4.9**
	80nm,24.2s						
PPT2				*e*LR	LR	14 47 35.2	
	151nm,28.5s						
PPT2				*e*LR	LR	14 47 41.9	
	133nm,22.0s						
KUZ	**Kuaotunu**	**23.53**	**203**	P	**P**	**14 42 24.7**	**+0.8**
TBI	**Tubuai** 2μm,34.8s	**23.61**	**113**	*e*S	**S**	**14 46 47.0**	**+9.4**
TBI				*e*LR	LR	14 47 56.3	
	3μm,44.2s						
TBI				*e*LR	LR	14 48 15.0	
	858nm,30.5s						
URZ	**Urewera** comp=Z,44nm,21.5s,baz=20,slow=30	**24.41**	**199**	LR	LR	14 49 14.8	
URZ	**Urewera**	**24.41**	**199**	P	**P**	**14 42 33.2**	**+1.1**
TOZ	**Tahuroa Road**	**24.48**	**202**	P	**P**	**14 42 32.9**	**+0.2**
BKZ	**Black Stump Fm**	**25.44**	**199**	P	**P**	**14 42 42.1**	**+0.7**
BFZ	**Birch Farm**	**26.90**	**198**	P	**P**	**14 42 55.6**	**+1.0**
BFZ	**Birch Farm**	**26.90**	**198**	P	**P**	**14 42 57.2**	**+2.6**
HNR	**Honiara** 59nm,0.4s,baz=104,slow=4.2,SNR=3.2	**27.00**	**279**	P	**P**	**14 42 54.3**	**-1.5**
HNR				LR	LR	14 52 11.2	
	comp=Z,106nm,19.5s,baz=114,slow=34						
HNR	**Honiara**	**27.00**	**279**	P	**P**	**14 42 57.5**	**+1.7**
QRZ	**Quartz Range**	**28.31**	**203**	P	**P**	**14 43 09.5**	**+2.3**
TUWZ	**Tuamarina**	**28.32**	**201**	P	**P**	**14 43 07.0**	**-0.3**
KHZ	**Kahutara**	**29.33**	**201**	P	**P**	**14 43 18.6**	**+2.3**
TAOE	**Nuku Hiva Isla** 211nm,26.1s	**32.78**	**82**	*e*LR	LR	14 52 12.5	
H11S2	**WAKE ISLAND Hy** baz=146,slow=76,SNR=26	**39.10**	**329**	T	T	15 25 27.8	
H11S3	**WAKE ISLAND Hy** baz=146,slow=76,SNR=29	**39.11**	**329**	T	T	15 25 28.8	
H11S1	**WAKE ISLAND Hy** baz=146,slow=76,SNR=8.2	**39.12**	**329**	T	T	15 25 29.0	
PMG	**Port Moresby** comp=Z,45nm,18.2s,baz=135,slow=35	**39.27**	**274**	LR	LR	15 00 11.6	
H11N3	**WAKE ISLAND Hy** baz=147,slow=76,SNR=7.5	**40.04**	**330**	T	T	15 26 31.8	
H11N1	**WAKE ISLAND Hy** baz=147,slow=76,SNR=29	**40.04**	**330**	T	T	15 26 36.6	
H11N2	**WAKE ISLAND Hy** baz=147,slow=76,SNR=7.9	**40.06**	**330**	T	T	15 26 35.3	
STKA	**Stephens Creek** comp=Z,78nm,18.1s,baz=26,slow=36	**44.35**	**240**	LR	LR	15 03 41.3	
WR8	**Warramunga Arr** comp=Z,13nm,1.4s	**50.03**	**257**	P	**P**	**14 46 05.8**	**-2.6**
WR8				IAmb	IAmb	14 46 45.5	
WB0	**Warramunga Arr**	**50.14**	**257**	P	**P**	**14 46 06.3**	**-3.0**
WRA	**Warramunga Arr**	**50.18**	**257**	P	**P**	**14 46 06.5**	**-3.1**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.5s,baz=91,slow=6.9,SNR=8.2	**50.18**	**257**	P	P	14 46 05.2	-4.5
WRA				LR	LR	15 06 40.2	
	comp=Z,92nm,18.2s,baz=78,slow=35 comp=Z,0.4nm,0.5s						
AS31	**Alice Springs**	**50.44**	**252**	P	**P**	**14 46 09.3**	**-2.2**
ASAR	**Alice Springs**	**50.44**	**252**	P	**P**	**14 46 08.7**	**-2.8**
ASAR	**Alice Springs** comp=Z,1.5nm,0.5s,baz=86,slow=8.1,SNR=46	**50.44**	**252**	P	P	14 46 07.8	-3.7
ASAR				LR	LR	15 06 00.2	
	comp=Z,211nm,20.2s,baz=97,slow=34 comp=Z,1.5nm,0.5s						
GUMO	**Guam** comp=Z,24nm,21.0s,baz=119,slow=32	**50.59**	**302**	LR	LR	15 04 20.6	
FITZ	**Fitzroy Crossi** comp=Z,124nm,21.2s,baz=64,slow=34	**58.55**	**258**	LR	LR	15 10 12.2	
BATI	**Baumata** comp=Z,263nm,18.0s,baz=272,slow=37	**61.75**	**267**	LR	LR	15 15 11.5	
SBA	**Scott Base**	**63.32**	**185**	P	**P**	**14 47 43.9**	**+1.9**
SBA				IAmb	IAmb	14 47 59.4	
	comp=Z,7.5nm,1.4s						
VNDA	**Vanda** comp=Z,0.4nm,0.6s,baz=32,slow=4.1,SNR=2.3 comp=Z,0.4nm,0.6s	**63.46**	**186**	P	**P**	**14 47 40.2**	**-2.7**
KAPI	**Kappang** comp=Z,40nm,18.8s,baz=177,slow=34	**66.71**	**271**	LR	LR	15 14 55.6	
SHEM	**Shemya Is, Ala** comp=Z,65nm,21.4s,baz=86,slow=30	**68.71**	**352**	LR	LR	15 11 45.5	
MJAR	**Matsushiro Arr** comp=Z,46nm,21.6s,baz=127,slow=30	**69.12**	**320**	LR	LR	15 11 47.6	
ASAJ	**Asahikawa** comp=Z,36nm,21.8s,baz=354,slow=30	**71.68**	**328**	LR	LR	15 13 19.1	
JNU	**Nakatsue** comp=Z,43nm,18.3s,baz=342,slow=32	**72.01**	**313**	LR	LR	15 15 59.1	
PFO	**Pinyon Flats O** comp=Z,74nm,20.2s,baz=316,slow=30	**72.64**	**47**	LR	LR	15 13 58.9	
LPIG	**La Paz** comp=Z,80nm,21.7s,baz=344,slow=28	**72.73**	**58**	LR	LR	15 11 29.1	
YBH	**Yreka Blue Hor**	**73.36**	**37**	P	**P**	**14 48 46.8**	**+1.4**
YBH	**Yreka Blue Hor** comp=Z,7.2nm,20.6s,baz=280,slow=29	**73.36**	**37**	LR	LR	15 12 41.8	
WAKR	**Walker**	**73.39**	**41**	P	**P**	**14 48 46.8**	**+1.1**
WAKR				IAmb	IAmb	14 48 48.7	
	comp=Z,6.2nm,1.3s						
QSM	**Queen of Sheba** comp=Z,5.9nm,0.9s	**73.64**	**45**	P	**P**	**14 48 48.1**	**+1.1**
QSM				IAmb	IAmb	14 48 48.8	
IRM	**Iron Mountain** comp=Z,6.6nm,1.2s	**73.86**	**47**		**P**	**14 48 49.5**	**+1.1**
IRM				IAmb	IAmb	14 48 50.4	
NVAR	**Mina Array Bea**	**74.07**	**42**	P	**P**	**14 48 50.4**	**+0.6**
NVAR	**Mina Array Bea** comp=Z,0.9nm,0.7s,baz=240,slow=7.9,SNR=5.8	**74.07**	**42**	P	**P**	**14 48 50.0**	**+0.1**
NVAR				LR	LR	15 12 56.1	
	comp=Z,98nm,20.4s,baz=326,slow=29 comp=Z,0.9nm,0.7s						
113A	**Mohawk Valley,**	**74.13**	**49**	P	**P**	**14 48 50.4**	**+0.4**
NV11	**Mina Array Sit**	**74.17**	**42**	P	**P**	**14 48 51.0**	**+0.7**
NV11				IAmb	IAmb	14 48 52.3	
	comp=Z,8.8nm,1.4s						
QSPA	**South Pole Qui**	**74.69**	**180**	P	**P**	**14 48 54.3**	**+1.4**
QSPA				IAmb	IAmb	14 49 13.1	
	comp=Z,8.4nm,1.2s						
QSPA	**South Pole Qui** comp=Z,0.7nm,1.0s,baz=62,slow=3.5,SNR=6.6	**74.69**	**180**	P	**P**	**14 48 51.0**	**-1.9**
QSPA				LR	LR	15 15 53.7	
	comp=Z,27nm,21.9s,baz=22,slow=31 comp=Z,0.7nm,1.0s						
KDAK	**Kodiak Island** comp=Z,112nm,19.9s,baz=183,slow=30	**74.81**	**11**	LR	LR	15 14 07.4	
K05A	**Summer Lake**	**75.03**	**37**	P	**P**	**14 48 56.0**	**+0.8**
K05A				IAmb	IAmb	14 48 57.6	
	comp=Z,10nm,1.1s						
J05D	**Fort Rock, OR**	**75.18**	**36**	P	**P**	**14 48 56.8**	**+0.8**
J05D				IAmb	IAmb	14 49 03.8	
	comp=Z,9.5nm,1.4s						
PINE	**Pine Mountain**	**75.66**	**36**		**P**	**14 48 59.7**	**+0.8**
M11K	**Mekoryuk**	**75.68**	**4**	P	**P**	**14 48 58.5**	**+0.2**
RADR	**Rader Ridge**	**75.78**	**33**	P	**P**	**14 49 00.1**	**+0.8**
TUC	**Tucson**	**76.10**	**51**	P	**P**	**14 49 02.9**	**+1.4**
TUC				IAmb	IAmb	14 49 03.7	
	comp=Z,6.3nm,1.1s						
X16A	**Lo Mia Camp, P**	**76.64**	**48**		**P**	**14 49 06.0**	**+1.4**
X16A				IAmb	IAmb	14 49 07.0	
	comp=Z,3.8nm,0.9s						
I07A	**Izee**	**76.66**	**37**	P	**P**	**14 49 05.3**	**+0.9**
CCUT	**Cedar City**	**76.86**	**45**		**P**	**14 49 06.9**	**+1.0**
U15A	**North Rim**	**77.03**	**46**		**P**	**14 49 08.0**	**+1.1**
U15A				IAmb	IAmb	14 49 09.3	
	comp=Z,8.8nm,1.2s						
LON	**Longmire**	**77.04**	**33**	P	**P**	**14 49 06.9**	**+0.4**
ELK	**Elko**	**77.33**	**41**	IAmb	IAmb	14 49 10.9	
	comp=Z,6.4nm,1.3s						
ELK	**Elko** comp=Z,78nm,22.0s,baz=28,slow=29	**77.33**	**41**	LR	LR	15 14 46.4	
G08A	**Pilot Rock**	**77.70**	**36**		**P**	**14 49 10.6**	**+0.4**
MTPU	**Mount Pierson** comp=Z,6.2nm,1.4s	**77.92**	**45**	IAmb	IAmb	14 49 47.5	
BMO	**Blue Mountains**	**78.39**	**37**		**P**	**14 49 14.2**	**+0.2**
BMO				IAmb	IAmb	14 49 15.6	
	comp=Z,4.9nm,1.1s						
HMU	**Henry Mountain** comp=Z,5.0nm,1.0s	**78.85**	**46**	IAmb	IAmb	14 49 19.5	
J16K	**Anvik River**	**78.98**	**6**	P	**P**	**14 49 17.6**	**+0.8**
F10A	**Beach Ranch, E**	**79.08**	**36**	P	**P**	**14 49 18.4**	**+0.6**
TMUT	**Trail Mountain** comp=Z,7.5nm,1.0s	**79.21**	**44**	IAmb	IAmb	14 49 21.4	
PLID	**Pearl Lake**	**79.28**	**37**		**P**	**14 49 18.9**	**-0.3**
PLID				IAmb	IAmb	14 49 20.7	
	comp=Z,7.5nm,1.4s						
HLID	**Hailey**	**79.38**	**39**		**P**	**14 49 19.9**	**+0.3**
HLID				IAmb	IAmb	14 49 21.7	
	comp=Z,5.9nm,0.9s						
HVU	**Hansel Valley** comp=Z,13nm,1.4s	**79.45**	**41**	IAmb	IAmb	14 49 21.8	
SRU	**San Rafael Swe** comp=Z,5.5nm,1.0s	**79.58**	**45**	IAmb	IAmb	14 49 22.7	
VHRN	**Van Horn**	**79.86**	**54**		**P**	**14 49 23.1**	**+0.6**
MNTX	**Cornudas Mount**	**79.93**	**53**		**P**	**14 49 23.4**	**+0.7**
TCUT	**Toone Canyon** comp=Z,12nm,1.3s	**79.99**	**42**	IAmb	IAmb	14 49 26.6	
PV05	**Paradox Valley** comp=Z,7.5nm,1.0s	**80.05**	**46**	IAmb	IAmb	14 49 26.1	
MA2	**Magadan** comp=Z,23nm,21.1s,baz=82,slow=30	**80.22**	**342**	LR	LR	15 17 53.5	
PV10	**Paradox Valley** comp=Z,8.6nm,1.2s	**80.24**	**46**	P	**P**	**14 49 24.8**	**+0.2**
PV10				IAmb	IAmb	14 49 53.6	
PV19	**Morning Glory** comp=Z,7.9nm,0.9s	**80.24**	**46**	IAmb	IAmb	14 49 26.4	
TX31	**Lajitas Ar. Si** comp=Z,13nm,1.5s	**80.31**	**56**	IAmb	IAmb	14 49 27.7	
TXAR	**Lajitas Array** comp=Z,1.8nm,1.0s,baz=217,slow=6.1,SNR=11	**80.31**	**56**	P	**P**	**14 49 24.9**	**0.0**
TXAR				LR	LR	15 17 50.2	
	comp=Z,55nm,19.1s,baz=30,slow=30 comp=Z,1.8nm,1.0s						
PV02	**Paradox Valley** comp=Z,6.3nm,1.1s	**80.37**	**46**	IAmb	IAmb	14 50 00.3	
NEW	**Newport** comp=Z,73nm,19.3s,baz=42,slow=32	**80.48**	**34**	LR	LR	15 19 35.7	
TASM	**ASL Pad, Albuq** comp=Z,9.9nm,1.4s	**80.51**	**50**	IAmb	IAmb	14 49 28.0	
ANMO	**Albuquerque** comp=Z,8.9nm,18.6s,baz=104,slow=30	**80.52**	**50**	LR	LR	15 17 09.2	
MCMT	**McKenzie Canyo**	**81.01**	**39**	P	**P**	**14 49 28.9**	**+0.5**
S22A	**4UR Ranch, Cre** comp=Z,6.9nm,1.0s	**81.49**	**47**	IAmb	IAmb	14 49 33.6	
DLBC	**Dease Lake** comp=Z,45nm,19.2s,baz=40,slow=32	**81.54**	**21**	LR	LR	15 20 07.1	
LOHW	**Long Hollow** comp=Z,5.3nm,1.3s	**81.76**	**41**	IAmb	IAmb	14 49 34.1	
LRM	**Limekiln Ridge**	**81.77**	**38**	P	**P**	**14 49 32.7**	**+0.2**
PDAR	**Pinedale Array** comp=Z,1.1nm,0.9s,baz=232,slow=1.7,SNR=8.6	**82.01**	**42**	P	**P**	**14 49 33.7**	**-0.1**
PDAR				LR	LR	15 16 57.2	
	comp=Z,52nm,20.8s,baz=7.0,slow=29 comp=Z,1.1nm,0.9s						
ILAR	**Eielson Array**	**82.34**	**11**	P	**P**	**14 49 34.2**	**-0.5**
ILAR	**Eielson Array** comp=Z,0.5nm,0.7s,baz=224,slow=5.8,SNR=8.0	**82.34**	**11**	P	**P**	**14 49 32.7**	**-2.0**
ILAR				LR	LR	15 19 41.8	
	comp=Z,69nm,20.4s,baz=184,slow=31 comp=Z,0.5nm,0.7s						
M30M	**Minto, Yukon**	**82.71**	**16**	P	**P**	**14 49 36.6**	**-0.1**
M30M				IAmb	IAmb	14 50 01.1	
	comp=Z,8.7nm,1.4s						
YNE	**Yellowstone No** comp=Z,5.2nm,1.2s	**82.83**	**40**	IAmb	IAmb	14 49 40.2	
G26K	**Porcupine Rive**	**84.86**	**11**	P	**P**	**14 49 48.5**	**+1.0**
F31M	**Tsiigehtchic**	**87.41**	**14**	P	**P**	**14 50 00.3**	**+0.2**
MAW	**Mawson** comp=Z,36nm,19.8s,baz=118,slow=34	**87.94**	**199**	LR	LR	15 27 16.3	
INK	**Inuvik** comp=Z,73nm,20.3s,baz=343,slow=30	**88.14**	**14**	LR	LR	15 21 46.3	
YKA	**Yellowknife Ar** comp=Z,97nm,19.2s,baz=314,slow=31	**89.92**	**23**	LR	LR	15 23 41.5	
JTS	**Las Juntas de** comp=Z,37nm,19.2s,baz=336,slow=29	**90.87**	**80**	LR	LR	15 21 33.3	
CMAR	**Chiang Mai Arr** comp=Z,30nm,18.4s,baz=150,slow=35	**92.92**	**288**	LR	LR	15 31 56.9	
ULM	**Lac du Bonnet** comp=Z,67nm,19.2s,baz=6.5,slow=31	**93.69**	**39**	LR	LR	15 25 06.5	
BRTR	**Keskin Array B** comp=Z,2.5nm,1.0s,baz=115,slow=1.8,SNR=11	**146.33**	**321**	PKPbc	**PKPdf**	**14 56 54.1**	**+0.7**

*ATH **11** 15:07:03.5, 40°.49N × 20°.79E, h10 km±1 km, ML2.6/9, Manual Solution by A.Agalos First location: 2019/11/11 15:08:19, This location: 2019/11/11 15:43:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*TIR **11** 15:07:03.2, 40°.49N × 20°.88E, h28 km, Md2.6/6, Ml3.0/3*
*BEO **11** 15:07:09.2±0.9, 40°.20N × 21°.34E, h21 km±4 km, ML2.3/10*
*THE **11** 15:07:09.3, 41°.N±3°.×2°.1E±°, h17 km±2 km, M2.6/5, MLh2.6/5*
ISC 11 15:07:05.8±0.8, 40°.46N±0°.02 × 20°.85E±0°.03, h13 km±5 km, n44, σ2°17/69, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res
NEST	**Nestorio**	**0.15**	**107**	Pg	**Pg**	**15 07 08.6**	**-1.1**
NEST				Sg	**Sg**	**15 07 12.5**	**+0.2**
NEST				AML	AML	15 07 18.9	
	7.7nm,39.9s						
NEST				AMd		15 07 48.5	
NEST	**Nestorio**	**0.15**	**107**	P	**Pg**	**15 07 08.7**	**-0.9**
NEST				S	**Sg**	**15 07 11.5**	**-0.8**
KBN	**Korca**	**0.17**	**343**	Pg	Pg	15 07 06.6	-3.3
KBN				Sg	**Sg**	**15 07 11.8**	**-0.9**
KBN				AMd		15 07 34.5	
KBN	**Korca**	**0.17**	**343**	P	**Pb**	**15 07 13.3**	**+2.4**
KBN				S	**Sg**	**15 07 16.1**	**+3.4**
PENT	**Pentalofos**	**0.34**	**140**	P	**Pn**	**15 07 17.6**	**+1.0**
PENT				S	**Sb**	**15 07 23.9**	**+4.8**
PENT	**Pentalofos**	**0.34**	**140**	P	**Pg**	**15 07 11.5**	**-1.2**
PENT				S	**Sg**	**15 07 17.3**	**-0.2**
LMS2	**Laimos Florina**	**0.43**	**30**	P	**Pg**	**15 07 12.3**	**-2.1**
LMS2				S	**Sg**	**15 07 18.4**	**-1.9**
OHR	**Ohrid**	**0.65**	**356**	*i* Pn	Pg	15 07 04.3	-14
OHR				*i* Sn	**Sg**	**15 07 26.5**	**-0.7**
KZN	**Kozani**	**0.72**	**102**	P	**Pg**	**15 07 18.8**	**-0.9**
KZN				S	**Sg**	**15 07 29.9**	**+0.7**
JAN	**Janina**	**0.80**	**180**	P	**Pg**	**15 07 19.3**	**-2.0**
JAN				S	**Sg**	**15 07 30.3**	**-1.6**
IGT	**Igoumenitsa**	**1.01**	**204**	Pg	Pb	15 07 22.3	-2.8
IGT				Sg	**Sb**	**15 07 37.9**	**-0.4**
IGT				AMd		15 08 31.0	
IGT	**Igoumenitsa**	**1.01**	**204**	P	**Pn**	**15 07 29.4**	**+3.8**
IGT				S	**Sn**	**15 07 45.6**	**+5.9**
IGT	**Igoumenitsa**	**1.01**	**204**	P	**Pb**	**15 07 23.7**	**-1.4**
KEK	**Kerkira**	**1.10**	**228**	Pg	**Pb**	**15 07 24.8**	**-1.8**
KEK				Sg	**Sb**	**15 07 40.9**	**0.0**
KEK				AML	AML	15 07 50.4	
	1μm,0.5s						
KEK				AMd		15 08 28.0	
KEK	**Kerkira**	**1.10**	**228**	P	**Pb**	**15 07 24.8**	**-1.8**
KEK				S	**Sb**	**15 07 38.5**	**-2.4**
TETR	**Tetrakomo, Epi**	**1.16**	**164**	P	**Pg**	**15 07 31.1**	**+3.0**
TETR	**Tetrakomo, Epi**	**1.16

BARS	**Barje**	**2.46**	**17**	*e*Pn		**Pb**	**15 07 50.4**	**+0.5**
BARS				*e*Sn		**Sg**	**15 08 22.8**	**-2.1**
VTS	**Vitosha**	**2.80**	**39**	*e*Pn		**Pb**	**15 07 54.2**	**-1.6**
VTS				*e*Sn		**Sn**	**15 08 24.8**	**+0.7**
SJES	**Sjenica**	**2.88**	**347**	*e*Pn		**Pb**	**15 07 59.9**	**+2.9**
SJES				*e*Sn		**Sg**	**15 08 36.9**	**-1.3**
GOCS	**Kraljevo Serbi**	**3.10**	**0**	*e*Pn		**Pb**	**15 08 01.3**	**+0.5**
GOCS				*e*Sn		**Sb**	**15 08 39.9**	**+1.3**
ZAPS	**Zavoj**	**3.11**	**25**	*e*Pn		**Pb**	**15 07 59.5**	**-1.5**
ZAPS				*e*Sn		**Sb**	**15 08 37.4**	**-1.4**
IVAS	**Ivanjica**	**3.16**	**351**	*e*Pn		**Pb**	**15 08 02.1**	**+0.3**
IVAS				*e*Sn		**Sb**	**15 08 42.0**	**+1.8**
ZAGS	**Zajecar**	**3.50**	**17**	*e*Pn		**Pb**	**15 08 03.9**	**+4.0**
ZAGS				*e*Sn		**Sb**	**15 08 46.3**	**-3.8**
BBLS	**Lazi&#263i**	**3.57**	**343**	*e*Pn		**Pb**	**15 08 08.7**	**-0.1**
BBLS				*e*Sn		**Sb**	**15 08 53.9**	**+1.8**

IDC 11 15:16:17.1±1.6, 8°70N×125°41E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=120.2km s-min=17.5km az=73.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.63**	**174**	Pg	Pn	15 16 46.1	-1.0
	172nm,0.3s,baz=276,slow=5.4,SNR=7.3						
DAV				Lg	Lg	15 16 56.1	
	252nm,0.3s,baz=61,slow=22,SNR=28						
WRA	**Warramunga Arr**	**29.79**	**163**	P	P	15 22 27.8	+1.9
	0.5nm,1.0s,baz=344,slow=8.8,SNR=1.9						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**33.23**	**166**	P	P	15 22 55.1	-1.0
	0.1nm,0.6s,baz=348,slow=9.2,SNR=5.0						
	0.1nm,0.6s						
MKAR	**Makanchi Array**	**52.77**	**324**	P	P	15 25 33.9	-0.2
	0.5nm,0.7s,baz=121,slow=7.7,SNR=4.2						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**56.88**	**326**	P	P	15 26 04.2	+0.4
	0.6nm,0.2s,baz=122,slow=7.0,SNR=1.7						
	0.6nm,0.2s						
ARCES	**ARCESS Array B**	**85.36**	**340**	P	P	15 28 55.3	-0.7
	1.8nm,0.8s,baz=77,slow=5.3,SNR=1.7						
	1.8nm,0.8s						

IDC 11 15:39:11.4±2.7, 6°09S×156°00E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=167.8km s-min=33.3km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.15**	**235**	P	P	15 44 38.3	-0.2
	0.3nm,0.4s,baz=60,slow=9.8,SNR=5.5						
	0.3nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**26.61**	**23**	T	T	16 13 19.2	
	baz=202,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**26.61**	**23**	T	T	16 13 21.2	
	baz=202,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**26.63**	**23**	T	T	16 13 20.6	
	baz=202,slow=75,SNR=12						
ASAR	**Alice Springs**	**27.51**	**228**	P	P	15 44 60.0	0.0
	0.2nm,0.4s,baz=60,slow=9.3,SNR=8.5						
	0.2nm,0.4s						
ILAR	**Eielson Array**	**82.17**	**21**	P	P	15 51 34.1	+0.2
	0.3nm,0.9s,baz=251,slow=5.2,SNR=2.0						
	0.3nm,0.9s						

IDC ***11*** *15:52:37.5±0.9, 0°.90S×128°.73E, h0km, mb4.0/9, mbtmp4.1/12, ML4.3/3, MS3.4/12, Error ellipse: s-maj=36.7km s-min=17.0km az=77.0*

NEIC ***11*** *15:52:41.9±1.4, 0°.94S±0°.07×128°.53E±0°.05, h20km±5km, mb4.4/20, Error ellipse: s-maj=11.4km s-min=3.2km az=212.0*

DJA ***11*** *15:52:42.5±0.2, 1°S±2°×12°8E±°, h10km, M4.7/19, mB5.2/6, mb5.0/10, MLv4.7/19, Mw(mB)4.7/6*

ISC 11 15:52:40.8±0.4, 0°.96S±0°.04×128°.55E±0°.05, h17km, n87, σ1§97/79, mb4.3/17, MS3.2/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.09**	**325**		**Pn**	**15 53 15.4**	**+0.4**
TNTI	**Ternate**	**2.09**	**325**	P	**Pn**	**15 53 16.0**	**+0.9**
MSAI	**Masohi**	**2.40**	**171**	P	**Pb**	**15 53 23.3**	**-0.4**
NLAI	**Namlea**	**2.69**	**213**	P	**Pn**	**15 53 24.6**	**+1.2**
NLAI				S	**Sn**	**15 53 56.9**	**+1.3**
SWI	**Sorong**	**2.71**	**88**	P	**Pb**	**15 53 26.9**	**-2.0**
AAI	**Ambon**	**2.74**	**187**	P	**Pb**	**15 53 27.1**	**-2.3**
SANI	**Sanana**	**2.78**	**247**	P	**Pn**	**15 53 24.0**	**-0.7**
SANI	**Sanana**	**2.78**	**247**	P	**Pn**	**15 53 23.9**	**-0.7**
SANI				S	**Sn**	**15 53 57.1**	**-0.8**
BNDI	**Bandanaira**	**3.79**	**159**	P	**Pn**	**15 53 41.8**	**+3.3**
FAKI	**Fak Fak**	**4.18**	**118**		**Pn**	**15 53 45.9**	**+2.0**
FAKI	**Fak Fak**	**4.18**	**118**	P	**Pn**	**15 53 46.6**	**+2.7**
FAKI	**Fak Fak**	**4.18**	**118**	P	**Pn**	**15 53 46.5**	**+2.7**
KMSI	**Cibinong**	**4.82**	**288**	P	**Pn**	**15 53 53.7**	**+1.1**
RKPI	**Ransiki, Papua**	**5.65**	**96**	P	**Pg**	**15 54 28.6**	**-0.5**
LUWI	**Luwuk**	**5.78**	**269**		**Pn**	**15 54 05.6**	**-0.3**
LUWI	**Luwuk**	**5.78**	**269**	P	**Pn**	**15 54 05.8**	**-0.1**
LUWI	**Luwuk**	**5.78**	**269**	S	**Sn**	**15 55 09.0**	**-2.9**
LUWI	**Luwuk**	**5.78**	**269**	P	**Pn**	**15 54 05.9**	**0.0**
	281nm,0.7s						
MRSI	**Marisa**	**6.76**	**282**	P	**Pn**	**15 54 18.7**	**-0.7**
	0.5nm767nm57nm,0.5s						
APSI	**Ampana**	**6.90**	**270**	P	**Pn**	**15 54 22.2**	**+0.9**
BBSI	**Bau Bau**	**7.48**	**233**	P	**Pn**	**15 54 33.1**	**+3.9**
	0.5nm1µm184nm,1.0s						
TOLI2	**Tolitoli**	**8.04**	**285**		**Pn**	**15 54 37.6**	**+0.7**
TOLI2	**Tolitoli**	**8.04**	**285**	P	**Pn**	**15 54 39.1**	**+2.2**
TOLI2	**Tolitoli**	**8.04**	**285**	S	**Sn**	**15 56 09.1**	**+1.6**
DAV	**Davao City (W)**	**8.51**	**340**	LR	LR	15 58 20.1	
	comp=Z,122nm,19.4s,baz=286,slow=40						
MPSI	**Mapaga**	**8.75**	**278**	P	**Pn**	**15 54 47.5**	**+0.8**
	25nm,0.8s						
TTSI	**Tana Toraja**	**8.97**	**256**	P	**Pn**	**15 54 50.2**	**+0.5**
	1µm79nm,0.7s						
BNSI	**Bone**	**9.10**	**248**	P	**Pn**	**15 54 53.2**	**+1.7**
	37nm,0.7s						
SPSI	**Sidrap Palu**	**9.27**	**251**	P	**Pn**	**15 54 57.0**	**+3.2**
BKSI	**Bulukumba**	**9.47**	**243**	P	**Pn**	**15 55 00.0**	**+3.5**
	2µm177nm,0.5s						
BSSI	**Bau Bau, Buton**	**9.55**	**237**	P	Pn	15 55 05.7	+8.0
KAPI	**Kappang**	**9.67**	**245**	Pn	**Pn**	**15 55 01.1**	**+1.8**
KAPI	**Kappang**	**9.67**	**245**	Pn	**Pn**	**15 55 02.1**	**+2.8**
	7.5nm,0.3s,baz=69,slow=11,SNR=14						
KAPI				Sn	**Sn**	**15 56 47.1**	**-0.4**
	0.5nm,0.3s,baz=197,slow=19,SNR=1.2						
KAPI				LR	LR	15 58 42.5	
	comp=Z,209nm,18.3s,baz=54,slow=37						
	35nm,0.4s						
MMRI	**Maumere**	**9.89**	**219**	P	Pn	15 54 56.2	-6.1
EDFI	**Ende, Flores**	**10.33**	**221**	P	**Pn**	**15 55 11.0**	**+2.6**
MYLDM	**Lahad Datu**	**11.75**	**301**	P	Pn	15 55 33.8	+6.0
MTN	**Manton Dam**	**12.08**	**168**		**Pn**	**15 55 32.1**	**-0.2**
KNRA	**Kununurra**	**14.63**	**179**		**Pn**	**15 56 06.1**	**-1.1**
TGY	**Tagaytay City**	**16.75**	**334**	LR	LR	16 03 05.5	
	comp=Z,123nm,20.1s,baz=156,slow=37						
FITZ	**Fitzroy Crossi**	**17.27**	**189**	Pn	**Pn**	**15 56 41.4**	**0.0**
FITZ	**Fitzroy Crossi**	**17.27**	**189**	P	**Pn**	**15 56 40.9**	**-0.5**
	0.3nm,0.3s,baz=22,slow=13,SNR=7.9						
FITZ				LR	LR	16 04 05.2	
	comp=Z,138nm,20.0s,baz=18,slow=40						
	3.5nm,1.0s						
COEN	**Coen**	**19.40**	**132**	P	**Pn**	**15 57 09.1**	**+1.7**
WB0	**Warramunga Arr**	**19.55**	**163**	P	**P**	**15 57 06.8**	**-1.1**
WB0				IAmb	IAmb	15 57 13.8	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**19.70**	**164**		**P**	**15 57 07.7**	**-1.8**
WRAB				IAmb	IAmb	15 57 16.7	
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**19.70**	**164**	P	**P**	**15 57 08.8**	**-0.7**
WRA	**Warramunga Arr**	**19.70**	**164**	P	**P**	**15 57 07.9**	**-1.6**
WRA	**Warramunga Arr**	**19.70**	**164**	P	**P**	**15 57 08.3**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=350,slow=12,SNR=28						
WRA				S	**S**	**16 00 41.1**	**-10**
	comp=Z,0.6nm,0.8s,baz=334,slow=23,SNR=2.3						
	comp=Z,10nm,0.9s						
WR8	**Warramunga Arr**	**19.76**	**163**		**P**	**15 57 09.1**	**-1.1**
PMG	**Port Moresby**	**20.33**	**115**	LR	LR	16 06 37.5	
	comp=Z,109nm,21.3s,baz=255,slow=42						
GUMO	**Guam**	**21.69**	**48**	LR	LR	16 05 27.2	
	comp=Z,34nm,20.1s,baz=239,slow=36						
PSA00	**Pilbara Seismi**	**22.18**	**202**	P	**P**	**15 57 35.8**	**-0.5**
QIS	**Mount Isa**	**22.28**	**152**	P	**P**	**15 57 38.1**	**+0.7**
MTSU	**Mount Surprise**	**23.05**	**139**	P	**P**	**15 57 47.8**	**+2.2**
AS31	**Alice Springs**	**23.16**	**167**		**P**	**15 57 46.6**	**-0.1**
AS31				IAmb	IAmb	15 57 58.8	
	comp=Z,6.7nm,0.6s						
ASAR	**Alice Springs**	**23.16**	**167**		**P**	**15 57 46.5**	**-0.2**
ASAR	**Alice Springs**	**23.16**	**167**	P	**P**	**15 57 46.3**	**-0.4**
	comp=Z,2.7nm,0.4s,baz=347,slow=12,SNR=115						
ASAR				S	**S**	**16 01 53.9**	**-3.9**
	comp=Z,1.8nm,0.8s,baz=348,slow=20,SNR=4.8						
ASAR				LR	LR	16 07 14.7	
	comp=Z,97nm,19.5s,baz=341,slow=38						
	comp=Z,2.7nm,0.4s						
HNR	**Honiara**	**32.35**	**106**	LR	LR	16 12 33.9	
	comp=Z,56nm,20.8s,baz=88,slow=37						
CMAR	**Chiang Mai Arr**	**34.92**	**305**	P	**P**	**15 59 32.5**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=133,slow=7.4,SNR=7.0						
	comp=Z,0.3nm,0.3s						
KSRS	**Korea Array**	**38.22**	**359**	P	**P**	**16 00 01.9**	**+2.0**
	comp=Z,1.1nm,0.8s,baz=171,slow=8.6,SNR=2.3						
MJAR	**Matsushiro Arr**	**38.37**	**13**	IAmb	IAmb	16 00 03.4	
	comp=Z,6.9nm,1.4s						
MJAR	**Matsushiro Arr**	**38.37**	**13**	P	**P**	**16 00 01.1**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=194,slow=10,SNR=2.5						
	comp=Z,2.7nm,1.0s						
LSA	**Lhasa**	**46.93**	**314**	P	**P**	**16 01 11.4**	**0.0**
LSA				IAmb	IAmb	16 01 32.4	
	comp=Z,3.7nm,0.6s						
GTA	**Gaotai**	**48.03**	**330**	P	**P**	**16 01 21.2**	**+1.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EVN	**Everest**	**49.28**	**309**		**P**	**16 01 30.0**	**+0.1**
ULN	**Ulaanbaatar**	**52.11**	**342**	P	**P**	**16 01 50.8**	**+0.5**
ULN				IAmb	IAmb	16 01 52.2	
	comp=Z,4.1nm,0.9s						
SONM	**Songino Array**	**52.29**	**341**	P	**P**	**16 01 51.8**	**+0.2**
SONM	**Songino Array**	**52.29**	**341**	P	**P**	**16 01 52.1**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=157,slow=8.8,SNR=7.0						
	comp=Z,1.6nm,0.8s						
THZ	**Tophouse**	**56.92**	**141**	P	**P**	**16 02 25.4**	**+0.2**
RAO	**Raoul Island**	**58.17**	**124**	LR	LR	16 25 58.6	
	comp=Z,118nm,20.1s,baz=284,slow=34						
PETK	**Petropavlovsk-**	**59.12**	**20**	LR	LR	16 32 52.7	
	comp=Z,17nm,18.0s,baz=304,slow=41						
MKAR	**Makanchi Array**	**62.42**	**326**	P	**P**	**16 03 02.6**	**-0.4**
MKAR	**Makanchi Array**	**62.42**	**326**	P	**P**	**16 03 03.0**	**0.0**
	comp=Z,1.6nm,0.8s,baz=112,slow=8.2,SNR=12						
	comp=Z,1.6nm,0.8s						
MAKZ	**Makanchi**	**62.61**	**326**	P	**P**	**16 03 04.1**	**-0.2**
MAKZ				IAmb	IAmb	16 03 10.1	
	comp=Z,4.0nm,1.1s						
MA2	**Magadan**	**62.82**	**12**	LR	LR	16 29 17.1	
	comp=Z,27nm,21.4s,baz=348,slow=35						
ZALV	**Zalesovo Beam**	**65.56**	**333**	P	**P**	**16 03 21.4**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=128,slow=9.3,SNR=3.7						
	comp=Z,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**66.64**	**328**	P	**P**	**16 03 30.3**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=126,slow=6.1,SNR=9.2						
	comp=Z,1.7nm,0.8s						
KURK	**Kurchatov**	**66.65**	**328**	P	**P**	**16 03 30.6**	**+0.1**
KURK				IAmb	IAmb	16 03 36.7	
	comp=Z,5.4nm,0.9s						
BVAR	**Borovoye Array**	**72.22**	**327**	P	**P**	**16 04 03.2**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=122,slow=7.1,SNR=4.3						
	comp=Z,0.9nm,0.8s						
NRIK	**Noril'sk**	**75.38**	**346**	IAmb	IAmb	16 04 31.2	
	comp=Z,3.3nm,0.8s						
NRIK	**Noril'sk**	**75.38**	**346**	P	**P**	**16 04 22.0**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=135,slow=6.5,SNR=8.2						
	comp=Z,1.4nm,0.7s						
SPIA	**Saint Paul Isl**	**75.61**	**30**	P	**P**	**16 04 24.0**	**-0.7**
LVA	**Lava Point**	**76.63**	**33**	P	**P**	**16 04 31.0**	**+0.4**
ABKAR	**Akbulak array**	**76.91**	**321**	P	**P**	**16 04 31.4**	**-0.9**
SII	**Sitkinak Islan**	**83.79**	**33**	P	**P**	**16 05 09.0**	**-0.2**
QSPA	**South Pole Qui**	**88.98**	**180**	P	**P**	**16 05 36.8**	**+2.2**
QSPA				IAmb	IAmb	16 05 45.3	
	comp=Z,1.6nm,0.8s						
QSPA	**South Pole Qui**	**88.98**	**180**	P	**P**	**16 05 37.6**	**+3.1**
	comp=Z,1.1nm,0.7s,baz=270,slow=1.0,SNR=6.1						
QSPA				LR	LR	16 46 18.1	
	comp=Z,46nm,19.0s,baz=352,slow=36						
LPAZ	**La Paz**	**156.23**	**137**	PKP	**PKPdf**	**16 12 35.5**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=278,slow=3.9,SNR=2.3						

CATAC ***11*** *16:03:56.7±0.2, 12°N±2°×8°8W±°, h15km, M4.8/42, MLv4.8/42, Error ellipse: s-maj=4.0km s-min=1.8km az=29.3, confirmed*

NEIC ***11*** *16:03:57.8±2.1, 12°.47N±0°.06×88°.15W±0°.05, h35km±2km, mb4.6/172, Error ellipse: s-maj=11.6km s-min=7.7km az=206.0*

SNET ***11*** *16:03:58.1±1.5, 12°.46N×88°.19W, h40km, ML4.5*

IDC ***11*** *16:04:00.6±1.3, 12°.78N×87°.88W, h70km±12km, mb4.0/10, mbtmp4.3/12, MS2.8/6, Error ellipse: s-maj=35.0km s-min=9.0km az=44.0*

GCG ***11*** *16:04:02.0±1.1, 12°.62N×88°.41W, h35km±319km, MD4.4*

ISC 11 16:03:58.3±1.0, 12°46N±0°.05×88°20W±0°.03, h55km±9km, n241, σ1§01/210, mb4.6/86, MS2.9/4, 13C-10D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POTN	**Potosi Cosigui**	**0.86**	**52**	§P	**Pn**	**16 04 14.4**	**0.0**
POTN				S	**Sn**	**16 04 26.0**	**-0.2**
CNCH	**Conchagua**	**0.88**	**24**	*e*P	**Pn**	**16 04 15.0**	**+0.1**
CNCH				*e*S	**Sn**	**16 04 27.7**	**+0.8**
CNCH	**Conchagua**	**0.88**	**24**	P	**Pn**	**16 04 15.0**	**+0.1**
LCND	**La Caada**	**0.89**	**20**	*e*P	**Pn**	**16 04 14.7**	**-0.1**
LCND				*e*P		16 04 14.8	
LCND				*e*S	**Sn**	**16 04 26.8**	**-0.2**
LCND	**La Caada**	**0.89**	**20**	§P	**Pn**	**16 04 14.9**	**+0.1**
LCY	**Lacayo**	**0.96**	**354**	*e*P	**Pn**	**16 04 15.8**	**0.0**
VSM	**San Miguel**	**0.96**	**356**	*e*P	**Pn**	**16 04 16.0**	**0.0**
RANC	**El Ranchito**	**0.97**	**355**	*e*P	**Pn**	**16 04 16.0**	**0.0**
BLLM	**Bellamira**	**0.97**	**358**	*e*P	**Pn**	**16 04 16.1**	**+0.1**
CNRM	**Centro Naciona**	**1.01**	**1**	*e*P	**Pn**	**16 04 16.5**	**+0.1**
CNRM	**Centro Naciona**	**1.01**	**1**	S	**Sn**	**16 04 30.7**	**+1.1**
CNRM	**Centro Naciona**	**1.01**	**1**	P	**Pn**	**16 04 16.7**	**+0.4**
PACA	**Pacayal**	**1.01**	**353**	*e*P	**Pn**	**16 04 16.7**	**+0.2**
PACA				*e*S	**Sn**	**16 04 29.8**	**0.0**
PACA	**Pacayal**	**1.01**	**353**	⇑P	**Pn**	**16 04 16.7**	**+0.2**
TECA	**Tecapa**	**1.07**	**344**	*e*P	**Pn**	**16 04 17.3**	**0.0**
CRIN	**San Cristobal**	**1.14**	**78**		**Pn**	**16 04 18.7**	**+0.5**
CRIN				Sn	**Sn**	**16 04 32.4**	**-0.6**
CRIN	**San Cristobal**	**1.14**	**78**	S	**Sn**	**16 04 35.3**	**+2.3**
CRIN	**San Cristobal**	**1.14**	**78**	§P	**Pn**	**16 04 18.9**	**+0.7**
PKGN	**Cerro Pekin**	**1.21**	**80**	§P	**Pn**	**16 04 19.3**	**+0.3**
PKGN				S	**Sn**	**16 04 36.3**	**+1.9**
PQSS	**Presa 15 de Se**	**1.21**	**343**	*e*P	**Pn**	**16 04 19.5**	**+0.5**
PQSS				*e*S	**Sn**	**16 04 33.3**	**-1.1**
PQSS	**Presa 15 de Se**	**1.21**	**343**	P	**Pn**	**16 04 19.7**	**+0.6**
TECO	**Alcaldia de Te**	**1.21**	**332**	*e*P	**Pn**	**16 04 18.7**	**-0.4**
TECO				*e*S	**Sn**	**16 04 33.2**	**-1.3**
TECO	**Alcaldia de Te**	**1.21**	**332**	⇑P	**Pn**	**16 04 18.8**	**-0.3**
CAHU	**Cacaotique**	**1.30**	**359**	*e*P	**Pn**	**16 04 21.3**	**+0.8**
UESV	**Universidad de**	**1.30**	**334**	*e*P	**Pn**	**16 04 20.7**	**+0.4**
UESV	**Universidad de**	**1.30**	**334**	P	**Pn**	**16 04 20.7**	**+0.4**
SNVI	**San Vicente**	**1.30**	**331**	*e*P	**Pn**	**16 04 20.6**	**+0.1**
HERN	**Volcan Telica**	**1.34**	**84**		**Pn**	**16 04 20.0**	**-0.9**
HERN				Sn	**Sn**	**16 04 36.8**	**-0.9**
POLN	**Al Sur del Vol**	**1.36**	**82**	§P	**Pn**	**16 04 21.0**	**-0.1**
LFRS	**El Faro**	**1.43**	**324**	*e*P	**Pn**	**16 04 21.8**	**-0.3**
PAVA	**Las Pavas**	**1.44**	**330**	*e*P	**Pn**	**16 04 22.1**	**-0.1**
PAVA				*e*S	**Sn**	**16 04 40.2**	**+0.1**
PAVA	**Las Pavas**	**1.44**	**330**	§P	**Pn**	**16 04 22.3**	**+0.1**
CNGA	**Al SSO del Vol**	**1.46**	**89**	§P	**Pn**	**16 04 22.5**	**0.0**
CNGN	**Cerro Negro**	**1.46**	**88**		**Pn**	**16 04 22.4**	**-0.1**
CNGN	**Cerro Negro**	**1.46**	**88**	§P	**Pn**	**16 04 22.5**	**0.0**
PANCS	**Alcalda de**	**1.49**	**320**	P	**Pn**	**16 04 23.7**	**+0.8**
PANCS	**Alcalda de**	**1.49**	**320**	S	**Sn**	**16 04 41.0**	**-0.3**
LALI	**Alcalda de L**	**1.50**	**313**	*e*P	**Pn**	**16 04 22.7**	**-0.1**
LALI	**Alcalda de L**	**1.50**	**313**	*e*P	**Pn**	**16 04 22.8**	**-0.1**
LALI	**Alcalda de L**	**1.50**	**313**	P	**Pn**	**16 04 22.9**	**0.0**
LOMA	**Loma Larga**	**1.51**	**321**	*e*P	**Pn**	**16 04 23.0**	**-0.2**
LOMA	**Loma Larga**	**1.51**	**321**	⇑P	**Pn**	**16 04 23.2**	**0.0**
LBRS	**Las Brisas**	**1.51**	**327**	*e*P	**Pn**	**16 04 23.6**	**+0.4**
UDBS	**Universidad Do**	**1.56**	**323**	P	**Pn**	**16 04 25.5**	**+1.7**
UDBS	**Universidad Do**	**1.56**	**323**	S	**Sn**	**16 04 42.6**	**-0.3**
IGN	**Direccin Gen**	**1.56**	**323**	*e*P	**Pn**	**16 04 24.1**	**+0.3**
IGN	**Direccin Gen**	**1.56**	**323**	P	**Pn**	**16 04 24.5**	**+0.6**
IGN	**Direccin Gen**	**1.56**	**323**	S	**Sn**	**16 04 43.2**	**+0.1**
UTEC	**Universidad Te**	**1.57**	**322**	*e*P	**Pn**	**16 04 24.5**	**+0.5**
UTEC				*e*S	**Sn**	**16 04 42.9**	**-0.4**
UESS	**Universidad de**	**1.59**	**322**	*e*P	**Pn**	**16 04 25.1**	**+0.9**
UESS				*e*S	**Sn**	**16 04 43.7**	**0.0**
COPN	**Copaltepe**	**1.59**	**100**	§P	**Pn**	**16 04 24.4**	**+0.1**
UEES	**Universidad Ev**	**1.61**	**321**	*e*P	**Pn**	**16 04 25.1**	**+0.6**
UEES	**Universidad Ev**	**1.61**	**321**	P	**Pn**	**16 04 24.8**	**+0.3**
UEES	**Universidad Ev**	**1.61**	**321**	S	**Sn**	**16 04 45.5**	**+1.3**
MAGS	**Ministerio de**	**1.61**	**319**	*e*P	**Pn**	**16 04 24.9**	**+0.3**
MAGS				*e*S	**Sn**	**16 04 44.3**	**-0.1**
MOM3	**MOM3**	**1.64**	**88**	§P	**Pn**	**16 04 25.1**	**+0.2**
MOM3				S	**Sn**	**16 04 45.8**	**+0.9**
PIC2	**El Picacho**	**1.64**	**321**	*e*P	**Pn**	**16 04 25.7**	**+0.6**
BOQS	**Boqueron**	**1.65**	**320**	*e*P	**Pn**	**16 04 25.6**	**+0.4**
BOQS				*e*S	**Sn**	**16 04 46.3**	**+0.9**
JAYA	**Jayaque - finc**	**1.70**	**314**	*e*P	**Pn**	**16 04 25.3**	**-0.5**
JAYA				*e*S	**Sn**	**16 04 45.4**	**-1.2**
JAYA	**Jayaque - finc**	**1.70**	**314**	*e*P	**Pn**	**16 04 25.4**	**-0.5**
JAYA	**Jayaque - finc**	**1.70**	**314**	P	**Pn**	**16 04 25.4**	**-0.5**
QUEZ	**Alcaldia de Qu**	**1.72**	**323**	*e*S	**Sn**	**16 04 46.6**	**-0.3**
CEDA	**San Andres**	**1.77**	**319**	*e*P	**Pn**	**16 04 27.2**	**+0.5**
APYN	**Apoyeque**	**1.82**	**97**	P	**Pn**	**16 04 28.1**	**+0.8**
APYN				S	**Sn**	**16 04 49.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.82**	**29**		**Pn**	**16 04 28.6**	**+1.2**
TGUH	**Tegucigalpa,Un**	**1.82**	**29**	⇑P	**Pn**	**16 04 28.7**	**+1.2**
LLGN	**La Laguna**	**1.84**	**337**	*e*P	**Pn**	**16 04 27.9**	**+0.2**
LLGN	**La Laguna**	**1.84**	**337**	P	**Pn**	**16 04 28.5**	**+0.8**
LLGN	**La Laguna**	**1.84**	**337**	S	**Sn**	**16 04 51.5**	**+1.6**
APQ2	**Apoyeque**	**1.85**	**98**	P	**Pn**	**16 04 28.3**	**+0.6**
APQ2				S	**Sn**	**16 04 50.3**	**+0.3**
APQ2	**Apoyeque**	**1.85**	**98**	⇑P	**Pn**	**16 04 28.1**	**+0.4**
APQ2				S	**Sn**	**16 04 50.7**	**+0.7**
APQN	**BB Volcan Apoy**	**1.87**	**97**	P	**Pn**	**16 04 27.5**	**-0.5**
ABCN	**Banco Central**	**1.88**	**100**	P	**Pn**	**16 04 28.8**	**+0.8**
ABCN	**Banco Central**	**1.88**	**100**	S	**Sn**	**16 04 50.9**	**+0.2**
LIMN	**Finca el Limon**	**1.88**	**71**	⇑P	**Pn**	**16 04 28.6**	**+0.4**
LIMN				S	**Sn**	**16 04 52.1**	**+1.2**
ALLN	**Telcor Managua**	**1.90**	**99**	S	**Sn**	**16 04 52.0**	**+0.7**
TISN	**Laguna Tiscapa**	**1.91**	**99**	⇑P	**Pn**	**16 04 29.0**	**+0.5**
USIM	**UNAN**	**1.91**	**100**		**Pn**	**16 04 29.4**	**+0.8**
CRUN	**El Crucero**	**1.91**	**104**	P	**Pn**	**16 04 28.0**	**-0.7**
UNAN	**Cigeo UNAN**	**1.92**	**100**	P	**Pn**	**16 04 29.2**	**+0.6**
MGAN	**Managua**	**1.93**	**99**		**Pn**	**16 04 28.8**	**0.0**
MGAN	**Managua**	**1.93**	**99**	P	**Pn**	**16 04 29.1**	**+0.3**
MGAN	**Managua**	**1.93**	**99**	S	**Sn**	**16 04 52.5**	**+0.5**
CEVE	**Cerro Verde**	**1.94**	**314**	*e*P	**Pn**	**16 04 30.4**	**+1.1**
CEVE	**Cerro Verde**	**1.94**	**314**	P	**Pn**	**16 04 30.3**	**+1.1**
SBLS	**San Blas**	**1.95**	**315**	*e*P	**Pn**	**16 04 30.2**	**+0.9**
SNJE	**San Jose**	**1.96**	**316**	*e*P	**Pn**	**16 04 29.9**	**+0.5**
YUSH	**Yuscaran**	**1.98**	**42**	S	**Sn**	**16 04 54.4**	**+1.0**
YUSH	**Yuscaran**	**1.98**	**42**	⇑P	**Pn**	**16 04 30.5**	**+0.8**
YUSH				Pn	Pn

comp=Z,12nm,0.5s
ALPN Alpine 22.85 324 IAmb IAmb 16 08 58.5
comp=Z,19nm,1.1s
BG3 Lake Jocassee 22.93 11 IAmb IAmb 16 08 59.7
comp=Z,34nm,1.2s
PAULI Pauline 23.00 14 IAmb IAmb 16 09 00.4
comp=Z,21nm,0.8s
WHAR Wooly Hollow 23.03 351 **P** **16 08 59.0 +0.2**
WHAR IAmb IAmb 16 09 00.0
comp=Z,20nm,0.9s
CPCT Cooper Cave 23.13 8 **P** **16 08 59.0 -0.8**
CPCT IAmb IAmb 16 09 01.9
comp=Z,11nm,0.7s
BIRD Birdtown, Kers 23.18 16 P **P** **16 09 00.1 -0.2**
BIRD IAmb IAmb 16 09 01.6
comp=Z,24nm,0.8s
KMSC Kings Mountain 23.42 14 IAmb IAmb 16 09 04.5
comp=Z,17nm,0.7s
TKL Tuckaleechee C 23.44 9 P **P** **16 09 03.3 +0.5**
TKL IAmb IAmb 16 09 04.9
comp=Z,24nm,0.8s
APMT Aspermont 23.45 334 IAmb IAmb 16 09 04.9
comp=Z,36nm,1.3s
V53A Saluda 23.61 11 IAmb IAmb 16 09 07.4
comp=Z,19nm,0.7s
W57A Gilead 23.78 17 IAmb IAmb 16 09 06.8
comp=Z,15nm,0.7s
V55A Taylorsville 24.13 14 IAmb IAmb 16 09 12.2
comp=Z,14nm,0.9s
HHAR Hobbs 24.27 349 IAmb IAmb 16 09 12.4
comp=Z,18nm,0.6s
PBMO Poplar Bluff 24.30 356 IAmb IAmb 16 09 11.6
comp=Z,15nm,0.8s
TZTN Tazewell 24.34 9 P **P** **16 09 11.2 +0.1**
TZTN IAmb IAmb 16 09 14.5
comp=Z,17nm,1.1s
T47A Sharon Grove 24.44 2 IAmb IAmb 16 09 13.6
comp=Z,19nm,0.8s
U38A Gravette 24.52 348 IAmb IAmb 16 09 15.1
comp=Z,16nm,0.9s
U56A King 24.80 15 IAmb IAmb 16 09 18.7
comp=Z,13nm,0.8s
CCM Cathedral Cave 25.63 354 P **P** **16 09 22.0 -0.7**
CCM IAmb IAmb 16 09 23.2
comp=Z,12nm,0.8s
WCI Wyandotte Cave 25.72 3 P **P** **16 09 23.2 -0.3**
WCI IAmb IAmb 16 09 23.5
comp=Z,15nm,0.6s
NOKA Waynoka 25.93 340 P **P** **16 09 25.2 -0.3**
R55A Marlinton 26.70 14 P **P** **16 09 32.9 +0.4**
R55A IAmb IAmb 16 09 33.7
comp=Z,9,8nm,0.9s
121A Cookes Peak, D 26.86 321 IAmb IAmb 16 09 40.0
comp=Z,10nm,0.9s
Q54A Coxs Mills 27.21 13 IAmb IAmb 16 09 37.8
comp=Z,16nm,1.0s
RTBA Rita Blanca 27.23 334 IAmb IAmb 16 09 39.0
comp=Z,13nm,0.6s
Y22A Socorro 27.37 324 IAmb IAmb 16 09 42.8
comp=Z,8.9nm,0.8s
P38A Dawn 27.46 351 IAmb IAmb 16 09 39.9
comp=Z,13nm,0.6s
P53A Whipple 27.58 11 IAmb IAmb 16 09 41.5
comp=Z,18nm,1.1s
Q56A Snyder Ridge, 27.65 15 IAmb IAmb 16 09 43.9
comp=Z,7.0nm,0.7s
TASM ASL Pad. Albuq 27.84 327 IAmb IAmb 16 09 48.9
comp=Z,2.7nm,0.7s
O52A Adamsville 28.11 10 P **P** **16 09 44.9 -0.1**
P57A Homestead Farm 28.38 17 P **P** **16 09 48.2 +0.8**
P57A IAmb IAmb 16 09 49.0
comp=Z,14nm,1.0s
T25A Trinidad 28.55 332 IAmb IAmb 16 09 53.2
comp=Z,9.9nm,0.7s
PV18 Skein Mesa, Pa 31.62 328 IAmb IAmb 16 10 19.1
comp=Z,9.9nm,0.7s
PV17 East Wray Mesa 31.67 328 IAmb IAmb 16 10 19.5
comp=Z,6.5nm,0.6s
PV16 Nyswonger Mesa 31.67 328 IAmb IAmb 16 10 19.7
comp=Z,6.9nm,1.0s
PV19 Morning Glory 31.71 328 IAmb IAmb 16 10 19.8
comp=Z,9.0nm,0.8s
PV20 West Nyswonger 31.72 328 IAmb IAmb 16 10 20.0
comp=Z,6.9nm,0.8s
PV04 Paradox Valley 31.73 328 IAmb IAmb 16 10 20.1
comp=Z,6.4nm,0.8s
PV23 Carpenter Ridg 31.83 328 IAmb IAmb 16 10 22.3
comp=Z,11nm,1.2s
ECSD EROS Data Cent 31.99 348 IAmb IAmb 16 10 20.4
comp=Z,7.7nm,0.9s
HMU Henry Mountain 32.38 326 IAmb IAmb 16 10 27.3
comp=Z,5.1nm,0.7s
DANC Danby, Needles 33.10 316 P **P** **16 10 30.8 +1.7**
DANC IAmb IAmb 16 10 32.6
comp=Z,5.8nm,1.0s
RSSD Black Hills 34.36 340 **P** **16 10 41.0 +0.8**
RSSD IAmb IAmb 16 10 42.4
comp=Z,6.3nm,0.6s
LPAZ La Paz 34.78 145 P **P** **16 10 45.4 +0.9**
comp=Z,0.5nm,0.4s,baz=18,slow=6.4,SNR=2.4
LPAZ LR LR 16 24 08.4
comp=Z,35nm,20.5s,baz=346,slow=35
comp=Z,0.5nm,0.4s
TCUT Toone Canyon 35.05 329 IAmb IAmb 16 10 49.8
comp=Z,6.6nm,0.6s
BW06 Boulder Array 35.42 332 IAmb IAmb 16 10 51.9
comp=Z,8.1nm,1.2s
PD31 Pinedale Array 35.42 332 IAmb IAmb 16 10 52.0
comp=Z,8.0nm,1.2s
PDAR Pinedale Array 35.42 332 P **P** **16 10 49.4 0.0**
PDAR Pinedale Array 35.42 332 P **P** **16 10 49.8 +0.4**
comp=Z,1.9nm,0.7s,baz=129,slow=9.7,SNR=16
PDAR PcP **PcP** **16 13 18.4 +0.1**
comp=Z,0.7nm,0.4s,baz=122,slow=4.9,SNR=11
comp=Z,1.9nm,0.7s
HWUT Hardware Ranch 35.49 329 IAmb IAmb 16 10 51.8
comp=Z,7.2nm,0.9s
AHID Auburn Hatcher 36.13 331 IAmb IAmb 16 10 57.5
comp=Z,7.1nm,0.6s
LOHW Long Hollow 36.56 332 IAmb IAmb 16 11 00.9
comp=Z,8.2nm,0.8s
TPAW Teton Pass 36.62 332 IAmb IAmb 16 11 06.1
comp=Z,11nm,0.8s
MOOW Moose Ponds 36.73 332 IAmb IAmb 16 11 02.2
comp=Z,5.2nm,0.7s
FLWY Flagg Ranch 36.97 333 IAmb IAmb 16 11 05.1
comp=Z,11nm,0.8s
NVAR Mina Array Bea 37.22 319 P **P** **16 11 06.3 +1.6**
comp=Z,1.4nm,0.8s,baz=130,slow=7.8,SNR=9.1
NVAR PcP **PcP** **16 13 24.9 +1.2**
comp=Z,1.7nm,0.7s,baz=95,slow=2.7,SNR=10
comp=Z,1.4nm,0.8s
YMP Mirror Lake Pl 37.25 334 IAmb IAmb 16 11 17.5
comp=Z,11nm,1.1s
YFT Old Faithful 37.32 333 IAmb IAmb 16 11 11.1
comp=Z,13nm,1.0s
YNE Yellowstone No 37.40 334 IAmb IAmb 16 11 07.4
comp=Z,8.9nm,0.7s
YNR Norris Junctio 37.46 333 IAmb IAmb 16 11 09.4
comp=Z,6.8nm,0.8s
YHL Hebgen Lake 37.78 333 IAmb IAmb 16 11 14.6
comp=Z,11nm,1.1s
ULM Lac du Bonnet 38.20 352 P **P** **16 11 10.4 -2.2**
comp=Z,6.5nm,0.5s,baz=147,slow=7.4,SNR=6.1
comp=Z,6.5nm,0.5s
BOZ Bozeman (W) 38.57 333 IAmb IAmb 16 11 17.9
comp=Z,7.5nm,0.8s
DLMT Dillon 38.81 332 IAmb IAmb 16 11 20.3
comp=Z,13nm,1.0s
EGMT Eagleton 39.76 337 IAmb IAmb 16 11 27.3
comp=Z,13nm,0.8s
PLID Pearl Lake 40.24 329 **P** **16 11 30.0 0.0**
OVMT Ovando 40.30 334 P **P** **16 11 30.5 +0.1**
MSO Missoula 40.54 333 **P** **16 11 33.0 +0.7**
MSO IAmb IAmb 16 11 33.7
comp=Z,14nm,1.1s
F10A Beach Ranch, E 41.47 329 P **P** **16 11 40.7 +0.7**
YBH Yreka Blue Hor 41.88 321 LR LR 16 30 58.4
comp=Z,5.2nm,19.1s,baz=48,slow=39
HOOD Mount Hood Mea 43.37 326 IAmb IAmb 16 11 58.1
comp=Z,19nm,1.2s
FFC Flin Flon 43.54 348 P **P** **16 11 56.4 -0.1**
FFC IAmb IAmb 16 11 56.5
comp=Z,10nm,0.9s
RPN Rapa Nui 44.38 207 LR LR 16 25 47.5
comp=Z,37nm,20.9s,baz=306,slow=29
SCHQ Schefferville 45.48 17 P **P** **16 12 10.3 -1.7**
comp=Z,7.7nm,0.4s,baz=212,slow=6.3,SNR=37
comp=Z,7.7nm,0.4s
FCC Fort Churchill 46.42 356 P **P** **16 12 18.2 -1.0**
LLLB Lillooet 46.91 331 **P** **16 12 24.0 +0.6**
YKA Yellowknife Ar 53.41 345 P **P** **16 13 11.3 -1.0**
comp=Z,2.3nm,0.7s,baz=73,slow=6.6,SNR=16
YKA PcP **PcP** **16 14 18.0 -0.8**
comp=Z,1.4nm,0.7s,baz=156,slow=3.5,SNR=4.3
comp=Z,2.3nm,0.7s
G29M Pine Creek 63.54 340 P **P** **16 14 22.4 -0.4**
G29M IAmb IAmb 16 14 37.9
comp=Z,6.6nm,1.2s
I26K Coal Creek Min 64.52 338 IAmb IAmb 16 14 29.5
comp=Z,3.7nm,1.0s
E28M Babbage River 64.95 342 IAmb IAmb 16 14 32.0
comp=Z,3.7nm,0.7s
ILAR Eielson Array 65.72 336 P **P** **16 14 36.0 -0.9**
comp=Z,1.7nm,0.8s,baz=163,slow=4.7,SNR=39
comp=Z,1.7nm,0.8s
RND Reindeer 65.99 335 P **P** **16 14 39.1 +0.3**
I23K Minto, Yukon-K 66.83 336 IAmb IAmb 16 14 45.6
comp=Z,4.2nm,0.8s
MLY Manley 67.34 336 **P** **16 14 46.8 -0.5**
ARCES ARCESS Array B 86.41 19 P **P** **16 16 32.5 -1.9**
comp=Z,1.4nm,0.8s,baz=299,slow=4.9,SNR=4.0
comp=Z,1.4nm,0.8s
SEY Seymchan 91.65 337 P **P** **16 16 59.0 -0.3**
comp=Z,1.4nm,0.6s,baz=90,slow=16,SNR=6.1
comp=Z,1.4nm,0.6s
KURK Kurchatov 116.04 9 **PKiKP** **16 22 33.9 -1.3**
KURBB Kurchatov Arra 116.12 9 PKP **PKiKP** **16 22 33.9 -1.5**
comp=Z,0.5nm,0.8s,baz=330,slow=3.2,SNR=4.4
SONM Songino Array 118.58 349 PKP **PKPdf** **16 22 40.1 -0.2**
comp=Z,0.6nm,0.5s,baz=12,slow=1.5,SNR=4.5
MKAR Makanchi Array 120.40 8 PKP **PKPdf** **16 22 43.1 -0.7**
comp=Z,0.4nm,0.7s,baz=313,slow=2.9,SNR=2.3
WRA Warramunga Arr 138.57 254 PKhKP PKPpre 16 23 14.8
comp=Z,0.3nm,0.5s,baz=92,slow=3.1,SNR=7.3
ASAR Alice Springs 138.60 248 PKhKP PKPpre 16 23 15.1
comp=Z,0.2nm,0.4s,baz=105,slow=3.0,SNR=1.9
CMAR Chiang Mai Arr 148.48 347 **PKPbc** **16 23 39.9 +0.1**
CMAR Chiang Mai Arr 148.48 347 PKPbc **PKPdf** **16 23 37.4 +1.1**
comp=Z,3.2nm,0.6s,baz=6.2,slow=2.3,SNR=16

IDC 11 16:07:22.5±8.4, 7.60S×128.88E, h138km±89km, mb3.3/1, mbtmp3.5/5, Error ellipse: s-maj=80.6km s-min=25.6km az=36.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.77**	**243**	P		Pn	16 08 47.1	+1.0
	15nm,0.4s,baz=89,slow=5.0,SNR=6.6							
BATI				S		Sn	16 09 51.6	+0.2
	9.5nm,0.3s,baz=2.9,slow=12,SNR=2.3							
FITZ	**Fitzroy Crossi**	**10.90**	**197**	P		Pn	16 09 54.0	-0.8
	0.5nm,0.3s,baz=28,slow=11,SNR=8.1							
FITZ				S		Sn	16 11 47.3	-7.8
	1.0nm,0.3s,baz=239,slow=18,SNR=6.2							
WRA	**Warramunga Arr**	**13.36**	**157**	P		Pn	16 10 25.9	-0.9
	0.3nm,0.6s,baz=336,slow=14,SNR=10							
WRA				S		Sn	16 12 46.2	-8.3
	0.9nm,0.6s,baz=326,slow=24,SNR=9.3							
ASAR	**Alice Springs**	**16.68**	**164**	P		Pn	16 11 09.6	+1.3
	0.2nm,0.6s,baz=326,slow=9.2,SNR=12							
ASAR				S		Sn	16 14 06.2	-8.3
	0.2nm,0.5s,baz=349,slow=24,SNR=5.7							
MKAR	**Makanchi Array**	**68.13**	**327**	P		P	16 18 07.5	-0.1
	0.4nm,0.5s,baz=113,slow=9.4,SNR=5.6							
	0.4nm,0.5s							

*MOS **11** 16:14:31.3±1.0, 48.85N×154.49E, h48km, mb3.9/1, Error ellipse: s-maj=25.3km s-min=4.8km az=70.8*
*SKHL **11** 16:14:34.3±0.4, 48.70N×155.40E, h86km±8km, mb4.4/3, msha5.2/4*
*KRSC **11** 16:14:35.8±2.2, 48.84N×156.48E, h39km±25km, Ml4.3*
*IDC **11** 16:14:37.6±2.4, 49.07N×154.73E, h91km±21km, mb3.3/11, mbtmp3.6/13, Error ellipse: s-maj=24.4km s-min=15.3km az=128.0*

ISC 11 16:14:32.7±0.8, 48.71N±0.09×155.4E±0.1, h50km, n84, σ2.855/86, mb3.6/11, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.03**	**13**	PN		**Pn**	**16 15 05.1**	**+0.8**
SKR				S		**Sn**	**16 15 27.7**	**-0.7**
SKR	**Severo-Kuril's**	**2.03**	**13**	*eP*		**Pn**	**16 15 05.1**	**+0.8**
SKR				*eS*		**Sn**	**16 15 27.8**	**-0.7**
SKR	**Severo-Kuril's**	**2.03**	**13**	*eP*		**Pn**	**16 15 05.5**	**+1.2**
SKR				AMB		AMB	16 15 05.6	
	40nm,0.4s							
SKR				*eS*		**Sn**	**16 15 27.8**	**-0.7**
SKR				A		A	16 15 32.6	
	270nm,0.4s							
SKR				A		A	16 15 32.6	
	330nm,0.4s							
PAU	**Pauzhetka**	**2.90**	**17**	PN		**Pn**	**16 15 18.5**	**+2.2**
PAU				S		**Sn**	**16 15 52.1**	**+2.2**
PAU	**Pauzhetka**	**2.90**	**17**	*eP*		**Pn**	**16 15 18.5**	**+2.2**
PAU				*eS*		**Sn**	**16 15 52.2**	**+2.2**
PAU	**Pauzhetka**	**2.90**	**17**	*eP*		**Pn**	**16 15 19.2**	**+2.9**
PAU				AMB		AMB	16 15 22.6	
	30nm,0.2s							
PAU				*eS*		**Sn**	**16 15 51.0**	**+1.1**
PAU				A		A	16 15 56.0	
	300nm,0.2s							
PAU				A		A	16 15 56.0	
	300nm,0.2s							
KDTR	**Khodutka, Kamc**	**3.54**	**28**	PN		**Pn**	**16 15 26.5**	**+1.5**
KDTR	**Khodutka, Kamc**	**3.54**	**28**	*eP*		**Pn**	**16 15 26.5**	**+1.5**
KDTR				*eS*		**Sn**	**16 16 05.2**	**-0.4**
KDTR	**Khodutka, Kamc**	**3.54**	**28**	*eP*		**Pn**	**16 15 26.5**	**+1.5**
MIPR	**Malaya Ipel'ka**	**3.67**	**13**	PN		**Pn**	**16 15 29.2**	**+2.3**
MIPR	**Malaya Ipel'ka**	**3.67**	**13**	*eP*		**Pn**	**16 15 29.2**	**+2.3**
ASAK	**Asacha**	**4.00**	**22**	PN		**Pn**	**16 15 34.4**	**+2.9**
ASAK	**Asacha**	**4.00**	**22**	*eP*		**Pn**	**16 15 34.4**	**+2.9**
MTVR	**Mutnovka**	**4.17**	**24**	PN		**Pn**	**16 15 36.0**	**+2.2**
MTVR	**Mutnovka**	**4.17**	**24**	*eP*		**Pn**	**16 15 36.1**	**+2.2**
MTVR				*eS*		**Sn**	**16 16 21.8**	**+0.5**
GRL	**Gorelyy**	**4.20**	**23**	PN		**Pn**	**16 15 37.3**	**+3.1**
GRL	**Gorelyy**	**4.20**	**23**	*eP*		**Pn**	**16 15 37.3**	**+3.1**
RUS	**Russkaya**	**4.22**	**27**	PN		**Pn**	**16 15 35.7**	**+1.4**
RUS	**Russkaya**	**4.22**	**27**	*eP*		**Pn**	**16 15 35.7**	**+1.4**
RUS				*eS*		**Sn**	**16 16 21.8**	**-0.4**
RUS	**Russkaya**	**4.22**	**27**	*eP*		**Pn**	**16 15 35.7**	**+1.4**
KRMR	**Karymshinskiy**	**4.47**	**22**	PN		**Pn**	**16 15 41.7**	**+3.9**
KRMR	**Karymshinskiy**	**4.47**	**22**	*eP*		**Pn**	**16 15 41.7**	**+3.9**
KRMR	**Karymshinskiy**	**4.47**	**22**	*eP*		**Pn**	**16 15 41.7**	**+3.9**
PEA0B	**Petropavlovsk-**	**4.64**	**17**	PN		**Pn**	**16 15 42.8**	**+2.7**
PETK	**Petropavlovsk-**	**4.64**	**17**	P		**Pn**	**16 15 42.3**	**+2.2**
	2.3nm,0.4s,baz=188,slow=11,SNR=49							
PETK				S		**Sn**	**16 16 33.9**	**+1.3**
	2.6nm,0.7s,baz=155,slow=24,SNR=1.8							
PET	**Petropavlovsk**	**4.78**	**24**	*e*PN		**Pn**	**16 15 44.9**	**+2.9**
PET	**Petropavlovsk**	**4.78**	**24**	*eP*		**Pn**	**16 15 44.2**	**+2.2**
PET				*eS*		**Sn**	**16 16 36.1**	**0.0**
PET	**Petropavlovsk**	**4.78**	**24**	*eP*		**Pn**	**16 15 44.9**	**+2.9**
PET				*eS*		**Sn**	**16 16 37.6**	**+1.5**
PET				A		A	16 16 48.6	
	40nm,0.5s							
PET				A		A	16 16 48.6	
	40nm,0.5s							
INSR	**Institute**	**4.81**	**24**	*eS*		**Sn**	**16 16 35.9**	**-0.8**
DALK	**Dalny**	**4.81**	**25**	PN		**Pn**	**16 15 44.5**	**+2.0**
DALK	**Dalny**	**4.81**	**25**	*eP*		**Pn**	**16 15 44.6**	**+2.0**
UGLR	**Uglovaya**	**4.99**	**24**	PN		**Pn**	**16 15 48.0**	**+2.9**
UGLR	**Uglovaya**	**4.99**	**24**	*eP*		**Pn**	**16 15 48.0**	**+2.9**
KOK	**Koryaka**	**5.02**	**23**	PN		**Pn**	**16 15 49.1**	**+3.7**
KOK	**Koryaka**	**5.02**	**23**	*eP*		**Pn**	**16 15 49.2**	**+3.7**
KOK	**Koryaka**	**5.02**	**23**	*eP*		**Pn**	**16 15 49.1**	**+3.7**
AVH	**Avacha**	**5.02**	**23**	PN		**Pn**	**16 15 49.4**	**+4.0**
AVH	**Avacha**	**5.02**	**23**	*eP*		**Pn**	**16 15 49.4**	**+4.0**
SMAR	**Somma**	**5.04**	**24**	PN		**Pn**	**16 15 48.1**	**+2.4**
SMAR	**Somma**	**5.04**	**24**	*eP*		**Pn**	**16 15 48.1**	**+2.4**
KRER	**Koryakskii**	**5.06**	**23**	PN		**Pn**	**16 15 49.0**	**+3.0**
KRER	**Koryakskii**	**5.06**	**23**	*eP*		**Pn**	**16 15 49.1**	**+3.0**
SDLR	**Sedlovina**	**5.07**	**24**	PN		**Pn**	**16 15 48.1**	**+2.0**
SDLR	**Sedlovina**	**5.07**	**24**	*eP*		**Pn**	**16 15 48.2**	**+2.0**
KRX	**Arik**	**5.08**	**22**	PN		**Pn**	**16 15 49.3**	**+3.0**
KRX	**Arik**	**5.08**	**22**	*eP*		**Pn**	**16 15 49.3**	**+3.0**
NLC	**Nalytchevo**	**5.11**	**28**	*eS*		**Sn**	**16 16 41.4**	**-2.8**
KUR	**Kuril'sk**	**6.23**	**239**	*e*PN		**Pn**	**16 16 03.7**	**+1.8**
KUR	**Kuril'sk**	**6.23**	**239**	*eP*		**Pn**	**16 16 03.8**	**+1.8**
KUR				AMB		AMB	16 16 07.2	
	30nm,0.4s							
KUR				*eS*		**Sn**	**16 17 11.2**	**-0.5**
KUR				A		A	16 17 16.5	
	30nm,0.6s							
KUR				A		A	16 17 16.5	
	40nm,0.6s							
MKZ	**Mys Kozlova**	**7.05**	**31**	PN		**Pn**	**16 16 13.9**	**+0.8**
MKZ	**Mys Kozlova**	**7.05**	**31**	*eP*		**Pn**	**16 16 13.9**	**+0.8**
KZV	**Kizimen**	**7.08**	**23**	PN		**Pn**	**16 16 16.2**	**+2.4**
KZV	**Kizimen**	**7.08**	**23**	*eP*		**Pn**	**16 16 16.2**	**+2.4**
TUMD	**Tumrok D**	**7.19**	**23**	PN		**Pn**	**16 16 19.5**	**+4.4**
TUMD	**Tumrok D**	**7.19**	**23**	*eP*		**Pn**	**16 16 19.6**	**+4.4**
TUMD				*eS*		**Sn**	**16 17 36.3**	**+0.9**
KBTR	**Krutoberegovo**	**8.76**	**28**	PN		**Pn**	**16 16 37.8**	**+1.3**
KBTR	**Krutoberegovo**	**8.76**	**28**	*eP*		**Pn**	**16 16 37.8**	**+1.3**
BKI	**Bering**	**9.20**	**41**	*eS*		**Sn**	**16 18 17.9**	**-6.6**
JKA	**Kamikawa-asahi**	**9.97**	**247**	*eP*		**Pn**	**16 16 54.9**	**+1.7**
ASAJ	**Asahikawa**	**9.98**	**247**	P		**Pn**	**16 16 54.9**	**+1.6**
	6.0nm,0.5s,baz=67,slow=13,SNR=14							
SEY	**Seymchan**	**14.36**	**354**	P		**Pn**	**16 17 54.2**	**+1.5**
	0.6nm,0.5s,baz=344,slow=15,SNR=1.6							
H11N2	**WAKE ISLAND Hy**	**30.35**	**158**	T		T	16 53 06.0	
	baz=344,slow=74							
H11N1	**WAKE ISLAND Hy**	**30.37**	**158**	T		T	16 52 38.7	
	baz=344,slow=74							
H11N3	**WAKE ISLAND Hy**	**30.37**	**158**	T		T	16 52 35.1	
	baz=344							
H11S1	**WAKE ISLAND Hy**	**31.48**	**159**	T		T	16 54 32.4	
	baz=345,slow=76,SNR=494							
H11S3	**WAKE ISLAND Hy**	**31.49**	**159**	T		T	16 54 36.9	
	baz=345,slow=76,SNR=468							
H11S2	**WAKE ISLAND Hy**	**31.50**	**159**	T		T	16 54 33.8	
	baz=345,slow=76,SNR=334							
MKAR	**Makanchi Array**	**47.44**	**297**	P		**P**	**16 22 58.4**	**-3.6**
	0.3nm,0.6s,baz=49,slow=6.7,SNR=1.6							
	0.3nm,0.6s							
KURK	**Kurchatov**	**47.59**	**303**	P		**P**	**16 22 59.5**	**-3.6**
KURK	**Kurchatov**	**47.59**	**303**	*eP*		**P**	**16 22 59.5**	**-3.6**
KURBB	**Kurchatov Arra**	**47.69**	**303**	P		P	16 22 59.5	-4.4
	0.2nm,0.3s,baz=68,slow=8.2,SNR=4.2							
	0.2nm,0.3s							
BVAR	**Borovoye Array**	**50.83**	**309**	P		P	16 23 24.0	-3.8
	0.4nm,0.3s,baz=67,slow=5.9,SNR=2.5							
	0.4nm,0.3s							
BVAR	**Borovoye Array**	**50.83**	**309**	P		P	16 23 24.0	-3.8
CMAR	**Chiang Mai Arr**	**54.34**	**257**	P		**P**	**16 23 53.1**	**-1.1**
	1.1nm,0.7s,baz=47,slow=7.7,SNR=5.3							
	1.1nm,0.7s							
PDAR	**Pinedale Array**	**62.34**	**56**	P		**P**	**16 24 52.4**	**+2.4**
	0.2nm,0.7s,baz=295,slow=5.6,SNR=2.1							
	0.2nm,0.7s							
FINES	**FINESS Array B**	**62.92**	**335**	P		**P**	**16 24 49.9**	**-3.3**
	0.5nm,0.4s,baz=37,slow=5.8,SNR=8.0							
	0.5nm,0.4s							
HFS	**Hagfors**	**67.15**	**340**	P		**P**	**16 25 17.8**	**-2.9**
	1.1nm,0.8s,baz=64,slow=3.4,SNR=4.8							
	1.1nm,0.8s							
WRA	**Warramunga Arr**	**70.89**	**201**	P		**P**	**16 25 44.8**	**+0.6**
	0.4nm,0.7s,baz=9.1,slow=6.2,SNR=2.9							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**74.57**	**200**	P		**P**	**16 26 07.2**	**+1.1**
	0.2nm,0.6s,baz=13,slow=5.1,SNR=5.8							
	0.2nm,0.6s							
EKA	**Eskdalemuir Ar**	**74.78**	**348**	P		**P**	**16 26 04.9**	**-2.1**
	0.4nm,0.4s,baz=6.7,slow=4.9,SNR=3.6							
	0.4nm,0.4s							
TXAR	**Lajitas Array**	**75.19**	**62**	P		**P**	**16 26 12.0**	**+2.1**
	0.2nm,0.6s,baz=321,slow=5.4,SNR=2.8							
	0.2nm,0.6s							
H03N2	**Juan Fernandez**	**137.19**	**90**	T		T	19 07 20.6	
	baz=310,slow=77,SNR=30							
H03N1	**Juan Fernandez**	**137.21**	**90**	T		T	19 07 02.3	
	baz=310,slow=77,SNR=23							
H03N3	**Juan Fernandez**	**137.21**	**90**	T		T	19 07 21.4	
	baz=310,slow=77,SNR=19							

IDC 11 16:18:02.9±8.0, 19.46S×177.19W, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=346.6km s-min=42.4km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.50**	**256**	P		P	16 26 24.2	-0.3
	0.2nm,0.5s,baz=92,slow=7.7,SNR=9.3							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**45.51**	**261**	P		P	16 26 24.6	0.0
	0.3nm,0.9s,baz=97,slow=7.5,SNR=5.2							
	0.3nm,0.9s							
ILAR	**Eielson Array**	**87.14**	**13**	P		P	16 30 50.3	0.0
	0.6nm,1.1s,baz=210,slow=4.4,SNR=3.1							
	0.6nm,1.1s							

*IDC **11** 16:32:36.1±2.1, 12.97N×143.48E, h124km±21km, mb3.4/5, mbtmp3.8/5, Error ellipse: s-maj=35.6km s-min=18.1km az=96.0*
*NEIC **11** 16:32:37.1±1.5, 13.0N±0.1×143.56E±0.10, h128km±7km, mb4.6/17, Error ellipse: s-maj=16.4km s-min=11.3km az=141.0*

ISC 11 16:32:38.3±0.6, 13.01N±0.09×143.7E±0.1, h150km, n29, σ1.926/29, mb4.4/14, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.28**	**63**			**Pn**	**16 33 04.2**	**-1.5**
GUMO	**Guam**	**1.28**	**63**	P		**Pn**	**16 33 04.3**	**-1.4**
	137nm,0.3s,baz=224,slow=4.0,SNR=90							
GUMO				S		**Sn**	**16 33 24.4**	**-2.1**
	211nm,0.4s,baz=39,slow=22,SNR=22							
GUMO				LR		LR	16 33 49.4	
	comp=Z,49nm,21.5s,baz=54,slow=50							
H11N1	**WAKE ISLAND Hy**	**23.22**	**70**	T		T	17 01 34.2	
	baz=255							
H11N2	**WAKE ISLAND Hy**	**23.23**	**70**	T		T	17 01 49.7	
	baz=255							
H11N3	**WAKE ISLAND Hy**	**23.23**	**70**	T		T	17 01 42.0	
	baz=255							
SSLB	**Suanglung**	**24.06**	**300**	P		**P**	**16 37 39.0**	**-0.9**
SSLB				IAmb	IAmb	IAmb	16 37 41.1	
	comp=Z,18nm,1.1s							
COEN	**Coen**	**26.79**	**181**	P		**P**	**16 38 05.0**	**+0.4**
COEN				IAmb	IAmb	IAmb	16 38 38.5	
	comp=Z,26nm,1.4s							
ERM	**Erimo**	**28.91**	**359**	P		**P**	**16 38 23.5**	**+0.4**
JKA	**Kamikawa-asahi**	**31.02**	**358**	P		**P**	**16 38 40.5**	**-1.2**
JKA				IAmb	IAmb	IAmb	16 39 10.1	
	comp=Z,33nm,1.4s							
TARA	**Tarawa**	**31.17**	**109**	P		**P**	**16 38 44.0**	**+0.6**
WB0	**Warramunga Arr**	**33.83**	**196**	P		**P**	**16 39 05.2**	**-1.3**
WB0				IAmb	IAmb	IAmb	16 39 29.3	
	comp=Z,8.8nm,1.4s							
WR8	**Warramunga Arr**	**33.98**	**196**	P		**P**	**16 39 06.8**	**-1.0**
WR8				IAmb	IAmb	IAmb	16 39 24.8	
	comp=Z,10nm,1.5s							
WRAB	**Tennant Creek**	**34.00**	**196**	P		**P**	**16 39 07.0**	**-1.0**
WRA	**Warramunga Arr**	**34.01**	**196**	P		**P**	**16 39 06.1**	**-1.9**
WRA	**Warramunga Arr**	**34.01**	**196**	P		**P**	**16 39 06.7**	**-1.4**
	comp=Z,1.7nm,0

O28M	**Mount Upton**	**71.96**	**30**	P	**P**	**16 43 47.0**	**+1.3**
O28M				IAmb	IAmb	16 43 47.8	
	comp=Z,17nm,1.1s						
FINES	**FINESS Array B**	**91.20**	**335**	P	**P**	**16 45 25.4**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=40,slow=5.4,SNR=1.6						
	comp=Z,1.1nm,0.8s						

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*IDC **11** 16:35:49.5±0.5,20.04N×155.49W, h0km, mb4.2/15, mbtmp4.2/15, MS4.0/42, Error ellipse: s-maj=25.4km s-min=7.7km az=133.0*

*NEIC **11** 16:35:52.8, 19.86N×155.36W, h33km*

*NEIC **11** 16:35:52.6±0.8, 19.83N±0.05×155.37W±0.02, h28km±5km, Error ellipse: s-maj=6.7km s-min=3.3km az=190.0, Moment Tensor Solution. Moment tensor: Scale 1015Nm; Mrr4.50; Mθθ-1.96; Mϕϕ-2.54; Mrθ-4.45; Mθϕ7.32; Mϕr-1.28; Fault plane solution: M0 9.51000×10^15 NP1: ϕs172.82000°, δ53.00000°, λ151.98000°. NP2: ϕs280.58000°, δ67.96000°, λ40.49000°. Principal axes: T 9.0131, Plg44.0000°, Azm143.0000°; N 0.9201, Plg45.0000°, Azm304.0000°; P -9.9332, Plg9.0000°, Azm44.0000°;*

*HVO **11** 16:35:52.8±2.6, 19.86N±0.05×155.36W±0.05, h33km±5km, ML4.9/55, mb4.7/47(NEIC), ML5.2/48(NEIC), Mwr4.6/28(NEIC), Mww4.7/8(NEIC) Error ellipse: s-maj=7.9km s-min=6.2km az=164.0*

*GCMT **11** 16:35:55.8±0.4, 19.77N±0.03×155.54W±0.03, h30km±1km, MW4.9/71, Moment Tensor Solution. s16,c20; s71,c87; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.49±.19; Mθθ-1.30±.13; Mϕϕ-0.18±.13; Mrθ-1.71±.16; Mθϕ1.86±.11; Mϕr-0.17±.15; Best double couple: M0 2.87700×10^16 NP1:ϕs161.00000°, δ41.00000°, λ148.00000°. NP2: ϕs276.00000°, δ70.00000°, λ53.00000°. Principal axes: T 2.6860, Plg51.0000°, Azm144.0000°; N 0.3820, Plg34.0000°, Azm290.0000°; P -3.0670, Plg17.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 16:35:52.5±0.8, 19.84N±0.05×155.40W±0.05, h28km±6km, n268, σ0.80/210, mb4.7/45, MS4.0/43, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.15**	**237**		**Pb**	**16 35 58.5**	**+0.2**
POHA				IAML		16 36 03.9	
	156μm,0.6s						
HMH	**Humu'ula Sheep**	**0.25**	**199**		**Pb**	**16 35 59.8**	**+0.4**
HMH				IAML		16 36 05.3	
	comp=E,273μm,1.2s						
HPAH	**Hawaii Prepara**	**0.34**	**304**		**Pb**	**16 36 00.3**	**-0.2**
HPAH					**Sb**	**16 36 05.4**	**-0.5**
HPAH	**Hawaii Prepara**	**0.34**	**304**	IAML		16 36 05.8	
	comp=E,183μm,0.3s						
HPAH				IAML		16 36 06.5	
	comp=N,154μm,0.2s						
MLH	**Mauna Loa**	**0.34**	**178**		**Pb**	**16 36 00.6**	**-0.1**
MLH				IAML		16 36 06.5	
	comp=E,205μm,0.7s						
MLH				IAML		16 36 06.8	
	comp=N,155μm,0.7s						
MLH	**Mauna Loa**	**0.34**	**178**		**Sb**	**16 36 06.0**	**-0.1**
ALEP	**Alea Permanent**	**0.38**	**218**		**Pb**	**16 36 01.2**	**0.0**
ALEP					**Sb**	**16 36 07.4**	**+0.3**
RSD	**Rainshed**	**0.39**	**163**		**Pb**	**16 36 01.0**	**-0.2**
RSD				IAML		16 36 07.6	
	comp=E,263μm,0.5s						
RSD				IAML		16 36 07.7	
	comp=N,257μm,0.5s						
MWH	**Mokuaweoweo**	**0.40**	**208**		**Pb**	**16 36 01.6**	**-0.1**
MWH				IAML		16 36 16.0	
	comp=N,121μm,0.6s						
MWH				IAML		16 36 18.2	
	comp=E,153μm,0.8s						
SBLHI	**Steaming Bluff**	**0.43**	**163**		**Sb**	**16 36 07.3**	**-0.8**
UWE	**Uwekahuna**	**0.43**	**167**		**Pb**	**16 36 01.3**	**-0.5**
UWE				IAML		16 36 08.3	
	comp=E,167μm,0.5s						
HATHI	**Halema'uma'u T**	**0.43**	**163**		**Pb**	**16 36 01.2**	**-0.7**
HATHI				IAML		16 36 08.2	
	comp=E,130μm,0.8s						
HATHI				IAML		16 36 10.1	
	comp=N,104μm,0.8s						
HUH	**Hualalai**	**0.44**	**250**		**Pb**	**16 36 02.2**	**+0.1**
HUH				IAML		16 36 16.7	
	comp=E,143μm,0.6s						
BYL	**Byron's Ledge**	**0.44**	**163**		**Pb**	**16 36 01.3**	**-0.7**
BYL				IAML		16 36 08.2	
	comp=N,105μm,0.7s						
BYL				IAML		16 36 11.3	
	comp=E,102μm,0.7s						
AIN	**Ainahou**	**0.47**	**187**		**Pb**	**16 36 02.2**	**-0.3**
PUH	**Pauahi**	**0.49**	**160**		**Pb**	**16 36 02.0**	**-0.8**
KNHH	**Kane Nui o Ham**	**0.51**	**155**		**Pb**	**16 36 02.1**	**-0.9**
STCH	**Steam Cracks**	**0.52**	**150**		**Pb**	**16 36 02.2**	**-1.0**
STCH				IAML		16 36 09.6	
	comp=N,198μm,0.7s						
STCH				IAML		16 36 09.6	
	comp=E,117μm,0.3s						
NPOC	**North of Pu'u**	**0.52**	**149**		**Pb**	**16 36 02.2**	**-1.0**
I59US	**HAWAII INFRASO**	**0.53**	**242**	Pg	**Pb**	**16 36 02.6**	**-0.8**
	baz=29,slow=9.0						
I59US				Lg	Lg	16 36 09.4	
	baz=46,slow=17						
HLP	**Hilina Pali**	**0.55**	**171**		**Pb**	**16 36 02.7**	**-1.0**
HLP				IAML		16 36 18.0	
	comp=E,114μm,0.6s						
HLP				IAML		16 36 21.9	
	comp=N,112μm,0.6s						
JOKA	**Jonika Flow**	**0.55**	**137**		**Pb**	**16 36 02.5**	**-1.2**
MHA	**Mahukona**	**0.59**	**306**		**Pb**	**16 36 03.3**	**-1.0**
HLK	**Haleakala**	**1.21**	**319**	Pn	**Pn**	**16 36 11.6**	**-2.2**
KHLH	**Kahului Airpor**	**1.43**	**318**	Pn	**Pn**	**16 36 15.1**	**-1.4**
DHH	**Diamond Head**	**2.66**	**303**	Pn	**Pn**	**16 36 31.7**	**-1.8**
HON	**Honolulu**	**2.85**	**302**		**Pn**	**16 36 34.4**	**-1.7**
KIP	**Kipapa**	**2.91**	**303**		**Pn**	**16 36 35.4**	**-1.6**
KEKH	**Kekaha**	**4.56**	**299**	Pn	**Pn**	**16 36 57.5**	**-2.1**
JOHN	**Johnston Islan**	**13.77**	**259**	Pn	Pn	16 39 01.1	-4.8
TAOE	**Nuku Hiva Isla**	**32.23**	**151**	*e*LR	LR	16 50 39.7	
	comp=N,519nm,26.0s						
YBH	**Yreka Blue Hor**	**35.24**	**44**	P	**P**	**16 42 46.9**	**+2.2**
	comp=N,0.3nm,0.9s,baz=209,slow=4.5,SNR=7.8						
YBH				LR	LR	16 53 18.6	
	comp=N,19nm,21.9s,baz=271,slow=30						
H11N3	**WAKE ISLAND Hy**	**35.42**	**276**	T	T	17 19 56.0	
	baz=84,slow=74,SNR=141						
H11N2	**WAKE ISLAND Hy**	**35.43**	**276**	T	T	17 19 56.9	
	baz=84,slow=74,SNR=124						
H11N1	**WAKE ISLAND Hy**	**35.44**	**276**	T	T	17 19 57.2	
	baz=84,slow=74,SNR=289						
H11S2	**WAKE ISLAND Hy**	**35.77**	**274**	T	T	17 20 24.9	
	baz=83,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**35.78**	**274**	T	T	17 20 20.1	
	baz=83,slow=75,SNR=5.2						
H11S3	**WAKE ISLAND Hy**	**35.79**	**274**	T	T	17 20 29.5	
	baz=83,slow=75,SNR=8.2						
ELS	**Elsinore Mount**	**36.38**	**60**	P	**P**	**16 42 52.6**	**-1.9**
ELS				IAmb	IAmb	16 43 23.6	
	comp=Z,8.9nm,1.3s						
NVAR	**Mina Array Bea**	**37.01**	**52**	P	**P**	**16 43 01.5**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=268,slow=12,SNR=4.3						
NVAR				LR	LR	16 54 38.2	
	comp=Z,305nm,19.8s,baz=272,slow=30						
	comp=Z,0.8nm,0.8s						
PFO	**Pinyon Flats O**	**37.16**	**60**	IAmb	IAmb	16 43 04.3	
	comp=Z,7.3nm,1.2s						
PFO	**Pinyon Flats O**	**37.16**	**60**	P	**P**	**16 43 02.7**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=276,slow=7.8,SNR=4.1						
PFO				LR	LR	16 54 07.1	
	comp=Z,256nm,20.2s,baz=304,slow=30						
	comp=Z,0.7nm,0.3s						
GSC	**Goldstone, Bar**	**37.26**	**57**	P	**P**	**16 43 02.3**	**+0.3**
GSC				IAmb	IAmb	16 43 04.9	
	comp=Z,9.9nm,1.4s						
PPT	**Papeete**	**37.61**	**171**	LR	LR	16 54 39.2	
	comp=Z,417nm,19.1s,baz=331,slow=30						
BELC	**Belle Mtn. Jos**	**37.62**	**60**	P	**P**	**16 43 05.1**	**0.0**
BELC				IAmb	IAmb	16 43 18.1	
	comp=Z,18nm,1.4s						
PPT2	**Papeete2**	**37.63**	**171**	*e*LR	LR	16 53 16.3	
	comp=Z,435nm,24.5s						
PPT2				*e*LR	LR	16 53 22.8	
	comp=Z,716nm,26.0s						

KDAK	**Kodiak Island**	**37.95**	**2**	LR	LR	16 55 23.1	
	comp=Z,263nm,18.4s,baz=177,slow=31						
BBB	**Bella Bella**	**38.65**	**27**	LR	LR	16 55 18.3	
	comp=Z,218nm,19.6s,baz=224,slow=30						
ELK	**Elko**	**40.01**	**50**	LR	LR	16 57 28.8	
	comp=Z,231nm,18.6s,baz=224,slow=32						
SHEM	**Shemya Is, Ala**	**40.44**	**332**	LR	LR	16 56 23.9	
	comp=Z,162nm,21.2s,baz=282,slow=31						
N17K	**Nushagak Hills**	**40.66**	**359**	P	**P**	**16 43 31.0**	**+1.0**
	baz=177						
N19K	**Bonanza Creek**	**40.94**	**1**	P	**P**	**16 43 33.1**	**+0.7**
	baz=181						
RAR	**Rarotonga**	**41.02**	**186**	LR	LR	16 58 37.3	
	comp=Z,231nm,18.2s,baz=13,slow=33						
PWL	**Port Wells**	**41.28**	**5**	P	**P**	**16 43 34.7**	**-0.4**
	baz=190						
N20K	**Mount Spurr**	**41.38**	**2**	P	**P**	**16 43 36.6**	**+0.6**
	baz=184						
M18K	**Stony River**	**41.61**	**360**	P	**P**	**16 43 38.3**	**+0.5**
	baz=179						
P29M	**Windy Craggy**	**41.72**	**13**	P	**P**	**16 43 39.0**	**+0.2**
	baz=205						
BMRM	**Bremner River**	**41.79**	**8**	P	**P**	**16 43 39.8**	**+0.5**
	baz=195						
KNK	**Knik Glacier**	**41.82**	**5**	P	**P**	**16 43 40.3**	**+0.7**
	baz=190						
NEW	**Newport**	**41.86**	**38**	LR	LR	16 56 52.4	
	comp=Z,144nm,20.0s,baz=208,slow=30						
PLBC	**Pleasant Camp**	**41.88**	**14**	P	**P**	**16 43 40.6**	**+0.6**
	baz=207						
LPIG	**La Paz**	**41.90**	**76**	LR	LR	16 58 34.9	
	comp=Z,142nm,18.3s,baz=290,slow=33						
S34M	**Telegraph Cree**	**41.98**	**19**	P	**P**	**16 43 41.3**	**+0.5**
	baz=215						
M20K	**Styx River**	**42.03**	**2**	P	**P**	**16 43 41.8**	**+0.5**
	baz=193						
KLU	**Klutina**	**42.14**	**7**	P	**P**	**16 43 42.9**	**+0.6**
	baz=193						
SKT	**Skwentna**	**42.19**	**3**	IAmb	IAmb	16 43 54.9	
	comp=Z,24nm,1.5s						
SKT	**Skwentna**	**42.19**	**3**	P	**P**	**16 43 43.6**	**+1.1**
	baz=185						
SML	**Sawmill**	**42.22**	**5**	P	**P**	**16 43 43.1**	**+0.2**
	baz=190						
CTG	**Chitina Glacier**	**42.27**	**10**	P	**P**	**16 43 43.2**	**-0.2**
	baz=200						
O28M	**Mount Upton**	**42.29**	**11**	P	**P**	**16 43 43.0**	**-0.7**
	baz=201						
L19K	**White Mountain**	**42.31**	**0**	P	**P**	**16 43 43.6**	**+0.1**
	baz=181						
SCM	**Sheep Creek Mo**	**42.33**	**6**	P	**P**	**16 43 43.5**	**-0.3**
	baz=191						
P30M	**Million Dollar**	**42.34**	**14**	P	**P**	**16 43 44.1**	**+0.2**
	baz=206						
L18K	**Granite Mounta**	**42.35**	**359**	P	**P**	**16 43 43.5**	**-0.3**
	baz=178						
MCARA	**McCarthy VSAT**	**42.41**	**9**	P	**P**	**16 43 44.8**	**+0.5**
	baz=197						
Q32M	**Nakina River**	**42.51**	**18**	P	**P**	**16 43 46.3**	**+0.9**
	baz=213						
L20K	**Farewell, AK**	**42.62**	**1**	P	**P**	**16 43 47.3**	**+1.3**
	baz=182						
CUT	**Chulitna**	**42.68**	**4**	P	**P**	**16 43 48.1**	**+1.6**
	baz=187						
DLBC	**Dease Lake**	**42.75**	**19**	LR	LR	16 58 59.8	
	comp=Z,232nm,18.9s,baz=248,slow=33						
DLBC	**Dease Lake**	**42.75**	**19**	P	**P**	**16 43 47.9**	**+0.7**
	baz=216						
YUK6	**Outpost Mounta**	**42.79**	**12**	P	**P**	**16 43 47.7**	**0.0**
	baz=204						
YUK8	**Steele Glacier**	**42.84**	**11**	P	**P**	**16 43 49.2**	**+1.0**
	baz=202						
HYT	**Haines Junctio**	**42.86**	**13**	P	**P**	**16 43 49.1**	**+0.9**
	baz=205						
K17K	**Iditarod**	**42.89**	**358**	P	**P**	**16 43 48.4**	**+0.2**
	baz=176						
WAT6	**Susitna Watana**	**43.03**	**5**	P	**P**	**16 43 50.2**	**+0.7**
	baz=190						
PPLA	**Purkeypile**	**43.08**	**2**	P	**P**	**16 43 50.9**	**+1.0**
	baz=184						
YUK4	**Talbot Arm**	**43.10**	**12**	P	**P**	**16 43 52.0**	**+1.8**
	baz=203						
HARP	**HAARP**	**43.11**	**7**	P	**P**	**16 43 49.3**	**-0.7**
	baz=194						
O30N	**Mendenhall**	**43.11**	**14**	P	**P**	**16 43 50.0**	**-0.1**
	baz=207						
YUK3	**Moose Creek**	**43.18**	**10**	P	**P**	**16 43 50.8**	**0.0**
	baz=201						
WAT1	**Susitna Watana**	**43.21**	**5**	P	**P**	**16 43 51.0**	**+0.1**
	baz=189						
R33M	**Jennings River**	**43.25**	**18**	P	**P**	**16 43 51.8**	**+0.5**
	baz=214						
WHY	**Whitehorse**	**43.30**	**15**	P	**P**	**16 43 50.4**	**-1.2**
	baz=209						
TBI	**Tubuai**	**43.31**	**172**	*e*LR	LR	16 55 53.1	
	comp=Z,2μm,25.8s						
M26K	**Nabesna, AK**	**43.39**	**8**	IAmb	IAmb	16 43 55.4	
	comp=Z,17nm,1.0s						
M26K	**Nabesna, AK**	**43.39**	**8**	P	**P**	**16 43 52.1**	**-0.2**
	baz=197						
P33M	**Teslin, Yukon**	**43.42**	**16**	P	**P**	**16 43 51.1**	**-1.6**
	baz=212						
K20K	**Telida**	**43.49**	**1**	P	**P**	**16 43 52.9**	**-0.3**
	baz=182						
M27K	**Edge Creek, AK**	**43.51**	**9**	P	**P**	**16 43 53.1**	**-0.3**
	baz=199						
N30M	**Aishikik Lake**	**43.52**	**13**	P	**P**	**16 43 53.7**	**+0.4**
	baz=205						
DHY	**Denali Highway**	**43.55**	**5**	P	**P**	**16 43 52.9**	**-0.8**
	baz=191,SNR=6.0						
J16K	**Anvik River**	**43.56**	**357**	P	**P**	**16 43 54.1**	**+0.6**
	baz=173						
J18K	**Innoko River**	**43.60**	**359**	P	**P**	**16 43 54.3**	**+0.3**
	baz=178						
PAX	**Paxson**	**43.63**	**7**	IAmb	IAmb	16 43 57.1	
	comp=Z,22nm,1.1s						
PAX	**Paxson**	**43.63**	**7**	P	**P**	**16 43 54.5**	**+0.1**
	baz=194,SNR=8.3						
TRF	**Thorofare Moun**	**43.72**	**3**	P	**P**	**16 43 55.0**	**0.0**
	baz=187						
CHUM	**Lake Minchumin**	**44.06**	**2**	P	**P**	**16 43 57.0**	**-0.6**
	baz=184						
MCK	**McKinley**	**44.08**	**4**	P	**P**	**16 43 57.4**	**-0.5**
	baz=189						
J19K	**Poorman**	**44.12**	**360**	P	**P**	**16 43 58.4**	**+0.3**
	baz=180						
MOOW	**Moose Ponds**	**44.13**	**47**	P	**P**	**16 43 57.9**	**-0.9**
PV13	**Radium Mtn., P**	**44.14**	**55**	P	**P**	**16 43 58.3**	**-0.6**
M29M	**Somme Creek**	**44.15**	**11**	P	**P**	**16 43 58.2**	**-0.3**
	baz=203						
N32M	**Quiet Lake**	**44.16**	**15**	P	**P**	**16 43 58.8**	**+0.3**
	baz=211						
L27K	**Beaver Creek,**	**44.18**	**9**	P	**P**	**16 43 59.0**	**+0.4**
	baz=198						
YHL	**Hebgen Lake**	**44.19**	**45**	P	**P**	**16 43 58.5**	**-0.8**
YHL				IAmb	IAmb	16 44 02.9	
	comp=Z,10.0nm,1.3s						
BPAW	**Bear Paw Mtn.**	**44.33**	**3**	P	**P**	**16 43 59.8**	**0.0**
	baz=186						
K24K	**Donnelly Dome**	**44.42**	**6**	P	**P**	**16 43 59.5**	**-1.1**
	baz=193						
DOT	**Dot Lake**	**44.45**	**7**	IAmb	IAmb	16 44 03.5	
	comp=Z,7.4nm,0.7s						
M30M	**Minto, Yukon**	**44.59**	**12**	P	**P**	**16 44 02.2**	**+0.2**
M30M				IAmb	IAmb	16 44 05.4	
	comp=Z,14nm,1.1s						
M30M	**Minto, Yukon**	**44.59**	**12**	P	**P**	**16 44 02.6**	**+0.7**
	baz=205,SNR=6.6						
TOAD	**Toad River Com**	**44.66**	**22**	P	**P**	**16 44 02.0**	**-0.5**
	baz=222						
PDAR	**Pinedale Array**	**44.67**	**49**	P	**P**	**16 44 02.6**	**-0.5**
PDAR	**Pinedale Array**	**44.67**	**49**	P	**P**	**16 44 04.0**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=263,slow=5.8,SNR=9.1						
PDAR				LR	LR	16 58 46.7	
	comp=Z,87nm,18.9s,baz=353,slow=31						
	comp=Z,1.4nm,1.0s						
M31M	**Drury Creek, Y**	**44.77**	**14**	P	**P**	**16 44 03.0**	**-0.4**
	baz=209						
SCRK	**Sand Creek**	**44.78**	**7**	P	**P**	**16 44 03.5**	**-0.1**
	baz=195						
L29M	**L29M**	**44.83**	**11**	P	**P**	**16 44 03.1**	**-0.7**
	baz=203						
HDA	**Harding Lake**	**44.90**	**5**	P	**P**	**16 44 04.4**	**0.0**
	baz=191						
NEA2	**Nenana**	**44.93**	**4**	P	**P**	**16 44 05.0**	**+0.5**
	baz=188						
H16K	**Elim**	**45.01**	**356**	P	**P**	**16 44 05.7**	**+0.6**
	baz=171						

Y22A	**Socorro**	**45.03**	**62**	P	**P**	**16 44 05.0**	**-1.1**
FARO	**Faro, Yukon**	**45.03**	**14**	P	**P**	**16 44 05.8**	**+0.4**
	baz=210,SNR=6.0						
CCB	**Clear Creek Bu**	**45.07**	**5**	IAmb	IAmb	16 44 08.0	
	comp=Z,17nm,1.2s						
K27K	**Chicken**	**45.07**	**8**	P	**P**	**16 44 04.9**	**-0.8**
	baz=198						
J25K	**Salcha River,**	**45.25**	**6**	IAmb	IAmb	16 44 09.7	
	comp=Z,14nm,1.2s						
J25K	**Salcha River,**	**45.25**	**6**	P	**P**	**16 44 06.7**	**-0.4**
	baz=193,SNR=9.4						
ILAR	**Eielson Array**	**45.27**	**5**		**P**	**16 44 06.9**	**-0.3**
ILAR	**Eielson Array**	**45.27**	**5**	P	**P**	**16 44 07.8**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=195,slow=6.3,SNR=19						
ILAR				PcP	**PcP**	**16 45 46.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=198,slow=4.7,SNR=2.9						
ILAR				LR	LR	16 59 57.6	
	comp=Z,126nm,18.5s,baz=132,slow=32						
	comp=Z,2.7nm,0.9s						
MLY	**Manley**	**45.27**	**3**	P	**P**	**16 44 07.3**	**0.0**
	baz=186						
J26L	**Joseph Creek**	**45.34**	**7**		**P**	**16 44 07.8**	**-0.1**
J26L				IAmb	IAmb	16 44 11.4	
	comp=Z,11nm,1.2s						
J26L	**Joseph Creek**	**45.34**	**7**	P	**P**	**16 44 08.4**	**+0.6**
	baz=196						
I21K	**Tanana**	**45.37**	**2**	P	**P**	**16 44 08.2**	**+0.1**
	baz=184						
I23K	**Minto, Yukon-K**	**45.46**	**4**	P	**P**	**16 44 09.0**	**+0.3**
	baz=188						
DAWY	**Dawson**	**45.50**	**10**	P	**P**	**16 44 09.6**	**+0.4**
	baz=201,SNR=5.7						
ANMO	**Albuquerque**	**45.55**	**60**	LR	LR	17 01 22.8	
	comp=Z,169nm,18.2s,baz=74,slow=34						
K29M	**Barlow Dome**	**45.61**	**11**	P	**P**	**16 44 10.5**	**+0.3**
	baz=204						
H20K	**Anotleneega Mo**	**45.63**	**0**	P	**P**	**16 44 09.7**	**-0.4**
	baz=181						
H19K	**Roundabout Mou**	**45.67**	**359**	P	**P**	**16 44 10.6**	**+0.2**
	baz=179						
KOTAN	**Kotaneelee Air**	**46.01**	**21**	P	**P**	**16 44 13.5**	**+0.3**
	baz=223						
H23K	**Yukon River**	**46.12**	**3**	IAmb	IAmb	16 44 16.1	
	comp=Z,19nm,1.4s						
H23K	**Yukon River**	**46.12**	**3**	P	**P**	**16 44 13.7**	**-0.4**
	baz=188						
I26K	**Coal Creek Min**	**46.16**	**7**	P	**P**	**16 44 14.3**	**0.0**
	baz=196						
H24K	**Noodor Dome**	**46.24**	**4**	P	**P**	**16 44 14.6**	**-0.4**
	baz=190						
J30M	**Hart River**	**46.50**	**11**	IAmb	IAmb	16 44 20.1	
	comp=Z,14nm,1.2s						
J30M	**Hart River**	**46.50**	**11**	P	**P**	**16 44 16.6**	**-0.5**
	baz=205						
I27K	**Kandik River**	**46.63**	**8**	P	**P**	**16 44 18.1**	**0.0**
	baz=198,SNR=5.3						
I28M	**Miner Creek**	**46.72**	**9**	P	**P**	**16 44 18.1**	**-0.6**
	baz=200						
F17K	**Baldwin Pennin**	**46.74**	**357**	P	**P**	**16 44 19.2**	**+0.4**
	baz=172						
F18K	**Selawik**	**46.82**	**358**	P	**P**	**16 44 19.4**	**0.0**
	baz=174						
H25L	**Birch Creek**	**46.83**	**5**	P	**P**	**16 44 19.9**	**+0.5**
	baz=192,SNR=5.8						
G23K	**Bananza Creek**	**46.98**	**3**	P	**P**	**16 44 20.3**	**-0.4**
G23K				IAmb	IAmb	16 44 56.6	
	comp=Z,10.0nm,1.5s						
G23K	**Bananza Creek**	**46.98**	**3**	P	**P**	**16 44 20.7**	**-0.1**
	baz=187						
F19K	**Shaleruckik Mo**	**47.00**	**359**	P	**P**	**16 44 21.3**	**+0.5**
	baz=177						
I30M	**Mount Dempster**	**47.08**	**11**	P	**P**	**16 44 21.5**	**-0.1**
	baz=205						
RKT	**Rikitea**	**47.12**	**154**	*e*LR	LR	16 57 37.9	
	comp=Z,5μm,33.8s						
G24K	**Hadweenzic Riv**	**47.12**	**4**	IAmb	IAmb	16 44 23.8	
	comp=Z,12nm,1.2s						
G24K	**Hadweenzic Riv**	**47.12**	**4**	P	**P**	**16 44 22.1**	**+0.3**
	baz=190						
G22K	**Bettles**	**47.13**	**2**	P	**P**	**16 44 21.3**	**-0.5**
	baz=185						
H27K	**Steamboat Moun**	**47.25**	**8**	P	**P**	**16 44 23.5**	**+0.7**
	baz=198						
G25K	**Bearman Lake**	**47.29**	**5**	P	**P**	**16 44 23.7**	**+0.6**
	baz=192						
F21K	**Alatna River**	**47.38**	**1**	P	**P**	**16 44 24.6**	**+0.8**
	baz=182						
COLD	**Coldfoot**	**47.49**	**3**	P	**P**	**16 44 25.1**	**+0.4**
	baz=187						
TXAR	**Lajitas Array**	**47.66**	**68**	P	**P**	**16 44 28.7**	**+2.0**
	comp=Z,2.3nm,1.0s,baz=248,slow=6.6,SNR=12						
TXAR				PcP	**PcP**	**16 45 54.9**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=249,slow=1.4,SNR=1.3						
TXAR				LR	LR	17 01 34.4	
	comp=Z,130nm,18.9s,baz=1.0,slow=32						
	comp=Z,2.3nm,1.0s						
H29M	**Whitestone**	**47.67**	**9**	P	**P**	**16 44 25.2**	**-0.9**
H29M	**Whitestone**	**47.67**	**9**	P	**P**	**16 44 26.7**	**+0.6**
	baz=202						
E18K	**Tukpahlearik C**	**47.68**	**357**	P	**P**	**16 44 26.5**	**+0.4**
	baz=173						
G26K	**Porcupine Rive**	**47.69**	**6**	P	**P**	**16 44 25.9**	**-0.2**
G26K				IAmb	IAmb	16 44 29.2	
	comp=Z,16nm,1.2s						
G26K	**Porcupine Rive**	**47.69**	**6**	P	**P**	**16 44 26.8**	**+0.7**
	baz=195						
F22K	**John River**	**47.70**	**2**	P	**P**	**16 44 24.8**	**-1.5**
	baz=184						
G27K	**Doyon Strip**	**47.78**	**7**	P	**P**	**16 44 26.0**	**-1.0**
	baz=198						
F24K	**Squaw Lake**	**47.91**	**4**	P	**P**	**16 44 27.7**	**-0.2**
	baz=190						
H31M	**Peel River**	**47.98**	**11**	P	**P**	**16 44 28.6**	**+0.2**
	baz=207						
EPYK	**Eagle Plains**	**48.07**	**10**	P	**P**	**16 44 29.1**	**-0.2**
	baz=204,SNR=5.3						
F25K	**Christian Rive**	**48.14**	**5**	P	**P**	**16 44 29.7**	**-0.1**
	baz=192						
E22K	**Anaktuvuk Pass**	**48.34**	**2**	P	**P**	**16 44 31.4**	**+0.1**
	baz=184,SNR=6.0						
E23K	**Chandalar**	**48.35**	**3**	P	**P**	**16 44 31.0**	**-0.4**
	baz=187						
G29M	**Pine Creek**	**48.37**	**9**	P	**P**	**16 44 30.9**	**-0.6**
	baz=202						
F26K	**Sheenjek River**	**48.37**	**6**	P	**P**	**16 44 31.5**	**0.0**
	baz=194						
E20K	**Nigu River**	**48.41**	**360

C24K	**Franklin Bluff**	**50.05**	**3**	P		**P**	**16 44 43.3**	**-0.9**
	baz=188							
C23K	**Itkillik River**	**50.08**	**2**	P		**P**	**16 44 44.8**	**+0.3**
	baz=186							
B20K	**Meade River**	**50.18**	**359**	P		**P**	**16 44 45.4**	**+0.2**
	baz=178							
D27M	**Malcolm River**	**50.19**	**7**	P		**P**	**16 44 45.3**	**-0.1**
	baz=198							
C27K	**Jago River**	**50.29**	**5**	P		**P**	**16 44 46.0**	**-0.1**
	baz=194							
INK	**Inuvik**	**50.36**	**10**	LR		LR	17 03 03.9	
	comp=Z,213nm,19.4s,baz=8.5,slow=33							
INK	**Inuvik**	**50.36**	**10**	P		**P**	**16 44 46.8**	**+0.2**
	baz=207,SNR=7.7							
YKA	**Yellowknife Ar**	**50.97**	**23**	P		**P**	**16 44 52.4**	**+1.1**
	comp=Z,4.5nm,1.0s,baz=230,slow=7.9,SNR=5.3							
YKA				LR		LR	17 02 52.8	
	comp=Z,211nm,20.9s,baz=303,slow=32							
	comp=Z,4.5nm,1.0s							
HNR	**Honiara**	**52.72**	**241**	LR		LR	17 02 58.2	
	comp=Z,124nm,21.9s,baz=34,slow=31							
C36M	**Paulatuk**	**53.08**	**13**	P		**P**	**16 45 06.9**	**0.0**
	baz=218							
A36M	**Sachs Harbour**	**54.98**	**11**			**P**	**16 45 21.1**	**+0.4**
A36M				IAmb		IAmb	16 45 22.7	
	comp=Z,9.6nm,1.0s							
A36M	**Sachs Harbour**	**54.98**	**11**	P		**P**	**16 45 20.5**	**-0.2**
	baz=215							
MA2	**Magadan**	**55.03**	**330**	LR		LR	17 04 55.0	
	comp=Z,108nm,21.2s,baz=133,slow=32							
ULM	**Lac du Bonnet**	**55.58**	**42**	LR		LR	17 07 47.7	
	comp=Z,147nm,18.4s,baz=10,slow=35							
SEY	**Seymchan**	**55.68**	**334**	LR		LR	17 05 08.2	
	comp=Z,70nm,21.7s,baz=80,slow=32							
ASAJ	**Asahikawa**	**56.48**	**310**	LR		LR	17 04 36.7	
	comp=Z,82nm,21.7s,baz=158,slow=31							
JCJ	**Chichijima**	**57.22**	**290**	LR		LR	17 05 32.2	
	comp=Z,64nm,21.9s,baz=78,slow=31							
GUMO	**Guam**	**57.31**	**274**	LR		LR	17 07 05.8	
	comp=Z,27nm,20.4s,baz=71,slow=33							
MJAR	**Matsushiro Arr**	**59.76**	**301**	P		**P**	**16 45 55.4**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=74,slow=4.5,SNR=4.0							
	comp=Z,1.7nm,0.8s							
URZ	**Urewera**	**63.30**	**204**	LR		LR	17 09 36.7	
	comp=Z,140nm,20.5s,baz=37,slow=32							
RES	**Resolute Bay**	**63.36**	**15**	LR		LR	17 10 43.1	
	comp=Z,186nm,19.5s,baz=186,slow=33							
PMG	**Port Moresby**	**63.57**	**248**	LR		LR	17 10 04.3	
	comp=Z,96nm,18.9s,baz=142,slow=32							
TKL	**Tuckaleechee C**	**64.06**	**59**	IAmb		IAmb	16 46 25.9	
	comp=Z,12nm,1.4s							
TKL	**Tuckaleechee C**	**64.06**	**59**	P		**P**	**16 46 24.8**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=45,slow=1.4,SNR=6.5							
TKL				LR		LR	17 13 06.2	
	comp=Z,103nm,19.1s,baz=42,slow=35							
	comp=Z,0.7nm,0.3s							
RPN	**Rapa Nui**	**64.59**	**135**	LR		LR	17 07 55.5	
	comp=Z,63nm,21.6s,baz=332,slow=30							
YAK	**Yakutsk**	**65.61**	**330**	LR		LR	17 11 23.4	
	comp=Z,114nm,21.6s,baz=51,slow=33							
TIXI	**Tiksi**	**66.83**	**340**	LR		LR	17 15 00.6	
	comp=Z,48nm,19.8s,baz=5.0,slow=35							
JTS	**Las Juntas de**	**68.29**	**87**	LR		LR	17 10 30.5	
	comp=Z,72nm,20.5s,baz=339,slow=30							
SCHQ	**Schefferville**	**73.21**	**37**	LR		LR	17 18 50.1	
	comp=Z,74nm,18.7s,baz=129,slow=35							
XLT	**XiLinHaoTe**	**75.48**	**312**	*e*P		**P**	**16 47 36.3**	**+2.0**
XLT				sP		sP	16 47 50.5	+2.6
XLT				pmax		pmax		
	comp=Z,6.0nm,0.8s							
NJ2	**Nanjing**	**76.27**	**299**	*e*P		**P**	**16 47 38.3**	**-0.6**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
SFJD	**Kangerlussuaq**	**77.53**	**23**	LR		LR	17 19 52.1	
	comp=Z,299nm,18.9s,baz=54,slow=34							
INKA	**Innaminka**	**77.79**	**234**			**P**	**16 47 48.2**	**+0.8**
INKA				IAmb		IAmb	16 48 00.6	
	comp=Z,11nm,1.4s							
WR8	**Warramunga Arr**	**79.23**	**244**	P		**P**	**16 47 54.5**	**-1.1**
WR8				IAmb		IAmb	16 47 56.8	
	comp=Z,8.4nm,1.1s							
WB0	**Warramunga Arr**	**79.24**	**244**	P		**P**	**16 47 54.2**	**-1.4**
WB0				IAmb		IAmb	16 47 56.8	
	comp=Z,8.3nm,1.1s							
STKA	**Stephens Creek**	**79.27**	**230**	P		**P**	**16 47 56.5**	**+1.1**
STKA	**Stephens Creek**	**79.27**	**230**	P		**P**	**16 47 56.7**	**+1.2**
	comp=Z,6.6nm,0.8s,baz=36,slow=5.5,SNR=8.6							
STKA				LR		LR	17 18 11.8	
	comp=Z,137nm,20.8s,baz=27,slow=32							
	comp=Z,6.6nm,0.8s							
WRA	**Warramunga Arr**	**79.36**	**244**	IAmb		IAmb	16 47 57.4	
	comp=Z,0.3nm,1.1s							
WRA	**Warramunga Arr**	**79.36**	**244**	P		**P**	**16 47 56.1**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=61,slow=5.7,SNR=11							
	comp=Z,3.7nm,0.9s							
HHC	**Hu-ho-hao-te**	**79.52**	**310**	*e*P		**P**	**16 47 56.0**	**-0.9**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,94nm,5.2s							
SONM	**Songino Array**	**80.86**	**318**	P		**P**	**16 48 04.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=44,slow=3.2,SNR=3.6							
	comp=Z,0.7nm,0.7s							
AS31	**Alice Springs**	**81.33**	**241**			**P**	**16 48 05.8**	**-1.0**
ASAR	**Alice Springs**	**81.34**	**241**			**P**	**16 48 05.7**	**-1.1**
ASAR	**Alice Springs**	**81.34**	**241**	P		**P**	**16 48 07.8**	**+0.9**
	comp=Z,6.6nm,0.8s,baz=64,slow=6.1,SNR=46							
ASAR				LR		LR	17 21 56.7	
	comp=Z,104nm,19.0s,baz=63,slow=34							
	comp=Z,6.6nm,0.8s							
XAN	**Xi'an**	**83.65**	**304**	P		**P**	**16 48 15.4**	**-3.5**
XAN				pmax		pmax		
	comp=Z,8.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**86.14**	**249**	LR		LR	17 23 02.9	
	comp=Z,71nm,20.0s,baz=20,slow=33							
LZDM	**Lanzhou Array**	**86.98**	**307**	P		**P**	**16 48 35.6**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=55,slow=13,SNR=2.0							
	comp=Z,2.6nm,0.3s							
GTA	**Gaotai**	**88.44**	**311**	*e*P		**P**	**16 48 41.9**	**-0.6**
GTA				sP		pP	16 48 53.0	+0.4
GTA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
H03N2	**Juan Fernandez**	**90.05**	**126**	T		T	18 28 16.2	
	baz=298,slow=76,SNR=82							
H03N3	**Juan Fernandez**	**90.06**	**126**	T		T	18 28 15.9	
	baz=298,slow=76,SNR=103							
H03N1	**Juan Fernandez**	**90.06**	**126**	T		T	18 28 20.3	
	baz=298,slow=76,SNR=84							
ZALV	**Zalesovo Beam**	**90.25**	**329**	P		**P**	**16 48 51.0**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=45,slow=6.7,SNR=5.2							
ZALV				LR		LR	17 26 56.8	
	comp=Z,109nm,21.6s,baz=319,slow=34							
	comp=Z,0.6nm,0.4s							
PZH	**PanZhiHua**	**92.18**	**299**	P		**P**	**16 48 59.2**	**-1.0**
LPAZ	**La Paz**	**92.92**	**106**	P		**P**	**16 49 04.7**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=350,slow=6.1,SNR=3.7							
	comp=Z,0.6nm,0.6s							
BVAR	**Borovoye Array**	**97.33**	**334**	LR		LR	17 31 43.1	
	comp=Z,121nm,21.8s,baz=323,slow=34							
NOA	**NORSAR Array B**	**98.68**	**7**	LR		LR	17 33 33.3	
	comp=Z,52nm,19.5s,baz=270,slow=35							
PLCA	**Paso Flores**	**98.92**	**130**	LR		LR	17 23 31.2	
	comp=Z,41nm,21.9s,baz=32,slow=29							
SNAA	**Sanae**	**125.76**	**170**			**PKiKP**	**16 54 51.3**	**+0.1**
SNAA	**Sanae**	**125.76**	**170**	PKP		**PKiKP**	**16 54 52.4**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=197,slow=5.6,SNR=5.4							
TORD	**Torodi Ar. Bea**	**140.21**	**36**	PKP		**PKPdf**	**16 55 19.9**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=2.5,slow=4.4,SNR=5.1							

HEL ***11*** *16:54:18.9±0.1, 57.°68N×21.°56E, h0km, ML1.9, Explosion*
EST ***11*** *16:54:18.9±0.1, 57.°67N×21.°56E, h0km, ML1.9(HEL), Explosion*
DNK ***11*** *16:54:18.1±1.4, 57.°62N×21.°61E, h0km, ML3.2, Suspected explosion*
IDC ***11*** *16:54:20.6±2.5, 57.°82N×21.°55E, h0km, mbtmp2.9/4, ML2.2/4, Error ellipse: s-maj=26.2km s-min=9.9km az=164.0*
UPP ***11*** *16:54:21.1±1.2, 57.°73N×21.°24E, h0km, ML2.5, Presumed earthquake*
LVSN ***11*** *16:54:22.2±6.1, 57.°61N×21.°70E, h0km±34km, ML2.1*
ISC 11 16:54:16.8±0.8, 57.°61N±0.°03×21.°61E±0.°03, h0km, n57, σ1°26/85, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.36**	**87**	*e*P	**Pb**	**16 54 25.8**	**-0.4**
SLIT	**Slitere, Latvi**	**0.36**	**87**	*e*P	**Pb**	**16 54 26.1**	**0.0**
SLIT				*e*S	**Sb**	**16 54 31.9**	**-0.5**
SLIT				AML	AML	16 54 54.4	
	comp=N,507nm,0.5s						
SLIT				AML	AML	16 54 56.9	
	comp=E,833nm,0.5s						
SLIT				AML	AML	16 54 57.1	
	comp=Z,745nm,0.6s						
SLIT	**Slitere, Latvi**	**0.36**	**87**	*e*P	**Pb**	**16 54 26.1**	**0.0**
SLIT				*e*S	**Sb**	**16 54 30.9**	**-1.4**
EE06	**Soera, Palade,**	**1.51**	**25**	*e*P	**Pn**	**16 54 44.9**	**-0.2**
EE06				*e*S	**Sg**	**16 55 04.1**	**-1.2**
GOTU	**Gotland**	**1.64**	**274**	P	**Pn**	**16 54 47.2**	**+0.4**
GOTU				S	**Sn**	**16 55 09.5**	**+1.0**
GOTU	**Gotland**	**1.64**	**274**	P	**Pn**	**16 54 47.2**	**+0.4**
GOTU				S	**Sn**	**16 55 09.5**	**+1.0**
GOTU	**Gotland**	**1.64**	**274**	*e*P	**Pn**	**16 54 47.3**	**+0.4**
GOTU				*e*S	**Sn**	**16 55 08.6**	**0.0**
GOTU				smax	smax	16 55 10.1	
	comp=Z,5.8nm,0.1s						
EE01	**Perakula, Nova**	**1.92**	**33**	*e*P	**Pb**	**16 54 52.1**	**-0.5**
EE01				*e*SG	**Sb**	**16 55 17.2**	**+0.1**
VSVD	**Vaisvydziai**	**2.07**	**141**	*e*P	**Pn**	**16 54 52.1**	**-0.6**
EE08	**Sarghaua, Vand**	**2.19**	**60**	*e*PB	**Pb**	**16 54 56.8**	**-0.5**
EE08				*e*SB	**Sb**	**16 55 24.7**	**-0.3**
EE08				*e*SG	**Sg**	**16 55 26.4**	**-0.8**
EE02	**Kiisa, Saku**	**2.27**	**44**	*e*PB	**Pb**	**16 54 58.3**	**-0.3**
EE02				*e*SB	**Sb**	**16 55 27.0**	**-0.1**
NYNU	**Nynaeshamn**	**2.36**	**308**	P	**Pn**	**16 54 58.0**	**+1.3**
NYNU	**Nynaeshamn**	**2.36**	**308**	P	**Pn**	**16 54 58.0**	**+1.3**
TVF	**Tvarminne**	**2.40**	**20**	*e*PB	**Pb**	**16 54 59.8**	**-1.0**
TVF				*e*SG	**Sb**	**16 55 31.2**	**+0.4**
TVF				smax	smax	16 55 34.0	
	comp=Z,8.1nm,0.1s						
PABE	**Paberze**	**2.48**	**147**	*e*P	**Pn**	**16 54 58.8**	**+0.4**
PABE	**Paberze**	**2.48**	**147**	*e*P	**Pb**	**16 55 02.1**	**0.0**
PABE				AML	AML	16 55 10.1	
	comp=Z,15nm,0.1s						
PABE				*e*S	**Sb**	**16 55 34.0**	**+0.8**
BYXU	**Byxelkrok**	**2.51**	**265**	P	**Pn**	**16 55 00.9**	**+2.1**
BYXU	**Byxelkrok**	**2.51**	**265**	P	**Pn**	**16 55 00.9**	**+2.1**
NRTU	**Norrtaelje**	**2.59**	**324**	P	**Pn**	**16 55 01.2**	**+1.3**
NRTU	**Norrtaelje**	**2.59**	**324**	P	**Pn**	**16 55 01.2**	**+1.3**
NRTU	**Norrtaelje**	**2.59**	**324**	*e*P	**Pn**	**16 55 01.1**	**+1.3**
NRTU				*e*PB	**Pb**	**16 55 03.1**	**-1.0**
NRTU				*e*SB	**Sn**	**16 55 34.7**	**+2.6**
NRTU				smax	smax	16 55 38.6	
	comp=Z,4.7nm,0.1s						
AAL	**Aland**	**2.71**	**343**	*e*P	**Pn**	**16 55 01.5**	**0.0**
AAL	**Aland**	**2.71**	**343**	*e*P	**Pn**	**16 55 02.0**	**+0.5**
AAL				*e*SB	**Sn**	**16 55 37.7**	**+2.8**
AAL				smax	smax	16 55 42.0	
	comp=Z,3.9nm,0.1s						
VSTU	**Vaestervik**	**2.73**	**273**	P	**Pn**	**16 55 03.9**	**+2.0**
VSTU	**Vaestervik**	**2.73**	**273**	P	**Pn**	**16 55 03.9**	**+2.0**
VIKU	**Vikbolandet**	**2.76**	**291**	P	**Pn**	**16 55 03.9**	**+1.6**
VIKU	**Vikbolandet**	**2.76**	**291**	P	**Pn**	**16 55 03.9**	**+1.6**
EE03	**Tooma soojaam,**	**2.77**	**61**	*e*P	**Pn**	**16 55 04.1**	**+1.8**
EE03				*e*PB	**Pb**	**16 55 06.9**	**-0.2**
EE03				*e*SB	**Sb**	**16 55 41.2**	**-0.4**
VSU	**Vasula**	**2.85**	**70**	*e*P	**Pn**	**16 55 04.3**	**+0.7**
VSU	**Vasula**	**2.85**	**70**	*e*P	**Pn**	**16 55 04.7**	**+1.2**
VSU				*e*S	**Sb**	**16 55 41.5**	**-2.5**
VSU				AML	AML	16 55 55.0	
	comp=E,24nm,0.3s						
VSU				AML	AML	16 55 57.1	
	comp=N,18nm,0.3s						
VSU				AML	AML	16 55 59.2	
	comp=Z,12nm,0.8s						
VSU	**Vasula**	**2.85**	**70**	*i* P	**Pn**	**16 55 04.8**	**+1.2**
VSU	**Vasula**	**2.85**	**70**	*e*P	**Pn**	**16 55 04.8**	**+1.2**
VSU				*e*SB	**Sb**	**16 55 44.9**	**+0.9**
MEF	**Metsahovi**	**2.99**	**28**	*e*P	**Pn**	**16 55 06.1**	**+0.7**
MEF	**Metsahovi**	**2.99**	**28**	*e*P	**Pb**	**16 55 09.1**	**-1.7**
MEF				*e*S	**Sb**	**16 55 46.1**	**-1.6**
MEF				AML	AML	16 55 50.1	
	comp=N,5.9nm,0.1s						
MEF				AML	AML	16 55 50.4	
	comp=E,7.7nm,0.1s						
MEF				AML	AML	16 55 50.9	
	comp=Z,6.4nm,0.1s						
MEF	**Metsahovi**	**2.99**	**28**	*e*P	**Pn**	**16 55 07.1**	**+1.7**
MEF				*e*PB	**Pb**	**16 55 09.3**	**-1.5**
MEF				*e*SB	**Sb**	**16 55 46.8**	**-1.0**
MEF				smax	smax	16 55 48.6	
	comp=Z,2.5nm,0.1s						
HEL5	**Espoo, Suvisaa**	**2.99**	**32**	*e*P	**Pn**	**16 55 07.4**	**+2.0**
OSKU	**Oskarshamn**	**3.01**	**264**	P	**Pn**	**16 55 07.6**	**+1.9**
OSKU	**Oskarshamn**	**3.01**	**264**	P	**Pn**	**16 55 07.6**	**+1.9**
FIBU	**Brunna**	**3.19**	**318**	P	**Pn**	**16 55 09.8**	**+1.6**
FIBU	**Brunna**	**3.19**	**318**	P	**Pn**	**16 55 09.8**	**+1.6**
IIGN	**Ignalina**	**3.42**	**130**	*e*P	**Pn**	**16 55 12.1**	**+0.9**
RAF	**Rauma**	**3.42**	**1**	*e*P	**Pn**	**16 55 12.1**	**+0.8**
RAF	**Rauma**	**3.42**	**1**	*e*P	**Pn**	**16 55 12.6**	**+1.2**
KPF	**Kankaanpaa**	**4.24**	**3**	*e*P	**Pn**	**16 55 23.9**	**+1.3**
DEL	**Delary**	**4.38**	**258**	*i* P	**Pn**	**16 55 25.4**	**+0.9**
DEL				*i* S	**Sn**	**16 56 15.6**	**-0.6**
FIA0	**FINESS Array S**	**4.47**	**29**	*e*P	**Pn**	**16 55 27.3**	**+1.7**
FINES	**FINESS Array B**	**4.47**	**29**	Pn	**Pn**	**16 55 27.1**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=213,slow=11,SNR=14						
FINES				Sn	**Sn**	**16 56 20.2**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=210,slow=19,SNR=5.5						
FINES				Lg	Lg	16 56 35.3	
	comp=Z,0.8nm,0.3s,baz=221,slow=25,SNR=12						
	comp=Z,0.6nm,0.3s						
BSD	**Bornholm Skovb**	**4.49**	**239**	*i* P	**Pn**	**16 55 26.6**	**+0.6**
BSD				*i* S	**Sn**	**16 56 19.1**	**+0.3**
BSD				IAML		16 56 48.7	
	comp=Z,17nm,1.0s						
BORU	**Boraas**	**4.75**	**274**	*i* P	**Pn**	**16 55 30.3**	**+0.7**
BORU				*i* S	**Sn**	**16 56 25.6**	**+0.3**
HFS	**Hagfors**	**4.83**	**305**	Pn	**Pn**	**16 55 31.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=118,slow=15,SNR=11						
HFS				Sn	**Sn**	**16 56 26.2**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=111,slow=28,SNR=5.5						
HFS				Lg	Lg	16 56 45.5	
	comp=Z,0.8nm,0.3s,baz=118,slow=28,SNR=11						
	comp=Z,0.7nm,0.3s						
KEF	**Keuruu**	**4.86**	**18**	*e*P	**Pn**	**16 55 32.1**	**+1.1**
BJUU	**Bjuv**	**4.96**	**256**	*i* P	**Pn**	**16 55 34.0**	**+1.6**
BJUU				*i* S	**Sn**	**16 56 30.0**	**-0.4**
RUF	**Ruokolahti**	**5.34**	**41**	*e*P	**Pn**	**16 55 39.0**	**+1.3**
VAF	**Ylistaro**	**5.47**	**5**	*e*P	**Pn**	**16 55 40.0**	**+0.5**
NOA	**NORSAR Array B**	**6.33**	**307**	Pn	**Pn**	**16 55 51.0**	**-0.4**
	baz=124,slow=14,SNR=5.0						
	comp=Z,0.1nm,0.3s						
JOF	**Joensuu**	**7.18**	**38**	*e*P	**Pn**	**16 56 03.2**	**+0.3**
ARCES	**ARCESS Array B**	**12.09**	**7**	Pn	**Pn**	**16 57 07.4**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=4.5						
	comp=Z,0.2nm,0.3s						

BJI ***11*** *16:54:55.4, 20.°86N×121.°81E, h95km, mB4.7/12, mb4.4/48*
NEIC ***11*** *16:54:56.5±1.4, 20.°86N±0.°08×121.°8E±0.°1, h91km±5km, mb4.8/147, Error ellipse: s-maj=13.9km s-min=10.9km az=65.0*
JMA ***11*** *16:54:56.2±0.5, 21.°N×2.°×12.°2E±.°, h29km, MV4.7/19, PHILIPPINE ISL REGION*
TAP ***11*** *16:54:57.8, 21.°05N×121.°66E, h115km, ML5.0, D*
IDC ***11*** *16:54:59.6±1.4, 20.°80N×121.°94E, h127km±12km, mb4.2/27, mbtmp4.6/29, MS3.6/8, Error ellipse: s-maj=14.4km s-min=8.3km az=73.0*
ISC 11 16:54:58.0±0.5, 20.°92N±0.°03×121.°71E±0.°03, h108km±4km, n719, σ1°65/812, mb4.7/125, 12C-85D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**1.08**	**354**	*i*P	**Pn**	**16 55 18.9**	**-1.0**
LYUB				*i* S	**Sn**	**16 55 34.9**	**-1.5**
LAY	**Lan-yu**	**1.12**	**352**	*i*P	**Pn**	**16 55 18.6**	**-1.7**
LAY				S	**Sn**	**16 55 35.0**	**-2.3**
TSEB	**Hengchuen, Pin**	**1.23**	**322**	*i*P	**Pn**	**16 55 21.2**	**-0.3**
TSEB				*i* S	**Sn**	**16 55 38.7**	**-0.7**
TWKBT	**Hengchun**	**1.31**	**321**	*i*P	**Pn**	**16 55 21.9**	**-0.5**
TWKBT				S	**Sn**	**16 55 39.2**	**-1.9**
TWK1	**Hengchun**	**1.32**	**320**	*i*P	**Pn**	**16 55 21.9**	**-0.6**
TWK1				S	**Sn**	**16 55 38.7**	**-2.5**
SMST	**Manzhou Townsh**	**1.36**	**324**	P	**Pn**	**16 55 22.2**	**-0.9**
SMST				S	**Sn**	**16 55 40.1**	**-1.9**
HEN	**Hengchun**	**1.41**	**320**	*i*P	**Pn**	**16 55 23.2**	**-0.4**
HEN				S	**Sn**	**16 55 41.8**	**-1.1**
SLIU	**Shizi**	**1.54**	**327**	*i*P	**Pn**	**16 55 24.2**	**-0.9**
SLIU				S	**Sn**	**16 55 43.9**	**-2.0**
TAWH	**Dawu Township**	**1.60**	**332**	*i*P	**Pn**	**16 55 24.5**	**-1.4**
TAWH				S	**Sn**	**16 55 44.6**	**-2.5**
TAW	**Tawu**	**1.61**	**332**	P	**Pn**	**16 55 24.5**	**-1.6**
TAW				S	**Sn**	**16 55 44.6**	**-2.8**
EAST	**Anshuo**	**1.66**	**331**	*i*P	**Pn**	**16 55 25.3**	**-1.4**
EAST				S	**Sn**	**16 55 46.1**	**-2.4**
LDUT	**Ludao**	**1.76**	**353**	P	**Pn**	**16 55 25.6**	**-2.3**
LDUT				S	**Sn**	**16 55 47.3**	**-3.2**
SCZT	**Fangliau**	**1.76**	**325**	*i*P	**Pn**	**16 55 27.0**	**-0.9**
SCZT				S	**Sn**	**16 55 47.5**	**-3.2**
ECL	**Taimali**	**1.81**	**337**	*i*P	**Pn**	**16 55 26.5**	**-2.0**
ECL				*e*S	**Sn**	**16 55 48.4**	**-3.4**
WLCH	**Liuqiu**	**1.88**	**319**	*i*P	**Pn**	**16 55 29.9**	**+0.5**
WLCH				*e*S	**Sn**	**16 55 53.4**	**0.0**
TWP	**Hsiaoliuchiu**	**1.89**	**319**	*i*P	**Pn**	**16 55 29.9**	**+0.4**
TWP				*e*S	**Sn**	**16 55 53.4**	**-0.2**
TTN	**Taitung**	**1.90**	**344**	P	**Pn**	**16 55 28.7**	**-0.8**
TTN				*e*S	**Sn**	**16 55 53.3**	**-0.4**
MASBT	**Mashibuluo**	**1.96**	**329**	*i*P	**Pn**	**16 55 29.4**	**-0.9**
MASBT				S	**Sn**	**16 55 52.4**	**-2.6**
TWGBT	**Beinan**	**1.97**	**343**	P	**Pn**	**16 55 29.2**	**-1.4**
TWGBT	**Beinan**	**1.97**	**343**	S	**Sn**	**16 55 55.7**	**+0.2**
TWGBT	**Beinan**	**1.97**	**343**	P	**Pn**	**16 55 28.7**	**-1.9**
TWGBT				S	**Sn**	**16 55 52.7**	**-2.8**
TWG	**Pinlang**	**1.98**	**343**		**Pn**	**16 55 28.6**	**-2.0**
TWG				Sn	**Sn**	**16 55 53.7**	**-1.8**
TWG	**Pinlang**	**1.98**	**343**	P	**Pn**	**16 55 28.7**	**-2.0**
TWG				S	**Sn**	**16 55 52.5**	**-3.1**
TSMG	**Majia**	**2.03**	**331**	*i*P	**Pn**	**16 55 30.4**	**-0.9**
TSMG				*e*S	**Sn**	**16 55 54.1**	**-2.7**
LONT	**Longtian**	**2.05**	**345**	*e*P	**Pn**	**16 55 29.9**	**-1.6**
LONT				*e*S	**Sn**	**16 55 54.4**	**-2.7**
SSD	**Sandimen**	**2.07**	**331**	*i*P	**Pn**	**16 55 30.9**	**-1.0**
SSD				*e*S	**Sn**	**16 55 54.3**	**-3.4**
EDH	**Donghe**	**2.07**	**350**	*e*P	**Pn**	**16 55 30.6**	**-1.3**
EDH				S	**Sn**	**16 55 55.4**	**-2.3**
TSPT	**Pingtung City**	**2.08**	**327**	*e*P	**Pn**	**16 55 31.7**	**-0.2**
TSPT				*e*S	**Sn**	**16 55 56.9**	**-0.9**
KAU	**Kaohsiung**	**2.09**	**322**	*e*P	**Pn**	**16 55 32.1**	**+0.1**
SGLT	**Jiouru**	**2.12**	**328**	*e*P	**Pn**	**16 55 32.6**	**+0.2**
SGLT				*e*S	**Sn**	**16 55 57.0**	**-1.8**
WSSB	**Gushan**	**2.18**	**322**	P	**Pn**	**16 55 33.1**	**-0.1**
WSSB				*e*S	**Sn**	**16 55 58.6**	**-1.5**
CHKT	**Chengkung**	**2.19**	**352**	P	**Pn**	**16 55 31.7**	**-1.6**
CHKT				S	**Sn**	**16 55 57.6**	**-2.8**
ECS	**Chishang**	**2.21**	**348**	*e*P	**Pn**	**16 55 32.7**	**-0.9**
ECS				*e*S	**Sn**	**16 55 59.4**	**-1.5**
TWM1	**Shoushan**	**2.24**	**328**	P	**Pn**	**16 55 34.1**	**+0.1**
TWM1				*e*S	**Sn**	**16 56 01.2**	**-0.3**
SCST	**Cishan**	**2.25**	**330**	*e*P	**Pn**	**16 55 33.8**	**-0.4**
SCST				*e*S	**Sn**	**16 56 00.5**	**-1.4**
EHD	**Haiduan**	**2.26**	**348**	*e*P	**Pn**	**16 55 33.5**	**-0.8**
EHD				*e*S	**Sn**	**16 56 00.0**	**-2.1**
CHKH	**Chenggong**	**2.28**	**353**	P	**Pn**	**16 55 32.9**	**-1.6**
CHKH				S	**Sn**	**16 55 59.6**	**-2.8**
FULB	**Fuli**	**2.30**	**350**	*e*P	**Pn**	**16 55 33.4**	**-1.3**
FULB				*e*S	**Sn**	**16 56 01.1**	**-1.8**
ELDTW	**Lidau**	**2.34**	**344**	*e*P	**Pn**	**16 55 33.6**	**-1.8**
ELDTW				*e*S	**Sn**	**16 56 01.7**	**-2.5**
SGST	**Jiashian**	**2.39**	**334**	*e*P	**Pn**	**16 55 34.2**	**-1.7**
SGST				*e*S	**Sn**	**16 56 01.2**	**-3.9**
ECBN	**Changbin**	**2.39**	**354**	P	**Pn**	**16 55 34.5**	**-1.4**
ECBN				S	**Sn**	**16 56 02.4**	**-2.7**
STYN	**Taoyuan**	**2.40**	**339**	*e*P	**Pn**	**16 55 35.5**	**-0.5**
STYH				*e*S	**Sn**	**16 56 03.2**	**-2.0**

HWA eS Sn 16 56 17.9 -2.5
OWD Renai 3.06 351 ⇓P Pn 16 55 44.4 -0.5
OWD eS Sn 16 56 19.0 -1.9
TYC Yuchr 3.07 345 eP Pn 16 55 43.9 -0.9
TYC eS Sn 16 56 18.7 -2.3
WNT Mingjian 3.09 342 eP Pn 16 55 44.1 -1.1
WNT eS Sn 16 56 18.0 -3.5
LXIB Xiulin Townshi 3.10 355 ⇓P Pn 16 55 44.1 -1.2
LXIB eS Sn 16 56 19.4 -2.5
WUSB Renai 3.10 350 P Pn 16 55 45.1 -0.3
WUSB eS Sn 16 56 20.2 -1.8
VCHM Qimei 3.10 318 ⇓iP Pn 16 55 44.0 -1.4
VCHM eS Sn 16 56 17.1 -4.7
WNT1 Nantou City 3.12 342 eP Pn 16 55 44.8 -0.7
WNT1 eS Sn 16 56 18.8 -3.4
TWD Chiawan 3.14 358 ⇓P Pn 16 55 44.9 -1.0
TWD eS Sn 16 56 20.1 -2.6
WPL Puli Township 3.15 347 eP Pn 16 55 45.7 -0.2
DPDB Guoxing 3.18 347 eP Pn 16 55 45.8 -0.6
DPDB eS Sn 16 56 21.8 -1.9
WYL Yuanlin Townsh 3.20 341 eP Pn 16 55 45.8 -0.8
RLNB Erlin 3.21 337 eP Pn 16 55 45.5 -1.2
RLNB eS Sn 16 56 20.7 -3.5
WTCT Ta-ch'eng 3.21 336 eP Pn 16 55 45.5 -1.2
WTCT eS Sn 16 56 21.5 -2.9
ETL Fush Village 3.22 359 eP Pn 16 55 46.1 -0.8
ETL eS Sn 16 56 22.7 -2.0
WHF Hehuan Shan 3.23 353 eP Pn 16 55 46.9 -0.5
WHF eS Sn 16 56 23.5 -2.1
NACB Ninganchiao 3.24 358 Pn 16 55 46.0 -1.1
NACB Ninganchiao 3.24 358 P Pn 16 55 46.3 -0.8
NACB Ninganchiao 3.24 358 ⇓iP Pn 16 55 46.1 -1.0
NACB eS Sn 16 56 22.6 -2.4
WWF Wufeng 3.24 343 eP Pn 16 55 46.4 -0.8
PHUB P'eng-hu 3.25 323 ⇓iP Pn 16 55 45.7 -1.6
PHUB eS Sn 16 56 20.4 -4.9
ETLH Xiulin Townshi 3.27 356 eP Pn 16 55 46.9 -0.8
ETLH eS Sn 16 56 24.1 -1.9
PNG Penghu 3.30 323 eP Pn 16 55 46.4 -1.6
PNG eS Sn 16 56 22.0 -4.5
WCH1 Changhua City 3.31 341 eP Pn 16 55 47.2 -0.8
WCH1 eS Sn 16 56 23.6 -3.2
WCHH Zhanghua 3.32 342 eP Pn 16 55 47.1 -1.0
WCHH eS Sn 16 56 23.4 -3.5
FUSS Fushou 3.34 353 eP Pn 16 55 48.7 +0.1
FUSS eS Sn 16 56 25.8 -2.0
TCU Taichung 3.35 344 eP Pn 16 55 48.5 -0.1
TCU eS Sn 16 56 24.9 -2.7
TWT Tachien 3.35 352 eP Pn 16 55 48.8 0.0
TWT eS Sn 16 56 26.1 -1.9
TDCB Techi 3.35 351 eP Pn 16 55 48.8 0.0
TDCB eS Sn 16 56 26.3 -1.7
EAHA Aohua 3.39 0 eP Pn 16 55 48.4 -0.8
EAHA eS Sn 16 56 25.2 -3.4
WHP Taichung City 3.41 348 eP Pn 16 55 49.0 -0.5
WHP eS Sn 16 56 27.3 -2.0
ENA Nanau 3.49 0 eP Pn 16 55 49.7 -0.7
ENA eS Sn 16 56 28.7 -2.3
NNSB Datong 3.50 355 ⇓P Pn 16 55 50.5 -0.2
NNSB S Sn 16 56 28.5 -3.0
NNS Nan Shan 3.51 355 eP Pn 16 55 50.7 -0.2
NNS eS Sn 16 56 30.5 -1.3
TWQ1 Liyutan 3.52 346 eP Pn 16 55 50.1 -0.7
TWQ1 eS Sn 16 56 28.9 -2.7
SZP Santa 3.56 200 P Pn 16 55 49.9 -1.5
SZP Santa 3.56 200 S Sn 16 56 30.8 -1.9
NSY Sanyi 3.58 346 eP Pn 16 55 51.8 0.0
NSY eS Sn 16 56 32.0 -1.4
LATG Datong 3.60 357 ⇓eP Pn 16 55 51.4 -0.6
LATG eS Sn 16 56 31.0 -2.9
ESAO Su ao 3.64 2 eP Pn 16 55 52.4 0.0
TWC Suao 3.67 2 eP Pn 16 55 52.6 -0.3
TWC eS Sn 16 56 33.4 -1.9
HATJ Hateruma jima 3.67 31 P Pn 16 55 51.9 -1.0
HATJ eS Sn 16 56 33.4 -2.0
JYNG Yonagunijimaku 3.69 18 P Pn 16 55 53.3 +0.1
JYNG S Sn 16 56 34.5 -1.4
NDS Dongshan 3.69 0 eP Pn 16 55 53.8 +0.6
NDS eS Sn 16 56 33.8 -2.1
NMLH Miaoli 3.69 347 eP Pn 16 55 52.5 -0.7
ENTT Nioudou 3.70 358 eP Pn 16 55 53.0 -0.3
ENTT eS Sn 16 56 34.4 -1.7
YOJ Yonaguni jima 3.72 19 Pn 16 55 52.5 -1.0
YOJ Yonaguni jima 3.72 19 P Pn 16 55 53.3 -0.2
YOJ Yonaguni jima 3.72 19 S Sn 16 55 53.1 -1.1
YOJ Yonaguni jima 3.72 19 P Pn 16 55 52.6 -1.0
YOJ eS Sn 16 56 35.4 -1.1
YOJ Yonaguni jima 3.72 19 P Pn 16 55 52.8 -0.7
YOJ S Sn 16 56 32.5 -4.1
NFF Wufeng Townshi 3.73 352 eP Pn 16 55 53.0 -0.8
YHNB Yeheng 3.74 355 Pn 16 55 53.6 -0.3
YHNB Yeheng 3.74 355 P Pn 16 55 54.1 +0.2
YHNB Yeheng 3.74 355 S Sn 16 56 36.4 -0.8
YHNB Yeheng 3.74 355 ⇓eP Pn 16 55 54.1 +0.2
YHNB eS Sn 16 56 35.6 -1.6
NSTT Nanjuang 3.75 350 eP Pn 16 55 55.7 +1.8
NSK Sanguang 3.75 355 eP Pn 16 55 54.5 +0.5
NSK eS Sn 16 56 35.6 -1.7
LIOB Emei 3.76 350 eP Pn 16 55 53.2 -0.9
LIOB eS Sn 16 56 35.8 -1.8
TWE Neicheng 3.78 359 eP Pn 16 55 54.5 +0.1
TWE eS Sn 16 56 34.9 -3.1
FUSB Fushanzhiwuyua 3.82 358 ⇓eP Pn 16 55 54.7 -0.2
FUSB S Sn 16 56 36.2 -2.9
NWLT Wulai 3.84 357 eP Pn 16 55 55.5 +0.3
NWLT eS Sn 16 56 37.5 -2.0
KSHI Guanxi Townshi 3.87 353 eP Pn 16 55 55.3 -0.3
IRIF Iriomote-Funau 3.88 28 P Pn 16 55 54.8 -0.8
IRIF eS Sn 16 56 38.9 -1.4
EGS 3.91 3 eP Pn 16 55 56.3 +0.3
EGS eS Sn 16 56 38.6 -2.5
JKRS Kuro-shima 3.92 32 P Pn 16 55 55.4 -0.8
JKRS eS Sn 16 56 39.1 -2.3
TIPB Shuangxi 4.03 2 eP Pn 16 55 58.1 +0.4
TIPB eS Sn 16 56 42.2 -1.9
TATO Taipei 4.04 357 P Pn 16 55 57.7 -0.1
TATO Taipei 4.04 357 S Sn 16 56 44.7 +0.5
TATO Taipei 4.04 357 eP Pn 16 55 58.3 +0.5
TATO eS Sn 16 56 41.2 -3.0
TWA Mucha 4.04 358 eP Pn 16 55 58.6 +0.7
TWA eS Sn 16 56 42.4 -1.8
TWB1 Santiao Chiao 4.07 4 eP Pn 16 55 57.7 -0.6
TWB1 eS Sn 16 56 42.4 -2.6
JIJ Ishigaki jima 4.10 33 P Pn 16 55 57.2 -1.4
JIJ S Sn 16 56 42.4 -3.2
NWF Wu-fen Shan 4.13 1 eP Pn 16 56 00.2 +1.1
NWF eS Sn 16 56 45.4 -1.1
WFSB Wu-fen Shan 4.13 1 eP Pn 16 55 59.7 +0.7
WFSB eS Sn 16 56 44.8 -1.6
SXI1 Grass Mountain 4.15 2 eP Pn 16 55 59.9 +0.5
SXI1 eS Sn 16 56 45.5 -1.6
TWS1 Kuangyinshan 4.17 356 eP Pn 16 55 59.5 -0.1
TWS1 eS Sn 16 56 45.4 -1.9
YM01 YM01 4.21 358 eP Pn 16 55 59.9 -0.2
YM01 eS Sn 16 56 45.7 -2.6
TNOU National Taiwa 4.21 1 eP Pn 16 56 00.3 +0.2
TNOU eS Sn 16 56 45.7 -2.6
ZUZH Zhuzihu 4.22 358 eP Pn 16 56 00.6 -0.3
YM08 YM08 4.25 359 eP Pn 16 56 00.5 -0.1
ANP Anpu 4.25 358 eP Pn 16 56 01.1 +0.4
TWY Chenhua 4.33 359 eP Pn 16 56 02.7 +0.9
JISG Ishigakijimahi 4.37 33 P Pn 16 56 00.5 -1.7
JISG eS Sn 16 56 49.6 -2.5
KNM Kinmen 4.61 320 ⇓P Pn 16 56 05.5 0.0
KNM eS Sn 16 56 55.2 -2.7
JTJ Tarama 4.62 36 P Pn 16 56 03.9 -1.7
JTJ eS Sn 16 56 55.2 -2.9
VDOS Pratas Island 4.66 268 eP Pn 16 56 06.1 -0.1
KNMB Chin-men Tao 4.67 320 Pn 16 56 05.0 -1.3
KNMB Chin-men Tao 4.67 320 ⇓P Pn 16 56 05.0 -1.3
KNMB eS Sn 16 56 54.7 -4.8
ZPLA Ao Xicun 4.73 310 ⇓eP Pn 16 56 06.0 -1.1
PTMZ Houxiangcun 4.74 330 ⇓P Pn 16 56 05.7 -1.5
PTMZ eS Sn 16 56 55.9 -5.2
DSXP Dongshan 4.84 306 ⇓P Pn 16 56 07.6 -1.0
DSXP eS Sn 16 56 59.6 -3.9
QZH Quanzhou 4.93 325 ⇓iP Pn 16 56 08.2 -1.6
QZH S Sn 16 56 59.8 -5.8
QZH smax smax
comp=N,250nm,0.5s
QZH smax smax
comp=E,680nm,0.6s
JIRB Irabujima 5.03 39 P Pn 16 56 09.7 -1.5
JIRB eS Sn 16 57 05.6 -2.5
JMJ2 Miyako jima3 5.06 41 P Pn 16 56 10.2 -1.3
JMJ2 eS Sn 16 57 07.2 -1.6
JMJ Miyako jima 2 5.09 40 P Pn 16 56 10.4 -1.6
JMJ Miyako jima 2 5.09 40 eP Pn 16 56 10.6 -1.4
JMJ eS Sn 16 57 04.9 -4.7
JOGS Gusukube 5.12 41 eP Pn 16 56 11.1 -1.3
AXDP Jialang 5.25 320 ⇓P Pn 16 56 13.1 -1.0
AXDP eS Sn 16 57 08.4 -5.1
MATB Ma-tsu 5.45 343 eP Pn 16 56 14.7 -2.2
MATB eS Sn 16 57 11.8 -6.6
MHZQ Yeshan 5.71 335 ⇓eP Pn 16 56 18.8 -1.5
MHZQ eS Sn 16 57 19.2 -5.4
XPSS Dashiqiu 6.14 347 eP Pn 16 56 24.4 -1.8
SXFK Yanhouchang 6.60 326 eP Pn 16 56 31.1 -1.4
TGY Tagaytay City 6.82 186 P Pn 16 56 37.0 +1.4
347nm,0.3s,baz=201,slow=2.7,SNR=2.3
TGY S Sn 16 57 59.5 +7.7
178nm,0.3s,baz=246,slow=20,SNR=1.1
TGY LR LR 16 59 20.7
comp=Z,110nm,18.9s,baz=266,slow=39
JKE Kume jima 2 7.11 40 P Pn 16 56 37.3 -2.1
HKPS Hong Kong Po S 7.17 282 P Pn 16 56 41.0 +0.8
HKPS Hong Kong Po S 7.17 282 eP Pn 16 56 40.3 +0.1
JOW Kunigami 8.41 44 Pn Pn 16 56 55.0 -2.0
JOW Kunigami 8.41 44 P Pn 16 56 54.9 -2.1
12nm,0.3s,baz=187,slow=14,SNR=12
JOW Kunigami 8.41 44 P Pn 16 56 55.0 -2.0
JKDJ Kitadaitoujima 10.12 59 eP Pn 16 57 18.3 -2.0
CNSH ChangSha 10.77 314 P Pn 16 57 28.7 -0.3
CNSH S Sn 16 59 21.6 -5.9
QIZ Qiongzhong 11.32 262 P Pn 16 57 35.2 -1.2
QIZ S Sn 16 59 42.5 +1.5
QIZ LR LR
comp=N,450nm,13.4s
QIZ LR LR
comp=E,490nm,13.4s
NJ2 Nanjing 11.37 348 eP Pn 16 57 37.1 0.0
NJ2 pmax pmax
comp=Z,11nm,0.5s
WHN Wuhan 11.65 327 P Pn 16 57 40.3 -0.5
WHN S Sn 16 59 46.8 -2.0
WHN LR LR
comp=E,680nm,16.7s
DAV Davao City (W) 14.27 164 LR LR 17 03 29.2
comp=Z,74nm,21.1s,baz=353,slow=36
ENH Enshi 14.42 313 P 16 58 20.4 -0.4
JNU Nakatsue 14.63 32 Pn 16 58 19.2 -0.5
JNU Nakatsue 14.63 32 P Pn 16 58 20.1 +0.4
44nm,1.1s,baz=210,slow=3.2,SNR=23
JNU Nakatsue 14.63 32 P Pn 16 58 19.3 -0.4
TIA Tai'an 15.75 346 P P 16 58 36.2 +0.8
TIA pmax pmax
comp=Z,12nm,0.8s
LYN LuoYang 15.84 331 P P 16 58 39.2 +2.8
LYN pmax pmax
comp=Z,39nm,0.8s
JMN Monobe 16.70 38 P Pn 16 58 45.5 0.0
XAN Xi'an 17.28 322 P P 16 58 50.1 -2.3
XAN pmax pmax
comp=Z,8.0nm,0.5s
KSRS Korea Array 17.34 17 P Pn 16 58 53.7 +0.6
11nm,0.5s,baz=197,slow=11,SNR=74
KS19 Wonju Array Si 17.36 17 P Pn 16 58 53.6 +0.1
HNS HongShan 17.51 341 ⇓P Pn 16 58 57.6 +2.4
HNS pmax pmax
comp=Z,59nm,0.8s
CD2 Chengdu 18.94 305 P Pn 16 59 14.4 +1.9
CD2 pmax pmax
comp=Z,20nm,0.5s
PZH PanZhiHua 19.10 291 P Pn 16 59 14.6 +0.2
BJI Beijing 19.63 347 P P 16 59 18.2 +0.2
BJI pmax pmax
comp=Z,7.0nm,1.1s
INU Inuyama 19.68 40 P Pn 16 59 20.5 -0.5
TOLI2 Tolitoli 19.71 183 P P 16 59 19.4 +0.4
MRSI Marisa 20.32 179 P Pn 16 59 27.9 -0.7
813nm73nm,0.7s
KMSI Cibinong 20.35 173 P Pn 16 59 27.2 -1.7
94nm,0.9s
MPSI Mapaga 20.54 185 P Pn 16 59 29.6 -1.5
SBUM Sibu 20.56 208 P P 16 59 29.4 +1.2
TNTI Ternate 20.78 164 P 16 59 28.4 -2.1
TNTI Ternate 20.78 164 P P 16 59 29.8 -0.7
TNTI Ternate 20.78 164 P P 16 59 29.4 -1.1
496nm31nm,0.5s
MJAR Matsushiro Arr 21.20 39 IAmb IAmb 16 59 44.0
comp=Z,6.8nm,0.9s
MJAR Matsushiro Arr 21.20 39 P P 16 59 35.3 +0.4
comp=Z,3.9nm,0.8s,baz=225,slow=9.2,SNR=4.4
comp=Z,3.9nm,0.8s
CMAR Chiang Mai Arr 21.57 267 P P 16 59 42.2 +3.2
comp=Z,1.3nm,0.8s,baz=84,slow=9.8,SNR=15
CMAR PcP PcP 17 03 38.1 +0.9
comp=Z,1.1nm,0.8s,baz=50,slow=0.7,SNR=11
CMAR ScP ScP 17 07 04.7 +0.2
comp=Z,1.0nm,0.8s,baz=77,slow=0.8,SNR=9.7
CMAR LR LR 17 07 35.9
comp=Z,54nm,19.2s,baz=195,slow=35
HHC Hu-ho-hao-te 21.66 339 eP P 16 59 41.0 +1.2
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,70nm,4.8s
LZDM Lanzhou Array 21.74 317 P P 16 59 43.2 +2.2
comp=Z,2.2nm,0.3s,baz=162,slow=11,SNR=4.3
comp=Z,2.2nm,0.3s
LUWI Luwuk 21.86 177 P 16 59 40.6 -1.4
LUWI Luwuk 21.86 177 P P 16 59 41.1 -0.9
LUWI Luwuk 21.86 177 P P 16 59 41.2 -0.8
comp=Z,1µmcomp=Z,125nm,1.4s
BTO Baotou 22.00 336 eP P 16 59 39.5 -4.0
BTO PP sP 17 00 18.4 +1.2
BTO S S 17 03 33.0 -6.5
BTO pmax pmax
comp=Z,13nm,0.5s
BTO pmax pmax
comp=Z,310nm,5.2s
BTO LR LR
comp=Z,250nm,6.9s
BTO LR LR
comp=Z,430nm,6.4s
BTO LR LR
comp=Z,460nm,6.8s
BKB Balikpapan 22.55 193 P P 16 59 50.2 +1.0
comp=Z,126nm,0.9s
MTKI Muara Teweh, K 22.73 198 P P 16 59 52.7 +1.7
comp=Z,98nm,0.9s
CN2 Changchun 23.03 7 eP P 16 59 54.8 +1.1
CN2 pmax pmax
comp=Z,10.0nm,0.6s
SANI Sanana 23.21 169 P P 16 59 51.8 -3.8
comp=Z,31nm,0.6s
XLT XiLinHaoTe 23.39 350 eP P 16 59 46.3 -11
XLT pP pP 17 00 05.4 -13
XLT PP PnPn 17 00 27.5 -2.6
XLT pmax pmax
comp=Z,15nm,0.8s
XLT pmax pmax
comp=Z,100nm,4.8s
SWI Sorong 23.58 156 P P 16 59 58.4 -0.6
TTSI Tana Toraja 23.89 185 P P 17 00 07.7 +5.9
comp=Z,32nm,1.0s
MDJ Mudanjiang 24.52 14 P P 17 00 07.7 +0.5
MDJ pmax pmax
comp=Z,11nm,1.0s
NLAI Namlea 24.59 167 P P 17 00 08.9 +0.8
USRK Ussuriysk Ar. 24.73 18 P P 17 00 09.8 +0.6
comp=Z,4.8nm,0.5s,baz=204,slow=6.5,SNR=26
comp=Z,4.8nm,0.5s
SPSI Sidrap Palu 24.81 185 P P 17 00 12.2 +2.1
comp=Z,29nm,0.8s
BBKI Banjar Baru 25.15 196 P P 17 00 17.0 +3.7
comp=Z,46nm,0.8s
BNX BinXian 25.19 9 ⇑P P 17 00 13.9 +0.6
BNX pmax pmax
comp=Z,5.0nm,0.8s
AAI Ambon 25.27 165 P P 17 00 14.5 +0.2
comp=Z,789nmcomp=Z,49nm,0.5s
JTM Tenmabayashi 25.75 35 P 17 00 18.6 +0.2
JTM IAmb IAmb 17 00 20.3
comp=Z,38nm,0.9s
FAKI Fak Fak 25.85 155 P P 17 00 20.6 +1.0
GTA Gaotai 26.30 319 eP P 17 00 25.7 +2.1
GTA sP sP 17 00 54.5 -4.4
GTA pmax pmax
comp=Z,2.0nm,0.9s
BNDI Bandanaira 26.54 161 P P 17 00 24.8 -0.9
GOMU GeErMu 27.98 309 P P 17 00 38.2 -0.7
HILR Hailar Array B 28.61 357 P P 17 00 44.4 +0.4
comp=Z,1.5nm,0.4s,baz=180,slow=9.0,SNR=4.2
comp=Z,1.5nm,0.4s
ULN Ulaanbaatar 29.37 340 P P 17 00 51.0 +0.1
ULN IAmb IAmb 17 00 53.3
comp=Z,15nm,0.7s
EDFI Ende, Flores 29.49 180 P P 17 00 51.7 -0.4
comp=Z,53nm,0.7s
SONM Songino Array 29.56 339 P 17 00 52.9 +0.3
SONM Songino Array 29.56 339 P P 17 00 53.3 +0.8
comp=Z,6.1nm,0.6s,baz=153,slow=9.3,SNR=22
comp=Z,6.1nm,0.6s
SOEI Soe 30.59 175 P P 17 00 52.9 -9.0
MTN Manton Dam 34.81 164 P P 17 01 36.0 -2.5
comp=Z,13nm,0.6s
MTN Manton Dam 34.81 164 P 17 01 36.2 -2.3
MTN IAmb IAmb 17 01 36.9
comp=Z,7.1nm,0.7s
KDU Kakadu 35.03 161 P P 17 01 37.8 -2.6
comp=Z,9.4nm,0.7s
WMQ Urumqi 36.31 317 eP P 17 01 52.7 +1.5
KNRA Kununurra 37.03 169 P P 17 01 55.7 -1.7
comp=Z,8.7nm,0.6s
KNRA Kununurra 37.03 169 IAmb IAmb 17 02 04.8
comp=Z,13nm,1.1s
FITZ Fitzroy Crossi 38.97 174 P P 17 02 11.1 -2.7
FITZ Fitzroy Crossi 38.97 174 P P 17 02 12.3 -1.4
PMG Port Moresby 39.17 138 P P 17 02 15.3 -0.2
COEN Coen 40.58 147 P P 17 02 25.4 -1.7
comp=Z,25nm,1.0s
COEN Coen 40.58 147 P P 17 02 26.6 -0.5
MKAR Makanchi Array 41.05 318 P 17 02 31.6 +0.9
MKAR Makanchi Array 41.05 318 P P 17 02 32.2 +1.5
comp=Z,6.2nm,0.4s,baz=108,slow=9.3,SNR=126
MKAR PcP PcP 17 04 29.1 +0.5
comp=Z,1.3nm,0.6s,baz=87,slow=4.6,SNR=3.4
MKAR ScP ScP 17 08 07.9 -0.6
comp=Z,0.5nm,0.7s,baz=110,slow=5.6,SNR=3.6
comp=Z,6.2nm,0.4s
MAKZ Makanchi 41.25 318 P 17 02 34.3 +1.9
MAKZ Makanchi 41.25 318 P P 17 02 34.5 +2.2
MAKZ pP pP 17 02 53.7 -3.0
MAKZ PcP PcP 17 04 29.6 +0.4
H11N1 WAKE ISLAND Hy 42.28 83 T T 17 48 05.1
baz=279,slow=75,SNR=10
H11N2 WAKE ISLAND Hy 42.28 83 T T 17 48 09.3
baz=279,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 42.30 83 T T 17 48 01.5
baz=279,slow=75,SNR=9.3
WB0 Warramunga Arr 42.30 162 IAmb IAmb 17 02 40.0
comp=Z,12nm,0.7s
H11S3 WAKE ISLAND Hy 42.31 85 T T 17 47 55.8
baz=281,slow=75,SNR=45
H11S1 WAKE ISLAND Hy 42.32 85 T T 17 47 55.9
baz=281,slow=75,SNR=58
H11S2 WAKE ISLAND Hy 42.33 85 T T 17 47 57.1
baz=281,slow=75,SNR=53
PETK Petropavlovsk- 42.33 32 P P 17 02 41.5 +0.4
comp=Z,3.4nm,0.7s,baz=239,slow=5.1,SNR=9.7
PETK LR LR 17 21 17.7
comp=Z,50nm,18.1s,baz=319,slow=37
comp=Z,3.4nm,0.7s
WRAB Tennant Creek 42.45 162 P 17 02 40.5 -1.8
WRAB IAmb IAmb 17 02 41.3
comp=Z,10nm,0.6s
WRAB Tennant Creek 42.45 162 P P 17 02 40.8 -1.5
WRAB Tennant Creek 42.45 162 P P 17 02 40.7 -1.7
WRA Warramunga Arr 42.45 162 P P 17 02 40.8 -1.6
comp=Z,11nm,0.5s,baz=344,slow=9.0,SNR=164
WRA ScP ScP 17 08 13.3 -1.1
comp=Z,1.3nm,1.0s,baz=357,slow=4.0,SNR=4.2
WRA S S 17 08 48.5 -7.8
comp=Z,1.7nm,1.1s,baz=350,slow=15,SNR=4.7
comp=Z,11nm,0.5s
ZAA0 Zalesovo Array 43.25 329 P 17 02 49.3 +0.9
ZALV Zalesovo Beam 43.25 329 P P 17 02 49.5 +1.0
comp=Z,34nm,0.6s,baz=116,slow=8.0,SNR=143
ZALV PcP PcP 17 04 34.5 -1.1
comp=Z,1.1nm,0.5s,baz=110,slow=5.5,SNR=2.3
comp=Z,34nm,0.6s
MA2 Magadan 43.82 21 LR LR 17 21 47.3
comp=Z,1.1nm,18.5s,baz=312,slow=37
MTSU Mount Surprise 44.70 149 P P 17 03 00.5 +0.1
comp=Z,27nm,0.8s
QIS Mount Isa 44.79 156 P P 17 02 59.6 -1.5
comp=Z,44nm,0.9s
QIS Mount Isa 44.79 156 P P 17 03 00.3 -0.8
KURK Kurchatov 44.92 322 PcP 17 04 41.3 -0.2
KURK ScP 17 08 23.2 -0.8
KURBB Kurchatov Arra 44.93 322 P P 17 03 03.6 +1.7
comp=Z,7.6nm,0.5s,baz=117,slow=7.7,SNR=27
KURBB PcP PcP 17 04 41.3 -0.2
comp=Z,1.4nm,0.5s,baz=119,slow=3.1,SNR=3.0
KURBB ScP ScP 17 08 23.2 -0.9
comp=Z,0.3nm,0.3s,baz=121,slow=3.6,SNR=1.6
comp=Z,7.6nm,0.5s
ASAR Alice Springs 45.88 164 P P 17 03 08.9 -0.8
ASAR Alice Springs 45.88 164 P P 17 03 08.8 -0.9
comp=Z,4.1nm,0.3s,baz=344,slow=7.0,SNR=323
ASAR ScP ScP 17 08 26.3 -2.1
comp=Z,0.6nm,0.7s,baz=348,slow=4.8,SNR=5.6
ASAR S S 17 09 40.7 -5.4
comp=Z,0.6nm,0.8s,baz=350,slow=15,SNR=5.0
comp=Z,4.1nm,0.3s
WRKA Warakurna 46.13 172 P P 17 03 10.4 -1.3
comp=Z,4.4nm,0.8s
CHGR Chuyangaron 48.25 304 IAmb IAmb 17 03 30.8
comp=Z,9.2nm,0.8s
MORW Morawa 50.00 186 P P 17 03 41.4 +0.1
BVAR Borovoye Array 50.52 322 P P 17 03 46.9 +1.8
comp=Z,7.5nm,0.4s,baz=108,slow=8.2,SNR=40
BVAR PcP PcP 17 05 01.6 +0.1
comp=Z,4.3nm,0.5s,baz=107,slow=3.5,SNR=8.2
comp=Z,7.5nm,0.4s
BORK Borovoye 50.56 322 P P 17 03 47.7 +2.4
TIXI Tiksi 50.91 3 P 17 03 46.5 -1.1
TIXI IAmb IAmb 17 03 48.1
comp=Z,6.7nm,0.7s
INKA Innaminka 51.76 158 P 17 03 54.7 +0.2
QLP Quilpie 52.03 154 P P 17 03 55.8 -0.7
comp=Z,24nm,1.4s
KLBR Kellerberrin 52.35 184 P P 17 03 58.5 -0.4
NRIK Noril'sk 52.66 345 P 17 04 00.7 0.0
NRIK IAmb IAmb 17 04 01.4
comp=Z,8.3nm,0.8s
NRIK Noril'sk 52.66 345 P P 17 04 00.9 +0.2
comp=Z,8.6nm,0.6s,baz=124,slow=7.5,SNR=24
NRIK PcP PcP 17 05 09.3 +0.2
comp=Z,1.8nm,0.4s,baz=121,slow=5.9,SNR=2.1
comp=Z,8.6nm,0.6s
NWAO Narrogin (SRO) 53.72 185 P P 17 04 09.3 +0.4
BILL Bilibino 54.59 19 P P 17 04 14.5 -0.2
BBOO Buckleboo 55.16 165 P P 17 04 19.1 -0.2
BBOO Buckleboo 55.16 165 P P 17 04 18.9 -0.4
STKA Stephens Creek 55.85 160 P P 17 04 22.4 -1.9
comp=Z,56nm,0.7s
STKA Stephens Creek 55.85 160 IAmb IAmb 17 04 24.7
comp=Z,36nm,0.8s
STKA Stephens Creek 55.85 160 P P 17 04 23.9 -0.4
comp=Z,5.8nm,0.5s,baz=339,slow=7.5,SNR=11
comp=Z,5.8nm,0.5s
AB31 Akbulak array 56.08 316 IAmb IAmb 17 04 33.2
comp=Z,4.8nm,0.6s
ABKAR Akbulak array 56.08 316 P 17 04 26.4 +0.5
HTT Hallett 56.49 163 P P 17 04 28.9 0.0
CMSA Cobar Meteorol 57.01 156 P P 17 04 32.8 +0.3
ARTI Arti 58.10 324 P P 17 04 40.9 +1.0
SPIA Saint Paul Isl 60.78 35 P P 17 04 58.7 +0.4
baz=263
P08K Saint George I 61.10 36 P P 17 05 00.9 +0.5
baz=264
GAMB Gambell 61.11 28 P P 17 05 01.0 +0.6
baz=258
NIKH Nikolski High 61.23 40 P P 17 05 01.4 0.0
baz=267
UNV Unalaska Valle 62.67 39 P P 17 05 11.4 +0.4
baz=268
TNA Tin City 63.03 26 P P 17 05 13.9 +0.7
baz=261

M11K	**Mekoryuk** baz=265	63.20	32	P	P	17 05 15.1 +0.7
ANM	**Nome** baz=264	63.97	27	P	P	17 05 20.8 +1.3
K13K	**Kusilvak Mount** baz=266	64.06	30	P	P	17 05 20.9 +0.8
F15K	**North Star Dit** baz=264	64.40	26	P	P	17 05 23.2 +1.0
C16K	**Lisburne Hills** baz=262	64.43	23	P	P	17 05 22.9 +0.5
FALS	**False Pass** baz=270	64.49	38	P	P	17 05 23.2 +0.3
G15K	**Niukluk** baz=265	64.58	27	P	P	17 05 24.5 +1.1
M13K	**Dall Lake** baz=268	64.61	32	P	P	17 05 24.9 +1.2
L14K	**Kuka Creek** baz=269	64.97	31	P	P	17 05 27.1 +1.1
D17K	**Noatak River** baz=264,SNR=12	65.21	24	P	P	17 05 28.7 +1.3
S12K	**Black Hills** baz=271	65.25	37	P	P	17 05 28.8 +0.9
C17K	**DeLong Mountai** baz=264	65.25	23	P	P	17 05 29.0 +1.3
M14K	**Bethel** baz=269	65.31	32	P	P	17 05 29.1 +1.0
RDOG	**Red Dog Mine** baz=264	65.31	24	P	P	17 05 29.1 +1.0
G16K	**Koyuk River** baz=266	65.32	27	P	P	17 05 29.3 +1.1
H16K	**Elim** baz=267	65.33	27	P	P	17 05 29.2 +1.0
K15K	**Wolf Creek Mou** baz=268	65.55	30	P	P	17 05 30.9 +1.2
O14K	**Tigyukauivet M** baz=270	65.64	33	P	P	17 05 31.3 +0.9
E17K	**Hotham Inlet** baz=266	65.65	25	P	P	17 05 31.1 +0.8
B18K	**Kokolik River** baz=265	65.83	22	P	P	17 05 32.7 +1.3
F17K	**Baldwin Pennin** baz=267	65.84	25	P	P	17 05 32.5 +1.0
M15K	**Kasigluk River** baz=270	65.93	32	P	P	17 05 33.4 +1.2
I17K	**Unalakleet** baz=268	65.97	28	P	P	17 05 33.8 +1.4
C18K	**Utukok River** baz=266	66.00	23	P	P	17 05 33.4 +0.8
J16K	**Anvik River** baz=269	66.00	29	P	P	17 05 33.1 +0.6
G17K	**Kiwalik Mounta** baz=268	66.04	26	P	P	17 05 33.9 +1.1
E18K	**Tukpahlearik C** baz=267	66.14	24	P	P	17 05 34.6 +1.1
A19K	**Wainwright** baz=265	66.16	21	P	P	17 05 34.0 +0.6
SDPT	**Sand Point** baz=272	66.16	38	P	P	17 05 34.0 +0.3
N15K	**Kwethluk River** baz=271	66.23	32	P	P	17 05 35.2 +1.0
H17K	**Granite Mounta** comp=Z,15nm,0.8s	66.33	27	IAmb	IAmb	17 05 37.2
H17K	**Granite Mounta** baz=269	66.33	27	P	P	17 05 35.7 +1.0
F18K	**Selawik** baz=268,SNR=12	66.48	25	P	P	17 05 36.7 +1.1
L16K	**Owhat River** baz=270	66.51	31	P	P	17 05 37.0 +1.1
C19K	**Lookout Ridge** baz=267	66.60	23	P	P	17 05 38.0 +1.5
S14K	**Fog Glacier** baz=273	66.64	37	P	P	17 05 37.5 +0.6
J17K	**VABM Dome** baz=270	66.69	29	P	P	17 05 38.1 +1.1
M16K	**Timber Creek** baz=271	66.77	31	P	P	17 05 38.7 +1.2
G18K	**Tagagawik** comp=Z,11nm,0.9s	66.87	26	IAmb	IAmb	17 05 40.0
G18K	**Tagagawik** baz=269,SNR=6.6	66.87	26	P	P	17 05 39.0 +0.8
N16K	**Nishlik Lake** baz=272	66.88	32	P	P	17 05 38.7 +0.4
H18K	**Honhosa River** baz=270	66.99	27	P	P	17 05 40.4 +1.5
K17K	**Iditarod** baz=271	67.05	30	P	P	17 05 40.6 +1.3
L17K	**Donlin** baz=271	67.06	30	P	P	17 05 40.8 +1.4
D19K	**Kuna River** baz=269,SNR=13	67.12	23	P	P	17 05 40.8 +1.1
F19K	**Shaleruckik Mo** baz=270	67.23	25	P	P	17 05 41.5 +1.1
O16K	**Kokwok River B** baz=273	67.26	33	P	P	17 05 41.9 +1.3
P16K	**Nushagak River** baz=273	67.34	34	P	P	17 05 41.7 +0.6
E19K	**Redstone River** baz=270	67.44	24	P	P	17 05 42.9 +1.2
B20K	**Meade River** baz=269	67.48	22	P	P	17 05 42.7 +0.9
M17K	**Holitna River** baz=272	67.50	31	P	P	17 05 43.3 +1.2
GCSA	**Galena City Sc** baz=272	67.63	27	P	P	17 05 43.8 +1.0
R16K	**Pilot Point** baz=274	67.65	35	P	P	17 05 43.3 +0.2
N17K	**Nushagak Hills** baz=273	67.66	32	P	P	17 05 44.2 +1.0
D20K	**Etivluk River** baz=270	67.67	23	P	P	17 05 44.3 +1.2
A21K	**Barrow** baz=269	67.68	20	P	P	17 05 43.9 +0.8
J18K	**Innoko River** baz=272	67.75	29	P	P	17 05 44.9 +1.2
O17K	**Koliganek Bris** baz=273	67.75	33	P	P	17 05 44.9 +1.2
H19K	**Roundabout Mou** baz=272	67.79	26	P	P	17 05 45.1 +1.2
L18K	**Granite Mounta** comp=Z,12nm,0.6s	67.81	30	IAmb	IAmb	17 05 46.6
L18K	**Granite Mounta** baz=273	67.81	30	P	P	17 05 45.5 +1.4
E20K	**Nigu River** baz=271	67.83	23	P	P	17 05 45.3 +1.1
KBZ	**Khabaz** comp=Z,3.1nm,0.9s,baz=18,slow=3.2,SNR=5.4	67.91	310	P	P	17 05 46.6 +1.6
KBZ	comp=Z,233nm,18.9s,baz=324,slow=40 comp=Z,3.1nm,0.9s			LR	LR	17 40 51.7
F20K	**Avaraart Lake** comp=Z,10.0nm,0.8s	68.04	25	IAmb	IAmb	17 05 47.6
F20K	**Avaraart Lake** baz=272	68.04	25	P	P	17 05 46.7 +1.3
Q16K	**King Salmon** baz=274	68.05	34	P	P	17 05 46.7 +1.1
P17K	**Kvichak River** baz=274	68.12	33	P	P	17 05 46.9 +0.8
J19K	**Poorman** comp=Z,19nm,1.2s	68.21	28	IAmb	IAmb	17 05 48.8
J19K	**Poorman** baz=273	68.21	28	P	P	17 05 47.4 +0.9
A22K	**Sinclair Lake** baz=271	68.22	21	P	P	17 05 47.5 +1.1
M18K	**Stony River** baz=274	68.27	31	P	P	17 05 48.0 +1.1
N18K	**Kilae Creek** baz=274	68.29	32	P	P	17 05 48.4 +1.2
R17L	**Mt. Peulik Vol** baz=275	68.29	35	P	P	17 05 48.0 +0.8
C21K	**Knifeblade Rid** baz=272	68.33	22	P	P	17 05 48.5 +1.3
B21K	**Ikpikpuk River** baz=272,SNR=6.3	68.37	22	P	P	17 05 48.7 +1.3
H20K	**Anotlenegea Mo** baz=273,SNR=11	68.44	26	P	P	17 05 49.1 +1.1
E21K	**Killik River** baz=273	68.65	23	P	P	17 05 50.2 +0.9
I20K	**Naaghedeneel** baz=274	68.66	27	P	P	17 05 50.6 +1.3
L19K	**White Mountain** comp=Z,16nm,1.1s	68.67	30	IAmb	IAmb	17 05 52.6
L19K	**White Mountain** baz=274	68.67	30	P	P	17 05 50.5 +1.0
O18K	**Koktuh Hills** baz=275	68.70	33	P	P	17 05 50.8 +1.1
B22K	**Teshekpuk Lake** baz=272	68.75	21	P	P	17 05 51.2 +1.4
J20K	**Nowinta River** baz=274	68.84	28	P	P	17 05 51.2 +0.8
IMAR	**Indian Mountai**	68.88	26	P	P	17 05 51.3 +0.6
F21K	**Alatna River** baz=274	68.90	25	P	P	17 05 52.0 +1.1
Q18K	**Katmai Hardscr** baz=276	68.91	34	P	P	17 05 51.9 +0.7
K20K	**Telida** comp=Z,12nm,0.7s	68.94	29	IAmb	IAmb	17 05 53.7
K20K	**Telida** baz=275	68.94	29	P	P	17 05 52.2 +1.1
G21K	**Allakaket** comp=Z,15nm,0.8s	68.94	25	IAmb	IAmb	17 05 53.3
G21K	**Allakaket** baz=274,SNR=11	68.94	25	P	P	17 05 51.8 +0.7
N19K	**Bonanza Creek** baz=275	68.97	31	P	P	17 05 52.1 +0.7
D22K	**Ayikyak River** comp=Z,17nm,0.8s	69.09	23	IAmb	IAmb	17 05 54.4
D22K	**Ayikyak River** baz=274,SNR=5.3	69.09	23	P	P	17 05 53.2 +1.2
L20K	**Farewell, AK** baz=275	69.10	30	P	P	17 05 53.0 +0.8
O19K	**Port Alsworth** baz=276	69.11	32	P	P	17 05 53.2 +1.0
H21K	**Melozitna Rive** comp=Z,18nm,0.8s	69.29	26	IAmb	IAmb	17 05 55.7
H21K	**Melozitna Rive** baz=276	69.29	26	P	P	17 05 54.2 +0.9
F22K	**John River** baz=275	69.39	24	P	P	17 05 54.5 +0.7
E22K	**Anaktuvuk Pass** comp=Z,14nm,0.8s	69.47	24	IAmb	IAmb	17 05 56.5
E22K	**Anaktuvuk Pass** baz=275,SNR=9.5	69.47	24	P	P	17 05 55.3 +0.9
M20K	**Styx River** baz=276	69.51	30	P	P	17 05 55.1 +0.3
SII	**Sitkinak Islan** baz=277	69.59	36	P	P	17 05 55.8 +0.5
CHUM	**Lake Minchumin** baz=276	69.67	28	P	P	17 05 56.9 +1.3
I21K	**Tanana** comp=Z,18nm,0.9s	69.68	27	IAmb	IAmb	17 05 58.1
I21K	**Tanana** baz=276,SNR=10	69.68	27	P	P	17 05 56.6 +1.0
G22K	**Bettles** baz=276	69.70	25	P	P	17 05 57.0 +1.3
P19K	**Oil Pt** baz=277	69.71	33	P	P	17 05 56.8 +0.8
C23K	**Itkillik River** baz=275	69.75	22	P	P	17 05 57.2 +1.3
RAYN	**Ar Rayn**	69.79	288	P	P	17 05 58.6 +1.5
D23K	**Nanushuk River** baz=276,SNR=9.6	69.81	23	P	P	17 05 57.5 +1.1
PPLA	**Purkeypile** baz=276	69.84	29	P	P	17 05 57.6 +0.8
H22K	**Ishtalitna Cre** baz=276	69.86	26	P	P	17 05 58.0 +1.2
O20K	**Slope Mountain** baz=277	69.96	32	P	P	17 05 57.8 +0.2
OHAK	**Old Harbor** baz=278	69.99	35	P	P	17 05 57.8 +0.2
N20K	**Mount Spurr** baz=277	70.03	31	P	P	17 05 58.7 +0.8
SPCR	**Spurr Chakacha** baz=277	70.03	31	P	P	17 05 58.7 +0.8
COLD	**Coldfoot** baz=277	70.17	24	P	P	17 05 59.9 +1.3
MLY	**Manley** comp=Z,17nm,0.9s	70.22	27	IAmb	IAmb	17 06 01.2
MLY	**Manley** baz=277,SNR=15	70.22	27	P	P	17 06 00.3 +1.2
BPAW	**Bear Paw Mtn.** comp=Z,14nm,1.0s	70.23	28	IAmb	IAmb	17 06 01.8
BPAW	**Bear Paw Mtn.** baz=277,SNR=9.8	70.23	28	P	P	17 05 59.9 +0.8
TOLK	**Toolik Lake Re** comp=Z,10nm,0.8s	70.25	23	IAmb	IAmb	17 06 01.1
TOLK	**Toolik Lake Re** baz=277,SNR=6.2	70.25	23	P	P	17 05 60.0 +0.9
SKT	**Skwentna** baz=277	70.25	30	P	P	17 05 60.0 +0.8
Q20K	**Shuyak Island** baz=278	70.27	34	P	P	17 06 00.1 +0.8
KDAK	**Kodiak Island** baz=278	70.29	35	P	P	17 06 00.3 +0.8
E23K	**Chandalar** comp=Z,13nm,0.8s	70.30	24	IAmb	IAmb	17 06 01.8
E23K	**Chandalar** baz=277,SNR=11	70.30	24	P	P	17 06 00.7 +1.2
G23K	**Bananza Creek** comp=Z,10nm,0.9s	70.31	25	IAmb	IAmb	17 06 01.8
G23K	**Bananza Creek** baz=277,SNR=9.5	70.31	25	P	P	17 06 00.4 +0.9
KTH	**Kantishna Hill** comp=Z,9.7nm,0.8s	70.33	28	IAmb	IAmb	17 06 01.4
C24K	**Franklin Bluff** baz=277	70.42	22	P	P	17 06 01.1 +1.0
D24K	**Happy Valley** comp=Z,15nm,0.8s	70.45	22	IAmb	IAmb	17 06 02.3
D24K	**Happy Valley** baz=277,SNR=6.9	70.45	22	P	P	17 06 01.6 +1.3
HOM	**Homer** baz=278	70.51	33	P	P	17 06 01.6 +0.9
CAPN	**Captain Cook N** baz=278	70.60	31	P	P	17 06 02.2 +0.9
H23K	**Yukon River** baz=278,SNR=12	70.61	26	P	P	17 06 02.6 +1.2
TRF	**Thorofare Moun** baz=278	70.62	28	P	P	17 06 02.5 +0.8
SUA	**Susitna One** baz=278	70.69	31	P	P	17 06 03.1 +1.1
E24K	**Your Creek** comp=Z,16nm,0.8s	70.72	23	IAmb	IAmb	17 06 04.1
E24K	**Your Creek** baz=278	70.72	23	P	P	17 06 02.9 +0.9
CUT	**Chulitna** baz=278	70.78	30	P	P	17 06 03.3 +1.0
I23K	**Minto, Yukon-K** comp=Z,15nm,1.2s	70.78	27	IAmb	IAmb	17 06 04.4
I23K	**Minto, Yukon-K** baz=278,SNR=5.8	70.78	27	P	P	17 06 03.6 +1.2
M22K	**Willow** baz=279	70.94	30	P	P	17 06 04.0 +0.6
NEA2	**Nenana** comp=Z,18nm,0.8s	70.99	27	IAmb	IAmb	17 06 05.3
NEA2	**Nenana** baz=279,SNR=11	70.99	27	P	P	17 06 04.5 +0.8
F24K	**Squaw Lake** comp=Z,14nm,0.7s	71.02	24	IAmb	IAmb	17 06 06.0
F24K	**Squaw Lake** baz=279,SNR=14	71.02	24	P	P	17 06 04.9 +1.1
MCK	**McKinley** baz=279,SNR=11	71.18	28	P	P	17 06 05.5 +0.7
D25K	**Kavik River** comp=Z,14nm,0.8s	71.29	22	IAmb	IAmb	17 06 07.2
D25K	**Kavik River** baz=279	71.29	22	P	P	17 06 06.3 +0.9
H24K	**Noodor Dome** comp=Z,9.4nm,0.8s	71.29	26	IAmb	IAmb	17 06 07.8
H24K	**Noodor Dome** baz=279	71.29	26	P	P	17 06 06.3 +0.8
G24K	**Hadweenzic Riv** comp=Z,11nm,0.8s	71.31	25	IAmb	IAmb	17 06 07.8
G24K	**Hadweenzic Riv** baz=279	71.31	25	P	P	17 06 06.4 +0.9
O22K	**Cooper Landing** baz=279	71.34	32	P	P	17 06 06.0 +0.2
WRH	**Wood River Hil** comp=Z,12nm,0.7s	71.42	27	IAmb	IAmb	17 06 08.4
PMR	**Palmer** baz=280	71.44	30	P	P	17 06 06.8 +0.5
COLA	**College**	71.46	27	P	P	17 06 06.7 +0.3
COLA	comp=Z,7.7nm,0.7s			IAmb	IAmb	17 06 08.9
COLA	**College** baz=280	71.46	27	P	P	17 06 06.9 +0.5
WAT1	**Susitna Watana** baz=280	71.50	29	P	P	17 06 07.1 +0.3
POKR	**Poker Plat Res** baz=280	71.59	26	P	P	17 06 07.9 +0.6
SML	**Sawmill** baz=280	71.78	30	P	P	17 06 08.9 +0.5
KNK	**Knik Glacier** comp=Z,13nm,0.8s	71.78	30	IAmb	IAmb	17 06 09.7
KNK	**Knik Glacier** baz=280	71.78	30	P	P	17 06 09.3 +0.8
E25K	**Arctic Village** baz=280	71.79	23	P	P	17 06 09.4 +1.0
G25K	**Bearman Lake**	71.84	25	P	P	17 06 09.7 +1.0
F25K	**Christian Rive** comp=Z,9.2nm,0.7s	71.86	24	IAmb	IAmb	17 06 11.4
F25K	**Christian Rive** baz=281,SNR=13	71.86	24	P	P	17 06 10.2 +1.3
ILAR	**Eielson Array** comp=Z,3.0nm,0.7s,baz=268,slow=4.9,SNR=42 comp=Z,3.0nm,0.7s	71.88	27	P	P	17 06 08.1 -0.9
WAT6	**Susitna Watana** baz=280,SNR=9.5	71.91	29	P	P	17 06 09.6 +0.2
HDA	**Harding Lake** baz=280	71.92	27	P	P	17 06 09.5 +0.3
PWL	**Port Wells** baz=280,SNR=5.7	71.94	31	P	P	17 06 09.9 +0.4
DHY	**Denali Highway** baz=280	71.98	29	P	P	17 06 10.6 +0.8
H25L	**Birch Creek** baz=281,SNR=6.6	72.04	25	P	P	17 06 11.2 +1.4
C27K	**Jago River** baz=282	72.16	22	P	P	17 06 11.6 +1.1
SCM	**Sheep Creek Mo** baz=281,SNR=7.4	72.24	30	P	P	17 06 11.9 +0.7
BMAR	**Burnt Mountain**	72.29	24		P	17 06 12.8 +1.3
F26K	**Sheenjek River** baz=282,SNR=8.4	72.40	24	P	P	17 06 13.6 +1.5
K24K	**Donnelly Dome** baz=282,SNR=8.9	72.55	28	P	P	17 06 14.2 +1.2
J25K	**Salcha River,** baz=282	72.55	27	P	P	17 06 13.9 +0.9
G26K	**Porcupine Rive** comp=Z,8.5nm,0.8s	72.70	24	IAmb	IAmb	17 06 16.1
G26K	**Porcupine Rive** baz=282,SNR=9.1	72.70	24	P	P	17 06 15.3 +1.5
M24K	**Tolsona, Glenn** baz=282	72.72	29	P	P	17 06 14.9 +0.8
ARCES	**ARCESS Array B** comp=Z,1.7nm,0.7s,baz=69,slow=7.9,SNR=12 comp=Z,1.7nm,0.7s	72.73	339	P	P	17 06 14.3 +0.3
SPA0	**Spitsbergen Ar**	72.76	348	*e*P	P	17 06 15.0 +1.0
SPITS	**Spitsbergen Ar** comp=Z,5.9nm,0.6s,baz=93,slow=8.4,SNR=16 comp=Z,5.9nm,0.6s	72.76	348	P	P	17 06 15.3 +1.3
PAX	**Paxson** baz=282	72.86	29	P	P	17 06 15.8 +0.9
KLU	**Klutina** baz=282	72.96	30	P	P	17 06 16.2 +0.6
RIDG	**Independent Ri** baz=282	72.96	28	P	P	17 06 16.8 +1.3
DIV	**Divide** comp=Z,10nm,0.8s	73.11	30	IAmb	IAmb	17 06 18.0
HARP	**HAARP** baz=283	73.12	29	P	P	17 06 17.8 +1.4
D27M	**Malcolm River** baz=284	73.19	22	P	P	17 06 17.6 +0.8
E27K	**Coleen River** baz=284	73.23	23	P	P	17 06 17.6 +0.6
EYAK	**Cordova Ski Ar** baz=283	73.25	31	P	P	17 06 17.7 +0.5
SCRK	**Sand Creek** baz=283,SNR=8.6	73.28	27	P	P	17 06 17.8 +0.4
I26K	**Coal Creek Min** comp=Z,12nm,0.8s	73.32	26	IAmb	IAmb	17 06 19.1
I26K	**Coal Creek Min** baz=284	73.32	26	P	P	17 06 18.0 +0.5
J26L	**Joseph Creek** comp=Z,9.0nm,0.7s	73.34	27	IAmb	IAmb	17 06 18.6
J26L	**Joseph Creek** baz=283	73.34	27	P	P	17 06 18.2 +0.5
G27K	**Doyon Strip** baz=284	73.55	24	P	P	17 06 20.1 +1.3
N25K	**Chitina, Valde** baz=283	73.56	30	P	P	17 06 19.7 +0.6
KTK1	**Kautokeino**	73.65	338	*e*P	P	17 06 19.7 +0.4
BMRM	**Bremner River** baz=284	73.70	30	P	P	17 06 20.9 +1.0
H27K	**Steamboat Moun** baz=285,SNR=7.5	73.75	25	P	P	17 06 21.2 +1.1
L26K	**Log Cabin Wild** comp=Z,7.0nm,0.6s	73.79	28	IAmb	IAmb	17 06 22.1
L26K	**Log Cabin Wild** baz=284,SNR=5.6	73.79	28	P	P	17 06 21.3 +1.0
E28M	**Babbage River** baz=286,SNR=7.6	73.86	22	P	P	17 06 21.9 +1.3
I27K	**Kandik River** baz=285	73.87	25	P	P	17 06 21.4 +0.6
GLB	**Gilahina Butte** comp=Z,12nm,0.8s	73.96	30	IAmb	IAmb	17 06 23.1
F28M	**Old Crow** comp=Z,8.9nm,0.8s	74.01	23	IAmb	IAmb	17 06 23.3
F28M	**Old Crow** baz=286,SNR=9.8	74.01	23	P	P	17 06 22.3 +0.8
KAIM	**Kayak Island** baz=284	74.04	32	P	P	17 06 21.5 -0.3
K27K	**Chicken** comp=Z,12nm,0.8s	74.09	27	IAmb	IAmb	17 06 24.1
K27K	**Chicken** baz=285,SNR=14	74.09	27	P	P	17 06 22.9 +0.9
M26K	**Nabesna, AK** comp=Z,16nm,0.7s	74.10	29	IAmb	IAmb	17 06 23.9
M26K	**Nabesna, AK** baz=284	74.10	29	P	P	17 06 21.9 -0.2
MCARA	**McCarthy VSAT** baz=285	74.34	30	P	P	17 06 24.4 +0.8
L27K	**Beaver Creek,** comp=Z,9.6nm,0.8s	74.45	28	IAmb	IAmb	17 06 26.4
L27K	**Beaver Creek,** baz=285	74.45	28	P	P	17 06 24.5 +0.4
BCAR	**Beaver Creek A**	74.46	28		P	17 06 24.9 +0.7
CRQE	**Circque** baz=285	74.47	31	P	P	17 06 25.1 +0.7
E29M	**Blow River** baz=287	74.50	22	P	P	17 06 25.2 +0.9
FINES	**FINESS Array B** comp=Z,4.5nm,0.7s,baz=49,slow=6.0,SNR=22 comp=Z,4.5nm,0.7s	74.50	330	P	P	17 06 24.9 +0.6
I28M	**Miner Creek** comp=Z,10nm,0.8s	74.59	25	IAmb	IAmb	17 06 27.0
I28M	**Miner Creek** baz=286	74.59	25	P	P	17 06 25.5 +0.5
M27K	**Edge Creek, AK** comp=Z,8.1nm,0.7s	74.61	29	IAmb	IAmb	17 06 26.9
M27K	**Edge Creek, AK** baz=286,SNR=5.4	74.61	29	P	P	17 06 26.1 +0.8
G29M	**Pine Creek** comp=Z,17nm,0.9s	74.90	24	IAmb	IAmb	17 06 28.4
G29M	**Pine Creek** baz=288	74.90	24	P	P	17 06 27.6 +0.9
H29M	**Whitestone** baz=288	74.98	24	P	P	17 06 28.1 +0.9
BVCY	**Beaver Creek** baz=286	75.05	29	P	P	17 06 28.6 +0.9
MESA	**MESA** baz=286	75.17	31	P	P	17 06 29.4 +0.8
DAWY	**Dawson** comp=Z,13nm,0.8s	75.21	27	IAmb	IAmb	17 06 30.1
DAWY	**Dawson** baz=287,SNR=14	75.21	27	P	P	17 06 29.3 +0.8
CTG	**Chitna Glacier** baz=286,SNR=5.7	75.24	30	P	P	17 06 29.4 +0.5
YUK3	**Moose Creek** baz=287	75.42	29	P	P	17 06 30.5 +0.6
LOGN	**Logan Glacier** comp=Z,12nm,0.8s	75.44	30	IAmb	IAmb	17 06 37.3
KIRS	**Kirsehir-Merke**	75.45	307	⇓P	P	17 06 31.8 +1.3
F30M	**Barrier River** comp=Z,16nm,0.9s	75.50	23	IAmb	IAmb	17 06 32.0
F30M	**Barrier River** baz=289	75.50	23	P	P	17 06 30.8 +0.7
BRTR	**Keskin Array B**	75.51	307		P	17 06 31.4 +0.6
BRTR	**Keskin Array B** comp=Z,2.4nm,0.7s,baz=121,slow=6.3,SNR=18	75.51	307	P	P	17 06 32.1 +1.3
BRTR	comp=Z,102nm,21.1s,baz=306,slow=39 comp=Z,2.4nm,0.7s			LR	LR	17 43 56.9
G30M	**tAoh Zrail Nji** comp=Z,11nm,0.9s	75.55	23	IAmb	IAmb	17 06 31.2
G30M	**tAoh Zrail Nji** baz=289	75.55	23	P	P	17 06 31.1 +0.7
EPYK	**Eagle Plains** comp=Z,14nm,0.9s	75.56	24	IAmb	IAmb	17 06 31.4
EPYK	**Eagle Plains** baz=289	75.56	24	P	P	17 06 31.1 +0.6
NOR	**Nord**	75.62	354	*i* P	P	17 06 30.2 -0.3
AKASG	**Malin Array Be** comp=Z,2.7nm,0.8s	75.63	319	IAmb	IAmb	17 06 32.0
AKASG	**Malin Array Be** comp=Z,2.0nm,0.4s,baz=63,slow=5.9,SNR=11 comp=Z,2.0nm,0.4s	75.63	319	P	P	17 06 31.2 +0.1

AKBB	Malin Array Si	75.63	319		IAmb	IAmb	17 06 31.7
	comp=Z,7.4nm,0.6s						
KIEV	Kiev	75.64	319			P	17 06 30.9 -0.2
KIEV	Kiev	75.64	319	⇓P		P	17 06 31.2 +0.1
KIEV	Kiev	75.64	319	P		P	17 06 31.2 +0.1
O28M	Mount Upton	75.84	30	P		P	17 06 33.2 +0.7
	baz=287						
YUK8	Steele Glacier	75.88	30	P		P	17 06 34.3 +1.6
	baz=288						
MMAI	Mount Meron Ar	75.93	300	P		P	17 06 34.8 +1.5
	comp=Z,0.7nm,0.4s,baz=45,slow=2.6,SNR=3.8						
	comp=Z,0.7nm,0.4s						
L29M	L29M	76.04	27	P		P	17 06 34.6 +1.3
	baz=288						
INK	Inuvik	76.06	22	P		P	17 06 33.3 +0.2
	baz=291,SNR=6.3						
K29M	Barlow Dome	76.06	27	IAmb		IAmb	17 06 35.5
	comp=Z,9.4nm,0.8s						
K29M	Barlow Dome	76.06	27	P		P	17 06 34.1 +0.6
	baz=289,SNR=6.4						
I30M	Mount Dempster	76.08	25	IAmb		IAmb	17 06 35.0
	comp=Z,8.3nm,0.8s						
I30M	Mount Dempster	76.08	25	P		P	17 06 34.2 +0.6
	baz=290						
ANTO	Ankara	76.10	308	⇓P		P	17 06 35.6 +1.5
M29M	Somme Creek	76.11	28	IAmb		IAmb	17 06 36.6
	comp=Z,17nm,0.7s						
M29M	Somme Creek	76.11	28	P		P	17 06 34.9 +1.2
	baz=288,SNR=15						
F31M	Tsiigehtchic	76.30	23	IAmb		IAmb	17 06 35.3
	comp=Z,16nm,1.0s						
F31M	Tsiigehtchic	76.30	23	P		P	17 06 34.4 -0.1
	baz=291,SNR=7.3						
J30M	Hart River	76.31	26	P		P	17 06 35.3 +0.4
	baz=290						
YUK4	Talbot Arm	76.38	29	P		P	17 06 36.0 +0.5
	baz=288						
PNL	Peninsula	76.55	31	P		P	17 06 36.7 +0.5
	baz=288						
YUK6	Outpost Mounta	76.64	30	P		P	17 06 37.7 +0.7
	baz=289						
H31M	Peel River	76.67	24	IAmb		IAmb	17 06 38.1
	comp=Z,12nm,0.8s						
H31M	Peel River	76.67	24	P		P	17 06 37.1 +0.4
	baz=291,SNR=8.1						
O29M	Mount Kennedy	76.74	30	P		P	17 06 37.7 +0.3
	baz=289						
STEI	Steigen	76.79	338	eP		P	17 06 37.2 -0.1
M30M	Minto, Yukon	76.80	28	IAmb		IAmb	17 06 39.9
	comp=Z,12nm,0.8s						
M30M	Minto, Yukon	76.80	28	P		P	17 06 38.6 +1.0
	baz=290,SNR=8.4						
MAYO	Mayo, Yukon	76.83	27	P		P	17 06 38.6 +0.9
	baz=290						
SORM	Soroca	76.88	317	⇓P		P	17 06 38.7 +0.5
FAUS	Fauske	76.99	338	eP		P	17 06 37.2 -1.2
N30M	Aishikik Lake	77.05	29	IAmb		IAmb	17 06 41.4
	comp=Z,9.1nm,0.8s						
N30M	Aishikik Lake	77.05	29	P		P	17 06 40.0 +1.0
	baz=290						
HYT	Haines Junctio	77.07	30	IAmb		IAmb	17 06 41.9
	comp=Z,13nm,1.0s						
HYT	Haines Junctio	77.07	30	P		P	17 06 40.1 +0.9
	baz=290						
A36M	Sachs Harbour	77.08	17	IAmb		IAmb	17 06 39.7
	comp=Z,8.3nm,0.8s						
A36M	Sachs Harbour	77.08	17	P		P	17 06 39.4 +0.5
	baz=298						
PABE	Paberze	77.27	325			P	17 06 40.6 +0.4
PABE					IAmb	IAmb	17 06 41.9
	comp=Z,14nm,0.7s						
P29M	Windy Craggy	77.36	31	P		P	17 06 40.7 -0.1
	baz=290						
JURR	Jurilovca	77.51	313	⇓P		P	17 06 43.0 +1.2
P30M	Million Dollar	77.56	30	P		P	17 06 42.1 +0.1
	baz=290						
N31M	Braeburn, Yuko	77.62	29	P		P	17 06 42.8 +0.5
	baz=291						
O30N	Mendenhall	77.74	29	P		P	17 06 43.3 +0.4
	baz=291						
MOR8	Moi Rana	77.78	337	eP		P	17 06 43.4 +0.4
TPGR	Topolog	77.80	313	⇑P		P	17 06 44.4 +1.0
RAUS	Rausandaksla	77.82	337	eP		P	17 06 43.4 +0.2
BORA	Eskisehir	77.82	308	IAmb		IAmb	17 06 45.5
	comp=Z,8.1nm,0.7s						
CFR	Carcaliu	77.89	314	⇑P		P	17 06 44.9 +1.0
TIRR	Tirgusor	77.92	313	⇓P		P	17 06 45.2 +1.1
VAGH	Vaagaholmen	77.98	337	eP		P	17 06 46.2 +2.3
M31M	Drury Creek, Y	77.98	28	P		P	17 06 44.7 +0.6
	baz=292						
PLBC	Pleasant Camp	78.08	31	P		P	17 06 45.6 +0.9
	baz=291						
HARR	Harsova	78.18	313	⇓P		P	17 06 46.1 +0.6
STOK	Stokkvaagen	78.24	337	eP		P	17 06 44.4 -1.0
LEIR	Leirfjorden	78.30	337	eP		P	17 06 45.1 -0.7
WHY	Whitehorse	78.33	29	P		P	17 06 46.6 +0.4
	baz=292,SNR=5.2						
FARO	Faro, Yukon	78.42	28	IAmb		IAmb	17 06 48.7
	comp=Z,12nm,1.0s						
FARO	Faro, Yukon	78.42	28	P		P	17 06 47.2 +0.7
	baz=293,SNR=6.8						
TESR	Tescani	78.47	315	⇓P		P	17 06 48.4 +1.2
SKAG	Skagway	78.57	31	P		P	17 06 48.2 +0.8
	baz=292						
VRI	Vrincioaia	78.62	315	⇓P		P	17 06 50.1 +2.1
PLOR	Plostina	78.68	315	⇓P		P	17 06 50.3 +2.0
C36M	Paulatuk	78.70	19	IAmb		IAmb	17 06 49.0
	comp=Z,10nm,0.5s						
C36M	Paulatuk	78.70	19	P		P	17 06 48.3 +0.3
	baz=300						
BISRR	Bisoca	78.73	314	⇓P		P	17 06 50.5 +1.8
N32M	Quiet Lake	78.96	28	P		P	17 06 50.3 +0.7
	baz=293						
TURR	Turia	79.03	315	⇑P		P	17 06 51.9 +1.6
NEHR	Nehoiu	79.05	314	⇓P		P	17 06 51.9 +1.5
BURAR	Bucovina Array	79.05	317			P	17 06 51.1 +0.7
BURAR	Bucovina Array	79.05	317	⇑P		P	17 06 51.5 +1.0
OZUR		79.17	315	⇑P		P	17 06 51.4 +0.4
MLR	Muntele Rosu	79.26	315	⇓P		P	17 06 53.2 +1.5
P32M	Atlin	79.28	30	P		P	17 06 52.2 +0.8
	baz=293						
NSS	Namsos	79.42	336	eP		P	17 06 51.9 0.0
P33M	Teslin, Yukon	79.45	29	P		P	17 06 52.9 +0.5
	baz=294						
SIT	Sitka	79.47	33	P		P	17 06 52.4 +0.1
	baz=292						
DOPR	Dopca	79.48	315	⇓P		P	17 06 54.2 +1.5
DAG	Danmarks Havn	79.65	351	iP		P	17 06 52.5 -0.5
S32K	Killisnoo	79.69	32	P		P	17 06 54.0 +0.5
	baz=293						
VOIR		79.88	315	⇑P		P	17 06 54.9 0.0
KWP	Kalwaria Pacla	79.94	319	eP		P	17 06 56.2 +1.1
ELND	Elena	80.15	312	⇑P		P	17 06 57.7 +1.4
ARR	Arges	80.17	315	⇓P		P	17 06 58.0 +1.5
Q32M	Nakina River	80.22	30	P		P	17 06 56.6 0.0
	baz=294						
BEL	Belsk	80.30	322	eP		P	17 06 58.1 +1.2
HFS	Hagfors	80.64	331	P		P	17 06 58.6 +0.1
	comp=Z,2.4nm,0.4s,baz=114,slow=3.7,SNR=29						
	comp=Z,2.4nm,0.4s						
R33M	Jennings River	80.64	30	P		P	17 06 58.9 +0.1
	baz=295						
MARR	Marisel-Cluj	80.72	316	⇓P		P	17 07 00.8 +1.4
STHS	Stebnicka Huta	80.91	319	eP		P	17 07 00.8 +0.5
DRGR		80.94	317	⇑P		P	17 07 01.9 +1.3
U33K	Whale Pass	80.96	33	P		P	17 07 00.6 +0.3
	baz=294						
NC405	NORSAR Array S	81.07	332	P		P	17 07 00.8 -0.1
NB2	NORSAR Subarra	81.32	333	P		P	17 07 01.9 -0.4
	comp=Z,7.6nm,0.9s,baz=59,slow=5.1						
NC602	NORSAR Array S	81.32	332	eP		P	17 07 03.4 +1.2
NOA	NORSAR Array B	81.32	333	P		P	17 07 01.8 -0.5
	comp=Z,2.6nm,0.7s,baz=62,slow=5.0,SNR=12						
NOA					LR	LR	17 44 51.4
	comp=Z,83nm,18.6s,baz=270,slow=37						
	comp=Z,2.6nm,0.7s						
GZR	Gura Zlata	81.39	315	⇓P		P	17 07 04.2 +1.2
OJC	Ojcow	81.48	321	eP		P	17 07 04.4 +1.1
OJC	Ojcow	81.48	321			P	17 07 04.0 +0.7
NIE	Niedzica	81.48	320	eP		P	17 07 05.2 +1.9
NEEM	North Greenlan	81.75	358	iP		P	17 07 05.1 +0.5
NEEM					IAmb	IAmb	17 07 06.5
	comp=Z,18nm,0.9s						
DOMB	Dombas	81.75	334	eP		P	17 07 04.4 -0.1
SIRR	Siria	81.81	316	⇑P		P	17 07 05.7 +0.7
DBG	Daneborg	81.88	350	iP		P	17 07 04.7 -0.2
BZS	Buzias	82.07	316	⇑P		P	17 07 07.5 +1.0
LANS	Liptovska Anna	82.09	320	eP		P	17 07 08.7 +2.2
BLKB	Belogradchik	82.10	314	⇓P		P	17 07 08.1 +1.4
MOL	Molde	82.10	335	eP		P	17 07 07.0 +0.8
AKN	Aaknes	82.52	335	eP		P	17 07 08.5 0.0
MORC	Moravsky Berou	82.99	321	⇑P		P	17 07 12.3 +1.1
MORC	Moravsky Berou	82.99	321	eP		P	17 07 11.2 0.0
KSP	Ksiaz	83.28	322	eP		P	17 07 13.7 +1.0
JAVC	Velka Javorina	83.29	320	eP		P	17 07 15.2 +2.4
KRLC	Kraliky	83.32	321	eP		P	17 07 14.2 +1.3
OSTC	Ostas	83.45	322	eP		P	17 07 14.8 +1.3
DPC	Dobruska-Polom	83.47	322	eP		P	17 07 15.3 +1.6
LIT	Litokhoron	83.52	310	IAmb		IAmb	17 07 15.2
	comp=Z,10nm,0.6s						
CHVC	Chvalec	83.53	322	eP		P	17 07 15.1 +1.2
VRAC	Vranov	83.75	321	⇓P		P	17 07 16.9 +1.9
VRAC	Vranov	83.75	321	eP		P	17 07 16.0 +0.9
MORH	Mrgy, Hungar	83.76	317	⇓P		P	17 07 16.2 +1.0
KRUC	Moravsky	83.97	320	eP		P	17 07 16.9 +0.7
ASK	Askoy	84.16	334	eP		P	17 07 17.0 +0.2
BLS5	Blasjo	84.19	332	eP		P	17 07 17.9 +0.8
PRU	Pruhonice	84.66	322	eP		P	17 07 21.4 +1.8
CLL	Collm	84.94	323	iP		P	17 07 21.9 +0.9
	comp=Z,10.0nm,1.2s						
CLL					epP	pP	17 07 47.0 -1.5
ZVC	Zvikov	85.11	321	eP		P	17 07 23.6 +1.7
CKRC	Cesky Krumlov	85.32	321	eP		P	17 07 24.9 +1.9
KHC	Kasperske Hory	85.61	321	eP		P	17 07 26.0 +1.6
GERES	GERESS Array B	85.66	321	P		P	17 07 25.7 +0.9
	comp=Z,2.5nm,0.8s,baz=34,slow=3.4,SNR=13						
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	85.77	23	P		P	17 07 25.2 +0.4
	comp=Z,2.6nm,0.6s,baz=314,slow=8.5,SNR=17						
	comp=Z,2.6nm,0.6s						
SUMG	Summit	85.78	354	iP		P	17 07 25.7 +0.4
LLLB	Lillooet	89.50	35	IAmb		IAmb	17 07 45.0
	comp=Z,4.9nm,0.8s						
EKA	Eskdalemuir Ar	90.80	332	P		P	17 07 48.7 -0.2
	comp=Z,1.3nm,0.6s,baz=39,slow=2.7,SNR=2.5						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	110.73	180	PP		PP	17 13 54.5 -1.7
	comp=Z,0.7nm,0.7s,baz=315,slow=2.9,SNR=5.1						
TXAR	Lajitas Array	113.60	43	PKiKP		PKiKP	17 13 24.2 -0.1
	comp=Z,0.4nm,0.4s,baz=338,slow=2.3,SNR=8.7						
SNAA	Sanae	120.30	198	PKP		PKPdf	17 13 33.8 -1.9
	comp=Z,0.6nm,0.8s,baz=240,slow=13,SNR=2.1						
ROSC	El Rosal	149.95	33	PKPbc		PKPbc	17 14 36.4 -0.7
	comp=Z,7.7nm,0.4s,baz=2.6,slow=13,SNR=4.3						

PRE ***11*** *17:08:37.9±1.0,26°.48S×27°.50E, h2km, ML2.7*
BGSI ***11*** *17:08:42.7±1.6,26°.46S×27°.37E, h12km±32km, ML3.0*

ISC 11 17:08:38.9±1.5,**26°.43S**±0°.04×**27°.43E**±0°.04,**h12**km±11km,
n24,σ1°56/47,South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HRAO	HartRAO	0.59	23	eP		Pg	17 08 49.8	-0.6
HRAO				eS		Sg	17 08 57.9	-0.3
HRAO				IAML			17 08 58.2	
	comp=Z,371nm,0.1s							
LBTB	Lobatse	2.17	310	eP		Pb	17 09 17.5	-0.7
LBTB				eS		Sb	17 09 45.4	+0.2
LBTB				IAML			17 09 48.4	
	comp=Z,156nm,1.0s							
CRLN	Carolina, Mapu	2.37	80	eP		Pn	17 09 17.8	0.0
CRLN				eS		Sn	17 09 46.5	-0.4
CRLN				IAML			17 09 50.8	
	comp=Z,28nm,0.4s							
MAKGR	Makgori	2.44	284	iP		Pn	17 09 19.9	+1.2
MAKGR				iS		Sn	17 09 47.8	-0.8
MAKGR				IAML			17 09 58.4	
	comp=E,316nm,0.4s							
NWCL	Newcastle	2.55	121	eP		Pn	17 09 20.2	0.0
NWCL				eS		Sn	17 09 51.1	-0.3
NWCL				IAML			17 09 58.7	
	comp=Z,86nm,0.3s							
LEPH	Lephalale, Lim	2.59	8	eP		Pn	17 09 23.0	+2.3
LEPH				eS		Sn	17 09 53.6	+1.5
LEPH				IAML			17 09 58.6	
	comp=Z,57nm,0.5s							
BOSA	Boshof	2.90	221	eP		Pn	17 09 26.9	+1.8
BOSA				eS		Sn	17 10 01.5	+1.5
BOSA				IAML			17 10 17.4	
	comp=N,38nm,0.5s							
PILG	Pilgrimsrest,	3.32	64	eP		Pn	17 09 32.1	+1.3
PILG				eS		Sn	17 10 10.3	-0.1
PILG				IAML			17 10 27.6	
	comp=Z,33nm,0.6s							
LPHEP	Lephephe	3.37	335	iP		Pn	17 09 33.8	+2.3
LPHEP				iS		Sn	17 10 10.6	-1.0
LPHEP				IAML			17 10 29.6	
	comp=E,54nm,0.5s							
SKOMA	Sekoma	3.69	300	iP		Pn	17 09 37.5	+1.6
SKOMA				iS		Sn	17 10 18.2	-1.2
SKOMA				IAML			17 10 38.1	
	comp=N,52nm,0.7s							
MREMI	Moremi	3.85	0	iP		Pn	17 09 40.2	+2.2
MREMI				iS		Sn	17 10 23.3	+0.1
MREMI				IAML			17 10 42.0	
	comp=E,208nm,0.3s							
KDWAN	Kaudwane	3.94	320	iP		Pn	17 09 41.5	+2.1
KDWAN				iS		Sn	17 10 25.5	-0.2
KDWAN				IAML			17 10 44.5	
	comp=E,103nm,0.6s							
KSTD	Kokstad	4.49	159	eP		Pn	17 09 46.7	-0.2
KSTD				eS		Sn	17 10 37.2	-1.9
KSTD				IAML			17 11 00.0	
	comp=Z,12nm,0.3s							
HVD	Gariep Dam	4.49	202	eP		Pn	17 09 48.4	+1.5
HVD				eS		Sn	17 10 37.8	-1.4
MOPA	Mopani	4.63	52	eP		Pn	17 09 49.8	+1.1
MOPA				eS		Sn	17 10 41.9	-0.5
MOPA				IAML			17 11 13.5	
	comp=E,31nm,0.3s							
MUSN	Musina, Limpop	4.69	29	eP		Pn	17 09 51.0	+1.5
MUSN				eS		Sn	17 10 43.7	-0.2
MUSN				IAML			17 11 04.0	
	comp=Z,33nm,0.5s							
BROLN	Tlhalogang	5.31	359	iP		Pn	17 09 59.2	+1.0
BROLN				iS		Sn	17 10 58.3	-1.1
BROLN				IAML			17 11 23.7	
	comp=E,17nm,1.3s							
ALKP	Alkanpan, Nort	5.75	231	eP		Pn	17 10 05.1	+0.8
ALKP				eS		Sn	17 11 09.3	-1.0
ALKP				IAML			17 11 45.1	
	comp=Z,22nm,0.4s							
KGCAE	Kacgae	5.94	306	iP		Pn	17 10 09.3	+2.5
KGCAE				iS		Sn	17 11 10.6	-4.2
KGCAE				IAML			17 11 51.7	
	comp=E,49nm,0.6s							
GRAF	Camdeboo Natio	6.36	203	eP		Pn	17 10 14.0	+1.4
GRAF				eS		Sn	17 11 23.5	-1.8
GRAF				IAML			17 12 16.4	
	comp=Z,5.4nm,0.5s							
BRAK	Brakfontein	6.64	216	eP		Pn	17 10 18.0	+1.6
BRAK				eS		Sn	17 11 29.9	-2.2
BRAK				IAML			17 11 40.2	
	comp=Z,4.5nm,0.4s							
GRAN	Grantham	7.43	217	eP		Pn	17 10 28.9	+1.6
GRAN				eS		Sn	17 11 49.4	-2.2
GRAN				IAML			17 12 44.9	
	comp=Z,6.3nm,0.6s							
FRAZ	Fraserburg	7.59	222	eP		Pn	17 10 31.5	+2.0
FRAZ				eS		Sn	17 11 53.6	-2.0
FRAZ				IAML			17 12 34.3	
	comp=Z,4.7nm,0.4s							
GRTLG	Ghanzi	7.60	310	iP		Pn	17 10 30.4	+0.8
GRTLG				IAML			17 12 39.4	
	comp=N,19nm,0.5s							

NEIC ***11*** *17:08:45.5±0.7, 19°.84N±0°.03×155°.38W±0°.03, h35km±2km, Error ellipse: s-maj=5.3km s-min=4.5km az=225.0*

HVO 11 17:08:46.9±1.9,**19°.84N**±0°.03×**155°.36W**±0°.04,**h30**km±7km,
ML2.5/23,**ML2.6**/39(NEIC),**Error ellipse: s-maj=6.1km**
s-min=3.4km az=130.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
POHA	Pohakuloa	0.18	242			Pb	17 08 52.5	-0.7
POHA				IAML			17 08 57.0	
	802nm,0.2s							
HMH	Humu'ula Sheep	0.27	206			Sb	17 08 58.7	-0.5
HMH						Pb	17 08 53.7	-0.6
HMH				IAML			17 08 59.0	
	comp=E,592nm,0.2s							
HMH				IAML			17 08 59.1	
	comp=N,943nm,0.4s							
MLH	Mauna Loa	0.35	184			Pb	17 08 54.4	-0.9
MLH				IAML			17 09 00.1	
	comp=N,412nm,0.1s							
MLH				IAML			17 09 00.2	
	comp=E,418nm,0.3s							
MLH	Mauna Loa	0.35	184			Sb	17 08 59.8	-1.2
HPAH	Hawaii Prepara	0.37	300			Sb	17 08 59.4	-1.9
HPAH	Hawaii Prepara	0.37	300			Pb	17 08 54.1	-1.3
HPAH				IAML			17 08 59.5	
	comp=E,840nm,0.4s							
HPAH				IAML			17 08 59.7	
	comp=N,470nm,0.2s							
RSD	Rainshed	0.39	169			Sb	17 09 00.8	-1.0
RSD	Rainshed	0.39	169			Pb	17 08 54.8	-1.0
RSD				IAML			17 09 01.1	
	comp=E,544nm,0.4s							
RSD				IAML			17 09 01.4	
	comp=N,528nm,0.3s							
ALEP	Alea Permanent	0.40	222			Pb	17 08 55.2	-1.0
ALEP						Sb	17 09 01.0	-1.4
MWH	Mokuaweoweo	0.42	212			Pb	17 08 55.3	-1.2
MWH				IAML			17 09 02.8	
	comp=E,304nm,2.5s							
MWH				IAML			17 09 09.5	
	comp=N,355nm,0.4s							
SBLHI	Steaming Bluff	0.42	168			Pb	17 08 55.0	-1.3
SBLHI						Sb	17 09 01.1	-1.5
UWB	Uwekahuna Bluf	0.42	170			Pb	17 08 55.0	-1.3
UWE	Uwekahuna	0.42	172			Pb	17 08 55.1	-1.2
UWE				IAML			17 09 01.4	
	comp=E,556nm,0.3s							
UWE	Uwekahuna	0.42	172			Sb	17 09 01.1	-1.6
HATHI	Halema'uma'u T	0.43	168			Pb	17 08 54.9	-1.4
HATHI				IAML			17 09 01.5	
	comp=N,259nm,0.1s							
OBL	Observatory Le	0.43	171			Pb	17 08 55.1	-1.2
OBL						Sb	17 09 01.2	-1.6
WRMHI	West Rim	0.44	173			Pb	17 08 55.2	-1.3
BYL	Byron's Ledge	0.44	168	Pn		Pb	17 08 55.1	-1.4
KKO	Keanakako'i	0.45	169			Pb	17 08 55.4	-1.3
KKO						Sb	17 09 01.5	-1.9
RIM	Rim	0.45	170			Pb	17 08 55.4	-1.3
SDHHI	Sand Hill	0.46	172			Pb	17 08 55.3	-1.4
SDHHI						Sb	17 09 01.5	-2.0
HUH	Hualalai	0.48	251			Sb	17 09 02.6	-1.6
HUH	Hualalai	0.48	251			Pb	17 08 56.0	-1.2
HUH				IAML			17 09 03.7	
	comp=E,544nm,0.2s							
HUH				IAML			17 09 10.6	
	comp=N,553nm,0.2s							
AIN	Ainahou	0.48	191			Pb	17 08 56.0	-1.1
AIN				IAML			17 09 02.8	
	comp=E,367nm,0.3s							
AIN				IAML			17 09 03.1	
	comp=N,335nm,0.4s							
AIN	Ainahou	0.48	191			Sb	17 09 02.6	-1.6
PUH	Pauahi	0.49	164			Pb	17 08 55.9	-1.3
PUH						Sb	17 09 02.3	-2.0
PUH	Pauahi	0.49	164	IAML			17 09 02.6	
	comp=E,887nm,0.2s							
PUH				IAML			17 09 02.8	
	comp=N,767nm,0.2s							
KNHH	Kane Nui o Ham	0.49	159			Pb	17 08 56.0	-1.4
NPOC	North of Pu'u	0.51	152			Pb	17 08 56.1	-1.4
NPOC						Sb	17 09 02.7	-2.0
STCH	Steam Cracks	0.51	154			Pb	17 08 56.1	-1.4
STCH						Sb	17 09 02.6	-2.1
STCH	Steam Cracks	0.51	154	IAML			17 09 03.0	
	comp=N,1μm,0.2s							
STCH				IAML			17 09 03.4	
	comp=E,1μm,0.1s							
JCUZ	Jacuzzi	0.52	152			Pb	17 08 56.2	-1.5
JCUZ						Sb	17 09 03.2	-1.9
JOKA	Jonika Flow	0.53	141			Pb	17 08 56.4	-1.5
JOKA	Jonika Flow	0.53	141	IAML			17 09 04.5	
	comp=E,207nm,4.9s							
JOKA				IAML			17 09 10.9	
	comp=N,170nm,2.9s							
HLP	Hilina Pali	0.55	175			Pb	17 08 56.5	-1.6
HLP				IAML			17 09 18.3	
	comp=N,272nm,2.1s							
HLP	Hilina Pali	0.55	175			Sb	17 09 03.7	-2.2
HLP	Hilina Pali	0.55	175	IAML			17 09 02.3	
	comp=E,504nm,4.2s							
HTC	Hot Caves	0.60	184			Pb	17 08 57.4	-1.7
MHA	Mahukona	0.62	304	Pn		Pb	17 08 57.3	-1.9
KHU	Kahuku	0.64	202			Pb	17 08 57.8	-2.0
KHU						Sb	17 09 05.8	-2.8

IDC ***11*** *17:09:54.0±2.8, 6°.76S×133°.79E, h60km±35km, mb3.5/3, mbtmp4.0/9, ML4.0/5, MS3.2/1, Error ellipse: s-maj=34.2km s-min=23.2km az=132.0*

ISC 11 17:09:52.4±0.8,**6°.78S**±0°.08×**133°.77E**±0°.07,**h50**km,**n10,**
σ3°43/14,mb3.5/3,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAY	Jayapura	8.11	59	P		Pn	17 11 48.1	+0.5
	1.9nm,0.3s,baz=189,slow=10,SNR=20							
JAY				S		Sn	17 13 10.7	-7.2
	5.3nm,0.8s,baz=36,slow=14,SNR=1.4							
	6.4nm,0.4s							
BATI	Baumata	10.56	250	P		Pn	17 12 23.2	+2.0
	6.0nm,0.3s,baz=63,slow=1.7,SNR=7.6							
BATI				S		Sn	17 14 13.9	-4.2
	7.4nm,0.4s,baz=230,slow=21,SNR=1.7							
	13nm,0.3s							
WRA	Warramunga Arr	13.10	178	P		Pn	17 12 58.2	+2.3
	0.4nm,0.3s,baz=353,slow=13,SNR=27							
WRA				S		Sn	17 15 18.9	-1.2
	1.7nm,0.5s,baz=0.6,slow=23,SNR=5.5							
	0.4nm,0.3s							
PMG	Port Moresby	13.51	102	P		Pn	17 13 03.8	+2.3
	4.7nm,0.5s,baz=274,slow=12,SNR=7.3							
FITZ	Fitzroy Crossi	13.76	214	P		Pn	17 13 06.0	+

TWB1			*i* S	Sn	18 11 59.2	-1.1	
ILA	**Ilan**	0.20 232	*e*P	Pn	18 11 48.7	+0.1	
ILA			*e*S	Sn	18 12 00.1	-0.5	
SXI1	**Grass Mountain**	0.21 348	⇓P	Pn	18 11 48.3	-0.5	
SXI1			S	Sn	18 11 59.5	-1.3	
NWF	**Wu-fen Shan**	0.22 325	⇓P	Pn	18 11 48.6	-0.2	
NWF			S	Sn	18 11 59.7	-1.2	
WFSB	**Wu-fen Shan**	0.22 325	⇓P	Pn	18 11 48.5	-0.2	
WFSB			S	Sn	18 11 59.6	-1.0	
TWC	**Suao**	0.29 193	⇑*i*P	Pn	18 11 49.0	0.0	
TWC			S	Sn	18 12 00.6	-0.4	
TWE	**Neicheng**	0.29 234	*e*P	Pn	18 11 49.0	+0.1	
TWE			*e*S	Sn	18 12 01.1	+0.1	
TNOU	**National Taiwa**	0.29 332	*e*P	Pn	18 11 48.6	-0.3	
TNOU			*e*S	Sn	18 11 59.9	-1.2	
NDS	**Dongshan**	0.32 216	*e*P	Pn	18 11 49.6	+0.5	
NDS			*e*S	Sn	18 12 01.6	+0.3	
ESAO	**Su ao**	0.32 193	*e*P	Pn	18 11 49.6	+0.5	
ESAO			*e*S	Sn	18 12 00.8	-0.5	
TWA	**Mucha**	0.32 286	*e*P	Pn	18 11 48.9	-0.1	
TWA			S	Sn	18 12 00.6	-0.7	
FUSB	**Fushanzhiwuyua**	0.33 247	⇑*i*P	Pn	18 11 49.3	+0.1	
FUSB			S	Sn	18 12 00.6	-0.9	
NHY	**Taipei**	0.35 295	*e*P	Pn	18 11 49.2	+0.1	
NHY			*e*S	Sn	18 12 00.7	-0.8	
NHDH	**Xindian Distri**	0.37 281	*e*P	Pn	18 11 49.3	+0.1	
NHDH			S	Sn	18 12 01.4	-0.3	
NWRT	**Kuosheng**	0.39 323	*e*P	Pn	18 11 49.1	-0.2	
NWLT	**Wulai**	0.40 254	⇑P	Pn	18 11 49.3	-0.1	
NWLT			S	Sn	18 12 01.1	-0.9	
TATO	**Taipei**	0.40 282	Pn	Pn	18 11 49.4	-0.1	
TATO			Sn	Sn	18 12 00.2	-1.8	
TATO	**Taipei**	0.40 282	P	Pn	18 11 49.5	-0.1	
TATO	**Taipei**	0.40 282	*e*P	Pn	18 11 49.3	-0.1	
TATO			*e*S	Sn	18 12 00.9	-1.0	
TAP	**Taipei**	0.41 292	*e*P	Pn	18 11 49.4	0.0	
TAP			S	Sn	18 12 01.2	-0.7	
ENTT	**Nioudou**	0.41 233	⇑P	Pn	18 11 49.8	+0.3	
ENTT			S	Sn	18 12 02.2	+0.1	
YM01	**YM01**	0.41 309	P	Pn	18 11 49.3	-0.2	
YM01			S	Sn	18 12 01.7	-0.5	
YM08	**YM08**	0.42 315	⇓*e*P	Pn	18 11 49.2	-0.4	
YM08			*e*S	Sn	18 12 00.5	-1.7	
ZUZH	**Zhuzihu**	0.44 308	*e*P	Pn	18 11 49.5	-0.2	
ZUZH			*e*S	Sn	18 12 01.8	-0.6	
BACT	**New Taipei Cit**	0.45 284	*e*P	Pn	18 11 49.9	+0.2	
BACT			*e*S	Sn	18 12 02.6	+0.2	
ANP	**Anpu**	0.47 309	*e*P	Pn	18 11 49.8	-0.2	
ANP			*e*S	Sn	18 12 02.5	-0.4	
TWY	**Chenhua**	0.48 323	⇓P	Pn	18 11 49.8	-0.1	
TWY			S	Sn	18 12 02.5	-0.3	
ENA	**Nanau**	0.49 200	⇑*i*P	Pn	18 11 50.2	+0.2	
ENA			S	Sn	18 12 03.0	+0.2	
NSM	**Shimen**	0.50 323	*e*P	Pn	18 11 50.4	+0.4	
NSM			*e*S	Sn	18 12 02.5	-0.5	
TWS1	**Kuangyinshan**	0.50 295	⇓P	Pn	18 11 50.2	+0.2	
TWS1			*e*S	Sn	18 12 03.1	+0.1	
LATG	**Datong**	0.51 226	⇑*i*P	Pn	18 11 50.5	+0.3	
LATG			S	Sn	18 12 03.1	-0.2	
NTST	**Danshui**	0.51 303	*e*P	Pn	18 11 50.2	+0.2	
NTST			*e*S	Sn	18 12 02.6	-0.5	
YHNB	**Yeheng**	0.54 246		Pn	18 11 50.1	-0.3	
YHNB			Sn	Sn	18 12 01.8	-1.9	
YHNB	**Yeheng**	0.54 246	P	Pn	18 11 50.2	-0.3	
YHNB	**Yeheng**	0.54 246	*i*P	Pn	18 11 50.1	-0.3	
YHNB			S	Sn	18 12 02.1	-1.6	
NSK	**Sanguang**	0.56 248	⇑*i*P	Pn	18 11 50.8	-0.3	
NSK			S	Sn	18 12 02.8	-1.0	
NTY	**Taoyuan**	0.58 281	*e*P	Pn	18 11 50.8	+0.3	
NTY			*e*S	Sn	18 12 03.8	-0.1	
EAHA	**Aohua**	0.58 197	*e*P	Pn	18 11 50.7	+0.1	
EAHA			*e*S	Sn	18 12 04.5	+0.5	
EHP	**Heping Village**	0.60 196	*e*P	Pn	18 11 51.0	+0.2	
EHP			*e*S	Sn	18 12 04.9	+0.7	
NNS	**Nan Shan**	0.67 228	⇑*i*P	Pn	18 11 51.5	+0.1	
NNS			*e*S	Sn	18 12 04.7	-0.7	
NNSB	**Datong**	0.67 227	⇑*i*P	Pn	18 11 51.5	+0.1	
NNSB			S	Sn	18 12 04.6	-0.9	
NCUH	**Zhongli**	0.67 277	⇑P	Pn	18 11 51.4	+0.1	
NCUH			*e*S	Sn	18 12 04.5	-0.7	
KSHI	**Guanxi Townshi**	0.69 261	⇑P	Pn	18 11 51.6	+0.2	
KSHI			*e*S	Sn	18 12 05.6	+0.2	
PCYT	**Pengchaiyu**	0.75 10	⇓*i*P	Pn	18 11 52.1	+0.2	
PCYT			S	Sn	18 12 06.1	-0.2	
NACB	**Ninganchiao**	0.77 203		Pn	18 11 51.3	-0.9	
NACB	**Ninganchiao**	0.77 203	P	Pn	18 11 51.4	-0.7	
NACB	**Ninganchiao**	0.77 203	⇑P	Pn	18 11 51.4	-0.7	
NACB			S	Sn	18 12 05.8	-0.9	
NJD	**Zhudong**	0.77 259	P	Pn	18 11 52.4	+0.3	
NJD			S	Sn	18 12 06.2	-0.4	
NFF	**Wufeng Townshi**	0.78 251	⇑*i*P	Pn	18 11 52.1	-0.1	
NFF			*i* S	Sn	18 12 06.0	-0.8	
ETL	**Fush Village**	0.78 201	*e*P	Pn	18 11 51.8	-0.4	
ETL			*e*S	Sn	18 12 06.4	-0.5	
ETLH	**Xiulin Townshi**	0.79 211	⇑P	Pn	18 11 52.1	-0.2	
ETLH			S	Sn	18 12 06.3	-0.9	
NHW	**Xinwu Township**	0.80 279	P	Pn	18 11 52.6	+0.3	
NHW			S	Sn	18 12 07.1	0.0	
HSN1	**Hsinchu**	0.83 262	⇑P	Pn	18 11 52.9	+0.4	
HSN1			S	Sn	18 12 07.4	-0.2	
SBCB	**Hsinchu**	0.86 264	⇑*i*P	Pn	18 11 53.1	+0.3	
SBCB			S	Sn	18 12 07.7	-0.3	
TWD	**Chiawan**	0.86 200	⇑*i*P	Pn	18 11 52.3	-0.6	
TWD			S	Sn	18 12 07.1	-1.0	
LIOB	**Emei**	0.86 254	⇑*i*P	Pn	18 11 53.1	+0.2	
LIOB			S	Sn	18 12 07.6	-0.5	
HSN	**Hsinchu**	0.87 264	P	Pn	18 11 52.8	-0.1	
HSN			S	Sn	18 12 07.4	-0.8	
NSTT	**Nanjuang**	0.88 253	⇑*i*P	Pn	18 11 53.1	+0.1	
NSTT			S	Sn	18 12 07.6	-0.7	
FUSS	**Fushou**	0.89 224	⇑*i*P	Pn	18 11 54.1	+0.6	
FUSS			*e*S	Sn	18 12 08.0	-1.0	
TWT	**Tachien**	0.93 227	⇑*i*P	Pn	18 11 54.5	+0.8	
TWT			S	Sn	18 12 09.9	+0.3	
TDCB	**Techi**	0.94 228	⇑*i*P	Pn	18 11 54.4	+0.6	
TDCB			S	Sn	18 12 09.5	-0.2	
WHF	**Hehuan Shan**	0.95 219	⇑*i*P	Pn	18 11 54.5	+0.2	
WHF			S	Sn	18 12 10.2	-0.3	
HWA	**Hwalien**	0.95 198	P	Pn	18 11 53.8	0.0	
HWA			*e*S	Sn	18 12 09.8	+0.1	
NJN	**Zhunan**	0.98 258	*e*P	Pn	18 11 54.2	+0.2	
NJN			S	Sn	18 12 10.0	-0.1	
LXIB	**Xiulin Townshi**	0.98 208	⇑*i*P	Pn	18 11 53.6	-0.6	
LXIB			S	Sn	18 12 09.9	-0.5	
ETM	**Tongmen**	1.00 203	*e*P	Pn	18 11 53.4	-0.9	
ETM			*e*S	Sn	18 12 09.4	-1.1	
JYNG	**Yonagunijimaku**	1.03 115	P	Pn	18 11 54.6	+0.1	
JYNG			*e*S	Sn	18 12 10.6	-0.4	
TEYL	**Yanliau Villag**	1.06 196	P	Pn	18 11 54.7	-0.2	
TEYL			S	Sn	18 12 11.3	-0.3	
WHP	**Taichung City**	1.08 236	⇑*i*P	Pn	18 11 55.7	+0.5	
WHP			S	Sn	18 12 11.6	-0.5	
YOJ	**Yonaguni jima**	1.08 113		Pn	18 11 54.9	-0.1	
YOJ			Sn	Sn	18 12 08.6	-3.3	
YOJ	**Yonaguni jima**	1.08 113	P	Pn	18 11 55.2	+0.1	
YOJ	**Yonaguni jima**	1.08 113	*e*P	Pn	18 11 55.2	+0.1	
YOJ			*e*S	Sn	18 12 11.4	-0.4	
YOJ	**Yonaguni jima**	1.08 113	⇓*i*P	Pn	18 11 55.1	+0.1	
YOJ			S	Sn	18 12 11.6	-0.3	
NMLH	**Miaoli**	1.09 251	⇑*e*P	Pn	18 11 55.5	+0.3	
NMLH			S	Sn	18 12 12.0	-0.1	
SHUL	**Shoufeng**	1.15 197	*e*P	Pn	18 11 55.8	+0.1	
SHUL			*e*S	Sn	18 12 13.3	+0.2	
OWD	**Renai**	1.15 216	⇑*e*P	Pn	18 11 56.4	+0.4	
OWD			*e*S	Sn	18 12 13.4	-0.3	
WUSB	**Renai**	1.16 220	⇑*i*P	Pn	18 11 56.8	+0.8	
WUSB			S	Sn	18 12 13.7	0.0	
NSY	**Sanyi**	1.16 246	⇑*i*P	Pn	18 11 57.0	+1.0	
NSY			*e*S	Sn	18 12 13.9	+0.5	
ESL	**Shilin**	1.16 203	⇑*e*P	Pn	18 11 54.9	-1.1	
ESL			*e*S	Sn	18 12 11.9	-1.6	
TWQ1	**Liyutan**	1.18 243	⇑P	Pn	18 11 56.4	+0.2	
TWQ1			S	Sn	18 12 13.2	-0.7	
TEGC	**Jichi Village**	1.23 197	*e*P	Pn	18 11 57.0	+0.3	
TEGC			*e*S	Sn	18 12 15.3	+0.6	
WPL	**Puli Township**	1.24 225	*e*P	Pn	18 11 57.0	+0.2	
WPL			*e*S	Sn	18 12 14.6	-0.4	
DPDB	**Guoxing**	1.25 227	⇑*i*P	Pn	18 11 57.4	+0.4	
DPDB			*e*S	Sn	18 12 15.3	+0.1	
WARBT	**Fenglin Townsh**	1.27 203	⇑*e*P	Pn	18 11 55.9	-1.3	
WARBT			*e*S	Sn	18 12 13.9	-1.7	
WDJ	**Dajia District**	1.29 245	⇑*e*P	Pn	18 11 57.8	+0.4	
WDJ			*e*S	Sn	18 12 15.9	0.0	
VWDT	**VWDT**	1.34 212	⇑*i*P	Pn	18 11 58.6	+0.7	
VWDT			S	Sn	18 12 16.7	-0.2	
TCU	**Taichung**	1.35 237	P	Pn	18 11 58.5	+0.4	
TCU			S	Sn	18 12 16.7	-0.6	
SMLT	**Sun Moon Lake**	1.37 223	⇑*i*P	Pn	18 11 58.9	+0.5	
SMLT			*i* S	Sn	18 12 18.2	+0.4	
TYC	**Yuchr**	1.38 225	⇑*i*P	Pn	18 11 58.9	+0.5	
TYC			S	Sn	18 12 17.9	+0.1	
WWF	**Wufeng**	1.40 233	*e*P	Pn	18 11 59.1	+0.5	
WWF			S	Sn	18 12 18.0	-0.2	
SSLB	**Suanglung**	1.41 219		Pn	18 11 59.1	+0.4	
SSLB	**Suanglung**	1.41 219	P	Pn	18 11 59.2	+0.4	
SSLB	**Suanglung**	1.41 219	⇑*i*P	Pn	18 11 59.2	+0.4	
SSLB			S	Sn	18 12 18.3	-0.2	
HGSD	**Ruisui**	1.46 198	⇑P	Pn	18 11 59.0	-0.4	
HGSD			S	Sn	18 12 19.3	-0.3	
EHY	**Hungye**	1.48 202	⇑*e*P	Pn	18 11 58.3	-1.4	
EHY			*e*S	Sn	18 12 18.5	-1.5	
EHYH	**Wanrong**	1.49 201	*e*P	Pn	18 11 58.8	-0.9	
EHYH			*e*S	Sn	18 12 18.6	-1.5	
WCH1	**Changhua City**	1.50 237	*e*P	Pn	18 11 59.9	+0.2	
WCH1			S	Sn	18 12 19.6	-0.6	
WNT1	**Nantou City**	1.50 229	*e*P	Pn	18 12 00.2	+0.5	
WNT1			*e*S	Sn	18 12 20.0	-0.2	
WNT	**Mingjian**	1.51 229	⇑*i*P	Pn	18 12 00.5	+0.5	
WNT			*e*S	Sn	18 12 20.6	0.0	
WJS	**Zhushan**	1.52 226	*e*P	Pn	18 12 00.6	+0.5	
WJS			S	Sn	18 12 21.0	+0.2	
WYL	**Yuanlin Townsh**	1.53 233	*e*P	Pn	18 12 00.5	+0.3	
WYL			*e*S	Sn	18 12 21.1	+0.1	
WHYT	**Xinyi Township**	1.54 220	⇑P	Pn	18 12 01.0	+0.7	
WHYT			S	Sn	18 12 21.6	+0.4	
YULB	**Yu-li**	1.60 201		Pn	18 11 59.5	-1.5	
YULB	**Yu-li**	1.60 201	P	Pn	18 12 00.3	-0.7	
YULB	**Yu-li**	1.60 201	⇑*e*P	Pn	18 11 59.7	-1.3	
YULB			*e*S	Sn	18 12 20.1	-2.3	
ECBN	**Changbin**	1.62 195	⇑P	Pn	18 12 01.3	0.0	
ECBN			*e*S	Sn	18 12 22.4	-0.6	
EYUL	**Yuli**	1.63 200	*e*P	Pn	18 12 01.9	+0.6	
EYUL			*e*S	Sn	18 12 22.1	-1.1	
TWF1	**Yuli**	1.63 201	*e*P	Pn	18 12 00.2	-1.3	
TWF1			*e*S	Sn	18 12 21.6	-1.6	
YUS	**Yu-Shan**	1.65 213	⇑*i*P	Pn	18 12 03.0	+0.9	
YUS			*e*S	Sn	18 12 24.4	+0.1	
ALS	**Alishan**	1.71 217	⇑*i*P	Pn	18 12 03.3	+0.7	
ALS			*e*S	Sn	18 12 25.9	+0.6	
CHN5	**Tsauling**	1.72 222	⇑*i*P	Pn	18 12 03.0	+0.5	
CHN5			S	Sn	18 12 25.3	+0.2	
WDL	**Douliou City**	1.72 227	P	Pn	18 12 03.0	+0.6	
WDL			S	Sn	18 12 25.7	+0.7	
WGK	**Gukeng**	1.73 226	*e*P	Pn	18 12 03.1	+0.6	
WGK			*e*S	Sn	18 12 25.6	+0.4	
IRIF	**Iriomote-Funau**	1.73 108	P	Pn	18 12 02.5	-0.1	
IRIF			*e*S	Sn	18 12 24.6	-0.8	
RLNB	**Erlin**	1.74 235	⇑P	Pn	18 12 02.8	+0.1	
RLNB			S	Sn	18 12 24.9	-0.5	
WDLH	**Douliu**	1.74 227	⇑*e*P	Pn	18 12 03.1	+0.5	
WDLH			*e*S	Sn	18 12 25.9	+0.5	
CHKH	**Chenggong**	1.76 196	*e*P	Pn	18 12 02.7	-0.2	
CHKH			*e*S	Sn	18 12 25.4	-0.4	
FULB	**Fuli**	1.78 199	*e*P	Pn	18 12 03.2	0.0	
FULB			*e*S	Sn	18 12 26.3	-0.1	
WTCT	**Ta-ch'eng**	1.81 236	*e*P	Pn	18 12 04.0	0.0	
WTCT			S	Sn	18 12 26.5	-0.5	
WTK	**Tuku**	1.84 230	*e*P	Pn	18 12 04.2	+0.3	
WTK			*e*S	Sn	18 12 27.4	-0.3	
EHD	**Haiduan**	1.85 201	*e*P	Pn	18 12 04.2	+0.1	
EHD			*e*S	Sn	18 12 26.6	-1.5	
CHKT	**Chengkung**	1.85 196	P	Pn	18 12 03.9	-0.2	
CHKT			S	Sn	18 12 26.6	-1.4	
ELDTW	**Lidau**	1.89 206	⇑P	Pn	18 12 04.4	-0.2	
ELDTW			*e*S	Sn	18 12 28.5	-0.4	
CHN2	**Minshiung**	1.89 225	*e*P	Pn	18 12 05.2	+0.6	
CHN2			*e*S	Sn	18 12 28.8	0.0	
ECS	**Chishang**	1.90 200	*e*P	Pn	18 12 04.4	-0.3	
ECS			*e*S	Sn	18 12 28.6	-0.5	
HATJ	**Hateruma jima**	1.91 115	*e*P	Pn	18 12 05.2	+0.5	
HATJ			*e*S	Sn	18 12 28.9	-0.2	
CHY	**Chiayi**	1.95 225	*e*P	Pn	18 12 05.7	+0.5	
CHY			*e*S	Sn	18 12 30.2	+0.2	
CHN4	**Tsaushan**	1.96 219	⇑P	Pn	18 12 05.5	+0.5	
CHN4			*e*S	Sn	18 12 30.6	+0.3	
TPUB	**Ta-pu**	1.98 217		Pn	18 12 05.7	+0.1	
TPUB	**Ta-pu**	1.98 217	P	Pn	18 12 05.9	+0.3	
TPUB	**Ta-pu**	1.98 217	*e*P	Pn	18 12 06.0	+0.4	
TPUB			S	Sn	18 12 30.1	-0.7	
EDH	**Donghe**	1.99 197	⇑*e*P	Pn	18 12 05.4	-0.4	
EDH			*e*S	Sn	18 12 30.0	-1.1	
WSF	**Szhu**	1.99 232	⇓P	Pn	18 12 05.9	+0.1	
WSF			*e*S	Sn	18 12 30.4	-0.6	
STYH	**Taoyuan**	2.01 212	*e*P	Pn	18 12 06.6	+0.6	
STYH			*e*S	Sn	18 12 31.6	+0.2	
JKRS	**Kuro-shima**	2.01 108	P	Pn	18 12 06.4	+0.4	
JKRS			*e*S	Sn	18 12 30.8	-0.5	
STYT	**Tauyuan**	2.02 212	*e*P	Pn	18 12 06.9	+0.6	
STYT			*e*S	Sn	18 12 31.9	0.0	
WTP	**Ta-pu**	2.03 216	⇑P	Pn	18 12 06.6	+0.2	
WTP			*e*S	Sn	18 12 31.7	-0.2	
WSL	**Shuilin Townsh**	2.06 229	*e*P	Pn	18 12 05.9	+0.3	
WSL			*e*S	Sn	18 12 32.8	+0.2	
TWK	**Hsinying**	2.08 219	⇑P	Pn	18 12 07.2	+0.2	
TWK			*e*S	Sn	18 12 33.0	-0.1	
JIJ	**Ishigaki jima**	2.09 104	*e*P	Pn	18 12 06.9	-0.1	
JIJ			*e*S	Sn	18 12 31.9	-1.3	
LONT	**Longtian**	2.10 200	*e*P	Pn	18 12 06.5	-0.7	
LONT			*e*S	Sn	18 12 32.1	-1.5	
CHN1	**Nanshi**	2.12 217	⇑*e*P	Pn	18 12 07.7	+0.2	
CHN1			S	Sn	18 12 33.3	-0.8	
SGST	**Jiashian**	2.18 215	⇑*e*P	Pn	18 12 07.5	-0.7	
SGST			*e*S	Sn	18 12 34.4	-0.9	
MATB	**Ma-tsu**	2.18 306	*e*P	Pn	18 12 08.0	-0.2	
JISG	**Ishigakijimahi**	2.19 97	*e*P	Pn	18 12 08.7	+0.4	
JISG			*e*S	Sn	18 12 35.4	-0.2	
CHN8	**Yiju**	2.19 226	*e*P	Pn	18 12 08.7	+0.4	
CHN8			*e*S	Sn	18 12 35.7	+0.1	
TWG	**Pinlang**	2.20 201		Pn	18 12 07.7	-1.3	
TWG	**Pinlang**	2.20 201	*e*P	Pn	18 12 07.4	-1.1	
TWG			*e*S	Sn	18 12 34.2	-1.6	
TWGBT	**Beinan**	2.20 201	P	Pn	18 12 07.6	-0.9	
TWGBT	**Beinan**	2.20 201	⇑*e*P	Pn	18 12 07.4	-1.1	
TWGBT			S	Sn	18 12 34.1	-1.8	
TTN	**Taitung**	2.24 199	*e*P	Pn	18 12 08.8	-0.2	
TTN			*e*S	Sn	18 12 36.2	-0.5	
LDUT	**Ludao**	2.25 191	*e*P	Pn	18 12 08.2	-0.8	
LDUT			*e*S	Sn	18 12 34.9	-1.9	
SSHA	**Shanhua**	2.30 221	*e*P	Pn	18 12 10.1	+0.4	
SSHA			*e*S	Sn	18 12 38.7	+0.7	
CHN3	**Shinhua**	2.30 219	*e*P	Pn	18 12 10.8	+1.0	
CHN3			*e*S	Sn	18 12 38.7	+0.7	
SCLT	**Jiali**	2.33 223	P	Pn	18 12 10.6	+0.5	
SCLT			S	Sn	18 12 39.2	+0.5	
SCST	**Cishan**	2.39 214	*e*P	Pn	18 12 12.0	+1.1	
SCST			*e*S	Sn	18 12 40.6	+0.6	
SSD	**Sandimen**	2.44 209	*e*P	Pn	18 12 12.2	+0.7	
SSD			*e*S	Sn	18 12 41.0	-0.3	
ECL	**Taimali**	2.45 201	*e*P	Pn	18 12 10.9	-0.8	
ECL			*e*S	Sn	18 12 40.1	-1.4	
TAI	**Tainan**	2.46 220	*e*P	Pn	18 12 09.9	-1.9	
TWM1	**Shoushan**	2.47 214	*e*P	Pn	18 12 13.4	+1.4	
TWM1			*e*S	Sn	18 12 44.0	+1.9	
SGLT	**Jiouru**	2.52 212	*e*P	Pn	18 12 13.8	+1.1	
PNG	**Penghu**	2.53 239	*e*P	Pn	18 12 12.2	-0.4	
PNG			*e*S	Sn	18 12 40.8	-2.6	
JTJ	**Tarama**	2.54 95	*e*P	Pn	18 12 13.7	+0.9	
JTJ			*e*S	Sn	18 12 43.6	+0.1	
PHUB	**P'eng-hu**	2.55 238	P	Pn	18 12 12.3	-0.6	
PHUB			*e*S	Sn	18 12 40.9	-2.8	
PTMZ	**Houxiangcun**	2.55 274	*e*P	Pn	18 12 12.7	-0.2	
PTMZ			*e*S	Sn	18 12 41.1	-2.6	
MASBT	**Mashibuluo**	2.56 208	P	Pn	18 12 13.7	+0.6	
MASBT			S	Sn	18 12 42.9	-1.1	
TSPT	**Pingtung City**	2.56 211	*e*P	Pn	18 12 13.3	+0.2	
XPSS	**Dashiqiu**	2.56 323	*e*P	Pn	18 12 12.7	-0.4	
XPSS			*e*S	Sn	18 12 42.1	-2.0	
WDGT	**Dungji**	2.63 232	*e*P	Pn	18 12 13.7	-0.2	
WDGT			*e*S	Sn	18 12 43.9	-1.8	
EAST	**Anshuo**	2.68 202	*e*P	Pn	18 12 15.3	+0.5	
TAW	**Tawu**	2.69 201	*e*P	Pn	18 12 16.1	+1.3	
TAW			*e*S	Sn	18 12 46.0	-1.1	
WSSB	**Gushan**	2.71 215	*e*P	Pn	18 12 15.8	+0.8	
TAWH	**Dawu Township**	2.71 201	*e*P	Pn	18 12 15.8	+0.7	
TAWH			*e*S	Sn	18 12 46.8	-0.8	
SCZT	**Fangliau**	2.78 206	*e*P	Pn	18 12 16.5	+0.6	
SCZT			*e*S	Sn	18 12 48.4	-0.8	
VCHM	**Qimei**	2.83 234	⇑P	Pn	18 12 16.1	-0.5	
VCHM			S	Sn	18 12 48.4	-1.9	
SLIU	**Shizi**	2.85 201	*e*P	Pn	18 12 18.0	+1.1	
LAY	**Lan-yu**	2.86 187	⇑*e*P	Pn	18 12 16.2	-0.9	
LAY			*e*S	Sn	18 12 48.3	-2.8	
MHZQ	**Yeshan**	2.88 295	*e*P	Pn	18 12 17.3	+0.1	
LYUB	**Lan-yu**	2.89 186	*e*P	Pn	18 12 16.1	-1.4	
LYUB			*e*S	Sn	18 12 48.7	-3.1	
TWP	**Hsiaoliuchiu**	2.91 210	*e*P	Pn	18 12 18.0	+0.4	
TWP			*e*S	Sn	18 12 53.3	+1.0	
JMJ	**Miyako jima 2**	3.06 91	P	Pn	18 12 21.2	+1.5	
JMJ			*e*S	Sn	18 12 56.0	+0.1	
HEN	**Hengchun**	3.07 201	*e*P	Pn	18 12 20.6	+0.8	
TWK1	**Hengchun**	3.11 200	*e*P	Pn	18 12 21.6	+1.3	
TWKBT	**Hengchun**	3.11 199	*e*P	Pn	18 12 21.0	+0.7	
TWKBT			*e*S	Sn	18 12 57.3	+0.3	
TSEB	**Hengchuen, Pin**	3.12 198	*e*P	Pn	18 12 21.6	+1.1	
KNM	**Kinmen**	3.21 262	*e*P	Pn	18 12 22.8	+1.2	
KNMB	**Chin-men Tao**	3.24 263	Pn	Pn	18 12 21.1	-0.9	
KNMB	**Chin-men Tao**	3.24 263	*e*P	Pn	18 12 21.6	-0.5	
KNMB			*e*S	Sn	18 12 57.2	-3.0	
AXDP	**Jialang**	3.59 271	*e*P	Pn	18 12 26.8	+0.2	
AXDP			*e*S	Sn	18 13 06.4	-2.0	
ZPLA	**Ao Xicun**	3.92 257	*e*P	Pn	18 12 31.0	-0.1	
ZPLA			*e*S	Sn	18 13 14.2	-2.1	
SXFK	**Yanhouchang**	4.14 292	*e*P	Pn	18 12 34.2	+0.1	
DSXP	**Dongshan**	4.27 255	⇓*e*P	Pn	18 12 35.6	-0.2	
DSXP			*e*S	Sn	18 13 21.6	-3.1	
JOW	**Kunigami**	6.04 70	P	Pn	18 12 59.8	+0.2	
JOW	4.9nm,0.3s,baz=115,slow=20,SNR=7.5		S	Sn	18 14 03.5	-4.0	
JOW	7.9nm,0.4s,baz=110,slow=26,SNR=6.6 **Kunigami**	6.04 70	*e*P	Pn	18 12 59.6	0.0	
KSRS	**Korea Array**	13.53 21	P	Pn	18 14 41.4	+1.4	
CMAR	10nm,0.7s,baz=202,slow=11,SNR=28 **Chiang Mai Arr**	22.28 258	P	P	18 16 21.9	+1.2	
HILR	0.4nm,0.5s,baz=62,slow=8.0,SNR=6.7 0.4nm,0.5s **Hailar Array B**	24.68 357	P	P	18 16 43.8	+0.8	
SONM	1.4nm,0.5s,baz=173,slow=13,SNR=1.9 1.4nm,0.5s **Songino Array**	25.99 336	IAmb	IAmb	18 16 56.3		
SONM	comp=Z,3.0nm,1.1s **Songino Array**	25.99 336	P	P	18 16 55.4	+0.

	comp=E,1μm,0.4s						
BYL	**Byron's Ledge**	**0.44**	**167**		Sb	18 34 51.9	-1.8
KKO	**Keanakako'i**	**0.45**	**168**		Pb	18 34 46.1	-1.3
KKO					Sb	18 34 52.4	-1.6
RIM	**Rim**	**0.45**	**169**		Pb	18 34 46.0	-1.3
RIM					Sb	18 34 52.2	-1.9
SDHHI	**Sand Hill**	**0.45**	**172**		Pb	18 34 46.0	-1.4
SDHHI					Sb	18 34 52.2	-1.9
HUH	**Hualalai**	**0.47**	**251**		Pb	18 34 46.7	-1.0
HUH	**Hualalai**	**0.47**	**251**		Sb	18 34 53.3	-1.5
AIN	**Ainahou**	**0.47**	**191**		Pb	18 34 46.7	-1.1
AIN					Sb	18 34 53.3	-1.4
AIN	**Ainahou**	**0.47**	**191**	IAML		18 34 53.6	
	comp=E,3μm,0.4s						
AIN				IAML		18 34 53.8	
	comp=N,2μm,0.4s						
PUH	**Pauahi**	**0.48**	**163**		Pb	18 34 46.4	-1.4
PUH					Sb	18 34 52.9	-2.0
PUH	**Pauahi**	**0.48**	**163**	IAML		18 34 53.3	
	comp=E,4μm,0.2s						
PUH				IAML		18 34 53.5	
	comp=N,4μm,0.2s						
KNHH	**Kane Nui o Ham**	**0.49**	**158**		Pb	18 34 46.6	-1.4
NPOC	**North of Pu'u**	**0.51**	**152**		Pb	18 34 46.8	-1.4
NPOC					Sb	18 34 53.4	-2.0
STCH	**Steam Cracks**	**0.51**	**153**		Pb	18 34 46.7	-1.5
STCH	**Steam Cracks**	**0.51**	**153**		Sb	18 34 53.2	-2.2
JCUZ	**Jacuzzi**	**0.52**	**151**		Pb	18 34 46.9	-1.5
JCUZ					Sb	18 34 53.5	-2.3
JOKA	**Jonika Flow**	**0.53**	**140**		Pb	18 34 47.0	-1.5
JOKA					Sb	18 34 53.9	-2.1
JOKA	**Jonika Flow**	**0.53**	**140**	IAML		18 34 54.1	
	comp=E,433nm,0.3s						
JOKA				IAML		18 34 57.7	
	comp=N,464nm,0.3s						
HLP	**Hilina Pali**	**0.54**	**174**		Pb	18 34 47.2	-1.6
HLP					Sb	18 34 54.2	-2.3
HLP	**Hilina Pali**	**0.54**	**174**	IAML		18 34 54.9	
	comp=N,1μm,0.1s						
HLP				IAML		18 35 02.4	
	comp=E,836nm,0.2s						
HTC	**Hot Caves**	**0.60**	**183**		Pb	18 34 48.1	-1.6
MHA	**Mahukona**	**0.61**	**305**		Pb	18 34 48.0	-1.9
KHU	**Kahuku**	**0.64**	**202**		Pb	18 34 48.5	-1.9
KHU					Sb	18 34 56.6	-2.6
HPO	**Honuapo**	**0.77**	**194**		Pn	18 34 50.2	-2.2
HPO					Sb	18 34 59.4	-3.2
HLK	**Haleakala**	**1.23**	**318**		Sn	18 35 09.7	-5.2
HLK	**Haleakala**	**1.23**	**318**		Pn	18 34 56.3	-2.8
HLK	**Haleakala**	**1.23**	**318**	IAML		18 35 09.2	
	comp=N,371nm,4.4s						
KHLH	**Kahului Airpor**	**1.45**	**317**		Pn	18 34 59.9	-1.9

*RSNC **11** 18:34:33.4±0.8, 10°N±3°×7°0W±°, h2km±5km, M3.5, mB4.4, mb4.4, ML3.3, Mw(mB)3.5*
*FUNV **11** 18:34:41.1, 9.70N×70.60W, h5km, MW3.8*
ISC 11 18:34:38.6±0.8, 9.64N±0.03×70.65W±0.02, h10km, n22, σ1§56/44, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**0.75**	**179**	P	**Pg**	**18 34 54.3**	**+1.1**
SDV				S	**Sg**	**18 35 04.0**	**+0.9**
TEPV	**Terepaima**	**1.48**	**77**	*e*P	**Pg**	**18 35 07.1**	**+0.1**
TEPV				*e*S	**Sn**	**18 35 25.2**	**+0.5**
MCQV	**Machiques**	**1.90**	**282**	*e*P	**Pn**	**18 35 12.9**	**+1.8**
MCQV				*e*S	**Sb**	**18 35 39.2**	**+2.0**
MAPV	**Macapo**	**2.17**	**85**	*e*P	**Pn**	**18 35 16.9**	**+1.9**
MAPV				*e*S	**Sn**	**18 35 43.0**	**+1.0**
JACV	**Jacura**	**2.30**	**51**	*e*P	**Pn**	**18 35 18.2**	**+1.6**
JACV				*e*S	**Sn**	**18 35 45.7**	**+0.7**
CAPV	**Capacho**	**2.41**	**223**	*e*P	**Pb**	**18 35 22.0**	**-0.3**
CAPV				*e*S	**Sb**	**18 35 51.8**	**-0.5**
URIC	**Uribia, Colomb**	**2.43**	**327**	P	**Pn**	**18 35 17.5**	**-1.0**
URIC				S	**Sb**	**18 35 53.5**	**+0.9**
CRJC	**Cerrejon, Guaj**	**2.58**	**302**	P	**Pn**	**18 35 20.4**	**-0.3**
CRJC				S	**Sb**	**18 35 58.2**	**+1.1**
BAUV	**El Baul**	**2.67**	**105**	*e*P	**Pn**	**18 35 22.9**	**+1.2**
BAUV				*e*S	**Sn**	**18 35 54.9**	**+0.8**
TURV	**Turiamo**	**2.88**	**74**	*e*P	**Pn**	**18 35 24.8**	**+0.1**
TURV				*e*S	**Sn**	**18 35 59.3**	**-0.2**
OCAC	**Ocana**	**2.98**	**242**	P	**Pn**	**18 35 27.6**	**+1.4**
OCAC				S	**Sb**	**18 36 10.3**	**+1.8**
BENV	**Beln**	**3.03**	**84**	*e*P	**Pn**	**18 35 28.7**	**+2.0**
BENV				*e*S	**Sn**	**18 36 03.1**	**0.0**
ARGC	**Ariguani, Magd**	**3.55**	**274**	P	**Pn**	**18 35 34.5**	**+0.7**
ARGC				S	**Sn**	**18 36 14.9**	**-1.0**
TACV	**Tcata**	**3.61**	**82**	*e*P	**Pn**	**18 35 35.8**	**+1.1**
TACV				*e*S	**Sn**	**18 36 16.1**	**-1.3**
BARC	**Barichara**	**3.93**	**220**	P	**Pn**	**18 35 40.9**	**+1.6**
BARC				S	**Sb**	**18 36 35.6**	**-0.4**
RUSC	**La Rusia**	**4.44**	**213**	P	**Pn**	**18 35 47.3**	**+0.8**
RUSC				S	**Sn**	**18 36 38.7**	**+0.2**
SJCC	**San Jacinto, C**	**4.47**	**274**	P	**Pn**	**18 35 44.3**	**-2.3**
SJCC				S	**Sn**	**18 36 38.9**	**+0.2**
CACV	**CAICARA DEL OR**	**4.56**	**117**	*e*P	**Pb**	**18 35 55.5**	**-3.4**
CACV				*e*S	**Sb**	**18 36 51.3**	**-2.6**
PTBC	**PUERTO BERRIO,**	**4.87**	**231**	P	**Pn**	**18 35 51.9**	**-0.1**
PTBC				S	**Sn**	**18 36 44.5**	**-4.0**
SPBC	**San Pablo de B**	**5.22**	**221**	P	**Pn**	**18 35 58.1**	**+1.2**
	37nm,0.6s						
SPBC				S	**Sn**	**18 36 54.4**	**-2.8**
	37nm,0.6s						
CHIC	**Chingaza**	**5.84**	**212**	P	**Pn**	**18 36 06.4**	**+0.6**
	18nm,0.6s						
CHIC				S	**Sn**	**18 37 15.4**	**+2.3**
	18nm,0.6s						
GUY2C	**Guyana, Caldas**	**6.41**	**227**	P	**Pn**	**18 36 15.3**	**+1.7**
GUY2C				S	**Sn**	**18 37 25.3**	**-1.9**

*NEIC **11** 18:47:30.9±2.3, 10.72N±0.09×126.0E±0.1, h98km±6km, mb4.3/15, Error ellipse: s-maj=18.0km s-min=12.6km az=86.0*
*IDC **11** 18:47:31.7±3.4, 10.62N×125.93E, h108km±30km, mb3.7/13, mbtmp4.1/14, MS3.2/4, Error ellipse: s-maj=39.3km s-min=13.1km az=64.0*
ISC 11 18:47:30.4±0.7, 10.72N±0.07×126.1E±0.1, h100km, n40, σ1§04/34, mb4.2/20, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.66**	**187**	P	**Pn**	**18 48 25.6**	**+0.6**
	93nm,0.3s,baz=244,slow=12,SNR=1.2						
DAV				S	**Sn**	**18 49 06.6**	**-0.6**
	115nm,0.4s,baz=118,slow=15,SNR=1.2						
DAV				LR	LR	18 50 16.8	
	comp=Z,588nm,18.9s,baz=350,slow=46						
MYLDM	**Lahad Datu**	**9.28**	**234**	Pn	**Pn**	**18 49 42.7**	**+1.3**
TPUB	**Ta-pu**	**13.54**	**338**	P	**P**	**18 50 42.4**	**-1.6**
GUMO	**Guam**	**18.62**	**79**	LR	LR	18 58 40.1	
	comp=Z,37nm,18.9s,baz=240,slow=36						
SOEI	**Soe**	**20.42**	**185**	P	**P**	**18 52 00.7**	**+0.8**
SOEI				IAmb	IAmb	18 52 19.5	
	comp=Z,13nm,0.7s						
BATI	**Baumata**	**20.92**	**187**	P	**P**	**18 52 06.5**	**+1.3**
	comp=Z,22nm,0.4s,baz=87,slow=0.4,SNR=9.7						
	comp=Z,22nm,0.4s						
KNRA	**Kununurra**	**26.36**	**174**	P	**P**	**18 52 57.4**	**0.0**
KNRA				IAmb	IAmb	18 53 07.6	
	comp=Z,9.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**27.31**	**289**	P	**P**	**18 53 04.3**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=102,slow=8.6,SNR=7.3						
CMAR				LR	LR	19 03 20.5	
	comp=Z,39nm,18.9s,baz=205,slow=35						
	comp=Z,0.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.64**	**181**	P	**P**	**18 53 17.4**	**-0.3**
WB0	**Warramunga Arr**	**31.39**	**165**	P	**P**	**18 53 41.0**	**-1.0**
WB0				IAmb	IAmb	18 53 53.9	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**31.54**	**165**	P	**P**	**18 53 42.3**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=343,slow=9.4,SNR=7.3						
WRA				PcP	**PcP**	**18 56 34.3**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=340,slow=3.0,SNR=1.4						
	comp=Z,0.7nm,0.6s						
WR8	**Warramunga Arr**	**31.60**	**165**	P	**P**	**18 53 42.1**	**-1.7**
WR8				IAmb	IAmb	18 54 02.5	
	comp=Z,8.1nm,1.4s						
MBWA	**Marble Bar**	**32.28**	**191**	P	**P**	**18 53 49.3**	**-0.5**
MBWA				IAmb	IAmb	18 54 25.4	
	comp=Z,36nm,1.4s						
PSA00	**Pilbara Seismi**	**32.66**	**191**	P	**P**	**18 53 52.0**	**-1.1**
AS31	**Alice Springs**	**35.03**	**167**	P	**P**	**18 54 13.5**	**-0.2**
ASAR	**Alice Springs**	**35.03**	**167**	P	**P**	**18 54 13.3**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=348,slow=8.7,SNR=29						
ASAR				PcP	**PcP**	**18 56 45.2**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=320,slow=3.6,SNR=1.5						
	comp=Z,0.5nm,0.3s						
SHL	**Shillong**	**35.53**	**299**	P	**P**	**18 54 16.8**	**-1.5**
SHL				IAmb	IAmb	18 54 25.2	
	comp=Z,4.5nm,0.9s						
GTA	**Gaotai**	**36.89**	**325**	*e*P	**P**	**18 54 31.3**	**+1.7**
GTA				pP	pP	18 54 36.5	-16
GTA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HNR	**Honiara**	**39.22**	**120**	LR	LR	19 11 16.3	
	comp=Z,27nm,19.1s,baz=319,slow=36						
H11S3	**WAKE ISLAND Hy**	**40.00**	**74**	T	T	19 37 44.0	
	baz=254,slow=79,SNR=16						
H11S1	**WAKE ISLAND Hy**	**40.02**	**74**	T	T	19 37 41.2	
	baz=254,slow=79,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	**40.02**	**74**	T	T	19 37 40.9	
	baz=254,slow=79,SNR=14						
H11N1	**WAKE ISLAND Hy**	**40.32**	**72**	T	T	19 38 01.6	
	baz=265,slow=74,SNR=25						
H11N2	**WAKE ISLAND Hy**	**40.33**	**72**	T	T	19 38 02.0	
	baz=265,slow=74,SNR=23						
H11N3	**WAKE ISLAND Hy**	**40.34**	**72**	T	T	19 38 03.1	
	baz=265,slow=74,SNR=24						
STKA	**Stephens Creek**	**44.89**	**161**	P	**P**	**18 55 34.5**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=345,slow=11,SNR=4.7						
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**51.54**	**323**	P	**P**	**18 56 24.8**	**-1.3**
MKAR	**Makanchi Array**	**51.54**	**323**	P	**P**	**18 56 27.1**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=122,slow=8.7,SNR=20						
	comp=Z,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**54.13**	**331**	P	**P**	**18 56 45.3**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=111,slow=7.0,SNR=7.2						
	comp=Z,1.4nm,0.7s						
KURK	**Kurchatov**	**55.58**	**325**	P	**P**	**18 56 56.6**	**+1.1**
KURK				IAmb	IAmb	18 56 57.3	
	comp=Z,2.8nm,0.8s						
KURBB	**Kurchatov Arra**	**55.58**	**325**	P	**P**	**18 56 56.4**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=128,slow=7.0,SNR=13						
	comp=Z,1.5nm,0.6s						
KKAR	**Karatay Array**	**57.78**	**314**	P	**P**	**18 57 11.7**	**+0.4**
BVAR	**Borovoye Array**	**61.17**	**325**	P	**P**	**18 57 35.6**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=114,slow=6.1,SNR=3.4						
	comp=Z,0.9nm,0.8s						
AB31	**Akbulak array**	**66.40**	**319**	P	**P**	**18 58 08.9**	**+0.2**
AB31				IAmb	IAmb	18 58 22.8	
	comp=Z,1.8nm,1.1s						
ABKAR	**Akbulak array**	**66.40**	**319**	P	**P**	**18 58 09.2**	**+0.4**
ILAR	**Eielson Array**	**79.13**	**26**	P	**P**	**18 59 24.5**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=256,slow=6.0,SNR=7.1						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**83.70**	**340**	IAmb	IAmb	18 59 51.4	
	comp=Z,5.8nm,1.1s						
ARCES	**ARCESS Array B**	**83.70**	**340**	P	**P**	**18 59 48.6**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=88,slow=6.3,SNR=7.6						
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**85.08**	**309**	P	**P**	**18 59 54.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=132,slow=6.2,SNR=2.7						
	comp=Z,0.3nm,0.3s						
FINES	**FINESS Array B**	**85.39**	**332**	P	**P**	**18 59 57.2**	**+0.8**
	comp=Z,2.9nm,1.1s,baz=54,slow=4.9,SNR=5.0						
	comp=Z,2.9nm,1.1s						

*IDC **11** 18:54:43.1±1.2, 2.55S×138.19E, h0km, mb3.7/4, mbtmp3.5/6, ML3.1/2, Error ellipse: s-maj=26.7km s-min=22.5km az=48.0*
ISC 11 18:54:48.0±1.0, 2.6S±0.1×138.17E±0.10, h35km, n6, σ2§04/7, mb3.6/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.54**	**88**	Pn	**Pn**	**18 55 24.4**	**-2.3**
	2.1nm,0.3s,baz=222,slow=12,SNR=18						
JAY				Sn	**Sn**	**18 55 58.5**	**+2.1**
	1.1nm,0.3s,baz=114,slow=21,SNR=1.8						
	3.5nm,0.3s						
WRA	**Warramunga Arr**	**17.63**	**192**	P	**Pn**	**18 58 49.7**	**-1.3**
	0.1nm,0.3s,baz=14,slow=12,SNR=3.2						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**21.34**	**191**	P	**P**	**18 59 31.8**	**-0.4**
	0.4nm,0.4s,baz=15,slow=11,SNR=9.2						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**29.29**	**174**	P	**P**	**19 00 49.1**	**+1.9**
	0.8nm,0.3s,baz=108,slow=6.4,SNR=6.4						
	0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**43.92**	**300**	P	**P**	**19 02 51.3**	**-0.5**
	0.2nm,0.2s,baz=90,slow=7.8,SNR=2.2						
	0.2nm,0.2s						
MKAR	**Makanchi Array**	**69.38**	**323**	P	**P**	**19 05 53.3**	**+1.0**
	0.6nm,0.6s,baz=119,slow=6.9,SNR=6.3						
	0.6nm,0.6s						

*RSNC **11** 19:12:10.6±0.0, 10°N±3°×7°1W±°, h4km±4km, M2.5, ML2.3, MLv3.1*
*FUNV **11** 19:12:18.3, 9.50N×70.39W, h31km, MW3.2*
ISC 11 19:12:09.0±1.6, 9.62N±0.05×70.55W±0.03, h20km±5km, n12, σ1§35/22, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**0.73**	**187**	P	**Pb**	**19 12 23.6**	**+0.4**
SDV				S	**Sb**	**19 12 33.8**	**+1.0**
MAPV	**Macapo**	**2.07**	**84**	*e*P	**Pg**	**19 12 49.2**	**+0.4**
MAPV				*e*S	**Sb**	**19 13 11.1**	**-0.3**
CAPV	**Capacho**	**2.46**	**225**	*e*P	**Pg**	**19 12 56.2**	**-0.1**
CAPV				*e*S	**Sb**	**19 13 24.6**	**+1.7**
URIC	**Uribia, Colomb**	**2.51**	**326**	P	**Pn**	**19 12 49.6**	**+0.8**
URIC				S	**Sn**	**19 13 20.0**	**+1.2**
BAUV	**El Baul**	**2.56**	**105**	*e*P	**Pb**	**19 12 53.6**	**-0.7**
BAUV				*e*S	**Sn**	**19 13 22.2**	**+2.1**
CRJC	**Cerrejon, Guaj**	**2.69**	**301**	P	**Pn**	**19 12 49.7**	**-1.6**
CRJC				S	**Sn**	**19 13 22.4**	**-0.9**
TURV	**Turiamo**	**2.79**	**73**	*e*P	**Pb**	**19 12 59.4**	**+1.1**
TURV				*e*S	**Sn**	**19 13 27.3**	**+1.5**
BENV	**Beln**	**2.93**	**83**	*e*P	**Pb**	**19 12 59.9**	**-0.6**
OCAC	**Ocana**	**3.06**	**244**	P	**Pn**	**19 12 56.9**	**+0.4**
OCAC				S	**Sn**	**19 13 32.3**	**-0.3**
PAMC	**Pamplona, Colo**	**3.11**	**223**	P	**Pn**	**19 12 57.7**	**+0.3**
PAMC				S	**Sn**	**19 13 32.3**	**-1.9**
TACV	**Tcata**	**3.51**	**81**	*e*P	**Pb**	**19 13 08.8**	**-1.7**
CACV	**CAICARA DEL OR**	**4.46**	**117**	*e*P	**Pb**	**19 13 25.7**	**-0.9**
CACV				*e*S	**Sb**	**19 14 17.5**	**-2.5**

*EST **11** 19:28:57.0, 59.90N×22.64E, h2km, ML1.3(HEL), Confirmed Earthquake*
*LVSN **11** 19:29:00.6±4.1, 59.52N×23.82E, h0km±13km, ML1.5*
HEL 11 19:28:57.1, 59.90N×22.64E, h2km, ML1.2, Confirmed Earthquake, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVF	**Tvarminne**	**0.31**	**100**	*e*P	Pg	19 29 02.4	-0.7
TVF				*e*S	Sg	19 29 06.5	-0.7
EE01	**Perakula, Nova**	**0.86**	**144**	*e*P	Pg	19 29 12.7	-0.8
EE01				*e*S	Sg	19 29 23.5	-1.1
MEF	**Metsahovi**	**0.94**	**69**	*e*P	Pg	19 29 13.9	-1.2
MEF	**Metsahovi**	**0.94**	**69**	*e*P	Pg	19 29 14.3	-0.7
MEF				*e*S	Sg	19 29 26.5	-0.6
MEF				AML	AML	19 29 29.5	
	comp=E,5.5nm,0.6s						
MEF				AML	AML	19 29 29.8	
	comp=N,6.6nm,0.7s						
MEF				AML	AML	19 29 35.0	
	comp=Z,4.4nm,0.8s						
MEF	**Metsahovi**	**0.94**	**69**	*e*P	Pg	19 29 13.9	-1.1
MEF				*e*S	Sg	19 29 25.8	-1.4
EE06	**Soera, Palade,**	**0.94**	**173**	*e*P	Pg	19 29 14.1	-1.0
EE06				*e*S	Sg	19 29 25.9	-1.3
HEL5	**Espoo, Suvisaa**	**1.08**	**77**	*e*P	Pg	19 29 16.5	-1.2
HEL5				*e*S	Sg	19 29 30.0	-1.6
NUR	**Nurmijarvi**	**1.18**	**58**	*e*P	Pg	19 29 18.3	-1.3
NUR				*e*S	Sg	19 29 33.4	-1.4
RAF	**Rauma**	**1.21**	**339**	*e*P	Pg	19 29 18.6	-1.5
RAF	**Rauma**	**1.21**	**339**	*e*P	Pg	19 29 18.8	-1.4
RAF				*e*S	Sg	19 29 34.1	-1.7
EE02	**Kiisa, Saku**	**1.27**	**123**	*e*PN	Pg	19 29 21.2	-0.2
EE02				*e*SB	Sg	19 29 36.6	-1.1
AAL	**Aland**	**1.35**	**283**	*e*P	Pn	19 29 20.9	-2.1
AAL	**Aland**	**1.35**	**283**	*e*P	Pn	19 29 21.2	-1.8
AAL				*e*S	Sg	19 29 38.3	-2.3
PVF	**Pernaja**	**1.73**	**67**	*e*P	Pn	19 29 27.4	-0.8
PVF				*e*S	Sn	19 29 50.1	-0.8
PVF				smax	smax	19 29 51.2	
	comp=Z,1.7nm,0.1s						
EE08	**Sarghaua, Vand**	**1.83**	**132**	*e*PG	Pn	19 29 29.8	+0.3
EE08				*e*S	Sn	19 29 52.9	-0.3
EE08				smax	smax	19 29 55.0	
	comp=Z,0.7nm,0.1s						
KPF	**Kankaanpaa**	**1.96**	**352**	*e*PG	Pn	19 29 32.1	+0.8
KPF				*e*SG	Sn	19 29 57.3	+0.9
KPF				smax	smax	19 29 59.5	
	comp=Z,0.8nm,0.1s						
NRTU	**Norrtaelje**	**2.04**	**265**	*e*P	Pn	19 29 32.3	-0.1
NRTU				*e*S	Sn	19 29 58.3	0.0
NRTU				smax	smax	19 30 00.5	
	comp=Z,1.3nm,0.1s						
EE03	**Tooma soojaam,**	**2.13**	**117**	*e*PG	Pb	19 29 34.9	-1.4
EE03				*e*SG	Sb	19 30 02.4	-0.7
SLIT	**Slitere, Latvi**	**2.29**	**185**	*e*P	Pn	19 29 37.1	+1.3
SLIT				*e*S	Sb	19 30 07.5	-0.2
SLIT				AML	AML	19 30 08.5	
	comp=N,55nm,0.3s						
SLIT				AML	AML	19 30 08.6	
	comp=E,51nm,0.5s						
SLIT				AML	AML	19 30 32.8	
	comp=Z,36nm,0.7s						
SLIT	**Slitere, Latvi**	**2.29**	**185**	*e*PG	Pn	19 29 36.9	+1.2
SLIT				*e*SG	Sb	19 30 06.5	-1.2
FIA0	**FINESS Array S**	**2.29**	**46**	*e*PB	Pn	19 29 37.5	+1.6
FIA0				*e*SG	Sb	19 30 07.0	-0.9
FIA0				smax	smax	19 30 10.2	
	comp=Z,0.8nm,0.1s						
KEF	**Keuruu**	**2.52**	**25**	*e*PG	Pb	19 29 42.0	-1.0
KEF				*e*SB	Sb	19 30 12.9	-1.5
KEF				smax	smax	19 30 18.4	
	comp=Z,0.7nm,0.1s						
VSU	**Vasula**	**2.56**	**123**	*e*S	Sn	19 29 59.9	-11
VSU				AML	AML	19 30 15.1	
	comp=Z,3.3nm,0.4s						
VSU				AML	AML	19 30 16.6	
	comp=N,5.1nm,0.6s						
VSU				AML	AML	19 30 16.8	
	comp=E,5.4nm,0.5s						

ZUR 11 19:29:58.2, 46.33N×7.37E, h4km±1km, MLh0.3/8, 1C-2D, Error ellipse: s-maj=2472.6km s-min=866.6km az=42.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.04**	**251**	⇓Pg	Pg	19 29 59.6	+0.2
RAW2				Sg	Sg	19 30 00.6	+0.3
STSW2	**Zeuzier, Staus**	**0.05**	**68**	⇑Pg	Pg	19 29 59.8	+0.2
STSW2				Sg	Sg	19 30 00.8	+0.2
SAYF2	**Ayent-Fortunoz**	**0.05**	**137**	⇑Pg	Pg	19 29 59.7	+0.2
SAYF2				Sg	Sg	19 30 00.8	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**309**	⇓Pg	Pg	19 29 59.9	+0.2
SENIN				Sg	Sg	19 30 01.1	+0.3
SIOV	**Sion-Valere**	**0.09**	**181**	Sg	Sg	19 30 01.7	+0.3
RAW1	**Lenk, BE**	**0.11**	**28**	Pg	Pg	19 30 00.6	+0.2
RAW1				Sg	Sg	19 30 02.5	+0.5
GRYON	**Gryon**	**0.19**	**247**	Sg	Sg	19 30 05.0	+0.5

ZUR 11 19:30:24.8, 46.33N×7.37E, h4km±1km, MLh0.6/10, 4C-2D, Error ellipse: s-maj=2065.2km s-min=766.5km az=173.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAW2	**Sanetsch, VS**	**0.04**	**251**	⇓Pg	Pg	19 30 26.3	+0.2
RAW2				Sg	Sg	19 30 27.3	+0.2
STSW2	**Zeuzier, Staus**	**0.05**	**69**	⇑Pg	Pg	19 30 26.4	+0.2
STSW2				Sg	Sg	19 30 27.5	+0.2
SAYF2	**Ayent-Fortunoz**	**0.05**	**139**	⇑Pg	Pg	19 30 26.4	+0.2
SAYF2				Sg	Sg	19 30 27.4	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**307**	⇓Pg	Pg	19 30 26.6	+0.2
SENIN				Sg	Sg	19 30 27.8	+0.3
SIOV	**Sion-Valere**	**0.09**	**182**	⇑Pg	Pg	19 30 26.9	+0.2
SIOV				Sg	Sg	19 30 28.4	+0.3
RAW1	**Lenk, BE**	**0.10**	**27**	⇑Pg	Pg	19 30 27.3	+0.2
RAW1				Sg	Sg	19 30 29.1	+0.5
GRYON	**Gryon**	**0.19**	**247**	Pg	Pg	19 30 28.8	+0.1
GRYON				Sg	Sg	19 30 31.6	+0.4
LKBD2	**Leukerbad 2**	**0.20**	**76**	Pg	Pg	19 30 29.0	+0.3
LKBD2				Sg	Sg	19 30 31.9	+0.5

*JMA **11** 19:41:56.7±0.2, 43.1N±0.5×145.8E±0.7, h51km±1km, MV3.1/36, OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .
*SKHL **11** 19:41:57.5±0.2, 43.20N×145.80E, h40km±4km, mb4.4/4*
ISC 11 19:41:58.0±1.6, 43.20N±0.07×145.68E±0.05, h44km±9km, n15, σ1§14/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.17**	**15**	*i* P	**Pn**	**19 42 05.2**	**-0.4**
NEM2				S	**Sn**	**19 42 11.0**	**+0.2**
NMR	**Nemuro--Hokkai**	**0.17**	**11**	*i* P	**Pn**	**19 42 05.1**	**-0.4**
NMR				*e*S	**Sn**	**19 42 10.8**	**0.0**
JKHN	**Kushirohamanak**	**

	comp=N,667nm,0.2s							
ERBA				S	Sg	19 43 34.1	+0.4	
ERBA				*i* IAML		19 43 36.0		
	comp=E,868nm,0.4s							
TOKT	**Tokat**	**0.24**	**183**	Pg	**Pg**	**19 43 31.5**	**-0.3**	
TOKT				Sg	**Sg**	**19 43 35.7**	**+0.5**	
TOKA	**Tokat**	**0.25**	**195**	P	**Pg**	**19 43 31.6**	**-0.3**	
TOKA				*i* IAML		19 43 35.0		
	comp=E,4μm,0.4s							
TOKA				S	**Sg**	**19 43 35.6**	**+0.2**	
TOKA				*i* IAML		19 43 38.0		
	comp=N,2μm,1.0s							
KIZO	**Buyukkizoglu-L**	**0.58**	**305**	Pg	**Pg**	**19 43 37.9**	**-0.2**	
KIZO				Sg	**Sb**	**19 43 46.9**	**-0.3**	
YARM	**Yarimca-Ladik(**	**0.66**	**303**	Pg	**Pg**	**19 43 39.4**	**-0.2**	
YARM				Sg	**Sb**	**19 43 49.4**	**-0.1**	
SVSK	**Karacayir**	**0.73**	**152**	Pg	**Pg**	**19 43 40.2**	**-0.6**	
SVSK				Sg	**Sb**	**19 43 50.6**	**-0.7**	
SCER	**sogukcermik**	**0.83**	**148**	P	**Pg**	**19 43 41.9**	**-0.7**	
SCER				S	**Sb**	**19 43 54.8**	**+0.5**	
SCER				*i* IAML		19 44 01.0		
	comp=E,245nm,0.5s							
SCER				*i* IAML		19 44 03.0		
	comp=N,250nm,0.5s							
SAMS	**Samsun-Alacam**	**0.84**	**341**	P	**Pb**	**19 43 43.0**	**-0.4**	
SAMS				S	**Sb**	**19 43 54.8**	**+0.1**	
SAMS				*i* IAML		19 43 55.0		
	comp=N,161nm,0.4s							
SAMS				*i* IAML		19 43 58.0		
	comp=E,194nm,0.2s							
CKRK	**Yozgat, Cekere**	**0.95**	**239**	P	**Pg**	**19 43 43.8**	**-1.1**	
CKRK				S	**Sb**	**19 43 58.8**	**+1.1**	
CKRK				*i* IAML		19 44 01.0		
	comp=E,166nm,0.7s							
CKRK				*i* IAML		19 44 02.0		
	comp=N,96nm,0.5s							
HACI	**Hacifakili, Ak**	**1.07**	**217**	P	**Pg**	**19 43 46.5**	**-0.8**	
HACI				S	**Sb**	**19 44 02.0**	**+0.7**	
HACI				*i* IAML		19 44 07.0		
	comp=N,114nm,0.3s							
HACI				*i* IAML		19 44 07.0		
	comp=E,115nm,0.9s							
ORDU	**Ordu-Boztepe**	**1.07**	**66**	P	**Pb**	**19 43 47.0**	**-0.3**	
ORDU				S	**Sn**	**19 44 02.3**	**-0.2**	
ORDU				*i* IAML		19 44 03.0		
	comp=N,156nm,0.3s							
ORDU				*i* IAML		19 44 16.0		
	comp=E,129nm,0.7s							
COAL	**Corum-Alaca**	**1.24**	**256**	P	**Pg**	**19 43 48.6**	**-2.0**	
COAL				S	**Sn**	**19 44 07.2**	**+0.5**	
AYAZ	**Ayas K¶y, M**	**1.30**	**276**	P	**Pn**	**19 43 49.8**	**-1.1**	
AYAZ				S	**Sn**	**19 44 09.0**	**+0.7**	
SUSE	**Susehri**	**1.30**	**105**	P	**Pn**	**19 43 50.7**	**-0.2**	
SUSE				S	**Sn**	**19 44 08.9**	**+0.4**	
SUSE				*i* IAML		19 44 12.0		
	comp=N,131nm,0.6s							
SUSE				*i* IAML		19 44 12.0		
	comp=E,100nm,0.4s							
CUAYA	**Sivas-Altinyay**	**1.30**	**174**	P	**Pn**	**19 43 51.0**	**+0.1**	
CUAYA				S	**Sn**	**19 44 10.7**	**+2.3**	
CUAYA				*i* IAML		19 44 12.0		
	comp=N,196nm,0.6s							
CUAYA				*i* IAML		19 44 12.0		
	comp=E,186nm,0.6s							
YOZ	**Yozgat**	**1.32**	**226**	Pn	**Pg**	**19 43 51.6**	**-0.5**	
CORM	**Corum**	**1.52**	**256**	Pn	**Pb**	**19 43 54.9**	**-0.1**	
ALUC	**Giresun/Alucra**	**1.70**	**97**	P	**Pb**	**19 43 57.3**	**-0.7**	
ALUC				S	**Sg**	**19 44 21.2**	**-0.2**	
SNOP	**Sinop**	**1.78**	**325**	Pn	**Pn**	**19 43 58.2**	**+0.9**	
BNN	**Bunyan**	**1.80**	**198**	Pn	**Pn**	**19 43 58.5**	**+0.8**	
KOZK	**Kozakli-Nevseh**	**1.88**	**224**	Pn	**Pb**	**19 43 59.9**	**-1.1**	
CANT	**Cankiri**	**2.24**	**272**	Pn	**Pb**	**19 44 07.8**	**+0.6**	

*NEIC **11** 19:58:31.5±1.2, 35°.13N±0°.02×95°.37W±0°.01, h5km±1km, mb_Lg2.8/32, ML2.6/9, ML2.9/14, Error ellipse: s-maj=2.7km s-min=2.6km az=196.0*

NEIC 11 19:58:31.7±0.9, 35°.14N±0°.02×95°.37W±0°.02, h5km±3km, Error ellipse: s-maj=2.8km s-min=1.8km az=154.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUL3	**Leonard**	**0.84**	**336**		Pg	19 58 47.8	0.0
TUL3					Sg	19 58 59.2	+0.5
RLO	**Rose Lookout**	**1.06**	**15**		Pg	19 58 51.8	-0.3
RLO					Sg	19 59 06.2	+0.3
RLO				IAML		19 59 08.5	
	comp=E,480nm,0.2s						
RLO				IAML		19 59 13.3	
	comp=N,406nm,0.2s						
DEOK	**Depew**	**1.16**	**308**		Pg	19 58 53.4	-0.4
DEOK					Sg	19 59 08.9	+0.1
DEOK				IAML		19 59 13.7	
	comp=N,320nm,0.5s						
DEOK				IAML		19 59 13.8	
	comp=E,245nm,0.4s						
OK052	**Battle Ridge R**	**1.44**	**307**		Pn	19 58 58.2	-0.3
OK052					Sg	19 59 18.1	0.0
QUOK	**Quay**	**1.50**	**314**		Pn	19 58 58.9	-0.4
QUOK					Sg	19 59 19.7	-0.1
U38A	**Gravette**	**1.52**	**31**		Pn	19 58 59.5	-0.2
U38A					Sb	19 59 20.1	-0.1
MIAR	**Mount Ida**	**1.59**	**111**		Pn	19 59 00.8	+0.3
MIAR					Sb	19 59 22.3	+0.2
HHAR	**Hobbs**	**1.63**	**45**		Pn	19 59 01.0	-0.1
HHAR					Sb	19 59 23.3	+0.2
FNO	**Franklin**	**1.67**	**275**		Pn	19 59 01.8	+0.2
FNO					Sg	19 59 25.0	-0.2
OKCSW	**OKLAHOMA CITY**	**1.71**	**279**	IAmb_Lg		19 59 28.3	
	comp=Z,62nm,0.9s						
OK048	**Pawnee Station**	**1.80**	**315**		Pn	19 59 03.5	0.0
OK051	**E0350 and S346**	**1.81**	**319**	IAmb_Lg		19 59 28.6	
	comp=Z,48nm,1.0s						
Z38A	**Mt. Pleasant**	**1.90**	**170**	Pn	Pn	19 59 03.7	-1.2
Z38A				IAmb_Lg		19 59 35.3	
	comp=Z,80nm,1.0s						
T35A	**Sooner Cattle**	**2.00**	**333**		Pn	19 59 04.6	-1.6
X40A	**Basin Creek Fa**	**2.19**	**107**		Pb	19 59 11.3	-0.4
WLAR	**White Oak Lake**	**2.37**	**127**	IAmb_Lg		19 59 52.4	
	comp=Z,30nm,0.7s						
WHAR	**Wooly Hollow**	**2.53**	**86**		Pn	19 59 13.4	-0.1
WHAR				IAmb_Lg		19 59 51.6	
	comp=Z,23nm,1.2s						
FCAR	**Ozark Folk Cen**	**2.75**	**73**		Pn	19 59 16.1	-0.5
FW06	**Azle**	**2.82**	**221**		Pn	19 59 15.9	-1.6
LCAR	**Lake Charles**	**3.56**	**74**	IAmb_Lg		20 00 28.9	
	comp=Z,20nm,1.1s						
SMWD	**Samnorwood**	**3.99**	**271**	IAmb_Lg		20 00 45.8	
	comp=Z,14nm,0.9s						
R40A	**Maddies Statio**	**4.01**	**38**	IAmb_Lg		20 00 40.6	
	comp=Z,36nm,0.9s						
R32A	**Long Quarter,**	**4.23**	**322**	IAmb_Lg		20 00 50.9	
	comp=Z,19nm,1.0s						
ABTX	**Abilene, Hawle**	**4.35**	**236**	IAmb_Lg		20 01 00.7	
	comp=Z,14nm,1.0s						
CCM	**Cathedral Cave**	**4.42**	**48**	IAmb_Lg		20 00 59.6	
	comp=Z,15nm,0.7s						
CGM3	**Cape Girardeau**	**5.10**	**63**	IAmb_Lg		20 01 12.7	
	comp=Z,14nm,0.8s						
MLDN	**Muldoon**	**5.53**	**195**	IAmb_Lg		20 01 30.4	
	comp=Z,20nm,0.7s						
N35A	**Tabor**	**5.72**	**358**	IAmb_Lg		20 01 36.0	
	comp=Z,24nm,0.7s						
EF04	**Eagle Ford 04**	**6.26**	**200**	IAmb_Lg		20 02 04.9	
	comp=Z,17nm,0.8s						

*IDC **11** 20:06:33.5±9.5, 18°.22S×178°.36W, h550km±95km, mb3.1/6, mbtmp4.0/6, Error ellipse: s-maj=56.6km s-min=25.1km az=66.0*

ISC 11 20:06:35.9±1.2, 18°.2S±0°.2×178°.5W±0°.3, h579km, n9, σ0 67/11, mb3.7/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.43**	**241**	P	**P**	**20 13 08.8**	**-0.3**
	4.6nm,1.1s,baz=67,slow=9.4,SNR=4.5 4.6nm,1.1s						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**20 13 57.3**	**0.0**
	0.6nm,0.6s,baz=97,slow=7.4,SNR=14						
WRA				PcP	**PcP**	**20 15 28.3**	**+0.4**
	0.3nm,0.3s,baz=103,slow=3.3,SNR=8.7 0.6nm,0.6s						
ASAR	**Alice Springs**	**44.65**	**255**	P	**P**	**20 13 58.6**	**+0.4**
	3.2nm,0.5s,baz=90,slow=8.3,SNR=72						
ASAR				PcP	**PcP**	**20 15 28.2**	**-0.1**
	0.3nm,0.6s,baz=95,slow=3.1,SNR=2.3 3.2nm,0.5s						
VNDA	**Vanda**	**60.12**	**185**	P	**P**	**20 15 46.7**	**-1.0**
	0.2nm,0.3s,baz=331,slow=12,SNR=2.0 0.2nm,0.3s						
MJAR	**Matsushiro Arr**	**68.13**	**323**	P	**P**	**20 16 39.1**	**+0.1**
	1.2nm,0.6s,baz=158,slow=5.5,SNR=5.3 1.2nm,0.6s						
QSPA	**South Pole Qui**	**71.83**	**180**	P	**P**	**20 17 01.8**	**+1.2**
	1.1nm,0.3s,baz=341,slow=0.6,SNR=3.6 1.1nm,0.3s						
BVAR	**Borovoye Array**	**117.06**	**321**	PKP	**PKPdf**	**20 24 15.0**	**-0.5**
	0.5nm,0.4s,baz=110,slow=3.5,SNR=7.4						
ARCES	**ARCESS Array B**	**126.62**	**350**	PKP	**PKPdf**	**20 24 32.9**	**-0.5**
	1.8nm,0.9s,baz=54,slow=2.0,SNR=1.7						
BRTR	**Keskin Array B**	**144.97**	**314**	PKPbc	**PKPbc**	**20 25 09.5**	**+0.4**
	1.3nm,0.7s,baz=64,slow=3.4,SNR=8.4						

ASRS 11 20:31:05.0±0.2, 51°N±2°×97°E±°, h5km, MLh4.0/15, 1C, Error ellipse: s-maj=4.2km s-min=2.4km az=3.2, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**0.39**	**116**	⇑Pg	Pg	20 31 11.2	-1.3
TDJR	**Todzha**	**1.71**	**342**	Pg	Pg	20 31 41.8	+4.0
TDJR				Sg	Sg	20 32 07.5	+7.5
KZLR	**Kyzyl**	**1.83**	**301**	Pg	Pg	20 31 42.8	+2.7
KZLR				Sg	Sg	20 32 09.2	+5.3
MOY	**Mondy**	**2.68**	**69**	Pg	Pb	20 31 53.0	-0.5
MOY				Sg	Sb	20 32 28.2	+1.4
ARDR	**Aradan**	**2.85**	**311**	Pg	Pg	20 32 00.7	+1.1
ARDR				Sg	Sg	20 32 41.1	+4.7
CERR	**Cheremushki**	**4.03**	**303**	Pg	Pg	20 32 24.2	+2.1
CERR				Sg	Sg	20 33 17.0	+2.8
ZAK	**Zakamensk**	**4.04**	**93**	Pn	Pn	20 32 07.6	+0.1
ZAK				Pg	Pg	20 32 19.8	-2.5
ZAK				Sg	Sb	20 33 08.5	+2.7
TLY	**Talaya**	**4.29**	**75**	Pg	Pb	20 32 22.6	+1.7
TEL	**Teeli**	**4.29**	**276**	Pn	Pb	20 32 19.8	-1.1
TEL				Pg	Pg	20 32 29.6	+2.4
TEL				Sg	Sg	20 33 28.3	+5.5
VEH	**Verkhnyaya Baz**	**4.80**	**304**	Pn	Pb	20 32 24.8	-4.8
VEH				Pg	Pg	20 32 41.4	+4.6
VEH				Sg	Sg	20 33 40.2	+1.2
CUR	**Chagan-Uzun**	**5.55**	**266**	Pn	Pn	20 32 32.3	+4.0
CUR				Pg	Pg	20 32 50.1	-1.1
CUR				Sg	Sg	20 34 03.0	-0.1
ULGR	**Ulagan, Altay**	**5.73**	**272**	Pn	Pn	20 32 35.0	+4.3
ULGR				Pg	Pg	20 32 54.2	-0.5
ULGR				Sg	Sg	20 34 09.4	+0.6
LUZB	**Luzhba, Kemero**	**5.74**	**303**	Pn	Pn	20 32 35.2	+4.4
LUZB				Pg	Pg	20 32 51.7	-3.2
LUZB				Sg	Sg	20 34 09.1	-0.1
GZLN	**Zheleznogorsk**	**5.93**	**343**	Pn	Pn	20 32 34.5	+1.1
GZLN				Pg	Pg	20 32 58.1	-0.3
GZLN				Sg	Sg	20 34 15.8	+0.6
YALR	**Yailyu, Altay**	**5.96**	**283**	Sg	Sg	20 34 16.2	0.0
AKAR	**Aktash**	**5.98**	**269**	Pn	Pn	20 32 38.4	+4.2
AKAR				Pg	Pg	20 32 58.9	-0.6
AKAR				Sg	Sg	20 34 16.2	-0.7
CHBI	**Chibit, Altay**	**6.05**	**269**	Pn	Pn	20 32 39.3	+4.1
CHBI				Pg	Pg	20 33 01.2	+0.4
CHBI				Sg	Sg	20 34 19.2	-0.1
ARTR	**Artybash**	**6.17**	**283**	Pn	Pn	20 32 41.4	+4.8
ARTR				Pg	Pg	20 33 02.3	-0.7
ARTR				Sg	Sg	20 34 23.2	+0.4
DGZ	**Jazzator, Alta**	**6.21**	**264**	Pn	Pn	20 32 41.3	+3.8
DGZ				Pg	Pg	20 33 01.6	-2.4
DGZ				Sg	Sg	20 34 23.9	-0.5
ELDR	**Elanda**	**6.88**	**278**	Pn	Pn	20 32 51.0	+4.6
ELDR				Pg	Pg	20 33 16.9	+0.2
ELDR				Sg	Sg	20 34 47.9	+2.0
ELT	**Eltsovka**	**7.08**	**295**	Pn	Pn	20 32 55.9	+6.8
ELT				Sg	Sg	20 34 51.6	-0.4
BRCR	**Berchikul'**	**7.12**	**317**	Sg	Sg	20 34 51.2	-2.1
SALR	**Pechorkino, Sa**	**7.77**	**302**	Sg	Sg	20 35 16.5	+2.4

*NEIC **11** 20:50:46.5±0.8, 36°.31N±0°.01×98°.16W±0°.01, h6km±2km, Error ellipse: s-maj=1.6km s-min=1.5km az=188.0*

NEIC 11 20:50:46.3±1.1, 36°.293N±0°.005×98°.15W±0°.01, h5km±1km, mb_Lg2.7/48, ML2.8/25, ML2.8/63, Error ellipse: s-maj=2.5km s-min=1.7km az=163.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.25**	**32**		Pg	20 50 51.8	+0.6
CROK					Sg	20 50 55.2	+0.6
CROK				IAML		20 50 58.1	
	comp=E,2μm,0.3s						
CROK				IAML		20 50 58.5	
	comp=N,2μm,0.2s						
OK038	**West end E0370**	**0.51**	**291**		Pg	20 50 56.5	+0.3
OK038					Sg	20 51 03.6	+0.8
GC02	**Grant County #**	**0.60**	**23**		Pg	20 50 58.1	+0.2
GC02					Sg	20 51 06.4	+0.6
KAN14	**Manchester OK**	**0.68**	**13**		Pg	20 50 59.5	+0.1
KAN14					Sg	20 51 08.5	+0.3
KAN14				IAML		20 51 08.9	
	comp=N,660nm,0.3s						
KAN14				IAML		20 51 10.4	
	comp=E,448nm,0.1s						
NOKA	**Waynoka**	**0.72**	**299**		Pg	20 51 00.2	+0.1
NOKA					Sg	20 51 09.7	+0.2
NOKA				IAML		20 51 15.2	
	comp=E,502nm,0.3s						
NOKA				IAML		20 51 20.4	
	comp=N,507nm,0.3s						
OK029	**Liberty Lake**	**0.75**	**131**		Pg	20 51 01.0	+0.3
OK029					Sb	20 51 11.4	-0.9
OK029				IAML		20 51 14.4	
	comp=N,351nm,0.6s						
CSTR	**Hydro, Custer**	**0.78**	**214**		Pb	20 51 01.9	-0.5
CSTR					Sb	20 51 12.9	-0.4
BLOK	**Blackwell**	**0.89**	**58**		Pg	20 51 03.4	+0.1
BLOK					Sg	20 51 15.2	+0.3
BLOK				IAML		20 51 18.6	
	comp=E,409nm,0.2s						
KAN13	**South Haven SW**	**0.90**	**37**		Pg	20 51 03.8	+0.2
KAN13					Sg	20 51 15.5	+0.2
OK048	**Pawnee Station**	**0.98**	**82**		Pg	20 51 04.7	-0.4
OKCFA	**Oklahoma City**	**1.04**	**147**		Pg	20 51 06.4	+0.1
OKCFA					Sb	20 51 20.7	-0.2
ELIS	**Ellis County**	**1.05**	**258**		Pg	20 51 04.7	-1.8
ELIS				IAML		20 51 29.7	
	comp=N,326nm,0.3s						
ELIS				IAML		20 51 34.9	
	comp=E,318nm,0.3s						
OKCSW	**OKLAHOMA CITY**	**1.06**	**147**		Pg	20 51 05.4	-1.2
OKCSW				IAmb_Lg		20 51 20.5	
	comp=Z,90nm,1.2s						
OK052	**Battle Ridge R**	**1.13**	**105**		Pg	20 51 07.9	-0.1
OK052					Sb	20 51 23.5	+0.1
OK052				IAML		20 51 26.4	
	comp=Z,259nm,0.2s						
FNO	**Franklin**	**1.20**	**149**		Pg	20 51 07.7	-1.6
DEOK	**Depew**	**1.41**	**108**		Pn	20 51 11.1	-1.5
T35A	**Sooner Cattle**	**1.46**	**64**		Pn	20 51 12.0	-1.3
WMOK	**Wichita Mounta**	**1.64**	**199**		Pn	20 51 14.8	-1.0
WMOK				IAmb_Lg		20 51 42.0	
	comp=Z,47nm,0.7s						
X34A	**Smith Ranch, M**	**1.71**	**171**		Pn	20 51 17.2	+0.5
X34A				IAmb_Lg		20 51 41.8	
	comp=Z,25nm,0.7s						
TUL3	**Leonard**	**1.95**	**101**		Pn	20 51 19.9	-0.2
SMWD	**Samnorwood**	**2.08**	**236**		Pn	20 51 22.5	+0.6
SMWD				IAmb_Lg		20 51 51.5	
	comp=Z,43nm,0.8s						
R32A	**Long Quarter,**	**2.17**	**348**		Pb	20 51 26.1	-0.1
WTFS	**Witchita Falls**	**2.53**	**186**		Pb	20 51 32.3	0.0
AMTX	**Amarillo**	**3.20**	**245**		Pn	20 51 35.4	-2.0
AMTX				IAmb_Lg		20 52 28.9	
	comp=Z,25nm,0.8s						
DKNS	**Dickens**	**3.47**	**222**		Pn	20 51 40.4	-0.7
PLPT	**Palo Pinto**	**3.47**	**182**	IAmb_Lg		20 52 43.9	
	comp=Z,15nm,0.8s						
RTBA	**Rita Blanca**	**3.71**	**274**		Pn	20 51 44.0	-0.4
ABTX	**Abilene, Hawle**	**3.86**	**199**	IAmb_Lg		20 52 49.5	
	comp=Z,15nm,1.0s						
SN07	**Snyder 07**	**3.91**	**216**	IAmb_Lg		20 52 58.0	
	comp=Z,23nm,0.9s						
MIAR	**Mount Ida**	**4.12**	**114**	IAmb_Lg		20 53 02.0	
	comp=Z,22nm,1.2s						
POST	**Post**	**4.24**	**222**		Pn	20 51 50.6	-1.1
POST				IAmb_Lg		20 53 08.7	
	comp=Z,26nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.47**	**309**		Pb	20 52 07.9	+2.5
X40A	**Basin Creek Fa**	**4.70**	**111**	IAmb_Lg		20 53 14.6	
	comp=Z,12nm,0.9s						
WHAR	**Wooly Hollow**	**4.87**	**100**	IAmb_Lg		20 53 30.1	
	comp=Z,16nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.90**	**93**	IAmb_Lg		20 53 21.7	
	comp=Z,14nm,1.0s						
P38A	**Dawn**	**4.94**	**46**		Pg	20 52 17.9	-3.0
P38A				IAmb_Lg		20 53 32.2	
	comp=Z,23nm,0.8s						
BRDY	**Brady**	**5.04**	**188**		Pn	20 52 00.9	-1.7
BRDY				IAmb_Lg		20 53 36.9	
	comp=Z,15nm,0.9s						
R40A	**Maddies Statio**	**5.09**	**65**	IAmb_Lg		20 53 36.5	
	comp=Z,13nm,0.9s						
T25A	**Trinidad**	**5.10**	**281**		Pn	20 52 02.3	-1.3
T25A				IAmb_Lg		20 53 33.7	
	comp=Z,14nm,0.9s						
BGNE	**Belgrade**	**5.11**	**360**	IAmb_Lg		20 53 32.0	
	comp=Z,19nm,0.8s						
435B	**Jarrell**	**5.52**	**175**	IAmb_Lg		20 53 42.2	
	comp=Z,13nm,0.7s						
L34A	**Svendsen Farm,**	**5.83**	**13**	IAmb_Lg		20 53 51.5	
	comp=Z,15nm,0.7s						
ISCO	**Idaho Springs**	**6.85**	**303**	IAmb_Lg		20 54 30.7	
	comp=Z,8.0nm,1.1s						

*SJA **11** 20:52:21.9±0.7, 31°.79S×71°.42W, h49km±9km, ML4.1, MW4.2*
*GUC **11** 20:52:23.7±0.6, 31°.81S×71°.31W, h55km±3km, ML4.2*
*IDC **11** 20:52:23.0±0.6, 31°.87S×71°.44W, h56km±4km, mb3.8/8, mbtmp4.0/13, MS3.8/3, Error ellipse: s-maj=17.5km s-min=10.8km az=174.0*
*NEIC **11** 20:52:23.6±1.3, 31°.81S±0°.04×71°.5W±0°.1, h57km±7km, mb4.2/6, Mwr4.3(GUC), Error ellipse: s-maj=13.0km s-min=5.7km az=86.0*

ISC 11 20:52:22.8±0.5, 31°.81S±0°.02×71°.47W±0°.04, h52km±4km, n145, σ1§84/176, mb4.2/9, MS3.5/3, 8C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.48**	**119**	⇑*i* P	**Pn**	**20 52 34.2**	**0.0**
CO04				*i* S	**Sn**	**20 52 41.5**	**-0.9**
CO04				IAML		20 52 43.9	
	comp=N,26μm,0.3s						
CO02	**Combarbal**	**0.72**	**34**		**Pn**	**20 52 37.3**	**+0.3**
CO02	**Combarbal**	**0.72**	**34**	⇑*i* P	**Pn**	**20 52 37.4**	**+0.4**
CO02				*i* S	**Sn**	**20 52 47.0**	**-0.4**
CO02	**Combarbal**	**0.72**	**34**	*eP*	**Pn**	**20 52 36.5**	**-0.6**
CO02				IAML		20 52 49.0	
	comp=Z,14μm,0.2s						
VA06	**Catapilco**	**0.77**	**169**		**Pn**	**20 52 38.2**	**+0.8**
VA06	**Catapilco**	**0.77**	**169**	*i* P	**Pn**	**20 52 38.3**	**+0.8**
VA06				*i* S	**Sn**	**20 52 49.5**	**+1.3**
VA06				IAML		20 52 52.0	
	comp=E,20μm,0.3s						
CO06	**Fray Jorge**	**1.14**	**353**		**Pn**	**20 52 43.9**	**+1.4**
CO06	**Fray Jorge**	**1.14**	**353**	⇑*i* P	**Pn**	**20 52 44.1**	**+1.6**
CO03	**El Pedregal**	**1.17**	**35**		**Pn**	**20 52 43.3**	**+0.3**
CO03	**El Pedregal**	**1.17**	**35**	⇑*i* P	**Pn**	**20 52 43.6**	**+0.6**
CO03				*i* S	**Sn**	**20 52 58.0**	**0.0**
CO03				IAML		20 52 58.7	
	comp=N,22μm,0.4s						
CO03	**El Pedregal**	**1.17**	**35**	*eP*	**Pn**	**20 52 42.7**	**-0.2**
CO03				IAML		20 52 58.5	
	comp=Z,12μm,0.3s						
VA01	**Torpederas**	**1.22**	**187**		**Pn**	**20 52 44.8**	**+1.3**
VA01	**Torpederas**	**1.22**	**187**	⇑*i* P	**Pn**	**20 52 44.9**	**+1.4**
VA01	**Torpederas**	**1.22**	**187**	*eP*	**Pn**	**20 52 44.5**	**+0.9**
VA01				IAML		20 53 03.8	
	comp=Z,2μm,0.8s						
ROCH	**El Roble**	**1.22**	**162**	*i* P	**Pn**	**20 52 44.6**	**+0.8**
ROCH				*i* S	**Sn**	**20 53 00.5**	**+1.2**
ROC1	**El Roble**	**1.23**	**162**	*eP*	**Pn**	**20 52 44.5**	**+0.6**
ROC1				*eS*	**Sn**	**20 53 01.1**	**+1.6**
VA03	**San Esteban**	**1.23**	**141**		**Pn**	**20 52 43.7**	**0.0**
VA03	**San Esteban**	**1.23**	**141**	⇑*i* P	**Pn**	**20 52 43.8**	**0.0**
VA03				*i* S	**Sn**	**20 52 58.9**	**-0.5**
VA03				IAML		20 53 01.8	
	comp=E,12μm,0.1s						
VA03	**San Esteban**	**1.23**	**141**	*eP*	**Pn**	**20 52 43.2**	**-0.5**
VA03				IAML		20 53 02.3	
	comp=Z,3μm,0.7s						
MT02	**Curacav**	**1.47**	**169**		**Pn**	**20 52 47.7**	**+0.7**
MT02	**Curacav**	**1.47**	**169**	⇑*i* P	**Pn**	**20 52 47.9**	**+0.9**
MT02				*i* S	**Sn**	**20 53 06.6**	**+1.4**
MT02	**Curacav**	**1.47**	**169**	*eP*	**Pn**	**20 52 47.2**	**+0.2**
MT02				IAML		20 53 10.1	
	comp=Z,1μm,0.7s						
PEL	**Peldehue**	**1.49**	**154**		**Pn**	**20 52 47.8**	**+0.6**
PEL	**Peldehue**	**1.49**	**154**	*i* P	**Pn**	**20 52 47.7**	**+0.6**
PEL				*i* S	**Sn**	**20 53 06.2**	**+0.7**
PEL	**Peldehue**	**1.49**	**154**	*eP*	Pn	20 52 42.6	-4.6
PEL				IAML		20 53 15.4	
	comp=Z,1μm,0.5s						
MT10	**Hacienda Santa**	**1.66**	**152**	*i* P	**Pn**	**20 52 50.0**	**+0.4**
MT05	**Renca**	**1.69**	**159**		**Pn**	**20 52 50.8**	**+0.7**
MT05	**Renca**	**1.69**	**159**	*eP*	**Pn**	**20 52 51.1**	**+1.0**
MT05				*eS*	**Sn**	**20 53 11.7**	**+1.0**
MT05				IAML		20 53 19.2	
	comp=E,4μm,0.5s						
MT05	**Renca**	**1.69**	**159**	*eP*	**Pn**	**20 52 50.

MT12 *i* S **Sn** **20 53 20.0 +0.2**
MT12 IAML 20 53 44.8
comp=E,3μm,0.5s
MT13 San Alfonso 2.17 153 Pn 20 52 57.3 +0.7
MT13 San Alfonso 2.17 153 *eS* **Sn 20 53 23.3 +0.9**
MT13 San Alfonso 2.17 153 *eP* **Pn 20 52 56.2 -0.4**
MT13 IAML 20 53 35.3
comp=Z,835nm,0.6s
CO01 Juntas del Tor 2.17 33 Pn 20 52 58.3 +1.5
CO01 Juntas del Tor 2.17 33 ↓*iP* **Pn 20 52 58.4 +1.6**
CO01 IAML 20 53 28.2
comp=N,2μm,0.4s
CO01 Juntas del Tor 2.17 33 *eP* **Pn 20 52 57.8 +1.1**
CO01 IAML 20 53 36.3
comp=Z,676nm,0.3s
BO04 La Punta 2.29 162 *eP* **Pn 20 52 59.3 +1.2**
LMEL Las Melosas 2.29 153 Pn 20 52 59.4 +1.1
LMEL Las Melosas 2.29 153 *eP* **Pn 20 53 00.1 +1.8**
LMEL Las Melosas 2.29 153 *eP* **Pn 20 52 59.6 +1.3**
LMEL IAML 20 53 36.4
comp=Z,484nm,0.1s
ASAL Salagasta 2.36 110 *eP* **Pn 20 52 57.0 -2.2**
AROD Rodeo 2.37 47 *eP* **Pn 20 53 02.5 +3.1**
AROD *eS* **Sn 20 53 28.4 +0.8**
ARCO CERRO ARCO 2.38 116 *eP* **Pn 20 52 57.6 -1.9**
ARCO *eS* **Sn 20 53 28.6 +1.0**
ARCO IAML 20 53 39.5
comp=Z,876nm,0.9s
ACCO Cerro Coronel 2.39 60 *eP* **Pn 20 53 02.7 +2.9**
ACCO *eS* **Sn 20 53 36.0 +7.9**
ZON Zonda 2.39 84 Pn 20 53 01.4 +1.9
ZON Zonda 2.39 84 *eP* **Pn 20 53 02.1 +2.5**
ZON IAML 20 53 40.9
comp=Z,756nm,0.7s
SJA San Juan 2.49 84 *eP* **Pn 20 53 04.2 +3.2**
SJA IAML 20 53 44.5
comp=Z,686nm,0.7s
AAGR Agrelo 2.57 120 *eP* **Pn 20 53 05.4 +3.4**
AAGR IAML 20 53 43.7
comp=Z,564nm,0.6s
ACDV Cuesta del Vie 2.59 52 *eP* **Pn 20 53 06.3 +3.9**
ACDV IAML 20 53 47.9
comp=Z,652nm,0.7s
BO01 Tunca 2.60 173 Pn 20 53 03.4 +1.1
BO01 Tunca 2.60 173 *eP* **Pn 20 53 03.5 +1.1**
BO01 Tunca 2.60 173 *eP* **Pn 20 53 03.0 +0.7**
BO01 IAML 20 53 49.2
comp=Z,607nm,0.8s
RTLL Cerro Villicun 2.60 80 *eP* **Pn 20 53 04.4 +2.0**
RTLL *eS* **Sn 20 53 33.3 +0.5**
RTLL IAML 20 53 39.9
comp=Z,1μm,0.5s
BO03 Pichilemu 2.71 189 *eP* **Pn 20 53 04.5 +0.6**
CFA Coronel Fontan 2.76 87 P **Pn 20 53 06.4 +1.8**
comp=Z,110nm,0.4s,baz=257,slow=11,SNR=251
CFA S **Sn** **20 53 37.5 +0.8**
comp=Z,191nm,0.3s,baz=180,slow=19,SNR=9.5
CFA Coronel Fontan 2.76 87 *eP* **Pn 20 53 06.4 +1.8**
CFA *eS* **Sn 20 53 36.3 -0.4**
LCO Las Campanas 2.87 14 Pn 20 53 07.4 +1.1
LCO Las Campanas 2.87 14 ↓*eP* **Pn 20 53 07.7 +1.4**
LCO Las Campanas 2.87 14 *eP* **Pn 20 53 07.0 +0.8**
LCO IAML 20 53 54.4
comp=Z,2μm,0.5s
AVIZ Vizcacheras 2.99 124 *eP* **Pn 20 53 08.3 +0.5**
BO02 Sierra Bellavi 3.03 169 Pn 20 53 09.7 +1.4
BO02 Sierra Bellavi 3.03 169 *eP* **Pn 20 53 09.7 +1.4**
BO02 Sierra Bellavi 3.03 169 *eP* **Pn 20 53 10.0 +1.6**
BO02 *eS* **Sn 20 53 48.5 +5.0**
BO02 IAML 20 53 59.6
comp=Z,865nm,0.6s
AC05 El Transito 3.14 20 *eP* **Pn 20 53 11.8 +2.0**
AC05 El Transito 3.14 20 *eP* **Pn 20 53 11.1 +1.2**
AC05 *eS* **Sn 20 53 45.1 -1.0**
AC05 IAML 20 54 05.6
comp=Z,871nm,0.8s
GO05 Hualane 3.22 187 *eP* **Pn 20 53 11.3 +0.4**
GO05 Hualane 3.22 187 *eP* **Pn 20 53 11.8 +0.9**
GO05 IAML 20 54 17.0
comp=Z,231nm,1.1s
AGUA GUANDACOL 3.45 49 *eP* **Pn 20 53 17.5 +3.3**
AGUA *eS* Sn 20 54 06.6 +13
AGUA IAML 20 54 11.6
comp=Z,862nm,0.6s
AC04 Llanos de Chal 3.61 6 Pn 20 53 17.3 +1.1
AC04 Llanos de Chal 3.61 6 *eP* **Pn 20 53 17.2 +1.0**
AC04 Llanos de Chal 3.61 6 *eP* **Pn 20 53 17.2 +1.1**
AC04 *eS* **Sn 20 54 01.5 +4.0**
AC04 IAML 20 54 13.4
comp=Z,1μm,0.8s
AVFE Valle Fertil 3.62 73 *eP* **Pn 20 53 17.9 +1.5**
AVFE *eS* **Sn 20 53 58.4 +0.4**
AVFE IAML 20 54 08.0
comp=Z,940nm,0.6s
ACAN Cantantal 3.66 98 *eP* **Pn 20 53 17.5 +0.6**
ACAN IAML 20 54 19.9
comp=Z,940nm,0.8s
RFA San Rafael 3.88 140 *eP* **Pn 20 53 20.8 +0.9**
RFA IAML 20 54 41.6
comp=Z,116nm,0.8s
ML02 Panimavida 3.94 179 *eP* **Pn 20 53 22.0 +1.2**
VCA Vinchina 4.16 43↑ *eP* **Pn 20 53 27.7 +3.7**
VCA Vinchina 4.16 43 *eP* **Pn 20 53 22.5 -1.5**
VCA *eS* Sn 20 54 22.8 +11
GO03 Copiapo 4.33 15 *eP* **Pn 20 53 27.6 +1.4**
GO03 *eS* **Sn 20 54 17.9 +2.4**
GO03 IAML 20 54 36.4
comp=Z,686nm,0.5s
MRA San Martin 4.92 99 *eP* **Pn 20 53 34.3 +0.1**
MRA *eS* **Sn 20 54 30.4 +0.5**
MRA IAML 20 54 35.6
comp=Z,390nm,0.7s
AANI Anillaco 4.92 54 *eP* **Pn 20 53 31.1 -3.3**
AANI *eS* **Sn 20 54 36.6 +6.5**
TINO Tinogasta 5.04 43 *eP* Pn 20 53 31.5 -4.4
TCA Tanti 5.88 87 *eP* **Pn 20 53 46.8 -0.7**
H03N1 Juan Fernandez 6.49 253 P **Pn 20 53 59.4 +4.0**
baz=79,slow=9.9,SNR=17
H03N1 S **Sn** **20 55 05.1 -2.8**
H03N1 T T 21 00 45.5
baz=79,slow=73,SNR=807
H03N3 Juan Fernandez 6.50 253 P **Pn** **20 53 59.1 +3.5**
baz=79,slow=9.9,SNR=28
H03N3 S **Sn** **20 55 04.9 -3.5**
H03N3 T T 21 00 44.6
baz=79,slow=73,SNR=870
H03N2 Juan Fernandez 6.50 254 P **Pn 20 53 58.4 +2.8**
baz=76,slow=9.9,SNR=18
H03N2 S **Sn** **20 55 05.3 -3.0**
H03N2 T T 21 00 46.4
baz=79,slow=73,SNR=778
H03S3 Juan Fernandez 6.58 250 P **Pn 20 53 59.0 +2.3**
baz=76
H03S3 S **Sn** **20 55 06.4 -3.8**
H03S3 T T 21 00 39.0
baz=83,slow=75,SNR=43
H03S1 Juan Fernandez 6.58 250 P **Pn 20 53 58.4 +1.7**
baz=79
H03S1 S **Sn** **20 55 06.0 -4.2**
H03S1 T T 21 00 37.7
baz=83,slow=75,SNR=33
H03S2 Juan Fernandez 6.60 250 P **Pn 20 53 58.7 +1.9**
baz=76
H03S2 S **Sn** **20 55 06.3 -4.3**
H03S2 T T 21 00 38.5
baz=83,slow=75,SNR=48
PLCA Paso Flores 8.94 176 P **Pn 20 54 27.7 -1.6**
comp=Z,0.7nm,0.4s,baz=332,slow=12,SNR=5.9
TRQA Tornquist 9.97 131 Pn 20 54 44.5 +1.1
CPUP Villa Florida 13.51 70 Pn 20 55 28.4 -3.4
CPUP Villa Florida 13.51 70 P **Pn 20 55 31.1 -0.7**
comp=Z,0.7nm,0.4s,baz=108,slow=12,SNR=5.0
CPUP S **Sn** **20 57 56.8 -3.6**
comp=Z,2.0nm,0.7s,baz=22,slow=11,SNR=3.4
CPUP LR LR 21 01 13.9
comp=Z,15nm,21.1s,baz=160,slow=39
LPAZ La Paz 15.75 12 Pn 20 56 02.4 +0.6
LPAZ La Paz 15.75 12 P **Pn 20 56 03.1 +1.3**
comp=Z,3.0nm,0.7s,baz=163,slow=5.2,SNR=9.5
SIV San Ignacio 18.37 33 P **P** **20 56 32.3 -1.1**
comp=Z,4.2nm,0.6s,baz=199,slow=8.6,SNR=26
BDFB Brasilia 26.74 58 P **P** **20 57 56.0 -1.8**
comp=Z,10nm,0.9s,baz=223,slow=7.1,SNR=7.0
BDFB LR LR 21 09 45.0

comp=Z,126nm,18.8s,baz=146,slow=39
comp=Z,10nm,0.9s
MDP Montagnes des 40.85 29 LR LR 21 18 15.8
comp=Z,64nm,19.7s,baz=32,slow=38
SNAA Sanae 53.44 158 IAmb IAmb 21 01 54.2
comp=Z,5.1nm,1.2s
SNAA Sanae 53.44 158 P **P** **21 01 36.7 -0.4**
SNAA comp=Z,1.2nm,0.9s,baz=323,slow=8.7,SNR=2.4 pP **pP** **21 01 52.1 +0.8**
comp=Z,4.0nm,1.1s,baz=292,slow=7.0,SNR=4.8
comp=Z,1.2nm,0.9s
QSPA South Pole Qui 58.42 180 P **P** **21 02 15.6 +2.7**
QSPA comp=Z,1.1nm,0.3s,baz=151,slow=2.2,SNR=5.3 pP **pP** **21 02 28.8 +1.5**
comp=Z,2.0nm,0.7s,baz=130,slow=5.0,SNR=2.9
TXAR Lajitas Array 68.07 330 P **P** **21 03 18.6 +1.5**
comp=Z,0.5nm,0.6s,baz=151,slow=6.2,SNR=2.4
comp=Z,0.5nm,0.6s
DBIC Dimbokro 74.03 71 IAmb IAmb 21 04 16.8
comp=Z,5.1nm,1.1s
DBIC Dimbokro 74.03 71 P **P** **21 03 52.5 -0.9**
comp=Z,2.7nm,0.9s,baz=276,slow=13,SNR=1.4
comp=Z,2.7nm,0.9s
ANMO Albuquerque 74.10 331 IAmb IAmb 21 04 03.8
comp=Z,1.4nm,0.7s
ANMO Albuquerque 74.10 331 P **P** **21 03 53.2 -0.4**
comp=Z,0.7nm,0.5s,baz=119,slow=19,SNR=1.5
comp=Z,0.7nm,0.5s
MAW Mawson 75.14 164 P **P** **21 03 57.0 -1.9**
comp=Z,1.5nm,0.6s,baz=231,slow=6.1,SNR=6.1
comp=Z,1.5nm,0.6s
NVAR Mina Array Bea 82.37 325 P **P** **21 04 37.7 -1.6**
comp=Z,0.4nm,0.7s,baz=92,slow=8.2,SNR=1.9
comp=Z,0.4nm,0.7s
TORD Torodi Ar. Bea 83.01 70 IAmb IAmb 21 05 04.2
comp=Z,2.6nm,1.1s
TORD Torodi Ar. Bea 83.01 70 P **P** **21 04 42.4 -0.5**
comp=Z,1.1nm,0.8s,baz=288,slow=2.9,SNR=7.5
TORD pP **pP** **21 04 57.3 -0.7**
comp=Z,0.5nm,0.6s,baz=298,slow=3.1,SNR=2.9
comp=Z,1.1nm,0.8s
RAO Raoul Island 87.46 237 LR LR 21 36 59.2
comp=Z,162nm,21.6s,baz=308,slow=31
ASAR Alice Springs 119.73 207 PKP **PKPdf** **21 11 06.9 -0.8**
comp=Z,0.3nm,0.7s,baz=134,slow=2.3,SNR=2.0
ASAR pPKP **pPKPdf** **21 11 23.4 -0.1**
comp=Z,0.2nm,0.5s,baz=129,slow=1.5,SNR=2.1
WRA Warramunga Arr 122.91 209 PKP **PKPdf** **21 11 13.8 +0.1**
comp=Z,0.5nm,0.5s,baz=157,slow=1.7,SNR=12
WRA pPKP **pPKPdf** **21 11 29.3 -0.2**
comp=Z,0.8nm,0.5s,baz=160,slow=1.8,SNR=5.4
H11S2 WAKE ISLAND Hyl 26.26 270 T T 23 30 28.4
baz=117,slow=75,SNR=59
H11S1 WAKE ISLAND Hyl 26.27 270 T T 23 30 26.4
baz=117,slow=75,SNR=68
H11S3 WAKE ISLAND Hyl 26.28 270 T T 23 30 26.0
baz=117,slow=75,SNR=51
H11N3 WAKE ISLAND Hyl 26.62 272 T T 23 30 53.7
baz=116,slow=75,SNR=31
H11N1 WAKE ISLAND Hyl 26.63 272 T T 23 30 52.3
baz=116,slow=75,SNR=9.5
H11N2 WAKE ISLAND Hyl 26.63 272 T T 23 30 53.4
baz=116,slow=75,SNR=54
BVAR Borovoye Array 145.33 41 PKPbc **PKPab** **21 11 55.3 +0.9**
comp=Z,1.1nm,0.7s,baz=283,slow=2.1,SNR=8.2
BVAR pPKPbc pPKPab 21 12 10.6 +0.8
comp=Z,0.9nm,0.5s,baz=298,slow=3.5,SNR=5.9
KURBB Kurchatov Arra 150.93 41 PKPbc **PKPbc** **21 12 08.7 -0.5**
comp=Z,0.5nm,0.7s,baz=288,slow=3.2,SNR=4.8
KURBB pPKPbc **pPKPbc** **21 12 25.2 +0.3**
comp=Z,1.0nm,0.7s,baz=299,slow=3.0,SNR=5.9
KURK Kurchatov 150.93 41 PKPbc PKPbc 21 12 08.7 -0.5
ZALV Zalesovo Beam 152.11 31 PKPbc **PKiKP** **21 12 12.7 +0.5**
comp=Z,1.0nm,0.7s,baz=255,slow=4.5,SNR=4.6
ZALV pPKPbc **sPKPdf** **21 12 28.1 +1.5**
comp=Z,1.8nm,0.6s,baz=307,slow=2.4,SNR=6.5
MKAR Makanchi Array 154.93 46 PKPab **PKPab** **21 12 34.5 +0.6**
comp=Z,0.8nm,0.8s,baz=259,slow=6.8,SNR=3.0
MKAR pPKPab **pPKPab** **21 12 50.0 +0.8**
comp=Z,0.7nm,0.7s,baz=262,slow=2.5,SNR=4.2

DJA 11 21:14:14.5±0.6, 8°S±7°×12°3E±°, h204km±7km, M3.8/12, mb3.8/3, MLv3.7/12, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMRI	**Maumere**	**0.98**	**230**	P		Pn	21 14 43.9	-0.6
EDFI	**Ende, Flores**	**1.49**	**240**	P		Pn	21 14 48.2	-0.4
EDFI				S		S	21 15 16.4	+1.7
SOEI	**Soe**	**2.14**	**144**	P		Pn	21 14 55.1	+0.2
BATI	**Baumata**	**2.28**	**163**	P		Pn	21 14 57.0	+0.7
BSSI	**Bau Bau, Buton**	**3.11**	**307**	P		Pn	21 15 05.3	-0.3
WSI	**Waingapu**	**3.14**	**238**	P		Pn	21 15 05.8	-0.2
BASI	**Baing, Sumba**	**3.25**	**227**	P		Pn	21 15 06.2	-1.1
WBSI	**Waikabubak, Su**	**3.92**	**245**	P		Pn	21 15 14.7	-0.8
PLAI	**Plampang**	**5.23**	**261**	P		Pn	21 15 32.3	+0.3
	0.2nm23nm,0.9s							
TWSI	**Taliwang, Sumb**	**6.10**	**263**	P		Pn	21 15 45.0	+1.9
	8.1nm,0.5s							

IDC 11 21:27:43.2±2.9, 5°40S×151°84E, h0km, mb3.8/2, mbtmp3.9/3, ML1.9/1, MS3.9/2, Error ellipse: s-maj=134.9km s-min=37.1km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**6.11**	**229**	Pn		Pn	21 29 13.7	-1.2
	1.9nm,0.3s,baz=50,slow=17,SNR=4.8							
PMG				Sn		Sn	21 30 26.0	+0.4
	1.5nm,0.3s,baz=49,slow=20,SNR=3.1							
WRA	**Warramunga Arr**	**22.33**	**228**	P		P	21 32 43.2	+0.3
	1.6nm,0.7s,baz=53,slow=9.7,SNR=11							
	1.6nm,0.7s							
ASAR	**Alice Springs**	**25.07**	**222**	P		P	21 33 09.8	+0.2
	4.3nm,1.0s,baz=56,slow=9.4,SNR=24							
	4.3nm,1.0s							
JCJ	**Chichijima**	**33.63**	**344**	LR		LR	21 48 25.5	
	comp=Z,58nm,18.9s,baz=14,slow=37							
NRIK	**Norilʹsk**	**86.22**	**341**	LR		LR	22 17 31.3	
	comp=Z,205nm,20.0s,baz=211,slow=35							
TORD	**Torodi Ar. Bea**	**149.58**	**287**	PKPbc		PKPbc	21 47 35.4	-0.5
	1.4nm,0.8s,baz=53,slow=6.5,SNR=8.1							

IDC ***11*** *21:58:25.0±1.4, 4°.99S×152°.16E, h106km±9km, mb3.6/12, mbtmp4.0/12, MS3.6/1, Error ellipse: s-maj=30.6km s-min=19.5km az=115.0*
NEIC ***11*** *21:58:25.9±1.6, 4°.87S±0°.09×152°.1E±0°.2, h103km±7km, mb4.3/27, Error ellipse: s-maj=23.6km s-min=12.7km az=105.0*
ISC 11 21:58:24.8±0.9, 5°0S±0°.1×152°1E±0°.2, h100km, n49, σ0s85/53, mb4.2/26, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**0.75**	**2**	Pn		**Pn**	**21 58 43.3**	**+0.5**
RABL				Sn		**Sn**	**21 58 57.2**	**+1.0**
PMG	**Port Moresby**	**6.63**	**228**	Pn		**Pn**	**22 00 01.4**	**+1.6**
PMG	**Port Moresby**	**6.63**	**228**	S		**Sn**	**22 01 13.1**	**-0.8**
	32nm,0.4s,baz=145,slow=22,SNR=11							
WB0	**Warramunga Arr**	**22.70**	**228**	P		**P**	**22 03 18.1**	**-0.3**
WB0				IAmb		IAmb	22 03 42.6	
	comp=Z,8.6nm,1.1s							
WR8	**Warramunga Arr**	**22.74**	**227**	P		**P**	**22 03 17.9**	**-0.9**
WRA	**Warramunga Arr**	**22.85**	**228**	P		**P**	**22 03 18.9**	**-1.0**
WRA	**Warramunga Arr**	**22.85**	**228**	P		**P**	**22 03 19.2**	**-0.7**
	comp=Z,4.7nm,0.7s,baz=51,slow=10,SNR=31							
WRA				pP		**pP**	**22 03 39.4**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=52,slow=9.6,SNR=3.5							
	comp=Z,4.7nm,0.7s							
KNRA	**Kununurra**	**25.31**	**243**	P		**P**	**22 03 43.5**	**+1.1**
KNRA				IAmb		IAmb	22 03 46.3	
	comp=Z,7.2nm,0.8s							
AS31	**Alice Springs**	**25.59**	**222**	P		**P**	**22 03 46.0**	**+1.1**
ASAR	**Alice Springs**	**25.60**	**222**	P		**P**	**22 03 45.4**	**+0.5**
ASAR	**Alice Springs**	**25.60**	**222**	P		**P**	**22 03 44.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=56,slow=8.8,SNR=9.0							
ASAR				pP		**pP**	**22 04 07.2**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=54,slow=8.6,SNR=14							
	comp=Z,0.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**29.00**	**241**	P		**P**	**22 04 14.5**	**-1.0**
MBWA	**Marble Bar**	**35.32**	**240**	P		**P**	**22 05 09.4**	**-1.3**
PSA00	**Pilbara Seismi**	**35.38**	**239**	P		**P**	**22 05 11.5**	**+0.3**

MORW Morawa 41.74 231 P **P** **22 06 04.3 0.0**
RAR Rarotonga 49.33 114 LR LR 22 27 06.1
comp=Z,60nm,18.1s,baz=6.5,slow=35
CM31 Chiang Mai Arr 57.34 295 P **P** **22 08 03.3 +0.4**
CM31 IAmb IAmb 22 08 04.8
comp=Z,4.4nm,1.0s
CMAR Chiang Mai Arr 57.34 295 P **P** **22 08 03.5 +0.5**
comp=Z,2.1nm,0.8s,baz=114,slow=5.4,SNR=16
CMAR pP **pP** **22 08 29.5 +2.0**
comp=Z,0.3nm,0.3s,baz=89,slow=7.9,SNR=1.7
comp=Z,2.1nm,0.8s
LZDM Lanzhou Array 60.91 316 P **P** **22 08 27.8 +0.1**
comp=Z,1.0nm,0.3s,baz=169,slow=8.6,SNR=4.2
comp=Z,1.0nm,0.3s
SHL Shillong 65.81 301 P **P** **22 08 59.1 -1.0**
SHL IAmb IAmb 22 09 01.2
comp=Z,5.2nm,0.8s
SONM Songino Array 66.10 328 P **P** **22 09 01.1 -0.3**
comp=Z,0.6nm,0.4s,baz=120,slow=5.7,SNR=1.6
comp=Z,0.6nm,0.4s
CNPM China Poot 78.14 26 P **P** **22 10 12.1 -0.7**
L19K White Mountain 78.14 23 P **P** **22 10 13.2 +0.5**
L19K IAmb IAmb 22 10 14.8
comp=Z,3.7nm,0.9s
SLKM Skilak Lake 79.08 25 P **P** **22 10 18.1 0.0**
SLKM IAmb IAmb 22 10 19.0
comp=Z,6.0nm,0.6s
SUA Susitna One 79.36 24 P **P** **22 10 19.8 +0.2**
SUA IAmb IAmb 22 10 43.0
comp=Z,4.7nm,0.9s
MKAR Makanchi Array 80.00 319 P **P** **22 10 23.1 -0.2**
MKAR Makanchi Array 80.00 319 P **P** **22 10 23.2 -0.1**
comp=Z,0.4nm,0.5s,baz=98,slow=8.9,SNR=6.3
comp=Z,0.4nm,0.5s
PWL Port Wells 80.06 25 P **P** **22 10 24.1 +0.8**
MAKZ Makanchi 80.21 319 P **P** **22 10 24.3 -0.1**
MAKZ IAmb IAmb 22 10 30.8
comp=Z,3.2nm,1.1s
SML Sawmill 80.53 25 P **P** **22 10 26.5 +0.6**
SML IAmb IAmb 22 10 28.6
comp=Z,9.2nm,1.1s
ZALV Zalesovo Beam 80.91 326 P **P** **22 10 27.0 -0.9**
ZALV Zalesovo Beam 80.91 326 P **P** **22 10 26.9 -1.0**
comp=Z,0.8nm,0.4s,baz=128,slow=6.9,SNR=5.8
comp=Z,0.8nm,0.4s
D19K Kuna River 80.92 17 P **P** **22 10 27.6 -0.2**
ILAR Eielson Array 82.55 22 P **P** **22 10 35.5 -0.8**
comp=Z,0.6nm,0.7s,baz=240,slow=4.4,SNR=7.2
comp=Z,0.6nm,0.7s
BARN Barnard Glacie 83.07 27 P **P** **22 10 40.6 +1.2**
BARN IAmb IAmb 22 11 08.5
comp=Z,7.9nm,1.2s
D23K Nanushuk River 83.39 18 P **P** **22 10 42.1 +1.5**
D23K IAmb IAmb 22 10 58.3
comp=Z,1.4nm,0.9s
KURBB Kurchatov Arra 83.50 322 P **P** **22 10 40.4 -1.2**
comp=Z,0.3nm,0.6s,baz=108,slow=3.0,SNR=2.9
comp=Z,0.3nm,0.6s
HYT Haines Junctio 84.87 28 P **P** **22 10 48.9 +0.5**
HYT IAmb IAmb 22 10 51.2
comp=Z,4.5nm,1.0s
L29M L29M 85.38 25 P **P** **22 10 50.3 -0.5**
L29M IAmb IAmb 22 11 10.3
comp=Z,2.5nm,1.0s
C27K Jago River 85.88 18 P **P** **22 10 53.2 +0.1**
I30M Mount Dempster 86.81 24 P **P** **22 10 58.3 +0.4**
I30M IAmb IAmb 22 11 10.2
comp=Z,2.5nm,1.1s
H31M Peel River 87.80 23 P **P** **22 11 01.9 -0.6**
H31M IAmb IAmb 22 11 03.7
comp=Z,1.8nm,0.8s
BVAR Borovoye Array 88.96 323 P **P** **22 11 06.4 -1.9**
comp=Z,0.9nm,0.7s,baz=76,slow=6.3,SNR=5.4
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 92.70 52 P **P** **22 11 27.4 +1.1**
NVAR Mina Array Bea 92.70 52 P **P** **22 11 26.9 +0.6**
comp=Z,0.9nm,0.7s,baz=251,slow=7.7,SNR=5.2
comp=Z,0.9nm,0.7s
PDAR Pinedale Array 99.44 48 P **Pdif** **22 11 56.1 -0.7**
comp=Z,0.1nm,0.5s,baz=258,slow=6.1,SNR=1.6
comp=Z,0.1nm,0.5s
GERES GERESS Array B 123.83 328 PKP **PKPdf** **22 17 10.7 -0.7**
comp=Z,0.7nm,0.6s,baz=96,slow=1.3,SNR=4.9
EKA Eskdalemuir Ar 125.98 343 PKP **PKPdf** **22 17 14.1 -1.1**
comp=Z,0.4nm,0.4s,baz=9.4,slow=2.4,SNR=3.8
TORD Torodi Ar. Bea 149.72 288 PKP **PKPdf** **22 17 59.2 -0.1**
comp=Z,3.0nm,0.7s,baz=23,slow=7.8,SNR=14
TORD PKPbc **PKPbc** **22 18 03.3 -0.8**
comp=Z,1.8nm,0.6s,baz=74,slow=2.2,SNR=5.5

AEIC ***11*** *22:13:35.5±0.8, 54°.2N±0°.3×165°.7W±0°.3, h94km±3km, Error ellipse: s-maj=51.1km s-min=2.6km az=148.0*
NEIC 11 22:13:35.5±0.7, 54°.1N±0°.3×165°.6W±0°.3, h98km±4km, ML2.8/16, ML2.5(AEIC), Error ellipse: s-maj=50.8km s-min=2.9km az=151.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.05**	**295**			Pn	22 13 49.1	-0.1
AKSA						Sn	22 13 59.8	+0.4
AKUT	**Akutan**	**0.09**	**283**			Pn	22 13 48.8	-0.4
AKUT						Sn	22 13 58.6	-0.8
AKUT				IAML			22 13 59.7	
	comp=N,217nm,0.7s							
AKUT				IAML			22 13 59.8	
	comp=E,209nm,0.4s							
AHB	**Akutan Harbor**	**0.12**	**271**			Pn	22 13 49.3	0.0
AHB						Sn	22 13 59.6	0.0
AKBBA	**Akutan Broad B**	**0.19**	**265**			Pn	22 13 49.3	-0.1
AKBBA						Sn	22 14 00.2	+0.3
AKV	**Akutan Volcano**	**0.20**	**274**			Pn	22 13 49.5	-0.1
AKLV	**Akutan Long Va**	**0.20**	**284**			Pn	22 13 49.4	-0.1
AKLV						Sn	22 14 00.4	+0.4
ZRO	**Akutan Zero**	**0.21**	**264**			Pn	22 13 49.5	-0.1
ZRO						Sn	22 14 00.3	+0.2
AKMO	**Akutan Morgan**	**0.23**	**265**			Pn	22 13 49.6	0.0
AKMO						Sn	22 14 00.2	+0.1
AKGG	**Akutan Green G**	**0.24**	**291**			Pn	22 13 49.5	-0.1
LVA	**Lava Point**	**0.25**	**281**	Pn		Pn	22 13 49.1	-0.6
AKRB	**Akutan Reef Bi**	**0.27**	**274**			Pn	22 13 49.7	0.0
UNV	**Unalaska Valle**	**0.59**	**243**	Pn		Pn	22 13 51.3	-0.5
UNV				IAML			22 14 12.3	
	comp=N,154nm,0.5s							
MNAT	**Makushin Natee**	**0.67**	**250**			Pn	22 13 52.4	-0.1
WEBT	**Westdahl Beart**	**0.70**	**46**			Pn	22 13 52.6	-0.1
WEBT						Sn	22 14 05.8	+0.2
MSW	**Makushin Switc**	**0.72**	**254**			Pn	22 13 53.1	+0.1
MSW						Sn	22 14 06.2	+0.2
MREP	**Makushin Repʹt**	**0.73**	**246**			Pn	22 13 53.4	+0.2
MGOD	**Makushin Gods**	**0.81**	**247**			Pn	22 13 54.0	+0.2
SSBA	**Shishaldin**	**1.09**	**52**			Pn	22 13 56.7	-0.1
FALS	**False Pass**	**1.48**	**59**	Pn		Pn	22 14 00.3	-1.0
OKCE	**Okmok Cone E**	**1.66**	**247**			Pn	22 14 04.4	+0.7
DT1	**Dutton Round H**	**2.18**	**61**			Pn	22 14 10.6	+0.3
NIKH	**Nikolski High**	**2.25**	**241**	Pn		Pn	22 14 12.2	+1.1
NIKH				IAML			22 14 48.8	
	comp=E,73nm,0.7s							
S12K	**Black Hills**	**2.60**	**51**	Pn		Pn	22 14 15.3	-0.5
S12K				IAML			22 15 00.9	
	comp=N,28nm,0.7s							
PS1A	**Pavlof South-1**	**2.60**	**58**			Pn	22 14 16.4	+0.6
SDPT	**Sand Point**	**3.23**	**65**	Pn		Pn	22 14 24.5	+0.4
SDPT				IAML			22 15 30.8	
	comp=E,37nm,1.2s							
CNBA	**Chernabura Isl**	**3.59**	**76**	Pn		Pn	22 14 31.3	+2.3
CNBA				IAML			22 15 28.5	
	comp=N,13nm,0.3s							
CNBA				IAML			22 16 55.8	
	comp=E,16nm,1.1s							
O15K	**Ungalikthiuk R**	**6.00**	**30**	Pn		Pn	22 15 02.9	+1.3

SOME ***11*** *22:33:01.0, 38°.02N×73°.88E, h5km*
IDC ***11*** *22:33:07.8±8.1, 38°.38N×73°.91E, h191km±51km, mb3.3/4, mbtmp3.6/9, Error ellipse: s-maj=76.4km s-min=44.7km az=4.0*
ISC 11 22:33:10.4±2.2, 38°.6N±0°.2×73°.6E±0°.1, h200km, n12, σ1s33/16, mb3.5/4, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**4.06**	**10**	P		**Pn**	**22 34 12.7**	**-0.3**
	0.9nm,0.3s,baz=57,slow=18,SNR=1.4							
AAK				S		**Sn**	**22 35 04.6**	**+2.3**

	3.0nm,0.3s,baz=242,slow=5.4,SNR=5.6								
MRKS	**Merke**	**4.11**	**357**	*eP*		**Pn**	**22 34 13.1**	**-0.5**	
	5.8nm,0.3s								
MRKS				*eS*		**Sn**	**22 35 04.7**	**+1.3**	
	76nm,0.3s								
KST	**Kastek**	**4.76**	**22**	*eP*		**Pn**	**22 34 20.7**	**-1.1**	
	1.4nm,0.4s								
KST				*eS*		**Sn**	**22 35 17.8**	**-0.4**	
	9.1nm,0.7s								
BRLS	**Borolday**	**5.22**	**328**	*eP*		**Pn**	**22 34 26.0**	**-1.5**	
	1.1nm,0.1s								
BRLS				*eS*		**Sn**	**22 35 27.0**	**-1.6**	
	30nm,0.3s								
MKAR	**Makanchi Array**	**10.37**	**35**	P		**Pn**	**22 35 33.2**	**-1.1**	
	1.0nm,0.9s,baz=209,slow=13,SNR=3.0								
KURBB	**Kurchatov Arra**	**12.49**	**15**	P		**Pn**	**22 36 01.6**	**+0.3**	
	0.5nm,0.5s,baz=206,slow=10,SNR=5.3								
BVAR	**Borovoye Array**	**14.56**	**352**	P		**P**	**22 36 26.8**	**-1.4**	
	1.3nm,0.6s,baz=152,slow=9.9,SNR=9.6								
ZALV	**Zalesovo Beam**	**17.14**	**23**	P		**P**	**22 36 55.3**	**-1.3**	
	1.3nm,0.5s,baz=220,slow=11,SNR=6.4								
FINES	**FINESS Array B**	**36.91**	**324**	P		**P**	**22 40 00.6**	**+1.1**	
	0.6nm,0.5s,baz=123,slow=11,SNR=7.5								
	0.6nm,0.5s								
ARCES	**ARCESS Array B**	**39.99**	**336**	P		**P**	**22 40 26.3**	**+1.2**	
	2.8nm,0.8s,baz=107,slow=8.1,SNR=11								
	2.8nm,0.8s								
HFS	**Hagfors**	**42.69**	**320**	P		**P**	**22 40 48.2**	**+1.1**	
	1.4nm,0.7s,baz=88,slow=14,SNR=5.8								
	1.4nm,0.7s								
NOA	**NORSAR Array B**	**43.94**	**322**	P		**P**	**22 40 58.1**	**+1.0**	
	0.3nm,0.6s,baz=89,slow=7.3,SNR=1.8								
	0.3nm,0.6s								

WEL 11 22:36:14.4±1.1, 33°S±20", 177°W±3", 3, h242km±30km, M4.0/8, mB4.5/5, ML4.5/12, MLv4.2/8, Mw(mB)3.7/5, Error ellipse: s-maj=47.5km s-min=14.7km az=117.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MXZ	**Matakaoa Point**	**4.72**	**205**	P		Pn		22 37 26.2	-0.2
MXZ				S		S		22 38 24.4	+0.6
WMGZ	**Waiomatatini S**	**4.92**	**203**	P		Pn		22 37 29.8	+0.9
WMGZ				S		S		22 38 26.8	-1.3
PKGZ	**Pakihiroa**	**5.07**	**206**	P		Pn		22 37 31.4	+0.6
PKGZ				S		S		22 38 32.8	+1.1
HAZ	**Te Kaha**	**5.09**	**208**	P		Pn		22 37 30.9	-0.1
HAZ				S		S		22 38 32.8	+0.8
PUZ	**Puketiti**	**5.20**	**203**	P		Pn		22 37 32.7	+0.3
PUZ				S		S		22 38 34.3	-0.1
RUGZ	**Raukumara Rang**	**5.31**	**208**	P		Pn		22 37 33.5	-0.4
RUGZ				S		S		22 38 37.7	+0.5
TWGZ	**Tauwhareparae**	**5.39**	**205**	P		Pn		22 37 35.6	+0.8
TWGZ				S		S		22 38 38.8	+0.1
CNGZ	**Carnagh Statio**	**5.59**	**202**	P		Pn		22 37 38.2	+1.1
TKGZ	**Te Karaka**	**5.67**	**205**	P		Pn		22 37 38.7	+0.6
TKGZ				S		S		22 38 45.1	+0.2
MWZ	**Matawai**	**5.69**	**207**	P		Pn		22 37 36.3	-2.3
URZ	**Urewera**	**5.80**	**210**	P		Pn		22 37 38.9	-0.8
URZ				S		S		22 38 47.8	-0.1
RAGZ	**Rawiri**	**5.88**	**207**	P		Pn		22 37 40.9	+0.1
RAGZ				S		S		22 38 51.5	+1.6
RIGZ	**Rimuhau**	**5.94**	**204**	P		Pn		22 37 42.0	+0.5
RIGZ				S		S		22 38 50.0	-1.2
MUGZ	**Murupara**	**6.12**	**211**	P		Pn		22 37 42.8	-1.1
MUGZ				S		S		22 38 56.4	+1.0
SNGZ	**Shannon Statio**	**6.15**	**206**	P		Pn		22 37 45.2	+0.9
SNGZ				S		S		22 38 56.7	+0.6
MHGZ	**Mahia Peninsul**	**6.30**	**201**	P		Pn		22 37 46.6	+0.6
MHGZ				S		S		22 38 59.4	+0.1
ARHZ	**Aropaoanui**	**6.71**	**206**	P		Pn		22 37 50.6	-0.6
ARHZ				S		S		22 39 08.7	+0.1
KAHZ	**Kahuranaki**	**7.22**	**205**	P		Pn		22 37 56.4	-1.3
KAHZ				S		S		22 39 21.8	+1.3

IDC 11 22:40:31.4±0.8, 28.10N×140.07E, h410km±12km, mb3.0/8, mbtmp3.7/10, Error ellipse: s-maj=35.5km s-min=14.3km az=76.0
JMA 11 22:40:35.1±0.2, 28°N±1"×140°0E±", h454km, MV3.7/18, W OFF OGASAWARA
ISC 11 22:40:34.3±0.8, 28°05N±0°08×140°1E±0°2, h450km, n17, σ2^{s}41/21, mb3.2/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CBIJ	**Chichi jima**	**2.05**	**117**	*eP*			**P**	**22 41 36.4**	**+1.2**
CBIJ				*eS*			**S**	**22 42 23.9**	**-0.5**
JCJ	**Chichijima**	**2.05**	**117**	P			P	22 41 28.4	-6.8
	53nm,0.3s,baz=306,slow=22,SNR=11								
JCJ				S			**S**	**22 42 16.1**	**-8.3**
	107nm,0.4s,baz=298,slow=23,SNR=12								
JHH2	**Haha-jima-NKT2**	**2.29**	**127**	*eS*			**S**	**22 42 27.9**	**+0.8**
BSO1	**Boso 1**	**6.62**	**6**	*eP*			**P**	**22 42 16.2**	**+1.8**
BSO1				*eS*			**S**	**22 43 35.9**	**-0.5**
BSO3	**Boso 3**	**6.74**	**3**	*eP*			**P**	**22 42 17.4**	**+1.5**
BSO3				*eS*			**S**	**22 43 37.7**	**-1.5**
JRY	**Ryogami san**	**8.02**	**353**	*eP*			**P**	**22 42 31.3**	**+1.5**
JAG	**Ashikaga**	**8.37**	**356**	*eP*			**P**	**22 42 34.0**	**+0.3**
JHO	**Hitachi**	**8.55**	**2**	P			**P**	**22 42 36.6**	**+1.1**
JHO				*eS*			**S**	**22 44 13.1**	**-1.9**
MJAR	**Matsushiro Arr**	**8.62**	**350**	P			**P**	**22 42 32.7**	**-3.7**
	1.2nm,0.5s,baz=179,slow=12,SNR=6.0								
WRA	**Warramunga Arr**	**48.04**	**187**	P			**P**	**22 48 31.8**	**+0.3**
	0.5nm,0.3s,baz=2.9,slow=7.7,SNR=12								
	0.5nm,0.3s								
MKAR	**Makanchi Array**	**48.47**	**309**	P			**P**	**22 48 34.4**	**0.0**
	0.2nm,0.4s,baz=82,slow=9.8,SNR=5.3								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**51.08**	**314**	P			**P**	**22 48 53.5**	**-0.1**
	0.4nm,0.3s,baz=92,slow=8.5,SNR=2.3								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**51.77**	**187**	P			**P**	**22 48 59.6**	**+0.7**
	0.3nm,0.4s,baz=3.4,slow=5.2,SNR=7.6								
	0.3nm,0.4s								
BVAR	**Borovoye Array**	**56.12**	**317**	P			**P**	**22 49 29.6**	**+0.1**
	0.6nm,0.5s,baz=96,slow=6.5,SNR=3.6								
	0.6nm,0.5s								
FINES	**FINESS Array B**	**76.29**	**333**	P			**P**	**22 51 35.3**	**-0.1**
	2.0nm,0.9s,baz=108,slow=6.2,SNR=7.5								
	2.0nm,0.9s								
NVAR	**Mina Array Bea**	**81.34**	**51**	P			**P**	**22 52 05.1**	**+1.8**
	0.2nm,0.4s,baz=303,slow=5.0,SNR=2.3								
	0.2nm,0.4s								
NOA	**NORSAR Array B**	**82.05**	**338**	P			**P**	**22 52 05.4**	**-0.8**
	0.6nm,0.7s,baz=52,slow=8.0,SNR=2.2								
	0.6nm,0.7s								

IDC 11 22:44:59.6±2.0, 8.76S×129.40E, h0km, mb3.5/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=106.3km s-min=28.5km az=66.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
WRA	**Warramunga Arr**	**12.10**	**157**	Pn		Pn	Pn	22 47 52.6	-0.7
	0.2nm,0.3s,baz=341,slow=13,SNR=10								
WRA				Sn		Sn	Sn	22 50 11.2	+2.0
	0.1nm,0.3s,baz=334,slow=22,SNR=2.1								
	0.1nm,0.3s								
ASAR	**Alice Springs**	**15.43**	**164**	Pn		Pn	Pn	22 48 39.5	+0.7
	baz=339,slow=10.0,SNR=1.9								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**69.37**	**327**	P		P	P	22 56 09.3	0.0
	0.3nm,0.5s,baz=134,slow=6.2,SNR=4.3								
	0.3nm,0.5s								

SSNC 11 22:46:41.6±1.6, 18.24N×76.51W, h11km±12km, MD2.7, ML1.9, MW2.6
JSN 11 22:46:42.0±0.7, 18.16N×76.48W, h16km±6km, MD2.6
ISC 11 22:46:40.4±1.5, 18°22Nkm±0°08×76°50W±0°07, h27km±13km, n10, σ1^{s}07/18, 1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
HOJ	**Hope**	**0.32**	**228**	*i* P			**Pn**	**22 46 48.3**	**-1.0**
STH	**Stony Hill**	**0.33**	**244**	*i* P			**Pb**	**22 46 48.4**	**+0.3**
MTDJ	**Mount Denham**	**0.98**	**271**	*i* P			**Pb**	**22 47 00.2**	**+1.3**
MTDJ	**Mount Denham**	**0.98**	**271**	*eP*			**Pb**	**22 46 59.7**	**+0.8**
MTDJ				*eS*			**Sn**	**22 47 12.8**	**+1.2**
MTDJ				IAML				22 47 13.7	
	comp=Z,25nm,0.4s								
MTDJ				IAML				22 47 13.7	
	39nm,0.4s								
MARVS	**Santiago de Cu**	**1.86**	**18**	*eP*			**Pn**	**22 47 11.6**	**+1.0**
MARVS				*eS*			**Sn**	**22 47 33.7**	**+0.6**
MARVS				*eSg*			**Sb**	**22 47 34.9**	**-1.8**
MARVS				IAML				22 47 35.1	
	comp=E,2.8nm,0.2s								
MARVS				IAML				22 47 35.1	
	comp=N,3.1nm,0.1s								
LMGC	**Las Mercedes**	**1.90**	**346**	*eP*			**Pn**	**22 47 10.3**	**-0.7**
LMGC				*eS*			**Sn**	**22 47 32.5**	**-1.5**
LMGC				IAML				22 47 34.7	
	comp=N,16nm,0.1s								
LMGC				IAML				22 47 35.0	
	comp=E,8.5nm,0.1s								
RCC	**Rio Carpintero**	**1.92**	**23**	*eP*			**Pn**	**22 47 12.3**	**+0.9**
RCC				*eS*			**Sn**	**22 47 33.8**	**-0.9**
RCC				IAML				22 47 36.4	
	comp=N,1.4nm,0.1s								
RCC				IAML				22 47 37.2	
	comp=E,1.5nm,0.2s								
GTBY	**Guantanamo Bay**	**2.15**	**38**	*eP*			**Pn**	**22 47 15.3**	**+0.8**
GTBY				*eS*			**Sn**	**22 47 40.7**	**+0.5**
GTBY				IAML				22 47 42.3	
	comp=E,6.1nm,0.2s								
GTBY				IAML				22 47 46.3	
	comp=E,7.1nm,0.3s								
PINC	**Pinares de May**	**2.35**	**16**	*eP*			**Pn**	**22 47 17.6**	**+0.4**
PINC				*eS*			**Sn**	**22 47 45.1**	**-0.2**
PINC				IAML				22 47 46.7	
	comp=N,5.3nm,0.1s								
PINC				IAML				22 47 47.3	
	comp=E,6.0nm,0.1s								
QMBU	**Quimbuelo**	**2.54**	**39**	*eP*			**Pn**	**22 47 19.9**	**0.0**
QMBU				*eS*			**Sn**	**22 47 48.7**	**-1.2**
QMBU				IAML				22 47 52.0	
	comp=N,7.1nm,0.4s								
QMBU				IAML				22 47 52.9	
	comp=E,5.2nm,0.3s								

IDC 11 22:56:12.4±0.9, 19.89S×175.14W, h0km, mb4.0/8, mbtmp4.0/9, ML3.5/1, Error ellipse: s-maj=44.2km s-min=21.7km az=147.0
NEIC 11 22:56:15.6±1.9, 19.5S±0.2×175.40W±0.02, h10km±1km, mb4.5/11, Error ellipse: s-maj=28.3km s-min=2.9km az=185.0
ISC 11 22:56:14.8±0.6, 19.6S±0.2×175.40W±0.09, h10km, n35, σ0^{s}98/29, mb4.3/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
NIUE	**Niue**	**5.20**	**85**				**Pn**	**22 57 33.5**	**+0.8**
MSVF	**Nonsavu**	**6.48**	**286**	Pn			**Pn**	**22 57 50.6**	**+0.2**
DZM	**Mont Dzumac**	**17.15**	**259**	P			**Pn**	**23 00 15.6**	**+0.8**
	0.2nm,0.3s,baz=115,slow=15,SNR=2.5								
	7.0nm,1.1s								
PMG	**Port Moresby**	**37.56**	**280**	P			**P**	**23 03 29.2**	**-0.4**
STKA	**Stephens Creek**	**40.37**	**244**	P			**P**	**23 03 52.8**	**-0.2**
	3.9nm,1.0s,baz=92,slow=9.3,SNR=1.8								
	3.9nm,1.0s								
WR8	**Warramunga Arr**	**47.00**	**261**	P			**P**	**23 04 45.5**	**-1.1**
WR8				IAmb		IAmb	IAmb	23 04 49.7	
	comp=Z,4.9nm,1.0s								
AS31	**Alice Springs**	**47.10**	**256**	P			**P**	**23 04 47.8**	**+0.4**
AS31				IAmb		IAmb	IAmb	23 04 55.1	
	comp=Z,1.8nm,0.8s								
ASAR	**Alice Springs**	**47.10**	**256**	P			**P**	**23 04 46.1**	**-1.3**
ASAR	**Alice Springs**	**47.10**	**256**	P			**P**	**23 04 48.5**	**+1.1**
	comp=Z,5.2nm,1.0s,baz=84,slow=8.4,SNR=7.5								
	comp=Z,5.2nm,1.0s								
WB0	**Warramunga Arr**	**47.12**	**261**	P			**P**	**23 04 47.9**	**+0.3**
WB0				IAmb		IAmb	IAmb	23 04 55.5	
	comp=Z,4.0nm,0.8s								
WRA	**Warramunga Arr**	**47.15**	**261**	P			**P**	**23 04 47.6**	**-0.2**
	comp=Z,2.8nm,1.1s,baz=96,slow=8.6,SNR=9.4								
	comp=Z,2.8nm,1.1s								
FITZ	**Fitzroy Crossi**	**55.57**	**261**	P			**P**	**23 05 51.1**	**+0.1**
SBA	**Scott Base**	**58.93**	**184**	P			**P**	**23 06 15.2**	**+1.4**
QSPA	**South Pole Qui**	**70.45**	**180**	P			**P**	**23 07 28.6**	**-0.7**
QSPA				IAmb		IAmb	IAmb	23 07 49.5	
	comp=Z,6.5nm,1.1s								
QSPA	**South Pole Qui**	**70.45**	**180**	P			**P**	**23 07 26.9**	**-2.5**
	comp=Z,1.6nm,1.0s,baz=349,slow=3.4,SNR=3.9								
	comp=Z,1.6nm,1.0s								
NVAR	**Mina Array Bea**	**78.72**	**42**	P			**P**	**23 08 16.9**	**-0.9**
NVAR	**Mina Array Bea**	**78.72**	**42**	P			**P**	**23 08 17.6**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=243,slow=4.9,SNR=6.1								
	comp=Z,0.8nm,0.8s								
GMN	**Gold Mountain**	**78.73**	**44**	P			**P**	**23 08 16.7**	**-1.2**
GMN				IAmb		IAmb	IAmb	23 08 18.6	
	comp=Z,3.4nm,1.1s								
NV11	**Mina Array Sit**	**78.81**	**42**	P			**P**	**23 08 17.4**	**-0.8**
NV11				IAmb		IAmb	IAmb	23 08 20.9	
	comp=Z,5.8nm,1.4s								
PRN	**Pahroc Range**	**80.24**	**45**	P			**P**	**23 08 26.3**	**+0.3**
X16A	**Lo Mia Camp, P**	**81.12**	**49**	P			**P**	**23 08 30.9**	**0.0**
X16A				IAmb		IAmb	IAmb	23 08 32.7	
	comp=Z,5.5nm,1.3s								
H03S2	**Juan Fernandez**	**84.47**	**124**	T			T	00 41 18.9	
	baz=250								
H03S1	**Juan Fernandez**	**84.48**	**124**	T			T	00 41 20.1	
	baz=250,slow=74								
H03S3	**Juan Fernandez**	**84.48**	**124**	T			T	00 41 23.2	
	baz=250,slow=74								
H03N2	**Juan Fernandez**	**84.60**	**123**	T			T	00 41 21.6	
	baz=254								
H03N3	**Juan Fernandez**	**84.60**	**123**	T			T	00 41 24.2	
	baz=254								
H03N1	**Juan Fernandez**	**84.61**	**123**	T			T	00 41 22.2	
	baz=254								
PDAR	**Pinedale Array**	**86.65**	**42**	P			**P**	**23 08 58.0**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=260,slow=6.9,SNR=3.3								
	comp=Z,0.5nm,0.8s								
ILAR	**Eielson Array**	**86.93**	**12**	P			**P**	**23 08 59.3**	**-0.2**
ILAR	**Eielson Array**	**86.93**	**12**	P			**P**	**23 09 00.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=219,slow=6.1,SNR=7.1								
	comp=Z,0.4nm,0.5s								
CMAR	**Chiang Mai Arr**	**92.13**	**289**	P			**P**	**23 09 26.8**	**+1.7**
CMAR	**Chiang Mai Arr**	**92.13**	**289**	P			**P**	**23 09 26.2**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=109,slow=5.8,SNR=4.7								
	comp=Z,0.4nm,0.3s								
BRTR	**Keskin Array B**	**148.00**	**315**	PKPbc			**PKPbc**	**23 16 00.3**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=92,slow=3.7,SNR=4.8								
MMAI	**Mount Meron Ar**	**149.46**	**302**	PKPbc			**PKPbc**	**23 16 04.6**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=76,slow=6.1,SNR=5.1								
GERES	**GERESS Array B**	**149.93**	**348**	PKPbc			**PKPbc**	**23 16 04.5**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=299,slow=2.7,SNR=4.6								

HEL 11 22:59:35.8±0.2, 67.18N×20.64E, h0km, ML1.4, Suspected explosion
UPP 11 22:59:35.5±0.0, 67.19N×20.68E, h0km, ML2.1, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
DUNU	**Dundret**	**0.08**	**212**	P		Pg		22 59 37.3	+0.3
DUNU				S		Sg		22 59 38.4	+0.5
DUNU	**Dundret**	**0.08**	**212**	P		Pg		22 59 37.5	+0.5
	baz=22								
DUNU				S		Sg		22 59 38.7	+0.8
MASU	**Masugnsbyn**	**0.58**	**62**	P		Pg		22 59 46.7	+0.1
MASU				S		Sg		22 59 54.5	+0.3
MASU	**Masugnsbyn**	**0.58**	**62**	P		Pg		22 59 47.1	+0.5
MASU				S		Sg		22 59 55.2	+1.1
RATU	**Laukkuluspa**	**0.76**	**327**	P		Pg		22 59 49.8	-0.3
RATU				S		Sg		23 00 00.4	+0.4
RATU	**Laukkuluspa**	**0.76**	**327**	P		Pg		22 59 50.5	+0.4
RATU				S		Sg		23 00 01.1	+1.1
KUA	**Kurravaara**	**0.78**	**351**	P		Pg		22 59 50.1	-0.4
KUA				S		Sg		23 00 01.1	+0.5
KUA	**Kurravaara**	**0.78**	**351**	P		Pg		22 59 50.9	+0.4
SALU	**Saltoluokta**	**0.86**	**284**	P		Pg		22 59 51.8	-0.3
ERTU	**Ertsjaerv**	**0.87**	**136**	P		Pg		22 59 51.5	-0.7
ERTU				S		Sg		23 00 03.9	+0.4
ERTU	**Ertsjaerv**	**0.87**	**136**	P		Pg		22 59 51.9	-0.3
ERTU	**Ertsjaerv**	**0.87**	**136**	PG		Pg		22 59 51.6	-0.6
ERTU				SB		Sg		23 00 03.4	-0.1
NIKU	**Nikkaluokta**	**0.93**	**318**	P		Pg		22 59 52.9	-0.4
NIKU				S		Sg		23 00 05.6	+0.2
PAJU	**Pajala**	**0.97**	**99**	P		Pg		22 59 53.4	-0.6
PAJU	**Pajala**	**0.97**	**99**	P		Pg		22 59 54.1	+0.1
PAJU	**Pajala**	**0.97**	**99**	PB		Pg		22 59 53.8	-0.2
PAJU				SB		Sg		23 00 06.7	+0.2
LANU	**Lannavaara**	**1.00**	**30**	P		Pg		22 59 54.1	-0.5
LANU	**Lannavaara**	**1.00**	**30**	PG		Pg		22 59 54.1	-0.5
HARU	**Harads**	**1.03**	**173**	P		Pg		22 59 54.6	-0.6
HARU	**Harads**	**1.03**	**173**	P		Pg		22 59 55.6	+0.3
HEF	**Hetta**	**1.67**	**41**	*eP*		Pn		23 00 05.2	-0.8
HEF	**Hetta**	**1.67**	**41**	PG		Pn		23 00 05.8	-0.2
HEF				smax		smax		23 00 26.1	
	comp=Z,2.1nm,0.2s								
HEF				SG		Sn		23 00 27.6	-0.4
KALU	**Kalix**	**1.71**	**140**	P		Pn		23 00 06.7	+0.2
KALU	**Kalix**	**1.71**	**140**	PN		Pn		23 00 06.7	+0.2
KALU				SN		Sb		23 00 29.9	+0.1
SJUU	**Sjulsmark**	**1.73**	**167**	P		Pn		23 00 06.9	+0.2
KIF	**Kilpisjarvi**	**1.83**	**1**	*eP*		Pn		23 00 08.4	+0.4
KIF	**Kilpisjarvi**	**1.83**	**1**	PG		Pb		23 00 09.0	-0.7
KIF				smax		smax		23 00 31.5	
	comp=Z,4.0nm,0.2s								
KIF				SG		Sg		23 00 34.6	+0.5
TOF	**Tornio**	**1.83**	**126**	PG		Pn		23 00 08.8	+0.6
TOF				smax		smax		23 00 30.7	
	comp=Z,1.0nm,0.2s								
TOF				SG		Sb		23 00 32.8	-0.4
RNF	**Rovaniemi**	**2.18**	**103**	PG		Pb		23 00 14.7	-1.1
RNF				SG		Sb		23 00 43.5	+0.1
BURU	**Burvik**	**2.63**	**173**	PB		Pn		23 00 20.2	+1.1
ARA0	**ARCESS Array S**	**2.96**	**35**	PB		Pn		23 00 25.3	+1.6
ARA0				SB		Sb		23 01 05.2	-0.6
HEMU	**Hemsoen**	**4.67**	**195**	P		Pn		23 00 46.7	-0.4

MOS 11 23:00:19.7±0.9, 18.68S×175.34W, h10km, mb5.2/38, MS6.4/4, Error ellipse: s-maj=9.9km s-min=7.3km az=46.2
IDC 11 23:00:19.4±0.5, 18.75S×175.58W, h0km, mb4.7/19, mbtmp4.7/20, ML3.8/1, Error ellipse: s-maj=18.2km s-min=14.8km az=145.0
NEIC 11 23:00:21.4±1.5, 18.82S×175.46W, h16km, Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10^{17}Nm; Mrr-0.38; Mθθ-1.40; Mϕϕ1.78; Mrθ0.31; Mθϕ-0.86; Mϕr-0.28; Fault plane solution: M0 1.89000×10^{17} NP1: ϕs210.79000°, δ76.77000°, λ-1.79000°. NP2: ϕs301.20000°, δ88.26000°, λ-166.76000°. Principal axes: T 2.0509, Plg8.0000°, Azm75.0000°; N -0.3873, Plg77.0000°, Azm309.0000°; P -1.6636, Plg11.0000°, Azm167.0000°;
NEIC 11 23:00:21.4±1.5, 18.69S±0.08×175.37W±0.07, h10km±1km, mb5.3/464, Mww5.5/10 Error ellipse: s-maj=13.5km s-min=10.9km az=175.0
BJI 11 23:00:21.0, 18.14S×175.02W, h12km, mB5.3/6, mb4.9/27
NEIC 11 23:00:21.4, 18.72S×175.36W, h16km
ISC 11 23:00:20.8±0.3, 18.75S±0.06×175.39W±0.05, h10km, n750, σ1^{s}04/738, mb5.3/266, MS6.5/4, 32C-37D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
NIUE	**Niue**	**5.18**	**95**	P			**Pn**	**23 01 37.3**	**-1.2**
	comp=Z,675nm,1.0s								
NIUE	**Niue**	**5.18**	**95**				**Pn**	**23 01 37.4**	**-1.1**
AFI	**Afiamalu**	**5.93**	**36**				**Pn**	**23 01 46.5**	**-2.3**
AFI	**Afiamalu**	**5.93**	**36**	P			**Pn**	**23 01 46.5**	**-2.3**
MSVF	**Nonsavu**	**6.31**	**278**				**Pn**	**23 01 53.9**	**-0.3**
MSVF	**Nonsavu**	**6.31**	**278**	P			**Pn**	**23 01 53.9**	**-0.3**
FUNA	**Funafuti**	**11.44**	**332**				**Pn**	**23 03 04.4**	**+0.1**
RAR	**Rarotonga**	**14.89**	**102**				**Pn**	**23 03 51.0**	**-0.5**
RAR	**Rarotonga**	**14.89**	**102**	Pn			**Pn**	**23 03 49.4**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=275,slow=7.6,SNR=8.2								
RAR	**Rarotonga**	**14.89**	**102**	P			**Pn**	**23 03 51.0**	**-0.5**
MARNC	**Mare, Loyalty**	**15.81**	**257**				**Pn**	**23 04 03.0**	**-0.7**
MARNC				IAmb			IAmb	23 04 09.5	
	comp=Z,428nm,1.5s								
PINNC	**Pines Island,**	**16.51**	**254**				**Pn**	**23 04 12.3**	**-0.4**
PINNC				IAmb			IAmb	23 04 18.1	
	comp=Z,685nm,1.7s								
SANVU	**Saraoutou**	**16.96**	**278**				**Pn**	**23 04 17.9**	**-0.5**
DZM	**Mont Dzumac**	**17.35**	**256**	P			**Pn**	**23 04 21.6**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=90,slow=12,SNR=11								
	comp=Z,22nm,1.0s								
ONTNC	**Ouen Toro**	**17.37**	**255**				**Pn**	**23 04 23.0**	**-0.5**
URZ	**Urewera**	**20.51**	**197**	P			**P**	**23 04 54.5**	**-4.7**
	comp=Z,32nm,0.8s,baz=12,slow=8.5,SNR=5.5								
TOZ	**Tahuroa Road**	**20.52**	**201**				**P**	**23 04 56.5**	**-2.8**
TOZ				IAmb			IAmb	23 05 08.7	
	comp=Z,207nm,1.

comp=Z,108nm,1.1s
STKA Stephens Creek 40.77 243 P **P** **23 08 02.1 -0.2**
STKA lAmb lAmb 23 08 25.0
comp=Z,135nm,1.2s
STKA Stephens Creek 40.77 243 P **P** **23 08 01.5 -0.9**
comp=Z,9.9nm,0.8s,baz=70,slow=8.7,SNR=11
comp=Z,9.9nm,0.8s
STKA Stephens Creek 40.77 243 *i* P **P** **23 08 03.1 +0.7**
INKA Innaminka 41.11 249 P **P** **23 08 05.0 -0.2**
INKA lAmb lAmb 23 08 11.4
comp=Z,58nm,1.4s
H11N3 WAKE ISLAND Hy 41.98 335 T T 23 53 40.1
baz=155
H11N1 WAKE ISLAND Hy 41.99 335 T T 23 53 54.2
baz=155
H11N2 WAKE ISLAND Hy 42.00 335 T T 23 53 27.6
baz=155
QIS Mount Isa 42.32 260 P P 23 08 10.6 -4.7
HTT Hallett 43.22 241 P **P** **23 08 22.7 +0.3**
comp=Z,11nm,1.5s
JAY Jayapura 45.89 285 P **P** **23 08 45.7 +1.7**
GENI Genyem 46.35 285 P **P** **23 08 49.7 +2.1**
WR8 Warramunga Arr 47.15 260 P **P** **23 08 50.4 -3.4**
WR8 lAmb lAmb 23 09 03.5
comp=Z,29nm,1.3s
WB0 Warramunga Arr 47.28 260 P **P** **23 08 52.0 -2.9**
WB9 Warramunga Arr 47.28 260 P **P** **23 08 52.0 -2.8**
WB2 Warramunga Arr 47.29 260 P **P** **23 08 52.1 -2.8**
WRAB Tennant Creek 47.30 260 P **P** **23 08 52.9 -2.1**
WRAB Tennant Creek 47.30 260 *i* P **P** **23 08 56.5 +1.6**
WRAB pmax pmax
comp=Z,24nm,1.3s
WR1 Warramunga Arr 47.30 260 P **P** **23 08 54.7 -0.3**
WRA Warramunga Arr 47.30 260 **P** **23 08 51.6 -3.4**
WRA Warramunga Arr 47.30 260 P **P** **23 08 52.6 -2.4**
comp=Z,5.4nm,1.1s,baz=97,slow=7.9,SNR=19
comp=Z,5.4nm,1.1s
AS31 Alice Springs 47.33 255 P **P** **23 08 53.0 -2.2**
ASAR Alice Springs 47.33 255 P **P** **23 08 52.5 -2.8**
ASAR Alice Springs 47.33 255 P **P** **23 08 53.7 -1.5**
comp=Z,8.1nm,0.8s,baz=84,slow=8.5,SNR=38
comp=Z,8.1nm,0.8s
KDU Kakadu 50.41 269 P **P** **23 09 16.4 -2.5**
FORT Forrest 52.25 245 P **P** **23 09 32.2 -0.4**
WRKA Warakurna 52.32 252 P **P** **23 09 31.5 -1.8**
comp=Z,30nm,1.9s
SAUI Saumlaki 52.78 274 P **P** **23 09 34.2 -2.4**
KNRA Kununurra 53.26 264 P **P** **23 09 37.8 -2.3**
KNRA Kununurra 53.26 264 P **P** **23 09 39.8 -0.3**
FAKI Fak Fak 53.55 281 P **P** **23 09 40.6 -1.7**
FAKI lAmb lAmb 23 09 46.4
comp=Z,64nm,1.5s
FAKI Fak Fak 53.55 281 P **P** **23 09 45.6 +3.3**
comp=Z,612nmcomp=Z,27nm,1.6s
BNDI Bandanaira 55.19 278 P **P** **23 09 59.0 +4.7**
SWI Sorong 55.22 282 P **P** **23 09 54.0 -0.5**
comp=Z,2µmcomp=Z,2µmcomp=Z,32nm,1.1s
FITZ Fitzroy Crossi 55.72 261 P **P** **23 09 56.8 -1.3**
AAI Ambon 57.08 278 P P 23 10 16.9 +9.1
NLAI Namlea 58.26 278 P **P** **23 10 17.4 +1.3**
comp=Z,1µmcomp=Z,49nm,1.7s
SOEI Soe 58.94 270 P **P** **23 10 20.7 -0.3**
SOEI Soe 58.94 270 P **P** **23 10 21.4 +0.4**
TNTI Ternate 59.44 282 P **P** **23 10 23.6 -0.7**
TNTI Ternate 59.44 282 P **P** **23 10 26.4 +2.1**
comp=Z,40nm,1.7s
SANI Sanana 59.70 279 P **P** **23 10 25.0 -1.2**
comp=Z,28nm,1.4s
SBA Scott Base 59.79 184 P **P** **23 10 26.9 +1.2**
SBA lAmb lAmb 23 11 27.6
comp=Z,52nm,1.9s
SBA Scott Base 59.79 184 P **P** **23 10 26.9 +1.2**
SBA pmax pmax
comp=Z,52nm,1.9s
VNDA Vanda 59.88 186 P **P** **23 10 26.7 +0.4**
VNDA lAmb lAmb 23 10 57.1
comp=Z,34nm,1.8s
VNDA Vanda 59.88 186 P **P** **23 10 26.7 +0.4**
comp=Z,1.4nm,0.9s,baz=13,slow=9.6,SNR=3.6
comp=Z,1.4nm,0.9s
VNDA Vanda 59.88 186 P **P** **23 10 26.7 +0.4**
VNDA pmax pmax
comp=Z,34nm,1.8s
PSAC2 Pilbara Seismi 60.42 255 P **P** **23 10 29.8 -1.2**
comp=Z,40nm,1.6s
PSAB3 Pilbara Seismi 60.46 255 P **P** **23 10 31.4 +0.1**
comp=Z,43nm,2.3s
PSA00 Pilbara Seismi 60.47 255 P **P** **23 10 29.9 -1.5**
comp=Z,36nm,1.4s
PSA00 Pilbara Seismi 60.47 255 P **P** **23 10 29.1 -2.2**
PSA00 Pilbara Seismi 60.47 255 P **P** **23 10 29.6 -1.8**
PSA00 lAmb lAmb 23 10 36.2
comp=Z,66nm,1.8s
PSAC1 Pilbara Seismi 60.52 255 P P 23 10 27.6 -4.0
MBWA Marble Bar 60.65 256 P **P** **23 10 31.4 -1.1**
comp=Z,28nm,1.6s
MBWA Marble Bar 60.65 256 P **P** **23 10 31.3 -1.3**
KLBR Kellerberrin 61.03 244 P **P** **23 10 33.3 -1.7**
comp=Z,48nm,0.8s
MMRI Maumere 61.17 270 P **P** **23 10 34.7 -1.5**
EDFI Ende, Flores 61.66 270 P **P** **23 10 38.2 -1.4**
comp=Z,37nm,1.4s
BBSI Bau Bau 61.79 274 P P 23 10 47.5 +7.1
LUWI Luwuk 63.07 279 P **P** **23 10 48.5 -0.4**
LUWI Luwuk 63.07 279 P **P** **23 10 51.2 +2.3**
comp=Z,2µmcomp=Z,84nm,1.4s
APSI Ampana 64.17 278 P **P** **23 10 59.6 +3.4**
PLAI Plampang 65.35 269 P **P** **23 11 04.4 +0.5**
comp=Z,1µmcomp=Z,79nm,2.2s
TOLI2 Tolitoli 65.69 280 P **P** **23 11 05.2 -0.9**
TWSI Taliwang, Sumb 66.22 269 P **P** **23 11 10.1 +0.6**
comp=Z,81nm,1.3s
MPSI Mapaga 66.24 279 P **P** **23 11 10.6 +1.0**
comp=Z,17nm,1.0s
CASY Casey 66.59 205 P **P** **23 11 11.4 +0.4**
CASY lAmb lAmb 23 11 16.7
comp=Z,23nm,1.1s
JAGI Jajag, Banyuwa 68.88 268 P **P** **23 11 25.2 -1.2**
JAGI Jajag, Banyuwa 68.88 268 P **P** **23 11 29.7 +3.3**
MYLDM Lahad Datu 69.29 283 P **P** **23 11 27.6 -1.3**
MYLDM lAmb lAmb 23 11 55.2
comp=Z,24nm,1.1s
BBKI Banjar Baru 69.74 273 P **P** **23 11 36.5 +4.8**
MJAR Matsushiro Arr 70.31 322 P **P** **23 11 33.6 -1.1**
comp=Z,2.1nm,0.2s,baz=159,slow=6.1,SNR=6.4
comp=Z,2.1nm,0.2s
QSPA South Pole Qui 71.32 180 P **P** **23 11 43.5 +2.9**
QSPA South Pole Qui 71.32 180 P **P** **23 11 41.7 +1.1**
comp=Z,9.1nm,1.0s,baz=25,slow=3.1,SNR=15
comp=Z,9.1nm,1.0s
H06E1 SOCORRO T-PHAS 73.45 63 T T 00 32 26.1
SAO San Andreas Ge 75.08 42 P **P** **23 12 02.9 -0.1**
SAO San Andreas Ge 75.08 42 P **P** **23 12 02.9 -0.1**
SAO pmax pmax
comp=Z,21nm,1.1s
PMPB Monarch Peak 75.16 43 P **P** **23 12 00.8 -2.8**
PMPB lAmb lAmb 23 12 06.9
comp=Z,84nm,1.5s
PKD Bear Valley Ra 75.17 43 P **P** **23 12 02.9 -0.7**
BBGB Big Mountain B 75.22 43 P **P** **23 12 03.2 -0.8**
BBGB lAmb lAmb 23 12 07.7
comp=Z,58nm,1.3s
PETK Petropavlovsk- 75.25 344 P **P** **23 12 03.4 -0.3**
comp=Z,4.7nm,0.8s,baz=126,slow=7.5,SNR=5.2
comp=Z,4.7nm,0.8s
MHC Mount Hamilton 75.31 42 P **P** **23 12 04.4 -0.1**
MHC lAmb lAmb 23 12 07.7
comp=Z,32nm,1.2s
MHC Mount Hamilton 75.31 42 P **P** **23 12 04.4 -0.1**
MHC pmax pmax
comp=Z,32nm,1.2s
YSS Yuzhno-Sakhali 75.47 332 *e*P **P** **23 12 06.2 +1.1**
YSS pmax pmax
comp=Z,20nm,1.1s
GDXM Geysers 75.50 40 P **P** **23 12 05.6 +0.1**
GDXM lAmb lAmb 23 12 47.4
comp=Z,43nm,1.9s
OSI Osito Audit: C 75.59 45 P **P** **23 12 07.3 +1.2**
OSI lAmb lAmb 23 14 38.4
comp=Z,20nm,0.6s
KSM Kuching 75.63 277 P **P** **23 12 05.9 -0.9**
KSM lAmb lAmb 23 12 11.9
comp=Z,22nm,1.0s
PASC Pasadena Art C 75.70 46 P **P** **23 12 07.8 +1.1**
KMPM Mount Pierce 75.74 38 P **P** **23 12 08.1 +1.2**
KMPM lAmb lAmb 23 12 10.1
comp=Z,34nm,1.1s
MNRC McLaughlin Min 75.76 40 P **P** **23 12 06.4 -0.6**
MNRC lAmb lAmb 23 12 10.3
comp=Z,38nm,1.1s
MWC Mount Wilson 75.82 46 P **P** **23 12 06.0 -1.6**
MWC lAmb lAmb 23 12 10.2
comp=Z,27nm,1.4s
MWC Mount Wilson 75.82 46 P **P** **23 12 06.0 -1.6**
MWC pmax pmax
comp=Z,27nm,1.4s
VTX Valle De La Tr 75.85 50 P **P** **23 12 04.9 -2.8**
KMRM Mail Ridge 75.85 38 P **P** **23 12 05.8 -1.8**
BAR Barrett 75.92 48 P **P** **23 12 06.4 -1.6**
BAR lAmb lAmb 23 12 11.0
comp=Z,43nm,2.0s
ELS Elsinore Mount 75.93 47 P **P** **23 12 05.6 -2.5**
VES Vestal, Richgr 76.06 44 P **P** **23 12 08.7 0.0**
ESJX Sierra Juarez 76.06 49 P **P** **23 12 08.5 -0.6**
TPO Tropico Hills 76.08 45 P **P** **23 12 09.1 +0.2**
TPO lAmb lAmb 23 12 11.9
comp=Z,44nm,1.3s
BFSC Mount Baldy Ra 76.10 46 P **P** **23 12 07.6 -1.6**
KHMM Horse Mountain 76.26 38 P **P** **23 12 09.3 -0.7**
KHMM lAmb lAmb 23 12 12.5
comp=Z,42nm,1.5s
ISA Isabella, Lake 76.36 45 P **P** **23 12 10.8 +0.3**
ISA lAmb lAmb 23 12 13.6
comp=Z,32nm,1.2s
ISA Isabella, Lake 76.36 45 P **P** **23 12 10.8 +0.3**
ISA pmax pmax
comp=Z,32nm,1.3s
O02D Mt. Diablo Mer 76.37 39 P **P** **23 12 09.2 -1.3**
O02D lAmb lAmb 23 12 13.8
comp=Z,26nm,1.1s
SUTB Sutter Butte 76.38 40 P **P** **23 12 10.4 -0.1**
SUTB lAmb lAmb 23 12 15.1
comp=Z,63nm,1.7s
BORC Borrego Spring 76.42 48 P **P** **23 12 10.9 +0.1**
KHBM Hayfork Bally 76.42 38 P **P** **23 12 09.9 -1.0**
YUH Yuha Desert 76.43 48 P **P** **23 12 09.4 -1.4**
YUH lAmb lAmb 23 12 50.3
comp=Z,34nm,1.9s
DNR Dunn Ranch,Anz 76.44 47 P **P** **23 12 10.2 -0.9**
DNR lAmb lAmb 23 12 14.1
comp=Z,26nm,1.3s
SLBS Sierra La Lagu 76.50 59 P **P** **23 12 10.9 -0.7**
SLBS lAmb lAmb 23 12 15.3
comp=Z,53nm,1.6s
CMB Columbia Colle 76.52 42 P **P** **23 12 10.6 -0.7**
CMB Columbia Colle 76.52 42 P **P** **23 12 10.6 -0.7**
CMB pmax pmax
comp=Z,16nm,1.2s
PFO Pinyon Flats O 76.58 47 P **P** **23 12 11.3 -0.6**
PFO Pinyon Flats O 76.58 47 *i* P **P** **23 12 12.3 +0.4**
PFO pmax pmax
comp=Z,37nm,2.4s
PMD Palm Desert 76.66 47 P **P** **23 12 11.4 -0.7**
ORV Oroville 76.75 40 P **P** **23 12 11.4 -1.2**
ORV Oroville 76.75 40 P **P** **23 12 11.4 -1.2**
ORV pmax pmax
comp=Z,11nm,1.1s
LRMC Laurel Mtn Rad 76.78 45 P **P** **23 12 13.2 +0.2**
KSXB Camp Six Broad 76.79 37 P **P** **23 12 12.8 0.0**
KSXB lAmb lAmb 23 12 17.4
comp=Z,24nm,1.0s
N02D Trinity Center 76.92 38 P **P** **23 12 13.4 -0.1**
N02D lAmb lAmb 23 12 16.8
comp=Z,28nm,1.2s
WSHM Spangler Hills 76.98 45 P **P** **23 12 14.2 +0.2**
WSHM lAmb lAmb 23 12 19.4
comp=Z,25nm,1.4s
CCCA Chr Cany lake 77.02 45 P **P** **23 12 14.6 +0.3**
CCCA lAmb lAmb 23 12 19.7
comp=Z,52nm,1.4s
O03E Paynes Creek 77.03 39 P **P** **23 12 14.3 +0.1**
O03E lAmb lAmb 23 12 16.8
comp=Z,38nm,1.3s
CLC China Lake 77.03 45 P **P** **23 12 14.1 -0.2**
CLC lAmb lAmb 23 12 17.3
comp=Z,24nm,1.3s
CLC China Lake 77.03 45 P **P** **23 12 14.1 -0.2**
CLC pmax pmax
comp=Z,24nm,1.3s
CWC Cottonwood Cre 77.07 44 P **P** **23 12 13.9 -0.7**
M02C Callahan 77.10 38 P **P** **23 12 13.1 -1.5**
MDPB Devils Postpil 77.11 43 P **P** **23 12 14.4 -0.6**
BELC Belle Mtn. Jos 77.11 47 P **P** **23 12 14.1 -0.8**
L02F Cave Junction 77.15 37 P **P** **23 12 12.9 -1.8**
KEBM Edson Butte 77.21 36 P **P** **23 12 13.6 -1.6**
KEBM lAmb lAmb 23 12 18.2
comp=Z,38nm,1.2s
MPMC Manual Prospec 77.24 45 P **P** **23 12 14.8 -0.8**
MPMC lAmb lAmb 23 12 18.7
comp=Z,25nm,1.2s
KSRS Korea Array 77.25 317 P **P** **23 12 15.4 +0.1**
comp=Z,3.2nm,0.8s,baz=135,slow=5.4,SNR=7.2
comp=Z,3.2nm,0.8s
KSAR Wonju Array Be 77.27 317 P **P** **23 12 15.1 -0.4**
KSAR Wonju Array Be 77.27 317 P **P** **23 12 15.1 -0.4**
GSC Goldstone, Bar 77.28 46 P **P** **23 12 14.6 -1.1**
GSC Goldstone, Bar 77.28 46 P **P** **23 12 14.6 -1.1**
GSC pmax pmax
comp=Z,22nm,1.3s
BC3 Big Chuckawall 77.31 48 P **P** **23 12 14.7 -1.2**
BC3 lAmb lAmb 23 12 21.7
comp=Z,37nm,1.9s
KS19 Wonju Array Si 77.31 317 P **P** **23 12 15.4 -0.4**
KS19 lAmb lAmb 23 12 25.3
comp=Z,49nm,1.4s
TIN Tinemaha, Big 77.32 44 P **P** **23 12 15.0 -1.0**
TIN Tinemaha, Big 77.32 44 P **P** **23 12 15.0 -1.0**
TIN pmax pmax
comp=Z,72nm,0.3s
WAKR Walker 77.40 42 P **P** **23 12 16.1 -0.3**
WAKR lAmb lAmb 23 12 19.5
comp=Z,21nm,1.2s
YBH Yreka Blue Hor 77.40 38 P **P** **23 12 15.4 -0.8**
YBH lAmb lAmb 23 12 19.3
comp=Z,19nm,1.1s
YBH Yreka Blue Hor 77.40 38 P **P** **23 12 15.4 -0.8**
YBH pmax pmax
comp=Z,19nm,1.1s
M03C McCloud 77.45 38 P **P** **23 12 15.3 -1.3**
M03C lAmb lAmb 23 12 19.3
comp=Z,49nm,1.3s
MPK Martis Peak 77.50 41 P **P** **23 12 16.8 -0.3**
MPK lAmb lAmb 23 12 20.0
comp=Z,43nm,1.2s
HATC Hat Creek Radi 77.56 39 P **P** **23 12 15.9 -1.3**
HATC lAmb lAmb 23 12 20.1
comp=Z,42nm,1.2s
QSM Queen of Sheba 77.61 45 P **P** **23 12 17.3 -0.1**
QSM lAmb lAmb 23 12 20.3
comp=Z,33nm,1.3s
PIX Pinacate 77.63 50 P **P** **23 12 16.8 -0.9**
BEKR Beckworth 77.64 40 P **P** **23 12 16.6 -1.1**
PNTR Pine Nut 77.64 41 P **P** **23 12 17.4 -0.5**
PNTR lAmb lAmb 23 12 20.7
comp=Z,31nm,1.2s
DSP Deep Springs 77.67 43 P **P** **23 12 16.8 -0.9**
DSP lAmb lAmb 23 12 21.0
comp=Z,28nm,1.2s
IRM Iron Mountain 77.79 47 P **P** **23 12 18.5 -0.1**
LHV Little Huntoon 77.84 42 P **P** **23 12 18.7 +0.1**
LHV lAmb lAmb 23 12 22.0
comp=Z,34nm,1.2s
GRAC Grapevine Rang 77.86 44 P **P** **23 12 18.8 0.0**
GRAC lAmb lAmb 23 12 22.2
comp=Z,46nm,1.2s
GWY Greenwater Val 77.86 45 P **P** **23 12 17.6 -1.4**
DANC Danby, Needles 77.89 47 P **P** **23 12 19.0 0.0**
DANC lAmb lAmb 23 12 22.2
comp=Z,34nm,1.3s
FURC Furnace Creek, 77.89 45 P **P** **23 12 19.9 +0.9**
FURC lAmb lAmb 23 12 22.0
comp=Z,30nm,1.3s
L04D Klamath Falls 77.94 37 P **P** **23 12 19.3 -0.1**
L04D lAmb lAmb 23 12 22.1
comp=Z,23nm,1.2s
SHOC Shoshone, Teco 77.97 45 P **P** **23 12 20.6 +1.1**
SHOC lAmb lAmb 23 12 22.9
comp=Z,16nm,0.7s
BLYC Blythe 78.01 48 P **P** **23 12 20.7 +0.9**
113A Mohawk Valley, 78.03 49 P **P** **23 12 20.0 +0.1**
RYN Ryan 78.05 42 P **P** **23 12 19.6 -0.4**
RYN lAmb lAmb 23 12 22.9
comp=Z,26nm,1.4s
NVAR Mina Array Bea 78.07 42 P **P** **23 12 20.7 +0.5**
NVAR Mina Array Bea 78.07 42 P **P** **23 12 21.6 +1.4**
comp=Z,14nm,1.1s,baz=226,slow=8.7,SNR=45
comp=Z,14nm,1.1s
GMN Gold Mountain 78.10 44 P **P** **23 12 21.0 +0.6**
PAHR Pah Rah Range 78.14 41 P **P** **23 12 21.0 +0.4**
BBOR Butler Butte 78.15 37 P **P** **23 12 19.2 -1.3**
NV11 Mina Array Sit 78.17 42 P **P** **23 12 20.8 +0.1**
NV11 lAmb lAmb 23 12 23.5
comp=Z,30nm,1.2s
MTPC Mountain Pass 78.23 46 P **P** **23 12 21.9 +0.7**
MTPC lAmb lAmb 23 12 24.3
comp=Z,37nm,1.5s
WCT Wildcat Mounta 78.23 45 P **P** **23 12 21.2 +0.2**
HSIG 78.23 54 P **P** **23 12 21.1 0.0**
I03D Drain, OR 78.30 36 P **P** **23 12 21.5 +0.5**
214A Organ Pipe Nat 78.30 50 P **P** **23 12 22.3 +0.9**
SSE Sheshan 78.49 308 P **P** **23 12 22.0 -0.4**
SSE S S **23 22 19.1 +0.2**
SSE pmax pmax
comp=Z,9.0nm,0.7s
SSE pmax pmax
comp=Z,79nm,3.4s
TPNV Topopah Spring 78.57 45 P **P** **23 12 23.3 +0.4**
TPNV Topopah Spring 78.57 45 P **P** **23 12 23.3 +0.4**
TPNV pmax pmax
comp=Z,20nm,1.2s
J04A Umpqua Nationa 78.70 37 P **P** **23 12 24.6 +1.0**
J04A lAmb lAmb 23 12 26.4
comp=Z,43nm,1.2s
BUCK Buck Mountain 78.82 36 P **P** **23 12 23.9 -0.2**
V12A Nelson 78.84 46 P **P** **23 12 25.0 +0.6**
I04A Tendick Farm, 78.88 36 P **P** **23 12 23.8 -0.6**
SHPR Sheep Range 79.05 45 P **P** **23 12 25.8 +0.1**
K05A Summer Lake 79.07 38 P **P** **23 12 25.7 0.0**
K05A lAmb lAmb 23 12 28.6
comp=Z,34nm,1.1s
H04D Lebanon 79.16 35 P **P** **23 12 25.2 -0.6**
W13A Hualapai Mount 79.17 47 P **P** **23 12 25.4 -1.0**
Y14A Wickenburg 79.18 49 P **P** **23 12 25.6 -0.6**
J05D Fort Rock, OR 79.22 37 P **P** **23 12 26.9 +0.5**
J05D lAmb lAmb 23 12 29.3
comp=Z,24nm,1.0s
S11A Rachel 79.29 44 P **P** **23 12 26.7 -0.1**
S11A lAmb lAmb 23 12 32.0
comp=Z,31nm,1.4s
G03D McMinnville, O 79.32 35 P **P** **23 12 25.8 -0.9**
G03D lAmb lAmb 23 12 29.4
comp=Z,31nm,1.1s
WIFE Three Sisters- 79.38 36 P **P** **23 12 26.9 -0.4**
Q19K Cape Douglas, 79.43 11 P **P** **23 12 26.9 -0.1**
LWLI Liwa 79.47 268 P **P** **23 12 30.1 +1.7**
H04A Detroit Lake 79.57 36 P **P** **23 12 27.4 -0.7**
P18K Big Mountain, 79.59 10 P **P** **23 12 27.4 -0.5**
P18K lAmb lAmb 23 12 43.0
comp=Z,35nm,1.1s
PRN Pahroc Range 79.62 45 P **P** **23 12 28.1 -0.6**
PRN lAmb lAmb 23 12 32.1
comp=Z,31nm,1.2s
PINE Pine Mountain 79.70 37 P **P** **23 12 29.8 +0.7**
PINE lAmb lAmb 23 12 32.0
comp=Z,31nm,1.1s
R11B Troy Canyon, C 79.78 44 P **P** **23 12 28.6 -1.0**
I05D Terrebonne, OR 79.82 36 P **P** **23 12 29.8 +0.3**
TUC Tucson 79.97 51 P **P** **23 12 30.2 -0.4**
TUC Tucson 79.97 51 P **P** **23 12 30.2 -0.4**
TUC pmax pmax
comp=Z,12nm,1.1s
F04D Rainier, OR 80.02 34 P **P** **23 12 29.2 -1.3**
F04D lAmb lAmb 23 12 33.3
comp=Z,68nm,1.4s
E03A Lebam 80.03 33 P **P** **23 12 30.1 -0.4**
E03A lAmb lAmb 23 12 33.2
comp=Z,28nm,1.0s
WVOR Wild Horse Val 80.22 39 P **P** **23 12 31.6 -0.2**
WVOR Wild Horse Val 80.22 39 P **P** **23 12 31.6 -0.2**
WVOR pmax pmax
comp=Z,18nm,1.1s
HOOD Mount Hood Mea 80.27 35 P **P** **23 12 32.5 +0.4**
G05A Wamic 80.40 35 P **P** **23 12 32.1 -0.5**
NLWA Neilton Lookou 80.43 33 P **P** **23 12 32.6 -0.1**
O19K Port Alsworth 80.50 10 P **P** **23 12 32.7 0.0**
O19K lAmb lAmb 23 12 48.6
comp=Z,48nm,1.3s
ILSW Iliamna Southw 80.51 11 P **P** **23 12 32.5 -0.5**
ILSW lAmb lAmb 23 12 48.0
comp=Z,43nm,1.1s
X16A Lo Mia Camp, P 80.54 49 P **P** **23 12 34.2 +0.4**
M16K Timber Creek 80.58 8 P **P** **23 12 33.9 +0.7**
M16K lAmb lAmb 23 12 51.2
comp=Z,81nm,1.4s
LCMT Little Creek M 80.62 46 P **P** **23 12 33.1 -1.0**
319A Douglas 80.63 52 P **P** **23 12 34.6 +0.3**
NJ2 Nanjing 80.69 308 *e*P **P** **23 12 35.3 +0.9**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
I07A Izee 80.70 37 P **P** **23 12 33.4 -1.0**
G06A Carlson, Or 80.77 36 P **P** **23 12 34.7 +0.1**
CCUT Cedar City 80.83 45 P **P** **23 12 35.2 -0.2**
KNB Kanab 80.91 46 P **P** **23 12 34.5 -1.2**
KNB Kanab 80.91 46 P **P** **23 12 34.5 -1.2**
KNB pmax pmax
comp=Z,20nm,1.2s
SPR3 Spring Creek 3 80.96 44 P **P** **23 12 35.0 -1.1**
BELA Belgrano 2 80.97 172 P **P** **23 12 33.7 -1.5**
U15A North Rim 80.97 47 P **P** **23 12 36.6 +0.5**
U15A lAmb lAmb 23 12 39.7
comp=Z,24nm,1.2s
PSUT Pine Spring 81.02 44 P **P** **23 12 35.9 -0.4**
SZCU Shurtz Canyon 81.04 45 P **P** **23 12 35.9 -0.5**
GNW Green Mountain 81.08 33 P **P** **23 12 35.5 -0.6**
LON Longmire 81.09 34 P **P** **23 12 35.9 -0.4**
LON Longmire 81.09 34 P **P** **23 12 35.9 -0.4**
LON pmax pmax
comp=Z,9.0nm,1.2s
WUAZ Wupatki 81.14 48 P **P** **23 12 35.8 -1.2**
L16K Owhat River 81.18 8 P **P** **23 12 36.6 +0.3**
L16K lAmb lAmb 23 12 48.1
comp=Z,30nm,1.2s
CLRS Cowichan Lake 81.24 31 P **P** **23 12 36.7 -0.3**
CLRS lAmb lAmb 23 12 49.0
comp=Z,24nm,1.2s
D05A Enumclaw 81.27 34 P **P** **23 12 36.5 -0.6**
D05A lAmb lAmb 23 12 40.2
comp=Z,33nm,1.2s
ELK Elko 81.33 42 P **P** **23 12 37.6 -0.4**
ELK Elko 81.33 42 P **P** **23 12 37.6 -0.4**
ELK pmax pmax
comp=Z,11nm,1.2s
DUN6 Lazy B Ranch 81.34 51 P **P** **23 12 36.3 -1.8**
DUN6 lAmb lAmb 23 12 41.8
comp=Z,42nm,0.9s
HPIG 81.42 58 P **P** **23 12 37.7 -1.0**
PGC Sidney 81.47 32 P **P** **23 12 37.2 -0.9**
PKCU Pink Cliffs 81.48 46 P **P** **23 12 38.9 0.0**
PKCU lAmb lAmb 23 12 45.5
comp=Z,54nm,1.3s
K15K Wolf Creek Mou 81.51 6 P **P** **23 12 39.4 +1.4**
K15K lAmb lAmb 23 12 54.5
comp=Z,41nm,1.0s
F07A Phinny Hill Vi 81.57 36 P **P** **23 12 38.6 -0.2**
X18A Snowflake 81.67 49 P **P** **23 12 39.4 -0.4**
G08A Pilot Rock 81.74 36 P **P** **23 12 39.7 -0.1**
G08A lAmb lAmb 23 12 42.4
comp=Z,23nm,1.0s
MXC Moxie City 81.79 35 P **P** **23 12 38.9 -1.1**
MTPU Mount Pierson 81.88 45 P **P** **23 12 40.7 -0.3**
MTPU lAmb lAmb 23 12 45.1
comp=Z,25nm,1.3s
A04D Lummi Island 81.89 32 P **P** **23 12 39.4 -0.9**
A04D lAmb lAmb 23 12 43.6
comp=Z,38nm,1.0s
TCRU Three Creeks R 82.00 45 P **P** **23 12 40.8 -0.7**
TCRU lAmb lAmb 23 13 06.5
comp=Z,12nm,0.4s
LTY Liberty 82.01 34 P **P** **23 12 41.1 0.0**
E07A Sunnyside 82.02 35 P **P** **23 12 40.5 -0.7**
E07A lAmb lAmb 23 12 43.8
comp=Z,21nm,1.0s

L18K Granite Mounta 82.05 9 P P 23 12 41.0 +0.1
HAWA Hanford 82.09 35 P P 23 12 41.3 -0.2
HAWA IAmb IAmb 23 12 44.2
comp=Z,27nm,1.2s
W18A Petrified Fore 82.11 49 P P 23 12 41.9 -0.2
W18A IAmb IAmb 23 12 48.1
comp=Z,32nm,1.7s
DL2 Dalian 82.18 315 P P 23 12 44.1 +2.0
DL2 pmax pmax
comp=Z,29nm,1.3s
ZAIG Zacatecas 82.22 63 P P 23 12 41.9 -1.2
WAH2 Wahluke Slope 82.30 35 P P 23 12 41.7 -0.9
WAH2 IAmb IAmb 23 12 59.3
comp=Z,43nm,1.7s
121A Cookes Peak, D 82.30 52 P P 23 12 41.7 -1.4
E08A Dider Farm, El 82.41 35 P P 23 12 43.7 +0.5
E08A IAmb IAmb 23 12 45.8
comp=Z,38nm,1.5s
BMO Blue Mountains 82.42 38 P P 23 12 43.6 +0.2
BMO Blue Mountains 82.42 38 P P 23 12 43.6 +0.2
BMO pmax pmax
comp=Z,17nm,1.2s
BNX BinXian 82.45 324 P P 23 12 43.6 +0.2
BNX pmax pmax
comp=Z,15nm,2.0s
CN2 Changchun 82.45 321 eP P 23 12 44.7 +1.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
MFID Camas Ranch 82.47 39 P P 23 12 43.4 -0.3
LNOR Lincton Mounta 82.47 36 P P 23 12 43.1 -0.4
J16K Anvik River 82.58 7 P P 23 12 44.9 +1.2
J16K IAmb IAmb 23 12 48.9
comp=Z,70nm,1.6s
DUG Dugway, Tooele 82.59 43 P P 23 12 43.6 -0.8
DUG Dugway, Tooele 82.59 43 P P 23 12 43.7 -0.8
DUG pmax pmax
comp=Z,14nm,1.4s
PMR Palmer 82.77 12 P P 23 12 44.7 +0.1
PMR IAmb IAmb 23 12 46.2
comp=Z,36nm,1.4s
PMR Palmer 82.77 12 P P 23 12 44.7 +0.1
PMR pmax pmax
comp=Z,36nm,1.4s
MA2 Magadan 82.78 343 iP P 23 12 45.7 +0.9
MA2 pmax pmax
comp=Z,12nm,1.1s
HMU Henry Mountain 82.81 46 P P 23 12 44.6 -1.2
D08A Wollman Farm, 82.83 35 P P 23 12 46.2 +0.9
D08A IAmb IAmb 23 12 48.0
comp=Z,20nm,1.1s
BGU Big Grassy Mou 82.84 43 P P 23 12 45.3 -0.4
J17K VABM Dome 82.86 7 P P 23 12 45.0 -0.2
E09A Wood Farm, Sta 82.93 36 P P 23 12 45.4 -0.5
E09A IAmb IAmb 23 12 48.1
comp=Z,25nm,1.3s
Q16A Castle Valley 83.01 45 P P 23 12 46.7 -0.1
F10A Beach Ranch, E 83.13 37 P P 23 12 47.0 -0.1
F10A IAmb IAmb 23 12 49.1
comp=Z,28nm,1.0s
J18K Innoko River 83.23 8 P P 23 12 47.5 +0.5
J18K IAmb IAmb 23 15 58.3
comp=Z,45nm,1.6s
PLID Pearl Lake 83.32 38 P 23 12 48.4 +0.2
PLID IAmb IAmb 23 15 58.7
comp=Z,23nm,1.4s
SCM Sheep Creek Mo 83.36 13 P P 23 12 47.5 -0.3
SCM Sheep Creek Mo 83.36 13 P P 23 12 47.5 -0.3
SCM pmax pmax
comp=Z,129nm,2.0s
HLID Hailey 83.41 40 P 23 12 49.4 +0.7
HLID IAmb IAmb 23 12 51.6
comp=Z,22nm,1.1s
SBM South Baldy 83.42 51 P P 23 12 49.4 +0.2
HVU Hansel Valley 83.46 42 P P 23 12 49.2 +0.3
HVU IAmb IAmb 23 12 51.6
comp=Z,21nm,1.1s
HVU Hansel Valley 83.46 42 P P 23 12 49.2 +0.3
HVU pmax pmax
comp=Z,21nm,1.1s
TGL Tana Glacier 83.46 15 P P 23 12 49.1 +0.7
TGL IAmb IAmb 23 15 59.3
comp=Z,48nm,1.5s
LLLB Lillooet 83.52 31 P 23 12 48.7 -0.1
CTU Camp Tracy 83.54 43 P P 23 12 50.0 +0.5
CTU IAmb IAmb 23 12 53.5
comp=Z,18nm,1.1s
SRU San Rafael Swe 83.54 45 P P 23 12 48.9 -0.6
SRU IAmb IAmb 23 12 52.3
comp=Z,23nm,1.0s
SRU San Rafael Swe 83.54 45 P P 23 12 48.9 -0.6
SRU pmax pmax
comp=Z,23nm,1.0s
Y22A Socorro 83.56 51 P 23 12 49.6 -0.1
P17A Butcher Ranch, 83.58 45 P P 23 12 48.9 -0.7
P17A IAmb IAmb 23 12 52.9
comp=Z,21nm,1.1s
C09A Chrisman Ranch 83.63 35 P P 23 12 48.7 -0.7
C09A IAmb IAmb 23 12 51.2
comp=Z,18nm,1.2s
VHRN Van Horn 83.64 55 P 23 12 49.3 -0.8
VHRN IAmb IAmb 23 16 00.7
comp=Z,28nm,1.1s
LENM Lemitar 83.66 51 P P 23 12 50.1 -0.1
TLIG Tlapa 83.67 69 P P 23 12 49.9 -0.6
TLIG IAmb IAmb 23 12 54.3
comp=Z,36nm,1.7s
JLU Jordanelle 83.69 43 P P 23 12 48.6 -1.6
MNTX Cornudas Mount 83.73 54 P 23 12 50.4 0.0
MNTX IAmb IAmb 23 16 01.0
comp=Z,22nm,1.2s
CRNM Carthage 83.74 51 P P 23 12 51.1 +0.5
N25K Chitina, Valde 83.77 14 P P 23 12 50.6 +0.6
N25K IAmb IAmb 23 13 02.3
comp=Z,16nm,1.1s
M24K Tolsona, Glenn 83.85 13 P P 23 12 50.3 0.0
BNM Barren Site 83.91 51 P P 23 12 50.4 -1.1
TCUT Toone Canyon 83.98 43 P P 23 12 51.8 0.0
P18A Preston Nutter 83.99 45 P P 23 12 52.1 +0.2
PV05 Paradox Valley 84.00 47 P P 23 12 52.2 +0.3
PV05 IAmb IAmb 23 16 05.2
comp=Z,38nm,1.2s
MAW Mawson 84.03 199 P P 23 12 55.0 +3.7
MAW Mawson 84.03 199 P P 23 12 50.4 -0.9
comp=Z,3.8nm,0.7s,baz=140,slow=8.2,SNR=13
comp=Z,3.8nm,0.7s
TX31 Lajitas Ar. Si 84.04 56 P 23 12 52.8 +0.6
TXAR Lajitas Array 84.04 56 P P 23 12 53.3 +1.1
comp=Z,12nm,1.1s,baz=212,slow=6.8,SNR=24
comp=Z,12nm,1.1s
BSUT Blindstream Ca 84.11 44 P 23 12 52.7 +0.1
BSUT IAmb IAmb 23 16 02.2
comp=Z,23nm,1.1s
HWUT Hardware Ranch 84.14 43 P 23 12 51.5 -1.0
HWUT IAmb IAmb 23 16 05.7
comp=Z,16nm,1.2s
PV10 Paradox Valley 84.19 46 P P 23 12 51.9 -1.0
PV10 IAmb IAmb 23 16 02.3
comp=Z,42nm,1.1s
PV17 East Wray Mesa 84.19 46 P P 23 12 51.9 -1.0
PV14 Lion Creek, Pa 84.20 46 P P 23 12 51.9 -1.0
PV14 IAmb IAmb 23 16 06.9
comp=Z,32nm,1.1s
PV18 Skein Mesa, Pa 84.21 47 P 23 12 52.4 -0.6
PV20 West Nyswonger 84.22 46 P P 23 12 52.4 -0.5
KTH Kantishna Hill 84.23 11 P P 23 12 52.2 0.0
KTH IAmb IAmb 23 16 02.1
comp=Z,43nm,1.5s
PV13 Radium Mtn., P 84.23 47 P P 23 12 53.0 0.0
PV13 IAmb IAmb 23 16 02.7
comp=Z,32nm,1.3s
PV16 Nyswonger Mesa 84.24 46 P P 23 12 52.4 -0.7
PV16 IAmb IAmb 23 16 02.8
comp=Z,30nm,1.4s
PV23 Carpenter Ridg 84.24 46 P P 23 12 53.2 +0.1
TRF Thorofare Moun 84.25 11 P 23 12 52.3 -0.1
PV03 Paradox Valley 84.26 47 P P 23 12 53.5 +0.3
H17K Granite Mounta 84.26 7 P P 23 12 52.4 +0.1
H17K IAmb IAmb 23 16 03.3
comp=Z,64nm,1.8s
PV11 David Mesa, Pa 84.26 46 P P 23 12 52.9 -0.3
PV11 IAmb IAmb 23 16 03.6
comp=Z,30nm,1.2s
J20K Nowinta River 84.28 9 P 23 12 52.4 0.0
J20K IAmb IAmb 23 16 05.7
comp=Z,45nm,1.2s
PV02 Paradox Valley 84.31 47 P P 23 12 52.2 -1.3
PV02 IAmb IAmb 23 16 03.1
comp=Z,36nm,1.2s
PV12 Saucer Basin, 84.32 47 P P 23 12 53.2 -0.3
PV21 Cone Mtn., Par 84.32 46 P P 23 12 53.6 +0.1
PV21 IAmb IAmb 23 16 03.3
comp=Z,25nm,1.2s
TASM ASL Pad, Albuq 84.39 50 P P 23 12 54.5 +0.6
TASM IAmb IAmb 23 16 04.1
comp=Z,20nm,1.2s
TASM ASL Pad, Albuq 84.39 50 P P 23 12 54.3 +0.3
TASM IAmb IAmb 23 16 04.1
comp=Z,16nm,1.1s
TASM ASL Pad, Albuq 84.39 50 P P 23 12 53.9 -0.1
TASM IAmb IAmb 23 16 08.4
comp=Z,30nm,1.3s
ABQ Albuquerque 84.39 50 P P 23 12 54.0 +0.1
ABQ IAmb IAmb 23 16 04.1
comp=Z,18nm,1.1s
PV01 Paradox Valley 84.39 47 P P 23 12 54.1 +0.2
PV01 IAmb IAmb 23 12 56.6
comp=Z,15nm,1.1s
ANMO Albuquerque 84.39 50 P 23 12 54.0 +0.1
ANMO IAmb IAmb 23 16 04.1
comp=Z,19nm,1.1s
ANMO Albuquerque 84.39 50 iP P 23 12 54.3 +0.4
ANMO pmax pmax
comp=Z,10.0nm,1.0s
BCYI Bear Canyon 84.42 40 P P 23 12 54.3 +0.4
BCYI IAmb IAmb 23 16 07.9
comp=Z,25nm,1.3s
PV22 Blue Mesa, Par 84.44 46 P 23 12 54.0 -0.1
PV22 IAmb IAmb 23 16 08.1
comp=Z,20nm,1.2s
DHY Denali Highway 84.47 12 P P 23 12 52.6 -0.9
DHY IAmb IAmb 23 16 04.1
comp=Z,49nm,1.5s
RND Reindeer 84.47 12 P 23 12 53.8 +0.3
RND Reindeer 84.47 12 P P 23 12 53.8 +0.3
RND pmax pmax
comp=Z,94nm,1.3s
PV07 Paradox Valley 84.49 46 P P 23 12 54.0 -0.4
PV07 IAmb IAmb 23 16 08.3
comp=Z,28nm,1.4s
SKAG Skagway 84.51 19 P P 23 12 54.1 +0.5
ALPN Alpine 84.51 56 P P 23 12 54.4 -0.1
NEW Newport 84.53 35 P 23 12 54.3 +0.2
NEW IAmb IAmb 23 16 08.7
comp=Z,13nm,1.0s
NEW Newport 84.53 35 P P 23 12 54.3 +0.2
NEW pmax pmax
comp=Z,13nm,1.0s
PV15 Paradox Valley 84.55 47 P P 23 12 54.8 +0.1
PV15 IAmb IAmb 23 16 09.6
comp=Z,19nm,1.0s
H18K Honhosa River 84.64 7 P P 23 12 54.2 0.0
H18K IAmb IAmb 23 16 07.3
comp=Z,40nm,1.3s
S34M Telegraph Cree 84.71 22 P 23 12 55.9 +1.2
MCK McKinley 84.75 11 P 23 12 54.8 -0.1
MCK McKinley 84.75 11 P P 23 12 54.8 -0.1
MCK pmax pmax
comp=Z,80nm,1.3s
PECS Pecos 84.75 55 P P 23 12 55.3 -0.4
PECS IAmb IAmb 23 12 59.1
comp=Z,54nm,1.7s
PAX Paxson 84.77 13 P P 23 12 54.2 -0.8
PAX IAmb IAmb 23 16 04.6
comp=Z,38nm,1.6s
PAX Paxson 84.77 13 P P 23 12 54.2 -0.8
PAX pmax pmax
comp=Z,38nm,1.6s
AY03 Cochrane 84.79 138 P P 23 12 55.2 -0.3
I20K Naaghedeneel 84.81 9 P P 23 12 54.4 -0.6
M26K Nabesna, AK 84.84 15 P P 23 12 55.9 +0.6
RDMU Red Mountain 84.91 44 P P 23 12 56.5 0.0
RDMU IAmb IAmb 23 16 11.6
comp=Z,30nm,1.1s
H03S2 Juan Fernandez 84.94 124 T T 00 46 51.5
baz=249,slow=75,SNR=33
H03S1 Juan Fernandez 84.95 124 T T 00 46 52.5
baz=249,slow=75,SNR=33
H03S3 Juan Fernandez 84.95 124 T T 00 46 51.3
baz=249,slow=75,SNR=29
AHID Auburn Hatcher 85.03 42 P P 23 12 56.5 -0.4
MCMT McKenzie Canyo 85.04 39 P P 23 12 57.5 +0.5
H03N2 Juan Fernandez 85.06 123 T T 00 46 52.5
baz=249,slow=71,SNR=8.0
H03N3 Juan Fernandez 85.06 124 T T 00 46 49.5
baz=249,slow=71,SNR=5.1
M27K Edge Creek, AK 85.07 15 P P 23 12 57.3 +0.7
H03N1 Juan Fernandez 85.08 124 T T 00 46 53.6
baz=249,slow=71,SNR=5.9
Q32M Nakina River 85.11 21 P P 23 12 57.2 +0.3
Q32M IAmb IAmb 23 16 10.8
comp=Z,44nm,1.4s
P32M Atlin 85.12 20 P P 23 12 57.0 +0.2
HEH HeiHe 85.14 327 eP P 23 12 59.4 +2.3
H19K Roundabout Mou 85.24 8 P P 23 12 57.8 +0.6
CLN7 Carlsbad 7 85.25 54 P P 23 12 59.3 +1.1
SEY Seymchan 85.26 346 iP P 23 12 58.1 +0.8
SEY pmax pmax
comp=Z,14nm,1.1s
L26K Log Cabin Wild 85.30 14 P P 23 12 58.3 +0.7
L26K IAmb IAmb 23 16 12.3
comp=Z,20nm,1.0s
O30N Mendenhall 85.32 18 P P 23 12 58.3 +0.5
G18K Tagagawik 85.33 7 P 23 12 58.8 +1.1
G18K IAmb IAmb 23 16 10.6
comp=Z,36nm,1.2s
IPM Ipoh 85.37 276 P P 23 13 00.1 +1.0
S22A 4UR Ranch, Cre 85.42 48 P 23 12 59.9 +0.7
S22A IAmb IAmb 23 16 16.7
comp=Z,18nm,1.0s
K24K Donnelly Dome 85.44 13 P P 23 12 58.7 +0.3
K24K IAmb IAmb 23 16 12.9
comp=Z,39nm,1.0s
CPRX Cap Rock 85.47 53 P 23 13 00.7 +1.3
CPRX pP 23 13 01.4 -0.5
DLMT Dillon 85.47 39 P P 23 12 59.3 +0.3
MSO Missoula 85.48 37 P 23 12 58.8 -0.2
MSO IAmb IAmb 23 16 14.4
comp=Z,32nm,1.3s
TPAW Teton Pass 85.50 41 P 23 12 59.8 +0.4
TPAW IAmb IAmb 23 16 15.6
comp=Z,37nm,1.4s
NEA2 Nenana 85.51 11 P P 23 12 58.6 0.0
NEA2 IAmb IAmb 23 16 12.1
comp=Z,32nm,1.2s
SAND Sanderson 85.52 56 P 23 12 59.7 +0.2
FXWY Fox Creek 85.53 41 P P 23 12 59.3 -0.2
BPMT Black Pine Rid 85.55 38 P P 23 12 59.4 -0.1
I21K Tanana 85.56 10 P P 23 12 59.4 +0.6
I21K IAmb IAmb 23 16 13.6
comp=Z,31nm,1.1s
O20A White River Ci 85.58 45 P 23 13 00.3 +0.5
O20A IAmb IAmb 23 16 15.2
comp=Z,22nm,1.1s
MNHN Monahans 85.60 55 P 23 13 00.8 +0.9
MNHN IAmb IAmb 23 16 09.9
comp=Z,39nm,1.1s
SNOW Snow King Moun 85.61 41 P P 23 13 00.7 +0.8
MLY Manley 85.62 10 P 23 12 58.2 -1.0
MLY IAmb IAmb 23 16 12.9
comp=Z,26nm,1.0s
DOT Dot Lake 85.68 13 P P 23 12 59.4 -0.1
DOT IAmb IAmb 23 16 13.9
comp=Z,27nm,1.0s
L27K Beaver Creek, 85.68 15 P P 23 13 00.4 +0.9
BCAR Beaver Creek A 85.70 15 P 23 12 60.0 +0.4
HDA Harding Lake 85.75 12 P P 23 13 00.2 +0.4
MOOW Moose Ponds 85.76 41 P 23 13 00.7 +0.1
LOHW Long Hollow 85.78 41 P 23 13 00.9 +0.3
LOHW IAmb IAmb 23 16 16.0
comp=Z,20nm,1.2s
CCB Clear Creek Bu 85.80 12 P 23 12 59.9 -0.1
JTMT Jette 85.80 36 P P 23 13 00.4 -0.2
LRM Limekiln Ridge 85.81 39 P P 23 13 01.8 +1.0
H21K Melozitna Rive 85.87 9 P P 23 12 59.8 -0.6
H21K IAmb IAmb 23 16 13.9
comp=Z,46nm,1.2s
R33M Jennings River 85.88 21 P P 23 13 00.1 -0.6
P33M Teslin, Yukon 85.89 20 P P 23 12 59.9 -0.8
P33M IAmb IAmb 23 16 15.6
comp=Z,21nm,1.1s
QLMT Earthquake Lak 85.90 40 P P 23 13 02.0 +0.7
FLWY Flagg Ranch 85.96 41 P P 23 13 01.6 0.0
I23K Minto, Yukon-K 85.97 11 IAmb IAmb 23 16 17.1
comp=Z,39nm,1.2s
SCRK Sand Creek 85.98 13 P 23 13 00.9 -0.2
SCRK IAmb IAmb 23 16 15.7
comp=Z,23nm,1.0s
N31M Braeburn, Yuko 85.98 18 P P 23 13 01.3 +0.3
YPP Pitchstone Pla 85.99 41 P P 23 13 02.0 +0.2
YPP IAmb IAmb 23 16 19.5
comp=Z,25nm,1.6s
COLA College 85.99 11 P P 23 13 00.7 -0.3
COLA College 85.99 11 iP P 23 13 00.6 -0.3
COLA pmax pmax
comp=Z,24nm,0.9s
YHB Horse Butte 86.00 40 P P 23 13 02.0 +0.3
BW06 Boulder Array 86.01 42 P P 23 13 02.0 +0.1
PD31 Pinedale Array 86.01 42 P P 23 13 02.0 +0.1
PDAR Pinedale Array 86.01 42 P P 23 13 01.6 -0.3
PDAR Pinedale Array 86.01 42 P P 23 13 02.5 +0.6
comp=Z,3.1nm,0.9s,baz=211,slow=3.1,SNR=23
comp=Z,3.1nm,0.9s
M29M Somme Creek 86.01 16 P P 23 13 01.5 +0.2
M29M IAmb IAmb 23 16 16.1
comp=Z,21nm,1.1s
IMAR Indian Mountai 86.04 9 P P 23 13 01.8 +0.7
YHL Hebgen Lake 86.06 40 P 23 13 02.5 +0.3
YFT Old Faithful 86.06 40 P P 23 13 02.6 +0.5
YFT IAmb IAmb 23 16 18.9
comp=Z,28nm,1.4s
IL31 86.08 12 P P 23 13 01.1 -0.2
ILAR Eielson Array 86.08 12 P P 23 13 01.3 -0.1
comp=Z,8.5nm,1.0s,baz=220,slow=5.6,SNR=28
comp=Z,8.5nm,1.0s
ODSA Odessa 86.09 54 P P 23 13 02.4 0.0
YMR Madison River 86.09 40 P P 23 13 02.5 +0.3
OVMT Ovando 86.15 37 P P 23 13 02.4 0.0
BOZ Bozeman (W) 86.18 39 P P 23 13 02.9 +0.4
BOZ IAmb IAmb 23 16 18.9
comp=Z,58nm,1.8s
BOZ Bozeman (W) 86.18 39 P P 23 13 02.9 +0.4
BOZ pmax pmax
comp=Z,58nm,1.8s
HNS HongShan 86.21 311 ⇑P P 23 13 06.4 +3.8
YHH Holmes Hill 86.23 40 P 23 13 03.5 +0.5
J25K Salcha River, 86.25 12 P P 23 13 02.4 0.0
J25K IAmb IAmb 23 16 15.3
comp=Z,50nm,1.3s
POKR Poker Plat Res 86.29 11 P P 23 13 02.4 0.0
YNR Norris Junctio 86.29 40 P P 23 13 03.0 -0.3
YNR IAmb IAmb 23 16 21.5
comp=Z,20nm,1.2s
LKWY Lake 86.39 40 P P 23 13 04.1 +0.4
LKWY IAmb IAmb 23 16 24.0
comp=Z,25nm,1.3s
LKWY Lake 86.39 40 P P 23 13 04.1 +0.4
LKWY pmax pmax
comp=Z,25nm,1.3s
BJT Baijiatuau 86.40 314 P P 23 13 03.3 -0.3
BJT IAmb IAmb 23 16 16.7
comp=Z,36nm,1.4s
BJT Baijiatuau 86.40 314 P P 23 13 03.3 -0.3
BJT pmax pmax
comp=Z,36nm,1.4s
BJI Beijing 86.40 314 P P 23 13 04.2 +0.7
BJI pP pwP 23 13 09.0 -0.2
BJI pmax pmax
comp=Z,5.0nm,1.5s
DRIO Del Rio 86.50 57 P 23 13 04.8 +0.5
LYMT Lyon Mountain 86.51 38 P P 23 13 04.7 +0.5
J26L Joseph Creek 86.53 13 P P 23 13 04.3 +0.5
M30M Minto, Yukon 86.57 17 P 23 13 03.0 -0.9
M30M IAmb IAmb 23 16 18.6
comp=Z,26nm,1.1s
G21K Allakaket 86.58 9 P P 23 13 04.3 +0.4
G21K IAmb IAmb 23 16 17.1
comp=Z,47nm,1.4s
L29M L29M 86.65 16 P P 23 13 04.6 +0.3
MSTX Muleshoe 86.70 53 P 23 13 05.2 -0.1
OZNA Ozona 86.70 56 P 23 13 05.1 -0.3
RPSI Rantau Prapat 86.77 274 P P 23 13 06.8 +0.7
RPSI IAmb IAmb 23 16 25.4
comp=Z,22nm,1.1s
PSI Prapat 86.81 274 P P 23 13 06.8 +0.5
PSI pmax pmax
comp=Z,21nm,1.1s
LL02 Futaleuf 86.81 135 P P 23 13 06.0 +0.2
LL02 IAmb IAmb 23 16 23.3
comp=Z,24nm,1.1s
YNE Yellowstone No 86.85 40 P P 23 13 05.2 -0.9
YNE IAmb IAmb 23 16 24.8
comp=Z,17nm,1.2s
T25A Trinidad 86.86 49 P P 23 13 05.7 -0.5
T25A IAmb IAmb 23 16 25.3
comp=Z,17nm,1.3s
E19K Redstone River 86.99 7 P P 23 13 05.9 0.0
E19K IAmb IAmb 23 16 28.0
comp=Z,29nm,1.2s
833A Chaparral WMA, 87.05 59 P 23 13 06.8 -0.2
SGCY Sterling City 87.11 55 P 23 13 08.0 +0.7
ENH Enshi 87.12 303 P P 23 13 07.2 -0.1
DAWY Dawson 87.12 15 P 23 13 06.9 +0.3
DAWY IAmb IAmb 23 16 21.5
comp=Z,25nm,1.0s
POST Post 87.29 54 P 23 13 08.2 +0.1
I26K Coal Creek Min 87.31 13 P 23 13 06.9 -0.5
ZEA Zeya 87.32 330 eP P 23 13 09.2 +1.5
ZEA pmax pmax
comp=Z,10.0nm,0.9s
K29M Barlow Dome 87.41 16 P P 23 13 08.3 +0.2
JCT Junction City 87.57 57 P P 23 13 09.4 -0.1
JCT Junction City 87.57 57 P P 23 13 09.5 -0.1
JCT pmax pmax
comp=Z,52nm,1.4s
BILL Bilibino 87.57 353 P 23 13 09.3 +0.7
BILL IAmb IAmb 23 16 21.9
comp=Z,26nm,1.1s
BILL Bilibino 87.57 353 iP P 23 13 09.7 +1.1
BILL pmax pmax
comp=Z,9.0nm,1.1s
HNDO Hondo 87.61 58 P P 23 13 10.1 +0.3
MAYO Mayo, Yukon 87.64 17 P P 23 13 09.7 +0.6
SN07 Snyder 07 87.76 54 P P 23 13 10.7 +0.2
LR05 Currie 87.85 132 P P 23 13 10.7 -0.1
AMTX Amarillo 87.90 52 P P 23 13 10.6 -0.5
DKNS Dickens 87.97 54 P P 23 13 11.9 +0.5
I28M Miner Creek 88.15 14 P P 23 13 11.2 -0.4
I28M IAmb IAmb 23 16 32.8
comp=Z,31nm,1.5s
XLT XiLinHaoTe 88.28 318 eP P 23 13 10.0 +0.3
XLT sP pwP 23 13 21.4 +3.1
XLT pmax pmax
comp=Z,12nm,0.8s
XLT pmax pmax
comp=Z,140nm,4.9s
J30M Hart River 88.31 16 P 23 13 12.8 +0.4
J30M IAmb IAmb 23 16 27.3
comp=Z,20nm,1.1s
E22K Anaktuvuk Pass 88.33 9 P P 23 13 11.5 -0.8
APMT Aspermont 88.45 54 P 23 13 13.5 -0.1
H27K Steamboat Moun 88.46 13 P P 23 13 11.5 -1.4
BRDY Brady 88.52 56 P 23 13 14.5 +0.5
EGMT Eagleton 88.53 38 P P 23 13 13.2 -0.5
ABTX Abilene, Hawle 88.54 55 P P 23 13 14.8 +0.7
E23K Chandalar 88.58 9 P P 23 13 12.7 -0.9
E23K IAmb IAmb 23 16 40.8
comp=Z,14nm,1.0s
G26K Porcupine Rive 88.61 12 P P 23 13 14.1 +0.5
ELIB Princess Elisa 88.64 186 dP P 23 13 12.9 -1.1
PLCA Paso Flores 88.67 133 P P 23 13 15.1 +0.3
PLCA IAmb IAmb 23 16 36.8
comp=Z,18nm,1.2s
PLCA Paso Flores 88.67 133 P P 23 13 15.1 +0.3
PLCA pmax pmax
comp=Z,18nm,1.3s
I30M Mount Dempster 88.82 15 P 23 13 14.1 -0.7
F25K Christian Rive 88.83 11 P P 23 13 14.1 -0.6
BMAR Burnt Mountain 88.88 11 P P 23 13 16.4 +1.5
KSCO Kaye Shedlock' 88.94 48 P P 23 13 17.3 +1.4
SYO Syowa Base 88.96 192⇑ eP P 23 13 16.0 +0.6
XAN Xi'an 89.05 306 ⇑P P 23 13 17.5 +1.0
XAN pmax pmax

comp=Z,10.0nm,1.7s
435B Jarrell 89.45 57 P **P** 23 13 18.8 +0.4
TROLL Troll, Antarti 89.47 179 ⇓P **P** 23 13 16.9 -1.1
comp=Z,230nm,0.7s
PLPT Palo Pinto 89.64 55 **P** 23 13 19.5 +0.3
SNAA Sanae 89.67 178 ⇓P **P** 23 13 17.8 -1.1
comp=Z,61nm,0.8s
SNAA Sanae 89.67 178 P **P** 23 13 17.8 -1.1
SNAA Sanae 89.67 178 P **P** 23 13 17.9 -0.9
comp=Z,2.1nm,0.8s,baz=194,slow=3.6,SNR=6.7
comp=Z,2.1nm,0.8s
WTFS Witchita Falls 89.89 54 P **P** 23 13 20.1 -0.2
HHC Hu-ho-hao-te 89.91 313 *e*P **P** 23 13 21.0 +0.5
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,150nm,6.0s
WMOK Wichita Mounta 90.03 53 P **P** 23 13 21.3 +0.3
WMOK Wichita Mounta 90.03 53 P **P** 23 13 21.3 +0.3
WMOK pmax pmax
comp=Z,15nm,1.4s
FW13 Cleburne 90.16 56 P **P** 23 13 22.5 +0.8
RSSD Black Hills 90.19 43 **P** 23 13 21.8 0.0
RSSD IAmb IAmb 23 16 36.5
comp=Z,25nm,1.3s
RSSD Black Hills 90.19 43 P **P** 23 13 21.8 0.0
RSSD pmax pmax
comp=Z,25nm,1.3s
C24K Franklin Bluff 90.24 9 P **P** 23 13 21.4 +0.3
C24K IAmb IAmb 23 16 34.4
comp=Z,37nm,1.3s
G30M tAoh Zraii Nji 90.27 14 P **P** 23 13 20.7 -0.7
VNA1 Neumayer--Stat 90.39 176 ⇓P **P** 23 13 21.4 -0.7
comp=Z,12nm,0.9s
HKT Hockley 90.55 59 P **P** 23 13 23.5 +0.1
HKT Hockley 90.55 59 P **P** 23 13 23.5 +0.1
HKT pmax pmax
comp=Z,66nm,1.7s
Z35A Perchaven, San 90.67 55 P **P** 23 13 24.0 0.0
X34A Smith Ranch, M 90.70 54 P **P** 23 13 23.9 -0.2
E28M Babbage River 90.88 12 P **P** 23 13 25.1 +0.9
BTO Baotou 90.88 313 *e*P **P** 23 13 26.6 +1.6
BTO S **S** 23 24 25.7 +3.6
BTO pmax pmax
comp=Z,7.0nm,0.6s
MTO3 Montecristo 90.88 75 P **P** 23 13 25.6 -0.1
F31M Tsiigehtchic 91.23 15 P **P** 23 13 26.6 +0.8
FNO Franklin 91.27 53 P **P** 23 13 26.0 -0.8
OKCSW OKLAHOMA CITY 91.30 53 P **P** 23 13 27.4 +0.5
CROK Carrier 91.30 52 P **P** 23 13 27.4 +0.5
YAK Yakutsk 91.43 337 *i* P **P** 23 13 29.5 +2.7
YAK pmax pmax
comp=Z,4.0nm,0.9s
R32A Long Quarter, 91.50 50 **P** 23 13 28.2 +0.4
CMAR Chiang Mai Arr 91.87 289 **P** 23 13 29.4 -0.5
CMAR Chiang Mai Arr 91.87 289 P **P** 23 13 30.1 +0.2
comp=Z,0.6nm,0.3s,baz=125,slow=2.5,SNR=7.7
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 91.87 289 P **P** 23 13 29.4 -0.5
INK Inuvik 91.96 14 P **P** 23 13 28.4 -0.6
INK Inuvik 91.96 14 P **P** 23 13 28.5 -0.6
INK pmax pmax
comp=Z,47nm,1.5s
OK052 Battle Ridge R 92.00 53 P **P** 23 13 30.5 +0.4
OK048 Pawnee Station 92.05 52 P **P** 23 13 30.4 +0.1
OK048 IAmb IAmb 23 15 41.9
comp=Z,19nm,0.8s
DEOK Depew 92.17 53 **P** 23 13 30.0 -0.9
T35A Sooner Cattle 92.55 52 P **P** 23 13 30.3 +0.3
BGNE Belgrade 93.04 47 P **P** 23 13 36.7 +1.8
YKA Yellowknife Ar 93.91 24 P **P** 23 13 39.0 +0.7
comp=Z,2.9nm,1.0s,baz=243,slow=4.6,SNR=4.9
comp=Z,2.9nm,1.0s
YKA Yellowknife Ar 93.91 24 P **P** 23 13 39.0 +0.7
MIAR Mount Ida 93.95 55 **P** 23 13 38.9 -0.3
MIAR Mount Ida 93.95 55 P **P** 23 13 38.9 -0.3
MIAR pmax pmax
comp=Z,51nm,1.6s
U38A Gravette 93.98 53 **P** 23 13 39.2 -0.1
MDND Maddock 94.55 41 P **P** 23 13 40.0 -1.6
N35A Tabor 94.60 48 P **P** 23 13 42.3 +0.3
ECSD EROS Data Cent 94.95 46 **P** 23 13 43.9 +0.4
UALR University of 94.99 55 P **P** 23 13 43.3 -0.6
WHAR Wooly Hollow 95.20 55 **P** 23 13 44.8 -0.1
FCAR Ozark Folk Cen 95.52 54 P **P** 23 13 45.2 -1.2
ULN Ulaanbaatar 95.66 319 **P** 23 13 47.9 +1.0
ULN IAmb IAmb 23 17 08.2
comp=Z,17nm,1.4s
ULN Ulaanbaatar 95.66 319 *i* P **P** 23 13 47.6 +0.7
ULN pmax pmax
comp=Z,4.0nm,1.2s
P38A Dawn 95.70 50 P **P** 23 13 46.4 -0.7
MGMO Mountain Grove 95.82 53 **P** 23 13 48.7 +1.0
SONM Songino Array 96.06 318 P **P** 23 13 48.5 -0.2
SONM IAmb IAmb 23 17 08.4
comp=Z,21nm,1.7s
SONM Songino Array 96.06 318 P **P** 23 13 47.6 -1.1
comp=Z,1.6nm,0.6s,baz=108,slow=4.7,SNR=3.7
comp=Z,1.6nm,0.6s
R40A Maddies Statio 96.19 52 P **P** 23 13 50.0 +0.7
N38A Joes South For 96.30 49 P **P** 23 13 50.1 +0.3
PBMO Poplar Bluff 97.10 54 P **P** 23 13 53.8 +0.4
OXF Oxford 97.20 56 P **P** 23 13 54.3 +0.3
OXF Oxford 97.20 56 P **P** 23 13 54.3 +0.3
OXF pmax pmax
comp=Z,59nm,0.8s
FVM French Village 97.47 53 **P** 23 13 55.2 +0.1
FVM French Village 97.47 53 P **P** 23 13 55.2 +0.1
FVM pmax pmax
comp=Z,35nm,1.4s
TIXI Tiksi 97.70 345 P **P** 23 13 54.6 -0.8
TIXI IAmb IAmb 23 17 10.5
comp=Z,8.2nm,1.1s
TIXI Tiksi 97.70 345 *i* P **P** 23 13 55.3 -0.1
TIXI pmax pmax
comp=Z,3.0nm,1.0s
GOMU GeErMu 100.67 305 P **Pdif** 23 14 10.9 +0.9
GOMU SS SS 23 32 46.2 +1.1
WMQ Urumqi 107.64 311 Pdif **Pdif** 23 14 41.4 +1.0
HYBB Hyderabad (bro 110.20 282 *e*PKiKP **PKiKP** 23 18 52.7 -1.2
HYBB ⇓*e*PP **PP** 23 19 27.7 -0.4
HYBB *e*SKSac **SKSac** 23 25 31.8 -0.7
HYBB IVMs_BB IVMs_BB 23 59 48.9
comp=Z,1μm,36.5s
ZALV Zalesovo Beam 110.67 321 PKiKP **PKiKP** 23 18 53.6 0.0
comp=Z,1.0nm,0.7s,baz=116,slow=3.4,SNR=3.7
MKAR Makanchi Array 111.78 314 PKiKP **PKiKP** 23 18 56.6 +0.6
comp=Z,0.7nm,0.7s,baz=81,slow=3.7,SNR=3.8
KURK Kurchatov 114.36 318 *i* PKiKP PKPdf 23 18 59.5 -1.2
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURBB Kurchatov Arra 114.42 318 PKiKP PKPdf 23 19 00.9 +0.1
comp=Z,1.0nm,0.9s,baz=106,slow=2.7,SNR=5.3
AAK Ala-Archa 117.13 309 *i* PKiKP **PKiKP** 23 19 08.4 +1.8
BVAR Borovoye Array 119.30 321 PKP **PKPdf** 23 19 09.6 -0.6
comp=Z,1.0nm,0.5s,baz=75,slow=2.3,SNR=6.2
BORK Borovoye 119.34 321 *i* PKiKP **PKiKP** 23 19 10.9 +0.6
SVE Sverdlovsk 123.91 327 *e*PKiKP **PKPdf** 23 19 18.4 -0.5
ARTI Arti 125.23 327 **PKPdf** 23 19 21.7 +0.2
ARTI Arti 125.23 327 *i* PKiKP **PKPdf** 23 19 21.9 +0.4
ARTI 23 21 10.4
ARTI 23 26 33.3
ARTI SS SS 23 38 06.4 -2.0
ARCES ARCESS Array B 127.62 351 PKP **PKPdf** 23 19 26.1 +0.4
comp=Z,7.6nm,1.2s,baz=30,slow=2.6,SNR=6.1
KIRV Kirov 128.63 332 *i* PKiKP **PKPdf** 23 19 27.6 -0.3
KLMR Klimovskoe 131.22 338 *e*PKiKP **PKiKP** 23 19 34.6 +0.9
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR MLR MLR
comp=Z,9μm,21.0s
BELG Belogornoye 132.61 325 *i* PKiKP **PKPdf** 23 19 36.4 +0.8
FINES FINESS Array B 134.74 346 PKP **PKPdf** 23 19 39.3 0.0
comp=Z,2.5nm,1.0s,baz=20,slow=2.1,SNR=4.1
OBN Obninsk 136.33 334⇑ *e*PKiKP **PKPdf** 23 19 43.3 +0.8
OBN *e* 23 22 24.7
OBN *e*PPP PPP 23 25 27.6
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,12μm,22.0s
KIV Kislovodsk 139.44 317 *e*PKiKP **PKPdf** 23 19 49.0 +0.2
KIV pmax pmax
comp=Z,2.0nm,1.0s

MNK Minsk 140.10 339 *i* PKiKP **PKPdf** 23 19 48.7 -0.8
MNK *i* 23 22 46.5
MNK *i* PPP PPP 23 25 50.4
MNK *i* 23 26 59.0
MNK *i* SS SS 23 41 10.8 +2.6
MNK *i* SSS SSS 23 46 24.0
MNK pmax pmax
comp=Z,7.0nm,0.9s
MNK pmax pmax
comp=E,13nm,0.9s
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK MLR MLR
comp=Z,14μm,25.0s
MNK MLR MLR
comp=E,10μm,24.0s
MNK MLR MLR
comp=N,6μm,23.0s
RAYN Ar Rayn 141.65 284 ⇑PKiKP **PKiKP** 23 19 55.6 -0.6
AKASG Malin Array Be 142.59 334 PKP **PKPdf** 23 19 53.1 -0.9
comp=N,1.0nm,0.6s,baz=42,slow=1.5,SNR=4.2
AKBB Malin Array Si 142.59 334 *i* PKiKP **PKPdf** 23 19 53.4 -0.7
SIM Simferopol' 144.15 323 *e*PKHKP PKPpre 23 19 52.7
SIM pmax pmax
comp=Z,9.0nm,1.1s
SIM MLR MLR
comp=Z,7μm,25.4s
SORM Soroca 144.91 332 ⇑P **PKPdf** 23 19 59.2 +1.0
SORM Soroca 144.91 332 ⇑PKiKP **PKPdf** 23 19 59.2 +1.0
PURM Purcari 145.36 329 ⇑P **PKiKP** 23 20 01.8 -1.1
BURAR Bucovina Array 146.65 334 **PKPbc** 23 20 02.8 -0.1
BURAR Bucovina Array 146.65 334 ⇓P **PKPbc** 23 20 03.7 +0.7
BURAR Bucovina Array 146.65 334 ⇓PKP2 **PKPbc** 23 20 03.7 +0.7
VLDR Vladesti 146.72 330 ⇑P **PKPab** 23 20 04.2 0.0
CLL Collm 146.84 350 *i* PKP2 **PKPbc** 23 20 03.5 +0.3
CLL pmax pmax
comp=Z,29nm,1.3s
CLL Collm 146.84 350 *i* PKPbc **PKPbc** 23 20 03.5 +0.3
comp=Z,29nm,1.3s
CLL *i* (PKPab) pPKPbc 23 20 06.1 +0.3
CLL *ex* x 23 20 11.0
GHRR 146.88 330 ⇓P **PKPbc** 23 20 03.9 +0.3
SCTR Scanteiesti 146.89 329 ⇓P **PKPab** 23 20 05.3 +0.5
TESR Tescani 146.89 332 ⇑P **PKPbc** 23 20 04.3 +0.7
OSTC Ostas 146.94 346 *e*PKP2 **PKPab** 23 20 05.1 +0.2
OSTC Ostas 146.94 346 *e*PKP **PKPab** 23 20 05.1 +0.2
CHVC Chivalec 146.94 347 *e*PKP2 **PKPab** 23 20 04.9 -0.1
CHVC Chivalec 146.94 347 *e*PKP **PKPab** 23 20 04.9 -0.1
UPC Upice 147.03 347 *e*PKP2 **PKPab** 23 20 05.1 -0.2
UPC Upice 147.03 347 *e*PKP **PKPbc** 23 20 05.1 -0.2
JURR Jurilovca 147.09 327 ⇓P **PKPbc** 23 20 04.7 +0.6
DPC Dobruska-Polom 147.11 346 *e*PKP2 **PKPbc** 23 20 05.3 +1.2
DPC Dobruska-Polom 147.11 346 *e*PKP **PKPbc** 23 20 05.3 +1.2
CFR Carcaliu 147.18 329 ⇑P **PKPbc** 23 20 04.6 +0.3
CFR Carcaliu 147.18 329 ⇑PKP2 **PKPbc** 23 20 04.6 +0.3
KRLC Kraliky 147.26 345 *e*PKP2 **PKPab** 23 20 06.3 +0.1
KRLC Kraliky 147.26 345 *e*PKP **PKPab** 23 20 06.3 +0.1
TPGR Topolog 147.26 328 ⇑P **PKPbc** 23 20 05.9 +1.2
ODBI Odobesti 147.27 330 ⇓P **PKPab** 23 20 06.4 +0.1
PVCC Panska Ves 147.31 348 *e*PKP2 **PKPbc** 23 20 05.5 +0.9
PVCC Panska Ves 147.31 348 *e*PKP **PKPbc** 23 20 05.5 +0.9
VRI Vrincioaia 147.34 331 ⇓P **PKPbc** 23 20 04.8 -0.1
VRI Vrincioaia 147.34 331 ⇓PKP2 **PKPbc** 23 20 04.8 -0.1
MORC Moravsky Berou 147.35 344 **PKPbc** 23 20 04.5 -0.3
MORC Moravsky Berou 147.35 344 ⇑P **PKPbc** 23 20 04.6 -0.2
MORC Moravsky Berou 147.35 344 *e*PKP **PKPbc** 23 20 06.0 +1.2
MORC Moravsky Berou 147.35 344 ⇑PKP2 **PKPbc** 23 20 04.6 -0.2
LANS Liptovska Anna 147.38 342 *e*PKP2 **PKiKP** 23 20 09.2 +2.0
LANS Liptovska Anna 147.38 342 *e*PKP **PKiKP** 23 20 09.2 +2.0
BR131 Keskin Array S 147.39 316 *i* PKiKP **PKPdf** 23 20 01.8 -1.1
BRTR Keskin Array B 147.39 316 **PKPdf** 23 20 02.4 -0.6
BRTR Keskin Array B 147.39 316 PKPbc **PKPbc** 23 20 04.7 -0.7
comp=Z,4.7nm,0.9s,baz=138,slow=1.3,SNR=16
PLOR Plostina 147.39 331 ⇓P **PKPbc** 23 20 05.7 +0.7
PLOR Plostina 147.39 331 ⇓PKP2 **PKPbc** 23 20 05.7 +0.7
HSKC Hora Svate Kat 147.44 350 *e*PKP **PKPbc** 23 20 05.8 +0.8
KIRS Kirsehir-Merke 147.51 315 ⇓P **PKPbc** 23 20 05.8 +0.2
TURR Turia 147.52 332 ⇑P **PKPdf** 23 20 03.4 +0.6
OZUR 147.59 332 ⇑P **PKPdf** 23 20 04.4 +1.5
HARR Harsova 147.62 328 ⇑P **PKPbc** 23 20 07.0 +1.4
PRU Pruhonice 147.83 348 *e*PKP2 **PKPbc** 23 20 06.8 +0.8
PRU Pruhonice 147.83 348 *e*PKP **PKPbc** 23 20 06.8 +0.8
ANTO Ankara 147.86 317 **PKPbc** 23 20 07.2 +0.6
ANTO Ankara 147.86 317 ⇑P **PKPdf** 23 20 05.1 +1.5
ANTO Ankara 147.86 317 ⇑PKP2 **PKPdf** 23 20 05.1 +1.5
DOPR Dopca 147.87 332 ⇑P **PKPbc** 23 20 06.6 +0.3
MESR Meseseni 147.93 336 ⇓P **PKPbc** 23 20 06.2 -0.2
MLR Muntele Rosu 147.99 331 ⇓P **PKPbc** 23 20 07.0 +0.2
MLR Muntele Rosu 147.99 331 ⇓PKP2 **PKPbc** 23 20 07.0 +0.2
ISR Istrita 147.99 330 ⇓P **PKPbc** 23 20 06.6 -0.1
ISR Istrita 147.99 330 ⇓PKP2 **PKPbc** 23 20 06.6 -0.1
VRAC Vranov 148.02 345 *e*PKP **PKPbc** 23 20 07.2 +0.6
UCC Uccle 148.02 0 *d*PKP **PKPbc** 23 20 07.2 +0.8
CJR Cluj-Napoca 148.03 335 ⇑P **PKPbc** 23 20 08.1 +1.3
CJR Cluj-Napoca 148.03 335 ⇑PKP2 **PKPbc** 23 20 08.1 +1.3
JAVC Velka Javorina 148.16 344 *e*PKP **PKPbc** 23 20 08.0 +1.0
BTNL Ternell 148.21 358 *d*PKP **PKPbc** 23 20 06.2 -0.9
MARR Marisel-Cluj 148.25 332 ⇓P **PKiKP** 23 20 08.9 +0.8
TREC Trest 148.28 346 *e*PKP2 **PKPbc** 23 20 08.1 +0.8
TREC Trest 148.28 346 *e*PKP **PKPbc** 23 20 08.1 +0.8
KRUC Moravsky 148.29 345 *e*PKP **PKPbc** 23 20 07.9 +0.6
DRGR 148.32 336 ⇑P **PKPbc** 23 20 07.9 +0.4
DRGR 148.32 336 ⇑PKP2 **PKPbc** 23 20 07.9 +0.4
PSZ Piszkesteto 148.35 340 ⇓P **PKPdf** 23 20 06.3 +2.2
PSZ Piszkesteto 148.35 340 ⇓PKP2 **PKPdf** 23 20 06.3 +2.2
ZVC Zvikov 148.42 348 *e*PKP **PKPbc** 23 20 08.5 +0.9
VOIR 148.43 332 ⇓P **PKPdf** 23 20 03.6 -0.8
VOIR 148.43 332 ⇓PKiKP **PKPdf** 23 20 03.6 -0.8
BMRD Maredsous 148.51 360 *d*PKP **PKPbc** 23 20 07.9 +0.1
ARR Arges 148.67 332 ⇓P **PKPdf** 23 20 05.3 +0.6
MODS Modra-Piesok 148.71 344 *e*PKP2 **PKPbc** 23 20 09.5 +1.1
MODS Modra-Piesok 148.71 344 *e*PKP **PKPbc** 23 20 09.5 +1.1
KHC Kasperske Hory 148.83 349 *e*PKP2 **PKPbc** 23 20 09.6 +0.9
KHC Kasperske Hory 148.83 349 *e*PKP **PKPbc** 23 20 09.6 +0.9
CKRC Cesky Krumlov 148.99 348 *e*PKP2 **PKPbc** 23 20 09.9 +0.8
CKRC Cesky Krumlov 148.99 348 *e*PKP **PKPbc** 23 20 09.9 +0.8
MMAI Mount Meron Ar 149.00 303 PKPbc **PKPbc** 23 20 09.6 -0.1
comp=Z,9.7nm,1.0s,baz=159,slow=3.5,SNR=8.0
GERES GERESS Array B 149.09 348 PKPbc **PKPbc** 23 20 09.9 +0.4
comp=Z,3.8nm,0.9s,baz=5.7,slow=2.7,SNR=3.9
WLF Walferdange 149.13 358 *d*PKiKP **PKPbc** 23 20 10.5 +1.1
SIRR Siria 149.15 337 ⇓P **PKPbc** 23 20 10.1 +0.5
LOZB Loznitsa 149.24 328 ⇑P **PKPdf** 23 20 07.2 +1.6
SURR Surduc 149.40 336 ⇑P **PKPdf** 23 20 01.9 -3.9
GZR Gura Zlata 149.44 334 ⇓P **PKPdf** 23 20 06.6 +0.6
CONA Conrad Observa 149.48 345 *e*PKiKP **PKiKP** 23 20 11.6 0.0
comp=Z,30nm,1.5s
RONA Rosalia, Austr 149.58 344 *i* PKiKP **PKPbc** 23 20 11.6 +0.9
comp=Z,16nm,1.2s
BZS Buzias 149.72 336 ⇓P **PKPdf** 23 20 07.5 +1.2
BZS Buzias 149.72 336 ⇓PKHKP PKPpre 23 20 07.5
VLAD Vladila 149.84 331 ⇑P **PKPdf** 23 20 06.1 -0.5
CSS Mathiatis 149.86 308 **PKPab** 23 20 18.4 +1.2
MOA Molln 149.92 347 *e*PKiKP **PKPbc** 23 20 12.3 +0.8
comp=Z,14nm,1.2s
ELND Elena 149.93 328 ⇑P **PKPdf** 23 20 08.6 +1.8
HERR Herculane 150.00 334 ⇑P **PKPbc** 23 20 11.4 -0.3
ARSA Arzberg 150.19 345 *e*PKiKP **PKPbc** 23 20 13.0 +0.8
comp=Z,7.3nm,1.2s
PLVB Pleven 150.20 330 ⇓P **PKPbc** 23 20 12.6 +0.4
BIOA Bad Ischl, Aus 150.20 348 *ep*PKP **PKPdf** 23 20 08.6 +1.5
comp=Z,8.8nm,1.2s
BIOA *i* PKiKP **PKPbc** 23 20 12.4 +0.3
comp=Z,9.3nm,1.1s
MORH Mrgy, Hungar 150.25 340 ⇑P **PKPbc** 23 20 12.1 -0.2
BAND Balkesir-Ban 150.48 322 ⇓P **PKPbc** 23 20 13.0 0.0
LESA Schwarzleotal 150.64 349 *e*PKiKP **PKPbc** 23 20 13.5 +0.2
comp=Z,13nm,1.2s
KBA Koelnbreinsper 150.84 348 *e*PKP **PKPbc** 23 20 13.6 -0.3
comp=Z,6.6nm,0.9s
SOKA Soboth 150.85 345 *e*PKP **PKPbc** 23 20 13.6 -0.2
comp=Z,14nm,1.2s
RETA Reutte 150.89 351 *i* PKP **PKPbc** 23 20 13.3 -0.6
comp=Z,9.0nm,1.1s
BLKB Belogradchik 150.91 332 ⇑P **PKPbc** 23 20 14.7 +0.7
WATA Walderalm 150.92 350 *e*PKP **PKPbc** 23 20 13.2 -0.8
comp=Z,15nm,1.3s
WTTA Wattenberg 150.98 350 *ep*PKP pPKPdf 23 20 11.1 -0.1
comp=Z,4.9nm,0.7s
MOTA Moosalm 150.98 351 *e*PKiKP **PKPbc** 23 20 14.7 +0.5
comp=Z,14nm,1.1s
SQTA Sankt Quirin 151.09 351 *e*PKP **PKPbc** 23 20 14.1 -0.2
comp=Z,12nm,1.1s
DAVA Damuels 151.21 353 *i* PKiKP **PKPbc** 23 20 14.9 +0.2
comp=Z,23nm,1.1s
MYKA Terra Mystica 151.21 347 *e*PKP **PKPbc** 23 20 14.4 -0.2
comp=Z,12nm,1.1s
ABTA Abfaltersbach 151.32 349 *e*PKP **PKPbc** 23 20 14.9 0.0
comp=Z,14nm,1.0s
FETA Feichten 151.35 351 *i* PKP **PKPdf** 23 20 09.9 +0.8
comp=Z,11nm,1.0s
FETA *i* PKP **PKPbc** 23 20 14.7 -0.3
comp=Z,11nm,1.0s
LJU Ljubljana 151.57 345 *e*PKPbc **PKPbc** 23 20 15.5 +0.1
BOJS Bojanci 151.89 344 *e*PKPbc **PKPbc** 23 20 15.5 -0.6
ESDC Sonseca Array 157.87 18 **PKPab** 23 20 52.5 +1.6
ESDC Sonseca Array 157.87 18 PKPab **PKPab** 23 20 52.1 +1.2
comp=Z,4.2nm,1.0s,baz=333,slow=3.9,SNR=10.0
TORD Torodi Ar. Bea 173.77 153 PKP **PKPdf** 23 20 31.3 -0.3
comp=Z,1.9nm,1.1s,baz=69,slow=2.5,SNR=7.0
TORD PKPab **PKPab** 23 22 02.4 +1.1
comp=Z,0.6nm,1.0s,baz=204,slow=3.2,SNR=1.7

GUC ***11*** *23:00:38.1±0.6,29.°87S×72.°08W,h35km±5km,ML3.3*
SJA ***11*** *23:00:44.3±1.2,29.°61S×71.°94W,h35km±87km,ML3.3, MW4.2*
ISC 11 23:00:36.8±2.0,**29.°84S**±0.°03×**72.°04W**±0.°08,**h10**km±12km, **n22,**σ1§**60**/33,**4C-1D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.70**	**97**	*e*P		**Pn**		**23 00 51.8**	**-0.9**
CO05				*e*S		**Sn**		**23 01 01.9**	**-1.7**
CO05				IAML				23 01 05.9	
comp=N,2μm,0.2s									
CO06	**Fray Jorge**	**0.91**	**157**	⇑*i*P		**Pb**		**23 00 54.2**	**-0.4**
CO06				*e*S		**Sb**		**23 01 06.2**	**-0.5**
GO04	**Tololo Observa**	**1.13**	**108**	⇓*i*P		**Pb**		**23 00 58.5**	**0.0**
GO04				*e*S		**Sg**		**23 01 14.4**	**+1.2**
GO04				IAML				23 01 18.1	
comp=N,2μm,0.4s									
LCO	**Las Campanas**	**1.43**	**55**	*e*P		**Pb**		**23 01 03.5**	**-0.1**
CO03	**El Pedregal**	**1.54**	**131**	⇑*i*P		**Pb**		**23 01 04.7**	**-0.7**
CO03				*e*S		**Sb**		**23 01 24.7**	**-0.3**
CO03				IAML				23 01 29.3	
comp=E,368nm,0.4s									
CO02	**Combarbal**	**1.63**	**147**	⇑*i*P		**Pb**		**23 01 06.2**	**-0.9**
CO02				*e*S		**Sn**		**23 01 26.4**	**-0.4**
CO02				IAML				23 01 33.9	
comp=N,970nm,0.5s									
CO01	**Juntas del Tor**	**1.70**	**95**	⇑*i*P		**Pb**		**23 01 08.1**	**-0.1**
CO01				*e*S		**Sb**		**23 01 30.2**	**+0.5**
CO01				IAML				23 01 32.5	
comp=N,369nm,0.3s									
AC04	**Llanos de Chal**	**1.83**	**28**	*e*P		**Pn**		**23 01 07.8**	**-0.4**
AC05	**El Transito**	**1.84**	**58**	*e*P		**Pb**		**23 01 09.9**	**-0.6**
AC05				IAML				23 01 45.3	
comp=E,411nm,0.6s									
AROD	**Rodeo**	**2.25**	**99**	*e*P		**Pb**		**23 01 17.8**	**+1.0**
AROD				*e*S		**Sg**		**23 01 49.4**	**+0.2**
CO04	**Los Peladeros**	**2.38**	**158**	*e*P		**Pn**		**23 01 16.5**	**+0.4**
CO04				*e*S		**Sn**		**23 01 44.5**	**-1.1**
CO04				IAML				23 02 00.0	
comp=N,172nm,0.6s									
GO03	**Copiapo**	**2.74**	**36**	*e*P		**Pn**		**23 01 21.2**	**+0.3**
GO03	**Copiapo**	**2.74**	**36**	*e*S		**Sg**		**23 02 08.8**	**+4.0**
GO03				IAML				23 02 09.9	
comp=Z,92nm,0.5s									
RTLS	**Leoncito**	**3.07**	**130**	*e*P		**Pb**		**23 01 29.9**	**-1.6**
RTLS				*e*S		**Sb**		**23 02 09.6**	**+0.4**
RTLS				IAML				23 02 29.4	
comp=Z,137nm,0.7s									
AGUA	**GUANDACOL**	**3.11**	**84**	*e*P		**Pb**		**23 01 31.6**	**-0.6**
AUSP	**Uspallata**	**3.29**	**137**	*e*P		**Pg**		**23 01 37.9**	**-2.0**
AUSP				*e*S		**Sb**		**23 02 18.5**	**+2.8**
VCA	**Vinchina**	**3.52**	**73**	*e*P		**Pb**		**23 01 37.9**	**-1.4**
VCA				*e*S		**Sb**		**23 02 21.5**	**-0.7**
VCA				IAML				23 02 36.8	
comp=Z,60nm,0.5s									
ASAL	**Salagasta**	**3.88**	**136**	*e*P		**Pb**		**23 01 47.0**	**+1.6**
ARCO	**CERRO ARCO**	**4.01**	**139**	*e*P		**Pb**		**23 01 48.8**	**+1.3**
ARCO				*e*S		**Sb**		**23 02 40.9**	**+4.8**
ARCO				IAML				23 03 00.3	
comp=Z,25nm,0.9s									
AVFE	**Valle Fertil**	**4.05**	**103**	*e*P		**Pn**		**23 01 41.0**	**+2.1**
AAGR	**Agrelo**	**4.25**	**141**	*e*S		**Sg**		**23 02 53.0**	**-0.1**
AAGR				IAML				23 03 02.6	
comp=Z,43nm,2.2s									
TINO	**Tinogasta**	**4.30**	**67**	*e*P		Pb		23 01 47.0	-5.5

MOS ***11*** *23:03:25.5±1.0,18.°90S×175.°47W,h10km,mb5.5/63, MS6.1/61,Error ellipse: s-maj=8.3km s-min=6.7km az=138.7*
IDC ***11*** *23:03:26.1±0.4,18.°87S×175.°68W,h0km,mb4.9/20, mbtmp4.9/21,ML4.2/1,MS5.9/51,Error ellipse: s-maj=17.2km s-min=14.5km az=154.0*
BJI ***11*** *23:03:26.8,18.°69S×175.°17W,h9km,mB5.8/53,mb5.1/53, Ms6.2/83,Ms7.6 1/78*
NEIC ***11*** *23:03:27.5,18.°91S×175.°37W,h10km*
IPGP ***11*** *23:03:27.0,18.°90S×175.°37W,h12km,Mw6.3,Fault plane solution: NP1:*φ*s208.00000°,*δ*85.00000°,*λ*5.00000°. NP2:*φ*s118.00000°,*δ*85.00000°,*λ*175.00000°.*
NEIC ***11*** *23:03:28.1,18.°79S×175.°78W,h12km,Moment Tensor Solution. Duration: 6*s *7 Moment tensor: Scale 10*^{18}*Nm; Mrr-0.06; Mθθ-1.70; Mφφ1.76; Mrθ0.31; Mθφ-1.67; Mφr0.09; Fault plane solution: Mo2.42000×10*^{18} *NP1: φs202.78000°,δ84.06000°,λ-4.87000°. NP2:φs293.28000°, δ85.15000°,λ-174.03000°. Principal axes: T 2.4327, Plg1.0000°, Azm68.0000°; N -0.0160, Plg82.0000°, Azm332.0000°; P -2.4167, Plg8.0000°, Azm158.0000°;*
NEIC ***11*** *23:03:28.1,18.°89S×175.°36W,h12km*
NEIC ***11*** *23:03:28.1±1.5,18.°86S±0.°07×175.°37W±0.°06,h10km±1km, mb5.6/677,Ms_20 6.1/753,Mwb6.1/192,Mww6.2/24,Error ellipse: s-maj=12.0km s-min=7.9km az=204.0,Moment Tensor Solution. Moment tensor: Scale 10*^{18}*Nm; Mrr-0.12; Mθθ-1.26; Mφφ1.38; Mrθ0.00; Mθφ-1.08; Mφr0.38; Fault plane solution: Mo1.75000×10*^{18} *NP1: φs294.96000°,δ79.12000°,λ176.12000°. NP2: φs25.70000°,δ86.19000°,λ10.91000°. Principal axes: T 1.8316, Plg10.0000°, Azm251.0000°; N -0.1721, Plg78.0000°, Azm45.0000°; P -1.6595, Plg5.0000°, Azm160.0000°;*
ISC-PP ***11*** *23:03:28,18.°86S×175.°37W,h2km,Mwppsm6.3,Moment Tensor Solution. s28 Moment tensor: Scale 10*^{18}*Nm; Mrr0.50±.18; Mθθ-0.33±.17; Mφφ0.55±.15; Mrθ0.18±.17; Mθφ0.26±.10; Mφr-0.27±.17; Fault plane solution: Mo3.16000×10*^{18} *NP1:*φs*37.70000°,δ74.60000°, λ40.50000°. NP2:*φs*294.90000°,δ51.20000°,λ160.10000°.*
NOU ***11*** *23:03:29.1,19.°03S×175.°49W,h9km,ML5.8/93,Tonga Islands*
GCMT ***11*** *23:03:34.1±0.0,18.°75S×175.°47W,h12km,MW6.2/167, Moment Tensor Solution. s161,c386; s167,c671; Duration: 3*s*2 Moment tensor: Scale 10*^{18}*Nm; Mrr0.01±.01; Mθθ-2.18±.01; Mφφ2.17±.01; Mrθ-0.28±.03; Mθφ-1.84±.01; Mφr0.25±.03; Best double couple: Mo2.87400×10*^{18} *NP1:*φs*25.00000°,δ83.00000°, λ2.00000°. NP2:*φs*295.00000°,δ88.00000°,λ173.00000°. Principal axes: T 2.8830, Plg7.0000°, Azm250.0000°; N -0.0210, Plg82.0000°, Azm99.0000°; P -2.8650, Plg4.0000°, Azm340.0000°; nsta

AFI	**Afiamalu**	**6.11**	**35**	P		**Pn**	**23 04 55.5**	**-2.5**
AFI	**Afiamalu**	**6.11**	**35**	⇑P		**Pn**	**23 04 56.8**	**-1.2**
MSVF	**Nonsavu**	**6.37**	**280**			**Pn**	**23 05 01.4**	**-0.2**
MSVF	**Nonsavu**	**6.37**	**280**	P		**Pn**	**23 05 01.6**	**0.0**
	comp=Z,754nm,1.1s							
MSVF	**Nonsavu**	**6.37**	**280**	P		**Pn**	**23 05 01.4**	**-0.2**
MSVF	**Nonsavu**	**6.37**	**280**	⇑P		**Pn**	**23 05 02.3**	**+0.7**
RAO	**Raoul Island**	**10.48**	**192**	LR		LR	23 09 47.6	
	comp=Z,144µm,18.2s,baz=14,slow=36							
FUNA	**Funafuti**	**11.65**	**332**			**Pn**	**23 06 12.6**	**-1.4**
FUNA	**Funafuti**	**11.65**	**332**	P		**Pn**	**23 06 15.1**	**+1.1**
	comp=Z,141nm,1.2s							
RAR	**Rarotonga**	**14.82**	**101**	Pn		**Pn**	**23 06 56.4**	**-0.9**
	comp=Z,4.5nm,0.3s,baz=271,slow=5.6,SNR=10							
RAR				LR		LR	23 11 38.1	
	comp=Z,37µm,18.8s,baz=278,slow=32							
RAR	**Rarotonga**	**14.82**	**101**	P		**Pn**	**23 06 58.9**	**+1.6**
	comp=Z,127nm,1.2s							
RAR	**Rarotonga**	**14.82**	**101**	⇑P		**Pn**	**23 06 57.1**	**-0.2**
MARNC	**Mare, Loyalty**	**15.78**	**258**			**Pn**	**23 07 08.9**	**-1.0**
MARNC	**Mare, Loyalty**	**15.78**	**258**	P		**Pn**	**23 07 10.3**	**+0.4**
	comp=Z,5.2nm,1.7s							
MARNC	**Mare, Loyalty**	**15.78**	**258**	⇑P		**Pn**	**23 07 08.9**	**-1.0**
PINNC	**Pines Island,**	**16.47**	**254**			**Pn**	**23 07 17.4**	**-1.3**
PINNC	**Pines Island,**	**16.47**	**254**	P		**Pn**	**23 07 19.3**	**+0.6**
	comp=Z,963nm,1.8s							
YATNC	**Mamie plateau,**	**16.89**	**257**	P		**Pn**	**23 07 24.6**	**+0.4**
	comp=Z,405nm,2.2s							
OUENC	**Ouen Island, N**	**16.99**	**255**	P		**Pn**	**23 07 25.7**	**+0.3**
	comp=Z,551nm,1.8s							
SANVU	**Saraoutou**	**17.01**	**279**	Pn		**Pn**	**23 07 24.6**	**-1.1**
SANVU	**Saraoutou**	**17.01**	**279**	P		**P**	**23 07 27.0**	**-0.5**
	comp=Z,781nm,1.6s							
SANVU	**Saraoutou**	**17.01**	**279**	⇑P		**Pn**	**23 07 25.6**	**-0.1**
DZM	**Mont Dzumac**	**17.31**	**257**	P		**Pn**	**23 07 26.9**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=88,slow=12,SNR=23							
DZM				LR		LR	23 13 01.0	
	comp=Z,134µm,21.0s,baz=97,slow=34							
	comp=Z,106nm,1.1s							
ONTNC	**Ouen Toro**	**17.33**	**256**			**Pn**	**23 07 28.9**	**-0.7**
ONTNC	**Ouen Toro**	**17.33**	**256**	P		**P**	**23 07 30.6**	**-0.4**
	comp=Z,136nm,1.7s							
ONTNC	**Ouen Toro**	**17.33**	**256**	⇑P		**Pn**	**23 07 29.5**	**-0.1**
NFK	**Norfolk Island**	**18.22**	**234**	P		**P**	**23 07 42.1**	**+1.3**
OUZ	**Omahuta**	**18.90**	**209**	P		**P**	**23 07 47.3**	**-0.9**
OUZ	**Omahuta**	**18.90**	**209**	⇓P		**Pn**	**23 07 50.4**	**+1.6**
GRZ	**Great Barrier**	**19.01**	**203**	P		**P**	**23 07 49.0**	**-0.3**
WCZ	**Waipu Caves**	**19.18**	**206**	P		**P**	**23 07 51.5**	**+0.3**
KOUNC	**Koumac, New Ca**	**19.21**	**262**	P		**Pn**	**23 07 53.1**	**+0.4**
	comp=Z,775nm,1.5s							
KOUNC	**Koumac, New Ca**	**19.21**	**262**	⇑P		**Pn**	**23 07 53.8**	**+1.1**
KUZ	**Kuaotunu**	**19.35**	**202**	P		**P**	**23 07 53.5**	**+0.4**
	comp=Z,164nm,1.2s							
KUZ	**Kuaotunu**	**19.35**	**202**	P		**P**	**23 07 53.0**	**-0.2**
WMGZ	**Waiomatatini S**	**19.54**	**195**	P		**Pn**	**23 07 56.6**	**+0.1**
WIAZ	**Waiheke Island**	**19.61**	**203**	P		**P**	**23 07 56.0**	**0.0**
HAZ	**Te Kaha**	**19.64**	**196**	P		**P**	**23 07 55.7**	**-0.6**
PKGZ	**Pakihiroa**	**19.66**	**196**	P		**Pn**	**23 07 57.4**	**-0.7**
RUGZ	**Raukumara Rang**	**19.86**	**196**	P		**P**	**23 07 57.0**	**-1.9**
MWZ	**Matawai**	**20.25**	**196**	P		**P**	**23 08 02.0**	**-1.0**
URZ	**Urewera**	**20.29**	**197**	P		**P**	**23 08 01.3**	**-2.1**
	comp=Z,158nm,0.9s,baz=3.3,slow=5.7,SNR=37							
URZ	**Urewera**	**20.29**	**197**	P		**P**	**23 08 01.2**	**-2.3**
URZ	**Urewera**	**20.29**	**197**	⇑P		**P**	**23 08 01.5**	**-2.0**
TOZ	**Tahuroa Road**	**20.31**	**201**			**P**	**23 08 02.6**	**-1.0**
TOZ				IAMs_20	IAMs_20		23 15 00.9	
	comp=Z,61µm,18.0s							
TOZ	**Tahuroa Road**	**20.31**	**201**	P		**P**	**23 08 03.2**	**-0.4**
RAGZ	**Rawiri**	**20.43**	**196**	P		**P**	**23 08 02.7**	**-2.3**
RIGZ	**Rimuhau**	**20.54**	**195**	P		**P**	**23 08 05.1**	**-1.0**
MUGZ	**Murupara**	**20.59**	**198**	P		**P**	**23 08 04.9**	**-1.8**
RTZ	**Ruatahuna**	**20.66**	**197**			**P**	**23 08 05.3**	**-2.2**
RTZ				IAMs_20	IAMs_20		23 16 07.3	
	comp=Z,66µm,19.0s							
HIZ	**Hauiti**	**21.24**	**202**	P		**P**	**23 08 11.2**	**-2.4**
HIZ				IAmb	IAmb		23 08 21.8	
	comp=Z,298nm,1.1s							
HIZ	**Hauiti**	**21.24**	**202**	P		**P**	**23 08 13.8**	**+0.1**
BKZ	**Black Stump Fm**	**21.31**	**198**			**P**	**23 08 11.8**	**-2.7**
BKZ				IAMs_20	IAMs_20		23 16 39.5	
	comp=Z,61µm,20.0s							
BKZ	**Black Stump Fm**	**21.31**	**198**	P		**P**	**23 08 16.5**	**+2.0**
	comp=Z,99nm,1.0s							
BKZ	**Black Stump Fm**	**21.31**	**198**	P		**P**	**23 08 12.2**	**-2.3**
SNVZ	**South Ngauruho**	**21.59**	**199**	P		**P**	**23 08 14.9**	**-2.7**
KAHZ	**Kahuranaki**	**21.79**	**196**	P		**P**	**23 08 16.9**	**-2.8**
PNHZ	**Pukenui**	**22.09**	**197**	P		**P**	**23 08 19.1**	**-3.7**
BFZ	**Birch Farm**	**22.79**	**197**	P		**P**	**23 08 30.0**	**-0.3**
BFZ	**Birch Farm**	**22.79**	**197**	P		**P**	**23 08 30.5**	**+0.2**
	comp=Z,102nm,1.5s							
BFZ	**Birch Farm**	**22.79**	**197**	P		**P**	**23 08 27.7**	**-2.6**
TARA	**Tarawa**	**23.25**	**329**	P		**P**	**23 08 32.9**	**-2.3**
SNZO	**South Karori**	**23.82**	**199**	P		**P**	**23 08 41.1**	**+0.6**
SNZO				IAmb	IAmb		23 08 58.5	
	comp=Z,135nm,1.0s							
SNZO	**South Karori**	**23.82**	**199**	P		**P**	**23 08 42.0**	**+1.5**
	comp=Z,96nm,1.2s							
BHW	**Baring Head**	**23.86**	**198**	P		**P**	**23 08 39.2**	**-1.7**
TCW	**Tory Channel**	**23.86**	**200**	P		**P**	**23 08 39.9**	**-1.1**
QRZ	**Quartz Range**	**24.12**	**203**	P		**P**	**23 08 44.7**	**+1.3**
QRZ				IAmb	IAmb		23 08 50.9	
	comp=Z,188nm,1.0s							
TKNZ	**Takaka Hill**	**24.14**	**202**	P		**P**	**23 08 43.4**	**-0.3**
NNZ	**Nelson**	**24.16**	**201**	P		**P**	**23 08 43.0**	**-0.8**
NNZ				IAmb	IAmb		23 09 03.9	
	comp=Z,155nm,1.4s							
TUWZ	**Tuamarina**	**24.16**	**200**	P		**P**	**23 08 40.8**	**-3.0**
BSWZ	**Blackbirch Sta**	**24.44**	**200**	P		**P**	**23 08 45.0**	**-1.4**
PAE	**Paea**	**24.51**	**91**	*e*PKIKP		**P**	**23 08 46.4**	**-0.9**
	comp=Z,149nm,1.3s							
PAE				*e*LR		LR	23 14 48.6	
	comp=Z,18µm,23.1s							
PPT2	**Papeete2**	**24.53**	**91**	*e*PKIKP		**P**	**23 08 47.0**	**-0.5**
	comp=Z,372nm,1.3s							
PPT2				*e*S		**S**	**23 13 02.4**	**-5.6**
	comp=Z,225µm,26.0s							
PPT2				*e*LR		LR	23 14 43.6	
	comp=Z,99µm,27.0s							
PPT2				*e*LR		LR	23 14 50.8	
	comp=Z,152µm,27.2s							
PPT	**Papeete**	**24.53**	**91**	P		**P**	**23 08 49.5**	**+2.1**
	comp=Z,152nm,0.9s,baz=358,slow=7.0,SNR=8.6							
PPT				LR		LR	23 15 55.7	
	comp=Z,46µm,20.1s,baz=260,slow=30							
	comp=Z,152nm,0.9s							
TBI	**Tubuai**	**24.54**	**105**	*e*P		**P**	**23 08 48.5**	**+1.1**
	comp=Z,881nm,1.3s							
TBI				*e*S		**S**	**23 13 04.8**	**-3.1**
	comp=Z,949µm,28.2s							
TBI				*e*LR		LR	23 14 38.8	
	comp=Z,153µm,29.5s							
TBI				*e*LR		LR	23 14 42.9	
	comp=Z,27µm,27.5s							
MRNZ	**Matariki Terra**	**24.54**	**202**	P		**P**	**23 08 46.9**	**-0.4**
PPTF	**Pamatai, Papee**	**24.54**	**91**	P		**P**	**23 08 44.2**	**-3.4**
PPTF	**Pamatai, Papee**	**24.54**	**91**	P		**P**	**23 08 50.7**	**+3.1**
	comp=Z,312nm,1.3s							
PPTF	**Pamatai, Papee**	**24.54**	**91**	⇓P		**P**	**23 08 50.1**	**+2.6**
CTZ	**Chatham Island**	**24.70**	**182**	P		**P**	**23 08 49.3**	**+0.6**
TIAR	**Tiarei**	**24.75**	**91**	*e*PKIKP		**P**	**23 08 49.3**	**-0.1**
	comp=Z,746nm,1.2s							
TIAR				*e*LR		LR	23 14 55.4	
	comp=Z,81µm,23.1s							
THZ	**Tophouse**	**24.81**	**201**	P		**P**	**23 08 48.7**	**-1.1**
TVO	**Taravao**	**24.81**	**91**	*e*PKIKP		**P**	**23 08 51.8**	**+1.8**
	comp=Z,124nm,1.2s							
TVO				*e*LR		LR	23 14 57.1	
	comp=Z,18µm,23.1s							
DSZ	**Denniston Nort**	**25.18**	**203**	P		**P**	**23 08 53.0**	**-0.2**
DSZ				IAmb	IAmb		23 09 24.5	
	comp=Z,91nm,0.9s							
DSZ				IAMs_20	IAMs_20		23 18 34.7	
	comp=Z,55µm,19.0s							
KHZ	**Kahutara**	**25.18**	**200**	P		**P**	**23 08 52.4**	**-0.6**
KHZ				IAMs_20	IAMs_20		23 19 19.7	
	comp=Z,49µm,19.0s							
KHZ	**Kahutara**	**25.18**	**200**	⇓P		**P**	**23 08 53.8**	**+0.8**
HNR	**Honiara**	**25.71**	**288**	P		**P**	**23 08 55.8**	**-2.3**
HNR	**Honiara**	**25.71**	**288**	P		**P**	**23 08 55.2**	**-3.2**
	comp=Z,60nm,0.3s,baz=224,slow=7.1,SNR=5.3							
HNR				LR		LR	23 17 44.3	
	comp=Z,13µm,18.1s,baz=122,slow=34							
	comp=Z,60nm,0.3s							
HNR	**Honiara**	**25.71**	**288**	P		**P**	**23 08 59.4**	**+1.3**
	comp=Z,290nm,1.1s							
HNR	**Honiara**	**25.71**	**288**	P		**P**	**23 08 55.8**	**-2.3**
HNR				pmax	pmax			
	comp=Z,433nm,1.2s							
HNR				MLR	MLR			
	comp=Z,21µm,22.0s							
GVZ	**Greta Valley S**	**25.84**	**200**	P		**P**	**23 08 58.4**	**-0.7**
LTZ	**Lake Taylor**	**25.93**	**201**	P		**P**	**23 09 00.4**	**+0.5**
LTZ				IAmb	IAmb		23 09 15.1	
	comp=Z,219nm,1.3s							
SAVO	**Savo Central**	**25.95**	**289**	P		**P**	**23 09 01.9**	**+1.6**
	comp=Z,149nm,1.1s							
INZ	**Inchbonnie**	**26.17**	**202**	P		**P**	**23 09 02.1**	**+0.1**
INZ				IAmb	IAmb		23 09 23.5	
	comp=Z,137nm,1.0s							
LHI	**Lord Howe Isla**	**26.20**	**237**	P		**P**	**23 09 03.6**	**+1.1**
	comp=Z,0.0nmcomp=Z,136nm,1.3s							
LHI	**Lord Howe Isla**	**26.20**	**237**	P		**P**	**23 09 02.2**	**-0.2**
OXZ	**Oxford**	**26.49**	**201**	IAmb	IAmb		23 09 18.3	
	comp=Z,218nm,1.2s							
PMOR	**Pomariorio Ree**	**26.56**	**86**	*e*P		**P**	**23 09 06.6**	**+0.8**
	comp=Z,330nm,1.2s							
PMOR				*e*LR		LR	23 15 44.3	
	comp=Z,107µm,23.5s							
MQZ	**McQueen's Vall**	**26.63**	**200**	P		**P**	**23 09 05.0**	**-1.1**
MQZ				IAmb	IAmb		23 09 12.0	
	comp=Z,200nm,1.6s							
VAH	**Vaihoa**	**26.76**	**86**	*e*P		**P**	**23 09 07.6**	**0.0**
	comp=Z,7.8nm,0.9s							
VAH				*e*LR		LR	23 15 51.2	
	comp=Z,14µm,24.1s							
RPZ	**Rata Peaks**	**27.17**	**202**	P		**P**	**23 09 11.3**	**+0.2**
XMAS	**Kiritimati**	**27.34**	**42**	P		**P**	**23 09 11.2**	**-1.6**
XMAS				IAmb	IAmb		23 09 19.4	
	comp=Z,161nm,1.0s							
XMAS	**Kiritimati**	**27.34**	**42**	IAMs_20	IAMs_20		23 17 00.8	
	comp=Z,45µm,22.0s							
XMAS	**Kiritimati**	**27.34**	**42**	P		**P**	**23 09 16.7**	**+3.9**
	comp=Z,136nm,1.1s							
FOZ	**Fox Glacier**	**27.47**	**204**	P		**P**	**23 09 13.8**	**+0.1**
FOZ				IAmb	IAmb		23 09 23.2	
	comp=Z,166nm,1.3s							
FOZ				IAMs_20	IAMs_20		23 19 53.0	
	comp=Z,69µm,19.0s							
LBZ	**Lake Benmore**	**28.06**	**202**	P		**P**	**23 09 17.9**	**-1.2**
LBZ				IAMs_20	IAMs_20		23 20 33.8	
	comp=Z,56µm,19.0s							
JCZ	**Jackson Bay**	**28.32**	**205**	P		**P**	**23 09 23.2**	**+1.7**
	comp=Z,112nm,1.3s							
WKZ	**Wanaka**	**28.87**	**203**	IAMs_20	IAMs_20		23 20 48.1	
	comp=Z,64µm,20.0s							
MLZ	**Mavora Lakes**	**29.67**	**204**	IAMs_20	IAMs_20		23 21 01.2	
	comp=Z,39µm,20.0s							
GC1S	**Gold Coast 1 S**	**29.88**	**246**	P		**P**	**23 09 36.3**	**+1.0**
WHZ	**Wether Hill Ro**	**30.18**	**204**	IAMs_20	IAMs_20		23 21 37.6	
	comp=Z,43µm,21.0s							
TW1H	**Toowoomba 1 Ha**	**31.11**	**248**	P		**P**	**23 09 47.0**	**+0.6**
	comp=Z,436nm,1.5s							
EIDS	**Eidsvold**	**31.65**	**252**	P		**P**	**23 09 49.4**	**-1.7**
	comp=Z,87nm,1.7s							
EIDS	**Eidsvold**	**31.65**	**252**	P		**P**	**23 09 49.7**	**-1.4**
EIDS				IAmb	IAmb		23 09 51.5	
	comp=Z,132nm,1.3s							
EIDS	**Eidsvold**	**31.65**	**252**	P		**P**	**23 09 50.2**	**-0.9**
	comp=Z,87nm,1.7s							
EIDS	**Eidsvold**	**31.65**	**252**	⇑P		**P**	**23 09 49.7**	**-1.4**
ARMA	**Armidale**	**31.96**	**243**	P		**P**	**23 09 54.2**	**+0.4**
	comp=Z,0.0nmcomp=Z,73nm,1.0s							
ARMA	**Armidale**	**31.96**	**243**	P		**P**	**23 09 52.6**	**-1.2**
ARMA				IAmb	IAmb		23 10 01.8	
	comp=Z,73nm,1.1s							
ARMA	**Armidale**	**31.96**	**243**	P		**P**	**23 09 55.2**	**+1.4**
	comp=Z,73nm,1.0s							
ARMA	**Armidale**	**31.96**	**243**	⇓P		**P**	**23 09 54.6**	**+0.8**
AUPHS	**Peel High Scho**	**32.73**	**242**	P		**P**	**23 10 01.8**	**+1.3**
	comp=Z,131nm,1.1s							
AUKHS	**Kincumber High**	**32.97**	**237**	P		**P**	**23 10 03.8**	**+1.3**
	comp=Z,203nm,1.6s							
MGCD	**Mangrove Creek**	**33.11**	**238**	P		**P**	**23 10 06.0**	**+2.2**
MGCD	**Mangrove Creek**	**33.11**	**238**	P		**P**	**23 10 04.2**	**+0.4**
	comp=Z,91nm,1.2s							
RIV	**Riverview**	**33.25**	**237**	P		**P**	**23 10 07.9**	**+2.9**
SYDH	**Sydney Hard Ro**	**33.56**	**237**	P		**P**	**23 10 08.5**	**+0.8**
	comp=Z,133nm,1.1s							
RMQ	**Roma**	**33.83**	**251**	P		**P**	**23 10 09.9**	**-0.2**
	comp=Z,59nm,1.5s							
AULRC	**Lightning Ridg**	**34.88**	**246**	P		**P**	**23 10 20.1**	**+0.9**
	comp=Z,231nm,1.7s							
RABL	**Rabaul**	**34.94**	**291**	P		**P**	**23 10 16.3**	**-3.6**
RABL				IAmb	IAmb		23 10 22.6	
	comp=Z,77nm,0.9s							
CNB	**Canberra Magne**	**35.12**	**235**	P		**P**	**23 10 19.5**	**-1.8**
	comp=Z,118nm,2.0s							
CNB	**Canberra Magne**	**35.12**	**235**	P		**P**	**23 10 22.4**	**+1.1**
	comp=Z,121nm,1.6s							
AUSIS	**Research Schoo**	**35.31**	**235**	P		**P**	**23 10 23.3**	**+0.4**
	comp=Z,128nm,1.4s							
AUMTS	**Mt Stromlo**	**35.41**	**235**	P		**P**	**23 10 24.9**	**+1.2**
	comp=Z,126nm,1.4s							
CAN	**Canberra**	**35.41**	**235**	P		**P**	**23 10 24.2**	**+0.5**
	comp=Z,0.0nmcomp=Z,112nm,1.4s							
CAN	**Canberra**	**35.41**	**235**	P		**P**	**23 10 23.4**	**-0.3**
CAN				IAMs_20	IAMs_20		23 21 40.1	
	comp=Z,29µm,20.0s							
CAN	**Canberra**	**35.41**	**235**	P		**P**	**23 10 25.0**	**+1.3**
	comp=Z,172nm,1.4s							
CAN	**Canberra**	**35.41**	**235**	P		**P**	**23 10 23.4**	**-0.3**
CAN				pmax	pmax			
	comp=Z,308nm,1.6s							
CAN				MLR	MLR			
	comp=Z,29µm,20.0s							
CAN	**Canberra**	**35.41**	**235**	⇑P		**P**	**23 10 24.7**	**+1.0**
TAOE	**Nuku Hiva Isla**	**35.57**	**78**	P		**P**	**23 10 24.3**	**-1.1**
TAOE				IAmb	IAmb		23 10 39.1	
	comp=Z,76nm,1.1s							
TAOE	**Nuku Hiva Isla**	**35.57**	**78**	*e*PKIKP		P	23 10 16.9	-8.5
	comp=Z,1µm,23.2s							
TAOE	**Nuku Hiva Isla**	**35.57**	**78**	*e*PP		PP	23 11 37.3	-8.9
	comp=Z,1µm,31.4s							
TAOE				*e*S		**S**	**23 15 58.2**	**-3.2**
	comp=Z,7µm,25.1s							
TAOE				*e*LR		LR	23 19 51.0	
	comp=Z,85µm,24.6s							
YNG	**Young**	**35.58**	**237**	P		**P**	**23 10 26.6**	**+1.4**
TV1H	**Townsville Har**	**35.70**	**263**	P		**P**	**23 10 27.0**	**+0.6**
	comp=Z,40nm,1.1s							
CTA	**Charters Tower**	**36.13**	**262**	LR		LR	23 23 24.4	
	comp=Z,1µm,21.8s,baz=84,slow=33							
CTA	**Charters Tower**	**36.13**	**262**	P		**P**	**23 10 29.2**	**-0.9**
CMSA	**Cobar Meteorol**	**37.18**	**243**	P		**P**	**23 10 37.5**	**-1.4**
	comp=Z,0.0nmcomp=Z,126nm,1.0s							
CMSA	**Cobar Meteorol**	**37.18**	**243**	P		**P**	**23 10 40.1**	**+1.2**
	comp=Z,126nm,1.0s							
PMG	**Port Moresby**	**37.48**	**279**	P		**P**	**23 10 40.3**	**-1.3**
PMG	**Port Moresby**	**37.48**	**279**	IAMs_20	IAMs_20		23 24 32.8	
	comp=Z,38µm,18.0s							
PMG	**Port Moresby**	**37.48**	**279**	LR		LR	23 24 26.7	
	comp=Z,27µm,18.4s,baz=96,slow=34							
PMG	**Port Moresby**	**37.48**	**279**	P		**P**	**23 10 41.2**	**-0.4**
	comp=Z,307nm,1.3s							
PMG	**Port Moresby**	**37.48**	**279**	*ce*P		**P**	**23 10 39.9**	**-1.7**
PMG				pmax	pmax			
	comp=Z,586nm,1.7s							
PMG	**Port Moresby**	**37.48**	**279**	⇑P		**P**	**23 10 40.0**	**-1.6**
RKT	**Rikitea**	**37.84**	**103**	*e*P		**P**	**23 10 44.3**	**-0.3**
	comp=Z,121nm,0.9s							
RKT				*e*S		**S**	**23 16 40.6**	**+4.9**
	comp=Z,18µm,40.5s							
RKT				*e*SS		**SS**	**23 19 19.8**	**-2.1**
	comp=Z,136µm,26.5s							
RKT				*e*LR		LR	23 21 02.5	
	comp=Z,104µm,29.2s							
QLP	**Quilpie**	**37.88**	**251**	P		**P**	**23 10 43.2**	**-1.7**
	comp=Z,359nm,1.4s							
QLP	**Quilpie**	**37.88**	**251**	P		**P**	**23 10 45.6**	**+0.7**
	comp=Z,359nm,1.4s							
QLP	**Quilpie**	**37.88**	**251**	⇑P		**P**	**23 10 43.7**	**-1.2**
MTSU	**Mount Surprise**	**38.17**	**265**	P		**P**	**23 10 45.5**	**-2.0**
	comp=Z,28nm,0.9s							
MTSU	**Mount Surprise**	**38.17**	**265**	P		**P**	**23 10 47.6**	**+0.2**
	comp=Z,28nm,0.9s							
TOO	**Toolangi**	**38.78**	**233**	P		**P**	**23 10 56.7**	**+4.3**
TOO	**Toolangi**	**38.78**	**233**	P		**P**	**23 10 52.4**	**0.0**
TOO	**Toolangi**	**38.78**	**233**	P		**P**	**23 10 52.4**	**0.0**
TOO				pmax	pmax			
	comp=Z,75nm,1.4s							
TOO	**Toolangi**	**38.78**	**233**	⇑P		P	23 10 58.0	+5.5
BRAT	**Ballarat**	**39.97**	**234**	P		**P**	**23 11 03.5**	**+1.3**
	comp=Z,49nm,1.2s							
COEN	**Coen**	**40.00**	**271**	P		**P**	**23 11 00.1**	**-2.7**
	comp=Z,0.0nmcomp=Z,136nm,1.1s							
COEN	**Coen**	**40.00**	**271**	P		**P**	**23 11 00.7**	**-2.0**
COEN				IAmb	IAmb		23 11 04.3	
	comp=Z,158nm,1.1s							
COEN	**Coen**	**40.00**	**271**	P		**P**	**23 11 03.3**	**+0.5**
	comp=Z,136nm,1.1s							
COEN	**Coen**	**40.00**	**271**	⇑P		**P**	**23 11 00.8**	**-2.0**
AUMTC	**Mt Clear Colle**	**40.02**	**234**	P		**P**	**23 11 03.6**	**+0.9**
	comp=Z,71nm,2.4s							
MANU	**Manus Island**	**40.17**	**290**	P		**P**	**23 11 02.9**	**-1.4**
STKA	**Stephens Creek**	**40.68**	**243**	P		**P**	**23 11 07.5**	**-0.7**
	comp=Z,0.0nmcomp=Z,393nm,1.0s							
STKA	**Stephens Creek**	**40.68**	**243**	P		**P**	**23 11 07.3**	**-0.9**
STKA	**Stephens Creek**	**40.68**	**243**	P		**P**	**23 11 06.6**	**-1.6**
	comp=Z,47nm,1.1s,baz=86,slow=7.7,SNR=20							
STKA				LR		LR	23 27 37.2	
	comp=Z,25µm,18.1s,baz=87,slow=36							
	comp=Z,47nm,1.1s							
STKA	**Stephens Creek**	**40.68**	**243**	P		**P**	**23 11 09.3**	**+1.1**
STKA	**Stephens Creek**	**40.68**	**243**	*i*P		**P**	**23 11 06.9**	**-1.3**
INKA	**Innaminka**	**41.04**	**249**	P		**P**	**23 11 11.2**	**-0.1**
H11S2	**WAKE ISLAND Hy**	**41.19**	**334**	T		T	23 55 57.0	
	baz=148							
H11S3	**WAKE ISLAND Hy**	**41.20**	**334**	T		T	23 55 51.0	
	baz=148							
H11S1	**WAKE ISLAND Hy**	**41.21**	**334**	T		T	23 55 52.6	
	baz=148							
ARPS	**Mount Arapiles**	**41.38**	**236**	P		**P**	**23 11 13.2**	**-0.7**
	comp=Z,47nm,1.6s							
H11N3	**WAKE ISLAND Hy**	**42.20**	**335**	T		T	23 57 05.8	
	baz=151,slow=76,SNR=5.4							
H11N1	**WAKE ISLAND Hy**	**42.21**	**335**	T		T	23 57 04.9	
	baz=151,slow=76,SNR=5.6							
H11N2	**WAKE ISLAND Hy**	**42.22**	**335**	T		T	23 57 06.3	
	baz=151,slow=76,SNR=4.6							
QIS	**Mount Isa**	**42.30**	**260**	P		**P**	**23 11 19.5**	**-2.2**
	comp=Z,0.0nmcomp=Z,42nm,1.6s							
HMH	**Humu'ula Sheep**	**43.02**	**28**	P		**P**	**23 11 25.6**	**-2.1**
HMH				IAmb	IAmb		23 12 04.0	
	comp=Z,179nm,1.3s							
AUMBR	**Murray Bridge**	**43.08**	**239**	P		**P**	**23 11 28.8**	**+1.0**
	comp=Z,121nm,1.5s							
JOKA	**Jonika Flow**	**43.09**	**29**	P		**P**	**23 11 27.4**	**-0.6**
JOKA				IAmb	IAmb		23 11 52.4	
	comp=Z,245nm,1.6s							
HTT	**Hallett**	**43.12**	**241**	P		**P**	**23 11 27.2**	**-1.1**
	comp=Z,43nm,1.6s							
HTT	**Hallett**	**43.12**	**241**	P		**P**	**23 11 29.1**	**+0.9**
	comp=Z,107nm,1.6s							
HTT	**Hallett**	**43.12**	**241**	⇑P		**P**	**23 11 27.6**	**-0.7**
POHA	**Pohakuloa**	**43.14**	**28**	P		**P**	**23 11 31.5**	**+2.9**
	comp=Z,45nm,1.0s							
HPAH	**Hawaii Prepara**	**43.30**	**27**	P		**P**	**23 11 28.1**	**-1.7**
AUJCS	**Jamestown Cent**	**43.35**	**242**	P		**P**	**23 11 30.7**	**+0.6**
	comp=Z,75nm,1.2s							
KIP	**Kipapa**	**43.60**	**24**	P		**P**	**23 11 30.6**	**-1.4**
KIP				IAmb	IAmb		23 11 41.3	
	comp=Z,116nm,1.1s							
KIP	**Kipapa**	**43.60**	**24**	P		**P**	**23 11 34.9**	**+2.9**
	comp=Z,43nm,1.2s							
KIP	**Kipapa**	**43.60**	**24**	P		**P**

SBA MLR MLR
comp=Z,6µm,22.0s
VNDA Vanda 59.64 186 P **P** **23 13 32.0 +0.7**
VNDA Vanda 59.64 186 P **P** **23 13 32.2 +0.9**
comp=Z,7.8nm,1.0s,baz=9.9,slow=6.5,SNR=8.5
VNDA LR LR 23 38 45.2
comp=Z,4µm,18.5s,baz=26,slow=36
comp=Z,7.8nm,1.0s
SANI Sanana 59.76 279 P **P** **23 13 30.3 -2.8**
SANI S **S** **23 21 39.2 -5.3**
SANI Sanana 59.76 279 P **P** **23 13 31.4 -1.7**
SANI Sanana 59.76 279 ⇑P **P** **23 13 30.7 -2.4**
PSAC2 Pilbara Seismi 60.38 256 P **P** **23 13 34.6 -2.7**
comp=Z,116nm,1.3s
PSAB3 Pilbara Seismi 60.42 255 P **P** **23 13 35.0 -2.6**
comp=Z,133nm,1.3s
PSA00 Pilbara Seismi 60.43 256 P **P** **23 13 35.3 -2.3**
comp=Z,127nm,1.4s
PSA00 Pilbara Seismi 60.43 256 P **P** **23 13 36.5 -1.1**
PSA00 Pilbara Seismi 60.43 256 P **P** **23 13 36.0 -1.6**
PSA00 IAmb IAmb 23 13 40.4
comp=Z,97nm,1.2s
PSA00 Pilbara Seismi 60.43 256 P **P** **23 13 39.3 +1.6**
comp=Z,127nm,1.4s
PSAC1 Pilbara Seismi 60.47 256 P **P** **23 13 36.1 -1.8**
comp=Z,132nm,1.4s
MBWA Marble Bar 60.61 256 P **P** **23 13 36.4 -2.5**
comp=Z,0.0nmcomp=Z,109nm,1.8s
MBWA Marble Bar 60.61 256 P **P** **23 13 37.1 -1.7**
MBWA Marble Bar 60.61 256 P **P** **23 13 38.6 -0.3**
comp=Z,63nm,1.8s
MBWA Marble Bar 60.61 256 ⇓P **P** **23 13 37.2 -1.7**
RPN Rapa Nui 60.71 111 LR LR 23 35 38.3
comp=Z,5µm,18.8s,baz=264,slow=32
MEEK Meekatharra 60.76 250 P **P** **23 13 36.5 -3.4**
MEEK Meekatharra 60.76 250 P **P** **23 13 40.7 +0.8**
comp=Z,71nm,1.3s
KLBR Kellerberrin 60.94 244 P **P** **23 13 39.1 -1.9**
comp=Z,195nm,1.2s
KLBR Kellerberrin 60.94 244 P **P** **23 13 42.1 +1.1**
comp=Z,195nm,1.2s
MMRI Maumere 61.19 270 P **P** **23 13 43.2 +0.3**
comp=Z,130nm,1.1s
MMRI Maumere 61.19 270 P **P** **23 13 43.0 +0.1**
NWAO Narrogin (SRO) 61.26 242 P **P** **23 13 41.3 -1.8**
comp=Z,49nm,1.7s
NWAO Narrogin (SRO) 61.26 242 P **P** **23 13 40.1 -3.0**
NWAO Narrogin (SRO) 61.26 242 P **P** **23 13 42.8 -0.4**
NWAO Narrogin (SRO) 61.26 242 IAMs_20 IAMs_20 23 40 12.4
comp=Z,18µm,19.0s
NWAO Narrogin (SRO) 61.26 242 P **P** **23 13 44.0 +0.9**
comp=Z,31nm,1.2s
NWAO Narrogin (SRO) 61.26 242 P **P** **23 13 44.4 +1.3**
comp=Z,31nm,1.2s
NWAO Narrogin (SRO) 61.26 242 P **P** **23 13 42.8 -0.4**
NWAO pmax pmax
comp=Z,120nm,1.5s
NWAO MLR MLR
comp=Z,18µm,19.0s
JCJ Chichijima 61.57 317 LR LR 23 36 50.6
comp=Z,11µm,19.5s,baz=141,slow=33
EDFI Ende, Flores 61.68 270 P **P** **23 13 44.2 -2.1**
BBSI Bau Bau 61.83 274 P **P** **23 13 49.0 +1.8**
BLDU Ballidu 61.93 245 P **P** **23 13 46.6 -1.1**
comp=Z,78nm,1.4s
BLDU Ballidu 61.93 245 P **P** **23 13 48.6 +0.9**
comp=Z,79nm,1.4s
MUN Mundaring 62.21 243 P **P** **23 13 50.2 +0.7**
comp=Z,64nm,1.5s
MUN Mundaring 62.21 243 P **P** **23 13 50.8 +1.2**
comp=Z,63nm,1.5s
BASI Baing, Sumba 62.32 268 P **P** **23 13 53.8 +3.3**
AUMAZ Mazenod Senior 62.35 243 P **P** **23 13 52.0 +1.5**
comp=Z,67nm,1.4s
KMSI Cibinong 62.57 281 P P 23 14 02.3 +10
MORW Morawa 62.70 247 P **P** **23 13 50.4 -2.5**
comp=Z,95nm,1.4s
MORW Morawa 62.70 247 P **P** **23 13 54.1 +1.2**
comp=Z,95nm,1.4s
WSI Waingapu 62.73 269 P **P** **23 13 54.5 +1.2**
LUWI Luwuk 63.12 279 P **P** **23 13 54.0 -1.8**
LUWI Luwuk 63.12 279 P **P** **23 13 57.1 +1.2**
comp=Z,186nm,1.4s
LUWI Luwuk 63.12 279 P **P** **23 13 55.5 -0.4**
LUWI Luwuk 63.12 279 ⇑P **P** **23 13 54.6 -1.2**
WBSI Waikabubak, Su 63.60 268 P **P** **23 13 58.6 -0.5**
BKSI Bulukumba 64.19 273 P **P** **23 14 06.4 +3.5**
APSI Ampana 64.22 278 P **P** **23 14 06.0 +2.9**
MRSI Marisa 64.44 280 P **P** **23 14 09.0 +4.5**
BNSI Bone 64.50 274 P **P** **23 14 04.2 -0.8**
KAPI Kappang 64.64 273 P **P** **23 14 03.8 -2.0**
KAPI Kappang 64.64 273 *i* P **P** **23 14 04.7 -1.2**
KAPI pmax pmax
comp=Z,31nm,1.2s
SPSI Sidrap Palu 64.96 275 P **P** **23 14 08.9 +1.0**
TTSI Tana Toraja 65.21 276 P **P** **23 14 11.4 +1.8**
GIRL Giralia 65.35 253 P **P** **23 14 09.9 -0.5**
PLAI Plampang 65.36 269 P **P** **23 14 11.5 +0.9**
comp=Z,265nm,1.8s
PLAI Plampang 65.36 269 P **P** **23 14 09.2 -1.4**
TOLI2 Tolitoli 65.75 280 P **P** **23 14 11.1 -2.0**
TOLI2 Tolitoli 65.75 280 P **P** **23 14 14.4 +1.3**
comp=Z,61nm,1.8s
TWSI Taliwang, Sumb 66.23 269 P **P** **23 14 14.9 -1.3**
MPSI Mapaga 66.29 279 P **P** **23 14 15.4 -1.2**
CASY Casey 66.38 205 P **P** **23 14 15.9 -0.4**
CASY Casey 66.38 205 ⇓P **P** **23 14 16.5 +0.2**
JHJ Hachijo jima 2 67.22 320 LR LR 23 42 50.7
comp=Z,8µm,18.0s,baz=142,slow=35
SRBI Singaraja 68.00 269 P **P** **23 14 32.1 +4.7**
JAGI Jajag, Banyuwa 68.89 268 P **P** **23 14 30.5 -2.6**
JAGI Jajag, Banyuwa 68.89 268 P **P** **23 14 34.2 +1.2**
comp=Z,128nm,1.1s
JAGI Jajag, Banyuwa 68.89 268 P **P** **23 14 32.3 -0.7**
JAGI Jajag, Banyuwa 68.89 268 ⇑P **P** **23 14 30.9 -2.1**
MYLDM Lahad Datu 69.37 283 P **P** **23 14 35.2 -0.7**
MYLDM Lahad Datu 69.37 283 P **P** **23 14 37.2 +1.3**
comp=Z,83nm,1.4s
BLJI Banyuglugur 69.63 269 P **P** **23 14 39.2 +1.6**
BBKI Banjar Baru 69.77 273 P **P** **23 14 41.7 +3.2**
JGF Kuroka 70.38 321 P **P** **23 14 43.7 +2.0**
comp=Z,48nm,1.6s
INU Inuyama 70.41 320 IAMs_20 IAMs_20 23 45 22.5
comp=Z,9µm,18.0s
MJAR Matsushiro Arr 70.51 322 P **P** **23 14 41.5 -1.0**
comp=Z,2.3nm,0.2s,baz=159,slow=5.9,SNR=8.6
MJAR LR LR 23 39 29.7
comp=Z,6µm,22.0s,baz=126,slow=31
comp=Z,2.3nm,0.2s
MAJO Matsushiro 70.51 322 P **P** **23 14 41.6 -0.9**
MAJO IAmb IAmb 23 14 54.2
comp=Z,41nm,1.1s
MAJO Matsushiro 70.51 322 P **P** **23 14 44.5 +2.0**
comp=Z,41nm,1.6s
MAJO Matsushiro 70.51 322 P **P** **23 14 41.6 -0.9**
MAJO pmax pmax
comp=Z,41nm,1.1s
MAJO MLR MLR
comp=Z,5µm,20.0s
MJB9 Matsu-Tunnel 70.51 322 P **P** **23 14 41.2 -1.3**
MJB9 IAmb IAmb 23 14 55.2
comp=Z,39nm,1.1s
MTKI Muara Teweh, K 70.55 276 P **P** **23 14 40.6 -2.6**
ADK Adak 70.57 359 IAMs_20 IAMs_20 23 38 23.8
comp=Z,17µm,21.0s
TGY Tagaytay City 70.81 293 LR LR 23 43 09.0
comp=Z,5µm,20.7s,baz=127,slow=34
ATKA Atka Island 70.89 1 IAMs_20 IAMs_20 23 38 33.3
comp=Z,11µm,22.0s
ATKA Atka Island 70.89 1 P **P** **23 14 46.5 +2.1**
comp=Z,100nm,1.3s
QSPA South Pole Qui 71.08 180 P **P** **23 14 50.4 +4.7**
QSPA South Pole Qui 71.08 180 IAMs_20 IAMs_20 23 39 13.1
comp=Z,11µm,22.0s
QSPA South Pole Qui 71.08 180 P **P** **23 14 49.2 +3.5**
comp=Z,61nm,1.1s,baz=42,slow=2.8,SNR=22
QSPA LR LR 23 43 58.7
comp=Z,8µm,18.5s,baz=34,slow=34
JOW Kunigami 71.14 309 LR LR 23 40 51.3
comp=Z,9µm,21.8s,baz=137,slow=32
JMN Monobe 71.32 317 P **P** **23 14 49.1 +1.6**
comp=Z,42nm,1.2s
PCJI Pacitan 71.78 267 P **P** **23 14 50.4 -0.3**
NIKH Nikolski High 71.87 4 P **P** **23 14 50.5 +0.2**
baz=186
SHEM Shemya Is, Ala 71.99 353 LR LR 23 42 26.5
comp=Z,13µm,19.2s,baz=172,slow=33
KUR Kuril'sk 72.13 334 *e*P **P** **23 14 48.6 -3.4**
KUR *e* 23 17 31.9
KUR *e*S **S** **23 24 12.2 -1.7**
KUR pmax pmax
comp=Z,2µm,4.3s
KUR MLR MLR
comp=Z,11µm,17.0s
KUR MLR MLR
comp=N,12µm,18.0s
UGM Wanagama 72.49 267 P **P** **23 14 56.1 +1.1**
comp=N,88nm,1.3s
SMRI Semarang 72.82 268 P **P** **23 14 55.5 -1.5**
JNU Nakatsue 72.92 315 P **P** **23 14 56.6 -0.5**
JNU IAmb IAmb 23 15 06.3
comp=Z,98nm,1.6s
JNU Nakatsue 72.92 315 LR LR 23 45 07.3
comp=Z,2µm,18.4s,baz=124,slow=34
UNV Unalaska Valle 72.93 5 P **P** **23 14 57.9 +1.4**
baz=189
H06E1 SOCORRO T-PHAS 73.55 63 T T 00 35 35.5
SNR=18
ASAJ Asahikawa 73.62 330 LR LR 23 43 46.1
comp=Z,23µm,19.3s,baz=168,slow=33
SKR Severo-Kuril's 73.77 342 *e*P **P** **23 14 58.7 -2.9**
SKR *e* 23 17 42.9
SKR *e*S **S** **23 24 36.1 +3.7**
SKR pmax pmax
comp=Z,500nm,8.1s
SKR smax smax
comp=N,5µm,14.0s
SKR smax smax
comp=E,2µm,15.2s
SKR MLR MLR
comp=Z,10µm,18.0s
KPJI Karang Pucung 74.17 268 P **P** **23 15 07.8 +3.0**
SBUM Sibu 74.22 278 P **P** **23 15 04.6 -0.6**
SBUM IAmb IAmb 23 15 22.6
comp=Z,67nm,1.5s
SBUM Sibu 74.22 278 P **P** **23 15 06.5 +1.4**
comp=Z,26nm,1.9s
CNBA Chernabura Isl 74.73 9 IAMs_20 IAMs_20 23 41 42.8
comp=Z,12µm,20.0s
FARB Farallon Islan 74.85 41 P **P** **23 15 05.7 -2.5**
FARB IAmb IAmb 23 15 46.2
comp=Z,109nm,1.4s
FARB IAMs_20 IAMs_20 23 40 34.4
comp=Z,11µm,21.0s
NACB Ninganchiao 74.92 303 P **P** **23 15 10.3 +1.4**
comp=Z,40nm,1.3s
FORD Fort Ord Natur 74.98 42 IAMs_20 IAMs_20 23 40 28.0
comp=Z,13µm,20.0s
JRSC Jasper Ridge 75.13 41 IAMs_20 IAMs_20 23 40 33.0
comp=Z,12µm,20.0s
PET Petropavlovsk 75.16 344 IAMs_20 IAMs_20 23 41 18.1
comp=Z,12µm,22.0s
MCCM Marconi Confer 75.20 40 IAMs_20 IAMs_20 23 40 54.7
comp=Z,12µm,20.0s
SAO San Andreas Ge 75.24 42 P **P** **23 15 09.7 -0.8**
SAO San Andreas Ge 75.24 42 P **P** **23 15 09.7 -0.8**
SAO pmax pmax
comp=Z,48nm,1.3s
SAO MLR MLR
comp=Z,16µm,20.0s
SAO San Andreas Ge 75.24 42 ⇑P **P** **23 15 12.6 +2.0**
S12K Black Hills 75.24 8 P **P** **23 15 10.6 +0.5**
baz=193
TPUB Ta-pu 75.27 301 IAMs_20 IAMs_20 23 43 21.5
comp=Z,11µm,22.0s
PMPB Monarch Peak 75.32 43 P **P** **23 15 10.8 -0.4**
PKD Bear Valley Ra 75.33 43 P **P** **23 15 10.6 -0.5**
PKD IAmb IAmb 23 15 20.1
comp=Z,62nm,1.4s
YHNB Yeheng 75.33 303 IAMs_20 IAMs_20 23 45 32.9
comp=Z,9µm,20.0s
BBJI Bungbulang 75.34 267 P **P** **23 15 12.6 +0.9**
comp=Z,57nm,1.4s
BBGB Big Mountain B 75.39 43 P **P** **23 15 11.1 -0.4**
BBGB IAmb IAmb 23 16 08.9
comp=Z,75nm,1.2s
TATO Taipei 75.39 303 IAMs_20 IAMs_20 23 44 39.3
comp=Z,9µm,20.0s
P08K Saint George I 75.45 3 IAMs_20 IAMs_20 23 41 10.4
comp=Z,11µm,20.0s
MHC Mount Hamilton 75.47 42 P **P** **23 15 11.6 -0.4**
MHC IAmb IAmb 23 15 21.2
comp=Z,53nm,1.2s
MHC IAMs_20 IAMs_20 23 40 53.9
comp=Z,14µm,20.0s
MHC Mount Hamilton 75.47 42 P **P** **23 15 11.6 -0.4**
MHC pmax pmax
comp=Z,53nm,1.3s
MHC MLR MLR
comp=Z,14µm,20.0s
PEA0B Petropavlovsk- 75.48 344 P **P** **23 15 10.6 -1.0**
PEA0B Petropavlovsk- 75.48 344 *i* P **P** **23 15 10.9 -0.7**
PETK Petropavlovsk- 75.48 344 P **P** **23 15 10.4 -1.1**
PETK Petropavlovsk- 75.48 344 P **P** **23 15 10.1 -1.4**
comp=Z,3.5nm,0.7s,baz=102,slow=14,SNR=4.2
comp=Z,3.5nm,0.7s
PETK Petropavlovsk- 75.48 344 P **P** **23 15 10.4 -1.1**
LEM Lembang 75.56 268 LR LR 23 46 17.8
comp=Z,5µm,21.9s,baz=123,slow=34
CVS Carmenet Viney 75.58 40 P **P** **23 15 11.3 -1.2**
CVS IAmb IAmb 23 15 31.4
comp=Z,84nm,1.5s
CVS IAMs_20 IAMs_20 23 40 44.9
comp=Z,13µm,21.0s
HOPS Hopland Field 75.62 40 P **P** **23 15 10.7 -2.0**
HOPS IAmb IAmb 23 15 21.0
comp=Z,62nm,1.2s
HOPS IAMs_20 IAMs_20 23 40 48.8
comp=Z,14µm,20.0s
CCX Cicese 75.62 49 P **P** **23 15 11.3 -1.6**
GDXM Geysers 75.67 40 P **P** **23 15 12.6 -0.5**
KSM Kuching 75.68 277 P **P** **23 15 12.4 -1.2**
KSM Kuching 75.68 277 P **P** **23 15 15.4 +1.8**
comp=Z,89nm,1.1s
YSS Yuzhno-Sakhali 75.69 332 P **P** **23 15 12.5 -0.3**
YSS IAmb IAmb 23 15 21.1
comp=Z,120nm,1.6s
YSS Yuzhno-Sakhali 75.69 332 P **P** **23 15 15.2 +2.3**
comp=Z,53nm,1.2s
YSS Yuzhno-Sakhali 75.69 332 *e*P **P** **23 15 12.6 -0.3**
YSS *e* 23 17 57.8
YSS *e*S **S** **23 24 55.0 +0.9**
YSS *e*SS **SS** **23 29 52.0 +5.8**
YSS pmax pmax
comp=Z,700nm,8.6s
YSS pmax pmax
comp=Z,40nm,1.0s
YSS smax smax
comp=E,900nm,9.8s
YSS MLR MLR
comp=Z,6µm,18.0s
YSS MLR MLR
comp=N,2µm,16.0s
YSS MLR MLR
comp=E,6µm,17.0s
OSI Osito Audit: C 75.74 45 P **P** **23 15 13.9 +0.3**
KCPM Cahto Peak 75.76 39 P **P** **23 15 11.9 -1.8**
KCPM IAmb IAmb 23 15 33.0
comp=Z,131nm,1.8s
DCMP DeCamp, Califo 75.76 39 P **P** **23 15 12.7 -0.8**
PASC Pasadena Art C 75.85 46 P **P** **23 15 14.1 0.0**
PASC IAmb IAmb 23 15 32.1
comp=Z,58nm,1.6s
PASC IAMs_20 IAMs_20 23 40 21.3
comp=Z,14µm,21.0s
CBX Cerro Bola 75.87 48 P **P** **23 15 14.5 0.0**
CBX IAmb IAmb 23 15 20.0
comp=Z,65nm,1.7s
CPE Camp Elliot 75.88 48 P **P** **23 15 13.4 -0.9**
CPE IAMs_20 IAMs_20 23 40 30.9
comp=Z,12µm,21.0s
KMPM Mount Pierce 75.91 38 IAmb IAmb 23 15 36.5
comp=Z,55nm,1.1s
KMPM IAMs_20 IAMs_20 23 41 49.5
comp=Z,13µm,20.0s
MNRC McLaughlin Min 75.93 40 P **P** **23 15 15.1 +0.5**
MNRC IAmb IAmb 23 15 23.7
comp=Z,107nm,1.4s
MNRC IAMs_20 IAMs_20 23 41 48.0
comp=Z,13µm,20.0s
MWC Mount Wilson 75.97 46 P **P** **23 15 14.6 -0.4**
MWC IAMs_20 IAMs_20 23 40 56.3
comp=Z,14µm,20.0s
MWC Mount Wilson 75.97 46 P **P** **23 15 14.6 -0.4**
MWC pmax pmax
comp=Z,28nm,1.1s
MWC MLR MLR
comp=Z,14µm,20.0s
SPIA Saint Paul Isl 75.99 3 IAMs_20 IAMs_20 23 42 30.7
comp=Z,10µm,20.0s
VTX Valle De La Tr 75.99 49 P **P** **23 15 13.5 -1.5**
VTX IAmb IAmb 23 15 47.0
comp=Z,75nm,2.0s
KMRM Mail Ridge 76.03 38 P **P** **23 15 15.0 -0.1**
KMRM IAMs_20 IAMs_20 23 40 50.2
comp=Z,15µm,21.0s
DPP Dos Picos Cty 76.05 48 P **P** **23 15 15.4 +0.1**
DPP IAmb IAmb 23 15 42.5
comp=Z,31nm,0.6s
BAR Barrett 76.06 48 P **P** **23 15 13.2 -2.2**
BAR IAMs_20 IAMs_20 23 40 35.9
comp=Z,11µm,21.0s
ELS Elsinore Mount 76.08 47 P **P** **23 15 14.7 -0.8**
S14K Fog Glacier 76.15 9 P **P** **23 15 15.6 +0.1**
baz=195
ESJX Sierra Juarez 76.20 49 P **P** **23 15 14.1 -2.4**
VES Vestal, Richgr 76.22 44 P **P** **23 15 15.6 -0.5**
VES IAMs_20 IAMs_20 23 40 43.8
comp=Z,12µm,22.0s
JCC Jacoby Creek, 76.22 38 IAMs_20 IAMs_20 23 42 46.7
comp=Z,11µm,19.0s
TPO Tropico Hills 76.23 45 P **P** **23 15 16.4 0.0**
TPO IAmb IAmb 23 15 25.5
comp=Z,94nm,1.5s
BFSC Mount Baldy Ra 76.25 46 P **P** **23 15 16.5 -0.1**
BFSC IAMs_20 IAMs_20 23 40 43.8
comp=Z,15µm,21.0s
CHIR Chirikof Islan 76.37 11 P **P** **23 15 16.6 +0.1**
CHIR IAMs_20 IAMs_20 23 42 38.7
comp=Z,12µm,20.0s
CHIR Chirikof Islan 76.37 11 P **P** **23 15 16.6 +0.1**
baz=199
KHMM Horse Mountain 76.43 38 P **P** **23 15 16.7 -0.8**
KHMM IAmb IAmb 23 15 25.9
comp=Z,45nm,1.1s
KHMM IAMs_20 IAMs_20 23 42 17.3
comp=Z,13µm,20.0s
KRPM Rodgers 76.45 37 P **P** **23 15 16.9 -0.6**
KRPM IAmb IAmb 23 15 26.0
comp=Z,41nm,1.1s
KRPM IAMs_20 IAMs_20 23 43 12.7
comp=Z,11µm,20.0s
DBJI Dramaga 76.46 268 P **P** **23 15 22.9 +4.8**
SFX San Felipe 76.48 50 P **P** **23 15 16.7 -1.0**
LPIG La Paz 76.51 58 LR LR 23 40 28.0
comp=Z,7µm,21.4s,baz=242,slow=29
ISA Isabella, Lake 76.52 45 P **P** **23 15 17.4 -0.5**
ISA Isabella, Lake 76.52 45 P **P** **23 15 17.5 -0.5**
ISA pmax pmax
comp=Z,168nm,2.0s
ISA MLR MLR
comp=Z,15µm,21.0s
SRIG Santa Rosalia 76.53 55 P **P** **23 15 18.3 +0.2**
O02D Mt. Diablo Mer 76.54 39 P **P** **23 15 16.9 -1.1**
O02D IAmb IAmb 23 15 26.6
comp=Z,41nm,1.1s
SUTB Sutter Butte 76.55 40 P **P** **23 15 18.0 +0.1**
SUTB IAmb IAmb 23 15 36.5
comp=Z,50nm,1.4s
BORC Borrego Spring 76.56 48 P **P** **23 15 17.6 -0.6**
YUH Yuha Desert 76.57 48 P **P** **23 15 17.8 -0.5**
DNR Dunn Ranch,Anz 76.58 47 P **P** **23 15 17.6 -0.9**
DNR IAmb IAmb 23 15 49.6
comp=Z,51nm,1.3s
KHBM Hayfork Bally 76.59 38 P **P** **23 15 16.8 -1.7**
KHBM IAMs_20 IAMs_20 23 41 20.5
comp=Z,12µm,20.0s
SLBS Sierra La Lagu 76.61 59 P **P** **23 15 17.2 -1.5**
SLBS IAmb IAmb 23 15 28.1
comp=Z,100nm,1.6s
SLBS Sierra La Lagu 76.61 59 IAMs_20 IAMs_20 23 40 08.9
comp=Z,9µm,21.0s
CMB Columbia Colle 76.68 42 P **P** **23 15 17.6 -1.2**
CMB IAMs_20 IAMs_20 23 41 32.0
comp=Z,12µm,21.0s
CMB Columbia Colle 76.68 42 P **P** **23 15 17.6 -1.2**
CMB pmax pmax
comp=Z,22nm,1.2s
CMB MLR MLR
comp=Z,12µm,21.0s
WELL Weller Preserv 76.71 41 IAMs_20 IAMs_20 23 41 42.8
comp=Z,11µm,20.0s
PFO Pinyon Flats O 76.72 47 P **P** **23 15 19.4 +0.1**
PFO Pinyon Flats O 76.72 47 LR LR 23 41 17.9
comp=Z,13µm,21.0s,baz=246,slow=30
PFO Pinyon Flats O 76.72 47 *i* P **P** **23 15 16.7 -2.6**
PFO pmax pmax
comp=Z,49nm,1.6s
TPI Tanjungpandan 76.79 272 P P 23 15 29.2 +9.3
PMD Palm Desert 76.80 47 P **P** **23 15 19.1 -0.5**
CPBX Cerro Prieto 76.89 49 P **P** **23 15 20.8 +0.8**
CPBX IAmb IAmb 23 16 21.2
comp=Z,110nm,1.4s
ORV Oroville 76.92 40 P **P** **23 15 20.4 +0.3**
ORV Oroville 76.92 40 P **P** **23 15 20.4 +0.3**
ORV pmax pmax
comp=Z,23nm,1.2s
ORV MLR MLR
comp=Z,7µm,20.0s
LRMC Laurel Mtn Rad 76.94 45 P **P** **23 15 20.0 -0.5**
LRMC IAmb IAmb 23 15 39.6
comp=Z,58nm,1.6s
KSXB Camp Six Broad 76.97 37 P **P** **23 15 19.6 -0.8**
KSXB IAMs_20 IAMs_20 23 42 33.4
comp=Z,12µm,20.0s
KBO Bosley Butte 77.02 36 IAMs_20 IAMs_20 23 42 13.7
comp=Z,11µm,20.0s
N02D Trinity Center 77.09 38 P **P** **23 15 21.9 +0.8**
N02D IAmb IAmb 23 15 30.3
comp=Z,86nm,1.4s
N02D IAMs_20 IAMs_20 23 42 58.8
comp=Z,13µm,20.0s
WSHM Spangler Hills 77.13 45 P **P** **23 15 21.6 +0.2**
WSHM IAmb IAmb 23 15 37.4
comp=Z,61nm,1.5s
CCCA Chr Cany lake 77.18 45 P **P** **23 15 21.3 -0.3**
SBJI Serang 77.18 268 P P 23 15 30.7 +8.6
CLC China Lake 77.19 45 P **P** **23 15 21.2 -0.5**
CLC IAmb IAmb 23 15 30.9
comp=Z,67nm,1.5s
CLC China Lake 77.19 45 P **P** **23 15 21.2 -0.5**
CLC pmax pmax
comp=Z,67nm,1.5s
O03E Paynes Creek 77.20 39 P **P** **23 15 21.2 -0.6**
O03E IAmb IAmb 23 15 31.0
comp=Z,76nm,1.4s
O03E IAMs_20 IAMs_20 23 41 39.6
comp=Z,13µm,21.0s
CWC Cottonwood Cre 77.22 44 P **P** **23 15 21.3 -0.8**
TEY Ternei 77.25 327 *e*P **P** **23 15 21.3 -0.4**
BELC Belle Mtn. Jos 77.26 47 P **P** **23 15 21.8 -0.5**
BELC IAMs_20 IAMs_20 23 41 34.6
comp=Z,12µm,20.0s
MDPB Devils Postpil 77.27 43 P **P** **23 15 22.1 -0.4**
M02C Callahan 77.27 38 P **P** **23 15 21.9 -0.3**
M02C IAmb IAmb 23 15 38.5
comp=Z,88nm,1.6s
M02C IAMs_20 IAMs_20 23 42 44.5
comp=Z,10µm,20.0s
L02F Cave Junction 77.33 37 P **P** **23 15 21.3 -1.0**
SII Sitkinak Islan 77.33 12 IAMs_20 IAMs_20 23 42 08.3
comp=Z,10µm,21.0s
SII Sitkinak Islan 77.33 12 P **P** **23 15 21.7 -0.3**
baz=200
KEBM Edson Butte 77.39 36 P **P** **23 15 21.0 -1.7**
KEBM IAmb IAmb 23 15 43.4
comp=Z,61nm,1.2s
MPMC Manual Prospec 77.40 45 IAmb IAmb 23 15 32.2
comp=Z,56nm,1.3s
GSC Goldstone, Bar 77.43 46 P **P** **23 15 23.0 -0.1**
GSC IAmb IAmb 23 15 32.1
comp=Z,49nm,1.4s
GSC Goldstone, Bar 77.43 46 P **P** **23 15 23.0 -0.1**
GSC pmax pmax
comp=Z,49nm,1.4s
KSRS Korea Array 77.43 317 P **P** **23 15 21.9 -1.1**
comp=Z,5.0nm,0.9s,baz=135,slow=6.0,SNR=11
comp=Z,5.0nm,0.9s

BC3 Big Chuckawall 77.45 48 P **P** **23 15 22.6 -0.7**
BC3 lAmb lAmb 23 15 32.8
comp=Z,79nm,1.8s
BC3 lAMs_20 lAMs_20 23 41 38.6
comp=Z,10µm,20.0s
KSAR Wonju Array Be 77.45 317 P **P** **23 15 22.8 -0.3**
KSAR Wonju Array Be 77.45 317 P **P** **23 15 22.8 -0.3**
TIN Tinemaha, Big 77.48 44 P **P** **23 15 23.6 +0.2**
TIN lAmb lAmb 23 16 22.7
comp=Z,54nm,1.1s
TIN Tinemaha, Big 77.48 44 P **P** **23 15 23.6 +0.2**
TIN pmax pmax
comp=Z,54nm,1.1s
TIN MLR MLR
comp=Z,18µm,22.0s
KS19 Wonju Array Si 77.50 317 P **P** **23 15 22.9 -0.4**
KS19 lAmb lAmb 23 15 33.5
comp=Z,81nm,1.5s
WAKR Walker 77.56 42 P **P** **23 15 23.2 -0.8**
WAKR lAmb lAmb 23 15 43.2
comp=Z,58nm,1.5s
GLA Glamis 77.57 48 P **P** **23 15 22.8 -1.1**
GLA lAMs_20 lAMs_20 23 41 43.8
comp=Z,9µm,20.0s
GLA Glamis 77.57 48 P **P** **23 15 22.8 -1.1**
GLA pmax pmax
comp=Z,22nm,1.0s
YBH Yreka Blue Hor 77.57 38 P **P** **23 15 23.8 0.0**
YBH Yreka Blue Hor 77.57 38 LR LR 23 43 24.2
comp=Z,670nm,19.4s,baz=251,slow=31
YBH Yreka Blue Hor 77.57 38 P **P** **23 15 23.8 0.0**
YBH pmax pmax
comp=Z,24nm,1.1s
UGL Uglegorsk 77.60 333 *e*P **P** **23 15 23.1 -0.5**
UGL *e* 23 18 23.5
UGL *e*S **S** **23 25 12.8 -2.1**
UGL smax smax
comp=E,2µm,11.0s
UGL smax smax
comp=N,3µm,8.8s
M03C McCloud 77.63 38 P **P** **23 15 23.8 -0.3**
KNMB Chin-men Tao 77.63 301 P **P** **23 15 22.0 -2.4**
KNMB lAmb lAmb 23 16 09.7
comp=Z,83nm,1.2s
K02D Willamette Mer 77.65 36 P **P** **23 15 22.9 -1.4**
K02D lAmb lAmb 23 15 43.5
comp=Z,58nm,1.5s
MPK Martis Peak 77.66 41 P **P** **23 15 23.5 -1.1**
MPK lAmb lAmb 23 15 44.3
comp=Z,69nm,1.2s
QZH Quanzhou 77.68 302 P **P** **23 15 25.3 +0.7**
QZH S **S** **23 25 16.6 -0.2**
QZH LR LR
comp=Z,2µm,18.9s
QZH LR LR
comp=Z,6µm,21.2s
QZH LR LR
comp=Z,7µm,19.5s
R16K Pilot Point 77.69 10 P **P** **23 15 22.6 -1.3**
HATC Hat Creek Radi 77.73 39 P **P** **23 15 24.3 -0.4**
HATC lAMs_20 lAMs_20 23 42 28.6
comp=Z,13µm,20.0s
QSM Queen of Sheba 77.76 45 P **P** **23 15 24.4 -0.4**
QSM lAmb lAmb 23 15 33.8
comp=Z,64nm,1.4s
PIX Pinacate 77.76 50 P **P** **23 15 24.2 -0.7**
PNTR Pine Nut 77.81 41 P **P** **23 15 24.7 -0.6**
PNTR lAmb lAmb 23 15 34.3
comp=Z,99nm,1.5s
BEKR Beckworth 77.81 40 P **P** **23 15 24.3 -1.0**
DSP Deep Springs 77.83 43 P **P** **23 15 25.7 +0.5**
DSP lAmb lAmb 23 15 41.6
comp=Z,63nm,1.4s
IRM Iron Mountain 77.94 47 P **P** **23 15 26.3 +0.3**
IRM lAmb lAmb 23 15 35.5
comp=Z,68nm,1.5s
IRM lAMs_20 lAMs_20 23 41 54.5
comp=Z,13µm,21.0s
R17L Mt. Peulik Vol 77.95 10 P **P** **23 15 25.3 -0.2**
baz=198
PLK4 Peulik 4 77.95 10 P **P** **23 15 26.2 +0.6**
PLK4 lAmb lAmb 23 15 47.7
comp=Z,75nm,1.1s
LHV Little Huntoon 78.00 42 P **P** **23 15 25.8 -0.3**
LHV lAmb lAmb 23 15 35.5
comp=Z,76nm,1.5s
GRAC Grapevine Rang 78.01 44 P **P** **23 15 25.0 -1.3**
GRAC lAmb lAmb 23 15 44.7
comp=Z,53nm,1.1s
GWY Greenwater Val 78.02 45 P **P** **23 15 25.2 -1.3**
DANC Danby, Needles 78.03 47 P **P** **23 15 26.3 -0.2**
DANC lAMs_20 lAMs_20 23 42 10.1
comp=Z,10µm,20.0s
FURC Furnace Creek, 78.05 45 P **P** **23 15 26.2 -0.2**
FURC lAmb lAmb 23 15 35.4
comp=Z,48nm,1.3s
L04D Klamath Falls 78.12 37 P **P** **23 15 25.6 -1.3**
L04D lAmb lAmb 23 16 10.1
comp=Z,95nm,1.6s
SHOC Shoshone, Teco 78.12 45 P **P** **23 15 25.2 -1.7**
SHOC lAmb lAmb 23 15 35.9
comp=Z,87nm,1.4s
SHOC lAMs_20 lAMs_20 23 42 36.3
comp=Z,13µm,20.0s
BLYC Blythe 78.15 48 P **P** **23 15 26.7 -0.4**
113A Mohawk Valley, 78.17 49 P **P** **23 15 26.8 -0.4**
RYN Ryan 78.21 42 P **P** **23 15 27.1 -0.4**
RYN lAmb lAmb 23 15 36.4
comp=Z,92nm,1.8s
NVAR Mina Array Bea 78.23 42 P **P** **23 15 27.1 -0.6**
NVAR Mina Array Bea 78.23 42 P **P** **23 15 28.9 +1.2**
comp=Z,16nm,1.1s,baz=226,slow=8.4,SNR=20
NVAR LR LR 23 42 36.5
comp=Z,16µm,20.8s,baz=236,slow=30
comp=Z,16nm,1.1s
GMN Gold Mountain 78.26 44 P **P** **23 15 27.2 -0.7**
INCN Inchon 78.29 316 P **P** **23 15 27.3 -0.5**
INCN lAmb lAmb 23 15 41.8
comp=Z,110nm,1.4s
INCN Inchon 78.29 316 lAMs_20 lAMs_20 23 44 43.4
comp=Z,8µm,20.0s
INCN Inchon 78.29 316 P **P** **23 15 27.3 -0.5**
INCN pmax pmax
comp=Z,110nm,1.5s
INCN MLR MLR
comp=Z,8µm,20.0s
PAHR Pah Rah Range 78.31 41 P **P** **23 15 27.6 -0.4**
BBOR Butler Butte 78.33 37 P **P** **23 15 27.6 -0.5**
NV11 Mina Array Sit 78.33 42 P **P** **23 15 28.7 +0.5**
NV11 lAmb lAmb 23 15 37.1
comp=Z,85nm,1.7s
HSIG 78.36 54 P **P** **23 15 27.1 -1.2**
MTPC Mountain Pass 78.38 46 P **P** **23 15 28.2 -0.4**
MTPC lAmb lAmb 23 15 37.8
comp=Z,69nm,1.5s
WCT Wildcat Mounta 78.39 44 P **P** **23 15 28.2 -0.3**
214A Organ Pipe Nat 78.44 50 P **P** **23 15 28.6 -0.1**
I02E Swisshome, OR 78.47 35 P **P** **23 15 28.5 -0.1**
I02E lAmb lAmb 23 15 37.7
comp=Z,78nm,1.7s
I03D Drain, OR 78.48 36 P **P** **23 15 27.7 -0.9**
I03D lAmb lAmb 23 15 37.3
comp=Z,81nm,1.7s
MSHR Mys Shultsa 78.58 323 *i* P **P** **23 15 28.4 -0.8**
MSHR pmax pmax
comp=Z,16nm,1.2s
NEE2 Needles Airpor 78.63 47 P **P** **23 15 29.8 +0.1**
NEE2 lAmb lAmb 23 15 49.5
comp=Z,74nm,1.6s
NEE2 lAMs_20 lAMs_20 23 42 26.9
comp=Z,9µm,20.0s
SSE Sheshan 78.65 308 P **P** **23 15 29.2 -0.7**
SSE S **S** **23 25 30.1 +3.1**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,310nm,6.1s
SSE LR LR
comp=Z,1µm,21.0s
SSE LR LR
comp=Z,1µm,21.6s
ACHA Angle Creek He 78.68 11 P **P** **23 15 29.1 -0.5**
TYV Tymovskoe 78.71 334 *e*P **P** **23 15 34.2 +4.5**
TYV *e*S **SKSac** **23 25 36.2 -8.4**
TYV pmax pmax
comp=Z,300nm,3.1s
TYV pmax pmax
comp=Z,26nm,1.3s
TYV smax smax
comp=N,500nm,5.9s
TYV smax smax
comp=E,400nm,5.9s
TYV smax smax
comp=N,1.0nm,1.6s
TYV smax smax
comp=E,16nm,1.6s
TPNV Topopah Spring 78.72 45 P **P** **23 15 29.5 -0.9**
TPNV Topopah Spring 78.72 45 P **P** **23 15 29.5 -0.9**
TPNV pmax pmax
comp=Z,43nm,1.2s
TPNV MLR MLR
comp=Z,16µm,20.0s
KDAK Kodiak Island 78.79 12 lAMs_20 lAMs_20 23 42 51.9
comp=Z,9µm,22.0s
KDAK Kodiak Island 78.79 12 LR LR 23 42 52.6
comp=Z,9µm,21.7s,baz=203,slow=30
J04A Umpqua Nationa 78.88 37 P **P** **23 15 31.4 +0.3**
J04A lAmb lAmb 23 15 39.1
comp=Z,61nm,1.2s
Q16K King Salmon 78.90 10 P **P** **23 15 31.0 +0.5**
baz=198
KASI Kota Agung 78.91 268 P **P** **23 15 31.7 0.0**
O15K Ungalikthiuk R 78.91 8 P **P** **23 15 31.7 +1.0**
O15K lAmb lAmb 23 17 09.1
comp=Z,101nm,1.6s
O15K lAMs_20 lAMs_20 23 44 26.9
comp=Z,7µm,20.0s
O15K Ungalikthiuk R 78.91 8 P **P** **23 15 31.1 +0.5**
baz=195
V12A Nelson 78.99 46 P **P** **23 15 32.4 +0.5**
BUCK Buck Mountain 79.00 35 P **P** **23 15 31.0 -0.6**
P16K Nushagak River 79.03 9 lAMs_20 lAMs_20 23 44 18.2
comp=Z,10µm,21.0s
P16K Nushagak River 79.03 9 P **P** **23 15 31.3 0.0**
baz=197
I04A Tendick Farm, 79.06 36 P **P** **23 15 31.6 -0.3**
COR Corvallis 79.08 35 P **P** **23 15 31.6 -0.3**
COR Corvallis 79.08 35 P **P** **23 15 31.6 -0.3**
COR pmax pmax
comp=Z,33nm,1.2s
COR MLR MLR
comp=Z,6µm,20.0s
SMAI San Martin Ant 79.12 159 P **P** **23 15 33.5 +1.7**
SMAI lAmb lAmb 23 15 56.5
comp=Z,90nm,1.2s
HHU Hamhung 79.13 319 P **P** **23 15 36.4 +4.1**
HHU AmB
comp=Z,1µm,3.9s
HHU AMS AMS
comp=Z,6µm,16.9s
Q18K Katmai Hardscr 79.15 11 P **P** **23 15 31.7 -0.4**
baz=200
HJU Haeju 79.19 317 P **P** **23 15 36.6 +3.9**
HJU S **S** **23 25 34.5 +2.1**
HJU AmB
comp=Z,924nm,3.2s
HJU AMS AMS
comp=Z,8µm,19.2s
SHPR Sheep Range 79.21 45 P **P** **23 15 33.1 +0.1**
K05A Summer Lake 79.25 38 P **P** **23 15 32.9 -0.3**
K05A lAmb lAmb 23 15 41.4
comp=Z,53nm,1.1s
W13A Hualapai Mount 79.32 47 P **P** **23 15 33.1 -0.6**
Y14A Wickenburg 79.33 49 P **P** **23 15 33.5 -0.1**
H04D Lebanon 79.35 35 P **P** **23 15 33.8 +0.4**
H04D lAmb lAmb 23 15 58.3
comp=Z,67nm,1.4s
J05D Fort Rock, OR 79.40 37 P **P** **23 15 34.0 +0.1**
J05D lAmb lAmb 23 15 42.1
comp=Z,47nm,1.1s
N14K Kuskokwak Cree 79.41 7 P **P** **23 15 32.6 -0.7**
N14K Kuskokwak Cree 79.41 7 P **P** **23 15 32.8 -0.5**
baz=193
P17K Kvichak River 79.43 10 P **P** **23 15 33.8 +0.3**
baz=198
M11K Mekoryuk 79.43 5 P **P** **23 15 33.9 +0.4**
baz=189
S11A Rachel 79.44 44 P **P** **23 15 33.4 -0.9**
S11A lAmb lAmb 23 15 53.5
comp=Z,73nm,1.4s
LWLI Liwa 79.48 268 P P 23 15 43.2 +8.2
G03D McMinnville, O 79.51 35 P **P** **23 15 35.1 +0.9**
G03D lAmb lAmb 23 15 42.2
comp=Z,63nm,1.2s
MDSI Maura Dua 79.53 269 P **P** **23 15 34.9 -0.3**
O16K Kokwok River B 79.56 9 P **P** **23 15 33.2 -1.0**
O16K lAmb lAmb 23 16 32.4
comp=Z,65nm,1.5s
O16K lAMs_20 lAMs_20 23 44 45.1
comp=Z,9µm,21.0s
O16K Kokwok River B 79.56 9 P **P** **23 15 35.1 +0.9**
baz=197
WIFE Three Sisters- 79.56 36 P **P** **23 15 34.6 -0.3**
Q20K Shuyak Island 79.60 12 P **P** **23 15 35.1 +0.6**
baz=202
Q19K Cape Douglas, 79.66 11 lAMs_20 lAMs_20 23 42 38.8
comp=Z,9µm,22.0s
M13K Dall Lake 79.71 6 P **P** **23 15 35.6 +0.6**
baz=192
PYAG Pyongyang 79.74 317 P **P** **23 15 37.8 +2.2**
PYAG S **S** **23 25 40.8 +2.6**
PYAG AmB
comp=Z,1µm,5.6s
H04A Detroit Lake 79.75 35 P **P** **23 15 36.0 +0.4**
PRN Pahroc Range 79.77 45 P **P** **23 15 36.3 +0.2**
PRN lAmb lAmb 23 15 45.6
comp=Z,81nm,1.4s
P18K Big Mountain, 79.82 10 P **P** **23 15 35.5 -0.1**
P18K lAmb lAmb 23 15 49.2
comp=Z,52nm,1.0s
P18K lAMs_20 lAMs_20 23 44 10.9
comp=Z,7µm,21.0s
P18K Big Mountain, 79.82 10 P **P** **23 15 36.4 +0.7**
baz=199
F03A Seaside 79.82 34 P **P** **23 15 36.0 +0.1**
F03A lAmb lAmb 23 15 43.7
comp=Z,72nm,1.3s
N15K Kwethluk River 79.84 8 P **P** **23 15 34.3 -1.4**
N15K lAmb lAmb 23 16 56.1
comp=Z,170nm,1.9s
N15K Kwethluk River 79.84 8 P **P** **23 15 36.3 +0.5**
baz=195
O17K Koliganek Bris 79.88 9 P **P** **23 15 36.7 +0.8**
baz=198
PINE Pine Mountain 79.88 37 P **P** **23 15 36.1 -0.5**
PINE lAmb lAmb 23 15 44.8
comp=Z,58nm,1.1s
G04A Mulino 79.93 35 P **P** **23 15 36.2 -0.4**
R11B Troy Canyon, C 79.94 44 P **P** **23 15 35.0 -2.0**
I05D Terrebonne, OR 80.00 36 P **P** **23 15 37.0 -0.1**
TUC 80.10 51 P **P** **23 15 37.6 -0.3**
TUC Tucson 80.10 51 lAMs_20 lAMs_20 23 43 21.0
comp=Z,10µm,20.0s
TUC Tucson 80.10 51 P **P** **23 15 37.6 -0.3**
TUC pmax pmax
comp=Z,56nm,1.6s
TUC MLR MLR
comp=Z,10µm,20.0s
M14K Bethel 80.19 7 P **P** **23 15 37.7 +0.1**
baz=193
F04D Rainier, OR 80.21 34 P **P** **23 15 38.9 +0.9**
F04D lAmb lAmb 23 15 48.5
comp=Z,49nm,1.1s
E03A Lebam 80.22 33 P **P** **23 15 37.9 -0.2**
E03A lAmb lAmb 23 15 45.9
comp=Z,53nm,1.1s
O18K Koktuh Hills 80.26 10 lAMs_20 lAMs_20 23 44 35.6
comp=Z,7µm,21.0s
O18K Koktuh Hills 80.26 10 P **P** **23 15 38.5 +0.5**
baz=199
M15K Kasigluk River 80.28 7 P **P** **23 15 39.0 +0.9**
baz=194
N16K Nishlik Lake 80.31 8 P **P** **23 15 39.0 +0.7**
baz=196
LHSI Lahat 80.36 269 P P 23 15 48.2 +8.6
WVOR Wild Horse Val 80.39 39 P **P** **23 15 38.8 -0.5**
WVOR Wild Horse Val 80.39 39 P **P** **23 15 38.8 -0.5**
WVOR pmax pmax
comp=Z,42nm,1.1s
WVOR MLR MLR
comp=Z,15µm,21.0s
WVOR Wild Horse Val 80.39 39 ⇓P **P** **23 15 40.4 +1.1**
P19K Oil Pt 80.41 11 lAMs_20 lAMs_20 23 45 20.7
comp=Z,8µm,20.0s
P19K Oil Pt 80.41 11 P **P** **23 15 39.3 +0.4**
baz=201
DSRI Dabo 80.44 273 P **P** **23 15 44.8 +4.8**
HOOD Mount Hood Mea 80.45 35 P **P** **23 15 39.4 -0.1**
WISH Wishkah 80.49 33 P **P** **23 15 39.6 +0.1**
WISH lAmb lAmb 23 15 46.2
comp=Z,59nm,1.3s
G05A Wamic 80.58 35 P **P** **23 15 41.2 +1.1**
N17K Nushagak Hills 80.59 9 P **P** **23 15 38.9 -0.9**
N17K Nushagak Hills 80.59 9 P **P** **23 15 39.5 -0.3**
baz=197
NLWA Neilton Lookou 80.62 33 P **P** **23 15 40.3 0.0**
NLWA Neilton Lookou 80.62 33 ⇑P P 23 15 45.8 +5.5
CNPM China Poot 80.68 12 lAMs_20 lAMs_20 23 43 29.7
comp=Z,10µm,22.0s
X16A Lo Mia Camp, P 80.68 49 P **P** **23 15 40.0 -1.1**
L14K Kuka Creek 80.69 6 P **P** **23 15 39.4 -0.8**
L14K lAmb lAmb 23 16 07.1
comp=Z,62nm,1.4s
L14K Kuka Creek 80.69 6 P **P** **23 15 40.0 -0.2**
baz=192
HOM Homer 80.72 12 P **P** **23 15 40.8 +0.4**
baz=203
BELA Belgrano 2 80.73 172 P **P** **23 15 41.4 +0.9**
O19K Port Alsworth 80.73 10 P **P** **23 15 39.2 -1.2**
O19K lAmb lAmb 23 15 54.4
comp=Z,56nm,0.9s
O19K Port Alsworth 80.73 10 P **P** **23 15 40.1 -0.4**
baz=200
MDJ Mudanjiang 80.74 324 P **P** **23 15 40.3 -0.6**
MDJ lAmb lAmb 23 15 59.6
comp=Z,69nm,1.4s
MDJ lAMs_20 lAMs_20 23 46 01.8
comp=Z,12µm,21.0s
MDJ Mudanjiang 80.74 324 P **P** **23 15 42.9 +2.0**
MDJ pP pwP 23 15 46.6 -0.6
MDJ PP **PP** **23 18 47.2 +1.9**
MDJ S **S** **23 25 53.9 +5.4**
MDJ sS SKSac 23 25 59.2 +0.1
MDJ pmax pmax
comp=Z,18nm,1.2s
MDJ LR LR
comp=Z,6µm,19.6s
MDJ LR LR
comp=Z,8µm,21.4s
MDJ LR LR
comp=Z,16µm,21.0s
MDJ Mudanjiang 80.74 324 P **P** **23 15 43.1 +2.2**
comp=Z,29nm,1.4s
ILSW Iliamna Southw 80.74 11 P **P** **23 15 40.2 -0.5**
ILSW lAmb lAmb 23 15 57.5
comp=Z,86nm,1.0s
319A Douglas 80.76 52 P **P** **23 15 41.4 -0.1**
319A lAmb lAmb 23 15 51.6
comp=Z,86nm,1.7s
LCMT Little Creek M 80.78 46 P **P** **23 15 41.7 +0.2**
M16K Timber Creek 80.81 8 P **P** **23 15 41.1 +0.1**
M16K Timber Creek 80.81 8 P **P** **23 15 41.8 +0.9**
baz=196
NJ2 Nanjing 80.85 308 *e*P **P** **23 15 42.3 +0.5**
NJ2 S **S** **23 25 55.0 +4.8**
NJ2 SS **SS** **23 31 06.8 +2.3**
NJ2 pmax pmax
comp=Z,13nm,0.5s
NJ2 pmax pmax
comp=Z,920nm,6.5s
NJ2 LR LR
comp=Z,5µm,19.9s
NJ2 LR LR
comp=Z,2µm,21.3s
NJ2 LR LR
comp=Z,4µm,19.9s
DIB Dawson Inlet, 80.86 25 P **P** **23 15 40.4 -1.0**
DIB lAmb lAmb 23 15 42.7
comp=Z,92nm,1.5s
I07A Izee 80.88 37 P **P** **23 15 41.6 -0.3**
O20K Slope Mountain 80.93 11 P **P** **23 15 42.4 +0.7**
baz=202
N18K Kilae Creek 80.93 10 P **P** **23 15 42.1 +0.5**
baz=199
G06A Carlson Farm, 80.95 36 P **P** **23 15 40.2 -2.0**
BRLK Bradley Lake 80.97 12 P **P** **23 15 41.1 -0.7**
BRLK lAmb lAmb 23 15 47.0
comp=Z,77nm,1.3s
BRLK lAMs_20 lAMs_20 23 43 15.0
comp=Z,9µm,22.0s
BRSE Bradley Lake S 80.98 12 P **P** **23 15 42.9 +1.0**
baz=204
CCUT Cedar City 80.98 45 P **P** **23 15 43.0 +0.3**
KNB Kanab 81.06 46 P **P** **23 15 42.9 -0.2**
KNB lAmb lAmb 23 16 02.9
comp=Z,114nm,1.8s
KNB Kanab 81.06 46 P **P** **23 15 42.9 -0.2**
KNB pmax pmax
comp=Z,114nm,1.8s
K13K Kusilvak Mount 81.09 5 P **P** **23 15 43.7 +1.4**
baz=190
SPR3 Spring Creek 3 81.12 44 P **P** **23 15 42.9 -0.6**
U15A North Rim 81.12 47 P **P** **23 15 43.7 +0.2**
U15A lAmb lAmb 23 16 00.4
comp=Z,67nm,1.3s
L15K Ungalak Mounta 81.15 7 P **P** **23 15 43.9 +1.2**
baz=193
GZH Guangzhou 81.17 298 P **P** **23 15 43.6 -0.1**
GZH PP **PP** **23 18 48.3 -0.9**
GZH S **SKSac** **23 26 00.7 -2.3**
GZH SS **SS** **23 31 10.8 +1.3**
GZH LR LR
comp=Z,2µm,18.9s
GZH LR LR
comp=Z,3µm,21.1s
GZH LR LR
comp=Z,8µm,20.6s
PSUT Pine Spring 81.18 44 P **P** **23 15 42.2 -1.5**
SZCU Shurtz Canyon 81.19 45 P **P** **23 15 43.5 -0.3**
B04A Port Angeles 81.24 32 P **P** **23 15 41.7 -1.8**
GNW Green Mountain 81.27 33 P **P** **23 15 42.4 -1.3**
LON Longmire 81.27 34 P **P** **23 15 42.7 -1.1**
LON Longmire 81.27 34 P **P** **23 15 42.7 -1.1**
LON pmax pmax
comp=Z,26nm,1.4s
N19K Bonanza Creek 81.28 10 P **P** **23 15 43.1 -0.4**
N19K lAMs_20 lAMs_20 23 45 17.7
comp=Z,8µm,21.0s
N19K Bonanza Creek 81.28 10 P **P** **23 15 44.5 +0.9**
baz=200
WUAZ Wupatki 81.29 48 P **P** **23 15 42.6 -1.7**
WUAZ lAMs_20 lAMs_20 23 42 45.3
comp=Z,9µm,22.0s
GRNR Gornyy 81.33 331 ⇓*i*P **P** **23 15 45.0 +1.0**
GRNR pmax pmax
comp=Z,7.0nm,1.2s
M17K Holitna River 81.39 9 P **P** **23 15 42.2 -1.8**
M17K lAMs_20 lAMs_20 23 45 53.4
comp=Z,10µm,21.0s
M17K Holitna River 81.39 9 P **P** **23 15 45.0 +1.0**
baz=197
L16K Owhat River 81.41 8 P **P** **23 15 43.3 -0.8**
L16K lAmb lAmb 23 16 11.1
comp=Z,114nm,1.6s
L16K Owhat River 81.41 8 P **P** **23 15 45.3 +1.2**
baz=195
CLRS Cowichan Lake 81.44 31 P **P** **23 15 44.5 0.0**
CLRS lAmb lAmb 23 16 28.3
comp=Z,70nm,1.6s
D05A Enumclaw 81.46 34 P **P** **23 15 44.9 +0.2**
D05A lAmb lAmb 23 16 03.9
comp=Z,91nm,1.2s
DUN6 Lazy B Ranch 81.47 51 P **P** **23 15 44.5 -0.8**
ELK Elko 81.50 42 P **P** **23 15 44.8 -0.6**
ELK lAMs_20 lAMs_20 23 44 46.5
comp=Z,13µm,20.0s
ELK Elko 81.50 42 LR LR 23 44 48.1
comp=Z,14µm,20.8s,baz=232,slow=30
ELK Elko 81.50 42 P **P** **23 15 44.8 -0.6**
ELK pmax pmax
comp=Z,11nm,0.5s
ELK MLR MLR
comp=Z,13µm,20.0s
HPIG 81.53 58 P **P** **23 15 45.0 -0.8**
SEW Seward 81.58 13 P **P** **23 15 46.3 +1.4**
SEW lAmb lAmb 23 16 17.3

comp=Z,120nm,1.7s
SEW IAMs_20 IAMs_20 23 55 32.4
comp=Z,7µm,18.0s
SEW Seward 81.58 13 P P 23 15 46.6 +1.6
baz=205
PKCU Pink Cliffs 81.64 46 P P 23 15 45.5 -0.8
CBB Campbell River 81.66 30 P P 23 15 45.8 +0.1
CBB IAmb IAmb 23 15 54.2
comp=Z,109nm,1.7s
Q23K Middleton Isla 81.66 15 P P 23 15 47.4 +2.0
baz=208
MID Middleton Isla 81.66 15 IAMs_20 IAMs_20 23 56 07.3
comp=Z,9µm,18.0s
PGC Sidney 81.66 32 P P 23 15 45.4 -0.2
PMSA Palmer Station 81.68 156 LR LR 23 42 49.2
comp=Z,4µm,21.8s,baz=234,slow=29
M18K Stony River 81.71 9 P P 23 15 47.1 +1.4
baz=199
K15K Wolf Creek Mou 81.74 6 P P 23 15 45.4 -0.4
K15K Wolf Creek Mou 81.74 6 P P 23 15 47.5 +1.7
baz=193
F07A Phinny Hill Vi 81.75 36 P P 23 15 46.2 -0.1
SLKM Skilak Lake 81.79 12 P P 23 15 46.6 +0.5
SLKM IAmb IAmb 23 16 12.6
comp=Z,92nm,1.4s
MASI Maura Aman, Be 81.79 269 P P 23 15 57.8 +10
X18A Snowflake 81.81 49 P P 23 15 47.4 +0.3
BBB Bella Bella 81.92 27 LR LR 23 45 07.7
comp=Z,3µm,21.3s,baz=233,slow=30
G08A Pilot Rock 81.92 36 P P 23 15 46.6 -0.8
G08A IAmb IAmb 23 15 55.2
comp=Z,50nm,1.1s
P23K Montague Islan 81.92 14 IAMs_20 IAMs_20 23 44 10.2
comp=Z,10µm,22.0s
L17K Donlin 81.97 8 P P 23 15 48.6 +1.5
baz=196
MXC Moxie City 81.98 35 P P 23 15 47.2 -0.2
J14K Nanvaranak Lak 81.99 5 P P 23 15 46.9 -0.2
baz=191
MTPU Mount Pierson 82.03 45 P P 23 15 48.7 +0.3
MTPU IAmb IAmb 23 16 15.8
comp=Z,65nm,1.5s
N20K Mount Spurr 82.04 11 P P 23 15 48.1 +0.6
baz=202
SPCR Spurr Chakacha 82.05 11 P P 23 15 48.3 +0.7
baz=202
SPU Mount Spurr 82.06 11 P P 23 15 47.5 -0.1
A04D Lummi Island 82.08 32 P P 23 15 48.5 +0.6
TCRU Three Creeks R 82.15 45 P P 23 15 49.6 +0.7
LTY Liberty 82.20 34 P P 23 15 48.0 -0.7
E07A Sunnyside 82.20 35 P P 23 15 48.2 -0.5
W18A Petrified Fore 82.25 49 P P 23 15 49.3 -0.1
W18A IAmb IAmb 23 16 08.3
comp=Z,70nm,1.7s
HAWA Hanford 82.28 35 P P 23 15 48.5 -0.5
L18K Granite Mounta 82.28 9 P P 23 15 48.4 -0.3
L18K IAmb IAmb 23 16 13.9
comp=Z,69nm,1.5s
L18K IAMs_20 IAMs_20 23 46 20.0
comp=Z,10µm,21.0s
L18K Granite Mounta 82.28 9 P P 23 15 49.4 +0.7
baz=198
ZAIG Zacatecas 82.31 63 P P 23 15 50.2 +0.1
CRAG Craig 82.35 23 P P 23 15 50.0 +0.9
baz=220
DL2 Dalian 82.36 315 P P 23 15 51.8 +2.2
DL2 S SKSac 23 26 08.7 -1.7
DL2 pmax pmax
comp=Z,40nm,1.7s
DL2 pmax pmax
comp=Z,790nm,7.1s
DL2 LR LR
comp=Z,5µm,23.5s
DL2 LR LR
comp=Z,5µm,25.7s
DL2 LR LR
comp=Z,9µm,26.9s
FIS Fire Island 82.37 12 IAMs_20 IAMs_20 23 44 48.4
comp=Z,9µm,21.0s
STLK Strandline Lak 82.39 11 P P 23 15 48.6 -0.8
RC01 Rabbit Creek A 82.42 12 P P 23 15 49.8 +0.4
RC01 IAmb IAmb 23 16 15.2
comp=Z,66nm,1.3s
RC01 Rabbit Creek A 82.42 12 P P 23 15 50.4 +1.0
baz=204
121A Cookes Peak, D 82.43 52 P P 23 15 50.0 -0.4
WAH2 Wahluke Slope 82.48 35 IAmb IAmb 23 16 09.7
comp=Z,92nm,1.8s
HIN Hinchinbrook I 82.48 14 IAMs_20 IAMs_20 23 44 26.5
comp=Z,11µm,22.0s
PWL Port Wells 82.50 13 IAmb IAmb 23 16 11.3
comp=Z,67nm,1.2s
PWL IAMs_20 IAMs_20 23 44 51.8
comp=Z,7µm,21.0s
PWL Port Wells 82.50 13 P P 23 15 50.3 +0.4
baz=206
L19K White Mountain 82.52 10 P P 23 15 49.1 -0.9
L19K IAmb IAmb 23 16 01.5
comp=Z,77nm,1.9s
L19K White Mountain 82.52 10 P P 23 15 51.0 +1.0
baz=200
M20K Styx River 82.52 10 P P 23 15 49.8 -0.3
M20K IAmb IAmb 23 16 29.6
comp=Z,82nm,1.9s
M20K IAMs_20 IAMs_20 23 45 56.8
comp=Z,10µm,22.0s
M20K Styx River 82.52 10 P P 23 15 51.1 +1.0
baz=201
QIZ Qiongzhong 82.52 293 P P 23 15 50.4 -0.5
QIZ S S 23 26 08.9 +0.9
QIZ LR LR
comp=Z,4µm,24.7s
QIZ LR LR
comp=Z,2µm,25.7s
QIZ LR LR
comp=Z,4µm,24.0s
K17K Iditarod 82.53 8 P P 23 15 50.1 +0.2
K17K IAmb IAmb 23 16 06.0
comp=Z,76nm,1.4s
K17K Iditarod 82.53 8 P P 23 15 51.5 +1.5
baz=196
GAMB Gambell 82.54 2 IAMs_20 IAMs_20 23 44 44.8
comp=Z,9µm,22.0s
SUA Susitna One 82.56 12 IAMs_20 IAMs_20 23 45 17.5
comp=Z,11µm,21.0s
SUA Susitna One 82.56 12 P P 23 15 51.6 +1.3
baz=203
KAIM Kayak Island 82.57 15 IAMs_20 IAMs_20 23 46 25.7
comp=Z,11µm,21.0s
KAIM Kayak Island 82.57 15 P P 23 15 51.5 +1.3
baz=209
E08A Dider Farm, El 82.59 35 P P 23 15 50.9 +0.2
E08A IAmb IAmb 23 15 59.2
comp=Z,81nm,1.6s
BMO Blue Mountains 82.60 37 P P 23 15 50.7 -0.2
BMO IAMs_20 IAMs_20 23 46 08.5
comp=Z,8µm,20.0s
BMO Blue Mountains 82.60 37 P P 23 15 50.7 -0.2
BMO pmax pmax
comp=Z,21nm,1.1s
BMO MLR MLR
comp=Z,8µm,20.0s
BMO Blue Mountains 82.60 37 ⇑P P 23 15 52.1 +1.2
MFID Camas Ranch 82.64 39 P P 23 15 51.2 0.0
MFID IAMs_20 IAMs_20 23 45 04.6
comp=Z,8µm,21.0s
CN2 Changchun 82.64 321 ⇑P P 23 15 52.5 +1.5
CN2 *es*P pwP 23 15 59.0 +1.7
CN2 *e*S S 23 26 08.9 +0.7
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,400nm,6.0s
CN2 LR LR
comp=Z,800nm,18.0s
CN2 LR LR
comp=Z,1µm,18.0s
CN2 LR LR
comp=Z,2µm,20.0s
BNX BinXian 82.65 324 ⇓P P 23 15 51.4 +0.4
BNX S S 23 26 07.2 -1.0
BNX pmax pmax
comp=Z,13nm,1.2s
BNX pmax pmax
comp=Z,550nm,10.2s
BNX LR LR
comp=Z,5µm,19.0s
BNX LR LR
comp=Z,7µm,22.3s
BNX LR LR
comp=Z,13µm,22.7s
LNOR Lincton Mounta 82.65 36 P P 23 15 50.8 -0.3
LNOR IAmb IAmb 23 15 59.2
comp=Z,58nm,1.8s
SNY Shenyang 82.67 319 ⇓P P 23 15 54.1 +2.9
SNY S SKSac 23 26 13.1 +0.8
SNY pmax pmax
comp=Z,11nm,0.4s
SNY pmax pmax
comp=Z,300nm,7.9s
SNY LR LR
comp=Z,4µm,17.8s
SNY LR LR
comp=Z,3µm,18.4s
SNY LR LR
comp=Z,4µm,19.0s
DUG Dugway, Tooele 82.75 43 P P 23 15 51.8 -0.1
DUG IAMs_20 IAMs_20 23 44 46.7
comp=Z,12µm,22.0s
DUG Dugway, Tooele 82.75 43 P P 23 15 51.8 -0.1
DUG pmax pmax
comp=Z,30nm,1.3s
DUG MLR MLR
comp=Z,12µm,22.0s
EYAK Cordova Ski Ar 82.79 14 IAMs_20 IAMs_20 23 44 12.7
comp=Z,11µm,21.0s
EYAK Cordova Ski Ar 82.79 14 P P 23 15 51.9 +0.5
baz=208
V35K Ketchikan 82.80 23 P P 23 15 51.8 +0.3
V35K Ketchikan 82.80 23 P P 23 15 52.8 +1.3
baz=221
J16K Anvik River 82.81 7 P P 23 15 51.9 +0.4
J16K Anvik River 82.81 7 P P 23 15 52.3 +0.8
baz=194
U33K Whale Pass 82.85 22 P P 23 15 52.0 +0.3
baz=220
SKT Skwentna 82.89 11 P P 23 15 52.1 +0.2
SKT Skwentna 82.89 11 P P 23 15 52.4 +0.5
baz=203
M22K Willow 82.95 12 P P 23 15 51.9 -0.2
M22K IAMs_20 IAMs_20 23 45 28.7
comp=Z,10µm,22.0s
M22K Willow 82.95 12 P P 23 15 52.4 +0.3
baz=204
L20K Farewell, AK 82.95 10 P P 23 15 52.4 +0.2
baz=200
HMU Henry Mountain 82.96 46 P P 23 15 51.6 -1.6
HMU IAmb IAmb 23 16 02.1
comp=Z,53nm,1.4s
KNK Knik Glacier 82.97 13 P P 23 15 52.3 -0.1
KNK IAmb IAmb 23 16 23.4
comp=Z,42nm,1.2s
KNK Knik Glacier 82.97 13 P P 23 15 52.1 -0.2
baz=206
PMR Palmer 83.00 12 P P 23 15 52.4 0.0
PMR IAmb IAmb 23 16 18.1
comp=Z,58nm,1.3s
PMR Palmer 83.00 12 P P 23 15 55.2 +2.8
comp=Z,26nm,2.2s
PMR Palmer 83.00 12 P P 23 15 52.4 0.0
PMR pmax pmax
comp=Z,58nm,1.3s
PMR Palmer 83.00 12 P P 23 15 51.9 -0.4
baz=205
BGU Big Grassy Mou 83.00 43 P P 23 15 52.3 -0.8
MG05 Puerto Natales 83.00 142 IAMs_20 IAMs_20 23 43 12.3
comp=Z,11µm,22.0s
D08A Wollman Farm, 83.01 35 P P 23 15 52.4 -0.5
D08A IAmb IAmb 23 16 00.7
comp=Z,37nm,1.2s
MA2 Magadan 83.02 343 *i*P P 23 15 52.1 -0.5
MA2 pmax pmax
comp=Z,14nm,1.1s
BGLC Bering Glacier 83.02 16 P P 23 15 52.5 0.0
baz=210
EPT El Paso 83.04 53 P P 23 15 53.7 +0.2
EPT IAmb IAmb 23 16 08.2
comp=Z,113nm,2.0s
J17K VABM Dome 83.09 7 P P 23 15 52.9 0.0
baz=196
E09A Wood Farm, Sta 83.11 36 P P 23 15 52.9 -0.5
BERG Berg Lake 83.15 15 IAMs_20 IAMs_20 23 46 55.2
comp=Z,12µm,20.0s
Q16A Castle Valley 83.17 45 P P 23 15 54.9 +0.8
Q16A IAmb IAmb 23 16 13.2
comp=Z,85nm,1.7s
SNH Sunshine Point 83.18 16 IAMs_20 IAMs_20 23 46 35.0
comp=Z,11µm,20.0s
GHO Glory Hole Cre 83.20 12 P P 23 15 54.3 +0.7
GHO IAmb IAmb 23 16 30.0
comp=Z,34nm,1.0s
S31K Pelican 83.24 20 IAMs_20 IAMs_20 23 45 48.7
comp=Z,9µm,20.0s
S31K Pelican 83.24 20 P P 23 15 53.9 +0.2
baz=217
GO09 Cerro Castillo 83.25 142 IAMs_20 IAMs_20 23 43 31.9
comp=Z,11µm,22.0s
DIV Divide 83.30 14 P P 23 15 54.5 +0.4
DIV IAmb IAmb 23 16 26.7
comp=Z,51nm,1.2s
DIV IAMs_20 IAMs_20 23 45 03.1
comp=Z,9µm,21.0s
F10A Beach Ranch, E 83.30 37 P P 23 15 54.0 -0.5
F10A IAmb IAmb 23 16 01.8
comp=Z,61nm,1.1s
TMUT Trail Mountain 83.33 45 P P 23 15 55.9 +0.8
SML Sawmill 83.35 13 P P 23 15 54.1 -0.2
SML Sawmill 83.35 13 P P 23 15 54.3 0.0
baz=206
WRAK Wrangell Islan 83.36 22 IAMs_20 IAMs_20 23 50 22.9
comp=Z,6µm,18.0s
WRAK Wrangell Islan 83.36 22 P P 23 15 54.5 +0.1
baz=220
I17K Unalakleet 83.39 6 P P 23 15 54.4 +0.1
baz=194
S32K Killisnoo 83.39 21 IAMs_20 IAMs_20 23 45 45.8
comp=Z,8µm,20.0s
S32K Killisnoo 83.39 21 P P 23 15 54.4 -0.1
baz=218
MESA MESA 83.41 16 P P 23 15 54.7 -0.1
baz=212
MPU Maple Canyon 83.43 44 P P 23 15 55.4 -0.1
BMRM Bremner River 83.43 15 P P 23 15 54.8 0.0
BMRM IAMs_20 IAMs_20 23 46 47.6
comp=Z,9µm,20.0s
BMRM Bremner River 83.43 15 P P 23 15 54.5 -0.3
baz=209
J18K Innoko River 83.47 8 P P 23 15 55.7 +0.8
J18K IAmb IAmb 23 16 21.4
comp=Z,59nm,1.2s
J18K Innoko River 83.47 8 P P 23 15 54.6 -0.2
baz=198
M23K Glacier View 83.47 13 P P 23 15 55.1 +0.2
baz=206
PLID Pearl Lake 83.49 38 P P 23 15 55.6 -0.1
PLID IAMs_20 IAMs_20 23 46 57.1
comp=Z,11µm,20.0s
CUT Chulitna 83.52 11 P P 23 15 55.0 -0.1
CUT IAMs_20 IAMs_20 23 45 57.8
comp=Z,11µm,21.0s
CUT Chulitna 83.52 11 P P 23 15 54.8 -0.2
baz=204
SBM South Baldy 83.55 51 P P 23 15 56.8 +0.3
WHN Wuhan 83.57 305 P P 23 15 57.3 +1.2
WHN S SKSac 23 26 19.4 +0.6
WHN pmax pmax
comp=Z,2µm,5.9s
WHN LR LR
comp=Z,9µm,17.8s
WHN LR LR
comp=Z,4µm,16.3s
WHN LR LR
comp=Z,14µm,18.9s
HLID Hailey 83.58 40 P P 23 15 55.7 -0.4
HLID IAmb IAmb 23 16 04.4
comp=Z,33nm,1.1s
SCM Sheep Creek Mo 83.59 13 P P 23 15 55.6 0.0
SCM IAmb IAmb 23 16 14.8
comp=Z,47nm,1.0s
SCM Sheep Creek Mo 83.59 13 P P 23 15 55.6 0.0
SCM pmax pmax
comp=Z,47nm,1.0s
SCM MLR MLR
comp=Z,6µm,21.0s
SCM Sheep Creek Mo 83.59 13 P P 23 15 55.7 +0.2
baz=207
B08A Colville Reser 83.59 34 P P 23 15 54.8 -1.0
B08A IAmb IAmb 23 16 03.5
comp=Z,76nm,1.9s
KLU Klutina 83.59 14 P P 23 15 55.9 +0.3
KLU IAmb IAmb 23 16 38.6
comp=Z,38nm,1.3s
KLU IAMs_20 IAMs_20 23 45 11.7
comp=Z,8µm,22.0s
KLU Klutina 83.59 14 P P 23 15 55.4 -0.2
baz=208
CRQM Cirque 83.61 15 P P 23 15 55.7 -0.1
CRQM IAmb IAmb 23 16 23.5
comp=Z,42nm,1.2s
CRQM IAMs_20 IAMs_20 23 47 10.4
comp=Z,12µm,20.0s
CRQE Cirque 83.61 15 P P 23 15 55.6 -0.2
baz=210
HVU Hansel Valley 83.62 42 IAmb IAmb 23 16 04.4
comp=Z,39nm,1.2s
YAH Yahtse 83.62 16 P P 23 15 54.8 -1.2
PPLA Purkeypile 83.63 10 IAMs_20 IAMs_20 23 46 41.6
comp=Z,10µm,21.0s
PPLA Purkeypile 83.63 10 P P 23 15 55.9 +0.1
baz=202
ANM Nome 83.64 4 IAMs_20 IAMs_20 23 46 24.9
comp=Z,7µm,21.0s
ANM Nome 83.64 4 P P 23 15 56.2 +0.5
baz=190
CNSH ChangSha 83.66 303 P P 23 15 56.9 +0.3
CNSH S S 23 26 15.2 -4.0
CNSH pmax pmax
comp=Z,680nm,7.6s
CNSH LR LR
comp=Z,4µm,19.8s
CNSH LR LR
comp=Z,4µm,20.4s
CNSH LR LR
comp=Z,5µm,18.5s
ISLE Juniper Island 83.67 16 IAMs_20 IAMs_20 23 47 02.0
comp=Z,11µm,20.0s
PNL Peninsula 83.68 17 P P 23 15 56.2 +0.1
baz=214
TGL Tana Glacier 83.68 15 P P 23 15 56.9 +0.8
TGL IAmb IAmb 23 16 29.1
comp=Z,72nm,1.4s
TGL IAMs_20 IAMs_20 23 47 12.2
comp=Z,11µm,20.0s
Y22A Socorro 83.69 51 P P 23 15 56.8 -0.1
Y22A IAmb IAmb 23 16 23.3
comp=Z,36nm,1.2s
SRU San Rafael Swe 83.70 45 P P 23 15 57.8 +0.9
SRU IAmb IAmb 23 16 05.2
comp=Z,67nm,1.2s
SRU San Rafael Swe 83.70 45 P P 23 15 57.8 +0.9
SRU pmax pmax
comp=Z,67nm,1.2s
CTU Camp Tracy 83.70 43 P P 23 15 56.8 0.0
CTU IAmb IAmb 23 16 05.3
comp=Z,33nm,1.0s
LLLB Lillooet 83.71 31 P P 23 15 57.0 +0.5
LLLB IAmb IAmb 23 16 11.7
comp=Z,66nm,1.7s
TLIG Tlapa 83.74 69 P P 23 15 55.7 -1.7
P17A Butcher Ranch, 83.74 45 P P 23 15 57.0 0.0
P17A IAmb IAmb 23 16 05.6
comp=Z,56nm,1.2s
K20K Telida 83.75 9 P P 23 15 56.2 -0.1
K20K Telida 83.75 9 P P 23 15 55.9 -0.4
baz=200
VHRN Van Horn 83.76 55 P P 23 15 57.0 -0.3
VHRN IAmb IAmb 23 16 06.6
comp=Z,49nm,1.2s
LENM Lemitar 83.79 51 P P 23 15 58.2 +0.8
PCA Pinnacle 83.80 17 IAMs_20 IAMs_20 23 44 44.3
comp=Z,9µm,20.0s
PINM Pinnacle 83.80 17 P P 23 15 56.8 +0.1
baz=213
MAW Mawson 83.81 199 P P 23 15 57.1 +0.4
comp=Z,36nm,1.0s,baz=114,slow=5.7,SNR=24
MAW LR LR 23 51 07.8
comp=Z,6µm,18.7s,baz=117,slow=34
comp=Z,36nm,1.0s
C09A Chrisman Ranch 83.81 35 P P 23 15 57.1 +0.1
C09A IAmb IAmb 23 16 05.3
comp=Z,100nm,1.9s
U35K Hyder 83.84 24 P P 23 15 56.3 -0.6
baz=223
TABL Table Mountain 83.85 16 P P 23 15 56.9 -0.2
TABL IAmb IAmb 23 16 22.9
comp=Z,75nm,1.4s
TABL IAMs_20 IAMs_20 23 46 56.6
comp=Z,12µm,20.0s
BCPM Bancas Point 83.85 17 P P 23 15 57.0 +0.1
BCPM IAMs_20 IAMs_20 23 52 05.7
comp=Z,10µm,18.0s
JLU Jordanelle 83.85 43 P P 23 15 57.3 -0.4
MNTX Cornudas Mount 83.86 54 P P 23 15 57.8 +0.2
MNTX IAmb IAmb 23 16 07.0
comp=Z,42nm,1.4s
MNTX IAMs_20 IAMs_20 23 45 07.7
comp=Z,11µm,22.0s
UNM Universidad Na 83.86 67 IAMs_20 IAMs_20 23 44 20.5
comp=Z,13µm,21.0s
GRNC Granite Creek 83.94 16 P P 23 15 58.2 +0.6
GRNC IAmb IAmb 23 16 15.8
comp=Z,48nm,1.2s
GRNC IAMs_20 IAMs_20 23 47 09.9
comp=Z,10µm,20.0s
VRDI Verde Repeater 83.94 15 P P 23 15 57.8 +0.3
VRDI IAmb IAmb 23 16 09.3
comp=Z,34nm,1.2s
VRDI IAMs_20 IAMs_20 23 47 40.9
comp=Z,8µm,20.0s
H16K Elim 83.97 6 P P 23 15 57.0 -0.3
baz=192,SNR=5.1
N25K Chitina, Valde 83.99 14 P P 23 15 57.5 -0.1
N25K IAmb IAmb 23 16 17.9
comp=Z,30nm,1.0s
N25K IAMs_20 IAMs_20 23 45 25.4
comp=Z,8µm,21.0s
N25K Chitina, Valde 83.99 14 P P 23 15 57.4 -0.3
baz=209
USHA Ushuaia 84.02 146 LR LR 23 47 07.5
comp=Z,3µm,20.7s,baz=248,slow=31
BNM Barren Site 84.04 51 P P 23 15 59.2 +0.5
BKNI Bangkinang 84.04 272 P P 23 15 58.0 -0.9
BKNI Bangkinang 84.04 272 P P 23 15 58.4 -0.5
BKNI IAMs_20 IAMs_20 23 53 16.1
comp=Z,7µm,22.0s
R32K Eaglecrest 84.05 20 IAMs_20 IAMs_20 23 45 55.0
comp=Z,8µm,20.0s
R32K Eaglecrest 84.05 20 P P 23 15 57.7 -0.2
baz=218
COCO West Island 84.06 259 IAMs_20 IAMs_20 23 52 14.7
comp=Z,12µm,20.0s
M24K Tolsona, Glenn 84.08 13 P P 23 15 58.7 +0.6
M24K Tolsona, Glenn 84.08 13 P P 23 15 57.8 -0.3
baz=208
TIA Tai'an 84.11 311 P P 23 16 00.4 +1.6
TIA S S 23 26 26.1 +2.7
TIA SS SS 23 31 53.4 +0.6
TIA pmax pmax
comp=Z,6.0nm,0.7s
TIA pmax pmax
comp=Z,840nm,5.8s
TIA LR LR
comp=Z,2µm,17.9s
TIA LR LR
comp=Z,4µm,17.9s
TIA LR LR
comp=Z,5µm,21.3s
J19K Poorman 84.12 9 P P 23 15 58.6 +0.4
J19K IAmb IAmb 23 16 04.0
comp=Z,42nm,1.4s
J19K Poorman 84.12 9 P P 23 15 58.1 0.0
baz=199
P29M Windy Craggy 84.13 18 P P 23 15 57.5 -0.8
P29M IAmb IAmb 23 16 03.8
comp=Z,94nm,1.6s
P29M IAMs_20 IAMs_20 23 50 01.9
comp=Z,9µm,19.0s
P29M Windy Craggy 84.13 18 P P 23 15 58.5 +0.1
baz=216

MVCO Mesa Verde 84.14 48 P **P** **23 15 59.2 0.0**
MVCO IAmb IAmb 23 16 56.8
comp=Z,60nm,1.7s
MVCO IAMs_20 IAMs_20 23 45 00.8
comp=Z,10µm,22.0s
TCUT Toone Canyon 84.14 43 P **P** **23 15 58.2 -0.9**
P18A Preston Nutter 84.14 45 P **P** **23 15 59.8 +0.5**
P18A IAmb IAmb 23 16 07.7
comp=Z,29nm,1.1s
PV05 Paradox Valley 84.15 47 P **P** **23 15 59.5 +0.2**
TX31 Lajitas Ar. Si 84.16 56 P **P** **23 15 59.7 +0.4**
TXAR Lajitas Array 84.16 56 P **P** **23 16 00.4 +1.1**
TXAR Lajitas Array 84.16 56 P **P** **23 16 01.1 +1.8**
comp=Z,12nm,1.1s,baz=221,slow=5.0,SNR=20
TXAR PKKPbc **PKKPbc** **23 34 14.1 +0.4**
comp=Z,0.3nm,0.5s,baz=95,slow=6.8,SNR=1.2
TXAR LR LR 23 44 58.0
comp=Z,8µm,21.9s,baz=247,slow=30
comp=Z,12nm,1.1s
TXAR Lajitas Array 84.16 56 P **P** **23 16 00.4 +1.1**
G15K Niukluk 84.16 5 P **P** **23 15 58.4 0.0**
baz=191
WAT6 Susitna Watana 84.17 12 P **P** **23 15 57.8 -0.9**
baz=206,SNR=6.7
MCARA McCarthy VSAT 84.17 15 P **P** **23 15 58.9 +0.4**
MCARA IAmb IAmb 23 16 31.4
comp=Z,79nm,1.6s
MCARA IAMs_20 IAMs_20 23 47 39.2
comp=Z,8µm,19.0s
MCARA McCarthy VSAT 84.17 15 P **P** **23 15 58.7 +0.2**
baz=211
BESE Bessie Mountai 84.18 20 P **P** **23 15 58.4 -0.3**
BESE IAmb IAmb 23 16 06.2
comp=Z,58nm,1.2s
BESE IAMs_20 IAMs_20 23 46 17.4
comp=Z,8µm,20.0s
PDSI Padang 84.19 271 P P 23 16 05.7 +6.0
LOGN Logan Glacier 84.21 16 P **P** **23 15 59.5 +0.6**
LOGN IAmb IAmb 23 16 19.4
comp=Z,45nm,1.2s
LOGN IAMs_20 IAMs_20 23 47 18.2
comp=Z,10µm,20.0s
WAT1 Susitna Watana 84.24 12 P **P** **23 15 58.4 -0.5**
baz=205
BARN Barnard Glacie 84.24 16 P **P** **23 15 58.8 -0.3**
BARN IAMs_20 IAMs_20 23 47 29.9
comp=Z,9µm,20.0s
CTG Chitna Glacier 84.24 16 P **P** **23 15 58.3 -0.8**
baz=212
CTGM Chitina Glacie 84.24 16 P **P** **23 15 59.4 +0.3**
CTGM IAmb IAmb 23 16 24.8
comp=Z,38nm,1.2s
CTGM IAMs_20 IAMs_20 23 47 30.0
comp=Z,9µm,19.0s
BSUT Blindstream Ca 84.27 44 P **P** **23 15 59.0 -0.9**
BSUT IAmb IAmb 23 16 08.2
comp=Z,66nm,1.2s
HWUT Hardware Ranch 84.30 43 P **P** **23 15 59.3 -0.6**
PV10 Paradox Valley 84.34 46 P **P** **23 16 00.1 -0.1**
PV19 Morning Glory 84.34 46 P **P** **23 16 00.1 -0.1**
PV17 East Wray Mesa 84.34 46 P **P** **23 15 59.4 -0.8**
PV17 IAmb IAmb 23 16 08.5
comp=Z,32nm,1.0s
PV14 Lion Creek, Pa 84.35 46 P **P** **23 15 59.4 -0.8**
PV14 IAmb IAmb 23 16 08.5
comp=Z,52nm,1.2s
PV18 Skein Mesa, Pa 84.36 46 P **P** **23 16 00.6 +0.3**
PV20 West Nyswonger 84.37 46 P **P** **23 16 00.1 -0.2**
PV13 Radium Mtn., P 84.38 47 P **P** **23 16 00.1 -0.3**
PV13 IAmb IAmb 23 16 08.7
comp=Z,43nm,1.2s
O28M Mount Upton 84.38 17 P **P** **23 15 58.7 -1.2**
O28M IAmb IAmb 23 16 43.4
comp=Z,51nm,1.6s
O28M IAMs_20 IAMs_20 23 47 23.7
comp=Z,10µm,20.0s
O28M Mount Upton 84.38 17 P **P** **23 15 59.7 -0.2**
baz=213
PV16 Nyswonger Mesa 84.39 46 P **P** **23 16 00.7 +0.3**
PV16 IAmb IAmb 23 16 26.7
comp=Z,60nm,1.4s
PV23 Carpenter Ridg 84.39 46 P **P** **23 16 00.9 +0.4**
PLBC Pleasant Camp 84.40 19 P **P** **23 15 59.7 +0.1**
baz=217
PV03 Paradox Valley 84.41 47 P **P** **23 16 01.1 +0.6**
PV03 IAmb IAmb 23 16 08.9
comp=Z,49nm,1.3s
PV11 David Mesa, Pa 84.41 46 P **P** **23 16 00.4 -0.1**
MG02 Cerro Sombrero 84.43 144 IAMs_20 IAMs_20 23 43 54.2
comp=Z,9µm,21.0s
PV04 Paradox Valley 84.44 46 P **P** **23 16 01.1 +0.5**
PV04 IAmb IAmb 23 16 09.0
comp=Z,44nm,1.1s
O29M Mount Kennedy 84.44 17 P **P** **23 16 00.9 +0.9**
O29M IAmb IAmb 23 16 49.8
comp=Z,53nm,1.4s
O29M IAMs_20 IAMs_20 23 52 08.2
comp=Z,10µm,18.0s
O29M Mount Kennedy 84.44 17 P **P** **23 15 59.9 -0.1**
baz=215
KTH Kantishna Hill 84.45 11 P **P** **23 15 59.9 -0.1**
KTH IAmb IAmb 23 16 20.1
comp=Z,44nm,1.2s
KTH IAMs_20 IAMs_20 23 47 20.5
comp=Z,8µm,21.0s
PV02 Paradox Valley 84.46 47 P **P** **23 16 00.6 -0.3**
PV12 Saucer Basin, 84.47 46 P **P** **23 16 00.7 -0.1**
TNA Tin City 84.47 3 IAMs_20 IAMs_20 23 48 44.9
comp=Z,8µm,20.0s
TNA Tin City 84.47 3 P **P** **23 16 00.4 +0.5**
baz=187
PV21 Cone Mtn., Par 84.47 46 P **P** **23 16 00.9 0.0**
PV21 IAmb IAmb 23 16 09.3
comp=Z,50nm,1.2s
TRF Thorofare Moun 84.47 11 P **P** **23 15 59.9 -0.3**
TRF IAMs_20 IAMs_20 23 47 12.0
comp=Z,11µm,21.0s
TRF Thorofare Moun 84.47 11 P **P** **23 16 00.1 -0.1**
baz=204
F14K Arctic Creek 84.47 4 P **P** **23 15 59.9 0.0**
baz=189
H17K Granite Mounta 84.49 7 P **P** **23 15 59.5 -0.5**
H17K IAmb IAmb 23 16 25.4
comp=Z,79nm,1.8s
H17K Granite Mounta 84.49 7 P **P** **23 16 00.2 +0.2**
baz=195
J20K Nowinta River 84.51 9 P **P** **23 15 59.9 -0.2**
J20K IAmb IAmb 23 16 16.1
comp=Z,48nm,1.1s
J20K Nowinta River 84.51 9 P **P** **23 16 00.5 +0.4**
baz=200,SNR=11
CHUM Lake Minchumin 84.52 10 P **P** **23 16 00.5 +0.3**
baz=202
ABQ Albuquerque 84.53 50 P **P** **23 16 00.8 -0.4**
ABQ IAmb IAmb 23 16 41.6
comp=Z,57nm,1.5s
TASM ASL Pad, Albuq 84.53 50 P **P** **23 16 00.8 -0.4**
TASM IAmb IAmb 23 16 41.6
comp=Z,68nm,1.6s
TASM ASL Pad, Albuq 84.53 50 P **P** **23 16 01.6 +0.4**
TASM IAmb IAmb 23 16 41.6
comp=Z,67nm,1.6s
TASM ASL Pad, Albuq 84.53 50 P **P** **23 16 00.3 -0.8**
TASM IAmb IAmb 23 16 41.6
comp=Z,54nm,1.5s
ANMO Albuquerque 84.53 50 P **P** **23 16 01.3 +0.1**
ANMO IAmb IAmb 23 16 41.6
comp=Z,61nm,1.6s
ANMO Albuquerque 84.53 50 IAMs_20 IAMs_20 23 46 25.3
comp=Z,9µm,20.0s
ANMO Albuquerque 84.53 50 LR LR 23 46 46.5
comp=Z,12µm,19.6s,baz=333,slow=31
ANMO Albuquerque 84.53 50 *i* P **P** **23 15 59.9 -1.3**
ANMO pmax pmax
comp=Z,10.0nm,1.0s
PV01 Paradox Valley 84.54 47 P **P** **23 16 01.1 -0.1**
PV01 IAmb IAmb 23 16 09.4
comp=Z,28nm,1.1s
GULI GuiLin 84.55 299 P **P** **23 16 02.9 +1.7**
GULI S **S** **23 26 28.3 0.0**
GULI pmax pmax
comp=Z,17nm,2.3s
GULI LR LR
comp=Z,2µm,24.0s
GULI LR LR
comp=Z,2µm,21.2s
GULI LR LR
comp=Z,5µm,20.6s
HARP HAARP 84.56 14 P **P** **23 16 00.9 +0.4**
baz=209
PV22 Blue Mesa, Par 84.59 46 P **P** **23 16 02.0 +0.6**
PV22 IAmb IAmb 23 16 09.7
comp=Z,38nm,1.2s
BCYI Bear Canyon 84.59 40 P **P** **23 16 01.9 +0.6**
AY03 Cochrane 84.60 138 P **P** **23 16 00.5 -0.7**
AY03 IAMs_20 IAMs_20 23 44 20.7
comp=Z,11µm,22.0s
ALPN Alpine 84.62 56 P **P** **23 16 02.7 +1.0**
PV07 Paradox Valley 84.64 46 P **P** **23 16 02.5 +0.9**
PV07 IAmb IAmb 23 16 09.9
comp=Z,38nm,1.2s
GCSA Galena City Sc 84.67 8 P **P** **23 16 01.6 +0.7**
baz=198
DHY Denali Highway 84.69 12 P **P** **23 16 01.4 +0.1**
DHY IAmb IAmb 23 16 32.5
comp=Z,60nm,1.4s
DHY Denali Highway 84.69 12 P **P** **23 16 00.9 -0.4**
baz=206,SNR=5.4
G16K Koyuk River 84.70 5 P **P** **23 16 00.8 -0.2**
G16K IAmb IAmb 23 16 17.8
comp=Z,37nm,1.1s
G16K Koyuk River 84.70 5 P **P** **23 16 01.6 +0.6**
baz=192
RND Reindeer 84.70 12 P **P** **23 16 01.0 -0.2**
RND IAMs_20 IAMs_20 23 46 44.0
comp=Z,12µm,22.0s
PV15 Paradox Valley 84.70 47 P **P** **23 16 02.6 +0.5**
PV15 IAmb IAmb 23 16 10.2
comp=Z,44nm,1.2s
NEW Newport 84.71 35 P **P** **23 16 01.2 -0.4**
NEW Newport 84.71 35 LR LR 23 47 24.7
comp=Z,4µm,21.1s,baz=235,slow=31
NEW Newport 84.71 35 P **P** **23 16 01.2 -0.4**
NEW pmax pmax
comp=Z,13nm,1.0s
NEW MLR MLR
comp=Z,5µm,18.0s
SKAG Skagway 84.72 19 P **P** **23 16 02.9 +1.6**
SKAG Skagway 84.72 19 P **P** **23 16 01.3 +0.1**
baz=218
P30M Million Dollar 84.76 18 P **P** **23 16 01.7 +0.2**
baz=216
H03S2 Juan Fernandez 84.79 124 T T 00 49 54.0
baz=249,slow=75,SNR=58
H03S1 Juan Fernandez 84.80 124 T T 00 49 54.8
baz=249,slow=75,SNR=72
H03S3 Juan Fernandez 84.81 124 T T 00 49 56.7
baz=249,slow=75,SNR=28
F15K North Star Dit 84.82 4 IAMs_20 IAMs_20 23 50 16.2
comp=Z,7µm,20.0s
F15K North Star Dit 84.82 4 P **P** **23 16 01.8 +0.1**
baz=190
H18K Honhosa River 84.88 7 P **P** **23 16 02.8 +0.9**
baz=196
PECS Pecos 84.88 55 P **P** **23 16 03.1 +0.2**
PECS IAmb IAmb 23 16 39.0
comp=Z,76nm,1.8s
H03N2 Juan Fernandez 84.92 123 T T 00 50 02.1
baz=252,slow=72,SNR=17
H03N3 Juan Fernandez 84.92 123 T T 00 50 00.7
baz=252,slow=72,SNR=18
S34M Telegraph Cree 84.92 22 P **P** **23 16 03.2 +0.9**
S34M IAmb IAmb 23 16 10.2
comp=Z,56nm,1.1s
S34M Telegraph Cree 84.92 22 P **P** **23 16 02.2 -0.1**
baz=222,SNR=9.0
YUK8 Steele Glacier 84.93 16 P **P** **23 16 02.7 +0.1**
baz=214
H03N1 Juan Fernandez 84.93 123 T T 00 50 00.1
baz=252,slow=72,SNR=18
BPAW Bear Paw Mtn. 84.95 10 P **P** **23 16 01.6 -0.8**
BPAW IAmb IAmb 23 16 14.3
comp=Z,70nm,1.8s
BPAW Bear Paw Mtn. 84.95 10 P **P** **23 16 02.6 +0.2**
baz=203
G17K Kiwalik Mounta 84.97 6 P **P** **23 16 02.9 +0.6**
baz=194
MCK McKinley 84.98 11 **P** **23 16 01.4 -1.1**
MCK IAMs_20 IAMs_20 23 46 54.5
comp=Z,11µm,21.0s
MCK McKinley 84.98 11 P **P** **23 16 01.5 -1.1**
MCK pmax pmax
comp=Z,61nm,1.0s
MCK MLR MLR
comp=Z,11µm,21.0s
MCK McKinley 84.98 11 P **P** **23 16 03.2 +0.7**
baz=205
PAX Paxson 85.00 13 P **P** **23 16 00.6 -2.2**
PAX IAMs_20 IAMs_20 23 46 21.0
comp=Z,7µm,21.0s
PAX Paxson 85.00 13 P **P** **23 16 00.6 -2.2**
PAX pmax pmax
comp=Z,29nm,1.3s
PAX MLR MLR
comp=Z,8µm,21.0s
PAX Paxson 85.00 13 P **P** **23 16 03.2 +0.5**
baz=208
YUK6 Outpost Mounta 85.03 17 P **P** **23 16 03.2 +0.1**
baz=215
I20K Naaghedeneel 85.05 9 P **P** **23 16 03.1 +0.3**
I20K Naaghedeneel 85.05 9 P **P** **23 16 03.6 +0.8**
baz=200
M26K Nabesna, AK 85.06 14 P **P** **23 16 03.4 +0.4**
M26K IAmb IAmb 23 16 10.7
comp=Z,51nm,1.2s
M26K IAMs_20 IAMs_20 23 48 29.7
comp=Z,7µm,19.0s
M26K Nabesna, AK 85.06 14 P **P** **23 16 03.6 +0.6**
baz=211
RDMU Red Mountain 85.07 44 P **P** **23 16 03.7 -0.1**
RDMU IAmb IAmb 23 16 42.2
comp=Z,43nm,1.3s
YUK3 Moose Creek 85.16 16 P **P** **23 16 04.2 +0.5**
baz=213
HYT Haines Junctio 85.17 18 P **P** **23 16 04.3 +0.6**
HYT IAmb IAmb 23 16 24.8
comp=Z,46nm,1.4s
HYT Haines Junctio 85.17 18 P **P** **23 16 04.4 +0.7**
baz=216
AHID Auburn Hatcher 85.19 42 P **P** **23 16 03.9 -0.5**
AHID IAmb IAmb 23 16 13.0
comp=Z,55nm,1.2s
AHID IAMs_20 IAMs_20 23 46 44.3
comp=Z,9µm,20.0s
MCMT McKenzie Canyo 85.21 39 P **P** **23 16 04.9 +0.5**
CLNB Carlsbad 85.25 54 P **P** **23 16 05.6 +0.8**
YUK4 Talbot Arm 85.28 17 P **P** **23 16 05.1 +0.7**
baz=215
BWN Browne 85.28 11 P **P** **23 16 04.3 +0.3**
M27K Edge Creek, AK 85.29 15 P **P** **23 16 04.6 +0.3**
M27K IAMs_20 IAMs_20 23 48 15.8
comp=Z,8µm,20.0s
M27K Edge Creek, AK 85.29 15 P **P** **23 16 04.5 +0.3**
baz=212,SNR=19
Q32M Nakina River 85.33 21 P **P** **23 16 03.8 -0.8**
Q32M IAMs_20 IAMs_20 23 46 35.8
comp=Z,8µm,21.0s
Q32M Nakina River 85.33 21 P **P** **23 16 04.7 +0.1**
baz=220
P32M Atlin 85.34 20 P **P** **23 16 05.0 +0.5**
P32M IAmb IAmb 23 16 12.0
comp=Z,49nm,1.3s
P32M IAMs_20 IAMs_20 23 47 13.0
comp=Z,8µm,20.0s
P32M Atlin 85.34 20 P **P** **23 16 04.5 0.0**
baz=219
HEH HeiHe 85.35 327 *e*P **P** **23 16 09.2 +4.5**
HEH sP pwP 23 16 20.2 +9.2
HEH S **S** **23 26 41.3 +6.1**
HEH SS **SS** **23 32 12.7 +2.2**
HEH pmax pmax
comp=Z,9.0nm,1.7s
HEH LR LR
comp=Z,10µm,23.5s
HEH LR LR
comp=Z,9µm,24.7s
HEH LR LR
comp=Z,22µm,24.6s
MENT Mentasta 85.36 14 P **P** **23 16 04.9 +0.5**
MENT IAmb IAmb 23 16 35.5
comp=Z,71nm,1.5s
MENT Mentasta 85.36 14 P **P** **23 16 07.2 +2.7**
comp=Z,28nm,1.1s
CLN7 Carlsbad 7 85.37 54 P **P** **23 16 05.0 -0.4**
IPM Ipoh 85.41 276 P **P** **23 16 05.6 -0.3**
IPM IAmb IAmb 23 16 10.9
comp=Z,22nm,0.8s
IPM IAMs_20 IAMs_20 00 01 20.3
comp=Z,6µm,19.0s
IPM Ipoh 85.41 276 P **P** **23 16 07.7 +1.8**
comp=Z,38nm,1.1s
H19K Roundabout Mou 85.47 8 P **P** **23 16 05.4 +0.5**
H19K Roundabout Mou 85.47 8 P **P** **23 16 05.6 +0.7**
baz=198
SEY Seymchan 85.49 346 *ce*P **P** **23 16 04.0 -1.1**
SEY pmax pmax
comp=Z,12nm,1.0s
L26K Log Cabin Wild 85.52 14 P **P** **23 16 05.7 +0.5**
L26K IAmb IAmb 23 16 37.1
comp=Z,42nm,1.3s
L26K IAMs_20 IAMs_20 23 48 17.8
comp=Z,9µm,20.0s
L26K Log Cabin Wild 85.52 14 P **P** **23 16 05.9 +0.6**
baz=210
O30N Mendenhall 85.54 18 P **P** **23 16 05.4 0.0**
O30N IAmb IAmb 23 16 13.0
comp=Z,49nm,1.3s
O30N IAMs_20 IAMs_20 23 49 25.3
comp=Z,10µm,20.0s
O30N Mendenhall 85.54 18 P **P** **23 16 05.6 +0.2**
baz=217
G18K Tagagawik 85.56 7 P **P** **23 16 05.5 +0.1**
G18K Tagagawik 85.56 7 P **P** **23 16 06.1 +0.7**
baz=196
COYC Coyhaique 85.56 137 P **P** **23 16 07.2 +1.2**
S22A 4UR Ranch, Cre 85.56 48 P **P** **23 16 06.0 -0.4**
S22A IAMs_20 IAMs_20 23 45 59.5
comp=Z,11µm,21.0s
BVCY Beaver Creek 85.59 15 P **P** **23 16 06.0 +0.4**
baz=212
CPRX Cap Rock 85.60 53 P **P** **23 16 06.9 +0.4**
SAND Sanderson 85.64 56 P **P** **23 16 06.3 -0.4**
SAND IAmb IAmb 23 16 09.6
comp=Z,46nm,1.1s
DLMT Dillon 85.65 39 P **P** **23 16 06.7 +0.2**
DLMT IAmb IAmb 23 16 14.6
comp=Z,43nm,1.1s
DLMT IAMs_20 IAMs_20 23 49 05.1
comp=Z,10µm,20.0s
H20K Anotleneega Mo 85.65 8 P **P** **23 16 06.2 +0.4**
baz=199
MSO Missoula 85.66 37 P **P** **23 16 05.9 -0.5**
MSO IAMs_20 IAMs_20 23 46 19.4
comp=Z,10µm,22.0s
TPAW Teton Pass 85.66 41 P **P** **23 16 07.5 +0.7**
TPAW IAmb IAmb 23 16 25.9
comp=Z,46nm,1.4s
TPAW IAMs_20 IAMs_20 23 48 20.6
comp=Z,7µm,20.0s
K24K Donnelly Dome 85.67 13 P **P** **23 16 06.5 +0.5**
K24K IAmb IAmb 23 16 22.6
comp=Z,52nm,1.0s
K24K Donnelly Dome 85.67 13 P **P** **23 16 06.3 +0.3**
baz=208
FXWY Fox Creek 85.69 41 P **P** **23 16 07.2 +0.3**
FXWY IAmb IAmb 23 16 15.8
comp=Z,40nm,1.4s
DLBC Dease Lake 85.71 22 LR LR 23 47 24.8
comp=Z,4µm,19.8s,baz=218,slow=31
DLBC Dease Lake 85.71 22 P **P** **23 16 06.1 -0.3**
baz=222
MNHN Monahans 85.72 55 P **P** **23 16 06.6 -0.5**
BPMT Black Pine Rid 85.73 38 P **P** **23 16 07.1 +0.1**
O20A White River Ci 85.73 45 P **P** **23 16 06.6 -0.5**
NEA2 Nenana 85.74 11 P **P** **23 16 06.1 -0.2**
NEA2 IAMs_20 IAMs_20 23 47 48.5
comp=Z,11µm,21.0s
NEA2 Nenana 85.74 11 P **P** **23 16 06.3 0.0**
baz=205,SNR=7.5
SNOW Snow King Moun 85.77 41 P **P** **23 16 07.0 -0.3**
SNOW IAmb IAmb 23 16 15.4
comp=Z,43nm,1.2s
SNOW IAMs_20 IAMs_20 23 47 54.5
comp=Z,7µm,20.0s
I21K Tanana 85.78 10 P **P** **23 16 06.2 -0.2**
I21K IAmb IAmb 23 16 20.7
comp=Z,58nm,1.2s
I21K IAMs_20 IAMs_20 23 48 19.7
comp=Z,7µm,21.0s
I21K Tanana 85.78 10 P **P** **23 16 05.9 -0.6**
baz=202,SNR=14
N30M Aishikik Lake 85.81 17 P **P** **23 16 06.5 -0.3**
N30M IAmb IAmb 23 17 00.4
comp=Z,73nm,1.9s
N30M IAMs_20 IAMs_20 23 50 32.3
comp=Z,8µm,19.0s
N30M Aishikik Lake 85.81 17 P **P** **23 16 06.6 -0.2**
baz=216
WHY Whitehorse 85.81 19 P **P** **23 16 06.2 -0.7**
WHY IAmb IAmb 23 16 14.5
comp=Z,82nm,1.3s
WHY Whitehorse 85.81 19 P **P** **23 16 06.6 -0.3**
baz=218
WRH Wood River Hil 85.81 11 P **P** **23 16 06.4 -0.3**
WRH IAmb IAmb 23 16 22.7
comp=Z,97nm,1.1s
WRH IAMs_20 IAMs_20 23 47 30.4
comp=Z,10µm,22.0s
RIDG Independent Ri 85.81 13 P **P** **23 16 06.6 -0.1**
RIDG IAmb IAmb 23 16 38.7
comp=Z,45nm,1.2s
RIDG Independent Ri 85.81 13 P **P** **23 16 07.4 +0.7**
baz=209
MLY Manley 85.85 10 P **P** **23 16 06.8 -0.1**
MLY IAmb IAmb 23 16 22.3
comp=Z,31nm,1.1s
MLY Manley 85.85 10 P **P** **23 16 06.6 -0.3**
baz=203,SNR=18
DOT Dot Lake 85.90 13 P **P** **23 16 07.2 +0.1**
DOT IAMs_20 IAMs_20 23 46 15.8
comp=Z,8µm,22.0s
L27K Beaver Creek, 85.91 15 P **P** **23 16 07.8 +0.6**
L27K IAMs_20 IAMs_20 23 46 37.0
comp=Z,7µm,21.0s
L27K Beaver Creek, 85.91 15 P **P** **23 16 07.1 -0.1**
baz=212
BCAR Beaver Creek A 85.92 15 P **P** **23 16 07.5 +0.2**
MOOW Moose Ponds 85.92 41 P **P** **23 16 07.4 -0.6**
LOHW Long Hollow 85.94 41 P **P** **23 16 07.6 -0.5**
LOHW IAmb IAmb 23 16 26.1
comp=Z,53nm,1.7s
LOHW IAMs_20 IAMs_20 23 47 59.1
comp=Z,6µm,20.0s
HDA Harding Lake 85.97 12 P **P** **23 16 07.9 +0.4**
HDA IAmb IAmb 23 16 13.8
comp=Z,48nm,1.0s
HDA IAMs_20 IAMs_20 23 53 50.7
comp=Z,6µm,20.0s
HDA Harding Lake 85.97 12 P **P** **23 16 06.8 -0.7**
baz=207,SNR=8.9
JTMT Jette 85.98 36 P **P** **23 16 07.1 -1.0**
LRM Limekiln Ridge 85.98 39 P **P** **23 16 07.7 -0.6**
G19K Purcell Mounta 85.98 7 P **P** **23 16 07.9 +0.4**
baz=197
CCB Clear Creek Bu 86.02 12 P **P** **23 16 07.0 -0.7**
CCB IAmb IAmb 23 16 23.4
comp=Z,59nm,1.0s
CCB IAMs_20 IAMs_20 23 47 36.0
comp=Z,10µm,22.0s
KULM Kulim 86.03 277 P **P** **23 16 09.3 +0.4**
QLMT Earthquake Lak 86.06 40 P **P** **23 16 09.0 +0.4**
R33M Jennings River 86.09 21 P **P** **23 16 08.6 +0.3**
R33M IAmb IAmb 23 16 16.2
comp=Z,41nm,1.1s
R33M IAMs_20 IAMs_20 23 47 21.1
comp=Z,7µm,20.0s
R33M Jennings River 86.09 21 P **P** **23 16 08.3 0.0**
baz=222
H21K Melozitna Rive 86.10 9 P **P** **23 16 07.9 -0.1**
H21K IAmb IAmb 23 16 24.8
comp=Z,52nm,1.3s
H21K Melozitna Rive 86.10 9 P **P** **23 16 08.2 +0.1**
baz=201
P33M Teslin, Yukon 86.11 20 P **P** **23 16 08.8 +0.5**
P33M IAMs_20 IAMs_20 23 47 48.4
comp=Z,7µm,20.0s
P33M Teslin, Yukon 86.11 20 P **P** **23 16 08.6 +0.3**
baz=220

FLWY Flagg Ranch 86.12 41 P **P** 23 16 09.5 +0.5
FLWY IAmb IAmb 23 16 17.4
comp=Z,46nm,1.2s
F18K Selawik 86.14 6 P **P** 23 16 07.9 -0.2
baz=195
YPP Pitchstone Pla 86.16 41 P **P** 23 16 08.1 -1.1
YHB Horse Butte 86.17 40 P **P** 23 16 09.4 +0.2
YHB IAmb IAmb 23 16 18.5
comp=Z,48nm,1.3s
BW06 Boulder Array 86.17 42 P **P** 23 16 08.6 -0.7
BW06 IAMs_20 IAMs_20 23 47 27.2
comp=Z,11µm,20.0s
PD31 Pinedale Array 86.17 42 P **P** 23 16 09.2 -0.1
PDAR Pinedale Array 86.17 42 P **P** 23 16 09.0 -0.3
PDAR Pinedale Array 86.17 42 P **P** 23 16 09.8 +0.5
comp=Z,3.3nm,0.9s,baz=218,slow=3.4,SNR=13
PDAR PP **PP** 23 19 30.0 -0.2
comp=Z,0.1nm,0.3s,baz=217,slow=7.1,SNR=4.3
PDAR PKKP **PKKPbc** 23 34 10.3 +0.6
comp=Z,0.9nm,1.0s,baz=100,slow=1.7,SNR=5.0
PDAR LR LR 23 47 38.4
comp=Z,7µm,20.5s,baz=232,slow=31
comp=Z,3.3nm,0.9s
I23K Minto, Yukon-K 86.19 11 P **P** 23 16 08.4 -0.1
I23K IAmb IAmb 23 16 28.1
comp=Z,60nm,1.4s
I23K IAMs_20 IAMs_20 23 57 50.5
comp=Z,10µm,18.0s
I23K Minto, Yukon-K 86.19 11 P **P** 23 16 08.0 -0.5
baz=205,SNR=9.6
LL05 Los Muermos 86.20 132 IAMs_20 IAMs_20 23 45 45.2
comp=Z,10µm,21.0s
N31M Braeburn, Yuko 86.20 18 P **P** 23 16 07.5 -1.2
N31M IAmb IAmb 23 16 16.1
comp=Z,58nm,1.2s
N31M IAMs_20 IAMs_20 23 51 26.9
comp=Z,10µm,18.0s
N31M Braeburn, Yuko 86.20 18 P **P** 23 16 08.6 -0.1
baz=217
SCRK Sand Creek 86.20 13 P **P** 23 16 07.9 -0.9
SCRK Sand Creek 86.20 13 P **P** 23 16 08.6 -0.2
baz=210
ODSA Odessa 86.21 54 P **P** 23 16 09.1 -0.4
COLA College 86.22 11 P **P** 23 16 08.2 -0.4
COLA College 86.22 11 IAMs_20 IAMs_20 23 48 04.2
comp=Z,10µm,21.0s
COLA College 86.22 11 P **P** 23 16 09.1 +0.5
comp=Z,40nm,1.2s
COLA College 86.22 11 *i*P **P** 23 16 07.1 -1.5
COLA pmax pmax
comp=Z,84nm,1.3s
COLA College 86.22 11 P **P** 23 16 08.7 0.0
baz=206
YHL Hebgen Lake 86.23 40 P **P** 23 16 08.6 -1.0
YHL IAmb IAmb 23 16 19.1
comp=Z,71nm,1.3s
YFT Old Faithful 86.23 40 P **P** 23 16 09.2 -0.3
M29M Somme Creek 86.23 16 P **P** 23 16 08.5 -0.5
M29M IAmb IAmb 23 16 29.7
comp=Z,48nm,1.5s
M29M IAMs_20 IAMs_20 23 48 34.6
comp=Z,10µm,20.0s
M29M Somme Creek 86.23 16 P **P** 23 16 08.6 -0.3
baz=215
YMR Madison River 86.26 40 P **P** 23 16 09.2 -0.5
YMR IAmb IAmb 23 16 19.2
comp=Z,51nm,1.4s
IMAR Indian Mountai 86.27 9 P **P** 23 16 09.2 +0.3
IL31 86.31 12 P **P** 23 16 08.7 -0.4
IL31 IAmb IAmb 23 16 14.0
comp=Z,50nm,1.2s
ILAR Eielson Array 86.31 12 P **P** 23 16 08.3 -0.8
ILAR Eielson Array 86.31 12 P **P** 23 16 08.2 -1.0
comp=Z,24nm,1.2s,baz=227,slow=5.1,SNR=14
ILAR LR LR 23 47 11.3
comp=Z,5µm,21.7s,baz=204,slow=30
comp=Z,24nm,1.2s
ILAR Eielson Array 86.31 12 P **P** 23 16 08.3 -0.8
OVMT Ovando 86.33 37 P **P** 23 16 09.5 -0.3
BOZ Bozeman (W) 86.35 39 P **P** 23 16 10.4 +0.5
BOZ IAmb IAmb 23 16 29.0
comp=Z,61nm,1.7s
BOZ IAMs_20 IAMs_20 23 47 56.7
comp=Z,11µm,21.0s
BOZ Bozeman (W) 86.35 39 P **P** 23 16 10.4 +0.5
BOZ pmax pmax
comp=Z,61nm,1.7s
BOZ MLR MLR
comp=Z,10µm,21.0s
H17A Grant Village 86.36 41 P **P** 23 16 10.2 0.0
H17A IAmb IAmb 23 16 29.3
comp=Z,51nm,1.8s
HNS HongShan 86.38 311 ⇑P **P** 23 16 11.8 +1.7
HNS S **S** 23 26 41.1 -4.7
HNS SS **SS** 23 32 24.3 -1.8
HNS pmax pmax
comp=Z,10.0nm,1.1s
HNS pmax pmax
comp=Z,340nm,6.1s
HNS LR LR
comp=Z,5µm,17.5s
HNS LR LR
comp=Z,2µm,18.7s
HNS LR LR
comp=Z,5µm,19.6s
YHH Holmes Hill 86.40 40 P **P** 23 16 10.9 +0.6
E17K Hotham Inlet 86.40 5 P **P** 23 16 08.9 -0.6
baz=193
YNM Yellowstone No 86.45 40 P **P** 23 16 10.3 -0.3
YNR Norris Junctio 86.46 40 P **P** 23 16 09.8 -0.9
YNR IAmb IAmb 23 16 30.6
comp=Z,51nm,1.5s
J25K Salcha River, 86.47 12 P **P** 23 16 10.3 +0.3
J25K IAMs_20 IAMs_20 00 00 21.9
comp=Z,6µm,18.0s
J25K Salcha River, 86.47 12 P **P** 23 16 10.6 +0.6
baz=208
SDCO Great Sand Dun 86.50 48 P **P** 23 16 11.3 +0.3
SDCO IAMs_20 IAMs_20 23 46 38.2
comp=Z,6µm,21.0s
POKR Poker Plat Res 86.52 11 P **P** 23 16 10.1 0.0
POKR IAmb IAmb 23 16 26.0
comp=Z,45nm,0.9s
POKR IAMs_20 IAMs_20 23 49 14.1
comp=Z,9µm,20.0s
POKR Poker Plat Res 86.52 11 P **P** 23 16 10.1 0.0
baz=206
H22K Ishtalitna Cre 86.54 10 P **P** 23 16 10.2 0.0
baz=203
LKWY Lake 86.56 40 P **P** 23 16 10.6 -0.5
LKWY Lake 86.56 40 P **P** 23 16 10.6 -0.5
LKWY pmax pmax
comp=Z,28nm,1.3s
BJT Baijiatuau 86.58 314 P **P** 23 16 11.4 +0.4
BJT IAmb IAmb 23 16 49.3
comp=Z,55nm,1.4s
BJT Baijiatuau 86.58 314 IAMs_20 IAMs_20 23 55 40.0
comp=Z,6µm,19.0s
BJT Baijiatuau 86.58 314 P **P** 23 16 12.7 +1.7
comp=Z,18nm,1.6s
BJT Baijiatuau 86.58 314 P **P** 23 16 11.4 +0.4
BJT pmax pmax
comp=Z,55nm,1.4s
BJT MLR MLR
comp=Z,6µm,19.0s
HAYD Hayden 86.58 45 P **P** 23 16 10.5 -0.8
HAYD IAmb IAmb 23 16 58.7
comp=Z,60nm,1.8s
BJI Beijing 86.58 314 P **P** 23 16 11.0 0.0
BJI pP **sP** 23 16 15.8 +0.3
BJI sP **pwP** 23 16 18.3 +1.0
BJI PP **PP** 23 19 33.2 0.0
BJI pmax pmax
comp=Z,7.0nm,1.4s
BJI pmax pmax
comp=Z,120nm,4.4s
DRIO Del Rio 86.61 57 P **P** 23 16 11.8 +0.3
LL02 Futaleuf 86.64 135 P **P** 23 16 12.2 +0.8
LL02 IAmb IAmb 23 16 43.8
comp=Z,70nm,1.4s
LL02 IAMs_20 IAMs_20 23 45 41.7
comp=Z,12µm,22.0s
K27K Chicken 86.68 14 P **P** 23 16 11.0 +0.1
K27K IAmb IAmb 23 16 51.9
comp=Z,41nm,1.3s
K27K IAMs_20 IAMs_20 23 49 14.4
comp=Z,6µm,20.0s
K27K Chicken 86.68 14 P **P** 23 16 12.4 +1.4
baz=211
LYMT Lyon Mountain 86.69 38 P **P** 23 16 11.8 +0.1
N32M Quiet Lake 86.75 19 P **P** 23 16 10.7 -0.7
N32M IAmb IAmb 23 16 19.8
comp=Z,36nm,1.2s
N32M IAMs_20 IAMs_20 23 47 49.4
comp=Z,9µm,20.0s
N32M Quiet Lake 86.75 19 P **P** 23 16 11.5 +0.1
baz=220
LYN LuoYang 86.75 308 P **P** 23 16 13.4 +1.4
LYN pP sP 23 16 16.9 +0.4
LYN S **S** 23 26 46.0 -3.5
LYN pmax pmax
comp=Z,35nm,0.9s
LYN pmax pmax
comp=Z,520nm,5.4s
LYN LR LR
comp=Z,8µm,17.8s
LYN LR LR
comp=Z,4µm,16.5s
LYN LR LR
comp=Z,8µm,18.8s
J26L Joseph Creek 86.75 13 P **P** 23 16 10.4 -1.0
J26L IAmb IAmb 23 16 38.8
comp=Z,51nm,1.1s
J26L Joseph Creek 86.75 13 P **P** 23 16 12.3 +0.9
baz=210
H23K Yukon River 86.78 10 IAMs_20 IAMs_20 23 58 02.6
comp=Z,7µm,18.0s
H23K Yukon River 86.78 10 P **P** 23 16 11.7 +0.3
baz=204
M30M Minto, Yukon 86.79 17 P **P** 23 16 11.1 -0.5
M30M Minto, Yukon 86.79 17 P **P** 23 16 12.6 +1.0
baz=216
YMP Mirror Lake Pl 86.80 40 P **P** 23 16 11.7 -0.7
YMP IAmb IAmb 23 16 33.3
comp=Z,61nm,1.6s
LR04 Corral 86.80 131 IAMs_20 IAMs_20 23 46 21.2
comp=Z,8µm,20.0s
G21K Allakaket 86.81 9 P **P** 23 16 11.4 -0.1
G21K Allakaket 86.81 9 P **P** 23 16 12.7 +1.1
baz=201
RPSI Rantau Prapat 86.81 274 P **P** 23 16 12.6 -0.1
RPSI IAmb IAmb 23 16 28.6
comp=Z,36nm,1.3s
OZNA Ozona 86.82 56 P **P** 23 16 12.9 +0.4
MSTX Muleshoe 86.83 53 P **P** 23 16 12.8 +0.3
E18K Tukpahlearik C 86.84 6 P **P** 23 16 12.9 +1.3
E18K IAmb IAmb 23 16 28.1
comp=Z,41nm,1.2s
E18K Tukpahlearik C 86.84 6 P **P** 23 16 12.7 +1.1
baz=194
PSI Prapat 86.84 274 LR LR 23 56 03.9
comp=Z,3µm,19.2s,baz=144,slow=36
PSI Prapat 86.84 274 P **P** 23 16 13.9 +0.8
comp=Z,20nm,1.4s
PSI Prapat 86.84 274 P **P** 23 16 12.6 -0.5
PSI pmax pmax
comp=Z,36nm,1.3s
L29M L29M 86.87 16 P **P** 23 16 12.9 +1.0
L29M IAmb IAmb 23 16 19.6
comp=Z,58nm,1.1s
L29M IAMs_20 IAMs_20 23 50 12.4
comp=Z,10µm,19.0s
L29M L29M 86.87 16 P **P** 23 16 12.9 +1.0
baz=215
D17K Noatak River 86.90 5 P **P** 23 16 12.9 +1.0
baz=192
T25A Trinidad 87.00 49 P **P** 23 16 13.1 -0.3
T25A IAMs_20 IAMs_20 23 47 26.6
comp=Z,9µm,22.0s
F20K Avaraart Lake 87.02 8 P **P** 23 16 13.4 +0.9
F20K IAmb IAmb 23 16 38.0
comp=Z,43nm,1.4s
F20K IAMs_20 IAMs_20 23 57 30.7
comp=Z,7µm,18.0s
F20K Avaraart Lake 87.02 8 P **P** 23 16 13.9 +1.4
baz=199
YNE Yellowstone No 87.02 40 P **P** 23 16 13.6 +0.2
LL03 Petrohue 87.05 133 IAMs_20 IAMs_20 23 46 20.7
comp=Z,7µm,20.0s
H24K Noodor Dome 87.08 11 P **P** 23 16 12.8 -0.2
H24K IAMs_20 IAMs_20 23 48 41.1
comp=Z,10µm,20.0s
H24K Noodor Dome 87.08 11 P **P** 23 16 14.0 +1.1
baz=206
833A Chaparral WMA, 87.16 59 P **P** 23 16 13.4 -0.7
M31M Drury Creek, Y 87.17 18 P **P** 23 16 13.7 +0.3
M31M IAmb IAmb 23 16 33.7
comp=Z,58nm,1.6s
M31M IAMs_20 IAMs_20 23 52 16.6
comp=Z,9µm,19.0s
M31M Drury Creek, Y 87.17 18 P **P** 23 16 14.3 +0.9
baz=218
E19K Redstone River 87.22 7 P **P** 23 16 11.4 -2.2
E19K IAmb IAmb 23 16 29.3
comp=Z,76nm,1.6s
E19K Redstone River 87.22 7 P **P** 23 16 13.7 +0.1
baz=197
SGCY Sterling City 87.22 55 P **P** 23 16 13.9 -0.5
HBVL Hebbronville 87.26 60 P **P** 23 16 14.2 -0.5
ENH Enshi 87.26 303 P **P** 23 16 14.6 0.0
ENH Enshi 87.26 303 P **P** 23 16 16.9 +2.3
comp=Z,60nm,1.7s
RDOG Red Dog Mine 87.27 5 IAMs_20 IAMs_20 23 48 08.8
comp=Z,8µm,21.0s
Q24A Divide 87.30 47 P **P** 23 16 14.0 -1.0
C16K Lisburne Hills 87.31 4 IAMs_20 IAMs_20 23 51 36.1
comp=Z,8µm,20.0s
C16K Lisburne Hills 87.31 4 P **P** 23 16 14.6 +0.7
baz=190
DAWY Dawson 87.34 15 P **P** 23 16 14.1 -0.2
baz=214,SNR=18
ISCO Idaho Springs 87.36 46 P **P** 23 16 15.2 0.0
ISCO IAMs_20 IAMs_20 23 48 39.9
comp=Z,8µm,20.0s
ISCO Idaho Springs 87.36 46 P **P** 23 16 15.3 0.0
ISCO pmax pmax
comp=Z,10.0nm,1.3s
ISCO MLR MLR
comp=Z,8µm,20.0s
WTLY Watson Lake, Y 87.37 21 P **P** 23 16 15.8 +1.4
WTLY Watson Lake, Y 87.37 21 P **P** 23 16 14.7 +0.3
baz=223,SNR=13
POST Post 87.41 54 P **P** 23 16 15.5 +0.2
POST IAmb IAmb 23 16 24.4
comp=Z,48nm,1.1s
F21K Alatna River 87.47 8 P **P** 23 16 14.9 +0.1
F21K IAmb IAmb 23 16 30.5
comp=Z,44nm,1.6s
F21K IAMs_20 IAMs_20 23 49 33.3
comp=Z,6µm,20.0s
F21K Alatna River 87.47 8 P **P** 23 16 15.3 +0.5
baz=201
G22K Bettles 87.48 9 P **P** 23 16 15.7 +0.9
baz=202
FARO Faro, Yukon 87.50 18 P **P** 23 16 15.3 +0.3
FARO Faro, Yukon 87.50 18 P **P** 23 16 15.4 +0.3
baz=219
G23K Bananza Creek 87.51 10 P **P** 23 16 15.1 +0.1
G23K IAmb IAmb 23 16 29.6
comp=Z,37nm,1.4s
G23K Bananza Creek 87.51 10 P **P** 23 16 15.5 +0.5
baz=204
ZEA Zeya 87.54 330 *e*P **P** 23 16 16.6 +1.3
ZEA *e*S **S** 23 27 00.7 +4.4
ZEA *e* 23 27 53.6
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA smax smax
comp=N,800nm,9.5s
I26K Coal Creek Min 87.54 13 P **P** 23 16 15.2 +0.2
I26K Coal Creek Min 87.54 13 P **P** 23 16 15.4 +0.3
baz=210,SNR=7.2
K29M Barlow Dome 87.63 16 P **P** 23 16 16.1 +0.4
K29M IAMs_20 IAMs_20 23 49 39.5
comp=Z,10µm,20.0s
K29M Barlow Dome 87.63 16 P **P** 23 16 16.2 +0.5
baz=216
GSI Gunungsitoli 87.63 272 P **P** 23 16 16.8 0.0
GSI IAMs_20 IAMs_20 23 54 05.2
comp=Z,10µm,22.0s
LR03 Panguipulli 87.67 131 P **P** 23 16 17.4 +0.9
LR05 Currie 87.68 132 P **P** 23 16 17.4 +0.9
LR05 IAMs_20 IAMs_20 23 48 06.3
comp=Z,6µm,20.0s
JCT Junction City 87.68 57 P **P** 23 16 17.0 +0.3
JCT IAmb IAmb 23 16 25.0
comp=Z,52nm,1.4s
JCT Junction City 87.68 57 P **P** 23 16 17.0 +0.3
HNDO Hondo 87.72 58 P **P** 23 16 17.3 +0.5
TOAD Toad River Com 87.76 24 P **P** 23 16 17.4 +1.0
baz=227,SNR=5.5
BILL Bilibino 87.81 353 P **P** 23 16 17.0 +0.7
BILL IAmb IAmb 23 16 40.2
comp=Z,32nm,1.2s
BILL Bilibino 87.81 353 *ce*P **P** 23 16 17.3 +1.0
BILL pmax pmax
comp=Z,34nm,1.3s
LIRD Liard River Hi 87.83 23 P **P** 23 16 17.7 +1.1
baz=226
H25L Birch Creek 87.85 12 P **P** 23 16 17.7 +1.2
baz=208
MAYO Mayo, Yukon 87.86 17 P **P** 23 16 17.1 +0.4
MAYO Mayo, Yukon 87.86 17 P **P** 23 16 17.8 +1.1
baz=217
SN07 Snyder 07 87.89 54 P **P** 23 16 16.5 -1.1
SN07 IAmb IAmb 23 16 25.8
comp=Z,57nm,1.3s
G24K Hadweenzic Riv 87.94 11 IAMs_20 IAMs_20 23 49 07.5
comp=Z,8µm,20.0s
G24K Hadweenzic Riv 87.94 11 P **P** 23 16 17.8 +0.8
baz=206
COLD Coldfoot 87.96 10 P **P** 23 16 17.7 +0.6
COLD IAMs_20 IAMs_20 23 49 37.2
comp=Z,8µm,21.0s
COLD Coldfoot 87.96 10 P **P** 23 16 17.6 +0.6
baz=204
C18K Utukok River 87.99 5 IAMs_20 IAMs_20 23 53 41.9
comp=Z,6µm,20.0s
K22A Casper 88.07 44 P **P** 23 16 18.4 0.0
DKNS Dickens 88.10 54 P **P** 23 16 18.0 -0.6
E20K Nigu River 88.11 7 P **P** 23 16 19.0 +1.1
baz=198
D19K Kuna River 88.13 6 P **P** 23 16 18.8 +1.0
baz=196
I27K Kandik River 88.13 13 P **P** 23 16 18.7 +0.7
baz=212
TIY Taiyuan 88.14 311 P **P** 23 16 22.7 +4.0
TIY S **S** 23 27 02.2 -0.7
TIY pmax pmax
comp=Z,330nm,6.5s
TIY LR LR
comp=Z,2µm,18.6s
TIY LR LR
comp=Z,3µm,22.0s
TIY LR LR
comp=Z,4µm,24.1s
G25K Bearman Lake 88.24 11 P **P** 23 16 19.8 +1.5
baz=208
I28M Miner Creek 88.37 14 P **P** 23 16 19.2 0.0
I28M IAmb IAmb 23 16 50.8
comp=Z,34nm,1.4s
I28M IAMs_20 IAMs_20 23 47 54.2
comp=Z,9µm,22.0s
I28M Miner Creek 88.37 14 P **P** 23 16 18.9 -0.2
baz=213
ELIB Princess Elisa 88.41 186 *d*P **P** 23 16 19.5 -0.1
comp=Z,27nm,1.1s
MMPY Sheldon Lake, 88.43 19 P **P** 23 16 19.8 +0.3
MMPY IAmb IAmb 23 16 27.1
comp=Z,47nm,1.3s
MMPY Sheldon Lake, 88.43 19 P **P** 23 16 20.0 +0.5
baz=221,SNR=5.4
XLT XiLinHaoTe 88.47 318 *e*P **P** 23 16 20.4 +0.3
XLT pP sP 23 16 25.0 +0.3
XLT sP pwP 23 16 29.4 +2.9
XLT SKS **SKSac** 23 26 50.0 +0.9
XLT S **S** 23 27 03.6 -2.2
XLT sS sS 23 27 13.0 +1.7
XLT SS **SS** 23 32 55.0 -1.6
XLT pmax pmax
comp=Z,20nm,0.9s
XLT pmax pmax
comp=Z,290nm,6.4s
XLT LR LR
comp=Z,4µm,18.7s
XLT LR LR
comp=Z,6µm,20.4s
PLCA Paso Flores 88.50 133 P **P** 23 16 20.6 +0.1
PLCA IAmb IAmb 23 16 54.7
comp=Z,46nm,1.6s
PLCA Paso Flores 88.50 133 P **P** 23 16 20.7 +0.1
comp=Z,1.6nm,0.9s,baz=233,slow=5.4,SNR=2.8
comp=Z,1.6nm,0.9s
D20K Etivluk River 88.50 7 P **P** 23 16 20.4 +0.7
D20K Etivluk River 88.50 7 P **P** 23 16 20.8 +1.2
baz=198
J30M Hart River 88.53 16 P **P** 23 16 19.8 -0.2
J30M IAmb IAmb 23 16 41.7
comp=Z,76nm,1.9s
J30M IAMs_20 IAMs_20 23 50 38.4
comp=Z,11µm,20.0s
J30M Hart River 88.53 16 P **P** 23 16 20.7 +0.7
baz=217
E21K Killik River 88.56 8 P **P** 23 16 20.7 +0.8
baz=200
E22K Anaktuvuk Pass 88.56 9 P **P** 23 16 20.8 +0.9
E22K IAmb IAmb 23 16 33.6
comp=Z,24nm,1.1s
E22K IAMs_20 IAMs_20 23 56 10.0
comp=Z,6µm,19.0s
E22K Anaktuvuk Pass 88.56 9 P **P** 23 16 20.9 +0.9
baz=202
APMT Aspermont 88.57 54 P **P** 23 16 20.5 -0.3
TGTN Hyland Airport 88.57 21 P **P** 23 16 21.1 +0.9
baz=224
C19K Lookout Ridge 88.57 6 P **P** 23 16 20.9 +0.9
baz=195
F24K Squaw Lake 88.60 10 P **P** 23 16 21.4 +1.2
F24K IAMs_20 IAMs_20 23 58 44.1
comp=Z,8µm,18.0s
F24K Squaw Lake 88.60 10 P **P** 23 16 21.4 +1.2
baz=206
BRDY Brady 88.64 56 P **P** 23 16 21.4 +0.3
BRDY IAmb IAmb 23 16 44.2
comp=Z,77nm,1.6s
B18K Kokolik River 88.64 5 P **P** 23 16 21.8 +1.6
baz=193
735A Kenedy 88.65 59 IAMs_20 IAMs_20 23 48 46.9
comp=Z,6µm,21.0s
ABTX Abilene, Hawle 88.66 55 P **P** 23 16 21.8 +0.6
ABTX IAMs_20 IAMs_20 23 48 44.9
comp=Z,11µm,20.0s
H27K Steamboat Moun 88.68 13 P **P** 23 16 21.0 +0.4
H27K IAmb IAmb 23 16 35.6
comp=Z,48nm,1.6s
H27K Steamboat Moun 88.68 13 P **P** 23 16 21.4 +0.9
baz=212
EGMT Eagleton 88.70 38 P **P** 23 16 20.6 -0.6
EGMT IAmb IAmb 23 16 29.8
comp=Z,70nm,1.8s
EGMT IAMs_20 IAMs_20 23 50 01.0
comp=Z,9µm,20.0s
SYO Syowa Base 88.73 192 ⇑*i*PcP **PcP** 23 16 23.2 +0.7
SYO Syowa Base 88.73 192 ⇑*i*pP pP 23 16 25.2 +0.9
E23K Chandalar 88.81 9 P **P** 23 16 22.2 +1.0
baz=204
G26K Porcupine Rive 88.84 12 P **P** 23 16 22.0 +0.8
G26K IAmb IAmb 23 16 40.2
comp=Z,44nm,1.4s
G26K IAMs_20 IAMs_20 23 56 15.4
comp=Z,6µm,19.0s
G26K Porcupine Rive 88.84 12 P **P** 23 16 22.7 +1.5
baz=210
HIA Hailar 88.92 324 P **P** 23 16 22.6 +0.5
HIA Hailar 88.92 324 P **P** 23 16 22.6 +0.5
HIA pmax pmax
comp=Z,19nm,1.2s
HIA MLR MLR
comp=Z,14µm,21.0s
E24K Your Creek 89.01 10 P **P** 23 16 23.3 +1.2
E24K IAmb IAmb 23 17 13.1
comp=Z,50nm,1.9s
E24K IAMs_20 IAMs_20 23 59 36.4
comp=Z,7µm,18.0s
E24K Your Creek 89.01 10 P **P** 23 16 23.0 +0.9
baz=205
CCIG Comitan 89.03 73 P **P** 23 16 23.2 -0.3
CCIG IAmb IAmb 23 17 14.4

comp=Z,104nm,2.0s
I30M Mount Dempster 89.04 15 P P 23 16 22.4 0.0
I30M IAmb IAmb 23 16 43.1
comp=Z,41nm,1.3s
I30M IAMs_20 IAMs_20 23 51 40.9
comp=Z,7µm,20.0s
I30M Mount Dempster 89.04 15 P P 23 16 23.3 +0.9
baz=216
F25K Christian Rive 89.06 11 IAMs_20 IAMs_20 23 49 42.3
comp=Z,9µm,20.0s
F25K Christian Rive 89.06 11 P P 23 16 23.2 +0.9
baz=208
HILR Hailar Array B 89.07 324 P P 23 16 20.9 -1.8
comp=Z,0.8nm,0.4s,baz=138,slow=7.6,SNR=4.7
HILR LR LR 23 50 38.5
comp=Z,11µm,21.6s,baz=100,slow=32
comp=Z,0.8nm,0.4s
KOTAN Kotaneelee Air 89.08 23 P P 23 16 24.1 +1.6
baz=228
KSCO Kaye Shedlock' 89.08 48 P P 23 16 24.2 +0.9
KSCO IAmb IAmb 23 16 27.4
comp=Z,57nm,1.5s
KSCO IAMs_20 IAMs_20 23 48 14.6
comp=Z,8µm,22.0s
BMAR Burnt Mountain 89.11 11 P P 23 16 23.0 +0.4
C21K Knifeblade Rid 89.13 7 P P 23 16 24.4 +1.9
baz=199
D22K Ayikyak River 89.14 8 P P 23 16 22.7 +0.1
D22K IAmb IAmb 23 16 27.7
comp=Z,29nm,1.2s
D22K IAMs_20 IAMs_20 23 54 09.2
comp=Z,7µm,20.0s
D22K Ayikyak River 89.14 8 P P 23 16 24.0 +1.4
baz=201
G27K Doyon Strip 89.15 13 P P 23 16 22.6 -0.1
G27K IAMs_20 IAMs_20 23 50 34.7
comp=Z,7µm,20.0s
G27K Doyon Strip 89.15 13 P P 23 16 23.7 +1.0
baz=212
SMWD Samnorwood 89.20 52 P P 23 16 23.2 -0.5
XAN Xi'an 89.21 306 ⇑P P 23 16 25.1 +1.3
XAN pP sP 23 16 28.7 +0.4
XAN S **S** **23 27 15.9 +2.8**
XAN pmax pmax
comp=Z,30nm,1.6s
XAN pmax pmax
comp=Z,1µm,6.2s
XAN LR LR
comp=Z,4µm,22.7s
XAN LR LR
comp=Z,5µm,22.7s
XAN LR LR
comp=Z,10µm,23.4s
TROLL Troll, Antarti 89.23 179 ⇓P P 23 16 23.6 +0.2
comp=Z,773nm,0.8s
TOLK Toolik Lake Re 89.36 9 P P 23 16 22.3 -1.3
TOLK IAMs_20 IAMs_20 23 50 55.0
comp=Z,7µm,21.0s
TOLK Toolik Lake Re 89.36 9 P P 23 16 24.3 +0.7
baz=204
H29M Whitestone 89.38 14 P P 23 16 24.2 +0.4
H29M IAmb IAmb 23 16 38.4
comp=Z,59nm,1.4s
H29M IAMs_20 IAMs_20 23 48 45.5
comp=Z,8µm,21.0s
H29M Whitestone 89.38 14 P P 23 16 25.3 +1.6
baz=215
F26K Sheenjek River 89.42 11 P P 23 16 24.7 +0.7
F26K IAMs_20 IAMs_20 23 48 35.8
comp=Z,9µm,22.0s
F26K Sheenjek River 89.42 11 P P 23 16 25.2 +1.2
baz=209
SNAA Sanae 89.44 178 ⇑P P 23 16 24.7 +0.4
comp=Z,236nm,0.8s
SNAA Sanae 89.44 178 P P 23 16 24.6 +0.4
SNAA IAmb IAmb 23 16 41.1
comp=Z,35nm,1.4s
SNAA IAMs_20 IAMs_20 23 56 14.7
comp=Z,10µm,18.0s
SNAA Sanae 89.44 178 P P 23 16 24.5 +0.3
comp=Z,9.0nm,1.1s,baz=173,slow=4.8,SNR=11
comp=Z,9.0nm,1.1s
VNA3 Neumayer Olymp 89.47 175 ⇓P P 23 16 24.6 +0.2
comp=Z,26nm,0.8s
D23K Nanushuk River 89.49 9 IAMs_20 IAMs_20 23 50 39.6
comp=Z,8µm,20.0s
D23K Nanushuk River 89.49 9 P P 23 16 26.1 +1.9
baz=203
A19K Wainwright 89.52 5 P P 23 16 26.1 +1.8
baz=194
E25K Arctic Village 89.54 11 P P 23 16 25.0 +0.5
E25K IAMs_20 IAMs_20 23 50 29.0
comp=Z,9µm,21.0s
E25K Arctic Village 89.54 11 P P 23 16 26.3 +1.8
baz=208
435B Jarrell 89.56 57 P P 23 16 26.7 +1.2
435B IAmb IAmb 23 16 35.4
comp=Z,40nm,1.1s
B21K Ikpikpuk River 89.59 7 IAMs_20 IAMs_20 23 50 58.3
comp=Z,7µm,20.0s
B21K Ikpikpuk River 89.59 7 P P 23 16 26.0 +1.4
baz=200
MLDN Muldoon 89.60 58 P P 23 16 27.2 +1.5
BI02 San Fabin de 89.61 129 P P 23 16 27.0 +1.2
B20K Meade River 89.68 6 P P 23 16 26.8 +1.7
baz=197
PLPT Palo Pinto 89.76 55 P P 23 16 27.4 +1.0
EPYK Eagle Plains 89.89 15 P P 23 16 26.6 +0.4
EPYK IAMs_20 IAMs_20 23 51 40.2
comp=Z,6µm,20.0s
EPYK Eagle Plains 89.89 15 P P 23 16 27.2 +1.1
baz=216
D24K Happy Valley 89.94 9 P P 23 16 27.5 +1.2
baz=205
VNA2 Neumayer--Watz 89.94 176 ⇓P P 23 16 26.1 -0.5
comp=Z,31nm,0.8s,baz=132,slow=8.8
WTFS Witchita Falls 90.02 54 P P 23 16 27.2 -0.4
WTFS IAmb IAmb 23 16 30.2
comp=Z,83nm,1.6s
H31M Peel River 90.02 16 P P 23 16 27.8 +1.0
H31M IAmb IAmb 23 17 03.7
comp=Z,55nm,1.6s
H31M IAMs_20 IAMs_20 23 52 21.8
comp=Z,9µm,19.0s
H31M Peel River 90.02 16 P P 23 16 28.4 +1.6
baz=218
G29M Pine Creek 90.03 14 P P 23 16 27.5 +0.7
G29M IAmb IAmb 23 16 47.5
comp=Z,55nm,1.7s
G29M IAMs_20 IAMs_20 23 51 18.7
comp=Z,8µm,20.0s
G29M Pine Creek 90.03 14 P P 23 16 28.0 +1.2
baz=215
HHC Hu-ho-hao-te 90.09 313 eP P 23 16 28.7 +0.9
HHC S **S** **23 27 15.4 -5.8**
HHC sS sS 23 27 31.2 +4.5
HHC SS **SS** **23 33 22.2 +1.8**
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,350nm,6.2s
HHC LR LR
comp=Z,3µm,19.1s
HHC LR LR
comp=Z,7µm,22.5s
HHC LR LR
comp=Z,12µm,23.3s
WHTX Lake Whitney, 90.12 56 P P 23 16 28.8 +0.7
WHTX IAMs_20 IAMs_20 23 49 39.6
comp=Z,6µm,20.0s
VNA1 Neumayer--Stat 90.15 176 ⇓P P 23 16 28.8 +1.3
comp=Z,51nm,0.9s
WMOK Wichita Mounta 90.15 53 P P 23 16 28.5 +0.3
WMOK Wichita Mounta 90.15 53 IAMs_20 IAMs_20 23 50 12.3
comp=Z,10µm,20.0s
WMOK Wichita Mounta 90.15 53 P P 23 16 28.5 +0.3
WMOK pmax pmax
comp=Z,15nm,1.4s
WMOK MLR MLR
comp=Z,10µm,20.0s
ELIS Ellis County 90.20 52 P P 23 16 28.7 +0.3
F28M Old Crow 90.20 13 P P 23 16 28.8 +1.1
F28M IAmb IAmb 23 16 48.5
comp=Z,56nm,1.9s
F28M IAMs_20 IAMs_20 23 51 27.6
comp=Z,7µm,20.0s
F28M Old Crow 90.20 13 P P 23 16 28.7 +1.1
baz=213
FW13 Cleburne 90.28 56 P P 23 16 28.4 -0.4
C23K Itkillik River 90.30 8 P P 23 16 28.6 +0.6
C23K IAmb IAmb 23 16 53.6
comp=Z,32nm,1.2s
C23K IAMs_20 IAMs_20 23 52 08.0
comp=Z,6µm,21.0s
C23K Itkillik River 90.30 8 P P 23 16 29.0 +1.0
baz=203
OGNE Ogallala 90.32 47 IAMs_20 IAMs_20 23 50 27.2
comp=Z,6µm,20.0s
E27K Coleen River 90.34 12 P P 23 16 29.8 +1.5
E27K Coleen River 90.34 12 P P 23 16 29.1 +0.9
baz=212
RSSD Black Hills 90.36 43 P P 23 16 29.3 +0.1
RSSD Black Hills 90.36 43 P P 23 16 29.3 +0.1
RSSD pmax pmax
comp=Z,25nm,1.3s
RSSD MLR MLR
comp=Z,4µm,21.0s
B22K Teshekpuk Lake 90.41 7 IAMs_20 IAMs_20 23 51 54.0
comp=Z,6µm,21.0s
B22K Teshekpuk Lake 90.41 7 P P 23 16 29.7 +1.2
baz=201
C24K Franklin Bluff 90.47 9 P P 23 16 28.8 0.0
C24K IAmb IAmb 23 16 56.1
comp=Z,42nm,1.3s
C24K Franklin Bluff 90.47 9 P P 23 16 28.8 0.0
baz=205
D25K Kavik River 90.47 10 P P 23 16 29.3 +0.4
D25K IAMs_20 IAMs_20 00 00 30.6
comp=Z,7µm,18.0s
D25K Kavik River 90.47 10 P P 23 16 30.2 +1.3
baz=207
G30M tAoh Zraii Nji 90.50 14 P P 23 16 29.3 +0.3
G30M IAMs_20 IAMs_20 23 51 12.2
comp=Z,6µm,20.0s
G30M tAoh Zraii Nji 90.50 14 P P 23 16 30.4 +1.4
baz=217
BO01 Tunca 90.65 127 IAMs_20 IAMs_20 23 47 30.1
comp=Z,10µm,21.0s
HKT Hockley 90.66 59 P P 23 16 31.1 +0.6
HKT IAmb IAmb 23 16 51.2
comp=Z,66nm,1.6s
HKT Hockley 90.66 59 IAMs_20 IAMs_20 23 54 37.0
comp=Z,6µm,20.0s
HKT Hockley 90.66 59 P P 23 16 31.1 +0.6
HKT pmax pmax
comp=Z,66nm,1.7s
HKT MLR MLR
comp=Z,6µm,20.0s
BO02 Sierra Bellavi 90.72 127 IAMs_20 IAMs_20 23 47 53.9
comp=Z,10µm,21.0s
MT01 Popeta 90.73 126 IAMs_20 IAMs_20 23 48 52.3
comp=Z,6µm,20.0s
VA01 Torpederas 90.76 125 P P 23 16 32.1 +1.0
VA01 IAMs_20 IAMs_20 23 48 11.3
comp=Z,6µm,22.0s
NOKA Waynoka 90.78 51 P P 23 16 31.3 +0.2
Z35A Perchaven, San 90.78 55 P P 23 16 32.0 +0.9
X34A Smith Ranch, M 90.82 54 P P 23 16 32.0 +0.7
OK038 West end E0370 90.86 52 P P 23 16 32.3 +0.9
OK038 IAmb IAmb 23 16 35.8
comp=Z,22nm,0.6s
A22K Sinclair Lake 90.86 7 P P 23 16 32.9 +2.4
baz=199
KMI Kunming 90.89 296 P P 23 16 32.5 +0.4
KMI SKS **SKSac** **23 27 05.6 +1.2**
KMI S **S** **23 27 30.0 +0.6**
KMI pmax pmax
comp=Z,13nm,1.3s
KMI pmax pmax
comp=Z,400nm,6.2s
KMI LR LR
comp=Z,3µm,19.3s
KMI LR LR
comp=Z,3µm,22.3s
KMI LR LR
comp=Z,6µm,22.2s
MTO3 Montecristo 90.92 75 P P 23 16 30.7 -1.7
MTO3 IAmb IAmb 23 16 56.9
comp=Z,35nm,1.5s
MT09 Talagante 90.97 126 P P 23 16 32.4 +0.1
MT09 IAmb IAmb 23 16 48.8
comp=Z,72nm,1.6s
MT09 IAMs_20 IAMs_20 23 48 57.6
comp=Z,6µm,20.0s
BTO Baotou 91.05 313 eP P 23 16 34.0 +1.7
BTO sP **pwP** **23 16 41.2 +2.5**
BTO S **S** **23 27 33.5 +3.5**
BTO SS **SS** **23 33 35.6 +1.3**
BTO pmax pmax
comp=Z,14nm,0.7s
BTO pmax pmax
comp=Z,480nm,5.9s
BTO LR LR
comp=Z,4µm,18.0s
BTO LR LR
comp=Z,9µm,20.0s
BTO LR LR
comp=Z,8µm,21.2s
CBKS Cedar Bluff 91.05 49 IAMs_20 IAMs_20 23 49 11.9
comp=Z,10µm,22.0s
MT02 Curacav 91.06 126 IAMs_20 IAMs_20 23 48 31.0
comp=Z,9µm,20.0s
E28M Babbage River 91.11 12 P P 23 16 32.8 +1.1
E28M IAmb IAmb 23 16 52.6
comp=Z,40nm,1.8s
E28M Babbage River 91.11 12 P P 23 16 32.9 +1.1
baz=214
F30M Barrier River 91.11 14 IAMs_20 IAMs_20 23 52 01.2
comp=Z,6µm,20.0s
F30M Barrier River 91.11 14 P P 23 16 33.1 +1.3
baz=217
BO04 La Punta 91.17 127 IAMs_20 IAMs_20 23 47 46.0
comp=Z,8µm,21.0s
C27K Jago River 91.19 11 P P 23 16 33.1 +0.9
C27K IAmb IAmb 23 16 39.4
comp=Z,50nm,1.9s
C27K IAMs_20 IAMs_20 23 51 23.1
comp=Z,10µm,21.0s
C27K Jago River 91.19 11 P P 23 16 32.9 +0.8
baz=210
C26K Camden Bay 91.24 10 P P 23 16 32.6 +0.3
baz=209
E29M Blow River 91.27 13 IAMs_20 IAMs_20 23 52 00.6
comp=Z,8µm,20.0s
E29M Blow River 91.27 13 P P 23 16 32.6 +0.1
baz=215
MT05 Renca 91.31 126 IAMs_20 IAMs_20 23 48 58.7
comp=Z,6µm,22.0s
D27M Malcolm River 91.36 12 P P 23 16 33.5 +0.4
D27M IAmb IAmb 23 16 54.1
comp=Z,40nm,1.8s
D27M IAMs_20 IAMs_20 23 49 46.6
comp=Z,7µm,22.0s
D27M Malcolm River 91.36 12 P P 23 16 33.6 +0.6
baz=212
OKCSW OKLAHOMA CITY 91.43 53 P P 23 16 34.1 +0.1
PEL Peldehue 91.45 126 IAMs_20 IAMs_20 23 49 02.6
comp=Z,6µm,21.0s
F31M Tsiigehtchic 91.45 15 P P 23 16 33.3 0.0
F31M IAMs_20 IAMs_20 23 57 05.6
comp=Z,7µm,18.0s
F31M Tsiigehtchic 91.45 15 P P 23 16 34.0 +0.7
baz=219
MT13 San Alfonso 91.52 126 IAMs_20 IAMs_20 23 47 57.1
comp=Z,8µm,22.0s
LMEL Las Melosas 91.54 127 IAMs_20 IAMs_20 23 47 58.6
comp=Z,9µm,22.0s
OK029 Liberty Lake 91.56 53 P P 23 16 33.9 -0.8
OK029 IAmb IAmb 23 17 13.7
comp=Z,33nm,1.1s
R32A Long Quarter, 91.64 50 P P 23 16 35.5 +0.5
R32A IAmb IAmb 23 16 44.4
comp=Z,37nm,0.9s
YAK Yakutsk 91.66 337 P P 23 16 35.3 +0.9
YAK IAmb IAmb 23 17 59.1
comp=Z,17nm,0.6s
YAK Yakutsk 91.66 337 IAMs_20 IAMs_20 23 50 24.7
comp=Z,8µm,22.0s
YAK Yakutsk 91.66 337 LR LR 23 53 48.0
comp=Z,5µm,19.9s,baz=130,slow=33
YAK Yakutsk 91.66 337 eP P 23 16 38.0 +3.6
YAK e*PP **pwP** **23 16 41.7 +0.9**
YAK e 23 20 15.7
YAK ePPP PPP 23 22 14.8
YAK eS **SKSac** **23 27 10.2 +3.7**
YAK e*SS **SKKSac** **23 27 21.2 -1.5**
YAK eSP **SP** **23 28 40.3 -3.1**
YAK eSS **SS** **23 33 47.2 +5.4**
YAK eSSS SSS 23 37 19.0
YAK pmax pmax
comp=Z,11nm,1.0s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,283nm,3.8s
YAK pmax pmax
comp=N,83nm,2.0s
YAK pmax pmax
comp=E,148nm,4.7s
YAK smax smax
comp=E,98nm,3.7s
YAK smax smax
comp=N,84nm,2.8s
YAK MLR MLR
comp=Z,6µm,24.0s
YAK MLR MLR
comp=N,3µm,25.0s
YAK MLR MLR
comp=E,6µm,22.0s
CO06 Fray Jorge 91.69 123 IAMs_20 IAMs_20 23 51 07.8
comp=Z,6µm,19.0s
MT08 Bocatoma Ro 91.84 126 IAMs_20 IAMs_20 23 48 07.8
comp=Z,7µm,22.0s
D28M Stokes Point 91.87 12 P P 23 16 36.5 +1.3
baz=214
CM31 Chiang Mai Arr 91.96 289 P P 23 16 35.5 -1.4
CMAR Chiang Mai Arr 91.96 289 P P 23 16 36.0 -0.9
CMAR Chiang Mai Arr 91.96 289 P P 23 16 36.2 -0.7
comp=Z,1.7nm,0.3s,baz=113,slow=3.0,SNR=15
comp=Z,1.7nm,0.3s
CMAR Chiang Mai Arr 91.96 289 ceP P 23 16 36.5 -0.4
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CO02 Combarbal 91.98 124 P P 23 16 37.2 +0.1
CHTO Chiang Mai 92.08 289 P P 23 16 37.8 +0.4
CHTO Chiang Mai 92.08 289 P P 23 16 37.6 +0.2
comp=Z,6.7nm,1.3s
CHTO Chiang Mai 92.08 289 P P 23 16 37.8 +0.4
CHTO pmax pmax
comp=Z,24nm,1.5s
CHTO MLR MLR
comp=Z,3µm,20.0s
CD2 Chengdu 92.08 302 P P 23 16 38.1 +0.9
CD2 S **S** **23 27 40.6 +1.0**
CD2 SS **SS** **23 33 50.9 +1.5**
CD2 pmax pmax
comp=Z,10.0nm,1.0s
CD2 pmax pmax
comp=Z,440nm,5.7s
CD2 LR LR
comp=Z,3µm,17.1s
CD2 LR LR
comp=Z,5µm,19.7s
CD2 LR LR
comp=Z,6µm,20.3s
BLOK Blackwell 92.10 52 P P 23 16 36.7 -0.5
OK052 Battle Ridge R 92.12 53 P P 23 16 37.2 -0.1
OK052 IAMs_20 IAMs_20 23 51 24.5
comp=Z,10µm,20.0s
INK Inuvik 92.18 14 P P 23 16 36.5 -0.2
INK IAmb IAmb 23 16 57.0
comp=Z,47nm,1.4s
INK Inuvik 92.18 14 LR LR 23 53 04.7
comp=Z,4µm,19.8s,baz=217,slow=32
INK Inuvik 92.18 14 P P 23 16 36.5 -0.2
INK pmax pmax
comp=Z,47nm,1.5s
INK Inuvik 92.18 14 P P 23 16 38.1 +1.4
baz=219
DGMT Dagmar 92.19 39 IAMs_20 IAMs_20 23 52 53.1
comp=Z,10µm,20.0s
PZH PanZhiHua 92.21 297 P P 23 16 41.3 +3.3
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,240nm,6.7s
PZH LR LR
comp=Z,3µm,22.7s
PZH LR LR
comp=Z,2µm,20.6s
PZH LR LR
comp=Z,2µm,22.0s
NATX Nacogdoches 92.25 57 IAMs_20 IAMs_20 23 50 24.0
comp=Z,8µm,21.0s
QUOK Quay 92.26 53 P P 23 16 37.0 -0.9
QUOK IAmb IAmb 23 17 00.5
comp=Z,40nm,1.2s
DEOK Depew 92.30 53 P P 23 16 36.8 -1.3
CO05 La Serena 92.30 123 IAMs_20 IAMs_20 23 50 31.0
comp=Z,7µm,19.0s
CO03 El Pedregal 92.37 124 IAMs_20 IAMs_20 23 51 02.8
comp=Z,6µm,18.0s
Z38A Mt. Pleasant 92.53 56 P P 23 16 38.9 -0.3
GO04 Tololo Observa 92.55 123 P P 23 16 40.1 +0.2
GO04 IAmb IAmb 23 17 14.7
comp=Z,29nm,1.1s
GO04 IAMs_20 IAMs_20 23 50 29.6
comp=Z,6µm,19.0s
K30B Basset 92.67 46 P P 23 16 40.1 +0.4
K30B IAmb IAmb 23 16 49.6
comp=Z,29nm,0.9s
T35A Sooner Cattle 92.68 52 P P 23 16 39.4 -0.5
TGUH Tegucigalpa,Un 92.73 76 IAMs_20 IAMs_20 23 48 05.7
comp=Z,9µm,22.0s
441A DeRidder 93.08 59 IAMs_20 IAMs_20 00 01 37.0
comp=Z,6µm,18.0s
LCO Las Campanas 93.09 122 IAMs_20 IAMs_20 23 49 38.9
comp=Z,6µm,20.0s
BGNE Belgrade 93.19 47 P P 23 16 42.8 +0.7
CO01 Juntas del Tor 93.19 123 IAMs_20 IAMs_20 23 51 01.5
comp=Z,7µm,19.0s
AC05 El Transito 93.50 122 IAMs_20 IAMs_20 23 50 21.9
comp=Z,6µm,20.0s
E28A Huff 93.53 42 P P 23 16 43.9 +0.4
RLO Rose Lookout 93.53 53 P P 23 16 43.8 0.0
RLO IAmb IAmb 23 19 07.1
comp=Z,19nm,0.7s
LZH Lanzhou 93.83 307 eP P 23 16 50.4 +5.0
LZH sP pwP 23 16 58.5 +6.8
LZH S **S** **23 27 52.5 -2.7**
LZH sS sS 23 28 04.5 +3.7
LZH SS **SS** **23 34 09.5 -5.1**
LZH pmax pmax
comp=Z,13nm,1.3s
LZH pmax pmax
comp=Z,180nm,4.8s
LZH LR LR
comp=Z,4µm,20.6s
LZH LR LR
comp=Z,4µm,21.0s
LZH LR LR
comp=Z,4µm,21.6s
LZDM Lanzhou Array 93.90 307 P P 23 16 44.4 -1.5
comp=Z,0.7nm,0.3s,baz=328,slow=39,SNR=1.3
LZDM LR LR 00 00 07.1
comp=Z,3µm,18.3s,baz=80,slow=36
comp=Z,0.7nm,0.3s
CFA Coronel Fontan 93.97 125 LR LR 23 50 58.1
comp=Z,1µm,20.7s,baz=224,slow=30
NNA Nana 94.05 104 LR LR 23 49 37.8
comp=Z,4µm,21.1s,baz=247,slow=29
MIAR Mount Ida 94.07 55 IAmb IAmb 23 17 02.7
comp=Z,51nm,1.6s
MIAR IAMs_20 IAMs_20 23 51 44.2
comp=Z,7µm,21.0s
U38A Gravette 94.11 53 P P 23 16 46.9 +0.4
U38A IAmb IAmb 23 16 55.5
comp=Z,57nm,1.5s
U38A IAMs_20 IAMs_20 23 51 55.0
comp=Z,9µm,21.0s
YKA Yellowknife Ar 94.12 24 P P 23 16 46.0 +0.3
comp=Z,3.7nm,1.1s,baz=241,slow=5.0,SNR=11
YKA LR LR 23 55 54.3
comp=Z,3µm,18.2s,baz=238,slow=33
comp=Z,3.7nm,1.1s
YKAW1 Yellowknife Wh 94.16 24 P P 23 16 46.6 +0.6
YKAW1 IAmb IAmb 23 16 53.1
comp=Z,36nm,1.2s

Z41A	**Richland Creek**	**94.24**	**56**	P	**P**	**23 16 46.4**	**-0.7**			
Z41A				IAmb	IAmb	23 17 38.8				
	comp=Z,35nm,1.2s									
AC01	**Pan de Azucar**	**94.31**	**119**	IAMs_20	IAMs_20	23 48 22.3				
	comp=Z,6µm,22.0s									
HHAR	**Hobbs**	**94.39**	**53**	P	**P**	**23 16 46.7**	**-1.1**			
TNCH	**TengChong**	**94.46**	**295**	*e*P	**P**	**23 16 48.9**	**+0.4**			
TNCH				S	**S**	**23 27 59.0**	**-2.2**			
TNCH				SS	**SS**	**23 34 29.4**	**+5.4**			
TNCH				LR	LR					
	comp=Z,1µm,22.4s									
TNCH				LR	LR					
	comp=Z,3µm,20.2s									
TNCH				LR	LR					
	comp=Z,8µm,21.2s									
L34A	**Svendsen Farm,**	**94.63**	**47**	P	**P**	**23 16 48.0**	**-0.7**			
L34A				IAMs_20	IAMs_20	23 52 01.3				
	comp=Z,8µm,22.0s									
X40A	**Basin Creek Fa**	**94.63**	**55**	P	**P**	**23 16 49.3**	**+0.4**			
X40A				IAmb	IAmb	23 17 06.5				
	comp=Z,36nm,1.7s									
MDND	**Maddock**	**94.72**	**41**	P	**P**	**23 16 49.8**	**+0.8**			
MDND				IAMs_20	IAMs_20	23 53 23.3				
	comp=Z,8µm,20.0s									
N35A	**Tabor**	**94.75**	**48**	P	**P**	**23 16 50.5**	**+1.2**			
N35A				IAMs_20	IAMs_20	23 52 04.5				
	comp=Z,9µm,22.0s									
PB14	**IPOC Station P**	**95.07**	**118**	IAMs_20	IAMs_20	23 51 11.6				
	comp=Z,6µm,20.0s									
ECSD	**EROS Data Cent**	**95.11**	**46**	P	**P**	**23 16 51.1**	**+0.3**			
ECSD				IAmb	IAmb	23 16 59.1				
	comp=Z,39nm,1.4s									
ECSD	**EROS Data Cent**	**95.11**	**46**	IAMs_20	IAMs_20	23 52 13.8				
	comp=Z,7µm,22.0s									
UALR	**University of**	**95.11**	**55**	P	**P**	**23 16 51.6**	**+0.6**			
UALR				IAmb	IAmb	23 17 07.7				
	comp=Z,20nm,1.0s									
143A	**Socs Landing,**	**95.16**	**57**	P	**P**	**23 16 52.1**	**+0.8**			
143A				IAmb	IAmb	23 20 38.3				
	comp=Z,16nm,0.6s									
143A				IAMs_20	IAMs_20	23 53 29.2				
	comp=Z,6µm,21.0s									
AC02	**Maricunga**	**95.24**	**121**	IAMs_20	IAMs_20	23 48 37.9				
	comp=Z,6µm,22.0s									
C36M	**Paulatuk**	**95.30**	**16**	P	**P**	**23 16 52.2**	**+1.2**			
C36M				IAmb	IAmb	23 17 09.5				
	comp=Z,18nm,0.8s									
C36M				IAMs_20	IAMs_20	23 54 44.3				
	comp=Z,8µm,20.0s									
WHAR	**Wooly Hollow**	**95.32**	**55**	P	**P**	**23 16 51.3**	**-0.7**			
PB10	**IPOC Station P**	**95.39**	**117**	IAMs_20	IAMs_20	23 49 10.9				
	comp=Z,6µm,22.0s									
FCAR	**Ozark Folk Cen**	**95.64**	**54**	P	**P**	**23 16 53.9**	**+0.5**			
P38A	**Dawn**	**95.83**	**50**	P	**P**	**23 16 54.6**	**+0.4**			
P38A				IAmb	IAmb	23 17 01.9				
	comp=Z,17nm,1.0s									
ULN	**Ulaanbaatar**	**95.85**	**319**	P	**P**	**23 16 55.2**	**+0.9**			
ULN	**Ulaanbaatar**	**95.85**	**319**	*ce*P	**P**	**23 16 53.5**	**-0.8**			
ULN				pmax	pmax					
	comp=Z,5.0nm,1.1s									
MGMO	**Mountain Grove**	**95.95**	**53**	P	**P**	**23 16 55.6**	**+0.7**			
F33A	**5 Mile Ranch,**	**96.08**	**44**	P	**P**	**23 16 54.6**	**-0.6**			
F33A				IAmb	IAmb	23 17 10.1				
	comp=Z,33nm,1.3s									
SONM	**Songino Array**	**96.25**	**318**	P	**P**	**23 16 53.4**	**-2.7**			
SONM	**Songino Array**	**96.25**	**318**	P	**P**	**23 16 52.3**	**-3.9**			
	comp=Z,1.2nm,0.7s,baz=98,slow=6.1,SNR=4.5									
SONM				LR	LR	00 01 08.9				
	comp=Z,3µm,18.0s,baz=110,slow=36									
SONM	**Songino Array**	**96.25**	**318**	P	**P**	**23 16 53.4**	**-2.7**			
SONM				pmax	pmax					
	comp=Z,21nm,1.7s									
R40A	**Maddies Statio**	**96.32**	**52**	P	**P**	**23 16 55.8**	**-0.7**			
N38A	**Joes South For**	**96.44**	**49**	P	**P**	**23 16 57.0**	**0.0**			
N38A				IAMs_20	IAMs_20	23 54 01.4				
	comp=Z,8µm,21.0s									
LCAR	**Lake Charles**	**96.45**	**54**	P	**P**	**23 16 57.8**	**+0.8**			
LCAR				IAmb	IAmb	23 17 13.1				
	comp=Z,23nm,1.2s									
PB06	**IPOC Station P**	**96.53**	**117**	IAMs_20	IAMs_20	23 49 45.3				
	comp=Z,6µm,22.0s									
PB03	**IPOC Station P**	**96.64**	**116**	P	**P**	**23 16 58.4**	**-0.3**			
PB03				IAmb	IAmb	23 17 24.4				
	comp=Z,26nm,1.5s									
HBAR	**Harrisburg**	**96.67**	**55**	P	**P**	**23 16 58.8**	**+0.7**			
A36M	**Sachs Harbour**	**96.81**	**14**	P	**P**	**23 16 58.5**	**+0.7**			
A36M				IAmb	IAmb	23 17 10.9				
	comp=Z,16nm,0.8s									
A36M				IAMs_20	IAMs_20	23 55 24.1				
	comp=Z,7µm,20.0s									
A36M	**Sachs Harbour**	**96.81**	**14**	P	**P**	**23 16 58.2**	**+0.4**			
	baz=227									
SCIA	**State Center**	**96.82**	**48**	P	**P**	**23 16 58.7**	**0.0**			
P40A	**Paris**	**96.89**	**51**	P	**P**	**23 16 59.5**	**+0.5**			
CCM	**Cathedral Cave**	**97.01**	**52**	P	**P**	**23 16 59.6**	**0.0**			
CCM				IAmb	IAmb	23 17 08.3				
	comp=Z,28nm,1.4s									
CCM	**Cathedral Cave**	**97.01**	**52**	P	**P**	**23 16 59.6**	**0.0**			
CCM				pmax	pmax					
	comp=Z,28nm,1.5s									
CCM				MLR	MLR					
	comp=Z,13µm,21.0s									
Y45A	**Yeager Farm, C**	**97.01**	**57**	IAMs_20	IAMs_20	23 53 14.1				
	comp=Z,8µm,21.0s									
AGMN	**Agassiz Nation**	**97.22**	**41**	P	**P**	**23 16 59.8**	**-0.5**			
AGMN				IAmb	IAmb	23 17 07.7				
	comp=Z,34nm,1.4s									
AGMN				IAMs_20	IAMs_20	23 55 51.4				
	comp=Z,6µm,20.0s									
OXF	**Oxford**	**97.31**	**56**	IAMs_20	IAMs_20	23 53 01.1				
	comp=Z,8µm,22.0s									
I37A	**Lemond, Waseca**	**97.38**	**46**	P	**P**	**23 17 00.9**	**-0.2**			
I37A				IAMs_20	IAMs_20	23 54 47.2				
	comp=Z,7µm,20.0s									
FVM	**French Village**	**97.60**	**53**	P	**P**	**23 17 01.4**	**-0.9**			
FVM	**French Village**	**97.60**	**53**	P	**P**	**23 17 01.4**	**-0.9**			
FVM				pmax	pmax					
	comp=Z,35nm,1.4s									
PB11	**IPOC Station P**	**97.63**	**114**	P	Pdif	23 17 03.8	+0.6			
ULM	**Lac du Bonnet**	**97.88**	**40**	LR	LR	23 54 29.3				
	comp=Z,9µm,21.9s,baz=252,slow=31									
TIXI	**Tiksi**	**97.94**	**345**	P	Pdif	23 17 03.8	+0.7			
TIXI	**Tiksi**	**97.94**	**345**	*ce*P	**P**	**23 17 01.9**	**-1.1**			
TIXI				pmax	pmax					
	comp=Z,6.0nm,1.0s									
GTA	**Gaotai**	**97.94**	**309**	*e*P	Pdif	23 17 10.6	+6.6			
GTA				pP	pwP	23 17 17.3	+7.0			
GTA				S	**S**	**23 28 33.3**	**+2.7**			
GTA				SS	**SS**	**23 35 10.7**	**-2.0**			
GTA				pmax	pmax					
	comp=Z,4.0nm,1.1s									
GTA				LR	LR					
	comp=Z,2µm,18.5s									
GTA				LR	LR					
	comp=Z,5µm,21.8s									
GTA				LR	LR					
	comp=Z,7µm,23.6s									
CGM3	**Cape Girardeau**	**97.97**	**53**	P	Pdif	23 17 04.2	+0.2			
Z47A	**Carrollton**	**97.98**	**58**	IAMs_20	IAMs_20	23 56 49.9				
	comp=Z,5µm,21.0s									
SPMN	**Marine on St.**	**98.18**	**45**	P	Pdif	23 17 05.2	+0.5			
SPMN				IAmb	IAmb	23 17 12.4				
	comp=Z,20nm,1.1s									
BRAL	**Brewton**	**98.21**	**60**	IAMs_20	IAMs_20	23 55 12.0				
	comp=Z,5µm,22.0s									
L40A	**Anamosa**	**98.28**	**48**	P	Pdif	23 17 07.5	+2.2			
L40A				IAMs_20	IAMs_20	23 54 45.0				
	comp=Z,8µm,20.0s									
S44A	**Carbondale**	**98.40**	**53**	IAMs_20	IAMs_20	23 53 12.5				
	comp=Z,8µm,22.0s									
SIUC	**Southern Illin**	**98.43**	**53**	P	Pdif	23 17 06.8	+0.8			
SIUC				IAmb	IAmb	23 19 28.1				
	comp=Z,18nm,0.9s									
T45A	**Paducah**	**98.66**	**54**	IAMs_20	IAMs_20	23 54 56.5				
	comp=Z,9µm,20.0s									
LRAL	**Lakeview Retre**	**98.79**	**58**	IAMs_20	IAMs_20	23 56 28.4				
	comp=Z,7µm,22.0s									
HOPE	**Hope Point**	**98.98**	**157**	IAMs_20	IAMs_20	23 56 54.4				
	comp=Z,6µm,19.0s									
X48A	**Hartselle**	**99.16**	**57**	IAMs_20	IAMs_20	23 55 12.1				
	comp=Z,8µm,21.0s									
I40A	**Norwalk**	**99.25**	**47**	IAMs_20	IAMs_20	23 55 14.7				
	comp=Z,7µm,21.0s									
Y49A	**Blount Mountai**	**99.50**	**58**	IAMs_20	IAMs_20	23 56 08.0				
	comp=Z,9µm,21.0s									
V48A	**Smith Brothers**	**99.70**	**56**	IAMs_20	IAMs_20	23 54 38.3				
	comp=Z,9µm,22.0s									
BRDH	**Bariadhala**	**99.76**	**291**	LR	LR	00 02 21.2				
	comp=Z,2µm,20.3s,baz=142,slow=36									
T47A	**Sharon Grove**	**99.83**	**54**	IAMs_20	IAMs_20	23 56 02.6				
	comp=Z,8µm,20.0s									
EYMN	**Ely**	**99.87**	**43**	IAMs_20	IAMs_20	23 55 06.8				
	comp=Z,8µm,21.0s									
352A	**Blakely**	**100.04**	**60**	IAMs_20	IAMs_20	23 58 33.6				
	comp=Z,6µm,22.0s									
K43A	**Burlington**	**100.51**	**48**	IAMs_20	IAMs_20	23 56 33.2				
	comp=Z,6µm,21.0s									
HQIL	**Hanson Quary C**	**100.61**	**49**	IAMs_20	IAMs_20	23 55 07.7				
	comp=Z,10µm,22.0s									
L44A	**Lake County Fo**	**100.67**	**49**	IAMs_20	IAMs_20	23 55 13.3				
	comp=Z,7µm,22.0s									
W50A	**Signal Mountai**	**100.74**	**56**	IAMs_20	IAMs_20	23 55 49.8				
	comp=Z,6µm,22.0s									
GOMU	**GeErMu**	**100.81**	**305**	P	**Pdif**	**23 17 17.2**	**0.0**			
GOMU				SS	SS	23 35 51.9	-1.6			
GOMU				LR	LR					
	comp=Z,2µm,18.0s									
GOMU				LR	LR					
	comp=Z,2µm,20.4s									
X51A	**Calhoun**	**100.93**	**57**	IAMs_20	IAMs_20	23 56 37.9				
	comp=Z,8µm,22.0s									
Y52A	**Lilburn**	**101.38**	**58**	IAMs_20	IAMs_20	23 56 05.9				
	comp=Z,8µm,22.0s									
H43A	**Windswept, Lux**	**101.38**	**47**	IAMs_20	IAMs_20	23 56 41.0				
	comp=Z,7µm,20.0s									
656A	**Willston**	**101.46**	**63**	IAMs_20	IAMs_20	00 00 54.3				
	comp=Z,5µm,21.0s									
T50A	**Nancy**	**101.59**	**55**	IAMs_20	IAMs_20	23 56 39.1				
	comp=Z,8µm,20.0s									
P48A	**Milroy**	**101.77**	**52**	IAMs_20	IAMs_20	23 57 44.7				
	comp=Z,6µm,20.0s									
L46A	**Eue Claire**	**101.78**	**50**	IAMs_20	IAMs_20	23 56 37.9				
	comp=Z,9µm,21.0s									
W52A	**Murphy**	**101.81**	**57**	IAMs_20	IAMs_20	23 56 43.1				
	comp=Z,6µm,22.0s									
154A	**Montrose**	**101.83**	**59**	IAMs_20	IAMs_20	23 56 58.9				
	comp=Z,7µm,21.0s									
061Z	**Ochoppi**	**101.93**	**67**	IAMs_20	IAMs_20	00 03 20.0				
	comp=Z,4µm,18.0s									
DWPF	**Disney Wildern**	**102.06**	**64**	IAMs_20	IAMs_20	23 56 48.4				
	comp=Z,5µm,22.0s									
O48B	**Hilliard**	**102.17**	**52**	IAMs_20	IAMs_20	23 57 08.3				
	comp=Z,9µm,20.0s									
456A	**Hilliard**	**102.24**	**62**	IAMs_20	IAMs_20	23 58 12.9				
	comp=Z,5µm,21.0s									
O49A	**Covington**	**102.76**	**52**	IAMs_20	IAMs_20	23 58 33.0				
	comp=Z,8µm,20.0s									
V53A	**Saluda**	**102.83**	**57**	IAMs_20	IAMs_20	23 59 52.2				
	comp=Z,5µm,21.0s									
MTDJ	**Mount Denham**	**102.89**	**75**	IAMs_20	IAMs_20	23 53 48.1				
	comp=Z,8µm,22.0s									
Q51A	**Peebles**	**103.23**	**53**	Pdif	**Pdif**	**23 17 27.1**	**-0.3**			
Q51A				IAMs_20	IAMs_20	23 57 41.4				
	comp=Z,8µm,20.0s									
AAM	**Ann Arbor**	**103.76**	**50**	IAMs_20	IAMs_20	23 59 23.1				
	comp=Z,7µm,20.0s									
ACSO	**Alum Creek Sta**	**103.78**	**52**	IAMs_20	IAMs_20	23 57 16.9				
	comp=Z,9µm,22.0s									
U54A	**Nelsons Funny**	**103.81**	**56**	IAMs_20	IAMs_20	23 57 39.2				
	comp=Z,8µm,21.0s									
KMSC	**Kings Mountain**	**103.88**	**57**	IAMs_20	IAMs_20	23 59 03.0				
	comp=Z,6µm,22.0s									
Q52A	**Bidwell**	**104.03**	**53**	IAMs_20	IAMs_20	23 57 33.7				
	comp=Z,8µm,22.0s									
NHSC	**New Hope**	**104.34**	**60**	IAMs_20	IAMs_20	00 10 23.3				
	comp=Z,4µm,18.0s									
Y57A	**Sumter**	**104.38**	**59**	IAMs_20	IAMs_20	23 58 51.2				
	comp=Z,8µm,21.0s									
K50A	**Casco**	**104.61**	**49**	IAMs_20	IAMs_20	23 57 32.6				
	comp=Z,5µm,21.0s									
P53A	**Whipple**	**104.81**	**53**	IAMs_20	IAMs_20	23 59 00.3				
	comp=Z,8µm,20.0s									
U56A	**King**	**104.91**	**56**	IAMs_20	IAMs_20	23 59 06.1				
	comp=Z,8µm,22.0s									
Y58A	**Scranton**	**104.94**	**59**	IAMs_20	IAMs_20	00 00 10.1				
	comp=Z,5µm,21.0s									
W57A	**Gilead**	**104.95**	**58**	IAMs_20	IAMs_20	23 59 32.4				
	comp=Z,8µm,22.0s									
GTBY	**Guantanamo Bay**	**105.55**	**74**	IAMs_20	IAMs_20	23 58 52.5				
	comp=Z,5µm,21.0s									
V58A	**Windy Hill, Pi**	**105.79**	**57**	IAMs_20	IAMs_20	23 59 47.5				
	comp=Z,7µm,22.0s									
MCWV	**Mont Chateau**	**106.01**	**53**	IAMs_20	IAMs_20	23 59 39.1				
	comp=Z,8µm,21.0s									
Y60A	**Bolivia**	**106.14**	**59**	IAMs_20	IAMs_20	00 01 03.9				
	comp=Z,5µm,20.0s									
W59A	**Clinton**	**106.19**	**58**	IAMs_20	IAMs_20	23 59 12.3				
	comp=Z,8µm,22.0s									
SDV	**Santo Domingo**	**106.71**	**86**	IAMs_20	IAMs_20	23 56 43.6				
	comp=Z,6µm,22.0s									
WMQ	**Urumqi**	**107.81**	**311**	Pdif	**Pdif**	**23 17 45.8**	**-1.9**			
WMQ				LR	LR					
	comp=Z,4µm,22.9s									
WMQ				LR	LR					
	comp=Z,4µm,24.2s									
WMQ				LR	LR					
	comp=Z,7µm,24.1s									
V61A	**Roper**	**107.81**	**58**	IAMs_20	IAMs_20	23 59 25.1				
	comp=Z,6µm,22.0s									
J55A	**Hilton**	**108.16**	**50**	IAMs_20	IAMs_20	00 00 33.6				
	comp=Z,8µm,21.0s									
GRTK	**Grand Turk**	**109.55**	**73**	IAMs_20	IAMs_20	23 59 43.3				
	comp=Z,7µm,22.0s									
HYBB	**Hyderabad (bro**	**110.27**	**282**	*e*PKiKP	**PKiKP**	**23 22 01.1**	**+0.5**			
HYBB				*es*PKiKP	**sPKiKP**	**23 22 04.9**	**-0.3**			
ZALV	**Zalesovo Beam**	**110.86**	**321**	PKiKP	**PKiKP**	**23 21 59.9**	**-0.7**			
	comp=Z,1.9nm,0.6s,baz=96,slow=1.5,SNR=4.4									
MKAR	**Makanchi Array**	**111.95**	**314**	PKiKP	**PKiKP**	**23 22 01.9**	**-1.1**			
	comp=Z,0.7nm,0.7s,baz=101,slow=2.5,SNR=3.9									
J61A	**Chester**	**111.98**	**50**	IAMs_20	IAMs_20	00 03 57.8				
	comp=Z,7µm,20.0s									
MAKZ	**Makanchi**	**112.17**	**314**	IAMs_20	IAMs_20	00 12 11.3				
	comp=Z,5µm,20.0s									
TULEG	**Thule**	**112.18**	**14**	IAMs_20	IAMs_20	00 05 03.2				
	comp=Z,7µm,20.0s									
HNH	**Hanover**	**112.21**	**50**	IAMs_20	IAMs_20	00 04 58.8				
	comp=Z,6µm,20.0s									
I62A	**Tamworth**	**112.91**	**50**	IAMs_20	IAMs_20	00 02 28.3				
	comp=Z,6µm,21.0s									
SJG	**San Juan**	**113.34**	**78**	IAMs_20	IAMs_20	00 01 23.0				
	comp=Z,4µm,21.0s									
I63A	**Otisfield**	**113.47**	**49**	IAMs_20	IAMs_20	00 04 44.0				
	comp=Z,6µm,21.0s									
SPB	**Sao Paulo**	**113.89**	**128**	IAMs_20	IAMs_20	00 02 15.8				
	comp=Z,6µm,20.0s									
E62A	**Clayton Lake**	**114.35**	**47**	IAMs_20	IAMs_20	00 10 07.2				
	comp=Z,5µm,19.0s									
KURK	**Kurchatov**	**114.55**	**318**		PKKPab	23 32 53.0	+1.6			
KURK	**Kurchatov**	**114.55**	**318**	IAMs_20	IAMs_20	00 07 59.8				
	comp=Z,7µm,20.0s									
KURK	**Kurchatov**	**114.55**	**318**	*c* iPKIKP	PKPdf	23 22 06.3	-1.4			
KURK				pmax	pmax					
	comp=Z,6.0nm,1.7s									
KURBB	**Kurchatov Arra**	**114.61**	**318**	PKiKP	PKPdf	23 22 06.4	-1.4			
	comp=Z,1.9nm,0.9s,baz=94,slow=1.5,SNR=8.3									
KURBB				PP	**PP**	**23 23 03.2**	**-2.0**			
	comp=Z,0.8nm,0.9s,baz=104,slow=4.7,SNR=4.1									
KURBB				PKKPab	**PKKPab**	**23 32 53.0**	**+1.9**			
	comp=Z,1.7nm,1.2s,baz=269,slow=4.2,SNR=3.3									
F64A	**Sherman**	**115.14**	**48**	IAMs_20	IAMs_20	00 06 07.2				
	comp=Z,7µm,20.0s									
SABA	**Saba**	**115.93**	**79**	IAMs_20	IAMs_20	00 02 11.6				
	comp=Z,6µm,22.0s									
KSH	**Kashi**	**116.04**	**305**	PKP	**PKiKP**	**23 22 12.4**	**+1.3**			
KSH				LR	LR					
	comp=Z,2µm,20.6s									
KSH				LR	LR					
	comp=Z,2µm,21.1s									
KSH				LR	LR					
	comp=Z,2µm,23.1s									
SEUS	**St. Eustatius**	**116.14**	**79**	IAMs_20	IAMs_20	00 02 07.3				
	comp=Z,5µm,22.0s									
GDHS	**Morne Mazeau,**	**117.00**	**81**	IAMs_20	IAMs_20	00 07 24.3				
	comp=Z,4µm,21.0s									
SVN	**Savane Anatole**	**117.22**	**83**	IAMs_20	IAMs_20	00 09 24.3				
	comp=Z,4µm,20.0s									
AAK	**Ala-Archa**	**117.30**	**309**	*i* PKIKP	**PKPdf**	**23 22 12.9**	**-0.6**			
ABD	**La Joyeuse, An**	**117.30**	**81**	IAMs_20	IAMs_20	00 07 52.2				
	comp=Z,5µm,21.0s									
MAGL	**Barre de l'ile**	**117.38**	**81**	IAMs_20	IAMs_20	00 07 51.2				
	comp=Z,4µm,21.0s									
ILAM	**Ilet Lapin Mar**	**117.48**	**83**	IAMs_20	IAMs_20	00 03 50.1				
	comp=Z,4µm,21.0s									
BBGH	**Gun Hill**	**118.32**	**85**	IAMs_20	IAMs_20	00 04 35.4				
	comp=Z,5µm,21.0s									
DRK	**Karamyk**	**119.27**	**305**	PKPdf	**PKiKP**	**23 22 17.7**	**+0.1**			
DRK	**Karamyk**	**119.27**	**305**	PKIKP	PKiKP	**23 22 17.7**	**+0.1**			
BVAR	**Borovoye Array**	**119.50**	**321**	PKP	**PKPdf**	**23 22 15.8**	**-1.3**			
	comp=Z,3.0nm,0.8s,baz=98,slow=2.1,SNR=8.0									
BORK	**Borovoye**	**119.53**	**321**	*c i*PKIKP	**PKPdf**	**23 22 16.5**	**-0.7**			
BORK				pmax	pmax					
	comp=Z,8.0nm,1.3s									
KBS	**Kingsbay**	**119.91**	**358**	IAMs_20	IAMs_20	00 05 36.6				
	comp=Z,4µm,22.0s									
FOMA	**Nahampoana Res**	**119.93**	**225**	IAMs_20	IAMs_20	00 03 48.1				
	comp=Z,5µm,21.0s									
KK31	**Karatay Array**	**120.22**	**309**	PKPdf	**PKPdf**	**23 22 18.7**	**-0.2**			
KK31	**Karatay Array**	**120.22**	**309**	PKIKP	**PKPdf**	**23 22 18.7**	**-0.2**			
KKAR	**Karatay Array**	**120.22**	**309**	PKPdf	**PKPdf**	**23 22 18.7**	**-0.2**			
KKAR	**Karatay Array**	**120.22**	**309**	PKIKP	**PKPdf**	**23 22 18.7**	**-0.2**			
GAR	**Garm**	**120.41**	**305**	PKPdf	**PKiKP**	**23 22 20.2**	**+0.5**			
SPB2	**Spitsbergen Ar**	**120.50**	**357**	PKPdf	**PKiKP**	**23 22 19.9**	**+1.4**			
KBU	**Kabul Universi**	**121.25**	**299**	PKP	**PKPdf**	**23 22 20.1**	**-1.3**			
CHGR	**Chuyangaron**	**121.32**	**304**	PKPdf	**PKPdf**	**23 22 20.8**	**-0.4**			
CHGR	**Chuyangaron**	**121.32**	**304**	PKIKP	**PKPdf**	**23 22 20.8**	**-0.4**			
KBL	**Kabul**	**121.32**	**299**	PKPdf	**PKPdf**	**23 22 21.5**	**0.0**			
KBL	**Kabul**	**121.32**	**299**	PKIKP	**PKPdf**	**23 22 21.5**	**0.0**			
VOI	**Vohitsoka**	**122.10**	**227**	IAMs_20	IAMs_20	00 05 35.9				
	comp=Z,4µm,22.0s									
ABPO	**Ambohimpanom**	**123.66**	**230**	IAMs_20	IAMs_20	00 12 57.4				
	comp=Z,6µm,20.0s									
OPO	**Ambohidratompo**	**123.97**	**231**	PKP	**PKiKP**	**23 22 27.6**	**+0.3**			
	comp=Z,4.2nm,1.0s,baz=25,slow=9.1,SNR=3.7									
SVE	**Sverdlovsk**	**124.12**	**327**	*i* PKIKP	**PKiKP**	**23 22 26.1**	**-0.1**			
SVE				pmax	pmax					
	comp=Z,24nm,1.3s									
SVE				MLR	MLR					
	comp=Z,12µm,22.0s									
SVE				MLR	MLR					
	comp=E,10µm,21.0s									
ARTI	**Arti**	**125.44**	**327**	PKPdf	**PKPdf**	**23 22 28.4**	**-0.1**			
ARTI	**Arti**	**125.44**	**327**	*i* PKIKP	**PKiKP**	**23 22 29.3**	**+0.5**			
ARTI						23 24 24.5				
ARTI						23 29 40.5				
ARTI				SP	SP	23 34 18.5	+0.5			
ARTI				SSS	SSS	23 45 57.1				
ARTI				MLR	MLR					
	comp=Z,14µm,22.0s									
SUR	**Sutherland**	**126.63**	**197**	IAMs_20	IAMs_20	00 12 48.0				
	comp=Z,5µm,19.0s									
AB31	**Akbulak array**	**126.66**	**318**	PKPdf	**PKPdf**	**23 22 31.0**	**0.0**			
ABKAR	**Akbulak array**	**126.66**	**318**	PKPdf	**PKPdf**	**23 22 30.7**	**-0.3**			
HRA	**Herat**	**126.94**	**299**	PKPdf	**PKPdf**	**23 22 31.5**	**-0.8**			
LVZ	**Lovozero**	**127.54**	**346**	IAMs_20	IAMs_20	00 19 19.4				
	comp=Z,5µm,20.0s									
ARCES	**ARCESS Array B**	**127.85**	**351**	PKP	**PKPdf**	**23 22 32.4**	**-0.4**			
	comp=Z,4.5nm,0.9s,baz=346,slow=2.5,SNR=6.7									
BOSA	**Boshof**	**128.65**	**203**	PKP	**PKiKP**

ANN				MLR	MLR			
	comp=Z,5µm,20.0s							
AKASG	**Malin Array Be**	**142.81**	**334**	*c* PKIKP	**PKPdf**	**23**	**23**	**00.7 -0.3**
	comp=Z,1.6nm,0.7s,baz=38,slow=2.0,SNR=6.9							
AKBB	**Malin Array Si**	**142.81**	**334**	*c* PKIKP	**PKPdf**	**23**	**23**	**01.5 +0.5**
SHEL	**Horse Pasture**	**143.81**	**163**	IAMs_20	IAMs_20	00	16	12.9
	comp=Z,3µm,18.0s							
SIM	**Simferopol'**	**144.35**	**323**	*e*PKIKP	**PKPdf**	**23**	**23**	**03.4 -0.5**
SIM				pmax	pmax			
	comp=Z,55nm,1.6s							
R9F13	**Warsaw-Wawer**	**144.39**	**343**	*e*PKP	PKPbc	23	23	02.3 +0.2
DSB	**Dublin**	**144.75**	**11**	PKP	**PKPab**	**23**	**23**	**02.5 -0.6**
BEL	**Belsk**	**144.84**	**343**	*e*PKPdf	**PKPab**	**23**	**23**	**03.0 -0.5**
BSEG	**Bad Segeberg**	**144.84**	**354**	*e*PKPbc	**PKiKP**	**23**	**23**	**10.9 +2.7**
	baz=8.9,slow=2.7							
KIS	**Kishinev**	**145.75**	**330**	⇑*i* PKP	**PKPab**	**23**	**23**	**07.0 0.0**
	comp=Z,150nm,3.4s							
KIS				*e*L	L	00	14	07.0
KIS				LRM	MLR	00	25	10.0
	comp=Z,3µm,22.5s							
MILM	**Milestii Mici**	**145.81**	**330**	⇑P	**PKiKP**	**23**	**23**	**09.5 -0.9**
MILM	**Milestii Mici**	**145.81**	**330**	⇑PKP2	**PKiKP**	**23**	**23**	**09.5 -0.9**
MILM	**Milestii Mici**	**145.81**	**330**	⇑*i* PKP	**PKPbc**	**23**	**23**	**07.0 +0.2**
	comp=Z,350nm,2.4s							
MILM	**Milestii Mici**	**145.81**	**330**	*e*PP	PP	23	26	21.0 -6.4
MILM				*e*L	L	00	14	13.0
MILM				LRM	MLR	00	25	09.0
	comp=Z,2µm,22.0s							
RETH	**Rethem/Aller,**	**146.11**	**355**	*e*PKPbc	**PKiKP**	**23**	**23**	**15.6 +4.8**
	baz=8.9,slow=2.7							
BZK	**Bozkurt**	**146.14**	**319**	⇑P	**PKPab**	**23**	**23**	**08.6 -0.1**
KWP	**Kalwaria Pacla**	**146.16**	**339**	*e*PKPdf	**PKPbc**	**23**	**23**	**08.0 +0.1**
IASR	**Iasi**	**146.19**	**331**	⇑P	**PKiKP**	**23**	**23**	**13.4 +2.1**
LODK	**Lodwar**	**146.22**	**247**	IAMs_20	IAMs_20	00	23	23.6
	comp=Z,4µm,20.0s							
VASR	**Vaslui**	**146.49**	**331**	⇑P	**PKPab**	**23**	**23**	**10.4 +0.5**
ASSE	**Asse, Remlinge**	**146.58**	**353**	*e*PKPbc	**PKiKP**	**23**	**23**	**16.0 +4.2**
	baz=8.9,slow=2.7							
STHS	**Stebnicka Huta**	**146.83**	**340**	*e*PKP2	**PKPab**	**23**	**23**	**10.7 -0.4**
STHS	**Stebnicka Huta**	**146.83**	**340**	*e*PKP	**PKPab**	**23**	**23**	**10.7 -0.4**
STHS				*e*		23	23	15.9
BIR	**Birlad**	**146.84**	**330**	⇓P	**PKPab**	**23**	**23**	**11.6 +0.4**
BIR	**Birlad**	**146.84**	**330**	⇓PKP2	**PKPab**	**23**	**23**	**11.6 +0.4**
BURAR	**Bucovina Array**	**146.87**	**334**	⇑P	**PKPab**	**23**	**23**	**11.7 +0.3**
BURAR	**Bucovina Array**	**146.87**	**334**	⇑PKP2	**PKPab**	**23**	**23**	**11.7 +0.3**
KSP	**Ksiaz**	**146.89**	**346**	*e*PKPdf	**PKPbc**	**23**	**23**	**10.6 +0.6**
CLZ	**Clausthal**	**146.90**	**353**	*e*PKPbc	**PKiKP**	**23**	**23**	**17.9 +5.3**
	baz=8.9,slow=2.7							
CLL	**Collm**	**147.07**	**350**	*i* PKP2	**PKPbc**	**23**	**23**	**10.7 +0.3**
CLL				pmax	pmax			
	comp=Z,39nm,1.3s							
CLL				MLR	MLR			
	comp=Z,7µm,21.5s							
CLL	**Collm**	**147.07**	**350**	*e*PKPbc	**PKiKP**	**23**	**23**	**18.0 +5.1**
	baz=8.9,slow=2.7							
GHRR		**147.10**	**330**	⇑P	**PKPab**	**23**	**23**	**12.2 0.0**
SCTR	**Scanteiesti**	**147.10**	**329**	⇑P	**PKPab**	**23**	**23**	**11.8 -0.5**
TESR	**Tescani**	**147.11**	**332**	⇓P	**PKPab**	**23**	**23**	**12.2 -0.1**
OSTC	**Ostas**	**147.17**	**346**	*e*PKP2	**PKPab**	**23**	**23**	**11.8 -0.6**
OSTC	**Ostas**	**147.17**	**346**	*e*PKP	**PKPab**	**23**	**23**	**11.8 -0.6**
CHVC	**Chvalec**	**147.18**	**347**	*e*PKP2	**PKPbc**	**23**	**23**	**11.4 +0.6**
CHVC				MLR	MLR			
	comp=Z,8µm,18.1s							
CHVC	**Chvalec**	**147.18**	**347**	*e*PKP	**PKPbc**	**23**	**23**	**11.4 +0.6**
CHVC				AMS	AMS	00	32	50.0
	comp=Z,8µm,18.1s							
NEGRR	**Negrea**	**147.25**	**329**	⇓P	**PKPab**	**23**	**23**	**12.9 0.0**
UPC	**Upice**	**147.26**	**347**	*e*PKP2	**PKPbc**	**23**	**23**	**11.5 +0.5**
UPC				MLR	MLR			
	comp=Z,11µm,23.9s							
UPC	**Upice**	**147.26**	**347**	*e*PKP	**PKPbc**	**23**	**23**	**11.5 +0.5**
UPC				AMS	AMS	00	25	40.0
	comp=Z,11µm,23.9s							
JURR	**Jurilovca**	**147.30**	**327**	⇓P	**PKPbc**	**23**	**23**	**11.6 +0.4**
IZVR	**Izvoarele**	**147.30**	**329**	⇓P	**PKiKP**	**23**	**23**	**15.7 +2.1**
SCHL	**Schela**	**147.30**	**329**	⇑P	**PKiKP**	**23**	**23**	**17.8 +4.2**
SCHLR	**Schela**	**147.32**	**329**	⇓P	**PKPab**	**23**	**23**	**13.3 +0.2**
BRG	**Berggiesshubel**	**147.33**	**349**	*e*PKPbc	**PKiKP**	**23**	**23**	**19.1 +5.6**
	baz=8.9,slow=2.7							
DPC	**Dobruska-Polom**	**147.34**	**346**	*e*PKP2	**PKPbc**	**23**	**23**	**12.1 +0.8**
DPC				MLR	MLR			
	comp=Z,9µm,22.9s							
DPC	**Dobruska-Polom**	**147.34**	**346**	*e*PKP	**PKPbc**	**23**	**23**	**12.1 +0.8**
DPC				AMS	AMS	00	28	00.0
	comp=Z,9µm,22.9s							
ONER	**Baraj Valea Uz**	**147.36**	**332**	⇑P	**PKPab**	**23**	**23**	**12.7 -0.6**
PANC	**Panciu**	**147.36**	**330**	⇓P	**PKiKP**	**23**	**23**	**13.9 +0.2**
OKC	**Ostrava-Krasne**	**147.37**	**344**	*e*PKP2	**PKiKP**	**23**	**23**	**13.8 +0.2**
OKC				MLR	MLR			
	comp=Z,11µm,24.4s							
OKC	**Ostrava-Krasne**	**147.37**	**344**	*e*PKP	**PKiKP**	**23**	**23**	**13.8 +0.2**
OKC				AMS	AMS	00	25	30.0
	comp=Z,11µm,24.4s							
CFR	**Carcaliu**	**147.39**	**328**	⇑P	**PKPbc**	**23**	**23**	**10.5 -1.0**
CFR	**Carcaliu**	**147.39**	**328**	⇑PKP2	**PKPbc**	**23**	**23**	**10.5 -1.0**
TPGR	**Topolog**	**147.47**	**328**	⇑P	**PKPbc**	**23**	**23**	**12.5 +0.7**
ODBI	**Odobesti**	**147.48**	**330**	⇑P	**PKiKP**	**23**	**23**	**14.5 +0.6**
KRLC	**Kraliky**	**147.49**	**345**	*e*PKP2	**PKPab**	**23**	**23**	**13.7 0.0**
KRLC				MLR	MLR			
	comp=Z,7µm,18.4s							
KRLC	**Kraliky**	**147.49**	**345**	*e*PKP	**PKPab**	**23**	**23**	**13.7 0.0**
KRLC				AMS	AMS	00	32	00.0
	comp=Z,7µm,18.4s							
BUG	**Bochum--Univer**	**147.54**	**357**	*e*PKPbc	**PKiKP**	**23**	**23**	**17.7 +3.9**
	baz=8.9,slow=2.7							
PVCC	**Panska Ves**	**147.54**	**348**	*e*PKP2	**PKPab**	**23**	**23**	**13.0 -0.8**
PVCC				MLR	MLR			
	comp=Z,8µm,21.9s							
PVCC	**Panska Ves**	**147.54**	**348**	*e*PKP	**PKPab**	**23**	**23**	**13.0 -0.8**
PVCC				AMS	AMS	00	27	10.0
	comp=Z,8µm,21.9s							
VRI	**Vrincioaia**	**147.56**	**331**	⇑P	**PKPab**	**23**	**23**	**13.8 -0.3**
VRI	**Vrincioaia**	**147.56**	**331**	⇑PKP2	**PKPab**	**23**	**23**	**13.8 -0.3**
BR131	**Keskin Array S**	**147.57**	**316**	*i* PKIKP	**PKPdf**	**23**	**23**	**08.0 -1.8**
BRTR	**Keskin Array B**	**147.57**	**316**		**PKPdf**	**23**	**23**	**09.1 -0.7**
BRTR	**Keskin Array B**	**147.57**	**316**	PKPbc	**PKPbc**	**23**	**23**	**11.7 -0.8**
	comp=Z,9.7nm,0.9s,baz=134,slow=2.3,SNR=15							
MORC	**Moravsky Berou**	**147.58**	**344**	⇑P	**PKPbc**	**23**	**23**	**11.6 -0.4**
MORC	**Moravsky Berou**	**147.58**	**344**	*e*PKP	**PKPbc**	**23**	**23**	**11.4 -0.6**
MORC	**Moravsky Berou**	**147.58**	**344**	⇑PKP2	**PKPbc**	**23**	**23**	**11.6 -0.4**
PLOR	**Plostina**	**147.60**	**331**	⇑P	**PKiKP**	**23**	**23**	**13.7 -0.6**
PLOR	**Plostina**	**147.60**	**331**	⇑PKP2	**PKiKP**	**23**	**23**	**13.7 -0.6**
LANS	**Liptovska Anna**	**147.62**	**342**	*e*PKP2	**PKPab**	**23**	**23**	**15.7 +1.5**
LANS	**Liptovska Anna**	**147.62**	**342**	*e*PKP	**PKPab**	**23**	**23**	**15.7 +1.5**
LANS				*e*		23	23	21.0
RICC	**Richard**	**147.62**	**349**	AMS	AMS	00	26	40.0
	comp=Z,6µm,22.2s							
HSKC	**Hora Svate Kat**	**147.68**	**349**	*e*PKP	**PKiKP**	**23**	**23**	**13.9 -0.3**
HSKC				AMS	AMS	00	30	30.0
	comp=Z,6µm,21.4s							
KIRS	**Kirsehir-Merke**	**147.69**	**315**	⇑P	**PKPbc**	**23**	**23**	**11.6 -1.0**
KASTN	**Kahler Asten**	**147.71**	**356**	*e*PKPbc	**PKPab**	**23**	**23**	**18.8 +4.3**
	baz=8.9,slow=2.7							
TURR	**Turia**	**147.74**	**332**	⇓P	**PKiKP**	**23**	**23**	**14.5 0.0**
CMLA	**Cha da Macela**	**147.74**	**48**	*i* PKP2	**PKiKP**	**23**	**23**	**13.9 -0.9**
TIRR	**Tirgusor**	**147.75**	**327**	⇓P	**PKiKP**	**23**	**23**	**13.9 -0.6**
TIRR	**Tirgusor**	**147.75**	**327**	⇓PKP2	**PKiKP**	**23**	**23**	**13.9 -0.6**
OZUR		**147.81**	**332**	⇓P	**PKiKP**	**23**	**23**	**14.5 -0.2**
HARR	**Harsova**	**147.84**	**328**	⇑P	**PKPbc**	**23**	**23**	**12.8 +0.1**
HARR	**Harsova**	**147.84**	**328**	⇑PKP2	**PKPbc**	**23**	**23**	**12.8 +0.1**
TLBR	**Topalu**	**147.88**	**328**	⇓P	**PKiKP**	**23**	**23**	**14.6 -0.2**
BOSR	**Bodos**	**147.88**	**332**	⇑P	**PKiKP**	**23**	**23**	**13.9 -0.9**
MOX	**Moxa**	**147.92**	**352**	*e*PKPbc	**PKPab**	**23**	**23**	**20.0 +4.6**
	baz=8.9,slow=2.7							
MOX				*e*L	L	00	33	25.4
	comp=Z,7µm,21.5s							
PLN	**Plauen**	**148.00**	**351**	*e*PKPbc	**PKPab**	**23**	**23**	**20.9 +5.2**
	baz=8.9,slow=2.7							
PRA	**Prague**	**148.01**	**348**	AMS	AMS	00	27	00.0
	comp=Z,8µm,23.8s							
TANN	**Tannenbergstha**	**148.02**	**351**	*e*PKPbc	**PKPab**	**23**	**23**	**20.0 +4.2**
	baz=8.9,slow=2.7							
ANTO	**Ankara**	**148.05**	**317**	IAMs_20	IAMs_20	00	34	53.1
	comp=Z,4µm,20.0s							
ANTO	**Ankara**	**148.05**	**317**	⇓P	**PKPbc**	**23**	**23**	**12.5 -1.1**
ANTO	**Ankara**	**148.05**	**317**	⇓PKP2	**PKPbc**	**23**	**23**	**12.5 -1.1**
PRU	**Pruhonice**	**148.06**	**348**	*e*PKP2	**PKPbc**	**23**	**23**	**13.6 +0.4**
PRU				MLR	MLR			
	comp=Z,8µm,22.8s							
PRU	**Pruhonice**	**148.06**	**348**	*e*PKP	**PKPbc**	**23**	**23**	**13.6 +0.4**
PRU				AMS	AMS	00	27	00.0
	comp=Z,8µm,22.8s							
DOPR	**Dopca**	**148.09**	**332**	⇑P	**PKiKP**	**23**	**23**	**14.6 -0.6**
NEHR	**Nehoiu**	**148.09**	**331**	⇓P	**PKPbc**	**23**	**23**	**12.3 -1.2**
MANR	**Mangalia**	**148.11**	**326**	⇓P	**PKPdf**	**23**	**23**	**11.8 +1.5**
MESR	**Meseseni**	**148.15**	**336**	⇑P	**PKPbc**	**23**	**23**	**14.0 +0.5**
ISR	**Istrita**	**148.20**	**330**	⇓P	**PKPbc**	**23**	**23**	**14.5 +0.7**
MLR	**Muntele Rosu**	**148.20**	**331**	⇑P	**PKPdf**	**23**	**23**	**10.8 +0.2**
MLR	**Muntele Rosu**	**148.20**	**331**	⇑PKIKP	**PKPdf**	**23**	**23**	**10.8 +0.2**
VRAC	**Vranov**	**148.25**	**345**	⇓P	**PKPbc**	**23**	**23**	**14.3 +0.6**
VRAC	**Vranov**	**148.25**	**345**	*e*PKP	**PKPbc**	**23**	**23**	**14.6 +0.9**
VRAC	**Vranov**	**148.25**	**345**	⇓PKP2	**PKPbc**	**23**	**23**	**14.3 +0.6**
CJR	**Cluj-Napoca**	**148.25**	**335**	⇑P	**PKiKP**	**23**	**23**	**14.9 -0.7**
CJR	**Cluj-Napoca**	**148.25**	**335**	⇑PKP2	**PKiKP**	**23**	**23**	**14.9 -0.7**
UCC	**Uccle**	**148.25**	**0**	*d*PKP	**PKiKP**	**23**	**23**	**14.5 -0.8**
JAVC	**Velka Javorina**	**148.39**	**343**	*e*PKP	**PKiKP**	**23**	**23**	**15.5 -0.3**
MDB	**Medias**	**148.39**	**333**	⇑P	**PKPab**	**23**	**23**	**20.3 +2.9**
MDB	**Medias**	**148.39**	**333**	⇑PKP2	**PKPab**	**23**	**23**	**20.3 +2.9**
MEM	**Membach**	**148.43**	**358**	*d*PKP	**PKiKP**	**23**	**23**	**15.0 -0.7**
BTNL	**Ternell**	**148.44**	**358**	*d*PKP	**PKPbc**	**23**	**23**	**14.5 +0.3**
BSTI	**Sart Tilman**	**148.46**	**359**	*d*PKP	**PKiKP**	**23**	**23**	**15.1 -0.7**
MARR	**Marisel-Cluj**	**148.47**	**335**	⇑P	**PKPab**	**23**	**23**	**17.2 -0.6**
MANZ	**Manzenberg**	**148.49**	**351**	*e*PKPbc	**PKPab**	**23**	**23**	**21.2 +3.5**
	baz=8.9,slow=2.7							
TREC	**Trest**	**148.52**	**346**	*e*PKP2	**PKPbc**	**23**	**23**	**14.1 -0.4**
TREC				MLR	MLR			
	comp=Z,10µm,21.1s							
TREC	**Trest**	**148.52**	**346**	*e*PKP	**PKPbc**	**23**	**23**	**14.1 -0.4**
TREC				AMS	AMS	00	30	30.0
	comp=Z,10µm,21.1s							
KRUC	**Moravsky**	**148.53**	**345**	*e*PKP	**PKPdf**	**23**	**23**	**11.5 +0.6**
DRGR		**148.54**	**336**	⇑P	**PKPbc**	**23**	**23**	**15.4 +0.7**
DRGR		**148.54**	**336**	⇑PKP2	**PKPbc**	**23**	**23**	**15.4 +0.7**
PSZ	**Piszkesteto**	**148.57**	**340**	⇓P	**PKiKP**	**23**	**23**	**16.0 -0.3**
PSZ	**Piszkesteto**	**148.57**	**340**	⇓PKP2	**PKiKP**	**23**	**23**	**16.0 -0.3**
VOIR		**148.65**	**332**	⇓P	**PKPab**	**23**	**23**	**17.8 -0.7**
VOIR		**148.65**	**332**	⇓PKP2	**PKPab**	**23**	**23**	**17.8 -0.7**
ZVC	**Zvikov**	**148.66**	**348**	*e*PKP	**PKiKP**	**23**	**23**	**15.9 -0.4**
ZVC				AMS	AMS	00	26	40.0
	comp=Z,9µm,24.8s							
BGES	**Gesves**	**148.67**	**359**	*d*PKP	**PKPbc**	**23**	**23**	**15.0 +0.3**
BHOU	**Houvegnez**	**148.68**	**358**	*d*PKP	**PKiKP**	**23**	**23**	**15.9 -0.4**
SAHE	**Sakarya_HENDEK**	**148.72**	**320**	⇓P	**PKPbc**	**23**	**23**	**14.5 -0.7**
ARR	**Arges**	**148.89**	**332**	⇓P	**PKPdf**	**23**	**23**	**13.0 +1.3**
RCHB	**Rochefort**	**148.89**	**359**	*d*PKP	**PKPbc**	**23**	**23**	**15.9 +0.6**
GRF	**Grafenberg Arr**	**148.91**	**352**	*e*L	L	00	29	10.6
	comp=Z,8µm,21.9s							
MODS	**Modra-Piesok**	**148.94**	**344**	*e*PKP2	**PKiKP**	**23**	**23**	**17.0 +0.1**
MODS	**Modra-Piesok**	**148.94**	**344**	*e*PKP	**PKiKP**	**23**	**23**	**17.0 +0.1**
MODS				*e*		23	23	23.2
DOU	**Dourbes**	**148.96**	**0**	*d*PKP	**PKPbc**	**23**	**23**	**16.1 +0.6**
BSZH	**Besenyszg**	**148.99**	**339**	⇓P	**PKPab**	**23**	**23**	**22.5 +2.8**
KHC	**Kasperske Hory**	**149.07**	**349**	*e*PKP2	**PKiKP**	**23**	**23**	**17.2 0.0**
KHC				MLR	MLR			
	comp=Z,8µm,21.0s							
KHC	**Kasperske Hory**	**149.07**	**349**	*e*PKP	**PKiKP**	**23**	**23**	**17.2 0.0**
KHC				x	x	23	23	22.5
KHC				AMS	AMS	00	27	40.0
	comp=Z,8µm,21.0s							
MMAI	**Mount Meron Ar**	**149.14**	**303**	PKPbc	**PKPbc**	**23**	**23**	**16.8 +0.2**
	comp=Z,11nm,0.9s,baz=58,slow=7.9,SNR=8.8							
WET	**Wettzell**	**149.18**	**349**	*e*PKPbc	**PKPab**	**23**	**23**	**23.0 +2.5**
	baz=8.9,slow=2.7							
LOT	**Lotru**	**149.20**	**333**	⇓P	**PKiKP**	**23**	**23**	**18.4 +0.8**
DEV	**Deva**	**149.21**	**335**	⇓P	**PKiKP**	**23**	**23**	**17.6 +0.1**
DEV	**Deva**	**149.21**	**335**	⇓PKP2	**PKiKP**	**23**	**23**	**17.6 +0.1**
GEC2	**GERESS Array S**	**149.32**	**348**	*e*PKPbc	**PKPab**	**23**	**23**	**23.4 +2.3**
	baz=8.9,slow=2.7							
GERES	**GERESS Array B**	**149.32**	**348**	PKPbc	**PKPbc**	**23**	**23**	**16.9 +0.3**
	comp=Z,2.9nm,0.6s,baz=29,slow=3.0,SNR=11							
RAZG	**Razgrad**	**149.36**	**328**	⇓P	**PKPbc**	**23**	**23**	**15.0 -1.8**
WLF	**Walferdange**	**149.37**	**358**	PKP	**PKPdf**	**23**	**23**	**11.4 -0.8**
WLF	**Walferdange**	**149.37**	**358**	*d*PKP	**PKiKP**	**23**	**23**	**17.9 +0.2**
WLF	**Walferdange**	**149.37**	**358**	*e*PKPbc	**PKPab**	**23**	**23**	**24.2 +3.0**
	baz=8.9,slow=2.7							
SIRR	**Siria**	**149.38**	**336**	⇑P	**PKiKP**	**23**	**23**	**17.4 -0.5**
LOZB	**Loznitsa**	**149.45**	**328**	⇓P	**PKiKP**	**23**	**23**	**18.0 -0.1**
COPA	**Copaceanca**	**149.57**	**330**	⇑P	**PKPbc**	**23**	**23**	**15.3 -1.9**
SURR	**Surduc**	**149.63**	**335**	⇓P	**PKPdf**	**23**	**23**	**10.6 -2.1**
GZR	**Gura Zlata**	**149.66**	**334**	⇑P	**PKPdf**	**23**	**23**	**13.3 +0.4**
GZR	**Gura Zlata**	**149.66**	**334**	⇑PKHKP	PKPpre	23	23	13.3
CONA	**Conrad Observa**	**149.71**	**345**	*e*PKiKP	**PKPbc**	**23**	**23**	**17.2 -0.4**
	comp=Z,89nm,1.5s,SNR=8.0							
RONA	**Rosalia, Austr**	**149.81**	**344**	*e*PKiKP	**PKPbc**	**23**	**23**	**17.5 -0.3**
	comp=Z,63nm,1.4s							
SZH	**Strazhitsa**	**149.84**	**328**	P	**PKPbc**	**23**	**23**	**18.1 +0.1**
BZS	**Buzias**	**149.94**	**336**	⇓P	**PKPdf**	**23**	**23**	**11.5 -1.7**
BZS	**Buzias**	**149.94**	**336**	⇓PKHKP	PKPpre	23	23	11.5
CSS	**Mathiatis**	**150.02**	**308**	IAMs_20	IAMs_20	00	35	09.4
	comp=Z,3µm,21.0s							
VLAD	**Vladila**	**150.05**	**331**	⇓P	**PKiKP**	**23**	**23**	**19.6 +0.3**
JMB	**Yambol**	**150.11**	**326**	P	**PKPbc**	**23**	**23**	**19.0 +0.4**
ELND	**Elena**	**150.14**	**328**	⇓P	**PKPbc**	**23**	**23**	**16.7 -2.0**
MOA	**Molln**	**150.15**	**347**	*e*PKP	**PKPbc**	**23**	**23**	**17.3 -1.3**
	comp=Z,40nm,1.4s							
HERR	**Herculane**	**150.22**	**334**	⇑P	**PKiKP**	**23**	**23**	**20.3 +0.7**
PLVB	**Pleven**	**150.41**	**330**	⇓P	**PKiKP**	**23**	**23**	**19.8 -0.2**
ARSA	**Arzberg**	**150.43**	**345**	*e*PKP	**PKPbc**	**23**	**23**	**18.1 -1.1**
	comp=Z,27nm,1.3s							
BIOA	**Bad Ischl, Aus**	**150.44**	**348**	*e*PKiKP	**PKPbc**	**23**	**23**	**18.8 -0.4**
	comp=Z,44nm,1.2s							
MORH	**Mrgy, Hungar**	**150.48**	**340**	⇑P	**PKiKP**	**23**	**23**	**20.3 +0.2**
MDVR	**Moldovita**	**150.59**	**335**	⇑P	**PKPbc**	**23**	**23**	**18.2 -1.5**
ISP	**Isparta**	**150.64**	**315**	*c i*PKIKP	**PKPbc**	**23**	**23**	**20.0 -0.2**
ISP				pmax	pmax			
	comp=Z,24nm,0.8s							
BAND	**Balkesir-Ban**	**150.68**	**322**	⇑P	**PKPbc**	**23**	**23**	**19.6 -0.4**
LESA	**Schwarzleotal**	**150.88**	**349**	*e*pPKP	**PKPdf**	**23**	**23**	**16.5 +1.8**
	comp=Z,25nm,1.3s							
DIM	**Dimitrovgrad**	**150.93**	**327**	P	**PKPbc**	**23**	**23**	**19.0 -1.6**
KBA	**Koelnbreinsper**	**151.08**	**348**	*e*PKP	**PKPbc**	**23**	**23**	**19.4 -1.6**
	comp=Z,24nm,0.8s							
SOKA	**Sobotin**	**151.08**	**345**	*e*PKP	**PKPbc**	**23**	**23**	**19.9 -1.0**
	comp=Z,32nm,1.4s,SNR=6.8							
BLKB	**Belogradchik**	**151.12**	**332**	⇑P	**PKPdf**	**23**	**23**	**15.2 0.0**
RETA	**Reutte**	**151.13**	**351**	*i* PKiKP	**PKiKP**	**23**	**23**	**21.6 +0.1**
	comp=Z,32nm,1.5s							
WATA	**Walderalm**	**151.15**	**350**	*e*PKP	**PKPdf**	**23**	**23**	**15.5 +0.2**
	comp=Z,28nm,1.2s							
WATA				*e*PKiKP	**PKiKP**	**23**	**23**	**21.6 -0.1**
	comp=Z,22nm,1.3s							
WTTA	**Wattenberg**	**151.21**	**350**	*e*PKiKP	**PKPbc**	**23**	**23**	**20.7 -0.6**
	comp=Z,16nm,0.7s							
MOTA	**Moosalm**	**151.22**	**351**	*e*PKP	**PKPbc**	**23**	**23**	**20.6 -0.7**
	comp=Z,37nm,1.3s							
PLD	**Plovdiv**	**151.28**	**328**	P	**PKPdf**	**23**	**23**	**16.6 +1.2**
SQTA	**Sankt Quirin**	**151.32**	**351**	*e*PKP	**PKPbc**	**23**	**23**	**20.7 -0.8**
	comp=Z,20nm,1.2s							
KDZ	**Kurdzhali**	**151.35**	**326**	P	**PKPbc**	**23**	**23**	**20.3 -1.3**
OBKA	**Obir**	**151.36**	**346**	PKP	**PKPbc**	**23**	**23**	**20.7 -0.8**
	comp=Z,15nm,0.8s							
DAVA	**Damuels**	**151.44**	**353**	*e*PKiKP	**PKPbc**	**23**	**23**	**21.2 -0.6**
	comp=Z,30nm,1.0s							
MYKA	**Terra Mystica**	**151.45**	**347**	*i* PKiKP	**PKPbc**	**23**	**23**	**21.5 -0.3**
	comp=Z,18nm,1.0s							
ABTA	**Abfaltersbach**	**151.56**	**349**	*e*PKiKP	**PKPbc**	**23**	**23**	**22.2 +0.2**
	comp=Z,62nm,1.6s							
RDO	**Rodhopi**	**151.59**	**326**	P	**PKPbc**	**23**	**23**	**21.7 -0.4**
FETA	**Feichten**	**151.59**	**351**	*e*PKiKP	**PKiKP**	**23**	**23**	**23.1 +0.5**
	comp=Z,40nm,1.2s							
VTS	**Vitosha**	**151.66**	**330**	P	**PKPbc**	**23**	**23**	**20.2 -2.3**
LJU	**Ljubljana**	**151.80**	**345**	*e*PKPbc	**PKPbc**	**23**	**23**	**21.5 -1.0**
EZN	**Ezine**	**152.05**	**323**	P	**PKPbc**	**23**	**23**	**22.8 -0.4**
EZN	**Ezine**	**152.05**	**323**	⇓P	**PKPdf**	**23**	**23**	**19.8 +3.2**
EZN	**Ezine**	**152.05**	**323**	⇓PKIKP	**PKPdf**	**23**	**23**	**19.8 +3.2**
CEY	**Cerknica**	**152.11**	**345**	*i* PKPbc	**PKiKP**	**23**	**23**	**25.1 +1.5**
FETY	**Fethiye**	**152.25**	**314**	P	**PKPdf**	**23**	**23**	**16.3 -0.8**
BLY	**Banja Luka**	**152.25**	**341**	⇓P	**PKiKP**	**23**	**23**	**25.1 +1.2**
YER	**Yerkesik**	**152.51**	**316**	P	**PKiKP**	**23**	**23**	**25.2 +0.6**
BLCB	**Balcova**	**152.55**	**319**	P	**PKPdf**	**23**	**23**	**18.3 +0.8**
SACV	**Santiago Islan**	**152.72**	**94**	IAMs_20	IAMs_20	00	22	13.2
	comp=Z,4µm,22.0s							
VAY	**Valandovo**	**152.97**	**329**	*i* P	**PKPab**	**23**	**23**	**31.9 -4.5**
OHR	**Ohrid**	**153.97**	**331**	*i* P	**PKiKP**	**23**	**23**	**27.6 0.0**
KARP	**Karpathos**	**154.15**	**314**	IAMs_20	IAMs_20	00	41	57.8
	comp=Z,4µm,21.0s							
PGAV	**Gavieira, Arco**	**154.60**	**23**	*e*SS	SS	23	47	10.9 +12
PGAV				*e*LR	LR	00	24	49.5
PGAV				*i* IAMs_20	IAMs_20	00	28	28.7
	comp=Z,5µm,20.0s							
POLO	**Lamas de Olo**	**155.29**	**23**	*e*PKPab	**PKPab**	**23**	**23**	**50.1 +3.7**
AQU	**L'Aquila**	**155.54**	**344**	PKP	**PKPdf**	**23**	**23**	**16.5 -5.1**
MVO	**Moncorvo**	**155.75**	**22**	*e*SS	SS	23	47	22.6 +12
MVO				*e*LQ	LQ	00	08	29.8
MVO				*e*LR	LR	00	24	42.9
MVO				*i* IAMs_20	IAMs_20	00	26	58.1
	comp=Z,5µm,20.0s							
IDI	**Anoyia**	**155.81**	**316**	PKP	**PKPdf**	**23**	**23**	**19.0 -3.2**
PMOZ	**Porto Moniz, M**	**156.08**	**51**	*e*LR	LR	00	16	48.9
PMOZ				*i* IAMs_20	IAMs_20	00	25	34.2
	comp=Z,3µm,22.0s							
MTE	**Manteigas**	**156.23**	**24**	*e*PKPab	**PKPab**	**23**	**23**	**49.6 -0.7**
MTE				*e*SS	SS	23	47	22.9 +6.8
MTE				*e*LR	LR	00	20	57.7
MTE				*i* IAMs_20	IAMs_20	00	26	59.5
	comp=Z,3µm,22.0s							
PSARD	**Sardoal**	**156.67**	**26**	*e*PKPab	**PKPab**	**23**	**23**	**57.6 +5.4**
PMRV	**Marv??o**	**157.13**	**25**	*e*SS	SS	23	47	35.6 +10
PMRV				*e*LR	LR	00	20	52.3
PMRV				*i* IAMs_20	IAMs_20	00	42	06.7
	comp=

OK051	**E0350 and S346**	**0.51**	**355**	Pg	Pg	23 24 33.9	+0.2	
OK051				IAML		23 24 45.1		
	comp=N,168nm,0.2s							
OK029	**Liberty Lake**	**0.58**	**250**		Pg	23 24 35.3	+0.2	
OK029				IAML		23 24 50.0		
	comp=N,104nm,0.6s							
OK029				IAML		23 24 50.0		
	comp=N,78nm,0.4s							
OKCSW	**OKLAHOMA CITY**	**0.80**	**222**	Pg	Pb	23 24 40.2	-0.1	
OKCSW				IAML		23 24 53.6		
	comp=E,104nm,0.3s							
OKCSW				IAML		23 24 53.8		
	comp=N,91nm,0.1s							
TUL3	**Leonard**	**0.81**	**96**	Pg	Pg	23 24 39.5	0.0	
FNO	**Franklin**	**0.90**	**214**	Pg	Pg	23 24 40.7	-0.4	
FNO				IAML		23 24 56.5		
	comp=E,45nm,0.5s							
T35A	**Sooner Cattle**	**0.94**	**13**	Pg	Pg	23 24 41.9	-0.1	
T35A				IAML		23 24 55.3		
	comp=E,85nm,0.2s							
T35A				IAML		23 24 55.3		
	comp=E,53nm,0.2s							
CROK	**Carrier**	**1.09**	**298**	Pg	Pg	23 24 44.6	-0.3	
CROK				IAML		23 25 04.4		
	comp=E,70nm,0.3s							
U38A	**Gravette**	**1.99**	**77**	Pn	Pn	23 24 58.5	+0.3	
U38A				Sg	Sb	23 25 26.5	+0.9	

*IDC **11** 23:32:35.6±0.7,2˚.38S×140˚.12E,h0km,mb4.1/10, mbtmp4.2/12,ML4.6/2, Error ellipse: s-maj=18.1km s-min=8.0km az=13.0*
*DJA **11** 23:32:36.8±0.4,2˚.5S×140˚.0E±˚,h10km,M4.6/7,mB6.5/1, MLv4.6/7,Mw(mB)6.3/1*

ISC 11 23:32:38.8±0.6,2˚.38S±0˚.06×140˚.25E±0˚.04,h25km,n29, σ1§60/27,mb4.2/11,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.23**	**201**	P	**Pb**	**23 32 43.8**	**-1.0**
GENI				S	**Sb**	**23 32 49.0**	**+0.1**
JAY	**Jayapura**	**0.48**	**106**	Pg	**Pb**	**23 32 48.0**	**-0.7**
	1μm,0.3s,baz=239,slow=11,SNR=3722						
JAY				Lg	Lg	23 32 54.7	
	1μm,0.3s,baz=153,slow=20,SNR=12						
JAY	**Jayapura**	**0.48**	**106**	P	**Pb**	**23 32 47.9**	**-0.7**
JAY				S	**Sb**	**23 32 54.4**	**-0.9**
SMPI	**Sarmi**	**1.58**	**284**	P	**Pn**	**23 33 03.6**	**-1.7**
SMPI				S	**Sn**	**23 33 25.2**	**+0.2**
WAMI	**Wamena**	**2.14**	**226**	P	**Pb**	**23 33 18.0**	**+1.1**
SRPI	**Serui, Papua**	**4.04**	**277**	P	**Pn**	**23 33 39.6**	**+0.6**
BAKI	**Biak**	**4.30**	**286**	P	**Pn**	**23 33 42.2**	**-0.5**
MMPI	**Merauke**	**6.05**	**179**	P	**Pn**	**23 34 08.4**	**+1.7**
BATI	**Baumata**	**18.21**	**244**	Pn	**Pn**	**23 36 48.1**	**-2.0**
	11nm,0.3s,baz=326,slow=0.5,SNR=12						
	10nm,0.4s						
WRA	**Warramunga Arr**	**18.39**	**198**	P	**P**	**23 36 50.9**	**-1.1**
	1.0nm,0.3s,baz=23,slow=13,SNR=38						
WRA				S	**Sn**	**23 40 11.4**	**-5.6**
	1.4nm,0.7s,baz=14,slow=22,SNR=5.3						
	4.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.20**	**222**	P	**P**	**23 37 21.8**	**-0.9**
	6.5nm,0.6s,baz=47,slow=9.6,SNR=25						
FITZ				S	S	23 41 07.5	-10
	6.3nm,1.1s,baz=111,slow=11,SNR=3.6						
	6.5nm,0.6s						
ASAR	**Alice Springs**	**22.04**	**196**	P	**P**	**23 37 31.6**	**-0.1**
	4.0nm,0.6s,baz=28,slow=10,SNR=36						
ASAR				S	**S**	**23 41 33.9**	**+0.1**
	1.9nm,0.7s,baz=14,slow=28,SNR=7.2						
	4.0nm,0.6s						
STKA	**Stephens Creek**	**29.37**	**178**	P	**P**	**23 38 40.6**	**+0.7**
	5.6nm,0.9s,baz=314,slow=6.7,SNR=3.8						
	5.6nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**33.28**	**50**	T	T	00 14 23.6	
	baz=230,slow=74,SNR=30						
H11S2	**WAKE ISLAND Hy**	**33.29**	**50**	T	T	00 14 22.3	
	baz=230,slow=74,SNR=21						
H11S1	**WAKE ISLAND Hy**	**33.30**	**50**	T	T	00 14 23.5	
	baz=230,slow=74,SNR=23						
H11N1	**WAKE ISLAND Hy**	**34.16**	**49**	T	T	00 15 24.3	
	baz=233,slow=75,SNR=45						
H11N2	**WAKE ISLAND Hy**	**34.17**	**49**	T	T	00 15 25.8	
	baz=233,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**34.17**	**49**	T	T	00 15 25.6	
	baz=233,slow=75,SNR=19						
CMAR	**Chiang Mai Arr**	**45.62**	**299**	P	**P**	**23 40 57.8**	**+0.3**
	1.4nm,0.6s,baz=112,slow=7.6,SNR=7.8						
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**70.47**	**322**	P	**P**	**23 43 52.3**	**+1.0**
	3.3nm,0.7s,baz=119,slow=7.6,SNR=6.4						
	3.3nm,0.7s						
KSH	**Kashi**	**71.98**	**313**	P	**P**	**23 44 01.7**	**+1.0**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURBB	**Kurchatov Arra**	**74.35**	**324**	P	**P**	**23 44 14.8**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=112,slow=5.9,SNR=4.6						
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**75.98**	**175**	P	**P**	**23 44 22.4**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=329,slow=5.8,SNR=4.1						
	comp=Z,0.8nm,0.8s						
BVAR	**Borovoye Array**	**79.92**	**325**	P	**P**	**23 44 45.6**	**0.0**
	comp=Z,1.2nm,0.3s,baz=120,slow=7.5,SNR=5.4						
	comp=Z,1.2nm,0.3s						
ILAR	**Eielson Array**	**84.90**	**24**	P	**P**	**23 45 10.9**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=268,slow=5.1,SNR=4.8						
	comp=Z,0.6nm,0.8s						
QSPA	**South Pole Qui**	**87.56**	**180**	P	**P**	**23 45 27.4**	**+2.9**
	comp=Z,1.0nm,0.6s,baz=245,slow=3.0,SNR=7.0						
	comp=Z,1.0nm,0.6s						
DBIC	**Dimbokro**	**144.96**	**278**	PKP	PKPbc	23 52 14.8	+0.5	
	comp=Z,3.5nm,0.7s,baz=124,slow=3.1,SNR=8.7							
LPAZ	**La Paz**	**146.38**	**124**	PKPbc	**PKPdf**	**23 52 19.4**	**+1.3**	
	comp=Z,2.1nm,0.9s,baz=278,slow=1.1,SNR=5.4							

IDC 11 23:35:07.6±2.1,3˚.17S×147˚.97E,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=82.4km s-min=27.0km az=108.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.33**	**218**	P	P	23 39 56.4	0.0
	2.3nm,0.9s,baz=42,slow=11,SNR=5.7						
	2.3nm,0.9s						
ASAR	**Alice Springs**	**24.50**	**213**	P	P	23 40 28.9	+0.1
	1.1nm,0.8s,baz=38,slow=10.0,SNR=5.5						
	1.1nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**28.34**	**40**	T	T	00 10 53.1	
	baz=223,slow=75,SNR=397						
H11S2	**WAKE ISLAND Hy**	**28.35**	**40**	T	T	00 10 53.8	
	baz=223,slow=75,SNR=232						
H11S1	**WAKE ISLAND Hy**	**28.36**	**40**	T	T	00 10 52.7	
	baz=223,slow=75,SNR=243						
H11N1	**WAKE ISLAND Hy**	**29.37**	**39**	T	T	00 12 06.2	
	baz=221,slow=76,SNR=71						
H11N3	**WAKE ISLAND Hy**	**29.39**	**39**	T	T	00 12 07.3	
	baz=221,slow=76,SNR=141						
H11N2	**WAKE ISLAND Hy**	**29.39**	**38**	T	T	00 12 07.6	
	baz=221,slow=76,SNR=118						
SONM	**Songino Array**	**62.44**	**330**	P	P	23 45 33.7	+0.9
	1.1nm,0.6s,baz=132,slow=4.3,SNR=2.5						
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**79.58**	**323**	P	P	23 47 15.5	-1.0
	0.3nm,0.8s,baz=94,slow=3.7,SNR=1.5						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**82.52**	**23**	P	P	23 47 32.0	+0.1
	0.3nm,0.7s,baz=258,slow=5.7,SNR=2.4						
	0.3nm,0.7s						

*AZER **11** 23:38:36.5,38˚.44N×45˚.07E,h4km,ml3.5*
*AFAD **11** 23:38:36.7,38˚.34N×45˚.64E,h7km±2km,ML2.8*
*ISK **11** 23:38:37.9,38˚.37N×45˚.46E,h8km,ML3.2/12*
*TEH **11** 23:38:38.4,38˚.40N×45˚.19E,h20km±50km*
*NSSP **11** 23:38:39.1,38˚.53N×45˚.22E,h1km,Ms3.4*

ISC 11 23:38:40.2±1.1,38˚.44N±0˚.02×45˚.28E±0˚.02,h6km±9km, n83,σ1§54/142,1C-3D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.30**	**120**	Pg	**Pg**	**23 38 45.9**	**-0.3**
ISHB				Sg	**Sg**	**23 38 51.6**	**+1.4**
IMRD	**Marand**	**0.43**	**50**	Pg	**Pg**	**23 38 49.4**	**+0.8**
IMRD				Sg	**Sb**	**23 38 57.1**	**-0.1**

ITBZ	**Tabriz**	**0.71**	**106**	Pg	**Pg**	**23 38 53.0**	**-0.8**	
ITBZ				Sg	**Sg**	**23 39 04.0**	**+1.0**	
ORD	**Ordubad**	**0.74**	**48**	P	**Pg**	**23 38 54.9**	**+0.5**	
ORD				S	**Sb**	**23 39 06.2**	**+0.2**	
NAX	**Nakhchivan**	**0.76**	**13**	P	**Pg**	**23 38 54.7**	**0.0**	
NAX				S	**Sb**	**23 39 05.7**	**-0.7**	
IAZR	**Azarshahr**	**0.94**	**144**	Pg	**Pg**	**23 38 57.1**	**-1.0**	
SBZ	**Shahbuz**	**0.98**	**12**	S	**Sb**	**23 39 13.2**	**+0.2**	
OZAP	**Van, Ozalp-Mer**	**1.04**	**283**	P	**Pb**	**23 38 58.5**	**-2.3**	
OZAP				S	**Sb**	**23 39 14.5**	**-0.1**	
YOVA	**Hakkari_Yksek**	**1.16**	**223**	SPECP		23 39 00.0		
YOVA				P	**Pb**	**23 39 00.3**	**-2.5**	
YOVA				*i* IAML		23 39 22.0		
	comp=N,254nm,0.6s							
YOVA				S	**Sn**	**23 39 22.4**	**+3.1**	
YOVA				*i* IAML		23 39 23.0		
	comp=E,149nm,0.7s							
EGVZ	**Egvard**	**1.26**	**51**	*e*P	**Pn**	**23 39 03.5**	**-1.0**	
EGVZ				*e*S	**Sn**	**23 39 20.8**	**-1.0**	
VAYK	**Vayk**	**1.26**	**5⇓**	*e*P	**Pn**	**23 39 02.6**	**-1.9**	
VAYK			**⇓**	*e*S	**Sb**	**23 39 19.5**	**-1.5**	
HYR	**Heyderabad**	**1.32**	**345**	P	**Pn**	**23 39 03.2**	**-2.1**	
GRS	**Goris**	**1.34**	**37⇑**	*i*P	**Pb**	**23 39 06.0**	**+0.2**	
GRS			**⇓**	*i*S	**Sg**	**23 39 25.0**	**+1.7**	
IHRS	**Heris**	**1.39**	**94**	Pg	**Pn**	**23 39 05.8**	**-0.6**	
IHRS				Sg	**Sg**	**23 39 26.4**	**+1.6**	
VMUR	**Van-Muradiye**	**1.45**	**293**	P	**Pn**	**23 39 05.6**	**-1.5**	
VMUR				S	**Sg**	**23 39 28.7**	**+1.9**	
TVAN	**Van**	**1.48**	**274**	P	**Pn**	**23 39 06.6**	**-1.0**	
TVAN				S	**Sg**	**23 39 30.5**	**+2.8**	
HAKT	**HAKKARI**	**1.52**	**235**	SPECP		23 39 06.0		
HAKT				P	**Pn**	**23 39 06.5**	**-1.7**	
HAKT				*i* IAML		23 39 35.0		
	comp=E,109nm,0.6s							
HAKT				*i* IAML		23 39 41.0		
	comp=N,116nm,1.2s							
HAKT	**HAKKARI**	**1.52**	**235**	P	**Pn**	**23 39 06.2**	**-2.0**	
HAKT				S	**Sb**	**23 39 28.7**	**0.0**	
ERCV	**ERCIS-VAN**	**1.63**	**292**	Pn	**Pn**	**23 39 09.9**	**+0.3**	
ERCV				Sn	**Sg**	**23 39 33.1**	**+0.5**	
NRKZ	**NAREK**	**1.64**	**343**	*e*P	**Pn**	**23 39 07.6**	**-2.0**	
NRKZ				*e*S	**Sn**	**23 39 28.2**	**-2.8**	
DYDN	**Diyadin**	**1.66**	**312**	SPECP		23 39 10.0		
DYDN				P	**Pn**	**23 39 10.2**	**+0.1**	
DYDN				S	**Sg**	**23 39 35.5**	**+1.9**	
DYDN				*i* IAML		23 39 37.0		
	comp=N,245nm,0.9s							
DYDN				*i* IAML		23 39 43.0		
	comp=E,162nm,1.0s							
MAHB	**Mahabad**	**1.70**	**169**	Pg	**Pn**	**23 39 10.5**	**-0.1**	
IGDI	**IGDIR**	**1.71**	**327**	SPECP		23 39 09.0		
IGDI				P	**Pn**	**23 39 09.9**	**-0.7**	
IGDI				S	**Sg**	**23 39 35.3**	**+0.1**	
IGDI				*i* IAML		23 39 40.0		
	comp=N,121nm,0.8s							
IGDI				*i* IAML		23 39 51.0		
	comp=E,110nm,0.7s							
IGDI	**IGDIR**	**1.71**	**327**	P	**Pn**	**23 39 09.5**	**-1.1**	
IGDI				S	**Sb**	**23 39 33.8**	**-0.1**	
AYRK	**Ayrk**	**1.72**	**13**	*e*P	**Pn**	**23 39 11.0**	**+0.1**	
AYRK				*e*S	**Sb**	**23 39 34.3**	**-0.1**	
TASB	**TASBURUN-IGDIR**	**1.75**	**333**	Pn	**Pn**	**23 39 10.5**	**-0.6**	
TASB				Sn	**Sb**	**23 39 35.5**	**+0.6**	
GNI	**Garni**	**1.76**	**346**	Pg	**Pn**	**23 39 10.9**	**-0.5**	
GNI	**Garni**	**1.76**	**346**	Pn	**Pn**	**23 39 10.9**	**-0.5**	
GNI				Sn	**Sb**	**23 39 35.2**	**-0.3**	
GNI	**Garni**	**1.76**	**346**	*e*P	**Pn**	**23 39 11.0**	**-0.5**	
GNI				*e*S	**Sn**	**23 39 34.1**	**-0.2**	
CUKT	**Cukurca**	**1.78**	**229**	P	Pn	23 38 56.3	-15	
AKDM	**Akdamar-Van**	**1.81**	**267**	Pn	**Pn**	**23 39 12.2**	**+0.1**	
AKDM				Sn	**Sb**	**23 39 37.4**	**+0.4**	
QRD	**Qoradiz**	**1.89**	**57**	P	**Pb**	**23 39 15.0**	**-0.1**	
QRD				S	**Sg**	**23 39 42.0**	**+1.1**	
IHSH	**Hashtrud**	**1.93**	**125**	Pn	**Pn**	**23 39 14.8**	**+0.9**	
KAPZ	**Kaputan**	**1.94**	**347**	*e*P	**Pn**	**23 39 13.4**	**-0.4**	
KAPZ				*e*S	**Sn**	**23 39 38.3**	**-0.3**	
METS	**Metsamor**	**1.95**	**332**	*e*P	**Pn**	**23 39 12.8**	**-1.1**	
METS				*e*S	**Sn**	**23 39 37.3**	**-1.5**	
VNNZ	**Vanand**	**2.01**	**326**	*e*P	**Pb**	**23 39 16.9**	**-0.4**	
VNNZ				*e*S	**Sg**	**23 39 44.4**	**-0.5**	
ADCV	**BITLIS_Adilcev**	**2.04**	**281**	SPECP		23 39 15.0		
ADCV				P	**Pn**	**23 39 15.4**	**+0.2**	
ADCV				S	**Sg**	**23 39 46.5**	**+0.8**	
ADCV				*i* IAML		23 39 47.0		
	comp=E,56nm,1.0s							
ADCV				*i* IAML		23 40 08.0		
	comp=N,44nm,0.9s							
ARUZ	**Aruch**	**2.06**	**334**	*e*P	**Pn**	**23 39 15.8**	**+0.2**	
ARUZ				*e*S	**Sb**	**23 39 42.4**	**-1.7**	
GRMI	**Germi**	**2.08**	**79**	Pn	**Pb**	**23 39 18.5**	**+0.1**	
AMBZ	**Amberd**	**2.10**	**338**	*e*P	**Pn**	**23 39 16.3**	**+0.1**	
AMBZ				*e*S	**Sn**	**23 39 43.5**	**+0.6**	
KOTA	**Agri, Merkez-K**	**2.12**	**311**	SPECP		23 39 16.0		
KOTA				P	**Pn**	**23 39 16.4**	**+0.1**	
KOTA				S	**Sg**	**23 39 50.1**	**+2.0**	
KOTA				*i* IAML		23 39 52.0		
	comp=N,40nm,0.9s							
KOTA				*i* IAML		23 40 05.0		
	comp=E,41nm,0.9s							
AGRB	**Hanur-Agry**	**2.12**	**303**	Pn	**Pn**	**23 39 16.9**	**+0.6**	
AGRB				Sn	**Sb**	**23 39 45.4**	**-0.3**	
DORK	**Agr/Tutak/Do**	**2.17**	**297**	SPECP		23 39 17.0		
DORK				P	**Pn**	**23 39 17.7**	**+0.6**	
DORK				*i* IAML		23 39 55.0		
	comp=N,45nm,0.7s							
DORK				*i* IAML		23 40 05.0		
	comp=E,38nm,1.1s							
BLQ	**Beylaqan**	**2.19**	**53**	P	**Pb**	**23 39 18.9**	**-1.2**	
BLQ				S	**Sg**	**23 39 49.2**	**-1.2**	
AGDM	**Agdam**	**2.19**	**40**	P	**Pb**	**23 39 18.8**	**-1.5**	
AGDM				S	**Sg**	**23 39 50.2**	**-0.3**	
PERV	**Siirt/Pervari-**	**2.21**	**258**	SPECP		23 39 18.0		
PERV				P	**Pn**	**23 39 18.1**	**+0.5**	
PERV				*i* IAML		23 39 57.0		
	comp=E,129nm,0.7s							
PERV				*i* IAML		23 40 02.0		
	comp=N,112nm,1.1s							
MLAZ	**Malazgirt-MUS**	**2.25**	**289**	Pn	**Pn**	**23 39 18.9**	**+0.8**	
GDB	**GEDABAY**	**2.31**	**9**	P	**Pn**	**23 39 19.7**	**+0.7**	
GDB				S	**Sb**	**23 39 52.2**	**+1.0**	
BRDA	**Brd**	**2.34**	**38**	P	**Pb**	**23 39 22.1**	**-0.7**	
BRDA				S	**Sg**	**23 39 54.6**	**-0.8**	
GANJ	**Ganja**	**2.35**	**20**	P	**Pn**	**23 39 20.5**	**+1.1**	
GANJ				S	**Sb**	**23 39 53.5**	**+1.3**	
YRD	**Yardimli**	**2.36**	**77**	P	**Pb**	**23 39 21.7**	**-1.6**	
YRD				S	**Sg**	**23 39 56.5**	**+0.4**	
LRK	**Lerik**	**2.41**	**84**	P	**Pn**	**23 39 21.8**	**+1.5**	
LRK				S	**Sg**	**23 39 58.6**	**+1.2**	
LSVT	**Lusahovit**	**2.48**	**358**	*e*P	**Pb**	**23 39 24.2**	**-1.0**	
LSVT				*e*S	**Sb**	**23 39 57.3**	**+1.3**	
GURO	**Guroymak-BITLI**	**2.55**	**274**	Pn	**Pn**	**23 39 23.1**	**+0.8**	
GLBA	**Clilabad**	**2.56**	**71**	P	**Pn**	**23 39 23.5**	**+1.3**	
GLBA				S	**Sg**	**23 40 00.3**	**-2.1**	
EATA	**Eleskirt**	**2.60**	**304**	P	**Pb**	**23 39 26.7**	**-0.7**	
EATA				S	**Sg**	**23 40 06.7**	**+3.1**	
ZRD	**Zardab**	**2.62**	**45**	P	**Pb**	**23 39 25.4**	**-2.0**	
ZRD				S	**Sg**	**23 40 02.2**	**-2.1**	
MNGR	**Mingechevir, A**	**2.72**	**30**	P	**Pn**	**23 39 26.4**	**+2.0**	
MNGR				S	**Sb**	**23 40 03.7**	**+0.9**	
SRTK	**Saratovka**	**2.73**	**345**	*e*P	**Pn**	**23 39 26.7**	**+1.9**	
SRTK				*e*S	**Sb**	**23 40 01.3**	**-2.0**	
LKRN	**Lenkeran, Azer**	**2.75**	**83**	P	**Pn**	**23 39 26.9**	**+2.1**	
LKRN				S	**Sg**	**23 40 07.1**	**-1.6**	
ASTR	**Astara**	**2.75**	**86**	P	**Pn**	**23 39 27.1**	**+2.2**	
ASTR				S	**Sg**	**23 40 06.6**	**-2.1**	
SAAT	**Saatly**	**2.83**	**59**	S	**Sb**	**23 40 06.0**	**+0.2**	
VSHL	**Vashlovani**	**2.92**	**17**	P	**Pb**	**23 39 33.8**	**+1.1**	
DGRG	**David-gareji**	**3.01**	**1**	P	**Pb**	**23 39 34.2**	**0.0**	
DGRG				S	**Sg**	**23 40 16.8**	**-0.2**	
KOPR	**Koprukoy-ERZUR**	**3.08**	**301**	Pn	**Pn**	**23 39 30.7**	**+1.1**	
SENK	**Senkaya-Erzuru**	**3.11**	**314**	Pn	**Pn**	**23 39 31.1**	**+1.1**	
BGD	**Bogdanovka**	**3.11**	**336**	P	**Pb**	**23 39 35.4**	**-0.6**	
SEKA	**Sheki**	**3.14**	**27**	P	**Pn**	**23 39 32.9**	**+2.7**	
SEKA				S	**Sb**	**23 40 13.7**	**-1.3**	
QBL	**Gabala**	**3.19**	**37**	P	**Pn**	**23 39 33.1**	**+2.2**	
QBL				S	**Sb**	**23 40 14.1**	**-2.2**	
TRLG	**Trialeti**	**3.23**	**344**	P	**Pb**	**23 39 36.4**	**-1.7**	
TRLG				S	**Sg**	**23 40 21.2**	**-2.7**	
IML	**Ismayilli**	**3.25**	**43**	S	**Sb**	**23 40 17.0**	**-1.2**	
AKH	**Akhalkalaki**	**3.27**	**336**	Pn	**Pn**	**23 39 32.9**	**+0.7**	
TBLG	**Delisi**	**3.32**	**353**	Pn	**Pn**	**23 39 32.9**	**+0.2**	

ZKTA	**Zakatala**	**3.36**	**17**	P	**Pn**	**23 39 34.6**	**+1.4**	
ZKTA				S	**Sb**	**23 40 18.0**	**-3.3**	
PQL	**Pirkuli**	**3.47**	**46**	P	**Pn**	**23 39 37.0**	**+2.1**	
PQL				S	**Sb**	**23 40 22.6**	**-2.1**	
LGD	**Lagodekhi**	**3.47**	**12**	P	**Pb**	**23 39 42.5**	**+0.4**	
XNQ	**Khinaliq**	**3.51**	**38**	P	**Pn**	**23 39 36.6**	**+1.1**	
XNQ				S	**Sb**	**23 40 23.5**	**-2.3**	
GBS	**Qobustan**	**3.52**	**52**	P	**Pn**	**23 39 38.2**	**+2.7**	
GBS				S	**Sb**	**23 40 25.3**	**-0.7**	
ATGJ	**Altiaghaj**	**3.72**	**48**	P	**Pn**	**23 39 39.7**	**+1.5**	
ATGJ				S	**Sb**	**23 40 29.1**	**-2.6**	
QUBA	**Quba, Azerbaij**	**3.82**	**39**	P	**Pn**	**23 39 41.6**	**+2.0**	
QUBA				S	**Sn**	**23 40 28.9**	**+4.0**	
YEDI	**Yedisu-Bingol**	**3.83**	**287**	Pn	**Pn**	**23 39 41.3**	**+1.5**	
QSAR	**Qusar**	**3.83**	**36**	P	**Pn**	**23 39 40.5**	**+0.7**	
QSAR				S	**Sb**	**23 40 29.6**	**-5.4**	
SIZA	**Siyzn**	**3.83**	**45**	P	**Pn**	**23 39 41.9**	**+2.0**	
SIZA				S	**Sn**	**23 40 29.4**	**+4.1**	

*NNC **11** 23:39:22.1±0.7,46˚.18N×79˚.21E,h5km±6km,mb3.6, mpv3.3,Error ellipse: s-maj=6.8km s-min=3.8km az=117.0*
*SOME **11** 23:39:24.1,46˚.20N×79˚.17E,h15km*

ISC 11 23:39:19.4±1.2,46˚.25N±0˚.02×79˚.17E±0˚.03,h4km±13km, n42,σ1§24/65,5C-7D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**0.97**	**172**	P	**Pn**	**23 39 39.7**	**-0.2**
	181nm,0.2s						
KAPS				S	**Sn**	**23 39 51.7**	**-2.6**
	508nm,0.2s						
KNOS	**Konyrlen**	**1.89**	**180**	P	**Pg**	**23 39 56.0**	**+0.4**
	12nm,0.1s						
KNOS				P	**Pb**	**23 39 57.2**	**+2.7**
KNOS				S	**Sg**	**23 40 18.9**	**-1.1**
	96nm,0.4s						
KNOS				S	**Sg**	**23 40 19.0**	**-1.1**
	96nm,0.3s						
MAKZ	**Makanchi**	**2.02**	**73**	⇓Pn	**Pb**	**23 39 55.6**	**-1.1**
	3.1nm,0.3s						
MAKZ				⇓Sn	**Sb**	**23 40 22.2**	**0.0**
	12nm,0.3s						
BLB	**Baldybastay**	**2.21**	**193**	Pg	**Pg**	**23 40 01.4**	**-0.2**
	9.9nm,0.2s						
BLB				Pg	**Pb**	**23 40 02.9**	**+2.9**
	27nm,0.2s						
BLB				Lg	Lg	23 40 28.5	
	77nm,0.4s						
BLB				Lg	Lg	23 40 28.6	
	87nm,0.2s						
MK31	**Makanchi Array**	**2.22**	**75**	Pn	**Pb**	**23 39 58.8**	**-1.4**
	9.5nm,0.4s,baz=250,slow=13,SNR=357						
MK31				⇑Sn	**Sg**	**23 40 29.3**	**-1.5**
	21nm,0.6s,baz=244,slow=29,SNR=7.7						
ARXS	**Arharly**	**2.24**	**205**	Pg	**Pg**	**23 40 02.1**	**-0.3**
	1.7nm,0.2s						
ARXS				Pg	**Pb**	**23 40 03.7**	**+3.1**
	11nm,0.2s						
ARXS				Lg	Lg	23 40 29.9	
	87nm,0.3s						
ARXS				Lg	Lg	23 40 29.9	
	86nm,0.2s						
ARXS	**Arharly**	**2.24**	**205**	*e*P	**Pg**	**23 40 02.1**	**-0.3**
ARXS				*e*S	**Sg**	**23 40 29.9**	**-1.6**
KPKS	**Kokpek**	**2.80**	**187**	Pg	**Pg**	**23 40 12.4**	**-0.7**
	0.2nm,0.1s						
KPKS				Lg	Lg	23 40 47.1	
	103nm,0.5s						
CHKK	**Chushkaly**	**2.85**	**214**	Pg	**Pg**	**23 40 13.5**	**-0.5**
	6.0nm,0.2s						
CHKK				Lg	Lg	23 40 49.3	
	74nm,0.2s						
CHKK	**Chushkaly**	**2.85**	**214**	*e*P	**Pg**	**23 40 13.5**	**-0.5**
	6.0nm,0.2s						
CHKK				*e*S	**Sg**	**23 40 49.3**	**-1.6**
	74nm,0.2s						
KURS	**Kuram**	**2.85**	**195**	Pg	**Pg**	**23 40 15.5**	**+1.5**
	8.9nm,0.4s						
KURS				Lg	Lg	23 40 52.3	
	42nm,0.4s						
KTMS	**Ketmen**	**2.92**	**163**	Pg	**Pg**	**23 40 14.7**	**-0.7**
	2.4nm,0.3s						
KTMS				Lg	Lg	23 40 51.4	
	11nm,0.2s						
KTMS	**Ketmen**	**2.92**	**163**	*e*P	**Pg**	**23 40 14.7**	**-0.7**
	2.4nm,0.3s						
KTMS				*e*S	**Sg**	**23 40 51.4**	**-1.9**
	11nm,0.2s						
**PDG

IZV	**Izvestkoviy**	**3.69**	**211**	*e*P		**Pg**	**23 40 30.4**	**+0.2**
	2.5nm,0.2s							
IZV				*e*S		**Sg**	**23 41 18.0**	**+0.1**
	19nm,0.4s							
DGS	**Degeres**	**3.86**	**220**	Pg		**Pg**	**23 40 32.8**	**-0.5**
	5.0nm,0.4s							
DGS				Lg		Lg	23 41 22.3	
	32nm,0.4s							
KST	**Kastek**	**3.94**	**217**	Pg		**Pg**	**23 40 34.4**	**-0.4**
	2.1nm,0.4s							
KST				Lg		Lg	23 41 24.8	
	28nm,0.5s							
KST	**Kastek**	**3.94**	**217**	*e*P		**Pg**	**23 40 34.4**	**-0.4**
	2.1nm,0.4s							
KST				*e*S		**Sg**	**23 41 24.8**	**-1.0**
	28nm,0.5s							
ZSN	**Zaisan**	**4.09**	**71**	Pg		**Pg**	**23 40 38.4**	**+0.6**
	4.0nm,0.5s							
ZSN				Lg		Lg	23 41 31.3	
	14nm,0.5s							
ZSN	**Zaisan**	**4.09**	**71**	*e*P		**Pg**	**23 40 38.4**	**+0.6**
	4.0nm,0.5s							
ZSN				*e*S		**Sg**	**23 41 31.3**	**+0.6**
	14nm,0.5s							
SEM	**Semipalatinsk**	**4.23**	**9**	Pg		**Pg**	**23 40 41.9**	**+1.6**
	3.0nm,0.1s							
SEM				Lg		Lg	23 41 37.5	
	34nm,0.4s							
SEM	**Semipalatinsk**	**4.23**	**9**	*e*P		**Pg**	**23 40 41.9**	**+1.6**
	3.0nm,0.1s							
SEM				*e*S		**Sg**	**23 41 37.5**	**+2.4**
	34nm,0.4s							
KURBB	**Kurchatov Arra**	**4.40**	**355**	⇓Pg		**Pg**	**23 40 41.9**	**-1.7**
	2.7nm,0.4s							
KURBB				⇓Lg		Lg	23 41 40.4	
	67nm,0.7s							
AAK	**Ala-Archa**	**4.92**	**225**	⇑Pg		**Pg**	**23 40 51.3**	**-2.4**
	1.5nm,0.7s							
AAK				⇓Lg		Lg	23 41 54.3	
	4.1nm,0.6s							
BRZS	**Berezniki**	**5.73**	**313**	Pg		**Pg**	**23 41 08.1**	**-1.1**
	0.7nm,0.4s							
BRZS				Lg		Lg	23 42 22.2	
	11nm,0.7s							
BRZS	**Berezniki**	**5.73**	**313**	*e*P		**Pg**	**23 41 08.1**	**-1.1**
	0.7nm,0.4s							
BRZS				*e*S		**Sg**	**23 42 22.2**	**-1.1**
	11nm,0.7s							
KK31	**Karatay Array**	**6.92**	**246**	⇑Pn		**Pn**	**23 41 02.7**	**+1.0**
	0.4nm,0.3s,baz=61,slow=12,SNR=4.6							
KK31				⇑Lg		Lg	23 43 00.2	
	1.3nm,0.3s,baz=63,slow=29,SNR=4.5							

BJI ***11*** *23:40:56.5, 1.21N×127.23E, h127km, mB5.8/13, mb5.6/90*

NEIC ***11*** *23:40:58.4±1.6, 1.42N±0.05×127.05E±0.06, h107km±3km, mb5.4/369, Mww5.3/17, Error ellipse: s-maj=8.3km s-min=7.3km az=65.0*

IDC ***11*** *23:40:59.5±0.9, 1.44N×127.08E, h123km±7km, mb5.1/37, mbtmp5.5/43, MS4.4/1, Error ellipse: s-maj=11.7km s-min=6.7km az=78.0*

MOS ***11*** *23:40:59.6±0.9, 1.41N×126.99E, h140km, mb5.5/81, Error ellipse: s-maj=6.8km s-min=4.0km az=115.8*

NEIC ***11*** *23:40:59.3, 1.39N×127.02E, h90km*

NEIC ***11*** *23:40:59.3, 1.29N×127.12E, h90km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 1017Nm; Mrr=0.20; Mθθ=0.96; Mϕϕ=-0.76; Mrθ=0.15; Mθϕ=-0.04; Mϕr=0.55; Fault plane solution: M0=1.05000×1017 NP1: ϕs=311.53000°, δ62.09000°, λ-18.03000°. NP2:ϕs=50.19000°, δ74.13000°, λ-150.88000°. Principal axes: T 0.9814, Plg8.0000°, Azm179.0000°; N 0.1192, Plg57.0000°, Azm76.0000°; P -1.1006, Plg32.0000°, Azm274.0000°;*

DJA ***11*** *23:40:59.6±0.1, 1.1N±1×12.7E±1, h121km±2km, M5.8/126, mb5.8/126, mB6.1/66, MLv6.1/24, Mw(mB)5.7/66, MwMwp6.7/6, Mwp6.5/6*

GCMT ***11*** *23:41:02.4±0.3, 1.53N±0.02×127.06E±0.02, h105km±5km, MW5.4/85, Moment Tensor Solution. s13,c14; s85,c119; Duration: 1s3 Moment tensor: Scale 1017Nm; Mrr=0.03±.09; Mθθ 1.43±.08; Mϕϕ-1.40±.08; Mrθ-0.30±.05; Mθϕ-0.54±.07; Mϕr-0.93±.06; Best double couple: M0 1.76100×1017 NP1:ϕs322.00000°, δ67.00000°, λ-15.00000°. NP2:ϕs58.00000°, δ76.00000°, λ-157.00000°. Principal axes: T 1.5420, Plg6.0000°, Azm189.0000°; N 0.4380, Plg63.0000°, Azm87.0000°; P -1.9790, Plg26.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 23:40:59.9±0.3, 1.39N±0.03×127.04E±0.03, h129km±2km, h129km:pP-P, n1379, σ1.1s24/1434, mb5.4/384, 45C-34D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
TNTI	**Ternate**	**0.69**	**152**		**Pn**	**23 41 19.1**		**-1.1**
TNTI				Sn	**Sn**	**23 41 33.4**		**-2.1**
TNTI	**Ternate**	**0.69**	**152**	P	**Pn**	**23 41 19.6**		**-0.5**
TNTI	**Ternate**	**0.69**	**152**	S	**Sn**	**23 41 35.8**		**+0.4**
TNTI	**Ternate**	**0.69**	**152**	P	**Pn**	**23 41 19.3**		**-0.8**
SGSI	**Sangihe**	**2.73**	**327**	P	**Pn**	**23 41 41.5**		**-1.6**
KMSI	**Cibinong**	**3.16**	**255**	P	**Pn**	**23 41 47.7**		**-0.9**
SANI	**Sanana**	**3.57**	**197**	P	**Pn**	**23 41 52.3**		**-1.7**
SANI	**Sanana**	**3.57**	**197**	P	**Pn**	**23 41 52.5**		**-1.5**
NLAI	**Namlea**	**4.59**	**179**	P	**Pn**	**23 42 07.6**		**0.0**
SWI	**Sorong**	**4.78**	**118**	P	**Pn**	**23 42 10.5**		**+0.5**
LUWI	**Luwuk**	**4.90**	**241**		**Pn**	**23 42 10.4**		**-1.3**
LUWI				Sn	**Sn**	**23 43 08.3**		**+0.9**
LUWI	**Luwuk**	**4.90**	**241**	P	**Pn**	**23 42 12.5**		**+0.9**
LUWI	**Luwuk**	**4.90**	**241**	S	**Sn**	**23 43 09.1**		**+1.6**
LUWI	**Luwuk**	**4.90**	**241**	P	**Pn**	**23 42 10.3**		**-1.3**
MSAI	**Masohi**	**5.07**	**158**	P	**Pn**	**23 42 15.5**		**+1.6**
	8.3nm22µm3µm,0.9s							
AAI	**Ambon**	**5.17**	**167**	P	**Pn**	**23 42 15.8**		**+0.5**
MRSI	**Marisa**	**5.17**	**260**	P	**Pn**	**23 42 15.0**		**-0.3**
DAV	**Davao City (W)**	**5.83**	**346**		**Pn**	**23 42 22.7**		**-1.5**
DAV	**Davao City (W)**	**5.83**	**346**	P	**Pn**	**23 42 22.8**		**-1.4**
	807nm,0.3s,baz=242,slow=20,SNR=8.5							
DAV				S	**Sn**	**23 43 26.4**		**-3.5**
	3µm,0.4s,baz=305,slow=20,SNR=6.7							
DAV	**Davao City (W)**	**5.83**	**346**	P	**Pn**	**23 42 22.7**		**-1.5**
DAV				S	**Sn**	**23 43 29.2**		**-0.7**
DAV	**Davao City (W)**	**5.83**	**346**	P	**Pn**	**23 42 23.3**		**-0.9**
DAV	**Davao City (W)**	**5.83**	**346**	S	**Sn**	**23 43 30.1**		**+0.2**
APSI	**Ampana**	**5.85**	**247**	P	**Pn**	**23 42 24.0**		**-0.4**
TOLI2	**Tolitoli**	**6.26**	**268**		**Pn**	**23 42 28.8**		**-1.1**
TOLI2				Sn	**Sn**	**23 43 37.7**		**-2.6**
TOLI2	**Tolitoli**	**6.26**	**268**	P	**Pn**	**23 42 29.5**		**-0.4**
TOLI2	**Tolitoli**	**6.26**	**268**	S	**Sn**	**23 43 38.9**		**-1.3**
BNDI	**Bandanaira**	**6.53**	**154**	P	**Pn**	**23 42 34.6**		**+1.0**
BNDI	**Bandanaira**	**6.53**	**154**	P	**Pn**	**23 42 34.4**		**+0.8**
	6.8nm33µm1µm,1.5s							
FAKI	**Fak Fak**	**6.74**	**129**		**Pn**	**23 42 37.2**		**+0.7**
FAKI	**Fak Fak**	**6.74**	**129**	P	**Pn**	**23 42 38.1**		**+1.6**
FAKI	**Fak Fak**	**6.74**	**129**	S	**Sn**	**23 43 52.4**		**+0.4**
FAKI	**Fak Fak**	**6.74**	**129**	P	**Pn**	**23 42 37.7**		**+1.2**
	1.5nm473nm,0.7s							
KDI	**Kendari**	**6.90**	**220**	P	**Pn**	**23 42 37.7**		**-0.9**
MPSI	**Mapaga**	**7.21**	**262**	P	**Pn**	**23 42 42.6**		**-0.2**
	4.0nm562nm,1.0s							
RKPI	**Ransiki, Papua**	**7.70**	**112**	P	**Pn**	**23 42 50.1**		**+0.7**
	3.2nm993nm,0.8s							
BBSI	**Bau Bau**	**8.16**	**213**	P	**Pn**	**23 42 56.1**		**+0.6**
	14µm1µm,1.0s							
KMPI	**Kaimana, Papua**	**8.34**	**127**	P	**Pn**	**23 42 59.6**		**+1.6**
	8µm804nm,1.2s							
TTSI	**Tana Toraja**	**8.45**	**239**	P	**Pn**	**23 42 59.3**		**-0.2**
	15µm1µm,0.8s							
BNSI	**Bone**	**9.00**	**230**	P	**Pn**	**23 43 07.6**		**+0.7**
	10µm1µm,1.0s							
SPSI	**Sidrap Palu**	**9.00**	**234**	P	**Pn**	**23 43 07.0**		**+0.1**
MYLDM	**Lahad Datu**	**9.32**	**294**		**Pn**	**23 43 11.0**		**-0.2**
MYLDM	**Lahad Datu**	**9.32**	**294**	P	**Pn**	**23 43 12.5**		**+1.4**
MYLDM	**Lahad Datu**	**9.32**	**294**	S	**Sn**	**23 44 54.3**		**0.0**
BAKI	**Biak**	**9.43**	**106**	P	**Pn**	**23 43 14.9**		**+2.3**
	11µm760nm,0.8s							
BKSI	**Bulukumba**	**9.60**	**226**	P	**Pn**	**23 43 14.2**		**-0.7**
SGKI	**Sangatta, Kali**	**9.62**	**259**	P	**Pn**	**23 43 12.7**		**-2.6**
	22µm2µm,1.0s							
KAPI	**Kappang**	**9.66**	**229**		**Pn**	**23 43 15.9**		**+0.2**
KAPI				Sn	**Sn**	**23 44 59.4**		**-3.3**
KAPI	**Kappang**	**9.66**	**229**	P	**Pn**	**23 43 16.4**		**+0.6**
	305nm,0.3s,baz=66,slow=3.3,SNR=180							
KAPI				S	**Sn**	**23 44 58.1**		**-4.6**
	827nm,0.5s,baz=235,slow=21,SNR=23							
KAPI	**Kappang**	**9.66**	**229**	P	**Pn**	**23 43 16.0**		**+0.2**
KAPI				S	**Sn**	**23 44 59.1**		**-3.6**
KAPI	**Kappang**	**9.66**	**229**	P	**Pn**	**23 43 17.5**		**+1.7**
KAPI	**Kappang**	**9.66**	**229**	S	**Sn**	**23 45 01.8**		**-0.9**
KAPI	**Kappang**	**9.66**	**229**	*i* P	**Pn**	**23 43 14.5**		**-1.3**
BSSI	**Bau Bau, Buton**	**9.93**	**221**	P	**Pn**	**23 43 17.7**		**-1.7**
	12µm843nm,0.9s							
SAUI	**Saumlaki**	**10.23**	**156**		**Pn**	**23 43 22.5**		**-1.0**
SAUI	**Saumlaki**	**10.23**	**156**	P	**Pn**	**23 43 23.1**		**-0.4**
SAUI	**Saumlaki**	**10.23**	**156**	P	**Pn**	**23 43 23.2**		**-0.3**
BKB	**Balikpapan**	**10.47**	**256**		**Pn**	**23 43 25.2**		**-1.5**
BKB	**Balikpapan**	**10.47**	**256**	P	**Pn**	**23 43 26.1**		**-0.6**
BKB	**Balikpapan**	**10.47**	**256**	S	**Sn**	**23 45 20.6**		**-1.7**
BKB	**Balikpapan**	**10.47**	**256**	P	**Pn**	**23 43 25.7**		**-1.0**
	6µm496nm,1.2s							
MMRI	**Maumere**	**11.04**	**206**		**Pn**	**23 43 34.0**		**-0.3**
MMRI	**Maumere**	**11.04**	**206**	P	**Pn**	**23 43 35.0**		**+0.7**
MMRI	**Maumere**	**11.04**	**206**	S	**Sn**	**23 45 36.0**		**-0.2**
MMRI	**Maumere**	**11.04**	**206**	P	**Pn**	**23 43 35.3**		**+1.0**
	8µm466nm,1.4s							
EDFI	**Ende, Flores**	**11.39**	**208**	P	**Pn**	**23 43 39.3**		**+0.3**
	10µm600nm,0.7s							
SOEI	**Soe**	**11.41**	**194**		**Pn**	**23 43 39.9**		**+0.7**
SOEI	**Soe**	**11.41**	**194**	P	**Pn**	**23 43 42.3**		**+3.0**
SOEI	**Soe**	**11.41**	**194**	P	**Pn**	**23 43 42.2**		**+3.0**
BATI	**Baumata**	**12.00**	**196**	P	**Pn**	**23 43 48.8**		**+1.9**
	509nm,0.7s,baz=94,slow=1.0,SNR=50							
BATI				S	S	23 46 14.4		-8.7
	44nm,0.5s,baz=340,slow=15,SNR=0.9							
BATI	**Baumata**	**12.00**	**196**	P	**Pn**	**23 43 48.1**		**+1.2**
	8µm558nm,1.2s							
SMPI	**Sarmi**	**12.14**	**106**	P	**Pn**	**23 43 49.6**		**+0.8**
	345nm,1.2s							
MTKI	**Muara Teweh, K**	**12.36**	**259**	P	**Pn**	**23 43 51.4**		**-0.2**
	466nm,1.1s							
WSI	**Waingapu**	**12.87**	**211**	P	**Pn**	**23 43 59.5**		**+1.2**
BBKI	**Banjar Baru**	**13.11**	**248**	P	**Pn**	**23 44 01.9**		**+0.6**
	15µm402nm,1.1s							
BASI	**Baing, Sumba**	**13.20**	**209**	P	**Pn**	**23 44 03.1**		**+0.6**
	13µm1µm,1.3s							
WBSI	**Waikabubak, Su**	**13.34**	**215**	P	**Pn**	**23 44 05.3**		**+0.9**
	668nm,0.7s							
GENI	**Genyem**	**13.71**	**107**	P	**Pn**	**23 44 09.7**		**+0.6**
GENI	**Genyem**	**13.71**	**107**	P	**Pn**	**23 44 09.8**		**+0.6**
	6µm254nm,0.9s							
PLAI	**Plampang**	**13.71**	**222**	P	**P**	**23 44 12.0**		**-1.4**
PLAI	**Plampang**	**13.71**	**222**	P	**Pn**	**23 44 11.1**		**+1.9**
	8µm777nm,1.2s							
TGY	**Tagaytay City**	**14.00**	**335**	P	**Pn**	**23 44 12.2**		**-0.7**
	191nm,0.3s,baz=176,slow=5.5,SNR=5.4							
JAY	**Jayapura**	**14.21**	**106**	P	**Pn**	**23 44 15.3**		**-0.2**
	31nm,0.9s,baz=114,slow=18,SNR=10							
JAY				S	**S**	**23 46 60.0**		**-4.2**
	13nm,0.9s,baz=288,slow=20,SNR=1.3							
JAY	**Jayapura**	**14.21**	**106**	P	**Pn**	**23 44 15.6**		**+0.1**
DRS	**Darwin Rock St**	**14.25**	**164**	P	**Pn**	**23 44 13.8**		**-2.2**
TWSI	**Taliwang, Sumb**	**14.27**	**225**	P	**P**	**23 44 17.9**		**-1.7**
	611nm,1.1s							
MTN	**Manton Dam**	**14.71**	**164**	P	**Pn**	**23 44 19.2**		**-2.6**
MTN	**Manton Dam**	**14.71**	**164**		**Pn**	**23 44 19.6**		**-2.2**
SBUM	**Sibu**	**14.85**	**274**		**Pn**	**23 44 23.1**		**-0.5**
SBUM	**Sibu**	**14.85**	**274**	P	**Pn**	**23 44 23.0**		**-0.5**
KDU	**Kakadu**	**14.99**	**159**	P	**Pn**	**23 44 22.4**		**-2.8**
SRBI	**Singaraja**	**15.08**	**231**	P	**P**	**23 44 29.1**		**+0.5**
	248nm,0.7s							
DNP	**Denpasar**	**15.46**	**229**	P	**P**	**23 44 35.9**		**+3.1**
	1µm,1.4s							
KMMI	**Kalianget**	**15.50**	**237**	P	**P**	**23 44 34.2**		**+0.9**
	17µm1µm,1.4s							
ABJI	**Asem Bagus**	**15.69**	**234**	P	**P**	**23 44 36.2**		**+0.8**
	482nm,1.5s							
JAGI	**Jajag, Banyuwa**	**16.15**	**232**		**P**	**23 44 40.1**		**-0.4**
JAGI				IAmb	IAmb	23 44 56.1		
	comp=Z,381nm,1.0s							
JAGI	**Jajag, Banyuwa**	**16.15**	**232**	P	**P**	**23 44 42.2**		**+1.7**
JAGI	**Jajag, Banyuwa**	**16.15**	**232**	P	**P**	**23 44 42.1**		**+1.6**
	comp=Z,332nm,1.1s							
BLJI	**Banyuglugur**	**16.19**	**236**	P	**P**	**23 44 41.9**		**+1.0**
	comp=Z,532nm,0.9s							
GRJI	**Gresik**	**16.70**	**240**	P	**P**	**23 44 47.6**		**+1.0**
	comp=Z,10µmcomp=Z,732nm,1.3s							
KSM	**Kuching**	**16.72**	**271**	P	**Pn**	**23 44 46.1**		**-0.7**
KSM				IAmb	IAmb	23 44 48.5		
	comp=Z,452nm,1.1s							
KSM	**Kuching**	**16.72**	**271**	P	**Pn**	**23 44 46.3**		**-0.4**
KNRA	**Kununurra**	**17.04**	**174**	P	**P**	**23 44 49.7**		**-0.5**
	comp=Z,3µm,0.7s							
KNRA	**Kununurra**	**17.04**	**174**	P	**P**	**23 44 49.9**		**-0.4**
TBJI	**Tambak Boyo**	**17.21**	**242**	P	**Pn**	**23 44 53.4**		**+0.8**
	comp=Z,9µmcomp=Z,661nm,1.0s							
NGJI	**Ngawi**	**17.81**	**241**	P	**Pn**	**23 45 01.6**		**+1.8**
	comp=Z,715nm,1.0s							
PCJI	**Pantan**	**18.46**	**239**	P	**Pn**	**23 45 08.0**		**+0.5**
	comp=Z,10µmcomp=Z,1µm,1.5s							
SMRI	**Semarang**	**18.56**	**243**		**Pn**	**23 45 07.9**		**-0.8**
SMRI	**Semarang**	**18.56**	**243**	P	**Pn**	**23 45 08.4**		**-0.3**
SMRI	**Semarang**	**18.56**	**243**	S	**Sn**	**23 48 35.4**		**-1.8**
SMRI	**Semarang**	**18.56**	**243**	P	**Pn**	**23 45 08.3**		**-0.4**
	comp=Z,545nm,1.0s							
UGM	**Wanagama**	**18.88**	**240**	P	**P**	**23 45 11.3**		**+0.8**
UGM	**Wanagama**	**18.88**	**240**	P	**Pn**	**23 45 13.1**		**+0.5**
UGM	**Wanagama**	**18.88**	**240**	S	**Sn**	**23 48 43.6**		**-1.4**
UGM	**Wanagama**	**18.88**	**240**	P	**Pn**	**23 45 13.0**		**+0.5**
	comp=Z,450nm,0.8s							
YOGI	**Yogyakarta**	**19.04**	**241**	P	**Pn**	**23 45 14.2**		**-0.1**
FITZ	**Fitzroy Crossi**	**19.41**	**184**	P	**P**	**23 45 15.2**		**-1.0**
	comp=Z,77nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.41**	**184**	P	**P**	**23 45 15.7**		**-0.5**
	comp=Z,157nm,0.6s,baz=19,slow=8.9,SNR=152							
FITZ				S	**S**	**23 48 42.7**		**-6.2**
	comp=Z,24nm,0.7s,baz=157,slow=23,SNR=1.2							
FITZ				ScP	**ScP**	**23 52 57.6**		**+0.7**
	comp=Z,11nm,0.6s,baz=116,slow=3.6,SNR=3.1							
FITZ	**Fitzroy Crossi**	**19.41**	**184**	P	**P**	**23 45 15.4**		**-0.8**
TPI	**Tanjungpandan**	**19.81**	**258**	P	**P**	**23 45 20.4**		**-0.2**
	comp=Z,4µmcomp=Z,504nm,1.1s							
KPJI	**Karang Pucung**	**20.03**	**244**	P	**P**	**23 45 23.8**		**+0.8**
	comp=Z,10µmcomp=Z,1µm,0.8s							
MANU	**Manus Island**	**20.61**	**99**	P	**P**	**23 45 29.5**		**+0.3**
LEM	**Lembang**	**21.03**	**247**	P	**P**	**23 45 33.8**		**-0.1**
	comp=Z,638nm,0.9s,baz=29,slow=12,SNR=15							
	comp=Z,638nm,0.9s							
LEM	**Lembang**	**21.03**	**247**	P	**P**	**23 45 34.3**		**+0.5**
	comp=Z,738nm,0.9s							
DLV	**Lat**	**21.18**	**300**	P	**P**	**23 45 34.9**		**-0.6**
DLV				IAmb	IAmb	23 45 41.6		
	comp=Z,334nm,1.2s							
DLV	**Lat**	**21.18**	**300**	P	**P**	**23 45 35.7**		**+0.3**
DLV	**Lat**	**21.18**	**300**	S	**S**	**23 49 25.1**		**+1.2**
PPBI	**Pangkal Pinang**	**21.19**	**260**	P	**P**	**23 45 35.4**		**0.0**
BBJI	**Bungbulang**	**21.24**	**245**	P	**P**	**23 45 35.7**		**-0.3**
BBJI	**Bungbulang**	**21.24**	**245**	S	**S**	**23 49 25.7**		**+0.7**
GUMO	**Guam**	**21.41**	**55**	P	**P**	**23 45 36.7**		**-1.0**
GUMO				IAmb	IAmb	23 45 40.0		
	comp=Z,213nm,0.7s							
GUMO	**Guam**	**21.41**	**55**	P	**P**	**23 45 36.1**		**-1.7**
	comp=Z,173nm,0.6s,baz=209,slow=11,SNR=9.2							
GUMO				LR	LR	23 53 57.4		
	comp=Z,903nm,18.4s,baz=247,slow=36							
	comp=Z,173nm,0.6s							
GUMO	**Guam**	**21.41**	**55**	P	**P**	**23 45 37.3**		**-0.4**
GUMO	**Guam**	**21.41**	**55**	P	**P**	**23 45 36.7**		**-1.0**
GUMO				pmax	pmax			
	comp=Z,213nm,0.7s							
CNJI	**Cibinong**	**21.66**	**246**	P	**P**	**23 45 41.1**		**+0.7**
	comp=Z,5µmcomp=Z,627nm,1.0s							
DBJI	**Dramaga**	**21.73**	**248**	P	**P**	**23 45 40.0**		**-1.2**
	comp=Z,17µmcomp=Z,869nm,1.3s							
SKJI	**Sukabumi**	**22.07**	**248**	P	**P**	**23 45 45.0**		**+0.3**
	comp=Z,11µmcomp=Z,988nm,0.8s							
TWGBT	**Beinan**	**22.07**	**345**	P	**P**	**23 45 44.0**		**-0.6**
TWG	**Pinlang**	**22.08**	**345**	P	**P**	**23 45 43.6**		**-1.1**
TWG				IAmb	IAmb	23 45 46.0		
	comp=Z,136nm,0.6s							
COEN	**Coen**	**22.10**	**134**	P	**P**	**23 45 42.9**		**-2.1**
	comp=Z,105nm,0.7s							
COEN	**Coen**	**22.10**	**134**	P	**P**	**23 45 43.2**		**-1.8**
COEN	**Coen**	**22.10**	**134**	P	**P**	**23 45 42.5**		**-2.5**
COEN	**Coen**	**22.10**	**134**	S	**S**	**23 49 40.2**		**+0.2**
SBJI	**Serang**	**22.16**	**250**	P	**P**	**23 45 47.2**		**+1.5**
	comp=Z,1µm,1.3s							
WRAB	**Tennant Creek**	**22.37**	**162**	P	**P**	**23 45 46.2**		**-1.5**
WRAB	**Tennant Creek**	**22.37**	**162**	P	**P**	**23 45 46.7**		**-1.0**
WRAB	**Tennant Creek**	**22.37**	**162**	S	**S**	**23 49 44.5**		**+0.1**
WRAB	**Tennant Creek**	**22.37**	**162**	*i* P	**P**	**23 45 47.1**		**-0.6**
WRAB				pmax	pmax			
	comp=Z,862nm,0.8s							
WRA	**Warramunga Arr**	**22.38**	**162**	P	**P**	**23 45 46.0**		**-1.8**
WRA				IAmb	IAmb	23 45 54.5		
	comp=Z,138nm,0.9s							
WRA	**Warramunga Arr**	**22.38**	**162**	P	**P**	**23 45 47.1**		**-0.6**
	comp=Z,269nm,0.5s,baz=341,slow=11,SNR=494							
WRA				S	**S**	**23 49 41.9**		**-2.7**
	comp=Z,46nm,1.1s,baz=341,slow=19,SNR=6.3							
WRA				ScP	**ScP**	**23 53 04.2**		**+0.1**
	comp=Z,10nm,0.6s,baz=333,slow=2.6,SNR=10.0							
	comp=Z,269nm,0.5s							
WRA	**Warramunga Arr**	**22.38**	**162**	*i* P	**P**	**23 45 44.0**		**-3.7**
WRA				pmax	pmax			
	comp=Z,308nm,0.5s							
WR0	**Warramunga Arr**	**22.45**	**161**	P	**P**	**23 45 47.5**		**-1.0**
TPRI	**Tanjung Pinang**	**22.51**	**269**	P	**P**	**23 45 48.9**		**-0.2**
	comp=Z,237nm,1.1s							
DSRI	**Dabo**	**22.53**	**265**	P	**P**	**23 45 49.1**		**-0.2**
YULB	**Yu-li**	**22.57**	**346**	IAmb	IAmb	23 45 59.8		
	comp=Z,107nm,0.9s							
YULB	**Yu-li**	**22.57**	**346**	P	**P**	**23 45 48.6**		**-1.0**
TPUB	**Ta-pu**	**22.65**	**345**	P	**P**	**23 45 49.1**		**-1.3**
TPUB				IAmb	IAmb	23 46 03.8		
	comp=Z,218nm,0.7s							
TPUB	**Ta-pu**	**22.65**	**345**	P	**P**	**23 45 48.5**		**-1.9**
TPUB	**Ta-pu**	**22.65**	**345**	S	**S**	**23 49 47.6**		**-1.3**
PMBI	**Palembang**	**22.66**	**259**	P	**P**	**23 45 51.6**		**+1.0**
PMBI	**Palembang**	**22.66**	**259**	P	**P**	**23 45 53.4**		**+2.8**
PMBI	**Palembang**	**22.66**	**259**	P	**P**	**23 45 52.2**		**+1.6**
	comp=Z,221nm,0.9s							
PMG	**Port Moresby**	**22.73**	**119**	P	**P**	**23 45 51.0**		**-0.3**
PMG	**Port Moresby**	**22.73**	**119**	P	**P**	**23 45 51.8**		**+0.5**
PMG	**Port Moresby**	**22.73**	**119**	*i* P	**P**	**23 45 50.3**		**-1.0**
PMG				pmax	pmax			
	comp=Z,31nm,1.0s							
BLSI	**Bandar Lampung**	**22.77**	**253**	P	**P**	**23 45 54.3**		**+2.6**
	comp=Z,551nm,0.7s							
KLI	**Kotabumi**	**23.01**	**254**	P	**P**	**23 45 54.2**		**+0.3**
	comp=Z,843nm,0.9s							
SSLB	**Suanglung**	**23.04**	**346**	P	**P**	**23 45 53.4**		**-0.7**
SSLB				IAmb	IAmb	23 46 08.4		
	comp=Z,139nm,0.8s							
SSLB	**Suanglung**	**23.04**	**346**	P	**P**	**23 45 53.4**		**-0.7**
BTDF	**Bukit Timah Da**	**23.26**	**270**	P	**P**	**23 45 55.7**		**-0.5**
NACB	**Ninganchiao**	**23.26**	**347**	P	**P**	**23 45 56.0**		**-0.1**
NACB	**Ninganchiao**	**23.26**	**347**	P	**P**	**23 45 56.7**		**+0.6**
YOJ	**Yonaguni jima**	**23.27**	**351**	P	**P**	**23 45 55.7**		**-0.4**
YOJ				IAmb	IAmb	23 46 04.1		
	comp=Z,178nm,0.8s							
YOJ	**Yonaguni jima**	**23.27**	**351**	P	**P**	**23 45 56.7**		**+0.6**
YOJ	**Yonaguni jima**	**23.27**	**351**	P	**P**	**23 45 55.7**		**-0.4**
YOJ				pmax	pmax			
	comp=Z,178nm,0.8s							
MBWA	**Marble Bar**	**23.52**	**197**	P	**P**	**23 45 58.0**		**-0.4**
	comp=Z,334nm,0.8s							
MBWA	**Marble Bar**	**23.52**	**197**	P	**P**	**23 45 57.8**		**-0.7**
MBWA	**Marble Bar**	**23.52**	**197**	P	**P**	**23 45 58.4**		**-0.1**
MBWA				S	**S**	**23 50 04.0**		**+1.2**
MBWA	**Marble Bar**	**23.52**	**197**	P	**P**	**23 45 57.5**		**-1.0**
KASI	**Kota Agung**	**23.53**	**253**	P	**P**	**23 45 59.4**		**+0.7**
	comp=Z,4µmcom

comp=Z,156nm,1.3s
PPSI Pulau Pagai 27.33 261 P P 23 46 34.0 +1.0
comp=Z,284nm,1.5s
MNSI Mandailing Nat 27.46 269 P P 23 46 34.0 -0.2
comp=Z,180nm,1.1s
SISI Saibi 28.07 265 P P 23 46 38.6 -1.0
comp=Z,128nm,0.4s
RPSI Rantau Prapat 28.12 273 P P 23 46 39.3 -0.8
RPSI IAmb IAmb 23 46 40.9
comp=Z,113nm,0.8s
PSI Prapat 28.13 273 P P 23 46 39.5 -0.8
PSI Prapat 28.13 273 P P 23 46 39.3 -1.0
PSI pmax pmax
comp=Z,113nm,0.8s
TV1H Townsville Har 28.24 138 P P 23 46 41.9 +0.9
CTA Charters Tower 28.47 140 P P 23 46 43.8 +0.7
PBSI Pulau Batu 28.79 267 P P 23 46 45.8 -0.2
comp=Z,101nm,1.1s
MEEK Meekatharra 29.02 196 P P 23 46 47.5 -0.4
comp=Z,295nm,0.9s
MEEK Meekatharra 29.02 196 P P 23 46 47.7 -0.2
KCSI Kotacane, Aceh 29.31 275 P P 23 46 49.3 -1.4
comp=Z,79µmcomp=Z,1µmcomp=Z,75nm,0.8s
JCJ Chichijima 29.41 28 P P 23 46 49.9 -1.3
GSI Gunungsitoli 29.45 270 IAmb IAmb 23 46 52.7
comp=Z,93nm,0.8s
GSI Gunungsitoli 29.45 270 P P 23 46 50.5 -1.3
GSI Gunungsitoli 29.45 270 P P 23 46 50.6 -1.3
comp=Z,125µmcomp=Z,144nm,1.0s
CNSH ChangSha 29.86 334 P P 23 46 55.8 +0.5
CNSH pmax pmax
comp=Z,23nm,1.2s
SLVN Son La 30.02 313 P P 23 46 56.0 -0.9
SLVN IAmb IAmb 23 46 59.1
comp=Z,74nm,1.2s
SLVN Son La 30.02 313 P P 23 46 57.6 +0.7
LHMI Lhok Sumawe 30.27 278 P P 23 46 58.7 -0.4
MLSI Meulaboh, Aceh 30.72 276 P P 23 47 02.3 -0.8
comp=Z,116µmcomp=Z,179nm,0.8s
WHN Wuhan 31.40 339 ⇓P P 23 47 10.2 +1.4
WHN sP **sP 23 47 56.3 +5.7**
WHN S S **23 52 09.0 +2.1**
WHN pmax pmax
comp=Z,140nm,0.7s
NJ2 Nanjing 31.46 347 ⇓P P 23 47 11.3 +2.0
NJ2 pP **pP 23 47 35.8 -0.7**
NJ2 pmax pmax
comp=Z,32nm,0.8s
GYA Guiyang 31.70 324 ⇓P P 23 47 12.5 +0.8
GYA pmax pmax
comp=Z,36nm,1.0s
JNU Nakatsue 31.77 6 P P 23 47 11.5 -0.6
JNU IAmb IAmb 23 47 12.8
comp=Z,78nm,1.0s
JNU Nakatsue 31.77 6 P P 23 47 11.9 -0.2
INKA Innaminka 31.82 157 P P 23 47 12.2 -0.3
INKA IAmb IAmb 23 47 13.7
comp=Z,34nm,0.5s
FORT Forrest 32.00 178 P P 23 47 13.5 -0.5
comp=Z,137nm,0.7s
FORT Forrest 32.00 178 P P 23 47 13.0 -1.1
FORT IAmb IAmb 23 47 14.7
comp=Z,100nm,0.8s
MORW Morawa 32.06 198 P P 23 47 14.4 -0.2
comp=Z,319nm,0.7s
MORW Morawa 32.06 198 P P 23 47 13.8 -0.9
MORW Morawa 32.06 198 P P 23 47 14.6 0.0
CM31 Chiang Mai Arr 32.36 303 P P 23 47 17.7 +0.2
CM31 IAmb IAmb 23 47 19.2
comp=Z,88nm,1.0s
CMAR Chiang Mai Arr 32.36 303 P P 23 47 17.5 +0.1
CMAR Chiang Mai Arr 32.36 303 P P 23 47 17.9 +0.5
comp=Z,32nm,0.9s,baz=126,slow=7.2,SNR=166
CMAR ScP **ScP 23 53 35.2 +0.9**
comp=Z,1.5nm,0.3s,baz=125,slow=2.1,SNR=5.1
comp=Z,32nm,0.9s
CMAR Chiang Mai Arr 32.36 303 *ce*P P **23 47 17.8 +0.4**
CMAR pmax pmax
comp=Z,33nm,0.9s
QLP Quilpie 32.38 150 P P 23 47 16.8 -0.7
comp=Z,200nm,0.8s
QLP Quilpie 32.38 150 P P 23 47 16.9 -0.6
CHTO Chiang Mai 32.53 304 P P 23 47 19.1 +0.2
CHTO IAmb IAmb 23 47 19.9
comp=Z,72nm,0.8s
CHTO Chiang Mai 32.53 304 P P 23 47 19.1 +0.2
CHTO Chiang Mai 32.53 304 P P 23 47 18.7 -0.2
CHTO Chiang Mai 32.53 304 P P 23 47 19.1 +0.2
CHTO pmax pmax
comp=Z,72nm,0.8s
CHTO Chiang Mai 32.53 304 P P 23 47 19.0 +0.1
JMN Monobe 32.81 11 P P 23 47 20.5 -0.6
JMN IAmb IAmb 23 47 22.6
comp=Z,85nm,0.9s
JMN Monobe 32.81 11 P P 23 47 21.6 +0.5
COCO West Island 32.89 245 P P 23 47 22.3 +0.3
COCO West Island 32.89 245 P P 23 47 22.3 +0.3
COCO pmax pmax
comp=Z,533nm,1.5s
KMBL Kambalda 32.94 188 P P 23 47 22.1 -0.1
comp=Z,158nm,0.9s
ENH Enshi 33.21 332 P P 23 47 24.7 0.0
ENH Enshi 33.21 332 P P 23 47 25.0 +0.3
KMI Kunming 33.27 317 ⇓P P 23 47 26.9 +1.4
KMI pmax pmax
comp=Z,110nm,1.3s
BLDU Ballidu 33.31 196 P P 23 47 25.2 -0.3
comp=Z,265nm,1.1s
BLDU Ballidu 33.31 196 P P 23 47 25.5 0.0
KLBR Kellerberrin 33.96 194 P P 23 47 31.1 -0.1
comp=Z,997nm,0.7s
KLBR Kellerberrin 33.96 194 P P 23 47 31.0 -0.1
GD1S Gladstone Soft 34.34 138 P P 23 47 35.4 +0.9
JSG Sagara 34.71 16 P P 23 47 37.6 +0.1
MUN Mundaring 34.73 196 P P 23 47 37.9 +0.1
comp=Z,256nm,0.6s
MUN Mundaring 34.73 196 P P 23 47 38.2 +0.4
AUMAZ Mazenod Senior 34.81 196 P P 23 47 39.0 +0.6
TJN Taejon 34.82 0 P P 23 47 38.7 +0.3
TJN Taejon 34.82 0 P P 23 47 38.9 +0.5
TJN Taejon 34.82 0 P P 23 47 38.7 +0.3
TJN pmax pmax
comp=Z,177nm,0.7s
PZH PanZhiHua 34.85 318 P P 23 47 41.4 +2.4
INU Inuyama 35.04 14 P P 23 47 39.8 -0.6
INU Inuyama 35.04 14 P P 23 47 40.3 -0.1
BBOO Buckleboo 35.07 167 P P 23 47 40.1 -0.5
comp=Z,162nm,1.4s
BBOO Buckleboo 35.07 167 P P 23 47 39.4 -1.2
BBOO Buckleboo 35.07 167 P P 23 47 40.3 -0.3
EIDS Eidsvold 35.34 140 P P 23 47 42.6 -0.5
comp=Z,128nm,0.9s
EIDS Eidsvold 35.34 140 P P 23 47 43.0 -0.1
NWAO Narrogin (SRO) 35.36 194 P P 23 47 43.5 +0.3
comp=Z,275nm,1.2s
NWAO Narrogin (SRO) 35.36 194 P P 23 47 43.2 0.0
NWAO Narrogin (SRO) 35.36 194 P P 23 47 43.9 +0.7
NWAO Narrogin (SRO) 35.36 194 P P 23 47 44.2 +1.0
NWAO Narrogin (SRO) 35.36 194 P P 23 47 43.2 0.0
NWAO pmax pmax
comp=Z,158nm,0.6s
JGF Kuroka 35.37 15 P P 23 47 42.1 -1.1
JGF IAmb IAmb 23 47 43.7
comp=Z,41nm,0.7s
JGF Kuroka 35.37 15 P P 23 47 43.0 -0.2
PBA Port Blair 35.52 288 P P 23 47 43.0 -1.7
PBA IAmb IAmb 23 48 08.2
comp=Z,125nm,1.4s
PBA Port Blair 35.52 288 *e*P **P 23 47 46.3 +1.6**
WHYH Whyalla 35.65 165 P P 23 47 45.6 0.0
LYN LuoYang 35.69 339 P P 23 47 47.1 +1.2
LYN pP pwP 23 48 16.7 +0.2
LYN S **S 23 53 11.1 -2.0**
LYN pmax pmax
comp=Z,210nm,0.7s
DGPR DIGLIPUR 35.74 291 *e*P **P 23 47 44.8 -1.8**
STKA Stephens Creek 35.85 159 P P 23 47 46.9 -0.5
STKA Stephens Creek 35.85 159 P P 23 47 47.4 +0.1
comp=Z,122nm,0.7s,baz=335,slow=8.7,SNR=222
STKA PP **PP 23 49 09.2 -2.3**
comp=Z,118nm,0.9s,baz=325,slow=14,SNR=9.6
comp=Z,122nm,0.7s
STKA Stephens Creek 35.85 159 P P 23 47 47.4 +0.1
TIA Tai'an 35.85 346 P P 23 47 47.8 +0.5
TIA pmax pmax
comp=Z,11nm,0.6s
AUHAR St Anne's Scho 35.87 196 P P 23 47 49.6 +2.1
KSAR Wonju Array Be 35.89 1 P P 23 47 48.2 +0.7
KSAR Wonju Array Be 35.89 1 P P 23 47 48.2 +0.7
KSRS Korea Array 35.90 1 P P 23 47 48.2 +0.6
comp=Z,59nm,0.6s,baz=178,slow=9.7,SNR=220
KSRS PcP **PcP 23 50 13.1 +1.0**
comp=Z,6.6nm,0.7s,baz=184,slow=2.9,SNR=6.5
KSRS ScP **ScP 23 53 47.0 +0.5**
comp=Z,5.1nm,0.6s,baz=183,slow=3.5,SNR=10
comp=Z,59nm,0.6s
INCN Inchon 35.92 359 P P 23 47 48.0 +0.1
INCN IAmb IAmb 23 47 49.4
comp=Z,40nm,0.8s
INCN Inchon 35.92 359 P P 23 47 48.0 +0.1
INCN pmax pmax
comp=Z,40nm,0.9s
KS19 Wonju Array Si 35.95 1 P P 23 47 48.0 -0.1
KS19 IAmb IAmb 23 47 49.1
comp=Z,62nm,0.7s
AUJCS Jamestown Cent 36.09 163 P P 23 47 49.3 -0.1
TNCH TengChong 36.20 313 ⇓*i*P **P 23 47 51.1 +0.5**
TNCH pP pwP 23 48 24.8 +4.1
TNCH S **S 23 53 21.2 -0.3**
TNCH pmax pmax
comp=Z,130nm,1.1s
TNCH LR LR
comp=Z,750nm,15.0s
TNCH LR LR
comp=Z,1µm,17.7s
TNCH LR LR
comp=Z,3µm,18.0s
HTT Hallett 36.40 163 P P 23 47 52.1 +0.1
comp=Z,20nm,1.6s
HTT Hallett 36.40 163 P P 23 47 52.1 +0.1
MAJO Matsushiro 36.48 15 P P 23 47 51.4 -1.2
MAJO IAmb IAmb 23 47 53.5
comp=Z,72nm,0.8s
MAJO Matsushiro 36.48 15 P P 23 47 51.2 -1.4
MAJO Matsushiro 36.48 15 P P 23 47 51.5 -1.2
MJAR Matsushiro Arr 36.48 15 P P 23 47 51.3 -1.4
MJAR IAmb IAmb 23 47 53.5
comp=Z,57nm,0.9s
MJAR Matsushiro Arr 36.48 15 P P 23 47 51.2 -1.4
comp=Z,35nm,0.7s,baz=184,slow=9.4,SNR=68
MJAR PcP **PcP 23 50 14.0 +0.2**
comp=Z,3.6nm,0.7s,baz=186,slow=2.6,SNR=2.0
MJAR ScP **ScP 23 53 49.3 +0.5**
comp=Z,2.0nm,0.4s,baz=200,slow=4.0,SNR=5.5
comp=Z,35nm,0.7s
MJB9 Matsu-Tunnel 36.48 15 P P 23 47 52.6 -0.1
MJB9 IAmb IAmb 23 47 54.5
comp=Z,72nm,0.9s
AULRC Lightning Ridg 36.61 148 P P 23 47 53.3 -0.5
XAN Xi'an 36.64 334 ⇓P **P 23 47 54.2 +0.1**
XAN pP pP 23 48 18.0 -3.9
XAN pmax pmax
comp=Z,260nm,0.7s
XAN pmax pmax
comp=Z,6µm,11.1s
XAN Xi'an 36.64 334 P P 23 47 54.3 +0.1
CD2 Chengdu 36.72 325 ⇓P **P 23 47 54.9 +0.1**
CD2 pmax pmax
comp=Z,170nm,1.2s
RKGY Rocky Gully 37.03 194 P P 23 47 58.7 +1.4
comp=Z,502nm,1.0s
AUALB St Joseph's Co 37.20 192 P P 23 47 59.9 +1.2
CMSA Cobar Meteorol 37.23 153 P P 23 47 59.1 +0.1
TW1H Toowoomba 1 Ha 37.45 142 P P 23 48 01.5 +0.4
HNS HongShan 37.59 344 ⇓P **P 23 48 02.8 +0.8**
HNS pmax pmax
comp=Z,25nm,0.8s
DL2 Dalian 37.67 353 P P 23 48 03.3 +0.7
DL2 pmax pmax
comp=Z,67nm,0.7s
JSD Sado 37.90 14 P P 23 48 03.6 -1.0
JSD IAmb IAmb 23 48 04.5
comp=Z,66nm,0.8s
JSD Sado 37.90 14 P P 23 48 04.6 0.0
H01W3 Cape Leeuwin H 38.05 197 P P 23 48 07.8 +2.1
baz=31,slow=6.3,SNR=11
H01W1 Cape Leeuwin H 38.06 197 P P 23 48 06.5 +0.8
baz=31,slow=6.3,SNR=19
H01W2 Cape Leeuwin H 38.07 197 P P 23 48 07.9 +2.2
baz=31,slow=6.3,SNR=7.0
AUMBR Murray Bridge 38.10 164 P P 23 48 07.1 +0.8
JMM Marumori 38.45 18 P P 23 48 08.6 -0.6
TIY Taiyuan 38.57 341 P P 23 48 11.2 +0.9
TIY pmax pmax
comp=Z,58nm,0.8s
GC1S Gold Coast 1 S 38.85 141 P P 23 48 13.2 +0.5
ARMA Armidale 39.37 145 P P 23 48 17.5 +0.4
ARMA Armidale 39.37 145 P P 23 48 18.0 +0.9
AUPHS Peel High Scho 39.47 147 P P 23 48 18.9 +1.0
LKP Lekhapani 39.49 314 IAmb IAmb 23 48 11.8
comp=Z,78nm,0.8s
BJT Baijiatuao 39.70 347 P P 23 48 20.2 +0.6
BJT IAmb IAmb 23 48 23.2
comp=Z,35nm,0.9s
BJT Baijiatuao 39.70 347 P P 23 48 19.5 -0.1
BJT Baijiatuao 39.70 347 P P 23 48 20.2 +0.6
BJT pmax pmax
comp=Z,35nm,0.9s
BJT Baijiatuao 39.70 347 P P 23 48 20.2 +0.6
BJI Beijing 39.72 347 P P 23 48 20.1 +0.4
BJI pmax pmax
comp=Z,21nm,0.9s
JORH JORHAT 40.33 312 *e*P **P 23 48 24.7 -0.3**
JORH IAmb IAmb 23 48 26.1
comp=Z,39nm,0.7s
SNY Shenyang 40.38 356 ⇑P **P 23 48 25.3 +0.2**
SNY pmax pmax
comp=Z,100nm,0.6s
LZDM Lanzhou Array 40.64 330 P P 23 48 28.2 +0.4
comp=Z,59nm,0.9s,baz=160,slow=11,SNR=51
LZDM PcP **PcP 23 50 27.4 0.0**
comp=Z,3.4nm,0.4s,baz=124,slow=4.4,SNR=1.7
LZDM ScP **ScP 23 54 05.7 +0.6**
comp=Z,4.9nm,0.5s,baz=176,slow=5.9,SNR=7.2
comp=Z,59nm,0.9s
LZH Lanzhou 40.67 331 ⇓P **P 23 48 29.6 +1.7**
LZH pP pP 23 48 55.7 -0.4
LZH sP sP 23 49 07.8 -2.7
LZH ScP **ScP 23 54 06.3 +1.3**
LZH pmax pmax
comp=Z,280nm,1.3s
LZH pmax pmax
comp=Z,740nm,4.1s
LZH LR LR
comp=Z,3µm,14.4s
LZH LR LR
comp=Z,3µm,13.7s
LZH LR LR
comp=Z,3µm,13.7s
AUMAG Moama Anglican 40.79 158 P P 23 48 28.9 +0.3
ITAN ITANAGAR 40.94 312 *e*P **P 23 48 30.2 +0.2**
ITAN IAmb IAmb 23 48 31.9
comp=Z,81nm,0.8s
ZIRO ZIRO 41.06 312 *e*P **P 23 48 31.5 +0.3**
ZIRO IAmb IAmb 23 48 34.0
comp=Z,78nm,0.8s
MSHR Mys Shultsa 41.18 5 *ce*P **P 23 48 32.5 +0.8**
MSHR pmax pmax
comp=Z,58nm,1.0s
JTM Tenmabayashi 41.23 16 P P 23 48 32.8 +0.6
JTM Tenmabayashi 41.23 16 P P 23 48 33.0 +0.9
AGT Agartala 41.23 306 *e*P **P 23 48 33.6 +1.2**
AGT IAmb IAmb 23 48 35.3
comp=Z,79nm,1.0s
TEZP TEZPUR 41.36 310 *e*P **P 23 48 33.2 -0.2**
TEZP IAmb IAmb 23 48 34.7
comp=Z,83nm,0.6s
SHL Shillong 41.53 308 P P 23 48 35.2 +0.1
SHL Shillong 41.53 308 P P 23 48 35.4 +0.3
SNR=107
SHL Shillong 41.53 308 *e*P **P 23 48 35.0 -0.1**
SHL IAmb IAmb 23 48 36.5
comp=Z,40nm,1.0s
SHL Shillong 41.53 308 P P 23 48 35.2 +0.1
SHL pmax pmax
comp=Z,361nm,0.9s
HHC Hu-ho-hao-te 41.71 342 ⇑*i*P **P 23 48 37.6 +1.4**
HHC pmax pmax
comp=Z,33nm,1.2s
BRAT Ballarat 41.78 160 P P 23 48 38.0 +1.3
AUMTS Mt Stromlo 41.90 153 P P 23 48 39.0 +1.2
CAN Canberra 41.90 153 P P 23 48 38.6 +0.8
CAN Canberra 41.90 153 P P 23 48 39.0 +1.2
CAN Canberra 41.90 153 P P 23 48 38.6 +0.8
CAN pmax pmax
comp=Z,124nm,0.9s
CAN Canberra 41.90 153 P P 23 48 39.0 +1.2
CAN ScP **ScP 23 54 11.9 +2.2**
AUSIS Research Schoo 41.91 153 P P 23 48 39.7 +1.8
BTO Baotou 41.98 341 *e*P **P 23 48 40.1 +1.7**
BTO pP **pP 23 49 06.8 +0.1**
BTO PP **PnPn 23 50 21.8 -2.9**
BTO S **S 23 54 51.2 +3.6**
BTO pmax pmax
comp=Z,30nm,0.6s
BTO pmax pmax
comp=Z,3µm,5.3s
BTO LR LR
comp=Z,3µm,16.4s
BTO LR LR
comp=Z,4µm,15.0s
BTO LR LR
comp=Z,5µm,18.3s
GUWA GUWAHATI 41.99 309 *e*P **P 23 48 38.2 -0.4**
GUWA IAmb IAmb 23 48 39.9
comp=Z,59nm,1.1s
CNB Canberra Magne 42.06 152 P P 23 48 40.8 +1.7
CN2 Changchun 42.26 358 ⇓P **P 23 48 40.2 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
TOO Toolangi 42.36 158 P P 23 48 42.4 +0.9
TOO Toolangi 42.36 158 P P 23 48 42.4 +0.9
TOO pmax pmax
comp=Z,44nm,1.5s
H11S3 WAKE ISLAND Hy 42.44 64 T T 00 32 45.1
baz=253,slow=74,SNR=7.0
H11S2 WAKE ISLAND Hy 42.45 64 T T 00 32 51.4
baz=253,slow=74,SNR=9.4
H11S1 WAKE ISLAND Hy 42.45 64 T T 00 32 44.4
baz=253,slow=74,SNR=4.3
TAWA Tawang 42.58 311 *e*P **P 23 48 44.6 +0.8**
TAWA IAmb IAmb 23 48 45.4
comp=Z,72nm,0.6s
USRK Ussuriysk Ar. 42.86 5 P P 23 48 45.8 +0.5
comp=Z,76nm,0.7s,baz=193,slow=6.7,SNR=91
comp=Z,76nm,0.7s
H11N1 WAKE ISLAND Hy 43.02 62 T T 00 33 17.9
baz=258,slow=75,SNR=9.6
H11N2 WAKE ISLAND Hy 43.03 62 T T 00 33 25.9
baz=258,slow=75,SNR=8.2
H11N3 WAKE ISLAND Hy 43.04 62 T T 00 33 16.6
baz=258,slow=75,SNR=13
SANVU Saraoutou 43.09 114 P P 23 48 47.4 -0.1
SANVU IAmb IAmb 23 48 56.4
comp=Z,64nm,0.9s
MDJ Mudanjiang 43.11 3 IAmb IAmb 23 48 49.4
comp=Z,88nm,0.8s
MDJ Mudanjiang 43.11 3 P P 23 48 47.9 +0.6
MDJ pmax pmax
comp=Z,140nm,0.8s
MDJ Mudanjiang 43.11 3 P P 23 48 47.8 +0.5
MDJ Mudanjiang 43.11 3 P P 23 48 47.9 +0.6
MDJ sP **pwP 23 49 23.6 +5.0**
MDJ PcP **PcP 23 50 35.3 +0.5**
XLT XiLinHaoTe 43.44 348 *e*P **P 23 48 50.5 +0.4**
XLT pP pwP 23 49 21.2 -0.3
XLT PP **PP 23 50 31.3 -2.5**
XLT pmax pmax
comp=Z,29nm,0.6s
BNX BinXian 44.17 0 ⇓P **P 23 48 55.6 -0.2**
BNX pmax pmax
comp=Z,41nm,0.7s
LSA Lhasa 44.23 313 P P 23 48 58.4 +1.3
LSA Lhasa 44.23 313 P P 23 48 59.0 +1.9
LSA Lhasa 44.23 313 P P 23 48 54.8 -2.3
LSA pmax pmax
comp=Z,230nm,0.7s
LSA LR LR
comp=Z,2µm,23.5s
LSA LR LR
comp=Z,2µm,23.0s
LSA LR LR
comp=Z,4µm,24.5s
LSA Lhasa 44.23 313 *i*P **P 23 48 58.6 +1.5**
SNR=56
LSA Lhasa 44.23 313 P P 23 48 58.4 +1.3
LSA pmax pmax
comp=Z,181nm,0.8s
LSA Lhasa 44.23 313 P P 23 48 58.8 +1.6
TEY Ternei 44.28 10 ⇑*e*P **P 23 48 57.2 +0.5**
TEY pmax pmax
comp=E,20nm,0.5s
TEY pmax pmax
comp=N,110nm,0.7s
TEY pmax pmax
comp=Z,210nm,0.6s
BWNR Bhubaneshwar 44.44 298 *e*P **P 23 48 58.6 +0.3**
ASAJ Asahikawa 44.74 16 P P 23 49 00.8 +0.4
ASAJ pmax pmax
comp=Z,83nm,0.9s
JKA Kamikawa-asahi 44.74 16 P P 23 49 00.8 +0.4
JKA IAmb IAmb 23 49 02.0
comp=Z,83nm,0.9s
SHBG Sahibganj 44.74 305 *e*P **P 23 49 02.3 +1.6**
SHBG IAmb IAmb 23 49 03.5
comp=Z,100nm,0.9s
ONTNC Ouen Toro 45.08 124 P P 23 49 02.9 -0.5
ONTNC IAmb IAmb 23 49 05.0
comp=Z,64nm,1.1s
GTA Gaotai 45.26 330 P P 23 49 06.6 +1.9
GTA sP sP 23 49 49.5 +1.9
GTA ScP **ScP 23 54 24.8 +1.4**
GTA S **S 23 55 37.7 +2.2**
GTA ScS **ScS 23 58 48.0 -0.5**
GTA pmax pmax
comp=Z,140nm,1.1s
YATNC Mamie plateau, 45.34 123 P P 23 49 07.1 +1.6
BOK Bokaro 45.64 303 *e*P **P 23 49 08.6 +0.7**
BOK IAmb IAmb 23 49 10.1
comp=Z,72nm,0.7s
GOMU GeErMu 45.71 323 P P 23 49 09.5 +0.8
GOMU PcP **PcP 23 50 44.7 +0.2**
GOMU pmax pmax
comp=Z,55nm,1.3s
GOMU LR LR
comp=Z,2µm,18.0s
GOMU LR LR
comp=Z,1µm,19.6s
GOMU LR LR
comp=Z,970nm,19.1s
VIS Vishakhapatnam 45.89 293 *e*P **P 23 49 10.8 +0.9**
VIS IAmb IAmb 23 49 11.9
comp=Z,58nm,0.8s
PINNC Pines Island, 46.04 124 P P 23 49 10.3 -0.6
PINNC IAmb IAmb 23 49 13.3
comp=Z,47nm,0.9s
PINNC Pines Island, 46.04 124 P P 23 49 12.8 +1.9
RAGD RAYAGADA 46.20 296 *e*P **P 23 49 13.0 +0.7**
RAGD IAmb IAmb 23 49 14.5
comp=Z,79nm,0.9s
PALK Pallekele 46.54 279 P P 23 49 15.0 -0.1
PALK IAmb IAmb 23 49 15.5
comp=Z,38nm,0.9s
PALK Pallekele 46.54 279 P P 23 49 15.1 -0.1
PALK Pallekele 46.54 279 P P 23 49 15.0 -0.1
PALK pmax pmax
comp=Z,38nm,0.9s
PALK Pallekele 46.54 279 P P 23 49 15.0 -0.1
PALK PcP **PcP 23 50 48.7 +1.2**
GAYA Gaya 46.58 303 *e*P **P 23 49 15.7 +0.5**
GAYA IAmb IAmb 23 49 16.9
comp=Z,91nm,0.8s
EVN Everest 46.65 308 P P 23 49 16.3 -0.1
YSS Yuzhno-Sakhali 47.41 15 P P 23 49 21.2 0.0
YSS IAmb IAmb 23 49 22.1
comp=Z,65nm,0.7s
YSS Yuzhno-Sakhali 47.41 15 P P 23 49 21.4 +0.2
YSS Yuzhno-Sakhali 47.41 15 *e*P **P 23 49 21.2 0.0**
YSS pmax pmax
comp=Z,40nm,0.9s
TAU Tasmania Unive 47.73 160 P P 23 49 23.1 -0.6
TAU IAmb IAmb 23 49 25.1
comp=Z,92nm,1.3s
TAU Tasmania Unive 47.73 160 P P 23 49 23.2 -0.6

TAU pmax pmax
comp=Z,93nm,1.3s
VJD Vijayawada 48.06 291 IAmb IAmb 23 49 35.2
comp=Z,74nm,1.3s
HIA Hailar 48.11 354 P **P** **23 49 26.7 +0.1**
HIA Hailar 48.11 354 P **P** **23 49 27.4 +0.8**
HIA Hailar 48.11 354 *i* P **P** **23 49 26.4 -0.2**
HIA pmax pmax
comp=Z,15nm,1.1s
BLSP Bilaspur 48.27 299 *e*P **P** **23 49 28.3 -0.1**
BLSP IAmb IAmb 23 49 29.7
comp=Z,69nm,1.0s
HILR Hailar Array B 48.39 354 P **P** **23 49 29.5 +0.7**
comp=Z,15nm,0.5s,baz=171,slow=9.9,SNR=26
HILR PcP **PcP** **23 50 54.6 +1.3**
comp=Z,17nm,0.5s,baz=171,slow=3.1,SNR=9.4
HILR ScP **ScP** **23 54 36.7 +0.5**
comp=Z,1.3nm,0.5s,baz=235,slow=5.1,SNR=2.2
comp=Z,15nm,0.5s
HEH HeiHe 48.69 0 *e*P **P** **23 49 29.9 -1.1**
HEH ScP **ScP** **23 54 37.0 -0.4**
HEH S **S** **23 56 20.4 -3.1**
HEH ScS **ScS** **23 59 08.8 -1.5**
HEH pmax pmax
comp=Z,77nm,0.8s
UGL Uglegorsk 49.23 13 *e*P **P** **23 49 35.6 +0.4**
UGL pmax pmax
comp=Z,200nm,1.0s
ULN Ulaanbaatar 49.43 342 P **P** **23 49 37.4 +0.5**
ULN IAmb IAmb 23 49 41.0
comp=Z,70nm,1.0s
ULN Ulaanbaatar 49.43 342 P **P** **23 49 38.0 +1.1**
ULN Ulaanbaatar 49.43 342*ce*P **P** **23 49 37.2 +0.3**
ULN pmax pmax
comp=Z,69nm,1.0s
ULN Ulaanbaatar 49.43 342 P **P** **23 49 37.9 +1.0**
SALM Salem 49.50 284 *e*P **P** **23 49 38.3 +0.6**
SALM IAmb IAmb 23 49 39.7
comp=Z,64nm,1.0s
SONM Songino Array 49.60 342 P **P** **23 49 38.1 -0.1**
SONM IAmb IAmb 23 49 42.0
comp=Z,43nm,0.8s
SONM Songino Array 49.60 342 P **P** **23 49 38.9 +0.7**
comp=Z,42nm,0.8s,baz=158,slow=7.5,SNR=52
SONM ScP **ScP** **23 54 40.9 -0.6**
comp=Z,2.1nm,0.6s,baz=158,slow=5.7,SNR=2.9
comp=Z,42nm,0.8s
GRNR Gornyy 49.84 8⇑ *i*P **P** **23 49 40.4 +0.6**
GRNR pmax pmax
comp=Z,50nm,1.0s
KOD Kodaikanal 50.03 282 *e*P **P** **23 49 41.9 -0.2**
KOD IAmb IAmb 23 49 43.3
comp=Z,87nm,0.8s
HYBB Hyderabad (bro 50.22 292 *e*P **P** **23 49 43.4 +0.1**
HYBB *es*P **sP** **23 50 21.0 -5.9**
HYBB *e*PcP **PcP** **23 51 01.2 +0.6**
HYBB *e*S **S** **23 56 48.2 +2.1**
TRD Trivandrum 50.35 280 *e*P **P** **23 49 44.1 -0.1**
TRD IAmb IAmb 23 49 45.4
comp=Z,93nm,0.8s
CIT Chita 51.71 349 *e*P **P** **23 49 54.0 +0.2**
CIT *e* 23 50 24.6
CIT *e* 23 51 06.8
CIT pmax pmax
comp=Z,79nm,1.5s
ZEA Zeya 52.18 0 *e*P **P** **23 49 56.9 -0.3**
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,20nm,0.8s
AKL Akola 52.42 295 *e*P **P** **23 50 00.0 +0.4**
AKL IAmb IAmb 23 50 01.2
comp=Z,79nm,0.8s
JHNI Jhansi 52.47 301 *e*P **P** **23 49 58.6 -1.3**
JHNI IAmb IAmb 23 49 59.3
comp=Z,96nm,0.8s
LGTI Lohaghat 52.50 307 *e*P **P** **23 49 60.0 0.0**
LGTI IAmb IAmb 23 50 01.7
comp=Z,84nm,0.6s
BHPL Bhopal 52.75 298 *e*P **P** **23 50 02.2 +0.2**
BHPL IAmb IAmb 23 50 03.5
comp=Z,68nm,0.8s
ZAK Zakamensk 52.82 341 *e*P **P** **23 50 02.4 +0.2**
ZAK pmax pmax
comp=Z,26nm,1.4s
NRDN NARMADA NAGAR 52.83 298 *e*P **P** **23 50 06.4 +3.8**
NRDN IAmb IAmb 23 50 07.7
comp=Z,57nm,0.9s
FUNA Funafuti 52.91 102 P **P** **23 50 03.0 -0.3**
FUNA Funafuti 52.91 102 P **P** **23 50 04.5 +1.2**
MNGI Mangalore 52.95 285 *e*P **P** **23 50 03.0 -0.5**
GUNA GUNA 53.25 300 *e*P **P** **23 50 05.7 +0.1**
GUNA IAmb IAmb 23 50 06.8
comp=Z,65nm,0.6s
JOSI Joshimath 53.49 308 *e*P **P** **23 50 07.6 +0.1**
JOSI IAmb IAmb 23 50 09.4
comp=Z,72nm,1.3s
MSVF Nonsavu 53.69 113 P **P** **23 50 08.8 -0.2**
MSVF IAmb IAmb 23 50 11.7
comp=Z,42nm,1.1s
MSVF Nonsavu 53.69 113 P **P** **23 50 11.0 +2.0**
MSVF Nonsavu 53.69 113 P **P** **23 50 08.8 -0.2**
MSVF pmax pmax
comp=Z,42nm,1.1s
MSVF Nonsavu 53.69 113 P **P** **23 50 10.7 +1.7**
TLY Talaya 53.84 342 P **P** **23 50 10.3 +0.9**
TLY IAmb IAmb 23 50 14.6
comp=Z,48nm,0.9s
TLY Talaya 53.84 342 P **P** **23 50 13.8 +4.4**
TLY Talaya 53.84 342 *i* P **P** **23 50 09.3 -0.1**
TLY pmax pmax
comp=Z,45nm,0.9s
TLY Talaya 53.84 342 P **P** **23 50 13.8 +4.4**
HMDM Hanimaadhoo 53.95 277 P **P** **23 50 09.7 -1.2**
HMDM Hanimaadhoo 53.95 277 P **P** **23 50 11.3 +0.4**
IRK Irkutsk 54.14 343 *e*P **P** 23 50 05.7 -5.9
IRK pmax pmax
comp=Z,89nm,2.2s
KAD Karad 54.28 290 *e*P **P** **23 50 12.6 -0.7**
KAD IAmb IAmb 23 50 13.0
comp=Z,84nm,0.8s
JMIU JAMIA UNIVERSI 54.57 305 *e*P **P** **23 50 14.8 -0.3**
DDI Dehra Dun 54.59 307 *e*P **P** **23 50 15.9 +0.5**
MOY Mondy 54.67 340 *e*P **P** **23 50 17.3 +1.7**
MOY pmax pmax
comp=Z,97nm,1.6s
NDI New Delhi 54.67 305 *e*P **P** **23 50 14.9 -1.0**
AYAN Aya Nagar 54.68 304 *i* P **P** **23 50 15.1 -0.8**
AYAN IAmb IAmb 23 50 17.4
comp=Z,57nm,1.1s
NPLP NPLP New Delhi 54.70 305 *e*P **P** **23 50 15.6 -0.5**
NPLP IAmb IAmb 23 50 16.5
comp=Z,56nm,0.7s
WMQ Urumqi 54.81 326 *e*P **P** **23 50 18.2 +1.5**
WMQ ScP **ScP** **23 55 05.6 +1.4**
WMQ S **S** **23 57 49.3 +1.4**
WMQ pmax pmax
comp=Z,120nm,0.9s
WMQ pmax pmax
comp=Z,490nm,3.7s
WMQ LR LR
comp=Z,3μm,19.1s
WMQ LR LR
comp=Z,3μm,16.7s
WMQ LR LR
comp=Z,2μm,23.3s
POO Poona 54.83 292 *e*P **P** **23 50 16.5 -0.8**
POO IAmb IAmb 23 50 18.1
comp=Z,73nm,1.1s
SKR Severo-Kuril's 54.95 22*ce*P **P** **23 50 19.1 +1.7**
KUDL Kundal 55.09 304 *e*P **P** **23 50 18.5 -0.4**
KUDL IAmb IAmb 23 50 19.8
comp=Z,54nm,0.8s
H08S2 Diego Garcia H 55.13 260 P **P** **23 50 20.8 +1.7**
baz=46,slow=10.0,SNR=13
H08S3 Diego Garcia H 55.14 260 P **P** **23 50 20.0 +0.8**
baz=46,slow=10.0,SNR=8.7
DGAR Diego Garcia 55.15 260 P **P** **23 50 19.4 -0.1**
DGAR Diego Garcia 55.15 260 P **P** **23 50 20.7 +1.2**
DGAR Diego Garcia 55.15 260*ce*P **P** **23 50 19.1 -0.4**
DGAR pmax pmax
comp=Z,1μm,2.5s
H08S1 Diego Carcia H 55.15 260 P **P** **23 50 20.5 +1.3**
baz=46,slow=10.0,SNR=12
RTK Rohtak 55.46 305 *e*P **P** **23 50 21.4 0.0**
RTK IAmb IAmb 23 50 22.7
comp=Z,60nm,1.1s
SMLA Simla 55.60 307 *e*P **P** **23 50 23.6 +1.1**
SMLA IAmb IAmb 23 50 25.1
comp=Z,97nm,1.1s
BHK Bhakra 56.31 307 *e*P **P** **23 50 28.8 +1.2**
BHK IAmb IAmb 23 50 30.1
comp=Z,71nm,0.9s
UDPR Udaipur 56.39 299 *e*P **P** **23 50 29.1 +0.9**
UDPR IAmb IAmb 23 50 30.4
comp=Z,71nm,0.8s
OUZ Omahuta 56.70 135 P **P** **23 50 31.2 +1.0**
DHRM DHARAMSHALA 56.71 308 *e*P **P** **23 50 31.3 +0.6**
DHRM IAmb IAmb 23 50 32.4
comp=Z,66nm,0.4s
ALCI Alchi Leh 56.80 311 *e*P **P** **23 50 32.0 +0.6**
ALCI IAmb IAmb 23 50 33.2
comp=Z,83nm,0.7s
TLWR Talawar 56.87 308 *e*P **P** **23 50 32.1 +0.5**
TLWR IAmb IAmb 23 50 33.4
comp=Z,79nm,0.6s
TSSA Tissa 57.05 309 *e*P **P** **23 50 33.3 +0.3**
TSSA IAmb IAmb 23 50 34.5
comp=Z,125nm,0.7s
BOD Bodaibo 57.21 352 *e*P **P** **23 50 33.2 -0.2**
BOD pmax pmax
comp=Z,59nm,1.3s
PEA0B Petropavlovsk- 57.48 21 P **P** **23 50 35.0 -0.4**
PEA0B IAmb IAmb 23 50 37.0
comp=Z,57nm,0.9s
PEA0B Petropavlovsk- 57.48 21*ce*P **P** **23 50 35.9 +0.5**
PETK Petropavlovsk- 57.48 21 P **P** **23 50 35.3 -0.1**
comp=Z,63nm,0.9s,baz=191,slow=4.8,SNR=49
comp=Z,63nm,0.9s
PET Petropavlovsk 57.76 22 P **P** **23 50 37.1 -0.2**
PET Petropavlovsk 57.76 22 P **P** **23 50 38.2 +0.9**
PET Petropavlovsk 57.76 22*ce*P **P** **23 50 38.1 +0.8**
PET pmax pmax
comp=Z,153nm,2.5s
JMU Jammu 57.98 308 *e*P **P** **23 50 41.1 +1.9**
DCZ Deep Cove 58.61 148 P **P** **23 50 42.5 -0.8**
DCZ IAmb IAmb 23 50 47.7
comp=Z,35nm,1.1s
JCZ Jackson Bay 58.61 146 P **P** **23 50 44.5 +1.0**
JCZ Jackson Bay 58.61 146 P **P** **23 50 44.7 +1.2**
ZSN Zaisan 58.63 328⇓ *i*P **P** **23 50 44.2 +0.6**
comp=Z,23nm,1.1s
ZSN *e*S **S** **23 58 39.6 +1.7**
ZSN Zaisan 58.63 328*d i*P **P** **23 50 44.1 +0.6**
ZSN *e*S **S** **23 58 39.6 +1.7**
ZSN pmax pmax
comp=Z,23nm,1.1s
DGZ Jazzator, Alta 58.77 331 *i* P **P** **23 50 44.3 -0.4**
DGZ pmax pmax
comp=Z,70nm,1.4s
FOZ Fox Glacier 58.86 145 P **P** **23 50 44.8 -0.3**
QRZ Quartz Range 58.93 141 P **P** **23 50 46.5 +0.8**
DSZ Denniston Nort 58.99 142 P **P** **23 50 47.4 +1.2**
DSZ PP **PP** **23 52 58.1 0.0**
MLZ Mavora Lakes 59.06 147 P **P** **23 50 46.5 0.0**
WVZ Waitaha Valley 59.12 144 P **P** **23 50 46.4 -0.5**
TOZ Tahuroa Road 59.27 136 P **P** **23 50 48.8 +0.7**
TOZ IAmb IAmb 23 50 49.6
comp=Z,32nm,0.9s
WHZ Wether Hill Ro 59.31 148 P **P** **23 50 47.5 -0.7**
WHZ IAmb IAmb 23 50 48.2
comp=Z,27nm,1.0s
TKNZ Takaka Hill 59.31 141 P **P** **23 50 48.1 -0.3**
INZ Inchbonnie 59.34 143 P **P** **23 50 47.0 -1.4**
SHLS Shalkode 59.34 321 *e*P **P** **23 50 47.2 -1.5**
SHLS *e*S **S** **23 58 45.1 -2.3**
SHLS Shalkode 59.34 321 *e*P **P** **23 50 47.2 -1.5**
SHLS *e*S **S** **23 58 45.1 -2.3**
MRNZ Matariki Terra 59.39 141 P **P** **23 50 48.5 -0.4**
PDGK Podgornoye 59.41 321 *i* P **P** **23 50 49.5 +0.3**
PDGK pmax pmax
comp=Z,85nm,0.7s
JASL Jaisalmer 59.45 301 *e*P **P** **23 50 49.8 +0.2**
JASL IAmb IAmb 23 50 51.3
comp=Z,69nm,0.9s
LBZ Lake Benmore 59.59 145 P **P** **23 50 48.9 -1.3**
LBZ Lake Benmore 59.59 145 P **P** **23 50 50.4 +0.2**
MK31 Makanchi Array 59.65 326*ce*P **P** **23 50 51.2 +0.6**
MKAR Makanchi Array 59.65 326 P **P** **23 50 51.0 +0.4**
MKAR Makanchi Array 59.65 326 P **P** **23 50 51.5 +0.9**
comp=Z,97nm,0.7s,baz=122,slow=7.8,SNR=674
MKAR ScP **ScP** **23 55 24.8 -0.6**
comp=Z,12nm,0.7s,baz=121,slow=5.1,SNR=10
MKAR S **S** **23 58 51.8 +0.8**
comp=Z,2.8nm,1.0s,baz=152,slow=11,SNR=5.2
comp=Z,97nm,0.7s
MKAR Makanchi Array 59.65 326*ce*P **P** **23 50 51.5 +0.9**
MKAR pmax pmax
comp=Z,98nm,0.7s
BHUJ Bhuj 59.66 296 *e*P **P** **23 50 51.7 +0.6**
BHUJ IAmb IAmb 23 50 52.9
comp=Z,84nm,0.8s
PRZ Przheval'sk 59.68 320 P **P** **23 50 52.0 +0.9**
PRZ Przheval'sk 59.68 320 P **P** **23 50 52.0 +0.9**
PRZ pmax pmax
comp=Z,122nm,0.6s
THZ Tophouse 59.68 142 P **P** **23 50 49.7 -1.3**
THZ IAmb IAmb 23 50 51.5
comp=Z,38nm,0.7s
THZ Tophouse 59.68 142 P **P** **23 50 50.8 -0.2**
RPZ Rata Peaks 59.69 144 P **P** **23 50 50.2 -0.6**
RPZ Rata Peaks 59.69 144 P **P** **23 50 50.9 0.0**
TARG Taragay, Kyrgy 59.70 319 P **P** **23 50 52.1 +0.6**
TARG Taragay, Kyrgy 59.70 319 P **P** **23 50 52.1 +0.6**
TARG pmax pmax
comp=Z,115nm,1.3s
MAKZ Makanchi 59.83 326 P **P** **23 50 52.2 +0.4**
MAKZ Makanchi 59.83 326 P **P** **23 50 52.2 +0.4**
MAKZ pmax pmax
comp=Z,178nm,1.2s
MAKZ Makanchi 59.83 326 P **P** **23 50 52.6 +0.8**
LTZ Lake Taylor 59.87 143 P **P** **23 50 52.3 +0.2**
KSH Kashi 59.92 316 P **P** **23 50 55.0 +2.3**
KSH pmax pmax
comp=Z,67nm,0.8s
KSH LR LR
comp=Z,3μm,21.0s
KSH LR LR
comp=Z,4μm,19.6s
KSH LR LR
comp=Z,7μm,20.3s
SATY Saty 59.96 321 *e*P **P** **23 50 53.1 +0.2**
SATY *e*S **S** **23 58 56.3 +1.0**
SATY Saty 59.96 321 *e*P **P** **23 50 53.1 +0.2**
SATY *e*S **S** **23 58 56.3 +1.0**
OXZ Oxford 60.04 143 P **P** **23 50 52.4 -0.9**
OXZ IAmb IAmb 23 50 54.7
comp=Z,26nm,0.7s
OXZ Oxford 60.04 143 P **P** **23 50 53.1 -0.2**
TUWZ Tuamarina 60.15 141 P **P** **23 50 53.1 -0.9**
TCW Tory Channel 60.24 140 P **P** **23 50 53.4 -1.3**
ODZ Otahua Downs 60.25 146 P **P** **23 50 54.7 0.0**
BSWZ Blackbirch Sta 60.26 141 P **P** **23 50 54.6 -0.2**
KDJ Kajisay 60.30 319 P **P** **23 50 56.2 +0.9**
KDJ Kajisay 60.30 319 P **P** **23 50 56.2 +0.9**
KDJ pmax pmax
comp=Z,101nm,0.8s
AMCZ Amberley 60.32 143 P **P** **23 50 55.1 0.0**
GVZ Greta Valley S 60.43 143 P **P** **23 50 56.0 0.0**
KHZ Kahutara 60.44 142 P **P** **23 50 55.5 -0.5**
KHZ IAmb IAmb 23 50 56.1
comp=Z,37nm,0.7s
KHZ Kahutara 60.44 142 P **P** **23 50 55.3 -0.6**
CMWZ Cape Campbell 60.49 141 P **P** **23 50 55.6 -0.8**
YAK Yakutsk 60.53 1 P **P** **23 50 56.1 0.0**
YAK Yakutsk 60.53 1 *e*P **P** **23 50 56.0 -0.2**
YAK *e**PP **pP** **23 51 25.0 -1.4**
YAK *e* 23 51 38.8
YAK *e* 23 53 11.0
YAK *e*PPP PPP 23 54 35.4
YAK *e*S **S** **23 59 02.7 +1.1**
YAK *e* 00 00 33.9
YAK *e*SS **SS** **00 03 03.3 +1.3**
YAK pmax pmax
comp=Z,164nm,1.3s
YAK pmax pmax
comp=N,34nm,1.3s
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=Z,8μm,30.5s
YAK pmax pmax
comp=N,1μm,15.4s
YAK pmax pmax
comp=E,4μm,21.9s
YAK smax smax
comp=E,3μm,18.6s
YAK smax smax
comp=N,2μm,20.1s
YAK Yakutsk 60.53 1 P **P** **23 50 56.6 +0.4**
MQZ McQueen's Vall 60.62 144 P **P** **23 50 57.2 0.0**
URZ Urewera 60.64 136 P **P** **23 50 56.1 -1.3**
BKZ Black Stump Fm 60.66 137 P **P** **23 50 57.0 -0.6**
BKZ IAmb IAmb 23 50 58.0
comp=Z,30nm,0.9s
BKZ Black Stump Fm 60.66 137 P **P** **23 50 57.1 -0.6**
BKZ Black Stump Fm 60.66 137 P **P** **23 50 57.3 -0.3**
RTZ Ruatahuna 60.72 137 P **P** **23 50 56.6 -1.5**
RTZ Ruatahuna 60.72 137 P **P** **23 50 57.8 -0.3**
BHW Baring Head 60.73 140 P **P** **23 50 56.4 -1.6**
BHW IAmb IAmb 23 50 57.1
comp=Z,42nm,0.7s
MRZ Mangatainoka R 60.80 139 P **P** **23 50 57.1 -1.4**
MRZ Mangatainoka R 60.80 139 P **P** **23 50 57.3 -1.2**
HAZ Te Kaha 60.88 135 P **P** **23 50 59.0 0.0**
MDOK Medeo 60.88 320 *e*P **P** **23 50 59.6 +0.3**
MDOK *e*S **S** **23 59 08.3 +1.2**
MDOK Medeo 60.88 320 *e*P **P** **23 50 59.5 +0.3**
MDOK *e*S **S** **23 59 08.3 +1.2**
TNSS Tian-Shan 60.88 320 *e*P **P** **23 50 59.5 -0.1**
TNSS Tian-Shan 60.88 320 *e*P **P** **23 50 59.4 -0.1**
MA2 Magadan 60.89 14 P **P** **23 50 59.1 +0.3**
MA2 Magadan 60.89 14 P **P** **23 51 00.0 +1.2**
comp=Z,154nm,0.9s
MA2 Magadan 60.89 14*ce*P **P** **23 50 59.4 +0.6**
MA2 pmax pmax
comp=Z,128nm,1.0s
ARXS Arharly 60.90 321 *e*P **P** **23 50 59.2 0.0**
TDK Taldyqorghan 60.94 322 *e*P **P** **23 50 59.9 +0.4**
TDK Taldyqorghan 60.94 322 *e*P **P** **23 50 59.8 +0.4**
ULHL Ulahol 60.97 319 P **P** **23 51 01.3 +1.4**
SNR=8.0
MWZ Matawai 60.97 136 P **P** **23 50 59.0 -0.8**
MSWZ Moikau Station 60.98 140 P **P** **23 50 58.9 -0.8**
AAA Alma-Ata 60.98 320 *e*P **P** **23 51 00.1 +0.3**
AAA Alma-Ata 60.98 320 *e*P **P** **23 51 00.1 +0.3**
PLWZ Palliser 61.06 140 P **P** **23 50 58.5 -1.8**
BFZ Birch Farm 61.24 139 P **P** **23 51 01.1 -0.5**
CHKK Chushkaly 61.25 321 *e*P **P** **23 51 01.1 -0.4**
CHKK Chushkaly 61.25 321 *e*P **P** **23 51 01.9 +0.4**
BOOM Boomskoye usch 61.28 319 P **P** **23 51 02.4 +0.5**
BOOM Boomskoye usch 61.28 319 P **P** **23 51 02.4 +0.5**
BOOM pmax pmax
comp=Z,136nm,1.4s
PUZ Puketiti 61.35 135 P **P** **23 51 02.0 -0.3**
KUU Kurty 61.68 321 *e*P **P** **23 51 04.7 +0.3**
KUU Kurty 61.68 321 *e*P **P** **23 51 04.7 +0.3**
TKM2 Tokmak 2 61.70 319 P **P** **23 51 06.0 +1.2**
SNR=91
KBK Karagaybulak 62.01 319 P **P** **23 51 08.3 +1.5**
SNR=32
UCH Uchtor 62.10 318 P **P** **23 51 09.5 +1.7**
SNR=84
FRU1 Bishkek 62.28 319 P **P** **23 51 09.0 +0.5**
FRU1 IAmb IAmb 23 51 10.2
comp=Z,30nm,0.5s
FRU1 Bishkek 62.28 319 P **P** **23 51 09.0 +0.5**
FRU1 pmax pmax
comp=Z,30nm,0.5s
CHMS Chumysh 62.29 319 P **P** **23 51 09.4 +0.9**
SNR=14
AAK Ala-Archa 62.30 319 P **P** **23 51 09.1 +0.4**
AAK IAmb IAmb 23 51 12.8
comp=Z,40nm,1.0s
AAK Ala-Archa 62.30 319 P **P** **23 51 10.1 +1.4**
comp=Z,26nm,0.6s,baz=118,slow=5.5,SNR=37
AAK ScP **ScP** **23 55 37.6 +0.2**
comp=Z,3.5nm,0.7s,baz=287,slow=19,SNR=2.7
comp=Z,26nm,0.6s
AAK Ala-Archa 62.30 319 P **P** **23 51 10.2 +1.4**
AAK Ala-Archa 62.30 319 P **P** **23 51 10.2 +1.4**
SNR=23
AAK Ala-Archa 62.30 319 *i* P **P** **23 51 09.9 +1.2**
SNR=23
AAK Ala-Archa 62.30 319*ce*P **P** **23 51 09.9 +1.2**
AAK pmax pmax
comp=Z,46nm,1.0s
AAK Ala-Archa 62.30 319 P **P** **23 51 10.1 +1.4**
SGDS Sogindy 62.57 319⇓ *i*P **P** **23 51 10.9 +0.5**
comp=Z,21nm,1.1s
USP Ospenovka 62.57 319 P **P** **23 51 11.5 +1.1**
SNR=110
EKS2 Erkin-Say 62.78 318 P **P** **23 51 13.5 +1.5**
SNR=6.9
ZAA0 Zalesovo Array 62.80 333 P **P** **23 51 10.8 -0.8**
ZAA0 IAmb IAmb 23 51 15.4
comp=Z,56nm,1.1s
ZALV Zalesovo Beam 62.80 333 P **P** **23 51 10.9 -0.8**
ZALV Zalesovo Beam 62.80 333 P **P** **23 51 11.1 -0.6**
comp=Z,19nm,0.6s,baz=120,slow=6.0,SNR=50
ZALV PP **PP** **23 53 31.3 0.0**
comp=Z,12nm,1.0s,baz=139,slow=9.4,SNR=2.6
ZALV S **S** **23 59 21.9 -8.7**
comp=Z,1.9nm,0.8s,baz=138,slow=15,SNR=5.2
comp=Z,19nm,0.6s
ZALV Zalesovo Beam 62.80 333 *i* P **P** **23 51 11.1 -0.6**
ZALV pmax pmax
comp=Z,18nm,0.6s
DRK Karamyk 62.84 314 P **P** **23 51 13.7 +1.1**
DRK Karamyk 62.84 314 P **P** **23 51 13.7 +1.1**
DRK pmax pmax
comp=Z,106nm,0.7s
KBL Kabul 63.19 308 P **P** **23 51 15.3 +0.4**
KBL Kabul 63.19 308 P **P** **23 51 15.8 +0.9**
SNR=74
KBL Kabul 63.19 308 P **P** **23 51 15.3 +0.4**
KBL pmax pmax
comp=Z,126nm,0.7s
GAR Garm 63.73 313 P **P** **23 51 18.9 +0.6**
KURBB Kurchatov Arra 63.87 328 P **P** **23 51 19.0 +0.3**
comp=Z,93nm,0.7s,baz=125,slow=6.1,SNR=423
KURBB S **S** **23 59 39.1 -4.8**
comp=Z,1.3nm,1.0s,baz=134,slow=11,SNR=7.7
comp=Z,93nm,0.7s
KURK Kurchatov 63.87 328 P **P** **23 51 19.1 +0.4**
KURK Kurchatov 63.87 328 P **P** **23 51 19.5 +0.7**
KURK Kurchatov 63.87 328*ce*P **P** **23 51 18.4 -0.3**
KURK pmax pmax
comp=Z,103nm,0.9s
KURK Kurchatov 63.87 328 P **P** **23 51 19.3 +0.5**
SEY Seymchan 64.23 13*ce*P **P** **23 51 22.2 +1.3**
SEY pmax pmax
comp=Z,132nm,1.7s
SMY Shemya 64.33 30 P **P** **23 51 22.3 +0.6**
SMY Shemya 64.33 30 P **P** **23 51 22.3 +0.6**
SMY pmax pmax
comp=Z,246nm,1.5s
CHGR Chuyangaron 64.46 313 P **P** **23 51 22.9 0.0**
CHGR Chuyangaron 64.46 313 P **P** **23 51 23.0 0.0**
CHGR pmax pmax
comp=Z,289nm,1.1s
DZA Taraz 64.52 318 *e*P **P** **23 51 23.7 +0.5**
comp=Z,33nm,0.8s
DZA Taraz 64.52 318 *e*P **P** **23 51 23.7 +0.5**
DZA pmax pmax
comp=Z,33nm,0.8s
IUG luzhnay 65.11 317 *e*P **P** **23 51 27.4 +0.2**
IUG *e*S **S** **00 00 00.7 +0.9**
IUG luzhnay 65.11 317 *e*P **P** **23 51 27.3 +0.2**
IUG *e*S **S** **00 00 00.6 +0.9**
KKAR Karatay Array 65.15 318 P **P** **23 51 27.7 +0.4**
KKAR Karatay Array 65.15 318 P **P** **23 51 27.7 +0.4**
CHM Chimkent 65.47 317 *e*P **P** **23 51 29.9 +0.5**
comp=Z,34nm,0.9s
CHM Chimkent 65.47 317 *e*P **P** **23 51 29.8 +0.5**
CHM pmax pmax
comp=Z,34nm,0.9s
BRLS Borolday 65.58 317⇓ *i*P **P** **23 51 30.7 +0.6**
comp=Z,16nm,0.5s
BRLS Borolday 65.58 317*d i*P **P** **23 51 30.6 +0.6**
BRLS pmax pmax
comp=Z,16nm,0.5s

AMKA Amchitka 66.29 33 P P 23 51 34.5 +0.2
BRZS Berezniki 66.77 325 *e*P P 23 51 38.0 +0.5
BRZS Berezniki 66.77 325 *e*P P 23 51 38.0 +0.5
NGCH Negor - Chabah 67.69 297 P P 23 51 44.9 +1.2
KIWB Kanaga Island 68.45 33 P P 23 51 48.3 +0.3
DRV Dumont d'Urvil 68.53 174 P P 23 51 48.1 0.0
CASY Casey 68.54 187 P P 23 51 49.0 +0.8
CASY IAmb IAmb 23 51 50.0
comp=Z,52nm,0.8s
CASY Casey 68.54 187 P P 23 51 49.1 +0.8
HRA Herat 68.55 306 IAmb IAmb 23 51 50.9
comp=Z,54nm,1.1s
ADK Adak 68.72 34 P P 23 51 50.2 +0.5
ADK IAmb IAmb 23 51 50.7
comp=Z,57nm,0.8s
ADK Adak 68.72 34 P P 23 51 50.2 +0.5
ADK pmax pmax
comp=Z,57nm,0.9s
JLN Jalan Bani Buh 68.79 293 P P 23 51 51.1 +0.4
GSTR Great Sitkin T 69.17 34 P P 23 51 51.9 -0.6
WBK Wadi Bani Khal 69.25 294 P P 23 51 54.5 +0.9
BVAR Borovoye Array 69.44 327 P P 23 51 54.2 +0.1
comp=Z,73nm,0.9s,baz=125,slow=7.4,SNR=168
BVAR S S 00 00 48.2 -2.8
comp=Z,7.2nm,1.1s,baz=132,slow=13,SNR=11
comp=Z,73nm,0.9s
BORK Borovoye 69.49 327 *ce*P P 23 51 54.4 0.0
BORK pmax pmax
comp=Z,141nm,1.0s
BORK Borovoye 69.49 327 P P 23 51 54.7 +0.3
WSAR Wadi Sarin 69.64 294 P P 23 51 56.5 +0.6
MHTO MHTO 69.98 292 P P 23 51 58.7 +0.7
SNR=20
JMDO Jabal Madar 70.02 293 P P 23 51 58.9 +0.7
SNR=7.7
SMDO Samad 70.15 294 P P 23 51 59.4 +0.3
TIXI Tiksi 70.17 1 P P 23 51 57.3 -0.8
TIXI Tiksi 70.17 1 P P 23 51 57.4 -0.7
TIXI Tiksi 70.17 1 P P 23 51 57.6 -0.5
ATKA Atka Island 70.25 34 P P 23 51 59.1 +0.1
DQM DQM 70.27 291 P P 23 52 00.9 +1.1
SNR=5.9
HOQ Hoqain 70.89 294 P P 23 52 04.4 +0.9
SNR=6.5
ARQ Araqi 71.58 294 P P 23 52 08.6 +0.9
SNR=15
SOHO SOHO 71.66 295 P P 23 52 08.7 +0.6
SOHO SOHO 71.66 295 *i*P P 23 52 07.7 -0.4
SNR=11
BILL Bilibino 71.73 15 P P 23 52 07.6 0.0
BILL Bilibino 71.73 15 *ce*P P 23 52 08.6 +0.9
BILL pmax pmax
comp=Z,8.0nm,0.6s
BILL Bilibino 71.73 15 P P 23 52 07.8 +0.2
MSEY Mahe Island 71.74 265 P P 23 52 08.9 0.0
MSEY Mahe Island 71.74 265 P P 23 52 09.6 +0.7
MSEY Mahe Island 71.74 265 P P 23 52 08.8 0.0
MSEY Mahe Island 71.74 265 P P 23 52 08.9 0.0
MSEY pmax pmax
comp=Z,19nm,1.1s
SHAO Shalim 71.90 288 P P 23 52 10.4 +0.7
SNR=6.3
SHAO Shalim 71.90 288 *i*P P 23 52 09.9 +0.2
SNR=21
MDH Madha 72.02 296 P P 23 52 09.8 -0.4
MDH Madha 72.02 296 P P 23 52 09.5 -0.8
UOSS Minazif 72.06 296 P P 23 52 10.4 -0.1
UOSS IAmb IAmb 23 52 12.3
comp=Z,30nm,0.7s
UOSS Minazif 72.06 296 P P 23 52 10.7 +0.2
UOSS Minazif 72.06 296 *i*P P 23 52 10.3 -0.2
SNR=8.3
UOSS Minazif 72.06 296 P P 23 52 10.5 -0.1
BANOM Banah 72.09 297 P P 23 52 11.4 +0.6
BANOM Banah 72.09 297 *i*P P 23 52 10.7 -0.1
SNR=12
HATD Hatta, Dubai 72.11 296 P P 23 52 11.8 +1.0
SNR=8.5
HATD Hatta, Dubai 72.11 296 *i*P P 23 52 11.2 +0.3
SNR=17
MSFE Esma-Masafi 72.15 296 *i*P P 23 52 11.8 +0.7
SNR=17
MASF Masafi 72.15 296 P P 23 52 12.2 +1.1
SNR=6.5
ASHO Ashiyiah 72.16 295 P P 23 52 12.1 +0.9
SNR=5.1
ASHO Ashiyiah 72.16 295 *i*P P 23 52 11.4 +0.2
SNR=23
SHME Shamm 72.25 297 P P 23 52 12.6 +0.9
SNR=6.2
SHME Shamm 72.25 297 *i*P P 23 52 11.7 0.0
SNR=17
ALNE Al Ain 72.36 295 P P 23 52 13.5 +1.1
SNR=54
ALNE Al Ain 72.36 295 *i*P P 23 52 13.4 +1.0
SNR=21
DMTO DMTO 72.52 288 P P 23 52 13.8 +0.4
NAZ Nazwa, Dubai 72.55 296 P P 23 52 14.0 +0.6
SNR=10
NAZ Nazwa, Dubai 72.55 296 *i*P P 23 52 13.8 +0.3
SNR=19
FAQ Al Faqa, Dubai 72.58 295 P P 23 52 14.2 +0.6
SNR=10
FAQ Al Faqa, Dubai 72.58 295 *i*P P 23 52 14.1 +0.5
SNR=7.7
UMZA Um Al Zommool 72.76 293 P P 23 52 15.1 +0.4
NRIK Noril'sk 72.76 346 IAmb IAmb 23 52 14.6
comp=Z,47nm,0.6s
NRIK Noril'sk 72.76 346 P P 23 52 13.8 +0.1
comp=Z,46nm,0.5s,baz=128,slow=5.9,SNR=138
NRIK S S 00 01 21.2 -7.5
comp=Z,3.4nm,0.9s,baz=3.3,slow=22,SNR=16
comp=Z,46nm,0.5s
NRIK Noril'sk 72.76 346 *ce*P P 23 52 13.7 -0.1
NRIK pmax pmax
comp=Z,36nm,0.6s
ASUD Al Ashush, Dub 72.81 295 P P 23 52 16.2 +1.3
SNR=12
ASUD Al Ashush, Dub 72.81 295 *i*P P 23 52 15.9 +0.9
SNR=23
CLES Cleveland East 72.91 34 P P 23 52 15.2 +0.2
AJN Ajban 73.11 295 P P 23 52 17.3 +0.5
SNR=9.5
AJN Ajban 73.11 295 *i*P P 23 52 17.1 +0.4
SNR=16
RBK Rabkut 73.21 288 P P 23 52 17.8 +0.3
SNR=9.1
DOK Doka 73.36 289 P P 23 52 18.5 +0.2
SNR=28
NIKH Nikolski High 73.55 35 P P 23 52 18.7 -0.1
NIKH Nikolski High 73.55 35 P P 23 52 18.5 -0.2
baz=250
WHFO Wadi Hawf 73.66 288 P P 23 52 19.8 -0.3
SNR=22
MZWR Madinat Zayed 74.03 294 P P 23 52 22.8 +0.7
ABTO Aybut 74.07 288 P P 23 52 22.6 +0.1
SNR=9.7
AB31 Akbulak array 74.15 321 IAmb IAmb 23 52 26.4
comp=Z,62nm,0.8s
ABKAR Akbulak array 74.15 321 P P 23 52 22.1 -0.2
MZR Muzera 74.33 293 P P 23 52 24.9 +1.0
SNR=15
MZR Muzera 74.33 293 *i*P P 23 52 24.4 +0.5
SNR=45
SPIA Saint Paul Isl 74.35 30 P P 23 52 25.0 +1.7
baz=247
GHWR Ruwais 74.97 294 P P 23 52 28.4 +0.8
JRN Qarnain Island 75.08 295 P P 23 52 28.3 +0.1
UNV Unalaska Valle 75.17 34 P P 23 52 28.2 +0.1
UNV IAmb IAmb 23 52 35.0
comp=Z,52nm,0.8s
UNV Unalaska Valle 75.17 34 P P 23 52 29.0 +0.9
UNV Unalaska Valle 75.17 34 P P 23 52 28.7 +0.7
baz=251,SNR=6.5
LVA Lava Point 75.53 34 P P 23 52 30.7 +0.5
AKUT Akutan 75.67 34 P P 23 52 31.1 +0.1
AKUT Akutan 75.67 34 P P 23 52 31.4 +0.5
AKTO Aktyubinsk 75.68 322 P P 23 52 31.1 +0.1
comp=Z,99nm,0.7s,baz=99,slow=5.7,SNR=125
AKTO S S 00 01 55.0 -7.0
comp=Z,0.5nm,0.5s,baz=218,slow=23,SNR=8.4
comp=Z,99nm,0.7s
SLWR Sila 76.06 294 P P 23 52 34.5 +0.8
SVE Sverdlovsk 76.11 329 *ci*P P 23 52 33.3 -0.1
SVE *e*S S 00 02 03.6 -2.8
SVE pmax pmax
comp=Z,107nm,0.7s
GAMB Gambell 76.40 24 P P 23 52 36.0 +1.2
baz=244
CCD Concordia, Ant 76.42 181 P P 23 52 36.3 +1.0
TRNA Turayna 76.55 295 P P 23 52 37.0 +0.5
SNR=6.5
SHMA Al-Shehemyia 76.86 296 P P 23 52 38.8 +0.6
SNR=5.4
SMRA Abu-Samra 76.90 295 P P 23 52 38.9 +0.4
SNR=9.9
ARTI Arti 77.15 328 P P 23 52 38.5 -0.8
ARTI IAmb IAmb 23 52 43.4
comp=Z,68nm,0.7s
ARTI Arti 77.15 328 P P 23 52 38.4 -0.8
comp=Z,47nm,0.7s,baz=106,slow=3.1,SNR=39
comp=Z,47nm,0.7s
ARTI Arti 77.15 328 *d*iP P 23 52 38.3 -0.9
ARTI *PP pP 23 53 09.0 -1.7
ARTI S S 00 02 19.7 +1.9
ARTI pmax pmax
comp=Z,42nm,0.7s
ARTI Arti 77.15 328 P P 23 52 38.5 -0.8
ARTI PcP PcP 23 52 48.5 -1.0
FALS False Pass 77.20 34 P P 23 52 39.7 +0.2
FALS False Pass 77.20 34 P P 23 52 40.5 +1.0
baz=254,SNR=14
SAKB Bahrain 77.26 296 P P 23 52 40.7 +0.3
MLH Mauna Loa 77.83 70 P P 23 52 44.0 -0.1
MLH IAmb IAmb 23 52 46.2
comp=Z,102nm,0.9s
RSD Rainshed 77.93 71 P P 23 52 44.3 -0.2
STCH Steam Cracks 78.07 71 P P 23 52 45.0 -0.2
STCH IAmb IAmb 23 52 47.0
comp=Z,68nm,1.0s
S12K Black Hills 78.17 33 P P 23 52 45.4 +0.5
baz=255
TNA Tin City 78.62 23 P P 23 52 47.7 +0.5
baz=248
K13K Kusilvak Mount 78.70 27 P P 23 52 48.9 +1.2
K13K IAmb IAmb 23 52 50.2
comp=Z,47nm,0.8s
K13K Kusilvak Mount 78.70 27 P P 23 52 48.9 +1.2
baz=251
M13K Dall Lake 78.83 28 P P 23 52 50.1 +1.7
baz=253
SDPT Sand Point 78.96 34 P P 23 52 49.2 0.0
SDPT Sand Point 78.96 34 P P 23 52 49.5 +0.3
SDPT Sand Point 78.96 34 P P 23 52 49.8 +0.6
baz=256,SNR=14
F14K Arctic Creek 79.20 23 P P 23 52 51.7 +1.3
baz=249
ANM Nome 79.27 24 P P 23 52 51.2 +0.5
baz=250
CNBA Chernabura Isl 79.33 34 IAmb IAmb 23 52 53.0
comp=Z,52nm,0.7s
CHNA Chernabura Isl 79.33 34 P P 23 52 51.5 +0.3
baz=257
L14K Kuka Creek 79.42 27 P P 23 52 52.4 +0.8
L14K IAmb IAmb 23 52 54.1
comp=Z,86nm,1.1s
L14K Kuka Creek 79.42 27 P P 23 52 53.1 +1.6
baz=253
J14K Nanvaranak Lak 79.44 26 P P 23 52 52.7 +1.0
baz=252
N14K Kuskokwak Cree 79.49 29 P P 23 52 52.5 +0.5
N14K IAmb IAmb 23 52 54.0
comp=Z,70nm,0.7s
N14K Kuskokwak Cree 79.49 29 P P 23 52 53.2 +1.2
baz=254
O14K Tigyukauivet M 79.52 30 P P 23 52 52.6 +0.4
O14K IAmb IAmb 23 52 54.2
comp=Z,66nm,0.9s
O14K Tigyukauivet M 79.52 30 P P 23 52 53.3 +1.2
baz=255
M14K Bethel 79.59 28 P P 23 52 53.1 +0.6
M14K IAmb IAmb 23 52 54.8
comp=Z,84nm,0.8s
M14K Bethel 79.59 28 P P 23 52 54.0 +1.5
baz=254,SNR=11
S14K Fog Glacier 79.68 33 P P 23 52 54.1 +0.8
baz=257
F15K North Star Dit 79.94 23 P P 23 52 55.1 +0.7
F15K North Star Dit 79.94 23 P P 23 52 55.6 +1.2
baz=251
G15K Niukluk 79.95 24 P P 23 52 54.6 +0.2
baz=251
KBD Kabd 80.02 299 P P 23 52 55.8 +0.2
L15K Ungalak Mounta 80.06 27 P P 23 52 56.4 +1.3
baz=254
M15K Kasigluk River 80.17 28 P P 23 52 57.1 +1.5
baz=255,SNR=6.4
K15K Wolf Creek Mou 80.21 27 P P 23 52 57.1 +1.2
K15K IAmb IAmb 23 52 59.0
comp=Z,71nm,1.0s
K15K Wolf Creek Mou 80.21 27 P P 23 52 57.6 +1.7
baz=254
O15K Ungalikthiuk R 80.22 30 P P 23 52 55.9 -0.1
O15K IAmb IAmb 23 52 57.9
comp=Z,32nm,0.8s
O15K Ungalikthiuk R 80.22 30 P P 23 52 57.1 +1.1
baz=256
N15K Kwethluk River 80.33 29 P P 23 52 57.5 +0.9
N15K IAmb IAmb 23 52 58.8
comp=Z,57nm,1.1s
N15K Kwethluk River 80.33 29 P P 23 52 57.9 +1.3
baz=256
C16K Lisburne Hills 80.56 20 P P 23 52 58.7 +1.1
baz=250
H16K Elim 80.57 24 P P 23 52 59.1 +1.4
baz=253,SNR=12
G16K Koyuk River 80.75 24 P P 23 52 60.0 +1.3
G16K IAmb IAmb 23 53 01.6
comp=Z,40nm,1.1s
G16K Koyuk River 80.75 24 P P 23 53 00.4 +1.8
baz=253,SNR=8.1
ABPO Ambohimpanom 80.82 251 P P 23 53 00.3 +0.1
ABPO Ambohimpanom 80.82 251 P P 23 53 00.4 +0.1
ABPO pmax pmax
comp=Z,12nm,0.9s
ABPO Ambohimpanom 80.82 251 P P 23 53 00.7 +0.5
J16K Anvik River 80.89 26 P P 23 53 00.7 +1.3
J16K IAmb IAmb 23 53 02.3
comp=Z,56nm,0.8s
J16K Anvik River 80.89 26 P P 23 53 01.1 +1.6
baz=255
L16K Owhat River 81.00 28 P P 23 53 00.8 +0.7
L16K IAmb IAmb 23 53 02.3
comp=Z,46nm,1.1s
L16K Owhat River 81.00 28 P P 23 53 01.6 +1.5
baz=256,SNR=10
I17K Unalakleet 81.01 25 P P 23 53 01.6 +1.6
I17K IAmb IAmb 23 53 03.0
comp=Z,43nm,0.8s
I17K Unalakleet 81.01 25 P P 23 53 01.6 +1.6
baz=255
R16K Pilot Point 81.02 32 P P 23 53 01.9 +1.6
baz=258
N16K Nishlik Lake 81.04 29 P P 23 53 01.4 +1.1
baz=257
AKT Akhty 81.07 312 *e*P P 23 53 01.2 +0.1
AKT *e*PP pP 23 53 31.7 -1.0
AKT *e*S S 00 03 02.1 +1.9
AKT *e* 00 03 38.7
AKT pmax pmax
comp=Z,29nm,0.6s
M16K Timber Creek 81.08 28 P P 23 53 01.4 +0.9
M16K IAmb IAmb 23 53 02.8
comp=Z,52nm,0.9s
M16K Timber Creek 81.08 28 P P 23 53 01.8 +1.3
baz=257
VNDA Vanda 81.08 173 P P 23 53 00.4 +0.2
comp=Z,13nm,0.6s,baz=318,slow=6.2,SNR=104
comp=Z,13nm,0.6s
VNDA Vanda 81.08 173 P P 23 53 00.5 +0.3
P16K Nushagak River 81.11 30 P P 23 53 01.2 +0.5
P16K IAmb IAmb 23 53 03.0
comp=Z,82nm,0.8s
P16K Nushagak River 81.11 30 P P 23 53 01.8 +1.1
baz=258
D17K Noatak River 81.17 21 P P 23 53 02.8 +1.9
baz=252,SNR=8.9
O16K Kokwok River B 81.17 30 P P 23 53 02.0 +0.9
O16K IAmb IAmb 23 53 03.1
comp=Z,57nm,1.1s
O16K Kokwok River B 81.17 30 P P 23 53 01.9 +0.9
baz=258
RDOG Red Dog Mine 81.35 21 P P 23 53 02.5 +0.6
RDOG Red Dog Mine 81.35 21 P P 23 53 03.2 +1.3
baz=252,SNR=6.0
C17K DeLong Mountai 81.38 21 P P 23 53 03.3 +1.2
baz=252
E17K Hotham Inlet 81.45 22 P P 23 53 04.2 +1.9
baz=253,SNR=12
G17K Kiwalik Mounta 81.46 24 P P 23 53 04.1 +1.6
baz=254
VOI Vohitsoka 81.46 248 IAmb IAmb 23 53 12.4
comp=Z,31nm,0.8s
VOI Vohitsoka 81.46 248 P P 23 53 04.1 +0.6
J17K VABM Dome 81.58 26 P P 23 53 04.1 +1.0
J17K IAmb IAmb 23 53 05.9
comp=Z,48nm,0.9s
J17K VABM Dome 81.58 26 P P 23 53 05.2 +2.1
baz=256,SNR=12
H17K Granite Mounta 81.61 24 P P 23 53 05.0 +1.7
baz=255
L17K Donlin 81.64 27 P P 23 53 05.0 +1.6
baz=257
R17L Mt. Peulik Vol 81.67 32 P P 23 53 04.1 +0.4
baz=259,SNR=6.1
PLK4 Peulik 4 81.67 32 IAmb IAmb 23 53 04.9
comp=Z,73nm,0.9s
MAW Mawson 81.68 200 P P 23 53 04.5 +1.0
comp=Z,22nm,0.5s,baz=70,slow=5.6,SNR=99
comp=Z,22nm,0.5s
RAYN Ar Rayn 81.68 293 P P 23 53 04.4 -0.2
RAYN IAmb IAmb 23 53 08.4
comp=Z,88nm,0.9s
RAYN Ar Rayn 81.68 293 P P 23 53 05.1 +0.5
RAYN Ar Rayn 81.68 293 *i*P P 23 53 04.8 +0.2
SNR=139
RAYN Ar Rayn 81.68 293 P P 23 53 04.7 +0.1
RAYN Ar Rayn 81.68 293 P P 23 53 04.8 +0.2
O17K Koliganek Bris 81.71 30 P P 23 53 05.5 +1.7
baz=258,SNR=9.3
Q16K King Salmon 81.71 31 P P 23 53 03.8 -0.1
baz=259
CHIR Chirikof Islan 81.75 34 P P 23 53 04.5 +0.3
baz=260
K17K Iditarod 81.77 27 IAmb IAmb 23 53 07.0
comp=Z,75nm,0.9s
K17K Iditarod 81.77 27 P P 23 53 05.6 +1.5
baz=257
N17K Nushagak Hills 81.82 29 P P 23 53 05.6 +1.2
N17K Nushagak Hills 81.82 29 P P 23 53 06.0 +1.5
baz=258
M17K Holitna River 81.88 28 P P 23 53 06.0 +1.2
M17K Holitna River 81.88 28 P P 23 53 06.6 +1.9
baz=258
P17K Kvichak River 81.92 30 P P 23 53 05.8 +0.8
baz=259
SBA Scott Base 81.99 172 P P 23 53 06.3 +1.3
SBA Scott Base 81.99 172 P P 23 53 06.3 +1.3
SBA pmax pmax
comp=Z,23nm,1.2s
E18K Tukpahlearik C 82.00 22 IAmb IAmb 23 53 08.1
comp=Z,57nm,0.8s
E18K Tukpahlearik C 82.00 22 P P 23 53 06.9 +1.7
baz=254
B18K Kokolik River 82.13 20 P P 23 53 06.9 +1.0
baz=253
C18K Utukok River 82.13 21 P P 23 53 06.8 +0.8
baz=253
F18K Selawik 82.14 23 P P 23 53 07.5 +1.5
baz=255,SNR=11
H18K Honhosa River 82.30 24 IAmb IAmb 23 53 09.2
comp=Z,51nm,0.9s
H18K Honhosa River 82.30 24 P P 23 53 07.8 +0.9
baz=257
G18K Tagagawik 82.36 24 IAmb IAmb 23 53 09.3
comp=Z,39nm,0.8s
G18K Tagagawik 82.36 24 P P 23 53 08.1 +0.9
baz=256
KIRV Kirov 82.37 329 P P 23 53 07.4 +0.1
comp=Z,62nm,0.8s,baz=172,slow=1.4,SNR=14
comp=Z,62nm,0.8s
KIRV Kirov 82.37 329 *ce*P P 23 53 07.0 -0.3
L18K Granite Mounta 82.39 27 P P 23 53 08.9 +1.5
L18K IAmb IAmb 23 53 10.1
comp=Z,60nm,1.0s
L18K Granite Mounta 82.39 27 P P 23 53 09.3 +1.9
baz=258,SNR=16
BELG Belogornoye 82.44 323 P P 23 53 07.4 -0.4
comp=Z,187nm,0.9s,baz=334,slow=1.2,SNR=29
comp=Z,187nm,0.9s
BELG Belogornoye 82.44 323 *i*P P 23 53 07.3 -0.5
BELG pmax pmax
comp=Z,14nm,1.3s
N18K Kilae Creek 82.47 29 P P 23 53 08.7 +0.8
N18K Kilae Creek 82.47 29 P P 23 53 09.2 +1.4
baz=259
Q18K Katmai Hardscr 82.56 31 P P 23 53 08.2 -0.2
baz=260,SNR=5.1
P18K Big Mountain, 82.57 30 P P 23 53 08.6 +0.2
baz=260
J18K Innoko River 82.63 26 IAmb IAmb 23 53 10.8
comp=Z,58nm,0.9s
J18K Innoko River 82.63 26 P P 23 53 09.7 +1.1
baz=258
M18K Stony River 82.66 28 P P 23 53 10.0 +1.2
baz=259
O18K Koktuh Hills 82.66 30 P P 23 53 09.7 +0.9
baz=260
SII Sitkinak Islan 82.66 33 P P 23 53 09.5 +0.6
baz=261
R18K Karluk 82.67 32 P P 23 53 09.7 +0.8
baz=261
C19K Lookout Ridge 82.82 20 P P 23 53 11.1 +1.6
C19K Lookout Ridge 82.82 20 P P 23 53 11.8 +2.3
baz=255,SNR=14
GCSA Galena City Sc 82.83 25 P P 23 53 11.5 +1.9
baz=258,SNR=8.6
G19K Purcell Mounta 83.04 23 P P 23 53 12.0 +1.4
baz=258
O19K Port Alsworth 83.16 30 P P 23 53 12.3 +0.9
baz=261
H19K Roundabout Mou 83.17 24 P P 23 53 13.1 +1.8
baz=258
N19K Bonanza Creek 83.18 29 P P 23 53 13.3 +1.7
baz=261
D19K Kuna River 83.18 21 P P 23 53 12.4 +1.0
baz=256
GNI Garni 83.21 310 P P 23 53 13.6 +1.3
GNI IAmb IAmb 23 53 38.0
comp=Z,42nm,0.9s
GNI Garni 83.21 310 P P 23 53 12.6 +0.3
comp=Z,15nm,0.9s,baz=340,slow=13,SNR=11
comp=Z,15nm,0.9s
GNI Garni 83.21 310 P P 23 53 13.3 +0.9
GNI Garni 83.21 310 *ce*P P 23 53 12.1 -0.2
GNI pmax pmax
comp=Z,58nm,1.7s
J19K Poorman 83.22 26 IAmb IAmb 23 53 14.1
comp=Z,66nm,1.0s
J19K Poorman 83.22 26 P P 23 53 13.2 +1.6
baz=259,SNR=25
L19K White Mountain 83.23 28 IAmb IAmb 23 53 14.3
comp=Z,61nm,1.0s
L19K White Mountain 83.23 28 P P 23 53 13.2 +1.5
baz=260
OHAK Old Harbor 83.25 33 IAmb IAmb 23 53 13.6
comp=Z,44nm,0.8s
OHAK Old Harbor 83.25 33 P P 23 53 12.7 +0.9
baz=262
E19K Redstone River 83.27 22 P P 23 53 13.6 +1.7
baz=257
Q19K Cape Douglas, 83.30 31 P P 23 53 12.0 -0.2
M19K Big River Lodg 83.40 28 P P 23 53 14.2 +1.6
baz=261
P19K Oil Pt 83.62 30 P P 23 53 13.7 -0.1
baz=262
KDAK Kodiak Island 83.70 32 P P 23 53 14.8 +0.6
KDAK IAmb IAmb 23 53 16.0
comp=Z,41nm,0.7s
KDAK Kodiak Island 83.70 32 P P 23 53 14.8 +0.6
KDAK pmax pmax
comp=Z,41nm,0.7s
KDAK Kodiak Island 83.70 32 P P 23 53 14.9 +0.7
baz=263
KDAK Kodiak Island 83.70 32 P P 23 53 14.8 +0.6
ILSW Iliamna Southw 83.71 30 P P 23 53 13.9 -0.5
L20K Farewell, AK 83.73 27 P P 23 53 16.2 +1.9
baz=261,SNR=19
F20K Avaraart Lake 83.76 23 P P 23 53 15.5 +1.2

F20K IAmb IAmb 23 53 16.9
comp=Z,44nm,0.9s
F20K Avaraart Lake 83.76 23 P P 23 53 15.7 +1.4
baz=259
D20K Etivluk River 83.77 21 IAmb IAmb 23 53 16.8
comp=Z,69nm,1.1s
D20K Etivluk River 83.77 21 P P 23 53 15.6 +1.2
baz=258
K20K Telida 83.78 26 P P **23 53 15.7 +1.1**
K20K IAmb IAmb 23 53 17.1
comp=Z,34nm,1.1s
K20K Telida 83.78 26 P P 23 53 15.8 +1.2
baz=261
H20K Anotleneega Mo 83.80 24 P P 23 53 16.4 +1.8
baz=260,SNR=14
E20K Nigu River 83.83 21 P P 23 53 16.3 +1.5
baz=258
I20K Naaghedeneel 83.85 25 P P **23 53 16.1 +1.3**
I20K IAmb IAmb 23 53 18.1
comp=Z,78nm,1.2s
I20K Naaghedeneel 83.85 25 P P 23 53 16.6 +1.8
baz=260
B20K Meade River 83.86 20 P P 23 53 16.1 +1.3
B20K IAmb IAmb 23 53 17.4
comp=Z,58nm,0.8s
B20K Meade River 83.86 20 P P 23 53 16.2 +1.4
baz=257
J20K Nowinta River 83.89 26 P P 23 53 16.6 +1.5
baz=260
Q20K Shuyak Island 83.90 31 P P 23 53 16.9 +1.7
baz=263
RED Redoubt Volcan 83.95 29 P P 23 53 15.6 0.0
O20K Slope Mountain 83.98 30 P P 23 53 17.0 +1.3
baz=262
M20K Styx River 83.99 28 IAmb IAmb 23 53 18.1
comp=Z,68nm,0.8s
M20K Styx River 83.99 28 P P 23 53 17.1 +1.3
baz=262
ATD Arta Tunnel 84.03 281 P P 23 53 17.9 +1.0
ATD IAmb IAmb 23 53 23.4
comp=Z,53nm,0.8s
ATD Arta Tunnel 84.03 281 P P 23 53 18.2 +1.3
PPT Papeete 84.11 108 P P 23 53 17.0 -0.2
comp=Z,22nm,0.8s,baz=125,slow=16,SNR=1.9
comp=Z,22nm,0.8s
PPT Papeete 84.11 108 P P 23 53 17.0 -0.2
NCK Nalchik 84.28 313 *i* P P **23 53 17.0 -0.5**
NCK pmax pmax
comp=Z,22nm,0.7s
N20K Mount Spurr 84.33 29 P P 23 53 18.1 +0.6
baz=263,SNR=10
SPCR Spurr Chakacha 84.33 29 P P 23 53 18.1 +0.6
baz=263,SNR=9.7
A21K Barrow 84.33 18 P P 23 53 19.0 +1.9
baz=258
IMAR Indian Mountai 84.35 24 P P 23 53 18.2 +0.9
SPU Mount Spurr 84.40 29 IAmb IAmb 23 53 19.3
comp=Z,31nm,1.0s
C21K Knifeblade Rid 84.51 21 P P 23 53 19.1 +1.0
baz=259
G21K Allakaket 84.53 23 P P 23 53 19.4 +1.1
baz=261,SNR=11
PPLA Purkeypile 84.56 27 P P 23 53 19.8 +1.2
baz=262,SNR=5.5
CNPM China Poot 84.61 30 IAmb IAmb 23 53 20.0
comp=Z,80nm,0.9s
CHUM Lake Minchumin 84.64 26 P P 23 53 20.4 +1.6
baz=262
B21K Ikpikpuk River 84.65 20 IAmb IAmb 23 53 21.3
comp=Z,29nm,0.8s
B21K Ikpikpuk River 84.65 20 P P 23 53 20.3 +1.5
baz=260
F21K Alatna River 84.65 23 P P 23 53 19.9 +1.1
baz=261
E21K Killik River 84.67 21 P P 23 53 20.1 +1.2
baz=260
H21K Melozitna Rive 84.68 24 P P 23 53 20.0 +0.9
baz=262,SNR=8.7
SKT Skwentna 84.75 28 IAmb IAmb 23 53 20.7
comp=Z,44nm,1.0s
SKT Skwentna 84.75 28 P P 23 53 19.5 0.0
baz=263,SNR=20
GOF Gofitskoye 84.77 315 *ce* P P **23 53 20.2 +0.3**
A22K Sinclair Lake 84.79 19 P P 23 53 20.8 +1.4
baz=259
CAPN Captain Cook N 84.79 29 P P 23 53 21.0 +1.4
baz=264
KBZ Khabaz 84.80 314 P P 23 53 20.4 +0.3
comp=Z,18nm,0.8s,baz=126,slow=4.1,SNR=36
comp=Z,18nm,0.8s
KBZ Khabaz 84.80 314 *ce* P P **23 53 19.1 -1.0**
KBZ pmax pmax
comp=Z,21nm,0.9s
BRSE Bradley Lake S 84.88 30 P P 23 53 20.8 +0.6
baz=264,SNR=8.0
I21K Tanana 84.95 25 P P 23 53 20.7 +0.3
I21K Tanana 84.95 25 P P 23 53 21.7 +1.3
baz=262
KIV Kislovodsk 84.97 314 P P 23 53 20.9 -0.1
KIV IAmb IAmb 23 53 29.5
comp=Z,55nm,0.6s
KIV Kislovodsk 84.97 314 P P 23 53 21.1 +0.1
KIV Kislovodsk 84.97 314 ⇑ P P **23 53 21.4 +0.3**
KIV Kislovodsk 84.97 314 *i* P P **23 53 21.2 +0.1**
SNR=23
KIV Kislovodsk 84.97 314 *e* P P **23 53 19.5 -1.6**
KIV pmax pmax
comp=Z,44nm,1.0s
KIV Kislovodsk 84.97 314 P P 23 53 21.4 +0.3
SHA1 Shidzhatmaz 84.98 314 *i* P P **23 53 20.7 -0.6**
SUA Susitna One 85.06 29 P P 23 53 21.4 +0.3
SUA Susitna One 85.06 29 P P 23 53 22.0 +0.8
baz=264,SNR=9.4
B22K Teshekpuk Lake 85.18 20 P P 23 53 22.6 +1.2
B22K IAmb IAmb 23 53 24.2
comp=Z,93nm,1.4s
B22K Teshekpuk Lake 85.18 20 P P 23 53 22.7 +1.3
baz=261
F22K John River 85.19 22 P P 23 53 22.9 +1.3
baz=262
D22K Ayikyak River 85.21 21 P P 23 53 23.1 +1.5
baz=261
KTH Kantishna Hill 85.21 26 P P 23 53 22.1 +0.3
GURO Guroymak-BITLI 85.23 308 P P 23 53 23.2 +0.7
BPAW Bear Paw Mtn. 85.25 26 P P 23 53 22.5 +0.6
baz=263
H22K Ishtalitna Cre 85.30 24 P P 23 53 23.3 +1.1
baz=263,SNR=7.3
G22K Bettles 85.38 23 P P 23 53 23.2 +0.7
baz=263
CUT Chulitna 85.39 28 P P 23 53 22.7 +0.2
CUT IAmb IAmb 23 53 25.7
comp=Z,73nm,1.4s
CUT Chulitna 85.39 28 P P 23 53 23.0 +0.5
baz=264
M22K Willow 85.39 28 P P 23 53 23.2 +0.6
baz=264,SNR=12
E22K Anaktuvuk Pass 85.42 22 P P 23 53 24.0 +1.3
baz=262,SNR=18
MLY Manley 85.46 25 P P 23 53 23.8 +0.8
baz=264,SNR=8.5
O22K Cooper Landing 85.46 30 P P 23 53 23.4 +0.4
O22K Cooper Landing 85.46 30 P P 23 53 23.9 +0.9
baz=265,SNR=6.3
TRF Thorofare Moun 85.48 27 P P 23 53 23.5 +0.2
baz=264
RC01 Rabbit Creek A 85.51 29 P P 23 53 22.6 -0.6
RC01 IAmb IAmb 23 53 24.3
comp=Z,50nm,0.8s
RC01 Rabbit Creek A 85.51 29 P P 23 53 23.7 +0.5
baz=265,SNR=5.8
SEW Seward 85.56 30 IAmb IAmb 23 53 24.9
comp=Z,36nm,0.8s
SEW Seward 85.56 30 P P 23 53 24.2 +0.7
baz=265
PMR Palmer 85.84 28 IAmb IAmb 23 53 26.5
comp=Z,35nm,0.8s
PMR Palmer 85.84 28 P P 23 53 25.7 +0.9
PMR Palmer 85.84 28 P P 23 53 25.2 +0.4
baz=265,SNR=8.9
BWN Browne 85.92 26 P P 23 53 25.8 +0.6
BWN IAmb IAmb 23 53 37.0
comp=Z,52nm,1.0s
COLD Coldfoot 85.92 23 IAmb IAmb 23 53 27.5
comp=Z,30nm,0.9s
COLD Coldfoot 85.92 23 P P 23 53 26.4 +1.2
baz=264,SNR=24

G23K Bananza Creek 85.93 23 IAmb IAmb 23 53 28.1
comp=Z,22nm,0.8s
G23K Bananza Creek 85.93 23 P P 23 53 26.6 +1.3
baz=264,SNR=17
D23K Nanushuk River 85.94 21 P P 23 53 26.1 +0.9
D23K Nanushuk River 85.94 21 P P 23 53 26.3 +1.1
baz=263
GHO Glory Hole Cre 85.96 28 P P 23 53 25.9 +0.4
GHO IAmb IAmb 23 53 35.8
comp=Z,25nm,1.0s
VRH Novokhopyorsk 85.98 321 *e* P P **23 53 23.6 -2.2**
VRH pmax pmax
comp=Z,120nm,1.0s
H23K Yukon River 86.04 24 IAmb IAmb 23 53 27.8
comp=Z,18nm,0.7s
H23K Yukon River 86.04 24 P P 23 53 26.9 +1.1
baz=265
I23K Minto, Yukon-K 86.05 25 IAmb IAmb 23 53 27.3
comp=Z,19nm,0.8s
I23K Minto, Yukon-K 86.05 25 P P 23 53 26.5 +0.7
baz=265,SNR=11
C23K Itkillik River 86.06 20 IAmb IAmb 23 53 28.3
comp=Z,30nm,0.6s
C23K Itkillik River 86.06 20 P P 23 53 26.8 +1.0
baz=263
MCK McKinley 86.11 26 IAmb IAmb 23 53 27.6
comp=Z,18nm,0.8s
MCK McKinley 86.11 26 P P 23 53 26.5 +0.3
baz=265,SNR=8.6
RND Reindeer 86.12 27 IAmb IAmb 23 53 27.1
comp=Z,24nm,0.6s
NEA2 Nenana 86.13 25 P P 23 53 26.9 +0.7
NEA2 Nenana 86.13 25 P P 23 53 27.0 +0.7
baz=265
KNK Knik Glacier 86.15 29 IAmb IAmb 23 53 28.7
comp=Z,51nm,1.0s
KNK Knik Glacier 86.15 29 P P 23 53 27.1 +0.7
baz=266,SNR=11
PWL Port Wells 86.17 29 IAmb IAmb 23 53 28.2
comp=Z,64nm,1.2s
PWL Port Wells 86.17 29 P P 23 53 27.5 +0.9
baz=266,SNR=9.4
MARD Mardin 86.18 307 P P 23 53 27.7 +0.4
MARD IAmb IAmb 23 53 32.4
comp=Z,53nm,0.7s
WAT1 Susitna Watana 86.21 27 P P 23 53 27.3 +0.6
baz=266
E23K Chandalar 86.23 22 P P 23 53 27.7 +0.9
E23K IAmb IAmb 23 53 28.8
comp=Z,31nm,0.7s
E23K Chandalar 86.23 22 P P 23 53 27.9 +1.2
baz=264
SML Sawmill 86.24 28 IAmb IAmb 23 53 28.5
comp=Z,36nm,0.7s
SML Sawmill 86.24 28 P P 23 53 27.8 +0.9
baz=266,SNR=8.1
TOLK Toolik Lake Re 86.30 21 P P 23 53 27.8 +0.7
TOLK IAmb IAmb 23 53 29.7
comp=Z,22nm,0.8s
TOLK Toolik Lake Re 86.30 21 P P 23 53 28.1 +1.1
baz=264,SNR=15
LABN Labinsk 86.40 314 *e* P P **23 53 26.6 -1.4**
LABN *e* S **SKSac 00 03 43.4 +0.8**
LABN pmax pmax
comp=Z,62nm,0.9s
KOPT Kop Dagi 86.46 310 P P 23 53 29.7 +0.9
M23K Glacier View 86.53 28 P P 23 53 29.0 +0.7
baz=266,SNR=9.6
WAT6 Susitna Watana 86.57 28 P P 23 53 29.0 +0.3
baz=266,SNR=9.1
P23K Montague Islan 86.58 30 P P 23 53 29.8 +1.2
baz=267
ERBR Yeremizino-Bor 86.60 316 *e* P P **23 53 27.7 -1.3**
ERBR *e* S **SKSac 00 03 41.6 -2.2**
ERBR pmax pmax
comp=Z,113nm,1.0s
D24K Happy Valley 86.62 21 P P 23 53 29.3 +0.8
D24K IAmb IAmb 23 53 31.3
comp=Z,33nm,0.7s
D24K Happy Valley 86.62 21 P P 23 53 29.9 +1.4
baz=265
E24K Your Creek 86.65 22 P P 23 53 30.1 +1.3
baz=265
COLA College 86.67 25 P P 23 53 29.6 +0.8
COLA College 86.67 25 P P 23 53 30.6 +1.8
baz=266
C24K Franklin Bluff 86.71 20 P P 23 53 30.0 +1.1
C24K IAmb IAmb 23 53 31.0
comp=Z,24nm,0.9s
C24K Franklin Bluff 86.71 20 P P 23 53 30.3 +1.3
baz=265,SNR=5.0
SCM Sheep Creek Mo 86.72 28 IAmb IAmb 23 53 31.7
comp=Z,32nm,0.8s
SCM Sheep Creek Mo 86.72 28 P P 23 53 30.8 +1.5
baz=267,SNR=7.0
H24K Noodor Dome 86.72 24 P P 23 53 30.0 +0.8
baz=266,SNR=12
DHY Denali Highway 86.77 27 P P 23 53 30.8 +1.2
baz=267
F24K Squaw Lake 86.84 23 P P 23 53 31.1 +1.4
baz=266,SNR=14
POKR Poker Plat Res 86.86 25 P P 23 53 30.9 +1.1
baz=267
VSLR Vesyoloye 86.87 313 *i* P P **23 53 30.1 -0.2**
VSLR pmax pmax
comp=Z,151nm,1.0s
G24K Hadweenzic Riv 86.94 23 P P 23 53 30.5 +0.3
G24K IAmb IAmb 23 53 32.4
comp=Z,27nm,1.1s
G24K Hadweenzic Riv 86.94 23 P P 23 53 31.6 +1.4
baz=266
HDA Harding Lake 87.03 26 P P 23 53 30.2 -0.4
baz=267,SNR=11
ILAR Eielson Array 87.08 25 P P 23 53 29.4 -1.4
ILAR Eielson Array 87.08 25 P P 23 53 28.9 -1.9
comp=Z,3.7nm,0.6s,baz=238,slow=5.3,SNR=47
ILAR PP PP **23 56 52.8 -3.1**
comp=Z,2.7nm,1.0s,baz=261,slow=7.2,SNR=6.1
comp=Z,3.7nm,0.6s
ILAR Eielson Array 87.08 25 P P 23 53 29.4 -1.4
Q23K Middleton Isla 87.09 31 P P 23 53 31.4 +0.5
baz=268
SOC Sochi 87.11 313 *e* P P **23 53 28.9 -2.5**
SOC *e* 23 56 55.8
SOC *e* PPP PPP 23 58 48.8
SOC *e* S **SKSac 00 03 44.0 -3.0**
SOC *e* SS **SS 00 09 43.5 -2.8**
SOC *e* SSS SSS 00 13 11.5
SOC pmax pmax
comp=Z,46nm,0.8s
M24K Tolsona, Glenn 87.28 28 P P 23 53 32.4 +0.4
M24K IAmb IAmb 23 53 36.3
comp=Z,38nm,1.1s
M24K Tolsona, Glenn 87.28 28 P P 23 53 32.3 +0.4
baz=268
KLU Klutina 87.37 29 P P 23 53 32.6 +0.2
baz=268
EYAK Cordova Ski Ar 87.43 30 P P 23 53 33.1 +0.6
baz=268
DIV Divide 87.43 29 P P 23 53 33.7 +0.9
DIV IAmb IAmb 23 53 35.0
comp=Z,26nm,0.8s
G25K Bearman Lake 87.49 23 P P 23 53 33.3 +0.6
baz=268
D25K Kavik River 87.50 21 P P 23 53 33.4 +0.5
baz=267
VORD Divnogorie 87.50 321 *e* P P **23 53 31.6 -1.6**
VORD pmax pmax
comp=Z,60nm,1.0s
K24K Donnelly Dome 87.52 26 IAmb IAmb 23 53 33.9
comp=Z,20nm,0.7s
K24K Donnelly Dome 87.52 26 P P 23 53 33.2 +0.2
baz=268,SNR=8.3
VORR Voronezh 87.57 321 *e* P P **23 53 31.7 -1.8**
VORR pmax pmax
comp=Z,120nm,1.0s
KLMR Klimovskoe 87.58 331 *e* P P **23 53 31.2 -2.1**
KLMR *e* 23 56 56.1
KLMR pmax pmax
comp=Z,62nm,1.1s
H25L Birch Creek 87.58 24 P P 23 53 34.2 +1.0
baz=268,SNR=5.9
VSR Storozhevoye 87.59 321 *e* P P **23 53 31.2 -2.4**
VSR pmax pmax
comp=Z,40nm,1.0s
PAX Paxson 87.63 27 P P 23 53 34.1 +0.5
baz=268,SNR=7.2

F25K Christian Rive 87.70 23 P P 23 53 34.9 +1.0
baz=268,SNR=9.0
J25K Salcha River, 87.72 26 P P 23 53 33.2 -0.8
baz=268,SNR=7.7
E25K Arctic Village 87.75 22 P P 23 53 35.1 +1.1
baz=268,SNR=16
LPSR Galich'ya Gora 87.75 322 *e* P P **23 53 32.1 -2.2**
LPSR pmax pmax
comp=Z,100nm,1.1s
HARP HAARP 87.76 28 P P 23 53 34.7 +0.5
baz=269
RIDG Independent Ri 87.93 26 P P 23 53 35.4 +0.4
baz=269
BMRM Bremner River 88.00 29 P P 23 53 35.3 -0.1
BMRM Bremner River 88.00 29 P P 23 53 35.6 +0.2
baz=269
N25K Chitina, Valde 88.01 29 P P 23 53 35.9 +0.4
baz=269
C26K Camden Bay 88.03 20 P P 23 53 36.2 +0.9
baz=269
BMAR Burnt Mountain 88.11 23 P P 23 53 36.0 +0.2
ARPR Arapgir-MALATY 88.12 309 P P 23 53 36.9 +0.3
F26K Sheenjek River 88.28 22 P P 23 53 36.7 +0.2
F26K Sheenjek River 88.28 22 P P 23 53 37.4 +0.8
baz=269,SNR=6.7
DOT Dot Lake 88.28 27 P P 23 53 36.1 -0.5
SCRK Sand Creek 88.31 26 P P 23 53 36.2 -0.7
SCRK Sand Creek 88.31 26 P P 23 53 37.1 +0.2
baz=270,SNR=7.7
GLB Gilahina Butte 88.39 29 P P 23 53 37.2 0.0
G26K Porcupine Rive 88.41 23 P P 23 53 37.8 +0.6
G26K Porcupine Rive 88.41 23 P P 23 53 38.5 +1.3
baz=270,SNR=8.1
MENT Mentasta 88.43 27 P P 23 53 36.8 -0.6
C27K Jago River 88.45 21 P P 23 53 37.6 +0.4
C27K IAmb IAmb 23 53 39.1
comp=Z,23nm,0.7s
C27K Jago River 88.45 21 P P 23 53 38.4 +1.1
baz=270
J26L Joseph Creek 88.50 26 IAmb IAmb 23 53 38.8
comp=Z,19nm,0.7s
J26L Joseph Creek 88.50 26 P P 23 53 37.8 +0.1
baz=270
MOS Moscow 88.53 326 *e* P P **23 53 34.3 -3.6**
MOS *e* 00 03 51.3
MOS *e* S **S 00 04 14.1 +1.0**
MOS pmax pmax
comp=Z,24nm,0.6s
L26K Log Cabin Wild 88.60 27 P P 23 53 38.5 +0.4
L26K Log Cabin Wild 88.60 27 P P 23 53 38.7 +0.6
baz=270
BGLC Bering Glacier 88.65 30 P P 23 53 39.2 +0.9
baz=270
I26K Coal Creek Min 88.67 25 P P 23 53 38.3 -0.1
I26K Coal Creek Min 88.67 25 P P 23 53 38.6 +0.2
baz=270,SNR=6.1
CRQE Cirque 88.74 29 P P 23 53 39.6 +0.6
baz=271
ANN Anapa 88.75 315 ⇑ *i* P P **23 53 38.0 -1.2**
ANN *e* S **SKSac 00 03 54.6 -2.2**
ANN pmax pmax
comp=Z,42nm,0.7s
MCARA McCarthy VSAT 88.76 29 P P 23 53 39.9 +0.9
baz=271
M26K Nabesna, AK 88.77 28 P P 23 53 39.8 +0.8
baz=271
GAZ Gaziantep 89.03 307 IAmb IAmb 23 53 47.5
comp=Z,37nm,1.0s
KIBK Kibwezi 89.05 268 P P 23 53 41.5 +0.2
KIBK IAmb IAmb 23 53 43.5
comp=Z,26nm,1.0s
KIBK Kibwezi 89.05 268 P P 23 53 42.7 +1.4
OBN Obninsk 89.14 325 P P 23 53 40.1 -0.7
OBN Obninsk 89.14 325 *ce* P P **23 53 39.0 -1.8**
OBN *e* 23 57 11.6
OBN *e* S **S 00 04 13.9 -4.9**
OBN pmax pmax
comp=Z,70nm,1.7s
K27K Chicken 89.15 26 P P 23 53 41.5 +0.8
K27K IAmb IAmb 23 53 42.9
comp=Z,28nm,0.8s
K27K Chicken 89.15 26 P P 23 53 42.0 +1.3
baz=271
E27K Coleen River 89.23 22 P P 23 53 41.2 +0.2
E27K Coleen River 89.23 22 P P 23 53 42.0 +1.0
baz=272
G27K Doyon Strip 89.25 23 P P 23 53 41.9 +0.7
G27K Doyon Strip 89.25 23 P P 23 53 42.2 +1.1
baz=272
M27K Edge Creek, AK 89.29 28 P P 23 53 42.3 +0.7
M27K Edge Creek, AK 89.29 28 P P 23 53 42.4 +0.9
baz=272
L27K Beaver Creek, 89.29 27 P P 23 53 42.5 +1.1
baz=272
I27K Kandik River 89.31 25 P P 23 53 42.3 +0.8
baz=272
BCAR Beaver Creek A 89.31 27 P P 23 53 42.2 +0.7
MESA MESA 89.31 30 P P 23 53 42.0 +0.2
baz=272
H27K Steamboat Moun 89.32 24 P P 23 53 42.5 +0.9
baz=272,SNR=7.7
GRNC Granite Creek 89.39 29 P P 23 53 42.1 -0.1
YAH Yahtse 89.41 30 P P 23 53 42.7 +0.5
YAH IAmb IAmb 23 53 46.3
comp=Z,85nm,1.5s
D27M Malcolm River 89.43 21 P P 23 53 43.0 +1.1
baz=272
BARN Barnard Glacie 89.43 29 P P 23 53 42.7 +0.4
CTG Chitna Glacier 89.59 29 P P 23 53 44.0 +1.1
baz=272
CTGM Chitina Glacie 89.59 29 P P 23 53 43.8 +0.8
CTGM IAmb IAmb 23 54 08.0
comp=Z,42nm,1.4s
BVCY Beaver Creek 89.76 28 P P 23 53 44.7 +1.1
baz=272
LOGN Logan Glacier 89.76 29 P P 23 53 43.8 0.0
KMBO Kilima Mbogo 89.81 269 P P 23 53 45.1 0.0
comp=Z,9.9nm,0.9s,baz=98,slow=3.7,SNR=13
comp=Z,9.9nm,0.9s
KMBO Kilima Mbogo 89.81 269 *ce* P P **23 53 43.7 -1.4**
KMBO pmax pmax
comp=Z,10.0nm,0.9s
F28M Old Crow 89.91 22 P P 23 53 44.7 +0.5
baz=273,SNR=9.7
E28M Babbage River 89.98 21 P P 23 53 45.0 +0.5
baz=274,SNR=17
YUK3 Moose Creek 89.98 28 P P 23 53 45.4 +0.5
baz=273
I28M Miner Creek 90.01 25 IAmb IAmb 23 53 46.4
comp=Z,25nm,0.7s
I28M Miner Creek 90.01 25 P P 23 53 45.5 +0.7
baz=273
APA Apatity 90.12 337 ⇓ *e* P P 23 53 51.6 +6.5
APA *e** PP sP 23 54 37.7 +7.1
APA MLR MLR
comp=Z,2µm,17.4s
O28M Mount Upton 90.16 29 P P 23 53 45.9 +0.1
O28M Mount Upton 90.16 29 P P 23 53 46.5 +0.6
baz=273
PINM Pinnacle 90.17 30 P P 23 53 46.5 +0.9
baz=273
D28M Stokes Point 90.21 21 P P 23 53 46.6 +1.1
baz=274
DAWY Dawson 90.33 26 P P 23 53 46.5 +0.2
DAWY IAmb IAmb 23 53 47.7
comp=Z,16nm,0.8s
DAWY Dawson 90.33 26 P P 23 53 47.1 +0.9
baz=274
YUK8 Steele Glacier 90.34 29 P P 23 53 46.7 +0.1
baz=274
SYO Syowa Base 90.36 201 ⇑ *e* P P **23 53 47.0 +0.8**
BALJ Balqa 90.46 302 P P 23 53 47.9 +0.4
GHAJ Ghor Haditha 90.55 301 P P 23 53 47.8 -0.1
GHAJ IAmb IAmb 23 53 55.2
comp=Z,54nm,1.1s
E29M Blow River 90.59 22 P P 23 53 48.0 +0.7
baz=275
H29M Whitestone 90.60 24 P P 23 53 48.3 +0.8
baz=275
PNL Peninsula 90.62 30 P P 23 53 48.5 +0.8
baz=274
MMAI Mount Meron Ar 90.62 303 P P 23 53 49.0 +0.6
comp=Z,5.2nm,0.6s,baz=93,slow=5.1,SNR=12
comp=Z,5.2nm,0.6s
G29M Pine Creek 90.68 23 IAmb IAmb 23 53 49.0
comp=Z,24nm,0.9s

G29M	**Pine Creek**	**90.68**	**23**	P		**P**	**23 53 48.6**	**+0.8**
	baz=275							
M29M	**Somme Creek**	**90.87**	**28**	P		**P**	**23 53 50.4**	**+1.5**
	baz=275,SNR=6.8							
YUK4	**Talbot Arm**	**90.87**	**29**	P		**P**	**23 53 50.3**	**+1.2**
	baz=275							
L29M	**L29M**	**90.97**	**27**	IAmb		IAmb	23 53 51.5	
	comp=Z,26nm,0.8s							
L29M	**L29M**	**90.97**	**27**	P		**P**	**23 53 50.8**	**+1.5**
	baz=275							
O29M	**Mount Kennedy**	**90.99**	**30**	P		**P**	**23 53 49.8**	**+0.3**
O29M	**Mount Kennedy**	**90.99**	**30**	P		**P**	**23 53 51.0**	**+1.5**
	baz=274							
YUK6	**Outpost Mounta**	**91.04**	**29**	P		**P**	**23 53 50.7**	**+0.9**
	baz=275							
SIM	**Simferopol'**	**91.10**	**315**	*e*P		**P**	**23 53 47.9**	**-2.3**
SIM				*e*			23 57 28.0	
SIM				pmax		pmax		
	comp=Z,39nm,0.8s							
K29M	**Barlow Dome**	**91.17**	**26**	P		**P**	**23 53 51.2**	**+1.0**
	baz=276							
EPYK	**Eagle Plains**	**91.25**	**24**	IAmb		IAmb	23 53 52.0	
	comp=Z,20nm,1.1s							
EPYK	**Eagle Plains**	**91.25**	**24**	P		**P**	**23 53 51.4**	**+0.9**
	baz=276,SNR=9.7							
QSPA	**South Pole Qui**	**91.31**	**180**	P		**P**	**23 53 54.2**	**+3.4**
QSPA	**South Pole Qui**	**91.31**	**180**	P		**P**	**23 53 51.9**	**+1.1**
	comp=Z,5.3nm,0.6s,baz=287,slow=0.8,SNR=19							
	comp=Z,5.3nm,0.6s							
VADS	**Vadso**	**91.32**	**340**	*e*P		**P**	**23 53 48.7**	**-2.0**
G30M	**tAoh Zraii Nji**	**91.38**	**23**	P		**P**	**23 53 51.0**	**-0.1**
	baz=277,SNR=5.4							
HOPEN	**Hopen**	**91.46**	**347**	*e*P		**P**	**23 53 49.4**	**-1.8**
P29M	**Windy Craggy**	**91.47**	**30**	P		**P**	**23 53 52.9**	**+1.3**
	baz=275							
F30M	**Barrier River**	**91.47**	**22**	P		**P**	**23 53 51.2**	**-0.2**
F30M				IAmb		IAmb	23 53 52.4	
	comp=Z,17nm,0.9s							
F30M	**Barrier River**	**91.47**	**22**	P		**P**	**23 53 51.9**	**+0.5**
	baz=277,SNR=5.5							
HYT	**Haines Junctio**	**91.47**	**29**	P		**P**	**23 53 52.0**	**+0.3**
HYT	**Haines Junctio**	**91.47**	**29**	P		**P**	**23 53 52.8**	**+1.1**
	baz=276							
I30M	**Mount Dempster**	**91.52**	**25**	P		**P**	**23 53 51.8**	**0.0**
I30M	**Mount Dempster**	**91.52**	**25**	P		**P**	**23 53 52.1**	**+0.3**
	baz=277							
KIRS	**Kirsehir-Merke**	**91.56**	**309**	⇓P		**P**	**23 53 52.0**	**-0.6**
LODK	**Lodwar**	**91.59**	**273**	P		**P**	**23 53 52.6**	**-0.5**
LODK	**Lodwar**	**91.59**	**273**	P		**P**	**23 53 53.9**	**+0.7**
ILGA	**Ilgaz**	**91.61**	**311**	IAmb		IAmb	23 53 57.9	
	comp=Z,20nm,0.9s							
N30M	**Aishikik Lake**	**91.61**	**29**	P		**P**	**23 53 53.1**	**+0.9**
	baz=276							
J30M	**Hart River**	**91.61**	**25**	P		**P**	**23 53 52.3**	**0.0**
J30M	**Hart River**	**91.61**	**25**	P		**P**	**23 53 53.3**	**+1.0**
	baz=277							
M30M	**Minto, Yukon**	**91.63**	**27**	P		**P**	**23 53 51.9**	**-0.4**
M30M	**Minto, Yukon**	**91.63**	**27**	P		**P**	**23 53 53.4**	**+1.1**
	baz=276,SNR=8.0							
BR131	**Keskin Array S**	**91.74**	**310**	P		**P**	**23 53 52.6**	**-0.8**
	SNR=8.2							
BR131	**Keskin Array S**	**91.74**	**310**	*i* P		**P**	**23 53 52.5**	**-1.0**
BRTR	**Keskin Array B**	**91.74**	**310**	P		**P**	**23 53 51.7**	**-1.8**
BRTR	**Keskin Array B**	**91.74**	**310**	P		**P**	**23 53 52.2**	**-1.2**
	comp=Z,6.1nm,0.9s,baz=116,slow=5.6,SNR=39							
BRTR				PP		**PP**	**23 57 33.0**	**-0.9**
	comp=Z,6.3nm,1.1s,baz=101,slow=6.4,SNR=8.9							
	comp=Z,6.1nm,0.9s							
BRTR	**Keskin Array B**	**91.74**	**310**	*ce*P		**P**	**23 53 52.2**	**-1.2**
BRTR				pmax		pmax		
	comp=Z,7.0nm,0.9s							
P30M	**Million Dollar**	**91.81**	**30**	P		**P**	**23 53 54.7**	**+1.5**
	baz=276							
MAYO	**Mayo, Yukon**	**91.92**	**26**	P		**P**	**23 53 54.1**	**+0.5**
MAYO				IAmb		IAmb	23 53 55.8	
	comp=Z,35nm,1.0s							
MAYO	**Mayo, Yukon**	**91.92**	**26**	P		**P**	**23 53 54.9**	**+1.3**
	baz=277							
O30N	**Mendenhall**	**92.17**	**29**	P		**P**	**23 53 55.7**	**+0.9**
	baz=277							
PLBC	**Pleasant Camp**	**92.18**	**31**	P		**P**	**23 53 55.2**	**+0.4**
	baz=276							
INK	**Inuvik**	**92.21**	**22**	P		**P**	**23 53 54.6**	**-0.1**
	baz=279,SNR=6.5							
N31M	**Braeburn, Yuko**	**92.23**	**28**	P		**P**	**23 53 55.1**	**0.0**
N31M				IAmb		IAmb	23 53 57.0	
	comp=Z,28nm,1.1s							
N31M	**Braeburn, Yuko**	**92.23**	**28**	P		**P**	**23 53 55.6**	**+0.5**
	baz=277							
CSS	**Mathiatis**	**92.25**	**305**	IAmb		IAmb	23 54 02.0	
	comp=Z,27nm,0.9s							
F31M	**Tsiigehtchic**	**92.27**	**22**	IAmb		IAmb	23 53 55.6	
	comp=Z,13nm,0.8s							
F31M	**Tsiigehtchic**	**92.27**	**22**	P		**P**	**23 53 55.1**	**0.0**
	baz=279,SNR=6.8							
H31M	**Peel River**	**92.28**	**24**	P		**P**	**23 53 55.4**	**+0.2**
	baz=278							
ANTO	**Ankara**	**92.38**	**310**	P		**P**	**23 53 55.2**	**-1.1**
ANTO	**Ankara**	**92.38**	**310**	P		**P**	**23 53 55.2**	**-1.1**
ANTO				pmax		pmax		
	comp=Z,7.0nm,1.0s							
S31K	**Pelican**	**92.42**	**32**	P		**P**	**23 53 56.7**	**+0.8**
	baz=276							
SKAG	**Skagway**	**92.70**	**30**	P		**P**	**23 53 56.2**	**-1.0**
SKAG				IAmb		IAmb	23 53 59.2	
	comp=Z,24nm,0.9s							
SKAG	**Skagway**	**92.70**	**30**	P		**P**	**23 53 58.0**	**+0.8**
	baz=277							
ARA0	**ARCESS Array S**	**92.74**	**340**	*e*P		**P**	**23 53 56.3**	**-0.9**
ARCES	**ARCESS Array B**	**92.74**	**340**	P		**P**	**23 53 56.5**	**-0.8**
ARCES				IAmb		IAmb	23 54 03.4	
	comp=Z,38nm,1.5s							
ARCES	**ARCESS Array B**	**92.74**	**340**	P		**P**	**23 53 56.1**	**-1.1**
	comp=Z,6.6nm,0.5s,baz=85,slow=5.8,SNR=96							
	comp=Z,6.6nm,0.5s							
ARCES	**ARCESS Array B**	**92.74**	**340**	P		**P**	**23 53 56.5**	**-0.8**
ARCES				pmax		pmax		
	comp=Z,38nm,1.5s							
WHY	**Whitehorse**	**92.77**	**29**	P		**P**	**23 53 57.9**	**+0.2**
WHY	**Whitehorse**	**92.77**	**29**	P		**P**	**23 53 58.9**	**+1.2**
	baz=278							
M31M	**Drury Creek, Y**	**92.79**	**28**	P		**P**	**23 53 57.4**	**-0.2**
M31M				IAmb		IAmb	23 54 05.4	
	comp=Z,15nm,1.2s							
M31M	**Drury Creek, Y**	**92.79**	**28**	P		**P**	**23 53 58.6**	**+1.0**
	baz=278							
SPB2	**Spitsbergen Ar**	**92.82**	**349**	P		**P**	**23 53 56.7**	**-0.8**
SPB2				IAmb		IAmb	23 54 12.0	
	comp=Z,25nm,0.9s							
SPA0	**Spitsbergen Ar**	**92.82**	**349**	*e*P		**P**	**23 53 56.8**	**-0.7**
SPITS	**Spitsbergen Ar**	**92.82**	**349**	P		**P**	**23 53 56.8**	**-0.7**
	comp=Z,11nm,0.6s,baz=91,slow=8.8,SNR=22							
	comp=Z,11nm,0.6s							
HAMF	**Hammerfest**	**93.11**	**341**	*e*P		**P**	**23 53 57.0**	**-1.9**
FARO	**Faro, Yukon**	**93.27**	**28**	P		**P**	**23 54 00.0**	**+0.2**
FARO	**Faro, Yukon**	**93.27**	**28**	P		**P**	**23 54 01.2**	**+1.3**
	baz=279							
R32K	**Eaglecrest**	**93.28**	**32**	P		**P**	**23 54 00.5**	**+0.6**
R32K				IAmb		IAmb	23 54 02.3	
	comp=Z,16nm,0.8s							
R32K	**Eaglecrest**	**93.28**	**32**	P		**P**	**23 54 01.1**	**+1.2**
	baz=278							
KBS	**Kingsbay**	**93.35**	**350**	*e*P		**P**	**23 53 59.6**	**-0.3**
KBS	**Kingsbay**	**93.35**	**350**	*i* P		**P**	**23 53 59.6**	**-0.3**
P32M	**Atlin**	**93.50**	**30**	P		**P**	**23 54 01.7**	**+0.7**
P32M				IAmb		IAmb	23 54 10.7	
	comp=Z,28nm,1.4s							
P32M	**Atlin**	**93.50**	**30**	P		**P**	**23 54 02.1**	**+1.1**
	baz=279							
MDUB	**Mudurnu**	**93.56**	**311**	P		**P**	**23 54 01.2**	**-0.6**
MDUB				IAmb		IAmb	23 54 19.8	
	comp=Z,12nm,0.9s							
N32M	**Quiet Lake**	**93.57**	**29**	P		**P**	**23 54 01.4**	**+0.1**
N32M	**Quiet Lake**	**93.57**	**29**	P		**P**	**23 54 02.1**	**+0.8**
	baz=279							
KTK1	**Kautokeino**	**93.64**	**339**	*e*P		**P**	**23 54 00.1**	**-1.2**
SAHE	**Sakarya_HENDEK**	**93.78**	**311**	⇑P		**P**	**23 54 01.6**	**-1.1**
P33M	**Teslin, Yukon**	**93.85**	**30**	P		**P**	**23 54 03.4**	**+0.7**
	baz=280							
AKASG	**Malin Array Be**	**93.89**	**321**	P		**P**	**23 54 02.5**	**-0.4**
AKASG	**Malin Array Be**	**93.89**	**321**	P		**P**	**23 54 01.6**	**-1.3**
	comp=Z,2.6nm,0.8s,baz=72,slow=3.2,SNR=6.8							
AKASG				PP		**PP**	**23 57 51.1**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=66,slow=7.3,SNR=2.3							
	comp=Z,2.6nm,0.8s							
AKASG	**Malin Array Be**	**93.89**	**321**	*ce*P		**P**	**23 54 01.6**	**-1.3**
	comp=Z,4.0nm,0.9s							
AKBB	**Malin Array Si**	**93.89**	**321**	P		**P**	**23 54 02.1**	**-0.7**
AKBB				IAmb		IAmb	23 54 08.9	
	comp=Z,14nm,1.2s							
AKBB	**Malin Array Si**	**93.89**	**321**	*ce*P		**P**	**23 54 01.2**	**-1.7**
AKBB				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KIEV	**Kiev**	**93.90**	**321**	P		**P**	**23 54 03.1**	**+0.2**
KIEV				IAmb		IAmb	23 54 08.9	
	comp=Z,12nm,1.2s							
KIEV	**Kiev**	**93.90**	**321**	P		**P**	**23 54 03.1**	**+0.2**
KIEV				pmax		pmax		
	comp=Z,12nm,1.3s							
PURM	**Purcari**	**93.94**	**317**	⇓P		**P**	**23 54 02.7**	**-0.5**
FINES	**FINESS Array B**	**94.03**	**332**	P		**P**	**23 54 01.6**	**-1.6**
	comp=Z,2.3nm,0.5s,baz=65,slow=4.7,SNR=32							
	comp=Z,2.3nm,0.5s							
A36M	**Sachs Harbour**	**94.12**	**17**	P		**P**	**23 54 04.4**	**+1.0**
	baz=287							
MMPY	**Sheldon Lake,**	**94.15**	**27**	P		**P**	**23 54 04.1**	**+0.2**
MMPY				IAmb		IAmb	23 54 05.9	
	comp=Z,20nm,0.9s							
MMPY	**Sheldon Lake,**	**94.15**	**27**	P		**P**	**23 54 05.1**	**+1.1**
	baz=281							
BORA	**Eskisehir**	**94.18**	**310**	IAmb		IAmb	23 54 09.1	
	comp=Z,9.3nm,1.0s							
MNK	**Minsk**	**94.20**	**325**	*i* P		**P**	**23 54 02.7**	**-1.5**
MNK				*i*			23 57 50.8	
MNK				*i* PPP		PPP	23 59 52.4	
MNK				*i* S		**SKSac**	**00 04 26.0**	**-1.2**
MNK				*i* SS		**SS**	**00 11 28.7**	**+0.8**
MNK				*i* SSS		SSS	00 15 11.2	
MNK				pmax		pmax		
	comp=N,6.0nm,0.8s							
MNK				pmax		pmax		
	comp=E,6.0nm,0.9s							
MNK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
Q32M	**Nakina River**	**94.33**	**31**	P		**P**	**23 54 05.8**	**+0.8**
	baz=280							
U33K	**Whale Pass**	**94.35**	**34**	P		**P**	**23 54 05.7**	**+0.8**
	baz=279							
CRAG	**Craig**	**94.45**	**34**	P		**P**	**23 54 06.5**	**+1.1**
	baz=279							
JETT	**Jettan, Norway**	**94.47**	**340**	*e*P		**P**	**23 54 04.0**	**-1.3**
SORM	**Soroca**	**94.78**	**318**	⇓P		**P**	**23 54 06.1**	**-0.9**
SORM	**Soroca**	**94.78**	**318**	P		**P**	**23 54 06.1**	**-0.9**
JURR	**Jurilovca**	**94.83**	**315**	⇑P		**P**	**23 54 06.5**	**-0.8**
ELL	**Elmali**	**94.89**	**307**	P		**P**	**23 54 07.3**	**-0.7**
ELL				IAmb		IAmb	23 54 07.8	
	comp=Z,8.9nm,0.7s							
ELL	**Elmali**	**94.89**	**307**	P		**P**	**23 54 07.3**	**-0.7**
ELL				pmax		pmax		
	comp=Z,9.0nm,0.7s							
R33M	**Jennings River**	**94.92**	**30**	P		**P**	**23 54 07.6**	**0.0**
R33M				IAmb		IAmb	23 54 09.5	
	comp=Z,14nm,0.8s							
R33M	**Jennings River**	**94.92**	**30**	P		**P**	**23 54 08.8**	**+1.2**
	baz=281							
S34M	**Telegraph Cree**	**95.11**	**32**	P		**P**	**23 54 08.4**	**0.0**
S34M				IAmb		IAmb	23 54 10.8	
	comp=Z,13nm,0.9s							
S34M	**Telegraph Cree**	**95.11**	**32**	P		**P**	**23 54 09.7**	**+1.3**
	baz=281							
TPGR	**Topolog**	**95.14**	**315**	⇑P		**P**	**23 54 08.3**	**-0.6**
TIRR	**Tirgusor**	**95.19**	**315**	IAmb		IAmb	23 54 09.1	
	comp=Z,7.4nm,0.8s							
TIRR	**Tirgusor**	**95.19**	**315**	⇓P		**P**	**23 54 07.8**	**-1.3**
TIRR	**Tirgusor**	**95.19**	**315**	P		**P**	**23 54 07.7**	**-1.3**
VLDR	**Vladesti**	**95.25**	**316**	⇓P		**P**	**23 54 08.3**	**-1.0**
C36M	**Paulatuk**	**95.30**	**20**	P		**P**	**23 54 08.9**	**0.0**
	baz=288							
CFR	**Carcaliu**	**95.30**	**315**	⇓P		**P**	**23 54 08.8**	**-0.7**
CFR	**Carcaliu**	**95.30**	**315**	P		**P**	**23 54 08.8**	**-0.7**
V35K	**Ketchikan**	**95.32**	**34**	P		**P**	**23 54 09.9**	**+0.6**
	baz=280							
SCTR	**Scanteiesti**	**95.34**	**316**	⇓P		**P**	**23 54 09.8**	**+0.2**
NOR	**Nord**	**95.44**	**355**	*i* P		**P**	**23 54 08.6**	**-0.8**
NOR				IAmb		IAmb	23 54 09.4	
	comp=Z,3.0nm,0.7s							
HARR	**Harsova**	**95.51**	**315**	⇓P		**P**	**23 54 10.3**	**-0.2**
HARR	**Harsova**	**95.51**	**315**	P		**P**	**23 54 10.2**	**-0.2**
ELIB	**Princess Elisa**	**95.54**	**198**	*d*P		**P**	**23 54 11.7**	**+1.5**
	comp=Z,13nm,0.8s							
DLBC	**Dease Lake**	**95.58**	**31**	P		**P**	**23 54 11.6**	**+1.0**
	baz=282							
TGTN	**Hyland Airport**	**95.76**	**28**	P		**P**	**23 54 12.4**	**+1.0**
	baz=284							
MANT	**Manisa**	**95.78**	**309**	P		**P**	**23 54 10.9**	**-1.2**
MANT				IAmb		IAmb	23 54 12.2	
	comp=Z,16nm,1.1s							
WTLY	**Watson Lake, Y**	**95.84**	**29**	P		**P**	**23 54 11.7**	**0.0**
WTLY				IAmb		IAmb	23 54 13.6	
	comp=Z,23nm,1.0s							
WTLY	**Watson Lake, Y**	**95.84**	**29**	P		**P**	**23 54 12.5**	**+0.8**
	baz=283							
BAND	**Balkesir-Ban**	**95.92**	**311**	⇑P		**P**	**23 54 11.8**	**-0.7**
TESR	**Tescani**	**96.15**	**317**	⇓P		**P**	**23 54 12.7**	**-0.6**
VRI	**Vrincioaia**	**96.19**	**316**	⇓P		**P**	**23 54 13.3**	**-0.2**
VRI	**Vrincioaia**	**96.19**	**316**	P		**P**	**23 54 13.3**	**-0.2**
PLOR	**Plostina**	**96.24**	**316**	⇑P		**P**	**23 54 13.1**	**-0.7**
PLOR	**Plostina**	**96.24**	**316**	P		**P**	**23 54 13.1**	**-0.7**
NEHR	**Nehoiu**	**96.55**	**316**	⇑P		**P**	**23 54 15.0**	**-0.2**
TURR	**Turia**	**96.65**	**317**	⇓P		**P**	**23 54 14.4**	**-1.3**
STEI	**Steigen**	**96.78**	**339**	*e*P		**P**	**23 54 13.5**	**-2.2**
MLR	**Muntele Rosu**	**96.79**	**316**	IAmb		IAmb	23 54 16.8	
	comp=Z,13nm,0.7s							
MLR	**Muntele Rosu**	**96.79**	**316**	⇑P		**P**	**23 54 16.0**	**-0.5**
MLR	**Muntele Rosu**	**96.79**	**316**	P		**P**	**23 54 15.9**	**-0.5**
BURAR	**Bucovina Array**	**96.94**	**318**	P		**P**	**23 54 16.6**	**-0.5**
BURAR				IAmb		IAmb	23 54 25.0	
	comp=Z,13nm,0.9s							
BURAR	**Bucovina Array**	**96.94**	**318**	⇑P		**P**	**23 54 17.1**	**+0.1**
BURAR	**Bucovina Array**	**96.94**	**318**	P		**P**	**23 54 17.1**	**+0.1**
BUR08	**Bucovina Ar. S**	**96.95**	**318**	IAmb		IAmb	23 54 24.7	
	comp=Z,15nm,0.9s							
FAUS	**Fauske**	**96.96**	**339**	*e*P		**P**	**23 54 15.1**	**-1.4**
ELND	**Elena**	**97.23**	**313**	⇓P		**P**	**23 54 17.4**	**-0.9**
KARP	**Karpathos**	**97.23**	**306**	P		**P**	**23 54 17.6**	**-0.9**
LOF	**Lofoten**	**97.30**	**340**	*e*P		**P**	**23 54 16.4**	**-1.6**
LIRD	**Liard River Hi**	**97.34**	**30**	P		Pdif	23 54 19.2	+0.7
	baz=285							
EZN	**Ezine**	**97.34**	**310**	⇑P		**P**	**23 54 18.0**	**-0.8**
EZN	**Ezine**	**97.34**	**310**	P		**P**	**23 54 18.0**	**-0.8**
VOIR		**97.42**	**316**	⇑P		**P**	**23 54 18.1**	**-1.1**
VOIR		**97.42**	**316**	P		**P**	**23 54 18.1**	**-1.1**
WRGLY	**Wrigley**	**97.45**	**25**	P		Pdif	23 54 19.6	+0.7
	baz=288							
MOR8	**Moi Rana**	**97.70**	**338**	*e*P		**P**	**23 54 17.1**	**-2.8**
ARR	**Arges**	**97.72**	**316**	⇑P		**P**	**23 54 20.2**	**-0.4**
RDO	**Rodhopi**	**97.74**	**312**	IAmb		IAmb	23 54 26.4	
	comp=Z,8.5nm,1.1s							
RAUS	**Rausandaksla**	**97.76**	**338**	*e*P		**P**	**23 54 18.4**	**-1.7**
TOAD	**Toad River Com**	**97.92**	**30**	P		Pdif	23 54 21.6	+0.5
	baz=286							
VAGH	**Vaagaholmen**	**97.93**	**338**	*e*P		**P**	**23 54 17.2**	**-3.6**
PLVB	**Pleven**	**98.06**	**314**	⇓P		**P**	**23 54 21.0**	**-1.0**
KOTAN	**Kotaneelee Air**	**98.13**	**29**	P		Pdif	23 54 22.6	+0.6
	baz=287							
STOK	**Stokkvaagen**	**98.18**	**338**	*e*P		**P**	**23 54 20.4**	**-1.6**
LEIR	**Leirfjorden**	**98.23**	**338**	*e*P		**P**	**23 54 20.6**	**-1.7**
DRGR		**98.77**	**318**	⇓P		**P**	**23 54 24.5**	**-0.7**
DRGR		**98.77**	**318**	P		**P**	**23 54 24.5**	**-0.7**
LSZ	**Lusaka**	**98.90**	**255**	P		**P**	**23 54 25.4**	**-1.1**
LSZ				IAmb		IAmb	23 54 39.1	
	comp=Z,7.5nm,0.9s							
LSZ	**Lusaka**	**98.90**	**255**	P		Pdif	23 54 26.6	+0.1
LSZ	**Lusaka**	**98.90**	**255**	P		**P**	**23 54 25.4**	**-1.1**
LSZ				pmax		pmax		
	comp=Z,8.0nm,1.0s							
NSS	**Namsos**	**99.29**	**337**	*e*P		**Pdif**	**23 54 25.4**	**-1.6**
BLKB	**Belogradchik**	**99.41**	**315**	⇓P		**Pdif**	**23 54 27.5**	**-0.6**
DAG	**Danmarks Havn**	**99.60**	**352**	*i* P		**Pdif**	**23 54 27.5**	**-0.7**
DAG				IAmb		IAmb	23 54 27.8	
	comp=Z,12nm,0.6s							
HFS	**Hagfors**	**100.22**	**332**	P		**Pdif**	**23 54 29.8**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=104,slow=3.1,SNR=11							
BOSA	**Boshof**	**101.00**	**241**	P		**Pdif**	**23 54 36.0**	**+0.4**
	comp=Z,5.3nm,1.2s,baz=99,slow=20,SNR=2.0							
NB2	**NORSAR Subarra**	**101.01**	**333**	PKPdf		**Pdif**	**23 54 31.8**	**-3.0**
	comp=Z,1.9nm,0.8s,baz=44,slow=1.9							
NOA	**NORSAR Array B**	**101.01**	**333**	P		**Pdif**	**23 54 32.7**	**-2.1**
	comp=Z,1.4nm,0.8s,baz=68,slow=4.6,SNR=4.9							
NEEM	**North Greenlan**	**101.25**	**360**	*i* P		**Pdif**	**23 54 35.9**	**0.0**
MORC	**Moravsky Berou**	**101.42**	**321**	*e*PP		**PP**	**23 58 50.8**	**+3.0**
YKA	**Yellowknife Ar**	**101.49**	**25**	P		**Pdif**	**23 54 36.9**	**0.0**
	comp=Z,4.2nm,1.0s,baz=301,slow=6.0,SNR=6.0							
YKA				PKiKP		**PKiKP**	**23 59 00.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=320,slow=2.6,SNR=2.4							
YKA	**Yellowknife Ar**	**101.49**	**25**	*i* P		**Pdif**	**23 54 37.4**	**+0.6**
YKA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
DBG	**Daneborg**	**101.87**	**351**	*i* P		**Pdif**	**23 54 37.6**	**-0.7**
VRAC	**Vranov**	**102.14**	**321**	*e*PP		**PKiKP**	**23 58 55.6**	**-6.2**
KRUC	**Moravsky**	**102.34**	**321**	*e*PP		**PKiKP**	**23 58 58.0**	**-4.1**
RONA	**Rosalia, Austr**	**102.79**	**320**	*e*PKiKP		**PKiKP**	**23 59 01.4**	**-1.6**
	comp=Z,12nm,1.6s							
CONA	**Conrad Observa**	**103.01**	**320**	*e*PP		**PP**	**23 58 59.3**	**-0.5**
	comp=Z,6.0nm,1.2s							
SNAA	**Sanae**	**103.04**	**194**	Pdiff		**Pdif**	**23 54 44.1**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=226,slow=8.5,SNR=8.3							
CLL	**Collm**	**103.70**	**324**	*e*PP		**PKiKP**	**23 59 04.0**	**-0.5**
	comp=Z,18nm,1.4s							
CLL				*e*PPP		PPP	00 01 20.0	
SOKA	**Soboth**	**103.91**	**319**	*e*PP		**PP**	**23 59 06.8**	**+0.2**
	comp=Z,16nm,1.3s							
KHC	**Kasperske Hory**	**104.08**	**322**	*e*PP		**PKiKP**	**23 59 05.5**	**+0.2**
GERES	**GERESS Array B**	**104.09**	**321**	Pdiff		**Pdif**	**23 54 48.5**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=59,slow=6.2,SNR=3.7							
GERES				PP		**PP**	**23 59 10.4**	**+2.5**
	comp=Z,2.9nm,0.8s,baz=70,slow=6.0,SNR=8.9							
LESA	**Schwarzleotal**	**105.21**	**320**	PP		**PP**	**23 59 17.2**	**+1.1**
	comp=Z,12nm,1.3s							
WTTA	**Wattenberg**	**105.93**	**320**	*i* PP		**PP**	**23 59 22.2**	**+0.7**
	comp=Z,16nm,1.3s							
WATA	**Walderalm**	**105.94**	**320**	*e*PKiKP		**PKiKP**	**23 59 10.6**	**+1.6**
	comp=Z,6.0nm,1.1s							
WATA				*e*PP		**PP**	**23 59 23.3**	**+1.7**
	comp=Z,20nm,1.4s							
SQTA	**Sankt Quirin**	**106.22**	**320**	*e*PKiKP		**PKiKP**	**23 59 09.3**	**-0.1**
	comp=Z,18nm,1.3s							
SQTA				*e*PP		**PP**	**23 59 26.3**	**+2.7**
	comp=Z,18nm,1.3s							
MOTA	**Moosalm**	**106.24**	**320**	*e*PP		**PP**	**23 59 26.8**	**+2.9**
	comp=Z,24nm,1.2s							
RETA	**Reutte**	**106.41**	**321**	*e*PP		**PP**	**23 59 28.4**	**+3.5**
	comp=Z,27nm,1.3s							
FETA	**Feichten**	**106.59**	**320**	*i* PP		**PP**	**23 59 29.4**	**+3.0**
	comp=Z,15nm,1.2s							
DAVA	**Damuels**	**107.04**	**321**	*e*PKiKP		**PKiKP**	**23 59 12.3**	**+1.3**
	comp=Z,12nm,1.5s							
DAVA				*e*PP		**PP**	**23 59 29.3**	**-0.4**
	comp=Z,28nm,2.1s							
NVAR	**Mina Array Bea**	**108.22**	**49**	PKiKP		**PKiKP**	**23 59 14.4**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=255,slow=3.4,SNR=4.0							
NVAR				PP		**PP**	**23 59 38.0**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=311,slow=7.5,SNR=2.0							
KEST	**Kesra**	**111.34**	**309**	PP		**PP**	**00 00 01.8**	**+0.6**
	comp=Z,8.9nm,1.0s,baz=73,slow=7.8,SNR=7.7							
PDAR	**Pinedale Array**	**112.90**	**42**	PKiKP		**PKiKP**	**23 59 22.4**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=103,slow=2.0,SNR=8.1							
PDAR				PP		**PP**	**00 00 12.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=272,slow=3.7,SNR=4.8							
PDAR				PKKPbc		**PKKPbc**	**00 10 10.2**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=124,slow=6.4,SNR=6.5							
ULM	**Lac du Bonnet**	**116.85**	**29**	PKP		**PKPdf**

	12nm,1.0s								
ASAR	**Alice Springs**	**23.80**	**211**	P		**P**	**00 00 32.5**	**+0.9**	
	2.4nm,0.7s,baz=43,slow=7.2,SNR=17								
	2.4nm,0.7s								
CMAR	**Chiang Mai Arr**	**51.95**	**296**	P		**P**	**00 04 27.6**	**-0.2**	
	1.3nm,0.3s,baz=104,slow=7.6,SNR=4.6								
	1.3nm,0.3s								
KURBB	**Kurchatov Arra**	**79.06**	**323**	P		**P**	**00 07 21.7**	**-0.7**	
	0.6nm,0.9s,baz=104,slow=3.9,SNR=4.0								
	0.6nm,0.9s								
ILAR	**Eielson Array**	**83.08**	**23**	P		**P**	**00 07 43.8**	**+0.2**	
	0.3nm,0.8s,baz=260,slow=5.3,SNR=2.2								
	0.3nm,0.8s								
BVAR	**Borovoye Array**	**84.57**	**324**	P		**P**	**00 07 51.9**	**+0.4**	
	0.7nm,0.8s,baz=98,slow=8.9,SNR=3.1								
	0.7nm,0.8s								

AFAD ***12*** *00:05:07.8, 38˚.44N×45˚.39E, h7km± 1km, ML2.2*
AZER ***12*** *00:05:09.0, 38˚.56N×45˚.06E, h2km, ml2.9*
TEH ***12*** *00:05:11.1, 38˚.42N×45˚.29E, h12km± 53km*
ISC 12 00:05:11.2±1.1**, 38˚.43N**±0˚.02×**45˚.29E**±0˚.02**, h6**km± 11km**,**
n41, σ1§**49/70, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
ISHB	**Shabestar**	**0.29**	**119**	Pg		**Pg**	**00 05 16.8**		**-0.2**
ISHB				Sg		**Sb**	**00 05 22.6**		**-1.5**
IMRD	**Marand**	**0.43**	**48**	Pg		**Pg**	**00 05 20.3**		**+0.7**
ITBZ	**Tabriz**	**0.70**	**106**	Pg		**Pg**	**00 05 23.8**		**-0.8**
ORD	**Ordubad**	**0.74**	**47**	Pg		**Pg**	**00 05 25.7**		**+0.2**
ORD				Sg		**Sb**	**00 05 36.7**		**-0.3**
NAX	**Nakhchivan**	**0.76**	**12**	P		**Pg**	**00 05 25.4**		**-0.5**
NAX				S		**Sg**	**00 05 36.4**		**+0.5**
IAZR	**Azarshahr**	**0.92**	**144**	Pg		**Pg**	**00 05 28.8**		**-0.2**
SBZ	**Shahbuz**	**0.99**	**12**	S		**Sb**	**00 05 43.6**		**-0.6**
OZAP	**Van, Ozalp-Mer**	**1.05**	**283**	P		**Pb**	**00 05 29.2**		**-2.6**
OZAP				S		**Sb**	**00 05 45.3**		**-0.6**
OZAP				*i*	IAML		00 05 50.0		
	comp=E,95nm,0.6s								
OZAP				*i*	IAML		00 05 51.0		
	comp=N,68nm,0.8s								
YOVA	**Hakkari_Yksek**	**1.15**	**224**	P		**Pb**	**00 05 31.0**		**-2.7**
YOVA				*i*	IAML		00 05 52.0		
	comp=E,64nm,0.5s								
YOVA				*i*	IAML		00 05 53.0		
	comp=N,47nm,0.6s								
HYR	**Heyderabad**	**1.34**	**345**	P		**Pn**	**00 05 34.1**		**-2.3**
HYR				S		**Sb**	**00 05 52.3**		**-1.8**
IHRS	**Heris**	**1.38**	**94**	Pg		**Pb**	**00 05 37.2**		**-0.3**
VMUR	**Van-Muradiye**	**1.46**	**293**	P		**Pn**	**00 05 36.7**		**-1.6**
VMUR				*i*	IAML		00 05 59.0		
	comp=E,58nm,0.7s								
VMUR				S		**Sg**	**00 05 59.6**		**+1.4**
VMUR				*i*	IAML		00 06 00.0		
	comp=N,86nm,0.9s								
TVAN	**Van**	**1.48**	**275**	P		**Pg**	**00 05 40.0**		**+0.3**
HAKT	**HAKKARI**	**1.52**	**236**	P		**Pn**	**00 05 38.3**		**-0.8**
HAKT				*i*	IAML		00 06 06.0		
	comp=E,33nm,0.8s								
HAKT				*i*	IAML		00 06 11.0		
	comp=N,18nm,0.6s								
HAKT	**HAKKARI**	**1.52**	**236**	P		**Pb**	**00 05 39.6**		**-0.4**
HAKT				S		**Sg**	**00 06 05.2**		**+5.0**
DYDN	**Diyadin**	**1.68**	**312**	P		**Pb**	**00 05 41.4**		**-1.2**
DYDN				S		**Sg**	**00 06 06.7**		**+1.5**
MAHB	**Mahabad**	**1.69**	**169**	Pg		**Pb**	**00 05 42.1**		**-0.6**
IGDI	**IGDIR**	**1.72**	**327**	P		**Pn**	**00 05 40.3**		**-1.5**
IGDI				S		**Sg**	**00 06 05.6**		**-1.0**
IGDI				*i*	IAML		00 06 12.0		
	comp=N,37nm,0.5s								
IGDI				*i*	IAML		00 06 15.0		
	comp=E,36nm,0.9s								
IGDI	**IGDIR**	**1.72**	**327**	P		**Pn**	**00 05 40.4**		**-1.3**
IGDI				S		**Sb**	**00 06 05.4**		**+0.2**
QRD	**Qoradiz**	**1.89**	**56**	P		**Pg**	**00 05 47.6**		**+0.1**
QRD				S		**Sg**	**00 06 11.8**		**-0.1**
IHSH	**Hashtrud**	**1.92**	**125**	Pn		**Pb**	**00 05 45.8**		**-1.0**
KOTA	**Agri, Merkez-K**	**2.13**	**311**	P		**Pn**	**00 05 48.1**		**+0.6**
KOTA				S		**Sg**	**00 06 20.7**		**+1.1**
KOTA				*i*	IAML		00 06 21.0		
	comp=N,7.8nm,1.0s								
KOTA				*i*	IAML		00 06 27.0		
	comp=E,14nm,1.1s								
DORK	**Agr/Tutak/Do**	**2.18**	**297**	P		**Pn**	**00 05 48.4**		**+0.2**
DORK				*i*	IAML		00 06 19.0		
	comp=E,7.7nm,1.3s								
DORK				*i*	IAML		00 06 25.0		
	comp=N,13nm,0.8s								
BLQ	**Beylaqan**	**2.19**	**53**	P		**Pb**	**00 05 51.0**		**-0.2**
BLQ				S		**Sg**	**00 06 20.6**		**-0.9**
AGDM	**Agdam**	**2.19**	**39**	P		**Pb**	**00 05 50.5**		**-0.7**
AGDM				S		**Sg**	**00 06 21.3**		**-0.4**
GDB	**GEDABAY**	**2.32**	**9**	P		**Pn**	**00 05 51.0**		**+1.0**
GDB				S		**Sb**	**00 06 23.4**		**+0.9**
GANJ	**Ganja**	**2.36**	**19**	P		**Pn**	**00 05 51.4**		**+1.0**
GANJ				S		**Sb**	**00 06 24.7**		**+1.3**
YRD	**Yardimli**	**2.36**	**77**	P		**Pb**	**00 05 55.0**		**+0.8**
YRD				S		**Sg**	**00 06 26.9**		**-0.1**
LRK	**Lerik**	**2.40**	**84**	P		**Pb**	**00 05 55.2**		**+0.4**
LRK				S		**Sg**	**00 06 29.7**		**+1.5**
GLBA	**Clilabad**	**2.55**	**70**	P		**Pb**	**00 05 56.0**		**-1.4**
GLBA				S		**Sg**	**00 06 32.8**		**-0.4**
EATA	**Eleskirt**	**2.61**	**304**	P		**Pb**	**00 05 57.9**		**-0.6**
EATA				S		**Sg**	**00 06 37.6**		**+2.5**
ZRD	**Zardab**	**2.62**	**44**	S		**Sg**	**00 06 33.0**		**-2.3**
LKRN	**Lenkeran, Azer**	**2.75**	**83**	P		**Pb**	**00 06 00.1**		**-0.6**
LKRN				S		**Sg**	**00 06 40.0**		**+0.5**
ASTR	**Astara**	**2.75**	**86**	P		**Pb**	**00 05 59.9**		**-0.8**
ASTR				S		**Sg**	**00 06 38.3**		**-1.2**
VSHL	**Vashlovani**	**2.93**	**17**	P		**Pb**	**00 06 05.0**		**+1.2**
VSHL				S		**Sg**	**00 06 46.5**		**+1.2**
DGRG	**David-gareji**	**3.02**	**1**	P		**Pb**	**00 06 05.2**		**-0.2**
DGRG				S		**Sg**	**00 06 47.7**		**-0.6**
SEKA	**Sheki**	**3.14**	**27**	P		**Pb**	**00 06 04.0**		**-3.5**
SEKA				S		**Sb**	**00 06 43.6**		**-2.4**
QBL	**Gabala**	**3.19**	**37**	P		**Pn**	**00 06 04.4**		**+2.5**
QBL				S		**Sb**	**00 06 46.8**		**-0.6**
IML	**Ismayilli**	**3.25**	**42**	P		**Pn**	**00 06 04.6**		**+1.8**
IML				S		**Sb**	**00 06 47.8**		**-1.4**
ZKTA	**Zakatala**	**3.37**	**17**	P		**Pn**	**00 06 05.7**		**+1.4**
ZKTA				S		**Sn**	**00 06 46.8**		**+2.2**
PQL	**Pirkuli**	**3.47**	**46**	P		**Pn**	**00 06 08.6**		**+2.7**
PQL				S		**Sb**	**00 06 53.5**		**-2.1**

IDC 12 00:05:45.8±5.0**, 61˚.62S**×**53˚.93W, h0**km**, mb3.9**/4,**
mbtmp3.9/4**, Error ellipse: s-maj=112.1km**
s-min=57.7km az=12.0, South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SNAA	**Sanae**	**21.83**	**139**	P		P	00 10 39.4		0.0
	1.1nm,0.6s,baz=272,slow=18,SNR=9.7								
	1.1nm,0.6s								
VNDA	**Vanda**	**39.37**	**192**	P		P	00 13 16.1		-0.1
	0.7nm,0.4s,baz=198,slow=9.5,SNR=10								
	0.7nm,0.4s								
ASAR	**Alice Springs**	**94.78**	**187**	P		P	00 19 10.2		+1.0
	0.4nm,0.6s,baz=166,slow=5.2,SNR=4.2								
	0.4nm,0.6s								
WRA	**Warrnunga Arr**	**98.45**	**188**	P		P	00 19 24.4		-1.4
	0.3nm,0.6s,baz=161,slow=3.9,SNR=6.4								
	0.3nm,0.6s								

HEL ***12*** *00:16:10.8±0.3, 67˚.85N×19˚.96E, h0km, ML2.0, Explosion*
UPP ***12*** *00:16:11.8±0.0, 67˚.82N×20˚.20E, h0km, ML2.3, Suspected explosion*
IDC ***12*** *00:16:13.1±0.9, 67˚.81N×20˚.80E, h0km, mbtmp3.2/5, ML2.0/4, Error ellipse: s-maj=15.0km s-min=6.3km az=119.0*
ISC 12 00:16:12.0±0.7**, 67˚.82N**±0˚.02×**20˚.26E**±0˚.02**, h0km, n38,**
σ1§**20/58, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KUA	**Kurravaara**	**0.14**	**12**	P		**Pg**	**00 16 14.8**		**0.0**
	baz=220								
KUA				S		**Sg**	**00 16 16.8**		**+0.3**
RATU	**Laukkuluspa**	**0.25**	**272**	P		**Pg**	**00 16 16.3**		**-0.5**
RATU				S		**Sg**	**00 16 19.9**		**-0.2**
NIKU	**Nikkaluokta**	**0.47**	**277**	P		**Pg**	**00 16 20.2**		**-0.7**
NIKU				S		**Sg**	**00 16 26.8**		**-0.2**
LANU	**Lannavaara**	**0.70**	**70**	P		**Pg**	**00 16 25.4**		**+0.1**
LANU	**Lannavaara**	**0.70**	**70**	PG		**Pg**	**00 16 25.4**		**+0.1**
LANU				SG		**Sg**	**00 16 35.3**		**+1.0**
DUNU	**Dundret**	**0.71**	**170**	P		**Pg**	**00 16 25.3**		**-0.2**
DUNU				S		**Sg**	**00 16 34.9**		**+0.3**
MASU	**Masugnsbyn**	**0.76**	**118**	P		**Pg**	**00 16 26.5**		**0.0**
SALU	**Saltoluokta**	**0.80**	**238**	P		**Pg**	**00 16 26.5**		**-0.8**
KIF	**Kilpisjarvi**	**1.21**	**9**	*e*P		**Pb**	**00 16 35.5**		**-0.2**
KIF	**Kilpisjarvi**	**1.21**	**9**	PN		**Pg**	**00 16 35.0**		**-0.2**
KIF				smax		smax	00 16 48.4		
	comp=Z,24nm,0.2s								
KIF				SN		**Sg**	**00 16 51.1**		**+0.2**
PAJU	**Pajala**	**1.36**	**124**	P		**Pg**	**00 16 37.1**		**-0.9**
PAJU	**Pajala**	**1.36**	**124**	PG		**Pg**	**00 16 36.8**		**-1.2**
	baz=301								
PAJU				SG		**Sg**	**00 16 55.5**		**0.0**
HEF	**Hetta**	**1.41**	**63**	*e*P		**Pn**	**00 16 38.1**		**-0.8**
HEF	**Hetta**	**1.41**	**63**	PG		**Pn**	**00 16 37.8**		**-1.1**
HEF				smax		smax	00 16 55.9		
	comp=Z,11nm,0.2s								
HEF				SG		**Sg**	**00 16 57.1**		**-0.1**
ERTU	**Ertsjaerv**	**1.47**	**148**	P		**Pn**	**00 16 39.2**		**-0.6**
ERTU	**Ertsjaerv**	**1.47**	**148**	PG		**Pn**	**00 16 38.9**		**-0.9**
ERTU				SG		**Sn**	**00 16 59.9**		**+0.2**
HARU	**Harads**	**1.68**	**170**	P		**Pn**	**00 16 42.7**		**+0.1**
KALU	**Kalix**	**2.31**	**147**	PB		**Pn**	**00 16 52.2**		**+1.0**
KALU				SG		**Sb**	**00 17 23.6**		**0.0**
TOF	**Tornio**	**2.37**	**136**	PB		**Pn**	**00 16 53.4**		**+1.4**
TOF				smax		smax	00 17 23.9		
	comp=Z,6.1nm,0.2s								
TOF				SB		**Sb**	**00 17 24.6**		**-0.5**
RNF	**Rovaniemi**	**2.55**	**116**	PB		**Pn**	**00 16 56.3**		**+1.8**
RNF				SB		**Sb**	**00 17 30.0**		**-0.3**
ARA0	**ARCESS Array S**	**2.58**	**46**	PB		**Pn**	**00 16 56.3**		**+1.3**
	baz=229								
ARA0				SB		**Sb**	**00 17 29.6**		**-1.7**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn		**Pn**	**00 16 55.7**		**+0.7**
	comp=Z,0.6nm,0.3s,baz=228,slow=15,SNR=53								
ARCES				Lg		Lg	00 17 28.7		
	comp=Z,2.0nm,0.3s,baz=230,slow=26,SNR=15								
	comp=Z,1.4nm,0.3s								
RAJF	**Raja-Jooseppi**	**3.08**	**74**	PN		**Pn**	**00 17 01.9**		**+0.1**
RAJF				SB		**Sb**	**00 17 45.5**		**-0.3**
KEV	**Kevo**	**3.13**	**48**	PB		**Pn**	**00 17 03.6**		**+1.0**
BURU	**Burvik**	**3.28**	**172**	PB		**Pn**	**00 17 06.1**		**+1.6**
	baz=355								
OUL	**Oulu**	**3.55**	**138**	PB		**Pn**	**00 17 11.4**		**+3.1**
OUL				SB		**Sb**	**00 17 59.8**		**+0.6**
VRF	**Varrio**	**3.55**	**87**	PN		**Pn**	**00 17 08.8**		**+0.4**
OBF0	**Syolatti, Pyha**	**3.70**	**152**	PG		**Pb**	**00 17 20.4**		**+2.2**
KU2	**Taivalkoski**	**3.80**	**120**	PN		**Pn**	**00 17 13.3**		**+1.6**
OLKF	**Oulanka, Finla**	**3.88**	**108**	PN		**Pn**	**00 17 13.6**		**+0.9**
OLKF				SG		**Sg**	**00 18 15.1**		**-1.3**
UMAU	**Umeaa**	**3.95**	**177**	PB		**Pn**	**00 17 16.5**		**+2.7**
	baz=354								
MSF	**Maaselka**	**3.96**	**115**	SG		**Sg**	**00 18 17.5**		**-1.4**
KU6	**Riekki**	**4.20**	**111**	PN		**Pn**	**00 17 18.0**		**+0.9**
KU6				SG		**Sg**	**00 18 23.6**		**-3.0**
KU1	**Kurvinen**	**4.33**	**117**	PN		**Pn**	**00 17 20.7**		**+1.7**
FINES	**FINESS Array B**	**6.87**	**156**	Pn		**Pn**	**00 17 55.0**		**+1.2**
	comp=Z,0.1nm,0.3s,baz=341,slow=16,SNR=4.0								
FINES				Sn		**Sn**	**00 19 10.2**		**-2.2**
	comp=Z,0.1nm,0.3s,baz=345,slow=22,SNR=1.7								
FINES				Lg		Lg	00 19 44.4		
	comp=Z,0.4nm,0.3s,baz=339,slow=20,SNR=5.9								
	comp=Z,0.4nm,0.3s								
NOA	**NORSAR Array B**	**7.84**	**214**	Pn		**Pn**	**00 18 06.7**		**-0.4**
	baz=21,slow=11,SNR=2.1								
NOA				Sn		**Sn**	**00 19 37.3**		**+0.9**
	baz=30,slow=20,SNR=0.9								
NOA				Lg		Lg	00 20 21.1		
	baz=26,slow=21,SNR=4.3								
	comp=Z,0.6nm,0.8s								
HFS	**Hagfors**	**8.23**	**204**	Pn		**Pn**	**00 18 12.1**		**-0.3**
	comp=Z,0.1nm,0.3s,baz=21,slow=14,SNR=1.6								
HFS				Sn		**Sn**	**00 19 43.5**		**-2.4**
	comp=Z,0.1nm,0.3s,baz=24,slow=26,SNR=2.0								
	comp=Z,2.7nm,1.0s								
SPITS	**Spitsbergen Ar**	**10.48**	**356**	Pn		**Pn**	**00 18 42.7**		**-0.4**
	comp=Z,1.5nm,0.6s,baz=165,slow=17,SNR=1.0								

ISN ***12*** *00:30:09.8±0.8, 34˚.49N×45˚.45E, h8km, 4km, ML2.7*
TEH ***12*** *00:30:10.6, 34˚.54N×45˚.47E, h10km± 163km*
ISC 12 00:30:11.6±1.6**, 34˚.52N**±0˚.05×**45˚.55E**±0˚.06**, h18**km±13km,
n9, σ0§**47/14, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
GLG1	**Gilan-e-Gharb**	**0.50**	**144**	Pg		**Pg**	**00 30 21.4**		**-0.3**
IDHR	**Dehrash**	**0.71**	**75**	Pg		**Pb**	**00 30 25.7**		**0.0**
IDHR				Sg		**Sn**	**00 30 37.1**		**-0.5**
IGHG	**Ghaleghazi**	**0.86**	**102**	Pg		**Pg**	**00 30 28.6**		**+0.1**
KCHF	**Cheshme Sefid,**	**1.25**	**101**	Pg		**Pg**	**00 30 36.8**		**+0.9**
IKRK	**Kirkuk**	**1.33**	**312**	*e*Pg		**Pn**	**00 30 35.0**		**-0.3**
IKRK				*e*Sg		**Sn**	**00 30 52.0**		**-0.6**
IKRK				AML		AML	00 30 59.3		
	comp=E,152nm,0.5s								
IKRK				AML		AML	00 30 59.4		
	comp=N,121nm,0.6s								
IBDR	**Badra**	**1.44**	**167**	*e*Pn		**Pb**	**00 30 38.0**		**+0.1**
IBDR				*e*Sn		**Sg**	**00 30 58.0**		**-0.1**
BHD	**Baghdad**	**1.58**	**218**	*e*Pn		**Pn**	**00 30 39.0**		**+0.2**
BHD				*e*Sn		**Sb**	**00 31 00.0**		**0.0**
SNQR	**Sonqor, Kerman**	**1.74**	**78**	Pg		**Pg**	**00 30 45.0**		**-0.2**
MSL	**Mosul**	**2.74**	**314**	*e*Pn		**Pn**	**00 30 55.0**		**+0.3**
MSL				*e*Sn		**Sn**	**00 31 28.0**		**+0.6**

IDC ***12*** *00:31:02.8±1.0, 36˚.38N×28˚.77E, h0km, mb3.5/7, mbtmp3.5/15, ML3.2/5, Error ellipse: s-maj=18.0km s-min=14.4km az=176.0*
ISK ***12*** *00:31:03.7, 36˚.48N×28˚.70E, h5km, ML3.2/26*
AFAD ***12*** *00:31:04.4, 36˚.44N×28˚.71E, h7km±2km, MW3.4*
ATH ***12*** *00:31:04.3±0.3, 36˚.41N×28˚.77E, h5km± 1km, ML3.2/6, Manual Solution by N.Liadopoulou First location: 2019/11/12 00:32:30, This location: 2019/11/12 07:14:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
GII ***12*** *00:31:04.0±0.0, 36˚.235N±0˚.001×28˚.755E±0˚.001, h8km, Mws3.2, confirmed*
THE ***12*** *00:31:05.1, 36˚N±3˚×2˚9E±˚, h0km±8km, M3.1/9, MLh3.1/9*
ISC 12 00:31:04.0±1.0**, 36˚.42N**±0˚.02×**28˚.76E**±0˚.02**, h8**km±7km,
n143, σ1§**46/172, mb3.4/6, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
FETY	**Fethiye**	**0.34**	**50**	P		Pg	00 31 03.0		-7.6
FETY				S		**Sg**	**00 31 09.0**		**-6.0**
IZZE	**Mula-Seydike**	**0.37**	**87**	SPECP			00 31 12.0		
IZZE				P		**Pg**	**00 31 12.5**		**+1.3**
IZZE				S		**Sb**	**00 31 19.3**		**+0.5**
IZZE				*i*	IAML		00 31 22.0		
	comp=E,3μm,0.3s								
IZZE				*i*	IAML		00 31 25.0		
	comp=N,6μm,0.4s								
DALY	**Dalyan (Mula)**	**0.41**	**347**	Pg		**Pg**	**00 31 11.5**		**-0.4**
DALY				Sg		**Sg**	**00 31 17.6**		**+0.3**
SABU	**Mula-Dalaman**	**0.43**	**22**	SPECP			00 31 12.0		
SABU				P		**Pg**	**00 31 12.7**		**+0.2**
SABU				S		**Sb**	**00 31 20.1**		**-0.6**
SABU				*i*	IAML		00 31 22.0		
	comp=E,1μm,0.4s								
SABU				*i*	IAML		00 31 24.0		
	comp=N,1μm,0.2s								
RDI1	**Rhodes Town Ha**	**0.44**	**274**	P		**Pg**	**00 31 12.4**		**0.0**
RDI1				S		**Sb**	**00 31 19.9**		**-0.7**
RODB	**Rodos**	**0.44**	**274**	P		**Pg**	**00 31 12.1**		**-0.4**
RODB				S		**Sb**	**00 31 20.6**		**-0.1**
TURN	**Turunc**	**0.55**	**310**	SPECP			00 31 14.0		
TURN				P		**Pg**	**00 31 14.6**		**0.0**
TURN				S		**Sg**	**00 31 21.9**		**+0.1**
TURN				*i*	IAML		00 31 24.0		
	comp=E,542nm,0.3s								
TURN				*i*	IAML		00 31 25.0		
	comp=N,607nm,0.4s								
TURN	**Turunc**	**0.55**	**310**	Pg		**Pg**	**00 31 13.8**		**-0.8**
TURN				Sg		**Sg**	**00 31 21.8**		**+0.1**
ARG	**Arkhangelos**	**0.55**	**249**	Pg		**Pg**	**00 31 14.5**		**-0.2**
ARG				Sg		**Sb**	**00 31 23.8**		**-0.3**
ARG	**Arkhangelos**	**0.55**	**249**	P		**Pg**	**00 31 14.5**		**-0.2**
ARG				S		**Sg**	**00 31 23.3**		**+1.4**
ARG	**Arkhangelos**	**0.55**	**249**	P		**Pg**	**00 31 14.8**		**+0.1**
ARG				S		**Sg**	**00 31 23.5**		**+1.5**
CAME	**Cameli-Denizli**	**0.68**	**39**	Pg		**Pg**	**00 31 17.5**		**+0.4**
CAME				Sg		**Sb**	**00 31 28.4**		**+0.6**
AKAS	**Kas**	**0.70**	**105**	SPECP			00 31 19.0		
AKAS				P		**Pb**	**00 31 19.4**		**+0.8**
AKAS				S		**Sn**	**00 31 32.4**		**+0.9**
AKAS				*i*	IAML		00 31 39.0		
	comp=E,834nm,0.4s								
AKAS				*i*	IAML		00 31 44.0		
	comp=N,1μm,0.6s								
AKAS	**Kas**	**0.70**	**105**	Pg		**Pb**	**00 31 19.5**		**+0.9**
KNIK	**Mula-Seydike**	**0.78**	**57**	P		**Pb**	**00 31 19.9**		**0.0**
KNIK				S		**Sb**	**00 31 32.4**		**+1.8**
KNIK				*i*	IAML		00 31 34.0		
	comp=N,456nm,0.6s								
KNIK				*i*	IAML		00 31 37.0		
	comp=E,575nm,0.7s								
RGE1	**Gennadi, Rhode**	**0.78**	**240**	P		**Pg**	**00 31 19.3**		**+0.3**
RGE1				S		**Sb**	**00 31 30.5**		**-0.1**
YER	**Yerkesik**	**0.81**	**332**	Pg		**Pg**	**00 31 19.2**		**-0.4**
CAEL	**Denizli, Camel**	**0.83**	**32**	SPECP			00 31 20.0		
CAEL				P		**Pg**	**00 31 20.2**		**+0.2**
CAEL				*i*	IAML		00 31 49.0		
	comp=E,719nm,1.4s								
CAEL				*i*	IAML		00 31 50.0		
	comp=N,824nm,0.5s								
DNZT	**Denizli-Tavas-**	**0.88**	**14**	SPECP			00 31 21.0		
DNZT				P		**Pg**	**00 31 21.1**		**+0.1**
DNZT				*i*	IAML		00 31 42.0		
	comp=N,187nm,0.6s								
DNZT				*i*	IAML		00 31 43.0		
	comp=E,274nm,0.5s								
MULA	**Mugla, Merkez-**	**0.91**	**337**	P		**Pg**	**00 31 21.6**		**+0.1**
MULA				S		**Sb**	**00 31 34.4**		**+0.1**
MULA				*i*	IAML		00 31 38.0		
	comp=E,352nm,0.5s								
MULA				*i*	IAML		00 31 43.0		
	comp=N,183nm,0.4s								
DEMR	**Demre-Antalya**	**0.94**	**101**	Pg		**Pn**	**00 31 23.9**		**+0.4**
DATC	**Datca-Mugla**	**0.95**	**291**	Pg		**Pg**	**00 31 22.1**		**-0.1**
ELL	**Elmali**	**0.98**	**70**	Pg		**Pb**	**00 31 24.2**		**+0.9**
DAT	**Datca**	**1.00**	**288**	Pg		**Pg**	**00 31 23.4**		**+0.1**
DAT	**Datca**	**1.00**	**288**	S		**Sb**	**00 31 37.5**		**+0.4**
GOLH	**Golhisar**	**1.04**	**38**	SPECP			00 31 24.0		
GOLH				P		**Pg**	**00 31 24.1**		**+0.2**
GOLH				S		**Sn**	**00 31 42.2**		**+2.4**
GOLH				*i*	IAML		00 31 43.0		
	comp=N,396nm,0.6s								
GOLH				*i*	IAML		00 31 48.0		
	comp=E,473nm,0.5s								
TAVA	**DENIZLI_Tavas**	**1.05**	**6**	SPECP			00 31 23.0		
TAVA				P		**Pg**	**00 31 23.9**		**-0.3**
TAVA				*i*	IAML		00 31 45.0		
	comp=N,281nm,0.5s								
TAVA				*i*	IAML		00 31 47.0		
	comp=E,331nm,0.3s								
APMY	**Acipayam-Deniz**	**1.14**	**22**	Pn		**Pg**	**00 31 25.5**		**-0.3**
MLSB	**Milas**	**1.18**	**318**	Pn		**Pg**	**00 31 25.5**		**-1.1**
DNIZ	**Denizli-Tavas-**	**1.22**	**10**	SPECP			00 31 27.0		
DNIZ				P		**Pg**	**00 31 27.1**		**-0.4**
DNIZ				S		**Sb**	**00 31 43.9**		**+0.4**
DNIZ				*i*	IAML		00 31 48.0		
	comp=N,967nm,0.5s								
DNIZ				*i*	IAML		00 31 51.0		
	comp=E,1μm,0.3s								
AKUM	**Antalya-Kumluc**	**1.28**	**94**	P		**Pb**	**00 31 30.7**		**+2.4**
AKUM				S		**Sn**	**00 31 52.8**		**+7.3**
BODT	**Bodrum**	**1.33**	**299**	Pn		**Pg**	**00 31 31.2**		**+1.7**
NISR	**Nisiros**	**1.33**	**279**	P		**Pn**	**00 31 28.9**		**+0.1**
NISR				S		**Sn**	**00 31 47.6**		**+0.8**
NISR	**Nisiros**	**1.33**	**279**	P		**Pn**	**00 31 29.4**		**+0.5**
YKAV	**Yalikavak-Bodr**	**1.38**	**301**	Pn		**Pn**	**00 31 29.9**		**+0.3**
KORT	**Korkueli**	**1.40**	**65**	Pn		**Pg**	**00 31 32.7**		**+1.9**
KEMT	**Kemer-ANTALYA**	**1.46**	**82**	Pn		**Pg**	**00 31 32.9**		**+1.0**
KLNA	**Kalymnos**

GEM	**Giv'at Ha'Em**	**6.51**	**117**	S		**Sn**	**00 33 53.3**	**-1.4**
NATI	**Neve Ativ**	**6.54**	**117**	P		**Pn**	**00 32 40.2**	**-0.3**
NATI	**Neve Ativ**	**6.54**	**117**	S		**Sn**	**00 33 54.5**	**-0.8**
MMLI	**Mount Malkishu**	**6.78**	**124**	P		**Pn**	**00 32 42.8**	**-1.1**
MMLI	**Mount Malkishu**	**6.78**	**124**	S		**Sn**	**00 33 59.1**	**-2.3**
HMDT	**Nahal Hemdat**	**6.97**	**125**	P		**Pn**	**00 32 45.5**	**-0.9**
HMDT	**Nahal Hemdat**	**6.97**	**125**	S		**Sn**	**00 34 03.9**	**-1.9**
KZIT	**Kziot**	**7.23**	**138**	P		**Pn**	**00 32 48.2**	**-1.8**
KZIT	**Kziot**	**7.23**	**138**	S		**Sn**	**00 34 09.5**	**-2.8**
DSI	**Dead Sea**	**7.32**	**129**	P		**Pn**	**00 32 50.1**	**-1.1**
DSI	**Dead Sea**	**7.32**	**129**	S		**Sn**	**00 34 11.8**	**-2.6**
GHAJ	**Ghor Haditha**	**7.62**	**130**	P		**Pn**	**00 32 54.1**	**-1.2**
GHAJ	**Ghor Haditha**	**7.62**	**130**	S		**Sn**	**00 34 20.0**	**-1.8**
RMNI	**Mount Ramon**	**7.67**	**138**	P		**Pn**	**00 32 54.9**	**-1.2**
RMNI	**Mount Ramon**	**7.67**	**138**	S		**Sn**	**00 34 20.6**	**-2.6**
ASF	**Jabal al Asfar**	**7.95**	**120**	Pn		**Pn**	**00 33 00.4**	**+0.5**
	0.1nm,0.3s,baz=315,slow=5.7,SNR=2.1							
ASF				Sn		**Sn**	**00 34 31.0**	**+0.8**
	0.1nm,0.3s,baz=321,slow=18,SNR=1.3							
	0.5nm,0.3s							
PRNI	**Paran**	**7.99**	**137**	P		**Pn**	**00 32 59.3**	**-1.2**
PRNI	**Paran**	**7.99**	**137**	S		**Sn**	**00 34 28.5**	**-2.5**
KRMI	**Paran Flat**	**8.02**	**140**	P		**Pn**	**00 32 59.5**	**-1.4**
KRMI	**Paran Flat**	**8.02**	**140**	S		**Sn**	**00 34 29.1**	**-2.7**
HRFI	**Mount Harif**	**8.25**	**139**	P		**Pn**	**00 33 02.6**	**-1.4**
HRFI	**Mount Harif**	**8.25**	**139**	S		**Sn**	**00 34 34.6**	**-2.9**
MBRI	**Mt Berech**	**8.38**	**140**	P		**Pn**	**00 33 04.3**	**-1.6**
MBRI	**Mt Berech**	**8.38**	**140**	S		**Sn**	**00 34 37.7**	**-3.0**
EIL	**Elat**	**8.50**	**141**	Pn		**Pn**	**00 33 06.4**	**-1.0**
	0.5nm,0.3s,baz=299,slow=5.2,SNR=5.6							
EIL				Sn		**Sn**	**00 34 38.3**	**-5.3**
	1.0nm,0.3s,baz=349,slow=10,SNR=6.1							
	1.4nm,0.4s							
EIL	**Elat**	**8.50**	**141**	P		**Pn**	**00 33 05.8**	**-1.6**
EIL	**Elat**	**8.50**	**141**	S		**Sn**	**00 34 40.4**	**-3.1**
MLR	**Muntele Rosu**	**9.31**	**348**	Pn		**Pn**	**00 33 20.0**	**+1.4**
	1.7nm,0.7s,baz=185,slow=16							
VAE	**Valguarnera**	**11.54**	**280**	Pn		**Pn**	**00 33 51.0**	**+2.0**
	14nm,1.0s,baz=140,slow=17,SNR=1.4							
GERES	**GERESS Array B**	**16.61**	**323**	Pn		**P**	**00 34 59.1**	**-0.6**
	baz=116,slow=18,SNR=2.5							
	0.2nm,0.4s							
FINES	**FINESS Array B**	**25.10**	**357**	P		**P**	**00 36 29.3**	**+0.4**
	1.0nm,0.5s,baz=152,slow=13,SNR=9.4							
	1.0nm,0.5s							
HFS	**Hagfors**	**25.64**	**342**	P		**P**	**00 36 34.0**	**+0.2**
	3.7nm,1.0s,baz=122,slow=11,SNR=2.3							
	3.7nm,1.0s							
ESDC	**Sonseca Array**	**25.90**	**287**	P		**P**	**00 36 35.6**	**-0.9**
	0.8nm,1.0s,baz=85,slow=10,SNR=1.6							
	0.8nm,1.0s							
TORD	**Torodi Ar. Bea**	**33.57**	**233**	P		**P**	**00 37 44.1**	**-0.5**
	0.3nm,0.6s,baz=39,slow=12,SNR=2.2							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**38.04**	**52**	P		**P**	**00 38 22.8**	**+0.1**
	0.2nm,0.4s,baz=282,slow=9.2,SNR=1.8							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**40.63**	**58**	P		**P**	**00 38 43.8**	**-0.6**
	0.3nm,0.6s,baz=274,slow=8.7,SNR=4.6							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**42.01**	**47**	P		**P**	**00 38 56.2**	**+0.6**
	0.3nm,0.3s,baz=249,slow=6.0,SNR=1.8							
	0.3nm,0.3s							

*IDC **12** 00:34:40.9±2.2,5.˚10S×145.˚19E,h70km±19km,mb3.5/8, mbtmp3.9/11,Error ellipse: s-maj=29.8km s-min=11.3km az=54.0*

ISC 12 00:34:40.4±0.9,5.˚1S±0.˚1×145.˚3E±0.˚1,h64km,n13, σ1°25/15,mb3.8/8,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.72**	**157**	P	**Pn**	**00 35 50.4**	**+1.3**
	65nm,0.5s,baz=290,slow=12,SNR=26						
PMG				S	**Sn**	**00 36 42.8**	**+0.1**
	72nm,0.5s,baz=342,slow=20,SNR=14						
JAY	**Jayapura**	**5.19**	**299**	P	**Pn**	**00 35 57.6**	**+2.0**
	7.7nm,0.5s,baz=118,slow=17,SNR=7.0						
JAY				S	**Sn**	**00 36 54.5**	**+0.2**
	8.2nm,0.8s,baz=194,slow=19,SNR=1.4						
WRA	**Warramunga Arr**	**18.22**	**215**	P	**P**	**00 38 46.7**	**-1.9**
	1.8nm,0.5s,baz=40,slow=12,SNR=21						
WRA				PcP	**PcP**	**00 43 19.4**	**+0.3**
	0.3nm,0.5s,baz=19,slow=1.9,SNR=0.9						
ASAR	**Alice Springs**	**21.50**	**209**	P	**P**	**00 39 22.6**	**-1.6**
	1.1nm,0.5s,baz=33,slow=12,SNR=16						
	1.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**51.27**	**298**	P	**P**	**00 43 37.0**	**-1.3**
	0.6nm,0.3s,baz=133,slow=6.3,SNR=5.5						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**75.67**	**321**	P	**P**	**00 46 18.7**	**-0.2**
	0.2nm,0.5s,baz=113,slow=3.3,SNR=1.7						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**77.29**	**328**	P	**P**	**00 46 27.3**	**-0.6**
	0.4nm,0.3s,baz=164,slow=11,SNR=1.7						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**79.44**	**323**	P	**P**	**00 46 40.6**	**+0.8**
	0.2nm,0.6s,baz=114,slow=6.3,SNR=1.3						
	0.2nm,0.6s						
MAW	**Mawson**	**82.45**	**203**	P	**P**	**00 46 54.8**	**-0.7**
	0.8nm,0.7s,baz=99,slow=13,SNR=1.8						
	0.8nm,0.7s						
QSPA	**South Pole Qui**	**84.91**	**180**	P	**P**	**00 47 09.8**	**+1.5**
	2.1nm,0.5s,baz=328,slow=1.6,SNR=8.5						
	2.1nm,0.5s						
ILAR	**Eielson Array**	**85.30**	**23**	P	**P**	**00 47 09.1**	**-1.0**
	0.5nm,0.7s,baz=262,slow=5.0,SNR=6.1						
	0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**143.17**	**285**	PKP	PKPbc	00 54 05.5	+0.1
	0.2nm,0.4s,baz=76,slow=4.7,SNR=7.1						
DBIC	**Dimbokro**	**150.23**	**275**	PKPbc	**PKPbc**	**00 54 24.9**	**-0.5**
	3.7nm,0.8s,baz=155,slow=4.4,SNR=4.5						

*LDG **12** 00:43:24.7±0.1,45.˚01N×4.˚39E,h7km,Ml1.7/18,Error ellipse: s-maj=1.5km s-min=1.2km az=41.0*

STR 12 00:43:25.3±0.3,45.˚N±2.˚×˚±˚,h10km,MLv1.7/6,LOCSAT earthModelID alpes_taup-2.11 preliminary,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIVF	**Saint-Julien-l**	**0.26**	**122**	*e*Pg	Pg	00 43 30.3	-0.2
VIVF				*e*Sg	Sg	00 43 33.8	-0.3
	46nm,0.2s						
SSB	**Saint Sauveur**	**0.31**	**24**	Pg	Pg	00 43 31.6	+0.1
SSB				Sg	Sg	00 43 36.1	+0.3
COLF	**Collangettes**	**0.71**	**318**	Pg	Pg	00 43 38.8	-0.1
COLF				Sg	Sg	00 43 48.0	-0.2
LBL	**Lubilhac**	**0.83**	**287**	Pg	Pg	00 43 41.2	0.0
LBL				Sg	Sg	00 43 52.4	+0.4
LASF	**Ste Croix**	**0.99**	**202**	*e*Pg	Pg	00 43 43.7	-0.5
LASF				*e*Sg	Sg	00 43 56.3	-0.7
	6.2nm,0.2s						
GRN	**Grenoble**	**1.01**	**75**	Pg	Pg	00 43 44.0	-0.7
GRN				Sg	Sg	00 43 57.8	0.0
ORIF	**Oris-en-Rattie**	**1.08**	**93**	*e*Pg	Pg	00 43 44.2	-1.8
ORIF				*e*Sg	Sg	00 43 57.9	-2.1
	0.6nm,0.2s						
PLDF	**La Plantade**	**1.11**	**332**	Pg	Pg	00 43 45.9	-0.7
PLDF				Sg	Sg	00 44 00.3	-0.7
SMRF	**Simiane la Rot**	**1.34**	**139**	*e*Pg	Pn	00 43 49.0	-1.0
SMRF				*e*Sg	Sb	00 44 06.6	-1.0
	0.6nm,0.2s						
CAF	**Calviac**	**1.64**	**268**	*e*Pg	Pb	00 43 55.1	-0.4
CAF				*e*Sg	Sb	00 44 16.1	-0.1
	1.5nm,0.3s						
SMF	**Signal de Mont**	**1.69**	**348**	*e*Pg	Pb	00 43 55.8	-0.7
SMF				*e*Sg	Sb	00 44 17.5	-0.4
	0.7nm,0.2s						
MBDF	**Montbardon**	**1.73**	**98**	*e*Sn	Sn	00 44 13.7	-4.1
	0.5nm,0.2s						
LPL	**La Plagne**	**1.75**	**72**	*e*Pg	Pb	00 43 57.0	-0.6
LPL				*e*Sg	Sn	00 44 18.6	+0.2
	0.3nm,0.3s						
LPG	**La Plagne**	**1.76**	**72**	*e*Pg	Pb	00 43 57.9	+0.1
LPG				*e*Sg	Sb	00 44 19.4	-0.7
	0.6nm,0.3s						
BGF	**Bois d'Agland**	**1.89**	**326**	*e*Pg	Pb	00 44 00.2	+0.3
BGF				*e*Sg	Sb	00 44 23.8	+0.2
	3.0nm,0.2s						
AVF	**Avril sur Loir**	**1.93**	**339**	*e*Pg	Pb	00 44 00.7	+0.1
AVF				*e*Sg	Sb	00 44 23.9	-0.8
	0.5nm,0.2s						
TCF	**Toulx Ste Croi**	**1.99**	**311**	*e*Pg	Pb	00 44 01.5	-0.1
TCF				*e*Sg	Sb	00 44 26.7	+0.3
	0.9nm,0.2s						
CABF	**La Chapelle**	**2.02**	**36**	*e*Pg	Pb	00 44 00.9	-1.2
CABF				*e*Sg	Sb	00 44 26.2	-1.1
	1.5nm,0.3s						
RJF	**Les Rejaudoux**	**2.04**	**280**	*e*Pg	Pb	00 44 03.0	+0.6
RJF				*e*Sn	Sn	00 44 23.5	-1.7
RJF				*e*Sg	Sb	00 44 28.7	+0.9
	1.6nm,0.4s						
SSF	**Saint Saulge**	**2.15**	**344**	*e*Pg	Pb	00 44 05.1	+0.8
SSF				*e*Sg	Sb	00 44 32.0	+0.9
	0.5nm,0.2s						
LMR	**La Mourre**	**2.27**	**136**	*e*Sn	Sn	00 44 26.7	-4.0
	0.2nm,0.2s						
LOR	**Lormes**	**2.30**	**351**	*e*Pg	Pb	00 44 06.8	-0.1
LOR				*e*Sg	Sb	00 44 36.3	+0.9
	1.2nm,0.3s						
SBF	**Sospel**	**2.47**	**116**	*e*Pn	Pn	00 44 03.5	-2.2
SBF				*e*Sn	Sn	00 44 32.9	-3.1
	5.8nm,0.3s						

*IDC **12** 00:46:22.7±2.2,59.˚72N×153.˚53W,h88km±34km,mb3.8/1, mbtmp3.7/6,Error ellipse: s-maj=37.2km s-min=17.6km az=106.0*

*NEIC **12** 00:46:24.1±1.2,59.˚73N±0.˚03×153.˚21W±0.˚03, h113km±3km,Error ellipse: s-maj=5.1km s-min=1.9km az=165.0*

*AEIC **12** 00:46:25.5±1.5,59.˚71N±0.˚03×153.˚15W±0.˚07, h106km±3km,ML2.9,ML3.3/12(NEIC),Error ellipse: s-maj=5.1km s-min=4.8km az=112.0*

ISC 12 00:46:24.0±0.8,59.72N±0.04×153.14W±0.04, h117km±6km,n227,σ1°06/252,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P19K	**Oil Pt**	**0.08**	**216**		**Pn**	**00 46 39.5**	**-0.6**
P19K				Sn	**Sn**	**00 46 50.3**	**-1.9**
P19K				IAML		00 46 51.5	
	comp=N,895nm,0.7s						
ILS	**Iliamna Low So**	**0.24**	**8**		**Pn**	**00 46 40.1**	**-0.5**
ILS					**Sn**	**00 46 51.7**	**-1.3**
ILSW	**Iliamna Southw**	**0.27**	**360**		**Pn**	**00 46 40.0**	**-0.7**
ILSW				Sn	**Sn**	**00 46 51.8**	**-1.5**
ILSW				IAML		00 46 52.1	
	comp=N,808nm,0.3s						
ILSW				IAML		00 46 52.4	
	comp=E,1μm,0.7s						
IVE	**Iliamna Volcan**	**0.31**	**12**		**Pn**	**00 46 40.2**	**-0.6**
IVE					**Sn**	**00 46 52.2**	**-1.2**
AU22	**Augustine Moun**	**0.36**	**198**		**Pn**	**00 46 40.5**	**-0.4**
AU22					**Sn**	**00 46 52.5**	**-1.1**
AUL	**Augustine Lava**	**0.37**	**204**		**Pn**	**00 46 40.6**	**-0.3**
AUL					**Sn**	**00 46 52.8**	**-0.9**
AUJK	**Augustine Jueg**	**0.39**	**201**		**Sn**	**00 46 52.8**	**-1.1**
O20K	**Slope Mountain**	**0.45**	**35**		**Sn**	**00 46 53.9**	**-0.7**
RED	**Redoubt Volcan**	**0.73**	**14**		**Pn**	**00 46 43.1**	**-0.3**
RED	**Redoubt Volcan**	**0.73**	**14**		**Sn**	**00 46 56.8**	**-1.3**
HOM	**Homer**	**0.76**	**94**		**Pn**	**00 46 43.6**	**+0.1**
HOM					**Sn**	**00 46 57.7**	**-0.6**
O19K	**Port Alsworth**	**0.76**	**309**		**Pn**	**00 46 43.0**	**-0.5**
O19K				Sn	**Sn**	**00 46 56.9**	**-1.4**
O19K				IAML		00 46 57.7	
	comp=N,730nm,0.4s						
RDWB	**Redoubt West**	**0.79**	**11**		**Sn**	**00 46 57.8**	**-1.3**
Q19K	**Cape Douglas,**	**0.83**	**198**		**Pn**	**00 46 43.8**	**-0.4**
Q19K				Sn	**Sn**	**00 46 58.2**	**-1.3**
Q19K				IAML		00 47 02.8	
	comp=N,484nm,0.6s						
Q19K				IAML		00 47 11.2	
	comp=E,649nm,1.0s						
RDJH	**Redoubt Jeurge**	**0.89**	**11**		**Sn**	**00 46 59.6**	**-1.1**
RDT	**Redoubt**	**0.94**	**23**		**Sn**	**00 46 60.0**	**-1.3**
CNPM	**China Poot**	**0.99**	**100**		**Pn**	**00 46 45.5**	**-0.2**
CNPM				Sn	**Sn**	**00 47 01.8**	**-0.3**
O18K	**Koktuh Hills**	**1.05**	**278**		**Sn**	**00 47 01.7**	**-1.6**
P18K	**Big Mountain,**	**1.11**	**254**		**Pn**	**00 46 46.0**	**-1.0**
P18K				Sn	**Sn**	**00 47 02.4**	**-1.9**
BRLK	**Bradley Lake**	**1.14**	**87**		**Pn**	**00 46 46.9**	**-0.4**
BRLK				Sn	**Sn**	**00 47 04.5**	**-0.4**
SYI	**Shuyak Island**	**1.18**	**161**		**Pn**	**00 46 47.5**	**-0.1**
KAPH	**Katmai Pasha**	**1.28**	**209**		**Pn**	**00 46 48.9**	**0.0**
N19K	**Bonanza Creek**	**1.29**	**329**		**Pn**	**00 46 48.5**	**-0.4**
CAPN	**Captain Cook N**	**1.45**	**42**		**Pn**	**00 46 52.4**	**+1.9**
SPU	**Mount Spurr**	**1.56**	**20**		**Pn**	**00 46 51.9**	**-0.1**
SPCN	**Chakachatna No**	**1.59**	**17**		**Pn**	**00 46 52.8**	**+0.5**
SPCP	**Crater Peak Br**	**1.63**	**17**		**Pn**	**00 46 53.3**	**+0.4**
SLKM	**Skilak Lake**	**1.66**	**60**		**Pn**	**00 46 53.4**	**+0.3**
SPCG	**Spurr Capps Gl**	**1.67**	**19**		**Pn**	**00 46 53.7**	**+0.3**
N18K	**Kilae Creek**	**1.68**	**306**		**Pn**	**00 46 52.8**	**-0.6**
KBM	**Katmai Bkd Mtn**	**1.80**	**217**		**Pn**	**00 46 55.2**	**+0.4**
O22K	**Cooper Landing**	**1.88**	**64**		**Pn**	**00 46 56.0**	**+0.4**
ACHA	**Angle Creek He**	**1.89**	**218**		**Pn**	**00 46 55.3**	**-0.7**
SEW	**Seward**	**1.90**	**77**		**Pn**	**00 46 56.1**	**+0.1**
STLK	**Strandline Lak**	**1.90**	**19**		**Pn**	**00 46 56.6**	**+0.5**
KDAK	**Kodiak Island**	**1.96**	**171**	P	**Pn**	**00 46 55.8**	**-1.0**
	comp=E,21nm,0.4s,baz=2.1,slow=9.1,SNR=38						
KDAK				S	**Sn**	**00 47 19.6**	**-2.3**
	comp=E,39nm,0.4s,baz=356,slow=16,SNR=24						
KDAK	**Kodiak Island**	**1.96**	**171**	Pn	**Pn**	**00 46 56.0**	**-0.8**
KDAK				Sn	**Sn**	**00 47 20.6**	**-1.3**
O16K	**King Salmon**	**2.09**	**242**		**Pn**	**00 46 58.4**	**+0.1**
KJL	**Kejulik**	**2.09**	**218**		**Pn**	**00 46 59.0**	**+0.5**
SUA	**Susitna One**	**2.11**	**33**		**Pn**	**00 46 59.1**	**+0.2**
SUA				Sn	**Sn**	**00 47 25.6**	**+0.2**
M20K	**Styx River**	**2.17**	**0**		**Pn**	**00 46 59.9**	**+0.3**
RC01	**Rabbit Creek A**	**2.18**	**49**		**Pn**	**00 46 59.8**	**+0.3**
RC01				Sn	**Sn**	**00 47 25.5**	**-1.2**
N17K	**Nushagak Hills**	**2.18**	**294**		**Pn**	**00 46 59.2**	**-0.3**
R18K	**Karluk**	**2.26**	**198**		**Pn**	**00 46 59.8**	**-0.8**
SKT	**Skwentna**	**2.40**	**18**		**Pn**	**00 47 02.9**	**+0.5**
OHAK	**Old Harbor**	**2.50**	**182**	Pn	**Pn**	**00 47 02.7**	**-1.0**
OHAK	**Old Harbor**	**2.50**	**182**	P	**Pn**	**00 47 02.2**	**-1.5**
OHAK	**Old Harbor**	**2.50**	**182**	S	**Sn**	**00 47 31.3**	**-2.8**
O16K	**Kokwok River B**	**2.52**	**269**		**Pn**	**00 47 04.0**	**+0.1**
M22K	**Willow**	**2.52**	**35**	Pn	**Pn**	**00 47 03.5**	**-0.4**
M22K					**Sn**	**00 47 33.8**	**-0.8**
P16K	**Nushagak River**	**2.58**	**257**	Pn	**Pn**	**00 47 02.7**	**-0.9**
PLK5	**Peulik 5**	**2.60**	**230**		**Pn**	**00 47 05.0**	**+0.2**
L19K	**White Mountain**	**2.61**	**342**		**Pn**	**00 47 04.9**	**-0.2**
PLK1	**Peulik 1**	**2.64**	**225**		**Pn**	**00 47 05.8**	**+0.4**
PWL	**Port Wells**	**2.65**	**62**		**Pn**	**00 47 05.7**	**+0.1**
PLK4	**Peulik 4**	**2.68**	**220**		**Pn**	**00 47 06.5**	**+0.4**
M17K	**Holitna River**	**2.71**	**310**	Pn	**Pn**	**00 47 06.1**	**-0.3**
PMR	**Palmer**	**2.73**	**45**		**Pn**	**00 47 05.9**	**-0.7**
PMR				Sn	**Sn**	**00 47 37.2**	**-2.1**
PMR	**Palmer**	**2.73**	**45**	P	**Pn**	**00 47 06.7**	**+0.2**
PLBL	**Peulik Blue Cr**	**2.79**	**225**		**Pn**	**00 47 07.9**	**+0.5**
KNK	**Knik Glacier**	**2.87**	**52**		**Pn**	**00 47 08.7**	**+0.2**
KNK				Sn	**Sn**	**00 47 40.9**	**-1.8**
N16K	**Nishlik Lake**	**2.92**	**288**		**Pn**	**00 47 09.4**	**+0.3**
GHO	**Glory Hole Cre**	**2.92**	**43**		**Pn**	**00 47 09.5**	**+0.3**
CUT	**Chulitna**	**3.04**	**26**		**Pn**	**00 47 11.7**	**+1.1**
SML	**Sawmill**	**3.16**	**46**		**Pn**	**00 47 12.1**	**-0.2**
R16K	**Pilot Point**	**3.17**	**229**	Pn	**Pn**	**00 47 12.1**	**-0.2**
M16K	**Timber Creek**	**3.17**	**297**		**Pn**	**00 47 12.7**	**+0.3**
SII	**Sitkinak Islan**	**3.21**	**190**	Pn	**Pn**	**00 47 12.9**	**-0.2**
PPLA	**Purkeypile**	**3.22**	**8**		**Pn**	**00 47 14.5**	**+1.3**
HIN	**Hinchinbrook I**	**3.40**	**76**	Pn	**Pn**	**00 47 15.0**	**-0.4**
O15K	**Ungalikthiuk R**	**3.46**	**264**	Pn	**Pn**	**00 47 16.7**	**+0.5**
N15K	**Kwethluk River**	**3.53**	**280**		**Pn**	**00 47 18.1**	**+1.0**
SCM	**Sheep Creek Mo**	**3.55**	**51**		**Pn**	**00 47 17.4**	**-0.2**
K20K	**Telida**	**3.68**	**353**		**Pn**	**00 47 19.1**	**0.0**
L16K	**Owhat River**	**3.70**	**305**	Pn	**Pn**	**00 47 18.9**	**-0.5**
EYAK	**Cordova Ski Ar**	**3.79**	**74**	Pn	**Pn**	**00 47 20.4**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.79**	**74**	P	**Pn**	**00 47 20.6**	**0.0**
M15K	**Kasigluk River**	**3.89**	**288**		**Pn**	**00 47 22.2**	**+0.2**
K17K	**Iditarod**	**3.91**	**323**	Pn	**Pn**	**00 47 22.0**	**-0.2**
DIV	**Divide**	**3.92**	**66**		**Pn**	**00 47 22.6**	**+0.2**
DIV				Sn	**Sn**	**00 48 04.5**	**-3.1**
KLU	**Klutina**	**3.98**	**60**		**Pn**	**00 47 23.1**	**-0.1**
KLU				Sn	**Sn**	**00 48 06.5**	**-2.5**
TRF	**Thorofare Moun**	**3.99**	**19**		**Pn**	**00 47 23.6**	**+0.2**
KTH	**Kantishna Hill**	**3.99**	**14**		**Pn**	**00 47 23.3**	**0.0**
CHIR	**Chirikof Islan**	**4.13**	**200**	Pn	**Pn**	**00 47 24.4**	**-0.7**
M24K	**Tolsona, Glenn**	**4.16**	**52**		**Pn**	**00 47 25.8**	**+0.2**
O14K	**Tigyukauivet M**	**4.17**	**267**	Pn	**Pn**	**00 47 25.9**	**+0.3**
RND	**Reindeer**	**4.23**	**27**		**Pn**	**00 47 26.7**	**+0.1**
RAGM	**Ragged Mountai**	**4.30**	**77**		**Pn**	**00 47 27.4**	**0.0**
DHY	**Denali Highway**	**4.36**	**37**		**Pn**	**00 47 28.1**	**-0.3**
KAIM	**Kayak Island**	**4.41**	**84**	Pn	**Pn**	**00 47 29.4**	**+0.6**
BMRM	**Bremner River**	**4.42**	**70**		**Pn**	**00 47 29.3**	**+0.2**
J19K	**Poorman**	**4.45**	**346**	Pn	**Pn**	**00 47 29.1**	**-0.3**
HMT	**Hamilton**	**4.50**	**78**	Pn	**Pn**	**00 47 30.6**	**+0.5**
J20K	**Nowinta River**	**4.50**	**354**		**Pn**	**00 47 30.3**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.51**	**12**	Pn	**Pn**	**00 47 29.8**	**-0.5**
M14K	**Bethel**	**4.52**	**287**	Pn	**Pn**	**00 47 30.5**	**+0.2**
N25K	**Chitina, Valde**	**4.61**	**62**		**Pn**	**00 47 32.3**	**+0.7**
J17K	**VABM Dome**	**4.66**	**325**	Pn	**Pn**	**00 47 32.5**	**+0.3**
SUCK	**Suckling Hills**	**4.73**	**82**	Pn	**Pn**	**00 47 32.9**	**-0.3**
BERG	**Berg Lake**	**4.78**	**78**	Pn	**Pn**	**00 47 34.3**	**+0.5**
BWN	**Browne**	**4.79**	**20**	Pn	**Pn**	**00 47 34.4**	**+0.4**
K15K	**Wolf Creek Mou**	**4.83**	**306**	Pn	**Pn**	**00 47 34.9**	**+0.3**
WACK	**Wrangell Chich**	**4.87**	**58**		**Pn**	**00 47 35.1**	**-0.2**
GLB	**Gilahina Butte**	**4.92**	**65**	Pn	**Pn**	**00 47 36.3**	**+0.6**
PAX	**Paxson**	**4.93**	**45**		**Pn**	**00 47 36.4**	**+0.5**
GRIN	**Grindle Hills**	**4.96**	**79**		**Pn**	**00 47 36.8**	**+0.5**
L14K	**Kuka Creek**	**4.99**	**293**	Pn	**Pn**	**00 47 37.2**	**+0.6**
KHIT	**Khitrov Hills**	**5.01**	**77**		**Pn**	**00 47 36.4**	**-0.6**
VRDI	**Verde Repeater**	**5.03**	**68**	Pn	**Pn**	**00 47 37.7**	**+0.4**
VRDI				Sn	**Sn**	**00 48 32.8**	**-1.6**
J16K	**Anvik River**	**5.06**	**318**	Pn	**Pn**	**00 47 37.5**	**0.0**
CRQM	**Cirque**	**5.09**	**74**	Pn	**Pn**	**00 47 38.4**	**+0.2**
CRQM				Sn	**Sn**	**00 48 34.0**	**-1.9**
SNH	**Sunshine Point**	**5.20**	**80**	Pn	**Pn**	**00 47 39.7**	**+0.1**
SNH				Sn	**Sn**	**00 48 36.6**	**-1.8**
WAX	**Waxell Ridge**	**5.20**	**77**	Pn	**Pn**	**00 47 40.2**	**+0.6**
TGL	**Tana Glacier**	**5.24**	**74**	Pn	**Pn**	**00 47 40.5**	**+0.3**
MCARA	**McCarthy VSAT**	**5.26**	**67**	Pn	**Pn**	**00 47 41.4**	**+1.0**
WRH	**Wood River Hil**	**5.33**	**24**	Pn	**Pn**	**00 47 40.4**	**-0.8**
K24K	**Donnelly Dome**	**5.39**	**37**		**Pn**	**00 47 43.2**	**+1.1**
MLY	**Manley**	**5.45**	**11**		**Pn**	**00 47 42.6**	**-0.3**
JUP	**Juniper Island**	**5.47**	**76**	Pn	**Pn**	**00 47 43.2**	**+1.0**
PTPK	**Petty Peak**	**5.49**	**70**		**Pn**	**00 47 44.1**	**+0.6**
KIAG	**Kiagna River**	**5.49**	**73**		**Pn**	**00 47 44.4**	**+0.8**
I21K	**Tanana**	**5.51**	**5**		**Pn**	**00 47 43.2**	**-0.4**
BALM	**Baldy**	**5.52**	**71**		**Pn**	**00 47 43.5**	**-0.4**
MENT	**Mentasta**	**5.57**	**50**	Pn	**Pn**	**00 47 45.1**	**+0.6**
BAGL	**Bagley Icefiel**	**5.58**	**77**		**Pn**	**00 47 45.5**	**+0.9**
M26K	**Nabesna, AK**	**5.61**	**57**	Pn	**Pn**	**00 47 46.3**	**+1.2**
RIDG	**Independent Ri**	**5.64**	**41**	Pn	**Pn**	**00 47 46.1**	**+0.6**
MESA	**MESA**	**5.64**	**80**	Pn	**Pn**	**00 47 46.6**	**+1.0**
I23K	**Minto, Yukon-K**	**5.73**	**16**		**Pn**	**00 47 46.4**	**-0.1**
COLA	**College**	**5.73**	**23**		**Pn**	**00 47 46.4**	**-0.2**
COLA	**College**	**5.73**	**23**	P	**Pn**	**00 47 46.8**	**+0.2**
YAH	**Yahtse**	**5.75**	**79**	Pn	**Pn**	**00 47 47.9**	**+0.8**
**GRNC

KCHF	Cheshme Sefid,	0.84	179	Pg		Pg	00 51 56.9	-0.7
IGHG	Ghaleghazi	0.87	205	Pg		Pg	00 51 57.5	-0.6
IBZA	Bozab	0.95	133	Pg		Pb	00 52 00.1	+0.2
GLG1	Gilan-e-Gharb	1.36	223	Pg		Pg	00 52 07.9	+0.5
HAGD	Aghdareh	1.76	99	Pn		Pb	00 52 13.5	-0.4
IBDR	Badra	2.20	205	*e*Pn		Pn	00 52 19.0	+1.1
IBDR				*e*Sn		Sb	00 52 48.0	-0.5
IKRK	Kirkuk	2.21	278	*e*Pn		Pn	00 52 18.0	0.0
IKRK				*e*Sn		Sn	00 52 46.0	+0.5
IKRK				AML		AML	00 52 58.7	
	comp=N,3.7nm,0.9s							
IKRK				AML		AML	00 53 01.8	
	comp=E,8.0nm,0.9s							
MSL	Mosul	3.43	293	*e*Pn		Pn	00 52 35.0	+0.3
MSL				*e*Sn		Sn	00 53 16.0	+0.6

IDC 12 00:56:46.0±1.6, 5°22N×123°72E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=207.0km s-min=23.6km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.61	45	Sn	Sn	00 57 53.2	-8.7
	49nm,0.3s,baz=217,slow=20,SNR=1.4						
WRA	Warramunga Arr	27.10	158	P	P	01 02 29.8	-1.0
	0.3nm,0.6s,baz=333,slow=10,SNR=2.3						
	0.3nm,0.6s						
ASAR	Alice Springs	30.39	161	P	P	01 03 00.8	+0.7
	0.9nm,0.4s,baz=342,slow=7.3,SNR=12						
	0.9nm,0.4s						
MKAR	Makanchi Array	54.64	326	P	P	01 06 18.5	+1.8
	0.2nm,0.5s,baz=132,slow=8.2,SNR=1.4						
	0.2nm,0.5s						
ZALV	Zalesovo Beam	57.92	334	P	P	01 06 38.1	-1.8
	0.4nm,0.5s,baz=114,slow=9.6,SNR=3.6						
	0.4nm,0.5s						

IDC 12 01:06:54.9±1.0, 9°.65N×126°.44E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=63.5km s-min=20.9km az=74.0
NEIC 12 01:07:00.2±1.3, 9°.85N±0°.09×126°.5E±0°.2, h35km±2km, mb4.5/17, Error ellipse: s-maj=33.5km s-min=14.9km az=97.0

ISC 12 01:07:00.4±0.6, 9°.75N±0°.07×126°.6E±0°.2, h43km, n37, σ1§08/30, mb4.2/15, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.85	201	Sn	Sn	01 08 15.4	-1.0
	88nm,0.3s,baz=38,slow=19,SNR=1.7						
DAV	Davao City (W)	2.85	201	Pn	Pn	01 07 42.9	-0.5
LUWI	Luwuk	11.38	200	Pn	Pn	01 09 40.6	+0.2
SAUI	Saumlaki	18.23	165	P	P	01 11 09.6	-0.5
KNRA	Kununurra	25.35	175	P	P	01 12 26.9	+3.3
KNRA				IAmb	IAmb	01 12 37.6	
	comp=Z,7.3nm,0.9s						
FITZ	Fitzroy Crossi	27.69	182	P	P	01 12 45.5	+0.9
MJAR	Matsushiro Arr	28.68	20	P	P	01 12 55.2	+1.8
	comp=Z,1.1nm,0.6s,baz=198,slow=7.7,SNR=1.5						
	comp=Z,1.1nm,0.6s						
MJAR	Matsushiro Arr	28.68	20	P	P	01 12 52.5	-0.9
MJAR				IAmb	IAmb	01 13 15.9	
	comp=Z,12nm,1.5s						
WB0	Warramunga Arr	30.32	165	P	P	01 13 07.6	-0.4
WB0				IAmb	IAmb	01 13 35.7	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	30.48	166	P	P	01 13 08.9	-0.5
	comp=Z,0.2nm,0.3s,baz=348,slow=8.3,SNR=6.9						
	comp=Z,0.2nm,0.3s						
WRA	Warramunga Arr	30.48	166	P	P	01 13 08.9	-0.5
WB2	Warramunga Arr	30.48	166	P	P	01 13 10.3	+0.9
WB2				IAmb	IAmb	01 13 11.2	
	comp=Z,11nm,1.5s						
WR8	Warramunga Arr	30.53	165	P	P	01 13 09.8	-0.1
WR8				IAmb	IAmb	01 13 26.4	
	comp=Z,5.0nm,1.1s						
ASAR	Alice Springs	33.97	168	P	P	01 13 40.2	+0.2
	49nm,0.2s,baz=343,slow=7.7,SNR=4.6						
	comp=Z,0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	39.76	73	T	T	01 57 28.0	
	baz=262,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	39.78	73	T	T	01 57 32.4	
	baz=262,slow=74,SNR=8.3						
H11S2	WAKE ISLAND Hy	39.78	73	T	T	01 57 29.3	
	baz=262,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	40.12	71	T	T	01 57 55.7	
	baz=262,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	40.12	71	T	T	01 57 52.0	
	baz=262,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	40.13	71	T	T	01 57 56.9	
	baz=262,slow=75,SNR=15						
FORT	Forrest	40.32	178	P	P	01 14 35.5	+1.7
FORT				IAmb	IAmb	01 15 09.6	
	comp=Z,13nm,0.9s						
BBOO	Buckleboo	43.27	168	P	P	01 14 58.1	+0.2
BBOO				IAmb	IAmb	01 15 35.4	
	comp=Z,40nm,1.4s						
NWAO	Narrogin (SRO)	43.37	191	P	P	01 14 59.1	+0.5
NWAO				IAmb	IAmb	01 15 38.9	
	comp=Z,24nm,1.2s						
PEA0B	Petropavlovsk-	49.98	24	P	P	01 15 49.3	-0.8
PETK	Petropavlovsk-	49.98	24	P	P	01 15 48.9	-1.3
MKAR	Makanchi Array	52.63	323	P	P	01 16 11.0	+0.8
	comp=Z,0.4nm,0.6s,baz=123,slow=8.1,SNR=5.5						
	comp=Z,0.4nm,0.6s						
MKAR	Makanchi Array	52.63	323	P	P	01 16 10.2	0.0
PRZ	Przheval'sk	53.18	316	P	P	01 16 12.5	-2.0
KURBB	Kurchatov Arra	56.68	325	P	P	01 16 40.0	+0.6
	comp=Z,0.5nm,0.4s,baz=125,slow=6.6,SNR=2.3						
	comp=Z,0.5nm,0.4s						
AB31	Akbulak array	67.48	319	P	P	01 17 51.4	-0.5
ABKAR	Akbulak array	67.48	319	P	P	01 17 51.9	0.0
J18K	Innoko River	75.39	27	P	P	01 18 39.5	+0.1
J18K				IAmb	IAmb	01 18 43.5	
	comp=Z,8.5nm,1.4s						
CASY	Casey	76.74	187		pP	01 18 58.6	+0.6
F28M	Old Crow	82.41	23	P	P	01 19 17.9	+0.1
ARCES	ARCESS Array B	84.79	340	P	P	01 19 30.9	+1.0
	comp=Z,1.6nm,0.8s,baz=79,slow=4.8,SNR=5.7						
	comp=Z,1.6nm,0.8s						
ARCES	ARCESS Array B	84.79	340	P	P	01 19 29.6	-0.4
FINES	FINESS Array B	86.50	332	P	P	01 19 38.9	+0.3
	comp=Z,0.8nm,0.7s,baz=92,slow=21,SNR=3.7						
	comp=Z,0.8nm,0.7s						

IDC 12 01:20:42.9±6.4, 18°82S×176°46W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=322.5km s-min=53.7km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.29	260	P	P	01 29 10.6	-0.2
	0.3nm,0.3s,baz=97,slow=7.3,SNR=5.3						
	0.3nm,0.3s						
ASAR	Alice Springs	46.33	255	P	P	01 29 11.0	-0.1
	0.6nm,0.5s,baz=94,slow=7.7,SNR=7.7						
	0.6nm,0.5s						
BRTR	Keskin Array B	146.73	315	PKPbc	PKPdf	01 40 26.3	+0.6
	0.6nm,0.6s,baz=73,slow=4.7,SNR=5.7						
MMAI	Mount Meron Ar	148.19	303	PKPbc	PKPbc	01 40 31.0	-0.5
	1.0nm,0.4s,baz=83,slow=3.5,SNR=8.1						

NNC 12 01:37:39.8±1.0, 41°.17N×76°.52E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=6.5km s-min=4.3km az=171.0
SOME 12 01:37:40.3, 41°.22N×76°.47E, h15km
KRNET 12 01:37:40.0±0.1, 41°.24N×76°.49E, h15km, mb3.4
KNET 12 01:37:44.0±0.5, 41°.39N×76°.27E, h3km±4km, ml2.7, Error ellipse: s-maj=4.9km s-min=2.9km az=110.0

ISC 12 01:37:40.3±1.3, 41°22N±0°.03×76°41E±0°.02, h8km±13km, n50, σ1§02/81, 33C-22D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	Jany-Kuch	0.60	254	↑*iP*	Pg	01 37 52.6	+0.7
JNKS				↑*iS*	Sb	01 38 02.1	+0.2
ULHL	Ulahol	1.03	353	↓P	Pb	01 37 60.0	-0.6
	34nm,0.1s,SNR=146						
ULHL				↓S	Sb	01 38 13.7	-0.6
	46nm,0.1s						
ULHL	Ulahol	1.03	353	↑*iP*	Pb	01 37 59.4	-1.1
ULHL				↑*iS*	Sb	01 38 13.8	-0.5
KDJ	Kajisay	1.07	32	↓*iP*	Pb	01 37 59.5	-1.7
KDJ				↓*iS*	Sb	01 38 13.7	-1.8
TARG	Taragay, Kyrgy	1.16	64	↑*iP*	Pb	01 38 00.7	-2.2
TARG				↑*iS*	Sb	01 38 15.9	-2.4
BOOM	Boomskoye usch	1.31	345	↓*iP*	Pb	01 38 04.9	-0.5
BOOM				↓*iS*	Sg	01 38 22.9	+0.3
ARLS	Aral	1.69	293	↑*iP*	Pb	01 38 12.3	+0.5
ARLS				↑*iS*	Sg	01 38 35.7	+1.0
UCH	Uchtor	1.74	306	↓P	Pg	01 38 13.7	+0.1
	52nm,0.2s,SNR=68						
UCH				↑S	Sg	01 38 36.7	+0.4
	45nm,0.2s						
UCH	Uchtor	1.74	306	↑*iP*	Pb	01 38 13.2	+0.4
UCH				↑*iS*	Sg	01 38 37.4	+1.1
KBK	Karagaybulak	1.80	323	↓P	Pg	01 38 14.8	0.0
	17nm,0.1s,SNR=32						
KBK				↓S	Sg	01 38 38.7	+0.5
	129nm,0.2s						
KBK	Karagaybulak	1.80	323	↓*iP*	Pb	01 38 13.8	+0.1
KBK				↓*iS*	Sg	01 38 38.5	+0.3
TKM2	Tokmak 2	1.80	341	↑P	Pg	01 38 14.5	-0.3
	35nm,0.2s,SNR=8.0						
TKM2				↑S	Sg	01 38 38.3	+0.1
	37nm,0.1s						
TKM2	Tokmak 2	1.80	341	↑*iP*	Pb	01 38 13.5	-0.2
TKM2				↑*iS*	Sg	01 38 37.9	-0.3
IZV	Izvestkoviy	1.82	5	*e*P	Pg	01 38 14.8	-0.4
	23nm,0.2s						
IZV				*e*S	Sg	01 38 39.5	+0.8
	59nm,0.3s						
KST	Kastek	1.85	350	*e*P	Pb	01 38 14.8	+0.4
	11nm,0.3s						
KST				*e*S	Sg	01 38 39.6	-0.1
	23nm,0.4s						
TNSS	Tian-Shan	1.85	12	*e*P	Pb	01 38 14.7	0.0
	7.1nm,0.2s						
TNSS				*e*S	Sg	01 38 39.5	-0.5
	20nm,0.3s						
MTBS	Maitube	1.91	0	*e*P	Pg	01 38 16.1	-0.7
	17nm,0.3s						
MTBS				*e*S	Sg	01 38 41.8	+0.3
	34nm,0.3s						
PRZ	Przheval'sk	1.94	49	↑*e*P	Pb	01 38 15.7	-0.4
PRZ				↑*e*S	Sg	01 38 41.1	-1.7
SALK	Salom-Alik	1.99	261	↑*iP*	Pb	01 38 17.4	+0.5
SALK				↑*iS*	Sg	01 38 44.8	+0.5
MDOK	Medeo	1.99	13	Pg	Pb	01 38 17.0	+0.1
	44nm,0.4s						
MDOK				Lg	Lg	01 38 43.5	
	80nm,0.5s						
AAK	Ala-Archa	2.01	315	↓P	Pg	01 38 18.6	-0.3
	16nm,0.2s,SNR=11						
AAK				↓S	Sg	01 38 44.6	-0.4
	50nm,0.3s						
AAK	Ala-Archa	2.01	315	↑Pg	Pg	01 38 18.5	-0.3
	9.0nm,0.6s						
AAK				↑Lg	Lg	01 38 46.3	
	75nm,1.1s						
AAK	Ala-Archa	2.01	315	↓*iP*	Pb	01 38 17.2	0.0
AAK				↓*iS*	Sg	01 38 44.7	-0.2
KNDC	Almaty	2.03	11	↑Pg	Pb	01 38 17.5	0.0
	57nm,0.7s						
KNDC				↑Lg	Lg	01 38 45.2	
	49nm,0.3s						
FRU1	Bishkek	2.07	321	↑*e*P	Pb	01 38 17.9	-0.3
FRU1				↑*e*S	Sg	01 38 46.1	-0.7
DGS	Degeres	2.07	347	Pg	Pg	01 38 19.4	-0.6
	41nm,0.4s						
DGS				Lg	Lg	01 38 47.3	
	19nm,0.2s						
KOTS	Kotyrbulak	2.07	14	Pg	Pb	01 38 18.7	+0.4
	61nm,0.3s						
KOTS				Lg	Lg	01 38 46.1	
	119nm,0.3s						
KOTS	Kotyrbulak	2.07	14	*e*P	Pb	01 38 18.7	+0.4
	61nm,0.3s						
KOTS				*e*S	Sg	01 38 46.1	-0.8
	119nm,0.3s						
CHMS	Chumysh	2.16	326	↑P	Pg	01 38 21.6	-0.2
	35nm,0.3s,SNR=21						
CHMS				↑S	Sg	01 38 49.3	-0.4
	30nm,0.2s						
CHMS	Chumysh	2.16	326	↑*iP*	Pb	01 38 19.2	-0.5
CHMS				↑*iS*	Sb	01 38 47.7	+1.0
SATY	Saty	2.36	38	Pg	Pb	01 38 23.2	+0.1
	18nm,0.3s						
SATY				Lg	Lg	01 38 53.9	
	61nm,0.3s						
EKS2	Erkin-Say	2.44	307	↓P	Pb	01 38 24.8	+0.4
	7.9nm,0.2s,SNR=14						
EKS2	Erkin-Say	2.44	307	↓*e*P	Pb	01 38 23.3	-1.1
EKS2				↓*e*S	Sb	01 38 54.9	+0.2
USP	Ospenovka	2.49	326	↑P	Pb	01 38 25.9	+0.6
	27nm,0.2s,SNR=34						
KTBS	Karatobe	2.49	4	Pg	Pb	01 38 26.4	+1.0
	16nm,0.3s						
KTBS				Lg	Lg	01 38 59.3	
	68nm,0.3s						
SFK	Sufi-Kurgan	2.52	242	↓*iP*	Pb	01 38 24.8	-1.2
SFK				↓*iS*	Sb	01 38 57.7	+0.3
ARSB	Arslanbob	2.59	273	↓*iP*	Pb	01 38 25.7	-1.4
ARSB				↓*iS*	Sb	01 38 59.1	0.0
KURS	Kuram	2.61	29	Pg	Pb	01 38 27.0	-0.4
	13nm,0.7s						
KURS				Lg	Lg	01 39 00.5	
	35nm,0.7s						
CHKK	Chushkaly	2.66	9	Pg	Pb	01 38 29.2	+1.0
	21nm,0.3s						
CHKK				Lg	Lg	01 39 04.3	
	58nm,0.2s						
CHKK	Chushkaly	2.66	9	*e*P	Pb	01 38 29.2	+1.0
	21nm,0.3s						
CHKK				*e*S	Sg	01 39 04.3	-1.5
	58nm,0.2s						
KPKS	Kokpek	2.80	36	Pg	Pb	01 38 31.0	+0.3
	0.4nm,0.1s						
KPKS				Lg	Lg	01 39 07.5	
	181nm,0.4s						
MRKS	Merke	2.82	304	Pg	Pg	01 38 33.1	-1.2
	18nm,0.3s						
MRKS				Lg	Lg	01 39 11.1	
	35nm,0.4s						
MRKS	Merke	2.82	304	*e*P	Pg	01 38 33.1	-1.2
	18nm,0.3s						
MRKS				*e*S	Sg	01 39 11.1	+0.1
	35nm,0.4s						
SHLS	Shalkode	2.98	49	Pg	Pg	01 38 38.6	+1.3
	12nm,0.3s						
SHLS				Lg	Lg	01 39 20.1	
	31nm,0.7s						
SHLS	Shalkode	2.98	49	*e*P	Pg	01 38 38.6	+1.3
	12nm,0.3s						
SHLS				*e*S	Sg	01 39 20.1	+4.3
	31nm,0.7s						
PDGK	Podgornoye	3.10	46	↑Pg	Pb	01 38 35.8	0.0
	8.2nm,0.6s						
PDGK				↑Lg	Lg	01 39 17.1	
	60nm,1.1s						
ARXS	Arharly	3.16	19	Lg	Lg	01 39 17.2	
	50nm,0.4s						
ARXS	Arharly	3.16	19	*e*P	Pb	01 38 36.7	-0.1
ARXS				*e*S	Sb	01 39 17.2	+1.7
KK31	Karatay Array	4.77	295	Pg	Pg	01 39 08.6	-3.1
	0.9nm,0.3s,baz=116,slow=17,SNR=14						
KK31				↑Lg	Lg	01 40 14.0	
	3.5nm,0.5s,baz=116,slow=27						
MK31	Makanchi Array	6.99	35	P	Pn	01 39 24.1	+1.1
	0.2nm,0.4s,baz=212,slow=12,SNR=5.3						

CATAC 12 01:40:45.2±0.7, 12°N±3°×8°8W±°, h22km±4km, M3.4/13, MLv3.4/13, Error ellipse: s-maj=7.2km s-min=3.9km az=34.2, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.94	47	P	Pn	01 41 03.4	+0.3
CRIN	San Cristobal	0.94	47	S	Sn	01 41 16.9	+1.0
POTN	Potosi Cosigui	0.97	14	P	Pb	01 41 02.9	-0.5
POTN				S	Sn	01 41 16.3	-0.3
PKGN	Cerro Pekin	0.97	51	P	Pn	01 41 03.5	-0.1
PKGN				S	Sn	01 41 16.5	-0.1
POLN	Al Sur del Vol	1.09	57	S	Sn	01 41 20.1	+0.5
CNGA	Al SSO del Vol	1.11	67	P	Pn	01 41 05.4	-0.2
CNGN	Cerro Negro	1.12	67	P	Pn	01 41 05.5	-0.1
CNGN	Cerro Negro	1.12	67	S	Sn	01 41 20.9	+0.5
COPN	Copaltepe	1.14	84	P	Pn	01 41 05.6	-0.2
CNCH	Conchagua	1.22	356	S	Sb	01 41 23.3	+0.3
CNCH	Conchagua	1.22	356	P	Pn	01 41 06.6	-0.4
LCND	La Caada	1.25	354	P	Pn	01 41 07.6	+0.2
MOM3	MOM3	1.29	69	P	Pn	01 41 07.5	-0.4
MOM3				S	Sn	01 41 24.5	+0.1
AMTN	Mateare	1.30	82	S	Sb	01 41 25.2	-0.1
APQ2	Apoyeque	1.40	84	P	Pn	01 41 08.9	-0.5
APQ2				S	Sn	01 41 27.6	+0.4
TISN	Laguna Tiscapa	1.45	86	P	Pn	01 41 10.6	+0.5
PACA	Pacayal	1.51	338	P	Pn	01 41 11.3	+0.2
PACA	Pacayal	1.51	338	S	Sn	01 41 30.4	+0.2
LIMN	Finca el Limon	1.68	53	P	Pn	01 41 13.2	-0.2
LIMN				S	Sb	01 41 35.6	-0.7
MATN	Matagalpa	1.98	64	P	Pn	01 41 17.1	-0.4
MATN	Matagalpa	1.98	64	S	Sn	01 41 41.8	+0.1
TGUH	Tegucigalpa,Un	2.04	13	P	Pn	01 41 18.6	+0.2
TGUH				S	Sn	01 41 43.7	+0.4

NEIC 12 02:00:26.4±1.0, 30°.07N±0°.09×80°.29E±0°.08, h10km±1km, mb4.3/22, Error ellipse: s-maj=16.4km s-min=10.8km az=203.0
NDI 12 02:00:28.4±4.1, 29°.92N×80°.22E, h10km, ML4.2, MW4.0
DMN 12 02:00:28.8±0.0, 29°.09N×79°.70E, h10km, Ml4.7/8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
IDC 12 02:00:29.5±6.9, 29°.95N×80°.14E, h3km±52km, mb4.1/26, mbtmp4.3/28, ML4.1/2, MS3.8/3, Error ellipse: s-maj=20.3km s-min=11.8km az=26.0

ISC 12 02:00:26.6±1.0, 30°.01N±0°.03×80°.24E±0°.03, h17km±6km, n142, σ1§91/178, mb4.4/32, MS3.9/6, 10C-12D, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGTI	Lohaghat	0.55	179	*e*P	Pb	02 00 38.6	+0.8
LGTI				*e*S	Sg	02 00 45.7	+0.7
LGTI				IAML		02 00 48.4	
	comp=E,8μm,0.4s						
LGTI				IAML		02 00 49.9	
	comp=N,16μm,0.3s						
JOSI	Joshimath	0.80	313	*e*P	Pb	02 00 41.8	-0.5
JOSI				IAML		02 00 53.9	
	comp=N,17μm,0.4s						
JOSI				*e*S	Sn	02 00 55.0	-0.1
JOSI				IAML		02 00 55.5	
	comp=E,11μm,0.5s						
DDI	Dehra Dun	1.92	280	*e*P	Pb	02 01 02.3	+1.2
DDI				*e*S	Sb	02 01 26.5	+1.7
DDI				IAML		02 01 29.4	
	comp=N,11μm,0.3s						
DDI				IAML		02 01 29.7	
	comp=E,8μm,0.5s						
BRCI	Bahraich	2.70	154	IAML		02 01 56.2	
	comp=N,3μm,0.5s						
BRCI				IAML		02 01 57.3	
	comp=E,3μm,0.3s						
SMLA	Simla	2.88	294	*e*P	Pn	02 01 14.0	+2.3
SMLA				*e*S	Sn	02 01 49.0	+3.0
SMLA				IAML		02 02 02.9	
	comp=E,3μm,0.4s						
SMLA				IAML		02 02 03.2	
	comp=N,3μm,0.4s						
NDI	New Delhi	2.95	244	*e*P	Pn	02 01 13.8	+1.1
NDI				*e*S	Sn	02 01 50.7	+2.9
NDI				IAML		02 02 10.3	
	comp=N,746nm,0.3s						
NDI				IAML		02 02 11.1	
	comp=E,2μm,0.6s						
HNLY	HANLEY	2.97	339	*e*P	Pb	02 01 17.5	-1.9
HNLY				*e*S	Sb	02 01 54.9	-0.7
HNLY				IAML		02 02 02.0	
	comp=N,234nm,0.4s						
HNLY				IAML		02 02 02.4	
	comp=E,147nm,0.4s						
LDR	Lodi Road	3.00	243	*e*S	Sn	02 01 50.7	+1.8
LDR				IAML		02 02 10.3	
	comp=N,4μm,0.5s						
LDR				IAML		02 02 12.3	
	comp=E,5μm,0.6s						
NPLP	NPLP New Delhi	3.01	244	*e*P	Pn	02 01 15.5	+2.0
NPLP				*e*S	Sn	02 01 51.3	+2.1
NPLP				IAML		02 02 02.1	
	comp=E,2μm,0.2s						
NPLP				IAML		02 02 06.1	
	comp=N,2μm,0.2s						
AYAN	Aya Nagar	3.11	242	*e*P	Pn	02 01 15.8	+0.9
AYAN				IAML		02 02 13.2	
	comp=E,943nm,0.6s						
AYAN				IAML		02 02 15.2	
	comp=N,610nm,0.4s						
LKN	LUCKNOW	3.28	170	*e*S	Sn	02 02 00.2	+4.3
LKN				IAML		02 02 13.5	
	comp=E,3μm,0.4s						
LKN				IAML		02 02 14.8	
	comp=N,3μm,0.5s						
JHJR	Jhajjar	3.43	247	*e*S	Sn	02 02 01.9	+2.2
JHJR				IAML		02 02 19.9	
	comp=E,3μm,0.6s						
JHJR				IAML		02 02 20.0	
	comp=N,3μm,0.3s						
DANN	Dangsing	3.49	117	Pn	Pn	02 01 23.8	+3.3
	baz=101,slow=0.0						
DANN				Sn	Sn	02 02 04.2	+2.6
	comp=N,599nm,0.4s,baz=101,slow=0.0						
BHK	Bhakra	3.58	294	*e*P	Pn	02 01 20.1	-1.3
BHK				IAML		02 02 20.3	
	comp=E,1μm,0.7s						
BHK				IAML		02 02 23.6	
	comp=N,2μm,0.5s						
KUDL	Kundal	3.77	241	*e*P	Pn	02 01 24.6	+0.7
TLWR	Talawar	4.16	299	*e*P	Pn	02 01 29.5	+0.1
TLWR				*e*S	Sn	02 02 18.8	+1.1
TLWR				IAML		02 02 37.1	
	comp=E,371nm,0.3s						
TLWR				IAML		02 02 37.4	
	comp=N,423nm,0.5s						
GKN	Gorkha	4.34	116	Pn	Pn	02 01 34.7	+2.7
	baz=103,slow=0.0						
GKN				Sn	Sn	02 02 23.6	+1.3
	baz=103,slow=0.0						
TSSA	Tissa	4.49	310	*e*P	Pn	02 01 36.6	+2.5
TSSA				*e*S	Sn	02 02 27.5	+1.4
TSSA				IAML		02 02 31.7	
	comp=E,692nm,0.4s						
TSSA				IAML		02 02 33.6	
	comp=N,796nm,0.3s						
JHNI	Jhansi	4.77	199	*e*P	Pn	02 01 38.5	+0.8
JHNI				*e*S	Sn	02 02 30.0	-2.6
DMN	Daman	4.89	118	Pn	Pn	02 01 42.1	+2.4
	baz=106,slow=0.0						
DMN				Sn	Sn	02 02 36.7	+0.6
	comp=N,100nm,0.4s,baz=106,slow=0.0						
ALCI	Alchi Leh	4.93	329	*e*P	Pn	02 01 43.7	+3.4
ALCI				*e*S	Sn	02 02 41.6	+4.4
ALCI				IAML		02 02 47.3	
	comp=E,86nm,0.3s						
ALCI				IAML		02 02 47.4	
	comp=N,115nm,0.5s						
KKN	Kakani	4.94	115	Pn	Pn	02 01 43.2	+2.9
	baz=103,slow=0.0						
KKN				Sn	Sn	02 02 37.8	+0.6
	comp=N,184nm,0.3s,baz=103,slow=0.0						
PKIN	Phulchoki	5.13	117	Pn	Pn

comp=E,259nm,0.3s
GUNA IAML 02 03 02.7
comp=N,328nm,0.4s
EVN Everest 6.11 108 Pn 02 01 56.4 -0.4
EVN Sn **Sn 02 03 06.0 -0.8**
RAMN Ramite 6.37 117 Pn **Pn 02 02 01.9 +1.9**
baz=108,slow=0.0
RAMN Sn **Sn 02 03 11.5 -1.1**
comp=N,145nm,0.4s,baz=108,slow=0.0
BKNR BIKANER 6.41 254 *e*S **Sn 02 03 10.7 -2.4**
GAYA Gaya 6.82 138 *e*P **Pn 02 02 07.3 +1.3**
GAYA *e*S **Sn 02 03 20.9 -2.4**
GAYA IAML 02 03 24.5
comp=N,251nm,0.2s
GAYA IAML 02 03 25.0
comp=E,246nm,0.2s
ODAN Odare 7.03 115 Pn **Pn 02 02 11.5 +2.4**
baz=106,slow=0.0
ODAN Sn **Sn 02 03 27.8 -1.0**
comp=E,119nm,0.4s,baz=106,slow=0.0
BHPL Bhopal 7.19 201 *e*P **Pn 02 02 09.5 -1.6**
BHPL *e*S **Sn 02 03 27.9 -4.6**
BHPL IAML 02 03 30.5
comp=E,172nm,0.1s
BHPL IAML 02 03 31.4
comp=N,166nm,0.2s
UDPR Udaipur 7.93 229 *e*P **Pn 02 02 22.1 +0.9**
UDPR *e*S **Sn 02 03 45.3 -5.3**
UDPR IAML 02 03 49.5
comp=E,122nm,0.3s
UDPR IAML 02 03 49.8
comp=N,161nm,0.4s
BOK Bokaro 7.98 139 *e*P **Pn 02 02 22.4 +0.5**
BOK *e*S **Sn 02 03 49.8 -2.0**
BLSP Bilaspur 8.03 167 *e*P **Pn 02 02 24.1 +1.6**
BLSP *e*S **Sn 02 03 48.8 -4.1**
BLSP IAML 02 03 55.0
comp=E,220nm,0.3s
BLSP IAML 02 03 58.0
comp=N,276nm,0.1s
JASL Jaisalmer 8.77 252 *e*S **Sn 02 04 06.3 -4.9**
NGP Nagpur 8.88 187 *e*P **Pn 02 02 33.7 -0.6**
NGP *e*S Sn 02 04 06.2 -7.8
NGP IAML 02 05 01.1
comp=N,93nm,0.8s
NGP IAML 02 05 01.4
comp=E,122nm,0.7s
LSA Lhasa 9.48 89 Pn 02 02 40.6 -2.3
LSA Lhasa 9.48 89 Pn **Pn 02 02 43.0 +0.1**
LSA Sn **Sn 02 04 25.5 -3.8**
LSA smax smax
comp=N,17nm,0.6s
LSA smax smax
comp=E,17nm,0.8s
AKL Akola 9.71 198 *e*P **Pn 02 02 44.7 -0.9**
AKL *e*S **Sn 02 04 30.7 -3.7**
KSH Kashi 10.11 341 P **Pn 02 02 50.3 -0.9**
KSH pP 02 02 56.5
KBL Kabul 10.50 298 Pn **Pn 02 02 56.3 -0.2**
BWNR Bhubaneshwar 10.90 151 *e*P **Pn 02 03 02.6 +0.7**
BWNR *e*S **Sn 02 04 57.1 -6.5**
BWNR IAML 02 05 05.4
comp=E,99nm,0.7s
SHL Shillong 11.22 110 Pn 02 03 05.6 -0.8
SHL Shillong 11.22 110 *e*P **Pn 02 03 06.2 -0.2**
SHL *e*S **Sn 02 05 05.7 -5.9**
TARG Taragay, Kyrgy 11.86 351 Pn **Pn 02 03 14.3 -1.1**
GAR Garm 12.14 320 Pn 02 03 17.9 -0.9
CHGR Chuyangaron 12.57 316 Pn 02 03 22.5 -2.3
ARSB Arslanbob 12.73 334 Pn 02 03 27.1 +0.1
POO Poona 12.82 208 *e*P **Pn 02 03 25.9 -2.3**
POO *e*S Sn 02 05 41.9 -8.7
BOOM Boomskoye usch 12.93 346 Pn **Pn 02 03 29.9 +0.2**
AAK Ala-Archa 13.42 341 Pn **Pn 02 03 36.2 -0.3**
comp=E,0.8nm,0.3s,baz=173,slow=5.7,SNR=6.1
comp=E,3.3nm,0.6s
AAK Ala-Archa 13.42 341 Pn **Pn 02 03 36.5 0.0**
KAD Karad 13.80 205 *e*P **Pn 02 03 38.7 -2.9**
KAD *e*S Sn 02 06 01.9 -13
WMQ Urumqi 15.01 21 *e*P **Pn 02 03 58.8 +0.7**
KK31 Karatay Array 15.21 332 Pn **Pn 02 03 57.4 -3.3**
KK31 IAmb IAmb 02 04 23.9
comp=Z,5.1nm,0.6s
KKAR Karatay Array 15.21 332 Pn Pn 02 03 57.5 -3.2
MAKZ Makanchi 16.83 4 Pn **Pn 02 04 21.0 -0.4**
MAKZ IAmb IAmb 02 04 26.1
comp=Z,20nm,1.2s
MKAR Makanchi Array 16.84 5 Pn **Pn 02 04 21.6 +0.1**
comp=Z,1.0nm,0.3s,baz=199,slow=9.7,SNR=33
MKAR Sn **Sn 02 07 21.6 -6.6**
comp=Z,0.1nm,0.3s,baz=186,slow=9.8,SNR=2.0
comp=Z,8.8nm,0.7s
MKAR Makanchi Array 16.84 5 Pn Pn 02 04 21.1 -0.5
GTA Gaotai 18.60 54 *e*P **Pn 02 04 45.7 +2.2**
GTA sP sP 02 04 52.7 +1.8
GTA pmax pmax
comp=Z,11nm,0.7s
CHTO Chiang Mai 20.32 119 P **P 02 05 01.9 -0.1**
CHTO IAmb IAmb 02 05 13.3
comp=Z,19nm,1.4s
LZDM Lanzhou Array 20.53 67 P Pn 02 05 06.4 -0.3
comp=Z,13nm,0.4s,baz=247,slow=12,SNR=22
comp=Z,13nm,0.4s
CM31 Chiang Mai Arr 20.54 120 P **P 02 05 05.2 +0.8**
CM31 IAmb IAmb 02 05 17.4
comp=Z,13nm,0.9s
CMAR Chiang Mai Arr 20.54 120 P Pn 02 05 07.1 +0.5
comp=Z,3.6nm,0.6s,baz=318,slow=11,SNR=17
comp=Z,3.6nm,0.6s
CMAR Chiang Mai Arr 20.54 120 P P 02 05 04.7 +0.3
KURBB Kurchatov Arra 20.64 357 P **P 02 05 05.4 +0.2**
comp=Z,3.5nm,0.6s,baz=181,slow=10,SNR=17
comp=Z,3.5nm,0.6s
LZH Lanzhou 20.67 67 *e*P **P 02 05 06.9 +1.0**
LZH pP sP 02 05 17.5 +3.8
LZH pmax pmax
comp=Z,24nm,1.2s
LZH LR LR
comp=N,200nm,12.0s
LZH LR LR
comp=E,310nm,12.7s
LZH LR LR
comp=Z,230nm,13.4s
KURK Kurchatov 20.72 357 P P 02 05 04.9 -1.2
KURK IAmb IAmb 02 05 07.2
comp=Z,5.8nm,0.7s
PALK Pallekele 22.62 179 LR LR 02 14 43.7
comp=Z,283nm,19.0s,baz=347,slow=38
PALK Pallekele 22.62 179 P **P 02 05 27.9 +1.2**
PALK IAmb IAmb 02 05 40.6
comp=Z,21nm,1.4s
BVAR Borovoye Array 24.11 345 P **P 02 05 42.1 +0.8**
comp=Z,1.4nm,0.5s,baz=153,slow=11,SNR=11
comp=Z,1.4nm,0.5s
ZAA0 Zalesovo Array 24.16 7 P **P 02 05 41.1 -0.6**
ZAA0 IAmb IAmb 02 05 44.5
comp=Z,8.1nm,0.8s
ZALV Zalesovo Beam 24.16 7 P **P 02 05 42.2 +0.5**
comp=Z,9.6nm,0.7s,baz=195,slow=9.1,SNR=29
ZALV LR LR 02 15 36.6
comp=Z,128nm,19.7s,baz=314,slow=38
comp=Z,9.6nm,0.7s
AB31 Akbulak array 24.64 327 P 02 05 46.4 +0.2
AB31 IAmb IAmb 02 05 48.7
comp=Z,4.5nm,0.6s
ABKAR Akbulak array 24.64 327 P 02 05 46.2 0.0
BTO Baotou 26.39 58 *e*P **P 02 06 01.6 -0.7**
BTO pP **pP 02 06 05.9 -2.1**
BTO S **S 02 10 33.7 -1.4**
BTO pmax pmax
comp=Z,14nm,0.5s
BTO pmax pmax
comp=Z,300nm,4.8s
BTO LR LR
comp=N,370nm,9.3s
BTO LR LR
comp=E,610nm,13.0s
BTO LR LR
comp=Z,250nm,10.9s
SONM Songino Array 26.84 41 P **P 02 06 09.7 +3.3**
comp=Z,2.4nm,0.5s,baz=234,slow=9.4,SNR=6.0
comp=Z,2.4nm,0.5s
SONM Songino Array 26.84 41 P P 02 06 04.5 -1.9
HHC Hu-ho-hao-te 27.59 58 *e*P **P 02 06 13.3 +0.2**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,44nm,4.9s
KBZ Khabaz 32.58 305 P **P 02 06 57.4 +0.4**
comp=Z,2.1nm,0.7s,baz=119,slow=5.3,SNR=7.6
comp=Z,2.1nm,0.7s
HILR Hailar Array B 35.57 45 P **P 02 07 25.2 +2.2**
comp=Z,2.9nm,0.5s,baz=226,slow=7.7,SNR=4.1
comp=Z,2.9nm,0.5s
BR131 Keskin Array S 39.07 297 P **P 02 07 53.1 +0.2**
BRTR Keskin Array B 39.07 297 P **P 02 07 53.9 +0.9**
comp=Z,0.6nm,0.6s,baz=116,slow=8.8,SNR=8.9
comp=Z,0.6nm,0.6s
BRTR Keskin Array B 39.07 297 P P 02 07 53.2 +0.3
NRIK Noril'sk 39.60 4 P **P 02 07 58.0 +1.3**
comp=Z,3.7nm,0.5s,baz=184,slow=7.7,SNR=9.3
comp=Z,3.7nm,0.5s
NRIK Noril'sk 39.60 4 P P 02 07 57.1 +0.3
NRIK IAmb IAmb 02 07 58.7
comp=Z,12nm,1.1s
KSRS Korea Array 40.00 66 P **P 02 08 00.8 +0.2**
comp=Z,13nm,0.3s,baz=278,slow=9.1,SNR=5.4
comp=Z,13nm,0.3s
TGY Tagaytay City 40.66 104 LR LR 02 25 34.5
comp=Z,188nm,19.4s,baz=288,slow=37
ELL Elmali 42.17 293 P P 02 08 19.2 +0.6
TLCR 42.75 305 ⇓P **P 02 08 23.6 +0.6**
USRK Ussuriysk Ar. 42.95 56 P **P 02 08 25.9 +1.2**
comp=Z,1.8nm,0.5s,baz=255,slow=12,SNR=2.2
comp=Z,1.8nm,0.5s
TPGR Topolog 43.02 305 ⇑P **P 02 08 25.9 +0.7**
AKASG Malin Array Be 43.03 314 P **P 02 08 25.2 0.0**
comp=Z,3.1nm,0.7s,baz=81,slow=7.0,SNR=10
comp=Z,3.1nm,0.7s
AKASG Malin Array Be 43.03 314 P P 02 08 25.7 +0.5
AKBB Malin Array Si 43.03 314 P 02 08 25.4 +0.2
AKBB IAmb IAmb 02 08 26.1
comp=Z,6.9nm,0.7s
KIEV Kiev 43.04 314 P 02 08 25.1 -0.1
KIEV IAmb IAmb 02 08 26.1
comp=Z,6.2nm,0.7s
KIEV Kiev 43.04 314 ⇑P **P 02 08 25.4 +0.2**
CFR Carcaliu 43.23 305 ⇑P **P 02 08 27.6 +0.7**
SORM Soroca 43.27 310 ⇓P **P 02 08 27.6 +0.4**
VLDR Vladesti 43.30 306 ⇓P **P 02 08 28.7 +1.2**
HARR Harsova 43.36 305 ⇓P **P 02 08 28.7 +0.7**
ICOR Ion Corvin 43.44 304 ⇓P **P 02 08 29.7 +1.1**
VRI Vrincioaia 44.24 306 ⇑P **P 02 08 35.8 +1.7**
PLOR Plostina 44.30 306 ⇑P **P 02 08 37.0 +1.5**
TESR Tescani 44.32 307 ⇑P **P 02 08 36.5 +0.8**
GIRR Girov 44.44 308 ⇑P **P 02 08 37.4 +0.8**
MNK Minsk 44.51 319 *i* P **P 02 08 37.7 +0.7**
comp=E,5.0nm,0.8s
MNK *i* P **P 02 08 37.7 +0.7**
comp=N,7.0nm,0.7s
MNK *i* P **P 02 08 37.7 +0.7**
comp=Z,12nm,0.7s,baz=101
MNK *i* PcP **PcP 02 10 20.7 +0.6**
MNK *i* PP **PP 02 10 21.9 +1.1**
MNK *i* PPP PPP 02 10 59.1
MNK *i* S **S 02 15 13.7 +2.2**
MNK *i* SS **SS 02 18 27.0 -3.9**
MNK *i* SSS SSS 02 19 14.6
MNK *i* LQ LQ 02 24 27.1
MNK *i* LR LR 02 27 25.3
MNK *i* LRM MLR 02 29 58.3
comp=E,86nm,11.3s
MNK *i* LRM MLR 02 29 59.1
comp=N,131nm,10.3s
MNK *i* LRM MLR 02 30 01.6
comp=Z,193nm,11.8s
NEHR Nehoiu 44.54 306 ⇓P **P 02 08 39.5 +2.1**
TURR Turia 44.74 307 ⇑P **P 02 08 40.7 +1.6**
MLR Muntele Rosu 44.78 306 P 02 08 39.8 +0.3
MLR Muntele Rosu 44.78 306 ⇓P **P 02 08 40.6 +1.0**
DOPR Dopca 45.18 306 ⇑P **P 02 08 43.9 +1.3**
NACGM Naroch 45.21 319 *e*P **P 02 08 43.2 +0.6**
comp=Z,19nm,0.9s,baz=101
BURAR Bucovina Array 45.34 309 ⇓P **P 02 08 45.0 +1.0**
BUR08 Bucovina Ar. S 45.36 309 P 02 08 44.7 +0.6
BUR08 IAmb IAmb 02 08 45.4
comp=Z,2.3nm,0.8s
VOIR 45.41 306 ⇓P **P 02 08 45.2 +0.7**
ARR Arges 45.71 306 ⇑P **P 02 08 47.4 +0.6**
LOT Lotru 46.31 306 ⇑P **P 02 08 53.0 +1.3**
MARR Marisel-Cluj 46.76 307 ⇓P **P 02 08 57.0 +1.9**
DRGR 47.04 308 ⇑P **P 02 08 58.5 +1.2**
FINES FINESS Array B 47.12 328 P **P 02 08 58.2 +0.6**
comp=Z,6.0nm,0.6s,baz=114,slow=9.2,SNR=53
comp=Z,6.0nm,0.6s
FINES FINESS Array B 47.12 328 P P 02 08 58.0 +0.4
TIXI Tiksi 49.19 18 P 02 09 13.0 -0.4
ARCES ARCESS Array B 50.06 338 P **P 02 09 21.3 +1.1**
comp=Z,1.5nm,0.4s,baz=103,slow=7.5,SNR=41
comp=Z,1.5nm,0.4s
ARCES ARCESS Array B 50.06 338 P P 02 09 21.2 +1.1
HFS Hagfors 52.87 325 P **P 02 09 41.8 +0.5**
comp=Z,4.4nm,0.5s,baz=95,slow=8.9,SNR=26
comp=Z,4.4nm,0.5s
GERES GERESS Array B 53.01 311 P P 02 09 42.6 0.0
comp=Z,0.9nm,0.6s,baz=79,slow=6.9,SNR=5.7
comp=Z,0.9nm,0.6s
NB2 NORSAR Subarra 54.14 326 P **P 02 09 50.5 -0.1**
comp=Z,1.9nm,0.7s,baz=91,slow=7.4
NOA NORSAR Array B 54.14 326 P **P 02 09 50.6 0.0**
comp=Z,2.2nm,0.8s,baz=92,slow=7.2,SNR=7.9
comp=Z,2.2nm,0.8s
SPITS Spitsbergen Ar 55.55 347 P P 02 10 01.5 +0.9
comp=Z,24nm,1.2s,baz=109,slow=9.8,SNR=4.7
comp=Z,24nm,1.2s
EKA Eskdalemuir Ar 62.27 320 P P 02 10 47.6 +0.1
comp=Z,1.0nm,0.4s,baz=88,slow=7.1,SNR=7.9
comp=Z,1.0nm,0.4s
ESDC Sonseca Array 67.42 304 P P 02 11 21.5 +0.1
comp=Z,2.2nm,0.8s,baz=56,slow=7.2,SNR=12
comp=Z,2.2nm,0.8s
ESDC Sonseca Array 67.42 304 P P 02 11 21.1 -0.3
WRA Warramunga Arr 71.95 127 P P 02 11 49.8 +0.3
comp=Z,1.1nm,0.6s,baz=322,slow=6.0,SNR=12
comp=Z,1.1nm,0.6s
WRA Warramunga Arr 71.95 127 P P 02 11 49.4 -0.1
TORD Torodi Ar. Bea 73.72 276 P P 02 12 00.3 +0.1
comp=Z,0.8nm,0.3s,baz=46,slow=6.8,SNR=11
comp=Z,0.8nm,0.3s
ASAR Alice Springs 74.18 130 P P 02 12 02.6 -0.1
comp=Z,0.7nm,0.5s,baz=311,slow=6.1,SNR=6.9
comp=Z,0.7nm,0.5s
ILAR Eielson Array 78.66 19 P **P 02 12 27.6 +0.1**
comp=Z,1.3nm,0.8s,baz=305,slow=4.6,SNR=16
ILAR PP **PP 02 15 23.7 -1.1**
comp=Z,0.5nm,0.9s,baz=313,slow=8.6,SNR=4.8
comp=Z,1.3nm,0.8s
DBIC Dimbokro 82.47 273 P P 02 12 49.2 +0.5
comp=Z,4.8nm,0.7s,baz=66,slow=5.6,SNR=6.0
comp=Z,4.8nm,0.7s
DBIC Dimbokro 82.47 273 P P 02 12 49.4 +0.7

IDC ***12*** *02:13:45.3±2.5, 32°.20N×116°.05W, h0km, mb3.1/1, mbtmp3.3/7, ML3.5/6, MS3.3/2, Error ellipse: s-maj=38.4km s-min=10.9km az=41.0*
NEIC ***12*** *02:13:51.4±3.0, 32°.785N±0°.006×115°.55W±0°.01, h10km±1km, Error ellipse: s-maj=2.9km s-min=1.7km az=339.0, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=0.05; Mθθ=0.90; Mφφ 0.95; Mrθ 0.32; Mθφ=0.01; Mrφ 0.30; Fault plane solution: M0 1.02000×10^15^ NP1:φ224.03000°, δ87.71000°, λ=-25.41000°. NP2: φ315.12000°, δ64.61000°, λ=-177.46000°. Principal axes: T 1.0301, Plg16.0000°, Azm272.0000°; N -0.0209, Plg64.0000°, Azm39.0000°; P -1.0092, Plg19.0000°, Azm177.0000°;*
PAS ***12*** *02:13:52.2±2.0, 32°.79N±0°.01×115°.55W±0°.01, h18km±3km, Mwr4.0/6, ML4.0/38(NEIC), Mwr3.9/104(NEIC) Error ellipse: s-maj=1.6km s-min=1.3km az=195.0*
ECX ***12*** *02:13:52.6±0.6, 32°.78N×115°.56W, h17km±2km, MD3.9, ML4.1, Fault plane solution: NP1:φ139.00000°, δ62.00000°, λ=166.00000°.*
NEIC ***12*** *02:13:52.2, 32°.79N×115°.55W, h18km*
ISC 12 02:13:52.0±0.7, 32°.76N±0°.02×115°.56W±0°.01, h23km±4km, n158, σ0 79/192, 16C-13D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time h m s	Res ISC
DREC	**Desert Rsrch C**	**0.10**	**64**		**Pb**	**02 13 55.2**	**-1.1**
DREC					**Sb**	**02 13 58.4**	**-0.9**
DREC	**Desert Rsrch C**	**0.10**	**64**	⇑*iP*	**Pb**	**02 13 55.2**	**-1.1**
5053	**Calexico**	**0.11**	**149**		**Pb**	**02 13 55.9**	**-0.5**
5053					**Sb**	**02 13 59.1**	**-0.2**
ICBC	**Inst. de Cultu**	**0.12**	**144**	⇓*eP*	**Pb**	**02 13 56.0**	**-0.5**
IMPE	**Imperial**	**0.14**	**359**		**Pn**	**02 13 59.2**	**+0.4**
SNR	**Schaffner Ranc**	**0.14**	**45**		**Pb**	**02 13 55.8**	**-0.9**
CEA0	**Mexicali**	**0.14**	**221**	*eP*	**Pb**	**02 13 56.2**	**-0.5**
WESC	**Westside Schoo**	**0.15**	**269**		**Pb**	**02 13 56.4**	**-0.4**
WESC					**Sb**	**02 14 00.2**	**+0.2**
WESC	**Westside Schoo**	**0.15**	**269**	⇑*iP*	**Pb**	**02 13 56.4**	**-0.4**
UABX	**UABC, Campus M**	**0.16**	**143**		**Pb**	**02 13 56.8**	**-0.2**
UABX	**UABC, Campus M**	**0.16**	**143**	⇓*iP*	**Pb**	**02 13 56.8**	**-0.2**
COK2	**Cook Ranch 2**	**0.17**	**302**		**Pb**	**02 13 56.6**	**-0.5**
COK2	**Cook Ranch 2**	**0.17**	**302**	⇑*iP*	**Pb**	**02 13 56.6**	**-0.5**
COK2				*i* S	**Sb**	**02 14 00.4**	**0.0**
5054	**Holtville Bond**	**0.20**	**110**		**Pb**	**02 13 57.2**	**-0.2**
5054					**Sb**	**02 14 01.4**	**+0.4**
JARAX	**Ej. Heriberto**	**0.22**	**185**	⇓*iP*	**Pb**	**02 13 57.4**	**-0.3**
SWSC	**Sam W. Stewart**	**0.28**	**312**		**Pn**	**02 14 02.0**	**+1.3**
SWSC	**Sam W. Stewart**	**0.28**	**312**	⇑*eP*	**Pb**	**02 13 57.8**	**-0.7**
SWSC				*e*S	**Pn**	**02 14 02.0**	**+1.3**
WEMD	**Westmorland, C**	**0.28**	**356**		**Pb**	**02 13 58.4**	**-0.2**
WEMD					**Sb**	**02 14 03.4**	**+0.4**
WEMD	**Westmorland, C**	**0.28**	**356**	⇓*iP*	**Pb**	**02 13 58.4**	**-0.2**
YUH	**Yuha Desert**	**0.33**	**250**		**Pb**	**02 13 58.9**	**-0.4**
YUH				Sg	**Sb**	**02 14 04.0**	**-0.3**
YUH				IAML		02 14 04.4	
comp=N,19μm,0.8s							
YUH2	**Yuha Desert**	**0.33**	**250**	*eP*	**Pb**	**02 13 59.0**	**-0.3**
YUH2				*i* S	**Sb**	**02 14 04.1**	**-0.1**
YUH2				⇓*e*		02 14 04.4	
YUH2				IAML		02 14 04.4	
comp=N,17μm,0.3s							
CLI2	**Calipatria 2**	**0.36**	**357**		**Pb**	**02 13 59.9**	**+0.1**
CLI2					**Sb**	**02 14 06.4**	**+1.3**
CRR	**Carrizo Plain**	**0.37**	**290**		**Pb**	**02 13 59.6**	**-0.3**
CRR					**Sb**	**02 14 05.3**	**0.0**
CRR	**Carrizo Plain**	**0.37**	**290**	⇑*iP*	**Pb**	**02 13 59.6**	**-0.3**
CRR				*i* S	**Sb**	**02 14 05.3**	**0.0**
COA	**Coachella**	**0.38**	**74**		**Pb**	**02 13 59.9**	**-0.2**
COA					**Sb**	**02 14 06.2**	**+0.5**
COA	**Coachella**	**0.38**	**74**	⇑*iP*	**Pb**	**02 13 59.9**	**-0.2**
COA				*i* S	**Sb**	**02 14 06.2**	**+0.5**
CPBX	**Cerro Prieto**	**0.40**	**148**		**Pb**	**02 14 00.4**	**-0.1**
CPBX	**Cerro Prieto**	**0.40**	**148**	⇓*eP*	**Pb**	**02 14 00.4**	**-0.1**
CPBX				⇓*e*		02 14 11.2	
CPBX				IAML		02 14 11.2	
comp=N,45μm,0.3s							
CPBX				IAML		02 14 17.5	
comp=E,56μm,0.3s							
CPBX				⇑*e*		02 14 17.5	
ERRC	**Elmore Ranch**	**0.42**	**328**		**Pb**	**02 14 01.0**	**+0.2**
ERRC					**Sb**	**02 14 08.1**	**+1.3**
YUCAX	**Ej. Yucatįn**	**0.42**	**112**	*eP*	**Pb**	**02 14 00.8**	**0.0**
CTLX	**Tlaxcala, TLX**	**0.45**	**129**	*eP*	**Pn**	**02 14 02.1**	**-1.0**
CTLX				*e*S	**Sn**	**02 14 10.1**	**-0.4**
MBIG	**Mexicali**	**0.47**	**139**	⇓*eP*	**Pb**	**02 14 01.8**	**+0.2**
RMX	**La Rumorosa**	**0.47**	**250**		**Pb**	**02 14 01.4**	**-0.3**
RMX					**Sb**	**02 14 07.8**	**-0.5**
RMX	**La Rumorosa**	**0.47**	**250**	⇑*eP*	**Pb**	**02 14 01.4**	**-0.3**
RMX				*e*S	**Sb**	**02 14 07.8**	**-0.5**
RMX				⇑*e*		02 14 08.0	
RMX				IAML		02 14 08.0	
comp=E,10μm,0.2s							
IKP	**In-Ko-Pah, Jac**	**0.48**	**257**		**Pb**	**02 14 01.8**	**0.0**
IKP					**Sb**	**02 14 08.5**	**0.0**
IKP	**In-Ko-Pah, Jac**	**0.48**	**257**	⇑*iP*	**Pb**	**02 14 01.8**	**0.0**
IKP				*e*S	**Sb**	**02 14 08.6**	**0.0**
IKP				IAML		02 14 10.4	
comp=E,8μm,0.4s							
EMSC	**East Mesa**	**0.48**	**92**		**Pb**	**02 14 01.7**	**-0.1**
EMSC					**Sb**	**02 14 09.6**	**+1.1**
EMSC	**East Mesa**	**0.48**	**92**	*eP*	**Pb**	**02 14 01.8**	**-0.1**
SLVP	**Salvation Pass**	**0.52**	**24**		**Pb**	**02 14 01.6**	**-0.9**
SLVP					**Sb**	**02 14 08.5**	**-1.2**
RUN	**Ruthven**	**0.53**	**66**		**Pb**	**02 14 01.9**	**-0.8**
RUN					**Sb**	**02 14 09.2**	**-0.8**
AGSX	**Ej. Aguas Cali**	**0.60**	**146**	⇓*eP*	**Pb**	**02 14 03.5**	**-0.3**
PESCX	**Ej. Pescaderos**	**0.60**	**123**		**Pb**	**02 14 03.6**	**-0.2**
PESCX					**Sn**	**02 14 13.7**	**-0.4**
5271	**Bombay Beach**	**0.61**	**346**		**Pb**	**02 14 03.3**	**-0.7**
GUVIX	**Guadalupe Vict**	**0.61**	**138**		**Pb**	**02 14 03.6**	**-0.4**
GUVIX					**Sn**	**02 14 14.0**	**-0.4**
GUVIX	**Guadalupe Vict**	**0.61**	**138**	⇓*eP*	**Pb**	**02 14 03.6**	**-0.4**
BOMB	**Bombay Beach**	**0.62**	**346**		**Pb**	**02 14 03.5**	**-0.7**
BOMB					**Sb**	**02 14 13.8**	**+1.3**
SALN	**Salton City**	**0.63**	**325**		**Pb**	**02 14 03.8**	**-0.6**
SALN	**Salton City**	**0.63**	**325**		**Sb**	**02 14 13.6**	**+0.7**
FRK	**Frink**	**0.64**	**354**		**Pb**	**02 14 03.5**	**-1.1**
FRK					**Sb**	**02 14 13.1**	**+0.1**
RHX	**Rio Hardy**	**0.67**	**160**	⇓*iP*	**Pb**	**02 14 04.5**	**-0.4**
GLA	**Glamis**	**0.68**	**65**		**Pb**	**02 14 04.1**	**-1.1**
GLA				IAML		02 14 14.6	
comp=E,13μm,0.6s							
GLA	**Glamis**	**0.68**	**65**		**Sb**	**02 14 13.1**	**-1.2**
GLA	**Glamis**	**0.68**	**65**	⇑*eP*	**Pb**	**02 14 04.4**	**-0.8**
SLH	**Sleepy Hollow**	**0.73**	**306**		**Pb**	**02 14 05.2**	**-0.8**
SLH					**Sb**	**02 14 15.3**	**-0.3**
SLH	**Sleepy Hollow**	**0.73**	**306**	⇑*eP*	**Pb**	**02 14 05.2**	**-0.8**
ALAMX	**Rancho Alamar**	**0.76**	**190**	⇓*iP*	**Pn**	**02 14 06.7**	**-0.7**
ALAMX				*e*S	**Sn**	**02 14 17.4**	**-0.9**
ALAMX				IAML		02 14 18.9	
comp=N,9μm,0.3s							
ALAMX				⇑*e*		02 14 18.9	
SLRCX	**San Luis Rio C**	**0.78**	**113**		**Pn**	**02 14 07.8**	**+0.2**
SLRCX					**Sn**	**02 14 18.6**	**0.0**
ESJX	**Sierra Juarez**	**0.82**	**204**		**Pn**	**02 14 07.6**	**-0.8**
ESJX				IAML		02 14 20.5	
comp=N,4μm,0.1s							
BORC	**Borrego Spring**	**0.88**	**305**		**Pb**	**02 14 07.4**	**-1.3**
BORC				IAML		02 14 28.3	
comp=N,4μm,0.9s							
BORC	**Borrego Spring**	**0.88**	**305**		**Sb**	**02 14 18.9**	**-1.2**
BC3	**Big Chuckawall**	**0.90**	**5**		**Pb**	**02 14 07.7**	**-1.3**
BC3				IAML		02 14 21.2	
comp=N,5μm,0.8s							
BC3				IAML		02 14 24.1	
comp=E,4μm,0.7s							
BC3	**Big Chuckawall**	**0.90**	**5**		**Sb**	**02 14 19.4**	**-1.2**
TKX	**Tecate**	**0.91**	**258**		**Pn**	**02 14 09.4**	**0.0**
TKX					**Sn**	**02 14 21.2**	**-0.6**
JUEM	**Julian Eagle M**	**0.93**	**290**		**Pb**	**02 14 08.8**	**-0.7**
JUEM					**Sb**	**02 14 21.6**	**0.0**
BAR	**Barrett**	**0.94**	**265**		**Pb**	**02 14 09.1**	**-0.6**
BAR				IAML		02 14 23.6	
comp=N,7μm,0.5s							
BAR				IAML		02 14 23.7	
comp=E,5μm,0.5s							
BAR	**Barrett**	**0.94**	**265**		**Sn**	**02 14 22.5**	**-0.3**
BAR	**Barrett**	**0.94**	**265**	⇑*eP*	**Pb**	**02 14 09.3**	**-0.4**
BAR				*e*S	**Sn**	**02 14 22.1**	**-0.7**
BAR				*e*		02 14 23.7	
BAR				IAML		02 14 23.7	
comp=E,4μm,0.5s							
HAY	**Hayfield**	**0.95**	**354**		**Pn**	**02 14 08.4**	**-1.6**
HAY					**Sb**	**02 14 22.0**	**0.0**
CTW	**Cottonwood Mou**	**0.95**	**344**		**Pb**	**02 14 08.2**	**-1.7**
CTCC	**Cactus City**	**0.96**	**338**		**Pn**	**02 14 08.3**	**-1.9**
CTCC					**Sn**	**02 14 23.1**	**-0.2**
MATG	**Mataguay Scout**	**1.02**	**296**		**Pn**	**02 14 10.0**	**-1.0**
MATG					**Sb**	**02 14 23.3**	**-0.7**
MATG	**Mataguay Scout**	**1.02**	**296**	⇑*iP*	**Pn**	**02 14 10.0**	**-1.0**
CBX	**Cerro Bola**	**1.04**	**245**		**Pb**	**02 14 11.2**	**-0.2**
DUZA	**Dulzura**	**1.04**	**262**		**Pn**	**02 14 10.8**	**-0.5**
DUZA					**Sn**	**02 14 25.2**	**+0.1**
EML	**El Monte Cty P**	**1.09**	**277**		**Pn**	**02 14 11.2**	**-0.8**
EML	**El Monte Cty P**	**1.09**	**277**	⇑*iP*	**Pn**	**02 14 11.2**	**-0.8**
EML				*e*S	**Sn**	**02 14 26.2**	**-0.2**
EML				IAML		02 14 27.8	
comp=N,5μm,0.4s							
EML				⇓*e*		02 14 27.8	
PMD	**Palm Desert**	**1.12**	**322**	Pn	**Pn**	**02 14 10.6**	**-1.8**
PMD				IAML		02 14 35.3	
comp=N,3μm,1.3s							
PMD				IAML		02 14 35.4	
comp=E,3μm,1.1s							
XPFO	**Pinon Flat**	**1.13**	**319**		**Pn**	**02 14 11.2**	**-1.5**
PFO	**Pinyon Flats O**	**1.14**	**318**	Pg	**Pn**	**02 14 11.2**	**-1.5**
comp=E,158nm,0.3s,baz=130,slow=12,SNR=942							

PFO			Lg		Lg	02 14 26.3		
	comp=E,465nm,0.3s,baz=207,slow=6.1,SNR=11							
PFO	**Pinyon Flats O**	**1.14 318**			**Pn**	**02 14 11.1**	**-1.6**	
FRD	**Ford Ranch, An**	**1.14 310**			**Pn**	**02 14 11.6**	**-1.2**	
FRD	**Ford Ranch, An**	**1.14 310**			**Pn**	**02 14 11.5**	**-1.2**	
SDRC	**San Diego Road**	**1.17 269**			**Pn**	**02 14 12.6**	**-0.4**	
OLP	**Otay Lakes Par**	**1.17 263**			**Pb**	**02 14 12.9**	**-0.6**	
BZNA	**Buzz No.'s Pla**	**1.18 308**			**Pn**	**02 14 12.2**	**-1.1**	
SNDA	**J Saunders Pla**	**1.19 312**			**Pn**	**02 14 12.3**	**-1.1**	
DPP	**Dos Picos Cty**	**1.19 282**			**Pn**	**02 14 12.2**	**-1.1**	
DNR	**Dunn Ranch,Anz**	**1.21 312**			**Pn**	**02 14 12.4**	**-1.3**	
PLM	**Palomar**	**1.25 299**			**Pn**	**02 14 13.3**	**-0.9**	
MTRP	**Mission Trails**	**1.27 273**			**Pn**	**02 14 14.1**	**-0.2**	
CRY	**Cary Ranch**	**1.27 309**			**Pn**	**02 14 13.5**	**-1.1**	
TJX	**Tijuana**	**1.29 259**			**Pb**	**02 14 15.1**	**-0.5**	
BELC	**Belle Mtn. Jos**	**1.29 343**			**Pn**	**02 14 12.9**	**-1.9**	
CCX	**Cicese**	**1.29 227**			**Pb**	**02 14 15.5**	**-0.1**	
CPE	**Camp Elliot**	**1.31 276**			**Pn**	**02 14 14.4**	**-0.6**	
CPE				IAML		02 14 34.0		
	comp=N,4μm,0.5s							
CPE				IAML		02 14 37.8		
	comp=E,2μm,0.6s							
BLYC	**Blythe**	**1.31 41**			**Pn**	**02 14 13.3**	**-1.7**	
BLYC				IAML		02 14 34.3		
	comp=E,5μm,0.8s							
EW2	**E Wide Canyon**	**1.38 329**			**Pn**	**02 14 14.7**	**-1.2**	
VTX	**Valle De La Tr**	**1.38 188**	Pn		**Pb**	**02 14 16.1**	**-1.1**	
TPC	**Twentynine Pal**	**1.40 343**			**Pn**	**02 14 15.2**	**-1.1**	
IRM	**Iron Mountain**	**1.43 14**			**Pn**	**02 14 16.1**	**-0.6**	
GORC	**Green Oak Ranc**	**1.46 286**			**Pn**	**02 14 16.3**	**-0.7**	
POB	**Polly Butte**	**1.47 309**			**Pn**	**02 14 16.3**	**-1.0**	
BLAC	**Blackrock camp**	**1.48 332**			**Pn**	**02 14 16.2**	**-1.1**	
BACC	**Bachelor Mtn.**	**1.51 305**			**Pn**	**02 14 16.8**	**-0.9**	
DGR	**Domenigoni Val**	**1.51 306**			**Pn**	**02 14 16.9**	**-0.8**	
113A	**Mohawk Valley,**	**1.51 89**			**Pn**	**02 14 16.5**	**-1.2**	
HMTC	**Hemet**	**1.54 308**			**Pn**	**02 14 17.2**	**-0.9**	
ELS	**Elsinore Mount**	**1.80 300**	Pn		**Pn**	**02 14 21.0**	**-0.8**	
SFX	**San Felipe**	**1.82 161**	Pn		**Pb**	**02 14 23.1**	**-1.6**	
DANC	**Danby, Needles**	**1.88 4**			**Pn**	**02 14 23.0**	**+0.2**	
PIX	**Pinacate**	**2.14 123**	Pn		**Pn**	**02 14 24.6**	**-1.8**	
NEE2	**Needles Airpor**	**2.15 21**			**Pn**	**02 14 26.1**	**-0.3**	
BFSC	**Mount Baldy Ra**	**2.29 311**			**Pn**	**02 14 28.2**	**-0.4**	
Y14A	**Wickenburg**	**2.44 61**			**Pn**	**02 14 30.5**	**0.0**	
214A	**Organ Pipe Nat**	**2.46 108**	Pn		**Pn**	**02 14 29.3**	**-1.4**	
MWC	**Mount Wilson**	**2.55 306**			**Pn**	**02 14 32.2**	**0.0**	
MWC				IAML		02 15 21.8		
	comp=N,773nm,0.7s							
MWC				IAML		02 15 25.7		
	comp=E,439nm,0.9s							
PASC	**Pasadena Art C**	**2.61 303**			**Pn**	**02 14 33.2**	**+0.4**	
W13A	**Hualapai Mount**	**2.71 30**			**Pn**	**02 14 34.1**	**-0.3**	
MTPC	**Mountain Pass**	**2.72 0**			**Pn**	**02 14 35.0**	**+0.6**	
GSC	**Goldstone, Bar**	**2.74 338**			**Pn**	**02 14 34.6**	**-0.1**	
GSC				IAML		02 15 28.3		
	comp=E,609nm,1.3s							
GSC				IAML		02 15 42.9		
	comp=N,500nm,1.0s							
V12A	**Nelson**	**3.02 11**			**Pn**	**02 14 38.6**	**+0.1**	
TPO	**Tropico Hills**	**3.07 314**	Pn		**Pn**	**02 14 39.3**	**+0.1**	
CCCA	**Chr Cany lake**	**3.14 332**			**Pn**	**02 14 40.2**	**0.0**	
OSI	**Osito Audit: C**	**3.22 306**			**Pn**	**02 14 41.6**	**+0.3**	
LRMC	**Laurel Mtn Rad**	**3.23 328**			**Pn**	**02 14 41.2**	**-0.3**	
WSHM	**Spangler Hills**	**3.25 331**			**Pn**	**02 14 41.7**	**0.0**	
QSM	**Queen of Sheba**	**3.38 342**			**Pn**	**02 14 43.3**	**0.0**	
CLC	**China Lake**	**3.48 332**			**Pn**	**02 14 44.3**	**-0.6**	
GWY	**Greenwater Val**	**3.54 345**			**Pn**	**02 14 45.8**	**0.0**	
SHPR	**Sheep Range**	**3.75 5**			**Pn**	**02 14 48.3**	**-0.3**	
ISA	**Isabella, Lake**	**3.77 321**			**Pn**	**02 14 49.1**	**+0.2**	
X16A	**Lo Mia Camp, P**	**3.81 63**			**Pn**	**02 14 49.3**	**-0.2**	
FURC	**Furnace Creek,**	**3.85 344**			**Pn**	**02 14 49.2**	**-0.7**	
TUC	**Tucson**	**4.05 95**			**Pn**	**02 14 52.0**	**-0.7**	
TUC	**Tucson**	**4.05 95**		IAML		02 16 09.3		
	comp=N,168nm,1.4s							
CWC	**Cottonwood Cre**	**4.22 331**			**Pn**	**02 14 54.9**	**-0.2**	
WUAZ	**Wupatki**	**4.42 50**			**Pn**	**02 14 57.9**	**0.0**	
GRAC	**Grapevine Rang**	**4.48 341**	Pn		**Pn**	**02 14 59.0**	**+0.4**	
U15A	**North Rim**	**4.54 35**	Pn		**Pn**	**02 14 59.5**	**-0.1**	
LCMT	**Little Creek M**	**4.65 23**			**Pn**	**02 15 01.2**	**+0.2**	
GMN	**Gold Mountain**	**4.74 343**	Pn		**Pn**	**02 15 02.1**	**-0.2**	
X18A	**Snowflake**	**5.00 68**			**Pn**	**02 15 05.8**	**0.0**	
PKD	**Bear Valley Ra**	**5.20 309**			**Pn**	**02 15 08.6**	**+0.1**	
319A	**Douglas**	**5.50 103**			**Pn**	**02 15 12.7**	**-0.1**	
HULI	**Fort Hunter Li**	**5.71 306**	Pn		**Pn**	**02 15 15.0**	**-0.4**	
NVAR	**Mina Array Bea**	**6.08 339**	Pn		**Pn**	**02 15 22.9**	**+2.1**	
	comp=N,0.3nm,0.3s,baz=165,slow=15,SNR=8.5							
NVAR			Lg		Lg	02 17 09.1		
	comp=N,0.5nm,0.3s,baz=160,slow=16,SNR=0.9							
	comp=N,0.5nm,0.5s							
NVAR	**Mina Array Bea**	**6.08 339**			**Pn**	**02 15 20.5**	**-0.3**	
SPR3	**Spring Creek 3**	**6.30 9**			**Pn**	**02 15 23.6**	**-0.3**	
121A	**Cookes Peak, D**	**6.56 90**			**Pn**	**02 15 27.4**	**+0.1**	
ANMO	**Albuquerque**	**7.88 71**	Pn		Pn	02 15 50.8	+5.5	
	comp=N,0.3nm,0.3s,baz=352,slow=14,SNR=5.3							
ANMO			Pg		Pb	02 16 19.1	+11	
	comp=N,0.6nm,0.3s,baz=354,slow=14,SNR=5.7							
ANMO			Lg		Lg	02 18 01.6		
	comp=N,0.5nm,0.3s,baz=100,slow=20,SNR=8.6							
	comp=N,2.2nm,0.7s							
ELK	**Elko**	**7.97 2**	Pn		Pn	02 15 53.6	+6.9	
	comp=N,0.2nm,0.3s,baz=194,slow=17,SNR=5.3							
ELK			Lg		Lg	02 18 02.2		
	comp=N,0.2nm,0.3s,baz=132,slow=8.1,SNR=3.5							
ELK			LR		LR	02 19 18.3		
	comp=N,206nm,20.8s,baz=138,slow=39							
	comp=N,0.6nm,0.6s							
LPIG	**La Paz**	**9.78 151**	LR		LR	02 19 26.7		
	comp=N,151nm,21.6s,baz=348,slow=36							
TXAR	**Lajitas Array**	**10.75 105**	Pn		**Pn**	**02 16 26.5**	**+1.7**	
	comp=N,0.5nm,0.3s,baz=288,slow=13,SNR=10							
TXAR			Sn		**Sn**	**02 18 25.5**	**+1.1**	
	comp=N,0.1nm,0.3s,baz=290,slow=23,SNR=1.0							
TXAR			Lg		Lg	02 19 27.9		
	comp=N,0.2nm,0.3s,baz=286,slow=31,SNR=4.1							
	comp=N,0.8nm,0.4s							
TXAR	**Lajitas Array**	**10.75 105**			**Pn**	**02 16 25.8**	**+1.1**	
PDAR	**Pinedale Array**	**11.05 24**	Pn		Pn	02 16 37.9	+9.0	
	baz=213,slow=11,SNR=6.4							
PDAR			Lg		Lg	02 19 47.4		
	comp=N,0.1nm,0.3s,baz=180,slow=28,SNR=6.3							
	comp=N,1.1nm,1.0s							
FW06	**Azle**	**15.13 84**	Pn		**Pn**	**02 17 24.8**	**+0.4**	
NEW	**Newport**	**15.53 356**	Pn		**P**	**02 17 35.0**	**+1.3**	
	comp=N,0.1nm,0.3s,baz=176,slow=15,SNR=7.2							
	comp=N,0.9nm,0.7s							
ILAR	**Eielson Array**	**37.34 338**	P		**P**	**02 21 02.4**	**0.0**	
	comp=N,0.2nm,0.7s,baz=127,slow=8.8,SNR=3.2							
	comp=N,0.2nm,0.7s							

NEIC ***12*** *02:14:18.5±1.5,32.79N±0.01×115.557W±0.004, h10km±1km, Error ellipse: s-maj=2.8km s-min=1.7km az=168.0*

PAS 12 02:14:18.3±1.7,32.78N±0.01×115.54W±0.01,h12km±2km, ML3.6/10,ML3.6/6(NEIC),Error ellipse: s-maj=1.6km s-min=1.2km az=156.0,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
5053	**Calexico**	**0.11**	**160**		Pg	02 14 21.4	+0.1
5053					Sg	02 14 24.5	+1.2
SNR	**Schaffner Ranc**	**0.12**	**45**		Pg	02 14 21.5	+0.1
SNR					Sg	02 14 24.8	+1.2
IMPE	**Imperial**	**0.13**	**352**		Pg	02 14 21.6	+0.2
IMPE					Sg	02 14 25.3	+1.5
5054	**Holtville Bond**	**0.19**	**116**		Pg	02 14 22.7	+0.3
5054					Sg	02 14 26.8	+1.5
WEMD	**Westmorland, C**	**0.26**	**352**		Pg	02 14 24.1	+0.4
WEMD					Sb	02 14 29.3	-0.2
SUP	**Superstition M**	**0.30**	**307**		Pg	02 14 24.0	-0.4
SUP					Sg	02 14 28.5	+0.1
CLI2	**Calipatria 2**	**0.35**	**354**		Pg	02 14 25.6	+0.4
COA	**Coachella**	**0.36**	**76**		Pg	02 14 25.6	+0.1
COA					Sb	02 14 31.6	-0.7
ERRC	**Elmore Ranch**	**0.41**	**325**		Pb	02 14 27.2	-0.4
ERRC					Sb	02 14 34.0	+0.2
EMSC	**East Mesa**	**0.47**	**94**		Pg	02 14 27.7	+0.3
EMSC					Sb	02 14 35.1	-0.3
RMX	**La Rumorosa**	**0.49**	**249**		Sg	02 14 33.4	-1.0
IKP	**In-Ko-Pah, Jac**	**0.50**	**256**		Pg	02 14 27.6	-0.5
IKP					Sg	02 14 34.4	-0.3
SLVP	**Salvation Pass**	**0.50**	**23**		Pg	02 14 27.4	-0.7
SLVP					Sg	02 14 34.4	-0.4
SALN	**Salton City**	**0.63**	**323**	Pg	Pg	02 14 30.2	-0.3
SALN				IAML		02 14 34.4	
	comp=E,18μm,0.9s						
SALN					Sb	02 14 39.6	-0.4
GLA	**Glamis**	**0.66**	**65**		Sg	02 14 38.6	-1.2
SLRCX	**San Luis Rio C**	**0.77**	**114**		Sb	02 14 44.0	0.0
ESJX	**Sierra Juarez**	**0.84**	**204**	Pg	Pg	02 14 34.6	+0.1
ESJX					Sg	02 14 44.6	-1.1
ESJX				IAML		02 14 45.7	
	comp=E,2μm,0.6s						
BORC	**Borrego Spring**	**0.89**	**304**		Pg	02 14 33.4	-2.0
BORC	**Borrego Spring**	**0.89**	**304**	IAML		02 14 37.7	
	comp=E,950nm,1.1s						
BORC				IAML		02 14 39.7	
	comp=N,1μm,0.7s						
TKX	**Tecate**	**0.93**	**257**		Sg	02 14 46.9	-1.3
BACC	**Bachelor Mtn.**	**1.51**	**304**		Pn	02 14 39.9	-5.3
PV15	**Paradox Valley**	**7.99**	**44**		Pn	02 16 13.7	-0.8

MEX ***12*** *02:34:42.4±0.8, 13.93N×93.68W, h10km, MD4.1*
GCG ***12*** *02:34:44.5±1.0, 14.05N×93.48W, h26km, MD4.4*

ISC 12 02:34:42.3±2.7,14.34N±0.09×93.59W±0.05,h15km±16km, n20,σ1.966/31,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.41**	**66**	*eP*	**Pb**	**02 35 08.3**	**+0.1**
THIG				*eS*	**Sg**	**02 35 28.5**	**+0.8**
PATR	**El Naranjo**	**1.53**	**59**	*eP*	**Pn**	**02 35 09.8**	**+0.6**
PATR				*eS*	**Sg**	**02 35 31.4**	**-0.1**
SMCA	**Catarina**	**1.56**	**70**	*eP*	**Pn**	**02 35 10.4**	**+0.9**
PAVE	**Pavencul**	**1.61**	**58**	*eP*	**Pb**	**02 35 11.6**	**-0.4**
PAVE				*eS*	**Sg**	**02 35 35.0**	**+0.6**
CHUJ	**Union Juarez**	**1.62**	**62**	*eP*	**Pn**	**02 35 11.2**	**+0.6**
CHUJ				*eS*	**Sg**	**02 35 33.2**	**-1.4**
RTAL	**Retalhuleu**	**1.85**	**84**	*eP*	**Pn**	**02 35 13.9**	**+0.4**
RTAL				*eS*	**Sn**	**02 35 37.3**	**+0.7**
STG2	**El Palmar, Qui**	**2.15**	**87**	*eP*	**Pn**	**02 35 15.3**	**-2.4**
CCIG	**Comitan**	**2.39**	**36**	*eP*	**Pb**	**02 35 25.1**	**0.0**
CCIG				*eS*	**Sg**	**02 35 58.1**	**-1.1**
CCIG	**Comitan**	**2.39**	**36**	*eP*	**Pb**	**02 35 26.0**	**+0.8**
TGIG		**2.47**	**11**	*eP*	**Pb**	**02 35 26.5**	**+0.1**
TGIG				*eS*	**Sg**	**02 35 59.1**	**-2.6**
TGIG		**2.47**	**11**	*eP*	**Pb**	**02 35 26.7**	**+0.2**
HUIG	**Huatulco**	**2.82**	**301**	*eP*	**Pn**	**02 35 27.1**	**+0.4**
HUIG				*eS*	**Sn**	**02 35 58.4**	**-2.1**
FG16	**Alotenango, Sa**	**2.99**	**91**	*eP*	Pn	02 35 24.8	-4.5
UXUV	**UXUV**	**3.01**	**350**	*eP*	**Pb**	**02 35 34.6**	**-1.0**
UXUV				*eS*	**Sb**	**02 36 13.6**	**+1.3**
APG	**El Apazote**	**3.10**	**77**	*eP*	**Pn**	**02 35 32.5**	**+1.7**
NUBE	**Las Nubes**	**3.72**	**96**	*eP*	**Pn**	**02 35 39.8**	**+0.4**
PEIG	**Puerto Escondi**	**3.81**	**296**	*eP*	**Pn**	**02 35 43.6**	**+3.1**
PEIG				*eS*	**Sn**	**02 36 22.1**	**-2.9**
NEUV	**Arroyo Zacate**	**3.97**	**328**	*eP*	**Pn**	**02 35 44.6**	**+1.9**
NEUV				*eS*	**Sn**	**02 36 29.0**	**0.0**
YOIG	**Yosondua**	**4.56**	**304**	*eP*	**Pn**	**02 35 50.8**	**-0.2**
YOIG				*eS*	**Sn**	**02 36 41.5**	**-2.4**
TXIG	**Tlaxiaco**	**4.96**	**306**	*eP*	**Pn**	**02 36 00.6**	**+4.1**

IDC ***12*** *02:38:40.0±1.6,1.31S×120.54E,h0km,mb3.5/4, mbtmp3.6/5,ML3.4/1,Error ellipse: s-maj=68.8km s-min=26.5km az=64.0*
DJA ***12*** *02:38:41.8±0.3,1.3S×120.0E±*, *h10km,M3.7/12, MLv3.7/12*

ISC 12 02:38:42.5±0.8,1.39S±0.05×120.27E±0.09,h23km,n14, σ1.969/17,mb3.5/4,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.46**	**71**	P	**Pb**	**02 39 10.2**	**+1.2**
TTSI	**Tana Toraja**	**1.70**	**195**	P	**Pn**	**02 39 08.4**	**-2.5**
TTSI				S	**Sn**	**02 39 30.7**	**-1.3**
MPSI	**Mapaga**	**1.75**	**348**	P	**Pn**	**02 39 11.4**	**-0.2**
MPSI				S	**Sb**	**02 39 36.5**	**+0.8**
MRSI	**Marisa**	**2.50**	**42**	P	**Pb**	**02 39 24.1**	**-2.6**
LUWI	**Luwuk**	**2.53**	**82**	P	**Pb**	**02 39 23.8**	**-3.4**
SPSI	**Sidrap Palu**	**2.61**	**191**	P	**Pn**	**02 39 23.5**	**+0.2**
BNSI	**Bone**	**3.00**	**183**	P	**Pn**	**02 39 30.0**	**+1.4**
KDI	**Kendari**	**3.47**	**137**	P	**Pn**	**02 39 36.3**	**+1.2**
KAPI	**Kappang**	**3.64**	**188**	Pn	**Pn**	**02 39 39.1**	**+1.6**
	3.1nm,0.3s,baz=8.9,slow=6.7,SNR=8.5						
KAPI				Sn	**Sn**	**02 40 19.8**	**+0.1**
	1.5nm,0.3s,baz=85,slow=17,SNR=1.9						
KAPI				Lg	Lg	02 40 29.6	
	1.4nm,0.3s,baz=234,slow=20,SNR=5.3						
	14nm,0.5s						
BKSI	**Bulukumba**	**3.91**	**182**	P	**Pn**	**02 39 40.9**	**-0.3**
WRA	**Warramunga Arr**	**23.01**	**144**	P	**P**	**02 43 44.8**	**-1.3**
	0.9nm,0.7s,baz=322,slow=10,SNR=6.5						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**25.79**	**150**	P	**P**	**02 44 12.8**	**+0.7**
	0.4nm,0.6s,baz=328,slow=8.3,SNR=4.9						
	0.4nm,0.6s						
STKA	**Stephens Creek**	**36.40**	**149**	P	**P**	**02 45 46.3**	**+1.0**
	1.7nm,0.7s,baz=325,slow=18,SNR=2.8						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**58.40**	**330**	P	**P**	**02 48 37.8**	**+1.5**
	0.3nm,0.6s,baz=133,slow=8.3,SNR=2.3						
	0.3nm,0.6s						

NEIC ***12*** *02:40:02.0±1.9,36.47N±0.01×120.62W±0.02,h10km±2km, Error ellipse: s-maj=3.0km s-min=2.4km az=250.0*

NCEDC 12 02:40:02.2±2.1,36.45N±0.01×120.64W±0.02,h19km±5km, ML3.1/148,ML2.9/128(NEIC),Error ellipse: s-maj=2.2km s-min=2.0km az=58.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMSM	**Mercy Hot Spri**	**0.24**	**330**		Pg	02 40 08.8	+0.8
PMPB	**Monarch Peak**	**0.26**	**209**		Pb	02 40 08.9	+0.6
PMPB					Sg	02 40 13.3	+1.0
PMPB	**Monarch Peak**	**0.26**	**209**	IAML		02 40 15.1	
	comp=E,2μm,0.8s						
PMPB				IAML		02 40 18.2	
	comp=N,2μm,0.5s						
LRV	**Little Rabbit**	**0.30**	**266**		Pb	02 40 09.2	+0.2
PPTM	**Peach Tree Val**	**0.34**	**191**		Pb	02 40 10.0	+0.2
BBGB	**Big Mountain B**	**0.35**	**293**		Pb	02 40 10.2	+0.2
BBGB					Sb	02 40 15.9	+0.7
BBGB	**Big Mountain B**	**0.35**	**293**	IAML		02 40 16.6	
	comp=E,4μm,0.4s						
BBGB				IAML		02 40 18.2	
	comp=N,5μm,0.7s						
PSMM	**Smith Mountain**	**0.38**	**174**		Pb	02 40 10.8	+0.4
LRC	**Lone Oak Road**	**0.38**	**239**		Pb	02 40 10.5	0.0
WSRE	**Westside REC,**	**0.43**	**104**		Pn	02 40 12.5	-1.0
PSAM	**San Ardo**	**0.46**	**205**		Pb	02 40 12.0	+0.2
PHPM	**Hope Ranch**	**0.47**	**176**		Pb	02 40 11.9	0.0
BEHM	**Elkhorn Ranch**	**0.48**	**297**		Pg	02 40 11.8	-0.2
BSGM	**Shirttail Gulc**	**0.49**	**266**		Pg	02 40 12.1	-0.1
PKD	**Bear Valley Ra**	**0.51**	**171**	Pg	Pb	02 40 12.6	0.0
PKD				IAML		02 40 27.2	
	comp=N,499nm,0.8s						
AVNL	**Avenal, CA USA**	**0.51**	**147**		Pb	02 40 13.4	+0.8
PVCM	**Vineyard Canyo**	**0.53**	**171**		Pb	02 40 13.1	+0.2
PCCM	**Crazy Canyon**	**0.55**	**230**		Pg	02 40 13.6	+0.4
CTM	**Castle Mountai**	**0.57**	**154**		Pg	02 40 14.5	+0.8
BJOM	**Mount Johnson**	**0.57**	**289**		Pb	02 40 13.4	-0.1
PPO	**Portuguese Can**	**0.58**	**178**		Pg	02 40 14.2	+0.5
PHFM	**Heflinger Ranc**	**0.60**	**161**		Pg	02 40 14.5	+0.4
BJCM	**Johnson Can.**	**0.61**	**280**		Pb	02 40 14.1	-0.2
SCZ	**Santa Cruz**	**0.63**	**284**		Pb	02 40 14.4	-0.2
BSMM	**Soledad Missio**	**0.64**	**265**		Pg	02 40 14.9	0.0
HULI	**Fort Hunter Li**	**0.64**	**229**	Pg	Pg	02 40 15.1	+0.2
HULI				IAML		02 40 29.6	
	comp=N,493nm,0.6s						
HULI				IAML		02 40 30.3	
	comp=E,606nm,0.5s						
PKLM	**Kerr Lake**	**0.71**	**160**		Pg	02 40 16.4	+0.1
SAO	**San Andreas Ge**	**0.72**	**296**	Pg	Pb	02 40 16.2	0.0
PMRM	**Maxey Ranch**	**0.74**	**153**		Pg	02 40 16.7	0.0
BSRM	**Salinas Radio**	**0.74**	**288**		Pb	02 40 16.4	-0.1
FRP	**Fremont Peak**	**0.75**	**295**		Pb	02 40 16.5	-0.2
BCWM	**Chews Ridge**	**0.76**	**260**		Pg	02 40 17.1	0.0
PAGB	**Antelope Grade**	**0.78**	**156**		Pg	02 40 17.3	0.0
SLD	**San Luis Dam**	**0.78**	**324**		Pg	02 40 17.7	+0.1
TCHL	**Shandon**	**0.78**	**165**		Pg	02 40 17.7	+0.2
THIS	**South End of C**	**0.78**	**155**		Pg	02 40 17.7	0.0
LCUV	**Le Cuvier**	**0.80**	**185**		Pb	02 40 17.6	+0.1
HPCM	**Pacheco Lake**	**0.80**	**320**		Pg	02 40 18.0	+0.1
HFEM	**San Felipe**	**0.81**	**312**		Pg	02 40 18.0	-0.1
SCKWR	**San Luis Creek**	**0.81**	**335**		Pn	02 40 18.5	-0.2
RAMR	**Ramage Ranch**	**0.83**	**193**		Pn	02 40 18.8	-0.1
TCAS	**Cass Winery, P**	**0.84**	**175**		Pg	02 40 18.4	-0.2
LEGD	**La Grand CA**	**0.86**	**27**		Pb	02 40 18.4	-0.2
LEGD	**La Grand CA**	**0.86**	**27**	IAML		02 40 32.4	
	comp=E,309nm,0.3s						
LEGD				IAML		02 40 35.4	
	comp=N,301nm,0.3s						
BPRM	**Ponciano Ridge**	**0.88**	**268**		Pb	02 40 18.8	-0.1
CDC	**Canada Road**	**0.89**	**311**		Pb	02 40 19.1	0.0
HCAM	**Canada Road**	**0.89**	**311**		Pb	02 40 20.0	+0.2
HTUM	**Tustin Road**	**0.89**	**296**		Pb	02 40 19.0	-0.1
MHDM	**Hidden Dam**	**0.90**	**42**		Pb	02 40 19.0	-0.2
FRI	**Friant**	**0.93**	**54**		Pb	02 40 19.3	-0.4
HERM	**Elkhorn Road**	**0.93**	**293**		Pb	02 40 19.3	-0.4
KARE	**Kearney REC, C**	**0.93**	**80**		Pb	02 40 19.2	-0.5
TSCN	**Private Proper**	**0.93**	**165**		Pn	02 40 20.2	-0.2
FORD	**Fort Ord Natur**	**0.95**	**285**		Pb	02 40 20.1	+0.1
FORD	**Fort Ord Natur**	**0.95**	**285**	Pg	Pb	02 40 19.6	-0.5
FORD	**Fort Ord Natur**	**0.95**	**285**	IAML		02 40 42.8	
	comp=E,579nm,0.6s						
HCBM	**Chamberlain**	**0.95**	**301**		Pn	02 40 20.5	-0.2
PBPM	**Bitterwater Pu**	**0.98**	**152**		Pb	02 40 20.4	-0.2
TRAY	**Twisselman Ran**	**0.98**	**155**		Pb	02 40 20.5	-0.2
PCBM	**Cambria**	**0.99**	**200**		Pn	02 40 21.2	+0.1
VOG	**Valley Oaks Go**	**1.02**	**97**		Pb	02 40 20.9	-0.5
HMOM	**Monterey**	**1.04**	**279**		Pb	02 40 21.1	-0.5
CADM	**Anderson Res.**	**1.07**	**313**		Pb	02 40 21.7	-0.4
JELB	**Ellicott, Sant**	**1.07**	**297**		Pb	02 40 21.1	-1.0
JLAB	**Laurel Hill**	**1.13**	**309**		Pn	02 40 22.1	-0.9
ARN	**Arnold Ranch**	**1.15**	**322**		Pn	02 40 22.8	-0.7
LSDC	**Los Osos Digit**	**1.16**	**188**		Pb	02 40 24.1	+0.5
CCOB	**Coe Ranch Numb**	**1.16**	**315**		Pn	02 40 23.1	-0.4
MTOS	**Mt Oso, Westle**	**1.19**	**333**		Pn	02 40 23.2	-0.8
MHC	**Mount Hamilton**	**1.20**	**318**	Pn	Pn	02 40 23.7	-0.5
MHC				IAML		02 40 45.2	
	comp=N,348nm,0.7s						
MHC				IAML		02 40 49.4	
	comp=E,225nm,0.8s						
MMIM	**Miami Mountain**	**1.21**	**36**		Pb	02 40 24.5	-0.1
CMMM	**Mount Mocho**	**1.22**	**326**		Pn	02 40 24.0	-0.4
DCD	**Diablo Creek**	**1.24**	**188**		Pn	02 40 24.5	-0.1
SMMC	**Simmler**	**1.25**	**155**		Pn	02 40 24.7	0.0
BUCR	**Buckhorn Ranch**	**1.29**	**18**		Pn	02 40 25.4	0.0
CARC	**Carrizo Plain**	**1.31**	**150**		Pn	02 40 25.3	-0.3
CMLM	**Mount Lewis**	**1.31**	**322**		Pn	02 40 25.0	-0.6
JJOM	**Saint Joseph's**	**1.31**	**306**		Pn	02 40 25.0	-0.6
CALM	**Calaveras Res.**	**1.37**	**318**		Pn	02 40 25.9	-0.5
CSTL	**Corral Hollow**	**1.37**	**330**		Pb	02 40 27.1	-0.2
KCC	**Kaiser Creek**	**1.38**	**50**		Pn	02 40 26.9	+0.4
JBNB	**Ben Lomond Mou**	**1.39**	**300**		Pn	02 40 25.7	-1.0
VES	**Vestal, Richgr**	**1.40**	**115**		Pn	02 40 26.4	-0.3
VES				IAML		02 40 46.5	
	comp=N,288nm,0.4s						
CRGC	**Crocker Grade**	**1.41**	**148**		Pn	02 40

GMN			IAML		02 41 42.5	
	comp=N,27nm,0.7s					
MPK	**Martis Peak**	**2.89 9**	Pn	Pn	02 40 48.8	+1.3
SUTB	**Sutter Butte**	**2.92 342**	Pn	Pn	02 40 47.4	-0.3
FURC	**Furnace Creek,**	**3.05 88**	Pn	Pn	02 40 49.6	+0.2
FURC			IAML		02 41 44.0	
	comp=N,40nm,1.0s					
FURC			IAML		02 41 44.3	
	comp=E,36nm,1.4s					
MWC	**Mount Wilson**	**3.06 136**		Pn	02 40 49.1	-0.7
MWC			IAML		02 41 37.0	
	comp=E,23nm,0.6s					
QSM	**Queen of Sheba**	**3.09 98**		Pn	02 40 50.3	+0.3
QSM			IAML		02 41 42.1	
	comp=N,22nm,0.8s					
ORV	**Oroville**	**3.18 348**	Pn	Pn	02 40 51.1	-0.1
ORV			IAML		02 41 43.4	
	comp=E,22nm,0.8s					
GWY	**Greenwater Val**	**3.22 93**	Pn	Pn	02 40 52.9	+0.9
GWY			IAML		02 41 47.4	
	comp=E,21nm,0.6s					
WCT	**Wildcat Mounta**	**3.25 83**	Pn	Pn	02 40 52.7	+0.4
BFSC	**Mount Baldy Ra**	**3.29 131**		Pn	02 40 52.7	-0.1
GSC	**Goldstone, Bar**	**3.32 109**		Pn	02 40 53.5	+0.3
GSC			IAML		02 41 58.7	
	comp=E,30nm,0.8s					
PAHR	**Pah Rah Range**	**3.40 17**	Pn	Pn	02 40 55.7	+1.2
PAHR			IAML		02 41 49.7	
	comp=E,22nm,0.5s					
PAHR			IAML		02 41 50.6	
	comp=N,20nm,1.1s					
BEKR	**Beckworth**	**3.42 4**	Pn	Pn	02 40 55.5	+0.7
BEKR			IAML		02 41 51.5	
	comp=E,43nm,0.5s					
BEKR			IAML		02 41 55.9	
	comp=N,19nm,0.7s					
TPNV	**Topopah Spring**	**3.57 81**		Pn	02 40 56.7	0.0
TPNV			IAML		02 42 01.0	
	comp=N,16nm,1.0s					
TPNV			IAML		02 42 05.8	
	comp=N,18nm,1.1s					
SHOC	**Shoshone, Teco**	**3.58 97**	Pn	Pn	02 40 56.8	0.0
SHOC			IAML		02 42 21.3	
	comp=E,32nm,0.9s					
O03E	**Paynes Creek**	**3.95 347**	Pn	Pn	02 41 03.5	+1.6
O03E			IAML		02 42 06.8	
	comp=N,19nm,1.2s					
O03E			IAML		02 42 30.3	
	comp=E,24nm,1.3s					
S11A	**Rachel**	**4.09 72**	Pn	Pn	02 41 04.3	+0.3
DNR	**Dunn Ranch,Anz**	**4.37 130**		Pn	02 41 08.6	+0.8
SHPR	**Sheep Range**	**4.42 88**		Pn	02 41 08.8	+0.3
PFO	**Pinyon Flats O**	**4.45 128**		Pn	02 41 09.1	+0.3
BELC	**Belle Mtn. Jos**	**4.52 121**		Pn	02 41 09.1	-0.7
BELC			IAML		02 42 33.3	
	comp=N,7.4nm,0.9s					
BELC			IAML		02 42 51.5	
	comp=E,7.7nm,3.0s					
DANC	**Danby, Needles**	**4.65 111**		Pn	02 41 11.8	+0.2

DJA ***12*** *02:46:47.1±0.4,2°N±4°×12°3E±°, h10km,M4.3/11,mb4.0/3, MLv4.5/11*

IDC ***12*** *02:46:51.4±1.7,1°.10N×124°.11E,h0km,mb3.4/3, mbtmp3.6/5,ML3.7/2,MS3.8/2,Error ellipse: s-maj=58.8km s-min=25.7km az=68.0*

ISC 12 02:46:48.2±2.5,1°.6N±0°.2×123°.3E±0°.1,h32km,n16, σ1§05/13,mb3.4/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.25 148**	P	**Pb**	**02 47 10.5**	**-0.8**
KMSI			S	**Sb**	**02 47 26.9**	**-0.3**
MRSI	**Marisa**	**1.79 230**	P	**Pn**	**02 47 15.5**	**-1.4**
LUWI	**Luwuk**	**2.72 191**	P	**Pn**	**02 47 30.4**	**+0.7**
APSI	**Ampana**	**3.03 213**	P	**Pn**	**02 47 35.5**	**+1.5**
MPSI	**Mapaga**	**3.65 249**	P	**Pn**	**02 47 43.2**	**+0.8**
SANI	**Sanana**	**4.54 144**	P	**Pn**	**02 47 55.3**	**+0.5**
KDI	**Kendari**	**5.60 187**	P	**Pn**	**02 48 10.0**	**+0.6**
	0.5nm,0.7s					
TTSI	**Tana Toraja**	**5.81 217**	P	**Pn**	**02 48 13.3**	**+1.0**
	66nm,0.7s					
BNSI	**Bone**	**6.80 208**	P	**Pn**	**02 48 25.7**	**-0.1**
KAPI	**Kappang**	**7.50 208**	Pn	Pn	02 48 41.7	+6.2
	0.7nm,0.3s,baz=42,slow=15,SNR=1.3					
	13nm,0.7s					
FITZ	**Fitzroy Crossi**	**19.75 173**	P	**P**	**02 51 14.7**	**-0.8**
	0.2nm,0.3s,baz=3.1,slow=9.1,SNR=7.2					
	1.6nm,0.5s					
WRA	**Warramunga Arr**	**24.02 154**	P	**P**	**02 51 59.9**	**-0.5**
	1.9nm,0.7s,baz=335,slow=10,SNR=11					
	1.9nm,0.7s					
ASAR	**Alice Springs**	**27.18 158**	P	**P**	**02 52 30.6**	**+1.5**
	0.2nm,0.6s,baz=341,slow=9.0,SNR=5.3					
	0.2nm,0.6s					
MJAR	**Matsushiro Arr**	**37.37 20**	LR	LR	03 08 57.8	
	comp=Z,184nm,21.3s,baz=197,slow=35					
MKAR	**Makanchi Array**	**57.40 328**	P	P	02 56 48.2	+14
	0.2nm,0.5s,baz=133,slow=8.5,SNR=3.6					
	0.2nm,0.5s					
SEY	**Seymchan**	**64.85 14**	LR	LR	03 25 53.1	
	comp=Z,54nm,21.3s,baz=225,slow=36					

IDC ***12*** *02:48:22.1±0.7,0°.97N×123°.67E,h0km,mb4.0/12, mbtmp4.0/14,ML3.9/2,MS4.0/24,Error ellipse: s-maj=37.0km s-min=14.3km az=78.0*

NEIC ***12*** *02:48:26.6±1.3,0°.97N±0°.06×123°.61E±0°.09,h30km±4km, mb4.7/22,Error ellipse: s-maj=13.3km s-min=7.9km az=68.0*

DJA ***12*** *02:48:27.1±0.2,1°N±3°×12°3E±°, h10km,M4.8/25, mB5.2/13,mb5.0/18,MLv4.9/25,Mw(mB)4.6/13, MwMwp4.8/3,Mwp5.1/3*

GCMT ***12*** *02:48:31.6±0.4,1°.58N±0°.03×123°.46E±0°.05,h29km±1km, MW5.0/66,Moment Tensor Solution. s17,c19; s66,c82; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.05±.32; Mθθ-3.01±.19; Mϕϕ-0.04±.22; Mrθ-1.26±.20; Mθϕ0.59±.11; Mϕr1.45±.34; Best double couple: Mo3.62800×10¹⁶ NP1:ϕs85.00000°,δ34.00000°,λ61.00000°. NP2: ϕs299.00000°,δ61.00000°,λ108.00000°. Principal axes: T 3.7630, Plg69.0000°, Azm247.0000°; N -0.2750, Plg16.0000°, Azm109.0000°; P -3.4920, Plg14.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 02:48:26.9±0.4,0°.98N±0°.04×123°.62E±0°.05,h32km,n98, σ1§74/73,mb4.6/30,MS4.0/25,1D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.54 138**	P	Pn	02 48 47.8	+10
MRSI	**Marisa**	**1.75 254**	P	**Pn**	**02 48 53.5**	**-1.6**
LUWI	**Luwuk**	**2.18 203**	Pn	**Pn**	**02 49 00.6**	**-0.3**
LUWI	**Luwuk**	**2.18 203**	P	**Pb**	**02 49 07.9**	**+2.2**
APSI	**Ampana**	**2.72 227**	P	**Pn**	**02 49 10.1**	**+1.7**
TOLI2	**Tolitoli**	**2.84 273**	Pn	**Pn**	**02 49 06.7**	**-3.4**
SGSI	**Sangihe**	**3.30 35**	P	**Pn**	**02 49 19.5**	**+3.2**
TNTI	**Ternate**	**3.75 93**	P	**Pb**	**02 49 33.0**	**+0.6**
MPSI	**Mapaga**	**3.78 260**	P	**Pn**	**02 49 19.9**	**-3.0**
SANI	**Sanana**	**3.82 142**	P	**Pb**	**02 49 33.2**	**-0.5**
NLAI	**Namlea**	**5.44 140**	P	Pb	02 49 55.1	-6.1
	0.5nm2µm123nm,0.5s					
TTSI	**Tana Toraja**	**5.52 224**	P	**Pn**	**02 49 48.1**	**+1.3**
SPSI	**Sidrap Palu**	**6.24 218**	P	**Pn**	**02 49 58.5**	**+1.7**
	0.5nm2µm170nm,0.9s					
DAV	**Davao City (W)**	**6.36 18**	LR	LR	02 52 52.5	
	comp=Z,2µm,18.2s,baz=184,slow=43					
BNSI	**Bone**	**6.39 213**	P	Pn	02 50 03.9	+5.0
	0.9nm3µm232nm,1.1s					
AAI	**Ambon**	**6.51 135**	P	Pb	02 50 12.6	-6.8
	0.3nm2µm93nm,0.8s					
BBSI	**Bau Bau**	**6.51 189**	P	Pn	02 50 05.9	+5.4
MYLDM	**Lahad Datu**	**6.60 309**		**Pn**	**02 50 01.4**	**-0.3**
MSAI	**Masohi**	**6.82 129**	P	Pb	02 50 17.5	-7.3
	0.5nm2µm133nm,1.1s					
KAPI	**Kappang**	**7.10 213**	Pn	**Pn**	**02 50 06.6**	**-1.9**
	1.2nm,0.3s,baz=65,slow=6.3,SNR=4.7					
KAPI			Sn	**Sn**	**02 51 31.2**	**+3.0**
	baz=197,slow=20					
KAPI			LR	LR	02 53 11.2	
	comp=Z,620nm,18.6s,baz=23,slow=41					
	8.2nm,0.6s					
KAPI	**Kappang**	**7.10 213**		**Pn**	**02 50 06.2**	**-2.4**
BKSI	**Bulukumba**	**7.17 209**	P	**Pn**	**02 50 13.0**	**+3.5**
	0.3nm866nm67nm,0.9s					
BSSI	**Bau Bau, Buton**	**7.73 204**	P	Pn	02 50 21.9	+4.6
	2µm228nm,1.4s					
BNDI	**Bandanaira**	**8.32 131**	P	Pn	02 50 38.1	+13
	51nm,0.5s					
FAKI	**Fak Fak**	**9.45 114**	Pn	**Pn**	**02 50 40.1**	**-0.8**
SOEI	**Soe**	**10.68 177**	Pn	**Pn**	**02 50 58.7**	**+0.9**
SOEI	**Soe**	**10.68 177**	P	Pn	02 51 05.2	+7.3
BATI	**Baumata**	**11.11 180**	LR	LR	02 55 55.8	
	comp=Z,1µm,19.1s,baz=18,slow=41					
JAGI	**Jajag, Banyuwa**	**13.31 225**	Pn	**Pn**	**02 51 32.5**	**-1.3**
KNRA	**Kununurra**	**17.31 163**		**Pn**	**02 52 26.2**	**0.0**
FITZ	**Fitzroy Crossi**	**19.06 174**	P	**P**	**02 52 46.5**	**-0.1**
	0.4nm,0.3s,baz=7.3,slow=7.6,SNR=7.9					
	2.6nm,0.6s					
MDSI	**Maura Dua**	**20.17 254**	P	**P**	**02 52 57.4**	**-1.5**
MBWA	**Marble Bar**	**22.33 190**	P	**P**	**02 53 21.1**	**-1.0**
TPUB	**Ta-pu**	**22.38 353**		**P**	**02 53 21.3**	**-1.3**
QIZ	**Qiongzhong**	**22.46 324**	P	**P**	**02 53 25.2**	**+1.7**
QIZ			S	**S**	**02 57 30.4**	**+2.1**
QIZ			LR	LR		
	comp=N,540nm,14.5s					
QIZ			LR	LR		
	comp=E,260nm,11.8s					
QIZ			LR	LR		
	comp=Z,540nm,15.5s					
PSA00	**Pilbara Seismi**	**22.71 189**	P	**P**	**02 53 25.7**	**-0.5**
PSA00			IAmb	IAmb	02 54 07.3	
	comp=Z,25nm,1.3s					
WB0	**Warramunga Arr**	**23.16 153**		**P**	**02 53 29.8**	**-1.1**
WB0			IAmb	IAmb	02 54 02.1	
	comp=Z,33nm,1.4s					
WRA	**Warramunga Arr**	**23.29 154**	P	**P**	**02 53 32.3**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=335,slow=9.9,SNR=11					
WRA			LR	LR	03 04 32.2	
	comp=Z,212nm,18.3s,baz=279,slow=42					
	comp=Z,2.4nm,0.7s					
WRA	**Warramunga Arr**	**23.29 154**	P	**P**	**02 53 31.6**	**-0.6**
WR8	**Warramunga Arr**	**23.38 153**	P	**P**	**02 53 32.1**	**-0.9**
WR8			IAmb	IAmb	02 53 43.9	
	comp=Z,30nm,1.4s					
COEN	**Coen**	**24.40 128**	P	**P**	**02 53 40.5**	**-2.1**
COEN			IAmb	IAmb	02 54 06.1	
	comp=Z,14nm,1.1s					
GUMO	**Guam**	**24.48 58**	LR	LR	03 01 53.6	
	comp=Z,196nm,20.3s,baz=252,slow=33					
PSI	**Prapat**	**24.75 275**	LR	LR	03 04 33.0	
	comp=Z,510nm,19.5s,baz=109,slow=39					
GIRL	**Giralia**	**25.20 201**	P	**P**	**02 53 47.6**	**-2.1**
PMG	**Port Moresby**	**25.61 114**	LR	LR	03 06 50.1	
	comp=Z,270nm,18.5s,baz=277,slow=43					
JOW	**Kunigami**	**26.09 9**	LR	LR	03 07 24.5	
	comp=Z,209nm,18.0s,baz=143,slow=44					
ASAR	**Alice Springs**	**26.45 158**	P	**P**	**02 54 01.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=332,slow=9.5,SNR=5.2					
ASAR			LR	LR	03 05 34.4	
	comp=Z,176nm,18.6s,baz=356,slow=39					
	comp=Z,0.4nm,0.7s					
ASAR	**Alice Springs**	**26.45 158**	P	**P**	**02 54 00.1**	**-1.1**
CTA	**Charters Tower**	**30.50 135**	LR	LR	03 08 34.0	
	comp=Z,4.6nm,19.1s,baz=261,slow=40					
NJ2	**Nanjing**	**31.24 352**	*e*P	**P**	**02 54 45.8**	**+2.2**
NJ2			pmax	pmax		
	comp=Z,11nm,0.5s					
JCJ	**Chichijima**	**31.50 33**	LR	LR	03 10 37.1	
	comp=Z,75nm,18.0s,baz=56,slow=42					
PZH	**PanZhiHua**	**32.97 322**	P	**P**	**02 55 01.7**	**+2.6**
XAN	**Xi'an**	**35.66 339**	↓P	**P**	**02 55 17.5**	**-4.7**
XAN			pmax	pmax		
	comp=Z,7.0nm,0.8s					
STKA	**Stephens Creek**	**36.85 154**	P	P	02 55 40.2	+7.9
	comp=Z,2.4nm,0.5s,baz=334,slow=11,SNR=4.5					
STKA	**Stephens Creek**	**36.85 154**	P	**P**	**02 55 32.6**	**+0.2**
HNR	**Honiara**	**37.62 107**	LR	LR	03 12 20.7	
	comp=Z,167nm,19.8s,baz=344,slow=38					
LZDM	**Lanzhou Array**	**39.42 334**	LR	LR	03 13 43.8	
	comp=Z,164nm,19.8s,baz=200,slow=39					
LZH	**Lanzhou**	**39.46 334**	*e*P	**P**	**02 55 50.4**	**-4.1**
LZH			sP	pP	02 56 02.6	-0.9
LZH			pmax	pmax		
	comp=Z,19nm,1.3s					
LZH			LR	LR		
	comp=N,240nm,13.7s					
LZH			LR	LR		
	comp=E,430nm,12.7s					
LZH			LR	LR		
	comp=Z,390nm,13.7s					
HHC	**Hu-ho-hao-te**	**41.17 346**	*e*P	**P**	**02 56 11.0**	**+2.5**
HHC			S	**S**	**03 02 21.9**	**+2.0**
HHC			sS	sS	03 02 39.5	+5.2
HHC			pmax	pmax		
	comp=Z,13nm,0.5s					
HHC			pmax	pmax		
	comp=Z,250nm,5.5s					
HHC			LR	LR		
	comp=N,280nm,17.7s					
HHC			LR	LR		
	comp=E,270nm,14.3s					
HHC			LR	LR		
	comp=Z,320nm,16.8s					
GTA	**Gaotai**	**44.00 333**	*e*P	**P**	**02 56 33.3**	**+1.7**
GTA			pP	sP	02 56 42.7	-2.1
GTA			pmax	pmax		
	comp=Z,9.0nm,1.0s					
GOMU	**GeErMu**	**44.06 326**	P	**P**	**02 56 35.7**	**+3.3**
GOMU			S	**S**	**03 03 06.4**	**+3.2**
GOMU			pmax	pmax		
	comp=Z,3.0nm,1.2s					
EVN	**Everest**	**44.27 311**	P	**P**	**02 56 33.9**	**-0.6**
EVN			IAmb	IAmb	02 56 52.2	
	comp=Z,10nm,0.9s					
HILR	**Hailar Array B**	**48.51 357**	P	**P**	**02 57 06.7**	**-0.1**
	comp=Z,6.9nm,0.8s,baz=171,slow=10,SNR=5.3					
	comp=Z,6.9nm,0.8s					
ULN	**Ulaanbaatar**	**48.87 345**		**P**	**02 57 09.8**	**+0.1**
ULN			IAmb	IAmb	02 57 25.9	
	comp=Z,6.4nm,1.1s					
SONM	**Songino Array**	**49.01 345**	P	**P**	**02 57 11.5**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=160,slow=9.1,SNR=4.2					
	comp=Z,1.4nm,0.6s					
SONM	**Songino Array**	**49.01 345**	P	**P**	**02 57 08.8**	**-1.9**
HEH	**HeiHe**	**49.20 3**	*e*P	**P**	**02 57 13.0**	**+1.0**
MKAR	**Makanchi Array**	**58.12 328**	P	**P**	**02 58 18.4**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=131,slow=7.9,SNR=7.6					
MKAR			LR	LR	03 26 36.6	
	comp=Z,114nm,18.1s,baz=345,slow=40					
	comp=Z,0.8nm,0.6s					
MKAR	**Makanchi Array**	**58.12 328**	P	**P**	**02 58 17.5**	**0.0**
PETK	**Petropavlovsk**	**59.15 23**	P	**P**	**02 58 24.0**	**-0.5**
	comp=Z,7.4nm,1.2s,baz=228,slow=7.4,SNR=1.8					
	comp=Z,7.4nm,1.2s					
PETK	**Petropavlovsk-**	**59.15 23**	P	**P**	**02 58 25.6**	**+1.1**
AAK	**Ala-Archa**	**60.38 320**	LR	LR	03 29 30.5	
	comp=Z,158nm,18.2s,baz=350,slow=41					
ZALV	**Zalesovo Beam**	**61.69 335**	P	**P**	**02 58 41.2**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=131,slow=8.1,SNR=5.6					
	comp=Z,0.9nm,0.3s					
ZALV	**Zalesovo Beam**	**61.69 335**		**P**	**02 58 42.0**	**+0.2**
CHGR	**Chuyangaron**	**62.26 314**	P	**P**	**02 58 45.0**	**-1.1**
KURBB	**Kurchatov Arra**	**62.44 329**	P	**P**	**02 58 47.3**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=132,slow=5.8,SNR=3.3					
	comp=Z,0.9nm,0.7s					
KURK	**Kurchatov**	**62.45 330**	P	**P**	**02 58 46.7**	**-0.3**
KURK			IAmb	IAmb	02 58 58.6	
	comp=Z,3.9nm,0.6s					
BVAR	**Borovoye Array**	**67.98 329**	P	**P**	**02 59 23.2**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=123,slow=7.2,SNR=2.3					
	comp=Z,0.6nm,0.6s					
TIXI	**Tiksi**	**70.64 2**	LR	LR	03 33 23.2	
	comp=Z,91nm,19.2s,baz=197,slow=38					
TIXI	**Tiksi**	**70.64 2**		**P**	**02 59 38.9**	**0.0**
TIXI			IAmb	IAmb	02 59 53.3	
	comp=Z,14nm,1.1s					
AB31	**Akbulak array**	**72.35 322**	P	**P**	**02 59 49.3**	**-0.3**
ABKAR	**Akbulak array**	**72.35 322**	P	**P**	**02 59 49.1**	**-0.5**
AKTO	**Aktyubinsk**	**73.91 323**	LR	LR	03 33 51.7	
	comp=Z,146nm,21.8s,baz=35,slow=37					
ARTI	**Arti**	**75.70 329**	P	**P**	**03 00 08.0**	**-1.0**
ARTI			IAmb	IAmb	03 00 20.3	
	comp=Z,6.8nm,1.0s					
RAYN	**Ar Rayn**	**78.72 294**	P	**P**	**03 00 25.5**	**-1.3**
RAYN			IAmb	IAmb	03 00 41.3	
	comp=Z,5.1nm,1.1s					
MAW	**Mawson**	**80.12 200**	LR	LR	03 33 01.3	
	comp=Z,64nm,18.5s,baz=39,slow=33					
VNDA	**Vanda**	**81.12 172**	P	**P**	**03 00 37.1**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=316,slow=5.5,SNR=7.8					
VNDA			LR	LR	03 38 01.9	
	comp=Z,93nm,18.1s,baz=326,slow=37					
	comp=Z,1.3nm,0.8s					
E18K	**Tukpahlearik C**	**83.66 22**	P	**P**	**03 00 50.9**	**-1.1**
KOPT	**Kop Dagi**	**84.10 310**	P	**P**	**03 00 53.6**	**-1.7**
KOPT			IAmb	IAmb	03 01 10.0	
	comp=Z,9.4nm,1.3s					
KDAK	**Kodiak Island**	**85.86 32**	LR	LR	03 38 11.6	
	comp=Z,33nm,19.0s,baz=258,slow=35					
KMBO	**Kilima Mbogo**	**86.39 269**	LR	LR	03 38 05.4	
	comp=Z,140nm,18.3s,baz=107,slow=34					
EIL	**Elat**	**88.37 299**	LR	LR	03 47 33.5	
	comp=Z,95nm,18.4s,baz=183,slow=40					
BRTR	**Keskin Array B**	**89.37 310**	P	**P**	**03 01 21.7**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=98,slow=7.4,SNR=1.5					
	comp=Z,0.2nm,0.6s					
BRTR	**Keskin Array B**	**89.37 310**	P	**P**	**03 01 20.2**	**-0.6**
QSPA	**South Pole Qui**	**90.90 180**	P	**P**	**03 01 28.6**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=322,slow=2.7,SNR=1.2					
QSPA			LR	LR	03 41 50.3	
	comp=Z,69nm,21.8s,baz=330,slow=35					
	comp=Z,0.4nm,0.3s					
QSPA	**South Pole Qui**	**90.90 180**	P	**P**	**03 01 27.2**	**-0.1**
QSPA			IAmb	IAmb	03 01 46.8	
	comp=Z,8.3nm,1.2s					
DLBC	**Dease Lake**	**97.68 31**	LR	LR	03 45 23.0	
	comp=Z,42nm,20.1s,baz=12,slow=35					
LBTB	**Lobatse**	**97.69 245**	LR	LR	03 43 23.4	
	comp=Z,82nm,18.3s,baz=336,slow=34					

TRN 12 02:50:22.7, 10.76N×61.42W, h45km, MD3.7, Near North coast of Trinidad., Trinidad

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.11 169**	*e*P	Pn	02 50 30.2	+0.2
TRN			*e*S	Sn	02 50 35.0	-0.1
PSKH	**Kent House, Po**	**0.12 232**	*e*P	Pn	02 50 30.5	+0.5
PSKH			*e*S	Sn	02 50 35.5	+0.4
DMDM	**Guralp CMG5TDE**	**0.14 245**	*e*P	Pn	02 50 30.3	+0.2
DMDM			*e*S	Sn	02 50 35.7	+0.4
DMDM	**Guralp CMG5TDE**	**0.14 245**	*e*	Pn	02 50 30.6	+0.5
DMDM			*e*S	Sn	02 50 35.7	+0.4
GRFF	**Grenada Fort F**	**1.32 347**	*e*P	Pn	02 50 44.4	-0.4
GRFF			*e*S	Sn	02 51 02.0	+0.8
GRGR	**Grenville**	**1.39 351**	*e*P	Pn	02 50 45.1	-0.5
GRGR			*e*S	Sn	02 51 02.2	-0.5
GRW	**Mount Saint Ca**	**1.41 351**	*e*P	Pn	02 50 47.0	+0.9
GRW			*e*S	Sn	02 51 02.8	-0.8
GRSS	**Sisters**	**1.54 353**	*e*P	Pn	02 50 47.3	-0.4
GRSS			*e*S	Sn	02 51 06.8	+0.2
GCMP	**Grenada, Carri**	**1.72 360**	*e*P	Pn	02 50 50.0	-0.2
GCMP			*e*S	Sn	02 51 10.1	-0.9
SVB	**Belmont**	**2.51 4**	*e*P	Pn	02 51 02.0	+1.0
SVB			*e*S	Sn	02 51 31.1	+0.8
MCLT	**Moule a Chique**	**2.97 9**	*e*P	Pn	02 51 07.5	+0.1
MCLT			*e*S	Sn	02 51 41.2	-0.6
PCRV	**Puerto La Cruz**	**3.21 260**	*e*P	Pn	02 51 11.3	+0.6
PCRV			*e*S	Sn	02 51 47.5	-0.3
SLBI	**Saint Lucia, B**	**3.28 8**	*e*P	Pn	02 51 12.4	+0.9
SLBI			*e*S	Sn	02 51 48.6	-0.7
BIM	**Bigot**	**3.75 5**	*e*P	Pn	02 51 18.5	+0.4
DSLB	**Salisbury**	**4.65 0**	*e*P	Pn	02 51 31.4	+0.9
MMLZ	**Guadeloupe Bro**	**5.26 357**	*e*	Pn	02 51 38.7	-0.1
ATGZ	**Broadband at L**	**5.32 357**	*e*P	Pn	02 51 41.2	+1.7
BAUV	**El Baul**	**6.77 255**	*e*P	Pn	02 51 59.6	+0.1
BAUV			*e*S	Sn	02 53 11.9	-3.4

NEIC ***12*** *03:24:03.2±0.6,19°.85N±0°.02×155°.39W±0°.02,h41km±1km, Error ellipse: s-maj=3.6km s-min=2.7km az=47.0*

HVO 12 03:24:05.1±0.7,19°.85N±0°.03×155°.37W±0°.04,h30km±3km, ML2.8/38,ML2.8/34(NEIC),Error ellipse: s-maj=7.0km s-min=3.3km az=53.0,Hawaiian Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.18 240**	Pg	Pb	03 24 10.6	-0.8
POHA				Sb	03 24 14.7	-1.0
POHA	**Pohakuloa**	**0.18 240**	IAML		03 24 15.0	
	1µm,0.8s					
POHA			IAML		03 24 15.2	
	1µm,0.6s					
HMH	**Humu'ula Sheep**	**0.27 204**	Pg	Pb	03 24 11.8	-0.6
HMH				Sb	03 24 16.8	-0.6
HMH			IAML		03 24 17.1	
	comp=E,1µm,0.4s					
HMH			IAML		03 24 17.3	
	comp=N,1µm,0.3s					
MLH	**Mauna Loa**	**0.35 183**		Pb	03 24 12.7	-0.9
MLH	**Mauna Loa**	**0.35 183**	IAML		03 24 18.3	
	comp=E,911nm,1.5s					
MLH			IAML		03 24 18.5	
	comp=N,1µm,0.4s					
HPAH	**Hawaii Prepara**	**0.36 300**		Sb	03 24 17.4	-1.7
RSD	**Rainshed**	**0.39 168**		Sb	03 24 19.2	-0.9
ALEP	**Alea Permanent**	**0.40 220**		Sb	03 24 19.4	-1.2
MWH	**Mokuaweoweo**	**0.42 211**		Sb	03 24 19.8	-1.5
SBLHI	**Steaming Bluff**	**0.43 168**		Sb	03 24 19.5	-1.5
HATHI	**Halema'uma'u T**	**0.44 167**		Pb	03 24 13.3	-1.3
HATHI	**Halema'uma'u T**	**0.44 167**	IAML		03 24 29.6	
	comp=N,442nm,0.6s					
OBL	**Observatory Le**	**0.44 170**		Pb	03 24 13.4	-1.3
OBL				Sb	03 24 19.5	-1.6
WRMHI	**West Rim**	**0.45 172**		Pb	03 24 13.4	-1.4
KKO	**Keanakako'i**	**0.46 168**		Pb	03 24 13.6	-1.4
RIM	**Rim**	**0.46 169**		Pb	03 24 13.6	-1.4
SDHHI	**Sand Hill**	**0.46 171**		Pb	03 24 13.6	-1.4
HUH	**Hualalai**	**0.47 250**		Pb	03 24 14.3	-0.9
HUH	**Hualalai**	**0.47 250**	IAML		03 24 22.2	
	comp=N,796nm,0.1s					
HUH			IAML		03 24 34.2	
	comp=E,746nm,0.5s					
AIN	**Ainahou**	**0.48 190**		Pb	03 24 14.2	-1.1
AIN	**Ainahou**	**0.48 190**	IAML		03 24 21.2	
	comp=E,1µm,0.4s				

ISC 12 03:24:57.8±1.3, 27°09N±0°06×55°11E±0°04, h11km±12km, n37, σ0°98/54, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.87**	**312**	Pg	**Pg**	**03 25 14.7**	**+0.1**
GENO	**Geno**	**1.00**	**72**	Pg	**Pg**	**03 25 16.1**	**-1.0**
IBND	**Bandar-abas**	**1.33**	**74**	Pg	**Pn**	**03 25 22.2**	**-0.1**
BANOM	**Banah**	**1.58**	**137**	P	**Pb**	**03 25 26.7**	**-0.4**
BANOM				S	**Sg**	**03 25 51.0**	**+2.3**
BANOM	**Banah**	**1.58**	**137**	P	**Pn**	**03 25 26.4**	**+0.5**
BANOM				S	**Sb**	**03 25 47.0**	**-0.1**
LMD1	**Lamerd**	**1.75**	**279**	Pg	**Pb**	**03 25 29.8**	**-0.1**
MDH	**Madha**	**2.08**	**149**	P	**Pb**	**03 25 34.5**	**-1.1**
MDH				S	**Sb**	**03 26 01.4**	**-0.1**
MDH				S	**Sb**	**03 26 01.4**	**-0.1**
MDH	**Madha**	**2.08**	**149**	P	**Pn**	**03 25 32.3**	**-0.4**
NAZ	**Nazwa, Dubai**	**2.15**	**166**	P	**Pb**	**03 25 36.0**	**-0.8**
UOSS	**Minazif**	**2.35**	**155**	P	**Pb**	**03 25 37.8**	**+1.4**
UOSS				S	**Sn**	**03 26 06.5**	**+1.2**
UOSS	**Minazif**	**2.35**	**155**	P	**Pn**	**03 25 37.3**	**+0.9**
FAQ	**Al Faqa, Dubai**	**2.38**	**169**	P	**Pn**	**03 25 38.3**	**+1.5**
FAQ				S	**Sb**	**03 26 08.0**	**-1.9**
HATD	**Hatta, Dubai**	**2.44**	**157**	P	**Pb**	**03 25 40.1**	**-1.6**
HATD	**Hatta, Dubai**	**2.44**	**157**	P	**Pn**	**03 25 39.1**	**+1.5**
KHNJ	**Kahnooj**	**2.46**	**69**	Pn	**Pn**	**03 25 37.4**	**-0.6**
ASHO	**Ashiyiah** SNR=6.0	**2.54**	**160**	P	**Pn**	**03 25 40.7**	**+1.6**
ASHO				S	**Sb**	**03 26 14.6**	**-0.3**
ASHO	**Ashiyiah**	**2.54**	**160**	P	**Pn**	**03 25 40.6**	**+1.6**
SOHO	**SOHO**	**3.21**	**156**	P	**Pn**	**03 25 48.7**	**+0.4**
KRBR	**Kerman**	**3.23**	**26**	Pn	**Pn**	**03 25 48.0**	**-0.8**
KHGB	**Koh Gabri**	**3.49**	**20**	Pn	**Pn**	**03 25 52.1**	**-0.1**
CHMN	**Cheshme madani**	**3.50**	**37**	Pn	**Pn**	**03 25 52.8**	**+0.3**
KBAM	**BAM**	**3.59**	**55**	Pn	**Pn**	**03 25 53.9**	**+0.3**
SHMA	**Al-Shehemyia** SNR=7.3	**3.91**	**253**	P	**Pn**	**03 25 58.1**	**+0.2**
SHMA				S	**Sn**	**03 26 43.6**	**-0.2**
ARQ	**Araqi**	**3.95**	**161**	P	**Pn**	**03 25 59.7**	**+1.2**
ARQ				S	**Sn**	**03 26 45.6**	**+0.8**
HOQ	**Hoqain**	**4.02**	**150**	P	**Pn**	**03 26 00.6**	**+1.2**
HOQ				S	**Sn**	**03 26 47.5**	**+1.0**
TRNA	**Turayna**	**4.22**	**237**	P	**Pn**	**03 26 02.3**	**+0.2**
TRNA				S	**Sn**	**03 26 51.4**	**+0.1**
SLWR	**Sila**	**4.31**	**226**	P	**Pn**	**03 26 03.9**	**+0.6**
SLWR				S	**Sn**	**03 26 53.5**	**-0.1**
SMRA	**Abu-Samra**	**4.51**	**240**	P	**Pn**	**03 26 06.7**	**+0.7**
SMRA				S	**Sn**	**03 26 59.5**	**+1.1**
SMDO	**Samad**	**4.82**	**146**	P	**Pn**	**03 26 11.4**	**+1.0**
SMDO				S	**Sn**	**03 27 08.1**	**+1.8**
WSAR	**Wadi Sarin** SNR=8.4	**4.99**	**139**	P	**Pn**	**03 26 13.6**	**+0.9**
WSAR				S	**Sn**	**03 27 10.4**	**0.0**
JMDO	**Jabal Madar**	**5.43**	**149**	P	**Pn**	**03 26 18.7**	**-0.1**
JMDO				S	**Sn**	**03 27 21.7**	**+0.3**
WBK	**Wadi Bani Khal**	**5.67**	**141**	P	**Pn**	**03 26 22.5**	**+0.3**
MHTO	**MHTO** SNR=8.9	**6.61**	**156**	P	**Pn**	**03 26 35.8**	**+0.8**
MHTO				S	**Sn**	**03 27 49.2**	**-1.3**
DOK	**Doka**	**8.48**	**186**	P	**Pn**	**03 26 59.8**	**-0.8**
WHFO	**Wadi Hawf** SNR=12	**9.21**	**188**	P	**Pn**	**03 27 10.0**	**-0.7**
DMTO	**DMTO**	**9.33**	**181**	P	**Pn**	**03 27 10.9**	**-1.5**
ABTO	**Aybut** SNR=9.3	**9.83**	**190**	P	**Pn**	**03 27 18.4**	**-0.9**

WEL ***12*** *04:06:10.5±1.2, 34°S±13°×17°8W±1°7, h225km±25km, M4.5/7, mB4.5/3, ML4.8/8, MLv4.5/7, Mw(mB)3.7/3, Error ellipse: s-maj=26.0km s-min=10.9km az=124.0, confirmed*
NEIC ***12*** *04:06:16.5±1.6, 33.7°S±0.1°×179.06W±0.05, h35km±2km, mb4.3/10, Error ellipse: s-maj=21.4km s-min=6.8km az=185.0*
IDC ***12*** *04:06:17.0±1.3, 33.57°S×179.14W, h50km±7km, mb4.0/3, mbtmp4.3/4, MS3.3/1, Error ellipse: s-maj=28.1km s-min=18.8km az=100.0*

ISC 12 04:06:12.1±1.2, 33.67S±0.09×178.3W±0.2, h41km, n48, σ1s77/64, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.76**	**214**	Pn	**Pn**	**04 07 20.5**	**-0.7**
MXZ	**Matakaoa Point**	**4.76**	**214**	S	**Sn**	**04 08 17.3**	**+2.2**
WMGZ	**Waiomatatini S**	**4.92**	**212**	P	**Pn**	**04 07 23.5**	**0.0**
WMGZ				S	**Sn**	**04 08 23.1**	**+4.0**
PKGZ	**Pakihiroa**	**5.11**	**214**	P	**Pn**	**04 07 25.3**	**-0.8**
PKGZ				S	**Sn**	**04 08 26.7**	**+2.9**
HAZ	**Te Kaha**	**5.16**	**217**	P	**Pn**	**04 07 26.8**	**0.0**
HAZ				S	**Sn**	**04 08 29.1**	**+4.0**
PUZ	**Puketiti**	**5.20**	**211**	P	**Pn**	**04 07 25.8**	**-1.5**
PUZ				S	**Sn**	**04 08 28.4**	**+2.4**
RUGZ	**Raukumara Rang**	**5.38**	**216**	P	**Pn**	**04 07 29.7**	**-0.2**
RUGZ				S	**Sn**	**04 08 33.5**	**+2.9**
TWGZ	**Tauwhareparae**	**5.41**	**213**	P	**Pn**	**04 07 29.7**	**-0.5**
CNGZ	**Carnagh Statio**	**5.56**	**209**	P	**Pn**	**04 07 31.5**	**-0.8**
CNGZ				S	**Sn**	**04 08 37.9**	**+2.9**
MWZ	**Matawai**	**5.74**	**215**	P	**Pn**	**04 07 33.7**	**-1.1**
MWZ				S	**Sn**	**04 08 39.8**	**+0.4**
URZ	**Urewera** 17nm,0.5s,baz=252,slow=4.6,SNR=37	**5.89**	**218**	P	**Pn**	**04 07 37.8**	**+1.1**
URZ	64nm,0.5s,baz=195,slow=20,SNR=11			S	**Sn**	**04 08 38.6**	**-4.4**
URZ	**Urewera**	**5.89**	**218**	P	**Pn**	**04 07 35.8**	**-1.0**
URZ				S	**Sn**	**04 08 43.1**	**+0.1**
RAGZ	**Rawiri**	**5.92**	**214**	P	**Pn**	**04 07 35.6**	**-1.8**
RAGZ				S	**Sn**	**04 08 45.6**	**+1.6**
RTZ	**Ruatahuna**	**6.23**	**216**		**Pn**	**04 07 40.6**	**-1.0**
MTHZ	**Maungataniwha**	**6.48**	**216**	P	**Pn**	**04 07 44.4**	**-0.6**
MTHZ				S	**Sn**	**04 08 57.6**	**0.0**
OUZ	**Omahuta**	**6.86**	**255**	P	**Pn**	**04 07 51.2**	**+1.2**
BKZ	**Black Stump Fm**	**6.89**	**216**	Pn	**Pn**	**04 07 49.6**	**-1.1**
MCHZ	**McNeill Hill**	**7.02**	**213**	P	**Pn**	**04 07 52.9**	**+0.6**
MCHZ				S	**Sn**	**04 09 13.0**	**+2.2**
KWHZ	**Kaweka Forest**	**7.13**	**215**	P	**Pn**	**04 07 52.9**	**-1.0**
KWHZ				S	**Sn**	**04 09 14.4**	**+0.8**
KAHZ	**Kahuranaki**	**7.22**	**211**	P	**Pn**	**04 07 52.0**	**-3.2**
KAHZ				S	**Sn**	**04 09 16.0**	**0.0**
ETVZ	**East Tongariro**	**7.27**	**220**	P	**Pn**	**04 07 56.2**	**+0.3**
ETVZ				S	**Sn**	**04 09 15.5**	**-1.7**
KRHZ	**Kereru**	**7.33**	**214**	P	**Pn**	**04 07 55.5**	**-1.0**
KRHZ				S	**Sn**	**04 09 17.4**	**-1.1**
MOVZ	**Moawhango**	**7.45**	**218**	P	**Pn**	**04 07 57.9**	**-0.4**
MOVZ				S	**Sn**	**04 09 18.0**	**-3.5**
PNHZ	**Pukenui**	**7.62**	**214**	P	**Pn**	**04 07 59.4**	**-1.2**
PNHZ				S	**Sn**	**04 09 23.4**	**-2.4**
MRZ	**Mangatainoka R**	**8.51**	**213**	Pn	**Pn**	**04 08 12.9**	**+0.2**
TCW	**Tory Channel**	**9.55**	**216**	Pn	**Pn**	**04 08 26.9**	**-0.1**
THZ	**Tophouse**	**10.65**	**218**	Pn	**Pn**	**04 08 41.6**	**-0.5**
PPT2	**Papeete2** 51nm,20.5s	**30.32**	**65**	*e*LR	LR	04 20 26.8	
PPT2	225nm,41.5s			*e*LR	LR	04 20 38.1	
PPT	**Papeete** comp=Z,55nm,19.3s,baz=92,slow=32	**30.34**	**65**	LR	LR	04 22 49.1	
STKA	**Stephens Creek**	**33.61**	**262**	P	**P**	**04 12 50.1**	**+1.5**
COEN	**Coen**	**40.02**	**290**	P	**P**	**04 13 42.6**	**-0.6**
COEN	comp=Z,4.3nm,0.8s			IAmb	IAmb	04 13 51.0	
AS31	**Alice Springs**	**42.77**	**271**	P	**P**	**04 14 03.9**	**-1.9**
AS31	comp=Z,1.8nm,0.8s			IAmb	IAmb	04 14 18.2	
ASAR	**Alice Springs** comp=Z,4.7nm,0.7s,baz=110,slow=7.5,SNR=42	**42.77**	**271**	P	**P**	**04 14 05.5**	**-0.2**
ASAR	comp=Z,3.5nm,0.7s,baz=110,slow=7.4,SNR=12			pP	**sP**	**04 14 17.2**	**-2.4**
ASAR	comp=Z,1.1nm,0.8s,baz=125,slow=4.3,SNR=5.4 comp=Z,4.7nm,0.7s			PcP	**PcP**	**04 15 56.7**	**-0.1**
ASAR	**Alice Springs**	**42.77**	**271**	P	**P**	**04 14 03.4**	**-2.4**
WR8	**Warramunga Arr**	**43.91**	**276**	P	**P**	**04 14 14.8**	**-0.3**
WR8	comp=Z,7.4nm,1.0s			IAmb	IAmb	04 14 27.2	
WRA	**Warramunga Arr** comp=Z,4.4nm,0.7s,baz=118,slow=7.4,SNR=33	**44.05**	**276**	P	**P**	**04 14 15.7**	**-0.5**
WRA	comp=Z,4.0nm,0.6s,baz=117,slow=7.5,SNR=12			pP	**sP**	**04 14 27.0**	**-3.1**
WRA	comp=Z,0.5nm,0.7s,baz=132,slow=3.7,SNR=2.5 comp=Z,4.4nm,0.7s			PcP	**PcP**	**04 16 01.8**	**+0.7**
WRA	**Warramunga Arr**	**44.05**	**276**	P	**P**	**04 14 15.1**	**-1.1**
WB0	**Warramunga Arr**	**44.09**	**276**	P	**P**	**04 14 15.6**	**-0.8**
WB0				IAmb	IAmb	04 14 28.1	
	comp=Z,5.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.16**	**273**	P	**P**	**04 15 18.9**	**+0.2**
QSPA	**South Pole Qui** comp=Z,0.6nm,0.3s,baz=108,slow=2.5,SNR=2.0	**56.45**	**180**	P	P	04 15 55.7	+6.2
QSPA	comp=Z,2.5nm,0.9s,baz=79,slow=1.3,SNR=3.6 comp=Z,0.6nm,0.3s			pP	pwP	04 16 09.3	+0.5
QSPA	**South Pole Qui**	**56.45**	**180**	P	P	04 15 56.3	+6.8
QSPA	comp=Z,5.8nm,1.2s			IAmb	IAmb	04 16 10.8	
PLCA	**Paso Flores**	**80.48**	**133**	P	P	04 18 27.8	+7.9
PLCA	comp=Z,4.4nm,1.2s			IAmb	IAmb	04 18 46.5	
ERM	**Erimo**	**83.21**	**332**	P	P	04 18 37.0	+3.2
FINES	**FINESS Array B** comp=Z,2.0nm,0.5s,baz=48,slow=3.4,SNR=12	**148.09**	**338**	PKPbc	**PKiKP**	**04 25 53.1**	**-1.1**
MMAI	**Mount Meron Ar** comp=Z,1.1nm,0.4s,baz=101,slow=1.5,SNR=4.1	**151.89**	**278**	PKPbc	**PKiKP**	**04 26 04.2**	**+1.1**
AKASG	**Malin Array Be** comp=Z,0.2nm,0.3s,baz=80,slow=1.0,SNR=1.7	**153.65**	**319**	PKPbc	**PKiKP**	**04 26 08.7**	**+2.7**
BRTR	**Keskin Array B** comp=Z,0.6nm,0.6s,baz=92,slow=2.8,SNR=5.7	**153.76**	**293**	PKPbc	**PKiKP**	**04 26 08.2**	**+1.3**
BRTR	**Keskin Array B**	**153.76**	**293**		**PKiKP**	**04 26 08.3**	**+1.5**

WEL 12 04:18:49.8±0.8, 45°S±4°×167°E±°, h52km±7km, M4.1/7, ML4.2/7, MLv4.1/7, Error ellipse: s-maj=6.9km s-min=3.8km az=130.6, confirmed, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAFS	**Te Anau Fire S**	**0.34**	**141**	P	Pn	04 19 01.0	+1.5
TAFS				S	Sn	04 19 09.5	+3.1
DCZ	**Deep Cove**	**0.36**	**211**	P	Pn	04 18 59.8	+0.1
DCZ				S	Sn	04 19 06.9	+0.2
MLZ	**Mavora Lakes**	**0.54**	**114**	P	Pn	04 19 03.0	+1.2
MLZ				S	Sn	04 19 12.7	+2.5
MSZ	**Milford Sound**	**0.60**	**37**	P	Pn	04 19 04.0	+1.6
MSZ				S	Sn	04 19 14.3	+2.8
GLNY	**Glenorchy**	**0.76**	**68**	P	Pn	04 19 05.6	+1.2
GLNY				S	Sn	04 19 16.9	+1.9
MOSS	**Mossburn Schoo**	**0.78**	**132**	P	Pn	04 19 05.9	+1.3
MOSS				S	Sn	04 19 18.8	+3.4
WHZ	**Wether Hill Ro**	**0.83**	**153**	P	Pn	04 19 06.2	+0.8
WHZ				S	Sn	04 19 18.1	+1.4
QTPS	**Queenstown Pol**	**0.89**	**83**	P	Pn	04 19 07.4	+1.3
QTPS				S	Sn	04 19 20.4	+2.2
RRKS	**Rarakau**	**1.00**	**178**	P	Pn	04 19 08.3	+0.8
RRKS				S	Sn	04 19 21.8	+1.3
PYZ	**Puysegur Point**	**1.14**	**207**	P	Pn	04 19 09.7	+0.3
WKZ	**Wanaka**	**1.18**	**75**	P	Pn	04 19 11.8	+1.7
WKZ				S	Sn	04 19 27.8	+2.7
EAZ	**Earnscleugh**	**1.34**	**94**	P	Pn	04 19 13.8	+1.7
EAZ				S	Sn	04 19 30.5	+1.6
JCZ	**Jackson Bay**	**1.46**	**43**	P	Pn	04 19 14.9	+1.1
JCZ				S	Sn	04 19 37.2	+5.4
APZ	**The Paps**	**1.73**	**167**	P	Pn	04 19 17.5	0.0
APZ				S	Sn	04 19 37.8	-0.6
TUZ	**Tuapeka**	**1.75**	**118**	P	Pn	04 19 18.6	+0.9
SYZ	**Scrubby Hill**	**1.83**	**140**	P	Pn	04 19 19.6	+0.7
LBZ	**Lake Benmore**	**2.12**	**70**	P	Pn	04 19 23.3	+0.5
ODZ	**Otahua Downs**	**2.29**	**88**	P	Pn	04 19 25.8	+0.7
ODZ				S	Sn	04 19 51.9	-0.3
HHSZ	**Highcliff Hill**	**2.35**	**109**	P	Pn	04 19 27.2	+1.2
HHSZ				S	Sn	04 19 53.2	-0.5
FOZ	**Fox Glacier**	**2.36**	**48**	P	Pn	04 19 26.7	+0.6
TMZ	**Timaru**	**2.67**	**75**	P	Pn	04 19 30.3	-0.1
TMZ				S	Sn	04 20 01.4	-0.1
ARCZ	**Arundel**	**2.95**	**67**	P	Pn	04 19 33.6	-0.5
ARCZ				S	Sn	04 20 06.7	-1.6
RPZ	**Rata Peaks**	**2.98**	**62**	P	Pn	04 19 34.3	-0.2
RPZ				S	Sn	04 20 06.9	-2.1
WVZ	**Waitaha Valley**	**3.17**	**50**	P	Pn	04 19 37.7	+0.6
WACZ	**Wakanui South**	**3.38**	**71**	P	Pn	04 19 39.7	-0.4
WACZ				S	Sn	04 20 16.8	-2.2
MHCZ	**Mount Hutt**	**3.39**	**63**	P	Pn	04 19 39.4	-0.9
RACZ	**Rakaia**	**3.67**	**69**	P	Pn	04 19 43.6	-0.5
INZ	**Inchbonnie**	**3.79**	**52**	P	Pn	04 19 47.5	+1.8
OXZ	**Oxford**	**3.79**	**63**	P	Pn	04 19 44.1	-1.6
MQZ	**McQueen's Vall**	**4.02**	**71**	P	Pn	04 19 48.0	-0.8
LTZ	**Lake Taylor**	**4.23**	**58**	P	Pn	04 19 50.7	-1.1
AMCZ	**Amberley**	**4.25**	**64**	P	Pn	04 19 51.1	-1.0
OKCZ	**Okains Bay**	**4.29**	**73**	P	Pn	04 19 52.0	-0.5
GVZ	**Greta Valley S**	**4.60**	**64**	P	Pn	04 19 55.5	-1.3
THZ	**Tophouse**	**5.24**	**52**	P	Pn	04 20 05.0	-0.6
MRNZ	**Matariki Terra**	**5.41**	**48**	P	Pn	04 20 08.5	+0.6
QRZ	**Quartz Range**	**5.72**	**43**	P	Pn	04 20 12.5	+0.3
TKNZ	**Takaka Hill**	**5.78**	**47**	P	Pn	04 20 13.8	+0.8
NNZ	**Nelson**	**5.87**	**50**	P	Pn	04 20 17.3	+3.1
TCW	**Tory Channel**	**6.38**	**54**	P	Pn	04 20 25.6	+4.4
DUWZ	**D'Urville Isla**	**6.45**	**50**	P	Pn	04 20 25.0	+2.8

NOU 12 04:31:06.3, 21.81S×169.88E, h0km, MLv4.5/12, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.75**	**280**	P	Pn	04 31 37.0	-0.9
MARNC	**Mare, Loyalty**	**1.75**	**280**	S	Sn	04 32 00.9	-0.1
PINNC	**Pines Island,**	**2.39**	**250**	P	Pn	04 31 46.7	-0.1
PINNC	**Pines Island,**	**2.39**	**250**	S	Sn	04 32 17.8	+1.0
YATNC	**Mamie plateau,**	**2.79**	**264**	P	Pn	04 31 51.3	-0.9
YATNC	**Mamie plateau,**	**2.79**	**264**	S	Sn	04 32 26.0	-0.6
OUENC	**Ouen Island, N**	**2.88**	**257**	P	Pn	04 31 53.6	+0.1
OUENC	**Ouen Island, N**	**2.88**	**257**	S	Sn	04 32 28.9	0.0
ONTNC	**Ouen Toro**	**3.22**	**261**	P	Pn	04 31 58.2	+0.1
ONTNC	**Ouen Toro**	**3.22**	**261**	S	Sn	04 32 38.2	+1.0
KOUNC	**Koumac, New Ca**	**5.37**	**282**	P	Pn	04 32 28.4	+0.7
KOUNC	**Koumac, New Ca**	**5.37**	**282**	S	Sn	04 33 31.0	+0.7

NEIC ***12*** *04:41:48.4±2.8, 19.74N±0.01×156.08W±0.04, h10km±1km, Error ellipse: s-maj=6.2km s-min=2.8km az=96.0*

HVO 12 04:41:49.2±2.9, 19.79N±0.02×156.10W±0.04, h10km±4km, ML2.4/12, ML2.4/32(NEIC), Error ellipse: s-maj=5.2km s-min=2.0km az=101.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKH	**Kailua Kona**	**0.15**	**149**		Pg	04 41 53.1	+0.5
KKH					Sg	04 41 55.9	+1.0
HUH	**Hualalai**	**0.27**	**113**		Pg	04 41 54.2	-0.6
HUH					Sg	04 41 57.7	-0.8
HUH	**Hualalai** comp=N,810nm,0.2s	**0.27**	**113**	IAML		04 41 59.0	
HUH	comp=E,585nm,0.2s			IAML		04 42 04.8	
MHA	**Mahukona**	**0.44**	**25**		Pg	04 41 58.2	+0.4
HPAH	**Hawaii Prepara**	**0.45**	**58**		Pg	04 41 57.5	-0.6
HPAH					Sg	04 42 03.3	-0.7
HPAH	**Hawaii Prepara** comp=E,548nm,0.3s	**0.45**	**58**	IAML		04 42 03.5	
HPAH	comp=N,291nm,0.4s			IAML		04 42 12.4	
ALEP	**Alea Permanent**	**0.50**	**120**		Pg	04 41 58.8	-0.2
ALEP					Sg	04 42 05.8	+0.2
POHA	**Pohakuloa**	**0.54**	**93**		Pg	04 41 58.8	-0.8
POHA					Sg	04 42 05.8	-1.0
POHA	**Pohakuloa** comp=N,354nm,0.5s	**0.54**	**93**	IAML		04 42 13.9	
POHA	comp=N,333nm,0.5s			IAML		04 42 15.2	
MWH	**Mokuaweoweo**	**0.56**	**122**		Pg	04 41 59.3	-1.0
MWH					Sg	04 42 07.4	-0.4
HMH	**Humu'ula Sheep**	**0.61**	**108**		Pg	04 42 00.1	-1.0
HMH					Sg	04 42 08.4	-0.8
HMH	**Humu'ula Sheep** comp=N,196nm,0.4s	**0.61**	**108**	IAML		04 42 09.8	
HMH	comp=E,348nm,0.4s			IAML		04 42 10.1	
KHU	**Kahuku**	**0.71**	**140**		Pg	04 42 01.2	-1.8
KHU					Sg	04 42 10.2	-2.1
AIN	**Ainahou**	**0.74**	**124**		Pg	04 42 01.4	-2.0
AIN					Sg	04 42 10.8	-2.3
AIN	**Ainahou** comp=E,126nm,0.3s	**0.74**	**124**	IAML		04 42 12.0	
AIN	comp=N,168nm,0.1s			IAML		04 42 12.1	
MLH	**Mauna Loa**	**0.74**	**113**		Pg	04 42 01.5	-1.9
MLH	**Mauna Loa** comp=N,241nm,0.1s	**0.74**	**113**	IAML		04 42 12.8	
RSD	**Rainshed**	**0.84**	**113**		Pg	04 42 02.9	-2.6
RSD					Sg	04 42 13.8	-2.6
UWE	**Uwekahuna**	**0.85**	**116**		Pg	04 42 02.8	-2.7
UWE					Sg	04 42 14.0	-2.6
WRMHI	**West Rim**	**0.85**	**117**		Pg	04 42 02.8	-2.7
WRMHI					Sg	04 42 14.8	-1.8
OBL	**Observatory Le**	**0.86**	**116**		Pg	04 42 02.8	-2.9
UWB	**Uwekahuna Bluf**	**0.86**	**115**		Pg	04 42 02.8	-2.9
SDHHI	**Sand Hill**	**0.86**	**117**		Pg	04 42 03.1	-2.7
HTC	**Hot Caves**	**0.86**	**130**		Pg	04 42 03.2	-2.6
SBLHI	**Steaming Bluff**	**0.86**	**115**		Pg	04 42 02.9	-3.0
SBLHI					Sg	04 42 14.4	-2.8
HPO	**Honuapo**	**0.87**	**143**		Sg	04 42 14.6	-2.6
HATHI	**Halema'uma'u T**	**0.87**	**115**		Pg	04 42 03.0	-3.1
HATHI					Sg	04 42 15.3	-2.1
HATHI	**Halema'uma'u T** comp=E,117nm,1.2s	**0.87**	**115**	IAML		04 42 22.2	
HLP	**Hilina Pali**	**0.90**	**123**		Pg	04 42 03.6	-2.8
HLP	**Hilina Pali** comp=E,196nm,1.1s	**0.90**	**123**	IAML		04 42 18.2	
HLP	comp=N,177nm,1.1s			IAML		04 42 31.1	
KNHH	**Kane Nui o Ham**	**0.97**	**115**		Pg	04 42 04.3	-3.6
STCH	**Steam Cracks**	**1.00**	**113**		Pg	04 42 04.7	-3.9
STCH	**Steam Cracks** comp=N,67nm,0.8s	**1.00**	**113**	IAML		04 42 23.2	
JOKA	**Jonika Flow**	**1.09**	**109**		Pb	04 42 05.7	-4.5
JOKA					Sg	04 42 19.7	-4.8
JOKA	**Jonika Flow** comp=N,88nm,0.7s	**1.09**	**109**	IAML		04 42 33.7	

SDD ***12*** *04:54:27.5±0.4, 19.07N×67.20W, h23km±594km, MD3.2, ML1.9*
RSPR ***12*** *04:54:27.6, 19.19N×67.26W, h29km±15km*

ISC 12 04:54:26.1±2.4, 19.1N±0.1×67.20W±0.08, h29km, n11, σ0s61/13, 3C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSP	**Las Mesas**	**0.94**	**173**	*e*P	**Pb**	**04 54 44.2**	**+0.4**
LSP	**Las Mesas**	**0.94**	**173**	*e*S	**Sb**	**04 54 57.1**	**+1.1**
CRPR	**Cabo Rojo, PR**	**1.10**	**175**	*e*Pg	**Pb**	**04 54 46.4**	**-0.2**
CRPR				*e*Sg	**Sb**	**04 55 00.1**	**-0.5**
CRPR	comp=N,28nm,2.8s			IAML		04 55 28.8	
CRPR	**Cabo Rojo, PR**	**1.10**	**175**	*e*P	**Pb**	**04 54 46.6**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.10**	**175**	*e*S	**Sb**	**04 55 01.1**	**+0.5**
ECPR	**Experimental S**	**1.12**	**135**	*e*P	**Pb**	**04 54 46.5**	**-0.4**
ECPR	**Experimental S**	**1.12**	**135**	*e*S	**Sb**	**04 55 01.9**	**+0.8**
MLPR	**Magueyes Islan**	**1.15**	**172**	*e*Pg	**Pb**	**04 54 46.7**	**-0.6**
MLPR				*e*Sg	**Sb**	**04 55 01.2**	**-0.7**
MLPR	comp=N,13nm,3.6s			IAML		04 55 36.3	
MLPR	**Magueyes Islan**	**1.15**	**172**	*e*P	**Pb**	**04 54 46.8**	**-0.5**
MLPR	**Magueyes Islan**	**1.15**	**172**	*e*S	**Sb**	**04 55 02.0**	**+0.1**
HATOM	**Hato Mayor del**	**2.09**	**261**	*e*Pg	**Pb**	**04 55 03.3**	**-0.1**
HATOM	comp=N,17nm,3.6s			IAML		04 55 43.1	

IDC ***12*** *05:20:07.8±3.5, 24.33S×179.70E, h486km±33km, mb3.5/5, mbtmp4.4/5, Error ellipse: s-maj=118.0km s-min=21.7km az=158.0*
NEIC ***12*** *05:20:10.7±1.4, 24.7S±0.1×179.8E±0.1, h516km±9km, mb4.3/28, Error ellipse: s-maj=19.3km s-min=13.4km az=139.0*

ISC 12 05:20:11.3±0.6, 24.6S±0.1×179.71E±0.09, h531km, n41, σ1s45/39, mb4.3/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**11.06**	**62**	P	**P**	**05 22 38.5**	**-1.6**
MARNC	**Mare, Loyalty**	**11.18**	**284**	P	**P**	**05 22 39.9**	**-1.4**
PINNC	**Pines Island,**	**11.41**	**277**	P	**P**	**05 22 42.6**	**-1.1**
DZM	**Mont Dzumac** 9.6nm,0.9s,baz=81,slow=17,SNR=5.3	**12.44**	**279**	P	**P**	**05 22 55.0**	**+0.5**
BKZ	**Black Stump Fm**	**14.81**	**190**	P	**P**	**05 23 16.3**	**-2.7**
SANVU	**Saraoutou**	**14.83**	**305**		**P**	**05 23 16.4**	**-3.1**
QRZ	**Quartz Range**	**17.30**	**199**	P	**P**	**05 23 41.3**	**-2.2**
EIDS	**Eidsvold**	**25.95**	**262**	P	**P**	**05 25 02.1**	**+0.6**
EIDS	comp=Z,16nm,1.4s			IAmb	IAmb	05 25 06.9	
STKA	**Stephens Creek** comp=Z,2.6nm,0.4s,baz=92,slow=11,SNR=7.3 comp=Z,2.6nm,0.4s	**34.23**	**249**	P	**P**	**05 26 12.6**	**-0.3**
STKA	**Stephens Creek**	**34.23**	**249**	P	**P**	**05 26 12.7**	**-0.3**
PMG	**Port Moresby**	**34.46**	**290**	P	**P**	**05 26 14.1**	**-1.0**
COEN	**Coen**	**35.96**	**280**	P	**P**	**05 26 28.9**	**+1.4**
COEN	comp=Z,8.6nm,0.9s			IAmb	IAmb	05 26 29.6	
BBOO	**Buck

DJA ***12*** *05:38:42.0±0.2,7°S±3°×12°9E±°, h134km±7km, M4.5/18, mb4.3/18, mB5.1/8, MLv4.6/11, Mw(mB)4.5/8*

ISC 12 05:38:41.6±0.6, 7°39S±0°06×129°39E±0°06, h150km, n49, σ1§72/51, mb3.9/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.98**	**108**	Pn		**Pn**	**05 39 16.4**	**-0.1**
SAUI						**Sn**	**05 39 43.1**	**-0.2**
SAUI	**Saumlaki**	**1.98**	**108**	P		**Pn**	**05 39 18.7**	**+2.2**
SAUI	**Saumlaki**	**1.98**	**108**	P		**Pn**	**05 39 15.0**	**-1.5**
DRS	**Darwin Rock St**	**5.23**	**164**	P		**Pn**	**05 40 01.7**	**+3.7**
FAKI	**Fak Fak**	**5.27**	**33**	Pn		**Pn**	**05 39 56.7**	**-1.9**
FAKI	**Fak Fak**	**5.27**	**33**	P		**Pn**	**05 39 56.5**	**-2.2**
FAKI	**Fak Fak**	**5.27**	**33**	P		**Pn**	**05 39 56.4**	**-2.2**
	0.4nm1µm21nm,0.5s							
SOEI	**Soe**	**5.59**	**245**			**Pn**	**05 40 05.1**	**+2.2**
SOEI	**Soe**	**5.59**	**245**	P		**Pn**	**05 40 05.2**	**+2.3**
SOEI	**Soe**	**5.59**	**245**	P		**Pn**	**05 40 04.4**	**+1.5**
	0.8nm2µm88nm,0.9s							
KMPI	**Kaimana, Papua**	**5.67**	**49**	P		**Pn**	**05 40 02.1**	**-1.8**
MTN	**Manton Dam**	**5.69**	**163**			**Pn**	**05 40 07.6**	**+3.4**
SANI	**Sanana**	**6.29**	**327**	P		**Pn**	**05 40 13.3**	**+1.1**
	11nm,0.7s							
BATI	**Baumata**	**6.32**	**243**	P		**Pn**	**05 40 14.8**	**+2.2**
	107nm,0.4s,baz=105,slow=5.4,SNR=10							
BATI				S		**Sn**	**05 41 19.6**	**-4.2**
	111nm,0.5s,baz=11,slow=10,SNR=12							
BATI	**Baumata**	**6.32**	**243**	P		**Pn**	**05 40 14.6**	**+2.0**
SWI	**Sorong**	**6.74**	**16**	P		**Pn**	**05 40 16.5**	**-1.7**
	0.2nm41nm,0.9s							
EDFI	**Ende, Flores**	**7.75**	**259**	P		**Pn**	**05 40 32.9**	**+1.2**
	0.1nm2µm13nm,0.8s							
KNRA	**Kununurra**	**8.26**	**184**			**Pn**	**05 40 40.4**	**+1.9**
LUWI	**Luwuk**	**9.12**	**313**	Pn		**Pn**	**05 40 51.3**	**+1.2**
WBSI	**Waikabubak, Su**	**10.14**	**257**	P		**Pn**	**05 41 04.6**	**+1.0**
	28nm,0.6s							
MRSI	**Marisa**	**10.78**	**316**	P		**Pn**	**05 41 12.3**	**+0.3**
	1µm13nm,1.4s							
FITZ	**Fitzroy Crossi**	**11.26**	**199**	P		**Pn**	**05 41 18.2**	**0.0**
	7.1nm,0.4s,baz=30,slow=11,SNR=83							
FITZ				S		Sn	05 43 17.2	-5.4
	10nm,0.3s,baz=105,slow=21,SNR=10							
FITZ	**Fitzroy Crossi**	**11.26**	**199**			**Pn**	**05 41 18.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**11.26**	**199**	P		**Pn**	**05 41 17.8**	**-0.4**
PLAI	**Plampang**	**11.59**	**262**	P		**Pn**	**05 41 21.9**	**-0.7**
PLAI	**Plampang**	**11.59**	**262**	P		**Pn**	**05 41 21.9**	**-0.7**
	15nm,0.9s							
WB0	**Warramunga Arr**	**13.23**	**159**			**Pn**	**05 41 44.5**	**+0.8**
WRAB	**Tennant Creek**	**13.37**	**159**	P		**Pn**	**05 41 46.0**	**+0.5**
WRAB	**Tennant Creek**	**13.37**	**159**	P		**Pn**	**05 41 46.2**	**+0.7**
WRA	**Warramunga Arr**	**13.37**	**159**	P		**Pn**	**05 41 46.4**	**+0.8**
	9.5nm,0.5s,baz=338,slow=13,SNR=69							
WRA				S		**Sn**	**05 44 08.9**	**-4.8**
	17nm,0.5s,baz=334,slow=23,SNR=5.1							
WRA	**Warramunga Arr**	**13.37**	**159**			**Pn**	**05 41 45.3**	**-0.3**
WR8	**Warramunga Arr**	**13.44**	**159**			**Pn**	**05 41 47.4**	**+1.0**
COEN	**Coen**	**15.03**	**117**	P		**P**	**05 42 07.4**	**-0.8**
COEN	**Coen**	**15.03**	**117**	P		**P**	**05 42 07.6**	**-0.6**
JAGI	**Jajag, Banyuwa**	**15.13**	**265**	P		**Pn**	**05 42 07.5**	**-0.3**
	14nm,0.9s							
AS31	**Alice Springs**	**16.76**	**166**			**P**	**05 42 28.3**	**+1.0**
AS31				IAmb		IAmb	05 42 56.5	
	comp=Z,2.6nm,0.5s							
ASAR	**Alice Springs**	**16.76**	**166**	P		**Pn**	**05 42 28.8**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=335,slow=9.8,SNR=30							
ASAR				S		S	05 45 25.0	-9.0
	comp=Z,1.4nm,0.7s,baz=331,slow=17,SNR=5.9							
ASAR	**Alice Springs**	**16.76**	**166**			**P**	**05 42 28.2**	**+0.9**
PSA00	**Pilbara Seismi**	**16.85**	**212**	P		**P**	**05 42 30.1**	**+1.8**
FORT	**Forrest**	**23.31**	**183**	P		**P**	**05 43 37.6**	**+1.5**
FORT				IAmb		IAmb	05 43 55.9	
	comp=Z,8.2nm,0.9s							
MORW	**Morawa**	**24.97**	**209**	P		**P**	**05 43 52.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**39.52**	**311**	P		**P**	**05 45 59.2**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=134,slow=7.7,SNR=7.1							
	comp=Z,1.0nm,0.3s							
EVN	**Everest**	**54.09**	**312**	P		**P**	**05 47 52.2**	**+0.4**
EVN				IAmb		IAmb	05 47 53.9	
	comp=Z,3.9nm,0.5s							
MKAR	**Makanchi Array**	**68.22**	**327**	P		**P**	**05 49 26.6**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=122,slow=8.1,SNR=9.1							
	comp=Z,0.6nm,0.4s							
ZALV	**Zalesovo Beam**	**71.66**	**334**	P		**P**	**05 49 47.1**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=116,slow=6.8,SNR=4.1							
	comp=Z,1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**72.52**	**329**	P		**P**	**05 49 52.4**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=131,slow=5.0,SNR=11							
	comp=Z,0.8nm,0.4s							
KURK	**Kurchatov**	**72.53**	**329**	P		**P**	**05 49 52.4**	**+0.4**
KURK	**Kurchatov**	**72.53**	**329**	IAmb		IAmb	05 49 54.5	
	comp=Z,1.9nm,0.5s							
BVAR	**Borovoye Array**	**78.07**	**328**	P		**P**	**05 50 25.1**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=4.0							
	comp=Z,0.4nm,0.4s							

DSN ***12*** *06:00:54.5±2.1,27°.71N×54°.94E, h10km, ML3.9/10, Error ellipse: s-maj=25.7km s-min=9.0km az=21.0*

IDC ***12*** *06:00:57.4±1.0,27°.28N×54°.99E, h0km, mb3.9/12, mbtmp3.9/13, ML3.8/1, MS3.6/5, Error ellipse: s-maj=23.5km s-min=21.6km az=47.0*

THR ***12*** *06:00:59.5±0.0,27°.17N×54°.95E, h14km±545km, ML4.0*

OMAN ***12*** *06:01:00.8±0.1,27°.24N×54°.97E, h10km, mb4.5/10, ml3.8/21, Error ellipse: s-maj=4.3km s-min=1.8km az=241.0*

TEH ***12*** *06:01:00.4,27°.27N×55°.03E, h14km±24km*

NEIC ***12*** *06:01:00.6±2.0,27°.34N±0°.07×54°.87E±0°.09, h10km±1km, mb4.2/21, Error ellipse: s-maj=13.3km s-min=12.0km az=74.0*

ISC 12 06:00:59.8±1.6, 27°27N±0°.05×54°92E±0°03, h10km±11km, n130, σ1§73/141, mb4.0/16, MS3.6/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LAR1	**LAR**	**0.63**	**309**	Pg		**Pn**	**06 01 13.8**	**-1.1**
GENO	**Geno**	**1.12**	**83**	Pg		**Pb**	**06 01 20.4**	**-1.0**
IBND	**Bandar-abas**	**1.45**	**83**	Pg		**Pn**	**06 01 25.6**	**-0.5**
LMD1	**Lamerd**	**1.57**	**273**	Pg		**Pg**	**06 01 30.9**	**+1.1**
SHME	**Shamm**	**1.63**	**138**	P		**Pn**	**06 01 28.8**	**+0.2**
	SNR=12							
SHME				S		**Sn**	**06 01 52.7**	**+3.0**
JHRM	**Jahrom**	**1.71**	**316**	Pg		**Pg**	**06 01 32.8**	**+0.1**
BANOM	**Banah**	**1.82**	**137**	P		**Pn**	**06 01 31.0**	**-0.2**
BANOM				S		**Sn**	**06 01 58.3**	**+4.0**
BANOM	**Banah**	**1.82**	**137**	*e*P		**Pn**	**06 01 30.2**	**-1.0**
	SNR=57							
BANOM				S		**Sn**	**06 01 58.4**	**+4.0**
UMQ	**Umm Al-Quwin**	**1.86**	**159**	P		**Pn**	**06 01 30.8**	**-0.9**
UMQ				S		**Sn**	**06 01 52.7**	**-2.5**
MASF	**Masafi**	**2.19**	**149**	P		**Pn**	**06 01 37.1**	**+0.7**
	SNR=13							
MASF				S		**Sn**	**06 02 05.1**	**+1.6**
MDH	**Madha**	**2.32**	**148**	P		**Pn**	**06 01 39.9**	**+1.9**
MDH				S		**Sn**	**06 02 09.5**	**+2.9**
MDH	**Madha**	**2.32**	**148**	P		**Pn**	**06 01 38.4**	**+0.4**
NAZ	**Nazwa, Dubai**	**2.37**	**164**	P		**Pn**	**06 01 40.6**	**+1.9**
	SNR=22							
NAZ	**Nazwa, Dubai**	**2.37**	**164**	*e*P		**Pn**	**06 01 39.0**	**+0.3**
	SNR=7.3							
KHNJ	**Kahnooj**	**2.56**	**74**	Pn		**Pn**	**06 01 41.8**	**+0.4**
FAQ	**Al Faqa, Dubai**	**2.58**	**166**	P		**Pn**	**06 01 43.5**	**+1.8**
FAQ	**Al Faqa, Dubai**	**2.58**	**166**	P		**Pn**	**06 01 43.3**	**+1.6**
UOSS	**Minazif**	**2.58**	**153**			**Pn**	**06 01 43.6**	**+1.9**
UOSS	**Minazif**	**2.58**	**153**	P		**Pn**	**06 01 42.5**	**+0.7**
ASUD	**Al Ashush, Dub**	**2.66**	**172**	P		**Pn**	**06 01 46.2**	**+3.5**
ASUD	**Al Ashush, Dub**	**2.66**	**172**	*i* P			**06 01 45.3**	**+2.6**
	SNR=6.5							
HATD	**Hatta, Dubai**	**2.67**	**156**	P		**Pn**	**06 01 44.6**	**+1.7**
	SNR=11							
HATD	**Hatta, Dubai**	**2.67**	**156**	*i* P		**Pn**	**06 01 42.7**	**-0.1**
	SNR=11							
ASHO	**Ashiyiah**	**2.77**	**158**	P		**Pn**	**06 01 44.6**	**+0.3**
	SNR=29							
ASHO				S		**Sn**	**06 02 20.9**	**+3.1**
ASHO	**Ashiyiah**	**2.77**	**158**	*i* P		**Pn**	**06 01 44.0**	**-0.3**
	SNR=22							
NGRK	**Negar Kerman**	**2.85**	**34**	Pn		**Pn**	**06 01 46.9**	**+1.2**
JRN	**Qarnain Island**	**2.97**	**219**	P		**Pn**	**06 01 49.4**	**+2.4**
JRN				S		**Sn**	**06 02 27.1**	**+4.3**
KRBR	**Kerman**	**3.15**	**30**	*e*Pn		**Pn**	**06 01 52.2**	**+2.5**
KRBR				IAML			06 02 58.8	
	comp=Z,250nm,1.0s							
ALNE	**Al Ain**	**3.29**	**167**	P		**Pn**	**06 01 53.1**	**+1.7**
	SNR=8.4							
ALNE	**Al Ain**	**3.29**	**167**	*i* P		**Pn**	**06 01 51.9**	**+0.6**
	SNR=8.1							
KHGB	**Koh Gabri**	**3.38**	**23**	Pn		**Pn**	**06 01 54.5**	**+1.6**
DSBU	**Dashti - Bushe**	**3.42**	**289**	Pn		**Pb**	**06 01 56.9**	**-3.6**
SOHO	**SOHO**	**3.44**	**155**	P		**Pn**	**06 01 54.0**	**+0.5**
CHMN	**Cheshme madani**	**3.46**	**41**	Pn		**Pn**	**06 01 55.7**	**+1.7**
MZWR	**Madinat Zayed**	**3.62**	**195**	P		**Pn**	**06 01 57.7**	**+1.8**
KBAM	**BAM**	**3.63**	**58**	Pn		**Pn**	**06 01 56.8**	**+0.7**
SHMA	**Al-Shehemyia**	**3.81**	**249**	P		**Pn**	**06 02 01.2**	**+2.6**
	SNR=13							
SHMA				S		**Sn**	**06 02 45.0**	**+1.5**
KRM1	**Kerman Provinc**	**3.82**	**32**	Pn		**Pn**	**06 02 00.3**	**+1.3**
ARQ	**Araqi**	**4.17**	**159**	P		**Pn**	**06 02 05.0**	**+1.4**
	SNR=8.8							
TRNA	**Turayna**	**4.18**	**234**	P		**Pn**	**06 02 05.2**	**+1.5**
	SNR=16							
TRNA				S		**Sn**	**06 02 56.0**	**+3.4**
HOQ	**Hoqain**	**4.26**	**149**	Pn		**Pn**	**06 02 05.9**	**+1.1**
HOQ	**Hoqain**	**4.26**	**149**	P		**Pn**	**06 02 04.0**	**-0.7**
SLWR	**Sila**	**4.32**	**223**	P		**Pn**	**06 02 06.6**	**+1.1**
SLWR				S		**Sn**	**06 02 57.8**	**+1.8**
IBAF	**Bafgh**	**4.34**	**7**	Pn		**Pn**	**06 02 07.3**	**+1.3**
SMRA	**Abu-Samra**	**4.46**	**237**	P		**Pn**	**06 02 09.0**	**+1.5**
	SNR=6.6							
SMRA				S		**Sn**	**06 03 01.9**	**+2.4**
UMZA	**Um Al Zommool**	**4.54**	**177**	P		**Pn**	**06 02 10.2**	**+1.6**
UMZA				S		**Sn**	**06 03 01.9**	**+0.4**
BSY	**Bisya**	**4.96**	**155**	P		**Pn**	**06 02 17.5**	**+3.2**
ICHK	**Chekchek**	**4.98**	**355**	Pn		**Pn**	**06 02 17.1**	**+2.3**
IRAM	**Ramesheh**	**5.04**	**335**	Pn		**Pn**	**06 02 17.9**	**+2.3**
SMDO	**Samad**	**5.06**	**145**	P		**Pn**	**06 02 17.5**	**+1.6**
SMDO				S		**Sn**	**06 03 15.5**	**+1.0**
YZKH	**Yazd**	**5.11**	**357**	*e*Pn		**Pn**	**06 02 18.8**	**+2.3**
YZKH				IAML			06 04 30.0	
	comp=Z,40nm,1.0s							
WSAR	**Wadi Sarin**	**5.23**	**139**	P		**Pn**	**06 02 18.4**	**+0.3**
	SNR=8.2							
WSAR				S		**Sn**	**06 03 18.3**	**-0.2**
JMDO	**Jabal Madar**	**5.67**	**149**	P		**Pn**	**06 02 23.5**	**-0.6**
NASN	**Na'in**	**5.81**	**342**	*i* P		**Pn**	**06 02 28.7**	**+2.4**
NASN				IAML			06 04 35.3	
	comp=Z,29nm,1.0s							
WBK	**Wadi Bani Khal**	**5.92**	**141**	P		**Pn**	**06 02 27.4**	**-0.1**
WBK				S		**Sn**	**06 03 36.4**	**+1.0**
TPRV	**Parvadeh(Tabas**	**5.94**	**14**	Pn		**Pn**	**06 02 29.4**	**+1.5**
BSRN	**Basiran**	**5.94**	**37**	*e*Pn		**Pn**	**06 02 30.4**	**+2.4**
BSRN				IAML			06 04 33.5	
	comp=Z,29nm,1.0s							
ANAR	**Anarak**	**5.99**	**350**	Pn		**Pn**	**06 02 30.6**	**+2.0**
JHBN	**Jahan bin**	**6.18**	**324**	Pn		**Pn**	**06 02 33.2**	**+1.8**
IKOO	**Kooshah**	**6.24**	**34**	Pn		**Pn**	**06 02 33.5**	**+1.3**
IPIR	**Pirpir**	**6.43**	**328**	Pn		**Pn**	**06 02 37.2**	**+2.3**
JLN	**Jalan Bani Buh**	**6.53**	**140**	P		**Pn**	**06 02 35.7**	**-0.3**
JLN				S		**Sn**	**06 03 48.6**	**-1.9**
TABS	**Tabas**	**6.63**	**16**	*i* P		**Pn**	**06 02 40.8**	**+3.3**
TABS				IAML			06 04 56.3	
	comp=Z,32nm,1.0s							
SRVN	**Saravan**	**6.65**	**87**	Pn		**Pn**	**06 02 38.2**	**+0.5**
SRVN	**Saravan**	**6.65**	**87**	*e*Pn		**Pn**	**06 02 38.9**	**+1.2**
KBD	**Kabd**	**6.66**	**288**	P		**Pn**	**06 02 39.8**	**+2.2**
KBD				S		**Sn**	**06 03 54.0**	**+0.5**
IKLH	**Kolahrood**	**6.69**	**335**	Pn		**Pn**	**06 02 41.2**	**+2.9**
MHTO	**MHTO**	**6.84**	**155**	P		**Pn**	**06 02 40.0**	**-0.2**
	SNR=14							
MHTO				S		**Sn**	**06 03 56.7**	**-1.5**
ISFB	**Sefidab**	**7.43**	**343**	Pn		**Pn**	**06 02 50.2**	**+1.9**
DQM	**DQM**	**7.69**	**161**	P		**Pn**	**06 02 50.1**	**-1.8**
KHMZ	**Khomeyn**	**7.74**	**328**	*e*Pn		**Pn**	**06 02 56.6**	**+3.9**
KHMZ				IAML			06 04 36.7	
	comp=Z,30nm,1.0s							
GHVR	**GHOM**	**7.83**	**337**	*e*Pn		Pn	06 02 58.5	+4.6
GHVR				IAML			06 04 44.7	
	comp=Z,44nm,1.0s							
SHRT	**Shahrakht**	**7.86**	**35**	Pn		**Pn**	**06 02 55.9**	**+1.6**
SHRT	**Shahrakht**	**7.86**	**35**	*e*Pn		**Pn**	**06 02 55.9**	**+1.6**
SHRT				IAML			06 05 21.3	
	comp=Z,8.3nm,1.0s							
IVRN	**Varamin**	**8.17**	**341**	Pn		**Pn**	**06 03 01.1**	**+2.6**
ASAO	**Ashtian**	**8.38**	**331**	*i* P		**Pn**	**06 03 04.0**	**+2.4**
DOK	**Doka**	**8.64**	**185**	P		**Pn**	**06 03 04.2**	**-0.7**
	SNR=12							
DAMV	**Damavand**	**8.71**	**344**	*e*Pn		**Pn**	**06 03 10.1**	**+4.0**
SHRO	**Shahrood**	**8.74**	**6**	*i* P		**Pn**	**06 03 09.5**	**+3.1**
SHAO	**Shalim**	**9.23**	**176**	P		**Pn**	**06 03 12.8**	**-0.2**
RAYN	**Ar Rayn**	**9.30**	**248**			**Pn**	**06 03 13.8**	**-0.2**
WHFO	**Wadi Hawf**	**9.37**	**187**	P		**Pn**	**06 03 14.4**	**-0.5**
	SNR=36							
HRA	**Herat**	**9.48**	**40**	Pn		**Pn**	**06 03 16.6**	**-0.1**
DMTO	**DMTO**	**9.51**	**180**	P		**Pn**	**06 03 17.7**	**+0.9**
RBK	**Rabkut**	**9.74**	**184**	P		**Pn**	**06 03 20.3**	**+0.2**
ABTO	**Aybut**	**9.98**	**189**	P		**Pn**	**06 03 22.7**	**-0.7**
	SNR=15							
GNI	**Garni**	**15.37**	**329**	Pn		**P**	**06 04 42.3**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=151,slow=0.8,SNR=7.7							
GNI				LR		LR	06 11 07.9	
	comp=Z,203nm,19.7s,baz=339,slow=40							
GNI	**Garni**	**15.37**	**329**	Pn		**Pn**	**06 04 35.9**	**-1.1**
GNI				IAmb		IAmb	06 04 48.8	
	comp=Z,25nm,0.8s							
MARD	**Mardin**	**15.58**	**314**	Pn		**Pn**	**06 04 39.0**	**-0.6**
MARD				IAmb		IAmb	06 04 49.4	
	comp=Z,18nm,0.6s							
ASF	**Jabal al Asfar**	**16.40**	**292**	Pn		**Pn**	**06 04 51.3**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=192,slow=2.7,SNR=3.4							
	comp=Z,3.1nm,0.7s							
GAR	**Garm**	**17.38**	**44**	Pn		**Pn**	**06 05 02.9**	**+0.3**
GAR				IAmb		IAmb	06 05 06.2	
	comp=Z,14nm,1.2s							
KOPT	**Kop Dagi**	**17.46**	**320**			**Pn**	**06 05 03.7**	**0.0**
ARPR	**Arapgir-MALATY**	**18.18**	**315**	P		**P**	**06 05 12.8**	**0.0**
ARPR				IAmb		IAmb	06 05 22.1	
	comp=Z,13nm,1.0s							
KBZ	**Khabaz**	**19.08**	**332**	P		**Pn**	**06 05 24.7**	**+1.5**
	comp=Z,4.7nm,0.8s,baz=134,slow=11,SNR=10.0							
KIV	**Kislovodsk**	**19.36**	**332**			**Pn**	**06 05 26.1**	**-0.6**
BNN	**Bunyan**	**19.68**	**311**			**P**	**06 05 29.0**	**-0.2**
BNN				IAmb		IAmb	06 05 51.0	
	comp=Z,14nm,1.2s							
KK31	**Karatay Array**	**20.24**	**35**	P		**P**	**06 05 35.9**	**+0.8**
KKAR	**Karatay Array**	**20.24**	**35**			Pn	06 05 36.7	-0.4
ARSB	**Arslanbob**	**20.42**	**42**	P		Pn	06 05 39.5	+0.2
ARSB				IAmb		IAmb	06 05 54.0	
	comp=Z,15nm,1.4s							
BR131	**Keskin Array S**	**21.60**	**311**	P		**P**	**06 05 50.4**	**+0.4**
BR131				IAmb		IAmb	06 05 59.6	
	comp=Z,9.6nm,0.9s							
BR131	**Keskin Array S**	**21.60**	**311**	P		**P**	**06 05 51.2**	**+1.2**
	SNR=8.1							
BRTR	**Keskin Array B**	**21.60**	**311**	P		**P**	**06 05 51.0**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=135,slow=12,SNR=17							
	comp=Z,3.0nm,0.8s							
BRTR	**Keskin Array B**	**21.60**	**311**			**P**	**06 05 50.4**	**+0.4**
ILGA	**Ilgaz**	**22.22**	**314**	P		**P**	**06 05 56.0**	**-0.7**
ILGA				IAmb		IAmb	06 06 18.0	
	comp=Z,14nm,1.1s							
ANTO	**Ankara**	**22.24**	**310**	P		**P**	**06 05 56.8**	**0.0**
ANTO				IAmb		IAmb	06 06 04.6	
	comp=Z,13nm,0.6s							
AB31	**Akbulak array**	**22.29**	**9**			**P**	**06 05 56.7**	**-0.4**
AB31				IAmb		IAmb	06 06 00.3	
	comp=Z,8.6nm,1.1s							
ABKAR	**Akbulak array**	**22.29**	**9**			**P**	**06 05 57.4**	**+0.3**
FRU1	**Bishkek**	**22.30**	**41**	P		**P**	**06 05 58.9**	**+1.6**
AKTO	**Aktyubinsk**	**23.25**	**5**	LR		LR	06 16 55.3	
	comp=Z,110nm,21.4s,baz=26,slow=41							
BVAR	**Borovoye Array**	**28.19**	**20**	P		**P**	**06 06 52.3**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=205,slow=6.6,SNR=8.7							
	comp=Z,2.5nm,0.8s							
MKAR	**Makanchi Array**	**29.04**	**41**	P		**P**	**06 06 59.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=243,slow=9.5,SNR=2.7							
	comp=Z,0.2nm,0.5s							
AKASG	**Malin Array Be**	**30.48**	**327**	P		**P**	**06 07 11.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=131,slow=8.2,SNR=4.5							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**30.48**	**327**	IAmb		IAmb	06 07 47.5	
	comp=Z,3.4nm,1.2s							
BURAR	**Bucovina Array**	**30.83**	**319**	P		**P**	**06 07 16.3**	**+0.3**
ZALV	**Zalesovo Beam**	**34.54**	**31**	P		**P**	**06 07 46.8**	**-1.4**
	comp=Z,1.6nm,0.5s,baz=243,slow=9.8,SNR=6.3							
ZALV				LR		LR	06 22 12.6	
	comp=Z,102nm,19.3s,baz=286,slow=37							
	comp=Z,1.6nm,0.5s							
ZALV	**Zalesovo Beam**	**34.54**	**31**			**P**	**06 07 48.1**	**-0.1**
GTA	**Gaotai**	**39.04**	**60**	*e*P		**P**	**06 08 26.9**	**0.0**
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
FIA1	**FINESS Array S**	**39.26**	**339**	P		**P**	**06 08 28.3**	**0.0**
FINES	**FINESS Array B**	**39.26**	**339**	P		**P**	**06 08 27.2**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=126,slow=9.7,SNR=5.5							
	comp=Z,0.9nm,0.5s							
HFS	**Hagfors**	**43.15**	**331**	P		**P**	**06 08 57.9**	**-2.4**
	comp=Z,1.1nm,0.5s,baz=123,slow=5.3,SNR=1.5							
	comp=Z,1.1nm,0.5s							
NC405	**NORSAR Array S**	**44.48**	**332**	P		**P**	**06 09 09.7**	**-1.3**
NB2	**NORSAR Subarra**	**44.66**	**331**	P		**P**	**06 09 10.9**	**-1.6**
	comp=Z,8.5nm,1.1s,baz=119,slow=7.9							
NOA	**NORSAR Array B**	**44.66**	**331**	P		**P**	**06 09 11.0**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=120,slow=7.9,SNR=5.4							
	comp=Z,1.1nm,0.7s							
LSZ	**Lusaka**	**49.62**	**215**	LR		LR	06 32 29.6	
	comp=Z,72nm,18.1s,baz=314,slow=38							
ESDC	**Sonseca Array**	**49.85**	**300**	P		**P**	**06 09 52.6**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=65,slow=7.2,SNR=6.1							
	comp=Z,1.0nm,0.8s							
TIXI	**Tiksi**	**59.32**	**21**	LR		LR	06 38 51.9	
	comp=Z,96nm,19.7s,baz=14,slow=38							
BOSA	**Boshof**	**62.43**	**209**	P		**P**	**06 11 23.2**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=17,slow=5.8,SNR=5.3							
	comp=Z,4.1nm,0.9s							
BOSA	**Boshof**	**62.43**	**209**	IAmb		IAmb	06 11 26.3	
	comp=Z,19nm,1.3s							
WRA	**Warramunga Arr**	**90.04**	**112**	P		**P**	**06 13 59.0**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=306,slow=4.7,SNR=2.4							
	comp=Z,0.3nm,0.7s							
ASAR	**Alice Springs**	**91.49**	**116**	P		**P**	**06 14 05.0**	**-1.9**
	comp=Z,0.3nm,0.7s,baz=302,slow=5.2,SNR=2.3							
	comp=Z,0.3nm,0.7s							

IDC ***12*** *06:07:52.2±0.8,53°.33N×35°.53W, h0km, mb3.9/10, mbtmp3.9/11, ML2.6/1, MS3.8/23, Error ellipse: s-maj=27.9km s-min=17.6km az=9.0*

ISC 12 06:07:54.7±0.7, 53°.3N±0°.2×35°.6W±0°.1, h16km, n34, σ0§97/14, mb3.8/9, MS3.8/21, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**15.56**	**338**	LR		LR	06 16 09.4	
	comp=Z,222nm,19.4s,baz=90,slow=32							
SCHQ	**Schefferville**	**18.35**	**287**	P		**P**	**06 12 08.4**	**+0.2**
	0.2nm,0.3s,baz=90,slow=12,SNR=1.7							
SCHQ				LR		LR	06 17 52.3	
	comp=Z,247nm,18.3s,baz=83,slow=33							
	4.2nm,0.9s							
FRB	**Frobisher Bay**	**19.89**	**315**	LR		LR	06 18 11.2	
	comp=Z,164nm,19.4s,baz=60,slow=31							
ESDC	**Sonseca Array**	**25.42**	**110**	P		**P**	**06 13 22.1**	**+0.7**
	2.2nm,0.9s,baz=305,slow=8.2,SNR=7.2							
ESDC				LR		LR	06 21 11.4	

GSI	Gunungsitoli	2.23	125	P		Pn	06 35 42.5	+0.5
KCSI	Kotacane, Aceh	2.23	65	P		Pn	06 35 42.0	-0.1
LHMI	Lhok Sumawe	2.90	24			Pn	06 35 54.4	+3.1
LHMI	Lhok Sumawe	2.90	24	P		Pn	06 35 50.9	-0.3
RPSI	Rantau Prapat	3.18	88			Pn	06 35 55.7	+0.6
RPSI	Rantau Prapat	3.18	88			Pn	06 35 56.0	+0.8
RPSI						Sn	06 36 32.7	+0.4
PSI	Prapat	3.19	86	Pn		Pn	06 35 56.0	+0.6
	7.7nm,0.3s,baz=305,slow=8.8,SNR=12							
PSI				Sn		Sn	06 36 32.7	+0.1
	5.7nm,0.3s,baz=76,slow=9.3,SNR=6.2							
PSI				LR		LR	06 37 29.0	
	comp=Z,394nm,19.0s,baz=254,slow=45							
	20nm,0.3s							
PBSI	Pulau Batu	3.64	136	P		Pn	06 36 02.6	+1.1
MNSI	Mandailing Nat	4.22	115	P		Pn	06 36 10.8	+1.3
PPI	Padang Panjang	5.54	123	P		Pn	06 36 29.2	+1.6
	0.2nm34nm,0.7s							
KULM	Kulim	5.59	61			Pn	06 36 28.4	+0.2
IPM	Ipoh	5.60	70			Pn	06 36 28.4	-0.1
PDSI	Padang	5.85	126	P		Pn	06 36 33.0	+1.1
	23um18nm,0.4s							
KSI	Kapahiang	9.23	132	P		Pn	06 37 18.7	+0.4
MDSI	Maura Dua	10.97	130	P		Pn	06 37 42.3	+0.2
	859nm26nm,0.7s							
TPI	Tanjungpandan	13.03	114	P		Pn	06 38 10.7	+0.3
	14nm,1.2s							
LEM	Lembang	15.09	128	LR		LR	06 45 10.2	
	comp=Z,217nm,20.9s,baz=250,slow=40							
LEM	Lembang	15.09	128	P		Pn	06 38 38.8	+0.2
	20nm,1.0s							
PALK	Pallekele	15.69	288	Sn		Sn	06 41 21.9	-18
	0.5nm,0.3s,baz=187,slow=12,SNR=3.9							
PALK				LR		LR	06 43 24.4	
	comp=Z,94nm,19.1s,baz=60,slow=32							
CMAR	Chiang Mai Arr	16.09	11	Pn		Pn	06 38 50.0	-1.3
	1.7nm,0.3s,baz=336,slow=26,SNR=4.0							
CMAR				LR		LR	06 44 28.8	
	comp=Z,145nm,19.3s,baz=210,slow=35							
	3.2nm,0.3s							
H08S2	Diego Garcia H	25.32	246	T		T	07 06 41.7	
	baz=67,slow=76,SNR=1154							
H08S3	Diego Garcia H	25.32	246	T		T	07 06 41.8	
	baz=67,slow=76,SNR=1203							
H08S1	Diego Garcia H	25.34	246	T		T	07 06 43.1	
	baz=67,slow=76,SNR=871							
EVN	Everest	26.64	342	P		P	06 40 45.5	+1.3
LZDM	Lanzhou Array	34.02	12	P		P	06 41 47.5	-1.6
	3.4nm,0.5s,baz=219,slow=11,SNR=5.5							
	3.4nm,0.5s							
LYN	LuoYang	35.42	24	P		P	06 42 00.6	-0.2
LYN				pP		PP	06 43 23.6	+2.1
LYN				SS		SS	06 50 16.5	+7.5
LYN				pmax		pmax		
	comp=Z,25nm,0.8s							
LYN				LR		LR		
	comp=N,210nm,14.4s							
LYN				LR		LR		
	comp=E,280nm,14.1s							
LYN				LR		LR		
	comp=Z,290nm,16.5s							
HNS	HongShan	38.79	24	⇓P		P	06 42 29.7	+0.3
HNS				pmax		pmax		
	comp=Z,24nm,0.9s							
H01W3	Cape Leeuwin H	41.07	157	T		T	07 26 23.1	
	baz=332,slow=76,SNR=161							
H01W2	Cape Leeuwin H	41.08	157	T		T	07 26 24.1	
	baz=332,slow=76,SNR=152							
H01W1	Cape Leeuwin H	41.09	157	T		T	07 26 24.3	
	baz=332,slow=76,SNR=156							
TARG	Taragay, Kyrgy	42.18	340	P		P	06 42 58.4	+0.5
DRK	Karamyk	42.70	332	P		P	06 43 03.5	+1.5
WB0	Warramunga Arr	43.96	122	P		P	06 43 09.1	-3.1
WB0				IAmb		IAmb	06 43 29.0	
	comp=Z,8.4nm,1.4s							
WRA	Warramunga Arr	43.99	122	P		P	06 43 12.4	-0.1
	comp=Z,1.2nm,0.9s,baz=300,slow=9.3,SNR=6.7							
	comp=Z,1.2nm,0.9s							
WRA	Warramunga Arr	43.99	122	P		P	06 43 09.4	-3.0
WR8	Warramunga Arr	44.14	122	P		P	06 43 09.6	-4.0
WR8				IAmb		IAmb	06 43 20.5	
	comp=Z,9.9nm,1.4s							
ASAR	Alice Springs	45.38	127	P		P	06 43 23.4	-0.1
	comp=Z,0.3nm,0.5s,baz=300,slow=8.2,SNR=8.4							
	comp=Z,0.3nm,0.5s							
MK31	Makanchi Array	45.57	347	P		P	06 43 25.1	+0.4
MK31				IAmb		IAmb	06 43 25.5	
	comp=Z,4.2nm,1.1s							
MKAR	Makanchi Array	45.57	347	P		P	06 43 24.6	0.0
	comp=Z,3.1nm,0.6s,baz=157,slow=8.4,SNR=26							
	comp=Z,3.1nm,0.6s							
MAKZ	Makanchi	45.66	347	P		P	06 43 25.2	-0.1
MAKZ				IAmb		IAmb	06 43 32.6	
	comp=Z,3.2nm,0.7s							
SONM	Songino Array	46.02	10	P		P	06 43 27.5	-0.7
	comp=Z,2.2nm,0.6s,baz=187,slow=8.5,SNR=8.1							
	comp=Z,2.2nm,0.6s							
SONM	Songino Array	46.02	10	P		P	06 43 28.2	0.0
SONM				IAmb		IAmb	06 43 37.9	
	comp=Z,2.6nm,0.8s							
KKAR	Karatay Array	46.19	334	P		P	06 43 30.6	+1.1
KURBB	Kurchatov Arra	50.04	346	P		P	06 43 59.0	-0.1
	comp=Z,1.1nm,0.7s,baz=164,slow=7.0,SNR=11							
	comp=Z,1.1nm,0.7s							
KURK	Kurchatov	50.10	346	P		P	06 43 60.0	+0.4
KURK				IAmb		IAmb	06 44 07.0	
	comp=Z,2.7nm,0.7s							
BNX	BinXian	51.14	28	⇓P		P	06 44 09.1	+1.5
BNX				pmax		pmax		
	comp=Z,6.0nm,1.1s							
ZAA0	Zalesovo Array	51.99	352			P	06 44 13.7	0.0
ZAA0				IAmb		IAmb	06 44 21.3	
	comp=Z,4.1nm,0.8s							
ZALV	Zalesovo Beam	51.99	352	P		P	06 44 13.4	-0.3
	comp=Z,3.6nm,0.6s,baz=181,slow=7.4,SNR=17							
	comp=Z,3.6nm,0.6s							
ZALV	Zalesovo Beam	51.99	352			P	06 44 13.3	-0.4
BVAR	Borovoye Array	54.49	341	P		P	06 44 31.8	-0.4
	comp=Z,1.2nm,0.5s,baz=135,slow=9.8,SNR=5.7							
	comp=Z,1.2nm,0.5s							
AB31	Akbulak array	55.62	332			P	06 44 40.8	+0.4
AB31				IAmb		IAmb	06 44 41.6	
	comp=Z,3.2nm,0.8s							
ABKAR	Akbulak array	55.62	332			P	06 44 40.8	+0.4
H04N2	CROZET ISLANDS	62.10	213	T		T	07 52 51.8	
	baz=52,slow=75,SNR=4683							
H04N1	CROZET ISLANDS	62.12	213	T		T	07 52 52.4	
	baz=52,slow=75,SNR=5551							
H04N3	CROZET ISLANDS	62.12	213	T		T	07 52 51.1	
	baz=52,slow=75,SNR=4202							
H04S1	CROZET ISLANDS	62.47	212	T		T	07 53 13.9	
	baz=52,slow=76,SNR=1224							
H04S3	CROZET ISLANDS	62.48	212	T		T	07 53 14.7	
	baz=52,slow=76,SNR=1308							
H04S2	CROZET ISLANDS	62.49	212	T		T	07 53 15.9	
	baz=52,slow=76,SNR=962							
FINES	FINESS Array B	78.11	333	P		P	06 47 02.5	-0.8
	comp=Z,2.6nm,0.9s,baz=92,slow=5.9,SNR=3.9							
	comp=Z,2.6nm,0.9s							
ARCES	ARCESS Array B	80.76	340	P		P	06 47 16.4	-1.2
	comp=Z,1.2nm,0.7s,baz=100,slow=6.3,SNR=8.9							
	comp=Z,1.2nm,0.7s							
ARCES	ARCESS Array B	80.76	340	IAmb		IAmb	06 47 20.1	
	comp=Z,17nm,1.5s							

IDC ***12*** *06:42:55.8±1.2, 4.79S×153.26E, h0km, mb3.7/7, mbtmp3.7/7, MS3.5/2, Error ellipse: s-maj=41.7km s-min=26.6km az=119.0*

ISC 12 06:43:02.2±1.1, 4.8S±0.2×153.2E±0.3, h43km, n9, σ1§11/7, mb3.5/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	23.71	229	P		P	06 48 11.3	+0.8
	1.2nm,0.7s,baz=53,slow=9.3,SNR=9.6							
	1.2nm,0.7s							
ASAR	Alice Springs	26.39	223	P		P	06 48 34.1	-0.7
	0.3nm,0.6s,baz=53,slow=9.2,SNR=6.6							
	0.3nm,0.6s							
FITZ	Fitzroy Crossi	29.98	242	P		P	06 49 07.2	+0.3
	0.9nm,0.8s,baz=67,slow=7.0,SNR=1.4							
	0.9nm,0.8s							
NWAO	Narrogin (SRO)	43.64	226	LR		LR	07 09 21.9	
	comp=Z,63nm,18.3s,baz=259,slow=36							
MA2	Magadan	64.23	359	LR		LR	07 23 51.3	
	comp=Z,23nm,18.0s,baz=337,slow=38							

VNDA	Vanda	72.79	178	P		P	06 54 24.5	-1.3
	0.7nm,0.7s,baz=342,slow=4.4,SNR=5.5							
	0.7nm,0.7s							
MKAR	Makanchi Array	80.60	319	P		P	06 55 10.3	-0.2
	0.3nm,0.5s,baz=90,slow=5.8,SNR=3.2							
	0.3nm,0.5s							
ILAR	Eielson Array	82.04	22	P		P	06 55 17.7	0.0
	0.3nm,0.6s,baz=254,slow=5.3,SNR=4.3							
	0.3nm,0.6s							
QSPA	South Pole Qui	85.13	180	P		P	06 55 35.1	+1.4
	1.7nm,0.7s,baz=286,slow=1.0,SNR=14							
	1.7nm,0.7s							

IDC ***12*** *06:46:24.7±1.2, 24.68S×176.97W, h0km, mb3.8/6, mbtmp3.8/6, MS3.6/2, Error ellipse: s-maj=43.7km s-min=31.2km az=166.0*

NEIC ***12*** *06:46:35.8±1.7, 24.51S±0.1×177.1W±0.2, h81km±5km, mb4.3/11, Error ellipse: s-maj=25.7km s-min=10.7km az=114.0*

ISC 12 06:46:37.7±0.7, 24.3S±0.1×177.2W±0.2, h100km, n23, σ1§48/17, mb4.1/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIUE	Niue	8.55	54	Pn		Pn	06 48 37.7	-1.0
AFI	Afiamalu	11.57	27	Pn		Pn	06 49 18.3	-1.5
PMG	Port Moresby	37.07	287	LR		LR	07 07 25.9	
	comp=Z,53nm,19.3s,baz=238,slow=34							
ASAR	Alice Springs	44.49	260	P		P	06 54 39.8	+0.3
	0.6nm,0.6s,baz=92,slow=6.7,SNR=11							
	0.6nm,0.6s							
WR8	Warramunga Arr	44.79	266	P		P	06 54 40.7	-1.1
WR8				IAmb		IAmb	06 55 11.7	
	comp=Z,7.9nm,1.5s							
WB2	Warramunga Arr	44.92	266	P		P	06 54 42.4	-0.6
WB2				IAmb		IAmb	06 55 07.1	
	comp=Z,11nm,1.4s							
WB0	Warramunga Arr	44.93	266	P		P	06 54 42.2	-0.8
WB0				IAmb		IAmb	06 55 09.2	
	comp=Z,7.1nm,1.4s							
WRA	Warramunga Arr	44.94	266	P		P	06 54 42.5	-0.6
	comp=Z,0.4nm,0.3s,baz=101,slow=8.2,SNR=11							
	comp=Z,0.4nm,0.3s							
FITZ	Fitzroy Crossi	53.35	265	P		P	06 55 47.4	+0.2
	comp=Z,1.0nm,0.7s,baz=141,slow=6.5,SNR=1.3							
	comp=Z,1.0nm,0.7s							
SBA	Scott Base	54.10	184	P		P	06 55 50.6	-1.2
SBA				IAmb		IAmb	06 55 55.0	
	comp=Z,1.5nm,0.7s							
CASY	Casey	60.84	206	P		P	06 56 38.3	-0.9
DAV	Davao City (W)	63.91	292	LR		LR	07 19 59.8	
	comp=Z,65nm,21.2s,baz=336,slow=31							
QSPA	South Pole Qui	65.74	180	P		P	06 57 14.5	+2.8
	comp=Z,1.4nm,0.7s,baz=280,slow=3.0,SNR=6.6							
QSPA	South Pole Qui	65.74	180	IAmb		IAmb	06 57 15.7	
	comp=Z,2.3nm,0.9s							
BELA	Belgrano 2	75.67	172	P		P	06 58 10.8	-0.8
BELA				IAmb		IAmb	06 58 11.1	
	comp=Z,6.8nm,1.5s							
ADK	Adak	75.90	0	P		P	06 58 14.0	+1.0
MAW	Mawson	78.22	200	P		P	06 58 24.7	-1.3
	comp=Z,1.0nm,0.7s,baz=119,slow=10,SNR=2.1							
	comp=Z,1.0nm,0.7s							
NVAR	Mina Array Bea	83.31	43	P		P	06 58 54.5	+0.7
	comp=Z,0.1nm,0.2s,baz=241,slow=4.1,SNR=1.8							
	comp=Z,0.1nm,0.2s							
SNAA	Sanae	84.16	178	P		P	06 58 55.7	-1.8
	comp=Z,1.8nm,0.8s,baz=214,slow=4.0,SNR=4.9							
	comp=Z,1.8nm,0.8s							
SNAA	Sanae	84.16	178	IAmb		IAmb	06 58 57.5	
	comp=Z,3.8nm,1.1s							
ARCES	ARCESS Array B	132.82	349	PKP		PKPdf	07 05 40.1	-0.2
	comp=Z,1.8nm,0.9s,baz=40,slow=2.1,SNR=4.2							
HFS	Hagfors	143.44	351	PKhKP		PKPpre	07 05 56.4	
	comp=Z,3.6nm,1.0s,baz=66,slow=8.3,SNR=4.3							
AKASG	Malin Array Be	146.70	329	PKPbc		PKPdf	07 06 09.2	+3.3
	comp=Z,0.5nm,0.3s,baz=46,slow=4.1,SNR=5.0							

VIE ***12*** *07:29:25.5±1.1, 51.40N×16.01E, h0km, ml2.5/2, Error ellipse: s-maj=7.0km s-min=4.8km az=0.0 77 km WNW of Wroclaw Suspected Mining induced.*

PRU ***12*** *07:29:27.6, 51.39N×16.17E, h0km*

ISC 12 07:29:26.3±1.5, 51.38N±0.07×16.23E±0.04, h0km, n19, σ0§81/36, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	Ksiaz	0.54	176	*e*Pg		Pg	07 29 37.5	+0.9
KSP				*e*Sg		Sb	07 29 45.7	-1.3
CHVC	Chvalec	0.80	188	*e*PG		Pb	07 29 42.8	-0.3
CHVC				*e*SG		Sb	07 29 54.1	-0.4
	comp=Z,23nm,0.5s							
OSTC	Ostas	0.82	181	*e*PG		Pb	07 29 43.1	-0.4
OSTC				*e*SG		Sb	07 29 54.9	-0.3
UPC	Upice	0.88	189	*e*SG		Sb	07 29 56.0	-0.9
DPC	Dobruska-Polom	1.03	177	*e*PG		Pg	07 29 46.2	+0.1
DPC				*e*SG		Sb	07 30 00.7	-0.5
	comp=Z,33nm,1.0s							
KRLC	Kraliky	1.35	165	*e*PG		Pb	07 29 52.4	-0.1
KRLC				*e*SG		Sn	07 30 11.0	-0.2
	comp=Z,15nm,0.5s							
PVCC	Panska Ves	1.35	232	*e*PG		Pg	07 29 52.3	+0.1
PVCC				*e*SG		Sb	07 30 10.8	+0.5
	comp=Z,94nm,0.2s							
STEB	Steborice	1.75	145	*e*PG		Pg	07 30 00.2	+0.4
STEB				*e*SG		Sg	07 30 22.2	-0.3
	comp=Z,25nm,0.8s							
PRU	Pruhonice	1.76	218	*e*PG		Pn	07 29 58.1	+0.1
PRU				*e*SG		Sg	07 30 22.7	-0.1
	comp=Z,18nm,0.5s							
MORC	Moravsky Berou	1.81	152	*e*PN		Pn	07 29 57.8	-1.0
MORC				*e*SG		Sn	07 30 21.8	-0.7
HSKC	Hora Svate Kat	1.93	247	*e*PG		Pn	07 30 00.9	+0.5
HSKC				*e*SG		Sb	07 30 26.6	-0.4
	comp=Z,21nm,0.5s							
CLL	Collm	2.02	269	*e*Pg		Pb	07 30 03.0	-1.0
CLL				*e*Sg		Sn	07 30 28.0	+0.3
	comp=Z,10.0nm,0.4s							
VRAC	Vranov	2.09	173	*e*PN		Pn	07 30 03.0	+0.4
VRAC				*e*SG		Sg	07 30 32.7	-0.6
KRUC	Moravsky	2.32	177	*e*SG		Sg	07 30 41.0	+0.1
ZVC	Zvikov	2.34	215	*e*SG		Sg	07 30 41.4	0.0
KHC	Kasperske Hory	2.82	218	*e*PN		Pn	07 30 12.8	+0.1
KHC				*e*PG		Pb	07 30 18.4	+0.8
KHC				*e*SG		Sg	07 30 55.9	-1.0
LANS	Liptovska Anna	3.05	136	*e*PG		Pg	07 30 26.9	+2.2
LANS				*e*SG		Sg	07 31 04.0	-0.2
LANS				*e*LG		Lg	07 31 06.9	
CONA	Conrad Observa	3.46	184	*i* Pn		Pn	07 30 20.9	-0.6
	comp=Z,0.4nm,0.2s							
CONA				*i* Sg		Sg	07 31 19.1	+1.6
	comp=Z,2.7nm,0.4s							
MOA	Molln	3.76	201	*i* Pn		Pn	07 30 24.5	-1.0
	comp=Z,0.2nm,0.1s							
MOA				*i* Sg		Sg	07 31 28.8	+1.9
	comp=Z,1.5nm,0.2s							

KRNET ***12*** *07:44:56.9±0.1, 42.92N×77.31E, h19km, mb2.6*

SOME ***12*** *07:44:57.1, 42.92N×77.25E, h10km*

ISC 12 07:44:56.6±0.9, 42.92N±0.03×77.30E±0.02, h17km±7km, n23, σ0§57/46, 16C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNSS	Tian-Shan	0.28	296	*e*P		Pg	07 45 03.1	+0.1
TNSS				*e*S		Sg	07 45 07.6	+0.1
TNSS	Tian-Shan	0.28	296	*e*P		Pg	07 45 03.1	+0.1
	4.0nm,0.1s							
TNSS				*e*S		Sg	07 45 07.6	+0.1
	38nm,0.2s							
MDOK	Medeo	0.31	324	*e*P		Pg	07 45 03.3	0.0
MDOK				*e*S		Sg	07 45 07.9	0.0
KOTS	Kotyrbulak	0.35	337	*e*P		Pg	07 45 03.9	-0.1
KOTS				*e*S		Sg	07 45 09.0	0.0
KOTS	Kotyrbulak	0.35	337	*e*P		Pg	07 45 03.9	-0.1
	86nm,0.1s							
KOTS				*e*S		Sg	07 45 09.0	0.0
	120nm,0.3s							
MTBS	Maitube	0.67	289	*e*P		Pb	07 45 09.6	-0.3
MTBS				*e*S		Sb	07 45 18.9	0.0
MTBS	Maitube	0.67	289	*e*P		Pb	07 45 09.6	-0.3
	1.3nm,0.1s							
	16nm,0.3s							
KDJ	Kajisay	0.79	186	⇓*i*P		Pb	07 45 12.1	+0.2
KDJ				⇓*i*S		Sb	07 45 22.5	+0.1
SATY	Saty	0.83	80	*e*P		Pb	07 45 12.3	-0.3
SATY				*e*S		Sb	07 45 23.1	-0.4
PRZ	Przheval'sk	0.92	118	⇑*e*P		Pb	07 45 14.3	+0.1
PRZ				⇑*e*S		Sb	07 45 25.8	-0.4
KST	Kastek	0.99	278	*e*P		Pb	07 45 15.7	+0.4
	2.4nm,0.2s							
KST				*e*S		Sg	07 45 29.1	+0.4
	5.2nm,0.1s							
ULHL	Ulahol	1.03	230	⇓*i*P		Pb	07 45 16.1	+0.1
ULHL				⇓*i*S		Sb	07 45 30.0	+0.7
BOOM	Boomskoye usch	1.09	247	⇑*i*P		Pb	07 45 17.2	+0.2
BOOM				⇑*i*S		Sn	07 45 31.8	-0.1
KPKS	Kokpek	1.16	61	*e*P		Pn	07 45 17.8	-0.2
	0.5nm,0.3s							
KPKS				*e*S		Sb	07 45 32.8	-0.1
	9.2nm,0.2s							
TARG	Taragay, Kyrgy	1.24	162	⇑*i*P		Pb	07 45 20.3	+0.5
TARG				⇑*i*S		Sn	07 45 36.7	+0.6
ARXS	Arharly	1.35	16	*e*P		Pn	07 45 21.3	+0.5
	2.8nm,0.1s							
ARXS				*e*S		Sb	07 45 38.8	+0.3
	16nm,0.2s							
CHMS	Chumysh	1.87	273	⇑*i*P		Pb	07 45 31.1	+0.8
CHMS				⇑*i*S		Sg	07 45 55.6	-1.2
USP	Ospenovka	2.08	281	⇓*i*P		Pb	07 45 34.0	+0.1
USP				⇓*i*S		Sb	07 46 00.5	+1.1
AAK	Ala-Archa	2.08	263	⇑*i*P		Pb	07 45 34.1	+0.1
AAK				⇑*i*S		Sb	07 46 00.6	+1.0
UCH	Uchtor	2.17	252	⇑*i*P		Pb	07 45 35.4	-0.2
UCH				⇑*i*S		Sb	07 46 02.9	+0.5
JNKS	Jany-Kuch	2.22	214	⇑*e*P		Pb	07 45 36.0	-0.4
JNKS				⇑*e*S		Sb	07 46 03.7	-0.1
ARLS	Aral	2.44	245	⇑*i*P		Pb	07 45 39.0	-1.1
ARLS				⇑*i*S		Sb	07 46 09.1	-0.9
EKS2	Erkin-Say	2.60	266	⇓*i*P		Pb	07 45 41.3	-1.5
EKS2				⇓*i*S		Sb	07 46 13.1	-1.5

NEIC ***12*** *08:08:03.4±1.2, 38.85N±0.02×111.42W±0.01, h5km±2km, Error ellipse: s-maj=3.0km s-min=3.0km az=171.0*

UUSS 12 08:08:03.4±1.1, 38.83N±0.02×111.42W±0.01, h3km±6km, ML2.3/7, ML2.6/88(NEIC), Error ellipse: s-maj=2.5km s-min=1.6km az=167.0, Utah

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OWUT	Old Woman Plat	0.05	183			Pg	08 08 04.9	+0.3
Q16A	Castle Valley	0.21	66			Pg	08 08 07.5	0.0
Q16A	Castle Valley	0.21	66	IAML			08 08 11.0	
	comp=N,324nm,0.4s							
Q16A				IAML			08 08 11.9	
	comp=E,880nm,0.2s							
SGU	Sterling	0.39	334			Pg	08 08 11.2	+0.3
TMUT	Trail Mountain	0.49	20			Pg	08 08 12.8	0.0
TMUT	Trail Mountain	0.49	20	IAML			08 08 20.7	
	comp=E,354nm,0.4s							
TMUT				IAML			08 08 21.5	
	comp=N,397nm,0.4s							
DBD	Des Bee Dove	0.55	28			Pg	08 08 13.7	-0.2
LEVU	Levan	0.74	336			Pg	08 08 17.7	+0.1
SRU	San Rafael Swe	0.75	68			Pg	08 08 17.4	-0.4
SRU	San Rafael Swe	0.75	68	IAML			08 08 27.8	
	comp=N,185nm,0.5s							
SRU				IAML			08 08 29.9	
	comp=E,180nm,0.3s							
FLU	Fool Peak	0.80	313			Pg	08 08 18.8	+0.1
ELU	Electric Lake	0.82	12			Pg	08 08 18.9	-0.3
P17A	Butcher Ranch,	0.83	39			Pg	08 08 18.5	-0.8
P17A	Butcher Ranch,	0.83	39	IAML			08 08 30.8	
	comp=N,63nm,0.2s							
TCRU	Three Creeks R	0.83	255			Pg	08 08 19.8	+0.5
MTPU	Mount Pierson	0.99	217			Pg	08 08 22.1	-0.3
MTPU	Mount Pierson	0.99	217	IAML			08 08 37.1	
	comp=E,50nm,0.4s							
HMU	Henry Mountain	1.04	149			Pg	08 08 22.5	-0.7
HMU	Henry Mountain	1.04	149	IAML			08 08 36.7	
	comp=N,116nm,0.3s							
HMU				IAML			08 08 38.7	
	comp=E,105nm,0.4s							
DCM	Dugout Coal Mi	1.08	37			Pg	08 08 23.2	-0.8
EMUT	Emma Park	1.09	25			Pg	08 08 23.5	-0.7
BCE	Book Cliffs Ea	1.11	45			Pg	08 08 23.9	-0.7
BTU	Barney Top	1.13	199			Pg	08 08 24.8	-0.2
NMUT	North Mineral	1.16	255			Pg	08 08 25.4	-0.2
ROA	Roan Cliffs	1.17	44			Pg	08 08 25.0	-0.8
MPU	Maple Canyon	1.19	352			Pg	08 08 26.2	-0.1
MPU				IAML			08 08 45.7	
	comp=N,37nm,0.4s							
MPU				IAML			08 08 45.9	
	comp=E,68nm,0.8s							
ARGU	Argyle Ridge	1.20	34			Pg	08 08 25.7	-0.7
P18A	Preston Nutter	1.21	49			Pg	08 08 26.0	-0.5
P18A	Preston Nutter	1.21	49	IAML			08 08 44.0	
	comp=E,55nm,0.1s							
P18A				IAML			08 08 48.6	
	comp=N,52nm,0.2s							
NLU	North Lily Min	1.23	336			Pg	08 08 27.1	+0.1
NLU	North Lily Min	1.23	336	IAML			08 08 46.9	
	comp=N,55nm,0.3s							
NLU				IAML			08 08 47.0	
	comp=E,60nm,0.5s							
WMUT	West Mountain	1.28	346			Pb	08 08 28.3	0.0
DWU

PV01 IAML 08 09 17.2
comp=E,85nm,0.3s
PV15 Paradox Valley 2.35 101 Pb 08 08 45.6 -1.0
PV15 IAML 08 09 19.4
comp=N,72nm,0.6s
PV15 IAML 08 09 21.4
comp=E,73nm,0.6s
BGU Big Grassy Mou 2.43 330 Pn 08 08 44.0 -0.2
BGU IAML 08 09 31.0
comp=E,8.9nm,4.9s
U15A North Rim 2.50 196 Pb 08 08 47.6 -1.5
U15A IAML 08 09 23.1
comp=N,21nm,0.7s
U15A IAML 08 09 23.2
comp=E,26nm,0.7s
MVCO Mesa Verde 2.82 124 Pn 08 08 51.0 +1.4
MVCO IAML 08 09 33.0
comp=E,37nm,0.5s
MVCO IAML 08 09 36.9
comp=E,39nm,0.6s

NNC ***12*** *08:08:36.3±1.0, 42.°90N×77.°31E, h0km, mb2.4, mpv2.8, Error ellipse: s-maj=9.4km s-min=3.6km az=11.0*
KRNET ***12*** *08:08:37.4±0.1, 42.°91N×77.°25E, h12km, mb2.5*
SOME ***12*** *08:08:37.5, 42.°97N×77.°28E, h10km*
ISC 12 08:08:35.9±1.3, 42.°95N±0.°03×77.°27E±0.°03, h11km±12km, n20, σ0s38/39, 8C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.26**	**291**	P	**Pb**	**08 08 42.6**	**-0.2**
	2.1nm,0.1s						
TNSS				S	**Sb**	**08 08 46.7**	**-0.7**
	13nm,0.2s						
TNSS	**Tian-Shan**	**0.26**	**291**	*e*P	**Pb**	**08 08 42.6**	**-0.2**
TNSS				*e*S	**Sb**	**08 08 46.7**	**-0.7**
TNSS	**Tian-Shan**	**0.26**	**291**	*e*P	**Pb**	**08 08 43.1**	**+0.3**
	2.1nm,0.1s						
TNSS				*e*S	**Sb**	**08 08 47.5**	**+0.1**
	13nm,0.2s						
MDOK	**Medeo**	**0.27**	**323**	Pg	**Pb**	**08 08 43.2**	**+0.3**
	12nm,0.1s						
MDOK				Lg	Lg	08 08 47.7	
	15nm,0.1s						
MDOK	**Medeo**	**0.27**	**323**	*e*P	**Pb**	**08 08 43.2**	**+0.3**
MDOK				*e*S	**Sb**	**08 08 47.8**	**+0.2**
KOTS	**Kotyrbulak**	**0.31**	**338**	P	**Pb**	**08 08 43.8**	**+0.2**
	32nm,0.1s						
KOTS				S	**Sb**	**08 08 48.6**	**-0.1**
	30nm,0.2s						
KOTS	**Kotyrbulak**	**0.31**	**338**	*e*P	**Pb**	**08 08 43.8**	**+0.2**
KOTS				*e*S	**Sb**	**08 08 48.7**	**-0.1**
KOTS	**Kotyrbulak**	**0.31**	**338**	*e*P	**Pb**	**08 08 43.8**	**+0.2**
	32nm,0.1s						
KOTS				*e*S	**Sb**	**08 08 48.6**	**-0.1**
	30nm,0.2s						
IZV	**Izvestkoviy**	**0.49**	**281**	P	**Pb**	**08 08 46.6**	**-0.1**
	5.1nm,0.1s						
IZV				S	**Sb**	**08 08 53.7**	**-0.3**
	110nm,0.3s						
IZV	**Izvestkoviy**	**0.49**	**281**	*e*P	**Pb**	**08 08 46.6**	**-0.1**
IZV				*e*S	**Sb**	**08 08 53.7**	**-0.3**
IZV	**Izvestkoviy**	**0.49**	**281**	*e*P	**Pb**	**08 08 46.6**	**-0.1**
	5.1nm,0.1s						
IZV				*e*S	**Sb**	**08 08 53.7**	**-0.3**
	110nm,0.3s						
KDJ	**Kajisay**	**0.82**	**185**	⇓*i*P	**Pb**	**08 08 52.4**	**+0.2**
KDJ				⇓*i*S	**Sb**	**08 09 03.1**	**-0.3**
SATY	**Saty**	**0.84**	**82**	P	**Pb**	**08 08 52.2**	**-0.3**
	2.0nm,0.1s						
SATY				S	**Sb**	**08 09 03.3**	**-0.6**
	9.5nm,0.1s						
PRZ	**Przheval'sk**	**0.95**	**119**	⇓*e*P	**Pn**	**08 08 56.0**	**+0.6**
PRZ				⇓*e*S	**Sn**	**08 09 08.4**	**-0.6**
ULHL	**Ulahol**	**1.03**	**228**	⇑*i*P	**Pn**	**08 08 56.4**	**-0.1**
ULHL				⇑*i*S	**Sb**	**08 09 09.8**	**+0.2**
BOOM	**Boomskoye usch**	**1.08**	**246**	⇑*e*P	**Pn**	**08 08 57.6**	**+0.4**
BOOM				⇑*i*S	**Sb**	**08 09 11.5**	**+0.5**
TARG	**Taragay, Kyrgy**	**1.28**	**162**	⇑*i*P	**Pg**	**08 09 00.1**	**-0.4**
TARG				⇑*i*S	**Sn**	**08 09 17.8**	**+0.4**
ARXS	**Arharly**	**1.33**	**17**	P	**Pg**	**08 09 01.2**	**-0.2**
	1.2nm,0.2s						
ARXS				S	**Sg**	**08 09 18.6**	**-0.1**
	5.2nm,0.2s						
ARXS	**Arharly**	**1.33**	**17**	*e*P	**Pg**	**08 09 01.2**	**-0.2**
	1.2nm,0.2s						
ARXS				*e*S	**Sg**	**08 09 18.6**	**-0.1**
	5.2nm,0.2s						
PDGK	**Podgornoye**	**1.67**	**76**	⇑Pn	**Pn**	**08 09 05.1**	**0.0**
	4.0nm,1.6s						
PDGK				⇑Sn	**Sg**	**08 09 30.6**	**+1.1**
	1.6nm,0.5s						

NNC ***12*** *08:14:06.9±1.2, 42.°90N×77.°27E, h0km, mb2.6, mpv3.0, Error ellipse: s-maj=15.1km s-min=4.6km az=7.0*
KRNET ***12*** *08:14:06.7±0.1, 42.°93N×77.°29E, h22km, mb2.7*
ISC 12 08:14:06.6±1.0, 42.°93N±0.°03×77.°29E±0.°03, h18km±6km, n17, σ0s20/31, 9C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.28**	**293**	P	**Pg**	**08 14 13.1**	**+0.1**
	2.7nm,0.1s						
TNSS				S	**Sg**	**08 14 17.3**	**-0.1**
	32nm,0.2s						
TNSS	**Tian-Shan**	**0.28**	**293**	*e*P	**Pg**	**08 14 13.1**	**+0.1**
TNSS				*e*S	**Sg**	**08 14 17.3**	**-0.1**
MDOK	**Medeo**	**0.29**	**322**	Pg	**Pg**	**08 14 13.2**	**0.0**
	31nm,0.2s						
MDOK				Lg	Lg	08 14 17.4	
	38nm,0.3s						
MDOK	**Medeo**	**0.29**	**322**	*e*P	**Pg**	**08 14 13.2**	**0.0**
MDOK				*e*S	**Sg**	**08 14 17.4**	**-0.2**
KOTS	**Kotyrbulak**	**0.33**	**336**	P	**Pg**	**08 14 13.9**	**+0.1**
	82nm,0.1s						
KOTS				S	**Sg**	**08 14 18.5**	**-0.1**
	96nm,0.3s						
KOTS	**Kotyrbulak**	**0.33**	**336**	*e*P	**Pg**	**08 14 13.9**	**+0.1**
KOTS				*e*S	**Sg**	**08 14 18.6**	**-0.1**
IZV	**Izvestkoviy**	**0.51**	**282**	P	**Pg**	**08 14 17.0**	**+0.1**
	11nm,0.1s						
IZV				S	**Sg**	**08 14 24.1**	**+0.2**
	43nm,0.2s						
IZV	**Izvestkoviy**	**0.51**	**282**	*e*P	**Pg**	**08 14 17.0**	**+0.1**
IZV				*e*S	**Sg**	**08 14 24.1**	**+0.2**
MTBS	**Maitube**	**0.66**	**288**	P	**Pg**	**08 14 19.5**	**-0.2**
	1.5nm,0.1s						
MTBS	**Maitube**	**0.66**	**288**	*e*P	**Pg**	**08 14 19.5**	**-0.2**
KDJ	**Kajisay**	**0.81**	**186**	⇑*i*P	**Pg**	**08 14 22.2**	**-0.2**
KDJ				⇑*i*S	**Sg**	**08 14 33.2**	**+0.1**
KURS	**Kuram**	**0.85**	**49**	*e*P	**Pb**	**08 14 22.7**	**-0.2**
KURS				*e*S	**Sb**	**08 14 33.8**	**-0.2**
PRZ	**Przheval'sk**	**0.93**	**118**	⇑*i*P	**Pb**	**08 14 24.4**	**0.0**
PRZ				⇑*e*S	**Sg**	**08 14 36.7**	**-0.4**
ULHL	**Ulahol**	**1.03**	**229**	⇓*i*P	**Pb**	**08 14 26.0**	**-0.2**
ULHL				⇓*i*S	**Sb**	**08 14 39.7**	**+0.2**
BOOM	**Boomskoye usch**	**1.09**	**247**	⇑*i*P	**Pb**	**08 14 27.1**	**0.0**
BOOM				⇑*i*S	**Sb**	**08 14 41.4**	**+0.4**
TARG	**Taragay, Kyrgy**	**1.26**	**162**	⇑*i*P	**Pn**	**08 14 29.8**	**0.0**
TARG				⇑*i*S	**Sn**	**08 14 46.3**	**-0.1**
PDGK	**Podgornoye**	**1.66**	**75**	⇑Pn	**Pg**	**08 14 38.9**	**+0.4**
	6.8nm,1.8s						
PDGK				⇓Sn	**Sg**	**08 15 00.4**	**+0.3**
	3.7nm,0.5s						

SOME ***12*** *08:14:16.6, 42.°93N×77.°23E, h15km*
KRNET 12 08:14:16.3±0.1, 42.°92N×77.°27E, h16km, mb2.8, 16C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.26**	**296**	*e*P	Pg	08 14 22.1	-0.2
TNSS				*e*S	Sg	08 14 26.0	-0.4
TNSS	**Tian-Shan**	**0.26**	**296**	*e*P	Pg	08 14 22.1	-0.2
	4.4nm,0.1s						
TNSS				*e*S	Sg	08 14 26.1	-0.4
	60nm,0.2s						
MDOK	**Medeo**	**0.29**	**326**	*e*P	Pg	08 14 22.2	-0.4
MDOK				*e*S	Sg	08 14 26.3	-0.7
KOTS	**Kotyrbulak**	**0.33**	**340**	*e*P	Pg	08 14 22.9	-0.5
KOTS				*e*S	Sg	08 14 27.5	-0.7
KOTS	**Kotyrbulak**	**0.33**	**340**	*e*P	Pg	08 14 22.9	-0.4
	120nm,0.1s						
KOTS				*e*S	Sg	08 14 27.6	-0.6
	188nm,0.4s						
MTBS	**Maitube**	**0.65**	**289**	*e*P	Pg	08 14 28.9	-0.2
MTBS				*e*S	Sg	08 14 37.8	0.0
MTBS	**Maitube**	**0.65**	**289**	*e*P	Pg	08 14 28.9	-0.2
	5.0nm,0.1s						
MTBS				*e*S	Sg	08 14 37.9	+0.1
	20nm,0.3s						
MTBS	**Maitube**	**0.65**	**289**	*e*S	Pg	08 14 28.5	-0.6
MTBS	**Maitube**	**0.65**	**289**	S	Pg	08 14 28.5	-0.6
	10nm,0.2s						
KDJ	**Kajisay**	**0.79**	**185**	⇑*i*P	Pg	08 14 31.2	-0.6
KDJ				⇑*i*S	Sg	08 14 41.9	-0.4
PRZ	**Przheval'sk**	**0.94**	**117**	⇑*e*P	Pg	08 14 34.5	-0.1
PRZ				⇑*e*S	Sg	08 14 47.0	0.0
ULHL	**Ulahol**	**1.01**	**229**	⇑*i*P	Pb	08 14 35.5	-0.1
ULHL				⇑*i*S	Sg	08 14 49.2	-0.1
BOOM	**Boomskoye usch**	**1.07**	**247**	⇑*i*P	Pb	08 14 36.5	0.0
BOOM				⇑*i*S	Sg	08 14 51.1	+0.1
TARG	**Taragay, Kyrgy**	**1.26**	**161**	⇓*i*P	Pn	08 14 39.2	-0.4
TARG				⇓*i*S	Sg	08 14 56.7	-0.3
KBK	**Karagaybulak**	**1.73**	**262**	⇑*i*P	Pb	08 14 48.4	+0.6
KBK				⇑*i*S	Sg	08 15 11.4	-0.6
CHMS	**Chumysh**	**1.85**	**273**	⇑*i*P	Pb	08 14 50.1	+0.3
CHMS				⇑*i*S	Sg	08 15 14.5	-1.3
AAK	**Ala-Archa**	**2.06**	**263**	⇑*i*P	Pb	08 14 53.1	-0.4
AAK				⇑*i*S	Sb	08 15 19.7	+0.8
UCH	**Uchtor**	**2.15**	**252**	⇑*i*P	Pb	08 14 54.4	-0.7
UCH				⇑*i*S	Sb	08 15 22.0	+0.3
JNKS	**Jany-Kuch**	**2.22**	**213**	⇓*e*P	Pb	08 14 55.3	-0.9
JNKS				⇓*e*S	Sb	08 15 23.8	+0.3

BJI ***12*** *08:16:38.1, 9.°33N×56.°95E, h10km, mB4.9/6, mb4.7/33, Ms4.8/12, Ms7 4.6/12*
IDC ***12*** *08:16:43.5±0.7, 9.°81N×57.°67E, h0km, mb4.3/24, mbtmp4.3/24, MS4.0/15, Error ellipse: s-maj=17.7km s-min=14.4km az=147.0*
MOS ***12*** *08:16:44.4±1.3, 9.°96N×57.°50E, h10km, mb4.8/31, MS4.2/4, Error ellipse: s-maj=8.9km s-min=5.1km az=99.3*
GCMT ***12*** *08:16:47.2±0.3, 9.°86N±0.°02×57.°58E±0.°03, h13km±1km, MW4.8/98, Moment Tensor Solution. s18,c21; s98,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.13±.16; $M_{\theta\theta}$1.66±.10; $M_{\phi\phi}$0.47±.09; $M_{r\theta}$0.36±.22; $M_{\theta\phi}$-0.66±.05; $M_{\phi r}$-0.75±.32; Best double couple: M_o2.19400×10^{16} NP1:ϕ_s103.00000°, δ37.00000°, λ-109.00000°. NP2: ϕ_s306.00000°, δ55.00000°, λ-76.00000°. Principal axes: T 2.0500, Plg9.0000°, Azm26.0000°; N 0.2880, Plg11.0000°, Azm118.0000°; P -2.3380, Plg75.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***12*** *08:16:47.2±1.9, 9.°9N±0.°1×57.°60E±0.°10, h10km±1km, mb4.8/60 Error ellipse: s-maj=18.3km s-min=15.7km az=146.0*
ISC 12 08:16:45.9±0.5, 9.°90N±0.°07×57.°54E±0.°06, h10km, n247, σ1s66/237, mb4.7/103, MS4.1/24, 32C-22D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMTO	**DMTO**	**8.16**	**342**	P	**Pn**	**08 18 48.9**	**+4.4**
DMTO				P	**Pn**	**08 18 48.9**	**+4.4**
RBK	**Rabkut**	**8.22**	**337**	P	Pn	08 18 51.7	+6.4
	SNR=7.7						
RBK				P	Pn	08 18 51.7	+6.4
	SNR=7.7						
SHAO	**Shalim**	**8.28**	**347**	P	**Pn**	**08 18 50.5**	**+4.3**
	SNR=9.8						
SHAO				P	**Pn**	**08 18 50.5**	**+4.3**
	SNR=9.8						
ABTO	**Aybut**	**8.48**	**331**	P	**Pn**	**08 18 53.4**	**+4.5**
	SNR=6.4						
ABTO				P	**Pn**	**08 18 53.4**	**+4.5**
	SNR=6.4						
WHFO	**Wadi Hawf**	**8.77**	**336**	P	**Pn**	**08 18 56.2**	**+3.4**
	SNR=6.0						
WHFO				P	**Pn**	**08 18 56.2**	**+3.4**
	SNR=6.0						
DOK	**Doka**	**9.27**	**339**	P	**Pn**	**08 19 04.1**	**+4.3**
	SNR=10.0						
MHTO	**MHTO**	**11.03**	**2**	P	Pn	08 19 29.5	+5.7
MHTO				P	Pn	08 19 29.5	+5.7
BSY	**Bisya**	**12.77**	**359**	P	Pn	08 19 53.5	+5.8
SMDO	**Samad**	**13.09**	**2**	P	P	08 19 57.9	-4.6
SMDO				P	P	08 19 57.9	-4.6
WSAR	**Wadi Sarin**	**13.30**	**4**	LR	LR	08 24 21.0	
	comp=Z,7.7nm,18.5s,baz=242,slow=34						
WSAR	**Wadi Sarin**	**13.30**	**4**	P	**P**	**08 20 02.2**	**-2.6**
ARQ	**Araqi**	**13.39**	**356**	P	**P**	**08 20 01.6**	**-4.2**
ARQ				P	**P**	**08 20 01.6**	**-4.2**
MZR	**Muzera**	**13.59**	**344**	P	**P**	**08 20 04.2**	**-3.8**
HOQ	**Hoqain**	**13.60**	**359**	P	**P**	**08 20 04.6**	**-3.5**
HOQ				P	**P**	**08 20 04.6**	**-3.5**
ALNE	**Al Ain**	**14.18**	**353**	P	**Pn**	**08 20 09.8**	**+2.9**
	SNR=5.3						
ALNE				P	**Pn**	**08 20 09.8**	**+2.9**
	SNR=5.3						
SOHO	**SOHO**	**14.18**	**356**	P	**P**	**08 20 13.3**	**-1.2**
SOHO				P	**P**	**08 20 13.3**	**-1.2**
ATD	**Arta Tunnel**	**14.53**	**278**	Pn	**P**	**08 20 15.9**	**-2.5**
	0.1nm,0.3s,baz=281,slow=16,SNR=2.0						
ATD				LR	LR	08 24 52.4	
	comp=Z,8.3nm,21.6s,baz=45,slow=33						
ASHO	**Ashiyiah**	**14.77**	**355**	P	**P**	**08 20 21.2**	**+0.2**
ASUD	**Al Ashush, Dub**	**14.79**	**352**	P	**P**	**08 20 22.1**	**+0.8**
HATD	**Hatta, Dubai**	**14.90**	**355**	P	**P**	**08 20 20.9**	**-1.6**
UOSS	**Minazif**	**15.01**	**355**		**Pn**	**08 20 19.6**	**+1.3**
UOSS	**Minazif**	**15.01**	**355**	P	**P**	**08 20 24.6**	**+0.8**
UOSS				P	**P**	**08 20 24.6**	**+0.8**
SLWR	**Sila**	**15.15**	**339**	P	**P**	**08 20 24.8**	**-0.5**
MDH	**Madha**	**15.36**	**356**	P	**P**	**08 20 25.7**	**-1.8**
MASF	**Masafi**	**15.44**	**355**	P	**P**	**08 20 29.1**	**+0.5**
TRNA	**Turayna**	**15.93**	**339**	P	**P**	**08 20 33.9**	**-0.1**
BANOM	**Banah**	**15.98**	**356**	P	**P**	**08 20 34.5**	**0.0**
SMRA	**Abu-Samra**	**16.09**	**337**	P	**P**	**08 20 35.9**	**+0.3**
SHME	**Shamm**	**16.11**	**355**	P	**Pn**	**08 20 34.6**	**+1.9**
	SNR=5.6						
SHMA	**Al-Shehemyia**	**17.05**	**339**	P	**P**	**08 20 47.2**	**+0.9**
RAYN	**Ar Rayn**	**17.77**	**321**		**Pn**	**08 20 52.9**	**-0.7**
RAYN	**Ar Rayn**	**17.77**	**321**	P	**Pn**	**08 20 52.7**	**-0.9**
RAYN	**Ar Rayn**	**17.77**	**321**	P	**Pn**	**08 20 52.9**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,33nm,0.9s						
KIBK	**Kibwezi**	**22.91**	**239**		**P**	**08 21 50.0**	**-0.3**
KIBK				IAmb	IAmb	08 22 01.0	
	comp=Z,30nm,1.0s						
KIBK	**Kibwezi**	**22.91**	**239**	P	**P**	**08 21 49.7**	**-0.6**
	SNR=9.5						
LODK	**Lodwar**	**22.94**	**255**		**P**	**08 21 51.9**	**+1.3**
LODK	**Lodwar**	**22.94**	**255**	P	**P**	**08 21 51.2**	**+0.5**
	SNR=32						
KMBO	**Kilima Mbogo**	**22.98**	**243**	P	**P**	**08 21 51.0**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=60,slow=12,SNR=11						
KMBO				LR	LR	08 31 45.5	
	comp=Z,175nm,18.5s,baz=150,slow=39						
	comp=Z,4.4nm,0.6s						
KMBO	**Kilima Mbogo**	**22.98**	**243**	*i*P	**P**	**08 21 52.4**	**+1.2**
KMBO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PALK	**Pallekele**	**23.05**	**95**	LR	LR	08 28 56.9	
	comp=Z,155nm,21.2s,baz=294,slow=32						
PALK	**Pallekele**	**23.05**	**95**	⇑*e*P	**P**	**08 21 50.5**	**-1.2**
HRA	**Herat**	**24.75**	**9**		**P**	**08 22 09.3**	**+1.4**
KBL	**Kabul**	**26.69**	**22**	P	**P**	**08 22 26.5**	**+1.0**
KBL	**Kabul**	**26.69**	**22**	P	**P**	**08 22 26.5**	**+1.0**
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
OPO	**Ambohidratompo**	**30.08**	**200**	LR	LR	08 32 26.4	
	comp=Z,281nm,19.7s,baz=186,slow=31						
MARD	**Mardin**	**31.20**	**334**	P	**P**	**08 23 07.6**	**+2.0**
MARD				IAmb	IAmb	08 23 11.0	
	comp=Z,17nm,1.1s						
EVN	**Everest**	**32.86**	**53**		**P**	**08 23 20.6**	**-0.3**
KOPT	**Kop Dagi**	**33.60**	**336**	P	**P**	**08 23 28.0**	**+1.1**
KOPT				IAmb	IAmb	08 23 42.4	
	comp=Z,14nm,0.8s						
KSH	**Kashi**	**33.76**	**26**	P	**P**	**08 23 24.6**	**-3.4**
KSH				pmax	pmax		
	comp=Z,28nm,1.1s						
KSH				LR	LR		
	comp=Z,440nm,11.7s						
KSH				LR	LR		
	comp=Z,450nm,11.3s						
KSH				LR	LR		
	comp=Z,700nm,17.5s						
MAK	**Makhachkala**	**34.08**	**347**	*c i*P	P	08 23 24.0	-6.5
MAK				*e*S	S	08 28 46.0	-10
MAK				pmax	pmax		
	comp=Z,156nm,1.6s						
MAK				MLR	MLR		
	comp=Z,317nm,14.0s						
KK31	**Karatay Array**	**34.96**	**17**	P	**P**	**08 23 39.2**	**+1.0**
KK31	**Karatay Array**	**34.96**	**17**	P	**P**	**08 23 39.2**	**+1.0**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	**Karatay Array**	**34.96**	**17**		**P**	**08 23 39.7**	**+1.5**
KKAR	**Karatay Array**	**34.96**	**17**	P	**P**	**08 23 39.7**	**+1.5**
BRDH	**Bariadhala**	**35.01**	**64**	LR	LR	08 37 55.2	
	comp=Z,362nm,18.0s,baz=265,slow=36						
NEUR	**Neytrino**	**35.66**	**341**	⇑*e*P	**P**	**08 23 46.5**	**+2.0**
AAK	**Ala-Archa**	**35.83**	**22**	P	**P**	**08 23 46.9**	**+1.0**
AAK				IAmb	IAmb	08 23 51.2	
	comp=Z,14nm,1.2s						
AAK	**Ala-Archa**	**35.83**	**22**	⇓*e*P	**P**	**08 23 47.7**	**+1.8**
AAK				pmax	pmax		
	comp=Z,14nm,1.2s						
KBZ	**Khabaz**	**36.02**	**342**	P	**P**	**08 23 48.0**	**+0.7**
	comp=Z,5.0nm,1.0s,baz=174,slow=8.7,SNR=7.2						
KBZ				LR	LR	08 40 35.9	
	comp=Z,329nm,18.4s,baz=258,slow=40						
	comp=Z,5.0nm,1.0s						
KBZ	**Khabaz**	**36.02**	**342**	⇓*e*P	**P**	**08 23 47.5**	**+0.2**
SHA1	**Shidzhatmaz**	**36.11**	**342**	*de*P	**P**	**08 23 49.3**	**+1.0**
BOOM	**Boomskoye usch**	**36.24**	**23**		**P**	**08 23 49.2**	**-0.3**
BOOM				IAmb	IAmb	08 23 54.3	
	comp=Z,18nm,1.2s						
BOOM	**Boomskoye usch**	**36.24**	**23**	P	**P**	**08 23 49.2**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,18nm,1.2s						
KIV	**Kislovodsk**	**36.29**	**342**	P	**P**	**08 23 50.9**	**+1.1**
KIV	**Kislovodsk**	**36.29**	**342**	*e*P	**P**	**08 23 50.3**	**+0.5**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,192nm,16.0s						
BR131	**Keskin Array S**	**36.53**	**328**	P	**P**	**08 23 52.5**	**+0.5**
BR131	**Keskin Array S**	**36.53**	**328**	⇑*e*P	**P**	**08 23 52.1**	**+0.2**
BRTR	**Keskin Array B**	**36.53**	**328**	P	**P**	**08 23 53.0**	**+1.1**
	comp=Z,3.1nm,0.9s,baz=151,slow=8.1,SNR=12						
	comp=Z,3.1nm,0.9s						
BRTR	**Keskin Array B**	**36.53**	**328**		**P**	**08 23 52.9**	**+1.0**
BRTR	**Keskin Array B**	**36.53**	**328**	*ce*P	**P**	**08 23 54.5**	**+2.5**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ELL	**Elmali**	**36.59**	**321**	P	**P**	**08 23 53.6**	**+1.1**
ELL				IAmb	IAmb	08 23 57.4	
	comp=Z,31nm,1.3s						
ELL	**Elmali**	**36.59**	**321**	P	**P**	**08 23 53.6**	**+1.1**
ELL				pmax	pmax		
	comp=Z,31nm,1.3s						
VSLR	**Vesyoloye**	**36.74**	**339**	⇑*e*P	**P**	**08 23 53.1**	**-0.4**
VSLR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SOC	**Sochi**	**36.96**	**338**	*e*P	**P**	**08 23 54.1**	**-1.2**
SOC				*e*		08 25 18.3	
SOC				*e*PPP	PPP	08 25 36.8	
SOC				*e*S	**S**	**08 29 40.1**	**-0.5**
SOC				*e*SS	**SnSn**	**08 32 04.6**	**-8.9**
SOC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SOC				MLR	MLR		
	comp=Z,361nm,12.0s						
ILGA	**Ilgaz**	**37.49**	**330**	IAmb	IAmb	08 24 09.0	
	comp=Z,14nm,1.1s						
LSZ	**Lusaka**	**38.36**	**230**	LR	LR	08 40 03.1	
	comp=Z,224nm,18.4s,baz=36,slow=36						
MANT	**Manisa**	**38.53**	**322**	IAmb	IAmb	08 24 11.8	
	comp=Z,30nm,1.8s						
MLSI	**Meulaboh, Aceh**	**38.95**	**95**	P	**P**	**08 24 12.3**	**-0.2**
IDI	**Anoyia**	**39.02**	**315**	P	**P**	**08 24 14.6**	**+1.7**
IDI				IAmb	IAmb	08 24 17.7	
	comp=Z,40nm,1.2s						
AB31	**Akbulak array**	**39.28**	**2**	IAmb	IAmb	08 24 18.7	
	comp=Z,27nm,1.1s						
ABKAR	**Akbulak array**	**39.28**	**2**	P	**P**	**08 24 15.8**	**+1.0**
SIM	**Simferopol'**	**40.33**	**334**	*e*P	**P**	**08 24 26.2**	**+2.6**
SIM				*e*S	**S**	**08 30 31.7**	**+0.3**
SIM				pmax	pmax		
	comp=Z,58nm,0.6s						
SIM				smax	smax		
	comp=E,84nm,15.1s						
CMAR	**Chiang Mai Arr**	**40.95**	**73**	P	**P**	**08 24 30.2**	**+1.1**
	comp=E,1.6nm,0.4s,baz=268,slow=8.2,SNR=25						
CMAR				LR	LR	08 41 36.5	
	comp=E,60nm,18.2s,baz=265,slow=36						
CMAR	**Chiang Mai Arr**	**40.95**	**73**	P	**P**	**08 24 30.0**	**+0.8**
CHTO	**Chiang Mai**	**40.99**	**73**	P	**P**	**08 24 29.8**	**+0.3**
CHTO	**Chiang Mai**	**40.99**	**73**	P	**P**	**08 24 29.8**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,15nm,1.4s						
MAKZ	**Makanchi**	**42.24**	**25**	P	**P**	**08 24 39.8**	**+0.5**
MAKZ	**Makanchi**	**42.24**	**25**	⇑P	**P**	**08 24 39.5**	**+0.2**
MK31	**Makanchi Array**	**42.36**	**25**	*de*P	**P**	**08 24 40.6**	**+0.3**
MKAR	**Makanchi Array**	**42.36**	**25**	P	**P**	**08 24 39.7**	**-0.6**
	comp=Z,3.5nm,0.9s,baz=219,slow=9.2,SNR=18						
	comp=Z,3.5nm,0.9s						
MKAR	**Makanchi Array**	**42.36**	**25**	P	**P**	**08 24 40.6**	**+0.3**
MKAR	**Makanchi Array**	**42.36**	**25**	*ce*P	**P**	**08 24 40.5**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIRR	**Tirgusor**	**42.64**	**329**	IAmb	IAmb	08 24 45.2	
	comp=Z,21nm,1.2s						
TIRR	**Tirgusor**	**42.64**	**329**	⇑P	**P**	**08 24 42.9**	**+0.3**
TIRR	**Tirgusor**	**42.64**	**329**	P

ARR	Arges	45.22	327	⇓P		P	08 25 03.8	+0.4
DOPR	Dopca	45.23	328	⇓P		P	08 25 03.6	+0.2
SORM	Soroca	45.33	333	⇑P		P	08 25 03.0	-1.1
SORM	Soroca	45.33	333	⇑P		P	08 25 03.0	-1.1
QNGWA	Qangwa	46.25	231			P	08 25 13.4	+1.5
ARTI	Arti	46.38	1	P		P	08 25 12.2	0.0
ARTI	Arti	46.38	1*c*	*i* P		P	08 25 12.6	+0.3
ARTI							08 26 51.5	
ARTI				S		S	08 32 02.3	+2.7
ARTI				pmax		pmax		
	comp=Z,21nm,1.2s							
BURAR	Bucovina Array	46.44	330			P	08 25 13.2	+0.2
BURAR	Bucovina Array	46.44	330	⇑P		P	08 25 13.4	+0.4
BURAR	Bucovina Array	46.44	330	⇑P		P	08 25 13.4	+0.4
BUR08	Bucovina Ar. S	46.47	330	IAmb		IAmb	08 25 19.3	
	comp=Z,5.6nm,0.8s							
LBTB	Lobatse	46.63	221	LR		LR	08 42 31.6	
	comp=Z,210nm,20.0s,baz=42,slow=33							
LBTB	Lobatse	46.63	221	P		P	08 25 15.5	+0.7
LBTB	Lobatse	46.63	221	P		P	08 25 15.5	+0.7
LBTB				pmax		pmax		
	comp=Z,18nm,1.0s							
DGZ	Jazzator, Alta	46.79	26	⇓*e*P		P	08 25 16.0	+0.1
DGZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
MARR	Marisel-Cluj	46.88	328	⇑P		P	08 25 17.9	+1.4
AKASG	Malin Array Be	46.88	336	P		P	08 25 14.8	-1.5
	comp=Z,3.3nm,0.8s,baz=137,slow=7.2,SNR=14							
	comp=Z,3.3nm,0.8s							
AKASG	Malin Array Be	46.88	336	*i* P		P	08 25 14.3	-2.0
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AKBB	Malin Array Si	46.88	336	P		P	08 25 14.9	-1.4
AKBB				IAmb		IAmb	08 25 18.7	
	comp=Z,10nm,1.0s							
AKBB	Malin Array Si	46.88	336	⇓*e*P		P	08 25 15.6	-0.7
KIEV	Kiev	46.89	336	P		P	08 25 15.5	-0.9
KIEV				IAmb		IAmb	08 25 18.7	
	comp=Z,9.4nm,1.0s							
KIEV	Kiev	46.89	336	⇑P		P	08 25 16.0	-0.3
KIEV	Kiev	46.89	336	⇑P		P	08 25 16.0	-0.3
BZS	Buzias	47.02	326	⇓P		P	08 25 17.0	-0.5
BZS	Buzias	47.02	326	P		P	08 25 17.0	-0.5
GRTLG	Ghanzi	47.31	229	IAmb		IAmb	08 25 24.7	
	comp=Z,14nm,1.1s							
KGCAE	Kacgae	47.51	226			P	08 25 22.9	+1.1
GTA	Gaotai	47.71	45	*e*P		P	08 25 24.0	+0.8
GTA				pmax		pmax		
	comp=Z,4.0nm,1.4s							
OBN	Obninsk	48.05	344	*e*P		P	08 25 25.9	+0.6
OBN				pmax		pmax		
	comp=Z,9.0nm,1.1s							
MOS	Moscow	48.33	345	*e*P		P	08 25 25.3	-2.2
MOS				*e*			08 25 33.9	
TSUM	Tsumeb	48.86	234	LR		LR	08 45 11.4	
	comp=Z,224nm,21.6s,baz=100,slow=35							
KIRV	Kirov	48.97	354	⇑*e*P		P	08 25 33.5	+1.2
ZAA0	Zalesovo Array	49.04	21	IAmb		IAmb	08 25 36.1	
	comp=Z,13nm,0.9s							
ZALV	Zalesovo Beam	49.04	21	P		P	08 25 32.8	-0.3
	comp=Z,14nm,0.9s,baz=227,slow=7.9,SNR=25							
ZALV				LR		LR	08 47 59.3	
	comp=Z,112nm,20.3s,baz=288,slow=38							
	comp=Z,14nm,0.9s							
KOOLE	Kule	49.05	228	IAmb		IAmb	08 25 45.4	
	comp=Z,11nm,0.9s							
LZDM	Lanzhou Array	49.18	51	LR		LR	08 46 06.9	
	comp=Z,202nm,20.6s,baz=215,slow=36							
LZH	Lanzhou	49.34	51	*e*P		P	08 25 35.3	-0.5
LZH				sP		pwP	08 25 42.0	-0.9
LZH				pmax		pmax		
	comp=Z,20nm,1.3s							
LZH				LR		LR		
	comp=Z,350nm,14.8s							
LZH				LR		LR		
	comp=Z,360nm,15.1s							
LZH				LR		LR		
	comp=Z,350nm,14.8s							
BOSA	Boshof	49.39	218	P		P	08 25 36.5	+0.4
	comp=Z,5.7nm,0.6s,baz=57,slow=7.0,SNR=13							
	comp=Z,5.7nm,0.6s							
BOSA	Boshof	49.39	218	P		P	08 25 36.9	+0.8
BOSA				IAmb		IAmb	08 25 45.3	
	comp=Z,16nm,1.0s							
PPBI	Pangkal Pinang	49.85	101	P		P	08 25 42.0	+2.2
MNK	Minsk	50.34	338	*i* P		P	08 25 42.1	-0.8
	comp=E,26nm,0.8s							
MNK				*i* P		P	08 25 42.1	-0.8
	comp=N,20nm,0.7s							
MNK				*i* P		P	08 25 42.1	-0.8
	comp=Z,15nm,0.8s,baz=140							
MNK				*i* PcP		PcP	08 27 00.3	-1.2
MNK				*i* PP		PP	08 27 37.8	-0.6
MNK				*i* PPP		PPP	08 28 33.4	
MNK				*i* S		S	08 32 56.2	+0.5
MNK				*i* SS		SS	08 36 17.2	-12
MNK				*i* SSS		SSS	08 38 12.5	
MNK				*i* LQ		LQ	08 43 54.8	
MNK				*i* LR		LR	08 46 10.0	
MNK				*i* LRM		MLR	08 47 54.5	
	comp=Z,193nm,10.5s							
MNK				*i* LRM		MLR	08 48 46.9	
	comp=N,137nm,12.8s							
MNK				*i* LRM		MLR	08 48 47.9	
	comp=E,232nm,13.0s							
MNK	Minsk	50.34	338	*i* P		P	08 25 42.1	-0.8
MNK				*i*			08 27 00.2	
MNK				*i*			08 27 37.8	
MNK				*i* PPP		PPP	08 28 33.4	
MNK				*i* S		S	08 32 56.2	+0.5
MNK				pmax		pmax		
	comp=E,26nm,0.8s							
MNK				pmax		pmax		
	comp=Z,15nm,0.8s							
MNK				pmax		pmax		
	comp=N,20nm,0.7s							
MNK				MLR		MLR		
	comp=Z,193nm,11.0s							
MNK				MLR		MLR		
	comp=N,137nm,13.0s							
MNK				MLR		MLR		
	comp=E,232nm,13.0s							
NACGM	Naroch	51.06	338	*e*P		P	08 25 49.1	+0.8
	comp=Z,24nm,0.9s,baz=140							
RONA	Rosalia, Austr	51.21	325	*i* P		P	08 25 50.7	+1.0
	comp=Z,11nm,1.1s							
SOKA	Soboth	51.39	323	*e*P		P	08 25 52.3	+1.2
	comp=Z,11nm,1.3s							
ARSA	Arzberg	51.41	324	*e*P		P	08 25 52.7	+1.6
	comp=Z,4.5nm,0.9s							
CONA	Conrad Observa	51.58	325	*i* P		P	08 25 53.7	+1.3
	comp=Z,13nm,1.3s							
OBKA	Obir	51.59	323	*e*P		P	08 25 52.8	+0.2
	comp=Z,18nm,1.5s							
MORC	Moravsky Berou	51.73	328	IAmb		IAmb	08 25 54.9	
	comp=Z,19nm,1.4s							
MORC	Moravsky Berou	51.73	328	⇓P		P	08 25 51.7	-1.8
MORC	Moravsky Berou	51.73	328	*e*P		P	08 25 52.8	-0.7
MORC	Moravsky Berou	51.73	328	P		P	08 25 51.7	-1.8
MYKA	Terra Mystica	52.19	323	*e*P		P	08 25 56.9	-0.1
	comp=Z,3.2nm,1.3s							
KNGR	Kungurtug, Tuv	52.21	31	⇓*e*P		P	08 25 57.5	+0.4
KNGR				pmax		pmax		
	comp=Z,21nm,1.1s							
KLMR	Klimovskoe	52.58	349	*e*P		P	08 25 57.3	-2.2
KLMR				pmax		pmax		
	comp=Z,26nm,1.6s							
KBA	Koelnbreinsper	52.59	323	*e*P		P	08 25 57.9	-2.2
	comp=Z,8.2nm,1.2s							
XAN	Xi'an	52.71	55	⇓P		P	08 26 00.0	-1.1
XAN				pP		pP	08 26 02.8	-0.2
XAN				pmax		pmax		
	comp=Z,9.0nm,1.2s							
BIOA	Bad Ischl, Aus	52.73	324	*i* P		P	08 26 00.3	-0.6
	comp=Z,8.6nm,0.9s							
LESA	Schwarzleotal	53.16	323	*e*P		P	08 26 03.7	-0.4
	comp=Z,10.0nm,1.0s							
GERES	GERESS Array B	53.29	325	P		P	08 26 05.0	-0.2
	comp=Z,0.3nm,0.4s,baz=147,slow=7.7,SNR=2.0							
	comp=Z,0.3nm,0.4s							
GERES	GERESS Array B	53.29	325	P		P	08 26 05.0	-0.2
KHC	Kasperske Hory	53.51	325	⇑*e*P		P	08 26 06.6	-0.1
KHC				pmax		pmax		
	comp=Z,11nm,1.3s							
WTTA	Wattenberg	53.70	323	*i* P		P	08 26 07.6	-0.6
	comp=Z,10nm,0.9s							
WATA	Walderalm	53.77	323	*i* P		P	08 26 06.6	-2.1
	comp=Z,6.4nm,0.6s							
SQTA	Sankt Quirin	53.93	322	*i* P		P	08 26 08.6	-1.3
	comp=Z,18nm,1.2s							
MOTA	Moosalm	54.05	323	*i* P		P	08 26 09.5	-1.4
	comp=Z,9.3nm,0.7s							
FETA	Feichten	54.13	322	*i* P		P	08 26 11.5	+0.1
	comp=Z,6.6nm,0.9s							
RETA	Reutte	54.32	323	*i* P		P	08 26 11.9	-0.8
	comp=Z,9.3nm,1.0s							
TORD	Torodi Ar. Bea	54.73	279	P		P	08 26 17.2	+1.1
	comp=Z,2.5nm,0.3s,baz=80,slow=8.1,SNR=17							
	comp=Z,2.5nm,0.3s							
TORD	Torodi Ar. Bea	54.73	279	IAmb		IAmb	08 26 25.5	
	comp=Z,6.1nm,1.1s							
SUR	Sutherland	54.75	218	P		P	08 26 17.6	+1.4
DAVA	Damuels	54.76	322	*i* P		P	08 26 14.6	-1.4
	comp=Z,13nm,1.0s							
CLL	Collm	54.98	327	*e*P		P	08 26 17.0	-0.3
CLL	Collm	54.98	327	*e*P		P	08 26 17.0	-0.3
BTO	Baotou	55.41	47	*e*P		P	08 26 21.0	+0.2
BTO				S		S	08 34 05.6	-0.1
BTO				pmax		pmax		
	comp=Z,16nm,0.6s							
BTO				pmax		pmax		
	comp=Z,420nm,5.5s							
BTO				LR		LR		
	comp=Z,510nm,12.4s							
BTO				LR		LR		
	comp=Z,770nm,9.9s							
BTO				LR		LR		
	comp=Z,570nm,16.5s							
LYN	LuoYang	55.68	55	*e*P		P	08 26 23.6	+0.9
LYN				pP		pwP	08 26 28.4	-1.4
LYN				pmax		pmax		
	comp=Z,17nm,0.7s							
LYN				LR		LR		
	comp=Z,350nm,19.6s							
LYN				LR		LR		
	comp=Z,290nm,17.9s							
LYN				LR		LR		
	comp=Z,450nm,17.2s							
SONM	Songino Array	55.73	38	P		P	08 26 23.3	+0.3
	comp=Z,3.4nm,0.9s,baz=224,slow=4.0,SNR=6.6							
	comp=Z,3.4nm,0.9s							
SONM	Songino Array	55.73	38	IAmb		IAmb	08 26 24.3	
	comp=Z,7.8nm,1.3s							
SENIN	Lac Senin/Sane	55.97	320	IAmb		IAmb	08 26 26.4	
	comp=Z,11nm,0.8s							
TLY	Talaya	56.01	33	⇑*e*P		P	08 26 25.6	+0.9
TLY				pmax		pmax		
	comp=Z,6.0nm,1.3s							
ULN	Ulaanbaatar	56.14	38	*de*P		P	08 26 28.0	+2.0
ULN				pmax		pmax		
	comp=Z,4.0nm,1.0s							
FINES	FINESS Array B	56.38	342	P		P	08 26 25.6	-1.6
	comp=Z,3.5nm,0.9s,baz=204,slow=4.2,SNR=4.2							
	comp=Z,3.5nm,0.9s							
HHC	Hu-ho-hao-te	56.60	47	*e*P		P	08 26 30.8	+1.5
HHC				pmax		pmax		
	comp=Z,10.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,61nm,3.8s							
HFS	Hagfors	59.76	336	P		P	08 26 49.4	-1.5
	comp=Z,5.3nm,0.9s,baz=198,slow=9.3,SNR=4.4							
	comp=Z,5.3nm,0.9s							
NJ2	Nanjing	60.54	59	*e*P		P	08 26 57.8	+1.1
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
NOA	NORSAR Array B	61.29	336	P		P	08 26 59.1	-2.2
	comp=Z,1.4nm,0.8s,baz=119,slow=7.4,SNR=3.2							
DBIC	Dimbokro	61.76	272	P		P	08 27 05.5	+0.2
	comp=Z,3.4nm,0.6s,baz=118,slow=9.6,SNR=4.3							
	comp=Z,3.4nm,0.6s							
ESBB	Sonseca Array	61.87	310	P		P	08 27 06.2	+0.5
ESDC	Sonseca Array	61.87	310	P		P	08 27 06.1	+0.4
	comp=Z,5.1nm,0.6s,baz=87,slow=5.7,SNR=36							
	comp=Z,5.1nm,0.6s							
ESDC	Sonseca Array	61.87	310			P	08 27 05.8	+0.1
ESDC				IAmb		IAmb	08 27 15.5	
	comp=Z,6.0nm,1.1s							
NRIK	Noril'sk	62.45	12	P		P	08 27 08.2	-0.7
	comp=Z,5.0nm,0.8s,baz=201,slow=5.3,SNR=9.0							
	comp=Z,5.0nm,0.8s							
NRIK	Noril'sk	62.45	12	P		P	08 27 09.0	0.0
NRIK				IAmb		IAmb	08 27 11.8	
	comp=Z,5.3nm,0.9s							
NRIK	Noril'sk	62.45	12	⇓*e*P		P	08 27 09.5	+0.5
NRIK				pmax		pmax		
	comp=Z,6.0nm,0.9s							
ARCES	ARCESS Array B	63.02	348	P		P	08 27 11.2	-1.6
	comp=Z,1.6nm,0.8s,baz=149,slow=9.7,SNR=2.5							
	comp=Z,1.6nm,0.8s							
KAPI	Kappang	63.72	101	LR		LR	08 53 17.0	
	comp=Z,78nm,18.3s,baz=273,slow=34							
HILR	Hailar Array B	64.61	40	P		P	08 27 24.1	+0.4
	comp=Z,3.2nm,0.7s,baz=243,slow=6.5,SNR=5.4							
	comp=Z,3.2nm,0.7s							
EKA	Eskdalemuir Ar	65.43	327	P		P	08 27 27.7	-1.2
	comp=Z,0.9nm,0.5s,baz=117,slow=6.2,SNR=3.5							
	comp=Z,0.9nm,0.5s							
KSRS	Korea Array	68.48	54	P		P	08 27 47.1	-1.5
	comp=Z,1.8nm,0.8s,baz=267,slow=6.4,SNR=6.7							
	comp=Z,1.8nm,0.8s							
HEH	HeiHe	69.59	40	*e*P		P	08 27 54.4	-0.9
HEH				pmax		pmax		
	comp=Z,9.0nm,1.1s							
JNU	Nakatsue	70.73	58	P		P	08 28 01.5	-1.2
SPITS	Spitsbergen Ar	71.33	352	P		P	08 28 02.7	-2.7
	comp=Z,5.4nm,0.7s,baz=128,slow=6.4,SNR=6.7							
YAK	Yakutsk	72.95	28	*de*P		P	08 28 14.0	-1.4
YAK				pmax		pmax		
	comp=Z,24nm,1.0s							
TIXI	Tiksi	74.81	18	⇑*e*P		P	08 28 25.1	-1.0
TIXI				pmax		pmax		
	comp=Z,11nm,2.5s							
MJAR	Matsushiro Arr	76.70	55	P		P	08 28 38.0	+0.3
	comp=Z,2.2nm,0.8s,baz=281,slow=7.2,SNR=4.3							
	comp=Z,2.2nm,0.8s							
MJAR	Matsushiro Arr	76.70	55	IAmb		IAmb	08 29 41.4	
	comp=Z,5.5nm,1.1s							
MJAR	Matsushiro Arr	76.70	55	P		P	08 28 38.0	+0.3
DBG	Daneborg	77.22	344	*i* P		P	08 28 40.4	+0.6
DAG	Danmarks Havn	77.27	347	*i* P		P	08 28 39.0	-1.0
DAG				*i* P		pP	08 28 39.5	-2.5
DAG				IAmb		IAmb	08 28 40.4	
	comp=Z,7.7nm,0.9s							
NOR	Nord	77.97	352	*i* P		P	08 28 43.1	-0.8
ASAJ	Asahikawa	79.65	47	LR		LR	09 04 25.1	
	comp=Z,112nm,20.7s,baz=350,slow=36							
WRA	Warramunga Arr	81.16	112	P		P	08 28 59.4	-2.9
	comp=Z,4.7nm,1.2s,baz=301,slow=4.0,SNR=5.7							
	comp=Z,4.7nm,1.2s							
WRA	Warramunga Arr	81.16	112	P		P	08 29 01.4	-0.9
WRA	Warramunga Arr	81.16	112	*i* P		P	08 29 01.6	-0.8
WRA				pmax		pmax		
	comp=Z,3.0nm,1.1s							
WB0	Warramunga Arr	81.16	112	P		P	08 29 02.3	-0.1
WB0				IAmb		IAmb	08 31 30.5	
	comp=Z,20nm,1.7s							
WR8	Warramunga Arr	81.31	112	P		P	08 29 01.6	-1.6
WR8				IAmb		IAmb	08 29 10.9	
	comp=Z,10nm,1.4s							
ASAR	Alice Springs	81.67	116	P		P	08 29 01.6	-3.4
	comp=Z,0.9nm,0.8s,baz=290,slow=4.7,SNR=6.8							
	comp=Z,0.9nm,0.8s							
AS31	Alice Springs	81.68	116	P		P	08 29 05.0	-0.1
SUMG	Summit	82.42	342	*i* P		P	08 29 11.4	+2.9
NEEM	North Greenlan	84.38	348	*i* P		P	08 29 18.5	+0.1
NEEM				IAmb		IAmb	08 29 19.2	
	comp=Z,10.0nm,0.7s							
SNAA	Sanae	90.46	196	LR		LR	09 03 43.3	
	comp=Z,37nm,19.5s,baz=15,slow=31							
QSPA	South Pole Qui	99.84	180	LR		LR	09 10 04.5	
	comp=Z,105nm,18.5s,baz=252,slow=32							
PDAR	Pinedale Array	126.27	348	PKP		PKPdf	08 35 48.9	-0.7
	comp=Z,1.7nm,0.8s,baz=58,slow=3.1,SNR=8.7							
NVAR	Mina Array Bea	131.76	356	PKP		PKPdf	08 36 00.5	+0.3
	comp=Z,0.9nm,0.7s,baz=24,slow=2.3,SNR=7.6							
TXAR	Lajitas Array	136.99	336	PKP		PKPdf	08 36 10.1	+0.1
	comp=Z,1.2nm,0.9s,baz=151,slow=2.9,SNR=4.7							

*SJA **12** 08:18:22.3±0.8, 36.°16S×71.°81W, h82km±4km, ML3.7, MW3.6*
*GUC **12** 08:18:24.3±0.8, 36.°17S×71.°72W, h82km±3km, ML3.7*

ISC 12 08:18:23.9±1.2, **36.°15S**±0.°03×**71.°83W**±0.°05, **h79**km±9km, **n38**, σ**1°25/64**, **Central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ML02	Panimavida	0.51	41	*e*P		Pn	08 18 37.8	+0.1
ML02				*i* S		Sn	08 18 47.9	+0.1
ML02				IAML			08 18 48.7	
	comp=E,10μm,0.2s							
ML02	Panimavida	0.51	41	*e*P		Pn	08 18 37.0	-0.6
ML02				*e*S		Sn	08 18 48.3	+0.5
ML02				IAML			08 18 53.0	
	comp=Z,4μm,0.3s							
BI02	San Fabin de	0.68	139	*e*P		Pn	08 18 38.9	-0.5
BI02				*i* S		Sn	08 18 50.3	-0.6
BI02				IAML			08 18 52.8	
	comp=N,1μm,0.2s							
BI02	San Fabin de	0.68	139	*e*P		Pn	08 18 38.3	-1.1
BI02				IAML			08 18 52.1	
	comp=Z,1μm,0.1s							
GO05	Hualane	1.14	356	*e*P		Pn	08 18 45.4	+0.8
GO05				*i* S		Sn	08 19 01.4	+1.2
GO05				IAML			08 19 02.8	
	comp=N,2μm,0.2s							
GO05	Hualane	1.14	356	*e*P		Pn	08 18 44.7	0.0
GO05				IAML			08 19 02.5	
	comp=Z,1μm,0.3s							
BI05	Punta Hualpn	1.25	241	*e*P		Pn	08 18 46.7	+0.8
BI05				*i* S		Sn	08 19 04.1	+1.7
BI05				IAML			08 19 04.9	
	comp=E,4μm,0.2s							
BI05	Punta Hualpn	1.25	241	*e*P		Pn	08 18 46.1	+0.2
BI05				IAML			08 19 05.6	
	comp=Z,1μm,0.2s							
BO02	Sierra Bellavi	1.60	33	*e*P		Pn	08 18 50.9	+0.3
BO02				*i* S		Sn	08 19 11.0	+0.2
BO02				IAML			08 19 12.3	
	comp=N,3μm,0.3s							
BO02	Sierra Bellavi	1.60	33	*e*P		Pn	08 18 45.4	-5.2
BO02				*e*P			08 18 50.4	
BO02				*e*S		Sn	08 19 09.7	-1.1
BO02				IAML			08 19 12.7	
	comp=Z,2μm,0.2s							
BO03	Pichilemu	1.66	356	*e*P		Pn	08 18 51.5	+0.3
BO03				*i* S		Sn	08 19 12.7	+0.8
BO03				IAML			08 19 16.2	
	comp=N,744nm,0.4s							
BO01	Tunca	1.86	19	*e*P		Pn	08 18 54.0	+0.1
BO01				*i* S		Sn	08 19 16.1	-0.5
BO01				IAML			08 19 18.0	
	comp=N,860nm,0.3s							
BO01	Tunca	1.86	19	*e*P		Pn	08 18 53.9	+0.1
BO01				*e*S		Sn	08 19 16.5	-0.2
BO01				IAML			08 19 16.9	
	comp=Z,412nm,0.3s							
BO01				*e*S			08 19 16.9	
EDS3	Malargue	2.01	80	*e*P		Pn	08 18 56.5	+0.5
MT01	Popeta	2.33	12	*e*P		Pn	08 19 00.3	+0.1
MT01				*i* S		Sn	08 19 27.5	-0.5
MT01				IAML			08 19 29.6	
	comp=E,904nm,0.1s							
MT01	Popeta	2.33	12	*e*P		Pn	08 19 00.4	+0.1
MT01				*e*S		Sn	08 19 28.1	+0.2
MT01				IAML			08 19 34.0	
	comp=Z,377nm,0.5s							
BO04	La Punta	2.38	25	*e*P		Pn	08 19 01.0	+0.1
BO04				*i* S		Sn	08 19 28.9	-0.3
BO04				IAML			08 19 34.2	
	comp=E,255nm,0.2s							
LMEL	Las Melosas	2.66	31	*e*P		Pn	08 19 05.6	+0.9
LMEL				*i* S		Sn	08 19 35.9	-0.2
LMEL				IAML			08 19 41.0	
	comp=N,343nm,0.2s							
LMEL	Las Melosas	2.66	31	*e*P		Pn	08 19 05.2	+0.5
LMEL				*e*S		Sn	08 19 39.4	+3.3
LMEL				IAML			08 19 41.9	
	comp=Z,176nm,0.1s							
LC01	Cunco	2.74	181	*e*P		Pn	08 19 05.8	+0.1
MT03	Universidad Ad	2.87	23	*e*P		Pn	08 19 07.7	+0.2
MT03				*e*S		Sn	08 19 42.6	+1.6
MT03				IAML			08 19 47.9	
	comp=Z,262nm,0.1s							
MT05	Renca	2.90	18	*e*P		Pn	08 19 08.1	+0.2
MT05				*e*S		Sn	08 19 43.7	+2.0
MT05				IAML			08 19 50.9	
	comp=Z,163nm,0.5s							
MT02	Curacav	2.94	11	*e*P		Pn	08 19 08.0	-0.4
MT02				*i* S		Sn	08 19 41.7	-1.0
MT02				IAML			08 19 45.7	
	comp=E,144nm,0.5s							
MT02	Curacav	2.94	11	*e*P		Pn	08 19 08.1	-0.4
MT02				*e*P			08 19 08.2	
MT02				*e*S		Sn	08 19 42.6	-0.1
MT02				IAML			08 19 50.5	
	comp=Z,148nm,0.4s							
MT04	Ro Olivares	3.07	27	*e*P		Pn	08 19 10.9	+0.4
MT04				*e*S		Sn	08 19 47.8	+1.5
MT04				IAML			08 19 49.6	
	comp=Z,106nm,0.2s							
RFA	San Rafael	3.07	64	*e*P		Pn	08 19 10.4	+0.2
MT08	Bocatoma Ro	3.08	29	*e*P		Pn	08 19 11.4	+0.8
MT08				*e*S		Sn	08 19 45.4	-1.1
VA01	Torpederas	3.12	3	*e*P		Pn	08 19 10.0	-0.9
VA01				*e*S		Sn	08 19 40.4	-6.7
VA01				IAML			08 19 46.2	
	comp=Z,106nm,0.5s							
GO06	Curarrehue	3.44	175	*e*P		Pn	08 19 14.9	-0.3
LR03	Panguipulli	3.50	187	*e*P		Pn	08 19 15.7	-0.3
LR03				*e*S		Sn	08 19 56.5	+0.3
LR03				IAML			08 19 58.9	
	comp=Z,149nm,0.3s							
VA03	San Esteban	3.54	18	*e*P		Pn	08 19 16.5	-0.2
VA03				*e*S		Sn	08 19 58.3	+0.8
VA03				IAML			08 19 59.5	
	comp=Z,215nm,0.2s							
LR04	Corral	3.93	198	*e*P		Pn	08 19 19.7	-2.0
LR04				IAML			08 20 06.9	
	comp=Z,197nm,0.3s							
LR05	Currie	4.08	182	*e*P		Pn	08 19 24.6	+0.8
PLCA	Paso Flores	4.68	168	*e*P		Pn	08 19 32.3	+0.1
RTLS	Leoncito	4.83	27	*e*P		Pn	08 19 34.9	+0.6
R

PRZ	Przheval'sk	0.94	119	⇑	*e*P	Pn	08 19 10.3	+0.1	
PRZ				⇑	*e*S	Sn	08 19 22.9	-0.5	
KST	Kastek	0.98	276		*e*P	Pb	08 19 09.7	-0.5	
	0.9nm,0.2s								
KST					*e*S	Sb	08 19 22.6	-0.5	
	2.9nm,0.6s								
ULHL	Ulahol	1.05	228	⇑	*i*P	Pb	08 19 11.1	-0.3	
ULHL				⇑	*i*S	Sb	08 19 24.9	-0.1	
BOOM	Boomskoye usch	1.10	246	⇑	*i*P	Pb	08 19 11.9	-0.3	
BOOM				⇑	*i*S	Sb	08 19 26.2	-0.2	
KPKS	Kokpek	1.14	63		*e*P	Pg	08 19 13.3	0.0	
KPKS					*e*S	Sg	08 19 28.8	+0.6	
KPKS	Kokpek	1.14	63		*e*P	Pg	08 19 13.3	0.0	
	0.5nm,0.3s								
KPKS					*e*S	Sg	08 19 28.8	+0.6	
	1.7nm,0.3s								
TARG	Taragay, Kyrgy	1.28	163	⇑	*i*P	Pn	08 19 14.9	-0.1	
TARG				⇑	*i*S	Sg	08 19 32.4	-0.3	
ARXS	Arharly	1.32	17		*e*P	Pb	08 19 16.0	+0.1	
	1.0nm,0.2s								
ARXS					*e*S	Sg	08 19 33.4	-0.6	
	5.4nm,0.3s								
JNKS	Jany-Kuch	2.25	214	⇑	*e*P	Pn	08 19 29.1	+0.8	
JNKS				⇑	*e*S	Sn	08 19 57.2	+1.2	

IDC **12** *08:23:53.9*±*0.9, 60°.85S*×*51°.09W, h0km, mb3.9/6, mbtmp3.9/7, ML3.8/1, MS3.2/3, Error ellipse: s-maj=38.1km s-min=20.8km az=65.0*

NEIC **12** *08:23:56.2*±*1.6, 60°.9S*±*0°.1*×*51°.2W*±*0°.2, h10km*±*1km, mb4.3/10, Error ellipse: s-maj=17.3km s-min=13.0km az=2.0*

ISC 12 08:23:55.9±0.6,**60°.83S**±0°.08×**51°.1W**±0°.1,**h10**km,**n35**, σ1**§38**/**27**,**mb4.1**/10,**MS2.9**/3,**4D**,**Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ESPZ	**Base Esperanza**	**3.79**	**225**			**Pn**	**08 24 52.2**	**-2.1**
PMSA	**Palmer Station**	**7.13**	**231**	Pn		**Pn**	**08 25 39.8**	**-0.3**
	1.5nm,0.3s,baz=77,slow=14,SNR=1.6							
	4.3nm,0.5s							
SMAI	**San Martin Ant**	**10.04**	**216**	Pn		**Pn**	**08 26 21.0**	**+1.2**
BELA	**Belgrano 2**	**17.93**	**169**	P		**P**	**08 28 05.5**	**0.0**
VNA3	**Neumayer Olymp**	**19.30**	**140**	⇓P		**P**	**08 28 19.0**	**-1.6**
	comp=Z,5.3nm,0.8s							
VNA1	**Neumayer--Stat**	**19.66**	**138**	⇓P		**P**	**08 28 22.6**	**-1.8**
	comp=Z,1.9nm,0.5s							
VNA2	**Neumayer--Watz**	**19.98**	**138**	⇓P		**Pn**	**08 28 28.6**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=301,slow=15							
SNAA	**Sanae**	**21.53**	**140**	⇓P		**P**	**08 28 45.3**	**+0.6**
	comp=Z,161nm,1.2s							
SNAA	**Sanae**	**21.53**	**140**	P		**P**	**08 28 44.2**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=303,slow=12,SNR=6.1							
	comp=Z,1.7nm,0.7s							
SNAA	**Sanae**	**21.53**	**140**	P		**P**	**08 28 45.4**	**+0.6**
SNAA				IAmb		IAmb	08 28 52.9	
	comp=Z,17nm,1.3s							
PLCA	**Paso Flores**	**23.42**	**320**	P		**P**	**08 29 04.8**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=147,slow=12,SNR=4.2							
PLCA				LR		LR	08 38 10.8	
	comp=Z,42nm,19.0s,baz=107,slow=37							
	comp=Z,2.6nm,1.0s							
PLCA	**Paso Flores**	**23.42**	**320**	IAmb		IAmb	08 29 05.6	
	comp=Z,11nm,1.4s							
TRQA	**Tornquist**	**23.81**	**338**	P		**P**	**08 29 10.0**	**+1.3**
TRQA				IAmb		IAmb	08 29 38.2	
	comp=Z,11nm,1.4s							
QSPA	**South Pole Qui**	**29.40**	**180**	P		**P**	**08 30 02.3**	**+3.2**
	comp=Z,2.4nm,1.0s,baz=162,slow=4.1,SNR=7.6							
QSPA	**South Pole Qui**	**29.40**	**180**	P		**P**	**08 30 01.6**	**+2.5**
QSPA				IAmb		IAmb	08 30 24.7	
	comp=Z,7.5nm,1.4s							
CPUP	**Villa Florida**	**34.75**	**350**	LR		LR	08 44 47.4	
	comp=Z,17nm,19.9s,baz=242,slow=36							
AC02	**Maricunga**	**36.14**	**332**	P		**P**	**08 30 59.4**	**+0.8**
AC02				IAmb		IAmb	08 31 00.4	
	comp=Z,3.4nm,0.7s							
AC01	**Pan de Azucar**	**37.15**	**330**	P		**P**	**08 31 06.2**	**-0.4**
AC01				IAmb		IAmb	08 31 07.3	
	comp=Z,4.5nm,0.8s							
MAW	**Mawson**	**43.19**	**149**	P		**P**	**08 31 57.0**	**+0.8**
	comp=Z,2.6nm,1.0s,baz=212,slow=8.1,SNR=2.8							
	comp=Z,2.6nm,1.0s							
BDFB	**Brasilia**	**45.18**	**4**	P		**P**	**08 32 12.7**	**-0.2**
	comp=Z,3.1nm,0.5s,baz=167,slow=1.2,SNR=4.7							
	comp=Z,3.1nm,0.5s							
LPAZ	**La Paz**	**46.15**	**337**	P		**P**	**08 32 21.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=187,slow=7.2,SNR=3.2							
LPAZ				LR		LR	08 52 45.5	
	comp=Z,68nm,20.2s,baz=64,slow=38							
	comp=Z,0.8nm,0.7s							
LPAZ	**La Paz**	**46.15**	**337**	P		**P**	**08 32 20.7**	**-0.4**
SUR	**Sutherland**	**53.59**	**92**	P		**P**	**08 33 17.8**	**+0.7**
H10S2	**ASCENSION HYDR**	**58.38**	**44**	T		T	09 37 25.0	
	baz=20,slow=74,SNR=9.7							
H10S3	**ASCENSION HYDR**	**58.38**	**44**	T		T	09 37 25.0	
	baz=200,slow=74,SNR=7.9							
H10N3	**ASCENSION HYDR**	**59.47**	**43**	T		T	09 38 47.6	
	baz=200,slow=75,SNR=11							
H10N1	**ASCENSION HYDR**	**59.48**	**43**	T		T	09 38 47.8	
	baz=200,slow=75,SNR=15							
H10N2	**ASCENSION HYDR**	**59.49**	**43**	T		T	09 38 48.9	
	baz=200,slow=75,SNR=18							
BOAV	**Boa Vista**	**63.47**	**349**	P		**P**	**08 34 26.5**	**+0.7**
ASAR	**Alice Springs**	**95.71**	**185**	P		**P**	**08 37 19.6**	**-2.2**
	comp=Z,0.4nm,0.9s,baz=194,slow=5.9,SNR=1.9							
	comp=Z,0.4nm,0.9s							
ILAR	**Eielson Array**	**143.99**	**314**	PKP		PKPbc	08 43 28.0	+0.2
	comp=Z,1.2nm,0.8s,baz=171,slow=2.8,SNR=8.3							
BVAR	**Borovoye Array**	**148.13**	**77**	PKPbc		**PKPbc**	**08 43 39.9**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=270,slow=3.9,SNR=4.0							
MKAR	**Makanchi Array**	**149.83**	**96**	PKPbc		**PKPbc**	**08 43 43.8**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=276,slow=2.3,SNR=5.8							
KURBB	**Kurchatov Arra**	**150.57**	**87**	PKPbc		**PKPbc**	**08 43 45.3**	**-1.4**
	comp=Z,1.4nm,0.9s,baz=228,slow=3.1,SNR=4.1							
KURK	**Kurchatov**	**150.68**	**87**			**PKPbc**	**08 43 45.3**	**-1.6**

DSN **12** *08:25:18.9*±*2.1, 27°.44N*×*57°.91E, h10km, ML4.2/12, Error ellipse: s-maj=28.6km s-min=19.4km az=143.0*

MOS **12** *08:25:18.6*±*1.1, 27°.10N*×*57°.86E, h10km, mb4.7/26, Error ellipse: s-maj=8.0km s-min=4.9km az=110.2*

IDC **12** *08:25:18.9*±*0.7, 27°.18N*×*57°.98E, h0km, mb4.4/31, mbtmp4.5/33, ML4.6/2, MS3.9/19, Error ellipse: s-maj=15.1km s-min=12.5km az=160.0*

OMAN **12** *08:25:20.0*±*0.1, 27°.24N*×*58°.07E, h10km, mb4.8/11, ml4.6/24, Error ellipse: s-maj=2.5km s-min=1.5km az=21.0*

BJI **12** *08:25:20.1, 27°.44N*×*57°.63E, h14km, mB5.1/8, mb4.6/26, Ms4.6/7, Ms7 4.4/8*

NEIC **12** *08:25:21.4*±*2.1, 27°.18N*±*0°.08*×*57°.81E*±*0°.07, h10km*±*1km, mb4.9/72, Error ellipse: s-maj=14.3km s-min=9.5km az=144.0*

THR **12** *08:25:22.1*±*0.0, 27°.19N*×*58°.10E, h14km*±*559km, mb4.6*

TEH **12** *08:25:23.0, 27°.06N*×*57°.95E, h60km*

ISC 12 08:25:21.4±1.5,**27°.12N**±0°.03×**57°.94E**±0°.03,**h13**km±9km, **n404**, σ1**§53**/405,**mb4.7**/117,**MS4.0**/25,**22C-13D**, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.29**	**285**	Pg		**Pb**	**08 25 46.6**	**+1.1**
GENO	**Geno**	**1.60**	**281**	Pg		**Pn**	**08 25 50.6**	**+1.0**
BANOM	**Banah**	**1.89**	**231**	P		**Pn**	**08 25 53.8**	**+0.3**
BANOM				S		**Sg**	**08 26 23.3**	**+1.0**
BANOM	**Banah**	**1.89**	**231**	*e*P		**Pn**	**08 25 54.3**	**+0.8**
	SNR=31							
BANOM				S		**Sb**	**08 26 20.9**	**+1.5**
SHME	**Shamm**	**1.93**	**237**	P		**Pb**	**08 25 56.1**	**-0.4**
	SNR=21							
SHME				S		**Sg**	**08 26 24.2**	**+0.7**
SHME	**Shamm**	**1.93**	**237**	*e*P		**Pn**	**08 25 54.5**	**+0.5**
	SNR=7.0							
MDH	**Madha**	**2.33**	**219**	P		**Pn**	**08 25 59.8**	**+0.2**
	SNR=7.2							
MDH				S		**Sn**	**08 26 29.3**	**+1.2**
MDH	**Madha**	**2.33**	**219**	P		**Pn**	**08 25 59.5**	**-0.1**
MASF	**Masafi**	**2.36**	**223**	P		**Pb**	**08 26 02.8**	**-1.1**
	SNR=9.5							
MASF				S		**Sb**	**08 26 33.6**	**+0.6**
MSFE	**Esma-Masafi**	**2.37**	**223**	*e*P		**Pn**	**08 26 02.4**	**+2.3**
	SNR=9.4							
UMQ	**Umm Al-Quwin**	**2.59**	**233**	P		**Pn**	**08 26 04.3**	**+1.3**
UMQ				S		**Sb**	**08 26 40.3**	**+0.9**
UOSS	**Minazif**	**2.67**	**216**	Pn		**Pn**	**08 26 04.4**	**+0.2**
UOSS	**Minazif**	**2.67**	**216**			**Pn**	**08 26 04.0**	**-0.1**
UOSS	**Minazif**	**2.67**	**216**	P		**Pn**	**08 26 04.4**	**+0.2**
UOSS				S		**Sn**	**08 26 36.9**	**+0.5**
NGRK	**Negar Kerman**	**2.73**	**337**	Pn		**Pn**	**08 26 06.9**	**+1.5**
CHBR	**Chabahar**	**2.74**	**123**	Pn		**Pn**	**08 26 05.5**	**+0.4**
CHBR	**Chabahar**	**2.74**	**123**	*e*Pn		**Pn**	**08 26 06.5**	**+1.4**
CHBR				IAML			08 26 51.8	
	comp=Z,1μm,1.0s							
CHMN	**Cheshme madani**	**2.76**	**353**	Pn		**Pn**	**08 26 07.0**	**+1.3**
HATD	**Hatta, Dubai**	**2.80**	**216**	P		**Pn**	**08 26 06.2**	**+0.2**
HATD				S		**Sb**	**08 26 46.1**	**+0.5**
HATD	**Hatta, Dubai**	**2.80**	**216**	P		**Pn**	**08 26 08.1**	**+2.1**
NAZ	**Nazwa, Dubai**	**2.95**	**225**	P		**Pn**	**08 26 11.4**	**+3.4**
	SNR=21							
NAZ				S		**Sb**	**08 26 48.8**	**-1.0**
NAZ	**Nazwa, Dubai**	**2.95**	**225**	*i* P		**Pn**	**08 26 10.9**	**+2.9**
	SNR=21							
ASHO	**Ashiyiah**	**2.96**	**215**	P		**Pn**	**08 26 11.4**	**+3.3**
	SNR=16							
ASHO				S		**Sb**	**08 26 48.8**	**-1.4**
ASHO	**Ashiyiah**	**2.96**	**215**	*i* P		**Pn**	**08 26 10.4**	**+2.3**
	SNR=11							
KRBR	**Kerman**	**3.04**	**340**	Pn		**Pn**	**08 26 11.0**	**+1.5**
KRBR	**Kerman**	**3.04**	**340**	*e*Pn		**Pn**	**08 26 12.4**	**+2.9**
KRBR				IAML			08 26 59.2	
	comp=Z,2μm,1.0s							
FAQ	**Al Faqa, Dubai**	**3.17**	**222**	P		**Pn**	**08 26 13.7**	**+2.7**
	SNR=9.0							
FAQ				S		**Sb**	**08 26 55.2**	**-0.9**
FAQ	**Al Faqa, Dubai**	**3.17**	**222**	*i* P		**Pn**	**08 26 12.8**	**+1.8**
	SNR=9.0							
LAR1	**LAR**	**3.21**	**281**	Pn		**Pn**	**08 26 12.7**	**+0.9**
SOHO	**SOHO**	**3.23**	**203**	P		**Pn**	**08 26 11.0**	**-0.8**
SOHO	**SOHO**	**3.23**	**203**	*i* P		**Pn**	**08 26 11.1**	**-0.8**
	SNR=17							
NGCH	**Negor - Chabah**	**3.36**	**121**	Pn		**Pn**	**08 26 14.5**	**+0.8**
NGCH	**Negor - Chabah**	**3.36**	**121**	P		**Pn**	**08 26 14.5**	**+0.8**
ASUD	**Al Ashush, Dub**	**3.42**	**224**	P		**Pn**	**08 26 18.1**	**+3.6**
	SNR=11							
ASUD				S		**Sb**	**08 27 01.5**	**-1.8**
ASUD	**Al Ashush, Dub**	**3.42**	**224**	*i* P		**Pn**	**08 26 16.8**	**+2.4**
	SNR=11							
KRM1	**Kerman Provinc**	**3.42**	**350**	Pn		**Pn**	**08 26 16.7**	**+1.9**
KHGB	**Koh Gabri**	**3.49**	**339**	Pn		**Pn**	**08 26 17.3**	**+1.6**
HOQ	**Hoqain**	**3.56**	**189**	Pn		**Pn**	**08 26 16.0**	**-0.5**
HOQ	**Hoqain**	**3.56**	**189**	P		**Pn**	**08 26 16.0**	**-0.5**
	SNR=19							
HOQ				S		**Sn**	**08 26 59.4**	**+0.9**
ALNE	**Al Ain**	**3.63**	**213**	P		**Pn**	**08 26 19.9**	**+2.4**
	SNR=17							
ALNE				S		**Sn**	**08 27 04.7**	**+4.5**
ALNE	**Al Ain**	**3.63**	**213**	*i* P		**Pn**	**08 26 19.7**	**+2.3**
	SNR=17							
AJN	**Ajban**	**3.68**	**227**	P		**Pn**	**08 26 19.9**	**+1.9**
AJN				S		**Sb**	**08 27 06.9**	**-4.0**
WSAR	**Wadi Sarin**	**3.91**	**171**	P		**Pn**	**08 26 21.8**	**+0.5**
WSAR				S		**Sn**	**08 27 06.8**	**-0.3**
ARQ	**Araqi**	**3.98**	**199**	P		**Pn**	**08 26 24.5**	**+2.3**
	SNR=22							
ARQ				S		**Sn**	**08 27 13.6**	**+4.8**
SRVN	**Saravan**	**3.98**	**85**	Pn		**Pn**	**08 26 22.6**	**+0.3**
SRVN	**Saravan**	**3.98**	**85**	*e*Pn		**Pn**	**08 26 22.9**	**+0.6**
SRVN				IAML			08 28 08.4	
	comp=Z,240nm,1.0s							
ZRDN	**Zarand Kerman**	**4.03**	**343**	Pn		**Pn**	**08 26 25.6**	**+2.6**
SMDO	**Samad**	**4.04**	**179**	P		**Pn**	**08 26 23.1**	**0.0**
	SNR=20							
SMDO				S		**Sn**	**08 27 12.1**	**+1.6**
JHRM	**Jahrom**	**4.10**	**291**	Pn		**Pn**	**08 26 25.4**	**+1.4**
LMD1	**Lamerd**	**4.26**	**274**	Pn		**Pn**	**08 26 27.2**	**+1.2**
BSY	**Bisya**	**4.41**	**189**	P		**Pn**	**08 26 29.9**	**+1.8**
	SNR=46							
BSY				S		**Sn**	**08 27 21.7**	**+2.4**
WBK	**Wadi Bani Khal**	**4.58**	**168**	Pn		**Pn**	**08 26 30.5**	**-0.1**
WBK	**Wadi Bani Khal**	**4.58**	**168**	P		**Pn**	**08 26 30.4**	**-0.2**
WBK				S		**Sn**	**08 27 22.4**	**-1.3**
NHDN	**Nehbandan**	**4.64**	**23**	Pn		**Pn**	**08 26 33.0**	**+1.6**
JMDO	**Jabal Madar**	**4.73**	**178**	P		**Pn**	**08 26 33.1**	**+0.6**
	SNR=15							
JMDO				S		**Sn**	**08 27 29.4**	**+2.1**
IBAF	**Bafgh**	**4.91**	**336**	Pn		**Pn**	**08 26 36.9**	**+1.8**
BSRN	**Basiran**	**4.94**	**12**	*e*Pn		**Pn**	**08 26 36.2**	**+0.7**
BSRN				IAML			08 28 07.2	
	comp=Z,400nm,1.0s							
MZWR	**Madinat Zayed**	**4.96**	**229**	P		**Pn**	**08 26 39.6**	**+3.9**
UMZA	**Um Al Zommool**	**5.06**	**210**	P		**Pn**	**08 26 37.7**	**+0.7**
UMZA				S		**Sn**	**08 27 36.2**	**+0.8**
JRN	**Qarnain Island**	**5.06**	**246**	P		**Pn**	**08 26 37.7**	**+0.6**
JRN				S		**Sn**	**08 27 35.9**	**+0.4**
JLN	**Jalan Bani Buh**	**5.12**	**165**	P		**Pn**	**08 26 37.5**	**-0.4**
SHI	**Shiraz**	**5.40**	**299**	Pn		**Pn**	**08 26 41.4**	**-0.4**
GHWR	**Ruwais**	**5.55**	**237**	S		**Sn**	**08 27 48.5**	**+1.1**
MZR	**Muzera**	**5.75**	**226**	P		**Pn**	**08 26 48.4**	**+1.8**
MZR				S		**Sn**	**08 27 54.7**	**+2.1**
ICHK	**Chekchek**	**5.96**	**330**	Pn		**Pn**	**08 26 51.3**	**+1.7**
TPRV	**Parvadeh(Tabas**	**5.99**	**350**	Pn		**Pn**	**08 26 51.9**	**+2.0**
YZKH	**Yazd**	**6.01**	**332**	*e*Pn		**Pn**	**08 26 52.0**	**+1.9**
YZKH				IAML			08 29 02.3	
	comp=Z,120nm,1.0s							
DSBU	**Dashti - Bushe**	**6.05**	**283**	Pn		**Pn**	**08 26 50.3**	**-0.4**
KAZ2	**Kazeron-Fars-I**	**6.06**	**296**	Pn		**Pn**	**08 26 50.7**	**-0.2**
MHTO	**MHTO**	**6.10**	**180**	P		**Pn**	**08 26 52.8**	**+1.4**
MHTO				S		**Sn**	**08 28 01.5**	**+0.3**
AFRZ	**Afriz**	**6.36**	**8**	Pn		**Pn**	**08 26 56.6**	**+1.6**
SHMA	**Al-Shehemyia**	**6.37**	**260**	P		**Pn**	**08 26 56.5**	**+1.4**
	SNR=18							
SHMA				S		**Sn**	**08 28 09.3**	**+1.6**
TRNA	**Turayna**	**6.50**	**250**	P		**Pn**	**08 26 57.4**	**+0.5**
	SNR=23							
TRNA				S		**Sn**	**08 28 14.0**	**+3.0**
	SNR=7.3							
TABS	**Tabas**	**6.55**	**354**	*e*Pn		**Pn**	**08 27 00.0**	**+2.4**
TABS				IAML			08 29 13.1	
	comp=Z,160nm,1.0s							
IRAM	**Ramesheh**	**6.73**	**315**	Pn		**Pn**	**08 27 01.3**	**+1.0**
KLNJ	**Kolanjah**	**6.77**	**306**	Pn		**Pn**	**08 27 01.3**	**+0.4**
SHRT	**Shahrakht**	**6.82**	**17**	Pn		**Pn**	**08 27 02.8**	**+1.5**
SHRT	**Shahrakht**	**6.82**	**17**	*i* P		**Pn**	**08 27 02.7**	**+1.5**
SHRT				IAML			08 29 23.8	
	comp=Z,110nm,1.0s							
SMRA	**Abu-Samra**	**6.83**	**251**	P		**Pn**	**08 27 02.2**	**+0.9**
SMRA				S		**Sn**	**08 28 18.9**	**0.0**
ANAR	**Anarak**	**7.06**	**330**	Pn		**Pn**	**08 27 06.5**	**+1.8**
DQM	**DQM**	**7.17**	**183**	P		**Pn**	**08 27 06.1**	**+0.1**
NASN	**Na'in**	**7.20**	**323**	*e*Pn		**Pn**	**08 27 08.1**	**+1.3**
NASN				IAML			08 29 19.6	
	comp=Z,56nm,1.0s							
IBRJ	**Brojen**	**7.53**	**311**	Pn		**Pn**	**08 27 12.4**	**+1.2**
IZEF	**Zefreh**	**7.54**	**321**	Pn		**Pn**	**08 27 12.2**	**+0.9**
TAPT	**Tabas- Tapeh t**	**7.77**	**355**	Pn		**Pn**	**08 27 16.8**	**+2.4**
ZNGN	**Zangian**	**7.93**	**311**	Pn		**Pn**	**08 27 17.8**	**+1.1**
JHBN	**Jahan bin**	**8.12**	**311**	Pn		**Pn**	**08 27 19.8**	**+0.4**
HRA	**Herat**	**8.14**	**26**			**Pn**	**08 27 20.2**	**+0.7**
IPIR	**Pirpir**	**8.26**	**314**	Pn		**Pn**	**08 27 21.3**	**+0.1**
IKLH	**Kolahrood**	**8.27**	**320**	Pn		**Pn**	**08 27 22.6**	**+1.2**
QAMS	**Qamsar**	**8.68**	**321**	Pn		**Pn**	**08 27 28.0**	**+1.0**
ISFB	**Sefidab**	**8.72**	**327**	Pn		**Pn**	**08 27 28.5**	**+1.1**
SHRO	**Shahrood**	**9.00**	**350**	*i* P		**Pn**	**08 27 33.6**	**+2.4**
SHRO				IAML_BB			08 27 37.7	
	comp=Z,350nm,1.0s							
JRKH	**Jarkhoshk**	**9.00**	**13**	Pn		**Pn**	**08 27 33.9**	**+2.6**
DOK	**Doka**	**9.16**	**203**	P		**Pn**	**08 27 32.7**	**-0.7**
KBD	**Kabd**	**9.27**	**285**	P		**Pn**	**08 27 33.2**	**-1.7**
SHAO	**Shalim**	**9.30**	**194**	P		**Pn**	**08 27 34.9**	**-0.5**
IPAY	**Payeh**	**9.35**	**5**	Pn		**Pn**	**08 27 38.8**	**+2.7**
IMYA	**Miami**	**9.38**	**11**	Pn		**Pn**	**08 27 38.7**	**+2.2**
KHMZ	**Khomeyn**	**9.54**	**316**	IAML_BB			08 27 42.7	
	comp=Z,680nm,1.0s							
DMTO	**DMTO**	**9.76**	**197**	P		**Pn**	**08 27 40.2**	**-1.4**
IDMV	**Damavand**	**9.83**	**331**	Pn		**Pn**	**08 27 44.7**	**+2.0**
WHFO	**Wadi Hawf**	**9.93**	**204**	P		**Pn**	**08 27 42.7**	**-1.3**
	SNR=19							
ASAO	**Ashtian**	**10.05**	**319**	IAML			08 27 54.8	
	comp=Z,21nm,0.7s							
RBK	**Rabkut**	**10.17**	**201**	P		**Pn**	**08 27 46.6**	**-0.7**
	SNR=7.2							
MZPU	**Pul - Mazandar**	**10.76**	**331**	Pn		**Pn**	**08 27 57.3**	**+1.9**
QABG	**Abgarm-Qazvin**	**11.14**	**322**	Pn		**Pn**	**08 28 02.4**	**+1.7**
RAYN	**Ar Rayn**	**11.80**	**255**			Pn	08 28 06.5	-3.1
RAYN	**Ar Rayn**	**11.80**	**255**	*i* P		Pn	08 28 06.6	-3.0
	SNR=18							
RAYN	**Ar Rayn**	**11.80**	**255**	P		Pn	08 28 06.5	-3.1
GRMI	**Germi**	**14.37**	**327**	*e*Pn		**Pn**	**08 28 46.8**	**+2.0**
GRMI				IAML			08 29 00.6	
	comp=Z,13nm,1.0s							
CHGR	**Chuyangaron**	**14.86**	**36**			**Pn**	**08 28 53.7**	**+2.3**
CHGR	**Chuyangaron**	**14.86**	**36**	P		**Pn**	**08 28 53.7**	**+2.3**
GAR	**Garm**	**15.73**	**38**	P		**Pn**	**08 29 03.8**	**+0.9**
AKT	**Akhty**	**16.61**	**332**	*e*P		**Pn**	**08 29 13.8**	**-0.3**
AKT				*e*S		**Sn**	**08 32 19.6**	**+1.3**
AKT				pmax	pmax			
	comp=Z,78nm,1.6s							
GNI	**Garni**	**16.99**	**323**	Pn		**P**	**08 29 20.7**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=207,slow=1.9,SNR=8.0							
	comp=Z,6.9nm,0.4s							
GNI	**Garni**	**16.99**	**323**			**Pn**	**08 29 19.0**	**-0.1**
GNI				IAmb		IAmb	08 29 26.8	
	comp=Z,106nm,1.9s							
GNI	**Garni**	**16.99**	**323**	⇑	*i*P	**P**	**08 29 20.8**	**-0.1**
GNI				pmax	pmax			
	comp=Z,10.0nm,0.9s							
GURO	**Guroymak-BITLI**	**17.54**	**315**	P		**Pn**	**08 29 25.2**	**-0.6**
MARD	**Mardin**	**17.70**	**309**			**Pn**	**08 29 27.9**	**+0.1**
MAK	**Makhachkala**	**17.94**	**334**	*c*	*i*P	**Pn**	**08 29 25.2**	**-5.4**
MAK				*e*S		**Sn**	**08 32 44.3**	**-6.2**
MAK				pmax	pmax			
	comp=Z,131nm,1.1s							
MAK				MLR	MLR			
	comp=Z,148nm,12.0s							
KK31	**Karatay Array**	**18.94**	**29**	P		**P**	**08 29 42.2**	**0.0**
KK31	**Karatay Array**	**18.94**	**29**	P		**P**	**08 29 42.2**	**0.0**
KK31				pmax	pmax			
	comp=Z,14nm,0.8s							
KKAR	**Karatay Array**	**18.94**	**29**	P		**P**	**08 29 41.4**	**-0.8**
KKAR	**Karatay Array**	**18.94**	**29**	P		**P**	**08 29 41.4**	**-0.8**
ASF	**Jabal al Asfar**	**18.96**	**290**	P		**P**	**08 29 42.3**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=112,slow=8.8,SNR=14							
ASF				S		Sn	08 33 03.5	-12
	comp=Z,4.9nm,0.8s,baz=194,slow=17,SNR=2.1							
ASF				LR		LR	08 38 40.3	
	comp=Z,309nm,19.7s,baz=92,slow=42							
	comp=Z,29nm,1.1s							
KOPT	**Kop Dagi**	**19.37**	**316**	P		**P**	**08 29 46.6**	**-0.5**
KSH	**Kashi**	**19.45**	**46**	P		**P**	**08 29 42.4**	**-5.5**
KSH				pmax	pmax			
	comp=Z,13nm,0.8s							
ARPR	**Arapgir-MALATY**	**20.26**	**311**	IAmb		IAmb	08 30 04.9	
	comp=Z,74nm,1.2s							
NEUR	**Neytrino**	**20.31**	**326**	⇑	*i*P	**P**	**08 29 57.4**	**+0.1**
NEUR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
MMAI	**Mount Meron Ar**	**20.35**	**292**	P		**P**	**08 29 58.8**	**+1.0**
	comp=Z,12nm,0.7s,baz=94,slow=13,SNR=14							
MMAI				LR		LR	08 38 46.5	
	comp=Z,297nm,19.8s,baz=100,slow=40							
	comp=Z,12nm,0.7s							
EIL	**Elat**	**20.38**	**283**	P		**P**	**08 29 58.8**	**+0.8**
	comp=Z,30nm,0.8s,baz=122,slow=3.4,SNR=12							
EIL				LR		LR	08 39 45.2	
	comp=Z,287nm,21.9s,baz=180,slow=42							
	comp=Z,30nm,0.8s							
AAK	**Ala-Archa**	**20.54**	**37**	P		**P**	**08 29 59.6**	**-0.2**
	comp=Z,4.7nm,0.5s,baz=170,slow=4.0,SNR=7.1							
	comp=Z,4.5nm,0.5s							
AAK

comp=Z,36nm,1.1s
SAHE **Sakarya_HENDEK** 26.18 308 ⇑P P 08 30 56.2 +0.5
BELG **Belogornoye** 26.41 346 P P 08 30 56.1 -1.4
comp=Z,36nm,0.6s,baz=322,slow=1.8,SNR=18
comp=Z,36nm,0.6s
BELG **Belogornoye** 26.41 346*c* *i*P P 08 30 56.1 -1.4
BELG pmax pmax
comp=Z,23nm,1.9s
MANT **Manisa** 27.06 302 IAmb IAmb 08 31 05.0
comp=Z,28nm,1.5s
MAKZ **Makanchi** 27.30 38 P P 08 31 05.5 -0.2
MAKZ **Makanchi** 27.30 38 P P 08 31 05.5 -0.2
MAKZ pmax pmax
comp=Z,13nm,1.5s
MKAR **Makanchi Array** 27.46 38 P P 08 31 06.4 -0.8
comp=Z,1.0nm,0.7s,baz=232,slow=5.9,SNR=7.9
comp=Z,1.0nm,0.7s
MKAR **Makanchi Array** 27.46 38 P P 08 31 06.2 -1.0
MKAR **Makanchi Array** 27.46 38 *i*P P 08 31 08.1 +0.9
MKAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR **Borovoye Array** 27.49 16 P P 08 31 06.1 -1.3
comp=Z,3.6nm,0.6s,baz=208,slow=7.8,SNR=11
comp=Z,3.6nm,0.6s
BORK **Borovoye** 27.50 16⇑ *e*P P 08 31 06.3 -1.1
BORK pmax pmax
comp=Z,6.0nm,0.8s
KLYT **Kilyos** 27.60 308 ⇓P P 08 31 09.3 +0.8
KURBB **Kurchatov Arra** 28.24 28 P P 08 31 12.8 -1.2
comp=Z,2.8nm,0.9s,baz=225,slow=8.4,SNR=19
comp=Z,2.8nm,0.9s
KURK **Kurchatov** 28.35 28 P P 08 31 12.8 -2.2
KURK **Kurchatov** 28.35 28 IAmb IAmb 08 31 16.3
comp=Z,4.7nm,1.1s
KURK **Kurchatov** 28.35 28⇑ *i*P P 08 31 16.1 +1.1
KURK pmax pmax
comp=Z,7.0nm,1.1s
WMQ **Urumqi** 29.20 47 *e*P P 08 31 25.8 +3.0
WMQ LR LR
comp=Z,210nm,24.2s
ARTI **Arti** 29.25 1 P P 08 31 22.4 -0.6
ARTI 08 32 15.6
ARTI S S 08 36 20.1 +4.8
ARTI SS SnSn 08 37 49.2 +8.5
IDI **Anoyia** 29.32 294 P P 08 31 24.8 +0.9
comp=Z,8.2nm,0.5s,baz=49,slow=18,SNR=6.7
IDI LR LR 08 46 57.9
comp=Z,133nm,20.1s,baz=330,slow=44
comp=Z,8.2nm,0.5s
ELND **Elena** 30.40 310 ⇓P P 08 31 33.4 0.0
BRDH **Bariadhala** 30.84 91 LR LR 08 46 27.7
comp=Z,346nm,18.2s,baz=274,slow=41
SORM **Soroca** 31.15 320 ⇑P P 08 31 38.0 -1.8
SORM **Soroca** 31.15 320 P P 08 31 38.0 -1.8
MLR **Muntele Rosu** 31.35 314 P P 08 31 43.5 +1.6
comp=Z,3.5nm,0.7s,baz=119,slow=10,SNR=3.9
MLR **Muntele Rosu** 31.35 314 ⇓P P 08 31 42.1 +0.2
MLR **Muntele Rosu** 31.35 314 P P 08 31 42.0 +0.2
TESR **Tescani** 31.36 316 P P 08 31 41.0 -0.8
comp=Z,15nm,1.6s
VOIR 31.90 314 ⇓P P 08 31 47.1 +0.4
VOIR 31.90 314 P P 08 31 47.1 +0.4
VOIR 31.90 314 P P 08 31 46.9 +0.2
comp=Z,6.0nm,0.9s
OBN **Obninsk** 32.01 337 *e*P P 08 31 46.5 -0.8
OBN *i* 08 34 35.3
OBN pmax pmax
comp=Z,49nm,1.3s
KIRV **Kirov** 32.01 352 P P 08 31 47.0 -0.3
comp=Z,7.9nm,0.5s,baz=172,slow=11,SNR=6.1
comp=Z,7.9nm,0.5s
KIRV **Kirov** 32.01 352 P P 08 31 47.0 -0.3
AK01 **Malin Array Si** 32.11 325 P P 08 31 46.3 -2.0
AKASG **Malin Array Be** 32.11 325 P P 08 31 46.4 -1.9
comp=Z,3.7nm,0.6s,baz=130,slow=8.3,SNR=15
comp=Z,3.7nm,0.6s
AKBB **Malin Array Si** 32.11 325 P P 08 31 46.3 -2.0
AKBB IAmb IAmb 08 31 47.3
comp=Z,11nm,0.7s
AKBB **Malin Array Si** 32.11 325*d* *i*P P 08 31 46.7 -1.6
AKBB **Malin Array Si** 32.11 325 P P 08 31 46.1 -2.2
AK12 **Malin Array Si** 32.11 325 P P 08 31 46.4 -1.9
KIEV **Kiev** 32.12 325 P P 08 31 46.1 -2.2
KIEV IAmb IAmb 08 31 47.3
comp=Z,9.9nm,0.6s
KIEV **Kiev** 32.12 325 ⇑P P 08 31 46.4 -1.9
KIEV **Kiev** 32.12 325 P P 08 31 46.4 -1.9
KIEV **Kiev** 32.12 325 P P 08 31 46.1 -2.2
comp=Z,62nm,0.7s
AK03 **Malin Array Si** 32.13 325 P P 08 31 46.6 -1.8
AK11 **Malin Array Si** 32.13 325 P P 08 31 46.5 -1.9
AK14 **Malin Array Si** 32.13 325 P P 08 31 46.6 -1.9
AK13 **Malin Array Si** 32.14 325 P P 08 31 46.7 -1.9
ARR **Arges** 32.15 313 ⇓P P 08 31 48.2 -0.5
MOS **Moscow** 32.15 338 *e*P P 08 31 47.5 -1.1
AK04 **Malin Array Si** 32.16 325 P P 08 31 46.8 -1.9
AK16 **Malin Array Si** 32.16 325 P P 08 31 46.8 -1.9
AK17 **Malin Array Si** 32.19 325 P P 08 31 47.1 -1.9
AK23 **Malin Array Si** 32.20 325 P P 08 31 47.2 -1.9
AK18 **Malin Array Si** 32.20 325 P P 08 31 47.2 -1.9
AK22 **Malin Array Si** 32.23 325 P P 08 31 47.4 -1.9
AK19 **Malin Array Si** 32.23 325 P P 08 31 47.5 -1.9
AK20 **Malin Array Si** 32.25 325 P P 08 31 47.6 -1.9
AK21 **Malin Array Si** 32.25 325 P P 08 31 47.6 -1.9
LUBAR **Lubar, Ukraine** 32.44 323 P P 08 31 49.2 -2.0
KMPD **K-Podol'skiy** 32.45 320 P P 08 31 49.0 -2.3
KMPD P P 08 31 49.0 -2.3
GOMU **GeErMu** 32.51 65 P P 08 31 57.4 +5.0
GOMU PcP PcP 08 34 40.6 +1.4
GOMU S S 08 37 07.7 +0.1
GOMU pmax pmax
comp=Z,4.0nm,1.0s
BURAR **Bucovina Array** 32.73 317 P P 08 31 52.7 -1.2
BURAR **Bucovina Array** 32.73 317 ⇑P P 08 31 52.8 -1.2
BURAR **Bucovina Array** 32.73 317 P P 08 31 52.7 -1.2
LOT **Lotru** 32.74 313 ⇑P P 08 31 53.2 -0.8
BLKB **Belogradchik** 32.84 309 ⇓P P 08 31 54.9 +0.1
ZALV **Zalesovo Beam** 33.32 29 P P 08 31 57.4 -1.5
comp=Z,4.3nm,0.4s,baz=232,slow=7.3,SNR=7.6
comp=Z,4.3nm,0.4s
ZALV **Zalesovo Beam** 33.32 29 P P 08 31 58.3 -0.5
ZALV **Zalesovo Beam** 33.32 29 *i*P P 08 31 59.2 +0.4
ZALV pmax pmax
comp=Z,4.0nm,0.4s
HERR **Herculane** 33.43 311 ⇑P P 08 32 00.2 +0.3
BOVS **Bovan** 33.51 309 ⇓P P 08 32 00.7 0.0
MARR **Marisel-Cluj** 33.63 315 ⇑P P 08 32 02.0 +0.2
MDVR **Moldovita** 33.87 311 ⇓P P 08 32 02.9 -0.9
DRGR 33.93 315 ⇑P P 08 32 03.6 -0.8
DRGR 33.93 315 P P 08 32 03.6 -0.8
BZS **Buzias** 34.21 312 ⇑P P 08 32 06.9 +0.1
BZS **Buzias** 34.21 312 P P 08 32 06.8 +0.1
BRIU **Brid** 34.38 317 P P 08 32 07.6 -0.5
KMBO **Kilima Mbogo** 34.43 219 LR LR 08 47 21.6
comp=Z,131nm,18.5s,baz=105,slow=38
MNK **Minsk** 35.09 329 *i*P P 08 32 13.5 -0.7
comp=E,28nm,0.6s
MNK *i*P P 08 32 13.5 -0.7
comp=N,16nm,0.7s
MNK *i*P P 08 32 13.5 -0.7
comp=Z,9.0nm,0.7s,baz=129
MNK *i*PP PnPn 08 33 30.0 -1.5
MNK *i*S S 08 37 47.0 +0.7
MNK *i*SS SnSn 08 40 02.9 +0.4
MNK *i*SSS SSS 08 40 40.0
MNK *i*LQ LQ 08 43 58.9
MNK *i*LR LR 08 46 03.8
MNK *i*LRM MLR 08 47 06.8
comp=Z,235nm,11.9s
MNK *i*LRM MLR 08 47 23.6
comp=N,152nm,10.4s
MNK *i*LRM MLR 08 47 24.6
comp=E,159nm,13.7s
MNK **Minsk** 35.09 329 *i*P P 08 32 13.5 -0.7
MNK *i* 08 33 29.9
MNK *i* 08 34 46.1
MNK *i*S S 08 37 47.0 +0.7
MNK *i*SS SnSn 08 40 02.9 +0.4
MNK *i* 08 42 35.1
MNK pmax pmax
comp=Z,9.0nm,0.7s
MNK pmax pmax
comp=N,16nm,0.7s
MNK pmax pmax
comp=E,28nm,0.6s
MNK MLR MLR
comp=Z,235nm,12.0s
MNK MLR MLR
comp=N,152nm,10.0s
MNK MLR MLR
comp=E,159nm,14.0s
KWP **Kalwaria Pacla** 35.13 319 P P 08 32 14.0 -0.6
comp=E,33nm,2.5s
KLMR **Klimovskoe** 35.97 345 *e*P P 08 32 19.7 -1.9
KLMR S S 08 37 56.4 -3.3
KLMR pmax pmax
comp=Z,70nm,1.5s
MORH **Mrgy, Hungar** 36.37 312 ⇑P P 08 32 24.2 -1.0
GTA **Gaotai** 36.79 60 P P 08 32 32.5 +3.4
GTA sP sP 08 32 39.4 +4.3
GTA pmax pmax
comp=Z,15nm,1.0s
OJC **Ojcow** 37.08 319 P P 08 32 30.1 -1.2
comp=Z,29nm,1.0s
JAVC **Velka Javorina** 37.85 316 *e*P P 08 32 38.5 +0.6
MODS **Modra-Piesok** 37.93 315 *e*P P 08 32 39.3 +0.7
MODS pmax pmax
comp=Z,29nm,1.3s
MODS **Modra-Piesok** 37.93 315 *e*P P 08 32 39.3 +0.7
MORC **Moravsky Berou** 38.25 317 ⇓P P 08 32 40.1 -1.2
MORC **Moravsky Berou** 38.25 317 *e*P P 08 32 39.8 -1.5
MORC **Moravsky Berou** 38.25 317 P P 08 32 40.1 -1.2
RONA **Rosalia, Austr** 38.35 314 *i*P P 08 32 41.3 -0.8
comp=Z,10nm,0.7s
VRAC **Vranov** 38.67 316 *e*P P 08 32 47.0 +2.2
CONA **Conrad Observa** 38.70 314 *e*P P 08 32 44.1 -1.0
comp=Z,4.8nm,1.0s
KRUC **Moravsky** 38.71 316 *e*P P 08 32 44.9 -0.2
PZH **PanZhiHua** 38.95 81 P P 08 32 49.4 +1.8
NRCA **Norcia** 39.45 305 P P 08 32 51.8 +0.3
MOA **Molln** 39.70 313 *i*P P 08 32 52.6 -0.8
comp=Z,9.7nm,0.8s
LZH **Lanzhou** 39.80 65 *e*P P 08 32 58.5 +3.9
LZH pP sP 08 33 03.6 +3.0
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=Z,340nm,14.1s
LZH LR LR
comp=Z,280nm,13.1s
LZH LR LR
comp=Z,350nm,14.1s
MYKA **Terra Mystica** 39.81 311 *e*P P 08 32 54.3 -0.1
comp=Z,2.0nm,0.5s
CD2 **Chengdu** 40.04 73 P P 08 32 58.2 +1.7
CD2 pmax pmax
comp=Z,20nm,0.9s
BIOA **Bad Ischl, Aus** 40.07 313 *i*P P 08 32 55.9 -0.6
comp=Z,6.7nm,0.5s
KBA **Koelnbreinsper** 40.11 312 *i*P P 08 32 56.7 -0.3
comp=Z,8.8nm,0.9s
ZVC **Zvikov** 40.20 316 *e*P P 08 32 57.1 -0.4
GEC2 **GERESS Array S** 40.34 315 IAmb IAmb 08 33 01.3
comp=Z,17nm,1.3s
GERES **GERESS Array B** 40.34 315 P P 08 32 57.9 -0.9
comp=Z,2.8nm,0.7s,baz=114,slow=9.2,SNR=15
comp=Z,2.8nm,0.7s
FIA1 **FINESS Array S** 40.41 337 P P 08 32 58.3 -0.7
FIA1 IAmb IAmb 08 33 01.5
comp=Z,38nm,0.9s
FINES **FINESS Array B** 40.41 337 P P 08 32 58.0 -1.1
comp=Z,8.0nm,0.7s,baz=136,slow=7.7,SNR=26
comp=Z,8.0nm,0.7s
FINES **FINESS Array B** 40.41 337 P P 08 32 58.3 -0.7
FINES **FINESS Array B** 40.41 337 *i*P P 08 32 57.5 -1.6
FINES pmax pmax
comp=Z,8.0nm,0.7s
KHC **Kasperske Hory** 40.50 315 IAmb IAmb 08 33 02.6
comp=Z,13nm,0.9s
KHC **Kasperske Hory** 40.50 315 *e*P P 08 32 59.0 -1.0
KHC **Kasperske Hory** 40.50 315 *e*P P 08 32 59.0 -1.0
KHC **Kasperske Hory** 40.50 315 P P 08 32 58.8 -1.2
comp=Z,16nm,0.9s
ABTA **Abfaltersbach** 40.59 311 *i*P P 08 33 00.2 -0.7
comp=Z,8.0nm,0.7s
LESA **Schwarzleotal** 40.64 312 *i*P P 08 32 59.8 -1.4
comp=Z,6.7nm,0.6s
WTTA **Wattenberg** 41.29 312 *i*P P 08 33 05.5 -1.3
comp=Z,11nm,0.7s,SNR=6.6
WATA **Walderalm** 41.35 312 *i*P P 08 33 05.7 -1.5
comp=Z,8.3nm,0.7s
CLL **Collm** 41.50 318 P P 08 33 06.8 -1.4
CLL IAmb IAmb 08 33 08.4
comp=Z,18nm,1.2s
CLL **Collm** 41.50 318 *i*P P 08 33 07.3 -0.9
CLL *i* 08 33 10.1
CLL pmax pmax
comp=Z,20nm,1.3s
CLL **Collm** 41.50 318 P P 08 33 07.2 -0.9
comp=Z,14nm,1.4s
CLL **Collm** 41.50 318 *i*P P 08 33 07.3 -0.9
comp=Z,20nm,1.3s
CLL *i*x x 08 33 10.1
comp=Z,37nm,1.6s
SQTA **Sankt Quirin** 41.57 312 *i*P P 08 33 07.8 -1.1
comp=Z,9.5nm,0.6s,SNR=4.7
MOTA **Moosalm** 41.66 312 *i*P P 08 33 08.8 -1.0
comp=Z,10nm,0.7s
FETA **Feichten** 41.85 311 *i*P P 08 33 10.1 -1.3
comp=Z,7.9nm,0.6s
RETA **Reutte** 41.92 312 *e*P P 08 33 09.7 -2.1
comp=Z,7.4nm,0.7s
MSSA **Maissana** 42.24 307 P P 08 33 13.2 -1.3
DAVA **Damuels** 42.47 311 *i*P P 08 33 15.1 -1.3
comp=Z,14nm,0.7s,SNR=7.1
TUE **Stuetta** 42.68 310 P P 08 33 18.4 +0.2
TUE IAmb IAmb 08 33 18.9
comp=Z,53nm,1.9s
SONM **Songino Array** 42.84 48 LR LR 08 53 36.8
comp=Z,188nm,18.2s,baz=340,slow=40
XAN **Xi'an** 44.06 68 ⇓P P 08 33 30.6 +1.3
XAN pP pP 08 33 34.8 +1.2
XAN pmax pmax
comp=Z,7.0nm,0.8s
XAN pmax pmax
comp=Z,290nm,10.3s
BNI **Bardonecchia** 44.34 308 P P 08 33 30.6 -0.9
BNI **Bardonecchia** 44.34 308 P P 08 33 30.6 -0.9
BNI pmax pmax
comp=Z,53nm,1.4s
HFS **Hagfors** 44.59 330 P P 08 33 32.0 -1.1
comp=Z,2.1nm,0.4s,baz=131,slow=10,SNR=15
comp=Z,2.1nm,0.4s
HFS **Hagfors** 44.59 330 P P 08 33 32.0 -1.1
NRIK **Noril'sk** 45.66 14 P P 08 33 40.6 -0.9
comp=Z,1.4nm,0.5s,baz=243,slow=3.7,SNR=5.2
NRIK LR LR 08 55 04.2
comp=Z,189nm,20.9s,baz=308,slow=39
comp=Z,1.4nm,0.5s
NRIK **Noril'sk** 45.66 14 P P 08 33 41.5 +0.1
NRIK **Noril'sk** 45.66 14⇑ *i*P P 08 33 40.6 -0.9
NRIK pmax pmax
comp=Z,9.0nm,1.3s
HHC **Hu-ho-hao-te** 45.86 58 *e*P P 08 33 44.0 +0.4
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,91nm,5.6s
HHC LR LR
comp=Z,190nm,20.2s
HHC LR LR
comp=Z,210nm,17.7s
HHC LR LR
comp=Z,400nm,16.8s
NC405 **NORSAR Array S** 45.91 331 P P 08 33 42.6 -1.0
PSI **Prapat** 46.05 115 LR LR 08 54 41.5
comp=Z,229nm,18.4s,baz=306,slow=38
NB2 **NORSAR Subarra** 46.10 331 P P 08 33 43.0 -2.1
comp=Z,6.4nm,1.1s,baz=113,slow=7.9
NOA **NORSAR Array B** 46.10 331 P P 08 33 42.8 -2.2
comp=Z,3.3nm,0.9s,baz=114,slow=7.9,SNR=7.1
comp=Z,3.3nm,0.9s
ARA0 **ARCESS Array S** 46.45 345 *e*P P 08 33 46.6 -1.1
ARCES **ARCESS Array B** 46.45 345 P P 08 33 46.5 -1.2
comp=Z,1.0nm,0.4s,baz=142,slow=8.2,SNR=23
comp=Z,1.0nm,0.4s
ARCES **ARCESS Array B** 46.45 345 P P 08 33 46.8 -0.9
ARCES **ARCESS Array B** 46.45 345 P P 08 33 46.8 -0.9
ARCES pmax pmax
comp=Z,76nm,1.9s
KTK1 **Kautokeino** 46.61 344 *e*P P 08 33 47.6 -1.4
LYN **LuoYang** 46.93 67 P P 08 33 56.3 +4.3
LYN pmax pmax
comp=Z,30nm,0.8s
LYN LR LR
comp=Z,330nm,21.3s
LYN LR LR
comp=Z,450nm,19.2s
LYN LR LR
comp=Z,450nm,16.8s
TAM **Tamanrasset** 47.44 277 P P 08 33 56.0 -0.3
TAM **Tamanrasset** 47.44 277 P P 08 33 56.0 -0.3
TAM pmax pmax
comp=Z,37nm,0.4s
BLS5 **Blasjo** 47.67 327 *e*P P 08 33 58.0 +0.7
RAUS **Rausandaksla** 47.67 338 *e*P P 08 33 55.5 -1.7
HAMF **Hammerfest** 47.69 345 *e*P P 08 33 56.6 -0.7
JETT **Jettan, Norway** 47.71 343 *e*P P 08 33 56.8 -0.8
FAUS **Fauske** 47.80 339 *e*P P 08 33 56.4 -1.9
LEIR **Leirfjorden** 47.81 337 *e*P P 08 33 55.7 -2.6
STOK **Stokkvaagen** 47.97 337 *e*P P 08 33 56.3 -3.2
VAGH **Vaagaholmen** 48.09 338 *e*P P 08 33 58.4 -2.1
STEI **Steigen** 48.14 340 *e*P P 08 33 58.8 -2.0
TRO **Tromso** 48.15 343 *e*P P 08 33 59.4 -1.4
MOL **Molde** 48.32 331 *e*P P 08 33 59.1 -3.2
EKA **Eskdalemuir Ar** 51.81 320 P P 08 34 27.2 -1.7
comp=Z,0.8nm,0.4s,baz=100,slow=7.7,SNR=5.1
comp=Z,0.8nm,0.4s
ESBB **Sonseca Array** 52.24 301 IAmb IAmb 08 34 33.0
comp=Z,14nm,0.9s
ESDC **Sonseca Array** 52.24 301 P P 08 34 32.4 -0.1
comp=Z,5.3nm,0.6s,baz=67,slow=7.4,SNR=28
ESDC LR LR 08 59 31.8
comp=Z,196nm,19.2s,baz=359,slow=39
comp=Z,5.3nm,0.6s
ESDC **Sonseca Array** 52.24 301 P P 08 34 31.9 -0.6
ESDC IAmb IAmb 08 34 35.6
comp=Z,16nm,1.4s
PAB **San Pablo** 52.55 300 P P 08 34 33.5 -1.3
PAB IAmb IAmb 08 34 35.7
comp=Z,20nm,0.8s
PAB **San Pablo** 52.55 300 P P 08 34 33.5 -1.3
PAB pmax pmax
comp=Z,20nm,0.9s
NJ2 **Nanjing** 52.60 69 *e*P P 08 34 34.9 -0.3
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
MD31 **MD31** 53.92 292 IAmb IAmb 08 34 46.6
comp=Z,8.7nm,0.9s
PBRG **Braganca** 54.12 303 *e*P P 08 34 46.6 +0.4
TORD **Torodi Ar. Bea** 54.20 267 P P 08 34 46.4 -0.7
comp=Z,7.3nm,0.5s,baz=52,slow=9.8,SNR=5.0
comp=Z,7.3nm,0.5s
TORD **Torodi Ar. Bea** 54.20 267 IAmb IAmb 08 35 49.0
comp=Z,5.0nm,0.7s
MVO **Moncorvo** 54.41 303 *e*P P 08 34 48.8 +0.4
MVO *i* IAmb IAmb 08 34 49.8
comp=Z,54nm,1.0s
SPITS **Spitsbergen Ar** 54.47 350 P P 08 34 47.3 -0.9
comp=Z,6.2nm,0.8s,baz=125,slow=12,SNR=8.1
comp=Z,6.2nm,0.8s
PBAR **Barrancos** 54.82 299 *e*P P 08 34 51.3 0.0
PBAR *i* IAmb IAmb 08 34 55.8
comp=Z,46nm,1.3s
MTE **Manteigas** 54.89 302 *e*P P 08 34 52.6 +0.7
MTE *i* IAmb IAmb 08 35 06.0
comp=Z,57nm,1.5s
PMRV **Marv??o** 54.90 301 *e*P P 08 34 51.9 0.0
PMRV *i* IAmb IAmb 08 34 54.1
comp=Z,38nm,2.1s
PVRL **Vila Real** 54.91 303 *e*P P 08 34 52.6 +0.7
PVRL *i* IAmb IAmb 08 35 29.4
comp=Z,53nm,1.9s
PCBR **Castelo Branco** 54.91 301 *e*P P 08 34 52.4 +0.4
PCBR *i* IAmb IAmb 08 34 57.5
comp=Z,63nm,1.7s
POLO **Lamas de Olo** 54.95 303 *e*P P 08 34 53.0 +0.6
PCAB **Cabril** 55.09 303 *e*P P 08 34 54.1 +0.8
PVIS **Viseu** 55.11 302 *e*P P 08 34 54.4 +0.9
PESTR **Estremoz** 55.14 300 *e*P P 08 34 53.4 -0.3
PGAV **Gavieira, Arco** 55.23 304 *e*P P 08 34 54.8 +0.4
PSARD **Sardoal** 55.47 301 *e*P P 08 34 56.5 +0.5
PSARD *i* IAmb IAmb 08 34 59.7
comp=Z,71nm,2.0s
PVAQ **Vaqueiros** 55.47 298 *e*P P 08 34 55.8 -0.2
PBEJ **Beja** 55.48 299 *e*P P 08 34 56.2 +0.1
PBEJ *i* IAmb IAmb 08 35 01.6
comp=Z,26nm,1.9s
PARRA **Arraiolos** 55.49 300 *e*P P 08 34 55.9 -5.8
PARRA *i* IAmb IAmb 08 35 05.5
comp=Z,32nm,1.7s
PMTG **Montargil** 55.60 300 *e*P P 08 34 57.8 +0.9
PMTG *i* IAmb IAmb 08 35 02.1
comp=Z,45nm,1.9s
PCAS **Casmilo, Conde** 55.66 302 *e*P P 08 34 58.3 +0.9
PFVI **Vila Bisbo** 56.39 298 *e*P P 08 35 02.8 +0.1
TIXI **Tiksi** 58.51 21 P P 08 35 16.9 -0.2
TIXI **Tiksi** 58.51 21*c* *i*P P 08 35 17.1 +0.1
TIXI pmax pmax
comp=Z,10.0nm,1.8s
KSRS **Korea Array** 58.85 61 P P 08 35 19.3 -0.6
comp=Z,2.2nm,0.6s,baz=278,slow=6.8,SNR=12
comp=Z,2.2nm,0.6s
LBTB **Lobatse** 60.49 214 LR LR 09 00 47.2
comp=Z,67nm,19.3s,baz=350,slow=35
DAG **Danmarks Havn** 60.74 345 *i*P P 08 35 31.0 -1.3
DAG IAmb IAmb 08 35 33.4
comp=Z,5.5nm,0.8s
DBG **Daneborg** 60.92 342 *i*P P 08 35 33.1 -0.4
DBG IAmb IAmb 08 35 36.0
comp=Z,4.7nm,0.8s
NOR **Nord** 61.10 351 *i*P P 08 35 35.9 +1.1
NOR IAmb IAmb 08 35 37.9
comp=Z,11nm,1.3s
DBIC **Dimbokro** 62.80 263 P P 08 35 46.0 -1.1
comp=Z,6.7nm,0.8s,baz=105,slow=8.5,SNR=4.8
comp=Z,6.7nm,0.8s
BOSA **Boshof** 63.67 212 P P 08 35 52.2 -0.5
comp=Z,3.5nm,0.8s,baz=42,slow=5.2,SNR=5.8
BOSA LR LR 09 04 35.2
comp=Z,54nm,18.1s,baz=26,slow=37
comp=Z,3.5nm,0.8s
SUMG **Summit** 66.27 341 *i*P P 08 36 09.3 -0.2
NEEM **North Greenlan** 67.73 347 *i*P P 08 36 17.4 -1.2
SFJD **Kangerlussuaq** 72.22 337 *i*P P 08 36 50.1 +4.3
SFJD IAmb IAmb 08 36 50.6
comp=Z,521nm,2.1s
NRS **Narsarsuaq** 72.74 330 *i*P P 08 36 50.6 +1.6
NRS IAmb IAmb 08 36 54.1
comp=Z,96nm,1.1s
A36M **Sachs Harbour** 81.14 1 P P 08 37 36.8 +0.6
A36M IAmb IAmb 08 37 38.8
comp=Z,7.0nm,0.7s
D25K **Kavik River** 82.22 8 IAmb IAmb 08 38 14.0
comp=Z,19nm,1.6s
TOLK **Toolik Lake Re** 82.40 10 IAmb IAmb 08 37 46.4
comp=Z,9.1nm,0.8s
BMAR **Burnt Mountain** 84.24 9 P P 08 37 52.2 -0.3
INK **Inuvik** 84.48 4 LR LR 09 21 42.7
comp=Z,97nm,18.1s,baz=350,slow=40
G24K **Hadweenzic Riv** 84.51 10 IAmb IAmb 08 38 02.1
comp=Z,11nm,1.2s
G27K **Doyon Strip** 85.19 8 IAmb IAmb 08 40 21.5
comp=Z,22nm,1.9s
H27K **Steamboat Moun** 85.77 8 IAmb IAmb 08 38 05.1
comp=Z,27nm,1.9s
ILAR **Eielson Array** 86.39 10 P P 08 38 01.5 -1.7
comp=Z,1.1nm,0.8s,baz=330,slow=4.3,SNR=10
ILAR LR LR 09 21 19.5
comp=Z,86nm,19.1s,baz=5.5,slow=39
comp=Z,1.1nm,0.8s
J26L **Joseph Creek** 87.15 9 IAmb IAmb 08 38 09.6
comp=Z,6.0nm,0.8s
I30M **Mount Dempster** 87.29 6 IAmb IAmb 08 38 09.2
comp=Z,4.4nm,0.7s
WRA **Warramunga Arr** 87.51 114 P P 08 38 08.9 -0.5
comp=Z,1.9nm,0.7s,baz=310,slow=4.2,SNR=16
comp=Z,1.9nm,0.7s
WRA **Warramunga Arr** 87.51 114 P P 08 38 09.8 +0.4
WRA **Warramunga Arr** 87.51 114 *i*P P 08 38 09.1 -0.3
WRA pmax pmax
comp=Z,2.0nm,0.7s
SCRK **Sand Creek** 87.58 9 P P 08 38 10.8 +1.5
J30M **Hart River** 87.93 6 IAmb IAmb 08 38 13.7
comp=Z,13nm,1.4s
DAWY **Dawson** 88.11 8 P P 08 38 12.0 +0.4

DAWY				IAmb	IAmb	08 38 14.3	
	comp=Z,9.0nm,1.1s						
ASAR	**Alice Springs**	**89.01**	**117**	P	**P**	**08 38 16.5**	**0.0**
	comp=E,1.3nm,0.8s,baz=300,slow=4.5,SNR=11						
	comp=Z,1.3nm,0.8s						
YKA	**Yellowknife Ar**	**90.50**	**357**	P	**P**	**08 38 22.6**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=358,slow=5.2,SNR=7.1						
YKA				LR	LR	09 25 31.4	
	comp=Z,113nm,19.4s,baz=358,slow=40						
	comp=Z,2.2nm,0.7s						
YKA	**Yellowknife Ar**	**90.50**	**357**	*i* P	**P**	**08 38 24.2**	**+1.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KDAK	**Kodiak Island**	**91.63**	**16**	LR	LR	09 28 21.8	
	comp=Z,72nm,19.4s,baz=0.3,slow=41						
MAW	**Mawson**	**94.50**	**178**	LR	LR	09 11 58.2	
	comp=Z,62nm,21.1s,baz=35,slow=30						
ULM	**Lac du Bonnet**	**99.55**	**343**	LR	LR	09 25 52.7	
	comp=Z,104nm,18.3s,baz=10,slow=36						

SOME ***12*** *08:40:08.0, 42.°95N×77.°27E, h15km*
KRNET 12 08:40:07.8±0.1, 42.°93N×77.°25E, h20km, mb2.5, 8C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.25**	**296**	S	Sb	08 40 17.8	-0.4
	12nm,0.2s						
TNSS	**Tian-Shan**	**0.25**	**296**	*e*P	Pb	08 40 13.5	-0.5
TNSS				*e*S	Sb	08 40 17.7	-0.5
TNSS	**Tian-Shan**	**0.25**	**296**	*e*P	Pb	08 40 13.5	-0.4
	1.2nm,0.1s						
TNSS				*e*S	Sb	08 40 17.8	-0.4
	12nm,0.2s						
TNSS	**Tian-Shan**	**0.25**	**296**	P	Pb	08 40 13.5	-0.4
	1.2nm,0.1s						
MDOK	**Medeo**	**0.28**	**328**	Lg	Lg	08 40 17.8	
	21nm,0.2s						
MDOK	**Medeo**	**0.28**	**328**	*e*P	Pb	08 40 13.6	-0.6
MDOK				*e*S	Sb	08 40 17.8	-0.8
MDOK	**Medeo**	**0.28**	**328**	Pg	Pb	08 40 13.6	-0.6
	10nm,0.1s						
KOTS	**Kotyrbulak**	**0.32**	**342**	S	Sb	08 40 19.1	-0.7
	24nm,0.3s						
KOTS	**Kotyrbulak**	**0.32**	**342**	*e*P	Pb	08 40 14.4	-0.5
KOTS				*e*S	Sb	08 40 19.1	-0.7
KOTS	**Kotyrbulak**	**0.32**	**342**	*e*P	Pb	08 40 14.4	-0.6
	29nm,0.2s						
KOTS				*e*S	Sb	08 40 19.1	-0.7
	24nm,0.3s						
KOTS	**Kotyrbulak**	**0.32**	**342**	P	Pb	08 40 14.4	-0.6
	29nm,0.2s						
KDJ	**Kajisay**	**0.80**	**184**	⇑*i*P	Pb	08 40 22.7	-0.4
KDJ				⇑*i*S	Sb	08 40 33.6	+0.1
KTBS	**Karatobe**	**0.89**	**332**	S	Sb	08 40 36.3	+0.4
	13nm,0.2s						
KTBS	**Karatobe**	**0.89**	**332**	*e*P	Pb	08 40 24.4	-0.1
KTBS				*e*S	Sb	08 40 36.3	+0.4
KTBS	**Karatobe**	**0.89**	**332**	P	Pb	08 40 24.4	-0.1
	2.0nm,0.1s						
PRZ	**Przheval'sk**	**0.96**	**117**	⇓*e*P	Pn	08 40 26.1	-0.1
PRZ				⇓*e*S	Sn	08 40 38.7	-0.7
ULHL	**Ulahol**	**1.01**	**228**	⇑*i*P	Pb	08 40 26.8	+0.1
ULHL				⇑*i*S	Sn	08 40 40.2	-0.5
BOOM	**Boomskoye usch**	**1.06**	**246**	⇑*i*P	Pn	08 40 27.9	+0.2
BOOM				⇑*i*S	Sn	08 40 42.0	+0.1
TARG	**Taragay, Kyrgy**	**1.27**	**161**	⇑*i*P	Pn	08 40 30.6	-0.1
TARG				⇑*i*S	Sn	08 40 47.8	+0.5
ARXS	**Arharly**	**1.35**	**18**	S	Sb	08 40 49.1	-0.2
	3.8nm,0.2s						
ARXS	**Arharly**	**1.35**	**18**	*e*P	Pn	08 40 31.8	+0.2
	0.7nm,0.1s						
ARXS				*e*S	Sb	08 40 49.1	-0.2
	3.8nm,0.2s						
ARXS	**Arharly**	**1.35**	**18**	P	Pn	08 40 31.8	+0.2
	0.7nm,0.1s						

SJA ***12*** *08:50:01.7±0.6, 30.°06S×71.°82W, h11km, ML3.5, MW3.2*
GUC ***12*** *08:50:04.2±0.5, 30.°11S×71.°61W, h38km±2km, ML3.0*
ISC 12 08:50:01.8±1.7, 30.°08S±0.°03×71.°67W±0.°06, h3km±12km, n23, σ2s14/42, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.59**	**177**	⇓*i*P	**Pb**	**08 50 15.3**	**+0.5**
CO06				*e*S	**Sb**	**08 50 23.3**	**-0.2**
CO06				IAML		08 50 23.6	
	comp=E,1μm,0.2s						
GO04	**Tololo Observa**	**0.76**	**97**	*e*P	**Pb**	**08 50 17.8**	**0.0**
GO04				*e*S	**Sb**	**08 50 28.0**	**-0.6**
CO03	**El Pedregal**	**1.13**	**132**	*e*P	**Pg**	**08 50 23.5**	**0.0**
CO03				*e*S	**Sg**	**08 50 37.6**	**-0.6**
CO02	**Combarbal**	**1.25**	**153**	⇓*i*P	**Pb**	**08 50 25.5**	**-0.8**
CO02				*e*S	**Sb**	**08 50 41.5**	**-1.3**
CO02				IAML		08 50 45.2	
	comp=N,937nm,0.5s						
CO01	**Juntas del Tor**	**1.37**	**86**	*e*P	**Pn**	**08 50 27.4**	**-0.6**
AC05	**El Transito**	**1.74**	**45**	*e*P	**Pn**	**08 50 33.3**	**+0.2**
AC05				*e*S	**Sn**	**08 50 55.5**	**-0.3**
AC05				IAML		08 50 57.5	
	comp=E,233nm,0.5s						
AROD	**Rodeo**	**1.90**	**93**	*e*P	**Pg**	**08 50 41.4**	**+3.1**
AROD				*e*S	**Sg**	**08 51 03.3**	**+0.3**
AC04	**Llanos de Chal**	**1.94**	**16**	*e*P	**Pn**	**08 50 35.6**	**-0.2**
AC04				IAML		08 51 09.6	
	comp=E,157nm,0.4s						
CO04	**Los Peladeros**	**2.04**	**163**	*e*P	**Pn**	**08 50 37.9**	**+0.5**
CO04				*e*S	**Sn**	**08 51 02.9**	**-0.6**
CO04				IAML		08 51 10.7	
	comp=N,173nm,0.3s						
ACDV	**Cuesta del Vie**	**2.21**	**93**	*e*P	**Pb**	**08 50 42.4**	**-0.2**
ACDV				*e*S	**Sg**	**08 51 13.2**	**+0.3**
ACCO	**Cerro Coronel**	**2.31**	**103**	*e*P	**Pb**	**08 50 44.1**	**-0.2**
ACCO				*e*S	**Sg**	**08 51 16.4**	**+0.5**
VA06	**Catapilco**	**2.49**	**173**	*e*P	**Pn**	**08 50 43.5**	**+0.3**
VA06				IAML		08 51 30.3	
	comp=N,88nm,0.5s						
GO03	**Copiapo**	**2.78**	**27**	*e*P	**Pn**	**08 50 48.4**	**+1.1**
GO03				IAML		08 51 32.9	
	comp=N,99nm,0.3s						
GO03	**Copiapo**	**2.78**	**27**	*e*P	**Pb**	**08 50 52.0**	**-0.3**
GO03				*e*S	**Sb**	**08 51 24.9**	**-1.8**
GO03				IAML		08 51 32.5	
	comp=Z,98nm,0.6s						
AUSP	**Uspallata**	**2.89**	**138**	*e*P	**Pb**	**08 50 52.7**	**-1.6**
AUSP				*e*S	**Sn**	**08 51 24.9**	**+0.4**
AC06	**Mina Casimiro**	**2.95**	**23**	*e*P	**Pn**	**08 50 50.4**	**+0.7**
AC06				IAML		08 51 40.8	
	comp=E,70nm,0.5s						
RTLL	**Cerro Villicun**	**3.02**	**115**	*e*P	**Pb**	**08 50 54.0**	**-2.3**
RTLL				*e*S	**Sb**	**08 51 29.9**	**-3.6**
VCA	**Vinchina**	**3.31**	**67**	*e*P	**Pn**	**08 50 54.0**	**-0.7**
VCA				*e*P	**Pb**	**08 50 58.0**	**-3.3**
VCA				*e*P		08 50 58.0	
VCA				*e*P		08 50 59.0	
VCA				*e*S	**Sg**	**08 51 49.0**	**+1.0**
VCA				IAML		08 51 52.0	
	comp=Z,110nm,0.4s						
ASAL	**Salagasta**	**3.48**	**137**	*e*P	**Pn**	**08 50 59.0**	**+2.0**
ASAL				*e*S	**Sb**	**08 51 44.0**	**-3.0**
AAGR	**Agrelo**	**3.85**	**142**	*e*P	**Pb**	**08 51 07.5**	**-3.0**
AAGR				*e*S	**Sb**	**08 51 58.0**	**+0.5**
TINO	**Tinogasta**	**4.11**	**62**	*e*P	**Pn**	**08 51 10.0**	**+4.3**
TINO				*e*S	**Sg**	**08 52 09.3**	**-4.7**
AANI	**Anillaco**	**4.32**	**74**	*e*P	**Pn**	**08 51 11.2**	**+2.7**
AANI				*e*S	**Sb**	**08 52 07.0**	**-4.0**
AANI				IAML		08 52 09.8	
	comp=Z,110nm,0.3s						
CYA	**Choya**	**5.38**	**74**	*e*P	**Pn**	**08 51 26.4**	**+3.4**
CYA				*e*S	**Sn**	**08 52 30.4**	**+4.9**
CYA				IAML		08 52 35.4	
	comp=Z,14nm,0.7s						

IDC ***12*** *08:55:32.4±0.9, 56.°61N×121.°57E, h0km, mb3.9/9, mbtmp4.1/13, ML4.6/4, MS3.3/2, Error ellipse: s-maj=19.8km s-min=13.7km az=131.0*
MOS ***12*** *08:55:33.4±2.1, 56.°79N×121.°67E, h7km, mb4.1/6, Error ellipse: s-maj=11.5km s-min=8.4km az=80.5*
BYKL ***12*** *08:55:35.1±0.4, 56.°74N×121.°69E*
YARS ***12*** *08:55:36.3, 56.°72N×121.°97E, h28km, ML2.8/6*

ISC 12 08:55:34.3±0.8, 56.°79N±0.°03×121.°67E±0.°02, h19km±3km, n73, σ2s99/112, mb3.9/13, 10C-9D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKLR	**Yuktali**	**0.20**	**183**	⇑*i*P	**Pg**	**08 55 41.6**	**+2.3**
YKLR				*e*S	**Sg**	**08 55 45.4**	**+2.6**
YKLR	**Yuktali**	**0.20**	**183**	*i* Pg	**Pg**	**08 55 41.2**	**+1.8**
	444nm,0.7s						
YKLR				*e*Sg	**Sg**	**08 55 45.4**	**+2.6**
	2μm,0.3s						
CLNS	**Chul'man**	**1.77**	**87**	⇓*i*Pn	**Pb**	**08 56 05.7**	**-0.5**
CLNS				*e*Pg	**Pg**	**08 56 07.0**	**-1.4**
CLNS				*e*Sg	**Sg**	**08 56 30.0**	**-1.4**
CLNS	**Chul'man**	**1.77**	**87**	*e*P	**Pg**	**08 56 06.9**	**-1.4**
CLNS				*e*S	**Sg**	**08 56 30.1**	**-1.4**
CLNS	**Chul'man**	**1.77**	**87**	*i* Pg	**Pg**	**08 56 06.9**	**-1.4**
	81nm,0.3s						
CLNS				*e*Sg	**Sg**	**08 56 29.4**	**-2.0**
	350nm,0.2s						
CRS	**Chara**	**1.87**	**275**	⇓*i*Pg	**Pg**	**08 56 08.9**	**-1.4**
CRS				*e*		08 56 10.7	
CRS				max		08 56 10.9	
	2μm,0.9s						
CRS				*e*		08 56 32.4	
CRS				*e*Sg	**Sg**	**08 56 33.9**	**-0.7**
CRS				Smax		08 56 35.4	
	5μm,0.6s						
CRS	**Chara**	**1.87**	**275**	*e*P	**Pg**	**08 56 10.5**	**+0.2**
CRS				*e*		08 56 34.7	
CRS				pmax	pmax		
	comp=Z,2μm,0.2s						
CRS				smax	smax		
	comp=E,5μm,0.5s						
TNDR	**Tynda**	**2.38**	**133**	*i* Pn	**Pn**	**08 56 12.4**	**+0.1**
TNDR				*i* Pn	**Pn**	**08 56 12.4**	**+0.1**
TNDR				*i* Pn	**Pn**	**08 56 12.4**	**+0.1**
TNDR				*e*Pg	**Pb**	**08 56 17.1**	**+0.6**
	comp=E,25nm,0.5s						
TNDR				*e*Sg	**Sb**	**08 56 45.6**	**+0.1**
	comp=E,272nm,0.7s						
TUP	**Tupik**	**2.56**	**203**	⇓*i*Pn	**Pn**	**08 56 14.7**	**-0.2**
TUP				*e*		08 56 16.0	
TUP				*e*Pg	**Pb**	**08 56 20.2**	**+0.5**
TUP				Pmax		08 56 32.6	
	comp=E,490nm,0.5s						
TUP				*e*		08 56 44.5	
TUP				*e*Sg	**Sb**	**08 56 51.9**	**+1.1**
TUP				*e*SgSg	**SnSn**	**08 56 59.3**	**+3.0**
TUP				max		08 57 00.3	
	comp=E,7μm,0.6s						
TUP	**Tupik**	**2.56**	**203**	*e*P	**Pn**	**08 56 14.7**	**-0.2**
TUP				*e*		08 56 51.9	
TUP				pmax	pmax		
	comp=Z,65nm,0.2s						
TUP				smax	smax		
	comp=N,7μm,0.5s						
NLYR	**Nelyaty**	**3.31**	**267**	⇓*i*Pn	**Pn**	**08 56 27.6**	**+2.5**
NLYR				*e*Pg	**Pg**	**08 56 34.9**	**-2.8**
NLYR				Pmax		08 56 36.9	
	comp=N,315nm,0.3s						
NLYR				*e*		08 57 00.7	
NLYR				*e*Sg	**Sg**	**08 57 17.1**	**-3.4**
NLYR				Smax		08 57 26.5	
	comp=N,3μm,0.8s						
NLYR	**Nelyaty**	**3.31**	**267**	*e*P	**Pn**	**08 56 27.4**	**+2.3**
NLYR				pmax	pmax		
	comp=Z,367nm,0.3s						
OLMR	**Olekminsk**	**3.65**	**351**	*i* Pn	**Pn**	**08 56 32.9**	**+3.2**
OLMR				*i* Pn	**Pn**	**08 56 32.9**	**+3.2**
OLMR				*i* Pn	**Pn**	**08 56 32.9**	**+3.2**
OLMR				*i* Pg	**Pg**	**08 56 44.1**	**-0.1**
	comp=Z,57nm,0.2s						
OLMR				*e*Sg	**Sg**	**08 57 33.9**	**+2.5**
	comp=Z,230nm,0.4s						
BOD	**Bodaibo**	**4.28**	**287**	*e*Pn	**Pn**	**08 56 40.7**	**+2.3**
BOD				*e*Pg	**Pg**	**08 56 52.4**	**-3.9**
BOD				*e*		08 56 58.1	
BOD				max		08 57 08.6	
	comp=Z,105nm,0.4s						
BOD				*e*Sn	**Sn**	**08 57 28.2**	**+0.3**
BOD				*e*Sg	**Sg**	**08 57 47.4**	**-4.3**
BOD				Smax		08 58 03.3	
	comp=Z,3μm,1.7s						
BOD	**Bodaibo**	**4.28**	**287**	*e*P	**Pn**	**08 56 40.9**	**+2.5**
BOD				*e*S	**Sn**	**08 57 28.5**	**+0.6**
BOD				pmax	pmax		
	comp=Z,62nm,0.4s						
BOD				smax	smax		
	comp=N,1μm,1.0s						
ZEA	**Zeya**	**4.42**	**131**	*e*P	**Pn**	**08 56 41.0**	**+0.7**
ZEA				*e*		08 57 44.2	
ZEA				pmax	pmax		
	comp=Z,50nm,0.4s						
ZEA				smax	smax		
	comp=N,220nm,0.9s						
ZEA				MLR	MLR		
	comp=N,2μm,1.0s						
ZEA				MLR	MLR		
	comp=E,1μm,1.0s						
ZEA				MLR	MLR		
	comp=Z,2μm,1.0s						
ZEA	**Zeya**	**4.42**	**131**	*e*Pn	**Pn**	**08 56 41.0**	**+0.7**
	comp=Z,50nm,0.4s						
SVKR	**Severomuysk**	**4.55**	**265**	*e*Pg	**Pg**	**08 56 57.4**	**-4.0**
SVKR				Pmax		08 56 59.5	
	comp=Z,293nm,0.2s						
SVKR				*e*Sg	**Sg**	**08 57 55.7**	**-4.6**
SVKR				Smax		08 58 04.8	
	comp=Z,2μm,0.8s						
BMKR	**Bomnak**	**4.56**	**114**	*e*Pg	**Pg**	**08 56 57.3**	**-4.2**
BMKR				*e*Sg	**Sg**	**08 57 55.6**	**-4.9**
	comp=Z,1μm,1.0s						
UKT	**Uakit**	**4.69**	**257**	⇓*i*Pn	**Pn**	**08 56 46.2**	**+2.1**
UKT				*e*Pg	**Pb**	**08 56 58.6**	**+2.7**
UKT				max		08 57 01.5	
	comp=Z,187nm,0.7s						
UKT				*e*		08 57 40.5	
UKT				*e*Sg	**Sg**	**08 57 59.0**	**-5.6**
UKT				Smax		08 58 23.5	
	comp=Z,700nm,0.8s						
CGD	**Chagda**	**5.17**	**64**	*e*Pn	**Pn**	**08 56 53.7**	**+3.0**
CGD				*i* Pg	Pg	08 57 08.7	-4.6
	comp=Z,5.1nm,0.2s						
CGD				*e*Sg	**Sg**	**08 58 16.2**	**-4.0**
	comp=Z,176nm,0.4s						
CGD				*e*Sg	**Sg**	**08 58 16.2**	**-4.0**
	comp=Z,63nm,0.5s						
VTMR	**Vitim**	**5.51**	**303**	*e*Pn	**Pn**	**08 56 59.4**	**+4.1**
VTMR				*e*		08 57 11.1	
VTMR				*e*Sn	**Sn**	**08 58 00.9**	**+2.7**
VTMR				*e*Sg	**Sg**	**08 58 26.1**	**-5.0**
YOAB	**Uoyan, Buryati**	**5.55**	**267**	*e*Sg	**Sg**	**08 58 27.1**	**-5.3**
YOAB				Smax		08 58 55.7	
	comp=Z,1μm,1.6s						
KMO	**Kumora**	**5.89**	**266**	*e*Pn	**Pn**	**08 57 03.3**	**+2.7**
KMO				*e*		08 57 12.1	
KMO				*e*Pg	Pb	08 57 21.0	+4.6
KMO				Pmax		08 57 26.6	
	comp=Z,101nm,0.7s						
KMO				*e*Sn	**Sn**	**08 58 07.3**	**-0.3**
KMO				*e*Sg	**Sg**	**08 58 37.2**	**-6.1**
KMO				Smax		08 58 51.9	
	comp=Z,799nm,0.9s						
BLSR	**Buluus**	**5.95**	**37**	*i* Pn	**Pn**	**08 57 03.5**	**+2.3**
BLSR				*i* Pn	**Pn**	**08 57 03.5**	**+2.3**
BLSR				*i* Pg	**Pg**	**08 57 23.6**	**-4.5**
	comp=Z,4.5nm,0.5s						
BLSR				*e*Sg	**Sg**	**08 58 41.9**	**-3.1**
	comp=Z,128nm,0.7s						
YLYR	**Ulyunkhan**	**6.22**	**256**	⇓*i*Pn	**Pn**	**08 57 07.4**	**+2.3**
YLYR				*e*Pg	Pb	08 57 26.7	+4.7
YLYR				Pmax		08 57 30.9	
	comp=Z,74nm,0.7s						
YLYR				*e*Sn	**Sn**	**08 58 16.6**	**+0.9**
YLYR				*e*		08 58 25.8	
YLYR				*e*Sg	**Sg**	**08 58 47.8**	**-6.1**
YLYR				Smax		08 59 08.3	
	comp=Z,622nm,1.0s						
YAK	**Yakutsk**	**6.65**	**35**	Pn	**Pn**	**08 57 12.7**	**+1.7**
	comp=Z,7.7nm,0.3s,baz=204,slow=4.3,SNR=11						
YAK				Sn	**Sn**	**08 58 23.2**	**-2.9**
	comp=Z,12nm,0.3s,baz=294,slow=24,SNR=11						
YAK				Lg	Lg	08 58 58.4	
	comp=Z,77nm,0.3s,baz=306,slow=23,SNR=39						
	comp=Z,18nm,0.3s						
YAK	**Yakutsk**	**6.65**	**35**	*e*P	**Pn**	**08 57 12.1**	**+1.2**
YAK				*e*		08 58 25.9	
YAK				pmax	pmax		
	comp=Z,13nm,0.2s						
YAK				pmax	pmax		
	comp=Z,25nm,0.3s						
YAK				smax	smax		
	comp=E,143nm,0.5s						
YAK				smax	smax		
	comp=N,98nm,0.6s						
YAK				smax	smax		
	comp=N,1μm,0.6s						
YAK				smax	smax		
	comp=E,427nm,0.4s						
YAK	**Yakutsk**	**6.65**	**35**	*i* Pn	**Pn**	**08 57 13.6**	**+2.7**
YAK				*i* Pg	Pg	08 57 36.5	-5.0
	comp=E,0.5nm,0.7s						
YAK				*e*Sn	**Sn**	**08 58 27.8**	**+1.7**
YAK				*e*Sn	**Sn**	**08 58 27.8**	**+1.7**
YAK				*e*Sg	**Sg**	**08 59 02.4**	**-5.2**
	comp=E,8.3nm,0.7s						
CIT	**Chita**	**6.73**	**228**	*e*	**Sn**	**08 58 22.4**	**-5.8**
CIT				*e*Sg	**Sg**	**08 59 01.8**	**-8.2**
CIT				Smax		08 59 32.9	
	comp=E,2μm,1.1s						
NIZB	**Nizh Angarsk**	**6.83**	**266**	*e*Pg	Pg	08 57 38.7	-6.2
NIZB				Pmax		08 57 44.2	
	comp=E,55nm,1.2s						
NIZB				*e*		08 58 36.2	
NIZB				*e*Sg	**Sg**	**08 59 06.9**	**-6.4**
NIZB				Smax		08 59 16.4	
	comp=E,407nm,2.1s						
HILR	**Hailar Array B**	**7.34**	**190**	Pn	**Pn**	**08 57 17.7**	**-2.8**
	baz=9.0,slow=13						
HILR				Sn	Sn	08 58 27.5	-16
	baz=16,slow=21						
HILR				Lg	Lg	08 59 17.7	
	baz=18,slow=30						
HILR				LR	LR	09 00 19.1	
	comp=E,294nm,21.8s,baz=25,slow=40						
	comp=E,14nm,0.3s						
HEH	**HeiHe**	**7.39**	**150**	*e*Pn	**Pn**	**08 57 20.0**	**-1.1**
HEH				Sg	**Sg**	**08 59 25.6**	**-5.5**
HEH				smax	smax		
	comp=N,240nm,0.7s						
HEH				smax	smax		
	comp=E,350nm,0.8s						
MXMB	**Maximikha**	**8.22**	**250**	*e*Sg		08 59 50.3	
GORB	**Goryachinsk**	**8.60**	**249**	*e*Pn	**Pn**	**08 57 39.1**	**+1.4**
GORB				*e*Pg		08 58 09.6	
GORB				*e*Sg		09 00 01.3	
UZR	**Uzur**	**8.72**	**252**	*e*	**Pn**	**08 57 37.6**	**-1.7**
UZR				*e*		08 57 47.7	
UZR				*e*Pg		08 58 12.7	
UZR				Pmax		08 58 20.9	
	comp=E,17nm,0.3s						
UZR				*e*Sn	**Sn**	**08 59 16.3**	**-0.6**
UZR				*e*Sg		09 00 05.1	
UZR				Smax		09 00 29.4	
	comp=E,222nm,0.8s						
KPC	**Khapcheranga**	**9.02**	**222**	*e*	**Pn**	**08 57 42.4**	**-1.1**
KPC				max		08 58 23.0	
	comp=E,12nm,0.7s						
KPC				*e*Sn	**Sn**	**08 59 22.0**	**-2.4**
KPC				*e*Sg		09 00 13.7	
KPC				Smax		09 00 27.6	
	comp=E,566nm,1.3s						
TRG	**Tyrgan**	**9.73**	**252**	*e*	**Pn**	**08 57 53.4**	**+0.3**
TRG				*e*		08 58 50.6	
TRG				max		08 58 52.8	
	comp=E,33nm,0.9s						
TRG				*e*Sg	Sn	09 00 36.9	+55
TRG				Smax		09 01 00.2	
	comp=E,163nm,1.3s						
FFNB	**Fofonovo**	**9.90**	**248**	*e*Pn	**Pn**	**08 57 56.7**	**+1.3**
FFNB				*e*		08 58 27.3	
FFNB				*e*		08 59 38.2	
FFNB				*e*Sg	Sn	09 00 40.9	+55
STDB	**Stepnoy Dvoret**	**10.03**	**249**	*e*Sg	Sn	09 00 45.1	+56
HRMR	**Khuramsha**	**10.04**	**245**	*e*	Pn	08 57 41.9	-16
HRMR				*e*Pn	Pn	08 57 59.0	+1.5
HRMR				*e*		08 58 15.7	
HRMR				*e*Pg		08 58 34.9	
HRMR				Pmax		08 58 52.4	
	comp=E,43nm,1.4s						
HRMR				*e*		08 59 49.4	
HRMR				*e*Sg	Sn	09 00 45.7	+56
HRMR				Smax		09 01 03.8	
	comp=E,726nm,1.0s						
LSTR	**Listvyanka**	**10.99**	**250**	*e*Sg		09 01 16.0	
LSTR				Smax		09 01 35.0	
	comp=E,110nm,1.7s						
TLY	**Talaya**	**11.71**	**252**	*e*P	**Pn**	**08 58 22.1**	**+1.9**
ULN	**Ulaanbaatar**	**12.62**	**231**	⇑*e*P	**Pn**	**08 58 36.2**	**+3.4**
SONM	**Songino Array**	**12.92**	**233**	Lg	Lg	09 02 18.4	
	comp=E,2.4nm,0.3s,baz=38,slow=27,SNR=4.1						
USRK	**Ussuriysk Ar.**	**14.19**	**148**	Lg	Lg	09 03 03.2	
	comp=E,0.3nm,0.3s,baz=334,slow=26,SNR=4.6						
TIXI	**Tiksi**	**15.22**	**9**	Pn	**Pn**	**08 59 05.1**	**-2.8**
	comp=E,2.5nm,0.3s,baz=215,slow=12,SNR=27						
TIXI				Sn	**Sn**	**09 01 46.5**	**-9.2**
	comp=E,2.3nm,0.3s,baz=21,slow=8.6,SNR=3.1						
TIXI				Lg	Lg	09 03 48.7	
	comp=E,0.3nm,0.3s,baz=282,slow=19,SNR=1.6						
	comp=E,10nm,0.4s						
TIXI	**Tiksi**	**15.22**	**9**	⇑*e*P	**P**	**08 59 13.5**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,97nm,0.4s						
KNGR	**Kungurtug, Tuv**	**15.54**	**257**	⇑*e*P	**P**	**08 59 16.1**	**-0.4**
KNGR				pmax	pmax		
	comp=Z,24nm,1.1s						
SEY	**Seymchan**	**16.48**	**55**	Pn	**P**	**08 59 26.6**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=270,slow=11,SNR=22						
SEY				Lg	Lg	09 04 11.2	
	comp=Z,0.2nm,0.3s,baz=5.2,slow=19,SNR=6.3						
SEY	**Seymchan**	**16.48**	**55**	⇓*e*P	**P**	**08 59 28.9**	**+2.2**
SEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BTO	**Baotou**	**17.89**	**210**	*e*P	**Pn**	**08 59 40.3**	**-1.7**
BTO				S	**Sn**	**09 02 57.8**	**-3.0**
BTO				pmax	pmax		
	comp=Z,20nm,0.5s						
BTO				pmax	pmax		
	comp=Z,570nm,9.7s						
BTO				LR	LR		
	comp=N,390nm,10.6s						
BTO				LR	LR		
	comp=E,500nm,10.5s						
BTO				LR	LR		
	comp=Z,520nm,14.1s						
NRIK	**Noril'sk**	**19.55**	**324**	P	**P**	**09 00 01.2**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=108,slow=13,SNR=8.7						
NRIK				S	Sn	09 03 29.6	-11
	comp=Z,1.5nm,0.3s,baz=140,slow=17,SNR=1.7						
NRIK				Lg	Lg	09 05 53.0	
	comp=Z,0.3nm,0.3s,baz=17,slow=19,SNR=1.3						
	comp=Z,4.4nm,0.

	comp=Z,1.1nm,0.5s							
BORK	**Borovoye**	**29.18**	**285**	⇑*e*P		P	09 01 39.7	+5.6
BORK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
AAK	**Ala-Archa**	**32.91**	**265**	⇑*e*P		**P**	**09 02 09.7**	**+2.4**
AAK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ARCES	**ARCESS Array B**	**40.46**	**327**	P		**P**	**09 03 12.0**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=80,slow=11,SNR=2.4							
	comp=Z,2.7nm,0.9s							
ILAR	**Eielson Array**	**41.54**	**40**	P		**P**	**09 03 22.1**	**+2.1**
	comp=Z,0.7nm,0.5s,baz=293,slow=4.9,SNR=22							
	comp=Z,0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**41.88**	**213**	LR		LR	09 22 47.2	
	comp=Z,40nm,20.2s,baz=85,slow=39							
CMAR	**Chiang Mai Arr**	**41.88**	**213**	*i* P		P	09 03 29.0	+5.7
CMAR				pmax		pmax		
	comp=Z,3.0nm,0.3s							
FINES	**FINESS Array B**	**45.05**	**317**	P		**P**	**09 03 49.4**	**+1.0**
	comp=Z,5.3nm,1.1s,baz=49,slow=7.3,SNR=7.9							
	comp=Z,5.3nm,1.1s							
HFS	**Hagfors**	**50.37**	**322**	P		**P**	**09 04 30.4**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=64,slow=6.6,SNR=4.2							
	comp=Z,1.0nm,0.5s							
WRA	**Warramunga Arr**	**77.18**	**168**	P		**P**	**09 07 26.1**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=353,slow=6.7,SNR=7.3							
	comp=Z,0.3nm,0.7s							
QSPA	**South Pole Qui**	**146.55**	**180**	PKPbc		**PKPbc**	**09 15 13.5**	**+0.6**
	comp=Z,2.1nm,1.3s,baz=248,slow=3.7,SNR=5.1							

CATAC 12 09:10:51.0±0.8, 12°N±3°×8°8W±°, h15km±4km, M3.0/8, MLv3.0/8, Error ellipse: s-maj=8.0km s-min=4.4km az=35.2, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POTN	**Potosi Cosigui**	**0.88**	**23**	P	Pg	09 11 08.4	+0.3
POTN				S	Sg	09 11 19.7	0.0
CRIN	**San Cristobal**	**0.94**	**57**	S	Sn	09 11 22.4	-0.5
CRIN	**San Cristobal**	**0.94**	**57**	P	Pn	09 11 09.9	+0.2
PKGN	**Cerro Pekin**	**0.99**	**61**	P	Pb	09 11 09.7	-0.1
PKGN				S	Sn	09 11 24.3	+0.3
CNCH	**Conchagua**	**1.08**	**1**	S	Sn	09 11 26.7	+0.2
CNCH	**Conchagua**	**1.08**	**1**	P	Pb	09 11 11.4	-0.1
LCND	**La Caada**	**1.12**	**358**	P	Pb	09 11 11.2	-0.9
CNGA	**Al SSO del Vol**	**1.17**	**75**	P	Pn	09 11 12.5	-0.4
CNGN	**Cerro Negro**	**1.18**	**75**	P	Pn	09 11 12.6	-0.3
MOM3	**MOM3**	**1.35**	**76**	P	Pn	09 11 14.7	-0.6
MOM3				S	Sn	09 11 33.0	0.0
PACA	**Pacayal**	**1.35**	**340**	S	Sn	09 11 32.7	-0.5
TGUH	**Tegucigalpa,Un**	**1.94**	**17**	S	Sn	09 11 48.8	+1.0
MATN	**Matagalpa**	**2.03**	**68**	P	Pn	09 11 24.0	-0.7
MATN	**Matagalpa**	**2.03**	**68**	S	Sn	09 11 50.1	+0.3

*DJA **12** 09:18:12.3±0.2, 9°S±3°×11°8E±°, h114km±4km, M4.1/26, mB4.8/2, mb4.1/7, MLv4.1/26, Mw(mB)4.1/2*
*IDC **12** 09:18:14.1±4.4, 8°64S×118°69E, h130km±50km, mb3.4/2, mbtmp4.0/6, Error ellipse: s-maj=70.6km s-min=23.8km az=52.0*
ISC 12 09:18:11.1±1.0, 8°74S±0°07×118°40E±0°06, h152km, n28, σ1s96/32, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.62**	**262**	P	**Pn**	**09 18 31.7**	**-1.6**
PLAI				S	**Sn**	**09 18 46.1**	**-4.2**
WBSI	**Waikabubak, Su**	**1.33**	**133**	P	**Pn**	**09 18 38.6**	**-0.5**
WBSI				S	**Sn**	**09 18 58.0**	**-2.6**
TWSI	**Taliwang, Sumb**	**1.50**	**270**	P	**Pn**	**09 18 39.4**	**-1.4**
WSI	**Waingapu**	**2.09**	**116**	P	**Pn**	**09 18 47.2**	**-0.2**
BASI	**Baing, Sumba**	**2.60**	**125**	P	**Pn**	**09 18 54.4**	**+0.8**
DNP	**Denpasar**	**3.16**	**271**	P	**Pn**	**09 19 00.7**	**+0.2**
SRBI	**Singaraja**	**3.22**	**281**	P	**Pn**	**09 19 00.7**	**-0.6**
EDFI	**Ende, Flores**	**3.25**	**90**	P	**Pn**	**09 19 02.9**	**+1.1**
BSSI	**Bau Bau, Buton**	**3.31**	**39**	P	**Pn**	**09 19 01.6**	**-0.9**
MMRI	**Maumere**	**3.79**	**89**	P	**Pn**	**09 19 08.3**	**-0.4**
BKSI	**Bulukumba**	**3.80**	**27**	P	**Pn**	**09 19 08.4**	**-0.4**
KAPI	**Kappang**	**3.93**	**20**	P	**Pn**	**09 19 10.1**	**-0.5**
	36nm,0.5s,baz=194,slow=13,SNR=21						
JAGI	**Jajag, Banyuwa**	**4.21**	**273**	P	**Pn**	**09 19 12.3**	**-1.9**
ABJI	**Asem Bagus**	**4.23**	**282**	P	**Pn**	**09 19 14.5**	**+0.1**
BNSI	**Bone**	**4.63**	**22**	P	**Pn**	**09 19 19.7**	**0.0**
KMMI	**Kalianget**	**4.70**	**291**	P	**Pn**	**09 19 22.4**	**+1.8**
BLJI	**Banyuglugur**	**4.86**	**281**	P	**Pn**	**09 19 24.4**	**+1.7**
SPSI	**Sidrap Palu**	**4.93**	**16**	P	**Pn**	**09 19 23.8**	**+0.1**
BBSI	**Bau Bau**	**5.25**	**52**	P	**Pn**	**09 19 27.4**	**-0.5**
BATI	**Baumata**	**5.39**	**106**	P	**Pn**	**09 19 31.3**	**+1.5**
	28nm,0.3s,baz=283,slow=6.0,SNR=7.7						
BATI				S	**Sn**	**09 20 27.7**	**-3.6**
	41nm,0.4s,baz=270,slow=3.0,SNR=2.4						
BATI	**Baumata**	**5.39**	**106**	P	**Pn**	**09 19 30.9**	**+1.1**
SOEI	**Soe**	**5.88**	**100**	P	**Pn**	**09 19 37.0**	**+0.7**
	0.2nm39nm,0.7s						
PCJI	**Pacitan**	**7.17**	**274**	P	**Pn**	**09 19 54.4**	**+1.0**
UGM	**Wanagama**	**7.84**	**275**	P	**Pn**	**09 20 03.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**11.66**	**144**	P	**Pn**	**09 20 54.5**	**+1.5**
	2.5nm,0.6s,baz=346,slow=8.3,SNR=9.6						
FITZ				S	**Sn**	**09 22 56.6**	**-5.4**
	4.2nm,0.4s,baz=172,slow=23,SNR=16						
WRA	**Warramunga Arr**	**19.02**	**128**	P	**Pn**	**09 22 24.2**	**+0.3**
	1.5nm,0.6s,baz=303,slow=12,SNR=18						
WRA				S	**S**	**09 25 49.2**	**-0.2**
	0.7nm,0.7s,baz=298,slow=25,SNR=4.2						
ASAR	**Alice Springs**	**20.99**	**137**	P	Pn	09 22 46.2	-1.1
	1.1nm,0.5s,baz=310,slow=9.1,SNR=37						
	1.1nm,0.5s						
STKA	**Stephens Creek**	**31.53**	**140**	P	**P**	**09 24 23.2**	**+4.3**
	2.0nm,0.9s,baz=318,slow=12,SNR=1.6						
	2.0nm,0.9s						

*ASRS **12** 09:18:45.0±0.8, 53°.79N×91°.08E, h0km, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
NNC 12 09:18:51.1±3.3, 53°.21N×91°.28E, h0km, mb3.7, mpv3.4, 7C-4D, Error ellipse: s-maj=24.8km s-min=16.1km az=78.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.92**	**283**	⇓Pn	Pn	09 19 51.7	-0.7
	1.4nm,0.7s,baz=99,slow=15						
ZAA0				⇑Sn	Sn	09 20 39.2	0.0
	8.0nm,1.1s,baz=102,slow=27						
KURK	**Kurchatov**	**8.21**	**257**	⇓Pn	Pn	09 20 51.4	+0.1
	1.2nm,1.1s						
KURK				⇑Sn	Sn	09 22 26.4	+1.7
	2.8nm,1.1s						
KURK				⇑Lg	Lg	09 23 12.0	
	11nm,1.3s						
KURBB	**Kurchatov Arra**	**8.30**	**257**	⇑Pn	Pn	09 20 52.7	+0.1
	3.0nm,0.6s,baz=65,slow=13						
KURBB				⇑Sn	Sn	09 22 28.3	+1.5
	18nm,0.7s						
KURBB				⇑Lg	Lg	09 23 15.2	
	24nm,0.8s						
MK31	**Makanchi Array**	**8.64**	**226**	⇓Pn	Pn	09 20 58.2	+0.9
	0.6nm,0.5s,baz=46,slow=15,SNR=5.7						
MK31				⇑Sn	Sn	09 22 38.2	+2.8
	baz=43,slow=23						
MK31				⇓Lg	Lg	09 23 25.5	
	16nm,1.1s,baz=43,slow=27						
MAKZ	**Makanchi**	**8.77**	**227**	Pn	Pn	09 20 59.7	+0.7
	6.1nm,1.5s						
MAKZ				Sn	Sn	09 22 41.2	+2.7
MAKZ				Lg	Lg	09 23 31.3	
	17nm,1.8s						

*IDC **12** 09:29:03.5±1.1, 20°.34S×169°.31E, h0km, mb4.2/7, mbtmp4.2/8, ML4.0/1, MS3.3/4, Error ellipse: s-maj=36.2km s-min=23.4km az=153.0*
*NEIC **12** 09:29:08.5±0.8, 20°.64S±0°.08×169°.3E±0°.1, h25km±8km, mb4.5/18, Error ellipse: s-maj=18.6km s-min=10.5km az=111.0*
ISC 12 09:29:08.5±0.7, 20°60S±0°08×169°32E±0°10, h35km, n36, σ0s91/35, mb4.3/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.49**	**234**		**Pn**	**09 29 32.8**	**0.0**
MARNC					**Sn**	**09 29 50.2**	**-0.8**
PINNC	**Pines Island,**	**2.66**	**221**		**Pn**	**09 29 48.5**	**-0.3**
DZM	**Mont Dzumac**	**3.06**	**241**	Pn	**Pn**	**09 29 55.3**	**+0.9**
	18nm,0.3s,baz=103,slow=15,SNR=143						
DZM					**Sn**	**09 30 30.6**	**+0.8**
	30nm,0.3s,baz=156,slow=23,SNR=13						
	46nm,0.4s						
ONTNC	**Quen Toro**	**3.17**	**237**		**Pn**	**09 29 56.8**	**+0.9**
SANVU	**Saraoutou**	**5.50**	**338**	Pn	**Pn**	**09 30 28.4**	**+0.5**
HNR	**Honiara**	**14.31**	**319**	LR	LR	09 36 16.6	
	comp=Z,88nm,19.5s,baz=143,slow=31						
RAO	**Raoul Island**	**14.43**	**129**	LR	LR	09 36 39.9	
	comp=Z,126nm,20.9s,baz=218,slow=31						
EIDS	**Eidsvold**	**17.45**	**251**	Pn	**Pn**	**09 33 07.4**	**-1.8**
URZ	**Urewera**	**18.85**	**161**	LR	LR	09 39 45.6	
	comp=Z,77nm,18.1s,baz=276,slow=34						
COEN	**Coen**	**25.80**	**281**	P	**P**	**09 34 36.3**	**-0.2**
COEN				IAmb	IAmb	09 35 00.6	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**27.21**	**240**	P	**P**	**09 34 49.6**	**+0.5**
	comp=Z,5.0nm,0.7s,baz=86,slow=13,SNR=6.5						
	comp=Z,5.0nm,0.7s						
WR8	**Warramunga Arr**	**32.63**	**265**	P	**P**	**09 35 37.1**	**-0.2**
WR8				IAmb	IAmb	09 35 37.8	
	comp=Z,4.6nm,1.1s						
WRAB	**Tennant Creek**	**32.77**	**265**	P	**P**	**09 35 38.1**	**-0.4**
WRAB				IAmb	IAmb	09 36 00.7	
	comp=Z,6.3nm,1.4s						
WRA	**Warramunga Arr**	**32.78**	**265**	P	**P**	**09 35 38.3**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=94,slow=8.5,SNR=44						
	comp=Z,1.5nm,0.4s						
WRA	**Warramunga Arr**	**32.78**	**265**	P	**P**	**09 35 37.2**	**-1.4**
AS31	**Alice Springs**	**32.90**	**258**	P	**P**	**09 35 39.9**	**+0.3**
AS31				IAmb	IAmb	09 35 40.4	
	comp=Z,3.2nm,0.9s						
ASAR	**Alice Springs**	**32.90**	**258**	P	**P**	**09 35 39.9**	**+0.2**
	comp=Z,7.6nm,0.7s,baz=85,slow=9.2,SNR=61						
	comp=Z,7.6nm,0.7s						
ASAR	**Alice Springs**	**32.90**	**258**	P	**P**	**09 35 39.7**	**+0.1**
MTN	**Manton Dam**	**37.30**	**276**	P	**P**	**09 36 17.7**	**+0.1**
MTN				IAmb	IAmb	09 36 18.5	
	comp=Z,7.0nm,0.6s						
FAKI	**Fak Fak**	**40.16**	**291**	P	**P**	**09 36 41.9**	**+0.3**
FAKI				IAmb	IAmb	09 36 42.5	
	comp=Z,13nm,0.9s						
FITZ	**Fitzroy Crossi**	**41.20**	**266**	P	**P**	**09 36 51.0**	**+0.9**
	comp=Z,5.3nm,0.8s,baz=92,slow=9.7,SNR=7.9						
FITZ				LR	LR	09 52 53.2	
	comp=Z,65nm,20.0s,baz=40,slow=35						
	comp=Z,5.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.20**	**266**	P	**P**	**09 36 50.7**	**+0.6**
PSA00	**Pilbara Seismi**	**46.01**	**260**	P	**P**	**09 37 28.0**	**-0.9**
PSA00	**Pilbara Seismi**	**46.01**	**260**	P	**P**	**09 37 28.1**	**-0.8**
PSA00				IAmb	IAmb	09 37 45.2	
	comp=Z,19nm,1.4s						
MBWA	**Marble Bar**	**46.18**	**260**	P	**P**	**09 37 30.2**	**0.0**
MBWA				IAmb	IAmb	09 38 09.2	
	comp=Z,11nm,1.1s						
NWAO	**Narrogin (SRO)**	**47.67**	**244**	P	**P**	**09 37 41.7**	**0.0**
TOLI2	**Tolitoli**	**51.26**	**288**	P	**P**	**09 38 16.3**	**+0.3**
VNDA	**Vanda**	**57.09**	**182**	P	**P**	**09 38 51.6**	**+0.8**
SBA	**Scott Base**	**57.32**	**181**	P	**P**	**09 38 53.7**	**+1.2**
SBA				IAmb	IAmb	09 39 04.2	
	comp=Z,2.9nm,0.8s						
NACB	**Ninganchiao**	**64.33**	**311**	P	**P**	**09 39 41.4**	**+0.5**
QSPA	**South Pole Qui**	**69.47**	**180**	P	**P**	**09 40 15.1**	**+2.0**
	comp=Z,2.6nm,0.9s,baz=24,slow=3.4,SNR=13						
	comp=Z,2.6nm,0.9s						
QSPA	**South Pole Qui**	**69.47**	**180**	P	**P**	**09 40 14.3**	**+1.1**
QSPA				IAmb	IAmb	09 40 30.9	
	comp=Z,6.5nm,1.1s						
BELA	**Belgrano 2**	**80.75**	**175**	P	**P**	**09 41 16.0**	**-1.9**
BELA				IAmb	IAmb	09 41 19.3	
	comp=Z,2.4nm,0.9s						
NVAR	**Mina Array Bea**	**89.64**	**48**	P	**P**	**09 42 03.7**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=252,slow=5.6,SNR=2.7						
	comp=Z,0.2nm,0.7s						
ILAR	**Eielson Array**	**91.50**	**17**	P	**P**	**09 42 09.1**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=237,slow=5.6,SNR=4.2						
	comp=Z,0.2nm,0.6s						
GERES	**GERESS Array B**	**145.71**	**331**	PKPbc	**PKPdf**	**09 48 43.2**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=24,slow=5.1,SNR=4.4						

IDC 12 09:33:46.7±7.2, 17°.52S×174°.43W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=311.8km s-min=38.6km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.43**	**259**	P	P	09 42 30.8	-0.4
	0.6nm,0.5s,baz=97,slow=7.0,SNR=18						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**48.54**	**254**	P	P	09 42 32.2	+0.2
	4.2nm,0.6s,baz=87,slow=8.6,SNR=69						
	4.2nm,0.6s						
ILAR	**Eielson Array**	**84.70**	**11**	P	P	09 46 22.1	0.0
	0.3nm,0.9s,baz=199,slow=4.8,SNR=4.4						
	0.3nm,0.9s						

NNC 12 09:43:09.2±2.5, 38°.29N×68°.24E, h0km, mb3.9, mpv3.5, 4C, Error ellipse: s-maj=19.8km s-min=14.3km az=16.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.11**	**19**	Pg	Pb	09 44 42.8	+3.3
	3.0nm,0.2s,baz=199,slow=16,SNR=34						
KK31				⇑Lg	Lg	09 45 51.8	
	0.8nm,0.3s,baz=201,slow=32						
AAK	**Ala-Archa**	**6.45**	**46**	⇑Pn	Pn	09 44 45.4	-0.2
	0.9nm,0.4s						
AAK				⇑Sn	Sn	09 46 01.0	+1.0
	2.7nm,0.7s						
MK31	**Makanchi Array**	**13.39**	**46**	⇑P	Pn	09 46 20.6	+0.1
	1.1nm,0.6s,baz=214,slow=7.5,SNR=6.3						

*IDC **12** 09:45:04.8±1.2, 35°.50N×138°.07E, h173km±13km, mb3.1/3, mbtmp3.6/3, MS4.1/1, Error ellipse: s-maj=44.2km s-min=23.9km az=65.0*
*JMA **12** 09:45:04.7±0.2, 36°N±1°×13°8E±°, h190km±1km, MV2.8/33, CENTRAL YAMANASHI PREF*
ISC 12 09:45:05.0±1.0, 35°66N±0°08×138°36E±0°08, h186km±7km, n15, σ0s55/19, mb3.1/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYN	**Shimob**	**0.22**	**137**	P	**Pn**	**09 45 30.0**	**+0.2**
JNT	**Takato**	**0.28**	**320**	P	**Pn**	**09 45 29.9**	**+0.1**
JNT				S	**Sn**	**09 45 48.7**	**-0.5**
JRY	**Ryogami san**	**0.57**	**51**	*i* P	**Pn**	**09 45 31.3**	**+0.6**
JRY				*e*S	**Sn**	**09 45 51.5**	**+0.8**
JOD2	**Odawara 2**	**0.72**	**123**	*i* P	**Pn**	**09 45 31.7**	**+0.2**
MJAR	**Matsushiro Arr**	**0.89**	**352**	P	**Pn**	**09 45 32.6**	**+0.1**
	6.9nm,0.4s,baz=182,slow=8.0,SNR=31						
MJAR				S	**Sn**	**09 45 53.5**	**-0.5**
	15nm,0.8s,baz=185,slow=13,SNR=22						
MAT	**Matsushiro**	**0.89**	**352**	P	**Pn**	**09 45 33.0**	**+0.5**
MAT				S	**Sn**	**09 45 53.4**	**-0.6**
JAG	**Ashikaga**	**1.17**	**49**	*i* P	**Pn**	**09 45 34.2**	**-0.4**
JYTA	**Yamagatataniai**	**1.32**	**268**	*i* P	**Pn**	**09 45 35.8**	**0.0**
JIE	**Ise**	**1.85**	**227**	P	**Pn**	**09 45 41.7**	**+0.8**
BSO1	**Boso 1**	**2.37**	**114**	*e*P	**Pn**	**09 45 45.8**	**-0.2**
JOTO	**OTAMA OYAMA**	**2.48**	**39**	P	**Pn**	**09 45 48.3**	**+0.6**
JOTO				*e*S	**Sn**	**09 46 21.3**	**+0.2**
MKAR	**Makanchi Array**	**42.77**	**303**	P	**P**	**09 52 43.2**	**-0.8**
	0.3nm,0.5s,baz=90,slow=8.9,SNR=2.4						
	0.3nm,0.5s						
NRIK	**Noril'sk**	**43.51**	**336**	LR	LR	10 12 32.3	
	comp=Z,236nm,19.5s,baz=308,slow=38						
KURBB	**Kurchatov Arra**	**44.92**	**309**	P	**P**	**09 53 01.6**	**+0.6**
	0.9nm,0.3s,baz=84,slow=9.4,SNR=4.6						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**55.43**	**185**	P	**P**	**09 54 20.0**	**-0.2**
	0.1nm,0.3s,baz=1.1,slow=7.4,SNR=2.5						
	0.1nm,0.3s						

*NEIC **12** 09:59:47.4±2.4, 32°.75N±0°.01×115°.53W±0°.01, h10km±1km, Error ellipse: s-maj=2.7km s-min=2.0km az=294.0*
*PAS **12** 09:59:47.9±1.5, 32°.78N±0°.01×115°.55W±0°.01, h15km±2km, ML3.2, ML3.1/36(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=222.0*

*ECX **12** 09:59:48.3±0.5, 32°.78N×115°.56W, h14km±2km, MD2.9, ML3.2*
ISC 12 09:59:46.2±0.8, 32°76N±0°02×115°57W±0°01, h16km±5km, n102, σ1s44/114, 29C-21D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DREC	**Desert Rsrch C**	**0.11**	**68**		**Sg**	**09 59 53.8**	**+1.9**
DREC	**Desert Rsrch C**	**0.11**	**68**	⇑*i*P	**Pg**	**09 59 47.5**	**-2.2**
DREC	**Desert Rsrch C**	**0.11**	**68**	⇑*i*P	**Pg**	**09 59 50.7**	**+1.0**
DREC				*e*S	**Sg**	**09 59 53.7**	**+1.8**
DREC	**Desert Rsrch C**	**0.11**	**68**		**Pg**	**09 59 47.5**	**-2.2**
DREC	**Desert Rsrch C**	**0.11**	**68**	*e*S	**Pg**	**09 59 50.6**	**+1.0**
5053	**Calexico**	**0.11**	**147**		**Pb**	**09 59 51.3**	**+1.3**
5053					**Sb**	**09 59 54.5**	**+2.0**
ICBC	**Inst. de Cultu**	**0.13**	**142**	*e*P	**Pg**	**09 59 48.3**	**-1.7**
ICBC	**Inst. de Cultu**	**0.13**	**142**	⇓*i*P	**Pb**	**09 59 51.5**	**+1.2**
IMPE	**Imperial**	**0.14**	**1**		**Pb**	**09 59 51.6**	**+1.1**
IMPE					**Sb**	**09 59 54.7**	**+1.4**
WESC	**Westside Schoo**	**0.14**	**268**		**Pb**	**09 59 51.9**	**+1.4**
WESC					**Sb**	**09 59 55.5**	**+2.1**
WESC	**Westside Schoo**	**0.14**	**268**	⇑*i*P	**Pg**	**09 59 48.7**	**-1.4**
WESC	**Westside Schoo**	**0.14**	**268**	⇑*i*P	**Pb**	**09 59 51.9**	**+1.4**
CEA0	**Mexicali**	**0.14**	**218**	⇓*e*P	**Pb**	**09 59 51.8**	**+1.2**
SNR	**Schaffner Ranc**	**0.14**	**48**		**Pb**	**09 59 51.4**	**+0.7**
SNR					**Sb**	**09 59 54.7**	**+1.1**
COK2	**Cook Ranch 2**	**0.16**	**302**		**Sb**	**09 59 55.8**	**+1.8**
COK2	**Cook Ranch 2**	**0.16**	**302**	⇑*i*P	**Pg**	**09 59 48.9**	**-1.5**
COK2	**Cook Ranch 2**	**0.16**	**302**	⇑*i*P	**Pb**	**09 59 52.1**	**+1.2**
UABX	**UABC, Campus M**	**0.17**	**141**		**Pg**	**09 59 49.1**	**-1.4**
UABX	**UABC, Campus M**	**0.17**	**141**	*e*P	**Pg**	**09 59 48.8**	**-1.6**
UABX	**UABC, Campus M**	**0.17**	**141**	⇓*i*P	**Pb**	**09 59 52.3**	**+1.3**
UABX				IAML		10 00 05.3	
	comp=N,7μm,0.3s						
UABX				⇑*e*		10 00 05.3	
UABX				⇓*e*		10 00 06.5	
UABX				IAML		10 00 06.5	
	comp=E,7μm,0.4s						
5054	**Holtville Bond**	**0.20**	**110**		**Pg**	**09 59 49.5**	**-1.5**
JARAX	**Ej. Heriberto**	**0.23**	**183**	⇓*i*P	**Pg**	**09 59 49.7**	**-1.7**
JARAX	**Ej. Heriberto**	**0.23**	**183**	⇓*i*P	**Pb**	**09 59 52.9**	**+0.9**
JARAX				IAML		10 00 02.9	
	comp=N,6μm,0.4s						
JARAX				⇑*e*		10 00 02.9	
SWSC	**Sam W. Stewart**	**0.27**	**312**		**Pb**	**09 59 53.3**	**+0.6**
SWSC	**Sam W. Stewart**	**0.27**	**312**	⇑*e*P	**Pg**	**09 59 50.2**	**-1.9**
SWSC	**Sam W. Stewart**	**0.27**	**312**	⇑*i*P	**Pb**	**09 59 53.3**	**+0.6**
WEMD	**Westmorland, C**	**0.27**	**357**		**Sb**	**09 59 58.9**	**+1.7**
WEMD	**Westmorland, C**	**0.27**	**357**	⇓*i*P	**Pg**	**09 59 50.7**	**-1.4**
WEMD	**Westmorland, C**	**0.27**	**357**	*e*P	**Pb**	**09 59 53.7**	**+0.8**
YUH2	**Yuha Desert**	**0.32**	**249**	⇑*i*P	**Pg**	**09 59 51.4**	**-1.6**
YUH2	**Yuha Desert**	**0.32**	**249**	*e*P	**Pg**	**09 59 54.5**	**+0.9**
YUH2				*e*S	**Sb**	**09 59 59.5**	**+0.9**
YUH2				IAML		09 59 59.7	
	comp=E,1μm,0.2s						
YUH2				⇑*e*		09 59 59.7	
YUH2				*e*		09 59 59.8	
YUH2				IAML		09 59 59.8	
	comp=N,2μm,0.2s						
YUH	**Yuha Desert**	**0.32**	**249**	Pg	**Pb**	**09 59 54.5**	**+0.8**
YUH				Sg	**Sb**	**09 59 59.7**	**+1.0**
YUH				IAML		09 59 59.7	
	comp=E,1μm,0.2s						
YUH				IAML		09 59 59.7	
	comp=N,2μm,0.4s						
CLI2	**Calipatria 2**	**0.36**	**358**		**Sn**	**10 00 01.9**	**-1.7**
CRR	**Carrizo Plain**	**0.36**	**290**		**Sb**	**10 00 08.8**	**+1.0**
CRR	**Carrizo Plain**	**0.36**	**290**	⇑*i*P	**Pb**	**09 59 55.2**	**+0.8**
CRR	**Carrizo Plain**	**0.36**	**290**		**Pg**	**09 59 52.0**	**-1.7**
COA	**Coachella**	**0.39**	**75**	*e*P	**Pg**	**09 59 52.3**	**-1.8**
COA	**Coachella**	**0.39**	**75**	⇑*i*P	**Pb**	**09 59 55.5**	**+0.8**
CPBX	**Cerro Prieto**	**0.41**	**147**	Pg	**Pb**	**09 59 55.9**	**+0.8**
CPBX	**Cerro Prieto**	**0.41**	**147**	*e*P	**Pg**	**09 59 53.0**	**-1.5**
CPBX	**Cerro Prieto**	**0.41**	**147**	IAML		10 00 14.8	
	comp=E,6μm,0.3s						
CPBX				⇓*e*		10 00 25.9	
CPBX				IAML		10 00 25.9	
	comp=N,4μm,0.5s						
ERRC	**Elmore Ranch**	**0.41**	**328**		**Pg**	**09 59 53.5**	**-1.1**
ERRC					**Sg**	**10 00 00.5**	**+0.2**
YUCAX	**Ej. Yucatn**	**0.43**	**112**	*e*P	**Pg**	**09 59 53.6**	**-1.3**
YUCAX	**Ej. Yucatn**	**0.43**	**112**	*e*P	**Pb**	**09 59 56.5**	**+1.0**
RMX	**La Rumorosa**	**0.46**	**250**		**Sb**	**10 00 03.2**	**+0.4**
RMX	**La Rumorosa**	**0.46**	**250**	⇑*e*P	**Pg**	**09 59 53.6**	**-1.9**
RMX	**La Rumorosa**	**0.46**	**250**	⇑*i*P	**Pb**	**09 59 56.8**	**+0.7**
RMX				IAML		10 00 05.1	
	comp=E,2μm,0.2s						

BAR	**Barrett**	**0.94**	**265**		**Pn**	**10 00 05.4**	**+0.5**
BAR	**Barrett**	**0.94**	**265**⇑	*eP*	**Pb**	**10 00 01.6**	**-2.6**
BAR				*e*		10 00 15.8	
BAR				IAML		10 00 15.8	
	comp=N,278nm,0.2s						
BAR				IAML		10 00 15.8	
	comp=E,209nm,0.3s						
CTW	**Cottonwood Mou**	**0.95**	**344**		**Pg**	**10 00 04.8**	**+0.2**
HAY	**Hayfield**	**0.95**	**354**		**Sn**	**10 00 17.7**	**-0.5**
CTCC	**Cactus City**	**0.96**	**338**		**Pg**	**10 00 05.0**	**+0.2**
MATG	**Mataguay Scout**	**1.01**	**296**⇑	*eP*	**Pb**	**10 00 05.6**	**+0.1**
CBX	**Cerro Bola**	**1.03**	**244**	Pg	**Pn**	**10 00 07.6**	**+1.3**
EML	**El Monte Cty P**	**1.09**	**277**⇑	*eP*	**Pb**	**10 00 03.5**	**-3.1**
EML				IAML		10 00 11.6	
	comp=E,185nm,0.3s						
EML				⇓*e*		10 00 11.6	
EML				IAML		10 00 13.9	
	comp=N,98nm,0.4s						
EML				⇓*e*		10 00 13.9	
EML	**El Monte Cty P**	**1.09**	**277**	*eP*	**Pn**	**10 00 07.2**	**+0.3**
EML				⇓*e*		10 00 22.8	
EML				IAML		10 00 22.8	
	comp=N,592nm,0.5s						
EML				IAML		10 00 22.9	
	comp=E,232nm,0.2s						
PMD	**Palm Desert**	**1.11**	**322**	Pg	**Pb**	**10 00 06.4**	**-0.8**
PMD				IAML		10 00 30.8	
	comp=E,256nm,1.0s						
DPP	**Dos Picos Cty**	**1.18**	**282**	Pg	**Pn**	**10 00 08.6**	**+0.4**
DNR	**Dunn Ranch,Anz**	**1.20**	**312**	Pg	**Pn**	**10 00 08.2**	**-0.3**
BELC	**Belle Mtn. Jos**	**1.28**	**344**		**Pn**	**10 00 09.7**	**-0.1**
CPE	**Camp Elliot**	**1.30**	**276**	Pn	**Pg**	**10 00 11.2**	**-0.2**
CPE				IAML		10 00 29.6	
	comp=E,486nm,0.4s						
VTX	**Valle De La Tr**	**1.38**	**188**		**Pg**	**10 00 12.7**	**-0.2**
VTX				IAML		10 00 33.0	
	comp=E,144nm,0.4s						
IRM	**Iron Mountain**	**1.43**	**14**		**Pb**	**10 00 13.0**	**+0.4**
IRM				IAML		10 00 41.2	
	comp=N,186nm,0.7s						
IRM				IAML		10 00 41.3	
	comp=E,168nm,0.7s						
113A	**Mohawk Valley,**	**1.52**	**89**	Pn	**Pb**	**10 00 14.1**	**+0.1**
ELS	**Elsinore Mount**	**1.79**	**300**	Pn	**Pn**	**10 00 16.3**	**-0.3**
SFX	**San Felipe**	**1.83**	**160**	Pn	**Pn**	**10 00 18.2**	**+1.2**
PIX	**Pinacate**	**2.15**	**123**	Pn	**Pn**	**10 00 20.6**	**-0.9**
214A	**Organ Pipe Nat**	**2.46**	**108**		**Pn**	**10 00 25.2**	**-0.6**
OSI	**Osito Audit: C**	**3.22**	**306**		**Pn**	**10 00 37.8**	**+1.6**
LRMC	**Laurel Mtn Rad**	**3.23**	**328**		**Pn**	**10 00 37.0**	**+0.5**
X16A	**Lo Mia Camp, P**	**3.82**	**63**		**Pn**	**10 00 45.7**	**+1.1**
X16A				IAML		10 02 01.6	
	comp=N,42nm,1.1s						
X16A				IAML		10 02 04.0	
	comp=E,46nm,0.9s						
U15A	**North Rim**	**4.54**	**36**	Pn	**Pn**	**10 00 57.1**	**+2.5**
LCMT	**Little Creek M**	**4.65**	**24**	Pn	**Pn**	**10 00 58.1**	**+2.2**
KNB	**Kanab**	**4.80**	**27**	Pn	**Pn**	**10 00 58.6**	**+0.4**

TEH **12** *10:03:24.0,27˚.64N×53˚.20E,h9km±28km*
OMAN **12** *10:03:28.9±0.1,27˚.24N×53˚.25E,h10km,ml3.1/10,Error ellipse: s-maj=1.7km s-min=0.6km az=358.0*
ISC 12 10:03:24.8±1.5,**27˚58N**±0˚.06×**53˚24E**±0˚.04,**h11**km±11km,
n31,σ1**§15**/41,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.25**	**195**	Pg	**Pg**	**10 03 29.9**	**0.0**
JHRM	**Jahrom**	**0.97**	**18**	Pg	**Pb**	**10 03 41.7**	**-2.0**
LAR1	**LAR**	**1.01**	**85**	Pg	**Pb**	**10 03 44.6**	**+0.2**
DSBU	**Dashti - Bushe**	**1.91**	**294**	Pn	**Pn**	**10 03 58.5**	**+1.0**
SHI	**Shiraz**	**2.15**	**343**	Pn	**Pb**	**10 04 03.7**	**-0.2**
JRN	**Qarnain Island**	**2.65**	**188**	P	**Pn**	**10 04 07.3**	**-0.2**
SHMA	**Al-Shehemyia**	**2.66**	**230**	P	**Pn**	**10 04 09.1**	**+1.4**
SHMA				S	**Sn**	**10 04 40.0**	**+0.1**
SHME	**Shamm**	**3.01**	**120**	P	**Pn**	**10 04 14.3**	**+1.9**
BANOM	**Banah**	**3.20**	**120**	P	**Pn**	**10 04 16.5**	**+1.4**
TRNA	**Turayna**	**3.37**	**213**	P	**Pn**	**10 04 18.5**	**+1.1**
NAZ	**Nazwa, Dubai**	**3.38**	**139**	P	**Pn**	**10 04 18.1**	**+0.6**
MASF	**Masafi**	**3.42**	**129**	P	**Pn**	**10 04 19.7**	**+1.6**
MASF				S	**Sn**	**10 05 00.0**	**+1.3**
SMRA	**Abu-Samra**	**3.56**	**218**	P	**Pn**	**10 04 21.4**	**+1.4**
SMRA				S	**Sn**	**10 05 02.6**	**+0.6**
MDH	**Madha**	**3.56**	**129**	P	**Pn**	**10 04 22.6**	**+2.6**
MDH				S	**Sn**	**10 05 01.3**	**-0.9**
ASHO	**Ashiyiah**	**3.84**	**138**	P	**Pn**	**10 04 24.9**	**+1.0**
ASHO				S	**Sn**	**10 05 09.1**	**0.0**
KRBR	**Kerman**	**3.91**	**51**	Pn	**Pn**	**10 04 26.3**	**+1.2**
IBAF	**Bafgh**	**4.48**	**26**	Pn	**Pn**	**10 04 33.3**	**+0.5**
SOHO	**SOHO**	**4.54**	**138**	P	**Pn**	**10 04 34.4**	**+0.9**
SOHO				S	**Sn**	**10 05 26.2**	**-0.1**
ICHK	**Chekchek**	**4.76**	**12**	Pn	**Pn**	**10 04 37.3**	**+0.6**
KBAM	**BAM**	**4.85**	**70**	Pn	**Pn**	**10 04 39.4**	**+1.5**
ARQ	**Araqi**	**5.16**	**144**	P	**Pn**	**10 04 42.9**	**+0.7**
ARQ				S	**Sn**	**10 05 40.6**	**-1.1**
HOQ	**Hoqain**	**5.42**	**136**	P	**Pn**	**10 04 46.3**	**+0.7**
HOQ				S	**Sn**	**10 05 46.7**	**-1.4**
BSY	**Bisya**	**6.00**	**142**	P	**Pn**	**10 04 54.9**	**+1.2**
BSY				S	**Sn**	**10 05 60.0**	**-2.5**
SMDO	**Samad**	**6.26**	**135**	P	**Pn**	**10 04 58.0**	**+0.7**
SMDO				S	**Sn**	**10 06 08.8**	**-0.2**
WSAR	**Wadi Sarin**	**6.52**	**130**	P	**Pn**	**10 05 01.4**	**+0.7**
MHTO	**MHTO** SNR=10	**7.86**	**146**	P	**Pn**	**10 05 19.4**	**+0.3**
DOK	**Doka** SNR=9.4	**8.96**	**175**	P	**Pn**	**10 05 33.6**	**-0.6**
WHFO	**Wadi Hawf** SNR=14	**9.63**	**177**	P	**Pn**	**10 05 42.7**	**-0.7**
SHAO	**Shalim**	**9.76**	**166**	P	**Pn**	**10 05 45.0**	**-0.3**
DMTO	**DMTO**	**9.94**	**171**	P	**Pn**	**10 05 46.9**	**-0.8**
ABTO	**Aybut**	**10.18**	**180**	P	**Pn**	**10 05 50.6**	**-0.4**

GCMT **12** *10:10:40.6±0.1,3˚.54S±0˚.01×128˚.33E±0˚.01,h13km, MW5.2/137,Moment Tensor Solution. s94,c146; s137,c231; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.74±.13; Mθθ1.25±.13; Mϕϕ0.49±.12; Mrθ1.00±.27; Mθϕ6.88±.11; Mϕr-1.81±.30; Best double couple: Mo7.30100×10¹⁶ NP1:φ=270.00000°,δ73.00000°, λ-13.00000°. NP2:φ=4.00000°,δ77.00000°,λ-162.00000°. Principal axes: T 7.7900, Plg3.0000°, Azm136.0000°; N -0.9760, Plg68.0000°, Azm38.0000°; P -6.8120, Plg22.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA **12** *10:10:41.1±0.3,4˚S±1˚×12˚8E±˚,h11km±2km,M5.1/96, mB5.6/67,mb5.3/96,MLv5.3/29,Mw5.1/116,Mw(mB)5.1/67, MwMwp4.9/31,Mwp5.2/31*
IDC **12** *10:10:41.4±2.1,3˚.60S×128˚.20E,h26km±13km,mb4.6/31, mbtmp4.8/32,ML4.3/1,MS4.3/53,Error ellipse: s-maj=18.8km s-min=10.6km az=79.0*
MOS **12** *10:10:43.3±0.9,3˚.55S×128˚.17E,h54km,mb5.1/34,Error ellipse: s-maj=10.0km s-min=5.7km az=114.2*
BJI **12** *10:10:43.6,3˚.60S×128˚.30E,h52km,mB5.3/29,mb4.9/75, Ms4.7/46,Ms7 4.5/44*
NEIC **12** *10:10:44.6±1.8,3˚.55S±0˚.06×128˚.30E±0˚.04,h48km±5km, mb5.1/81,Mww5.2/15,Error ellipse: s-maj=9.4km s-min=3.4km az=210.0*
ISC 12 10:10:42.5±0.5,**3˚62S**±0˚.03×**128˚28E**±0˚.04,**h33**km±3km,
n430,σ1**§88**/403,**mb5.0**/116,**MS4.4**/72,**17C-15D,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.11**	**229**	P	Pb	10 10 42.9	-5.4
MSAI	**Masohi**	**0.70**	**68**	P	**Pb**	**10 10 53.0**	**-3.5**
NLAI	**Namlea**	**1.23**	**288**	P	**Pn**	**10 11 01.0**	**-2.5**
BNDI	**Bandanaira**	**1.86**	**119**	P	**Pn**	**10 11 10.7**	**-1.4**
BNDI	**Bandanaira**	**1.86**	**119**	P	**Pn**	**10 11 10.2**	**-1.9**
SANI	**Sanana**	**2.76**	**304**	P	**Pn**	**10 11 24.0**	**-0.6**
SANI	**Sanana**	**2.76**	**304**	S	**Sb**	**10 11 58.5**	**-6.3**
SANI	**Sanana**	**2.76**	**304**	P	**Pn**	**10 11 23.3**	**-1.3**
FAKI	**Fak Fak**	**4.03**	**80**		**Pn**	**10 11 42.6**	**+0.6**
FAKI	**Fak Fak**	**4.03**	**80**	P	**Pn**	**10 11 43.1**	**+1.1**
FAKI	**Fak Fak**	**4.03**	**80**	P	**Pn**	**10 11 42.8**	**+0.8**
SWI	**Sorong**	**4.05**	**48**	P	**Pn**	**10 11 42.5**	**+0.3**
TNTI	**Ternate**	**4.45**	**348**		**Pn**	**10 11 48.5**	**+0.7**
TNTI	**Ternate**	**4.45**	**348**	P	**Pn**	**10 11 48.9**	**+1.1**
TNTI	**Ternate**	**4.45**	**348**	P	**Pn**	**10 11 48.3**	**+0.5**
SAUI	**Saumlaki**	**5.28**	**145**		**Pn**	**10 12 01.4**	**+2.2**
SAUI	**Saumlaki**	**5.28**	**145**	P	**Pn**	**10 12 00.5**	**+1.3**
SAUI	**Saumlaki** 2.8nm15µm727nm,1.1s	**5.28**	**145**	P	**Pn**	**10 12 01.1**	**+1.9**
KMPI	**Kaimana, Papua**	**5.42**	**91**	P	**Pn**	**10 12 01.8**	**+0.7**
KDI	**Kendari**	**5.65**	**266**	P	**Pn**	**10 12 06.2**	**+1.9**
KMSI	**Cibinong**	**5.98**	**314**	P	**Pn**	**10 12 09.5**	**+0.7**
BBSI	**Bau Bau** 1.1nm4µm290nm,1.0s	**5.98**	**252**	P	Pn	10 12 13.4	+4.5
LUWI	**Luwuk**	**6.06**	**295**		**Pn**	**10 12 10.6**	**+0.7**
LUWI	**Luwuk**	**6.06**	**295**	P	**Pn**	**10 12 11.9**	**+1.9**
LUWI	**Luwuk**	**6.06**	**295**	P	**Pn**	**10 12 11.8**	**+1.8**
RKPI	**Ransiki, Papua**	**6.26**	**71**	P	**Pn**	**10 12 13.5**	**+0.9**
APSI	**Ampana**	**7.14**	**292**	P	**Pn**	**10 12 27.5**	**+2.7**
SOEI	**Soe**	**7.28**	**213**		**Pn**	**10 12 29.9**	**+3.1**
SOEI	**Soe**	**7.28**	**213**	P	**Pn**	**10 12 29.9**	**+3.1**
SOEI	**Soe** 1.2nm6µm4µm315nm,1.1s	**7.28**	**213**	P	Pn	10 12 31.2	+4.4
MRSI	**Marisa**	**7.52**	**303**	P	**Pn**	**10 12 31.9**	**+1.9**
SGSI	**Sangihe**	**7.75**	**339**	P	**Pn**	**10 12 34.7**	**+1.5**
MMRI	**Maumere**	**7.80**	**230**	Pn	**Pn**	**10 12 35.6**	**+1.8**
MMRI	**Maumere** 0.6nm6µm81nm,1.0s	**7.80**	**230**	P	**Pn**	**10 12 36.2**	**+2.3**
BATI	**Baumata** 6.4nm,0.3s,baz=14,slow=0.9,SNR=11	**7.99**	**215**	Pn	**Pn**	**10 12 38.8**	**+2.3**
BATI				LR	LR	10 15 36.5	
	comp=Z,3µm,20.5s,baz=28,slow=37						
BATI	**Baumata** 4µm2µm117nm,0.8s	**7.99**	**215**	P	**Pn**	**10 12 40.2**	**+3.8**
SRPI	**Serui, Papua** 212nm,0.7s	**8.14**	**78**	P	**Pn**	**10 12 38.9**	**+0.4**
BSSI	**Bau Bau, Buton** 3µm3µm379nm,0.8s	**8.15**	**252**	P	**Pn**	**10 12 41.5**	**+2.8**
BNSI	**Bone** 3µm1µm121nm,0.9s	**8.19**	**264**	P	Pn	10 12 43.3	+4.2
BAKI	**Biak**	**8.19**	**73**	P	**Pn**	**10 12 41.4**	**+2.2**
EDFI	**Ende, Flores** 6µm2µm96nm,0.8s	**8.30**	**232**	P	**Pn**	**10 12 43.4**	**+2.6**
BKSI	**Bulukumba** 3µm194nm,0.7s	**8.30**	**258**	P	Pn	10 12 44.3	+3.6
TTSI	**Tana Toraja** 2µm91nm,1.0s	**8.46**	**274**	P	**Pn**	**10 12 45.9**	**+3.0**
SPSI	**Sidrap Palu** 2µm168nm,1.1s	**8.49**	**267**	P	Pn	10 12 47.6	+4.2
KAPI	**Kappang** 19nm,0.3s,baz=96,slow=7.3,SNR=71	**8.61**	**260**	Pn	Pn	10 12 48.8	+3.8
KAPI				LR	LR	10 16 57.0	
	comp=Z,2µm,19.7s,baz=72,slow=44						
KAPI	**Kappang**	**8.61**	**260**		**Pn**	**10 12 47.6**	**+2.6**
KAPI	**Kappang**	**8.61**	**260**	P	Pn	10 12 48.5	+3.5
KAPI	**Kappang**	**8.61**	**260**	*d iP*	**Pn**	**10 12 47.8**	**+2.8**
TOLI2	**Tolitoli**	**8.84**	**302**		**Pn**	**10 12 50.2**	**+2.1**
TOLI2	**Tolitoli**	**8.84**	**302**	P	**Pn**	**10 12 50.4**	**+2.3**
PCI	**Palu**	**8.85**	**288**	P	**Pn**	**10 12 48.7**	**+0.4**
AUDHS	**Darwin High Sc**	**9.12**	**164**	P	**Pn**	**10 12 54.1**	**+2.1**
DRS	**Darwin Rock St**	**9.14**	**164**	P	**Pn**	**10 12 54.7**	**+2.5**
MPSI	**Maapag** 4µm2µm283nm,0.7s	**9.25**	**295**	P	**Pn**	**10 12 56.4**	**+2.7**
MTN	**Manton Dam** comp=Z,0.0nmcomp=Z,58nm,0.9s	**9.59**	**163**	P	**Pn**	**10 12 59.2**	**+0.7**
MTN	**Manton Dam**	**9.59**	**163**		**Pn**	**10 12 59.5**	**+1.1**
KDU	**Kakadu** comp=Z,75nm,0.8s	**9.92**	**156**	P	**Pn**	**10 13 01.9**	**-1.1**
WSI	**Waingapu** comp=Z,4µmcomp=Z,204nm,1.0s	**9.95**	**232**	P	Pn	10 13 07.7	+4.4
BASI	**Baing, Sumba** comp=Z,4µmcomp=Z,4µmcomp=Z,266nm,1.3s	**10.07**	**229**	P	**Pn**	**10 13 08.0**	**+3.1**
SMPI	**Sarmi** comp=Z,2µmcomp=Z,130nm,1.4s	**10.55**	**81**	P	**Pn**	**10 13 13.1**	**+1.6**
WBSI	**Waikabubak, Su** comp=Z,3µmcomp=Z,2µmcomp=Z,100nm,0.8s	**10.66**	**235**	P	**Pn**	**10 13 16.3**	**+3.2**
BKB	**Balikpapan**	**11.61**	**281**	P	**Pn**	**10 13 27.8**	**+1.8**
PLAI	**Plampang**	**11.65**	**243**	P	**Pn**	**10 13 28.8**	**+2.2**
PLAI	**Plampang** comp=Z,3µmcomp=Z,2µmcomp=Z,84nm,1.0s	**11.65**	**243**	P	Pn	10 13 30.3	+3.7
GENI	**Genyem**	**11.92**	**85**	P	**Pn**	**10 13 31.9**	**+1.6**
GENI	**Genyem** comp=Z,2µmcomp=Z,127nm,1.0s	**11.92**	**85**	P	**Pn**	**10 13 31.1**	**+0.8**
KNRA	**Kunungurra** comp=Z,166nm,0.8s	**11.99**	**178**	P	**Pn**	**10 13 31.2**	**-0.1**
KNRA	**Kunungurra**	**11.99**	**178**		**Pn**	**10 13 31.2**	**-0.1**
TWSI	**Taliwang, Sumb** comp=Z,2µmcomp=Z,115nm,1.2s	**12.41**	**245**	P	**Pn**	**10 13 40.0**	**+2.9**
MMPI	**Merauke**	**12.97**	**112**	P	**Pn**	**10 13 45.5**	**+0.9**
MYLDM	**Lahad Datu**	**13.10**	**312**		P	10 13 51.1	-5.1
MYLDM	**Lahad Datu**	**13.10**	**312**	P	**Pn**	**10 13 48.6**	**+2.1**
BBKI	**Banjar Baru** comp=Z,131nm,1.4s	**13.41**	**270**	P	P	10 13 54.7	-5.0
MTKI	**Muara Teweh, K** comp=Z,70nm,0.8s	**13.63**	**281**	P	**Pn**	**10 13 56.5**	**+2.8**
SRBI	**Singaraja** comp=Z,95nm,1.3s	**13.73**	**251**	P	**Pn**	**10 13 56.1**	**+1.1**
DNP	**Denpasar** comp=Z,189nm,0.5s	**13.93**	**248**	P	**Pn**	**10 13 59.4**	**+1.7**
ABJI	**Asem Bagus** comp=Z,3µmcomp=Z,168nm,1.3s	**14.57**	**253**	P	**P**	**10 14 09.5**	**-3.1**
FITZ	**Fitzroy Crossi** comp=Z,15nm,0.7s	**14.62**	**190**	P	**Pn**	**10 14 05.8**	**-1.4**
FITZ	**Fitzroy Crossi** comp=Z,0.9nm,0.3s,baz=23,slow=12,SNR=41 comp=Z,31nm,0.8s	**14.62**	**190**	Pn	**Pn**	**10 14 05.5**	**-1.7**
FITZ	**Fitzroy Crossi**	**14.62**	**190**		**Pn**	**10 14 05.6**	**-1.5**
FITZ	**Fitzroy Crossi**	**14.62**	**190**	P	**Pn**	**10 14 05.7**	**-1.5**
KMMI	**Kalianget** comp=Z,4µmcomp=Z,204nm,0.9s	**14.65**	**256**	P	**P**	**10 14 11.9**	**-1.6**
JAGI	**Jajag, Banyuwa**	**14.85**	**250**		**Pn**	**10 14 11.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**14.85**	**250**	P	**P**	**10 14 12.5**	**-3.2**
JAGI	**Jajag, Banyuwa** comp=Z,2µmcomp=Z,3µmcomp=Z,124nm,1.0s	**14.85**	**250**	P	**P**	**10 14 13.3**	**-2.4**
BLJI	**Banyuglugur** comp=Z,3µmcomp=Z,236nm,0.7s	**15.17**	**254**	P	**P**	**10 14 16.6**	**-2.7**
GRJI	**Gresik** comp=Z,3µmcomp=Z,298nm,0.9s	**16.07**	**258**	P	**P**	**10 14 30.0**	**+0.8**
WB0	**Warramunga Arr** WB0 comp=Z,284nm,1.4s	**17.13**	**160**	IAmb	**Pn** IAmb	**10 14 35.2** 10 14 46.0	**-4.4**
SBUM	**Sibu**	**17.14**	**290**	P	**P**	**10 14 40.3**	**-0.9**
SBUM	**Sibu**	**17.14**	**290**	P	**P**	**10 14 42.3**	**+1.1**
NGJI	**Ngawi** comp=Z,198nm,1.0s	**17.14**	**257**	P	**P**	**10 14 43.8**	**+2.6**
WRAB	**Tennant Creek** WRAB comp=Z,280nm,1.4s	**17.27**	**160**	P IAmb	**Pn** IAmb	**10 14 37.5** 10 14 47.6	**-3.8**
WRAB	**Tennant Creek**	**17.27**	**160**	*i* P	**P**	**10 14 43.5**	**+1.0**
WRA	**Warramunga Arr** WRA comp=Z,1µm,19.0s,baz=342,slow=39	**17.27**	**160**	P LR	**Pn** LR	**10 14 37.8** 10 21 56.8	**-3.6**
WRA	**Warramunga Arr**	**17.27**	**160**		**Pn**	**10 14 38.1**	**-3.3**
WRA	**Warramunga Arr** WRA comp=Z,9.0nm,1.3s	**17.27**	**160**	P pmax	**Pn** pmax	**10 14 38.1**	**-3.3**
WR8	**Warramunga Arr** WR8 comp=Z,172nm,1.4s	**17.34**	**160**	IAmb	**Pn** IAmb	**10 14 38.3** 10 14 48.4	**-3.9**
PCJI	**Pacitan** comp=Z,2µmcomp=Z,180nm,1.0s	**17.60**	**254**	P	**P**	**10 14 45.8**	**-0.4**
COEN	**Coen** comp=Z,102nm,0.9s	**17.94**	**126**	P	**Pn**	**10 14 48.7**	**-0.9**
COEN	**Coen**	**17.94**	**126**	P	**Pn**	**10 14 48.0**	**-1.6**
COEN	**Coen**	**17.94**	**126**	P	**Pn**	**10 14 48.4**	**-1.3**
SMRI	**Semarang**	**18.08**	**258**	P	**P**	**10 14 53.4**	**+1.8**
SMRI	**Semarang**	**18.08**	**258**	P	**P**	**10 14 53.7**	**+2.1**
UGM	**Wanagama** UGM comp=Z,134nm,0.9s	**18.17**	**256**	P IAmb	**P** IAmb	**10 14 53.9** 10 15 04.5	**+1.3**
UGM	**Wanagama**	**18.17**	**256**	P	**P**	**10 14 54.6**	**+2.1**
UGM	**Wanagama** comp=Z,160nm,0.9s	**18.17**	**256**	P	**P**	**10 14 53.8**	**+1.3**
YOGI	**Yogyakarta** comp=Z,5µmcomp=Z,341nm,1.5s	**18.37**	**256**	P	**Pn**	**10 14 54.9**	**0.0**
KSM	**Kuching**	**18.66**	**285**	P	**Pn**	**10 14 58.0**	**-0.4**
KSM	**Kuching**	**18.66**	**285**	P	**Pn**	**10 15 00.1**	**+1.7**
TGY	**Tagaytay City** comp=Z,410nm,18.3s,baz=103,slow=45	**19.05**	**338**	LR	LR	10 25 02.4	
MBWA	**Marble Bar** comp=Z,41nm,0.8s	**19.32**	**205**	P	**Pn**	**10 15 06.0**	**-0.3**
MBWA	**Marble Bar** MBWA comp=Z,162nm,1.8s	**19.32**	**205**	IAmb	**Pn** IAmb	**10 15 05.8** 10 15 10.0	**-0.5**
MBWA	**Marble Bar**	**19.32**	**205**	P	**Pn**	**10 15 05.9**	**-0.4**
KPJI	**Karang Pucung** comp=Z,3µmcomp=Z,261nm,0.6s	**19.60**	**258**	P	**Pn**	**10 15 09.6**	**-0.2**
PSAC2	**Pilbara Seismi** comp=Z,95nm,2.1s	**19.61**	**204**	P	**Pn**	**10 15 09.3**	**-0.5**
PMG	**Port Moresby**	**19.62**	**108**	P	**Pn**	**10 15 11.5**	**+1.5**
	comp=Z,52nm,0.9s,baz=334,slow=6.2,SNR=11						
PMG				LR	LR	10 25 10.0	
	comp=Z,2µm,20.7s,baz=312,slow=44						
PMG	**Port Moresby**	**19.62**	**108**	P	**P**	**10 15 09.0**	**+0.6**
PMG				IAmb	IAmb	10 15 18.8	
	comp=Z,81nm,0.9s						
PMG	**Port Moresby**	**19.62**	**108**	P	**Pn**	**10 15 10.9**	**+0.9**
PMG	**Port Moresby**	**19.62**	**108**⇑	*iP*	**Pn**	**10 15 10.8**	**+0.8**
PMG				pmax	pmax		
	comp=Z,43nm,0.8s						
PSAC1	**Pilbara Seismi** comp=Z,79nm,1.9s	**19.62**	**204**	P	**Pn**	**10 15 09.3**	**-0.6**
PSA00	**Pilbara Seismi** comp=Z,96nm,2.1s	**19.64**	**204**	P	**Pn**	**10 15 09.2**	**-0.9**
PSA00	**Pilbara Seismi**	**19.64**	**204**	P	**Pn**	**10 15 09.0**	**-1.2**
PSA00				IAmb	IAmb	10 15 14.4	
	comp=Z,64nm,0.9s						
PSA00	**Pilbara Seismi**	**19.64**	**204**	P	**P**	**10 15 08.4**	**-0.2**
PSA00				IAmb	IAmb	10 15 14.4	
	comp=Z,42nm,1.1s						
PSA00	**Pilbara Seismi**	**19.64**	**204**	P	**P**	**10 15 08.8**	**+0.2**
PSAB3	**Pilbara Seismi** comp=Z,107nm,1.4s	**19.65**	**204**	P	**Pn**	**10 15 09.7**	**-0.6**
QIS	**Mount Isa** comp=Z,136nm,1.2s	**20.13**	**148**	P	**P**	**10 15 14.3**	**+0.3**
QIS	**Mount Isa**	**20.13**	**148**	P	**P**	**10 15 13.5**	**-0.5**
TPI	**Tanjungpandan**	**20.61**	**272**	P	Pn	10 15 19.8	-1.8
AS31	**Alice Springs**	**20.66**	**165**	P	Pn	10 15 21.0	-1.2
AS31				IAmb	IAmb	10 15 22.5	
	comp=Z,64nm,0.8s						
ASAR	**Alice Springs** comp=Z,175nm,0.8s,baz=345,slow=11,SNR=818	**20.66**	**165**	P PcP	**P** **PcP**	**10 15 20.6**	**+0.9**
ASAR						**10 19 28.8**	**-0.7**
	comp=Z,5.8nm,0.7s,baz=359,slow=1.9,SNR=6.9						
ASAR				ScP	**ScP**	**10 23 02.7**	**-1.1**
	comp=Z,2.7nm,0.9s,baz=348,slow=2.4,SNR=7.5						
ASAR				LR	LR	10 23 24.5	
	comp=Z,1µm,20.2s,baz=340,slow=37 comp=Z,175nm,0.8s						
AUALC	**St Philip's Co**	**20.68**	**165**	P	**P**	**10 15 20.3**	**+0.4**
LEM	**Lembang** comp=Z,30nm,0.6s,baz=85,slow=12,SNR=4.5	**20.82**	**260**	P	**P**	**10 15 20.8**	**-0.8**
LEM				LR	LR	10 24 36.9	
	comp=Z,1µm,18.5s,baz=144,slow=40 comp=Z,30nm,0.6s						
LEM	**Lembang** comp=Z,2µmcomp=Z,100nm,0.9s	**20.82**	**260**	P	Pn	10 15 23.6	-0.6
BBJI	**Bungbulang**	**20.88**	**259**	P	**P**	**10 15 21.8**	**-0.4**
WRKA	**Warakurna** comp=Z,79nm,1.0s	**21.30**	**180**	P	**P**	**10 15 28.2**	**+1.6**
MTSU	**Mount Surprise** comp=Z,30nm,0.8s	**21.33**	**134**	P	**P**	**10 15 27.9**	**+0.9**
MTSU	**Mount Surprise**	**21.33**	**134**	P	**P**	**10 15 27.7**	**+0.7**
CNJI	**Cibinong** comp=Z,112nm,0.9s	**21.36**	**259**	P	**P**	**10 15 29.8**	**+2.4**
KLI	**Kotabumi** comp=Z,130nm,0.5s	**23.39**	**266**	P	**P**	**10 15 50.9**	**+2.2**
GUMO	**Guam** comp=Z,695nm,20.6s,baz=219,slow=38	**23.74**	**44**	LR	LR	10 25 33.3	
RABL	**Rabaul**	**23.84**	**92**	P	**P**	**10 15 53.3**	**+0.3**
TV1H	**Townsville Har**	**23.86**	**132**	P	**P**	**10 15 53.7**	**+0.6**
DSRI	**Dabo** comp=Z,53nm,0.5s	**23.88**	**277**	P	**P**	**10 15 53.2**	**-0.3**
CTA	**Charters Tower** comp=Z,40nm,18.9s,baz=316,slow=41	**23.99**	**134**	LR	LR	10 27 05.7	
CTA	**Charters Tower**	**23.99**	**134**	P	**P**	**10 15 54.8**	**+0.4**
MDSI	**Maura Dua**	**24.05**	**267**	P	**P**	**10 15 56.6**	**+1.6**
TPRI	**Tanjung Pinang** comp=Z,76nm,0.6s	**24.16**	**280**	P	**P**	**10 15 56.1**	**+0.1**
MEEK	**Meekatharra** comp=Z,249nm,0.9s	**24.69**	**201**	P	**P**	**10 16 00.7**	**0.0**
MEEK	**Meekatharra**	**24.69**	**201**	P	**P**	**10 16 00.2**	**-0.6**
LHSI	**Lahat** comp=Z,27nm,0.8s	**24.70**	**269**	P	**P**	**10 16 05.7**	**+4.8**
BTDF	**Bukit Timah Da**	**24.98**	**281**	P	**P**	**10 16 05.8**	**+2.3**
DLV	**Lat**	**25.02**	**308**	P	**P**	**10 16 06.9**	**+2.9**
KSI	**Kapahiang** comp=Z,84nm,0.6s	**25.63**	**269**	P	**P**	**10 16 13.3**	**+3.8**
FORT	**Forrest**	**27.02**	**180**	P	**P**	**10 16 22.5**	**+0.8**
QLP	**Quilpie**	**27.48**	**148**	P	**P**	**10 16 26.6**	**+0.7**
BKNI	**Bangkinang**	**27.50**	**278**	P	**P**	**10 16 27.5**	**+1.2**
TPUB	**Ta-pu**	**27.77**	**345**	P	**P**	**10 16 27.2**	**-1.3**
TPUB				IAmb	IAmb	10 16 56.

comp=Z,20nm,0.9s
ARMA Armidale 34.61 143 P P 10 17 30.6 +1.8
CNSH ChangSha 34.90 336 P P 10 17 34.9 +3.7
CNSH S S **10 23 08.1 +7.6**
CNSH pmax pmax
comp=Z,17nm,0.5s
CNSH LR LR
comp=Z,560nm,19.2s
CNSH LR LR
comp=Z,570nm,17.1s
CNSH LR LR
comp=Z,920nm,18.5s
SSE Sheshan 35.17 349 P P 10 17 34.7 +1.2
SSE S S **10 23 06.5 +1.9**
SSE pmax pmax
comp=Z,13nm,0.8s
SSE pmax pmax
comp=Z,110nm,6.2s
SSE LR LR
comp=Z,150nm,18.6s
SSE LR LR
comp=Z,300nm,19.1s
CM31 Chiang Mai Arr 36.28 308 P P 10 17 43.2 0.0
CM31 IAmb IAmb 10 17 47.4
comp=Z,29nm,1.4s
CMAR Chiang Mai Arr 36.28 308 P P 10 17 44.1 +0.9
comp=Z,7.7nm,1.0s,baz=141,slow=7.6,SNR=22
CMAR PcP **PcP 10 20 08.2 +0.2**
comp=Z,1.4nm,0.4s,baz=156,slow=2.1,SNR=4.4
CMAR ScP **ScP 10 23 53.1 +1.0**
comp=Z,2.4nm,0.3s,baz=118,slow=2.9,SNR=5.3
CMAR LR LR 10 35 00.7
comp=Z,346nm,18.6s,baz=125,slow=40
comp=Z,7.7nm,1.0s
CMAR Chiang Mai Arr 36.28 308 P 10 17 43.3 +0.1
CMAR Chiang Mai Arr 36.28 308 *i* P **P 10 17 46.5 +3.3**
CMAR pmax pmax
comp=Z,5.0nm,0.6s
CHTO Chiang Mai 36.48 309 P 10 17 43.4 -1.5
CHTO IAmb IAmb 10 18 09.3
comp=Z,27nm,1.1s
CHTO Chiang Mai 36.48 309 P P 10 17 45.7 +0.8
CHTO Chiang Mai 36.48 309 P P 10 17 43.4 -1.5
CHTO pmax pmax
comp=Z,27nm,1.2s
WHN Wuhan 36.48 340 P P 10 17 47.5 +2.8
WHN S S **10 23 23.0 -1.7**
WHN pmax pmax
comp=Z,110nm,1.1s
WHN LR LR
comp=Z,1μm,10.4s
WHN LR LR
comp=Z,570nm,9.7s
WHN LR LR
comp=Z,2μm,25.3s
GYA Guiyang 36.48 326 ⇓P **P 10 17 48.3 +3.3**
GYA S S **10 23 25.4 +0.2**
GYA pmax pmax
comp=Z,10.0nm,1.2s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=Z,140nm,15.7s
NJ2 Nanjing 36.58 347 *e*P **P 10 17 48.7 +3.1**
NJ2 pmax pmax
comp=Z,15nm,0.6s
JNU Nakatsue 36.62 4 LR LR 10 33 21.2
comp=Z,400nm,20.1s,baz=178,slow=37
JNU Nakatsue 36.62 4 P **P 10 17 45.3 -0.6**
JNU IAmb IAmb 10 18 01.5
comp=Z,20nm,1.1s
JNU Nakatsue 36.62 4 P P 10 17 48.0 +2.0
JMN Monobe 37.52 8 P P 10 17 54.0 +0.4
JMN IAmb IAmb 10 17 57.0
comp=Z,31nm,0.9s
JMN Monobe 37.52 8 P P 10 17 56.3 +2.7
KMI Kunming 37.83 320 ⇑P **P 10 18 00.3 +3.8**
KMI PP **PnPn 10 19 26.6 +1.9**
KMI S S **10 23 45.3 -0.5**
KMI pmax pmax
comp=Z,30nm,1.1s
KMI LR LR
comp=Z,410nm,18.7s
KMI LR LR
comp=Z,270nm,20.1s
KMI LR LR
comp=Z,520nm,21.7s
JHJ Hachijo jima 2 38.13 16 LR LR 10 32 47.3
comp=Z,702nm,19.3s,baz=198,slow=35
ENH Enshi 38.19 333 IAmb IAmb 10 18 07.5
comp=Z,37nm,1.2s
ENH Enshi 38.19 333 P P 10 18 01.3 +2.0
PZH PanZhiHua 39.44 321 P P 10 18 11.7 +1.8
TJN Taejon 39.79 359 P P 10 18 11.8 -0.8
TJN Taejon 39.79 359 P P 10 18 15.4 +2.8
TJN Taejon 39.79 359 P P 10 18 11.8 -0.8
TJN pmax pmax
comp=Z,107nm,1.2s
JGF Kuroka 39.93 12 P P 10 18 16.3 +2.5
TNCH TengChong 40.56 316 P P 10 18 20.5 +1.1
TNCH pmax pmax
comp=Z,160nm,1.5s
LYN LuoYang 40.78 340 P P 10 18 22.8 +2.0
LYN pmax pmax
comp=Z,20nm,0.6s
LYN LR LR
comp=Z,680nm,19.6s
LYN LR LR
comp=Z,580nm,19.2s
LYN LR LR
comp=Z,1μm,28.5s
KSAR Wonju Array Be 40.85 360 P 10 18 21.3 0.0
KSAR Wonju Array Be 40.85 360 P P 10 18 21.3 0.0
KSRS Korea Array 40.86 360 P P 10 18 22.0 +0.6
comp=Z,12nn,0.9s,baz=182,slow=9.6,SNR=29
comp=Z,12nn,0.9s
KS19 Wonju Array Si 40.91 360 P P 10 18 21.0 -0.8
INCN Inchon 40.92 358 P P 10 18 24.9 +3.0
TIA Tai'an 40.97 346 P P 10 18 23.1 +0.8
TIA pmax pmax
comp=Z,13nn,1.4s
MJAR Matsushiro Arr 41.01 12 P P 10 18 21.6 -1.1
comp=Z,8.1nm,0.9s,baz=184,slow=9.1,SNR=13
comp=Z,8.1nn,0.9s
MJAR Matsushiro Arr 41.01 12 P P 10 18 21.0 -1.8
MAJO Matsushiro 41.01 12 P P 10 18 23.2 +0.5
MAJO IAmb IAmb 10 18 28.8
comp=Z,30nm,1.1s
MAJO Matsushiro 41.01 12 P P 10 18 25.4 +2.7
MAJO Matsushiro 41.01 12 ⇓*i*P **P 10 18 20.9 -1.8**
MAJO pmax pmax
comp=Z,9.0nm,0.9s
MJB9 Matsu-Tunnel 41.02 12 P P 10 18 24.6 +1.8
MJB9 IAmb IAmb 10 18 29.8
comp=Z,30nm,1.1s
CD2 Chengdu 41.55 327 P P 10 18 29.2 +2.0
CD2 S S **10 24 44.4 +3.3**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 LR LR
comp=Z,620nm,15.2s
CD2 LR LR
comp=Z,610nm,18.4s
CD2 LR LR
comp=Z,790nm,19.0s
XAN Xi'an 41.67 336 ⇑P **P 10 18 26.8 -1.4**
XAN S S **10 24 41.0 -1.8**
XAN pmax pmax
comp=Z,11nm,0.7s
XAN pmax pmax
comp=Z,300nm,9.8s
XAN LR LR
comp=Z,550nm,18.6s
XAN LR LR
comp=Z,340nm,13.7s
XAN LR LR
comp=Z,700nm,17.9s
HNS HongShan 42.71 344 ⇑P **P 10 18 38.2 +1.7**
HNS pP **sP 10 18 52.0 +2.0**
HNS PP **PP 10 20 20.5 +4.4**
HNS S S **10 24 55.1 -2.9**
HNS ScS **ScS 10 28 27.1 -8.3**
HNS pmax pmax
comp=Z,22nn,0.8s
HNS LR LR
comp=Z,240nm,23.0s
HNS LR LR
comp=Z,470nm,16.0s
HNS LR LR
comp=Z,400nm,15.7s
BRDH Bariadhala 44.30 308 LR LR 10 40 38.7
comp=Z,355nm,18.2s,baz=142,slow=41
BJT Baijiatuao 44.82 347 P **P 10 18 52.8 -0.7**
BJT IAmb IAmb 10 18 56.2
comp=Z,28nm,1.1s
BJT Baijiatuao 44.82 347 P P 10 18 53.2 -0.3
BJT Baijiatuao 44.82 347 P P 10 18 52.8 -0.7
BJT pmax pmax
comp=Z,28nm,1.1s
BJI Beijing 44.84 347 P P 10 18 52.6 -1.0
BJI pP **sP 10 19 05.0 -2.2**
BJI S S **10 25 27.4 -1.6**
BJI SS **ScS 10 28 41.2 -7.5**
BJI pmax pmax
comp=Z,13nn,0.9s
BJI pmax pmax
comp=Z,140nm,9.2s
BJI LR LR
comp=Z,200nm,18.1s
BJI LR LR
comp=Z,150nm,24.3s
BJI LR LR
comp=Z,200nm,25.8s
SNY Shenyang 45.43 355 ⇑P **P 10 18 58.6 +0.3**
SNY S S **10 25 33.2 -4.3**
SNY pmax pmax
comp=Z,13nm,0.9s
SNY pmax pmax
comp=Z,170nm,9.4s
SNY LR LR
comp=Z,350nm,19.2s
SNY LR LR
comp=Z,310nm,22.0s
SNY LR LR
comp=Z,500nm,21.6s
LZDM Lanzhou Array 45.59 332 P **P 10 19 00.5 +0.4**
comp=Z,1.5nm,0.3s,baz=167,slow=9.1,SNR=6.6
LZDM LR LR 10 39 51.1
comp=Z,462nm,21.3s,baz=115,slow=38
comp=Z,1.5nn,0.3s
LZH Lanzhou 45.63 332 *e*P **P 10 19 02.3 +2.1**
LZH sP sP 10 19 21.9 +8.2
LZH pmax pmax
comp=Z,34nm,1.2s
LZH LR LR
comp=Z,490nm,13.7s
LZH LR LR
comp=Z,720nm,14.8s
LZH LR LR
comp=Z,730nm,13.7s
SHL Shillong 45.67 311 P 10 18 59.3 -1.4
SHL IAmb IAmb 10 19 09.0
comp=Z,22nn,0.8s
SHL Shillong 45.67 311 P P 10 18 59.3 -1.4
SHL pmax pmax
comp=Z,23nm,0.8s
PSTR Posyet 46.11 3 ⇓*i*P **P 10 19 04.5 +0.9**
HHC Hu-ho-hao-te 46.82 343 *e*P **P 10 19 12.2 +2.8**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,230nm,4.9s
HHC LR LR
comp=Z,210nm,23.6s
HHC LR LR
comp=Z,370nm,19.3s
HHC LR LR
comp=Z,430nm,19.3s
BTO Baotou 47.08 341 *e*P P 10 19 16.2 +4.8
BTO pP sP 10 19 28.7 +3.7
BTO pmax pmax
comp=Z,11nn,0.6s
BTO pmax pmax
comp=Z,390nm,6.1s
BTO LR LR
comp=Z,1μm,11.7s
BTO LR LR
comp=Z,800nm,14.1s
BTO LR LR
comp=Z,890nm,19.1s
CN2 Changchun 47.27 357 *e*P P 10 19 17.2 +4.5
CN2 *ep*P sP 10 19 31.0 +4.7
CN2 *e*S **S 10 26 07.7 +3.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 LR LR
comp=Z,200nm,13.0s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,400nm,14.0s
USRK Ussuriysk Ar. 47.72 4 P **P 10 19 16.3 +0.1**
comp=Z,6.8nm,0.6s,baz=183,slow=7.1,SNR=14
comp=Z,6.8nn,0.6s
MDJ Mudanjiang 48.03 1 P P 10 19 20.6 +2.0
MDJ PP **PP 10 21 06.8 -4.2**
MDJ S S **10 26 21.4 +6.8**
MDJ pmax pmax
comp=Z,23nm,1.1s
MDJ LR LR
comp=Z,390nm,21.3s
MDJ LR LR
comp=Z,340nm,12.4s
MDJ LR LR
comp=Z,720nm,19.9s
MDJ Mudanjiang 48.03 1 P P 10 19 20.3 +1.7
XLT XiLinHaoTe 48.56 348 *e*P **P 10 19 19.2 -3.6**
XLT pmax pmax
comp=Z,6.0nm,0.7s
XLT pmax pmax
comp=Z,230nm,8.1s
XLT LR LR
comp=Z,400nm,13.8s
XLT LR LR
comp=Z,260nm,11.8s
LSA Lhasa 48.59 316 IAmb IAmb 10 19 33.3
comp=Z,34nm,1.3s
LSA Lhasa 48.59 316 P P 10 19 20.1 -3.6
PALK Pallekele 48.69 283 P P 10 19 23.1 -1.2
comp=Z,4.4nm,0.7s,baz=86,slow=8.0,SNR=6.3
PALK LR LR 10 43 05.4
comp=Z,329nm,18.1s,baz=96,slow=40
comp=Z,4.4nn,0.7s
BNX BinXian 49.15 359 ⇑P **P 10 19 27.0 -0.1**
BNX pmax pmax
comp=Z,11nn,1.2s
ASAJ Asahikawa 49.23 14 LR LR 10 40 39.7
comp=Z,358nm,20.6s,baz=206,slow=36
GTA Gaotai 50.20 331 *e*P **P 10 19 35.7 +0.2**
GTA pmax pmax
comp=Z,8.0nm,0.7s
GTA LR LR
comp=Z,600nm,22.2s
GTA LR LR
comp=Z,430nm,22.9s
GTA LR LR
comp=Z,720nm,22.9s
GOMU GeErMu 50.46 325 P **P 10 19 39.5 +1.7**
GOMU S S **10 26 52.1 +2.4**
GOMU pmax pmax
comp=Z,3.0nm,0.5s
MSVF Nonsavu 50.71 110 ⇑*e*P **P 10 19 43.1 +3.4**
EVN Everest 50.77 311 P P 10 19 40.1 -0.5
YSS Yuzhno-Sakhali 51.95 13 *e*P **P 10 19 47.6 -0.7**
YSS *e*S **S 10 27 07.1 -2.1**
YSS MLR MLR
comp=Z,600nm,12.0s
HYBB Hyderabad (bro 53.32 295 *e*P **P 10 19 60.0 +0.9**
HYBB *es*P sP 10 20 17.9 +5.2
HILR Hailar Array B 53.47 353 P **P 10 19 59.9 +0.3**
comp=Z,4.1nm,0.6s,baz=164,slow=8.7,SNR=5.4
comp=Z,4.1nn,0.6s
HEH HeiHe 53.66 359 *e*P **P 10 20 02.4 +1.5**
HEH pmax pmax
comp=Z,12nn,1.3s
HEH LR LR
comp=Z,290nm,18.0s
HEH LR LR
comp=Z,450nm,17.4s
HEH LR LR
comp=Z,600nm,19.6s
ULN Ulaanbaatar 54.54 343 P P 10 20 07.7 +0.1
ULN IAmb IAmb 10 20 19.8
comp=Z,27nm,1.3s
ULN Ulaanbaatar 54.54 343 ⇓*i*P **P 10 20 07.5 -0.1**
ULN pmax pmax
comp=Z,14nm,1.0s
SONM Songino Array 54.71 342 P P 10 20 08.2 -0.6
comp=Z,8.9nm,1.0s,baz=160,slow=6.6,SNR=19
SONM LR LR 10 45 02.0
comp=Z,314nm,20.1s,baz=156,slow=38
comp=Z,8.9nn,1.0s
SONM Songino Array 54.71 342 P P 10 20 08.7 -0.1
SONM Songino Array 54.71 342 P P 10 20 08.7 -0.1
SONM pmax pmax
comp=Z,14nm,1.2s
TUWZ Tuamarina 55.55 139 P P 10 20 14.7 -0.1
URZ Urewera 56.23 135 LR LR 10 45 08.6
comp=Z,444nm,20.4s,baz=308,slow=37
RAO Raoul Island 56.94 123 LR LR 10 45 49.3
comp=Z,193nm,18.1s,baz=314,slow=37
ZEA Zeya 57.15 359 *e*P P 10 20 36.3 +10
ZEA pmax pmax
comp=Z,10.0nm,0.6s
TLY Talaya 58.95 342 ⇑*i*P **P 10 20 39.7 +1.1**
TLY pmax pmax
comp=Z,4.0nm,0.9s
WMQ Urumqi 59.64 327 *e*P **P 10 20 43.9 +0.3**
WMQ pmax pmax
comp=Z,20nm,1.1s
PEA0B Petropavlovsk- 61.70 20 P P 10 20 57.2 -0.2
PEA0B Petropavlovsk- 61.70 20 P P 10 20 57.2 -0.2
PEA0B pmax pmax
comp=Z,83nm,1.6s
PETK Petropavlovsk- 61.70 20 P P 10 20 58.1 +0.7
comp=Z,3.0nm,0.7s,baz=204,slow=4.7,SNR=8.7
PETK LR LR 10 46 13.4
comp=Z,146nm,21.5s,baz=215,slow=34
comp=Z,3.0nm,0.7s
PETK Petropavlovsk- 61.70 20 P P 10 20 57.2 -0.2
PET Petropavlovsk 61.95 20 P P 10 20 59.5 +0.4
PET Petropavlovsk 61.95 20 ⇑*i*P **P 10 20 59.8 +0.7**
PET pmax pmax
comp=Z,18nm,1.2s
ZSN Zaisan 63.51 329 *e*P **P 10 21 09.1 -0.5**
ZSN Zaisan 63.51 329 *e*P **P 10 21 09.9 +0.3**
DGZ Jazzator, Alta 63.73 332 ⇓*i*P **P 10 21 10.8 -0.4**
DGZ pmax pmax
comp=Z,11nm,1.1s
CASY Casey 63.78 188 P P 10 21 10.7 -0.3
CASY IAmb IAmb 10 23 25.4
comp=Z,47nm,1.6s
SHLS Shalkode 64.01 322 *e*P **P 10 21 11.4 -1.8**
comp=Z,12nn,0.8s
SHLS Shalkode 64.01 322 *e*P **P 10 21 11.3 -1.8**
SHLS pmax pmax
comp=Z,12nn,0.8s
KSH Kashi 64.38 317 P P 10 21 15.3 -0.4
KSH pP sP 10 21 29.3 -0.2
KSH pmax pmax
comp=Z,9.0nm,0.9s
MK31 Makanchi Array 64.47 327 P P 10 21 15.4 -0.6
MK31 IAmb IAmb 10 21 18.7
comp=Z,12nn,0.9s
MK31 Makanchi Array 64.47 327 ⇓*i*P **P 10 21 14.6 -1.4**
MKAR Makanchi Array 64.47 327 P P 10 21 15.5 -0.5
comp=Z,13nm,0.8s,baz=126,slow=8.0,SNR=68
MKAR LR LR 10 50 17.2
comp=Z,186nm,21.6s,baz=104,slow=37
comp=Z,13nn,0.8s
MKAR Makanchi Array 64.47 327 P P 10 21 15.0 -1.0
MKAR Makanchi Array 64.47 327 *i* P **P 10 21 15.0 -1.0**
MKAR pmax pmax
comp=Z,13nm,0.9s
SATY Saty 64.61 322 *e*P **P 10 21 16.9 -0.1**
comp=Z,14nn,1.0s
SATY Saty 64.61 322 *e*P **P 10 21 16.9 -0.1**
SATY pmax pmax
comp=Z,14nn,1.0s
MAKZ Makanchi 64.65 327 P 10 21 16.2 -0.9
MAKZ IAmb IAmb 10 21 19.8
comp=Z,17nn,1.0s
MAKZ Makanchi 64.65 327 P P 10 21 16.2 -0.9
MAKZ pmax pmax
comp=Z,17nn,1.0s
MAKZ Makanchi 64.65 327 P P 10 21 16.3 -0.9
MA2 Magadan 65.46 12 LR LR 10 49 30.3
comp=Z,120nm,20.3s,baz=226,slow=36
YAK Yakutsk 65.47 1 P P 10 21 22.4 +0.3
comp=Z,16nm,0.5s,baz=87,slow=10.0,SNR=5.7
YAK LR LR 10 51 13.4
comp=Z,209nm,19.0s,baz=180,slow=37
comp=Z,16nn,0.5s
YAK Yakutsk 65.47 1 P P 10 21 22.2 +0.2
YAK Yakutsk 65.47 1 *e*P **P 10 21 23.2 +1.1**
YAK *e**PP **sP 10 21 33.6 -2.3**
YAK *e* 10 21 55.0
YAK *e* 10 23 46.3
YAK *e*PPP PPP 10 25 20.2
YAK *e*S **S 10 30 05.1 +0.7**
YAK *e**SS **sS 10 30 22.6 +1.6**
YAK *e* 10 31 15.8
YAK *e*SS **SS 10 34 18.5 +0.1**
YAK pmax pmax
comp=Z,43nm,1.3s
YAK pmax pmax
comp=N,24nm,1.9s
YAK pmax pmax
comp=E,13nm,2.2s
YAK pmax pmax
comp=Z,194nm,4.4s
YAK pmax pmax
comp=N,267nm,4.3s
YAK pmax pmax
comp=E,100nm,2.1s
YAK smax smax
comp=E,230nm,2.9s
YAK smax smax
comp=N,145nm,2.5s
TNSS Tian-Shan 65.50 321 *e*P **P 10 21 23.1 -0.1**
TNSS Tian-Shan 65.50 321 *e*P **P 10 21 23.1 -0.1**
MDOK Medeo 65.50 321 *e*P **P 10 21 23.2 +0.2**
MDOK Medeo 65.50 321 *e*P **P 10 21 23.1 +0.2**
AAA Alma-Ata 65.61 321 *e*P **P 10 21 23.7 +0.1**
AAA Alma-Ata 65.61 321 *e*P **P 10 21 23.6 +0.1**
TDK Taldyqorghan 65.66 323 *e*P **P 10 21 24.0 +0.3**
TDK Taldyqorghan 65.66 323 *e*P **P 10 21 23.9 +0.3**
BOOM Boomskoye usch 65.86 320 IAmb IAmb 10 23 35.3
comp=Z,18nn,1.0s
AAK Ala-Archa 66.87 320 P **P 10 21 31.2 -0.5**
comp=Z,4.6nm,0.8s,baz=144,slow=5.9,SNR=7.0
AAK LR LR 10 53 53.8
comp=Z,277nm,20.9s,baz=104,slow=39
comp=Z,4.6nn,0.8s
AAK Ala-Archa 66.87 320 P P 10 21 31.4 -0.3
AAK Ala-Archa 66.87 320 ⇓*i*P **P 10 21 33.3 +1.6**
AAK pmax pmax
comp=Z,5.0nm,0.9s
SGDS Sogindy 67.17 320 *e*P **P 10 21 33.8 +0.3**
comp=Z,9.9nm,1.1s
ARSB Arslanbob 67.25 318 IAmb IAmb 10 21 58.2
comp=Z,37nm,1.4s
ZAA0 Zalesovo Array 67.81 334 IAmb IAmb 10 21 39.3
comp=Z,22nm,1.1s
ZALV Zalesovo Beam 67.81 334 P P 10 21 35.9 -1.3
comp=Z,13nm,1.0s,baz=112,slow=4.5,SNR=18
ZALV LR LR 10 53 54.2
comp=Z,300nm,19.9s,baz=108,slow=38
comp=Z,13nn,1.0s
ZALV Zalesovo Beam 67.81 334 P 10 21 35.5 -1.7
SHEM Shemya Is, Ala 68.08 28 LR LR 10 46 59.0
comp=Z,309nm,20.8s,baz=282,slow=32
BTLS Baital 68.32 322 *e*P **P 10 21 41.0 +0.3**
BTLS Baital 68.32 322 *e*P **P 10 21 40.9 +0.3**
KURBB Kurchatov Arra 68.75 329 P P 10 21 41.9 -1.2
comp=Z,16nm,0.8s,baz=129,slow=5.5,SNR=37
comp=Z,16nm,0.8s
KURK Kurchatov 68.75 329 P 10 21 42.5 -0.7
KURK IAmb IAmb 10 21 46.1
comp=Z,29nm,0.9s
KURK Kurchatov 68.75 329 ⇓*i*P **P 10 21 41.6 -1.6**
KURK pmax pmax
comp=Z,30nm,0.9s
KURK Kurchatov 68.75 329 P P 10 21 42.3 -0.8
SEY Seymchan 68.84 12 LR LR 10 51 37.7
comp=Z,229nm,20.9s,baz=208,slow=36
SEY Seymchan 68.84 12 ⇓*i*P **P 10 21 44.4 +1.0**

SEY pmax pmax
comp=Z,30nm,0.9s
IUG luzhnay 69.59 318 *e*P **P 10 21 48.8 +0.1**
comp=Z,9.4nm,1.1s
IUG luzhnay 69.59 318 *e*P **P 10 21 48.8 +0.1**
IUG pmax pmax
comp=Z,9.0nm,1.1s
KK31 Karatay Array 69.68 319 P **P 10 21 47.9 -1.2**
KK31 Karatay Array 69.68 319 P **P 10 21 47.9 -1.2**
KK31 pmax pmax
comp=Z,9.0nm,1.0s
KKAR Karatay Array 69.68 319 **P 10 21 48.1 -1.0**
KKAR Karatay Array 69.68 319 P **P 10 21 48.1 -1.0**
BRLS Borolday 70.09 318 *e*P **P 10 21 52.0 +0.3**
BRLS Borolday 70.09 318 *e*P **P 10 21 52.0 +0.3**
BRZS Berezniki 71.57 326 *e*P **P 10 22 01.0 +0.5**
BRZS Berezniki 71.57 326 *e*P **P 10 22 01.0 +0.5**
RAR Rarotonga 71.88 111 LR LR 10 52 07.4
comp=Z,162nm,21.6s,baz=270,slow=35
BVAR Borovoye Array 74.30 328 P **P 10 22 15.6 -1.0**
comp=Z,8.4nm,0.9s,baz=133,slow=8.7,SNR=16
BVAR LR LR 10 55 20.6
comp=Z,255nm,21.7s,baz=347,slow=36
comp=Z,8.4nm,0.9s
BORK Borovoye 74.35 328 ⇓*i*P **P 10 22 16.2 -0.7**
BORK pmax pmax
comp=Z,16nm,1.0s
BORK Borovoye 74.35 328 P **P 10 22 16.1 -0.8**
TIXI Tiksi 75.13 0 P **P 10 22 20.2 -0.8**
comp=Z,9.1nm,0.5s,baz=192,slow=4.0,SNR=29
TIXI LR LR 10 57 21.6
comp=Z,394nm,19.6s,baz=194,slow=37
comp=Z,9.1nm,0.5s
TIXI Tiksi 75.13 0 ⇓*i*P **P 10 22 19.9 -1.1**
TIXI Tiksi 75.13 0 ⇓*i*P **P 10 22 20.0 -1.0**
TIXI pmax pmax
comp=Z,10.0nm,0.6s
VNDA Vanda 75.99 173 P **P 10 22 25.0 -0.9**
comp=Z,1.9nm,0.6s,baz=302,slow=6.2,SNR=15
VNDA LR LR 10 55 15.6
comp=Z,313nm,20.1s,baz=342,slow=35
comp=Z,1.9nm,0.6s
VNDA Vanda 75.99 173 **P 10 22 25.1 -0.9**
VNDA Vanda 75.99 173 P **P 10 22 25.1 -0.9**
VNDA pmax pmax
comp=Z,3.0nm,0.8s
VNDA Vanda 75.99 173 P **P 10 22 24.9 -1.0**
BILL Bilibino 76.24 14⇑*i*P **P 10 22 27.7 +0.3**
BILL pmax pmax
comp=Z,5.0nm,1.0s
MAW Mawson 77.47 201 P **P 10 22 33.0 -1.4**
comp=Z,2.9nm,0.7s,baz=79,slow=7.7,SNR=6.8
MAW LR LR 10 54 12.1
comp=Z,176nm,19.9s,baz=66,slow=34
comp=Z,2.9nm,0.7s
MAW Mawson 77.47 201 P **P 10 22 33.0 -1.4**
NRIK Noril'sk 77.88 346 P **P 10 22 36.2 -0.5**
comp=Z,9.8nm,0.7s,baz=140,slow=6.8,SNR=15
comp=Z,9.8nm,0.7s
NRIK Noril'sk 77.88 346*c i*P **P 10 22 36.3 -0.3**
NRIK pmax pmax
comp=Z,38nm,1.4s
ABKAR Abkulak array 78.81 322 P **P 10 22 40.7 -1.4**
AKTO Aktyubinsk 80.36 322 LR LR 11 02 04.8
comp=Z,244nm,20.6s,baz=285,slow=38
SVE Sverdlovsk 81.00 329 *e*P P 10 22 59.9 +6.0
PPT Papeete 81.44 107 LR LR 10 57 03.5
comp=Z,139nm,19.8s,baz=284,slow=34
PPT2 Papeete2 81.44 107 *e*S S 10 32 57.4 -9.5
comp=Z,84nm,22.2s
PPT2 *e*SS SS 10 38 12.3 -12
comp=Z,119nm,25.8s
PPT2 *e*LQ LQ 10 44 54.1
comp=Z,443nm,27.8s
PPT2 *e*LR LR 10 48 25.2
comp=Z,243nm,23.8s
PPT2 *e*LR LR 10 48 32.6
comp=Z,276nm,41.0s
TBI Tubuai 81.48 113 *e*P **P 10 22 59.8 +2.7**
comp=Z,835nm,45.0s
TBI Tubuai 81.48 113 *e*S **S 10 33 02.2 -4.8**
comp=Z,565nm,28.5s
TBI *e*SS SS 10 38 13.2 -11
comp=Z,877nm,32.2s
TBI *e*LQ LQ 10 44 58.7
comp=Z,2μm,36.0s
TBI *e*LR LR 10 48 23.2
comp=Z,1μm,27.2s
TBI *e*LR LR 10 48 27.0
comp=Z,2μm,37.2s
ARTI Arti 82.02 328 P **P 10 22 57.5 -1.7**
comp=Z,4.3nm,0.6s,baz=141,slow=3.8,SNR=7.4
comp=Z,4.3nm,0.6s
ARTI Arti 82.02 328 **P 10 22 58.1 -1.2**
ARTI lAmb lAmb 10 23 01.3
comp=Z,36nm,1.5s
ARTI Arti 82.02 328*d i*P **P 10 22 58.0 -1.3**
ARTI S **S 10 33 11.8 +0.5**
ARTI SS **SS 10 38 24.9 -5.9**
ARTI pmax pmax
comp=Z,23nm,1.4s
RAYN Ar Rayn 84.81 294 **P 10 23 13.9 -0.5**
RAYN lAmb lAmb 10 23 21.4
comp=Z,9.4nm,0.8s
RAYN Ar Rayn 84.81 294 P **P 10 23 13.9 -0.5**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
SYO Syowa Base 86.17 201⇑*e*PcP **PcP 10 23 24.2 +1.5**
SYO Syowa Base 86.17 201⇑*e*pP pP 10 23 35.0 +4.4
QSPA South Pole Qui 86.34 180 P **P 10 23 22.7 +1.5**
comp=Z,14nm,0.7s,baz=278,slow=1.0,SNR=31
comp=Z,14nm,0.7s
QSPA South Pole Qui 86.34 180 P **P 10 23 22.4 +1.1**
QSPA lAmb lAmb 10 23 27.0
comp=Z,15nm,0.8s
BELG Belogornoye 87.14 323 P **P 10 23 24.4 -0.8**
comp=Z,34nm,0.8s,baz=237,slow=0.1,SNR=14
comp=Z,34nm,0.8s
BELG Belogornoye 87.14 323⇑*i*P **P 10 23 25.3 +0.1**
BELG pmax pmax
comp=Z,7.0nm,0.9s
KDAK Kodiak Island 87.26 32 LR LR 11 01 50.6
comp=Z,158nm,18.2s,baz=243,slow=35
KIRV Kirov 87.27 329 P **P 10 23 23.9 -1.7**
comp=Z,14nm,0.8s,baz=113,slow=10,SNR=7.7
KIRV LR LR 11 05 17.8
comp=Z,289nm,22.0s,baz=36,slow=38
comp=Z,14nm,0.8s
KIRV Kirov 87.27 329 ⇓*i*P **P 10 23 25.6 -0.1**
GNI Garni 87.37 310 LR LR 11 11 18.1
comp=Z,78nm,18.3s,baz=16,slow=42
GNI Garni 87.37 310⇑*e*P **P 10 23 30.4 +3.5**
GNI pmax pmax
comp=Z,4.0nm,1.1s
E19K Redstone River 87.42 22 lAmb lAmb 10 23 35.0
comp=Z,10nm,0.9s
KBZ Khabaz 89.13 314 P **P 10 23 34.1 -0.7**
comp=Z,1.2nm,0.6s,baz=198,slow=4.2,SNR=2.9
comp=Z,1.2nm,0.6s
KBZ Khabaz 89.13 314⇑*e*P **P 10 23 36.8 +1.9**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KVAR Kislovodsk Arr 89.30 314 LR LR 11 07 59.6
comp=Z,211nm,19.2s,slow=38
KIV Kislovodsk 89.31 314 *e*P **P 10 23 34.7 -1.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s
CCB Clear Creek Bu 90.63 25 P **P 10 23 40.0 -1.5**
CCB lAmb lAmb 10 24 04.0
comp=Z,14nm,1.4s
KMBO Kilima Mbogo 90.95 269 LR LR 11 00 27.9
comp=Z,241nm,21.5s,baz=104,slow=33
TAOE Nuku Hiva Isla 91.01 99 *e*S S 10 34 30.0 -10
comp=Z,71nm,23.4s
TAOE *e*SS **SS 10 40 37.7 -6.8**
comp=Z,61nm,23.0s
TAOE Nuku Hiva Isla 91.01 99 *e*LR LR 10 52 50.9
comp=Z,358nm,21.8s
ILAR Eielson Array 91.04 25 P **P 10 23 42.2 -1.2**
comp=Z,1.2nm,0.6s,baz=242,slow=5.5,SNR=11
ILAR LR LR 10 59 18.3
comp=Z,166nm,20.3s,baz=252,slow=32
comp=Z,1.2nm,0.6s
ILAR Eielson Array 91.04 25 P **P 10 23 42.6 -0.7**
ILAR Eielson Array 91.04 25 P **P 10 23 42.6 -0.7**
BMAR Burnt Mountain 92.21 23 P **P 10 23 49.2 +0.4**
J26L Joseph Creek 92.44 26 lAmb lAmb 10 24 07.1
comp=Z,4.7nm,0.7s
KLMR Klimovskoe 92.52 331 *e*P **P 10 23 48.6 -1.7**
KLMR pmax pmax
comp=Z,18nm,1.3s
ASF Jabal al Asfar 93.07 302 LR LR 11 12 46.6
comp=Z,109nm,18.3s,baz=105,slow=40
BARN Barnard Glacie 93.17 29 P **P 10 23 53.7 +0.2**
BCAR Beaver Creek A 93.17 27 P **P 10 23 53.8 +0.5**
DAWY Dawson 94.25 26 lAmb lAmb 10 24 13.2
comp=Z,6.7nm,1.0s
MMAI Mount Meron Ar 94.36 303 LR LR 11 11 56.1
comp=Z,121nm,21.0s,baz=114,slow=39
EIL Elat 94.66 299 LR LR 11 12 06.7
comp=Z,117nm,20.5s,baz=12,slow=39
APA Apatity 95.18 337⇓*e*P P 10 24 10.2 +7.8
BRTR Keskin Array B 95.86 309 P **P 10 24 04.7 -1.6**
comp=Z,0.6nm,0.7s,baz=70,slow=4.7,SNR=2.7
BRTR LR LR 11 14 19.3
comp=Z,98nm,18.8s,baz=332,slow=40
comp=Z,0.6nm,0.7s
BRTR Keskin Array B 95.86 309 P **P 10 24 05.1 -1.2**
BRTR Keskin Array B 95.86 309 P **P 10 24 05.1 -1.2**
ARCES ARCESS Array B 97.83 340 P **P 10 24 12.0 -2.4**
comp=Z,4.4nm,0.9s,baz=66,slow=4.4,SNR=8.0
comp=Z,4.4nm,0.9s
ARCES ARCESS Array B 97.83 340 P **P 10 24 12.9 -1.4**
ARCES ARCESS Array B 97.83 340 P **P 10 24 13.0 -1.4**
ARCES pmax pmax
comp=Z,73nm,1.9s
BELA Belgrano 2 98.07 184 P **P 10 24 14.4 -1.0**
BELA lAmb lAmb 10 24 17.9
comp=Z,3.8nm,0.7s
AKASG Malin Array Be 98.52 321 LR LR 11 15 09.5
comp=Z,196nm,19.4s,baz=308,slow=39
SNAA Sanae 98.52 194 P Pdif 10 24 18.2 +0.6
SNAA lAmb lAmb 10 24 42.2
comp=Z,7.9nm,1.0s
SNAA Sanae 98.52 194 P Pdif 10 24 18.2 +0.6
SNAA pmax pmax
comp=Z,8.0nm,1.0s
LSZ Lusaka 98.76 254 LR LR 11 05 38.8
comp=Z,198nm,20.0s,baz=116,slow=33
MNK Minsk 98.97 324 *i* P **P 10 24 18.0 -1.8**
MNK *i* S **SKSac 10 34 56.1 +0.5**
MNK *i* PS **PS 10 37 18.6 +0.6**
MNK pmax pmax
comp=Z,18nm,0.7s
MNK pmax pmax
comp=E,23nm,0.8s
MNK pmax pmax
comp=N,15nm,0.9s
MNK MLR MLR
comp=N,564nm,16.0s
MNK MLR MLR
comp=E,570nm,17.0s
MNK MLR MLR
comp=Z,260nm,13.0s
DLBC Dease Lake 99.19 31 LR LR 11 08 37.8
comp=Z,123nm,18.6s,baz=260,slow=35
BOSA Boshof 99.66 240 LR LR 11 08 01.2
comp=Z,93nm,18.1s,baz=30,slow=34
LBTB Lobatse 99.93 244 LR LR 11 07 09.4
comp=Z,109nm,19.2s,baz=100,slow=34
PDAR Pinedale Array 115.70 44 PKKPbc PKKPbc 10 39 56.7 +0.9
comp=Z,0.3nm,0.7s,baz=48,slow=0.9,SNR=3.7
TXAR Lajitas Array 124.59 57 PKP **PKiKP 10 29 39.9 +0.1**
comp=Z,0.4nm,0.7s,baz=320,slow=1.9,SNR=2.9
PLCA Paso Flores 132.62 161 PKP **PKiKP 10 29 55.1 -0.4**
comp=Z,1.6nm,0.8s,baz=188,slow=4.6,SNR=4.4
PLCA SKPbc **SKPbc 10 33 19.4 +0.1**
comp=Z,6.8nm,1.2s,baz=224,slow=4.0,SNR=4.8
DBIC Dimbokro 133.24 276 PKP **PKPdf 10 29 56.0 -0.2**
comp=Z,4.8nm,0.9s,baz=267,slow=2.9,SNR=3.8
DBIC SKPbc **SKPbc 10 33 21.9 -0.1**
comp=Z,4.0nm,1.0s,baz=270,slow=1.0,SNR=3.0
LCO Las Campanas 142.79 152 **PKPdf 10 30 13.1 -0.7**
LCO Las Campanas 142.79 152 PKIKP **PKPdf 10 30 13.1 -0.7**
PLTB Pedras Altas 144.77 177 **PKPab 10 30 15.3 -0.3**
AC01 Pan de Azucar 145.22 149 PKPbc **PKPbc 10 30 17.1 -0.3**
PB14 IPOC Station P 146.56 148 **PKPdf 10 30 20.8 +0.4**
CPUP Villa Florida 149.74 170 PKPbc **PKPbc 10 30 29.7 -0.2**
comp=Z,3.9nm,1.0s,baz=64,slow=2.6,SNR=11
CPUP Villa Florida 149.74 170 **PKPbc 10 30 29.4 -0.5**
LPAZ La Paz 154.42 141 PKPbc **PKiKP 10 30 42.8 +1.2**
comp=Z,1.7nm,0.8s,baz=134,slow=2.6,SNR=6.3

IDC 12 10:26:23.8±2.3, 5.84S×129.26E, h0km, mb3.6/1, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=127.7km s-min=33.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.86**	**161**	Pn	Pn	10 29 56.6	+1.2
	baz=340,slow=11,SNR=3.0						
	0.2nm,0.8s						
ASAR	**Alice Springs**	**18.28**	**166**	P	Pn	10 30 38.4	-0.8
	baz=345,slow=11,SNR=4.2						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**66.86**	**327**	P	P	10 37 17.8	0.0
	0.5nm,0.8s,baz=124,slow=8.9,SNR=3.7						
	0.5nm,0.8s						

AFAD 12 10:27:18.5, 38.81N×27.03E, h7km±1km, ML1.1, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZMD	**zmir-Dikili-**	**0.19**	**336**	P	Pg	10 27 22.9	+0.4
IZMD				*i* IAML		10 27 26.0	
	comp=E,36nm,0.5s						
IZMD				S	Sg	10 27 26.0	+1.0
KARB	**zmir-Karabur**	**0.50**	**253**	P	Pg	10 27 28.5	+0.3
KARB				S	Sb	10 27 36.0	-1.2
KARB				*i* IAML		10 27 37.0	
	comp=E,18nm,0.8s						

ZUR 12 10:27:22.8, 46.32N×7.37E, h4km, MLh0.5/9, 4C-3D, Error ellipse: s-maj=1768.7km s-min=552.7km az=219.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.04**	**257**	⇑Pg	Pg	10 27 24.3	+0.2
RAW2				Sg	Sg	10 27 25.2	+0.2
SAYF2	**Ayent-Fortunoz**	**0.05**	**139**	⇑Pg	Pg	10 27 24.3	+0.3
SAYF2				Sg	Sg	10 27 25.4	+0.4
STSW2	**Zeuzier, Staus**	**0.05**	**63**	⇑Pg	Pg	10 27 24.4	+0.2
STSW2				Sg	Sg	10 27 25.4	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**308**	⇓Pg	Pg	10 27 24.5	+0.1
SENIN				Sg	Sg	10 27 25.7	+0.2
RAW1	**Lenk, BE**	**0.11**	**25**	⇑Pg	Pg	10 27 25.2	+0.1
RAW1				Sg	Sg	10 27 27.0	+0.4
VET01	**Vtroz, Route**	**0.12**	**215**	Pg	Pg	10 27 25.4	+0.1
VET01				Sg	Sg	10 27 27.5	+0.5
SHER	**Hrmence, R**	**0.14**	**173**	Sg	Sg	10 27 28.2	+0.7
RAW4	**Former Reservo**	**0.18**	**229**	⇓Pg	Pg	10 27 26.6	+0.2
LKBD2	**Leukerbad 2**	**0.20**	**75**	Sg	Sg	10 27 29.8	+0.6
GRYON	**Gryon**	**0.20**	**248**	Pg	Pg	10 27 26.9	+0.2
GRYON				Sg	Sg	10 27 29.7	+0.5
FULLY	**Reservoir Maze**	**0.23**	**224**	⇓Pg	Pg	10 27 27.5	+0.1
DIX	**Grande Dixence**	**0.24**	**174**	Pg	Pg	10 27 28.0	+0.4
DIX				Sg	Sg	10 27 31.2	+0.4
LAVEY	**Lavey les Bain**	**0.27**	**243**	Sg	Sg	10 27 32.0	+0.3
LAUCH	**Lauchernalp**	**0.29**	**72**	Pg	Pg	10 27 28.9	+0.4
LAUCH				Sg	Sg	10 27 32.8	+0.4
JAUN	**Jaun, Euschels**	**0.32**	**350**	Sg	Sg	10 27 34.2	+1.1
ILLEZ	**Chalet Vouargn**	**0.32**	**251**	Sg	Sg	10 27 33.6	+0.4

ISK 12 10:27:38.4, 37.14N×28.03E, h5km, ML1.5/2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSB	**Milas**	**0.26**	**308**	Pg	Pg	10 27 44.1	+0.6
MLSB				Sg	Sg	10 27 48.2	+1.3
TURN	**Turunc**	**0.40**	**155**	Pg	Pg	10 27 46.7	+0.6
TURN				Sg	Sb	10 27 52.8	-1.5
DAT	**Datca**	**0.55**	**222**	Pg	Pg	10 27 49.5	+0.6
DAT				Sg	Sb	10 27 57.5	-1.2
BODT	**Bodrum**	**0.58**	**263**	Pg	Pg	10 27 50.3	+0.7
CAME	**Cameli-Denizli**	**1.03**	**100**	Pg	Pb	10 27 58.7	-0.2

ZUR 12 10:28:19.9, 46.32N×7.36E, h3km±1km, MLh0.3/7, 1C-4D, Error ellipse: s-maj=1976.5km s-min=613.7km az=126.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAW2	**Sanetsch, VS**	**0.03**	**254**	⇓Pg	Pg	10 28 21.1	+0.2
RAW2				Sg	Sg	10 28 22.0	+0.3
SAYF2	**Ayent-Fortunoz**	**0.05**	**133**	⇑Pg	Pg	10 28 21.3	+0.2
STSW2	**Zeuzier, Staus**	**0.06**	**67**	⇓Pg	Pg	10 28 21.5	+0.2
STSW2				Sg	Sg	10 28 22.5	+0.3
SENIN	**Lac Senin/Sane**	**0.06**	**313**	⇓Pg	Pg	10 28 21.5	+0.1
SENIN				Sg	Sg	10 28 22.6	+0.3
SIOM	**Sion-Mayennets**	**0.10**	**180**	Sg	Sg	10 28 23.4	+0.3
RAW1	**Lenk, BE**	**0.11**	**28**	Pg	Pg	10 28 22.3	+0.2
RAW1				Sg	Sg	10 28 24.2	+0.5
SHER	**Hrmence, R**	**0.14**	**170**	Sg	Sg	10 28 25.2	+0.6
RAW4	**Former Reservo**	**0.17**	**228**	Pg	Pg	10 28 23.5	+0.2
GRYON	**Gryon**	**0.19**	**247**	Pg	Pg	10 28 23.7	+0.2
GRYON				Sg	Sg	10 28 26.5	+0.4
LKBD2	**Leukerbad 2**	**0.20**	**75**	Sg	Sg	10 28 27.2	+0.6
DIX	**Grande Dixence**	**0.25**	**172**	⇓Pg	Pg	10 28 25.0	+0.4
DIX				Sg	Sg	10 28 28.4	+0.5
LAVEY	**Lavey les Bain**	**0.27**	**242**	Sg	Sg	10 28 28.8	+0.3
LAUCH	**Lauchernalp**	**0.30**	**72**	Sg	Sg	10 28 30.1	+0.4
EMBD	**Embd, Matterta**	**0.34**	**108**	Sg	Sg	10 28 31.6	+0.6

IDC 12 10:28:52.0±1.7, 14.87N×122.95E, h0km, mb3.3/4, mbtmp3.3/4, ML4.6/1, Error ellipse: s-maj=36.6km s-min=23.9km az=35.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**2.09**	**249**	Pn	Pn	10 29 29.3	+1.0
	184nm,0.3s,baz=89,slow=4.0,SNR=7.5						
TGY				Sn	Sn	10 29 55.1	0.0
	145nm,0.3s,baz=127,slow=21,SNR=5.2						
CMAR	**Chiang Mai Arr**	**23.27**	**282**	P	P	10 34 01.1	-0.4
	0.7nm,0.4s,baz=93,slow=8.3,SNR=7.7						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**36.36**	**162**	P	P	10 35 57.6	-0.4
	0.2nm,0.7s,baz=339,slow=9.1,SNR=1.5						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**39.77**	**164**	P	P	10 36 26.9	+0.1
	0.1nm,0.3s,baz=337,slow=9.1,SNR=4.2						
	0.1nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**41.98**	**79**	T	T	11 21 47.9	
	baz=272,slow=74,SNR=42						
H11S1	**WAKE ISLAND Hy**	**41.99**	**79**	T	T	11 21 48.1	
	baz=272,slow=74,SNR=28						
H11S2	**WAKE ISLAND Hy**	**42.00**	**79**	T	T	11 21 49.2	
	baz=272,slow=74,SNR=33						
H11N1	**WAKE ISLAND Hy**	**42.15**	**77**	T	T	11 22 07.9	
	baz=271,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**42.16**	**77**	T	T	11 22 10.5	
	baz=271,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**42.17**	**77**	T	T	11 22 10.0	
	baz=271,slow=75,SNR=8.9						
KURBB	**Kurchatov Arra**	**50.47**	**325**	P	P	10 37 51.5	0.0
	0.6nm,0.6s,baz=117,slow=8.7,SNR=3.1						
	0.6nm,0.6s						

DJA ***12*** *10:30:43.5±0.5, 9.°S±6.°×12.°4E±.°, h151km±5km, M3.5/11, mb3.7/5, MLv3.5/11*
IDC ***12*** *10:30:44.8±1.8, 8.°84S×123.°32E, h168km±18km, mb3.2/2, mbtmp3.5/5, Error ellipse: s-maj=110.0km s-min=15.0km az=58.0*
ISC 12 10:30:43.0±1.1, 8.°7S±0.°1×123.°6E±0.°1, h150km, n14, c2961/19, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.24**	**148**	P	**Pn**	**10 31 12.9**	**+2.8**
MMRI	**Maumere**	**1.36**	**272**	P	**Pn**	**10 31 11.4**	**+0.3**
MMRI				S	**Sn**	**10 31 32.5**	**-0.1**
BATI	**Baumata**	**1.50**	**178**	P	**Pn**	**10 31 15.6**	**+2.9**
	500nm,0.5s,baz=286,slow=1.1,SNR=59						
BATI				S	**Sn**	**10 31 38.1**	**+2.7**
	269nm,0.5s,baz=42,slow=2.6,SNR=22						
BATI	**Baumata**	**1.50**	**178**	P	**Pn**	**10 31 15.5**	**+2.9**
EDFI	**Ende, Flores**	**1.90**	**268**	P	**Pn**	**10 31 17.4**	**+0.3**
BASI	**Baing, Sumba**	**3.35**	**243**	P	**Pn**	**10 31 35.1**	**+0.2**
WRSI	**Waikabubak, Su**	**4.27**	**257**	P	**Pn**	**10 31 46.6**	**-0.3**
PLAI	**Plampang**	**5.77**	**268**	P	**Pn**	**10 32 05.6**	**-1.1**
TWSI	**Taliwang, Sumb**	**6.65**	**269**	P	**Pn**	**10 32 18.2**	**-0.2**
	17nm,1.2s						
FITZ	**Fitzroy Crossi**	**9.55**	**168**	P	**Pn**	**10 32 57.1**	**0.0**
	0.8nm,0.4s,baz=11,slow=13,SNR=13						
FITZ				S	**Sn**	**10 34 38.6**	**-4.4**
	6.2nm,0.6s,baz=72,slow=23,SNR=12						
WRA	**Warramunga Arr**	**15.26**	**138**	P	**P**	**10 34 13.6**	**+1.4**
	0.6nm,0.5s,baz=325,slow=14,SNR=15						
WRA				S	**Sn**	**10 36 53.2**	**-7.2**
	0.5nm,0.4s,baz=314,slow=23,SNR=7.9						
ASAR	**Alice Springs**	**17.85**	**148**	P	**Pn**	**10 34 43.0**	**+0.9**
	0.5nm,0.5s,baz=326,slow=13,SNR=11						
ASAR				S	**S**	**10 37 59.0**	**+0.6**
	0.7nm,0.7s,baz=319,slow=21,SNR=5.0						
MKAR	**Makanchi Array**	**66.36**	**330**	P	**P**	**10 41 15.6**	**-0.1**
	0.6nm,0.5s,baz=132,slow=7.7,SNR=6.1						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**70.80**	**331**	P	**P**	**10 41 42.0**	**-1.0**
	0.3nm,0.6s,baz=134,slow=5.7,SNR=2.4						
	0.3nm,0.6s						

NEIC ***12*** *10:44:01.6±1.8, 39.°19N±0.°01×123.°56W±0.°02, h5km±1km, Error ellipse: s-maj=3.9km s-min=2.8km az=230.0*
NCEDC 12 10:44:02.0±1.8, 39.°16N±0.°02×123.°60W±0.°03, h6km±5km, ML3.1/74, ML2.7/79(NEIC), Error ellipse: s-maj=3.6km s-min=1.3km az=48.0, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHOM	**Hamilton Openi**	**0.12**	**159**		Pg	10 44 04.9	+0.3
GHOM					Sg	10 44 07.3	+1.1
MNDO	**Woodland Fire**	**0.20**	**324**		Pg	10 44 06.1	+0.3
MNDO					Sg	10 44 09.6	+1.1
GWRM	**Wonder Ranch**	**0.24**	**78**		Pg	10 44 07.0	+0.3
GWRM					Sg	10 44 10.9	+1.1
GTC	**Three Chop Rid**	**0.24**	**7**		Pg	10 44 07.2	+0.3
BONV	**Boonville, CA**	**0.26**	**131**		Pg	10 44 07.5	+0.5
DCMP	**DeCamp, Califo**	**0.37**	**33**	Pg	Pg	10 44 09.6	+0.4
DCMP				IAML		10 44 18.1	
	comp=N,638nm,0.4s						
INGLE	**Inglenook, Smi**	**0.38**	**348**		Pg	10 44 09.9	+0.6
GSNM	**Snow Mountain**	**0.38**	**124**		Pg	10 44 10.1	+0.7
GALB	**Galbreath Wild**	**0.40**	**138**		Pg	10 44 10.1	+0.5
HOPS	**Hopland Field**	**0.44**	**112**	Pg	Pg	10 44 10.5	0.0
HOPS				IAML		10 44 20.8	
	comp=N,614nm,0.7s						
HOPS				IAML		10 44 23.1	
	comp=E,546nm,1.4s						
KRKM	**Rackout Spring**	**0.52**	**38**		Pb	10 44 12.9	-0.7
KCPM	**Cahto Peak**	**0.53**	**1**		Pb	10 44 13.1	-0.6
KCPM	**Cahto Peak**	**0.53**	**1**	Sg	Sb	10 44 21.9	+0.2
KCPM				IAML		10 44 23.2	
	comp=N,4μm,0.5s						
KCPM				IAML		10 44 23.7	
	comp=E,9μm,0.4s						
GPMM	**Pine Mountain**	**0.59**	**121**		Pg	10 44 13.9	+0.5
GCVM	**Cloverdale**	**0.60**	**130**		Pg	10 44 13.9	+0.5
GHGM	**Hogback Ridge**	**0.60**	**92**		Pg	10 44 13.9	+0.4
KIPM	**Iron Peak**	**0.66**	**8**		Pb	10 44 15.7	-0.3
GDXM	**Geysers**	**0.71**	**119**		Pg	10 44 15.9	+0.2
GDXM	**Geysers**	**0.71**	**119**	IAML		10 44 19.8	
	comp=E,310nm,1.0s						
GDXM				IAML		10 44 19.8	
	comp=N,292nm,0.7s						
FTR	**Fort Ross**	**0.72**	**152**		Pg	10 44 16.1	+0.3
GRTM	**Round Top Moun**	**0.75**	**107**		Pg	10 44 16.5	+0.1
GAXM	**Alexander Vall**	**0.79**	**124**		Pg	10 44 17.4	+0.2
GBGM	**Boggs Mountain**	**0.79**	**115**		Pg	10 44 17.6	+0.4
MNRC	**McLaughlin Min**	**0.94**	**107**		Pg	10 44 19.6	-0.4
MNRC	**McLaughlin Min**	**0.94**	**107**		Pg	10 44 20.1	+0.1
MNRC				IAML		10 44 37.7	
	comp=E,143nm,1.2s						
MNRC				IAML		10 44 42.9	
	comp=N,276nm,1.1s						
GVV	**Valley View**	**0.94**	**49**		Pg	10 44 20.1	0.0
NMTM	**Middletown**	**0.96**	**111**		Pg	10 44 19.7	-0.7
BRIC	**Briceland Vine**	**0.98**	**346**		Pb	10 44 21.5	+0.1
NTYM	**Taylor**	**1.06**	**136**		Pg	10 44 20.8	-1.5
KMRM	**Mail Ridge**	**1.07**	**355**	Pg	Pb	10 44 23.1	+0.2

MCCM	**Marconi Confer**	**1.16**	**151**			Pg		10 44 22.1	-2.1
MCCM	**Marconi Confer**	**1.16**	**151**			Pb		10 44 24.5	+0.1
MCCM					IAML			10 44 45.2	
	comp=E,312nm,1.0s								
MCCM					IAML			10 44 48.4	
	comp=N,220nm,1.1s								
OAKV	**Oakville Exper**	**1.18**	**128**			Pg		10 44 22.1	-2.5
O02D	**Mt. Diablo Mer**	**1.19**	**31**			Pg		10 44 23.8	-1.2
O02D	**Mt. Diablo Mer**	**1.19**	**31**			Pg		10 44 24.1	-0.8
O02D					IAML			10 44 46.6	
	comp=E,115nm,1.1s								
O02D					IAML			10 44 47.5	
	comp=N,92nm,1.0s								
CVS	**Carmenet Viney**	**1.20**	**132**			Pg		10 44 22.5	-2.6
CVS	**Carmenet Viney**	**1.20**	**132**			Pg		10 44 24.7	-0.4
CVS					IAML			10 44 50.0	
	comp=N,150nm,0.9s								
CVS					IAML			10 44 51.7	
	comp=E,145nm,0.9s								
PETL	**Petrolia**	**1.27**	**333**			Pn		10 44 23.5	-2.8
NOLM	**Olema**	**1.28**	**150**			Pn		10 44 23.7	-2.6
KMPM	**Mount Pierce**	**1.32**	**342**			Pg		10 44 27.7	+0.4
SNT	**Sears Point**	**1.32**	**137**			Pn		10 44 24.0	-2.9
SUTB	**Sutter Butte**	**1.41**	**86**			Pn		10 44 25.3	-2.9
SUTB	**Sutter Butte**	**1.41**	**86**	Pn	Pn	Pn		10 44 28.1	-0.1
SUTB					IAML			10 44 52.7	
	comp=N,101nm,0.6s								
SUTB					IAML			10 44 56.0	
	comp=E,83nm,0.6s								
KHBM	**Hayfork Bally**	**1.53**	**11**			Pn		10 44 28.4	-1.7
KHBM	**Hayfork Bally**	**1.53**	**11**		IAML			10 44 36.9	
	comp=N,87nm,0.7s								
KHBM					IAML			10 44 59.0	
	comp=E,89nm,1.0s								
FARB	**Farallon Islan**	**1.53**	**162**			Pn		10 44 28.7	-1.1
FARB	**Farallon Islan**	**1.53**	**162**	Pn	Pn	Pn		10 44 29.6	-0.2
FARB					IAML			10 45 01.5	
	comp=E,183nm,0.9s								
FARB					IAML			10 45 02.4	
	comp=N,89nm,0.8s								
DMOR	**Dinsmores, CA**	**1.55**	**357**			Pn		10 44 28.9	-1.4
CPIM	**Pinole Ridge**	**1.59**	**137**			Pn		10 44 28.8	-1.9
BKS	**Berkeley--Byer**	**1.67**	**140**			Pn		10 44 29.3	-2.4
ORV	**Oroville**	**1.67**	**76**			Pn		10 44 31.7	-0.1
BRIB	**Briones**	**1.68**	**137**			Pn		10 44 29.8	-2.0
JCC	**Jacoby Creek,**	**1.69**	**349**			Pn		10 44 32.2	+0.1
JCC					IAML			10 45 08.1	
	comp=N,131nm,1.5s								
JCC					IAML			10 45 09.3	
	comp=E,122nm,1.0s								
JCC	**Jacoby Creek,**	**1.69**	**349**			Pn		10 44 29.8	-2.2
KHMM	**Horse Mountain**	**1.72**	**357**			Pn		10 44 32.9	+0.2
KHMM					IAML			10 45 10.1	
	comp=E,134nm,0.9s								
O03E	**Paynes Creek**	**1.79**	**50**	Pn	Pn	Pn		10 44 32.3	-1.2
O03E					IAML			10 45 11.4	
	comp=E,59nm,0.8s								
CLCB	**Lake Chabot**	**1.86**	**139**			Pn		10 44 32.3	-2.1
N02D	**Trinity Center**	**1.94**	**20**			Pn		10 44 34.4	-1.2
N02D	**Trinity Center**	**1.94**	**20**			Pn		10 44 34.9	-0.7
N02D					IAML			10 44 50.9	
	comp=N,69nm,0.5s								
N02D					IAML			10 45 12.7	
	comp=E,53nm,0.7s								
CNIC	**Niles Canyon**	**2.01**	**140**			Pn		10 44 34.3	-2.1
KRPM	**Rodgers**	**2.03**	**351**			Pn		10 44 36.6	-0.1
KRPM					IAML			10 45 21.3	
	comp=E,67nm,1.4s								
KRPM					IAML			10 45 25.7	
	comp=N,80nm,1.5s								
LSHM	**Sage Hen Hill**	**2.03**	**36**			Pn		10 44 35.3	-1.4
JRSC	**Jasper Ridge**	**2.05**	**148**			Pn		10 44 34.1	-2.8
LBKM	**Bonanza King**	**2.05**	**20**			Pn		10 44 36.3	-0.9
LRDM	**Redding Peak**	**2.10**	**51**			Pn		10 44 36.7	-1.1
M02C	**Callahan**	**2.30**	**14**			Pn		10 44 40.3	-0.2
HATC	**Hat Creek Radi**	**2.33**	**44**			Pn		10 44 40.7	-0.2
HATC					IAML			10 45 17.2	
	comp=E,41nm,2.2s								
HATC					IAML			10 45 47.6	
	comp=N,42nm,3.2s								
MHC	**Mount Hamilton**	**2.38**	**139**			Pn		10 44 39.6	-2.0
MHC	**Mount Hamilton**	**2.38**	**139**	IAML				10 45 29.9	
	comp=E,36nm,2.0s								
MHC					IAML			10 45 46.1	
	comp=N,39nm,1.6s								
M03C	**McCloud**	**2.40**	**28**	IAML				10 45 39.3	
	comp=N,45nm,1.0s								
CCOB	**Coe Ranch Numb**	**2.43**	**141**			Pn		10 44 40.8	-1.4
BEKR	**Beckworth**	**2.60**	**73**			Pn		10 44 44.7	-0.1
YBH	**Yreka Blue Hor**	**2.66**	**14**			Pn		10 44 45.5	0.0
KSXB	**Camp Six Broad**	**2.68**	**356**			Pn		10 44 44.8	-0.9
KSXB					IAML			10 45 49.5	
	comp=E,27nm,2.6s								
CMB	**Columbia Colle**	**2.75**	**113**			Pn		10 44 45.7	-1.0
MPK	**Martis Peak**	**2.77**	**86**			Pn		10 44 47.9	+0.7
MPK					IAML			10 45 34.7	
	comp=N,43nm,1.1s								
SAO	**San Andreas Ge**	**2.93**	**144**			Pn		10 44 47.9	-1.2
L02F	**Cave Junction**	**2.96**	**0**	Pn		Pn		10 44 49.1	-0.4
BCGM	**Cienega Road**	**3.02**	**143**			Pn		10 44 52.1	+1.8
L04D	**Klamath Falls**	**3.21**	**17**			Pn		10 44 53.2	+0.1
L04D					IAML			10 45 44.5	
	comp=N,22nm,4.7s								
L04D					IAML			10 46 01.1	
	comp=E,18nm,3.7s								
K02D	**Willamette Mer**	**3.54**	**359**			Pn		10 44 57.3	-0.2
K02D					IAML			10 46 28.8	
	comp=E,14nm,4.5s								
K02D					IAML			10 46 31.9	
	comp=N,12nm,3.3s								
BBOR	**Butler Butte**	**3.79**	**10**			Pn		10 45 01.3	+0.2
BBOR					IAML			10 47 02.2	
	comp=N,9.0nm,4.9s								
LHV	**Little Huntoon**	**4.08**	**101**			Pn		10 45 04.8	-0.1
LHV					IAML			10 46 35.2	
	comp=E,14nm,5.0s								
LHV					IAML			10 46 41.9	
	comp=N,11nm,4.1s								
K05A	**Summer Lake**	**4.11**	**29**			Pn		10 45 05.3	-0.2
I03D	**Drain, OR**	**4.54**	**2**	Pn		Pn		10 45 10.4	-0.8
I03D					IAML			10 47 33.7	
	comp=N,10.0nm,3.7s								
I03D					IAML			10 47 59.7	
	comp=E,11nm,4.9s								
VES	**Vestal, Richgr**	**4.88**	**131**	Pn		Pn		10 45 15.4	-0.5

INMG ***12*** *10:54:14.9±1.1, 37.°17N×3.°60W, h12km, ML2.1, Error ellipse: s-maj=2.6km s-min=2.3km az=75.0, #DIST_RANGE: REGIONAL #IPMA_REGION: N Granada (ESP)*

MDD ***12*** *10:54:14.8±0.4, 37.°19N×3.°70W, h2km±5km, mb_Lg2.6/10, Error ellipse: s-maj=3.1km s-min=2.7km az=118.0*

SFS ***12*** *10:54:14.5, 37.°18N×3.°67W, h0km, ML2.3/7, ML2.1/7, MLv2.1/7*

ISC 12 10:54:13.8±1.2,**37°23N**±0°.03×**3°72W**±0°.02,**h0**km±11km, **n34**,σ1°**26**/49,**Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQTA	**Presa de Quent**	**0.22**	**95**	Pg	**Pg**	**10 54 17.6**	**-0.4**
EQTA				Sg	**Sg**	**10 54 20.2**	**-0.7**
EQTA	**Presa de Quent**	**0.22**	**95**	Pg	**Pg**	**10 54 17.9**	**-0.1**
EQUE	**Quentar**	**0.22**	**95**	Pg	**Pg**	**10 54 17.6**	**-0.5**
EQUE				Sg	**Sg**	**10 54 20.8**	**-0.1**
EQUE				*i* lVmb_Lg		10 54 20.9	
EGOR	**Sierra Gorda,**	**0.33**	**250**	Pg	**Pg**	**10 54 20.3**	**+0.1**
EGOR				Sg	**Sg**	**10 54 25.9**	**+1.5**
EGOR	**Sierra Gorda,**	**0.33**	**250**	Sg	**Sb**	**10 54 27.0**	**-1.6**
EGOR	**Sierra Gorda,**	**0.33**	**250**	Pg	**Pg**	**10 54 20.4**	**+0.1**
EGOR				Sg	**Sg**	**10 54 26.0**	**+1.5**
EGOR				*i* lVmb_Lg		10 54 28.6	
EGOR	**Sierra Gorda,**	**0.33**	**250**	Pg	**Pg**	**10 54 20.2**	**+0.1**
ELGU	**Los Guajares,**	**0.36**	**168**	Pg	**Pg**	**10 54 20.3**	**-0.4**
ELGU				Sg	**Sg**	**10 54 25.0**	**-0.5**
ELGU	**Los Guajares,**	**0.36**	**168**	Sg	**Sb**	**10 54 26.1**	**-3.4**
ELGU	**Los Guajares,**	**0.36**	**168**	Pg	**Pg**	**10 54 20.4**	**-0.4**
ELGU				Sg	**Sg**	**10 54 25.7**	**+0.2**
ELGU				*i* lVmb_Lg		10 54 30.7	
ELGU	**Los Guajares,**	**0.36**	**168**	Pg	**Pg**	**10 54 20.2**	**-0.4**
EMAL	**Malaga-Limoner**	**0.73**	**231**	Pg	**Pb**	**10 54 28.6**	**-0.8**
EMAL				Sg	**Sg**	**10 54 37.5**	**+0.2**
EMAL	**Malaga-Limoner**	**0.73**	**231**	Sg	**Sb**	**10 54 40.2**	**+0.2**
EMAL	**Malaga-Limoner**	**0.73**	**231**	Pg	**Pg**	**10 54 28.5**	**+0.7**
EQES	**Quesada**	**0.77**	**42**	Pg	**Pb**	**10 54 30.2**	**0.0**
EQES				Sg	**Sg**	**10 54 39.3**	**+0.7**
EQES				*i* lVmb_Lg		10 54 56.7	
EMIJ	**Mijas**	**1.07**	**232**	Pg	**Pg**	**10 54 33.7**	**-0.6**
EMIJ	**Mijas**	**1.07**	**232**	Pg	**Pn**	**10 54 37.1**	**+1.0**
EADA	**Adamuz**	**1.16**	**324**	Pg	**Pb**	**10 54 36.5**	**-0.3**
EADA				Sg	**Sn**	**10 54 53.7**	**-0.2**
EADA	**Adamuz**	**1.16**	**324**	Sg	**Sn**	**10 54 54.3**	**+0.4**
EADA	**Adamuz**	**1.16**	**324**	Pg	**Pn**	**10 54 37.1**	**-0.2**
EADA				Sg	**Sn**	**10 54 53.9**	**-0.1**
EADA				*i* lVmb_Lg		10 54 56.2	
EADA	**Adamuz**	**1.16**	**324**	Pg	**Pb**	**10 54 36.6**	**-0.1**
ENIJ	**Nijar**	**1.23**	**101**	Sg	**Sn**	**10 55 01.6**	**+5.9**
ENIJ	**Nijar**	**1.23**	**101**	Pg	**Pn**	**10 54 39.2**	**+0.9**
PSIM	**Granatula de C**	**1.59**	**359**	Pn	**Pn**	**10 54 42.5**	**-0.7**
PSIM				Sn	**Sn**	**10 55 03.1**	**-1.5**
ECAB	**El Cabril**	**1.59**	**303**	Pn	**Pn**	**10 54 43.7**	**+0.4**
ECAB				Sn	**Sb**	**10 55 05.7**	**+0.9**
ECAB	**El Cabril**	**1.59**	**303**	Pn	**Pb**	**10 54 44.3**	**+0.1**
ECAB	**El Cabril**	**1.59**	**303**	Pg	**Pb**	**10 54 44.6**	**+0.5**
ECAB				Sn	**Sn**	**10 55 04.3**	**-0.3**
EMIN	**Mina Concepcio**	**2.41**	**284**	Sn	**Sb**	**10 55 27.6**	**-0.7**
EMIN	**Mina Concepcio**	**2.41**	**284**	Pn	**Pn**	**10 54 53.1**	**-1.3**
PBAR	**Barrancos**	**2.80**	**291**	*e*Pn	**Pn**	**10 54 59.7**	**-0.1**
PBAR				*e*Sg	**Sg**	**10 55 44.2**	**+0.4**
PBAR				*i* IAML		10 55 56.8	
PMRV	**Marv??o**	**3.63**	**308**	*e*Pn	**Pn**	**10 55 12.7**	**+1.5**
PARRA	**Arraiolos**	**3.76**	**296**	*e*Pn	Pn	10 55 13.5	-10
PARRA				*e*Sn	Sn	10 55 57.2	-19
PARRA				*i* IAML		10 56 32.2	
PARRA				*i* IAML		10 56 32.5	
PARRA				*i* IAML		10 56 36.8	
PMTG	**Montargil**	**4.00**	**299**	*e*Pn	**Pn**	**10 55 17.0**	**+0.7**
PMTG				*e*Sn	**Sn**	**10 56 02.6**	**-1.3**
PMTG				*i* IAML		10 56 41.8	
PMTG				*i* IAML		10 56 46.1	
PMTG				*i* IAML		10 56 52.0	
PSARD	**Sardoal**	**4.22**	**306**	*e*Pn	**Pn**	**10 55 20.1**	**+0.8**
PSARD				*e*Sn	**Sn**	**10 56 08.4**	**-0.9**
PSARD				*i* IAML		10 56 41.9	
PSARD				*i* IAML		10 56 42.7	
PSARD				*i* IAML		10 56 46.6	

SFS ***12*** *10:54:18.0, 37.°15N×3.°80W, h0km, ML2.6/11, ML2.6/11, MLv2.6/11*

MDD 12 10:54:24.8±0.6,**37°19N×3°69W,h0**km,**mb_Lg2.6/8, Error ellipse: s-maj=4.2km s-min=3.8km az=41.0,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQTA	**Presa de Quent**	**0.19**	**86**	Sg	Sg	10 54 28.1	-2.9
EQUE	**Quentar**	**0.20**	**87**	Pg	Pg	10 54 28.1	-0.4
EQUE				Sg	Sg	10 54 30.2	-0.9
EQUE				*i* lVmb_Lg		10 54 30.9	
EQES	**Quesada**	**0.78**	**39**	Sg	Sg	10 54 49.3	-0.5
EADA	**Adamuz**	**1.20**	**324**	Pg	Pg	10 54 47.5	-0.3
EADA				Sg	Sg	10 55 03.9	+0.5
EADA				*i* lVmb_Lg		10 55 07.0	
PSIM	**Granatula de C**	**1.62**	**358**	Sg	Sn	10 55 15.4	-1.0
ECAB	**El Cabril**	**1.63**	**303**	Sg	Sn	10 55 15.4	-1.2
ECAB				*i* lVmb_Lg		10 55 23.0	
TLOR	**Lorca, Murcia**	**1.66**	**73**	Pn	Pn	10 54 51.4	-3.7
TLOR				Sn	Sn	10 55 12.5	-4.6
ESPR	**Espera**	**1.77**	**260**	Pn	Pn	10 54 49.8	-6.8
ESPR				Sn	Sn	10 55 12.3	-7.5
EMUR	**La Murta**	**2.05**	**71**	Pn	Pn	10 54 56.3	-4.3
ETOB	**Tobarra**	**2.23**	**49**	Pn	Pn	10 54 57.7	-5.3
ETOB				Sn	Sn	10 55 25.5	-5.7

ISK ***12*** *11:42:22.7, 36.°47N×28.°71E, h5km, ML2.5/11*
AFAD ***12*** *11:42:22.2, 36.°44N×28.°67E, h7km±4km, ML2.2*

ISC 12 11:42:23.0±1.2,**36°45N**±0°.03×**28°67E**±0°.02,**h4**km±10km, **n25**,σ1°**42**/42,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.37**	**358**	Pg	**Pg**	**11 42 29.5**	**-0.6**
DALY				Sg	**Sg**	**11 42 35.8**	**+0.9**
SABU	**Mula-Dalaman**	**0.44**	**33**	P	**Pg**	**11 42 30.8**	**-0.7**
SABU				S	**Sg**	**11 42 37.8**	**+0.4**
SABU				*i* IAML		11 42 38.0	
	comp=E,161nm,0.7s						
SABU				*i* IAML		11 42 42.0	
	comp=N,159nm,0.2s						
IZZE	**Mula-Seydike**	**0.45**	**91**	P	**Pg**	**11 42 31.1**	**-0.5**
IZZE				S	**Sb**	**11 42 38.1**	**-2.4**
IZZE				*i* IAML		11 42 40.0	
	comp=N,541nm,0.3s						
IZZE				*i* IAML		11 42 40.0	
	comp=E,396nm,0.2s						
TURN	**Turunc**	**0.47**	**314**	P	**Pg**	**11 42 31.2**	**-0.9**
TURN				*i* IAML		11 42 39.0	
	comp=N,104nm,0.3s						
TURN				S	**Sb**	**11 42 39.6**	**-1.5**
TURN				*i* IAML		11 42 44.0	
	comp=E,85nm,0.4s						
ARG	**Arkhangelos**	**0.50**	**242**	Pg	**Pb**	**11 42 33.7**	**-0.5**
ARG				Sg	**Sb**	**11 42 41.2**	**-0.6**
CAME	**Cameli-Denizli**	**0.71**	**46**	Pg	**Pg**	**11 42 35.8**	**-0.8**
YER	**Yerkesik**	**0.75**	**336**	Pg	**Pb**	**11 42 37.9**	**-0.8**
AKAS	**Kas**	**0.79**	**106**	P	**Pg**	**11 42 37.8**	**-0.2**
AKAS				*i* IAML		11 42 53.0	
	comp=E,76nm,0.4s						
AKAS				S	**Sn**	**11 42 53.1**	**0.0**
AKAS				*i* IAML		11 43 02.0	
	comp=N,174nm,0.5s						
DNZT	**Denizli-Tavas-**	**0.88**	**19**	P	**Pb**	**11 42 40.5**	**-0.3**
DNZT				S	**Sn**	**11 42 57.2**	**+1.8**
DNZT				*i* IAML		11 42 58.0	
	comp=E,38nm,0.6s						
DAT	**Datca**	**0.92**	**288**	Pg	**Pb**	**11 42 41.3**	**-0.3**
DAT				Sg	**Sb**	**11 42 54.8**	**+0.6**
YAZI	**Mula-Dat§a-**	**1.01**	**284**	P	**Pg**	**11 42 41.1**	**-1.1**
YAZI				S	**Sn**	**11 42 57.9**	**-0.5**
YAZI				*i* IAML		11 42 59.0	
	comp=N,44nm,0.6s						
YAZI				*i* IAML		11 43 00.0	
	comp=E,33nm,0.4s						
TAVA	**DENIZLI_Tavas**	**1.03**	**11**	P	**Pn**	**11 42 44.3**	**0.0**
TAVA				*i* IAML		11 43 01.0	
	comp=E,38nm,0.3s						
TAVA				S	**Sn**	**11 43 01.6**	**+2.3**
TAVA				*i* IAML		11 43 02.0	
	comp=N,55nm,0.2s						
ELL	**Elmali**	**1.04**	**73**	Pg	**Pb**	**11 42 42.9**	**-0.7**
GOLH	**Golhisar**	**1.06**	**42**	P	**Pg**	**11 42 42.0**	**-1.4**
GOLH				S	**Sn**	**11 43 00.3**	**+0.3**
GOLH				*i* IAML		11 43 02.0	
	comp=E,54nm,0.4s						
GOLH				*i* IAML		11 43 03.0	
	comp=N,48nm,0.3s						
APMY	**Acipayam-Deniz**	**1.14**	**26**	Pn	Pn	**11 42 44.8**	**-1.0**
DNIZ	**Denizli-Tavas-**	**1.21**	**14**	P	**Pn**	**11 42 46.1**	**-0.6**
DNIZ				S	**Sn**	**11 43 05.3**	**+1.6**
DNIZ				*i* IAML		11 43 06.0	
	comp=E,306nm,0.4s						
DNIZ				*i* IAML		11 43 07.0	
	comp=N,235nm,0.3s						
BODT	**Bodrum**	**1.25**	**300**	Pn	**Pb**	**11 42 47.5**	**+0.4**
AYDN	**Tasoluk**	**1.36**	**333**	P	**Pn**	**11 42 48.2**	**-0.6**
AYDN				S	**Sn**	**11 43 09.0**	**+1.6**
AYDN				*i* IAML		11 43 13.0	
	comp=N,42nm,0.4s						
AYDN				*i* IAML		11 43 13.0	
	comp=E,62nm,0.2s						
ESEN	**Aydn-Nazilli**	**1.37**	**349**	P	**Pg**	**11 42 49.0**	**-0.3**
ESEN				S	**Sn**	**11 43 08.8**	**+1.4**
ESEN				*i* IAML		11 43 10.0	
	comp=N,34nm,0.6s						
ESEN				*i* IAML		11 43 10.0	
	comp=E,41nm,0.4s						
KORT	**Korkueli**	**1.46**	**67**	P	**Pg**	**11 42 50.4**	**-0.6**
KORT				*i* IAML		11 43 15.0	
	comp=N,33nm,0.5s						
KORT				S	**Sg**	**11 43 15.6**	**+5.7**
KORT				*i* IAML		11 43 16.0	
	comp=E,66nm,0.5s						
KARP	**Karpathos**	**1.52**	**234**	Pn	**Pg**	**11 42 51.8**	**-0.3**
KARP				Sn	**Sg**	**11 43 12.9**	**+1.1**
NAZL	**Nazilli-Aydin**	**1.54**	**349**	Pn	**Pb**	**11 42 51.6**	**-0.5**
KIRA	**zmir-Kiraz**	**1.76**	**353**	P	**Pn**	**11 42 52.8**	**-1.5**
KIRA				S	**Sb**	**11 43 17.7**	**-0.6**
KULA	**Kula-Manisa**	**2.06**	**360**	Pn	**Pb**	**11 42 59.2**	**-1.8**
CHOS	**Chios island**	**2.84**	**314**	Pn	**Pn**	**11 43 10.3**	**+1.1**

IDC ***12*** *11:42:46.6±0.7, 0.°79N×97.°36E, h0km, mb4.5/24, mbtmp4.5/26, ML4.3/2, MS4.4/50, Error ellipse: s-maj=19.6km s-min=14.2km az=48.0*

BJI ***12*** *11:42:48.6, 0.°60N×97.°42E, h36km, mB5.2/29, mb4.8/68, Ms5.0/58, Ms7 4.9/53*

MOS ***12*** *11:42:49.5±0.9, 0.°89N×97.°45E, h28km, mb4.8/21, Error ellipse: s-maj=10.6km s-min=5.9km az=102.3*

NEIC ***12*** *11:42:51.7±1.2, 0.°84N±0°.05×97.°40E±0°.06, h27km±5km, mb5.0/54, Error ellipse: s-maj=9.6km s-min=4.2km az=127.0*

DJA ***12*** *11:42:51.5±0.3, 1.°1N±2°×9°7E±°, h34km±3km, M4.9/52, mB5.4/24, mb4.8/52, MLv5.4/25, Mw4.9/27, Mw(mB)4.8/24, MwMwp4.9/7, Mwp5.2/7*

GCMT ***12*** *11:42:53.7±0.3, 0.°80N±0°.02×97.°11E±0°.02, h37km±1km, MW5.0/68, Moment Tensor Solution. s51,c75; s68,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.23±.15; $M_{\theta\theta}$-1.08±.10; $M_{\phi\phi}$-2.15±.12; $M_{r\theta}$0.84±.12; $M_{\theta\phi}$1.42±.07; $M_{\phi r}$-2.30±.13; Best double couple: M_o4.01300×10^{16} NP1:ϕs318.00000°, δ27.00000°, λ75.00000°. NP2: ϕs154.00000°, δ64.00000°, λ97.00000°. Principal axes: T 4.0980, Plg70.0000°, Azm79.0000°; N -0.1690, Plg7.0000°, Azm331.0000°; P -3.9280, Plg19.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 11:42:51.8±0.6,**0°80N**±0°.04×**97°42E**±0°.05,**h34**km±1km, **h33**km:**pP-P**,**n315**,σ1°**26**/279,**mb4.8**/109,**MS4.6**/75, **21C-13D**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.53**	**17**	P	**Pn**	**11 43 02.3**	**-0.6**
GSI				Sg	**Sb**	**11 43 08.6**	**-1.8**
GSI	**Gunungsitoli**	**0.53**	**17**	P	**Pb**	**11 43 01.6**	**-1.2**
GSI	**Gunungsitoli**	**0.53**	**17**	S	**Sb**	**11 43 09.3**	**-1.1**
GSI	**Gunungsitoli**	**0.53**	**17**	P	**Pn**	**11 43 02.3**	**-0.6**
GSI				S	**Sn**	**11 43 10.9**	**+0.2**
PBSI	**Pulau Batu**	**1.21**	**135**	P	**Pn**	**11 43 13.2**	**+0.9**
SNSI	**Sinabang, Aceh**	**1.94**	**326**	P	**Pn**	**11 43 22.3**	**-0.1**
MNSI	**Mandailing Nat**	**2.16**	**90**	P	**Pn**	**11 43 25.8**	**+0.4**
RPSI	**Rantau Prapat**	**2.41**	**39**		**Pn**	**11 43 29.2**	**+0.3**
PSI	**Prapat**	**2.49**	**37**	Pn	**Pn**	**11 43 29.1**	**-1.0**
	30nm,0.3s,baz=197,slow=10,SNR=76						
PSI				Sn	**Sn**	**11 44 01.8**	**+2.3**
	49nm,0.3s,baz=225,slow=17,SNR=8.8 72nm,0.3s						
PSI	**Prapat**	**2.49**	**37**	P	**Pn**	**11 43 29.8**	**-0.3**
SISI	**Saibi**	**2.69**	**142**	P	**Pn**	**11 43 32.9**	**+0.2**
KCSI	**Kotacane, Aceh**	**2.73**	**7**	P	**Pn**	**11 43 32.3**	**-1.0**
PPI	**Padang Panjang**	**3.23**	**113**	P	**Pn**	**11 43 41.6**	**+1.5**
PDSI	**Padang**	**3.48**	**119**	P	**Pn**	**11 43 45.1**	**+1.5**
MLSI	**Meulaboh, Aceh**	**3.59**	**344**	P	**Pn**	**11 43 43.8**	**-1.3**
BKNI	**Bangkinang**	**3.65**	**97**		**Pn**	**11 43 47.6**	**+1.7**
BKNI	**Bangkinang**	**3.65**	**97**	P	**Pn**	**11 43 48.4**	**+2.5**
PPSI	**Pulau Pagai**	**4.38**	**144**	P	**Pn**	**11 43 58.2**	**+2.2**
LHMI	**Lhok Sumawe**	**4.43**	**354**		**Pn**	**11 43 56.6**	**0.0**
LHMI	**Lhok Sumawe**	**4.43**	**354**	P	**Pn**	**11 43 55.6**	**-1.0**
LHMI	**Lhok Sumawe**	**4.43**	**354**	P	**Pn**	**11 43 55.9**	**-0.7**
KRJI	**Kerinci**	**4.96**	**125**	P	**Pn**	**11 44 04.9**	**+0.9**
IPM	**Ipoh**	**5.13**	**44**		**Pn**	**11 44 07.2**	**+0.8**
IPM	**Ipoh**	**5.13**	**44**	P	**Pn**	**11 44 07.0**	**+0.7**
KULM	**Kulim**	**5.50**	**36**		**Pn**	**11 44 11.1**	**-0.3**
KULM	**Kulim**	**5.50**	**36**	P	**Pn**	**11 44 10.6**	**-0.9**
MASI	**Maura Aman, Be**	**6.21**	**129**	P	**Pn**	**11 44 22.7**	**+1.6**
	3µm219nm,0.7s						
KSI	**Kapahiang**	**6.80**	**131**	P	**Pn**	**11 44 29.7**	**+0.4**
TPRI	**Tanjung Pinang**	**7.11**	**89**	P	**Pn**	**11 44 33.3**	**-0.1**
DSRI	**Dabo**	**7.27**	**100**	P	**Pn**	**11 44 36.0**	**+0.3**
	0.9nm4µm26nm,0.7s						
MNAI	**Manna**	**7.54**	**133**	Pn	**Pn**	**11 44 40.5**	**+1.1**
MNAI	**Manna**	**7.54**	**133**	P	**Pn**	**11 44 39.9**	**+0.5**
MNAI	**Manna**	**7.54**	**133**	P	**Pn**	**11 44 39.8**	**+0.4**
LHSI	**Lahat**	**7.63**	**127**	P	**Pn**	**11 44 42.1**	**+1.4**
	0.6nm3µm104nm,0.9s						
PMBI	**Palembang**	**8.23**	**117**	P	**Pn**	**11 44 48.3**	**-0.6**
MDSI	**Maura Dua**	**8.55**	**128**	P	**Pn**	**11 44 53.6**	**+0.3**
	1µm92nm,0.7s						
LWLI	**Liwa**	**8.79**	**131**	P	**Pn**	**11 44 57.5**	**+0.8**
PPBI	**Pangkal Pinang**	**9.20**	**109**	P	**Pn**	**11 45 03.1**	**+0.9**
KLI	**Kotabumi**	**9.32**	**127**	P	**Pn**	**11 45 02.5**	**-1.3**
KASI	**Kota Agung**	**9.45**	**

RAGD IAmb IAmb 11 47 59.6
comp=Z,26nm,1.0s
KAPI Kappang 23.04 105 LR LR 11 56 47.9
comp=Z,1μm,19.8s,baz=274,slow=36
KAPI Kappang 23.04 105 P **P** **11 47 55.4 +1.0**
KAPI IAmb IAmb 11 48 01.1
comp=Z,37nm,1.4s
KAPI Kappang 23.04 105⇓*i*P **P** **11 47 55.0 +0.6**
KAPI pmax pmax
comp=Z,9.0nm,0.6s
BELO BELONIA 23.06 346 *e*P **P** **11 47 52.7 -1.7**
BNSI Bone 23.25 103 P **P** **11 47 58.1 +1.7**
comp=Z,765nmcomp=Z,27nm,1.1s
TOLI2 Tolitoli 23.36 89 **P** **11 47 56.4 -1.2**
TOLI2 IAmb IAmb 11 47 57.8
comp=Z,62nm,1.2s
TOLI2 Tolitoli 23.36 89 P **P** **11 47 56.9 -0.7**
BKSI Bulukumba 23.47 105 P **P** **11 47 57.4 -1.3**
comp=Z,24nm,1.2s
AGT Agartala 23.72 346 *e*P **P** **11 48 00.5 -0.4**
BSSI Bau Bau, Buton 24.04 107 P **P** **11 48 03.9 -0.1**
comp=Z,73nm,1.2s
TNCH TengChong 24.11 2⇑*i*P **P** **11 48 04.7 -0.1**
TNCH S **S** **11 52 26.3 +5.7**
TNCH pmax pmax
comp=Z,70nm,0.7s
TNCH pmax pmax
comp=Z,750nm,2.7s
TNCH LR LR
comp=Z,2μm,11.2s
TNCH LR LR
comp=Z,2μm,13.1s
TNCH LR LR
comp=Z,3μm,13.4s
SILR SILCHAR 24.26 350 *e*P **P** **11 48 04.1 -1.7**
APSI Ampana 24.29 94 P **P** **11 48 05.9 -0.4**
comp=Z,1μmcomp=Z,92nm,1.2s
MRSI Marisa 24.52 91 P **P** **11 48 08.3 -0.1**
comp=Z,47nm,0.8s
KMI Kunming 24.72 12⇑P **P** **11 48 11.0 +0.6**
KMI S **S** **11 52 26.4 -4.1**
KMI pmax pmax
comp=Z,52nm,1.2s
KMI pmax pmax
comp=Z,400nm,3.5s
KMI LR LR
comp=Z,3μm,13.7s
KMI LR LR
comp=Z,2μm,14.0s
KMI LR LR
comp=Z,3μm,10.7s
HYBB Hyderabad (bro 24.85 313 *e*P **P** **11 48 11.7 +0.3**
KOHI KOHIMA 24.98 353 *e*P **P** **11 48 11.2 -1.4**
KOHI IAmb IAmb 11 48 27.1
comp=Z,68nm,0.9s
SHL Shillong 25.20 348 P **P** **11 48 14.4 -0.3**
SHL IAmb IAmb 11 48 16.1
comp=Z,59nm,0.9s
SHL Shillong 25.20 348 *e*P **P** **11 48 14.6 0.0**
SHL IAmb IAmb 11 48 16.6
comp=Z,30nm,0.5s
SHL Shillong 25.20 348 P **P** **11 48 14.4 -0.3**
SHL pmax pmax
comp=Z,59nm,0.9s
LUWI Luwuk 25.41 94 P **P** **11 48 16.2 -0.4**
comp=Z,2μmcomp=Z,115nm,1.1s
BOK Bokaro 25.45 335 *e*P **P** **11 48 18.5 +1.7**
BOK IAmb IAmb 11 48 32.2
comp=Z,59nm,1.4s
GUWA GUWAHATI 25.85 348 *e*P **P** **11 48 19.2 -1.1**
GUWA IAmb IAmb 11 48 22.1
comp=Z,24nm,1.1s
PZH PanZhiHua 25.89 9 P **P** **11 48 20.9 0.0**
PZH S **S** **11 52 48.6 -0.3**
PZH sS **sS** **11 53 06.4 +1.6**
PZH pmax pmax
comp=Z,20nm,1.4s
PZH pmax pmax
comp=Z,210nm,6.2s
PZH LR LR
comp=Z,2μm,19.5s
PZH LR LR
comp=Z,1μm,21.1s
PZH LR LR
comp=Z,3μm,18.1s
EDFI Ende, Flores 25.98 112 P **P** **11 48 19.7 -2.1**
comp=Z,14nm,1.3s
JORH JORHAT 25.98 354 *e*P **P** **11 48 21.0 -0.5**
TEZP TEZPUR 26.05 351 *e*P **P** **11 48 22.4 +0.2**
TEZP IAmb IAmb 11 48 47.7
comp=Z,16nm,0.8s
H08S2 Diego Garcia H 26.24 251 T T 12 15 30.3
baz=72,slow=76
H08S3 Diego Garcia H 26.24 251 T T 12 15 40.7
baz=72,slow=76
H08S1 Diego Carcia H 26.25 251 T T 12 15 36.0
baz=72,slow=76,SNR=9883
ITAN ITANAGAR 26.44 353 *e*P **P** **11 48 24.9 -0.7**
ITAN IAmb IAmb 11 48 39.0
comp=Z,154nm,1.1s
COBR COOCHBEHAR 26.48 344 *e*P **P** **11 48 26.1 0.0**
GAYA Gaya 26.62 335 *e*P **P** **11 48 27.7 +0.4**
DIBR DIBRUGARH 26.63 355 *e*P **P** **11 48 26.7 -0.6**
TGY Tagaytay City 26.76 59 LR LR 11 58 41.1
comp=Z,667nm,21.5s,baz=256,slow=36
ZIRO ZIRO 26.80 353 *e*P **P** **11 48 27.8 -1.3**
ZIRO IAmb IAmb 11 48 38.2
comp=Z,124nm,1.4s
JPG JALPAIGURI 26.94 343 *e*P **P** **11 48 30.9 +0.8**
GYA Guiyang 27.02 18⇓P **P** **11 48 32.8 +1.7**
GYA pmax pmax
comp=Z,11nm,1.0s
TAWA Tawang 27.17 349 *e*P **P** **11 48 31.9 -0.7**
BATI Baumata 28.31 113 LR LR 12 02 12.0
comp=Z,2μm,19.3s,baz=290,slow=41
SOEI Soe 28.71 112 **P** **11 48 45.9 -0.4**
SOEI IAmb IAmb 11 48 53.5
comp=Z,37nm,1.1s
SOEI Soe 28.71 112 P **P** **11 48 45.1 -1.2**
comp=Z,32nm,1.1s
DAV Davao City (W) 28.76 77 LR LR 12 01 35.4
comp=Z,1μm,19.7s,baz=212,slow=39
LSA Lhasa 29.36 349 P **P** **11 48 52.3 0.0**
LSA IAmb IAmb 11 49 05.8
comp=Z,79nm,1.9s
LSA Lhasa 29.36 349 P **P** **11 48 49.4 -2.9**
LSA pmax pmax
comp=Z,17nm,1.0s
LSA LR LR
comp=Z,630nm,27.0s
LSA LR LR
comp=Z,330nm,28.0s
LSA Lhasa 29.36 349 P **P** **11 48 52.3 0.0**
LSA pmax pmax
comp=Z,79nm,1.9s
CNSH ChangSha 31.02 27 P **P** **11 49 03.6 -2.8**
CNSH LR LR
comp=Z,3μm,15.2s
CNSH LR LR
comp=Z,1μm,13.7s
CNSH LR LR
comp=Z,3μm,13.7s
ENH Enshi 31.48 20 P **P** **11 49 09.3 -1.2**
ENH IAmb IAmb 11 49 19.6
comp=Z,20nm,0.8s
TPUB Ta-pu 31.75 44 **P** **11 49 12.2 -0.8**
YULB Yu-li 32.27 44 P **P** **11 49 18.3 +0.7**
SSLB Suanglung 32.29 43 P **P** **11 49 18.1 +0.3**
PTH Pithoragarh 32.96 332 *e*P **P** **11 49 24.8 +1.1**
PTH IAmb IAmb 11 49 49.3
comp=Z,59nm,1.2s
FITZ Fitzroy Crossi 33.52 125 P **P** **11 49 27.1 -1.3**
comp=Z,2.5nm,0.9s
FITZ Fitzroy Crossi 33.52 125 LR LR 12 04 00.0
comp=Z,495nm,21.4s,baz=309,slow=38
FITZ Fitzroy Crossi 33.52 125 P **P** **11 49 28.1 -0.4**
DDI Dehra Dun 34.65 330 *e*P **P** **11 49 37.8 -0.5**
XAN Xi'an 34.78 17⇑P **P** **11 49 37.9 -1.4**
XAN pP pP 11 49 47.8 -1.3
XAN pmax pmax
comp=Z,39nm,0.9s
XAN pmax pmax
comp=Z,330nm,9.6s
XAN LR LR
comp=Z,1μm,14.4s
XAN LR LR
comp=Z,2μm,14.4s
XAN LR LR
comp=Z,3μm,13.1s
GOMU GeErMu 35.31 356 P **P** **11 49 44.5 +0.3**
GOMU PcP **PcP** **11 52 14.9 +0.6**
GOMU S **S** **11 55 19.6 +3.2**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU LR LR
comp=Z,460nm,14.5s
GOMU LR LR
comp=Z,360nm,13.9s
LZDM Lanzhou Array 35.46 9 P **P** **11 49 44.6 -0.9**
comp=Z,5.5nm,0.6s,baz=194,slow=12,SNR=6.8
comp=Z,5.5nm,0.6s
LZH Lanzhou 35.62 9 *e*P **P** **11 49 46.0 -0.6**
LZH pP pP 11 49 54.9 -1.5
LZH sP sP 11 49 59.8 -0.1
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=Z,1μm,12.4s
LZH LR LR
comp=Z,2μm,12.7s
LZH LR LR
comp=Z,1μm,13.7s
SMLA Simla 35.75 329 *e*P **P** **11 49 47.9 +0.2**
SMLA IAmb IAmb 11 49 57.8
comp=Z,15nm,0.8s
LYN LuoYang 36.41 21 P **P** **11 49 53.1 -0.1**
LYN pP pP 11 50 00.4 -2.6
LYN pmax pmax
comp=Z,33nm,0.5s
LYN pmax pmax
comp=Z,290nm,6.6s
LYN LR LR
comp=Z,3μm,12.4s
LYN LR LR
comp=Z,1μm,12.7s
LYN LR LR
comp=Z,2μm,12.7s
DHRM DHARAMSHALA 37.09 330 *e*P **P** **11 50 00.0 +0.6**
DHRM IAmb IAmb 11 50 31.4
comp=Z,32nm,0.6s
NJ2 Nanjing 37.09 31 *e*P **P** **11 49 58.9 -0.2**
NJ2 pmax pmax
comp=Z,20nm,1.1s
NJ2 pmax pmax
comp=Z,130nm,4.2s
NJ2 LR LR
comp=Z,640nm,18.8s
NJ2 LR LR
comp=Z,550nm,14.1s
NJ2 LR LR
comp=Z,1μm,13.2s
SSE Sheshan 37.62 34 P **P** **11 50 04.1 +0.6**
SSE S **S** **11 55 51.9 +0.8**
SSE pmax pmax
comp=Z,8.0nm,0.7s
SSE pmax pmax
comp=Z,93nm,4.5s
SSE LR LR
comp=Z,850nm,14.3s
SSE LR LR
comp=Z,530nm,13.7s
GTA Gaotai 38.49 3 P **P** **11 50 11.2 +0.2**
GTA pmax pmax
comp=Z,18nm,1.2s
GTA LR LR
comp=Z,850nm,13.8s
GTA LR LR
comp=Z,530nm,18.2s
GTA LR LR
comp=Z,870nm,15.3s
H01W3 Cape Leeuwin H 38.79 158 T T 12 31 30.2
baz=333,slow=76,SNR=174
H01W2 Cape Leeuwin H 38.80 158 T T 12 31 31.2
baz=333,slow=76,SNR=344
H01W1 Cape Leeuwin H 38.81 158 T T 12 31 33.4
baz=333,slow=76,SNR=234
JOW Kunigami 39.35 46 P **P** **11 50 18.4 +0.2**
JOW IAmb IAmb 11 50 19.5
comp=Z,63nm,1.1s
JOW Kunigami 39.35 46 P **P** **11 50 18.8 +0.5**
HNS HongShan 39.76 22⇑P **P** **11 50 21.7 +0.3**
HNS PP **PnPn** **11 52 02.3 +5.7**
HNS S **S** **11 56 20.2 -3.1**
HNS sS **sS** **11 56 41.2 +2.0**
HNS pmax pmax
comp=Z,23nm,1.1s
HNS LR LR
comp=Z,850nm,12.9s
HNS LR LR
comp=Z,1μm,17.8s
HNS LR LR
comp=Z,1μm,14.0s
WRA Warramunga Arr 41.64 122 P **P** **11 50 36.8 -0.5**
comp=Z,3.3nm,0.9s,baz=305,slow=8.9,SNR=21
WRA LR LR 12 10 12.2
comp=Z,459nm,19.9s,baz=299,slow=40
comp=Z,3.3nm,0.9s
WRA Warramunga Arr 41.64 122 P **P** **11 50 37.1 -0.2**
WRA Warramunga Arr 41.64 122 *i*P **P** **11 50 37.2 0.0**
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRAB Tennant Creek 41.64 122 P **P** **11 50 37.1 -0.2**
WRAB Tennant Creek 41.64 122 P **P** **11 50 36.4 -0.9**
WRAB Tennant Creek 41.64 122⇑*i*P **P** **11 50 37.5 +0.2**
WRAB pmax pmax
comp=Z,4.0nm,0.9s
WR8 Warramunga Arr 41.78 122 IAmb IAmb 11 50 46.0
comp=Z,18nm,1.1s
HHC Hu-ho-hao-te 41.88 16 *e*P **P** **11 50 41.3 +2.3**
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,140nm,5.1s
HHC LR LR
comp=Z,1μm,14.3s
HHC LR LR
comp=Z,1μm,15.3s
HHC LR LR
comp=Z,1μm,15.2s
BJT Baijiatuau 42.61 21 IAmb IAmb 11 50 46.8
comp=Z,24nm,0.9s
BJI Beijing 42.63 21 P **P** **11 50 45.6 +0.6**
BJI pP **pP** **11 50 55.5 +0.6**
BJI S **S** **11 57 06.4 +0.6**
BJI pmax pmax
comp=Z,15nm,1.0s
BJI pmax pmax
comp=Z,110nm,6.3s
BJI LR LR
comp=Z,250nm,15.3s
BJI LR LR
comp=Z,380nm,16.5s
BJI LR LR
comp=Z,370nm,15.8s
ASAR Alice Springs 42.98 127 P **P** **11 50 48.2 +0.1**
comp=Z,2.0nm,0.7s,baz=296,slow=7.4,SNR=36
ASAR S **S** **11 57 07.7 -3.9**
comp=Z,1.4nm,1.1s,baz=295,slow=13,SNR=7.3
comp=Z,2.0nm,0.7s
KSH Kashi 43.23 336 P **P** **11 50 48.8 -1.2**
KSH pmax pmax
comp=Z,4.0nm,0.8s
KSH LR LR
comp=Z,400nm,12.4s
KSH LR LR
comp=Z,450nm,11.7s
KSH LR LR
comp=Z,610nm,13.4s
WMQ Urumqi 43.71 350 *e*P **P** **11 50 55.1 +1.4**
WMQ sP sP 11 51 09.4 +2.2
WMQ pmax pmax
comp=Z,30nm,0.7s
WMQ LR LR
comp=Z,1μm,12.9s
WMQ LR LR
comp=Z,370nm,24.1s
DL2 Dalian 43.93 27 P **P** **11 50 56.2 +0.7**
DL2 *e*S **S** **11 57 27.4 +2.5**
DL2 pmax pmax
comp=Z,68nm,0.7s
DL2 pmax pmax
comp=Z,510nm,5.7s
DL2 LR LR
comp=Z,1μm,13.6s
DL2 LR LR
comp=Z,670nm,14.0s
DL2 LR LR
comp=Z,1μm,14.5s
TARG Taragay, Kyrgy 44.42 339 IAmb IAmb 11 51 45.0
comp=Z,12nm,0.9s
JNU Nakatsue 44.96 41 LR LR 12 12 07.9
comp=Z,710nm,18.2s,baz=234,slow=39
JNU Nakatsue 44.96 41 P **P** **11 51 04.0 +0.1**
TJN Taejon 44.98 35*c i*P **P** **11 51 03.3 -0.6**
TJN pmax pmax
comp=Z,3.0nm,1.7s
KDJ Kajisay 45.00 339 IAmb IAmb 11 51 06.5
comp=Z,14nm,0.9s
GAR Garm 45.39 330 IAmb IAmb 11 51 18.1
comp=Z,25nm,1.1s
CHGR Chuyangaron 45.72 329 IAmb IAmb 11 51 19.6
comp=Z,27nm,1.0s
XLT XiLinHaoTe 46.02 19 *e*P **P** **11 51 12.7 +0.5**
XLT pmax pmax
comp=Z,11nm,1.8s
XLT pmax pmax
comp=Z,250nm,7.0s
XLT LR LR
comp=Z,130nm,13.2s
XLT LR LR
comp=Z,560nm,14.0s
XLT LR LR
comp=Z,2μm,13.5s
KSAR Wonju Array Be 46.02 34 **P** **11 51 12.1 -0.1**
KSAR Wonju Array Be 46.02 34 P **P** **11 51 12.1 -0.1**
KSRS Korea Array 46.05 34 P **P** **11 51 11.9 -0.4**
comp=Z,8.6nm,0.7s,baz=222,slow=8.4,SNR=31
comp=Z,8.6nm,0.7s
KSRS Korea Array 46.05 34 P **P** **11 51 12.0 -0.4**
QIS Mount Isa 46.41 120 P **P** **11 51 14.5 -1.1**
comp=Z,9.3nm,1.6s
AAK Ala-Archa 46.46 337 LR LR 12 12 51.5
comp=Z,479nm,21.3s,baz=164,slow=39
AAK Ala-Archa 46.46 337⇓*i*P **P** **11 51 17.6 +1.8**
AAK pmax pmax
comp=Z,12nm,2.3s
SNY Shenyang 47.16 27⇑P **P** **11 51 20.3 -0.7**
SNY S **S** **11 58 13.8 +2.4**
SNY pmax pmax
comp=Z,21nm,1.1s
SNY pmax pmax
comp=Z,190nm,6.4s
SNY LR LR
comp=Z,610nm,16.5s
SNY LR LR
comp=Z,930nm,14.5s
SNY LR LR
comp=Z,1μm,14.1s
JMN Monobe 47.32 42 P **P** **11 51 22.4 -0.1**
SONM Songino Array 47.49 8 P **P** **11 51 23.7 0.0**
comp=Z,3.2nm,0.4s,baz=191,slow=8.9,SNR=32
SONM PcP **PcP** **11 52 53.9 +0.3**
comp=Z,1.8nm,0.8s,baz=197,slow=4.5,SNR=1.6
SONM LR LR 12 13 46.0
comp=Z,1μm,19.5s,baz=196,slow=39
comp=Z,3.2nm,0.4s
SONM Songino Array 47.49 8 **P** **11 51 23.9 +0.2**
SONM IAmb IAmb 11 51 24.7
comp=Z,11nm,1.1s
ULN Ulaanbaatar 47.62 9 P **P** **11 51 25.3 +0.6**
ULN IAmb IAmb 11 51 25.5
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 47.62 9⇑*i*P **P** **11 51 24.7 0.0**
ULN pmax pmax
comp=Z,13nm,1.1s
MK31 Makanchi Array 47.68 346*c i*P **P** **11 51 25.2 +0.1**
MKAR Makanchi Array 47.68 346 P **P** **11 51 25.4 +0.3**
comp=Z,7.3nm,0.5s,baz=160,slow=8.6,SNR=93
MKAR LR LR 12 15 13.0
comp=Z,458nm,20.0s,baz=146,slow=41
comp=Z,7.3nm,0.5s
MKAR Makanchi Array 47.68 346 P **P** **11 51 25.2 +0.1**
MAKZ Makanchi 47.77 346 **P** **11 51 26.0 +0.2**
MAKZ IAmb IAmb 11 51 41.5
comp=Z,12nm,1.0s
MAKZ Makanchi 47.77 346 P **P** **11 51 25.9 +0.1**
KK31 Karatay Array 48.51 334 P **P** **11 51 31.8 +0.3**
KK31 IAmb IAmb 11 51 43.7
comp=Z,29nm,1.7s
KK31 Karatay Array 48.51 334 P **P** **11 51 31.8 +0.3**
KK31 pmax pmax
comp=Z,29nm,1.7s
KKAR Karatay Array 48.51 334 P **P** **11 51 31.1 -0.5**
KKAR Karatay Array 48.51 334 P **P** **11 51 31.1 -0.5**
GUMO Guam 48.64 73 LR LR 12 12 36.6
comp=Z,89nm,21.8s,baz=238,slow=37
BBOO Buckleboo 49.44 136 P **P** **11 51 39.3 +0.5**
DGZ Jazzator, Alta 49.47 351⇑*i*P **P** **11 51 39.4 +0.5**
DGZ pmax pmax
comp=Z,7.0nm,0.7s
JCJ Chichijima 50.27 55 LR LR 12 10 35.7
comp=Z,191nm,21.4s,baz=50,slow=33
JHJ Hachijo jima 2 51.13 47 LR LR 12 13 15.7
comp=Z,152nm,19.6s,baz=278,slow=36
HTT Hallett 51.78 135 P **P** **11 51 57.0 +0.5**
MJAR Matsushiro Arr 51.84 42 P **P** **11 51 56.7 -0.2**
comp=Z,4.7nm,0.8s,baz=224,slow=5.6,SNR=9.8
MJAR LR LR 12 16 12.1
comp=Z,339nm,18.4s,baz=244,slow=39
comp=Z,4.7nm,0.8s
MJAR Matsushiro Arr 51.84 42 P **P** **11 51 56.9 0.0**
MJAR IAmb IAmb 11 51 58.2
comp=Z,22nm,1.9s
BNX BinXian 51.95 26⇑P **P** **11 51 56.7 -0.8**
BNX pmax pmax
comp=Z,15nm,0.9s
MDJ Mudanjiang 52.11 29 P **P** **11 51 59.0 +0.3**
MDJ S **S** **11 59 21.7 +1.1**
MDJ sS sS 11 59 37.5 +0.3
MDJ pmax pmax
comp=Z,12nm,1.8s
MDJ pmax pmax
comp=Z,380nm,4.5s
MDJ LR LR
comp=Z,2μm,13.1s
MDJ LR LR
comp=Z,1μm,19.9s
MDJ LR LR
comp=Z,2μm,20.6s
CTA Charters Tower 52.13 116 LR LR 12 17 25.5
comp=Z,11nm,19.2s,baz=278,slow=40
KURBB Kurchatov Arra 52.17 345 P **P** **11 51 59.3 +0.2**
comp=Z,3.5nm,0.7s,baz=169,slow=7.3,SNR=27
KURBB LR LR 12 18 23.9
comp=Z,449nm,18.1s,baz=178,slow=41
comp=Z,3.5nm,0.7s
HILR Hailar Array B 52.21 18 P **P** **11 51 58.7 -0.7**
comp=Z,1.8nm,0.4s,baz=186,slow=12,SNR=5.3
comp=Z,1.8nm,0.4s
KURK Kurchatov 52.24 345 P **P** **11 51 59.9 +0.4**
KURK IAmb IAmb 11 52 40.6
comp=Z,10nm,0.9s
KURK Kurchatov 52.24 345⇑*i*P **P** **11 51 59.8 +0.3**
KURK pmax pmax
comp=Z,11nm,1.0s
STKA Stephens Creek 52.92 132 P **P** **11 52 03.1 -1.8**
comp=Z,54nm,1.1s
STKA Stephens Creek 52.92 132 P **P** **11 52 05.2 +0.2**
comp=Z,9.2nm,1.1s,baz=332,slow=7.0,SNR=5.3
STKA LR LR 12 16 38.9
comp=Z,572nm,21.6s,baz=296,slow=38
comp=Z,9.2nm,1.1s
STKA Stephens Creek 52.92 132 P **P** **11 52 05.8 +0.8**
STKA Stephens Creek 52.92 132*c i*P **P** **11 52 05.4 +0.4**
USRK Ussuriysk Ar. 53.00 31 P **P** **11 52 05.6 +0.3**
comp=Z,16nm,0.8s,baz=199,slow=3.7,SNR=21
comp=Z,16nm,0.8s
ZAA0 Zalesovo Array 53.99 351 IAmb IAmb 11 52 28.1
comp=Z,37nm,1.2s
ZALV Zalesovo Beam 53.99 351 P **P** **11 52 12.4 +0.1**
comp=Z,10.0nm,0.4s,baz=178,slow=6.1,SNR=54
ZALV LR LR 12 18 40.4
comp=Z,341nm,18.9s,baz=162,slow=40
comp=Z,10.0nm,0.4s
ZALV Zalesovo Beam 53.99 351 **P** **11 52 12.2 -0.1**
RAYN Ar Rayn 55.14 298 P **P** **11 52 23.1 +1.7**
ATD Arta Tunnel 55.19 283 LR LR 12 13 12.4
comp=Z,5.7nm,19.0s,baz=36,slow=33
HEH HeiHe 55.49 23 *e*P **P** **11 52 23.5 +0.2**
HEH pmax pmax

comp=Z,13nm,2.1s
HEH LR LR
comp=Z,630nm,17.5s
HEH LR LR
comp=Z,1μm,16.9s
HEH LR LR
comp=Z,1μm,15.7s
CMSA Cobar Meteorol 55.87 130 P **P** **11 52 27.5 +1.1**
comp=Z,15nm,1.8s
CMSA Cobar Meteorol 55.87 130 P **P** **11 52 27.4 +1.0**
BVAR Borovoye Array 56.70 341 P **P** **11 52 31.5 -0.4**
comp=Z,5.3nm,0.9s,baz=139,slow=7.9,SNR=20
comp=Z,5.3nm,0.9s
BORK Borovoye 56.74 341 ⇓*iP* **P** **11 52 31.5 -0.7**
BORK pmax pmax
comp=Z,4.0nm,0.8s
AB31 Akbulak array 57.97 332 IAmb IAmb 11 52 51.4
comp=Z,24nm,1.4s
ABKAR Akbulak array 57.97 332 **P** **11 52 40.4 -0.6**
ZEA Zeya 58.24 20 *e*P P 11 52 54.7 +12
ZEA MLR MLR
comp=E,200nm,17.0s
ZEA MLR MLR
comp=N,300nm,19.0s
ZEA MLR MLR
comp=Z,400nm,20.0s
ASAJ Asahikawa 58.85 37 LR LR 12 19 08.5
comp=Z,332nm,19.2s,baz=269,slow=37
FURI Furi 59.02 280 LR LR 12 14 33.5
comp=Z,158nm,21.8s,baz=144,slow=32
YSS Yuzhno-Sakhali 60.55 34 *e*P **P** **11 52 59.4 +0.5**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=Z,700nm,17.0s
YSS MLR MLR
comp=N,600nm,16.0s
YSS MLR MLR
comp=E,600nm,13.0s
H04N2 CROZET ISLANDS 61.57 214 T T 13 00 03.8
baz=55,slow=75
H04N1 CROZET ISLANDS 61.58 214 T T 13 00 04.3
baz=55,slow=75
H04N3 CROZET ISLANDS 61.59 214 T T 13 00 04.7
baz=55,slow=75
GNI Garni 61.74 316 LR LR 12 21 33.6
comp=E,244nm,20.7s,baz=48,slow=38
H04S1 CROZET ISLANDS 61.90 214 T T 13 00 13.7
baz=54,slow=76,SNR=2103
H04S3 CROZET ISLANDS 61.91 214 T T 13 00 13.3
baz=54,slow=76,SNR=2508
H04S2 CROZET ISLANDS 61.92 214 T T 13 00 13.6
baz=54,slow=76,SNR=1546
HNR Honiara 63.07 101 LR LR 12 24 32.6
comp=E,129nm,18.7s,baz=234,slow=40
ARTI Arti 63.68 337 P **P** **11 53 17.1 -2.5**
comp=E,2.8nm,0.5s,baz=160,slow=8.4,SNR=4.8
ARTI LR LR 12 22 51.3
comp=E,369nm,18.9s,baz=124,slow=38
ARTI Arti 63.68 337*d iP* **P** **11 53 19.5 -0.1**
ARTI S **S** **12 01 52.6 +1.0**
ARTI SS **SS** **12 05 55.8 -3.9**
ARTI pmax pmax
comp=Z,17nm,1.8s
KBZ Khabaz 64.52 319 P **P** **11 53 25.8 +0.3**
comp=Z,3.2nm,0.8s,baz=113,slow=6.0,SNR=9.9
comp=Z,3.2nm,0.8s
KBZ Khabaz 64.52 319 ⇓*iP* **P** **11 53 26.1 +0.7**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
SHA1 Shidzhatmaz 64.68 319 ⇓*iP* **P** **11 53 28.2 +1.4**
KIV Kislovodsk 64.75 319 *e*P **P** **11 53 26.0 -1.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s
ASF Jabal al Asfar 64.88 305 LR LR 12 23 08.3
comp=Z,243nm,19.1s,baz=100,slow=37
YAK Yakutsk 65.74 16 LR LR 12 24 17.3
comp=Z,411nm,20.5s,baz=213,slow=38
YAK Yakutsk 65.74 16 *e*P **P** **11 53 31.7 -1.3**
YAK *e**PP **pP** **11 53 41.4 -1.9**
YAK *e* 11 54 02.5
YAK *e* 11 55 55.9
YAK *e*PPP PPP 11 57 30.2
YAK *e*S **S** **12 02 15.7 -1.1**
YAK *e**SS **sS** **12 02 32.7 +0.2**
YAK *e* 12 03 24.4
YAK *e*SS **SS** **12 06 31.1 -0.6**
YAK pmax pmax
comp=Z,28nm,0.9s
YAK pmax pmax
comp=N,16nm,2.0s
YAK pmax pmax
comp=E,17nm,2.0s
YAK pmax pmax
comp=Z,304nm,4.4s
YAK pmax pmax
comp=N,374nm,4.6s
YAK pmax pmax
comp=E,346nm,4.4s
YAK smax smax
comp=E,271nm,3.6s
YAK smax smax
comp=N,175nm,3.0s
EIL Elat 65.86 302 LR LR 12 22 24.6
comp=N,596nm,18.2s,baz=156,slow=36
BELG Belogornoye 66.02 329 P **P** **11 53 33.7 -1.3**
comp=N,8.3nm,0.7s,baz=199,slow=5.1,SNR=3.6
comp=N,8.3nm,0.7s
BELG Belogornoye 66.02 329 ⇓*iP* **P** **11 53 34.3 -0.6**
BELG pmax pmax
comp=Z,2.0nm,1.0s
MMAI Mount Meron Ar 66.32 306 LR LR 12 23 30.9
comp=Z,188nm,19.2s,baz=93,slow=37
NRIK Noril'sk 68.74 356 P **P** **11 53 51.5 -0.3**
comp=Z,4.0nm,0.5s,baz=161,slow=6.6,SNR=12
NRIK LR LR 12 27 01.9
comp=Z,370nm,19.2s,baz=220,slow=39
comp=Z,4.0nm,0.5s
NRIK Noril'sk 68.74 356 P **P** **11 53 52.0 +0.1**
NRIK IAmb IAmb 11 53 52.2
comp=Z,17nm,1.2s
NRIK Noril'sk 68.74 356⇑*iP* **P** **11 53 51.2 -0.7**
NRIK pmax pmax
comp=Z,16nm,1.2s
KIRV Kirov 68.77 335 LR LR 12 28 38.4
comp=Z,258nm,18.2s,baz=305,slow=40
KIRV Kirov 68.77 335⇑*eP* **P** **11 53 51.2 -1.0**
BR131 Keskin Array S 69.54 312 P **P** **11 53 57.1 -0.6**
BR131 Keskin Array S 69.54 312 ⇓*iP* **P** **11 53 57.1 -0.6**
BRTR Keskin Array B 69.54 312 P **P** **11 53 57.7 0.0**
comp=Z,1.5nm,0.8s,baz=140,slow=6.0,SNR=8.8
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 69.54 312 **P** **11 53 56.7 -1.0**
BRTR Keskin Array B 69.54 312*ceP* **P** **11 53 58.0 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
VORD Divnogorie 69.84 325 *eP* **P** **11 53 56.5 -2.5**
VORD pmax pmax
comp=Z,8.0nm,1.0s
VSR Storozhevoye 70.02 325 *eP* **P** **11 53 57.4 -2.8**
VSR pmax pmax
comp=Z,6.0nm,1.1s
LSZ Lusaka 70.21 254 LR LR 12 22 09.3
comp=Z,666nm,18.1s,baz=86,slow=34
MATP Matopo 70.58 248 LR LR 12 20 08.4
comp=Z,199nm,21.4s,baz=55,slow=32
MA2 Magadan 71.60 25 LR LR 12 28 26.9
comp=Z,333nm,19.1s,baz=246,slow=38
PETK Petropavlovsk- 71.95 33 LR LR 12 29 45.4
comp=Z,242nm,18.6s,baz=253,slow=39
MAW Mawson 72.37 193 LR LR 12 22 25.6
comp=Z,267nm,18.4s,baz=22,slow=33
PET Petropavlovsk 72.44 34 P **P** **11 54 15.1 +0.3**
PET Petropavlovsk 72.44 34 P **P** **11 54 15.0 +0.3**
OBN Obninsk 73.08 328 *eP* **P** **11 54 17.6 -0.8**
OBN pmax pmax
comp=Z,11nm,0.5s
TIXI Tiksi 73.54 10 LR LR 12 29 45.1
comp=Z,472nm,18.6s,baz=200,slow=38
TIXI Tiksi 73.54 10 **P** **11 54 20.3 -0.6**
TIXI IAmb IAmb 11 54 20.7
comp=Z,13nm,1.1s
TIXI Tiksi 73.54 10⇑*iP* **P** **11 54 20.0 -0.9**
TIXI pmax pmax
comp=Z,14nm,1.1s
LBTB Lobatse 73.91 244 LR LR 12 24 30.3
comp=Z,234nm,18.0s,baz=60,slow=34
SEY Seymchan 74.04 23 LR LR 12 29 25.4
comp=Z,270nm,19.3s,baz=249,slow=38
SEY Seymchan 74.04 23 *eP* **P** **11 54 22.9 -1.1**
SEY pmax pmax
comp=Z,12nm,1.3s
KLMR Klimovskoe 74.21 334 *eP* **P** **11 54 23.2 -1.8**
KLMR pmax pmax
comp=Z,18nm,1.1s
BOSA Boshof 74.77 240 LR LR 12 23 31.2
comp=Z,217nm,18.1s,baz=30,slow=33
SORM Soroca 75.55 320 ⇓P **P** **11 54 33.9 +0.8**
SORM Soroca 75.55 320 P **P** **11 54 33.8 +0.8**
AKASG Malin Array Be 75.71 322 P **P** **11 54 33.1 -0.7**
comp=Z,0.6nm,0.4s,baz=91,slow=4.8,SNR=7.4
comp=Z,0.6nm,0.4s
KIEV Kiev 75.72 322 ⇑P **P** **11 54 34.7 +0.8**
KIEV Kiev 75.72 322 P **P** **11 54 34.7 +0.8**
VRI Vrincioaia 76.06 317 ⇑P **P** **11 54 37.1 +1.0**
VRI Vrincioaia 76.06 317 P **P** **11 54 37.0 +1.0**
MLR Muntele Rosu 76.51 317 P **P** **11 54 38.3 -0.4**
comp=Z,2.6nm,0.5s,baz=153,slow=21,SNR=3.5
comp=Z,2.6nm,0.5s
MLR Muntele Rosu 76.51 317 ⇑P **P** **11 54 39.2 +0.4**
VOIR 77.11 316 ⇑P **P** **11 54 43.1 +1.0**
VOIR 77.11 316 P **P** **11 54 43.1 +1.0**
ARR Arges 77.39 316 ⇓P **P** **11 54 44.6 +1.0**
BURAR Bucovina Array 77.47 319 P **P** **11 54 45.2 +1.1**
BURAR Bucovina Array 77.47 319 ⇓P **P** **11 54 45.5 +1.4**
BURAR Bucovina Array 77.47 319 P **P** **11 54 45.5 +1.4**
BUR08 Bucovina Ar. S 77.49 319 **P** **11 54 45.5 +1.3**
BUR08 IAmb IAmb 11 54 58.7
comp=Z,15nm,1.1s
RPZ Rata Peaks 78.77 135 LR LR 12 29 49.9
comp=Z,382nm,21.9s,baz=315,slow=36
DRGR 78.98 318 ⇓P **P** **11 54 53.9 +1.4**
DRGR 78.98 318 P **P** **11 54 53.8 +1.4**
FINES FINESS Array B 80.46 333 P **P** **11 55 00.1 +0.1**
comp=Z,1.2nm,0.4s,baz=81,slow=4.1,SNR=9.0
comp=Z,1.2nm,0.4s
FINES FINESS Array B 80.46 333 *i* P **P** **11 55 00.7 +0.7**
FINES pmax pmax
comp=Z,2.0nm,0.6s
TSUM Tsumeb 80.67 251 LR LR 12 28 19.7
comp=Z,214nm,18.5s,baz=342,slow=34
ARCES ARCESS Array B 82.99 340 P **P** **11 55 13.4 +0.2**
comp=Z,2.5nm,0.7s,baz=93,slow=4.9,SNR=13
ARCES LR LR 12 35 48.4
comp=Z,454nm,19.2s,baz=240,slow=38
comp=Z,2.5nm,0.7s
GERES GERESS Array B 85.26 319 P **P** **11 55 25.9 +0.5**
comp=Z,1.1nm,0.7s,baz=98,slow=2.7,SNR=7.6
comp=Z,1.1nm,0.7s
VNDA Vanda 85.39 169 LR LR 12 32 01.8
comp=Z,229nm,18.4s,baz=312,slow=35
RAO Raoul Island 85.72 119 LR LR 12 34 35.1
comp=Z,124nm,19.8s,baz=290,slow=36
HFS Hagfors 86.18 330 P **P** **11 55 30.3 +0.8**
comp=Z,3.9nm,0.8s,baz=98,slow=6.4,SNR=4.6
comp=Z,3.9nm,0.8s
SPITS Spitsbergen Ar 87.39 348 LR LR 12 41 38.6
comp=Z,297nm,19.6s,baz=175,slow=40
NB2 NORSAR Subarra 87.46 331 P **P** **11 55 35.9 +0.1**
comp=Z,14nm,1.4s,baz=93,slow=5.3
NOA NORSAR Array B 87.46 331 P **P** **11 55 35.8 -0.1**
comp=Z,2.0nm,0.8s,baz=94,slow=4.8,SNR=5.2
NOA LR LR 12 37 14.4
comp=Z,140nm,20.9s,baz=100,slow=37
comp=Z,2.0nm,0.8s
QSPA South Pole Qui 90.74 180 LR LR 12 32 23.4
comp=Z,229nm,19.1s,baz=306,slow=33
SNAA Sanae 93.98 198 LR LR 12 34 45.5
comp=Z,178nm,18.1s,baz=14,slow=33
TORD Torodi Ar. Bea 95.40 283 LR LR 12 37 29.3
comp=Z,186nm,19.2s,baz=4.0,slow=34
MDT Midelt 99.67 303 LR LR 12 45 34.4
comp=Z,228nm,19.9s,baz=46,slow=38
TBI Tubuai 111.49 115 *e*LR LR 12 34 30.1
comp=Z,1μm,25.2s
TBI *e*LR LR 12 34 31.7
comp=Z,1μm,28.8s
PPT2 Papeete2 112.14 109 *e*LR LR 12 34 52.7
comp=Z,195nm,24.5s
PPT2 *e*LR LR 12 34 53.6
comp=Z,184nm,29.2s
TAOE Nuku Hiva Isla 122.14 100 *e*LR LR 12 39 25.2
comp=Z,172nm,26.0s
NVAR Mina Array Bea 128.98 36 PKP **PKiKP** **12 01 58.8 +1.2**
comp=Z,0.5nm,0.8s,baz=218,slow=3.4,SNR=4.6
PDAR Pinedale Array 130.30 26 PKP **PKiKP** **12 01 60.0 -0.2**
comp=Z,0.1nm,0.4s,baz=324,slow=4.2,SNR=3.0
TXAR Lajitas Array 143.89 32 PKP **PKPdf** **12 02 23.5 -1.1**
comp=Z,0.7nm,0.7s,baz=168,slow=1.3,SNR=5.1
CPUP Villa Florida 144.86 222 PKP **PKPdf** **12 02 25.7 -0.5**
comp=Z,0.8nm,0.7s,baz=287,slow=7.3,SNR=5.3

DNK ***12*** *11:46:28.8±1.7, 57.55N×21.93E, h0km, ML3.2, Suspected explosion*
HEL ***12*** *11:46:28.9±0.2, 57.72N×21.87E, h0km, ML2.3, Explosion*
IDC ***12*** *11:46:29.7±2.3, 57.79N×22.05E, h0km, mbtmp3.2/4, ML2.3/4, Error ellipse: s-maj=22.9km s-min=9.4km az=163.0*
EST ***12*** *11:46:29.0±0.1, 57.70N×21.89E, h0km, ML2.3(HEL), Explosion*
LVSN ***12*** *11:46:31.9±3.8, 57.60N×22.01E, h0km±45km, ML2.6*
UPP ***12*** *11:46:32.7±1.3, 57.70N×21.46E, h0km, ML2.4, Presumed earthquake*

ISC 12 11:46:27.7±0.7, 57.76N±0.03×21.86E±0.02, h0km, n63, σ1s52/94, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.27**	**119**	*e*P	**Pg**		**11 46 33.2**	**+0.5**
SLIT	**Slitere, Latvi**	**0.27**	**119**	*e*P	**Pg**		**11 46 33.3**	**+0.5**
SLIT				*e*S	**Sg**		**11 46 37.3**	**+1.2**
SLIT				AML	AML		11 46 48.5	
	comp=N,4μm,0.5s							
SLIT				AML	AML		11 46 49.4	
	comp=E,7μm,0.4s							
SLIT				AML	AML		11 46 49.5	
	comp=Z,6μm,0.6s							
SLIT	**Slitere, Latvi**	**0.27**	**119**	*e*P	**Pg**		**11 46 33.3**	**+0.5**
SLIT				*e*S	**Sg**		**11 46 36.5**	**+0.3**
EE06	**Soera, Palade,**	**1.32**	**23**	*e*P	**Pb**		**11 46 53.3**	**0.0**
EE06				*e*SB	**Sn**		**11 47 11.5**	**-0.1**
EE01	**Perakula, Nova**	**1.72**	**32**	*e*P	**Pb**		**11 47 00.3**	**+0.1**
EE01				*e*PG	**Pg**		**11 47 01.0**	**+0.4**
EE01				*e*SN	**Sg**		**11 47 24.3**	**+1.4**
GOTU	**Gotland**	**1.77**	**269**	P	**Pb**		**11 47 00.7**	**-0.1**
GOTU				S	**Sg**		**11 47 24.9**	**+0.5**
GOTU	**Gotland**	**1.77**	**269**	P	**Pb**		**11 47 00.7**	**-0.1**
GOTU				S	**Sg**		**11 47 24.9**	**+0.5**
GOTU	**Gotland**	**1.77**	**269**	*e*P	**Pb**		**11 47 00.7**	**-0.1**
GOTU				*e*SN	**Sg**		**11 47 24.8**	**+0.5**
EE08	**Sarghaua, Vand**	**2.00**	**62**	*e*P	**Pb**		**11 47 03.8**	**-1.1**
EE08				*e*SG	**Sb**		**11 47 30.9**	**+0.5**
EE02	**Kiisa, Saku**	**2.07**	**45**	*e*PB	**Pb**		**11 47 06.0**	**0.0**
EE02				*e*SG	**Sg**		**11 47 34.0**	**-0.1**
TVF	**Tvarminne**	**2.21**	**19**	*e*PB	**Pb**		**11 47 08.4**	**0.0**
TVF				*e*SG	**Sg**		**11 47 38.4**	**-0.3**
TVF				smax	smax		11 47 40.7	
	comp=Z,25nm,0.1s							
NYNU	**Nynaeshamn**	**2.38**	**303**	P	**Pb**		**11 47 10.4**	**-1.0**
NYNU	**Nynaeshamn**	**2.38**	**303**	P	**Pb**		**11 47 10.4**	**-1.0**
PABE	**Paberze**	**2.54**	**152**	*e*P	**Pn**		**11 47 10.0**	**-0.1**
PABE	**Paberze**	**2.54**	**152**	*e*P	**Pn**		**11 47 11.9**	**+1.8**
PABE				AML	AML		11 47 12.1	
	comp=Z,78nm,0.2s							
PABE				AML	AML		11 47 12.7	
	comp=N,52nm,0.2s							
PABE				AML	AML		11 47 46.4	
	comp=E,52nm,0.2s							
PABE	**Paberze**	**2.54**	**152**	*e*PB	**Pn**		**11 47 11.9**	**+1.8**
PABE				*e*SB	**Sn**		**11 47 43.6**	**+1.9**
EE03	**Tooma soojaam,**	**2.58**	**63**	*e*P	**Pn**		**11 47 12.1**	**+1.5**
EE03				*e*PB	**Pb**		**11 47 13.5**	**-1.3**
EE03				*e*SB	**Sb**		**11 47 47.1**	**+0.1**
AAL	**Aland**	**2.61**	**339**	*e*P	**Pn**		**11 47 12.3**	**+1.3**
AAL	**Aland**	**2.61**	**339**	*e*P	**Pn**		**11 47 12.4**	**+1.4**
AAL				*e*SG	**Sg**		**11 47 51.1**	**-0.4**
VSU	**Vasula**	**2.68**	**73**	*e*P	**Pn**		**11 47 12.3**	**+0.3**
VSU	**Vasula**	**2.68**	**73**	*e*P	**Pb**		**11 47 14.5**	**-1.9**
VSU				AML	AML		11 47 14.8	
	comp=Z,91nm,0.1s							
VSU				AMb	AMB		11 47 15.4	
	comp=E,36nm,0.2s							
VSU				AML	AML		11 47 16.3	
	comp=N,55nm,0.2s							
VSU	**Vasula**	**2.68**	**73**	*i* P	**Pb**		**11 47 14.5**	**-1.9**
VSU	**Vasula**	**2.68**	**73**	*e*P	**Pn**		**11 47 12.5**	**+0.5**
VSU				*e*PB	**Pb**		**11 47 14.3**	**-2.1**
VSU				*e*SB	**Sb**		**11 47 49.6**	**-0.2**
ARBE	**Arbavere**	**2.74**	**50**	*e*P	**Pn**		**11 47 13.3**	**+0.5**
MEF	**Metsahovi**	**2.79**	**27**	*e*P	**Pn**		**11 47 13.8**	**+0.2**
MEF	**Metsahovi**	**2.79**	**27**	*e*P	**Pb**		**11 47 17.8**	**-0.6**
MEF				*e*S	**Sb**		**11 47 53.3**	**+0.2**
MEF				AML	AML		11 47 56.1	
	comp=N,12nm,0.2s							
MEF				AML	AML		11 47 56.5	
	comp=E,29nm,0.1s							
MEF				AML	AML		11 47 58.8	
	comp=Z,16nm,0.5s							
MEF	**Metsahovi**	**2.79**	**27**	*e*PB	**Pb**		**11 47 17.3**	**-1.0**
MEF				*e*SB	**Sb**		**11 47 53.8**	**+0.7**
MEF				smax	smax		11 47 55.6	
	comp=Z,11nm,0.1s							
HEL5	**Espoo, Suvisaa**	**2.80**	**31**	*e*PB	**Pb**		**11 47 17.1**	**-1.3**
HEL5				smax	smax		11 47 56.1	
	comp=Z,9.4nm,0.1s							
VIKU	**Vikbolandet**	**2.84**	**287**	P	**Pb**		**11 47 18.3**	**-0.8**
VIKU	**Vikbolandet**	**2.84**	**287**	P	**Pb**		**11 47 18.3**	**-0.8**
VSTU	**Vaestervik**	**2.86**	**270**	P	**Pb**		**11 47 17.2**	**-2.2**
VSTU	**Vaestervik**	**2.86**	**270**	P	**Pb**		**11 47 17.2**	**-2.2**
OSKU	**Oskarshamn**	**3.16**	**262**	P	**Pn**		**11 47 20.2**	**+1.6**
OSKU	**Oskarshamn**	**3.16**	**262**	P	**Pn**		**11 47 20.2**	**+1.6**
RAF	**Rauma**	**3.27**	**359**	*e*P	**Pn**		**11 47 18.1**	**-2.0**
LNKU	**Linkoeping**	**3.42**	**281**	P	**Pn**		**11 47 24.2**	**+2.1**
LNKU	**Linkoeping**	**3.42**	**281**	P	**Pn**		**11 47 24.2**	**+2.1**
EKSU	**Eksjoe**	**3.53**	**270**	P	**Pn**		**11 47 25.5**	**+1.8**
EKSU	**Eksjoe**	**3.53**	**270**	P	**Pn**		**11 47 25.5**	**+1.8**
VXJU	**Vaexsjoe**	**3.84**	**260**	P	**Pn**		**11 47 29.5**	**+1.5**
VXJU	**Vaexsjoe**	**3.84**	**260**	P	**Pn**		**11 47 29.5**	**+1.5**
KPF	**Kankaanpaa**	**4.09**	**1**	*e*P	**Pn**		**11 47 33.5**	**+2.2**
FIA0	**FINESS Array S**	**4.27**	**28**	*e*P	**Pn**		**11 47 36.4**	**+2.6**
FINES	**FINESS Array B**	**4.27**	**28**	Pn	**Pn**		**11 47 35.8**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=213,slow=12,SNR=16							
FINES				Pg	**Pb**		**11 47 45.8**	**+2.3**
	comp=Z,1.2nm,0.3s,baz=207,slow=14,SNR=21							
FINES				Sn	**Sn**		**11 48 25.9**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=213,slow=18,SNR=5.3							
FINES				Lg	Lg		11 48 39.7	
	comp=Z,1.7nm,0.3s,baz=210,slow=22,SNR=15							
	comp=Z,0.8nm,0.2s							
FKPU	**Falk**	**4.35**	**279**	P	**Pn**		**11 47 36.9**	**+1.9**
FKPU	**Falk**	**4.35**	**279**	P	**Pn**		**11 47 36.9**	**+1.9**
DEL	**Delary**	**4.54**	**257**	*i* P	**Pn**		**11 47 38.5**	**+0.9**
DEL				*i* S	**Sn**		**11 48 30.9**	**-0.1**
KEF	**Keuruu**	**4.67**	**18**	*e*P	**Pn**		**11 47 39.8**	**+0.4**
BSD	**Bornholm Skovb**	**4.68**	**238**	*i* P	**Pn**		**11 47 39.2**	**-0.3**
BSD				*i* S	**Sn**		**11 48 32.7**	**-1.6**
BSD				IAML			11 48 45.1	
	comp=Z,18nm,1.0s							
HFS	**Hagfors**	**4.85**	**303**	Pn	**Pn**		**11 47 43.5**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=112,slow=15,SNR=13							
HFS				Sn	**Sn**		**11 48 40.9**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=114,slow=29,SNR=7.4							
HFS				Lg	Lg		11 49 03.0	
	comp=Z,2.7nm,0.3s,baz=116,slow=32,SNR=15							
	comp=Z,1.8nm,0.3s							
BORU	**Boraas**	**4.88**	**272**	*i* P	**Pn**		**11 47 43.0**	**+0.8**
BORU				*i* S	**Sn**		**11 48 40.5**	**+1.2**
FABU	**Falkenberg**	**5.00**	**265**	*i* S	**Sn**		**11 48 41.2**	**-1.1**
LUNU	**Lund**	**5.10**	**249**	*i* P	**Pn**		**11 47 45.2**	**-0.1**
BJUU	**Bjuv**	**5.13**	**255**	*i* P	**Pn**		**11 47 46.1**	**+0.5**
BJUU				*i* S	**Sn**		**11 48 44.1**	**-1.2**
VAF	**Ylistaro**	**5.32**	**4**	*e*P	**Pn**		**11 47 48.8**	**+0.6**
ONAU	**Onsala**	**5.36**	**270**	*i* P	**Pn**		**11 47 51.4**	**+2.6**
ONAU				*i* S	**Sn**		**11 48 52.2**	**+1.0**
TJOU	**Tjoern**	**5.47**	**277**	P	**Pn**		**11 47 52.8**	**+2.6**
TJOU	**Tjoern**	**5.47**	**277**	*i* P	**Pn**		**11 47 52.1**	**+1.9**
TJOU				P	**Pn**		**11 47 52.8**	**+2.6**
TJOU				*i* S	**Sn**		**11 48 53.1**	**-0.6**
STRU	**Stroemstad**	**5.76**	**287**	*e*P	**Pn**		**11 47 55.8**	**+1.6**
NC602	**NORSAR Array S**	**6.08**	**304**	*e*P	**Pn**		**11 47 59.4**	**+0.7**
NOA	**NORSAR Array B**	**6.35**	**306**	Pn	**Pn**		**11 48 02.9**	**+0.5**
	baz=118,slow=11,SNR=1.5							
NOA				Sn	**Sn**		**11 49 15.1**	**-0.6**
	baz=289,slow=11,SNR=1.8							
NOA				Lg	Lg		11 49 45.7	
	comp=Z,0.1nm,0.3s,baz=226,slow=21,SNR=3.7							
	comp=Z,0.4nm,0.7s							
JOF	**Joensuu**	**6.98**	**38**	*e*P	**Pn**		**11 48 11.3**	**+0.3**
ARCES	**ARCESS Array B**	**11.93**	**6**	Pn	**Pn**		**11 49 16.4**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=9.4							
ARCES				Sn	**Sn**		**11 51 25.7**	**-6.7**
	baz=192,slow=22,SNR=2.2							
	comp=Z,1.7nm,0.9s							

NEIC ***12*** *11:53:29.1±1.0, 35.13N±0.02×95.37W±0.02, h6km±2km, Error ellipse: s-maj=3.1km s-min=2.2km az=147.0*
NEIC 12 11:53:29.0±0.9, 35.13N±0.02×95.37W±0.02, h5km±1km, mb_Lg2.3/10, ML2.5/9, ML2.6/14, Error ellipse: s-maj=3.8km s-min=2.6km az=310.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TUL3	**Leonard**	**0.85**	**336**			Pg	11 53 45.2	-0.1
TUL3						Sg	11 53 56.5	+0.2
TUL3				IAML			11 53 56.7	
	145nm,0.2s							
RLO	**Rose Lookout**	**1.07**	**15**			Pg	11 53 49.0	-0.4
RLO						Sg	11 54 03.4	+0.1
RLO				IAML			11 54 08.8	
	comp=E,194nm,0.2s							
RLO				IAML			11 54 10.2	
	comp=N,185nm,0.2s							
DEOK	**Depew**	**1.16**	**308**			Pg	11 53 51.0	-0.4
DEOK						Sg	11 54 06.3	-0.1
DEOK				IAML			11 54 06.5	
	comp=N,162nm,0.2s							
DEOK				IAML			11 54 06.6	
	comp=E,133nm,0.1s							
OK052	**Battle Ridge R**	**1.45**	**307**			Pn	11 53 55.7	-0.2
OK052						Sb	11 54 15.3	0.0
QUOK	**Quay**	**1.51**	**314**			Pn	11 53 56.6	-0.1
QUOK						Sb	11 54 17.0	+0.1
U38A	**Gravette**	**1.53**	**31**			Pn	11 53 56.9	0.0
U38A						Sb	11 54 17.4	-0.1
MIAR	**Mount Ida**	**1.58**	**111**			Pb	11 53 58.3	-0.5
MIAR						Sg	11 54 19.6	-0.3
HHAR	**Hobbs**	**1.63**	**45**			Pn	11 53 58.8	+0.4
HHAR						Sb	11 54 20.7	+0.2
FNO	**Franklin**	**1.67**	**275**			Pn	11 53 59.4	+0.4
FNO						Sg	11 54 22.3	-0.5
OKCSW	**OKLAHOMA CITY**	**1.72**	**280**	IAmb_Lg			11 54 23.7	
	comp=Z,13nm,1.2s							
OKCFA	**Oklahoma City**	**1.73**	**280**			Pb	11 54 00.6	-0.7
OKCFA						Sb	11 54 23.6	+0.2
OK048	**Pawnee Station**	**1.81**	**315**	IAmb_Lg			11 54 30.1	
	comp=Z,8.8nm,0.8s							
Z38A	**Mt. Pleasant**	**1.90**	**170**	IAmb_Lg			11 54 33.2	
	comp=Z,24nm,0.7s							
T35A	**Sooner Cattle**	**2.01**	**333**			Pb	11 54 05.2	-0.8
X40A	**Basin Creek Fa**	**2.18**	**107**	IAmb_Lg			11 54 41.3	
	comp=Z,14nm,0.8s							
WHAR	**Wooly Hollow**	**2.52**	**86**			Pn	11 54 11.6	+0.9
WMOK	**Wichita Mounta**	**2.83**	**263**	Pn		Pn	11 54 15.2	+0.3
WMOK	**Wichita Mounta**	**2.83**	**263**			Pn	11 54 15.6	+0.6
PBMO	**Poplar Bluff**	**4.33**	**66**	IAmb_Lg			11 55 47.5	
	comp=Z,14nm,0.9s							
CCM	**Cathedral Cave**	**4.42**	**47**	Pn		Pn	11 54 36.6	-0.1

BGSI ***12*** *12:00:57.0±1.5, 25.04S×23.53E, h0km±178km, ML2.4*
PRE 12 12:00:30.5±0.9, 27.81S×26.54E, h2km, ML2.4, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**2.17**	**29**	*e*P		Pb	12 01 09.3	-1.3
HRAO				*e*S		Sn	12 01 35.5	+0.2
HRAO				IAML			12 01 48.2	
	comp=Z,24nm,0.3s							
MAKGR	**Makgori**	**2.52**	**322**	*i* P		Pg	12 01 21.9	+3.0
MAKGR				*i* S		Sn	12 01 39.8	-4.2
MAKGR				IAML			12 02 03.0	
	comp=N,129nm,0.6s							

ALKP	**Alkanpan, Nort**	**4.32**	**240**	*e*P	Pn	12 01 37.8	+0.4
ALKP				*e*S	Sn	12 02 28.4	0.0
ALKP				IAML		12 02 46.7	
	comp=Z,13nm,0.3s						
KDWAN	**Kaudwane**	**4.72**	**339**	*i* P	Pn	12 01 30.2	-13
KDWAN				IAML		12 03 14.6	
	comp=N,38nm,0.4s						
GRAF	**Camdeboo Natio**	**4.79**	**201**	*e*P	Pn	12 01 45.0	+1.2
GRAF				*e*S	Sn	12 02 39.0	-1.0
GRAF				IAML		12 03 09.1	
	comp=Z,9.7nm,0.4s						
BRAK	**Brakfontein**	**5.07**	**218**	*e*P	Pn	12 01 48.8	+1.2
BRAK				*e*S	Sn	12 02 44.8	-1.9
BRAK				IAML		12 03 13.9	
	comp=Z,9.9nm,0.5s						
GRHM	**Grahamstown, E**	**5.45**	**181**	*e*P	Pn	12 01 53.6	+0.8
GRHM				*e*S	Sn	12 02 54.5	-1.6
GRHM				IAML		12 02 55.6	
	comp=Z,2.3nm,1.0s						
GRAN	**Grantham**	**5.86**	**219**	*e*P	Pn	12 01 59.9	+1.4
GRAN				*e*S	Sn	12 03 04.0	-2.3
GRAN				IAML		12 03 45.8	
	comp=Z,9.1nm,0.5s						
ARMS	**Ukamas**	**6.02**	**266**	*e*P	Pn	12 02 01.2	+0.6
ARMS				*e*S	Sn	12 03 08.4	-1.7
FRAZ	**Fraserburg**	**6.06**	**226**	*e*P	Pn	12 02 02.6	+1.4
FRAZ				*e*S	Sn	12 03 09.0	-2.2
FRAZ				IAML		12 03 26.1	
	comp=Z,6.7nm,0.3s						
BROLN	**Tlhalogang**	**6.72**	**6**	*i* P	Pn	12 02 13.7	+3.4
BROLN				*i* S	Sn	12 03 12.5	-15
BROLN				IAML		12 04 08.8	
	comp=E,10nm,0.8s						
CVNA	**Calvinia**	**6.94**	**237**	*e*P	Pn	12 02 13.9	+0.6
CVNA				*e*S	Sn	12 03 29.8	-3.1
CVNA				IAML		12 04 12.2	
	comp=Z,8.8nm,0.7s						
ELIM	**Elim**	**8.92**	**219**	*e*P	Pn	12 02 41.5	+1.1
ELIM				IAML		12 04 49.4	
	comp=Z,3.3nm,0.5s						

HEL **12** *12:04:02.2±0.2,61.30N×29.76E,h0km,ML1.9,Explosion*
IDC **12** *12:04:02.4±1.3,61.21N×29.65E,h0km,mbtmp3.9/3, ML4.0/1,Error ellipse: s-maj=18.5km s-min=9.1km az=12.0*

ISC 12 12:03:60.0±1.0, 61.28N±0.04×29.72E±0.05, h0km, n21, σ1§27/31, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**0.40**	**292**	PG	**Pb**	**12 04 09.8**	**-0.1**
RUF				SG	**Sb**	**12 04 15.3**	**-1.2**
VJF	**Virojoki**	**1.29**	**236**	PG	**Pn**	**12 04 25.9**	**+0.6**
VJF				*s*max	*s*max	12 04 42.1	
	comp=Z,16nm,0.2s						
VJF				SB	**Sn**	**12 04 43.6**	**+0.4**
FIA0	**FINESS Array S**	**1.76**	**277**	PG	**Pg**	**12 04 33.8**	**+0.1**
FIA0				*s*max	*s*max	12 04 55.3	
	comp=Z,6.0nm,0.2s						
FIA0				SG	**Sg**	**12 04 56.8**	**+0.3**
FINES	**FINESS Array B**	**1.76**	**277**	Pg	**Pg**	**12 04 34.0**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=95,slow=14,SNR=37						
FINES				Lg	Lg	12 04 56.7	
	comp=Z,3.0nm,0.3s,baz=100,slow=33,SNR=30						
JOF	**Joensuu**	**1.81**	**24**	PG	**Pb**	**12 04 34.4**	**+0.5**
JOF				SG	**Sg**	**12 04 58.2**	**+0.1**
KAF	**Kangasniemi**	**1.83**	**299**	PG	**Pg**	**12 04 35.3**	**+0.3**
KAF				*s*max	*s*max	12 04 56.9	
	comp=Z,12nm,0.2s						
KAF				SN	**Sg**	**12 04 59.6**	**+0.9**
PVF	**Pernaja**	**2.02**	**250**	PG	**Pg**	**12 04 38.9**	**+0.2**
PVF				*s*max	*s*max	12 05 03.1	
	comp=Z,9.3nm,0.2s						
PVF				SG	**Sg**	**12 05 06.8**	**+1.9**
SUF	**Sumiainen**	**2.22**	**312**	PG	**Pb**	**12 04 41.7**	**+0.8**
	baz=128						
SUF				*s*max	*s*max	12 05 08.0	
	comp=Z,3.9nm,0.2s						
SUF				SG	**Sg**	**12 05 12.1**	**+0.9**
NIF	**Nilsia**	**2.30**	**338**	PG	**Pb**	**12 04 42.7**	**+0.4**
	baz=152						
NIF				*s*max	*s*max	12 05 09.8	
	comp=Z,3.9nm,0.2s						
NIF				SG	**Sb**	**12 05 11.9**	**+0.7**
KEF	**Keuruu**	**2.48**	**293**	PB	**Pb**	**12 04 44.5**	**-0.8**
KEF				*s*max	*s*max	12 05 15.5	
	comp=Z,3.8nm,0.2s						
KEF				SG	**Sb**	**12 05 17.9**	**+1.7**
HEL5	**Espoo, Suvisaa**	**2.71**	**247**	*s*max	*s*max	12 05 22.8	
	comp=Z,3.3nm,0.2s						
HEL5				SG	**Sg**	**12 05 26.6**	**-0.4**
MEF	**Metsahovi**	**2.82**	**250**	*s*max	*s*max	12 05 25.9	
	comp=Z,3.8nm,0.2s						
MEF				SG	**Sg**	**12 05 30.0**	**-0.5**
RMF	**Romuvaara**	**2.95**	**2**	PB	**Pb**	**12 04 51.9**	**-1.5**
RMF				*s*max	*s*max	12 05 28.5	
	comp=Z,2.9nm,0.2s						
RMF				SB	**Sb**	**12 05 30.4**	**+0.4**
VAF	**Ylistaro**	**3.75**	**301**	PG	**Pg**	**12 05 10.2**	**-1.6**
	baz=119						
KU2	**Taivalkoski**	**4.50**	**352**	PN	**Pn**	**12 05 13.0**	**+3.7**
	baz=169						
MSF	**Maaselka**	**4.66**	**357**	SG	**Sg**	**12 06 26.5**	**-3.1**
KU6	**Riekki**	**4.77**	**1**	PN	**Pn**	**12 05 14.7**	**+1.7**
KU6				SN	**Sn**	**12 06 09.3**	**+0.4**
I43RU	**DUBNA INFRASON**	**5.99**	**136**	I	I	12 40 40.0	
	baz=326,slow=315,SNR=2.2						
OBN	**Obninsk**	**7.16**	**147**	Pn	**Pn**	**12 05 45.8**	**0.0**
	comp=Z,5.9nm,0.3s,baz=323,slow=20,SNR=1.7						
	comp=Z,14nm,0.3s						
HFS	**Hagfors**	**7.94**	**269**	Pn	**Pn**	**12 05 56.0**	**-0.5**
	comp=Z,3.0nm,1.0s,baz=72,slow=9.5,SNR=1.9						
ARCES	**ARCESS Array B**	**8.47**	**350**	Pn	**Pn**	**12 06 04.5**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=164,slow=12,SNR=5.5						

NOU **12** *12:05:16.7,39.79S×176.46E,h14km,MLv3.3/9,North Island, New Zealand*
WEL **12** *12:05:17.2±0.7,40.2±2.2×17.6E±.1,h13km±5km,M3.4/12, ML3.8/12,MLv3.4/12,Error ellipse: s-maj=3.4km s-min=2.6km az=84.0,confirmed*

ISC 12 12:05:17.1±1.4, 39.79S±0.02×176.46E±0.02, h13km±13km, n89, σ0§63/97, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRHZ	**Kereru**	**0.16**	**334**	P	**Pb**	**12 05 21.8**	**-0.2**
KRHZ				S	**Sb**	**12 05 25.6**	**+0.4**
WAKS	**Wakarara Rangi**	**0.16**	**275**	S	**Sb**	**12 05 26.3**	**+1.1**
WPWS	**Waipawa Distri**	**0.18**	**149**	P	**Pb**	**12 05 22.4**	**0.0**
WPWS				S	**Sb**	**12 05 26.4**	**+0.6**
PNHZ	**Pukenui**	**0.24**	**238**	P	**Pb**	**12 05 23.4**	**+0.1**
PNHZ				S	**Sb**	**12 05 28.3**	**+0.8**
WPHZ	**Waipukurau**	**0.28**	**183**	P	**Pb**	**12 05 24.2**	**+0.2**
WPHZ				S	**Sb**	**12 05 29.8**	**+1.2**
KAHZ	**Kahuranaki**	**0.32**	**92**	P	**Pb**	**12 05 24.7**	**0.0**
HCDS	**Hastings Civil**	**0.33**	**65**	P	**Pb**	**12 05 24.6**	**-0.2**
KFHS	**Kaweka Forest**	**0.35**	**1**	P	**Pb**	**12 05 24.9**	**-0.3**
KFHS				S	**Sb**	**12 05 30.9**	**+0.1**
KWHZ	**Kaweka Forest**	**0.36**	**355**	P	**Pb**	**12 05 25.1**	**-0.4**
MCHZ	**McNeill Hill**	**0.39**	**28**	P	**Pb**	**12 05 26.0**	**+0.2**
MCHZ				S	**Sb**	**12 05 32.9**	**+1.2**
PWZ	**Pawanui**	**0.39**	**128**	P	**Pb**	**12 05 26.0**	**+0.1**
PWZ				S	**Sb**	**12 05 33.4**	**+1.5**
PXZ	**Pawanui**	**0.39**	**128**	P	**Pb**	**12 05 25.9**	**0.0**
PXZ				S	**Sb**	**12 05 33.5**	**+1.6**
NCDS	**Napier Civil D**	**0.43**	**48**	P	**Pb**	**12 05 26.6**	**+0.1**
NAAS	**Napier Airport**	**0.45**	**45**	P	**Pb**	**12 05 27.0**	**+0.2**
NSPS	**Napier St Paul**	**0.46**	**50**	P	**Pb**	**12 05 27.3**	**+0.2**
NGHS	**Napier Girls H**	**0.46**	**50**	P	**Pb**	**12 05 27.3**	**+0.3**
TSZ	**Takapari Road**	**0.47**	**235**	P	**Pb**	**12 05 27.2**	**-0.1**
CKHZ	**Cape Kidnapper**	**0.49**	**75**	P	**Pb**	**12 05 28.0**	**+0.4**
PRHZ	**Porangahau**	**0.50**	**164**	P	**Pb**	**12 05 28.1**	**+0.4**
DVHZ	**Dannevirke**	**0.56**	**204**	P	**Pb**	**12 05 28.8**	**0.0**
BKZ	**Black Stump Fm**	**0.62**	**2**	P	**Pb**	**12 05 29.4**	**-0.4**
BKZ	**Black Stump Fm**	**0.62**	**2**	S	**Sb**	**12 05 38.6**	**+0.1**
BKZ	**Black Stump Fm**	**0.62**	**2**	P	**Pb**	**12 05 29.6**	**-0.2**
MOVZ	**Moawhango**	**0.67**	**304**	P	**Pb**	**12 05 30.6**	**0.0**
ARHZ	**Aropaoanui**	**0.67**	**39**	P	**Pb**	**12 05 31.1**	**+0.5**
ANWZ	**Angora Road**	**0.67**	**179**	P	**Pn**	**12 05 31.6**	**-0.7**
NMHZ	**Naumai**	**0.74**	**21**	P	**Pn**	**12 05 32.5**	**-0.8**
POWZ	**Post Office Ro**	**0.81**	**221**	P	**Pb**	**12 05 33.1**	**+0.2**
WNVZ	**Wahianoa**	**0.81**	**304**	P	**Pb**	**12 05 33.4**	**+0.3**
TUVZ	**Tukino**	**0.81**	**309**	P	**Pn**	**12 05 33.6**	**-0.8**
WHVZ	**Whangaehu Hut**	**0.84**	**306**	P	**Pn**	**12 05 34.0**	**-0.8**
PRWZ	**Pori Road**	**0.85**	**206**	P	**Pn**	**12 05 34.5**	**-0.3**
TRVZ	**Turoa**	**0.86**	**304**	P	**Pb**	**12 05 34.3**	**+0.3**
MTVZ	**Mangateitei**	**0.86**	**297**	P	**Pn**	**12 05 34.5**	**-0.5**
MAVZ	**Matarangi**	**0.87**	**306**	P	**Pn**	**12 05 34.5**	**-0.8**
ETVZ	**East Tongariro**	**0.87**	**318**	P	**Pb**	**12 05 34.4**	**+0.3**
SNVZ	**South Ngauruho**	**0.87**	**313**	P	**Pn**	**12 05 34.6**	**-0.7**
OTVZ	**Oturere**	**0.88**	**315**	P	**Pn**	**12 05 34.5**	**-0.7**
FWVZ	**Far West T-bar**	**0.88**	**307**	P	**Pb**	**12 05 34.6**	**+0.2**
TMVZ	**Te Maari**	**0.89**	**319**	P	**Pn**	**12 05 34.7**	**-0.7**
NGZ	**Ngauruhoe**	**0.90**	**312**	P	**Pn**	**12 05 35.0**	**-0.6**
BFZ	**Birch Farm**	**0.91**	**190**	P	**Pg**	**12 05 34.6**	**0.0**
BFZ	**Birch Farm**	**0.91**	**190**	S	**Sb**	**12 05 46.9**	**+0.1**
BFZ	**Birch Farm**	**0.91**	**190**	P	**Pg**	**12 05 34.6**	**0.0**
NTVZ	**North Tongarir**	**0.92**	**318**	P	**Pb**	**12 05 35.1**	**+0.2**
COVZ	**Chateau Observ**	**0.92**	**309**	P	**Pn**	**12 05 35.3**	**-0.5**
NNVZ	**North Ngauruho**	**0.93**	**315**	P	**Pn**	**12 05 35.4**	**-0.5**
WHHZ	**Waihua**	**0.93**	**40**	P	**Pn**	**12 05 35.5**	**-0.3**
RITZ	**Rihia Road**	**0.93**	**330**	P	**Pn**	**12 05 35.7**	**-0.3**
KRVZ	**Karewarewa**	**0.94**	**317**	P	**Pn**	**12 05 35.5**	**-0.6**
HATZ	**Hinemaiaia**	**0.94**	**342**	P	**Pg**	**12 05 35.2**	**0.0**
WTVZ	**West Tongariro**	**0.95**	**315**	P	**Pn**	**12 05 35.8**	**-0.5**
MRHZ	**Matea Rd**	**0.95**	**358**	P	**Pg**	**12 05 35.5**	**0.0**
OHWZ	**Ohakea**	**0.97**	**244**	P	**Pn**	**12 05 36.6**	**+0.1**
MTHZ	**Maungataniwha**	**0.98**	**18**	P	**Pn**	**12 05 36.2**	**-0.3**
PKVZ	**Pokaka**	**0.99**	**300**	P	**Pn**	**12 05 36.5**	**-0.3**
RAHZ	**Arahi**	**0.99**	**29**	P	**Pn**	**12 05 36.6**	**-0.2**
KATZ	**Kakaramea**	**1.00**	**324**	P	**Pn**	**12 05 36.8**	**-0.2**
RATZ	**Rangitukua**	**1.06**	**330**	P	**Pn**	**12 05 37.9**	**+0.2**
TWVZ	**Taurewa**	**1.07**	**312**	P	**Pn**	**12 05 37.6**	**-0.3**
TIWZ	**Tiltrock**	**1.08**	**204**	P	**Pb**	**12 05 37.7**	**0.0**
MRZ	**Mangatainoka R**	**1.10**	**217**	P	**Pb**	**12 05 37.7**	**-0.3**
WAZ	**Wanganui**	**1.14**	**271**	P	**Pg**	**12 05 39.7**	**+0.7**
CPWZ	**Castlepoint**	**1.14**	**190**	P	**Pb**	**12 05 38.3**	**-0.3**
WHTZ	**Whakaora**	**1.19**	**341**	P	**Pg**	**12 05 40.5**	**+0.6**
SNGZ	**Shannon Statio**	**1.21**	**34**	P	**Pn**	**12 05 39.3**	**-0.4**
WATZ	**Wairara**	**1.22**	**332**	P	**Pg**	**12 05 40.2**	**-0.3**
ALRZ	**Allen Road**	**1.23**	**356**	P	**Pb**	**12 05 40.2**	**+0.1**
MHGZ	**Mahia Peninsul**	**1.29**	**61**	P	**Pn**	**12 05 39.9**	**-0.8**
WPRZ	**Whakapapatarin**	**1.29**	**350**	P	**Pg**	**12 05 41.5**	**-0.3**
PRRZ	**Plateau Road**	**1.29**	**358**	P	**Pb**	**12 05 41.0**	**-0.1**
HOWZ	**Holdsworth Sta**	**1.32**	**213**	P	**Pn**	**12 05 40.3**	**-1.0**
MUGZ	**Murupara**	**1.33**	**11**	P	**Pn**	**12 05 41.3**	**-0.1**
TMWZ	**Te Maipa**	**1.39**	**198**	P	**Pn**	**12 05 40.8**	**-1.4**
PRGZ	**Paritu Road**	**1.40**	**52**	P	**Pn**	**12 05 41.3**	**-1.0**
OGWZ	**Otaki Gorge**	**1.43**	**223**	P	**Pn**	**12 05 42.1**	**-0.6**
VRZ	**Vera Road**	**1.48**	**296**	P	**Pb**	**12 05 44.3**	**-0.1**
RIGZ	**Rimuaa**	**1.48**	**44**	P	**Pn**	**12 05 42.2**	**-1.2**
HSRZ	**Hossack Road**	**1.48**	**353**	P	**Pb**	**12 05 43.8**	**-0.7**
MTW	**Mount Morrison**	**1.55**	**208**	P	**Pn**	**12 05 42.9**	**-1.5**
KIW	**Kapiti Island**	**1.60**	**227**	P	**Pn**	**12 05 44.6**	**-0.5**
URZ	**Urewera**	**1.61**	**19**	P	**Pn**	**12 05 44.3**	**-0.8**
URZ	**Urewera**	**1.61**	**19**	S	**Sn**	**12 06 05.9**	**+0.2**
LREZ	**Lake Rotokare**	**1.62**	**281**	P	**Pg**	**12 05 48.1**	**-0.2**
MWZ	**Matawai**	**1.67**	**30**	P	**Pn**	**12 05 45.0**	**-1.1**
TRWZ	**Traveller**	**1.71**	**200**	P	**Pn**	**12 05 44.9**	**-1.8**
HIZ	**Hauiti**	**1.78**	**315**	P	**Pn**	**12 05 47.9**	**+0.3**
SNZO	**South Karori**	**2.03**	**221**	P	**Pn**	**12 05 50.1**	**-0.8**
QRZ	**Quartz Range**	**3.18**	**250**	P	**Pn**	**12 06 05.8**	**-1.0**

IDC **12** *12:40:47.2±2.5,15.69S×176.82W,h353km±22km, mb3.7/10,mbtmp4.4/11,Error ellipse: s-maj=22.1km s-min=15.5km az=136.0*
NEIC **12** *12:40:50.2±2.1,15.79S±0.07×176.62W±0.09, h372km±6km,mb4.4/108,Error ellipse: s-maj=12.6km s-min=8.4km az=62.0*

ISC 12 12:40:47.3±0.5, 15.85S±0.1×176.87W±0.09, h350km, n94, σ1§17/59, mb4.4/55, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.25**	**247**		Pn	12 42 16.5	+6.8
AFI	**Afiamalu**	**5.26**	**70**		**Pn**	**12 42 09.5**	**-0.5**
FUNA	**Funafuti**	**8.15**	**331**	Pn	**P**	**12 42 46.8**	**+0.5**
MARNC	**Mare, Loyalty**	**15.39**	**246**	P	**P**	**12 44 08.5**	**+2.2**
DZM	**Mont Dzumac**	**16.98**	**246**	P	**P**	**12 44 25.1**	**+1.5**
	9.4nm,0.9s,baz=68,slow=20,SNR=9.2						
COEN	**Coen**	**38.62**	**267**	P	**P**	**12 47 41.1**	**+2.7**
STKA	**Stephens Creek**	**40.97**	**239**	P	**P**	**12 47 57.0**	**-0.3**
	4.2nm,0.9s,baz=85,slow=11,SNR=4.3						
	4.2nm,0.9s						
STKA	**Stephens Creek**	**40.97**	**239**	P	**P**	**12 47 57.4**	**+0.1**
BBOO	**Buckleboo**	**45.74**	**239**	P	**P**	**12 48 34.7**	**-0.4**
BBOO				IAmb	IAmb	12 48 36.1	
	comp=Z,19nm,1.1s						
WR8	**Warramunga Arr**	**46.35**	**257**		**P**	**12 48 40.0**	**0.0**
WR8				IAmb	IAmb	12 48 41.2	
	comp=Z,9.0nm,0.5s						
WB0	**Warramunga Arr**	**46.46**	**258**		**P**	**12 48 41.0**	**+0.2**
WRAB	**Tennant Creek**	**46.49**	**257**	P	**P**	**12 48 41.1**	**0.0**
WRA	**Warramunga Arr**	**46.50**	**257**	P	**P**	**12 48 41.0**	**-0.2**
	comp=Z,5.9nm,0.7s,baz=98,slow=6.5,SNR=110						
WRA				ScP	**ScP**	**12 53 28.1**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=99,slow=4.1,SNR=2.7						
WRA				S	**S**	**12 54 58.0**	**-4.7**
	comp=Z,0.3nm,0.7s,baz=99,slow=14,SNR=1.7						
	comp=Z,5.9nm,0.7s						
WRA	**Warramunga Arr**	**46.50**	**257**		**P**	**12 48 41.1**	**0.0**
AS31	**Alice Springs**	**46.81**	**252**		**P**	**12 48 43.8**	**+0.2**
AS31				IAmb	IAmb	12 48 44.6	
	comp=Z,10nm,0.6s						
ASAR	**Alice Springs**	**46.82**	**252**	P	**P**	**12 48 43.6**	**+0.1**
	comp=Z,34nm,0.6s,baz=86,slow=8.0,SNR=634						
ASAR				ScP	**ScP**	**12 53 29.9**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=84,slow=3.7,SNR=6.4						
ASAR				S	**S**	**12 55 03.3**	**-3.8**
	comp=Z,0.6nm,0.6s,baz=93,slow=14,SNR=8.8						
	comp=Z,34nm,0.6s						
FITZ	**Fitzroy Crossi**	**54.86**	**259**	P	**P**	**12 49 44.2**	**+1.3**
PSA00	**Pilbara Seismi**	**59.89**	**254**	P	**P**	**12 50 17.9**	**+0.1**
PSA00	**Pilbara Seismi**	**59.89**	**254**		**P**	**12 50 17.9**	**+0.1**
SBA	**Scott Base**	**62.65**	**184**		**P**	**12 50 35.3**	**+0.2**
MORW	**Morawa**	**62.70**	**245**	P	**P**	**12 50 36.2**	**-0.1**
MORW				IAmb	IAmb	12 50 38.5	
	comp=Z,12nm,1.0s						
VNDA	**Vanda**	**62.70**	**185**	P	**P**	**12 50 34.2**	**-1.2**
	comp=Z,1.8nm,1.1s,baz=13,slow=5.1,SNR=5.7						
	comp=Z,1.8nm,1.1s						
VNDA	**Vanda**	**62.70**	**185**		**P**	**12 50 35.5**	**+0.1**
MJAR	**Matsushiro Arr**	**67.10**	**322**	P	**P**	**12 51 03.9**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=108,slow=10,SNR=1.6						
	comp=Z,0.5nm,0.4s						
QSPA	**South Pole Qui**	**74.28**	**180**	P	**P**	**12 51 47.7**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=62,slow=1.1,SNR=9.7						
	comp=Z,2.3nm,0.9s						
QSPA	**South Pole Qui**	**74.28**	**180**	P	**P**	**12 51 48.2**	**+1.4**
KMRM	**Mail Ridge**	**74.43**	**40**	P	**P**	**12 51 49.0**	**+1.0**
MWC	**Mount Wilson**	**74.81**	**47**	P	**P**	**12 51 50.1**	**-0.3**
O02D	**Mt. Diablo Mer**	**74.97**	**40**	P	**P**	**12 51 51.9**	**+0.8**
O02D				IAmb	IAmb	12 51 52.5	
	comp=Z,8.6nm,1.1s						
DPP	**Dos Picos Cty**	**74.98**	**49**	IAmb	IAmb	12 51 51.5	
	comp=Z,5.4nm,0.8s						
BFSC	**Mount Baldy Ra**	**75.10**	**47**	P	**P**	**12 51 51.6**	**-0.4**
CMB	**Columbia Colle**	**75.27**	**43**	IAmb	IAmb	12 52 25.9	
	comp=Z,8.9nm,1.1s						
BORC	**Borrego Spring**	**75.50**	**49**	IAmb	IAmb	12 51 54.6	
	comp=Z,7.7nm,1.0s						
YUH	**Yuha Desert**	**75.55**	**50**	IAmb	IAmb	12 51 54.9	
	comp=Z,6.5nm,0.9s						
PFO	**Pinyon Flats O**	**75.64**	**49**		**P**	**12 51 54.8**	**-0.3**
YBH	**Yreka Blue Hor**	**75.94**	**39**		**P**	**12 51 56.7**	**+0.2**
WAKR	**Walker**	**76.16**	**43**	IAmb	IAmb	12 51 58.9	
	comp=Z,5.9nm,0.8s						
BELC	**Belle Mtn. Jos**	**76.17**	**48**	IAmb	IAmb	12 51 58.5	
	comp=Z,6.3nm,0.8s						
BEKR	**Beckworth**	**76.32**	**41**		**P**	**12 51 58.7**	**0.0**
BC3	**Big Chuckawall**	**76.39**	**49**	IAmb	IAmb	12 51 60.0	
	comp=Z,5.6nm,1.0s						
PAHR	**Pah Rah Range**	**76.85**	**42**	IAmb	IAmb	12 52 02.5	
	comp=Z,6.9nm,1.1s						
IRM	**Iron Mountain**	**76.86**	**49**		**P**	**12 52 01.7**	**0.0**
IRM				IAmb	IAmb	12 52 02.5	
	comp=Z,11nm,1.2s						
PIX	**Pinacate**	**76.86**	**52**	IAmb	IAmb	12 52 02.8	
	comp=Z,10nm,1.4s						
NVAR	**Mina Array Bea**	**76.86**	**43**	P	**P**	**12 52 01.6**	**-0.3**
NV11	**Mina Array Sit**	**76.96**	**44**	IAmb	IAmb	12 52 03.0	
	comp=Z,9.4nm,1.1s						
BLYC	**Blythe**	**77.11**	**49**		**P**	**12 52 02.8**	**-0.3**
113A	**Mohawk Valley,**	**77.20**	**50**	IAmb	IAmb	12 52 04.2	
	comp=Z,7.4nm,0.9s						
214A	**Organ Pipe Nat**	**77.53**	**52**	IAmb	IAmb	12 52 06.5	
	comp=Z,7.5nm,1.1s						
K05A	**Summer Lake**	**77.61**	**39**	IAmb	IAmb	12 52 07.1	
	comp=Z,10nm,1.3s						
J05D	**Fort Rock, OR**	**77.73**	**38**	IAmb	IAmb	12 52 07.6	
	comp=Z,6.1nm,0.9s						
PINE	**Pine Mountain**	**78.20**	**38**	IAmb	IAmb	12 52 10.2	
	comp=Z,4.9nm,1.0s						
PRN	**Pahroc Range**	**78.53**	**46**	IAmb	IAmb	12 52 12.0	
	comp=Z,8.8nm,1.2s						
WVOR	**Wild Horse Val**	**78.83**	**40**	IAmb	IAmb	12 52 13.1	
	comp=Z,6.3nm,1.2s						
TUC	**Tucson**	**79.23**	**52**		**P**	**12 52 14.9**	**+0.2**
TUC				IAmb	IAmb	12 52 15.9	
	comp=Z,6.8nm,0.9s						
X16A	**Lo Mia Camp, P**	**79.68**	**50**	IAmb	IAmb	12 52 18.3	
	comp=Z,5.0nm,0.9s						
U15A	**North Rim**	**79.99**	**48**	IAmb	IAmb	12 52 20.2	
	comp=Z,6.1nm,1.2s						
ELK	**Elko**	**80.09**	**43**	IAmb	IAmb	12 52 19.9	
	comp=Z,8.4nm,1.5s						
G08A	**Pilot Rock**	**80.22**	**37**	IAmb	IAmb	12 52 20.5	
	comp=Z,5.6nm,1.1s						
E07A	**Sunnyside**	**80.42**	**36**	IAmb	IAmb	12 52 21.4	
	comp=Z,6.9nm,0.9s						
MTPU	**Mount Pierson**	**80.83**	**46**	IAmb	IAmb	12 52 25.0	
	comp=Z,10nm,1.5s						
121A	**Cookes Peak, D**	**81.61**	**53**	IAmb	IAmb	12 52 28.6	
	comp=Z,7.6nm,0.9s						
TMUT	**Trail Mountain**	**82.09**	**46**	IAmb	IAmb	12 52 31.0	
	comp=Z,9.1nm,1.1s						
M26K	**Nabesna, AK**	**82.33**	**15**	IAmb	IAmb	12 52 31.2	
	comp=Z,7.9nm,1.0s						
SRU	**San Rafael Swe**	**82.48**	**46**	IAmb	IAmb	12 52 32.2	
	comp=Z,6.2nm,0.8s						
Y22A	**Socorro**	**82.82**	**52**	IAmb	IAmb	12 52 34.4	
	comp=Z,9.8nm,1.2s						
MNTX	**Cornudas Mount**	**83.14**	**55**	IAmb	IAmb	12 52 35.8	
	comp=Z,7.8nm,0.9s						
IMAR	**Indian Mountai**	**83.33**	**9**	P	**P**	**12 52 35.9**	**+0.7**
COLA	**College**	**83.37**	**12**	P	**P**	**12 52 35.1**	**-0.3**
ILAR	**Eielson Array**	**83.48**	**12**	P	**P**	**12 52 35.1**	**-0.9**
	comp=Z,2.7nm,0.6s,baz=220,slow=5.8,SNR=33						
	comp=Z,2.7nm,0.6s						
ILAR	**Eielson Array**	**83.48**	**12**		**P**	**12 52 35.5**	**-0.6**
TXAR	**Lajitas Array**	**83.61**	**57**	P	**P**	**12 52 37.5**	**-0.1**
	comp=Z,4.6nm,0.9s,baz=224,slow=5.2,SNR=23						
	comp=Z,4.6nm,0.9s						
TASM	**ASL Pad, Albuq**	**83.61**	**51**	IAmb	IAmb	12 52 38.0	
	comp=Z,5.5nm,1.1s						
TASM	**ASL Pad, Albuq**	**83.61**	**51**	IAmb	IAmb	12 52 38.0	
	comp=Z,5.8nm,1.1s						
ABQ	**Albuquerque**	**83.61**	**51**	IAmb	IAmb	12 52 38.1	
	comp=Z,5.4nm,1.1s						
ANMO	**Albuquerque**	**83.61**	**51**		**P**	**12 52 37.5**	**-0.2**
ALPN	**Alpine**	**84.02**	**56**	IAmb	IAmb	12 52 40.4	
	comp=Z,5.5nm,0.8s						
DLMT	**Dillon**	**84.08**	**40**	IAmb	IAmb	12 52 40.4	
	comp=Z,6.1nm,0.8s						
L29M	**L29M**	**84.20**	**17**	IAmb	IAmb	12 52 40.5	
	comp=Z,6.7nm,0.8s						
DAWY	**Dawson**	**84.63**	**16**	IAmb	IAmb

VSU					*e*SB	**Sb**	**12 47 09.6**	**-1.4**
AAL	**Aland**	**2.68**	**339**		P	**Pn**	**12 46 33.9**	**+0.5**
AAL	**Aland**	**2.68**	**339**		*e*P	**Pn**	**12 46 33.9**	**+0.5**
AAL	**Aland**	**2.68**	**339**		P	**Pn**	**12 46 33.9**	**+0.5**
AAL	**Aland**	**2.68**	**339**		*e*P	**Pn**	**12 46 33.8**	**+0.5**
AAL					*e*SG	**Sb**	**12 47 13.4**	**+2.2**
ARBE	**Arbavere**	**2.76**	**49**		*e*P	**Pn**	**12 46 37.1**	**+2.7**
ARBE	**Arbavere**	**2.76**	**49**		*e*P	**Pn**	**12 46 37.2**	**+2.7**
ARBE					AML	AML	12 47 14.7	
	comp=N,386nm,0.1s							
ARBE					AML	AML	12 47 15.6	
	comp=Z,96nm,0.2s							
ARBE					AML	AML	12 47 18.2	
	comp=E,378nm,0.2s							
ARBE	**Arbavere**	**2.76**	**49**		*e*PB	**Pn**	**12 46 37.1**	**+2.7**
ARBE					*e*SB	**Sb**	**12 47 13.3**	**-0.1**
HEL5	**Espoo, Suvisaa**	**2.84**	**30**		*e*PB	**Pn**	**12 46 38.3**	**+2.8**
HEL5					*e*SB	**Sb**	**12 47 14.9**	**-0.9**
HEL5					smax	smax	12 47 18.9	
	comp=Z,11nm,0.1s							
MEF	**Metsahovi**	**2.84**	**26**		*e*P	**Pn**	**12 46 36.7**	**+1.2**
MEF	**Metsahovi**	**2.84**	**26**		*e*P	**Pn**	**12 46 38.2**	**+2.7**
MEF					*e*S	**Sb**	**12 47 14.8**	**-1.0**
MEF					AML	AML	12 47 18.8	
	comp=N,14nm,0.1s							
MEF					AML	AML	12 47 21.3	
	comp=E,21nm,0.4s							
MEF					AML	AML	12 47 22.0	
	comp=Z,15nm,0.5s							
MEF	**Metsahovi**	**2.84**	**26**		*e*PB	**Pn**	**12 46 38.5**	**+3.0**
MEF					*e*SB	**Sb**	**12 47 14.6**	**-1.2**
MEF					smax	smax	12 47 17.2	
	comp=Z,12nm,0.1s							
VIKU	**Vikbolandet**	**2.88**	**289**		P	**Pn**	**12 46 38.0**	**+1.9**
VIKU	**Vikbolandet**	**2.88**	**289**		P	**Pn**	**12 46 38.0**	**+1.9**
HEL1	**Helsinki**	**2.93**	**30**		*e*SB	**Sb**	**12 47 17.5**	**-0.8**
ISAL	**Salakas**	**3.15**	**131**		*e*P	**Pn**	**12 46 39.8**	**0.0**
NUR	**Nurmijarvi**	**3.16**	**25**		smax	smax	12 47 25.6	
	comp=Z,5.8nm,0.1s							
GRAU	**Graesoe**	**3.17**	**328**		P	**Pn**	**12 46 40.8**	**+0.7**
GRAU	**Graesoe**	**3.17**	**328**		P	**Pn**	**12 46 40.8**	**+0.7**
OSKU	**Oskarshamn**	**3.18**	**263**		P	**Pn**	**12 46 41.6**	**+1.4**
OSKU	**Oskarshamn**	**3.18**	**263**		P	**Pn**	**12 46 41.6**	**+1.4**
FIBU	**Brunna**	**3.25**	**315**		P	**Pn**	**12 46 42.9**	**+1.8**
FIBU	**Brunna**	**3.25**	**315**		P	**Pn**	**12 46 42.9**	**+1.8**
BACU	**Backbrunna**	**3.31**	**313**		P	**Pn**	**12 46 43.7**	**+1.7**
BACU	**Backbrunna**	**3.31**	**313**		P	**Pn**	**12 46 43.7**	**+1.7**
RAF	**Rauma**	**3.34**	**359**		*e*P	**Pn**	**12 46 43.9**	**+1.5**
RAF	**Rauma**	**3.34**	**359**		*e*SB	**Sb**	**12 47 29.6**	**-0.6**
IIGN	**Ignalina**	**3.35**	**133**		*e*P	**Pn**	**12 46 40.5**	**-2.0**
OSTU	**Oestervaala**	**3.55**	**318**		P	**Pn**	**12 46 46.6**	**+1.4**
OSTU	**Oestervaala**	**3.55**	**318**		P	**Pn**	**12 46 46.6**	**+1.4**
IGGU	**Iggoen**	**3.96**	**325**		P	**Pn**	**12 46 52.7**	**+1.7**
IGGU	**Iggoen**	**3.96**	**325**		P	**Pn**	**12 46 52.7**	**+1.7**
NRAU	**Nora**	**4.05**	**301**		P	**Pn**	**12 46 53.7**	**+1.4**
NRAU	**Nora**	**4.05**	**301**		P	**Pn**	**12 46 53.7**	**+1.4**
FALU	**Falun**	**4.21**	**314**		P	**Pn**	**12 46 55.4**	**+1.0**
FALU	**Falun**	**4.21**	**314**		P	**Pn**	**12 46 55.4**	**+1.0**
FINES	**FINESS Array B**	**4.32**	**28**		Pn	**Pn**	**12 46 55.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=208,slow=12,SNR=14							
FINES					Pg	**Pb**	**12 47 06.1**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=210,slow=15,SNR=23							
FINES					Sn	**Sn**	**12 47 47.9**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=213,slow=14,SNR=1.7							
FINES					Lg	Lg	12 48 02.1	
	comp=Z,1.8nm,0.3s,baz=215,slow=24,SNR=12							
	comp=Z,0.7nm,0.3s							
FIA1	**FINESS Array S**	**4.32**	**28**	*e*	P	**Pn**	**12 46 57.3**	**+1.5**
DEL	**Delary**	**4.56**	**258**	*i*	P	**Pn**	**12 47 00.4**	**+1.3**
BSD	**Bornholm Skovb**	**4.67**	**239**	*i*	P	**Pn**	**12 47 00.6**	**-0.1**
BSD				*i*	S	**Sn**	**12 47 54.5**	**-0.9**
BSD					IAML		12 48 13.0	
	comp=Z,22nm,0.9s							
KEF	**Keuruu**	**4.73**	**17**	*e*	P	**Pn**	**12 47 02.5**	**+1.1**
ROTU	**Roteberg**	**4.86**	**323**		P	**Pn**	**12 47 03.5**	**+0.3**
ROTU	**Roteberg**	**4.86**	**323**		P	**Pn**	**12 47 03.5**	**+0.3**
BORU	**Boraas**	**4.91**	**273**	*i*	P	**Pn**	**12 47 06.2**	**+2.2**
HFS	**Hagfors**	**4.91**	**303**		Pn	**Pn**	**12 47 04.8**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=117,slow=15,SNR=28							
HFS					Sn	**Sn**	**12 48 01.7**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=113,slow=27,SNR=5.9							
HFS					Lg	Lg	12 48 22.6	
	comp=Z,1.4nm,0.3s,baz=115,slow=32,SNR=9.1							
	comp=Z,1.3nm,0.3s							
FABU	**Falkenberg**	**5.03**	**266**	*i*	S	**Sn**	**12 48 04.1**	**-0.2**
LUNU	**Lund**	**5.11**	**250**	*i*	S	**Sn**	**12 48 05.2**	**-1.0**
BJUU	**Bjuv**	**5.14**	**255**	*i*	P	**Pn**	**12 47 07.7**	**+0.6**
BJUU				*i*	S	**Sn**	**12 48 06.1**	**-1.0**
RUF	**Ruokolahti**	**5.18**	**41**	*e*	P	**Pn**	**12 47 08.3**	**+0.7**
VAF	**Ylistaro**	**5.38**	**4**	*e*	P	**Pn**	**12 47 11.5**	**+1.1**
TJOU	**Tjoern**	**5.50**	**278**	*i*	P	**Pn**	**12 47 12.9**	**+0.8**
STRU	**Stroemstad**	**5.81**	**288**	*i*	P	**Pn**	**12 47 17.3**	**+1.0**
STRU				*i*	S	**Sn**	**12 48 21.6**	**-1.9**
NOA	**NORSAR Array B**	**6.41**	**306**		Pn	**Pn**	**12 47 25.4**	**+0.8**
	baz=114,slow=21,SNR=4.2							
NOA					Sn	**Sn**	**12 48 34.2**	**-4.3**
	baz=117,slow=12,SNR=1.3							
NOA					Lg	Lg	12 49 09.9	
	comp=Z,0.1nm,0.3s,baz=115,slow=21,SNR=4.4							
	comp=Z,0.4nm,0.6s							
ARCES	**ARCESS Array B**	**11.99**	**6**		Pn	**Pn**	**12 48 37.4**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=9.9							
	comp=Z,1.3nm,0.8s							

MOS **12** *12:55:35.6±1.2,36°.42N×141°.20E,h46km,mb4.8/19,Error ellipse: s-maj=10.1km s-min=6.7km az=103.5*
NIED **12** *12:55:36.8,36°.43N×141°.02E,h46km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}4.67; $M_{\theta\theta}$-1.82; $M_{\phi\phi}$-2.85; $M_{r\theta}$-2.02; $M_{\theta\phi}$-2.20; $M_{\phi r}$-2.52; Fault plane solution: $M_0$5.65000×10^{15} NP1: ϕ_s38.00000°,δ28.00000°,λ90.00000°. NP2:ϕ_s219.00000°, δ62.00000°,λ90.00000°.*
JMA **12** *12:55:36.8±0.1,36°.4N±0°.3×141°.0E±0°.8,h46km±1km, MD4.4/40,MW4.4/40,E OFF IBARAKI PREF*
JMA Felt III J1 at E OFF IBARAKI PREF
IDC **12** *12:55:38.1±1.5,36°.40N×140°.97E,h47km±14km,mb4.1/25, mbtmp4.3/29,ML3.8/4,MS3.6/18,Error ellipse: s-maj=13.2km s-min=8.9km az=68.0*
NEIC **12** *12:55:38.8±1.3,36°.50N±0°.05×141°.04E±0°.08,h43km±6km, mb4.6/109,Error ellipse: s-maj=11.0km s-min=1.8km az=125.0*
ISC 12 12:55:37.3±0.5,**36°.43N**±0°.04×**141°.12E**±0°.05,**h37**km±1km, **n221,σ1§49**/191,**mb4.6/**94,**MS3.5**/16,**8C-23D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.44**	**259**	⇓	P	**Pn**	**12 55 46.2**	**-0.7**
JHYU				⇓	S	**Sn**	**12 55 52.6**	**-1.3**
JHYU	**Hitachinakayam**	**0.44**	**259**		A	A	12 55 46.2	
	comp=N,69nm,0.3s,comp=E,148nm,0.7s							
JHO	**Hitachi**	**0.48**	**293**	⇓	P	**Pn**	**12 55 46.5**	**-1.1**
JHO				⇓	S	**Sn**	**12 55 53.2**	**-1.7**
JHO	**Hitachi**	**0.48**	**293**		A	A	12 55 46.5	
	comp=N,63nm,0.5s,comp=E,84nm,0.8s							
JIHU	**Itakohorinouch**	**0.67**	**227**	*e*P		**Pn**	**12 55 49.8**	**-0.5**
JIHU					S	**Sn**	**12 55 59.1**	**-0.3**
JIHU	**Itakohorinouch**	**0.67**	**227**		A	A	12 55 49.8	
	comp=N,61nm,0.9s,comp=E,94nm,0.7s							
ONAJ	**Iwakimizuishiy**	**0.72**	**339**		P	**Pn**	**12 55 50.0**	**-1.1**
ONAJ					S	**Sn**	**12 55 59.2**	**-1.7**
ONAJ	**Iwakimizuishiy**	**0.72**	**339**		A	A	12 55 50.0	
	comp=N,20nm,0.5s,comp=E,22nm,2.1s							
JYT	**Yasato**	**0.78**	**255**	⇓	P	**Pn**	**12 55 50.3**	**-1.4**
JYT				⇓	S	**Sn**	**12 55 59.5**	**-2.6**
JYT	**Yasato**	**0.78**	**255**		A	A	12 55 50.3	
	comp=N,68nm,0.3s,comp=E,38nm,0.4s							
JFFD	**Fukushimafurud**	**0.80**	**326**		A	A	12 55 51.2	
	comp=N,18nm,1.0s,comp=E,15nm,0.9s							
JSMT	**Sammumatsuo**	**0.95**	**215**		A	A	12 55 53.4	
	comp=N,21nm,0.9s,comp=E,18nm,1.1s							
JFK	**Kawauchi**	**0.96**	**348**	⇓	P	**Pn**	**12 55 53.2**	**-1.1**
JFK				⇓	S	**Sn**	**12 56 04.7**	**-2.1**
JFK	**Kawauchi**	**0.96**	**348**		A	A	12 55 53.2	
	comp=N,10.0nm,1.0s,comp=E,9.0nm,1.6s							
JSB	**Shiboa**	**1.11**	**300**		A	A	12 55 55.2	
	comp=N,38nm,1.2s,comp=E,42nm,0.9s							
JOTO	**OTAMA OYAMA**	**1.30**	**331**	*i*	P	**Pn**	**12 55 59.0**	**+0.1**
JOTO					S	**Sn**	**12 56 15.3**	**+0.3**
JOTO	**OTAMA OYAMA**	**1.30**	**331**		A	A	12 55 59.0	
	comp=N,41nm,1.2s,comp=E,70nm,0.5s							

JMST	**Minamisoumatoc**	**1.31**	**352**		A	A	12 55 59.0	
	comp=N,7.0nm,1.6s,comp=E,12nm,1.3s							
TOK	**Tokyo**	**1.33**	**237**		A	A	12 55 58.4	
	comp=N,21nm,0.8s,comp=E,23nm,0.6s							
JAG	**Ashikaga**	**1.34**	**270**	⇓	*i*P	**Pn**	**12 55 58.4**	**-1.2**
JAG				⇓	S	**Sn**	**12 56 14.3**	**-1.9**
JAG	**Ashikaga**	**1.34**	**270**		A	A	12 55 58.4	
	comp=N,9.0nm,0.7s,comp=E,11nm,0.3s							
JMM	**Marumori**	**1.46**	**350**			**Pn**	**12 56 00.7**	**-0.4**
JMM					Sn	**Sn**	**12 56 18.2**	**-0.8**
JMM	**Marumori**	**1.46**	**350**		P	**Pn**	**12 56 01.1**	**0.0**
JMM	**Marumori**	**1.46**	**350**	⇓	*i*P	**Pn**	**12 56 00.7**	**-0.4**
JMM				⇓	S	**Sn**	**12 56 18.4**	**-0.7**
JMM	**Marumori**	**1.46**	**350**		A	A	12 56 00.7	
	comp=N,8.0nm,0.4s,comp=E,9.0nm,2.3s							
JKUC	**kamogawauchiur**	**1.47**	**211**		A	A	12 56 00.9	
	comp=N,10.0nm,4.4s,comp=E,8.0nm,3.1s							
JFY	**Yanaizu**	**1.50**	**311**	⇓	*i*P	**Pn**	**12 56 01.3**	**-0.4**
JFY	**Yanaizu**	**1.50**	**311**		A	A	12 56 01.3	
	comp=N,4.0nm,2.3s,comp=E,4.0nm,3.4s							
JKT	**Katashina**	**1.54**	**283**	⇓	*i*P	**Pn**	**12 56 01.9**	**-0.5**
JKT				⇓	S	**Sn**	**12 56 20.1**	**-1.1**
JKT	**Katashina**	**1.54**	**283**		A	A	12 56 01.9	
	comp=N,19nm,0.6s,comp=E,25nm,0.4s							
JYAR	**Yonezawaarcadi**	**1.68**	**333**		A	A	12 56 03.9	
	comp=N,15nm,1.2s,comp=E,16nm,1.0s							
JYO	**Yokosk**	**1.69**	**225**		A	A	12 56 03.7	
	comp=N,9.0nm,5.9s,comp=E,8.0nm,1.7s							
TATJ	**Tateyama 2**	**1.71**	**216**		A	A	12 56 04.3	
	comp=N,12nm,2.3s,comp=E,12nm,1.6s							
JSGW	**Sagamiharawaka**	**1.75**	**243**		A	A	12 56 04.5	
	comp=N,5.0nm,3.7s,comp=E,6.0nm,2.2s							
JUON	**Uonuma**	**1.83**	**296**		A	A	12 56 05.6	
	comp=N,3.0nm,1.2s,comp=E,6.0nm,4.0s							
JOU	**Okura**	**1.97**	**349**		A	A	12 56 08.5	
	comp=N,10.0nm,0.7s,comp=E,7.0nm,0.6s							
JYS	**Shirataka**	**1.98**	**335**		A	A	12 56 08.3	
	comp=N,10.0nm,1.2s,comp=E,11nm,2.7s							
JNS	**Sasagawa**	**2.00**	**314**		A	A	12 56 08.3	
	comp=N,3.0nm,1.3s,comp=E,5.0nm,2.1s							
JGK	**Kuni**	**2.00**	**275**		A	A	12 56 08.0	
	comp=N,6.0nm,4.6s,comp=E,8.0nm,0.7s							
JOD2	**Odawara 2**	**2.02**	**236**		A	A	12 56 08.4	
	comp=N,5.0nm,2.1s,comp=E,6.0nm,1.3s							
JOFO	**Osakifurukawao**	**2.18**	**356**		A	A	12 56 11.5	
	comp=N,18nm,2.6s,comp=E,15nm,1.7s							
JIM2	**Oshima 3**	**2.19**	**219**		A	A	12 56 11.1	
	comp=N,7.0nm,1.6s,comp=E,6.0nm,3.6s							
JIZZ	**Izumozaki**	**2.23**	**300**		A	A	12 56 11.3	
	comp=N,9.0nm,5.1s,comp=E,12nm,1.5s							
JHTM	**Izuhatsuma**	**2.26**	**230**		A	A	12 56 11.8	
	comp=N,7.0nm,2.1s,comp=E,8.0nm,1.9s							
JFNN	**Fujinakano**	**2.33**	**239**		A	A	12 56 12.8	
	comp=N,7.0nm,4.0s,comp=E,6.0nm,3.3s							
MJAR	**Matsushiro Arr**	**2.35**	**274**		P	**Pn**	**12 56 12.7**	**-0.7**
	comp=E,30nm,0.3s,baz=111,slow=9.3,SNR=1129							
MJAR					S	**Sn**	**12 56 39.2**	**-1.8**
	comp=E,186nm,0.5s,baz=77,slow=18,SNR=4.4							
MJAR					LR	LR	12 57 23.2	
	comp=E,825nm,21.8s,baz=84,slow=47							
	comp=E,173nm,0.4s							
MJAR	**Matsushiro Arr**	**2.35**	**274**			**Pn**	**12 56 13.1**	**-0.3**
MAJO	**Matsushiro**	**2.35**	**274**			**Pn**	**12 56 13.7**	**+0.3**
MAJO	**Matsushiro**	**2.35**	**274**		P	**Pn**	**12 56 14.0**	**+0.6**
MAJO	**Matsushiro**	**2.35**	**274**	*d*	*i*P	**Pn**	**12 56 13.8**	**+0.4**
MJB9	**Matsu-Tunnel**	**2.35**	**274**			**Pn**	**12 56 14.7**	**+1.2**
JYA	**Atsumi**	**2.44**	**333**		A	A	12 56 14.8	
	comp=N,12nm,0.9s,comp=E,11nm,0.8s							
JJN	**Nakama**	**2.47**	**287**		A	A	12 56 14.7	
	comp=N,8.0nm,0.9s,comp=E,9.0nm,2.5s							
SHZ3	**Shizuoka 3**	**2.73**	**241**		A	A	12 56 18.4	
	comp=N,7.0nm,0.7s,comp=E,6.0nm,0.8s							
JSD	**Sado**	**2.79**	**306**			**Pn**	**12 56 19.1**	**-0.3**
JSD	**Sado**	**2.79**	**306**		P	**Pn**	**12 56 19.6**	**+0.2**
JNY	**Yasuok**	**2.85**	**249**		A	A	12 56 20.1	
	comp=N,6.0nm,2.3s,comp=E,5.0nm,3.6s							
JSG	**Sagara**	**2.96**	**235**			**Pn**	**12 56 25.0**	**+3.2**
JSG	**Sagara**	**2.96**	**235**		P	**Pn**	**12 56 24.9**	**+3.2**
JGF	**Kuroka**	**3.16**	**256**			**Pn**	**12 56 25.8**	**+1.2**
JGF	**Kuroka**	**3.16**	**256**		P	**Pn**	**12 56 26.4**	**+1.9**
JHJ2	**Mitsune**	**3.48**	**198**			**Pn**	**12 56 30.1**	**+1.2**
JHJ2	**Mitsune**	**3.48**	**198**		P	**Pn**	**12 56 30.0**	**+1.2**
JHJ	**Hachijo jima 2**	**3.48**	**199**		P	**Pn**	**12 56 28.9**	**+0.1**
	comp=E,52nm,0.3s,baz=18,slow=20,SNR=27							
JHJ					S	**Sn**	**12 57 08.6**	**-0.2**
	comp=E,595nm,0.4s,baz=61,slow=23,SNR=18							
	comp=E,104nm,0.3s							
INU	**Inuyama**	**3.50**	**253**			**Pn**	**12 56 30.6**	**+1.4**
INU	**Inuyama**	**3.50**	**253**		P	**Pn**	**12 56 30.5**	**+1.4**
JTM	**Tenmabayashi**	**4.36**	**359**			**Pn**	**12 56 42.5**	**+1.6**
JTM	**Tenmabayashi**	**4.36**	**359**		P	**Pn**	**12 56 43.4**	**+2.5**
ERM	**Erimo**	**5.80**	**15**		Pn	**Pn**	**12 57 01.3**	**+0.6**
ERM	**Erimo**	**5.80**	**15**		P	**Pn**	**12 57 02.1**	**+1.4**
ERM	**Erimo**	**5.80**	**15**		P	**Pn**	**12 57 01.3**	**+0.6**
JEM	**Erimo**	**5.80**	**15**		P	**Pn**	**12 57 02.4**	**+1.6**
JMN	**Monobe**	**6.52**	**248**			**Pn**	**12 57 12.3**	**+1.6**
ASAJ	**Asahikawa**	**7.76**	**8**		P	**Pn**	**12 57 27.1**	**-0.5**
	comp=E,1.9nm,0.3s,baz=206,slow=13,SNR=15							
ASAJ					S	**Sn**	**12 58 52.4**	**-1.9**
	comp=E,6.6nm,0.5s,baz=250,slow=29,SNR=1.3							
ASAJ					LR	LR	13 00 58.5	
	comp=E,143nm,20.6s,baz=151,slow=41							
	comp=E,4.3nm,0.3s							
ASAJ	**Asahikawa**	**7.76**	**8**		P	**Pn**	**12 57 27.7**	**0.0**
JKA	**Kamikawa-asahi**	**7.76**	**8**		Pn	**Pn**	**12 57 27.7**	**0.0**
NMR	**Nemuro--Hokkai**	**7.79**	**26**	*e*	P	**Pn**	**12 57 25.6**	**-2.4**
NMR				*e*	S	Sn	12 58 46.9	-7.9
RUSJ	**Misakicho**	**8.29**	**21**	*e*	P	**Pn**	**12 57 32.8**	**-2.1**
RUSJ				*e*	S	**Sn**	**12 59 01.3**	**-5.9**
JNU	**Nakatsue**	**9.05**	**252**		P	**Pn**	**12 57 43.7**	**-1.7**
	comp=E,0.6nm,0.3s,baz=102,slow=6.9,SNR=9.4							
JNU					LR	LR	13 01 43.8	
	comp=E,311nm,19.6s,baz=9.0,slow=41							
	comp=E,7.0nm,0.9s							
JNU	**Nakatsue**	**9.05**	**252**			**Pn**	**12 57 46.9**	**+1.5**
JNU	**Nakatsue**	**9.05**	**252**		P	**Pn**	**12 57 47.9**	**+2.5**
TEY	**Ternei**	**9.26**	**340**	⇑	*e*P	Pn	12 57 54.8	+6.7
TEY					pmax	pmax		
	comp=N,50nm,0.7s							
TEY					pmax	pmax		
	comp=E,30nm,0.7s							
TEY					pmax	pmax		
	comp=Z,50nm,0.7s							
JCJ	**Chichijima**	**9.35**	**174**		P	Pn	12 57 38.4	-11
	comp=Z,67nm,0.4s,baz=279,slow=18,SNR=13							
JCJ					S	Sn	12 59 15.2	-18
	comp=Z,61nm,0.4s,baz=280,slow=23,SNR=5.9							
USRK	**Ussuriysk Ar.**	**10.43**	**321**		P	**Pn**	**12 58 08.2**	**+3.9**
	comp=Z,54nm,0.9s,baz=133,slow=12,SNR=47							
YSS	**Yuzhno-Sakhali**	**10.59**	**6**	*e*	P	**Pn**	**12 58 04.0**	**-2.4**
YSS					pmax	pmax		
	comp=Z,20nm,1.4s							
YSS					MLR	MLR		
	comp=Z,900nm,10.0s							
KSRS	**Korea Array**	**10.62**	**279**		P	**Pn**	**12 58 10.1**	**+3.3**
	comp=Z,16nm,0.6s,baz=93,slow=14,SNR=27							
MDJ	**Mudanjiang**	**11.99**	**317**		P	**Pn**	**12 58 29.8**	**+4.3**
MDJ					S	**Sn**	**13 00 40.6**	**+2.8**
MDJ					pmax	pmax		
	comp=Z,30nm,1.2s							
MDJ					LR	LR		
	comp=N,290nm,14.4s							
MDJ					LR	LR		
	comp=E,220nm,11.0s							
MDJ					LR	LR		
	comp=Z,450nm,10.4s							
BNX	**BinXian**	**13.90**	**316**	⇑	P	**Pn**	**12 58 54.2**	**+2.6**
BNX					pmax	pmax		
	comp=Z,8.0nm,1.7s							
JOW	**Kunigami**	**14.52**	**232**		LR	LR	13 04 16.5	
	comp=Z,112nm,20.9s,baz=34,slow=36							
HEH	**HeiHe**	**17.00**	**329**	*e*	P	**P**	**12 59 38.7**	**+5.1**
HEH					LR	LR		
	comp=N,160nm,14.9s							
HEH					LR	LR		
	comp=E,300nm,14.0s							
HEH					LR	LR		
	comp=Z,430nm,15.2s							
TIA	**Tai'an**	**19.33**	**277**		P	**P**	**12 59 57.0**	**-2.4**
TIA					pmax	pmax		
	comp=Z,10.0nm,0.8s							
TIA					pmax	pmax		
	comp=Z,270nm,6.6s							
HILR	**Hailar Array B**	**20.32**	**317**		P	**P**	**13 00 09.1**	**-0.9**
	comp=Z,3.3nm,0.5s,baz=122,slow=11,SNR=5.9							
	comp=Z,3.3nm,0.5s							

PETK	**Petropavlovsk-**	**20.33**	**30**		P	**P**	**13 00 11.3**	**+1.2**
	comp=Z,6.0nm,1.0s,baz=193,slow=6.1,SNR=4.7							
PETK					LR	LR	13 08 35.0	
	comp=Z,42nm,19.4s,baz=274,slow=38							
	comp=Z,6.0nm,1.0s							
HNS	**HongShan**	**21.12**	**281**	⇑	P	**P**	**13 00 17.3**	**-1.5**
HNS					S	**S**	**13 04 07.9**	**-3.8**
HNS					pmax	pmax		
	comp=Z,12nm,0.8s							
HNS					LR	LR		
	comp=N,200nm,12.9s							
HNS					LR	LR		
	comp=E,340nm,12.2s							
HNS					LR	LR		
	comp=Z,290nm,14.1s							
WHN	**Wuhan**	**23.05**	**263**		P	**P**	**13 00 40.9**	**+1.6**
HHC	**Hu-ho-hao-te**	**23.45**	**290**	*e*	P	**P**	**13 00 44.2**	**+0.8**
HHC					pmax	pmax		
	comp=Z,10.0nm,0.5s							
HHC					pmax	pmax		
	comp=Z,190nm,4.8s							
MA2	**Magadan**	**24.00**	**12**		LR	LR	13 09 45.1	
	comp=Z,81nm,21.4s,baz=144,slow=35							
BTO	**Baotou**	**24.62**	**289**	*e*	P	**P**	**13 00 55.8**	**+1.6**
BTO					pmax	pmax		
	comp=Z,12nm,0.6s							
BTO					pmax	pmax		
	comp=Z,370nm,5.0s							
XAN	**Xi'an**	**26.35**	**274**	⇓	P	**P**	**13 01 09.7**	**-0.1**
XAN					pmax	pmax		
	comp=Z,7.0nm,0.5s							
YAK	**Yakutsk**	**26.61**	**348**		LR	LR	13 11 10.7	
	comp=Z,168nm,19.5s,baz=89,slow=35							
YAK	**Yakutsk**	**26.61**	**348**	*e*	P	**P**	**13 01 10.1**	**-1.7**
YAK					pmax	pmax		
	comp=Z,10.0nm,0.9s							
YAK					pmax	pmax		
	comp=N,8.0nm,1.2s							
YAK					pmax	pmax		
	comp=E,3.0nm,1.4s							
SEY	**Seymchan**	**27.43**	**11**		LR	LR	13 13 11.6	
	comp=E,107nm,18.7s,baz=220,slow=38							
SEY	**Seymchan**	**27.43**	**11**	*e*	P	**P**	**13 01 20.7**	**+1.5**
SEY					pmax	pmax		
	comp=Z,10.0nm,1.3s							
ULN	**Ulaanbaatar**	**27.51**	**305**			**P**	**13 01 20.4**	**+0.1**
ULN					IAmb	IAmb	13 01 24.2	
	comp=Z,11nm,0.8s							
ULN	**Ulaanbaatar**	**27.51**	**305**	⇓	*i*P	**P**	**13 01 20.4**	**+0.1**
ULN					pmax	pmax		
	comp=Z,13nm,0.9s							
SONM	**Songino Array**	**27.93**	**305**		P	**P**	**13 01 23.7**	**-0.4**
	comp=Z,14nm,0.7s,baz=107,slow=8.0,SNR=40							
SONM					LR	LR	13 14 11.0	
	comp=Z,130nm,18.9s,baz=264,slow=40							
	comp=Z,14nm,0.7s							
SONM	**Songino Array**	**27.93**	**305**			**P**	**13 01 23.7**	**-0.4**
SONM					IAmb	IAmb	13 01 27.7	
	comp=Z,16nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**28.05**	**119**		T	T	13 31 29.6	
	baz=312,slow=75,SNR=121							
H11N1	**WAKE ISLAND Hy**	**28.05**	**119**		T	T	13 31 33.7	
	baz=312,slow=75,SNR=72							
H11N3	**WAKE ISLAND Hy**	**28.06**	**119**		T	T	13 31 34.4	
	baz=312,slow=75,SNR=94							
H11S1	**WAKE ISLAND Hy**	**28.73**	**122**

comp=Z,7.3nm,0.8s
ILAR Eielson Array 50.13 32 P **P** **13 04 28.9 +0.5**
comp=Z,4.3nm,0.8s,baz=272,slow=6.4,SNR=39
comp=Z,4.3nm,0.8s
ILAR Eielson Array 50.13 32 P **P** **13 04 29.4 +0.9**
ILAR Eielson Array 50.13 32 P **P** **13 04 29.4 +0.9**
KSH Kashi 50.44 294 P **P** **13 04 34.3 +2.9**
KSH pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 50.57 299 LR LR 13 26 56.7
comp=Z,266nm,19.1s,baz=338,slow=37
AAK Ala-Archa 50.57 299 **P** **13 04 32.0 -0.4**
AAK IAmb IAmb 13 04 38.1
comp=Z,5.8nm,0.7s
AAK Ala-Archa 50.57 299⇓ *i* P **P** **13 04 32.1 -0.3**
AAK pmax pmax
comp=Z,5.0nm,1.0s
BVAR Borovoye Array 50.81 313 P **P** **13 04 33.0 -0.8**
comp=Z,3.2nm,0.7s,baz=79,slow=7.7,SNR=15
BVAR PcP **PcP** **13 05 49.3 -0.9**
comp=Z,1.0nm,0.6s,baz=57,slow=5.3,SNR=1.6
comp=Z,3.2nm,0.7s
BORK Borovoye 50.85 313⇓ *i* P **P** **13 04 32.9 -1.1**
BORK pmax pmax
comp=Z,4.0nm,0.9s
BMAR Burnt Mountain 50.98 29 P **P** **13 04 35.7 +0.8**
PSI Prapat 51.28 239 P **P** **13 04 37.2 -0.7**
PSI pmax pmax
comp=Z,10.0nm,1.0s
RPSI Rantau Prapat 51.36 239 **P** **13 04 37.2 -1.2**
RPSI IAmb IAmb 13 04 37.8
comp=Z,10nm,1.0s
L26K Log Cabin Wild 51.83 34 IAmb IAmb 13 04 43.6
comp=Z,6.0nm,0.8s
BCAR Beaver Creek A 52.53 34 P **P** **13 04 47.3 +0.8**
I28M Miner Creek 53.01 31 IAmb IAmb 13 05 05.0
comp=Z,4.4nm,0.8s
KK31 Karatay Array 53.23 300 P **P** **13 04 51.2 -0.8**
KK31 IAmb IAmb 13 04 57.8
comp=Z,6.7nm,0.9s
KK31 Karatay Array 53.23 300 P **P** **13 04 51.2 -0.8**
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 53.23 300 **P** **13 04 51.3 -0.6**
KKAR Karatay Array 53.23 300 P **P** **13 04 51.3 -0.6**
GSI Gunungsitoli 53.29 239 **P** **13 04 52.4 -0.2**
DRK Karamyk 53.50 296 P **P** **13 04 54.4 +0.1**
DRK IAmb IAmb 13 05 15.1
comp=Z,6.4nm,0.6s
DRK Karamyk 53.50 296 P **P** **13 04 54.4 +0.1**
DRK pmax pmax
comp=Z,6.0nm,0.6s
M29M Somme Creek 54.14 34 IAmb IAmb 13 05 01.5
comp=Z,6.5nm,0.9s
WB0 Warramunga Arr 56.25 188 **P** **13 05 12.8 -1.1**
WRAB Tennant Creek 56.42 188 P **P** **13 05 14.2 -0.9**
WRAB IAmb IAmb 13 05 27.9
comp=Z,7.3nm,0.8s
WRAB Tennant Creek 56.42 188⇑ *i* P **P** **13 05 12.9 -2.2**
WRAB pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 56.43 188 P **P** **13 05 13.7 -1.5**
comp=Z,8.0nm,0.7s,baz=4.8,slow=7.4,SNR=82
comp=Z,8.0nm,0.7s
WRA Warramunga Arr 56.43 188 **P** **13 05 14.2 -1.0**
WRA Warramunga Arr 56.43 188 *i* P **P** **13 05 14.1 -1.1**
WRA pmax pmax
comp=Z,8.0nm,0.7s
ARTI Arti 56.77 319 P **P** **13 05 16.1 -1.1**
comp=Z,5.0nm,0.4s,baz=92,slow=2.6,SNR=10.0
comp=Z,5.0nm,0.4s
ARTI Arti 56.77 319 **P** **13 05 16.4 -0.8**
ARTI Arti 56.77 319*c* *i* P **P** **13 05 16.4 -0.8**
ARTI S **S** **13 13 12.4 +5.0**
ARTI SS **SS** **13 16 52.2 -2.9**
ARTI pmax pmax
comp=Z,7.0nm,0.7s
A36M Sachs Harbour 56.91 22 IAmb IAmb 13 05 20.8
comp=Z,8.4nm,0.9s
AB31 Akbulak array 58.15 310 IAmb IAmb 13 05 27.5
comp=Z,4.8nm,0.8s
ABKAR Akbulak array 58.15 310 **P** **13 05 26.2 -0.9**
AKTO Aktyubinsk 58.91 312 P **P** **13 05 31.1 -1.3**
comp=Z,2.0nm,0.6s,baz=67,slow=6.5,SNR=6.7
comp=Z,2.0nm,0.6s
AS31 Alice Springs 60.15 188 **P** **13 05 40.7 -0.5**
ASAR Alice Springs 60.16 188 P **P** **13 05 40.4 -0.8**
comp=Z,4.3nm,0.7s,baz=14,slow=6.6,SNR=58
comp=Z,4.3nm,0.7s
KIRV Kirov 60.59 323⇑ *i* P **P** **13 05 43.9 +0.1**
INKA Innaminka 63.83 180 P **P** **13 06 05.8 +0.1**
ARCES ARCESS Array B 64.48 339 P **P** **13 06 10.0 +0.4**
comp=Z,1.2nm,0.7s,baz=57,slow=4.5,SNR=3.6
comp=Z,1.2nm,0.7s
NLWA Neilton Lookou 67.30 47 IAmb IAmb 13 06 31.2
comp=Z,8.5nm,1.0s
STKA Stephens Creek 67.95 180 P **P** **13 06 30.6 -1.6**
comp=Z,3.3nm,0.7s,baz=352,slow=7.1,SNR=4.5
comp=Z,3.3nm,0.7s
FORT Forrest 67.97 192 P **P** **13 06 32.3 0.0**
FIA1 FINESS Array S 69.24 332 P **P** **13 06 39.5 -0.5**
FINES FINESS Array B 69.24 332 P **P** **13 06 38.9 -1.1**
comp=Z,2.1nm,0.8s,baz=50,slow=6.7,SNR=4.9
comp=Z,2.1nm,0.8s
FINES FINESS Array B 69.24 332 P **P** **13 06 39.6 -0.3**
FINES FINESS Array B 69.24 332 *i* P **P** **13 06 42.7 +2.7**
FINES pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 71.12 311 P **P** **13 06 51.4 -0.4**
comp=Z,2.4nm,0.8s,baz=65,slow=3.8,SNR=5.5
comp=Z,2.4nm,0.8s
KIV Kislovodsk 71.13 311 *e*P **P** **13 06 52.3 +0.3**
KIV pmax pmax
comp=Z,9.0nm,1.1s
O03E Paynes Creek 72.25 53 IAmb IAmb 13 07 00.4
comp=Z,7.1nm,1.1s
BEKR Beckworth 73.41 53 **P** **13 07 06.5 +0.7**
PAHR Pah Rah Range 74.12 52 IAmb IAmb 13 07 11.9
comp=Z,5.2nm,1.0s
HFS Hagfors 74.54 336 P **P** **13 07 10.0 -1.8**
comp=Z,2.3nm,0.8s,baz=63,slow=10,SNR=1.6
comp=Z,2.3nm,0.8s
AKASG Malin Array Be 74.63 322 P **P** **13 07 11.2 -1.3**
comp=Z,0.9nm,0.5s,baz=49,slow=5.6,SNR=6.6
comp=Z,0.9nm,0.5s
AKASG Malin Array Be 74.63 322 *i* P **P** **13 07 11.8 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
NB2 NORSAR Subarra 74.66 337 P **P** **13 07 11.5 -1.0**
comp=Z,7.1nm,1.1s,baz=39,slow=6.2
NOA NORSAR Array B 74.66 337 P **P** **13 07 11.2 -1.4**
comp=Z,1.2nm,0.8s,baz=39,slow=5.8,SNR=5.0
comp=Z,1.2nm,0.8s
DLMT Dillon 74.94 44 IAmb IAmb 13 07 16.6
comp=Z,5.7nm,0.7s
LHV Little Huntoon 75.51 53 IAmb IAmb 13 07 20.1
comp=Z,6.0nm,0.9s
NVAR Mina Array Bea 75.54 53 P **P** **13 07 19.5 +1.2**
comp=Z,2.8nm,0.8s,baz=288,slow=6.0,SNR=21
comp=Z,2.8nm,0.8s
NVAR Mina Array Bea 75.54 53 P **P** **13 07 19.7 +1.4**
YHL Hebgen Lake 76.05 44 IAmb IAmb 13 07 22.9
comp=Z,8.5nm,1.2s
R11B Troy Canyon, C 77.32 52 IAmb IAmb 13 07 30.4
comp=Z,4.8nm,1.1s
CLC China Lake 77.51 55 IAmb IAmb 13 07 30.9
comp=Z,6.4nm,1.3s
FURC Furnace Creek, 77.61 54 IAmb IAmb 13 07 45.0
comp=Z,4.5nm,0.8s
SPR3 Spring Creek 3 77.72 51 IAmb IAmb 13 07 46.6
comp=Z,5.7nm,1.3s
TPNV Topopah Spring 77.73 53 IAmb IAmb 13 07 32.5
comp=Z,5.9nm,1.1s
HWUT Hardware Ranch 77.81 47 IAmb IAmb 13 07 32.8
comp=Z,5.3nm,1.1s
QSM Queen of Sheba 77.91 54 IAmb IAmb 13 07 33.2
comp=Z,6.6nm,1.1s
DUG Dugway, Tooele 77.93 49 IAmb IAmb 13 07 33.9
comp=Z,7.3nm,1.1s
PRN Pahroc Range 78.22 52 IAmb IAmb 13 07 35.7
comp=Z,4.7nm,1.0s
PDAR Pinedale Array 78.26 45 P **P** **13 07 34.1 +0.6**
comp=Z,1.2nm,0.6s,baz=265,slow=2.0,SNR=17
comp=Z,1.2nm,0.6s
BUR08 Bucovina Ar. S 78.63 322 P **P** **13 07 35.4 +0.1**
BURAR Bucovina Array 78.64 322 P **P** **13 07 35.4 0.0**
BRTR Keskin Array B 79.08 311 P **P** **13 07 37.9 0.0**
comp=Z,0.7nm,0.7s,baz=80,slow=3.2,SNR=4.0
comp=Z,0.7nm,0.7s
BRTR Keskin Array B 79.08 311 *i* P **P** **13 07 39.2 +1.2**
P17A Butcher Ranch, 79.63 48 IAmb IAmb 13 07 43.2
comp=Z,8.1nm,1.0s
RDMU Red Mountain 79.64 47 IAmb IAmb 13 07 43.1
comp=Z,13nm,1.1s
P18A Preston Nutter 79.83 48 IAmb IAmb 13 07 59.4
comp=Z,5.0nm,1.0s
KNB Kanab 79.87 51 IAmb IAmb 13 07 45.0
comp=Z,7.2nm,1.2s
SRU San Rafael Swe 79.99 49 IAmb IAmb 13 08 01.5
comp=Z,5.5nm,0.8s
ULM Lac du Bonnet 80.14 33 P **P** **13 07 43.4 0.0**
comp=Z,4.0nm,0.6s,baz=333,slow=6.8,SNR=2.6
comp=Z,4.0nm,0.6s
HMU Henry Mountain 80.59 50 IAmb IAmb 13 07 47.8
comp=Z,5.0nm,0.8s
RAYN Ar Rayn 80.67 292 **P** **13 07 46.4 -0.3**
RAYN Ar Rayn 80.67 292 P **P** **13 07 46.4 -0.3**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
HAYD Hayden 81.02 46 IAmb IAmb 13 07 50.6
comp=Z,4.0nm,0.8s
PV14 Lion Creek, Pa 81.36 48 IAmb IAmb 13 07 52.5
comp=Z,8.9nm,1.0s
PV22 Blue Mesa, Par 81.40 48 IAmb IAmb 13 08 05.8
comp=Z,9.6nm,1.1s
PV04 Paradox Valley 81.42 48 IAmb IAmb 13 07 52.3
comp=Z,11nm,1.2s
PV17 East Wray Mesa 81.46 48 IAmb IAmb 13 07 53.0
comp=Z,11nm,1.1s
PV16 Nyswonger Mesa 81.47 48 IAmb IAmb 13 08 06.4
comp=Z,11nm,1.1s
PV11 David Mesa, Pa 81.50 48 IAmb IAmb 13 07 53.4
comp=Z,10nm,1.1s
CLL Collm 81.50 330 *i* P **P** **13 07 50.7 +0.1**
CLL Collm 81.50 330 *i* P **P** **13 07 50.7 +0.1**
PV05 Paradox Valley 81.51 49 IAmb IAmb 13 07 53.3
comp=Z,10nm,0.9s
PV18 Skein Mesa, Pa 81.51 48 IAmb IAmb 13 07 53.3
comp=Z,13nm,1.1s
PV03 Paradox Valley 81.55 48 IAmb IAmb 13 07 53.5
comp=Z,5.9nm,1.0s
PV13 Radium Mtn., P 81.62 48 IAmb IAmb 13 08 07.7
comp=Z,11nm,1.2s
PV01 Paradox Valley 81.79 48 IAmb IAmb 13 07 54.6
comp=Z,4.9nm,1.0s
PPT2 Papeete2 84.59 116 *e*LR LR 13 34 46.7
comp=Z,63nm,21.8s
PPT2 *e*LR LR 13 34 48.8
comp=Z,104nm,29.8s
SCHQ Schefferville 85.98 16 LR LR 13 49 38.6
comp=Z,194nm,18.5s,baz=66,slow=38
TAOE Nuku Hiva Isla 86.25 104 *e*LR LR 13 35 35.3
comp=Z,83nm,24.8s
TBI Tubuai 88.42 121 *e*LR LR 13 36 32.0
comp=Z,782nm,43.0s
TX31 Lajitas Ar. Si 90.68 52 IAmb IAmb 13 08 37.9
comp=Z,2.1nm,0.9s
TXAR Lajitas Array 90.68 52 P **P** **13 08 36.8 +0.4**
comp=Z,1.2nm,0.8s,baz=304,slow=2.9,SNR=8.8
comp=Z,1.2nm,0.8s
TXAR Lajitas Array 90.68 52 P **P** **13 08 37.0 +0.6**
TXAR Lajitas Array 90.68 52 P **P** **13 08 37.0 +0.6**
ESDC Sonseca Array 97.73 334 LR LR 13 57 09.7
comp=Z,298nm,18.1s,baz=360,slow=38
QSPA South Pole Qui 126.17 180 PKP **PKiKP** **13 14 36.4 +1.3**
comp=Z,1.9nm,0.9s,baz=0.0,slow=4.0,SNR=5.4
PB12 IPOC Station P 147.15 66 PKPbc **PKPbc** **13 15 17.6 +0.7**
H03N2 Juan Fernandez 147.19 97 T T 16 00 20.0
baz=291,slow=76,SNR=28
H03N3 Juan Fernandez 147.20 97 T T 16 00 19.5
baz=291,slow=76,SNR=34
LPAZ La Paz 147.20 60 PKPbc **PKPbc** **13 15 17.7 -0.1**
comp=Z,3.0nm,0.8s,baz=288,slow=3.2,SNR=18
LPAZ La Paz 147.20 60 PKPbc **PKPbc** **13 15 18.1 +0.3**
LPAZ La Paz 147.20 60 PKP2 **PKPbc** **13 15 18.1 +0.3**
H03N1 Juan Fernandez 147.21 97 T T 16 00 19.6
baz=291,slow=76,SNR=31
AC05 El Transito 152.58 83 PKPbc **PKiKP** **13 15 30.7 +0.4**
CO01 Juntas del Tor 153.18 85 **PKPdf** **13 15 23.1 -1.0**

DSN ***12*** *13:18:19.0*$_s$*1.4,27.54*$_N$*×58.19*$_E$*,h10*^{km}*,ML3.5/10, Error ellipse: s-maj=21.9km s-min=11.8km az=147.0*
IDC ***12*** *13:18:24.1*$_s$*1.1,27.41*$_N$*×57.85*$_E$*,h0*^{km}*,mb3.8/20, mbtmp3.9/21,ML4.1/1,MS3.6/4, Error ellipse: s-maj=25.9km s-min=16.8km az=7.0*
THR ***12*** *13:18:25.1*$_s$*0.0,27.09*$_N$*×57.91*$_E$*,h14*^{km}*±550*^{km}*,ML4.1*
NEIC ***12*** *13:18:25.1*$_s$*1.5,27.16*$_N$*±0.08×57.78*$_E$*±0.10,h10*^{km}*±1*^{km}*, mb4.1/21, Error ellipse: s-maj=16.2km s-min=11.6km az=129.0*
TEH ***12*** *13:18:26.8,27.05*$_N$*×57.90*$_E$*,h60*^{km}
OMAN ***12*** *13:18:27.2*$_s$*0.9,26.90*$_N$*×57.85*$_E$*,h5*^{km}*, mb4.7/7, ml3.8/20, Error ellipse: s-maj=6.9km s-min=4.2km az=31.0*

ISC 12 13:18:24.5$_s$**1.5,27°13N**$_N$**±0.04×57°39E**$_E$**±0.04,h10**^{km}**±10**^{km}**, n131,**$_\sigma$**1**^{S}**61/146,mb4.0/23,MS3.8/3,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
IBND	**Bandar-abas**	**1.24**	**285**	Pg	**Pn**	**13 18 49.4**	**+1.6**
BANOM	**Banah**	**1.86**	**230**	P	**Pb**	**13 18 58.8**	**+0.2**
BANOM	**Banah**	**1.86**	**230**	P	**Pb**	**13 18 58.5**	**-0.1**
BANOM				S	**Sg**	**13 19 27.3**	**+2.9**
SHME	**Shamm**	**1.90**	**236**	P	**Pg**	**13 19 00.3**	**-0.6**
	SNR=25						
SHME				S	**Sg**	**13 19 23.5**	**-2.0**
SHME	**Shamm**	**1.90**	**236**	*e*P	**Pg**	**13 18 59.6**	**-1.3**
	SNR=6.2						
SHME				S	**Sg**	**13 19 27.5**	**+2.0**
MDH	**Madha**	**2.32**	**218**	P	**Pn**	**13 19 03.3**	**+0.6**
	SNR=15						
MDH				S	**Sn**	**13 19 30.8**	**-0.5**
MDH	**Madha**	**2.32**	**218**	*e*P	**Pn**	**13 19 03.1**	**+0.4**
	SNR=7.9						
MASF	**Masafi**	**2.34**	**222**	P	**Pb**	**13 19 06.3**	**-0.5**
MASF				S	**Sn**	**13 19 31.1**	**-0.8**
MSFE	**Esma-Masafi**	**2.35**	**222**	*e*P	**Pn**	**13 19 04.4**	**+1.3**
	SNR=19						
UMQ	**Umm Al-Quwin**	**2.56**	**232**	P	**Pn**	**13 19 06.3**	**+0.3**
UMQ				S	**Sn**	**13 19 36.0**	**-1.2**
UOSS	**Minazif**	**2.65**	**215**	Pn	**Pn**	**13 19 07.4**	**+0.1**
UOSS	**Minazif**	**2.65**	**215**		**Pn**	**13 19 07.4**	**+0.1**
UOSS	**Minazif**	**2.65**	**215**	P	**Pn**	**13 19 08.1**	**+0.8**
UOSS				S	**Sn**	**13 19 38.8**	**-0.8**
NGRK	**Negar Kerman**	**2.70**	**338**	Pn	**Pn**	**13 19 10.4**	**+2.1**
CHMN	**Cheshme madani**	**2.73**	**354**	Pn	**Pn**	**13 19 11.1**	**+2.4**
CHBR	**Chabahar**	**2.79**	**123**	Pn	**Pn**	**13 19 09.4**	**+0.3**
CHBR	**Chabahar**	**2.79**	**123**	*i* P	**Pn**	**13 19 10.8**	**+1.6**
CHBR				IAML		13 20 08.4	
	comp=Z,200nm,1.0s						
HATD	**Hatta, Dubai**	**2.79**	**215**	P	**Pn**	**13 19 10.1**	**+0.9**
HATD				S	**Sn**	**13 19 42.8**	**-0.1**
	SNR=8.1						
HATD	**Hatta, Dubai**	**2.79**	**215**	P	**Pn**	**13 19 09.7**	**+0.6**
ASHO	**Ashiyiah**	**2.94**	**214**	P	**Pn**	**13 19 13.6**	**+2.3**
	SNR=24						
ASHO	**Ashiyiah**	**2.94**	**214**	*i* P	**Pn**	**13 19 13.5**	**+2.2**
	SNR=24						
KRBR	**Kerman**	**3.00**	**341**	Pn	**Pn**	**13 19 15.0**	**+2.5**
KRBR	**Kerman**	**3.00**	**341**	*e*Pn	**Pb**	**13 19 17.1**	**-1.2**
KRBR				IAML		13 20 11.7	
	comp=Z,390nm,1.0s						
FAQ	**Al Faqa, Dubai**	**3.15**	**221**	P	**Pn**	**13 19 15.9**	**+1.8**
LAR1	**LAR**	**3.17**	**280**	Pn	**Pn**	**13 19 16.0**	**+1.5**
SOHO	**SOHO**	**3.23**	**203**	P	**Pn**	**13 19 15.0**	**-0.2**
SOHO				S	**Sn**	**13 19 51.6**	**-2.1**
SOHO	**SOHO**	**3.23**	**203**	*i* P	**Pn**	**13 19 14.8**	**-0.4**
	SNR=9.5						
ASUD	**Al Ashush, Dub**	**3.40**	**223**	P	**Pn**	**13 19 19.3**	**+1.7**
ASUD				S	**Sn**	**13 19 59.3**	**+1.4**
ASUD	**Al Ashush, Dub**	**3.40**	**223**	P	**Pn**	**13 19 19.7**	**+2.2**
KHGB	**Koh Gabri**	**3.46**	**339**	Pn	**Pn**	**13 19 21.5**	**+2.9**
HOQ	**Hoqain**	**3.58**	**188**	Pn	**Pn**	**13 19 19.9**	**-0.1**
HOQ	**Hoqain**	**3.58**	**188**	P	**Pn**	**13 19 19.9**	**-0.1**
	SNR=38						
HOQ				S	**Sn**	**13 20 01.6**	**-0.7**
ALNE	**Al Ain**	**3.62**	**213**	P	**Pn**	**13 19 23.9**	**+3.3**
	SNR=10						
ALNE				S	**Sn**	**13 20 03.9**	**+0.4**
ALNE	**Al Ain**	**3.62**	**213**	*i* P	**Pn**	**13 19 22.3**	**+1.6**
	SNR=10						
WSAR	**Wadi Sarin**	**3.94**	**170**	S	**Sn**	**13 20 10.7**	**-0.6**
ARQ	**Araqi**	**3.98**	**198**	P	**Pn**	**13 19 28.4**	**+2.8**
	SNR=59						
ARQ				S	**Sn**	**13 20 11.3**	**-1.0**
SRVN	**Saravan**	**4.03**	**85**	Pn	**Pn**	**13 19 28.0**	**+1.7**
SRVN	**Saravan**	**4.03**	**85**	*e*Pn	**Pn**	**13 19 28.0**	**+1.7**
SRVN				IAML		13 21 19.6	
	comp=Z,42nm,1.0s						
SMDO	**Samad**	**4.06**	**178**	P	**Pn**	**13 19 27.4**	**+0.6**
	SNR=18						
SMDO				S	**Sn**	**13 20 13.5**	**-1.0**
LMD1	**Lamerd**	**4.21**	**274**	Pn	**Pn**	**13 19 30.7**	**+1.9**
LMD1	**Lamerd**	**4.21**	**274**	*e*Pn	**Pn**	**13 19 31.2**	**+2.5**
LMD1				IAML		13 21 26.2	
	comp=Z,140nm,1.0s						
WBK	**Wadi Bani Khal**	**4.61**	**167**	Pn	**Pn**	**13 19 34.4**	**+0.2**
WBK	**Wadi Bani Khal**	**4.61**	**167**	P	**Pn**	**13 19 34.6**	**+0.3**
	SNR=12						
WBK				S	**Sn**	**13 20 26.8**	**-1.1**
NHDN	**Nehbandan**	**4.65**	**24**	Pn	**Pn**	**13 19 36.6**	**+1.8**
JMDO	**Jabal Madar**	**4.75**	**178**	P	**Pn**	**13 19 37.2**	**+1.1**
	SNR=8.5						
IBAF	**Bafgh**	**4.88**	**336**	Pn	**Pn**	**13 19 40.7**	**+2.6**
BSRN	**Basiran**	**4.93**	**12**	*e*Pn	**Pn**	**13 19 39.8**	**+1.0**
BSRN				IAML		13 21 18.9	
	comp=Z,79nm,1.0s						
MZWR	**Madinat Zayed**	**4.94**	**228**	P	**Pn**	**13 19 40.1**	**+1.3**
MZWR				S	**Sn**	**13 20 36.3**	**+0.3**
UMZA	**Um Al Zommool**	**5.05**	**210**	P	**Pn**	**13 19 41.1**	**+0.8**
UMZA				S	**Sn**	**13 20 40.0**	**+1.4**
JLN	**Jalan Bani Buh**	**5.15**	**164**	P	**Pn**	**13 19 41.9**	**+0.2**
	SNR=10						
JLN				S	**Sn**	**13 20 40.8**	**-0.4**
MZR	**Muzera**	**5.73**	**225**	P	**Pn**	**13 19 49.8**	**+0.1**
	SNR=6.5						
MZR				S	**Sn**	**13 20 57.2**	**+1.6**
ITEG	**Tejag**	**5.79**	**7**	Pn	**Pn**	**13 19 52.6**	**+2.0**
ICHK	**Chekchek**	**5.92**	**330**	Pn	**Pn**	**13 19 54.8**	**+2.4**
TPRV	**Parvadeh(Tabas**	**5.97**	**350**	Pn	**Pn**	**13 19 55.3**	**+2.4**
YZKH	**Yazd**	**5.97**	**332**	*i* P	**Pn**	**13 19 55.6**	**+2.6**
YZKH				IAML		13 21 49.6	
	comp=Z,25nm,1.0s						
MHTO	**MHTO**	**6.12**	**179**	P	**Pn**	**13 19 56.2**	**+1.2**
MHTO				S	**Sn**	**13 21 05.9**	**+0.8**
SHMA	**Al-Shehemyia**	**6.33**	**260**	P	**Pn**	**13 19 60.0**	**+2.1**
	SNR=14						
AFRZ	**Afriz**	**6.35**	**9**	Pn	**Pn**	**13 20 00.6**	**+2.3**
TRNA	**Turayna**	**6.46**	**250**	S	**Sn**	**13 21 14.6**	**+1.1**
	SNR=7.3						
TABS	**Tabas**	**6.53**	**354**	*e*Pn	**Pn**	**13 20 05.0**	**+4.3**
TABS				IAML		13 22 10.2	
	comp=Z,30nm,1.0s						
IRAM	**Ramesheh**	**6.69**	**315**	Pn	**Pn**	**13 20 04.8**	**+1.9**
KLNJ	**Kolanjah**	**6.72**	**307**	Pn	**Pn**	**13 20 05.5**	**+1.9**
KLNJ	**Kolanjah**	**6.72**	**307**	*e*Pn	**Pn**	**13 20 07.0**	**+3.4**
KLNJ				IAML		13 21 35.4	
	comp=Z,54nm,1.0s						
SMRA	**Abu-Samra**	**6.79**	**251**	P	**Pn**	**13 20 06.2**	**+2.1**
SMRA				S	**Sn**	**13 21 21.9**	**+0.4**
ANAR	**Anarak**	**7.03**	**330**	Pn	**Pn**	**13 20 10.5**	**+3.0**
NASN	**Na'in**	**7.16**	**323**	*e*Pn	**Pn**	**13 20 12.7**	**+3.1**
NASN				IAML		13 22 29.1	
	comp=Z,8.8nm,1.0s						
IBRJ	**Brojen**	**7.48**	**311**	Pn	**Pn**	**13 20 16.1**	**+2.2**
IZEF	**Zefreh**	**7.49**	**321**	Pn	**Pn**	**13 20 15.4**	**+1.3**
HRA	**Herat**	**8.14**	**26**	Pn	**Pn**	**13 20 24.9**	**+2.0**
ISFB	**Sefidab**	**8.68**	**327**	Pn	**Pn**	**13 20 32.6**	**+2.4**
SHRO	**Shahrood**	**8.97**	**350**	*e*Pn	**Pn**	**13 20 38.0**	**+3.8**
SHRO				IAML_BB		13 21 36.5	
	comp=Z,380nm,1.0s						
DOK	**Doka**	**9.15**	**203**	P	**Pn**	**13 20 36.9**	**+0.3**
	SNR=7.7						
KHMZ	**Khomeyn**	**9.49**	**316**	*e*Pn	**Pn**	**13 20 43.3**	**+1.8**
KHMZ				IAML_BB		13 20 55.2	
	comp=Z,390nm,1.0s						
DMTO	**DMTO**	**9.76**	**197**	P	**Pn**	**13 20 45.8**	**+0.9**
RBK	**Rabkut**	**10.17**	**200**	P	**Pn**	**13 20 51.5**	**+0.8**
ABTO	**Aybut**	**10.62**	**204**	P	**Pn**	**13 20 55.8**	**-1.0**
RAYN	**Ar Rayn**	**11.76**	**255**		**Pn**	**13 21 10.3**	**-2.1**
RAYN	**Ar Rayn**	**11.76**	**255**	P	**Pn**	**13 21 12.0**	**-0.5**
RAYN	**Ar Rayn**	**11.76**	**255**	*i* P	**Pn**	**13 21 10.4**	**-2.1**
	SNR=6.3						
MARD	**Mardin**	**17.65**	**309**	P	**P**	**13 22 30.7**	**-0.9**
MARD				IAmb	IAmb	13 22 33.7	
	comp=Z,32nm,0.9s						
ARSB	**Arslanbob**	**18.83**	**37**	P	**P**	**13 22 45.6**	**+1.1**
ARSB				IAmb	IAmb	13 23 00.9	
	comp=Z,4.1nm,0.5s						
ASF	**Jabal al Asfar**	**18.91**	**290**	P	**Pn**	**13 22 46.6**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=105,slow=9.1,SNR=3.2						
ASF				LR	LR	13 30 33.0	
	comp=Z,83nm,20.7s,baz=337,slow=39						
	comp=Z,1.6nm,0.4s						
KK31	**Karatay Array**	**18.95**	**30**		**P**	**13 22 46.0**	**+0.3**
KKAR	**Karatay Array**	**18.95**	**30**		**P**	**13 22 46.0**	**+0.3**
KSH	**Kashi**	**19.47**	**46**	P	**P**	**13 22 47.9**	**-3.7**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MMAI	**Mount Meron Ar**	**20.30**	**292**	P	**P**	**13 23 00.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=94,slow=20,SNR=1.4						
	comp=Z,0.5nm,0.3s						
EIL	**Elat**	**20.33**	**283**	P	Pn	13 23 01.6	-1.2
	comp=Z,6.9nm,0.8s,baz=71,slow=14,SNR=4.6						
	comp=Z,6.9nm,0.8s						
KBZ	**Khabaz**	**20.52**	**328**	P	**P**	**13 23 01.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=149,slow=12,SNR=1.0						
	comp=Z,0.3nm,0.3s						
AAK	**Ala-Archa**	**20.55**	**37**	P	**P**	**13 23 03.5**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=219,slow=6.5,SNR=2.5						
	comp=Z,1.7nm,0.6s						
AAK	**Ala-Archa**	**20.55**	**37**	P	**P**	**13 23 04.2**	**+0.9**
BOOM	**Boomskoye usch**	**21.25**	**39**	P	**P**	**13 23 11.3**	**+0.3**
BOOM				IAmb	IAmb	13 23 23.7	
	comp=Z,3.2nm,0.8s						
KDJ	**Kajisay**	**21.74**	**42**	P	**P**	**13 23 16.9**	**+0.7**
KDJ				IAmb	IAmb	13 23 17.5	
	comp=Z,5.5nm,0.9s						
AB31	**Akbulak array**	**22.14**	**4**		**P**	**13 23 19.1**	**-1.1**
AB31				IAmb	IAmb	13 23 24.7	
	comp=Z,7.3nm,0.8s						
ABKAR	**Akbulak array**	**22.14**	**4**		**P**	**13 23 19.1**	**-1.1**
BRTR	**Keskin Array B**	**23.73**	**308**	P	**P**	**13 23 37.1**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=121,slow=10,SNR=11						
	comp=Z,2.2nm,0.7s						
BRTR	**Keskin Array B**	**23.73**	**308**		**P**	**13 23 36.1**	**-0.9**
EVN	**Everest**	**25.64**	**81**		**P**	**13 23 54.4**	**-0.7**
EVN				IAmb	IAmb	13 24 01.2	
	comp=Z,2.6nm,0.8s						
MAKZ	**Makanchi**	**27.31**	**38**	P	**P**	**13 24 10.2**	**+0.8**
MAKZ				IAmb	IAmb	13 24 18.2	
	comp=Z,2.2nm,1.1s						
MKAR	**Makanchi Array**	**27.48**	**38**	P	**P**	**13 24 11.7**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=229,slow=8.9,SNR=4.0						
	comp=Z,0.5nm,0.7s						
BVAR	**Borovoye Array**	**27.49**	**16**	P	**P**	**13 24 10.5**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=189,slow=8.3,SNR=7.9						
	comp=Z,1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**28.25**	**28**	P	**P**	**13 24 16.1**	**-1.5**
	comp=Z,0.3nm,0.2s,baz=221,slow=9.0,SNR=0.7						
	comp=Z,0.3nm

comp=Z,2.7nm,0.7s
HHC Hu-ho-hao-te 45.89 58 *e*P **P** **13 26 48.3 +1.0**
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,150nm,5.3s
NOA NORSAR Array B 46.06 331 P **P** **13 26 47.6 -0.7**
comp=Z,0.9nm,0.7s,baz=114,slow=7.9,SNR=3.3
comp=Z,0.9nm,0.7s
ARCES ARCESS Array B 46.42 345 P **P** **13 26 48.4 -2.5**
comp=Z,2.7nm,0.9s,baz=130,slow=6.5,SNR=4.2
comp=Z,2.7nm,0.9s
ARCES ARCESS Array B 46.42 345 P **P** **13 26 51.5 +0.5**
ESDC Sonseca Array 52.20 301 P **P** **13 27 35.9 +0.3**
comp=Z,0.9nm,0.6s,baz=71,slow=7.2,SNR=6.7
comp=Z,0.9nm,0.6s
ESDC Sonseca Array 52.20 301 IAmb IAmb 13 28 01.8
comp=Z,4.0nm,1.5s
YOJ Yonaguni jima 58.10 77 P **P** **13 28 19.2 +0.8**
ASAJ Asahikawa 68.05 51 LR LR 14 00 38.6
comp=Z,73nm,18.1s,baz=336,slow=37
TOLK Toolik Lake Re 82.39 10 P **P** **13 30 46.5 0.0**
H19K Roundabout Mou 83.92 14 P **P** **13 30 53.9 -0.5**
H19K IAmb IAmb 13 31 34.2
comp=Z,7.7nm,1.4s
BMAR Burnt Mountain 84.23 9 P **P** **13 30 56.0 +0.1**
ILAR Eielson Array 86.38 10 P **P** **13 31 06.7 0.0**
comp=Z,0.3nm,0.7s,baz=14,slow=8.4,SNR=4.9
comp=Z,0.3nm,0.7s
WB0 Warramunga Arr 87.52 114 P **P** **13 31 13.2 +0.3**
WRA Warramunga Arr 87.56 114 P **P** **13 31 15.0 +1.8**
comp=Z,0.8nm,0.7s,baz=310,slow=4.3,SNR=7.7
comp=Z,0.8nm,0.7s
ASAR Alice Springs 89.06 117 P **P** **13 31 22.0 +1.7**
comp=Z,0.6nm,0.8s,baz=302,slow=5.6,SNR=8.2
comp=Z,0.6nm,0.8s
ASAR Alice Springs 89.06 117 P **P** **13 31 21.6 +1.3**
COEN Coen 92.16 104 P **P** **13 31 35.4 +0.6**

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*NAO **12** 13:20:12.6±1.0, 78.26N×7.84E, h12km±10km, ML2.2*
*BER **12** 13:20:12.7±2.5, 78.27N×7.71E, h10km, mb(Pn)3.1, ML2.2(NAO), Confirmed Earthquake*
ISC 12 13:20:12.4±4.0, 78.30N±0.1°×8.0E±0.2, h24km±19km, n11, σ0.58/20, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.01**	**50**	Pb	**Pn**	**Pn**	**13 20 35.7**	**-0.4**
KBS				Sb	**Sb**	**Sb**	**13 20 52.5**	**+0.2**
KBS	**Kingsbay**	**1.01**	**50**	*e*P	**Pn**	**Pn**	**13 20 35.4**	**+0.4**
KBS				*e*S	**Sb**	**Sb**	**13 20 52.4**	**0.0**
BRBA	**Barentsburg A**	**1.31**	**98**	Pb	**Pb**	**Pb**	**13 20 36.3**	**+0.1**
BRBA				Sb	**Sb**	**Sb**	**13 20 52.6**	**0.0**
BRBA	**Barentsburg A**	**1.31**	**98**	*e*P	**Pn**	**Pn**	**13 20 35.6**	**+0.5**
BRBA				Sb	**Sb**	**Sb**	**13 20 52.6**	**0.0**
BRBA				IAML			13 20 57.0	
comp=Z,18nm,0.2s								
SPA0	**Spitsbergen Ar**	**1.73**	**90**	Pn	**Pb**	**Pb**	**13 20 42.6**	**-0.8**
baz=270,slow=16								
SPA0				Sn	**Sb**	**Sb**	**13 21 05.6**	**+1.0**
baz=270,slow=22								
SPA0	**Spitsbergen Ar**	**1.73**	**90**	Pn	**Pb**	**Pb**	**13 20 42.6**	**-0.8**
baz=270,slow=16								
SPA0				Sn	**Sb**	**Sb**	**13 21 05.6**	**+1.0**
baz=270,slow=22								
SPA0				IAML			13 21 07.0	
comp=Z,16nm,0.3s								
HOPEN	**Hopen**	**4.13**	**107**	Pn	**Pn**	**Pn**	**13 21 14.3**	**+0.5**
HOPEN				Sn	**Sn**	**Sn**	**13 22 00.7**	**-0.6**
HOPEN	**Hopen**	**4.13**	**107**	Pn	**Pn**	**Pn**	**13 21 14.3**	**+0.5**
HOPEN				Sn	**Sn**	**Sn**	**13 22 00.7**	**-0.6**
DAG	**Danmarks Havn**	**5.92**	**268**	*i* P	Pn	**Pn**	13 21 33.1	-5.3
DAG				*i* S	Sn	**Sn**	13 22 32.1	-13

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*EST **12** 13:37:02.9±0.1, 57.70N×21.93E, h0km, ML2.3(HEL), Explosion*
*UPP **12** 13:37:02.0±2.4, 57.67N×22.13E, h0km, ML2.5, Presumed earthquake*
*DNK **12** 13:37:02.6±2.0, 57.64N×21.91E, h0km, ML3.2, Suspected explosion*
*HEL **12** 13:37:02.9±0.2, 57.71N×21.93E, h0km, ML2.3, Explosion*
*IDC **12** 13:37:03.8±2.3, 57.79N×22.00E, h0km, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=23.1km s-min=8.7km az=167.0*
*LVSN **12** 13:37:06.2±5.2, 57.65N×22.00E, h0km±29km, ML2.8*
ISC 12 13:37:01.9±0.8, 57.75N±0.03×21.93E±0.03, h0km, n71, σ1.45/98, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.22**	**121**	*e*P	**Pg**	**Pg**	**13 37 06.3**	**+0.1**
SLIT	**Slitere, Latvi**	**0.22**	**121**	*e*P	**Pg**	**Pg**	**13 37 06.8**	**+0.7**
SLIT				*e*S	**Sg**	**Sg**	**13 37 10.6**	**+1.5**
SLIT				AML	AML		13 37 20.8	
comp=Z,10μm,0.5s								
SLIT				AML	AML		13 37 24.9	
comp=E,9μm,0.5s								
SLIT				AML	AML		13 37 26.1	
comp=N,6μm,0.5s								
SLIT	**Slitere, Latvi**	**0.22**	**121**	*e*P	**Pg**	**Pg**	**13 37 06.9**	**+0.7**
SLIT				*e*S	**Sg**	**Sg**	**13 37 08.8**	**-0.3**
EE06	**Soera, Palade,**	**1.32**	**21**	*e*P	**Pg**	**Pg**	**13 37 27.3**	**+0.1**
EE06				*e*SN	**Sn**	**Sn**	**13 37 47.2**	**+1.4**
EE01	**Perakula, Nova**	**1.71**	**30**	*e*P	**Pb**	**Pg**	**13 37 33.9**	**-0.3**
EE01				*e*PN	**Pg**	**Pg**	**13 37 34.3**	**-0.4**
EE01				*e*SN	**Sg**	**Sg**	**13 37 57.1**	**+0.2**
GOTU	**Gotland**	**1.81**	**270**	*e*P	**Pn**	**Pn**	**13 37 35.2**	**+1.0**
EE08	**Sarghaua, Vand**	**1.98**	**61**	*e*P	**Pb**	**Pb**	**13 37 37.8**	**-0.9**
EE08				*e*SG	**Sg**	**Sg**	**13 38 04.3**	**-1.0**
EE02	**Kiisa, Saku**	**2.05**	**44**	*e*P	**Pb**	**Pb**	**13 37 39.3**	**-0.7**
EE02				*e*PG	**Pg**	**Pg**	**13 37 40.0**	**-1.2**
EE02				*e*SG	**Sg**	**Sg**	**13 38 07.7**	**-0.1**
TVF	**Tvarminne**	**2.21**	**17**	*e*PB	**Pb**	**Pb**	**13 37 42.5**	**-0.3**
TVF				*e*SG	**Sg**	**Sg**	**13 38 12.7**	**-0.3**
TVF				smax	smax		13 38 14.6	
comp=Z,22nm,0.1s								
NYNU	**Nynaeshamn**	**2.42**	**303**	P	**Pn**	**Pn**	**13 37 44.2**	**+1.5**
NYNU	**Nynaeshamn**	**2.42**	**303**	P	**Pn**	**Pn**	**13 37 44.2**	**+1.5**
PABE	**Paberze**	**2.51**	**153**	*e*P	**Pn**	**Pn**	**13 37 43.4**	**-0.6**
PABE	**Paberze**	**2.51**	**153**	*e*P	**Pn**	**Pn**	**13 37 45.9**	**+2.0**
PABE				AML	AML		13 37 46.1	
comp=Z,119nm,0.2s								
PABE				*e*S	**Sn**	**Sn**	**13 38 16.6**	**+1.4**
PABE				AML	AML		13 38 21.1	
comp=E,75nm,0.4s								
PABE				AML	AML		13 38 21.1	
comp=N,94nm,0.1s								
PABE	**Paberze**	**2.51**	**153**	*e*PB	**Pn**	**Pn**	**13 37 45.7**	**+1.8**
PABE				*e*SB	**Sn**	**Sn**	**13 38 16.8**	**+1.6**
EE03	**Tooma soojaam,**	**2.55**	**62**	*e*P	**Pn**	**Pn**	**13 37 45.9**	**+1.3**
EE03				*e*PB	**Pb**	**Pb**	**13 37 47.7**	**-0.9**
EE03				*e*SB	**Sb**	**Sb**	**13 38 21.1**	**+0.6**
NRTU	**Norrtaelje**	**2.59**	**320**	P	**Pn**	**Pn**	**13 37 46.9**	**+1.8**
NRTU	**Norrtaelje**	**2.59**	**320**	P	**Pn**	**Pn**	**13 37 46.9**	**+1.8**
AAL	**Aland**	**2.64**	**338**	P	**Pn**	**Pn**	**13 37 46.7**	**+1.0**
AAL	**Aland**	**2.64**	**338**	*e*P	**Pn**	**Pn**	**13 37 46.7**	**+1.0**
AAL	**Aland**	**2.64**	**338**	P	**Pn**	**Pn**	**13 37 46.7**	**+1.0**
AAL	**Aland**	**2.64**	**338**	*e*P	**Pn**	**Pn**	**13 37 46.6**	**+1.0**
VSU	**Vasula**	**2.65**	**72**	*e*P	**Pn**	**Pn**	**13 37 46.6**	**+0.8**
VSU	**Vasula**	**2.65**	**72**	*e*P	**Pb**	**Pb**	**13 37 48.2**	**-2.0**
VSU				AML	AML		13 37 48.4	
comp=Z,94nm,0.2s								
VSU				*e*S	**Sb**	**Sb**	**13 38 22.9**	**-0.3**
VSU				AML	AML		13 38 25.4	
comp=N,65nm,0.2s								
VSU				AML	AML		13 38 28.0	
comp=E,84nm,0.5s								
VSU	**Vasula**	**2.65**	**72**	*i* P	**Pb**	**Pb**	**13 37 48.1**	**-2.0**
VSU	**Vasula**	**2.65**	**72**	*e*PB	**Pb**	**Pb**	**13 37 48.1**	**-2.0**
VSU				*e*SB	**Sb**	**Sb**	**13 38 22.8**	**-0.3**
ARBE	**Arbavere**	**2.72**	**50**	*e*P	**Pb**	**Pb**	**13 37 50.1**	**-1.2**
ARBE	**Arbavere**	**2.72**	**50**	*e*P	**Pb**	**Pb**	**13 37 50.1**	**-1.2**
ARBE	**Arbavere**	**2.72**	**50**	*e*PB	**Pb**	**Pb**	**13 37 50.2**	**-1.2**
ARBE				*e*SG	**Sg**	**Sg**	**13 38 26.7**	**-2.4**
MEF	**Metsahovi**	**2.79**	**26**	*e*P	**Pb**	**Pb**	**13 37 50.9**	**-1.7**
MEF	**Metsahovi**	**2.79**	**26**	*e*P	**Pb**	**Pb**	**13 37 51.6**	**-1.0**
MEF				*e*S	**Sb**	**Sb**	**13 38 26.8**	**-0.4**
MEF				AML	AML		13 38 28.7	
comp=E,22nm,0.1s								
MEF				AML	AML		13 38 29.4	
comp=Z,18nm,0.2s								
MEF				AML	AML		13 38 30.2	
comp=N,23nm,0.2s								
MEF	**Metsahovi**	**2.79**	**26**	*e*PB	**Pb**	**Pb**	**13 37 51.5**	**-1.1**
MEF				*e*SB	**Sb**	**Sb**	**13 38 28.1**	**+0.9**
MEF				smax	smax		13 38 29.4	
comp=Z,16nm,0.1s								
HEL5	**Espoo, Suvisaa**	**2.79**	**30**	*e*PB	**Pb**	**Pb**	**13 37 51.3**	**-1.3**
HEL5				*e*SB	**Sb**	**Sb**	**13 38 28.2**	**+1.0**
HEL5				smax	smax		13 38 31.7	
comp=Z,11nm,0.1s								
HEL1	**Helsinki**	**2.88**	**31**	*e*PB	**Pb**	**Pb**	**13 37 52.8**	**-1.3**
VIKU	**Vikbolandet**	**2.88**	**287**	P	**Pn**	**Pn**	**13 37 50.9**	**+1.9**
VIKU	**Vikbolandet**	**2.88**	**287**	P	**Pn**	**Pn**	**13 37 50.9**	**+1.9**
VSTU	**Vaestervik**	**2.90**	**271**	P	**Pn**	**Pn**	**13 37 50.9**	**+1.6**
VSTU	**Vaestervik**	**2.90**	**271**	P	**Pn**	**Pn**	**13 37 50.9**	**+1.6**
NUR	**Nurmijarvi**	**3.11**	**26**	smax	smax		13 38 39.2	
comp=Z,5.8nm,0.1s								
GRAU	**Graesoe**	**3.13**	**327**	P	**Pn**	**Pn**	**13 37 53.7**	**+1.2**
GRAU	**Graesoe**	**3.13**	**327**	P	**Pn**	**Pn**	**13 37 53.7**	**+1.2**
OSKU	**Oskarshamn**	**3.20**	**263**	P	**Pn**	**Pn**	**13 37 54.6**	**+1.3**
OSKU	**Oskarshamn**	**3.20**	**263**	P	**Pn**	**Pn**	**13 37 54.6**	**+1.3**
RAF	**Rauma**	**3.29**	**359**	*e*P	**Pn**	**Pn**	**13 37 56.4**	**+1.8**
IIGN	**Ignalina**	**3.38**	**134**	*e*P	**Pn**	**Pn**	**13 37 54.1**	**-1.7**
OSTU	**Oestervaala**	**3.52**	**317**	P	**Pn**	**Pn**	**13 37 59.8**	**+2.0**
OSTU	**Oestervaala**	**3.52**	**317**	P	**Pn**	**Pn**	**13 37 59.8**	**+2.0**
IGGU	**Iggoen**	**3.93**	**325**	P	**Pn**	**Pn**	**13 38 05.5**	**+2.1**
IGGU	**Iggoen**	**3.93**	**325**	P	**Pn**	**Pn**	**13 38 05.5**	**+2.1**
FALU	**Falun**	**4.18**	**314**	P	**Pn**	**Pn**	**13 38 08.2**	**+1.3**
FALU	**Falun**	**4.18**	**314**	P	**Pn**	**Pn**	**13 38 08.2**	**+1.3**
FINES	**FINESS Array B**	**4.27**	**28**	Pn	**Pn**	**Pn**	**13 38 08.4**	**+0.4**
comp=Z,0.3nm,0.3s,baz=207,slow=21,SNR=16								
FINES				Pg		**Pb**	**13 38 19.0**	**+1.3**
comp=Z,0.9nm,0.3s,baz=208,slow=14,SNR=16								
FINES				Sn		**Sn**	**13 39 00.4**	**+2.0**
comp=Z,0.6nm,0.3s,baz=215,slow=18,SNR=3.6								
FINES				Lg	Lg		13 39 15.3	
comp=Z,1.6nm,0.3s,baz=214,slow=22,SNR=11								
comp=Z,0.9nm,0.2s								
DEL	**Delary**	**4.58**	**257**	*i* P		**Pn**	**13 38 12.5**	**+0.2**
ARNU	**Arnoeviken**	**4.58**	**332**	P		**Pn**	**13 38 14.3**	**+1.9**
ARNU	**Arnoeviken**	**4.58**	**332**	P		**Pn**	**13 38 14.3**	**+1.9**
KEF	**Keuruu**	**4.68**	**17**	*e*P		**Pn**	**13 38 16.5**	**+2.9**
HUDU	**Hudiksvall**	**4.69**	**331**	P		**Pn**	**13 38 15.7**	**+1.9**
HUDU	**Hudiksvall**	**4.69**	**331**	P		**Pn**	**13 38 15.7**	**+1.9**
BSD	**Bornholm Skovb**	**4.70**	**239**	*i* P		**Pn**	**13 38 13.9**	**-0.2**
ROTU	**Roteberg**	**4.82**	**322**	P		**Pn**	**13 38 16.7**	**+1.1**
ROTU	**Roteberg**	**4.82**	**322**	P		**Pn**	**13 38 16.7**	**+1.1**
HFS	**Hagfors**	**4.89**	**303**	Pn		**Pn**	**13 38 18.0**	**+1.3**
comp=Z,0.8nm,0.3s,baz=120,slow=14,SNR=29								
HFS				Sn		**Sn**	**13 39 14.4**	**+0.4**
comp=Z,0.5nm,0.3s,baz=120,slow=28,SNR=5.5								
HFS				Lg	Lg		13 39 35.8	
comp=Z,1.0nm,0.3s,baz=116,slow=30,SNR=9.2								
comp=Z,1.7nm,0.3s								
BORU	**Boraas**	**4.92**	**273**	*i* P		**Pn**	**13 38 18.9**	**+1.9**
BORU				*i* S		**Sn**	**13 39 17.4**	**+2.9**
RUF	**Ruokolahti**	**5.13**	**41**	*e*P		**Pn**	**13 38 21.1**	**+1.2**
BJUU	**Bjuv**	**5.16**	**255**	*i* P		**Pn**	**13 38 19.5**	**-0.9**
BJUU				*i* S		**Sn**	**13 39 17.4**	**-3.1**
VAF	**Ylistaro**	**5.33**	**4**	*e*P		**Pn**	**13 38 24.5**	**+1.9**
ONAU	**Onsala**	**5.40**	**271**	*i* P		**Pn**	**13 38 23.4**	**-0.3**
ONAU				*i* S		**Sn**	**13 39 26.3**	**-0.1**
TJOU	**Tjoern**	**5.51**	**277**	*i* P		**Pn**	**13 38 26.0**	**+0.9**
TJOU				*i* S		**Sn**	**13 39 27.4**	**-1.6**
STRU	**Stroemstad**	**5.80**	**287**	*i* P		**Pn**	**13 38 29.6**	**+0.5**
STRU				*i* S		**Sn**	**13 39 35.1**	**-1.2**
NOA	**NORSAR Array B**	**6.39**	**306**	Pn		**Pn**	**13 38 37.9**	**+0.6**
baz=118,slow=10,SNR=4.3								
NOA				Sn		**Sn**	**13 39 48.2**	**-2.7**
baz=118,slow=17,SNR=1.4								
NOA				Lg	Lg		13 40 22.3	
comp=Z,0.1nm,0.3s,baz=119,slow=16,SNR=4.7								
comp=Z,0.2nm,0.5s								
JOF	**Joensuu**	**6.97**	**38**	*e*P		**Pn**	**13 38 45.1**	**+0.1**
ARCES	**ARCESS Array B**	**11.94**	**6**	Pn		**Pn**	**13 39 50.6**	**-2.6**
comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=10								
comp=Z,2.0nm,1.0s								

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*BGR **12** 13:38:13.5±0.2, 48.63N×7.79E, h5km, ML3.2/20, Error ellipse: s-maj=2.2km s-min=1.1km az=86.0*
*LDG **12** 13:38:13.6±0.0, 48.62N×7.76E, h6km, Md3.7/1, Ml3.5/38, Error ellipse: s-maj=0.8km s-min=0.7km az=152.0*
*STR **12** 13:38:13.9±0.0, 48.61N±0.05×7.79E±0.07, h5km, MLv3.0/24, LOCSAT earthModelID haslach_taup-2.11 preliminary*
*BNS **12** 13:38:14.1±1.6, 48.59N×7.78E, h4km±4km, ML2.9*
*PRU **12** 13:38:23.4, 48.94N×8.32E, h10km*
ISC 12 13:38:10.9±0.7, 48.62N±0.01×7.75E±0.01, h0km, n155, σ1.59/287, 10C-16D, France

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STR	**Strasbourg**	**0.04**	**156**	*i* Pg		**Pg**	**13 38 15.2**	**+3.6**
STR				*e*Sg		**Sg**	**13 38 16.7**	**+4.7**
STR	**Strasbourg**	**0.04**	**156**	⇑Pg		**Pg**	**13 38 15.2**	**+3.6**
STR				Sg		**Sg**	**13 38 16.8**	**+4.8**
HOHE	**HOHENGOEFT**	**0.18**	**284**	⇑Pg		**Pg**	**13 38 17.9**	**+3.6**
HOHE				Sg		**Sg**	**13 38 21.0**	**+4.3**
BABA	**Baden-Baden-Ne**	**0.31**	**71**	⇑*i* Pg		**Pb**	**13 38 19.0**	**-0.1**
BABA				Sg		**Sb**	**13 38 23.4**	**-1.6**
BABA	**Baden-Baden-Ne**	**0.31**	**71**	⇑Pg		**Pb**	**13 38 19.3**	**-0.1**
BABA				Sg		**Sg**	**13 38 23.2**	**+2.2**
OPP	**Oppenau**	**0.32**	**112**	Pg		**Pb**	**13 38 19.3**	**-0.2**
OPP				Sg		**Sg**	**13 38 23.2**	**+2.1**
OPP	**Oppenau**	**0.32**	**112**	⇓Pg		**Pb**	**13 38 19.3**	**-0.2**
OPP				Sg		**Sg**	**13 38 23.2**	**+2.1**
ZELS	**Zelsheim**	**0.32**	**194**	Pg		**Pb**	**13 38 20.5**	**+0.9**
ZELS				Sg		**Sb**	**13 38 25.6**	**+0.2**
SZBH	**soultz borehol**	**0.33**	**14**	⇓Pg		**Pb**	**13 38 20.1**	**+0.5**
SZBH				Sg		**Sb**	**13 38 25.1**	**-0.3**
WLS	**Welschbruch**	**0.33**	**232**	⇑*i* Pg		**Pb**	**13 38 20.5**	**+0.7**
WLS				Sg		**Sb**	**13 38 25.4**	**-0.2**
WLS	**Welschbruch**	**0.33**	**232**	⇑Pg		**Pb**	**13 38 20.5**	**+0.7**
WLS				Sg		**Sb**	**13 38 25.4**	**-0.2**
CIEL	**Dossenheim-sur**	**0.33**	**311**	⇓Pg		**Pb**	**13 38 20.6**	**+0.8**
CIEL				Sg		**Sb**	**13 38 25.7**	**+0.1**
CDF	**Champ du Feu**	**0.37**	**237**	*e*Pg		**Pb**	**13 38 20.9**	**+0.4**
CDF	**Champ du Feu**	**0.37**	**237**	*e*Pg		**Pb**	**13 38 21.4**	**+0.9**
CDF				*e*Sg		**Sb**	**13 38 25.5**	**-1.4**
454nm,0.3s								
NEEW	**Neewiller pres**	**0.41**	**35**	⇑Pg		**Pb**	**13 38 21.8**	**+0.6**
NEEW				Sg		**Sb**	**13 38 27.9**	**-0.1**
LEMB	**Lembach**	**0.42**	**1**	⇓Pg		**Pb**	**13 38 21.7**	**+0.5**
LEMB				Sg		**Sb**	**13 38 27.5**	**-0.6**
PEB	**Petersbachel**	**0.45**	**355**	⇓Pg		**Pb**	**13 38 22.3**	**+0.5**
BFO	**Black Forest**	**0.48**	**126**	⇓Pg		**Pb**	**13 38 22.4**	**+0.1**
BFO				Sg		**Sb**	**13 38 28.5**	**-1.5**
BFO	**Black Forest**	**0.48**	**126**	⇓Pg		**Pb**	**13 38 22.5**	**+0.1**
BFO				Sg		**Sb**	**13 38 28.5**	**-1.5**
VOGT	**Vogtsburg - To**	**0.54**	**185**	⇓Pg		**Pb**	**13 38 24.2**	**+0.9**
VOGT				Sg		**Sb**	**13 38 31.6**	**+0.1**
VOGT	**Vogtsburg - To**	**0.54**	**185**	⇓Pg		**Pb**	**13 38 24.2**	**+0.9**
VOGT				Sg		**Sb**	**13 38 31.5**	**-0.1**
VOEL	**Voellerdingen**	**0.54**	**311**	⇓Pg		**Pb**	**13 38 24.3**	**+1.0**
VOEL				Sg		**Sb**	**13 38 32.2**	**+0.5**
ECH	**Echery**	**0.56**	**224**	*e*Pg		**Pb**	**13 38 24.5**	**+0.9**
ECH				*e*Sg		**Sb**	**13 38 32.5**	**+0.3**
ECH	**Echery**	**0.56**	**224**	⇑Pg		**Pb**	**13 38 24.5**	**+0.9**
ECH				Sg		**Sb**	**13 38 32.3**	**+0.1**
ROTT	**Steinweiler**	**0.58**	**27**	Sg		**Sb**	**13 38 33.5**	**+0.8**
LDE	**Landau**	**0.62**	**25**	Sg		**Sb**	**13 38 35.1**	**+1.3**
FBB	**Freiburg im Br**	**0.62**	**173**	Pg		**Pb**	**13 38 25.6**	**+0.9**
FBB				Sg		**Sb**	**13 38 33.8**	**-0.1**
KIZ	**Kirchzarten**	**0.67**	**170**	⇓Pg		**Pb**	**13 38 26.2**	**+0.7**
KIZ				Sg		**Sb**	**13 38 35.1**	**-0.3**
KIZ				SmS			13 38 37.5	
KIZ	**Kirchzarten**	**0.67**	**170**	⇓Pg		**Pb**	**13 38 26.2**	**+0.7**
KIZ				Sg		**Sb**	**13 38 35.2**	**-0.3**
GALG	**Neuhausen (Enz**	**0.71**	**76**	⇑Pg		**Pb**	**13 38 26.6**	**+0.4**
GALG				Sg		**Sb**	**13 38 35.3**	**-1.1**
GALG				SmS			13 38 38.4	
BRET	**Bretten**	**0.74**	**57**	PmP			13 38 28.2	
BRET				SmS			13 38 39.5	
FELD	**Feldberg im Sc**	**0.76**	**167**	Pg		**Pb**	**13 38 27.9**	**+0.8**
ROTE	**Rottweil**	**0.77**	**127**	PmP			13 38 29.2	
BERGE	**Lenzkirch (DE)**	**0.80**	**159**	⇓Pg		**Pb**	**13 38 28.5**	**+0.8**
BERGE				*e*Sg		**Sb**	**13 38 39.1**	**0.0**
ENDD	**Endenburg**	**0.90**	**180**	Pg		**Pn**	**13 38 30.6**	**-0.3**
ENDD				PmP			13 38 31.2	
MSS	**Messtetten**	**0.92**	**118**	*e*Pg		**Pn**	**13 38 30.8**	**-0.4**
MSS				*e*Sg		**Sb**	**13 38 42.4**	**-0.2**
MSS	**Messtetten**	**0.92**	**118**	Pg		**Pn**	**13 38 30.8**	**-0.4**
MSS				Sg		**Sb**	**13 38 42.4**	**-0.2**
METMA	**Mettma DE**	**0.97**	**159**	Pn		**Pn**	**13 38 31.5**	**-0.3**
METMA				*e*Sg		**Sb**	**13 38 44.5**	**+0.6**
STU	**Stuttgart**	**0.97**	**80**	*e*Pg		**Pn**	**13 38 31.9**	**+0.1**
STU				*e*Sg		**Sb**	**13 38 43.7**	**-0.4**
IMS	**Imsbach**	**0.98**	**6**	Pn		**Pn**	**13 38 32.1**	**0.0**
IMS				Sn		**Sb**	**13 38 45.1**	**+0.7**
SLE	**Schleitheim**	**0.99**	**149**	⇓Pn		**Pn**	**13 38 32.0**	**-0.1**
SLE				Sn		**Sb**	**13 38 45.5**	**+0.9**
HINF	**Hinteralfeld**	**1.00**	**217**	*e*Pg		**Pn**	**13 38 32.2**	**0.0**
HINF				*e*Sg		**Sb**	**13 38 45.3**	**+0.5**
580nm,0.2s								
FREU	**Neufra-Freuden**	**1.00**	**112**	⇓Pn		**Pn**	**13 38 32.2**	**-0.1**
FREU				Sn		**Sb**	**13 38 45.6**	**+0.6**
GUT	**Gutenstein**	**1.06**	**120**	⇓Pn		**Pn**	**13 38 33.2**	**0.0**
HAU	**Haudompre**	**1.11**	**237**	*e*Pg		**Pn**	**13 38 34.0**	**+0.2**
HAU	**Haudompre**	**1.11**	**237**	*e*Pg		**Pn**	**13 38 34.1**	**+0.2**
HAU	**Haudompre**	**1.11**	**237**	*e*P		**Pn**	**13 38 35.3**	**+1.5**
HAU				*e*Sg		**Sn**	**13 38 49.5**	**-0.4**
855nm,0.4s								
HAU				*e*Sg		**Sb**	**13 38 50.5**	**+2.3**
SULZ	**Cheisacher**	**1.12**	**167**	*e*Pn		**Pn**	**13 38 34.1**	**+0.3**
SULZ				*e*Pg		**Pb**	**13 38 35.1**	**+1.9**
SULZ				*e*Sg		**Sb**	**13 38 48.5**	**+0.3**
WALHA	**Wallhausen, DE**	**1.26**	**133**	*e*Pn		**Pn**	**13 38 36.3**	**+0.5**
WALHA				*e*Pg		**Pb**	**13 38 37.5**	**+1.9**
WALHA				*e*Sg		**Sb**	**13 38 52.4**	**0.0**
ABH	**Alteburg**	**1.27**	**354**	*e*Pg		**Pn**	**13 38 37.5**	**+1.5**
BALST	**Balsthal**	**1.28**	**182**	*e*Pn		**Pn**	**13 38 36.5**	**+0.4**
BALST				*e*Pg		**Pb**	**13 38 37.9**	**+1.9**
BALST				*e*Sg		**Sn**	**13 38 54.7**	**+0.7**
PAGF	**Fort de Pagny**	**1.34**	**268**	*e*Pn		**Pb**	**13 38 37.5**	**+0.5**
baz=85								
PAGF	**Fort de Pagny**	**1.34**	**268**	*e*Pg		**Pb**	**13 38 38.9**	**+1.9**
PAGF				*e*Sg		**Sn**	**13 38 55.8**	**+0.3**
220nm,0.3s								
WLF	**Walferdange**	**1.48**	**316**	*e*Pn		**Pb**	**13 38 40.7**	**+1.4**
WLF				*e*Pg		**Pg**	**13 38 42.0**	**+2.7**
WLF				*e*Sg		**Sn**	**13 39 00.5**	**+1.6**
NAST	**IGS Nastaetten**	**1.58**	**3**	*e*Pn		**Pg**	**13 38 43.0**	**+1.8**
NAST				*e*Sg		**Sg**	**13 39 02.3**	**+0.6**
167nm,0.5s								
BGG	**Burgeitz**	**1.61**	**351**	*e*Pn		**Pg**	**13 38 43.5**	**+1.7**
BGG				*e*Sg		**Sg**	**13 39 03.8**	**+1.1**
81nm,0.3s								
TNS	**Taunus Mts**	**1.67**	**16**	*e*Pn		**Pn**	**13 38 42.1**	**+0.6**
TNS				*e*Pg		**Pg**	**13 38 44.6**	**+1.6**
TNS				*e*Sg		**Sg**	**13 39 05.4**	**+0.8**
133nm,0.4s								
SAVF	**Savonnieres en**	**1.74**	**271**	*e*Pn		**Pn**	**13 38 43.0**	**+0.6**
SAVF	**Savonnieres en**	**1.74**	**271**	*e*Pg		**Pg**	**13 38 45.6**	**+1.4**
baz=90								
SAVF	**Savonnieres en**	**1.74**	**271**	*e*Pg		**Pg**	**13 38 45.9**	**+1.7**
SAVF				*e*Sg		**Sg**	**13 39 07.9**

HYF	**Humbligny**	**3.69**	**250**	*e*Pn		**Pn**	**13 39 09.6**	**+0.4**
HYF	**Humbligny**	**3.69**	**250**	*e*Pg		**Pg**	**13 39 21.9**	**+0.3**
HYF				*e*Sn		**Sn**	**13 39 50.1**	**-3.2**
HYF				*e*Sg		**Sg**	**13 40 10.0**	**+0.7**
	279nm,0.4s							
ABTA	**Abfaltersbach**	**3.72**	**118**	*e*Pn		**Pn**	**13 39 10.8**	**+1.1**
	2.0nm,0.2s							
ABTA				*e*Sn		**Sn**	**13 39 55.9**	**+1.5**
	4.5nm,0.3s							
KHC	**Kasperske Hory**	**3.88**	**80**	*e*PN		**Pb**	**13 39 17.6**	**-2.7**
	19nm,0.3s							
KHC				*e*PG		**Pg**	**13 39 26.1**	**+0.7**
KHC				*e*SN		**Sn**	**13 39 57.0**	**-1.2**
KHC				*e*SG		**Sg**	**13 40 13.2**	**-2.5**
BGF	**Bois d'Agland**	**3.90**	**240**	*e*Pn		**Pn**	**13 39 11.9**	**-0.2**
BGF	**Bois d'Agland**	**3.90**	**240**	*e*Pg		**Pg**	**13 39 26.3**	**+0.6**
BGF				*e*Sn		**Sn**	**13 39 57.0**	**-1.6**
BGF				*e*Sg		**Sg**	**13 40 15.5**	**-0.7**
	90nm,0.5s							
ORIF	**Oris-en-Rattie**	**3.92**	**200**	*e*Pn		**Pn**	**13 39 13.7**	**+1.3**
ORIF	**Oris-en-Rattie**	**3.92**	**200**	*e*Pg		**Pg**	**13 39 26.0**	**+0.1**
ORIF				*e*Sg		**Sg**	**13 40 16.3**	**-0.4**
	17nm,0.3s							
MBDF	**Montbardon**	**3.95**	**190**	*e*Pn		**Pn**	**13 39 13.1**	**+0.2**
MBDF	**Montbardon**	**3.95**	**190**	*e*Pg		**Pg**	**13 39 26.5**	**-0.1**
MBDF				*e*Sg		**Sg**	**13 40 17.9**	**+0.2**
	7.2nm,0.3s							
GEC2	**GERESS Array S**	**3.95**	**84**	*e*Pg		**Pg**	**13 39 26.9**	**+0.3**
BIOA	**Bad Ischl, Aus**	**4.05**	**101**	*i* Pn		**Pn**	**13 39 15.3**	**+1.1**
	4.6nm,0.2s							
KBA	**Koelnbreinsper**	**4.07**	**110**	*i* Pn		**Pn**	**13 39 15.1**	**+0.5**
	1.2nm,0.1s							
KBA				*e*Sn		**Sn**	**13 40 03.2**	**+0.2**
	5.0nm,0.4s							
HSKC	**Hora Svate Kat**	**4.20**	**60**	*e*PG		**Pg**	**13 39 30.2**	**-1.2**
	9.7nm,0.3s							
HSKC				*e*SG		**Sb**	**13 40 20.9**	**+4.0**
VIVF	**Saint-Julien-l**	**4.31**	**210**	*e*Pn		**Pn**	**13 39 17.4**	**-0.4**
VIVF	**Saint-Julien-l**	**4.31**	**210**	*e*Pg		**Pg**	**13 39 34.0**	**+0.4**
VIVF				*e*Sn		**Sn**	**13 40 06.6**	**-2.2**
VIVF				*e*Sg		**Sg**	**13 40 28.7**	**-0.8**
	20nm,0.3s							
ZVC	**Zvikov**	**4.32**	**77**	*e*PG		**Pg**	**13 39 32.6**	**-1.1**
	14nm,0.4s							
ZVC				*e*SN		**Sn**	**13 40 07.5**	**-1.4**
ZVC				*e*SG		**Sg**	**13 40 26.9**	**-2.8**
CLL	**Collm**	**4.33**	**50**	*e*Pg		**Pg**	**13 39 34.0**	**+0.1**
CLL				*e*Sg		**Sg**	**13 40 29.0**	**-1.0**
	comp=Z,22nm,0.8s							
CKRC	**Cesky Krumlov**	**4.35**	**85**	*e*PG		**Pg**	**13 39 34.1**	**-0.2**
	comp=Z,18nm,0.4s							
CKRC				*e*SN		**Sn**	**13 40 08.8**	**-0.9**
CKRC				*e*SG		**Sg**	**13 40 29.3**	**-1.3**
TCF	**Toulx Ste Croi**	**4.42**	**240**	*e*Pn		**Pn**	**13 39 19.2**	**0.0**
TCF	**Toulx Ste Croi**	**4.42**	**240**	*e*Pg		**Pg**	**13 39 35.9**	**+0.3**
TCF				*e*Sn		**Sn**	**13 40 08.5**	**-2.9**
TCF				*e*Sg		**Sg**	**13 40 31.9**	**-0.9**
	comp=Z,21nm,0.3s							
MOA	**Molln**	**4.43**	**98**	*i* Pn		**Pn**	**13 39 20.3**	**+1.0**
	comp=Z,1.6nm,0.2s							
MOA				*e*Sn		**Sn**	**13 40 12.4**	**+0.8**
	comp=Z,14nm,0.5s							
MYKA	**Terra Mystica**	**4.46**	**114**	*i* Pn		**Pn**	**13 39 21.0**	**+1.2**
	comp=Z,1.2nm,0.2s							
MYKA				*e*Sn		**Sn**	**13 40 13.7**	**+1.3**
	comp=Z,2.0nm,0.2s							
PRU	**Pruhonice**	**4.65**	**70**	*e*PG		**Pg**	**13 39 38.8**	**-1.3**
PRU				*e*SG		**Sg**	**13 40 36.1**	**-4.3**
SBF	**Sospel**	**4.76**	**183**	*e*Pn		**Pn**	**13 39 24.6**	**+0.6**
SBF				*e*Sn		**Sn**	**13 40 18.2**	**-1.6**
	comp=Z,12nm,0.4s							
SMRF	**Simiane la Rot**	**4.88**	**199**	*e*Pn		**Pn**	**13 39 24.4**	**-1.2**
SMRF				*e*Sn		**Sn**	**13 40 20.4**	**-2.4**
SMRF				*e*Sg		**Sg**	**13 40 47.2**	**-0.4**
	comp=Z,3.4nm,0.2s							
OBKA	**Obir**	**5.07**	**112**	*e*Pn		**Pn**	**13 39 28.8**	**+0.6**
	comp=Z,1.0nm,0.4s							
OBKA				*e*Sn		**Sn**	**13 40 28.3**	**+0.9**
	comp=Z,7.4nm,0.5s							
LDF	**La Druitiere**	**5.22**	**273**	*e*Pn		**Pn**	**13 39 30.5**	**+0.3**
LDF				*e*Sg		**Sg**	**13 40 56.9**	**-1.6**
	comp=Z,7.7nm,0.3s							
LASF	**Ste Croix**	**5.28**	**212**	*e*Pn		**Pn**	**13 39 31.2**	**+0.2**
LASF	**Ste Croix**	**5.28**	**212**	*e*Pg		**Pg**	**13 39 49.5**	**-2.6**
LASF				*e*Sn		**Sn**	**13 40 28.8**	**-3.8**
LASF				*e*Sg		**Sg**	**13 40 58.6**	**-1.8**
	comp=Z,4.6nm,0.2s							
SOKA	**Soboth**	**5.29**	**109**	*e*Pn		**Pn**	**13 39 31.8**	**+0.5**
	comp=Z,0.9nm,0.2s							
SOKA				*e*Sn		**Sn**	**13 40 32.5**	**-0.6**
	comp=Z,2.3nm,0.3s							
LMR	**La Mourre**	**5.35**	**190**	*e*Pn		**Pn**	**13 39 33.7**	**+1.7**
LMR				*e*Sn		**Sn**	**13 40 30.4**	**-4.0**
LMR				*e*Sg		**Sg**	**13 41 00.9**	**-1.9**
	comp=Z,3.6nm,0.4s							
CAF	**Calviac**	**5.37**	**229**	*e*Pn		**Pn**	**13 39 31.2**	**-1.1**
CAF	**Calviac**	**5.37**	**229**	*e*Pg		**Pg**	**13 39 53.3**	**-0.5**
CAF				*e*Sn		**Sn**	**13 40 32.2**	**-2.7**
CAF				*e*Sg		**Sg**	**13 41 03.2**	**-0.2**
	comp=Z,8.7nm,0.4s							
RJF	**Les Rejaudoux**	**5.40**	**234**	*e*Pn		**Pn**	**13 39 32.7**	**0.0**
RJF	**Les Rejaudoux**	**5.40**	**234**	*e*Pg		**Pg**	**13 39 54.0**	**-0.3**
RJF				*e*Sg		**Sg**	**13 41 03.2**	**-1.1**
	comp=Z,6.9nm,0.3s							
ARSA	**Arzberg**	**5.40**	**102**	*i* Pn		**Pn**	**13 39 33.3**	**+0.5**
	comp=Z,2.9nm,0.6s							
ARSA				*e*Sn		**Sn**	**13 40 36.2**	**+0.6**
	comp=Z,4.7nm,0.3s							
FLN	**La Foliniere**	**5.45**	**275**	*e*Pn		**Pn**	**13 39 33.5**	**+0.1**
FLN	**La Foliniere**	**5.45**	**275**	*e*Pg		**Pg**	**13 39 54.8**	**-0.5**
FLN				*e*Sn		**Sn**	**13 40 33.0**	**-3.7**
FLN				*e*Sg		**Sg**	**13 41 04.7**	**-1.2**
	comp=Z,11nm,0.4s							
CONA	**Conrad Observa**	**5.46**	**94**	*i* Pn		**Pn**	**13 39 34.9**	**+1.3**
	comp=Z,0.6nm,0.2s							
CONA				*e*Sn		**Sn**	**13 40 36.4**	**-0.8**
	comp=Z,3.3nm,0.3s							
MFF	**Saint Martin d**	**5.70**	**252**	*e*Pn		**Pn**	**13 39 36.3**	**-0.5**
MFF	**Saint Martin d**	**5.70**	**252**	*e*Pn		**Pn**	**13 39 36.6**	**-0.2**
MFF	**Saint Martin d**	**5.70**	**252**	*e*Pg		**Pg**	**13 39 58.9**	**-1.3**
MFF	**Saint Martin d**	**5.70**	**252**	*e*Pg		**Pg**	**13 39 59.6**	**-0.6**
MFF				*e*Sn		**Sn**	**13 40 37.6**	**-5.4**
MFF				*e*Sn		**Sn**	**13 40 38.0**	**-5.0**
MFF				*e*Sg		**Sg**	**13 41 10.3**	**-3.8**
	comp=Z,9.0nm,0.3s							
MFF				*e*Sg		**Sg**	**13 41 11.5**	**-2.6**
	comp=Z,12nm,0.4s							
GRR	**Gorron**	**5.72**	**271**	*e*Pn		**Pn**	**13 39 37.8**	**+0.7**
GRR	**Gorron**	**5.72**	**271**	*e*Pg		**Pg**	**13 39 59.4**	**-1.1**
GRR				*e*Sn		**Sn**	**13 40 37.6**	**-5.9**
GRR				*e*Sg		**Sg**	**13 41 12.8**	**-1.9**
	comp=Z,8.3nm,0.3s							
KRUC	**Moravsky**	**5.73**	**82**	*e*PG		**Pg**	**13 39 58.9**	**-1.8**
KRUC				*e*SG		**Sg**	**13 41 16.6**	**+1.7**
RONA	**Rosalia, Austr**	**5.80**	**96**	*e*Pn		**Pn**	**13 39 38.8**	**+0.6**
	comp=Z,0.8nm,0.2s							
RONA				*e*Sn		**Sn**	**13 40 42.5**	**-2.8**
	comp=Z,4.4nm,0.3s							
VRAC	**Vranov**	**5.87**	**80**	*e*PG		**Pg**	**13 40 01.8**	**-1.5**
VRAC				*e*SG		**Sg**	**13 41 17.6**	**-1.8**
LFF	**La Frestale**	**6.05**	**235**	*e*Pn		**Pn**	**13 39 40.7**	**-1.0**
LFF	**La Frestale**	**6.05**	**235**	*e*Pg		**Pg**	**13 40 05.6**	**-1.3**
LFF				*e*Sn		**Sn**	**13 40 48.4**	**-3.2**
LFF				*e*Sg		**Sg**	**13 41 22.3**	**-3.0**
	comp=Z,30nm,0.6s							
MORC	**Moravsky Berou**	**6.53**	**76**	*e*SG		**Sg**	**13 41 40.4**	**0.0**
MTLF	**Montolieu**	**6.53**	**218**	*e*Pn		**Pn**	**13 39 48.9**	**+0.7**
MTLF				*e*Sn		**Sn**	**13 40 57.7**	**-5.7**
MTLF				*e*Sg		**Sg**	**13 41 38.7**	**-1.9**
	comp=Z,2.7nm,0.4s							
MAUC	**Maruska**	**6.68**	**80**	*e*SG		**Sg**	**13 41 42.3**	**-3.0**

*IDC **12** 13:40:52.6±7.2,22°.08S×178°.20W, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=186.9km s-min=37.6km az=33.0.*
*NEIC **12** 13:41:54.0±2.3,23°.9S±0°.2×180°.0E±0°.2, h492km±17km, mb4.4/17, Error ellipse: s-maj=23.2km s-min=19.3km az=202.0*

ISC 12 13:41:54.3±0.9,24°.1S±0°.1×179°.8W±0°.1, h518km, n28, σ1=8.08/26, mb4.0/11, South of Fiji Islands

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

RAO	**Raoul Island**	**5.44**	**162**	P		**P**	**13 43 26.1**		**0.0**
NIUE	**Niue**	**10.43**	**64**	P		**P**	**13 44 15.7**		**-0.7**
NIUE				S		**S**	**13 46 14.4**		**+1.2**
RTZ	**Ruatahuna**	**14.77**	**190**	P		**P**	**13 45 00.3**		**-1.4**
BKZ	**Black Stump Fm**	**15.39**	**191**	P		**P**	**13 45 07.6**		**-0.5**
BKZ				IAmb		IAmb	13 45 47.0		
	comp=Z,27nm,1.4s								
MRZ	**Mangatainoka R**	**17.01**	**192**	P		**P**	**13 45 22.3**		**-2.1**
MRZ				IAmb		IAmb	13 45 44.2		
	comp=Z,26nm,1.1s								
QRZ	**Quartz Range**	**17.92**	**199**	P		**P**	**13 45 33.0**		**+0.2**
MRNZ	**Matariki Terra**	**18.38**	**198**			**P**	**13 45 37.0**		**0.0**
THZ	**Tophouse**	**18.68**	**197**			**P**	**13 45 40.1**		**+0.3**
INZ	**Inchbonnie**	**19.98**	**199**	P		**P**	**13 45 51.8**		**+0.2**
FOZ	**Fox Glacier**	**21.23**	**201**	P		**P**	**13 46 04.2**		**+1.4**
WHZ	**Wether Hill Ro**	**23.93**	**201**	P		**P**	**13 46 28.8**		**+1.7**
WHZ				IAmb		IAmb	13 47 00.2		
	comp=Z,34nm,1.3s								
EIDS	**Eidsvold**	**26.47**	**261**	P		**P**	**13 46 49.2**		**-0.6**
EIDS				IAmb		IAmb	13 46 55.0		
	comp=Z,8.0nm,1.2s								
STKA	**Stephens Creek**	**34.84**	**248**	P		**P**	**13 48 02.8**		**+1.1**
	comp=Z,2.0nm,0.9s,baz=63,slow=2.3,SNR=1.6								
	comp=Z,2.0nm,0.9s								
STKA	**Stephens Creek**	**34.84**	**248**	P		**P**	**13 48 02.8**		**+1.1**
STKA	**Stephens Creek**	**34.84**	**248**	IAmb		IAmb	13 48 14.2		
	comp=Z,32nm,1.1s								
AS31	**Alice Springs**	**42.20**	**261**	P		**P**	**13 49 01.9**		**+0.2**
ASAR	**Alice Springs**	**42.20**	**261**	P		**P**	**13 49 01.9**		**+0.3**
	comp=Z,1.6nm,0.8s,baz=97,slow=7.5,SNR=24								
	comp=Z,1.6nm,0.8s								
ASAR	**Alice Springs**	**42.20**	**261**	P		**P**	**13 49 01.9**		**+0.3**
WR8	**Warramunga Arr**	**42.44**	**266**	P		**P**	**13 49 02.9**		**-0.7**
WR8				IAmb		IAmb	13 49 46.6		
	comp=Z,4.9nm,1.4s								
WRAB	**Tennant Creek**	**42.58**	**266**	P		**P**	**13 49 03.7**		**-1.0**
WRAB				IAmb		IAmb	13 49 40.4		
	comp=Z,7.2nm,1.4s								
WRA	**Warramunga Arr**	**42.59**	**266**	P		**P**	**13 49 04.5**		**-0.3**
	comp=Z,2.3nm,0.5s,baz=97,slow=8.0,SNR=103								
	comp=Z,2.3nm,0.5s								
WRA	**Warramunga Arr**	**42.59**	**266**	P		**P**	**13 49 04.2**		**-0.5**
MTN	**Manton Dam**	**47.66**	**274**	P		**P**	**13 49 40.8**		**-2.9**
MTN				IAmb		IAmb	13 50 09.5		
	comp=Z,13nm,1.2s								
KNRA	**Kununurra**	**48.88**	**270**	P		**P**	**13 49 52.5**		**-0.3**
KNRA				IAmb		IAmb	13 50 04.5		
	comp=Z,23nm,1.5s								
FITZ	**Fitzroy Crossi**	**51.01**	**266**	P		**P**	**13 50 08.8**		**+0.4**
	comp=Z,1.5nm,0.9s,baz=101,slow=7.4,SNR=1.3								
	comp=Z,1.5nm,0.9s								
FITZ	**Fitzroy Crossi**	**51.01**	**266**	P		**P**	**13 50 09.1**		**+0.7**
QSPA	**South Pole Qui**	**66.03**	**180**	P		P	13 51 53.6		+4.4
	comp=Z,0.4nm,0.5s,baz=45,slow=1.4,SNR=7.2								
	comp=Z,0.4nm,0.5s								
QSPA	**South Pole Qui**	**66.03**	**180**	P		P	13 51 53.8		+4.6

*SOME **12** 13:43:57.9,44°.45N×83°.20E, h15km*
*NNC **12** 13:44:00.4±2.2,44°.53N×83°.31E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=23.7km s-min=9.4km az=122.0*

ISC 12 13:44:04.4±1.6,44°.64N±0°.09×82°.77E±0°.09, h10km, n21, σ1=9.51/28, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KTMS	**Ketmen**	**2.12**	**237**	*e*P		**Pn**	**13 44 40.0**		**+0.1**
	7.7nm,0.2s								
KTMS				*e*S		**Sb**	**13 45 10.5**		**+1.3**
	124nm,0.2s								
MK31	**Makanchi Array**	**2.18**	**351**	⇓Pn		**Pn**	**13 44 41.3**		**+0.5**
	2.5nm,0.3s,baz=159,slow=16,SNR=141								
MK31				⇓Lg		Lg	13 45 14.7		
	12nm,0.2s,baz=160,slow=24								
MAKZ	**Makanchi**	**2.24**	**346**	⇑Pn		**Pn**	**13 44 42.1**		**+0.5**
	6.2nm,0.5s								
MAKZ				⇑Lg		Lg	13 45 17.4		
	14nm,0.3s								
KAPS	**Kapalarasan**	**2.51**	**286**	Pg		**Pg**	**13 44 51.8**		**-0.7**
	2.0nm,0.1s								
KAPS				Lg		Lg	13 45 30.6		
	68nm,0.2s								
KNOS	**Konyrlen**	**2.59**	**265**	Pg		**Pb**	**13 44 51.6**		**+0.7**
	5.3nm,0.1s								
KNOS				Lg		Lg	13 45 30.4		
	52nm,0.5s								
PDGK	**Podgornoye**	**2.71**	**242**	⇑Pn		**Pn**	**13 44 49.6**		**+1.5**
	5.4nm,0.5s								
PDGK				⇑Sn		**Sb**	**13 45 27.0**		**+0.7**
	57nm,0.5s								
SHLS	**Shalkode**	**2.81**	**239**	*e*P		**Pn**	**13 44 47.5**		**-2.1**
	16nm,0.2s								
SHLS				*e*S		**Sn**	**13 45 23.4**		**-0.2**
	185nm,0.7s								
BLB	**Baldybastay**	**3.13**	**262**	Pg		**Pb**	**13 45 00.9**		**+0.8**
	15nm,0.1s								
BLB				Lg		Lg	13 45 46.1		
	60nm,0.5s								
ZSN	**Zaisan**	**3.17**	**27**	Pg		**Pn**	**13 44 55.4**		**+1.2**
	12nm,0.2s								
ZSN				Lg		Lg	13 45 36.8		
	42nm,0.6s								
ZSN	**Zaisan**	**3.17**	**27**	*e*P		**Pn**	**13 44 55.4**		**+1.2**
	12nm,0.2s								
ZSN				*e*S		**Sb**	**13 45 36.8**		**-2.5**
	42nm,0.6s								
SATY	**Saty**	**3.53**	**245**	Pg		**Pb**	**13 45 05.4**		**-1.7**
	2.8nm,0.2s								
SATY				Lg		Lg	13 45 54.0		
	36nm,0.1s								
ARXS	**Arharly**	**3.57**	**265**	*e*P		**Pb**	**13 45 08.2**		**+0.6**
ARXS				*e*S		**Sg**	**13 45 58.9**		**-0.1**
KOTS	**Kotyrbulak**	**4.32**	**253**	Pg		**Pb**	**13 45 21.7**		**+1.2**
	2.9nm,0.4s								
KOTS				Lg		Lg	13 46 21.6		
	58nm,0.5s								
KOTS	**Kotyrbulak**	**4.32**	**253**	*e*P		**Pb**	**13 45 21.8**		**+1.2**
	2.9nm,0.4s								
KOTS				*e*S		**Sg**	**13 46 21.6**		**-1.6**
	58nm,0.5s								
MDOK	**Medeo**	**4.39**	**252**	Pg		**Pb**	**13 45 22.4**		**+0.7**
	1.2nm,0.2s								
MDOK				Lg		Lg	13 46 23.1		
	14nm,0.6s								
KTBS	**Karatobe**	**4.48**	**260**	Pg		**Pb**	**13 45 25.0**		**+1.9**
	1.0nm,0.1s								
KTBS				Lg		Lg	13 46 27.7		
	18nm,0.6s								
IZV	**Izvestkoviy**	**4.74**	**252**	Pg		**Pb**	**13 45 29.8**		**+2.3**
IZV	**Izvestkoviy**	**4.74**	**252**	*e*P		**Pb**	**13 45 29.8**		**+2.3**
IZV				*e*S		**Sg**	**13 46 35.4**		**-1.0**
KST	**Kastek**	**5.18**	**254**	Pg		**Pb**	**13 45 37.1**		**+2.1**
	0.8nm,0.2s								
KST				Lg		Lg	13 46 48.4		
	14nm,0.9s								
KST	**Kastek**	**5.18**	**254**	*e*P		**Pb**	**13 45 37.1**		**+2.1**
	0.8nm,0.2s								
KST				*e*S		**Sg**	**13 46 48.4**		**-2.2**
	14nm,0.9s								
KRBS	**Karabastau**	**5.19**	**262**	Lg		Lg	13 46 48.7		
	2.1nm,0.5s								

*NEIC **12** 13:49:44.5±1.5, 6°.5S±0°.1×13°.6W±0°.1, h10km±1km, mb4.7/10, Error ellipse: s-maj=29.9km s-min=6.6km az=312.0*
*IDC **12** 13:49:44.6±1.1, 6°.54S×13°.27W, h0km, mb4.1/4, mbtmp4.1/5, ML3.6/1, Error ellipse: s-maj=88.4km s-min=21.2km az=122.0*

ISC 12 13:49:44.8±0.8, 6°.5S±0°.1×13°.5W±0°.2, h10km, n21, σ1=9.51/15, mb4.4/7, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
H10N2	**ASCENSION HYDR**	**1.66**	**216**	T		T	13 52 26.7		
	baz=68,slow=74,SNR=7131								
H10N1	**ASCENSION HYDR**	**1.67**	**215**	Pn		**Pn**	**13 50 14.9**		**+1.0**
H10N1				T		T	13 52 18.8		
	baz=68,slow=74,SNR=331								
ASCN	**Ascension**	**1.68**	**210**	Pn		**Pn**	**13 50 13.8**		**-0.4**
ASCN				Sn		**Sn**	**13 50 33.9**		**-2.0**
H10N3	**ASCENSION HYDR**	**1.68**	**216**	T		T	13 52 25.2		
	baz=68,slow=74,SNR=239								
H10S2	**ASCENSION HYDR**	**2.72**	**204**	T		T	13 53 14.8		
	baz=44,slow=74,SNR=281								
H10S3	**ASCENSION HYDR**	**2.72**	**205**	T		T	13 53 12.2		

	baz=176,slow=74,SNR=275								
DBIC	**Dimbokro**	**15.65**	**34**	Pn		**Pn**	**13 53 25.4**		**-0.2**
	0.2nm,0.3s,baz=218,slow=11,SNR=4.7								
	2.4nm,0.6s								
DBIC	**Dimbokro**	**15.65**	**34**	IAmb		IAmb	13 53 32.2		
	comp=Z,9.3nm,0.9s								
MBO	**M'Bour**	**21.00**	**351**	P		**P**	**13 54 27.0**		**-1.6**
MBO				IAmb		IAmb	13 54 42.6		
	comp=Z,79nm,1.0s								
TORD	**Torodi Ar. Bea**	**24.66**	**38**	P		**P**	**13 55 04.9**		**-1.1**
	comp=Z,3.4nm,0.4s,baz=216,slow=9.2,SNR=9.7								
	comp=Z,3.4nm,0.4s								
TORD	**Torodi Ar. Bea**	**24.66**	**38**	IAmb		IAmb	13 55 21.0		
	comp=Z,4.2nm,0.5s								
EDA	**Edea**	**25.73**	**67**	P		**P**	**13 55 14.4**		**-1.3**
EDA				IAmb		IAmb	13 55 29.0		
	comp=Z,12nm,0.6s								
BURAR	**Bucovina Array**	**63.76**	**28**	P		**P**	**14 00 16.5**		**-0.5**
KIEV	**Kiev**	**67.79**	**28**	P		**P**	**14 00 43.7**		**+0.9**
KIEV				IAmb		IAmb	14 00 45.3		
	comp=Z,20nm,1.6s								
AKASG	**Malin Array Be**	**67.81**	**28**	P		**P**	**14 00 44.3**		**+1.4**
	comp=Z,0.5nm,0.4s,baz=227,slow=7.1,SNR=6.5								
	comp=Z,0.5nm,0.4s								
AKASG	**Malin Array Be**	**67.81**	**28**	P		**P**	**14 00 42.1**		**-0.8**
AKASG				IAmb		IAmb	14 00 47.9		
	comp=Z,3.8nm,1.2s								
AKBB	**Malin Array Si**	**67.81**	**28**	P		**P**	**14 00 43.8**		**+0.9**
HFS	**Hagfors**	**69.79**	**14**	P		**P**	**14 00 57.9**		**+2.9**
	comp=Z,2.5nm,0.9s,baz=202,slow=7.2,SNR=1.2								
	comp=Z,2.5nm,0.9s								
FIA1	**FINESS Array S**	**74.35**	**19**	P		**P**	**14 01 21.6**		**-0.7**
QSPA	**South Pole Qui**	**83.64**	**180**	P		**P**	**14 02 15.3**		**+1.9**
	comp=Z,1.1nm,0.9s,baz=211,slow=2.9,SNR=5.7								
	comp=Z,1.1nm,0.9s								
QSPA	**South Pole Qui**	**83.64**	**180**	IAmb		IAmb	14 02 24.3		
	comp=Z,4.2nm,1.0s								

IDC 12 13:52:44.5±3.5, 31°.44S×177°.67W, h0km, mb3.4/2, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=81.3km s-min=38.3km az=112.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
URZ	**Urewera**	**8.04**	**211**	Pn		Pn	13 54 43.0		+0.4
	0.2nm,0.3s,baz=34,slow=3.6,SNR=6.9								
URZ				Sn		Sn	13 56 13.9		-0.2
	0.1nm,0.3s,baz=37,slow=20,SNR=1.8								
	2.4nm,0.6s								
ASAR	**Alice Springs**	**43.35**	**268**	P		P	14 00 48.8		+0.1
	0.5nm,0.9s,baz=101,slow=7.2,SNR=4.6								
	0.5nm,0.9s								
WRA	**Warramunga Arr**	**44.43**	**273**	P		P	14 00 57.1		-0.3
	0.5nm,0.8s,baz=115,slow=7.9,SNR=2.0								
	0.5nm,0.8s								
FINES	**FINESS Array B**	**146.22**	**340**	PKPbc		PKPdf	14 12 25.2		+0.1
	1.9nm,0.9s,baz=55,slow=6.7,SNR=1.7								

*SNET **12** 13:57:40.0±0.8, 13°.73N×89°.23W, h7km±1km, ML3.9*
*GCG **12** 13:57:40.2±1.3, 13°.72N×89°.20W, h6km±12km, MD4.5, ML4.3, MW3.7*
*CATAC **12** 13:57:40.7±0.1, 14°N±1°×89°.2W±0°.8, h3km, M4.2/30, MLv4.2/30, Error ellipse: s-maj=2.8km s-min=1.5km az=22.5, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.40; $M_{\theta\theta}$=0.10; $M_{\phi\phi}$=0.30; $M_{r\theta}$=-0.02; $M_{r\phi}$=-8.46; $M_{\theta\phi}$=1.89; Fault plane solution: M_w=8.67606×10^{14} NP1: ϕ_s=270.36483°, δ77.36427°, λ-179.33411°. NP2: ϕ_s=180.21916°, δ89.35024°, λ-12.63656°. Principal axes: T 8.8620, Plg8.4335°, Azm225.9907°; N -0.3847, Plg77.3470°, Azm357.3235°; P -8.4773, Plg9.3636°, Azm134.5897°; confirmed*
*NEIC **12** 13:57:41.6±1.8, 13°.74N±0°.04×89°.19W±0°.06, h10km±1km, mb3.8/1 Error ellipse: s-maj=11.6km s-min=4.5km az=244.0*

ISC 12 13:57:40.6±0.8, 13°.73N±0°.02×89°.21W±0°.02, h6km±4km, n115, σ1=0.87/124, 13C-12D, El Salvador

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

PACA	**Pacayal**	**0.90**	**107**	*e*P	**Pg**	**13 57 57.8**	**-0.1**
PACA	**Pacayal**	**0.90**	**107**	P	**Pg**	**13 57 57.8**	**-0.1**
LCY	**Lacayo**	**0.94**	**109**	⇓*i*P	**Pg**	**13 57 58.5**	**-0.2**
RANC	**El Ranchito**	**0.94**	**108**	⇑*e*P	**Pg**	**13 57 58.5**	**-0.2**
PCG5	**San Vicente Pa**	**1.24**	**293**	*e*P	**Pn**	**13 58 07.7**	**+3.1**
ESSJ	**San Jos, E**	**1.27**	**263**	*e*P	**Pg**	**13 58 09.6**	**+4.6**
LCND	**La Caada**	**1.34**	**108**	P	**Pn**	**13 58 05.3**	**-0.6**
FG16	**Alotenango, Sa**	**1.38**	**293**	*e*P	**Pg**	**13 58 11.1**	**+4.0**
CNCH	**Conchagua**	**1.41**	**108**	P	**Pn**	**13 58 06.5**	**-0.5**
CNCH	**Conchagua**	**1.41**	**108**	S	**Sg**	**13 58 26.6**	**+0.6**
ESSG	**Sabana Grande**	**1.71**	**293**	*e*P	**Pn**	**13 58 11.3**	**+0.3**
POTN	**Potosi Cosigui**	**1.81**	**113**	P	**Pn**	**13 58 12.1**	**-0.1**
POTN				S	**Sn**	**13 58 36.2**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.90**	**80**	Pn	**Pn**	**13 58 12.9**	**-0.9**
TGUH					**Sb**	**13 58 40.6**	**+0.6**
YUSH	**Yuscaran**	**2.31**	**84**	P	**Pb**	**13 58 21.3**	**-1.4**
CRIN	**San Cristobal**	**2.33**	**116**	Pn	**Pn**	**13 58 21.0**	**+1.4**
CRIN	**San Cristobal**	**2.33**	**116**	P	**Pb**	**13 58 21.5**	**-1.7**
PKGN	**Cerro Pekin**	**2.41**	**116**	P	**Pn**	**13 58 22.0**	**+1.4**
PKGN				S	**Sn**	**13 58 51.0**	**+0.5**
RTAL	**Retalhuleu**	**2.54**	**288**	Pn	**Pn**	**13 58 23.5**	**+1.1**
POLN	**Al Sur del Vol**	**2.56**	**114**	P	**Pn**	**13 58 22.4**	**-0.3**
HERN	**Volcan Telica**	**2.57**	**115**	Pn	**Pn**	**13 58 22.4**	**-0.4**
HUEH	**Huehuetenango**	**2.73**	**306**	Pn	**Pn**	**13 58 25.6**	**+0.4**
CNGA	**Al SSO del Vol**	**2.73**	**116**	P	**Pn**	**13 58 26.3**	**+1.2**
CNGN	**Cerro Negro**	**2.73**	**116**	Pn	**Pn**	**13 58 25.3**	**+0.2**
CNGN	**Cerro Negro**	**2.73**	**116**	P	**Pn**	**13 58 26.0**	**+1.0**
MOM3	**MOM3**	**2.88**	**115**	P	**Pn**	**13 58 28.7**	**+1.5**
RCVN	**Varillal2**	**2.93**	**92**	P	**Pn**	**13 58 28.6**	**+0.7**
COPN	**Copaltepe**	**2.98**	**121**	P	**Pn**	**13 58 28.5**	**+0.1**
APQ2	**Apoyeque**	**3.19**	**118**	P	**Pn**	**13 58 32.2**	**+0.8**
PETF	**Flores**	**3.23**	**349**	Pn	**Pn**	**13 58 32.7**	**+0.8**
TISN	**Laguna Tiscapa**	**3.27**	**119**	P	**Pn**	**13 58 33.4**	**+1.0**
UNAN	**Cigeo UNAN**	**3.28**	**119**	P	**Pn**	**13 58 33.4**	**+0.8**
MGAN	**Managua**	**3.28**	**118**	Pn	**Pn**	**13 58 33.3**	**+0.6**
MATN	**Matagalpa**	**3.29**	**104**	P	**Pn**	**13 58 31.9**	**-0.9**
MATN				S	**Sb**	**13 59 19.9**	**0.0**
MAS3	**Al N del Volca**	**3.41**	**119**	P	**Pn**	**13 58 34.7**	**+0.4**
CCIG	**Comitan**	**3.80**	**312**	Pn	**Pn**	**13 58 40.9**	**+0.9**
SIUN	**Universidad Ur**	**4.31**	**90**	Pn	**Pn**	**13 58 46.8**	**+0.1**
ESPN	**Las Esperanzas**	**5.02**	**107**	Pn	**Pn**	**13 58 57.0**	**+0.5**
JUD3	**Juan Diaz 3**	**5.04**	**134**	Pn	**Pn**	**13 58 57.0**	**+0.2**
JTS	**Las Juntas de**	**5.38**	**129**	Pn	**Pn**	**13 59 01.4**	**-0.1**
TEIG	**Tepich**	**6.52**	**8**	Pn	**Pn**	**13 59 17.3**	**+0.2**
BRU2	**Volcan**	**8.05**	**127**	Pn	**Pn**	**13 59 37.8**	**-0.6**
TX31	**Lajitas Ar. Si**	**20.51**	**322**		**P**	**14 02 19.7**	**0.0**
TX31				IAmb	IAmb	14 02 25.8	
	comp=Z,5.7nm,1.1s						

*SNET **12** 14:01:22.0±1.0, 13°.70N×89°.23W, h6km±2km, ML3.0*
*CATAC **12** 14:01:22.5±0.7, 14°N±2°×8°.9W±°, h8km±3km, M3.2/7, MLv3.2/7, Error ellipse: s-maj=4.4km s-min=3.2km az=4.5, confirmed*
*GCG **12** 14:01:23.0±0.7, 13°.72N×89°.26W, h11km±5km, MD3.6, ML2.8*

ISC 12 14:01:22.7±0.9, **13°.72N**±0°.03×**89°.22W**±0°.02, **h9**km±4km, **n38**, σ0**956**/**43**, **3C-3D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UEES	**Universidad Ev**	**0.02**	**255**	*e*P	**Pg**	**14 01 24.6**	**+0.2**
UEES				*e*S	**Sg**	**14 01 25.6**	**0.0**
UEES	**Universidad Ev**	**0.02**	**255**	P	**Pg**	**14 01 24.6**	**+0.2**
UESS	**Universidad de**	**0.02**	**91**	*e*P	**Pg**	**14 01 24.7**	**+0.3**
UTEC	**Universidad Te**	**0.03**	**132**	P	**Pg**	**14 01 24.6**	**+0.1**
UTEC	**Universidad Te**	**0.03**	**132**	S	**Sg**	**14 01 25.2**	**+0.1**
PIC2	**El Picacho**	**0.04**	**307**	*e*P	**Pg**	**14 01 25.2**	**+0.5**
IGN	**Direccin Gen**	**0.05**	**97**	*e*P	**Pg**	**14 01 25.1**	**+0.4**
IGN	**Direccin Gen**	**0.05**	**97**	P	**Pg**	**14 01 25.1**	**+0.4**
IGN	**Direccin Gen**	**0.05**	**97**	S	**Sg**	**14 01 26.5**	**+0.5**
BOQS	**Boqueron**	**0.06**	**285**	⇓*i*P	**Pg**	**14 01 25.1**	**+0.3**
UDBS	**Universidad Do**	**0.07**	**94**	*e*P	**Pg**	**14 01 25.3**	**+0.5**
UDBS	**Universidad Do**	**0.07**	**94**	P	**Pg**	**14 01 25.3**	**+0.5**
UDBS	**Universidad Do**	**0.07**	**94**	S	**Sg**	**14 01 27.0**	**+0.7**
MAGS	**Ministerio de**	**0.07**	**240**	*e*P	**Pg**	**14 01 25.2**	**+0.3**
LOMA	**Loma Larga**	**0.09**	**146**	⇓*i*P	**Pg**	**14 01 25.4**	**+0.2**
LOMA	**Loma Larga**	**0.09**	**146**	P	**Pg**	**14 01 25.4**	**+0.2**
LFU	**La Fuente**	**0.11**	**75**	⇑*i*P	**Pg**	**14 01 26.2**	**+0.8**
PANCS	**Alcalda de**	**0.12**	**158**	*e*P	**Pg**	**14 01 25.5**	**+0.1**
PANCS	**Alcalda de**	**0.12**	**158**	S	**Sg**	**14 01 27.4**	**0.0**
PANCS	**Alcalda de**	**0.12**	**158**	P	**Pg**	**14 01 25.5**	**+0.1**
LBRS	**Las Brisas**	**0.18**	**84**	*e*P	**Pg**	**14 01 27.4**	**+0.9**
LFRS	**El Faro**	**0.18**	**121**	⇑*i*P	**Pg**	**14 01 27.2**	**+0.6**
LFRS				*e*S	**Sg**	**14 01 29.8**	**+0.5**
JAYA	**Jayaque - finc**	**0.23**	**253**	*e*P	**Pg**	**14 01 27.9**	**+0.5**
JAYA	**Jayaque - finc**	**0.23**	**253**	*i* P	**Pg**	**14 01 27.9**	**+0.5**
JAYA				*e*S	**Sg**	**14 01 31.1**	**+0.5**
JAYA	**Jayaque - finc**	**0.23**	**253**	P	**Pg**	**14 01 27.9**	**+0.5**
LALI	**Alcalda de L**	**0.25**	**202**	⇑*i*P	**Pg**	**14 01 28.4**	**+0.7**
LALI	**Alcalda de L**	**0.25**	**202**	*i* P	**Pg**	**14 01 28.4**	**+0.7**
LALI				*e*S	**Sg**	**14 01 32.4**	**+1.3**
LALI				IAML		14 01 32.7	
	comp=E,1μm,0.2s						
PAVA	**Las Pavas**	**0.28**	**91**	⇓*e*P	**Pb**	**14 01 29.3**	**-0.6**
PAVA	**Las Pavas**	**0.28**	**91**	P	**Pb**	**14 01 29.3**	**-0.6**
PAVA	**Las Pavas**	**0.28**	**91**	S	**Sb**	**14 01 33.8**	**-1.0**
LLGN	**La Laguna**	**0.52**	**32**	*e*P	**Pg**	**14 01 33.1**	**+0.4**
LLGN	**La Laguna**	**0.52**	**32**	P	**Pg**	**14 01 33.1**	**+0.4**
LLGN	**La Laguna**	**0.52**	**32**	S	**Sg**	**14 01 40.6**	**+1.0**
NUBE	**Las Nubes**	**0.57**	**289**	*e*P	**Pg**	**14 01 34.2**	**+0.5**
NUBE	**Las Nubes**	**0.57**	**289**	*e*P	**Pg**	**14 01 34.2**	**+0.5**
NUBE				*e*S	**Sb**	**14 01 42.4**	**-0.8**
MTO3	**Montecristo**	**0.69**	**349**	*e*P	**Pg**	**14 01 36.2**	**+0.2**
MTO3	**Montecristo**	**0.69**	**349**	*e*P	**Pg**	**14 01 36.2**	**+0.2**
APG	**El Apazote**	**1.75**	**317**	*e*P	**Pn**	**14 01 53.5**	**+0.1**

*NNC **12** 14:01:47.2±4.3, 37°.79N×69°.83E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=38.9km s-min=23.6km az=176.0*
*MOS **12** 14:01:48.0±1.2, 37°.80N×70°.02E, h16km, mb4.3/6, Error ellipse: s-maj=11.2km s-min=5.3km az=80.2*
*IDC **12** 14:01:48.9±1.6, 37°.89N×70°.35E, h0km, mb4.1/11, mbtmp4.0/17, ML3.3/5, MS3.8/3, Error ellipse: s-maj=27.7km s-min=11.8km az=150.0*
*NEIC **12** 14:01:49.6±1.0, 37°.79N±0°.05×69°.96E±0°.07, h10km±1km, mb4.3/9, Error ellipse: s-maj=10.0km s-min=7.7km az=136.0*

ISC 12 14:01:48.5±0.5, **37°.73N**±0°.05×**70°.11E**±0°.05, **h10**km, **n99**, σ2**905**/**98**, **mb4.0**/12, **MS3.4**/3, **8C-8D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**1.19**	**321**		**Pb**	**14 02 10.1**	**-1.2**
CHGR	**Chuyangaron**	**1.19**	**321**	PG	**Pb**	**14 02 10.1**	**-1.2**
GAR	**Garm**	**1.28**	**7**		**Pn**	**14 02 12.2**	**-0.3**
DRK	**Karamyk**	**2.19**	**37**		**Pb**	**14 02 27.8**	**-0.6**
DRK	**Karamyk**	**2.19**	**37**	PN	**Pb**	**14 02 27.8**	**-0.6**
KBL	**Kabul**	**3.30**	**196**		**Pn**	**14 02 41.8**	**+1.4**
KBL	**Kabul**	**3.30**	**196**	PN	**Pn**	**14 02 41.8**	**+1.4**
ARSB	**Arslanbob**	**4.22**	**31**		**Pn**	**14 02 53.8**	**+0.8**
ARSB	**Arslanbob**	**4.22**	**31**	PN	**Pn**	**14 02 53.8**	**+0.8**
IUG	**luzhnay**	**4.41**	**359**	Lg	Lg	14 04 11.0	
	612nm,0.8s						
KSH	**Kashi**	**4.92**	**67**	Pn	**Pn**	**14 02 59.6**	**-3.1**
KSH				Sn	**Sn**	**14 03 56.0**	**-3.7**
KSH				smax	smax		
	comp=N,200nm,0.8s						
KSH				smax	smax		
	comp=E,160nm,0.9s						
BRLS	**Borolday**	**5.30**	**358**	Pg	**Pb**	**14 03 19.6**	**-1.6**
	comp=E,4.4nm,0.4s						
BRLS				Lg	Lg	14 04 29.5	
	comp=E,164nm,0.7s						
KK31	**Karatay Array**	**5.37**	**3**		**Pn**	**14 03 09.0**	**+0.2**
KK31	**Karatay Array**	**5.37**	**3**	⇑Pn	**Pn**	**14 03 08.3**	**-0.4**
	comp=E,13nm,0.6s,baz=198,slow=14,SNR=51						
KK31				⇓Pg	**Pb**	**14 03 25.1**	**+2.6**
	comp=E,13nm,0.6s						
KK31				⇓Lg	Lg	14 04 36.8	
	comp=E,35nm,0.4s,baz=184,slow=25						
KK31	**Karatay Array**	**5.37**	**3**	PN	**Pn**	**14 03 09.0**	**+0.2**
KKAR	**Karatay Array**	**5.37**	**3**		**Pn**	**14 03 09.2**	**+0.4**
KKAR	**Karatay Array**	**5.37**	**3**	PN	**Pn**	**14 03 09.2**	**+0.4**
MRKS	**Merke**	**5.54**	**24**	Pg	**Pb**	**14 03 28.2**	**+2.8**
	comp=E,14nm,0.4s						
UCH	**Uchtor**	**5.62**	**36**	P	**Pn**	**14 03 13.9**	**+1.4**
	SNR=14						
EKS2	**Erkin-Say**	**5.67**	**29**	P	**Pn**	**14 03 15.9**	**+3.0**
	SNR=5.9						
AAK	**Ala-Archa**	**5.94**	**33**	Pn	**Pn**	**14 03 17.5**	**+0.8**
	comp=E,2.4nm,0.3s,baz=221,slow=6.4,SNR=28						
AAK				Pg	**Pb**	**14 03 33.4**	**+1.3**
	comp=E,4.0nm,0.3s,baz=248,slow=13,SNR=8.3						
AAK				Sn	**Sn**	**14 04 22.0**	**-2.8**
	comp=E,2.2nm,0.3s,baz=224,slow=1.9,SNR=3.9						
AAK				Lg	Lg	14 04 49.7	
	comp=E,2.8nm,0.3s,baz=151,slow=19,SNR=1.0						
	comp=E,5.1nm,0.3s						
AAK	**Ala-Archa**	**5.94**	**33**	P	**Pn**	**14 03 18.3**	**+1.6**
	SNR=14						
AAK	**Ala-Archa**	**5.94**	**33**	⇓Pn	**Pn**	**14 03 18.2**	**+1.5**
	comp=E,1.4nm,0.4s						
AAK				⇑Pg	**Pb**	**14 03 36.9**	**+4.7**
	comp=E,28nm,0.9s						
AAK				⇑Lg	Lg	14 04 57.4	
	comp=E,87nm,1.3s						
AAK	**Ala-Archa**	**5.94**	**33**	*ce*PN	**Pn**	**14 03 18.5**	**+1.9**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FRU1	**Bishkek**	**6.13**	**33**	Pn	**Pn**	**14 03 20.1**	**+0.8**
FRU1	**Bishkek**	**6.13**	**33**	PN	**Pn**	**14 03 20.1**	**+0.8**
CHMS	**Chumysh**	**6.34**	**32**	P	**Pn**	**14 03 23.2**	**+1.1**
	SNR=14						
USP	**Ospenovka**	**6.46**	**30**	P	**Pn**	**14 03 25.2**	**+1.5**
	SNR=5.1						
BOOM	**Boomskoye usch**	**6.52**	**41**		**Pn**	**14 03 25.9**	**+1.3**
BOOM	**Boomskoye usch**	**6.52**	**41**	PN	**Pn**	**14 03 26.0**	**+1.3**
TKM2	**Tokmak 2**	**6.66**	**37**	P	**Pn**	**14 03 28.4**	**+1.8**
	SNR=7.2						
ALCI	**Alchi Leh**	**6.72**	**119**	*e*P	**Pn**	**14 03 26.2**	**-1.4**
KST	**Kastek**	**6.93**	**38**	Pg	Pb	14 03 54.3	+5.2
	comp=Z,5.7nm,0.7s						
KST				Lg	Lg	14 05 29.4	
	comp=Z,25nm,0.9s						
TSSA	**Tissa**	**6.94**	**133**	*e*S	**Sn**	**14 04 49.0**	**-0.7**
TSSA				IAML		14 04 57.8	
	comp=E,95nm,0.6s						
TSSA				IAML		14 04 58.1	
	comp=N,83nm,0.8s						
KDJ	**Kajisay**	**6.98**	**49**	Pn	**Pn**	**14 03 32.6**	**+1.6**
KDJ	**Kajisay**	**6.98**	**49**	PN	**Pn**	**14 03 32.6**	**+1.6**
TARG	**Taragay, Kyrgy**	**7.14**	**54**		**Pn**	**14 03 34.6**	**+1.1**
TARG	**Taragay, Kyrgy**	**7.14**	**54**	PN	**Pn**	**14 03 34.6**	**+1.1**
MTBS	**Maitube**	**7.23**	**40**	Pg	**Pb**	**14 03 58.1**	**+4.0**
	comp=N,5.3nm,0.6s						
MTBS				Lg	Lg	14 05 35.9	
KRBS	**Karabastau**	**7.30**	**34**	Pg	Pb	14 04 02.3	+6.9
	comp=N,11nm,0.9s						
KRBS				Lg	Lg	14 05 42.6	
	comp=N,18nm,0.8s						
DHRM	**DHARAMSHALA**	**7.46**	**135**	*e*P	**Pn**	**14 03 37.5**	**-0.1**
DHRM				*e*S	**Sn**	**14 05 01.9**	**-0.5**
DHRM				IAML		14 05 10.2	
	comp=N,93nm,0.8s						
DHRM				IAML		14 05 15.3	
	comp=E,69nm,0.8s						
MDOK	**Medeo**	**7.57**	**42**	Pg	Pb	14 04 05.4	+5.3
	comp=E,4.1nm,0.9s						
MDOK				Lg	Lg	14 05 48.1	
	comp=E,18nm,0.7s						
BTLS	**Baital**	**7.88**	**21**	Pg	Pg	14 04 13.6	-5.7
	comp=E,13nm,1.3s						
SMLA	**Simla**	**8.79**	**136**	*e*P	**Pn**	**14 03 55.9**	**+0.2**
SMLA				*e*S	**Sn**	**14 05 35.5**	**+0.7**
SMLA				IAML		14 05 41.3	
	comp=E,48nm,1.5s						
SMLA				IAML		14 05 55.1	
	comp=N,42nm,0.7s						
JOSI	**Joshimath**	**10.60**	**130**	*e*S	**Sn**	**14 06 15.4**	**-4.2**
MK31	**Makanchi Array**	**12.77**	**41**	P	**Pn**	**14 04 50.7**	**+0.6**
	comp=N,2.3nm,0.7s,baz=229,slow=14,SNR=13						
MK31	**Makanchi Array**	**12.77**	**41**	*de*P	**Pn**	**14 04 49.6**	**-0.5**
MKAR	**Makanchi Array**	**12.77**	**41**	Pn	**Pn**	**14 04 49.2**	**-0.9**
	comp=N,0.1nm,0.3s,baz=232,slow=14,SNR=14						
MKAR				Lg	Lg	14 08 25.7	
	comp=N,0.1nm,0.3s,baz=218,slow=28,SNR=1.4						
	comp=N,2.3nm,0.8s						
MKAR	**Makanchi Array**	**12.77**	**41**		**Pn**	**14 04 48.6**	**-1.5**
MKAR	**Makanchi Array**	**12.77**	**41**	*i* P	**Pn**	**14 04 49.5**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AB31	**Akbulak array**	**13.66**	**331**		**Pn**	**14 04 58.9**	**-3.3**
AB31	**Akbulak array**	**13.66**	**331**	⇑P	**Pn**	**14 05 00.3**	**-1.9**
	comp=Z,2.4nm,0.8s,baz=151,slow=14,SNR=31						
AB31	**Akbulak array**	**13.66**	**331**	P	**Pn**	**14 05 00.3**	**-1.9**
KURBB	**Kurchatov Arra**	**14.22**	**22**	Pn	**Pn**	**14 05 06.3**	**-3.5**
	comp=Z,1.0nm,0.6s,baz=210,slow=12,SNR=4.5						
KURBB				Lg	Lg	14 09 11.5	
	comp=Z,0.1nm,0.3s,baz=208,slow=28,SNR=4.0						
KURK	**Kurchatov**	**14.33**	**22**		Pn	14 05 06.3	-5.0
KURK	**Kurchatov**	**14.33**	**22**	P	Pn	14 05 06.3	-5.0
WMQ	**Urumqi**	**14.63**	**60**	*e*P	**Pn**	**14 05 19.0**	**+3.4**
BVA0	**Borovoye Array**	**15.29**	**1**	P	**Pn**	**14 05 23.5**	**-0.9**
	comp=Z,5.5nm,1.3s,baz=180,slow=10.0,SNR=16						
BVA0	**Borovoye Array**	**15.29**	**1**	P	**Pn**	**14 05 23.5**	**-0.9**
BVAR	**Borovoye Array**	**15.29**	**1**	Pn	**Pn**	**14 05 21.2**	**-3.2**
	baz=163,slow=11,SNR=7.4						
BVAR				Lg	Lg	14 09 37.8	
	baz=165,slow=18						
	comp=Z,2.2nm,0.8s						
BORK	**Borovoye**	**15.32**	**0**	⇓*e*P	**Pn**	**14 05 22.2**	**-2.4**
BORK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKTO	**Aktyubinsk**	**15.36**	**330**	Pn	**Pn**	**14 05 24.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=137,slow=9.1,SNR=10.0						
AKTO				Sn	Sn	14 08 03.5	-12
	comp=Z,0.2nm,0.3s,baz=188,slow=17,SNR=2.7						
AKTO				Lg	Lg	14 09 52.5	
	comp=Z,0.2nm,0.3s,baz=223,slow=21,SNR=1.5						
	comp=Z,3.4nm,0.9s						
EVN	**Everest**	**17.07**	**120**		**Pn**	**14 05 45.2**	**-2.7**
DGZ	**Jazzator, Alta**	**17.27**	**41**	⇑*e*P	**Pn**	**14 05 46.3**	**-3.5**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZAA0	**Zalesovo Array**	**19.12**	**27**	P	**P**	**14 06 07.7**	**-3.7**
ZALV	**Zalesovo Beam**	**19.12**	**27**	P	**P**	**14 06 09.1**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=216,slow=11,SNR=18						
	comp=Z,2.8nm,0.4s						
ZALV	**Zalesovo Beam**	**19.12**	**27**	P	**P**	**14 06 07.2**	**-4.2**
ZALV	**Zalesovo Beam**	**19.12**	**27**	*i* P	**P**	**14 06 10.3**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ARTI	**Arti**	**20.25**	**341**	P	**P**	**14 06 23.9**	**+0.2**
	comp=Z,7.9nm,0.7s,baz=151,slow=7.3,SNR=15						
ARTI				LR	LR	14 14 05.2	
	comp=Z,197nm,21.7s,baz=326,slow=36						
	comp=Z,7.9nm,0.7s						
ARTI	**Arti**	**20.25**	**341**	P	**P**	**14 06 24.0**	**+0.2**
ARTI				IAmb	IAmb	14 06 26.8	
	comp=Z,11nm,0.7s						
ARTI	**Arti**	**20.25**	**341**	*d* P	**P**	**14 06 24.7**	**+1.0**
ARTI						14 06 41.1	
ARTI				SS	**SnSn**	**14 10 35.7**	**+7.7**
ARTI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	**Khabaz**	**21.42**	**295**	P	**P**	**14 06 40.5**	**+4.0**
	comp=Z,3.2nm,0.8s,baz=126,slow=9.5,SNR=8.3						
	comp=Z,3.2nm,0.8s						
BELG	**Belogornoye**	**21.49**	**320**	P	**P**	**14 06 38.2**	**+1.1**
	comp=Z,32nm,0.9s,baz=127,slow=9.4,SNR=6.5						
	comp=Z,32nm,0.9s						
BELG	**Belogornoye**	**21.49**	**320**	⇓*e*P	**P**	**14 06 37.0**	**-0.1**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	**Kislovodsk**	**21.60**	**295**	*e*P	**P**	**14 06 36.3**	**-2.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIRV	**Kirov**	**24.82**	**334**	⇑*e*P	**P**	**14 07 11.6**	**+1.0**
SONM	**Songino Array**	**28.24**	**57**	P	**P**	**14 07 42.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=263,slow=8.4,SNR=2.5						
SONM				LR	LR	14 19 05.3	
	comp=Z,110nm,20.9s,baz=18,slow=37						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**28.24**	**57**	IAmb	IAmb	14 07 51.0	
	comp=Z,3.5nm,1.5s						
HHC	**Hu-ho-hao-te**	**32.02**	**71**	*e*P	**P**	**14 08 17.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
NRIK	**Noril'sk**	**33.05**	**11**	P	**P**	**14 08 23.0**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=172,slow=5.8,SNR=3.5						
	comp=Z,1.8nm,0.6s						
NRIK	**Noril'sk**	**33.05**	**11**	P	**P**	**14 08 24.2**	**+0.5**
NRIK				IAmb	IAmb	14 08 26.4	
	comp=Z,6.7nm,1.4s						
NRIK	**Noril'sk**	**33.05**	**11**	P	**P**	**14 08 24.3**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
FINES	**FINESS Array B**	**36.07**	**325**	P	**P**	**14 08 50.9**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=134,slow=8.2,SNR=4.8						
	comp=Z,1.4nm,0.8s						
FINES	**FINESS Array B**	**36.07**	**325**	P	**P**	**14 08 50.3**	**+0.3**
ARCES	**ARCESS Array B**	**39.74**	**337**	P	**P**	**14 09 21.5**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=117,slow=9.4,SNR=7.7						
	comp=Z,2.3nm,0.8s						
ARCES	**ARCESS Array B**	**39.74**	**337**	P	**P**	**14 09 22.1**	**+1.2**
ARCES				IAmb	IAmb	14 09 37.4	
	comp=Z,7.2nm,1.2s						
ARCES	**ARCESS Array B**	**39.74**	**337**	P	**P**	**14 09 22.1**	**+1.2**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HFS	**Hagfors**	**41.66**	**321**	P	**P**	**14 09 37.4**	**+0.5**
	comp=Z,6.3nm,1.0s,baz=99,slow=13,SNR=4.9						
	comp=Z,6.3nm,1.0s						
NOA	**NORSAR Array B**	**42.97**	**322**	P	**P**	**14 09 48.5**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=96,slow=8.1,SNR=5.7						
	comp=Z,1.9nm,0.8s						
TIXI	**Tiksi**	**44.90**	**23**	P	**P**	**14 10 03.5**	**+0.7**
TIXI				IAmb	IAmb	14 10 05.2	
	comp=Z,4.2nm,0.8s						
TIXI	**Tiksi**	**44.90**	**23**	⇓*e*P	**P**	**14 10 02.3**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMBO	**Kilima Mbogo**	**49.16**	**226**	⇑*e*P	**P**	**14 10 37.1**	**+0.1**
ESDC	**Sonseca Array**	**56.26**	**297**	LR	LR	14 38 30.7	
	comp=Z,174nm,20.3s,baz=22,slow=39						
TORD	**Torodi Ar. Bea**	**65.05**	**268**	P	**P**	**14 12 33.2**	**+3.8**
	comp=Z,2.0nm,0.3s,baz=46,slow=8.3,SNR=1.7						
	comp=Z,2.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**65.05**	**268**	P	**P**	**14 12 29.1**	**-0.2**
A36M	**Sachs Harbour**	**70.04**	**5**	P	**P**	**14 13 01.1**	**+1.1**
IMAR	**Indian Mountai**	**71.21**	**17**	P	**P**	**14 13 09.4**	**+2.1**
ILAR	**Eielson Array**	**73.79**	**16**	P	**P**	**14 13 22.8**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=325,slow=5.5,SNR=6.6						
	comp=Z,0.5nm,0.8s						
SHEL	**Horse Pasture**	**88.86**	**249**	*i* P	**P**	**14 14 41.0**	**-2.3**

*IDC **12** 14:08:13.6±0.9, 28°.86N×139°.37E, h436km±31km, mb2.8/6, mbtmp3.6/10, Error ellipse: s-maj=85.3km s-min=12.6km az=67.0*

ISC 12 14:08:14.0±0.8, **28°.72N**±0°.10×**139°.4E**±0°.2, **h448**km, **n11**, σ1**933**/**14**, **mb3.1**/6, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.96**	**122**	P	**P**	**14 09 18.6**	**-2.1**
	39nm,0.4s,baz=6.5,slow=8.7,SNR=13						
JCJ				S	**S**	**14 10 14.1**	**-0.6**
	142nm,0.3s,baz=311,slow=23,SNR=24						
JHJ	**Hachijo jima 2**	**4.40**	**4**	P	**P**	**14 09 33.6**	**+1.1**
	68nm,0.8s,baz=236,slow=16,SNR=2.1						
JHJ				S	**S**	**14 10 38.0**	**+1.5**
	41nm,0.7s,baz=163,slow=19,SNR=1.3						
MJAR	**Matsushiro Arr**	**7.87**	**353**	P	**P**	**14 10 07.2**	**-0.6**
	0.5nm,0.4s,baz=153,slow=14,SNR=1.5						
KSRS	**Korea Array**	**12.96**	**315**	P	**P**	**14 11 02.7**	**-0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMS2	**Laimos Florina**	**0.17**	**269**	P	**Pg**	**14 27 30.9**	**-0.3**
LMS2				S	**Sg**	**14 27 33.5**	**-0.3**
NEST	**Nestorio**	**0.49**	**210**	Pg	**Pg**	**14 27 36.5**	**-0.4**
NEST				Sg	**Sg**	**14 27 44.3**	**+0.9**
NEST				AML	AML	14 27 45.7	
	50nm,0.3s						
NEST	**Nestorio**	**0.49**	**210**	P	**Pg**	**14 27 36.6**	**-0.4**
NEST				S	**Sg**	**14 27 43.7**	**+0.4**
NEST	**Nestorio**	**0.49**	**210**	P	**Pg**	**14 27 36.5**	**-0.4**
NEST				S	**Sg**	**14 27 43.9**	**+0.6**
KBN	**Korca**	**0.49**	**244**	Pg	**Pg**	**14 27 36.2**	**-0.8**
KBN				Sg	**Sg**	**14 27 43.6**	**+0.1**
KBN				AML	AML	14 27 44.0	
	15nm,0.4s						
KBN	**Korca**	**0.49**	**244**	P	**Pg**	**14 27 36.1**	**-0.8**
KBN				S	**Sg**	**14 27 43.5**	**0.0**
OHR	**Ohrid**	**0.51**	**303**	⇑*i*Pg	**Pg**	**14 27 37.1**	**-0.3**
OHR				*i* Sg	**Sg**	**14 27 45.0**	**+0.8**
OHR				*e*Lg	Lg	14 27 45.3	
	comp=N,4μm,0.7s						
OHR				*e*Lg	Lg	14 27 46.4	
	comp=E,2μm,0.3s						
NASA	**Naoussa**	**0.57**	**111**	P	**Pg**	**14 27 38.8**	**+0.3**
NASA				S	**Sg**	**14 27 46.5**	**+0.4**
KZN	**Kozani**	**0.61**	**150**	P	**Pg**	**14 27 39.3**	**0.0**
KZN				S	**Sg**	**14 27 48.7**	**+1.3**
KZN	**Kozani**	**0.61**	**150**	P	**Pg**	**14 27 39.1**	**-0.2**
KZN				S	**Sg**	**14 27 48.7**	**+1.3**
PENT	**Pentalofos**	**0.66**	**195**	P	**Pg**	**14 27 40.1**	**-0.2**
PENT	**Pentalofos**	**0.66**	**195**	P	**Pg**	**14 27 40.2**	**-0.1**
PENT				S	**Sg**	**14 27 49.7**	**+0.7**
VAY	**Valandovo**	**1.03**	**62**	⇑*i*Pg	**Pg**	**14 27 47.0**	**-0.3**
VAY				*i* Sg	**Sb**	**14 28 01.9**	**+1.0**
VAY				*e*Lg	Lg	14 28 05.4	
	comp=N,690nm,0.7s						
VAY				*e*Lg	Lg	14 28 06.0	
	comp=E,525nm,0.6s						
MSVA	**Metsovo**	**1.07**	**188**	P	**Pg**	**14 27 48.2**	**+0.1**
LIT	**Litokhoron**	**1.13**	**130**	P	**Pg**	**14 27 49.0**	**-0.2**
LIT				S	**Sn**	**14 28 05.6**	**+0.8**
LIT	**Litokhoron**	**1.13**	**130**	*i* Pg	**Pg**	**14 27 48.7**	**-0.4**
LIT				*i* Sg	**Sg**	**14 28 04.6**	**+0.7**
LIT	**Litokhoron**	**1.13**	**130**	P	**Pg**	**14 27 48.8**	**-0.3**
LIT				S	**Sg**	**14 28 04.3**	**+0.5**
SKO	**Skopje**	**1.14**	**3**	*i* Pg	**Pg**	**14 27 48.9**	**-0.4**
SKO				*i* Sg	**Sg**	**14 28 04.3**	**+0.3**
KNT	**Kendrikon**	**1.21**	**74**	P	**Pb**	**14 27 50.0**	**-0.3**
KNT	**Kendrikon**	**1.21**	**74**	*i* Pg	**Pb**	**14 27 50.3**	**0.0**
KNT				*i* Sg	**Sn**	**14 28 07.2**	**+0.6**
KNT	**Kendrikon**	**1.21**	**74**	P	**Pb**	**14 27 50.0**	**-0.3**
KNT				S	**Sb**	**14 28 05.8**	**-0.1**
THE	**Thessaloniki**	**1.23**	**99**	Pg	**Pn**	**14 27 50.4**	**-0.2**
THE				Sg	**Sb**	**14 28 07.1**	**+0.5**
THE				AML	AML	14 28 11.2	
	comp=E,1.4nm,0.7s						
THE				AML	AML	14 28 14.2	
	comp=E,1.1nm,0.4s						
THE	**Thessaloniki**	**1.23**	**99**	P	**Pn**	**14 27 50.5**	**-0.2**
THE	**Thessaloniki**	**1.23**	**99**	⇓*i*Pg	**Pn**	**14 27 50.5**	**-0.2**
THE				*i* Sg	**Sg**	**14 28 07.7**	**+0.6**
THE	**Thessaloniki**	**1.23**	**99**	P	**Pn**	**14 27 50.1**	**-0.5**
THE				S	**Sb**	**14 28 07.0**	**+0.4**
JAN	**Janina**	**1.24**	**199**	P	**Pn**	**14 27 51.0**	**+0.2**
JAN	**Janina**	**1.24**	**199**	P	**Pn**	**14 27 50.7**	**-0.1**
JAN				S	**Sn**	**14 28 08.7**	**+1.1**
TIR	**Tirane**	**1.24**	**295**	Pn	**Pn**	**14 27 50.0**	**-0.7**
TIR				Sn	**Sb**	**14 28 08.2**	**+1.2**
TIR				AML	AML	14 28 21.2	
	comp=E,2.2nm,0.7s						
PRMD	**Pramanda**	**1.32**	**189**	P	**Pn**	**14 27 52.0**	**+0.1**
HORT	**Hortiatis**	**1.34**	**100**	P	**Pn**	**14 27 52.1**	**-0.1**
HORT	**Hortiatis**	**1.34**	**100**	P	**Pn**	**14 27 51.9**	**-0.3**
THL	**Klokotos Trika**	**1.36**	**158**	Pn	**Pn**	**14 27 52.2**	**-0.2**
THL				Sn	**Sn**	**14 28 11.8**	**+1.3**
THL	**Klokotos Trika**	**1.36**	**158**	P	**Pn**	**14 27 52.0**	**-0.4**
THL	**Klokotos Trika**	**1.36**	**158**	P	**Pn**	**14 27 52.6**	**+0.2**
THL				S	**Sn**	**14 28 11.7**	**+1.2**
GINA	**Giannouli**	**1.41**	**146**	P	**Pn**	**14 27 53.8**	**+0.8**
VLO	**Vlora**	**1.47**	**256**	Pn	**Pg**	**14 27 56.6**	**+1.0**
VLO				AML	AML	14 28 26.1	
	comp=E,7.3nm,0.6s						
TETR	**Tetrakomo, Epi**	**1.49**	**183**	P	**Pn**	**14 27 54.7**	**+0.4**
TETR	**Tetrakomo, Epi**	**1.49**	**183**	P	**Pn**	**14 27 55.1**	**+0.8**
TETR				S	**Sb**	**14 28 15.8**	**+1.6**
SOH	**Sokhos**	**1.51**	**90**	P	**Pn**	**14 27 54.7**	**+0.3**
SOH	**Sokhos**	**1.51**	**90**	⇓*i*Pn	**Pn**	**14 27 54.8**	**+0.3**
SOH				*i* Sn	**Sb**	**14 28 16.0**	**+1.3**
SOH	**Sokhos**	**1.51**	**90**	P	**Pn**	**14 27 54.5**	**0.0**
SOH				S	**Sb**	**14 28 15.7**	**+1.0**
IGT	**Igoumenitsa**	**1.52**	**212**	Pn	**Pn**	**14 27 56.2**	**+1.6**
IGT				Sn	**Sb**	**14 28 16.6**	**+1.5**
IGT	**Igoumenitsa**	**1.52**	**212**	P	**Pn**	**14 27 55.0**	**+0.3**
IGT	**Igoumenitsa**	**1.52**	**212**	P	**Pn**	**14 27 55.6**	**+1.0**
IGT				S	**Sn**	**14 28 15.6**	**+1.1**
KEK	**Kerkira**	**1.64**	**227**	Pn	**Pg**	**14 28 02.5**	**+3.6**
PLG	**Polygyros**	**1.65**	**106**	P	**Pn**	**14 27 56.6**	**+0.2**
KKB	**Krupnik**	**1.67**	**52**	P	**Pn**	**14 27 57.2**	**+0.7**
KKB	**Krupnik**	**1.67**	**52**	P	**Pn**	**14 27 57.3**	**+0.7**
KKB				S	**Sg**	**14 28 22.0**	**+1.0**
KKB	**Krupnik**	**1.67**	**52**	⇑*i*Pn	**Pn**	**14 27 57.4**	**+0.8**
KKB				*i* Sn	**Sn**	**14 28 19.2**	**+1.2**
SRS	**Serrai**	**1.71**	**80**	P	**Pn**	**14 27 57.2**	**-0.1**
SRS	**Serrai**	**1.71**	**80**	⇑*i*Pn	**Pn**	**14 27 57.3**	**+0.1**
SRS				*i* Sn	**Sg**	**14 28 25.6**	**+3.2**
SRS	**Serrai**	**1.71**	**80**	P	**Pn**	**14 27 57.1**	**-0.1**
BOSS	**Bosilegrad**	**1.86**	**26**	*e*Pn	**Pn**	**14 27 59.7**	**+0.5**
BOSS				*e*Sg	**Sg**	**14 28 30.0**	**+2.9**
MAKR	**Makrakomi, Fth**	**1.92**	**162**	P	**Pn**	**14 28 00.5**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.92**	**162**	P	**Pn**	**14 28 00.5**	**+0.4**
MAKR				S	**Sn**	**14 28 25.0**	**+0.8**
AMPL	**Ampelaki**	**1.92**	**184**	P	**Pn**	**14 28 01.9**	**+1.9**
MMB	**Musomishta**	**1.93**	**68**	P	**Pn**	**14 28 01.0**	**+0.7**
MMB	**Musomishta**	**1.93**	**68**	P	**Pn**	**14 28 01.3**	**+1.0**
MMB				S	**Sn**	**14 28 25.3**	**+0.6**
MMB	**Musomishta**	**1.93**	**68**	⇑*i*Pn	**Pn**	**14 28 01.1**	**+0.7**
MMB				*i* Sn	**Sn**	**14 28 26.3**	**+1.6**
EVR	**Evrytania**	**1.95**	**170**	P	**Pn**	**14 28 01.5**	**+0.9**
EVR	**Evrytania**	**1.95**	**170**	P	**Pn**	**14 28 01.8**	**+1.2**
AGG	**Agios Georgios**	**1.96**	**157**	P	**Pn**	**14 28 01.3**	**+0.7**
AGG	**Agios Georgios**	**1.96**	**157**	P	**Pn**	**14 28 01.1**	**+0.5**
AGG				S	**Sn**	**14 28 26.9**	**+1.7**
BARS	**Barje**	**2.01**	**10**	⇑*i*Pn	**Pn**	**14 28 02.0**	**+0.7**
BARS	**Barje**	**2.01**	**10**	*e*Pn	**Pn**	**14 28 01.8**	**+0.5**
BARS				*e*Sg	**Sg**	**14 28 33.8**	**+1.9**
OUR	**Ouranopolis**	**2.06**	**103**	P	**Pn**	**14 28 02.4**	**+0.5**
OUR	**Ouranopolis**	**2.06**	**103**	P	**Pn**	**14 28 01.8**	**-0.1**
TSLK	**Tsoukalades, L**	**2.08**	**195**	P	**Pn**	**14 28 03.2**	**+0.9**
LKD2	**Lefkada island**	**2.12**	**195**	Pn	**Pn**	**14 28 04.2**	**+1.4**
LKD2				Sn	**Sb**	**14 28 32.0**	**-0.1**
LKD2				AML	AML	14 28 42.5	
	comp=E,1.2nm,0.5s						
LKD2	**Lefkada island**	**2.12**	**195**	P	**Pn**	**14 28 03.9**	**+1.1**
LKD2	**Lefkada island**	**2.12**	**195**	P	**Pn**	**14 28 04.2**	**+1.4**
PVO	**Paravola**	**2.22**	**177**	P	**Pn**	**14 28 05.3**	**+1.1**
PDG	**Podgorica**	**2.24**	**316**	Pn	**Pn**	**14 28 06.9**	**+2.3**
PDG				Sn	**Sb**	**14 28 35.7**	**-0.1**
PDG	**Podgorica**	**2.24**	**316**	*e*Pg	**Pb**	**14 28 07.7**	**-0.3**
PDG				*e*Sg	**Sg**	**14 28 39.0**	**-0.5**
PLNA	**Plana**	**2.25**	**43**	P	**Pn**	**14 28 05.3**	**+0.6**
VTS	**Vitosha**	**2.26**	**38**	P	**Pn**	**14 28 05.3**	**+0.4**
VTS	**Vitosha**	**2.26**	**38**	P	**Pn**	**14 28 05.9**	**+0.9**
VTS	**Vitosha**	**2.26**	**38**	*e*Pn	**Pn**	**14 28 05.8**	**+0.8**
EVGI	**Lefkada island**	**2.28**	**194**	P	**Pn**	**14 28 06.5**	**+1.5**
ANX	**Ano Chora**	**2.28**	**169**	P	**Pn**	**14 28 06.1**	**+1.0**
ANX	**Ano Chora**	**2.28**	**169**	P	**Pn**	**14 28 06.5**	**+1.3**
AXAR	**Agios Charalam**	**2.30**	**154**	P	**Pn**	**14 28 06.6**	**+1.4**
KAVA	**Kavala**	**2.39**	**85**	P	**Pn**	**14 28 06.5**	**-0.1**
EFP	**Efpalio**	**2.44**	**170**	P	**Pn**	**14 28 08.1**	**+0.8**
ZAPS	**Zavoj**	**2.61**	**21**	*e*Pn	**Pn**	**14 28 10.5**	**+0.9**
ZAPS				*e*Sg	**Sg**	**14 28 53.7**	**+2.4**
SJES	**Sjenica**	**2.63**	**337**	*e*Pn	**Pn**	**14 28 11.1**	**+1.1**
SJES				*e*Sg	**Sg**	**14 28 54.6**	**+2.5**
RZN	**Rozhen**	**2.68**	**70**	P	**Pn**	**14 28 11.7**	**+0.9**
RZN	**Rozhen**	**2.68**	**70**	P	**Pn**	**14 28 12.5**	**+1.7**
BOVS	**Bovan**	**2.81**	**5**	⇑P	**Pn**	**14 28 12.6**	**+0.3**
BOVS	**Bovan**	**2.81**	**5**	*e*Pn	**Pn**	**14 28 12.6**	**+0.3**
KLV	**Kalavryta, Ach**	**2.85**	**167**	Pn	**Pn**	**14 28 14.0**	**+1.0**
PLD	**Plovdiv**	**2.86**	**62**	*e*Pn	**Pn**	**14 28 14.0**	**+1.0**
IVAS	**Ivanjica**	**2.88**	**342**	*e*Pn	**Pn**	**14 28 13.2**	**-0.2**
IVAS				*e*Sg	**Sg**	**14 28 59.4**	**-0.6**
TREB	**Trebinje**	**2.94**	**311**	*e*Pn	**Pb**	**14 28 18.7**	**-1.1**
ZAGS	**Zajecar**	**3.04**	**12**	*e*Pn	**Pn**	**14 28 16.0**	**+0.5**
MPEP	**Malo Peshtene**	**3.08**	**34**	P	**Pn**	**14 28 17.1**	**+1.1**
GRUS	**Gruza**	**3.09**	**351**	*e*Pn	**Pn**	**14 28 16.7**	**+0.6**
RDO	**Rodhopi**	**3.17**	**83**	Pn	**Pn**	**14 28 17.4**	**+0.1**
BORS2	**Bor- Borsko je**	**3.29**	**8**	*e*Pn	**Pn**	**14 28 17.9**	**-1.0**
STON	**Ston**	**3.41**	**308**	*e*Pn	**Pn**	**14 28 25.0**	**+4.5**
DIVS	**Divibare**	**3.41**	**343**	*e*Pn	**Pn**	**14 28 20.7**	**0.0**
TRUS	**Trudelj**	**3.46**	**348**	*e*Pn	**Pn**	**14 28 21.7**	**+0.5**
KUBS	**Kucevo**	**3.58**	**4**	*e*Pn	**Pn**	**14 28 21.5**	**-1.4**
TIP	**Timpagrande**	**3.91**	**246**	⇓P	**Pn**	**14 28 28.7**	**+1.3**
AVAS	**Avala Beograd**	**3.91**	**351**	*e*Pn	**Pn**	**14 28 27.1**	**-0.3**
EZN	**Ezine**	**3.92**	**103**	⇑P	**Pn**	**14 28 28.5**	**+0.9**
TEKS	**Tekeris**	**3.95**	**341**	*e*Pn	**Pn**	**14 28 28.1**	**+0.1**
ELND	**Elena**	**3.96**	**57**	⇓P	**Pn**	**14 28 29.3**	**+1.1**
HERR	**Herculane**	**4.12**	**10**	⇑P	**Pn**	**14 28 30.6**	**+0.3**
FRGS	**Fruska Gora**	**4.47**	**346**	*e*Pn	**Pn**	**14 28 34.8**	**-0.3**
GZR	**Gura Zlata**	**4.67**	**12**	⇓P	**Pn**	**14 28 38.3**	**+0.4**
BZS	**Buzias**	**4.78**	**2**	⇓P	**Pn**	**14 28 40.1**	**+0.7**
BZS	**Buzias**	**4.78**	**2**	*e*Pn	**Pn**	**14 28 39.9**	**+0.5**
LOT	**Lotru**	**4.93**	**20**	⇓P	**Pn**	**14 28 42.1**	**+0.5**
BLY	**Banja Luka**	**4.97**	**323**	*e*Pn	**Pn**	**14 28 44.4**	**+2.4**
ARR	**Arges**	**5.12**	**27**	⇓P	**Pn**	**14 28 44.8**	**+0.7**
VOIR		**5.33**	**29**	⇑P	**Pn**	**14 28 48.0**	**+0.9**
MORH	**Mrgy, Hungar**	**5.73**	**341**	⇑P	**Pn**	**14 28 52.9**	**+0.5**
MLR	**Muntele Rosu**	**5.73**	**34**	Pn	**Pn**	**14 28 56.0**	**+3.4**
	comp=E,2.1nm,0.3s,baz=212,slow=19,SNR=8.6						
MLR				Sn	**Sn**	**14 29 59.3**	**+0.9**
	comp=E,0.4nm,0.3s,baz=260,slow=18,SNR=1.2						
	comp=E,4.9nm,0.4s						
MLR	**Muntele Rosu**	**5.73**	**34**	⇑P	**Pn**	**14 28 53.2**	**+0.7**
MLR	**Muntele Rosu**	**5.73**	**34**	*e*Pn	**Pn**	**14 28 52.6**	**0.0**
NEHR	**Nehoiu**	**5.83**	**37**	⇑P	**Pn**	**14 28 55.0**	**+1.1**
IDI	**Anoyia**	**6.20**	**152**	Pn	**Pn**	**14 28 57.8**	**-1.1**
	comp=E,11nm,1.0s,baz=340,slow=15,SNR=1.4						
IDI				Sn	**Sn**	**14 30 08.0**	**-1.9**
	comp=E,0.5nm,0.3s,baz=279,slow=18,SNR=2.6						
PLOR	**Plostina**	**6.32**	**36**	⇑P	**Pn**	**14 29 01.6**	**+1.0**
VRI	**Vrincioaia**	**6.37**	**36**	⇑P	**Pn**	**14 29 02.2**	**+1.0**
BOJS	**Bojanci**	**6.46**	**318**	*e*Pn	**Pn**	**14 29 03.6**	**+1.2**
CEY	**Cerknica**	**7.04**	**316**	*e*Pn	**Pn**	**14 29 11.2**	**+0.7**
BRTR	**Keskin Array B**	**9.45**	**93**	LR	LR	14 33 32.5	
	comp=E,127nm,20.7s,baz=328,slow=38						
HFS	**Hagfors**	**19.90**	**349**	P	**P**	**14 31 58.2**	**-0.5**
	comp=E,0.2nm,0.3s,baz=161,slow=9.2,SNR=2.1						
	comp=E,2.3nm,0.7s						
FINES	**FINESS Array B**	**20.83**	**6**	P	**P**	**14 32 08.1**	**-0.8**
	comp=E,2.1nm,0.8s,baz=187,slow=9.6,SNR=4.3						
	comp=E,2.1nm,0.8s						
NOA	**NORSAR Array B**	**21.17**	**346**	P	**P**	**14 32 11.7**	**-0.8**
	comp=E,0.2nm,0.5s,baz=161,slow=10.0,SNR=1.3						
	comp=E,0.2nm,0.5s						
EKA	**Eskdalemuir Ar**	**21.72**	**320**	P	**P**	**14 32 17.4**	**-1.0**
	comp=E,0.3nm,0.4s,baz=113,slow=10,SNR=3.7						
	comp=E,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**28.84**	**3**	P	**P**	**14 33 23.7**	**-1.8**
	comp=E,2.2nm,1.0s,baz=194,slow=8.1,SNR=5.2						
	comp=E,2.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**32.52**	**218**	P	**P**	**14 33 57.5**	**-0.8**
	comp=E,1.5nm,0.4s,baz=16,slow=9.0,SNR=1.5						
BVAR	**Borovoye Array**	**34.95**	**53**	P	**P**	**14 34 18.4**	**-0.8**
	comp=E,0.3nm,0.6s,baz=272,slow=7.9,SNR=2.6						
	comp=E,0.3nm,0.6s						
MKAR	**Makanchi Array**	**43.40**	**61**	P	**P**	**14 35 29.4**	**-0.5**
	comp=E,0.3nm,0.7s,baz=276,slow=9.5,SNR=1.7						
	comp=E,0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**43.46**	**50**	P	**P**	**14 35 30.9**	**+0.6**
	comp=E,0.5nm,0.3s,baz=238,slow=8.5,SNR=3.6						
	comp=E,0.5nm,0.3s						
MDP	**Montagnes des**	**74.59**	**263**	LR	LR	15 06 32.2	
	comp=E,41nm,21.1s,baz=26,slow=32						
ASAR	**Alice Springs**	**121.78**	**95**	PKP	**PKPdf**	**14 46 19.3**	**-2.5**
	comp=E,0.5nm,1.0s,baz=304,slow=2.1,SNR=2.5						

DJA 12 14:33:48.1±0.4, 2°N±4°×12°3E±°, h10km, M3.9/12, mb4.0/2, MLv3.9/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.24**	**146**	P	Pn	14 34 11.1	-0.4
KMSI				S	Sb	14 34 27.2	-0.5
MRSI	**Marisa**	**1.76**	**230**	P	Pn	14 34 16.2	-2.4
LUWI	**Luwuk**	**2.69**	**191**	P	Pn	14 34 31.2	-0.2
APSI	**Ampana**	**2.99**	**213**	P	Pn	14 34 37.1	+1.4
MPSI	**Mapaga**	**3.62**	**250**	P	Pn	14 34 43.9	-0.4
SANI	**Sanana**	**4.53**	**143**	P	Pn	14 34 56.2	-0.6
TTSI	**Tana Toraja**	**5.78**	**217**	P	Pn	14 35 15.2	+1.2

*IDC **12** 14:34:04.8±0.9, 51.02N×93.45E, h0km, mb3.7/10, mbtmp3.6/15, ML3.1/5, Error ellipse: s-maj=20.1km s-min=13.4km az=5.0*
*ASRS **12** 14:34:06.1±0.2, 51.1N±2.2×9.3E±.1, h10km, MLh4.4/12, Error ellipse: s-maj=3.7km s-min=2.3km az=160.1, confirmed*
*MOS **12** 14:34:06.1±1.1, 50.89N×93.25E, h10km, mb4.2/5, Error ellipse: s-maj=7.3km s-min=6.7km az=96.8*
*NEIC **12** 14:34:07.4±0.7, 51.01N±0.06×93.3E±0.2, h10km±1km, mb4.3/13, Error ellipse: s-maj=17.9km s-min=6.2km az=116.0*

ISC 12 14:34:07.9±1.2, 50.96N±0.04×93.30E±0.02, h14km±8km, n96, σ1.933/114, mb3.9/15, 9C-6D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**1.04**	**44**	⇓Pg	**Pb**	**14 34 27.2**	**-0.6**
KZLR				Sg	**Sb**	**14 34 40.9**	**-0.3**
KZLR	**Kyzyl**	**1.04**	**44**	PG	**Pb**	**14 34 27.1**	**-0.6**
KZLR						14 34 40.9	
ARDR	**Aradan**	**1.63**	**3**	⇓Pg	**Pb**	**14 34 37.3**	**-0.5**
ARDR				Sg	**Sg**	**14 34 59.8**	**-0.5**
ARDR	**Aradan**	**1.63**	**3**	PN	**Pb**	**14 34 37.2**	**-0.5**
ARDR						14 34 59.7	
TEL	**Teeli**	**1.96**	**273**	⇑Pg	**Pg**	**14 34 46.4**	**+0.9**
TEL				Sg	**Sg**	**14 35 13.1**	**+2.2**
TEL	**Teeli**	**1.96**	**273**	PN	**Pg**	**14 34 46.3**	**+0.9**
TEL						14 35 13.1	
CERR	**Cheremushki**	**2.23**	**329**	Pg	**Pn**	**14 34 45.2**	**+0.8**
CERR				Sg	**Sb**	**14 35 14.3**	**-1.1**
CERR	**Cheremushki**	**2.23**	**329**	PN	**Pn**	**14 34 45.2**	**+0.8**
CERR						14 35 14.2	
DJO	**Djoy, Khakassi**	**2.24**	**326**	Pg	**Pn**	**14 34 45.7**	**+1.1**
DJO				Sg	**Sb**	**14 35 14.3**	**-1.3**
DJO	**Djoy, Khakassi**	**2.24**	**326**	PN	**Pn**	**14 34 45.6**	**+1.1**
DJO						14 35 14.2	
TDJR	**Todzha**	**2.27**	**49**	Pg	**Pb**	**14 34 47.6**	**-0.9**
TDJR				Sg	**Sb**	**14 35 17.4**	**+1.0**
TDJR	**Todzha**	**2.27**	**49**	PN	**Pb**	**14 34 47.6**	**-0.9**
TDJR						14 35 17.4	
KNGR	**Kungurtug, Tuv**	**2.70**	**96**	Pg	**Pb**	**14 34 54.1**	**-1.9**
KNGR				Sg	**Sg**	**14 35 35.2**	**+0.6**
KNGR	**Kungurtug, Tuv**	**2.70**	**96**	PN	**Pb**	**14 34 54.0**	**-1.9**
KNGR						14 35 35.1	
VEH	**Verkhnyaya Baz**	**2.94**	**323**	Pg	**Pn**	**14 34 55.2**	**+0.9**
VEH				Sg	**Sn**	**14 35 31.3**	**+1.8**
VEH	**Verkhnyaya Baz**	**2.94**	**323**	PN	**Pn**	**14 34 55.1**	**+0.9**
VEH						14 35 31.2	
CUR	**Chagan-Uzun**	**3.27**	**257**	Pn	**Pn**	**14 34 59.8**	**+1.0**
CUR				Pg	**Pg**	**14 35 09.8**	**-0.8**
CUR				Sg	**Sb**	**14 35 47.2**	**+1.7**
CUR	**Chagan-Uzun**	**3.27**	**257**	PN	**Pn**	**14 34 59.8**	**+1.0**
CUR						14 35 09.7	
CUR						14 35 47.2	
ULGR	**Ulagan, Altay**	**3.40**	**266**	Pn	**Pn**	**14 35 01.9**	**+1.3**
ULGR				Pg	**Pg**	**14 35 13.2**	**+0.1**
ULGR				Sg	**Sb**	**14 35 51.5**	**+2.3**
ULGR	**Ulagan, Altay**	**3.40**	**266**	PN	**Pn**	**14 35 01.9**	**+1.3**
ULGR						14 35 13.1	
ULGR						14 35 51.5	
AKAR	**Aktash**	**3.67**	**262**	Pn	**Pn**	**14 35 05.5**	**+1.2**
AKAR				Pg	**Pg**	**14 35 19.2**	**+1.1**
AKAR				Sg	**Sb**	**14 35 59.5**	**+2.6**
AKAR	**Aktash**	**3.67**	**262**	PN	**Pn**	**14 35 05.5**	**+1.2**
AKAR						14 35 19.2	
AKAR						14 35 59.5	
LUZB	**Luzhba, Kemero**	**3.83**	**317**	Pn	**Pn**	**14 35 07.1**	**+0.8**
LUZB				Sg	**Sb**	**14 36 01.7**	**+0.5**
LUZB	**Luzhba, Kemero**	**3.83**	**317**	PN	**Pn**	**14 35 07.1**	**+0.8**
LUZB						14 36 01.7	
ARTR	**Artybash**	**3.86**	**285**	PN	**Pn**	**14 35 06.2**	**-0.6**
ARTR						14 35 16.5	
ARTR						14 36 03.8	
DGZ	**Jazzator, Alta**	**3.96**	**254**	Pn	**Pn**	**14 35 09.9**	**+1.5**
DGZ				Pg	**Pg**	**14 35 22.3**	**-1.4**
DGZ				Sg	**Sg**	**14 36 11.8**	**-3.3**
DGZ	**Jazzator, Alta**	**3.96**	**254**	PN	**Pn**	**14 35 09.8**	**+1.5**
DGZ						14 35 22.3	
MINR	**Mina**	**3.99**	**7**	PN	**Pn**	**14 35 11.2**	**+2.7**
MINR						14 35 19.5	
MINR						14 36 11.2	
ORL	**Orlik**	**4.34**	**66**	*i* PN	**Pb**	**14 35 24.6**	**+0.6**
ORL				*i* S	**Sb**	**14 36 18.6**	**+2.3**
ELDR	**Elanda**	**4.55**	**276**	Pn	**Pn**	**14 35 17.7**	**+1.4**
ELDR				Sg	**Sg**	**14 36 29.4**	**-4.5**
ELDR	**Elanda**	**4.55**	**276**	PN	**Pn**	**14 35 17.7**	**+1.4**
ELT	**Eltsovka**	**4.93**	**301**	Pn	**Pn**	**14 35 21.1**	**-0.3**
ELT				Sg	**Sb**	**14 36 36.1**	**+3.3**
ELT	**Eltsovka**	**4.93**	**301**	PN	**Pn**	**14 35 21.1**	**-0.3**
ELT						14 36 36.1	
ZAA0	**Zalesovo Array**	**5.99**	**303**		**Pn**	**14 35 35.2**	**-0.8**
ZAA0	**Zalesovo Array**	**5.99**	**303**	⇓P	**Pb**	**14 35 53.7**	**+1.8**
	1.0nm,0.6s,baz=114,slow=15						
ZALV	**Zalesovo Beam**	**5.99**	**303**	Pn	**Pn**	**14 35 35.6**	**-0.4**
	0.8nm,0.3s,baz=99,slow=12,SNR=13						
ZALV				Pg	**Pb**	**14 35 53.8**	**+1.9**
	1.1nm,0.3s,baz=110,slow=11,SNR=5.6						
ZALV				Lg	Lg	14 37 05.6	
	2.7nm,0.3s,baz=115,slow=25,SNR=6.5						
	2.1nm,0.3s						
ZALV	**Zalesovo Beam**	**5.99**	**303**		**Pn**	**14 35 35.2**	**-0.8**
ZALV	**Zalesovo Beam**	**5.99**	**303**	*i* PN	**Pn**	**14 35 37.4**	**+1.5**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TLY	**Talaya**	**6.53**	**80**	⇑*e*PN	**Pn**	**14 35 44.2**	**+0.8**
WMQ	**Urumqi**	**8.09**	**210**	*e*P	**Pn**	**14 36 07.2**	**+2.4**
WMQ				smax	smax		
	comp=N,40nm,0.9s						
WMQ				smax	smax		
	comp=E,66nm,1.1s						
MK31	**Makanchi Array**	**8.37**	**244**	*d* iP	**Pn**	**14 36 09.5**	**+0.9**
MKAR	**Makanchi Array**	**8.37**	**244**	Pn	**Pn**	**14 36 09.4**	**+0.8**
	comp=E,0.9nm,0.3s,baz=49,slow=17,SNR=47						
MKAR				Lg	Lg	14 38 28.4	
	comp=E,1.6nm,0.3s,baz=71,slow=31,SNR=6.5						
	comp=E,1.4nm,0.4s						
MKAR	**Makanchi Array**	**8.37**	**244**		**Pn**	**14 36 08.2**	**-0.4**
MKAR	**Makanchi Array**	**8.37**	**244**	*i* P	**Pn**	**14 36 09.8**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.

WRA	**Warramunga Arr**	**79.27**	**141**	P	**P**	**14 46 11.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=336,slow=6.0,SNR=2.1						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**79.27**	**141**	P	**P**	**14 46 12.0**	**-0.6**
WRA	**Warramunga Arr**	**79.27**	**141**	*eP*	**P**	**14 46 12.0**	**-0.6**
ASAR	**Alice Springs**	**82.47**	**143**	P	**P**	**14 46 28.4**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=332,slow=4.7,SNR=4.8						
	comp=Z,0.3nm,0.7s						

*IDC **12** 14:48:49.2±1.7,36°.71N×141°.77E, h0km, mb3.3/3, mbtmp3.3/5, ML2.6/2, Error ellipse: s-maj=35.7km s-min=25.7km az=71.0*
*JMA **12** 14:48:51.8±0.2,36°.3N±0°.4×14°2E±°, h51km, MV2.8/32, FAR E OFF IBARAKI PREF*
ISC 12 14:48:47.8±1.4, 36°.33N±0°.05×141°.81E±0°.08, h19km, n19, σ1§39/17, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.99**	**271**	P	**Pg**	**14 49 08.8**	**+1.8**
JHYU				*eS*	**Sn**	**14 49 20.4**	**+0.4**
JHO	**Hitachi**	**1.04**	**286**	P	**Pg**	**14 49 09.3**	**+1.3**
JHU	**Itakohorinouch**	**1.10**	**251**	*eP*	**Pg**	**14 49 10.8**	**+1.7**
ONAJ	**Iwakimizuishiy**	**1.12**	**314**	P	**Pg**	**14 49 11.1**	**+1.5**
JFK	**Kawauchi**	**1.28**	**325**	*eP*	**Pg**	**14 49 13.3**	**+0.7**
JOTO	**OTAMA OYAMA**	**1.71**	**317**	P	**Pg**	**14 49 20.2**	**-0.4**
JOTO				*eS*	**Sg**	**14 49 42.4**	**-0.5**
JMM	**Marumori**	**1.74**	**332**	*eP*	**Pb**	**14 49 19.6**	**+0.5**
BSO1	**Boso 1**	**1.80**	**202**	P	**Pb**	**14 49 19.0**	**-0.8**
BSO3	**Boso 3**	**1.85**	**215**	*eP*	**Pb**	**14 49 20.4**	**-0.5**
JAG	**Ashikaga**	**1.90**	**274**	P	**Pb**	**14 49 22.0**	**+0.1**
JFY	**Yanaizu**	**2.00**	**303**	*eP*	**Pb**	**14 49 24.4**	**+0.8**
MJAR	**Matsushiro Arr**	**2.91**	**275**	Pn	**Pb**	**14 49 36.4**	**-2.7**
	0.3nm,0.3s,baz=86,slow=21,SNR=12						
MJAR				Sn	**Sb**	**14 50 12.5**	**-1.8**
	0.2nm,0.3s,baz=89,slow=17,SNR=4.4						
	2.0nm,0.5s						
ASAJ	**Asahikawa**	**7.81**	**4**	Pn	**Pn**	**14 50 39.0**	**-1.3**
	0.1nm,0.3s,baz=180,slow=20,SNR=1.8						
	6.2nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**27.52**	**120**	T	T	15 23 57.3	
	baz=314						
H11N1	**WAKE ISLAND Hy**	**27.52**	**120**	T	T	15 23 40.0	
	baz=314						
H11N3	**WAKE ISLAND Hy**	**27.53**	**120**	T	T	15 23 24.5	
	baz=314						
KURBB	**Kurchatov Arra**	**46.69**	**309**	P	**P**	**14 57 16.5**	**+1.4**
	0.2nm,0.4s,baz=80,slow=8.0,SNR=1.7						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**56.41**	**188**	P	P	14 58 35.3	+7.3
	0.4nm,0.8s,baz=4.4,slow=7.9,SNR=5.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**60.13**	**188**	P	P	14 59 01.0	+6.9
	0.2nm,0.8s,baz=20,slow=8.2,SNR=2.3						
	0.2nm,0.8s						

*DJA **12** 15:11:29.7±0.2,1°N±2°×12°6E±°, h10km, M4.4/22, mB5.0/9, mb4.7/21, MLv4.4/22, Mw(mB)4.3/9, MwMwp4.7/1, Mwp5.0/1*
*NEIC **12** 15:11:30.7±1.5,1°.49N±0°.08×126°.54E±0°.06, h35km±1km, mb4.7/36, Error ellipse: s-maj=14.4km s-min=9.2km az=212.0*
*IDC **12** 15:11:32.9±2.4,1°.41N×126°.38E, h61km±21km, mb4.0/24, mbtmp4.2/26, ML4.5/2, MS3.3/7, Error ellipse: s-maj=22.9km s-min=8.4km az=75.0*
ISC 12 15:11:32.0±0.3,1°.43N±0°.04×126°.50E±0°.05, h47km, n130, σ1§19/128, mb4.5/44, MS3.3/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.08**	**127**		**Pn**	**15 11 50.2**	**-0.6**
TNTI	**Ternate**	**1.08**	**127**	P	**Pn**	**15 11 50.8**	**0.0**
TNTI	**Ternate**	**1.08**	**127**	P	**Pn**	**15 11 50.2**	**-0.6**
TNTI				S	**Sn**	**15 12 06.8**	**+2.1**
SGSI	**Sangihe**	**2.44**	**337**	P	**Pn**	**15 12 09.4**	**0.0**
SGSI				S	**Sn**	**15 12 39.4**	**+1.4**
KMSI	**Cibinong**	**2.66**	**251**	P	**Pn**	**15 12 11.5**	**-0.9**
SANI	**Sanana**	**3.50**	**188**	P	**Pn**	**15 12 23.1**	**-0.8**
SANI	**Sanana**	**3.50**	**188**	P	**Pn**	**15 12 23.1**	**-0.8**
LUWI	**Luwuk**	**4.47**	**237**		**Pn**	**15 12 37.9**	**+0.7**
LUWI	**Luwuk**	**4.47**	**237**	P	**Pn**	**15 12 37.9**	**+0.7**
LUWI				S	**Sn**	**15 13 30.9**	**+3.0**
MRSI	**Marisa**	**4.66**	**258**	P	**Pn**	**15 12 40.4**	**+0.6**
NLAI	**Namlea**	**4.68**	**173**	P	**Pn**	**15 12 40.6**	**+0.5**
SWI	**Sorong**	**5.27**	**116**	P	**Pn**	**15 12 49.6**	**+1.3**
	0.1nm29nm,0.8s						
AAI	**Ambon**	**5.36**	**162**	P	**Pn**	**15 12 51.3**	**+1.9**
	0.2nm2µm42nm,0.6s						
APSI	**Ampana**	**5.38**	**244**	P	**Pn**	**15 12 51.4**	**+1.6**
DAV	**Davao City (W)**	**5.68**	**351**	LR	LR	15 15 16.8	
	comp=Z,185nm,20.3s,baz=110,slow=39						
TOLI2	**Tolitoli**	**5.73**	**267**		**Pn**	**15 12 52.7**	**-1.8**
TOLI2	**Tolitoli**	**5.73**	**267**	P	**Pn**	**15 12 52.7**	**-1.8**
KDI	**Kendari**	**6.61**	**216**	P	**Pn**	**15 13 07.5**	**+0.8**
MPSI	**Mapaga**	**6.69**	**261**	P	**Pn**	**15 13 08.2**	**+0.4**
	0.2nm564nm52nm,0.7s						
PCI	**Palu**	**7.06**	**251**	P	**Pn**	**15 13 12.2**	**-0.6**
	0.3nm66nm,0.9s						
FAKI	**Fak Fak**	**7.19**	**127**	P	**Pn**	**15 13 17.3**	**+2.7**
FAKI	**Fak Fak**	**7.19**	**127**	P	**Pn**	**15 13 17.7**	**+3.1**
	0.1nm39nm,0.8s						
BBSI	**Bau Bau**	**7.92**	**210**	P	**Pn**	**15 13 24.5**	**-0.1**
TTSI	**Tana Toraja**	**8.03**	**236**	P	**Pn**	**15 13 25.5**	**-0.5**
	0.2nm663nm52nm,0.7s						
SPSI	**Sidrap Palu**	**8.60**	**231**	P	**Pn**	**15 13 33.8**	**-0.2**
	32nm,0.4s						
BNSI	**Bone**	**8.63**	**228**	P	**Pn**	**15 13 34.5**	**+0.2**
	38nm,0.7s						
MYLDM	**Lahad Datu**	**8.81**	**295**		**Pn**	**15 13 36.6**	**-0.3**
MYLDM	**Lahad Datu**	**8.81**	**295**	P	**Pn**	**15 13 39.2**	**+2.4**
BKSI	**Bulukumba**	**9.25**	**223**	P	**Pn**	**15 13 43.0**	**+0.1**
	350nm31nm,0.6s						
KAPI	**Kappang**	**9.30**	**226**	P	**Pn**	**15 13 44.1**	**+0.6**
	4.6nm,0.3s,baz=118,slow=2.4,SNR=11						
	15nm,0.5s						
KAPI	**Kappang**	**9.30**	**226**		**Pn**	**15 13 44.7**	**+1.2**
EDFI	**Ende, Flores**	**11.19**	**205**	P	**Pn**	**15 14 09.1**	**-0.4**
	13nm,0.8s						
SOEI	**Soe**	**11.33**	**191**	P	**Pn**	**15 14 11.7**	**+0.2**
BATI	**Baumata**	**11.90**	**194**	LR	LR	15 19 29.7	
	comp=Z,264nm,18.2s,baz=36,slow=40						
TWSI	**Taliwang, Sumb**	**13.93**	**223**	P	**Pn**	**15 14 48.1**	**+1.3**
	40nm,0.9s						
SBUM	**Sibu**	**14.31**	**274**	Pn	**Pn**	**15 14 50.6**	**-1.4**
JAY	**Jayapura**	**14.73**	**105**	LR	LR	15 20 21.5	
	comp=Z,83nm,21.4s,baz=288,slow=36						
MTN	**Manton Dam**	**14.91**	**162**	Pn	**Pn**	**15 14 58.9**	**-1.0**
KSM	**Kuching**	**16.19**	**270**		**Pn**	**15 15 16.9**	**+0.5**
KNRA	**Kununurra**	**17.14**	**173**	Pn	**Pn**	**15 15 27.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.43**	**182**	P	**P**	**15 15 53.4**	**-1.1**
	1.0nm,0.3s,baz=9.0,slow=8.2,SNR=26						
	3.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.43**	**182**	P	**P**	**15 15 53.5**	**-1.1**
LEM	**Lembang**	**20.56**	**246**	LR	LR	15 25 32.6	
	comp=Z,102nm,18.9s,baz=154,slow=41						
TPRI	**Tanjung Pinang**	**21.98**	**269**	P	**P**	**15 16 22.6**	**+0.4**
WB0	**Warramunga Arr**	**22.45**	**160**		**P**	**15 16 26.1**	**-1.1**
WB0				IAmb	IAmb	15 16 28.6	
	comp=Z,26nm,0.7s						
COEN	**Coen**	**22.51**	**133**	P	**P**	**15 16 29.3**	**+1.4**
WRAB	**Tennant Creek**	**22.58**	**160**	P	**P**	**15 16 27.7**	**-0.9**
WRAB				IAmb	IAmb	15 16 30.1	
	comp=Z,22nm,0.7s						
WRAB	**Tennant Creek**	**22.58**	**160**	P	**P**	**15 16 27.9**	**-0.7**
WRA	**Warramunga Arr**	**22.59**	**160**	P	**P**	**15 16 27.4**	**-1.3**
	comp=Z,24nm,0.7s,baz=338,slow=10,SNR=80						
WRA				PcP	**PcP**	**15 20 20.4**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=301,slow=3.1,SNR=2.5						
WRA				S	**S**	**15 20 32.9**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=340,slow=16,SNR=7.0						
	comp=Z,24nm,0.7s						
WR8	**Warramunga Arr**	**22.66**	**160**		**P**	**15 16 28.2**	**-1.1**
WR8				IAmb	IAmb	15 16 30.8	
	comp=Z,19nm,0.9s						
PMG	**Port Moresby**	**23.22**	**118**	P	**P**	**15 16 36.2**	**+1.0**
	comp=Z,11nm,0.8s,baz=279,slow=16,SNR=3.0						
PMG				LR	LR	15 27 59.9	
	comp=Z,99nm,18.5s,baz=346,slow=42						
	comp=Z,11nm,0.8s						
PMG	**Port Moresby**	**23.22**	**118**	P	**P**	**15 16 34.0**	**-1.2**
PMG				IAmb	IAmb	15 16 39.4	
	comp=Z,20nm,1.1s						

MBWA	**Marble Bar**	**23.41**	**196**	P	**P**	**15 16 35.2**	**-1.7**
MBWA				IAmb	IAmb	15 16 47.2	
	comp=Z,18nm,1.1s						
MBWA	**Marble Bar**	**23.41**	**196**	P	**P**	**15 16 35.6**	**-1.3**
PSA00	**Pilbara Seismi**	**23.77**	**196**	P	**P**	**15 16 38.2**	**-2.2**
PSA00	**Pilbara Seismi**	**23.77**	**196**	P	**P**	**15 16 39.7**	**-0.6**
MNAI	**Manna**	**24.22**	**256**	P	**P**	**15 16 44.4**	**-0.2**
JOW	**Kunigami**	**25.31**	**4**	LR	LR	15 27 08.9	
	comp=Z,110nm,19.6s,baz=335,slow=37						
QIS	**Mount Isa**	**25.34**	**150**	P	**P**	**15 16 56.7**	**+2.0**
AS31	**Alice Springs**	**25.96**	**164**	P	**P**	**15 16 59.5**	**-0.9**
ASAR	**Alice Springs**	**25.96**	**164**	P	**P**	**15 17 00.3**	**-0.1**
	comp=Z,4.7nm,0.5s,baz=349,slow=13,SNR=70						
ASAR				PcP	**PcP**	**15 20 27.9**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=344,slow=2.3,SNR=4.8						
ASAR				S	**S**	**15 21 26.9**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=353,slow=20,SNR=6.0						
	comp=Z,4.7nm,0.5s						
ASAR	**Alice Springs**	**25.96**	**164**	P	**P**	**15 17 00.1**	**-0.2**
GIRL	**Giralia**	**26.75**	**206**	P	**P**	**15 17 08.1**	**+0.7**
MEEK	**Meekatharra**	**28.93**	**195**	P	**P**	**15 17 27.0**	**+0.2**
NJ2	**Nanjing**	**31.30**	**347**	*eP*	**P**	**15 17 49.4**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.89**	**304**	P	**P**	**15 17 50.6**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=130,slow=9.1,SNR=4.3						
	comp=Z,0.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.89**	**304**	P	**P**	**15 17 52.5**	**-0.7**
MORW	**Morawa**	**31.94**	**197**	P	**P**	**15 17 52.2**	**-1.2**
MORW				IAmb	IAmb	15 18 06.4	
	comp=Z,24nm,1.4s						
MORW	**Morawa**	**31.94**	**197**	P	**P**	**15 17 53.1**	**-0.3**
FORT	**Forrest**	**32.07**	**177**	P	**P**	**15 17 54.5**	**0.0**
FORT				IAmb	IAmb	15 17 56.4	
	comp=Z,6.9nm,0.7s						
INKA	**Innaminka**	**32.08**	**156**	P	**P**	**15 17 54.5**	**-0.1**
BLDU	**Ballidu**	**33.21**	**196**	P	**P**	**15 18 03.9**	**-0.6**
PZH	**PanZhiHua**	**34.46**	**318**	P	**P**	**15 18 17.2**	**+1.6**
MUN	**Mundaring**	**34.63**	**196**	P	**P**	**15 18 16.6**	**-0.2**
HNR	**Honiara**	**35.02**	**109**	LR	LR	15 33 42.1	
	comp=Z,36nm,18.2s,baz=212,slow=38						
BBOO	**Buckleboo**	**35.23**	**166**	P	**P**	**15 18 22.0**	**0.0**
BBOO				IAmb	IAmb	15 18 24.0	
	comp=Z,21nm,1.1s						
BBOO	**Buckleboo**	**35.23**	**166**	P	**P**	**15 18 22.4**	**+0.4**
NWAO	**Narrogin (SRO)**	**35.28**	**194**	P	**P**	**15 18 22.5**	**+0.1**
NWAO				IAmb	IAmb	15 19 06.0	
	comp=Z,38nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.28**	**194**	P	**P**	**15 18 22.3**	**-0.1**
KSRS	**Korea Array**	**35.87**	**2**	P	**P**	**15 18 26.5**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=187,slow=8.6,SNR=2.2						
	comp=Z,0.5nm,0.7s						
STKA	**Stephens Creek**	**36.09**	**158**	P	**P**	**15 18 29.0**	**-0.3**
	comp=Z,4.1nm,0.6s,baz=338,slow=6.6,SNR=10						
	comp=Z,4.1nm,0.6s						
STKA	**Stephens Creek**	**36.09**	**158**	P	**P**	**15 18 29.1**	**-0.3**
STKA	**Stephens Creek**	**36.09**	**158**	P	**P**	**15 18 30.3**	**+1.0**
MJAR	**Matsushiro Arr**	**36.58**	**16**	P	**P**	**15 18 32.9**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=187,slow=11,SNR=5.5						
	comp=Z,1.0nm,0.5s						
HTT	**Hallett**	**36.60**	**162**	P	**P**	**15 18 35.5**	**+1.7**
CMSA	**Cobar Meteorol**	**37.51**	**153**	P	**P**	**15 18 42.3**	**+0.8**
LZH	**Lanzhou**	**40.38**	**331**	*eP*	P	15 19 10.5	+4.9
LZH				sP	pP	15 19 16.5	-1.3
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				LR	LR		
	comp=N,610nm,12.7s						
LZH				LR	LR		
	comp=E,570nm,12.7s						
LZH				LR	LR		
	comp=Z,470nm,13.1s						
HHC	**Hu-ho-hao-te**	**41.51**	**343**	*eP*	**P**	**15 19 17.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,5.0s						
BTO	**Baotou**	**41.76**	**341**	*eP*	**P**	**15 19 20.1**	**+3.3**
BTO				pmax	pmax		
	comp=Z,16nm,0.5s						
BTO				pmax	pmax		
	comp=Z,410nm,5.5s						
CAN	**Canberra**	**42.18**	**152**	P	**P**	**15 19 20.6**	**+0.3**
CAN				IAmb	IAmb	15 19 36.7	
	comp=Z,61nm,1.5s						
CAN	**Canberra**	**42.18**	**152**	P	**P**	**15 19 21.1**	**+0.8**
TOO	**Toolangi**	**42.60**	**158**	P	**P**	**15 19 24.2**	**+0.6**
TOO				IAmb	IAmb	15 19 36.3	
	comp=Z,15nm,1.4s						
USRK	**Ussuriysk Ar.**	**42.86**	**6**	P	**P**	**15 19 26.0**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=179,slow=7.0,SNR=2.3						
	comp=Z,3.2nm,0.7s						
EVN	**Everest**	**46.20**	**308**	P	**P**	**15 19 52.2**	**-1.1**
EVN				IAmb	IAmb	15 19 58.2	
	comp=Z,6.7nm,1.5s						
HILR	**Hailar Array B**	**48.29**	**354**	P	**P**	**15 20 09.4**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=173,slow=10,SNR=2.7						
	comp=Z,1.1nm,0.4s						
SONM	**Songino Array**	**49.40**	**342**	P	**P**	**15 20 16.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=151,slow=9.2,SNR=3.0						
	comp=Z,0.4nm,0.3s						
SONM	**Songino Array**	**49.40**	**342**	IAmb	IAmb	15 20 17.3	
	comp=Z,2.0nm,1.1s						
WMQ	**Urumqi**	**54.48**	**326**	*eP*	**P**	**15 20 56.8**	**+1.8**
WMQ				LR	LR		
	comp=Z,140nm,11.7s						
PETK	**Petropavlovsk-**	**57.63**	**22**	P	**P**	**15 21 17.7**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=186,slow=3.9,SNR=5.5						
	comp=Z,2.0nm,0.8s						
PETK	**Petropavlovsk-**	**57.63**	**22**	P	**P**	**15 21 18.0**	**+0.8**
FOZ	**Fox Glacier**	**59.20**	**144**	P	**P**	**15 21 27.4**	**-1.0**
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**	**15 21 28.1**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=120,slow=7.7,SNR=26						
	comp=Z,1.3nm,0.3s						
MAKZ	**Makanchi**	**59.50**	**326**	P	**P**	**15 21 29.3**	**-1.1**
MAKZ				IAmb	IAmb	15 21 30.0	
	comp=Z,3.8nm,0.8s						
KSH	**Kashi**	**59.52**	**316**	P	**P**	**15 21 34.3**	**+3.5**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LBZ	**Lake Benmore**	**59.93**	**145**	P	**P**	**15 21 33.0**	**-0.4**
KHZ	**Kahutara**	**60.80**	**142**	P	**P**	**15 21 38.2**	**-1.1**
ZALV	**Zalesovo Beam**	**62.53**	**334**	P	**P**	**15 21 49.5**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=122,slow=11,SNR=2.0						
	comp=Z,0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**63.55**	**328**	P	**P**	**15 21 56.3**	**-1.3**
	comp=Z,2.8nm,0.6s,baz=131,slow=6.5,SNR=48						
	comp=Z,2.8nm,0.6s						
KURK	**Kurchatov**	**63.55**	**328**	P	**P**	**15 21 56.5**	**-1.1**
KURK				IAmb	IAmb	15 21 58.9	
	comp=Z,7.6nm,0.8s						
KKAR	**Karatay Array**	**64.76**	**318**	P	**P**	**15 22 05.2**	**-0.6**
BVAR	**Borovoye Array**	**69.12**	**328**	P	**P**	**15 22 32.3**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=111,slow=6.2,SNR=7.8						
	comp=Z,0.7nm,0.4s						
NRIK	**Noril'sk**	**72.59**	**346**	P	**P**	**15 22 53.5**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=153,slow=6.8,SNR=8.6						
	comp=Z,3.3nm,0.6s						
NRIK	**Noril'sk**	**72.59**	**346**	P	**P**	**15 22 54.1**	**+0.1**
NRIK				IAmb	IAmb	15 22 55.1	
	comp=Z,4.2nm,0.9s						
AB31	**Akbulak array**	**73.78**	**321**	P	**P**	**15 23 00.6**	**-0.8**
ABKAR	**Akbulak array**	**73.78**	**321**	P	**P**	**15 23 00.7**	**-0.7**
RAYN	**Ar Rayn**	**81.18**	**293**	P	**P**	**15 23 42.0**	**-1.3**
RAYN				IAmb	IAmb	15 23 47.7	
	comp=Z,3.6nm,1.1s						
VNDA	**Vanda**	**81.19**	**173**	P	**P**	**15 23 41.8**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=306,slow=3.5,SNR=9.2						
	comp=Z,1.8nm,0.7s						
VNDA	**Vanda**	**81.19**	**173**		**P**	**15 23 42.1**	**-0.1**
MAW	**Mawson**	**81.53**	**200**	P	**P**	**15 23 43.9**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=45,slow=2.9,SNR=1.1						
	comp=Z,0.6nm,0.4s						
KBZ	**Khabaz**	**84.39**	**314**	P	**P**	**15 23 58.5**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=100,slow=6.1,SNR=5.8						
	comp=Z,1.6nm,0.7s						
CNPM	**China Poot**	**84.84**	**30**	P	**P**	**15 24 01.3**	**-0.2**
KNK	**Knik Glacier**	**86.37**	**29**	P	**P**	**15 24 09.2**	**+0.1**
ILAR	**Eielson Array**	**87.26**	**25**	P	**P**	**15 24 12.2**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=250,slow=5.1,SNR=6.9						
	comp=Z,0.2nm,0.5s						
J25K	**Salcha River,**	**87.91**	**26**	P	**P**	**15 24 15.6**	**-0.9**
J25K				IAmb	IAmb	15 24 41.3	
	comp=Z,4.1nm,1.3s						
QSPA	**South Pole Qui**	**91.35**	**180**	P	**P**	**15 24 33.4**	**+0.8**
	comp=Z,1.8nm,1.2s,baz=342,slow=3.2,SNR=10						
	comp=Z,1.8nm,1.2s						

QSPA	**South Pole Qui**	**91.35**	**180**	IAmb	IAmb	15 24 39.9	
	comp=Z,4.3nm,1.4s						
ARCES	**ARCESS Array B**	**92.51**	**340**	P	**P**	**15 24 36.7**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=52,slow=4.8,SNR=4.4						
	comp=Z,2.3nm,0.8s						
SPITS	**Spitsbergen Ar**	**92.67**	**349**	P	**P**	**15 24 39.1**	**+0.6**
	comp=Z,9.2nm,1.1s,baz=79,slow=3.1,SNR=1.8						
	comp=Z,9.2nm,1.1s						
FINES	**FINESS Array B**	**93.74**	**332**	P	**P**	**15 24 41.8**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=57,slow=5.1,SNR=8.4						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**123.16**	**53**	PKP	**PKPdf**	**15 30 22.3**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=284,slow=7.7,SNR=3.4						

*IDC **12** 15:24:15.7±1.2,16°.64N×96°.16E, h0km, mb3.5/6, mbtmp3.5/7, ML3.8/1, MS3.2/3, Error ellipse: s-maj=20.5km s-min=18.1km az=32.0*
*NDI **12** 15:24:15.7±2.0,16°.55N×96°.70E, h10km, ML3.8, MW3.5*
*NEIC **12** 15:24:18.3±0.8,16°.8N±0°.1×96°.18E±0°.02, h10km±2km, mb3.8/3, Error ellipse: s-maj=19.4km s-min=3.4km az=181.0*
*BKK **12** 15:24:18.1±0.8,17°N±4°×9°6E±°, h6km, M4.3/13, Mjma4.0/13, ML4.6/12, MLv4.3/12*
ISC 12 15:24:17.6±1.1, 16°.75N±0°.09×96°.07E±0°.09, h10km, n28, σ1§70/27, mb3.4/7, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MHMT	**Maesarieng**	**2.27**	**51**	Pg	**Pb**	**15 25 00.3**	**+1.6**
MHMT				Pn	**Pn**	**15 24 54.6**	**-0.6**
CM13	**Chiang Mai Arr**	**3.17**	**58**	Pg	**Pb**	**15 25 16.5**	**+2.4**
CM13				Pn	**Pn**	**15 25 06.9**	**-0.7**
CM05	**Chiang Mai Arr**	**3.20**	**59**	Pn	**Pn**	**15 25 07.8**	**-0.1**
CM31	**Chiang Mai Arr**	**3.22**	**58**	Pn	**Pn**	**15 25 07.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**3.22**	**58**	Pn	**Pn**	**15 25 08.0**	**-0.3**
	2.5nm,0.3s,baz=239,slow=13,SNR=18						
CMAR				Pg	**Pb**	**15 25 16.1**	**+1.2**
	17nm,0.3s,baz=240,slow=19,SNR=94						
CMAR				Lg	Lg	15 25 57.0	
	16nm,0.3s,baz=234,slow=29,SNR=7.5						
CMAR				LR	LR	15 26 48.5	
	comp=Z,164nm,18.4s,baz=245,slow=48						
	4.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**3.22**	**58**	Pn	**Pn**	**15 25 07.8**	**-0.5**
CHTO	**Chiang Mai**	**3.42**	**53**	Pn	**Pn**	**15 25 10.4**	**-0.7**
UTHA	**Uthaitani**	**3.45**	**110**	P	**Pn**	**15 25 10.6**	**-0.9**
LAMP	**Lampang**	**3.83**	**62**	P	**Pn**	**15 25 16.5**	**-0.1**
CMAI	**Chiengmai2**	**4.24**	**41**	P	**Pn**	**15 25 22.9**	**+0.4**
KOHI	**KOHIMA**	**9.11**	**349**	*eP*	**Pn**	**15 26 31.7**	**+2.4**
KOHI				*eS*	**Sn**	**15 28 11.3**	**-0.8**
KOHI				IAML		15 28 17.9	
	comp=E,29nm,0.9s						
KOHI				IAML		15 28 18.6	
	comp=N,42nm,0.5s						
SHL	**Shillong**	**9.60**	**337**	Pn	**Pn**	**15 26 36.8**	**+0.7**
SHL	**Shillong**	**9.60**	**337**	*eP*	**Pn**	**15 26 38.5**	**+2.4**
TEZP	**TEZPUR**	**10.28**	**343**	*eP*	**Pn**	**15 26 46.9**	**+1.8**
ZIRO	**ZIRO**	**10.92**	**350**	*eS*	**Sn**	**15 28 50.7**	**-5.8**
EVN	**Everest**	**14.05**	**324**		**Pn**	**15 27 38.4**	**+1.0**
PALK	**Pallekele**	**17.42**	**340**	LR	LR	15 35 48.9	
	comp=N,62nm,18.7s,baz=341,slow=39						
LEM	**Lembang**	**26.06**	**153**	LR	LR	15 41 09.3	
	comp=N,118nm,20.0s,baz=164,slow=39						
MKAR	**Makanchi Array**	**32.06**	**342**	P	**P**	**15 30 44.9**	**+0.3**
	comp=N,0.3nm,0.7s,baz=159,slow=9.1,SNR=2.2						
	comp=N,0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**36.61**	**341**	P	**P**	**15 31 23.9**	**0.0**
	comp=N,0.3nm,0.5s,baz=156,slow=8.2,SNR=5.4						
	comp=N,0.3nm,0.5s						
KURK	**Kurchatov**	**36.66**	**341**	P	**P**	**15 31 23.9**	**-

n40,σ0ᵏ71/45, 1C, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIC2	**El Picacho**	**0.05**	**236**	*eP*	**Pb**	**15 47 42.3**	**+0.6**
UESS	**Universidad de**	**0.06**	**169**	*eP*	**Pb**	**15 47 41.8**	**+0.2**
UEES	**Universidad Ev**	**0.06**	**205**	*eP*	**Pg**	**15 47 41.3**	**-0.4**
UEES				*eS*	**Sg**	**15 47 42.8**	**-0.8**
UEES	**Universidad Ev**	**0.06**	**205**	P	**Pg**	**15 47 41.2**	**-0.5**
UEES	**Universidad Ev**	**0.06**	**205**	S	**Sg**	**15 47 43.3**	**-0.4**
IGN	**Direccin Gen**	**0.07**	**146**	*eP*	**Pb**	**15 47 42.4**	**+0.7**
IGN	**Direccin Gen**	**0.07**	**146**	P	**Pb**	**15 47 42.1**	**+0.4**
IGN	**Direccin Gen**	**0.07**	**146**	S	**Sg**	**15 47 44.1**	**+0.4**
UTEC	**Universidad Te**	**0.07**	**173**	P	**Pg**	**15 47 41.6**	**-0.1**
UTEC	**Universidad Te**	**0.07**	**173**	S	**Sg**	**15 47 43.0**	**-0.7**
BOQS	**Boqueron**	**0.08**	**239**	*eP*	**Pg**	**15 47 42.2**	**+0.2**
BOQS				*eS*	**Sg**	**15 47 44.0**	**-0.1**
UDBS	**Universidad Do**	**0.08**	**137**	*eP*	**Pb**	**15 47 42.6**	**+0.8**
UDBS	**Universidad Do**	**0.08**	**137**	P	**Pb**	**15 47 42.5**	**+0.8**
UDBS	**Universidad Do**	**0.08**	**137**	S	**Sg**	**15 47 44.2**	**+0.4**
MAGS	**Ministerio de**	**0.12**	**219**	*eP*	**Pg**	**15 47 42.2**	**0.0**
PANCS	**Alcalda de**	**0.17**	**169**	*eP*	**Pg**	**15 47 42.6**	**-0.2**
PANCS	**Alcalda de**	**0.17**	**169**	P	**Pg**	**15 47 42.6**	**-0.2**
PANCS	**Alcalda de**	**0.17**	**169**	S	**Sg**	**15 47 44.8**	**-0.8**
LBRS	**Las Brisas**	**0.17**	**103**	*eP*	**Pb**	**15 47 44.4**	**+0.6**
LFRS	**El Faro**	**0.21**	**136**	⇑*i*P	**Pb**	**15 47 44.3**	**-0.2**
LFRS				*eS*	**Sg**	**15 47 47.1**	**+0.3**
JAYA	**Jayaque - finc**	**0.26**	**243**	*eP*	**Pg**	**15 47 44.9**	**+0.5**
JAYA	**Jayaque - finc**	**0.26**	**243**	*eP*	**Pg**	**15 47 43.4**	**-1.1**
JAYA				*eS*	**Sg**	**15 47 48.5**	**+0.2**
JAYA	**Jayaque - finc**	**0.26**	**243**	P	**Pg**	**15 47 44.6**	**+0.1**
JAYA	**Jayaque - finc**	**0.26**	**243**	S	**Sg**	**15 47 49.0**	**+0.8**
PAVA	**Las Pavas**	**0.27**	**103**	*eP*	**Pb**	**15 47 46.4**	**+0.8**
PAVA	**Las Pavas**	**0.27**	**103**	P	**Pb**	**15 47 46.1**	**+0.5**
PAVA	**Las Pavas**	**0.27**	**103**	S	**Sg**	**15 47 50.9**	**+2.3**
LALI	**Alcalda de L**	**0.30**	**201**	*eP*	**Pg**	**15 47 45.5**	**+0.3**
LALI	**Alcalda de L**	**0.30**	**201**	*eP*	**Pg**	**15 47 45.5**	**+0.3**
LALI				*eS*	**Sg**	**15 47 49.5**	**+0.1**
LALI				IAML		15 47 50.0	
	comp=E,688nm,0.3s						
LALI	**Alcalda de L**	**0.30**	**201**	P	**Pg**	**15 47 45.4**	**+0.3**
SNJE	**San Jose**	**0.39**	**284**	*eP*	**Pb**	**15 47 48.3**	**+0.6**
LLGN	**La Laguna**	**0.46**	**34**	P	**Pn**	**15 47 49.5**	**-1.6**
NUBE	**Las Nubes**	**0.57**	**283**	*eP*	**Pb**	**15 47 51.3**	**+0.6**
NUBE	**Las Nubes**	**0.57**	**283**	P	**Pb**	**15 47 51.0**	**+0.4**
NUBE	**Las Nubes**	**0.57**	**283**	S	**Sb**	**15 47 59.8**	**+1.2**
MTO3	**Montecristo**	**0.64**	**347**	*eP*	**Pn**	**15 47 53.2**	**-0.5**
MTO3	**Montecristo**	**0.64**	**347**	*eP*	**Pn**	**15 47 53.2**	**-0.5**
MTO3	**Montecristo**	**0.64**	**347**	S	**Sn**	**15 48 02.9**	**-0.8**
MTO3	**Montecristo**	**0.64**	**347**	P	**Pn**	**15 47 53.2**	**-0.5**
APG	**El Apazote**	**1.72**	**315**	*eP*	**Pg**	**15 48 11.9**	**-0.1**

MOS ***12*** *15:51:06.6±1.0, 15°.17S×167°.43E, h117km, mb5.1/11, Error ellipse: s-maj=12.8km s-min=11.9km az=74.2*
BJI ***12*** *15:51:06.3, 15°.07S×167°.60E, h118km, mB5.1/9, mb4.7/40*
NEIC ***12*** *15:51:08.2±1.3, 15°.13S±0°.08×167°.7E±0°.1, h122km±2km, mb5.0/34, Error ellipse: s-maj=14.4km s-min=10.8km az=80.0*
IDC ***12*** *15:51:08.2±1.9, 15°.18S×167°.58E, h122km±15km, mb4.2/20, mbtmp4.6/22, MS3.6/8, Error ellipse: s-maj=19.1km s-min=10.6km az=84.0*
GCMT ***12*** *15:51:09.2±0.3, 15°.27S±0°.02×167°.40E±0°.02, h132km±3km, MW4.8/86, Moment Tensor Solution. s21,c22; s86,c128; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.10±.07; Mθθ0.34±.08; Mϕϕ-2.44±.08; Mrθ-0.49±.07; Mrϕ-0.16±.09; Mθϕ0.17±.09; Best double couple: Mo2.34500×10¹⁶ NP1:ϕs198.00000°, δ45.00000°, λ111.00000°. NP2: ϕs349.00000°, δ49.00000°, λ70.00000°. Principal axes: T 2.2370, Plg75.0000°, Azm190.0000°; N 0.2120, Plg15.0000°, Azm3.0000°; P -2.4540, Plg2.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 15:51:08.2±0.9, 15°.16S±0°.05×167°.66E±0°.07, h127km±7km, n179, σ1ᵏ33/180, mb4.8/58, 17C-7D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.53**	**237**		**Pn**	**15 51 26.7**	**-0.4**
MARNC	**Mare, Loyalty**	**6.30**	**177**	Pn	**Pn**	**15 52 38.0**	**-0.8**
DZM	**Mont Dzumac**	**6.97**	**189**	P	**Pn**	**15 52 48.3**	**+0.3**
	33nm,0.5s,baz=68,slow=9.3,SNR=114						
DZM				S	**Sn**	**15 54 05.3**	**-0.7**
	37nm,0.3s,baz=311,slow=22,SNR=12						
DZM				LR	LR	15 54 50.9	
	comp=Z,237nm,21.4s,baz=23,slow=32						
ONTNC	**Ouen Toro**	**7.21**	**189**		**Pn**	**15 52 51.4**	**+0.4**
PINNC	**Pines Island,**	**7.42**	**182**		**Pn**	**15 52 54.1**	**+0.3**
HNR	**Honiara**	**9.45**	**306**	P	**Pn**	**15 53 22.0**	**+0.7**
	71nm,0.6s,baz=151,slow=10,SNR=5.9						
HNR				S	**Sn**	**15 55 05.0**	**-0.7**
	34nm,0.6s,baz=164,slow=18,SNR=1.5						
HNR	**Honiara**	**9.45**	**306**		**Pn**	**15 53 20.8**	**-0.4**
EIDS	**Eidsvold**	**18.56**	**234**	Pn	**Pn**	**15 55 17.2**	**+0.1**
OUZ	**Omahuta**	**20.68**	**166**	P	Pn	15 55 40.5	-1.3
ARMA	**Armidale**	**21.16**	**221**	P	**P**	**15 55 44.1**	**+0.7**
WCZ	**Waipu Caves**	**21.54**	**165**	P	**P**	**15 55 49.8**	**+2.4**
GRZ	**Great Barrier**	**22.13**	**163**	P	**P**	**15 55 55.7**	**+2.1**
KUZ	**Kuaotunu**	**22.67**	**163**	P	**P**	**15 56 00.0**	**+1.2**
TOZ	**Tahuroa Road**	**23.53**	**164**	P	**P**	**15 56 07.7**	**+0.7**
TOZ	**Tahuroa Road**	**23.53**	**164**	P	**P**	**15 56 08.5**	**+1.6**
TLZ	**Tolley Road**	**24.11**	**165**	P	**P**	**15 56 14.0**	**+1.8**
HIZ	**Hauiti**	**24.12**	**166**		**P**	**15 56 12.3**	**+0.1**
HIZ				IAmb	IAmb	15 56 16.9	
	comp=Z,82nm,0.7s						
HIZ	**Hauiti**	**24.12**	**166**	P	**P**	**15 56 14.4**	**+2.2**
HAZ	**Te Kaha**	**24.23**	**160**	P	**P**	**15 56 14.9**	**+1.6**
URZ	**Urewera**	**24.48**	**162**	LR	LR	16 04 33.0	
	comp=Z,111nm,19.0s,baz=64,slow=33						
URZ	**Urewera**	**24.48**	**162**	P	**P**	**15 56 16.5**	**+1.0**
PUZ	**Puketiti**	**24.67**	**160**	P	**P**	**15 56 17.5**	**+0.2**
MWZ	**Matawai**	**24.68**	**161**	P	**P**	**15 56 18.1**	**+0.7**
RTZ	**Ruatahuna**	**24.77**	**162**		**P**	**15 56 18.9**	**+0.6**
RTZ	**Ruatahuna**	**24.77**	**162**	P	**P**	**15 56 19.0**	**+0.8**
NGZ	**Ngauruhoe**	**24.93**	**165**	P	**P**	**15 56 21.7**	**+1.9**
BKZ	**Black Stump Fm**	**25.15**	**164**		**P**	**15 56 22.2**	**+0.6**
BKZ				IAmb	IAmb	15 56 23.6	
	comp=Z,34nm,0.5s						
BKZ	**Black Stump Fm**	**25.15**	**164**	P	**P**	**15 56 22.6**	**+1.0**
TSZ	**Takapari Road**	**25.85**	**165**	P	**P**	**15 56 28.4**	**+0.5**
QRZ	**Quartz Range**	**25.92**	**172**	P	**P**	**15 56 30.3**	**+1.7**
PXZ	**Pawanui**	**26.05**	**164**	P	**P**	**15 56 29.7**	**-0.1**
CAN	**Canberra**	**26.14**	**216**	P	**P**	**15 56 30.9**	**+0.2**
CAN				IAmb	IAmb	15 56 38.7	
	comp=Z,131nm,2.0s						
CAN	**Canberra**	**26.14**	**216**	P	**P**	**15 56 30.9**	**+0.2**
CAN				pmax	pmax		
	comp=Z,131nm,2.0s						
MRZ	**Mangatainoka R**	**26.33**	**166**	P	**P**	**15 56 31.6**	**-0.6**
MRZ				IAmb	IAmb	15 56 38.0	
	comp=Z,48nm,1.2s						
MRZ	**Mangatainoka R**	**26.33**	**166**	P	**P**	**15 56 31.9**	**-0.3**
NNZ	**Nelson**	**26.44**	**170**	P	**P**	**15 56 35.2**	**+2.1**
BFZ	**Birch Farm**	**26.51**	**165**	P	**P**	**15 56 33.6**	**-0.2**
DSZ	**Denniston Nort**	**26.74**	**173**	P	**P**	**15 56 37.7**	**+1.8**
KHZ	**Kahutara**	**27.63**	**171**	P	**P**	**15 56 44.0**	**+0.2**
INZ	**Inchbonnie**	**27.66**	**174**	P	**P**	**15 56 44.9**	**+0.7**
INZ				IAmb	IAmb	15 56 45.9	
	comp=Z,62nm,1.0s						
INZ	**Inchbonnie**	**27.66**	**174**	P	**P**	**15 56 45.1**	**+1.0**
LTZ	**Lake Taylor**	**27.81**	**173**		**P**	**15 56 46.2**	**+0.7**
LTZ				IAmb	IAmb	15 56 46.9	
	comp=Z,37nm,0.6s						
LTZ	**Lake Taylor**	**27.81**	**173**	P	**P**	**15 56 46.2**	**+0.7**
INKA	**Innaminka**	**27.94**	**239**		**P**	**15 56 46.9**	**+0.2**
WVZ	**Waitaha Valley**	**27.95**	**175**	P	**P**	**15 56 48.2**	**+1.6**
GVZ	**Greta Valley S**	**28.10**	**172**	P	**P**	**15 56 46.8**	**-1.2**
GVZ	**Greta Valley S**	**28.10**	**172**	P	**P**	**15 56 48.1**	**+0.1**
OXZ	**Oxford**	**28.32**	**173**	P	**P**	**15 56 49.9**	**-0.1**
FOZ	**Fox Glacier**	**28.34**	**177**	P	**P**	**15 56 51.4**	**+1.3**
RPZ	**Rata Peaks**	**28.61**	**175**	P	**P**	**15 56 53.5**	**+1.0**
MQZ	**McQueen's Vall**	**28.77**	**172**	P	**P**	**15 56 54.6**	**+0.7**
JCZ	**Jackson Bay**	**28.84**	**178**	P	**P**	**15 56 56.7**	**+2.0**
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**15 56 55.9**	**-0.4**
	comp=Z,7.9nm,0.4s,baz=64,slow=9.2,SNR=38						
STKA				PcP	**PcP**	**16 00 02.3**	**+0.6**
	comp=Z,7.8nm,0.7s,baz=69,slow=3.2,SNR=11						
	comp=Z,7.9nm,0.4s						
STKA	**Stephens Creek**	**29.01**	**230**	P	**P**	**15 56 55.9**	**-0.4**
STKA	**Stephens Creek**	**29.01**	**230**	*d* P	**P**	**15 56 56.9**	**+0.6**
LBZ	**Lake Benmore**	**29.21**	**176**	P	**P**	**15 56 58.9**	**+1.0**
TMZ	**Timaru**	**29.27**	**175**	P	**P**	**15 56 58.8**	**+0.4**
TOO	**Toolangi**	**29.74**	**217**	P	**P**	**15 57 03.0**	**+0.3**
TOO	**Toolangi**	**29.74**	**217**	P	**P**	**15 57 03.0**	**+0.3**
TOO				pmax	pmax		
	comp=Z,25nm,1.7s						
EAZ	**Earnscleugh**	**30.01**	**178**	P	**P**	**15 57 05.5**	**+0.6**
TUZ	**Tuapeka**	**30.75**	**177**	P	**P**	**15 57 12.3**	**+1.0**
SYZ	**Scrubby Hill**	**31.31**	**178**	P	**P**	**15 57 17.7**	**+1.4**
WR8	**Warramunga Arr**	**31.94**	**257**	P	**P**	**15 57 20.2**	**-2.0**
WB0	**Warramunga Arr**	**32.03**	**257**	P	**P**	**15 57 21.1**	**-2.0**
WRAB	**Tennant Creek**	**32.08**	**257**	⇑*e*P	**P**	**15 57 22.4**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**32.09**	**257**	P	**P**	**15 57 21.8**	**-1.8**
	comp=Z,3.0nm,0.8s,baz=86,slow=9.0,SNR=20						
WRA				PcP	**PcP**	**16 00 10.5**	**+0.4**
	comp=Z,3.1nm,1.0s,baz=90,slow=2.8,SNR=8.8						
WRA				ScP	**ScP**	**16 03 43.0**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=82,slow=4.1,SNR=7.9						
WRA				PKiKP	**PKiKP**	**16 07 37.0**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=45,slow=0.6,SNR=2.5						
WRA				LR	LR	16 10 15.5	
	comp=Z,194nm,18.0s,baz=187,slow=36						
	comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**32.09**	**257**	P	**P**	**15 57 21.9**	**-1.7**
WRA					**PcP**	**16 00 10.3**	**+0.2**
WRA	**Warramunga Arr**	**32.09**	**257**	*i* P	**P**	**15 57 22.2**	**-1.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AS31	**Alice Springs**	**32.88**	**250**	P	**P**	**15 57 29.2**	**-1.2**
ASAR	**Alice Springs**	**32.88**	**250**	P	**P**	**15 57 29.1**	**-1.3**
	comp=Z,9.6nm,0.4s,baz=76,slow=9.2,SNR=420						
ASAR				PcP	**PcP**	**16 00 12.4**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=87,slow=2.7,SNR=7.8						
ASAR				ScP	**ScP**	**16 03 45.1**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=87,slow=3.5,SNR=9.7						
ASAR				PKiKP	**PKiKP**	**16 07 37.4**	**-1.3**
	comp=Z,0.6nm,1.1s,baz=90,slow=0.9,SNR=4.6						
ASAR				LR	LR	16 10 55.5	
	comp=Z,124nm,18.2s,baz=101,slow=36						
	comp=Z,9.6nm,0.4s						
BBOO	**Buckleboo**	**33.62**	**233**	P	**P**	**15 57 37.1**	**+0.3**
BBOO				IAmb	IAmb	15 57 37.5	
	comp=Z,24nm,0.7s						
GUMO	**Guam**	**36.39**	**321**	LR	LR	16 14 42.1	
	comp=Z,42nm,18.4s,baz=191,slow=39						
KNRA	**Kununurra**	**37.47**	**264**	P	**P**	**15 58 08.6**	**-1.2**
KNRA				IAmb	IAmb	15 58 09.7	
	comp=Z,13nm,0.9s						
FORT	**Forrest**	**39.41**	**240**	P	**P**	**15 58 25.6**	**-0.3**
FORT				IAmb	IAmb	15 58 26.5	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.31**	**260**	PcP	**PcP**	**16 00 34.8**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=82,slow=7.1,SNR=2.8						
FITZ	**Fitzroy Crossi**	**40.31**	**260**	P	**P**	**15 58 33.1**	**-0.4**
PPT2	**Papeete2**	**41.04**	**99**	*e*S	**S**	**16 04 37.9**	**-5.0**
	comp=Z,38nm,22.8s						
PPT2				*e*SS	**SS**	**16 07 46.4**	**-3.8**
	comp=Z,160nm,26.2s						
PPT2				*e*LR	LR	16 10 15.3	
	comp=Z,177nm,28.5s						
PPT2				*e*LR	LR	16 10 23.6	
	comp=Z,206nm,34.5s						
TBI	**Tubuai**	**41.17**	**108**	*e*SS	SS	16 07 44.1	-8.4
	comp=Z,543nm,30.5s						
TBI				*e*LR	LR	16 10 20.6	
	comp=Z,898nm,37.5s						
TBI				*e*LR	LR	16 10 28.7	
	comp=Z,486nm,23.8s						
TIAR	**Tiarei**	**41.26**	**99**	*e*P	**P**	**15 58 42.8**	**+1.5**
	comp=Z,164nm,1.0s						
TVO	**Taravao**	**41.34**	**100**	*e*P	**P**	**15 58 44.3**	**+2.4**
	comp=Z,31nm,1.0s						
PMOR	**Pomariorio Ree**	**42.85**	**96**	*e*P	**P**	**15 58 56.3**	**+2.1**
	comp=Z,171nm,1.1s						
PSA00	**Pilbara Seismi**	**45.69**	**255**	P	**P**	**15 59 17.0**	**+0.2**
PSA00				IAmb	IAmb	16 00 16.0	
	comp=Z,20nm,1.2s						
MBWA	**Marble Bar**	**45.80**	**255**	P	**P**	**15 59 17.1**	**-0.6**
MBWA				IAmb	IAmb	15 59 18.3	
	comp=Z,66nm,1.8s						
KAPI	**Kappang**	**48.14**	**277**	⇓*e*P	**P**	**15 59 36.2**	**+0.3**
KAPI				pmax	pmax		
	comp=Z,25nm,1.5s						
NWAO	**Narrogin (SRO)**	**48.86**	**239**	P	**P**	**15 59 40.4**	**-0.8**
NWAO	**Narrogin (SRO)**	**48.86**	**239**	P	**P**	**15 59 40.4**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,107nm,1.9s						
MPSI	**Mapaga**	**49.64**	**284**	P	**P**	**15 59 44.9**	**-2.5**
	comp=Z,17nm,1.0s						
TAOE	**Nuku Hiva Isla**	**51.33**	**89**	*e*P	**P**	**16 00 01.7**	**+1.5**
	comp=Z,147nm,1.1s						
MJAR	**Matsushiro Arr**	**58.46**	**332**	P	**P**	**16 00 50.3**	**-0.6**
	comp=Z,3.0nm,1.1s,baz=152,slow=5.9,SNR=4.1						
	comp=Z,3.0nm,1.1s						
JNU	**Nakatsue**	**59.49**	**324**	P	**P**	**16 00 58.1**	**0.0**
	comp=Z,4.0nm,0.7s,baz=153,slow=4.5,SNR=2.8						
	comp=Z,4.0nm,0.7s						
VNDA	**Vanda**	**62.45**	**181**	P	**P**	**16 01 17.5**	**+0.1**
	comp=Z,4.1nm,0.5s,baz=355,slow=8.0,SNR=43						
	comp=Z,4.1nm,0.5s						
VNDA	**Vanda**	**62.45**	**181**	P	**P**	**16 01 17.8**	**+0.3**
VNDA				IAmb	IAmb	16 01 19.4	
	comp=Z,43nm,2.0s						
VNDA	**Vanda**	**62.45**	**181**	P	**P**	**16 01 17.8**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,43nm,2.0s						
VNDA	**Vanda**	**62.45**	**181**	P	**P**	**16 01 17.9**	**+0.5**
SBA	**Scott Base**	**62.71**	**180**	P	**P**	**16 01 20.1**	**+0.9**
SBA				IAmb	IAmb	16 01 21.9	
	comp=Z,21nm,0.9s						
SBA	**Scott Base**	**62.71**	**180**	P	**P**	**16 01 20.1**	**+0.9**
SBA				pmax	pmax		
	comp=Z,21nm,0.9s						
CASY	**Casey**	**63.28**	**202**	P	**P**	**16 01 23.1**	**0.0**
KSRS	**Korea Array**	**64.31**	**326**	P	**P**	**16 01 30.4**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=135,slow=9.5,SNR=2.3						
	comp=Z,0.7nm,0.8s						
MNAI	**Manna**	**64.47**	**272**	P	**P**	**16 01 29.4**	**-2.5**
CCD	**Concordia, Ant**	**64.56**	**192**	P	**P**	**16 01 31.9**	**0.0**
CCD				PcP	**PcP**	**16 02 05.7**	**+0.8**
NJ2	**Nanjing**	**66.25**	**316**	*e*P	**P**	**16 01 44.7**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
USRK	**Ussuriysk Ar.**	**67.44**	**333**	P	**P**	**16 01 51.6**	**+1.4**
	comp=Z,2.9nm,0.6s,baz=132,slow=2.8,SNR=6.5						
	comp=Z,2.9nm,0.6s						
PETK	**Petropavlovsk-**	**68.52**	**354**	P	**P**	**16 01 58.0**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=166,slow=8.3,SNR=4.2						
PETK				LR	LR	16 27 52.2	
	comp=Z,33nm,19.5s,baz=347,slow=32						
	comp=Z,2.5nm,0.8s						
MDJ	**Mudanjiang**	**68.83**	**332**	P	**P**	**16 02 00.7**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
CN2	**Changchun**	**70.21**	**329**	*e*P	**P**	**16 02 11.0**	**+3.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNX	**BinXian**	**70.69**	**331**	⇓P	**P**	**16 02 11.0**	**+0.8**
BNX				pmax	pmax		
	comp=Z,12nm,0.7s						
GYA	**Guiyang**	**72.27**	**305**	⇓P	**P**	**16 02 21.2**	**+0.9**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN	**Xi'an**	**74.26**	**312**	⇓P	**P**	**16 02 28.2**	**-3.5**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**16 02 37.1**	**+2.2**
	comp=Z,27nm,0.9s,baz=7.9,slow=3.5,SNR=168						
	comp=Z,27nm,0.9s						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**16 02 37.7**	**+2.8**
QSPA				IAmb	IAmb	16 02 39.2	
	comp=Z,40nm,1.1s						
XLT	**XiLinHaoTe**	**75.27**	**324**	*e*P	**P**	**16 02 38.4**	**+1.0**
XLT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XLT				pmax	pmax		
	comp=Z,150nm,5.0s						
CMAR	**Chiang Mai Arr**	**75.47**	**294**	P	**P**	**16 02 40.2**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=129,slow=4.9,SNR=23						
	comp=Z,2.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**75.47**	**294**	P	**P**	**16 02 38.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**75.47**	**294**	P	**P**	**16 02 38.5**	**-0.5**
CHTO	**Chiang Mai**	**75.60**	**294**	P	**P**	**16 02 40.3**	**+0.6**
CHTO	**Chiang Mai**	**75.60**	**294**	P	**P**	**16 02 40.3**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**76.16**	**320**	*e*P	**P**	**16 02 43.6**	**+1.1**
HHC				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,100nm,4.9s						
PZH	**PanZhiHua**	**76.25**	**303**	P	**P**	**16 02 43.9**	**+0.5**
BTO	**Baotou**	**77.00**	**319**	*e*P	**P**	**16 02 50.1**	**+2.9**
BTO				S	**S**	**16 12 27.4**	**+2.0**
BTO				pmax	pmax		
	comp=Z,12nm,0.5s						
BTO				pmax	pmax		
	comp=Z,330nm,4.9s						
BTO				LR	LR		
	comp=Z,690nm,9.9s						
BTO				LR	LR		
	comp=Z,560nm,8.6s						
BTO				LR	LR		
	comp=Z,450nm,9.4s						
HILR	**Hailar Array B**	**77.04**	**330**	P	**P**	**16 02 47.6**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=132,slow=6.2,SNR=4.7						
	comp=Z,1.9nm,0.6s						
LZH	**Lanzhou**	**78.89**	**312**	*e*P	**P**	**16 02 56.3**	**-1.6**
LZH				sP	sP	16 03 41.0	-1.8
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
KDAK	**Kodiak Island**	**79.73**	**20**	LR	LR	16 30 50.7	
	comp=Z,59nm,20.6s,baz=39,slow=30						
MAW	**Mawson**	**81.63**	**202**	P	**P**	**16 03 12.2**	**+0.4**
	comp=Z,6.5nm,1.0s,baz=100,slow=7.9,SNR=7.4						
	comp=Z,6.5nm,1.0s						
YAK	**Yakutsk**	**82.55**	**343**	P	**P**	**16 03 17.2**	**+0.7**
	comp=Z,15nm,0.7s,baz=96,slow=3.4,SNR=7.8						
	comp=Z,15nm,0.7s						
YAK	**Yakutsk**	**82.55**	**343**	*e*P	**P**	**16 03 16.7**	**+0.2**
YAK				pmax	pmax		
	comp=Z,23nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
ULN	**Ulaanbaatar**	**82.70**	**324**	*ce*P	**P**	**16 03 18.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
SONM	**Songino Array**	**83.06**	**323**	P	**P**	**16 03 20.2**	**+0.4**
	comp=Z,6.6nm,1.0s,baz=139,slow=5.0,SNR=22						
	comp=Z,5.6nm,1.0s						
SONM	**Songino Array**	**83.06**	**323**	P	**P**	**16 03 18.6**	**-1.2**
SONM				IAmb	IAmb	16 03 21.9	
	comp=Z,18nm,1.4s						
GTA	**Gaotai**	**83.24**	**314**	P	**P**	**16 03 21.4**	**+0.6**
BELA	**Belgrano 2**	**86.27**	**175**	P	**P**	**16 03 34.4**	**-0.9**
BELA				IAmb	IAmb	16 03 35.5	
	comp=Z,19nm,1.2s						
ILAR	**Eielson Array**	**86.81**	**18**	P	**P**	**16 03 37.1**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=239,slow=5.2,SNR=13						
	comp=Z,0.7nm,0.6s						
PFO	**Pinyon Flats O**	**86.93**	**54**	LR	LR	16 37 49.2	
	comp=Z,59nm,18.1s,baz=19,slow=32						
NVAR	**Mina Array Bea**	**87.26**	**49**	P	**P**	**16 03 41.1**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=233,slow=7.4,SNR=5.7						
	comp=Z,0.8nm,0.7s						
SYO	**Syowa Base**	**88.41**	**196**	⇑*e*P	**P**	**16 03 45.2**	**-0.4**
SYO	**Syowa Base**	**88.41**	**196**	⇑*e*PcP	**P**	**16 03 46.7**	**+1.1**
EVN	**Everest**	**89.16**	**299**	P	**P**	**16 03 49.2**	**-1.5**
EVN				IAmb	IAmb	16 03 51.9	
	comp=Z,11nm,1.2s						
TIXI	**Tiksi**	**90.46**	**349**	⇓*e*P	**P**	**16 03 55.1**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,12nm,2.8s						
TROLL	**Troll, Antarti**	**92.47**	**185**	⇑P	**P**	**16 04 04.3**	**-0.3**
	comp=Z,511nm,0.5s						
SNAA	**Sanae**	**93.14**	**183**	⇑P	**P**	**16 04 06.8**	**-0.9**
	comp=Z,145nm,1.0s						
SNAA	**Sanae**	**93.14**	**183**	P	**P**	**16 04 06.5

*BJI **12** 16:02:40.3, 19°.82S×59°.57E, h7km, mB5.1/3, mb4.8/34*
*NEIC **12** 16:02:42.5±1.8, 20°.1S±0°.1×59°.87E±0°.10, h10km±1km, mb4.8/54, Error ellipse: s-maj=17.2km s-min=15.5km az=180.0*
*GCMT **12** 16:02:43.5±0.2, 20°.12S±0°.02×59°.83E±0°.01, h21km±1km, MW4.9/94, Moment Tensor Solution. s40,c53; s94,c127; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.22±.12; Mθθ=2.11±.10; Mφφ2.33±.10; Mre=0.36±.17; Mθφ1.91±.08; Mθr=0.12±.16; Best double couple: Mo2.95400×10^16 NP1:φs155.00000°, δ82.00000°, λ=178.00000°. NP2: φs65.00000°, δ88.00000°, λ=8.00000°. Principal axes: T 3.0560, Plg4.0000°, Azm111.0000°; N -0.2080, Plg82.0000°, Azm233.0000°; P -2.8530, Plg6.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 16:02:42.0±0.3, 20°.11S±0°.07×59°.81E±0°.06, h10km, n143, σ1§24/119, mb4.7/63, MS3.9/31, 3C-1D,
Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**11.91**	**273**		**Pn**	**16 05 31.9**	**-0.2**
OPO	**Ambohidratompo**	**12.01**	**275**	Pn	**Pn**	**16 05 33.3**	**-0.1**
	0.5nm,0.3s,baz=85,slow=12,SNR=16						
OPO				Sn	**Sn**	**16 07 41.3**	**-6.3**
	1.1nm,0.3s,baz=8.5,slow=18,SNR=4.7 18nm,0.7s						
VOI	**Vohitsoka**	**12.28**	**259**		**Pn**	**16 05 37.1**	**-0.1**
FOMA	**Nahampoana Res**	**12.80**	**245**	Pn	**Pn**	**16 05 43.9**	**-0.2**
H08S1	**Diego Garcia H**	**17.44**	**47**	T	T	16 23 00.8	
	baz=221,slow=75,SNR=142						
H08S2	**Diego Garcia H**	**17.45**	**47**	T	T	16 23 04.9	
	baz=221,slow=75,SNR=42						
H08S3	**Diego Garcia H**	**17.46**	**46**	T	T	16 23 05.5	
	baz=221,slow=75,SNR=32						
H04N2	**CROZET ISLANDS**	**26.81**	**192**	T	T	16 38 09.0	
	baz=18,slow=75,SNR=97						
H04N1	**CROZET ISLANDS**	**26.81**	**192**	T	T	16 38 09.3	
	baz=18,slow=75,SNR=148						
H04N3	**CROZET ISLANDS**	**26.82**	**192**	T	T	16 38 08.1	
	baz=18,slow=75,SNR=75						
KIBK	**Kibwezi**	**27.63**	**307**		**P**	**16 08 31.0**	**+0.9**
KMBO	**Kilima Mbogo**	**29.02**	**308**	P	**P**	**16 08 45.0**	**+2.3**
	1.5nm,0.3s,baz=127,slow=2.7,SNR=4.7						
KMBO				LR	LR	16 17 21.2	
	comp=Z,170nm,22.0s,baz=101,slow=30 1.5nm,0.3s						
MATP	**Matopo**	**29.35**	**264**	LR	LR	16 19 08.8	
	comp=Z,269nm,20.6s,baz=92,slow=34						
LSZ	**Lusaka**	**30.47**	**274**	LR	LR	16 20 38.4	
	comp=Z,153nm,18.2s,baz=113,slow=35						
LSZ	**Lusaka**	**30.47**	**274**	P	**P**	**16 08 56.7**	**+1.2**
LBTB	**Lobatse**	**31.91**	**255**	LR	LR	16 20 27.8	
	comp=Z,423nm,19.3s,baz=88,slow=33						
BOSA	**Boshof**	**32.50**	**248**	P	**P**	**16 09 14.0**	**+0.8**
	4.6nm,1.0s,baz=82,slow=5.8,SNR=6.0						
BOSA				LR	LR	16 20 41.5	
	comp=Z,196nm,18.1s,baz=86,slow=33 4.6nm,1.0s						
BOSA	**Boshof**	**32.50**	**248**	P	**P**	**16 09 13.9**	**+0.8**
BOSA				IAmb	IAmb	16 09 44.0	
	comp=Z,15nm,1.2s						
LODK	**Lodwar**	**33.51**	**312**		**P**	**16 09 23.0**	**+0.9**
PALK	**Pallekele**	**34.10**	**39**	LR	LR	16 19 53.6	
	comp=Z,144nm,21.8s,baz=214,slow=30						
FURI	**Furi**	**35.54**	**322**	LR	LR	16 22 02.2	
	comp=Z,194nm,19.8s,baz=138,slow=33						
ATD	**Arta Tunnel**	**35.59**	**331**	LR	LR	16 23 15.6	
	comp=Z,10nm,18.1s,baz=158,slow=35						
GRTLG	**Ghanzi**	**36.05**	**261**	P	**P**	**16 09 44.8**	**+0.7**
GRTLG				IAmb	IAmb	16 09 49.3	
	comp=Z,18nm,1.4s						
TSUM	**Tsumeb**	**39.70**	**264**	LR	LR	16 24 46.5	
	comp=Z,170nm,18.5s,baz=120,slow=33						
RAYN	**Ar Rayn**	**45.55**	**341**		**P**	**16 11 02.5**	**+0.3**
IPM	**Ipoh**	**47.29**	**63**	P	**P**	**16 11 16.1**	**-0.1**
IPM				IAmb	IAmb	16 11 49.5	
	comp=Z,6.2nm,0.9s						
KULM	**Kulim**	**47.42**	**62**		**P**	**16 11 16.8**	**-0.2**
MAW	**Mawson**	**47.52**	**178**	P	**P**	**16 11 16.9**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=338,slow=6.7,SNR=2.6						
MAW				LR	LR	16 25 38.2	
	comp=Z,83nm,20.1s,baz=344,slow=29 comp=Z,2.3nm,0.8s						
LEM	**Lembang**	**48.16**	**81**	P	**P**	**16 11 21.9**	**-1.1**
	comp=Z,5.5nm,0.4s,baz=261,slow=19,SNR=1.6						
LEM				LR	LR	16 26 47.1	
	comp=Z,111nm,21.8s,baz=213,slow=30 comp=Z,5.5nm,0.4s						
LEM	**Lembang**	**48.16**	**81**	P	**P**	**16 11 25.4**	**+2.4**
	comp=Z,29nm,1.5s						
MORW	**Morawa**	**51.51**	**112**	P	**P**	**16 11 46.7**	**-1.5**
BRDH	**Bariadhala**	**52.67**	**38**	LR	LR	16 30 52.4	
	comp=Z,142nm,21.8s,baz=209,slow=32						
CM31	**Chiang Mai Arr**	**54.24**	**48**	P	**P**	**16 12 09.0**	**+0.6**
CM31				IAmb	IAmb	16 12 10.0	
	comp=Z,8.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**54.24**	**48**	P	**P**	**16 12 08.2**	**-0.2**
	comp=Z,6.1nm,0.9s,baz=234,slow=7.8,SNR=44						
CMAR				LR	LR	16 31 03.9	
	comp=Z,61nm,22.0s,baz=225,slow=32 comp=Z,6.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**54.24**	**48**		**P**	**16 12 08.6**	**+0.2**
EVN	**Everest**	**54.46**	**30**		**P**	**16 12 09.1**	**-1.5**
CHTO	**Chiang Mai**	**54.49**	**47**	P	**P**	**16 12 09.5**	**-0.7**
SHL	**Shillong**	**55.07**	**36**	P	**P**	**16 12 14.2**	**-0.3**
SHL				IAmb	IAmb	16 12 24.3	
	comp=Z,14nm,1.1s						
MBWA	**Marble Bar**	**55.79**	**102**	P	**P**	**16 12 19.0**	**-0.7**
MBWA				IAmb	IAmb	16 12 20.1	
	comp=Z,17nm,0.9s						
PSA00	**Pilbara Seismi**	**55.82**	**103**	P	**P**	**16 12 18.8**	**-1.1**
PSA00	**Pilbara Seismi**	**55.82**	**103**	P	**P**	**16 12 18.6**	**-1.3**
PSA00				IAmb	IAmb	16 12 50.3	
	comp=Z,32nm,1.4s						
ASF	**Jabal al Asfar**	**56.42**	**337**	LR	LR	16 34 27.6	
	comp=Z,73nm,18.5s,baz=150,slow=34						
MMAI	**Mount Meron Ar**	**57.74**	**336**	P	**P**	**16 12 34.8**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=141,slow=7.4,SNR=2.7 comp=Z,1.9nm,0.7s						
LSA	**Lhasa**	**58.00**	**32**	P	**P**	**16 12 36.2**	**+0.6**
LSA				IAmb	IAmb	16 12 46.3	
	comp=Z,15nm,1.0s						
LSA	**Lhasa**	**58.00**	**32**	P	**P**	**16 12 32.1**	**-3.6**
LSA				pmax	pmax		
	comp=Z,12nm,1.0s						
CHGR	**Chuyangaron**	**59.11**	**9**	P	**P**	**16 12 43.8**	**+1.0**
CHGR				IAmb	IAmb	16 13 19.6	
	comp=Z,15nm,1.1s						
GAR	**Garm**	**59.62**	**9**	P	**P**	**16 12 46.6**	**+0.3**
SLVN	**Son La**	**59.63**	**49**	P	**P**	**16 12 46.8**	**+0.2**
SLVN				IAmb	IAmb	16 12 47.8	
	comp=Z,9.2nm,0.9s						
KAPI	**Kappang**	**60.10**	**84**	LR	LR	16 36 28.2	
	comp=Z,38nm,18.0s,baz=258,slow=34						
EDFI	**Ende, Flores**	**60.70**	**89**	P	**P**	**16 12 54.1**	**-0.1**
	comp=Z,16nm,1.2s						
KSH	**Kashi**	**61.21**	**14**	P	**P**	**16 12 54.6**	**-2.6**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GNI	**Garni**	**61.57**	**347**	LR	LR	16 38 37.5	
	comp=Z,179nm,20.7s,baz=340,slow=35						
PZH	**PanZhiHua**	**61.66**	**43**	P	**P**	**16 13 03.7**	**+3.2**
FORT	**Forrest**	**61.73**	**115**	P	**P**	**16 13 00.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**61.87**	**100**		**P**	**16 13 00.4**	**-1.6**
BATI	**Baumata**	**62.11**	**91**	LR	LR	16 34 41.2	
	comp=Z,139nm,19.6s,baz=274,slow=31						
SNAA	**Sanae**	**62.56**	**198**	⇑P	**P**	**16 13 06.5**	**+0.6**
	comp=Z,83nm,0.7s						
SNAA	**Sanae**	**62.56**	**198**	P	**P**	**16 13 05.7**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=76,slow=5.9,SNR=6.1 comp=Z,3.3nm,0.8s						
SNAA	**Sanae**	**62.56**	**198**		**P**	**16 13 06.3**	**+0.4**
SNAA				IAmb	IAmb	16 13 10.9	
	comp=Z,5.3nm,0.9s						
IUG	**Iuzhnay**	**62.66**	**9**	*e*P	**P**	**16 13 07.2**	**+0.3**
	comp=Z,13nm,1.5s						
CHM	**Chimkent**	**62.77**	**8**	*e*P	**P**	**16 13 08.0**	**+0.5**
SOEI	**Soe**	**62.81**	**91**	P	**P**	**16 13 08.8**	**+0.3**
BRLS	**Borolday**	**63.50**	**8**	*e*P	**P**	**16 13 10.5**	**-1.8**
DZA	**Taraz**	**63.58**	**9**	*e*P	**P**	**16 13 13.2**	**+0.4**
KKAR	**Karatay Array**	**63.66**	**9**	P	**P**	**16 13 14.0**	**+0.6**
VNA2	**Neumayer--Watz**	**63.74**	**200**	⇑P	**P**	**16 13 13.9**	**+0.4**
	comp=Z,6.4nm,0.8s,baz=73,slow=6.1						
TARG	**Taragay, Kyrgy**	**63.74**	**15**	P	**P**	**16 13 14.6**	**+0.2**
AAK	**Ala-Archa**	**63.88**	**12**	LR	LR	16 39 32.8	
	comp=Z,139nm,19.7s,baz=326,slow=35						
AAK	**Ala-Archa**	**63.88**	**12**	P	**P**	**16 13 15.3**	**+0.3**
AAK				IAmb	IAmb	16 13 29.3	
	comp=Z,4.4nm,0.8s						
KDJ	**Kajisay**	**63.98**	**14**	P	**P**	**16 13 15.6**	**0.0**
KDJ				IAmb	IAmb	16 13 16.9	
	comp=Z,14nm,1.6s						
BRTR	**Keskin Array B**	**64.34**	**338**	P	**P**	**16 13 18.4**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=156,slow=6.5,SNR=7.1 comp=Z,1.4nm,1.0s						
BR106	**Keskin Array S**	**64.36**	**338**	P	**P**	**16 13 18.1**	**-0.1**
	comp=Z,42nmcomp=Z,5.0nm,1.1s						
VNA3	**Neumayer Olymp**	**64.53**	**200**	⇑P	**P**	**16 13 19.0**	**+0.2**
	comp=Z,5.3nm,0.8s						
SGDS	**Sogindy**	**64.70**	**12**	*e*P	**P**	**16 13 20.4**	**+0.2**
MDOK	**Medeo**	**64.93**	**14**	*e*P	**P**	**16 13 22.1**	**+0.3**
GOMU	**GeErMu**	**65.06**	**31**	P	**P**	**16 13 23.8**	**+0.7**
GOMU				sP	pwP	16 13 29.0	-1.3
GOMU				PcP	**PcP**	**16 13 58.0**	**+2.0**
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SATY	**Saty**	**65.14**	**15**	*e*P	**P**	**16 13 23.6**	**+0.4**
	comp=Z,15nm,1.5s						
KNRA	**Kununurra**	**65.37**	**98**	P	**P**	**16 13 23.9**	**-1.2**
KBZ	**Khabaz**	**65.39**	**347**	P	**P**	**16 13 25.1**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=187,slow=6.1,SNR=5.0						
KBZ				LR	LR	16 41 03.3	
	comp=Z,247nm,19.4s,baz=116,slow=35 comp=Z,1.7nm,0.8s						
SHLS	**Shalkode**	**65.50**	**16**	*e*P	**P**	**16 13 26.7**	**+1.2**
	comp=Z,5.9nm,1.1s						
KIV	**Kislovodsk**	**65.65**	**347**	P	**P**	**16 13 26.0**	**-0.5**
	comp=Z,12nm,0.7s						
BORA	**Eskisehir**	**65.67**	**336**	P	**P**	**16 13 27.4**	**+0.8**
BORA				IAmb	IAmb	16 13 43.9	
	comp=Z,8.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**66.02**	**295**	LR	LR	16 42 10.8	
	comp=Z,74nm,18.5s,baz=150,slow=36						
TDK	**Taldyqorghan**	**66.98**	**14**	*e*P	**P**	**16 13 35.2**	**+0.3**
ASAR	**Alice Springs**	**68.13**	**108**	P	**P**	**16 13 41.7**	**-1.1**
	comp=Z,8.2nm,0.8s,baz=261,slow=5.3,SNR=120						
ASAR				LR	LR	16 39 27.0	
	comp=Z,160nm,20.7s,baz=288,slow=32 comp=Z,8.2nm,0.8s						
ASAR	**Alice Springs**	**68.13**	**108**		**P**	**16 13 41.5**	**-1.3**
AS31	**Alice Springs**	**68.13**	**108**		**P**	**16 13 41.3**	**-1.5**
WMQ	**Urumqi**	**68.57**	**21**	*e*P	**P**	**16 13 41.2**	**-3.8**
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
DBIC	**Dimbokro**	**68.89**	**286**	P	**P**	**16 13 48.8**	**+1.3**
	comp=Z,1.8nm,0.6s,baz=130,slow=9.1,SNR=4.2						
DBIC				LR	LR	16 43 07.6	
	comp=Z,94nm,18.0s,baz=33,slow=35 comp=Z,1.8nm,0.6s						
AB31	**Akbulak array**	**69.05**	**0**		**P**	**16 13 47.2**	**-0.5**
AB31				IAmb	IAmb	16 13 48.9	
	comp=Z,8.5nm,1.1s						
ABKAR	**Akbulak array**	**69.05**	**0**		**P**	**16 13 47.0**	**-0.8**
WRA	**Warramunga Arr**	**69.41**	**104**	P	**P**	**16 13 49.7**	**-1.1**
	comp=Z,8.5nm,0.8s,baz=261,slow=5.3,SNR=70 comp=Z,8.5nm,0.8s						
WRAB	**Tennant Creek**	**69.42**	**104**	P	**P**	**16 13 50.0**	**-0.8**
WB0	**Warramunga Arr**	**69.51**	**104**		**P**	**16 13 49.9**	**-1.4**
WB0				IAmb	IAmb	16 13 51.1	
	comp=Z,8.1nm,0.7s						
WR8	**Warramunga Arr**	**69.56**	**104**		**P**	**16 13 50.5**	**-1.2**
WR8				IAmb	IAmb	16 13 51.9	
	comp=Z,11nm,0.9s						
MKAR	**Makanchi Array**	**69.62**	**16**	P	**P**	**16 13 51.2**	**-0.2**
	comp=Z,4.5nm,0.9s,baz=198,slow=7.3,SNR=18 comp=Z,4.5nm,0.9s						
MKAR	**Makanchi Array**	**69.62**	**16**		**P**	**16 13 50.6**	**-0.8**
QSPA	**South Pole Qui**	**70.01**	**180**	P	**P**	**16 13 56.3**	**+2.6**
	comp=Z,4.1nm,0.7s,baz=269,slow=1.1,SNR=23						
QSPA				LR	LR	16 40 51.8	
	comp=Z,68nm,20.0s,baz=292,slow=33						
QSPA	**South Pole Qui**	**70.01**	**180**	P	**P**	**16 13 55.0**	**+1.2**
GTA	**Gaotai**	**70.03**	**32**	P	**P**	**16 13 54.5**	**+0.3**
GTA				pP	sP	16 13 59.2	+2.5
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
BRZS	**Berezniki**	**70.70**	**9**	*e*P	**P**	**16 13 58.5**	**+0.6**
ZSN	**Zaisan**	**70.93**	**18**	*e*P	**P**	**16 13 59.8**	**+0.5**
XAN	**Xi'an**	**71.31**	**42**	⇓P	**P**	**16 14 00.2**	**-1.9**
XAN				pP	pP	16 14 03.9	0.0
XAN				sP	pwP	16 14 07.3	-2.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BELA	**Belgrano 2**	**71.42**	**193**	P	**P**	**16 14 00.6**	**-1.5**
KURBB	**Kurchatov Arra**	**72.33**	**12**	P	**P**	**16 14 07.2**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=210,slow=6.5,SNR=26 comp=Z,3.7nm,0.8s						
KURK	**Kurchatov**	**72.44**	**12**		**P**	**16 14 07.9**	**-0.5**
KURK				IAmb	IAmb	16 14 24.8	
	comp=Z,7.6nm,1.0s						
WHN	**Wuhan**	**72.69**	**47**	P	P	16 14 15.5	+5.2
STKA	**Stephens Creek**	**72.92**	**118**	P	**P**	**16 14 10.8**	**-1.0**
	comp=Z,2.5nm,0.7s,baz=270,slow=5.1,SNR=5.2 comp=Z,2.5nm,0.7s						
VNDA	**Vanda**	**73.09**	**167**	P	**P**	**16 14 11.7**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=272,slow=7.3,SNR=17						
VNDA				LR	LR	16 43 21.7	
	comp=Z,49nm,18.5s,baz=244,slow=33 comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**73.09**	**167**	P	**P**	**16 14 12.4**	**+0.4**
VNDA				IAmb	IAmb	16 14 18.8	
	comp=Z,7.1nm,1.1s						
INKA	**Innaminka**	**73.18**	**114**		**P**	**16 14 12.7**	**-0.7**
INKA				IAmb	IAmb	16 14 14.4	
	comp=Z,5.7nm,0.8s						
BVAR	**Borovoye Array**	**73.40**	**7**	P	**P**	**16 14 14.1**	**+0.1**
	comp=Z,10nm,0.7s,baz=171,slow=6.2,SNR=59						
BVAR				LR	LR	16 45 35.1	
	comp=Z,221nm,18.2s,baz=307,slow=35 comp=Z,10nm,0.7s						
SBA	**Scott Base**	**73.98**	**168**	P	**P**	**16 14 18.6**	**+1.4**
SBA				IAmb	IAmb	16 14 35.6	
	comp=Z,10nm,1.2s						
AK01	**Malin Array Si**	**75.47**	**340**	P	**P**	**16 14 25.2**	**-0.9**
AKASG	**Malin Array Be**	**75.48**	**340**	P	**P**	**16 14 26.1**	**0.0**
	comp=Z,1.0nm,0.5s,baz=152,slow=4.7,SNR=7.3 comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**75.48**	**340**	P	**P**	**16 14 26.0**	**-0.1**
KIEV	**Kiev**	**75.48**	**340**	P	**P**	**16 14 26.3**	**+0.2**
KIEV	**Kiev**	**75.48**	**340**	P	**P**	**16 14 25.6**	**-0.5**
AK17	**Malin Array Si**	**75.52**	**340**	P	**P**	**16 14 26.1**	**-0.2**
ARTI	**Arti**	**76.20**	**359**		**P**	**16 14 30.4**	**+0.3**
ARTI				IAmb	IAmb	16 14 31.3	
	comp=Z,16nm,1.1s						
NJ2	**Nanjing**	**76.71**	**48**	*e*P	**P**	**16 14 34.7**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ZAA0	**Zalesovo Array**	**76.84**	**15**		**P**	**16 14 33.1**	**-0.7**
ZAA0				IAmb	IAmb	16 14 34.3	
	comp=Z,7.4nm,0.8s						
ZALV	**Zalesovo Beam**	**76.84**	**15**	P	**P**	**16 14 33.0**	**-0.8**
	comp=Z,6.6nm,0.7s,baz=216,slow=5.2,SNR=29 comp=Z,6.6nm,0.7s						
ZALV	**Zalesovo Beam**	**76.84**	**15**		**P**	**16 14 32.9**	**-0.8**
HHC	**Hu-ho-hao-te**	**77.37**	**38**	*e*P	P	16 14 42.4	+5.1
HHC				pmax	pmax		
	comp=Z,13nm,0.5s						
KIRV	**Kirov**	**78.87**	**354**	LR	LR	16 48 26.5	
	comp=Z,178nm,18.1s,baz=298,slow=35						
SONM	**Songino Array**	**79.48**	**30**	P	**P**	**16 14 49.1**	**+0.3**
	comp=Z,6.8nm,0.9s,baz=218,slow=5.8,SNR=27						
SONM				LR	LR	16 48 52.4	
	comp=Z,130nm,18.2s,baz=320,slow=35 comp=Z,6.8nm,0.9s						
SONM	**Songino Array**	**79.48**	**30**	P	**P**	**16 14 49.0**	**+0.2**
SONM				IAmb	IAmb	16 14 50.3	
	comp=Z,7.7nm,1.0s						
ULN	**Ulaanbaatar**	**79.81**	**30**		**P**	**16 14 50.7**	**+0.1**
ULN				IAmb	IAmb	16 14 51.8	
	comp=Z,8.8nm,1.1s						
GERES	**GERESS Array B**	**79.99**	**331**	P	**P**	**16 14 52.8**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=116,slow=6.1,SNR=4.5 comp=Z,0.4nm,0.7s						
ESDC	**Sonseca Array**	**84.07**	**316**	P	**P**	**16 15 13.4**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=98,slow=4.4,SNR=4.1						
ESDC				LR	LR	16 53 46.4	
	comp=Z,154nm,19.1s,baz=7.5,slow=36 comp=Z,0.7nm,0.7s						
PMSA	**Palmer Station**	**85.16**	**201**	LR	LR	16 47 15.9	
	comp=Z,26nm,18.9s,baz=122,slow=31						
FINES	**FINESS Array B**	**85.65**	**344**	P	**P**	**16 15 20.7**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=128,slow=4.3,SNR=4.8 comp=Z,3.6nm,0.8s						
KSAR	**Wonju Array Be**	**85.85**	**48**		**P**	**16 15 21.1**	**-0.9**
KSRS	**Korea Array**	**85.88**	**48**	P	**P**	**16 15 21.5**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=252,slow=4.6,SNR=7.9 comp=Z,2.1nm,0.8s						
HILR	**Hailar Array B**	**87.30**	**34**	P	**P**	**16 15 28.9**	**0.0**
	comp=Z,3.1nm,0.7s,baz=224,slow=4.0,SNR=6.9 comp=Z,3.1nm,0.7s						
HFS	**Hagfors**	**88.27**	**339**	P	**P**	**16 15 33.2**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=134,slow=8.3,SNR=2.6 comp=Z,4.1nm,0.9s						
NRIK	**Noril'sk**	**91.39**	**10**	LR	LR	16 55 50.9	
	comp=Z,165nm,20.4s,baz=314,slow=35						
USRK	**Ussuriysk Ar.**	**91.75**	**43**	P	**P**	**16 15 48.8**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=236,slow=6.5,SNR=6.9 comp=Z,2.5nm,0.8s						
YAK	**Yakutsk**	**98.57**	**27**	LR	LR	16 59 46.4	
	comp=Z,74nm,21.1s,baz=317,slow=35						
ILAR	**Eielson Array**	**131.96**	**15**	PKP	**PKPdf**	**16 21 55.0**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=306,slow=3.2,SNR=4.4						
PDAR	**Pinedale Array**	**155.70**	**341**	PKP	**PKPdf**	**16 22 37.0**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=5.2,slow=4.2,SNR=1.5						
TXAR	**Lajitas Array**	**162.41**	**305**	PKP	**PKPdf**	**16 22 47.1**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=84,slow=3.2,SNR=5.5						

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*NEIC **12** 16:06:36.1±0.7, 56°.39N±0°.10×148°.5W±0°.1, h10km±2km, ML3.8/82, ML3.7(AEIC), Error ellipse: s-maj=16.6km s-min=11.3km az=164.0*
*AEIC **12** 16:06:41.0±0.7, 56°.40N±0°.04×148°.5W±0°.1, h10km±6km, Error ellipse: s-maj=11.0km s-min=4.9km az=109.0*

ISC 12 16:06:34.9±1.3, 56°.35N±0°.08×148°.47W±0°.06, h10km, n179, σ1§22/178, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.67**	**304**		**Pn**	**16 07 18.1**	**+0.2**
KDAK	**Kodiak Island**	**2.67**	**304**		**Sn**	**16 07 47.6**	**-2.6**
KDAK					**Sn**	**16 07 47.8**	**-2.4**
OHAK	**Old Harbor**	**2.79**	**290**		**Pn**	**16 07 19.4**	**-0.2**
OHAK	**Old Harbor**	**2.79**	**290**		**Sn**	**16 07 49.9**	**-3.3**
OHAK	**Old Harbor**	**2.79**	**290**	P	**Pn**	**16 07 19.3**	**-0.2**
SYI	**Shuyak Island**	**3.10**	**319**	Pn	**Pn**	**16 07 24.5**	**+0.6**
SYI	**Shuyak Island**	**3.10**	**319**		**Sn**	**16 07 59.5**	**-1.4**
SYI					**Sn**	**16 07 59.6**	**-1.3**
SII	**Sitkinak Islan**	**3.18**	**276**		**Sn**	**16 08 00.5**	**-2.4**
MID	**Middleton Isla**	**3.29**	**19**	Pn	**Pn**	**16 07 26.8**	**+0.4**
MID				IAML		16 08 09.5	
	comp=E,177nm,1.2s						
MID	**Middleton Isla**	**3.29**	**19**		**Sn**	**16 08 03.4**	**-2.1**
R18K	**Karluk**	**3.50**	**293**		**Pn**	**16 07 29.9**	**+0.6**
R18K					**Pn**	**16 07 30.0**	**+0.8**
R18K	**Karluk**	**3.50**	**293**	IAML		16 08 13.3	
	comp=N,313nm,0.5s						
R18K				IAML		16 08 14.9	
	comp=E,248nm,0.4s						
CNPM	**China Poot**	**3.51**	**336**		**Pn**	**16 07 30.0**	**+0.5**
CNPM	**China Poot**	**3.51**	**336**		**Sn**	**16 08 09.3**	**-1.8**
CNPM					Lg	16 08 09.7	
BRSE	**Bradley Lake S**	**3.61**	**341**		**Pn**	**16 07 31.6**	**+0.7**
BRSE					**Sn**	**16 08 11.1**	**-2.4**
BRLK	**Bradley Lake**	**3.66**	**340**		**Pn**	**16 07 31.9**	**+0.4**
HOM	**Homer**	**3.73**	**334**		**Pn**	**16 07 33.6**	**+1.3**
HOM	**Homer**	**3.73**	**334**		**Sn**	**16 08 17.2**	**+1.0**
Q19K	**Cape Douglas,**	**3.80**	**315**		**Pn**	**16 07 34.7**	**+1.3**
SEW	**Seward**	**3.80**	**353**		**Pn**	**16 07 33.6**	**+0.2**
SEW	**Seward**	**3.80**	**353**		**Sn**	**16 08 14.3**	**-3.8**
KAPH	**Katmai Pasha**	**3.89**	**308**		**Pn**	**16 07 36.5**	**+1.7**
KAPH					**Sn**	**16 08 18.9**	**-1.6**
KAPH					Lg	16 08 19.9	
KAWH	**Katmai**	**3.99**	**303**		**Pn**	**16 07 37.7**	**+1.6**
KARR	**Katmai Rainbow**	**4.00**	**305**		**Pn**	**16 07 36.9**	**+0.7**
KARR					**Pn**	**16 07 37.8**	**+1.6**
KARR					**Sn**	**16 08 25.8**	**+2.7**
AUJK	**Augustine Jueg**	**4.00**	**321**		**Sn**	**16 08 24.2**	**+1.1**
AGU	**Augustine-Summ**	**4.02**	**321**		**Pn**	**16 07 38.1**	**+1.6**
AGU					**Sn**	**16 08 26.0**	**+2.4**
CHIR	**Chirikof Islan**	**4.04**	**265**	P	**Pn**	**16 07 37.5**	**+0.8**
KAKN	**Katmai Knife C**	**4.07**	**301**		**Pn**	**16 07 38.8**	**+1.5**
ACHA	**Angle Creek He**	**4.17**	**299**		**Pn**	**16 07 39.8**	**+1.3**
P19K	**Oil Pt**	**4.17**	**325**		**Pn**	**16 07 39.8**	**+1.3**
KAIM	**Kayak Island**	**4.18**	**29**	Pn	**Pn**	**16 07 39.5**

SPU	Mount Spurr	5.19	340			Pn	16 07 53.0 +0.4
CRQM	Cirque	5.23	30			Pn	16 07 54.0 +0.8
CRQM				IAML			16 08 51.6
	comp=N,67nm,0.5s						
CRQM				IAML			16 09 02.2
	comp=E,50nm,0.9s						
SPCR	Spurr Chakacha	5.24	340			Pn	16 07 53.7 +0.4
SPCR						Pn	16 07 54.1 +0.9
CKL	Chakachamna La	5.26	339			Pn	16 07 54.1 +0.5
SUA	Susitna One	5.26	348			Pn	16 07 54.1 +0.4
SUA	Susitna One	5.26	348	IAML			16 08 55.0
	comp=N,42nm,0.8s						
SUA				IAML			16 08 57.9
	comp=E,43nm,0.7s						
PMR	Palmer	5.27	357			Pn	16 07 54.4 +0.8
PMR	Palmer	5.27	357	IAML			16 08 52.1
	comp=N,58nm,1.0s						
PMR				IAML			16 08 52.6
	comp=E,51nm,0.8s						
PMR	Palmer	5.27	357	P		Pn	16 07 54.6 +1.0
SPCG	Spurr Capps Gl	5.29	341			Pn	16 07 54.9 +0.9
TGL	Tana Glacier	5.31	31			Pn	16 07 55.2 +0.9
TGL	Tana Glacier	5.31	31	IAML			16 08 56.8
	comp=E,39nm,0.9s						
TGL				IAML			16 08 57.5
	comp=N,38nm,0.8s						
KLU	Klutina	5.33	13	IAML			16 08 56.9
	comp=E,47nm,0.5s						
KLU				IAML			16 08 57.5
	comp=N,63nm,0.4s						
ISLE	Juniper Island	5.34	34	IAML			16 08 54.5
	comp=E,37nm,0.9s						
ISLE				IAML			16 08 58.4
	comp=N,44nm,0.9s						
YAH	Yahtse	5.36	39	IAML			16 08 58.8
	comp=N,42nm,0.7s						
ANPK	Aniakchak Peak	5.36	279			Pn	16 07 55.9 +1.0
CHX	Chaix Hills	5.38	43			Pn	16 07 56.5 +1.3
GHO	Glory Hole Cre	5.45	358			Pn	16 07 57.5 +1.4
STLK	Strandline Lak	5.45	343			Pn	16 07 56.9 +0.7
SML	Sawmill	5.48	1			Pn	16 07 57.5 +1.1
SPNN	North Nagishla	5.49	338			Pn	16 07 57.8 +1.0
SCM	Sheep Creek Mo	5.51	6			Pn	16 07 58.7 +1.4
TABL	Table Mountain	5.63	40			Pn	16 07 59.9 +1.2
GLB	Gilahina Butte	5.65	23			Pn	16 07 59.8 +0.9
O17K	Koliganek Bris	5.72	310			Pn	16 08 00.6 +0.8
PCA	Pinnacle	5.74	46			Pn	16 08 01.3 +1.2
PTPK	Patty Peak	5.77	30			Pn	16 08 01.6 +1.0
MCARA	McCarthy VSAT	5.78	27			Pn	16 08 01.8 +1.2
PNL	Peninsula	5.86	52	P		Pn	16 08 02.5 +0.8
SKT	Skwentna	5.86	346			Pn	16 08 02.2 +0.5
M24K	Tolsona, Glenn	5.89	11			Pn	16 08 03.5 +1.3
VNSG	Veniaminof 6	5.93	272			Pn	16 08 03.1 +0.5
WASW	Wrangell South	6.02	20			Pn	16 08 05.2 +1.2
WACK	Wrangell Chich	6.04	19			Pn	16 08 05.5 +1.1
M20K	Styx River	6.05	339			Pn	16 08 05.0 +0.6
O16K	Kokwok River B	6.07	306			Pn	16 08 05.0 +0.5
VNKR	Veniaminof 5	6.10	272			Pn	16 08 05.9 +0.9
WAZA	Wrangell Mount	6.16	19			Pn	16 08 07.5 +1.5
VNFG	Fog Glacier, M	6.17	274			Pn	16 08 06.5 +0.5
O28M	Mount Upton	6.20	41	Pn		Pn	16 08 07.8 +1.2
N17K	Nushagak Hills	6.20	316			Pn	16 08 06.8 +0.4
WAT6	Susitna Watana	6.26	3			Pn	16 08 08.3 +1.0
HARP	HAARP	6.30	14			Pn	16 08 09.4 +1.6
M18K	Stony River	6.41	327			Pn	16 08 09.6 +0.4
CHNA	Chernabura Isl	6.49	261	P		Pn	16 08 11.1 +0.8
WAT7	Susitna Watana	6.51	358			Pn	16 08 12.1 +1.4
O29M	Mount Kennedy	6.54	49			Pn	16 08 12.9 +1.7
P29M	Windy Craggy	6.58	56			Pn	16 08 12.8 +1.2
YUK8	Steele Glacier	6.70	39			Pn	16 08 14.8 +1.3
L19K	White Mountain	6.70	333			Pn	16 08 13.4 +0.2
O15K	Ungalikthiuk R	6.71	300			Pn	16 08 14.4 +1.1
YUK2	White River	6.72	33			Pn	16 08 15.4 +1.9
L20K	Farewell, AK	6.74	338			Pn	16 08 13.7 0.0
DHY	Denali Highway	6.77	4			Pn	16 08 15.8 +1.5
N16K	Nishlik Lake	6.81	312			Pn	16 08 15.3 +0.6
PAX	Paxson	6.81	12			Pn	16 08 16.4 +1.5
SDPT	Sand Point	6.84	267			Pn	16 08 15.9 +0.8
SDPT	Sand Point	6.84	267	P		Pn	16 08 16.1 +1.0
YUK7	Dusty Glacier	6.85	48			Pn	16 08 17.2 +1.7
M17K	Holitna River	6.87	321			Pn	16 08 16.2 +0.6
M27K	Edge Creek, AK	6.90	26			Pn	16 08 17.4 +1.2
MENT	Mentasta	7.03	18	P		Pn	16 08 20.3 +2.5
RND	Reindeer	7.08	359			Pn	16 08 19.7 +1.2
P30M	Million Dollar	7.15	53			Pn	16 08 21.0 +1.5
PLBC	Pleasant Camp	7.16	59			Pn	16 08 20.8 +1.3
L26K	Log Cabin Wild	7.18	19			Pn	16 08 21.5 +1.7
TRF	Thorofare Moun	7.18	353			Pn	16 08 21.2 +1.2
M16K	Timber Creek	7.20	315			Pn	16 08 20.6 +0.6
BVCY	Beaver Creek	7.21	29			Pn	16 08 22.0 +1.8
SIT	Sitka	7.27	79			Pn	16 08 19.6 -1.3
SIT	Sitka	7.27	79	P		Pn	16 08 19.7 -1.3
HYT	Haines Junctio	7.27	47			Pn	16 08 22.8 +1.6
KTH	Kantishna Hill	7.33	351			Pn	16 08 23.1 +1.1
MCK	McKinley	7.41	358			Pn	16 08 24.5 +1.5
L27K	Beaver Creek,	7.52	24			Pn	16 08 25.5 +1.0
PS1A	Pavlof South-1	7.53	268			Pn	16 08 24.7 +0.2
S12K	Black Hills	7.65	271			Pn	16 08 26.4 +0.2
DOL	Dolgoi Island	7.66	267			Pn	16 08 26.6 +0.2
SKAG	Skagway	7.66	61	P		Pn	16 08 27.4 +1.1
PN7A	Pavlof North-7	7.67	269			Pn	16 08 27.2 +0.7
BESE	Bessie Mountai	7.67	67			Pn	16 08 27.0 +0.4
L17K	Donlin	7.68	323			Pn	16 08 26.7 +0.1
CHUM	Lake Minchumin	7.80	347			Pn	16 08 28.9 +0.7
N30M	Aishikik Lake	7.80	44			Pn	16 08 29.7 +1.4
O30N	Mendenhall	7.84	50			Pn	16 08 30.3 +1.5
N14K	Kuskokwak Cree	7.86	303			Pn	16 08 29.5 +0.5
JIS	Juneau Island	7.87	70	P		Pn	16 08 30.0 +0.8
M29M	Somme Creek	7.96	36			Pn	16 08 32.2 +1.6
SCRK	Sand Creek	7.97	14			Pn	16 08 31.9 +1.1
K17K	Iditarod	8.10	326			Pn	16 08 32.6 +0.2
HDA	Harding Lake	8.12	5			Pn	16 08 34.2 +1.5
J18K	Innoko River	8.25	333			Pn	16 08 35.0 +0.6
NEA2	Nenana	8.28	358			Pn	16 08 35.8 +0.9
WHY	Whitehorse	8.32	53			Pn	16 08 37.2 +1.7
K27K	Chicken	8.33	20			Pn	16 08 36.9 +1.3
CCB	Clear Creek Bu	8.33	2			Pn	16 08 36.5 +1.0
N31M	Braeburn, Yuko	8.34	47			Pn	16 08 37.3 +1.6
J20K	Nowinta River	8.34	343			Pn	16 08 36.5 +0.8
J25K	Salcha River,	8.43	9			Pn	16 08 37.5 +0.6
J19K	Poorman	8.45	338			Pn	16 08 37.3 +0.1
P32M	Atlin	8.48	61			Pn	16 08 39.0 +1.3
IL31		8.49	5			Pn	16 08 38.5 +0.9
IL01		8.49	5			Pn	16 08 38.5 +0.8
J26L	Joseph Creek	8.53	14			Pn	16 08 39.7 +1.4
L29M	L29M	8.55	33			Pn	16 08 40.1 +1.5
COLA	College	8.56	2	P		Pn	16 08 40.5 +1.9
L15K	Ungalak Mounta	8.57	314			Pn	16 08 39.8 +0.9
FALS	False Pass	8.60	266			Pn	16 08 40.0 +0.8
FALS	False Pass	8.60	266	P		Pn	16 08 39.7 +0.5
M30M	Minto, Yukon	8.61	39			Pn	16 08 40.7 +1.3
CRAG	Craig	8.67	89			Pn	16 08 38.7 -1.4
CRAG	Craig	8.67	89	P		Pn	16 08 39.3 -0.8
ISNN	Isanotski Nort	8.80	266			Pn	16 08 42.8 +0.7
L14K	Kuka Creek	8.90	310			Pn	16 08 44.0 +0.7
P33M	Teslin, Yukon	9.10	58			Pn	16 08 47.5 +1.3
K29M	Barlow Dome	9.28	31			Pn	16 08 49.8 +1.1
N32M	Quiet Lake	9.32	53			Pn	16 08 50.3 +1.1
J30M	Hart River	10.18	31			Pn	16 09 02.0 +1.1

*IDC **12** 16:11:54.4±1.8, 49°.04N×151°.10E, h300km±19km, mb3.1/10, mbtmp3.8/13, Error ellipse: s-maj=21.9km s-min=15.4km az=151.0*

ISC 12 16:11:54.9±0.9, 49°.1N±0°.1×151°.1E±0°.1, h308km, n13, σ0s69/14, mb3.3/9, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	Petropavlovsk-	5.80	43	P	Pn	16 13 20.6	-1.4
	4.9nm,0.9s,baz=191,slow=7.3,SNR=13						
ASAJ	Asahikawa	7.67	233	P	Pn	16 13 43.9	-0.6
	12nm,0.8s,baz=62,slow=14,SNR=10.0						
MJAR	Matsushiro Arr	15.66	222	P	P	16 15 19.3	+0.5
	0.8nm,0.5s,baz=49,slow=8.5,SNR=2.2						
HILR	Hailar Array B	20.39	283	P	P	16 16 09.5	+0.4
	0.7nm,0.4s,baz=72,slow=11,SNR=1.8						
	0.7nm,0.4s						
ILAR	Eielson Array	35.62	41	P	P	16 18 24.3	+0.7
	0.6nm,1.1s,baz=273,slow=9.2,SNR=4.5						
	0.6nm,1.1s						
ZALV	Zalesovo Beam	40.21	303	P	P	16 19 02.0	+0.3
	0.5nm,0.4s,baz=70,slow=12,SNR=1.7						
	0.5nm,0.4s						
MKAR	Makanchi Array	44.73	294	P	P	16 19 38.0	-0.1
	0.6nm,0.7s,baz=76,slow=6.8,SNR=4.4						
MKAR				PcP	PcP	16 21 13.7	-0.7
	0.2nm,0.4s,baz=73,slow=2.3,SNR=1.6						
	0.6nm,0.7s						
KURBB	Kurchatov Arra	45.10	301	P	P	16 19 40.6	-0.2
	0.9nm,0.5s,baz=69,slow=8.3,SNR=12						
	0.9nm,0.5s						
BVAR	Borovoye Array	48.38	307	P	P	16 20 06.4	+0.3
	0.6nm,0.4s,baz=45,slow=7.5,SNR=6.0						
	0.6nm,0.4s						
FINES	FINESS Array B	61.38	333	P	P	16 21 38.4	+0.1
	2.2nm,0.9s,baz=42,slow=5.6,SNR=7.7						
	2.2nm,0.9s						
HFS	Hagfors	65.83	338	P	P	16 22 07.2	0.0
	6.2nm,1.1s,baz=19,slow=4.9,SNR=2.2						
	6.2nm,1.1s						
ASAR	Alice Springs	74.00	196	P	P	16 22 56.9	-0.2
	0.2nm,0.8s,baz=8.3,slow=5.7,SNR=4.1						
	0.2nm,0.8s						
TXAR	Lajitas Array	77.50	60	P	P	16 23 18.2	+1.2
	0.4nm,0.7s,baz=339,slow=7.8,SNR=2.2						
	0.4nm,0.7s						

*BUT **12** 16:13:34.1±1.5, 49°.08N±0°.08×105°.39W±0°.08, h5km±7km, Error ellipse: s-maj=13.1km s-min=6.0km az=205.0*

NEIC 12 16:13:34.3±0.8, 49°.08N±0°.09×105°.3W±0°.1, h5km±2km, mb_Lg2.8/11, ML3.6/5(BUT), Error ellipse: s-maj=15.1km s-min=10.8km az=25.0, Saskatchewan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGMT	Dagmar	0.96	129		Pg	16 13 52.4	-0.3
DGMT					Sg	16 14 05.5	+0.4
EGMT	Eagleton	3.13	252	Pn	Pn	16 14 21.6	-2.7
EGMT	Eagleton	3.13	252		Sn	16 15 01.2	-0.9
E28A	Huff	4.00	127	Pn	Pn	16 14 35.7	-0.5
SXM	Sixmile	4.94	236		Pn	16 14 49.0	-0.3
RSSD	Black Hills	5.04	169	Pn	Pn	16 14 49.4	-1.2
RSSD				IAmb_Lg		16 16 11.7	
	comp=Z,14nm,0.8s						
BZMT	Bozeman Pass	5.06	229		Pn	16 14 51.0	0.0
LYMT	Lyon Mountain	5.13	248	Pn	Pn	16 14 50.5	-1.4
YNE	Yellowstone No	5.18	220	Pn	Pn	16 14 51.8	-0.8
YNE				IAmb_Lg		16 16 16.9	
	comp=Z,22nm,1.0s						
YPK	Parker Peak, Y	5.37	218		Pn	16 14 55.1	-0.2
YMP	Mirror Lake Pl	5.46	219	IAmb_Lg		16 16 27.3	
	comp=Z,23nm,0.8s						
BOZ	Bozeman (W)	5.52	233	Pn	Pn	16 14 56.2	-1.1
OVMT	Ovando	5.53	252	Pn	Pn	16 14 56.4	-0.9
YNR	Norris Junctio	5.70	222	IAmb_Lg		16 16 48.2	
	comp=Z,14nm,1.2s						
YHH	Holmes Hill	5.72	224	Pn	Pn	16 14 59.0	-1.2
CHMT	Chamberlain Mo	5.75	251		Pn	16 15 00.2	-0.2
YHL	Hebgen Lake	5.83	226	Pn	Pn	16 14 59.1	-2.4
YHL				IAmb_Lg		16 16 39.6	
	comp=Z,12nm,0.8s						
LRM	Limekiln Ridge	5.83	239	Pn	Pn	16 15 00.7	-0.8
YMR	Madison River	5.87	223	Pn	Pn	16 15 00.9	-1.2
YHB	Horse Butte	5.91	225	Pn	Pn	16 15 01.3	-1.4
BPMT	Black Pine Rid	6.08	247	Pn	Pn	16 15 03.0	-2.1
DLMT	Dillon	6.19	236	Pn	Pn	16 15 03.1	-3.3
MSO	Missoula	6.21	252	Pn	Pn	16 15 05.2	-1.4
MSO				IAmb_Lg		16 16 50.3	
	comp=Z,11nm,0.8s						
FLWY	Flagg Ranch	6.22	219	Pn	Pn	16 15 04.9	-2.0
K22A	Casper	6.48	188	Pn	Pn	16 15 09.3	-1.1
FXWY	Fox Creek	6.72	218	Pn	Pn	16 15 12.3	-1.5
F33A	5 Mile Ranch,	6.92	114	IAmb_Lg		16 17 18.5	
	comp=Z,16nm,1.0s						
PD31	Pinedale Array	6.97	207	Pn	Pn	16 15 15.2	-2.0
BW06	Boulder Array	6.97	207	Pn	Pn	16 15 15.1	-2.1
EPLO	Experimental L	7.59	81	Pn	Pn	16 15 23.8	-1.8
ECSD	EROS Data Cent	8.04	128	Pn	Pn	16 15 29.2	-2.6
PV16	Nyswonger Mesa	11.07	195	Pn	Pn	16 16 11.0	-2.4
PV19	Morning Glory	11.08	195	Pn	Pn	16 16 10.9	-2.7
PV13	Radium Mtn., P	11.20	194	Pn	Pn	16 16 13.0	-2.3
FCC	Fort Churchill	11.73	30	Pn	Pn	16 16 20.1	-2.0

*DNK **12** 16:23:36.1±3.8, 82°.18N×5°.96W, h8km±34km, ML2.0*
*BER **12** 16:23:38.0±2.9, 82°.36N×6°.33W, h26km±34km, mb(Pn)3.8, ML2.0(DNK), Confirmed Earthquake*
*FCIAR **12** 16:23:39.0, 82°.32N×4°.97W, h10km, station ZFI2 has station magnitude of 3.60 station OMEGA has station magnitude of 3.60*

ISC 12 16:23:33.1±1.1, 82°.14N±0°.09×6°.49W±0°.04, h10km, n19, σ2s88/35, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOR	Nord	1.55	254	*i* P	Pg	16 24 04.3	+1.6
NOR				*i* S	Sg	16 24 23.8	+1.0
NOR				IAML		16 24 27.5	
	comp=Z,42nm,0.9s						
NOR	Nord	1.55	254	*i* P	Pg	16 24 04.3	+1.6
NOR				*i* S	Sg	16 24 23.8	+1.0
NOR				IAML		16 24 27.5	
	comp=Z,42nm,0.9s						
KBS	Kingsbay	4.41	127	*e*P	Pn	16 24 43.5	+3.6
KBS				*e*S	Sn	16 25 30.1	-1.2
KBS				IAML		16 25 34.9	
	comp=Z,4.1nm,0.5s						
KBS	Kingsbay	4.41	127	*i* P	Pn	16 24 43.6	+3.6
KBS				*i* S	Sn	16 25 30.0	-1.2
BRBB	Barentsburg B	5.36	128	*e*P	Pn	16 24 57.4	+4.5
BRBB				*e*S	Sn	16 25 53.9	-0.7
SPA0	Spitsbergen Ar	5.53	124	*e*P	Pn	16 24 58.5	+3.2
SPA0				*e*S	Sn	16 25 56.8	-2.0
SPA0	Spitsbergen Ar	5.53	124	*e*P	Pn	16 24 58.7	+3.4
SPA0				*e*S	Sn	16 25 57.1	-1.7
SPA0				IAML		16 26 08.1	
	comp=Z,2.4nm,0.8s						
DAG	Danmarks Havn	5.82	209	*i* P	Pn	16 25 00.6	+1.2
DAG				*i* S	Sn	16 26 05.5	-0.5
DAG				IAML		16 26 19.0	
	comp=Z,4.3nm,0.6s						
DAG	Danmarks Havn	5.82	209	*i* P	Pn	16 25 00.6	+1.2
DAG				*i* S	Sn	16 26 05.5	-0.5
DAG				IAML		16 26 19.0	
	comp=Z,4.3nm,0.6s						
HSPB	Hornsund (broa	6.46	131	*e*P	Pn	16 25 10.4	+2.4
ZFI2	Zemlya Franca-	7.88	72	*e*P	Pn	16 25 27.7	+0.2
ZFI2				*e*S	Sn	16 26 47.2	-9.2
	comp=Z,14nm,1.0s						
OMEGA	Omega	7.90	72	*e*P	Pn	16 25 27.8	0.0
OMEGA				*e*S	Sn	16 26 47.5	-10
	comp=Z,16nm,2.4s						
HOPEN	Hopen	7.97	118	*e*P	Pn	16 25 31.2	+2.5
HOPEN				*e*S	Sn	16 26 53.9	-4.8
DBG	Daneborg	8.32	207	*i* P	Pn	16 25 36.1	+2.6
DBG				*i* S	Sn	16 27 04.4	-2.9
DBG				IAML		16 27 12.9	
	comp=Z,2.7nm,0.6s						
DBG	Daneborg	8.32	207	*i* P	Pn	16 25 36.1	+2.6
DBG				*i* S	Sn	16 27 04.4	-2.9
DBG				IAML		16 27 12.9	
	comp=Z,2.7nm,0.6s						
NEEM	North Greenlan	8.91	263	*e*P	Pn	16 25 43.7	+1.8
NEEM				*i* S	Sn	16 27 18.7	-3.5
NEEM				IAML		16 27 25.7	
	comp=Z,3.2nm,0.7s						
NEEM	North Greenlan	8.91	263	*e*P	Pn	16 25 43.7	+1.8
NEEM				*i* S	Sn	16 27 18.7	-3.5
NEEM				IAML		16 27 25.7	
	comp=Z,3.2nm,0.7s						
SUMG	Summit	11.58	233	*e*P	Pn	16 26 19.5	+1.0
SUMG				*i* S	Sn	16 28 21.6	-6.2
SUMG				IAML		16 28 36.0	
	comp=Z,2.8nm,0.8s						
SUMG	Summit	11.58	233	*e*P	Pn	16 26 19.5	+1.0
SUMG				*i* S	Sn	16 28 21.6	-6.2
SUMG				IAML		16 28 36.0	
	comp=Z,2.8nm,0.8s						

SDD 12 16:29:44.6±2.0, 19°.00N×70°.23W, h14km±16km, MD2.2, ML2.0, MW2.3, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR08	Loma La Naviza	0.20	101	*e*Pg	Pg	16 29 48.7	-0.6
DR08				IAML		16 29 50.3	
	comp=N,4μm,0.1s						
DR08				*e*Sg	Sg	16 29 51.9	-0.5
DR08	Loma La Naviza	0.20	101	*e*Pg	Pg	16 29 48.8	-0.4
DR08				IAML		16 29 51.8	
	comp=N,2μm,0.1s						
DR08				*e*Sg	Sg	16 29 52.0	-0.3
SFDR	San Fco. de Ma	0.28	357	*e*Pg	Pg	16 29 49.1	-1.5
SFDR				*e*Sg	Sg	16 29 54.7	0.0
SFDR				IAML		16 30 10.0	
	comp=N,146nm,0.3s						
BANI	BANI	0.62	192	*e*Pg	Pg	16 29 56.7	-0.1
HATOM	Hato Mayor del	0.83	105	*e*Pg	Pg	16 29 59.6	-1.1
HATOM				*e*Sg	Sg	16 30 09.3	-2.3
HATOM				IAML		16 30 15.1	
	comp=N,5.7nm,0.0s						
HATOM	Hato Mayor del	0.83	105	*e*Pg	Pg	16 30 00.4	-0.3
HATOM				*e*Sg	Sg	16 30 08.8	-2.9
HATOM				IAML		16 30 32.7	
	comp=N,19nm,3.1s						
MIDR	Miches	1.11	91	*e*Pg	Pb	16 30 04.1	-1.5
MIDR				*e*Sg	Sb	16 30 17.6	-2.4
MIDR				IAML		16 31 02.0	
	comp=N,24nm,3.1s						
MIDR	Miches	1.11	91	*e*Pg	Pb	16 30 04.3	-1.3
MIDR				*e*Sg	Sb	16 30 18.9	-1.1
MIDR				IAML		16 31 02.0	
	comp=N,24nm,3.1s						

*SKHL **12** 16:30:01.9±0.3, 45°.10N×150°.80E, h46km±9km, mb4.4/2*

JMA 12 16:30:02.6±0.5, 45°.N±.5°×15°.1E±°, h100km, MV3.6/8, KURILE ISLANDS REGION, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.00	274	*e*P	Pn	16 30 34.4	-0.7
KUR				AMB	AMB	16 30 34.6	
	90nm,0.3s						
KUR				*e*S	Sn	16 30 59.0	-1.0
KUR				A	A	16 31 01.0	
	250nm,0.5s						
KUR				A	A	16 31 01.0	
	350nm,0.5s						
SHO	Shikotan	3.04	247	*e*P	Pn	16 30 56.9	+8.1
SHO				AMB	AMB	16 30 57.3	
	40nm,0.7s						
SHO				*e*S	Sn	16 31 30.2	+5.7
SHO				A	A	16 31 34.2	
	70nm,0.3s						
SHO				A	A	16 31 34.2	
	40nm,0.3s						
NEM2	Nemuro 2	3.97	245	P	Pn	16 31 02.5	+1.2
NEM2				*e*S	Sn	16 31 48.3	+1.4
NMR	Nemuro--Hokkai	3.98	245	*e*P	Pn	16 31 02.4	+0.9
NMR				*e*S	Sn	16 31 47.7	+0.6
NMR				A	A	16 31 49.4	
	40nm,0.2s						
NMR				A	A	16 31 49.4	
	30nm,0.2s						
JNK	Nakash	4.56	252	*e*S	Sn	16 32 02.8	+1.8
AKK	Akkeshi	4.72	245	*e*P	Pn	16 31 12.9	+1.5
AKK				*e*S	Sn	16 32 05.3	+0.3
AKK				A	A	16 32 10.9	
	50nm,0.5s						
AKK				A	A	16 32 10.9	
	40nm,0.5s						
JAK	Akkeshi	4.82	246	*e*P	Pn	16 31 13.8	+1.0
JAK				*e*S	Sn	16 32 08.1	+0.7
JAR	Ashorobuto	5.30	252	*e*P	Pn	16 31 21.1	+1.7
JAR				*e*S	Sn	16 32 21.2	+2.0
JCH	Churui	5.87	247	*e*P	Pn	16 31 28.3	+1.3
JCH				*e*S	Sn	16 32 32.1	-0.7
JNBK	Urakawa-nobuka	6.42	246	*e*P	Pn	16 31 34.8	+0.3
JNBK				*e*S	Sn	16 32 44.3	-2.1
JANG	Nango	8.26	238	*e*S	Sn	16 33 26.8	-4.3

*NEIC **12** 16:44:35.2±1.3, 10°.47S±0°.08×161°.4E±0°.1, h39km±7km, mb4.5/21, Error ellipse: s-maj=18.9km s-min=6.9km az=58.0*
*IDC **12** 16:44:36.9±2.9, 10°.54S×161°.32E, h58km±24km, mb3.5/6, mbtmp3.8/7, ML3.2/1, MS3.6/2, Error ellipse: s-maj=30.0km s-min=18.0km az=66.0*

ISC 12 16:44:37.1±0.7, 10°.55S±0°.08×161°.4E±0°.1, h61km, n36, σ0s98/29, mb4.0/15, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.77	309	P	Pn	16 45 03.7	-1.8
	92nm,0.3s,baz=138,slow=7.3,SNR=15						
HNR				S	Sn	16 45 26.5	-0.6
	249nm,0.8s,baz=158,slow=19,SNR=8.1						
HNR				LR	LR	16 45 56.9	
	comp=Z,117nm,18.8s,baz=248,slow=46						
DZM	Mont Dzumac	12.45	158	P	Pn	16 47 31.1	-0.5
	0.1nm,0.3s,baz=344,slow=15,SNR=1.1						
DZM				S	Sn	16 49 46.0	-2.8
	5.7nm,1.1s,baz=255,slow=20,SNR=1.8						
	1.0nm,0.4s						
INKA	Innaminka	25.84	226	P	P	16 50 03.8	+0.8
WR8	Warramunga Arr	27.50	247	P	P	16 50 18.1	0.0
WB0	Warramunga Arr	27.55	247	P	P	16 50 18.4	-0.1
WB0				IAmb	IAmb	16 50 27.1	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	27.65	247	P	P	16 50 19.3	-0.1
	comp=Z,0.9nm,0.6s,baz=76,slow=8.9,SNR=6.2						
	comp=Z,0.9nm,0.6s						
STKA	Stephens Creek	28.00	218	LR	LR	17 01 12.7	
	comp=Z

comp=Z,2.9nm,1.3s
BRLK Bradley Lake 79.77 22 P P 16 56 38.2 -0.2
IMAR Indian Mountai 83.16 17 P P 16 56 56.9 +0.7
D19K Kuna River 83.89 14 P P 16 57 00.4 +0.5
ILAR Eielson Array 84.46 20 P P 16 57 02.7 -0.1
comp=Z,0.7nm,1.0s,baz=236,slow=6.4,SNR=4.5
comp=Z,0.7nm,1.0s
TIXI Tiksi 84.83 350 P P 16 57 05.5 +1.0
TIXI IAmb IAmb 16 57 49.2
comp=Z,3.0nm,1.1s
SIT Sitka 84.90 29 P P 16 57 04.8 -0.4
MKAR Makanchi Array 90.23 318 P P 16 57 30.2 -0.9
comp=Z,0.6nm,0.9s,baz=114,slow=5.4,SNR=1.5
comp=Z,0.6nm,0.9s

SJA ***12*** *17:19:02.0±0.6,24.°14S×66.°92W,h215km±13km,ML3.7, MW3.4*
GUC ***12*** *17:19:03.6±0.6,24.°12S×66.°93W,h204km±8km,ML3.7*
ISC 12 17:19:04.6±1.3,24°14.14S±0.05×66°92.92W±0.04,h181km,n33, σ1§78/38,4C,Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SALTA		**0.54**	**99**	↑*eP*		**Pn**		**17 19 31.8**	**+1.5**
SALTA		**0.54**	**99**	*eP*		**Pn**		**17 19 32.0**	**+1.8**
SLA	**San Lorenzo**	**1.41**	**115**	↑*eP*		**Pn**		**17 19 37.0**	**+1.1**
SLA	**San Lorenzo**	**1.41**	**115**	*eP*		**Pn**		**17 19 37.1**	**+1.1**
HJA	**Humahuaca**	**1.67**	**57**	*eP*		**Pn**		**17 19 40.0**	**+1.4**
HJA				*eS*		**Sn**		**17 19 58.6**	**-6.4**
AZAP	**Zapla**	**1.69**	**93**	*eP*		**Pn**		**17 19 39.2**	**+0.5**
FSA	**Cafayete**	**2.14**	**157**	*eP*		**Pn**		**17 19 43.8**	**+0.4**
FSA				*eS*		**Sn**		**17 20 14.0**	**+0.2**
YJA	**Yavi**	**2.34**	**34**	*eP*		**Pn**		**17 19 46.4**	**+0.4**
GO02	**Mina Guanaco**	**2.64**	**247**	↑*iP*		**Pn**		**17 19 49.7**	**+0.5**
GO02				*eS*		**Sn**		**17 20 25.0**	**+1.0**
GO02				IAML				17 20 25.2	
comp=E,179nm,0.5s									
GO02	**Mina Guanaco**	**2.64**	**247**	*eP*		**Pn**		**17 19 49.3**	**+0.1**
GO02				IAML				17 20 26.5	
comp=Z,96nm,0.1s									
PB06	**IPOC Station P**	**2.82**	**300**	*eP*		**Pn**		**17 19 51.7**	**+0.4**
PB06				*eS*		**Sn**		**17 20 27.5**	**-0.2**
PB06				IAML				17 20 29.4	
comp=N,310nm,0.2s									
PB06	**IPOC Station P**	**2.82**	**300**	*eP*		**Pn**		**17 19 51.7**	**+0.4**
PB06				IAML				17 20 58.5	
comp=Z,273nm,0.3s									
PB09	**IPOC Station P**	**3.17**	**317**	*eP*		**Pn**		**17 19 56.4**	**+0.9**
PB09	**IPOC Station P**	**3.17**	**317**	*eP*		**Pn**		**17 19 56.1**	**+0.6**
PB09				IAML				17 20 38.6	
comp=Z,131nm,0.3s									
PB14	**IPOC Station P**	**3.21**	**261**	*eP*		**Pn**		**17 19 55.9**	**-0.2**
PB14	**IPOC Station P**	**3.21**	**261**	*eP*		**Pn**		**17 19 55.6**	**-0.6**
PB14				IAML				17 20 37.7	
comp=Z,35nm,0.3s									
PB05	**IPOC Station P**	**3.27**	**292**	↑*iP*		**Pn**		**17 19 56.9**	**+0.1**
PB05				IAML				17 20 39.8	
comp=E,78nm,0.2s									
PB05	**IPOC Station P**	**3.27**	**292**	*eP*		**Pn**		**17 19 56.3**	**-0.5**
PB05				IAML				17 21 07.3	
comp=Z,98nm,0.4s									
PB10	**IPOC Station P**	**3.39**	**280**	*eP*		**Pn**		**17 19 58.2**	**+0.2**
PB10				IAML				17 20 42.2	
comp=E,37nm,0.2s									
PB10	**IPOC Station P**	**3.39**	**280**	*eP*		**Pn**		**17 19 57.7**	**-0.3**
PB10				IAML				17 20 43.3	
comp=Z,32nm,0.5s									
PB01	**IPOC Station P**	**3.89**	**322**	*eP*		**Pn**		**17 20 04.0**	**-0.4**
PB01	**IPOC Station P**	**3.89**	**322**	*eP*		**Pn**		**17 20 03.5**	**-0.9**
PB01				IAML				17 20 56.8	
comp=Z,147nm,0.1s									
AC01	**Pan de Azucar**	**3.89**	**238**	*iP*		**Pn**		**17 20 03.0**	**-1.3**
AC01	**Pan de Azucar**	**3.89**	**238**	*eP*		**Pn**		**17 20 02.4**	**-1.9**
AC01				IAML				17 20 51.3	
comp=Z,28nm,0.2s									
PB02	**IPOC Station P**	**3.93**	**315**	*eP*		**Pn**		**17 20 04.5**	**-0.4**
PB02	**IPOC Station P**	**3.93**	**315**	*eP*		**Pn**		**17 20 04.1**	**-0.8**
TINO	**Tinogasta**	**3.95**	**188**	*eP*		**Pn**		**17 20 05.5**	**+0.3**
PATCX	**Punta Patache**	**4.45**	**317**	*eP*		**Pn**		**17 20 10.7**	**-0.9**
PATCX				IAML				17 21 05.2	
comp=Z,79nm,0.8s									
TA01	**Diego Aracena**	**4.66**	**319**	*eP*		**Pn**		**17 20 13.6**	**-0.7**
TA01				IAML				17 20 58.2	
comp=Z,154nm,0.3s									
VCA	**Vinchina**	**4.72**	**194**	*eP*		**Pn**		**17 20 15.4**	**+0.4**
VCA				IAML				17 21 38.0	
comp=Z,9.4nm,2.4s									
HMBC	**Humberstone**	**4.72**	**324**	*eP*		**Pn**		**17 20 12.7**	**-2.5**
HMBC				IAML				17 21 11.8	
comp=Z,144nm,0.1s									
GO01	**Chusmiza**	**4.92**	**334**	*eP*		**Pn**		**17 20 18.3**	**+0.2**
GO01				*eS*		**Sn**		**17 21 21.6**	**+5.9**
GO01				IAML				17 21 22.3	
comp=Z,112nm,0.3s									
PB11	**IPOC Station P**	**5.04**	**329**	*eP*		**Pn**		**17 20 16.7**	**-2.6**
PB11				IAML				17 21 22.2	
comp=Z,108nm,0.3s									

GUC 12 17:20:22.5±0.6,21°54S×69°51W,h15km±12km,ML2.5, 2C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.36**	**136**	↑*iP*		Pg		17 20 30.1	+0.1
PB09				*iS*		Sg		17 20 35.0	-0.1
PB09				*iS*		Sb		17 20 35.4	-0.8
PB09				IAML				17 20 36.4	
comp=E,665nm,0.1s									
PB02	**IPOC Station P**	**0.42**	**301**	↑*iP*		Pg		17 20 28.5	-2.5
PB02				*iS*		Sg		17 20 33.0	-3.7
PB02				IAML				17 20 34.0	
comp=E,2μm,0.3s									
PB01	**IPOC Station P**	**0.49**	**2**	*eP*		Pg		17 20 31.2	-1.1
PB01				*iS*		Sg		17 20 38.0	-0.9
PB01				IAML				17 20 38.4	
comp=E,269nm,0.2s									
PATCX	**Punta Patache**	**0.93**	**320**	↓*iP*		Pb		17 20 37.5	-2.9
PATCX				*iS*		Sb		17 20 49.7	-3.0
PATCX				IAML				17 20 50.1	
comp=N,176nm,0.2s									
PATCX				IAML				17 20 51.9	
comp=E,224nm,0.4s									
TA01	**Diego Aracena**	**1.15**	**327**	*eP*		Pn		17 20 41.4	-2.6
TA01				*iS*		Sb		17 20 56.0	-2.9
TA01				IAML				17 20 57.1	
comp=N,216nm,0.3s									
TA01	**Diego Aracena**	**1.15**	**327**	*eS*		Sb		17 20 56.7	-2.2
PB06	**IPOC Station P**	**1.17**	**183**	*eP*		Pn		17 20 42.6	-1.9
PB06				*iS*		Sb		17 20 57.4	-2.1

NOU ***12*** *17:28:24.3,37.°07S×179.°61E,h0km,MLv4.2/9, Off E. Coast of N. Island, N.Z.*
WEL ***12*** *17:28:31.6±0.9,37.°5S×17.°9E±.°,h12km,M3.8/18, ML4.0/19,MLv3.8/18,Error ellipse: s-maj=10.0km s-min=5.9km az=99.9,confirmed*
ISC 12 17:28:28.4±2.7,37°10S±0.07×179°3E±0.1,h8km±12km, n65,σ0§82/72,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ECLS	**East Cape Ligh**	**0.83**	**225**	P		**Pn**		**17 28 47.3**	**+0.8**
MXZ	**Matakaoa Point**	**0.91**	**239**	P		**Pg**		**17 28 45.8**	**-0.1**
MXZ	**Matakaoa Point**	**0.91**	**239**	P		**Pg**		**17 28 46.1**	**+0.3**
MXZ				S		**Sg**		**17 28 55.9**	**-1.9**
WMGZ	**Waiomatatini S**	**1.00**	**224**	P		**Pn**		**17 28 49.8**	**+1.0**
WMGZ				S		**Sb**		**17 29 02.8**	**+1.5**
PKGZ	**Pakihiroa**	**1.23**	**231**	P		**Pg**		**17 28 52.8**	**+0.8**
PKGZ				S		**Sg**		**17 29 08.1**	**+0.1**
PUZ	**Puketiti**	**1.27**	**220**	P		**Pg**		**17 28 53.3**	**+0.5**
PUZ				S		**Sb**		**17 29 09.2**	**0.0**
HAZ	**Te Kaha**	**1.37**	**241**	P		**Pg**		**17 28 54.9**	**+0.3**
HAZ				S		**Sb**		**17 29 11.6**	**-0.2**
TWGZ	**Tauwhareparae**	**1.50**	**223**	P		**Pb**		**17 28 56.6**	**+0.1**
TWGZ				S		**Sn**		**17 29 15.9**	**+0.5**
RUGZ	**Raukumara Rang**	**1.55**	**235**	P		**Pn**		**17 28 57.3**	**+0.9**
CNGZ	**Carnagh Statio**	**1.63**	**211**	P		**Pb**		**17 28 59.0**	**+0.3**
TKGZ	**Te Karaka**	**1.76**	**220**	P		**Pn**		**17 28 59.8**	**+0.6**
MWZ	**Matawai**	**1.86**	**228**	P		**Pn**		**17 29 01.3**	**+0.7**
WHRZ	**Whale Island**	**1.99**	**247**	P		**Pn**		**17 29 03.5**	**+1.2**
RIGZ	**Rimuhau**	**2.01**	**216**	P		**Pn**		**17 29 03.3**	**+0.7**
RAGZ	**Rawiri**	**2.04**	**226**	P		**Pn**		**17 29 03.9**	**+0.8**
URZ	**Urewera**	**2.08**	**235**	P		**Pn**		**17 29 04.7**	**+1.1**
URZ	**Urewera**	**2.08**	**235**	P		**Pn**		**17 29 04.3**	**+0.7**
URZ				S		**Sn**		**17 29 28.0**	**-1.7**
PRGZ	**Paritu Road**	**2.13**	**211**	P		**Pn**		**17 29 05.0**	**+0.7**
MARZ	**Manawahe**	**2.26**	**246**	P		**Pn**		**17 29 06.7**	**+0.7**
EDRZ	**Edgecumbe**	**2.26**	**243**	P		**Pn**		**17 29 07.1**	**+0.9**
SNGZ	**Shannon Statio**	**2.28**	**222**	P		**Pn**		**17 29 08.4**	**+2.0**
KNZ	**Kokohu**	**2.31**	**213**	P		**Pn**		**17 29 06.5**	**-0.1**
MHGZ	**Mahia Peninsul**	**2.33**	**207**	P		**Pn**		**17 29 07.5**	**+0.6**
RTZ	**Ruatahuna**	**2.37**	**230**	P		**Pn**		**17 29 08.5**	**+0.7**
MUGZ	**Murupara**	**2.42**	**235**	P		**Pn**		**17 29 08.7**	**+0.3**
MYRZ	**Mayor Island**	**2.44**	**265**	P		**Pn**		**17 29 08.7**	**+0.2**
TARZ	**Mount Tarawera**	**2.48**	**242**	P		**Pn**		**17 29 10.6**	**+1.4**
TGRZ	**Tauranga**	**2.49**	**254**	P		**Pn**		**17 29 09.5**	**+0.3**
RAHZ	**Arahi**	**2.52**	**223**	P		**Pn**		**17 29 10.0**	**+0.4**
RRRZ	**Republican Roa**	**2.52**	**240**	P		**Pn**		**17 29 11.2**	**+1.5**
WHHZ	**Waihua**	**2.56**	**219**	P		**Pn**		**17 29 10.4**	**+0.2**
KARZ	**Kaharoa**	**2.59**	**248**	P		**Pn**		**17 29 11.2**	**+0.6**
MTHZ	**Maungataniwha**	**2.61**	**227**	P		**Pn**		**17 29 11.6**	**+0.7**
KMRZ	**Kaimai**	**2.77**	**253**	P		**Pn**		**17 29 13.4**	**+0.4**
NMHZ	**Naumai**	**2.80**	**224**	P		**Pn**		**17 29 14.0**	**+0.5**
ARHZ	**Aropaoanui**	**2.82**	**219**	P		**Pn**		**17 29 14.0**	**+0.3**
MRHZ	**Matea Rd**	**2.86**	**232**	P		**Pn**		**17 29 14.9**	**+0.6**
KUZ	**Kuaotunu**	**2.88**	**276**	P		**Pn**		**17 29 13.4**	**-1.1**
KUZ	**Kuaotunu**	**2.88**	**276**	P		**Pn**		**17 29 13.5**	**-1.1**
BKZ	**Black Stump Fm**	**3.02**	**226**	P		**Pn**		**17 29 16.4**	**-0.2**
BKZ	**Black Stump Fm**	**3.02**	**226**	P		**Pn**		**17 29 16.6**	**0.0**
TOZ	**Tahuroa Road**	**3.08**	**257**	P		**Pn**		**17 29 16.9**	**-0.4**
CKHZ	**Cape Kidnapper**	**3.09**	**213**	P		**Pn**		**17 29 16.8**	**-0.7**
MCHZ	**McNeill Hill**	**3.11**	**220**	P		**Pn**		**17 29 17.6**	**-0.1**
GRZ	**Great Barrier**	**3.19**	**284**	P		**Pn**		**17 29 18.8**	**-0.1**
KWHZ	**Kaweka Forest**	**3.24**	**223**	P		**Pn**		**17 29 19.2**	**-0.4**
KAHZ	**Kahuranaki**	**3.29**	**214**	P		**Pn**		**17 29 19.5**	**-0.8**
RITZ	**Rihia Road**	**3.29**	**234**	P		**Pn**		**17 29 21.0**	**+0.7**
MKAZ	**Moumakai**	**3.30**	**269**	P		**Pn**		**17 29 20.0**	**-0.4**
WIAZ	**Waiheke Island**	**3.34**	**274**	P		**Pn**		**17 29 20.5**	**-0.4**
ETVZ	**East Tongariro**	**3.48**	**233**	P		**Pn**		**17 29 22.8**	**-0.2**
NTVZ	**North Tongarir**	**3.48**	**234**	P		**Pn**		**17 29 22.9**	**0.0**
PXZ	**Pawanui**	**3.49**	**212**	P		**Pn**		**17 29 21.6**	**-1.4**
KRVZ	**Karewarewa**	**3.50**	**234**	P		**Pn**		**17 29 23.6**	**+0.3**
MBAZ	**Motutapu North**	**3.53**	**274**	P		**Pn**		**17 29 23.8**	**+0.2**
WTVZ	**West Tongariro**	**3.55**	**234**	P		**Pn**		**17 29 24.3**	**+0.5**
SNVZ	**South Ngauruho**	**3.55**	**233**	P		**Pn**		**17 29 24.1**	**+0.1**
ABAZ	**Army Bay**	**3.61**	**277**	P		**Pn**		**17 29 25.1**	**+0.5**
WPHZ	**Waipukurau**	**3.71**	**216**	P		**Pn**		**17 29 24.7**	**-1.3**
HIZ	**Hauiti**	**3.78**	**247**	P		**Pn**		**17 29 28.1**	**+1.1**
BFZ	**Birch Farm**	**4.30**	**213**	P		**Pn**		**17 29 32.7**	**-1.3**
KHEZ	**Kahui Hut**	**4.70**	**241**	P		**Pn**		**17 29 39.4**	**-0.2**
OUZ	**Omahuta**	**4.97**	**290**	P		**Pn**		**17 29 44.0**	**+0.7**
OUZ	**Omahuta**	**4.97**	**290**	P		**Pn**		**17 29 44.2**	**+0.9**
QRZ	**Quartz Range**	**6.45**	**233**	P		**Pn**		**17 30 02.3**	**-1.3**

SDD 12 17:39:01.8±1.6,18°72N×68°47W,h148km±17km,MD3.0, ML2.9,MW2.3,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MIDR	**Miches**	**0.61**	**295**	*ePg*		Pn		17 39 22.5	-1.0
MIDR				*eSg*		Sn		17 39 38.2	-1.9
MIDR	**Miches**	**0.61**	**295**	*ePg*		Pn		17 39 21.2	-2.4
MIDR				*eSg*		Sn		17 39 38.2	-1.8
MIDR				IAML				17 39 42.5	
comp=N,28nm,2.6s									
HATOM	**Hato Mayor del**	**0.87**	**275**	*ePg*		Pn		17 39 23.7	-1.7
HATOM				*eSg*		Sn		17 39 40.3	-3.0
HATOM				IAML				17 39 41.4	
comp=N,9.1nm,0.1s									
HATOM				IAML				17 39 41.6	
comp=E,12nm,0.0s									
HATOM	**Hato Mayor del**	**0.87**	**275**	*ePg*		Pn		17 39 23.8	-1.6
HATOM				*eSg*		Sn		17 39 40.4	-2.9
HATOM				IAML				17 40 10.2	
comp=N,18nm,1.6s									
DR08	**Loma La Naviza**	**1.49**	**280**	*ePg*		Pn		17 39 30.8	-0.4
DR08				*eSg*		Sn		17 39 51.1	-2.5
DR08				IAML				17 39 58.6	
comp=N,238nm,0.1s									
MLPR	**Magueyes Islan**	**1.55**	**119**	*ePg*		Pn		17 39 27.1	-4.6
MLPR				*eSg*		Sn		17 39 45.8	-8.8
AOPR	**Arecibo Observ**	**1.67**	**103**	*eSg*		Sn		17 39 52.5	-4.5
AOPR	**Arecibo Observ**	**1.67**	**103**	*ePg*		Pn		17 39 31.8	-1.3
AOPR				IAML				17 39 53.4	
comp=N,2μm,3.4s									
AOPR				*eSg*		Sn		17 39 54.1	-3.0

IDC ***12*** *17:49:06.9±1.3,47.°30N×153.°76E,h0km,mb3.7/12, mbtmp3.8/14,ML4.8/1,MS3.5/7,Error ellipse: s-maj=32.2km s-min=19.4km az=119.0*
MOS ***12*** *17:49:07.6±1.6,47.°33N×154.°01E,h18km,mb4.0/1,Error ellipse: s-maj=18.6km s-min=5.3km az=74.9*
SKHL ***12*** *17:49:10.0±0.1,47.°20N×154.°20E,h51km±9km,mb4.5/3*
ISC 12 17:49:09.9±1.1,47°2N±0.1×154°2E±0.1,h27km,n54, σ1§62/53,mb3.8/12,MS4.2/4,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.69**	**19**	PN		**Pn**		**17 50 05.6**	**+0.5**
SKR	**Severo-Kuril's**	**3.69**	**19**	*eP*		**Pn**		**17 50 05.9**	**+0.8**
SKR				AMB		AMB		17 50 12.5	
40nm,0.5s									
SKR				*eS*		**Sn**		**17 50 45.9**	**-1.8**
SKR				A		A		17 50 55.3	
80nm,0.4s									
SKR				A		A		17 50 55.3	
100nm,0.4s									
PAU	**Pauzhetka**	**4.58**	**21**	PN		**Pn**		**17 50 16.9**	**-0.5**
PAU	**Pauzhetka**	**4.58**	**21**	*eP*		**Pn**		**17 50 17.8**	**+0.4**
PAU				AMB		AMB		17 50 20.8	
30nm,0.3s									
PAU				*eS*		**Sn**		**17 51 08.6**	**-1.1**
PAU				A		A		17 51 13.8	
110nm,0.3s									
PAU				A		A		17 51 13.8	
100nm,0.3s									
KUR	**Kuril'sk**	**4.83**	**248**	PN		**Pn**		**17 50 24.9**	**+4.2**
KUR				*eS*		**Sn**		**17 51 17.5**	**+1.9**
KUR				smax		smax			
comp=N,70nm,0.8s									
KUR				smax		smax			
comp=E,127nm,0.8s									
KUR	**Kuril'sk**	**4.83**	**248**	*eP*		**Pn**		**17 50 21.0**	**+0.3**
KUR				AMB		AMB		17 50 28.8	
comp=E,80nm,0.5s									
KUR				*eS*		**Sn**		**17 51 14.3**	**-1.3**
KUR				A		A		17 51 22.8	
comp=E,90nm,0.6s									
KUR				A		A		17 51 22.8	
comp=E,70nm,0.6s									
KDTR	**Khodutka, Kamc**	**5.24**	**27**	PN		**Pn**		**17 50 25.6**	**-0.8**
KDTR	**Khodutka, Kamc**	**5.24**	**27**	*eP*		**Pn**		**17 50 25.6**	**-0.8**
MIPR	**Malaya Ipel'ka**	**5.33**	**17**	PN		**Pn**		**17 50 28.6**	**+1.9**
ASAK	**Asacha**	**5.70**	**23**	PN		**Pn**		**17 50 33.5**	**+0.7**
MTVR	**Mutnovka**	**5.87**	**25**	PN		**Pn**		**17 50 35.4**	**+0.3**
GRL	**Gorelyy**	**5.90**	**24**	PN		**Pn**		**17 50 36.1**	**+0.6**
KRMR	**Karymshinskiy**	**6.16**	**23**	PN		**Pn**		**17 50 37.1**	**-1.9**
KRMR	**Karymshinskiy**	**6.16**	**23**	*eP*		**Pn**		**17 50 37.1**	**-1.9**
PEA0B	**Petropavlovsk-**	**6.31**	**20**	PN		**Pn**		**17 50 42.6**	**+1.5**
PETK	**Petropavlovsk-**	**6.31**	**20**	Pn		**Pn**		**17 50 41.7**	**+0.6**
comp=E,2.5nm,0.4s,baz=180,slow=12,SNR=22									
PETK				Sn		**Sn**		**17 51 55.7**	**+3.4**
baz=220,slow=22									
PETK				LR		LR		17 53 19.7	
comp=E,67nm,18.9s,baz=226,slow=40									
PET	**Petropavlovsk**	**6.48**	**25**	PN		**Pn**		**17 50 42.6**	**-0.8**
PET	**Petropavlovsk**	**6.48**	**25**	*eP*		**Pn**		**17 50 42.6**	**-0.8**
PET				*eS*		**Sn**		**17 51 53.8**	**-2.5**
UGLR	**Uglovaya**	**6.69**	**25**	PN		**Pn**		**17 50 46.9**	**+0.5**
KOK	**Koryaka**	**6.71**	**23**	PN		**Pn**		**17 50 47.9**	**+1.2**
KOK	**Koryaka**	**6.71**	**23**	*eP*		**Pn**		**17 50 47.9**	**+1.2**
KOK				*eP*		**Pn**		**17 50 47.9**	**+1.2**
AVH	**Avacha**	**6.72**	**24**	PN		**Pn**		**17 50 48.0**	**+1.3**
AVH	**Avacha**	**6.72**	**24**	*eP*		**Pn**		**17 50 48.0**	**+1.3**
SMAR	**Somma**	**6.73**	**24**	PN		**Pn**		**17 50 47.8**	**+0.7**
SDLR	**Sedlovina**	**6.77**	**25**	PN		**Pn**		**17 50 47.6**	**+0.1**
NMR	**Nemuro--Hokkai**	**7.11**	**240**	*eP*		**Pn**		**17 50 52.8**	**+0.8**
NMR				*eS*		**Sn**		**17 52 07.2**	**-4.6**
AKK	**Akkeshi**	**7.84**	**241**	*eP*		**Pn**		**17 51 02.1**	**0.0**
ASAJ	**Asahikawa**	**8.70**	**253**	Pn		**Pn**		**17 51 17.1**	**+3.3**
comp=E,0.8nm,0.3s,baz=40,slow=10,SNR=11									

MA2	**Magadan**	**12.55**	**352**	Pn		**Pn**		**17 52 08.2**	**+1.8**
comp=E,0.6nm,0.3s,baz=168,slow=20,SNR=2.1									
MA2				LR		LR		17 57 32.1	
comp=E,67nm,18.6s,baz=110,slow=41									
comp=E,11nm,1.0s									
SEY	**Seymchan**	**15.79**	**357**	LR		LR		17 58 37.3	
comp=E,59nm,19.4s,baz=248,slow=36									
USRK	**Ussuriysk Ar.**	**15.80**	**267**	Pn		**Pn**		**17 52 51.5**	**+1.2**
comp=E,0.1nm,0.3s,baz=83,slow=12,SNR=1.7									
MJAR	**Matsushiro Arr**	**15.96**	**234**	Pn		**Pn**		**17 52 53.0**	**+0.5**
baz=42,slow=9.2,SNR=4.6									
KSRS	**Korea Array**	**21.65**	**253**	P		**P**		**17 53 56.9**	**-1.1**
comp=E,0.5nm,0.5s,baz=51,slow=9.6,SNR=1.7									
comp=E,0.5nm,0.5s									
H11N2	**WAKE ISLAND Hy**	**29.30**	**155**	T		T		18 26 07.8	
baz=343,slow=75,SNR=63									
H11N1	**WAKE ISLAND Hy**	**29.32**	**155**	T		T		18 26 19.5	
baz=343,slow=75,SNR=76									
H11N3	**WAKE ISLAND Hy**	**29.32**	**155**	T		T		18 26 18.7	
baz=343,slow=75,SNR=35									
H11S1	**WAKE ISLAND Hy**	**30.41**	**156**	T		T		18 27 41.7	
baz=343,slow=76,SNR=144									
H11S3	**WAKE ISLAND Hy**	**30.42**	**156**	T		T		18 27 37.5	
baz=343,slow=76,SNR=201									
H11S2	**WAKE ISLAND Hy**	**30.43**	**156**	T		T		18 27 40.0	
baz=343,slow=76,SNR=204									
SONM	**Songino Array**	**31.89**	**289**	P		**P**		**17 55 30.7**	**-2.1**
comp=E,0.4nm,0.9s,baz=95,slow=9.3,SNR=1.9									
comp=E,0.4nm,0.9s									
ILAR	**Eielson Array**	**35.72**	**39**	P		**P**		**17 56 07.3**	**+1.6**
comp=E,0.3nm,0.9s,baz=274,slow=9.4,SNR=2.0									
comp=Z,0.3nm,0.9s									
MKAR	**Makanchi Array**	**47.39**	**297**	P		**P**		**17 57 39.2**	**-2.4**
comp=E,0.9nm,1.1s,baz=67,slow=6.0,SNR=2.5									
comp=E,0.9nm,1.1s									
KURK	**Kurchatov**	**47.73**	**304**	P		**P**		**17 57 43.3**	**-0.7**
KURK	**Kurchatov**	**47.73**	**304**	*eP*		**P**		**17 57 43.3**	**-0.7**
KURBB	**Kurchatov Arra**	**47.82**	**304**	P		**P**		**17 57 43.3**	**-1.5**
comp=E,0.7nm,0.6s,baz=67,slow=8.0,SNR=5.2									
comp=E,0.7nm,0.6s									
BVAR	**Borovoye Array**	**51.14**	**310**	P		**P**		**17 58 09.4**	**-0.6**
comp=E,0.5nm,0.5s,baz=56,slow=8.2,SNR=5.7									
comp=E,0.5nm,0.3s									
ARCES	**ARCESS Array B**	**57.66**	**341**	LR		LR		18 28 35.7	
comp=E,208nm,18.3s,baz=244,slow=41									
FINES	**FINESS Array B**	**63.94**	**335**	P		**P**		**17 59 39.7**	**-0.2**
comp=E,0.7nm,0.4s,baz=22,slow=8.1,SNR=13									
FINES				LR		LR		18 30 44.6	
comp=E,303nm,18.7s,baz=272,slow=39									
comp=E,0.7nm,0.4s									
NOA	**NORSAR Array B**	**68.03**	**342**	P		**P**		**18 00 06.5**	**+0.2**
comp=E,0.9nm,1.0s,baz=27,slow=6.5,SNR=6.3									
comp=E,0.9nm,1.0s									
HFS	**Hagfors**	**68.28**	**340**	P		**P**		**18 00 07.7**	**-0.2**
comp=E,1.4nm,0.4s,baz=42,slow=2.3,SNR=22									
comp=E,1.4nm,0.4s									
AKASG	**Malin Array Be**	**71.57**	**327**	P		**P**		**18 00 27.7**	**-0.5**
comp=E,0.5nm,0.3s,baz=37,slow=5.7,SNR=2.8									
comp=E,0.5nm,0.3s									
ASAR	**Alice Springs**	**72.89**	**199**	P		**P**		**18 00 37.3**	**+1.0**
comp=E,0.7nm,0.9s,baz=9.7,slow=8.9,SNR=5.5									
ASAR				LR		LR		18 34 34.6	
comp=E,18nm,18.6s,baz=317,slow=37									
comp=E,0.7nm,0.9s									
EKA	**Eskdalemuir Ar**	**76.06**	**347**	P		**P**		**18 00 56.8**	**+2.3**
comp=E,0.4nm,0.4s,baz=18

OBF4				smax	smax	18 02 09.4			
	comp=Z,4.9nm,0.2s								
OUL	**Oulu**	**2.83**	**133**	PB	**Pn**	**18 01 34.7**	**+2.7**		
OUL				SG	**Sb**	**18 02 14.1**	**+2.0**		
OBF0	**Syolatti, Pyha**	**2.91**	**151**	PB	**Pn**	**18 01 35.0**	**+1.9**		
	baz=334								
OBF0				smax	smax	18 02 12.3			
	comp=Z,6.1nm,0.2s								
OBF8	**Ulkokalla**	**2.94**	**158**	PG	**Pb**	**18 01 37.4**	**-1.3**		
OBF8				smax	smax	18 02 13.0			
	comp=Z,8.8nm,0.2s								
ARA0	**ARCESS Array S**	**2.99**	**32**	*eP*	**Pn**	**18 01 34.8**	**+0.5**		
ARA0	**ARCESS Array S**	**2.99**	**32**	PN	**Pn**	**18 01 34.7**	**+0.5**		
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn	**Pn**	**18 01 34.5**	**+0.2**		
	comp=Z,0.4nm,0.3s,baz=214,slow=14,SNR=55								
ARCES				Sn	**Sn**	**18 02 10.7**	**-0.1**		
	comp=Z,0.8nm,0.3s,baz=211,slow=24,SNR=9.3								
	comp=Z,0.9nm,0.2s								
VAGH	**Vaagaholmen**	**3.06**	**267**	*eP*	**Pn**	**18 01 36.5**	**+1.5**		
RAJF	**Raja-Jooseppi**	**3.13**	**60**	PB	**Pn**	**18 01 38.0**	**+1.9**		
OUF	**Merijarvi**	**3.13**	**148**	PB	**Pn**	**18 01 37.7**	**+1.6**		
	baz=329								
OUF				smax	smax	18 02 18.2			
	comp=Z,3.5nm,0.2s								
UMAU	**Umeaa**	**3.21**	**182**	PN	**Pn**	**18 01 38.1**	**+1.0**		
UMAU				SB	**Sn**	**18 02 19.0**	**+3.1**		
KU2	**Taivalkoski**	**3.23**	**112**	PB	**Pn**	**18 01 40.6**	**+3.2**		
STOK	**Stokkvaagen**	**3.25**	**260**	*eP*	**Pn**	**18 01 40.7**	**+3.0**		
LEIR	**Leirfjorden**	**3.28**	**257**	*eP*	**Pn**	**18 01 39.7**	**+1.5**		
VRF	**Varrio**	**3.40**	**75**	PN	**Pn**	**18 01 41.4**	**+1.5**		
OLKF	**Oulanka, Finla**	**3.44**	**99**	PN	**Pn**	**18 01 41.8**	**+1.5**		
MSF	**Maaselka**	**3.44**	**106**	PB	**Pn**	**18 01 43.1**	**+2.7**		
KEV	**Kevo**	**3.50**	**37**	PN	**Pn**	**18 01 41.5**	**+0.3**		
KEV				SN	**Sn**	**18 02 24.6**	**+1.4**		
KU6	**Riekki**	**3.72**	**102**	PN	**Pn**	**18 01 45.6**	**+1.4**		
	baz=293								
HUSU	**Husum**	**3.82**	**192**	PN	**Pn**	**18 01 47.3**	**+1.7**		
HUSU				SN	**Sn**	**18 02 32.2**	**+1.1**		
VAF	**Ylistaro**	**4.11**	**169**	PN	**Pn**	**18 01 50.7**	**+1.1**		
VADS	**Vadso**	**4.34**	**41**	*eP*	**Pn**	**18 01 53.4**	**+0.7**		
NSS	**Namsos**	**4.50**	**240**	*eP*	**Pn**	**18 01 56.8**	**+1.9**		
NIF	**Nilsia**	**4.68**	**139**	PN	**Pn**	**18 01 59.3**	**+1.8**		
RMF	**Romuvaara**	**4.69**	**124**	PB	Pn	18 02 03.2	+5.8		
	baz=311								
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**18 02 17.5**	**+1.0**		
	comp=Z,0.2nm,0.3s,baz=347,slow=13,SNR=12								
FINES				Sn	**Sn**	**18 03 25.5**	**-1.0**		
	comp=Z,0.4nm,0.3s,baz=347,slow=23,SNR=6.4								
FINES				Lg	Lg	18 03 57.6			
	comp=Z,0.3nm,0.3s,baz=343,slow=28,SNR=1.4								
	comp=Z,2.0nm,0.7s								
NOA	**NORSAR Array B**	**7.40**	**220**	Pn	**Pn**	**18 02 33.6**	**-1.3**		
	baz=28,slow=11,SNR=5.4								
NOA				Sn	**Sn**	**18 03 56.9**	**-2.6**		
	baz=30,slow=22,SNR=1.5								
NOA				Lg	Lg	18 04 39.9			
	baz=54,slow=23								
	comp=Z,0.2nm,0.5s								
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**18 02 38.2**	**-0.3**		
	comp=Z,0.2nm,0.3s,baz=25,slow=13,SNR=9.2								
HFS				Sn	**Sn**	**18 04 02.9**	**-3.1**		
	comp=Z,0.1nm,0.3s,baz=27,slow=26,SNR=1.7								
HFS				Lg	Lg	18 04 43.7			
	comp=Z,0.1nm,0.3s,baz=29,slow=28,SNR=1.7								
	comp=Z,2.9nm,0.8s								
SPITS	**Spitsbergen Ar**	**11.24**	**355**	Pn	**Pn**	**18 03 27.4**	**+0.2**		
	baz=163,slow=15								
	comp=Z,8.5nm,1.0s								

*DSN **12** 18:41:44.5±2.2,27.°52N×58.°19E,h10km,ML2.7/5,Error ellipse: s-maj=56.0km s-min=14.5km az=148.0*
*TEH **12** 18:41:50.7,27.°42N×57.°95E,h10km±143km*
*OMAN **12** 18:41:51.6±0.1,26.°91N×58.°12E,h10km,ml2.8/12,Error ellipse: s-maj=1.5km s-min=0.9km az=358.0*

ISC 12 18:41:45.9±1.0,27.°14N±0.°04×58.°21E±0.°04,h10km,n32, σ2923/45,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.92**	**331**	Pg	**Pg**	**18 42 01.4**	**-2.1**
IBND	**Bandar-abas**	**1.51**	**282**	Pg	**Pg**	**18 42 14.2**	**-0.7**
GENO	**Geno**	**1.83**	**279**	Pg	**Pb**	**18 42 18.8**	**-0.7**
KBAM	**BAM**	**2.00**	**6**	Pg	**Pb**	**18 42 21.9**	**-0.5**
BANOM	**Banah**	**2.10**	**235**	P	**Pb**	**18 42 23.0**	**-1.0**
BANOM				S	**Sb**	**18 42 49.1**	**-1.0**
BANOM	**Banah**	**2.10**	**235**	P	**Pb**	**18 42 22.7**	**-1.3**
BANOM				S	**Sg**	**18 42 53.5**	**+0.3**
SHME	**Shamm**	**2.15**	**240**	P	**Pb**	**18 42 24.5**	**-0.3**
SHME				S	**Sb**	**18 42 50.8**	**-0.7**
SHME	**Shamm**	**2.15**	**240**	P	**Pb**	**18 42 23.7**	**-1.1**
SHME				S	**Sb**	**18 42 51.8**	**+0.3**
MDH	**Madha**	**2.51**	**223**	P	**Pn**	**18 42 28.1**	**+1.4**
MDH				S	**Sn**	**18 42 58.4**	**+1.0**
MDH	**Madha**	**2.51**	**223**	P	**Pn**	**18 42 27.7**	**+1.0**
MASF	**Masafi**	**2.55**	**227**	P	**Pb**	**18 42 30.4**	**-1.3**
MSFE	**Esma-Masafi**	**2.56**	**226**	P	**Pb**	**18 42 30.6**	**-1.2**
NGRK	**Negar Kerman**	**2.81**	**333**	Pn	**Pb**	**18 42 33.7**	**-2.7**
UOSS	**Minazif**	**2.83**	**220**	P	**Pb**	**18 42 33.8**	**-2.8**
UOSS				S	**Sn**	**18 43 06.1**	**+0.7**
HATD	**Hatta, Dubai**	**2.97**	**219**	P	**Pb**	**18 42 35.8**	**-3.0**
ASHO	**Ashiyiah**	**3.12**	**219**	P	**Pb**	**18 42 37.8**	**-3.6**
ASHO				S	**Sn**	**18 43 13.5**	**+1.0**
ASHO	**Ashiyiah**	**3.12**	**219**	P	**Pb**	**18 42 38.1**	**-3.4**
NGCH	**Negor - Chabah**	**3.17**	**123**	P	**Pb**	**18 42 40.5**	**-1.9**
SOHO	**SOHO**	**3.35**	**207**	P	**Pn**	**18 42 40.3**	**+2.0**
SOHO				S	**Sn**	**18 43 18.6**	**+0.4**
HOQ	**Hoqain**	**3.63**	**193**	P	**Pn**	**18 42 44.3**	**+2.0**
	SNR=18						
ALNE	**Al Ain**	**3.79**	**216**	P	**Pn**	**18 42 47.4**	**+3.1**
ALNE				S	**Sn**	**18 43 30.0**	**+1.0**
WSAR	**Wadi Sarin**	**3.90**	**174**	P	**Pb**	**18 42 50.1**	**-4.8**
WSAR				S	**Sn**	**18 43 32.9**	**+1.0**
SMDO	**Samad**	**4.07**	**182**	P	**Pn**	**18 42 51.7**	**+3.4**
SMDO				S	**Sn**	**18 43 36.9**	**+0.8**
ARQ	**Araqi**	**4.08**	**202**	P	**Pn**	**18 42 51.2**	**+2.8**
	SNR=8.6						
ARQ				S	**Sn**	**18 43 36.9**	**+0.6**
WBK	**Wadi Bani Khal**	**4.56**	**171**	P	**Pn**	**18 42 58.8**	**+3.8**
	SNR=11						
WBK				S	**Sn**	**18 43 48.1**	**-0.1**
JMDO	**Jabal Madar**	**4.75**	**181**	P	**Pn**	**18 43 00.3**	**+2.7**
JLN	**Jalan Bani Buh**	**5.09**	**167**	P	**Pn**	**18 43 05.6**	**+3.4**
MHTO	**MHTO**	**6.13**	**182**	P	**Pn**	**18 43 20.5**	**+3.9**
DOK	**Doka**	**9.28**	**205**	P	**Pn**	**18 44 01.8**	**+2.1**
SHAO	**Shalim**	**9.38**	**195**	P	**Pn**	**18 44 03.9**	**+2.7**
DMTO	**DMTO**	**9.85**	**198**	P	**Pn**	**18 44 10.6**	**+3.0**
ABTO	**Aybut**	**10.75**	**206**	P	**Pn**	**18 44 22.0**	**+2.0**

*IDC **12** 19:30:59.5±10.0,7.°87S×159.°46E,h0km,mb4.0/3, mbtmp4.0/3,Error ellipse: s-maj=170.2km s-min=28.0km az=43.0*
*NEIC **12** 19:31:05.5±2.5,8.°31S±0.°08×159.°2E±0.°1,h10km±1km, mb4.6/12,Error ellipse: s-maj=24.6km s-min=4.1km az=56.0*

ISC 12 19:31:08.3±1.0,8.°3S±0.°1×159.°1E±0.°1,h35km,n24, σ1941/20,mb4.2/8,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.39**	**145**	Pn	**Pn**	**19 31 29.8**	**-1.4**
	22nm,0.3s,baz=323,slow=1.0,SNR=22						
HNR				Sn	**Sn**	**19 31 51.3**	**+3.1**
	52nm,0.3s,baz=290,slow=23,SNR=6.8						
HNR	**Honiara**	**1.39**	**145**		**Pn**	**19 31 29.2**	**-2.0**
HNR					**Sn**	**19 31 48.0**	**-0.2**
RABL	**Rabaul**	**8.04**	**300**	Pn	**Pn**	**19 33 02.2**	**-0.5**
ARMA	**Armidale**	**23.11**	**197**	P	**P**	**19 36 12.8**	**+1.4**
ARMA				IAmb	IAmb	19 36 25.5	
	comp=Z,21nm,1.2s						
WR8	**Warramunga Arr**	**26.52**	**241**	P	**P**	**19 36 43.3**	**+0.5**
WR8				IAmb	IAmb	19 36 43.7	
	comp=Z,5.2nm,1.2s						
WB0	**Warramunga Arr**	**26.54**	**242**	P	**P**	**19 36 43.2**	**+0.1**
WRA	**Warramunga Arr**	**26.65**	**242**	P	**P**	**19 36 44.8**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=65,slow=8.9,SNR=8.0						
	comp=Z,0.9nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**27.64**	**16**	T	T	20 04 53.4	
	baz=195,slow=76,SNR=209						
H11S2	**WAKE ISLAND Hy**	**27.64**	**16**	T	T	20 04 49.5	
	baz=195,slow=76,SNR=292						
H11S1	**WAKE ISLAND Hy**	**27.65**	**16**	T	T	20 04 50.7	
	baz=195,slow=76,SNR=124						
STKA	**Stephens Creek**	**28.59**	**212**	P	**P**	**19 37 02.1**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=46,slow=14,SNR=5.4						
	comp=Z,1.8nm,0.7s						
ASAR	**Alice Springs**	**28.60**	**235**	P	**P**	**19 37 01.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=64,slow=10,SNR=12						
	comp=Z,0.4nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**28.86**	**15**	T	T	20 06 21.0	
	baz=195,slow=76,SNR=103						
H11N3	**WAKE ISLAND Hy**	**28.86**	**15**	T	T	20 06 25.4	
	baz=195,slow=76,SNR=85						
H11N2	**WAKE ISLAND Hy**	**28.87**	**15**	T	T	20 06 25.6	
	baz=195,slow=76,SNR=93						
KNRA	**Kununurra**	**30.58**	**253**	P	**P**	**19 37 19.4**	**+0.3**
KNRA				IAmb	IAmb	19 37 33.4	
	comp=Z,26nm,1.4s						
BBOO	**Buckleboo**	**32.44**	**218**	P	**P**	**19 37 34.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**33.98**	**250**	P	**P**	**19 37 48.5**	**-0.5**
MSWZ	**Moikau Station**	**35.95**	**159**	P	**P**	**19 38 04.6**	**-1.0**
M14K	**Bethel**	**75.32**	**19**	P	**P**	**19 42 49.5**	**+1.9**
BRLK	**Bradley Lake**	**78.55**	**23**	P	**P**	**19 43 07.5**	**+1.6**
STLK	**Strandline Lak**	**79.31**	**22**	P	**P**	**19 43 12.1**	**+2.0**
STLK				IAmb	IAmb	19 43 26.4	
	comp=Z,5.0nm,1.2s						
SUA	**Susitna One**	**79.68**	**22**	P	**P**	**19 43 11.6**	**-0.7**
SUA				IAmb	IAmb	19 43 31.6	
	comp=Z,21nm,1.3s						
RIDG	**Independent Ri**	**83.23**	**22**	P	**P**	**19 43 29.4**	**-1.5**

*NEIC **12** 20:08:09.3±1.1,61.°51N±0.°02×146.°52W±0.°03,h28km±8km, Error ellipse: s-maj=2.8km s-min=2.0km az=175.0*

AEIC 12 20:08:10.3±1.2,61.°51N±0.°02×146.°51W±0.°03,h27km±6km, ML3.3,mL3.5/218(NEIC),Error ellipse: s-maj=3.2km s-min=1.8km az=210.0,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLU	**Klutina**	**0.28**	**93**		Pb	20 08 16.9	-0.4
KLU					Sn	20 08 23.1	-1.0
KLU				IAML		20 08 23.5	
	comp=N,7μm,0.3s						
KLU				IAML		20 08 23.6	
	comp=E,6μm,0.3s						
SCM	**Sheep Creek Mo**	**0.51**	**310**		Pb	20 08 19.7	-1.1
SCM					Sb	20 08 27.9	-0.1
SCM				IAML		20 08 28.4	
	comp=N,4μm,0.2s						
SCM				IAML		20 08 28.7	
	comp=E,4μm,0.7s						
DIV	**Divide**	**0.52**	**137**		Pb	20 08 19.6	-1.4
DIV					Sb	20 08 27.4	-0.8
DIV				IAML		20 08 29.4	
	comp=E,3μm,0.5s						
M24K	**Tolsona, Glenn**	**0.62**	**15**		Pb	20 08 21.8	-0.9
M24K				IAML		20 08 32.1	
	comp=E,3μm,0.8s						
M24K				IAML		20 08 33.0	
	comp=N,3μm,0.5s						
M24K	**Tolsona, Glenn**	**0.62**	**15**		Sb	20 08 31.2	+0.2
M23K	**Glacier View**	**0.65**	**297**		Pb	20 08 21.6	-1.5
M23K					Sb	20 08 31.1	-0.7
N25K	**Chitina, Valde**	**0.92**	**83**		Pn	20 08 25.4	-2.2
N25K				IAML		20 08 39.9	
	comp=N,1μm,0.5s						
N25K	**Chitina, Valde**	**0.92**	**83**		Sb	20 08 37.9	-1.7
SML	**Sawmill**	**0.92**	**290**		Pn	20 08 25.3	-2.2
SML					Sb	20 08 37.5	-2.0
SML				IAML		20 08 40.0	
	comp=N,968nm,0.6s						
KNK	**Knik Glacier**	**0.94**	**265**		Pn	20 08 26.3	-1.5
KNK					Sb	20 08 39.0	-1.1
KNK				IAML		20 08 40.3	
	comp=E,1μm,0.5s						
EYAK	**Cordova Ski Ar**	**1.03**	**159**		Pn	20 08 27.8	-1.2
EYAK					Sn	20 08 42.6	0.0
EYAK				IAML		20 08 44.8	
	comp=E,889nm,0.8s						
EYAK				IAML		20 08 45.1	
	comp=N,935nm,0.5s						
BMRM	**Bremner River**	**1.07**	**120**		Pn	20 08 27.4	-2.2
BMRM					Sn	20 08 42.2	-1.4
BMRM				IAML		20 08 46.1	
	comp=E,1μm,0.6s						
BMRM				IAML		20 08 46.1	
	comp=N,2μm,0.4s						
HARP	**HAARP**	**1.10**	**35**		Pn	20 08 28.8	-1.1
PWL	**Port Wells**	**1.10**	**234**		Pn	20 08 28.6	-1.3
PWL					Sn	20 08 42.9	-1.3
PWL				IAML		20 08 44.6	
	comp=N,892nm,0.5s						
PWL				IAML		20 08 45.0	
	comp=E,1μm,0.5s						
HIN	**Hinchinbrook I**	**1.12**	**180**		Pn	20 08 29.2	-0.9
HIN					Sn	20 08 45.1	0.0
HIN				IAML		20 08 46.4	
	comp=N,1μm,1.0s						
HIN				IAML		20 08 48.5	
	comp=E,1μm,0.5s						
WACK	**Wrangell Chich**	**1.14**	**64**		Pn	20 08 29.3	-1.5
GHO	**Glory Hole Cre**	**1.18**	**284**		Pn	20 08 29.4	-1.7
GHO					Sn	20 08 45.3	-1.1
GHO				IAML		20 08 47.7	
	comp=N,1μm,0.6s						
GHO				IAML		20 08 47.7	
	comp=E,984nm,0.5s						
WASW	**Wrangell South**	**1.19**	**68**		Pn	20 08 29.9	-1.5
WAT6	**Susitna Watana**	**1.22**	**332**		Pn	20 08 29.6	-2.1
WAT6					Sn	20 08 45.2	-2.3
WAZA	**Wrangell Mount**	**1.25**	**62**		Pn	20 08 31.2	-1.2
PMR	**Palmer**	**1.26**	**275**		Pn	20 08 30.8	-1.2
PMR					Sn	20 08 47.1	-1.0
PMR				IAML		20 08 48.1	
	comp=N,1μm,0.6s						
PMR				IAML		20 08 49.0	
	comp=E,1μm,0.6s						
GOAT	**Goat Mountain**	**1.27**	**136**		Pn	20 08 31.3	-1.0
GLB	**Gilahina Butte**	**1.30**	**92**		Pn	20 08 31.0	-1.6
GLB					Sn	20 08 47.9	-1.2
GLB				IAML		20 08 50.2	
	comp=N,971nm,0.7s						
GLB				IAML		20 08 51.7	
	comp=E,722nm,0.6s						
RAGM	**Ragged Mountai**	**1.44**	**141**		Pn	20 08 33.7	-0.9
RAGM					Sn	20 08 53.6	-0.7
VRDI	**Verde Repeater**	**1.50**	**99**		Pn	20 08 34.3	-1.2
VRDI				IAML		20 08 58.2	
	comp=E,418nm,0.6s						
PAX	**Paxson**	**1.54**	**18**		Pn	20 08 34.7	-1.4
PAX				IAML		20 08 57.0	
	comp=E,567nm,0.5s						
PAX	**Paxson**	**1.54**	**18**		Sn	20 08 54.6	-0.7
P23K	**Montague Islan**	**1.58**	**197**		Pn	20 08 35.5	-0.9
P23K				IAML		20 08 59.1	
	comp=N,904nm,0.9s						
HMT	**Hamilton**	**1.61**	**136**		Pn	20 08 35.8	-1.1
RC01	**Rabbit Creek A**	**1.61**	**256**		Pn	20 08 36.4	-0.6
DHY	**Denali Highway**	**1.62**	**346**		Pn	20 08 35.8	-1.5
DHY				IAML		20 08 59.5	
	comp=N,386nm,0.4s						
WAT1	**Susitna Watana**	**1.64**	**325**		Pn	20 08 36.3	-1.0
MCARA	**McCarthy VSAT**	**1.68**	**93**		Pn	20 08 37.1	-0.8
WAT7	**Susitna Watana**	**1.72**	**321**		Pn	20 08 37.6	-1.0
WAT7					Sn	20 08 59.7	-0.1
M22K	**Willow**	**1.74**	**280**		Pn	20 08 38.1	-0.6
BERG	**Berg Lake**	**1.77**	**128**		Pn	20 08 38.0	-1.2
NICHA	**Nichawak Mount**	**1.78**	**135**		Pn	20 08 38.2	-1.1
CRQM	**Cirque**	**1.80**	**113**		Pn	20 08 39.0	-0.8
FIS	**Fire Island**	**1.83**	**260**	Pn	Pn	20 08 39.2	-0.7
O22K	**Cooper Landing**	**1.88**	**238**		Pn	20 08 40.4	-0.1
M26K	**Nabesna, AK**	**1.89**	**60**		Pn	20 08 40.7	-0.1
KAIM	**Kayak Island**	**1.89**	**146**	Pn	Pn	20 08 39.4	-1.4
KHIT	**Khitrov Hills**	**1.92**	**123**		Pn	20 08 40.2	-1.0
TGL	**Tana Glacier**	**1.94**	**111**		Pn	20 08 40.2	-1.3
SUCK	**Suckling Hills**	**1.97**	**136**	Pn	Pn	20 08 40.8	-1.0
SUCK				IAML		20 09 12.5	
	comp=N,450nm,0.6s						
SUCK				IAML		20 09 13.1	
	comp=E,317nm,0.5s						
PTPK	**Patty Peak**	**1.98**	**98**		Pn	20 08 41.5	-0.6
GRIN	**Grindle Hills**	**1.99**	**127**		Pn	20 08 41.0	-1.1
GRIN					Pb	20 08 41.4	-4.3
CUT	**Chulitna**	**1.99**	**298**		Pn	20 08 42.0	-0.2
SEW	**Seward**	**2.02**	**227**		Pn	20 08 41.7	-0.8
SEW				IAML		20 09 11.6	
	comp=N,280nm,0.5s						
SUA	**Susitna One**	**2.03**	**271**		Pn	20 08 42.2	-0.7
SUA				IAML		20 09 10.7	
	comp=E,495nm,0.7s						
SUA				IAML		20 09 11.0	
	comp=N,428nm,0.6s						
BALM	**Baldy**	**2.07**	**101**		Pn	20 08 42.2	-1.1
SLKM	**Skilak Lake**	**2.07**	**243**		Pn	20 08 42.8	-0.4
SLKM				IAML		20 09 11.1	
	comp=N,506nm,0.4s						
SLKM				IAML		20 09 11.7	
	comp=E,505nm,0.5s						
WAX	**Waxell Ridge**	**2.08**	**119**		Pn	20 08 42.2	-1.2
MID	**Middleton Isla**	**2.09**	**178**	Pn	Pn	20 08 42.6	-0.9
MID				IAML		20 09 15.2	
	comp=E,313nm,1.5s						
MID				IAML		20 09 16.6	
	comp=N,349nm,0.7s						
KIAG	**Kiagna River**	**2.09**	**104**		Pn	20 08 42.5	-1.2
L26K	**Log Cabin Wild**	**2.12**	**43**		Pn	20 08 43.8	-0.2
L26K				IAML		20 09 15.8	
	comp=E,239nm,0.5s						
L26K				IAML		20 09 20.9	
	comp=N,277nm,0.4s						
RND	**Reindeer**	**2.19**	**331**		Pn	20 08 44.6	-0.4
ISLE	**Juniper Island**	**2.22**	**112**		Pn	20 08 44.2	-1.2
ISLE				IAML		20 09 20.0	
	comp=E,421nm,0.5s						
ISLE				IAML		20 09 22.7	
	comp=N,414nm,1.0s						
SNH	**Sunshine Point**	**2.24**	**125**		Pn	20 08 44.5	-1.1
SNH	**Sunshine Point**	**2.24**	**125**	IAML		20 09 22.8	
	comp=E,265nm,0.5s						
SNH				IAML		20 09 28.1	
	comp=N,260nm,0.7s						
BARK	**Barkley Ridge**	**2.25**	**118**		Pn	20 08 44.8	-1.0
L22K	**Petersville**	**2.25**	**299**	Pn	Pn	20 08 45.9	+0.1
L22K				IAML		20 09 16.2	
	comp=E,428nm,0.4s						
K24K	**Donnelly Dome**	**2.33**	**8**		Pn	20 08 47.2	+0.4
M27K	**Edge Creek, AK**	**2.35**	**67**		Pn	20 08 47.4	+0.1
RIDG	**Independent Ri**	**2.37**	**18**		Pn	20 08 47.2	-0.2
RIDG				IAML		20 09 30.9	
	comp=E,301nm,0.7s						
RIDG				IAML		20 09 31.8	
	comp=N,186nm,1.0s						
BAGL	**Bagley Icefiel**	**2.38**	**113**		Pn	20 08 46.5	-1.0
BARN	**Barnard Glacie**	**2.38**	**99**		Pn	20 08 47.2	-0.6
BARN				IAML		20 09 21.0	
	comp=N,216nm,0.5s						
BARN				IAML		20 09 25.7	
	comp=E,261nm,0.4s						
DOT	**Dot Lake**	**2.43**	**27**		Pn	20 08 48.0	-0.2
GRNC	**Granite Creek**	**2.44**	**107**		Pn	20 08 47.2	-1.2
GRNC				IAML		20 09 29.3	
	comp=E,164nm,0.7s						
GRNC				IAML		20 09 31.3	
	comp=N,236nm,0.8s						
SKT	**Skwentna**	**2.44**	**283**		Pn	20 08 47.1	-1.2
SKT				IAML		20 09 24.1	
	comp=N,263nm,0.6s						
SKT				IAML		20 09 24.1	
	comp=E,230nm,0.5s						
MCK	**McKinley**	**2.50**	**334**		Pn	20 08 49.0	-0.2
MCK				IAML		20 09 21.7	
	comp=N,255nm,0.7s						
MCK				IAML		20 09 25.3	
	comp=E,309nm,0.6s						
STLK	**Strandline Lak**	**2.55**	**272**		Pn	20 08 49.4	-0.6
CTGM	**Chitina Glacie**	**2.56**	**100**		Pn	20 08 49.5	-0.6
CTGM				IAML		20 09 28.1	
	comp=N,196nm,0.6s						
YAH	**Yahtse**	**2.59**	**114**		Pn	20 08 49.3	-1.3
YAH				IAML		20 09 29.5	
	comp=E,316nm,0.8s						
MESA	**MESA**	**2.60**	**119**		Pn	20 08 49.5	-1.2
TRF	**Thorofare Moun**	**2.62**	**320**		Pn	20 08 50.4	-0.6
TRF				IAML		20 09 31.4	
	comp=N,227nm,0.6s						
TRF				IAML		20 09 34.9	
	comp=E,298nm,1.1s						
SPCG	**Spurr Capps Gl**	**2.66**	**268**		Pn	20 08 50.5	-0.9
L27K	**Beaver Creek,**	**2.69**	**52**		Pn	20 08 51.3	-0.4
SPU	**Mount Spurr**	**2.69**	**265**		Pn	20 08 50.8	-1.1
BCAR	**Beaver Creek A**	**2.70**	**53**		Pn	20 08 51.5	-0.6
YUK2	**White River**	**2.72**	**82**		Pn	20 08 51.8	-0.4
SCRK	**Sand Creek**	**2.74**	**24**		Pn	20 08 51.7	-0.8
BRSE	**Bradley Lake S**	**2.74**	**232**		Pn	20 08 51.4	-1.0
LOGN	**Logan Glacier**	**2.75**	**102**		Pn	20 08 51.9	-1.0
LOGN				IAML		20 09 36.6	
	comp=N,164nm,0.5s						
LOGN				IAML		20 09 38.8	
	comp=E,164nm,0.5s						
SPCR	**Spurr Chakacha**	**2.76**	**266**		Pn	20 08 51.4	-1.5
BRLK	**Bradley Lake**	**2.78**	**233**		Pn	20 08 51.9	-1.1
RKAV	**Rock Avalanche**	**2.80**	**113**		Pn	20 08 51.5	-1.9
RKAV					Pb	20 08 52.1	-7.5
CKL	**Chakachamna La**	**2.83**	**266**		Pn	20 08 52.1	-1.7
TABL	**Table Mountain**	**2.83**	**110**		Pn	20 08 52.4	-1.4
KTH	**Kantishna Hill**	**2.90**	**317**		Pn	20 08 54.1	-0.5
KTH				IAML		20 09 36.4	
	comp=E,223nm,0.8s						
KTH				IAML		20 09 39.8	
	comp=N,196nm,0.7s						
YUK3	**Moose Creek**	**2.90**	**82**		Pn	20 08 54.5	-

M29M	**Somme Creek**	**3.91**	**73**			Pn	20 09 08.1	-0.5
N19K	**Bonanza Creek**	**3.93**	**263**			Pn	20 09 08.0	-0.9
K20K	**Telida**	**3.97**	**301**			Pn	20 09 07.8	-1.6
L19K	**White Mountain**	**4.01**	**283**			Pn	20 09 08.3	-1.7
L19K					IAML		20 10 22.7	
	comp=E,60nm,1.0s							
L19K					IAML		20 10 39.7	
	comp=N,46nm,4.2s							
MLY	**Manley**	**4.02**	**333**			Pn	20 09 08.7	-1.4
MLY					IAML		20 09 59.0	
	comp=E,58nm,0.5s							
MLY					IAML		20 09 59.2	
	comp=N,65nm,0.5s							
O29M	**Mount Kennedy**	**4.06**	**104**			Pn	20 09 09.4	-1.2
O29M	**Mount Kennedy**	**4.06**	**104**		IAML		20 10 13.4	
	comp=E,58nm,0.5s							
O29M					IAML		20 10 14.9	
	comp=N,52nm,1.2s							
I26K	**Coal Creek Min**	**4.10**	**20**			Pn	20 09 10.6	-0.5
I26K					IAML		20 10 27.3	
	comp=E,60nm,0.8s							
I26K					IAML		20 10 28.6	
	comp=N,61nm,1.3s							
DAWY	**Dawson**	**4.16**	**49**			Pn	20 09 11.8	-0.1
L29M	**L29M**	**4.23**	**64**		IAML		20 10 30.5	
	comp=N,49nm,0.7s							
H24K	**Noodor Dome**	**4.39**	**353**		IAML		20 10 32.6	
	comp=E,39nm,0.7s							
H24K					IAML		20 10 38.4	
	comp=N,38nm,1.3s							
J20K	**Nowinta River**	**4.41**	**311**			Pn	20 09 14.1	-1.2
I21K	**Tanana**	**4.43**	**329**			Pn	20 09 14.6	-1.1
I21K					IAML		20 10 36.8	
	comp=E,47nm,1.5s							
I21K					IAML		20 10 43.7	
	comp=N,45nm,2.1s							
M18K	**Stony River**	**4.46**	**274**			Pn	20 09 14.0	-2.1
N30M	**Aishikik Lake**	**4.52**	**86**			Pn	20 09 15.2	-1.7
H23K	**Yukon River**	**4.54**	**344**		IAML		20 10 42.0	
	comp=N,30nm,1.5s							
N18K	**Kilae Creek**	**4.63**	**264**		IAML		20 10 46.7	
	comp=E,31nm,3.6s							
N18K					IAML		20 10 48.2	
	comp=N,50nm,3.6s							
I27K	**Kandik River**	**4.66**	**26**			Pn	20 09 18.3	-0.5
I27K	**Kandik River**	**4.66**	**26**		IAML		20 10 38.0	
	comp=E,49nm,0.9s							
I27K					IAML		20 10 45.5	
	comp=N,32nm,0.8s							
M30M	**Minto, Yukon**	**4.70**	**73**			Pn	20 09 18.6	-0.8
L18K	**Granite Mounta**	**4.87**	**283**			Pn	20 09 19.5	-2.2
L18K					IAML		20 10 48.6	
	comp=N,36nm,1.2s							
L18K					IAML		20 11 18.1	
	comp=E,39nm,4.7s							
J19K	**Poorman**	**4.87**	**305**	IAML			20 10 48.1	
	comp=E,48nm,1.2s							
J19K					IAML		20 10 54.2	
	comp=N,45nm,1.3s							
P30M	**Million Dollar**	**4.88**	**102**			Pn	20 09 20.4	-1.5
P30M	**Million Dollar**	**4.88**	**102**	IAML			20 10 43.3	
	comp=N,27nm,3.3s							
P30M					IAML		20 10 44.8	
	comp=E,24nm,3.9s							
I28M	**Miner Creek**	**4.93**	**34**	IAML			20 10 49.3	
	comp=E,33nm,1.0s							
I28M					IAML		20 10 57.1	
	comp=N,26nm,1.1s							
H21K	**Melozitna Rive**	**5.02**	**329**			Pn	20 09 22.5	-1.3
H21K					IAML		20 10 52.0	
	comp=N,32nm,1.3s							
H21K					IAML		20 10 53.6	
	comp=E,32nm,1.0s							
O30N	**Mendenhall**	**5.10**	**94**			Pn	20 09 23.9	-1.0
O30N					IAML		20 10 42.7	
	comp=E,20nm,4.0s							
J18K	**Innoko River**	**5.12**	**297**	IAML			20 11 06.6	
	comp=N,30nm,3.5s							
J18K					IAML		20 11 09.3	
	comp=E,28nm,3.2s							
H27K	**Steamboat Moun**	**5.22**	**23**	IAML			20 11 01.3	
	comp=N,20nm,3.1s							
H27K					IAML		20 11 01.6	
	comp=E,29nm,1.8s							
G24K	**Hadweenzic Riv**	**5.23**	**356**			Pn	20 09 25.6	-1.0
G24K					IAML		20 10 52.8	
	comp=E,24nm,4.6s							
G24K					IAML		20 10 56.7	
	comp=N,25nm,1.1s							
L17K	**Donlin**	**5.62**	**282**			Pn	20 09 29.8	-2.2
G21K	**Allakaket**	**5.89**	**332**			Pn	20 09 34.4	-1.3
COLD	**Coldfoot**	**5.96**	**346**			Pn	20 09 35.7	-1.0
BM01	**Burnt Mountain**	**6.03**	**7**			Pn	20 09 35.9	-1.6
F26K	**Sheenjek River**	**6.29**	**8**			Pn	20 09 40.6	-0.7
E23K	**Chandalar**	**6.71**	**350**			Pn	20 09 47.2	+0.2
N15K	**Kwethluk River**	**6.77**	**265**	Pn		Pn	20 09 47.9	+0.1
G18K	**Tagagawik**	**6.96**	**314**			Pn	20 09 49.3	-1.0
E27K	**Coleen River**	**7.02**	**15**	Pn		Pn	20 09 50.1	-1.1
G30M	**tAoh Zraii Nji**	**7.08**	**35**	Pn		Pn	20 09 51.0	-1.1
S32K	**Killisnoo**	**7.30**	**118**	Pn		Pn	20 09 54.3	-0.6
E19K	**Redstone River**	**7.54**	**327**	Pn		Pn	20 09 57.6	-0.8
E28M	**Babbage River**	**7.70**	**19**	Pn		Pn	20 10 00.8	+0.2
D25K	**Kavik River**	**7.85**	**0**			Pn	20 10 02.0	-0.5
C27K	**Jago River**	**8.23**	**7**			Pn	20 10 08.4	+0.6
D19K	**Kuna River**	**8.55**	**330**	Pn		Pn	20 10 10.6	-1.5
B21K	**Ikpikpuk River**	**8.80**	**341**	Pn		Pn	20 10 13.8	-1.7
F15K	**North Star Dit**	**9.09**	**305**	Pn		Pn	20 10 19.1	-0.5

*TAP **12** 20:53:24.8, 25°.02N × 122°.34E, h141km, ML3.5, C*
*JMA **12** 20:53:25.1±0.2, 25°.N±2° × 122°.3E±0°.5, h144km±2km, MV2.9/14, TAIWAN REGION*

ISC 12 20:53:24.6±1.6, **24°.96N**±0°.05×**122°.28E**±0°.03, **h147**km±8km, **n107**, σ0°**63**/184, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.27**	**280**	*eP*	**Pn**	**20 53 44.1**	**-0.5**
TWB1				eS	**Sn**	**20 53 59.7**	**-0.2**
EGS		**0.34**	**250**	*eP*	**Pn**	**20 53 45.1**	**+0.3**
SXI1	**Grass Mountain**	**0.39**	**290**	P	**Pn**	**20 53 45.1**	**-0.1**
SXI1				eS	**Sn**	**20 54 00.2**	**-0.6**
TIPB	**Shuangxi**	**0.42**	**271**	P	**Pn**	**20 53 45.5**	**+0.2**
TIPB				eS	**Sn**	**20 54 00.2**	**-0.7**
NWF	**Wu-fen Shan**	**0.47**	**283**	*eP*	**Pn**	**20 53 45.3**	**-0.2**
NWF				eS	**Sn**	**20 54 00.9**	**-0.5**
WFSB	**Wu-fen Shan**	**0.47**	**283**	*eP*	**Pn**	**20 53 45.4**	**0.0**
WFSB				eS	**Sn**	**20 54 00.5**	**-0.8**
TNOU	**National Taiwa**	**0.50**	**292**	*eP*	**Pn**	**20 53 45.4**	**-0.2**
ILA	**Ilan**	**0.53**	**248**	eS	**Sn**	**20 54 01.8**	**+0.1**
TWC	**Suao**	**0.53**	**228**	P	**Pn**	**20 53 45.8**	**0.0**
TWC				eS	**Sn**	**20 54 01.1**	**-0.6**
TWE	**Neicheng**	**0.61**	**247**	*eP*	**Pn**	**20 53 46.5**	**+0.3**
TWE				eS	**Sn**	**20 54 02.9**	**+0.3**
NDS	**Dongshan**	**0.61**	**238**	*eP*	**Pn**	**20 53 46.5**	**+0.2**
NDS				eS	**Sn**	**20 54 03.3**	**+0.6**
TWA	**Mucha**	**0.64**	**272**	eS	**Sn**	**20 54 04.1**	**+1.2**
FUSB	**Fushanzhiwuyua**	**0.66**	**252**	*i* P	**Pn**	**20 53 46.7**	**+0.1**
FUSB				eS	**Sn**	**20 54 02.8**	**-0.6**
YM01	**YM01**	**0.67**	**286**	P	**Pn**	**20 53 46.6**	**0.0**
YM01				eS	**Sn**	**20 54 03.1**	**-0.3**
PCYT	**Pengchaiyu**	**0.69**	**344**	*eP*	**Pn**	**20 53 46.9**	**+0.2**
ZUZH	**Zhuzihu**	**0.70**	**287**	*eP*	**Pn**	**20 53 46.4**	**-0.4**
ZUZH				eS	**Sn**	**20 54 02.7**	**-1.0**
TAP	**Taipei**	**0.71**	**276**	eS	**Sn**	**20 54 04.8**	**+1.1**
ENA	**Nanau**	**0.73**	**223**	P	**Pn**	**20 53 47.3**	**+0.4**
ENA				eS	**Sn**	**20 54 04.1**	**+0.1**
ENTT	**Nioudou**	**0.73**	**244**	*eP*	**Pn**	**20 53 47.3**	**+0.3**
ENTT				eS	**Sn**	**20 54 03.6**	**-0.3**
NWLT	**Wulai**	**0.73**	**256**	*eP*	**Pn**	**20 53 46.7**	**-0.3**
NWLT				eS	**Sn**	**20 54 03.6**	**-0.5**
JYNG	**Yonagunijimaku**	**0.79**	**130**	*i* P	**Pn**	**20 53 47.5**	**+0.2**
JYNG				S	**Sn**	**20 54 04.5**	**-0.2**
TWS1	**Kuangyinshan**	**0.80**	**280**	*eP*	**Pn**	**20 53 47.7**	**+0.3**
TWS1				eS	**Sn**	**20 54 05.2**	**+0.4**
EAHA	**Aohua**	**0.80**	**218**	*eP*	**Pn**	**20 53 47.8**	**+0.3**
EAHA				eS	**Sn**	**20 54 05.3**	**+0.4**
LATG	**Datong**	**0.81**	**238**	*i* P	**Pn**	**20 53 48.6**	**+0.9**
LATG				S	**Sn**	**20 54 05.8**	**+0.6**
YOJ	**Yonaguni jima**	**0.83**	**127**	P	**Pn**	**20 53 47.7**	**0.0**
YOJ	**Yonaguni jima**	**0.83**	**127**	*eP*	**Pn**	**20 53 47.8**	**+0.2**
YOJ				eS	**Sn**	**20 54 05.0**	**-0.2**
YOJ	**Yonaguni jima**	**0.83**	**127**	*eP*	**Pn**	**20 53 47.6**	**-0.1**
YOJ				eS	**Sn**	**20 54 04.8**	**-0.5**
YHNB	**Yeheng**	**0.88**	**251**	P	**Pn**	**20 53 48.5**	**+0.3**
YHNB	**Yeheng**	**0.88**	**251**	P	**Pn**	**20 53 48.3**	**+0.1**
YHNB				S	**Sn**	**20 54 05.5**	**-0.6**
NSK	**Sanguang**	**0.89**	**251**	P	**Pn**	**20 53 48.2**	**0.0**
NSK				S	**Sn**	**20 54 05.5**	**-0.7**
NNSB	**Datong**	**0.98**	**237**	P	**Pn**	**20 53 49.9**	**+0.8**
NNSB				eS	**Sn**	**20 54 07.4**	**-0.2**
NNS	**Nan Shan**	**0.98**	**238**	P	**Pn**	**20 53 49.8**	**+0.8**
NNS				eS	**Sn**	**20 54 07.7**	**+0.1**
NCUH	**Zhongli**	**1.00**	**271**	eS	**Sn**	**20 54 08.1**	**+0.5**
ETL	**Fush Village**	**1.00**	**217**	P	**Pn**	**20 53 49.3**	**+0.2**
ETL				eS	**Sn**	**20 54 07.4**	**-0.4**
NACB	**Ninganchiao**	**1.01**	**219**	P	**Pn**	**20 53 49.0**	**-0.1**
NACB	**Ninganchiao**	**1.01**	**219**	P	**Pn**	**20 53 49.1**	**0.0**
NACB				S	**Sn**	**20 54 07.5**	**-0.4**
KSHI	**Guanxi Townshi**	**1.02**	**260**	*eP*	**Pn**	**20 53 50.1**	**+0.8**
KSHI				eS	**Sn**	**20 54 08.7**	**+0.6**
ETLH	**Xiulin Townshi**	**1.05**	**224**	*eP*	**Pn**	**20 53 50.0**	**+0.4**
ETLH				eS	**Sn**	**20 54 08.2**	**-0.4**
TWD	**Chiawan**	**1.08**	**216**	*eP*	**Pn**	**20 53 50.0**	**+0.2**
TWD				eS	**Sn**	**20 54 08.4**	**-0.5**
NFF	**Wufeng Townshi**	**1.11**	**253**	*eP*	**Pn**	**20 53 50.4**	**+0.3**
NFF				eS	**Sn**	**20 54 08.8**	**-0.7**
HWA	**Hwalien**	**1.16**	**212**	*eP*	**Pn**	**20 53 50.9**	**+0.3**
HWA				eS	**Sn**	**20 54 11.0**	**+0.7**
FUSS	**Fushou**	**1.19**	**233**	*eP*	**Pn**	**20 53 52.1**	**+1.0**
FUSS				eS	**Sn**	**20 54 11.8**	**+0.6**
LIOB	**Emei**	**1.20**	**255**	P	**Pn**	**20 53 51.4**	**+0.5**
LIOB				eS	**Sn**	**20 54 10.7**	**-0.2**
NSTT	**Nanjuang**	**1.21**	**254**	*i* P	**Pn**	**20 53 51.4**	**+0.4**
NSTT				S	**Sn**	**20 54 10.6**	**-0.6**
ETM	**Tongmen**	**1.23**	**216**	*eP*	**Pn**	**20 53 51.1**	**-0.1**
ETM				eS	**Sn**	**20 54 10.6**	**-0.8**
LXIB	**Xiulin Townshi**	**1.23**	**220**	*eP*	**Pn**	**20 53 51.4**	**0.0**
LXIB				eS	**Sn**	**20 54 11.2**	**-0.6**
TWT	**Tachien**	**1.23**	**235**	*eP*	**Pn**	**20 53 52.6**	**+1.2**
TWT				eS	**Sn**	**20 54 12.5**	**+0.7**
WHF	**Hehuan Shan**	**1.23**	**229**	*eP*	**Pn**	**20 53 52.5**	**+0.8**
WHF				eS	**Sn**	**20 54 12.3**	**-0.1**
TDCB	**Techi**	**1.25**	**236**	*eP*	**Pn**	**20 53 52.4**	**+0.9**
TDCB				eS	**Sn**	**20 54 12.2**	**+0.2**
TEYL	**Yanliau Villag**	**1.26**	**210**	*eP*	**Pn**	**20 53 51.7**	**+0.3**
TEYL				eS	**Sn**	**20 54 12.1**	**+0.1**
SHUL	**Shoufeng**	**1.34**	**209**	*eP*	**Pn**	**20 53 52.5**	**+0.2**
SHUL				eS	**Sn**	**20 54 13.9**	**+0.5**
ESL	**Shilin**	**1.38**	**214**	*eP*	**Pn**	**20 53 52.3**	**-0.4**
ESL				eS	**Sn**	**20 54 12.7**	**-1.5**
WHP	**Taichung City**	**1.40**	**241**	P	**Pn**	**20 53 53.8**	**+0.9**
WHP				S	**Sn**	**20 54 14.8**	**+0.2**
TEGC	**Jichi Village**	**1.42**	**209**	*eP*	**Pn**	**20 53 53.6**	**+0.5**
TEGC				eS	**Sn**	**20 54 15.0**	**+0.2**
OWD	**Renai**	**1.42**	**225**	P	**Pn**	**20 53 54.2**	**+0.9**
OWD				S	**Sn**	**20 54 15.4**	**+0.2**
WUSB	**Renai**	**1.44**	**228**	*i* P	**Pn**	**20 53 54.8**	**+1.3**
WUSB				S	**Sn**	**20 54 15.9**	**+0.5**
IRIF	**Iriomote-Funau**	**1.46**	**115**	P	**Pn**	**20 53 53.5**	**0.0**
WARBT	**Fenglin Townsh**	**1.49**	**214**	*i* P	**Pn**	**20 53 53.4**	**-0.5**
WARBT				eS	**Sn**	**20 54 14.4**	**-1.7**
TWQ1	**Liyutan**	**1.50**	**246**	*eP*	**Pn**	**20 53 54.3**	**+0.3**
TWQ1				eS	**Sn**	**20 54 16.0**	**-0.4**
WCS	**Beigang Elemen**	**1.54**	**234**	*eP*	**Pn**	**20 53 55.1**	**+0.8**
WCS				eS	**Sn**	**20 54 17.5**	**+0.4**
VWDT	**VWDT**	**1.59**	**221**	*eP*	**Pn**	**20 53 55.8**	**+0.9**
VWDT				eS	**Sn**	**20 54 18.9**	**+0.8**
HATJ	**Hateruma jima**	**1.65**	**123**	*eP*	**Pn**	**20 53 56.4**	**+0.8**
HATJ				S	**Sn**	**20 54 19.6**	**+0.3**
SMLT	**Sun Moon Lake**	**1.66**	**230**	*eP*	**Pn**	**20 53 56.2**	**+0.4**
SMLT				eS	**Sn**	**20 54 20.5**	**+0.9**
HGSD	**Ruisui**	**1.66**	**208**	*eP*	**Pn**	**20 53 55.9**	**+0.2**
HGSD				eS	**Sn**	**20 54 19.3**	**-0.2**
TCU	**Taichung**	**1.67**	**241**	*eP*	**Pn**	**20 53 56.6**	**+0.7**
TCU				eS	**Sn**	**20 54 19.8**	**+0.1**
TYC	**Yuchr**	**1.67**	**231**	*eP*	**Pn**	**20 53 56.3**	**+0.5**
TYC				eS	**Sn**	**20 54 20.4**	**+0.7**
SSLB	**Suanglung**	**1.69**	**226**	P	**Pn**	**20 53 56.7**	**+0.7**
SSLB	**Suanglung**	**1.69**	**226**	*eP*	**Pn**	**20 53 56.6**	**+0.7**
SSLB				eS	**Sn**	**20 54 20.4**	**+0.4**
EHY	**Hungye**	**1.70**	**211**	*eP*	**Pn**	**20 53 56.8**	**+0.7**
JKRS	**Kuro-shima**	**1.73**	**114**	P	**Pn**	**20 53 57.0**	**+0.6**
JKRS				S	**Sn**	**20 54 20.8**	**0.0**
JIJ	**Ishigaki jima**	**1.79**	**109**	P	**Pn**	**20 53 57.3**	**+0.1**
JIJ				S	**Sn**	**20 54 21.0**	**-1.0**
YULB	**Yu-li**	**1.81**	**210**	P	**Pn**	**20 53 57.2**	**-0.1**
YULB	**Yu-li**	**1.81**	**210**	*eP*	**Pn**	**20 53 56.4**	**-0.9**
YULB				eS	**Sn**	**20 54 20.7**	**-1.7**
ECBN	**Changbin**	**1.81**	**205**	eS	**Sn**	**20 54 21.8**	**-0.7**
WHYT	**Xinyi Township**	**1.81**	**226**	*eP*	**Pn**	**20 53 58.3**	**+0.8**
WHYT				eS	**Sn**	**20 54 22.9**	**+0.3**
WNT	**Mingjian**	**1.81**	**234**	*eP*	**Pn**	**20 53 58.2**	**+0.8**
WNT				eS	**Sn**	**20 54 23.1**	**+0.6**
TWF1	**Yuli**	**1.84**	**210**	*eP*	**Pn**	**20 53 57.7**	**0.0**
JISG	**Ishigakijimahi**	**1.88**	**101**	P	**Pn**	**20 53 58.1**	**0.0**
JISG				S	**Sn**	**20 54 22.6**	**-1.3**
YUS	**Yu-Shan**	**1.91**	**220**	*eP*	**Pn**	**20 54 00.0**	**+1.1**
YUS				eS	**Sn**	**20 54 25.8**	**+0.6**
CHKH	**Chenggong**	**1.94**	**205**	eS	**Sn**	**20 54 24.2**	**-0.9**
FULB	**Fuli**	**1.98**	**207**	*eP*	**Pn**	**20 54 00.1**	**+0.8**
FULB				eS	**Sn**	**20 54 26.0**	**+0.1**
ALS	**Alishan**	**1.98**	**223**	*eP*	**Pn**	**20 53 60.0**	**+0.4**
ALS				eS	**Sn**	**20 54 26.8**	**+0.4**
CHN5	**Tsauling**	**2.00**	**227**	P	**Pn**	**20 54 00.4**	**+0.8**
CHN5				eS	**Sn**	**20 54 26.6**	**+0.1**
WDLH	**Douliu**	**2.04**	**232**	*eP*	**Pn**	**20 54 00.4**	**+0.5**
WDLH				eS	**Sn**	**20 54 27.0**	**-0.1**
CHKT	**Chengkung**	**2.04**	**205**	eS	**Sn**	**20 54 25.6**	**-1.6**
EHD	**Haiduan**	**2.06**	**209**	*eP*	**Pn**	**20 53 60.0**	**-0.3**
ELDTW	**Lidau**	**2.11**	**214**	*eP*	**Pn**	**20 54 01.4**	**+0.4**
ELDTW				eS	**Sn**	**20 54 28.4**	**-0.5**
WTK	**Tuku**	**2.15**	**234**	*eP*	**Pn**	**20 54 01.5**	**+0.3**
WTK				eS	**Sn**	**20 54 29.1**	**-0.3**
EDH	**Donghe**	**2.17**	**205**	eS	**Sn**	**20 54 29.8**	**-0.3**
JTJ	**Tarama**	**2.22**	**98**	P	**Pn**	**20 54 02.4**	**+0.3**
TPUB	**Ta-pu**	**2.24**	**223**	P	**Pn**	**20 54 02.9**	**+0.4**
TPUB	**Ta-pu**	**2.24**	**223**	P	**Pn**	**20 54 02.6**	**+0.2**
TPUB				eS	**Sn**	**20 54 31.0**	**-0.6**
STYH	**Taoyuan**	**2.25**	**218**	*eP*	**Pn**	**20 54 03.0**	**+0.4**
WSF	**Szhu**	**2.30**	**235**	eS	**Sn**	**20 54 33.2**	**+0.5**
TWK	**Hsinying**	**2.35**	**225**	*eP*	**Pn**	**20 54 04.2**	**+0.3**
TWK				eS	**Sn**	**20 54 34.1**	**0.0**
WSL	**Shuilin Townsh**	**2.36**	**233**	*eP*	**Pn**	**20 54 04.5**	**-0.4**
WSL				eS	**Sn**	**20 54 33.9**	**-0.1**
SNST	**Tainan City**	**2.38**	**224**	*eP*	**Pn**	**20 54 04.5**	**+0.4**
SNST				eS	**Sn**	**20 54 34.1**	**-0.5**
CHN1	**Nanshi**	**2.39**	**223**	*eP*	**Pn**	**20 54 04.8**	**+0.5**
CHN1				eS	**Sn**	**20 54 34.7**	**-0.1**
LDUT	**Ludao**	**2.40**	**198**	eS	**Sn**	**20 54 33.7**	**-1.2**
JIRB	**Irabujima**	**2.63**	**92**	P	**Pn**	**20 54 07.7**	**+0.6**
JMJ	**Miyako jima 2**	**2.74**	**92**	P	**Pn**	**20 54 10.4**	**+1.9**
JMJ2	**Miyako jima3**	**2.77**	**94**	P	**Pn**	**20 54 09.7**	**+0.7**
MASBT	**Mashibuluo**	**2.79**	**213**	*eP*	**Pn**	**20 54 09.7**	**+0.6**
MASBT				eS	**Sn**	**20 54 43.9**	**+0.3**
PNG	**Penghu**	**2.85**	**241**	*eP*	**Pn**	**20 54 09.3**	**-0.6**
PNG				eS	**Sn**	**20 54 43.5**	**-1.4**
PHUB	**P'eng-hu**	**2.87**	**240**	*eP*	**Pn**	**20 54 09.4**	**-0.7**
PHUB				eS	**Sn**	**20 54 43.2**	**-2.1**
PTMZ	**Houxiangcun**	**2.87**	**272**	*eP*	**Pn**	**20 54 09.9**	**-0.3**
WDGT	**Dungji**	**2.94**	**235**	*eP*	**Pn**	**20 54 10.9**	**-0.1**

*NEIC **12** 21:01:31.8±0.9, 43°.79N±0°.04×105°.32W±0°.09, h0km±1km, ML3.2/54, Error ellipse: s-maj=10.7km s-min=7.3km az=74.0*
*IDC **12** 21:01:34.1±0.9, 44°.04N×105°.74W, h0km, mb4.0/2, mbtmp3.6/7, ML3.4/4, MS3.4/2, Error ellipse: s-maj=23.3km s-min=8.3km az=146.0*

ISC 12 21:01:33.0±0.9, **43°.77N**±0°.06×**105°.28W**±0°.07, **h0**km, **n47**, σ0°**80**/45, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.97**	**68**	Pg	**Pg**	**21 01 52.4**	**+0.8**
K22A	**Casper**	**1.44**	**220**		**Pn**	**21 01 59.0**	**-1.5**
K22A					IAML	21 02 23.1	
	224nm,0.3s						
K22A					IAML	21 02 28.9	
	251nm,0.3s						
RLMT	**Red Lodge**	**3.16**	**297**		**Pn**	**21 02 23.8**	**-0.5**
RLMT					IAML	21 03 19.3	
	60nm,1.0s						
RLMT					IAML	21 03 22.9	
	68nm,0.7s						
BW06	**Boulder Array**	**3.28**	**254**		**Pn**	**21 02 25.8**	**-0.1**
BW06					IAML	21 03 14.8	
	47nm,0.3s						
BW06					IAML	21 03 17.0	
	51nm,0.7s						
PD31	**Pinedale Array**	**3.28**	**254**		**Pn**	**21 02 26.0**	**+0.2**
PDAR	**Pinedale Array**	**3.28**	**254**	Pn	**Pn**	**21 02 25.8**	**-0.1**
	3.3nm,0.3s,baz=67,slow=17,SNR=63						
PDAR				Lg	Lg	21 03 10.1	
	11nm,0.3s,baz=73,slow=31,SNR=3.0						
	5.2nm,0.4s						
PDAR	**Pinedale Array**	**3.28**	**254**		**Pn**	**21 02 26.1**	**+0.2**
HAYD	**Hayden**	**3.56**	**205**		**Pn**	**21 02 29.3**	**-0.5**
HAYD					IAML	21 03 39.0	
	comp=E,49nm,1.2s						
HAYD					IAML	21 03 46.2	
	comp=N,54nm,0.9s						
YNE	**Yellowstone No**	**3.61**	**292**		**Pn**	**21 02 30.2**	**-0.2**
YNE					IAML	21 03 31.1	
	comp=N,56nm,0.8s						
YNE					IAML	21 03 38.6	
	comp=E,50nm,0.4s						
YMP	**Mirror Lake Pl**	**3.63**	**287**		**Pn**	**21 02 29.8**	**-1.1**
OGNE	**Ogallala**	**3.71**	**138**		**Pn**	**21 02 32.6**	**+0.9**
LOHW	**Long Hollow**	**3.86**	**270**		**Pn**	**21 02 34.6**	**+0.7**
FLWY	**Flagg Ranch**	**3.92**	**276**		**Pn**	**21 02 35.1**	**+0.3**
FLWY					IAML	21 03 44.8	
	comp=E,32nm,1.5s						
MOOW	**Moose Ponds**	**3.96**	**272**		**Pn**	**21 02 35.7**	**+0.5**
YPP	**Pitchstone Pla**	**4.01**	**279**		**Pn**	**21 02 36.9**	**+0.9**
YPP					IAML	21 03 57.6	
	comp=N,21nm,4.0s						
TPAW	**Teton Pass**	**4.12**	**268**		**Pn**	**21 02 36.6**	**-0.9**
TPAW					IAML	21 03 59.4	
	comp=N,40nm,0.9s						
TPAW					IAML	21 03 59.9	
	comp=N,21nm,1.1s						
YHH	**Holmes Hill**	**4.13**	**286**		**Pn**	**21 02 37.4**	**-0.2**
FXWY	**Fox Creek**	**4.17**	**270**		**Pn**	**21 02 38.4**	**+0.3**
O20A	**White River Ci**	**4.25**	**212**		**Pn**	**21 02 39.5**	**+0.3**
O20A					IAML	21 04 05.0	
	comp=N,38nm,1.6s						
E28A	**Huff**	**4.29**	**48**	Pn	**Pn**	**21 02 40.6**	**+1.0**
AHID	**Auburn Hatcher**	**4.36**	**259**	Pn	**Pn**	**21 02 42.2**	**+1.5**
AHID					IAML	21 03 53.4	
	comp=N,34nm,1.3s						
AHID					IAML	21 04 25.5	
	comp=N,24nm,1.1s						
YHL	**Hebgen Lake**	**4.37**	**286**		**Pn**	**21 02 42.1**	**+1.2**
YHL					IAML	21 03 55.8	
	comp=N,27nm,1.1s						
YHL					IAML	21 03 58.3	
	comp=E,28nm,1.0s						
DGMT	**Dagmar**	**4.76**	**9**	Pn	**Pn**	**21 02 46.4**	**+0.3**
HWUT	**Hardware Ranch**	**5.11**	**247**		**Pn**	**21 02 50.6**	**-0.3**
BSUT	**Blindstream Ca**	**5.20**	**233**		**Pn**	**21 02 52.9**	**+0.5**
BSUT					IAML	21 04 20.0	
	comp=N,16nm,3.9s						
BSUT					IAML	21 04 45.2	
	comp=E,14nm,2.8s						
TCUT	**Toone Canyon**	**5.25**	**242**		**Pn**	**21 02 53.3**	**+0.3**
EGMT	**Eagleton**	**5.28**	**325**		**Pn**	**21 02 53.2**	**0.0**
LRM	**Limekiln Ridge**	**5.50**	**294**	Pn	**Pn**	**21 02 57.6**	**+1.2**
P18A	**Preston Nutter**	**5.56**	**224**		**Pn**	**21 02 57.6**	**+0.3**
PV22	**Blue Mesa, Par**	**5.86**	**208**	Pn	**Pn**	**21 03 02.4**	**+1.1**
PV21	**Cone Mtn., Par**	**5.90**	**209**	Pn	**Pn**	**21 03 02.6**	**+0.7**
PV15	**Paradox Valley**	**5.93**	**205**	Pn	**Pn**	**21 03 02.9**	**+0.5**
SDCO	**Great Sand Dun**	**6.02**	**182**	Pn	**Pn**	**21 03 03.4**	**-0.2**
PV04	**Paradox Valley**	**6.03**	**208**	Pn	**Pn**	**21 03 04.4**	**+0.8**
PV11	**David Mesa, Pa**	**6.10**	**208**		**Pn**	**21 03 03.6**	**-1.0**
S22A	**4UR Ranch, Cre**	**6.13**	**192**

TXAR Lajitas Array 70.34 67 P P 21 16 30.4 +0.4
0.1nm,0.6s,baz=320,slow=5.8,SNR=1.4
0.1nm,0.6s

UCR **12** *21:33:59.1±0.7, 15°.39N×92°.96W, h60km, MW5.6, MB5.1(NEIC)*
SNET **12** *21:35:05.8±0.8, 12°.77N×88°.66W, h42km±40km, ML5.5*
IDC **12** *21:35:05.9±0.5, 13°.18N×88°.12W, h63km±4km, mb4.5/23, mbtmp4.8/24, MS4.1/51, Error ellipse: s-maj=16.3km s-min=7.4km az=50.0*
NEIC **12** *21:35:06.5±1.9, 12°.93N±0°.06×88°.49W±0°.05, h60km±4km, mb5.2/154, Mwr5.1/50, Mww5.1/32, Error ellipse: s-maj=9.7km s-min=5.6km az=217.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr3.67; Mθθ-2.61; Mϕϕ-1.06; Mrθ2.30; Mrϕ0.49; Mθϕ-3.92; Fault plane solution: M₀5.62000×10¹⁶ NP1:ϕs286.85000°, δ19.88000°, λ57.94000°. NP2:ϕs140.52000°, δ73.25000°, λ100.86000°. Principal axes: T 6.2405, Plg60.0000°, Azm66.0000°; N -1.5889, Plg10.0000°, Azm317.0000°; P -4.6516, Plg27.0000°, Azm222.0000°;*
GCMT **12** *21:35:06.5±0.2, 12°.71N±0°.01×88°.75W±0°.01, h62km, MW5.1/115, Moment Tensor Solution. s96,c136; s115,c175; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.67±.13; Mθθ-4.54±.10; Mϕϕ-1.12±.12; Mrθ0.47±.08; Mθϕ3.27±.09; Mϕr-0.70±.09; Best double couple: M₀6.15500×10¹⁶ NP1:ϕs297.00000°, δ42.00000°, λ84.00000°. NP2:ϕs125.00000°, δ49.00000°, λ95.00000°. Principal axes: T 5.7430, Plg85.0000°, Azm80.0000°; N 0.8350, Plg4.0000°, Azm302.0000°; P -6.5680, Plg4.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
CATAC **12** *21:35:06.1±0.1, 13°.N±2°×8°.9W±°, h44km±3km, MS1.1/91, mb5.3/37, mB5.5/30, MLv5.6/91, Mw(mB)5.0/30, MwMwp4.8/6, Mwp5.1/6 Error ellipse: s-maj=3.9km s-min=1.1km az=31.5, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr5.69; Mθθ-3.02; Mϕϕ-2.67; Mrθ2.08; Mθϕ2.89; Mϕr-1.92; Fault plane solution: M₀6.37726×10¹⁶ NP1:ϕs133.04116°, δ58.16897°, λ89.73127°. NP2:ϕs313.55068°, δ31.83205°, λ90.43289°. Principal axes: T 6.3528, Plg76.8294°, Azm42.2071°; N 0.0486, Plg0.2283°, Azm133.1829°; P -6.4014, Plg13.1686°, Azm223.2363°; confirmed*
NEIC **12** *21:35:07.6, 12°.93N×88°.73W, h60km, Moment Tensor Solution. Duration: 1ŧ7 Moment tensor: Scale 10¹⁶Nm; Mrr5.38; Mθθ-4.49; Mϕϕ-0.89; Mrθ0.97; Mθϕ3.12; Mϕr-0.28; Fault plane solution: M₀5.98000×10¹⁶ NP1: ϕs303.19000°, δ40.31000°, λ94.68000°. NP2: ϕs117.05000°, δ49.85000°, λ86.04000°. Principal axes: T 5.4741, Plg84.0000°, Azm357.0000°; N 0.9009, Plg3.0000°, Azm120.0000°; P -6.3750, Plg5.0000°, Azm210.0000°;*
NEIC **12** *21:35:07.6, 12°.93N×88°.53W, h60km*
NEIC **12** *21:35:07.3, 12°.92N×88°.53W, h68km*
MOS **12** *21:35:07.2±1.1, 13°.06N×88°.26W, h87km, mb5.1/31, Error ellipse: s-maj=12.6km s-min=5.4km az=113.4*
GCG **12** *21:35:09.7±2.5, 13°.05N×88°.83W, h32km±24km, MD5.3*
UPA **12** *21:35:12.2±2.1, 12°.88N×88°.23W, h40km±223km, MW4.8*
ISC 12 21:35:05.3±0.3, **12°.89N**±0°.03×**88°.56W**±0°.03, **h63**km±2km, **h63**km:**pP-P, n1027,** σ1ŧ**42**/1051, **mb5.2**/118, **21C-21D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCY	**Lacayo**	**0.59**	**26**	*ǁiP*	**Pn**	**21 35 19.2**	**+0.7**
RANC	**El Ranchito**	**0.60**	**26**	*ǁeP*	**Pn**	**21 35 19.6**	**+0.8**
TECA	**Tecapa**	**0.60**	**6**	*ǁiP*	**Pn**	**21 35 19.2**	**+0.4**
PACA	**Pacayal**	**0.62**	**22**	*eP*	**Pn**	**21 35 19.9**	**+1.0**
PACA				*eS*	**Sn**	**21 35 30.2**	**+1.3**
PACA	**Pacayal**	**0.62**	**22**	P	**Pn**	**21 35 19.8**	**+0.9**
PACA	**Pacayal**	**0.62**	**22**	S	**Sn**	**21 35 29.5**	**+0.6**
BLLM	**Bellamira**	**0.63**	**30**	*ǁiP*	**Pn**	**21 35 19.9**	**+0.9**
TECO	**Alcaldia de Te**	**0.67**	**342**	*ǁeP*	**Pn**	**21 35 19.6**	**+0.2**
TECO				*eS*	**Sn**	**21 35 30.0**	**+0.1**
TECO	**Alcaldia de Te**	**0.67**	**342**	P	**Pn**	**21 35 19.7**	**+0.2**
TECO	**Alcaldia de Te**	**0.67**	**342**	S	**Sn**	**21 35 30.0**	**+0.1**
CNRM	**Centro Naciona**	**0.69**	**33**	*eP*	**Pn**	**21 35 20.6**	**+0.9**
CNRM	**Centro Naciona**	**0.69**	**33**	P	**Pn**	**21 35 20.7**	**+1.1**
CNRM	**Centro Naciona**	**0.69**	**33**	S	**Sn**	**21 35 32.5**	**+2.3**
PQSS	**Presa 15 de Se**	**0.73**	**0**	*eP*	**Pn**	**21 35 20.8**	**+0.7**
PQSS	**Presa 15 de Se**	**0.73**	**0**	P	**Pn**	**21 35 20.9**	**+0.8**
PQSS	**Presa 15 de Se**	**0.73**	**0**	S	**Sn**	**21 35 32.5**	**+1.6**
SNVI	**San Vicente**	**0.76**	**339**	*ǁiP*	**Pn**	**21 35 21.0**	**+0.3**
UESV	**Universidad de**	**0.77**	**343**	P	**Pn**	**21 35 21.2**	**+0.6**
UESV	**Universidad de**	**0.77**	**343**	S	**Sn**	**21 35 32.9**	**+1.0**
LCND	**La Caada**	**0.77**	**58**	*eP*	**Pn**	**21 35 21.5**	**+0.9**
LCND	**La Caada**	**0.77**	**58**	S	**Sn**	**21 35 33.2**	**+1.3**
LCND	**La Caada**	**0.77**	**58**	P	**Pn**	**21 35 21.5**	**+0.9**
CNCH	**Conchagua**	**0.81**	**62**	*ǁeP*	**Pn**	**21 35 21.7**	**+0.6**
CNCH	**Conchagua**	**0.81**	**62**	P	**Pn**	**21 35 21.7**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.82**	**349**	*ǁiP*	**Pn**	**21 35 22.2**	**+0.9**
SCLA	**Alcaldia de Sa**	**0.82**	**349**	P	**Pn**	**21 35 22.3**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.82**	**349**	S	**Sn**	**21 35 35.1**	**+2.1**
LFRS	**El Faro**	**0.87**	**326**	*ǁiP*	**Pn**	**21 35 22.0**	**+0.1**
PAVA	**Las Pavas**	**0.89**	**336**	*ǁiP*	**Pn**	**21 35 22.7**	**+0.5**
PAVA	**Las Pavas**	**0.89**	**336**	P	**Pn**	**21 35 22.7**	**+0.5**
PAVA	**Las Pavas**	**0.89**	**336**	S	**Sn**	**21 35 35.8**	**+1.1**
PANCS	**Alcalda de**	**0.93**	**320**	S	**Sn**	**21 35 34.8**	**-0.7**
PANCS	**Alcalda de**	**0.93**	**320**	P	**Pn**	**21 35 22.6**	**-0.1**
CAHU	**Cacacuatique**	**0.94**	**21**	*ǁiP*	**Pn**	**21 35 24.1**	**+1.2**
LALI	**Alcalda de L**	**0.95**	**309**	*ǁeP*	**Pn**	**21 35 22.2**	**-0.5**
LALI	**Alcalda de L**	**0.95**	**309**	*iP*	**Pn**	**21 35 22.2**	**-0.5**
LALI	**Alcalda de L**	**0.95**	**309**	P	**Pn**	**21 35 22.3**	**-0.5**
LALI	**Alcalda de L**	**0.95**	**309**	S	**Sn**	**21 35 34.2**	**-1.5**
LOMA	**Loma Larga**	**0.95**	**322**	*ǁiP*	**Pn**	**21 35 23.0**	**+0.1**
LOMA				*eS*	**Sn**	**21 35 36.1**	**0.0**
LOMA	**Loma Larga**	**0.95**	**322**	P	**Pn**	**21 35 23.1**	**+0.1**
LBRS	**Las Brisas**	**0.96**	**331**	*ǁiP*	**Pn**	**21 35 23.6**	**+0.5**
UDBS	**Universidad Do**	**1.00**	**325**	*eP*	**Pn**	**21 35 23.8**	**+0.2**
UDBS	**Universidad Do**	**1.00**	**325**	P	**Pn**	**21 35 23.7**	**+0.2**
UDBS	**Universidad Do**	**1.00**	**325**	S	**Sn**	**21 35 37.2**	**+0.2**
LFU	**La Fuente**	**1.00**	**328**	*ǁiP*	**Pn**	**21 35 24.0**	**+0.4**
IGN	**Direccin Gen**	**1.01**	**324**	*eP*	**Pn**	**21 35 23.9**	**+0.3**
IGN	**Direccin Gen**	**1.01**	**324**	P	**Pn**	**21 35 23.9**	**+0.3**
IGN	**Direccin Gen**	**1.01**	**324**	S	**Sn**	**21 35 37.6**	**+0.4**
UTEC	**Universidad Te**	**1.01**	**322**	P	**Pn**	**21 35 24.1**	**+0.4**
UTEC	**Universidad Te**	**1.01**	**322**	S	**Sn**	**21 35 37.4**	**0.0**
UESS	**Universidad de**	**1.03**	**323**	*eP*	**Pn**	**21 35 24.3**	**+0.3**
POTN	**Potosi Cosigui**	**1.03**	**84**	P	**Pn**	**21 35 24.5**	**+0.6**
POTN				S	**Sn**	**21 35 38.8**	**+1.0**
UEES	**Universidad Ev**	**1.05**	**321**	*eP*	**Pn**	**21 35 24.2**	**0.0**
UEES	**Universidad Ev**	**1.05**	**321**	P	**Pn**	**21 35 24.5**	**+0.3**
UEES	**Universidad Ev**	**1.05**	**321**	S	**Sn**	**21 35 38.0**	**-0.3**
MAGS	**Ministerio de**	**1.06**	**318**	*eP*	**Pn**	**21 35 24.4**	**+0.1**
PIC2	**El Picacho**	**1.08**	**321**	*ǁeP*	**Pn**	**21 35 25.2**	**+0.5**
BOQS	**Boqueron**	**1.09**	**320**	*eP*	**Pn**	**21 35 25.1**	**+0.2**
PMON	**Piamonte**	**1.09**	**318**	*eP*	**Pn**	**21 35 24.8**	**+0.1**
PMON	**Piamonte**	**1.09**	**318**	P	**Pn**	**21 35 24.9**	**+0.1**
PMON	**Piamonte**	**1.09**	**318**	S	**Sn**	**21 35 39.4**	**+0.1**
JAYA	**Jayaque - finc**	**1.15**	**311**	*iP*	**Pn**	**21 35 25.0**	**-0.5**
JAYA	**Jayaque - finc**	**1.15**	**311**	S	**Sn**	**21 35 39.9**	**-0.7**
QUEZ	**Alcaldia de Qu**	**1.16**	**324**	*eP*	**Pn**	**21 35 26.3**	**+0.6**
CEDA	**San Andres**	**1.21**	**318**	*eP*	**Pn**	**21 35 26.4**	**+0.2**
CEDA	**San Andres**	**1.21**	**318**	P	**Pn**	**21 35 26.6**	**+0.3**
CEDA	**San Andres**	**1.21**	**318**	S	**Sn**	**21 35 42.2**	**+0.2**
LLGN	**La Laguna**	**1.31**	**344**	*ǁiP*	**Pn**	**21 35 28.5**	**+0.9**
LLGN	**La Laguna**	**1.31**	**344**	P	**Pn**	**21 35 28.6**	**+0.9**
CEVE	**Cerro Verde**	**1.39**	**312**	*eP*	**Pn**	**21 35 29.4**	**+0.6**
CEVE	**Cerro Verde**	**1.39**	**312**	P	**Pn**	**21 35 29.4**	**+0.6**
CEVE	**Cerro Verde**	**1.39**	**312**	S	**Sn**	**21 35 47.6**	**+1.1**
SNJE	**San Jose**	**1.40**	**314**	*eP*	**Pn**	**21 35 29.1**	**+0.2**
UNIC	**Universidad Ca**	**1.45**	**319**	P	**Pn**	**21 35 30.0**	**+0.6**
UNIC	**Universidad Ca**	**1.45**	**319**	S	**Sn**	**21 35 48.2**	**+0.7**
CRIN	**San Cristobal**	**1.49**	**97**		**Pn**	**21 35 31.2**	**+1.3**
CRIN				Sn	**Sn**	**21 35 50.1**	**+1.6**
CRIN	**San Cristobal**	**1.49**	**97**	P	**Pn**	**21 35 31.4**	**+1.4**
CRIN	**San Cristobal**	**1.49**	**97**	S	**Sn**	**21 35 50.6**	**+2.0**
CRIN	**San Cristobal**	**1.49**	**97**	P	**Pn**	**21 35 31.2**	**+1.3**
CRIN				S	**Sn**	**21 35 49.2**	**+0.7**
NUBE	**Las Nubes**	**1.55**	**310**	*eP*	**Pn**	**21 35 31.1**	**+0.2**
NUBE	**Las Nubes**	**1.55**	**310**	*iP*	**Pn**	**21 35 31.1**	**+0.2**
NUBE	**Las Nubes**	**1.55**	**310**	P	**Pn**	**21 35 31.1**	**+0.2**
NUBE	**Las Nubes**	**1.55**	**310**	S	**Sn**	**21 35 49.9**	**-0.3**
PKGN	**Cerro Pekin**	**1.56**	**98**	P	**Pn**	**21 35 31.8**	**+1.0**
PKGN				S	**Sn**	**21 35 50.9**	**+0.7**
LOAL	**Lomas de Alarc**	**1.62**	**313**	*eP*	**Pn**	**21 35 32.6**	**+0.9**
LOAL	**Lomas de Alarc**	**1.62**	**313**	P	**Pn**	**21 35 32.5**	**+0.8**
LOAL	**Lomas de Alarc**	**1.62**	**313**	S	**Sn**	**21 35 53.0**	**+1.4**
RBDL	**Robledal**	**1.63**	**318**	*ǁiP*	**Pn**	**21 35 32.3**	**+0.3**
SLOZ	**Alcaldia de Sa**	**1.64**	**314**	P	**Pn**	**21 35 30.7**	**-1.3**
SLOZ	**Alcaldia de Sa**	**1.64**	**314**	S	**Sn**	**21 35 51.8**	**-0.3**
MTO3	**Montecristo**	**1.69**	**333**		**Pn**	**21 35 33.5**	**+0.8**
MTO3				Sn	**Sn**	**21 35 54.3**	**+0.8**
MTO3	**Montecristo**	**1.69**	**333**	*ǁiP*	**Pn**	**21 35 33.6**	**+0.8**
MTO3	**Montecristo**	**1.69**	**333**	*iP*	**Pn**	**21 35 33.6**	**+0.8**
MTO3	**Montecristo**	**1.69**	**333**	P	**Pn**	**21 35 33.6**	**+0.8**
MTO3	**Montecristo**	**1.69**	**333**	S	**Sn**	**21 35 54.6**	**+1.1**
FAME	**Alcaldia de Sa**	**1.70**	**304**	P	**Pn**	**21 35 32.5**	**-0.3**
FAME	**Alcaldia de Sa**	**1.70**	**304**	S	**Sn**	**21 35 52.2**	**-1.3**
TGUH	**Tegucigalpa,Un**	**1.71**	**47**		**Pn**	**21 35 34.5**	**+1.5**
TGUH	**Tegucigalpa,Un**	**1.71**	**47**	P	**Pn**	**21 35 34.7**	**+1.7**
HERN	**Volcan Telica**	**1.71**	**99**	Pn	**Pn**	**21 35 32.6**	**-0.4**
HERN				Sn	**Sn**	**21 35 51.7**	**-2.3**
POLN	**Al Sur del Vol**	**1.72**	**98**	P	**Pn**	**21 35 33.9**	**+0.8**
POLN				S	**Sn**	**21 35 55.2**	**+1.1**
JUAM	**Asuncion Mita**	**1.81**	**322**	*iP*	**Pn**	**21 35 34.9**	**+0.6**
ESQI	**Esquipulas**	**1.82**	**336**		**Pn**	**21 35 35.8**	**+1.4**
ESQI	**Esquipulas**	**1.82**	**336**	*ǁiP*	**Pn**	**21 35 35.8**	**+1.4**
ESQI	**Esquipulas**	**1.82**	**336**	P	**Pn**	**21 35 35.9**	**+1.4**
ESQI	**Esquipulas**	**1.82**	**336**	S	**Sn**	**21 35 57.2**	**+0.6**
ZAFR2	**Estanzuela, Za**	**1.84**	**335**	*iP*	**Pn**	**21 35 42.1**	**+7.4**
CNGA	**Al SSO del Vol**	**1.86**	**102**	P	**Pn**	**21 35 35.5**	**+0.6**
CNGA				S	**Sn**	**21 35 58.5**	**+1.1**
CNGN	**Cerro Negro**	**1.86**	**102**		**Pn**	**21 35 35.5**	**+0.5**
CNGN	**Cerro Negro**	**1.86**	**102**	P	**Pn**	**21 35 35.3**	**+0.3**
CNGN	**Cerro Negro**	**1.86**	**102**	S	**Sn**	**21 35 58.3**	**+0.8**
AESN	**El Sauce Leon**	**1.97**	**90**	P	**Pn**	**21 35 37.0**	**+0.6**
YUSH	**Yuscaran**	**1.98**	**58**	P	**Pn**	**21 35 38.4**	**+1.8**
ESSJ	**San Jos, E**	**2.00**	**290**	*eP*	**Pn**	**21 35 43.4**	**+6.6**
MOM3	**MOM3**	**2.03**	**101**	P	**Pn**	**21 35 37.9**	**+0.7**
MOM3				S	**Sn**	**21 36 02.8**	**+1.2**
COPN	**Copaltepe**	**2.05**	**110**	P	**Pn**	**21 35 37.8**	**+0.3**
MOM2	**El Cardon**	**2.08**	**102**	P	**Pn**	**21 35 38.7**	**+0.8**
OCON	**Estacion meteo**	**2.16**	**70**	P	**Pn**	**21 35 40.4**	**+1.4**
AMTN	**Mateare**	**2.18**	**107**	P	**Pn**	**21 35 40.0**	**+0.7**
AMTN	**Mateare**	**2.18**	**107**	S	**Sn**	**21 36 05.6**	**+0.4**
PCG5	**San Vicente Pa**	**2.20**	**307**	*iP*	**Pn**	**21 35 44.7**	**+5.0**
SAPS	**Ciudad Sandino**	**2.23**	**109**	P	**Pn**	**21 35 40.5**	**+0.6**
SAPS	**Ciudad Sandino**	**2.23**	**109**	S	**Sn**	**21 36 06.6**	**+0.3**
APQ3	**Volcan Apoyequ**	**2.23**	**106**	P	**Pn**	**21 35 39.8**	**-0.1**
APQ3				S	**Sn**	**21 36 05.1**	**-1.2**
APQN	**Apoyeque**	**2.26**	**107**	P	**Pn**	**21 35 41.3**	**+1.0**
APQ2	**Apoyeque**	**2.29**	**107**	P	**Pn**	**21 35 41.9**	**+1.1**
APQ2				S	**Sn**	**21 36 07.3**	**-0.6**
APQ2	**Apoyeque**	**2.29**	**107**	P	**Pn**	**21 35 41.2**	**+0.4**
APQ2				S	**Sn**	**21 36 08.9**	**+1.0**
APQN	**BB Volcan Apoy**	**2.31**	**107**	P	**Pn**	**21 35 40.3**	**-0.7**
ABCN	**Banco Central**	**2.33**	**109**	P	**Pn**	**21 35 41.9**	**+0.6**
ABCN	**Banco Central**	**2.33**	**109**	S	**Sn**	**21 36 09.1**	**+0.3**
FG16	**Alotenango, Sa**	**2.34**	**306**	*iP*	**Pn**	**21 35 47.6**	**+6.0**
ALLN	**Telcor Managua**	**2.35**	**108**	P	**Pn**	**21 35 42.4**	**+0.8**
ALLN	**Telcor Managua**	**2.35**	**108**	S	**Sn**	**21 36 09.2**	**-0.2**
TISN	**Laguna Tiscapa**	**2.36**	**108**	P	**Pn**	**21 35 42.5**	**+0.8**
USIM	**UNAN**	**2.36**	**109**		**Pn**	**21 35 42.7**	**+0.9**
UNAN	**Cigeo UNAN**	**2.37**	**109**	P	**Pn**	**21 35 42.4**	**+0.6**
UNAN				S	**Sn**	**21 36 10.0**	**+0.2**
CRUN	**El Crucero**	**2.39**	**112**	P	**Pn**	**21 35 43.5**	**+1.3**
RCVN	**Varillal2**	**2.41**	**73**	P	**Pn**	**21 35 43.8**	**+1.4**
RCON	**San Juan de Ri**	**2.42**	**76**	P	**Pn**	**21 35 44.0**	**+1.4**
WILN	**Americas 2**	**2.43**	**107**	P	**Pn**	**21 35 43.3**	**+0.7**
WILN				S	**Sn**	**21 36 11.5**	**+0.2**
AERN	**Aeropuerto Man**	**2.45**	**107**	P	**Pn**	**21 35 43.2**	**+0.2**
AERN	**Aeropuerto Man**	**2.45**	**107**	S	**Sn**	**21 36 12.0**	**+0.1**
RCPN	**Sur Rio San Ju**	**2.48**	**75**	P	**Pn**	**21 35 45.2**	**+1.7**
MAS3	**Al N del Volca**	**2.49**	**110**	P	**Pn**	**21 35 43.7**	**+0.3**
MAS3				S	**Sn**	**21 36 11.5**	**-1.2**
MASN	**Masaya**	**2.52**	**111**	P	**Pn**	**21 35 44.5**	**+0.5**
MASN				S	**Sn**	**21 36 13.5**	**-0.1**
MASN	**Masaya**	**2.52**	**111**	*eP*	**Pn**	**21 35 44.6**	**+0.7**
MATN	**Matagalpa**	**2.57**	**89**	P	**Pn**	**21 35 44.6**	**-0.1**
ESSG	**Sabana Grande**	**2.66**	**304**	*iP*	**Pn**	**21 35 46.2**	**+0.4**
NADN	**Granada**	**2.72**	**114**	P	**Pn**	**21 35 47.7**	**+1.1**
NADN				S	**Sn**	**21 36 17.5**	**-0.9**
NADN	**Granada**	**2.72**	**114**	*eP*	**Pn**	**21 35 49.4**	**+2.7**
APG	**El Apazote**	**2.79**	**319**	P	**Pn**	**21 35 48.9**	**+1.0**
	15nm,0.5s,baz=141,slow=10,SNR=208						
APG				S	**Sn**	**21 36 25.3**	**+4.8**
	111nm,0.6s,baz=71,slow=20,SNR=6.3						
APG	**El Apazote**	**2.79**	**319**	*iP*	**Pn**	**21 35 49.0**	**+1.2**
IZABA	**Izabal, Puerto**	**2.82**	**360**	P	**Pn**	**21 35 50.5**	**+2.5**
ARIN	**Rivas**	**3.03**	**118**	P	**Pn**	**21 35 50.8**	**0.0**
JAPN	**Al SSO del Vol**	**3.13**	**115**	P	**Pn**	**21 35 53.9**	**+1.7**
JAPN	**Al SSO del Vol**	**3.13**	**115**	*eP*	**Pn**	**21 35 54.0**	**+1.8**
MORN	**Al O del Volca**	**3.15**	**115**	P	**Pn**	**21 35 54.3**	**+1.8**
CONN	**Concepcion**	**3.16**	**114**	P	**Pn**	**21 35 52.9**	**+0.3**
OMEN	**Al SSO del Vol**	**3.18**	**115**	P	**Pn**	**21 35 54.2**	**+1.3**
SOKI	**Kika Raxquin**	**3.36**	**305**	*iP*	**Pn**	**21 35 57.7**	**+2.0**
QUIS	**Sacapulas**	**3.42**	**314**	*iP*	**Pn**	**21 35 58.6**	**+2.3**
CARN	**Rivas**	**3.42**	**119**	P	**Pn**	**21 35 56.8**	**+0.6**
CARN	**Rivas**	**3.42**	**119**	*eP*	**Pn**	**21 35 57.4**	**+1.2**
RTAL	**Retalhuleu**	**3.45**	**298**		**Pn**	**21 35 57.6**	**+1.0**
RTAL	**Retalhuleu**	**3.45**	**298**	P	**Pn**	**21 35 57.6**	**+1.4**
ELI1	**Hacienda Flor**	**3.70**	**127**	P	**Pn**	**21 36 02.5**	**+2.3**
ELI1	**Hacienda Flor**	**3.70**	**127**	S	**Sn**	**21 36 43.5**	**+1.1**
ELI1	**Hacienda Flor**	**3.70**	**127**	*eP*	**Pn**	**21 36 02.7**	**+2.7**
LAPC	**Finca la Perla**	**3.72**	**124**	*eP*	**Pn**	**21 36 01.3**	**+1.0**
HUEH	**Huehuetenango**	**3.73**	**311**		**Pn**	**21 36 02.8**	**+2.1**
HUEH	**Huehuetenango**	**3.73**	**311**	*iP*	**Pn**	**21 36 03.9**	**+3.2**
HUEH	**Huehuetenango**	**3.73**	**311**	P	**Pn**	**21 36 02.2**	**+1.5**
ALIBA	**Liberia Airpor**	**3.74**	**127**	*eP*	**Pn**	**21 36 02.8**	**+2.3**
BUAI	**Buenos Aires**	**3.74**	**122**	*eP*	**Pn**	**21 36 01.7**	**+1.0**
VRLE	**La Escondida,**	**3.77**	**123**	*eP*	**Pn**	**21 36 03.6**	**+2.6**
SIUN	**Universidad Ur**	**3.78**	**77**		**Pn**	**21 36 02.7**	**+1.7**
SIUN	**Universidad Ur**	**3.78**	**77**	P	**Pn**	**21 36 02.8**	**+1.7**
GPS1	**Guardaparques**	**3.79**	**123**	*eP*	**Pn**	**21 36 04.5**	**+3.3**
DELF	**Filadelfia**	**3.82**	**129**	*eP*	**Pn**	**21 36 04.2**	**+2.5**
SMCA	**Catarina**	**3.93**	**300**	*iP*	**Pn**	**21 36 04.1**	**+0.9**
MESS	**Mesas**	**3.93**	**123**	*eP*	**Pn**	**21 36 04.8**	**+1.5**
HORNC	**Hornillas**	**3.96**	**123**	*eP*	**Pn**	**21 36 04.2**	**+1.6**
SAJU	**San Juanillo,**	**3.96**	**135**	*eP*	**Pn**	**21 36 05.0**	**+1.4**
BAGA	**Bagaces**	**4.00**	**126**	*eP*	**Pn**	**21 36 06.9**	**+2.8**
CUI	**Cuipilapa**	**4.00**	**123**	*eP*	**Pn**	**21 36 05.9**	**+1.7**
UPAL	**Upala**	**4.00**	**119**	P	**Pn**	**21 36 05.1**	**+0.9**
JUD3	**Juan Diaz 3**	**4.02**	**132**		**Pn**	**21 36 06.2**	**+1.7**
JUD3	**Juan Diaz 3**	**4.02**	**132**	*eP*	**Pn**	**21 36 06.6**	**+2.2**
NICO	**Nicoya**	**4.10**	**132**	*eP*	**Pn**	**21 36 07.8**	**+2.3**
THIG		**4.12**	**300**	*iP*	**Pn**	**21 36 07.6**	**+1.9**
TENO	**El Achiote**	**4.13**	**121**	*eP*	**Pn**	**21 36 07.5**	**+1.5**
TIMP	**Tierras Morena**	**4.16**	**123**	*eP*	**Pn**	**21 36 09.1**	**+2.6**
INVE	**Universidad In**	**4.19**	**125**	*eP*	**Pn**	**21 36 10.8**	**+4.1**
PETF	**Flores**	**4.19**	**343**		**Pn**	**21 36 09.6**	**+2.9**
PETF	**Flores**	**4.19**	**343**	*iP*	**Pn**	**21 36 09.7**	**+2.9**
PETF	**Flores**	**4.19**	**343**	P	**Pn**	**21 36 09.6**	**+2.9**
CMARA	**Lajas Hojancha**	**4.20**	**133**	P	**Pn**	**21 36 08.2**	**+1.3**
CMARA	**Lajas Hojancha**	**4.20**	**133**	S	**Sn**	**21 36 53.4**	**-1.4**
ESPN	**Las Esperanzas**	**4.22**	**99**	P	**Pn**	**21 36 07.4**	**+0.3**
INDI	**Punta indio, G**	**4.25**	**135**	*eP*	**Pn**	**21 36 09.1**	**+1.9**
NYURE	**Nandayure**	**4.34**	**131**	*eP*	**Pn**	**21 36 09.7**	**+1.9**
JTS	**Las Juntas de**	**4.38**	**126**	P	**Pn**	**21 36 10.8**	**+1.5**
	73nm,0.4s,baz=300,slow=19,SNR=61						
JTS				S	**Sn**	**21 36 57.8**	**-1.4**
	426nm,0.6s,baz=310,slow=18,SNR=4.1						
JTS	**Las Juntas de**	**4.38**	**126**		**Pn**	**21 36 11.0**	**+1.7**
JTS	**Las Juntas de**	**4.38**	**126**	*ceP*	**Pn**	**21 36 11.3**	**+1.9**
JTS				pmax	pmax		
	comp=Z,64nm,0.3s						
JTS	**Las Juntas de**	**4.38**	**126**	*eP*	**Pn**	**21 36 12.2**	**+2.8**
JTS				eS	Sn	**21 37 14.5**	**+15**
JTS	**Las Juntas de**	**4.38**	**126**	P	**Pn**	**21 36 11.1**	**+1.7**
JTS	**Las Juntas de**	**4.38**	**126**	*eP*	**Pn**	**21 36 12.1**	**+2.7**
TABAC	**Tabacon**	**4.41**	**122**	*eP*	**Pn**	**21 36 13.7**	**+3.9**
MTEVE	**Monteverde**	**4.46**	**125**	*eP*	**Pn**	**21 36 14.8**	**+4.2**
CEDE	**Laguna Cedeo**	**4.47**	**122**	*eP*	**Pn**	**21 36 13.5**	**+2.8**
ARE1	**Arenal 1**	**4.47**	**122**	*eP*	**Pn**	**21 36 13.9**	**+3.3**
VARE2	**V. Arenal**	**4.47**	**122**	*eP*	**Pn**	**21 36 14.0**	**+3.3**
CASO	**Castillo**	**4.48**	**123**	*eP*	**Pn**	**21 36 13.2**	**+2.5**
SOCE	**Pocosol**	**4.60**	**122**		**Pn**	**21 36 14.9**	**+2.6**
SOCE	**Pocosol**	**4.60**	**122**	P	**Pn**	**21 36 14.7**	**+2.3**
SOCE	**Pocosol**	**4.60**	**122**	*eP*	**Pn**	**21 36 15.2**	**+2.8**
COVE	**Coope Vega, Sa**	**4.61**	**118**	P	**Pn**	**21 36 13.9**	**+1.4**
CCIG	**Comitan**	**4.83**	**315**	Pn	**Pn**	**21 36 18.1**	**+2.5**
CCIG	**Comitan**	**4.83**	**315**	*iP*	**Pn**	**21 36 18.1**	**+2.5**
CCIG	**Comitan**	**4.83**	**315**	P	**Pn**	**21 36 17.9**	**+2.3**
SRA1	**San Ramn**	**4.88**	**124**	*eP*	**Pn**	**21 36 20.9**	**+4.7**
VPS8	**V Poas**	**5.02**	**122**	*eP*	**Pn**	**21 36 23.6**	**+5.2**
TCS1	**Tacares**	**5.05**	**124**	P	**Pn**	**21 36 22.8**	**+4.2**
BILN	**Bilwi Airport**	**5.17**	**77**		**Pn**	**21 36 22.0**	**+1.8**
BILN	**Bilwi Airport**	**5.17**	**77**	P	**Pn**	**21 36 22.2**	**+2.0**
BELE	**Belen**	**5.18**	**124**	*eP*	**Pn**	**21 36 23.9**	**+3.6**
HEME	**Heredia, Merce**	**5.21**	**123**	*eP*	**Pn**	**21 36 26.3**	**+5.5**
HDC	**Heredia**	**5.22**	**123**		**Pn**	**21 36 22.5**	**+1.5**
HDC	**Heredia**	**5.22**	**123**	*eP*	**Pn**	**21 36 22.8**	**+1.8**
HDC	**Heredia**	**5.22**	**123**	*eP*	**Pn**	**21 36 25.2**	**+4.2**
ACOS	**Acosta**	**5.30**	**125**	*eP*	**Pn**	**21 36 24.6**	**+2.5**
LUJA	**Lujan**	**5.30**	**123**	*eP*	**Pn**	**21 36 26.3**	**+4.2**
ECI	**Escuela Centro**	**5.31**	**123**	*eP*	**Pn**	**21 36 27.6**	**+5.4**
AMPA	**Desamparados**	**5.32**	**124**	*eP*	**Pn**	**21 36 26.8**	**+4.4**
**PAR1A

comp=Z,18nm,1.3s
OTAV Otavalo 16.08 141 P Pn 21 38 48.8 +0.8
OTAV Otavalo 16.08 141 *eP* **P 21 38 53.6 +3.3**
CRUC La Cruz 16.09 133 P P 21 38 51.5 +1.2
ROSC El Rosal 16.18 118 P P 21 38 52.2 +1.0
comp=Z,34nm,0.7s,baz=317,slow=11,SNR=11
ROSC LR LR 21 46 29.9
comp=Z,228nm,19.2s,baz=318,slow=43
ROSC El Rosal 16.18 118 Pn 21 38 49.8 +0.7
ROSC El Rosal 16.18 118 P Pn 21 38 49.8 +0.7
ROSC pmax pmax
comp=Z,43nm,0.9s
URIC Uribia, Colomb 16.23 92 P P 21 38 51.9 +0.4
comp=Z,2µmcomp=Z,1µmcomp=Z,117nm,0.9s
URI Uribia 16.24 92 P Pn 21 38 49.6 +0.1
PRAC Prado 16.31 123 P Pn 21 38 51.0 +0.6
LGNH Logne 16.34 68 P P 21 38 51.9 -0.7
BONI La Bonita 16.50 138 P P 21 39 00.2 +5.4
comp=Z,66nm,0.9s
ZAIG Zacatecas 16.55 308 P P 21 38 55.3 +0.1
PAMC Pamplona, Colo 16.56 108 P Pn 21 38 54.2 +0.2
comp=Z,365nmcomp=Z,48nm,0.6s
GARC Garzon, Huila 16.75 128 P P 21 38 58.8 +1.3
comp=Z,4µmcomp=Z,42nm,0.6s
RUSC La Rusia 16.77 113 P Pn 21 38 57.1 +0.5
RUSC La Rusia 16.77 113 P Pn 21 38 56.5 -0.1
SLOR San Lorenzo - 16.82 143 P 21 38 58.3 -0.2
HBVL Hebbronville 16.98 328 P P 21 39 00.9 +1.1
FLOC Florencia 17.02 130 P P 21 39 01.5 +1.2
FLOC Florencia 17.02 130 P P 21 39 02.6 +2.4
FLOC Florencia 17.02 130 P P 21 39 02.2 +1.9
comp=Z,1µmcomp=Z,2µmcomp=Z,177nm,1.5s
SDDR Presa de Saban 17.67 68 Pn 21 39 06.7 -0.6
SDDR Presa de Saban 17.67 68 P P 21 39 08.4 +0.9
SDV Santo Domingo 18.05 101 P Pn 21 39 12.2 +0.1
comp=Z,103nm,0.8s,baz=268,slow=5.1,SNR=69
SDV PcP **PcP 21 43 45.3 +1.3**
comp=Z,18nm,0.8s,baz=255,slow=2.5,SNR=5.7
SDV LR LR 21 47 33.7
comp=Z,305nm,18.7s,baz=280,slow=42
SDV Santo Domingo 18.05 101 P 21 39 11.3 -0.5
SDV IAmb IAmb 21 39 15.4
comp=Z,94nm,0.8s
SDV Santo Domingo 18.05 101 *eP* **Pn 21 39 12.2 +0.1**
HKT Hockley 18.26 339 P Pn 21 39 15.5 +1.2
HKT Hockley 18.26 339 *ceP* **Pn 21 39 17.0 +2.8**
HKT pmax pmax
comp=Z,74nm,1.4s
SC01 Santiago de lo 18.31 67 P Pn 21 39 15.6 +0.6
SC01 IAmb IAmb 21 39 24.4
comp=Z,92nm,0.8s
833A Chaparral WMA, 18.38 328 P Pn 21 39 16.6 +0.8
PTLC Puerto Leguiza 18.60 132 P Pn 21 39 23.2 +4.6
250A Grady 19.11 6 P P 21 39 23.3 +0.2
HNDO Hondo 19.31 331 P P 21 39 26.1 +0.7
HNDO IAmb IAmb 21 39 43.9
comp=Z,93nm,0.8s
DR12 Loma Pena Alta 19.35 70 P Pn 21 39 26.8 -0.8
435B Jarrell 19.66 336 P P 21 39 29.5 +0.5
435B IAmb IAmb 21 39 43.2
comp=Z,111nm,0.9s
LRAL Lakeview Retre 20.10 4 Pn 21 39 36.2 +0.1
LRAL IAmb IAmb 21 39 39.1
comp=Z,101nm,0.8s
JCT Junction City 20.35 331 P P 21 39 37.3 +0.7
JCT IAmb IAmb 21 39 42.8
comp=Z,83nm,0.7s
JCT Junction City 20.35 331 P P 21 39 37.3 +0.7
JCT pmax pmax
comp=Z,83nm,0.7s
BAUV El Baul 20.52 99 P P 21 39 37.7 -0.9
GOGA Godfrey 20.95 12 P Pn 21 39 44.7 -1.5
GOGA IAmb IAmb 21 40 01.6
comp=Z,95nm,0.7s
GOGA Godfrey 20.95 12 P Pn 21 39 44.7 -1.4
GOGA pmax pmax
comp=Z,95nm,0.7s
HPIG 21.26 314 P P 21 39 47.7 +1.0
CRPR Cabo Rojo, PR 21.29 73 P P 21 39 46.9 +0.2
OXF Oxford 21.54 358 P P 21 39 49.8 +0.6
OXF IAmb IAmb 21 39 56.9
comp=Z,120nm,0.9s
OXF Oxford 21.54 358 P P 21 39 49.8 +0.6
OXF pmax pmax
comp=Z,120nm,0.9s
TXAR Lajitas Array 21.55 322 P P 21 39 51.6 +2.1
comp=Z,48nm,0.6s,baz=147,slow=9.4,SNR=205
TXAR pP **pP 21 40 05.0 +1.7**
comp=Z,47nm,1.0s,baz=143,slow=11,SNR=8.7
TXAR PcP **PcP 21 43 51.4 +1.4**
comp=Z,6.3nm,0.8s,baz=153,slow=4.4,SNR=9.5
TXAR ScP **ScP 21 47 23.5 +1.7**
comp=Z,0.9nm,0.8s,baz=135,slow=4.5,SNR=3.3
TXAR LR LR 21 49 55.8
comp=Z,116nm,18.7s,baz=128,slow=41
TXAR PKiKP **PKiKP 21 51 36.4 -0.5**
comp=Z,0.5nm,0.9s,baz=113,slow=1.4,SNR=4.2
comp=Z,48nm,0.6s
TXAR Lajitas Array 21.55 322 P P 21 39 50.9 +1.3
OBIP Obispado Ponce 21.76 74 P P 21 39 51.5 -0.3
OBIP IAmb IAmb 21 40 11.7
comp=Z,217nm,1.6s
X40A Basin Creek Fa 21.84 350 P P 21 39 54.0 +1.4
X40A IAmb IAmb 21 40 12.9
comp=Z,202nm,1.6s
MIAR Mount Ida 22.03 349 P P 21 39 55.5 +0.9
MIAR IAmb IAmb 21 40 14.9
comp=Z,119nm,0.9s
MIAR Mount Ida 22.03 349 P P 21 39 55.5 +0.9
MIAR pmax pmax
comp=Z,119nm,0.9s
SWET Sewanee 22.35 6 P P 21 39 58.5 +0.4
SWET IAmb IAmb 21 40 19.7
comp=Z,231nm,1.5s
HUMP Col San Antoni 22.49 74 P P 21 39 59.1 -0.6
HUMP IAmb IAmb 21 40 19.9
comp=Z,55nm,0.8s
SLBS Sierra La Lagu 22.93 301 P P 21 40 06.4 +2.0
SLBS IAmb IAmb 21 40 11.5
comp=Z,59nm,0.8s
TKL Tuckaleechee C 23.07 10 LR LR 21 49 50.7
comp=Z,151nm,18.4s,baz=202,slow=39
TKL Tuckaleechee C 23.07 10 P P 21 40 06.4 +0.8
TKL Tuckaleechee C 23.07 10 P P 21 40 06.4 +0.8
TKL pmax pmax
comp=Z,191nm,1.2s
WVT Waverly 23.14 2 P P 21 40 07.0 +0.9
WVT IAmb IAmb 21 40 28.5
comp=Z,66nm,0.9s
WVT Waverly 23.14 2 P P 21 40 07.1 +0.9
WVT pmax pmax
comp=Z,66nm,1.0s
X34A Smith Ranch, M 23.19 340 P P 21 40 08.5 +1.8
X34A IAmb IAmb 21 40 11.1
comp=Z,99nm,0.7s
LPIG La Paz 23.41 302 LR LR 21 50 01.2
comp=Z,280nm,18.4s,baz=146,slow=38
WMOK Wichita Mounta 23.64 339 P P 21 40 11.3 +0.4
WMOK IAmb IAmb 21 40 13.7
comp=Z,159nm,1.8s
WMOK Wichita Mounta 23.64 339 P P 21 40 11.3 +0.4
WMOK pmax pmax
comp=Z,159nm,1.8s
TZTN Tazewell 23.98 10 P P 21 40 13.9 0.0
TZTN IAmb IAmb 21 40 39.6
comp=Z,162nm,1.4s
GDL2 Guadalupe Moun 24.07 326 P P 21 40 15.4 +0.4
MNTX Cornudas Mount 24.28 323 P P 21 40 17.0 +0.3
MNTX IAmb IAmb 21 40 19.8
comp=Z,76nm,1.3s
CCM Cathedral Cave 25.17 355 P P 21 40 24.9 +0.2
CCM IAmb IAmb 21 40 27.4
comp=Z,86nm,0.8s
CCM Cathedral Cave 25.17 355 P P 21 40 25.0 +0.2
CCM pmax pmax
comp=Z,86nm,0.8s
WCI Wyandotte Cave 25.31 4 P P 21 40 26.4 +0.4
WCI IAmb IAmb 21 40 27.4
comp=Z,71nm,0.8s
WCI Wyandotte Cave 25.31 4 P P 21 40 26.4 +0.4
WCI pmax pmax
comp=Z,71nm,0.9s
HSIG 26.28 311 P P 21 40 35.5 +0.6
SRIG Santa Rosalia 26.39 307 P P 21 40 37.2 +1.3
SRIG IAmb IAmb 21 40 39.5
comp=Z,69nm,0.8s
BIM Bigot 26.75 83 P P 21 40 38.2 -1.1
GDSD La Dsirade Is 26.81 79 P P 21 40 37.8 -2.1
GDSD IAmb IAmb 21 40 37.9
comp=Z,183nm,1.8s
CBN Corbin Frederi 27.11 20 P P 21 40 43.4 +1.2
ANMO Albuquerque 27.29 327 LR LR 21 53 08.4
comp=Z,243nm,21.0s,baz=221,slow=40
ANMO Albuquerque 27.29 327 P P 21 40 45.0 +0.8
ANMO Albuquerque 27.29 327 *eP* **P 21 40 45.7 +1.6**
ANMO pmax pmax
comp=Z,8.0nm,0.6s
NNA Nana 27.32 154 LR LR 21 49 51.7
comp=Z,280nm,21.6s,baz=344,slow=32
NNA Nana 27.32 154 *eP* **P 21 40 43.9 -0.5**
NNA pmax pmax
comp=Z,32nm,1.3s
ACSO Alum Creek Sta 27.67 9 P P 21 40 47.1 -0.2
ACSO IAmb IAmb 21 40 49.0
comp=Z,52nm,0.7s
TUC Tucson 28.08 317 P P 21 40 52.0 +0.9
TUC Tucson 28.08 317 P P 21 40 52.0 +0.9
TUC pmax pmax
comp=Z,14nm,1.0s
TEFE Tefe 28.82 123 *eP* **P 21 40 57.9 +0.2**
X18A Snowflake 28.99 322 P P 21 41 01.2 +1.9
SDCO Great Sand Dun 29.00 332 P P 21 41 00.5 +1.0
SSPA Standing Stone 29.18 17 P P 21 41 00.8 +0.1
SSPA IAmb IAmb 21 41 26.6
comp=Z,136nm,1.8s
BBSR BB Station 29.22 45 P P 21 41 01.8 +0.7
BBSR IAmb IAmb 21 41 03.7
comp=Z,48nm,0.8s
S22A 4UR Ranch, Cre 29.64 330 P P 21 41 06.2 +1.1
S22A IAmb IAmb 21 41 09.1
comp=Z,43nm,0.7s
S22A PcP **PcP 21 44 09.7 +1.3**
BOAV Boa Vista 29.64 108 P P 21 41 03.4 -1.8
BOAV PcP **PcP 21 44 09.6 +1.1**
BOAV Boa Vista 29.64 108 *eP* **P 21 41 03.1 -2.0**
BRNJ Basking Ridge 30.29 21 P P 21 41 11.4 +1.0
BRNJ IAmb IAmb 21 41 37.7
comp=Z,74nm,0.9s
WUAZ Wupatki 30.52 321 P P 21 41 14.0 +1.2
ISCO Idaho Springs 30.73 334 P P 21 41 16.0 +1.2
ISCO IAmb IAmb 21 41 18.6
comp=Z,26nm,0.8s
ISCO Idaho Springs 30.73 334 P P 21 41 16.0 +1.2
ISCO pmax pmax
comp=Z,26nm,0.8s
BINY Binghamton 31.18 18 P P 21 41 18.6 +0.2
BINY IAmb IAmb 21 41 19.9
comp=Z,45nm,0.9s
ECSD EROS Data Cent 31.50 349 P P 21 41 20.8 -0.4
ECSD IAmb IAmb 21 41 22.8
comp=Z,41nm,1.4s
MACA Manacapuru-AM 31.95 118 P P 21 41 24.4 -1.0
PFO Pinyon Flats O 32.72 314 LR LR 21 56 45.8
comp=Z,279nm,19.5s,baz=134,slow=40
PFO Pinyon Flats O 32.72 314 P P 21 41 32.7 +0.6
PFO Pinyon Flats O 32.72 314 *eP* **P 21 41 33.8 +1.7**
PFO pmax pmax
comp=Z,8.0nm,0.8s
SADO Sadowa 32.77 12 LR LR 21 54 42.5
comp=Z,269nm,21.9s,baz=146,slow=36
P18A Preston Nutter 32.79 328 P P 21 41 34.4 +1.5
P18A IAmb IAmb 21 41 36.8
comp=Z,20nm,0.7s
BUKO Buck Lake 33.36 12 P P 21 41 37.5 +0.1
BUKO IAmb IAmb 21 41 38.5
comp=Z,41nm,0.7s
SHPR Sheep Range 33.51 319 P P 21 41 39.8 +0.8
LONY Lake Ozonia 33.80 18 P P 21 41 41.1 -0.2
RSSD Black Hills 33.84 340 P P 21 41 42.4 +0.6
RSSD IAmb IAmb 21 41 45.6
comp=Z,18nm,0.6s
RSSD Black Hills 33.84 340 P P 21 41 42.4 +0.6
RSSD pmax pmax
comp=Z,19nm,0.6s
RSSD Black Hills 33.84 340 P P 21 41 43.5 +1.7
RSSD PcP **PcP 21 44 19.7 +0.1**
TPNV Topopah Spring 34.47 319 P P 21 41 49.2 +1.8
TPNV Topopah Spring 34.47 319 P P 21 41 49.2 +1.8
TPNV pmax pmax
comp=Z,10.0nm,0.9s
PDAR Pinedale Array 34.88 333 P P 21 41 51.4 +0.5
comp=Z,13nm,0.7s,baz=128,slow=10,SNR=120
PDAR PcP **PcP 21 44 22.6 0.0**
comp=Z,4.9nm,0.6s,baz=140,slow=5.2,SNR=9.2
PDAR ScP **ScP 21 48 03.1 +0.3**
comp=Z,1.8nm,1.0s,baz=122,slow=5.4,SNR=4.9
PDAR PKiKP **PKiKP 21 51 44.7 -0.2**
comp=Z,0.9nm,0.7s,baz=115,slow=5.3,SNR=8.2
PDAR LR LR 22 00 33.6
comp=Z,108nm,18.1s,baz=116,slow=44
comp=Z,13nm,0.7s
EYMN Ely 35.03 357 P P 21 41 50.7 -1.2
LPAZ La Paz 35.34 145 P P 21 41 56.9 +1.4
comp=Z,11nm,0.6s,baz=336,slow=6.9,SNR=59
LPAZ LR LR 21 57 08.3
comp=Z,266nm,21.0s,baz=306,slow=37
comp=Z,11nm,0.6s
LPAZ La Paz 35.34 145 P P 21 41 56.0 +0.5
LPAZ La Paz 35.34 145 *eP* **P 21 41 57.0 +1.4**
LPAZ La Paz 35.34 145 P P 21 41 56.8 +1.4
TBO Thunder Bay 35.65 359 P P 21 41 56.2 -0.9
PB18 Visviri 35.67 148 P P 21 41 58.3 +0.1
PB18 IAmb IAmb 21 43 08.6
comp=Z,51nm,1.1s
AGMN Agassiz Nation 35.82 352 P P 21 41 58.0 -0.6
SNOW Snow King Moun 35.96 332 P P 21 42 01.3 +1.0
PB12 IPOC Station P 36.10 150 P P 21 42 02.6 +1.1
PB12 IAmb IAmb 21 42 04.2
comp=Z,26nm,0.7s
PKME Peaks-Kenny Pk 36.19 23 P P 21 42 02.9 +1.1
ELK Elko 36.28 325 LR LR 21 58 35.3
comp=Z,151nm,20.3s,baz=140,slow=39
MDP Montagnes des 36.28 99 LR LR 21 57 53.8
comp=Z,197nm,22.0s,baz=288,slow=38
YPP Pitchstone Pla 36.62 333 P P 21 42 06.8 +0.9
YPP IAmb IAmb 21 42 13.5
comp=Z,18nm,0.7s
RLMT Red Lodge 36.64 335 P P 21 42 06.7 +0.8
NVAR Mina Array Bea 36.66 319 P P 21 42 08.4 +2.2
comp=Z,15nm,0.7s,baz=133,slow=7.3,SNR=88
NVAR PcP **PcP 21 44 29.4 +1.4**
comp=Z,20nm,0.6s,baz=141,slow=2.4,SNR=46
NVAR ScP **ScP 21 48 09.3 -0.1**
comp=Z,2.5nm,0.8s,baz=124,slow=4.1,SNR=7.1
NVAR LR LR 21 59 30.5
comp=Z,405nm,19.3s,baz=132,slow=40
comp=Z,15nm,0.7s
NVAR Mina Array Bea 36.66 319 P P 21 42 07.6 +1.4
ITTB Itaituba 36.84 116 *eP* **P 21 42 05.3 -2.4**
EPLO Experimental L 36.92 354 P P 21 42 07.2 -0.8
MAL2 Monte Alegre, 37.20 111 P P 21 42 08.9 -1.9
PB11 IPOC Station P 37.41 150 P P 21 42 13.2 +0.6
PB11 IAmb IAmb 21 42 40.2
comp=Z,29nm,0.8s
WAKR Walker 37.43 319 P P 21 42 14.2 +1.5
GO01 Chusmiza 37.56 149 P P 21 42 15.2 +0.9
ULM Lac du Bonnet 37.73 352 P P 21 42 13.8 -0.9
comp=Z,56nm,0.7s,baz=167,slow=9.1,SNR=43
ULM LR LR 21 58 54.6
comp=Z,588nm,21.9s,baz=185,slow=38
comp=Z,56nm,0.7s
ULM Lac du Bonnet 37.73 352 P P 21 42 14.1 -0.7
HMBC Humberstone 37.74 151 P P 21 42 17.1 +1.8
HMBC IAmb IAmb 21 42 27.4
comp=Z,23nm,0.5s
CMB Columbia Colle 37.79 317 P P 21 42 16.0 +0.4
CMB Columbia Colle 37.79 317 P P 21 42 16.0 +0.4
CMB pmax pmax
comp=Z,7.0nm,1.1s
HLID Hailey 37.80 329 P P 21 42 16.5 +0.8
TA01 Diego Aracena 37.85 151 P P 21 42 17.5 +1.4
TA01 IAmb IAmb 21 42 19.6
comp=Z,59nm,1.4s
PB08 IPOC Station P 37.98 150 P P 21 42 18.7 +1.1
PATCX Punta Patache 38.08 151 P P 21 42 18.7 +0.5
PATCX IAmb IAmb 21 42 21.8
comp=Z,36nm,1.1s
VILB Vilhena 38.08 131 P P 21 42 18.0 -0.2
VILB Vilhena 38.08 131 *eP* **P 21 42 17.6 -0.6**
NPGB Novo Progresso 38.48 119 *eP* **P 21 42 18.6 -3.0**
PB01 IPOC Station P 38.58 151 P P 21 42 23.2 +0.8
PB02 IPOC Station P 38.63 151 P P 21 42 24.2 +1.4
PB02 IAmb IAmb 21 42 26.3
comp=Z,24nm,1.1s
PB03 IPOC Station P 39.32 152 P P 21 42 29.4 +0.7
PB03 IAmb IAmb 21 42 31.5
comp=Z,15nm,0.7s
PB09 IPOC Station P 39.34 151 P P 21 42 30.7 +1.8
PB09 IAmb IAmb 21 42 32.8
comp=Z,49nm,1.2s
LYMT Lyon Mountain 39.38 334 P P 21 42 30.1 +1.1
SIV San Ignacio 39.53 136 P P 21 42 31.1 +0.7
comp=Z,23nm,0.6s,baz=305,slow=9.1,SNR=96
SIV pP **pP 21 42 46.4 +0.2**
comp=Z,43nm,0.8s,baz=316,slow=12,SNR=13
SIV PcP **PcP 21 44 38.4 +1.4**
comp=Z,19nm,0.6s,baz=266,slow=1.9,SNR=7.3
SIV LR LR 21 58 38.9
comp=Z,320nm,21.6s,baz=300,slow=36
comp=Z,23nm,0.6s
PDRB Porto dos Gac 39.88 126 *eP* **P 21 42 31.2 -2.0**
MSO Missoula 39.99 333 P P 21 42 34.8 +0.8
MSO IAmb IAmb 21 42 35.9
comp=Z,41nm,0.9s
CLDB Colider 40.19 125 *eP* **P 21 42 33.6 -2.2**
PTLB Pontes e Lacer 40.51 133 P P 21 42 37.8 -0.6
PTLB IAmb IAmb 21 42 39.8
comp=Z,41nm,1.3s
PTLB Pontes e Lacer 40.51 133 *eP* **P 21 42 38.5 +0.1**
F10A Beach Ranch, E 40.92 329 P P 21 42 41.8 +0.2
F10A IAmb IAmb 21 42 44.7
comp=Z,28nm,0.7s
KMRM Mail Ridge 41.14 318 P P 21 42 44.4 +0.9
PB14 IPOC Station P 41.29 155 P P 21 42 46.2 +1.1
PB14 IAmb IAmb 21 42 48.3
comp=Z,53nm,1.5s
YBH Yreka Blue Hor 41.32 320 LR LR 22 01 48.1
comp=Z,31nm,21.2s,baz=120,slow=39
L04D Klamath Falls 41.34 321 P P 21 42 45.7 +0.5
GO02 Mina Guanaco 42.11 154 P P 21 42 53.3 +1.5
GO02 IAmb IAmb 21 42 55.2
comp=Z,22nm,0.8s
HAWA Hanford 42.38 328 P P 21 42 53.5 +0.1
NEW Newport 42.50 332 LR LR 22 05 13.7
comp=Z,215nm,19.1s,baz=124,slow=43
PRPB Parauapebas 42.91 114 *eP* **P 21 42 54.5 -3.6**
FFC Flin Flon 43.05 349 P P 21 42 58.7 +0.1
FFC IAmb IAmb 21 42 59.8
comp=Z,37nm,0.6s
FFC Flin Flon 43.05 349 P P 21 42 58.7 +0.1
FFC pmax pmax
comp=Z,37nm,0.6s
FFC Flin Flon 43.05 349 P P 21 42 59.1 +0.5
SALV Santo Antonio 43.31 130 *eP* **P 21 43 00.8 -0.4**
AC06 Mina Casimiro 43.74 156 P P 21 43 05.6 +1.0
AC02 Maricunga 43.77 155 P P 21 43 06.7 +1.3
SNDB Serra Nova Dou 44.47 122 *eP* **P 21 43 08.5 -2.1**
RPN Rapa Nui 44.60 207 LR LR 21 57 05.3
comp=Z,398nm,21.4s,baz=12,slow=29
PP1B Ponte de Pedra 44.99 132 *eP* **P 21 43 14.5 -0.2**
LCO Las Campanas 45.09 158 P P 21 43 16.6 +0.9
LCO Las Campanas 45.09 158 P P 21 43 16.6 +0.9
LCO pmax pmax
comp=Z,16nm,0.9s
LCO Las Campanas 45.09 158 P P 21 43 17.6 +2.0
LCO pP **sP 21 43 37.6 -1.1**
LCO PcP **PcP 21 44 56.8 +1.3**
AC05 El Transito 45.10 157 P P 21 43 16.7 +1.2
SCHQ Schefferville 45.18 18 P P 21 43 14.8 -1.0
comp=Z,55nm,0.7s,baz=213,slow=7.0,SNR=48
SCHQ PcP **PcP 21 44 53.6 -1.4**
comp=Z,8.6nm,0.6s,baz=240,slow=4.0,SNR=2.2
SCHQ LR LR 22 03 07.9
comp=Z,478nm,19.1s,baz=198,slow=38
comp=Z,55nm,0.7s
BDQN Bodoquena, MS 45.57 136 *eP* **P 21 43 19.3 +0.1**
SMTB Santa Maria do 46.08 116 *eP* **P 21 43 21.0 -2.4**
ARAG Araguaiana, MT 46.14 127 *eP* **P 21 43 22.2 -1.7**
CO01 Juntas del Tor 46.19 158 P P 21 43 25.6 +1.3
AQDB Aquidauana 46.30 135 P P 21 43 24.7 -0.3
AQDB Aquidauana 46.30 135 *eP* **P 21 43 25.4 +0.4**
CO03 El Pedregal 46.75 159 P P 21 43 29.4 +0.9
CO03 IAmb IAmb 21 43 31.4
comp=Z,22nm,0.9s
CO02 Combarbal 46.98 159 P P 21 43 31.4 +1.2
CO02 IAmb IAmb 21 43 33.2
comp=Z,43nm,0.9s
VA06 Catapilco 48.12 160 P P 21 43 40.0 +1.0
VA06 IAmb IAmb 21 44 01.6
comp=Z,25nm,1.0s
ZON Zonda 48.13 157 P P 21 43 40.3 +1.2
ZON IAmb IAmb 21 43 42.5
comp=Z,50nm,1.3s
ZON Zonda 48.13 157 P P 21 43 40.3 +1.2
ZON pmax pmax
comp=Z,50nm,1.3s
CFA Coronel Fontan 48.35 157 P P 21 43 41.9 +1.0
comp=Z,4.4nm,0.7s,baz=338,slow=7.4,SNR=14
comp=Z,4.4nm,0.7s
VA03 San Esteban 48.55 160 P P 21 43 43.4 +1.0
MT02 Curacav 48.81 161 P P 21 43 45.1 +0.8
MT02 IAmb IAmb 21 44 08.0
comp=Z,21nm,1.0s
PEL Peldehue 48.86 160 P P 21 43 45.3 +0.6
PEL IAmb IAmb 21 44 07.6
comp=Z,22nm,1.1s
PEL Peldehue 48.86 160 P P 21 43 45.3 +0.6
PEL pmax pmax
comp=Z,23nm,1.1s
BDFB Brasilia 49.12 124 P P 21 43 45.6 -1.4
comp=Z,20nm,0.6s,baz=293,slow=9.3,SNR=22
BDFB PcP **PcP 21 45 10.9 +1.0**
comp=Z,7.5nm,0.8s,baz=332,slow=3.5,SNR=3.7
comp=Z,20nm,0.6s
BDFB Brasilia 49.12 124 P P 21 43 45.8 -1.3
BDFB IAmb IAmb 21 43 47.6
comp=Z,21nm,0.6s
BDFB Brasilia 49.12 124 P P 21 43 45.8 -1.3
BDFB pmax pmax
comp=Z,21nm,0.6s
MT03 Universidad Ad 49.24 160 P P 21 43 48.4 +0.8
MT03 IAmb IAmb 21 44 29.2
comp=Z,36nm,1.0s
MT01 Popeta 49.34 161 P P 21 43 48.5 +0.3
MT01 IAmb IAmb 21 44 12.8
comp=Z,18nm,0.9s
CPUP Villa Florida 49.42 142 P P 21 43 49.1 +0.1
comp=Z,2.5nm,0.6s,baz=233,slow=6.1,SNR=16
CPUP PcP **PcP 21 45 12.0 +1.4**
comp=Z,1.3nm,0.7s,baz=288,slow=4.1,SNR=3.9
CPUP LR LR 22 05 00.8
comp=Z,54nm,21.5s,baz=178,slow=36
comp=Z,2.5nm,0.6s
CPUP Villa Florida 49.42 142 P P 21 43 48.5 -0.5
CPUP Villa Florida 49.42 142 P P 21 43 49.3 +0.3
ITRB Iturama 49.64 130 *eP* **P 21 43 50.7 -0.1**
BO04 La Punta 49.66 160 P P 21 43 51.6 +0.8
BO04 IAmb IAmb 21 44 14.2
comp=Z,32nm,1.2s
BO01 Tunca 49.87 161 P P 21 43 53.5 +1.2
BO01 IAmb IAmb 21 44 15.3
comp=Z,42nm,1.1s
SDBA SAO DESIDERIO 50.07 118 *eP* **P 21 43 53.5 -0.8**
IPMB Ipameri, GO 50.27 127 *eP* **P 21 43 54.8 -0.8**
BBB Bella Bella 50.38 329 LR LR 22 07 21.6
comp=Z,202nm,18.8s,baz=158,slow=38
BB19B Bebedouro 51.83 130 *eP* **P 21 44 06.9 -0.4**
BI02 San Fabin de 51.92 162 P P 21 44 08.9 +1.2
FRTB Fartura 52.47 133 *eP* **P 21 44 12.0 0.0**
FRB Frobisher Bay 52.69 11 LR LR 22 05 37.8
comp=Z,396nm,21.8s,baz=224,slow=35
PSAL Palomas, Salto 52.88 146 *eP* **P 21 44 16.1 +1.3**
YKA Yellowknife Ar 52.90 345 P P 21 44 14.4 -0.2
comp=Z,52nm,0.9s,baz=146,slow=7.0,SNR=114
YKA LR LR 22 09 20.5
comp=Z,215nm,20.8s,baz=121,slow=39
comp=Z,52nm,0.9s
YKA Yellowknife Ar 52.90 345 P P 21 44 14.5 -0.1
ITAB Concordia 53.30 139 P P 21 44 18.2 +0.2
ITAB Concordia 53.30 139 *eP* **P 21 44 18.4 +0.4**
RCLB Rio Claro- Sao 53.38 131 *eP* **P 21 44 18.8 0.0**
TOAD Toad River Com 53.42 337 P P 21 44 18.7 +0.2
baz=134,SNR=16
KOTAN Kotaneelee Air 53.89 339 P P 21 44 22.4 +0.5
baz=136,SNR=17

V35K Ketchikan 53.90 331 P P 21 44 22.3 +0.3
baz=124
DIAM Diamantina, MG 54.05 124 eP P 21 44 23.0 -0.8
LIRD Liard River Hi 54.13 337 P P 21 44 23.8 +0.1
baz=133,SNR=29
VAO Valinhos 54.14 131 P P 21 44 23.8 -0.6
VAO Valinhos 54.14 131 eP P 21 44 24.2 -0.2
T35M Bob Quinn 54.25 333 P P 21 44 25.7 +1.1
baz=127
BSCB Bom Sucesso 54.64 128 eP P 21 44 27.8 -0.2
CRAG Craig 54.70 331 P P 21 44 29.1 +1.3
baz=123
CPSB Cacapava Do Su 54.73 142 eP P 21 44 28.6 +0.2
WRAK Wrangell Islan 54.86 332 P P 21 44 30.3 +1.3
baz=124
LR05 Currie 55.05 165 P P 21 44 31.2 +0.7
LR05 IAmb IAmb 21 44 58.5
comp=Z,40nm,1.3s
DLBC Dease Lake 55.05 335 LR LR 22 13 12.0
comp=Z,336nm,18.1s,baz=86,slow=42
DLBC Dease Lake 55.05 335 P P 21 44 31.8 +1.4
baz=128,SNR=41
U33K Whale Pass 55.05 331 P P 21 44 31.4 +1.0
baz=123
S34M Telegraph Cree 55.19 334 P P 21 44 32.7 +1.3
baz=126,SNR=6.5
PARB Paraibuna 55.34 130 eP P 21 44 33.2 +0.2
RCBR Riachuelo 55.52 106 P P 21 44 32.8 -1.7
RCBR IAmb IAmb 21 46 25.5
comp=Z,41nm,1.4s
RCBR Riachuelo 55.52 106 P P 21 44 32.8 -1.7
RCBR pmax pmax
comp=Z,41nm,1.4s
TAOE Nuku Hiva Isla 55.61 250 eLR LR 22 00 36.2
comp=Z,703nm,26.6s
WTLY Watson Lake, Y 55.62 337 P P 21 44 34.8 +0.4
baz=130,SNR=30
PLTB Pedras Altas 55.63 144 P P 21 44 34.8 -0.1
PLTB IAmb IAmb 21 44 48.2
comp=Z,53nm,1.5s
PLTB Pedras Altas 55.63 144 eP P 21 44 35.3 +0.4
PLCA Paso Flores 55.91 164 P P 21 44 38.2 +1.4
comp=Z,11nm,0.9s,baz=339,slow=8.3,SNR=15
comp=Z,11nm,0.9s
PLCA Paso Flores 55.91 164 P P 21 44 37.1 +0.3
PLCA IAmb IAmb 21 44 39.4
comp=Z,24nm,1.2s
PLCA Paso Flores 55.91 164 eP P 21 44 38.0 +1.3
PLCA Paso Flores 55.91 164 P P 21 44 38.3 +1.6
PLCA sP sP 21 44 58.9 -1.5
PLCA PcP PcP 21 45 36.0 +1.2
WRGLY Wrigley 55.95 342 P P 21 44 36.6 -0.1
WRGLY Wrigley 55.95 342 P P 21 44 37.1 +0.4
baz=138
R33M Jennings River 56.02 335 P P 21 44 38.5 +1.0
baz=128
CMC01 Camacan, BA 56.06 119 eP P 21 44 36.3 -1.9
Q32M Nakina River 56.30 335 P P 21 44 40.7 +1.1
baz=126
TGTN Hyland Airport 56.35 338 P P 21 44 40.8 +1.1
baz=132,SNR=21
GUA01 Guaratinga, BA 56.39 120 eP P 21 44 39.4 -1.2
S32K Killisnoo 56.46 332 P P 21 44 41.3 +0.9
baz=123
TRQA Tornquist 56.48 155 P P 21 44 41.5 +0.7
TRQA IAmb IAmb 21 44 42.9
comp=Z,45nm,1.4s
TRQA Tornquist 56.48 155 P P 21 44 41.5 +0.7
TRQA pmax pmax
comp=Z,45nm,1.4s
NBAN Anadia - AL 56.56 111 eP P 21 44 39.6 -2.2
SIT Sitka 56.59 332 P P 21 44 41.8 +0.5
baz=122
R32K Eaglecrest 56.88 333 P P 21 44 44.4 +1.0
baz=123
RIB01 Linhares ES 57.23 123 eP P 21 44 45.3 -1.2
NUUK Nuuk 57.24 18 i P P 21 44 45.6 -0.2
NUUK IAmb IAmb 21 44 46.6
comp=Z,41nm,1.0s
P33M Teslin, Yukon 57.26 336 P P 21 44 46.7 +0.5
baz=126,SNR=9.4
P32M Atlin 57.27 335 P P 21 44 46.9 +0.7
baz=125
S31K Pelican 57.48 332 P P 21 44 48.7 +1.0
baz=121
CAM01 Campos-RJ 57.52 126 eP P 21 44 47.6 -0.9
RKT Rikitea 57.83 232 eLR LR 22 01 47.7
comp=Z,14µm,42.0s
LL02 Futaleuf 57.87 166 P P 21 44 51.2 +0.6
LL02 IAmb IAmb 21 44 53.5
comp=Z,50nm,1.8s
SKAG Skagway 57.88 334 P P 21 44 51.1 +0.7
baz=123
N32M Quiet Lake 57.92 336 P P 21 44 51.2 +0.4
baz=126
MMPY Sheldon Lake, 58.13 338 P P 21 44 53.0 +0.8
baz=129,SNR=42
PLBC Pleasant Camp 58.32 334 P P 21 44 54.3 +0.8
baz=122
WHY Whitehorse 58.35 335 P P 21 44 54.3 +0.4
baz=124,SNR=7.8
O30N Mendenhall 58.91 335 P P 21 44 58.2 +0.5
baz=123,SNR=22
P30M Million Dollar 58.93 334 P P 21 44 58.6 +0.8
baz=122
P29M Windy Craggy 59.01 333 P P 21 44 59.2 +0.9
baz=121,SNR=13
M31M Drury Creek, Y 59.04 337 P P 21 44 58.9 +0.3
baz=125,SNR=7.3
N31M Braeburn, Yuko 59.18 336 P P 21 44 59.9 +0.4
baz=124,SNR=13
HYT Haines Junctio 59.53 335 P P 21 45 02.9 +0.9
baz=121,SNR=5.3
SFJD Kangerlussuaq 59.59 16 LR LR 22 09 31.0
comp=Z,211nm,22.0s,baz=202,slow=35
N30M Aishikik Lake 59.69 335 P P 21 45 03.7 +0.6
baz=122
O29M Mount Kennedy 59.72 334 P P 21 45 03.9 +0.6
baz=120
PNL Peninsula 59.76 333 P P 21 45 04.1 +0.6
baz=119
YUK6 Outpost Mounta 59.95 334 P P 21 45 05.7 +0.6
baz=121
M30M Minto, Yukon 60.18 337 P P 21 45 06.5 +0.1
baz=123,SNR=8.3
YUK4 Talbot Arm 60.27 335 P P 21 45 07.9 +0.6
baz=121,SNR=5.5
PINM Pinnacle 60.34 333 P P 21 45 08.2 +0.6
baz=118
MAYO Mayo, Yukon 60.41 338 P P 21 45 08.4 +0.5
baz=124,SNR=5.4
O28M Mount Upton 60.64 334 P P 21 45 10.4 +0.6
baz=119
YUK8 Steele Glacier 60.71 334 P P 21 45 10.9 +0.6
baz=119,SNR=20
C36M Paulatuk 60.73 346 P P 21 45 10.4 +0.5
baz=140
M29M Somme Creek 60.77 336 P P 21 45 10.6 +0.2
M29M Somme Creek 60.77 336 P P 21 45 10.9 +0.5
baz=121,SNR=39
L29M L29M 60.98 337 P P 21 45 12.0 +0.2
baz=122
J30M Hart River 61.12 339 P P 21 45 13.2 +0.3
baz=124
MESA MESA 61.14 333 P P 21 45 13.1 0.0
baz=117
K29M Barlow Dome 61.15 338 P P 21 45 13.1 0.0
baz=123
H31M Peel River 61.16 340 P P 21 45 12.7 -0.3
baz=127,SNR=9.4
CTGM Chitina Glacie 61.23 334 P P 21 45 14.4 +0.7
CTGM IAmb IAmb 21 45 15.4
comp=Z,22nm,0.7s
CTG Chitna Glacier 61.23 334 P P 21 45 14.3 +0.6
baz=118,SNR=6.4
YUK3 Moose Creek 61.24 335 P P 21 45 14.0 +0.2
baz=119,SNR=12
I30M Mount Dempster 61.51 339 P P 21 45 15.3 -0.2
baz=125,SNR=33
AY03 Cochrane 61.56 168 P P 21 45 17.7 +1.9
AY03 IAmb IAmb 21 45 19.2
comp=Z,29nm,1.1s
BVCY Beaver Creek 61.72 335 P P 21 45 17.0 +0.2
baz=119,SNR=8.3
G31M Satah River 61.82 341 P P 21 45 17.5 +0.2
baz=128,SNR=60
RES Resolute Bay 61.88 358 LR LR 22 12 49.5
comp=Z,259nm,20.4s,baz=196,slow=37
RES Resolute Bay 61.88 358 P P 21 45 16.8 -0.8
RES IAmb IAmb 21 45 38.9
comp=Z,22nm,0.9s
RES Resolute Bay 61.88 358 P P 21 45 16.8 -0.8
RES pmax pmax
comp=Z,22nm,0.9s
CRQE Cirque 61.90 333 P P 21 45 17.8 -0.4
baz=116
DAWY Dawson 61.97 337 P P 21 45 17.9 -0.5
baz=121,SNR=14
F31M Tsiigehtchic 61.98 342 P P 21 45 18.4 0.0
baz=128,SNR=29
M27K Edge Creek, AK 62.11 335 P P 21 45 19.8 +0.2
baz=118
MCARA McCarthy VSAT 62.15 334 P P 21 45 20.5 +0.8
baz=116,SNR=12
VRDI Verde Repeater 62.27 333 P P 21 45 20.7 0.0
VRDI IAmb IAmb 21 45 22.0
comp=Z,15nm,0.7s
EPYK Eagle Plains 62.28 340 P P 21 45 20.5 0.0
baz=125,SNR=16
BCAR Beaver Creek A 62.40 336 P P 21 45 21.2 -0.2
L27K Beaver Creek, 62.42 336 P P 21 45 21.8 +0.3
baz=118,SNR=38
INK Inuvik 62.46 343 P P 21 45 21.6 +0.1
baz=129,SNR=50
G30M tAoh Zraii Nji 62.47 341 P P 21 45 21.4 -0.4
baz=126,SNR=19
M26K Nabesna, AK 62.59 335 P P 21 45 23.1 +0.4
baz=117,SNR=5.8
BMRM Bremner River 62.66 333 P P 21 45 23.9 +0.7
baz=114,SNR=8.2
F30M Barrier River 62.71 342 P P 21 45 23.6 +0.3
baz=126,SNR=68
H29M Whitestone 62.75 340 P P 21 45 23.8 +0.2
baz=123
ANGG Ammassalik, Gr 62.81 21 i P P 21 45 22.2 -1.7
ANGG IAmb IAmb 21 45 23.3
comp=Z,46nm,0.8s
Q23K Middleton Isla 62.85 331 P P 21 45 24.4 0.0
baz=112
I28M Miner Creek 62.88 338 P P 21 45 24.4 -0.2
baz=121,SNR=24
N25K Chitina, Valde 62.92 334 P P 21 45 25.3 +0.3
baz=115,SNR=22
K27K Chicken 62.98 337 P P 21 45 25.5 +0.4
baz=118
A36M Sachs Harbour 63.00 348 P P 21 45 24.2 -0.9
baz=139,SNR=5.8
EYAK Cordova Ski Ar 63.01 332 P P 21 45 26.0 +0.7
baz=113
L26K Log Cabin Wild 63.02 335 P P 21 45 25.9 +0.5
baz=117,SNR=11
G29M Pine Creek 63.02 340 P P 21 45 25.7 +0.3
baz=124
KLU Klutina 63.46 333 P P 21 45 28.7 +0.2
baz=113,SNR=13
HARP HAARP 63.50 334 P P 21 45 29.2 +0.6
baz=114
P23K Montague Islan 63.56 331 P P 21 45 29.2 +0.2
baz=111
I27K Kandik River 63.57 338 P P 21 45 29.2 +0.1
baz=120,SNR=27
SCRK Sand Creek 63.70 336 P P 21 45 30.2 +0.1
baz=116,SNR=17
J26L Joseph Creek 63.77 337 P P 21 45 30.9 +0.4
baz=117
E29M Blow River 63.81 342 P P 21 45 31.0 +0.4
baz=124,SNR=48
M24K Tolsona, Glenn 63.81 334 P P 21 45 31.1 +0.3
baz=113
H27K Steamboat Moun 63.85 339 P P 21 45 31.2 +0.3
baz=120,SNR=52
PAX Paxson 63.87 335 P P 21 45 30.9 -0.2
baz=114,SNR=14
RIDG Independent Ri 63.94 336 P P 21 45 31.7 +0.1
baz=115,SNR=20
I26K Coal Creek Min 63.99 338 P P 21 45 31.9 +0.1
baz=118
F28M Old Crow 64.00 341 P P 21 45 32.1 +0.2
baz=122,SNR=140
G27K Doyon Strip 64.18 339 P P 21 45 32.8 -0.2
baz=120,SNR=22
SCM Sheep Creek Mo 64.21 333 P P 21 45 33.0 -0.4
baz=112,SNR=7.5
HMH Humu'ula Sheep 64.26 286 P P 21 45 36.3 +1.5
PWL Port Wells 64.30 332 P P 21 45 33.6 -0.3
baz=111
K24K Donnelly Dome 64.34 336 P P 21 45 34.1 -0.1
baz=114,SNR=22
M23K Glacier View 64.37 333 P P 21 45 34.2 -0.2
baz=112,SNR=9.9
E28M Babbage River 64.43 342 P P 21 45 34.6 -0.1
baz=123
TULEG Thule 64.49 5 i P P 21 45 33.9 -1.0
TULEG IAmb IAmb 21 45 34.9
comp=Z,8.3nm,0.6s
J25K Salcha River, 64.52 336 P P 21 45 35.6 +0.2
baz=115,SNR=40
KNK Knik Glacier 64.56 333 P P 21 45 35.6 0.0
baz=111,SNR=8.7
SEW Seward 64.56 331 P P 21 45 35.8 +0.2
baz=109
D28M Stokes Point 64.59 342 P P 21 45 36.2 +0.6
baz=124
SML Sawmill 64.64 333 P P 21 45 36.0 -0.2
baz=111,SNR=6.1
WAT6 Susitna Watana 64.67 334 P P 21 45 36.2 -0.3
baz=112,SNR=16
DHY Denali Highway 64.70 334 P P 21 45 36.5 -0.2
baz=113,SNR=5.1
O22K Cooper Landing 64.81 331 P P 21 45 37.3 +0.1
baz=109
E27K Coleen River 64.86 341 P P 21 45 37.8 +0.3
baz=121,SNR=53
GHO Glory Hole Cre 64.89 333 P P 21 45 37.9 0.0
PMR Palmer 64.92 333 P P 21 45 38.3 +0.4
baz=110
G26K Porcupine Rive 64.99 339 P P 21 45 38.4 +0.1
baz=118,SNR=17
RC01 Rabbit Creek A 65.02 332 P P 21 45 38.6 0.0
baz=110,SNR=13
HDA Harding Lake 65.06 336 P P 21 45 38.5 -0.3
baz=114,SNR=30
BRSE Bradley Lake S 65.06 330 P P 21 45 38.7 -0.2
baz=108
WAT1 Susitna Watana 65.11 334 P P 21 45 39.0 -0.2
baz=111
ILAR Eielson Array 65.18 336 P P 21 45 39.0 -0.5
comp=Z,23nm,0.8s,baz=108,slow=5.3,SNR=186
ILAR LR LR 22 16 38.0
comp=Z,144nm,21.9s,baz=98,slow=38
comp=Z,23nm,0.8s
D27M Malcolm River 65.21 342 P P 21 45 39.9 +0.1
baz=122
H25L Birch Creek 65.40 338 P P 21 45 41.4 +0.4
baz=116,SNR=34
KDAK Kodiak Island 65.42 328 LR LR 22 17 17.4
comp=Z,144nm,18.7s,baz=98,slow=39
KDAK Kodiak Island 65.42 328 P P 21 45 41.5 +0.4
KDAK Kodiak Island 65.42 328 P P 21 45 41.6 +0.4
KDAK pmax pmax
comp=Z,138nm,1.6s
KDAK Kodiak Island 65.42 328 P P 21 45 41.3 +0.1
baz=105
M22K Willow 65.42 333 P P 21 45 41.0 -0.1
baz=109
F26K Sheenjek River 65.46 340 P P 21 45 41.7 +0.3
baz=118,SNR=43
HOM Homer 65.47 330 P P 21 45 41.7 +0.2
baz=107
BMAR Burnt Mountain 65.48 339 P P 21 45 42.0 +0.5
POKR Poker Plat Res 65.53 337 P P 21 45 41.7 -0.2
baz=114,SNR=14
Q20K Shuyak Island 65.54 329 P P 21 45 41.2 -0.8
baz=106
COLA College 65.60 336 P P 21 45 41.6 -0.6
COLA College 65.60 336 d i P P 21 45 41.9 -0.3
COLA pmax pmax
comp=Z,24nm,0.8s
COLA College 65.60 336 P P 21 45 42.1 -0.1
baz=113
COLA College 65.60 336 P P 21 45 41.9 -0.3
COLA PcP PcP 21 46 14.3 +1.0
MCK McKinley 65.60 335 P P 21 45 42.2 -0.1
baz=111,SNR=21
SUA Susitna One 65.61 332 P P 21 45 42.5 0.0
baz=109,SNR=12
OHAK Old Harbor 65.64 327 P P 21 45 43.5 +0.9
baz=104
G25K Bearman Lake 65.72 338 P P 21 45 43.5 +0.6
baz=116,SNR=18
F25K Christian Rive 65.92 339 P P 21 45 45.2 +0.8
baz=116,SNR=48
SII Sitkinak Islan 65.95 326 P P 21 45 45.2 +0.4
baz=103
NEA2 Nenana 65.97 336 P P 21 45 44.2 -0.5
baz=112,SNR=17
H24K Noodor Dome 65.99 337 P P 21 45 44.9 +0.1
baz=113,SNR=20
O20K Slope Mountain 66.07 330 P P 21 45 45.6 +0.2
baz=106
TRF Thorofare Moun 66.07 334 P P 21 45 44.9 -0.7
TRF Thorofare Moun 66.07 334 P P 21 45 45.3 -0.2
baz=110,SNR=23
SKT Skwentna 66.13 333 P P 21 45 45.5 -0.2
baz=108,SNR=18
E25K Arctic Village 66.13 340 P P 21 45 46.3 +0.6
baz=117,SNR=35
G24K Hadweenzic Riv 66.19 338 P P 21 45 46.2 +0.2
baz=114,SNR=24
N20K Mount Spurr 66.20 332 P P 21 45 45.9 -0.4
baz=107
SPCR Spurr Chakacha 66.20 332 P P 21 45 46.2 -0.1
baz=107,SNR=6.4
P19K Oil Pt 66.24 330 P P 21 45 46.8 +0.3
baz=106
C27K Jago River 66.25 342 P P 21 45 46.8 +0.4
baz=119
I23K Minto, Yukon-K 66.30 336 P P 21 45 46.9 +0.2
baz=112,SNR=26
SUMG Summit 66.43 15 P P 21 45 47.1 -0.9
SUMG IAmb IAmb 21 46 16.7
comp=Z,24nm,0.9s
SUMG Summit 66.43 15 P P 21 45 47.1 -0.9
SUMG pmax pmax
comp=Z,24nm,0.9s
SUMG Summit 66.43 15 i P P 21 45 47.0 -1.0
KIP Kipapa 66.46 288 ∏ eP P 21 45 50.6 +2.0
KIP pmax pmax
comp=Z,43nm,1.3s
CHIR Chirikof Islan 66.58 326 P P 21 45 48.9 +0.2
baz=102
BPAW Bear Paw Mtn. 66.58 335 P P 21 45 48.2 -0.4
baz=110,SNR=12
H23K Yukon River 66.62 337 P P 21 45 48.8 0.0
baz=112
F24K Squaw Lake 66.67 339 P P 21 45 49.9 +0.7
baz=114,SNR=14
PPLA Purkeypile 66.70 333 P P 21 45 48.8 -0.8
baz=108,SNR=6.5
C26K Camden Bay 66.75 342 P P 21 45 50.3 +0.8
baz=118
MLY Manley 66.80 336 P P 21 45 49.7 -0.3
baz=110,SNR=14
M20K Styx River 66.82 332 P P 21 45 49.9 -0.4
baz=107
Q18K Katmai Hardscr 66.88 329 P P 21 45 50.3 -0.4
baz=104
O19K Port Alsworth 66.92 330 P P 21 45 50.4 -0.3
baz=105,SNR=5.2
D25K Kavik River 66.94 341 P P 21 45 51.3 +0.5
baz=116
CHUM Lake Minchumin 67.06 334 P P 21 45 51.4 -0.2
baz=108,SNR=5.9
E24K Your Creek 67.11 339 P P 21 45 52.4 +0.4
baz=114
G23K Bananza Creek 67.13 338 P P 21 45 52.5 +0.4
baz=112,SNR=24
N19K Bonanza Creek 67.15 331 P P 21 45 51.6 -0.8
baz=105,SNR=9.7
P18K Big Mountain, 67.16 329 P P 21 45 51.6 -0.8
baz=104
Q17K Contact Creek 67.24 328 P P 21 45 52.6 -0.3
baz=103
O18K Koktuh Hills 67.26 330 P P 21 45 52.6 -0.4
baz=104,SNR=6.9
NEEM North Greenlan 67.32 8 i P P 21 45 52.6 -0.8
NEEM IAmb IAmb 21 45 53.4
comp=Z,22nm,0.7s
L20K Farewell, AK 67.33 333 P P 21 45 52.2 -1.1
baz=106,SNR=28
I21K Tanana 67.34 336 P P 21 45 53.0 -0.4
baz=109,SNR=9.0
H22K Ishtalitna Cre 67.35 337 P P 21 45 52.9 -0.5
baz=110,SNR=14
R17L Mt. Peulik Vol 67.35 327 P P 21 45 53.5 -0.1
baz=102
COLD Coldfoot 67.38 338 P P 21 45 54.2 +0.6
baz=112,SNR=27
PPT Papeete 67.40 245 LR LR 22 06 56.3
comp=Z,452nm,19.9s,baz=5.0,slow=28
PPT2 Papeete2 67.41 245 eP P 21 45 51.6 -3.1
comp=Z,54nm,27.2s
PPT2 eS S 21 54 40.9 -5.3
comp=Z,95nm,27.0s
PPT2 eSS SS 21 59 05.8 -1.9
comp=Z,158nm,34.8s
PPT2 eLR LR 22 06 07.7
comp=Z,568nm,29.8s
PPT2 eLR LR 22 06 15.0
comp=Z,592nm,25.0s
E23K Chandalar 67.49 339 P P 21 45 55.0 +0.6
baz=112,SNR=34
D24K Happy Valley 67.66 340 P P 21 45 55.1 -0.2
baz=114
K20K Telida 67.66 334 P P 21 45 54.8 -0.6
baz=106,SNR=6.3
L19K White Mountain 67.68 332 P P 21 45 55.1 -0.5
baz=105
TOLK Toolik Lake Re 67.70 340 P P 21 45 55.6 -0.1
baz=113,SNR=31
Q16K King Salmon 67.72 328 P P 21 45 55.9 0.0
baz=102
G22K Bettles 67.75 338 P P 21 45 56.1 +0.2
baz=110
N18K Kilae Creek 67.79 331 P P 21 45 55.8 -0.6
baz=104
H21K Melozitna Rive 67.83 336 P P 21 45 56.2 -0.3
baz=108,SNR=8.4
C24K Franklin Bluff 67.85 341 P P 21 45 56.6 +0.1
baz=114
J20K Nowinta River 67.92 335 P P 21 45 56.1 -0.9
baz=107,SNR=10
M18K Stony River 67.95 331 P P 21 45 56.4 -0.9
baz=104,SNR=12
O17K Koliganek Bris 68.17 330 P P 21 45 58.4 -0.3
baz=102,SNR=8.5
D23K Nanushuk River 68.20 340 P P 21 45 59.1 +0.4
baz=112,SNR=8.6
F22K John River 68.20 338 P P 21 45 59.0 +0.2
baz=110
I20K Naaghedeneel 68.24 335 P P 21 45 58.6 -0.4
baz=106
E22K Anaktuvuk Pass 68.28 339 P P 21 45 59.2 -0.1
baz=110
IMAR Indian Mountai 68.30 336 P P 21 45 58.3 -1.1
G21K Allakaket 68.37 337 P P 21 45 59.5 -0.3
baz=108,SNR=20
N17K Nushagak Hills 68.38 330 P P 21 45 59.5 -0.5
baz=102
J19K Poorman 68.50 334 P P 21 45 59.9 -0.7
baz=105,SNR=8.7
C23K Itkillik River 68.50 341 P P 21 46 00.6 0.0
baz=112,SNR=15
L18K Granite Mounta 68.53 332 P P 21 46 00.6 -0.2
baz=104
F21K Alatna River 68.58 338 P P 21 46 01.6 +0.4
baz=108,SNR=32
H20K Anotleneega Mo 68.60 336 P P 21 46 00.7 -0.6
baz=106,SNR=6.0
O16K Kokwok River B 68.63 329 P P 21 46 01.4 -0.2
baz=101
M17K Holitna River 68.69 331 P P 21 46 01.6 -0.3
baz=102
S14K Fog Glacier 68.83 326 P P 21 46 02.6 -0.3
baz=99
J18K Innoko River 68.83 333 P P 21 46 02.6 -0.2
baz=104
D22K Ayikyak River 68.84 340 P P 21 46 02.7 0.0
baz=110,SNR=7.9
N16K Nishlik Lake 69.14 330 P P 21 46 04.5 -0.2
baz=101
E21K Killik River 69.14 339 P P 21 46 04.4 -0.3
baz=108

SDPT Sand Point 69.21 324 P **P** **21 46 04.5 -0.8**
baz=98
H19K Roundabout Mou 69.24 336 P **P** **21 46 04.9 -0.3**
baz=105,SNR=13
L17K Donlin 69.24 332 P **P** **21 46 05.0 -0.4**
baz=102
M16K Timber Creek 69.33 331 P **P** **21 46 05.6 -0.3**
baz=101
K17K Iditarod 69.37 332 P **P** **21 46 05.7 -0.3**
baz=102
F20K Avaraart Lake 69.37 337 P **P** **21 46 06.0 0.0**
baz=106
O15K Ungalikthiuk R 69.43 329 P **P** **21 46 06.0 -0.5**
baz=100
B22K Teshekpuk Lake 69.58 341 P **P** **21 46 07.5 +0.2**
baz=110
TBI Tubuai 69.61 239 *e*S **S** **21 55 14.2 +2.3**
comp=Z,633nm,35.0s
TBI Tubuai 69.61 239 *e*LR LR 22 07 14.5
comp=Z,3μm,27.8s
TBI *e*LR LR 22 07 24.3
comp=Z,674nm,29.5s
C21K Knifeblade Rid 69.65 340 P **P** **21 46 07.9 +0.2**
baz=108
G19K Purcell Mounta 69.65 336 P **P** **21 46 07.7 -0.1**
baz=104,SNR=9.3
BBTS Babate 69.70 79 LR LR 22 12 34.1
comp=Z,132nm,19.8s,baz=170,slow=32
L16K Owhat River 69.70 331 P **P** **21 46 08.3 +0.1**
baz=101,SNR=6.5
N15K Kwethluk River 69.73 330 P **P** **21 46 08.4 0.0**
baz=100
B21K Ikpikpuk River 69.74 340 P **P** **21 46 08.0 -0.2**
baz=108
J17K VABM Dome 69.85 333 P **P** **21 46 09.0 -0.1**
baz=102
E20K Nigu River 69.88 338 P **P** **21 46 09.6 +0.4**
baz=106
H18K Honhosa River 69.93 335 P **P** **21 46 09.7 +0.2**
baz=103,SNR=6.0
E19K Redstone River 70.04 338 P **P** **21 46 09.8 -0.3**
baz=105
M15K Kasigluk River 70.11 330 P **P** **21 46 11.0 +0.3**
baz=99
D20K Etivluk River 70.15 339 P **P** **21 46 10.7 -0.1**
baz=106,SNR=13
G18K Tagagawik 70.21 336 P **P** **21 46 11.3 0.0**
baz=103,SNR=9.1
ALE Alert 70.44 4 P **P** **21 46 10.9 -1.5**
ALE pP **pP** **21 46 28.4 -1.2**
N14K Kuskokwak Cree 70.48 329 P **P** **21 46 12.8 -0.1**
baz=98
J16K Anvik River 70.51 333 P **P** **21 46 13.3 +0.3**
baz=100,SNR=6.0
H17K Granite Mounta 70.52 335 P **P** **21 46 13.5 +0.3**
baz=102
D19K Kuna River 70.63 339 P **P** **21 46 14.0 +0.2**
baz=104
L15K Ungalak Mounta 70.64 331 P **P** **21 46 14.1 +0.2**
baz=99
I17K Unalakleet 70.66 333 P **P** **21 46 13.8 -0.1**
baz=100
B20K Meade River 70.70 340 P **P** **21 46 14.3 +0.2**
baz=106
M14K Bethel 70.73 330 P **P** **21 46 14.8 +0.3**
baz=98,SNR=7.8
K15K Wolf Creek Mou 70.76 332 P **P** **21 46 15.1 +0.5**
baz=99,SNR=7.2
F18K Selawik 70.76 336 P **P** **21 46 14.9 +0.4**
baz=102
FALS False Pass 70.84 324 P **P** **21 46 15.7 +0.5**
baz=95
A21K Barrow 70.89 342 P **P** **21 46 15.6 +0.4**
baz=107
G17K Kiwalik Mounta 70.94 335 P **P** **21 46 15.9 +0.2**
baz=101
L14K Kuka Creek 71.16 331 P **P** **21 46 17.2 +0.1**
baz=98
C19K Lookout Ridge 71.29 339 P **P** **21 46 17.7 -0.1**
baz=103
E18K Tukpahlearik C 71.30 337 P **P** **21 46 17.1 -0.7**
baz=102
M13K Dall Lake 71.37 330 P **P** **21 46 18.4 +0.2**
baz=97
H16K Elim 71.45 334 P **P** **21 46 19.0 +0.3**
baz=99
E17K Hotham Inlet 71.70 337 P **P** **21 46 20.1 -0.1**
baz=100,SNR=14
J14K Nanvaranak Lak 71.75 332 P **P** **21 46 20.8 +0.3**
baz=97,SNR=5.2
C18K Utukok River 71.76 338 P **P** **21 46 20.7 0.0**
baz=102
DBG Daneborg 71.86 15 *i* P **P** **21 46 19.8 -1.3**
A19K Wainwright 72.04 340 P **P** **21 46 22.4 +0.3**
baz=102
B18K Kokolik River 72.12 339 P **P** **21 46 23.1 +0.4**
baz=101
K13K Kusilvak Mount 72.17 331 P **P** **21 46 23.1 0.0**
baz=96
G15K Niukluk 72.26 334 P **P** **21 46 24.1 +0.5**
baz=98
RDOG Red Dog Mine 72.28 338 P **P** **21 46 24.1 +0.4**
baz=100
D17K Noatak River 72.29 337 P **P** **21 46 23.9 +0.2**
baz=99
C17K DeLong Mountai 72.45 338 P **P** **21 46 24.8 +0.1**
baz=100
UNV Unalaska Valle 72.58 323 P **P** **21 46 25.9 +0.2**
baz=92
F15K North Star Dit 72.61 335 P **P** **21 46 26.0 +0.3**
baz=97,SNR=8.8
M11K Mekoryuk 72.78 329 P **P** **21 46 26.7 0.0**
baz=94
ANM Nome 72.78 334 P **P** **21 46 26.8 +0.1**
baz=96
DAG Danmarks Havn 72.97 13 *i* P **P** **21 46 26.0 -1.6**
DAG IAmb IAmb 21 46 27.2
comp=Z,14nm,0.6s
C16K Lisburne Hills 73.21 338 P **P** **21 46 29.4 +0.3**
baz=97
F14K Arctic Creek 73.28 335 P **P** **21 46 29.8 +0.1**
baz=96
TNA Tin City 73.95 335 P **P** **21 46 33.8 +0.2**
baz=94
PCAS Casmilo, Conde 74.26 52 *e*P **P** **21 46 35.0 -0.9**
P08K Saint George I 74.38 325 P **P** **21 46 36.3 +0.1**
baz=90
MOE Montemor 74.48 53 *e*P **P** **21 46 38.1 +0.9**
MESJ Messejana 74.64 54 *e*P **P** **21 46 38.2 +0.1**
JMIC Jan Mayen 74.65 20 LR LR 22 18 43.5
comp=Z,158nm,19.1s,baz=226,slow=35
NOR Nord 74.70 8 *i* P **P** **21 46 36.7 -0.9**
NOR IAmb IAmb 21 46 37.5
comp=Z,4.1nm,0.7s
MTE Manteigas 74.97 51 P **P** **21 46 39.8 -0.3**
MTE Manteigas 74.97 51 *e*P **P** **21 46 39.7 -0.3**
PESTR Estremoz 75.05 53 *e*P **P** **21 46 40.8 +0.3**
PCBR Castelo Branco 75.06 52 *e*P **P** **21 46 40.2 -0.3**
MVO Moncorvo 75.30 51 *e*P **P** **21 46 41.8 -0.2**
MVO *e*pP **pP** **21 46 59.4 +0.1**
GAMB Gambell 75.50 333 P **P** **21 46 42.5 0.0**
baz=90
PBAR Barrancos 75.54 54 *e*P **P** **21 46 42.9 -0.4**
EKA Eskdalemuir Ar 76.90 36 P **P** **21 46 47.6 -3.1**
comp=Z,3.0nm,0.6s,baz=270,slow=6.2,SNR=12
comp=Z,3.0nm,0.6s
RAR Rarotonga 77.69 245 LR LR 22 12 24.4
comp=Z,111nm,21.3s,baz=82,slow=29
ESDC Sonseca Array 77.77 52 P **P** **21 46 53.5 -2.5**
comp=Z,3.8nm,0.8s,baz=284,slow=5.4,SNR=19
ESDC pP **pP** **21 47 11.4 -1.9**
comp=Z,3.2nm,0.8s,baz=286,slow=5.4,SNR=6.7
ESDC LR LR 22 14 00.5
comp=Z,223nm,21.9s,baz=292,slow=30
comp=Z,3.8nm,0.8s
ESDC Sonseca Array 77.77 52 P **P** **21 46 54.0 -1.9**
MDT Midelt 78.11 59 LR LR 22 16 01.2
comp=Z,264nm,19.5s,baz=253,slow=32
PMSA Palmer Station 79.64 170 P **P** **21 47 07.1 +1.7**
HOPE Hope Point 80.11 152 P **P** **21 47 09.3 +1.2**
HOPE Hope Point 80.11 152 P **P** **21 47 09.3 +1.2**
HOPE pmax pmax
comp=Z,94nm,1.1s
SPITS Spitsbergen Ar 80.49 12 P **P** **21 47 09.3 -0.7**
comp=Z,4.0nm,0.6s,baz=270,slow=1.4,SNR=14
SPITS pP **pP** **21 47 26.1 -1.5**
comp=Z,5.7nm,0.7s,baz=266,slow=11,SNR=2.3
SPITS LR LR 22 23 55.4
comp=Z,271nm,19.4s,baz=254,slow=37
comp=Z,4.0nm,0.6s
SPITS Spitsbergen Ar 80.49 12 P **P** **21 47 09.7 -0.3**
SPITS pmax pmax
comp=Z,92nm,1.7s
SMAI San Martin Ant 82.27 172 P **P** **21 47 20.9 +1.6**
SMAI IAmb IAmb 21 47 22.7
comp=Z,22nm,1.0s
DBIC Dimbokro 82.43 85 P **P** **21 47 20.8 -0.6**
comp=Z,3.4nm,0.6s,baz=290,slow=3.2,SNR=4.4
DBIC LR LR 22 21 28.4
comp=Z,86nm,18.8s,baz=350,slow=34
comp=Z,3.4nm,0.6s
DBIC Dimbokro 82.43 85 P **P** **21 47 20.4 -1.0**
DBIC IAmb IAmb 21 50 12.7
comp=Z,36nm,1.8s
KONO Kongsberg 83.07 30⇑ *e*P **P** **21 47 22.8 -1.0**
KONO pmax pmax
comp=Z,100nm,2.4s
NB2 NORSAR Subarra 83.50 29 P **P** **21 47 24.1 -2.0**
comp=Z,3.6nm,0.9s,baz=285,slow=4.8
NOA NORSAR Array B 83.50 29 P **P** **21 47 24.1 -2.0**
comp=Z,1.6nm,0.8s,baz=287,slow=4.9,SNR=5.7
NOA LR LR 22 23 22.3
comp=Z,96nm,18.1s,baz=350,slow=35
comp=Z,1.6nm,0.8s
BILL Bilibino 83.71 339 P **P** **21 47 26.9 -0.1**
BILL IAmb IAmb 21 47 27.7
comp=Z,21nm,0.9s
BILL Bilibino 83.71 339⇑ *e*P **P** **21 47 26.4 -0.6**
BILL pmax pmax
comp=Z,31nm,1.7s
BILL Bilibino 83.71 339 P **P** **21 47 27.0 -0.1**
BILL pP **pP** **21 47 43.4 -1.2**
SHEM Shemya Is, Ala 84.25 323 LR LR 22 25 33.8
comp=Z,43nm,19.5s,baz=322,slow=36
SENIN Lac Senin/Sane 84.78 44 P **P** **21 47 31.5 -1.7**
SENIN IAmb IAmb 21 48 09.6
comp=Z,44nm,1.9s
HFS Hagfors 84.93 29 P **P** **21 47 31.2 -2.1**
comp=Z,3.3nm,0.7s,baz=243,slow=6.5,SNR=4.9
HFS pP **pP** **21 47 48.5 -2.4**
comp=Z,4.0nm,0.8s,baz=333,slow=1.7,SNR=2.7
HFS LR LR 22 25 18.8
comp=Z,117nm,19.0s,baz=325,slow=36
comp=Z,3.3nm,0.7s
ARCES ARCESS Array B 86.12 19 P **P** **21 47 37.6 -1.5**
comp=Z,1.7nm,0.6s,baz=301,slow=4.7,SNR=8.5
ARCES pP **pP** **21 47 55.8 -0.9**
comp=Z,5.3nm,0.9s,baz=286,slow=4.3,SNR=2.5
ARCES LR LR 22 25 39.9
comp=Z,189nm,18.2s,baz=252,slow=35
comp=Z,1.7nm,0.6s
DAVA Damuels 86.28 42 *e*P **P** **21 47 39.4 -1.1**
comp=Z,3.2nm,0.6s
DAVA *e*pP **pP** **21 47 57.5 -0.7**
comp=Z,4.0nm,0.6s
DAVOX Davos/Dischmat 86.41 43 LR LR 22 19 12.5
comp=Z,279nm,19.9s,baz=294,slow=31
FUORN Ofenpass-Fuorn 86.70 43 P **P** **21 47 40.8 -2.0**
FUORN IAmb IAmb 21 48 10.0
comp=Z,16nm,1.1s
RETA Reutte 86.80 42 *e*P **P** **21 47 40.6 -2.4**
comp=Z,3.8nm,0.8s
RETA *e*pP **pP** **21 47 59.9 -0.7**
comp=Z,3.8nm,0.6s
FETA Feichten 86.90 43 *i* P **P** **21 47 44.5 +0.9**
comp=Z,2.1nm,0.6s
FETA *i* pP **pP** **21 48 00.6 -0.7**
comp=Z,2.3nm,0.7s
MOTA Moosalm 87.06 42 *e*P **P** **21 47 45.3 +0.9**
comp=Z,2.8nm,0.8s
MOTA *e*pP **pP** **21 48 04.7 +2.7**
comp=Z,1.8nm,0.5s
CLL Collm 87.14 38 *i* P **P** **21 47 43.8 -0.6**
CLL *i* *SP **sP** **21 48 09.4 +0.4**
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm 87.14 38 *i* P **P** **21 47 43.8 -0.6**
comp=Z,5.0nm,0.7s
CLL *i* pP **pP** **21 48 01.6 -0.5**
comp=Z,7.0nm,0.8s
CLL *i* sP **sP** **21 48 09.4 +0.4**
comp=Z,11nm,1.0s
TORD Torodi Ar. Bea 87.37 77 LR LR 22 21 39.9
comp=Z,199nm,20.7s,baz=314,slow=32
WTTA Wattenberg 87.43 42 *e*P **P** **21 47 44.8 -1.4**
comp=Z,9.9nm,1.6s
WTTA *e*pP **pP** **21 48 05.5 +1.7**
comp=Z,0.6nm,0.3s
ZCCA Zocca 87.79 45 P **P** **21 47 45.9 -1.9**
KHC Kasperske Hory 88.14 40‖ *e*P **P** **21 47 50.7 +1.4**
KHC pmax pmax
comp=Z,28nm,2.3s
KHC Kasperske Hory 88.14 40 *e*P **P** **21 47 48.2 -1.1**
KHC *ex* x 21 48 06.6
GERES GERESS Array B 88.30 40 P **P** **21 47 48.0 -2.2**
comp=Z,0.9nm,0.8s,baz=259,slow=1.4,SNR=6.0
GERES LR LR 22 22 48.3
comp=Z,229nm,19.4s,baz=330,slow=33
comp=Z,0.9nm,0.8s
APA Apatity 89.62 19 *e*P **P** **21 47 53.6 -2.2**
APA MLR MLR
comp=Z,1μm,8.6s
VRAC Vranov 89.95 39 LR LR 22 23 12.1
comp=Z,213nm,20.0s,baz=332,slow=32
FINES FINESS Array B 90.05 26 P **P** **21 47 56.4 -1.5**
comp=Z,3.5nm,1.0s,baz=277,slow=5.0,SNR=4.0
comp=Z,3.5nm,1.0s
SEY Seymchan 91.12 336 LR LR 22 33 18.9
comp=Z,126nm,21.1s,baz=45,slow=38
SEY Seymchan 91.12 336‖ *e*P **P** **21 48 02.8 -0.1**
SEY pmax pmax
comp=Z,13nm,0.8s
TIXI Tiksi 92.00 349 LR LR 22 31 57.1
comp=Z,149nm,22.0s,baz=18,slow=37
TIXI Tiksi 92.00 349 P **P** **21 48 05.8 -1.0**
TIXI IAmb IAmb 21 48 06.7
comp=Z,11nm,0.8s
TIXI Tiksi 92.00 349‖ *e*P **P** **21 48 05.4 -1.4**
TIXI pmax pmax
comp=Z,11nm,0.8s
PET Petropavlovsk 92.95 326⇑ *e*P **P** **21 48 11.8 +0.3**
PET pmax pmax
comp=Z,16nm,1.4s
PETK Petropavlovsk- 93.43 326 P **P** **21 48 13.1 -0.6**
comp=Z,2.1nm,0.7s,baz=15,slow=6.2,SNR=1.8
comp=Z,2.1nm,0.7s
PETK Petropavlovsk- 93.43 326 P **P** **21 48 12.6 -1.2**
MA2 Magadan 93.57 334 LR LR 22 36 08.4
comp=Z,80nm,18.8s,baz=51,slow=39
KLMR Klimovskoe 95.80 23 *e*P **P** **21 48 22.0 -2.4**
KLMR *e**PP **pP** **21 48 42.2 0.0**
KLMR *e* 21 52 12.2
KLMR pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 96.77 35 LR LR 22 27 51.4
comp=Z,128nm,19.5s,baz=273,slow=33
NRIK Noril'sk 97.93 1 LR LR 22 35 58.1
comp=Z,197nm,19.1s,baz=328,slow=37
YAK Yakutsk 99.53 343 LR LR 22 38 09.4
comp=Z,130nm,21.9s,baz=12,slow=38
SNAA Sanae 100.80 161 P **Pdif** **21 48 47.2 +0.5**
comp=Z,1.4nm,0.8s,baz=239,slow=5.9,SNR=3.8
QSPA South Pole Qui 102.85 180 Pdiff **Pdif** **21 48 59.8 +3.8**
comp=Z,1.5nm,0.5s,baz=133,slow=3.8,SNR=4.8
BRTR Keskin Array B 105.05 43 PKKPbc PKKPbc 22 04 49.5 +0.6
comp=Z,1.0nm,0.7s,baz=128,slow=3.6,SNR=7.2
MMAI Mount Meron Ar 109.72 48 PKKPbc PKKPbc 22 04 34.5 +0.5
comp=Z,0.4nm,0.5s,baz=93,slow=6.2,SNR=4.0
MAK Makhachkala 111.40 33 *i* P **Pdif** **21 49 33.6 -0.8**
MAK *i* 21 53 30.4
MAK *e* 21 53 50.9
MAK *e* 21 54 10.4
MAK *e*PPP PPP 21 56 31.3
MAK *e* 22 00 07.1
MAK *e*PS **PS** **22 03 49.2 +3.3**
MAK *e*SS SS 22 09 40.1 -1.6
MAK *e*SSS SSS 22 13 53.7
MAK pmax pmax
comp=Z,81nm,1.1s
BORK Borovoye 111.86 14⇑ *i* PKIKP **PKiKP** **21 53 31.8 -1.3**
BVAR Borovoye Array 111.90 14 PKiKP **PKiKP** **21 53 32.8 -0.4**
comp=Z,0.6nm,0.6s,baz=5.2,slow=3.3,SNR=5.4
ZALV Zalesovo Beam 113.19 4 PKiKP **PKiKP** **21 53 34.2 -1.4**
comp=Z,1.5nm,0.4s,baz=289,slow=2.1,SNR=10
ZALV PP **PP** **21 54 22.7 -2.3**
comp=Z,3.2nm,0.8s,baz=349,slow=6.0,SNR=7.3
ZALV PKKPbc **PKKPbc** **22 04 24.1 +0.8**
comp=Z,0.3nm,0.4s,baz=212,slow=5.1,SNR=3.7
MJAR Matsushiro Arr 113.98 320 PKiKP **PKiKP** **21 53 37.9 +0.2**
comp=Z,1.4nm,0.5s,baz=86,slow=0.9,SNR=5.9
SYO Syowa Base 115.08 162⇑ *e*Pdiff **Pdif** **21 49 51.0 +0.9**
SYO Syowa Base 115.08 162‖ *e*Pdiff pPdif 21 50 06.0 -1.8
CN2 Changchun 115.61 333 *e*P **PKPdf** **21 53 46.2 +5.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
KURK Kurchatov 115.68 9 **PKiKP** **21 53 39.0 -1.5**
KURK Kurchatov 115.68 9 PKiKP **PKiKP** **21 53 39.5 -0.9**
KURBB Kurchatov Arra 115.75 9 PKP **PKiKP** **21 53 39.5 -1.1**
comp=Z,1.2nm,0.5s,baz=348,slow=1.8,SNR=8.5
KDWAN Kaudwane 116.15 110 PKPdf **PKPdf** **21 53 42.0 -0.2**
KHWEE KHWEE 116.79 108 PKPdf **PKPdf** **21 53 43.3 -0.2**
BOSA Boshof 116.86 116 PKP **PKiKP** **21 53 43.7 +0.2**
comp=Z,14nm,0.8s,baz=243,slow=1.7,SNR=20
BOSA pPKP pPKPdf 21 54 01.8 -0.2
comp=Z,9.9nm,0.8s,baz=276,slow=2.0,SNR=5.2
BOSA Boshof 116.86 116 **PKiKP** **21 53 43.6 +0.1**
LBTB Lobatse 117.09 112 PKPdf **PKPdf** **21 53 43.8 -0.2**
LBTB Lobatse 117.09 112 PKiKP **PKPdf** **21 53 43.8 -0.2**
ULN Ulaanbaatar 117.93 348 *c* *i* PKiKP **PKiKP** **21 53 45.2 0.0**
ULN pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 118.09 349 PKP **PKPdf** **21 53 44.7 -0.7**
comp=Z,3.5nm,0.6s,baz=336,slow=1.2,SNR=22
SONM PP **PP** **21 55 00.3 +0.6**
comp=Z,1.3nm,0.8s,baz=360,slow=6.9,SNR=4.0
SONM PKKPbc **PKKPbc** **22 04 04.8 -1.6**
comp=Z,1.6nm,0.7s,baz=200,slow=3.6,SNR=7.4
SONM Songino Array 118.09 349 **PKPdf** **21 53 44.8 -0.6**
SONM Songino Array 118.09 349 PKiKP **PKPdf** **21 53 44.8 -0.6**
MREMI Moremi 118.68 109 **PKPdf** **21 53 47.0 -0.1**
LSZ Lusaka 118.79 100 **PKPdf** **21 53 47.0 -0.5**
LSZ Lusaka 118.79 100 PKiKP **PKPdf** **21 53 47.0 -0.5**
XLT XiLinHaoTe 119.17 340 *e*PKP **PKPdf** **21 53 47.2 -0.3**
KS19 Wonju Array Si 119.31 327 **PKiKP** **21 53 48.0 +0.1**
KSRS Korea Array 119.32 327 PKP **PKiKP** **21 53 48.5 +0.7**
comp=Z,9.2nm,0.6s,baz=12,slow=1.8,SNR=7.1
KSRS pPKP **pPKPdf** **21 54 05.6 -0.6**
comp=Z,5.2nm,0.8s,baz=350,slow=1.0,SNR=7.0
KSAR Wonju Array Be 119.35 327 **PKiKP** **21 53 48.1 +0.1**
KSAR Wonju Array Be 119.35 327 PKiKP **PKiKP** **21 53 48.1 +0.1**
MKAR Makanchi Array 120.02 7 PKP **PKPdf** **21 53 47.4 -1.7**
comp=Z,0.5nm,0.4s,baz=318,slow=2.9,SNR=18
KKAR Karatay Array 121.07 18 PKPdf **PKPdf** **21 53 49.7 -1.4**
KKAR Karatay Array 121.07 18 PKiKP **PKPdf** **21 53 49.7 -1.4**
MAW Mawson 122.21 167 PKP **PKiKP** **21 53 53.0 +0.4**
comp=Z,2.7nm,0.5s,baz=166,slow=3.2,SNR=7.8
MAW Mawson 122.21 167 PKiKP **PKiKP** **21 53 53.0 +0.4**
HHC Hu-ho-hao-te 123.37 342 *e*P **PKPdf** **21 53 54.8 -0.9**
WMQ Urumqi 123.46 3 *e*PKP **PKiKP** **21 53 56.1 +0.1**
WMQ LR LR
comp=Z,300nm,24.2s
PRZ Przheval'sk 123.61 12 PKPdf **PKPdf** **21 53 56.0 -0.2**
PRZ Przheval'sk 123.61 12 PKiKP **PKPdf** **21 53 56.0 -0.2**
BTO Baotou 124.05 343 *e*PKP **PKPdf** **21 53 54.2 -2.8**
BTO pmax pmax
comp=Z,13nm,0.5s
BTO pmax pmax
comp=Z,240nm,4.0s
HNS HongShan 125.40 337⇑ PKP **PKiKP** **21 54 00.5 +0.6**
TOO Toolangi 126.12 233 PKPdf **PKiKP** **21 54 01.8 +0.5**
TOO Toolangi 126.12 233 PKiKP **PKiKP** **21 54 01.8 +0.5**
CTAO Charters Tower 127.14 255 PKPdf **PKiKP** **21 54 04.4 +0.6**
CTAO Charters Tower 127.14 255 PKiKP **PKiKP** **21 54 04.4 +0.6**
GTA Gaotai 127.38 352 PKP **PKPdf** **21 54 03.4 -0.1**
GTA pPKP pPKPdf 21 54 22.0 +0.1
NJ2 Nanjing 128.16 330 *e*P **PKiKP** **21 54 05.7 +0.1**
NJ2 pmax pmax
comp=Z,14nm,0.6s
LZH Lanzhou 129.89 347 *e*PKP **PKiKP** **21 54 09.7 +0.5**
LZH sPKP 21 54 45.6
LZH LR LR
comp=N,250nm,21.3s
LZH LR LR
comp=E,250nm,21.0s
LZH LR LR
comp=Z,280nm,20.3s
LZDM Lanzhou Array 130.05 347 PKP **PKiKP** **21 54 10.3 +0.6**
comp=Z,4.4nm,0.5s,baz=63,slow=0.3,SNR=8.4
LZDM SKPbc **SKPbc** **21 57 27.4 +1.0**
comp=Z,1.7nm,0.4s,baz=12,slow=3.6,SNR=3.9
STKA Stephens Creek 130.39 239 PKP **PKiKP** **21 54 10.5 +0.5**
comp=Z,3.4nm,0.5s,baz=92,slow=3.3,SNR=12
STKA pPKP **pPKPdf** **21 54 27.9 +0.4**
comp=Z,18nm,1.1s,baz=133,slow=3.9,SNR=8.4
STKA Stephens Creek 130.39 239 **PKPdf** **21 54 09.5 +0.3**
XAN Xi'an 130.45 341 PKP **PKiKP** **21 54 10.7 +0.5**
XAN sPKP sPKPdf 21 54 26.7 -7.8
GOMU GeErMu 131.07 356 PKP **PKiKP** **21 54 11.6 -0.2**
GOMU GeErMu 131.07 356 SS SS 22 13 53.7 +1.0
WHN Wuhan 131.51 333⇓ PKP **PKiKP** **21 54 12.1 -0.2**
ENH Enshi 133.70 338 **PKPdf** **21 54 15.4 -0.2**
BBOO Buckleboo 134.75 236 PKPdf **PKiKP** **21 54 18.2 -0.6**
ABPO Ambohimpanom 137.15 104 PKPdf **PKPdf** **21 54 22.2 -0.2**
ABPO Ambohimpanom 137.15 104 PKiKP **PKPdf** **21 54 22.2 -0.2**
WRAB Tennant Creek 138.34 254 *d* *i* PKiKP **PKiKP** **21 54 26.1 -0.4**
WRA Warramunga Arr 138.34 254 PKhKP PKPpre 21 54 16.5
comp=Z,2.4nm,0.8s,baz=90,slow=3.3,SNR=8.4
WRA PKP **PKiKP** **21 54 25.5 -1.0**
comp=Z,8.4nm,0.8s,baz=94,slow=1.6,SNR=11
ASAR Alice Springs 138.42 249 PKhKP PKPpre 21 54 15.8
comp=Z,2.7nm,0.7s,baz=108,slow=2.9,SNR=19
ASAR PKP **PKPdf** **21 54 25.3 +0.8**
comp=Z,6.4nm,0.7s,baz=96,slow=2.1,SNR=19
PZH PanZhiHua 139.58 346 PKP **PKPdf** **21 54 25.2 -1.5**
KMI Kunming 140.64 344 PKP **PKPdf** **21 54 29.6 +0.8**
KMI LR LR
comp=Z,210nm,24.5s
FITZ Fitzroy Crossi 146.67 257 PKPbc **PKPbc** **21 54 40.7 -0.1**
HYBB Hyderabad (bro 147.30 23 *e*PKPdf **PKPdf** **21 54 40.6 +0.3**
CMAR Chiang Mai Arr 147.98 346 PKPbc **PKPdf** **21 54 42.0 +0.6**
comp=Z,1.3nm,0.7s,baz=321,slow=2.6,SNR=59
CMAR Chiang Mai Arr 147.98 346 **PKPdf** **21 54 41.4 0.0**
PSA00 Pilbara Seismi 151.57 248 PKPdf **PKPdf** **21 54 47.1 +0.1**
PSA00 PKPbc **PKiKP** **21 54 53.9 +0.3**
PSI Prapat 162.73 334 PKiKP **PKPdf** **21 55 00.7 -0.7**
RPSI Rantau Prapat 162.82 334 **PKPdf** **21 55 00.7 -0.7**

IDC **12** *21:47:32.7±1.6, 11.°79S×77.°27W, h56km±12km, mb3.7/5, mbtmp4.0/6, MS4.0/6, Error ellipse: s-maj=41.6km s-min=23.1km az=47.0*
NEIC **12** *21:47:34.1±1.4, 11.°8S±0.°1×77.°2W±0.°1, h68km±9km, mb4.0/10, Error ellipse: s-maj=19.1km s-min=12.3km az=48.0*
ISC 12 21:47:31.7±0.9, **11.°84S**±0.°09×**77.°4W**±0.°1, **h51**km, **n46**, σt 1.8 **s 16**/32, **mb 3.9**/5, **MS 4.2**/5, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**0.57**	**105**	P	**Pn**	**21 47 45.6**	**+1.6**
	3μm,0.3s,baz=313,slow=12,SNR=1174						
NNA				S	**Sn**	**21 47 54.6**	**+1.9**
	12μm,0.2s,baz=142,slow=19,SNR=54						
PB12	**IPOC Station P**	**9.59**	**135**	Pn	**Pn**	**21 49 45.9**	**-1.4**
PB16	**IPOC Station P**	**9.99**	**131**	Pn	**Pn**	**21 49 51.8**	**-1.4**
LPAZ	**La Paz**	**10.02**	**117**	P	**Pn**	**21 49 55.0**	**+1.3**
	2.5nm,0.4s,baz=304,slow=12,SNR=16						
LPAZ	**La Paz**	**10.02**	**117**	Pn	**Pn**	**21 49 54.8**	**+1.1**
HMBC	**Humberstone**	**11.07**	**140**	Pn	**Pn**	**21 50 08.8**	**+1.3**
TA01	**Diego Aracena**	**11.11**	**142**	Pn	**Pn**	**21 50 10.3**	**+2.3**
PATCX	**Punta Patache**	**11.32**	**143**	Pn	**Pn**	**21 50 10.8**	**-0.1**
PB08	**IPOC Station P**	**11.45**	**137**	Pn	**Pn**	**21 50 11.9**	**-1.0**
PB02	**IPOC Station P**	**11.86**	**144**	Pn	**Pn**	**21 50 16.7**	**-1.6**
PB01	**IPOC Station P**	**11.89**	**141**	Pn	**Pn**	**21 50 19.3**	**+0.6**
OTAV	**Otavalo**	**12.04**	**355**	Pn	**Pn**	**21 50 22.1**	**+0.9**
PB03	**IPOC Station P**	**12.51**	**145**	Pn	**Pn**	**21 50 29.1**	**+1.8**
PB05	**IPOC Station P**	**12.93**	**149**	Pn	**Pn**	**21 50 32.6**	**-0.3**
PB14	**IPOC Station P**	**14.35**	**153**	Pn	**Pn**	**21 50 53.1**	**+0.8**
GO02	**Mina Guanaco**	**15.18**	**152**	P	**P**	**21 51 05.8**	**-1.6**
GO02				IAmb	IAmb	21 51 11.4	
	comp=Z,5.6nm,0.8s						
AC06	**Mina Casimiro**	**16.80**	**158**	Pn	**Pn**	**21 51 23.0**	**-0.5**
AC06				IAmb	IAmb	21 51 54.3	
	comp=Z,15nm,1.4s						
VILB	**Vilhena**	**16.84**	**96**	P	**Pn**	**21 51 23.8**	**-0.3**
VILB				IAmb	IAmb	21 51 27.5	
	comp=Z,20nm,1.2s						

ROSC	**El Rosal**	**16.85**	**11**	LR	LR	21 58 57.0		
	comp=Z,119nm,19.4s,baz=14,slow=41							
PTLB	**Pontes e Lacer**	**18.11**	**103**	P	**P**	**21 51 38.4**	**-1.1**
PTLB				IAmb	IAmb	21 51 40.9		
	comp=Z,18nm,1.3s							
RUSC	**La Rusia**	**18.13**	**14**	P	**Pn**	**21 51 40.8**	**+0.3**
RUSC				IAmb	IAmb	21 52 03.0		
	comp=Z,8.1nm,0.9s							
LCO	**Las Campanas**	**18.20**	**161**	P	**P**	**21 51 41.0**	**+0.3**
CFA	**Coronel Fontan**	**21.42**	**158**	P	**P**	**21 52 15.2**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=344,slow=13,SNR=7.3							
	comp=Z,0.9nm,0.6s							
H03N1	**Juan Fernandez**	**21.55**	**183**	T	T	22 14 32.1		
	baz=3.5,slow=75,SNR=152							
H03N2	**Juan Fernandez**	**21.55**	**183**	T	T	22 14 38.8		
	baz=3.5,slow=75,SNR=139							
H03N3	**Juan Fernandez**	**21.57**	**183**	T	T	22 14 38.3		
	baz=3.5,slow=75,SNR=192							
BOAV	**Boa Vista**	**21.94**	**51**	P	**P**	**21 52 19.7**	**-1.5**
BOAV				IAmb	IAmb	21 52 22.4		
	comp=Z,7.3nm,1.0s							
BAUV	**El Baul**	**22.64**	**25**	P	**P**	**21 52 27.6**	**-1.1**
PLTB	**Pedras Altas**	**29.57**	**136**	P	**P**	**21 53 30.8**	**-1.0**
TXAR	**Lajitas Array**	**48.14**	**329**	P	**P**	**21 56 07.8**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=144,slow=7.3,SNR=9.8							
	comp=Z,0.5nm,0.4s							
TXAR	**Lajitas Array**	**48.14**	**329**	P	**P**	**21 56 07.5**	**+0.5**
TX31	**Lajitas Ar. Si**	**48.14**	**329**	P	**P**	**21 56 07.5**	**+0.5**
PDAR	**Pinedale Array**	**61.80**	**334**	P	**P**	**21 57 45.6**	**0.0**
	comp=Z,0.2nm,0.6s,baz=148,slow=9.1,SNR=3.0							
	comp=Z,0.2nm,0.6s							
DBIC	**Dimbokro**	**74.44**	**80**	P	**P**	**21 59 04.9**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=258,slow=4.2,SNR=3.8							
	comp=Z,3.5nm,0.6s							
QSPA	**South Pole Qui**	**78.30**	**180**	LR	LR	22 26 46.1		
	comp=Z,68nm,20.9s,baz=156,slow=30							
TORD	**Torodi Ar. Bea**	**82.28**	**75**	P	**P**	**21 59 48.5**	**+0.1**
	comp=Z,2.9nm,0.4s,baz=267,slow=3.9,SNR=4.6							
	comp=Z,2.9nm,0.4s							
RAO	**Raoul Island**	**93.27**	**239**	LR	LR	22 33 48.1		
	comp=Z,144nm,21.6s,baz=255,slow=30							
BOSA	**Boshof**	**95.25**	**121**	LR	LR	22 40 30.7		
	comp=Z,83nm,20.4s,baz=306,slow=33							
MAW	**Mawson**	**95.76**	**166**	LR	LR	22 42 56.8		
	comp=Z,111nm,18.8s,baz=223,slow=35							
LBTB	**Lobatse**	**96.55**	**117**	LR	LR	22 39 57.7		
	comp=Z,79nm,21.5s,baz=304,slow=33							
H11N3	**WAKE ISLAND Hyl**	**17.91**	**286**	T	T	00 14 40.6		
	baz=93,slow=74,SNR=21							
H11N2	**WAKE ISLAND Hyl**	**17.93**	**286**	T	T	00 14 42.6		
	baz=93,slow=74,SNR=22							
H11N1	**WAKE ISLAND Hyl**	**17.93**	**286**	T	T	00 14 39.8		
	baz=93,slow=74,SNR=23							
H11S2	**WAKE ISLAND Hyl**	**18.03**	**285**	T	T	00 14 51.1		
	baz=94,slow=75,SNR=78							
H11S1	**WAKE ISLAND Hyl**	**18.04**	**285**	T	T	00 14 51.6		
	baz=94,slow=75,SNR=116							
H11S3	**WAKE ISLAND Hyl**	**18.05**	**285**	T	T	00 14 52.5		
	baz=94,slow=75,SNR=126							

*AEIC **12** 22:03:11.6±1.2,54°.49N±0°.03×161°.63W±0°.02,h13km±6km, Error ellipse: s-maj=4.8km s-min=1.5km az=181.0*

NEIC 12 22:03:10.2±0.8,54°.417N±0°.009×161°.64W±0°.05, h13km±5km,ML2.8/16,ML2.8(AEIC),Error ellipse: s-maj=4.1km s-min=0.7km az=73.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	**0.74**	**350**		Pg	22 03 24.7	0.0
DOL					Sg	22 03 34.3	-0.1
DT1	**Dutton Round H**	**0.79**	**332**		Pg	22 03 25.0	-0.4
DT1					Sg	22 03 34.9	-0.9
HAG	**Hague Volcano**	**0.92**	**350**		Pb	22 03 28.0	+0.1
PS4A	**Pavlof South-4**	**0.94**	**352**		Pb	22 03 28.2	-0.2
PS4A					Sg	22 03 40.5	-0.2
PVV	**Pavlof Volcano**	**0.96**	**355**		Pb	22 03 28.3	-0.4
PS1A	**Pavlof South-1**	**1.01**	**357**		Pb	22 03 29.5	0.0
PS1A					Sb	22 03 42.5	-0.2
PN7A	**Pavlof North-7**	**1.04**	**349**		Pg	22 03 30.2	0.0
FALS	**False Pass**	**1.13**	**294**		Pb	22 03 31.1	-0.4
FALS				Sn	Sb	22 03 45.0	-1.0
SDPT	**Sand Point**	**1.15**	**35**		Pb	22 03 31.6	-0.3
SDPT				Sn	Sg	22 03 47.1	-0.2
CNBA	**Chernabura Isl**	**1.26**	**70**		Pn	22 03 32.7	-0.7
CNBA					Sb	22 03 49.0	-0.8
S12K	**Black Hills**	**1.31**	**349**		Pn	22 03 34.1	-0.1
S12K				IAML		22 03 52.7	
	comp=E,290nm,0.3s						
S12K				IAML		22 03 56.1	
	comp=N,202nm,0.4s						
ISNN	**Isanotski Nort**	**1.31**	**289**		Pb	22 03 34.6	-0.1
SSBA	**Shishaldin**	**1.49**	**285**		Pn	22 03 37.0	+0.3
AKUT	**Akutan**	**2.44**	**265**	Pn	Pn	22 03 49.8	+0.1
AKUT				IAML		22 04 15.8	
	comp=E,53nm,0.9s						
AKUT				IAML		22 04 18.3	
	comp=N,45nm,1.1s						
UNV	**Unalaska Valle**	**2.92**	**261**	Pn	Pn	22 03 55.8	-0.4
UNV				IAML		22 04 45.0	
	comp=N,20nm,1.2s						
O14K	**Tigyukauivet M**	**4.85**	**2**	Pn	Pn	22 04 22.8	0.0
O14K				IAML		22 06 34.2	
	comp=N,6.7nm,1.0s						
O14K				IAML		22 07 21.7	
	comp=E,8.3nm,1.1s						
O15K	**Ungalikthiuk R**	**4.88**	**11**	Pn	Pn	22 04 23.2	+0.1
O15K				IAML		22 07 08.4	
	comp=E,7.6nm,1.1s						
N14K	**Kuskokwak Cree**	**5.52**	**360**	Pn	Pn	22 04 32.0	0.0
N15K	**Kwethluk River**	**5.83**	**8**	Pn	Pn	22 04 37.1	+0.9
KDAK	**Kodiak Island**	**6.08**	**53**	Pn	Pn	22 04 39.6	-0.1
L14K	**Kuka Creek**	**6.97**	**356**	Pn	Pn	22 04 51.5	-0.3

*MDD **12** 22:05:04.9±0.3,39°.54N×6°.94W,h20km±5km,mb_Lg2.4/6, Error ellipse: s-maj=2.9km s-min=2.5km az=110.0*

*SFS **12** 22:05:04.8,39°.58N×6°.98W,h2km,ML2.5/5,ML2.1/7, MLv1.9/7*

*INMG **12** 22:05:05.8±1.8,39°.52N×6°.94W,h16km±4km,ML1.7, Error ellipse: s-maj=3.3km s-min=2.1km az=81.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Alcantara (ESP)*

ISC 12 22:05:04.6±1.1,39°.54N±0°.02×6°.93W±0°.02,h16km±9km, n35,σ0s67/61,1C-1D,Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMRV	**Marv??o**	**0.37**	**252**	*e*Pg	**Pb**	**22 05 13.3**	**+0.5**
PMRV				*e*Sg	**Sb**	**22 05 18.5**	**+0.1**
PMRV				*i* IAML		22 05 18.7	
PMRV				*i* IAML		22 05 18.7	
PMRV				*i* IAML		22 05 19.1	
PCBR	**Castelo Branco**	**0.51**	**305**	⇓*e*Pg	**Pb**	**22 05 15.3**	**+0.1**
PCBR				*e*Sg	**Sg**	**22 05 22.1**	**+0.4**
PCBR				*i* IAML		22 05 22.2	
PCBR				*i* IAML		22 05 22.4	
PCBR				*i* IAML		22 05 23.8	
EBAD	**Badajoz**	**0.79**	**184**	Pg	**Pb**	**22 05 20.1**	**+0.2**
EBAD				Sg	**Sg**	**22 05 30.2**	**-0.2**
EBAD	**Badajoz**	**0.79**	**184**	Pg	**Pg**	**22 05 20.2**	**+0.3**
EBAD				Sg	**Sg**	**22 05 30.2**	**-0.2**
EBAD				*i* IVmb_Lg		22 05 32.4	
EPLA	**Plasencia**	**0.84**	**51**	Pg	**Pb**	**22 05 21.1**	**+0.3**
EPLA				Sg	**Sb**	**22 05 31.5**	**-0.3**
EPLA				*i* IVmb_Lg		22 05 33.1	
PESTR	**Estremoz**	**0.85**	**217**	Pg	**Pb**	**22 05 21.1**	**+0.2**
PESTR				Sg	**Sb**	**22 05 32.1**	**+0.1**
PESTR	**Estremoz**	**0.85**	**217**	⇑*e*P	**Pg**	**22 05 21.2**	**+0.2**
PESTR				*e*S	**Sb**	**22 05 32.1**	**+0.1**
PESTR				*i* IAML		22 05 33.0	
PESTR				*i* IAML		22 05 33.4	
PESTR				*i* IAML		22 05 33.8	
PSARD	**Sardoal**	**0.95**	**274**	*e*P	**Pb**	**22 05 22.6**	**-0.1**
PSARD				*e*S	**Sb**	**22 05 35.4**	**+0.4**
PSARD				*i* IAML		22 05 35.9	
PSARD				*i* IAML		22 05 36.3	
PSARD				*i* IAML		22 05 36.6	
MTE	**Manteigas**	**0.97**	**331**	*e*P	**Pb**	**22 05 23.5**	**+0.3**
MTE				*e*S	**Sb**	**22 05 35.8**	**0.0**
MTE				*i* IAML		22 05 36.7	
MTE				*i* IAML		22 05 37.1	
MTE				*i* IAML		22 05 37.4	
PMTG	**Montargil**	**1.11**	**245**	*e*P	**Pb**	**22 05 25.5**	**+0.1**
PMTG				*e*S	**Sb**	**22 05 39.6**	**0.0**
PMTG				*i* IAML		22 05 39.8	
PMTG				*i* IAML		22 05 40.2	
PMTG				*i* IAML		22 05 41.2	
PARRA	**Arraiolos**	**1.13**	**230**	*e*P	Pn	22 05 25.8	-9.0
PARRA				*e*S	Sn	22 05 40.1	-17
PARRA				*i* IAML		22 05 40.4	
PARRA				*i* IAML		22 05 40.6	
PARRA				*i* IAML		22 05 46.9	
PCAS	**Casmilo, Conde**	**1.31**	**293**	*e*P	**Pb**	**22 05 29.4**	**+0.6**
PCAS				*e*S	**Sn**	**22 05 46.0**	**+0.6**
PCAS				*i* IAML		22 05 46.8	
PCAS				*i* IAML		22 05 46.9	
PBAR	**Barrancos**	**1.37**	**183**	Pn	**Pb**	**22 05 30.4**	**+0.6**
PBAR				Sn	**Sb**	**22 05 47.5**	**+0.4**
PBAR	**Barrancos**	**1.37**	**183**	*e*Pg	**Pb**	**22 05 30.4**	**+0.6**
PBAR				*e*Sg	**Sb**	**22 05 47.6**	**+0.6**
PBAR				*i* IAML		22 05 48.4	
PBAR				*i* IAML		22 05 49.1	
PBAR				*i* IAML		22 05 49.7	
PVIS	**Viseu**	**1.38**	**328**	*e*Pn	**Pb**	**22 05 30.7**	**+0.6**
PVIS				*e*Sn	**Sb**	**22 05 47.8**	**+0.2**
PSBE	**So Bento**	**1.44**	**269**	*e*Sg	**Sg**	**22 05 50.8**	**-0.3**
MOE	**Montemor**	**1.50**	**228**	*e*Pg	**Pb**	**22 05 32.4**	**+0.3**
MOE				*e*Sg	**Sb**	**22 05 51.3**	**+0.4**
MOE				*i* IAML		22 05 51.7	
MOE				*i* IAML		22 05 52.3	
MOE				*i* IAML		22 05 52.7	
MVO	**Moncorvo**	**1.62**	**357**	*e*Pn	**Pn**	**22 05 33.0**	**+0.5**
MVO				*e*Pg	**Pb**	**22 05 34.7**	**+0.5**
MVO				*e*Sn	**Sb**	**22 05 54.7**	**+0.3**
MVO				*i* IAML		22 05 55.2	
MVO				*i* IAML		22 06 00.3	
MVO				*i* IAML		22 06 01.1	
EMIN	**Mina Concepcio**	**1.79**	**173**	Sn	**Sb**	**22 05 59.4**	**+0.4**
EMIN	**Mina Concepcio**	**1.79**	**173**	Sg	**Sb**	**22 05 59.2**	**+0.1**
PVRL	**Vila Real**	**1.83**	**341**	*e*Sn	**Sn**	**22 05 58.1**	**-0.2**
PVRL				*e*Sg	**Sb**	**22 06 01.3**	**+0.9**
ECAB	**El Cabril**	**1.89**	**141**	Sn	**Sb**	**22 06 02.4**	**+0.5**
ECAB				Pn	**Pb**	**22 05 38.5**	**-0.1**
ECAB	**El Cabril**	**1.89**	**141**	Pg	**Pb**	**22 05 38.7**	**+0.1**
ECAB				Sg	**Sb**	**22 06 03.0**	**+1.1**
ECAB				*i* IVmb_Lg		22 06 05.3	
PMAFR	**Mafra**	**1.92**	**253**	*e*Sg	**Sb**	**22 06 02.8**	**0.0**
PAB	**San Pablo**	**2.00**	**89**	Pg	**Pb**	**22 05 40.9**	**+0.3**
PAB				Sg	**Sb**	**22 06 06.0**	**+0.8**
PAB				*i* IVmb_Lg		22 06 06.5	
PCVE	**Castro Verde**	**2.10**	**205**	*e*Pn	**Pn**	**22 05 38.4**	**-0.6**
PVAQ	**Vaqueiros**	**2.22**	**196**	*e*Pn	**Pn**	**22 05 40.5**	**-0.2**
PVAQ				*e*Pg	**Pb**	**22 05 45.3**	**+0.9**
PVAQ				*e*Sg	**Sb**	**22 06 13.0**	**+1.4**
PVAQ				*i* IAML		22 06 17.9	
PVAQ				*i* IAML		22 06 19.5	
PVAQ				*i* IAML		22 06 19.6	
PBRG	**Braganca**	**2.26**	**4**	*e*Sg	**Sg**	**22 06 16.9**	**-0.5**
PBRG				*i* IAML		22 06 17.9	
PBRG				*i* IAML		22 06 18.2	
PBRG				*i* IAML		22 06 19.1	
EADA	**Adamuz**	**2.30**	**126**	Pn	**Pn**	**22 05 41.3**	**-0.5**
EADA	**Adamuz**	**2.30**	**126**	Pn	**Pn**	**22 05 41.3**	**-0.5**
EADA				Pg	**Pb**	**22 05 46.0**	**+0.4**
EADA				Sg	**Sg**	**22 06 17.2**	**-1.3**
EADA				*i* IVmb_Lg		22 06 28.1	
GUD	**Guadarrama**	**2.40**	**62**	Sg	**Sb**	**22 06 18.1**	**+1.3**
ECAL	**Calabor**	**2.40**	**4**	Sg	**Sg**	**22 06 20.2**	**-1.6**
ECAL	**Calabor**	**2.40**	**4**	Sg	**Sg**	**22 06 19.9**	**-1.8**
PSIM	**Granatula de C**	**2.57**	**105**	Pg	**Pb**	**22 05 50.2**	**-0.1**
PSIM				Sg	**Sb**	**22 06 23.5**	**+1.7**
MORF	**Marmelete**	**2.61**	**212**	*e*Pn	**Pn**	**22 05 45.4**	**-0.7**
MORF				*e*Sn	**Sn**	**22 06 16.3**	**-1.2**

*IDC **12** 22:28:53.6±1.1,13°.55S×166°.39E,h0km,mb4.1/6, mbtmp4.0/7,Error ellipse: s-maj=39.7km s-min=25.4km az=111.0*

ISC 12 22:28:59.2±1.0,13°.67S±0°.10×166°.4E±0°.2,h39km,n9, σ1s22/10,mb4.0/6,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.35**	**180**	Pn	**Pn**	**22 30 56.7**	**-1.2**
	2.1nm,0.4s,baz=65,slow=19						
DZM				Sn	**Sn**	**22 32 31.1**	**+0.1**
	0.1nm,0.3s,baz=331,slow=23,SNR=1.4						
STKA	**Stephens Creek**	**29.07**	**227**	P	**P**	**22 34 57.2**	**+1.1**
	3.1nm,0.7s,baz=52,slow=8.3,SNR=4.8						
	3.1nm,0.7s						
ASAR	**Alice Springs**	**32.30**	**247**	P	**P**	**22 35 23.9**	**-0.9**
	1.0nm,0.7s,baz=78,slow=8.9,SNR=14						
	1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.77**	**294**	P	**P**	**22 40 30.6**	**+0.5**
	0.6nm,0.3s,baz=109,slow=5.9,SNR=4.8						
	0.6nm,0.3s						
QSPA	**South Pole Qui**	**76.35**	**180**	P	**P**	**22 40 45.8**	**+1.6**
	0.8nm,0.5s,baz=343,slow=4.9,SNR=3.8						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**85.78**	**18**	P	**P**	**22 41 34.2**	**+0.1**
	0.8nm,0.6s,baz=238,slow=5.8,SNR=9.8						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**95.88**	**317**	P	**P**	**22 42 21.1**	**-0.8**
	0.4nm,0.7s,baz=93,slow=2.9,SNR=2.4						
	0.4nm,0.7s						
ARCES	**ARCESS Array B**	**119.03**	**345**	PKP	**PKPdf**	**22 47 41.5**	**-1.7**
	0.8nm,0.6s,baz=46,slow=0.7,SNR=6.9						
ESDC	**Sonseca Array**	**152.75**	**344**	PKPbc	**PKiKP**	**22 48 53.4**	**+0.8**
	0.2nm,0.5s,baz=14,slow=4.9,SNR=4.3						

RSNC 12 22:57:52.1±0.0,5°N±1°×7°4W±°,h148km±2km,M3.1,mb3.6, ML2.8,Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.53**	**317**	P	Pn	22 58 13.2	-0.3
SPBC				S	Sn	22 58 29.5	-0.3
CHIC	**Chingaza**	**0.63**	**182**	P	Pn	22 58 14.4	-0.1
CHIC				S	Sn	22 58 30.4	-1.1
ROSC	**El Rosal**	**0.74**	**236**	P	Pn	22 58 15.9	+0.8
ROSC				S	Sn	22 58 33.5	+0.9
CVER	**Cruz Verde, Cu**	**0.82**	**206**	P	Pn	22 58 16.3	+0.5
CVER				S	Sn	22 58 33.7	-0.1
RUSC	**La Rusia**	**0.89**	**45**	P	Pn	22 58 16.5	+0.2
RUSC				S	Sn	22 58 34.7	0.0
VILC	**Villavicencio,**	**1.14**	**179**	P	Pn	22 58 17.7	-0.4
VILC				S	Sn	22 58 37.4	-0.6
NORC	**Norcasia**	**1.19**	**285**	P	Pn	22 58 17.9	-0.6
NORC				S	Sn	22 58 37.7	-0.9
BARC	**Barichara**	**1.42**	**22**	P	Pn	22 58 20.3	-0.7
BARC				S	Sn	22 58 42.2	-0.9
PTBC	**PUERTO BERRIO,**	**1.47**	**330**	P	Pn	22 58 20.1	-1.2
PTBC				S	Sn	22 58 42.1	-1.5
GUY2C	**Guyana, Caldas**	**1.65**	**269**	P	Pn	22 58 23.5	-0.1
GUY2C				S	Sn	22 58 48.2	+0.5
RECRC	**Villamaria, Ca**	**1.66**	**260**	P	Pn	22 58 23.9	+0.1
RECRC				S	Sn	22 58 48.0	-0.1
BRJC	**Barrancabermej**	**1.70**	**359**	P	Pn	22 58 23.8	+0.1
BRJC				S	Sn	22 58 48.0	0.0
ANIL	**Santa Ana**	**1.85**	**246**	P	Pn	22 58 25.3	-0.4
ANIL				S	Sn	22 58 50.7	-0.7
PTGC	**Puerto Gaitan,**	**1.89**	**124**	P	Pn	22 58 25.3	-0.6
PTGC				S	Sn	22 58 50.5	-1.3
PRAC	**Prado**	**1.93**	**217**	P	Pn	22 58 26.0	-0.4
PRAC				S	Sn	22 58 51.9	-0.8
HELC	**Santa Helena**	**2.03**	**297**	P	Pn	22 58 27.5	-0.4
HELC				S	Sn	22 58 53.9	-1.4
ORTC	**Ortega, Tolima**	**2.04**	**229**	P	Pn	22 58 26.7	-0.9
ORTC				S	Sn	22 58 53.6	-1.3
URMC	**La Uribe, Meta**	**2.11**	**198**	P	Pn	22 58 28.5	0.0
URMC				S	Sn	22 58 56.7	+0.2
CBOC	**Ciudad Bolivar**	**2.37**	**285**	P	Pn	22 58 31.2	-0.5
YOTC	**Yotoco, Valle**	**2.92**	**244**	P	Pn	22 58 39.1	+0.6
OCAC	**Ocana**	**2.98**	**7**	P	Pn	22 58 38.7	-0.7
OCAC				S	Sn	22 59 15.3	-0.6
DBBC	**Dabeiba**	**3.04**	**305**	P	Pn	22 58 39.4	-0.6
DBBC				S	Sn	22 59 17.2	+0.2
UREC	**San Jos de Ur**	**3.07**	**324**	P	Pn	22 58 37.5	-2.8
UREC				S	Sn	22 59 14.1	-3.5
MACC	**Macarena, Meta**	**3.10**	**183**	P	Pn	22 58 38.9	-1.8
MACC				S	Sn	22 59 15.2	-3.1
GARC	**Garzon, Huila**	**3.53**	**210**	P	Pn	22 58 45.4	-1.1
GARC				S	Sn	22 59 28.1	-0.6
FLOC	**Florencia**	**4.14**	**208**	P	Pn	22 58 53.4	-0.8
ARGC	**Ariguani, Magd**	**4.60**	**353**	P	Pn	22 58 59.6	-0.6
ARGC				S	Sn	22 59 51.5	-1.8
SJCC	**San Jacinto, C**	**4.83**	**343**	P	Pn	22 59 00.7	-2.7
SJCC				S	Sn	22 59 53.3	-5.6
CRUC	**La Cruz**	**4.89**	**222**	P	Pn	22 59 05.8	+1.4
CRJC	**Cerrejon, Guaj**	**5.78**	**8**	P	Pn	22 59 13.6	-2.4
	5.7nm,0.6s						
CRJC				S	Sn	23 00 17.6	-4.0
	5.7nm,0.6s						
URIC	**Uribia, Colomb**	**6.62**	**15**	P	Pn	22 59 24.6	-2.5
URIC				S	Sn	23 00 37.2	-4.4

RSNC 12 23:01:50.6±1.1,4°S±10°×7°8W±°,h0km,mB4.9,mb4.2, ML3.2,Mw(mB)4.2,Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCRA	**Macar, Loja**	**2.43**	**271**	P	Pn	23 02 29.6	-2.0
MCRA				S	Sn	23 03 02.4	+0.3
PTLC	**Puerto Leguiza**	**5.32**	**31**	P	Pn	23 03 09.7	-1.7
	1µm22nm,0.8s						
PTLC				S	Sn	23 04 08.5	-4.9
	1µm22nm,0.8s						
FLOC	**Florencia**	**6.26**	**17**	P	Pn	23 03 26.4	+2.1
FLOC				S	Sn	23 04 38.8	+2.2
GARC	**Garzon, Huila**	**6.88**	**17**	P	Pn	23 03 35.3	+2.3
MACC	**Macarena, Meta**	**7.49**	**29**	P	Pn	23 03 43.4	+2.1

*ISU **12** 23:53:17,41°.32N×70°.03E,h27km*

*KRNET **12** 23:53:18.5±0.1,41°.28N×70°.46E,h13km,mb3.5*

*SOME **12** 23:53:18.9,41°.13N×70°.65E,h10km*

*NNC **12** 23:53:21.0±2.9,41°.28N×70°.29E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=27.0km s-min=13.1km az=14.0*

ISC 12 23:53:20.5±1.2,41°.31N±0°.02×70°.48E±0°.02,h1km±10km, n45,σ1s68/75,37C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.55**	**66**	⇑*i*P	**Pg**	**23 53 29.7**	**-1.3**
TRKS				⇑*i*S	**Sg**	**23 53 37.6**	**-0.5**
IUG	**Iuzhnay**	**0.90**	**339**	S	**Sn**	**23 53 57.8**	**+3.6**
	575nm,0.2s						
MINT	**Mingtut**	**0.92**	**156**	S	**Sn**	**23 53 54.9**	**+0.3**
NAM	**Namangan**	**0.95**	**109**	P	**Pg**	**23 53 38.6**	**-0.1**
CHM	**Chimkent**	**1.20**	**327**	*e*P	**Pg**	**23 53 45.2**	**+1.6**
	28nm,0.2s						
CHM				*e*S	**Sn**	**23 54 03.5**	**+2.0**
	452nm,0.4s						
ARK	**Arkit**	**1.22**	**66**	⇑*i*P	**Pn**	**23 53 42.2**	**-2.6**
ARK				⇑*i*S	**Sb**	**23 53 59.5**	**-1.3**
CHMI	**Chimion**	**1.31**	**142**	P	**Pg**	**23 53 45.9**	**+0.3**
CHMI				S	**Sg**	**23 54 05.8**	**+3.2**
FRG	**Fergana**	**1.36**	**133**	P	**Pg**	**23 53 46.5**	**-0.2**
FRG				S	**Sg**	**23 54 07.2**	**+2.9**
ANR	**Andizhan**	**1.53**	**111**	S	**Sg**	**23 54 13.5**	**+3.8**
TSTA	**Tashata**	**1.68**	**115**	P	**Pb**	**23 53 51.0**	**-1.3**
TSTA				S	**Sg**	**23 54 14.8**	**+0.2**
BRLS	**Boroldoy**	**1.78**	**345**	*e*P	**Pn**	**23 53 51.4**	**-1.1**
	21nm,0.3s						
BRLS				*e*S	**Sn**	**23 54 14.8**	**-1.1**
	163nm,0.2s						
KK31	**Karatay Array**	**1.79**	**1**	⇓Pn	**Pb**	**23 53 54.6**	**+0.4**
	7.7nm,0.3s,baz=189,slow=14,SNR=388						
KK31				⇓Lg	Lg	23 54 18.5	
	18nm,0.2s,baz=186,slow=30						
ARSB	**Arslanbob**	**1.89**	**89**	⇓*e*P	**Pn**	**23 53 53.6**	**-0.5**
ARSB				⇓*e*S	**Sb**	**23 54 19.8**	**-0.2**
OHH	**Osh**	**1.92**	**113**	⇑*e*P	**Pn**	**23 53 54.0**	**-0.4**
OHH				⇑*e*S	**Sb**	**23 54 20.2**	**-0.6**
DRK	**Karamyk**	**2.09**	**151**	⇑*i*P	**Pn**	**23 53 56.6**	**-0.3**
DRK				⇑*i*S	**Sb**	**23 54 24.4**	**-1.5**
GAR	**Garm**	**2.31**	**183**	⇓*i*P	**Pn**	**23 53 59.4**	**-0.4**
GAR				⇓*i*S	**Sb**	**23 54 29.3**	**-2.8**
DZI	**Dzhizak**	**2.34**	**240**	P	**Pb**	**23 54 02.9**	**-0.6**
BXML	**Bakhmal**	**2.47**	**230**	S	**Pg**	**23 54 08.5**	**+0.6**
MRKS	**Merke**	**2.50**	**54**	Pg	**Pb**	**23 54 05.0**	**-1.3**
	6.3nm,0.5s						
MRKS				Lg	Lg	23 54 38.7	
	166nm,0.5s						
MRKS	**Merke**	**2.50**	**54**	*e*P	**Pb**	**23 54 05.0**	**-1.3**
	6.3nm,0.5s						
MRKS				*e*S	**Sb**	**23 54 38.7**	**+1.1**
	166nm,0.5s						
SALK	**Salom-Alik**	**2.56**	**98**	⇑*i*P	**Pn**	**23 54 03.2**	**-0.2**
SALK				⇑*e*S	**Sn**	**23 54 36.3**	**+1.0**
SFK	**Sufi-Kurgan**	**2.64**	**118**	⇑*e*P	**Pn**	**23 54 04.2**	**-0.3**
SFK				⇑*e*S	**Sn**	**23 54 37.6**	**+0.3**
EKS2	**Erkin-Say**	**2.81**	**60**	⇑*i*P	**Pn**	**23 54 07.1**	**+0.4**
EKS2			

SONM Lg Lg 23 58 48.0
3.2nm,0.3s,baz=238,slow=32,SNR=3.6
7.2nm,0.3s
LZDM Lanzhou Array 9.30 161 Pn **Pn 23 58 18.3 -0.1**
baz=338,slow=15
LZDM Lg Lg 00 00 56.9
baz=349,slow=26
1.1nm,0.3s
MKAR Makanchi Array 12.46 285 Lg Lg 00 02 35.7
0.1nm,0.3s,baz=86,slow=31,SNR=2.0
ZALV Zalesovo Beam 13.40 318 Lg Lg 00 02 57.8
0.1nm,0.3s,baz=120,slow=25,SNR=2.3
KURBB Kurchatov Arra 15.50 300 Lg Lg 00 04 14.6
baz=111,slow=31
BVAR Borovoye Array 20.95 304 P **P 00 00 47.2 +0.3**
1.7nm,0.5s,baz=98,slow=10,SNR=5.2
1.7nm,0.5s
ILAR Eielson Array 59.04 27 P **P 00 06 03.2 -0.4**
0.4nm,0.8s,baz=321,slow=6.4,SNR=2.6
0.4nm,0.8s
ASAR Alice Springs 74.88 148 P **P 00 07 45.1 +0.3**
0.4nm,0.9s,baz=332,slow=4.5,SNR=4.1
0.4nm,0.9s

SOME ***13*** *00:07:05.8, 41°.42N×70°.65E, h5km*
ISU ***13*** *00:07:05, 41°.36N×70°.56E, h15km*
NNC ***13*** *00:07:06.0±1.7, 41°.37N×70°.55E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=13.0km s-min=5.0km az=17.0*
ISC 13 00:07:05.8±1.5, 41°.36N±0°.06×70°.53E±0°.08, h16km±12km, **n8,** σ1ᵗ**43**/14**, 2C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**0.87**	**335**	P		**Pg**	**00 07 22.8**	**+0.1**
	14nm,0.2s							
IUG				S		**Sb**	**00 07 35.1**	**+1.1**
	13nm,0.2s							
CHMI	**Chimion**	**1.32**	**145**	P		**Pn**	**00 07 29.2**	**-0.4**
CHMI				S		**Sg**	**00 07 47.5**	**-1.1**
KK31	**Karatay Array**	**1.74**	**359**	⇑Pn		**Pb**	**00 07 38.3**	**+0.9**
	0.3nm,0.2s,baz=178,slow=15,SNR=24							
KK31				⇑Sn		**Sg**	**00 08 01.7**	**-0.1**
	1.5nm,0.2s,baz=181,slow=31,SNR=5.9							
BRLS	**Borolday**	**1.75**	**343**	P		**Pn**	**00 07 34.9**	**-0.5**
	2.0nm,0.3s							
BRLS				S		**Sn**	**00 07 56.1**	**-1.2**
	11nm,0.1s							
BRLS	**Borolday**	**1.75**	**343**	*e*P		**Pn**	**00 07 34.9**	**-0.5**
	1.3nm,0.1s							
BRLS				*e*S		**Sn**	**00 07 56.1**	**-1.2**
	5.0nm,0.1s							
MRKS	**Merke**	**2.44**	**55**	Pg		**Pb**	**00 07 49.9**	**+0.7**
	2.2nm,0.4s							
MRKS				Lg		Lg	00 08 22.0	
	10nm,0.3s							
MRKS	**Merke**	**2.44**	**55**	*e*P		**Pb**	**00 07 49.9**	**+0.7**
	0.3nm,0.1s							
MRKS				*e*S		**Sg**	**00 08 21.9**	**-2.1**
	7.1nm,0.3s							
DGS	**Degeres**	**4.32**	**62**	Pg		**Pb**	**00 08 24.1**	**+2.8**
	0.7nm,0.4s							
DGS				Lg		Lg	00 09 20.3	
	2.2nm,0.6s							

CATAC ***13*** *00:09:12.4±0.7, 15°S±4°×7°0W±°, h146km±9km, M5.4/29, mb5.5/29, mB5.7/23, MLv6.1/2, Mw(mB)5.2/23, Error ellipse: s-maj=20.3km s-min=6.5km az=77.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.64; Mθθ-2.22; Mφφ1.59; Mrθ3.65; Mθφ-0.31; Mφr-3.45; Fault plane solution: M₀5.40935×10¹⁶ NP1: φs130.09339°, δ87.01383°, λ111.08307°. NP2: φs227.78892°, δ21.28396°, λ8.25134°. Principal axes: T 5.5853, Plg44.0841°, Azm60.8321°; N -0.3709, Plg21.0531°, Azm308.9428°; P -5.2143, Plg38.4653°, Azm201.1362°; confirmed*
NEIC ***13*** *00:09:17.5, 15°.30S×70°.42W, h210km*
NEIC ***13*** *00:09:17.5, 15°.20S×70°.42W, h210km, Moment Tensor Solution. Duration: 1ᵗ7 Moment tensor: Scale 10¹⁶Nm; Mrr-0.42; Mθθ-0.62; Mφφ1.04; Mrθ3.82; Mθφ-1.07; Mφr-3.29; Fault plane solution: M₀5.23000×10¹⁶ NP1: φs199.24000°, δ12.03000°, λ-20.42000°. NP2: φs309.24000°, δ85.83000°, λ-101.29000°. Principal axes: T 5.5507, Plg40.0000°, Azm50.0000°; N -0.7132, Plg11.0000°, Azm310.0000°; P -4.8376, Plg48.0000°, Azm207.0000°;*
BJI ***13*** *00:09:18.6, 15°.40S×70°.50W, h183km, mB5.3/4*
MOS ***13*** *00:09:19.0±1.3, 15°.36S×70°.50W, h204km, mb5.0/16, Error ellipse: s-maj=12.3km s-min=7.3km az=118.2*
NEIC ***13*** *00:09:19.9±2.5, 15°.29S±0°.08×70°.4W±0°.1, h203km±4km, mb5.3/639, Mww5.1/37, Mwr5.0(GUC), Error ellipse: s-maj=14.7km s-min=10.4km az=67.0*
GUC ***13*** *00:09:19.1±0.6, 15°.78S×70°.88W, h224km±7km, ML5.1*
VAO ***13*** *00:09:19.0±0.4, 15°.33S×70°.43W, h200km±3km, mb5.5*
IDC ***13*** *00:09:20.0±0.8, 15°.22S×70°.29W, h200km±6km, mb4.7/21, mbtmp5.2/25, MS3.9/5, Error ellipse: s-maj=11.8km s-min=8.0km az=63.0*
GCMT ***13*** *00:09:23.2±0.2, 15°.40S±0°.01×70°.52W±0°.02, h203km±1km, MW5.1/117, Moment Tensor Solution. s53,c60; s117,c163; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.17±.15; Mθθ0.28±.16; Mφφ-0.45±.18; Mrθ4.16±.10; Mθφ-0.63±.15; Mφr-4.50±.12; Best double couple: Mw6.14500×10¹⁶ NP1:φs59.00000°, δ4.00000°, λ-169.00000°. NP2:φs318.00000°, δ89.00000°, λ-86.00000°. Principal axes: T 6.4870, Plg44.0000°, Azm44.0000°; N -0.6830, Plg4.0000°, Azm138.0000°; P -5.8030, Plg46.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
UCR ***13*** *00:09:40.5±1.8, 13°.63S×71°.78W, h202km, MW4.5*
ISC 13 00:09:17.9±0.5, 15°.40S±0°.03×70°.44W±0°.05, h190km±4km, **n1000,** σ1ᵗ**37**/771**, mb5.2**/347**, 30C-9D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB18	**Visviri**	**2.37**	**157**	Pn		**Pn**	**00 10 03.6**	**+3.4**
PB18	**Visviri**	**2.37**	**157**	⇑*i*P		**Pn**	**00 10 03.8**	**+3.6**
LPAZ	**La Paz**	**2.39**	**112**	P		**Pn**	**00 10 03.9**	**+3.4**
	972nm,0.4s,baz=334,slow=6.4,SNR=9121							
LPAZ				S		**Sn**	**00 10 37.0**	**+3.4**
	934nm,0.6s,baz=16,slow=20,SNR=8.2							
LPAZ				LR		LR	00 10 55.9	
	comp=Z,980nm,21.7s,baz=147,slow=41							
LPAZ	**La Paz**	**2.39**	**112**	*e*P		**Pn**	**00 10 02.4**	**+1.9**
AP01	**Chacalluta**	**2.96**	**178**	Pn		**Pn**	**00 10 06.9**	**+0.4**
AP01	**Chacalluta**	**2.96**	**178**	⇑*i*P		**Pn**	**00 10 06.9**	**+0.4**
AP01				*e*S		**Sn**	**00 10 43.7**	**-1.0**
PB12	**IPOC Station P**	**3.20**	**178**	Pn		**Pn**	**00 10 09.0**	**-0.6**
PB12	**IPOC Station P**	**3.20**	**178**	⇑*i*P		**Pn**	**00 10 09.6**	**0.0**
PB11	**IPOC Station P**	**4.40**	**170**	⇑*i*P		**Pn**	**00 10 24.5**	**-0.1**
GO01	**Chusmiza**	**4.41**	**165**	⇑*i*P		**Pn**	**00 10 26.4**	**+1.4**
TA02	**Huaiquique**	**4.86**	**177**	*e*P		**Pn**	**00 10 29.2**	**-1.0**
PB08	**IPOC Station P**	**4.87**	**166**	Pn		**Pn**	**00 10 31.5**	**+0.6**
PB08	**IPOC Station P**	**4.87**	**166**	⇑*e*P		**Pn**	**00 10 31.5**	**+0.6**
HMBC	**Humberstone**	**4.88**	**174**	Pn		**Pn**	**00 10 29.5**	**-1.2**
HMBC	**Humberstone**	**4.88**	**174**	⇑*e*P		**Pn**	**00 10 29.4**	**-1.2**
TA01	**Diego Aracena**	**5.15**	**177**	Pn		**Pn**	**00 10 32.6**	**-1.3**
TA01	**Diego Aracena**	**5.15**	**177**	⇑*e*P		**Pn**	**00 10 32.6**	**-1.3**
TA01	**Diego Aracena**	**5.15**	**177**	P		**Pn**	**00 10 32.8**	**-1.1**
TA01				S		**Sn**	**00 11 28.4**	**-5.5**
PATCX	**Punta Patache**	**5.40**	**177**	Pn		**Pn**	**00 10 36.0**	**-1.4**
PB01	**IPOC Station P**	**5.69**	**171**	Pn		**Pn**	**00 10 39.9**	**-1.2**
PB02	**IPOC Station P**	**5.91**	**175**	Pn		**Pn**	**00 10 42.9**	**-1.1**
PB03	**IPOC Station P**	**6.65**	**175**	Pn		**Pn**	**00 10 52.1**	**-1.5**
NNA	**Nana**	**7.09**	**298**	P		**Pn**	**00 10 59.1**	**-0.3**
	95nm,0.3s,baz=134,slow=10,SNR=74							
NNA				S		**Sn**	**00 12 16.5**	**-3.2**
	298nm,0.7s,baz=16,slow=7.5,SNR=7.9							
NNA	**Nana**	**7.09**	**298**	Pn		**Pn**	**00 10 58.3**	**-1.1**
NNA	**Nana**	**7.09**	**298**	*de*P		**Pn**	**00 10 58.6**	**-0.8**
NNA				pmax		pmax		
	comp=Z,222nm,0.7s							
NNA	**Nana**	**7.09**	**298**	P		**Pn**	**00 10 59.0**	**-0.4**
PB06	**IPOC Station P**	**7.32**	**174**	Pn		**Pn**	**00 11 00.5**	**-1.9**
AF01	**San Pedro de A**	**7.81**	**165**	Pn		**Pn**	**00 11 09.2**	**+0.2**
YJA	**Yavi**	**8.20**	**146**	*e*P		**Sn**	**00 12 44.9**	**-1.5**
SIV	**San Ignacio**	**9.04**	**95**	P		**Pn**	**00 11 25.0**	**+0.1**
	comp=Z,30nm,0.5s,baz=275,slow=13,SNR=112							
SIV				S		**Sn**	**00 13 00.6**	**-5.4**
	comp=Z,27nm,0.6s,baz=259,slow=17,SNR=3.1							
PB14	**IPOC Station P**	**9.18**	**180**	Pn		**Pn**	**00 11 25.4**	**-1.5**
GO02	**Mina Guanaco**	**9.75**	**175**	Pn		**Pn**	**00 11 33.1**	**-1.3**
VILB	**Vilhena**	**10.22**	**78**	Pn		**Pn**	**00 11 40.4**	**+0.1**
VILB	**Vilhena**	**10.22**	**78**	*e*P		**Pn**	**00 11 40.4**	**+0.1**
AC01	**Pan de Azucar**	**10.70**	**181**	Pn		**Pn**	**00 11 45.0**	**-1.3**
AC01	**Pan de Azucar**	**10.70**	**181**	P		**Pn**	**00 11 44.7**	**-1.7**
AC01				S		Sn	00 13 33.8	-12
PTLB	**Pontes e Lacer**	**10.90**	**92**	Pn		**Pn**	**00 11 49.7**	**+0.7**
PTLB	**Pontes e Lacer**	**10.90**	**92**	*e*P		**Pn**	**00 11 50.0**	**+1.0**
FSA	**Cafayete**	**11.44**	**155**	*e*P		**Pn**	**00 11 55.5**	**-0.6**
AC02	**Maricunga**	**11.45**	**174**	Pn		**Pn**	**00 11 56.8**	**+0.3**
AC02	**Maricunga**	**11.45**	**174**	*e*P		**Pn**	**00 11 57.7**	**+1.2**
AC02				*e*S		**Sn**	**00 13 59.6**	**-4.6**
GO03	**Copiapo**	**12.14**	**179**	*e*P		**Pn**	**00 12 05.8**	**+0.9**
AHML	**Horco Molle**	**12.29**	**158**	*e*P		**Pn**	**00 12 03.7**	**-3.1**
TINO	**Tinogasta**	**12.88**	**169**	*e*P		**Pn**	**00 12 14.7**	**+0.3**
TEFE	**Tefe**	**13.12**	**26**	*e*P		**Pn**	**00 12 17.3**	**0.0**
VCA	**Vinchina**	**13.44**	**172**	*e*P		**Pn**	**00 12 22.9**	**+1.5**
LCO	**Las Campanas**	**13.55**	**181**	Pn		**Pn**	**00 12 22.9**	**0.0**
LCO	**Las Campanas**	**13.55**	**181**	P		**Pn**	**00 12 22.9**	**0.0**
LCO	**Las Campanas**	**13.55**	**181**	P		**Pn**	**00 12 23.3**	**+0.4**
LCO				S		**Sn**	**00 14 48.9**	**-5.2**
CYA	**Choya**	**13.67**	**162**	*e*P		**P**	**00 12 26.1**	**-0.7**
AANI	**Anillaco**	**13.74**	**167**	*e*P		**P**	**00 12 27.2**	**-0.5**
PDRB	**Porto dos Gac**	**13.85**	**76**	*e*P		**Pn**	**00 12 26.8**	**+0.3**
BDQN	**Bodoquena, MS**	**13.96**	**113**	*e*P		**Pn**	**00 12 28.6**	**+0.8**
AGUA	**GUANDACOL**	**14.14**	**173**	*e*P		**P**	**00 12 32.1**	**+0.1**
SALV	**Santo Antonio**	**14.21**	**94**	*e*P		**P**	**00 12 32.4**	**-0.4**
MCRA	**Macar, Loja**	**14.41**	**319**	P		**Pn**	**00 12 33.7**	**+0.1**
	comp=Z,826nmcomp=Z,90nm,0.8s							
AROD	**Rodeo**	**14.73**	**177**	*e*P		**P**	**00 12 40.3**	**+1.5**
ACDV	**Cuesta del Vie**	**14.76**	**176**	*e*P		**P**	**00 12 40.3**	**+1.4**
AQDB	**Aquidauana**	**14.90**	**112**	P		**P**	**00 12 40.8**	**+0.4**
AQDB	**Aquidauana**	**14.90**	**112**	*e*P		**P**	**00 12 41.3**	**+0.8**
CLDB	**Colider**	**14.95**	**74**	*e*P		**Pn**	**00 12 40.3**	**+0.2**
PP1B	**Ponte de Pedra**	**15.08**	**101**	*e*P		**P**	**00 12 42.3**	**-0.1**
ACCO	**Cerro Coronel**	**15.17**	**175**	*e*P		**P**	**00 12 45.3**	**+1.6**
MACA	**Manacapuru-AM**	**15.49**	**39**	P		**P**	**00 12 47.2**	**+0.2**
MACA	**Manacapuru-AM**	**15.49**	**39**	*e*P		**P**	**00 12 47.3**	**+0.2**
RTLL	**Cerro Villicun**	**15.96**	**174**	ǁ*e*P		**Pn**	**00 12 53.8**	**+1.5**
ZON	**Zonda**	**16.16**	**175**	*e*P		**Pn**	**00 12 56.0**	**+1.3**
CFA	**Coronel Fontan**	**16.26**	**173**	P		**Pn**	**00 12 57.2**	**+1.3**
	comp=Z,45nm,0.7s,baz=350,slow=11,SNR=123							
CFA				S		**S**	**00 15 49.5**	**-6.2**
	comp=Z,5.3nm,0.7s,baz=227,slow=18,SNR=3.0							
RTLS	**Leoncito**	**16.36**	**177**	*e*P		**Pn**	**00 12 59.9**	**+2.5**
CPUP	**Villa Florida**	**16.37**	**134**	P		**Pn**	**00 12 58.3**	**+1.1**
	comp=Z,16nm,0.7s,baz=168,slow=11,SNR=44							
CPUP				ScP		**ScP**	**00 20 54.6**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=248,slow=5.4,SNR=4.4							
CPUP	**Villa Florida**	**16.37**	**134**	P		**P**	**00 12 56.5**	**0.0**
CPUP	**Villa Florida**	**16.37**	**134**	*e*P		**Pn**	**00 12 57.5**	**+0.3**
TCA	**Tanti**	**16.74**	**162**	*e*P		**Pn**	**00 13 01.6**	**-0.1**
AUSP	**Uspallata**	**16.78**	**177**	*e*P		**Pn**	**00 13 04.1**	**+1.8**
NPGB	**Novo Progresso**	**16.95**	**62**	*e*P		**Pn**	**00 13 05.0**	**-0.1**
ACAN	**Cantantal**	**17.06**	**171**	*e*P		**Pn**	**00 13 05.9**	**+0.5**
C2SB	**Chapadao do Su**	**17.15**	**104**	*e*P		**P**	**00 13 05.8**	**+0.5**
VA03	**San Esteban**	**17.29**	**180**	*e*P		**Pn**	**00 13 08.8**	**+0.5**
ARCO	**CERRO ARCO**	**17.42**	**176**	*e*P		**Pn**	**00 13 10.9**	**+1.1**
OTAV	**Otavalo**	**17.44**	**332**	Pn		**Pn**	**00 13 10.2**	**-0.3**
OTAV	**Otavalo**	**17.44**	**332**	P		**Pn**	**00 13 10.2**	**-0.3**
OTAV	**Otavalo**	**17.44**	**332**	P		**Pn**	**00 13 09.9**	**-0.6**
OTAV	**Otavalo**	**17.44**	**332**	*e*P		**P**	**00 13 08.2**	**-0.7**
CUSE	**Cuicocha Este**	**17.47**	**333**	P		**Pn**	**00 13 12.2**	**+1.3**
MRA	**San Martin**	**17.48**	**167**	*e*P		**Pn**	**00 13 10.5**	**0.0**
ROC1	**El Roble**	**17.51**	**182**	*e*P		**P**	**00 13 09.5**	**+0.1**
TULM	**Tulcn-Chalpat**	**17.58**	**335**	P		**Pn**	**00 13 13.5**	**+1.3**
	comp=Z,4µmcomp=Z,346nm,0.8s							
PAC1	**Pacto, Paraso**	**17.62**	**331**	P		**Pn**	**00 13 12.9**	**+0.6**
FLOC	**Florencia**	**17.64**	**343**	P		**P**	**00 13 09.5**	**-1.2**
FLOC	**Florencia**	**17.64**	**343**	P		**P**	**00 13 09.5**	**-1.2**
PEL	**Peldehue**	**17.67**	**181**	ǁ*e*P		**Pn**	**00 13 12.7**	**0.0**
PEL	**Peldehue**	**17.67**	**181**	P		**Pn**	**00 13 12.2**	**-0.4**
AAGR	**Agrelo**	**17.67**	**176**	*e*P		**Pn**	**00 13 13.7**	**+1.0**
MACC	**Macarena, Meta**	**17.75**	**349**	P		**P**	**00 13 10.0**	**-1.9**
	comp=Z,817nmcomp=Z,105nm,0.8s							
CMBC	**Cumbal**	**17.80**	**335**	P		**Pn**	**00 13 16.6**	**+1.9**
ARAG	**Araguaiana, MT**	**17.95**	**93**	*e*P		**P**	**00 13 14.5**	**+0.5**
MT16	**CCHEN**	**17.95**	**180**			**Pn**	**00 13 15.5**	**-0.5**
CRUC	**La Cruz**	**18.05**	**339**	P		**Pn**	**00 13 18.7**	**+1.2**
ITTB	**Itaituba**	**18.14**	**54**	*e*P		**P**	**00 13 17.2**	**+1.0**
GARC	**Garzon, Huila**	**18.17**	**344**	P		**P**	**00 13 15.5**	**-1.2**
	comp=Z,1µmcomp=Z,75nm,0.6s							
SNDB	**Serra Nova Dou**	**18.91**	**82**	*e*P		**P**	**00 13 25.7**	**+1.3**
TUMC	**Tumaco**	**18.97**	**334**	P		**Pn**	**00 13 26.8**	**-1.3**
RFA	**San Rafael**	**19.37**	**175**	*e*P		**Pn**	**00 13 31.1**	**-1.5**
PRAC	**Prado**	**19.49**	**347**	P		**P**	**00 13 30.3**	**-0.5**
JAMC	**Jamundi, Valle**	**19.50**	**341**	P		**P**	**00 13 32.0**	**+1.0**
	comp=Z,2µmcomp=Z,131nm,0.8s							
PSAL	**Palomas, Salto**	**19.53**	**145**	*e*P		**P**	**00 13 32.3**	**+1.3**
PTGB	**Pitanga**	**19.57**	**121**	*e*P		**P**	**00 13 32.5**	**+0.9**
ITRB	**Iturama**	**19.61**	**106**	*e*P		**P**	**00 13 32.9**	**+0.9**
VA04	**Juan Fernndez**	**19.69**	**201**	P		**P**	**00 13 33.3**	**+0.6**
ORTC	**Ortega, Tolima**	**19.76**	**346**	P		**P**	**00 13 32.8**	**-0.9**
	comp=Z,1µmcomp=Z,129nm,0.9s							
BOAV	**Boa Vista**	**20.22**	**30**	P		**P**	**00 13 39.4**	**+0.9**
BOAV	**Boa Vista**	**20.22**	**30**	*e*P		**P**	**00 13 37.4**	**-1.1**
BOAV	**Boa Vista**	**20.22**	**30**	P		**P**	**00 13 40.0**	**+1.5**
	comp=Z,2µmcomp=Z,183nm,1.6s							
ROSC	**El Rosal**	**20.47**	**349**	P		**P**	**00 13 41.6**	**0.0**
	comp=Z,31nm,0.6s,baz=143,slow=11,SNR=12							
ROSC				S		**S**	**00 17 24.3**	**+3.7**
	comp=Z,28nm,1.1s,baz=311,slow=20,SNR=2.5							
ROSC	**El Rosal**	**20.47**	**349**	P		**P**	**00 13 41.1**	**-0.5**
ITAB	**Concordia**	**20.69**	**128**	P		**P**	**00 13 43.1**	**-0.4**
ITAB	**Concordia**	**20.69**	**128**	*e*P		**P**	**00 13 43.3**	**-0.2**
MAL2	**Monte Alegre,**	**20.82**	**52**	P		**P**	**00 13 45.1**	**+0.1**
GUY2C	**Guyana, Caldas**	**21.06**	**346**	P		**P**	**00 13 47.1**	**-0.9**
	comp=Z,642nmcomp=Z,72nm,1.1s							
FRTB	**Fartura**	**21.20**	**115**	*e*P		**P**	**00 13 48.9**	**-0.1**
RUSC	**La Rusia**	**21.31**	**353**	P		**P**	**00 13 47.9**	**-2.8**
RUSC	**La Rusia**	**21.31**	**353**	P		**P**	**00 13 46.6**	**-4.0**
IPMB	**Ipameri, GO**	**21.44**	**100**	*e*P		**P**	**00 13 50.6**	**-0.9**
BB19B	**Bebedouro**	**21.55**	**108**	*e*P		**P**	**00 13 52.1**	**-0.5**
CPSB	**Cacapava Do Su**	**21.60**	**137**	*e*P		**P**	**00 13 52.9**	**0.0**
BDFB	**Brasilia**	**21.61**	**94**	P		**P**	**00 13 53.1**	**-0.2**
	comp=Z,47nm,0.6s,baz=267,slow=12,SNR=79							
	comp=Z,47nm,0.6s							
HELC	**Santa Helena**	**22.03**	**346**	P		**P**	**00 13 53.4**	**-4.5**
PRPB	**Parauapebas**	**22.21**	**68**	*e*P		**P**	**00 13 59.5**	**+0.3**
PLTB	**Pedras Altas**	**22.39**	**140**	P		**P**	**00 14 00.4**	**-0.3**
PLTB	**Pedras Altas**	**22.39**	**140**	*e*P		**P**	**00 14 00.8**	**+0.1**
PAMC	**Pamplona, Colo**	**22.70**	**354**	P		**P**	**00 14 03.4**	**-0.7**
	comp=Z,665nmcomp=Z,39nm,0.4s							
RCLB	**Rio Claro- Sao**	**22.75**	**111**	*e*P		**P**	**00 14 05.5**	**+1.4**
CNLB	**Canela**	**22.75**	**131**	*e*P		**P**	**00 14 04.7**	**+0.6**
DBBC	**Dabeiba**	**22.99**	**345**	P		**P**	**00 14 06.3**	**0.0**
SPB	**Sao Paulo**	**23.14**	**114**	P		**P**	**00 14 07.8**	**+0.3**
SPB	**Sao Paulo**	**23.14**	**114**	*e*P		**P**	**00 14 08.2**	**+0.7**
PMNB	**Patos De Minas**	**23.16**	**101**	*e*P		**P**	**00 14 08.2**	**+0.3**
SMTB	**Santa Maria do**	**23.25**	**76**	*e*P		**P**	**00 14 08.6**	**-0.1**
VAO	**Valinhos**	**23.40**	**112**	P		**P**	**00 14 09.9**	**-0.1**
VAO	**Valinhos**	**23.40**	**112**	*e*P		**P**	**00 14 10.1**	**+0.1**
PET01	**Itanhaem-SP**	**23.48**	**116**	*e*P		**P**	**00 14 11.5**	**+0.8**
TRQA	**Tornquist**	**23.78**	**163**	P		**P**	**00 14 12.9**	**-0.3**
TRQA	**Tornquist**	**23.78**	**163**	P		**P**	**00 14 12.9**	**-0.3**
SDV	**Santo Domingo**	**24.13**	**360**	P		**P**	**00 14 15.2**	**-1.6**
SDV	**Santo Domingo**	**24.13**	**360**	*e*P		**P**	**00 14 15.1**	**-1.6**
SDV	**Santo Domingo**	**24.13**	**360**	P		**P**	**00 14 15.4**	**-1.4**
	comp=Z,1µmcomp=Z,39nm,0.9s							
BAUV	**El Baul**	**24.30**	**6**	P		**P**	**00 14 17.1**	**-1.0**
LR04	**Corral**	**24.53**	**186**	P		**P**	**00 14 21.1**	**+1.1**
LR04					IAmb	IAmb	00 14 24.6	
	comp=Z,69nm,0.7s							
PARB	**Paraibuna**	**24.68**	**113**	*e*P		**P**	**00 14 21.8**	**+0.1**
LR05	**Currie**	**24.78**	**183**	P		**P**	**00 14 22.9**	**+0.7**
LR05					IAmb	IAmb	00 14 25.2	
	comp=Z,217nm,1.7s							
SDBA	**SAO DESIDERIO**	**24.96**	**86**	*e*P		**P**	**00 14 24.1**	**-0.1**
BSCB	**Bom Sucesso**	**24.99**	**107**	*e*P		**P**	**00 14 24.4**	**-0.1**
AZU	**Azuero**	**25.02**	**336**	*e*P		**P**	**00 14 24.9**	**+0.3**
PLCA	**Paso Flores**	**25.24**	**180**	P		**P**	**00 14 27.4**	**+0.9**
	comp=Z,18nm,0.5s,baz=350,slow=9.7,SNR=34							
PLCA				PcP		**PcP**	**00 17 55.8**	**+1.1**
	comp=Z,8.2nm,0.8s,baz=358,slow=3.8,SNR=6.8							
PLCA				ScP		**ScP**	**00 21 17.1**	**+1.0**
	comp=Z,4.3nm,1.0s,baz=338,slow=4.3,SNR=4.8							
	comp=Z,18nm,0.5s							
PLCA	**Paso Flores**	**25.24**	**180**	P		**P**	**00 14 26.4**	**-0.1**
PLCA					IAmb	IAmb	00 14 31.6	
	comp=Z,86nm,1.4s							
PLCA	**Paso Flores**	**25.24**	**180**	*e*P		**P**	**00 14 27.2**	**+0.6**
ARGC	**Ariguani, Magd**	**25.37**	**351**	P		**P**	**00 14 27.0**	**-0.8**
	comp=Z,1µmcomp=Z,102nm,0.5s							
GMAL	**Guarumal, Vera**	**25.38**	**334**	⇑*i*P		**P**	**00 14 30.5**	**+2.6**
TMAB	**Tom-Au,PA,Br**	**25.54**	**62**	*e*P		**P**	**00 14 29.3**	**-0.1**
SJCC	**San Jacinto, C**	**25.57**	**349**	P		**P**	**00 14 27.4**	**-2.3**
SJCC	**San Jacinto, C**	**25.57**	**349**	P		**P**	**00 14 28.3**	**-1.3**
	comp=Z,1µmcomp=Z,61nm,0.8s							
DIAM	**Diamantina, MG**	**25.77**	**100**	*e*P		**P**	**00 14 31.9**	**+0.3**
VAS01	**Vassouras-RJ**	**26.42**	**109**	*e*P		**P**	**00 14 37.8**	**+0.6**
SMRC	**Santa Marta, M**	**26.66**	**352**	P		**P**	**00 14 36.6**	**-2.7**
JEFFS	**S de V. Baru**	**26.75**	**333**	*e*P		**P**	**00 14 43.1**	**+2.8**
PBNVO	**Pueblo Nuevo,**	**26.80**	**333**	*e*P		**P**	**00 14 42.6**	**+2.0**
DMCAL	**E. de Neily**	**26.86**	**332**	*e*P		**P**	**00 14 43.1**	**+1.8**
BRU2	**Volcan**	**26.93**	**332**	P		**P**	**00 14 45.1**	**+3.1**
URI	**Uribia**	**26.97**	**357**	P		**P**	**00 14 38.4**	**-3.7**
JIME	**Puerto Jimenez**	**26.99**	**331**	*e*P		**P**	**00 14 48.5**	**+6.2**
ALCO	**Alturas Coton,**	**27.13**	**332**	*e*P		**P**	**00 14 45.2**	**+1.4**
EDP2	**Potrero Grande**	**27.34**	**332**	*e*P		**P**	**00 14 48.4**	**+2.9**
PSMG	**Mucurapo Girls**	**27.36**	**19**	*e*P		P	00 14 31.6	-14
TRN	**Trinidad (W)**	**27.38**	**20**	*e*P		**P**	**00 14 45.3**	**-0.5**
TRN	**Trinidad (W)**	**27.38**	**20**	*e*P		**P**	**00 14 46.5**	**+0.7**
DRK0	**Durika**	**27.59**	**332**	P		**P**	**00 14 50.4**	**+2.5**
DRK0	**Durika**	**27.59**	**332**	*e*P		**P**	**00 14 50.1**	**+2.2**
OCHAL	**Ojochal**	**27.63**	**331**	P		**P**	**00 14 46.6**	**-1.4**
LLO2	**Futaleuf**	**27.73**	**182**	P		**P**	**00 14 47.4**	**-1.2**
GO07	**Milladeo Hill,**	**27.76**	**185**	P		**P**	**00 14 48.7**	**-0.2**
CAM01	**Campos-RJ**	**27.98**	**108**	*e*P		**P**	**00 14 51.7**	**+0.5**
BUS1	**Rivas**	**28.08**	**331**	*e*P		**P**	**00 14 54.5**	**+2.0**
SJMB	**Sao Joao De Ma**	**28.14**	**101**	*e*P		**P**	**00 14 52.4**	**-0.3**
PIEC	**Cerro El Cedra**	**28.24**	**331**	*e*P		**P**	**00 14 55.8**	**+2.0**
PICV	**PH. Pirrs**	**28.35**	**330**	*e*P		**P**	**00 14 56.5**	**+2.0**
PAR1A	**Puntarenas Pro**	**28.36**	**330**	*e*P		**P**	**00 14 57.2**	**+2.7**
LCR2	**La Lucha 2**	**28.36**	**331**	P		**P**	**00 14 55.8**	**+1.0**
LCOCO	**El Coco**	**28.46**	**332**	*e*P		**P**	**00 14 57.9**	**+2.5**
ABRB	**Las Abras (San**	**28.46**	**332**	*e*P		**P**	**00 14 59.3**	**+3.6**
CVTV	**Tajo**	**28.

152A	Waverly Hall	49.71	344	IAmb	IAmb	00 17 51.1	
	comp=Z,75nm,0.9s						
Y57A	Sumter	50.05	349	IAmb	IAmb	00 17 53.1	
	comp=Z,61nm,0.7s						
HBVL	Hebbronville	50.33	327	IAmb	IAmb	00 18 00.8	
	comp=Z,53nm,0.6s						
BIRD	Birdtown, Kers	50.67	349	IAmb	IAmb	00 17 58.1	
	comp=Z,86nm,1.2s						
LRAL	Lakeview Retre	50.69	342	P	P	00 17 56.2	-2.0
146A	Union	50.98	340	IAmb	IAmb	00 18 00.7	
	comp=Z,82nm,0.7s						
PAULI	Pauline	51.10	348	IAmb	IAmb	00 18 02.1	
	comp=Z,179nm,1.8s						
Z47A	Carrollton	51.17	341	IAmb	IAmb	00 18 01.5	
	comp=Z,66nm,0.7s						
HKT	Hockley	51.30	332	P	P	00 18 03.4	+0.8
HKT				IAmb	IAmb	00 18 05.0	
	comp=Z,164nm,1.5s						
HKT	Hockley	51.30	332 *c i*	P	P	00 18 03.5	+0.8
HKT				pmax	pmax		
	comp=Z,42nm,1.1s						
HKT	Hockley	51.30	332	P	P	00 18 03.8	+1.1
HKT				PcP	PcP	00 19 16.2	+1.3
X51A	Calhoun	51.55	345	IAmb	IAmb	00 19 17.6	
	comp=Z,135nm,1.7s						
EF04	Eagle Ford 04	51.62	329	IAmb	IAmb	00 18 06.6	
	comp=Z,81nm,0.8s						
833A	Chaparral WMA,	51.72	327	IAmb	IAmb	00 18 07.7	
	comp=Z,100nm,0.8s						
MLDN	Muldoon	51.74	330	IAmb	IAmb	00 18 08.0	
	comp=Z,76nm,0.8s						
143A	Socs Landing,	51.87	337	IAmb	IAmb	00 18 08.4	
	comp=Z,158nm,1.3s						
V55A	Taylorsville	51.98	349	IAmb	IAmb	00 18 09.2	
	comp=Z,145nm,1.6s						
X48A	Hartselle	52.03	343	IAmb	IAmb	00 18 07.7	
	comp=Z,49nm,1.0s						
W50A	Signal Mountai	52.26	345	IAmb	IAmb	00 18 10.0	
	comp=Z,59nm,1.1s						
Y45A	Yeager Farm, C	52.26	340	P	P	00 18 08.7	-1.1
Y45A				IAmb	IAmb	00 18 09.9	
	comp=Z,48nm,0.6s						
U56A	King	52.31	350	IAmb	IAmb	00 18 11.3	
	comp=Z,143nm,1.7s						
SWET	Sewanee	52.44	344	IAmb	IAmb	00 18 10.5	
	comp=Z,40nm,0.9s						
U54A	Nelsons Funny	52.74	348	IAmb	IAmb	00 18 13.7	
	comp=Z,47nm,0.9s						
T57A	Hurt	52.77	351	IAmb	IAmb	00 20 04.0	
	comp=Z,97nm,1.7s						
OXF	Oxford	52.81	340	IAmb	IAmb	00 18 14.2	
	comp=Z,67nm,1.1s						
435B	Jarrell	52.82	330	IAmb	IAmb	00 19 22.7	
	comp=Z,58nm,0.7s						
Z41A	Richland Creek	52.89	336	P	P	00 18 13.7	-0.7
Z41A				IAmb	IAmb	00 18 15.6	
	comp=Z,73nm,1.0s						
BLA	Blacksburg	53.16	350	IAmb	IAmb	00 18 21.3	
	comp=Z,78nm,1.5s						
V48A	Smith Brothers	53.17	343	IAmb	IAmb	00 18 16.4	
	comp=Z,54nm,0.8s						
DRIO	Del Rio	53.24	327	IAmb	IAmb	00 18 18.8	
	comp=Z,82nm,0.9s						
WLAR	White Oak Lake	53.39	336	IAmb	IAmb	00 18 19.8	
	comp=Z,99nm,0.8s						
S57A	Dark Hollow, R	53.48	352	IAmb	IAmb	00 18 37.3	
	comp=Z,88nm,1.7s						
U49A	Red Boiling Sp	53.62	345	IAmb	IAmb	00 18 18.8	
	comp=Z,30nm,0.6s						
JCT	Junction City	53.66	328	IAmb	IAmb	00 18 23.2	
	comp=Z,39nm,0.7s						
WVT	Waverly	53.82	343	P	P	00 18 18.8	-2.3
WVT				IAmb	IAmb	00 18 20.4	
	comp=Z,50nm,0.8s						
WVT	Waverly	53.82	343	P	P	00 18 18.8	-2.3
WVT				pmax	pmax		
	comp=Z,49nm,0.9s						
WVT	Waverly	53.82	343	P	P	00 18 19.4	-1.8
WVT				PcP	PcP	00 19 22.6	-1.8
S54A	Dingess, Beckl	53.89	349	IAmb	IAmb	00 18 21.6	
	comp=Z,64nm,0.8s						
FW13	Cleburne	54.06	332	P	P	00 18 23.2	+0.2
UALR	University of	54.06	338	IAmb	IAmb	00 18 23.5	
	comp=Z,58nm,0.7s						
HBAR	Harrisburg	54.18	340	IAmb	IAmb	00 18 25.3	
	comp=Z,62nm,1.0s						
MIAR	Mount Ida	54.32	336	IAmb	IAmb	00 18 26.3	
	comp=Z,50nm,1.1s						
T47A	Sharon Grove	54.42	344	IAmb	IAmb	00 18 24.8	
	comp=Z,59nm,0.6s						
WHAR	Wooly Hollow	54.51	338	IAmb	IAmb	00 18 27.1	
	comp=Z,62nm,0.8s						
OZNA	Ozona	54.70	327	IAmb	IAmb	00 18 30.2	
	comp=Z,71nm,0.8s						
SLBS	Sierra La Lagu	54.77	314	P	P	00 18 28.4	+0.1
SLBS	Sierra La Lagu	54.77	314	P	P	00 18 29.4	+1.0
LCAR	Lake Charles	54.81	339	IAmb	IAmb	00 18 29.0	
	comp=Z,61nm,1.1s						
TXAR	Lajitas Array	54.84	324	P	P	00 18 29.1	+0.4
	comp=Z,18nm,0.6s,baz=150,slow=8.6,SNR=201						
TXAR				PcP	PcP	00 19 29.4	+0.8
	comp=Z,2.8nm,0.4s,baz=142,slow=4.7,SNR=5.4						
	comp=Z,18nm,0.6s						
TXAR	Lajitas Array	54.84	324	P	P	00 18 28.3	-0.4
R50A	Paris	54.96	347	IAmb	IAmb	00 18 29.3	
	comp=Z,76nm,1.4s						
Q54A	Coxs Mills	54.96	350	IAmb	IAmb	00 18 29.0	
	comp=Z,58nm,1.2s						
FCAR	Ozark Folk Cen	54.98	339	P	P	00 18 28.1	-1.5
Q52A	Bidwell	55.20	349	IAmb	IAmb	00 18 30.5	
	comp=Z,34nm,0.8s						
WCI	Wyandotte Cave	55.38	345	P	P	00 18 30.1	-2.2
WCI				IAmb	IAmb	00 18 30.9	
	comp=Z,32nm,0.6s						
WCI	Wyandotte Cave	55.38	345	P	P	00 18 30.1	-2.2
WCI				pmax	pmax		
	comp=Z,32nm,0.6s						
WCI	Wyandotte Cave	55.38	345	P	P	00 18 30.4	-1.9
USIN	University of	55.49	343	IAmb	IAmb	00 18 32.6	
	comp=Z,48nm,0.6s						
P53A	Whipple	55.55	350	IAmb	IAmb	00 18 33.4	
	comp=Z,53nm,0.7s						
SIUC	Southern Illin	55.70	342	P	P	00 18 32.9	-1.7
P52A	Corning	55.82	349	IAmb	IAmb	00 18 34.7	
	comp=Z,52nm,0.8s						
HHAR	Hobbs	56.00	337	P	P	00 18 35.5	-1.2
HHAR				IAmb	IAmb	00 18 37.2	
	comp=Z,44nm,0.5s						
MGMO	Mountain Grove	56.17	339	IAmb	IAmb	00 18 39.0	
	comp=Z,85nm,1.1s						
O53A	New Philadelph	56.26	350	P	P	00 18 36.6	-1.9
O53A				IAmb	IAmb	00 18 38.1	
	comp=Z,35nm,0.8s						
U38A	Gravette	56.30	337	IAmb	IAmb	00 18 40.2	
	comp=Z,48nm,1.2s						
BLO	Bloomington	56.33	345	IAmb	IAmb	00 19 35.4	
	comp=Z,54nm,0.8s						
P48A	Milroy	56.34	346	P	P	00 18 36.3	-2.8
P48A				IAmb	IAmb	00 18 38.2	
	comp=Z,83nm,1.5s						
ODSA	Odessa	56.38	327	IAmb	IAmb	00 18 40.7	
	comp=Z,81nm,0.8s						
PECS	Pecos	56.51	326	IAmb	IAmb	00 18 42.2	
	comp=Z,48nm,1.3s						
POST	Post	56.60	329	IAmb	IAmb	00 18 43.5	
	comp=Z,62nm,0.7s						
CCM	Cathedral Cave	56.65	340	P	P	00 18 39.2	-2.1
CCM				IAmb	IAmb	00 19 36.8	
	comp=Z,66nm,0.8s						
CCM	Cathedral Cave	56.65	340	P	P	00 18 39.2	-2.1
CCM				pmax	pmax		
	comp=Z,66nm,0.8s						
CCM	Cathedral Cave	56.65	340	P	P	00 18 40.4	-1.0
CCM				PcP	PcP	00 19 36.2	+0.9
WMOK	Wichita Mounta	56.67	332	IAmb	IAmb	00 18 43.6	
	comp=Z,40nm,0.8s						
WMOK	Wichita Mounta	56.67	332	P	P	00 18 41.5	-0.1
VHRN	Van Horn	56.68	324	IAmb	IAmb	00 18 43.2	
	comp=Z,49nm,0.8s						
N53A	Lisbon	56.74	351	IAmb	IAmb	00 18 41.6	
	comp=Z,44nm,0.9s						
Q44A	Meyer Farm, Va	56.75	343	IAmb	IAmb	00 18 41.4	
	comp=Z,118nm,1.3s						
M57A	Sunshine Farm,	56.78	354	IAmb	IAmb	00 19 49.1	
	comp=Z,141nm,1.9s						
DKNS	Dickens	56.80	330	IAmb	IAmb	00 18 44.2	
	comp=Z,55nm,0.7s						
O48B	Farmland	57.04	347	IAmb	IAmb	00 18 44.7	
	comp=Z,55nm,1.1s						
N51A	Ashland	57.11	349	IAmb	IAmb	00 18 43.5	
	comp=Z,39nm,0.8s						
N49A	Columbus Grove	57.47	348	IAmb	IAmb	00 18 46.0	
	comp=Z,72nm,0.7s						
BINY	Binghamton	57.53	355	IAmb	IAmb	00 19 10.6	
	comp=Z,161nm,2.0s						
P43A	Skiggs, Pawnee	57.58	343	IAmb	IAmb	00 18 46.8	
	comp=Z,60nm,0.8s						
MNTX	Cornudas Mount	57.59	325	P	P	00 18 47.1	-1.0
MNTX				IAmb	IAmb	00 18 49.5	
	comp=Z,54nm,1.1s						
L56A	Greenwood	57.62	354	IAmb	IAmb	00 19 25.3	
	comp=Z,92nm,1.8s						
N47A	Urbana	57.75	346	IAmb	IAmb	00 18 47.6	
	comp=Z,77nm,1.3s						
MSTX	Muleshoe	57.96	328	P	P	00 18 50.4	-0.3
MSTX				IAmb	IAmb	00 18 51.8	
	comp=Z,91nm,1.1s						
MMNY	Mt. Morris Dam	58.25	354	IAmb	IAmb	00 18 51.6	
	comp=Z,104nm,1.5s						
K50A	Casco	58.96	350	IAmb	IAmb	00 18 56.1	
	comp=Z,52nm,0.7s						
121A	Cookes Peak, D	59.57	324	IAmb	IAmb	00 19 04.2	
	comp=Z,36nm,0.8s						
319A	Douglas	59.61	322	IAmb	IAmb	00 19 03.8	
	comp=Z,35nm,0.6s						
R32A	Long Quarter,	59.74	334	P	P	00 19 03.0	+0.2
N38A	Joes South For	59.77	340	IAmb	IAmb	00 19 02.6	
	comp=Z,56nm,0.6s						
L42A	Oliver, Polo	59.81	343	IAmb	IAmb	00 19 49.2	
	comp=Z,47nm,0.8s						
J47A	Sunmer	59.82	348	IAmb	IAmb	00 19 02.0	
	comp=Z,50nm,0.8s						
L40A	Anamosa	60.30	342	IAmb	IAmb	00 19 51.7	
	comp=Z,68nm,1.2s						
DUN6	Lazy B Ranch	60.34	323	IAmb	IAmb	00 19 08.8	
	comp=Z,73nm,0.9s						
G65A	Princeton	60.36	2	P	P	00 19 05.3	-1.5
G65A				IAmb	IAmb	00 19 08.3	
	comp=Z,62nm,1.0s						
ABQ	Albuquerque	60.63	326	P	P	00 19 09.4	+0.3
ABQ				IAmb	IAmb	00 19 11.6	
	comp=Z,34nm,0.8s						
ANMO	Albuquerque	60.63	326	P	P	00 19 09.5	+0.3
ANMO				IAmb	IAmb	00 19 11.6	
	comp=Z,32nm,0.7s						
ANMO	Albuquerque	60.63	326 *c i*	P	P	00 19 09.7	+0.5
ANMO				pmax	pmax		
	comp=Z,42nm,1.0s						
ANMO	Albuquerque	60.63	326 ⇑	P	P	00 19 09.7	+0.5
ANMO				PcP	PcP	00 19 50.7	-0.8
TASM	ASL Pad, Albuq	60.63	326	IAmb	IAmb	00 19 11.7	
	comp=Z,34nm,0.7s						
TASM	ASL Pad, Albuq	60.63	326	IAmb	IAmb	00 19 11.7	
	comp=Z,34nm,0.7s						
TASM	ASL Pad, Albuq	60.63	326	IAmb	IAmb	00 19 11.7	
	comp=Z,34nm,0.7s						
MNTQ	Montreal, Queb	60.68	357	IAmb	IAmb	00 19 10.7	
	comp=Z,57nm,0.6s						
BBTS	Babate	61.08	63	P	P	00 19 12.7	+0.5
	comp=Z,62nm,1.0s,baz=163,slow=20						
	comp=Z,62nm,1.0s						
BUKO	Buck Lake	61.09	353	IAmb	IAmb	00 19 11.1	
	comp=Z,35nm,0.7s						
LMN	Caledonia Moun	61.17	4	P	P	00 19 10.7	-1.6
LMN				IAmb	IAmb	00 19 12.8	
	comp=Z,32nm,0.7s						
TUC	Tucson	61.18	321	P	P	00 19 12.8	+0.1
TUC	Tucson	61.18	321	P	P	00 19 12.8	+0.1
TUC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
T25A	Trinidad	61.28	329	IAmb	IAmb	00 19 16.4	
	comp=Z,46nm,0.8s						
I42A	Draeger Farm,	61.37	345	IAmb	IAmb	00 19 14.7	
	comp=Z,36nm,1.0s						
214A	Organ Pipe Nat	62.18	320	IAmb	IAmb	00 19 21.3	
	comp=Z,33nm,0.9s						
D62A	Allapoint, All	62.20	1	P	P	00 19 18.1	-1.1
X18A	Snowflake	62.26	324	IAmb	IAmb	00 19 22.4	
	comp=Z,46nm,1.1s						
G40A	Rib Lake	62.99	344	IAmb	IAmb	00 20 01.8	
	comp=Z,22nm,0.6s						
X16A	Lo Mia Camp, P	63.04	323	IAmb	IAmb	00 19 27.7	
	comp=Z,53nm,1.2s						
LDAQ	Lac Daran	63.08	359	IAmb	IAmb	00 19 26.0	
	comp=Z,30nm,0.6s						
113A	Mohawk Valley,	63.32	320	IAmb	IAmb	00 19 28.6	
	comp=Z,24nm,0.7s						
MVCO	Mesa Verde	63.42	327	IAmb	IAmb	00 19 29.8	
	comp=Z,30nm,0.7s						
Y14A	Wickenburg	63.64	321	IAmb	IAmb	00 19 30.7	
	comp=Z,22nm,0.6s						
WUAZ	Wupatki	63.78	323	P	P	00 19 30.1	0.0
WUAZ				IAmb	IAmb	00 19 32.6	
	comp=Z,39nm,0.8s						
ISCO	Idaho Springs	63.95	330	IAmb	IAmb	00 19 33.5	
	comp=Z,116nm,1.4s						
PV02	Paradox Valley	64.29	327	IAmb	IAmb	00 19 35.5	
	comp=Z,58nm,0.8s						
PV13	Radium Mtn., P	64.30	327	IAmb	IAmb	00 19 35.4	
	comp=Z,51nm,0.9s						
PV03	Paradox Valley	64.38	327	IAmb	IAmb	00 19 36.3	
	comp=Z,18nm,0.5s						
PV05	Paradox Valley	64.39	327	IAmb	IAmb	00 19 38.3	
	comp=Z,27nm,0.6s						
PV18	Skein Mesa, Pa	64.41	327	IAmb	IAmb	00 19 36.5	
	comp=Z,34nm,0.5s						
PV07	Paradox Valley	64.42	327	IAmb	IAmb	00 19 37.3	
	comp=Z,26nm,0.6s						
PV11	David Mesa, Pa	64.43	327	IAmb	IAmb	00 19 45.8	
	comp=Z,27nm,0.7s						
PV17	East Wray Mesa	64.46	327	IAmb	IAmb	00 19 36.8	
	comp=Z,17nm,0.6s						
PV16	Nyswonger Mesa	64.46	327	P	P	00 19 33.7	-0.8
PV16				IAmb	IAmb	00 19 36.8	
	comp=Z,16nm,0.5s						
PV19	Morning Glory	64.50	327	IAmb	IAmb	00 19 49.8	
	comp=Z,29nm,0.7s						
PV20	West Nyswonger	64.51	327	IAmb	IAmb	00 19 51.4	
	comp=Z,24nm,0.6s						
PV04	Paradox Valley	64.52	327	IAmb	IAmb	00 19 38.1	
	comp=Z,41nm,1.3s						
PV22	Blue Mesa, Par	64.56	327	IAmb	IAmb	00 19 37.0	
	comp=Z,33nm,0.8s						
PV10	Paradox Valley	64.58	327	IAmb	IAmb	00 19 38.5	
	comp=Z,30nm,0.8s						
PV23	Carpenter Ridg	64.62	327	IAmb	IAmb	00 19 39.9	
	comp=Z,38nm,0.9s						
CBX	Cerro Bola	64.87	318	IAmb	IAmb	00 19 40.0	
	comp=Z,45nm,0.9s						
U15A	North Rim	64.95	324	IAmb	IAmb	00 19 40.0	
	comp=Z,32nm,0.6s						
BELA	Bebrano 2	64.96	172	P	P	00 19 37.0	+0.1
BC3	Big Chuckawall	64.97	319	IAmb	IAmb	00 19 39.5	
	comp=Z,21nm,0.6s						
IRM	Iron Mountain	65.10	320	IAmb	IAmb	00 19 41.0	
	comp=Z,27nm,0.9s						
BAR	Barrett	65.11	318	IAmb	IAmb	00 19 41.0	
	comp=Z,32nm,0.8s						
HMU	Henry Mountain	65.16	326	IAmb	IAmb	00 19 44.8	
	comp=Z,49nm,0.8s						
HAYD	Hayden	65.30	330	IAmb	IAmb	00 19 43.4	
	comp=Z,104nm,1.5s						
O20A	White River Ci	65.49	329	IAmb	IAmb	00 19 43.1	
	comp=Z,36nm,0.7s						
PFO	Pinyon Flats O	65.57	319	P	P	00 19 42.0	+0.4
PFO	Pinyon Flats O	65.57	319 *c i*	P	P	00 19 42.7	+1.1
PFO				pmax	pmax		
	comp=Z,20nm,0.9s						
PFO	Pinyon Flats O	65.57	319	P	P	00 19 42.8	+1.2
PFO				PcP	PcP	00 20 11.7	0.0
DNR	Dunn Ranch,Anz	65.65	319	IAmb	IAmb	00 19 44.4	
	comp=Z,38nm,0.7s						
PKCU	Pink Cliffs	65.68	324	IAmb	IAmb	00 19 45.0	
	comp=Z,61nm,1.4s						
SRU	San Rafael Swe	65.90	327	IAmb	IAmb	00 19 46.2	
	comp=Z,48nm,0.6s						
TBO	Thunder Bay	65.95	346	IAmb	IAmb	00 19 45.0	
	comp=Z,54nm,1.4s						
V12A	Nelson	65.97	321	IAmb	IAmb	00 19 46.5	
	comp=Z,56nm,1.3s						
Q16A	Castle Valley	66.10	326	IAmb	IAmb	00 19 48.1	
	comp=Z,25nm,0.7s						
P18A	Preston Nutter	66.13	327	IAmb	IAmb	00 19 47.5	
	comp=Z,33nm,0.8s						
P17A	Butcher Ranch,	66.28	327	P	P	00 19 46.6	+0.5
P17A				IAmb	IAmb	00 19 48.1	
	comp=Z,52nm,0.9s						
VNA3	Neumayer Olymp	66.29	162 ⇑	P	P	00 19 47.2	+1.7
	comp=Z,9.1nm,0.5s						
CCUT	Cedar City	66.35	324	IAmb	IAmb	00 19 49.7	
	comp=Z,41nm,0.9s						
VNA1	Neumayer--Stat	66.49	161 ⇑	P	P	00 19 48.8	+2.1
	comp=Z,22nm,1.0s						
TCRU	Three Creeks R	66.58	325	IAmb	IAmb	00 19 50.6	
	comp=Z,34nm,0.8s						
RSSD	Black Hills	66.70	334	P	P	00 19 49.1	+0.4
RSSD				IAmb	IAmb	00 19 50.6	
	comp=Z,54nm,0.7s						
RSSD	Black Hills	66.70	334	P	P	00 19 49.1	+0.4
RSSD				pmax	pmax		
	comp=Z,55nm,0.7s						
RSSD	Black Hills	66.70	334	P	P	00 19 49.5	+0.8
SHOC	Shoshone, Teco	66.95	321	IAmb	IAmb	00 19 52.8	
	comp=Z,25nm,0.7s						
MWC	Mount Wilson	66.98	318	IAmb	IAmb	00 19 53.3	
	comp=Z,53nm,1.2s						
BSUT	Blindstream Ca	67.07	328	IAmb	IAmb	00 19 53.6	
	comp=Z,39nm,1.0s						
PRN	Pahroc Range	67.22	323	P	P	00 19 53.2	+1.2
PSUT	Pine Spring	67.31	324	IAmb	IAmb	00 19 56.1	
	comp=Z,32nm,0.7s						
GWY	Greenwater Val	67.38	321	IAmb	IAmb	00 19 55.3	
	comp=Z,32nm,0.7s						
JLU	Jordanelle	67.47	327	IAmb	IAmb	00 19 56.0	
	comp=Z,36nm,0.9s						
WSHM	Spangler Hills	67.50	320	IAmb	IAmb	00 19 55.8	
	comp=Z,44nm,0.6s						
TPNV	Topopah Spring	67.63	322	IAmb	IAmb	00 19 57.5	
	comp=Z,61nm,1.1s						
FURC	Furnace Creek,	67.68	321	IAmb	IAmb	00 19 57.6	
	comp=Z,71nm,0.8s						
WCT	Wildcat Mounta	67.75	321	IAmb	IAmb	00 19 57.8	
	comp=Z,36nm,0.7s						
MPMC	Manual Prospec	67.80	320	P	P	00 19 55.4	-0.3
TCUT	Toone Canyon	67.83	328	IAmb	IAmb	00 20 22.4	
	comp=Z,40nm,0.6s						
DUG	Dugway, Tooele	67.90	326	IAmb	IAmb	00 19 58.7	
	comp=Z,40nm,1.1s						
EPLO	Experimental L	67.98	344	IAmb	IAmb	00 19 56.5	
	comp=Z,39nm,0.5s						
PDAR	Pinedale Array	68.13	330	P	P	00 19 58.0	+0.3
	comp=Z,15nm,0.5s,baz=123,slow=8.1,SNR=181						
PDAR				PKP2ab	P'P'ab	00 48 16.8	+0.1
	comp=Z,1.0nm,1.1s,baz=280,slow=7.7,SNR=3.8						
	comp=Z,15nm,0.5s						
PDAR	Pinedale Array	68.13	330	P	P	00 19 57.4	-0.3
ISA	Isabella, Lake	68.16	319	IAmb	IAmb	00 20 00.1	
	comp=Z,26nm,0.6s						
HWUT	Hardware Ranch	68.27	328	IAmb	IAmb	00 20 01.0	
	comp=Z,33nm,0.7s						
GMN	Gold Mountain B	68.46	321	IAmb	IAmb	00 20 02.1	
	comp=Z,29nm,0.6s						
SNAA	Sanae	68.49	162 ⇑	P	P	00 20 00.0	+0.7
	comp=Z,338nm,0.6s						
SNAA	Sanae	68.49	162	P	P	00 20 00.1	+0.7
	comp=Z,11nm,0.5s,baz=286,slow=5.5,SNR=46						
	comp=Z,11nm,0.5s						
SNAA	Sanae	68.49	162 *d i*	P	P	00 20 00.1	+0.7
SNAA				*i* *PP	pP	00 20 49.3	+3.8
SNAA				pmax	pmax		
	comp=Z,15nm,0.6s						
DBIC	Dimbokro	68.55	76	P	P	00 19 59.9	-0.8
	comp=Z,89nm,0.6s,baz=270,slow=6.0,SNR=157						
	comp=Z,89nm,0.6s						
DBIC	Dimbokro	68.55	76	P	P	00 19 59.3	-1.3
DBIC	Dimbokro	68.55	76	P	P	00 19 60.0	-0.6
AHID	Auburn Hatcher	68.88	329	IAmb	IAmb	00 20 07.7	
	comp=Z,39nm,0.7s						
TIN	Tinemaha, Big	68.89	321	IAmb	IAmb	00 20 04.8	
	comp=Z,37nm,0.6s						
HVU	Hansel Valley	69.02	327	IAmb	IAmb	00 20 04.8	
	comp=Z,28nm,0.7s						
ULM	Lac du Bonnet	69.09	343	P	P	00 20 02.1	-1.1
	comp=Z,94nm,0.5s,baz=147,slow=6.1,SNR=72						
	comp=Z,94nm,0.5s						
ULM	Lac du Bonnet	69.09	343	P	P	00 20 01.9	-1.2
SNOW	Snow King Moun	69.23	330	IAmb	IAmb	00 20 06.0	
	comp=Z,27nm,0.7s						
LOHW	Long Hollow	69.27	330	IAmb	IAmb	00 20 14.6	
	comp=Z,28nm,0.7s						
NVAR	Mina Array Bea	69.83	322	P	P	00 20 09.6	+1.4
	comp=Z,11nm,0.7s,baz=130,slow=6.0,SNR=60						
NVAR				PP	PP	00 22 51.4	+5.9
	comp=Z,2.2nm,0.8s,baz=123,slow=6.7,SNR=4.2						
	comp=Z,11nm,0.7s						
NVAR	Mina Array Bea	69.83	322	P	P	00 20 08.5	+0.2
LKWY	Lake	69.88	331	IAmb	IAmb	00 20 11.8	
	comp=Z,106nm,1.2s						
YMP	Mirror Lake Pl	69.90	331	IAmb	IAmb	00 20 21.8	
	comp=Z,52nm,1.0s						
PMPB	Monarch Peak	69.98	318	IAmb	IAmb	00 20 11.8	
	comp=Z,42nm,0.7s						
YFT	Old Faithful	70.00	330	IAmb	IAmb	00 20 12.8	
	comp=Z,65nm,1.4s						
SCHQ	Schefferville	70.02	2	P	P	00 20 07.7	-1.1
	comp=Z,14nm,0.6s,baz=197,slow=6.7,SNR=33						
	comp=Z,14nm,0.6s						
YNR	Norris Junctio	70.13	331	IAmb	IAmb	00 20 12.6	
	comp=Z,77nm,1.4s						
HULI	Fort Hunter Li	70.14	318	P	P	00 20 11.3	+1.4
HULI				IAmb	IAmb	00 20 13.1	
	comp=Z,77nm,0.9s						
TROLL	Troll, Antarti	70.21	162 ⇑	P	P	00 20 11.3	+1.3
	comp=Z,301nm,0.3s						
YMR	Madison River	70.23	330	IAmb	IAmb	00 20 13.6	
	comp=Z,105nm,1.3s						
BBGB	Big Mountain B	70.35	319	IAmb	IAmb	00 20 16.8	
	comp=Z,60nm,0.8s						
YHB	Horse Butte	70.40	330	IAmb	IAmb	00 20 14.3	
	comp=Z,128nm,1.3s						
PNTR	Pine Nut	71.03	321	IAmb	IAmb	00 20 18.4	
	comp=Z,44nm,0.7s						
BCYI	Bear Canyon	71.16	329	IAmb	IAmb	00 20 18.9	
	comp=Z,79nm,1.8s						
MHC	Mount Hamilton	71.20	319	P	P	00 20 17.0	+0.5
MHC	Mount Hamilton	71.20	319	P	P	00 20 17.0	+0.5
MHC	

L04D **Klamath Falls** 74.59 323 lAmb lAmb 00 20 37.6
comp=Z,26nm,0.7s
KMPM **Mount Pierce** 74.59 320 lAmb lAmb 00 20 38.8
comp=Z,38nm,0.7s
KHMM **Horse Mountain** 74.62 321 lAmb lAmb 00 20 40.5
comp=Z,30nm,0.7s
J05D **Fort Rock, OR** 74.64 324 lAmb lAmb 00 20 39.1
comp=Z,57nm,1.3s
QSPA **South Pole Qui** 74.76 180 P P **00 20 40.4 +3.5**
comp=Z,8.8nm,0.7s,baz=158,slow=2.8,SNR=30
comp=Z,8.8nm,0.7s
QSPA **South Pole Qui** 74.76 180 P P **00 20 39.5 +2.6**
QSPA **South Pole Qui** 74.76 180 P P 00 20 42.0 +5.1
JCC **Jacoby Creek,** 74.77 321 lAmb lAmb 00 20 40.1
comp=Z,43nm,1.1s
PINE **Pine Mountain** 74.79 325 lAmb lAmb 00 20 40.4
comp=Z,64nm,1.1s
FFC **Flin Flon** 74.81 342 P P **00 20 36.5 -0.6**
FFC **Flin Flon** 74.81 342 P P **00 20 36.5 -0.6**
FFC pmax pmax
comp=Z,15nm,0.7s
FFC **Flin Flon** 74.81 342 P P **00 20 37.2 +0.1**
KRPM **Rodgers** 74.97 321 lAmb lAmb 00 20 41.0
comp=Z,37nm,0.8s
J04A **Umpqua Nationa** 75.11 324 lAmb lAmb 00 20 41.6
comp=Z,67nm,0.9s
KSXB **Camp Six Broad** 75.28 322 lAmb lAmb 00 20 42.5
comp=Z,32nm,0.7s
I05D **Terrebonne, OR** 75.36 325 lAmb lAmb 00 20 43.0
comp=Z,61nm,0.6s
WIFE **Three Sisters-** 75.45 324 lAmb lAmb 00 20 43.4
comp=Z,38nm,0.6s
HAWA **Hanford** 75.72 327 lAmb lAmb 00 20 45.1
comp=Z,32nm,0.8s
D08A **Wollman Farm,** 75.84 328 lAmb lAmb 00 20 45.9
comp=Z,90nm,1.8s
G05A **Wamic** 75.92 326 lAmb lAmb 00 20 46.9
comp=Z,69nm,1.0s
WAH2 **Wahluke Slope** 75.97 328 lAmb lAmb 00 20 46.0
comp=Z,23nm,0.6s
E07A **Sunnyside** 76.00 327 P P **00 20 45.1 +1.1**
C09A **Chrisman Ranch** 76.02 329 lAmb lAmb 00 20 46.8
comp=Z,82nm,1.3s
H04A **Detroit Lake** 76.05 325 lAmb lAmb 00 20 45.9
comp=Z,30nm,0.6s
I03D **Drain, OR** 76.10 323 lAmb lAmb 00 20 47.1
comp=Z,31nm,0.8s
HOOD **Mount Hood Mea** 76.16 326 lAmb lAmb 00 20 50.8
comp=Z,56nm,0.8s
KEBM **Edson Butte** 76.18 322 lAmb lAmb 00 20 48.8
comp=Z,60nm,1.0s
BUCK **Buck Mountain** 76.20 324 lAmb lAmb 00 20 47.5
comp=Z,62nm,1.0s
G04A **Mulino** 76.54 325 lAmb lAmb 00 20 49.4
comp=Z,71nm,0.8s
COR **Corvallis** 76.62 324 P P **00 20 48.3 +0.8**
COR lAmb lAmb 00 20 50.1
comp=Z,52nm,0.7s
COR **Corvallis** 76.62 324 P P **00 20 48.3 +0.8**
COR pmax pmax
comp=Z,52nm,0.7s
TORD **Torodi Ar. Bea** 76.78 72 P P **00 20 48.3 -0.8**
comp=Z,88nm,0.7s,baz=266,slow=3.7,SNR=59
comp=Z,88nm,0.7s
TORD **Torodi Ar. Bea** 76.78 72 P P **00 20 48.0 -1.1**
TORD lAmb lAmb 00 20 49.7
comp=Z,66nm,0.8s
LTY **Liberty** 76.88 327 lAmb lAmb 00 20 51.6
comp=Z,58nm,1.5s
G03D **McMinnville, O** 76.98 325 lAmb lAmb 00 20 54.1
comp=Z,48nm,1.3s
F04D **Rainier, OR** 77.38 325 lAmb lAmb 00 20 54.3
comp=Z,58nm,0.8s
D05A **Enumclaw** 77.52 327 lAmb lAmb 00 20 54.8
comp=Z,66nm,0.8s
E03A **Lebam** 77.96 326 lAmb lAmb 00 20 57.4
comp=Z,46nm,0.7s
PFVI **Vila Bisbo** 78.00 46 eP P **00 20 55.9 +0.5**
PFVI i lAmb lAmb 00 20 57.1
comp=Z,72nm,0.9s
MORF **Marmelete** 78.20 46 eP P **00 20 57.2 +0.6**
MORF lAmb lAmb 00 20 58.5
comp=Z,70nm,0.9s
MORF **Marmelete** 78.20 46 P P **00 20 56.7 +0.1**
MORF lAmb lAmb 00 20 58.7
comp=Z,72nm,0.9s
MORF **Marmelete** 78.20 46 eP P **00 20 57.6 +1.0**
MORF i lAmb lAmb 00 20 58.9
comp=Z,84nm,0.9s
MORF **Marmelete** 78.20 46 eP P **00 20 57.2 +0.6**
PTEO **Sao Teotonio** 78.27 46 eP P **00 20 58.3 +1.4**
PTEO i lAmb lAmb 00 20 59.5
comp=Z,158nm,1.2s
NLWA **Neilton Lookou** 78.65 326 lAmb lAmb 00 21 01.3
comp=Z,35nm,0.7s
PBDV **Barranco-do-Ve** 78.67 46 eP P **00 21 00.3 +1.1**
PBDV i lAmb lAmb 00 21 02.1
comp=Z,70nm,1.4s
MESJ **Messejana** 78.77 46 eP P **00 21 00.1 +0.5**
MESJ lAmb lAmb 00 21 01.9
comp=Z,41nm,0.9s
MESJ **Messejana** 78.77 46 eP P **00 21 00.7 +1.1**
MESJ i lAmb lAmb 00 21 01.8
comp=Z,58nm,1.1s
MESJ **Messejana** 78.77 46 eP P **00 21 00.1 +0.5**
PCVE **Castro Verde** 78.79 46 eP P **00 21 00.9 +1.2**
PCVE i lAmb lAmb 00 21 01.5
comp=Z,52nm,0.9s
B04A **Port Angeles** 78.86 327 lAmb lAmb 00 21 02.9
comp=Z,132nm,2.0s
PVAQ **Vaqueiros** 78.90 46 eP P **00 21 00.9 +0.5**
PVAQ i lAmb lAmb 00 21 03.4
comp=Z,40nm,1.5s
MD01 **Midelt array s** 78.94 51 P P **00 21 01.0 +0.2**
MOE **Montemor** 79.02 45 eP P **00 21 00.4 -0.5**
MOE i lAmb lAmb 00 21 03.5
comp=Z,65nm,1.3s
PBEJ **Beja** 79.10 46 eP P **00 21 02.4 +1.0**
PBEJ i lAmb lAmb 00 21 03.5
comp=Z,51nm,1.2s
PGC **Sidney** 79.20 327 lAmb lAmb 00 21 03.9
comp=Z,30nm,0.7s
PSBE **So Bento** 79.21 44 eP P **00 21 03.0 +1.0**
PSBE i lAmb lAmb 00 21 03.5
comp=Z,76nm,1.1s
PARRA **Arraiolos** 79.37 45 eP P **00 21 02.5 -0.4**
PARRA i lAmb lAmb 00 21 04.7
comp=Z,55nm,1.2s
PMTG **Montargil** 79.37 44 eP P **00 21 03.3 +0.5**
PMTG i lAmb lAmb 00 21 05.2
comp=Z,91nm,1.6s
PSARD **Sardoal** 79.68 44 eP P **00 21 04.4 -0.1**
PSARD i lAmb lAmb 00 21 06.0
comp=Z,96nm,1.2s
PCAS **Casmilo, Conde** 79.68 44 eP P **00 21 04.9 +0.4**
PESTR **Estremoz** 79.70 45 eP P **00 21 05.7 +1.0**
PESTR i lAmb lAmb 00 21 06.7
comp=Z,75nm,1.1s
PBAR **Barrancos** 79.75 46 eP P **00 21 05.7 +0.8**
PBAR i lAmb lAmb 00 21 06.3
comp=Z,36nm,1.0s
PMRV **Marv??o** 80.11 44 eP P **00 21 06.8 -0.1**
PCBR **Castelo Branco** 80.25 44 eP P **00 21 08.2 +0.6**
PCBR i lAmb lAmb 00 21 08.9
comp=Z,42nm,1.2s
PVIS **Viseu** 80.41 43 eP P **00 21 08.6 +0.1**
MTE **Manteigas** 80.48 44 lAmb lAmb 00 21 10.1
comp=Z,47nm,1.0s
MTE **Manteigas** 80.48 44 eP P **00 21 08.6 -0.3**
MTE i lAmb lAmb 00 21 10.3
comp=Z,68nm,1.1s
PVRL **Vila Real** 80.80 43 eP P **00 21 10.5 0.0**
PCAB **Cabril** 80.82 42 eP P **00 21 11.4 +0.8**
PCAB i lAmb lAmb 00 21 33.0
comp=Z,128nm,2.0s
CBB **Campbell River** 81.04 328 lAmb lAmb 00 21 14.2
comp=Z,64nm,1.2s
MVO **Moncorvo** 81.20 43 eP P **00 21 13.0 +0.4**
SBA **Scott Base** 81.54 190 P P **00 21 15.6 +1.8**
SBA **Scott Base** 81.54 190 P P **00 21 15.6 +1.8**
SBA pmax pmax
comp=Z,27nm,1.8s
PBRG **Braganca** 81.70 43 eP P **00 21 15.4 +0.1**
PBRG i lAmb lAmb 00 21 17.5
comp=Z,74nm,1.6s
WIN **Windhoek** 82.01 111 lAmb lAmb 00 21 19.7
comp=Z,43nm,1.1s
ESDC **Sonseca Array** 82.57 46 P P **00 21 20.1 +0.2**
comp=Z,29nm,0.8s,baz=253,slow=5.3,SNR=105
comp=Z,29nm,0.8s
ESDC **Sonseca Array** 82.57 46 P P **00 21 19.5 -0.4**
ESDC lAmb lAmb 00 21 21.6
comp=Z,41nm,1.0s
ESBB **Sonseca Array** 82.57 46 lAmb lAmb 00 21 21.5
comp=Z,46nm,0.9s
VNDA **Vanda** 82.58 190 P P **00 21 20.8 +1.6**
comp=Z,3.2nm,0.9s,baz=136,slow=5.0,SNR=22
VNDA LR LR 00 54 07.6
comp=Z,37nm,18.4s,baz=142,slow=32
comp=Z,3.2nm,0.9s
VNDA **Vanda** 82.58 190 P P **00 21 20.0 +0.8**
VNDA **Vanda** 82.58 190 P P **00 21 20.8 +1.6**
VNDA pP pP **00 22 09.4 +2.4**
SYO **Syowa Base** 82.70 160 eP P **00 21 20.6 +0.7**
SYO **Syowa Base** 82.70 160 ePcP PcP **00 21 22.8 -1.6**
SUR **Sutherland** 82.94 122 P P **00 21 23.5 +1.3**
SUR lAmb lAmb 00 21 25.2
comp=Z,38nm,0.9s
TSUM **Tsumeb** 83.24 108 P P **00 21 24.6 +0.7**
TAM **Tamanrasset** 83.44 64 P P **00 21 25.5 +0.8**
SFJD **Kangerlussuaq** 83.45 8 P P **00 21 22.0 -1.6**
SFJD lAmb lAmb 00 21 23.5
comp=Z,31nm,0.9s
ANGG **Ammassalik, Gr** 84.46 13 P P **00 21 28.9 +0.2**
ANGG lAmb lAmb 00 21 29.8
comp=Z,69nm,1.1s
KOOLE **Kule** 84.68 112 P P **00 21 32.1 +0.9**
YKAW1 **Yellowknife Wh** 84.93 341 lAmb lAmb 00 21 32.5
comp=Z,89nm,0.8s
YKA **Yellowknife Ar** 84.98 341 P P **00 21 31.7 +0.3**
comp=Z,69nm,0.8s,baz=142,slow=4.5,SNR=176
comp=Z,69nm,0.8s
YKA **Yellowknife Ar** 84.98 341 P P **00 21 31.3 -0.1**
YKAW3 **Yellowknife Wh** 85.03 341 lAmb lAmb 00 21 33.1
comp=Z,98nm,0.7s
GRTLG **Ghanzi** 86.01 111 lAmb lAmb 00 21 39.3
comp=Z,36nm,0.8s
GRTLG **Ghanzi** 86.01 111 P P **00 21 38.3 +0.6**
TOAD **Toad River Com** 86.35 335 P P **00 21 38.7 +0.4**
baz=128,SNR=25
PHPEN **Phepeng** 86.40 115 lAmb lAmb 00 21 41.6
comp=Z,63nm,1.2s
PHPEN **Phepeng** 86.40 115 P P **00 21 40.1 +0.6**
QNGWA **Qangwa** 86.44 109 lAmb lAmb 00 21 41.3
comp=Z,21nm,0.7s
QNGWA **Qangwa** 86.44 109 P P **00 21 40.5 +0.7**
DIB **Dawson Inlet,** 86.49 328 lAmb lAmb 00 21 41.0
comp=Z,50nm,0.9s
KGCAE **Kacgae** 86.51 113 lAmb lAmb 00 21 41.9
comp=Z,61nm,1.0s
KGCAE **Kacgae** 86.51 113 P P **00 21 40.8 +0.6**
KOTAN **Kotaneelee Air** 86.68 336 P P **00 21 40.8 +1.0**
baz=129,SNR=18
XAUDM **Khaudum** 86.84 108 P P **00 21 42.9 +1.1**
LIRD **Liard River Hi** 87.05 335 P P **00 21 42.2 +0.6**
baz=127,SNR=19
V35K **Ketchikan** 87.18 330 P P **00 21 43.5 +1.2**
baz=122
CEST **Esterri de Car** 87.37 45 P P **00 21 44.2 +0.4**
CEST lAmb lAmb 00 21 46.8
comp=Z,45nm,1.1s
GMARE **Gumare** 87.38 109 P P **00 21 44.6 +0.3**
GMARE lAmb lAmb 00 21 46.1
comp=Z,37nm,0.9s
GMARE **Gumare** 87.38 109 P P **00 21 45.4 +1.0**
T35M **Bob Quinn** 87.44 332 P P **00 21 45.0 +1.4**
baz=123
SKOMA **Sekoma** 87.60 115 P P **00 21 46.2 +0.9**
BOSA **Boshof** 87.62 119 P P **00 21 45.9 +0.5**
comp=Z,7.6nm,0.7s,baz=281,slow=4.0,SNR=14
BOSA LR LR 00 59 13.4
comp=Z,52nm,19.2s,baz=352,slow=34
comp=Z,7.6nm,0.7s
CRAG **Craig** 87.99 330 P P **00 21 47.0 +0.8**
baz=121
MAKGR **Makgori** 88.00 116 P P **00 21 48.0 +0.8**
WRAK **Wrangell Islan** 88.11 331 lAmb lAmb 00 21 48.9
comp=Z,57nm,1.1s
WRAK **Wrangell Islan** 88.11 331 P P **00 21 47.9 +1.2**
baz=122
DLBC **Dease Lake** 88.14 333 P P **00 21 48.4 +1.5**
baz=124
U33K **Whale Pass** 88.32 330 P P **00 21 48.9 +1.2**
baz=121
S34M **Telegraph Cree** 88.34 332 lAmb lAmb 00 21 50.4
comp=Z,55nm,1.0s
S34M **Telegraph Cree** 88.34 332 P P **00 21 49.3 +1.5**
baz=123,SNR=12
WRGLY **Wrigley** 88.42 339 lAmb lAmb 00 21 49.7
comp=Z,57nm,1.0s
WRGLY **Wrigley** 88.42 339 P P **00 21 49.0 +1.0**
baz=130
KDWAN **Kaudwane** 88.55 114 P P **00 21 50.8 +1.0**
WTLY **Watson Lake, Y** 88.57 335 P P **00 21 50.3 +1.4**
baz=125,SNR=31
LBTB **Lobatse** 88.91 116 LR LR 00 58 38.1
comp=Z,32nm,18.6s,baz=320,slow=33
LBTB **Lobatse** 88.91 116 P P **00 21 50.9 -0.6**
LBTB **Lobatse** 88.91 116 P P **00 21 50.9 -0.6**
LBTB pmax pmax
comp=Z,15nm,0.8s
R33M **Jennings River** 89.08 334 P P **00 21 52.9 +1.5**
baz=123
TGTN **Hyland Airport** 89.17 336 P P **00 21 53.4 +1.7**
baz=125,SNR=37
PHDHD **Phududuu** 89.31 111 lAmb lAmb 00 21 55.3
comp=Z,24nm,0.8s
Q32M **Nakina River** 89.41 333 P P **00 21 54.6 +1.5**
baz=122
LPHEP **Lephephe** 89.61 114 P P **00 21 55.8 +1.0**
KHWEE **KHWEE** 89.64 113 P P **00 21 55.9 +0.9**
S32K **Killisnoo** 89.70 331 P P **00 21 55.3 +1.2**
baz=120,SNR=5.7
SIT **Sitka** 89.85 330 P P **00 21 56.5 +1.6**
baz=119
R32K **Eaglecrest** 90.07 332 lAmb lAmb 00 21 58.4
comp=Z,40nm,0.7s
R32K **Eaglecrest** 90.07 332 P P **00 21 57.4 +1.5**
baz=120,SNR=9.0
KULLO **Kullorsuaq** 90.17 4 P P **00 21 55.9 -0.1**
KULLO lAmb lAmb 00 21 57.4
comp=Z,18nm,0.8s
EKA **Eskdalemuir Ar** 90.21 32 P P **00 21 55.2 -1.4**
comp=Z,1.2nm,0.5s,baz=238,slow=4.8,SNR=12
comp=Z,1.2nm,0.5s
SUMG **Summit** 90.29 9 lAmb lAmb 00 21 59.5
comp=Z,27nm,0.8s
SUMG **Summit** 90.29 9 P P **00 21 57.4 +0.2**
SUMG lAmb lAmb 00 21 59.8
comp=Z,31nm,0.9s
P33M **Teslin, Yukon** 90.31 334 lAmb lAmb 00 21 59.2
comp=Z,43nm,1.1s
P33M **Teslin, Yukon** 90.31 334 P P **00 21 58.2 +1.1**
baz=121,SNR=12
P32M **Atlin** 90.37 333 lAmb lAmb 00 21 59.6
comp=Z,34nm,0.9s
P32M **Atlin** 90.37 333 P P **00 21 58.6 +1.2**
baz=120,SNR=9.2
BESE **Bessie Mountai** 90.38 332 lAmb lAmb 00 21 59.9
comp=Z,53nm,1.0s
KSANE **Kasane** 90.54 109 P P **00 22 00.3 +1.1**
MAW **Mawson** 90.56 164 P P **00 21 58.6 +0.5**
comp=Z,12nm,0.9s,baz=230,slow=5.5,SNR=12
comp=Z,12nm,0.9s
S31K **Pelican** 90.71 331 P P **00 22 00.1 +1.3**
baz=118
KEST **Kesra** 90.81 53 P P **00 21 59.4 -0.6**
comp=Z,15nm,1.0s,baz=314,slow=5.4,SNR=7.2
comp=Z,15nm,1.0s
KEST **Kesra** 90.81 53 P P **00 22 02.7 +2.8**
N32M **Quiet Lake** 90.91 334 lAmb lAmb 00 22 02.0
comp=Z,28nm,0.8s
N32M **Quiet Lake** 90.91 334 P P **00 22 00.8 +1.0**
baz=121,SNR=6.0
SKAG **Skagway** 91.02 332 P P **00 22 01.4 +1.1**
baz=119
RES **Resolute Bay** 91.21 354 lAmb lAmb 00 22 02.8
comp=Z,35nm,1.7s
MREMI **Moremi** 91.24 114 lAmb lAmb 00 22 05.4
comp=Z,21nm,0.8s
MREMI **Moremi** 91.24 114 P P **00 22 03.5 +1.2**
WHY **Whitehorse** 91.42 334 P P **00 22 03.1 +0.9**
baz=120
PLBC **Pleasant Camp** 91.48 332 P P **00 22 03.8 +1.4**
baz=118
BROLN **Tlhalogang** 91.57 112 P P **00 22 04.8 +0.9**
TULEG **Thule** 91.75 0 P P **00 22 03.5 +0.2**
SCO **Scoresbysund** 91.93 15 P P **00 22 04.9 +0.7**
SCO lAmb lAmb 00 22 05.6
comp=Z,9.5nm,1.0s
M31M **Drury Creek, Y** 91.98 335 P P **00 22 05.8 +1.2**
baz=120
O30N **Mendenhall** 91.99 333 P P **00 22 05.9 +1.1**
baz=118
P30M **Million Dollar** 92.06 333 P P **00 22 06.4 +1.2**
baz=118
P29M **Windy Craggy** 92.19 332 P P **00 22 06.6 +0.9**
baz=117
N31M **Braeburn, Yuko** 92.20 334 lAmb lAmb 00 22 07.5
comp=Z,22nm,0.9s
N31M **Braeburn, Yuko** 92.20 334 P P **00 22 06.5 +0.7**
baz=119
HYT **Haines Junctio** 92.63 333 lAmb lAmb 00 23 15.8
comp=Z,26nm,1.5s
HYT **Haines Junctio** 92.63 333 P P **00 22 08.7 +0.8**
baz=117
N30M **Aishikik Lake** 92.74 334 P P **00 22 09.0 +0.7**
baz=118,SNR=6.3
O29M **Mount Kennedy** 92.86 332 P P **00 22 09.7 +0.8**
baz=116
PNL **Peninsula** 92.96 332 P P **00 22 10.3 +1.1**
baz=116
YUK6 **Outpost Mounta** 93.06 333 P P **00 22 11.0 +1.0**
baz=116
M30M **Minto, Yukon** 93.14 335 P P **00 22 10.4 +0.3**
baz=118,SNR=6.2
NEEM **North Greenlan** 93.35 4 P P **00 22 10.9 -0.2**
NEEM lAmb lAmb 00 22 13.0
comp=Z,45nm,1.1s
YUK4 **Talbot Arm** 93.36 333 P P **00 22 12.1 +0.8**
baz=116,SNR=5.6
PINM **Pinnacle** 93.53 332 P P **00 22 12.7 +0.7**
baz=115
H31M **Peel River** 93.76 338 P P **00 22 13.4 +0.5**
baz=120,SNR=18
M29M **Somme Creek** 93.77 334 P P **00 22 14.0 +1.0**
baz=116
O28M **Mount Upton** 93.79 333 P P **00 22 14.2 +0.8**
baz=115
YUK8 **Steele Glacier** 93.82 333 P P **00 22 14.0 +0.5**
baz=115
J30M **Hart River** 93.90 337 P P **00 22 14.3 +0.7**
baz=118
L29M **L29M** 93.93 335 P P **00 22 14.4 +0.7**
baz=116,SNR=19
K29M **Barlow Dome** 94.02 336 P P **00 22 14.6 +0.4**
baz=117,SNR=5.7
LSZ **Lusaka** 94.04 107 P P **00 22 17.0 +1.6**
LSZ **Lusaka** 94.04 107 P P **00 22 14.7 -0.7**
LSZ **Lusaka** 94.04 107 P P **00 22 17.0 +1.6**
LSZ pmax pmax
comp=Z,7.0nm,1.2s
BFO **Black Forest** 94.08 41 P P **00 22 15.7 +1.0**
I30M **Mount Dempster** 94.22 337 P P **00 22 15.6 +0.5**
baz=118,SNR=12
G31M **Satah River** 94.29 339 lAmb lAmb 00 22 16.3
comp=Z,26nm,0.7s
G31M **Satah River** 94.29 339 P P **00 22 15.5 +0.3**
baz=120,SNR=12
YUK3 **Moose Creek** 94.33 333 P P **00 22 16.2 +0.5**
baz=115,SNR=6.5
MESA **MESA** 94.34 332 P P **00 22 16.1 +0.3**
baz=113
F31M **Tsiigehtchic** 94.37 340 lAmb lAmb 00 22 16.7
comp=Z,20nm,0.7s
F31M **Tsiigehtchic** 94.37 340 P P **00 22 16.0 +0.4**
baz=120,SNR=14
CTG **Chitna Glacier** 94.38 332 P P **00 22 16.6 +0.7**
baz=114
A36M **Sachs Harbour** 94.46 345 P P **00 22 16.0 +0.1**
baz=128,SNR=5.4
INK **Inuvik** 94.74 341 P P **00 22 17.6 +0.4**
baz=120,SNR=27
DAVA **Damuels** 94.75 42 P P **00 22 17.5 -0.4**
comp=Z,8.7nm,0.9s,SNR=6.3
BVCY **Beaver Creek** 94.77 334 P P **00 22 17.9 +0.4**
baz=114
DAWY **Dawson** 94.86 336 P P **00 22 17.9 0.0**
baz=115,SNR=6.5
EPYK **Eagle Plains** 94.88 338 lAmb lAmb 00 22 24.7
comp=Z,60nm,1.9s
EPYK **Eagle Plains** 94.88 338 P P **00 22 18.3 +0.3**
baz=118,SNR=5.0
G30M **tAoh Zraii Nji** 94.99 339 P P **00 22 19.2 +0.7**
baz=118
CRQE **Cirque** 95.09 332 P P **00 22 19.4 +0.3**
baz=112
F30M **Barrier River** 95.14 340 P P **00 22 19.5 +0.4**
baz=118
M27K **Edge Creek, AK** 95.18 334 P P **00 22 19.7 +0.2**
baz=113
FETA **Feichten** 95.22 43 P P **00 22 20.0 -0.2**
comp=Z,2.2nm,0.7s
MCARA **McCarthy VSAT** 95.30 333 lAmb lAmb 00 22 21.3
comp=Z,16nm,0.7s
MCARA **McCarthy VSAT** 95.30 333 P P **00 22 20.4 +0.5**
baz=112
RETA **Reutte** 95.38 42 P P **00 22 20.1 -0.6**
comp=Z,3.1nm,0.7s,SNR=5.1
H29M **Whitestone** 95.41 338 P P **00 22 20.6 +0.3**
baz=116,SNR=6.9
BCAR **Beaver Creek A** 95.42 334 P P **00 22 20.3 -0.2**
VRDI **Verde Repeater** 95.43 332 lAmb lAmb 00 22 21.6
comp=Z,14nm,0.8s
L27K **Beaver Creek,** 95.44 334 P P **00 22 20.9 +0.3**
baz=113
MOTA **Moosalm** 95.56 43 P P **00 22 21.3 -0.4**
comp=Z,7.1nm,0.9s,SNR=5.1
G29M **Pine Creek** 95.59 339 P P **00 22 21.1 -0.1**
baz=116,SNR=12
SQTA **Sankt Quirin** 95.60 43 eP P **00 22 21.3 -0.5**
comp=Z,15nm,1.0s,SNR=6.9
I28M **Miner Creek** 95.66 337 P P **00 22 21.8 +0.2**
baz=115
M26K **Nabesna, AK** 95.67 333 P P **00 22 21.9 +0.2**
baz=112
BMRM **Bremner River** 95.85 332 P P **00 22 22.4 -0.1**
baz=111
WATA **Walderalm** 95.87 43 P P **00 22 22.4 -0.6**
comp=Z,1.8nm,0.4s
WTTA **Wattenberg** 95.89 43 P P **00 22 22.7 -0.5**
comp=Z,4.4nm,0.7s
K27K **Chicken** 95.92 335 P P **00 22 23.4 +0.8**
baz=113
L26K **Log Cabin Wild** 96.06 334 P P **00 22 23.4 0.0**
baz=112
N25K **Chitina, Valde** 96.08 332 P P **00 22 23.9 +0.3**
baz=111
E29M **Blow River** 96.21 340 P P **00 22 23.9 +0.1**
baz=116
EYAK **Cordova Ski Ar** 96.23 331 P P **00 22 24.0 -0.1**
baz=110
ABTA **Abfaltersbach** 96.32 43 eP P **00 22 24.7 -0.3**
comp=Z,3.6nm,0.8s
I27K **Kandik River** 96.36 337 P P **00 22 24.7 0.0**
baz=113
DIV **Divide** 96.44 332 lAmb lAmb 00 22 25.7
comp=Z,16nm,0.8s
F28M **Old Crow** 96.54 339 lAmb lAmb 00 22 26.4
comp=Z,13nm,0.8s
F28M **Old Crow** 96.54 339 P P **00 22 25.4 0.0**
baz=115,SNR=11
H27K **Steamboat Moun** 96.58 337 P P **00 22 26.1 +0.5**
baz=113
DOT **Dot Lake** 96.59 334 lAmb lAmb 00 22 26.7
comp=Z,7.2nm,0.8s
HARP **HAARP** 96.61 333 P P **00 22 26.2 +0.3**
baz=110
LESA **Schwarzleotal** 96.61 43 eP P **00 22 25.6 -0.7**
comp=Z,1.5nm,0.5s
KLU **Klutina** 96.64 332 P P **00 22 26.0 -0.1**
baz=110,SNR=9.5
SCRK **Sand Creek** 96.68 335 P P **00 22 26.2 -0.1**
baz=111
J26L **Joseph Creek** 96.70 335 P P **00 22 26.5 +0.2**
baz=112
P23K **Montague Islan** 96.82 330 P P **00 22 26.6 -0.3**
baz=109
I26K **Coal Creek Min** 96.84 336 lAmb lAmb 00 24 21.5
comp=Z,39nm,2.0s
I26K **Coal Creek Min** 96.84 336 P P **00 22 26.7 -0.1**

baz=112
E28M **Babbage River** 96.84 340 P P 00 22 26.7 -0.1
baz=115,SNR=6.4
G27K **Doyon Strip** 96.85 338 P P 00 22 26.9 0.0
baz=113
DAG **Danmarks Havn** 96.85 10 *i* P P 00 22 25.6 -1.0
D28M **Stokes Point** 96.89 341 P P 00 22 27.1 +0.2
baz=116
PAX **Paxson** 96.94 334 IAmb IAmb 00 22 27.6
comp=Z,7.1nm,0.8s
PAX **Paxson** 96.94 334 P P 00 22 27.1 -0.4
baz=110,SNR=5.7
RIDG **Independent Ri** 96.95 334 P P 00 22 27.4 -0.1
baz=111
M24K **Tolsona, Glenn** 96.96 333 P P 00 22 27.8 +0.3
baz=110
BIOA **Bad Ischl, Aus** 97.31 43 *i* P P 00 22 28.9 -0.5
comp=Z,0.4nm,0.2s
K24K **Donnelly Dome** 97.36 334 P Pdif 00 22 29.6 +0.3
baz=110
E27K **Coleen River** 97.37 339 P Pdif 00 22 29.3 +0.1
baz=113
SCM **Sheep Creek Mo** 97.38 332 P Pdif 00 22 29.5 0.0
baz=109
J25K **Salcha River,** 97.47 335 P Pdif 00 22 29.9 +0.1
baz=110
PWL **Port Wells** 97.53 331 P P 00 22 29.8 -0.2
baz=108
M23K **Glacier View** 97.55 332 P P 00 22 30.0 -0.1
baz=108
D27M **Malcolm River** 97.58 340 P Pdif 00 22 30.6 +0.4
baz=113
GERES **GERESS Array B** 97.64 42 P P 00 22 29.6 -1.4
comp=Z,1.9nm,0.8s,baz=267,slow=2.3,SNR=15
comp=Z,1.9nm,0.8s
G26K **Porcupine Rive** 97.68 338 P Pdif 00 22 30.9 +0.3
baz=111
MOA **Molln** 97.76 43 *i* Pdiff P 00 22 30.7 -0.7
comp=Z,3.8nm,0.7s
KNK **Knik Glacier** 97.76 332 P Pdif 00 22 31.2 +0.1
baz=108
DHY **Denali Highway** 97.80 333 P P 00 22 31.2 -0.2
baz=108
WAT6 **Susitna Watana** 97.80 333 P P 00 22 31.2 -0.2
baz=108,SNR=5.5
SML **Sawmill** 97.83 332 P P 00 22 31.2 -0.2
baz=108,SNR=5.5
CLL **Collm** 97.83 39 *i* P P 00 22 31.6 0.0
CLL **Collm** 97.83 39 *i* Pdif P 00 22 31.6 0.0
CLL AMS AMS 03 36 00.0
comp=Z,500nm,21.5s
SEW **Seward** 97.83 330 P P 00 22 31.3 -0.1
baz=107
OVD **Ostervraa, Den** 97.85 33 *i* P P 00 22 25.5 -6.0
HDA **Harding Lake** 98.05 335 IAmb IAmb 00 22 33.2
comp=Z,6.4nm,0.9s
HDA **Harding Lake** 98.05 335 P P 00 22 31.9 -0.4
baz=109
O22K **Cooper Landing** 98.07 331 P Pdif 00 22 32.7 +0.3
baz=107
F26K **Sheenjek River** 98.08 338 P Pdif 00 22 32.6 +0.2
baz=111
IL31 98.14 335 IAmb IAmb 00 26 30.5
comp=Z,8.0nm,0.9s
ILAR **Eielson Array** 98.14 335 P P 00 22 32.4 -0.3
comp=Z,2.4nm,0.8s,baz=112,slow=3.3,SNR=22
comp=Z,2.4nm,0.8s
ILAR **Eielson Array** 98.14 335 P P 00 22 31.5 -1.1
H25L **Birch Creek** 98.21 337 P Pdif 00 22 33.4 +0.5
baz=109
WAT1 **Susitna Watana** 98.23 333 P Pdif 00 22 33.5 +0.3
baz=108
RC01 **Rabbit Creek A** 98.26 331 P P 00 22 33.1 -0.2
baz=107
BRSE **Bradley Lake S** 98.35 330 P Pdif 00 22 34.0 +0.2
baz=106
POKR **Poker Plat Res** 98.47 335 IAmb IAmb 00 22 35.3
comp=Z,13nm,0.8s
POKR **Poker Plat Res** 98.47 335 P Pdif 00 22 34.3 +0.2
baz=108
CCB **Clear Creek Bu** 98.47 335 IAmb IAmb 00 22 35.3
comp=Z,7.2nm,1.0s
G25K **Bearman Lake** 98.48 337 P Pdif 00 22 34.3 +0.2
baz=109
WRH **Wood River Hil** 98.54 335 IAmb IAmb 00 22 35.2
comp=Z,9.8nm,1.0s
RND **Reindeer** 98.54 334 IAmb IAmb 00 22 36.0
comp=Z,28nm,1.4s
COLA **College** 98.56 335 *ce* P P 00 22 34.1 -0.4
COLA pmax pmax
comp=Z,17nm,0.9s
COLA **College** 98.56 335 P Pdif 00 22 34.6 +0.1
baz=108
F25K **Christian Rive** 98.58 338 P Pdif 00 22 34.8 +0.1
baz=109
M22K **Willow** 98.62 332 P Pdif 00 22 35.0 +0.1
baz=106
C27K **Jago River** 98.62 340 P Pdif 00 22 35.1 +0.3
baz=111
MCK **McKinley** 98.67 334 P Pdif 00 22 35.2 +0.1
baz=107
E25K **Arctic Village** 98.73 338 IAmb IAmb 00 22 36.5
comp=Z,8.6nm,1.2s
E25K **Arctic Village** 98.73 338 P P 00 22 35.3 0.0
baz=109
KDAK **Kodiak Island** 98.75 328 P P 00 22 35.6 0.0
baz=105
HOM **Homer** 98.77 329 P P 00 22 35.3 -0.3
baz=105
SUA **Susitna One** 98.83 331 P P 00 22 35.8 -0.2
baz=106
CAPN **Captain Cook N** 98.83 331 P P 00 22 35.7 -0.1
baz=106
H24K **Noodor Dome** 98.87 336 P Pdif 00 22 36.1 +0.2
baz=108
Q20K **Shuyak Island** 98.87 328 P P 00 22 35.8 -0.2
baz=105
CUT **Chulitna** 98.87 332 P P 00 22 36.0 0.0
baz=106
G24K **Hadweenzic Riv** 98.98 337 P Pdif 00 22 36.6 +0.2
baz=108
NEA2 **Nenana** 98.98 335 IAmb IAmb 00 22 41.3
comp=Z,10nm,0.8s
NEA2 **Nenana** 98.98 335 P P 00 22 36.3 -0.1
baz=107
OHAK **Old Harbor** 98.98 327 P P 00 22 36.5 -0.1
baz=104
C26K **Camden Bay** 99.12 340 P Pdif 00 22 37.3 +0.4
baz=110
TRF **Thorofare Moun** 99.17 333 P Pdif 00 22 37.5 0.0
baz=106
I23K **Minto, Yukon-K** 99.25 335 P Pdif 00 22 37.8 +0.2
baz=106
SII **Sitkinak Islan** 99.30 326 P Pdif 00 22 38.1 0.0
baz=104
SKT **Skwentna** 99.33 332 P Pdif 00 22 38.1 0.0
baz=105,SNR=5.8
F24K **Squaw Lake** 99.38 338 P Pdif 00 22 38.5 +0.3
baz=107
D25K **Kavik River** 99.41 340 P Pdif 00 22 38.4 +0.1
baz=108
N20K **Mount Spurr** 99.44 331 P Pdif 00 22 39.0 +0.3
baz=105
SPCR **Spurr Chakacha** 99.44 331 P Pdif 00 22 38.8 +0.2
baz=105
H23K **Yukon River** 99.52 336 P Pdif 00 22 38.8 0.0
baz=106
P19K **Oil Pt** 99.55 329 P Pdif 00 22 39.0 -0.2
baz=104
BPAW **Bear Paw Mtn.** 99.64 334 P Pdif 00 22 39.3 -0.2
baz=105
E24K **Your Creek** 99.76 338 P Pdif 00 22 40.4 +0.5
baz=107
MLY **Manley** 99.78 335 P Pdif 00 22 40.6 +0.5
baz=105
MODS **Modra-Piesok** 99.84 43 *i* P Pdif 00 22 40.9 +0.2
MODS **Modra-Piesok** 99.84 43 *e* PDIFF Pdif 00 22 40.9 +0.2
PPLA **Purkeypile** 99.86 333 P Pdif 00 22 40.6 +0.1
baz=104
CHIR **Chirikof Islan** 99.91 325 P Pdif 00 22 41.0 +0.3
baz=103
G23K **Bananza Creek** 99.95 337 P Pdif 00 22 41.3 +0.5
baz=106
M20K **Styx River** 100.04 331 P Pdif 00 22 41.2 -0.1
baz=104
CHUM **Lake Minchumin** 100.15 334 P Pdif 00 22 42.1 +0.4
baz=104
COLD **Coldfoot** 100.16 337 P Pdif 00 22 42.0 +0.4
baz=105
E23K **Chandalar** 100.16 338 P Pdif 00 22 42.0 +0.2
baz=106
D24K **Happy Valley** 100.19 339 P Pdif 00 22 42.3 +0.6
baz=106
Q18K **Katmai Hardscr** 100.21 328 P Pdif 00 22 42.4 +0.2
baz=103
H22K **Ishtalitna Cre** 100.27 336 P Pdif 00 22 42.6 +0.5
baz=104
C24K **Franklin Bluff** 100.31 340 P Pdif 00 22 42.9 +0.7
baz=106
TOLK **Toolik Lake Re** 100.31 339 P Pdif 00 22 42.7 +0.4
baz=106
N19K **Bonanza Creek** 100.43 330 P Pdif 00 22 42.6 -0.4
baz=103
P18K **Big Mountain,** 100.48 329 P Pdif 00 22 43.3 +0.1
baz=102
L20K **Farewell, AK** 100.52 332 P Pdif 00 22 43.3 -0.1
baz=103
O18K **Koktuh Hills** 100.57 329 P Pdif 00 22 43.7 +0.1
baz=102
Q17K **Contact Creek** 100.58 328 P Pdif 00 22 44.1 +0.3
baz=102
M19K **Big River Lodg** 100.62 331 P Pdif 00 22 44.1 +0.3
baz=103
R17L **Mt. Peulik Vol** 100.69 327 P Pdif 00 22 44.2 0.0
baz=102
H21K **Melozitna Rive** 100.78 335 P Pdif 00 22 44.7 +0.3
baz=103
D23K **Nanushuk River** 100.78 339 P Pdif 00 22 44.7 +0.4
baz=105
K20K **Telida** 100.80 333 P Pdif 00 22 45.3 +0.7
baz=103
L19K **White Mountain** 100.89 332 P Pdif 00 22 44.9 -0.2
baz=102
C23K **Itkillik River** 100.98 340 P Pdif 00 22 46.2 +1.0
baz=104
E22K **Anaktuvuk Pass** 100.98 338 P Pdif 00 22 46.0 +0.6
baz=104
J20K **Nowinta River** 101.01 334 P Pdif 00 22 46.0 +0.5
baz=102
Q16K **King Salmon** 101.06 328 P Pdif 00 22 46.3 +0.6
baz=101
N18K **Kliae Creek** 101.07 330 P Pdif 00 22 46.0 +0.1
baz=102
M18K **Stony River** 101.20 331 P Pdif 00 22 46.9 +0.6
baz=101
G21K **Allakaket** 101.25 336 P Pdif 00 22 47.3 +0.8
baz=102
F21K **Alatna River** 101.39 337 P Pdif 00 22 48.0 +0.8
baz=102
D22K **Ayikyak River** 101.46 339 P Pdif 00 22 48.3 +0.9
baz=103
O17K **Koliganek Bris** 101.49 329 P Pdif 00 22 48.1 +0.4
baz=101
H20K **Anotleneega Mo** 101.59 335 P Pdif 00 22 48.7 +0.7
baz=102
N17K **Nushagak Hills** 101.67 330 P Pdif 00 22 48.2 -0.3
baz=100
L18K **Granite Mounta** 101.75 331 P Pdif 00 22 48.4 -0.4
baz=100
B22K **Teshekpuk Lake** 102.03 340 P Pdif 00 22 50.4 +0.6
baz=102
B21K **Ikpikpuk River** 102.29 339 P Pdif 00 22 51.8 +0.7
baz=101
L17K **Donlin** 102.47 331 P Pdif 00 22 52.3 +0.3
baz=99
G19K **Purcell Mounta** 102.60 335 P Pdif 00 22 52.9 +0.4
baz=99
E20K **Nigu River** 102.61 338 P Pdif 00 22 52.8 +0.2
baz=100
M16K **Timber Creek** 102.61 330 P Pdif 00 22 53.1 +0.4
baz=99
L16K **Owhat River** 102.96 331 P Pdif 00 22 54.9 +0.7
baz=98
H18K **Honhosa River** 102.97 334 P Pdif 00 22 54.5 +0.3
baz=98
F19K **Shaleruckik Mo** 102.98 336 P Pdif 00 22 54.8 +0.7
baz=99
G18K **Tagagawik** 103.19 335 P Pdif 00 22 55.4 +0.2
baz=98
B20K **Meade River** 103.23 339 P Pdif 00 22 55.9 +0.7
baz=98
D19K **Kuna River** 103.35 338 P Pdif 00 22 55.9 0.0
baz=98
F18K **Selawik** 103.69 336 P Pdif 00 22 58.0 +0.7
baz=97
B18K **Kokolik River** 104.77 338 P Pdif 00 23 02.1 +0.1
baz=94
ARCES **ARCESS Array B** 106.39 21 PKKPbc PKKPbc 00 38 39.8 -3.3
comp=Z,6.2nm,1.1s,baz=84,slow=3.7,SNR=6.3
FINES **FINESS Array B** 106.50 30 PKiKP **PKiKP** 00 27 20.1 +0.3
comp=Z,6.2nm,1.0s,baz=202,slow=2.6,SNR=5.5
FINES PKKPbc **PKKPbc** 00 38 40.6 -1.9
comp=Z,1.8nm,0.8s,baz=103,slow=6.0,SNR=3.6
AKASG **Malin Array Be** 107.85 41 PKiKP **PKiKP** 00 27 22.6 0.0
comp=Z,1.4nm,0.5s,baz=273,slow=2.8,SNR=7.0
ANTO **Ankara** 109.78 53 P **PKiKP** 00 27 27.5 +0.9
BR131 **Keskin Array S** 110.42 53 P **PKiKP** 00 27 29.1 +1.1
BRTR **Keskin Array B** 110.42 52 PKiKP **PKiKP** 00 27 28.8 +0.8
comp=Z,1.7nm,0.7s,baz=223,slow=3.9,SNR=10.0
BRTR PP **PP** 00 28 04.2 -2.2
comp=Z,1.2nm,0.9s,baz=258,slow=6.8,SNR=4.6
MMAI **Mount Meron Ar** 111.36 60 PKiKP **PKiKP** 00 27 31.2 +1.3
comp=Z,4.9nm,0.6s,baz=66,slow=2.1,SNR=26
OBN **Obninsk** 112.21 36 *c* *i* PKiKP **PKiKP** 00 27 31.1 +0.5
OBN *e* 00 28 16.2
OBN *e* PS **PS** 00 37 52.0 -2.6
OBN *e* SS SS 00 43 54.8 +12
OBN pmax pmax
comp=Z,18nm,1.7s
MOS **Moscow** 112.75 36 *e* P **Pdif** 00 23 40.5 +2.7
MOS pmax pmax
comp=Z,20nm,0.7s
ANN **Anapa** 113.33 48 *i* PKiKP **PKiKP** 00 27 34.8 +1.7
ANN *e* 00 28 21.2
ANN pmax pmax
comp=Z,51nm,1.0s
ATD **Arta Tunnel** 115.22 84 P **PKPdf** 00 27 37.4 -0.4
ERBR **Yeremizino-Bor** 115.44 46 *i* PKiKP **PKPdf** 00 27 36.7 -0.5
ERBR *e* 00 28 23.1
ERBR pmax pmax
comp=Z,16nm,0.7s
LABN **Labinsk** 115.68 48 *i* PKiKP **PKiKP** 00 27 40.7 +3.0
LABN pmax pmax
comp=Z,13nm,0.7s
KIV **Kislovodsk** 117.13 48 P **PKiKP** 00 27 41.6 +1.0
KIV **Kislovodsk** 117.13 48 *e* PKiKP **PKiKP** 00 27 40.9 +0.2
KIV pmax pmax
comp=Z,8.0nm,1.0s
KBZ **Khabaz** 117.30 49 PKP **PKiKP** 00 27 42.0 +1.1
comp=Z,14nm,0.8s,baz=197,slow=3.0,SNR=52
KBZ **Khabaz** 117.30 49 *c* *i* PKiKP **PKiKP** 00 27 41.8 +1.0
KIRV **Kirov** 118.44 31 ⇑ *i* PKiKP **PKiKP** 00 27 42.8 +0.3
GNI **Garni** 118.95 52 P **PKiKP** 00 27 45.8 +1.4
GNI **Garni** 118.95 52 *c* *i* PKiKP **PKiKP** 00 27 45.2 +0.8
GNI pmax pmax
comp=Z,4.0nm,0.5s
RAYN **Ar Rayn** 119.47 71 P **PKiKP** 00 27 46.8 +1.0
KBD **Kabd** 121.71 65 P **PKiKP** 00 27 50.7 +0.8
TIXI **Tiksi** 122.59 353 ⇑ *i* PKiKP **PKPdf** 00 27 49.8 -0.4
TIXI pmax pmax
comp=Z,6.0nm,0.7s
ARTI **Arti** 123.75 31 *c* *i* PKiKP **PKiKP** 00 27 53.7 +0.6
ARTI pmax pmax
comp=Z,23nm,0.6s
STKA **Stephens Creek** 123.85 213 PKP **PKiKP** 00 27 54.4 +0.2
comp=Z,12nm,0.6s,baz=104,slow=3.3,SNR=24
STKA **Stephens Creek** 123.85 213 **PKiKP** 00 27 54.1 -0.1
SEY **Seymchan** 123.94 338 ⇑ *i* PKiKP **PKiKP** 00 27 54.4 +1.1
SEY pmax pmax
comp=Z,48nm,2.5s
NRIK **Noril'sk** 124.34 9 PKP **PKPdf** 00 27 53.5 -0.1
comp=Z,3.1nm,0.6s,baz=49,slow=2.8,SNR=13
NRIK **Noril'sk** 124.34 9 *d* *i* PKiKP **PKiKP** 00 27 54.6 +0.7
SMRA **Abu-Samra** 124.40 70 P **PKiKP** 00 27 55.2 -0.1
SVE **Sverdlovsk** 124.67 30 *e* PKiKP **PKiKP** 00 27 55.5 +0.6
SVE pmax pmax
comp=Z,11nm,0.7s
ABTO **Aybut** 126.14 80 P **PKiKP** 00 28 00.0 +1.0
WHFO **Wadi Hawf** 126.65 79 P **PKiKP** 00 28 00.0 -0.1
SNR=12
MZR **Muzera** 126.76 73 P **PKiKP** 00 28 01.2 +1.1
PETK **Petropavlovsk-** 126.77 326 PKP **PKiKP** 00 27 59.5 +0.3
comp=Z,8.9nm,0.6s,baz=80,slow=2.5,SNR=16
PETK **Petropavlovsk-** 126.77 326 PKPdf **PKPdf** 00 27 58.6 -0.1
RBK **Rabkut** 127.02 80 P **PKiKP** 00 28 01.1 +0.3
DOK **Doka** 127.06 78 P **PKPdf** 00 28 00.5 +0.2
SNR=11
DMTO **DMTO** 127.75 79 P **PKiKP** 00 28 02.4 +0.2
SHAO **Shalim** 128.42 79 P **PKiKP** 00 28 04.1 +0.6
ASUD **Al Ashush, Dub** 128.49 71 P **PKiKP** 00 28 04.9 +1.4
FAQ **Al Faqa, Dubai** 128.73 70 P **PKiKP** 00 28 04.7 +0.7
NAZ **Nazwa, Dubai** 128.80 70 P **PKiKP** 00 28 05.0 +0.8
ALNE **Al Ain** 128.87 71 P **PKiKP** 00 28 05.3 +0.9
ASHO **Ashiyiah** 129.16 71 P **PKiKP** 00 28 05.0 +0.1
SHME **Shamm** 129.22 69 P **PKiKP** 00 28 05.7 +0.8
HATD **Hatta, Dubai** 129.22 70 P **PKiKP** 00 28 05.2 +0.2
MASF **Masafi** 129.25 70 P **PKiKP** 00 28 05.0 -0.1
UOSS **Minazif** 129.29 70 P **PKiKP** 00 28 05.0 -0.1
BANOM **Banah** 129.37 69 P **PKiKP** 00 28 05.3 0.0
MDH **Madha** 129.37 70 P **PKiKP** 00 28 05.4 +0.2
ARQ **Araqi** 129.57 72 P **PKiKP** 00 28 06.1 +0.3
SOHO **SOHO** 129.59 71 P **PKiKP** 00 28 05.9 +0.2
HOQ **Hoqain** 130.29 72 P **PKiKP** 00 28 06.8 -0.4
MHTO **MHTO** 130.83 75 P **PKiKP** 00 28 08.6 +0.3
SNR=13
SMDO **Samad** 130.97 73 P **PKiKP** 00 28 08.8 +0.1
JMDO **Jabal Madar** 131.00 74 P **PKiKP** 00 28 08.4 -0.3
YAK **Yakutsk** 131.28 348 *e* PKiKP **PKPdf** 00 28 07.2 +0.2
YAK *e* 00 30 27.4
YAK *e* SS SS 00 47 46.6 +3.3
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=Z,265nm,3.2s
BORK **Borovoye** 131.40 31 *c* *i* PKiKP **PKiKP** 00 28 08.8 +0.3
BORK pmax pmax
comp=Z,27nm,1.7s
BVAR **Borovoye Array** 131.45 31 PKP **PKiKP** 00 28 08.2 -0.4
comp=Z,8.3nm,0.7s,baz=298,slow=3.2,SNR=43
BVAR SKPab **SKPbc** 00 31 14.7 -0.4
comp=Z,1.0nm,0.5s,baz=285,slow=5.4,SNR=5.4
WSAR **Wadi Sarin** 131.50 72 P **PKiKP** 00 28 09.7 0.0
JLN **Jalan Bani Buh** 132.21 74 P **PKiKP** 00 28 10.8 -0.2
ASAR **Alice Springs** 134.47 212 PKP **PKPdf** 00 28 14.2 -0.1
comp=Z,7.0nm,0.5s,baz=137,slow=2.2,SNR=12
ASAR SKPbc **SKPbc** 00 31 25.6 -0.9
comp=Z,4.2nm,0.5s,baz=137,slow=3.8,SNR=39
ASAR PKKP **PKKPdf** 00 37 59.6 0.0
comp=Z,0.9nm,0.6s,baz=319,slow=1.8,SNR=11
ASAR **Alice Springs** 134.47 212 PKPdf **PKPdf** 00 28 13.1 -1.3
DGAR **Diego Garcia** 136.81 119 P **PKPdf** 00 28 18.7 -0.1
KURK **Kurchatov** 136.85 29 PKPdf **PKiKP** 00 28 18.8 -0.9
KURK **Kurchatov** 136.85 29 P **PKiKP** 00 28 19.7 +0.1
KURK **Kurchatov** 136.85 29 *ce* PKiKP **PKiKP** 00 28 18.8 -0.9
KURBB **Kurchatov Arra** 136.87 29 PKP **PKPdf** 00 28 18.6 +0.8
comp=Z,14nm,0.6s,baz=307,slow=2.7,SNR=37
KURBB SKP **SKPdf** 00 31 33.9 -1.0
comp=Z,1.3nm,0.2s,baz=308,slow=3.3,SNR=7.4
ZALV **Zalesovo Beam** 136.94 21 PKP **PKPdf** 00 28 18.4 +0.5
comp=Z,5.2nm,0.6s,baz=301,slow=2.5,SNR=13
ZALV SKP **SKPdf** 00 31 33.8 -1.2
comp=Z,4.0nm,0.8s,baz=330,slow=3.1,SNR=7.6
WRAB **Tennant Creek** 137.26 216 ‖ *e* PKiKP **PKPdf** 00 28 18.4 -1.2
AAK **Ala-Archa** 139.52 41 *i* PKiKP **PKPdf** 00 28 21.9 -1.3
MKAR **Makanchi Array** 141.33 30 PKhKP PKPpre 00 28 20.2
comp=Z,4.4nm,0.5s,baz=325,slow=3.2,SNR=63
MKAR PKP **PKPdf** 00 28 26.8 +0.6
comp=Z,13nm,0.7s,baz=342,slow=1.7,SNR=22
MKAR SKPbc **SKPbc** 00 31 45.0 -0.4
comp=Z,1.8nm,0.7s,baz=298,slow=2.6,SNR=4.3
MKAR **Makanchi Array** 141.33 30 PKPpre 00 28 19.9
MKAR **PKPdf** 00 28 26.2 +0.1
KSH **Kashi** 142.07 44 PKP **PKPdf** 00 28 24.4 -3.5
HEH **HeiHe** 142.34 341 PKP **PKPdf** 00 28 23.5 -4.3
HEH pPKP **pPKPdf** 00 29 12.3 -6.4
HEH AMB AMB
comp=Z,230nm,4.0s
MOY **Mondy** 143.17 9 *e* PKiKP **PKPdf** 00 28 28.2 -1.2
MOY pmax pmax
comp=Z,18nm,1.2s
ZAK **Zakamensk** 144.74 7 *e* PKiKP **PKPab** 00 28 31.5 0.0
ZAK pmax pmax
comp=Z,7.3nm,1.3s
HILR **Hailar Array B** 144.93 348 PKP **PKPdf** 00 28 33.0 +0.6
comp=Z,128nm,0.4s,baz=24,slow=2.3,SNR=409
HIA **Hailar** 145.21 348 **PKPab** 00 28 33.4 +0.2
HIA **Hailar** 145.21 348 PKP2 **PKPab** 00 28 33.4 +0.2
USRK **Ussuriysk Ar.** 145.55 331 PKPbc **PKPab** 00 28 35.0 +0.5
comp=Z,89nm,0.7s,baz=29,slow=2.0,SNR=78
WMQ **Urumqi** 146.10 29 *e* PKPbc **PKPab** 00 28 36.9 +0.1
BNX **BinXian** 146.24 337 ⇑ PKPbc **PKPdf** 00 28 34.8 +0.1
MDJ **Mudanjiang** 146.29 334 PKPbc **PKPbc** 00 28 36.1 -0.2
MJAR **Matsushiro Arr** 146.94 315 PKPbc **PKPbc** 00 28 38.6 +0.1
comp=Z,31nm,0.6s,baz=88,slow=1.7,SNR=4.2
MJAR **Matsushiro Arr** 146.94 315 **PKPdf** 00 28 37.2 +1.0
MJAR **Matsushiro Arr** 146.94 315 PKiKP **PKPdf** 00 28 37.2 +1.0
SONM **Songino Array** 147.55 4 PKPbc **PKPbc** 00 28 39.1 -0.8
comp=Z,104nm,0.7s,baz=343,slow=1.3,SNR=268
SONM **Songino Array** 147.55 4 **PKPdf** 00 28 38.2 +1.2
SONM **Songino Array** 147.55 4 PKiKP **PKPdf** 00 28 38.2 +1.2
ULN **Ulaanbaatar** 147.56 3 P **PKPdf** 00 28 38.4 +1.3
HYBB **Hyderabad (bro** 150.20 82 *e* PKiKP **PKiKP** 00 28 47.8 -0.3
PALK **Pallekele** 150.60 103 P **PKPdf** 00 28 42.6 -0.2
BATI **Baumata** 150.98 210 PKPbc **PKiKP** 00 28 51.0 +1.2
comp=Z,61nm,0.6s,baz=258,slow=4.0,SNR=12
XLT **XiLinHaoTe** 151.05 350 *e* PKPbc **PKiKP** 00 28 49.6 +0.4
XLT sPKP 00 29 46.8
KSRS **Korea Array** 152.66 327 PKP **PKPdf** 00 28 46.5 +1.3
comp=Z,16nm,0.8s,baz=30,slow=1.0,SNR=48
KSRS PKPbc **PKiKP** 00 28 53.5 +1.0
comp=Z,47nm,0.8s,baz=25,slow=1.5,SNR=52
JNU **Nakatsue** 153.84 316 PKPbc **PKiKP** 00 28 56.0 +0.8
comp=Z,7.6nm,0.7s,baz=117,slow=3.3,SNR=4.8
HHC **Hu-ho-hao-te** 154.58 356 *e* PKPbc **PKPdf** 00 28 43.1 -4.9
GTA **Gaotai** 154.59 18 PKPbc **PKPdf** 00 28 49.3 +1.2
BJI **Beijing** 154.78 348 PKPbc **PKPdf** 00 28 47.5 -0.6
BJI PKS **PKSdf** 00 32 21.3 -0.8
BJI SKS **SKSdf** 00 35 30.2 -6.6
BJI LR LR
comp=Z,110nm,16.7s
BJI LR LR
comp=Z,97nm,20.0s
BJI LR LR
comp=Z,82nm,18.1s
BTO **Baotou** 154.88 359 *e* PKPbc **PKPdf** 00 28 49.6 +1.2
BTO PKPab **PKPab** 00 29 12.1 -1.0
BTO PP PP 00 32 57.6 +9.1
BTO LR LR
comp=Z,290nm,10.6s
GOMU **GeErMu** 155.46 30 PKP **PKPdf** 00 28 48.7 -0.9
GOMU SS SS 00 52 21.9 -0.5
LSA **Lhasa** 157.87 47 P **PKPdf** 00 28 53.1 +0.1
LZH **Lanzhou** 158.77 13 *e* P **PKPab** 00 29 31.0 +0.9
LZH pP pPKPdf 00 29 40.4 -4.2
LZH pmax pmax
comp=Z,23nm,1.3s
LZDM **Lanzhou Array** 158.86 13 PKPab **PKPab** 00 29 30.4 -0.3
comp=Z,2.6nm,0.4s,baz=354,slow=4.3,SNR=4.5
LYN **LuoYang** 160.75 353 PKP **PKPdf** 00 28 58.3 +2.7
NJ2 **Nanjing** 161.38 335 *e* PKP **PKPdf** 00 28 54.8 -1.5
XAN **Xi'an** 161.43 2 ⇑ PKP **PKPdf** 00 28 57.7 +1.3
WHN **Wuhan** 164.30 345 P **PKPab** 00 29 53.9 -0.2
PZH **PanZhiHua** 166.76 32 PKP **PKPdf** 00 28 58.4 -3.1
CMAR **Chiang Mai Arr** 169.39 72 PKP **PKPdf** 00 29 03.6 +0.2
comp=Z,1.4nm,0.3s,baz=287,slow=2.0,SNR=19
CMAR PKPab **PKPab** 00 30 17.1 -0.2
comp=Z,12nm,0.9s,baz=282,slow=5.9,SNR=34
CMAR **Chiang Mai Arr** 169.39 72 **PKPdf** 00 29 03.5 +0.2
CMAR **PKPab** 00 30 16.7 -0.6
CMAR **Chiang Mai Arr** 169.39 72 PKiKP **PKPdf** 00 29 03.5 +0.2
CMAR 00 30 16.7

IDC ***13*** *00:10:48.5±1.6, 4°.55S×102°.27E, h0km, mb4.3/11, mbtmp4.3/11, Error ellipse: s-maj=81.3km s-min=15.7km az=55.0*

NEIC ***13*** *00:10:54.0±1.9, 4°.5S±0°.1×102°.28E±0°.07, h32km±3km, mb4.3/9, Error ellipse: s-maj=19.4km s-min=9.9km az=185.0*

DJA ***13*** *00:10:57.8±0.4, 4°.5S±4°×10°.3E±°, h32km±5km, M4.0/13, mb4.0/3, MLv4.1/13*

ISC 13 00:10:56.9±0.6, 4°.41S±0°.09×102°.59E±0°.07, h56km, n57, σ1°.11/47, mb4.2/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.37**	**83**		**Pn**	**00 11 08.5**	**+1.3**
MNAI					**Sn**	**00 11 16.8**	**+2.1**
MNAI	**Manna**	**0.37**	**83**	P	**Pn**	**00 11 08.5**	**+1.3**
MNAI				S	**Sn**	**00 11 15.4**	**+0.7**
KSI	**Kapahiang**	**0.75**	**0**	P	**Pn**	**00 11 12.6**	**+0.9**
LHSI	**Lahat**	**1.09**	**58**	P	**Pn**	**00 11 17.9**	**+1.8**
MASI	**Maura Aman, Be**	**1.30**	**344**	P	**Pn**	**00 11 20.4**	**+1.4**
LWLI	**Liwa**	**1.58**	**113**	P	**Pn**	**00 11 24.2**	**+1.4**
MDSI	**Maura Dua**	**1.58**	**93**	P	**Pn**	**00 11 23.7**	**+1.0**
KASI	**Kota Agung**	**2.20**	**120**	P	**Pn**	**00 11 31.8**	**+0.7**
KLI	**Kotabumi**	**2.30**	**101**	P	**Pn**	**00 11 33.8**	**+1.3**
KRJI	**Kerinci**	**2.56**	**334**	P	**Pn**	**00 11 37.0**	**+0.9**
PPSI	**Pulau Pagai**	**3.05**	**302**	P	**Pn**	**00 11 44.9**	**+2.2**
PDSI	**Padang**	**4.07**	**328**	P	**Pn**	**00 11 59.3**	**+2.6**
SISI	**Saibi**	**4.65**	**311**	P	**Pn**	**00 12 06.2**	**+1.6**
PBSI	**Pulau Batu** 75nm,1.7s	**6.10**	**315**	P	**Pn**	**00 12 26.2**	**+1.6**
CMAR	**Chiang Mai Arr** 1.7nm,0.3s,baz=186,slow=8.6,SNR=6.6 1.7nm,0.3s	**23.00**	**351**	P	**P**	**00 15 56.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**26.34**	**123**	P	**P**	**00 16 27.8**	**0.0**
H08S2	**Diego Garcia H** baz=86,slow=75,SNR=6.6	**30.10**	**262**	T	T	00 47 40.7	
H08S3	**Diego Garcia H** baz=86,slow=75,SNR=6.3	**30.11**	**262**	T	T	00 47 34.7	
H08S1	**Diego Carcia H** baz=86,slow=75,SNR=3.2	**30.12**	**262**	T	T	00 47 37.5	
H01W3	**Cape Leeuwin H** baz=339,slow=76,SNR=12	**32.16**	**162**	T	T	00 51 11.0	
H01W2	**Cape Leeuwin H** baz=339,slow=76,SNR=15	**32.17**	**162**	T	T	00 51 15.3	
H01W1	**Cape Leeuwin H** baz=339,slow=76,SNR=17	**32.17**	**162**	T	T	00 51 08.3	
WRA	**Warramunga Arr**	**34.56**	**119**	P	**P**	**00 17 40.6**	**+0.1**
LSA	**Lhasa**	**35.64**	**343**	P	**P**	**00 17 48.9**	**-1.3**
LSA	comp=Z,7.8nm,0.7s			IAmb	IAmb	00 17 56.2	
ASAR	**Alice Springs** comp=Z,0.4nm,0.3s,baz=301,slow=7.9,SNR=10	**35.76**	**125**	P	**P**	**00 17 50.8**	**0.0**
ASAR	comp=Z,0.2nm,0.4s,baz=304,slow=2.6,SNR=2.2 comp=Z,0.4nm,0.3s			PcP	**PcP**	**00 20 17.9**	**0.0**
LZH	**Lanzhou**	**40.30**	**2**	*e*P	P	00 18 20.6	-8.4
LZH				pP	pP	00 18 28.9	-15
LZH	comp=Z,20nm,1.2s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,1.6nm,0.5s,baz=287,slow=5.0,SNR=5.9 comp=Z,1.6nm,0.5s	**45.63**	**131**	P	**P**	**00 19 12.8**	**+0.7**
STKA	**Stephens Creek**	**45.63**	**131**	P	**P**	**00 19 12.6**	**+0.6**
SONM	**Songino Array** comp=Z,1.6nm,0.6s,baz=186,slow=9.3,SNR=8.9 comp=Z,1.6nm,0.6s	**52.13**	**3**	P	**P**	**00 20 02.3**	**+0.6**
SONM	**Songino Array**	**52.13**	**3**	P	**P**	**00 20 01.8**	**+0.1**
ARSB	**Arslanbob**	**52.94**	**332**	P	**P**	**00 20 07.9**	**+0.1**
ARSB	comp=Z,4.0nm,1.1s			IAmb	IAmb	00 20 08.6	
MKAR	**Makanchi Array** comp=Z,1.0nm,0.5s,baz=152,slow=8.2,SNR=18 comp=Z,1.0nm,0.5s	**54.05**	**343**	P	**P**	**00 20 15.2**	**-0.6**
MKAR	**Makanchi Array**	**54.05**	**343**	P	**P**	**00 20 13.8**	**-1.9**
KURBB	**Kurchatov Arra** comp=Z,2.5nm,0.2s,baz=75,slow=4.1,SNR=4.4 comp=Z,2.5nm,0.2s	**58.59**	**342**	P	**P**	**00 20 47.2**	**-0.7**
KURK	**Kurchatov**	**58.65**	**342**	P	**P**	**00 20 47.9**	**-0.4**
KURK	comp=Z,1.9nm,1.1s			IAmb	IAmb	00 21 16.3	
ZAA0	**Zalesovo Array**	**60.02**	**348**	P	**P**	**00 20 56.8**	**-1.0**
ZAA0	comp=Z,3.4nm,1.1s			IAmb	IAmb	00 20 58.1	
ZALV	**Zalesovo Beam** comp=Z,2.4nm,0.4s,baz=165,slow=5.5,SNR=13 comp=Z,2.4nm,0.4s	**60.02**	**348**	P	**P**	**00 20 57.0**	**-0.7**
ZALV	**Zalesovo Beam**	**60.02**	**348**	P	**P**	**00 20 56.4**	**-1.3**
H04N2	**CROZET ISLANDS** baz=62,slow=74	**60.46**	**218**	T	T	01 26 29.2	
H04N1	**CROZET ISLANDS** baz=62	**60.48**	**218**	T	T	01 26 28.5	
H04N3	**CROZET ISLANDS** baz=62,slow=74	**60.48**	**218**	T	T	01 26 28.3	
H04S1	**CROZET ISLANDS** baz=60,slow=75	**60.71**	**218**	T	T	01 26 42.9	
H04S3	**CROZET ISLANDS** baz=60,slow=75	**60.72**	**218**	T	T	01 26 42.5	
H04S2	**CROZET ISLANDS** baz=60,slow=75	**60.73**	**218**	T	T	01 26 43.9	
BVAR	**Borovoye Array** comp=Z,2.1nm,0.9s,baz=146,slow=6.3,SNR=5.3 comp=Z,2.1nm,0.9s	**63.33**	**339**	P	**P**	**00 21 19.1**	**-0.9**
AB31	**Akbulak array**	**64.98**	**331**	P	**P**	**00 21 30.1**	**-0.8**
AB31	comp=Z,1.8nm,0.8s			IAmb	IAmb	00 21 30.9	
ABKAR	**Akbulak array**	**64.98**	**331**	P	**P**	**00 21 29.9**	**-1.0**
NRIK	**Noril'sk** comp=Z,0.8nm,0.3s,baz=127,slow=4.7,SNR=6.1 comp=Z,0.8nm,0.3s	**74.31**	**355**	P	**P**	**00 22 26.8**	**-1.1**
BKZ	**Black Stump Fm**	**74.76**	**129**	P	**P**	**00 22 31.4**	**+0.1**
FINES	**FINESS Array B** comp=Z,4.9nm,1.1s,baz=88,slow=9.9,SNR=3.5 comp=Z,4.9nm,1.1s	**87.43**	**332**	P	**P**	**00 23 37.7**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,4.7nm,1.1s,baz=109,slow=5.5,SNR=1.6 comp=Z,4.7nm,1.1s	**89.60**	**340**	P	**P**	**00 23 48.4**	**+0.3**
TX31	**Lajitas Ar. Si**	**144.88**	**42**	PKPbc	**PKPab**	**00 30 27.9**	**+0.1**
TXAR	**Lajitas Array** comp=Z,0.5nm,0.4s,baz=258,slow=0.9,SNR=13	**144.88**	**42**	PKPbc	**PKPab**	**00 30 27.8**	**0.0**
TXAR	**Lajitas Array**	**144.88**	**42**	PKPbc	**PKPab**	**00 30 27.3**	**-0.5**
FCAR	**Ozark Folk Cen**	**145.86**	**22**	PKPdf	**PKPdf**	**00 30 29.0**	**-0.9**
MIAR	**Mount Ida**	**146.47**	**25**	PKPbc	**PKPab**	**00 30 33.2**	**-0.1**
WVT	**Waverly**	**147.00**	**16**	PKPbc	**PKPdf**	**00 30 32.9**	**+1.0**

*KRNET **13** 01:46:51.4±0.1,41°.85N×79°.84E,mb2.8*
*SOME **13** 01:46:52.0,41°.88N×79°.78E,h15km*
*NNC **13** 01:46:52.5±1.1,41°.93N×79°.79E,h0km,mb3.2,mpv3.1, Error ellipse: s-maj=7.4km s-min=4.6km az=143.0*
ISC 13 01:46:51.5±2.8,41°.93N±0°.07×79°.91E±0°.07,h0km±16km, n30,σ0°93/48,11C-3D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.25**	**297**	⇑*e*P	**Pn**	**01 47 15.3**	**-1.1**
PRZ				⇑*e*S	**Sn**	**01 47 32.6**	**-1.4**
SHLS	**Shalkode** 38nm,0.2s	**1.27**	**345**	P	**Pn**	**01 47 15.3**	**-1.3**
SHLS	41nm,0.1s			S	**Sb**	**01 47 32.3**	**-0.9**
SHLS	**Shalkode** 38nm,0.1s	**1.27**	**345**	*e*P	**Pn**	**01 47 15.3**	**-1.3**
SHLS	41nm,0.1s			*e*S	**Sb**	**01 47 32.3**	**-0.9**
PDGK	**Podgornoye** 1.8nm,0.3s	**1.43**	**348**	⇑P	**Pn**	**01 47 18.3**	**-0.5**
PDGK	25nm,0.8s			⇓S	**Sg**	**01 47 38.4**	**+1.0**
KTMS	**Ketmen** 0.6nm,0.1s	**1.55**	**12**	*e*P	**Pb**	**01 47 21.1**	**0.0**
KTMS	7.7nm,0.2s			*e*S	**Sg**	**01 47 41.9**	**+0.7**
SATY	**Saty** 2.0nm,0.2s	**1.58**	**316**	P	**Pb**	**01 47 21.2**	**-0.5**
SATY	33nm,0.1s			S	**Sg**	**01 47 42.3**	**0.0**
TARG	**Taragay, Kyrgy**	**1.59**	**263**	⇓*i*P	**Pn**	**01 47 19.9**	**-1.3**
TARG				⇓*i*S	**Sn**	**01 47 41.2**	**-1.4**
KPKS	**Kokpek** 0.5nm,0.2s	**1.78**	**330**	P	**Pb**	**01 47 24.9**	**-0.1**
KPKS	55nm,0.3s			S	**Sg**	**01 47 48.7**	**0.0**
KDJ	**Kajisay**	**2.04**	**276**	⇑*e*P	**Pb**	**01 47 28.4**	**-1.2**
KDJ				⇑*i*S	**Sb**	**01 47 55.2**	**-0.4**
BLB	**Baldybastay** 18nm,0.2s	**2.41**	**335**	Pg	**Pb**	**01 47 35.8**	**+0.1**
BLB	31nm,0.4s			Lg	Lg	01 48 07.3	
KOTS	**Kotyrbulak** 4.1nm,0.2s	**2.44**	**303**	Pg	**Pb**	**01 47 35.9**	**-0.5**
KOTS	14nm,0.5s			Lg	Lg	01 48 07.5	
KOTS	**Kotyrbulak** 4.1nm,0.1s	**2.44**	**303**	*e*P	**Pb**	**01 47 36.5**	**+0.2**
KOTS	26nm,0.5s			*e*S	**Sg**	**01 48 08.4**	**-1.5**
MDOK	**Medeo** 4.2nm,0.3s	**2.45**	**301**	Pg	**Pb**	**01 47 35.6**	**-0.9**
MDOK	12nm,0.4s			Lg	Lg	01 48 06.9	
TNSS	**Tian-Shan** 1.1nm,0.2s	**2.46**	**298**	Pg	**Pb**	**01 47 36.4**	**-0.3**
TNSS	4.3nm,0.2s			Lg	Lg	01 48 08.4	
TNSS	**Tian-Shan** 0.1nm,0.1s	**2.46**	**298**	*e*P	**Pb**	**01 47 36.4**	**-0.3**
TNSS	4.3nm,0.2s			*e*S	**Sb**	**01 48 08.4**	**+0.8**
KNOS	**Konyrlen** 3.5nm,0.2s	**2.48**	**348**	Pg	**Pb**	**01 47 37.5**	**+0.4**
KNOS	8.1nm,0.1s			Lg	Lg	01 48 10.3	
IZV	**Izvestkoviy** 2.2nm,0.2s	**2.68**	**295**	Pg	**Pb**	**01 47 39.8**	**-0.6**
IZV	32nm,0.5s			Lg	Lg	01 48 13.9	
IZV	**Izvestkoviy** 2.2nm,0.2s	**2.68**	**295**	*e*P	**Pb**	**01 47 39.8**	**-0.6**
IZV	32nm,0.5s			*e*S	**Sb**	**01 48 13.9**	**+0.1**
ARXS	**Arharly** 2.7nm,0.4s	**2.74**	**327**	Pg	**Pb**	**01 47 41.7**	**+0.3**
ARXS	20nm,0.3s			Lg	Lg	01 48 17.5	
ARXS	**Arharly**	**2.74**	**327**	*e*P	**Pb**	**01 47 41.7**	**+0.3**
ARXS				*e*S	**Sb**	**01 48 17.5**	**+1.8**
ULHL	**Ulahol**	**2.75**	**278**	⇑*e*P	**Pn**	**01 47 37.5**	**+0.5**
ULHL				⇑*i*S	**Sn**	**01 48 12.3**	**+1.3**
MTBS	**Maitube** 1.9nm,0.2s	**2.84**	**296**	Pg	**Pb**	**01 47 42.5**	**-0.6**
MTBS	7.0nm,0.5s			Lg	Lg	01 48 18.8	
MTBS	**Maitube** 1.9nm,0.2s	**2.84**	**296**	*e*P	**Pb**	**01 47 42.5**	**-0.6**
MTBS	7.0nm,0.5s			*e*S	**Sb**	**01 48 18.8**	**+0.4**
KTBS	**Karatobe** 2.0nm,0.3s	**2.97**	**308**	Pg	**Pb**	**01 47 45.1**	**-0.2**
KTBS	6.6nm,0.4s			Lg	Lg	01 48 23.2	
BOOM	**Boomskoye usch**	**3.00**	**282**	⇑*e*P	**Pn**	**01 47 42.0**	**+1.6**
BOOM				⇑*i*S	**Sn**	**01 48 18.5**	**+1.3**
KST	**Kastek** 3.2nm,0.3s	**3.12**	**292**	Pg	**Pb**	**01 47 47.7**	**-0.2**
KST	14nm,0.6s			Lg	Lg	01 48 27.8	
KST	**Kastek** 0.4nm,0.1s	**3.12**	**292**	*e*P	**Pb**	**01 47 48.6**	**+0.6**
KST	14nm,0.6s			*e*S	**Sb**	**01 48 29.0**	**+2.4**
JNKS	**Jany-Kuch**	**3.32**	**256**	⇑*e*P	**Pn**	**01 47 46.0**	**+1.2**
JNKS				⇑*e*S	**Sn**	**01 48 25.1**	**0.0**
DGS	**Degeres** 1.8nm,0.3s	**3.33**	**295**	Pg	**Pb**	**01 47 51.2**	**-0.1**
DGS	4.8nm,0.5s			Lg	Lg	01 48 33.8	
KRBS	**Karabastau** 0.7nm,0.3s	**3.58**	**301**	Pg	**Pb**	**01 47 56.2**	**+0.5**
KRBS	3.8nm,0.4s			Lg	Lg	01 48 42.4	

*DNK **13** 02:14:14.9±3.5,71°.12N×9°.05W,h19km±103km,ML2.3*
*BER **13** 02:14:15.5±1.7,71°.20N×8°.67W,h9km±12km,mb(Pn)4.2, ML3.7,ML2.3(DNK),Confirmed Earthquake*
ISC 13 02:14:13.1±0.9,71°.16N±0°.10×8°.99W±0°.10,h28km±10km, n20,σ1°69/29,3C-1D,Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.22**	**126**	⇑*i*P	**Pb**	**02 14 19.2**	**-0.2**
JNW				*e*S	**Sb**	**02 14 22.3**	**-1.4**
JNW	comp=Z,13μm,0.3s			IAML		02 14 23.1	
JMIC	**Jan Mayen**	**0.23**	**138**	⇑*i*P	**Pb**	**02 14 19.7**	**+0.2**
JMIC				*e*S	**Sb**	**02 14 23.2**	**-0.7**
JMIC	comp=Z,12μm,0.5s			IAML		02 14 25.9	
JMIC	**Jan Mayen**	**0.23**	**138**	*i*P	**Pb**	**02 14 19.7**	**+0.2**
JMIC				*i*S	**Sb**	**02 14 22.9**	**-0.9**
JMI	**Jan Mayen**	**0.25**	**160**	⇓*i*P	**Pn**	**02 14 21.0**	**+0.2**
JMI				*e*S	**Sn**	**02 14 25.6**	**+1.5**
JMI	comp=Z,5μm,0.4s			IAML		02 14 30.2	
JNE	**Jan Mayen East**	**0.28**	**127**	⇑*i*P	**Pb**	**02 14 19.4**	**-0.7**
JNE				*e*S	**Sb**	**02 14 22.9**	**-2.0**
JNE	comp=Z,14μm,0.5s			IAML		02 14 23.2	
DBG	**Daneborg**	**4.60**	**319**	*i*P	**Pn**	**02 15 23.6**	**+3.0**
DBG				*i*S	**Sn**	**02 16 12.3**	**-0.6**
DBG	comp=Z,7.1nm,0.4s			IAML		02 16 18.0	
DBG	**Daneborg**	**4.60**	**319**	*i*P	**Pn**	**02 15 23.6**	**+3.0**
DBG				*i*S	**Sn**	**02 16 12.3**	**-0.6**
DBG	comp=Z,7.1nm,0.4s			IAML		02 16 18.0	
DAG	**Danmarks Havn**	**6.23**	**339**	*i*P	**Pn**	**02 15 45.8**	**+2.9**
DAG				*i*S	**Sn**	**02 16 52.4**	**-0.7**
DAG	comp=Z,9.8nm,0.1s			IAML		02 16 53.6	
DAG	**Danmarks Havn**	**6.23**	**339**	*i*P	**Pn**	**02 15 45.8**	**+2.9**
DAG				*i*S	**Sn**	**02 16 52.4**	**-0.7**
DAG	comp=Z,9.8nm,0.1s			IAML		02 16 53.6	
LOF	**Lofoten**	**8.39**	**100**	*e*P	**Pn**	**02 16 12.3**	**-0.2**
STEI	**Steigen**	**9.04**	**99**	*e*P	**Pn**	**02 16 21.1**	**-0.3**
VAGH	**Vaagaholmen**	**9.12**	**108**	*e*P	**Pn**	**02 16 21.6**	**-0.9**
STOK	**Stokkvaagen**	**9.30**	**111**	*e*P	**Pn**	**02 16 24.3**	**-0.6**
FAUS	**Fauske**	**9.36**	**102**	*e*P	**Pn**	**02 16 24.8**	**-0.9**
KBS	**Kingsbay**	**9.40**	**25**	*i*P	**Pn**	**02 16 27.4**	**+1.1**
LEIR	**Leirfjorden**	**9.47**	**111**	*e*P	**Pn**	**02 16 26.6**	**-0.7**
NSS	**Namsos**	**10.28**	**120**	*e*P	**Pn**	**02 16 37.3**	**-1.1**
NOR	**Nord**	**10.64**	**354**	*i*P	**Pn**	**02 16 45.8**	**+2.6**
NOR				*e*S	Sn	02 18 30.0	-11
NOR	comp=Z,9.6nm,0.4s			IAML		02 18 44.3	
NEEM	**North Greenlan**	**12.68**	**318**	*i*P	**Pn**	**02 17 08.9**	**-2.5**
NEEM	**North Greenlan**	**12.68**	**318**	*i*P	**Pn**	**02 17 08.9**	**-2.5**

*TAP **13** 02:17:21.9,24°.72N×122°.41E,h13km,ML3.0,C*
*JMA **13** 02:17:23.4±0.1,25°N.1°×122°.4E±0°.4,h32km±3km, MV2.6/10,NW OFF ISHIGAKUJIMA IS*
ISC 13 02:17:21.6±1.0,24°.72N±0°.03×122°.45E±0°.02,h14km±9km, n74,σ0°83/114,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.49**	**285**	P	**Pg**	**02 17 31.1**	**-0.3**
TWB1	**Santiao Chiao**	**0.51**	**304**	*i*P	**Pg**	**02 17 31.9**	**+0.2**
TWB1				S	**Sg**	**02 17 37.8**	**-0.9**
JYNG	**Yonagunijimaku**	**0.52**	**121**	*e*P	**Pn**	**02 17 33.8**	**-0.8**
JYNG				*e*S	**Sb**	**02 17 41.3**	**+1.5**
TWC	**Suao**	**0.56**	**259**	P	**Pg**	**02 17 31.9**	**-0.8**
TWC				S	**Sg**	**02 17 40.7**	**+0.5**
YOJ	**Yonaguni jima**	**0.57**	**117**	P	**Pn**	**02 17 34.9**	**-0.4**
YOJ				*e*S	**Sn**	**02 17 42.7**	**-1.7**
YOJ	**Yonaguni jima**	**0.57**	**117**	P	**Pn**	**02 17 34.8**	**-0.4**
YOJ				*i*S	**Sb**	**02 17 42.6**	**+1.3**
ESAO	**Su ao**	**0.57**	**256**	*e*P	**Pg**	**02 17 33.4**	**+0.5**
TIPB	**Shuangxi**	**0.62**	**294**	*e*P	**Pg**	**02 17 33.4**	**-0.5**
SXI1	**Grass Mountain**	**0.65**	**306**	P	**Pb**	**02 17 35.0**	**+0.3**
SXI1				*e*S	**Sg**	**02 17 42.7**	**-0.2**
NDS	**Dongshan**	**0.68**	**263**	P	**Pg**	**02 17 34.4**	**-0.5**
NDS				*e*S	**Sg**	**02 17 44.3**	**+0.5**
NWF	**Wu-fen Shan**	**0.70**	**300**	*e*P	**Pb**	**02 17 36.3**	**+0.6**
WFSB	**Wu-fen Shan**	**0.70**	**300**	P	**Pb**	**02 17 36.3**	**+0.6**
ENA	**Nanau**	**0.71**	**246**	*e*P	**Pg**	**02 17 34.7**	**-0.8**
TWE	**Neicheng**	**0.72**	**270**	P	**Pg**	**02 17 34.8**	**-0.8**
TWE				*e*S	**Sg**	**02 17 45.3**	**+0.2**
TNOU	**National Taiwa**	**0.75**	**305**	*e*P	**Pb**	**02 17 36.7**	**+0.2**
TNOU				*e*S	**Sg**	**02 17 46.6**	**+0.3**
EAHA	**Aohua**	**0.76**	**239**	*i*P	**Pg**	**02 17 36.0**	**-0.3**
EAHA				*i*S	**Sg**	**02 17 46.6**	**+0.3**
FUSB	**Fushanzhiwuyua**	**0.79**	**273**	P	**Pg**	**02 17 36.3**	**-0.7**
FUSB				S	**Sb**	**02 17 48.6**	**+0.9**
ENTT	**Nioudou**	**0.81**	**265**	*e*P	**Pg**	**02 17 36.5**	**-0.9**
TWA	**Mucha**	**0.83**	**288**	*e*P	**Pb**	**02 17 38.6**	**+0.7**
TWA				S	**Sg**	**02 17 48.8**	**0.0**
LATG	**Datong**	**0.86**	**258**	P	**Pg**	**02 17 37.5**	**-0.9**
LATG				S	**Sg**	**02 17 49.3**	**-0.5**
NWLT	**Wulai**	**0.87**	**274**	P	**Pg**	**02 17 37.7**	**-0.7**
NWLT				*e*S	**Sg**	**02 17 48.3**	**-1.6**
YM01	**YM01**	**0.91**	**298**	P	**Pb**	**02 17 39.7**	**+0.5**
YM01				S	**Sg**	**02 17 51.4**	**+0.1**
TATO	**Taipei**	**0.91**	**287**	P	**Pb**	**02 17 39.7**	**+0.4**
TATO				S	**Sg**	**02 17 51.2**	**-0.2**
YM08	**YM08**	**0.91**	**301**	*e*P	**Pg**	**02 17 38.9**	**-0.5**
YM08				*e*S	**Sg**	**02 17 50.8**	**-0.6**
ZUZH	**Zhuzihu**	**0.94**	**298**	*e*P	**Pg**	**02 17 39.6**	**-0.2**
ETL	**Fush Village**	**0.94**	**234**	*e*P	**Pb**	**02 17 38.9**	**-0.8**
NACB	**Ninganchiao**	**0.95**	**236**	P	**Pb**	**02 17 39.1**	**-0.8**
NACB				S	**Sb**	**02 17 51.0**	**-1.3**
TWY	**Chenhua**	**0.95**	**306**	*e*P	**Pg**	**02 17 40.4**	**+0.3**
TWY				S	**Sg**	**02 17 52.9**	**+0.3**
ANP	**Anpu**	**0.97**	**299**	*e*P	**Pg**	**02 17 40.7**	**+0.3**
PCYT	**Pengchaiyu**	**0.97**	**339**	*e*P	**Pn**	**02 17 41.6**	**+0.8**
YHNB	**Yeheng**	**0.98**	**267**	P	**Pb**	**02 17 40.4**	**0.0**
NSK	**Sanguang**	**1.00**	**268**	*e*P	**Pb**	**02 17 40.4**	**-0.3**
NSK				S	**Sb**	**02 17 52.8**	**-0.9**
TWD	**Chiawan**	**1.01**	**231**	*e*P	**Pn**	**02 17 42.3**	**+1.0**
TWS1	**Kuangyinshan**	**1.02**	**292**	*e*P	**Pn**	**02 17 41.8**	**+0.4**
TWS1				*e*S	**Sb**	**02 17 54.5**	**+0.3**
NNSB	**Datong**	**1.02**	**254**	*e*P	**Pb**	**02 17 38.5**	**-2.5**
ETLH	**Xiulin Townshi**	**1.02**	**240**	*e*P	**Pb**	**02 17 40.3**	**-0.8**
ETLH				*e*S	**Sb**	**02 17 53.0**	**-1.4**
NNS	**Nan Shan**	**1.02**	**255**	*e*P	**Pb**	**02 17 41.2**	**0.0**
NNS				S	**Sb**	**02 17 54.2**	**-0.3**
KSHI	**Guanxi Townshi**	**1.16**	**273**	*e*P	**Pg**	**02 17 44.2**	**+0.2**
FUSS	**Fushou**	**1.20**	**247**	*e*P	**Pn**	**02 17 44.0**	**-0.2**
NFF	**Wufeng Townshi**	**1.22**	**266**	*e*P	**Pn**	**02 17 44.6**	**+0.4**
NFF				S	**Sb**	**02 18 00.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.22**	**108**	*e*P	**Pb**	**02 17 44.6**	**+0.1**
IRIF				*e*S	**Sb**	**02 17 59.3**	**-0.8**
WHF	**Hehuan Shan**	**1.22**	**243**	*e*P	**Pn**	**02 17 44.3**	**-0.4**
WHF				*e*S	**Sb**	**02 18 00.1**	**-0.5**
SHUL	**Shoufeng**	**1.23**	**221**	*e*P	**Pg**	**02 17 45.9**	**+0.5**
SHUL				*e*S	**Sg**	**02 18 04.1**	**+2.6**
TWT	**Tachien**	**1.25**	**249**	*e*P	**Pb**	**02 17 45.5**	**+0.4**
TDCB	**Techi**	**1.27**	**249**	*e*P	**Pn**	**02 17 45.3**	**+0.3**
ESL	**Shilin**	**1.29**	**226**	*e*P	**Pb**	**02 17 46.1**	**+0.4**
LIOB	**Emei**	**1.31**	**267**	*e*P	**Pg**	**02 17 47.1**	**+0.2**
LIOB				*e*S	**Sb**	**02 17 59.8**	**-2.9**
NSTT	**Nanjuang**	**1.32**	**267**	*e*P	**Pg**	**02 17 47.4**	**+0.3**
NSTT				*e*S	**Sn**	**02 18 04.0**	**+0.9**
OWD	**Renai**	**1.39**	**237**	P	**Pn**	**02 17 47.4**	**+0.7**
OWD				*e*S	**Sb**	**02 18 06.5**	**+1.4**
WARBT	**Fenglin Townsh**	**1.39**	**225**	*e*P	**Pn**	**02 17 47.4**	**+0.8**
WARBT				*e*S	**Sn**	**02 18 04.5**	**-0.3**
HATJ	**Hateruma jima**	**1.40**	**118**	*e*S	**Sb**	**02 18 05.5**	**+0.3**
WUSB	**Renai**	**1.42**	**240**	P	**Pb**	**02 17 48.1**	**+0.2**
WHP	**Taichung City**	**1.44**	**253**	*e*P	**Pg**	**02 17 49.3**	**-0.1**
JKRS	**Kuro-shima**	**1.50**	**108**	*e*P	**Pb**	**02 17 49.3**	**+0.1**
JKRS				*e*S	**Sb**	**02 18 08.2**	**+0.3**
NMLH	**Miaoli**	**1.52**	**264**	*e*P	**Pg**	**02 17 51.2**	**+0.2**
VWDT	**VWDT**	**1.54**	**232**	*e*P	**Pb**	**02 17 50.3**	**+0.5**
VWDT				*e*S	**Sg**	**02 18 11.3**	**+0.1**
HGSD	**Ruisui**	**1.54**	**218**	*e*P	**Pn**	**02 17 47.8**	**-0.8**
HGSD				*e*S	**Sb**	**02 18 10.4**	**+1.1**
WCS	**Beigang Elemen**	**1.55**	**245**	*e*P	**Pb**	**02 17 50.1**	**0.0**
TWQ1	**Liyutan**	**1.57**	**257**	*e*P	**Pg**	**02 17 52.3**	**+0.4**
EHYH	**Wanrong**	**1.58**	**220**	*e*P	**Pn**	**02 17 49.6**	**+0.4**
EHY	**Hungye**	**1.59**	**221**	*e*P	**Pn**	**02 17 50.1**	**+0.8**
SMLT	**Sun Moon Lake**	**1.64**	**240**	*e*P	**Pb**	**02 17 51.9**	**+0.1**
SSLB	**Suanglung**	**1.65**	**236**	*e*P	**Pb**	**02 17 51.9**	**0.0**
TYC	**Yuchr**	**1.67**	**241**	*e*P	**Pb**	**02 17 52.6**	**+0.5**
TYC				*e*S	**Sg**	**02 18 15.5**	**+0.2**
YULB	**Yu-li**	**1.69**	**219**	*e*P	**Pn**	**02 17 50.2**	**-0.5**
TWF1	**Yuli**	**1.72**	**218**	*e*P	**Pn**	**02 17 50.2**	**-0.9**
ALS	**Alishan**	**1.93**	**232**	*e*P	**Pn**	**02 17 56.9**	**+0.2**
CHN5	**Tsauling**	**1.97**	**236**	*e*P	**Pb**	**02 17 58.5**	**+1.3**
CHN5				*e*S	**Sg**	**02 18 24.7**	**-0.4**
EDH	**Donghe**	**2.03**	**211**	*e*P	**Pn**	**02 17 55.3**	**-0.1**
EDH				*e*S	**Sn**	**02 18 19.2**	**-1.3**
CHN4	**Tsaushan**	**2.18**	**232**	*e*P	**Pb**	**02 18 01.7**	**+0.9**
CHN4				*e*S	**Sb**	**02 18 29.8**	**+2.2**
TPUB	**Ta-pu**	**2.19**	**230**	*e*P	**Pb**	**02 18 01.8**	**+0.9**
TPUB				*e*S	**Sb**	**02 18 28.9**	**+1.1**
WTP	**Ta-pu**	**2.23**	**229**	*e*P	**Pb**	**02 18 02.0**	**+0.3**
TWK	**Hsinying**	**2.31**	**232**	*e*P	**Pb**	**02 18 02.9**	**-0.1**
TWK				*e*S	**Sb**	**02 18 32.7**	**+1.3**
CHN1	**Nanshi**	**2.33**	**230**	*e*P	**Pb**	**02 18 02.4**	**-1.0**

*DJA **13** 02:20:07.7±0.5,1°N±3°×12°2E±°,h22km±4km,M4.6/17, mB5.2/3,mb4.8/6,MLv4.5/17,Mw(mB)4.5/3*
*NEIC **13** 02:20:09.9±1.6,0°.80N±0°.07×122°.0E±0°.1,h64km±11km, mb4.4/9,Error ellipse: s-maj=17.3km s-min=4.3km az=55.0*
*IDC **13** 02:20:25.1±11.0,0°.20S×121°.37E,h174km±112km, mb3.3/4,mbtmp3.8/4,Error ellipse: s-maj=152.5km s-min=19.0km az=65.0*
ISC 13 02:20:08.6±1.0,0°.88N±0°.06×122°.09E±0°.05,h53km±9km, n31,σ1°15/35,mb4.2/8,Minahassa Peninsula, Sulawesi

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

σ1§09/9, **mb3.5**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.79**	**260**	P	**P**	**02 30 21.7**	**-0.1**
	1.1nm,0.7s,baz=95,slow=7.7,SNR=6.4 1.1nm,0.7s						
ASAR	**Alice Springs**	**44.89**	**255**	P	**P**	**02 30 23.4**	**+0.9**
	7.4nm,0.8s,baz=90,slow=8.3,SNR=16 7.4nm,0.8s						
PETK	**Petropavlovsk-**	**74.39**	**345**	P	**P**	**02 33 37.0**	**-0.9**
	4.6nm,0.8s,baz=116,slow=10,SNR=4.2 4.6nm,0.8s						
NVAR	**Mina Array Bea**	**79.71**	**44**	P	**P**	**02 34 08.1**	**+0.6**
	0.4nm,0.7s,baz=222,slow=8.5,SNR=5.4 0.4nm,0.7s						
USHA	**Ushuaia**	**85.79**	**147**	P	**P**	**02 34 36.3**	**-1.2**
	20nm,0.4s,baz=172,slow=2.8,SNR=3.1						
TXAR	**Lajitas Array**	**86.11**	**57**	P	**P**	**02 34 41.1**	**+1.4**
	0.2nm,0.6s,baz=212,slow=4.4,SNR=3.7 0.2nm,0.6s						
ILAR	**Eielson Array**	**86.47**	**13**	P	**P**	**02 34 39.3**	**-1.1**
	0.3nm,0.5s,baz=219,slow=5.3,SNR=6.1 0.3nm,0.5s						
BRTR	**Keskin Array B**	**145.45**	**314**	PKPbc	**PKPbc**	**02 41 34.2**	**+0.7**
	0.4nm,0.7s,baz=72,slow=4.7,SNR=4.0						
GERES	**GERESS Array B**	**148.33**	**345**	PKPbc	**PKiKP**	**02 41 42.3**	**+0.2**
	0.8nm,0.5s,baz=29,slow=3.0,SNR=8.7						

IDC ***13*** *02:32:58.9±0.5, 15.˙90N×146.˙88E, h0km, mb4.6/31, mbtmp4.6/34, ML4.5/3, MS4.5/68, Error ellipse: s-maj=16.9km s-min=10.9km az=88.0*

BJI ***13*** *02:32:58.8, 15.˙86N×147.˙01E, h12km, mB5.2/24, mb4.7/54, Ms5.0/49, Ms7 4.8/47*

MOS ***13*** *02:32:59.2±0.9, 15.˙87N×146.˙75E, h11km, mb5.1/47, MS4.6/4, Error ellipse: s-maj=9.2km s-min=5.6km az=105.1*

NEIC ***13*** *02:33:01.9±1.3, 15.˙87N±0.˙07×146.˙83E±0.˙09, h14km±3km, mb5.2/332, Mww5.3/21, Error ellipse: s-maj=13.0km s-min=9.9km az=109.0*

NEIC ***13*** *02:33:01.2, 15.˙87N×146.˙85E, h18km*

NEIC ***13*** *02:33:01.2, 15.˙77N×146.˙85E, h18km, Moment Tensor Solution. Duration: 2s1 Moment tensor: Scale 10^17Nm; Mrr0.73; Mθθ-0.28; Mϕϕ-0.45; Mrθ0.28; Mθϕ0.58; Mϕr-0.64; Fault plane solution: M0 1.10000×10^17 NP1: ϕs302.38000°, δ27.72000°, λ63.10000°. NP2: ϕs152.19000°, δ65.49000°, λ103.37000°. Principal axes: T 1.0067, Plg67.0000°, Azm87.0000°; N 0.1732, Plg12.0000°, Azm327.0000°; P -1.1798, Plg19.0000°, Azm232.0000°;*

GCMT ***13*** *02:33:04.2±0.1, 15.˙68N±0.˙01×147.˙12E±0.˙01, h12km, MW5.2/121, Moment Tensor Solution. s61,c106; s121,c203; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr5.80±.14; Mθθ-1.77±.12; Mϕϕ-4.03±.11; Mrθ-0.16±.37; Mθϕ6.02±.10; Mϕr-0.87±.34; Best double couple: M07.51900×10^16 NP1:ϕs306.00000°, δ45.00000°, λ70.00000°. NP2:ϕs153.00000°, δ49.00000°, λ109.00000°. Principal axes: T 5.9900, Plg76.0000°, Azm132.0000°; N 3.0560, Plg14.0000°, Azm321.0000°; P -9.0470, Plg2.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***13*** *02:33:06.2±1.5, 16˚N±6˚×14˚7E±˚, h51km±11km, M5.0/33, mb5.1/33, mB5.6/12, MLv4.5/1, Mw(mB)5.1/12, MwMwp5.4/4, Mwp5.6/4*

ISC 13 02:33:00.5±0.3, 15.˙84N±0.˙04×146.˙95E±0.˙05, h10km, n744, σ1§10/595, **mb5.2**/266, **MS4.6**/89, **9C-19D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.01**	**222**	Pn	**Pn**	**02 33 48.8**	**+0.5**
	89nm,0.3s,baz=87,slow=2.1,SNR=10						
GUMO				Sn	**Sn**	**02 34 25.8**	**+1.3**
	130nm,0.3s,baz=26,slow=22,SNR=5.8 160nm,0.3s						
GUMO	**Guam**	**3.01**	**222**	Pn	**Pn**	**02 33 48.2**	**-0.1**
GUMO	**Guam**	**3.01**	**222**	P	**Pn**	**02 33 49.7**	**+1.4**
MANU	**Manus Island**	**17.77**	**179**		**Pn**	**02 37 09.2**	**+1.0**
JHJ2	**Mitsune**	**18.37**	**341**	P	**Pn**	**02 37 14.2**	**-1.3**
JHJ2	**Mitsune**	**18.37**	**341**	P	**P**	**02 37 19.9**	**+4.5**
JHJ	**Hachijo jima 2**	**18.39**	**341**	P	**Pn**	**02 37 15.4**	**-0.2**
	12nm,0.3s,baz=90,slow=16,SNR=6.0 74nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**19.04**	**79**	T	T	02 57 11.0	
	baz=264,slow=75						
H11S1	**WAKE ISLAND Hy**	**19.06**	**79**	T	T	02 56 48.7	
	baz=264,slow=75						
H11S2	**WAKE ISLAND Hy**	**19.06**	**79**	T	T	02 56 45.0	
	baz=264,slow=75						
JAY	**Jayapura**	**19.25**	**199**	P	**P**	**02 37 26.6**	**+1.2**
	0.7nm,0.3s,baz=358,slow=3.6,SNR=20						
JAY				LR	LR	02 43 44.1	
	comp=Z,2μm,21.7s,baz=14,slow=34 105nm,1.0s						
JAY	**Jayapura**	**19.25**	**199**	P	**Pn**	**02 37 27.3**	**+1.0**
	2μm108nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**19.38**	**76**	T	T	02 57 14.9	
	baz=261,slow=75						
H11N2	**WAKE ISLAND Hy**	**19.38**	**76**	T	T	02 57 04.6	
	baz=261,slow=75						
H11N3	**WAKE ISLAND Hy**	**19.39**	**76**	T	T	02 57 06.6	
	baz=261,slow=75						
SMPI	**Sarmi**	**19.50**	**205**	P	**Pn**	**02 37 30.9**	**+1.7**
	5μm90nm,1.0s						
GENI	**Genyem**	**19.50**	**201**	P	**Pn**	**02 37 31.0**	**+1.7**
	4μm5μm270nm,1.2s						
BAKI	**Biak**	**20.03**	**213**	P	**Pn**	**02 37 37.0**	**+1.4**
	3μm2μm70nm,0.9s						
JOW	**Kunigami**	**20.52**	**305**	P	**P**	**02 37 38.9**	**-0.2**
	8.6nm,0.6s,baz=123,slow=9.9,SNR=8.0						
JOW				LR	LR	02 44 46.2	
	comp=Z,2μm,20.1s,baz=148,slow=35 8.6nm,0.6s						
JOW	**Kunigami**	**20.52**	**305**	Pn	**P**	**02 37 39.4**	**+0.4**
JOW	**Kunigami**	**20.52**	**305**	P	Pn	02 37 42.8	+1.5
RABL	**Rabaul**	**20.56**	**165**	P	**P**	**02 37 40.2**	**+0.6**
JGF	**Kuroka**	**21.47**	**338**	P	**P**	**02 37 47.8**	**-1.5**
MJAR	**Matsushiro Arr**	**22.04**	**341**	P	**P**	**02 37 53.5**	**-1.9**
	4.4nm,0.6s,baz=164,slow=9.8,SNR=14 4.4nm,0.6s						
MJAR	**Matsushiro Arr**	**22.04**	**341**	P	**P**	**02 37 53.4**	**-1.9**
MAJO	**Matsushiro**	**22.04**	**341**	P	**P**	**02 37 53.6**	**-1.7**
MAJO	**Matsushiro**	**22.04**	**341**	‖*eP*	**P**	**02 37 54.3**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,16nm,1.4s						
MJB9	**Matsu-Tunnel**	**22.04**	**341**	P	**P**	**02 37 54.6**	**-0.8**
JNU	**Nakatsue**	**22.53**	**323**	P	**P**	**02 37 59.4**	**-1.3**
	comp=Z,4.2nm,0.7s,baz=144,slow=4.7,SNR=5.0 comp=Z,4.2nm,0.7s						
JMM	**Marumori**	**22.60**	**347**	P	**P**	**02 38 01.2**	**-0.2**
JMM				IAmb	IAmb	02 38 16.1	
	comp=Z,170nm,1.6s						
JMM	**Marumori**	**22.60**	**347**	P	**P**	**02 38 05.2**	**+3.8**
DAV	**Davao City (W)**	**22.66**	**250**	LR	LR	02 46 27.8	
	comp=Z,822nm,20.5s,baz=86,slow=36						
SWI	**Sorong**	**22.71**	**224**	P	**P**	**02 38 04.7**	**+2.0**
	comp=Z,49nm,1.4s						
JSD	**Sado**	**23.40**	**343**	P	**P**	**02 38 09.0**	**-0.6**
FAKI	**Fak Fak**	**23.64**	**219**	P	**P**	**02 38 12.0**	**-0.2**
FAKI				IAmb	IAmb	02 38 14.9	
	comp=Z,106nm,1.2s						
FAKI	**Fak Fak**	**23.64**	**219**	P	**P**	**02 38 13.1**	**+0.9**
FAKI	**Fak Fak**	**23.64**	**219**	P	**P**	**02 38 11.3**	**-0.9**
	comp=Z,75nm,1.0s						
YOJ	**Yonaguni jima**	**24.02**	**295**	P	**P**	**02 38 16.2**	**+0.4**
YOJ	**Yonaguni jima**	**24.02**	**295**	P	**P**	**02 38 16.2**	**+0.4**
YOJ				pmax	pmax		
	comp=Z,48nm,1.0s						
PMG	**Port Moresby**	**25.09**	**180**	P	**P**	**02 38 23.8**	**-1.7**
PMG				IAmb	IAmb	02 38 31.0	
	comp=Z,59nm,0.9s						
PMG	**Port Moresby**	**25.09**	**180**	*d* iP	**P**	**02 38 24.8**	**-0.7**
PMG				pmax	pmax		
	comp=Z,59nm,0.8s						
JTM	**Tenmabayashi**	**25.38**	**350**	P	**P**	**02 38 27.6**	**-0.3**
JTM				IAmb	IAmb	02 38 48.7	
	comp=Z,58nm,1.1s						
JTM	**Tenmabayashi**	**25.38**	**350**	P	**P**	**02 38 29.4**	**+1.5**
YHNB	**Yeheng**	**25.51**	**294**	P	**P**	**02 38 29.4**	**-0.1**
YHNB				IAmb	IAmb	02 38 42.0	
	comp=Z,123nm,1.7s						
SSLB	**Suanglung**	**25.67**	**292**	P	**P**	**02 38 31.3**	**+0.5**
KSRS	**Korea Array**	**27.33**	**326**	P	**P**	**02 38 44.3**	**-1.3**
	comp=Z,11nm,0.3s,baz=146,slow=9.0,SNR=5.5 comp=Z,11nm,0.3s						
SSE	**Sheshan**	**27.99**	**307**	P	**P**	**02 38 50.5**	**-1.1**
SSE				S	**S**	**02 43 34.8**	**-1.1**
SSE				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,61nm,4.1s						
SSE				LR	LR		
	comp=Z,350nm,18.5s						
SSE				LR	LR		
	comp=Z,520nm,17.1s						
HNR	**Honiara**	**28.22**	**152**	LR	LR	02 48 56.1	
	comp=Z,1μm,20.6s,baz=318,slow=34						
JKA	**Kamikawa-asahi**	**28.43**	**353**	P	**P**	**02 38 57.3**	**+2.0**
JKA				IAmb	IAmb	02 39 30.9	
	comp=Z,92nm,1.5s						
ASAJ	**Asahikawa**	**28.43**	**353**	P	**P**	**02 38 57.3**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,92nm,1.5s						
TOLI2	**Tolitoli**	**29.67**	**243**	P	**P**	**02 39 04.8**	**-1.9**
COEN	**Coen**	**29.84**	**187**	P	**P**	**02 39 09.2**	**+1.0**
	comp=Z,14nm,1.4s						
COEN	**Coen**	**29.84**	**187**	P	**P**	**02 39 06.4**	**-1.8**
COEN	**Coen**	**29.84**	**187**	P	**P**	**02 39 08.9**	**+0.7**
NJ2	**Nanjing**	**30.20**	**307**	*e*P	**P**	**02 39 12.7**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.2s						
NJ2				LR	LR		
	comp=Z,860nm,18.8s						
NJ2				LR	LR		
	comp=Z,1μm,15.0s						
NJ2				LR	LR		
	comp=Z,1μm,17.9s						
MPSI	**Mapaga**	**30.82**	**243**	P	**P**	**02 39 16.4**	**-0.5**
	comp=Z,11nm,0.7s						
USRK	**Ussuriysk Ar.**	**30.99**	**339**	P	**P**	**02 39 17.7**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=153,slow=8.6,SNR=4.2 comp=Z,2.3nm,0.6s						
YSS	**Yuzhno-Sakhali**	**31.22**	**354**	*e*P	**P**	**02 39 18.8**	**-1.2**
YSS				*e**SP	**sP**	**02 39 24.0**	**+2.0**
YSS				*e*PPP	PPP	02 40 38.0	
YSS				*e*S	**S**	**02 44 20.9**	**-5.3**
YSS				pmax	pmax		
	comp=Z,100nm,2.5s						
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,800nm,16.0s						
YSS				MLR	MLR		
	comp=E,700nm,20.0s						
KDU	**Kakadu**	**31.76**	**208**	P	**P**	**02 39 24.6**	**-0.5**
	comp=Z,9.0nm,1.1s						
DL2	**Dalian**	**31.95**	**321**	P	**P**	**02 39 26.9**	**+0.3**
DL2				*e*S	**S**	**02 44 35.3**	**-2.6**
DL2				pmax	pmax		
	comp=Z,37nm,1.0s						
DL2				pmax	pmax		
	comp=Z,350nm,5.8s						
DL2				LR	LR		
	comp=Z,1μm,17.5s						
DL2				LR	LR		
	comp=Z,1μm,18.9s						
DL2				LR	LR		
	comp=Z,2μm,14.5s						
MTN	**Manton Dam**	**32.51**	**210**	P	**P**	**02 39 31.9**	**+0.1**
	comp=Z,29nm,0.9s						
MTN	**Manton Dam**	**32.51**	**210**	P	**P**	**02 39 30.6**	**-1.2**
MTN				IAmb	IAmb	02 39 32.5	
	comp=Z,25nm,0.9s						
CN2	**Changchun**	**33.33**	**331**	*e*P	**P**	**02 39 39.9**	**+1.3**
CN2				*e*S	**S**	**02 44 55.6**	**-3.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,6.0s						
CN2				LR	LR		
	comp=Z,1μm,18.0s						
CN2				LR	LR		
	comp=Z,2μm,18.0s						
CN2				LR	LR		
	comp=Z,1μm,18.6s						
MTSU	**Mount Surprise**	**33.86**	**184**	P	**P**	**02 39 44.4**	**+0.9**
	comp=Z,19nm,0.9s						
SOEI	**Soe**	**33.93**	**223**	P	**P**	**02 39 42.5**	**-1.8**
SOEI				IAmb	IAmb	02 40 27.4	
	comp=Z,34nm,1.0s						
SOEI	**Soe**	**33.93**	**223**	P	**P**	**02 39 43.7**	**-0.6**
	comp=Z,32nm,1.3s						
KAPI	**Kappang**	**33.97**	**235**	LR	LR	02 54 43.2	
	comp=Z,269nm,18.3s,baz=30,slow=38						
KAPI	**Kappang**	**33.97**	**235**	‖*eP*	**P**	**02 39 44.0**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,15nm,1.1s						
BNX	**BinXian**	**34.02**	**335**	‖P	**P**	**02 39 44.8**	**+0.2**
BNX				pmax	pmax		
	comp=Z,11nm,1.1s						
BATI	**Baumata**	**34.66**	**223**	LR	LR	02 54 00.3	
	comp=Z,959nm,21.7s,baz=64,slow=36						
TYV	**Tymovskoe**	**35.10**	**355**	*e*P	**P**	**02 39 56.4**	**+2.5**
TYV				pmax	pmax		
	comp=Z,300nm,3.2s						
TYV				pmax	pmax		
	comp=Z,28nm,1.3s						
QIZ	**Qiongzhong**	**35.50**	**281**	P	**P**	**02 39 58.7**	**+0.9**
QIZ				S	**S**	**02 45 35.2**	**+1.8**
QIZ				LR	LR		
	comp=Z,330nm,13.8s						
QIZ				LR	LR		
	comp=Z,770nm,15.9s						
QIZ				LR	LR		
	comp=Z,810nm,17.1s						
CTA	**Charters Tower**	**35.71**	**181**	LR	LR	02 54 42.3	
	comp=Z,14nm,20.4s,baz=358,slow=36						
CTAO	**Charters Tower**	**35.71**	**181**	P	**P**	**02 39 59.0**	**-0.5**
CTAO	**Charters Tower**	**35.71**	**181**	P	**P**	**02 39 59.0**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,18nm,1.3s						
KNRA	**Kununurra**	**36.10**	**211**	P	**P**	**02 40 03.6**	**+0.8**
	comp=Z,33nm,1.1s						
KNRA	**Kununurra**	**36.10**	**211**	P	**P**	**02 40 01.9**	**-0.9**
KNRA				IAmb	IAmb	02 40 04.1	
	comp=Z,25nm,0.8s						
QIS	**Mount Isa**	**36.88**	**192**	P	**P**	**02 40 09.7**	**+0.2**
	comp=Z,19nm,1.1s						
WB0	**Warramunga Arr**	**37.48**	**200**	IAmb	IAmb	02 40 16.1	
	comp=Z,32nm,0.9s						
WR8	**Warramunga Arr**	**37.62**	**199**	IAmb	IAmb	02 40 17.3	
	comp=Z,29nm,0.8s						
WRAB	**Tennant Creek**	**37.65**	**200**	P	**P**	**02 40 15.7**	**-0.2**
WRAB				IAmb	IAmb	02 40 17.6	
	comp=Z,39nm,0.9s						
WRAB	**Tennant Creek**	**37.65**	**200**	P	**P**	**02 40 16.0**	**0.0**
WRAB	**Tennant Creek**	**37.65**	**200**	*de*P	**P**	**02 40 16.4**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,62nm,1.3s						
WRA	**Warramunga Arr**	**37.66**	**200**	P	**P**	**02 40 15.8**	**-0.3**
	comp=Z,37nm,0.9s,baz=22,slow=9.3,SNR=66						
WRA				PcP	**PcP**	**02 42 33.9**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=21,slow=3.5,SNR=6.9						
WRA				LR	LR	02 56 31.3	
	comp=Z,351nm,21.0s,baz=18,slow=38 comp=Z,37nm,0.9s						
WRA	**Warramunga Arr**	**37.66**	**200**	P	**P**	**02 40 13.3**	**-2.8**
WRA	**Warramunga Arr**	**37.66**	**200**	*i* P	**P**	**02 40 15.8**	**-0.3**
WRA				pmax	pmax		
	comp=Z,38nm,0.9s						
HEH	**HeiHe**	**37.79**	**339**	*e*P	**P**	**02 40 15.4**	**-1.4**
HEH				pmax	pmax		
	comp=Z,12nm,1.1s						
HEH				LR	LR		
	comp=Z,980nm,14.5s						
HEH				LR	LR		
	comp=Z,900nm,16.1s						
HEH				LR	LR		
	comp=Z,1μm,16.3s						
PLAI	**Plampang**	**37.89**	**232**	P	**P**	**02 40 20.0**	**+1.9**
PETK	**Petropavlovsk-**	**38.14**	**10**	P	**P**	**02 40 20.4**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=199,slow=7.2,SNR=1.7						
PETK				LR	LR	02 53 39.2	
	comp=Z,1μm,21.7s,baz=200,slow=33 comp=Z,3.5nm,0.8s						
PETK	**Petropavlovsk-**	**38.14**	**10**	P	**P**	**02 40 21.3**	**+1.5**
PET	**Petropavlovsk**	**38.23**	**11**	*e*P	P	02 40 25.7	+5.2
PET				*e*S	**S**	**02 46 20.3**	**+6.1**
PET				pmax	pmax		
	comp=Z,400nm,6.7s						
PET				pmax	pmax		
	comp=Z,200nm,10.8s						
PET				MLR	MLR		
	comp=Z,1μm,15.0s						
PET				MLR	MLR		
	comp=Z,1μm,18.0s						
XLT	**XiLinHaoTe**	**38.31**	**323**	*e*P	**P**	**02 40 23.3**	**+1.8**
XLT				pP	pwP	02 40 27.9	-2.2
XLT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TWSI	**Taliwang, Sumb**	**38.51**	**233**	P	**P**	**02 40 22.5**	**-0.9**
	comp=Z,689nmcomp=Z,39nm,0.7s						
XAN	**Xi'an**	**38.67**	**305**	P	P	02 40 19.4	-5.2
XAN				pP	pP	02 40 23.8	-2.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,190nm,7.8s						
XAN				LR	LR		
	comp=N,810nm,19.9s						
XAN				LR	LR		
	comp=E,1μm,18.6s						
XAN				LR	LR		
	comp=Z,2μm,20.6s						
HHC	**Hu-ho-hao-te**	**39.46**	**316**	*e*P	**P**	**02 40 31.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
HHC				LR	LR		
	comp=Z,530nm,16.8s						
HHC				LR	LR		
	comp=Z,400nm,16.0s						
HHC				LR	LR		
	comp=Z,800nm,16.0s						
FITZ	**Fitzroy Crossi**	**39.72**	**213**	LR	LR	02 57 17.6	
	comp=Z,639nm,20.5s,baz=26,slow=37						
HILR	**Hailar Array B**	**40.24**	**333**	P	**P**	**02 40 36.3**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=124,slow=12,SNR=2.4						
HILR				PcP	**PcP**	**02 42 40.6**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=117,slow=5.0,SNR=2.7						
HILR				LR	LR	02 56 57.6	
	comp=Z,1μm,19.4s,baz=130,slow=36 comp=Z,1.0nm,0.4s						
BTO	**Baotou**	**40.39**	**315**	*e*P	**P**	**02 40 41.1**	**+2.2**
BTO				sP	**pwP**	**02 40 48.4**	**+0.8**
BTO				PP	**PnPn**	**02 42 15.0**	**-0.6**
BTO				S	**S**	**02 46 51.4**	**+4.2**
BTO				pmax	pmax		
	comp=Z,25nm,0.6s						
BTO				pmax	pmax		
	comp=Z,460nm,6.3s						
BTO				LR	LR		
	comp=Z,1μm,11.2s						
BTO				LR	LR		
	comp=Z,1μm,15.7s						
BTO				LR	LR		
	comp=Z,1μm,19.2s						
AS31	**Alice Springs**	**41.28**	**198**	P	**P**	**02 40 46.1**	**-0.2**
ASAR	**Alice Springs**	**41.28**	**198**	P	**P**	**02 40 45.9**	**-0.5**
	comp=Z,8.0nm,1.0s,baz=21,slow=7.2,SNR=45						
ASAR				PP	**PP**	**02 42 21.0**	**-0.8**
	comp=Z,4.2nm,1.0s,baz=17,slow=10,SNR=3.0						
ASAR				PcP	**PcP**	**02 42 45.3**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=18,slow=3.9,SNR=1.3						
ASAR				ScP	**ScP**	**02 46 36.3**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=27,slow=4.3,SNR=2.3						
ASAR				LR	LR	03 00 53.0	
	comp=Z,333nm,18.1s,baz=16,slow=40 comp=Z,8.0nm,1.0s						
ASAR	**Alice Springs**	**41.28**	**198**	P	**P**	**02 40 45.6**	**-0.7**
CD2	**Chengdu**	**42.12**	**299**	P	**P**	**02 40 53.5**	**+0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,1μm,15.2s						
CD2				LR	LR		
	comp=Z,1μm,18.4s						
CD2				LR	LR		
	comp=Z,1μm,15.9s						
KMI	**Kunming**	**42.27**	**290**	P	**P**	**02 40 54.5**	**-0.3**
KMI				SS	SS	02 50 18.8	-5.4
KMI				pmax	pmax		
	comp=Z,170nm,6.7s						
KMI				LR	LR		
	comp=Z,360nm,16.4s						
KMI				LR	LR		
	comp=Z,460nm,17.1s						
KMI				LR	LR		
	comp=Z,600nm,18.0s						
ONTNC	**Ouen Toro**	**42.46**	**153**	P	**P**	**02 40 56.2**	**+0.4**
ONTNC				IAmb	IAmb	02 41 00.5	
	comp=Z,28nm,0.7s						
SHEM	**Shemya Is, Ala**	**42.59**	**24**	LR	LR	02 55 43.4	
	comp=Z,1μm,21.0s,baz=268,slow=32						
LZH	**Lanzhou**	**43.26**	**306**	*e*P	**P**	**02 41 03.8**	**+1.3**
LZH				pP	pwP	02 41 11.7	+0.7
LZH				S	**S**	**02 47 28.5**	**-1.4**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				LR	LR		
	comp=Z,1μm,13.7s						
LZH				LR	LR		
	comp=Z,1μm,14.1s						
LZH				LR	LR		
	comp=Z,2μm,14.4s						
PZH	**PanZhiHua**	**43.27**	**292**	P	**P**	**02 41 03.5**	**+0.7**
PZH				S	**S**	**02 47 30.6**	**+0.2**
PZH				LR	LR		
	comp=Z,260nm,18.8s						
PZH				LR	LR		
	comp=Z,380nm,19.0s						
PZH				LR	LR		
	comp=Z,640nm,17.7s						
LZDM	**Lanzhou Array**	**43.34**	**306**	P	**P**	**02 41 02.2**	**-1.1**
	comp=Z,2.2nm,0.3s,baz=145,slow=8.3,SNR=9.2 comp=Z,2.2nm,0.3s						
INKA	**Innaminka**	**43.74**	**188**	P	**P**	**02 41 05.7**	**-0.5**
MA2	**Magadan**	**43.76**	**3**	LR	LR	02 57 45.3	
	comp=Z,300nm,20.8s,baz=176,slow=34						
MA2	**Magadan**	**43.76**	**3**	P	**P**	**02 41 05.9**	**-0.1**
MA2	**Magadan**	**43.76**	**3**	‖*eP*	**P**	**02 41 08.1**	**+2.1**
MA2				pmax	pmax		
	comp=Z,58nm,1.0s						
WRKA	**Warakurna**	**44.52**	**204**	P	**P**	**02 41 13.2**	**+0.7**
	comp=Z,20nm,1.1s						
LEM	**Lembang**	**44.99**	**243**	LR	LR	02 59 52.7	
	comp=Z,296nm,21.7s,baz=13,slow=36						
MBWA	**Marble Bar**	**45.45**	**217**	P	**P**	**02 41 19.9**	**0.0**
	comp=Z,30nm,1.4s						
MBWA	**Marble Bar**	**45.45**	**217**	P	**P**	**02 41 19.2**	**-0.7**
MBWA				IAmb	IAmb	02 41 20.9	
	comp=Z,24nm,0.9s						
PSAC2	**Pilbara Seismi**	**45.67**	**216**	P	**P**	**02 41 22.5**	**+0.8**
	comp=Z,36nm,1.4s						
PSAC1	**Pilbara Seismi**	**45.70**	**216**	P	**P**	**02 41 22.2**	**+0.3**
	comp=Z,36nm,1.2s						
PSA00	**Pilbara Seismi**	**45.70**	**216**	P	**P**	**02 41 18.6**	**-3.4**
	comp=Z,25nm,1.4s						
PSA00	**Pilbara Seismi**	**45.70**	**216**	P	**P**	**02 41 21.5**	**-0.5**
PSAB3	**Pilbara Seismi**	**45.72**	**216**	P	**P**	**02 41 19.9**	**-2.2**
	comp=Z,41nm,1.1s						
ULN	**Ulaanbaatar**	**45.75**	**323**	P	**P**	**02 41 21.7**	**-0.6**
ULN	**Ulaanbaatar**	**45.75**	**323**	‖*eP*	**P**	**02 41 22.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**45.82**	**281**	P	**P**	**02 41 22.6**	**-0.5**
CHTO	**Chiang Mai**	**45.82**	**281**	P	**P**	**02 41 22.6**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,24nm,1.8s						
CM31	**Chiang Mai Arr**	**45.84**	**280**	P	**

TNCH LR LR
comp=Z,670nm,12.7s
TNCH LR LR
comp=Z,920nm,18.4s
SONM Songino Array 46.12 323 P **P 02 41 25.1 0.0**
comp=Z,3.5nm,0.6s,baz=142,slow=7.9,SNR=15
SONM LR LR 03 00 32.6
comp=Z,1µm,21.9s,baz=118,slow=36
comp=Z,3.5nm,0.6s
SONM Songino Array 46.12 323 P **P 02 41 24.9 -0.3**
SONM Songino Array 46.12 323 P **P 02 41 24.9 -0.3**
SONM pmax pmax
comp=Z,7.0nm,1.3s
IPM Ipoh 46.48 261 P **P 02 41 28.1 -0.3**
KULM Kulim 46.60 262 P **P 02 41 28.1 -1.2**
KULM IAmb IAmb 02 41 32.6
comp=Z,17nm,0.9s
SEY Seymchan 47.19 3⇓*eP* **P 02 41 34.8 +1.7**
SEY pmax pmax
comp=Z,30nm,1.3s
GTA Gaotai 47.25 309 *eP* **P 02 41 35.4 +1.2**
GTA sP pwP 02 41 44.0 +1.1
GTA pmax pmax
comp=Z,6.0nm,0.7s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,680nm,20.7s
GTA LR LR
comp=Z,1µm,21.8s
STKA Stephens Creek 47.72 186 P **P 02 41 38.0 +0.4**
comp=Z,48nm,1.1s
STKA Stephens Creek 47.72 186 P **P 02 41 37.5 -0.1**
comp=Z,7.3nm,0.8s,baz=356,slow=7.7,SNR=7.5
STKA LR LR 03 04 30.9
comp=Z,528nm,18.3s,baz=360,slow=40
comp=Z,7.3nm,0.8s
STKA Stephens Creek 47.72 186 P **P 02 41 36.9 -0.7**
YAK Yakutsk 47.73 349 LR LR 03 05 33.9
comp=Z,352nm,18.1s,baz=147,slow=41
YAK Yakutsk 47.73 349 P **P 02 41 36.9 -0.5**
YAK Yakutsk 47.73 349 *eP* **P 02 41 37.0 -0.4**
YAK *e* 02 43 05.6
YAK *e* 02 43 29.9
YAK *eS* **S 02 48 34.1 +0.7**
YAK *e* 02 51 32.6
YAK pmax pmax
comp=Z,43nm,1.0s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,254nm,3.1s
YAK smax smax
comp=E,714nm,2.8s
YAK smax smax
comp=N,248nm,2.9s
PSI Prapat 48.99 260 LR LR 03 06 31.4
comp=N,235nm,18.0s,baz=73,slow=41
PSI Prapat 48.99 260 P **P 02 41 47.0 -1.0**
PSI pmax pmax
comp=Z,24nm,1.0s
RPSI Rantau Prapat 49.03 260 P **P 02 41 47.0 -1.1**
RPSI IAmb IAmb 02 42 02.7
comp=Z,24nm,1.0s
BBOO Buckleboo 49.48 192 P **P 02 41 52.0 +0.8**
comp=Z,52nm,1.0s
BBOO Buckleboo 49.48 192 P **P 02 41 52.0 +0.8**
HTT Hallett 49.59 189 P **P 02 41 53.2 +1.2**
comp=Z,8.8nm,1.2s
HTT Hallett 49.59 189 P **P 02 41 52.9 +0.8**
FORT Forrest 49.79 201 P **P 02 41 54.4 +0.9**
comp=Z,35nm,1.0s
FORT Forrest 49.79 201 P **P 02 41 54.0 +0.4**
KCSI Kotacane, Aceh 49.87 261 P **P 02 41 55.6 +1.1**
comp=Z,2µmcomp=Z,11nm,1.2s
GOMU GeErMu 50.40 304 P **P 02 41 59.7 +0.9**
GOMU S **S 02 49 14.4 +1.9**
GOMU pmax pmax
comp=Z,8.0nm,0.9s
GOMU LR LR
comp=Z,340nm,17.5s
GOMU LR LR
comp=Z,340nm,13.9s
MEEK Meekatharra 50.41 213 P **P 02 41 59.3 +0.9**
NIKH Nikolski High 50.70 33 P **P 02 42 00.7 +0.5**
baz=240
GSI Gunungsitoli 50.75 258 P **P 02 42 00.5 -0.8**
GSI IAmb IAmb 02 42 18.6
comp=Z,24nm,0.7s
GSI Gunungsitoli 50.75 258 P **P 02 42 01.1 -0.1**
comp=Z,34nm,1.0s
CNB Canberra Magne 50.92 177 P **P 02 42 01.8 -0.4**
comp=Z,24nm,0.9s
P08K Saint George I 52.26 29 P **P 02 42 12.5 +0.7**
baz=237
SPIA Saint Paul Isl 52.26 28 P **P 02 42 12.5 +0.7**
baz=236
UNV Unalaska Valle 52.35 33 P **P 02 42 13.2 +0.6**
baz=242
BRDH Bariadhala 52.41 287 LR LR 03 06 22.5
comp=Z,203nm,18.1s,baz=88,slow=38
ARPS Mount Arapiles 52.55 185 P **P 02 42 15.8 +1.6**
comp=Z,31nm,1.1s
KMBL Kambalda 52.75 207 P **P 02 42 16.1 +0.3**
comp=Z,13nm,1.1s
LSA Lhasa 52.81 295 P **P 02 42 14.6 -2.4**
BILL Bilibino 53.63 9 P **P 02 42 22.3 +0.5**
BILL IAmb IAmb 02 42 45.2
comp=Z,40nm,1.3s
BILL Bilibino 53.63 9⇓*eP* **P 02 42 23.0 +1.2**
BILL pmax pmax
comp=Z,19nm,1.3s
MORW Morawa 53.71 214 P **P 02 42 23.3 +0.4**
comp=Z,34nm,1.0s
MORW Morawa 53.71 214 IAmb IAmb 02 42 24.9
comp=Z,27nm,0.9s
MORW Morawa 53.71 214 P **P 02 42 23.4 +0.4**
FALS False Pass 54.42 33 P **P 02 42 29.0 +1.3**
baz=244
BLDU Ballidu 54.59 212 P **P 02 42 29.4 +0.1**
comp=Z,46nm,1.3s
BLDU Ballidu 54.59 212 P **P 02 42 30.0 +0.7**
KLBR Kellerberrin 54.86 211 P **P 02 42 30.7 -0.5**
comp=Z,29nm,0.8s
S12K Black Hills 55.49 32 P **P 02 42 36.7 +1.2**
baz=245
GAMB Gambell 55.66 21 P **P 02 42 36.9 +0.3**
baz=230
M11K Mekoryuk 55.78 26 P **P 02 42 38.4 +1.0**
baz=238
MUN Mundaring 55.94 212 P **P 02 42 40.3 +1.3**
SDPT Sand Point 56.17 33 P **P 02 42 41.2 +0.9**
baz=247
NWAO Narrogin (SRO) 56.20 210 LR LR 03 06 48.0
comp=Z,522nm,20.8s,baz=36,slow=36
RAO Raoul Island 56.22 143 LR LR 03 05 35.2
comp=Z,115nm,18.1s,baz=126,slow=35
CHNA Chernabura Isl 56.44 34 P **P 02 42 42.4 +0.1**
baz=248
EVN Everest 56.60 293 P **P 02 42 43.9 -0.8**
TIXI Tiksi 56.83 353 LR LR 03 06 40.2
comp=Z,311nm,21.4s,baz=188,slow=36
TIXI Tiksi 56.83 353 P **P 02 42 43.8 -1.1**
TIXI Tiksi 56.83 353⇓*eP* **P 02 42 44.3 -0.5**
TIXI pmax pmax
comp=Z,12nm,1.0s
S14K Fog Glacier 57.01 32 P **P 02 42 47.5 +1.0**
baz=247
M13K Dall Lake 57.01 27 P **P 02 42 47.1 +0.8**
baz=241
WMQ Urumqi 57.09 312 *eP* **P 02 42 49.3 +2.1**
WMQ LR LR
comp=Z,900nm,21.1s
WMQ LR LR
comp=Z,700nm,11.5s
WMQ LR LR
comp=Z,550nm,17.3s
K13K Kusilvak Mount 57.23 25 P **P 02 42 48.4 +0.6**
baz=239
O14K Tigyukauivet M 57.41 29 P **P 02 42 49.9 +0.8**
baz=244
N14K Kuskokwak Cree 57.52 28 P **P 02 42 51.1 +1.3**
baz=243
RKGY Rocky Gully 57.70 209 P **P 02 42 50.2 -1.2**
comp=Z,64nm,0.9s

L14K Kuka Creek 57.75 26 P **P 02 42 53.2 +1.7**
baz=241
M14K Bethel 57.78 27 P **P 02 42 52.8 +1.1**
baz=242
O15K Ungalikthiuk R 58.05 29 P **P 02 42 54.4 +0.8**
baz=245
TNA Tin City 58.05 20 P **P 02 42 54.3 +0.8**
baz=234
J14K Nanvaranak Lak 58.09 24 P **P 02 42 54.1 +0.2**
baz=240
M15K Kasigluk River 58.31 27 P **P 02 42 55.7 +0.3**
baz=244
N15K Kwethluk River 58.34 28 P **P 02 42 56.1 +0.4**
baz=245
ANM Nome 58.36 22 P **P 02 42 56.1 +0.3**
baz=237
L15K Ungalak Mounta 58.41 26 P **P 02 42 56.8 +0.7**
baz=242
DGZ Jazzator, Alta 58.44 319*deP* **P 02 42 57.0 +0.2**
DGZ pmax pmax
comp=Z,13nm,1.1s
R16K Pilot Point 58.50 31 P **P 02 42 56.2 -0.6**
baz=248
F14K Arctic Creek 58.54 21 P **P 02 42 57.4 +0.5**
baz=235
K15K Wolf Creek Mou 58.69 25 P **P 02 42 57.7 -0.3**
baz=242
P16K Nushagak River 58.85 30 P **P 02 42 59.4 +0.2**
baz=247
CHIR Chirikof Islan 58.91 34 P **P 02 42 59.6 -0.1**
baz=251
O16K Kokwok River B 59.02 29 P **P 02 43 00.5 0.0**
baz=247
N16K Nishlik Lake 59.07 28 P **P 02 43 01.6 +0.8**
baz=246
G15K Niukluk 59.08 22 P **P 02 43 00.7 0.0**
baz=238
M16K Timber Creek 59.22 27 IAmb IAmb 02 43 23.1
comp=Z,30nm,1.2s
M16K Timber Creek 59.22 27 P **P 02 43 02.3 +0.6**
baz=245
F15K North Star Dit 59.25 21 P **P 02 43 02.1 +0.2**
baz=237
L16K Owhat River 59.28 26 P **P 02 43 02.2 +0.1**
baz=244
Q16K King Salmon 59.36 30 P **P 02 43 02.6 -0.2**
baz=249
J16K Anvik River 59.53 25 P **P 02 43 04.4 +0.5**
baz=242
H16K Elim 59.55 23 P **P 02 43 04.2 +0.2**
baz=240
O17K Koliganek Bris 59.56 29 P **P 02 43 03.6 -0.5**
baz=248
Q17K Contact Creek 59.59 31 P **P 02 43 03.8 -0.7**
baz=250
P17K Kvichak River 59.66 30 P **P 02 43 05.1 +0.4**
baz=249
ZSN Zaisan 59.66 316 *eP* **P 02 43 04.4 -0.7**
ZSN Zaisan 59.66 316 *eP* **P 02 43 04.4 -0.7**
I17K Unalakleet 59.77 24 P **P 02 43 06.0 +0.5**
baz=242
N17K Nushagak Hills 59.81 28 P **P 02 43 06.3 +0.5**
baz=247
SII Sitkinak Islan 59.91 33 P **P 02 43 07.3 +0.7**
baz=252
L17K Donlin 59.97 26 P **P 02 43 06.9 0.0**
baz=245
M17K Holitna River 60.04 27 P **P 02 43 07.4 0.0**
baz=246
R18K Karluk 60.08 32 P **P 02 43 07.5 -0.2**
baz=252
Q18K Katmai Hardscr 60.16 31 P **P 02 43 07.8 -0.6**
baz=250
J17K VABM Dome 60.19 25 P **P 02 43 09.1 +0.7**
J17K IAmb IAmb 02 43 15.1
comp=Z,22nm,1.1s
J17K VABM Dome 60.19 25 P **P 02 43 08.0 -0.4**
baz=244
K17K Iditarod 60.22 26 IAmb IAmb 02 43 12.6
comp=Z,25nm,0.9s
K17K Iditarod 60.22 26 P **P 02 43 08.4 -0.2**
baz=245
N18K Kilae Creek 60.46 28 P **P 02 43 10.4 +0.1**
baz=248
C16K Lisburne Hills 60.47 18 P **P 02 43 10.1 -0.1**
baz=235
O18K Koktuh Hills 60.48 29 P **P 02 43 10.9 +0.4**
baz=250
G17K Kiwalik Mounta 60.56 22 P **P 02 43 11.5 +0.6**
baz=241
H17K Granite Mounta 60.57 23 P **P 02 43 11.8 +0.8**
baz=242
OHAK Old Harbor 60.58 33 P **P 02 43 11.7 +0.6**
baz=253
L18K Granite Mounta 60.70 27 P **P 02 43 12.5 +0.6**
baz=247
M18K Stony River 60.79 28 P **P 02 43 13.5 +0.9**
baz=248
URZ Urewera 60.80 153 LR LR 03 08 51.7
comp=Z,188nm,18.6s,baz=318,slow=35
D17K Noatak River 60.85 20 P **P 02 43 13.7 +0.9**
baz=238
E17K Hotham Inlet 60.94 20 P **P 02 43 13.9 +0.4**
baz=239
ZAA0 Zalesovo Array 61.00 323 P **P 02 43 11.8 -2.3**
ZALV Zalesovo Beam 61.00 323 P **P 02 43 12.8 -1.4**
comp=Z,2.4nm,0.5s,baz=104,slow=6.3,SNR=11
ZALV LR LR 03 09 38.4
comp=Z,401nm,20.8s,baz=86,slow=36
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 61.00 323 P **P 02 43 11.7 -2.4**
ZALV Zalesovo Beam 61.00 323 *i* P **P 02 43 13.3 -0.8**
ZALV pmax pmax
comp=Z,2.0nm,0.5s
O19K Port Alsworth 61.02 29 P **P 02 43 14.9 +0.8**
baz=250
RTZ Ruatahuna 61.04 153 P **P 02 43 13.5 -1.1**
RDOG Red Dog Mine 61.10 19 P **P 02 43 15.0 +0.4**
baz=238
KDAK Kodiak Island 61.10 32 LR LR 03 08 30.0
comp=Z,444nm,20.0s,baz=244,slow=35
KDAK Kodiak Island 61.10 32 P **P 02 43 15.3 +0.5**
baz=253
N19K Bonanza Creek 61.15 29 P **P 02 43 15.4 +0.3**
baz=250
J18K Innoko River 61.18 25 P **P 02 43 16.0 +0.8**
baz=246
C17K DeLong Mountai 61.25 19 P **P 02 43 16.5 +0.9**
baz=237
H18K Honhosa River 61.25 23 IAmb IAmb 02 43 19.3
comp=Z,32nm,1.2s
H18K Honhosa River 61.25 23 P **P 02 43 16.6 +0.9**
baz=244
MK31 Makanchi Array 61.30 315*deP* **P 02 43 16.3 -0.1**
MKAR Makanchi Array 61.30 315 P **P 02 43 16.3 -0.1**
comp=Z,2.6nm,0.5s,baz=92,slow=7.8,SNR=23
MKAR LR LR 03 10 54.7
comp=Z,388nm,19.1s,baz=84,slow=37
comp=Z,2.6nm,0.5s
MKAR Makanchi Array 61.30 315 P **P 02 43 16.0 -0.4**
MKAR Makanchi Array 61.30 315*ceP* **P 02 43 16.5 +0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
P19K Oil Pt 61.35 30 P **P 02 43 17.6 +1.2**
baz=252
Q20K Shuyak Island 61.44 31 P **P 02 43 17.3 +0.3**
baz=253
F18K Selawik 61.45 21 P **P 02 43 18.0 +1.1**
baz=242
L19K White Mountain 61.48 27 P **P 02 43 18.3 +1.1**
baz=249,SNR=5.5
G18K Tagagawik 61.48 22 P **P 02 43 17.9 +0.8**
G18K IAmb IAmb 02 43 20.5
comp=Z,21nm,1.2s
G18K Tagagawik 61.48 22 P **P 02 43 18.0 +0.8**
baz=243
MAKZ Makanchi 61.52 315 P **P 02 43 17.1 -0.7**
MAKZ Makanchi 61.52 315 P **P 02 43 17.1 -0.7**
MAKZ pmax pmax
comp=Z,12nm,1.1s
E18K Tukaahlearik C 61.53 20 P **P 02 43 18.4 +1.0**
baz=240
M19K Big River Lodg 61.58 27 P **P 02 43 19.1 +1.2**
baz=249
GCSA Galena City Sc 61.65 24 P **P 02 43 19.6 +1.3**
baz=245
O20K Slope Mountain 61.78 30 P **P 02 43 20.6 +1.2**
baz=252

J19K Poorman 61.84 25 IAmb IAmb 02 43 33.8
comp=Z,17nm,1.0s
J19K Poorman 61.84 25 P **P 02 43 20.5 +0.9**
baz=247
C18K Utukok River 61.96 19 P **P 02 43 20.7 +0.3**
baz=239
L20K Farewell, AK 62.01 27 P **P 02 43 21.2 +0.4**
baz=250
M20K Styx River 62.13 28 IAmb IAmb 02 43 34.6
comp=Z,15nm,1.0s
M20K Styx River 62.13 28 P **P 02 43 21.7 0.0**
baz=250
H19K Roundabout Mou 62.14 23 IAmb IAmb 02 43 24.8
comp=Z,16nm,0.9s
H19K Roundabout Mou 62.14 23 P **P 02 43 21.8 +0.3**
baz=245
B18K Kokolik River 62.15 18 P **P 02 43 22.2 +0.6**
baz=238
F19K Shaleruckik Mo 62.22 22 P **P 02 43 22.8 +0.7**
baz=244
K20K Telida 62.24 26 P **P 02 43 23.3 +1.0**
baz=249
CNPM China Poot 62.28 30 P **P 02 43 23.6 +0.9**
N20K Mount Spurr 62.33 29 P **P 02 43 23.7 +0.7**
baz=252
SPCR Spurr Chakacha 62.33 29 P **P 02 43 24.2 +1.2**
baz=252
J20K Nowinta River 62.51 25 IAmb IAmb 02 43 38.8
comp=Z,24nm,1.1s
J20K Nowinta River 62.51 25 P **P 02 43 24.3 +0.2**
baz=248
BRSE Bradley Lake S 62.59 30 P **P 02 43 24.8 +0.1**
baz=254
I20K Naaghedeneel 62.61 24 P **P 02 43 24.9 +0.2**
baz=248
C19K Lookout Ridge 62.69 19 P **P 02 43 26.4 +1.1**
baz=241
E19K Redstone River 62.69 21 IAmb IAmb 02 43 52.2
comp=Z,13nm,0.9s
E19K Redstone River 62.69 21 P **P 02 43 26.3 +1.0**
baz=244
H20K Anotleneega Mo 62.72 23 P **P 02 43 26.5 +1.0**
baz=247
A19K Wainwright 62.80 18 P **P 02 43 27.0 +1.1**
baz=239
D19K Kuna River 62.87 20 P **P 02 43 27.2 +0.8**
baz=242
SKT Skwentna 62.88 28 P **P 02 43 27.1 +0.5**
SKT Skwentna 62.88 28 P **P 02 43 26.8 +0.1**
baz=252
PPLA Purkeypile 62.88 27 P **P 02 43 27.0 +0.2**
baz=251
SHLS Shalkode 62.96 311 *eP* **P 02 43 24.8 -2.9**
SHLS Shalkode 62.96 311 *eP* **P 02 43 24.7 -2.9**
F20K Avaraart Lake 63.04 22 P **P 02 43 28.9 +1.3**
baz=245
SUA Susitna One 63.08 28 P **P 02 43 28.8 +0.7**
baz=253
CHUM Lake Minchumin 63.16 26 P **P 02 43 29.1 +0.7**
baz=250
O22K Cooper Landing 63.28 30 P **P 02 43 29.7 +0.4**
baz=254
SEW Seward 63.31 30 P **P 02 43 29.8 +0.3**
baz=255
IMAR Indian Mountai 63.34 23 P **P 02 43 30.4 +0.8**
E20K Nigu River 63.40 20 P **P 02 43 30.6 +0.6**
baz=244,SNR=5.7
RC01 Rabbit Creek A 63.44 29 P **P 02 43 31.2 +0.8**
baz=254
M22K Willow 63.45 28 P **P 02 43 31.4 +1.0**
baz=253
D20K Etivluk River 63.46 20 P **P 02 43 31.6 +1.2**
baz=244
CUT Chulitna 63.57 28 P **P 02 43 32.3 +1.1**
baz=253
H21K Melozitna Rive 63.59 24 IAmb IAmb 02 43 35.0
comp=Z,19nm,1.1s
H21K Melozitna Rive 63.59 24 P **P 02 43 32.3 +1.1**
baz=249
G21K Allakaket 63.64 23 IAmb IAmb 02 45 02.0
comp=Z,37nm,1.8s
G21K Allakaket 63.64 23 P **P 02 43 31.8 +0.2**
baz=248
SATY Saty 63.73 310 *eP* **P 02 43 32.0 -0.8**
comp=Z,5.1nm,0.9s
SATY Saty 63.73 310 *eP* **P 02 43 31.9 -0.8**
SATY pmax pmax
comp=Z,5.0nm,0.9s
I21K Tanana 63.74 24 P **P 02 43 32.8 +0.6**
baz=250
BPAW Bear Paw Mtn. 63.78 26 P **P 02 43 34.0 +1.3**
BPAW IAmb IAmb 02 43 35.4
comp=Z,21nm,0.9s
BPAW Bear Paw Mtn. 63.78 26 P **P 02 43 33.2 +0.6**
baz=252,SNR=5.3
TDK Taldyqorghan 63.83 313 *eP* **P 02 43 32.5 -0.8**
comp=Z,14nm,1.0s
TDK Taldyqorghan 63.83 313 *eP* **P 02 43 32.5 -0.8**
TDK pmax pmax
comp=Z,14nm,1.0s
PMR Palmer 63.86 29 P **P 02 43 33.6 +0.5**
baz=254
B20K Meade River 63.87 18 P **P 02 43 34.0 +1.0**
baz=243
TRF Thorofare Moun 63.88 26 IAmb IAmb 02 43 35.3
comp=Z,17nm,1.0s
TRF Thorofare Moun 63.88 26 P **P 02 43 33.6 +0.2**
baz=252,SNR=6.8
F21K Alatna River 63.92 22 P **P 02 43 34.2 +0.7**
baz=248
RAR Rarotonga 63.93 124 LR LR 03 08 21.7
comp=Z,197nm,18.3s,baz=310,slow=33
GHO Glory Hole Cre 64.00 28 IAmb IAmb 02 43 36.6
comp=Z,20nm,1.0s
PWL Port Wells 64.04 29 P **P 02 43 34.8 +0.5**
baz=256,SNR=10
KNK Knik Glacier 64.12 29 IAmb IAmb 02 43 37.2
comp=Z,21nm,1.0s
KNK Knik Glacier 64.12 29 P **P 02 43 35.7 +0.8**
baz=255
MLY Manley 64.19 25 P **P 02 43 35.8 +0.5**
MLY IAmb IAmb 02 43 38.6
comp=Z,14nm,0.9s
MLY Manley 64.19 25 P **P 02 43 36.3 +1.0**
baz=251
KURK Kurchatov 64.19 319 P **P 02 43 34.6 -0.9**
KURK Kurchatov 64.19 319*ceP* **P 02 43 34.0 -1.5**
KURK pmax pmax
comp=Z,36nm,1.0s
H22K Ishtalitna Cre 64.22 24 P **P 02 43 36.2 +0.7**
baz=250
E21K Killik River 64.22 21 P **P 02 43 35.2 -0.2**
baz=247
KURBB Kurchatov Arra 64.24 319 P **P 02 43 35.1 -0.7**
comp=Z,31nm,0.8s,baz=98,slow=6.6,SNR=151
KURBB LR LR 03 12 04.1
comp=Z,819nm,21.4s,baz=132,slow=37
comp=Z,31nm,0.8s
C21K Knifeblade Rid 64.25 20 P **P 02 43 36.2 +0.7**
baz=245
P23K Montague Islan 64.28 31 P **P 02 43 36.4 +0.5**
SML Sawmill 64.28 28 P **P 02 43 36.8 +0.9**
baz=255,SNR=6.1
WAT1 Susitna Watana 64.45 27 P **P 02 43 37.6 +0.6**
baz=254
RND Reindeer 64.48 27 P **P 02 43 38.2 +0.9**
RND IAmb IAmb 02 43 40.4
comp=Z,24nm,1.2s
RND Reindeer 64.48 27 P **P 02 43 38.2 +0.9**
RND pmax pmax
comp=Z,24nm,1.2s
F22K John River 64.49 22 P **P 02 43 38.3 +1.1**
baz=249
B21K Ikpikpuk River 64.50 19 P **P 02 43 38.0 +0.9**
baz=245
G22K Bettles 64.53 23 P **P 02 43 38.0 +0.7**
baz=250
MCK McKinley 64.54 26 P **P 02 43 38.6 +1.0**
baz=254
M23K Glacier View 64.56 29 P **P 02 43 38.3 +0.6**
baz=256
Q23K Middleton Isla 64.67 31 P **P 02 43 39.3 +0.9**
baz=258
NRIK Noril'sk 64.69 340 P **P 02 43 37.6 -0.8**
comp=Z,6.7nm,0.6s,baz=108,slow=9.9,SNR=14
NRIK LR LR 03 12 31.2
comp=Z,665nm,18.6s,baz=114,slow=37

NRIK **Noril'sk** 64.69 340 IAmb IAmb 02 43 46.7
comp=Z,2,25nm,1.5s
NRIK **Noril'sk** 64.69 340 *de*P P 02 43 37.5 -0.8
NRIK pmax pmax
comp=Z,8.0nm,1.0s
MDOK **Medeo** 64.73 311 *e*P P 02 43 38.4 -0.9
MDOK **Medeo** 64.73 311 *e*P P 02 43 38.4 -0.9
NEA2 **Nenana** 64.73 25 P P 02 43 40.1 +1.3
baz=253
SCM **Sheep Creek Mo** 64.75 29 P P 02 43 40.3 +1.2
SCM **Sheep Creek Mo** 64.75 29 P P 02 43 40.3 +1.2
SCM pmax pmax
comp=Z,45nm,1.0s
SCM **Sheep Creek Mo** 64.75 29 P P 02 43 39.9 +0.8
baz=256,SNR=7.3
WAT6 **Susitna Watana** 64.75 28 P P 02 43 39.5 +0.4
baz=255,SNR=6.5
I23K **Minto, Yukon-K** 64.78 25 P P 02 43 40.1 +1.1
baz=253
TNSS **Tian-Shan** 64.80 310 *e*P P 02 43 39.0 -1.2
TNSS **Tian-Shan** 64.80 310 *e*P P 02 43 38.9 -1.2
D22K **Ayikyak River** 64.83 20 P P 02 43 40.6 +1.2
baz=248
E22K **Anaktuvuk Pass** 64.85 21 P P 02 43 40.8 +1.3
baz=249
H23K **Yukon River** 64.91 24 IAmb IAmb 02 44 07.0
comp=Z,28nm,1.5s
H23K **Yukon River** 64.91 24 P P 02 43 41.1 +1.2
baz=252,SNR=6.0
A22K **Sinclair Lake** 64.98 18 P P 02 43 42.1 +1.9
baz=244
G23K **Bananza Creek** 65.01 23 P P 02 43 42.2 +1.6
baz=251
DHY **Denali Highway** 65.04 27 P P 02 43 42.0 +1.0
baz=255
WRH **Wood River Hil** 65.10 26 IAmb IAmb 02 43 44.3
comp=Z,14nm,0.9s
COLD **Coldfoot** 65.11 22 P P 02 43 42.4 +1.2
COLD **Coldfoot** 65.11 22 P P 02 43 43.0 +1.8
baz=251
B22K **Teshekpuk Lake** 65.17 19 P P 02 43 42.5 +1.0
baz=246
EYAK **Cordova Ski Ar** 65.20 30 P P 02 43 42.9 +1.1
baz=258
HYBB **Hyderabad (bro** 65.23 282 *e*P P 02 43 43.4 +0.6
PALK **Pallekele** 65.25 271 LR LR 03 12 25.0
comp=Z,208nm,18.4s,baz=72,slow=36
CCB **Clear Creek Bu** 65.27 25 IAmb IAmb 02 44 01.5
comp=Z,20nm,1.4s
COLA **College** 65.31 25 || *e*P P 02 43 44.8 +2.3
COLA pmax pmax
comp=Z,8.0nm,0.9s
COLA **College** 65.31 25 P P 02 43 43.3 +0.9
baz=254
DIV **Divide** 65.32 30 IAmb IAmb 02 43 56.8
comp=Z,15nm,0.9s
KLU **Klutina** 65.32 29 P P 02 43 43.1 +0.4
baz=258
M24K **Tolsona, Glenn** 65.34 28 P P 02 43 43.6 +0.7
baz=257
KSH **Kashi** 65.50 307 P P 02 43 46.7 +2.3
KSH pmax pmax
comp=Z,7.0nm,0.9s
BOOM **Boomskoye usch** 65.53 310 IAmb IAmb 02 43 50.9
comp=Z,12nm,0.7s
D23K **Nanushuk River** 65.54 21 P P 02 43 44.8 +0.9
baz=250
POKR **Poker Plat Res** 65.55 25 P P 02 43 44.8 +0.7
baz=254
HDA **Harding Lake** 65.56 26 IAmb IAmb 02 43 45.5
comp=Z,12nm,1.0s
HDA **Harding Lake** 65.56 26 P P 02 43 44.8 +0.6
baz=255,SNR=7.1
H24K **Noodor Dome** 65.57 24 IAmb IAmb 02 44 02.9
comp=Z,21nm,1.2s
H24K **Noodor Dome** 65.57 24 P P 02 43 44.6 +0.3
baz=254
E23K **Chandalar** 65.60 22 P P 02 43 45.7 +1.3
baz=251,SNR=9.7
IL31 65.68 25 IAmb IAmb 02 43 46.1
comp=Z,15nm,1.0s
ILAR **Eielson Array** 65.68 25 P P 02 43 44.6 -0.3
comp=Z,4.6nm,0.5s,baz=253,slow=4.8,SNR=40
ILAR LR LR 03 09 58.9
comp=Z,880nm,20.9s,baz=254,slow=34
comp=Z,4.6nm,0.5s
KAIM **Kayak Island** 65.73 31 P P 02 43 44.8 -0.6
baz=260
TOLK **Toolik Lake Re** 65.80 21 P P 02 43 45.8 +0.1
baz=251
BMRM **Bremner River** 65.84 30 P P 02 43 47.5 +1.4
BMRM IAmb IAmb 02 44 00.9
comp=Z,27nm,1.1s
BMRM **Bremner River** 65.84 30 P P 02 43 46.7 +0.6
baz=259
PAX **Paxson** 65.86 28 IAmb IAmb 02 43 49.1
comp=Z,25nm,1.4s
PAX **Paxson** 65.86 28 P P 02 43 46.6 +0.3
baz=257,SNR=9.1
C23K **Itkillik River** 65.87 20 P P 02 43 46.8 +0.8
baz=249
HARP **HAARP** 65.87 28 P P 02 43 47.0 +0.8
baz=258,SNR=6.7
K24K **Donnelly Dome** 65.91 27 IAmb IAmb 02 43 53.7
comp=Z,27nm,1.2s
K24K **Donnelly Dome** 65.91 27 P P 02 43 47.4 +0.9
baz=257
N25K **Chitina, Valde** 65.97 29 IAmb IAmb 02 44 05.4
comp=Z,13nm,1.0s
N25K **Chitina, Valde** 65.97 29 P P 02 43 47.3 +0.3
baz=259
G24K **Hadweenzic Riv** 65.97 23 IAmb IAmb 02 44 04.2
comp=Z,12nm,0.9s
G24K **Hadweenzic Riv** 65.97 23 P P 02 43 46.8 0.0
baz=254
E24K **Your Creek** 66.00 22 IAmb IAmb 02 44 05.0
comp=Z,27nm,1.4s
E24K **Your Creek** 66.00 22 P P 02 43 47.7 +0.7
baz=252
F24K **Squaw Lake** 66.05 22 IAmb IAmb 02 44 02.1
comp=Z,15nm,1.1s
F24K **Squaw Lake** 66.05 22 P P 02 43 48.0 +0.7
baz=253
D24K **Happy Valley** 66.23 21 P P 02 43 48.9 +0.5
baz=251
J25K **Salcha River,** 66.28 26 P P 02 43 49.1 +0.3
baz=257
RIDG **Independent Ri** 66.30 27 P P 02 43 49.8 +0.8
RIDG IAmb IAmb 02 43 52.0
comp=Z,31nm,1.2s
RIDG **Independent Ri** 66.30 27 P P 02 43 49.5 +0.5
baz=258
GLB **Gilahina Butte** 66.31 29 IAmb IAmb 02 43 51.9
comp=Z,17nm,1.1s
BGLC **Bering Glacier** 66.33 31 P P 02 43 49.9 +0.8
baz=260
C24K **Franklin Bluff** 66.45 20 P P 02 43 50.6 +0.9
baz=251
H25L **Birch Creek** 66.50 24 P P 02 43 51.6 +1.5
baz=256,SNR=6.5
SGDS **Segindy** 66.50 311 *e*P P 02 43 49.7 -1.0
G25K **Bearman Lake** 66.51 23 P P 02 43 51.3 +1.1
baz=255
CRQE **Cirque** 66.53 30 P P 02 43 51.3 +0.7
baz=260
AAK **Ala-Archa** 66.60 310 LR LR 03 15 03.6
comp=Z,489nm,18.2s,baz=88,slow=38
AAK **Ala-Archa** 66.60 310 P P 02 43 50.5 -0.9
AAK **Ala-Archa** 66.60 310 *de*P P 02 43 51.2 -0.2
AAK pmax pmax
comp=Z,4.0nm,0.7s
DOT **Dot Lake** 66.62 27 IAmb IAmb 02 43 53.4
comp=Z,15nm,0.9s
MCARA **McCarthy VSAT** 66.67 30 P P 02 43 52.1 +0.7
MCARA IAmb IAmb 02 43 55.0
comp=Z,21nm,0.8s
MCARA **McCarthy VSAT** 66.67 30 P P 02 43 52.3 +1.0
baz=260,SNR=6.1
SCRK **Sand Creek** 66.72 27 P P 02 43 52.9 +1.1
baz=258,SNR=10
L26K **Log Cabin Wild** 66.82 28 P P 02 43 53.8 +1.5
baz=259
M26K **Nabesna, AK** 66.86 28 P P 02 43 53.6 +1.0
baz=260
F25K **Christian Rive** 66.90 23 IAmb IAmb 02 44 10.1
comp=Z,16nm,1.1s
F25K **Christian Rive** 66.90 23 P P 02 43 54.4 +1.6
baz=255
BTLS **Baital** 66.92 313 *e*P P 02 43 52.6 -0.7
comp=Z,5.1nm,0.8s
BTLS **Baital** 66.92 313 *e*P P 02 43 52.6 -0.7
BTLS pmax pmax
comp=Z,5.0nm,0.8s
MESA **MESA** 67.00 31 P P 02 43 54.5 +0.8
baz=262
J26L **Joseph Creek** 67.01 26 P P 02 43 54.8 +1.2
baz=258
E25K **Arctic Village** 67.07 22 P P 02 43 55.2 +1.4
baz=255
D25K **Kavik River** 67.11 21 IAmb IAmb 02 44 06.1
comp=Z,16nm,0.9s
D25K **Kavik River** 67.11 21 P P 02 43 55.1 +1.0
baz=254
BMAR **Burnt Mountain** 67.26 23 P P 02 43 56.2 +1.2
BARN **Barnard Glacie** 67.27 30 P P 02 43 55.1 -0.3
BARN IAmb IAmb 02 43 59.9
comp=Z,18nm,1.2s
I26K **Coal Creek Min** 67.35 25 P P 02 43 56.1 +0.6
baz=258
M27K **Edge Creek, AK** 67.37 29 IAmb IAmb 02 44 31.6
comp=Z,20nm,1.4s
M27K **Edge Creek, AK** 67.37 29 P P 02 43 56.8 +0.9
baz=261
CTG **Chitna Glacier** 67.41 30 P P 02 43 57.1 +0.9
baz=262
G26K **Porcupine Rive** 67.45 24 IAmb IAmb 02 44 01.1
comp=Z,16nm,0.8s
G26K **Porcupine Rive** 67.45 24 P P 02 43 57.0 +0.8
baz=257,SNR=11
F26K **Sheenjek River** 67.48 23 IAmb IAmb 02 44 13.8
comp=Z,16nm,1.1s
F26K **Sheenjek River** 67.48 23 P P 02 43 58.0 +1.5
baz=256
L27K **Beaver Creek,** 67.50 28 P P 02 43 57.7 +1.0
baz=261
BCAR **Beaver Creek A** 67.53 28 P P 02 43 56.9 +0.1
K27K **Chicken** 67.56 27 P P 02 43 57.9 +1.0
baz=260
ARSB **Arslanbob** 67.75 309 IAmb IAmb 02 44 07.9
comp=Z,14nm,0.9s
C26K **Camden Bay** 67.77 20 P P 02 43 59.6 +1.5
baz=255
PINM **Pinnacle** 67.83 31 P P 02 43 59.3 +0.5
baz=263
BVCY **Beaver Creek** 67.84 29 P P 02 43 59.5 +0.7
baz=262
O28M **Mount Upton** 67.94 30 P P 02 44 00.0 +0.2
baz=263
YUK3 **Moose Creek** 67.94 29 P P 02 44 00.9 +1.3
baz=262,SNR=5.2
NIL **Nilore** 67.98 300 P P 02 43 59.1 -1.1
NIL **Nilore** 67.98 300 P P 02 43 59.1 -1.1
NIL pmax pmax
comp=Z,45nm,0.9s
I27K **Kandik River** 68.03 25 P P 02 44 00.5 +0.5
baz=260
C27K **Jago River** 68.10 21 P P 02 44 00.7 +0.5
baz=256
H27K **Steamboat Moun** 68.18 24 IAmb IAmb 02 44 04.4
comp=Z,13nm,0.9s
H27K **Steamboat Moun** 68.18 24 P P 02 44 01.3 +0.4
baz=260
PNL **Peninsula** 68.21 32 P P 02 44 00.3 -0.8
baz=264
YUK8 **Steele Glacier** 68.21 30 P P 02 44 01.6 +0.2
baz=263
G27K **Doyon Strip** 68.24 24 P P 02 44 02.0 +0.7
baz=259
E27K **Coleen River** 68.53 22 P P 02 44 03.9 +0.8
baz=259
O29M **Mount Kennedy** 68.68 31 P P 02 44 05.4 +1.2
baz=262
I28M **Miner Creek** 68.70 25 IAmb IAmb 02 44 21.8
comp=Z,37nm,1.8s
I28M **Miner Creek** 68.70 25 P P 02 44 05.2 +1.0
baz=261
DAWY **Dawson** 68.73 27 IAmb IAmb 02 44 30.4
comp=Z,30nm,1.5s
DAWY **Dawson** 68.73 27 P P 02 44 05.4 +1.0
baz=262,SNR=5.6
DRK **Karamyk** 68.73 307 P P 02 44 04.6 -0.6
DRK **Karamyk** 68.73 307 P P 02 44 04.6 -0.6
DRK pmax pmax
comp=Z,38nm,0.2s
YUK4 **Talbot Arm** 68.75 30 P P 02 44 06.1 +1.4
baz=264
YUK6 **Outpost Mounta** 68.85 30 P P 02 44 06.5 +1.1
baz=265
M29M **Somme Creek** 68.95 29 P P 02 44 07.1 +1.3
baz=264
D27M **Malcolm River** 68.96 21 P P 02 44 07.4 +1.7
baz=259
P29M **Windy Craggy** 69.05 32 P P 02 44 07.5 +1.1
baz=266
F28M **Old Crow** 69.07 23 P P 02 44 08.0 +1.6
baz=261,SNR=7.0
L29M **L29M** 69.18 28 IAmb IAmb 02 44 10.7
comp=Z,18nm,0.9s
L29M **L29M** 69.18 28 P P 02 44 08.5 +1.3
baz=264,SNR=14
HYT **Haines Junctio** 69.26 30 P P 02 44 08.9 +1.1
baz=265,SNR=8.4
E28M **Babbage River** 69.36 22 P P 02 44 07.6 -0.5
E28M IAmb IAmb 02 44 34.9
comp=Z,42nm,1.6s
E28M **Babbage River** 69.36 22 P P 02 44 09.8 +1.7
baz=261
BVAR **Borovoye Array** 69.43 321 P P 02 44 08.2 -0.6
comp=Z,7.7nm,0.4s,baz=95,slow=7.4,SNR=57
BVAR LR LR 03 16 49.1
comp=Z,468nm,18.6s,baz=79,slow=38
comp=Z,7.7nm,0.4s
H29M **Whitestone** 69.45 25 P P 02 44 10.5 +1.7
baz=263
P30M **Million Dollar** 69.47 31 P P 02 44 10.2 +1.2
baz=266
BORK **Borovoye** 69.47 321 *ce*P P 02 44 07.8 -1.3
BORK pmax pmax
comp=Z,21nm,1.0s
N30M **Aishikik Lake** 69.51 30 P P 02 44 10.4 +1.2
baz=266
KK31 **Karatay Array** 69.51 311 IAmb IAmb 02 44 18.3
comp=Z,16nm,0.9s
KKAR **Karatay Array** 69.51 311 P P 02 44 09.0 -0.6
KKAR **Karatay Array** 69.51 311 P P 02 44 09.0 -0.6
K29M **Barlow Dome** 69.53 27 IAmb IAmb 02 44 13.1
comp=Z,14nm,0.9s
K29M **Barlow Dome** 69.53 27 P P 02 44 10.3 +0.9
baz=264,SNR=9.8
G29M **Pine Creek** 69.67 24 IAmb IAmb 02 45 29.3
comp=Z,38nm,1.5s
G29M **Pine Creek** 69.67 24 P P 02 44 11.2 +1.0
baz=263
S31K **Pelican** 69.73 34 P P 02 44 11.5 +0.9
baz=268
PLBC **Pleasant Camp** 69.73 32 P P 02 44 11.4 +0.8
baz=267
M30M **Minto, Yukon** 69.74 29 P P 02 44 11.4 +0.8
baz=265,SNR=5.5
IUG **luzhnay** 69.92 310 *e*P P 02 44 11.4 -0.8
IUG **luzhnay** 69.92 310 *e*P P 02 44 11.4 -0.8
E29M **Blow River** 69.92 22 P P 02 44 12.4 +0.9
baz=262
O30N **Mendenhall** 69.94 31 P P 02 44 12.3 +0.4
baz=267
BRLS **Borolday** 70.01 310 *e*P P 02 44 12.6 -0.1
BRLS **Borolday** 70.01 310 *e*P P 02 44 12.6 -0.1
J30M **Hart River** 70.11 27 IAmb IAmb 02 44 39.0
comp=Z,44nm,1.8s
J30M **Hart River** 70.11 27 P P 02 44 14.1 +1.1
baz=265
EPYK **Eagle Plains** 70.13 25 P P 02 44 13.7 +0.8
baz=264
N31M **Braeburn, Yuko** 70.14 30 IAmb IAmb 02 44 16.4
comp=Z,19nm,0.8s
N31M **Braeburn, Yuko** 70.14 30 P P 02 44 13.9 +0.9
baz=267
I30M **Mount Dempster** 70.15 26 IAmb IAmb 02 44 40.6
comp=Z,35nm,1.9s
I30M **Mount Dempster** 70.15 26 P P 02 44 14.6 +1.3
baz=265
SIT **Sitka** 70.18 35 P P 02 44 14.7 +1.4
baz=269
CHM **Chimkent** 70.22 310 *e*P P 02 44 13.3 -0.7
comp=Z,8.4nm,0.7s
CHM **Chimkent** 70.22 310 *e*P P 02 44 13.3 -0.7
CHM pmax pmax
comp=Z,8.0nm,0.7s
MAYO **Mayo, Yukon** 70.23 28 P P 02 44 14.3 +0.7
MAYO **Mayo, Yukon** 70.23 28 P P 02 44 14.8 +1.2
baz=266
SKAG **Skagway** 70.26 32 P P 02 44 15.2 +1.4
baz=268
G30M **tAoh Zraii Nji** 70.39 24 IAmb IAmb 02 44 27.5
comp=Z,24nm,1.4s
G30M **tAoh Zraii Nji** 70.39 24 P P 02 44 15.8 +1.2
baz=264
WHY **Whitehorse** 70.53 31 P P 02 44 15.9 +0.3
baz=268
S32K **Killisnoo** 70.60 34 P P 02 44 16.7 +0.8
baz=269
F30M **Barrier River** 70.62 23 IAmb IAmb 02 44 19.5
comp=Z,22nm,1.0s
F30M **Barrier River** 70.62 23 P P 02 44 16.6 +0.7
baz=264
R32K **Eaglecrest** 70.64 33 P P 02 44 16.8 +0.6
baz=269
PPT **Papeete** 70.81 115 LR LR 03 08 41.8
comp=Z,324nm,20.4s,baz=310,slow=30
PPT2 **Papeete2** 70.82 115 *e*PKP1 P 02 44 06.2 -12
comp=Z,39nm,23.5s
PPT2 *e*S **S** 02 53 32.1 -1.4
comp=Z,86nm,23.8s
PPT2 *e*SS **SS** 02 58 06.7 +0.4
comp=Z,141nm,23.5s
PPT2 *e*LQ LQ 03 02 24.3
comp=Z,1μm,38.8s
PPT2 *e*LR LR 03 05 47.3
comp=Z,452nm,22.2s
PPT2 *e*LR LR 03 05 48.5
comp=Z,367nm,23.2s
M31M **Drury Creek, Y** 70.83 29 P P 02 44 17.9 +0.6
baz=268
CHGR **Chuyangaron** 70.84 306 P P 02 44 17.0 -0.9
CHGR **Chuyangaron** 70.84 306 P P 02 44 17.0 -0.9
CHGR pmax pmax
comp=Z,112nm,1.4s
H31M **Peel River** 71.05 25 IAmb IAmb 02 44 44.5
comp=Z,24nm,1.2s
H31M **Peel River** 71.05 25 P P 02 44 20.0 +1.4
baz=266,SNR=8.8
P32M **Atlin** 71.09 32 P P 02 44 19.6 +0.7
baz=269
G31M **Satah River** 71.15 24 P P 02 44 20.1 +1.1
G31M IAmb IAmb 02 44 45.5
comp=Z,26nm,1.1s
G31M **Satah River** 71.15 24 P P 02 44 20.3 +1.2
baz=266,SNR=8.4
KBL **Kabul** 71.36 302 P P 02 44 20.7 -0.6
KBL **Kabul** 71.36 302 P P 02 44 20.7 -0.6
KBL pmax pmax
comp=Z,19nm,0.4s
F31M **Tsiigehtchic** 71.39 24 P P 02 44 21.7 +1.2
baz=266
U33K **Whale Pass** 71.40 36 P P 02 44 21.6 +0.9
baz=271
CRAG **Craig** 71.41 36 P P 02 44 20.6 -0.3
baz=271
N32M **Quiet Lake** 71.42 30 P P 02 44 22.0 +1.0
baz=269
INK **Inuvik** 71.53 23 LR LR 03 13 15.4
comp=Z,323nm,21.9s,baz=286,slow=34
INK **Inuvik** 71.53 23 P P 02 44 21.5 +0.2
baz=266,SNR=6.8
P33M **Teslin, Yukon** 71.55 31 P P 02 44 21.5 -0.3
baz=270
WRAK **Wrangell Islan** 71.83 35 P P 02 44 24.2 +0.9
baz=271
Q32M **Nakina River** 71.83 33 P P 02 44 23.7 +0.1
baz=271
S34M **Telegraph Cree** 72.45 34 P P 02 44 28.1 +1.1
baz=272
R33M **Jennings River** 72.49 32 P P 02 44 27.9 +0.4
baz=272,SNR=7.6
T35M **Bob Quinn** 72.96 35 P P 02 44 30.8 +0.6
baz=273
DLBC **Dease Lake** 73.01 33 LR LR 03 12 09.3
comp=Z,325nm,20.0s,baz=266,slow=32
TBI **Tubuai** 73.35 121 *e*S S 02 53 52.5 -10
comp=Z,360nm,30.8s
TBI *e*SS **SS** 02 58 41.6 -3.1
comp=Z,431nm,36.0s
TBI *e*LQ LQ 03 03 30.0
comp=Z,2μm,41.5s
TBI *e*LR LR 03 07 03.9
comp=Z,823nm,21.8s
WTLY **Watson Lake, Y** 73.56 31 P P 02 44 34.5 +0.9
baz=273,SNR=6.4
A36M **Sachs Harbour** 74.38 19 P P 02 44 38.7 +0.6
baz=273
BBB **Bella Bella** 74.57 40 LR LR 03 09 48.7
comp=Z,462nm,21.6s,baz=258,slow=30
SVE **Sverdlovsk** 74.89 325 *e*P P 02 44 41.3 -0.1
SVE pmax pmax
comp=Z,18nm,1.3s
C36M **Paulatuk** 74.95 22 P P 02 44 42.3 +0.8
baz=275
TOAD **Toad River Com** 75.48 32 P P 02 44 45.0 +0.1
baz=277
KOTAN **Kotaneelee Air** 75.92 31 P P 02 44 47.7 +0.4
baz=277,SNR=5.2
ARTI **Arti** 76.18 325 LR LR 03 20 03.6
comp=Z,380nm,19.8s,baz=91,slow=37
ARTI **Arti** 76.18 325 P P 02 44 47.3 -1.5
ARTI **Arti** 76.18 325 *d* iP P 02 44 48.0 -0.9
ARTI 02 47 37.3
ARTI S S 02 54 34.4 +1.5
ARTI SS SS 02 59 24.8 -1.1
ARTI pmax pmax
comp=Z,16nm,1.1s
TAOE **Nuku Hiva Isla** 76.22 103 *e*S S 02 54 32.0 -2.9
comp=Z,100nm,28.8s
TAOE **Nuku Hiva Isla** 76.22 103 *e*LR LR 03 07 49.2
comp=Z,460nm,23.3s
AB31 **Akbulak array** 76.24 318 P P 02 44 47.9 -1.5
ABKAR **Akbulak array** 76.24 318 P P 02 44 48.0 -1.3
AKTO **Aktyubinsk** 77.29 319 LR LR 03 21 43.7
comp=Z,745nm,18.0s,baz=59,slow=38
NLWA **Neilton Lookou** 77.97 44 P P 02 44 59.1 -0.1
NLWA IAmb IAmb 02 45 08.7
comp=Z,23nm,1.2s
KMPM **Mount Pierce** 79.11 51 P P 02 45 04.6 -1.1
KMPM IAmb IAmb 02 47 48.7
comp=Z,25nm,1.2s
BUCK **Buck Mountain** 79.18 47 P P 02 45 05.5 -0.4
G04A **Mulino** 79.33 46 P P 02 45 07.2 +0.5
G04A IAmb IAmb 02 45 09.7
comp=Z,19nm,0.7s
KCPM **Cahto Peak** 79.66 52 P P 02 45 08.7 -0.1
KCPM IAmb IAmb 02 45 17.8
comp=Z,20nm,0.8s
I04A **Tendick Farm,** 79.67 47 IAmb IAmb 02 45 17.2
comp=Z,41nm,1.6s
HOOD **Mount Hood Mea** 79.88 46 IAmb IAmb 02 45 18.6
comp=Z,47nm,1.4s
YBH **Yreka Blue Hor** 79.89 49 LR LR 03 12 34.1
comp=Z,36nm,21.7s,baz=278,slow=30
YBH **Yreka Blue Hor** 79.89 49 IAmb IAmb 02 45 19.0
comp=Z,42nm,1.6s
YKA **Yellowknife Ar** 79.94 28 P P 02 45 09.7 +0.1
comp=Z,4.6nm,0.7s,baz=286,slow=7.2,SNR=12
YKA LR LR 03 20 26.1
comp=Z,432nm,19.5s,baz=286,slow=36
comp=Z,4.6nm,0.7s
YKA **Yellowknife Ar** 79.94 28 *ce*P P 02 45 10.3 +0.7
YKA pmax pmax
comp=Z,8.0nm,0.9s
J04A **Umpqua Nationa** 80.00 48 P P 02 45 10.4 -0.2
WIFE **Three Sisters-** 80.03 47 IAmb IAmb 02 45 19.7
comp=Z,30nm,1.3s
N02D **Trinity Center** 80.05 50 P P 02 45 11.8 +1.0
N02D IAmb IAmb 02 45 20.2
comp=Z,42nm,1.9s
L04D **Klamath Falls** 80.08 49 IAmb IAmb 02 45 13.6
comp=Z,30nm,1.4s
G05A **Wamic** 80.13 46 IAmb IAmb 02 45 42.8
comp=Z,64nm,1.7s
LTY **Liberty** 80.13 44 IAmb IAmb 02 45 19.8
comp=Z,47nm,1.7s
KIRV **Kirov** 80.50 328 LR LR 03 23 04.9
comp=Z,297nm,18.7s,baz=70,slow=37
KIRV **Kirov** 80.50 328 *ce*P P 02 45 11.4 -1.3

MXC	**Moxie City**	**80.53**	**44**	IAmb	IAmb	02 45 22.0		
	comp=Z,43nm,1.7s							
G06A	**Carlson Farm,**	**80.60**	**46**	P	**P**	**02 45 13.9**	**+0.3**	
G06A				IAmb	IAmb	02 45 22.3		
	comp=Z,63nm,1.8s							
B08A	**Colville Reser**	**80.76**	**42**	IAmb	IAmb	02 45 17.3		
	comp=Z,15nm,0.8s							
O03E	**Paynes Creek**	**80.87**	**51**	IAmb	IAmb	02 45 23.5		
	comp=Z,26nm,1.2s							
WAH2	**Wahluke Slope**	**80.98**	**44**	IAmb	IAmb	02 45 18.2		
	comp=Z,21nm,1.2s							
HATC	**Hat Creek Radi**	**81.00**	**50**	IAmb	IAmb	02 45 25.6		
	comp=Z,37nm,1.4s							
ORV	**Oroville**	**81.26**	**51**	P	**P**	**02 45 17.1**	**-0.1**	
ORV	**Oroville**	**81.26**	**51**	P	**P**	**02 45 17.1**	**-0.1**	
ORV				pmax	pmax			
	comp=Z,12nm,1.2s							
D08A	**Wollman Farm,**	**81.34**	**44**	IAmb	IAmb	02 45 26.1		
	comp=Z,52nm,1.7s							
E08A	**Dider Farm, El**	**81.38**	**44**	IAmb	IAmb	02 45 26.6		
	comp=Z,61nm,1.9s							
C09A	**Chrisman Ranch**	**81.59**	**43**	IAmb	IAmb	02 45 27.2		
	comp=Z,46nm,1.7s							
MHC	**Mount Hamilton**	**81.66**	**54**	IAmb	IAmb	02 45 28.3		
	comp=Z,43nm,1.6s							
G08A	**Pilot Rock**	**81.74**	**45**	IAmb	IAmb	02 45 28.3		
	comp=Z,40nm,1.8s							
RES	**Resolute Bay**	**81.90**	**14**	LR	LR	03 20 27.0		
	comp=Z,312nm,22.0s,baz=350,slow=35							
BEKR	**Beckworth**	**82.04**	**51**	IAmb	IAmb	02 45 30.0		
	comp=Z,32nm,1.6s							
SPITS	**Spitsbergen Ar**	**82.16**	**351**	P	**P**	**02 45 20.1**	**-1.1**	
	comp=Z,4.6nm,0.7s,baz=63,slow=6.6,SNR=1.9							
SPITS				LR	LR	03 23 28.9		
	comp=Z,307nm,20.7s,baz=36,slow=37							
	comp=Z,4.6nm,0.7s							
NEW	**Newport**	**82.22**	**42**	LR	LR	03 20 04.6		
	comp=Z,436nm,18.4s,baz=300,slow=34							
NEW	**Newport**	**82.22**	**42**	P	**P**	**02 45 22.1**	**0.0**	
NEW				IAmb	IAmb	02 45 25.1		
	comp=Z,13nm,0.8s							
NEW	**Newport**	**82.22**	**42**	P	**P**	**02 45 22.1**	**0.0**	
NEW				pmax	pmax			
	comp=Z,13nm,0.8s							
NOR	**Nord**	**82.38**	**358**	*i* P	**P**	**02 45 22.6**	**+0.3**	
MPK	**Martis Peak**	**82.43**	**51**	IAmb	IAmb	02 45 32.5		
	comp=Z,39nm,1.4s							
CMB	**Columbia Colle**	**82.47**	**53**	IAmb	IAmb	02 45 32.2		
	comp=Z,25nm,1.5s							
WVOR	**Wild Horse Val**	**82.67**	**48**	IAmb	IAmb	02 45 33.4		
	comp=Z,40nm,1.6s							
PNTR	**Pine Nut**	**82.80**	**52**	IAmb	IAmb	02 45 31.0		
	comp=Z,9.4nm,0.7s							
PAHR	**Pah Rah Range**	**82.81**	**51**	IAmb	IAmb	02 45 34.1		
	comp=Z,22nm,1.5s							
PKD	**Bear Valley Ra**	**82.86**	**55**	P	**P**	**02 45 26.3**	**+0.6**	
PKD				IAmb	IAmb	02 45 35.2		
	comp=Z,22nm,1.1s							
BMO	**Blue Mountains**	**82.98**	**45**	IAmb	IAmb	02 45 28.7		
	comp=Z,19nm,1.2s							
WAKR	**Walker**	**83.07**	**52**	IAmb	IAmb	02 45 36.2		
	comp=Z,27nm,1.8s							
BELG	**Belogornoye**	**83.18**	**322**	*de*P	**P**	**02 45 27.9**	**+1.0**	
BELG				pmax	pmax			
	comp=Z,5.0nm,0.9s							
RYN	**Ryan**	**83.73**	**52**	IAmb	IAmb	02 45 39.0		
	comp=Z,16nm,1.4s							
LHV	**Little Huntoon**	**83.85**	**52**	IAmb	IAmb	02 45 39.9		
	comp=Z,23nm,1.6s							
NVAR	**Mina Array Bea**	**83.95**	**52**	P	**P**	**02 45 32.5**	**+1.0**	
	comp=Z,4.3nm,0.7s,baz=270,slow=6.0,SNR=35							
NVAR				LR	LR	03 14 05.0		
	comp=Z,140nm,21.3s,baz=282,slow=29							
	comp=Z,4.3nm,0.7s							
NVAR	**Mina Array Bea**	**83.95**	**52**	P	**P**	**02 45 31.7**	**+0.1**	
APA	**Apatity**	**84.09**	**339**	‖ *e*P	**P**	**02 45 32.0**	**+0.7**	
MFID	**Camas Ranch**	**84.40**	**47**	IAmb	IAmb	02 45 42.2		
	comp=Z,16nm,1.0s							
KLMR	**Klimovskoe**	**84.53**	**332**	*e*P	**P**	**02 45 30.7**	**-2.9**	
KLMR				*e*		02 48 46.8		
KLMR				pmax	pmax			
	comp=Z,34nm,1.5s							
CWC	**Cottonwood Cre**	**84.65**	**54**	IAmb	IAmb	02 45 46.5		
	comp=Z,20nm,1.8s							
CLC	**China Lake**	**85.20**	**54**	P	**P**	**02 45 38.2**	**+0.5**	
CLC				IAmb	IAmb	02 45 46.2		
	comp=Z,23nm,1.6s							
CLC	**China Lake**	**85.20**	**54**	P	**P**	**02 45 38.2**	**+0.5**	
CLC				pmax	pmax			
	comp=Z,23nm,1.6s							
LRMC	**Laurel Mtn Rad**	**85.22**	**55**	IAmb	IAmb	02 45 46.4		
	comp=Z,38nm,1.7s							
HLID	**Hailey**	**85.34**	**46**	IAmb	IAmb	02 45 47.0		
	comp=Z,22nm,1.6s							
TULEG	**Thule**	**85.37**	**8**	*i* P	**P**	**02 45 38.8**	**+1.2**	
TULEG				IAmb	IAmb	02 45 40.9		
	comp=Z,93nm,1.6s							
CCCA	**Chr Cany lake**	**85.46**	**55**	IAmb	IAmb	02 45 47.7		
	comp=Z,23nm,1.4s							
ARCES	**ARCESS Array B**	**85.56**	**342**	P	**P**	**02 45 37.6**	**-1.1**	
	comp=Z,9.5nm,1.0s,baz=76,slow=6.3,SNR=12							
ARCES				LR	LR	03 28 03.2		
	comp=Z,442nm,19.6s,baz=57,slow=39							
	comp=Z,9.5nm,1.0s							
ARCES	**ARCESS Array B**	**85.56**	**342**	P	**P**	**02 45 38.1**	**-0.6**	
ARCES	**ARCESS Array B**	**85.56**	**342**	P	**P**	**02 45 38.2**	**-0.6**	
ARCES				pmax	pmax			
	comp=Z,94nm,1.9s							
ELK	**Elko**	**85.58**	**49**	LR	LR	03 17 21.9		
	comp=Z,549nm,20.2s,baz=285,slow=31							
ELK	**Elko**	**85.58**	**49**	IAmb	IAmb	02 45 48.4		
	comp=Z,28nm,1.4s							
FURC	**Furnace Creek,**	**85.59**	**53**	P	**P**	**02 45 39.7**	**+0.2**	
FURC				IAmb	IAmb	02 45 48.1		
	comp=Z,32nm,1.6s							
GWY	**Greenwater Val**	**85.82**	**54**	IAmb	IAmb	02 45 49.4		
	comp=Z,16nm,1.3s							
TPNV	**Topopah Spring**	**85.93**	**53**	IAmb	IAmb	02 45 50.0		
	comp=Z,39nm,1.7s							
GSC	**Goldstone, Bar**	**85.96**	**55**	IAmb	IAmb	02 45 50.0		
	comp=Z,15nm,1.3s							
MCMT	**McKenzie Canyo**	**86.03**	**45**	P	**P**	**02 45 42.2**	**+0.3**	
R11B	**Troy Canyon, C**	**86.03**	**51**	IAmb	IAmb	02 45 50.6		
	comp=Z,26nm,1.6s							
MAK	**Makhachkala**	**86.08**	**313**	*d* iP	P	02 45 35.8	-6.0	
MAK				*e*		02 55 58.3		
MAK				*e*SSS	SSS	03 05 17.5		
MAK				pmax	pmax			
	comp=Z,84nm,1.3s							
S11A	**Rachel**	**86.11**	**52**	IAmb	IAmb	02 45 44.9		
	comp=Z,19nm,1.3s							
NEEM	**North Greenlan**	**86.30**	**4**	*i* P	**P**	**02 45 43.8**	**+1.1**	
NEEM				IAmb	IAmb	02 45 47.3		
	comp=Z,14nm,0.5s							
AKT	**Akhty**	**86.38**	**312**	*e*P	P	02 45 52.9	+9.4	
AKT				pmax	pmax			
	comp=Z,18nm,1.3s							
PRN	**Pahroc Range**	**86.71**	**52**	IAmb	IAmb	02 45 53.9		
	comp=Z,34nm,1.9s							
PFO	**Pinyon Flats O**	**86.72**	**56**	LR	LR	03 24 32.4		
	comp=Z,199nm,18.0s,baz=284,slow=36							
PFO	**Pinyon Flats O**	**86.72**	**56**	P	**P**	**02 45 45.2**	**-0.2**	
PFO	**Pinyon Flats O**	**86.72**	**56**	P	**P**	**02 45 45.2**	**-0.2**	
PFO				pmax	pmax			
	comp=Z,9.0nm,1.3s							
SPR3	**Spring Creek 3**	**86.77**	**50**	IAmb	IAmb	02 45 54.6		
	comp=Z,22nm,1.2s							
PMD	**Palm Desert**	**86.77**	**56**	IAmb	IAmb	02 45 53.4		
	comp=Z,43nm,2.0s							
SHPR	**Sheep Range**	**86.89**	**53**	IAmb	IAmb	02 45 55.2		
	comp=Z,23nm,1.9s							
BELC	**Belle Mtn. Jos**	**86.97**	**56**	IAmb	IAmb	02 45 54.6		
	comp=Z,20nm,1.5s							
EGMT	**Eagleton**	**86.99**	**41**	IAmb	IAmb	02 45 49.2		
	comp=Z,22nm,1.4s							
HVU	**Hansel Valley**	**87.04**	**47**	IAmb	IAmb	02 45 55.7		
	comp=Z,26nm,1.2s							
YHL	**Hebgen Lake**	**87.14**	**44**	P	**P**	**02 45 48.4**	**+1.0**	
YHL				IAmb	IAmb	02 45 56.6		
	comp=Z,17nm,0.9s							
YHB	**Horse Butte**	**87.17**	**44**	IAmb	IAmb	02 45 53.6		
	comp=Z,14nm,0.9s							
DAG	**Danmarks Havn**	**87.17**	**357**	*i* P	**P**	**02 45 46.3**	**-0.2**	
DAG				IAmb	IAmb	02 45 55.0		
	comp=Z,6.9nm,0.8s							
PSUT	**Pine Spring**	**87.27**	**51**	IAmb	IAmb	02 45 57.2		
	comp=Z,14nm,0.9s							
V12A	**Nelson**	**87.36**	**54**	IAmb	IAmb	02 45 57.1		
	comp=Z,26nm,1.7s							
BC3	**Big Chuckawall**	**87.51**	**56**	IAmb	IAmb	02 45 57.6		
	comp=Z,16nm,1.5s							
ESJX	**Sierra Juarez**	**87.59**	**58**	IAmb	IAmb	02 45 58.3		
	comp=Z,18nm,1.5s							
IRM	**Iron Mountain**	**87.60**	**55**	P	**P**	**02 45 48.3**	**-1.2**	
IRM				IAmb	IAmb	02 45 57.9		
	comp=Z,20nm,1.6s							
FXWY	**Fox Creek**	**87.65**	**45**	IAmb	IAmb	02 45 53.2		
	comp=Z,16nm,1.5s							
TPAW	**Teton Pass**	**87.75**	**45**	IAmb	IAmb	02 45 59.2		
	comp=Z,29nm,1.6s							
AHID	**Auburn Hatcher**	**87.89**	**46**	IAmb	IAmb	02 45 59.5		
	comp=Z,11nm,0.8s							
HWUT	**Hardware Ranch**	**87.95**	**47**	IAmb	IAmb	02 45 54.1		
	comp=Z,9.8nm,0.8s							
BLYC	**Blythe**	**88.22**	**56**	IAmb	IAmb	02 46 01.0		
	comp=Z,22nm,1.6s							
OBN	**Obninsk**	**88.31**	**327**	*e*P	**P**	**02 45 50.3**	**-2.0**	
OBN				pmax	pmax			
	comp=Z,5.0nm,0.9s							
JLU	**Jordanelle**	**88.37**	**48**	IAmb	IAmb	02 46 01.8		
	comp=Z,12nm,0.9s							
MPU	**Maple Canyon**	**88.43**	**49**	P	**P**	**02 45 54.0**	**+0.4**	
MPU				IAmb	IAmb	02 46 02.0		
	comp=Z,18nm,1.4s							
GNI	**Garni**	**88.96**	**311**	LR	LR	03 29 33.1		
	comp=Z,214nm,19.8s,baz=64,slow=38							
PD31	**Pinedale Array**	**88.96**	**46**	P	**P**	**02 45 55.6**	**-0.4**	
PDAR	**Pinedale Array**	**88.96**	**46**	P	**P**	**02 45 56.3**	**+0.3**	
	comp=Z,1.5nm,0.6s,baz=244,slow=2.7,SNR=12							
PDAR				LR	LR	03 19 09.3		
	comp=Z,210nm,20.7s,baz=292,slow=31							
	comp=Z,1.5nm,0.6s							
PDAR	**Pinedale Array**	**88.96**	**46**	P	**P**	**02 45 55.3**	**-0.7**	
TMUT	**Trail Mountain**	**88.98**	**49**	IAmb	IAmb	02 46 05.0		
	comp=Z,14nm,1.4s							
KBZ	**Khabaz**	**89.00**	**315**	P	**P**	**02 45 54.9**	**-0.9**	
	comp=Z,3.0nm,0.9s,baz=90,slow=7.1,SNR=7.0							
KBZ				LR	LR	03 31 09.2		
	comp=Z,404nm,18.3s,baz=82,slow=39							
	comp=Z,3.0nm,0.9s							
KBZ	**Khabaz**	**89.00**	**315**	‖ *e*P	**P**	**02 45 54.4**	**-1.4**	
KBZ				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KVAR	**Kislovodsk Arr**	**89.06**	**316**	LR	LR	03 30 04.7		
	comp=Z,304nm,18.5s,baz=282,slow=38							
KIV	**Kislovodsk**	**89.06**	**316**	*e*P	**P**	**02 45 56.7**	**+0.4**	
KIV				pmax	pmax			
	comp=Z,5.0nm,1.1s							
KIV				MLR	MLR			
	comp=Z,324nm,19.0s							
U15A	**North Rim**	**89.11**	**52**	IAmb	IAmb	02 45 59.8		
	comp=Z,12nm,1.2s							
DBG	**Daneborg**	**89.68**	**357**	*i* P	**P**	**02 45 57.5**	**-1.0**	
FINES	**FINESS Array B**	**89.97**	**336**	P	**P**	**02 45 58.2**	**-1.7**	
	comp=Z,4.4nm,0.7s,baz=60,slow=5.2,SNR=26							
	comp=Z,4.4nm,0.7s							
FINES	**FINESS Array B**	**89.97**	**336**	P	**P**	**02 45 59.1**	**-0.9**	
FINES	**FINESS Array B**	**89.97**	**336**	*i* P	**P**	**02 45 58.5**	**-1.5**	
FINES				pmax	pmax			
	comp=Z,4.0nm,0.7s							
WUAZ	**Wupatki**	**90.12**	**53**	P	**P**	**02 46 01.4**	**-0.1**	
WUAZ				IAmb	IAmb	02 46 11.4		
	comp=Z,19nm,1.4s							
UPNV	**Upernavik**	**90.27**	**7**	*i* P	**P**	**02 45 59.5**	**-1.7**	
UPNV				IAmb	IAmb	02 46 05.1		
	comp=Z,32nm,1.0s							
PV20	**West Nyswonger**	**90.95**	**50**	P	**P**	**02 46 05.3**	**0.0**	
PV11	**David Mesa, Pa**	**91.03**	**50**	IAmb	IAmb	02 46 17.6		
	comp=Z,11nm,0.9s							
PV03	**Paradox Valley**	**91.07**	**50**	IAmb	IAmb	02 46 14.2		
	comp=Z,23nm,1.5s							
TUC	**Tucson**	**91.65**	**56**	P	**P**	**02 46 09.4**	**+0.9**	
TUC				IAmb	IAmb	02 46 17.7		
	comp=Z,14nm,1.4s							
TUC	**Tucson**	**91.65**	**56**	P	**P**	**02 46 09.5**	**+0.9**	
TUC				pmax	pmax			
	comp=Z,14nm,1.5s							
SUMG	**Summit**	**91.72**	**2**	*i* P	**P**	**02 46 08.8**	**+0.3**	
RSSD	**Black Hills**	**92.16**	**43**	P	**P**	**02 46 10.6**	**-0.3**	
RSSD				IAmb	IAmb	02 46 18.7		
	comp=Z,19nm,1.6s							
RSSD	**Black Hills**	**92.16**	**43**	P	**P**	**02 46 10.6**	**-0.3**	
RSSD				pmax	pmax			
	comp=Z,19nm,1.6s							
S22A	**4UR Ranch, Cre**	**92.74**	**50**	IAmb	IAmb	02 46 22.4		
	comp=Z,23nm,1.7s							
VNDA	**Vanda**	**93.58**	**177**	P	**P**	**02 46 15.9**	**-0.4**	
	comp=Z,1.3nm,1.0s,baz=358,slow=4.0,SNR=6.0							
VNDA				LR	LR	03 23 31.4		
	comp=Z,148nm,21.6s,baz=350,slow=32							
	comp=Z,1.3nm,1.0s							
VNDA	**Vanda**	**93.58**	**177**	P	**P**	**02 46 17.4**	**+1.1**	
ANMO	**Albuquerque**	**94.08**	**52**	LR	LR	03 26 57.8		
	comp=Z,307nm,18.2s,baz=32,slow=34							
ANMO	**Albuquerque**	**94.08**	**52**	P	**P**	**02 46 21.1**	**+1.2**	
ANMO	**Albuquerque**	**94.08**	**52**	‖ *e*P	**P**	**02 46 21.5**	**+1.6**	
ANMO				pmax	pmax			
	comp=Z,4.0nm,1.4s							
ABQ	**Albuquerque**	**94.08**	**52**	P	**P**	**02 46 21.1**	**+1.2**	
ULM	**Lac du Bonnet**	**94.26**	**35**	LR	LR	03 24 30.1		
	comp=Z,337nm,19.6s,baz=4.5,slow=33							
LPIG	**La Paz**	**94.81**	**63**	LR	LR	03 21 06.2		
	comp=Z,263nm,20.2s,baz=299,slow=30							
HFS	**Hagfors**	**95.47**	**339**	P	**P**	**02 46 24.0**	**-1.4**	
	comp=Z,1.2nm,0.5s,baz=57,slow=5.3,SNR=8.1							
HFS				LR	LR	03 30 25.2		
	comp=Z,476nm,21.4s,baz=41,slow=36							
	comp=Z,1.2nm,0.5s							
HFS	**Hagfors**	**95.47**	**339**	P	**P**	**02 46 24.0**	**-1.4**	
NOA	**NORSAR Array B**	**95.65**	**340**	P	**P**	**02 46 26.3**	**0.0**	
	comp=Z,1.0nm,1.0s,baz=34,slow=3.2,SNR=1.2							
NOA				LR	LR	03 33 51.6		
	comp=Z,187nm,19.0s,baz=45,slow=38							
	comp=Z,1.0nm,1.0s							
FRB	**Frobisher Bay**	**96.06**	**15**	LR	LR	03 31 10.1		
	comp=Z,302nm,19.1s,baz=318,slow=36							
MNTX	**Cornudas Mount**	**96.15**	**55**	P	**P**	**02 46 31.0**	**+1.8**	
MNTX				IAmb	IAmb	02 47 56.0		
	comp=Z,12nm,1.8s							
SFJD	**Kangerlussuaq**	**96.38**	**7**	LR	LR	03 28 50.1		
	comp=Z,248nm,22.0s,baz=354,slow=35							
BRTR	**Keskin Array B**	**96.95**	**314**	P	**P**	**02 46 30.9**	**-1.9**	
	comp=Z,0.4nm,0.7s,baz=46,slow=4.2,SNR=2.6							
BRTR				LR	LR	03 36 27.3		
	comp=Z,114nm,18.1s,baz=43,slow=39							
	comp=Z,0.4nm,0.7s							
R9F13	**Warsaw-Wawer**	**97.62**	**330**	*e*P	P	02 46 17.3	-18	
ASF	**Jabal al Asfar**	**97.82**	**306**	LR	LR	03 37 55.7		
	comp=Z,128nm,19.0s,baz=57,slow=40							
TXAR	**Lajitas Array**	**98.44**	**56**	P	**P**	**02 46 39.2**	**-0.5**	
	comp=Z,0.3nm,0.8s,baz=311,slow=5.3,SNR=2.5							
TXAR				PKKP	**PKKPbc**	**03 03 11.6**	**+1.4**	
	comp=Z,0.4nm,0.9s,baz=119,slow=4.9,SNR=3.5							
TXAR				LR	LR	03 30 34.2		
	comp=Z,451nm,18.1s,baz=308,slow=35							
	comp=Z,0.3nm,0.8s							
TXAR	**Lajitas Array**	**98.44**	**56**	P	**P**	**02 46 40.3**	**+0.6**	
MMAI	**Mount Meron Ar**	**98.62**	**308**	LR	LR	03 36 25.8		
	comp=Z,155nm,19.8s,baz=50,slow=39							
MLR	**Muntele Rosu**	**98.97**	**322**	LR	LR	03 34 11.9		
	comp=Z,508nm,18.6s,baz=52,slow=37							
BORG	**Borgarnes**	**99.16**	**355**	LR	LR	03 29 07.1		
	comp=Z,117nm,21.3s,baz=25,slow=34							
SYO	**Syowa Base**	**110.89**	**202**	‖ *ep*Pdiff	pPdif	02 47 39.5	+4.1	
NVL	**N'lazarevskaya**	**118.81**	**195**	*i* PKIKP	**PKPdf**	**02 51 46.6**	**-1.9**	
NVL				pmax	pmax			
	comp=Z,10.0nm,1.2s							
NVL				MLR	MLR			
	comp=Z,119nm,19.0s							
SNAA	**Sanae**	**121.36**	**191**	PKP	**PKPdf**	**02 51 53.2**	**-0.4**	
	comp=Z,1.9nm,0.6s,baz=195,slow=14,SNR=5.7							
SNAA	**Sanae**	**121.36**	**191**		**PKPdf**	**02 51 52.6**	**-0.9**	
SNAA	**Sanae**	**121.36**	**191**	↑ iPKIKP	**PKPdf**	**02 51 54.6**	**+1.1**	
SNAA				pmax	pmax			
	comp=Z,3.0nm,1.3s							
LCO	**Las Campanas**	**142.98**	**117**	PKPdf		02 52 31.6		
LCO	**Las Campanas**	**142.98**	**117**	PKIKP		02 52 31.6		
AC05	**El Transito**	**143.38**	**117**	PKPdf	PKPab	02 52 33.7	+1.6	
ZON	**Zonda**	**144.02**	**122**	PKPdf	**PKPab**	**02 52 35.0**	**+0.6**	
ZON	**Zonda**	**144.02**	**122**	PKIKP	**PKPab**	**02 52 35.0**	**+0.6**	
DBIC	**Dimbokro**	**144.23**	**307**	PKP	**PKPab**	**02 52 35.8**	**+0.2**	
	comp=Z,10.0nm,0.8s,baz=68,slow=3.4,SNR=8.8							
DBIC	**Dimbokro**	**144.23**	**307**	PKPdf	**PKPab**	**02 52 35.2**	**-0.4**	
TA01	**Diego Aracena**	**144.47**	**103**	PKPdf	**PKPab**	**02 52 36.6**	**+0.3**	
TRQA	**Tornquist**	**146.26**	**137**	PKPdf	**PKPdf**	**02 52 40.1**	**-0.5**	
TRQA	**Tornquist**	**146.26**	**137**	PKP2	**PKPdf**	**02 52 40.2**	**-0.5**	
LPAZ	**La Paz**	**146.31**	**96**	PKPbc	**PKPdf**	**02 52 43.8**	**+1.7**	
	comp=Z,7.5nm,1.0s,baz=353,slow=5.8,SNR=24							
LPAZ	**La Paz**	**146.31**	**96**		**PKPdf**	**02 52 41.9**	**-0.2**	
LPAZ	**La Paz**	**146.31**	**96**	PKP2	**PKPdf**	**02 52 41.9**	**-0.2**	

SJA ***13*** *03:18:01.0±0.9, 30.°14S×71.°46W, h42km±16km, ML3.5, MW3.6*

GUC ***13*** *03:18:02.8±0.8, 30.°15S×71.°29W, h63km±2km, ML3.7*

ISC 13 03:18:02.2±1.5, 30.13S±0.02×71.44W±0.05, h26km±13km, **n48, σ1°33/74, 6C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.28**	**40**	↑ *e*P		**Pn**	**03 18 12.6**	**+2.0**
CO05				*e*S		**Sn**	**03 18 19.8**	**+3.9**
CO05				IAML			03 18 20.1	
	comp=N,15μm,0.2s							
GO04	**Tololo Observa**	**0.56**	**95**	*e*P		**Pb**	**03 18 14.3**	**+0.7**
GO04				*e*S		**Sn**	**03 18 23.2**	**-0.2**
GO04				IAML			03 18 25.1	
	comp=E,11μm,0.5s							
GO04	**Tololo Observa**	**0.56**	**95**	*e*P		**Pb**	**03 18 14.5**	**+0.9**
GO04				*e*S		**Sn**	**03 18 23.6**	**+0.2**
GO04				IAML			03 18 23.6	
	comp=Z,7μm,0.5s							
CO06	**Fray Jorge**	**0.57**	**197**	↓ *e*P		**Pn**	**03 18 15.9**	**+1.3**
CO06				*e*S		**Sn**	**03 18 25.9**	**+2.7**
CO03	**El Pedregal**	**0.96**	**138**	↑ *e*P		**Pn**	**03 18 19.0**	**-1.2**
CO03				*e*S		**Sb**	**03 18 31.2**	**-1.5**
CO03				IAML			03 18 31.7	
	comp=E,3μm,0.3s							
CO03	**El Pedregal**	**0.96**	**138**	*e*P		**Pn**	**03 18 19.0**	**-1.2**
CO03				*e*S		**Sb**	**03 18 31.4**	**-1.3**
CO03				IAML			03 18 32.4	
	comp=Z,1μm,0.4s							
CO02	**Combarbal**	**1.14**	**161**	↑ *e*P		**Pn**	**03 18 21.9**	**-0.6**
CO02				*e*S		**Sn**	**03 18 36.7**	**-0.7**
CO02				IAML			03 18 37.6	
	comp=E,2μm,0.1s							
CO02	**Combarbal**	**1.14**	**161**	*e*P		**Pn**	**03 18 22.0**	**-0.6**
CO02				*e*S		**Sn**	**03 18 36.7**	**-0.7**
CO02				IAML			03 18 37.0	
	comp=Z,523nm,0.3s							
CO01	**Juntas del Tor**	**1.18**	**83**	↑ *e*P		**Pn**	**03 18 22.5**	**-0.8**
CO01				*e*S		**Sn**	**03 18 37.0**	**-1.6**
CO01				IAML			03 18 37.4	
	comp=N,6μm,0.1s							
CO01	**Juntas del Tor**	**1.18**	**83**	*e*P		**Pn**	**03 18 22.4**	**-0.8**
CO01				*e*S		**Sn**	**03 18 37.1**	**-1.5**
LCO	**Las Campanas**	**1.29**	**30**	↑ *e*P		**Pn**	**03 18 24.4**	**-0.4**
LCO				*e*S		**Sn**	**03 18 41.0**	**-0.3**
LCO	**Las Campanas**	**1.29**	**30**	*e*P		**Pn**	**03 18 23.7**	**-1.1**
LCO				*e*P			03 18 24.6	
LCO				*e*S		**Sn**	**03 18 39.2**	**-2.1**
LCO				IAML			03 18 42.4	
	comp=Z,2μm,0.2s							
AC05	**El Transito**	**1.64**	**39**	↑ *e*P		**Pn**	**03 18 29.7**	**+0.1**
AC05				*e*S		**Sn**	**03 18 50.3**	**+0.4**
AC05				IAML			03 18 58.7	
	comp=N,682nm,0.3s							
AC05	**El Transito**	**1.64**	**39**	*e*P		**Pn**	**03 18 29.0**	**-0.6**
AC05				*e*S		**Sn**	**03 18 50.5**	**+0.5**
AC05				IAML			03 18 53.5	
	comp=Z,287nm,0.6s							
AROD	**Rodeo**	**1.71**	**92**	*e*P		Pn	03 18 25.6	-5.1
AROD				*e*P			03 18 31.0	
AROD				*e*S		**Sn**	**03 18 51.5**	**-0.3**
AC04	**Llanos de Chal**	**1.94**	**10**	*e*P		**Pn**	**03 18 33.8**	**+0.2**
AC04				IAML			03 19 11.9	
	comp=E,632nm,0.1s							
AC04	**Llanos de Chal**	**1.94**	**10**	*e*P		**Pn**	**03 18 33.3**	**-0.3**
AC04				*e*S		**Sn**	**03 18 55.5**	**-1.6**
AC04				IAML			03 19 04.7	
	comp=Z,239nm,0.9s							
CO04	**Los Peladeros**	**1.95**	**168**	*e*P		**Pn**	**03 18 33.7**	**-0.3**
CO04				*e*S		**Sn**	**03 18 57.6**	**-0.1**
CO04				IAML			03 19 05.4	
	comp=N,955nm,0.1s							
ACDV	**Cuesta del Vie**	**2.01**

	comp=Z,49nm,0.3s							
BO02	**Sierra Bellavi**	**4.68**	**173**	IAML		03 20 22.7		
	comp=Z,65nm,0.6s							
RFA	**San Rafael**	**5.27**	**152**	*e*P	**Pn**	**03 19 20.1**	**+0.7**	

DRS ***13*** *03:18:23.8, 41˚.09N×43˚.32E, h15km*
TIF ***13*** *03:18:25.4, 41˚.28N×43˚.69E, h7km*
MOS ***13*** *03:18:25.1, 41˚.31N×43˚.72E, h1km, MPVA3.6*
ISK ***13*** *03:18:25.5, 41˚.27N×43˚.71E, h5km, ML2.8/8*
AFAD ***13*** *03:18:26.6, 41˚.22N×43˚.60E, h3km±3km, ML2.6*
NORS ***13*** *03:18:27.5, 41˚.39N×43˚.89E, h1km, MPVA3.5*

ISC 13 03:18:25.6±0.9, 41˚.25N±0˚.02×43.72E±0˚.02, h5km±8km, n56, σ1¶13/92, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BGD	**Bogdanovka**	**0.10**	**282**	P	**Pg**	**03 18 27.8**	**+0.1**
BGD				S	**Sg**	**03 18 29.2**	**+0.1**
BGD	**Bogdanovka**	**0.10**	**282**	*e*Pg	**Pg**	**03 18 27.8**	**+0.1**
BGD				*e*Sg	**Sg**	**03 18 29.2**	**+0.1**
AKH	**Akhalkalaki**	**0.24**	**314**	P	**Pg**	**03 18 30.3**	**0.0**
AKH				S	**Sg**	**03 18 33.7**	**+0.3**
AKH	**Akhalkalaki**	**0.24**	**314**	Pg	**Pg**	**03 18 30.3**	**0.0**
AKH				Sg	**Sg**	**03 18 33.6**	**+0.2**
AKH	**Akhalkalaki**	**0.24**	**314**	*e*Pg	**Pg**	**03 18 30.3**	**0.0**
AKH				*e*Sg	**Sg**	**03 18 33.7**	**+0.3**
TRLG	**Trialeti**	**0.41**	**44**	P	**Pg**	**03 18 34.1**	**+0.5**
KZR	**Kazreti**	**0.54**	**75**	P	**Pg**	**03 18 33.9**	**-2.0**
KZR				S	**Sg**	**03 18 41.6**	**-1.4**
EAK	**Akyaka**	**0.57**	**189**	P	**Pg**	**03 18 36.9**	**+0.5**
EPOS	**Posof**	**0.79**	**289**	P	**Pg**	**03 18 40.6**	**-0.2**
EPOS				S	**Sg**	**03 18 49.7**	**-1.3**
EPOS				*i* IAML		03 18 52.0	
	comp=N,362nm,0.6s						
AHAN	**Ardahan-Merkez**	**0.83**	**265**	P	**Pg**	**03 18 41.8**	**+0.3**
AHAN				S	**Sg**	**03 18 52.8**	**+0.5**
AHAN				*i* IAML		03 18 55.0	
	comp=N,224nm,0.4s						
AHAN				*i* IAML		03 19 07.0	
	comp=E,252nm,0.6s						
BOZK	**Kars-Merkez-Bo**	**0.86**	**221**	P	**Pg**	**03 18 42.5**	**+0.3**
BOZK				S	**Sg**	**03 18 53.6**	**+0.2**
BOZK				*i* IAML		03 18 59.0	
	comp=E,180nm,1.0s						
DIGO	**Kars**	**0.87**	**198**	P	**Pg**	**03 18 42.4**	**+0.1**
TBLG	**Delisi**	**0.90**	**57**	P	**Pg**	**03 18 43.2**	**+0.2**
TBLG				S	**Sb**	**03 18 56.6**	**+0.4**
TBLG	**Delisi**	**0.90**	**57**	Pg	**Pg**	**03 18 43.1**	**+0.2**
TBLG				Sg	**Sb**	**03 18 56.4**	**+0.2**
GOLE	**Ardahan-G¶le**	**0.94**	**245**	P	**Pg**	**03 18 43.6**	**-0.1**
GOLE				S	**Sg**	**03 18 56.1**	**+0.2**
GOLE				*i* IAML		03 18 57.0	
	comp=E,198nm,0.4s						
SEAG	**Tbilisi Sea**	**0.96**	**57**	P	**Pb**	**03 18 44.7**	**-0.1**
SEAG				S	**Sb**	**03 18 58.6**	**+0.7**
SEAG	**Tbilisi Sea**	**0.96**	**57**	*e*Pg	**Pb**	**03 18 44.7**	**-0.1**
SEAG				*e*Sg	**Sb**	**03 18 58.6**	**+0.7**
TKB	**Tkibuli**	**1.23**	**334**	P	**Pg**	**03 18 48.5**	**-0.7**
TKB				S	**Sn**	**03 19 05.4**	**-1.2**
SENK	**Senkaya-Erzuru**	**1.24**	**237**	Pn	**Pg**	**03 18 49.4**	**0.0**
SENK				Sn	**Sn**	**03 19 07.4**	**+0.3**
DGRG	**David-gareji**	**1.26**	**80**	P	**Pn**	**03 18 50.2**	**+0.2**
DGRG				S	**Sn**	**03 19 09.2**	**+1.9**
TASB	**TASBURUN-IGDIR**	**1.32**	**163**	Pn	**Pn**	**03 18 51.0**	**+0.2**
GNI	**Garni**	**1.34**	**144**	Pn	**Pn**	**03 18 51.6**	**+0.4**
GUDG	**Gudauri**	**1.34**	**25**	P	**Pb**	**03 18 51.0**	**-0.4**
IGDI	**IGDIR**	**1.40**	**169**	P	**Pn**	**03 18 49.0**	**-2.9**
KOTA	**Agri, Merkez-K**	**1.50**	**195**	P	**Pg**	**03 18 55.1**	**+0.8**
DDEM	**Demirkent**	**1.53**	**257**	P	**Pn**	**03 18 53.9**	**+0.1**
DBAD	**Bademkaya**	**1.55**	**262**	P	**Pn**	**03 18 54.0**	**0.0**
DBOC	**Borcka**	**1.55**	**274**	P	**Pn**	**03 18 54.0**	**0.0**
DBOC				S	**Sn**	**03 19 11.9**	**-2.6**
LACR	**Lac**	**1.64**	**15**	*e*Pg	**Pg**	**03 18 56.3**	**-0.7**
LACR				*e*Sg	**Sg**	**03 19 19.0**	**+0.8**
EATA	**Eleskirt**	**1.67**	**215**	P	**Pg**	**03 18 58.6**	**+1.0**
AGRB	**Hanur-Agry**	**1.76**	**199**	Pn	**Pb**	**03 18 58.6**	**+0.1**
SHTL	**Shatili**	**1.77**	**37**	P	**Pb**	**03 18 58.5**	**-0.1**
SHTL				S	**Sg**	**03 19 22.6**	**+0.2**
HOMI	**Horasan**	**1.83**	**230**	P	**Pg**	**03 19 01.1**	**+0.5**
KORR	**Kora**	**1.86**	**8**	*e*Pg	**Pg**	**03 19 01.9**	**+0.7**
KORR				*e*Sg	**Sg**	**03 19 27.9**	**+2.6**
KOPR	**Koprukoy-ERZUR**	**1.90**	**229**	Pn	**Pb**	**03 19 00.2**	**-0.6**
ARNR	**Ardon**	**1.98**	**12**	*e*Pg	**Pg**	**03 19 03.9**	**+0.4**
ARNR				*e*Sg	**Sg**	**03 19 32.2**	**+3.1**
LGD	**Lagodekhi**	**1.98**	**72**	P	**Pb**	**03 19 02.1**	**0.0**
LGD				S	**Sg**	**03 19 30.4**	**+1.2**
DORK	**Agr/Tutak/Do**	**1.99**	**202**	P	**Pg**	**03 19 04.4**	**+0.7**
KMGR	**Komgaron**	**2.00**	**25**	*e*Pg	**Pg**	**03 19 04.3**	**+0.4**
KMGR				*e*Sg	**Sg**	**03 19 31.5**	**+1.6**
VSHL	**Vashlovani**	**2.02**	**90**	P	**Pb**	**03 19 03.3**	**+0.5**
VSHL				S	**Sg**	**03 19 33.7**	**+3.3**
STDR	**Stavd-Durt**	**2.14**	**7**	*e*Pg	**Pg**	**03 19 07.1**	**+0.6**
STDR				*e*Sg	**Sg**	**03 19 37.2**	**+3.0**
TLTR	**Tlyarata**	**2.15**	**66**	*e*Pg	**Pb**	**03 19 04.8**	**-0.4**
TLTR				*e*Sg	**Sg**	**03 19 35.6**	**+0.9**
CHOM	**Cayeli-Rize**	**2.24**	**267**	Pn	**Pb**	**03 19 04.8**	**-1.8**
EJDE	**Erzurum, Palan**	**2.32**	**233**	P	**Pn**	**03 19 06.4**	**+1.6**
BTLR	**Botlikh**	**2.34**	**52**	*e*Pn	**Pb**	**03 19 08.1**	**-0.2**
BTLR				*e*Sn	**Sg**	**03 19 39.7**	**-1.1**
IZDR	**Rize**	**2.44**	**260**	P	**Pb**	**03 19 09.9**	**0.0**
ETEKE	**Tekederesi - E**	**2.45**	**234**	P	**Pg**	**03 19 12.7**	**+0.3**
DVE	**Vedeno**	**2.48**	**45**	*e*Pn	**Pb**	**03 19 10.0**	**-0.6**
DVE				*e*Sn	**Sg**	**03 19 43.4**	**-1.7**
GROC	**Groznyy**	**2.49**	**38**	*e*Pn	**Pb**	**03 19 10.2**	**-0.6**
GROC				*e*Sn	**Sg**	**03 19 45.2**	**-0.4**
XNZR	**Khunzakh**	**2.58**	**59**	*e*Pn	**Pb**	**03 19 12.7**	**+0.3**
XNZR				*e*Sn	**Sg**	**03 19 47.6**	**-0.7**
KMKR	**Kumukh**	**2.68**	**70**	*e*Pn	**Pb**	**03 19 13.1**	**-1.0**
KMKR				*e*Sn	**Sg**	**03 19 49.9**	**-1.8**
UNCR	**Uncukul**	**2.72**	**56**	*e*Pn	**Pb**	**03 19 14.3**	**-0.5**
UNCR				*e*Sn	**Sg**	**03 19 51.6**	**-1.4**
ARKR	**Arakani**	**2.79**	**60**	*e*Pn	**Pb**	**03 19 14.9**	**-1.1**
ARKR				*e*Sn	**Sg**	**03 19 53.3**	**-2.0**
BAYB	**BAYBURT**	**2.81**	**251**	P	**Pg**	**03 19 18.8**	**-0.6**
KRNR	**Karanay**	**2.85**	**55**	*e*Pn	**Pb**	**03 19 16.0**	**-1.0**
KRNR				*e*Sn	**Sg**	**03 19 55.0**	**-2.2**
AKT	**Akhty**	**3.03**	**84**	*e*Pn	**Pb**	**03 19 18.0**	**-2.0**
AKT				*e*Sn	**Sb**	**03 19 58.6**	**+1.3**

SDD ***13*** *03:22:55.8±1.9, 19˚.59N×66˚.94W, h23km±213km, MD3.2, ML2.3, MW2.7*
NEIC ***13*** *03:23:00.2±0.9, 19˚.36N±0˚.05×67˚.16W±0˚.05, h10km±2km, ML2.0/11, Md2.8/4(RSPR), Error ellipse: s-maj=9.2km s-min=7.1km az=52.0*
RSPR ***13*** *03:23:02.4, 19˚.43N×67˚.16W, h54km±15km, MD2.8/4*

ISC 13 03:22:59.4±2.7, 19˚.34N±0˚.08×67˚.16W±0˚.05, h6km±18km, n32, σ0¶87/36, 12C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.86**	**177**	⇑*e*Pg	**Pb**	**03 23 14.4**	**-2.4**
AGPR				⇑*e*Sg	**Sn**	**03 23 30.9**	**-0.1**
AGPR				IAML		03 23 40.5	
	comp=N,77nm,1.7s						
AOPR	**Arecibo Observ**	**1.06**	**158**		**Pn**	**03 23 21.7**	**+0.9**
AOPR	**Arecibo Observ**	**1.06**	**158**	⇓*e*P	**Pn**	**03 23 21.7**	**+0.9**
LSP	**Las Mesas**	**1.16**	**176**		**Pn**	**03 23 22.3**	**+0.2**
LSP					**Sn**	**03 23 37.9**	**-0.3**
LSP	**Las Mesas**	**1.16**	**176**	⇑*e*P	**Pn**	**03 23 22.3**	**+0.2**
LSP	**Las Mesas**	**1.16**	**176**	*e*S	**Sn**	**03 23 37.9**	**-0.3**
ECPR	**Experimental S**	**1.26**	**143**	⇑*e*P	**Pn**	**03 23 23.6**	**0.0**
ECPR	**Experimental S**	**1.26**	**143**	*e*S	**Sn**	**03 23 40.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.32**	**178**		**Sb**	**03 23 43.0**	**+1.2**
CRPR	**Cabo Rojo, PR**	**1.32**	**178**		**Pn**	**03 23 24.5**	**+0.1**
CRPR				IAML		03 23 45.2	
	comp=E,35nm,1.4s						
CRPR	**Cabo Rojo, PR**	**1.32**	**178**	IAML		03 23 38.3	
	comp=N,36nm,3.0s						
CRPR	**Cabo Rojo, PR**	**1.32**	**178**	⇑*e*Pg	**Pn**	**03 23 23.9**	**-0.5**
CRPR				⇑*e*Sg	**Sb**	**03 23 43.2**	**+1.4**
CRPR				IAML		03 23 44.9	
	comp=N,34nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.32**	**178**	⇓*e*P	**Pn**	**03 23 24.5**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.32**	**178**	*e*S	**Sb**	**03 23 43.0**	**+1.2**
OBIP	**Obispado Ponce**	**1.39**	**158**		**Pn**	**03 23 25.3**	**0.0**
OBIP					**Sb**	**03 23 44.5**	**+0.7**
OBIP	**Obispado Ponce**	**1.39**	**158**	IAML		03 23 50.5	
	comp=E,24nm,3.5s						
OBIP				IAML		03 24 06.5	
	comp=N,22nm,2.3s						
OBIP	**Obispado Ponce**	**1.39**	**158**	⇑*e*P	**Pn**	**03 23 25.3**	**0.0**
OBIP	**Obispado Ponce**	**1.39**	**158**	*e*S	**Sb**	**03 23 44.5**	**+0.7**
GCPR	**Guaynabo City**	**1.45**	**135**		**Pn**	**03 23 26.2**	**+0.1**
GCPR				IAML		03 24 17.7	
	comp=N,17nm,3.3s						
GCPR	**Guaynabo City**	**1.45**	**135**		**Sn**	**03 23 45.2**	**-0.1**
GCPR	**Guaynabo City**	**1.45**	**135**	⇑*e*P	**Pn**	**03 23 25.6**	**-0.5**
GCPR	**Guaynabo City**	**1.45**	**135**	*e*S	**Sn**	**03 23 45.2**	**-0.1**
SJG	**San Juan**	**1.55**	**142**	Pn	**Pn**	**03 23 28.3**	**+0.8**
SJG				IAML		03 23 44.0	
	comp=N,17nm,3.1s						
HUMP	**Col San Antoni**	**1.72**	**133**		**Pn**	**03 23 30.4**	**+0.6**
HUMP				IAML		03 23 48.3	
	comp=N,14nm,2.7s						
HUMP				IAML		03 24 17.5	
	comp=E,17nm,2.6s						
HUMP	**Col San Antoni**	**1.72**	**133**		**Sn**	**03 23 52.8**	**+0.6**
HUMP	**Col San Antoni**	**1.72**	**133**	⇓*e*P	**Pn**	**03 23 30.0**	**+0.1**
HUMP	**Col San Antoni**	**1.72**	**133**	*e*S	**Sn**	**03 23 52.8**	**+0.6**
MIDR	**Miches**	**1.82**	**259**	*e*Pg	**Pn**	**03 23 31.7**	**+0.5**
MIDR				⇑*e*Sg	**Sg**	**03 23 58.9**	**+1.1**
MIDR				IAML		03 24 00.4	
	comp=N,25nm,3.5s						
MIDR	**Miches**	**1.82**	**259**	⇓*e*P	**Pn**	**03 23 31.2**	**0.0**
MIDR	**Miches**	**1.82**	**259**	*e*S	**Sn**	**03 23 52.7**	**-1.9**
DR12	**Loma Pena Alta**	**2.17**	**256**	Pn	**Pn**	**03 23 36.4**	**+0.3**
HATOM	**Hato Mayor del**	**2.17**	**256**	*e*Pg	**Pb**	**03 23 38.2**	**-0.8**
HATOM				⇑*e*Sg	**Sb**	**03 24 07.8**	**+1.6**
HATOM				IAML		03 24 13.4	
	comp=N,17nm,1.9s						

BJI ***13*** *03:28:58.6, 46˚.90N×153˚.05E, h59km, mB5.0/13, mb4.8/49, Ms4.5/4, Ms7 4.2/1*
NEIC ***13*** *03:29:00.5±1.2, 46˚.89N±0˚.09×152˚.6E±0˚.1, h35km±1km, mb4.6/103, Error ellipse: s-maj=18.4km s-min=11.3km az=140.0*
MOS ***13*** *03:29:00.1±0.9, 46˚.79N×152˚.75E, h58km, mb4.8/21, Error ellipse: s-maj=7.6km s-min=5.6km az=85.1*
JMA ***13*** *03:29:00.8±0.8, 47˚.N±4˚.×15˚.3E±˚, h30km, MV5.1/17, KURILE ISLANDS REGION*
SKHL ***13*** *03:29:01.9±0.0, 46˚.70N×152˚.80E, h65km±5km, mb5.6/5, mbv5.5/4, msh5.0/5*
IDC ***13*** *03:29:04.0±1.9, 46˚.92N×152˚.64E, h74km±16km, mb4.1/29, mbtmp4.5/35, MS3.7/22, Error ellipse: s-maj=13.3km s-min=9.2km az=142.0*

ISC 13 03:29:00.8±1.0, 46.71N±0˚.05×152.85E±0˚.05, h53km±8km, n386, σ1½22/384, mb4.6/119, MS3.9/16, 41C-15D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.78**	**249**	*e*PN	**Pn**	**03 29 57.4**	**+0.9**
KUR				*e*S	**Sn**	**03 30 41.4**	**+1.8**
KUR				pmax	pmax		
	comp=N,206nm,0.4s						
KUR				pmax	pmax		
	comp=E,124nm,0.4s						
KUR				pmax	pmax		
	comp=Z,594nm,0.4s						
KUR				smax	smax		
	comp=N,1μm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.4s						
KUR	**Kuril'sk**	**3.78**	**249**	*e*P	**Pn**	**03 29 57.2**	**+0.7**
KUR				AMB	AMB	03 29 59.2	
	comp=E,590nm,0.4s						
KUR				AMB	AMB	03 30 02.3	
	comp=E,1μm,3.0s						
KUR				*e*S	**Sn**	**03 30 38.7**	**-0.9**
KUR				A	A	03 30 42.7	
	comp=E,2μm,3.0s						
KUR				A	A	03 30 42.7	
	comp=E,2μm,3.0s						
KUR				A	A	03 30 57.7	
	comp=E,1μm,0.4s						
KUR				A	A	03 30 57.7	
	comp=E,1μm,0.4s						
SKR	**Severo-Kuril's**	**4.52**	**27**	*e*PN	**Pn**	**03 30 08.1**	**+1.4**
SKR				*e*S	**Sn**	**03 30 56.8**	**-1.2**
SKR				pmax	pmax		
	comp=Z,94nm,0.6s						
SKR				smax	smax		
	comp=E,315nm,0.4s						
SKR				smax	smax		
	comp=N,521nm,0.5s						
SKR				MLR	MLR		
	comp=Z,700nm,11.0s						
SKR	**Severo-Kuril's**	**4.52**	**27**	*e*P	**Pn**	**03 30 07.7**	**+1.0**
SKR				AMB	AMB	03 30 09.4	
	comp=Z,560nm,3.0s						
SKR				AMB	AMB	03 30 09.4	
	comp=Z,110nm,0.4s						
SKR				*e*S	**Sn**	**03 30 57.0**	**-1.0**
SKR				A	A	03 31 01.5	
	comp=Z,810nm,3.0s						
SKR				A	A	03 31 01.5	
	comp=Z,800nm,3.0s						
SKR				A	A	03 31 11.8	
	comp=Z,520nm,0.5s						
SKR				A	A	03 31 11.8	
	comp=Z,450nm,0.5s						
PAU	**Pauzhetka**	**5.42**	**27**	*e*P	**Pn**	**03 30 19.6**	**+0.6**
PAU				AMB	AMB	03 30 21.8	
	comp=Z,300nm,2.0s						
PAU				AMB	AMB	03 30 23.0	
	comp=Z,450nm,0.3s						
PAU				*e*S	**Sn**	**03 31 18.5**	**-1.5**
PAU				A	A	03 31 23.3	
	comp=Z,450nm,2.0s						
PAU				A	A	03 31 23.3	
	comp=Z,690nm,2.0s						
PAU				A	A	03 31 39.5	
	comp=Z,750nm,0.3s						
PAU				A	A	03 31 39.5	
	comp=Z,560nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.61**	**244**	*c i*PN	**Pn**	**03 30 23.8**	**+2.3**
YUK				S	**Sn**	**03 31 25.7**	**+1.1**
YUK				pmax	pmax		
	comp=N,115nm,0.2s						
YUK				pmax	pmax		
	comp=Z,642nm,0.2s						
YUK				pmax	pmax		
	comp=E,198nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.8s						
YUK				smax	smax		
	comp=N,978nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.61**	**244**	*e*P	**Pn**	**03 30 23.4**	**+1.9**
YUK				AMB	AMB	03 30 31.4	
	comp=N,540nm,0.4s						
YUK				*e*S	**Sn**	**03 31 25.0**	**+0.4**
YUK				A	A	03 31 28.0	
	comp=N,2μm,2.0s						
YUK				A	A	03 31 28.0	
	comp=N,870nm,2.0s						
YUK				A	A	03 31 44.9	
	comp=N,980nm,0.6s						
YUK				A	A	03 31 44.9	
	comp=N,1μm,0.6s						
RUSJ	**Misakicho**	**5.95**	**247**	*e*PN	**Pn**	**03 30 27.6**	**+1.3**
RUSJ				*e*S	**Sn**	**03 31 36.8**	**+3.6**
GLVR	**Golovnino**	**5.97**	**243**	*e*PN	**Pn**	**03 30 27.6**	**+1.0**
GLVR				*e*S	**Sn**	**03 31 35.1**	**+1.5**
GLVR				pmax	pmax		
	comp=Z,282nm,0.4s						
GLVR				smax	smax		
	comp=N,582nm,0.2s						
GLVR				smax	smax		
	comp=E,702nm,0.2s						
GLVR	**Golovnino**	**5.97**	**243**	*e*P	**Pn**	**03 30 27.6**	**+1.0**
GLVR				AMB	AMB	03 30 31.7	
	comp=E,280nm,0.4s						
GLVR				*e*S	**Sn**	**03 31 35.1**	**+1.5**
GLVR				A	A	03 31 41.9	
	comp=E,580nm,0.2s						
GLVR				A	A	03 31 41.9	
	comp=E,700nm,0.2s						
NEM2	**Nemuro 2**	**6.05**	**239**	*e*P	**Pn**	**03 30 26.9**	**-0.7**
NEM2				*e*S	**Sn**	**03 31 31.1**	**-4.4**
NMR	**Nemuro--Hokkai**	**6.05**	**239**	⇑*i*PN	**Pn**	**03 30 26.9**	**-0.8**
NMR	**Nemuro--Hokkai**	**6.05**	**239**	*e*P	**Pn**	**03 30 27.2**	**-0.5**
NMR				*e*S	**Sn**	**03 31 32.5**	**-3.1**
JRA	**Rausu**	**6.12**	**246**	*e*P	**Pn**	**03 30 30.9**	**+2.4**
JRA				*e*S	**Sn**	**03 31 37.9**	**+0.8**
JNK	**Nakash**	**6.54**	**244**	*e*P	**Pn**	**03 30 35.7**	**+1.2**
JNK				*e*S	**Sn**	**03 31 46.9**	**-0.8**
AKK	**Akkeshi**	**6.78**	**240**	*e*P	**Pn**	**03 30 37.4**	**-0.3**
JTKR	**Abashiri--Toko**	**6.87**	**250**	*e*P	**Pn**	**03 30 41.2**	**+2.2**
JAK	**Akkeshi**	**6.88**	**240**	*e*P	**Pn**	**03 30 38.2**	**-0.9**
JAK				*e*S	**Sn**	**03 31 51.5**	**-4.5**
YSS	**Yuzhno-Sakhali**	**6.93**	**276**		**Pn**	**03 30 40.6**	**+0.9**
YSS	**Yuzhno-Sakhali**	**6.93**	**276**	*e*PN	**Pn**	**03 30 42.5**	**+2.8**
YSS				*e*S	**Sn**	**03 32 00.2**	**+3.1**
YSS				pmax	pmax		
	comp=Z,90nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,1.4s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
YSS	**Yuzhno-Sakhali**	**6.93**	**276**	*e*P	**Pn**	**03 30 41.7**	**+2.0**
YSS				AMB	AMB	03 30 42.4	
	comp=E,310nm,3.0s						
YSS				*e*S	**Sn**	**03 31 55.5**	**-1.6**
YSS				A	A	03 31 57.2	
	comp=E,140nm,2.0s						
YSS				A	A	03 31 57.2	
	comp=E,150nm,2.0s						
PEA0B	**Petropavlovsk-**	**7.13**	**24**		**Pn**	**03 30 41.1**	**-1.2**
PEA0B	**Petropavlovsk-**	**7.13**	**24**	⇓*e*PN	**Pn**	**03 30 41.8**	**-0.6**
PETK	**Petropavlovsk-**	**7.13**	**24**	P	**Pn**	**03 30 43.2**	**+0.9**
	comp=E,5.3nm,0.5s,baz=184,slow=12,SNR=10						
PETK				S	**Sn**	**03 32 01.7**	**-0.2**
	comp=E,4.5nm,0.6s,baz=176,slow=26,SNR=1.1						
PETK				LR	LR	03 33 21.7	
	comp=E,182nm,20.0s,baz=196,slow=37						
PETK	**Petropavlovsk-**	**7.13**	**24**		**Pn**	**03 30 42.3**	**-0.1**
JAR	**Ashorobuto**	**7.29**	**245**	*e*P	**Pn**	**03 30 45.4**	**+0.8**
JAR				*e*S	**Sn**	**03 32 05.0**	**-0.9**
PET	**Petropavlovsk**	**7.34**	**29**	Pn	**Pn**	**03 30 45.3**	**0.0**
PET	**Petropavlovsk**	**7.34**	**29**	*e*PN	Pn	03 30 52.0	+6.7
PET				pmax	pmax		
	comp=Z,14nm,0.5s						
PET	**Petropavlovsk**	**7.34**	**29**	*e*S	**Sn**	**03 32 05.2**	**-2.0**
PET				A	A	03 32 36.3	
	comp=Z,120nm,0.4s						
PET				A	A	03 32 36.3	
	comp=Z,100nm,0.4s						
JKA	**Kamikawa-asahi**	**7.67**	**254**		**Pn**	**03 30 48.9**	**-0.9**
ASAJ	**Asahikawa**	**7.67**	**254**	P	**Pn**	**03 30 52.6**	**+2.7**
	comp=Z,42nm,0.7s,baz=81,slow=16,SNR=27						
ASAJ				S	**Sn**	**03 32 16.9**	**+1.6**
	comp=Z,10nm,0.5s,baz=238,slow=19,SNR=1.1						
ASAJ				LR	LR	03 33 30.0	
	comp=Z,278nm,20.6s,baz=49,slow=35						
JWK2	**Keihoku**	**7.75**	**264**	*e*P	**Pn**	**03 30 55.5**	**+4.5**
JCH	**Churui**	**7.91**	**242**	*e*P	**Pn**	**03 30 52.9**	**-0.2**
JCH				*e*S	**Sn**	**03 32 16.9**	**-4.2**
JAB	**Ashibetsu**	**8.17**	**251**	*e*P	**Pn**	**03 30 59.9**	**+3.1**
JRBN	**Rebuntou**	**8.30**	**265**	*e*P	**Pn**	**03 31 02.4**	**+4.0**
ERM	**Erimo**	**8.38**	**239**		**Pn**	**03 30 59.5**	**-0.1**
ERM	**Erimo**	**8.38**	**239**	PN	**Pn**	**03 30 59.5**	**-0.1**
JNBK	**Urakawa-nobuka**	**8.47**	**242**	*e*P	**Pn**	**03 30 59.7**	**-1.0**
JTM	**Tenmabayashi**	**10.38**	**239**		**Pn**	**03 31 24.7**	**-2.2**
JANG	**Nango**	**10.38**	**236**	*e*P	**Pn**	**03 31 23.7**	**-3.2**
JANG				*e*S	Sn	03 33 11.4	-10
JTH	**Tanohata**	**10.48**	**234**	*e*S	Sn	03 33 11.7	-12
TEY	**Ternei**	**11.45**	**267**	*e*PN	**Pn**	**03 31 44.3**	**+2.7**
MA2	**Magadan**	**12.95**	**355**	P	**Pn**	**03 32 02.1**	**+0.2**
	comp=Z,17nm,0.3s,baz=166,slow=12,SNR=12						
MA2				S	**Sn**	**03 34 22.5**	**-1.7**
	comp=Z,4.0nm,0.3s,baz=60,slow=16,SNR=0.9						
MA2				LR	LR	03 36 25.2	
	comp=Z,178nm,19.4s,baz=148,slow=35						
MA2	**Magadan**	**12.95**	**355**	Pn	**Pn**	**03 31 58.6**	**-3.3**
MA2	**Magadan**	**12.95**	**355**	⇑*e*PN	**Pn**	**03 32 02.0**	**+0.2**
MA2				pmax	pmax		
	comp=Z,111nm,2.5s						
USRK	**Ussuriysk Ar.**	**14.85**	**268**	P	**Pn**	**03 32 28.2**	**+0.7**
	comp=Z,7.5nm,0.5s,baz=70,slow=12,SNR=15						
MAJO	**Matsushiro**	**14.91**	**232**	⇑*e*P	**Pn**	**03 32 26.5**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJAR	**Matsushiro Arr**	**14.91**	**232**	P	**P**	**03 32 32.2**	**-0.7**
	comp=Z,8.2nm,0.7s,baz=14,slow=12,SNR=6.2						
MJAR				LR	LR	03 37 38.5	
	comp=Z,131nm,19.9s,baz=29,slow=34						
SHEM	**Shemya Is, Ala**	**14.98**	**59**	LR	LR	03 38 34.0	
	comp=Z,66nm,19.8s,baz=316,slow=38						
SEY	**Seymchan**	**16.26**	**359**	P	**P**	**03 32 46.5**	**-1.2**
	comp=Z,7.0nm,0.4s,baz=178,slow=12,SNR=20						
SEY				LR	LR	03 38 07.7	
	comp=Z,108nm,21.3s,baz=166,slow=34						
MDJ	**Mudanjiang**	**16.39**	**271**	Pn	**Pn**	**03 32 45.4**	**-1.7**
MDJ	**Mudanjiang**	**16.39**	**271**	P	**P**	**03 32 50.0**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,20nm,0.7s						
HEH	**HeiHe**	**17.20**	**291**	*e*P	**P**	**03 32 59.3**	**+1.1**
HE

comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.3s
H11S1 WAKE ISLAND Hy 30.35 153 T T 04 07 41.3
baz=341,slow=76
H11S3 WAKE ISLAND Hy 30.36 153 T T 04 07 42.3
baz=341,slow=76
H11S2 WAKE ISLAND Hy 30.37 153 T T 04 07 46.7
baz=341,slow=76
ULN Ulaanbaatar 30.74 289 **P** **03 35 09.5 -1.5**
ULN IAmb IAmb 03 35 17.3
comp=Z,11nm,1.0s
ULN Ulaanbaatar 30.74 289⇓*e*P **P** **03 35 11.3 +0.3**
ULN pmax pmax
comp=Z,10.0nm,0.9s
ULN Ulaanbaatar 30.74 289 *e*P **P** **03 35 11.3 +0.3**
SONM Songino Array 31.18 289 P **P** **03 35 14.2 -0.5**
comp=Z,1.7nm,0.8s,baz=84,slow=9.6,SNR=10
SONM PcP **PcP** **03 38 08.8 +0.3**
comp=Z,0.7nm,0.6s,baz=102,slow=3.3,SNR=3.4
SONM LR LR 03 48 58.1
comp=Z,128nm,18.7s,baz=54,slow=39
comp=Z,1.7nm,0.8s
SONM Songino Array 31.18 289 P **P** **03 35 14.6 -0.2**
SONM Songino Array 31.18 289 P **P** **03 35 14.6 -0.2**
SONM pmax pmax
comp=Z,5.0nm,1.2s
BTO Baotou 31.28 275 *e*P **P** **03 35 16.3 +0.6**
BTO pmax pmax
comp=Z,12nm,0.6s
BTO pmax pmax
comp=Z,130nm,4.1s
E19K Redstone River 32.82 33 P **P** **03 35 30.0 +1.2**
E19K IAmb IAmb 03 35 30.7
comp=Z,7.9nm,0.8s
D20K Etivluk River 33.36 31 P **P** **03 35 34.0 +0.4**
B20K Meade River 33.54 28 P **P** **03 35 36.0 +1.0**
GUMO Guam 33.69 194 LR LR 03 49 42.2
comp=Z,22nm,19.9s,baz=26,slow=37
G21K Allakaket 34.08 35 P **P** **03 35 40.7 +0.9**
G21K IAmb IAmb 03 35 41.8
comp=Z,7.1nm,0.9s
H21K Melozitna Rive 34.25 37 P **P** **03 35 42.5 +1.2**
H21K IAmb IAmb 03 35 42.8
comp=Z,4.3nm,0.7s
B21K Ikpikpuk River 34.28 30 **P** **03 35 42.8 +1.3**
E22K Anaktuvuk Pass 34.98 33 **P** **03 35 48.6 +1.0**
XAN Xi'an 35.33 265 ⇑P **P** **03 35 51.1 +0.1**
XAN pP pP 03 36 03.9 0.0
XAN pmax pmax
comp=Z,24nm,0.7s
XAN pmax pmax
comp=Z,240nm,5.7s
COLD Coldfoot 35.47 34 **P** **03 35 52.6 +0.9**
COLD IAmb IAmb 03 35 53.4
comp=Z,8.7nm,1.0s
G23K Bananza Creek 35.48 35 P **P** **03 35 52.7 +0.8**
E23K Chandalar 35.78 33 IAmb IAmb 03 35 57.2
comp=Z,9.6nm,1.0s
SML Sawmill 36.12 44 **P** **03 35 58.6 +1.1**
E24K Your Creek 36.21 33 P **P** **03 35 59.1 +1.0**
E24K IAmb IAmb 03 36 14.2
comp=Z,7.5nm,0.9s
COLA College 36.28 38⇓*e*P **P** **03 36 00.1 +1.5**
COLA pmax pmax
comp=Z,7.0nm,0.9s
CCB Clear Creek Bu 36.30 39 **P** **03 36 00.1 +1.3**
G24K Hadweenzic Riv 36.49 35 P **P** **03 36 01.7 +1.2**
G24K IAmb IAmb 03 36 02.9
comp=Z,12nm,1.1s
HDA Harding Lake 36.67 39 P **P** **03 36 02.6 +0.6**
HDA IAmb IAmb 03 36 03.1
comp=Z,7.0nm,0.6s
IL31 36.69 39 P **P** **03 36 02.6 +0.5**
ILAR Eielson Array 36.69 39 P **P** **03 36 02.1 -0.1**
comp=Z,2.0nm,0.8s,baz=260,slow=6.7,SNR=18
ILAR PcP **PcP** **03 38 22.1 -1.7**
comp=Z,0.5nm,0.8s,baz=287,slow=3.7,SNR=3.3
comp=Z,2.0nm,0.8s
ILAR Eielson Array 36.69 39 P **P** **03 36 02.4 +0.2**
D25K Kavik River 37.09 31 P **P** **03 36 06.5 +0.9**
D25K IAmb IAmb 03 36 07.3
comp=Z,8.3nm,0.7s
LZH Lanzhou 37.71 272 *e*P **P** **03 36 11.4 0.0**
LZH pmax pmax
comp=Z,19nm,1.2s
SCRK Sand Creek 37.98 40 P **P** **03 36 13.7 +0.4**
C27K Jago River 38.05 31 P **P** **03 36 14.8 +1.1**
C27K IAmb IAmb 03 36 15.3
comp=Z,6.0nm,0.6s
M26K Nabesna, AK 38.57 42 P **P** **03 36 19.7 +1.5**
M26K IAmb IAmb 03 36 21.3
comp=Z,8.8nm,1.0s
NRIK Noril'sk 38.70 329 P **P** **03 36 17.4 -1.7**
comp=Z,1.6nm,0.5s,baz=58,slow=5.8,SNR=4.2
NRIK LR LR 03 53 27.4
comp=Z,160nm,18.1s,baz=308,slow=38
comp=Z,1.6nm,0.5s
NRIK Noril'sk 38.70 329 P **P** **03 36 17.7 -1.4**
NRIK Noril'sk 38.70 329 P **P** **03 36 17.7 -1.4**
NRIK pmax pmax
comp=Z,2.0nm,0.5s
CRQM Cirque 38.72 45 P **P** **03 36 20.6 +1.0**
CRQM IAmb IAmb 03 36 22.1
comp=Z,17nm,0.9s
GTA Gaotai 38.80 279 *e*P **P** **03 36 22.8 +2.3**
GTA pmax pmax
comp=Z,12nm,0.7s
K27K Chicken 38.81 40 P **P** **03 36 21.2 +1.1**
K27K IAmb IAmb 03 36 22.3
comp=Z,7.9nm,0.8s
H27K Steamboat Moun 38.88 36 **P** **03 36 21.9 +1.2**
L27K Beaver Creek, 39.03 41 P **P** **03 36 23.2 +1.2**
I28M Miner Creek 39.59 37 **P** **03 36 27.9 +1.1**
I28M IAmb IAmb 03 36 28.6
comp=Z,9.4nm,1.0s
G29M Pine Creek 40.23 35 **P** **03 36 33.2 +1.3**
G29M IAmb IAmb 03 36 34.3
comp=Z,9.2nm,0.8s
L29M L29M 40.69 41 **P** **03 36 37.2 +1.4**
L29M IAmb IAmb 03 36 38.7
comp=Z,8.4nm,0.8s
CD2 Chengdu 40.70 265 P **P** **03 36 36.9 +0.7**
CD2 pmax pmax
comp=Z,60nm,0.9s
EPYK Eagle Plains 40.80 36 P **P** **03 36 38.1 +1.5**
EPYK IAmb IAmb 03 36 38.8
comp=Z,14nm,1.1s
G30M tAoh Zraii Nji 40.92 35 **P** **03 36 38.7 +1.1**
G30M IAmb IAmb 03 36 39.2
comp=Z,17nm,1.4s
F30M Barrier River 41.02 34 P **P** **03 36 40.3 +1.9**
F30M IAmb IAmb 03 36 43.7
comp=Z,25nm,1.5s
I30M Mount Dempster 41.10 37 P **P** **03 36 40.3 +1.1**
I30M IAmb IAmb 03 36 41.2
comp=Z,10nm,0.7s
INK Inuvik 41.78 32 **P** **03 36 45.6 +1.1**
INK Inuvik 41.78 32 P **P** **03 36 45.6 +1.1**
INK pmax pmax
comp=Z,6.0nm,0.9s
H31M Peel River 41.84 36 P **P** **03 36 46.3 +1.1**
H31M IAmb IAmb 03 37 14.9
comp=Z,12nm,1.2s
ZALV Zalesovo Beam 42.49 306 P **P** **03 36 48.4 -2.1**
comp=Z,1.9nm,0.4s,baz=62,slow=7.1,SNR=9.3
ZALV PcP **PcP** **03 38 41.8 -0.5**
comp=Z,1.6nm,0.4s,baz=61,slow=3.4,SNR=8.4
ZALV LR LR 03 54 54.3
comp=Z,143nm,18.9s,baz=151,slow=37
comp=Z,1.9nm,0.4s
ZALV Zalesovo Beam 42.49 306 P **P** **03 36 49.2 -1.3**
ZALV **PcP** **03 38 42.6 +0.3**
ZALV Zalesovo Beam 42.49 306 P **P** **03 36 49.2 -1.3**
ZALV 03 38 42.6
P33M Teslin, Yukon 43.82 44 **P** **03 37 02.6 +1.2**
P33M IAmb IAmb 03 37 05.8
comp=Z,8.7nm,1.0s
GOMU GeErMu 43.84 278 P **P** **03 37 03.0 +0.9**
GOMU PcP **PcP** **03 38 49.3 +1.6**
GOMU pmax pmax
comp=Z,9.0nm,0.9s
A36M Sachs Harbour 43.97 26 **P** **03 37 03.0 +0.8**
WMQ Urumqi 44.77 291 *e*P **P** **03 37 10.8 +1.7**
PZH PanZhiHua 44.83 262 P **P** **03 37 11.4 +1.6**

MK31 Makanchi Array 46.80 297 *ce*P **P** **03 37 23.5 -1.5**
MK31 pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 46.80 297 P **P** **03 37 23.6 -1.4**
comp=Z,3.7nm,0.7s,baz=69,slow=7.8,SNR=19
MKAR PcP **PcP** **03 38 57.5 +0.1**
comp=Z,1.8nm,0.6s,baz=64,slow=4.6,SNR=6.8
MKAR LR LR 03 58 02.8
comp=Z,198nm,18.1s,baz=354,slow=37
comp=Z,3.7nm,0.7s
MKAR Makanchi Array 46.80 297 P **P** **03 37 23.3 -1.7**
MKAR **PcP** **03 38 56.9 -0.4**
KURK Kurchatov 47.24 304 **P** **03 37 27.0 -1.3**
KURK IAmb IAmb 03 37 29.0
comp=Z,5.3nm,0.8s
KURK **PcP** **03 38 58.6 -0.1**
KURK Kurchatov 47.24 304 *de*P **P** **03 37 26.1 -2.2**
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURBB Kurchatov Arra 47.33 303 P **P** **03 37 26.8 -2.2**
comp=Z,4.1nm,0.8s,baz=70,slow=8.6,SNR=16
KURBB PcP **PcP** **03 38 58.8 -0.3**
comp=Z,0.6nm,0.6s,baz=72,slow=3.2,SNR=4.4
comp=Z,4.1nm,0.8s
KURBB Kurchatov Arra 47.33 303 P **P** **03 37 26.4 -2.6**
BVAR Borovoye Array 50.74 309 P **P** **03 37 53.6 -1.5**
comp=Z,1.6nm,0.4s,baz=55,slow=7.9,SNR=14
BVAR PcP **PcP** **03 39 11.6 +0.1**
comp=Z,2.9nm,0.5s,baz=77,slow=4.3,SNR=8.3
comp=Z,1.6nm,0.4s
BORK Borovoye 50.77 309 *ce*P **P** **03 37 54.6 -0.7**
BORK pmax pmax
comp=Z,4.0nm,1.3s
YKA Yellowknife Ar 51.06 37 P **P** **03 37 58.2 +0.9**
comp=Z,1.9nm,0.8s,baz=292,slow=8.0,SNR=3.5
comp=Z,1.9nm,0.8s
CHTO Chiang Mai 51.94 256 **P** **03 38 04.0 -0.4**
CHTO IAmb IAmb 03 38 06.5
comp=Z,9.8nm,0.8s
CHTO Chiang Mai 51.94 256 P **P** **03 38 04.0 -0.4**
CHTO pmax pmax
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 52.19 256 P **P** **03 38 07.4 +1.1**
comp=Z,6.0nm,0.6s,baz=44,slow=7.5,SNR=23
CMAR LR LR 04 02 21.5
comp=Z,33nm,18.4s,baz=275,slow=38
comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr 52.19 256 P **P** **03 38 06.5 +0.2**
CMAR PcP **PcP** **03 39 18.4 +1.0**
CMAR Chiang Mai Arr 52.19 256 P **P** **03 38 06.5 +0.2**
CMAR 03 39 18.4
SHL Shillong 52.19 268 **P** **03 38 05.8 -0.7**
SHL Shillong 52.19 268 P **P** **03 38 05.8 -0.7**
SHL pmax pmax
comp=Z,28nm,0.6s
AAK Ala-Archa 53.69 296 LR LR 04 01 39.9
comp=Z,127nm,18.8s,baz=354,slow=37
AAK Ala-Archa 53.69 296 *ce*P **P** **03 38 18.3 +1.0**
AAK pmax pmax
comp=Z,3.0nm,1.3s
AAK Ala-Archa 53.69 296 *e*P **P** **03 38 18.3 +1.0**
EVN Everest 54.15 274 **P** **03 38 22.1 +0.6**
TULEG Thule 54.20 11 *i*P **P** **03 38 19.3 -1.0**
ARTI Arti 55.02 317 LR LR 04 02 23.5
comp=Z,119nm,18.5s,baz=335,slow=36
ARTI Arti 55.02 317 *di*P **P** **03 38 26.3 -0.3**
ARTI 03 39 25.9
ARTI S **S** **03 46 02.6 -2.0**
ARTI pmax pmax
comp=Z,5.0nm,0.9s
NEEM North Greenlan 55.22 6 *i*P **P** **03 38 27.0 -1.1**
NEEM IAmb IAmb 03 38 27.6
comp=Z,23nm,0.7s
KK31 Karatay Array 55.86 299 **P** **03 38 33.2 +0.4**
KK31 Karatay Array 55.86 299 *e*P **P** **03 38 30.3 -2.5**
DAG Danmarks Havn 56.68 358 *i*P **P** **03 38 36.3 -1.8**
DAG IAmb IAmb 03 38 37.6
comp=Z,2.4nm,0.7s
WIFE Three Sisters- 57.10 59 P **P** **03 38 43.3 +1.5**
WIFE IAmb IAmb 03 38 44.7
comp=Z,6.4nm,1.0s
I05D Terrebonne, OR 57.22 58 P **P** **03 38 44.1 +1.7**
I05D IAmb IAmb 03 38 45.0
comp=Z,5.7nm,0.8s
PINE Pine Mountain 57.77 59 P **P** **03 38 47.9 +1.4**
PINE IAmb IAmb 03 39 05.2
comp=Z,8.2nm,1.3s
ARCES ARCESS Array B 57.83 341 P **P** **03 38 44.9 -1.4**
comp=Z,2.8nm,0.7s,baz=36,slow=6.4,SNR=12
comp=Z,2.8nm,0.7s
ARCES ARCESS Array B 57.83 341 P **P** **03 38 45.8 -0.5**
ARCES IAmb IAmb 03 39 19.8
comp=Z,13nm,1.4s
ARCES ARCESS Array B 57.83 341 P **P** **03 38 45.8 -0.5**
ARCES pmax pmax
comp=Z,13nm,1.4s
AB31 Akbulak array 58.31 310 **P** **03 38 48.8 -1.2**
AB31 IAmb IAmb 03 38 51.5
comp=Z,3.0nm,0.5s
AB31 Akbulak array 58.31 310 *i*P **P** **03 38 48.8 -1.2**
ABKAR Akbulak array 58.31 310 P **P** **03 38 48.9 -1.1**
K05A Summer Lake 58.42 60 IAmb IAmb 03 38 53.9
comp=Z,4.0nm,0.9s
AKTO Aktyubinsk 58.62 312 LR LR 04 06 50.2
comp=Z,226nm,18.4s,baz=27,slow=39
DBG Daneborg 59.18 358 *i*P **P** **03 38 54.1 -1.6**
DBG IAmb IAmb 03 38 55.6
comp=Z,5.6nm,1.1s
CHGR Chuyangaron 59.30 295 **P** **03 38 56.6 -0.6**
CHGR Chuyangaron 59.30 295 P **P** **03 38 56.6 -0.6**
CHGR pmax pmax
comp=Z,13nm,0.8s
NIL Nilore 59.75 288 P **P** **03 38 59.9 -0.3**
NIL Nilore 59.75 288 P **P** **03 38 59.9 -0.3**
NIL pmax pmax
comp=Z,15nm,1.0s
PLID Pearl Lake 59.84 55 **P** **03 39 02.1 +1.1**
PLID IAmb IAmb 03 39 03.1
comp=Z,6.0nm,0.8s
MSO Missoula 59.93 52 **P** **03 39 02.7 +1.3**
MSO IAmb IAmb 03 39 04.8
comp=Z,4.7nm,1.1s
BEKR Beckworth 60.47 62 **P** **03 39 06.3 +1.1**
SUMG Summit 60.75 4 **P** **03 39 07.1 +0.2**
SUMG Summit 60.75 4 P **P** **03 39 07.1 +0.2**
SUMG pmax pmax
comp=Z,20nm,0.9s
SUMG Summit 60.75 4 *i*P **P** **03 39 06.9 0.0**
SUMG IAmb IAmb 03 39 08.0
comp=Z,19nm,0.8s
PNTR Pine Nut 61.41 62 P **P** **03 39 13.2 +1.5**
PNTR IAmb IAmb 03 39 15.8
comp=Z,3.7nm,0.6s
FAUS Fauske 61.79 343 *e*P **P** **03 39 12.9 -0.6**
BOZ Bozeman (W) 61.95 52 IAmb IAmb 03 39 17.1
comp=Z,3.7nm,0.6s
NVAR Mina Array Bea 62.61 62 P **P** **03 39 20.9 +1.1**
comp=Z,1.4nm,0.6s,baz=293,slow=7.4,SNR=16
comp=Z,1.4nm,0.6s
NVAR Mina Array Bea 62.61 62 P **P** **03 39 21.6 +1.8**
VAGH Vaagaholmen 62.76 343 *e*P **P** **03 39 19.0 -0.9**
MOR8 Moi Rana 63.00 342 *e*P **P** **03 39 19.9 -1.8**
SCO Scoresbysund 63.06 358 *i*P **P** **03 39 22.0 +0.1**
SCO IAmb IAmb 03 39 22.9
comp=Z,5.9nm,0.6s
LEIR Leirfjorden 63.33 343 *e*P **P** **03 39 22.9 -0.9**
TPAW Teton Pass 63.67 54 IAmb IAmb 03 39 29.8
comp=Z,6.0nm,0.8s
FINES FINESS Array B 64.00 335 P **P** **03 39 27.1 -1.1**
comp=Z,10nm,0.4s,baz=34,slow=7.3,SNR=147
comp=Z,10nm,0.4s
FINES FINESS Array B 64.00 335 P **P** **03 39 27.4 -0.9**
SPR3 Spring Creek 3 64.63 59 **P** **03 39 34.8 +1.6**
PDAR Pinedale Array 64.91 54 P **P** **03 39 35.8 +0.9**
comp=Z,2.2nm,0.8s,baz=303,slow=1.6,SNR=21
comp=Z,2.2nm,0.8s
PDAR Pinedale Array 64.91 54 P **P** **03 39 36.0 +1.1**
NSS Namsos 64.95 342 *e*P **P** **03 39 33.5 -1.0**
SFJD Kangerlussuaq 65.22 10 LR LR 04 07 48.5
comp=Z,88nm,19.6s,baz=128,slow=36
RSSD Black Hills 66.98 50 **P** **03 39 48.7 +0.6**
RSSD Black Hills 66.98 50 P **P** **03 39 48.7 +0.6**
RSSD pmax pmax
comp=Z,6.0nm,0.6s
HMU Henry Mountain 67.45 58 IAmb IAmb 03 40 11.4
comp=Z,4.2nm,0.9s

MOL Molde 67.60 343 *e*P **P** **03 39 51.1 -0.3**
DOMB Dombas 67.77 342 *e*P **P** **03 39 51.7 -0.9**
AKN Aaknes 68.06 344 *e*P **P** **03 39 54.1 -0.3**
NB2 NORSAR Subarra 68.21 341 P **P** **03 39 54.8 -0.5**
comp=Z,5.4nm,0.6s,baz=28,slow=6.2
NOA NORSAR Array B 68.21 341 P **P** **03 39 54.8 -0.5**
comp=Z,8.1nm,0.7s,baz=28,slow=6.5,SNR=55
comp=Z,8.1nm,0.7s
PV18 Skein Mesa, Pa 68.30 57 IAmb IAmb 03 40 13.2
comp=Z,6.2nm,0.8s
NC602 NORSAR Array S 68.40 341 *e*P **P** **03 39 55.5 -1.0**
WRA Warramunga Arr 68.42 199 P **P** **03 39 57.4 +0.4**
comp=Z,1.4nm,0.5s,baz=18,slow=6.8,SNR=12
comp=Z,1.4nm,0.5s
WRA Warramunga Arr 68.42 199 P **P** **03 39 57.7 +0.7**
WRA Warramunga Arr 68.42 199 P **P** **03 39 57.7 +0.7**
WRA pmax pmax
comp=Z,1.0nm,1.5s
HFS Hagfors 68.43 339 P **P** **03 39 55.8 -0.8**
comp=Z,15nm,0.4s,baz=53,slow=5.7,SNR=162
comp=Z,15nm,0.4s
STRU Stroemstad 70.00 340 *i*P **P** **03 40 05.9 -0.4**
KVAR Kislovodsk Arr 70.69 314 LR LR 04 14 01.5
comp=Z,77nm,18.4s,baz=282,slow=38
KIV Kislovodsk 70.70 314 *e*P **P** **03 40 10.1 -0.9**
KIV pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 70.76 314 P **P** **03 40 11.1 -0.1**
comp=Z,3.0nm,0.7s,baz=55,slow=2.1,SNR=11
comp=Z,3.0nm,0.7s
KBZ Khabaz 70.76 314⇑*e*P **P** **03 40 12.0 +0.8**
KBZ Khabaz 70.76 314 *e*P **P** **03 40 12.0 +0.8**
TJOU Tjoern 70.79 339 *i*P **P** **03 40 10.6 -0.6**
BORU Boraas 70.86 339 *i*P **P** **03 40 10.8 -0.9**
ONAU Onsala 71.29 339 *i*P **P** **03 40 13.5 -0.7**
FABU Falkenberg 71.44 338 *i*P **P** **03 40 15.1 0.0**
AK03 Malin Array Si 71.46 326 P **P** **03 40 14.1 -1.3**
AK23 Malin Array Si 71.47 326 P **P** **03 40 14.5 -0.9**
AKASG Malin Array Be 71.48 326 P **P** **03 40 14.6 -0.9**
comp=Z,7.7nm,0.3s,baz=35,slow=6.2,SNR=30
AKASG LR LR 04 14 48.0
comp=Z,196nm,18.2s,baz=10.0,slow=38
comp=Z,7.7nm,0.3s
AKASG Malin Array Be 71.48 326 P **P** **03 40 14.7 -0.9**
AKASG Malin Array Be 71.48 326 *ce*P **P** **03 40 14.6 -0.9**
AKASG pmax pmax
comp=Z,12nm,0.4s
AKBB Malin Array Si 71.48 326 P **P** **03 40 14.5 -1.0**
AKBB Malin Array Si 71.48 326 *de*P **P** **03 40 14.6 -0.9**
AKBB Malin Array Si 71.48 326 P **P** **03 40 14.6 -0.9**
AK04 Malin Array Si 71.48 326 P **P** **03 40 14.6 -0.9**
AK21 Malin Array Si 71.49 326 P **P** **03 40 14.4 -1.2**
AK22 Malin Array Si 71.49 326 P **P** **03 40 14.4 -1.2**
AK01 Malin Array Si 71.49 326 P **P** **03 40 14.4 -1.2**
KIEV Kiev 71.49 326 ⇓P **P** **03 40 14.6 -1.0**
KIEV Kiev 71.49 326 ⇓P **P** **03 40 14.6 -1.0**
KIEV Kiev 71.49 326 P **P** **03 40 14.6 -1.0**
comp=Z,87nm,0.9s
AK11 Malin Array Si 71.52 326 P **P** **03 40 14.8 -0.9**
AK02 Malin Array Si 71.52 326 P **P** **03 40 14.8 -1.0**
AK08 Malin Array Si 71.52 326 P **P** **03 40 14.8 -1.0**
AK15 Malin Array Si 71.52 326 P **P** **03 40 14.8 -1.0**
AK18 Malin Array Si 71.52 326 P **P** **03 40 14.8 -1.0**
AK09 Malin Array Si 71.52 326 P **P** **03 40 14.8 -1.0**
AK20 Malin Array Si 71.53 326 P **P** **03 40 14.8 -1.0**
AK19 Malin Array Si 71.54 326 P **P** **03 40 14.9 -1.0**
AK10 Malin Array Si 71.55 326 P **P** **03 40 15.0 -0.9**
AK16 Malin Array Si 71.55 326 P **P** **03 40 15.0 -0.9**
AK05 Malin Array Si 71.55 326 P **P** **03 40 15.0 -0.9**
AK12 Malin Array Si 71.55 326 P **P** **03 40 15.0 -0.9**
AK17 Malin Array Si 71.56 326 P **P** **03 40 15.0 -1.0**
AK14 Malin Array Si 71.58 326 P **P** **03 40 15.1 -1.0**
AK06 Malin Array Si 71.58 326 P **P** **03 40 15.1 -1.0**
AK07 Malin Array Si 71.61 326 P **P** **03 40 15.3 -1.0**
DEL Delary 71.61 337 *i*P **P** **03 40 14.9 -1.3**
AK13 Malin Array Si 71.61 326 P **P** **03 40 15.3 -1.0**
MI28 Mi28,Pidlybu 71.88 327 P **P** **03 40 17.2 -0.7**
AS31 Alice Springs 72.11 198 **P** **03 40 21.3 +1.8**
ASAR Alice Springs 72.11 198 P **P** **03 40 21.3 +1.7**
comp=Z,3.7nm,0.7s,baz=13,slow=5.5,SNR=44
comp=Z,3.7nm,0.7s
ASAR Alice Springs 72.11 198 P **P** **03 40 21.4 +1.8**
ASAR Alice Springs 72.11 198 P **P** **03 40 21.4 +1.8**
BJUU Bjuv 72.18 338 *i*P **P** **03 40 19.0 -0.6**
LUNU Lund 72.46 337 *i*P **P** **03 40 20.5 -0.8**
BSD Bornholm Skovb 72.52 336 *i*P **P** **03 40 21.1 -0.6**
BSD IAmb IAmb 03 40 21.6
comp=Z,20nm,0.8s
SORM Soroca 73.88 325 ⇑P **P** **03 40 28.8 -1.0**
SORM Soroca 73.88 325 ⇑P **P** **03 40 28.8 -1.0**
MILM Milestii Mici 74.68 324 ⇑P **P** **03 40 33.0 -1.4**
MILM Milestii Mici 74.68 324 ⇑P **P** **03 40 33.0 -1.4**
KWP Kalwaria Pacla 74.76 329 *e*P **P** **03 40 34.7 -0.3**
GURO Guroymak-BITLI 75.01 311 IAmb IAmb 03 40 38.6
comp=Z,4.4nm,0.6s
OJC Ojcow 75.27 331 *e*P **P** **03 40 37.3 -0.5**
OJC Ojcow 75.27 331 P **P** **03 40 37.5 -0.4**
OJC Ojcow 75.27 331 P **P** **03 40 37.5 -0.4**
STHS Stebnicka Huta 75.46 330 *e*P **P** **03 40 38.5 -0.5**
STHS pmax pmax
comp=Z,7.0nm,0.7s
STHS Stebnicka Huta 75.46 330 *e*P **P** **03 40 38.5 -0.5**
BURAR Bucovina Array 75.52 326 **P** **03 40 39.4 -0.1**
BURAR Bucovina Array 75.52 326 ⇑P **P** **03 40 39.2 -0.3**
BURAR Bucovina Array 75.52 326 ⇑P **P** **03 40 39.2 -0.3**
GIRR Girov 75.57 325 ⇓P **P** **03 40 39.7 +0.1**
TESR Tescani 75.87 325 ⇑P **P** **03 40 40.7 -0.6**
ONER Baraj Valea Uz 76.12 325 ⇑P **P** **03 40 42.6 -0.2**
CHVC Chvalec 76.15 333 *e*P **P** **03 40 42.5 -0.4**
CHVC Chvalec 76.15 333 *e*P **P** **03 40 42.5 -0.4**
STEB Steborice 76.18 332 *e*P **P** **03 40 42.5 -0.5**
DPC Dobruska-Polom 76.28 333 *e*P **P** **03 40 43.8 +0.1**
DPC Dobruska-Polom 76.28 333 *e*P **P** **03 40 43.8 +0.1**
LANS Liptovska Anna 76.29 331 *e*P **P** **03 40 44.2 +0.4**
LANS pmax pmax
comp=Z,5.0nm,0.9s
LANS Liptovska Anna 76.29 331 *e*P **P** **03 40 44.2 +0.4**
EKA Eskdalemuir Ar 76.33 346 P **P** **03 40 43.3 -0.5**
comp=Z,0.4nm,0.3s,baz=20,slow=5.6,SNR=9.9
comp=Z,0.4nm,0.3s
CFR Carcaliu 76.36 323 ⇑P **P** **03 40 44.2 +0.1**
CFR Carcaliu 76.36 323 ⇑P **P** **03 40 44.2 +0.1**
KRLC Kraliky 76.37 333 *e*P **P** **03 40 44.1 -0.1**
KRLC Kraliky 76.37 333 *e*P **P** **03 40 44.1 -0.1**
MORC Moravsky Berou 76.39 332 P **P** **03 40 44.4 0.0**
MORC IAmb IAmb 03 40 45.0
comp=Z,6.6nm,0.8s
MORC Moravsky Berou 76.39 332 ⇑P **P** **03 40 44.3 0.0**
MORC Moravsky Berou 76.39 332 *e*P **P** **03 40 43.1 -1.2**
MORC Moravsky Berou 76.39 332 ⇑P **P** **03 40 44.3 0.0**
PLOR Plostina 76.42 325 ⇑P **P** **03 40 43.1 -1.4**
PLOR Plostina 76.42 325 P **P** **03 40 43.1 -1.4**
CLL Collm 76.42 335 **P** **03 40 44.1 -0.3**
CLL IAmb IAmb 03 40 44.2
comp=Z,9.3nm,0.9s
CLL Collm 76.42 335 *i*P **P** **03 40 43.5 -0.9**
CLL *e* 03 45 19.0
CLL pmax pmax
comp=Z,10.0nm,0.8s
CLL Collm 76.42 335 *i*P **P** **03 40 43.5 -0.9**
comp=Z,10.0nm,0.8s
TURR Turia 76.50 325 ⇑P **P** **03 40 44.9 -0.1**
OZUR 76.56 325 ⇑P **P** **03 40 45.5 +0.2**
UOSS Minazif 76.58 292 **P** **03 40 45.6 -0.2**
HSKC Hora Svate Kat 76.92 335 *e*P **P** **03 40 47.3 0.0**
MLR Muntele Rosu 76.99 325 IAmb IAmb 03 40 49.4
comp=Z,8.5nm,0.7s
MLR Muntele Rosu 76.99 325 ⇑P **P** **03 40 48.4 +0.5**
MLR Muntele Rosu 76.99 325 ⇑P **P** **03 40 48.4 +0.5**
MARR Marisel-Cluj 77.09 327 ⇑P **P** **03 40 48.5 +0.1**
VRAC Vranov 77.10 332 LR LR 04 20 25.1
comp=Z,204nm,20.2s,baz=343,slow=40
VRAC Vranov 77.10 332 ⇑P **P** **03 40 48.4 +0.1**
VRAC Vranov 77.10 332 *e*P **P** **03 40 48.0 -0.3**
VRAC Vranov 77.10 332 ⇑P **P** **03 40 48.4 +0.1**
PRU Pruhonice 77.14 334 *e*P **P** **03 40 48.5 0.0**
PRU Pruhonice 77.14 334 *e*P **P** **03 40 48.5 0.0**
JAVC Velka Javorina 77.14 331 *e*P **P** **03 40 49.2 +0.6**
DRGR 77.15 327 ⇑P **P** **03 40 48.9 +0.2**
DRGR 77.15 327 ⇑P **P** **03 40 48.9 +0.2**
ILGA Ilgaz 77.21 317 IAmb IAmb 03 40 54.5
comp=Z,9.9nm,0.8s
ICOR Ion Corvin 77.37 323 ⇓P **P** **03 40 50.0 +0.2**

KRUC	Moravsky	77.38	332	*e*P		P	03 40 49.2	-0.6
VOIR		77.39	325	⇓P		P	03 40 48.9	-1.1
VOIR		77.39	325	⇓P		P	03 40 48.9	-1.1
ARR	Arges	77.61	325	⇑P		P	03 40 51.7	+0.4
TXAR	Lajitas Array	77.67	60	P		P	03 40 52.9	+1.0
	comp=Z,1.3nm,0.6s,baz=299,slow=5.0,SNR=35							
	comp=Z,1.3nm,0.6s							
MODS	Modra-Piesok	77.69	331	*e*P		P	03 40 51.9	+0.3
MODS				pmax	pmax			
	comp=Z,22nm,1.2s							
MODS	Modra-Piesok	77.69	331	*e*P		P	03 40 51.9	+0.3
ZVC	Zvikov	77.73	334	*e*P		P	03 40 51.2	-0.6
SRO	Srobarova	77.84	331	*e*P		P	03 40 52.9	+0.5
SRO				pmax	pmax			
	comp=Z,16nm,1.3s							
SRO	Srobarova	77.84	331	*e*P		P	03 40 52.9	+0.5
BNN	Bunyan	77.92	315			P	03 40 53.6	+0.4
BNN				IAmb	IAmb		03 40 54.4	
	comp=Z,5.6nm,0.8s							
KHC	Kasperske Hory	78.19	334	IAmb	IAmb		03 40 55.3	
	comp=Z,9.0nm,1.0s							
KHC	Kasperske Hory	78.19	334	*e*P		P	03 40 54.3	-0.1
KHC	Kasperske Hory	78.19	334	*e*P		P	03 40 54.3	-0.1
BR131	Keskin Array S	78.29	317	IAmb	IAmb		03 40 56.6	
	comp=Z,4.7nm,0.9s							
BR131	Keskin Array S	78.29	317	*de*P		P	03 40 55.2	0.0
BRTR	Keskin Array B	78.29	317	P		P	03 40 54.9	-0.4
	comp=Z,2.9nm,0.8s,baz=71,slow=4.0,SNR=16							
	comp=Z,2.9nm,0.8s							
BRTR	Keskin Array B	78.29	317			P	03 40 55.3	0.0
BRTR	Keskin Array B	78.29	317	*ce*P		P	03 40 55.5	+0.2
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
GERES	GERESS Array B	78.41	334	P		P	03 40 55.3	-0.4
	comp=Z,1.3nm,0.7s,baz=38,slow=6.8,SNR=11							
	comp=Z,1.3nm,0.7s							
CONA	Conrad Observa	78.55	332	*e*P		P	03 40 56.5	+0.1
	comp=Z,3.3nm,0.6s							
BZS	Buzias	78.55	327	⇑P		P	03 40 55.6	-0.8
BZS	Buzias	78.55	327	⇑P		P	03 40 55.6	-0.8
ANTO	Ankara	78.58	317	P		P	03 40 57.3	+0.5
ANTO	Ankara	78.58	317	⇓P		P	03 40 57.5	+0.8
ANTO	Ankara	78.58	317	⇓P		P	03 40 57.5	+0.8
RONA	Rosalia, Austr	78.61	332	*e*P		P	03 40 57.3	+0.6
	comp=Z,5.5nm,0.7s,SNR=4.7							
KIRS	Kirsehir-Merke	78.63	316	⇑P		P	03 40 57.4	+0.3
MOA	Molln	79.12	333	*i* P		P	03 40 59.8	+0.3
	comp=Z,1.5nm,0.4s							
MDVR	Moldovita	79.22	327	⇑P		P	03 41 01.0	+0.9
PLVB	Pleven	79.27	324	⇑P		P	03 41 00.1	-0.3
DRIO	Del Rio	79.41	58	IAmb	IAmb		03 41 02.9	
	comp=Z,5.8nm,1.0s							
BIOA	Bad Ischl, Aus	79.46	333	*e*P		P	03 41 01.1	-0.3
	comp=Z,6.6nm,1.1s							
SOKA	Soboth	79.91	332	*e*P		P	03 41 03.9	-0.1
	comp=Z,13nm,1.1s,SNR=4.3							
LESA	Schwarzleotal	79.99	334	*e*P		P	03 41 04.7	+0.4
	comp=Z,8.3nm,0.9s							
KBA	Koelnbreinsper	80.09	333	*e*P		P	03 41 05.1	+0.1
	comp=Z,12nm,0.8s							
OBKA	Obir	80.22	332	*e*P		P	03 41 05.0	-0.5
	comp=Z,1.8nm,0.5s							
WATA	Walderalm	80.40	334	*e*P		P	03 41 06.7	+0.1
	comp=Z,1.1nm,0.9s							
WTTA	Wattenberg	80.45	334	*e*P		P	03 41 07.1	+0.2
	comp=Z,13nm,0.9s,SNR=5.3							
RETA	Reutte	80.50	335	*e*P		P	03 41 07.1	+0.1
	comp=Z,10nm,1.2s							
MOTA	Moosalm	80.53	335	*e*P		P	03 41 07.3	0.0
	comp=Z,16nm,1.1s							
RDO	Rodhopi	80.76	323	IAmb	IAmb		03 41 09.4	
	comp=Z,11nm,0.9s							
DAVA	Damuels	80.94	335	*e*P		P	03 41 09.3	-0.2
	comp=Z,8.0nm,1.0s							
TAOE	Nuku Hiva Isla	81.10	113	*e*LR		LR	04 06 38.6	
	comp=Z,56nm,21.7s							
PPT	Papeete	82.28	126	LR		LR	04 13 01.3	
	comp=Z,49nm,19.4s,baz=312,slow=32							
PPT2	Papeete2	82.30	126	*e*LR		LR	04 07 09.5	
PPT2				*e*LR		LR	04 07 15.8	
	comp=Z,106nm,26.0s							
ELL	Elmali	82.43	317	IAmb	IAmb		03 41 18.4	
	comp=Z,9.8nm,0.9s							
MMAI	Mount Meron Ar	82.70	311	P		P	03 41 19.5	+0.6
	comp=Z,5.4nm,0.5s,baz=45,slow=4.8,SNR=14							
	comp=Z,5.4nm,0.5s							
RAYN	Ar Rayn	84.28	298			P	03 41 27.0	-0.1
RAYN				IAmb	IAmb		03 41 28.2	
	comp=Z,4.6nm,0.7s							
RAYN	Ar Rayn	84.28	298	P		P	03 41 27.5	+0.4
TBI	Tubuai	87.01	129	*e*LR		LR	04 09 23.9	
	comp=Z,1µm,37.0s							
ESDC	Sonseca Array	91.53	342	P		P	03 42 00.5	-1.2
	comp=Z,0.9nm,0.8s,baz=42,slow=6.1,SNR=4.3							
	comp=Z,0.9nm,0.8s							
ESDC	Sonseca Array	91.53	342	P		P	03 42 00.8	-0.9
ESDC				IAmb	IAmb		03 42 01.6	
	comp=Z,2.9nm,1.1s							
H03N2	Juan Fernandez	138.93	90	T		T	06 23 46.6	
	baz=308,slow=77							
H03N1	Juan Fernandez	138.95	90	T		T	06 23 48.9	
	baz=308,slow=77							
H03N3	Juan Fernandez	138.95	90	T		T	06 23 43.7	
	baz=308,slow=77							
BDFB	Brasilia	144.48	36	PKP		PKPab	03 48 30.1	+0.2
	comp=Z,4.0nm,0.7s,baz=324,slow=2.0,SNR=6.5							
PLCA	Paso Flores	148.38	95	PKPbc		PKPbc	03 48 41.3	+0.4
	comp=Z,4.5nm,0.9s,baz=265,slow=3.2,SNR=14							
PLCA	Paso Flores	148.38	95			PKiKP	03 48 42.3	-0.2
PLCA	Paso Flores	148.38	95	PKP2		PKiKP	03 48 42.3	-0.2
CPUP	Villa Florida	148.64	60	PKPbc		PKPbc	03 48 42.4	+0.4
	comp=Z,0.7nm,0.7s,baz=229,slow=0.6,SNR=5.7							
CPUP	Villa Florida	148.64	60			PKPbc	03 48 42.5	+0.6
CPUP	Villa Florida	148.64	60	PKP2		PKPbc	03 48 42.5	+0.6

GII 13 03:32:09.5±0.0, 33°457N±0″004×35°874E±0″001, h0km, Mws1.3, confirmed, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NATI	Neve Ativ	0.23	211	P	Pg	03 32 15.1	+1.2
NATI	Neve Ativ	0.23	211	S	Sg	03 32 19.5	+2.8
GEM	Giv'at Ha'Em	0.30	216	P	Pg	03 32 16.0	+0.8
GEM	Giv'at Ha'Em	0.30	216	S	Sb	03 32 21.7	-1.6
MMC7	Mount Meron ar	0.59	223	P	Pb	03 32 22.6	-0.2

IDC 13 03:34:47.2±0.6, 6°.50S×104°.21E, h0km, mb4.3/16, mbtmp4.3/18, ML4.7/2, MS3.4/5, Error ellipse: s-maj=23.5km s-min=13.1km az=53.0
DJA 13 03:34:51.7±0.3, 7°.5S×210°.4E±°, h10km, M4.7/19, mB5.3/3, mb4.9/7, MLv4.5/19, Mw(mB)4.8/3
NEIC 13 03:34:54.3±1.5, 6°.49S±0°.10×104°.33E±0°.10, h47km±5km, mb4.5/20, Error ellipse: s-maj=18.6km s-min=7.1km az=45.0

ISC 13 03:34:54.0±1.2, 6°.62S±0°.06×104°.33E±0°.05, h52km±10km, n102, σ1§46/102, mb4.4/28, MS3.4/3, 1C, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.10	9	P	Pn	03 35 11.9	-1.2
KASI				S	Sn	03 35 25.6	-1.7
BLSI	Bandar Lampung	1.54	36	P	Pn	03 35 19.4	+0.3
BLSI				S	Sn	03 35 39.0	+1.0
LWLI	Liwa	1.61	350	P	Pn	03 35 20.1	-0.1
LWLI				S	Sn	03 35 42.4	+2.5
KLI	Kotabumi	1.82	17	P	Pn	03 35 23.5	+0.6
KLI				S	Sn	03 35 47.7	+2.8
SBJI	Serang	1.86	75	P	Pn	03 35 24.3	+0.9
SBJI				S	Sn	03 35 47.7	+2.0
MDSI	Maura Dua	2.12	356	P	Pn	03 35 27.7	+0.6
MDSI				S	Sn	03 35 55.6	+3.3
SKJI	Sukabumi	2.24	100	P	Pn	03 35 29.2	+0.5
SKJI				S	Sn	03 35 57.7	+2.5
TNG	Tangerang	2.34	79	P	Pn	03 35 29.4	-0.7
TNG				S	Sn	03 35 59.8	+2.1
DBJI	Dramaga	2.41	89	P	Pn	03 35 31.3	+0.4
DBJI				S	Sn	03 36 01.2	+2.0
MNAI	Manna	2.63	329		Pn	03 35 33.4	-0.6
MNAI	Manna	2.63	329	P	Pn	03 35 34.2	+0.3
MNAI	Manna	2.63	329	P	Pn	03 35 34.3	+0.3
MNAI				S	Sn	03 36 09.0	+4.3
CNJI	Cibinong	2.86	104	P	Pn	03 35 36.1	-1.1
CNJI				S	Sn	03 36 10.2	-0.2
LHSI	Lahat	2.89	344	P	Pn	03 35 39.2	+1.7
LEM	Lembang	3.27	94	Pn	Pn	03 35 43.4	+0.5
	20nm,0.3s,baz=290,slow=11,SNR=18						
LEM				Sn	Sn	03 36 24.4	+3.7
	19nm,0.3s,baz=181,slow=23,SNR=4.3						
LEM				LR	LR	03 37 19.6	
	comp=Z,614nm,18.7s,baz=202,slow=45						
	148nm,0.7s						
LEM	Lembang	3.27	94	P	Pn	03 35 44.5	+1.6
BBJI	Bungbulang	3.40	104	P	Pn	03 35 44.1	-0.5
MASI	Maura Aman, Be	4.03	329	P	Pn	03 35 53.9	+0.6
MASI				S	Sn	03 36 43.8	+4.5
XMI	Christmas Isla	4.04	161	P	Pn	03 35 42.0	-11
KPJI	Karang Pucung	4.62	99	P	Pn	03 36 01.1	-0.2
TPI	Tanjungpandan	5.07	41	P	Pn	03 36 07.9	+0.4
	0.2nm1µm38nm,1.1s						
TPI				S	Sn	03 37 06.0	+1.2
	0.2nm1µm38nm,1.1s						
PPSI	Pulau Pagai	5.76	311	P	Pn	03 36 15.6	-1.4
	3µm174nm,0.5s						
UGM	Wanagama	6.28	102	Pn	Pn	03 36 24.7	+0.6
UGM	Wanagama	6.28	102	P	Pn	03 36 25.6	+1.5
UGM	Wanagama	6.28	102	P	Pn	03 36 25.3	+1.2
UGM				S	Sn	03 37 35.2	+0.7
PCJI	Pacitan	6.97	103	P	Pn	03 36 33.6	+0.1
	45nm,0.5s						
SISI	Saibi	7.41	315	P	Pn	03 36 38.4	-1.2
	0.3nm60nm,0.8s						
ABJI	Asem Bagus	9.90	97	P	Pn	03 37 13.0	-0.7
JAGI	Jajag, Banyuwa	9.91	101		Pn	03 37 12.7	-1.2
JAGI	Jajag, Banyuwa	9.91	101	P	Pn	03 37 13.4	-0.5
JAGI	Jajag, Banyuwa	9.91	101	P	Pn	03 37 13.4	-0.5
PLAI	Plampang	13.50	100	P	Pn	03 38 00.3	-2.7
KAPI	Kappang	15.43	85	LR	LR	03 45 04.6	
	comp=Z,122nm,20.0s,baz=260,slow=40						
GIRL	Giralia	18.57	150		P	03 39 07.0	+0.2
GIRL				IAmb	IAmb	03 39 21.7	
	comp=Z,44nm,1.3s						
BATI	Baumata	19.45	102	P	Pn	03 39 18.2	0.0
	comp=Z,6.7nm,0.3s,baz=289,slow=18,SNR=1.5						
BATI				S	S	03 42 51.9	-2.0
	comp=Z,32nm,0.5s,baz=102,slow=19,SNR=1.7						
	comp=Z,34nm,0.3s						
MBWA	Marble Bar	20.76	136	P	P	03 39 30.9	+0.1
PSA00	Pilbara Seismi	21.12	136	P	P	03 39 35.9	+1.3
FITZ	Fitzroy Crossi	23.70	121	P	P	03 40 02.0	+0.6
CMAR	Chiang Mai Arr	25.48	348	P	P	03 40 15.7	-1.8
	comp=Z,1.6nm,0.3s,baz=181,slow=8.7,SNR=9.0						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	25.48	348	P	P	03 40 14.3	-3.2
H01W3	Cape Leeuwin H	29.55	164	T	T	04 11 47.4	
	baz=341,slow=76						
H01W1	Cape Leeuwin H	29.56	163	T	T	04 11 59.7	
	baz=341,slow=76						
H01W2	Cape Leeuwin H	29.56	164	T	T	04 11 59.8	
	baz=341,slow=76						
H08S2	Diego Garcia H	31.60	266	T	T	04 14 56.8	
	baz=89,slow=76						
H08S3	Diego Garcia H	31.61	266	T	T	04 14 55.2	
	baz=89,slow=76						
H08S1	Diego Garcia H	31.62	266	T	T	04 14 58.2	
	baz=89,slow=76						
WRA	Warramunga Arr	31.99	117	P	P	03 41 15.8	+0.1
	comp=Z,1.0nm,0.9s,baz=287,slow=12,SNR=5.1						
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	31.99	117	P	P	03 41 15.4	-0.2
WR8	Warramunga Arr	32.14	117	P	P	03 41 17.4	+0.4
PZH	PanZhiHua	33.02	356	P	P	03 41 27.3	+2.7
ASAR	Alice Springs	33.08	124	P	P	03 41 25.4	+0.3
	comp=Z,0.3nm,0.3s,baz=304,slow=7.9,SNR=5.1						
ASAR				LR	LR	03 54 48.7	
	comp=Z,78nm,20.8s,baz=288,slow=36						
	comp=Z,0.3nm,0.3s						
ASAR	Alice Springs	33.08	124	P	P	03 41 26.5	+1.4
EVN	Everest	38.31	335		P	03 42 08.7	-1.9
EVN				IAmb	IAmb	03 42 24.8	
	comp=Z,6.4nm,1.3s						
XAN	Xi'an	40.67	6	P	P	03 42 25.4	-4.0
XAN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2	Nanjing	40.87	19	*e*P	P	03 42 31.4	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
STKA	Stephens Creek	42.88	131	P	P	03 42 48.5	+1.0
	comp=Z,3.2nm,0.5s,baz=305,slow=8.8,SNR=9.5						
	comp=Z,3.2nm,0.5s						
STKA	Stephens Creek	42.88	131	P	P	03 42 47.7	+0.2
GTA	Gaotai	45.99	355	*e*P	P	03 43 13.4	+1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JNU	Nakatsue	46.88	31	LR	LR	04 02 32.4	
	comp=Z,62nm,20.3s,baz=340,slow=36						
BJI	Beijing	47.70	12	P	P	03 43 25.5	0.0
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,80nm,5.2s						
HHC	Hu-ho-hao-te	47.70	7	*e*P	P	03 43 27.3	+1.6
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
NIL	Nilore	49.72	326	P	P	03 43 39.9	-1.4
SONM	Songino Array	54.25	2	P	P	03 44 14.5	-0.3
	comp=Z,1.4nm,0.6s,baz=187,slow=8.5,SNR=15						
	comp=Z,1.4nm,0.6s						
SONM	Songino Array	54.25	2	P	P	03 44 13.7	-1.1
SONM				IAmb	IAmb	03 44 16.5	
	comp=Z,11nm,1.4s						
BNX	BinXian	56.06	19	⇑P	P	03 44 27.9	+0.2
BNX				pmax	pmax		
	comp=Z,13nm,1.2s						
USRK	Ussuriysk Ar.	56.41	24	P	P	03 44 29.6	-0.5
	comp=Z,3.4nm,0.5s,baz=215,slow=6.5,SNR=10.0						
	comp=Z,3.4nm,0.5s						
MKAR	Makanchi Array	56.67	342	P	P	03 44 31.5	-0.5
	comp=Z,2.2nm,0.6s,baz=146,slow=8.6,SNR=15						
	comp=Z,2.2nm,0.6s						
MKAR	Makanchi Array	56.67	342		P	03 44 31.3	-0.7
HILR	Hailar Array B	57.54	12	P	P	03 44 37.0	-1.1
	comp=Z,1.0nm,0.3s,baz=189,slow=8.5,SNR=2.7						
	comp=Z,1.0nm,0.3s						
H04N2	CROZET ISLANDS	59.84	220	T	T	04 49 49.7	
	baz=63,slow=74						
H04N1	CROZET ISLANDS	59.86	220	T	T	04 49 48.6	
	baz=63,slow=74						
H04N3	CROZET ISLANDS	59.86	220	T	T	04 49 46.4	
	baz=63,slow=74						
H04S1	CROZET ISLANDS	60.05	219	T	T	04 49 57.6	
	baz=66,slow=75						
H04S3	CROZET ISLANDS	60.07	219	T	T	04 49 57.7	
	baz=66,slow=75						
H04S2	CROZET ISLANDS	60.07	219	T	T	04 49 58.5	
	baz=66,slow=75						
KURBB	Kurchatov Arra	61.22	342	P	P	03 45 01.9	-1.6
	comp=Z,2.3nm,0.8s,baz=153,slow=6.6,SNR=12						
	comp=Z,2.3nm,0.8s						
KURK	Kurchatov	61.27	342		P	03 45 03.2	-0.6
KURK				IAmb	IAmb	03 45 04.4	
	comp=Z,4.2nm,0.9s						
DZM	Mont Dzumac	61.72	111	LR	LR	04 12 14.0	
	comp=Z,29nm,19.8s,baz=197,slow=36						
ZAA0	Zalesovo Array	62.54	347		P	03 45 10.8	-1.5
ZAA0				IAmb	IAmb	03 45 12.9	
	comp=Z,6.9nm,0.8s						
ZALV	Zalesovo Beam	62.54	347	P	P	03 45 11.5	-0.8
	comp=Z,4.4nm,0.5s,baz=154,slow=4.8,SNR=24						
	comp=Z,4.4nm,0.5s						
BVAR	Borovoye Array	66.01	338	P	P	03 45 34.3	-0.7
	comp=Z,1.9nm,0.6s,baz=142,slow=9.3,SNR=10						
	comp=Z,1.9nm,0.6s						
MAW	Mawson	66.98	196	P	P	03 45 41.8	+0.7
	comp=Z,3.2nm,0.9s,baz=23,slow=7.7,SNR=4.6						
	comp=Z,3.2nm,0.9s						
AB31	Akbulak array	67.75	330		P	03 45 46.2	0.0
ABKAR	Akbulak array	67.75	330		P	03 45 45.7	-0.5
GURO	Guroymak-BITLI	73.08	313		P	03 46 20.6	+1.4
GURO				IAmb	IAmb	03 46 21.4	
	comp=Z,4.3nm,0.9s						
ARTI	Arti	73.20	335		P	03 46 18.7	-0.6
KBZ	Khabaz	74.60	319	P	P	03 46 27.9	+0.2
	comp=Z,2.9nm,0.8s,baz=123,slow=7.0,SNR=7.6						
	comp=Z,2.9nm,0.8s						
KOPT	Kop Dagi	74.75	314	P	P	03 46 28.8	-0.3
KOPT				IAmb	IAmb	03 46 45.9	
	comp=Z,3.8nm,0.9s						
BR131	Keskin Array S	79.60	312	P	P	03 46 56.1	-0.1
BR131				IAmb	IAmb	03 47 10.3	
	comp=Z,3.6nm,0.8s						
BRTR	Keskin Array B	79.60	312	P	P	03 46 56.3	+0.1
	comp=Z,2.1nm,1.0s,baz=122,slow=5.2,SNR=9.5						
	comp=Z,2.1nm,1.0s						
BRTR	Keskin Array B	79.60	312	P	P	03 46 55.6	-0.5
QSPA	South Pole Qui	83.37	180	P	P	03 47 17.4	+1.9
	comp=Z,3.2nm,1.1s,baz=279,slow=5.4,SNR=5.3						
	comp=Z,3.2nm,1.1s						
QSPA	South Pole Qui	83.37	180	P	P	03 47 17.1	+1.6
QSPA				IAmb	IAmb	03 47 22.3	
	comp=Z,4.8nm,1.2s						
BUR08	Bucovina Ar. S	87.57	318		P	03 47 37.1	+0.4
BUR08				IAmb	IAmb	03 47 53.5	
	comp=Z,4.4nm,0.8s						
FINES	FINESS Array B	90.19	332	P	P	03 47 48.3	-0.2
	comp=Z,4.4nm,1.0s,baz=108,slow=6.2,SNR=3.7						
	comp=Z,4.4nm,1.0s						
FINES	FINESS Array B	90.19	332	P	P	03 47 49.1	+0.6
BDFB	Brasilia	144.79	231	PKP	PKPdf	03 54 27.1	+0.7
	comp=Z,1.7nm,0.4s,baz=80,slow=2.1,SNR=4.8						
BDFB	Brasilia	144.79	231		PKPdf	03 54 26.8	+0.4
TXAR	Lajitas Array	145.26	46	PKPbc	PKPdf	03 54 27.6	+0.8
	comp=Z,2.3nm,0.7s,baz=276,slow=0.9,SNR=42						
TXAR	Lajitas Array	145.26	46		PKPdf	03 54 27.2	+0.3
TKL	Tuckaleechee C	150.16	13	PKPbc	PKiKP	03 54 39.5	-1.1
	comp=Z,6.8nm,1.0s,baz=0.0,slow=0.0,SNR=4.5						
TKL	Tuckaleechee C	150.16	13		PKiKP	03 54 39.7	-0.9

PRU 13 03:43:09.8, 50°.21N×19°.07E, h0km
IPEC 13 03:43:09.3±0.1, 50°.14N×19°.10E, h1km, ML2.4/4, Error ellipse: s-maj=1.4km s-min=0.8km az=12.0, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.46	80	*e*Pg	Pg	03 43 18.0	-0.1
OJC				*e*Sg	Sg	03 43 24.3	+0.3
OKC	Ostrava-Krasne	0.68	244	*e*PG	Pg	03 43 22.3	-0.1
OKC				*e*SG	Sb	03 43 33.0	-1.0
	comp=Z,34nm,0.4s						
STEB	Steborice	0.88	257	*e*PG	Pb	03 43 27.0	-0.3
STEB				*e*SG	Sb	03 43 39.2	-0.4
LANS	Liptovska Anna	1.02	166	*e*PG	Pg	03 43 28.6	-0.2
LANS				*e*SG	Sg	03 43 42.4	+0.4
LANS				*e*LG	Lg	03 43 44.7	
NIE	Niedzica	1.06	132	*e*Pg	Pg	03 43 29.1	-0.5
NIE				*e*Sg	Sg	03 43 44.0	+0.6
MORC	Moravsky Berou	1.07	251	*e*Pg	Pg	03 43 29.9	+0.1
	baz=70						
MORC				*e*Sg	Sg	03 43 42.8	-0.8
	59nm,0.5s,baz=70						
ANAC	Anensky vrch	1.11	267	*e*Pg	Pg	03 43 30.8	+0.3
	baz=86						
LOSC	Losov	1.23	246	*e*Pg	Pg	03 43 33.0	+0.1
	baz=64						
KRLC	Kraliky	1.49	268	*e*PG	Pn	03 43 36.3	-1.0
KRLC				*e*SG	Sg	03 43 56.4	-0.8
	comp=Z,15nm,0.3s						
KRLC	Kraliky	1.49	268	*e*	Pn	03 43 36.3	-1.0
STHS	Stebnicka Huta	1.57	117	*e*PG	Pn	03 43 37.9	-0.4
STHS				*e*SG	Sg	03 44 00.5	+0.9
STHS				*e*LG	Lg	03 44 05.7	
JAVC	Velka Javorina	1.58	217	*e*Pn	Pn	03 43 38.8	+0.2
	baz=35						
DPC	Dobruska-Polom	1.79	278	*e*PG	Pn	03 43 41.5	+0.1
DPC				*e*SG	Sb	03 44 05.7	-0.3
	comp=Z,16nm,0.4s						
DPC	Dobruska-Polom	1.79	278	*e*	Pn	03 43 41.5	+0.1
VRAC	Vranov	1.83	244	*e*Pn	Pn	03 43 41.8	0.0
	baz=62						
VRAC				*e*Sg	Sb	03 44 06.4	-0.5
	36nm,0.9s,baz=62						
OSTC	Ostas	1.89	284	*e*PG	Pb	03 43 44.2	-0.4
OSTC				*e*SG	Sn	03 44 07.8	+0.5
KSP	Ksiaz	1.92	293	*e*Pg	Pg	03 43 47.8	+1.7
KSP				*e*Sg	Sg	03 44 12.2	+1.1
CHVC	Chvalec	2.00	284	*e*PG	Pn	03 43 44.2	0.0
UPC	Upice	2.01	282	*e*PG	Pb	03 43 46.5	-0.2
KRUC	Moravsky	2.06	239	*e*Pn	Pn	03 43 45.0	-0.1
	baz=57						
KRUC				*e*Sg	Sb	03 44 13.9	+0.2
	18nm,0.6s,baz=57						
MODS	Modra-Piesok	2.13	215	*e*PN	Pn	03 43 46.5	+0.4
MODS				*e*SN	Sn	03 44 13.3	+0.1
PRU	Pruhonice	2.94	269	*e*SG	Sb	03 44 41.0	+2.1
ZVC	Zvikov	3.25	259	*e*PG	Pb	03 44 08.8	+1.0
CKRC	Cesky Krumlov	3.39	249	*e*SG	Sg	03 44 56.5	-1.7
KHC	Kasperske Hory	3.73	256	*e*PG	Pb	03 44 16.6	+0.7
KHC				*e*SG	Sg	03 45 08.2	-0.8

IDC 13 04:18:11.9±5.9, 38°.18N×139°.39E, h139km±85km, mb3.5/6, mbtmp3.9/6, Error ellipse: s-maj=108.6km s-min=53.6km az=7.0
JMA 13 04:18:11.6±0.1, 37°.9N±0°.5×139°.6E±0°.7, h153km±1km, MV2.8/35, NE NIIGATA PREF

ISC 13 04:18:11.6±0.9, 37°.95N±0°.06×139°.57E±0°.07, h154km±6km, n23, σ0§46/31, mb3.7/6, Eastern Honshu

| Code | Station Name | Δ° | AZ° | Phase ID | | Time |

44nm,0.5s,baz=340,slow=17,SNR=6.1
BATI S **Sn** **04 21 51.2 +2.3**
29nm,0.3s,baz=202,slow=23,SNR=5.9
MTN Manton Dam 5.58 155 Pn **Pn** **04 20 49.8 +4.1**
KNRA Kununurra 7.87 180 Pn **Pn** **04 21 19.3 +2.9**
FITZ Fitzroy Crossi 10.71 196 P **Pn** **04 21 56.2 +2.1**
0.6nm,0.3s,baz=38,slow=10,SNR=14
FITZ S **Sn** **04 23 50.2 -2.4**
1.9nm,0.3s,baz=146,slow=22,SNR=7.6
WB0 Warramunga Arr 13.14 156 Pn **P** **04 22 28.8 -1.5**
WRA Warramunga Arr 13.28 156 P **P** **04 22 31.1 -0.7**
0.5nm,0.6s,baz=338,slow=14,SNR=5.1
WRA S **Sn** **04 24 51.9 -2.6**
0.8nm,0.4s,baz=339,slow=21,SNR=9.5
WRA Warramunga Arr 13.28 156 Pn **P** **04 22 30.1 -1.7**
WR8 Warramunga Arr 13.36 156 Pn **Pn** **04 22 30.3 +1.9**
COEN Coen 15.46 115 P **P** **04 22 57.4 +1.3**
ASAR Alice Springs 16.58 163 P **Pn** **04 23 12.7 +4.2**
0.4nm,0.5s,baz=341,slow=11,SNR=5.9
ASAR S **S** **04 26 11.8 -1.1**
0.1nm,0.3s,baz=196,slow=34,SNR=1.3
ASAR Alice Springs 16.58 163 P **Pn** **04 23 09.2 +0.7**
GIRL Giralia 20.34 222 P **P** **04 23 47.8 -1.5**
MORW Morawa 24.34 208 P **P** **04 24 28.4 -0.2**
MORW IAmb IAmb 04 24 37.1
comp=Z,19nm,1.4s
MJB9 Matsu-Tunnel 44.96 11 P **P** **04 27 23.9 -0.9**
MJB9 IAmb IAmb 04 27 29.4
comp=Z,10nm,1.2s
TARA Tarawa 44.99 80 P **P** **04 27 26.0 +0.5**
MKAR Makanchi Array 68.17 328 P **P** **04 30 07.4 -1.3**
comp=Z,0.5nm,0.4s,baz=129,slow=7.7,SNR=6.2
comp=Z,0.5nm,0.4s
MKAR Makanchi Array 68.17 328 P **P** **04 30 07.0 -1.6**
MAKZ Makanchi 68.35 327 P **P** **04 30 09.3 -0.5**
MAKZ IAmb IAmb 04 30 24.9
comp=Z,4.0nm,0.9s
ZAA0 Zalesovo Array 71.71 334 P **P** **04 30 28.8 -1.2**
KURBB Kurchatov Arra 72.50 329 P **P** **04 30 34.0 -0.9**
comp=Z,0.7nm,0.5s,baz=131,slow=5.0,SNR=11
comp=Z,0.7nm,0.5s
KURK Kurchatov 72.51 329 P **P** **04 30 33.8 -1.1**

*SKHL **13** 04:24:16.3±0.4, 42.°40N×131.°00E, h595km±7km, mb4.4/1, msh3.8/2*
*JMA **13** 04:24:20.9±0.4, 42.°N±2.°×13.°2E±.°, h630km, MV4.1/43, NEAR VLADIVOSTOK*
*IDC **13** 04:24:23.0±0.9, 42.°16N×131.°45E, h549km±11km, mb3.1/17, mbtmp4.2/24, Error ellipse: s-maj=14.1km s-min=11.4km az=32.0*
*MOS **13** 04:24:22.0±0.9, 42.°21N×131.°67E, h560km, mb4.1/11, Error ellipse: s-maj=11.1km s-min=7.9km az=120.1*
*NEIC **13** 04:24:23.1±1.5, 42.°17N±0.°10×131.°5E±0.°1, h546km±9km, mb4.5/33, Error ellipse: s-maj=16.3km s-min=13.1km az=118.0*
ISC 13 04:24:22.5±0.4, 42.°17N±0.°06×131.°70E±0.°05, h550km, n159, σ1s33/169, mb4.1/42, 12C-7D,
Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSTR	**Posyet**	**0.82**	**306**	*c*	*i*P	**P**	**04 25 28.6**	**+0.4**
PSTR	**Posyet**	**0.82**	**306**		*e*P	**P**	**04 25 26.4**	**-1.8**
PSTR					AMB	AMB	04 25 29.0	
30nm,0.3s								
GRTR	**Gornotajezhnoj**	**1.57**	**12**		*e*P	**P**	**04 25 29.1**	**-1.1**
GRTR					AMB	AMB	04 25 31.2	
30nm,0.5s								
GRTR					AMB	AMB	04 25 32.7	
110nm,2.0s								
GRTR					*e*S	**S**	**04 26 26.2**	**+0.4**
GRTR					A	A	04 26 26.3	
20nm,1.1s								
GRTR					A	A	04 26 29.1	
130nm,2.4s								
GRTR					A	A	04 26 29.1	
140nm,2.4s								
USRK	**Ussuriysk Ar.**	**2.04**	**6**		P	**P**	**04 25 32.7**	**+0.6**
49nm,0.5s,baz=182,slow=3.0,SNR=95								
TEY	**Ternei**	**4.57**	**50**	⇑	*e*P	**P**	**04 25 50.0**	**+1.5**
TEY					pmax	pmax		
comp=N,40nm,0.6s								
TEY					pmax	pmax		
comp=E,30nm,0.6s								
TEY					pmax	pmax		
comp=Z,90nm,0.6s								
TEY	**Ternei**	**4.57**	**50**		*e*P	**P**	**04 25 48.6**	**+0.1**
TEY					AMB	AMB	04 25 50.5	
comp=Z,50nm,0.6s								
TEY					AMB	AMB	04 25 50.6	
comp=Z,290nm,4.0s								
TEY					*e*S	**S**	**04 27 00.3**	**+1.3**
TEY					A	A	04 27 00.6	
comp=Z,290nm,4.0s								
TEY					A	A	04 27 00.6	
comp=Z,270nm,4.0s								
TEY					A	A	04 27 00.9	
comp=Z,10.0nm,1.2s								
BNX	**BinXian**	**4.73**	**320**	⇑	P	**P**	**04 25 49.6**	**-0.2**
BNX					S	**S**	**04 26 58.8**	**-2.6**
BNX					pmax	pmax		
comp=Z,95nm,0.5s								
BNX					pmax	pmax		
comp=Z,290nm,5.1s								
KS19	**Wonju Array Si**	**5.52**	**214**		P	**P**	**04 25 58.1**	**+1.2**
KSRS	**Korea Array**	**5.54**	**213**		P	**P**	**04 25 57.9**	**+1.0**
comp=Z,38nm,0.6s,baz=23,slow=8.1,SNR=7.2								
KSRS	**Korea Array**	**5.54**	**213**		*e*P	**P**	**04 25 58.2**	**+1.2**
KSRS					pmax	pmax		
comp=Z,49nm,0.6s								
JOSM	**Okushiri--Mats**	**5.78**	**88**		*e*P	**P**	**04 26 00.8**	**+1.8**
JHG	**Hegura jima**	**5.89**	**135**		*e*P	**P**	**04 26 02.0**	**+1.9**
JSH	**Shimam**	**6.19**	**83**		*e*P	**P**	**04 26 04.1**	**+1.4**
JIW	**Iwasaki**	**6.44**	**101**		*e*P	**P**	**04 26 05.8**	**+0.6**
JSD	**Sado**	**6.50**	**127**		P	**P**	**04 26 06.5**	**+0.8**
JSD	**Sado**	**6.50**	**127**		*e*P	**P**	**04 26 06.3**	**+0.5**
TJN	**Taejon**	**6.69**	**212**			**P**	**04 26 08.5**	**+1.0**
TJN	**Taejon**	**6.69**	**212**	*c*	*e*P	**P**	**04 26 08.3**	**+0.7**
JKSM	**Kasumi**	**6.97**	**160**		*e*P	**P**	**04 26 11.2**	**+1.1**
JOT	**Ohata**	**7.03**	**93**		*e*P	**P**	**04 26 11.4**	**+0.8**
JTM	**Tenmabayashi**	**7.17**	**98**		P	**P**	**04 26 13.3**	**+1.4**
JHS	**Saijyo**	**7.25**	**171**		*e*P	**P**	**04 26 14.5**	**+1.6**
JRG	**Rokugo**	**7.32**	**109**		*e*P	**P**	**04 26 13.7**	**+0.2**
JRG					*e*S	**S**	**04 27 44.4**	**-0.1**
JWT	**Wachi**	**7.46**	**156**		P	**P**	**04 26 16.4**	**+1.5**
MJB9	**Matsu-Tunnel**	**7.54**	**136**		P	**P**	**04 26 17.3**	**+1.5**
MAJO	**Matsushiro**	**7.55**	**136**			**P**	**04 26 16.6**	**+0.8**
MAJO	**Matsushiro**	**7.55**	**136**			**P**	**04 26 16.7**	**+0.9**
MAJO	**Matsushiro**	**7.55**	**136**	*c*	*i*P	**P**	**04 26 16.2**	**+0.4**
MAJO					pmax	pmax		
comp=Z,29nm,0.9s								
MJAR	**Matsushiro Arr**	**7.55**	**136**		P	**P**	**04 26 16.6**	**+0.7**
comp=Z,26nm,0.8s,baz=322,slow=10,SNR=37								
MJAR	**Matsushiro Arr**	**7.55**	**136**			**P**	**04 26 17.1**	**+1.3**
MJAR	**Matsushiro Arr**	**7.55**	**136**		P	**P**	**04 26 17.1**	**+1.3**
MJA0	**Matsu Arr-Jizo**	**7.57**	**136**		*e*P	**P**	**04 26 16.7**	**+0.7**
MJA0					pmax	pmax		
comp=Z,25nm,0.8s								
JTU	**Tsushima**	**7.85**	**194**		P	**P**	**04 26 19.6**	**+0.9**
JTU	**Tsushima**	**7.85**	**194**		*e*P	**P**	**04 26 20.0**	**+1.3**
JGF	**Kuroka**	**7.90**	**144**			**P**	**04 26 20.6**	**+1.2**
JGF	**Kuroka**	**7.90**	**144**		P	**P**	**04 26 20.5**	**+1.2**
JMK	**Ichinoseki**	**7.92**	**111**		*e*P	**P**	**04 26 19.0**	**-0.4**
JMK					*e*S	**S**	**04 27 51.9**	**-3.4**
INU	**Inuyama**	**7.97**	**147**		P	**P**	**04 26 21.2**	**+1.2**
JWK2	**Keihoku**	**8.02**	**63**		*e*P	**P**	**04 26 22.1**	**+1.9**
JMM	**Marumori**	**8.19**	**119**		P	**P**	**04 26 21.7**	**-0.3**
JMM	**Marumori**	**8.19**	**119**		P	**P**	**04 26 21.5**	**-0.6**
JMM	**Marumori**	**8.19**	**119**		*e*P	**P**	**04 26 21.3**	**-0.8**
JMM					*e*S	**S**	**04 27 57.1**	**-3.1**
ASAJ	**Asahikawa**	**8.20**	**73**		P	**P**	**04 26 23.2**	**+1.2**
comp=Z,11nm,0.4s,baz=279,slow=7.7,SNR=7.0								
ASAJ					S	**S**	**04 27 58.9**	**-1.3**
comp=Z,20nm,1.0s,baz=285,slow=19,SNR=3.1								
ASAJ	**Asahikawa**	**8.20**	**73**		P	**P**	**04 26 23.0**	**+1.0**
JKA	**Kamikawa-asahi**	**8.20**	**73**		P	**P**	**04 26 23.0**	**+0.9**
JRY	**Ryogami san**	**8.31**	**135**		*e*P	**P**	**04 26 23.8**	**+0.4**
ERM	**Erimo**	**8.52**	**87**		P	**P**	**04 26 26.3**	**+1.1**
ERM	**Erimo**	**8.52**	**87**		P	**P**	**04 26 26.3**	**+1.1**
ERM	**Erimo**	**8.52**	**87**		P	**P**	**04 26 26.3**	**+1.1**
JEM	**Erimo**	**8.52**	**87**		P	**P**	**04 26 26.1**	**+0.9**
JMN	**Monobe**	**8.60**	**168**			**P**	**04 26 27.6**	**+1.3**
JMN	**Monobe**	**8.60**	**168**		P	**P**	**04 26 27.6**	**+1.3**
HEH	**HeiHe**	**8.61**	**341**		*e*P	**P**	**04 26 25.9**	**-0.1**
HEH					pmax	pmax		
comp=Z,24nm,0.6s								
JCH	**Churui**	**8.64**	**83**		*e*S	**S**	**04 28 02.9**	**-5.4**
JIE	**Ise**	**8.70**	**152**		*e*P	**P**	**04 26 28.3**	**+1.0**
JOD2	**Odawara 2**	**8.99**	**138**		*e*P	**P**	**04 26 29.9**	**-0.2**
YSS	**Yuzhno-Sakhali**	**9.22**	**55**		P	**P**	**04 26 33.5**	**+1.3**
YSS	**Yuzhno-Sakhali**	**9.22**	**55**		*e*P	**P**	**04 26 33.5**	**+1.3**
YSS					pmax	pmax		
comp=Z,30nm,1.1s								
NMR	**Nemuro--Hokkai**	**10.38**	**79**		*e*P	**P**	**04 26 44.4**	**+0.2**
NEM2	**Nemuro 2**	**10.39**	**79**		*e*S	**S**	**04 28 36.5**	**-4.4**
BSO1	**Boso 1**	**10.45**	**133**		*e*P	**P**	**04 26 43.9**	**-0.5**
BSO1					*e*S	**S**	**04 28 39.0**	**-2.2**
YUK	**Yuzh-Kuril'sk**	**10.52**	**75**	*c*	*e*P	**P**	**04 26 45.1**	**-0.5**
HIA	**Hailar**	**10.96**	**314**		P	**P**	**04 26 49.5**	**-0.5**
HIA	**Hailar**	**10.96**	**314**		P	**P**	**04 26 49.5**	**-0.5**
HILR	**Hailar Array B**	**11.13**	**316**		P	**P**	**04 26 50.9**	**-0.8**
comp=Z,7.8nm,0.3s,baz=117,slow=11,SNR=22								
TYV	**Tymovskoe**	**11.50**	**37**		*e*P	P	04 27 09.5	+14
TYV					pmax	pmax		
comp=Z,43nm,1.4s								
TYV					pmax	pmax		
comp=Z,200nm,2.9s								
XLT	**XiLinHaoTe**	**11.57**	**284**		*e*P	**P**	**04 26 55.4**	**-1.1**
XLT					pmax	pmax		
comp=Z,30nm,0.7s								
JOW	**Kunigami**	**15.56**	**191**		P	**P**	**04 27 37.5**	**-0.2**
comp=Z,7.6nm,0.6s,baz=104,slow=17,SNR=2.1								
JOW	**Kunigami**	**15.56**	**191**		P	**P**	**04 27 37.7**	**-0.1**
ULN	**Ulaanbaatar**	**18.30**	**297**			**P**	**04 28 03.5**	**+0.5**
ULN					IAmb	IAmb	04 28 04.5	
comp=Z,23nm,1.2s								
ULN	**Ulaanbaatar**	**18.30**	**297**	*c*	*e*P	**P**	**04 28 03.7**	**+0.7**
ULN					pmax	pmax		
comp=Z,21nm,1.3s								
SONM	**Songino Array**	**18.73**	**296**		P	**P**	**04 28 07.7**	**+0.7**
comp=Z,2.7nm,0.3s,baz=90,slow=10,SNR=19								
SONM	**Songino Array**	**18.73**	**296**		P	**P**	**04 28 07.3**	**+0.4**
SKR	**Severo-Kuril's**	**18.79**	**55**	‖	*e*P	**P**	**04 28 06.4**	**-0.8**
TPUB	**Ta-pu**	**20.96**	**210**		P	**P**	**04 28 26.2**	**-1.1**
TWG	**Pinlang**	**21.24**	**208**		P	**P**	**04 28 30.1**	**+0.2**
ENH	**Enshi**	**21.43**	**244**		P	**P**	**04 28 30.9**	**-0.7**
DGZ	**Jazzator, Alta**	**31.32**	**299**	‖	*e*P	**P**	**04 29 58.7**	**+0.6**
DGZ					pmax	pmax		
comp=Z,4.0nm,0.8s								
ZALV	**Zalesovo Beam**	**32.88**	**307**		P	**P**	**04 30 10.1**	**-1.0**
comp=Z,1.2nm,0.3s,baz=98,slow=11,SNR=6.8								
comp=Z,1.2nm,0.3s								
ZALV	**Zalesovo Beam**	**32.88**	**307**		P	**P**	**04 30 10.7**	**-0.4**
ZALV	**Zalesovo Beam**	**32.88**	**307**		*e*P	**P**	**04 30 10.5**	**-0.6**
ZALV					pmax	pmax		
comp=Z,1.0nm,0.3s								
MKAR	**Makanchi Array**	**35.09**	**295**		P	**P**	**04 30 29.2**	**-0.6**
comp=Z,1.6nm,0.7s,baz=83,slow=11,SNR=8.4								
comp=Z,1.6nm,0.7s								
MKAR	**Makanchi Array**	**35.09**	**295**		P	**P**	**04 30 29.5**	**-0.2**
MKAR	**Makanchi Array**	**35.09**	**295**		P	**P**	**04 30 29.5**	**-0.2**
NRIK	**Noril'sk**	**35.45**	**335**	⇑	*e*P	**P**	**04 30 31.6**	**-0.8**
NRIK					pmax	pmax		
comp=Z,3.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**36.50**	**240**		*e*P	**P**	**04 30 43.5**	**+1.7**
CMAR					pmax	pmax		
comp=Z,3.0nm,0.3s								
KURK	**Kurchatov**	**36.85**	**302**			**P**	**04 30 43.7**	**-0.6**
KURK					IAmb	IAmb	04 30 44.3	
comp=Z,11nm,1.1s								
KURK	**Kurchatov**	**36.85**	**302**	*d*	*e*P	**P**	**04 30 43.3**	**-0.9**
KURK					pmax	pmax		
comp=Z,8.0nm,1.3s								
KURBB	**Kurchatov Arra**	**36.92**	**302**		P	**P**	**04 30 44.1**	**-0.7**
comp=Z,4.0nm,0.5s,baz=82,slow=8.3,SNR=28								
comp=Z,4.0nm,0.5s								
TARG	**Taragay, Kyrgy**	**39.52**	**288**		P	**P**	**04 31 06.7**	**+0.2**
TARG	**Taragay, Kyrgy**	**39.52**	**288**		P	**P**	**04 31 06.7**	**+0.2**
TARG					pmax	pmax		
comp=Z,3.0nm,0.8s								
KDJ	**Kajisay**	**39.83**	**289**		P	**P**	**04 31 07.3**	**-1.4**
KDJ					IAmb	IAmb	04 31 13.5	
comp=Z,13nm,1.1s								
KDJ	**Kajisay**	**39.83**	**289**		P	**P**	**04 31 07.3**	**-1.4**
KDJ					pmax	pmax		
comp=Z,13nm,1.1s								
BOOM	**Boomskoye usch**	**40.58**	**290**		P	**P**	**04 31 14.5**	**-0.2**
BOOM					IAmb	IAmb	04 31 50.0	
comp=Z,10nm,1.1s								
BOOM	**Boomskoye usch**	**40.58**	**290**		P	**P**	**04 31 14.5**	**-0.2**
BOOM					pmax	pmax		
comp=Z,10.0nm,1.1s								
BVAR	**Borovoye Array**	**41.53**	**307**		P	**P**	**04 31 21.3**	**-0.5**
comp=Z,3.2nm,0.5s,baz=85,slow=9.4,SNR=12								
comp=Z,3.2nm,0.5s								
BORK	**Borovoye**	**41.57**	**307**	‖	*e*P	**P**	**04 31 21.6**	**-0.5**
BORK					pmax	pmax		
comp=Z,23nm,4.9s								
M13K	**Dall Lake**	**42.53**	**42**		P	**P**	**04 31 30.6**	**+1.1**
F17K	**Baldwin Pennin**	**43.20**	**33**		P	**P**	**04 31 36.7**	**+2.0**
F17K					IAmb	IAmb	04 32 04.7	
comp=Z,13nm,1.2s								
SBUM	**Sibu**	**43.23**	**209**		P	**P**	**04 31 36.2**	**+0.6**
SBUM					IAmb	IAmb	04 31 38.1	
comp=Z,7.6nm,0.8s								
K15K	**Wolf Creek Mou**	**43.25**	**39**		P	**P**	**04 31 37.2**	**+2.0**
K15K					IAmb	IAmb	04 31 56.5	
comp=Z,18nm,1.4s								
C18K	**Utukok River**	**43.25**	**29**		P	**P**	**04 31 37.2**	**+2.0**
C18K					IAmb	IAmb	04 32 00.4	
comp=Z,41nm,1.5s								
C19K	**Lookout Ridge**	**43.85**	**29**		P	**P**	**04 31 41.8**	**+2.1**
C19K					IAmb	IAmb	04 32 17.6	
comp=Z,29nm,1.3s								
N15K	**Kwethluk River**	**44.17**	**42**		P	**P**	**04 31 44.3**	**+2.0**
N15K					IAmb	IAmb	04 31 58.9	
comp=Z,26nm,1.4s								
G18K	**Tagagawik**	**44.27**	**33**		P	**P**	**04 31 45.1**	**+2.1**
L16K	**Owhat River**	**44.27**	**40**		P	**P**	**04 31 45.4**	**+2.3**
L16K					IAmb	IAmb	04 32 24.2	
comp=Z,23nm,1.4s								
D19K	**Kuna River**	**44.38**	**30**		P	**P**	**04 31 45.7**	**+1.8**
D19K					IAmb	IAmb	04 31 46.6	
comp=Z,7.4nm,0.8s								
O15K	**Ungalikthiuk R**	**44.45**	**43**		P	**P**	**04 31 45.7**	**+1.2**
F19K	**Shaleruckik Mo**	**44.57**	**32**		P	**P**	**04 31 46.6**	**+1.4**
K17K	**Iditarod**	**44.70**	**38**		P	**P**	**04 31 48.6**	**+2.3**
K17K					IAmb	IAmb	04 32 26.5	
comp=Z,19nm,1.2s								
B20K	**Meade River**	**44.71**	**28**		P	**P**	**04 31 48.3**	**+2.0**
E19K	**Redstone River**	**44.75**	**31**		P	**P**	**04 31 48.8**	**+2.1**
E19K					IAmb	IAmb	04 32 13.7	
comp=Z,12nm,1.4s								
G19K	**Purcell Mounta**	**44.89**	**33**		P	**P**	**04 31 49.4**	**+1.6**
G19K					IAmb	IAmb	04 32 05.1	
comp=Z,17nm,1.5s								
D20K	**Etivluk River**	**44.93**	**29**		P	**P**	**04 31 49.5**	**+1.4**
D20K					IAmb	IAmb	04 32 06.6	
comp=Z,21nm,1.4s								
F20K	**Avaraart Lake**	**45.36**	**32**		P	**P**	**04 31 53.2**	**+1.9**
E22K	**Anaktuvuk Pass**	**46.74**	**30**		P	**P**	**04 32 04.5**	**+2.6**
E22K					IAmb	IAmb	04 32 05.1	
comp=Z,10nm,0.6s								
ARTI	**Arti**	**47.58**	**314**			**P**	**04 32 07.9**	**-0.4**
ARTI	**Arti**	**47.58**	**314**	*d*	*i*P	**P**	**04 32 07.7**	**-0.6**
ARTI					*PP	**pP**	**04 33 47.0**	**-2.4**
ARTI							04 34 04.1	
ARTI					S	**S**	**04 38 23.6**	**+0.6**
ARTI					SS	**SS**	**04 41 58.8**	**-1.0**
ARTI					pmax	pmax		
comp=Z,14nm,1.0s								
COLA	**College**	**48.89**	**34**	⇑	*e*P	**P**	**04 32 19.7**	**+1.9**
COLA					pmax	pmax		
comp=Z,5.0nm,0.9s								
IL31		**49.31**	**34**		P	**P**	**04 32 22.5**	**+1.6**
ILAR	**Eielson Array**	**49.31**	**34**		P	**P**	**04 32 22.6**	**+1.5**
comp=Z,1.2nm,0.6s,baz=292,slow=9.0,SNR=18								
comp=Z,1.2nm,0.6s								
ILAR	**Eielson Array**	**49.31**	**34**		*e*P	**P**	**04 32 23.7**	**+2.7**
ILAR					pmax	pmax		
comp=Z,2.0nm,0.6s								
KIRV	**Kirov**	**51.54**	**318**	‖	*e*P	**P**	**04 32 36.6**	**-0.6**
I30M	**Mount Dempster**	**53.41**	**32**		P	**P**	**04 32 53.0**	**+2.2**
BELG	**Belogornoye**	**54.86**	**312**	*c*	*e*P	**P**	**04 33 00.4**	**-0.5**
BELG					pmax	pmax		
comp=Z,3.0nm,1.2s								
ARCES	**ARCESS Array B**	**56.41**	**336**		P	**P**	**04 33 11.3**	**-0.1**
comp=Z,5.0nm,1.0s,baz=58,slow=7.8,SNR=9.8								
comp=Z,5.0nm,1.0s								
ARCES	**ARCESS Array B**	**56.41**	**336**		P	**P**	**04 33 11.7**	**+0.3**
ARCES	**ARCESS Array B**	**56.41**	**336**		*e*P	**P**	**04 33 11.5**	**0.0**
ARCES					pmax	pmax		
comp=Z,5.0nm,1.0s								
OBN	**Obninsk**	**59.39**	**318**	‖	*e*P	**P**	**04 33 31.6**	**-0.2**
OBN					pmax	pmax		
comp=Z,9.0nm,0.5s								
PUL	**Pulkovo**	**59.82**	**325**	⇑	*e*P	**P**	**04 33 34.6**	**0.0**
PUL					pmax	pmax		
comp=Z,43nm,0.7s								
FINES	**FINESS Array B**	**60.63**	**328**		P	**P**	**04 33 39.5**	**-0.5**
comp=Z,3.5nm,0.6s,baz=53,slow=9.8,SNR=32								
comp=Z,3.5nm,0.6s								
FINES	**FINESS Array B**	**60.63**	**328**		P	**P**	**04 33 39.6**	**-0.3**
FINES	**FINESS Array B**	**60.63**	**328**		*e*P	**P**	**04 33 38.5**	**-1.4**
FINES					pmax	pmax		
comp=Z,3.0nm,0.6s								
WRAB	**Tennant Creek**	**61.84**	**177**	⇑	*e*P	**P**	**04 33 46.2**	**-2.2**
WRAB					pmax	pmax		
comp=Z,3.0nm,0.8s								
WRA	**Warramunga Arr**	**61.85**	**177**		P	**P**	**04 33 48.5**	**+0.1**
comp=Z,0.5nm,0.5s,baz=352,slow=6.9,SNR=6.9								
comp=Z,0.5nm,0.5s								
WRA	**Warramunga Arr**	**61.85**	**177**		*e*P	**P**	**04 33 47.8**	**-0.6**
WRA					pmax	pmax		
comp=Z,1.0nm,0.5s								
YKA	**Yellowknife Ar**	**63.02**	**28**		P	**P**	**04 33 57.1**	**+1.6**
comp=Z,0.7nm,0.6s,baz=314,slow=8.7,SNR=1.8								
comp=Z,0.7nm,0.6s								
YKA	**Yellowknife Ar**	**63.02**	**28**		P	**P**	**04 33 56.0**	**+0.6**
YKA	**Yellowknife Ar**	**63.02**	**28**		P	**P**	**04 33 56.0**	**+0.6**
ASAR	**Alice Springs**	**65.54**	**178**		P	**P**	**04 34 12.5**	**+0.6**
comp=Z,0.2nm,0.3s,baz=354,slow=8.9,SNR=1.7								
comp=Z,0.2nm,0.3s								
ASAR	**Alice Springs**	**65.54**	**178**		P	**P**	**04 34 12.3**	**+0.4**
ASAR	**Alice Springs**	**65.54**	**178**		P	**P**	**04 34 12.3**	**+0.4**
AKASG	**Malin Array Be**	**65.54**	**317**		P	**P**	**04 34 10.9**	**-0.7**
comp=Z,0.6nm,0.4s,baz=52,slow=6.5,SNR=5.0								
comp=Z,0.6nm,0.4s								
AKASG	**Malin Array Be**	**65.54**	**317**		P	**P**	**04 34 11.2**	**-0.4**
HFS	**Hagfors**	**66.15**	**331**		P	**P**	**04 34 14.8**	**-0.4**
comp=Z,2.4nm,0.4s,baz=76,slow=6.3,SNR=24								
comp=Z,2.4nm,0.4s								
NB2	**NORSAR Subarra**	**66.38**	**333**		P	**P**	**04 34 16.1**	**-0.6**
comp=Z,0.7nm,0.5s,baz=43,slow=6.5								
NOA	**NORSAR Array B**	**66.38**	**333**		P	**P**	**04 34 16.3**	**-0.4**
comp=Z,0.6nm,0.5s,baz=25,slow=5.9,SNR=7.3								
comp=Z,0.6nm,0.5s								
NORES	**NORESS Array B**	**66.48**	**332**		P	**P**	**04 34 16.8**	**-0.5**
BRTR	**Keskin Array B**	**69.80**	**306**		P	**P**	**04 34 37.2**	**-0.7**
comp=Z,0.7nm,0.6s,baz=70,slow=3.6,SNR=3.8								
comp=Z,0.7nm,0.6s								
BRTR	**Keskin Array B**	**69.80**	**306**		P	**P**	**04 34 37.4**	**-0.5**
BRTR	**Keskin Array B**	**69.80**	**306**		*e*P	**P**	**04 34 37.6**	**-0.4**
BRTR					pmax	pmax		
comp=Z,1.0nm,0.5s								
CLL	**Collm**	**72.75**	**325**	*i*	P	**P**	**04 34 54.9**	**+0.1**
CLL	**Collm**	**72.75**	**325**	*i*	P	**P**	**04 34 54.9**	**+0.1**
EKA	**Eskdalemuir Ar**	**75.56**	**335**		P	**P**	**04 35 11.0**	**+0.4**
comp=Z,3.9nm,1.0s,baz=38,slow=6.3,SNR=4.2								
comp=Z,3.9nm,1.0s								
EKA	**Eskdalemuir Ar**	**75.56**	**335**		P	**P**	**04 35 11.0**	**+0.4**
NVAR	**Mina Array Bea**	**77.62**	**49**		P	**P**	**04 35 24.9**	**+2.3**
comp=Z,0.8nm,0.6s,baz=297,slow=5.4,SNR=8.3								
comp=Z,0.8nm,0.6s								
NVAR	**Mina Array Bea**	**77.62**	**49**		P	**P**	**04 35 23.7**	**+1.2**
PDAR	**Pinedale Array**	**79.09**	**41**		P	**P**	**04 35 32.1**	**+1.8**
comp=Z,0.3nm,0.7s,baz=107,slow=1.5,SNR=3.7								
comp=Z,0.3nm,0.7s								
PDAR	**Pinedale Array**	**79.09**	**41**		P	**P**	**04 35 31.6**	**+1.3**

*PNSN **13** 04:35:15.2, 47.°70N×121.°90W, h28km, MD2.6, Fault plane solution: NP1:ϕs70.00000°, δ40.00000°, λ70.00000°.*
*SEA **13** 04:35:15.2±2.5, 47.°70N±0.°02×121.°90W±0.°03, h28km±6km, ML2.6/26, ML2.6/52(NEIC), Error ellipse: s-maj=3.3km s-min=1.2km az=126.0*
*PGC **13** 04:35:15.2, 47.°70N×121.°90W, h28km, ML2.2/11, ML2.6(SEA), 33km east of Seattle, Washington, Usa Washington*
*NEIC **13** 04:35:15.1±2.0, 47.°71N±0.°02×121.°93W±0.°03, h29km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=122.0*
ISC 13 04:35:15.1±0.8, 47.°70N±0.°02×121.°93W±0.°02, h32km±4km,
n153, σ0s88/183, Washington

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res

PCFR	Pierce County	0.79	206			Pn	04 35 29.3	-0.6
RPW	Rockport	0.80	20			Pb	04 35 29.6	-0.9
OBSR	Observation Ro	0.81	174			Pn	04 35 29.9	-0.6
RCS	Mount Rainier-	0.84	171			Pn	04 35 30.4	-0.6
RCM	Mount Rainier-	0.88	171			Pn	04 35 31.0	-0.5
REMR	Mount Rainier-	0.89	176			Pn	04 35 30.9	-0.5
LON	Longmire	0.96	175			Pn	04 35 31.9	-0.4
LON					IAML		04 35 45.1	
	comp=E,220nm,0.5s							
LON					IAML		04 35 45.8	
	comp=N,179nm,0.1s							
LON	Longmire	0.96	175			Pn	04 35 31.9	-0.4
LON	Longmire	0.96	175	P		Pn	04 35 31.9	-0.4
LON				S		Sn	04 35 44.2	-0.6
LTY	Liberty	0.96	117			Pn	04 35 32.6	+0.1
LTY	Liberty	0.96	117	P		Pn	04 35 32.7	+0.3
LTY				S		Sn	04 35 45.5	+0.5
SMW	South Mountain	1.03	249			Pn	04 35 33.5	+0.2
TBM	Table Mountain	1.05	120			Pb	04 35 34.5	-0.2
MBW	Mount Baker	1.08	1			Pn	04 35 34.4	+0.2
ETW	Entiat	1.09	95			Pn	04 35 34.5	+0.4
CPW	Capitol Peak	1.10	229			Pn	04 35 34.3	+0.1
CPW	Capitol Peak	1.10	229	P		Pn	04 35 34.2	-0.1
UWFH	University of	1.11	320			Pn	04 35 34.3	-0.1
B04A	Port Angeles	1.12	289			Pn	04 35 33.8	-0.6
B04A	Port Angeles	1.12	289			Pn	04 35 34.0	-0.4
NLW	Nelson Butte	1.14	70			Pn	04 35 35.5	+0.6
A04D	Lummi Island	1.14	333			Pn	04 35 34.4	-0.4
MCW	Mount Constitu	1.15	329			Pn	04 35 34.9	0.0
SHUK	Shuksan-Mt. Ba	1.16	8			Pn	04 35 35.5	+0.3
VGZ	Gonzales	1.17	308			Pn	04 35 34.6	-0.6
VGZ	Gonzales	1.17	308	P		Pn	04 35 34.4	-0.8
RRHS	Rochester High	1.18	220			Pn	04 35 35.8	+0.6
OSD	Olympics--Snow	1.20	276	P		Pn	04 35 36.4	+0.6
EBG	Ellensburg	1.22	130			Pb	04 35 37.5	-0.2
E04D	Cinebar	1.23	201			Pn	04 35 36.5	+0.5
NAC	Naches	1.23	142			Pn	04 35 36.9	+0.9
STW	Striped Peak	1.25	292			Pn	04 35 36.3	0.0
STW	Striped Peak	1.25	292	P		Pn	04 35 36.1	-0.2
OLQ	Olympics--Lake	1.28	262			Pb	04 35 38.0	-0.6
B017	Montesano	1.31	238			Pn	04 35 38.1	+1.0
WTV	Waterville	1.34	90			Pb	04 35 39.0	-0.6
NLWA	Neilton Lookou	1.35	257			Pn	04 35 38.0	+0.3
SNB	Saturna Island	1.35	323			Pn	04 35 38.4	+0.7
SNB	Saturna Island	1.35	323	P		Pn	04 35 38.2	+0.5
SNB				S		Sn	04 35 55.6	+1.0
TDL	Tradedollar La	1.37	188			Pn	04 35 38.6	+0.6
WISH	Wishkah	1.38	245			Pn	04 35 39.0	+1.0
B011	North Saanich	1.39	314			Pn	04 35 38.1	0.0
B011	North Saanich	1.39	314	P		Pn	04 35 38.1	0.0
B011				S		Sn	04 35 55.5	+0.1
B009	North Saanich	1.39	313	P		Pn	04 35 38.1	0.0
B009				S		Sn	04 35 55.8	+0.4
B010	North Saanich	1.39	314	P		Pn	04 35 38.1	0.0
B010				S		Sn	04 35 55.4	0.0
PGC	Sidney	1.39	314			Pn	04 35 38.1	-0.1
PGC					IAML		04 35 56.3	
	comp=E,92nm,0.5s							
PGC	Sidney	1.39	314	P		Pn	04 35 38.0	-0.1
PGC				S		Sn	04 35 55.6	+0.3
B201	Coldwater, Mou	1.42	189			Pn	04 35 39.3	+0.6
ERK	Elk Rock	1.43	191			Pn	04 35 39.4	+0.7
JRO	Jston Ridge Ob	1.44	188			Pn	04 35 40.0	+0.9
B202	Windy Ridge, M	1.47	186			Pn	04 35 40.2	+0.8
SOSW	Source of Smit	1.47	186			Pn	04 35 40.4	+1.0
STD	Studebaker Rid	1.48	188			Pn	04 35 40.5	+1.0
ESD	East Dome	1.52	186			Pb	04 35 41.9	-0.7
SYMB	Survey Mountai	1.52	305			Pn	04 35 40.2	+0.2
SYMB	Survey Mountai	1.52	305	P		Pn	04 35 39.6	-0.4
SYMB				S		Sn	04 35 58.9	+0.2
YA2	Yakima	1.52	140			Pn	04 35 41.5	+1.5
SHW	Mount Saint He	1.53	188			Pn	04 35 41.5	+1.2
FL2	Flat Top 2	1.54	191			Pn	04 35 41.4	+1.1
SWF2	Southwest Flan	1.54	187			Pn	04 35 41.7	+1.3
HSR	South Ridge	1.54	186			Pb	04 35 42.7	-0.4
B203	Quarry, Mount	1.56	190			Pn	04 35 41.7	+1.1
JLK	June Lake	1.57	186			Pn	04 35 42.3	+1.6
ASR	Mount Adams--S	1.57	171			Pn	04 35 42.4	+1.6
B019	Raymond	1.58	229			Pn	04 35 41.0	+0.7
MXC	Moxie City	1.59	135			Pn	04 35 42.0	+1.0
MXC					IAML		04 36 04.9	
	comp=N,61nm,0.4s							
MXC					IAML		04 36 05.1	
	comp=E,68nm,0.6s							
CDFW	Cedar Flats	1.59	183			Pn	04 35 42.5	+1.5
E03A	Lebam	1.61	224	Pn		Pn	04 35 41.8	+0.6
E03A					IAML		04 36 06.9	
	comp=N,66nm,0.7s							
E03A					IAML		04 36 08.6	
	comp=E,71nm,0.6s							
E03A	Lebam	1.61	224	S		Sn	04 36 02.6	+1.9
MTMW	Mount Mitchell	1.69	187			Pn	04 35 44.2	+1.8
TRW	Toppenish Ridg	1.70	146			Pb	04 35 44.7	-1.1
HOPB	Hope	1.72	11	P		Pn	04 35 43.5	+0.8
HOPB				S		Sn	04 36 04.2	+0.7
B023	Clatskanie	1.78	207			Pn	04 35 45.1	+1.7
RADR	Rader Ridge	1.81	226			Pn	04 35 44.9	+0.9
RADR					IAML		04 36 16.2	
	comp=N,55nm,1.7s							
RADR					IAML		04 36 18.2	
	comp=E,54nm,0.6s							
FHE	Frenchman Hill	1.82	114			Pb	04 35 48.3	+0.6
E07A	Sunnyside	1.82	128	Pn		Pn	04 35 44.4	+0.2
E07A					IAML		04 36 14.2	
	comp=E,65nm,0.3s							
E07A					IAML		04 36 15.7	
	comp=N,62nm,0.5s							
B926	Mesachie Lake	1.84	308	P		Pn	04 35 45.3	+0.8
B926				S		Sn	04 36 07.8	+1.1
CLRS	Cowichan Lake	1.84	308			Pn	04 35 45.1	+0.7
CLRS	Cowichan Lake	1.84	308	P		Pn	04 35 44.9	+0.5
CLRS				S		Sn	04 36 07.8	+1.1
PTRF	Port Renfrew	1.86	298			Pn	04 35 45.4	+0.7
PTRF	Port Renfrew	1.86	298	Pn		Pn	04 35 45.3	+0.7
PTRF				Sn		Sn	04 36 08.3	+1.2
B08A	Colville Reser	1.86	68			Pn	04 35 45.7	+1.0
WAH2	Wahluke Slope	1.87	120			Pn	04 35 46.5	+0.7
BENWA	Benson Ranch	1.92	127			Pn	04 35 46.7	+1.2
CRF	Corfu	1.94	116			Pn	04 35 46.5	+0.7
LOCW	Locke Island	1.97	119			Pb	04 35 50.4	+0.1
APM	Augspurger Mou	1.98	175			Pn	04 35 43.1	-3.2
SNIWA	Snively Ranch	1.99	128			Pn	04 35 47.6	+1.2
GBL	Gable Mountain	2.02	122			Pn	04 35 47.9	+1.1
NLLB	Nanaimo Lost L	2.05	319	Pn		Pn	04 35 48.5	+1.3
NLLB				Sg		Sb	04 36 14.3	-2.3
RSW	Rattlesnake Hi	2.07	128			Pn	04 35 49.3	+1.7
HAWA	Hanford	2.10	128			Pn	04 35 48.6	+0.7
HAWA					IAML		04 36 19.8	
	comp=N,24nm,0.2s							
HAWA					IAML		04 36 25.4	
	comp=N,26nm,0.6s							
WPB	Watts Point	2.13	337	Pn		Pn	04 35 49.3	+0.9
D08A	Wollman Farm,	2.15	106	Pn		Pn	04 35 49.1	+0.5
H2OWA	Water	2.16	126			Pb	04 35 52.7	-0.7
PNT	Penticton	2.23	43	Sg		Sb	04 36 23.4	+1.5
MGRB	Mount Grey	2.25	306	Pn		Pn	04 35 51.5	+1.3
F07A	Phinny Hill Vi	2.27	142	Pn		Pn	04 35 50.9	+0.6
F07A					IAML		04 36 32.1	
	comp=N,43nm,0.5s							
F07A					IAML		04 36 34.0	
	comp=E,31nm,0.5s							
SHB	Sechelt	2.29	327	Pn		Pn	04 35 52.2	+1.5
G05A	Wamic	2.50	170	Pn		Pn	04 35 55.2	+1.7
G05A					IAML		04 36 32.2	
	comp=E,36nm,4.7s							
G05A					IAML		04 36 35.3	
	comp=N,32nm,4.7s							
BPO	Bald Peter	3.06	177			Pn	04 35 59.6	-1.7
LNOR	Lincton Mounta	3.10	125	Pn		Pn	04 36 03.1	+1.3
LNOR					IAML		04 37 28.4	
	comp=N,14nm,4.6s							
LNOR					IAML		04 37 43.8	
	comp=E,12nm,4.4s							
G08A	Pilot Rock	3.17	139	Pn		Pn	04 36 03.5	+0.7
G08A					IAML		04 36 37.5	
	comp=N,11nm,5.0s							
G08A					IAML		04 37 29.4	
	comp=E,12nm,4.4s							
F10A	Beach Ranch, E	3.66	116	Pn		Pn	04 36 09.1	-0.4

*IDC **13** 05:29:01.2±3.8, 36°42N×71°05E, h198km±32km, mb3.7/12, mbtmp4.2/18, Error ellipse: s-maj=27.6km s-min=13.9km az=34.0*
*NEIC **13** 05:29:04.8±1.3, 36°68N±0°07×70°95E±0°09, h226km±7km, mb4.3/15, Error ellipse: s-maj=10.9km s-min=9.7km az=72.0*
*NNC **13** 05:29:10.1±3.1, 37°14N×71°16E, h242km±37km, mb2.8, mpv4.0, Error ellipse: s-maj=33.1km s-min=18.8km az=20.0*

ISC 13 05:29:02.8±0.6, 36°65N±0°05×71°06E±0°06, h200km, n66, σ1§72/75, mb4.1/16, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.42	346		Pn	05 29 48.8	+2.9
CHGR	Chuyangaron	2.51	324		Pn	05 29 49.3	+2.5
KBL	Kabul	2.67	219		Pn	05 29 51.7	+2.8
DRK	Karamyk	2.88	11		Pn	05 29 54.9	+3.6
NIL	Nilore	3.49	148		Pn	05 30 02.0	+3.6
SRNI	Srinagar	4.01	128	eS	Sn	05 30 56.0	+2.8
ARSB	Arslanbob	4.90	17	Pn	Pn	05 30 17.6	+1.7
JMU	Jammu	5.04	140	eS	Sn	05 31 15.6	-1.2
JMU				IAML		05 31 19.1	
	comp=E,299nm,0.6s						
JMU				IAML		05 31 19.6	
	comp=N,621nm,0.5s						
ALCI	Alchi Leh	5.56	114	eP	Pn	05 30 25.8	+1.0
ALCI				eS	Sn	05 31 29.2	-0.2
ALCI				IAML		05 31 31.1	
	comp=E,117nm,0.3s						
ALCI				IAML		05 31 31.7	
	comp=N,98nm,0.6s						
TSSA	Tissa	5.66	131	eP	Pn	05 30 27.9	+2.0
TSSA				eS	Sn	05 31 30.3	-1.2
TSSA				IAML		05 31 32.4	
	comp=E,403nm,0.4s						
TSSA				IAML		05 31 34.5	
	comp=N,618nm,0.7s						
THN	Thein Dam	5.70	136	eP	Pn	05 30 28.8	+2.6
THN				eS	Sn	05 31 32.4	+0.4
THN				IAML		05 31 33.5	
	comp=E,395nm,0.2s						
THN				IAML		05 31 34.2	
	comp=N,260nm,0.6s						
DHRM	DHARAMSHALA	6.17	134	eP	Pn	05 30 33.5	+1.1
DHRM				eS	Sn	05 31 41.9	-1.4
DHRM				IAML		05 31 43.0	
	comp=E,832nm,0.7s						
DHRM				IAML		05 31 43.9	
	comp=N,635nm,0.3s						
TLWR	Talawar	6.19	138	eS	Sn	05 31 42.4	-1.2
KK31	Karatay Array	6.46	356	⇑P	Pn	05 30 37.9	+2.0
	comp=N,3.8nm,0.3s,baz=175,slow=12,SNR=4.5						
KK31				⇓S	Sn	05 31 48.2	-1.5
	comp=N,8.2nm,0.3s,baz=184,slow=23,SNR=13						
AAK	Ala-Archa	6.54	23	P	Pn	05 30 38.9	+1.9
	comp=N,25nm,0.4s,baz=162,slow=4.7,SNR=20						
AAK				S	Sn	05 31 52.3	+0.5
	comp=N,13nm,0.3s,baz=321,slow=22,SNR=17						
AAK	Ala-Archa	6.54	23		Pn	05 30 39.2	+2.2
AAK	Ala-Archa	6.54	23	⇓P	Pn	05 30 38.8	+1.7
	comp=N,6.0nm,0.4s						
AAK				⇑S	Sn	05 31 50.4	-1.4
	comp=N,19nm,0.6s						
BHK	Bhakra	6.86	138	ex	x	05 30 42.6	
BHK				ex	x	05 31 56.1	
BOOM	Boomskoye usch	6.94	31		Pn	05 30 44.4	+2.1
TARG	Taragay, Kyrgy	7.29	44		Pn	05 30 48.5	+1.5
SMLA	Simla	7.49	136	eP	Pn	05 30 49.7	+0.2
SMLA				eS	Sn	05 32 11.7	-2.5
SMLA				IAML		05 32 13.8	
	comp=N,172nm,0.3s						
SMLA				IAML		05 32 14.2	
	comp=E,203nm,0.3s						
HRA	Herat	7.54	255		Pn	05 30 51.5	+1.3
HNLY	HANLEY	7.57	118	eP	Pn	05 30 51.9	+0.9
HNLY				eS	Sn	05 32 17.9	+1.0
HNLY				IAML		05 32 21.8	
	comp=N,10nm,1.1s						
HNLY				IAML		05 32 22.2	
	comp=E,9.4nm,0.9s						
JOSI	Joshimath	9.34	128	eP	Pn	05 31 15.2	+1.6
JOSI				eS	Sn	05 32 54.5	-3.8
KUDL	Kundal	9.64	150	eP	Pn	05 31 16.7	-0.7
KUDL				eS	Sn	05 32 57.5	-7.9
KUDL				IAML		05 32 58.9	
	comp=E,36nm,0.7s						
KUDL				IAML		05 33 06.7	
	comp=N,18nm,0.6s						
MAKZ	Makanchi	13.00	35		Pn	05 32 00.4	+0.2
MKAR	Makanchi Array	13.14	36	P	Pn	05 32 01.8	-0.1
	comp=N,0.7nm,0.4s,baz=226,slow=18,SNR=9.1						
MKAR				S	Sn	05 34 31.8	+3.4
	comp=N,0.4nm,0.6s,baz=230,slow=28,SNR=1.7						
MKAR	Makanchi Array	13.14	36	Pn	Pn	05 32 03.1	+1.2
KURBB	Kurchatov Arra	14.96	19	P	Pn	05 32 25.8	+1.5
	comp=N,1.6nm,0.5s,baz=207,slow=12,SNR=7.9						
AB31	Akbulak array	14.97	331		Pn	05 32 25.5	+1.0
AB31	Akbulak array	14.97	331	P	P	05 32 26.3	+1.1
	comp=N,1.0nm,0.5s,baz=138,slow=11,SNR=18						
ABKAR	Akbulak array	14.97	331	Pn	Pn	05 32 22.1	-2.4
KURK	Kurchatov	15.07	19	P	Pn	05 32 25.8	+0.2
KURK	Kurchatov	15.07	19	IAmb	IAmb	05 32 29.6	
	comp=Z,2.7nm,0.8s						
EVN	Everest	15.88	119	P	P	05 32 36.7	+0.6
BVAR	Borovoye Array	16.38	359	P	P	05 32 42.0	+1.4
	comp=Z,2.0nm,0.3s,baz=159,slow=9.9,SNR=17						
BVAR				S	S	05 35 38.3	-3.5
	comp=Z,0.8nm,0.6s,baz=165,slow=18,SNR=1.8						
AKTO	Aktyubinsk	16.67	330	P	P	05 32 44.9	+1.0
	comp=Z,4.9nm,0.5s,baz=144,slow=7.5,SNR=16						
AKTO	Aktyubinsk	16.67	330	⇓P	P	05 32 43.7	-0.2
	comp=Z,2.3nm,0.5s						
ZAA0	Zalesovo Array	19.75	25		P	05 33 17.3	0.0
ZAA0				IAmb	IAmb	05 33 18.1	
	comp=Z,4.3nm,0.6s						
ZALV	Zalesovo Beam	19.75	25	P	P	05 33 17.4	+0.1
	comp=Z,4.8nm,0.3s,baz=214,slow=10,SNR=20						
ZALV				S	S	05 36 43.5	-5.2
	comp=Z,0.5nm,0.3s,baz=207,slow=22,SNR=1.8						
ZALV	Zalesovo Beam	19.75	25		P	05 33 17.0	-0.3
SHL	Shillong	20.93	116	P	P	05 33 31.7	+1.4
SHL				IAmb	IAmb	05 33 38.0	
	comp=Z,8.0nm,0.8s						
ARTI	Arti	21.51	341	P	P	05 33 36.2	+0.4
	comp=Z,2.2nm,0.4s,baz=163,slow=12,SNR=4.7						
	comp=Z,2.2nm,0.4s						
ARTI	Arti	21.51	341	IAmb	IAmb	05 33 37.9	
	comp=Z,6.6nm,0.5s						
SONM	Songino Array	28.21	56	P	P	05 34 38.0	+1.1
	comp=Z,1.1nm,0.7s,baz=268,slow=9.8,SNR=5.3						
	comp=Z,1.1nm,0.7s						
NRIK	Noril'sk	33.97	10	P	P	05 35 27.8	+0.9
	comp=Z,5.8nm,0.6s,baz=186,slow=6.1,SNR=10.0						
	comp=Z,5.8nm,0.6s						
NRIK	Noril'sk	33.97	10	P	P	05 35 26.3	-0.5
NRIK				IAmb	IAmb	05 35 28.5	
	comp=Z,5.9nm,0.6s						
FIA1	FINESS Array S	37.38	326	P	P	05 35 55.4	-0.6
FINES	FINESS Array B	37.38	326	P	P	05 35 56.1	+0.2
	comp=Z,2.6nm,0.4s,baz=124,slow=9.9,SNR=16						
	comp=Z,2.6nm,0.4s						
FINES	FINESS Array B	37.38	326	P	P	05 35 56.0	0.0
ARCES	ARCESS Array B	41.02	338	P	P	05 36 26.3	+0.3
	comp=Z,3.3nm,0.6s,baz=114,slow=8.2,SNR=26						
	comp=Z,3.3nm,0.6s						
ARCES	ARCESS Array B	41.02	338	P	P	05 36 26.1	+0.2
HFS	Hagfors	42.98	322	P	P	05 36 41.6	-0.2
	comp=Z,4.0nm,0.5s,baz=107,slow=9.9,SNR=17						
	comp=Z,4.0nm,0.5s						
NC303	NORSAR Array S	44.23	323	P	P	05 36 50.9	-0.9
NB201	NORSAR Array S	44.25	323	P	P	05 36 51.1	-1.0
NB201				IAmb	IAmb	05 37 02.5	
	comp=Z,23nm,1.4s						
NB2	NORSAR Subarra	44.29	323	P	P	05 36 51.6	-0.8
	comp=Z,1.1nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.29	323	P	P	05 36 51.9	-0.5
	comp=Z,1.1nm,0.5s,baz=96,slow=7.7,SNR=8.1						
	comp=Z,1.1nm,0.5s						
NC204	NORSAR Array S	44.53	323	P	P	05 36 53.8	-0.5
NC204				IAmb	IAmb	05 36 56.2	
	comp=Z,19nm,1.4s						
TIXI	Tiksi	45.61	22		P	05 37 02.5	0.0
TIXI				IAmb	IAmb	05 37 03.1	
	comp=Z,7.5nm,0.8s						
SPITS	Spitsbergen Ar	47.35	347	P	P	05 37 17.0	+0.9
	comp=Z,1.3nm,0.5s,baz=125,slow=10,SNR=9.8						
	comp=Z,1.3nm,0.5s						
INK	Inuvik	73.75	9	P	P	05 40 13.6	-0.8
INK				IAmb	IAmb	05 40 20.5	
	comp=Z,4.1nm,0.8s						
ILAR	Eielson Array	74.62	16	P	P	05 40 18.6	-1.0
	comp=Z,1.1nm,0.9s,baz=314,slow=4.5,SNR=9.8						
	comp=Z,1.1nm,0.9s						
YKA	Yellowknife Ar	81.09	3	P	P	05 40 54.8	-0.4
	comp=Z,1.2nm,0.6s,baz=319,slow=1.3,SNR=6.2						
	comp=Z,1.2nm,0.6s						
WRA	Warramunga Arr	82.03	122	P	P	05 40 58.3	-2.5
	comp=Z,1.2nm,0.7s,baz=324,slow=5.0,SNR=9.9						
	comp=Z,1.2nm,0.7s						
ASAR	Alice Springs	84.30	125	P	P	05 41 10.3	-2.0
	comp=Z,1.4nm,0.6s,baz=317,slow=5.0,SNR=18						
	comp=Z,1.4nm,0.6s						
QSPA	South Pole Qui	126.45	180	PKP	PKPdf	05 47 40.5	-0.4
	comp=Z,1.1nm,1.0s,baz=306,slow=2.0,SNR=2.4						

*IDC **13** 05:45:50.8±1.0, 6°85S×155°27E, h0km, mb3.8/8, mbtmp3.8/8, MS2.9/1, Error ellipse: s-maj=36.5km s-min=23.7km az=123.0*

ISC 13 05:45:56.9±1.0, 6°8S±0°2×155°1E±0°2, h35km, n14, σ1§01/10, mb3.7/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.46	119	LR	LR	05 49 14.9	
	comp=Z,121nm,19.4s,baz=338,slow=38						
WRA	Warramunga Arr	24.03	235	P	P	05 51 08.0	-0.8
	0.6nm,0.4s,baz=59,slow=9.5,SNR=7.5						
	0.6nm,0.4s						
ASAR	Alice Springs	26.39	228	P	P	05 51 29.9	-0.5
	0.2nm,0.3s,baz=50,slow=9.5,SNR=1.9						
	0.2nm,0.3s						
H11S3	WAKE ISLAND Hy	27.60	24	T	T	06 20 17.4	
	baz=203,slow=75,SNR=8.8						
H11S2	WAKE ISLAND Hy	27.60	24	T	T	06 19 57.5	
	baz=203,slow=75,SNR=6.5						
H11S1	WAKE ISLAND Hy	27.62	24	T	T	06 19 52.0	
	baz=203,slow=75,SNR=3.8						
FITZ	Fitzroy Crossi	30.84	246	P	P	05 52 09.3	-0.6
	0.8nm,0.6s,baz=98,slow=7.1,SNR=1.4						
	0.8nm,0.6s						
PETK	Petropavlovsk-	59.71	2	P	P	05 55 58.5	+0.6
	2.6nm,0.8s,baz=201,slow=7.7,SNR=1.4						
	2.6nm,0.8s						
CMAR	Chiang Mai Arr	60.80	295	P	P	05 56 06.9	+0.9
	1.3nm,0.3s,baz=121,slow=5.1,SNR=7.6						
	1.3nm,0.3s						
ILAR	Eielson Array	83.14	21	P	P	05 58 17.3	-1.7
	0.3nm,0.5s,baz=255,slow=6.7,SNR=6.5						
	0.3nm,0.5s						
QSPA	South Pole Qui	83.18	180	P	P	05 58 19.8	+0.5
	0.8nm,0.7s,baz=328,slow=0.8,SNR=5.3						
	0.8nm,0.7s						
MKAR	Makanchi Array	83.33	319	P	P	05 58 19.9	-0.4
	0.5nm,0.7s,baz=101,slow=7.5,SNR=3.4						
	0.5nm,0.7s						
MMAI	Mount Meron Ar	118.50	304	PKP	PKPdf	06 04 42.7	+1.0
	0.9nm,0.3s,baz=79,slow=4.3,SNR=4.4						
BDFB	Brasilia	148.04	134	PKPbc	PKPdf	06 05 37.5	+0.7
	2.3nm,0.5s,baz=135,slow=1.4,SNR=5.0						

*KRSC **13** 05:47:50.1±0.6, 55°88N×161°53E, h96km±7km, Ml4.1, Felt [II-III] at kordon Kronoki.*
*MOS **13** 05:47:50.1±0.7, 56°00N×161°43E, h101km, mb4.0/4, Error ellipse: s-maj=12.1km s-min=4.3km az=74.1*
*IDC **13** 05:47:51.9±2.6, 56°12N×161°19E, h93km±26km, mb3.5/13, mbtmp3.8/14, MS3.5/1, Error ellipse: s-maj=20.6km s-min=15.1km az=172.0*
*NEIC **13** 05:47:52.0±0.8, 56°06N±0°10×161°2E±0°2, h92km±9km, mb4.1/14, Error ellipse: s-maj=23.5km s-min=3.0km az=125.0*

ISC 13 05:47:51.3±0.7, 55°92N±0°03×161°53E±0°03, h94km±5km, n133, σ1§05/167, mb4.0/23, 2C-4D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZLN	Zelenaya	0.42	284	PN	Pn	05 48 06.3	+0.4
ZLN	Zelenaya	0.42	284	eP	Pn	05 48 06.4	+0.4
BZGR	Bezymyannyi-Gr	0.47	273	PN	Pn	05 48 06.3	0.0
BZGR				S	Sn	05 48 17.8	+0.3
BZGR	Bezymyannyi-Gr	0.47	273	eP	Pn	05 48 06.4	0.0
BZGR				eS	Sn	05 48 17.8	+0.3
CIRR	Tsirk	0.48	295	PN	Pn	05 48 06.8	+0.4
CIRR				S	Sn	05 48 18.8	+1.0
CIRR	Tsirk	0.48	295	eP	Pn	05 48 06.8	+0.4
CIRR				eS	Sn	05 48 18.8	+1.0
LGNR	Loginova	0.50	290	PN	Pn	05 48 07.3	+0.6
LGNR				S	Sn	05 48 18.8	+0.5
LGNR	Loginova	0.50	290	eP	Pn	05 48 07.4	+0.6
LGNR				eS	Sn	05 48 18.8	+0.5
BZP	Bezymyannyi-Pe	0.56	270	PN	Pn	05 48 06.6	-0.4
BZP				S	Sn	05 48 18.7	-0.1
BZP	Bezymyannyi-Pe	0.56	270	eP	Pn	05 48 06.7	-0.4
BZP				eS	Sn	05 48 18.7	-0.1
BZWR	Bezymyannyi-We	0.58	275	PN	Pn	05 48 07.5	+0.2
BZWR				S	Sn	05 48 20.1	+0.9
BZWR	Bezymyannyi-We	0.58	275	eP	Pn	05 48 07.5	+0.2
BZWR				eS

KII	**Karymskiy**	**2.23**	**213**	*e*P		**Pn**	05 48 26.9	+0.1
BKI	**Bering**	**2.62**	**104**	PN		**Pn**	05 48 31.8	+0.1
BKI				S		**Sn**	05 49 01.8	-1.0
BKI	**Bering**	**2.62**	**104**	*e*P		**Pn**	05 48 31.9	+0.1
BKI				*e*S		**Sn**	05 49 01.8	-1.0
NLC	**Nalytchevo**	**3.03**	**206**	PN		**Pn**	05 48 37.3	+0.1
NLC	**Nalytchevo**	**3.03**	**206**	*e*P		**Pn**	05 48 37.4	+0.1
SDLR	**Sedlovina**	**3.06**	**211**	PN		**Pn**	05 48 38.6	+0.9
SDLR	**Sedlovina**	**3.06**	**211**	*e*P		**Pn**	05 48 38.7	+0.9
KRX	**Arik**	**3.06**	**214**	PN		**Pn**	05 48 38.8	+1.0
KRX	**Arik**	**3.06**	**214**	*e*P		**Pn**	05 48 38.9	+1.0
KRER	**Koryakskii**	**3.08**	**213**	PN		**Pn**	05 48 39.8	+1.7
KRER	**Koryakskii**	**3.08**	**213**	*e*P		**Pn**	05 48 39.8	+1.7
SMAR	**Somma**	**3.10**	**212**	PN		**Pn**	05 48 39.3	+1.0
SMAR	**Somma**	**3.10**	**212**	*e*P		**Pn**	05 48 39.3	+1.0
AVH	**Avacha**	**3.11**	**213**	PN		**Pn**	05 48 39.9	+1.5
AVH	**Avacha**	**3.11**	**213**	*e*P		**Pn**	05 48 40.0	+1.5
KOK	**Koryaka**	**3.12**	**214**	PN		**Pn**	05 48 39.9	+1.3
KOK	**Koryaka**	**3.12**	**214**	*e*P		**Pn**	05 48 39.9	+1.3
UGLR	**Uglovaya**	**3.14**	**211**	PN		**Pn**	05 48 39.9	+1.1
UGLR	**Uglovaya**	**3.14**	**211**	*e*P		**Pn**	05 48 39.9	+1.1
DALK	**Dalny**	**3.31**	**210**	PN		**Pn**	05 48 41.4	+0.4
DALK	**Dalny**	**3.31**	**210**	*e*P		**Pn**	05 48 41.4	+0.4
PET	**Petropavlovsk**	**3.35**	**211**			**Pn**	05 48 42.4	+0.9
PET	**Petropavlovsk**	**3.35**	**211**	*e*PN		**Pn**	05 48 42.4	+0.9
PET				*e*S		**Sn**	05 49 24.1	+3.8
PET	comp=Z,84nm,0.4s			pmax		pmax		
PET	comp=E,101nm,0.5s			smax		smax		
PET	comp=N,88nm,0.4s			smax		smax		
OSSR	**Ossora**	**3.44**	**13**	PN		**Pn**	05 48 43.6	+0.9
OSSR	**Ossora**	**3.44**	**13**	*e*P		**Pn**	05 48 43.7	+0.9
PEA0B	**Petropavlovsk-**	**3.59**	**220**			**Pn**	05 48 45.3	+0.5
PEA0B	**Petropavlovsk-**	**3.59**	**220**	*c i*	PN	**Pn**	05 48 45.4	+0.6
PETK	**Petropavlovsk-**	**3.59**	**220**	P		**Pn**	05 48 45.2	+0.4
PETK	comp=N,9.3nm,0.4s,baz=59,slow=16,SNR=40			S		**Sn**	05 49 28.9	+2.7
PETK	**Petropavlovsk-**	**3.59**	**220**			**Pn**	05 48 45.1	+0.2
KRMR	**Karymshinskiy**	**3.67**	**214**	PN		**Pn**	05 48 46.7	+0.8
KRMR	**Karymshinskiy**	**3.67**	**214**	*e*P		**Pn**	05 48 46.8	+0.8
RUS	**Russkaya**	**3.91**	**208**	PN		**Pn**	05 48 49.2	+0.1
RUS	**Russkaya**	**3.91**	**208**	*e*P		**Pn**	05 48 49.2	+0.1
GRL	**Gorelyy**	**3.93**	**212**	PN		**Pn**	05 48 51.2	+1.7
GRL	**Gorelyy**	**3.93**	**212**	*e*P		**Pn**	05 48 51.3	+1.7
APC	**Apacha**	**3.94**	**222**	PN		**Pn**	05 48 50.3	+0.9
APC	**Apacha**	**3.94**	**222**	*e*P		**Pn**	05 48 50.3	+0.9
MTVR	**Mutnovka**	**3.96**	**211**	PN		**Pn**	05 48 51.1	+1.2
MTVR	**Mutnovka**	**3.96**	**211**	*e*P		**Pn**	05 48 51.2	+1.2
ASAK	**Asacha**	**4.13**	**213**	PN		**Pn**	05 48 53.5	+1.3
ASAK	**Asacha**	**4.13**	**213**	*e*P		**Pn**	05 48 53.5	+1.3
KDTR	**Khodutka, Kamc**	**4.59**	**208**	PN		**Pn**	05 48 56.5	-1.8
KDTR	**Khodutka, Kamc**	**4.59**	**208**	*e*P		**Pn**	05 48 56.5	-1.8
MIPR	**Malaya Ipel'ka**	**4.60**	**220**	PN		**Pn**	05 49 01.5	+3.0
MIPR	**Malaya Ipel'ka**	**4.60**	**220**	*e*P		**Pn**	05 49 01.5	+3.0
TILK	**Tilichiki**	**5.16**	**26**	PN		**Pn**	05 49 07.6	+1.7
TILK	**Tilichiki**	**5.16**	**26**	*e*P		**Pn**	05 49 07.6	+1.7
PAU	**Pauzhetka**	**5.26**	**214**	PN		**Pn**	05 49 08.9	+1.5
PAU	**Pauzhetka**	**5.26**	**214**	*e*P		**Pn**	05 49 08.9	+1.5
SEY	**Seymchan**	**8.43**	**330**	⇓*e*PN		**Pn**	05 49 49.1	-1.4
SEY	comp=Z,3.0nm,0.9s			pmax		pmax		
BILL	**Bilibino**	**12.36**	**8**	⇓*e*PN		**Pn**	05 50 41.4	-2.2
BILL	comp=Z,2.0nm,1.1s			pmax		pmax		
ERM	**Erimo**	**18.33**	**228**	P		**P**	05 51 58.2	+0.2
ERM	**Erimo**	**18.33**	**228**	P		**P**	05 51 58.2	+0.2
ERM	comp=Z,28nm,1.1s			pmax		pmax		
TIXI	**Tiksi**	**20.93**	**331**	⇓*i*P		Pn	05 52 28.1	-1.2
TIXI	comp=Z,3.0nm,0.9s			pmax		pmax		
E19K	**Redstone River**	**22.21**	**42**	P		**P**	05 52 41.0	+1.4
E19K	comp=Z,8.3nm,1.2s			IAmb		IAmb	05 53 22.8	
D20K	**Etivluk River**	**22.70**	**39**	P		**P**	05 52 45.9	+1.1
D20K	comp=Z,18nm,1.4s			IAmb		IAmb	05 53 08.4	
B20K	**Meade River**	**22.86**	**36**	P		**P**	05 52 46.8	+0.5
B21K	**Ikpikpuk River**	**23.61**	**37**	P		**P**	05 52 54.6	+1.3
E22K	**Anaktuvuk Pass**	**24.35**	**41**	P		**P**	05 53 00.8	+0.8
E22K	comp=Z,7.1nm,1.2s			IAmb		IAmb	05 53 42.0	
STLK	**Strandline Lak**	**24.41**	**58**	P		**P**	05 53 02.3	+1.6
D23K	**Nanushuk River**	**24.87**	**39**	P		**P**	05 53 05.8	+1.1
C23K	**Itkillik River**	**25.02**	**37**	P		**P**	05 53 06.8	+0.8
C23K	comp=Z,3.6nm,0.6s			IAmb		IAmb	05 53 08.2	
E24K	**Your Creek**	**25.59**	**42**	P		**P**	05 53 12.2	+0.9
E24K	comp=Z,10nm,1.5s			IAmb		IAmb	05 53 19.2	
ILAR	**Eielson Array**	**26.28**	**49**	P		**P**	05 53 17.8	+0.3
	comp=Z,0.4nm,0.6s,baz=264,slow=8.5,SNR=6.2 comp=Z,0.4nm,0.6s							
D25K	**Kavik River**	**26.44**	**39**	P		**P**	05 53 19.6	+0.6
D25K	comp=Z,3.4nm,0.7s			IAmb		IAmb	05 53 20.1	
BMAR	**Burnt Mountain**	**27.07**	**43**	P		**P**	05 53 26.1	+1.5
C27K	**Jago River**	**27.39**	**38**	P		**P**	05 53 28.7	+1.3
C27K	comp=Z,8.1nm,1.4s			IAmb		IAmb	05 53 46.0	
SONM	**Songino Array**	**34.15**	**280**	P		**P**	05 54 26.1	-1.1
	comp=Z,0.2nm,0.4s,baz=40,slow=11,SNR=1.9 comp=Z,0.2nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**36.35**	**171**	T		T	06 32 26.5	
	baz=355,slow=76,SNR=18							
H11N3	**WAKE ISLAND Hy**	**36.37**	**171**	T		T	06 32 27.6	
	baz=355,slow=76,SNR=18							
H11N1	**WAKE ISLAND Hy**	**36.37**	**171**	T		T	06 32 27.7	
	baz=355,slow=76,SNR=22							
KURK	**Kurchatov**	**46.99**	**300**	⇓*i*P		**P**	05 56 10.5	-2.0
KURK	comp=Z,2.0nm,0.9s			pmax		pmax		
KURBB	**Kurchatov Arra**	**47.09**	**300**	P		**P**	05 56 12.3	-1.0
	comp=Z,2.0nm,0.4s,baz=55,slow=7.7,SNR=14 comp=Z,2.0nm,0.4s							
MKAR	**Makanchi Array**	**47.72**	**294**	P		**P**	05 56 17.2	-1.1
	comp=Z,0.7nm,0.4s,baz=54,slow=7.2,SNR=9.2 comp=Z,0.7nm,0.4s							
BVAR	**Borovoye Array**	**49.32**	**307**	P		**P**	05 56 29.2	-1.2
	comp=Z,0.7nm,0.4s,baz=66,slow=8.3,SNR=3.5 comp=Z,0.7nm,0.4s							
NVAR	**Mina Array Bea**	**54.05**	**73**	P		**P**	05 57 08.2	+2.1
	comp=Z,0.7nm,0.6s,baz=307,slow=7.1,SNR=5.5							
NVAR	comp=Z,46nm,18.4s,baz=28,slow=35 comp=Z,0.7nm,0.6s			LR		LR	06 19 22.2	
AAK	**Ala-Archa**	**54.60**	**295**	⇓*i*P		**P**	05 57 10.3	+0.3
AAK	comp=Z,3.0nm,0.9s			pmax		pmax		
PDAR	**Pinedale Array**	**55.46**	**63**	P		**P**	05 57 17.3	+1.1
	comp=Z,0.5nm,0.6s,baz=8.3,slow=3.1,SNR=7.3 comp=Z,0.5nm,0.6s							
KKAR	**Karatay Array**	**56.26**	**298**	P		**P**	05 57 20.3	-1.4
KKAR	**Karatay Array**	**56.26**	**298**	P		**P**	05 57 20.3	-1.4
AB31	**Akbulak array**	**56.62**	**310**	P		**P**	05 57 22.8	-1.2
AB31	comp=Z,3.8nm,1.4s			IAmb		IAmb	05 57 24.1	
FINES	**FINESS Array B**	**57.86**	**337**	P		**P**	05 57 31.1	-1.4
	comp=Z,2.4nm,0.9s,baz=38,slow=7.2,SNR=3.7 comp=Z,2.4nm,0.9s							
FINES	**FINESS Array B**	**57.86**	**337**	*e*P		**P**	05 57 32.3	-0.3
FINES	comp=Z,3.0nm,0.9s			pmax		pmax		
HFS	**Hagfors**	**61.51**	**342**	P		**P**	05 57 56.0	-1.7
	comp=Z,2.5nm,0.9s,baz=41,slow=9.6,SNR=2.2 comp=Z,2.5nm,0.9s							
KBZ	**Khabaz**	**68.06**	**317**	P		**P**	05 58 38.4	-2.0
	comp=Z,1.8nm,0.9s,baz=95,slow=15,SNR=3.6 comp=Z,1.8nm,0.9s							
TXAR	**Lajitas Array**	**68.80**	**69**	P		**P**	05 58 46.9	+1.5
	comp=Z,0.5nm,0.6s,baz=305,slow=5.1,SNR=7.4 comp=Z,0.5nm,0.6s							
WRA	**Warramunga Arr**	**78.99**	**206**	P		**P**	05 59 45.6	+1.0
	comp=Z,0.1nm,0.4s,baz=18,slow=5.8,SNR=1.4 comp=Z,0.1nm,0.4s							
ASAR	**Alice Springs**	**82.68**	**205**	P		**P**	06 00 03.9	-0.2
	comp=Z,0.2nm,0.3s,baz=351,slow=4.1,SNR=2.6 comp=Z,0.2nm,0.3s							
QSPA	**South Pole Qui**	**145.67**	**180**	PKPbc		**PKPab**	06 07 19.2	+1.0
	comp=Z,1.1nm,0.9s,baz=325,slow=2.9,SNR=2.4							

IDC ***13*** *06:08:01.4±3.5, 23.°11S×179.°78E, h516km±37km, mb3.0/5, mbtmp3.9/5, Error ellipse: s-maj=36.0km s-min=24.2km az=175.0*

ISC 13 06:07:59.8±1.1, 23.°1S×179.°8E±0.°2, h500km, n6, σ1s24/6, mb3.6/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.96**	**260**	P	**P**	**06 15 07.0**	**+0.5**
	0.9nm,0.5s,baz=91,slow=8.2,SNR=12						
ASAR				ScP	**ScP**	**06 19 51.2**	**-1.9**
	0.5nm,0.8s,baz=96,slow=4.5,SNR=2.9 0.9nm,0.5s						
WRA	**Warramunga Arr**	**42.26**	**265**	P	**P**	**06 15 09.3**	**+0.4**
	1.3nm,0.4s,baz=91,slow=8.4,SNR=30 1.3nm,0.4s						
QSPA	**South Pole Qui**	**66.94**	**180**	P	**P**	**06 18 01.9**	**0.0**
	0.9nm,0.6s,baz=59,slow=5.9,SNR=6.3 0.9nm,0.6s						
TXAR	**Lajitas Array**	**90.20**	**58**	P	**P**	**06 20 07.6**	**+0.7**
	0.3nm,0.8s,baz=205,slow=5.3,SNR=4.0 0.3nm,0.8s						
PDAR	**Pinedale Array**	**92.29**	**44**	P	**P**	**06 20 15.9**	**-0.5**
	0.2nm,0.6s,baz=256,slow=7.1,SNR=1.7 0.2nm,0.6s						
HFS	**Hagfors**	**141.76**	**349**	PKhKP	PKPpre	06 26 28.7	
	0.8nm,0.3s,baz=286,slow=2.7,SNR=8.0						

IDC ***13*** *06:12:08.6±1.2, 55.°91S×26.°00W, h0km, mb4.4/5, mbtmp4.3/6, ML4.2/1, MS3.3/2, Error ellipse: s-maj=60.4km s-min=22.0km az=61.0*

NEIC ***13*** *06:12:21.7±1.8, 56.°4S±0.°1×26.°8W±0.°2, h94km±8km, mb4.5/15, Error ellipse: s-maj=21.3km s-min=15.8km az=213.0*

ISC 13 06:12:15.2±0.7, 56.°2S±0.°1×26.°7W±0.°1, h35km, n33, σ1s24/26, mb4.5/10, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.91**	**285**	Pn	Pn	06 13 46.5	+6.4
VNA1	**Neumayer--Stat**	**16.54**	**158**	⇑P	**P**	**06 16 08.3**	**+2.1**
	comp=Z,25nm,0.6s						
VNA3	**Neumayer Olymp**	**16.74**	**161**	⇑P	**P**	**06 16 08.9**	**+0.4**
	comp=Z,23nm,0.7s						
SNAA	**Sanae**	**18.48**	**156**	⇑P	**Pn**	**06 16 27.4**	**-0.7**
	comp=Z,216nm,0.4s						
SNAA	**Sanae**	**18.48**	**156**	P	**Pn**	**06 16 27.8**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=317,slow=9.3,SNR=18 comp=Z,5.4nm,0.7s						
SNAA	**Sanae**	**18.48**	**156**	P	**Pn**	**06 16 27.8**	**-0.2**
TROLL	**Troll, Antarti**	**19.97**	**154**	⇑P	**Pn**	**06 16 44.1**	**-2.0**
	comp=Z,158nm,0.5s						
BELA	**Belgrano 2**	**21.92**	**184**	P	**P**	**06 17 03.5**	**-1.4**
BELA				IAmb	IAmb	06 17 04.3	
	comp=Z,16nm,0.6s						
PLCA	**Paso Flores**	**32.28**	**280**	LR	LR	06 30 22.2	
	comp=Z,26nm,20.9s,baz=80,slow=34						
QSPA	**South Pole Qui**	**34.02**	**180**	P	**P**	**06 18 57.9**	**+2.4**
	comp=Z,5.8nm,0.5s,baz=209,slow=2.2,SNR=64 comp=Z,5.8nm,0.5s						
QSPA	**South Pole Qui**	**34.02**	**180**	P	**P**	**06 18 57.6**	**+2.1**
QSPA				IAmb	IAmb	06 18 59.0	
	comp=Z,6.5nm,0.6s						
MAW	**Mawson**	**39.85**	**143**	P	**P**	**06 19 43.6**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=252,slow=10,SNR=2.6 comp=Z,1.6nm,0.7s						
BOSA	**Boshof**	**45.77**	**75**	LR	LR	06 37 06.2	
	comp=Z,58nm,18.4s,baz=21,slow=33						
BOSA	**Boshof**	**45.77**	**75**	P	**P**	**06 20 33.1**	**-0.2**
BOSA				IAmb	IAmb	06 21 05.5	
	comp=Z,17nm,1.4s						
SBA	**Scott Base**	**45.92**	**184**	P	**P**	**06 20 33.8**	**+0.2**
SBA				IAmb	IAmb	06 20 35.7	
	comp=Z,7.8nm,1.5s						
VNDA	**Vanda**	**46.41**	**183**	P	**P**	**06 20 36.9**	**-0.6**
	comp=Z,4.3nm,0.7s,baz=183,slow=7.3,SNR=32 comp=Z,4.3nm,0.7s						
VNDA	**Vanda**	**46.41**	**183**	P	**P**	**06 20 36.8**	**-0.6**
VNDA				IAmb	IAmb	06 20 39.5	
	comp=Z,4.4nm,0.8s						
GO01	**Chusmiza**	**48.25**	**302**	P	**P**	**06 20 53.5**	**+0.4**
GO01				IAmb	IAmb	06 20 54.0	
	comp=Z,3.5nm,0.8s						
LBTB	**Lobatse**	**48.82**	**73**	P	**P**	**06 20 58.2**	**+1.3**
LBTB				IAmb	IAmb	06 21 39.8	
	comp=Z,15nm,1.4s						
H10N1	**ASCENSION HYDR**	**49.22**	**16**	T	T	07 15 06.4	
	baz=192,slow=71,SNR=5.5						
H10N3	**ASCENSION HYDR**	**49.22**	**16**	T	T	07 15 13.4	
	baz=192,slow=71,SNR=11						
H10N2	**ASCENSION HYDR**	**49.24**	**16**	T	T	07 14 58.2	
	baz=192,slow=71,SNR=8.5						
GRTLG	**Ghanzi**	**49.53**	**65**	P	**P**	**06 21 03.3**	**+0.8**
PB16	**IPOC Station P**	**49.55**	**302**	P	**P**	**06 21 03.3**	**+0.2**
PB16				IAmb	IAmb	06 21 03.9	
	comp=Z,4.6nm,1.3s						
LPAZ	**La Paz**	**50.69**	**305**	P	**P**	**06 21 12.3**	**+0.5**
	comp=Z,3.2nm,0.5s,baz=116,slow=4.5,SNR=19 comp=Z,3.2nm,0.5s						
LPAZ	**La Paz**	**50.69**	**305**	P	**P**	**06 21 12.3**	**+0.5**
LPAZ				IAmb	IAmb	06 21 12.9	
	comp=Z,4.1nm,0.8s						
QNGWA	**Qangwa**	**51.05**	**64**	P	**P**	**06 21 15.0**	**+1.1**
MREMI	**Moremi**	**51.78**	**73**	P	**P**	**06 21 20.1**	**+0.6**
BOAV	**Boa Vista**	**64.58**	**322**	P	**P**	**06 22 48.2**	**-0.5**
OTAV	**Otavalo**	**69.96**	**303**	P	**P**	**06 23 24.0**	**+0.6**
ASAR	**Alice Springs**	**98.74**	**162**	P	Pdif	06 25 51.1	+0.1
	comp=Z,0.4nm,0.6s,baz=183,slow=4.0,SNR=8.8 comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**124.77**	**110**	PKP	**PKPdf**	**06 31 09.1**	**-1.9**
	comp=Z,2.6nm,0.3s,baz=205,slow=4.4,SNR=4.7						
ILAR	**Eielson Array**	**150.42**	**311**	PKPbc	**PKPbc**	**06 31 59.5**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=142,slow=1.8,SNR=10						

IDC ***13*** *06:19:22.6±2.5, 41.°01N×143.°52E, h0km, mb3.6/4, mbtmp3.5/6, ML2.8/2, Error ellipse: s-maj=67.1km s-min=25.2km az=79.0*

JMA ***13*** *06:19:27.7±0.1, 41.°0N±0.°4×143.°1E±0.°7, h34km, MV3.3/32, E OFF AOMORI PREF*

ISC 13 06:19:24.4±1.8, 41.°01N±0.°05×143.°18E±0.°07, h3km±11km, n25, σ1s17/27, mb3.6/4, 2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.01**	**359**	*e*P	**Pn**	**06 19 46.3**	**+0.9**
JEM				*e*S	**Sn**	**06 19 59.9**	**-0.1**
JTHR	**Tokachihiroo**	**1.29**	**4**	*e*P	**Pn**	**06 19 50.3**	**+1.1**
JTHR				*e*S	**Sn**	**06 20 06.9**	**0.0**
JNBK	**Urakawa-nobuka**	**1.31**	**346**	*e*P	**Pb**	**06 19 50.8**	**+1.2**
JARK	**Aomorirokkasho**	**1.37**	**271**	*e*P	**Pn**	**06 19 50.5**	**+0.1**
JARK				*e*S	**Sg**	**06 20 07.4**	**-1.1**
JKEN	**Kujiedanarisaw**	**1.38**	**235**	*e*P	**Pn**	**06 19 50.4**	**0.0**
JKEN				*e*S	**Sg**	**06 20 07.5**	**-1.0**
JANG	**Nango**	**1.42**	**244**	*e*P	**Pn**	**06 19 51.2**	**+0.2**
JANG				*e*S	**Sg**	**06 20 08.4**	**-1.5**
JCH	**Churui**	**1.61**	**5**	*e*P	**Pg**	**06 19 55.2**	**0.0**
JTM	**Tenmabayashi**	**1.61**	**263**	*e*P	**Pn**	**06 19 54.7**	**+1.0**
JOT	**Ohata**	**1.65**	**284**	*e*P	**Pn**	**06 19 55.0**	**+0.8**
JOT				*e*S	**Sn**	**06 20 15.3**	**-0.6**
JKB	**Kayabe**	**1.84**	**299**	*e*P	**Pn**	**06 19 57.7**	**+0.9**
JOM	**Ohasama**	**2.11**	**224**	*e*P	**Pn**	**06 20 01.8**	**+1.3**
JAK	**Akkeshi**	**2.29**	**29**	*e*P	**Pn**	**06 20 03.2**	**+0.3**
JAK				*e*S	**Sn**	**06 20 29.2**	**-2.3**
JAR	**Ashorobuto**	**2.33**	**11**	⇓*e*P	**Pn**	**06 20 04.4**	**+0.8**
JAR				⇓*e*S	**Sn**	**06 20 31.5**	**-1.2**
ASAJ	**Asahikawa**	**3.14**	**352**	Pn	**Pn**	**06 20 14.8**	**+0.2**
	1.6nm,0.3s,baz=254,slow=11,SNR=2.9 2.3nm,0.3s						
MJAR	**Matsushiro Arr**	**5.91**	**223**	Pn	**Pn**	**06 20 55.2**	**+2.4**
	baz=25,slow=13,SNR=2.5 1.0nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**29.30**	**129**	T	T	06 56 09.0	
	baz=322						
H11N1	**WAKE ISLAND Hy**	**29.31**	**129**	T	T	06 56 06.7	
	baz=322						
H11N3	**WAKE ISLAND Hy**	**29.32**	**129**	T	T	06 56 08.9	
	baz=322						
H11S1	**WAKE ISLAND Hy**	**30.15**	**131**	T	T	06 57 17.8	
	baz=323,slow=76,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**30.15**	**131**	T	T	06 57 17.5	
	baz=323,slow=76,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**30.17**	**131**	T	T	06 57 21.1	
	baz=323,slow=76,SNR=5.2						
ZALV	**Zalesovo Beam**	**40.37**	**309**	P	**P**	**06 27 05.0**	**+1.9**
	0.6nm,0.5s,baz=99,slow=8.9,SNR=2.4 0.6nm,0.5s						
MKAR	**Makanchi Array**	**43.29**	**299**	P	**P**	**06 27 26.5**	**-0.7**
	0.3nm,0.5s,baz=90,slow=7.7,SNR=2.3 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**44.74**	**305**	P	**P**	**06 27 38.3**	**-0.4**
	0.8nm,0.5s,baz=78,slow=8.8,SNR=5.5 0.8nm,0.5s						
WRA	**Warramunga Arr**	**61.19**	**189**	P	**P**	**06 29 39.2**	**-1.1**
	0.3nm,0.5s,baz=6.2,slow=7.0,SNR=7.2 0.3nm,0.5s						

IDC ***13*** *06:20:05.5±7.2, 41.°13N×142.°09E, h0km, mb4.0/5, mbtmp4.0/5, ML2.7/1, Error ellipse: s-maj=137.3km s-min=37.8km az=126.0*

JMA ***13*** *06:20:11.6±0.2, 40.°9N±0.°4×14.°2E±.°, h49km±2km, MV3.7/32, E OFF AOMORI PREF*

JMA Felt I J1 at E OFF AOMORI PREF .

ISC 13 06:20:10.3±1.2, 40.°94N±0.°04×142.°26E±0.°07, h49km±12km, n25, σ1s28/30, mb3.6/5, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.68**	**276**	⇓*i*P	**Pn**	**06 20 24.1**	**+0.4**
JARK				⇓*e*S	**Sn**	**06 20 32.3**	**-1.1**
JAHD	**Aomorihigashid**	**0.77**	**295**	P	**Pn**	**06 20 25.6**	**+0.7**
JAHD				*e*S	**Sn**	**06 20 35.2**	**-0.2**
JANG	**Nango**	**0.80**	**225**	*e*P	**Pn**	**06 20 25.6**	**+0.3**
JANG				*e*S	**Sn**	**06 20 35.2**	**-1.0**
JKEN	**Kujiedanarisaw**	**0.84**	**210**	*e*P	**Pn**	**06 20 26.4**	**+0.5**
JKEN				*e*S	**Sn**	**06 20 36.8**	**-0.4**
JTM	**Tenmabayashi**	**0.91**	**261**	*e*P	**Pn**	**06 20 26.9**	**+0.1**
JTM				*e*S	**Sn**	**06 20 37.7**	**-1.2**
JOT	**Ohata**	**1.01**	**296**	P	**Pn**	**06 20 28.7**	**+0.5**
JOT				*e*S	**Sn**	**06 20 40.7**	**-0.6**
JEM	**Erimo**	**1.27**	**32**	*e*S	**Sn**	**06 20 51.1**	**+3.6**
JKB	**Kayabe**	**1.32**	**316**	*e*P	**Pn**	**06 20 33.2**	**+0.8**
JKB				*e*S	**Sn**	**06 20 48.7**	**0.0**
JAH	**Hinai**	**1.45**	**239**	*e*P	**Pn**	**06 20 35.0**	**+1.0**
JAH				*e*S	**Sn**	**06 20 51.1**	**-0.7**
JSR	**Shiriuchi**	**1.51**	**294**	*e*P	**Pn**	**06 20 35.6**	**+0.8**
JSR				*e*S	**Sn**	**06 20 53.2**	**-0.2**
JOM	**Ohasama**	**1.64**	**207**	*e*S	**Sn**	**06 20 55.8**	**-0.8**
JIW	**Iwasaki**	**1.74**	**259**	*e*P	**Pn**	**06 20 38.6**	**+0.5**
JNB	**Noboribetsu**	**1.78**	**330**	*e*P	**Pn**	**06 20 39.8**	**+1.2**
JNB				*e*S	**Sn**	**06 21 00.6**	**+0.6**
ASAJ	**Asahikawa**	**3.19**	**4**	Pn	**Pn**	**06 20 54.8**	**-3.0**
	0.7nm,0.3s,baz=174,slow=18,SNR=4.6						
ASAJ				Sn	**Sn**	**06 21 31.6**	**-2.9**
	1.5nm,0.3s,baz=334,slow=28,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**29.80**	**128**	T	T	06 57 52.4	
	baz=320,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**29.82**	**128**	T	T	06 57 57.1	
	baz=320,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**29.82**	**128**	T	T	06 57 57.4	
	baz=320,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**30.64**	**130**	T	T	06 58 52.8	
	baz=322,slow=76,SNR=3.8						
H11S3	**WAKE ISLAND Hy**	**30.64**	**130**	T	T	06 58 53.5	
	baz=322,slow=76,SNR=3.4						
H11S2	**WAKE ISLAND Hy**	**30.66**	**130**	T	T	06 58 55.7	
	baz=322,slow=76,SNR=3.0						
ZALV	**Zalesovo Beam**	**39.87**	**309**	P	**P**	**06 27 39.1**	**+0.3**
	0.5nm,0.5s,baz=96,slow=8.8,SNR=1.9 0.5nm,0.5s						
MKAR	**Makanchi Array**	**42.71**	**299**	P	**P**	**06 28 02.5**	**+0.2**
	0.5nm,0.5s,baz=84,slow=8.7,SNR=6.5 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**44.21**	**305**	P	**P**	**06 28 14.5**	**+0.2**
	0.6nm,0.5s,baz=79,slow=9.1,SNR=4.6 0.6nm,0.5s						
BVAR	**Borovoye Array**	**48.50**	**310**	P	**P**	**06 28 47.3**	**-0.6**
	1.1nm,0.3s,baz=84,slow=9.6,SNR=5.5 1.1nm,0.3s						
FINES	**FINESS Array B**	**65.68**	**332**	P	**P**	**06 30 49.8**	**+0.7**
	6.9nm,1.1s,baz=46,slow=8.2,SNR=5.4 6.9nm,1.1s						

FUNV ***13*** *06:34:43.8, 11.°15N×62.°05W, h115km, MW3.5*

TRN ***13*** *06:34:43.3, 11.°15N×62.°12W, h110km, MD3.7, North of the Paria peninsula.*

**ISC 13 06:34:41.9±1.7, 11.°15N±0.°05×62.°15W±0.°07, h119km±15km, n23, σ1s49/

TURN				*i* IAML			06 35 15.0		
	comp=N,162nm,0.2s								
TURN				*i* IAML			06 35 15.0		
	comp=E,250nm,0.2s								
TURN	**Turunc**	**0.53**	**103**	Pg	**Pg**		**06 35 05.1**	**0.0**	
TURN				Sg	**Sb**		**06 35 13.1**	**-0.5**	
YER	**Yerkesik**	**0.59**	**66**	Pg	**Pg**		**06 35 06.4**	**0.0**	
MULA	**Mugla, Merkez-**	**0.68**	**58**	P	**Pb**		**06 35 08.7**	**0.0**	
MULA				S	**Sb**		**06 35 18.2**	**+0.1**	
MULA				*i* IAML			06 35 20.0		
	comp=E,68nm,0.2s								
AYDN	**Tasoluk**	**0.80**	**16**	P	**Pg**		**06 35 10.1**	**-0.1**	
AYDN				S	**Sb**		**06 35 21.7**	**+0.3**	
AYDN				*i* IAML			06 35 22.0		
	comp=E,115nm,0.2s								
AYDN				*i* IAML			06 35 25.0		
	comp=N,88nm,0.3s								
ARG	**Arkhangelos**	**0.80**	**148**	Pg	**Pb**		**06 35 10.5**	**-0.1**	
ARG				Sg	**Sb**		**06 35 22.1**	**+0.7**	
DALY	**Dalyan (Mula)**	**0.85**	**95**	Pg	**Pb**		**06 35 11.2**	**-0.2**	
GCAM	**G?zelcaml?**	**0.86**	**340**	P	**Pn**		**06 35 13.2**	**+0.5**	
GCAM				S	**Sg**		**06 35 22.1**	**-0.4**	
GCAM	**G?zelcaml?**	**0.86**	**340**	Pg	**Pb**		**06 35 11.3**	**-0.3**	
ESEN	**Aydn-Nazilli**	**1.08**	**33**	P	**Pg**		**06 35 14.8**	**-0.8**	
ESEN				S	**Sb**		**06 35 29.8**	**+0.3**	
ESEN				*i* IAML			06 35 33.0		
	comp=N,22nm,0.6s								
ESEN				*i* IAML			06 35 34.0		
	comp=E,27nm,0.3s								
SABU	**Mula-Dalaman**	**1.10**	**93**	P	**Pg**		**06 35 15.2**	**-0.7**	
SABU				S	**Sg**		**06 35 29.8**	**-0.4**	
SABU				*i* IAML			06 35 30.0		
	comp=N,22nm,1.4s								
SABU				*i* IAML			06 35 34.0		
	comp=E,21nm,0.4s								
TAVA	**DENIZLI_Tavas**	**1.19**	**61**	P	**Pn**		**06 35 17.7**	**+0.3**	
TAVA				S	**Sn**		**06 35 34.7**	**+1.0**	
NAZL	**Nazilli-Aydin**	**1.20**	**27**	Pn	**Pg**		**06 35 17.4**	**-0.5**	
KARP	**Karpathos**	**1.39**	**195**	Pn	**Pg**		**06 35 21.2**	**-0.3**	
ODEM	**Odemis-Izmir**	**1.43**	**15**	Pn	**Pn**		**06 35 20.5**	**-0.2**	

*NEIC **13** 06:35:16.0±0.4,36°.274N×0°.006×97°.64W±0°.01,h7km±2km, Error ellipse: s-maj=1.5km s-min=0.7km az=65.0*

NEIC 13 06:35:16.0±0.3,36°.268N±0°.006×97°.64W±0°.01,h6km±2km, mb_Lg2.3/11,ML2.5/31,ML2.6/74,Error ellipse: s-maj=1.2km s-min=0.9km az=110.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.36**	**311**	Pg	**Pg**	06 35 23.2	+0.2
CROK				Sg	**Sg**	06 35 28.5	+0.6
OK029	**Liberty Lake**	**0.49**	**162**	Pg	**Pg**	06 35 26.0	+0.5
OK029				Sg	**Sg**	06 35 32.7	+0.7
OK029				IAML		06 35 33.0	
	357nm,0.3s						
OK048	**Pawnee Station**	**0.58**	**75**	Pg	**Pg**	06 35 27.3	0.0
BLOK	**Blackwell**	**0.60**	**35**	Pg	**Pg**	06 35 27.7	+0.1
BLOK				Sg	**Sg**	06 35 35.8	+0.3
BLOK				IAML		06 35 43.8	
	comp=E,317nm,0.2s						
GC02	**Grant County #**	**0.61**	**344**	Pg	**Pg**	06 35 27.8	0.0
GC02				Sg	**Sg**	06 35 36.1	+0.4
BCOK	**Bluff Creek, N**	**0.61**	**177**	Pg	**Pg**	06 35 28.1	+0.3
BCOK				Sg	**Sg**	06 35 36.6	+0.9
ADOK	**Arcadia Dam**	**0.65**	**160**	Pg	**Pg**	06 35 28.6	0.0
OK051	**E0350 and S346**	**0.69**	**70**	Pg	**Pg**	06 35 29.3	-0.1
OK051				IAML		06 35 48.4	
	comp=E,283nm,0.2s						
KAN14	**Manchester OK**	**0.73**	**340**	Pg	**Pg**	06 35 30.0	-0.1
KAN14				Sg	**Sg**	06 35 40.0	+0.3
OK052	**Battle Ridge R**	**0.73**	**112**	Pg	**Pg**	06 35 30.1	0.0
OK052				Sg	**Sg**	06 35 40.0	+0.4
OK052				IAML		06 35 42.7	
	comp=E,226nm,0.2s						
OK004	**Okla Sci Mus**	**0.76**	**169**	Pb	**Pb**	06 35 31.0	-0.5
OK004				Sg	**Sg**	06 35 41.1	+0.8
KAN13	**South Haven SW**	**0.76**	**10**	Pg	**Pg**	06 35 30.5	-0.1
KAN13				Sg	**Sg**	06 35 40.5	+0.1
QUOK	**Quay**	**0.76**	**97**	Pg	**Pg**	06 35 30.6	0.0
QUOK				Sg	**Sg**	06 35 40.8	+0.3
QUOK				IAML		06 35 41.1	
	comp=N,249nm,2.9s						
QUOK				IAML		06 35 44.1	
	comp=E,185nm,0.2s						
OKCFA	**Oklahoma City**	**0.86**	**169**	Pg	**Pg**	06 35 33.0	+0.4
OKCFA				Sb	**Sb**	06 35 44.6	-0.6
OKCSW	**OKLAHOMA CITY**	**0.88**	**169**	Pg	**Pg**	06 35 32.9	+0.1
OKCSW				Sg	**Sg**	06 35 44.8	+0.6
OKCSW				IAML		06 35 45.1	
	comp=E,221nm,0.7s						
KAN01	**Argonia South**	**0.89**	**354**	Pg	**Pg**	06 35 33.0	0.0
KAN01				Sg	**Sg**	06 35 44.8	+0.1
KAN01				IAML		06 35 45.1	
	comp=E,211nm,0.2s						
OK038	**West end E0370**	**0.91**	**284**	Pg	**Pg**	06 35 33.2	-0.2
OK038				Sg	**Sg**	06 35 45.8	+0.5
KAN08	**Anthony NE Sta**	**0.99**	**345**	Sg	**Sg**	06 35 48.1	+0.1
DEOK	**Depew**	**1.02**	**114**	Pg	**Pg**	06 35 35.1	-0.5
DEOK				IAML		06 35 49.3	
	comp=N,170nm,0.2s						
DEOK				IAML		06 35 52.0	
	comp=E,160nm,0.1s						
FNO	**Franklin**	**1.03**	**169**	IAML		06 35 50.6	
	comp=E,158nm,0.2s						
CSTR	**Hydro, Custer**	**1.05**	**234**	Pg	**Pg**	06 35 36.0	-0.2
NOKA	**Waynoka**	**1.10**	**290**	IAML		06 35 56.5	
	comp=E,165nm,0.3s						
T35A	**Sooner Cattle**	**1.12**	**54**	IAML		06 35 56.2	
	comp=E,138nm,0.3s						
TUL3	**Leonard**	**1.54**	**103**		Pn	06 35 43.7	-0.3
X34A	**Smith Ranch, M**	**1.67**	**185**		Pb	06 35 47.1	0.0
WMOK	**Wichita Mounta**	**1.79**	**212**	IAmb_Lg		06 36 15.3	
	comp=Z,14nm,0.8s						
LOOK	**Love County**	**2.30**	**170**	IAmb_Lg		06 36 32.7	
	comp=Z,29nm,0.9s						
R32A	**Long Quarter,**	**2.31**	**339**	IAmb_Lg		06 36 33.7	
	comp=Z,11nm,0.8s						
SMWD	**Samnorwood**	**2.41**	**242**		Pn	06 35 56.7	+0.6
SMWD				IAmb_Lg		06 36 37.9	
	comp=Z,11nm,0.7s						
DKNS	**Dickens**	**3.74**	**227**	IAmb_Lg		06 37 25.3	
	comp=Z,5.1nm,1.1s						
R40A	**Maddies Statio**	**4.74**	**63**	IAmb_Lg		06 37 45.5	
	comp=Z,9.6nm,0.8s						

*ISK **13** 06:47:19.9,38°.77N×25°.85E,h5km,ML2.5/15*
*AFAD **13** 06:47:21.6,38°.80N×25°.91E,h7km±3km,ML2.3*
*THE **13** 06:47:21.2,39°.N±1°×2°.6E±°,h14km±2km,M2.4/6, MLh2.4/6*
*ATH **13** 06:47:21.3,38°.76N×25°.86E,h8km±2km,ML2.3/6,Manual Solution by I.Dede First location: 2019/11/13 06:47:51, This location: 2019/11/13 06:55:56 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*

ISC 13 06:47:21.3±0.9,38°.77N±0°.02×25°.88E±0°.03,h14km±8km, n45,σ0°967/72,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAG2	**Marmaro, Chios**	**0.29**	**141**	P	**Pg**	**06 47 26.9**	**-0.4**
EAG2				S	**Sg**	**06 47 31.1**	**-0.2**
CHOS	**Chios island**	**0.41**	**160**	Pg	**Pg**	**06 47 29.3**	**-0.1**
CHOS	**Chios island**	**0.41**	**160**	P	**Pg**	**06 47 29.4**	**-0.1**
CHOS				S	**Sg**	**06 47 34.9**	**-0.1**
CHOS	**Chios island**	**0.41**	**160**	P	**Pg**	**06 47 29.4**	**-0.1**
CHOS				S	**Sg**	**06 47 34.9**	**-0.1**
KARB	**zmir-Karabur**	**0.43**	**104**	P	**Pg**	**06 47 29.7**	**-0.2**
KARB				S	**Sg**	**06 47 36.0**	**+0.2**
SIGR	**SIGRI**	**0.44**	**358**	Pg	**Pg**	**06 47 29.8**	**-0.3**
SIGR				Sg	**Sb**	**06 47 36.9**	**-0.6**
SIGR	**SIGRI**	**0.44**	**358**	P	**Pg**	**06 47 30.3**	**+0.1**
SIGR				S	**Sb**	**06 47 37.7**	**+0.2**
SIGR	**SIGRI**	**0.44**	**358**	P	**Pg**	**06 47 30.2**	**+0.1**
SIGR				S	**Sb**	**06 47 37.4**	**0.0**
PRK	**Paraskevi**	**0.57**	**33**	P	**Pg**	**06 47 32.3**	**-0.2**
PRK				S	**Sb**	**06 47 41.9**	**+0.8**
PRK	**Paraskevi**	**0.57**	**33**	P	**Pg**	**06 47 32.2**	**-0.2**
PRK				S	**Sg**	**06 47 40.3**	**+0.2**
GPNR	**Gulpinar-Canak**	**0.72**	**16**	Pg	**Pg**	**06 47 35.0**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**0.72**	**137**	P	**Pg**	**06 47 34.7**	**-0.6**
ZEYE				S	**Sg**	**06 47 44.1**	**-0.7**
ZEYE				*i* IAML		06 47 47.0	
	comp=E,241nm,0.6s						
ZEYE				*i* IAML		06 47 49.0	
	comp=N,207nm,0.5s						
KOCA	**Canakkale, Ayv**	**0.76**	**16**	P	**Pg**	**06 47 35.8**	**-0.3**
KOCA				S	**Sn**	**06 47 48.7**	**-0.4**
KOCA				*i* IAML		06 47 50.0	
	comp=N,276nm,0.6s						
KOCA				*i* IAML		06 47 51.0	
	comp=E,290nm,0.4s						
AYVA	**Ayvalik**	**0.83**	**49**	P	**Pb**	**06 47 38.3**	**+0.8**
AYVA				S	**Sg**	**06 47 48.7**	**+0.3**
AYVA				*i* IAML		06 47 51.0	
	comp=N,148nm,0.3s						
AYVA				*i* IAML		06 47 51.0	
	comp=E,95nm,0.3s						
IZMD	**zmir-Dikili-**	**0.85**	**75**	P	**Pg**	**06 47 37.7**	**-0.1**
IZMD				S	**Sg**	**06 47 48.3**	**-0.7**
DKL	**Dikili**	**0.86**	**69**	Pg	**Pg**	**06 47 38.0**	**+0.1**
ZEDA	**zmir-Bergama**	**0.96**	**78**	P	**Pg**	**06 47 39.4**	**-0.4**
ZEDA				*i* IAML		06 47 52.0	
	comp=N,65nm,0.3s						
ZEDA				S	**Sg**	**06 47 52.7**	**+0.3**
BLCB	**Balcova**	**0.99**	**112**	Pg	**Pg**	**06 47 40.5**	**+0.1**
BLCB	**Balcova**	**0.99**	**112**	P	**Pg**	**06 47 40.0**	**-0.4**
BLCB				S	**Sg**	**06 47 53.5**	**+0.2**
EZNE	**Ezine-Canakkal**	**1.06**	**21**	Pg	**Pg**	**06 47 40.9**	**-0.8**
BOZC	**Bozcaada**	**1.08**	**7**	P	**Pg**	**06 47 41.3**	**-0.8**
BOZC				S	**Sg**	**06 47 55.8**	**-0.5**
BOZC				*i* IAML		06 47 58.0	
	comp=N,74nm,0.4s						
BOZC				*i* IAML		06 47 59.0	
	comp=E,73nm,0.3s						
BOZC	**Bozcaada**	**1.08**	**7**	Pn	**Pg**	**06 47 41.3**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**1.10**	**28**	P	**Pg**	**06 47 42.4**	**-0.2**
BAYC				S	**Sg**	**06 47 57.0**	**+0.1**
EZN	**Ezine**	**1.11**	**18**	Pn	**Pg**	**06 47 42.3**	**-0.4**
EZN	**Ezine**	**1.11**	**18**	P	**Pg**	**06 47 42.1**	**-0.7**
EZN				S	**Sn**	**06 47 58.1**	**+0.4**
BUHA	**Balikesir, Bur**	**1.19**	**52**	P	**Pb**	**06 47 42.9**	**-0.8**
BUHA				S	**Sg**	**06 47 58.5**	**-1.1**
BUHA				*i* IAML		06 48 02.0	
	comp=E,141nm,0.5s						
BUHA				*i* IAML		06 48 03.0	
	comp=N,65nm,0.4s						
LIA	**Limnos Island**	**1.25**	**335**	P	**Pn**	**06 47 43.6**	**-0.8**
LIA				S	**Sb**	**06 48 00.4**	**-0.3**
LIA	**Limnos Island**	**1.25**	**335**	P	**Pg**	**06 47 45.2**	**-0.1**
LIA				S	**Sg**	**06 48 01.3**	**-0.3**
YAYO	**Edremit-Balk**	**1.25**	**47**	Pn	**Pg**	**06 47 45.4**	**-0.1**
SMG	**Samos**	**1.30**	**144**	P	**Pn**	**06 47 44.4**	**-0.7**
SMG				S	**Sb**	**06 48 02.8**	**+0.7**
SMG	**Samos**	**1.30**	**144**	P	**Pn**	**06 47 45.7**	**+0.6**
SMG				S	**Sg**	**06 48 03.4**	**+0.2**
KARY	**Karystos**	**1.35**	**237**	P	**Pb**	**06 47 46.7**	**+0.3**
KARY				S	**Sb**	**06 48 03.9**	**+0.5**
CNKL	**anakkale-Mer**	**1.36**	**17**	P	**Pn**	**06 47 46.3**	**+0.4**
CNKL				S	**Sg**	**06 48 04.8**	**-0.2**
CNKL				*i* IAML		06 48 06.0	
	comp=E,87nm,0.4s						
CNKL				*i* IAML		06 48 07.0	
	comp=N,48nm,0.4s						
KYMI	**Kymi, Euboea I**	**1.40**	**265**	P	**Pg**	**06 47 48.3**	**+0.2**
COMU	**Canakkale**	**1.41**	**19**	Pn	**Pb**	**06 47 47.8**	**+0.4**
GADA	**Gvkgeada**	**1.42**	**1**	Pn	**Pb**	**06 47 47.9**	**+0.3**
CANM	**Can-anakkale**	**1.54**	**36**	Pn	**Pb**	**06 47 49.8**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.56**	**66**	P	**Pn**	**06 47 48.6**	**-0.1**
STEP				S	**Sn**	**06 48 05.9**	**-2.8**
YENI	**Yenice-Canakka**	**1.58**	**42**	Pn	**Pb**	**06 47 50.3**	**0.0**
BALY	**Balya**	**1.67**	**54**	P	**Pg**	**06 47 54.1**	**+0.8**
BALY				S	**Sg**	**06 48 14.6**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.69**	**16**	Pn	**Pn**	**06 47 51.9**	**+1.4**
SMTH	**Samothraki Isl**	**1.72**	**351**	P	**Pg**	**06 47 54.0**	**-0.4**
LPK	**Lapseki**	**1.74**	**23**	Pn	**Pn**	**06 47 52.5**	**+1.3**
GONE	**Gonen-Balikesi**	**1.90**	**47**	Pn	**Pn**	**06 47 55.1**	**+1.8**
KRBG	**Karabiga-Canak**	**1.96**	**34**	Pn	**Pn**	**06 47 55.7**	**+1.5**

*WEL **13** 06:51:53.6±0.8,33°.S±9°×18°.0E±2°.0,h12km,M4.5/7, mB5.0/4,ML4.3/11,MLv4.5/7,Mw(mB)4.3/4,Error ellipse: s-maj=28.5km s-min=3.9km az=113.6,confirmed*
*NOU **13** 06:52:12.8,34°.665S×179°.65W,h330km,mb4.1/7,South of Kermadec Islands*

ISC 13 06:51:48.8±1.6,32°.2S±0°.1×179°.0E±0°.2,h10km,n44, σ2°82/57,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.97**	**42**	S	**Sn**	**06 53 36.4**	**0.0**
GLKZ	**Green Lake**	**3.97**	**42**	P	**Pn**	**06 52 48.4**	**-1.3**
MXZ	**Matakaoa Point**	**5.34**	**186**	P	Pn	06 53 13.9	+5.3
MXZ	**Matakaoa Point**	**5.34**	**186**	P	**Pn**	**06 53 13.1**	**+4.5**
MXZ				S	**Sn**	**06 54 10.9**	**+0.7**
WMGZ	**Waiomatatini S**	**5.59**	**185**	P	**Pn**	**06 53 40.0**	**+4.0**
WMGZ				S	**Sn**	**06 54 16.3**	**0.0**
HAZ	**Te Kaha**	**5.59**	**190**	P	Pn	06 53 17.4	+5.3
HAZ				S	**Sn**	**06 54 17.7**	**+1.3**
PKGZ	**Pakihiroa**	**5.66**	**188**	P	Pn	06 53 18.8	+5.7
RUGZ	**Raukumara Rang**	**5.81**	**191**	P	**Pn**	**06 53 19.9**	**+4.7**
RUGZ				S	**Sn**	**06 54 19.2**	**-2.9**
PUZ	**Puketiti**	**5.85**	**186**	P	**Pn**	**06 53 19.7**	**+4.0**
TWGZ	**Tauwhareparae**	**5.98**	**188**	P	Pn	06 53 22.5	+5.0
TWGZ				S	**Sn**	**06 54 24.4**	**-1.7**
MWZ	**Matawai**	**6.20**	**191**	P	**Pn**	**06 53 24.6**	**+4.1**
MWZ				S	**Sn**	**06 54 29.5**	**-1.9**
URZ	**Urewera**	**6.20**	**194**	P	**Pn**	**06 53 24.8**	**+4.3**
URZ	**Urewera**	**6.20**	**194**	P	**Pn**	**06 53 24.7**	**+4.3**
URZ				S	**Sn**	**06 54 29.7**	**-1.8**
TKGZ	**Te Karaka**	**6.26**	**188**	P	**Pn**	**06 53 25.0**	**+3.8**
TKGZ				S	**Sn**	**06 54 30.6**	**-2.2**
CNGZ	**Carnagh Statio**	**6.26**	**186**	P	**Pn**	**06 53 24.4**	**+3.1**
CNGZ				S	**Sn**	**06 54 32.9**	**0.6**
MUGZ	**Murupara**	**6.49**	**196**	P	**Pn**	**06 53 29.0**	**+4.6**
MUGZ				S	**Sn**	**06 54 40.1**	**+1.7**
RIGZ	**Rimuhau**	**6.53**	**189**	P	**Pn**	**06 53 28.4**	**+3.4**
RIGZ				S	**Sn**	**06 54 36.0**	**-3.5**
SNGZ	**Shannon Statio**	**6.67**	**191**	P	**Pn**	**06 53 30.1**	**+3.3**
SNGZ				S	**Sn**	**06 54 39.5**	**-3.4**
PRGZ	**Paritu Road**	**6.73**	**188**	P	**Pn**	**06 53 30.8**	**+3.0**
PRGZ				S	**Sn**	**06 54 41.1**	**-3.4**
MTHZ	**Maungataniwha**	**6.83**	**194**	P	**Pn**	**06 53 33.0**	**+3.9**
MTHZ				S	**Sn**	**06 54 45.4**	**-1.6**
MHGZ	**Mahia Peninsul**	**6.96**	**187**	P	**Pn**	**06 53 32.0**	**+1.2**
HIZ	**Hauiti**	**7.12**	**207**	P	Pn	06 53 42.4	+9.3
BKZ	**Black Stump Fm**	**7.21**	**196**	P	**Pn**	**06 53 37.0**	**+2.7**
BKZ	**Black Stump Fm**	**7.21**	**196**	P	**Pn**	**06 53 37.1**	**+2.8**
BKZ				S	**Sn**	**06 54 53.3**	**-3.0**
TMVZ	**Te Maari**	**7.37**	**201**	P	**Pn**	**06 53 40.1**	**+3.5**
ETVZ	**East Tongariro**	**7.39**	**200**	P	**Pn**	**06 53 40.6**	**+3.7**
ETVZ				S	**Sn**	**06 55 01.2**	**+0.5**
OTVZ	**Oturere**	**7.42**	**201**	P	**Pn**	**06 53 41.0**	**+3.6**
OTVZ				S	**Sn**	**06 55 04.3**	**+2.5**
SNVZ	**South Ngauruho**	**7.45**	**201**	P	**Pn**	**06 53 41.5**	**+3.7**
KWHZ	**Kaweka Forest**	**7.47**	**196**	P	**Pn**	**06 53 39.7**	**+1.8**
KWHZ				S	**Sn**	**06 55 01.0**	**-1.7**
WNVZ	**Wahianoa**	**7.60**	**201**	P	**Pn**	**06 53 43.2**	**+3.4**
KRHZ	**Kereru**	**7.69**	**195**	P	**Pn**	**06 53 41.8**	**+0.9**
KAHZ	**Kahuranaki**	**7.73**	**192**	P	**Pn**	**06 53 42.6**	**+1.1**
PXZ	**Pawanui**	**7.97**	**192**	P	**Pn**	**06 53 44.1**	**-0.5**
PNHZ	**Pukenui**	**7.99**	**196**	P	**Pn**	**06 53 45.4**	**+0.4**
TSZ	**Takapari Road**	**8.18**	**197**	P	**Pn**	**06 53 48.2**	**+0.6**
PRHZ	**Porangahau**	**8.24**	**193**	P	**Pn**	**06 53 48.4**	**0.0**
BFZ	**Birch Farm**	**8.71**	**194**	P	**Pn**	**06 53 52.8**	**-2.1**
OGWZ	**Otaki Gorge**	**9.10**	**199**	P	**Pn**	**06 53 58.9**	**-1.3**
TMWZ	**Te Maipa**	**9.20**	**195**	P	**Pn**	**06 54 00.2**	**-1.4**
CAW	**Cannon Point**	**9.40**	**199**	P	**Pn**	**06 54 02.1**	**-2.2**
TCW	**Tory Channel**	**9.72**	**202**	P	**Pn**	**06 54 06.6**	**-2.1**
PLWZ	**Palliser**	**9.78**	**197**	P	**Pn**	**06 54 06.8**	**-2.9**
QRZ	**Quartz Range**	**10.03**	**210**	P	**Pn**	**06 54 14.2**	**+1.2**
KHZ	**Kahutara**	**11.05**	**202**	P	**Pn**	**06 54 24.1**	**-2.8**

IDC 13 07:00:22.5±1.1,6°.52N×125°.15E,h0km,mb3.5/5, mbtmp3.5/5,MS2.6/2,Error ellipse: s-maj=27.9km s-min=10.5km az=122.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.69**	**38**	Pg	Pg	07 00 35.2	-0.5
	331nm,0.3s,baz=135,slow=1.5,SNR=16						
DAV				Lg	Lg	07 00 45.8	
	457nm,0.3s,baz=80,slow=22,SNR=7.4						
DAV				LR	LR	07 01 10.8	
	comp=Z,1μm,18.3s,baz=342,slow=70						
GUMO	**Guam**	**20.63**	**69**	LR	LR	07 11 26.1	
	comp=Z,21nm,21.9s,baz=22,slow=32						
WRA	**Warramunga Arr**	**27.81**	**161**	P	P	07 06 12.5	-1.1
	0.3nm,0.7s,baz=341,slow=10,SNR=5.1 0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.16**	**297**	LR	LR	07 17 36.4	
	comp=Z,12nm,18.4s,baz=195,slow=37						
ASAR	**Alice Springs**	**31.20**	**164**	P	P	07 06 44.9	+1.2
	0.3nm,0.5s,baz=343,slow=9.3,SNR=5.3 0.3nm,0.5s						
SONM	**Songino Array**	**44.17**	**342**	P	P	07 08 34.6	+1.5
	0.3nm,0.4s,baz=168,slow=7.4,SNR=2.3 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**58.56**	**327**	P	P	07 10 19.3	-1.5
	0.4nm,0.6s,baz=127,slow=5.5,SNR=4.3 0.4nm,0.6s						
ILAR	**Eielson Array**	**83.27**	**26**	P	P	07 12 51.5	+0.7
	0.6nm,0.9s,baz=258,slow=5.7,SNR=4.2 0.6nm,0.9s						

*IDC **13** 07:02:51.5±3.4,57°.55N×22°.28E,h0km,mbtmp3.1/3, ML2.3/3,Error ellipse: s-maj=42.4km s-min=16.4km az=146.0*
*DNK **13** 07:02:52.1±1.7,57°.51N×22°.06E,h0km,ML3.0,Suspected explosion*
*LVSN **13** 07:02:53.9±2.9,57°.46N×22°.17E,h0km±19km,ML2.9*
*UPP **13** 07:02:56.6±1.3,57°.55N×21°.51E,h0km,ML2.4,Presumed earthquake*

ISC 13 07:02:52.4±0.8,57°.60N±0°.04×21°.94E±0°.03,h0km,n49, σ1°919/57,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.19**	**82**	*e*P	**Pg**	**07 02 56.2**	**+0.1**
SLIT	**Slitere, Latvi**	**0.19**	**82**	*e*P	**Pg**	**07 02 56.5**	**+0.5**
SLIT				*e*S	**Sg**	**07 02 59.2**	**+0.7**
SLIT				AML	AML	07 03 00.3	
	comp=Z,9μm,0.1s						
SLIT				AML	AML	07 03 09.3	
	comp=E,11μm,0.5s						
SLIT				AML	AML	07 03 16.7	
	comp=N,7μm,0.5s						
GOTU	**Gotland**	**1.81**	**274**	P	**Pn**	**07 03 25.4**	**+0.6**
GOTU				S	**Sg**	**07 03 50.9**	**+0.3**
GOTU	**Gotland**	**1.81**	**274**	P	**Pn**	**07 03 25.4**	**+0.6**
GOTU				S	**Sg**	**07 03 50.9**	**+0.3**
VSVD	**Vaisvydziai**	**1.96**	**145**	*e*P	**Pb**	**07 03 27.7**	**-1.2**
PABE	**Paberze**	**2.38**	**151**	*e*P	**Pb**	**07 03 35.3**	**-0.9**
VSU	**Vasula**	**2.69**	**69**	*e*P	**Pn**	**07 03 37.9**	**+1.1**
VSU	**Vasula**	**2.69**	**69**	*e*P	**Pn**	**07 03 36.2**	**-0.6**
VSU				AML	AML	07 03 38.3	
	comp=Z,59nm,0.2s						
VSU				AML	AML	07 04 14.2	
	comp=N,65nm,0.4s						
VSU				AML	AML	07 04 14.2	
	comp=E,59nm,0.2s						
VSU	**Vasula**	**2.69**	**69**	*i* P	**Pn**	**07 03 35.8**	**-1.1**
AAL	**Aland**	**2.77**	**339**	*e*P	**Pn**	**07 03 37.2**	**-0.8**
ARBE	**Arbavere**	**2.81**	**47**	*e*P	**Pn**	**07 03 40.1**	**+1.7**
ARBE	**Arbavere**	**2.81**	**47**	*e*P	**Pn**	**07 03 40.2**	**+1.7**
ARBE				AML	AML	07 04 19.0	
	comp=N,602nm,0.1s						
ARBE				AML	AML	07 04 19.1	
	comp=Z,102nm,0.4s						
ARBE				AML	AML	07 04 20.4	
	comp=E,418nm,0.1s						
VSTU	**Vaestervik**	**2.91**	**273**	P	**Pn**	**07 03 41.1**	**+1.3**
VSTU	**Vaestervik**	**2.91**	**273**	P	**Pn**	**07 03 41.1**	**+1.3**
MEF	**Metsahovi**	**2.92**	**25**	*e*P	**Pn**	**07 03 41.2**	**+1.3**
MEF	**Metsahovi**	**2.92**	**25**	*e*P	**Pn**	**07 03 41.7**	**+1.8**
MEF				*e*S	**Sn**	**07 04 17.6**	**+2.0**
MEF				AML	AML	07 04 20.2	
	comp=E,22nm,0.1s						
MEF				AML	AML	07 04 20.3	
	comp=N,24nm,0.2s						
MEF				AML	AML	07 04 25.4	
	comp=Z,18nm,0.2s						
VIKU	**Vikbolandet**	**2.93**	**290**	P	**Pn**	**07 03 41.8**	**+1.7**
VIKU	**Vikbolandet**	**2.93**	**290**	P	**Pn**	**07 03 41.8**	**+1.7**
ISAL	**Salakas**	**3.08**	**130**	*e*P	**Pn**	**07 03 43.4**	**+1.1**
OSKU	**Oskarshamn**	**3.19**	**265**	P	**Pn**	**07 03 44.7**	**+1.0**
OSKU	**Oskarshamn**	**3.19**	**265**	P	**Pn**	**07 03 44.7**	**+1.0**
IIGN	**Ignalina**	**3.28**	**132**	*e*P	**Pn**	**07 03 45.9**	**+1.0**
RAF	**Rauma**	**3.43**	**359**	*e*P	**Pn**	**07 03 46.6**	**-0.4**
LNKU	**Linkoeping**	**3.49**	**283**	P	**Pn**	**07 03 49.1**	**+

KUR05				⇑S		**Sb**	**07 07 06.3**	**-1.3**
KUR04	**Kurchatov Arra**	**0.68**	**20**	⇓P		**Pb**	**07 06 57.7**	**-0.5**
KUR04				⇓S		**Sb**	**07 07 07.3**	**-0.9**
KURK	**Kurchatov**	**0.75**	**22**	⇓P		**Pg**	**07 06 58.4**	**+0.6**
	0.4nm,0.3s							
KURK				⇓S		**Sb**	**07 07 09.0**	**-1.1**
	3.8nm,0.6s							
MK31	**Makanchi Array**	**4.23**	**138**	Pn		**Pn**	**07 07 49.2**	**+0.1**
	baz=318,slow=11,SNR=7.8							
MK31				⇓Pg		**Pb**	**07 07 59.5**	**+0.8**
	0.2nm,0.3s,baz=327,slow=12,SNR=5.2							
MK31				⇓Lg		Lg	07 08 50.5	
	2.4nm,0.5s,baz=327,slow=26,SNR=12							
MKAR	**Makanchi Array**	**4.23**	**138**	Pn		**Pn**	**07 07 49.0**	**-0.1**
	0.1nm,0.3s,baz=324,slow=9.8,SNR=8.4							
MKAR				Pg		**Pb**	**07 07 57.4**	**-1.3**
	0.2nm,0.3s,baz=324,slow=15,SNR=5.8							
MKAR				Lg		Lg	07 08 50.2	
	0.8nm,0.3s,baz=326,slow=26,SNR=15							
	0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**5.68**	**44**	Pn		**Pn**	**07 08 09.5**	**+0.5**
	0.2nm,0.3s,baz=215,slow=11,SNR=4.3							
	0.3nm,0.2s							
I46RU	**ZALESOVO INFRA**	**5.68**	**44**	I		I	07 40 00.0	
	baz=219,slow=319,SNR=4.3							

IDC ***13*** *07:15:29.1±1.3,49.76N×81.58E,h0km,mbtmp2.6/2, ML2.3/2,Error ellipse: s-maj=17.2km s-min=9.5km az=55.0*

NNC ***13*** *07:15:31.4±4.0,49.70N×81.60E,h0km,mb3.0,mpv2.6, Error ellipse: s-maj=69.9km s-min=13.2km az=49.0, Suspected Mining explosion.*

ISC 13 07:15:27.7±1.2,49.56N±0.08×81.5E±0.1,h0km,n7, σ0s48/8,5C-1D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.17**	**303**	⇑Pn	**Pb**	**07 16 07.8**	**0.0**
	1.0nm,0.5s						
KURK				⇑Sn	**Sg**	**07 16 37.5**	**+0.1**
	3.6nm,0.5s						
KURBB	**Kurchatov Arra**	**2.17**	**300**	Pg	**Pb**	**07 16 07.7**	**-0.2**
	0.4nm,0.3s,baz=112,slow=19,SNR=41						
KURBB				Lg	Lg	07 16 36.0	
	0.6nm,0.3s,baz=109,slow=31,SNR=14						
KURBB				Rg	Rg	07 16 54.5	
	0.7nm,0.4s,baz=102,slow=40,SNR=10						
KURBB	**Kurchatov Arra**	**2.17**	**300**	⇑Pn	**Pb**	**07 16 08.2**	**+0.3**
	4.1nm,0.4s						
KURBB				⇑Sn	**Sg**	**07 16 38.0**	**+0.5**
	11nm,0.3s						
MK31	**Makanchi Array**	**2.82**	**169**	⇑Pn	**Pg**	**07 16 21.1**	**-0.7**
	0.8nm,0.3s,baz=353,slow=12,SNR=28						
MK31				⇓Lg	Lg	07 17 01.1	
	0.9nm,0.3s,baz=352,slow=27,SNR=12						
MKAR	**Makanchi Array**	**2.82**	**169**	Pn	**Pb**	**07 16 19.5**	**+0.6**
	1.3nm,0.3s,baz=346,slow=12,SNR=36						
MKAR				Lg	Lg	07 17 02.0	
	1.3nm,0.3s,baz=355,slow=29,SNR=20						
	1.8nm,0.3s						
I46RU	**ZALESOVO INFRA**	**4.86**	**24**	I	I	07 44 10.0	
	baz=199,slow=328,SNR=1.6						
ZALV	**Zalesovo Beam**	**4.86**	**24**	Pn	**Pn**	**07 16 42.0**	**+0.1**
	0.2nm,0.3s,baz=202,slow=19,SNR=2.0						
ZALV				Lg	Lg	07 17 56.2	
	0.5nm,0.3s,baz=203,slow=28,SNR=7.6						
	0.3nm,0.3s						

CATAC ***13*** *07:15:40.3±0.9,13°N±4°×90°W±°,h10km±4km,M2.8/7, MLv2.8/7,Error ellipse: s-maj=9.9km s-min=8.0km az=31.3, confirmed*

GCG ***13*** *07:15:42.0±0.5,13°.20N×90°.11W,h20km±5km,MD3.5, ML3.1*

SNET ***13*** *07:15:42.3±1.1,13°.17N×90°.01W,h13km,ML2.9*

ISC 13 07:15:40.4±3.6,13°.1N±0°.1×90°.07W±0°.10,h10km±27km, n31,σ0s77/40,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.70**	**4**	P	**Pb**	**07 15 54.5**	**-0.2**
JAYA	**Jayaque - finc**	**0.79**	**50**	*e*P	**Pb**	**07 15 56.2**	**-0.1**
JAYA				*e*S	**Sb**	**07 16 05.8**	**-1.4**
JAYA	**Jayaque - finc**	**0.79**	**50**	*e*P	**Pb**	**07 15 56.6**	**+0.2**
JAYA				*e*S	**Sb**	**07 16 07.8**	**+0.6**
NUBE	**Las Nubes**	**0.81**	**20**	*e*P	**Pb**	**07 15 56.5**	**-0.2**
NUBE				*e*S	**Sb**	**07 16 06.6**	**-1.1**
NUBE	**Las Nubes**	**0.81**	**20**	*i* P	**Pb**	**07 15 56.5**	**-0.2**
NUBE				*e*S	**Sb**	**07 16 07.8**	**+0.1**
NUBE	**Las Nubes**	**0.81**	**20**	S	**Sb**	**07 16 08.4**	**+0.7**
NUBE	**Las Nubes**	**0.81**	**20**	P	**Pb**	**07 15 56.8**	**+0.1**
PMON	**Piamonte**	**0.93**	**52**	*e*P	**Pb**	**07 15 58.5**	**-0.2**
PMON				*e*S	**Sb**	**07 16 10.1**	**-1.0**
PMON	**Piamonte**	**0.93**	**52**	S	**Sb**	**07 16 12.6**	**+1.4**
PMON	**Piamonte**	**0.93**	**52**	P	**Pb**	**07 15 58.8**	**+0.1**
UNIC	**Universidad Ca**	**0.98**	**31**	P	**Pb**	**07 15 59.2**	**-0.3**
UEES	**Universidad Ev**	**0.99**	**55**	*e*P	**Pb**	**07 15 59.8**	**+0.1**
UEES				*e*S	**Sb**	**07 16 12.2**	**-0.7**
UEES	**Universidad Ev**	**0.99**	**55**	S	**Sb**	**07 16 13.8**	**+0.9**
UEES	**Universidad Ev**	**0.99**	**55**	P	**Pb**	**07 16 00.3**	**+0.6**
LOMA	**Loma Larga**	**1.01**	**60**	*e*P	**Pb**	**07 16 00.1**	**+0.1**
LOMA				*e*S	**Sb**	**07 16 12.8**	**-0.6**
LOMA	**Loma Larga**	**1.01**	**60**	S	**Sb**	**07 16 14.9**	**+1.4**
LOMA	**Loma Larga**	**1.01**	**60**	P	**Pb**	**07 16 00.7**	**+0.6**
LFRS	**El Faro**	**1.09**	**64**	*e*P	**Pn**	**07 16 00.9**	**-1.0**
LBRS	**Las Brisas**	**1.16**	**59**	*e*P	**Pn**	**07 16 02.1**	**-0.8**
JUAM	**Asuncion Mita**	**1.24**	**17**	*e*P	**Pn**	**07 16 03.3**	**+0.5**
JUAM				*e*S	**Sb**	**07 16 20.3**	**+0.3**
JUAM				IAML		07 16 21.1	
	comp=N,409nm,0.3s						
TECO	**Alcaldia de Te**	**1.31**	**72**	*e*P	**Pn**	**07 16 03.9**	**-1.0**
TECO				*e*S	**Sn**	**07 16 20.9**	**-1.7**
TECO	**Alcaldia de Te**	**1.31**	**72**	S	**Sn**	**07 16 22.4**	**-0.1**
TECO	**Alcaldia de Te**	**1.31**	**72**	P	**Pn**	**07 16 04.4**	**-0.5**
SCLA	**Alcaldia de Sa**	**1.42**	**67**	*e*P	**Pn**	**07 16 06.8**	**+0.4**
MTO3	**Montecristo**	**1.43**	**29**	*e*P	**Pn**	**07 16 06.7**	**0.0**
MTO3	**Montecristo**	**1.43**	**29**	*i* P	**Pn**	**07 16 06.8**	**+0.2**
LLGN	**La Laguna**	**1.49**	**47**	S	**Sn**	**07 16 27.7**	**+0.7**
ESQI	**Esquipulas**	**1.58**	**27**	S	**Sn**	**07 16 30.2**	**+1.1**
ESQI	**Esquipulas**	**1.58**	**27**	P	**Pn**	**07 16 08.6**	**0.0**
PACA	**Pacayal**	**1.73**	**79**	*e*P	**Pn**	**07 16 12.0**	**+1.3**
APG	**El Apazote**	**1.89**	**348**	*e*P	**Pn**	**07 16 13.2**	**+0.2**

IDC ***13*** *07:21:33.7±1.0,21°.79S×179°.45W,h579km±10km, mb4.0/23,mbtmp4.9/25,Error ellipse: s-maj=10.6km s-min=10.2km az=142.0*

NEIC ***13*** *07:21:33.3±2.3,21°.87S±0°.09×179°.43W±0°.10, h573km±6km,mb4.6/175,Error ellipse: s-maj=13.2km s-min=12.8km az=196.0*

NOU ***13*** *07:21:34.1,21°.90S×179°.38W,h590km,mb4.9/72,Fiji Islands Region*

ISC 13 07:21:33.9±0.3,21°.96S±0°.05×179°.37W±0°.04,h592km, n420,σ1s46/383,mb4.7/124,36C-38D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.86**	**330**		**P**	**07 23 05.5**	**+0.1**
MSVF	**Nonsavu**	**4.86**	**330**	P	**P**	**07 23 05.2**	**-0.2**
MSVF	**Nonsavu**	**4.86**	**330**	S	**S**	**07 24 21.1**	**+1.2**
RIZ	**Raoul Island**	**7.37**	**170**	P	**P**	**07 23 27.0**	**+0.1**
RAO	**Raoul Island**	**7.38**	**170**	P	**P**	**07 23 26.6**	**-0.3**
	598nm,0.4s,baz=262,slow=22,SNR=9.9						
RAO				S	**S**	**07 24 58.1**	**-1.5**
	150nm,0.3s,baz=116,slow=22,SNR=1.7						
RAO	**Raoul Island**	**7.38**	**170**	P	**P**	**07 23 26.9**	**-0.1**
GLKZ	**Green Lake**	**7.39**	**170**	P	**P**	**07 23 26.1**	**-0.9**
GLKZ				S	**S**	**07 24 58.9**	**-0.9**
NIUE	**Niue**	**9.30**	**74**		**P**	**07 23 45.1**	**-0.6**
NIUE	**Niue**	**9.30**	**74**	P	**P**	**07 23 45.3**	**-0.4**
NIUE	**Niue**	**9.30**	**74**	P	**P**	**07 23 44.8**	**-0.9**
NIUE				S	**S**	**07 25 39.5**	**+5.7**
AFI	**Afiamalu**	**10.78**	**43**		**P**	**07 23 57.2**	**-3.4**
AFI	**Afiamalu**	**10.78**	**43**	P	**P**	**07 23 57.2**	**-3.4**
MARNC	**Mare, Loyalty**	**11.72**	**270**		**P**	**07 24 09.3**	**-0.6**
MARNC	**Mare, Loyalty**	**11.72**	**270**	P	**P**	**07 24 09.6**	**-0.3**
MARNC	**Mare, Loyalty**	**11.72**	**270**	S	**S**	**07 26 17.4**	**-0.6**
PINNC	**Pines Island,**	**12.22**	**264**		**P**	**07 24 14.6**	**-0.4**
PINNC	**Pines Island,**	**12.22**	**264**	P	**P**	**07 24 14.7**	**-0.2**
PINNC	**Pines Island,**	**12.22**	**264**	S	**S**	**07 26 28.7**	**+1.4**
YATNC	**Mamie plateau,**	**12.75**	**267**	P	**P**	**07 24 19.5**	**-0.7**
YATNC	**Mamie plateau,**	**12.75**	**267**	S	**S**	**07 26 37.3**	**+0.2**
OUENC	**Ouen Island, N**	**12.78**	**265**	P	**P**	**07 24 20.4**	**-0.2**
ONTNC	**Ouen Toro**	**13.14**	**266**		**P**	**07 24 23.6**	**-0.7**
ONTNC	**Ouen Toro**	**13.14**	**266**	P	**P**	**07 24 23.7**	**-0.6**
DZM	**Mont Dzumac**	**13.16**	**267**	P	**P**	**07 24 23.5**	**-1.1**
	81nm,0.7s,baz=77,slow=20,SNR=62						
DZM				S	**S**	**07 26 45.9**	**+1.0**
	9.3nm,0.9s,baz=340,slow=23,SNR=1.0						
DZM				ScP	**ScP**	**07 31 46.6**	**+3.0**
	10nm,0.9s,baz=44,slow=19,SNR=6.0						
FUNA	**Funafuti**	**13.43**	**354**		**P**	**07 24 25.2**	**-2.1**
FUNA	**Funafuti**	**13.43**	**354**	P	**P**	**07 24 25.7**	**-1.6**
SANVU	**Saraoutou**	**14.27**	**295**	P	**P**	**07 24 35.0**	**-0.6**
OUZ	**Omahuta**	**14.58**	**203**	P	**P**	**07 24 39.8**	**+1.5**
GRZ	**Great Barrier**	**14.93**	**196**	P	**P**	**07 24 42.1**	**+0.5**
WCZ	**Waipu Caves**	**14.97**	**200**	P	**P**	**07 24 43.7**	**+1.8**
KUZ	**Kuaotunu**	**15.34**	**195**	P	**P**	**07 24 46.4**	**+1.1**
KUZ	**Kuaotunu**	**15.34**	**195**	P	**P**	**07 24 46.3**	**+1.0**
WIAZ	**Waiheke Island**	**15.53**	**197**	P	**P**	**07 24 48.7**	**+1.6**
MBAZ	**Motutapu North**	**15.57**	**197**	P	**P**	**07 24 49.4**	**+1.9**
MXZ	**Matakaoa Point**	**15.68**	**187**	P	**P**	**07 24 47.4**	**-1.1**
MXZ				S	**S**	**07 27 22.3**	**-4.9**
MYRZ	**Mayor Island**	**15.73**	**193**	P	**P**	**07 24 50.2**	**+1.2**
ETAZ	**East Tamaki Re**	**15.74**	**197**	P	**P**	**07 24 50.7**	**+1.7**
MKAZ	**Moumakai**	**15.82**	**196**	P	**P**	**07 24 51.2**	**+1.5**
AWAZ	**Awhitu Peninsu**	**15.92**	**198**	P	**P**	**07 24 52.3**	**+1.6**
WMGZ	**Waiomatatini S**	**15.92**	**186**	P	**P**	**07 24 49.3**	**-1.4**
WMGZ				S	**S**	**07 27 25.8**	**-5.3**
HAZ	**Te Kaha**	**15.93**	**188**	P	**P**	**07 24 49.2**	**-1.6**
HAZ				S	**S**	**07 27 25.7**	**-5.6**
PKGZ	**Pakihiroa**	**16.00**	**187**	P	**P**	**07 24 51.8**	**+0.2**
RUGZ	**Raukumara Rang**	**16.15**	**188**	P	**P**	**07 24 51.5**	**-1.5**
RUGZ				S	**S**	**07 27 27.7**	**-7.5**
OPRZ	**Ohinepanea**	**16.22**	**192**	P	**P**	**07 24 54.1**	**+0.7**
TOZ	**Tahuroa Road**	**16.33**	**195**		**P**	**07 24 55.8**	**+1.4**
TOZ	**Tahuroa Road**	**16.33**	**195**	P	**P**	**07 24 55.8**	**+1.4**
OMRZ	**Omania**	**16.50**	**192**	P	**P**	**07 24 56.8**	**+0.6**
URZ	**Urewera**	**16.52**	**190**	P	**P**	**07 24 54.3**	**-1.9**
	100nm,0.5s,baz=348,slow=2.5,SNR=50						
URZ				S	**S**	**07 27 34.7**	**-6.3**
	15nm,0.5s,baz=153,slow=22,SNR=11						
MWZ	**Matawai**	**16.54**	**189**	P	**P**	**07 24 54.5**	**-1.9**
CNGZ	**Carnagh Statio**	**16.60**	**187**	P	**P**	**07 24 56.0**	**-1.0**
TLZ	**Tolley Road**	**16.89**	**194**	P	**P**	**07 25 01.9**	**+2.2**
RTZ	**Ruatahuna**	**16.89**	**190**		**P**	**07 24 58.4**	**-1.3**
HIZ	**Hauiti**	**17.23**	**195**	P	**P**	**07 25 04.0**	**+1.4**
BKZ	**Black Stump Fm**	**17.51**	**191**	P	**P**	**07 25 03.5**	**-1.8**
BKZ	**Black Stump Fm**	**17.51**	**191**	S	**S**	**07 27 58.6**	**+1.4**
RAR	**Rarotonga**	**18.24**	**91**	P	**P**	**07 25 12.1**	**-0.1**
	35nm,0.8s,baz=222,slow=8.4,SNR=5.1						
RAR	**Rarotonga**	**18.24**	**91**	P	**P**	**07 25 12.4**	**+0.3**
RAR	**Rarotonga**	**18.24**	**91**	P	**P**	**07 25 12.6**	**+0.4**
BFZ	**Birch Farm**	**19.03**	**190**	P	**P**	**07 25 18.8**	**-0.2**
BFZ	**Birch Farm**	**19.03**	**190**	P	**P**	**07 25 18.7**	**-0.3**
BFZ	**Birch Farm**	**19.03**	**190**	S	**S**	**07 28 24.0**	**+2.5**
MRZ	**Mangatainoka R**	**19.13**	**192**	P	**P**	**07 25 18.6**	**-1.3**
QRZ	**Quartz Range**	**20.02**	**198**	P	**P**	**07 25 28.3**	**+0.3**
TUWZ	**Tuamarina**	**20.21**	**195**	P	**P**	**07 25 29.1**	**-0.6**
THZ	**Tophouse**	**20.79**	**196**	P	**P**	**07 25 34.0**	**-1.0**
KHZ	**Kahutara**	**21.24**	**195**	P	**P**	**07 25 37.8**	**-1.2**
TARA	**Tarawa**	**24.36**	**341**	P	**P**	**07 26 06.4**	**-0.7**
TARA	**Tarawa**	**24.36**	**341**	P	**P**	**07 26 06.6**	**-0.5**
WHZ	**Wether Hill Ro**	**26.02**	**200**	P	**P**	**07 26 21.8**	**+0.5**
TW1H	**Toowoomba 1 Ha**	**26.58**	**252**	P	**P**	**07 26 27.1**	**+0.6**
EIDS	**Eidsvold**	**27.25**	**257**	P	**P**	**07 26 33.1**	**+0.8**
EIDS	**Eidsvold**	**27.25**	**257**	P	**P**	**07 26 32.8**	**+0.4**
TBI	**Tubuai**	**27.61**	**99**	*e*sS	sS	07 33 29.5	-1.9
	669nm,31.8s						
AUPHS	**Peel High Scho**	**28.05**	**245**	P	**P**	**07 26 40.6**	**+1.3**
PPT2	**Papeete2**	**28.35**	**87**	*e*S	**S**	**07 30 41.0**	**-7.6**
	18nm,22.8s						
PPT2				*e*sS	sS	07 33 34.4	-9.5
	101nm,42.5s						
PPT2				*e*sS	**SS**	**07 33 40.9**	**-14**
	231nm,26.2s						
PPT	**Papeete**	**28.35**	**86**	P	**P**	**07 26 42.9**	**+0.8**
	58nm,0.6s,baz=79,slow=5.6,SNR=9.7						
	58nm,0.6s						
MGCD	**Mangrove Creek**	**28.37**	**240**	P	**P**	**07 26 42.6**	**+0.6**
TIAR	**Tiarei**	**28.57**	**87**	*e*P	**P**	**07 26 44.7**	**+0.8**
	192nm,0.9s						
TVO	**Taravao**	**28.60**	**87**	*e*P	**P**	**07 26 45.9**	**+1.6**
	118nm,1.3s						
SYDH	**Sydney Hard Ro**	**28.82**	**239**	P	**P**	**07 26 47.1**	**+1.3**
AUDCS	**Dubbo College**	**30.17**	**243**	P	**P**	**07 26 58.3**	**+0.8**
AULRC	**Lightning Ridg**	**30.27**	**249**	P	**P**	**07 26 59.1**	**+0.6**
CNB	**Canberra Magne**	**30.36**	**237**	P	**P**	**07 27 00.3**	**+1.1**
AUDAR	**Daramalan Coll**	**30.51**	**237**	P	**P**	**07 27 01.2**	**+0.7**
AUSIS	**Research Schoo**	**30.54**	**237**	P	**P**	**07 27 02.0**	**+1.2**
PMOR	**Pomariorio Ree**	**30.60**	**82**	*e*P	**P**	**07 27 02.1**	**+0.7**
	199nm,1.1s						
AUMTS	**Mt Stromlo**	**30.64**	**237**	P	**P**	**07 27 02.0**	**+0.4**
CAN	**Canberra**	**30.64**	**237**	P	**P**	**07 27 01.7**	**+0.1**
CAN	**Canberra**	**30.64**	**237**	P	**P**	**07 27 01.8**	**+0.2**
VAH	**Vaihoa**	**30.78**	**83**	*e*P	**P**	**07 27 03.2**	**+0.3**
	10nm,0.9s						
CTAO	**Charters Tower**	**32.10**	**267**	P	**P**	**07 27 14.2**	**+0.1**
CTAO	**Charters Tower**	**32.10**	**267**	P	**P**	**07 27 14.3**	**+0.1**
CMSA	**Cobar Meteorol**	**32.51**	**245**	P	**P**	**07 27 17.7**	**+0.3**
QLP	**Quilpie**	**33.42**	**255**	P	**P**	**07 27 25.1**	**-0.1**
MTSU	**Mount Surprise**	**34.27**	**270**	P	**P**	**07 27 32.4**	**-0.1**
PMG	**Port Moresby**	**34.47**	**286**	P	**P**	**07 27 33.7**	**-0.4**
PMG	**Port Moresby**	**34.47**	**286**	P	**P**	**07 27 34.5**	**+0.4**
BRAT	**Ballarat**	**35.19**	**236**	P	**P**	**07 27 41.0**	**+1.3**
STKA	**Stephens Creek**	**36.01**	**246**	P	**P**	**07 27 47.2**	**+0.5**
	25nm,0.6s,baz=92,slow=10,SNR=73						
STKA				S	**S**	**07 32 43.4**	**-1.2**
	2.9nm,0.8s,baz=163,slow=24,SNR=2.9						
	25nm,0.6s						
STKA	**Stephens Creek**	**36.01**	**246**	P	**P**	**07 27 47.0**	**+0.3**
COEN	**Coen**	**36.43**	**276**	P	**P**	**07 27 50.5**	**+0.2**
COEN				IAmb	IAmb	07 27 52.3	
	comp=Z,14nm,0.9s						
COEN	**Coen**	**36.43**	**276**	P	**P**	**07 27 51.3**	**+1.0**
INKA	**Innaminka**	**36.53**	**253**	IAmb	IAmb	07 27 52.8	
	comp=Z,10nm,0.8s						
AUMBR	**Murray Bridge**	**38.35**	**241**	P	**P**	**07 28 05.9**	**+0.3**
HTT	**Hallett**	**38.42**	**244**	P	**P**	**07 28 06.3**	**0.0**
AUJCS	**Jamestown Cent**	**38.66**	**244**	P	**P**	**07 28 08.9**	**+0.7**
WHYH	**Whyalla**	**39.51**	**244**	P	**P**	**07 28 15.3**	**+0.3**
TAOE	**Nuku Hiva Isla**	**39.86**	**77**	P	**P**	**07 28 19.3**	**+1.1**
TAOE	**Nuku Hiva Isla**	**39.86**	**77**	⇑*i*P	**P**	**07 28 18.9**	**+0.7**
	comp=Z,277nm,1.0s						
TAOE	**Nuku Hiva Isla**	**39.86**	**77**	P	**P**	**07 28 19.1**	**+0.9**
BBOO	**Buckleboo**	**40.76**	**245**	P	**P**	**07 28 24.9**	**-0.1**
BBOO				IAmb	IAmb	07 28 25.5	
	comp=Z,39nm,0.9s						
BBOO	**Buckleboo**	**40.76**	**245**	P	**P**	**07 28 24.7**	**-0.3**
AS31	**Alice Springs**	**42.96**	**258**	IAmb	IAmb	07 28 42.7	
	comp=Z,6.1nm,0.7s						
ASAR	**Alice Springs**	**42.96**	**258**	P	**P**	**07 28 42.0**	**-0.4**
	comp=Z,28nm,0.8s,baz=101,slow=7.9,SNR=293						
ASAR				PcP	**PcP**	**07 30 19.3**	**+0.1**
	comp=Z,3.7nm,0.5s,baz=108,slow=3.6,SNR=8.2						
ASAR				ScP	**ScP**	**07 33 17.1**	**+2.6**
	comp=Z,1.6nm,0.7s,baz=103,slow=4.4,SNR=4.6						
ASAR				S	**S**	**07 34 22.8**	**-3.1**
	comp=Z,10nm,0.9s,baz=95,slow=16,SNR=35						
	comp=Z,28nm,0.8s						
ASAR	**Alice Springs**	**42.96**	**258**		**P**	**07 28 41.5**	**-0.9**
AUALC	**St Philip's Co**	**42.97**	**258**	P	**P**	**07 28 42.1**	**-0.4**
WR8	**Warramunga Arr**	**43.00**	**264**	IAmb	IAmb	07 28 43.1	
	comp=Z,15nm,1.0s						
WB0	**Warramunga Arr**	**43.14**	**264**	IAmb	IAmb	07 28 43.6	
	comp=Z,21nm,0.7s						
WRAB	**Tennant Creek**	**43.15**	**264**	P	**P**	**07 28 42.8**	**-1.0**
WRAB				IAmb	IAmb	07 28 43.6	
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**43.15**	**264**	P	**P**	**07 28 42.6**	**-1.2**
WRA	**Warramunga Arr**	**43.15**	**264**	P	**P**	**07 28 42.8**	**-1.1**
	comp=Z,18nm,0.8s,baz=97,slow=7.4,SNR=112						
WRA				PcP	**PcP**	**07 30 19.9**	**0.0**
	comp=Z,2.3nm,0.7s,baz=98,slow=3.7,SNR=2.6						
WRA				ScP	**ScP**	**07 33 18.1**	**+2.7**
	comp=Z,5.8nm,0.9s,baz=96,slow=4.0,SNR=11						
WRA				S	**S**	**07 34 25.4**	**-3.3**
	comp=Z,9.7nm,1.2s,baz=98,slow=13,SNR=6.1						
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**43.15**	**264**		**P**	**07 28 42.5**	**-1.4**
JAY	**Jayapura**	**43.33**	**291**	P	**P**	**07 28 44.6**	**-0.7**
	comp=Z,485nmcomp=Z,54nm,0.9s						
FORT	**Forrest**	**47.55**	**248**		**P**	**07 29 16.6**	**-0.6**
FORT				IAmb	IAmb	07 29 17.3	
	comp=Z,18nm,0.7s						
MTN	**Manton Dam**	**47.92**	**272**	IAmb	IAmb	07 29 19.9	
	comp=Z,14nm,0.6s						
KNRA	**Kununurra**	**49.31**	**268**	IAmb	IAmb	07 29 30.5	
	comp=Z,18nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.58**	**264**		**P**	**07 29 46.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**51.58**	**264**	P	**P**	**07 29 47.1**	**+0.2**
SWI	**Sorong**	**52.41**	**287**	P	**P**	**07 29 52.2**	**-0.6**
SOEI	**Soe**	**55.29**	**273**	P	**P**	**07 30 13.6**	**+0.4**
SOEI	**Soe**	**55.29**	**273**	P	**P**	**07 30 14.4**	**+1.2**
	comp=Z,736nmcomp=Z,72nm,0.6s						
PSA00	**Pilbara Seismi**	**56.10**	**258**	P	**P**	**07 30 17.7**	**-1.0**
PSA00	**Pilbara Seismi**	**56.10**	**258**	IAmb	IAmb	07 30 19.0	
	comp=Z,19nm,1.1s						
KLBR	**Kellerberrin**	**56.29**	**246**	P	**P**	**07 30 19.6**	**-0.1**
MBWA	**Marble Bar**	**56.30**	**259**	P	**P**	**07 30 19.4**	**-0.6**
MBWA				IAmb	IAmb	07 30 20.3	
	comp=Z,21nm,0.8s						
MBWA	**Marble Bar**	**56.30**	**259**	P	**P**	**07 30 19.4**	**-0.6**
VNDA	**Vanda**	**56.35**	**185**	P	**P**	**07 30 21.6**	**+2.2**
	comp=Z,1.2nm,0.5s,baz=3.3,slow=6.8,SNR=22						
	comp=Z,1.2nm,0.5s						
VNDA	**Vanda**	**56.35**	**185**	P	**P**	**07 30 21.5**	**+2.2**
SANI	**Sanana**	**56.63**	**283**	P	**P**	**07 30 21.9**	**-0.4**
SANI	**Sanana**	**56.63**	**283**	P	**P**	**07 30 21.7**	**-0.6**
	comp=Z,39nm,0.9s						
EDFI	**Ende, Flores**	**58.02**	**273**	P	**P**	**07 30 31.1**	**-0.8**
	comp=Z,37nm,1.0s						
BKSI	**Bulukumba**	**60.70**	**276**	P	**P**	**07 30 48.8**	**-0.8**
	comp=Z,20nm,0.8s						
PLAI	**Plampang**	**61.62**	**272**	P	**P**	**07 30 55.4**	**-0.2**
PLAI	**Plampang**	**61.62**	**272**	P	**P**	**07 30 55.0**	**-0.6**
	comp=Z,53nm,1.0s						
TWSI	**Taliwang, Sumb**	**62.48**	**271**	P	**P**	**07 31 00.8**	**-0.4**
	comp=Z,52nm,0.9s						
TOLI2	**Tolitoli**	**62.67**	**283**	IAmb	IAmb	07 31 02.4	
	comp=Z,25nm,1.0s						
TOLI2	**Tolitoli**	**62.67**	**283**	P	**P**	**07 31 01.5**	**-0.9**
MPSI	**Mapaga**	**63.15**	**282**	P	**P**	**07 31 04.7**	**-0.7**
	comp=Z,35nm,1.0s						
PCJI	**Pacitan**	**67.96**	**270**	P	**P**	**07 31 35.3**	**-0.1**
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**07 31 39.2**	**+3.6**
	comp=Z,1.3nm,0.5s,baz=274,slow=1.1,SNR=16						
	comp=Z,1.3nm,0.5s						
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**07 31 39.0**	**+3.4**
UGM	**Wanagama**	**68.67**	**270**	P	**P**	**07 31 39.5**	**-0.2**
JOW	**Kunigami**	**70.14**	**311**	IAmb	IAmb	07 31 49.6	
	comp=Z,30nm,0.8s						
JOW	**Kunigami**	**70.14**	**311**	P	**P**	**07 31 48.8**	**+0.6**
MJAR	**Matsushiro Arr**	**70.64**	**325**	P	**P**	**07 31 50.6**	**-0.4**
	comp=Z,19nm,0.8s,baz=158,slow=6.0,SNR=37						
	comp=Z,19nm,0.8s						
MJAR	**Matsushiro Arr**	**70.64**	**325**	P	**P**	**07 31 50.5**	**-0.4**
MJAR				IAmb	IAmb	07 31 51.2	
	comp=Z,13nm,0.7s						
MAJO	**Matsushiro**	**70.64**	**325**	P	**P**	**07 31 50.7**

comp=Z,18nm,0.9s
HPIG **86.27** **59** IAmb IAmb 07 33 16.5
comp=Z,4.6nm,0.7s
KNK **Knik Glacier** **86.73** **14** IAmb IAmb 07 33 15.9
comp=Z,13nm,0.7s
PMR **Palmer** **86.73** **14** P **P** **07 33 15.4 -0.1**
PMR IAmb IAmb 07 33 15.7
comp=Z,8.8nm,0.6s
PMR **Palmer** **86.73** **14** P **P** **07 33 15.6 +0.1**
LL02 **Futaleuf** **87.18** **136** P **P** **07 33 19.8 +1.5**
LL02 IAmb IAmb 07 33 21.8
comp=Z,12nm,0.9s
BMRM **Bremner River** **87.28** **16** IAmb IAmb 07 33 19.2
comp=Z,18nm,0.9s
SEY **Seymchan** **87.51** **347** P **P** **07 33 19.0 -0.1**
comp=Z,13nm,0.7s,baz=144,slow=4.9,SNR=23
comp=Z,13nm,0.7s
VRDI **Verde Repeater** **87.80** **17** IAmb IAmb 07 33 21.9
comp=Z,14nm,1.1s
N25K **Chitina, Valde** **87.83** **16** IAmb IAmb 07 33 21.9
comp=Z,13nm,0.8s
GRNC **Granite Creek** **87.85** **17** IAmb IAmb 07 33 22.3
comp=Z,16nm,1.0s
GLB **Gilahina Butte** **87.89** **16** IAmb IAmb 07 33 22.0
comp=Z,13nm,0.8s
F10A **Beach Ranch, E** **87.94** **38** IAmb IAmb 07 33 29.2
comp=Z,12nm,1.5s
XAN **Xi'an** **88.01** **308** ⇓P **P** **07 33 23.3 +1.1**
XAN S **S** **07 43 16.1 -0.9**
XAN pmax pmax
comp=Z,26nm,0.8s
XAN pmax pmax
comp=Z,120nm,6.5s
J20K **Nowinta River** **88.08** **11** IAmb IAmb 07 33 22.6
comp=Z,28nm,1.5s
TMUT **Trail Mountain** **88.08** **46** IAmb IAmb 07 33 25.3
comp=Z,4.7nm,0.8s
KTH **Kantishna Hill** **88.11** **12** IAmb IAmb 07 33 22.1
comp=Z,15nm,0.9s
BARN **Barnard Glacie** **88.15** **17** P **P** **07 33 23.1 +0.7**
BARN IAmb IAmb 07 33 23.8
comp=Z,14nm,0.8s
CTGM **Chitina Glacie** **88.16** **18** IAmb IAmb 07 33 23.7
comp=Z,15nm,0.9s
O28M **Mount Upton** **88.33** **18** IAmb IAmb 07 33 24.6
comp=Z,14nm,0.8s
DHY **Denali Highway** **88.43** **14** IAmb IAmb 07 33 26.8
comp=Z,8.3nm,1.2s
Y22A **Socorro** **88.47** **52** IAmb IAmb 07 33 26.8
comp=Z,4.7nm,0.9s
VHRN **Van Horn** **88.53** **56** IAmb IAmb 07 33 27.3
comp=Z,5.6nm,0.8s
MNTX **Cornudas Mount** **88.63** **55** IAmb IAmb 07 33 27.5
comp=Z,5.8nm,0.8s
MCK **McKinley** **88.67** **13** IAmb IAmb 07 33 24.9
comp=Z,17nm,1.0s
M26K **Nabesna, AK** **88.91** **16** IAmb IAmb 07 33 27.1
comp=Z,14nm,1.2s
TX31 **Lajitas Ar. Si** **88.91** **58** IAmb IAmb 07 33 29.4
comp=Z,8.3nm,1.1s
TXAR **Lajitas Array** **88.91** **58** P **P** **07 33 28.4 +1.8**
comp=Z,4.3nm,0.9s,baz=212,slow=6.0,SNR=37
comp=Z,4.3nm,0.9s
BSUT **Blindstream Ca** **89.01** **45** IAmb IAmb 07 33 29.3
comp=Z,4.9nm,0.9s
PLCA **Paso Flores** **89.19** **134** P **P** **07 33 29.8 +2.0**
comp=Z,5.1nm,0.9s,baz=222,slow=4.2,SNR=14
comp=Z,5.1nm,0.9s
PLCA **Paso Flores** **89.19** **134** P **P** **07 33 29.5 +1.7**
PLCA IAmb IAmb 07 33 30.4
comp=Z,5.4nm,0.9s
TASM **ASL Pad, Albuq** **89.31** **52** IAmb IAmb 07 33 30.4
comp=Z,3.2nm,0.9s
TASM **ASL Pad, Albuq** **89.31** **52** IAmb IAmb 07 33 30.4
comp=Z,3.4nm,0.9s
TASM **ASL Pad, Albuq** **89.31** **52** IAmb IAmb 07 33 30.4
comp=Z,3.5nm,0.9s
ABQ **Albuquerque** **89.31** **52** IAmb IAmb 07 33 30.4
comp=Z,3.6nm,1.0s
ANMO **Albuquerque** **89.31** **52** P **P** **07 33 29.5 +1.0**
ANMO IAmb IAmb 07 33 30.4
comp=Z,3.8nm,1.0s
HILR **Hailar Array B** **89.31** **325** P **P** **07 33 28.1 +0.2**
comp=Z,4.4nm,0.7s,baz=134,slow=8.4,SNR=5.2
comp=Z,4.4nm,0.7s
ALPN **Alpine** **89.39** **57** IAmb IAmb 07 33 31.0
comp=Z,7.9nm,0.7s
CMAR **Chiang Mai Arr** **89.41** **290** P **P** **07 33 31.1 +2.0**
comp=Z,13nm,0.8s,baz=135,slow=3.3,SNR=73
comp=Z,13nm,0.8s
CMAR **Chiang Mai Arr** **89.41** **290** **P** **07 33 29.8 +0.8**
K24K **Donnelly Dome** **89.43** **14** IAmb IAmb 07 33 29.0
comp=Z,16nm,0.9s
HHC **Hu-ho-hao-te** **89.46** **315** *e*P **P** **07 33 29.6 +0.7**
HHC pmax pmax
comp=Z,25nm,0.7s
HHC pmax pmax
comp=Z,120nm,6.6s
WRH **Wood River Hil** **89.50** **13** IAmb IAmb 07 33 28.6
comp=Z,10nm,0.8s
CHTO **Chiang Mai** **89.54** **290** **P** **07 33 30.5 +0.8**
CHTO **Chiang Mai** **89.54** **290** P **P** **07 33 30.8 +1.1**
HDA **Harding Lake** **89.69** **13** IAmb IAmb 07 33 30.5
comp=Z,15nm,1.2s
DOT **Dot Lake** **89.69** **15** IAmb IAmb 07 33 30.2
comp=Z,11nm,1.0s
CCB **Clear Creek Bu** **89.72** **13** IAmb IAmb 07 33 29.3
comp=Z,8.1nm,0.6s
IMAR **Indian Mountai** **89.81** **10** P **P** **07 33 29.6 -0.1**
COLA **College** **89.91** **13** P **P** **07 33 29.1 -1.1**
COLA IAmb IAmb 07 33 30.2
comp=Z,11nm,0.7s
COLA **College** **89.91** **13** P **P** **07 33 29.6 -0.6**
SCRK **Sand Creek** **89.99** **15** **P** **07 33 30.4 -0.4**
SCRK IAmb IAmb 07 33 31.7
comp=Z,5.4nm,1.0s
F19K **Shaleruckik Mo** **90.00** **8** IAmb IAmb 07 33 31.2
comp=Z,8.7nm,0.9s
IL31 **90.02** **13** IAmb IAmb 07 33 30.4
comp=Z,7.7nm,1.1s
ILAR **Eielson Array** **90.02** **13** P **P** **07 33 29.9 -0.8**
comp=Z,2.6nm,0.7s,baz=219,slow=4.9,SNR=21
comp=Z,2.6nm,0.7s
ILAR **Eielson Array** **90.02** **13** **P** **07 33 30.2 -0.6**
PZH **PanZhiHua** **90.27** **298** P **P** **07 33 34.0 +1.0**
G21K **Allakaket** **90.34** **10** IAmb IAmb 07 33 33.1
comp=Z,7.1nm,0.8s
BILL **Bilibino** **90.36** **355** **P** **07 33 32.8 +0.5**
F20K **Avaraart Lake** **90.49** **9** IAmb IAmb 07 33 33.8
comp=Z,13nm,1.1s
J26L **Joseph Creek** **90.53** **15** **P** **07 33 33.9 +0.6**
J26L IAmb IAmb 07 33 34.7
comp=Z,12nm,1.0s
L29M **L29M** **90.79** **17** IAmb IAmb 07 33 36.0
comp=Z,7.0nm,1.0s
PDAR **Pinedale Array** **90.90** **44** P **P** **07 33 35.9 +0.2**
comp=Z,0.9nm,0.8s,baz=205,slow=3.6,SNR=8.3
comp=Z,0.9nm,0.8s
I28M **Miner Creek** **92.19** **15** IAmb IAmb 07 33 43.9
comp=Z,7.6nm,1.2s
LZH **Lanzhou** **92.65** **308** *e*P **P** **07 33 45.0 +1.2**
LZH pP PcP 07 33 52.0 +7.9
LZH pmax pmax
comp=Z,24nm,1.2s
LZDM **Lanzhou Array** **92.70** **308** P **P** **07 33 44.5 +0.3**
comp=Z,1.6nm,0.4s,baz=126,slow=7.4,SNR=4.0
comp=Z,1.6nm,0.4s
SONM **Songino Array** **96.02** **319** P **P** **07 33 57.8 -1.0**
comp=Z,0.3nm,0.4s,baz=123,slow=7.3,SNR=4.2
SONM PP **PP** **07 38 02.3 +0.3**
comp=Z,1.4nm,0.8s,baz=99,slow=8.9,SNR=4.4
comp=Z,0.3nm,0.4s
ZALV **Zalesovo Beam** **110.82** **321** PKiKP **PKiKP** **07 38 58.9 -1.3**
comp=Z,1.4nm,0.5s,baz=90,slow=0.8,SNR=8.5
MKAR **Makanchi Array** **111.26** **313** PKiKP **PKiKP** **07 39 00.2 -1.1**
comp=Z,0.6nm,0.4s,baz=205,slow=1.2,SNR=8.3
MKAR PKKPab **PKKPab** **07 50 10.7 +1.0**
comp=Z,0.6nm,0.8s,baz=332,slow=1.8,SNR=4.2
KURBB **Kurchatov Arra** **114.24** **317** PKiKP PKPdf 07 39 05.5 -1.2
comp=Z,1.6nm,0.6s,baz=113,slow=1.7,SNR=13
KURBB PP **PP** **07 40 12.1 -1.9**
comp=Z,0.8nm,0.8s,baz=97,slow=7.1,SNR=4.8
KSH **Kashi** **114.67** **305** P **PKiKP** **07 39 08.5 +0.3**
KSH pmax pmax
comp=Z,5.0nm,0.4s
KK31 **Karatay Array** **119.14** **308** **PKPdf** **07 39 15.8 -0.7**
KKAR **Karatay Array** **119.14** **308** **PKPdf** **07 39 15.7 -0.9**
BVAR **Borovoye Array** **119.36** **319** PKP **PKPdf** **07 39 15.8 -0.7**
comp=Z,5.2nm,0.4s,baz=110,slow=2.1,SNR=28
SPITS **Spitsbergen Ar** **123.23** **356** PKP **PKPdf** **07 39 22.7 -0.7**
comp=Z,8.5nm,0.7s,baz=98,slow=6.3,SNR=11
ARTI **Arti** **125.77** **325** **PKPdf** **07 39 28.3 -0.5**
AB31 **Akbulak array** **126.25** **316** **PKPdf** **07 39 29.6 -0.3**
ARCES **ARCESS Array B** **130.11** **349** PKhKP PKPpre 07 39 24.2
comp=Z,3.2nm,0.9s,baz=333,slow=1.4,SNR=5.9
ARCES PKP sPdif 07 39 35.0 -1.2
comp=Z,6.7nm,0.7s,baz=13,slow=0.8,SNR=18
ARCES SKP **SKPbc** **07 42 06.7 +1.5**
comp=Z,14nm,1.1s,baz=16,slow=4.7,SNR=7.0
FINES **FINESS Array B** **136.79** **342** PKhKP PKPpre 07 39 36.5
comp=Z,1.1nm,0.5s,baz=46,slow=5.5,SNR=5.6
FINES PKP **PKPdf** **07 39 48.5 -0.9**
comp=Z,4.7nm,0.8s,baz=100,slow=5.1,SNR=7.6
FINES SKPbc **SKPbc** **07 42 27.5 +0.3**
comp=Z,7.1nm,0.9s,baz=39,slow=7.3,SNR=6.1
KMBO **Kilima Mbogo** **137.53** **242** SKPbc **SKPbc** **07 42 30.4 -0.8**
comp=Z,1.6nm,0.3s,baz=194,slow=5.3,SNR=3.2
KBZ **Khabaz** **138.95** **312** PKP **PKPdf** **07 39 54.1 +0.3**
comp=Z,1.6nm,0.8s,baz=237,slow=3.7,SNR=4.1
NB2 **NORSAR Subarra** **140.26** **352** PKP PKPpre 07 39 49.1
comp=Z,0.9nm,0.4s,baz=16,slow=3.2
NB2 pPKP **SKPbc** **07 42 37.5 +0.6**
comp=Z,0.8nm,0.7s,baz=16,slow=2.8
NOA **NORSAR Array B** **140.26** **352** PKhKP PKPpre 07 39 49.0
comp=Z,1.6nm,0.6s,baz=15,slow=4.6,SNR=9.6
NOA PKP **PKiKP** **07 39 57.4 -1.1**
comp=Z,1.0nm,0.6s,baz=14,slow=4.0,SNR=3.9
NOA SKPbc **SKPbc** **07 42 37.1 +0.3**
comp=Z,1.4nm,0.7s,baz=16,slow=4.5,SNR=4.0
HFS **Hagfors** **140.76** **350** PKhKP PKPpre 07 39 50.3
comp=Z,5.9nm,0.5s,baz=66,slow=3.6,SNR=42
STRU **Stroemstad** **142.20** **351** *i* P PKPpre 07 39 55.2
TJOU **Tjoern** **143.09** **350** *i* P PKPab 07 39 58.0 -0.7
BORU **Boraas** **143.28** **349** *i* P PKPab 07 39 58.7 -0.8
HOMB **Homborsund** **143.28** **353** *i* P PKPab 07 39 59.4 0.0
SNART **Snartemo** **143.35** **354** *i* P PKPab 07 39 59.4 -0.3
AKASG **Malin Array Be** **143.64** **329** PKP PKPbc 07 39 60.0 -1.1
comp=Z,29nm,0.6s,baz=44,slow=4.3,SNR=164
AKASG SKPbc **SKPbc** **07 42 44.9 -0.6**
comp=Z,2.2nm,0.7s,baz=44,slow=2.0,SNR=9.1
AKASG **Malin Array Be** **143.64** **329** PKPbc 07 40 00.1 -0.9
KIEV **Kiev** **143.65** **329** PKPbc 07 39 60.0 -1.1
KIEV **Kiev** **143.65** **329** ⇓P PKPbc 07 39 59.9 -1.2
ONAU **Onsala** **143.66** **350** *i* P PKPbc 07 39 59.7 -1.1
SUW **Suwalki** **143.72** **338** *e*PKP PKPbc 07 40 00.8 -0.4
FABU **Falkenberg** **143.89** **349** *i* P PKPbc 07 40 00.7 -0.9
DEL **Delary** **144.17** **347** *i* P PKPbc 07 40 01.8 -0.7
RNPP9 **Sopachiv** **144.65** **332** PKP **PKPdf** **07 40 03.5 -0.2**
BJUU **Bjuv** **144.71** **348** *i* P **PKPdf** **07 40 03.5 -0.2**
RNPP8 **Varash** **144.72** **332** PKP **PKPdf** **07 40 03.6 -0.3**
RNPP5 **Staryi Chortor** **144.79** **332** PKP **PKPdf** **07 40 03.8 -0.2**
LUBAR **Lubar, Ukraine** **144.86** **329** PKP **PKPdf** **07 40 04.2 0.0**
LUNU **Lund** **145.04** **347** *i* P **PKPdf** **07 40 04.7 +0.4**
BSD **Bornholm Skovb** **145.20** **346** *i* P **PKPbc** **07 40 05.2 -0.5**
BNN **Bunyan** **145.54** **307** **PKPbc** **07 40 07.4 0.0**
BZK **Bozkurt** **145.68** **313** ⇓P **PKPbc** **07 40 07.3 -0.2**
SORM **Soroca** **145.74** **326** ⇑P **PKPbc** **07 40 07.1 -0.4**
NDNU **Novodnistrovsk** **145.94** **328** PKP **PKPdf** **07 40 06.9 +0.9**
ILGA **Ilgaz** **146.25** **312** **PKPbc** **07 40 09.4 -0.1**
MILM **Milestii Mici** **146.26** **324** *e*PKP **PKPdf** **07 40 07.0 +0.4**
comp=Z,60nm,0.8s
BEL **Belsk** **146.34** **337** *e*PKP **PKPbc** **07 40 09.3 +0.3**
KMPD **K-Podol'skiy** **146.41** **328** PKP **PKPbc** **07 40 08.1 -1.2**
EKA **Eskdalemuir Ar** **146.55** **4** PKPbc **PKPbc** **07 40 09.1 -0.4**
comp=Z,7.2nm,0.8s,baz=317,slow=3.0,SNR=13
BRTR **Keskin Array B** **146.83** **310** PKPbc **PKPbc** **07 40 10.4 -0.6**
comp=Z,9.7nm,0.7s,baz=135,slow=4.5,SNR=43
BRTR **Keskin Array B** **146.83** **310** **PKPbc** **07 40 09.8 -1.1**
BR104 **Keskin Array S** **146.84** **310** PKP **PKPdf** **07 40 08.0 0.0**
BR106 **Keskin Array S** **146.84** **310** PKP **PKPbc** **07 40 09.6 -1.4**
KIRS **Kirsehir-Merke** **146.85** **309** ⇑P **PKPbc** **07 40 10.6 -0.4**
KSV **Kosov** **147.25** **329** PKP **PKPbc** **07 40 10.4 -1.2**
TLCR **147.30** **322** ⇑P **PKPbc** **07 40 11.7 -0.1**
KWP **Kalwaria Pacla** **147.33** **333** *e*PKP **PKPbc** **07 40 11.5 -0.2**
KWP **Kalwaria Pacla** **147.33** **333** PKP **PKPbc** **07 40 10.4 -1.4**
ANTO **Ankara** **147.37** **311** **PKPbc** **07 40 12.5 +0.2**
ANTO **Ankara** **147.37** **311** ⇑P **PKPbc** **07 40 12.0 -0.2**
MMAI **Mount Meron Ar** **147.38** **297** PKPbc **PKPbc** **07 40 13.1 +0.6**
comp=Z,10nm,0.5s,baz=64,slow=5.7,SNR=15
GHRR **147.56** **324** ⇓P **PKPbc** **07 40 13.0 +0.6**
BURAR **Bucovina Array** **147.66** **328** **PKPbc** **07 40 13.2 +0.4**
BURAR **Bucovina Array** **147.66** **328** ⇓P **PKPbc** **07 40 12.9 +0.1**
TESR **Tescani** **147.68** **325** ⇑P **PKPbc** **07 40 12.5 -0.3**
CFR **Carcaliu** **147.69** **322** ⇓P **PKPbc** **07 40 12.7 -0.1**
TPGR **Topolog** **147.72** **322** ⇑P **PKPbc** **07 40 11.5 -1.4**
PANC **Panciu** **147.82** **324** ⇓P **PKPbc** **07 40 13.5 +0.4**
ONER **Baraj Valea Uz** **147.93** **325** ⇑P **PKPbc** **07 40 13.6 +0.2**
OJC **Ojcow** **148.02** **337** *e*PKP **PKPbc** **07 40 13.4 0.0**
VRI **Vrincioaia** **148.05** **324** ⇓P **PKPbc** **07 40 13.6 -0.1**
STHS **Stebnicka Huta** **148.10** **334** *e*PKP **PKPbc** **07 40 13.3 -0.4**
SAHE **Sakarya_HENDEK** **148.29** **313** ⇓P **PKPbc** **07 40 13.7 -0.8**
TURR **Turia** **148.31** **325** ⇓P **PKPab** **07 40 20.8 +0.9**
COVR **Voineasa-Covas** **148.34** **325** ⇑P **PKPbc** **07 40 13.0 -1.5**
OZUR **148.40** **326** ⇑P **PKPbc** **07 40 14.8 +0.2**
NIE **Niedzica** **148.48** **325** *e*PKP **PKiKP** **07 40 14.4 -0.3**
BOSR **Bodos** **148.48** **326** ⇓P **PKiKP** **07 40 15.4 +0.4**
NEHR **Nehoiu** **148.56** **324** ⇓P **PKPbc** **07 40 15.0 0.0**
KSP **Ksiaz** **148.68** **341** *e*PKP **PKPbc** **07 40 15.5 +0.5**
MLR **Muntele Rosu** **148.71** **325** **PKPbc** **07 40 15.2 -0.3**
MLR **Muntele Rosu** **148.71** **325** ⇓P **PKPbc** **07 40 15.3 -0.3**
OSTC **Ostas** **148.95** **341** ⇑*e*PKP **PKiKP** **07 40 16.4 -0.3**
OSTC *e*PKPAB **PKPab** **07 40 23.7 +1.4**
CHVC **Chvalec** **148.97** **341** ⇑*e*PKP **PKPbc** **07 40 16.1 +0.3**
STEB **Steborice** **148.98** **338** ⇑*e*PKP **PKPbc** **07 40 16.1 +0.3**
LANS **Liptovska Anna** **149.02** **336** *e*PKP **PKiKP** **07 40 17.4 +0.5**
LANS *e* 07 40 23.2
UPC **Upice** **149.06** **341** ⇑*e*PKP **PKiKP** **07 40 16.6 -0.3**
CJR **Cluj-Napoca** **149.08** **328** ⇓P **PKPbc** **07 40 16.6 +0.4**
DPC **Dobruska-Polom** **149.10** **340** ⇑*e*PKP **PKiKP** **07 40 16.8 -0.2**
DPC *e*PKPAB **PKPab** **07 40 23.4 +0.4**
KECS **Kecovo** **149.15** **334** *e*PKP **PKiKP** **07 40 17.2 +0.1**
KECS *e* 07 40 23.7
CLL **Collm** **149.16** **345** ⇓*i*PKPbc **PKPbc** **07 40 16.3 +0.1**
comp=Z,39nm,1.0s
CLL ⇑*i*PKPab **PKPab** **07 40 22.8 -0.3**
comp=Z,22nm,0.8s
KRLC **Kraliky** **149.19** **340** *e*PKPAB **PKPab** **07 40 24.0 +0.6**
MORC **Moravsky Berou** **149.19** **338** ⇑P **PKPbc** **07 40 16.6 +0.2**
MORC **Moravsky Berou** **149.19** **338** *e*PKP **PKPbc** **07 40 16.3 -0.1**
VOIR **149.22** **325** ⇑P **PKPbc** **07 40 16.7 0.0**
MARR **Marisel-Cluj** **149.34** **329** ⇓P **PKiKP** **07 40 18.9 +1.2**
MAUC **Maruska** **149.44** **338** ⇑*e*PKP **PKiKP** **07 40 17.7 -0.1**
DRGR **149.45** **329** ⇓P **PKPbc** **07 40 16.6 -0.6**
PVCC **Panska Ves** **149.46** **342** ⇑*e*PKP **PKPbc** **07 40 17.3 +0.3**
ARR **Arges** **149.49** **326** ⇑P **PKiKP** **07 40 18.1 +0.1**
HSKC **Hora Svate Kat** **149.70** **340** ⇓*e*PKP **PKPbc** **07 40 17.8 +0.2**
PSZ **Piszkesteto** **149.84** **334** ⇓P **PKPbc** **07 40 17.9 -0.2**
LOT **Lotru** **149.88** **327** ⇓P **PKPbc** **07 40 17.2 -1.1**
VRAC **Vranov** **149.91** **339** ⇓P **PKPbc** **07 40 18.3 +0.2**
VRAC **Vranov** **149.91** **339** *e*PKP **PKPbc** **07 40 18.2 +0.1**
VRAC *e* 07 40 26.5
JAVC **Velka Javorina** **149.92** **337** *e*PKP **PKiKP** **07 40 19.4 +0.6**
PRU **Pruhonice** **149.95** **342** ⇑*e*PKP **PKPbc** **07 40 18.2 +0.1**
PRU *e*PKPAB **PKPab** **07 40 25.6 -0.9**
PHSR **Pinarhisar** **150.08** **317** ⇑P **PKPbc** **07 40 18.6 -0.1**
KRUC **Moravsky** **150.19** **339** *e*PKP **PKPbc** **07 40 18.7 0.0**
KRUC *e* 07 40 27.8
TREC **Trest** **150.28** **340** ⇑*e*PKP **PKiKP** **07 40 19.3 -0.2**
SIRR **Siria** **150.33** **330** ⇑P **PKiKP** **07 40 19.6 0.0**
ELND **Elena** **150.35** **321** ⇑P **PKPbc** **07 40 19.1 -0.2**
BAND **Balkesir-Ban** **150.37** **315** ⇑P **PKPbc** **07 40 18.7 -0.7**
GZR **Gura Zlata** **150.42** **327** ⇑P **PKPbc** **07 40 19.1 -0.3**
MODS **Modra-Piesok** **150.47** **337** *e*PKP **PKiKP** **07 40 20.3 +0.4**
MODS *e* 07 40 29.7
SURR **Surduc** **150.48** **329** ⇓P **PKPdf** **07 40 13.1 -0.4**
ZVC **Zvikov** **150.55** **342** ⇑*e*PKP **PKiKP** **07 40 19.8 -0.2**
ZVC *e*PKPAB **PKPab** **07 40 29.2 +0.2**
PLVB **Pleven** **150.79** **323** ⇑P **PKPbc** **07 40 20.2 0.0**
BZS **Buzias** **150.83** **329** ⇓P **PKPbc** **07 40 20.1 -0.2**
HERR **Herculane** **150.96** **327** ⇑P **PKPbc** **07 40 20.1 -0.6**
KHC **Kasperske Hory** **151.00** **342** ⇑*e*PKP **PKPbc** **07 40 20.5 -0.1**
KHC *e*PKPAB **PKPab** **07 40 31.4 +0.4**
CKRC **Cesky Krumlov** **151.06** **341** ⇑*e*PKP **PKiKP** **07 40 21.1 0.0**
UCC **Uccle** **151.07** **355** *d*PKPbc **PKPbc** **07 40 20.8 +0.1**
MEM **Membach** **151.10** **353** *d*PKPbc **PKPbc** **07 40 20.5 -0.3**
BTNL **Ternell** **151.11** **353** *d*PKP **PKPbc** **07 40 20.8 0.0**
GERES **GERESS Array B** **151.22** **342** PKPbc **PKPbc** **07 40 21.2 -0.1**
comp=Z,5.6nm,0.7s,baz=35,slow=3.3,SNR=25
GERES PKPab **PKPab** **07 40 32.0 0.0**
comp=Z,2.9nm,0.6s,baz=35,slow=4.9,SNR=7.4
BHOU **Houvegnez** **151.35** **353** *d*PKPbc **PKiKP** **07 40 21.7 +0.1**
BHOU *d*PKPab **PKPab** **07 40 31.9 -0.5**
CONA **Conrad Observa** **151.35** **338** *e*PKP **PKPbc** **07 40 21.4 -0.1**
comp=Z,9.6nm,0.7s
CONA *e*PKP **PKPab** **07 40 33.5 +0.9**
comp=Z,10.0nm,0.7s
BCLA **Clavier** **151.36** **354** *d*PKPbc **PKiKP** **07 40 21.6 0.0**
BCLA *d*PKPab **PKPab** **07 40 32.0 -0.4**
RONA **Rosalia, Austr** **151.39** **338** *e*PKP **PKPbc** **07 40 21.4 -0.1**
comp=Z,8.4nm,0.5s
BGES **Gesves** **151.42** **354** *d*PKPab **PKPab** **07 40 32.1 -0.5**
BMRD **Maredsous** **151.53** **354** *d*PKPbc **PKiKP** **07 40 21.9 0.0**
BMRD *d*PKPab **PKPab** **07 40 33.0 -0.1**
RCHB **Rochefort** **151.63** **354** *d*PKPdf **PKPdf** **07 40 15.2 +0.1**
RCHB *d*PKPbc **PKPbc** **07 40 22.0 0.0**
BLKB **Belogradchik** **151.70** **325** ⇓P **PKPbc** **07 40 22.0 -0.4**
MORH **Mrgy, Hungar** **151.71** **333** ⇓P **PKPbc** **07 40 22.2 -0.1**
DOU **Dourbes** **151.75** **355** *d*PKPbc **PKPbc** **07 40 22.2 0.0**
EZN **Ezine** **151.81** **315** ⇓P **PKPbc** **07 40 22.3 -0.4**
BOVS **Bovan** **152.20** **326** ⇑P **PKPbc** **07 40 22.8 -0.7**
LESA **Schwarzleotal** **152.80** **342** *e*PKP **PKPbc** **07 40 24.4 -0.3**
comp=Z,3.5nm,0.5s
LESA *i* PKP **PKPab** **07 40 39.5 +0.8**
comp=Z,8.0nm,1.1s
BFO **Black Forest** **152.98** **349** **PKPab** **07 40 39.0 -0.4**
WTTA **Wattenberg** **153.24** **343** *e*PKP **PKPbc** **07 40 25.7 -0.1**
comp=Z,8.0nm,0.5s
RETA **Reutte** **153.25** **345** *e*PKP **PKPab** **07 40 40.2 -0.4**
comp=Z,8.0nm,0.7s
MOTA **Moosalm** **153.30** **344** *e*PKP **PKPbc** **07 40 25.8 -0.1**
comp=Z,4.6nm,0.9s
MOTA *e*PKP **PKPab** **07 40 41.1 +0.2**
comp=Z,5.9nm,1.0s
ABTA **Abfaltersbach** **153.46** **342** *i* PKP **PKPbc** **07 40 25.3 -0.9**
comp=Z,0.3nm,0.0s
ABTA *i* PKP **PKPab** **07 40 42.0 +0.4**
comp=Z,9.8nm,0.6s
ESDC **Sonseca Array** **161.91** **11** PKPab **PKPab** **07 41 18.2 -0.1**
comp=Z,1.0nm,0.8s,baz=343,slow=4.5,SNR=5.6
DBIC **Dimbokro** **163.90** **160** PKPab **PKPab** **07 41 28.1 +0.5**
comp=Z,1.0nm,0.5s,baz=233,slow=5.3,SNR=3.7

SNET ***13*** *07:27:15.1±1.2, 13°.01N×88°.87W, h66km, ML2.8*
CATAC ***13*** *07:27:15.4±0.7, 13°N±4°×8°.9W±°, h29km±5km, M3.0/16, MLv3.0/16, Error ellipse: s-maj=9.4km s-min=4.1km az=25.3, confirmed*
ISC 13 07:27:15.2±1.8, 12°.93N±0°.08×88°.90W±0°.04, h28km±13km, n54, σ0°34/67, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TECO	**Alcaldia de Te**	**0.62**	**11**	*e*P	**Pn**	**07 27 28.1**	**-0.2**
TECO				*e*S	**Sn**	**07 27 36.8**	**-0.5**
TECO	**Alcaldia de Te**	**0.62**	**11**	P	**Pn**	**07 27 28.1**	**-0.2**
TECO	**Alcaldia de Te**	**0.62**	**11**	S	**Sn**	**07 27 37.8**	**+0.5**
TECA	**Tecapa**	**0.69**	**35**	*e*P	**Pn**	**07 27 29.2**	**-0.1**
TECA				*e*S	**Sn**	**07 27 39.8**	**+0.6**
LFRS	**El Faro**	**0.71**	**347**	*e*P	**Pn**	**07 27 29.4**	**-0.2**
UESV	**Universidad de**	**0.71**	**9**	*e*P	**Pb**	**07 27 29.3**	**+0.1**
UESV				*e*S	**Sn**	**07 27 39.3**	**-0.4**
UESV	**Universidad de**	**0.71**	**9**	S	**Sn**	**07 27 40.2**	**+0.5**
UESV	**Universidad de**	**0.71**	**9**	P	**Pb**	**07 27 29.4**	**+0.1**
PANCS	**Alcalda de**	**0.73**	**338**	P	**Pb**	**07 27 29.6**	**+0.1**
PANCS	**Alcalda de**	**0.73**	**338**	S	**Sn**	**07 27 40.2**	**+0.1**
LOMA	**Loma Larga**	**0.76**	**340**	*e*P	**Pb**	**07 27 30.1**	**+0.1**
LOMA				*e*S	**Sn**	**07 27 40.9**	**0.0**
LOMA	**Loma Larga**	**0.76**	**340**	S	**Sn**	**07 27 41.7**	**+0.7**
LOMA	**Loma Larga**	**0.76**	**340**	P	**Pn**	**07 27 30.3**	**0.0**
PQSS	**Presa 15 de Se**	**0.77**	**26**	*e*P	**Pb**	**07 27 30.0**	**-0.1**
PQSS	**Presa 15 de Se**	**0.77**	**26**	S	**Sn**	**07 27 41.7**	**+0.7**
LCY	**Lacayo**	**0.77**	**50**	*e*P	**Pn**	**07 27 30.4**	**0.0**
PACA	**Pacayal**	**0.78**	**46**	*e*P	**Pn**	**07 27 30.7**	**+0.1**
PACA				*e*S	**Sn**	**07 27 41.7**	**+0.3**
PACA	**Pacayal**	**0.78**	**46**	P	**Pn**	**07 27 30.6**	**+0.1**
PAVA	**Las Pavas**	**0.78**	**358**	*e*P	**Pb**	**07 27 30.2**	**-0.2**
PAVA				*e*S	**Sn**	**07 27 41.1**	**-0.3**
PAVA	**Las Pavas**	**0.78**	**358**	P	**Pb**	**07 27 30.4**	**0.0**
SCLA	**Alcaldia de Sa**	**0.79**	**12**	*e*P	**Pn**	**07 27 30.2**	**-0.4**
SCLA				*e*S	**Sn**	**07 27 41.6**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.79**	**12**	S	**Sn**	**07 27 42.3**	**+0.7**
SCLA	**Alcaldia de Sa**	**0.79**	**12**	P	**Pn**	**07 27 30.4**	**-0.3**
VSM	**San Miguel**	**0.79**	**51**	*e*P	**Pn**	**07 27 30.8**	**-0.1**
LBRS	**Las Brisas**	**0.82**	**350**	*e*P	**Pn**	**07 27 30.9**	**-0.2**
UDBS	**Universidad Do**	**0.82**	**343**	*e*P	**Pn**	**07 27 30.8**	**-0.2**
UDBS	**Universidad Do**	**0.82**	**343**	S	**Sn**	**07 27 42.7**	**+0.3**
UDBS	**Universidad Do**	**0.82**	**343**	P	**Pb**	**07 27 31.1**	**+0.1**
UTEC	**Universidad Te**	**0.82**	**339**	P	**Pb**	**07 27 31.4**	**+0.3**
UTEC	**Universidad Te**	**0.82**	**339**	S	**Sn**	**07 27 42.6**	**+0.2**
IGN	**Direccin Gen**	**0.82**	**342**	S	**Sn**	**07 27 42.9**	**+0.4**
IGN	**Direccin Gen**	**0.82**	**342**	P	**Pb**	**07 27 31.2**	**+0.1**
UESS	**Universidad de**	**0.84**	**340**	*e*P	**Pb**	**07 27 31.6**	**+0.3**
UESS				*e*S	**Sn**	**07 27 42.7**	**-0.1**
LFU	**La Fuente**	**0.84**	**346**	*e*P	**Pn**	**07 27 31.2**	**-0.2**
UEES	**Universidad Ev**	**0.85**	**337**	*e*P	**Pn**	**07 27 31.4**	**-0.1**
UEES				*e*S	**Sn**	**07 27 43.0**	**-0.1**
UEES	**Universidad Ev**	**0.85**	**337**	P	**Pn**	**07 27 31.4**	**-0.1**
UEES	**Universidad Ev**	**0.85**	**337**	S	**Sn**	**07 27 43.2**	**+0.1**
PMON	**Piamonte**	**0.88**	**333**	*e*P	**Pn**	**07 27 31.6**	**-0.2**
PMON				*e*S	**Sb**	**07 27 43.0**	**-0.4**
PMON	**Piamonte**	**0.88**	**333**	P	**

KK31				⇓Sn		**Sb**	**08 06 39.3**	**+4.8**
	5.7nm,0.3s,baz=168,slow=29,SNR=7.2							
AAK	**Ala-Archa**	**4.22**	**33**	P		**Pb**	**08 05 45.0**	**-4.3**
	SNR=11							
AAK	**Ala-Archa**	**4.22**	**33**	⇓Pn		Pb	08 05 44.5	-4.8
	3.9nm,0.5s							
AAK				⇓Sn		**Sg**	**08 06 45.9**	**-4.6**
	5.3nm,0.5s							
AAK	**Ala-Archa**	**4.22**	**33**	⇑*i*P		**Pn**	**08 05 41.4**	**+2.0**
AAK				⇑*i*S		**Sn**	**08 06 29.6**	**+0.8**
KBK	**Karagaybulak**	**4.44**	**36**	⇓*i*P		**Pn**	**08 05 44.5**	**+2.1**
KBK				⇓*i*S		**Sn**	**08 06 34.8**	**+0.6**
CHMS	**Chumysh**	**4.62**	**32**	P		Pb	08 05 50.5	-5.6
	SNR=7.6							
CHMS	**Chumysh**	**4.62**	**32**	⇓*i*P		**Pn**	**08 05 46.9**	**+2.0**
CHMS				⇓*i*S		**Sn**	**08 06 39.1**	**+0.5**
USP	**Ospenovka**	**4.75**	**29**	P		Pn	08 05 51.5	+4.9
	SNR=9.1							
USP	**Ospenovka**	**4.75**	**29**	⇓*i*P		**Pn**	**08 05 48.6**	**+2.0**
USP				⇓*i*S		**Sn**	**08 06 42.2**	**+0.4**
BOOM	**Boomskoye usch**	**4.82**	**44**	⇓*i*P		**Pn**	**08 05 49.8**	**+2.2**
BOOM				⇓*i*S		**Sn**	**08 06 44.0**	**+0.5**
ULHL	**Ulahol**	**4.83**	**48**	⇓*i*P		**Pn**	**08 05 50.0**	**+2.2**
ULHL				⇓*i*S		**Sn**	**08 06 44.4**	**+0.5**
TKM2	**Tokmak 2**	**4.95**	**39**	P		Pn	08 05 54.7	+5.2
	SNR=6.0							
TKM2	**Tokmak 2**	**4.95**	**39**	⇑*i*P		**Pn**	**08 05 51.4**	**+2.0**
TKM2				⇑*e*S		**Sn**	**08 06 47.1**	**+0.3**
TARG	**Taragay, Kyrgy**	**5.54**	**60**	⇑*i*P		**Pn**	**08 06 00.0**	**+2.2**
TARG				⇑*i*S		**Sn**	**08 07 01.7**	**-0.1**
AB31	**Akbulak array**	**13.01**	**325**	⇓P		**Pn**	**08 07 41.6**	**+1.8**
	0.6nm,0.5s,baz=143,slow=11,SNR=2.7							
AKTO	**Aktyubinsk**	**14.73**	**324**	⇓P		**P**	**08 08 10.2**	**+0.9**
	2.4nm,1.0s							

KRSC 13 08:15:55.9±1.7, 48°25'N×157°04'E, h8km±52km, MI3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**3.22**	**358**	*e*S	Sn	08 17 28.3	+3.0
KDTR	**Khodutka, Kamc**	**3.63**	**10**	*e*P	Pn	08 16 55.3	+3.1
KDTR				*e*S	Sb	08 17 40.2	-4.0
ASAK	**Asacha**	**4.17**	**7**	*e*P	Pn	08 17 03.5	+3.7
MTVR	**Mutnovka**	**4.30**	**9**	*e*P	Pn	08 17 05.2	+3.5
GRL	**Gorelyy**	**4.36**	**8**	*e*P	Pn	08 17 06.2	+3.8
AVH	**Avacha**	**5.14**	**12**	*e*P	Pn	08 17 18.3	+5.3
SDLR	**Sedlovina**	**5.17**	**12**	*e*P	Pn	08 17 17.5	+4.0
KRX	**Arik**	**5.22**	**11**	*e*P	Pn	08 17 18.6	+4.4
MKZ	**Mys Kozlova**	**6.96**	**23**	*e*P	Pn	08 17 43.2	+5.2

*IDC **13** 08:24:11.8±1.8, 55°.49S×25°.62W, h0km, mb3.9/4, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=77.3km s-min=22.6km az=59.0*
*NEIC **13** 08:24:17.4±1.3, 55°.66S±0°.07×25°.9W±0°.2, h35km±2km, mb4.3/16, Error ellipse: s-maj=24.9km s-min=4.8km az=62.0*

ISC 13 08:24:13.4±1.3, 55°.6S±0°.2×25°.9W±0°.2, h10km, n23, σ1s36/22, mb4.2/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.26**	**278**	Pn	**Pn**	**08 25 47.5**	**+1.7**
SNAA	**Sanae**	**18.85**	**157**	P	**Pn**	**08 28 34.6**	**+0.9**
	0.4nm,0.3s,baz=306,slow=12,SNR=6.0						
	2.0nm,0.5s						
SNAA	**Sanae**	**18.85**	**157**	P	**Pn**	**08 28 34.5**	**+0.8**
PMSA	**Palmer Station**	**20.75**	**228**	P	**P**	**08 28 53.8**	**-0.1**
BELA	**Belgrano 2**	**22.57**	**185**	P	**P**	**08 29 10.5**	**-2.8**
SMAI	**San Martin Ant**	**22.58**	**220**	P	**P**	**08 29 13.6**	**+0.1**
SMAI				IAmb	IAmb	08 29 35.2	
	comp=Z,30nm,1.5s						
MG02	**Cerro Sombrero**	**25.21**	**258**	P	**P**	**08 29 37.2**	**-1.7**
QSPA	**South Pole Qui**	**34.64**	**180**	P	**P**	**08 31 04.6**	**+2.1**
	comp=Z,1.7nm,0.6s,baz=230,slow=4.0,SNR=24						
	comp=Z,1.7nm,0.6s						
QSPA	**South Pole Qui**	**34.64**	**180**	P	**P**	**08 31 04.1**	**+1.6**
QSPA				IAmb	IAmb	08 31 05.2	
	comp=Z,2.6nm,0.8s						
MT09	**Talagante**	**37.90**	**286**	P	**P**	**08 31 29.4**	**-1.3**
MT02	**Curacav**	**38.37**	**286**	P	**P**	**08 31 34.4**	**-0.1**
CO02	**Combarbal**	**39.87**	**289**	P	**P**	**08 31 47.7**	**+0.5**
CO02				IAmb	IAmb	08 32 22.2	
	comp=Z,8.0nm,0.9s						
CO03	**El Pedregal**	**39.99**	**289**	P	**P**	**08 31 49.4**	**+1.3**
CO03				IAmb	IAmb	08 32 31.0	
	comp=Z,8.9nm,1.3s						
MAW	**Mawson**	**40.06**	**143**	P	**P**	**08 31 48.5**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=248,slow=5.4,SNR=1.1						
	comp=Z,0.8nm,0.8s						
CO01	**Juntas del Tor**	**40.35**	**291**	P	**P**	**08 31 51.3**	**0.0**
CO01				IAmb	IAmb	08 31 53.8	
	comp=Z,8.3nm,1.5s						
AC05	**El Transito**	**41.35**	**292**	P	**P**	**08 31 60.0**	**+0.5**
AC05				IAmb	IAmb	08 32 29.8	
	comp=Z,8.5nm,1.2s						
VNDA	**Vanda**	**47.04**	**182**	P	**P**	**08 32 43.4**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=193,slow=5.9,SNR=8.7						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**47.04**	**182**	P	**P**	**08 32 44.1**	**-0.2**
GO01	**Chusmiza**	**48.36**	**300**		**P**	**08 32 55.9**	**+0.1**
GO01				IAmb	IAmb	08 33 00.7	
	comp=Z,2.0nm,0.9s						
PB16	**IPOC Station P**	**49.65**	**301**	P	**P**	**08 33 03.3**	**-2.5**
PB16				IAmb	IAmb	08 33 46.9	
	comp=Z,2.4nm,1.1s						
LPAZ	**La Paz**	**50.75**	**303**	P	**P**	**08 33 15.1**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=146,slow=4.7,SNR=16						
	comp=Z,2.1nm,0.6s						
LPAZ	**La Paz**	**50.75**	**303**	IAmb	IAmb	08 33 15.6	
	comp=Z,2.3nm,0.7s						
ILAR	**Eielson Array**	**150.38**	**312**	PKPbc	**PKPbc**	**08 44 02.2**	**-1.2**
	comp=Z,0.9nm,1.0s,baz=109,slow=1.7,SNR=5.7						

RSNC 13 08:24:49.9±0.0, 7°N±1°×77°W±°, h134km±2km, M3.2, mB4.5, mb3.6, ML3.0, Mw(mB)3.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**155**	P	Pn	08 25 08.4	-0.4
BARC				S	Sn	08 25 22.5	-0.5
BRJC	**Barrancabermej**	**0.46**	**287**	P	Pn	08 25 08.9	-0.3
BRJC				S	Sn	08 25 23.8	0.0
PAMC	**Pamplona, Colo**	**0.78**	**50**	P	Pn	08 25 11.8	0.0
PAMC				S	Sn	08 25 28.5	+0.1
RUSC	**La Rusia**	**0.97**	**167**	P	Pn	08 25 12.6	-0.8
RUSC				S	Sn	08 25 30.6	-0.7
PTBC	**PUERTO BERRIO,**	**1.19**	**255**	P	Pn	08 25 13.6	-1.4
PTBC				S	Sn	08 25 32.1	-1.9
OCAC	**Ocana**	**1.39**	**359**	P	Pn	08 25 16.9	-0.4
OCAC				S	Sn	08 25 37.8	-0.3
SPBC	**San Pablo de B**	**1.41**	**213**	P	Pn	08 25 16.4	-1.0
SPBC				S	Sn	08 25 37.1	-1.2
ROSC	**El Rosal**	**2.23**	**207**	P	Pn	08 25 28.8	+1.5
ROSC				S	Sn	08 25 56.2	+0.2
CHIC	**Chingaza**	**2.24**	**191**	P	Pn	08 25 27.2	-0.2
CHIC				S	Sn	08 25 55.3	-0.9
HELC	**Santa Helena**	**2.31**	**254**	P	Pn	08 25 27.8	-0.4
HELC				S	Sn	08 25 57.5	-0.1
UREC	**San Jos de Ur**	**2.39**	**292**	P	Pn	08 25 27.4	-1.6
UREC				S	Sn	08 25 56.9	-2.1
CVER	**Cruz Verde, Cu**	**2.43**	**199**	P	Pn	08 25 30.6	+0.7
CVER				S	Sn	08 26 00.7	+0.2
GUY2C	**Guyana, Caldas**	**2.61**	**232**	P	Pn	08 25 32.3	+0.2
GUY2C				S	Sn	08 26 05.7	+1.2
VILC	**Villavicencio,**	**2.74**	**188**	P	Pn	08 25 32.5	-1.0
VILC				S	Sn	08 26 06.6	-0.4
CBOC	**Ciudad Bolivar**	**2.87**	**250**	P	Pn	08 25 35.1	0.0
CBOC				S	Sn	08 26 08.8	-1.1
DBBC	**Dabeiba**	**2.89**	**274**	P	Pn	08 25 35.0	-0.4
DBBC				S	Sn	08 26 08.7	-1.7
ANIL	**Santa Ana**	**3.13**	**222**	P	Pn	08 25 39.6	+0.9
ANIL				S	Sn	08 26 17.4	+1.0
ARGC	**Ariguani, Magd**	**3.14**	**343**	P	Pn	08 25 39.4	+0.9
ARGC				S	Sn	08 26 19.3	+3.2
SDV	**Santo Domingo**	**3.33**	**52**	P	Pn	08 25 40.6	-0.6
SDV				S	Sn	08 26 18.1	-2.7
PRAC	**Prado**	**3.48**	**207**	P	Pn	08 25 43.0	0.0
PRAC				S	Sn	08 26 23.8	-0.4
ORTC	**Ortega, Tolima**	**3.50**	**214**	P	Pn	08 25 43.6	+0.4
ORTC				S	Sn	08 26 27.0	+2.5
SJCC	**San Jacinto, C**	**3.56**	**329**	P	Pn	08 25 42.0	-2.1
SJCC				S	Sn	08 26 22.3	-3.7
LCBC	**Los crdobas,**	**3.64**	**304**	P	Pn	08 25 44.6	-0.4
LCBC				S	Sn	08 26 27.9	+0.2
URMC	**La Uribe, Meta**	**3.73**	**197**	P	Pn	08 25 47.1	+0.8
URMC				S	Sn	08 26 30.1	+0.1
YOTC	**Yotoco, Valle**	**4.15**	**227**	P	Pn	08 25 50.9	-1.0
YOTC				S	Sn	08 26 39.6	-0.4
CRJC	**Cerrejon, Guaj**	**4.17**	**6**	P	Pn	08 25 50.4	-1.8
CRJC				S	Sn	08 26 38.5	-2.0
SMRC	**Santa Marta, M**	**4.39**	**348**	P	Pn	08 25 54.9	-0.1
SMRC				S	Sn	08 26 42.3	-3.3
PTAC	**Punta Ardita,**	**4.49**	**274**	P	Pn	08 25 53.2	-3.0
PTAC				S	Sn	08 26 47.4	-0.4
MACC	**Macarena, Meta**	**4.70**	**187**	P	Pn	08 25 56.9	-2.2
MACC				S	Sn	08 26 48.8	-4.1
JAMC	**Jamundi, Valle**	**4.92**	**223**	P	Pn	08 26 01.7	-0.6
JAMC				S	Sn	08 26 57.1	-1.5
URIC	**Uribia, Colomb**	**5.00**	**15**	P	Pn	08 26 00.8	-2.3
	530nm12nm,1.0s						
URIC				S	Sn	08 27 00.6	+0.5
	530nm12nm,1.0s						
GARC	**Garzon, Huila**	**5.11**	**205**	P	Pn	08 26 03.8	-1.1
GARC				S	Sn	08 26 59.5	-3.7
POPC	**Popayan, Colom**	**5.44**	**218**	P	Pn	08 26 07.7	-1.5
	5.9nm,0.6s						
POPC				S	Sn	08 27 09.4	-1.5
	5.9nm,0.6s						
FLOC	**Florencia**	**5.72**	**204**	P	Pn	08 26 12.1	-0.8
FLOC				S	Sn	08 27 17.2	-0.4
SGC2	**Sao Gabriel da**	**9.38**	**138**	P	Pn	08 26 59.9	-2.1

*GII **13** 08:25:35.8±0.0, 29°.20N±0°.03×34°.70E±0°.01, h12km, Mws2.3, confirmed*
*SGS **13** 08:25:36.2, 29°.19N×34°.79E, h23km, MI1.8*
*JSO **13** 08:25:36.9±0.0, 29°N±2°×3°5E±°, h12km±2km, M2.5/6, Md3.2/6, ML2.2/6, MLv2.3/6, MLv2.3/6*
*HLW **13** 08:25:36.1, 29°.17N×34°.92E, h21km±1km, MI1.9*

ISC 13 08:25:36.0±1.0, 29°.17N±0°.02×34°.85E±0°.05, h20km±2km, n38, σ0s63/39, 2D, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HBST	**Basata**	**0.11**	**293**	⇓P	**Pb**	**08 25 40.9**	**-1.2**
HAQS	**Haql**	**0.14**	**153**	P	Pb	08 25 51.7	+10
HQLS		**0.23**	**56**	P	**Pb**	**08 25 42.2**	**+0.3**
HQLS		**0.23**	**56**	S	**Sb**	**08 25 46.6**	**+0.6**
JMOS	**Jabal al Moall**	**0.23**	**91**	S	**Sb**	**08 25 47.1**	**+1.2**
JMOS				P	**Pb**	**08 25 42.6**	**+0.7**
HDHB	**Dhahab**	**0.49**	**204**	P	**Pb**	**08 25 46.6**	**+0.6**
EIL	**Elat**	**0.50**	**10**	P	**Pb**	**08 25 46.0**	**-0.1**
EIL	**Elat**	**0.50**	**10**	S	**Sb**	**08 25 53.5**	**+0.4**
BEOR	**Beer Ora**	**0.55**	**13**	P	**Pb**	**08 25 46.8**	**-0.2**
BEOR	**Beer Ora**	**0.55**	**13**	S	**Sb**	**08 25 55.6**	**+1.1**
AQBJ	**Aqaba**	**0.58**	**18**	P	**Pb**	**08 25 47.4**	**-0.2**
MBRI	**Mt Berech**	**0.62**	**5**	P	**Pb**	**08 25 48.1**	**-0.2**
MBRI	**Mt Berech**	**0.62**	**5**	P	**Pb**	**08 25 48.1**	**-0.2**
MBRI	**Mt Berech**	**0.62**	**5**	S	**Sb**	**08 25 57.0**	**+0.3**
ELFZ	**Elifaz**	**0.64**	**13**	P	**Pb**	**08 25 48.9**	**+0.4**
ELFZ	**Elifaz**	**0.64**	**13**	S	**Sn**	**08 25 58.2**	**-1.1**
SAMR	**Samar**	**0.67**	**13**	P	**Pb**	**08 25 48.9**	**-0.3**
SAMR	**Samar**	**0.67**	**13**	S	**Sb**	**08 25 58.7**	**+0.6**
JLOS		**0.71**	**128**	S	**Sb**	**08 26 00.5**	**+1.2**
JLOS		**0.71**	**128**	P	**Pb**	**08 25 50.2**	**+0.3**
BDAS	**Al Bad`**	**0.77**	**163**	P	**Pb**	**08 25 50.8**	**0.0**
BDAS	**Al Bad`**	**0.77**	**163**	S	**Sb**	**08 26 01.5**	**+0.6**
RSHS		**0.87**	**183**	P	**Pb**	**08 25 51.8**	**-0.6**
RSHS		**0.87**	**183**	S	**Sb**	**08 26 03.8**	**+0.1**
HRFI	**Mount Harif**	**0.88**	**11**	P	**Pb**	**08 25 52.6**	**+0.1**
HRFI	**Mount Harif**	**0.88**	**11**	S	**Sb**	**08 26 04.3**	**+0.5**
KRMI	**Paran Flat**	**0.95**	**354**	P	**Pb**	**08 25 53.3**	**-0.5**
HKAT	**Jabal Katrina**	**0.99**	**229**	⇓P	**Pb**	**08 25 54.6**	**0.0**
HKAT				S	**Sn**	**08 26 08.3**	**-0.1**
AYUS	**`Aynunah**	**1.05**	**159**	P	**Pn**	**08 25 54.7**	**-0.9**
KRABS	**KRABS**	**1.13**	**161**	P	**Pn**	**08 25 55.7**	**-0.9**
PRNI	**Paran**	**1.18**	**7**	P	**Pb**	**08 25 57.6**	**-0.1**
PRNI	**Paran**	**1.18**	**7**	P	**Pb**	**08 25 57.7**	**-0.1**
PRNI	**Paran**	**1.18**	**7**	S	**Sn**	**08 26 13.7**	**+0.8**
TR1	**Tor 1**	**1.41**	**214**	P	**Pn**	**08 26 00.7**	**+0.3**
ZFRI	**Zfri**	**1.41**	**12**	P	**Pb**	**08 26 01.0**	**-0.6**
ZFRI	**Zfri**	**1.41**	**12**	S	**Sb**	**08 26 19.8**	**+0.8**
WTBKS	**WTBKS**	**1.43**	**139**	P	**Pn**	**08 26 00.6**	**-0.3**
HRDS	**Abu Rudays**	**1.44**	**252**	⇑P	**Pb**	**08 26 01.6**	**-0.5**

*LVSN **13** 08:41:04.9±4.3, 57°.39N×21°.08E, h0km±26km, ML2.6*
*DNK **13** 08:41:07.0±2.3, 57°.50N×21°.59E, h0km, ML3.0, Suspected explosion*
*UPP **13** 08:41:10.2±1.2, 57°.72N×21°.23E, h0km, ML2.3, Presumed earthquake*

ISC 13 08:41:06.8±0.9, 57°.70N±0°.05×21°.53E±0°.03, h0km, n41, σ1s57/53, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.41**	**99**	*e*P	**Pg**	**08 41 15.7**	**+1.0**
SLIT	**Slitere, Latvi**	**0.41**	**99**	*e*P	**Pg**	**08 41 15.9**	**+1.2**
SLIT				*e*S	**Sb**	**08 41 26.6**	**+2.8**
SLIT				AML	AML	08 41 47.4	
	comp=N,1μm,0.8s						
SLIT				AML	AML	08 41 47.6	
	comp=E,2μm,0.8s						
SLIT				AML	AML	08 41 47.8	
	comp=Z,1μm,0.7s						
GOTU	**Gotland**	**1.59**	**271**	P	**Pn**	**08 41 36.2**	**0.0**
GOTU				S	**Sn**	**08 41 58.3**	**+0.9**
GOTU	**Gotland**	**1.59**	**271**	P	**Pn**	**08 41 36.2**	**-0.1**
GOTU				S	**Sn**	**08 41 58.3**	**+0.9**
NYNU	**Nynaeshamn**	**2.27**	**307**	P	**Pn**	**08 41 47.0**	**+1.4**
NYNU	**Nynaeshamn**	**2.27**	**307**	P	**Pn**	**08 41 47.0**	**+1.4**
BYXU	**Byxelkrok**	**2.48**	**262**	P	**Pn**	**08 41 50.0**	**+1.6**
BYXU	**Byxelkrok**	**2.48**	**262**	P	**Pn**	**08 41 50.0**	**+1.6**
PABE	**Paberze**	**2.58**	**147**	*e*P	**Pn**	**08 41 50.3**	**+0.6**
AAL	**Aland**	**2.61**	**343**	*e*P	**Pn**	**08 41 50.3**	**+0.1**
VSTU	**Vaestervik**	**2.68**	**271**	P	**Pn**	**08 41 52.8**	**+1.6**
VSTU	**Vaestervik**	**2.68**	**271**	P	**Pn**	**08 41 52.8**	**+1.6**
VIKU	**Vikbolandet**	**2.69**	**289**	P	**Pn**	**08 41 52.8**	**+1.6**
VIKU	**Vikbolandet**	**2.69**	**289**	P	**Pn**	**08 41 52.8**	**+1.6**
VSU	**Vasula**	**2.87**	**72**	*e*P	**Pn**	**08 41 54.3**	**+0.6**
VSU	**Vasula**	**2.87**	**72**	*e*P	**Pn**	**08 41 54.2**	**+0.5**
VSU				*e*S	**Sb**	**08 42 33.8**	**-0.5**
VSU				AML	AML	08 42 43.6	
	comp=E,38nm,0.5s						
VSU				AML	AML	08 42 44.2	
	comp=Z,17nm,0.5s						
VSU				AML	AML	08 42 45.2	
	comp=N,35nm,0.4s						
VSU	**Vasula**	**2.87**	**72**	*i*P	**Pn**	**08 41 53.7**	**0.0**
ARBE	**Arbavere**	**2.91**	**51**	*e*P	**Pb**	**08 41 57.9**	**-1.6**
ARBE	**Arbavere**	**2.91**	**51**	*e*P	**Pb**	**08 41 57.9**	**-1.6**
ARBE				*e*S	**Sb**	**08 42 33.9**	**-1.7**
ARBE				AML	AML	08 42 44.0	
	comp=Z,50nm,0.7s						
ARBE				AML	AML	08 42 44.1	
	comp=E,137nm,0.1s						
ARBE				AML	AML	08 42 44.3	
	comp=N,142nm,0.1s						
MEF	**Metsahovi**	**2.93**	**29**	*e*P	**Pn**	**08 41 55.5**	**+0.9**
MEF	**Metsahovi**	**2.93**	**29**	*e*P	**Pn**	**08 41 58.0**	**+3.5**
MEF				*e*S	**Sb**	**08 42 34.5**	**-1.6**
MEF				AML	AML	08 42 38.0	
	comp=Z,8.5nm,0.6s						
MEF				AML	AML	08 42 39.5	
	comp=N,5.9nm,0.1s						
MEF				AML	AML	08 42 46.9	
	comp=E,9.1nm,0.9s						
LNKU	**Linkoeping**	**3.25**	**282**	P	**Pn**	**08 42 00.5**	**+1.4**
LNKU	**Linkoeping**	**3.25**	**282**	P	**Pn**	**08 42 00.5**	**+1.4**
ISAL	**Salakas**	**3.31**	**128**	*e*P	**Pn**	**08 42 00.5**	**+0.7**
RAF	**Rauma**	**3.34**	**2**	*e*P	**Pn**	**08 42 01.2**	**+1.1**
EKSU	**Eksjoe**	**3.35**	**270**	P	**Pn**	**08 42 01.4**	**+1.1**
EKSU	**Eksjoe**	**3.35**	**270**	P	**Pn**	**08 42 01.4**	**+1.1**
VXJU	**Vaexsjoe**	**3.66**	**261**	P	**Pn**	**08 42 05.5**	**+0.9**
VXJU	**Vaexsjoe**	**3.66**	**261**	P	**Pn**	**08 42 05.5**	**+0.9**
ASKU	**Askersund**	**3.74**	**292**	P	**Pn**	**08 42 07.4**	**+1.7**
ASKU	**Askersund**	**3.74**	**292**	P	**Pn**	**08 42 07.4**	**+1.7**
DEL	**Delary**	**4.36**	**257**	*i*P	**Pn**	**08 42 13.7**	**-0.4**
DEL				*i*S	**Sn**	**08 43 04.5**	**-1.1**
BSD	**Bornholm Skovb**	**4.50**	**238**	*i*P	**Pn**	**08 42 15.8**	**-0.2**
BSD				*i*S	**Sn**	**08 43 05.5**	**-3.5**
BORU	**Boraas**	**4.71**	**273**	*i*P	**Pn**	**08 42 20.6**	**+1.7**
BORU				*i*S	**Sn**	**08 43 15.0**	**+0.8**
KEF	**Keuruu**	**4.79**	**19**	*e*P	**Pn**	**08 42 21.1**	**+1.1**
FABU	**Falkenberg**	**4.83**	**265**	*i*P	**Pn**	**08 42 23.7**	**+3.1**
ONAU	**Onsala**	**5.19**	**271**	*i*P	**Pn**	**08 42 26.2**	**+0.7**
ONAU				*i*S	**Sn**	**08 43 28.0**	**+2.0**
TJOU	**Tjoern**	**5.30**	**278**	*i*P	**Pn**	**08 42 28.1**	**+1.0**
TJOU				*i*S	**Sn**	**08 43 25.0**	**-3.8**
VAF	**Ylistaro**	**5.39**	**6**	*e*P	**Pn**	**08 42 29.3**	**+1.0**
STRU	**Stroemstad**	**5.61**	**288**	*i*P	**Pn**	**08 42 32.1**	**+0.7**
STRU				*i*S	**Sn**	**08 43 35.2**	**-1.2**
JOF	**Joensuu**	**7.14**	**39**	*e*P	**Pn**	**08 42 52.3**	**0.0**

*CATAC **13** 08:43:57.0±0.4, 14°N±2°×89°.2W±1°.0, h8km±2km, M1.9/12, MLv1.9/12, Error ellipse: s-maj=3.6km s-min=2.0km az=9.6, confirmed*

SNET 13 08:43:56.9±1.1, 13°.71N×89°.22W, h6km±2km, ML1.6, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UEES	**Universidad Ev**	**0.02**	**289**	*e*P	Pg	08 43 59.6	+1.4
UEES				*e*S	Sg	08 44 00.8	+1.6
UEES	**Universidad Ev**	**0.02**	**289**	P	Pg	08 43 59.2	+0.9
UTEC	**Universidad Te**	**0.02**	**116**	*e*P	Pg	08 43 58.9	+0.6
UTEC	**Universidad Te**	**0.02**	**116**	P	Pg	08 43 58.9	+0.7
UTEC	**Universidad Te**	**0.02**	**116**	S	Sg	08 44 00.3	+1.2
UESS	**Universidad de**	**0.02**	**63**	*e*P	Pg	08 43 59.0	+0.7
UESS				*e*S	Sg	08 44 00.4	+1.2
PIC2	**El Picacho**	**0.05**	**315**	*e*P	Pg	08 43 59.5	+0.8
PIC2				*e*S	Sg	08 44 00.9	+1.0
IGN	**Direccin Gen**	**0.05**	**86**	*e*P	Pg	08 43 59.2	+0.7
IGN				*e*S	Sg	08 44 00.1	+0.5
IGN	**Direccin Gen**	**0.05**	**86**	P	Pg	08 43 59.4	+0.9
BOQS	**Boqueron**	**0.06**	**293**	*e*P	Pg	08 43 59.4	+0.6
BOQS				*e*S	Sg	08 44 01.4	+1.3
UDBS	**Universidad Do**	**0.06**	**85**	*e*P	Pg	08 43 59.5	+0.9
UDBS				*e*S	Sg	08 44 01.2	+1.3
UDBS	**Universidad Do**	**0.06**	**85**	P	Pg	08 43 59.6	+1.0
MAGS	**Ministerio de**	**0.07**	**248**	*e*P	Pg	08 43 59.4	+0.7
MAGS				*e*S	Sg	08 44 00.9	+0.8
MAGS				IAML		08 44 02.3	
	comp=Z,319nm,0.1s						
LOMA	**Loma Larga**	**0.08**	**143**	*e*P	Pg	08 43 59.5	+0.6
LOMA				*e*S	Sg	08 44 01.7	+1.4
PMON	**Piamonte**	**0.09**	**271**	*e*P	Pg	08 43 59.8	+0.8
PMON	**Piamonte**	**0.09**	**271**	P	Pg	08 43 59.9	+0.8
PMON	**Piamonte**	**0.09**	**271**	S	Sg	08 44 01.9	+1.3
PANCS	**Alcalda de**	**0.11**	**158**	P	Pg	08 43 59.8	+0.5
PANCS	**Alcalda de**	**0.11**	**158**	S	Sg	08 44 01.8	+0.9
LFU	**La Fuente**	**0.11**	**70**	*e*P	Pg	08 44 00.3	+0.9
LFU				*e*S	Sg	08 44 01.7	+0.6
QUEZ	**Alcaldia de Qu**	**0.13**	**338**	*e*P	Pg	08 44 00.6	+0.8
LBRS	**Las Brisas**	**0.17**	**81**	*e*P	Pg	08 44 01.4	+0.9
LFRS	**El Faro**	**0.18**	**119**	*e*P	Pg	08 44 01.4	+0.9
JAYA	**Jayaque - finc**	**0.23**	**256**	*e*P	Pg	08 44 02.5	+1.0
JAYA				*e*S	Sg	08 44 05.7	+1.2
JAYA				IAML		08 44 07.0	
	comp=Z,157nm,0.2s						
JAYA	**Jayaque - finc**	**0.23**	**256**	P	Pg	08 44 02.2	+0.8
PAVA	**Las Pavas**	**0.28**	**89**	*e*P	Pg	08 44 03.3	+0.9
PAVA				IAML		08 44 08.4	
	comp=Z,78nm,0.2s						
PAVA	**Las Pavas**	**0.28**	**89**	S	Sb	08 44 08.0	-1.3
PAVA	**Las Pavas**	**0.28**	**89**	P	Pb	08 44 03.4	-0.9
UNIC	**Universidad Ca**	**0.42**	**310**	S	Sg	08 44 11.9	+1.4
UNIC	**Universidad Ca**	**0.42**	**310**	P	Pg	08 44 05.3	+0.3
TECO	**Alcaldia de Te**	**0.46**	**112**	P	Pg	08 44 06.4	+0.6
TECO	**Alcaldia de Te**	**0.46**	**112**	S	Sg	08 44 13.0	+1.1
SCLA	**Alcaldia de Sa**	**0.48**	**91**	P	Pb

NEIC ***13*** *08:56:27.3±1.4, 4.78S±0.07×144.68E±0.08, h71km±7km, mb4.5/23, Error ellipse: s-maj=12.3km s-min=8.7km az=49.0*

ISC 13 08:56:27.8±0.6, 4.80S±0.07×144.66E±0.08, h82km, n42, σ1°03/41, mb4.3/16, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.85**	**45**		**Pn**	**08 57 25.2**	**+0.6**
JAY	**Jayapura**	**4.55**	**300**	P	**Pn**	**08 57 33.0**	**-1.3**
	2.6nm,0.3s,baz=126,slow=14,SNR=7.4						
JAY				S	**Sn**	**08 58 25.3**	**-0.8**
	12nm,0.7s,baz=208,slow=23,SNR=1.6						
JAY				LR	LR	08 59 48.8	
	comp=Z,40nm,20.2s,baz=35,slow=44						
	12nm,0.8s						
PMG	**Port Moresby**	**5.20**	**152**	P	**Pn**	**08 57 42.4**	**-0.8**
	24nm,0.3s,baz=328,slow=9.5,SNR=14						
PMG				S	**Sn**	**08 58 39.7**	**-2.2**
	23nm,0.4s,baz=134,slow=23,SNR=6.1						
PMG				LR	LR	09 00 13.7	
	comp=Z,154nm,21.3s,baz=327,slow=44						
PMG	**Port Moresby**	**5.20**	**152**		**Pn**	**08 57 42.6**	**-0.6**
COEN	**Coen**	**9.22**	**189**		**Pn**	**08 58 39.7**	**+1.8**
CTAO	**Charters Tower**	**15.28**	**174**	Pn	**Pn**	**08 59 59.5**	**+0.6**
WB0	**Warramunga Arr**	**17.93**	**213**		**P**	**09 00 31.1**	**-0.3**
WB0				IAmb	IAmb	09 00 33.0	
	comp=Z,17nm,0.8s						
WR8	**Warramunga Arr**	**18.02**	**212**		**Pn**	**09 00 32.2**	**-0.7**
WR8				IAmb	IAmb	09 00 33.7	
	comp=Z,19nm,0.7s						
WRAB	**Tennant Creek**	**18.09**	**213**	P	**P**	**09 00 32.3**	**-0.7**
WRAB				IAmb	IAmb	09 00 34.9	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**18.10**	**213**	P	**P**	**09 00 33.0**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=36,slow=12,SNR=55						
	comp=Z,17nm,0.8s						
GUMO	**Guam**	**18.27**	**1**	LR	LR	09 06 18.5	
	comp=Z,26nm,18.3s,baz=154,slow=33						
EIDS	**Eidsvold**	**21.36**	**164**	P	**P**	**09 01 08.0**	**-0.6**
EIDS				IAmb	IAmb	09 01 09.7	
	comp=Z,30nm,1.4s						
AS31	**Alice Springs**	**21.43**	**208**		**P**	**09 01 08.9**	**-0.5**
ASAR	**Alice Springs**	**21.43**	**208**	P	**P**	**09 01 09.1**	**-0.3**
	comp=Z,3.6nm,0.7s,baz=34,slow=10,SNR=43						
ASAR				PcP	**PcP**	**09 05 10.2**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=52,slow=1.9,SNR=2.1						
ASAR				LR	LR	09 09 36.6	
	comp=Z,46nm,21.1s,baz=309,slow=37						
	comp=Z,3.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.81**	**233**		**P**	**09 01 23.8**	**-0.2**
STKA	**Stephens Creek**	**27.09**	**186**	LR	LR	09 14 54.2	
	comp=Z,78nm,20.9s,baz=26,slow=41						
JOW	**Kunigami**	**35.22**	**334**	LR	LR	09 15 53.1	
	comp=Z,37nm,18.2s,baz=184,slow=33						
ASAJ	**Asahikawa**	**48.73**	**358**	LR	LR	09 26 44.1	
	comp=Z,19nm,19.1s,baz=356,slow=37						
CMAR	**Chiang Mai Arr**	**50.63**	**298**	P	**P**	**09 05 19.7**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=122,slow=6.5,SNR=5.5						
	comp=Z,1.1nm,0.4s						
VNDA	**Vanda**	**73.25**	**176**	P	**P**	**09 07 50.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=332,slow=4.9,SNR=4.0						
	comp=Z,0.6nm,0.8s						
MKAR	**Makanchi Array**	**75.10**	**321**	P	**P**	**09 08 00.7**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=108,slow=7.8,SNR=6.3						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**76.77**	**328**	P	**P**	**09 08 08.8**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=150,slow=3.3,SNR=3.9						
	comp=Z,0.5nm,0.5s						
BOOM	**Boomskoye usch**	**77.79**	**315**	P	**P**	**09 08 16.9**	**+0.4**
KURK	**Kurchatov**	**78.87**	**324**	P	**P**	**09 08 20.6**	**-1.4**
L19K	**White Mountain**	**80.97**	**24**	P	**P**	**09 08 34.1**	**+1.0**
G18K	**Tagagawik**	**81.43**	**20**	P	**P**	**09 08 36.3**	**+0.8**
G18K				IAmb	IAmb	09 08 37.2	
	comp=Z,7.1nm,1.1s						
E19K	**Redstone River**	**82.74**	**19**	P	**P**	**09 08 43.3**	**+1.0**
E19K				IAmb	IAmb	09 09 27.6	
	comp=Z,12nm,1.3s						
D19K	**Kuna River**	**83.01**	**18**	P	**P**	**09 08 43.5**	**-0.2**
TRF	**Thorofare Moun**	**83.42**	**24**	P	**P**	**09 08 45.4**	**-0.7**
E22K	**Anaktuvuk Pass**	**84.88**	**20**	P	**P**	**09 08 53.8**	**+0.6**
QSPA	**South Pole Qui**	**85.16**	**180**	P	**P**	**09 08 57.8**	**+3.0**
	comp=Z,2.0nm,0.8s,baz=10,slow=8.8,SNR=8.6						
	comp=Z,2.0nm,0.8s						
QSPA	**South Pole Qui**	**85.16**	**180**	P	**P**	**09 08 56.0**	**+1.1**
QSPA				IAmb	IAmb	09 09 00.7	
	comp=Z,2.8nm,0.9s						
N25K	**Chitina, Valde**	**85.18**	**27**	P	**P**	**09 08 55.6**	**+0.7**
N25K				IAmb	IAmb	09 09 34.5	
	comp=Z,7.1nm,0.9s						
IL31		**85.31**	**24**	P	**P**	**09 08 54.7**	**-0.7**
IL31				IAmb	IAmb	09 08 58.1	
	comp=Z,4.6nm,1.4s						
ILAR	**Eielson Array**	**85.31**	**24**	P	**P**	**09 08 54.2**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=252,slow=5.0,SNR=17						
	comp=Z,1.8nm,0.7s						
TOLK	**Toolik Lake Re**	**85.84**	**20**	P	**P**	**09 08 58.8**	**+0.7**
TOLK				IAmb	IAmb	09 09 00.4	
	comp=Z,7.0nm,1.2s						
F24K	**Squaw Lake**	**85.97**	**21**	P	**P**	**09 08 59.7**	**+1.0**
F24K				IAmb	IAmb	09 09 32.9	
	comp=Z,6.3nm,1.2s						
C23K	**Itkillik River**	**86.01**	**18**	P	**P**	**09 09 00.2**	**+1.5**
C23K				IAmb	IAmb	09 09 33.8	
	comp=Z,10nm,1.4s						
J30M	**Hart River**	**89.60**	**25**	P	**P**	**09 09 16.1**	**-0.1**
J30M				IAmb	IAmb	09 09 30.4	
	comp=Z,2.9nm,1.2s						
PLCA	**Paso Flores**	**124.38**	**148**	PKP	**PKiKP**	**09 15 19.0**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=150,slow=4.4,SNR=3.8						
SIV	**San Ignacio**	**147.21**	**130**	PKPbc	**PKPab**	**09 16 03.5**	**-1.0**
	comp=Z,6.3nm,0.6s,baz=252,slow=2.6,SNR=46						
DBIC	**Dimbokro**	**149.62**	**275**	PKPbc	**PKiKP**	**09 16 09.7**	**-0.3**
	comp=Z,6.8nm,0.6s,baz=100,slow=1.9,SNR=8.6						

IDC ***13*** *08:57:44.6±8.2, 17.98S×168.52E, h168km±44km, mb3.9/4, mbtmp4.3/5, Error ellipse: s-maj=127.6km s-min=48.7km az=93.0*

NEIC ***13*** *08:57:44.4±0.5, 17.94S±0.04×168.6E±0.2, h154km±18km, mb4.4/7, Error ellipse: s-maj=24.7km s-min=4.5km az=80.0*

ISC 13 08:57:41.8±2.8, 17.92S±0.08×168.8E±0.3, h150km, n15, σ1°40/15, mb4.4/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.87**	**329**	Pn	**Pn**	**08 58 29.4**	**+1.9**
MARNC	**Mare, Loyalty**	**3.61**	**191**		**Pn**	**08 58 37.5**	**+0.6**
DZM	**Mont Dzumac**	**4.66**	**207**	P	**Pn**	**08 58 53.0**	**+2.2**
	11nm,0.4s,baz=63,slow=18,SNR=34						
DZM				S	**Sn**	**08 59 44.8**	**+0.2**
	4.6nm,0.3s,baz=96,slow=19,SNR=1.5						
PINNC	**Pines Island,**	**4.83**	**194**	Pn	**Pn**	**08 58 54.3**	**+1.4**
ONTNC	**Ouen Toro**	**4.87**	**206**		**Pn**	**08 58 55.4**	**+2.0**
PMG	**Port Moresby**	**22.60**	**289**	P	**P**	**09 02 27.9**	**-2.1**
	5.3nm,0.3s,baz=63,slow=4.5,SNR=2.3						
	5.3nm,0.3s						
PMG	**Port Moresby**	**22.60**	**289**	IAmb	IAmb	09 02 48.8	
	comp=Z,18nm,0.9s						
STKA	**Stephens Creek**	**28.18**	**235**	P	**P**	**09 03 18.6**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=50,slow=7.9,SNR=1.3						
	comp=Z,0.8nm,0.4s						
WR8	**Warramunga Arr**	**32.42**	**261**	P	**P**	**09 03 57.7**	**-0.1**
WR8				IAmb	IAmb	09 04 01.4	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**32.53**	**261**	P	**P**	**09 03 58.7**	**0.0**
WB0				IAmb	IAmb	09 04 01.5	
	comp=Z,6.0nm,1.2s						
WRA	**Warramunga Arr**	**32.58**	**261**	P	**P**	**09 03 58.8**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=97,slow=8.0,SNR=16						
	comp=Z,0.9nm,0.4s						
AS31	**Alice Springs**	**33.01**	**254**	P	**P**	**09 04 03.0**	**0.0**
AS31				IAmb	IAmb	09 04 03.3	
	comp=Z,8.2nm,0.3s						
ASAR	**Alice Springs**	**33.02**	**254**	P	**P**	**09 04 02.8**	**-0.2**
	comp=Z,5.8nm,0.4s,baz=86,slow=8.4,SNR=105						
	comp=Z,5.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**40.92**	**263**	P	**P**	**09 05 10.9**	**+1.2**
MBWA	**Marble Bar**	**46.16**	**258**	P	**P**	**09 05 51.9**	**+0.2**
MBWA				IAmb	IAmb	09 05 52.9	
	comp=Z,9.9nm,1.1s						

HEL ***13*** *09:07:51.0±0.6, 57.35N×22.12E, h0km, ML2.6, Explosion*
DNK ***13*** *09:07:53.3±2.6, 57.50N×22.00E, h0km, ML3.0, Suspected explosion*
EST ***13*** *09:07:54.3±0.2, 57.72N×21.92E, h0km, ML2.2(HEL), Explosion*
IDC ***13*** *09:07:55.1±2.2, 57.77N×22.02E, h0km, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=21.7km s-min=9.2km az=165.0*
LVSN ***13*** *09:07:56.9±6.1, 57.56N×21.99E, h0km±34km, ML2.9*
UPP ***13*** *09:07:59.7±1.5, 57.68N×21.26E, h0km, ML2.4, Presumed earthquake*
BER ***13*** *09:08:11.0±52.0, 58.47N×21.64E, h0km, ML2.3, ML2.4(UPP), Suspected explosion*

ISC 13 09:07:53.0±0.8, 57.75N±0.03×21.92E±0.03, h0km, n85, σ1°44/115, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.24**	**121**	*e*P	**Pg**	**09 07 57.3**	**-0.2**
SLIT	**Slitere, Latvi**	**0.24**	**121**	*e*P	**Pg**	**09 07 58.0**	**+0.5**
SLIT				*e*S	**Sg**	**09 08 01.3**	**+0.8**
SLIT				AML	AML	09 08 02.1	
	comp=Z,7μm,0.2s						
SLIT				AML	AML	09 08 16.1	
	comp=E,9μm,0.6s						
SLIT				AML	AML	09 08 16.9	
	comp=N,7μm,0.5s						
SLIT	**Slitere, Latvi**	**0.24**	**121**	*e*P	**Pg**	**09 07 58.1**	**+0.5**
SLIT				*e*S	**Sg**	**09 08 00.6**	**+0.1**
EE06	**Soera, Palade,**	**1.32**	**22**	*e*P	**Pb**	**09 08 18.4**	**-0.1**
EE06				*e*SB	**Sn**	**09 08 36.7**	**-0.1**
EE01	**Perakula, Nova**	**1.71**	**31**	*e*P	**Pb**	**09 08 25.1**	**-0.2**
EE01				*e*PN	**Pg**	**09 08 25.6**	**-0.2**
EE01				*e*SG	**Sg**	**09 08 48.0**	**+0.1**
GOTU	**Gotland**	**1.80**	**269**	P	**Pb**	**09 08 26.4**	**-0.3**
GOTU	**Gotland**	**1.80**	**269**	P	**Pb**	**09 08 26.4**	**-0.3**
EE08	**Sarghaua, Vand**	**1.98**	**61**	*e*P	**Pb**	**09 08 28.9**	**-1.0**
EE08				*e*SG	**Sb**	**09 08 55.5**	**+0.4**
EE02	**Kiisa, Saku**	**2.05**	**44**	*e*P	**Pb**	**09 08 30.7**	**-0.4**
EE02				*e*PB	**Pg**	**09 08 31.0**	**-1.3**
EE02				*e*SG	**Sg**	**09 08 58.1**	**-0.8**
TVF	**Tvarminne**	**2.21**	**18**	*e*PB	**Pb**	**09 08 33.7**	**-0.1**
TVF				*e*SG	**Sg**	**09 09 03.2**	**-0.7**
TVF				smax	smax	09 09 05.8	
	comp=Z,11nm,0.1s						
PABE	**Paberze**	**2.52**	**152**	*e*P	**Pn**	**09 08 35.0**	**-0.1**
PABE	**Paberze**	**2.52**	**152**	*e*P	**Pn**	**09 08 37.0**	**+1.9**
PABE				AML	AML	09 08 37.3	
	comp=Z,117nm,0.2s						
PABE				AML	AML	09 08 37.6	
	comp=E,54nm,0.2s						
PABE				AML	AML	09 09 11.3	
	comp=N,100nm,0.2s						
EE03	**Tooma soojaam,**	**2.56**	**62**	*e*P	**Pn**	**09 08 37.1**	**+1.4**
EE03				*e*PB	**Pb**	**09 08 38.8**	**-0.9**
EE03				*e*SB	**Sb**	**09 09 12.0**	**+0.3**
AAL	**Aland**	**2.63**	**339**	*e*P	**Pn**	**09 08 37.9**	**+1.3**
VSU	**Vasula**	**2.66**	**72**	*e*P	**Pb**	**09 08 39.6**	**-1.8**
VSU	**Vasula**	**2.66**	**72**	*e*P	**Pb**	**09 08 39.3**	**-2.1**
VSU				AML	AML	09 08 39.5	
	comp=Z,87nm,0.1s						
VSU				*e*S	**Sb**	**09 09 13.9**	**-0.5**
VSU				AML	AML	09 09 15.8	
	comp=N,113nm,0.4s						
VSU				AML	AML	09 09 20.0	
	comp=E,74nm,0.4s						
VSU	**Vasula**	**2.66**	**72**	*i* P	**Pn**	**09 08 38.3**	**+1.3**
VSU	**Vasula**	**2.66**	**72**	*e*P	**Pb**	**09 08 39.3**	**-2.1**
VSU				*e*SB	**Sb**	**09 09 13.6**	**-0.9**
BYXU	**Byxelkrok**	**2.69**	**262**	P	**Pn**	**09 08 39.2**	**+1.8**
BYXU	**Byxelkrok**	**2.69**	**262**	P	**Pn**	**09 08 39.2**	**+1.8**
ARBE	**Arbavere**	**2.72**	**50**	*e*P	**Pb**	**09 08 41.1**	**-1.3**
ARBE	**Arbavere**	**2.72**	**50**	*e*P	**Pb**	**09 08 41.3**	**-1.1**
ARBE				*e*S	**Sb**	**09 09 17.0**	**+0.7**
ARBE				AML	AML	09 09 19.1	
	comp=E,539nm,0.2s						
ARBE				AML	AML	09 09 20.8	
	comp=N,454nm,0.2s						
ARBE				AML	AML	09 09 21.8	
	comp=Z,93nm,0.2s						
ARBE	**Arbavere**	**2.72**	**50**	*e*PB	**Pb**	**09 08 41.1**	**-1.3**
ARBE				*e*SB	**Sb**	**09 09 16.8**	**+0.6**
MEF	**Metsahovi**	**2.79**	**26**	*e*P	**Pn**	**09 08 41.1**	**+2.3**
MEF	**Metsahovi**	**2.79**	**26**	*e*P	**Pb**	**09 08 42.6**	**-1.0**
MEF				*e*S	**Sb**	**09 09 19.7**	**+1.5**
MEF				AML	AML	09 09 21.1	
	comp=N,19nm,0.1s						
MEF				AML	AML	09 09 21.2	
	comp=E,21nm,0.1s						
MEF				AML	AML	09 09 26.3	
	comp=Z,24nm,0.4s						
MEF	**Metsahovi**	**2.79**	**26**	*e*PB	**Pb**	**09 08 42.7**	**-0.9**
MEF				*e*SB	**Sb**	**09 09 18.7**	**+0.5**
MEF				smax	smax	09 09 19.9	
	comp=Z,7.8nm,0.1s						
HEL5	**Espoo, Suvisaa**	**2.79**	**30**	*e*PB	**Pb**	**09 08 42.4**	**-1.2**
HEL5				*e*SB	**Sb**	**09 09 19.0**	**+0.8**
HEL5				smax	smax	09 09 22.6	
	comp=Z,8.5nm,0.1s						
VIKU	**Vikbolandet**	**2.87**	**287**	P	**Pn**	**09 08 42.0**	**+2.1**
VIKU	**Vikbolandet**	**2.87**	**287**	P	**Pn**	**09 08 42.0**	**+2.1**
HEL1	**Helsinki**	**2.88**	**31**	*e*PB	**Pb**	**09 08 43.8**	**-1.3**
HEL1				*e*SB	**Sb**	**09 09 21.0**	**+0.2**
HEL1				smax	smax	09 09 22.8	
	comp=Z,11nm,0.1s						
VSTU	**Vaestervik**	**2.89**	**270**	P	**Pn**	**09 08 42.3**	**+2.2**
VSTU	**Vaestervik**	**2.89**	**270**	P	**Pn**	**09 08 42.3**	**+2.2**
NUR	**Nurmijarvi**	**3.10**	**26**	*e*PB	**Pb**	**09 08 47.4**	**-1.6**
NUR				*e*SB	**Sb**	**09 09 26.9**	**-0.5**
NUR				smax	smax	09 09 30.8	
	comp=Z,5.9nm,0.1s						
OSKU	**Oskarshamn**	**3.19**	**262**	P	**Pn**	**09 08 46.2**	**+1.9**
OSKU	**Oskarshamn**	**3.19**	**262**	P	**Pn**	**09 08 46.2**	**+1.9**
RAF	**Rauma**	**3.28**	**359**	*e*P	**Pn**	**09 08 47.9**	**+2.4**
RAF	**Rauma**	**3.28**	**359**	*e*P	**Pn**	**09 08 47.4**	**+1.9**
IIGN	**Ignalina**	**3.39**	**133**	*e*P	**Pn**	**09 08 44.8**	**-2.2**
LNKU	**Linkoeping**	**3.45**	**281**	P	**Pn**	**09 08 50.0**	**+2.1**
LNKU	**Linkoeping**	**3.45**	**281**	P	**Pn**	**09 08 50.0**	**+2.1**
PVF	**Pernaja**	**3.46**	**34**	*e*PG	**Pb**	**09 08 56.1**	**+1.0**
PVF				*e*SB	**Sb**	**09 09 37.2**	**-0.4**
PVF				smax	smax	09 09 47.7	
	comp=Z,5.4nm,0.2s						
EKSU	**Eksjoe**	**3.56**	**270**	P	**Pn**	**09 08 51.5**	**+2.1**
EKSU	**Eksjoe**	**3.56**	**270**	P	**Pn**	**09 08 51.5**	**+2.1**
VXJU	**Vaexsjoe**	**3.87**	**261**	P	**Pn**	**09 08 54.9**	**+1.2**
VXJU	**Vaexsjoe**	**3.87**	**261**	P	**Pn**	**09 08 54.9**	**+1.2**
KPF	**Kankaanpaa**	**4.10**	**1**	*e*P	**Pn**	**09 08 58.7**	**+2.0**
FIA0	**FINESS Array S**	**4.26**	**28**	*e*P	**Pn**	**09 09 01.3**	**+2.2**
FINES	**FINESS Array B**	**4.26**	**28**	Pn	**Pn**	**09 09 01.2**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=214,slow=13,SNR=17						
FINES				Sn	**Sn**	**09 09 51.7**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=210,slow=19,SNR=3.8						
FINES				Lg	Lg	09 10 08.8	
	comp=Z,2.5nm,0.3s,baz=212,slow=25,SNR=15						
	comp=Z,0.8nm,0.2s						
FKPU	**Falk**	**4.38**	**279**	P	**Pn**	**09 09 02.9**	**+2.1**
FKPU	**Falk**	**4.38**	**279**	P	**Pn**	**09 09 02.9**	**+2.1**
DEL	**Delary**	**4.57**	**257**	*e*P	**Pn**	**09 08 59.8**	**-3.5**
KEF	**Keuruu**	**4.67**	**17**	*e*P	**Pn**	**09 09 06.9**	**+2.2**
KEF	**Keuruu**	**4.67**	**17**	*e*P	**Pn**	**09 09 07.4**	**+2.7**
BSD	**Bornholm Skovb**	**4.70**	**239**	*i* P	**Pn**	**09 09 04.7**	**-0.4**
BSD				*i* S	**Sn**	**09 09 58.6**	**-1.6**
HFS	**Hagfors**	**4.88**	**303**	Pn	**Pn**	**09 09 09.1**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=121,slow=14,SNR=15						
HFS				Sn	**Sn**	**09 10 05.6**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=112,slow=27,SNR=4.6						
HFS				Lg	Lg	09 10 29.0	
	comp=Z,2.0nm,0.3s,baz=121,slow=31,SNR=7.6						
	comp=Z,1.9nm,0.3s						
KAF	**Kangasniemi**	**4.90**	**25**	*e*P	**Pn**	**09 09 09.5**	**+1.7**
BORU	**Boraas**	**4.91**	**272**	*e*P	**Pn**	**09 09 09.4**	**+1.5**
BORU				*i* S	**Sn**	**09 10 04.0**	**-1.3**
FABU	**Falkenberg**	**5.03**	**265**	*e*P	**Pn**	**09 09 08.0**	**-1.6**
FABU				*i* S	**Sn**	**09 10 08.5**	**0.0**
RUF	**Ruokolahti**	**5.13**	**41**	*e*P	**Pn**	**09 09 12.2**	**+1.2**
VAF	**Ylistaro**	**5.32**	**4**	*e*P	**Pn**	**09 09 16.0**	**+2.5**
VAF	**Ylistaro**	**5.32**	**4**	*e*P	**Pn**	**09 09 15.4**	**+1.9**
ONAU	**Onsala**	**5.39**	**270**	*e*P	**Pn**	**09 09 13.9**	**-0.7**
ONAU				*i* S	**Sn**	**09 10 19.0**	**+1.7**
TJOU	**Tjoern**	**5.50**	**277**	P	**Pn**	**09 09 18.5**	**+2.5**
TJOU	**Tjoern**	**5.50**	**277**	*i* P	**Pn**	**09 09 16.9**	**+0.9**
TJOU				P	**Pn**	**09 09 18.5**	**+2.5**
STRU	**Stroemstad**	**5.79**	**287**	*e*P	**Pn**	**09 09 21.5**	**+1.5**
STRU	**Stroemstad**	**5.79**	**287**	*i* P	**Pn**	**09 09 21.1**	**+1.1**
STRU				*i* S	**Sn**	**09 10 26.3**	**-0.8**
NC602	**NORSAR Array S**	**6.10**	**304**	*e*P	**Pn**	**09 09 25.1**	**+0.7**
NB201	**NORSAR Array S**	**6.35**	**306**	*e*P	**Pn**	**09 09 28.6**	**+0.9**
NOA	**NORSAR Array B**	**6.38**	**306**	Pn	**Pn**	**09 09 29.0**	**+0.8**
	baz=126,slow=11,SNR=1.8						
NOA				Sn	**Sn**	**09 10 41.4**	**-0.3**
	baz=212,slow=21,SNR=1.1						
NOA				Lg	Lg	09 11 15.4	
	comp=Z,0.1nm,0.3s,baz=116,slow=15,SNR=5.7						
	comp=Z,0.2nm,0.3s						
NC303	**NORSAR Array S**	**6.40**	**307**	*e*P	**Pn**	**09 09 29.4**	**+1.0**
NAO01	**NORSAR Array S**	**6.44**	**303**	*e*P	**Pn**	**09 09 28.6**	**-0.4**
NBO00	**NORSAR Array S**	**6.57**	**305**	*e*P	**Pn**	**09 09 32.1**	**+1.3**
NC204	**NORSAR Array S**	**6.68**	**307**	*e*P	**Pn**	**09 09 32.7**	**+0.4**
OUF	**Merijarvi**	**6.78**	**10**	*e*P	**Pn**	**09 09 35.2**	**+1.6**
JOF	**Joensuu**	**6.97**	**38**	*e*P	**Pn**	**09 09 37.0**	**+0.8**
SKAR	**Skarslia**	**7.57**	**299**	*e*P	**Pn**	**09 09 44.6**	**+0.1**
DOMB	**Dombas**	**7.76**	**309**	*e*P	Sn	09 11 25.3	+10
NSS	**Namsos**	**8.32**	**329**	*e*P	**Pn**	**09 09 54.0**	**-0.7**
NSS				*e*S	**Sn**	**09 11 27.6**	**-1.6**
NSS				IAML		09 12 05.0	
	comp=Z,3.4nm,0.6s						
MOR8	**Moi Rana**	**9.14**	**341**	*e*P	**Pn**	**09 10 06.6**	**+0.6**
LEIR	**Leirfjorden**	**9.35**	**337**	*e*P	**Pn**	**09 10 09.3**	**+0.6**
RAUS	**Rausandaksla**	**9.45**	**340**	*e*P	**Pn**	**09 10 10.1**	**-0.2**
SALU	**Saltoluokta**	**9.79**	**352**	*e*P	**Pn**	**09 10 14.9**	**+0.1**
VAGH	**Vaagaholmen**	**9.86**	**340**	*e*P	**Pn**	**09 10 15.8**	**0.0**
FAUS	**Fauske**	**10.13**	**345**	*e*P	**Pn**	**09 10 19.2**	**-0.2**
ARCES	**ARCESS Array B**	**11.93**	**6**	Pn	**Pn**	**09 10 42.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=14,SNR=8.1						
ARCES				Sn	Sn	09 12 47.1	-11
	comp=Z,0.1nm,0.3s,baz=190,slow=15,SNR=1.2						
	comp=Z,2.2nm,0.9s						

GUC ***13*** *09:30:32.3±0.8, 22.32S×67.67W, h178km±8km, ML2.9*
SCB ***13*** *09:30:33.1±1.2, 22.33S×67.65W, h136km±13km, MB5.6, ML3.0/4, Error ellipse: s-maj=4.0km s-min=3.4km az=0.0*

ISC 13 09:30:32.3±1.9, 22.32S±0.06×67.64W±0.05, h165km±15km, n29, σ0°76/37, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**0.80**	**218**	*e*P	**Pn**	**09 30 58.4**	**+1.0**
PB09	**IPOC Station P**	**1.57**	**289**	*e*P	**Pn**	**09 31 04.9**	**+1.0**
PB09				*e*S	**Sn**	**09 31 28.8**	**+0.5**
PB09				IAML		09 31 33.0	
	comp=N,50nm,0.4s						
PB09	**IPOC Station P**	**1.57**	**289**	Pg	**Pn**	**09 31 03.7**	**-0.3**
PB06	**IPOC Station P**	**1.83**	**257**	*e*P	**Pn**	**09 31 07.2**	**+0.6**
PB06				*e*S	**Sn**	**09 31 33.6**	**+0.6**
PB06				IAML		09 31 35.5	
	comp=E,46nm,0.2s						
PB06	**IPOC Station P**	**1.83**	**257**	Pg	**Pn**	**09 31 06.4**	**-0.2**
PB03	**IPOC Station P**	**1.98**	**277**	*e*P	**Pn**	**09 31 08.4**	**+0.2**
PB03				*e*S	**Sn**	**09 31 35.5**	**-0.5**
PB03				IAML		09 31 36.5	
	comp=N,198nm,0.1s						
YJA	**Yavi**	**1.98**	**86**	*e*P	**Pn**	**09 31 09.2**	**+0.6**
YJA	**Yavi**	**1.98**	**86**	Pg	**Pn**	**09 31 08.0**	**-0.5**
PB01	**IPOC Station P**	**2.13**	**306**	*e*P	**Pn**	**09 31 10.4**	**+0.4**
PB01				*e*S	**Sn**	**09 31 38.8**	**-0.3**
PB01				IAML		09 31 39.9	
	comp=N,55nm,0.2s						
PB01	**IPOC Station P**	**2.13**	**306**	Pg	**Pn**	**09 31 09.6**	**-0.4**
PB01				Sg	**Sn**	**09 31 38.6**	**-0.5**
PB01				IAML		09 31 41.2	
	comp=N,42nm,0.2s						
MOCB	**Mochara**	**2.14**	**61**	Pg	**Pn**	**09 31 10.6**	**+0.1**
MOCB				Sg	**Sn**	**09 31 39.0**	**-0.9**
MOCB				IAML		09 31 43.2	
	comp=N,54nm,0.4s						
PB02	**IPOC Station P**	**2.32**	**295**	*e*P	**Pn**	**09 31 12.5**	**+0.4**
PB02	**IPOC Station P**	**2.32**	**295**	Pg	**Pn**	**09 31 11.9**	**-0.2**
PB02				Sg	**Sn**	**09 31 41.6**	**-1.3**
PB02				IAML		09

PABE					AML	AML	09 57 26.2	
	comp=E,26nm,0.5s							
PABE					AML	AML	09 57 34.9	
	comp=N,28nm,0.4s							
VIKU	**Vikbolandet**	**2.66**	**289**	P	**Pn**	**Pn**	**09 56 44.5**	**+1.4**
VIKU	**Vikbolandet**	**2.66**	**289**	P	**Pn**	**Pn**	**09 56 44.5**	**+1.4**
VSTU	**Vaestervik**	**2.67**	**271**	P	**Pn**	**Pn**	**09 56 44.8**	**+1.6**
VSTU	**Vaestervik**	**2.67**	**271**	P	**Pn**	**Pn**	**09 56 44.8**	**+1.6**
EE03	**Tooma soojaam,**	**2.76**	**64**	*e*P	**Pn**	**Pn**	**09 56 46.1**	**+1.6**
EE03				*e*SB	**Sb**	**Sb**	**09 57 23.2**	**-0.4**
VSU	**Vasula**	**2.87**	**73**	*e*P	**Pn**	**Pn**	**09 56 47.3**	**+1.3**
VSU	**Vasula**	**2.87**	**73**	*e*P	**Pn**	**Pn**	**09 56 46.0**	**+0.1**
VSU					AML	AML	09 56 49.5	
	comp=Z,24nm,0.2s							
VSU					AML	AML	09 57 30.4	
	comp=E,49nm,0.3s							
VSU					AML	AML	09 57 35.5	
	comp=N,45nm,0.4s							
VSU	**Vasula**	**2.87**	**73**	*i* P	**Pn**	**Pn**	**09 56 45.9**	**-0.1**
VSU	**Vasula**	**2.87**	**73**	*e*P	**Pn**	**Pn**	**09 56 45.9**	**-0.1**
VSU				*e*SB	**Sb**	**Sb**	**09 57 25.4**	**-1.3**
ARBE	**Arbavere**	**2.90**	**52**	*e*P	**Pn**	**Pn**	**09 56 47.9**	**+1.5**
ARBE	**Arbavere**	**2.90**	**52**	*e*P	**Pn**	**Pn**	**09 56 48.6**	**+2.2**
ARBE					AML	AML	09 56 50.1	
	comp=N,608nm,0.1s							
ARBE					AML	AML	09 56 50.2	
	comp=Z,122nm,0.1s							
ARBE					AML	AML	09 56 51.3	
	comp=E,431nm,0.1s							
ARBE	**Arbavere**	**2.90**	**52**	*e*SB	**Sb**	**Sb**	**09 57 27.5**	**-0.1**
MEF	**Metsahovi**	**2.91**	**30**	*e*P	**Pn**	**Pn**	**09 56 47.6**	**+1.1**
MEF	**Metsahovi**	**2.91**	**30**	*e*P	**Pn**	**Pb**	**09 56 49.9**	**-1.8**
MEF					AML	AML	09 57 31.9	
	comp=E,11nm,0.3s							
MEF					AML	AML	09 57 43.0	
	comp=Z,8.2nm,1.0s							
MEF					AML	AML	09 57 45.4	
	comp=N,7.2nm,0.5s							
MEF	**Metsahovi**	**2.91**	**30**	*e*PB	**Pn**	**Pn**	**09 56 49.6**	**+3.2**
MEF				*e*SB	**Sb**	**Sb**	**09 57 26.9**	**-0.7**
MEF				smax	smax	smax	09 57 30.6	
	comp=Z,3.6nm,0.1s							
HEL5	**Espoo, Suvisaa**	**2.92**	**34**	*e*P	**Pn**	**Pn**	**09 56 48.4**	**+1.8**
HEL5				*e*SB	**Sb**	**Sb**	**09 57 26.9**	**-1.2**
HEL5				smax	smax	smax	09 57 31.3	
	comp=Z,2.0nm,0.1s							
OSKU	**Oskarshamn**	**2.97**	**262**	P	**Pn**	**Pn**	**09 56 48.6**	**+1.2**
OSKU	**Oskarshamn**	**2.97**	**262**	P	**Pn**	**Pn**	**09 56 48.6**	**+1.2**
NUR	**Nurmijarvi**	**3.22**	**29**	*e*S	**Sn**	**Sn**	**09 57 30.7**	**+0.9**
NUR				smax	smax	smax	09 57 35.0	
	comp=Z,2.2nm,0.1s							
LNKU	**Linkoeping**	**3.23**	**281**	P	**Pn**	**Pn**	**09 56 52.5**	**+1.5**
LNKU	**Linkoeping**	**3.23**	**281**	P	**Pn**	**Pn**	**09 56 52.5**	**+1.5**
RAF	**Rauma**	**3.30**	**2**	*e*P	**Pn**	**Pn**	**09 56 51.9**	**0.0**
RAF	**Rauma**	**3.30**	**2**	*e*P	**Pn**	**Pn**	**09 56 52.6**	**+0.7**
RAF				*e*S	**Sn**	**Sn**	**09 57 32.5**	**+0.7**
RAF				smax	smax	smax	09 57 45.7	
	comp=Z,2.6nm,0.1s							
PVF	**Pernaja**	**3.60**	**37**	*e*P	**Pn**	**Pn**	**09 56 58.0**	**+1.9**
PVF				*e*SG	**Sb**	**Sb**	**09 57 51.3**	**+3.6**
VXJU	**Vaexsjoe**	**3.65**	**260**	P	**Pn**	**Pn**	**09 56 57.5**	**+0.8**
VXJU	**Vaexsjoe**	**3.65**	**260**	P	**Pn**	**Pn**	**09 56 57.5**	**+0.8**
KPF	**Kankaanpaa**	**4.12**	**4**	*e*P	**Pn**	**Pn**	**09 57 04.0**	**+0.9**
KPF				*e*S	**Sn**	**Pn**	**09 57 51.4**	**-0.7**
KPF				smax	smax	smax	09 57 55.2	
	comp=Z,2.1nm,0.1s							
FKPU	**Falk**	**4.17**	**279**	P	**Pn**	**Pn**	**09 57 04.8**	**+1.0**
FKPU	**Falk**	**4.17**	**279**	P	**Pn**	**Pn**	**09 57 04.8**	**+1.0**
VJF	**Virojoki**	**4.20**	**45**	*e*P	**Pn**	**Pn**	**09 57 05.2**	**+1.0**
DEL	**Delary**	**4.35**	**256**	*i* P	**Pn**	**Pn**	**09 57 06.4**	**+0.1**
DEL				*i* S	**Sn**	**Sn**	**09 57 57.3**	**-0.4**
FIA0	**FINESS Array S**	**4.39**	**30**	*e*P	**Pn**	**Pn**	**09 57 07.7**	**+0.9**
FINES	**FINESS Array B**	**4.39**	**30**	Pn	**Pn**	**Pn**	**09 57 08.1**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=207,slow=11,SNR=7.9							
FINES				Pg	**Pb**	**Pb**	**09 57 17.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=210,slow=15,SNR=7.9							
FINES				Sn	**Sn**	**Sn**	**09 57 59.9**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=214,slow=20,SNR=7.4							
FINES				Lg	Lg	Lg	09 58 16.5	
	comp=Z,1.1nm,0.3s,baz=207,slow=28,SNR=5.2							
	comp=Z,2.2nm,0.9s							
BSD	**Bornholm Skovb**	**4.50**	**237**	*i* P	**Pn**	**Pn**	**09 57 07.9**	**-0.5**
BSD				*i* S	**Sn**	**Sn**	**09 57 59.9**	**-1.5**
BORU	**Boraas**	**4.69**	**272**	*i* P	**Pn**	**Pn**	**09 57 11.7**	**+0.7**
HFS	**Hagfors**	**4.71**	**304**	Pn	**Pn**	**Pn**	**09 57 12.1**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=116,slow=15,SNR=18							
HFS				Pg	**Pb**	**Pb**	**09 57 22.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=117,slow=16,SNR=5.3							
HFS				Sn	**Sn**	**Sn**	**09 58 07.2**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=116,slow=23,SNR=1.8							
HFS				Lg	Lg	Lg	09 58 24.9	
	comp=Z,1.0nm,0.3s,baz=113,slow=31,SNR=8.7							
	comp=Z,1.4nm,0.3s							
KEF	**Keuruu**	**4.76**	**19**	*e*P	**Pn**	**Pn**	**09 57 12.8**	**+0.9**
KEF	**Keuruu**	**4.76**	**19**	*e*P	**Pn**	**Pn**	**09 57 13.6**	**+1.7**
FABU	**Falkenberg**	**4.81**	**265**	*i* P	**Pn**	**Pn**	**09 57 13.2**	**+0.6**
FABU				*i* S	**Sn**	**Sn**	**09 58 09.5**	**+0.5**
KAF	**Kangasniemi**	**5.01**	**27**	*e*P	**Pn**	**Pn**	**09 57 16.6**	**+1.2**
ONAU	**Onsala**	**5.17**	**270**	*i* P	**Pn**	**Pn**	**09 57 18.3**	**+0.7**
RUF	**Ruokolahti**	**5.29**	**42**	*e*P	**Pn**	**Pn**	**09 57 20.7**	**+1.5**
VAF	**Ylistaro**	**5.36**	**6**	*e*P	**Pn**	**Pn**	**09 57 21.2**	**+1.0**
VAF	**Ylistaro**	**5.36**	**6**	*e*P	**Pn**	**Pn**	**09 57 21.0**	**+0.9**
VAF				*e*S	**Sn**	**Sn**	**09 58 20.5**	**-1.9**
NOA	**NORSAR Array B**	**6.21**	**307**	Pn	**Pn**	**Pn**	**09 57 32.7**	**+0.7**
	baz=119,slow=11,SNR=5.8							
NOA				Sn	**Sn**	**Sn**	**09 58 43.8**	**+0.2**
	baz=196,slow=16,SNR=1.9							
NOA				Lg	Lg	Lg	09 59 20.2	
	comp=Z,0.1nm,0.3s,baz=136,slow=24,SNR=6.0							
	comp=Z,0.7nm,0.8s							
AKASG	**Malin Array Be**	**8.37**	**144**	Pn	Pn	Pn	09 57 51.9	-10
ARCES	**ARCESS Array B**	**11.98**	**7**	Pn	**Pn**	**Pn**	**09 58 47.5**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=184,slow=14,SNR=15							
ARCES				Sn	**Sn**	**Sn**	**10 00 58.0**	**-6.9**
	comp=Z,0.1nm,0.3s,baz=189,slow=25,SNR=2.0							
	comp=Z,2.7nm,1.0s							

GCG 13 09:57:11.4±1.2, 13°67′N×91°31′W, h24km±13km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.84**	**33**	*e*P	Pb	09 57 27.3	-0.2
PCG5	**San Vicente Pa**	**1.05**	**59**	*e*P	Pn	09 57 29.4	-1.5
PCG5				*i* S	Sb	09 57 41.0	-3.5
SMCA	**Catarina**	**1.39**	**328**	*e*P	Pn	09 57 34.7	-0.7
NUBE	**Las Nubes**	**1.50**	**81**	*e*P	Pn	09 57 37.2	+0.2
NUBE				*i* S	Sn	09 57 55.5	-0.4
APG	**El Apazote**	**1.56**	**32**	*i* P	Pb	09 57 39.0	-0.7

*NOU **13** 10:09:12.8, 37°48′S×179°02′E, h19km, MLv3.7/12, Off E. Coast of N. Island, N.Z.*
*WEL **13** 10:09:15.7±0.9, 37°S±4°×17°9′E±°, h28km±4km, M3.3/14, ML3.2/18, MLv3.3/14, Error ellipse: s-maj=7.7km s-min=4.6km az=75.8, confirmed*

ISC 13 10:09:13.3±2.5, 37°28′S±0.06°×179°0′E±0.1, h33km±8km, n37, σ1°§24/53, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDHS	**Te Araroa Dist**	**0.61**	**234**	P	**Pb**	**10 09 25.8**	**+0.2**
MXZ	**Matakaoa Point**	**0.61**	**242**	P	**Pn**	**10 09 25.1**	**-0.5**
MXZ	**Matakaoa Point**	**0.61**	**242**	S	**Sb**	**10 09 33.1**	**-0.9**
MXZ	**Matakaoa Point**	**0.61**	**242**	P	**Pn**	**10 09 25.3**	**-0.3**
MXZ				S	**Sb**	**10 09 33.2**	**-0.9**
WMGZ	**Waiomatatini S**	**0.70**	**220**	P	**Pb**	**10 09 28.7**	**+1.5**
WMGZ				S	**Sn**	**10 09 38.7**	**+2.0**
PKGZ	**Pakihiroa**	**0.93**	**231**	P	**Pb**	**10 09 31.5**	**+0.6**
PKGZ				S	**Sn**	**10 09 43.4**	**+1.2**
PUZ	**Puketiti**	**0.98**	**216**	P	**Pb**	**10 09 32.1**	**+0.3**
PUZ				S	**Sn**	**10 09 43.6**	**+0.1**
HAZ	**Te Kaha**	**1.07**	**243**	P	**Pn**	**10 09 32.4**	**+0.5**
HAZ				S	**Sn**	**10 09 46.6**	**+0.9**
TWGZ	**Tauwhareparae**	**1.20**	**221**	P	**Pb**	**10 09 35.5**	**0.0**
TWGZ				S	**Sb**	**10 09 51.0**	**+0.3**
RUGZ	**Raukumara Rang**	**1.24**	**236**	P	**Pb**	**10 09 36.0**	**-0.3**
RUGZ				S	**Sn**	**10 09 51.2**	**+1.1**
CNGZ	**Carnagh Statio**	**1.35**	**207**	P	**Pb**	**10 09 37.8**	**-0.2**
CNGZ				S	**Sb**	**10 09 54.7**	**-0.2**
TKGZ	**Te Karaka**	**1.47**	**218**	P	**Pn**	**10 09 38.4**	**+1.0**
TKGZ				S	**Sn**	**10 09 54.8**	**-0.7**
MWZ	**Matawai**	**1.56**	**227**	P	**Pn**	**10 09 40.0**	**+1.2**
WHRZ	**Whale Island**	**1.70**	**250**	P	**Pn**	**10 09 41.8**	**+1.2**
RIGZ	**Rimuhau**	**1.72**	**214**	P	**Pn**	**10 09 41.7**	**+0.7**
RAGZ	**Rawiri**	**1.74**	**225**	P	**Pn**	**10 09 42.6**	**+1.4**
URZ	**Urewera**	**1.78**	**236**	P	**Pn**	**10 09 42.6**	**+0.9**
URZ	**Urewera**	**1.78**	**236**	S	**Sn**	**10 10 04.3**	**+1.1**
URZ	**Urewera**	**1.78**	**236**	P	**Pn**	**10 09 42.9**	**+1.2**
URZ				S	**Sn**	**10 10 03.5**	**+0.3**
PRGZ	**Paritu Road**	**1.85**	**208**	P	**Pn**	**10 09 43.7**	**+0.9**
PRGZ				S	**Sn**	**10 10 06.7**	**+1.5**
EDRZ	**Edgecumbe**	**1.96**	**245**	P	**Pn**	**10 09 45.0**	**+0.6**
EDRZ				S	**Sn**	**10 10 07.6**	**-0.2**
KNZ	**Kokohu**	**2.02**	**210**	P	**Pn**	**10 09 45.5**	**+0.4**
RTZ	**Ruatahuna**	**2.07**	**229**	P	**Pn**	**10 09 47.0**	**+1.2**
KUZ	**Kuaotunu**	**2.67**	**281**	P	**Pn**	**10 09 53.8**	**-0.1**
KUZ	**Kuaotunu**	**2.67**	**281**	P	**Pn**	**10 09 53.6**	**-0.3**
KUZ				S	**Sn**	**10 10 22.5**	**-2.6**
BKZ	**Black Stump Fm**	**2.72**	**225**	P	**Pn**	**10 09 55.3**	**+0.6**
BKZ	**Black Stump Fm**	**2.72**	**225**	S	**Sn**	**10 10 25.7**	**-0.8**
BKZ	**Black Stump Fm**	**2.72**	**225**	P	**Pn**	**10 09 55.6**	**+0.8**
BKZ				S	**Sn**	**10 10 24.2**	**-2.4**
TOZ	**Tahuroa Road**	**2.81**	**260**	P	**Pn**	**10 09 56.2**	**+0.4**
TOZ				S	**Sn**	**10 10 28.1**	**-0.5**
GRZ	**Great Barrier**	**3.01**	**289**	P	**Pn**	**10 09 59.4**	**+0.7**
GRZ				S	**Sn**	**10 10 31.8**	**-1.9**
HIZ	**Hauiti**	**3.49**	**248**	P	**Pn**	**10 10 07.1**	**+1.8**
WCZ	**Waipu Caves**	**3.97**	**288**	P	**Pn**	**10 10 12.6**	**+0.8**
BFZ	**Birch Farm**	**4.01**	**211**	P	**Pn**	**10 10 10.2**	**-2.2**
BFZ	**Birch Farm**	**4.01**	**211**	S	**Sn**	**10 10 54.8**	**-3.5**
OUZ	**Omahuta**	**4.82**	**294**	P	**Pn**	**10 10 25.3**	**+1.8**
OUZ	**Omahuta**	**4.82**	**294**	P	**Pn**	**10 10 25.3**	**+1.8**
KHZ	**Kahutara**	**6.62**	**218**	P	**Pn**	**10 10 47.2**	**-1.0**

*JMA **13** 10:22:17.0±0.1, 39°.8N±0°.2×141°.8E±0°.4, h58km, MD3.5/39, MV3.7/39, NORTHERN IWATE PREF*
JMA Felt II J1 at NORTHERN IWATE PREF .
*IDC **13** 10:22:17.4±2.0, 39°.82N×142°.11E, h77km±18km, mb3.5/6, mbtmp3.7/11, Error ellipse: s-maj=31.1km s-min=13.7km az=97.0*

ISC 13 10:22:16.8±0.9, 39°.75N±0°.03×141°.91E±0°.08, h61km±6km, n34, σ1°§36/37, mb3.9/6, 12D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.19**	**348**	*i* P	**Pn**	**10 22 26.2**	**-0.1**
JTH				S	**Sn**	**10 22 32.8**	**-0.4**
JTH	**Tanohata**	**0.19**	**348**	A	A	10 22 26.2	
	comp=N,6.0nm,0.3s,comp=E,13nm,0.3s						
MIYJ	**Miyakonagasawa**	**0.19**	**202**	*i* P	**Pn**	**10 22 26.3**	**0.0**
MIYJ				S	**Sn**	**10 22 32.6**	**-0.6**
JKEN	**Kujiedanarisaw**	**0.48**	**341**	*i* P	**Pn**	**10 22 28.4**	**-0.2**
JKEN				S	**Sn**	**10 22 36.5**	**-0.7**
JKEN	**Kujiedanarisaw**	**0.48**	**341**	A	A	10 22 28.4	
	comp=N,9.0nm,0.7s,comp=E,9.0nm,0.8s						
JKZ	**Kuzumaki**	**0.51**	**297**	⇓*i* P	**Pn**	**10 22 28.6**	**-0.4**
JKZ				⇓S	**Sn**	**10 22 36.5**	**-1.3**
JKZ	**Kuzumaki**	**0.51**	**297**	A	A	10 22 28.6	
	comp=N,5.0nm,0.5s,comp=E,8.0nm,0.5s						
JOM	**Ohasama**	**0.56**	**240**	⇓*i* P	**Pn**	**10 22 28.8**	**-0.6**
JOM				⇓S	**Sn**	**10 22 37.3**	**-1.3**
JOM	**Ohasama**	**0.56**	**240**	A	A	10 22 28.8	
	comp=N,5.0nm,0.3s,comp=E,7.0nm,0.3s						
JANG	**Nango**	**0.69**	**334**	⇓*i* P	**Pn**	**10 22 30.5**	**-0.5**
JANG				⇓*e*S	**Sn**	**10 22 40.1**	**-1.3**
OFUJ	**Ofunato**	**0.70**	**196**	*i* P	**Pn**	**10 22 30.9**	**-0.1**
OFUJ				*e*S	**Sn**	**10 22 40.9**	**-0.6**
JMK	**Ichinoseki**	**0.96**	**214**	*i* P	**Pn**	**10 22 34.0**	**-0.4**
JMK				*e*S	**Sn**	**10 22 46.7**	**-0.7**
JRG	**Rokugo**	**1.05**	**251**	⇓P	**Pn**	**10 22 34.8**	**-0.7**
JRG				⇓*e*S	**Sn**	**10 22 48.4**	**-1.0**
JRG	**Rokugo**	**1.05**	**251**	A	A	10 22 34.8	
	comp=N,3.0nm,0.7s,comp=E,3.0nm,0.4s						
JAH	**Hinai**	**1.07**	**294**	⇓*i* P	**Pn**	**10 22 35.2**	**-0.6**
JAH				⇓*e*S	**Sn**	**10 22 49.6**	**-0.3**
JTM	**Tenmabayashi**	**1.22**	**326**	⇓*i* P	**Pn**	**10 22 37.3**	**-0.4**
JTM				⇓*e*S	**Sn**	**10 22 52.5**	**-0.8**
JIO	**Ouri**	**1.37**	**199**	*i* P	**Pn**	**10 22 39.5**	**-0.2**
JIO				*e*S	**Sn**	**10 22 56.2**	**-0.7**
MJAR	**Matsushiro Arr**	**4.34**	**223**	P	**Pn**	**10 23 23.8**	**+3.6**
	comp=E,1.7nm,0.5s,baz=30,slow=14,SNR=6.4						
ASAJ	**Asahikawa**	**4.39**	**6**	P	**Pn**	**10 23 21.2**	**+0.4**
	comp=E,7.3nm,0.8s,baz=192,slow=14,SNR=9.5						
ASAJ				S	**Sn**	**10 24 09.6**	**-1.1**
	comp=E,3.3nm,0.4s,baz=166,slow=17,SNR=1.9						
JHJ	**Hachijo jima 2**	**6.84**	**195**	P	**Pn**	**10 23 55.5**	**+1.1**
	comp=E,62nm,0.8s,baz=50,slow=15,SNR=2.0						
JHJ				S	**Sn**	**10 25 06.9**	**-4.0**
	comp=E,59nm,0.8s,baz=244,slow=18,SNR=1.7						
USRK	**Ussuriysk Ar.**	**8.62**	**304**	P	**Pn**	**10 24 19.9**	**+1.1**
	comp=E,0.5nm,0.3s,baz=112,slow=12,SNR=1.5						
KSRS	**Korea Array**	**11.19**	**263**	P	**Pn**	**10 24 57.7**	**+3.9**
	comp=E,0.9nm,0.5s,baz=72,slow=14,SNR=2.0						
H11N2	**WAKE ISLAND Hy 29.31**	**126**		T	T	10 58 48.5	
	baz=318,slow=75,SNR=120						
H11N1	**WAKE ISLAND Hy 29.32**	**126**		T	T	10 58 49.2	
	baz=318,slow=75,SNR=124						
H11N3	**WAKE ISLAND Hy 29.32**	**126**		T	T	10 58 50.9	
	baz=318,slow=75,SNR=93						
H11S1	**WAKE ISLAND Hy 30.10**	**128**		T	T	10 59 54.1	
	baz=319,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy 30.11**	**128**		T	T	10 59 53.2	
	baz=319,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy 30.12**	**128**		T	T	10 59 55.7	
	baz=319,slow=76,SNR=30						
ZALV	**Zalesovo Beam**	**40.42**	**310**	P	**P**	**10 29 48.5**	**-0.3**
	comp=E,1.5nm,0.5s,baz=96,slow=8.4,SNR=7.5						
	comp=E,1.5nm,0.5s						
MKAR	**Makanchi Array**	**43.06**	**300**	P	**P**	**10 30 09.7**	**-0.7**
	comp=E,0.6nm,0.6s,baz=85,slow=9.3,SNR=6.4						
	comp=E,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**44.68**	**306**	P	**P**	**10 30 22.7**	**-0.7**
	comp=E,1.3nm,0.5s,baz=81,slow=8.5,SNR=9.4						
	comp=E,1.3nm,0.5s						
WRA	**Warramunga Arr**	**59.80**	**188**	P	**P**	**10 32 14.8**	**-0.8**
	comp=E,0.4nm,0.7s,baz=13,slow=7.2,SNR=1.6						
	comp=E,0.4nm,0.7s						
ARCES	**ARCESS Array B**	**61.60**	**339**	P	**P**	**10 32 27.0**	**-0.3**
	comp=E,3.2nm,0.8s,baz=57,slow=5.7,SNR=2.0						
	comp=E,3.2nm,0.8s						
ASAR	**Alice Springs**	**63.53**	**188**	P	**P**	**10 32 40.4**	**-0.4**
	comp=E,0.1nm,0.3s,baz=0.9,slow=6.9,SNR=1.4						
	comp=E,0.1nm,0.3s						

IDC 13 10:24:22.4±2.0, 4°.35S×150°.54E, h0km, mb3.7/4, mbtmp3.8/5, ML2.2/1, MS3.2/6, Error ellipse: s-maj=94.7km s-min=28.6km az=134.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.04**	**214**	Pn	Pn	10 25 54.4	+1.3
	3.4nm,0.3s,baz=55,slow=15,SNR=8.0						
PMG				Sn	Sn	10 27 05.7	+2.7
	1.0nm,0.3s,baz=67,slow=13,SNR=2.4						
PMG				LR	LR	10 27 48.4	
	comp=Z,61nm,19.7s,baz=8.5,slow=34						
	15nm,0.7s						
GUMO	**Guam**	**18.69**	**343**	LR	LR	10 34 44.2	
	comp=Z,29nm,19.3s,baz=151,slow=33						
WRA	**Warramunga Arr**	**22.12**	**224**	P	P	10 29 20.6	+0.9
	0.7nm,0.4s,baz=50,slow=10,SNR=6.9						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**25.03**	**218**	P	P	10 29 46.7	-1.8
	1.9nm,0.8s,baz=56,slow=9.2,SNR=20						
	1.9nm,0.8s						
STKA	**Stephens Creek**	**28.64**	**196**	LR	LR	10 41 17.7	
	comp=Z,49nm,18.6s,baz=23,slow=35						
JOW	**Kunigami**	**37.74**	**326**	LR	LR	10 44 11.7	
	comp=Z,41nm,21.4s,baz=329,slow=32						
JNU	**Nakatsue**	**41.66**	**335**	LR	LR	10 48 47.2	
	comp=Z,42nm,18.3s,baz=11,slow=35						
RPZ	**Rata Peaks**	**43.19**	**158**	LR	LR	10 51 20.1	
	comp=Z,133nm,18.2s,baz=260,slow=38						
QSPA	**South Pole Qui**	**85.61**	**180**	P	P	10 37 03.5	+0.7
	0.7nm,0.7s,baz=11,slow=0.6,SNR=11						
	0.7nm,0.7s						
NVAR	**Mina Array Bea**	**93.58**	**52**	P	P	10 37 41.1	0.0
	0.2nm,0.7s,baz=259,slow=6.3,SNR=2.7						
	0.2nm,0.7s						

*MEX **13** 10:33:56.4±1.0, 14°.61N×94°.38W, h22km±86km, MD4.3*
*CATAC **13** 10:34:01.1±0.9, 15°.7N±6°×9°.4W±°, h14km±8km, M4.0/11, MLv4.0/11, Error ellipse: s-maj=16.5km s-min=4.9km az=46.6, confirmed*

ISC 13 10:33:52.6±1.4, 14°.78N±0°.05×94°.29W±0°.03, h5km±9km, n35, σ2§43/54, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.96**	**86**	*e*P	**Pn**	**10 34 27.4**	**+0.8**
THIG				*e*S	**Sn**	**10 34 51.4**	**-0.2**
HUIG	**Huatulco**	**2.01**	**299**	*e*P	**Pn**	**10 34 27.4**	**+0.2**
HUIG				*e*S	**Sn**	**10 34 49.0**	**-3.7**
PATR	**El Naranjo**	**2.02**	**80**	*e*P	**Pn**	**10 34 27.6**	**0.0**
PATR				*e*S	**Sn**	**10 34 53.6**	**+0.3**
PAVE	**Pavencul**	**2.09**	**78**	*e*P	**Pn**	**10 34 29.0**	**+0.5**
PAVE				*e*S	**Sn**	**10 34 54.8**	**-0.2**
CHUJ	**Union Juarez**	**2.13**	**81**	*e*P	**Pn**	**10 34 29.6**	**+0.4**
CHUJ				*e*S	**Sn**	**10 34 55.7**	**-0.5**
TGIG		**2.28**	**29**	*e*P	**Pb**	**10 34 33.8**	**-0.5**
TGIG				*e*S	**Sg**	**10 35 03.7**	**-2.3**
UXUV	**UXUV**	**2.53**	**3**	*e*P	**Pb**	**10 34 37.8**	**-0.7**
UXUV				*e*S	**Sb**	**10 35 09.0**	**-0.9**
RTAL	**Retalhuleu**	**2.53**	**95**	*e*P	**Pn**	**10 34 35.1**	**+0.7**
RTAL				*e*S	**Sn**	**10 35 02.8**	**-2.8**
RTAL	**Retalhuleu**	**2.53**	**95**	P	**Pg**	**10 34 41.9**	**+0.8**
CCIG	**Comitan**	**2.56**	**54**	*e*P	**Pb**	**10 34 38.7**	**-0.4**
CCIG				*e*S	**Sb**	**10 35 10.7**	**-0.3**
CCIG	**Comitan**	**2.56**	**54**	P	**Pb**	**10 34 38.6**	**-0.5**
HUEH	**Huehuetenango**	**2.75**	**78**	*e*S	**Sb**	**10 35 14.5**	**-2.0**
HUEH	**Huehuetenango**	**2.75**	**78**	S	**Sb**	**10 35 15.3**	**-1.2**
HUEH	**Huehuetenango**	**2.75**	**78**	P	**Pb**	**10 34 43.9**	**+1.5**
PEIG	**Puerto Escondi**	**3.01**	**294**	*e*P	**Pn**	**10 34 41.3**	**+0.3**
PEIG				*e*S	**Sn**	**10 35 12.8**	**-4.6**
NEUV	**Arroyo Zacate**	**3.25**	**334**	*e*P	**Pn**	**10 34 46.6**	**+2.3**
NEUV				*e*S	**Sn**	**10 35 25.2**	**+1.6**
VHO	**Vista Hermosa**	**3.27**	**314**	*e*P	**Pn**	**10 34 46.3**	**+1.5**
VHO				*e*S	**Sn**	**10 35 23.9**	**-0.3**
YOIG	**Yosondua**	**3.75**	**304**	*e*P	**Pn**	**10 34 54.5**	**+3.0**
YOIG				*e*S	**Sn**	**10 35 36.2**	**+0.1**
PNIG	**Pinotepa**	**4.03**	**294**	*e*P	**Pn**	**10 34 56.5**	**+1.4**
PNIG				*e*S	**Sn**	**10 35 38.2**	**-4.4**
TXIG	**Tlaxiaco**	**4.15**	**307**	*e*P	**Pn**	**10 34 59.3**	**+2.4**
TXIG				*e*S	**Sn**	**10 35 45.5**	**-0.5**
TOIG	**Toxpalan**	**4.23**	**321**	*e*P	**Pn**	**10 35 03.0**	**+5.1**
TOIG				*e*S	**Sn**	**10 35 49.3**	**+1.4**
NUBE	**Las Nubes**	**4.46**	**101**	P	Pb	10 35 08.0	-3.6
NUBE	**Las Nubes**	**4.46**	**101**	S	**Sb**	**10 36 00.5**	**-5.3**
HLIG	**Huajuapan de L**	**4.53**	**312**	*e*P	Pn	10 35 06.5	+4.3
HLIG				*e*S	**Sn**	**10 35 58.7**	**+3.3**
PETF	**Flores**	**4.76**	**63**	*e*P	**Pn**	**10 35 04.3**	**-0.8**
PETF				*e*S	**Sn**	**10 36 01.9**	**+1.2**
PETF	**Flores**	**4.76**	**63**	P	**Pn**	**10 35 08.1**	**+3.0**
ESQI	**Esquipulas**	**4.80**	**92**	P	Pb	10 35 12.7	-4.6
FTIG	**Fresnillo

MEF					AML	AML	10 58 14.9		
	comp=N,22nm,0.1s								
MEF					AML	AML	10 58 15.0		
	comp=Z,19nm,0.1s								
MEF					AML	AML	10 58 15.7		
	comp=E,26nm,0.1s								
VIKU	**Vikbolandet**	**2.83**	**287**	P	**Pn**		**10 57 35.8**	**+3.1**	
VIKU	**Vikbolandet**	**2.83**	**287**	P	**Pn**		**10 57 35.8**	**+3.1**	
VSTU	**Vaestervik**	**2.86**	**270**	P	**Pn**		**10 57 35.9**	**+2.8**	
VSTU	**Vaestervik**	**2.86**	**270**	P	**Pn**		**10 57 35.9**	**+2.8**	
OSKU	**Oskarshamn**	**3.16**	**262**	P	**Pn**		**10 57 39.4**	**+2.2**	
OSKU	**Oskarshamn**	**3.16**	**262**	P	**Pn**		**10 57 39.4**	**+2.2**	
RAF	**Rauma**	**3.27**	**359**	*eP*	**Pn**		**10 57 41.6**	**+3.0**	
LNKU	**Linkoeping**	**3.41**	**280**	P	**Pn**		**10 57 43.2**	**+2.6**	
LNKU	**Linkoeping**	**3.41**	**280**	P	**Pn**		**10 57 43.2**	**+2.6**	
IIGN	**Ignalina**	**3.42**	**133**	*eP*	**Pn**		**10 57 38.2**	**-2.6**	
EKSU	**Eksjoe**	**3.53**	**270**	P	**Pn**		**10 57 44.7**	**+2.4**	
EKSU	**Eksjoe**	**3.53**	**270**	P	**Pn**		**10 57 44.7**	**+2.4**	
SUW	**Suwalki**	**3.84**	**168**	*eP*	**Pn**		**10 57 45.8**	**-0.7**	
VXJU	**Vaexsjoe**	**3.84**	**260**	P	**Pn**		**10 57 48.6**	**+2.0**	
VXJU	**Vaexsjoe**	**3.84**	**260**	P	**Pn**		**10 57 48.6**	**+2.0**	
FKPU	**Falk**	**4.35**	**279**	P	**Pn**		**10 57 56.3**	**+2.8**	
FKPU	**Falk**	**4.35**	**279**	P	**Pn**		**10 57 56.3**	**+2.8**	
DEL	**Delary**	**4.54**	**257**	*iP*	**Pn**		**10 57 57.4**	**+1.2**	
DEL				*iS*	**Sn**		**10 58 50.0**	**+0.4**	
DEL	**Delary**	**4.54**	**257**	*iP*	**Pn**		**10 57 57.4**	**+1.2**	
DEL				*iS*	**Sn**		**10 58 50.0**	**+0.4**	
KEF	**Keuruu**	**4.66**	**18**	*eP*	**Pn**		**10 58 01.2**	**+3.3**	
BSD	**Bornholm Skovb**	**4.68**	**238**	*iP*	**Pn**		**10 57 58.9**	**+0.8**	
BORU	**Boraas**	**4.88**	**272**	*iP*	**Pn**		**10 58 03.6**	**+2.8**	
BORU	**Boraas**	**4.88**	**272**	*iP*	**Pn**		**10 58 03.6**	**+2.8**	
FABU	**Falkenberg**	**5.01**	**265**	*iP*	**Pn**		**10 58 01.8**	**-0.7**	
FABU	**Falkenberg**	**5.01**	**265**	*iP*	**Pn**		**10 58 01.8**	**-0.7**	
VAF	**Ylistaro**	**5.31**	**4**	*eP*	**Pn**		**10 58 09.7**	**+3.0**	
ONAU	**Onsala**	**5.36**	**270**	*iP*	**Pn**		**10 58 10.1**	**+2.6**	
ONAU	**Onsala**	**5.36**	**270**	*iP*	**Pn**		**10 58 10.1**	**+2.6**	
STRU	**Stroemstad**	**5.76**	**287**	*eP*	**Pn**		**10 58 14.7**	**+1.8**	
STRU				*eS*	**Sn**		**10 59 18.7**	**-0.7**	
NC602	**NORSAR Array S**	**6.07**	**304**	*eP*	**Pn**		**10 58 18.5**	**+1.3**	
NC602				*eS*	**Sn**		**10 59 29.1**	**+1.9**	
NC602				IAML			10 59 36.2		
	comp=Z,1.8nm,0.3s								
NB201	**NORSAR Array S**	**6.32**	**306**	*eP*	**Pn**		**10 58 22.1**	**+1.6**	
NB201				*eS*	**Sn**		**10 59 34.4**	**+1.1**	
NB201				IAML			10 59 40.6		
	comp=Z,1.3nm,0.8s								
NC303	**NORSAR Array S**	**6.37**	**307**	*eP*	**Pn**		**10 58 23.3**	**+2.1**	
NAO01	**NORSAR Array S**	**6.41**	**303**	*eP*	**Pn**		**10 58 22.9**	**+1.1**	
NBO00	**NORSAR Array S**	**6.53**	**305**	*eP*	**Pn**		**10 58 24.2**	**+0.7**	
NC204	**NORSAR Array S**	**6.65**	**307**	*eP*	**Pn**		**10 58 26.5**	**+1.4**	
NC204				*eS*	**Sn**		**10 59 42.5**	**+1.0**	
JOF	**Joensuu**	**6.97**	**38**	*eP*	**Pn**		**10 58 29.5**	**0.0**	
HOMB	**Homborsund**	**7.11**	**280**	*iP*	**Pn**		**10 58 31.5**	**+0.1**	
HOMB				*iS*	**Sn**		**10 59 48.3**	**-4.6**	
HOMB	**Homborsund**	**7.11**	**280**	*iP*	**Pn**		**10 58 31.5**	**+0.1**	
HOMB				*iS*	**Sn**		**10 59 48.3**	**-4.6**	
SKAR	**Skarslia**	**7.54**	**298**	*eP*	**Pn**		**10 58 38.3**	**+0.9**	
SKAR				*eS*	**Sn**		**11 00 02.5**	**-0.9**	
SKAR				IAML			11 00 20.4		
	comp=Z,1.5nm,0.5s								
NSS	**Namsos**	**8.29**	**329**	*eP*	**Pn**		**10 58 47.9**	**+0.3**	
NSS				*eS*	**Sn**		**11 00 19.8**	**-1.9**	
NSS				IAML			11 00 40.4		
	comp=Z,1.8nm,0.8s								
MOL	**Molde**	**8.60**	**310**	*eP*	**Pn**		**10 58 52.0**	**+0.3**	
MOL				*eS*	**Sn**		**11 00 27.7**	**-1.6**	
MOL				IAML			11 00 45.2		
	comp=Z,1.5nm,0.9s								
AKN	**Aaknes**	**8.66**	**307**	*eP*	**Pn**		**10 58 53.5**	**+0.9**	
AKN				*eS*	**Sn**		**11 00 28.7**	**-2.2**	
AKN				IAML			11 00 35.0		
	comp=Z,1.5nm,0.7s								
LEIR	**Leirfjorden**	**9.32**	**338**	*eP*	**Pn**		**10 59 02.8**	**+1.1**	

*EST **13** 11:03:56.3±0.2,57.°70N×21.°87E,h0km,ML2.1(HEL), Explosion*
*HEL **13** 11:03:56.9±0.7,57.°68N×22.°14E,h0km,ML2.4, Explosion*
*DNK **13** 11:03:56.4±1.5,57.°65N×21.°94E,h0km,ML3.0, Suspected explosion*
*IDC **13** 11:03:58.0±2.2,57.°80N×21.°98E,h0km,mbtmp3.2/4, ML2.2/4, Error ellipse: s-maj=22.0km s-min=8.5km az=165.0*
*LVSN **13** 11:03:59.6±4.0,57.°59N×22.°07E,h0km,≤46km,ML2.5*
*UPP **13** 11:03:59.7±1.5,57.°78N×21.°50E,h0km,ML2.4, Presumed earthquake*
*BER **13** 11:04:01.2±1.0,57.°84N×21.°55E,h0km,ML2.0, ML2.4(UPP), Suspected explosion*

ISC 13 11:03:55.6±0.8, 57.71°N±0.03°×21.87°E±0.03, h0km, n76, σ1§49/100, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.24**	**110**	*eP*	**Pg**	**11 04 00.3**	**+0.1**
SLIT	**Slitere, Latvi**	**0.24**	**110**	*eP*	**Pg**	**11 04 00.5**	**+0.3**
SLIT				*eS*	**Sg**	**11 04 04.0**	**+0.6**
SLIT				AML	AML	11 04 17.5	
	comp=N,4μm,0.4s						
SLIT				AML	AML	11 04 17.9	
	comp=Z,4μm,0.5s						
SLIT				AML	AML	11 04 19.3	
	comp=E,5μm,0.5s						
SLIT	**Slitere, Latvi**	**0.24**	**110**	*eP*	**Pg**	**11 04 00.6**	**+0.3**
SLIT				*eS*	**Sg**	**11 04 03.7**	**+0.4**
EE06	**Soera, Palade,**	**1.36**	**22**	*eP*	**Pg**	**11 04 20.7**	**-1.1**
EE06				*eSB*	**Sg**	**11 04 38.9**	**-0.5**
EE01	**Perakula, Nova**	**1.76**	**31**	*eP*	**Pn**	**11 04 27.4**	**+0.1**
EE01				*ePG*	**Pb**	**11 04 28.2**	**-0.6**
EE01				*eS*	**Sn**	**11 04 50.1**	**-0.3**
EE01				*eSN*	**Sb**	**11 04 52.0**	**+0.7**
GOTU	**Gotland**	**1.77**	**271**	P	**Pn**	**11 04 28.6**	**+1.1**
GOTU	**Gotland**	**1.77**	**271**	P	**Pn**	**11 04 28.6**	**+1.1**
EE08	**Sarghaua, Vand**	**2.02**	**61**	*eP*	**Pn**	**11 04 31.3**	**+0.3**
EE08				*eSB*	**Sn**	**11 04 57.8**	**+1.0**
EE02	**Kiisa, Saku**	**2.10**	**44**	*eP*	**Pn**	**11 04 33.0**	**+1.1**
EE02				*eSG*	**Sb**	**11 05 01.2**	**+0.1**
TVF	**Tvarminne**	**2.26**	**18**	*ePB*	**Pn**	**11 04 36.0**	**+1.9**
TVF				*eSB*	**Sb**	**11 05 05.3**	**-0.3**
TVF				smax	smax	11 05 07.7	
	comp=Z,13nm,0.1s						
NYNU	**Nynaeshamn**	**2.41**	**304**	P	**Pn**	**11 04 38.3**	**+2.1**
NYNU	**Nynaeshamn**	**2.41**	**304**	P	**Pn**	**11 04 38.3**	**+2.1**
PABE	**Paberze**	**2.50**	**151**	*eP*	**Pn**	**11 04 36.8**	**-0.6**
PABE	**Paberze**	**2.50**	**151**	*eP*	**Pn**	**11 04 39.4**	**+2.0**
PABE				AML	AML	11 04 39.6	
	comp=Z,92nm,0.1s						
PABE				AML	AML	11 05 11.7	
	comp=N,42nm,0.4s						
PABE				AML	AML	11 05 12.6	
	comp=E,50nm,0.1s						
NRTU	**Norrtaelje**	**2.60**	**321**	P	**Pn**	**11 04 40.2**	**+1.4**
NRTU	**Norrtaelje**	**2.60**	**321**	P	**Pn**	**11 04 40.2**	**+1.4**
EE03	**Tooma soojaam,**	**2.60**	**62**	*eP*	**Pn**	**11 04 39.5**	**+0.7**
EE03				*ePB*	**Pb**	**11 04 41.0**	**-2.0**
BYXU	**Byxelkrok**	**2.66**	**263**	P	**Pn**	**11 04 41.3**	**+1.7**
BYXU	**Byxelkrok**	**2.66**	**263**	P	**Pn**	**11 04 41.3**	**+1.7**
AAL	**Aland**	**2.66**	**339**	*eP*	**Pn**	**11 04 40.9**	**+1.3**
AAL	**Aland**	**2.66**	**339**	*eP*	**Pn**	**11 04 40.0**	**+0.3**
AAL				*eSG*	**Sb**	**11 05 19.3**	**+2.2**
AAL				smax	smax	11 05 23.9	
	comp=Z,4.7nm,0.1s						
VSU	**Vasula**	**2.69**	**72**	*eP*	**Pn**	**11 04 41.1**	**+1.0**
VSU	**Vasula**	**2.69**	**72**	*eP*	**Pn**	**11 04 41.8**	**+1.7**
VSU				AML	AML	11 04 42.4	
	comp=E,86nm,0.1s						
VSU				AML	AML	11 05 18.7	
	comp=N,55nm,0.2s						
VSU	**Vasula**	**2.69**	**72**	*iP*	**Pn**	**11 04 40.7**	**+0.6**
VSU	**Vasula**	**2.69**	**72**	*eP*	**Pn**	**11 04 41.5**	**+1.4**
VSU				*eSB*	**Sn**	**11 05 16.2**	**+2.8**
MEF	**Metsahovi**	**2.83**	**26**	*eP*	**Pn**	**11 04 43.1**	**+1.0**
MEF	**Metsahovi**	**2.83**	**26**	*eP*	**Pn**	**11 04 45.1**	**+3.1**
MEF				*eS*	**Sb**	**11 05 21.1**	**-1.2**
MEF				AML	AML	11 05 23.8	
	comp=E,18nm,0.1s						
MEF				AML	AML	11 05 26.5	
	comp=N,10nm,0.1s						
MEF				AML	AML	11 05 27.5	
	comp=Z,13nm,0.2s						
MEF	**Metsahovi**	**2.83**	**26**	*ePB*	**Pn**	**11 04 44.9**	**+2.9**
MEF				*eSB*	**Sb**	**11 05 21.5**	**-0.8**
MEF				smax	smax	11 05 24.7	
	comp=Z,7.5nm,0.1s						
HEL5	**Espoo, Suvisaa**	**2.84**	**30**	*ePB*	**Pn**	**11 04 44.8**	**+2.7**
HEL5				*eSB*	**Sb**	**11 05 22.2**	**-0.1**
HEL5				smax	smax	11 05 24.8	
	comp=Z,8.6nm,0.1s						
VIKU	**Vikbolandet**	**2.85**	**288**	P	**Pn**	**11 04 44.2**	**+1.9**
VIKU	**Vikbolandet**	**2.85**	**288**	P	**Pn**	**11 04 44.2**	**+1.9**
HEL1	**Helsinki**	**2.93**	**31**	*eSB*	**Sb**	**11 05 23.5**	**-1.4**
HEL1				smax	smax	11 05 24.9	
	comp=Z,5.5nm,0.1s						
NUR	**Nurmijarvi**	**3.15**	**26**	*ePB*	**Pn**	**11 04 50.0**	**+3.5**
NUR				*eSB*	**Sb**	**11 05 29.5**	**-1.9**
NUR				smax	smax	11 05 31.0	
	comp=Z,5.8nm,0.1s						
OSKU	**Oskarshamn**	**3.16**	**263**	P	**Pn**	**11 04 48.0**	**+1.5**
OSKU	**Oskarshamn**	**3.16**	**263**	P	**Pn**	**11 04 48.0**	**+1.5**
FIBU	**Brunna**	**3.22**	**315**	P	**Pn**	**11 04 48.9**	**+1.6**
FIBU	**Brunna**	**3.22**	**315**	P	**Pn**	**11 04 48.9**	**+1.6**
BACU	**Backbrunna**	**3.28**	**313**	P	**Pn**	**11 04 49.6**	**+1.5**
BACU	**Backbrunna**	**3.28**	**313**	P	**Pn**	**11 04 49.6**	**+1.5**
RAF	**Rauma**	**3.32**	**359**	*eP*	**Pn**	**11 04 50.4**	**+1.7**
RAF	**Rauma**	**3.32**	**359**	*eP*	**Pn**	**11 04 50.3**	**+1.6**
RAF				*eSB*	**Sb**	**11 05 35.9**	**-0.3**
RAF				smax	smax	11 05 40.2	
	comp=Z,3.1nm,0.1s						
IIGN	**Ignalina**	**3.38**	**133**	*eP*	**Pn**	**11 04 46.6**	**-2.9**
LNKU	**Linkoeping**	**3.43**	**281**	P	**Pn**	**11 04 51.8**	**+1.6**
LNKU	**Linkoeping**	**3.43**	**281**	P	**Pn**	**11 04 51.8**	**+1.6**
PVF	**Pernaja**	**3.51**	**34**	*ePG*	**Pb**	**11 04 58.8**	**+0.3**
VXJU	**Vaexsjoe**	**3.84**	**261**	P	**Pn**	**11 04 57.2**	**+1.4**
VXJU	**Vaexsjoe**	**3.84**	**261**	P	**Pn**	**11 04 57.2**	**+1.4**
KPF	**Kankaanpaa**	**4.14**	**1**	*eP*	**Pn**	**11 05 00.9**	**+1.0**
FIA0	**FINESS Array S**	**4.31**	**28**	*eP*	**Pn**	**11 05 03.7**	**+1.4**
FINES	**FINESS Array B**	**4.31**	**28**	Pn	**Pn**	**11 05 03.5**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=213,slow=12,SNR=9.8						
FINES				Pg	**Pb**	**11 05 12.1**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=210,slow=14,SNR=17						
FINES				Sn	**Sn**	**11 05 54.6**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=211,slow=18,SNR=4.0						
FINES				Lg	Lg	11 06 08.9	
	comp=Z,1.9nm,0.3s,baz=213,slow=24,SNR=12						
	comp=Z,0.7nm,0.2s						
DEL	**Delary**	**4.54**	**257**	*iP*	**Pn**	**11 05 06.0**	**+0.6**
DEL				*iS*	**Sn**	**11 05 59.1**	**+0.4**
BSD	**Bornholm Skovb**	**4.66**	**239**	*iS*	**Sn**	**11 05 59.1**	**-2.6**
KEF	**Keuruu**	**4.72**	**17**	*eP*	**Pn**	**11 05 09.3**	**+1.4**
HFS	**Hagfors**	**4.88**	**303**	Pn	**Pn**	**11 05 11.6**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=119,slow=14,SNR=26						
HFS				Pg	**Pb**	**11 05 22.7**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=118,slow=12,SNR=4.2						
HFS				Sn	**Sn**	**11 06 08.6**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=116,slow=26,SNR=5.7						
HFS				Lg	Lg	11 06 28.4	
	comp=Z,1.1nm,0.3s,baz=120,slow=29,SNR=8.6						
	comp=Z,1.3nm,0.3s						
BORU	**Boraas**	**4.88**	**273**	*iP*	**Pn**	**11 05 12.9**	**+2.7**
UDD	**Uddeholm**	**4.90**	**303**	*eP*	**Pn**	**11 05 11.6**	**+1.2**
KAF	**Kangasniemi**	**4.95**	**25**	*eP*	**Pn**	**11 05 12.2**	**+1.1**
FABU	**Falkenberg**	**5.00**	**266**	*iS*	**Sn**	**11 06 10.6**	**+0.3**
LUNU	**Lund**	**5.09**	**249**	*iS*	**Sn**	**11 06 10.3**	**-2.1**
VAF	**Ylistaro**	**5.37**	**4**	*eP*	**Pn**	**11 05 18.0**	**+1.2**
ONAU	**Onsala**	**5.37**	**271**	*eP*	**Pn**	**11 05 18.1**	**+1.3**
ONAU	**Onsala**	**5.37**	**271**	*iP*	**Pn**	**11 05 19.5**	**+2.7**
ONAU				*iS*	**Sn**	**11 06 18.9**	**-0.3**
STRU	**Stroemstad**	**5.78**	**288**	*eP*	**Pn**	**11 05 23.3**	**+0.8**
NC602	**NORSAR Array S**	**6.11**	**304**	*eP*	**Pn**	**11 05 27.8**	**+0.8**
NC602				IAML		11 06 36.6	
	comp=Z,0.9nm,0.6s						
NB201	**NORSAR Array S**	**6.35**	**306**	*eP*	**Pn**	**11 05 30.8**	**+0.4**
NB201				IAML		11 07 21.5	
	comp=Z,1.8nm,0.3s						
NOA	**NORSAR Array B**	**6.38**	**306**	Pn	**Pn**	**11 05 31.5**	**+0.7**
	baz=120,slow=11,SNR=1.3						
NOA				Sn	**Sn**	**11 06 42.2**	**-2.1**
	baz=138,slow=8.7,SNR=1.5						
NOA				Lg	Lg	11 07 19.7	
	comp=Z,0.1nm,0.3s,baz=116,slow=17,SNR=4.3						
	comp=Z,0.3nm,0.5s						
NC303	**NORSAR Array S**	**6.40**	**308**	*eP*	**Pn**	**11 05 31.7**	**+0.6**
NAO01	**NORSAR Array S**	**6.44**	**304**	*eP*	**Pn**	**11 05 30.9**	**-0.8**
NAO01				IAML		11 07 20.6	
	comp=Z,1.9nm,0.8s						
NBO00	**NORSAR Array S**	**6.57**	**305**	*eP*	**Pn**	**11 05 32.9**	**-0.4**
NBO00				IAML		11 06 53.1	
	comp=Z,1.6nm,0.8s						
NC204	**NORSAR Array S**	**6.69**	**307**	*eP*	**Pn**	**11 05 35.2**	**+0.2**
HOMB	**Homborsund**	**7.13**	**280**	*eP*	**Pn**	**11 05 40.6**	**-0.3**
HOMB				IAML		11 07 35.9	
	comp=Z,6.2nm,0.7s						
SKAR	**Skarslia**	**7.57**	**299**	*eP*	**Pn**	**11 05 46.6**	**-0.5**
SKAR				IAML		11 07 10.6	
	comp=Z,1.6nm,0.6s						
SNART	**Snartemo**	**7.81**	**281**	*eP*	**Pn**	**11 05 50.2**	**-0.1**
SNART				IAML		11 07 31.9	
	comp=Z,8.1nm,1.0s						
ODD1	**Odda**	**8.21**	**292**	*eP*	**Pn**	**11 05 55.1**	**-0.8**
BLS5	**Blasjo**	**8.24**	**289**	*eP*	**Pn**	**11 05 55.4**	**-0.8**
ARCES	**ARCESS Array B**	**11.98**	**6**	Pn	**Pn**	**11 06 44.0**	**-3.4**
	baz=185,slow=14,SNR=7.2						
ARCES				Sn	Sn	11 08 51.5	-10
	baz=187,slow=23,SNR=1.6						
	comp=Z,2.6nm,0.9s						

*NCEDC **13** 11:13:37.0±1.3,40.°37N±0.°07×126.°66W±0.°02,h5km,≥2km, Error ellipse: s-maj=12.5km s-min=4.1km az=183.0*

NEIC 13 11:13:36.9±1.6, 40.°39N±0.°07×126.°61W±0.°04, h10km±2km, ML2.6/53, ML3.0/45(NCEDC), Error ellipse: s-maj=12.5km s-min=5.5km az=181.0, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETL	**Petrolia**	**1.73**	**92**		Pn	**11 14 06.6**	**-0.5**
PETL					Sb	**11 14 30.2**	**-0.4**
KCTM	**Capetown**	**1.73**	**86**		Pn	**11 14 07.2**	**+0.1**
KCTM					Sb	**11 14 31.5**	**+0.8**
KMPM	**Mount Pierce**	**1.90**	**88**		Pn	**11 14 09.7**	**+0.2**
KMPM				Sn	Sb	**11 14 35.0**	**-0.5**
KMPM				IAML		11 14 37.8	
	comp=E,54nm,0.5s						
KMPM				IAML		11 14 43.0	
	comp=N,62nm,1.1s						
JCC	**Jacoby Creek,**	**2.01**	**77**	Pn	Pn	11 14 10.2	-0.6
BRIC	**Briceland Vine**	**2.09**	**97**		Pn	11 14 12.2	+0.2
BRIC	**Briceland Vine**	**2.09**	**97**	IAML		11 14 40.7	
	comp=N,68nm,0.2s						
BRIC				IAML		11 14 40.9	
	comp=E,33nm,0.1s						
KRPM	**Rodgers**	**2.11**	**68**	Pn	Pn	11 14 11.6	-0.7
KRPM				IAML		11 15 19.6	
	comp=N,43nm,4.4s						
KRPM				IAML		11 15 32.1	
	comp=E,37nm,4.0s						
KMRM	**Mail Ridge**	**2.22**	**93**		Pn	11 14 14.5	+0.6
KMRM				IAML		11 14 49.3	
	comp=E,35nm,1.0s						
KMRM				IAML		11 14 52.5	
	comp=N,50nm,1.3s						
KHMM	**Horse Mountain**	**2.24**	**76**		Pn	11 14 14.1	-0.1
KHMM				IAML		11 14 46.1	
	comp=E,24nm,1.5s						
INGLE	**Inglenook, Smi**	**2.39**	**110**		Pn	11 14 16.1	-0.1
KCPM	**Cahto Peak**	**2.42**	**106**		Pn	11 14 16.6	-0.1
KCPM				Sn	Sn	11 14 45.4	-1.1
KCPM				IAML		11 14 52.7	
	comp=N,36nm,0.9s						
KCPM				IAML		11 14 53.0	
	comp=E,34nm,0.9s						
MNDO	**Woodland Fire**	**2.45**	**115**		Pn	11 14 16.7	-0.3
KSXB	**Camp Six Broad**	**2.52**	**54**		Pn	11 14 17.0	-1.0
KSXB				IAML		11 15 09.6	
	comp=E,19nm,4.9s						
GTC	**Three Chop Rid**	**2.55**	**112**		Pn	11 14 18.1	-0.1
KBO	**Bosley Butte**	**2.56**	**44**	Pn	Pn	11 14 17.3	-1.2
KBO				IAML		11 14 50.3	
	comp=E,45nm,4.2s						
KHBM	**Hayfork Bally**	**2.60**	**83**	Pn	Pn	11 14 19.6	+0.5
KHBM				IAML		11 15 03.5	
	comp=N,19nm,4.3s						
DCMP	**DeCamp, Califo**	**2.67**	**109**	Pn	Pn	11 14 20.1	+0.1
L02F	**Cave Junction**	**2.87**	**52**		Pn	11 14 22.8	+0.1
L02F				IAML		11 14 41.2	
	comp=N,18nm,4.6s						
L02F				IAML		11 15 35.0	
	comp=E,14nm,4.9s						
O02D	**Mt. Diablo Mer**	**2.93**	**93**		Pn	11 14 24.4	+0.8
M02C	**Callahan**	**3.02**	**69**	Pn	Pn	11 14 24.9	+0.1
HOPS	**Hopland Field**	**3.06**	**116**	Pn	Pn	11 14 25.5	+0.2
HOPS				IAML		11 15 07.3	
	comp=N,18nm,1.6s						
HOPS				IAML		11 16 13.2	
	comp=E,24nm,2.7s						
K02D	**Willamette Mer**	**3.19**	**43**	Pn	Pn	11 14 26.6	-0.6
K02D				IAML		11 15 59.9	
	comp=N,10nm,4.5s						
YBH	**Yreka Blue Hor**	**3.24**	**64**		Pn	11 14 28.9	+1.0
YBH				IAML		11 15 20.6	
	comp=N,14nm,2.9s						
MCCM	**Marconi Confer**	**3.66**	**127**	Pn	Pn	11 14 32.9	-0.6
O03E	**Paynes Creek**	**3.67**	**90**		Pn	11 14 34.2	+0.4
O03E				IAML		11 16 44.1	
	comp=E,11nm,4.7s						
CVS	**Carmenet Viney**	**3.81**	**121**	Pn	Pn	11 14 35.6	0.0
BBOR	**Butler Butte**	**3.86**	**48**	Pn	Pn	11 14 37.0	+0.5
BBOR				IAML		11 15 26.2	
	comp=E,7.9nm,4.4s						
BBOR				IAML		11 16 45.8	
	comp=N,6.8nm,3.5s						
ORV	**Oroville**	**4.01**	**100**		Pn	11 14 39.2	+0.8
ORV				IAML		11 15 20.2	
	comp=E,5.4nm,4.8s						
ORV				IAML		11 15 22.4	
	comp=N,5.6nm,5.0s						
JRSC	**Jasper Ridge**	**4.53**	**130**	Pn	Pn	11 14 44.5	-1.0
MHC	**Mount Hamilton**	**4.92**	**127**	Pn	Pn	11 14 50.2	-0.9
WIFE	**Three Sisters-**	**5.11**	**43**	Pn	Pn	11 14 53.8	+0.1
SAO	**San Andreas Ge**	**5.42**	**130**	Pn	Pn	11 14 56.6	-1.2
BBGB	**Big Mountain B**	**5.79**	**129**	Pn	Pn	11 15 02.9	0.0
HULI	**Fort Hunter Li**	**6.07**	**134**	Pn	Pn	11 15 05.9	-0.8
MDPB	**Devils Postpil**	**6.47**	**113**		Pn	11 15 16.1	+3.6

*SOME **13** 11:13:41.2,43.°67N×69.°63E*
*NNC **13** 11:13:42.5±1.0,43.°64N×69.°67E,h0km,mb4.0,mpv3.4, Error ellipse: s-maj=7.2km s-min=2.8km az=128.0, Suspected Mining explosion.*
*KRNET **13** 11:13:45.2±0.1,39.°49N×69.°26E,mb3.1*

ISC 13 11:13:40.9±2.2, 43.°73N±0.°07×69.°5E±0.°1, h0km, n15, σ2§70/22, 5C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.73**	**162**	P	**Pn**	**11 13 58.6**	**+0.1**
	3.8nm,0.4s						
BRLS				S	**Sn**	**11 14 11.4**	**+0.9**
	39nm,0.3s						
KK31	**Karatay Array**	**0.95**	**131**	⇑P	**Pg**	**11 13 57.7**	**-1.4**
	1.2nm,0.2s,baz=318,slow=15						
KK31				⇓S	**Sg**	**11 14 09.8**	**-1.7**
	33nm,0.6s,baz=311,slow=31						
IUG	**luzhnay**	**1.62**	**167**	P	**Pn**	**11 14 09.9**	**-1.0**
	43nm,0.4s						
IUG				S	**Sg**	**11 14 31.0**	**-2.1**
	78nm,0.4s						
TRKS	**Terek-Say**	**2.50**	**151**	⇓*eP*	**Pb**	**11 14 25.4**	**-1.4**
TRKS				⇓*eS*	**Sn**	**11 14 54.7**	**+0.5**
ARK	**Arkit**	**2.63**	**136**	⇑*eP*	**Pg**	**11 14 34.3**	**+2.9**
ARK				⇑*eS*	**Sg**	**11 15 10.3**	**+4.8**
MRKS	**Merke**	**2.88**	**109**	Pg	**Pb**	**11 14 33.1**	**-0.1**
	9.2nm,0.4s						
MRKS				Lg	Lg	11 15 10.3	
	13nm,0.4s						
BTLS	**Baital**	**3.50**	**66**	Pg	**Pb**	**11 14 45.3**	**+1.6**
	19nm,0.4s						
BTLS				Lg	Lg	11 15 31.3	
	15nm,0.7s						
ARSB	**Arslanbob**	**3.51**	**132**	⇑*eP*	**Pn**	**11 14 38.4**	**+1.6**
ARSB				⇑*eS*	**Sn**	**11 15 17.0**	**-2.1**
SGDS	**Sogindy**	**3.72**	**92**	Pg	**Pb**	**11 14 48.3**	**+0.8**
	3.6nm,0.3s						
SGDS				Lg	Lg	11 15 36.9	
	8.7nm,0.6s						
ARLS	**Aral**	**3.99**	**116**	⇓*eP*	**Pb**	**11 14 54.2**	**+2.0**
ARLS				⇓*eS*	**Sg**	**11 15 44.3**	**-4.9**
KRBS	**Karabastau**	**4.46**

baz=55,slow=76,SNR=118
H08S2 Diego Garcia H 26.05 237 T T 11 50 59.9
baz=55,slow=76,SNR=90
H08S1 Diego Garcia H 26.07 237 T T 11 50 55.2
baz=55,slow=76,SNR=78
GAR Garm 38.63 330 P **P** **11 25 58.8 +0.9**
BOOM Boomskoye usch 39.03 338 P **P** **11 26 01.1 -0.1**
BOOM IAmb IAmb 11 26 02.9
comp=Z,1.8nm,0.9s
ARSB Arslanbob 39.23 334 P **P** **11 26 03.6 +0.8**
FITZ Fitzroy Crossi 39.65 129 P **P** **11 26 06.2 -0.2**
MKAR Makanchi Array 41.12 347 P **P** **11 26 18.8 +0.5**
comp=Z,0.5nm,0.4s,baz=157,slow=9.2,SNR=6.0
comp=Z,0.5nm,0.4s
MAKZ Makanchi 41.20 347 P **P** **11 26 19.5 +0.5**
KK31 Karatay Array 41.74 334 P **P** **11 26 24.3 +0.9**
KK31 IAmb IAmb 11 26 26.2
comp=Z,3.2nm,1.0s
KURBB Kurchatov Arra 45.58 346 P **P** **11 26 54.7 +0.8**
comp=Z,1.4nm,0.2s,baz=160,slow=5.8,SNR=1.7
comp=Z,1.4nm,0.2s
KURK Kurchatov 45.64 346 P **P** **11 26 54.4 0.0**
WB0 Warramunga Arr 47.52 125 P **P** **11 27 09.1 -0.5**
WB0 IAmb IAmb 11 27 10.5
comp=Z,1.5nm,0.4s
WRA Warramunga Arr 47.56 125 P **P** **11 27 09.6 -0.3**
comp=Z,0.8nm,0.5s,baz=306,slow=8.7,SNR=26
WRA PcP **PcP** **11 28 38.9 +0.4**
comp=Z,0.2nm,0.4s,baz=313,slow=3.1,SNR=1.2
comp=Z,0.8nm,0.5s
WRA Warramunga Arr 47.56 125 P **P** **11 27 08.1 -1.8**
ZALV Zalesovo Beam 47.59 352 P **P** **11 27 10.1 +0.4**
comp=Z,0.5nm,0.3s,baz=176,slow=8.8,SNR=3.8
comp=Z,0.5nm,0.3s
ZALV Zalesovo Beam 47.59 352 P **P** **11 27 10.6 +0.9**
ASAR Alice Springs 49.16 129 P **P** **11 27 22.0 -0.2**
comp=Z,1.6nm,0.6s,baz=301,slow=7.6,SNR=45
ASAR PcP **PcP** **11 28 44.6 +0.4**
comp=Z,0.4nm,0.5s,baz=336,slow=2.7,SNR=4.5
comp=Z,1.6nm,0.6s
ASAR Alice Springs 49.16 129 P **P** **11 27 21.8 -0.4**
AS31 Alice Springs 49.16 129 P **P** **11 27 21.8 -0.4**
AS31 IAmb IAmb 11 27 23.8
comp=Z,0.8nm,0.6s
FORT Forrest 49.45 141 P **P** **11 27 22.7 -1.5**
FORT IAmb IAmb 11 27 27.2
comp=Z,3.9nm,0.8s
BVAR Borovoye Array 50.01 341 P **P** **11 27 29.0 +0.8**
comp=Z,0.7nm,0.4s,baz=144,slow=10,SNR=4.8
comp=Z,0.7nm,0.4s
AB31 Akbulak array 51.20 332 P **P** **11 27 38.1 +1.0**
AB31 IAmb IAmb 11 27 39.5
comp=Z,1.3nm,0.6s
ABKAR Akbulak array 51.20 332 P **P** **11 27 37.7 +0.5**
STKA Stephens Creek 59.30 133 P **P** **11 28 34.5 -1.2**
comp=Z,1.1nm,0.4s,baz=322,slow=16,SNR=3.0
comp=Z,1.1nm,0.4s
H04N2 CROZET ISLANDS 64.91 211 T T 12 39 59.8
baz=47,slow=75,SNR=20
H04N1 CROZET ISLANDS 64.92 211 T T 12 39 44.1
baz=47,slow=75,SNR=18
H04N3 CROZET ISLANDS 64.93 211 T T 12 39 51.0
baz=47,slow=75,SNR=18
CAN Canberra 66.37 133 P **P** **11 29 23.6 +1.0**
FINES FINESS Array B 73.68 332 P **P** **11 30 07.2 +0.5**
comp=Z,5.2nm,1.0s,baz=79,slow=4.1,SNR=5.5
comp=Z,5.2nm,1.0s
FINES FINESS Array B 73.68 332 P **P** **11 30 07.4 +0.7**
TXAR Lajitas Array 140.11 25 PKP **PKiKP** **11 38 02.9 -1.5**
comp=Z,0.1nm,0.4s,baz=35,slow=1.3,SNR=4.0

*NEIC **13** 11:20:02.9±0.6, 19°.21N±0°.02×155°.47W±0°.02, h42km±3km, Error ellipse: s-maj=3.6km s-min=2.6km az=150.0*
HVO 13 11:20:04.2±0.6,**19°.19N**±0°.03×**155°.447W**±0°.009,
h38km±4km,**ML2.5**/41,**ML2.6**/42(NEIC), **Error ellipse: s-maj=4.0km s-min=1.1km az=182.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.07**	**43**		Pn	11 20 10.1	-0.4
HPO	**Honuapo**	**0.14**	**226**		Pn	11 20 10.2	-5.2
HPO					Sn	11 20 14.6	-12
HLP	**Hilina Pali**	**0.17**	**50**		Pn	11 20 10.6	-3.8
HLP					Sn	11 20 15.3	-8.9
HLP				IAML		11 20 16.8	
	comp=E,646nm,0.4s						
KHU	**Kahuku**	**0.17**	**290**		Pn	11 20 10.4	-4.2
KHU					Sn	11 20 15.1	-10
AIN	**Ainahou**	**0.18**	**357**	Pn	Pn	11 20 10.6	-3.5
SDHHI	**Sand Hill**	**0.25**	**36**		Pn	11 20 11.0	-1.9
SDHHI					Sn	11 20 15.9	-4.6
WRMHI	**West Rim**	**0.26**	**32**		Pn	11 20 11.0	-1.8
WRMHI					Sn	11 20 16.2	-4.2
RIM	**Rim**	**0.26**	**38**		Pn	11 20 11.1	-1.6
KKO	**Keanakako'i**	**0.27**	**39**		Pn	11 20 11.2	-1.5
KKO					Sn	11 20 16.2	-3.9
UWE	**Uwekahuna**	**0.27**	**32**		Pn	11 20 11.1	-1.6
OBL	**Observatory Le**	**0.28**	**34**		Pn	11 20 11.1	-1.6
BYL	**Byron's Ledge**	**0.28**	**38**		Pn	11 20 11.2	-1.4
BYL				IAML		11 20 16.7	
	comp=E,432nm,0.8s						
UWB	**Uwekahuna Bluf**	**0.28**	**34**		Pn	11 20 11.1	-1.6
PUH	**Pauahi**	**0.29**	**49**		Pn	11 20 11.4	-1.3
PUH					Sn	11 20 16.5	-3.4
PUH				IAML		11 20 16.6	
	comp=E,525nm,0.4s						
PUH				IAML		11 20 18.1	
	comp=N,465nm,0.3s						
SBLHI	**Steaming Bluff**	**0.29**	**35**		Pn	11 20 11.2	-1.5
SBLHI					Sn	11 20 16.4	-3.4
HATHI	**Halema'uma'u T**	**0.29**	**37**		Pn	11 20 11.3	-1.4
HATHI					Sn	11 20 16.7	-3.2
HATHI				IAML		11 20 16.8	
	comp=E,485nm,0.3s						
HATHI				IAML		11 20 17.6	
	comp=N,344nm,0.6s						
MLH	**Mauna Loa**	**0.31**	**11**		Pn	11 20 11.8	-1.1
MLH					Sn	11 20 17.4	-2.6
MLH				IAML		11 20 17.4	
	comp=E,385nm,0.3s						
MLH				IAML		11 20 17.5	
	comp=N,467nm,0.3s						
RSD	**Rainshed**	**0.32**	**30**		Pn	11 20 11.6	-1.2
RSD					Sn	11 20 17.4	-2.4
KNHH	**Kane Nui o Ham**	**0.32**	**54**		Pn	11 20 11.8	-0.9
MWH	**Mokuaweoweo**	**0.33**	**334**		Pn	11 20 11.8	-1.4
MWH				IAML		11 20 18.2	
	comp=N,290nm,0.3s						
MWH				IAML		11 20 23.2	
	comp=E,298nm,0.6s						
STCH	**Steam Cracks**	**0.36**	**57**		Pn	11 20 12.1	-0.8
STCH					Sn	11 20 18.1	-1.7
STCH				IAML		11 20 18.1	
	comp=N,423nm,0.1s						
NPOC	**North of Pu'u**	**0.38**	**57**		Pn	11 20 12.2	-0.9
NPOC					Sn	11 20 18.3	-1.7
JCUZ	**Jacuzzi**	**0.38**	**59**		Pn	11 20 12.3	-0.9
JCUZ					Sn	11 20 18.2	-1.8
ALEP	**Alea Permanent**	**0.40**	**332**		Pn	11 20 12.3	-1.4
ALEP					Sn	11 20 18.3	-2.5
HMH	**Humu'ula Sheep**	**0.41**	**355**		Pn	11 20 13.1	-0.8
HMH					Sn	11 20 19.6	-1.4
HMH				IAML		11 20 19.8	
	comp=N,403nm,0.4s						
HMH				IAML		11 20 20.1	
	comp=E,399nm,0.5s						
JOKA	**Jonika Flow**	**0.48**	**59**		Pn	11 20 13.5	-1.2
JOKA				IAML		11 20 20.6	
	comp=E,221nm,0.4s						
JOKA				IAML		11 20 20.7	
	comp=N,396nm,0.9s						
POHA	**Pohakuloa**	**0.57**	**352**		Pn	11 20 14.3	-2.0
POHA					Sn	11 20 21.7	-2.8
POHA	**Pohakuloa**	**0.57**	**352**	IAML		11 20 22.4	
	comp=N,145nm,0.5s						
POHA				IAML		11 20 32.3	
	comp=N,153nm,0.8s						
HUH	**Hualalai**	**0.62**	**323**		Pn	11 20 15.4	-1.5
HUH				IAML		11 20 28.5	
	comp=N,285nm,0.3s						
HUH				IAML		11 20 36.6	
	comp=E,291nm,1.5s						

*SOME **13** 11:28:14.4, 39°.65N×73°.75E, h10km*
*KRNET **13** 11:28:15.6±0.1, 39°.23N×73°.99E, h10km, mb2.9*
*NNC **13** 11:28:24.6±4.1, 39°.56N×74°.24E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=30.6km s-min=15.9km az=166.0*
ISC 13 11:28:18.9±1.8,**39°.24N**±0°.09×**73.96E**±0°.04,**h10km**,**n18,**
σ1892/32,12C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.85**	**336**	⇓*i*P	**Pg**	**11 28 32.3**	**-3.0**
SFK				⇓*i*S	**Sg**	**11 28 45.1**	**-1.3**
OHH	**Osh**	**1.57**	**325**	⇓*e*P	**Pn**	**11 28 45.8**	**-1.1**
OHH				⇓*e*S	**Sb**	**11 29 07.5**	**-0.5**
SALK	**Salom-Alik**	**1.65**	**356**	⇓*i*P	**Pn**	**11 28 47.1**	**-0.9**
SALK				⇓*i*S	**Sb**	**11 29 09.7**	**-0.6**
DRK	**Karamyk**	**1.69**	**279**	⇓*e*P	**Pn**	**11 28 48.1**	**-0.7**
DRK				⇓*e*S	**Sb**	**11 29 11.2**	**-0.5**
ARSB	**Arslanbob**	**2.21**	**341**	⇑*e*P	**Pn**	**11 28 56.3**	**+0.5**
ARSB				⇑*e*S	**Sb**	**11 29 25.4**	**-1.2**
JNKS	**Jany-Kuch**	**2.23**	**35**	⇑*e*P	**Pn**	**11 28 55.9**	**-0.3**
JNKS				⇑*i*S	**Sb**	**11 29 25.7**	**-1.6**
ARLS	**Aral**	**2.63**	**6**	⇑*e*P	**Pn**	**11 29 01.9**	**+0.3**
ARLS				⇑*i*S	**Sn**	**11 29 35.5**	**+1.8**
ARK	**Arkit**	**2.98**	**330**	⇑*e*P	**Pn**	**11 29 06.7**	**+0.4**
ARK				⇑*e*S	**Sn**	**11 29 43.6**	**+1.5**
TRKS	**Terek-Say**	**3.14**	**318**	⇑*e*P	**Pn**	**11 29 08.2**	**-0.4**
TRKS				⇑*e*S	**Sn**	**11 29 46.2**	**0.0**
MRKS	**Merke**	**3.55**	**351**	*e*P	**Pn**	**11 29 13.9**	**-0.2**
	0.3nm,0.0s						
MRKS				*e*S	**Sn**	**11 29 56.5**	**+0.4**
	6.6nm,0.5s						
BOOM	**Boomskoye usch**	**3.58**	**24**	⇓*e*P	**Pn**	**11 29 14.9**	**+0.3**
BOOM				⇓*e*S	**Sn**	**11 29 57.8**	**+0.8**
KDJ	**Kajisay**	**3.79**	**39**	⇓*e*P	**Pn**	**11 29 17.5**	**0.0**
KDJ				⇓*e*S	**Sn**	**11 30 03.0**	**+0.8**
KST	**Kastek**	**4.09**	**21**	Pg	**Pb**	**11 29 32.8**	**+1.7**
	6.0nm,0.8s						
KST				Lg	Lg	11 30 20.4	
	7.2nm,0.7s						
KST	**Kastek**	**4.09**	**21**	*e*P	**Pn**	**11 29 23.2**	**+1.6**
	2.8nm,0.3s						
KST				*e*S	**Sn**	**11 30 12.5**	**+2.9**
	7.1nm,0.6s						
DGS	**Degeres**	**4.23**	**18**	Pg	**Pb**	**11 29 36.1**	**+2.8**
	7.7nm,0.8s						
DGS				Lg	Lg	11 30 26.3	
	5.1nm,0.4s						
KRBS	**Karabastau**	**4.64**	**16**	Pg	**Pg**	**11 29 44.3**	**-3.4**
	2.6nm,0.6s						
KRBS				Lg	Lg	11 30 40.5	
	4.6nm,0.8s						
KK31	**Karatay Array**	**4.66**	**327**	⇑Pn	**Pn**	**11 29 32.3**	**+3.0**
	0.6nm,0.3s						
KK31				⇑Sn	**Sn**	**11 30 29.2**	**+5.9**
	1.4nm,0.6s						
KK31				⇓Lg	Lg	11 30 48.5	
	2.3nm,0.6s						
KTBS	**Karatobe**	**4.92**	**24**	Pg	**Pb**	**11 29 47.1**	**+2.1**
	3.3nm,0.5s						
KTBS				Lg	Lg	11 30 45.5	
	4.4nm,1.4s						

*TEH **13** 11:28:38.7, 29°.67N×51°.97E, h9km±27km*
*IDC **13** 11:28:40.3±3.7, 29°.85N×51°.89E, h0km, mb3.8/11, mbtmp3.9/16, ML3.8/5, MS3.1/7, Error ellipse: s-maj=70.6km s-min=19.4km az=175.0*
*OMAN **13** 11:28:41.7±0.8, 29°.49N×52°.10E, h10km, mb4.5/19, ml4.2/1, Error ellipse: s-maj=7.8km s-min=3.9km az=18.0*
*THR **13** 11:28:42.2±0.0, 29°.80N×51°.66E, h10km±10km, ML4.2*
*DSN **13** 11:28:45.6±1.6, 29°.15N×52°.01E, h15km, ML3.9/12, Error ellipse: s-maj=24.5km s-min=8.1km az=16.0*
ISC 13 11:28:39.4±0.5,**29.66N**±0°.03×**51.98E**±0°.03,**h10**km,**n116,**
σ1872/137,mb4.0/16,MS3.1/3,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ2	**Kazeron-Fars-I**	**0.28**	**260**	Pg	**Pb**	**11 28 45.1**	**-1.5**
KAZ2				Sg	**Sg**	**11 28 49.2**	**+0.3**
SHI	**Shiraz**	**0.47**	**92**	Pg	**Pg**	**11 28 47.7**	**-0.8**
KLNJ	**Kolanjah**	**1.38**	**346**	Pg	**Pg**	**11 29 05.8**	**-0.2**
KLNJ				Sg	**Sg**	**11 29 28.3**	**+4.3**
KLNJ	**Kolanjah**	**1.38**	**346**	*e*Pg	**Pg**	**11 29 05.3**	**-0.7**
KLNJ				IAML		11 29 33.6	
	comp=Z,4μm,1.0s						
DSBU	**Dashti - Bushe**	**1.44**	**206**	Pg	**Pg**	**11 29 07.0**	**0.0**
ABEH	**Behbahan**	**1.76**	**302**	Pg	**Pg**	**11 29 11.8**	**-1.4**
JHRM	**Jahrom**	**1.81**	**129**	Pn	**Pb**	**11 29 12.7**	**0.0**
IRAM	**Rameshеh**	**2.17**	**9**	Pn	**Pb**	**11 29 18.1**	**-0.8**
IBRJ	**Brojen**	**2.32**	**345**	Pn	**Pb**	**11 29 19.8**	**-1.7**
LMD1	**Lamerd**	**2.54**	**155**	*e*Pn	**Pg**	**11 29 28.9**	**+0.8**
LMD1				IAML		11 30 15.5	
	comp=Z,990nm,1.0s						
ZNGN	**Zangian**	**2.63**	**339**	Pn	**Pb**	**11 29 24.1**	**-2.7**
IGAR	**Gharneh**	**2.73**	**1**	Pn	**Pb**	**11 29 25.6**	**-2.9**
JHBN	**Jahan bin**	**2.80**	**337**	Pn	**Pn**	**11 29 26.3**	**+1.8**
IMEH	**Mehriz**	**2.85**	**52**	Pn	**Pb**	**11 29 27.8**	**-2.8**
LAR1	**LAR**	**2.89**	**133**	Pn	**Pn**	**11 29 27.5**	**+1.9**
IPIR	**Pirpir**	**3.15**	**343**	Pn	**Pn**	**11 29 30.7**	**+1.3**
IZEF	**Zefreh**	**3.24**	**5**	Pn	**Pn**	**11 29 32.1**	**+1.6**
ICHK	**Chekchek**	**3.31**	**38**	Pn	**Pn**	**11 29 33.7**	**+2.2**
IBAF	**Bafgh**	**3.64**	**57**	Pn	**Pn**	**11 29 38.4**	**+2.4**
IKLH	**Kolahrood**	**3.66**	**355**	Pn	**Pn**	**11 29 38.0**	**+1.7**
GTMR	**Gotvand**	**3.73**	**319**	*e*Pn	**Pn**	**11 29 38.0**	**+1.0**
GTMR				IAML		11 30 51.0	
	comp=Z,320nm,1.0s						
KBD	**Kabd**	**3.77**	**264**	P	**Pn**	**11 29 40.1**	**+2.5**
KBD				S	**Sn**	**11 30 25.2**	**+3.2**
ANAR	**Anarak**	**3.82**	**23**	Pn	**Pn**	**11 29 39.8**	**+1.3**
SHMA	**Al-Shehemyia**	**3.90**	**194**	P	**Pn**	**11 29 40.9**	**+1.6**
	SNR=25						
SHMA				S	**Sn**	**11 30 26.8**	**+1.7**
KHGB	**Koh Gabri**	**3.96**	**79**	Pn	**Pn**	**11 29 42.9**	**+2.4**
QAMS	**Qamsar**	**4.09**	**353**	Pn	**Pn**	**11 29 44.2**	**+1.9**
ZRDN	**Zarand Kerman**	**4.15**	**71**	Pn	**Pn**	**11 29 45.0**	**+2.0**
KRBR	**Kerman**	**4.17**	**84**	Pn	**Pn**	**11 29 45.6**	**+2.3**
KHMZ	**Khomeyn**	**4.41**	**338**	*e*Pn	**Pn**	**11 29 47.9**	**+1.2**
KHMZ				IAML		11 31 04.0	
	comp=Z,89nm,1.0s						
KRM1	**Kerman Provinc**	**4.66**	**78**	Pn	**Pn**	**11 29 52.3**	**+2.2**
ISFB	**Sefidab**	**4.68**	**3**	Pn	**Pn**	**11 29 52.0**	**+1.8**
GHVR	**GHOM**	**4.84**	**353**	*e*Pn	**Pn**	**11 29 55.2**	**+2.8**
GHVR				IAML		11 30 54.3	
	comp=Z,250nm,1.0s						
CHMN	**Cheshme madani**	**4.84**	**86**	Pn	**Pn**	**11 29 55.1**	**+2.5**
TRNA	**Turayna**	**4.96**	**188**	P	**Pn**	**11 29 55.1**	**+1.2**
TRNA				S	**Sn**	**11 30 51.1**	**-0.2**
SMRA	**Abu-Samra**	**5.00**	**192**	P	**Pn**	**11 29 55.8**	**+1.2**
SMRA				S	**Sn**	**11 30 53.4**	**+0.9**
BDRS	**Dareh Seyedi**	**5.03**	**329**	Pn	**Pn**	**11 29 56.7**	**+1.5**
ASAO	**Ashtian**	**5.14**	**342**	*e*Pn	**Pn**	**11 29 59.4**	**+2.7**
ASAO				IAML		11 31 41.2	
	comp=Z,95nm,1.0s						
SHME	**Shamm**	**5.15**	**133**	P	**Pn**	**11 29 57.1**	**+0.5**
IQOM	**Oom**	**5.22**	**352**	Pn	**Pn**	**11 29 59.6**	**+1.8**
TPRV	**Parvadeh(Tabas**	**5.24**	**49**	Pn	**Pn**	**11 30 00.0**	**+2.1**
KHNJ	**Kahnooj**	**5.31**	**107**	Pn	**Pn**	**11 30 00.9**	**+2.2**
IVRN	**Varamin**	**5.32**	**358**	Pn	**Pn**	**11 30 01.2**	**+2.2**
BANOM	**Banah**	**5.34**	**133**	P	**Pn**	**11 29 59.8**	**+0.6**
BANOM				S	**Sn**	**11 31 00.2**	**-0.6**
BANOM	**Banah**	**5.34**	**133**	*i*P	**Pn**	**11 29 59.4**	**+0.2**
	SNR=23						
BANOM				S	**Sn**	**11 30 57.3**	**-3.6**
MASF	**Masafi**	**5.66**	**138**	P	**Pn**	**11 30 04.6**	**+0.9**
	SNR=9.7						
MASF				S	**Sn**	**11 31 07.5**	**-1.3**
MSFE	**Esma-Masafi**	**5.67**	**138**	*i*P	**Pn**	**11 30 04.5**	**+0.7**
	SNR=9.7						
MSFE				S	**Sn**	**11 31 05.7**	**-3.2**
NAZ	**Nazwa, Dubai**	**5.69**	**144**	P	**Pn**	**11 30 05.5**	**+1.4**
NAZ				S	**Sn**	**11 31 08.3**	**-1.2**
NAZ	**Nazwa, Dubai**	**5.69**	**144**	P	**Pn**	**11 30 05.2**	**+1.2**
ILAS	**Lasjerd**	**5.76**	**8**	Pn	**Pn**	**11 30 07.0**	**+1.8**
MDH	**Madha**	**5.80**	**138**	P	**Pn**	**11 30 06.3**	**+0.8**
	SNR=7.8						
MDH				S	**Sn**	**11 31 10.9**	**-1.1**
MDH	**Madha**	**5.80**	**138**	*i*P	**Pn**	**11 30 05.0**	**-0.5**
	SNR=7.8						
TNSJ	**Nastanj**	**5.82**	**41**	Pn	**Pn**	**11 30 08.0**	**+2.1**
ASUD	**Al Ashush, Dub**	**5.84**	**148**	P	**Pn**	**11 30 07.5**	**+1.5**
	SNR=5.7						
ASUD				S	**Sn**	**11 31 12.1**	**-0.9**
ASUD	**Al Ashush, Dub**	**5.84**	**148**	P	**Pn**	**11 30 06.1**	**+0.1**
FAQ	**Al Faqa, Dubai**	**5.86**	**146**	P	**Pn**	**11 30 05.2**	**-1.1**
TKDS	**Koohdasht(Taba**	**5.89**	**47**	Pn	**Pn**	**11 30 08.6**	**+1.7**
IDMV	**Damavand**	**5.90**	**0**	Pn	**Pn**	**11 30 09.0**	**+1.9**
DAMV	**Damavand**	**5.95**	**360**	*e*Pn	**Pn**	**11 30 09.3**	**+1.5**
DAMV				IAML		11 30 51.5	
	comp=Z,4.1nm,1.0s						
IFIR	**Firoozkooh**	**6.00**	**6**	Pn	**Pn**	**11 30 10.4**	**+1.9**
UOSS	**Minazif**	**6.02**	**140**	P	**Pn**	**11 30 09.3**	**+0.8**
UOSS				S	**Sn**	**11 31 14.1**	**-3.4**
HATD	**Hatta, Dubai**	**6.07**	**142**	P	**Pn**	**11 30 10.0**	**+0.7**
ASHO	**Ashiyiah**	**6.15**	**143**	P	**Pn**	**11 30 11.2**	**+0.8**
	SNR=13						
ASHO				S	**Sn**	**11 31 18.3**	**-2.5**
ASHO	**Ashiyiah**	**6.15**	**143**	*i*P	**Pn**	**11 30 10.5**	**+0.2**
	SNR=13						
KCHF	**Cheshme Sefid,**	**6.22**	**319**	Pn	**Pn**	**11 30 13.2**	**+1.7**
CHTH	**Charan**	**6.27**	**354**	*e*Pn	**Pn**	**11 30 13.8**	**+1.6**
CHTH				IAML		11 31 30.1	
	comp=Z,1.9nm,1.0s						
SNQR	**Sonqor, Kerman**	**6.36**	**326**	Pn	**Pn**	**11 30 15.1**	**+1.7**
QABG	**Abgarm-Qazvin**	**6.36**	**342**	Pn	**Pn**	**11 30 15.5**	**+2.2**
IALA	**Alasht**	**6.44**	**6**	Pn	**Pn**	**11 30 16.9**	**+2.3**
ALNE	**Al Ain**	**6.52**	**148**	P	**Pn**	**11 30 16.3**	**+0.8**
ALNE				S	**Sn**	**11 31 27.3**	**-2.6**
ALNE	**Al Ain**	**6.52**	**148**	P	**Pn**	**11 30 16.0**	**+0.5**
IGHG	**Ghaleghazi**	**6.54**	**317**	Pn	**Pn**	**11 30 18.1**	**+2.3**
SNGE	**Sanandaj**	**6.68**	**325**	*e*Pn	**Pn**	**11 30 19.3**	**+1.5**
SNGE				IAML		11 32 41.3	
	comp=Z,47nm,1.0s						
MZPU	**Pul - Mazandar**	**6.77**	**357**	Pn	**Pn**	**11 30 21.1**	**+2.1**
MZR	**Muzera**	**6.77**	**168**	P	**Pn**	**11 30 19.9**	**+1.1**
	SNR=9.2						
MZR	**Muzera**	**6.77**	**168**	*i*P	**Pn**	**11 30 18.9**	**+0.1**
	SNR=9.3						
TAPT	**Tabas- Tapeh t**	**6.81**	**39**	Pn	**Pn**	**11 30 21.5**	**+2.0**
SOHO	**SOHO**	**6.84**	**142**	P	**Pn**	**11 30 20.7**	**+0.9**
SOHO				S	**Sn**	**11 31 35.6**	**-2.3**
SOHO	**SOHO**	**6.84**	**142**	*i*P	**Pn**	**11 30 19.6**	**-0.3**
	SNR=6.8						
IDHR	**Dehrash**	**6.91**	**318**	Pn	**Pn**	**11 30 22.3**	**+1.4**
ARQ	**Araqi**	**7.50**	**146**	P	**Pn**	**11 30 30.0**	**+1.2**
	SNR=16						
ARQ				S	**Sn**	**11 31 51.1**	**-3.0**
HOQ	**Hoqain**	**7.71**	**141**	P	**Pn**	**11 30 32.4**	**+0.7**
HOQ				S	**Sn**	**11 31 57.0**	**-2.1**
BSY	**Bisya**	**8.33**	**145**	P	**Pn**	**11 30 41.5**	**+1.2**
RAYN	**Ar Rayn**	**8.42**	**225**	*i*P	**Pn**	**11 30 41.0**	**-0.6**
	SNR=8.1						
SMDO	**Samad**	**8.54**	**139**	P	**Pn**	**11 30 43.3**	**+0.1**
SMDO				S	**Sn**	**11 32 17.3**	**-2.4**
SRSL	**SARDASHT**	**8.54**	**322**	*e*Pn	**Pn**	**11 30 44.1**	**+0.9**
WSAR	**Wadi Sarin**	**8.74**	**135**	P	**Pn**	**11 30 45.7**	**-0.3**
	SNR=11						
WBK	**Wadi Bani Khal**	**9.42**	**137**	P	**Pn**	**11 30 53.9**	**-1.3**
JLN	**Jalan Bani Buh**	**10.03**	**136**	P	**Pn**	**11 31 02.3**	**-1.3**
MHTO	**MHTO**	**10.19**	**147**	P	**Pn**	**11 31 06.1**	**+0.3**
	SNR=7.8						
DOK	**Doka**	**11.17**	**169**	P	**Pn**	**11 31 19.6**	**+0.4**
	SNR=6.2						
WHFO	**Wadi Hawf**	**11.80**	**172**	P	**Pn**	**11 31 27.8**	**-0.2**
	SNR=12						
SHAO	**Shalim**	**12.06**	**163**	P	**Pn**	**11 31 31.0**	**-0.3**
	SNR=7.5						
DMTO	**DMTO**	**12.20**	**166**	P	**Pn**	**11 31 33.1**	**-0.2**
	SNR=7.3						
ABTO	**Aybut**	**12.31**	**174**	P	**Pn**	**11 31 34.0**	**-0.9**
ASF	**Jabal al Asfar**	**13.19**	**285**	Pn	**Pn**	**11 31 46.8**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=59,slow=2.9,SNR=3.3						
ASF				Sn	**Sn**	**11 34 10.8**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=109,slow=14,SNR=1.8						
ASF				LR	LR	11 37 58.7	
	comp=Z,77nm,18.2s,baz=109,slow=43						
	comp=Z,3.3nm,0.4s						
MMAI	**Mount Meron Ar**	**14.55**	**287**	Pn	**Pn**	**11 32 05.3**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=105,slow=15,SNR=4.2						
MMAI				Sn	**Sn**	**11 34 49.0**	**+2.0**
	comp=Z,2.8nm,0.3s,baz=318,slow=14,SNR=5.2						
MMAI				LR	LR	11 39 02.3	
	comp=Z,50nm,19.8s,baz=100,slow=43						
	comp=Z,4.0nm,0.7s						
EIL	**Elat**	**14.81**	**274**	Pn	**P**	**11 32 11.3**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=68,slow=8.5,SNR=3.5						
EIL				LR	LR	11 38 35.4	
	comp=Z,51nm,21.0s,baz=334,slow=40						
	comp=Z,4.8nm,0.7s						
KBZ	**Khabaz**	**15.80**	**335**	Pn	**P**	**11 32 23.4**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=148,slow=6.5,SNR=6.2						
	comp=Z,0.8nm,0.6s						
BRTR	**Keskin Array B**	**18.09**	**309**	P	**P**	**11 32 50.6**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=129,slow=11,SNR=17						
BRTR				LR	LR	11 40 39.3	
	comp=Z,74nm,18.7s,baz=352,slow=40						
	comp=Z,3.8nm,0.8s						
AKTO	**Aktyubinsk**	**21.24**	**11**	P	**P**	**11 33 25.4**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=204,slow=9.3,SNR=5.9						
	comp=Z,1.9nm,0.7s						
AAK	**Ala-Archa**	**22.24**	**48**	P	**P**	**11 33 39.2**	**+2.8**
	comp=Z,3.1nm,0.8s,baz=232,slow=8.1,SNR=6.0						
AAK				LR	LR	11 43 24.9	

MTO3	**Montecristo**	**1.19**	**24**	*eP*		**Pn**	**11 36 05.6**	**-0.4**
PACA	**Pacayal**	**1.50**	**83**	*eP*		**Pn**	**11 36 10.3**	**+0.3**
PACA				*eS*		**Sn**	**11 36 28.6**	**0.0**

*MEX **13** 11:38:55.7±0.8, 14°.58N×92°.35W, h83^{km}±9^{km}, MD3.8*
*GCG **13** 11:38:56.5±0.9, 14°.53N×92°.31W, h63^{km}±12^{km}, MD3.4, ML3.7*

ISC 13 11:38:54.0±2.7, **14°.4N**±0°.1×**92°.4W**±0°.1, **h69**^{km}±12^{km}, **n15, s19/85/25, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.52**	**9**	*iP*	**Pn**	**11 39 07.2**	**+0.4**
THIG				*iS*	**Sn**	**11 39 16.2**	**-0.1**
THIG		**0.52**	**9**	*iP*	**Pn**	**11 39 07.2**	**+0.4**
THIG				*iS*	**Sn**	**11 39 16.7**	**+0.4**
THIG				IAML		11 39 17.0	
	comp=N,25μm,0.3s						
SMCA	**Catarina**	**0.53**	**30**	*eP*	**Pn**	**11 39 07.4**	**+0.3**
SMCA				IAML		11 39 16.6	
	comp=E,923nm,0.2s						
RTAL	**Retalhuleu**	**0.65**	**78**	*eP*	**Pn**	**11 39 10.3**	**+2.1**
RTAL				*iS*	**Sn**	**11 39 20.4**	**+1.7**
PATR	**El Naranjo**	**0.73**	**9**	*eP*	**Pn**	**11 39 08.6**	**-0.8**
PATR				*iS*	**Sn**	**11 39 18.9**	**-1.8**
CHUJ	**Union Juarez**	**0.73**	**19**	*eP*	**Pn**	**11 39 09.1**	**-0.4**
CHUJ				*iS*	**Sn**	**11 39 19.5**	**-1.4**
PAVE	**Pavencul**	**0.81**	**12**	*eP*	**Pn**	**11 39 10.1**	**-0.3**
PAVE				*iS*	**Sn**	**11 39 21.1**	**-1.3**
QUEO	**Labor Ovalle**	**0.94**	**60**	*iS*	**Sn**	**11 39 27.4**	**+2.1**
QUEO				IAML		11 39 27.9	
	comp=N,1μm,0.2s						
STG2	**El Palmar, Qui**	**0.95**	**87**	*eP*	**Pn**	**11 39 10.7**	**-1.1**
STG2				*iS*	**Sn**	**11 39 22.4**	**-2.8**
SOKI	**Kika Raxquin**	**1.01**	**65**	*eP*	**Pn**	**11 39 15.1**	**+2.2**
HUEH	**Huehuetenango**	**1.23**	**42**	*eP*	**Pn**	**11 39 14.4**	**-1.2**
HUEH				*iS*	**Sn**	**11 39 30.6**	**-1.2**
FG16	**Alotenango, Sa**	**1.79**	**94**	*eP*	**Pn**	**11 39 21.1**	**-1.9**
CCIG	**Comitan**	**1.89**	**6**	*eP*	**Pn**	**11 39 25.4**	**+1.1**
CCIG				*iS*	**Sn**	**11 39 47.6**	**+0.3**
APG	**El Apazote**	**1.93**	**71**	*eP*	**Pn**	**11 39 27.2**	**+2.4**
TGIG		**2.48**	**343**	*eP*	**Pn**	**11 39 35.5**	**+3.3**
TGIG				*eS*	**Sn**	**11 39 57.8**	**-3.8**

*BER **13** 11:42:41.4±1.1, 57°.72N×22°.64E, h0^{km}, ML1.8, ML2.5(UPP), Suspected explosion*
*HEL **13** 11:42:41.0±0.7, 57°.48N×21°.90E, h0^{km}, ML2.4, Explosion*
*DNK **13** 11:42:43.3±1.4, 57°.54N×21°.98E, h0^{km}, ML3.0, Suspected explosion*
*EST **13** 11:42:43.3±0.1, 57°.68N×21°.85E, h0^{km}, ML2.1(HEL), Explosion*
*LVSN **13** 11:42:47.6±4.7, 57°.57N×22°.20E, h0^{km}±39^{km}, ML2.5*
*UPP **13** 11:42:48.5±1.5, 57°.79N×21°.35E, h0^{km}, ML2.5, Presumed earthquake*

ISC 13 11:42:42.8±0.8, **57°.72N**±0°.04×**21°.91E**±0°.03, **h0**^{km}, **n66, s19/42/87, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.23**	**113**	*eP*	**Pg**	**11 42 47.0**	**0.0**
SLIT	**Slitere, Latvi**	**0.23**	**113**	*eP*	**Pg**	**11 42 47.8**	**+0.8**
SLIT				*eS*	**Sg**	**11 42 50.1**	**+0.2**
SLIT				AML	AML	11 42 58.7	
	comp=N,5μm,0.3s						
SLIT				AML	AML	11 43 03.5	
	comp=E,6μm,0.6s						
SLIT				AML	AML	11 43 06.4	
	comp=Z,4μm,0.5s						
SLIT	**Slitere, Latvi**	**0.23**	**113**	*eP*	**Pg**	**11 42 47.8**	**+0.8**
SLIT				*eS*	**Sg**	**11 42 50.5**	**+0.6**
EE06	**Soera, Palade,**	**1.35**	**21**	*eP*	**Pg**	**11 43 08.2**	**-0.5**
EE06				*eSB*	**Sn**	**11 43 27.7**	**+0.2**
EE01	**Perakula, Nova**	**1.75**	**30**	*eP*	**Pn**	**11 43 14.8**	**+0.5**
EE01				*ePG*	**Pb**	**11 43 15.4**	**-0.2**
EE01				*eSN*	**Sb**	**11 43 38.7**	**+0.6**
GOTU	**Gotland**	**1.79**	**270**	P	**Pn**	**11 43 16.0**	**+1.2**
GOTU	**Gotland**	**1.79**	**270**	P	**Pn**	**11 43 16.3**	**+1.2**
EE08	**Sarghaua, Vand**	**2.00**	**60**	*eP*	**Pn**	**11 43 18.7**	**+0.9**
EE08				*eSB*	**Sb**	**11 43 45.5**	**+0.1**
EE02	**Kiisa, Saku**	**2.08**	**44**	*ePB*	**Pn**	**11 43 20.5**	**+1.6**
EE02				*eSB*	**Sb**	**11 43 48.0**	**+0.2**
TVF	**Tvarminne**	**2.25**	**18**	*ePB*	**Pb**	**11 43 23.4**	**-0.7**
TVF				*eSB*	**Sb**	**11 43 52.7**	**+0.3**
TVF				smax	smax	11 43 54.8	
	comp=Z,9.5nm,0.1s						
NYNU	**Nynaeshamn**	**2.43**	**304**	P	**Pn**	**11 43 25.3**	**+1.7**
NYNU	**Nynaeshamn**	**2.43**	**304**	P	**Pn**	**11 43 25.3**	**+1.7**
PABE	**Paberze**	**2.49**	**152**	*eP*	**Pn**	**11 43 24.0**	**-0.5**
PABE	**Paberze**	**2.49**	**152**	*eP*	**Pn**	**11 43 26.7**	**+2.2**
PABE				AML	AML	11 43 26.9	
	comp=Z,84nm,0.1s						
PABE				AML	AML	11 43 59.6	
	comp=E,43nm,0.2s						
PABE				AML	AML	11 44 00.9	
	comp=N,56nm,0.1s						
EE03	**Tooma soojaam,**	**2.58**	**61**	*eP*	**Pn**	**11 43 26.9**	**+1.1**
EE03				*ePB*	**Pb**	**11 43 28.6**	**-1.3**
EE03				*eSB*	**Sb**	**11 44 01.8**	**-0.3**
AAL	**Aland**	**2.66**	**339**	*eP*	**Pn**	**11 43 27.8**	**+0.9**
AAL	**Aland**	**2.66**	**339**	*eP*	**Pn**	**11 43 27.4**	**+0.6**
AAL				*eSG*	**Sb**	**11 44 06.0**	**+1.7**
AAL				smax	smax	11 44 10.2	
	comp=Z,5.4nm,0.1s						
VSU	**Vasula**	**2.67**	**72**	*eP*	**Pn**	**11 43 28.5**	**+1.5**
VSU	**Vasula**	**2.67**	**72**	*eP*	**Pn**	**11 43 29.0**	**+2.1**
VSU				AML	AML	11 43 29.3	
	comp=Z,56nm,0.1s						
VSU				AML	AML	11 44 05.6	
	comp=N,52nm,0.5s						
VSU				AML	AML	11 44 09.1	
	comp=E,58nm,0.4s						
VSU	**Vasula**	**2.67**	**72**	*iP*	**Pn**	**11 43 28.2**	**+1.3**
VSU	**Vasula**	**2.67**	**72**	*eP*	**Pn**	**11 43 28.8**	**+1.8**
VSU				*eSB*	**Sb**	**11 44 03.5**	**-1.2**
BYXU	**Byxelkrok**	**2.68**	**263**	P	**Pn**	**11 43 28.8**	**+1.7**
BYXU	**Byxelkrok**	**2.68**	**263**	P	**Pn**	**11 43 28.8**	**+1.7**
HEL5	**Espoo, Suvisaa**	**2.82**	**30**	*ePB*	**Pb**	**11 43 32.6**	**-1.3**
HEL5				*eSB*	**Sb**	**11 44 09.1**	**+0.1**
HEL5				smax	smax	11 44 10.9	
	comp=Z,5.8nm,0.1s						
MEF	**Metsahovi**	**2.82**	**26**	*eP*	**Pn**	**11 43 30.8**	**+1.8**
MEF	**Metsahovi**	**2.82**	**26**	*eP*	**Pb**	**11 43 32.6**	**-1.4**
MEF				*eS*	**Sb**	**11 44 09.4**	**+0.4**
MEF				AML	AML	11 44 10.4	
	comp=N,12nm,0.1s						
MEF				AML	AML	11 44 11.2	
	comp=E,11nm,0.3s						
MEF				AML	AML	11 44 11.9	
	comp=Z,16nm,0.4s						
MEF	**Metsahovi**	**2.82**	**26**	*ePB*	**Pn**	**11 43 32.1**	**+3.0**
MEF				*eSB*	**Sb**	**11 44 08.9**	**-0.1**
MEF				smax	smax	11 44 10.3	
	comp=Z,9.2nm,0.1s						
VIKU	**Vikbolandet**	**2.87**	**288**	P	**Pn**	**11 43 31.7**	**+1.9**
VIKU	**Vikbolandet**	**2.87**	**288**	P	**Pn**	**11 43 31.7**	**+1.9**
VSTU	**Vaestervik**	**2.88**	**271**	P	**Pn**	**11 43 32.1**	**+2.2**
VSTU	**Vaestervik**	**2.88**	**271**	P	**Pn**	**11 43 32.1**	**+2.2**
HEL1	**Helsinki**	**2.91**	**31**	*eSB*	**Sb**	**11 44 11.8**	**+0.2**
NUR	**Nurmijarvi**	**3.14**	**26**	*ePB*	**Pb**	**11 43 37.3**	**-2.1**
NUR				smax	smax	11 44 18.6	
	comp=Z,3.8nm,0.1s						
OSKU	**Oskarshamn**	**3.18**	**263**	P	**Pn**	**11 43 35.9**	**+1.9**
OSKU	**Oskarshamn**	**3.18**	**263**	P	**Pn**	**11 43 35.9**	**+1.9**
ESKU	**Eskilstuna**	**3.27**	**300**	P	**Pn**	**11 43 37.1**	**+1.9**
ESKU	**Eskilstuna**	**3.27**	**300**	P	**Pn**	**11 43 37.1**	**+1.9**
RAF	**Rauma**	**3.32**	**359**	*eP*	**Pn**	**11 43 37.9**	**+2.0**
RAF	**Rauma**	**3.32**	**359**	*eP*	**Pn**	**11 43 37.1**	**+1.2**
IIGN	**Ignalina**	**3.37**	**133**	*eP*	**Pn**	**11 43 35.4**	**-1.2**
LNKU	**Linkoeping**	**3.45**	**281**	P	**Pn**	**11 43 39.9**	**+2.3**
LNKU	**Linkoeping**	**3.45**	**281**	P	**Pn**	**11 43 39.9**	**+2.3**
VXJU	**Vaexsjoe**	**3.86**	**261**	P	**Pn**	**11 43 44.8**	**+1.4**
VXJU	**Vaexsjoe**	**3.86**	**261**	P	**Pn**	**11 43 44.8**	**+1.4**
KPF	**Kankaanpaa**	**4.13**	**1**	*eP*	**Pn**	**11 43 48.3**	**+1.2**
FIA0	**FINESS Array S**	**4.30**	**28**	*eP*	**Pn**	**11 43 51.0**	**+1.7**
DEL	**Delary**	**4.56**	**257**	*iP*	**Pn**	**11 43 53.2**	**+0.3**
DEL				*iS*	**Sn**	**11 44 45.2**	**-1.3**
BSD	**Bornholm Skovb**	**4.68**	**239**	*iP*	**Pn**	**11 43 54.1**	**-0.4**
KEF	**Keuruu**	**4.71**	**17**	*eP*	**Pn**	**11 43 56.6**	**+1.7**
KEF	**Keuruu**	**4.71**	**17**	*eP*	**Pn**	**11 43 56.9**	**+1.9**
BORU	**Boraas**	**4.91**	**273**	*iP*	**Pn**	**11 44 00.0**	**+2.3**
KAF	**Kangasniemi**	**4.94**	**25**	*eP*	**Pn**	**11 43 59.3**	**+1.2**
FABU	**Falkenberg**	**5.03**	**266**	*iP*	**Pn**	**11 44 01.0**	**+1.7**
FABU				*iS*	**Sn**	**11 44 56.9**	**-1.1**
LUNU	**Lund**	**5.11**	**249**	*iP*	**Pn**	**11 43 59.5**	**-1.0**
LUNU				*iS*	**Sn**	**11 44 57.4**	**-2.7**
RUF	**Ruokolahti**	**5.16**	**41**	*eP*	**Pn**	**11 44 01.8**	**+0.6**
VAF	**Ylistaro**	**5.36**	**4**	*eP*	**Pn**	**11 44 05.8**	**+1.9**
VAF	**Ylistaro**	**5.36**	**4**	*eP*	**Pn**	**11 44 05.3**	**+1.4**
ONAU	**Onsala**	**5.39**	**271**	*iP*	**Pn**	**11 44 05.9**	**+1.6**
ONAU				*iS*	**Sn**	**11 45 06.5**	**-0.5**
STRU	**Stroemstad**	**5.80**	**288**	*eP*	**Pn**	**11 44 11.4**	**+1.5**
NC602	**NORSAR Array S**	**6.12**	**304**	*eP*	**Pn**	**11 44 14.5**	**+0.2**
NC602				*eS*	**Sn**	**11 45 24.7**	**-0.3**
NC602				IAML		11 45 30.1	
	comp=Z,1.2nm,0.6s						
NB201	**NORSAR Array S**	**6.37**	**306**	*eP*	**Pn**	**11 44 18.9**	**+1.1**
NB201				*eS*	**Sn**	**11 45 29.2**	**-1.9**
NB201				IAML		11 45 33.9	
	comp=Z,1.4nm,0.7s						
NC303	**NORSAR Array S**	**6.42**	**308**	*eP*	**Pn**	**11 44 18.9**	**+0.4**
NAO01	**NORSAR Array S**	**6.46**	**304**	*eP*	**Pn**	**11 44 18.7**	**-0.3**
NBO00	**NORSAR Array S**	**6.58**	**305**	*eP*	**Pn**	**11 44 21.8**	**+1.0**
NC204	**NORSAR Array S**	**6.70**	**307**	*eP*	**Pn**	**11 44 22.2**	**-0.2**
SKAR	**Skarslia**	**7.59**	**299**	*eP*	**Pn**	**11 44 34.1**	**-0.4**
SKAR				IAML		11 45 52.8	
	comp=Z,1.7nm,0.7s						

*IDC **13** 11:49:00.1±8.5, 10°.03S×112°.61E, h0^{km}, mb4.1/5, mbtmp4.1/5, Error ellipse: s-maj=434.0km s-min=158.5km az=54.0*
*DJA **13** 11:50:25.2±0.4, 6°S±12°×11°0E±°, h559^{km}±6^{km}, M3.9/20, mb4.1/8, MLv3.8/20*

ISC 13 11:50:25.6±1.0, **5°.9S**±0°.2×**110°.4E**±0°.1, **h550**^{km}, **n24, s0/74/25, mb3.6/5, Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRI	**Semarang**	**1.12**	**176**	P	**P**	**11 51 33.1**	**+0.8**
TBJI	**Tambak Boyo**	**1.73**	**121**	P	**P**	**11 51 35.1**	**+0.9**
NGJI	**Ngawi**	**1.81**	**143**	P	**P**	**11 51 34.2**	**-0.3**
YOGI	**Yogyakarta**	**1.88**	**182**	P	**P**	**11 51 35.9**	**+1.0**
UGM	**Wanagama**	**1.98**	**175**	P	**P**	**11 51 35.3**	**0.0**
KPJI	**Karang Pucung**	**1.99**	**225**	P	**P**	**11 51 36.2**	**+0.9**
KPJI				S	**S**	**11 52 31.9**	**0.0**
GRJI	**Gresik**	**2.33**	**115**	P	**P**	**11 51 37.7**	**+0.8**
PCJI	**Pacitan**	**2.40**	**160**	P	**P**	**11 51 36.9**	**-0.4**
CNJI	**Cibinong**	**3.49**	**247**	P	**P**	**11 51 44.2**	**+0.3**
BLJI	**Banyuglugur**	**3.69**	**120**	P	**P**	**11 51 46.3**	**+1.0**
TNG	**Tangerang**	**3.70**	**266**	P	**P**	**11 51 45.4**	**+0.1**
KMMI	**Kalianget**	**3.76**	**108**	P	**P**	**11 51 46.5**	**+0.8**
TPI	**Tanjungpandan**	**4.14**	**319**	P	**P**	**11 51 48.2**	**-0.4**
SRBI	**Singaraja**	**5.28**	**114**	P	**P**	**11 51 59.1**	**+1.2**
	0.3nm84nm,0.7s						
KASI	**Kota Agung**	**5.84**	**274**	P	**P**	**11 52 03.0**	**+0.1**
	0.2nm31nm,0.5s						
TWSI	**Taliwang, Sumb**	**7.05**	**114**	P	**P**	**11 52 13.9**	**-0.2**
	0.1nm22nm,1.0s						
MNAI	**Manna**	**7.53**	**282**	P	**P**	**11 52 18.5**	**-0.4**
PLAI	**Plampang**	**7.90**	**112**	P	**P**	**11 52 21.3**	**-1.2**
	33nm,1.3s						
WBSI	**Waikabubak, Su**	**9.68**	**113**	P	**P**	**11 52 39.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**26.71**	**335**	P	**P**	**11 55 22.6**	**+1.0**
	0.4nm,0.3s,baz=171,slow=8.2,SNR=5.6						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**58.09**	**338**	P	**P**	**11 59 26.7**	**+0.1**
	1.4nm,0.3s,baz=150,slow=7.4,SNR=27						
	1.4nm,0.3s						
KURBB	**Kurchatov Arra**	**62.66**	**338**	P	**P**	**11 59 56.8**	**+0.1**
	0.6nm,0.2s,baz=155,slow=5.1,SNR=1.5						
	0.6nm,0.2s						
ZALV	**Zalesovo Beam**	**63.39**	**343**	P	**P**	**12 00 00.5**	**-0.8**
	0.9nm,0.3s,baz=157,slow=5.6,SNR=6.8						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**67.74**	**335**	P	**P**	**12 00 27.9**	**-0.6**
	0.6nm,0.6s,baz=141,slow=7.4,SNR=3.9						
	0.6nm,0.6s						

HEL 13 12:04:05.8±0.5, **60°.33N×22°.33E, h0**^{km}, **ML1.0, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVF	**Tvarminne**	**0.68**	**136**	SG	Sg	12 04 25.9	-1.5
TVF				smax	smax	12 04 27.1	
	comp=Z,0.8nm,0.2s						
RAF	**Rauma**	**0.74**	**338**	PG	Pg	12 04 18.8	-1.2
	baz=157						
RAF				SB	Sg	12 04 28.8	-0.9
RAF				smax	smax	12 04 29.1	
	comp=Z,1.2nm,0.2s						
AAL	**Aland**	**1.17**	**263**	SN	Sn	12 04 46.6	+0.5
KPF	**Kankaanpaa**	**1.51**	**355**	PN	Pn	12 04 33.4	-0.7
KPF				smax	smax	12 04 51.2	
	comp=Z,1.2nm,0.2s						
KPF				SN	Sn	12 04 56.4	+2.0
FIA0	**FINESS Array S**	**2.15**	**57**	PG	Pn	12 04 43.8	+1.0
FIA0				smax	smax	12 05 09.3	
	comp=Z,1.0nm,0.2s						
FIA0				SG	Sb	12 05 13.2	+0.6
KEF	**Keuruu**	**2.21**	**33**	smax	smax	12 05 11.4	
	comp=Z,0.6nm,0.2s						
KEF				SG	Sb	12 05 15.7	+1.1
OBF8	**Ulkokalla**	**4.05**	**7**	PG	Pb	12 05 20.2	+2.3
OUF	**Merijarvi**	**4.20**	**14**	PG	Pb	12 05 22.3	+1.9
OBF0	**Syolatti, Pyha**	**4.27**	**11**	PB	Pb	12 05 20.2	-1.5
BURU	**Burvik**	**4.29**	**355**	PG	Pb	12 05 20.6	-1.4

*UPP **13** 12:04:30.3±0.1, 65°.90N×23°.23E, h0^{km}, ML1.9, Suspected explosion*

HEL 13 12:04:30.6±0.1, **65°.91N×23°.21E, h0**^{km}, **ML1.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALU	**Kalix**	**0.08**	**132**	P	Pg	12 04 31.7	-0.4
KALU				S	Sg	12 04 32.8	-0.4
KALU	**Kalix**	**0.08**	**132**	PG	Pg	12 04 30.9	-1.2
KALU				SG	Sg	12 04 31.3	-1.8
TOF	**Tornio**	**0.48**	**69**	PG	Pg	12 04 38.9	-1.0
TOF				SG	Sg	12 04 45.4	-0.7
TOF				smax	smax	12 04 46.4	
	comp=Z,6.0nm,0.2s						
ERTU	**Ertsjaerv**	**0.77**	**328**	P	Pg	12 04 45.0	-0.3
ERTU				S	Sg	12 04 56.0	+0.8
ERTU	**Ertsjaerv**	**0.77**	**328**	PB	Pg	12 04 44.9	-0.3
	baz=145						
ERTU				SB	Sg	12 04 55.3	+0.2
SJUU	**Sjulsmark**	**0.78**	**239**	P	Pg	12 04 44.8	-0.7
SJUU				S	Sg	12 04 55.4	-0.1
HARU	**Harads**	**0.95**	**286**	P	Pg	12 04 48.5	-0.3
HARU				S	Sg	12 05 01.7	+0.7
PAJU	**Pajala**	**1.12**	**358**	P	Pg	12 04 51.0	-0.9
PAJU	**Pajala**	**1.12**	**358**	PG	Pg	12 04 51.0	-1.0
PAJU				SG	Sg	12 05 05.8	-0.6
RNF	**Rovaniemi**	**1.33**	**57**	PG	Pg	12 04 55.0	-1.1
RNF				SN	Sn	12 05 14.8	0.0
OBF4	**Vikkela, Lumij**	**1.36**	**143**	PG	Pg	12 04 55.1	-1.5
	baz=326						
OBF4				smax	smax	12 05 11.6	
	comp=Z,2.7nm,0.2s						
OBF4				SG	Sg	12 05 13.4	-0.8
OUL	**Oulu**	**1.40**	**125**	PG	Pn	12 04 55.7	-1.6
	baz=306						
OUL				SG	Sg	12 05 13.3	-2.0
OBF0	**Syolatti, Pyha**	**1.49**	**163**	PN	Pn	12 04 58.1	-0.4
OBF0				smax	smax	12 05 15.2	
	comp=Z,4.7nm,0.2s						
BURU	**Burvik**	**1.54**	**211**	PN	Pn	12 04 58.9	-0.4
	baz=32						
OBF8	**Ulkokalla**	**1.59**	**176**	PG	Pn	12 04 59.6	-0.4
OBF8				smax	smax	12 05 18.3	
	comp=Z,4.3nm,0.2s						
DUNU	**Dundret**	**1.61**	**320**	P	Pn	12 05 00.1	-0.1
MASU	**Masugnsbyn**	**1.62**	**343**	P	Pn	12 05 00.1	-0.3
OUF	**Merijarvi**	**1.68**	**157**	PG	Pn	12 05 00.6	-0.6
	baz=339						
OUF				smax	smax	12 05 20.9	
	comp=Z,2.3nm,0.2s						
KU2	**Taivalkoski**	**2.08**	**93**	PG	Pn	12 05 07.6	+1.0
	baz=282						
KU2				SG	Sn	12 05 33.7	+0.5
LANU	**Lannavaara**	**2.20**	**348**	PG	Pn	12 05 09.7	+1.4
LANU				SG	Sb	12 05 39.4	+0.5
UMAU	**Umeaa**	**2.31**	**209**	PG	Pn	12 05 11.3	+1.6
UMAU				SN	Sb	12 05 42.6	+0.6
UMAU	**Umeaa**	**2.31**	**209**	PG	Pn	12 05 11.3	+1.6
UMAU				SG	Sb	12 05 41.8	-0.2
MSF	**Maaselka**	**2.39**	**87**	SG	Sb	12 05 42.8	-1.6
HEF	**Hetta**	**2.51**	**4**	PB	Pn	12 05 13.9	+1.2
	baz=183						
HEF				smax	smax	12 05 44.7	
	comp=Z,2.4nm,0.2s						
HEF				SB	Sn	12 05 45.8	+1.9
OLKF	**Oulanka, Finla**	**2.55**	**78**	PN	Pn	12 05 12.8	-0.4
OLKF				smax	smax	12 05 46.0	
	comp=Z,2.4nm,0.2s						
OLKF				SB	Sb	12 05 48.0	-1.1
KU1	**Kurvinen**	**2.65**	**95**	PN	Pn	12 05 14.7	+0.3
KU1				SN	Sn	12 05 48.0	+0.8
KU6	**Riekki**	**2.74**	**85**	PN	Pn	12 05 15.8	+0.1
	baz=272						
KU6				SN	Sn	12 05 50.2	+0.8
KU6				smax	smax	12 05 51.2	
	comp=Z,2.2nm,0.2s						
VAF	**Ylistaro**	**2.89**	**185**	SN	Sn	12 05 49.8	-3.5
VAF				smax	smax	12 05 55.6	
	comp=Z,2.0nm,0.2s						
HUSU	**Husum**	**3.10**	**215**	PB	Pn	12 05 21.8	+1.1
VRF	**Varrio**	**3.13**	**51**	SB	Sn	12 06 01.9	+2.8
VRF				smax	smax	12 06 02.6	
	comp=Z,4.2nm,0.2s						
NIF	**Nilsia**	**3.21**	**140**	SG	Sb	12 06 08.3	+0.2
KIF	**Kilpisjarvi**	**3.24**	**344**	PG	Pb	12 05 29.7	+0.8
KIF				SG	Sb	12 06 11.1	+2.2
RAJF	**Raja-Jooseppi**	**3.25**	**35**	PN	Pn	12 05 20.9	-1.9
ARA0	**ARCESS Array S**	**3.74**	**12**	PN	Pn	12 05 30.1	+0.5
	baz=198						
ARA0				SN	Sn	12 06 14.6	+0.4
KEV	**Kevo**	**4.12**	**19**	PN	Pn	12 05 34.6	-0.1
FIA0	**FINESS Array S**	**4.67**	**163**	PN	Pn	12 05 43.6	+1.4
FIA0				SG	Sb	12 06 53.7	+3.9

*IDC **13** 12:15:40.1±1.8, 62°.92N×150°.53W, h0^{km}, mb3.7/4, mbtmp3.7/5, ML3.1/1, Error ellipse: s-maj=24.7km s-min=22.5km az=121.0*
*AEIC **13** 12:15:42.0±1.0, 63°.03N±0°.01×150°.50W±0°.03, h8^{km}±7^{km}, ML3.3, ML3.5/184(NEIC), Error ellipse: s-maj=2.2km s-min=1.9km az=53.0*
*NEIC **13** 12:15:42.1±1.0, 63°.03N±0°.01×150°.51W±0°.03, h7^{km}±10^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=55.0*

ISC 13 12:15:42.0±1.0, **63°.03N**±0°.02×**150°.52W**±0°.02, **h11**^{km}±8^{km}, **n154, s19/08/162, mb3.9/4, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.44**	**14**		**Pg**	**12 15 50.9**	**+0.2**
TRF					**Sg**	**12 15 57.4**	**+0.9**
TRF				IAML		12 15 57.7	
	comp=N,4μm,0.2s						
TRF				IAML		12 15 57.8	
	comp=E,3μm,0.3s						
L22K	**Petersville**	**0.52**	**193**	Pg	**Pg**	**12 15 52.1**	**+0.1**
L22K					**Sg**	**12 15 58.8**	**-0.1**
KTH	**Kantishna Hill**	**0.56**	**341**		**Pg**	**12 15 53.0**	**+0.1**
KTH					**Sg**	**12 16 00.2**	**-0.1**
CUT	**Chulitna**	**0.64**	**169**		**Pg**	**12 15 54.5**	**+0.3**
CUT					**Sg**	**12 16 03.1**	**+0.5**
CUT				IAML		12 16 08.0	
	comp=N,4μm,0.4s						
PPLA	**Purkeypile**	**0.78**	**261**		**Pg**	**12 15 56.9**	**-0.1**
PPLA					**Sg**	**12 16 06.9**	**-0.2**
PPLA				IAML		12 16 08.2	
	comp=N,2μm,0.3s						
PPLA				IAML		12 16 08.3	
	comp=E,1μm,0.4s						
WAT7	**Susitna Watana**	**0.79**	**104**		**Pg**	**12 15 56.9**	**-0.3**
WAT7					**Sg**	**12 16 07.2**	**-0.3**
RND	**Reindeer**	**0.84**	**62**		**Pg**	**12 15 57.3**	**-1.0**
WAT1	**Susitna Watana**	**0.92**	**102**		**Pg**	**12 15 59.2**	**-0.5**
WAT1					**Sg**	**12 16 11.6**	**-0.2**
MCK	**McKinley**	**1.00**	**45**		**Pg**	**12 16 01.2**	**-0.2**
MCK					**Sg**	**12 16 14.7**	**+0.3**
BPAW	**Bear Paw Mtn.**	**1.10**	**349**		**Pg**	**12 16 02.6**	**-0.5**
SKT	**Skwentna**	**1.15**	**205**		**Pg**	**12 16 03.8**	**-0.3**
SKT				IAML		12 16 21.7	
	comp=E,1μm,0.2s						
CHUM	**Lake Minchumin**	**1.18**	**318**		**Pg**	**12 16 04.4**	**-0.2**
BWN	**Browne**	**1.24**	**22**		**Pn**	**12 16 06.0**	**+0.7**
M22K	**Willow**	**1.29**	**172**		**Pn**	**12 16 05.9**	**-0.1**
WAT6	**Susitna Watana**	**1.35**	**108**		**Pn**	**12 16 06.3**	**-0.7**
DHY	**Denali Highway**	**1.43**	**87**		**Pn**	**12 16 08.3**	**+0.2**
GHO	**Glory Hole Cre**	**

IL01 2.38 41 Pn 12 16 21.2 +0.4
IL31 2.38 41 Pn 12 16 21.2 +0.4
ILAR Eielson Array 2.38 41 Pn Pn 12 16 20.6 -0.3
comp=E,3.9nm,0.3s,baz=224,slow=14,SNR=172
ILAR Lg Lg 12 16 56.0
comp=E,18nm,0.3s,baz=219,slow=30,SNR=12
comp=E,11nm,0.4s
ILAR Eielson Array 2.38 41 Pn 12 16 20.9 0.0
PWL Port Wells 2.41 154 Pn 12 16 22.9 +1.6
J19K Poorman 2.48 295 Pn 12 16 22.9 +0.6
J19K IAML 12 17 04.1
comp=E,234nm,0.5s
J19K IAML 12 17 04.6
comp=N,219nm,0.6s
POKR Poker Plat Res 2.50 31 Pn 12 16 23.1 +0.6
SLKM Skilak Lake 2.53 177 Pn 12 16 25.5 +2.4
SLKM IAML 12 16 59.6
comp=N,227nm,0.3s
SLKM IAML 12 17 01.4
comp=E,264nm,0.5s
HARP HAARP 2.55 102 Pn 12 16 24.5 +1.2
O22K Cooper Landing 2.58 171 Pn 12 16 25.3 +1.7
RDT Redoubt 2.62 201 Pn 12 16 25.5 +1.2
KLU Klutina 2.64 124 Pn 12 16 26.5 +1.9
KLU IAML 12 17 03.0
comp=N,220nm,0.4s
KLU IAML 12 17 04.5
comp=E,157nm,0.3s
DFR Drift River 2.65 204 Pn 12 16 26.2 +1.4
RIDG Independent Ri 2.65 72 Pn 12 16 25.6 +0.9
RIDG IAML 12 17 10.7
comp=N,239nm,0.8s
J25K Salcha River, 2.78 53 Pn 12 16 26.5 0.0
J25K IAML 12 17 10.7
comp=E,113nm,0.5s
J25K IAML 12 17 11.5
comp=N,131nm,0.5s
J18K Innoko River 2.84 282 Pn 12 16 27.9 +0.7
J18K IAML 12 17 13.6
comp=N,213nm,0.8s
J18K IAML 12 17 14.6
comp=E,119nm,0.5s
H23K Yukon River 2.84 8 Pn 12 16 27.9 +0.6
H22K Ishtalitna Cre 2.90 353 Pn Pn 12 16 29.1 +1.0
N19K Bonanza Creek 2.91 222 Pn 12 16 29.4 +1.1
N19K IAML 12 17 22.8
comp=E,101nm,0.6s
N19K IAML 12 17 33.6
comp=N,97nm,0.9s
M18K Stony River 2.92 241 Pn 12 16 28.9 +0.5
DIV Divide 2.94 128 Pn 12 16 29.8 +1.2
DIV IAML 12 17 08.3
comp=E,100nm,0.5s
DIV IAML 12 17 13.0
comp=N,200nm,0.5s
SEW Seward 2.98 170 Pn 12 16 31.6 +2.5
SEW IAML 12 17 14.1
comp=N,105nm,0.5s
SEW IAML 12 17 22.1
comp=E,112nm,0.5s
DOT Dot Lake 2.98 75 Pn 12 16 29.8 +0.7
DOT IAML 12 17 22.8
comp=E,182nm,0.8s
H24K Noodor Dome 3.04 21 Pn 12 16 30.9 +0.8
WACK Wrangell Chich 3.06 107 Pn 12 16 32.8 +2.4
SCRK Sand Creek 3.08 69 Pn 12 16 30.8 +0.2
SCRK IAML 12 17 19.9
comp=E,116nm,0.7s
SCRK IAML 12 17 20.5
comp=N,103nm,0.7s
MENT Mentasta 3.10 89 Pn 12 16 31.9 +0.9
N25K Chitina, Valde 3.11 115 Pn 12 16 33.2 +2.1
N25K IAML 12 17 20.1
comp=N,94nm,0.5s
HIN Hinchinbrook I 3.26 142 Pn 12 16 34.9 +1.8
HIN IAML 12 17 27.8
comp=N,154nm,0.7s
L26K Log Cabin Wild 3.27 87 Pn 12 16 35.3 +2.2
J26L Joseph Creek 3.42 61 Pn 12 16 36.3 +0.9
J26L IAML 12 17 29.0
comp=E,64nm,0.6s
J26L IAML 12 17 34.4
comp=N,75nm,0.6s
N18K Kilae Creek 3.47 230 Pn 12 16 36.7 +0.8
N18K IAML 12 17 37.8
comp=E,88nm,0.8s
N18K IAML 12 17 38.2
comp=N,100nm,0.6s
BMRM Bremner River 3.47 124 Pn 12 16 36.2 +0.3
BMRM IAML 12 17 33.8
comp=E,115nm,0.7s
BMRM IAML 12 17 35.2
comp=N,104nm,0.9s
GLB Gilahina Butte 3.52 114 Pn 12 16 38.6 +1.9
GLB IAML 12 17 40.4
comp=N,81nm,0.9s
M26K Nabesna, AK 3.52 97 Pn 12 16 38.8 +2.2
K17K Iditarod 3.58 268 Pn 12 16 38.5 +1.1
K17K IAML 12 17 36.5
comp=E,89nm,0.7s
K17K IAML 12 17 45.1
comp=N,99nm,1.0s
M17K Holitna River 3.63 246 Pn 12 16 38.4 +0.3
GOAT Goat Mountain 3.69 129 Pn 12 16 40.3 +1.4
G23K Bananza Creek 3.71 3 Pn 12 16 39.6 +0.4
L17K Donlin 3.71 259 Pn 12 16 39.7 +0.5
VRDI Verde Repeater 3.78 115 Pn 12 16 41.6 +1.3
VRDI IAML 12 17 44.5
comp=N,64nm,1.0s
MCARA McCarthy VSAT 3.88 112 Pn 12 16 43.5 +2.0
MCARA IAML 12 17 55.2
comp=N,84nm,1.1s
O18K Koktuh Hills 3.90 217 Pn 12 16 42.6 +0.8
G24K Hadweenzic Riv 3.91 18 Pn 12 16 42.8 +0.8
K27K Chicken 3.91 71 Pn 12 16 42.4 +0.5
K27K IAML 12 17 47.2
comp=N,60nm,1.0s
I26K Coal Creek Min 3.95 51 Pn 12 16 43.8 +1.3
I26K IAML 12 18 01.6
comp=N,79nm,0.7s
L27K Beaver Creek, 3.96 86 Pn 12 16 44.0 +1.4
L27K IAML 12 17 46.9
comp=N,52nm,0.6s
BC03 3.98 86 Pn 12 16 43.9 +1.1
BCAR Beaver Creek A 3.98 86 Pn 12 16 44.3 +1.4
N17K Nushagak Hills 4.04 235 Pn 12 16 44.8 +1.1
N17K IAML 12 17 54.6
comp=N,78nm,0.8s
N17K IAML 12 18 00.5
comp=E,73nm,1.1s
CRQM Cirque 4.17 120 Pn 12 16 47.8 +2.1
CRQM IAML 12 17 59.2
comp=N,87nm,1.2s
CRQM IAML 12 17 59.8
comp=E,72nm,1.1s
COLD Coldfoot 4.22 2 Pn 12 16 47.0 +0.8
COLD IAML 12 17 37.5
comp=N,38nm,0.4s
TGL Tana Glacier 4.29 119 Pn 12 16 48.7 +1.4
TGL IAML 12 17 57.8
comp=E,55nm,1.0s
TGL IAML 12 18 02.6
comp=N,80nm,0.9s
KHIT Khitrov Hills 4.32 124 Pn 12 16 49.6 +1.9
BALM Baldy 4.34 114 Pn 12 16 49.4 +1.5
L16K Owhat River 4.38 256 Pn Pn 12 16 49.3 +1.0
L16K IAML 12 18 11.3
comp=E,40nm,1.0s
L16K IAML 12 18 14.2
comp=N,43nm,1.0s
KIAG Kiagna River 4.39 115 Pn 12 16 49.8 +1.1
M16K Timber Creek 4.46 247 Pn Pn 12 16 51.1 +1.7
M16K IAML 12 18 16.1
comp=N,57nm,1.1s
M16K IAML 12 18 17.0
comp=E,31nm,1.0s
BVCY Beaver Creek 4.49 94 Pn 12 16 51.9 +2.0
O17K Koliganek Bris 4.54 227 Pn 12 16 51.4 +0.8
ISLE Juniper Island 4.58 118 Pn 12 16 52.7 +1.5
ISLE IAML 12 18 03.5
comp=E,36nm,0.7s
ISLE IAML 12 18 11.4
comp=N,41nm,1.1s
J16K Anvik River 4.58 278 Pn 12 16 51.3 +0.2
J16K IAML 12 18 07.5
comp=E,32nm,0.7s
J16K IAML 12 18 08.0
comp=N,45nm,1.1s
F20K Avaraart Lake 4.60 334 Pn 12 16 53.3 +1.9
BARN Barnard Glacie 4.61 111 Pn 12 16 53.0 +1.3
BARN IAML 12 18 08.3
comp=N,26nm,0.8s
BARN IAML 12 18 18.6
comp=E,35nm,1.0s
F24K Squaw Lake 4.64 13 Pn 12 16 53.3 +1.3
I27K Kandik River 4.66 52 Pn 12 16 53.5 +1.3
I27K IAML 12 18 20.7
comp=N,61nm,0.7s
YUK2 White River 4.67 101 Pn 12 16 54.8 +2.3
N16K Nishlik Lake 4.68 241 Pn 12 16 53.7 +1.1
GRNC Granite Creek 4.74 115 Pn 12 16 54.2 +0.6
GRNC IAML 12 18 10.4
comp=N,34nm,1.1s
YUK3 Moose Creek 4.84 101 Pn 12 16 57.5 +2.6
LOGN Logan Glacier 5.01 112 Pn 12 16 58.2 +1.1
LOGN IAML 12 18 19.0
comp=N,21nm,1.2s
O16K Kokwok River B 5.02 230 Pn 12 16 57.8 +0.7
O16K IAML 12 18 26.4
comp=E,37nm,0.7s
O16K IAML 12 18 35.7
comp=N,26nm,0.8s
F25K Christian Rive 5.02 22 Pn 12 16 58.0 +0.8
BM03 Burnt Mountain 5.06 27 Pn 12 16 58.4 +0.7
E23K Chandalar 5.07 4 Pn Pn 12 16 59.7 +1.8
E23K IAML 12 17 59.2
comp=N,41nm,0.3s
BMAR Burnt Mountain 5.08 27 Pn 12 16 58.7 +0.7
DAWY Dawson 5.08 73 Pn 12 16 58.7 +0.6
K15K Wolf Creek Mou 5.13 267 Pn 12 16 59.5 +0.8
K15K IAML 12 17 60.0
comp=N,31nm,0.5s
K15K IAML 12 18 00.1
comp=E,33nm,0.4s
E24K Your Creek 5.14 9 Pn 12 16 60.0 +1.1
E22K Anaktuvuk Pass 5.16 355 Pn 12 17 00.4 +1.3
E22K IAML 12 18 01.6
comp=E,27nm,0.8s
E22K IAML 12 18 02.4
comp=N,31nm,0.7s
I28M Miner Creek 5.22 58 Pn 12 17 01.2 +1.3
I28M IAML 12 18 38.4
comp=N,26nm,0.7s
I28M IAML 12 18 46.3
comp=E,31nm,0.9s
E19K Redstone River 5.26 331 Pn 12 17 02.3 +1.8
E19K IAML 12 18 04.0
comp=E,40nm,0.6s
YUK8 Steele Glacier 5.34 104 Pn 12 17 04.6 +2.9
G27K Doyon Strip 5.35 41 Pn 12 17 02.2 +0.5
F26K Sheenjek River 5.39 27 Pn 12 17 03.1 +0.8
E25K Arctic Village 5.51 20 Pn 12 17 04.8 +0.9
L29M L29M 5.63 84 Pn 12 17 06.6 +1.0
TOLK Toolik Lake Re 5.65 4 Pn 12 17 08.0 +2.2
K29M Barlow Dome 5.89 76 Pn 12 17 09.6 +0.4
OHAK Old Harbor 5.99 195 Pn Pn 12 17 10.7 +0.3
H29M Whitestone 6.12 53 Pn 12 17 13.5 +1.2
E17K Hotham Inlet 6.28 315 Pn 12 17 15.9 +1.5
M30M Minto, Yukon 6.31 88 Pn 12 17 16.1 +1.1
E27K Coleen River 6.36 32 Pn 12 17 16.2 +0.7
J30M Hart River 6.47 70 Pn Pn 12 17 17.9 +0.7
I30M Mount Dempster 6.57 64 Pn Pn 12 17 18.8 +0.3
E28M Babbage River 7.18 34 Pn Pn 12 17 27.0 +0.2
G30M tAoh Zraii Nji 7.23 50 Pn 12 17 27.7 +0.1
E29M Blow River 7.47 38 Pn 12 17 31.0 +0.2
H31M Peel River 7.53 61 Pn 12 17 31.8 +0.1
F30M Barrier River 7.68 47 Pn 12 17 34.0 +0.3
G31M Satah River 7.91 53 Pn Pn 12 17 36.7 0.0
F31M Tsiigehtchic 8.30 50 Pn Pn 12 17 42.0 -0.2
PDAR Pinedale Array 31.16 111 P P 12 22 01.2 +0.3
comp=E,0.1nm,0.3s,baz=327,slow=9.3,SNR=2.6
comp=E,0.1nm,0.3s
ARCES ARCESS Array B 47.69 2 P P 12 24 17.8 -0.1
comp=E,3.8nm,0.9s,baz=1.6,slow=8.5,SNR=4.2
comp=E,3.8nm,0.9s
HFS Hagfors 56.57 9 P P 12 25 23.2 -0.8
comp=E,0.6nm,0.4s,baz=338,slow=1.6,SNR=4.7
comp=E,0.6nm,0.4s
EKA Eskdalemuir Ar 59.27 21 P P 12 25 42.7 -0.2
comp=E,0.3nm,0.3s,baz=337,slow=6.2,SNR=4.0
comp=E,0.3nm,0.3s

*UPP **13** 12:29:59.6±0.5, 59°.99N×21°.25E, h0km, ML2.3, Presumed earthquake*
*DNK **13** 12:29:59.6±2.1, 60°.06N×21°.35E, h0km, Suspected explosion*
*HEL **13** 12:29:59.5±0.1, 60°.09N×21°.43E, h0km, ML2.1, Explosion*
*IDC **13** 12:30:00.0±1.4, 60°.15N×21°.37E, h0km, mbtmp2.9/4, ML1.9/4, Error ellipse: s-maj=21.5km s-min=7.7km az=164.0*

ISC 13 12:29:58.1±0.8, 60°.00N±0°.03×21°.39E±0°.02, h0km, n57, σ1§64/84, Finland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AAL	**Aland**	**0.72**	**285**	P		Pg	**12 30 12.1**	**+0.1**
AAL				S		Sg	**12 30 21.9**	**+0.6**
AAL	**Aland**	**0.72**	**285**	*e*P		Pg	**12 30 12.2**	**+0.3**
AAL	**Aland**	**0.72**	**285**	P		Pg	**12 30 12.1**	**+0.1**
AAL				S		Sg	**12 30 21.9**	**+0.6**
AAL	**Aland**	**0.72**	**285**	*e*P		Pg	**12 30 12.2**	**+0.1**
AAL				*e*S		Sg	**12 30 21.5**	**+0.2**
TVF	**Tvarminne**	**0.95**	**99**	*e*P		Pg	**12 30 16.4**	**+0.1**
TVF				*e*S		Sg	**12 30 27.4**	**-1.1**
RAF	**Rauma**	**1.04**	**10**	*e*P		Pg	**12 30 16.5**	**-1.6**
RAF	**Rauma**	**1.04**	**10**	*e*P		Pg	**12 30 16.4**	**-1.6**
RAF				*e*S		Sg	**12 30 28.2**	**-3.2**
NRTU	**Norrtaelje**	**1.43**	**258**	P		Pn	**12 30 25.1**	**-0.2**
NRTU	**Norrtaelje**	**1.43**	**258**	P		Pn	**12 30 25.1**	**-0.2**
GRAU	**Graesoe**	**1.47**	**284**	P		Pn	**12 30 24.5**	**-1.3**
GRAU	**Graesoe**	**1.47**	**284**	P		Pn	**12 30 24.5**	**-1.3**
MEF	**Metsahovi**	**1.52**	**81**	*e*P		Pn	**12 30 26.2**	**-0.3**
MEF	**Metsahovi**	**1.52**	**81**	*e*PG		Pn	**12 30 26.5**	**0.0**
MEF				*e*SB		Sg	**12 30 45.5**	**-1.3**
MEF				smax		smax	12 30 48.1	
comp=Z,18nm,0.1s								
FORU	**Forsmark**	**1.65**	**285**	P		Pn	**12 30 27.9**	**-0.5**
FORU	**Forsmark**	**1.65**	**285**	P		Pn	**12 30 27.9**	**-0.5**
HEL5	**Espoo, Suvisaa**	**1.68**	**85**	*e*P		Pn	**12 30 28.9**	**+0.2**
HEL5				*e*S		Sn	**12 30 49.7**	**-1.3**
HEL5				smax		smax	12 30 55.2	
comp=Z,19nm,0.1s								
NUR	**Nurmijarvi**	**1.70**	**71**	*e*P		Pn	**12 30 28.9**	**-0.1**
NUR				*e*S		Sn	**12 30 49.9**	**-1.6**
HEL1	**Helsinki**	**1.76**	**83**	*e*PG		Pn	**12 30 30.5**	**+0.7**
HEL1				*e*S		Sn	**12 30 52.3**	**-0.5**
HEL1				smax		smax	12 30 59.0	
comp=Z,15nm,0.1s								
KPF	**Kankaanpaa**	**1.87**	**10**	*e*P		Pn	**12 30 30.8**	**-0.5**
KPF				*e*S		Sn	**12 30 54.2**	**-1.3**
KPF				smax		smax	12 30 57.3	
comp=Z,8.6nm,0.1s								
FIBU	**Brunna**	**2.04**	**269**	P		Pn	**12 30 34.9**	**+1.3**
FIBU	**Brunna**	**2.04**	**269**	P		Pn	**12 30 34.9**	**+1.3**
PVF	**Pernaja**	**2.29**	**74**	*e*PG		Pb	**12 30 39.4**	**-0.9**
PVF				*e*SB		Sn	**12 31 07.3**	**+1.4**
ARBE	**Arbavere**	**2.39**	**102**	*e*PB		Pb	**12 30 41.3**	**-0.8**
ARBE				*e*SB		Sb	**12 31 11.9**	**-0.2**
SLIT	**Slitere, Latvi**	**2.43**	**169**	*e*P		Pn	**12 30 39.3**	**+0.3**
SLIT	**Slitere, Latvi**	**2.43**	**169**	*e*PB		Pb	**12 30 42.3**	**-0.3**
SLIT				*e*SB		Sg	**12 31 14.3**	**-1.7**
ARNU	**Arnoeviken**	**2.59**	**312**	P		Pn	**12 30 42.4**	**+1.0**
ARNU	**Arnoeviken**	**2.59**	**312**	P		Pn	**12 30 42.4**	**+1.0**
FIA0	**FINESS Array S**	**2.72**	**56**	*e*PB		Pn	**12 30 45.6**	**+2.6**
FIA0				*e*SB		Sn	**12 31 18.7**	**+2.2**
FINES	**FINESS Array B**	**2.72**	**56**	Pn		Pn	**12 30 45.2**	**+2.2**
comp=Z,0.8nm,0.3s,baz=237,slow=13,SNR=64								
FINES				Sn		Sn	**12 31 19.6**	**+3.1**
comp=Z,1.9nm,0.3s,baz=244,slow=22,SNR=26								
comp=Z,1.9nm,0.3s								
KEF	**Keuruu**	**2.75**	**36**	*e*P		Pn	**12 30 45.3**	**+1.8**
KEF	**Keuruu**	**2.75**	**36**	*e*PB		Pn	**12 30 45.9**	**+2.4**
KEF				*e*SB		Sn	**12 31 19.5**	**+2.1**
VAF	**Ylistaro**	**3.11**	**11**	*e*P		Pn	**12 30 48.7**	**+0.4**
VAF	**Ylistaro**	**3.11**	**11**	*e*PB		Pn	**12 30 51.2**	**+2.8**
VAF				*e*SB		Sn	**12 31 30.6**	**+4.4**

HEMU Hemsoen 3.13 330 P Pn 12 30 49.7 +1.1
HEMU Hemsoen 3.13 330 P Pn 12 30 49.7 +1.1
HEMU Hemsoen 3.13 330 *e*P Pn 12 30 49.9 +1.2
HEMU *e*S Sn 12 31 27.2 +0.5
KAF Kangasniemi 3.19 46 *e*PB Pn 12 30 52.6 +3.1
KAF *e*SB Sn 12 31 31.4 +3.2
HUSU Husum 3.51 344 P Pn 12 30 54.6 +0.8
HUSU Husum 3.51 344 P Pn 12 30 54.6 +0.8
HUSU Husum 3.51 344 *e*P Pn 12 30 54.7 +0.8
HUSU *e*S Sn 12 31 36.5 +0.6
SUF Sumiainen 3.56 38 *e*PB Pn 12 30 57.6 +3.1
SUF *e*SB Sn 12 31 40.7 +3.5
HFS Hagfors 3.86 275 Pn Pn 12 30 59.3 +0.5
comp=Z,0.2nm,0.3s,baz=83,slow=16,SNR=14
HFS Lg Lg 12 31 59.5
comp=Z,0.5nm,0.3s,baz=91,slow=31,SNR=6.0
comp=Z,2.0nm,0.9s
ODEU Stanfors 4.43 356 P Pn 12 31 08.5 +1.9
ODEU Stanfors 4.43 356 P Pn 12 31 08.5 +1.9
NIF Nilsia 4.57 39 *e*P Pn 12 31 10.1 +1.7
BURU Burvik 4.60 360 *e*P Pn 12 31 09.7 +0.9
OUF Merijarvi 4.65 18 *e*P Pn 12 31 09.9 +0.4
OBF0 Syolatti, Pyha 4.70 15 *e*P Pn 12 31 10.7 +0.5
BORU Boraas 5.07 246 *i* P Pn 12 31 18.3 +3.0
BORU *i* S Sn 12 32 17.3 +2.7
NOA NORSAR Array B 5.13 286 Pn Pn 12 31 16.8 +0.5
baz=101,slow=6.6,SNR=0.8
NOA Sn Sn 12 32 15.1 -1.1
baz=21,slow=12,SNR=5.1
NOA Lg Lg 12 32 34.4
baz=31,slow=16,SNR=3.8
comp=Z,0.7nm,0.7s
STRU Stroemstad 5.29 264 *i* P Pn 12 31 18.8 +0.5
STRU *i* S Sn 12 32 17.5 -2.4
DEL Delary 5.32 232 *i* P Pn 12 31 19.4 +0.6
DEL *i* S Sn 12 32 19.7 -1.0
FABU Falkenberg 5.45 240 *i* S Sn 12 32 23.3 -0.7
ONAU Onsala 5.59 246 *i* P Pn 12 31 25.5 +3.1
ONAU *i* S Sn 12 32 26.6 -0.7
BJUU Bjuv 5.94 232 *i* P Pn 12 31 28.6 +1.4
LUNU Lund 6.10 228 *i* P Pn 12 31 29.8 +0.4
LUNU *i* S Sn 12 32 38.7 -1.2
ARCES ARCESS Array B 9.73 9 Pn Pn 12 32 16.1 -3.0
comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=12
ARCES Sn Sn 12 33 59.0 -10
baz=188,slow=24,SNR=1.6
comp=Z,2.4nm,0.9s

*IDC **13** 12:47:02.5±2.1, 43°.48N×128°.91W, h0km, mb3.1/3, mbtmp3.1/4, ML2.0/2, MS3.0/2, Error ellipse: s-maj=94.8km s-min=18.2km az=38.0*
*NEIC **13** 12:47:18.3±1.6, 43°.83N±0°.08×127°.0W±0°.2, h10km±2km, ML2.8/70, Error ellipse: s-maj=20.7km s-min=12.3km az=259.0*

ISC 13 12:47:16.6±2.5, 43°.81N±0°.06×127°.2W±0°.2, h10km, n50, σ1§28/39, mb3.4/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.26**	**114**	Pn	Pn	Pn	**12 47 53.2**	**-0.9**
KEBM						IAML	12 48 32.8	
comp=E,49nm,2.0s								
KEBM						IAML	12 48 56.2	
comp=N,37nm,4.2s								
I02E	**Swisshome, OR**	**2.40**	**82**	Pn	Pn	Pn	**12 47 56.1**	**+0.2**
KBO	**Bosley Butte**	**2.67**	**126**	Pn	Pn	Pn	**12 47 58.5**	**-1.3**
KBO						IAML	12 48 18.2	
comp=E,48nm,4.0s								
KBO						IAML	12 48 26.9	
comp=N,49nm,4.7s								
I03D	**Drain, OR**	**2.76**	**91**			Pn	**12 48 01.6**	**+0.8**
K02D	**Willamette Mer**	**2.78**	**112**	Pn		Pn	**12 48 01.1**	**-0.2**
BUCK	**Buck Mountain**	**3.03**	**81**	Pn		Pn	**12 48 04.7**	**0.0**
BUCK						IAML	12 48 41.4	
comp=N,28nm,4.3s								
BUCK						IAML	12 48 58.3	
comp=E,22nm,3.5s								
G03D	**McMinnville, O**	**3.11**	**62**	Pn		Pn	**12 48 05.9**	**+0.2**
G03D						IAML	12 48 39.0	
comp=N,24nm,4.2s								
G03D						IAML	12 49 20.3	
comp=E,26nm,4.8s								
KSXB	**Camp Six Broad**	**3.12**	**128**	Pn		Pn	**12 48 06.9**	**+1.0**
KSXB						IAML	12 49 29.1	
comp=E,19nm,4.5s								
L02F	**Cave Junction**	**3.12**	**122**	Pn		Pn	**12 48 06.3**	**+0.5**
H04D	**Lebanon**	**3.25**	**76**	Pn		Pn	**12 48 08.1**	**+0.4**
H04D						IAML	12 48 39.4	
comp=E,23nm,4.5s								
H04D						IAML	12 50 03.4	
comp=N,19nm,4.9s								
F03A	**Seaside**	**3.32**	**49**	Pn		Pn	**12 48 09.8**	**+1.2**
BBOR	**Butler Butte**	**3.39**	**104**			Pn	**12 48 10.7**	**+1.0**
I04A	**Tendick Farm,**	**3.43**	**89**			Pn	**12 48 12.3**	**+2.1**
RADR	**Rader Ridge**	**3.53**	**41**	Pn		Pn	**12 48 12.4**	**+1.0**
RADR						IAML	12 49 07.9	
comp=N,30nm,4.2s								
H04A	**Detroit Lake**	**3.67**	**75**			Pn	**12 48 14.0**	**+0.5**
H04A						IAML	12 48 49.2	
comp=N,13nm,4.8s								
H04A						IAML	12 48 53.4	
comp=E,18nm,5.0s								
J04A	**Umpqua Nationa**	**3.71**	**97**			Pn	**12 48 15.2**	**+1.1**
J04A						IAML	12 48 42.7	
comp=N,26nm,0.4s								
J04A						IAML	12 49 26.9	
comp=E,27nm,1.8s								
E03A	**Lebam**	**3.73**	**42**	Pn		Pn	**12 48 15.3**	**+1.1**
WIFE	**Three Sisters-**	**3.86**	**84**			Pn	**12 48 17.5**	**+1.3**
WIFE						IAML	12 49 47.1	
comp=N,10nm,4.9s								
WIFE						IAML	12 50 17.2	
comp=E,17nm,4.1s								
YBH	**Yreka Blue Hor**	**3.87**	**121**	Pn		Pn	**12 48 18.6**	**+2.3**
baz=254,slow=3.0,SNR=4.1								
YBH	**Yreka Blue Hor**	**3.87**	**121**	Pn		Pn	**12 48 17.9**	**+1.7**
YBH						IAML	12 50 17.1	
comp=N,18nm,3.0s								
L04D	**Klamath Falls**	**3.89**	**112**	Pn		Pn	**12 48 18.5**	**+1.9**
L04D						IAML	12 49 34.0	
comp=E,17nm,3.7s								
L04D						IAML	12 50 43.8	
comp=N,12nm,3.8s								
WISH	**Wishkah**	**4.07**	**35**	Pn		Pn	**12 48 19.1**	**+0.2**
HOOD	**Mount Hood Mea**	**4.21**	**67**			Pn	**12 48 21.4**	**+0.4**
HOOD						IAML	12 49 05.6	
comp=E,14nm,4.1s								
KHBM	**Hayfork Bally**	**4.29**	**136**	Pn		Pn	**12 48 23.9**	**+1.7**
KHBM						IAML	12 50 37.3	
comp=N,11nm,4.6s								
KHBM						IAML	12 50 57.0	
comp=E,10nm,5.0s								
J05D	**Fort Rock, OR**	**4.33**	**95**			Pn	**12 48 25.6**	**+2.9**
J05D						IAML	12 49 45.8	
comp=N,16nm,4.8s								
G05A	**Wamic**	**4.41**	**69**			Pn	**12 48 25.2**	**+1.6**
PINE	**Pine Mountain**	**4.50**	**88**			Pn	**12 48 24.8**	**-0.1**
PINE						IAML	12 50 31.9	
comp=N,12nm,4.8s								
PINE						IAML	12 51 13.8	
comp=E,14nm,4.7s								
K05A	**Summer Lake**	**4.70**	**101**	Pn		Pn	**12 48 27.0**	**-0.7**
K05A						IAML	12 49 43.9	
comp=N,13nm,4.8s								
LON	**Longmire**	**4.78**	**50**			Pn	**12 48 29.0**	**+0.3**
LON						IAML	12 49 50.8	
comp=N,9.3nm,4.8s								
LON						IAML	12 50 58.4	
comp=E,10nm,4.8s								
B04A	**Port Angeles**	**4.95**	**30**	Pn		Pn	**12 48 30.8**	**-0.1**
D05A	**Enumclaw**	**4.96**	**45**			Pn	**12 48 31.8**	**+0.7**
O03E	**Paynes Creek**	**5.31**	**130**	Pn		Pn	**12 48 36.7**	**+0.7**
O03E						IAML	12 49 28.6	
comp=N,8.1nm,4.4s								
I07A	**Izee**	**5.53**	**85**	Pn		Pn	**12 48 39.0**	**0.0**
MXC	**Moxie City**	**5.58**	**58**			Pn	**12 48 40.7**	**+1.1**
LTY	**Liberty**	**5.71**	**51**	Pn		Pn	**12 48 42.7**	**+1.2**
E07A	**Sunnyside**	**5.84**	**59**	Pn		Pn	**12 48 43.5**	**+0.2**
PNTR	**Pine Nut**	**7.37**	**127**			Pn	**12 49 07.2**	**+2.8**
NEW	**Newport**	**8.27**	**54**	LR		LR	12 52 16.1	
comp=N,58nm,19.2s,baz=294,slow=33								
NVAR	**Mina Array Bea**	**8.57**	**126**	Pn		Pn	**12 49 20.5**	**-0.3**
comp=N,0.1nm,0.3s,baz=295,slow=13,SNR=4.1								

	comp=N,0.3nm,0.7s								
TXAR	**Lajitas Array**	**23.65**	**120**	P		**P**	12 52 26.1	**-2.0**
	comp=N,0.1nm,0.6s,baz=315,slow=12,SNR=4.0								
	comp=N,0.1nm,0.6s								
ILAR	**Eielson Array**	**23.75**	**339**	P		P	12 52 15.2	-14	
	comp=N,0.6nm,0.8s,baz=148,slow=7.4,SNR=5.8								
	comp=N,0.6nm,0.8s								
TKL	**Tuckaleechee C**	**34.02**	**89**	LR		LR	13 10 02.9		
	comp=N,44nm,20.5s,baz=17,slow=39								
PETK	**Petropavlovsk-**	**48.53**	**309**	P		P	12 55 41.1	-18	
	comp=N,5.3nm,0.9s,baz=35,slow=5.3,SNR=2.8								
H11N3	**WAKE ISLAND Hy 59.38**		**269**	T		T	14 00 13.4		
	baz=49,slow=75,SNR=72								
H11N2	**WAKE ISLAND Hy 59.38**		**269**	T		T	14 00 13.2		
	baz=49,slow=75,SNR=45								
H11N1	**WAKE ISLAND Hy 59.39**		**269**	T		T	14 00 17.7		
	baz=49,slow=75,SNR=47								
H11S1	**WAKE ISLAND Hy 60.30**		**268**	T		T	14 01 08.7		
	baz=50,slow=76,SNR=20								
H11S2	**WAKE ISLAND Hy 60.31**		**268**	T		T	14 01 26.2		
	baz=50,slow=76,SNR=18								
H11S3	**WAKE ISLAND Hy 60.32**		**268**	T		T	14 01 24.0		
	baz=50,slow=76,SNR=16								
KURBB	**Kurchatov Arra**	**83.33**	**344**	P		P	12 59 29.7	-14	
	comp=N,0.4nm,0.8s,baz=19,slow=5.2,SNR=4.4								
	comp=N,0.4nm,0.8s								

*DNK **13** 12:49:11.9±2.1,57.°55N×21.°99E,h0km,ML3.0,Suspected explosion*
*EST **13** 12:49:12.0±0.2,57.°68N×21.°90E,h0km,ML2.2(HEL), Explosion*
*HEL **13** 12:49:12.6±0.4,57.°70N×21.°90E,h0km,ML2.5,Explosion*
*IDC **13** 12:49:13.1±2.2,57.°82N×22.°00E,h0km,mbtmp3.1/4, ML2.3/4,Error ellipse: s-maj=21.9km s-min=9.4km az=163.0*
*LVSN **13** 12:49:15.3±3.9,57.°70N×22.°10E,h0km±35km, ML2.8*
*BER **13** 12:49:16.6±1.5,57.°79N×21.°61E,h0km,ML2.0, ML2.6(UPP),Suspected explosion*
*UPP **13** 12:49:16.0±1.5,57.°80N×21.°47E,h0km,ML2.6,Presumed earthquake*

ISC 13 12:49:11.3±0.8,57.°76N±0.°03×21.°92E±0.°03,h0km,n85,
σ1§62/109,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.24**	**124**		*e*P		**Pg**	**12 49 15.9**	**+0.1**
SLIT	**Slitere, Latvi**	**0.24**	**124**		*e*P		**Pg**	**12 49 15.9**	**+0.1**
SLIT					*e*S		**Sg**	**12 49 19.7**	**+0.8**
SLIT				AML		AML	AML	12 49 28.4	
	comp=E,11μm,0.5s								
SLIT				AML		AML	AML	12 49 29.9	
	comp=Z,10μm,0.5s								
SLIT				AML		AML	AML	12 49 37.0	
	comp=N,11μm,0.5s								
SLIT	**Slitere, Latvi**	**0.24**	**124**		*e*P		**Pg**	**12 49 15.9**	**+0.1**
SLIT					*e*S		**Sg**	**12 49 18.5**	**-0.4**
EE06	**Soera, Palade,**	**1.31**	**22**		*e*P		**Pg**	**12 49 36.7**	**+0.4**
EE06					*e*SB		**Sn**	**12 49 55.4**	**+0.6**
EE01	**Perakula, Nova**	**1.70**	**31**		*e*P		**Pb**	**12 49 43.6**	**+0.2**
EE01					*e*S		**Sg**	**12 50 06.5**	**+0.6**
GOTU	**Gotland**	**1.80**	**269**		P		**Pn**	**12 49 44.6**	**+1.1**
GOTU	**Gotland**	**1.80**	**269**		P		**Pn**	**12 49 44.6**	**+1.1**
EE08	**Sarghaua, Vand**	**1.97**	**62**		*e*P		**Pn**	**12 49 46.9**	**+1.1**
EE08					*e*SG		**Sg**	**12 50 14.3**	**-0.2**
EE02	**Kiisa, Saku**	**2.04**	**44**		*e*PB		**Pb**	**12 49 49.3**	**+0.1**
EE02					*e*SG		**Sg**	**12 50 17.2**	**+0.4**
TVF	**Tvarminne**	**2.20**	**18**		*e*PB		**Pb**	**12 49 51.9**	**0.0**
TVF					*e*SG		**Sg**	**12 50 22.1**	**+0.2**
TVF				smax		smax		12 50 23.4	
	comp=Z,15nm,0.1s								
PABE	**Paberze**	**2.53**	**153**		*e*P		**Pn**	**12 49 54.8**	**+1.3**
PABE	**Paberze**	**2.53**	**153**		*e*P		**Pn**	**12 49 54.8**	**+1.3**
PABE				AML		AML	AML	12 49 55.1	
	comp=Z,90nm,0.2s								
PABE					*e*S		**Sn**	**12 50 25.8**	**+0.8**
PABE				AML		AML	AML	12 50 29.0	
	comp=E,71nm,0.2s								
PABE				AML		AML	AML	12 50 29.8	
	comp=N,57nm,0.2s								
EE03	**Tooma soojaam,**	**2.55**	**62**		*e*P		**Pn**	**12 49 55.2**	**+1.4**
EE03					*e*PB		**Pb**	**12 49 57.0**	**-0.9**
EE03					*e*SB		**Sb**	**12 50 30.0**	**+0.2**
NRTU	**Norrtaelje**	**2.58**	**320**		P		**Pn**	**12 49 56.3**	**+2.2**
NRTU	**Norrtaelje**	**2.58**	**320**		P		**Pn**	**12 49 56.3**	**+2.2**
AAL	**Aland**	**2.62**	**338**		*e*P		**Pn**	**12 49 56.1**	**+1.3**
AAL	**Aland**	**2.62**	**338**		*e*P		**Pn**	**12 49 56.0**	**+1.3**
AAL					*e*PB		**Pb**	**12 49 58.7**	**-0.3**
AAL					*e*SB		**Sb**	**12 50 32.9**	**+1.2**
AAL				smax		smax		12 50 38.1	
	comp=Z,9.1nm,0.1s								
VSU	**Vasula**	**2.65**	**73**		*e*P		**Pn**	**12 49 56.3**	**+1.1**
VSU	**Vasula**	**2.65**	**73**		*e*P		**Pn**	**12 49 57.4**	**+2.2**
VSU				AML		AML	AML	12 49 57.6	
	comp=Z,70nm,0.2s								
VSU				AML		AML	AML	12 50 34.0	
	comp=N,103nm,0.2s								
VSU				AML		AML	AML	12 50 36.2	
	comp=E,105nm,0.4s								
VSU	**Vasula**	**2.65**	**73**		*i* P		**Pn**	**12 49 57.0**	**+1.8**
VSU	**Vasula**	**2.65**	**73**		*e*P		**Pn**	**12 49 56.8**	**+1.6**
VSU					*e*SB		**Sb**	**12 50 31.9**	**-0.7**
BYXU	**Byxelkrok**	**2.69**	**262**		P		**Pn**	**12 49 57.3**	**+1.5**
BYXU	**Byxelkrok**	**2.69**	**262**		P		**Pn**	**12 49 57.3**	**+1.5**
MEF	**Metsahovi**	**2.78**	**26**		*e*P		**Pb**	**12 50 01.0**	**-0.7**
MEF	**Metsahovi**	**2.78**	**26**		*e*P		**Pb**	**12 50 00.8**	**-0.8**
MEF				AML		AML	AML	12 50 39.6	
	comp=N,17nm,0.1s								
MEF				AML		AML	AML	12 50 40.3	
	comp=Z,19nm,0.7s								
MEF				AML		AML	AML	12 50 41.9	
	comp=E,25nm,0.6s								
MEF	**Metsahovi**	**2.78**	**26**		*e*PB		**Pb**	**12 50 00.8**	**-0.8**
MEF					*e*SB		**Sb**	**12 50 37.3**	**+1.2**
MEF				smax		smax		12 50 40.2	
	comp=Z,10nm,0.1s								
HEL5	**Espoo, Suvisaa**	**2.78**	**31**		*e*PB		**Pb**	**12 50 00.6**	**-1.1**
HEL5				smax		smax		12 50 41.1	
	comp=Z,8.0nm,0.1s								
HEL1	**Helsinki**	**2.87**	**31**		*e*PB		**Pb**	**12 50 02.3**	**-0.9**
HEL1					*e*SB		**Sb**	**12 50 40.4**	**+1.7**
HEL1				smax		smax		12 50 45.1	
	comp=Z,8.2nm,0.1s								
VIKU	**Vikbolandet**	**2.87**	**287**		P		**Pn**	**12 50 00.3**	**+2.2**
VIKU	**Vikbolandet**	**2.87**	**287**		P		**Pn**	**12 50 00.3**	**+2.2**
VSTU	**Vaestervik**	**2.89**	**270**		P		**Pn**	**12 50 00.4**	**+1.9**
VSTU	**Vaestervik**	**2.89**	**270**		P		**Pn**	**12 50 00.4**	**+1.9**
NUR	**Nurmijarvi**	**3.09**	**26**		*e*P		**Pn**	**12 50 02.7**	**+1.5**
NUR					*e*SB		**Sb**	**12 50 46.2**	**+0.9**
NUR				smax		smax		12 50 48.6	
	comp=Z,5.6nm,0.1s								
OSKU	**Oskarshamn**	**3.19**	**262**		P		**Pn**	**12 50 04.0**	**+1.3**
OSKU	**Oskarshamn**	**3.19**	**262**		P		**Pn**	**12 50 04.0**	**+1.3**
RAF	**Rauma**	**3.27**	**359**		*e*P		**Pn**	**12 50 06.3**	**+2.6**
RAF	**Rauma**	**3.27**	**359**		*e*P		**Pn**	**12 50 06.2**	**+2.5**
RAF					*e*SB		**Sb**	**12 50 52.0**	**+1.5**
RAF				smax		smax		12 50 55.0	
	comp=Z,5.2nm,0.1s								
LNKU	**Linkoeping**	**3.45**	**280**		P		**Pn**	**12 50 07.8**	**+1.7**
LNKU	**Linkoeping**	**3.45**	**280**		P		**Pn**	**12 50 07.8**	**+1.7**
PVF	**Pernaja**	**3.45**	**34**		*e*P		**Pn**	**12 50 08.9**	**+2.7**
EKSU	**Eksjoe**	**3.56**	**270**		P		**Pn**	**12 50 09.4**	**+1.7**
EKSU	**Eksjoe**	**3.56**	**270**		P		**Pn**	**12 50 09.4**	**+1.7**
VXJU	**Vaexsjoe**	**3.88**	**260**		P		**Pn**	**12 50 13.3**	**+1.3**
VXJU	**Vaexsjoe**	**3.88**	**260**		P		**Pn**	**12 50 13.3**	**+1.3**
VJF	**Virojoki**	**4.02**	**44**		*e*P		**Pn**	**12 50 16.6**	**+2.6**
KPF	**Kankaanpaa**	**4.09**	**1**		*e*P		**Pn**	**12 50 17.1**	**+2.2**
FINES	**FINESS Array B**	**4.25**	**28**	Pn			**Pn**	**12 50 17.9**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=208,slow=12,SNR=16								
FINES				Pg			**Pb**	**12 50 28.8**	**+1.9**
	comp=Z,0.9nm,0.3s,baz=208,slow=15,SNR=21								
FINES				Sn			**Sn**	**12 51 08.1**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=209,slow=20,SNR=3.5								
FINES				Lg		Lg		12 51 25.1	
	comp=Z,2.6nm,0.3s,baz=214,slow=26,SNR=16								
	comp=Z,0.7nm,0.3s								
FIA1	**FINESS Array S**	**4.25**	**28**		*e*P		**Pn**	**12 50 19.3**	**+2.1**
FIA1					*e*SG		**Sg**	**12 51 25.5**	**-2.3**
DEL	**Delary**	**4.58**	**257**		*i* P		**Pn**	**12 50 21.8**	**+0.2**
KEF	**Keuruu**	**4.66**	**17**		*e*P		**Pn**	**12 50 25.2**	**+2.4**
KEF	**Keuruu**	**4.66**	**17**		*e*P		**Pn**	**12 50 25.3**	**+2.5**
BSD	**Bornholm Skovb**	**4.71**	**239**		*i* P		**Pn**	**12 50 23.1**	**-0.4**
BSD					*i* S		**Sn**	**12 51 16.0**	**-2.6**
BSD				IAML				12 51 18.0	
	comp=Z,13nm,1.0s								
HFS	**Hagfors**	**4.88**	**303**	Pn			**Pn**	**12 50 27.5**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=123,slow=14,SNR=37								
HFS					Sn		**Sn**	**12 51 24.2**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=114,slow=26,SNR=6.5								
HFS					Lg	Lg		12 51 43.7	
	comp=Z,1.4nm,0.3s,baz=115,slow=30,SNR=8.6								
	comp=Z,1.6nm,0.3s								
KAF	**Kangasniemi**	**4.89**	**25**		*e*P		**Pn**	**12 50 27.7**	**+1.8**
BORU	**Boraas**	**4.91**	**272**		*i* P		**Pn**	**12 50 28.9**	**+2.6**
BORU					*i* S		**Sn**	**12 51 25.6**	**+1.8**
RUF	**Ruokolahti**	**5.12**	**41**		*e*P		**Pn**	**12 50 30.2**	**+1.1**
LUNU	**Lund**	**5.13**	**249**		*i* P		**Pn**	**12 50 32.1**	**+2.8**
BJUU	**Bjuv**	**5.16**	**255**		*i* P		**Pn**	**12 50 29.9**	**+0.2**
VAF	**Ylistaro**	**5.31**	**4**		*e*P		**Pn**	**12 50 34.1**	**+2.4**
VAF	**Ylistaro**	**5.31**	**4**		*e*P		**Pn**	**12 50 33.9**	**+2.2**
TJOU	**Tjoern**	**5.50**	**277**		*i* P		**Pn**	**12 50 35.1**	**+0.8**
HUSU	**Husum**	**5.75**	**348**		*e*P		**Pn**	**12 50 39.9**	**+2.1**
STRU	**Stroemstad**	**5.79**	**287**		*e*P		**Pn**	**12 50 39.7**	**+1.4**
STRU	**Stroemstad**	**5.79**	**287**		*i* P		**Pn**	**12 50 39.7**	**+1.4**
NC602	**NORSAR Array S**	**6.10**	**304**		*e*P		**Pn**	**12 50 43.1**	**+0.6**
NC602				IAML				12 52 30.2	
	comp=Z,2.9nm,0.7s								
NB201	**NORSAR Array S**	**6.35**	**306**		*e*P		**Pn**	**12 50 46.8**	**+0.8**
NB201				IAML				12 52 39.8	
	comp=Z,3.1nm,0.6s								
NOA	**NORSAR Array B**	**6.38**	**306**	Pn			**Pn**	**12 50 45.5**	**-0.9**
	baz=124,slow=12,SNR=8.3								
NOA					Lg	Lg		12 52 32.1	
	comp=Z,0.1nm,0.3s,baz=112,slow=12,SNR=5.4								
	comp=Z,0.2nm,0.3s								
NC303	**NORSAR Array S**	**6.40**	**307**		*e*P		**Pn**	**12 50 48.0**	**+1.4**
NC303				IAML				12 52 38.5	
	comp=Z,3.2nm,0.4s								
NAO01	**NORSAR Array S**	**6.44**	**303**		*e*P		**Pn**	**12 50 47.4**	**+0.1**
NBO00	**NORSAR Array S**	**6.57**	**305**		*e*P		**Pn**	**12 50 49.1**	**+0.1**
NC204	**NORSAR Array S**	**6.68**	**307**		*e*P		**Pn**	**12 50 51.2**	**+0.6**
OUF	**Merijarvi**	**6.77**	**10**		*e*P		**Pn**	**12 50 53.5**	**+1.8**
JOF	**Joensuu**	**6.96**	**38**		*e*P		**Pn**	**12 50 54.6**	**+0.3**
SKAR	**Skarslia**	**7.57**	**298**		*e*P		**Pn**	**12 51 02.8**	**0.0**
SKAR				IAML				12 52 28.8	
	comp=Z,1.7nm,0.8s								
NSS	**Namsos**	**8.31**	**329**		*e*P		**Pn**	**12 51 11.3**	**-1.5**
MOR8	**Moi Rana**	**9.14**	**341**		*e*P		**Pn**	**12 51 24.9**	**+0.7**
LEIR	**Leirfjorden**	**9.34**	**337**		*e*P		**Pn**	**12 51 26.7**	**-0.2**
RAUS	**Rausandaksla**	**9.45**	**340**		*e*P		**Pn**	**12 51 28.4**	**+0.1**
STOK	**Stokkvaagen**	**9.55**	**338**		*e*P		**Pn**	**12 51 30.7**	**+1.0**
SALU	**Saltoluokta**	**9.78**	**352**		*e*P		**Pn**	**12 51 33.0**	**0.0**
VAGH	**Vaagaholmen**	**9.85**	**340**		*e*P		**Pn**	**12 51 34.0**	**+0.1**
HEF	**Hetta**	**10.72**	**3**		*e*P		**Pn**	**12 51 44.7**	**-1.1**
KIF	**Kilpisjarvi**	**11.30**	**358**		*e*P		**Pn**	**12 51 52.6**	**-1.1**
KTK1	**Kautokeino**	**11.31**	**2**		*e*P		**Pn**	**12 51 52.5**	**-1.3**
ARCES	**ARCESS Array B**	**11.92**	**6**	Pn			**Pn**	**12 51 59.8**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=9.8								
ARCES					Sn		**Sn**	**12 54 08.6**	**-7.3**
	baz=193,slow=23,SNR=1.0								
ARCES					Lg	Lg		12 55 22.0	
	comp=Z,0.1nm,0.3s,baz=192,slow=34,SNR=3.7								
	comp=Z,1.5nm,0.9s								

*IDC **13** 12:51:55.8±1.3,32.°74N×131.°41E,h68km±7km,mb3.3/3, mbtmp3.8/7,MS3.9/1,Error ellipse: s-maj=19.2km s-min=14.5km az=77.0*
*JMA **13** 12:51:56.5±0.1,32.°8N±0.°3×131.°5E±0.°3,h71km,MV3.3/40, SOUTHERN OITA PREF*
JMA Felt I J1 at SOUTHERN OITA PREF .

ISC 13 12:51:55.8±0.9,32.°78N±0.°05×131.°55E±0.°04,h78km±6km,
n24,σ0§89/32,mb3.4/3,11D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKIT	**Kitakata**	**0.17**	**209**		P		**Pn**	**12 52 07.2**	**0.0**
JKIT					S		**Sn**	**12 52 15.1**	**-0.5**
JSKE	**Saikikamae**	**0.29**	**86**		P		**Pn**	**12 52 08.0**	**+0.3**
JSKE					S		**Sn**	**12 52 16.6**	**-0.1**
JUS	**Usuki**	**0.33**	**30**		⇓P		**Pn**	**12 52 08.1**	**0.0**
JUS					⇓S		**Sn**	**12 52 16.6**	**-0.5**
JNU	**Nakatsue**	**0.66**	**301**		P		**Pn**	**12 52 10.8**	**-0.1**
	99nm,0.2s,baz=149,slow=4.6,SNR=1453								
JNU					S		**Sn**	**12 52 21.2**	**-0.9**
	424nm,0.3s,baz=196,slow=21,SNR=34								
JNU	**Nakatsue**	**0.66**	**301**		P		**Pn**	**12 52 11.0**	**0.0**
JIU3	**Izumi3**	**0.66**	**250**		⇓P		**Pn**	**12 52 11.1**	**+0.2**
JIU3					⇓S		**Sn**	**12 52 21.7**	**-0.4**
JTZ	**Takazaki**	**0.96**	**204**		⇓P		**Pn**	**12 52 15.1**	**+0.8**
JTZ					⇓S		**Sn**	**12 52 28.8**	**+0.8**
UWA2	**Uwa jima 2**	**1.00**	**64**		⇓P		**Pn**	**12 52 14.5**	**-0.2**
JTO	**Tosashimizu**	**1.05**	**85**		⇓P		**Pn**	**12 52 14.9**	**-0.5**
JTO					⇓S		**Sn**	**12 52 28.8**	**-1.3**
JNA	**Nagahama**	**1.10**	**45**		⇓P		**Pn**	**12 52 15.9**	**0.0**
JKU	**Kubokawa**	**1.38**	**67**		⇓P		**Pn**	**12 52 19.2**	**-0.3**
JMN	**Monobe**	**2.17**	**63**		P		**Pn**	**12 52 30.1**	**+0.2**
JTU	**Tsushima**	**2.50**	**315**		P		**Pn**	**12 52 34.4**	**+0.1**
INU	**Inuyama**	**5.21**	**59**		P		**Pn**	**12 53 12.2**	**+1.0**
KSRS	**Korea Array**	**5.53**	**328**		P		**Pn**	**12 53 16.6**	**+1.1**
	1.2nm,0.4s,baz=147,slow=14,SNR=5.0								
KSRS					S		**Sn**	**12 54 17.4**	**-0.3**
	1.8nm,0.4s,baz=148,slow=24,SNR=5.5								
JGF	**Kuroka**	**5.57**	**58**		P		**Pn**	**12 53 16.6**	**+0.4**
JOW	**Kunigami**	**6.57**	**207**		P		**Pn**	**12 53 30.6**	**+0.8**
	4.7nm,0.3s,baz=113,slow=24,SNR=14								
JOW					S		**Sn**	**12 54 40.6**	**-2.8**
	7.4nm,0.8s,baz=129,slow=24,SNR=1.4								
MAJO	**Matsushiro**	**6.64**	**54**		P		**Pn**	**12 53 32.2**	**+1.4**
MJAR	**Matsushiro Arr**	**6.65**	**54**		P		**Pn**	**12 53 32.6**	**+1.8**
	4.5nm,0.3s,baz=236,slow=15,SNR=30								
JHJ	**Hachijo jima 2**	**6.93**	**85**		P		**Pn**	**12 53 35.5**	**+0.9**
	43nm,0.3s,baz=270,slow=20,SNR=11								
SONM	**Songino Array**	**24.23**	**316**		P		**P**	**12 57 05.6**	**+0.3**
	0.7nm,0.4s,baz=111,slow=8.1,SNR=3.8								
	0.7nm,0.4s								
BRDH	**Bariadhala**	**36.55**	**264**	LR			LR	13 14 30.8	
	comp=Z,166nm,18.9s,baz=348,slow=37								
MKAR	**Makanchi Array**	**39.72**	**305**	P			**P**	**12 59 20.6**	**+0.1**
	0.3nm,0.7s,baz=88,slow=9.4,SNR=2.4								
	0.3nm,0.7s								
BVAR	**Borovoye Array**	**47.56**	**314**	P			**P**	**13 00 23.5**	**+0.2**
	0.4nm,0.3s,baz=79,slow=7.6,SNR=2.5								
	0.4nm,0.3s								

IDC 13 12:55:24.0±11.0,20.°05S×179.°29W,h650km±135km,
mb2.5/5,mbtmp3.5/5,Error ellipse: s-maj=226.3km
s-min=35.5km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.45**	**256**		P		P	13 02 32.6	+0.1
	0.5nm,0.7s,baz=93,slow=7.8,SNR=13								
ASAR					PcP		PcP	13 04 04.9	-0.6
	0.3nm,0.8s,baz=90,slow=3.6,SNR=2.0								
	0.5nm,0.7s								
WRA	**Warramunga Arr**	**43.47**	**262**		P		P	13 02 32.9	+0.2
	0.1nm,0.3s,baz=97,slow=8.0,SNR=1.4								
	0.1nm,0.3s								
NVAR	**Mina Array Bea**	**81.54**	**44**		P		P	13 06 36.1	0.0
	0.3nm,0.6s,baz=235,slow=5.2,SNR=4.2								
	0.3nm,0.6s								
TXAR	**Lajitas Array**	**87.84**	**58**		P		P	13 07 06.6	0.0
	0.5nm,0.9s,baz=218,slow=7.9,SNR=4.8								
	0.5nm,0.9s								
PDAR	**Pinedale Array**	**89.47**	**44**		P		P	13 07 14.4	+0.4
	0.2nm,0.6s,baz=250,slow=5.1,SNR=2.2								
	0.2nm,0.6s								

*DNK **13** 13:01:24.6±4.4,57.°46N×22.°89E,h0km,ML2.5(UPP), Suspected explosion*
*EST **13** 13:01:31.8±0.2,57.°73N×21.°84E,h0km,ML2.2(HEL), Explosion*
*HEL **13** 13:01:32.7±0.8,57.°85N×21.°88E,h0km,ML2.1,Explosion*
*UPP **13** 13:01:33.9±1.8,57.°80N×21.°61E,h0km,ML2.5,Presumed earthquake*
*LVSN **13** 13:01:34.7±4.4,57.°60N×21.°98E,h0km±52km, ML2.7*
*BER **13** 13:01:47.0±0.6,58.°19N×20.°16E,h0km,ML1.7, ML2.5(UPP),Suspected explosion*

ISC 13 13:01:31.0±0.9,57.°74N±0.°04×21.°77E±0.°03,h0km,n65,
σ1§65/85,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.30**	**112**		*e*P		**Pg**	**13 01 35.9**	**-0.9**
SLIT	**Slitere, Latvi**	**0.30**	**112**		*e*P		**Pg**	**13 01 36.1**	**-0.7**
SLIT					*e*S		**Sg**	**13 01 40.6**	**-0.1**
SLIT				AML		AML	AML	13 01 51.4	
	comp=N,5μm,0.4s								
SLIT				AML		AML	AML	13 01 51.7	
	comp=Z,5μm,0.8s								
SLIT				AML		AML	AML	13 01 52.4	
	comp=E,8μm,0.8s								
SLIT	**Slitere, Latvi**	**0.30**	**112**		*e*P		**Pg**	**13 01 36.1**	**-0.7**
SLIT					*e*S		**Sg**	**13 01 39.6**	**-1.1**
EE06	**Soera, Palade,**	**1.36**	**24**		*e*P		**Pg**	**13 01 56.0**	**-0.9**
EE06					*e*SN		**Sb**	**13 02 15.8**	**+0.7**
GOTU	**Gotland**	**1.72**	**269**		P		**Pn**	**13 02 03.8**	**+1.7**
GOTU	**Gotland**	**1.72**	**269**		P		**Pn**	**13 02 03.8**	**+1.7**
EE01	**Perakula, Nova**	**1.76**	**33**		*e*P		**Pn**	**13 02 02.9**	**+0.2**
EE01					*e*PN		**Pb**	**13 02 03.7**	**-0.4**
EE01					*e*SN		**Sn**	**13 02 26.4**	**+0.5**
EE08	**Sarghaua, Vand**	**2.06**	**62**		*e*P		**Pn**	**13 02 06.8**	**+0.1**
EE08					*e*SG		**Sn**	**13 02 34.0**	**+1.0**
EE02	**Kiisa, Saku**	**2.12**	**45**		*e*PB		**Pn**	**13 02 08.5**	**+0.9**
EE02					*e*SG		**Sb**	**13 02 36.5**	**-0.5**
TVF	**Tvarminne**	**2.25**	**19**		*e*PB		**Pn**	**13 02 11.2**	**+1.9**
TVF					*e*SG		**Sb**	**13 02 40.6**	**-0.1**
TVF				smax		smax		13 02 42.3	
	comp=Z,15nm,0.1s								
NYNU	**Nynaeshamn**	**2.35**	**304**		P		**Pn**	**13 02 13.2**	**+2.4**
NYNU	**Nynaeshamn**	**2.35**	**304**		P		**Pn**	**13 02 13.2**	**+2.4**
NRTU	**Norrtaelje**	**2.54**	**321**		P		**Pn**	**13 02 15.1**	**+1.7**
NRTU	**Norrtaelje**	**2.54**	**321**		P		**Pn**	**13 02 15.1**	**+1.7**
PABE	**Paberze**	**2.55**	**151**		*e*P		**Pn**	**13 02 14.8**	**+1.2**
PABE	**Paberze**	**2.55**	**151**		*e*P		**Pn**	**13 02 14.9**	**+1.4**
PABE				AML		AML	AML	13 02 15.0	
	comp=Z,96nm,0.2s								
PABE				AML		AML	AML	13 02 47.4	
	comp=E,49nm,0.2s								
PABE				AML		AML	AML	13 02 50.3	
	comp=N,59nm,0.2s								
BYXU	**Byxelkrok**	**2.61**	**262**		P		**Pn**	**13 02 16.6**	**+2.3**
BYXU	**Byxelkrok**	**2.61**	**262**		P		**Pn**	**13 02 16.6**	**+2.3**
AAL	**Aland**	**2.61**	**340**		P		**Pn**	**13 02 15.8**	**+1.4**
AAL	**Aland**	**2.61**	**340**		*e*P		**Pn**	**13 02 15.6**	**+1.2**
AAL	**Aland**	**2.61**	**340**		P		**Pn**	**13 02 15.8**	**+1.4**
AAL	**Aland**	**2.61**	**340**		*e*P		**Pn**	**13 02 15.2**	**+0.9**
AAL					*e*SB		**Sb**	**13 02 50.2**	**-1.0**
AAL				smax		smax		13 02 55.7	
	comp=Z,7.4nm,0.1s								
EE03	**Tooma soojaam,**	**2.63**	**63**		*e*PB		**Pn**	**13 02 16.3**	**+1.6**
EE03					*e*SB		**Sn**	**13 02 49.7**	**+2.4**
VSU	**Vasula**	**2.73**	**73**		*e*P		**Pn**	**13 02 17.4**	**+1.3**
VSU	**Vasula**	**2.73**	**73**		*e*P		**Pn**	**13 02 17.4**	**+1.3**
VSU				AML		AML	AML	13 02 17.6	
	comp=Z,96nm,0.2s								
VSU				AML		AML	AML	13 02 18.0	
	comp=E,112nm,0.2s								
VSU				AML		AML	AML	13 02 54.2	
	comp=N,61nm,0.2s								
VSU	**Vasula**	**2.73**	**73**		*i* P		**Pn**	**13 02 17.4**	**+1.3**
VSU	**Vasula**	**2.73**	**73**		*e*P		**Pn**	**13 02 17.2**	**+1.2**
VSU					*e*

comp=Z,47nm,20.4s,baz=16,slow=37
44nm,0.6s
BKSI Bulukumba 4.39 183 P **Pn 13 04 01.4 +0.8**
BSSI Bau Bau, Buton 5.20 178 P **Pn 13 04 11.2 -0.6**
BATI Baumata 9.81 160 LR LR 13 09 41.6
comp=Z,83nm,18.5s,baz=26,slow=42
WRA Warramunga Arr 23.35 145 P **P 13 08 00.1 -2.8**
2.0nm,0.9s,baz=326,slow=9.3,SNR=9.5
2.0nm,0.9s
ASAR Alice Springs 26.17 151 P **P 13 08 27.8 -1.2**
0.8nm,0.8s,baz=342,slow=15,SNR=16
0.8nm,0.8s
CMAR Chiang Mai Arr 28.52 313 P **P 13 08 51.6 +1.5**
0.6nm,0.3s,baz=128,slow=8.4,SNR=5.3
0.6nm,0.3s
STKA Stephens Creek 36.76 149 P **P 13 10 02.5 +0.4**
1.6nm,0.6s,baz=313,slow=12,SNR=3.2
1.6nm,0.6s
SONM Songino Array 50.05 348 P **P 13 11 51.1 +1.9**
0.2nm,0.3s,baz=157,slow=7.8,SNR=1.6
0.2nm,0.3s
MKAR Makanchi Array 58.03 330 P **P 13 12 48.1 +0.7**
0.4nm,0.6s,baz=140,slow=7.0,SNR=3.6
0.4nm,0.6s
PETK Petropavlovsk- 62.19 24 P **P 13 13 16.1 +0.2**
1.5nm,0.4s,baz=224,slow=5.6,SNR=1.8
1.5nm,0.4s
KURBB Kurchatov Arra 62.45 331 P **P 13 13 17.8 +0.1**
0.2nm,0.5s,baz=142,slow=5.4,SNR=2.4
0.2nm,0.5s
QSPA South Pole Qui 89.03 180 P **P 13 15 48.7 -0.7**
1.6nm,0.9s,baz=349,slow=2.0,SNR=3.1
1.6nm,0.9s

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*SOME **13** 13:04:02.0, 43.42N×81.97E, h20km*
*NNC **13** 13:04:04.1±1.1, 43.41N×81.76E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=9.2km s-min=4.3km az=142.0, Suspected Mining explosion.*
ISC 13 13:04:00.6±2.2, 43.2N±0.1×81.76E±0.09, h0km, n24, σ1°29/36, 2C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.05**	**284**	P		**Pn**	**13 04 23.3**	**+0.6**
KTMS	4.6nm,0.2s			S		**Sn**	**13 04 38.9**	**+0.7**
	21nm,0.4s							
KTMS	**Ketmen**	**1.05**	**284**	*e*P		**Pn**	**13 04 23.3**	**+0.6**
KTMS	4.6nm,0.1s			*e*S		**Sn**	**13 04 39.0**	**+0.7**
	21nm,0.4s							
SHLS	**Shalkode**	**1.68**	**269**	P		**Pn**	**13 04 30.0**	**-1.3**
SHLS	23nm,0.4s			S		**Sn**	**13 04 50.6**	**-3.0**
	89nm,0.4s							
SHLS	**Shalkode**	**1.68**	**269**	*e*P		**Pn**	**13 04 30.0**	**-1.3**
SHLS	15nm,0.1s			*e*S		**Sn**	**13 04 50.6**	**-3.0**
	89nm,0.3s							
KNOS	**Konyrlen**	**2.20**	**303**	Pg		**Pg**	**13 04 42.1**	**-0.6**
KNOS	9.9nm,0.3s			Lg		Lg	13 05 11.3	
	20nm,0.2s							
KPKS	**Kokpek**	**2.26**	**278**	Pg		**Pg**	**13 04 45.3**	**+1.5**
KPKS	0.3nm,0.1s			Lg		Lg	13 05 16.7	
	52nm,0.5s							
SATY	**Saty**	**2.46**	**268**	Pg		**Pg**	**13 04 49.3**	**+1.6**
SATY	14nm,0.4s			Lg		Lg	13 05 23.6	
	63nm,0.5s							
BLB	**Baldybastay**	**2.54**	**292**	Pg		**Pg**	**13 04 49.0**	**-0.3**
BLB	12nm,0.2s			Lg		Lg	13 05 23.2	
	30nm,0.4s							
KAPS	**Kapalarasan**	**2.70**	**321**	Pg		**Pb**	**13 04 49.3**	**-0.5**
KAPS	5.8nm,0.4s			Lg		Lg	13 05 23.6	
	34nm,0.3s							
ARXS	**Arharly**	**3.02**	**291**	Pg		**Pg**	**13 04 57.9**	**-0.6**
ARXS	7.0nm,0.3s			Lg		Lg	13 05 38.1	
	13nm,0.4s							
ARXS	**Arharly**	**3.02**	**291**	*e*P		**Pg**	**13 04 57.9**	**-0.6**
ARXS				*e*S		**Sg**	**13 05 38.1**	**+0.4**
KOTS	**Kotyrbulak**	**3.40**	**272**	Pg		**Pg**	**13 05 05.4**	**-0.3**
KOTS	9.4nm,0.4s			Lg		Lg	13 05 51.1	
	24nm,0.5s							
KOTS	**Kotyrbulak**	**3.40**	**272**	*e*P		**Pg**	**13 05 05.4**	**-0.3**
KOTS	9.4nm,0.4s			*e*S		**Sg**	**13 05 51.1**	**+1.5**
	24nm,0.5s							
MDOK	**Medeo**	**3.44**	**271**	Pg		**Pg**	**13 05 06.6**	**0.0**
MDOK	5.6nm,0.5s			Lg		Lg	13 05 53.3	
	8.2nm,0.5s							
TNSS	**Tian-Shan**	**3.53**	**269**	Pg		**Pg**	**13 05 08.4**	**+0.3**
TNSS	1.0nm,0.3s			Lg		Lg	13 05 56.4	
	2.2nm,0.5s							
TNSS	**Tian-Shan**	**3.53**	**269**	*e*P		**Pg**	**13 05 08.4**	**+0.3**
TNSS	1.0nm,0.3s			*e*S		**Sg**	**13 05 56.4**	**+2.6**
	2.2nm,0.5s							
MK31	**Makanchi Array**	**3.61**	**6**	⇑Pn		**Pn**	**13 04 59.9**	**+2.1**
MK31	0.2nm,0.2s,baz=54,slow=33,SNR=15			Pg		**Pg**	**13 05 08.8**	**-1.0**
MK31	0.5nm,0.3s,baz=187,slow=16,SNR=16			⇑Sn		**Sn**	**13 05 40.3**	**-0.8**
	0.6nm,0.3s							
MK31				⇓Lg		Lg	13 05 59.1	
	0.8nm,0.3s,baz=186,slow=32,SNR=6.4							
KTBS	**Karatobe**	**3.73**	**280**	Pg		**Pg**	**13 05 11.3**	**-0.8**
KTBS	3.6nm,0.4s			Lg		Lg	13 06 01.0	
	6.1nm,0.3s							
IZV	**Izvestkoviy**	**3.77**	**269**	Pg		**Pg**	**13 05 12.7**	**-0.1**
IZV	4.4nm,0.4s			Lg		Lg	13 06 03.6	
	16nm,0.5s							
IZV	**Izvestkoviy**	**3.77**	**269**	*e*P		**Pg**	**13 05 12.7**	**-0.1**
IZV	0.2nm,0.0s			*e*S		**Sg**	**13 06 03.6**	**+1.9**
	16nm,0.5s							
MTBS	**Maitube**	**3.90**	**271**	*e*P		**Pg**	**13 05 14.5**	**-0.8**
MTBS	0.7nm,0.1s			*e*S		**Sg**	**13 06 06.4**	**+0.6**
	1.9nm,0.1s							
KST	**Kastek**	**4.25**	**270**	Pg		**Pg**	**13 05 21.6**	**-0.3**
KST	6.2nm,0.5s			Lg		Lg	13 06 18.6	
	5.1nm,0.4s							
KST	**Kastek**	**4.25**	**270**	*e*P		**Pg**	**13 05 21.6**	**-0.3**
KST	6.2nm,0.5s			*e*S		**Sg**	**13 06 18.6**	**+1.7**
	6.1nm,0.3s							
KRBS	**Karabastau**	**4.46**	**278**	Pg		**Pg**	**13 05 24.8**	**-1.2**
KRBS	1.4nm,0.4s			Lg		Lg	13 06 24.3	
	4.4nm,0.5s							

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*IDC **13** 13:04:09.8±1.8, 1.67S×115.84E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=176.9km s-min=17.6km az=59.0*
ISC 13 13:04:15.3±1.8, 1.6S±0.5×116.0E±0.9, h35km, n7, σ0°55/7, mb3.7/7, Borneo

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.56**	**137**	P		**P**	**13 09 41.2**	**+0.1**
	2.3nm,0.8s,baz=314,slow=10,SNR=12							
	2.3nm,0.8s							
ASAR	**Alice Springs**	**27.95**	**143**	P		**P**	**13 10 03.1**	**+0.4**
	0.7nm,0.5s,baz=316,slow=8.2,SNR=11							
	0.7nm,0.5s							
STKA	**Stephens Creek**	**38.58**	**144**	P		**P**	**13 11 34.7**	**-0.4**
	2.6nm,0.6s,baz=324,slow=7.7,SNR=4.7							
	2.6nm,0.6s							
SONM	**Songino Array**	**49.95**	**352**	P		**P**	**13 13 06.2**	**+0.4**
	0.2nm,0.3s,baz=157,slow=7.7,SNR=2.6							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**56.56**	**333**	P		**P**	**13 13 54.6**	**+0.2**
	0.3nm,0.5s,baz=132,slow=7.2,SNR=1.9							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**61.06**	**334**	P		**P**	**13 14 25.4**	**-0.1**
	0.2nm,0.8s,baz=141,slow=6.0,SNR=1.5							
	0.2nm,0.8s							
ZALV	**Zalesovo Beam**	**61.12**	**340**	P		**P**	**13 14 25.0**	**-0.8**
	0.6nm,0.5s,baz=127,slow=3.2,SNR=4.8							
	0.6nm,0.5s							

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*NDI **13** 13:10:53.8±2.9, 26.26N×93.42E, h30km±9km, mb4.5, ML4.3, MW4.3*
*IDC **13** 13:10:53.9±1.8, 26.17N×93.42E, h49km±21km, mb4.1/21, mbtmp4.3/23, ML4.3/3, MS3.0/4, Error ellipse: s-maj=18.8km s-min=14.3km az=103.0*
*NEIC **13** 13:10:54.9±1.3, 26.17N±0.04×93.31E±0.08, h51km±7km, mb4.7/35, Error ellipse: s-maj=10.6km s-min=5.1km az=71.0*
ISC 13 13:10:54.1±0.8, 26.25N±0.04×93.34E±0.03, h47km±8km, n133, σ1°22/156, mb4.5/40, MS2.8/3, 1C, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TEZP	**TEZPUR**	**0.61**	**307**	*e*P		**Pn**	**13 11 07.5**	**+0.9**
TEZP				*e*S		**Sn**	**13 11 17.0**	**+1.4**
TEZP				IAML			13 11 17.8	
	comp=N,10μm,0.3s							
TEZP				IAML			13 11 18.0	
	comp=E,10μm,0.3s							
KOHI	**KOHIMA**	**0.86**	**127**	*e*P		**Pn**	**13 11 09.5**	**-0.6**
KOHI				*e*S		**Sn**	**13 11 20.2**	**-1.6**
KOHI				IAML			13 11 21.8	
	comp=N,8μm,0.4s							
KOHI				IAML			13 11 21.9	
	comp=E,10μm,0.4s							
JORH	**JORHAT**	**0.95**	**58**	*e*P		**Pn**	**13 11 10.5**	**-0.7**
JORH				*e*S		**Sn**	**13 11 22.7**	**-0.9**
JORH				IAML			13 11 29.0	
	comp=E,10μm,0.2s							
JORH				IAML			13 11 29.1	
	comp=N,10μm,0.2s							
ITAN	**ITANAGAR**	**0.96**	**21**	*e*P		**Pn**	**13 11 11.8**	**+0.5**
ITAN				*e*S		**Sn**	**13 11 23.4**	**-0.4**
ITAN				IAML			13 11 25.4	
	comp=E,7μm,0.4s							
ITAN				IAML			13 11 25.9	
	comp=N,10μm,0.2s							
ZIRO	**ZIRO**	**1.35**	**19**	*e*P		**Pn**	**13 11 17.0**	**+0.2**
ZIRO				*e*S		**Sn**	**13 11 33.6**	**-0.2**
ZIRO				IAML			13 11 35.2	
	comp=N,10μm,0.3s							
ZIRO				IAML			13 11 35.6	
	comp=E,10μm,0.4s							
SHL	**Shillong**	**1.48**	**243**			**Pn**	**13 11 18.6**	**+0.1**
SHL	**Shillong**	**1.48**	**243**	*e*P		**Pn**	**13 11 19.2**	**+0.7**
SHL				*e*S		**Sn**	**13 11 37.1**	**+0.3**
GUWA	**GUWAHATI**	**1.48**	**268**	*e*P		**Pn**	**13 11 19.3**	**+0.9**
GUWA				*e*S		**Sn**	**13 11 37.5**	**+0.8**
GUWA				IAML			13 11 38.8	
	comp=E,4μm,0.1s							
GUWA				IAML			13 11 39.1	
	comp=N,4μm,0.1s							
SILR	**SILCHAR**	**1.54**	**199**	*e*P		**Pn**	**13 11 20.4**	**+1.3**
SILR				*e*S		**Sn**	**13 11 40.3**	**+2.4**
TAWA	**Tawang**	**1.88**	**316**	*e*P		**Pn**	**13 11 26.4**	**+2.2**
TAWA				*e*S		**Sn**	**13 11 49.1**	**+2.2**
TAWA				IAML			13 11 51.1	
	comp=E,3μm,0.3s							
TAWA				IAML			13 11 51.5	
	comp=N,3μm,0.3s							
AGT	**Agartala**	**3.02**	**219**	*e*S		**Sn**	**13 12 15.5**	**+1.0**
BELO	**BELONIA**	**3.45**	**210**	*e*P		**Pn**	**13 11 45.9**	**+0.6**
BELO				*e*S		**Sn**	**13 12 25.4**	**+0.5**
BRDH	**Bariadhala**	**3.88**	**204**	P		**Pn**	**13 11 51.4**	**+0.1**
	comp=N,91nm,0.3s,baz=40,slow=11,SNR=6.9							
BRDH				S		**Sn**	**13 12 34.5**	**-1.0**
	comp=N,434nm,0.3s,baz=160,slow=23,SNR=16							
LSA	**Lhasa**	**3.95**	**331**			**Pn**	**13 11 54.8**	**+2.1**
LSA	**Lhasa**	**3.95**	**331**	Pg		**Pn**	**13 11 51.8**	**-0.9**
LSA				Sg		Sn	13 12 19.9	-18
LSA				smax		smax		
	comp=N,93nm,0.7s							
LSA				smax		smax		
	comp=E,66nm,0.7s							
TNCH	**TengChong**	**4.83**	**103**	*e*P		**Pn**	**13 12 06.4**	**+1.9**
TNCH				S		**Sn**	**13 13 01.5**	**+2.3**
TNCH				LR		LR		
	comp=N,620nm,3.0s							
TNCH				LR		LR		
	comp=E,470nm,4.4s							
TNCH				LR		LR		
	comp=Z,240nm,9.8s							
SHBG	**Sahibganj**	**5.22**	**260**	*e*P		**Pn**	**13 12 11.0**	**+1.3**
SHBG				*e*S		**Sn**	**13 13 06.7**	**-1.9**
SHBG				IAML			13 13 08.1	
	comp=N,469nm,0.3s							
SHBG				IAML			13 13 09.1	
	comp=E,408nm,0.3s							
ODAN	**Odare**	**5.37**	**278**	Pn		**Pn**	**13 12 12.3**	**+0.4**
	baz=277,slow=0.0							
ODAN				Sn		**Sn**	**13 13 11.9**	**-0.7**
	baz=277,slow=0.0							
EVN	**Everest**	**6.06**	**288**			**Pn**	**13 12 23.2**	**+1.4**
RAMN	**Ramite**	**6.08**	**278**	Pn		**Pn**	**13 12 22.5**	**+0.8**
	baz=278,slow=0.0							
RAMN				Sn		**Sn**	**13 13 29.3**	**-0.8**
	comp=E,145nm,0.3s,baz=278,slow=0.0							
GUN	**Gumba**	**6.86**	**286**	Pn		**Pn**	**13 12 33.4**	**+0.9**
	baz=285,slow=0.0							
GUN				Sn		**Sn**	**13 13 46.9**	**-2.5**
	comp=E,263nm,0.4s,baz=285,slow=0.0							
BOK	**Bokaro**	**7.19**	**252**	*e*P		**Pn**	**13 12 36.6**	**-0.2**
BOK				*e*S		**Sn**	**13 13 52.3**	**-4.9**
PKI	**Pulchoki**	**7.21**	**282**	Pn		**Pn**	**13 12 37.2**	**0.0**
	baz=282,slow=0.0							
PKI				Sn		**Sn**	**13 13 55.5**	**-2.4**
	comp=E,157nm,0.6s,baz=282,slow=0.0							
PKIN	**Phulchoki**	**7.22**	**282**	Pn		**Pn**	**13 12 37.4**	**+0.1**
	baz=282,slow=0.0							
PKIN				Sn		**Sn**	**13 13 55.8**	**-2.3**
	comp=E,72nm,0.3s,baz=282,slow=0.0							
KKN	**Kakani**	**7.35**	**284**	Pg		**Pn**	**13 12 39.9**	**+0.7**
	baz=283,slow=0.0							
KKN				Sn		**Sn**	**13 13 59.7**	**-1.7**
	baz=283,slow=0.0							
GAYA	**Gaya**	**7.47**	**261**	*e*P		**Pn**	**13 12 41.1**	**+0.6**
GAYA				*e*S		**Sn**	**13 13 59.5**	**-4.4**
GAYA				IAML			13 14 03.4	
	comp=E,228nm,0.2s							
GAYA				IAML			13 14 03.6	
	comp=N,330nm,0.1s							
DMN	**Daman**	**7.48**	**282**	Pn		**Pn**	**13 12 41.5**	**+0.6**
	baz=282,slow=0.0							
DMN				Sn		**Sn**	**13 14 03.2**	**-1.3**
	comp=N,140nm,0.6s,baz=282,slow=0.0							
PZH	**PanZhiHua**	**7.54**	**86**	P		**Pn**	**13 12 41.6**	**0.0**
PZH				S		**Sn**	**13 14 05.5**	**-0.3**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
GKN	**Gorkha**	**7.95**	**285**	Pn		**Pn**	**13 12 47.5**	**+0.2**
	baz=284,slow=0.0							
GKN				Sn		**Sn**	**13 14 13.6**	**-2.4**
	comp=Z,87nm,0.3s,baz=284,slow=0.0							
KNTI	**KHUNTI**	**7.99**	**248**	*e*P		**Pn**	**13 12 48.5**	**+0.8**
KNTI				*ex*		x	13 14 12.4	
KNTI				IAML			13 14 18.9	
	comp=E,114nm,0.3s							
KNTI				IAML			13 14 19.2	
	comp=N,275nm,0.3s							
KMI	**Kunming**	**8.55**	**95**	Pn		**Pn**	**13 12 56.4**	**+0.8**
KMI				smax		smax		
	comp=N,14nm,0.7s							
KMI				smax		smax		
	comp=E,16nm,0.7s							
DANN	**Dangsing**	**8.78**	**286**	Pn		**Pn**	**13 12 57.6**	**-1.2**
	baz=285,slow=0.0							
DANN				Sn		**Sn**	**13 14 32.5**	**-4.0**
	comp=E,187nm,0.6s,baz=285,slow=0.0							
CHTO	**Chiang Mai**	**9.03**	**144**	Pn		**Pn**	**13 13 01.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**9.32**	**145**	P		**Pn**	**13 13 04.3**	**-1.7**
	comp=E,0.3nm,0.3s,baz=328,slow=13,SNR=12							
CMAR				LR		LR	13 17 28.4	
	comp=E,52nm,20.0s,baz=335,slow=43							
	comp=E,1.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**9.32**	**145**	Pn		**Pn**	**13 13 04.5**	**-1.5**
JHSG	**JHARSUGUGA**	**9.82**	**245**	*e*P		**Pn**	**13 13 12.8**	**0.0**
JHSG				*e*S		Sn	13 14 53.0	-8.7
GOMU	**GeErMu**	**10.00**	**7**	P		**Pn**	**13 13 15.3**	**-0.2**
GOMU				pmax		pmax		
	comp=Z,316μm,0.6s							
CD2	**Chengdu**	**10.26**	**61**	P		**Pn**	**13 13 20.0**	**+1.1**
CD2				pmax		pmax		
	comp=Z,30nm,0.8s							
LZDM	**Lanzhou Array**	**13.12**	**40**	P		**Pn**	**13 13 56.9**	**-1.2**
	baz=217,slow=12							
	comp=Z,2.6nm,0.4s							
LZH	**Lanzhou**	**13.30**	**40**	*e*P		**Pn**	**13 13 59.1**	**-1.3**
LZH				pP		P	13 14 09.6	+0.7
LZH				pmax		pmax		
	comp=Z,27nm,1.3s							
BHPL	**Bhopal**	**14.77**	**262**	IAmb		IAmb	13 14 18.6	
	comp=Z,34nm,0.7s							
BHPL				*e*P		**Pn**	**13 14 19.0**	**-1.2**
SMLA	**Simla**	**15.01**	**293**	*e*P		**Pn**	**13 14 22.7**	**-0.4**
XAN	**Xi'an**	**15.54**	**56**	⇑P		**Pn**	**13 14 26.4**	**-3.8**
XAN				pmax		pmax		
	comp=Z,14nm,0.6s							
DHRM	**DHARAMSHALA**	**16.03**	**296**	*e*P		**Pn**	**13 14 33.9**	**-2.6**
DHRM				IAmb		IAmb	13 14 35.1	
	comp=Z,14nm,0.9s							
HYBB	**Hyderabad (bro**	**16.29**	**240**	*e*P		**P**	**13 14 42.0**	**-0.1**
WMQ	**Urumqi**	**18.13**	**347**	*e*P		**Pn**	**13 15 03.6**	**+1.2**
WMQ				LR		LR		
	comp=Z,130nm,22.3s							
NIL	**Nilore**	**18.89**	**298**	P		**P**	**13 15 09.9**	**-0.8**
NIL				IAmb		IAmb	13 15 16.9	
	comp=Z,14nm,0.6s							
WHN	**Wuhan**	**18.96**	**72**	P		**Pn**	**13 15 11.8**	**-0.8**
KSH	**Kashi**	**19.65**	**317**	P		**Pn**	**13 15 21.8**	**+1.0**
KSH				pmax		pmax		
	comp=Z,11nm,0.7s							
BTO	**Baotou**	**19.92**	**40**	*e*P		**P**	**13 15 20.9**	**-1.1**
BTO				S		**S**	**13 19 01.1**	**-2.6**
BTO				pmax		pmax		
	comp=Z,15nm,0.6s							
BTO				pmax		pmax		
	comp=Z,230nm,3.7s							
BTO				LR		LR		
	comp=N,290nm,4.1s							
BTO				LR		LR		
	comp=E,290nm,4.8s							
BTO				LR		LR		
	comp=Z,270nm,5.1s							
TARG	**Taragay, Kyrgy**	**20.06**	**324**			**P**	**13 15 23.7**	**-0.1**
TARG				IAmb		IAmb	13 15 29.0	
	comp=Z,11nm,0.7s							
KDJ	**Kajisay**	**20.68**	**324**	P		**P**	**13 15 31.6**	**+1.4**
KDJ				IAmb		IAmb	13 15 33.7	
	comp=Z,20nm,0.9s							
HHC	**Hu-ho-hao-te**	**20.98**	**41**	*e*P		Pn	13 15 35.3	-1.3
HHC				pmax		pmax		
	comp=Z,28nm,0.8s							
HHC				pmax		pmax		
	comp=Z,76nm,5.3s							
BOOM	**Boomskoye usch**	**21.59**	**323**	P		**P**	**13 15 40.8**	**+0.7**
MKAR	**Makanchi Array**	**22.30**	**340**	P		**P**	**13 15 48.0**	**+0.4**
	comp=Z,9.0nm,0.5s,baz=146,slow=13,SNR=86							
	comp=Z,9.0nm,0.5s							
MKAR	**Makanchi Array**	**22.30**	**340**			**P**	**13 15 47.3**	**-0.2**
PALK	**Pallekele**	**22.38**	**215**	LR		LR	13 27 04.8	
	comp=Z,38nm,18.9s,baz=36,slow=43							
AAK	**Ala-Archa**	**22.48**	**321**	P		**P**	**13 15 52.0**	**+2.4**
	comp=Z,7.3nm,0.8s,baz=117,slow=9.0,SNR=8.2							
AAK				LR		LR	13 25 10.9	
	comp=Z,30nm,20.9s,baz=0.5,slow=38							
	comp=Z,7.3nm,0.8s							
AAK	**Ala-Archa**	**22.48**	**321**	P		**P**	**13 15 50.5**	**+0.9**
KBL	**Kabul**	**22.49**	**297**	P		**P**	**13 15 50.2**	**+0.3**
KBL				IAmb		IAmb	13 15 57.0	
	comp=Z,31nm,1.2s							
ARSB	**Arslanbob**	**22.56**	**317**	P		**P**	**13 15 50.7**	**+0.3**
NJ2	**Nanjing**	**22.99**	**69**	*e*P		**P**	**13 15 55.9**	**+1.1**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
GAR	**Garm**	**23.12**	**309**	P		**P**	**13 15 56.3**	**+0.1**
GAR				IAmb		IAmb	13 15 58.1	
	comp=Z,55nm,1.0s							
CHGR	**Chuyangaron**	**23.79**	**307**	P		**P**	**13 16 01.9**	**-0.6**
CHGR				IAmb		IAmb	13 16 10.8	
	comp=Z,27nm,0.8s							
SONM	**Songino Array**	**23.87**	**22**	P		**P**	**13 16 04.3**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=212,slow=10,SNR=5.1							
RPSI	**Rantau Prapat**	**24.02**	**166**	P		**P**	**13 16 03.8**	**-0.9**
KK31	**Karatay Array**	**25.08**	**318**	P		**P**	**13 16 14.4**	**+0.2**
KKAR	**Karatay Array**	**25.08**	**318**	P		**P**	**13 16 14.8**	**+0.6**
KURBB	**Kurchatov Arra**	**26.86**	**339**	P		**P**	**13 16 30.3**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=153,slow=10,SNR=15							
	comp=Z,3.7nm,0.9s							
KURK	**Kurchatov**	**26.91**	**339**	P		**P**	**13 16 30.7**	**0.0**
ZAA0	**Zalesovo Array**	**28.39**	**349**	P		**P**	**13 16 44.2**	**+0.5**
ZALV	**Zalesovo Beam**	**28.39**	**349**	P		**P**	**13 16 44.3**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=181,slow=9.0,SNR=9.6							
	comp=Z,1.7nm,0.5s							
ZALV	**Zalesovo Beam**	**28.39**	**349**	P		**P**	**13 16 44.5**	**+0.7**
JOW	**Kunigami**	**31.20**	**81**	P		**P**	**13 17 07.0**	**-2.0**
BVAR	**Borovoye Array**	**31.78**	**333**	P		**P**	**13 17 13.7**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=116,slow=11,SNR=2.9							
	comp=Z,0.7nm,0.4s							
JNU	**Nakatsue**	**33.19**	**69**	P		**P**	**13 17 28.2**	**+1.7**
JNU				IAmb		IAmb	13 17 30.6	
	comp=Z,31nm,1.3s							
AB31	**Akbulak array**	**34.56**	**321**	P		**P**	**13 17 38.8**	**+0.7**
AB31				IAmb		IAmb	13 17 40.1	
	comp=Z,8.5nm,1.1s							
ABKAR	**Akbulak array**	**34.56**	**321**	P		**P**	**13 17 38.9**	**+0.8**
ARTI	**Arti**	**39.20**	**330**	P		**P**	**13 18 17.4**	**-0.1**
ARTI				IAmb		IAmb	13 18 19.0	
	comp=Z,7.2nm,0.3s							
NRIK	**Noril'sk**	**43.26**	**357**	P		**P**	**13 18 50.5**	**0.0**
	comp=Z,1.9nm,0.4s,baz=157,slow=7.1,SNR=5.8							
	comp=Z,1.9nm,0.4s							
KBZ	**Khabaz**	**44.15**	**307**	P		**P**	**13 18 58.1**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=104,slow=9.6,SNR=3.9							
	comp=Z,1.3nm,0.8s							
KIV	**Kislovodsk**	**44.32**	**307**	P		**P**	**13 19 00.0**	**+0.4**
	comp=Z,9.9nm,1.1s							
KIRV	**Kirov**	**44.48**	**329**	P		**P**	**13 19 00.7**	**+0.2**
	comp=Z,8.4nm,0.5s,baz=266,slow=21,SNR=3.5							
	comp=Z,8.4nm,0.5s							
BR104	**Keskin Array S**	**50.99**	**301**	P		**P**	**13 19 51.4**	**0.0**
	comp=Z,2.4nm,0.7s							
BR131	**Keskin Array S**	**50.99**	**301**	P		**P**	**13 19 51.5**	**0.0**
BR131				IAmb		IAmb	13 19 53.6	
	comp=Z,3.2nm,0.8s							
BRTR	**Keskin Array B**	**50.99**	**301**	P		**P**	**13 19 52.1**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=111,slow=7.2,SNR=9.2							
	comp=Z,2.0nm,0.7s							
BRTR	**Keskin Array B**	**50.99**	**301**	P		**P**	**13 19 51.8**	**+0.3**
BR106	**Keskin Array S**	**51.01**	**301**	P		**P**	**13 19 51.4**	**-0.2**
	comp=Z,2.6nm,1.3s							
BR105	**Keskin Array S**	**51.01**	**301**	P		**P**	**13 19 51.5**	**-0.1**
	comp=Z,3.9nm,0.9s							
MA2	**Magadan**	**51.34**	**33**	LR		LR	13 45 01.0	
	comp=Z,46nm,18.8s,baz=148,slow=40							
BORA	**Eskisehir**	**53.43**	**301**	P		**P**	**13 20 09.4**

MLR					IAmb	IAmb	13 20 34.0	
	comp=Z,12nm,1.0s							
MLR	**Muntele Rosu**	**56.26**	**309**	P	**P**		**13 20 29.8**	**-0.1**
	comp=Z,12nm,0.7s							
FIA1	**FINESS Array S**	**56.46**	**328**	P	**P**		**13 20 30.9**	**0.0**
FINES	**FINESS Array B**	**56.46**	**328**	P	**P**		**13 20 30.6**	**-0.2**
BURAR	**Bucovina Array**	**56.62**	**311**	P	**P**		**13 20 32.9**	**+0.5**
VOIR		**56.89**	**309**	P	**P**		**13 20 34.2**	**-0.1**
	comp=Z,4.0nm,1.7s							
PABE	**Paberze**	**57.20**	**321**	P	**P**		**13 20 36.1**	**-0.1**
ARCES	**ARCESS Array B**	**57.93**	**337**	P	**P**		**13 20 41.7**	**+0.5**
	comp=Z,4.3nm,0.9s,baz=100,slow=7.5,SNR=10							
	comp=Z,4.3nm,0.9s							
IDI	**Anoyia**	**58.48**	**297**	P	**P**		**13 20 45.5**	**-0.1**
	comp=Z,16nm,1.0s,baz=24,slow=6.2,SNR=2.2							
	comp=Z,16nm,1.0s							
IDI	**Anoyia**	**58.48**	**297**	P	**P**		**13 20 44.9**	**-0.8**
NIE	**Niedzica**	**59.73**	**314**	P	**P**		**13 20 55.1**	**+1.1**
ITM	**Ithomi**	**60.45**	**300**	P	**P**		**13 20 57.4**	**-1.7**
WRA	**Warramunga Arr**	**60.76**	**135**	P	**P**		**13 21 00.7**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=318,slow=7.3,SNR=3.3							
	comp=Z,0.7nm,0.5s							
SPITS	**Spitsbergen Ar**	**61.83**	**347**	P	**P**		**13 21 07.9**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=119,slow=10.0,SNR=6.6							
	comp=Z,3.8nm,0.7s							
VRAC	**Vranov**	**62.14**	**314**	P	**P**		**13 21 11.5**	**+1.2**
	comp=Z,4.0nm,0.4s,baz=87,slow=6.0,SNR=5.8							
	comp=Z,4.0nm,0.4s							
HFS	**Hagfors**	**62.51**	**326**	P	**P**		**13 21 12.7**	**+0.1**
	comp=Z,9.3nm,0.5s,baz=98,slow=11,SNR=15							
	comp=Z,9.3nm,0.5s							
AS31	**Alice Springs**	**63.26**	**138**	P	**P**		**13 21 19.3**	**+1.2**
AS31					IAmb	IAmb	13 21 22.9	
	comp=Z,1.6nm,0.7s							
ASAR	**Alice Springs**	**63.26**	**138**	P	**P**		**13 21 18.4**	**+0.3**
NC602	**NORSAR Array S**	**63.51**	**327**	P	**P**		**13 21 19.7**	**+0.4**
NB2	**NORSAR Subarra**	**63.63**	**327**	P	**P**		**13 21 19.8**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=83,slow=6.5							
NOA	**NORSAR Array B**	**63.63**	**327**	P	**P**		**13 21 19.9**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=83,slow=6.4,SNR=12							
	comp=Z,2.2nm,0.5s							
GEC2	**GERESS Array S**	**64.09**	**314**	P	**P**		**13 21 23.6**	**+0.1**
GEC2					IAmb	IAmb	13 21 24.5	
	comp=Z,4.2nm,0.8s							
GERES	**GERESS Array B**	**64.09**	**314**	P	**P**		**13 21 23.9**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=75,slow=5.7,SNR=17							
	comp=Z,2.3nm,0.5s							
EKA	**Eskdalemuir Ar**	**72.37**	**323**	P	**P**		**13 22 15.0**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=70,slow=5.7,SNR=11							
	comp=Z,1.7nm,0.5s							
TOLK	**Toolik Lake Re**	**74.96**	**20**	P	**P**		**13 22 30.6**	**+0.6**
TOLK					IAmb	IAmb	13 23 05.4	
	comp=Z,7.1nm,1.3s							
ILAR	**Eielson Array**	**78.09**	**22**	P	**P**		**13 22 47.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=310,slow=5.2,SNR=7.1							
	comp=Z,0.7nm,0.7s							
TXAR	**Lajitas Array**	**122.38**	**18**	PKP		**PKPdf**	**13 29 44.2**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=299,slow=1.0,SNR=2.2							

*HEL **13** 13:11:40.0±0.5, 61.10N×29.94E, h0km, ML1.9, Suspected explosion*
*IDC **13** 13:11:42.8±2.8, 61.14N×29.66E, h0km, mbtmp3.4/2, ML2.1/2, Error ellipse: s-maj=26.0km s-min=11.8km az=153.0*
ISC 13 13:11:39.9±1.6, **61.15N**±0.05×**29.79E**±0.07, **h0km**, **n22**, σ1=**69**/32, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUF	**Ruokolahti**	**0.49**	**304**	PG	**Pb**	**13 11 50.8**	**-0.6**
	baz=119						
RUF				SG	**Sb**	**13 11 58.1**	**-1.0**
RUF				smax	smax	13 11 58.7	
	comp=Z,16nm,0.2s						
VJF	**Virojoki**	**1.25**	**242**	PG	**Pb**	**13 12 03.6**	**-0.9**
VJF				smax	smax	13 12 19.1	
	comp=Z,15nm,0.2s						
VJF				SN	**Sn**	**13 12 24.6**	**+2.3**
FIA0	**FINESS Array S**	**1.81**	**281**	PG	**Pb**	**13 12 13.5**	**-0.5**
	baz=101						
FIA0				smax	smax	13 12 36.5	
	comp=Z,9.0nm,0.2s						
FIA0				SG	**Sg**	**13 12 39.2**	**+1.0**
FINES	**FINESS Array B**	**1.81**	**281**	Pg	**Pb**	**13 12 13.9**	**0.0**
	comp=Z,1.6nm,0.3s,baz=105,slow=16,SNR=52						
FINES				Lg	Lg	13 12 38.5	
	comp=Z,0.6nm,0.3s,baz=95,slow=24,SNR=4.3						
FINES				Rg	Rg	13 12 48.0	
	comp=Z,80nm,0.9s,baz=97,slow=33,SNR=24						
JOF	**Joensuu**	**1.91**	**21**	*e*P	**Pn**	**13 12 14.8**	**+1.1**
KAF	**Kangasniemi**	**1.92**	**302**	PG	**Pb**	**13 12 16.0**	**+0.1**
KAF				smax	smax	13 12 39.9	
	comp=Z,14nm,0.2s						
KAF				SG	**Sg**	**13 12 42.2**	**+0.6**
PVF	**Pernaja**	**2.02**	**254**	PG	**Pb**	**13 12 16.6**	**-0.8**
PVF				smax	smax	13 12 41.4	
	comp=Z,10.0nm,0.2s						
PVF				SG	**Sg**	**13 12 45.7**	**+1.0**
SUF	**Sumiainen**	**2.33**	**314**	PG	**Pb**	**13 12 23.1**	**+0.3**
	baz=132						
SUF				smax	smax	13 12 51.5	
	comp=Z,3.1nm,0.2s						
SUF				SG	**Sg**	**13 12 54.5**	**-0.3**
NIF	**Nilsia**	**2.43**	**338**	PG	**Pb**	**13 12 23.9**	**-0.6**
	baz=153						
NIF				smax	smax	13 12 54.1	
	comp=Z,3.9nm,0.2s						
NIF				SG	**Sb**	**13 12 55.5**	**+0.6**
KEF	**Keuruu**	**2.56**	**296**	*e*P	**Pb**	**13 12 25.5**	**-1.1**
KEF	**Keuruu**	**2.56**	**296**	PB	**Pb**	**13 12 25.5**	**-1.1**
KEF				smax	smax	13 12 58.0	
	comp=Z,3.8nm,0.2s						
KEF				SG	**Sb**	**13 12 59.6**	**+1.0**
NUR	**Nurmijarvi**	**2.60**	**258**	PG	**Pb**	**13 12 27.1**	**-0.3**
	baz=74						
NUR				smax	smax	13 12 58.5	
	comp=Z,3.0nm,0.2s						
MEF	**Metsahovi**	**2.81**	**253**	PB	**Pb**	**13 12 30.1**	**-0.9**
MEF				smax	smax	13 13 04.5	
	comp=Z,4.3nm,0.2s						
MEF				SG	**Sg**	**13 13 09.0**	**-1.2**
RMF	**Romuvaara**	**3.08**	**1**	PB	**Pn**	**13 12 32.1**	**+2.4**
RMF				smax	smax	13 13 12.0	
	comp=Z,1.6nm,0.2s						
VAF	**Ylistaro**	**3.84**	**303**	*e*P	**Pn**	**13 12 43.2**	**+2.9**
VAF	**Ylistaro**	**3.84**	**303**	SG	**Sg**	**13 13 43.0**	**-0.4**
RAF	**Rauma**	**3.90**	**272**	*e*P	**Pn**	**13 12 43.7**	**+2.7**
OUF	**Merijarvi**	**3.98**	**326**	PG	**Pb**	**13 12 53.0**	**+2.2**
KU1	**Kurvinen**	**4.43**	**359**	PN	**Pn**	**13 12 49.1**	**+0.8**
I43RU	**DUBNA INFRASON**	**5.87**	**136**	I	I	13 44 40.0	
	baz=324,slow=339,SNR=1.4						
HFS	**Hagfors**	**7.98**	**270**	Pn	**Pn**	**13 13 36.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=78,slow=15,SNR=1.9						
HFS				Sn	**Sn**	**13 15 04.2**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=73,slow=24,SNR=1.5						
HFS				Lg	Lg	13 15 48.2	
	comp=Z,0.4nm,0.3s,baz=82,slow=23,SNR=5.0						
	comp=Z,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**8.60**	**350**	Pn	**Pn**	**13 13 46.5**	**+1.0**
	baz=167,slow=11,SNR=5.3						
ARCES				Sn	**Sn**	**13 15 18.4**	**-4.8**
	comp=Z,0.1nm,0.3s,baz=165,slow=25,SNR=1.5						
ARCES				Lg	Lg	13 16 05.9	
	comp=Z,0.1nm,0.3s,baz=162,slow=29,SNR=1.9						
	comp=Z,2.1nm,0.9s						

*IDC **13** 13:12:20.1±3.8, 6.51S×128.32E, h315km±38km, mb3.1/2, mbtmp3.9/6, Error ellipse: s-maj=46.7km s-min=13.7km az=65.0*
ISC 13 13:12:18.3±1.4, **6.4S**±0.1×**128.5E**±0.1, **h300km**, **n6**, σ1=**06**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.05**	**231**	P	**Pn**	**13 13 48.5**	**+0.2**
	25nm,0.4s,baz=66,slow=4.9,SNR=4.6						
BATI				S	**S**	**13 14 59.6**	**-1.2**
	16nm,0.4s,baz=59,slow=23,SNR=2.1						
FITZ	**Fitzroy Crossi**	**11.93**	**193**	P	**Pn**	**13 15 01.6**	**+1.5**
	1.5nm,0.3s,baz=19,slow=9.1,SNR=26						
FITZ				S	**S**	**13 17 13.6**	**+0.7**
	1.3nm,0.7s,baz=190,slow=21,SNR=1.2						
WRA	**Warramunga Arr**	**14.61**	**157**	P	**P**	**13 15 29.9**	**-1.4**
	0.6nm,0.6s,baz=335,slow=13,SNR=8.5						
WRA				S	**S**	**13 18 10.3**	**-1.1**
	0.5nm,0.7s,baz=337,slow=18,SNR=2.7						
ASAR	**Alice Springs**	**17.93**	**164**	P	**P**	**13 16 08.1**	**+0.7**
	1.7nm,0.4s,baz=343,slow=11,SNR=46						
ASAR				S	**S**	**13 19 17.4**	**-0.1**
	0.9nm,0.7s,baz=347,slow=20,SNR=6.7						
MKAR	**Makanchi Array**	**66.90**	**327**	P	**P**	**13 22 39.0**	**+0.2**
	0.3nm,0.3s,baz=104,slow=8.1,SNR=4.0						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**71.22**	**329**	P	**P**	**13 23 05.4**	**+0.4**
	0.3nm,0.5s,baz=126,slow=5.1,SNR=6.3						
	0.3nm,0.5s						

*IDC **13** 13:14:21.3±0.9, 12.48S×166.87E, h212km±7km, mb3.8/18, mbtmp4.3/19, Error ellipse: s-maj=17.0km s-min=10.5km az=135.0*
*NEIC **13** 13:14:21.5±1.3, 12.43S±0.1×167.0E±0.1, h214km±8km, mb4.6/33, Error ellipse: s-maj=20.5km s-min=14.5km az=96.0*
*NOU **13** 13:14:22.0, 12.36S×166.89E, h208km, mb4.5/10, Santa Cruz Islands*
ISC 13 13:14:22.2±0.4, **12.43S**±0.06×**166.90E**±0.09, **h220**km, **n123**, σ0=**96**/123, **mb4.4**/38, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.01**	**174**		**Pn**	**13 15 12.8**	**-0.2**
SANVU	**Saraoutou**	**3.01**	**174**	P	**Pn**	**13 15 13.1**	**+0.1**
MARNC	**Mare, Loyalty**	**9.06**	**173**	Pn	**Pn**	**13 16 28.2**	**-0.9**
DZM	**Mont Dzumac**	**9.59**	**183**	P	**Pn**	**13 16 38.4**	**+2.4**
	2.7nm,0.2s,baz=302,slow=17,SNR=44						
DZM				S	**S**	**13 18 24.5**	**+0.6**
	3.6nm,0.4s,baz=134,slow=24,SNR=5.7						
ONTNC	**Ouen Toro**	**9.83**	**182**	Pn	**Pn**	**13 16 37.8**	**-1.1**
AUNRC	**North Rockhamp**	**18.96**	**233**	P	**P**	**13 18 29.0**	**+1.8**
PMG	**Port Moresby**	**19.61**	**277**	P	**P**	**13 18 34.0**	**-0.2**
	12nm,0.7s,baz=72,slow=6.1,SNR=4.1						
EIDS	**Eidsvold**	**19.71**	**227**	P	**P**	**13 18 36.1**	**+1.0**
EIDS	**Eidsvold**	**19.71**	**227**	P	**P**	**13 18 36.4**	**+1.3**
TV1H	**Townsville Har**	**20.48**	**248**	P	**P**	**13 18 44.2**	**+0.7**
CTA	**Charters Tower**	**21.21**	**246**	P	**P**	**13 18 51.3**	**+0.1**
CTAO	**Charters Tower**	**21.21**	**246**	P	**P**	**13 18 50.8**	**-0.3**
CTAO				IAmb	IAmb	13 18 52.2	
	comp=Z,18nm,0.8s						
CTAO	**Charters Tower**	**21.21**	**246**	P	**P**	**13 18 51.5**	**+0.3**
MANU	**Manus Island**	**21.93**	**297**	P	**P**	**13 18 57.6**	**-0.6**
MTSU	**Mount Surprise**	**22.50**	**253**	P	**P**	**13 19 05.0**	**+1.5**
COEN	**Coen**	**23.14**	**264**		**P**	**13 19 09.7**	**+0.3**
COEN				IAmb	IAmb	13 19 11.2	
	comp=Z,15nm,0.8s						
COEN	**Coen**	**23.14**	**264**	P	**P**	**13 19 10.4**	**+1.1**
AULRC	**Lightning Ridg**	**24.39**	**223**	P	**P**	**13 19 21.6**	**+1.1**
TOZ	**Tahuroa Road**	**26.34**	**164**	P	**P**	**13 19 39.5**	**+1.6**
HIZ	**Hauiti**	**26.92**	**166**	P	**P**	**13 19 44.5**	**+1.3**
MXZ	**Matakaoa Point**	**27.03**	**160**	P	**P**	**13 19 44.1**	**0.0**
HAZ	**Te Kaha**	**27.03**	**161**	P	**P**	**13 19 44.9**	**+0.9**
URZ	**Urewera**	**27.28**	**162**	P	**P**	**13 19 47.9**	**+1.6**
URZ	**Urewera**	**27.28**	**162**	P	**P**	**13 19 45.6**	**-0.8**
MWZ	**Matawai**	**27.48**	**162**	P	**P**	**13 19 47.9**	**-0.2**
RTZ	**Ruatahuna**	**27.58**	**163**	P	**P**	**13 19 48.7**	**-0.3**
MRHZ	**Matea Rd**	**27.62**	**164**	P	**P**	**13 19 50.1**	**+0.7**
BKZ	**Black Stump Fm**	**27.95**	**164**	P	**P**	**13 19 52.5**	**+0.1**
KNZ	**Kokohu**	**28.16**	**162**	P	**P**	**13 19 53.5**	**-0.6**
ARHZ	**Aropaoanui**	**28.18**	**163**	P	**P**	**13 19 54.5**	**+0.2**
KRHZ	**Kereru**	**28.37**	**164**	P	**P**	**13 19 55.5**	**-0.5**
PNHZ	**Pukenui**	**28.58**	**165**	P	**P**	**13 19 58.6**	**+0.8**
TSZ	**Takapari Road**	**28.66**	**165**	P	**P**	**13 19 59.8**	**+0.3**
PXZ	**Putaruru**	**28.86**	**164**	P	**P**	**13 20 00.0**	**+0.2**
DVHZ	**Dannevirke**	**28.93**	**165**	P	**P**	**13 20 00.7**	**-0.3**
MRZ	**Mangatainoka R**	**29.14**	**166**	P	**P**	**13 20 03.7**	**+0.9**
BFZ	**Birch Farm**	**29.32**	**165**	P	**P**	**13 20 03.8**	**-0.5**
THZ	**Tophouse**	**29.69**	**171**	P	**P**	**13 20 08.0**	**+0.3**
STKA	**Stephens Creek**	**30.26**	**226**	P	**P**	**13 20 13.1**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=42,slow=10,SNR=9.3						
	comp=Z,2.7nm,0.5s						
KHZ	**Kahutara**	**30.43**	**170**	P	**P**	**13 20 13.4**	**-0.6**
LTZ	**Lake Taylor**	**30.59**	**172**	P	**P**	**13 20 16.1**	**+0.5**
GVZ	**Greta Valley S**	**30.88**	**171**	P	**P**	**13 20 17.9**	**-0.2**
OXZ	**Oxford**	**31.10**	**173**	P	**P**	**13 20 20.5**	**+0.5**
RPZ	**Rata Peaks**	**31.38**	**174**	P	**P**	**13 20 23.4**	**+1.1**
MQZ	**McQueen's Vall**	**31.55**	**172**	P	**P**	**13 20 24.2**	**+0.3**
LBZ	**Lake Ianthmore**	**31.96**	**176**	P	**P**	**13 20 28.0**	**+0.5**
WB0	**Warramunga Arr**	**32.03**	**253**	P	**P**	**13 20 27.5**	**-0.9**
WB0				IAmb	IAmb	13 20 28.3	
	comp=Z,6.5nm,0.8s						
TMZ	**Timaru**	**32.03**	**174**	P	**P**	**13 20 26.8**	**-1.3**
WRA	**Warramunga Arr**	**32.10**	**252**	P	**P**	**13 20 28.1**	**-1.0**
	comp=Z,2.3nm,0.4s,baz=85,slow=8.9,SNR=18						
	comp=Z,2.3nm,0.4s						
WRA	**Warramunga Arr**	**32.10**	**252**	P	**P**	**13 20 27.2**	**-1.8**
ODZ	**Otahua Downs**	**32.66**	**175**	P	**P**	**13 20 33.7**	**+0.2**
AS31	**Alice Springs**	**33.21**	**246**		**P**	**13 20 37.1**	**-1.6**
AS31				IAmb	IAmb	13 20 38.6	
	comp=Z,3.1nm,0.3s						
ASAR	**Alice Springs**	**33.22**	**246**	P	**P**	**13 20 38.0**	**-0.8**
	comp=Z,2.9nm,0.4s,baz=71,slow=9.8,SNR=46						
ASAR				pP	**pP**	**13 21 21.9**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=73,slow=9.7,SNR=9.8						
ASAR				S	**S**	**13 25 39.6**	**-2.7**
	comp=Z,0.8nm,1.0s,baz=75,slow=14,SNR=4.5						
	comp=Z,2.9nm,0.4s						
ASAR	**Alice Springs**	**33.22**	**246**	P	**P**	**13 20 36.9**	**-1.9**
BBOO	**Buckleboo**	**34.74**	**229**	P	**P**	**13 20 51.3**	**-0.4**
BBOO				IAmb	IAmb	13 21 18.5	
	comp=Z,31nm,1.4s						
KNRA	**Kununurra**	**37.10**	**260**	P	**P**	**13 21 11.8**	**-0.1**
KNRA				IAmb	IAmb	13 21 31.7	
	comp=Z,11nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.13**	**257**	P	**P**	**13 21 36.7**	**-0.4**
	comp=Z,3.0nm,0.3s,baz=71,slow=7.8,SNR=18						
	comp=Z,3.0nm,0.3s						
FORT	**Forrest**	**40.20**	**237**	P	**P**	**13 21 37.3**	**-0.2**
MBWA	**Marble Bar**	**45.84**	**253**	P	**P**	**13 22 22.6**	**-0.1**
MBWA				IAmb	IAmb	13 22 32.3	
	comp=Z,19nm,1.2s						
JGF	**Kuroka**	**55.35**	**331**	P	**P**	**13 23 32.7**	**-0.8**
JGF				IAmb	IAmb	13 23 36.2	
	comp=Z,18nm,1.2s						
JMN	**Monobe**	**55.64**	**327**	P	**P**	**13 23 34.4**	**-1.2**
MJAR	**Matsushiro Arr**	**55.72**	**332**	P	**P**	**13 23 35.3**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=164,slow=8.1,SNR=6.0						
	comp=Z,2.6nm,0.8s						
MJAR	**Matsushiro Art**	**55.72**	**332**		**P**	**13 23 35.6**	**-0.4**
JKA	**Kamikawa-asahi**	**60.47**	**340**	P	**P**	**13 24 08.9**	**+0.1**
KSRS	**Korea Array**	**61.65**	**325**	P	**P**	**13 24 17.0**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=144,slow=7.4,SNR=4.2						
	comp=Z,1.5nm,0.7s						
NJ2	**Nanjing**	**63.79**	**315**	*e*P	**P**	**13 24 31.9**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**64.69**	**333**	P	**P**	**13 24 37.8**	**+1.2**
	comp=Z,2.4nm,0.7s,baz=145,slow=5.5,SNR=4.7						
	comp=Z,2.4nm,0.7s						
VNDA	**Vanda**	**65.13**	**181**	P	**P**	**13 24 39.2**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=353,slow=7.4,SNR=9.9						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**65.13**	**181**	P	**P**	**13 24 39.5**	**+0.5**
SBA	**Scott Base**	**65.42**	**180**		**P**	**13 24 41.8**	**+0.9**
CASY	**Casey**	**65.51**	**202**	P	**P**	**13 24 41.1**	**-0.5**
PETK	**Petropavlovsk-**	**65.75**	**354**	P	**P**	**13 24 43.7**	**+0.4**
	comp=Z,6.1nm,1.0s,baz=121,slow=7.6,SNR=6.9						
	comp=Z,6.1nm,1.0s						
KULM	**Kulim**	**68.15**	**281**	P	**P**	**13 24 59.3**	**+0.1**
HHC	**Hu-ho-hao-te**	**73.61**	**319**	*e*P	**P**	**13 25 34.8**	**+3.1**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
CMAR	**Chiang Mai Arr**	**73.70**	**294**	P	**P**	**13 25 33.2**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=123,slow=5.0,SNR=13						
	comp=Z,1.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.70**	**294**	P	**P**	**13 25 32.6**	**+0.1**
PZH	**PanZhiHua**	**74.17**	**302**	P	**P**	**13 25 35.5**	**+0.3**
OHAK	**Old Harbor**	**76.78**	**21**	P	**P**	**13 25 48.5**	**-0.7**
Q19K	**Cape Douglas,**	**77.98**	**20**	P	**P**	**13 25 55.6**	**-0.3**
M16K	**Timber Creek**	**78.06**	**16**	P	**P**	**13 25 56.7**	**+0.5**
M16K				IAmb	IAmb	13 25 57.7	
	comp=Z,27nm,1.1s						
L16K	**Owhat River**	**78.50**	**16**	P	**P**	**13 25 58.1**	**-0.4**
L16K				IAmb	IAmb	13 26 13.3	
	comp=Z,14nm,1.2s						
CNPM	**China Poot**	**79.24**	**20**	P	**P**	**13 26 02.6**	**-0.1**
BILL	**Bilibino**	**80.26**	**360**		**P**	**13 26 07.9**	**-0.1**
BILL				IAmb	IAmb	13 26 09.5	
	comp=Z,22nm,1.2s						
SONM	**Songino Array**	**80.45**	**324**	P	**P**	**13 26 09.9**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=142,slow=6.3,SNR=6.7						
	comp=Z,0.5nm,0.4s						
GTA	**Gaotai**	**80.83**	**314**	*e*P	**P**	**13 26 13.1**	**+1.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PWL	**Port Wells**	**81.21**	**20**	P	**P**	**13 26 12.6**	**-0.5**
PWL				IAmb	IAmb	13 26 44.6	
	comp=Z,23nm,1.4s						
PPLA	**Purkeypile**	**81.49**	**18**	P	**P**	**13 26 14.0**	**-0.8**
PPLA				IAmb	IAmb	13 26 40.9	
	comp=Z,28nm,1.5s						
N25K	**Chitina, Valde**	**83.02**	**21**	P	**P**	**13 26 22.3**	**-0.3**
N25K				IAmb	IAmb	13 26 23.7	
	comp=Z,18nm,1.1s						
MAW	**Mawson**	**83.86**	**202**	P	**P**	**13 26 26.3**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=42,slow=3.6,SNR=3.6						
	comp=Z,2.6nm,0.9s						
O28M	**Mount Upton**	**84.11**	**23**	P	**P**	**13 26 27.3**	**-1.1**
O28M				IAmb	IAmb	13 26 29.2	
	comp=Z,9.2nm,0.7s						
ILAR	**Eielson Array**	**84.47**	**18**	P	**P**	**13 26 29.0**	**-0.8**
	comp=Z,10.0nm,0.6s,baz=247,slow=5.1,SNR=116						
	comp=Z,10.0nm,0.6s						
J25K	**Salcha River,**	**84.83**	**19**	P	**P**	**13 26 30.9**	**-0.8**
J25K				IAmb	IAmb	13 26 32.4	
	comp=Z,12nm,0.5s						
G24K	**Hadweenzic Riv**	**85.67**	**17**	P	**P**	**13 26 35.4**	**-0.4**
G24K				IAmb	IAmb	13 26 37.5	
	comp=Z,18nm,1.1s						
I26K	**Coal Creek Min**	**85.99**	**19**	P	**P**	**13 26 37.0**	**-0.3**
NVAR	**Mina Array Bea**	**86.06**	**49**	P	**P**	**13 26 38.9**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=227,slow=8.1,SNR=6.5						
NVAR				pP	**pP**	**13 27 29.9**	**-1.7**
	comp=Z,0.2nm,0.6s,baz=238,slow=6.4,SNR=1.7						
	comp=Z,1.0nm,0.9s						
PDAR	**Pinedale Array**	**93.66**	**47**	P	**P**	**13 27 13.1**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=266,slow=2.1,SNR=2.9						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**95.30**	**317**	P	**P**	**13 27 21.3**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=89,slow=6.8,SNR=11						
MKAR				pP	**pP**	**13 28 12.0**	**-2.6**
	comp=Z,0.1nm,0.4s,baz=135,slow=40,SNR=2.0						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**95.33**	**324**	P	**P**	**13 27 19.7**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=99,slow=4.7,SNR=3.9						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**95.50**	**61**	P	**P**	**13 27 21.7**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=221,slow=6.7,SNR=6.8						
	comp=Z,0.4nm,0.8s						
H03S2	**Juan Fernandez**	**102.38**	**129**	T	T	15 23 33.6	
	baz=247,slow=74,SNR=180						
H03S1	**Juan Fernandez**	**102.39**	**129**	T	T	15 23 37.4	
	baz=247,slow=74,SNR=198						
H03S3	**Juan Fernandez**	**102.40**	**129**	T	T	15 23 32.9	
	baz=247,slow=74,SNR=179						
H03N2	**Juan Fernandez**	**102.54**	**129**	T	T	15 23 39.1	
	baz=248,slow=70,SNR=54						
H03N3	**Juan Fernandez**	**102.54**	**129**	T	T	15 23 38.2	
	baz=248,slow=70,SNR=36						
H03N1	**Juan Fernandez**	**102.55**	**129**	T	T	15 23 43.9	
	baz=248,slow=70,SNR=49						
ARCES	**ARCESS Array B**	**117.95**	**346**	PKP	**PKPdf**	**13 32 41.7**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=64,slow=2.8,SNR=7.7						
FINES	**FINESS Array B**	**123.47**	**339**	PKP	**PKPdf**	**13 32 52.0**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=338,slow=1.5,SNR=5.8						
NOA	**NORSAR Array B**	**128.33**	**345**	PKP	**PKPdf**	**13 33 02.2**	**0.0**
	comp=Z,0.3nm,0.5s,baz=28,slow=2.1,SNR=3.6						
EKA	**Eskdalemuir Ar**	**136.50**	**352**	PKP	**PKPdf**	**13 33 17.1**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=18,slow=2.9,SNR=3.4						
KEST	**Kesra**	**149.20**	**323**	PKPbc	**PKPbc**	**13 33 45.7**	**+0.5**
	comp=Z,7.2nm,0.6s,baz=349,slow=1.3,SNR=9

ESKU	**Eskilstuna**	**3.25**	**300**	P	**Pn**	**13 19 11.1**	**+0.8**
ESKU	**Eskilstuna**	**3.25**	**300**	P	**Pn**	**13 19 11.1**	**+0.8**
BACU	**Backbrunna**	**3.28**	**313**	P	**Pn**	**13 19 11.6**	**+0.9**
BACU	**Backbrunna**	**3.28**	**313**	P	**Pn**	**13 19 11.6**	**+0.9**
RAF	**Rauma**	**3.33**	**359**	*e*P	**Pn**	**13 19 12.0**	**+0.6**
IIGN	**Ignalina**	**3.38**	**132**	*e*P	**Pn**	**13 19 09.2**	**-2.9**
LNKU	**Linkoeping**	**3.42**	**281**	P	**Pn**	**13 19 13.3**	**+0.7**
LNKU	**Linkoeping**	**3.42**	**281**	P	**Pn**	**13 19 13.3**	**+0.7**
OSTU	**Oestervaala**	**3.52**	**318**	P	**Pn**	**13 19 14.3**	**+0.3**
OSTU	**Oestervaala**	**3.52**	**318**	P	**Pn**	**13 19 14.3**	**+0.3**
FINES	**FINESS Array B**	**4.32**	**28**	Pn	**Pn**	**13 19 25.0**	**0.0**
	comp=E,0.2nm,0.3s,baz=207,slow=12,SNR=15						
FINES				Pg	**Pb**	**13 19 34.6**	**-0.2**
	comp=E,0.8nm,0.3s,baz=206,slow=14,SNR=5.3						
	comp=E,1.9nm,0.2s						
DEL	**Delary**	**4.53**	**258**	*i* P	**Pn**	**13 19 27.3**	**-0.6**
DEL				*i* S	**Sn**	**13 20 18.7**	**-2.5**
BSD	**Bornholm Skovb**	**4.65**	**239**	*i* P	**Pn**	**13 19 28.3**	**-1.2**
BSD				*i* S	**Sn**	**13 20 21.7**	**-2.3**
KEF	**Keuruu**	**4.73**	**17**	*e*P	**Pn**	**13 19 30.9**	**+0.3**
BORU	**Boraas**	**4.88**	**273**	*i* P	**Pn**	**13 19 33.7**	**+1.0**
HFS	**Hagfors**	**4.88**	**303**	Pn	**Pn**	**13 19 33.0**	**+0.3**
	comp=E,0.6nm,0.3s,baz=113,slow=15,SNR=24						
HFS				Sn	**Sn**	**13 20 30.1**	**+0.3**
	comp=E,0.5nm,0.3s,baz=116,slow=27,SNR=6.0						
HFS				Lg	Lg	13 20 50.2	
	comp=E,1.0nm,0.3s,baz=112,slow=31,SNR=7.8						
	comp=E,1.5nm,0.3s						
FABU	**Falkenberg**	**5.00**	**266**	*i* P	**Pn**	**13 19 36.2**	**+1.9**
BJUU	**Bjuv**	**5.11**	**255**	*i* P	**Pn**	**13 19 35.4**	**-0.4**
ONAU	**Onsala**	**5.36**	**271**	*i* P	**Pn**	**13 19 40.0**	**+0.8**
VAF	**Ylistaro**	**5.37**	**4**	*e*P	**Pn**	**13 19 40.2**	**+0.8**
TJOU	**Tjoern**	**5.47**	**278**	*i* P	**Pn**	**13 19 41.3**	**+0.5**
NOA	**NORSAR Array B**	**6.38**	**306**	Pn	**Pn**	**13 19 52.3**	**-1.1**
	baz=124,slow=12,SNR=1.4						
NOA				Lg	Lg	13 21 39.9	
	comp=E,0.1nm,0.3s,baz=112,slow=8.1,SNR=4.5						
	comp=E,0.4nm,0.7s						
KWP	**Kalwaria Pacla**	**8.11**	**176**	P	**Pb**	**13 20 43.0**	**+3.7**
	comp=E,21nm,1.0s						
ARCES	**ARCESS Array B**	**11.98**	**6**	Pn	**Pn**	**13 21 07.0**	**-2.9**
	comp=E,0.1nm,0.3s,baz=197,slow=12,SNR=1.4						
	comp=E,2.4nm,1.0s						

*IDC **13** 13:19:28.1±0.9, 19°.18S×167°.51E, h0km, mb4.2/10, mbtmp4.2/11, ML4.3/1, MS3.2/7, Error ellipse: s-maj=29.4km s-min=21.5km az=131.0*
ISC 13 13:19:29.8±0.8, **19°.3S**±0°.1×**167°.5E**±0°.2, **h10**km, **n18,**
σ1s16/14, mb4.2/10, MS3.3/6, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.94**	**199**	Pn	**Pn**	**13 20 16.1**	**-0.5**
	41nm,0.3s,baz=73,slow=7.9,SNR=265						
DZM				Sn	**Sn**	**13 20 51.0**	**-1.1**
	84nm,0.3s						
HNR	**Honiara**	**12.22**	**322**	LR	LR	13 25 49.5	
	comp=Z,54nm,21.6s,baz=174,slow=31						
PMG	**Port Moresby**	**21.99**	**294**	LR	LR	13 31 06.4	
	comp=Z,102nm,18.6s,baz=156,slow=32						
STKA	**Stephens Creek**	**26.43**	**237**	P	**P**	**13 25 07.4**	**+0.5**
	2.4nm,0.7s,baz=3.1,slow=10,SNR=4.0						
STKA				LR	LR	13 33 55.2	
	comp=Z,115nm,21.3s,baz=31,slow=33						
	2.4nm,0.7s						
RAR	**Rarotonga**	**30.74**	**99**	LR	LR	13 35 39.4	
	comp=Z,19nm,20.0s,baz=289,slow=32						
WRA	**Warramunga Arr**	**31.21**	**263**	P	**P**	**13 25 49.1**	**-0.5**
	0.7nm,0.9s,baz=84,slow=6.1,SNR=2.0						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**31.51**	**256**	P	**P**	**13 25 52.8**	**+0.5**
	2.0nm,0.6s,baz=82,slow=9.2,SNR=10						
ASAR				LR	LR	13 38 08.7	
	comp=Z,79nm,19.7s,baz=104,slow=36						
	2.0nm,0.6s						
GUMO	**Guam**	**39.54**	**324**	LR	LR	13 39 43.1	
	comp=Z,37nm,21.9s,baz=46,slow=31						
FITZ	**Fitzroy Crossi**	**39.59**	**265**	P	**P**	**13 27 01.8**	**+0.1**
	4.5nm,0.8s,baz=129,slow=8.0,SNR=5.7						
	4.5nm,0.8s						
BATI	**Baumata**	**43.23**	**276**	LR	LR	13 44 16.6	
	comp=Z,51nm,21.7s,baz=132,slow=34						
QSPA	**South Pole Qui**	**70.77**	**180**	P	**P**	**13 30 48.8**	**+2.6**
	1.4nm,0.9s,baz=352,slow=2.0,SNR=3.5						
	1.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**77.02**	**295**	P	**P**	**13 31 23.6**	**+0.1**
	1.0nm,0.3s,baz=143,slow=3.9,SNR=6.5						
	1.0nm,0.3s						
SONM	**Songino Array**	**86.28**	**324**	P	**P**	**13 32 11.9**	**+0.1**
	2.2nm,0.8s,baz=143,slow=5.7,SNR=10						
	2.2nm,0.8s						
SNAA	**Sanae**	**89.03**	**183**	P	**P**	**13 32 23.8**	**-0.9**
	1.3nm,0.6s,baz=162,slow=19,SNR=3.7						
	1.3nm,0.6s						
NVAR	**Mina Array Bea**	**90.08**	**49**	P	**P**	**13 32 30.5**	**+0.1**
	0.8nm,0.8s,baz=228,slow=8.5,SNR=7.1						
	0.8nm,0.8s						
ILAR	**Eielson Array**	**90.78**	**18**	P	**P**	**13 32 31.1**	**-1.7**
	1.1nm,0.8s,baz=234,slow=5.4,SNR=9.5						
	1.1nm,0.8s						
ARCES	**ARCESS Array B**	**124.69**	**345**	PKP	**PKPdf**	**13 38 28.2**	**-0.8**
	6.0nm,1.0s,baz=40,slow=2.2,SNR=4.6						
DAVOX	**Davos/Dischmat**	**147.00**	**331**	PKPbc	**PKPdf**	**13 39 12.3**	**+1.2**
	3.1nm,0.6s,baz=267,slow=4.1,SNR=4.7						

HEL 13 13:23:46.9±0.2, **61°.91N**×**25°.30E, h0**km, **ML1.3,**
Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF	**Keuruu**	**0.33**	**322**	*e*P	Pg	13 23 51.7	-1.4
KEF	**Keuruu**	**0.33**	**322**	PG	Pg	13 23 52.6	-0.6
KEF				SG	Sg	13 23 57.0	-0.4
KAF	**Kangasniemi**	**0.52**	**66**	PG	Pg	13 23 55.7	-1.1
KAF				SG	Sg	13 24 03.1	-0.4
KAF				smax	smax	13 24 03.5	
	comp=Z,3.8nm,0.2s						
FIA0	**FINESS Array S**	**0.60**	**141**	PG	Pg	13 23 57.1	-1.2
	baz=319						
FIA0				smax	smax	13 24 05.8	
	comp=Z,1.9nm,0.2s						
FIA0				SG	Sg	13 24 06.9	+0.8
SUF	**Sumiainen**	**0.90**	**26**	PB	Pg	13 24 03.3	-0.9
SUF				smax	smax	13 24 14.7	
	comp=Z,1.3nm,0.2s						
SUF				SB	Sg	13 24 16.2	+0.3
KPF	**Kankaanpaa**	**1.53**	**269**	PG	Pn	13 24 14.4	-1.1
KPF				smax	smax	13 24 32.8	
	comp=Z,1.3nm,0.2s						
KPF				SG	Sn	13 24 34.5	-1.5
VAF	**Ylistaro**	**1.67**	**314**	*e*P	Pn	13 24 17.1	-0.2
VAF	**Ylistaro**	**1.67**	**314**	PG	Pn	13 24 17.1	-0.2
	baz=129						
VAF				smax	smax	13 24 36.9	
	comp=Z,1.2nm,0.2s						
VAF				SN	Sb	13 24 39.8	-0.2
MEF	**Metsahovi**	**1.76**	**195**	smax	smax	13 24 39.3	
	comp=Z,1.3nm,0.2s						
MEF				SG	Sb	13 24 42.5	+0.1
VJF	**Virojoki**	**1.76**	**141**	smax	smax	13 24 39.3	
	comp=Z,1.8nm,0.2s						
VJF				SN	Sn	13 24 42.0	+0.4
RUF	**Ruokolahti**	**1.81**	**104**	PG	Pb	13 24 20.1	-0.7
RUF				smax	smax	13 24 40.8	
	comp=Z,1.8nm,0.2s						
RUF				SG	Sn	13 24 42.2	-0.6
NIF	**Nilsia**	**1.88**	**37**	PG	Pn	13 24 20.6	+0.3
NIF				smax	smax	13 24 42.9	
	comp=Z,1.4nm,0.2s						
RAF	**Rauma**	**1.92**	**244**	*e*P	Sg	13 24 47.2	-1.1
TVF	**Tvarminne**	**2.30**	**207**	smax	smax	13 24 55.0	
	comp=Z,10nm,0.2s						
OUF	**Merijarvi**	**2.48**	**354**	smax	smax	13 24 60.0	
	comp=Z,0.8nm,0.2s						
OUF				SG	Sb	13 25 02.6	-0.6
JOF	**Joensuu**	**2.98**	**67**	SG	Sb	13 25 15.4	-2.2

*UPP **13** 13:24:16.0±2.7, 57°.57N×22°.27E, h0km, ML2.6, Presumed earthquake*
*DNK **13** 13:24:17.2±2.4, 57°.58N×22°.02E, h0km±19km, ML3.0*
*EST **13** 13:24:19.0±0.2, 57°.75N×21°.92E, h0km, ML2.4(HEL), Explosion*

*IDC **13** 13:24:20.6±2.4, 57°.83N×21°.86E, h0km, mbtmp3.2/4, ML2.3/3, Error ellipse: s-maj=24.3km s-min=9.1km az=167.0*
*HEL **13** 13:24:20.4±0.4, 57°.83N×22°.00E, h0km, ML2.3, Explosion*
*LVSN **13** 13:24:22.4±3.5, 57°.70N×22°.15E, h0km±29km, ML2.9*
ISC 13 13:24:17.6±0.8, **57.74N**±0°.03×**21°.84E**±0°.02, **h0**km, **n66,**
σ1s58/92, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.26**	**114**	*e*P	**Pg**	**13 24 22.6**	**0.0**
SLIT	**Slitere, Latvi**	**0.26**	**114**	*e*P	**Pg**	**13 24 22.8**	**+0.2**
SLIT				*e*S	**Sg**	**13 24 25.7**	**-0.3**
SLIT				AML	AML	13 24 39.7	
	comp=Z,9μm,0.6s						
SLIT				AML	AML	13 24 40.2	
	comp=E,16μm,0.6s						
SLIT				AML	AML	13 24 41.1	
	comp=N,11μm,0.6s						
SLIT	**Slitere, Latvi**	**0.26**	**114**	*e*P	**Pg**	**13 24 22.9**	**+0.2**
SLIT				*e*S	**Sg**	**13 24 26.3**	**+0.3**
EE06	**Soera, Palade,**	**1.35**	**23**	*e*PB	**Pg**	**13 24 42.9**	**-0.5**
EE06				*e*SN	**Sn**	**13 25 02.9**	**+0.7**
EE01	**Perakula, Nova**	**1.75**	**32**	*e*P	**Pn**	**13 24 49.7**	**+0.5**
EE01				*e*PN	**Pb**	**13 24 50.5**	**0.0**
EE01				*e*SN	**Sn**	**13 25 12.2**	**+0.2**
EE08	**Sarghaua, Vand**	**2.02**	**61**	*e*P	**Pn**	**13 24 53.6**	**+0.7**
EE08				*e*SG	**Sb**	**13 25 20.3**	**-0.5**
EE02	**Kiisa, Saku**	**2.09**	**45**	*e*PG	**Pb**	**13 24 55.6**	**-0.8**
EE02				*e*SB	**Sn**	**13 25 21.4**	**+0.9**
TVF	**Tvarminne**	**2.24**	**18**	*e*PB	**Pb**	**13 24 57.9**	**-1.0**
TVF				*e*SG	**Sb**	**13 25 26.9**	**-0.1**
TVF				smax	smax	13 25 29.8	
	comp=Z,26nm,0.1s						
PABE	**Paberze**	**2.52**	**151**	*e*P	**Pn**	**13 25 01.2**	**+1.3**
PABE	**Paberze**	**2.52**	**151**	*e*P	**Pn**	**13 25 01.6**	**+1.8**
PABE				AML	AML	13 25 01.6	
	comp=Z,102nm,0.1s						
PABE				*e*S	**Sn**	**13 25 32.7**	**+1.4**
PABE				AML	AML	13 25 34.7	
	comp=E,80nm,0.1s						
PABE				AML	AML	13 25 36.9	
	comp=N,77nm,0.2s						
NRTU	**Norrtaelje**	**2.57**	**321**	P	**Pn**	**13 25 02.0**	**+1.6**
NRTU				S	**Sb**	**13 25 36.6**	**0.0**
NRTU	**Norrtaelje**	**2.57**	**321**	P	**Pn**	**13 25 02.0**	**+1.6**
NRTU				S	**Sb**	**13 25 36.6**	**0.0**
AAL	**Aland**	**2.63**	**339**	P	**Pn**	**13 25 01.9**	**+0.7**
AAL	**Aland**	**2.63**	**339**	*e*P	**Pn**	**13 24 59.8**	**-1.5**
AAL	**Aland**	**2.63**	**339**	P	**Pn**	**13 25 01.9**	**+0.7**
AAL	**Aland**	**2.63**	**339**	*e*P	**Pn**	**13 25 02.3**	**+1.0**
AAL				*e*SG	**Sb**	**13 25 39.7**	**+1.3**
AAL				smax	smax	13 25 42.2	
	comp=Z,14nm,0.1s						
VSU	**Vasula**	**2.70**	**72**	*e*P	**Pn**	**13 25 01.7**	**-0.5**
VSU	**Vasula**	**2.70**	**72**	*e*P	**Pn**	**13 25 04.1**	**+1.9**
VSU				AML	AML	13 25 04.4	
	comp=Z,133nm,0.2s						
VSU				AML	AML	13 25 41.4	
	comp=N,72nm,0.5s						
VSU				AML	AML	13 25 45.3	
	comp=E,93nm,0.4s						
VSU	**Vasula**	**2.70**	**72**	*i* P	**Pn**	**13 25 02.1**	**-0.1**
VSU	**Vasula**	**2.70**	**72**	*e*P	**Pn**	**13 25 02.1**	**-0.1**
VSU				*e*PB	**Pn**	**13 25 04.1**	**+1.9**
VSU				*e*SB	**Sb**	**13 25 38.4**	**-1.8**
ARBE	**Arbavere**	**2.76**	**50**	*e*P	**Pn**	**13 25 04.8**	**+1.8**
ARBE	**Arbavere**	**2.76**	**50**	*e*P	**Pb**	**13 25 05.9**	**-1.9**
ARBE				AML	AML	13 25 43.9	
	comp=Z,97nm,0.1s						
ARBE				AML	AML	13 25 45.1	
	comp=N,753nm,0.1s						
ARBE				AML	AML	13 25 46.5	
	comp=E,827nm,0.2s						
ARBE	**Arbavere**	**2.76**	**50**	*e*PB	**Pb**	**13 25 05.9**	**-1.9**
ARBE				*e*SG	**Sb**	**13 25 42.8**	**+0.8**
MEF	**Metsahovi**	**2.82**	**27**	*e*P	**Pb**	**13 25 06.5**	**-2.2**
MEF	**Metsahovi**	**2.82**	**27**	*e*P	**Pb**	**13 25 07.5**	**-1.3**
MEF				AML	AML	13 25 45.4	
	comp=Z,22nm,0.2s						
MEF				AML	AML	13 25 45.7	
	comp=N,22nm,0.2s						
MEF				AML	AML	13 25 46.2	
	comp=E,38nm,0.1s						
MEF	**Metsahovi**	**2.82**	**27**	*e*PB	**Pb**	**13 25 07.5**	**-1.3**
MEF				*e*SG	**Sb**	**13 25 43.7**	**-0.1**
MEF				smax	smax	13 25 45.1	
	comp=Z,15nm,0.1s						
HEL5	**Espoo, Suvisaa**	**2.82**	**31**	*e*PB	**Pb**	**13 25 06.8**	**-2.1**
HEL5				*e*SG	**Sb**	**13 25 43.9**	**0.0**
HEL5				smax	smax	13 25 45.8	
	comp=Z,13nm,0.1s						
VIKU	**Vikbolandet**	**2.84**	**288**	P	**Pn**	**13 25 06.2**	**+2.1**
VIKU	**Vikbolandet**	**2.84**	**288**	P	**Pn**	**13 25 06.2**	**+2.1**
HEL1	**Helsinki**	**2.91**	**31**	*e*PB	**Pb**	**13 25 08.1**	**-2.2**
HEL1				*e*SB	**Sb**	**13 25 45.9**	**-0.6**
HEL1				smax	smax	13 25 50.7	
	comp=Z,12nm,0.1s						
GRAU	**Graesoe**	**3.12**	**328**	P	**Pb**	**13 25 11.4**	**-2.4**
GRAU	**Graesoe**	**3.12**	**328**	P	**Pb**	**13 25 11.4**	**-2.4**
NUR	**Nurmijarvi**	**3.13**	**26**	*e*PB	**Pb**	**13 25 11.4**	**-2.7**
NUR				*e*SB	**Sb**	**13 25 51.8**	**-1.1**
NUR				smax	smax	13 25 53.5	
	comp=Z,11nm,0.1s						
FIBU	**Brunna**	**3.19**	**315**	P	**Pn**	**13 25 11.0**	**+2.0**
FIBU	**Brunna**	**3.19**	**315**	P	**Pn**	**13 25 11.0**	**+2.0**
BACU	**Backbrunna**	**3.25**	**313**	P	**Pn**	**13 25 11.5**	**+1.7**
BACU	**Backbrunna**	**3.25**	**313**	P	**Pn**	**13 25 11.5**	**+1.7**
FORU	**Forsmark**	**3.26**	**326**	P	**Pb**	**13 25 13.3**	**-3.0**
FORU	**Forsmark**	**3.26**	**326**	P	**Pb**	**13 25 13.3**	**-3.0**
RAF	**Rauma**	**3.30**	**359**	*e*P	**Pn**	**13 25 12.5**	**+2.1**
RAF				*e*S	**Sn**	**13 25 50.0**	**-0.3**
IIGN	**Ignalina**	**3.41**	**133**	*e*P	**Pn**	**13 25 09.2**	**-2.7**
LNKU	**Linkoeping**	**3.41**	**281**	P	**Pn**	**13 25 13.6**	**+1.6**
LNKU	**Linkoeping**	**3.41**	**281**	P	**Pn**	**13 25 13.6**	**+1.6**
OSTU	**Oestervaala**	**3.49**	**318**	P	**Pn**	**13 25 14.4**	**+1.3**
OSTU	**Oestervaala**	**3.49**	**318**	P	**Pn**	**13 25 14.4**	**+1.3**
PVF	**Pernaja**	**3.50**	**35**	*e*PG	**Pb**	**13 25 20.8**	**+0.5**
NRAU	**Nora**	**4.00**	**300**	P	**Pn**	**13 25 21.9**	**+1.7**
NRAU	**Nora**	**4.00**	**300**	P	**Pn**	**13 25 21.9**	**+1.7**
KPF	**Kankaanpaa**	**4.11**	**1**	*e*P	**Pn**	**13 25 22.9**	**+1.3**
FALU	**Falun**	**4.15**	**314**	P	**Pn**	**13 25 23.4**	**+1.2**
FALU	**Falun**	**4.15**	**314**	P	**Pn**	**13 25 23.4**	**+1.2**
FIA0	**FINESS Array S**	**4.30**	**28**	*e*P	**Pn**	**13 25 26.5**	**+2.4**
FINES	**FINESS Array B**	**4.30**	**28**	Pn	**Pn**	**13 25 25.6**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=216,slow=12,SNR=15						
FINES				Pg	**Pb**	**13 25 35.5**	**+1.6**
	comp=Z,1.5nm,0.3s,baz=204,slow=14,SNR=20						
FINES				Sn	**Sn**	**13 26 17.1**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=215,slow=21,SNR=5.3						
FINES				Lg	Lg	13 26 33.2	
	comp=Z,2.9nm,0.3s,baz=214,slow=26,SNR=18						
	comp=Z,1.0nm,0.2s						
DEL	**Delary**	**4.53**	**257**	*i* P	**Pn**	**13 25 28.4**	**+1.0**
BSD	**Bornholm Skovb**	**4.66**	**239**	*i* P	**Pn**	**13 25 28.4**	**-0.8**
BSD				*i* S	**Sn**	**13 26 22.4**	**-1.4**
BSD				IAML		13 26 32.6	
	comp=Z,12nm,1.2s						
KEF	**Keuruu**	**4.70**	**18**	*e*P	**Pn**	**13 25 32.0**	**+2.3**
HFS	**Hagfors**	**4.86**	**303**	Pn	**Pn**	**13 25 33.0**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=108,slow=14,SNR=7.3						
HFS				Sn	**Sn**	**13 26 30.7**	**+1.9**
	comp=Z,0.9nm,0.3s,baz=110,slow=29,SNR=6.7						
HFS				Lg	Lg	13 26 49.6	
	comp=Z,2.0nm,0.3s,baz=116,slow=30,SNR=10						
	comp=Z,1.8nm,0.3s						
BORU	**Boraas**	**4.87**	**273**	*i* P	**Pn**	**13 25 34.3**	**+2.3**
KAF	**Kangasniemi**	**4.93**	**25**	*e*P	**Pn**	**13 25 34.1**	**+1.2**
FABU	**Falkenberg**	**5.00**	**265**	*i* P	**Pn**	**13 25 37.6**	**+3.8**
FABU				*i* S	**Sn**	**13 26 31.0**	**-1.1**
RUF	**Ruokolahti**	**5.17**	**41**	*e*P	**Pn**	**13 25 37.0**	**+0.8**
VAF	**Ylistaro**	**5.34**	**4**	*e*P	**Pn**	**13 25 39.9**	**+1.4**
ONAU	**Onsala**	**5.36**	**271**	*i* P	**Pn**	**13 25 40.5**	**+1.8**
TJOU	**Tjoern**	**5.46**	**277**	*i* P	**Pn**	**13 25 41.5**	**+1.4**
TJOU				*i* S	**Sn**	**13 26 44.4**	**+0.8**
NOA	**NORSAR Array B**	**6.36**	**306**	Pn	**Pn**	**13 25 53.7**	**+1.1**
	baz=128,slow=13,SNR=1.9						
NOA				Lg	Lg	13 27 37.3	
	comp=Z,0.1nm,0.3s,baz=173,slow=15,SNR=5.7						
	comp=Z,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**11.95**	**6**	Pn	**Pn**	**13 27 06.2**	**-2.9**
	comp=Z,2.6nm,0.9s,baz=192,slow=13,SNR=1.1						

HEL 13 13:33:01.5±0.5, **60°.63N**×**29°.02E, h0**km, **ML1.6,**
Suspected explosion, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.73**	**264**	PG	Pg	13 33 14.1	-1.3
	baz=82						
VJF				smax	smax	13 33 24.3	
	comp=Z,10nm,0.2s						
VJF				SG	Sg	13 33 24.5	-0.4
RUF	**Ruokolahti**	**0.80**	**358**	PG	Pg	13 33 16.1	-0.8
RUF				smax	smax	13 33 26.4	
	comp=Z,3.6nm,0.2s						
PVF	**Pernaja**	**1.56**	**268**	PG	Pn	13 33 29.7	-0.8
PVF				smax	smax	13 33 48.4	
	comp=Z,9.4nm,0.2s						
PVF				SN	Sn	13 33 50.8	-0.5
FIA0	**FINESS Array S**	**1.65**	**301**	PG	Pn	13 33 30.4	-1.3
	baz=119						
FIA0				smax	smax	13 33 51.0	
	comp=Z,3.4nm,0.2s						
FIA0				SN	Sg	13 33 54.3	-0.2
ARBE	**Arbavere**	**1.94**	**233**	PG	Pn	13 33 36.3	+0.7
KAF	**Kangasniemi**	**1.98**	**320**	PG	Pn	13 33 36.9	+0.6
KAF				smax	smax	13 34 00.3	
	comp=Z,4.2nm,0.2s						
NUR	**Nurmijarvi**	**2.16**	**269**	PG	Pn	13 33 39.3	+0.6
	baz=82						
NUR				smax	smax	13 34 05.5	
	comp=Z,2.5nm,0.2s						
NUR				SG	Sb	13 34 09.2	+0.5
MEF	**Metsahovi**	**2.33**	**262**	PG	Pn	13 33 42.4	+1.4
MEF				smax	smax	13 34 10.4	
	comp=Z,6.0nm,0.2s						
SUF	**Sumiainen**	**2.51**	**328**	PG	Pb	13 33 45.6	-1.7
	baz=149						
SUF				smax	smax	13 34 15.6	
	comp=Z,1.0nm,0.2s						
SUF				SG	Sb	13 34 19.6	+0.9
KEF	**Keuruu**	**2.53**	**310**	PG	Pn	13 33 45.2	+1.5
KEF				smax	smax	13 34 16.1	
	comp=Z,1.4nm,0.2s						
JOF	**Joensuu**	**2.55**	**24**	PB	Pn	13 33 45.6	+1.6
JOF				SB	Sb	13 34 17.8	-2.0
NIF	**Nilsia**	**2.83**	**349**	smax	smax	13 34 24.9	
	comp=Z,1.5nm,0.2s						
NIF				SG	Sb	13 34 27.2	-0.9
OUF	**Merijarvi**	**4.25**	**334**	SB	Sb	13 35 08.0	-0.8
OBF4	**Vikkela, Lumij**	**4.57**	**338**	SB	Sb	13 35 14.2	-3.9

*DNK **13** 13:33:22.1±1.2, 57°.57N×22°.09E, h0km, ML3.0, Suspected explosion*
*LVSN **13** 13:33:27.5±2.9, 57°.78N×21°.52E, h0km±47km, ML2.5*
*UPP **13** 13:33:28.4±1.4, 57°.82N×21°.27E, h0km, ML2.5, Presumed earthquake*
*IDC **13** 13:33:29.6±2.4, 57°.96N×21°.48E, h0km, mbtmp3.1/4, ML2.4/3, Error ellipse: s-maj=24.3km s-min=9.6km az=166.0*
*BER **13** 13:33:31.7±1.1, 57°.85N×21°.10E, h0km, ML1.8, ML2.5(UPP), Suspected explosion*
ISC 13 13:33:24.5±0.9, **57°.69N**±0°.05×**21°.53E**±0°.03, **h0**km, **n54,**
σ1s42/58, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.42**	**99**	*e*P	**Pb**	**13 33 33.8**	**-1.0**
SLIT	**Slitere, Latvi**	**0.42**	**99**	*e*P	**Pb**	**13 33 34.5**	**-0.3**
SLIT				*e*S	**Sb**	**13 33 41.7**	**+0.1**
SLIT				AML	AML	13 33 55.8	
	comp=N,839nm,0.6s						
SLIT				AML	AML	13 34 06.1	
	comp=E,2μm,0.7s						
SLIT				AML	AML	13 34 06.3	
	comp=Z,1μm,0.8s						
GOTU	**Gotland**	**1.59**	**271**	P	**Pb**	**13 33 54.7**	**0.0**
GOTU	**Gotland**	**1.59**	**271**	P	**Pb**	**13 33 54.7**	**0.0**
NYNU	**Nynaeshamn**	**2.27**	**307**	P	**Pb**	**13 34 05.2**	**-1.3**
NYNU	**Nynaeshamn**	**2.27**	**307**	P	**Pb**	**13 34 05.2**	**-1.3**
BYXU	**Byxelkrok**	**2.47**	**262**	P	**Pb**	**13 34 08.7**	**-1.0**
BYXU	**Byxelkrok**	**2.47**	**262**	P	**Pb**	**13 34 08.7**	**-1.0**
NRTU	**Norrtaelje**	**2.50**	**324**	P	**Pn**	**13 34 07.8**	**+1.4**
NRTU	**Norrtaelje**	**2.50**	**324**	P	**Pn**	**13 34 07.8**	**+1.4**
PABE	**Paberze**	**2.58**	**147**	*e*P	**Pn**	**13 34 04.8**	**-2.6**
PABE	**Paberze**	**2.58**	**147**	*e*P	**Pb**	**13 34 10.9**	**-0.6**
PABE				AML	AML	13 34 19.5	
	comp=Z,20nm,0.2s						
PABE				AML	AML	13 34 52.8	
	comp=N,30nm,0.2s						
PABE				AML	AML	13 34 53.0	
	comp=E,24nm,0.2s						
AAL	**Aland**	**2.62**	**343**	P	**Pn**	**13 34 08.9**	**+1.0**
AAL	**Aland**	**2.62**	**343**	*e*P	**Pn**	**13 34 08.8**	**+0.8**
AAL	**Aland**	**2.62**	**343**	P	**Pn**	**13 34 08.9**	**+1.0**
AAL	**Aland**	**2.62**	**343**	PN	**Pn**	**13

NOA Lg Lg 13 36 39.1
comp=Z,0.1nm,0.3s,baz=113,slow=13,SNR=6.6
comp=Z,0.2nm,0.4s
NC303 NORSAR Array S 6.27 309 *e*P **Pn 13 34 59.1 +0.9**
NC303 IAML 13 36 46.5
comp=Z,3.0nm,0.3s
NAO01 NORSAR Array S 6.30 305 *e*P **Pn 13 35 00.0 +1.4**
NBO00 NORSAR Array S 6.43 306 *e*P **Pn 13 35 00.6 +0.2**
NBO00 IAML 13 36 56.1
comp=Z,2.5nm,0.7s
NC204 NORSAR Array S 6.55 308 *e*P **Pn 13 35 02.5 +0.4**
LEIR Leirfjorden 9.32 338 *e*P **Pn 13 35 40.0 +0.1**
RAUS Rausandaksla 9.44 341 *e*P **Pn 13 35 40.9 -0.7**
SALU Saltoluokta 9.82 353 *e*P **Pn 13 35 46.1 -0.7**
VAGH Vaagaholmen 9.84 341 *e*P **Pn 13 35 47.2 +0.1**
ARCES ARCESS Array B 12.02 7 Pn **Pn 13 36 14.4 -2.4**
comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=5.7
comp=Z,1.5nm,0.6s

IDC 13 13:34:25.3±1.7, 39.19N×105.74E, *h*0km, mb3.4/2, mbtmp3.4/4, MLJ3.5/2, Error ellipse: s-maj=40.5km s-min=16.9km az=101.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**3.61**	**207**	Pn	Pn	13 35 23.2	+0.3
	baz=39,slow=5.5						
LZDM				Pg	Pb	13 35 31.6	+1.4
	baz=27,slow=13						
LZDM				Lg	Lg	13 36 21.3	
	baz=51,slow=30						
	3.7nm,0.3s						
SONM	**Songino Array**	**8.66**	**3**	Pn	Pn	13 36 33.6	+1.6
	0.2nm,0.3s,baz=185,slow=14,SNR=3.0						
SONM				Pg	Pg	13 37 06.7	-4.5
	0.6nm,0.3s,baz=192,slow=17,SNR=6.2						
SONM				Lg	Lg	13 39 02.0	
	1.1nm,0.3s,baz=195,slow=29,SNR=7.7						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**22.28**	**310**	P	P	13 39 22.9	-1.0
	0.5nm,0.2s,baz=114,slow=14,SNR=1.6						
	0.5nm,0.2s						
ASAR	**Alice Springs**	**67.85**	**152**	P	P	13 45 25.0	-0.4
	0.3nm,1.0s,baz=334,slow=5.8,SNR=2.3						
	0.3nm,1.0s						

*IDC **13** 13:39:18.8±0.9, 21.2S±0.2×175.7W±0.2, h89km, n7, σ1§02/7, mb3.7/6, Tonga Islands*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.47**	**257**	P	**P**	**13 47 48.5**	**0.0**
	2.0nm,0.8s,baz=89,slow=8.2,SNR=19						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**46.65**	**262**	P	**P**	**13 47 49.8**	**-0.1**
	0.8nm,0.7s,baz=99,slow=8.2,SNR=4.7						
	0.8nm,0.7s						
VNDA	**Vanda**	**57.42**	**186**	P	**P**	**13 49 07.9**	**-1.1**
	0.7nm,0.9s,baz=56,slow=7.3,SNR=4.2						
	0.7nm,0.9s						
QSPA	**South Pole Qui**	**68.88**	**180**	P	**P**	**13 50 26.3**	**+1.3**
	3.0nm,0.9s,baz=32,slow=2.0,SNR=10						
	3.0nm,0.9s						
NVAR	**Mina Array Bea**	**80.06**	**42**	P	**P**	**13 51 30.9**	**+0.6**
	0.4nm,0.7s,baz=226,slow=9.5,SNR=5.9						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**85.62**	**56**	P	**P**	**13 51 58.2**	**-0.9**
	1.0nm,1.1s,baz=204,slow=2.7,SNR=4.8						
	1.0nm,1.1s						
EKA	**Eskdalemuir Ar**	**145.45**	**8**	PKPbc	**PKPdf**	**13 58 57.8**	**+0.4**
	0.5nm,0.5s,baz=347,slow=2.6,SNR=3.6						

*MOS **13** 13:44:02.9±1.2, 7.33N×35.45W, h10km, mb5.2/40, MS4.8/6, Error ellipse: s-maj=11.1km s-min=5.2km az=52.4*
*IDC **13** 13:44:03.2±0.4, 7.38N×35.40W, h0km, mb4.6/29, mbtmp4.7/31, ML4.1/1, MS4.7/66, Error ellipse: s-maj=15.3km s-min=10.1km az=141.0*
*NEIC **13** 13:44:05.1, 7.31N×35.42W, h20km*
*NEIC **13** 13:44:05.3, 7.30N×35.43W, h10km*
*NEIC **13** 13:44:05.1, 7.41N×35.52W, h20km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10¹⁷Nm; Mrr-0.43; Mθθ 0.06; Mϕϕ 0.37; Mrθ 0.47; Mθϕ -1.92; Mϕr-0.18; Fault plane solution: M₀2.02000×10¹⁷ NP1: ϕs182.53000°, δ75.80000°, λ-0.38000°. NP2:ϕs272.62000°, δ89.64000°, λ-165.80000°. Principal axes: T 2.2139, Plg10.0000°, Azm47.0000°; N -0.4647, Plg76.0000°, Azm274.0000°; P -1.7492, Plg10.0000°, Azm138.0000°;*
*NEIC **13** 13:44:05±1.1, 7.32N±0.10×35.40W±0.07, h10km±1km, mb5.2/81, Ms_20 5.0/237, Mwb5.5/67, Mww5.5/27 Error ellipse: s-maj=17.4km s-min=10.0km az=156.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.51; Mθθ-0.67; Mϕϕ 0.16; Mrθ-0.33; Mθϕ-2.17; Mϕr-0.14; Fault plane solution: M₀2.28000×10¹⁷ NP1:ϕs95.46000°, δ88.17000°, λ-172.51000°. NP2:ϕs5.22000°, δ82.51000°, λ-1.84000°. Principal axes: T 1.9584, Plg4.0000°, Azm230.0000°; N 0.5428, Plg82.0000°, Azm109.0000°; P -2.5011, Plg7.0000°, Azm321.0000°;*
*INMG **13** 13:44:06.0±5.6, 7.37N×35.57W, h10km, mb5.2, Ms4.8, MW4.9, #DIST_RANGE: DISTANT*
*GCMT **13** 13:44:09.0±0.1, 7.46N±0.01×35.41W±0.01, h15km, MW5.5/153, Moment Tensor Solution. s122,c221; s153,c309; Duration: 1§4 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.12±.02; Mθθ-0.07±.03; Mϕϕ 0.18±.02; Mrθ 0.25±.07; Mθϕ-2.16±.02; Mϕr-0.29±.07; Best double couple: M₀2.19400×10¹⁷ NP1:ϕs91.00000°, δ83.00000°, λ174.00000°. NP2:ϕs182.00000°, δ84.00000°, λ7.00000°. Principal axes: T 2.2830, Plg9.0000°, Azm47.0000°; N -0.1760, Plg81.0000°, Azm223.0000°; P -2.1050, Plg1.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 13:44:04.9±0.3, 7.27N±0.05×35.45W±0.05, h10km, n554, σ1§45/413, mb5.1/143, MS5.0/190, 30C-13D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**13.02**	**182**		**Pn**	**13 47 10.5**	**+0.4**
RCBR	**Riachuelo**	**13.02**	**182**	P	**Pn**	**13 47 10.5**	**+0.4**
RCBR	**Riachuelo**	**13.02**	**182**	*e*P	**Pn**	**13 47 11.0**	**+0.9**
SACV	**Santiago Islan**	**13.90**	**56**		Pn	13 47 15.9	-6.2
TMAB	**Tom-Aú,PA,Br**	**15.85**	**233**	*e*P	**Pn**	**13 47 48.4**	**+0.2**
MDP	**Montagnes des**	**17.23**	**264**	P	**Pn**	**13 48 06.0**	**+0.1**
	0.6nm,0.3s,baz=75,slow=14,SNR=12						
MDP				LR	LR	13 53 28.6	
	comp=Z,3μm,20.3s,baz=72,slow=33						
	51nm,1.1s						
MBO	**M'Bour**	**19.48**	**67**	P	**P**	**13 48 32.5**	**+0.3**
PRPB	**Parauapebas**	**19.59**	**227**	*e*P	**P**	**13 48 33.7**	**+0.2**
BBTS	**Babate**	**19.95**	**67**	P	**P**	**13 48 36.9**	**-0.5**
	56nm,0.9s,baz=343,slow=20						
BBTS				LR	LR	13 54 18.6	
	comp=Z,3μm,21.6s,baz=259,slow=31						
SMTB	**Santa Maria do**	**20.08**	**217**	*e*P	**P**	**13 48 39.0**	**+0.2**
MAL2	**Monte Alegre,**	**20.85**	**244**		**P**	**13 48 47.0**	**-0.1**
SDBA	**SAO DESIDERIO**	**21.69**	**206**	*e*P	**P**	**13 48 55.8**	**-0.5**
CMC01	**Camacan, BA**	**22.84**	**190**	*e*P	**P**	**13 49 09.7**	**+1.3**
ITTB	**Itaituba**	**23.32**	**241**	*e*P	**P**	**13 49 14.1**	**+0.8**
GUA01	**Guaratinga, BA**	**24.09**	**190**	*e*P	**P**	**13 49 23.0**	**+2.2**
NPGB	**Novo Progresso**	**24.43**	**235**	*e*P	**P**	**13 49 23.4**	**-0.6**
SNDB	**Serra Nova Dou**	**24.78**	**220**	*e*P	**P**	**13 49 28.6**	**+1.4**
BOAV	**Boa Vista**	**25.45**	**260**		**P**	**13 49 33.1**	**-0.1**
BOAV	**Boa Vista**	**25.45**	**260**	*e*P	**P**	**13 49 34.2**	**+1.0**
H10N3	**ASCENSION HYDR**	**25.72**	**125**	T	T	14 16 31.0	
	baz=306,slow=75,SNR=57						
H10N2	**ASCENSION HYDR**	**25.72**	**125**	T	T	14 16 31.1	
	baz=306,slow=75,SNR=138						
H10N1	**ASCENSION HYDR**	**25.74**	**125**	T	T	14 16 26.1	
	baz=306,slow=75,SNR=74						
H05S1	**Guadeloupe/Mar**	**25.91**	**288**	T	T	14 16 17.6	
	SNR=38						
BDFB	**Brasilia**	**25.95**	**209**	P	**P**	**13 49 38.1**	**+0.3**
	29nm,0.8s,baz=33,slow=13,SNR=21						
BDFB				LR	LR	13 59 23.0	
	comp=Z,3μm,18.4s,baz=15,slow=35						
	29nm,0.8s						
BDFB	**Brasilia**	**25.95**	**209**		**P**	**13 49 38.0**	**+0.1**
BDFB				IAmb	IAmb	13 49 42.5	
	comp=Z,69nm,1.1s						
H10S3	**ASCENSION HYDR**	**26.24**	**128**	T	T	14 17 01.7	
	baz=305,slow=74,SNR=100						
H10S2	**ASCENSION HYDR**	**26.26**	**128**	T	T	14 17 03.1	
	baz=275,slow=74,SNR=99						
SJMB	**Sao Joao De Ma**	**26.42**	**192**	*e*P	**P**	**13 49 44.4**	**+2.4**
H05N1	**Guadeloupe/Mar**	**26.61**	**292**	T	T	14 17 11.9	
	SNR=8.1						
GDSD	**La Dsirade Is**	**26.61**	**292**	P	**P**	**13 49 43.6**	**-0.2**
GDSD				IAmb	IAmb	13 49 55.1	
	comp=Z,50nm,1.1s						
DIAM	**Diamantina, MG**	**26.67**	**198**	*e*P	**P**	**13 49 46.3**	**+1.9**
CLDB	**Colider**	**27.11**	**229**	*e*P	**P**	**13 49 49.3**	**+0.9**
MACA	**Manacapuru-AM**	**27.24**	**248**	P	**P**	**13 49 48.9**	**-0.6**
MACA				IAmb	IAmb	13 49 56.9	
	comp=Z,75nm,1.3s						
MACA	**Manacapuru-AM**	**27.24**	**248**	*e*P	**P**	**13 49 49.8**	**+0.4**
ARAG	**Araguaiana, MT**	**28.00**	**215**	*e*P	**P**	**13 49 58.0**	**+1.8**
IPMB	**Ipameri, GO**	**28.08**	**207**	*e*P	**P**	**13 49 59.9**	**+2.9**
PDRB	**Porto dos Gac**	**28.29**	**229**	*e*P	**P**	**13 49 59.9**	**+1.1**
BSCB	**Bom Sucesso**	**29.55**	**198**	*e*P	**P**	**13 50 12.4**	**+2.4**
DBIC	**Dimbokro**	**30.37**	**89**	P	**P**	**13 50 16.0**	**-1.3**
	comp=Z,15nm,0.7s,baz=290,slow=9.1,SNR=13						
	comp=Z,15nm,0.7s						
DBIC	**Dimbokro**	**30.37**	**89**	P	**P**	**13 50 15.8**	**-1.5**
DBIC				IAmb	IAmb	13 50 29.0	
	comp=Z,37nm,1.0s						
SALV	**Santo Antonio**	**30.53**	**221**	*e*P	**P**	**13 50 19.9**	**+1.2**
PMOZ	**Porto Moniz, M**	**30.56**	**31**	*e*LQ	LQ	13 56 41.2	
PMOZ				*e*LR	LR	13 57 48.9	
PMOZ				*i* IAMs_20	IAMs_20	13 59 52.1	
	comp=Z,1μm,20.0s						
PMOZ				*e*T	T	14 21 19.1	
ITRB	**Iturama**	**30.56**	**208**	*e*P	**P**	**13 50 21.1**	**+2.1**
FUL	**Funchal**	**30.58**	**32**	*e*T	T	14 21 28.1	
PMAR	**Madeira**	**30.62**	**32**	*e*T	T	14 21 25.4	
BB19B	**Bebedouro**	**30.95**	**204**	*e*P	**P**	**13 50 24.3**	**+1.9**
TEFE	**Tefe**	**31.04**	**251**	*e*P	**P**	**13 50 25.0**	**+1.8**
PP1B	**Ponte de Pedra**	**31.29**	**218**	*e*P	**P**	**13 50 27.8**	**+2.3**
HUMP	**Col San Antoni**	**31.51**	**293**	P	**P**	**13 50 26.6**	**-0.8**
VILB	**Vilhena**	**31.76**	**231**	P	**P**	**13 50 29.7**	**+0.1**
VILB				IAmb	IAmb	13 51 38.3	
	comp=Z,37nm,1.1s						
VILB	**Vilhena**	**31.76**	**231**	*e*P	**P**	**13 50 31.7**	**+2.1**
SJG	**San Juan**	**31.78**	**293**	LR	LR	14 00 40.4	
SJG	comp=Z,2μm,21.4s,baz=106,slow=31						
SJG	**San Juan**	**31.78**	**293**	P	**P**	**13 50 28.1**	**-1.6**
SJG				IAmb	IAmb	13 50 45.8	
	comp=Z,26nm,1.0s						
SJG	**San Juan**	**31.78**	**293**	P	**P**	**13 50 28.1**	**-1.6**
SJG				pmax	pmax		
	comp=Z,27nm,1.0s						
BAUV	**El Baul**	**32.31**	**275**	P	**P**	**13 50 34.0**	**-0.5**
PTLB	**Pontes e Lacer**	**32.57**	**226**		**P**	**13 50 37.1**	**+0.5**
PTLB				IAmb	IAmb	13 50 40.0	
	comp=Z,36nm,1.2s						
PTLB	**Pontes e Lacer**	**32.57**	**226**	*e*P	**P**	**13 50 38.0**	**+1.4**
FRTB	**Fartura**	**33.41**	**204**	*e*P	**P**	**13 50 46.2**	**+2.3**
AQDB	**Aquidauana**	**34.01**	**215**		**P**	**13 50 49.1**	**-0.1**
AQDB				IAmb	IAmb	13 50 52.6	
	comp=Z,91nm,2.0s						
AQDB	**Aquidauana**	**34.01**	**215**	*e*P	**P**	**13 50 51.4**	**+2.2**
SIV	**San Ignacio**	**34.32**	**228**	LR	LR	14 04 22.6	
	comp=Z,5μm,18.4s,baz=84,slow=35						
BDQN	**Boqueona, MS**	**34.61**	**217**	*e*P	**P**	**13 50 56.6**	**+2.3**
SDV	**Santo Domingo**	**34.87**	**275**	LR	LR	14 05 15.5	
	comp=Z,588nm,20.0s,baz=91,slow=36						
SDV	**Santo Domingo**	**34.87**	**275**	P	**P**	**13 50 56.1**	**-0.8**
SDV	**Santo Domingo**	**34.87**	**275**	*e*P	**P**	**13 50 58.0**	**+1.0**
ACRG	**Accra**	**35.05**	**91**	P	**P**	**13 50 56.8**	**-1.5**
TIO	**Tiouine**	**35.34**	**45**	P	**P**	**13 51 00.2**	**-0.6**
PTGB	**Pitanga**	**35.68**	**206**	*e*P	**P**	**13 51 05.9**	**+2.2**
BANI	**BANI**	**35.72**	**291**	P	**P**	**13 51 04.3**	**+0.1**
MURT	**Porto Murtinho**	**36.05**	**217**	*e*P	**P**	**13 51 09.1**	**+2.3**
AVE	**Averroes**	**36.67**	**41**	IAMs_20	IAMs_20	14 02 25.9	
	comp=Z,2μm,19.0s						
SDDR	**Presa de Saban**	**36.71**	**292**	P	**P**	**13 51 12.1**	**-0.5**
SDDR				IAmb	IAmb	13 51 34.3	
	comp=Z,34nm,1.1s						
TORD	**Torodi Ar. Bea**	**36.98**	**78**	P	**P**	**13 51 13.3**	**-1.6**
	comp=Z,29nm,0.7s,baz=282,slow=7.7,SNR=23						
TORD				LR	LR	14 04 06.3	
	comp=Z,2μm,21.4s,baz=259,slow=33						
	comp=Z,29nm,0.7s						
TORD	**Torodi Ar. Bea**	**36.98**	**78**	P	**P**	**13 51 13.4**	**-1.6**
RTC	**Rabat Centre**	**37.46**	**41**	P	**P**	**13 51 18.1**	**-0.6**
MD01	**Midelt array s**	**38.20**	**44**	P	**P**	**13 51 24.8**	**-0.4**
MD31	**MD31**	**38.20**	**44**	P	**P**	**13 51 24.0**	**-1.0**
MORF	**Marmelete**	**38.56**	**35**	*e*P	**P**	**13 51 28.7**	**+0.7**
MORF				IAmb	IAmb	13 51 29.8	
	comp=Z,167nm,1.8s						
MORF	**Marmelete**	**38.56**	**35**	*e*P	**P**	**13 51 29.6**	**+1.6**
MORF				*i* IAmb	IAmb	13 51 31.1	
	comp=Z,104nm,1.6s						
MORF	**Marmelete**	**38.56**	**35**	*e*P	**P**	**13 51 28.7**	**+0.7**
PTEO	**Sao Teotonio**	**38.68**	**35**	*e*P	**P**	**13 51 30.2**	**+1.3**
ROSC	**El Rosal**	**38.73**	**269**	P	**P**	**13 51 31.2**	**+1.1**
	comp=Z,6.0nm,0.3s,baz=92,slow=5.0,SNR=13						
ROSC				LR	LR	14 07 49.2	
	comp=Z,2μm,20.1s,baz=88,slow=37						
	comp=Z,6.0nm,0.3s						
ROSC	**El Rosal**	**38.73**	**269**	P	**P**	**13 51 30.5**	**+0.4**
ROSC	**El Rosal**	**38.73**	**269**	P	**P**	**13 51 30.5**	**+0.4**
ROSC				pmax	pmax		
	comp=Z,152nm,1.8s						
PBDV	**Barranco-do-Ve**	**38.93**	**36**	P	**P**	**13 51 30.5**	**-0.6**
PBDV	**Barranco-do-Ve**	**38.93**	**36**	*e*P	**P**	**13 51 32.5**	**+1.4**
PBDV				*i* IAmb	IAmb	13 51 32.7	
	comp=Z,88nm,1.1s						
PCVE	**Castro Verde**	**39.13**	**35**	P	**P**	**13 51 32.4**	**-0.3**
PCVE	**Castro Verde**	**39.13**	**35**	*e*P	**P**	**13 51 33.7**	**+0.9**
PCVE				*i* IAmb	IAmb	13 51 36.3	
	comp=Z,47nm,1.6s						
PCVE				*e*T	T	14 31 37.5	
PVAQ	**Vaqueiros**	**39.16**	**36**	*e*P	**P**	**13 51 34.4**	**+1.3**
PVAQ				*i* IAmb	IAmb	13 51 51.4	
	comp=Z,63nm,1.5s						
PVAQ				*e*S	**S**	**13 57 35.4**	**+2.3**
PVAQ				*e*LQ	LQ	14 00 33.2	
PVAQ				*e*LR	LR	14 02 00.3	
PVAQ				*i* IAMs_20	IAMs_20	14 03 50.3	
	comp=Z,1μm,20.0s						
MESJ	**Messejana**	**39.17**	**35**	*e*P	**P**	**13 51 33.6**	**+0.5**
MESJ				IAmb	IAmb	13 51 34.4	
	comp=Z,29nm,1.0s						
MESJ	**Messejana**	**39.17**	**35**	*e*P	**P**	**13 51 34.3**	**+1.2**
MESJ				*i* IAmb	IAmb	13 51 35.4	
	comp=Z,45nm,1.5s						
MESJ				*e*T	T	14 31 31.9	
MESJ	**Messejana**	**39.17**	**35**	*e*P	**P**	**13 51 33.6**	**+0.5**
EGRO	**El Granado**	**39.39**	**36**	P	**P**	**13 51 35.0**	**+0.1**
PBEJ	**Beja**	**39.51**	**35**	*e*P	**P**	**13 51 37.1**	**+1.2**
PBEJ				*i* IAmb	IAmb	13 52 00.6	
	comp=Z,39nm,1.4s						
PBEJ				*e*T	T	14 32 12.8	
MOE	**Montemor**	**39.58**	**34**	*e*P	**P**	**13 51 37.8**	**+1.3**
MOE				*e*T	T	14 31 52.6	
CPUP	**Villa Florida**	**39.58**	**212**	P	**P**	**13 51 38.4**	**+1.8**
	comp=Z,3.3nm,1.1s,baz=234,slow=7.2,SNR=6.5						
CPUP				LR	LR	14 08 08.5	
	comp=Z,704nm,19.0s,baz=252,slow=36						
	comp=Z,3.3nm,1.1s						
CPUP	**Villa Florida**	**39.58**	**212**	P	**P**	**13 51 37.1**	**+0.6**
CPUP	**Villa Florida**	**39.58**	**212**	*e*P	**P**	**13 51 37.7**	**+1.1**
EVO	**Evora**	**39.77**	**34**	*e*P	**P**	**13 51 39.1**	**+1.0**
EVO				*i* IAmb	IAmb	13 52 05.6	
	comp=Z,47nm,1.6s						
ESPR	**Espera**	**39.92**	**38**	P	**P**	**13 51 40.9**	**+1.6**
LPAZ	**La Paz**	**39.93**	**234**	P	**P**	**13 51 41.0**	**+0.7**
	comp=Z,36nm,0.8s,baz=46,slow=6.7,SNR=122						
LPAZ				LR	LR	14 07 48.3	
	comp=Z,2μm,19.1s,baz=53,slow=36						
	comp=Z,36nm,0.8s						
LPAZ	**La Paz**	**39.93**	**234**		**P**	**13 51 40.3**	**-0.1**
LPAZ				IAmb	IAmb	13 51 43.3	
	comp=Z,54nm,0.9s						
LPAZ	**La Paz**	**39.93**	**234**	*e*P	**P**	**13 51 40.6**	**+0.3**
PARRA	**Arraiolos**	**39.96**	**34**	*e*P	P	13 51 40.9	+5.9
PARRA				*i* IAmb	IAmb	13 51 50.6	
	comp=Z,51nm,1.9s						
PARRA				*e*T	T	14 31 56.4	
EMIN	**Mina Concepcio**	**40.02**	**36**	P	**P**	**13 51 39.1**	**-1.0**
PMTG	**Montargil**	**40.03**	**34**	*e*P	**P**	**13 51 40.7**	**+0.5**
PMTG				*i* IAmb	IAmb	13 51 42.5	
	comp=Z,75nm,1.6s						
PBAR	**Barrancos**	**40.08**	**36**	P	**P**	**13 51 40.6**	**-0.1**
PBAR	**Barrancos**	**40.08**	**36**	*e*P	**P**	**13 51 41.9**	**+1.3**
PBAR				*i* IAmb	IAmb	13 51 51.8	
	comp=Z,54nm,1.8s						
PESTR	**Estremoz**	**40.24**	**34**	*e*P	**P**	**13 51 43.6**	**+1.6**
PESTR				*i* IAmb	IAmb	13 51 57.7	
	comp=Z,50nm,1.6s						
PSARD	**Sardoal**	**40.45**	**33**	*e*P	**P**	**13 51 44.9**	**+1.2**
PSARD				*i* IAmb	IAmb	13 52 08.7	
	comp=Z,88nm,1.8s						
PCAS	**Casmilo, Conde**	**40.59**	**32**	*e*P	**P**	**13 51 46.3**	**+1.4**
PCAS				*i* IAmb	IAmb	13 52 05.3	
	comp=Z,138nm,1.8s						
PMRV	**Marv??o**	**40.75**	**34**	*e*P	**P**	**13 51 47.5**	**+1.4**
PMRV				*i* IAmb	IAmb	13 51 50.5	
	comp=Z,88nm,1.4s						
PMRV				*e*S	**S**	**13 58 05.2**	**+8.4**
PMRV				*i* IAMs_20	IAMs_20	14 04 54.5	
	comp=Z,986nm,20.0s						
PCBR	**Castelo Branco**	**40.99**	**33**	*e*P	**P**	**13 51 49.0**	**+0.9**
PCBR				*i* IAmb	IAmb	13 52 06.9	
	comp=Z,45nm,1.7s						
CPSB	**Capacava Do Su**	**41.25**	**204**	*e*P	**P**	**13 51 52.6**	**+2.3**
MTE	**Manteigas**	**41.35**	**33**	IAMs_20	IAMs_20	14 05 44.7	
	comp=Z,3μm,18.0s						
MTE	**Manteigas**	**41.35**	**33**	*e*S	**S**	**13 58 08.7**	**+2.9**
MTE				*e*LQ	LQ	14 01 59.4	
MTE				*e*LR	LR	14 03 07.6	
MTE				*i* IAMs_20	IAMs_20	14 05 31.6	
	comp=Z,1μm,20.0s						
PVIS	**Viseu**	**41.39**	**32**	*e*P	**P**	**13 51 52.4**	**+0.9**
PB18	**Visviri**	**41.72**	**233**	P	**P**	**13 51 54.5**	**-0.5**
PB18				IAMs_20	IAMs_20	14 08 34.8	
	comp=Z,2μm,19.0s						
PVRL	**Vila Real**	**41.88**	**32**	*e*P	**P**	**13 51 56.4**	**+0.9**
POLO	**Lamas de Olo**	**41.91**	**32**	*e*P	**P**	**13 51 57.0**	**+1.1**
PCAB	**Cabril**	**42.04**	**31**	*e*P	**P**	**13 51 57.2**	**+0.4**
PCAB				*i* IAmb	IAmb	13 52 06.8	
	comp=Z,91nm,2.0s						
PGAV	**Gavieira, Arco**	**42.10**	**31**	*e*P	**P**	**13 51 58.2**	**+0.9**
PGAV				*e*S	**S**	**13 58 20.1**	**+3.1**
PGAV				*e*LQ	LQ	14 01 37.2	
PGAV				*e*LR	LR	14 03 24.4	
PGAV				*i* IAMs_20	IAMs_20	14 05 30.2	
	comp=Z,1μm,20.0s						
PB16	**IPOC Station P**	**42.15**	**232**	P	**P**	**13 51 57.5**	**-1.2**
PB16				IAmb	IAmb	13 51 59.2	
	comp=Z,37nm,1.2s						
MVO	**Moncorvo**	**42.17**	**32**	*e*P	**P**	**13 51 58.7**	**+0.8**
MVO				*i* IAmb	IAmb	13 52 01.0	
	comp=Z,52nm,2.0s						
MVO				*e*S	**S**	**13 58 25.7**	**+7.8**
MVO				*e*LQ	LQ	14 02 08.4	
MVO				*e*LR	LR	14 03 33.7	
MVO				*i* IAMs_20	IAMs_20	14 06 07.1	
	comp=Z,2μm,20.0s						
TAM	**Tamanrasset**	**42.29**	**64**	P	**P**	**13 51 58.6**	**-0.7**
TAM				IAMs_20	IAMs_20	14 07 01.4	
	comp=Z,2μm,20.0s						
TAM	**Tamanrasset**	**42.29**	**64**	P	**P**	**13 51 58.6**	**-0.7**
TAM				pmax	pmax		
	comp=Z,74nm,0.2s						
PLTB	**Pedras Altas**	**42.51**	**203**	P	**P**	**13 52 02.1**	**+1.4**
PLTB				IAmb	IAmb	13 52 04.5	
	comp=Z,40nm,1.0s						
PLTB	**Pedras Altas**	**42.51**	**203**	*e*P	**P**	**13 52 03.2**	**+2.5**
PAB	**San Pablo**	**42.56**	**36**	IAMs_20	IAMs_20	14 05 29.8	
	comp=Z,2μm,19.0s						
GO01	**Chusmiza**	**42.67**	**231**	P	**P**	**13 52 01.3**	**-1.3**
PBRG	**Braganca**	**42.77**	**32**	*e*P	**P**	**13 52 03.9**	**+1.2**
ESDC	**Sonseca Array**	**42.87**	**36**	P	**P**	**13 52 04.0**	**+0.4**
	comp=Z,6.0nm,1.0s,baz=235,slow=8.6,SNR=13						
ESDC				LR	LR	14 06 22.1	
	comp=Z,1μm,20.3s,baz=226,slow=31						
	comp=Z,6.0nm,1.0s						
ESDC	**Sonseca Array**	**42.87**	**36**		**P**	**13 52 02.8**	**-0.8**
PB08	**IPOC Station P**	**42.91**	**230**	P	**P**	**13 52 02.9**	**-1.6**
PB08				IAMs_20	IAMs_20	14 09 26.4	
	comp=Z,2μm,20.0s						
PB12	**IPOC Station P**	**42.96**	**233**	P	**P**	**13 52 02.7**	**-1.9**
PB12				IAMs_20	IAMs_20	14 08 47.6	
	comp=Z,2μm,21.0s						
PB11	**IPOC Station P**	**43.08**	**231**	IAMs_20	IAMs_20	14 09 18.8	
	comp=Z,2μm,22.0s						
OTAV	**Otavalo**	**43.45**	**263**	P	**P**	**13 52 08.1**	**-1.0**
OTAV	**Otavalo**	**43.45**	**263**	P	**P**	**13 52 08.1**	**-1.0**
OTAV				pmax	pmax		
	comp=Z,14nm,1.1s						
OTAV	**Otavalo**	**43.45**	**263**	*e*P	**P**	**13 52 10.2**	**+1.1**
HMBC	**Humberstone**	**43.55**	**230**	P	**P**	**13 52 08.2**	**-1.2**
HMBC				IAmb	IAmb	13 52 09.4	
	comp=Z,32nm,0.8s						
HMBC				IAMs_20	IAMs_20	14 09 46.4	
	comp=Z,2μm,20.0s						
PSAL	**Palomas, Salto**	**43.64**	**208**	*e*P	**P**	**13 52 11.2**	**+1.4**
PB01	**IPOC Station P**	**43

LCO Las Campanas 49.54 222 P P 13 52 56.1 -0.4
LCO pmax pmax
comp=Z,28nm,1.0s
LCO MLR MLR
comp=Z,1µm,18.0s
CFA Coronel Fontan 49.76 217 P P 13 52 58.5 +0.7
comp=Z,6.2nm,0.9s,baz=64,slow=4.9,SNR=16
CFA LR LR 14 13 42.4
comp=Z,705nm,20.7s,baz=36,slow=36
comp=Z,6.2nm,0.9s
KEST Kesra 49.77 49 P P 13 52 58.1 +0.1
comp=Z,13nm,0.8s,baz=253,slow=6.4,SNR=8.0
KEST LR LR 14 13 05.3
comp=Z,3µm,20.7s,baz=238,slow=35
comp=Z,13nm,0.8s
KEST Kesra 49.77 49 P P 13 52 57.5 -0.4
CO01 Juntas del Tor 49.79 220 IAMs_20 IAMs_20 14 14 22.4
comp=Z,2µm,21.0s
ZON Zonda 49.98 218 P 13 52 57.8 -1.8
ZON Zonda 49.98 218 P P 13 52 57.8 -1.8
ZON pmax pmax
comp=Z,105nm,1.8s
U56A King 50.12 312 IAMs_20 IAMs_20 14 09 27.6
comp=Z,1µm,21.0s
CO05 La Serena 50.49 221 IAMs_20 IAMs_20 14 15 07.0
comp=Z,2µm,18.0s
V55A Taylorsville 50.54 311 IAMs_20 IAMs_20 14 08 31.8
comp=Z,1µm,19.0s
CO03 El Pedregal 50.74 220 IAMs_20 IAMs_20 14 15 07.8
comp=Z,1µm,18.0s
CO02 Combarbal 51.19 220 IAMs_20 IAMs_20 14 15 39.5
comp=Z,1µm,20.0s
CO06 Fray Jorge 51.24 221 IAMs_20 IAMs_20 14 15 10.0
comp=Z,2µm,20.0s
U54A Nelsons Funny 51.26 312 IAMs_20 IAMs_20 14 09 40.6
comp=Z,1µm,22.0s
SSB Saint Sauveur 51.27 36 P P 13 53 08.6 -0.5
SSB IAmb IAmb 13 53 15.0
comp=Z,19nm,0.8s
SSB Saint Sauveur 51.27 36 P P 13 53 08.6 -0.5
SSB pmax pmax
comp=Z,19nm,0.8s
BG3 Lake Jocassee 51.52 309 P P 13 53 12.0 +0.8
BG3 IAmb IAmb 13 53 25.5
comp=Z,31nm,1.2s
V53A Saluda 51.68 310 IAMs_20 IAMs_20 14 10 26.8
comp=Z,1µm,20.0s
VA03 San Esteban 51.97 218 P P 13 53 14.3 -0.2
VA03 IAMs_20 IAMs_20 14 15 22.2
comp=Z,1µm,20.0s
352A Blakely 51.98 304 IAMs_20 IAMs_20 14 09 49.1
comp=Z,2µm,22.0s
MT08 Bocatoma Ro 52.12 217 IAMs_20 IAMs_20 14 14 23.2
comp=Z,1µm,19.0s
PEL Peldehue 52.31 218 IAMs_20 IAMs_20 14 15 12.1
comp=Z,1µm,19.0s
BNI Bardonecchia 52.39 37 P P 13 53 17.1 -0.5
BNI IAmb IAmb 13 53 20.3
comp=Z,26nm,1.1s
BNI Bardonecchia 52.39 37 P P 13 53 17.1 -0.5
BNI pmax pmax
comp=Z,27nm,1.2s
TKL Tuckaleechee C 52.40 310 LR LR 14 10 50.5
comp=Z,699nm,21.6s,baz=124,slow=31
MT03 Universidad Ad 52.45 217 IAMs_20 IAMs_20 14 17 24.8
comp=Z,2µm,18.0s
MT13 San Alfonso 52.49 217 IAMs_20 IAMs_20 14 16 57.9
comp=Z,1µm,19.0s
LMEL Las Melosas 52.51 217 P P 13 53 18.3 -0.4
LMEL IAmb IAmb 13 53 24.2
comp=Z,40nm,1.2s
LMEL IAMs_20 IAMs_20 14 15 51.6
comp=Z,2µm,20.0s
TZTN Tazewell 52.55 311 IAMs_20 IAMs_20 14 12 20.9
comp=Z,1µm,20.0s
MT02 Curacav 52.66 218 IAMs_20 IAMs_20 14 15 53.6
comp=Z,1µm,20.0s
VA01 Torpederas 52.82 219 IAMs_20 IAMs_20 14 17 10.5
comp=Z,2µm,20.0s
BO04 La Punta 52.85 217 P P 13 53 20.7 -0.3
BO04 IAMs_20 IAMs_20 14 14 54.5
comp=Z,1µm,20.0s
MT09 Talagante 52.93 217 P P 13 53 21.0 -0.7
MT09 IAMs_20 IAMs_20 14 15 19.6
comp=Z,1µm,20.0s
MT01 Popeta 53.15 217 IAMs_20 IAMs_20 14 17 22.4
comp=Z,1µm,19.0s
SADO Sadowa 53.19 322 LR LR 14 12 29.6
comp=Z,593nm,19.9s,baz=136,slow=32
250A Grady 53.21 305 IAMs_20 IAMs_20 14 10 49.0
comp=Z,1µm,22.0s
BO01 Tunca 53.41 217 P P 13 53 24.8 -0.3
BO01 IAmb IAmb 13 53 30.1
comp=Z,43nm,1.2s
BO01 IAMs_20 IAMs_20 14 15 38.4
comp=Z,1µm,18.0s
BO02 Sierra Bellavi 53.51 216 IAMs_20 IAMs_20 14 17 29.0
comp=Z,2µm,18.0s
SCHQ Schefferville 53.66 338 P P 13 53 26.4 -0.3
comp=Z,6.4nm,0.7s,baz=66,slow=18,SNR=5.4
SCHQ LR LR 14 13 47.9
comp=Z,438nm,18.1s,baz=134,slow=33
comp=Z,6.4nm,0.7s
T50A Nancy 53.69 311 IAMs_20 IAMs_20 14 10 57.0
comp=Z,1µm,21.0s
R50A Paris 53.77 313 IAMs_20 IAMs_20 14 10 59.1
comp=Z,1µm,21.0s
Y49A Blount Mountai 53.87 307 IAMs_20 IAMs_20 14 11 40.4
comp=Z,1µm,20.0s
LRAL Lakeview Retre 54.10 306 IAMs_20 IAMs_20 14 11 27.5
comp=Z,1µm,21.0s
DOU Dourbes 54.17 31 dP P 13 53 30.9 +0.5
comp=Z,20nm,1.0s
VAE Valguarnera 54.20 49 LR LR 14 15 13.3
comp=Z,2µm,21.9s,baz=294,slow=35
EKA Eskdalemuir Ar 54.38 22 P P 13 53 30.3 -1.5
comp=Z,6.1nm,0.9s,baz=218,slow=7.6,SNR=7.1
comp=Z,6.1nm,0.9s
BMRD Maredsous 54.39 31 dP P 13 53 32.7 +0.7
R49A Shelbyville 54.39 312 IAMs_20 IAMs_20 14 11 28.6
comp=Z,1µm,21.0s
ECH Echery 54.42 34 IAMs_20 IAMs_20 14 13 28.6
comp=Z,1µm,21.0s
OSSC Osservatorio P 54.46 41 P P 13 53 31.5 -1.2
OSSC IAmb IAmb 13 53 41.0
comp=Z,32nm,1.1s
RCHB Rochefort 54.53 31 dP P 13 53 33.1 +0.1
comp=Z,10nm,1.1s
X48A Hartselle 54.55 307 IAMs_20 IAMs_20 14 12 10.3
comp=Z,1µm,20.0s
ML02 Panimavida 54.56 216 P P 13 53 33.1 -0.3
ML02 IAMs_20 IAMs_20 14 17 34.8
comp=Z,2µm,18.0s
BGES Gesves 54.60 31 dP P 13 53 34.4 +0.9
comp=Z,9.3nm,1.1s
BCLA Clavier 54.73 31 dP P 13 53 34.8 +0.3
comp=Z,11nm,1.2s
Z47A Carrollton 55.01 306 IAMs_20 IAMs_20 14 11 44.6
comp=Z,1µm,22.0s
BI02 San Fabin de 55.11 215 P P 13 53 37.0 -0.5
BI02 IAMs_20 IAMs_20 14 17 44.3
comp=Z,2µm,19.0s
DAVOX Davos/Dischmat 55.20 37 LR LR 14 14 56.7
comp=Z,1µm,19.4s,baz=258,slow=34
MEM Membach 55.20 31 dP P 13 53 38.3 +0.4
comp=Z,18nm,1.0s
BTNL Ternell 55.25 31 dP P 13 53 39.2 +0.9
comp=Z,13nm,1.1s
FUORN Ofenpass-Fuorn 55.35 37 IAMs_20 IAMs_20 14 13 41.3
comp=Z,2µm,20.0s
DAVA Damuels 55.46 36 i P P 13 53 39.7 -0.3
comp=Z,29nm,1.1s
FETA Feichten 55.83 37 eP P 13 53 42.0 -0.7
comp=Z,13nm,1.2s
RETA Reutte 56.08 36 i P P 13 53 44.1 -0.3
comp=Z,17nm,1.1s
MOTA Moosalm 56.21 36 i P P 13 53 45.1 -0.3
comp=Z,7.0nm,0.7s
SQTA Sankt Quirin 56.21 37 eP P 13 53 45.0 -0.3
comp=Z,20nm,1.0s
BI05 Punta Hualpn 56.28 216 IAMs_20 IAMs_20 14 17 24.2
comp=Z,1µm,20.0s
Y45A Yeager Farm, C 56.37 306 IAMs_20 IAMs_20 14 12 26.7
comp=Z,1µm,22.0s
WATA Walderalm 56.48 37 i P P 13 53 47.1 -0.3
comp=Z,10nm,0.8s
WTTA Wattenberg 56.48 37 i P P 13 53 47.0 -0.4
comp=Z,16nm,0.9s

ABTA Abfaltersbach 56.76 38 i P P 13 53 49.1 -0.1
comp=Z,18nm,1.1s,SNR=8.7
LESA Schwarzleotal 57.18 37 i P P 13 53 52.1 -0.2
comp=Z,12nm,1.0s
MYKA Terra Mystica 57.40 38 i P P 13 53 53.8 0.0
comp=Z,41nm,1.3s
PLCA Paso Flores 57.65 211 P P 13 53 55.6 0.0
comp=Z,19nm,1.1s,baz=25,slow=10,SNR=14
PLCA LR LR 14 19 29.7
comp=Z,4µm,18.0s,baz=48,slow=37
comp=Z,19nm,1.1s
PLCA Paso Flores 57.65 211 P 13 53 55.4 -0.2
PLCA IAmb IAmb 13 53 58.0
comp=Z,32nm,1.2s
PLCA Paso Flores 57.65 211 eP P 13 53 56.9 +1.3
L44A Lake County Fo 57.77 316 IAMs_20 IAMs_20 14 12 48.7
comp=Z,876nm,20.0s
LR03 Panguipulli 57.81 213 IAMs_20 IAMs_20 14 19 41.7
comp=Z,1µm,19.0s
OBKA Obir 57.90 39 i P P 13 53 57.6 +0.2
comp=Z,42nm,1.2s
LR05 Currie 58.05 213 P 13 53 58.2 -0.1
LR05 IAmb IAmb 13 54 00.0
comp=Z,35nm,1.1s
LR05 IAMs_20 IAMs_20 14 19 31.1
comp=Z,1µm,18.0s
FVM French Village 58.20 310 P 13 53 58.7 -0.8
FVM French Village 58.20 310 P P 13 53 58.7 -0.8
FVM pmax pmax
comp=Z,13nm,1.1s
BORG Borgarnes 58.25 7 LR LR 14 13 00.5
comp=Z,637nm,20.7s,baz=196,slow=30
SOKA Soboth 58.27 39 eP P 13 53 59.3 -0.7
comp=Z,35nm,1.0s,SNR=6.1
MOA Molln 58.33 37 eP P 13 53 59.6 -0.7
comp=Z,23nm,1.2s
GERES GERESS Array B 58.46 36 P P 13 53 59.9 -1.3
comp=Z,1.9nm,0.8s,baz=248,slow=7.1,SNR=8.2
GERES LR LR 14 16 04.7
comp=Z,898nm,21.7s,baz=252,slow=33
comp=Z,1.9nm,0.8s
TSUM Tsumeb 58.48 118 LR LR 14 13 34.2
comp=Z,1µm,20.6s,baz=308,slow=30
TSUM Tsumeb 58.48 118 IAMs_20 IAMs_20 14 13 23.1
comp=Z,1µm,20.0s
KHC Kasperske Hory 58.53 36 P 13 54 00.5 -1.1
KHC IAmb IAmb 13 54 11.9
comp=Z,23nm,1.5s
KHC IAMs_20 IAMs_20 14 14 35.3
comp=Z,1µm,22.0s
KHC Kasperske Hory 58.53 36 ceP P 13 54 01.8 +0.2
KHC pmax pmax
comp=Z,25nm,2.5s
KHC Kasperske Hory 58.53 36 eP P 13 54 01.5 -0.1
KHC AMS AMS 14 14 20.0
comp=Z,1µm,19.8s
KHC Kasperske Hory 58.53 36 P P 13 54 00.7 -0.9
comp=Z,14nm,1.6s
CKRC Cesky Krumlov 58.80 36 eP P 13 54 03.4 -0.1
CKRC MLR MLR
comp=Z,2µm,23.2s
CKRC Cesky Krumlov 58.80 36 eP P 13 54 03.4 -0.1
CKRC AMS AMS 14 15 50.0
comp=Z,2µm,23.2s
ARSA Arzberg 58.83 38 P P 13 54 02.7 -1.0
ARSA IAmb IAmb 13 54 18.6
comp=Z,16nm,1.0s
ARSA Arzberg 58.83 38 i P P 13 54 03.1 -0.6
comp=Z,12nm,1.1s
LL03 Petrohue 58.91 212 IAMs_20 IAMs_20 14 17 21.9
comp=Z,1µm,20.0s
ZVC Zvikov 59.03 35 eP P 13 54 04.5 -0.5
CLL Collm 59.28 33 eP P 13 54 08.0 +1.3
CLL i 13 54 11.5
CLL eS S 14 02 18.0 +3.1
CONA Conrad Observa 59.33 38 eP P 13 54 06.8 -0.5
comp=Z,18nm,1.2s,SNR=4.2
WIN Windhoek 59.36 121 IAMs_20 IAMs_20 14 13 24.1
comp=Z,992nm,22.0s
RONA Rosalia, Austr 59.49 38 i P P 13 54 08.2 -0.2
comp=Z,28nm,1.1s,SNR=6.1
LL05 Los Muermos 59.67 212 IAMs_20 IAMs_20 14 22 00.9
comp=Z,1µm,20.0s
P40A Paris 59.87 312 IAMs_20 IAMs_20 14 15 12.5
comp=Z,1µm,20.0s
NATX Nacogdoches 60.11 302 IAMs_20 IAMs_20 14 15 51.7
comp=Z,1µm,22.0s
KRUC Kravsky 60.14 37 eP P 13 54 10.7 -2.0
MORH Mrgy, Hungar 60.36 40 ⇑P P 13 54 14.3 0.0
VRAC Vranov 60.37 36 LR LR 14 17 01.8
comp=Z,945nm,21.8s,baz=253,slow=33
VRAC Vranov 60.37 36 ⇓P P 13 54 13.8 -0.5
VRAC Vranov 60.37 36 eP P 13 54 13.6 -0.7
VRAC Vranov 60.37 36 P P 13 54 13.8 -0.5
MODS Modra-Piesok 60.38 38 eP P 13 54 13.9 -0.4
MODS pmax pmax
comp=Z,37nm,1.0s
MODS Modra-Piesok 60.38 38 eP P 13 54 13.9 -0.4
SMOL Smolenice 60.52 38 eP P 13 54 15.8 +0.4
SMOL pmax pmax
comp=Z,13nm,1.3s
SFJD Kangerlussuaq 60.53 353 LR LR 14 15 45.5
comp=Z,193nm,19.4s,baz=174,slow=32
CHVC Chvalec 60.62 35 eP P 13 54 16.6 +0.6
CHVC Chvalec 60.62 35 eP P 13 54 16.6 +0.6
Z38A Mt. Pleasant 60.66 304 IAMs_20 IAMs_20 14 15 49.2
comp=Z,1µm,22.0s
DPC Dobruska-Polom 60.67 35 AMS AMS 14 14 50.0
comp=Z,1µm,21.3s
DPC Dobruska-Polom 60.67 35 P P 13 54 15.8 -0.6
comp=Z,12nm,1.2s
OSTC Ostas 60.70 35 eP P 13 54 17.5 +1.0
OSTC Ostas 60.70 35 eP P 13 54 17.5 +1.0
SRO Srobarova 60.78 39 eP P 13 54 18.1 +1.0
SRO pmax pmax
comp=Z,30nm,0.9s
SRO Srobarova 60.78 39 eP P 13 54 18.1 +1.0
HKT Hockley 60.80 300 IAMs_20 IAMs_20 14 17 19.3
comp=Z,874nm,21.0s
HKT Hockley 60.80 300 i P P 13 54 14.6 -2.9
HKT pmax pmax
comp=Z,17nm,1.4s
KRLC Kraliky 60.81 36 AMS AMS 14 16 00.0
comp=Z,1µm,22.9s
JAVC Velka Javorina 60.81 37 eP P 13 54 13.0 -4.4
KSP Ksiaz 60.88 35 P P 13 54 17.1 -0.6
comp=Z,13nm,1.3s
P38A Dawn 60.99 311 IAMs_20 IAMs_20 14 15 58.4
comp=Z,1µm,20.0s
N38A Joes South For 61.10 313 IAMs_20 IAMs_20 14 15 39.0
comp=Z,1µm,22.0s
MAUC Maruska 61.12 37 eP P 13 54 20.5 +1.1
MORC Moravsky Berou 61.13 36 ⇑P P 13 54 19.3 -0.2
MORC Moravsky Berou 61.13 36 eP P 13 54 15.1 -4.4
MORC Moravsky Berou 61.13 36 P P 13 54 19.3 -0.2
FRB Frobisher Bay 61.17 344 LR LR 14 17 30.5
comp=Z,468nm,19.5s,baz=136,slow=33
STEB Steborice 61.33 36 eP P 13 54 21.8 +1.0
BOVS Bovan 61.50 44 ⇑P P 13 54 22.2 +0.1
IDI Anoyia 61.71 54 LR LR 14 21 11.6
comp=Z,403nm,21.4s,baz=264,slow=36
PSZ Piszkesteto 61.80 39 ⇑P P 13 54 24.3 +0.1
PSZ Piszkesteto 61.80 39 P P 13 54 24.2 +0.1
EFI East Falkland 61.84 196 i P P 13 54 25.4 +1.3
EFI pmax pmax
comp=Z,30nm,1.1s
LANS Liptovska Anna 62.02 37 eP P 13 54 27.1 +1.6
LANS pmax pmax
comp=Z,6.0nm,1.0s
LANS Liptovska Anna 62.02 37 eP P 13 54 27.0 +1.6
BZS Buzias 62.09 42 ⇑P P 13 54 26.0 0.0
BZS Buzias 62.09 42 P P 13 54 25.9 0.0
GRTLG Ghanzi 62.44 119 P 13 54 28.4 -0.5
GRTLG IAmb IAmb 13 54 41.3
comp=Z,27nm,1.1s
Z35A Perchaven, San 62.54 304 IAMs_20 IAMs_20 14 16 56.1
comp=Z,1µm,22.0s
NIE Niedzica 62.62 37 eP P 13 54 29.8 +0.3
NIE Niedzica 62.62 37 P P 13 54 29.4 -0.1
comp=Z,5.4nm,1.2s
OJC Ojcow 62.63 36 eP P 13 54 29.7 +0.2
OJC Ojcow 62.63 36 P P 13 54 29.4 -0.2
comp=Z,18nm,1.1s
STHS Stebnicka Huta 63.19 38 eP P 13 54 33.6 +0.3
STHS Stebnicka Huta 63.19 38 eP P 13 54 33.6 +0.3
DRGR 63.19 41 ⇑P P 13 54 33.0 -0.4

DRGR 63.19 41 P P 13 54 33.0 -0.4
MARR Marisel-Cluj 63.42 41 ⇑P P 13 54 35.3 +0.3
LOT Lotru 63.47 43 ⇑P P 13 54 35.8 +0.4
HOLU Holmets 63.57 39 P P 13 54 35.8 0.0
KARP Karpathos 63.58 54 IAMs_20 IAMs_20 14 23 04.6
comp=Z,877nm,18.0s
KARP Karpathos 63.58 54 P P 13 54 35.6 -0.6
comp=Z,117nm,1.0s
BERU Beregovo 63.64 39 P P 13 54 36.2 0.0
SCO Scoresbysund 63.73 5 i P P 13 54 38.3 +1.8
SCO IAmb IAmb 13 54 48.4
comp=Z,23nm,1.2s
MUKU Mukachevo 63.74 39 P P 13 54 36.9 0.0
EZN Ezine 63.80 49 ⇑P P 13 54 38.7 +1.2
EZN Ezine 63.80 49 P P 13 54 38.6 +1.2
NB2 NORSAR Subarra 63.82 23 P P 13 54 36.3 -1.0
comp=Z,16nm,1.2s,baz=234,slow=6.5
NOA NORSAR Array B 63.82 23 P P 13 54 37.3 +0.1
comp=Z,7.9nm,0.9s,baz=234,slow=6.6,SNR=11
NOA LR LR 14 17 32.5
comp=Z,882nm,21.8s,baz=230,slow=32
comp=Z,7.9nm,0.9s
BRIU Brid 63.91 39 P P 13 54 38.0 0.0
ARR Arges 64.02 43 ⇑P P 13 54 39.1 +0.1
WMOK Wichita Mounta 64.03 305 IAMs_20 IAMs_20 14 17 19.3
comp=Z,1µm,22.0s
KWP Kalwaria Pacla 64.16 38 eP P 13 54 39.5 -0.2
HFS Hagfors 64.30 25 P P 13 54 38.9 -1.4
comp=Z,3.2nm,0.6s,baz=190,slow=6.0,SNR=8.7
HFS LR LR 14 18 42.0
comp=Z,820nm,21.1s,baz=247,slow=32
comp=Z,3.2nm,0.6s
SAATT Saattut 64.30 354 i P P 13 54 43.9 +3.7
SAATT IAmb IAmb 13 54 46.3
comp=Z,82nm,1.2s
VOIR 64.32 43 ⇓P P 13 54 40.9 0.0
VOIR 64.32 43 P P 13 54 40.9 0.0
ABTX Abilene, Hawle 64.42 303 IAMs_20 IAMs_20 14 19 51.8
comp=Z,966nm,20.0s
DOPR Dopca 64.70 42 ⇑P P 13 54 43.8 +0.4
BGNE Belgrade 64.85 312 IAMs_20 IAMs_20 14 18 30.3
comp=Z,884nm,20.0s
MLR Muntele Rosu 64.94 43 LR LR 14 23 06.9
comp=Z,740nm,19.0s,baz=249,slow=36
MLR Muntele Rosu 64.94 43 IAMs_20 IAMs_20 14 22 26.3
comp=Z,1µm,19.0s
MLR Muntele Rosu 64.94 43 ⇑P P 13 54 45.3 +0.2
MLR Muntele Rosu 64.94 43 P P 13 54 45.3 +0.2
BURAR Bucovina Array 65.08 41 ⇑P P 13 54 46.3 +0.5
BURAR Bucovina Array 65.08 41 P P 13 54 46.3 +0.5
COVR Voineasa-Covas 65.22 43 ⇑P P 13 54 46.4 -0.3
BAND Balkesir-Ban 65.24 49 ⇑P P 13 54 46.6 -0.3
ISR Istrita 65.25 43 ⇑P P 13 54 47.6 +0.7
ISR Istrita 65.25 43 P P 13 54 47.6 +0.7
SUMG Summit 65.27 359 i P P 13 54 47.0 0.0
SUMG IAmb IAmb 13 54 52.1
comp=Z,15nm,0.9s
ONER Baraj Valea Uz 65.48 42 ⇑P P 13 54 48.6 +0.2
ULM Lac du Bonnet 65.75 322 P P 13 54 49.0 -1.0
comp=Z,5.5nm,0.8s,baz=77,slow=4.8,SNR=4.0
ULM LR LR 14 18 45.8
comp=Z,557nm,21.2s,baz=112,slow=32
comp=Z,5.5nm,0.8s
ULM Lac du Bonnet 65.75 322 i P P 13 54 50.4 +0.4
JMIC Jan Mayen 65.88 9 LR LR 14 15 57.5
comp=Z,291nm,21.8s,baz=236,slow=29
SUW Suwalki 66.03 33 eP P 13 54 51.1 -0.6
SUW Suwalki 66.03 33 P P 13 54 51.0 -0.7
SUW Suwalki 66.03 33 P P 13 54 51.0 -0.7
HARR Harsova 66.09 44 ⇓P P 13 54 52.6 +0.3
HARR Harsova 66.09 44 P P 13 54 52.6 +0.3
K30B Basset 66.19 313 IAMs_20 IAMs_20 14 19 02.7
comp=Z,1µm,20.0s
AMTX Amarillo 66.41 305 IAMs_20 IAMs_20 14 18 55.4
comp=Z,922nm,21.0s
TPGR Topolog 66.47 44 ⇑P P 13 54 54.2 -0.6
RNPP5 Staryi Chortor 66.61 37 P P 13 54 54.9 -0.6
RNPP8 Varash 66.62 37 P P 13 54 55.0 -0.6
RNPP9 Sopachiv 66.67 37 P P 13 54 55.4 -0.5
LSZ Lusaka 66.90 110 IAMs_20 IAMs_20 14 17 14.2
comp=Z,796nm,21.0s
BORA Eskisehir 66.92 50 P 13 54 56.9 -1.0
BORA IAmb IAmb 13 54 59.0
comp=Z,15nm,1.1s
PABE Paberze 67.01 32 IAMs_20 IAMs_20 14 19 05.5
comp=Z,1µm,22.0s
MSTX Muleshoe 67.19 304 IAMs_20 IAMs_20 14 19 33.1
comp=Z,1µm,21.0s
SORM Soroca 67.25 41 ⇑P P 13 54 59.4 -0.3
SORM Soroca 67.25 41 P P 13 54 59.3 -0.3
LUBAR Lubar, Ukraine 67.36 39 P P 13 54 58.9 -1.4
LBTB Lobatse 67.48 121 LR LR 14 18 10.4
comp=Z,704nm,21.6s,baz=282,slow=30
LBTB Lobatse 67.48 121 P 13 54 59.2 -2.4
LBTB Lobatse 67.48 121 P P 13 54 59.2 -2.4
LBTB pmax pmax
comp=Z,60nm,1.6s
TXAR Lajitas Array 67.50 299 P P 13 55 02.0 +0.3
comp=Z,0.9nm,0.7s,baz=109,slow=6.8,SNR=11
TXAR LR LR 14 21 19.5
comp=Z,314nm,21.9s,baz=81,slow=33
comp=Z,0.9nm,0.7s
DBG Daneborg 67.57 4 i P P 13 55 02.1 +0.9
DBG IAmb IAmb 13 55 05.7
comp=Z,16nm,1.5s
MI28 Mi28,Pidlybu 67.59 38 P P 13 55 00.6 -1.1
OGNE Ogallala 67.62 311 IAMs_20 IAMs_20 14 18 47.9
comp=Z,962nm,21.0s
AK13 Malin Array Si 68.35 38 P P 13 55 05.6 -0.9
AK20 Malin Array Si 68.35 38 P P 13 55 05.7 -0.8
AK17 Malin Array Si 68.37 38 P P 13 55 05.4 -1.2
AK21 Malin Array Si 68.38 38 P P 13 55 05.5 -1.2
AK14 Malin Array Si 68.38 38 P P 13 55 05.5 -1.2
AK18 Malin Array Si 68.38 38 P P 13 55 05.5 -1.2
AK16 Malin Array Si 68.39 38 P P 13 55 05.6 -1.2
AK22 Malin Array Si 68.40 38 P P 13 55 05.6 -1.2
AK15 Malin Array Si 68.41 38 P P 13 55 05.7 -1.2
AK12 Malin Array Si 68.42 38 P P 13 55 05.7 -1.2
AK07 Malin Array Si 68.42 38 P P 13 55 05.8 -1.2
AK06 Malin Array Si 68.43 38 P P 13 55 05.8 -1.2
AK23 Malin Array Si 68.43 38 P P 13 55 05.8 -1.2
AK11 Malin Array Si 68.43 38 P P 13 55 05.9 -1.1
AK05 Malin Array Si 68.44 38 P P 13 55 05.9 -1.2
AK04 Malin Array Si 68.44 38 P P 13 55 05.9 -1.2
AK02 Malin Array Si 68.45 38 P P 13 55 06.0 -1.1
KIEV Kiev 68.46 38 P 13 55 06.2 -0.9
KIEV IAmb IAmb 13 55 08.2
comp=Z,26nm,1.3s
KIEV Kiev 68.46 38 ⇑P P 13 55 06.4 -0.9
KIEV Kiev 68.46 38 P P 13 55 06.3 -0.9
KIEV Kiev 68.46 38 P P 13 55 05.8 -1.4
comp=Z,72nm,1.1s
AK10 Malin Array Si 68.46 38 P P 13 55 05.7 -1.5
AK01 Malin Array Si 68.46 38 P P 13 55 05.7 -1.5
BOSA Boshof 68.47 124 P P 13 55 08.0 +0.1
comp=Z,16nm,0.9s,baz=300,slow=6.4,SNR=13
BOSA LR LR 14 19 08.3
comp=Z,1µm,21.0s,baz=304,slow=31
comp=Z,16nm,0.9s
BOSA Boshof 68.47 124 P P 13 55 07.8 0.0
BOSA Boshof 68.47 124 P P 13 55 08.0 +0.1
AK08 Malin Array Si 68.47 38 P P 13 55 05.8 -1.5
AKASG Malin Array Be 68.47 38 P P 13 55 06.1 -1.2
comp=Z,14nm,0.8s,baz=259,slow=6.0,SNR=29
AKASG LR LR 14 23 44.8
comp=Z,296nm,19.8s,baz=248,slow=35
comp=Z,14nm,0.8s
AKASG Malin Array Be 68.47 38 P P 13 55 05.4 -1.9
AKASG IAmb IAmb 13 57 00.7
comp=Z,18nm,1.1s
AKASG Malin Array Be 68.47 38 i P P 13 55 06.0 -1.2
AKASG pmax pmax
comp=Z,13nm,0.8s
AKBB Malin Array Si 68.47 38 P 13 55 06.4 -0.9
AKBB IAmb IAmb 13 55 08.1
comp=Z,29nm,1.3s
AKBB Malin Array Si 68.47 38 ceP P 13 55 06.8 -0.5
AKBB pmax pmax
comp=Z,24nm,1.3s
AKBB Malin Array Si 68.47 38 P P 13 55 05.8 -1.5
MNK Minsk 68.79 34 i P P 13 55 09.5 +0.3
MNK i 13 57 40.7
MNK i PPP PPP 13 59 19.7
MNK i S S 14 04 13.3 +0.5

MNK pmax pmax
comp=E,15nm,0.8s
MNK pmax pmax
comp=Z,37nm,0.9s
MNK pmax pmax
comp=N,45nm,1.0s
MNK MLR MLR
comp=Z,421nm,17.0s
MNK MLR MLR
comp=N,1μm,19.0s
MNK MLR MLR
comp=E,1μm,20.0s
BR105 Keskin Array S 69.30 50 P **P** 13 55 11.5 -1.4
comp=E,140nmcomp=E,13nm,1.2s
BR131 Keskin Array S 69.32 50 *i* P **P** 13 55 11.3 -1.7
BRTR Keskin Array B 69.32 50 P **P** 13 55 12.2 -0.7
comp=E,7.3nm,1.0s,baz=249,slow=5.5,SNR=24
BRTR LR LR 14 27 29.2
comp=E,282nm,19.1s,baz=249,slow=38
comp=E,7.3nm,1.0s
BRTR Keskin Array B 69.32 50 *i* P **P** 13 55 12.3 -0.7
BRTR pmax pmax
comp=Z,8.0nm,1.0s
EIL Elat 69.42 61 LR LR 14 26 39.3
comp=Z,2μm,19.5s,baz=346,slow=37
KIRS Kirsehir-Merke 69.45 51 ⇑P **P** 13 55 14.0 +0.3
MMAI Mount Meron Ar 70.02 58 P **P** 13 55 16.4 -1.0
comp=Z,1.4nm,0.5s,baz=235,slow=17,SNR=3.5
MMAI LR LR 14 27 07.8
comp=Z,255nm,21.8s,baz=252,slow=37
comp=Z,1.4nm,0.5s
GHAJ Ghor Haditha 70.04 59 IAMs_20 IAMs_20 14 25 15.1
comp=Z,671nm,21.0s
DAG Danmarks Havn 70.06 4 *i* P **P** 13 55 15.8 -0.9
DAG IAmb IAmb 13 55 27.0
comp=Z,8.8nm,0.9s
ISCO Idaho Springs 70.16 310 IAMs_20 IAMs_20 14 22 19.0
comp=Z,608nm,18.0s
FINES FINESS Array B 70.27 27 P **P** 13 55 16.0 -2.2
comp=Z,10nm,0.8s,baz=268,slow=5.2,SNR=14
FINES LR LR 14 24 02.0
comp=Z,832nm,19.3s,baz=246,slow=34
comp=Z,10nm,0.8s
ANMO Albuquerque 70.31 304 LR LR 14 22 17.7
comp=Z,1μm,21.6s,baz=194,slow=33
ANMO Albuquerque 70.31 304 IAMs_20 IAMs_20 14 21 54.9
comp=Z,950nm,22.0s
ANMO Albuquerque 70.31 304*ce* P **P** 13 55 17.4 -1.9
ANMO pmax pmax
comp=Z,11nm,1.7s
LODK Lodwar 70.55 89 P **P** 13 55 20.3 -0.6
NEEM North Greenlan 70.63 356 *i* P **P** 13 55 19.5 -1.0
NEEM IAmb IAmb 13 55 22.6
comp=Z,37nm,1.4s
FFC Flin Flon 70.64 326 IAMs_20 IAMs_20 14 20 24.5
comp=Z,981nm,19.0s
K22A Casper 71.20 313 IAMs_20 IAMs_20 14 22 00.5
comp=Z,960nm,20.0s
ASF Jabal al Asfar 71.23 59 LR LR 14 30 06.5
comp=Z,277nm,18.7s,baz=290,slow=39
TULEG Thule 71.56 352 *i* P **P** 13 55 26.7 +0.9
TULEG IAmb IAmb 13 55 31.9
comp=Z,19nm,1.1s
ANN Anapa 72.77 45 *e*P **P** 13 55 29.0 -4.6
ANN *e*S **S** 14 04 56.6 -2.9
ANN pmax pmax
comp=Z,23nm,0.6s
LPIG La Paz 73.28 293 LR LR 14 26 05.2
comp=Z,254nm,21.7s,baz=86,slow=34
FURI Furi 73.29 83 IAMs_20 IAMs_20 14 25 36.1
comp=Z,683nm,20.0s
ARCES ARCESS Array B 73.32 19 P **P** 13 55 35.5 -0.9
comp=Z,20nm,1.1s,baz=248,slow=4.5,SNR=12
ARCES LR LR 14 24 39.9
comp=Z,326nm,19.4s,baz=238,slow=33
comp=Z,20nm,1.1s
ARCES ARCESS Array B 73.32 19 P **P** 13 55 36.0 -0.4
ARCES ARCESS Array B 73.32 19 P **P** 13 55 36.0 -0.4
ARCES pmax pmax
comp=Z,53nm,1.5s
PDAR Pinedale Array 73.44 312 P **P** 13 55 36.6 -1.3
comp=Z,3.4nm,0.9s,baz=99,slow=6.0,SNR=22
PDAR LR LR 14 23 35.2
comp=Z,481nm,21.8s,baz=102,slow=32
comp=Z,3.4nm,0.9s
PDAR Pinedale Array 73.44 312 P **P** 13 55 37.2 -0.8
BW06 Boulder Array 73.44 312 IAMs_20 IAMs_20 14 23 12.7
comp=Z,871nm,21.0s
OBN Obninsk 73.81 35 LR LR 14 28 29.7
comp=Z,240nm,18.0s,baz=202,slow=36
OBN Obninsk 73.81 35‖ *e*P **P** 13 55 39.9 +0.4
OBN *e* 13 58 25.0
OBN *e*S **S** 14 05 15.1 +4.3
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN MLR MLR
comp=Z,367nm,17.0s
SOC Sochi 74.28 47 *e*P **P** 13 55 39.7 -2.8
SOC *e* 13 58 23.0
SOC *e*PPP PPP 14 00 12.6
SOC *e*S **S** 14 05 16.3 -0.3
SOC pmax pmax
comp=Z,21nm,1.0s
SOC MLR MLR
comp=Z,268nm,17.0s
WUAZ Wupatki 74.37 305 IAMs_20 IAMs_20 14 23 19.1
comp=Z,991nm,22.0s
FLWY Flagg Ranch 74.39 314 IAMs_20 IAMs_20 14 24 25.7
comp=Z,832nm,20.0s
VSLR Vesyoloye 74.50 47 *i* P **P** 13 55 44.4 +0.6
MOS Moscow 74.51 34 *e*P **P** 13 55 42.1 -1.5
MOS *e* 13 55 55.7
MOS pmax pmax
comp=Z,34nm,0.7s
FXWY Fox Creek 74.59 313 IAMs_20 IAMs_20 14 23 58.9
comp=Z,1μm,21.0s
VSR Storozhevoye 74.73 39 *e*P **P** 13 55 41.9 -3.1
VSR pmax pmax
comp=Z,20nm,1.0s
LPSR Galich'ya Gora 74.78 37 *e*P **P** 13 55 41.7 -3.5
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 74.78 39 *e*P **P** 13 55 42.8 -2.5
VORD pmax pmax
comp=Z,50nm,1.0s
NOR Nord 74.78 3 *i* P **P** 13 55 45.7 +0.9
NOR IAmb IAmb 13 55 49.8
comp=Z,15nm,1.3s
VORR Voronezh 74.82 38 *e*P **P** 13 55 43.9 -1.6
VORR pmax pmax
comp=Z,24nm,1.4s
HWUT Hardware Ranch 74.83 311 IAMs_20 IAMs_20 14 25 03.7
comp=Z,826nm,21.0s
PMSA Palmer Station 74.95 192 LR LR 14 26 03.2
comp=Z,148nm,20.9s,baz=358,slow=34
RES Resolute Bay 75.22 346 LR LR 14 25 39.9
comp=Z,263nm,20.3s,baz=142,slow=33
APA Apatity 75.32 22‖ *e*P **P** 13 55 46.2 -1.9
APA *e* 13 58 45.4
KBS Kingsbay 75.33 8*ce* P **P** 13 55 49.2 +1.2
KBS pmax pmax
comp=Z,18nm,1.0s
SPITS Spitsbergen Ar 75.55 10 LR LR 14 24 07.0
comp=Z,274nm,18.6s,baz=236,slow=32
VRH Novokhopyorsk 76.33 39 *e*P **P** 13 55 53.1 -1.1
VRH pmax pmax
comp=Z,20nm,1.3s
KLMR Klimovskoe 76.37 29 *e*P **P** 13 55 51.8 -2.4
KLMR pmax pmax
comp=Z,72nm,1.2s
SHA1 Shidzhatmaz 76.42 47 *i* P **P** 13 55 54.4 -0.8
KIV Kislovodsk 76.45 47 *e*P **P** 13 55 54.7 -0.5
KIV pmax pmax
comp=Z,14nm,1.1s
KBZ Khabaz 76.59 47 P **P** 13 55 55.8 0.0
comp=Z,8.9nm,1.0s,baz=343,slow=1.7,SNR=16
KBZ LR LR 14 30 14.4
comp=Z,224nm,22.0s,baz=290,slow=36
comp=Z,8.9nm,1.0s
KBZ Khabaz 76.59 47*ce* P **P** 13 55 55.6 -0.2
KBZ pmax pmax
comp=Z,11nm,0.9s
NEE2 Needles Airpor 77.01 304 IAMs_20 IAMs_20 14 26 24.2
comp=Z,942nm,19.0s
HLID Hailey 77.04 313 IAMs_20 IAMs_20 14 25 52.8
comp=Z,906nm,20.0s
ELK Elko 77.57 310 LR LR 14 26 34.9
comp=Z,692nm,21.7s,baz=102,slow=33
GNI Garni 77.86 51 LR LR 14 31 40.2
comp=Z,373nm,22.0s,baz=280,slow=37
GNI Garni 77.86 51*ce* P **P** 13 56 02.5 -0.7
GNI pmax pmax
comp=Z,10.0nm,1.3s
SHOC Shoshone, Teco 78.36 305 IAMs_20 IAMs_20 14 25 46.8
comp=Z,702nm,21.0s
PFO Pinyon Flats O 78.55 303 LR LR 14 27 18.3
comp=Z,447nm,21.8s,baz=101,slow=33
PFO Pinyon Flats O 78.55 303 *i* P **P** 13 56 06.3 -0.9
PFO pmax pmax
comp=Z,31nm,3.0s
YKA Yellowknife Ar 78.58 332 P **P** 13 56 06.0 -0.5
comp=Z,1.6nm,0.7s,baz=105,slow=5.6,SNR=5.8
YKA LR LR 14 28 15.7
comp=Z,698nm,19.2s,baz=85,slow=34
comp=Z,1.6nm,0.7s
WCT Wildcat Mounta 78.64 306 P **P** 13 56 07.2 -0.4
NEW Newport 79.08 318 LR LR 14 29 20.7
comp=Z,332nm,18.6s,baz=92,slow=34
BFSC Mount Baldy Ra 79.53 303 IAMs_20 IAMs_20 14 26 52.9
comp=Z,805nm,20.0s
CWC Cottonwood Cre 79.81 306 IAMs_20 IAMs_20 14 29 54.2
comp=Z,624nm,21.0s
MAK Makhachkala 79.94 48 *e*P P 13 56 07.2 -7.2
MAK *e*S S 14 06 08.6 -10
MAK *e*SS **SS** **14 11 28.3 +0.6**
MAK *e*SSS SSS 14 14 42.1
MAK pmax pmax
comp=Z,131nm,0.9s
MAK MLR MLR
comp=Z,469nm,15.0s
NVAR Mina Array Bea 79.94 308 P **P** 13 56 14.4 -0.4
comp=Z,3.3nm,1.0s,baz=84,slow=5.4,SNR=17
comp=Z,3.3nm,1.0s
BELG Belogornoye 80.06 38 LR LR 14 27 26.5
comp=Z,390nm,22.0s,baz=277,slow=33
BELG Belogornoye 80.06 38 *i* P **P** 13 56 14.0 -0.8
BELG pmax pmax
comp=Z,4.0nm,1.1s
KIRV Kirov 81.16 32 LR LR 14 29 19.9
comp=Z,594nm,21.9s,baz=269,slow=34
KIRV Kirov 81.16 32*ce* P **P** 13 56 20.9 +0.3
BEKR Beckworth 81.49 309 **P** 13 56 22.3 -0.7
CMB Columbia Colle 81.59 307 P **P** 13 56 22.4 -1.0
CMB Columbia Colle 81.59 307 P **P** 13 56 22.5 -1.0
CMB pmax pmax
comp=Z,4.0nm,1.0s
SNAA Sanae 81.65 170 P **P** 13 56 25.9 +2.9
comp=Z,2.8nm,0.7s,baz=300,slow=7.1,SNR=6.6
SNAA Sanae 81.65 170 P **P** 13 56 24.8 +1.8
SNAA Sanae 81.65 170*ce* P **P** 13 56 23.4 +0.4
SNAA pmax pmax
comp=Z,6.0nm,1.3s
K05A Summer Lake 81.78 312 P **P** 13 56 24.9 +0.4
K05A IAmb IAmb 13 56 52.4
comp=Z,51nm,1.8s
ORV Oroville 82.39 309 P **P** 13 56 26.5 -1.0
ORV Oroville 82.39 309 P **P** 13 56 26.5 -1.0
ORV pmax pmax
comp=Z,10.0nm,1.3s
J04A Umpqua Nationa 82.65 313 P **P** 13 56 27.7 -1.4
J04A IAmb IAmb 13 56 41.9
comp=Z,15nm,0.9s
A36M Sachs Harbour 83.08 342 IAMs_20 IAMs_20 14 29 23.3
comp=Z,723nm,22.0s
BBOR Butler Butte 83.08 312 P **P** 13 56 29.4 -1.9
HOPS Hopland Field 83.64 308 IAMs_20 IAMs_20 14 32 15.3
comp=Z,689nm,21.0s
NVL N'lazarevskaya 84.00 166 *e*P **P** 13 56 37.0 +1.9
NVL *e* 13 59 50.6
NVL *e*PPP PPP 14 01 42.6
NVL *e*S **S** **14 06 59.3 +0.3**
NVL *e*SS **SS** **14 12 31.2 +3.8**
NVL *e*SSS SSS 14 16 00.9
NVL pmax pmax
comp=Z,6.0nm,0.6s
NVL smax smax
comp=N,243nm,12.7s
NVL MLR MLR
comp=Z,121nm,22.0s
BBB Bella Bella 85.95 322 LR LR 14 31 36.8
comp=Z,360nm,20.3s,baz=72,slow=33
ARTI Arti 86.12 34 LR LR 14 33 12.4
comp=Z,393nm,20.0s,baz=272,slow=34
ARTI Arti 86.12 34 **P** 13 56 45.5 -0.7
ARTI IAmb IAmb 13 57 04.0
comp=Z,30nm,1.4s
ARTI Arti 86.12 34*d* *i*P **P** 13 56 47.6 +1.5
ARTI 14 00 02.4
ARTI S **SKSac** **14 07 13.0 +0.7**
ARTI SS **SS** **14 13 01.6 +2.9**
ARTI pmax pmax
comp=Z,20nm,1.2s
INK Inuvik 86.28 338 LR LR 14 32 34.7
comp=Z,674nm,19.8s,baz=100,slow=34
AKTO Aktyubinsk 86.66 40 LR LR 14 34 56.0
comp=Z,347nm,20.8s,baz=246,slow=35
SVE Sverdlovsk 87.29 33 *e*P **P** 13 56 52.5 +0.7
N32M Quiet Lake 87.36 331 IAMs_20 IAMs_20 14 34 02.5
comp=Z,628nm,18.0s
AB31 Akbulak array 88.06 41 **P** 13 56 54.2 -1.5
AB31 IAmb IAmb 13 57 14.7
comp=Z,13nm,1.6s
ABKAR Akbulak array 88.06 41 **P** 13 56 54.9 -0.8
O29M Mount Kennedy 90.18 331 IAMs_20 IAMs_20 14 29 40.9
comp=Z,577nm,21.0s
CTGM Chitina Glacie 91.30 332 IAMs_20 IAMs_20 14 36 39.5
comp=Z,684nm,20.0s
SYO Syowa Base 91.43 160⇑ *e*P **P** 13 57 08.6 -2.3
ILAR Eielson Array 92.40 336 P **P** 13 57 19.1 +3.5
comp=Z,1.5nm,1.0s,baz=52,slow=3.5,SNR=5.7
ILAR LR LR 14 36 45.9
comp=Z,737nm,19.4s,baz=62,slow=34
DIV Divide 93.29 333 IAMs_20 IAMs_20 14 36 49.8
comp=Z,686nm,20.0s
BORK Borovoye 93.58 36 *i* P **P** 13 57 21.5 +0.2
BORK pmax pmax
comp=Z,6.0nm,1.8s
BVAR Borovoye Array 93.63 36 P **P** 13 57 22.4 +0.9
comp=Z,0.6nm,0.5s,baz=304,slow=3.3,SNR=4.3
BVAR LR LR 14 37 54.9
comp=Z,440nm,20.7s,baz=278,slow=35
comp=Z,0.6nm,0.5s
KDAK Kodiak Island 97.83 331 LR LR 14 41 47.2
comp=Z,709nm,18.8s,baz=60,slow=35
KURBB Kurchatov Arra 99.20 36 P **Pdif** 13 57 47.8 +0.9
comp=Z,0.6nm,0.9s,baz=292,slow=5.3,SNR=4.4
comp=Z,0.6nm,0.9s
KURK Kurchatov 99.22 36 IAMs_20 IAMs_20 14 38 34.4
comp=Z,468nm,22.0s
KURK Kurchatov 99.22 36 P **Pdif** 13 57 47.8 +0.9
AAK Ala-Archa 99.49 45 IAMs_20 IAMs_20 14 43 03.4
comp=Z,380nm,21.0s
MKAR Makanchi Array 103.05 39 P **Pdif** 13 58 07.4 +3.2
comp=Z,0.6nm,0.8s,baz=251,slow=3.7,SNR=3.6
TAOE Nuku Hiva Isla 105.55 263 eLR LR 14 33 02.6
comp=Z,324nm,24.9s
WMQ Urumqi 107.81 40 Pdif **Pdif** 13 58 26.3 +0.9
WMQ LR LR
comp=N,630nm,18.1s
WMQ LR LR
comp=E,560nm,22.1s
WMQ LR LR
comp=Z,460nm,20.1s
SBA Scott Base 108.51 185 IAMs_20 IAMs_20 14 48 27.4
comp=Z,536nm,20.0s
HYBB Hyderabad (bro 110.35 68 *e*PKiKP **PKiKP** **14 02 37.2 -1.2**
TBI Tubuai 114.87 248 *e*S 14 10 22.7
TBI *e*SS SS 14 19 26.9 -14
comp=Z,2μm,33.2s
TBI Tubuai 114.87 248 eLQ LQ 14 31 14.8
comp=Z,2μm,33.2s
TBI eLR LR 14 37 06.8
TBI comp=Z,1μm,29.5s eLR LR 14 37 12.6
comp=Z,3μm,30.0s
PPT2 Papeete2 115.13 254 *e*P **PKiKP** **14 02 49.1 +1.6**
PPT2 comp=Z,32nm,23.0s *e*S 14 10 26.1
PPT2 comp=Z,110nm,24.2s *e*SS SS 14 19 25.6 -20
comp=Z,285nm,30.8s
PPT2 Papeete2 115.13 254 eLQ LQ 14 31 11.0
comp=Z,698nm,35.2s
PPT2 eLR LR 14 37 24.5
comp=Z,350nm,25.0s
PPT2 eLR LR 14 37 24.6
comp=Z,364nm,24.0s
ULN Ulaanbaatar 115.91 27 *i* PKIKP **PKiKP** **14 02 47.1 -1.3**
LZH Lanzhou 122.37 39 *e*P PKPdf 14 02 46.9 -14
LZH sP PKiKP 14 02 57.8 -3.6
LZH pmax pmax
comp=Z,17nm,1.2s
BTO Baotou 122.73 31 *e*PKP **PKPdf** **14 02 57.0 -4.7**
BTO PP **PP** **14 04 33.4 -5.0**
BTO Baotou 122.73 31 SS SS 14 21 12.9 -7.7
BTO pmax pmax
comp=Z,17nm,0.5s
BTO pmax pmax
comp=Z,170nm,4.0s
BTO LR LR
comp=N,860nm,17.5s
BTO LR LR
comp=E,610nm,12.9s
BTO LR LR
comp=Z,1μm,17.7s
HHC Hu-ho-hao-te 123.32 30 *e*P **PKPdf** **14 02 58.3 -4.5**
HHC LR LR
comp=N,460nm,19.3s
HHC LR LR
comp=E,410nm,21.0s
HHC LR LR
comp=Z,910nm,21.0s
TNCH TengChong 124.88 53 *e*PKP **PKPdf** **14 03 04.5 -1.8**
TNCH PP **PP** **14 04 56.3 +2.4**
TNCH LR LR
comp=N,420nm,15.0s
TNCH LR LR
comp=E,290nm,15.4s
TNCH LR LR
comp=Z,780nm,16.5s
PZH PanZhiHua 126.61 49 PKP **PKPdf** **14 03 08.1 -1.4**
CMAR Chiang Mai Arr 128.25 60 PKP **PKPdf** **14 03 12.4 -0.3**
comp=Z,0.7nm,0.8s,baz=289,slow=3.5,SNR=4.8
SLVN Son La 131.01 54 IAMs_20 IAMs_20 14 48 35.4
comp=Z,443nm,22.0s
NJ2 Nanjing 133.84 31 *e*P **PKPdf** **14 03 22.4 -0.5**
NJ2 pmax pmax
comp=Z,18nm,0.6s
QIZ Qiongzhong 136.95 52 PKP **PKPdf** **14 03 27.1 -1.9**
QIZ PP **PP** **14 06 11.0 -0.8**
MSVF Nonsavu 145.75 249 *i* PKP2 **PKPdf** **14 03 45.0 +0.1**
ASAR Alice Springs 160.75 149 PKP **PKPdf** **14 04 05.0 -1.2**
comp=Z,0.4nm,1.0s,baz=209,slow=5.0,SNR=2.0
ASAR PKPab **PKPab** **14 04 48.4 +0.3**
comp=Z,0.8nm,0.9s,baz=208,slow=4.8,SNR=5.4
WRA Warramunga Arr 163.97 143 PKP **PKPdf** **14 04 08.2 -1.3**
comp=Z,0.6nm,1.0s,baz=259,slow=1.3,SNR=2.3
WRA PKPab **sPKPab** **14 05 04.8 -0.1**
comp=Z,2.6nm,1.1s,baz=208,slow=2.3,SNR=5.2

IDC 13 13:44:07.7±5.0, 13°.02N×51°.19E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=120.1km s-min=49.4km az=78.0, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**42.61**	**32**	P	P	13 52 05.4	-0.3
	0.3nm,0.5s,baz=217,slow=8.1,SNR=5.0						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**43.62**	**25**	P	P	13 52 13.8	+0.1
	0.1nm,0.4s,baz=224,slow=7.8,SNR=1.8						
	0.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**46.18**	**77**	P	P	13 52 34.7	0.0
	0.4nm,0.3s,baz=273,slow=9.2,SNR=7.6						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**88.63**	**115**	P	P	13 57 03.3	-0.1
	0.2nm,0.7s,baz=283,slow=4.8,SNR=1.7						
	0.2nm,0.7s						

*NOU **13** 13:45:25.8, 11°.00S×165°.96E, h0km, mb4.7/6, Santa Cruz Islands*
*IDC **13** 13:45:27.8±3.6, 10°.91S×166°.02E, h66km±30km, mb3.8/7, mbtmp4.2/9, ML4.4/2, MS3.8/6, Error ellipse: s-maj=29.2km s-min=17.5km az=54.0*

ISC 13 13:45:27.6±1.0, 10°.9S±0°.1×166°.1E±0°.1, h61km, n24, σ1s08/18, mb4.0/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.63**	**166**	P	**Pn**	**13 46 35.8**	**+0.7**
HNR	**Honiara**	**6.20**	**283**	P	**Pn**	**13 46 57.2**	**+0.7**
	28nm,0.3s,baz=138,slow=2.9,SNR=19						
HNR				S	**Sn**	**13 48 06.1**	**0.0**
	47nm,0.7s,baz=358,slow=20,SNR=2.0						
HNR				LR	LR	13 49 28.4	
	comp=Z,228nm,20.1s,baz=148,slow=39						
	178nm,0.6s						
HNR	**Honiara**	**6.20**	**283**	P	**Pn**	**13 46 57.2**	**+0.7**
SAVO	**Savo Central**	**6.40**	**285**	P	**Pn**	**13 47 00.4**	**+1.1**
KOUNC	**Koumac, New Ca**	**9.73**	**190**	P	**Pn**	**13 47 45.4**	**+0.6**
DZM	**Mont Dzumac**	**11.10**	**178**	P	**Pn**	**13 48 04.1**	**+0.5**
	0.8nm,0.3s,baz=155,slow=21,SNR=12						
DZM				S	**Sn**	**13 50 04.4**	**-1.8**
	2.1nm,0.3s,baz=149,slow=22,SNR=2.2						
DZM				LR	LR	13 51 36.1	
	comp=Z,40nm,21.3s,baz=26,slow=33						
	2.1nm,0.3s						
YATNC	**Mamie plateau,**	**11.11**	**176**	P	**Pn**	**13 48 04.9**	**+1.2**
PINNC	**Pines Island,**	**11.70**	**174**	P	**Pn**	**13 48 13.7**	**+1.9**
PMG	**Port Moresby**	**18.67**	**273**	LR	LR	13 55 39.4	
	comp=Z,114nm,19.4s,baz=147,slow=33						
URZ	**Urewera**	**28.97**	**162**	P	**P**	**13 51 21.6**	**+0.3**
	4.4nm,0.6s,baz=260,slow=2.9,SNR=1.8						
	4.4nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**29.23**	**1**	T	T	14 21 57.6	
	baz=181,slow=76,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	**29.23**	**1**	T	T	14 21 53.7	
	baz=181,slow=76,SNR=3.1						
H11S1	**WAKE ISLAND Hy**	**29.25**	**1**	T	T	14 21 56.5	
	baz=181,slow=76,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	14 23 29.3	
	baz=183						
H11N3	**WAKE ISLAND Hy**	**30.45**	**2**	T	T	14 23 29.7	
	baz=183						
H11N2	**WAKE ISLAND Hy**	**30.47**	**2**	T	T	14 23 30.6	
	baz=183						
STKA	**Stephens Creek**	**30.75**	**224**	LR	LR	14 03 16.2	
	comp=Z,56nm,18.1s,baz=24,slow=35						
WRA	**Warramunga Arr**	**31.82**	**250**	P	**P**	**13 51 46.1**	**-0.7**
	2.8nm,0.8s,baz=79,slow=9.1,SNR=11						
	2.8nm,0.8s						
ASAR	**Alice Springs**	**33.13**	**243**	P	**P**	**13 51 57.0**	**-1.2**
	1.2nm,0.8s,baz=66,slow=10,SNR=19						
ASAR				PcP	**PcP**	**13 54 39.7**	**-0.6**
	0.2nm,0.6s,baz=72,slow=2.5,SNR=5.0						
ASAR				LR	LR	14 04 30.7	
	comp=Z,54nm,18.8s,baz=110,slow=34						
	1.2nm,0.8s						
VNDA	**Vanda**	**66.62**	**181**	P	**P**	**13 56 10.4**	**-0.8**
	0.6nm,0.8s,baz=8.5,slow=4.9,SNR=4.0						
	0.6nm,0.8s						
QSPA	**South Pole Qui**	**79.08**	**180**	P	**P**	**13 57 26.8**	**+1.5**
	1.0nm,0.8s,baz=5.3,slow=2.3,SNR=4.0						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**83.30**	**18**	P	**P**	**13 57 46.4**	**-0.9**
	0.9nm,0.5s,baz=233,slow=5.1,SNR=11						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**93.64**	**317**	P	**P**	**13 58 37.3**	**-0.1**
	0.5nm,0.7s,baz=86,slow=6.6,SNR=2.9						
MKAR				LR	LR	14 41 49.9	
	comp=Z,340nm,21.9s,baz=278,slow=36						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**96.79**	**320**	LR	LR	14 43 14.4	
	comp=Z,288nm,19.2s,baz=157,slow=36						

*IDC **13** 13:50:07.9±1.4, 28°.34N×141°.94E, h0km, mb3.8/6, mbtmp3.9/9, ML3.3/3, Error ellipse: s-maj=57.2km s-min=15.5km az=74.0*
*JMA **13** 13:50:10.9±0.3, 28°.6N±0°.6×14°3E±°, h58km, MV4.0/20, NEAR CHICHIJIMA ISLAND*

ISC 13 13:50:09.7±0.8, 28°.39N±0°.06×141°.9E±0°.2, h10km, n21, σ2s43/20, mb3.9/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.31**	**169**	P	Pg	13 50 38.8	+3.9
JCJ	**Chichijima**	**1.31**	**169**	Pn	**Pn**	**13 50 30.8**	**-3.3**

	70nm,0.3s,baz=277,slow=22,SNR=27						
JCJ				Sn	**Sb**	**13 50 47.0**	**-4.3**
	157nm,0.3s,baz=291,slow=22,SNR=16						
JHH2	**Haha-jima-NKT2**	**1.77**	**172**	P	**Pg**	**13 50 44.6**	**+1.0**
JHH2				*eS*	**Sg**	**13 51 09.9**	**+3.4**
JHJ2	**Mitsune**	**5.04**	**340**	*eP*	Pn	13 51 29.4	+4.1
JHJ	**Hachijo jima 2**	**5.06**	**339**	Pn	**Pn**	**13 51 26.5**	**+0.9**
	3.0nm,0.3s,baz=72,slow=20,SNR=1.5						
JHJ				Sn	**Sn**	**13 52 23.3**	**-0.8**
	4.9nm,0.3s,baz=63,slow=17,SNR=1.4						
	90nm,1.0s						
BSO1	**Boso 1**	**6.30**	**353**	*eP*	**Pn**	**13 51 45.3**	**+3.1**
BSO3	**Boso 3**	**6.50**	**350**	*eP*	**Pn**	**13 51 48.4**	**+3.1**
JRY	**Ryogami san**	**8.02**	**342**	*eP*	Pn	13 52 10.3	+3.9
JHO	**Hitachi**	**8.28**	**352**	*eP*	**Pn**	**13 52 11.4**	**+1.6**
JHO				*eS*	**Sn**	**13 53 38.8**	**-4.6**
JAG	**Ashikaga**	**8.28**	**346**	P	**Pn**	**13 52 12.4**	**+2.6**
MJAR	**Matsushiro Arr**	**8.71**	**340**	Pn	**Pn**	**13 52 17.8**	**+2.0**
	0.1nm,0.3s,baz=157,slow=12,SNR=4.3						
	0.7nm,0.3s						
JOW	**Kunigami**	**12.19**	**266**	Pn	**Pn**	**13 53 03.6**	**+0.1**
	0.6nm,0.3s,baz=94,slow=15,SNR=2.2						
	13nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**24.35**	**105**	T	T	14 21 06.5	
	baz=296,slow=75,SNR=67						
H11N1	**WAKE ISLAND Hy**	**24.36**	**105**	T	T	14 21 06.7	
	baz=296,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**24.37**	**105**	T	T	14 21 07.8	
	baz=296,slow=75,SNR=50						
WRA	**Warramunga Arr**	**48.60**	**190**	P	**P**	**13 58 54.3**	**+0.6**
	1.6nm,0.5s,baz=11,slow=8.6,SNR=17						
	1.6nm,0.5s						
MKAR	**Makanchi Array**	**49.47**	**309**	P	**P**	**13 58 59.1**	**-1.0**
	0.2nm,0.6s,baz=96,slow=9.3,SNR=1.8						
MKAR				PcP	**PcP**	**14 00 22.4**	**+0.2**
	0.4nm,0.5s,baz=96,slow=3.7,SNR=3.6						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**51.97**	**314**	P	**P**	**13 59 18.1**	**-0.7**
	0.5nm,0.5s,baz=92,slow=9.4,SNR=6.6						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**52.33**	**189**	P	**P**	**13 59 22.1**	**+0.3**
	0.4nm,0.7s,baz=13,slow=7.4,SNR=7.4						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**56.93**	**317**	P	**P**	**13 59 54.3**	**-0.7**
	0.6nm,0.4s,baz=102,slow=5.4,SNR=3.6						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**76.68**	**334**	P	**P**	**14 02 01.0**	**+0.4**
	1.5nm,0.7s,baz=57,slow=5.9,SNR=7.8						
	1.5nm,0.7s						

SOME 13 13:51:18.4, 42°95N × 77°32E, h5km, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.28**	**288**	*eP*	Pg	13 51 24.4	+0.3
	0.2nm,0.0s						
TNSS				*eS*	Sg	13 51 28.8	+0.9
	1.5nm,0.1s						
KOTS	**Kotyrbulak**	**0.32**	**332**	*eP*	Pg	13 51 25.3	+0.6
	7.6nm,0.1s						
KOTS				*eS*	Sg	13 51 30.3	+1.3
	4.7nm,0.1s						
IZV	**Izvestkoviy**	**0.52**	**280**	*eP*	Pg	13 51 28.6	+0.1
	0.5nm,0.1s						
IZV				*eS*	Sg	13 51 35.9	+0.5
	3.7nm,0.1s						

*NNC **13** 13:51:41.6±0.6, 42°92N × 77°31E, h0km, mb3.1, mpv3.1, Error ellipse: s-maj=5.3km s-min=2.6km az=6.0*
*SOME **13** 13:51:42.2, 42°93N × 77°28E, h0km*
*KRNET **13** 13:51:43.0±0.1, 42°84N × 77°25E, h16km, mb2.2*
ISC 13 13:51:41.6±0.9, 42°94N±0°02 × 77°32E±0°02, h15km±8km, n32, σ0°40/59, 4C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.29**	**290**	P	**Pg**	**13 51 48.1**	**+0.2**
	2.5nm,0.1s						
TNSS				S	**Sg**	**13 51 52.5**	**+0.2**
	33nm,0.2s						
TNSS	**Tian-Shan**	**0.29**	**290**	*eP*	**Pg**	**13 51 48.1**	**+0.2**
	0.6nm,0.1s						
TNSS				*eS*	**Sg**	**13 51 52.5**	**+0.2**
	33nm,0.2s						
MDOK	**Medeo**	**0.30**	**319**	Pg	**Pb**	**13 51 48.3**	**-0.5**
	29nm,0.2s						
MDOK				Lg	Lg	13 51 52.6	
	48nm,0.4s						
KOTS	**Kotyrbulak**	**0.33**	**333**	P	**Pb**	**13 51 49.0**	**-0.3**
	78nm,0.1s						
KOTS				S	**Sb**	**13 51 54.1**	**-0.4**
	63nm,0.3s						
KOTS	**Kotyrbulak**	**0.33**	**333**	*eP*	**Pb**	**13 51 49.0**	**-0.3**
	78nm,0.1s						
KOTS				*eS*	**Sb**	**13 51 54.1**	**-0.4**
	95nm,0.2s						
AAA	**Alma-Ata**	**0.40**	**313**	P	**Pb**	**13 51 50.5**	**+0.1**
	84nm,0.1s						
AAA				S	**Sb**	**13 51 56.7**	**+0.3**
	18nm,0.1s						
AAA	**Alma-Ata**	**0.40**	**313**	*eP*	**Pb**	**13 51 50.5**	**+0.1**
	84nm,0.1s						
AAA				*eS*	**Sb**	**13 51 56.7**	**+0.3**
	6.9nm,0.1s						
IZV	**Izvestkoviy**	**0.52**	**281**	P	**Pg**	**13 51 52.1**	**0.0**
	12nm,0.1s						
IZV				S	**Sg**	**13 51 59.2**	**+0.2**
	55nm,0.2s						
IZV	**Izvestkoviy**	**0.52**	**281**	*eP*	**Pg**	**13 51 52.1**	**0.0**
	12nm,0.1s						
IZV				*eS*	**Sg**	**13 51 59.2**	**+0.2**
	55nm,0.2s						
MTBS	**Maitube**	**0.68**	**287**	P	**Pg**	**13 51 54.7**	**-0.2**
	1.1nm,0.2s						
MTBS				S	**Sg**	**13 52 03.8**	**-0.1**
	13nm,0.3s						
MTBS	**Maitube**	**0.68**	**287**	*eP*	**Pg**	**13 51 54.7**	**-0.2**
	0.5nm,0.1s						
MTBS				*eS*	**Sg**	**13 52 03.8**	**-0.1**
	7.9nm,0.2s						
SATY	**Saty**	**0.81**	**81**	P	**Pb**	**13 51 57.5**	**0.0**
	1.5nm,0.1s						
SATY				S	**Sb**	**13 52 08.6**	**+0.3**
	29nm,0.1s						
KDJ	**Kajisay**	**0.82**	**187**	⇑*iP*	**Pg**	**13 51 56.8**	**-0.7**
KDJ				⇑*iS*	**Sg**	**13 52 07.3**	**-0.9**
KTBS	**Karatobe**	**0.90**	**329**	P	**Pg**	**13 51 58.7**	**-0.4**
	5.4nm,0.1s						
KTBS				S	**Sg**	**13 52 10.6**	**-0.3**
	16nm,0.2s						
PRZ	**Przheval'sk**	**0.92**	**119**	⇓*eP*	**Pn**	**13 52 00.8**	**+0.6**
PRZ				⇓*eS*	**Sn**	**13 52 13.8**	**+0.5**
KST	**Kastek**	**1.00**	**276**	P	**Pg**	**13 52 00.3**	**-0.6**
	1.0nm,0.1s						
KST				S	**Sg**	**13 52 13.3**	**-0.7**
	8.6nm,0.4s						
KST	**Kastek**	**1.00**	**276**	*eP*	**Pg**	**13 52 00.3**	**-0.6**
	1.0nm,0.1s						
KST				*eS*	**Sg**	**13 52 13.3**	**-0.7**
	8.6nm,0.4s						
ULHL	**Ulahol**	**1.05**	**229**	⇓*iP*	**Pb**	**13 52 01.3**	**-0.4**
ULHL				⇓*iS*	**Sg**	**13 52 15.2**	**-0.6**
BOOM	**Boomskoye usch**	**1.11**	**247**	⇓*iP*	**Pb**	**13 52 02.6**	**0.0**
BOOM				⇓*iS*	**Sb**	**13 52 17.0**	**+0.1**
KPKS	**Kokpek**	**1.13**	**62**	*eP*	**Pn**	**13 52 03.1**	**+0.1**
	0.1nm,0.1s						
KPKS				*eS*	**Sg**	**13 52 18.1**	**-0.1**
	8.2nm,0.3s						
DGS	**Degeres**	**1.17**	**285**	P	**Pb**	**13 52 03.4**	**-0.2**
	1.5nm,0.1s						
DGS				S	**Sb**	**13 52 18.7**	**+0.1**
	6.0nm,0.3s						
DGS	**Degeres**	**1.17**	**285**	*eP*	**Pb**	**13 52 03.4**	**-0.2**
	1.5nm,0.1s						
DGS				*eS*	**Sb**	**13 52 18.8**	**+0.1**
	6.0nm,0.3s						
KUU	**Kurty**	**1.19**	**324**	*eP*	**Pn**	**13 52 03.8**	**+0.1**
	2.7nm,0.1s						
KUU				*eS*	**Sb**	**13 52 19.4**	**+0.3**
	5.9nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.26**	**163**	⇓*iP*	**Pn**	**13 52 05.2**	**+0.1**
TARG				⇓*iS*	**Sb**	**13 52 21.9**	**+0.3**
ARXS	**Arharly**	**1.33**	**16**	P	**Pb**	**13 52 06.3**	**0.0**
	3.0nm,0.2s						
ARXS				S	**Sg**	**13 52 24.0**	**-0.5**
	9.3nm,0.2s						
ARXS	**Arharly**	**1.33**	**16**	*eP*	**Pb**	**13 52 06.3**	**0.0**
	3.0nm,0.2s						
ARXS				*eS*	**Sg**	**13 52 24.0**	**-0.5**
	13nm,0.2s						
KRBS	**Karabastau**	**1.42**	**303**	P	**Pb**	**13 52 07.6**	**-0.2**
	7.8nm,0.1s						
KRBS				S	**Sb**	**13 52 26.3**	**+0.6**
	6.7nm,0.2s						
KRBS	**Karabastau**	**1.42**	**303**	*eP*	**Pb**	**13 52 07.8**	**+0.1**
KRBS				*eS*	**Sb**	**13 52 26.3**	**+0.6**
BLB	**Baldybastay**	**1.43**	**36**	P	**Pb**	**13 52 08.0**	**-0.1**
	8.7nm,0.2s						
BLB				S	**Sb**	**13 52 26.5**	**+0.3**
	26nm,0.3s						
SHLS	**Shalkode**	**1.59**	**81**	Pg	Pg	13 52 18.0	+5.8
	3.9nm,0.2s						
SHLS	**Shalkode**	**1.59**	**81**	*eP*	Pg	13 52 18.5	+6.3
	2.5nm,0.1s						
SHLS				*eS*	Sg	13 52 44.6	+12
	9.2nm,0.2s						
JNKS	**Jany-Kuch**	**2.25**	**214**	⇑*eP*	**Pb**	**13 52 22.4**	**+0.3**
JNKS				⇑*eS*	**Sb**	**13 52 51.0**	**+1.1**

*GCG **13** 13:54:10.9±2.2, 15°70N × 89°90W, h10km±16km, MD4.7, ML4.5*
*CATAC **13** 13:54:10.9±0.2, 16°N±1°×9°0W±°, h1km, M4.3/24, mb4.4/1, MLv4.2/24, Error ellipse: s-maj=2.7km s-min=2.1km az=65.7, confirmed*
ISC 13 13:54:09.7±1.4, 15°72N±0°03 × 89°87W±0°03, h2km±12km, n58, σ0°91/64, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVCB	**Coban**	**0.57**	**244**	*eP*	**Pg**	**13 54 20.4**	**-0.4**
AVCB				*i* S	**Sg**	**13 54 28.9**	**+0.7**
AVCB				IAML		13 54 38.4	
	comp=E,140μm,0.4s						
APG	**El Apazote**	**0.92**	**219**	*i* P	**Pg**	**13 54 26.6**	**-0.7**
APG				*i* S	**Sg**	**13 54 38.2**	**-1.0**
PETF	**Flores**	**1.19**	**0**	*i* P	**Pn**	**13 54 33.0**	**-0.3**
PETF				*eS*	**Sb**	**13 54 48.7**	**-0.1**
PETF	**Flores**	**1.19**	**0**	P	**Pn**	**13 54 32.8**	**-0.5**
IZABA	**Izabal, Puerto**	**1.24**	**89**	P	**Pn**	**13 54 33.1**	**-0.9**
IZABA	**Izabal, Puerto**	**1.24**	**89**	S	**Sb**	**13 54 51.3**	**+1.1**
ZAFR2	**Estanzuela, Za**	**1.24**	**156**	*eP*	Pn	13 54 24.4	-10
ZAFR2				*i* S	Sb	13 54 34.4	-16
QUIS	**Sacapulas**	**1.25**	**250**	*eP*	**Pn**	**13 54 32.8**	**-1.6**
QUIS				*eS*	**Sb**	**13 54 49.6**	**-1.2**
QUIS				IAML		13 54 55.8	
	comp=E,12μm,0.5s						
ESQI	**Esquipulas**	**1.26**	**156**	P	**Pn**	**13 54 33.6**	**-0.8**
ESQI	**Esquipulas**	**1.26**	**156**	S	**Sn**	**13 54 51.8**	**-0.3**
GCG4	**OSOP**	**1.30**	**210**	*i* S	**Sn**	**13 54 52.0**	**-1.1**
JUAM	**Asuncion Mita**	**1.39**	**173**	*eP*	**Pn**	**13 54 35.5**	**-0.6**
MTO3	**Montecristo**	**1.41**	**159**	*i* P	**Pn**	**13 54 35.6**	**-0.9**
MTO3	**Montecristo**	**1.41**	**159**	P	**Pn**	**13 54 35.7**	**-0.9**
MTO3	**Montecristo**	**1.41**	**159**	S	**Sb**	**13 54 54.8**	**-0.4**
FG16	**Alotenango, Sa**	**1.57**	**203**	*eP*	**Pn**	**13 54 38.9**	**+0.1**
PCG5	**San Vicente Pa**	**1.58**	**198**	*eP*	**Pn**	**13 54 39.2**	**+0.4**
ESSG	**Sabana Grande**	**1.62**	**215**	*eP*	**Pb**	**13 54 40.0**	**-0.4**
HUEH	**Huehuetenango**	**1.63**	**256**	*eP*	**Pb**	**13 54 40.4**	**-0.2**
HUEH				*eS*	**Sg**	**13 55 02.8**	**+0.8**
HUEH				IAML		13 55 11.8	
	comp=N,9μm,0.6s						
HUEH	**Huehuetenango**	**1.63**	**256**	P	**Pg**	**13 54 41.6**	**+0.7**
HUEH	**Huehuetenango**	**1.63**	**256**	S	**Sg**	**13 55 03.7**	**+1.8**
LOAL	**Lomas de Alarc**	**1.72**	**177**	S	**Sg**	**13 55 05.0**	**+0.1**
LOAL	**Lomas de Alarc**	**1.72**	**177**	P	**Pb**	**13 54 42.4**	**+0.4**
SOKI	**Kika Raxquin**	**1.73**	**239**	*eP*	**Pb**	**13 54 42.2**	**-0.2**
SOKI				*eS*	**Sb**	**13 55 04.6**	**-0.2**
SOKI				IAML		13 55 18.5	
	comp=E,5μm,0.7s						
UNIC	**Universidad Ca**	**1.76**	**170**	S	**Sb**	**13 55 05.7**	**+0.4**
UNIC	**Universidad Ca**	**1.76**	**170**	P	**Pn**	**13 54 41.5**	**+0.2**
LLGN	**La Laguna**	**1.79**	**150**	S	**Sb**	**13 55 06.5**	**+0.4**
LLGN	**La Laguna**	**1.79**	**150**	P	**Pn**	**13 54 42.6**	**+0.9**
QUEO	**Labor Ovalle**	**1.80**	**242**	*eP*	**Pn**	**13 54 42.6**	**+0.6**
QUEO				IAML		13 55 19.3	
	comp=N,8μm,0.5s						
NUBE	**Las Nubes**	**1.81**	**177**	P	**Pn**	**13 54 42.8**	**+0.7**
NUBE	**Las Nubes**	**1.81**	**177**	S	**Sb**	**13 55 07.5**	**+0.6**
FAME	**Alcaldia de Sa**	**1.87**	**184**	P	**Pb**	**13 54 44.4**	**-0.3**
FAME	**Alcaldia de Sa**	**1.87**	**184**	S	**Sg**	**13 55 10.4**	**+0.5**
CEVE	**Cerro Verde**	**1.90**	**173**	S	**Sg**	**13 55 11.0**	**+0.2**
CEVE	**Cerro Verde**	**1.90**	**173**	P	**Pn**	**13 54 44.1**	**+0.8**
CEDA	**San Andres**	**1.96**	**166**	S	**Sb**	**13 55 11.8**	**+0.6**
PMON	**Piamonte**	**2.07**	**165**	S	**Sb**	**13 55 15.2**	**+0.9**
PMON	**Piamonte**	**2.07**	**165**	P	**Pn**	**13 54 47.0**	**+1.5**
UEES	**Universidad Ev**	**2.09**	**163**	S	**Sb**	**13 55 14.7**	**0.0**
JAVA	**Jayaque - finc**	**2.10**	**169**	P	**Pn**	**13 54 47.2**	**-0.9**
JAVA	**Jayaque - finc**	**2.10**	**169**	S	**Sb**	**13 55 14.9**	**-0.2**
RTAL	**Retalhuleu**	**2.13**	**236**	P	**Pb**	**13 54 49.5**	**+0.5**
RTAL	**Retalhuleu**	**2.13**	**236**	S	**Sg**	**13 55 17.1**	**-1.0**
LOMA	**Loma Larga**	**2.17**	**162**	S	**Sb**	**13 55 17.8**	**+0.5**
LOMA	**Loma Larga**	**2.17**	**162**	P	**Pn**	**13 54 48.3**	**+1.3**
PAVA	**Las Pavas**	**2.19**	**156**	P	**Pn**	**13 54 48.8**	**+1.5**
PAVA	**Las Pavas**	**2.19**	**156**	S	**Sb**	**13 55 17.9**	**+0.1**
CCIG	**Comitan**	**2.25**	**285**	S	**Sb**	**13 55 19.8**	**+0.2**
CCIG	**Comitan**	**2.25**	**285**	P	**Pn**	**13 54 48.1**	**-0.1**
LALI	**Alcalda de L**	**2.28**	**167**	S	**Sb**	**13 55 21.7**	**+1.3**
LALI	**Alcalda de L**	**2.28**	**167**	P	**Pb**	**13 54 50.8**	**-0.8**
SCLA	**Alcaldia de Sa**	**2.29**	**151**	P	**Pn**	**13 54 50.5**	**+1.9**
SCLA	**Alcaldia de Sa**	**2.29**	**151**	S	**Sb**	**13 55 21.5**	**+0.9**
PACA	**Pacayal**	**2.69**	**146**	P	**Pn**	**13 54 56.3**	**+2.1**
LCND	**La Caada**	**3.07**	**141**	P	**Pb**	**13 55 03.0**	**-2.1**
SCIG	**Sabancuy**	**3.46**	**339**	P	**Pn**	**13 55 06.5**	**+1.9**
TEIG	**Tepich**	**4.73**	**18**	P	**Pn**	**13 55 21.7**	**-0.4**
TEIG				S	**Sn**	**13 56 17.3**	**-0.2**
MYIG	**Merida**	**5.21**	**1**	S	**Sn**	**13 56 29.5**	**+0.2**

*DNK **13** 14:06:07.3±1.6, 57°54N × 22°06E, h0km, ML3.0, Suspected explosion*
*HEL **13** 14:06:07.8±0.5, 57°53N × 20°92E, h0km, ML2.0, Explosion*
*EST **13** 14:06:11.2±0.2, 57°73N × 21°44E, h0km, ML1.9(HEL), Explosion*
*IDC **13** 14:06:12.6±2.5, 57°82N × 21°63E, h0km, mbtmp3.1/4, ML2.3/4, Error ellipse: s-maj=25.7km s-min=9.6km az=166.0*
*UPP **13** 14:06:13.5±1.4, 57°80N × 21°27E, h0km, ML2.6, Presumed earthquake*
*LVSN **13** 14:06:13.7±4.0, 57°65N × 21°53E, h0km±74km, ML2.5*
ISC 13 14:06:10.2±0.8, 57°71N±0°04 × 21°50E±0°03, h0km, n56, σ1°59/68, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.43**	**101**	*eP*	**Pg**	**14 06 19.2**	**+0.7**
SLIT	**Slitere, Latvi**	**0.43**	**101**	*eP*	**Pg**	**14 06 19.4**	**+0.8**
SLIT				*eS*	**Sb**	**14 06 27.1**	**-0.7**
SLIT				AML	AML	14 06 39.0	
	comp=N,768nm,0.4s						
SLIT				AML	AML	14 06 51.1	
	comp=E,2μm,0.8s						
SLIT				AML	AML	14 06 51.3	
	comp=Z,1μm,0.7s						
SLIT	**Slitere, Latvi**	**0.43**	**101**	*eP*	**Pg**	**14 06 19.3**	**+0.8**
SLIT				*eS*	**Sg**	**14 06 25.3**	**+1.1**
EE06	**Soera, Palade,**	**1.45**	**29**	*eP*	**Pn**	**14 06 36.9**	**-0.8**
EE06				*eSB*	**Sg**	**14 06 56.8**	**+0.1**
GOTU	**Gotland**	**1.57**	**270**	P	**Pn**	**14 06 39.7**	**+0.4**
GOTU	**Gotland**	**1.57**	**270**	P	**Pn**	**14 06 39.7**	**+0.4**
EE01	**Perakula, Nova**	**1.87**	**36**	*eP*	**Pn**	**14 06 44.1**	**+0.7**
EE01				*ePN*	**Pb**	**14 06 44.5**	**-0.7**
EE01				*eSG*	**Sb**	**14 07 09.2**	**+0.1**
EE08	**Sarghaua, Vand**	**2.20**	**63**	*ePB*	**Pn**	**14 06 49.7**	**+1.8**
EE08				*eSB*	**Sb**	**14 07 18.4**	**-0.1**
EE02	**Kiisa, Saku**	**2.24**	**47**	*ePB*	**Pn**	**14 06 50.7**	**+2.2**
EE02				*eSG*	**Sb**	**14 07 20.7**	**+0.9**
NYNU	**Nynaeshamn**	**2.25**	**307**	P	**Pn**	**14 06 50.6**	**+2.0**
NYNU	**Nynaeshamn**	**2.25**	**307**	P	**Pn**	**14 06 50.6**	**+2.0**
TVF	**Tvarminne**	**2.32**	**22**	*ePB*	**Pn**	**14 06 51.9**	**+2.2**
TVF				*eSG*	**Sb**	**14 07 22.2**	**+0.1**
TVF				smax	smax	14 07 24.9	
	comp=Z,7.1nm,0.1s						
BYXU	**Byxelkrok**	**2.46**	**262**	P	**Pn**	**14 06 53.6**	**+2.1**
BYXU	**Byxelkrok**	**2.46**	**262**	P	**Pn**	**14 06 53.6**	**+2.1**
NRTU	**Norrtaelje**	**2.47**	**324**	P	**Pn**	**14 06 53.9**	**+2.2**
NRTU	**Norrtaelje**	**2.47**	**324**	P	**Pn**	**14 06 53.9**	**+2.2**
AAL	**Aland**	**2.59**	**343**	P	**Pn**	**14 06 53.9**	**+0.6**
AAL	**Aland**	**2.59**	**343**	P	**Pn**	**14 06 53.9**	**+0.6**
AAL	**Aland**	**2.59**	**343**	*eP*	**Pn**	**14 06 53.8**	**+0.5**
AAL				smax	smax	14 07 35.3	
	comp=Z,4.4nm,0.1s						
PABE	**Paberze**	**2.60**	**147**	*eP*	**Pn**	**14 06 53.5**	**+0.1**
PABE	**Paberze**	**2.60**	**147**	*eP*	**Pn**	**14 06 55.6**	**+2.2**
PABE				AML	AML	14 07 03.9	
	comp=Z,17nm,0.3s						
PABE				AML	AML	14 07 32.3	
	comp=N,25nm,0.6s						
PABE				AML	AML	14 07 32.8	
	comp=E,28nm,0.5s						
VSTU	**Vaestervik**	**2.66**	**271**	P	**Pn**	**14 06 56.7**	**+2.3**
VSTU	**Vaestervik**	**2.66**	**271**	P	**Pn**	**14 06 56.7**	**+2.3**
VIKU	**Vikbolandet**	**2.67**	**289**	P	**Pn**	**14 06 56.4**	**+2.0**
VIKU	**Vikbolandet**	**2.67**	**289**	P	**Pn**	**14 06 56.4**	**+2.0**
EE03	**Tooma soojaam,**	**2.78**	**63**	*eP*	**Pn**	**14 06 57.7**	**+1.8**
VSU	**Vasula**	**2.88**	**73**	*eP*	**Pn**	**14 06 56.2**	**-1.1**
VSU	**Vasula**	**2.88**	**73**	AML	AML	14 07 01.1	
	comp=Z,21nm,0.2s						
VSU				AML	AML	14 07 47.1	
	comp=N,45nm,0.3s						
VSU				AML	AML	14 07 49.6	
	comp=E,45nm,0.5s						
VSU	**Vasula**	**2.88**	**73**	*i* P	**Pn**	**14 06 57.2**	**-0.1**
ARBE	**Arbavere**	**2.92**	**52**	*eP*	**Pn**	**14 07 00.8**	**+3.0**
ARBE				AML	AML	14 07 27.9	
	comp=Z,114nm,0.1s						
ARBE				AML	AML	14 07 44.5	
	comp=N,172nm,0.1s						
ARBE				AML	AML	14 07 45.4	
	comp=E,125nm,0.2s						
MEF	**Metsahovi**	**2.93**	**30**	*eP*	**Pb**	**14 07 01.6**	**-1.6**
MEF				AML	AML	14 07 40.9	
	comp=E,8.0nm,0.1s						
MEF				AML	AML	14 07 42.9	
	comp=Z,8.0nm,0.3s						
MEF				AML	AML	14 07 47.6	
	comp=N,7.3nm,0.5s						
MEF	**Metsahovi**	**2.93**	**30**	*ePB*	**Pn**	**14 07 01.3**	**+3.4**
MEF				*eSB*	**Sb**	**14 07 38.5**	**-1.0**
MEF				smax	smax	14 07 41.3	
	comp=Z,3.0nm,0.1s						
HEL5	**Espoo, Suvisaa**	**2.94**	**34**	*ePB*	**Pn**	**14 07 01.3**	**+3.2**
HEL5				*eSB*	**Sb**	**14 07 38.5**	**-1.3**
HEL5				smax	smax	14 07 42.5	
	comp=Z,3.0nm,0.1s						
OSKU	**Oskarshamn**	**2.96**	**262**	P	**Pn**	**14 07 00.3**	**+1.9**
OSKU	**Oskarshamn**	**2.96**	**262**	P	**Pn**	**14 07 00.3**	**+1.9**
NUR	**Nurmijarvi**	**3.24**	**29**	smax	smax	14 07 47.1	
	comp=Z,2.5nm,0.1s						
RAF	**Rauma**	**3.32**	**2**	*eP*	**Pn**	**14 07 04.4**	**+1.1**
PVF	**Pernaja**	**3.62**	**37**	*eP*	**Pn**	**14 07 09.3**	**+1.8**
KPF	**Kankaanpaa**	**4.14**	**4**	*eP*	**Pn**	**14 07 15.7**	**+1.0**
KPF				smax	smax	14 08 06.6	
	comp=Z,1.9nm,0.1s						
DEL	**Delary**	**4.34**	**257**	*i* P	**Pn**	**14 07 18.2**	**+0.8**
FIA0	**FINESS Array S**	**4.41**	**30**	*eP*	**Pn**	**14 07 19.6**	**+1.3**
FINES	**FINESS Array B**	**4.41**	**30**	Pn	**Pn**	**14 07 19.7**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=212,slow=10.0,SNR=8.8						
FINES				Sn	**Sn**	**14 08 09.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=225,slow=23,SNR=1.7						
FINES				Lg	Lg	14 08 27.4	
	comp=Z,1.1nm,0.3s,baz=223,slow=25,SNR=12						
	comp=Z,2.2nm,0.9s						
FIA1	**FINESS Array S**	**4.41**	**30**	*eP*	**Pn**	**14 07 19.8**	**+1.5**
BSD	**Bornholm Skovb**	**4.49**	**237**	*i* P	**Pn**	**14 07 19.4**	**+0.1**
BSD				*i* S	**Sn**	**14 08 11.2**	**-1.0**
BSD				IAML		14 08 12.0	
	comp=Z,13nm,0.8s						
BORU	**Boraas**	**4.69**	**273**	*i* P	**Pn**	**14 07 24.1**	**+2.0**
HFS	**Hagfors**	**4.72**	**304**	Pn	**Pn**	**14 07 23.4**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=114,slow=16,SNR=15						
HFS				Sn	**Sn**	**14 08 18.8**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=113,slow=25,SNR=6.3						
HFS				Lg	Lg	14 08 37.6	
	comp=Z,1.1nm,0.3s,baz=115,slow=31,SNR=10						
	comp=Z,1.5nm,0.3s						
KEF	**Keuruu**	**4.78**	**19**	*eP*	**Pn**	**14 07 25.3**	**+1.9**
FABU	**Falkenberg**	**4.81**	**265**	*i* P	**Pn**	**14 07 25.1**	**+1.3**
BJUU	**Bjuv**	**4.93**	**254**	*i* P	**Pn**	**14 07 26.7**	**+1.3**
BJUU				*i* S	**Sn**	**14 08 20.8**	**-2.2**
KAF	**Kangasniemi**	**5.03**	**27**	*eP*	**Pn**	**14 07 28.2**	**+1.3**
ONAU	**Onsala**	**5.17**	**271**	*i* P	**Pn**	**14 07 30.1**	**+1.4**
RUF	**Ruokolahti**	**5.31**	**42**	*eP*	**Pn**	**14 07 31.8**	**+1.1**
VAF	**Ylistaro**	**5.38**	**6**	*eP*	Pn	14 07 26.6	-4.9
**

KDJ	**Kajisay**	**0.81**	**185**	⇑*i*P		**Pb**	**14 17 09.5**	**+0.4**
KDJ				⇑*i*S		**Sb**	**14 17 20.3**	**+0.2**
SATY	**Saty**	**0.83**	**81**	P		**Pb**	**14 17 09.8**	**+0.3**
SATY	7.2nm,0.2s			S		**Sb**	**14 17 20.5**	**-0.3**
	77nm,0.2s							
SATY	**Saty**	**0.83**	**81**	*e*P		**Pb**	**14 17 09.8**	**+0.3**
SATY				*e*S		**Sb**	**14 17 20.6**	**-0.3**
KTBS	**Karatobe**	**0.89**	**331**	P		**Pn**	**14 17 11.0**	**-0.6**
KTBS	22nm,0.1s			S		**Sb**	**14 17 22.8**	**+0.3**
	91nm,0.2s							
KTBS	**Karatobe**	**0.89**	**331**	*e*P		**Pn**	**14 17 11.0**	**-0.6**
KTBS				*e*S		**Sb**	**14 17 22.8**	**+0.3**
PRZ	**Przheval'sk**	**0.94**	**118**	⇑*e*P		**Pn**	**14 17 12.1**	**-0.2**
PRZ				⇑*e*S		**Sb**	**14 17 24.1**	**+0.2**
KST	**Kastek**	**0.97**	**277**	P		**Pn**	**14 17 12.7**	**0.0**
KST	4.4nm,0.2s			S		**Sb**	**14 17 25.6**	**+0.7**
	46nm,0.4s							
KST	**Kastek**	**0.97**	**277**	*e*P		**Pn**	**14 17 12.7**	**0.0**
KST				*e*S		**Sb**	**14 17 25.6**	**+0.7**
KST	**Kastek**	**0.97**	**277**	*e*P		**Pn**	**14 17 12.7**	**0.0**
KST	4.4nm,0.2s			*e*S		**Sb**	**14 17 25.6**	**+0.7**
	46nm,0.4s							
ULHL	**Ulahol**	**1.03**	**229**	⇑P		**Pb**	**14 17 13.4**	**+0.5**
ULHL	11nm,0.2s,SNR=6.4			⇑S		**Sg**	**14 17 26.6**	**+0.5**
	34nm,0.2s							
ULHL	**Ulahol**	**1.03**	**229**	⇑*i*P		**Pb**	**14 17 13.4**	**+0.5**
ULHL				⇑*i*S		**Sb**	**14 17 27.1**	**+0.5**
BOOM	**Boomskoye usch**	**1.08**	**246**	⇑*i*P		**Pn**	**14 17 14.2**	**-0.1**
BOOM				⇑*i*S		**Sb**	**14 17 28.7**	**+0.6**
DGS	**Degeres**	**1.15**	**286**	P		**Pn**	**14 17 15.6**	**+0.5**
DGS	6.0nm,0.2s			S		**Sn**	**14 17 30.6**	**-0.3**
	33nm,0.4s							
DGS	**Degeres**	**1.15**	**286**	*e*P		**Pn**	**14 17 15.6**	**+0.5**
DGS	6.0nm,0.2s			*e*S		**Sn**	**14 17 30.6**	**-0.3**
	33nm,0.4s							
KPKS	**Kokpek**	**1.15**	**62**	P		**Pn**	**14 17 15.4**	**+0.2**
KPKS	6.5nm,0.2s			S		**Sg**	**14 17 30.1**	**+0.1**
	32nm,0.3s							
KPKS	**Kokpek**	**1.15**	**62**	*e*P		**Pn**	**14 17 15.4**	**+0.2**
KPKS	6.5nm,0.2s			*e*S		**Sg**	**14 17 30.1**	**+0.1**
	32nm,0.3s							
KUU	**Kurty**	**1.18**	**325**	*e*P		**Pg**	**14 17 16.1**	**+0.5**
KUU	2.2nm,0.1s			*e*S		**Sn**	**14 17 31.3**	**-0.3**
	37nm,0.2s							
TKM2	**Tokmak 2**	**1.24**	**270**	⇑P		**Pg**	**14 17 17.4**	**+0.7**
TKM2	2.4nm,0.1s,SNR=14			⇑S		**Sn**	**14 17 33.6**	**+0.3**
	26nm,0.1s							
TKM2	**Tokmak 2**	**1.24**	**270**	⇑*i*P		**Pg**	**14 17 17.3**	**+0.7**
TKM2				⇑*i*S		**Sn**	**14 17 33.9**	**+0.6**
TARG	**Taragay, Kyrgy**	**1.26**	**162**	⇓*i*P		**Pb**	**14 17 17.3**	**+0.3**
TARG				⇓*i*S		**Sn**	**14 17 34.4**	**+0.2**
ARXS	**Arharly**	**1.34**	**17**	P		**Pg**	**14 17 18.4**	**-0.1**
ARXS	14nm,0.2s			S		**Sg**	**14 17 35.7**	**-0.2**
	62nm,0.2s							
ARXS	**Arharly**	**1.34**	**17**	*e*P		**Pg**	**14 17 18.8**	**+0.2**
ARXS	4.9nm,0.1s			*e*S		**Sg**	**14 17 36.0**	**0.0**
	62nm,0.2s							
KRBS	**Karabastau**	**1.40**	**304**	*e*P		**Pg**	**14 17 20.3**	**+0.5**
KRBS				*e*S		**Sg**	**14 17 38.5**	**+0.6**
KRBS	**Karabastau**	**1.40**	**304**	*e*P		**Pg**	**14 17 20.3**	**+0.5**
KRBS				*e*S		**Sg**	**14 17 38.5**	**+0.6**
BLB	**Baldybastay**	**1.45**	**36**	P		**Pg**	**14 17 20.6**	**-0.2**
BLB	22nm,0.2s			S		**Sg**	**14 17 39.2**	**-0.4**
	96nm,0.2s							
SHLS	**Shalkode**	**1.61**	**81**	Pg		Pg	14 17 29.6	+5.8
	19nm,0.2s							
SHLS	**Shalkode**	**1.61**	**81**	*e*P		Pg	14 17 29.9	+6.1
SHLS	19nm,0.2s			*e*S		Sg	14 17 55.2	+10
	57nm,0.3s							
KBK	**Karagaybulak**	**1.74**	**262**	⇓P		**Pg**	**14 17 26.2**	**-0.1**
KBK	4.8nm,0.1s			⇓S		**Sg**	**14 17 49.3**	**+0.4**
	37nm,0.2s							
CHMS	**Chumysh**	**1.86**	**273**	⇑P		**Pg**	**14 17 28.1**	**-0.4**
CHMS	2.2nm,0.1s			⇑S		**Sg**	**14 17 52.7**	**+0.1**
	13nm,0.2s							
KNOS	**Konyrlen**	**1.98**	**43**	P		**Pg**	**14 17 30.1**	**-0.8**
	3.1nm,0.2s							
USP	**Ospenovka**	**2.07**	**280**	⇓P		**Pb**	**14 17 31.2**	**+0.7**
USP	3.0nm,0.2s,SNR=6.8			⇑S		**Sg**	**14 17 58.7**	**-0.5**
	15nm,0.2s							
AAK	**Ala-Archa**	**2.08**	**263**	⇑P		**Pg**	**14 17 31.7**	**-0.9**
AAK	4.4nm,0.3s,SNR=5.3			⇓S		**Sg**	**14 17 59.3**	**-0.3**
	19nm,0.5s							
UCH	**Uchtor**	**2.16**	**252**	⇓P		**Pb**	**14 17 32.7**	**+0.3**
UCH	1.5nm,0.2s,SNR=5.9			⇓S		**Sg**	**14 18 01.5**	**-1.0**
	9.9nm,0.4s							
TDK	**Taldyqorghan**	**2.22**	**21**	*e*P		**Pb**	**14 17 34.1**	**+1.0**
TDK	8.6nm,0.1s			*e*S		**Sg**	**14 18 02.3**	**-1.9**
	112nm,0.2s							
JNKS	**Jany-Kuch**	**2.23**	**214**	⇓*e*P		**Pb**	**14 17 33.5**	**+0.1**
JNKS				⇓*e*S		**Sb**	**14 18 01.6**	**+0.4**
KTMS	**Ketmen**	**2.30**	**76**	*e*P		**Pb**	**14 17 35.2**	**+0.6**
KTMS	1.4nm,0.1s			*e*S		**Sb**	**14 18 04.0**	**+0.9**
	8.4nm,0.2s							
ARLS	**Aral**	**2.44**	**245**	⇑*e*P		**Pb**	**14 17 36.1**	**-0.8**
ARLS				⇑*e*S		**Sb**	**14 18 06.3**	**-0.8**
MRKS	**Merke**	**2.99**	**268**	*e*P		**Pg**	**14 17 48.6**	**-1.5**
MRKS	0.4nm,0.1s			*e*S		**Sg**	**14 18 27.1**	**-1.8**
	6.9nm,0.3s							

SOME 13 14:17:08.7, 42°93N×77°32E, h0km, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.29**	**291**	*e*P	Pg	14 17 14.9	+0.7
TNSS	4.9nm,0.1s			*e*S	Sg	14 17 19.6	+1.5
	14nm,0.1s						
TNSS	**Tian-Shan**	**0.29**	**291**	P	Pg	14 17 15.0	+0.8
	8.2nm,0.1s						
IZV	**Izvestkoviy**	**0.53**	**282**	*e*P	Pg	14 17 19.1	+0.3
IZV	20nm,0.1s			*e*S	Sg	14 17 26.6	+1.0
	32nm,0.1s						

*BJI **13** 14:17:14.3, 32°.34S×79°.75E, h6km, mB5.5/39, mb5.2/72, Ms5.1/52, Ms7 4.9/50*

*MOS **13** 14:17:14.7±0.8, 32°.54S×80°.09E, h10km, mb5.6/60, Error ellipse: s-maj=10.4km s-min=5.8km az=98.4*

*IDC **13** 14:17:15.2±0.3, 32°.45S×80°.02E, h0km, mb5.0/32, mbtmp5.0/32, MS4.7/39, Error ellipse: s-maj=12.5km s-min=12.2km az=145.0*

*NEIC **13** 14:17:17.5, 32°.42S×80°.11E, h24km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^17 Nm; Mrr=1.26; Mθθ 0.50; Mφφ 0.76; Mrθ=0.29; Mθφ 0.52; Mφr 0.06; Fault plane solution: M0 1.25000×10^17 NP1: φs207.93000°, δ42.88000°, λ-105.63000°. NP2: φs48.83000°, δ49.06000°, λ-75.95000°. Principal axes: T 1.1768, Plg3.0000°, Azm129.0000°; N 0.1439, Plg11.0000°, Azm220.0000°; P -1.3207, Plg79.0000°, Azm23.0000°;*

*NEIC **13** 14:17:17.5±1.6, 32°.51S±0°.09×80°.0E±0°.1, h10km±1km, mb5.5/92, Mwb5.3/28, Mww5.3/12 Error ellipse: s-maj=16.3km s-min=14.7km az=302.0, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=0.96; Mθθ 0.75; Mφφ 0.21; Mrθ=0.30; Mθφ 0.61; Mφr=0.39; Fault plane solution: M0 1.18000×10^17 NP1: φs247.89000°, δ34.02000°, λ-72.65000°. NP2: φs47.23000°, δ57.72000°, λ-101.38000°. Principal axes: T 1.2459, Plg12.0000°, Azm145.0000°; N -0.1549, Plg10.0000°, Azm53.0000°; P -1.0910, Plg75.0000°, Azm286.0000°;*

*NEIC **13** 14:17:17.5, 32°.52S×79°.99E, h24km*

*NEIC **13** 14:17:18, 32°.52S×80°.07E, h10km*

*GCMT **13** 14:17:20.5±0.1, 32°.56S±0°.01×79°.93E±0°.01, h20km, MW5.4/133, Moment Tensor Solution. s112,c162; s133,c250; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-1.27±.03; Mθθ 0.46±.02; Mφφ 0.81±.02; Mrθ-0.12±.04; Mθφ 0.76±.01; Mφr-0.38±.04; Best double couple: M0 1.40300×10^17 NP1: φs226.00000°, δ38.00000°, λ-79.00000°. NP2: φs32.00000°, δ53.00000°, λ-98.00000°. Principal axes: T 1.4670, Plg8.0000°, Azm128.0000°; N -0.1230, Plg7.0000°, Azm37.0000°; P -1.3380, Plg80.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 14:17:18.0±0.7, 32°.52S±0°.04×79°.90E±0°.05, h17km±3km, n486, σ1§38/485, mb5.3/188, MS4.8/65, 31C-19D, Broken Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**5.59**	**199**	Pn	**Pn**	**14 18 41.1**	**+0.6**
H04N2	**CROZET ISLANDS**	**25.49**	**230**	T	T	14 49 23.0	
	baz=68,slow=75						
H04N1	**CROZET ISLANDS**	**25.50**	**230**	T	T	14 49 20.6	
	baz=68,slow=75						
H04N3	**CROZET ISLANDS**	**25.50**	**230**	T	T	14 49 19.3	
	baz=68,slow=75						
CRZF	**Crozet Islands**	**25.55**	**229**	P	**P**	**14 22 45.9**	**+0.1**
CRZF				IAmb	IAmb	14 23 15.5	
	comp=Z,72nm,0.9s						
H04S1	**CROZET ISLANDS**	**25.68**	**228**	T	T	14 49 31.7	
	baz=67,slow=76,SNR=665						
H08S2	**Diego Garcia H**	**25.69**	**343**	T	T	14 49 27.3	
	baz=166,slow=75,SNR=4079						
H04S3	**CROZET ISLANDS**	**25.70**	**228**	T	T	14 49 32.7	
	baz=67,slow=76,SNR=373						
H04S2	**CROZET ISLANDS**	**25.70**	**228**	T	T	14 49 35.0	
	baz=67,slow=76,SNR=362						
H08S1	**Diego Carcia H**	**25.70**	**343**	T	T	14 49 25.4	
	baz=166,slow=75,SNR=1930						
H08S3	**Diego Garcia H**	**25.71**	**343**	T	T	14 49 28.8	
	baz=166,slow=75,SNR=8755						
H01W2	**Cape Leeuwin H**	**28.50**	**104**	T	T	14 52 56.4	
	baz=266,slow=73,SNR=26						
H01W3	**Cape Leeuwin H**	**28.50**	**104**	T	T	14 52 53.9	
	baz=266,slow=73,SNR=30						
H01W1	**Cape Leeuwin H**	**28.52**	**104**	T	T	14 52 50.5	
	baz=266,slow=73,SNR=34						
MUN	**Mundaring**	**30.62**	**99**	P	**P**	**14 23 31.1**	**-0.3**
	comp=Z,20nm,1.4s						
MORW	**Morawa**	**31.15**	**93**	P	**P**	**14 23 36.3**	**+0.3**
	comp=Z,23nm,1.7s						
VOI	**Vohitsoka**	**31.17**	**281**	P	**P**	**14 23 37.3**	**+1.0**
NWAO	**Narrogin (SRO)**	**31.31**	**101**	P	**P**	**14 23 37.1**	**-0.3**
	comp=Z,18nm,1.6s						
NWAO	**Narrogin (SRO)**	**31.31**	**101**	P	**P**	**14 23 37.5**	**+0.1**
NWAO	**Narrogin (SRO)**	**31.31**	**101**	LR	LR	14 33 00.3	
	comp=Z,2μm,21.7s,baz=268,slow=30						
NWAO	**Narrogin (SRO)**	**31.31**	**101**		**P**	**14 23 37.1**	**-0.3**
NWAO	**Narrogin (SRO)**	**31.31**	**101**	P	**P**	**14 23 37.1**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,31nm,1.4s						
BLDU	**Ballidu**	**31.33**	**96**	P	**P**	**14 23 37.4**	**-0.2**
	comp=Z,23nm,2.4s						
ABPO	**Ambohimpanom**	**32.21**	**287**		**P**	**14 23 45.9**	**+0.3**
ABPO	**Ambohimpanom**	**32.21**	**287**	P	**P**	**14 23 45.9**	**+0.3**
ABPO				pmax	pmax		
	comp=Z,51nm,1.7s						
OPO	**Ambohidratompo**	**32.47**	**287**	P	**P**	**14 23 48.7**	**+0.8**
	comp=Z,5.1nm,0.9s,baz=121,slow=12,SNR=4.2						
	comp=Z,5.1nm,0.9s						
MEEK	**Meekatharra**	**34.05**	**90**	P	**P**	**14 24 01.5**	**0.0**
	comp=Z,47nm,1.5s						
LWLI	**Liwa**	**35.48**	**45**	P	**P**	**14 24 15.4**	**+1.4**
KMBL	**Kambalda**	**35.48**	**100**	P	**P**	**14 24 14.1**	**+0.3**
	comp=Z,12nm,1.5s						
MSEY	**Mahe Island**	**35.90**	**315**	P	**P**	**14 24 19.2**	**+1.7**
MSEY	**Mahe Island**	**35.90**	**315**	P	**P**	**14 24 19.0**	**+1.4**
MSEY	**Mahe Island**	**35.90**	**315**	P	**P**	**14 24 18.3**	**+0.8**
MSEY	**Mahe Island**	**35.90**	**315**	P	**P**	**14 24 19.2**	**+1.7**
MSEY				pmax	pmax		
	comp=Z,48nm,1.1s						
LHSI	**Lahat**	**36.12**	**43**	P	**P**	**14 24 21.6**	**+2.2**
	comp=Z,39nm,1.2s						
LEM	**Lembang**	**36.31**	**51**	LR	LR	14 37 04.1	
	comp=Z,717nm,18.2s,baz=218,slow=33						
MAW	**Mawson**	**36.51**	**191**	P	**P**	**14 24 21.8**	**-0.3**
	comp=Z,4.9nm,1.3s						
MAW	**Mawson**	**36.51**	**191**	P	**P**	**14 24 22.1**	**0.0**
	comp=Z,16nm,1.0s,baz=13,slow=11,SNR=13						
MAW				PcP	**PcP**	**14 26 45.2**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=0.0,slow=2.0,SNR=1.8						
MAW				LR	LR	14 36 27.3	
	comp=Z,1μm,18.6s,baz=14,slow=32						
	comp=Z,16nm,1.0s						
PDSI	**Padang**	**36.94**	**36**	P	**P**	**14 24 29.1**	**+2.8**
PSAD3	**Pilbara Seismi**	**36.94**	**83**	P	**P**	**14 24 25.9**	**-0.5**
	comp=Z,24nm,1.7s						
PSAC1	**Pilbara Seismi**	**37.01**	**83**	P	**P**	**14 24 25.9**	**-1.0**
PSAB3	**Pilbara Seismi**	**37.02**	**83**	P	**P**	**14 24 27.4**	**+0.3**
	comp=Z,20nm,1.4s						
PSA00	**Pilbara Seismi**	**37.02**	**83**		**P**	**14 24 26.0**	**-1.1**
PSAC2	**Pilbara Seismi**	**37.07**	**83**	P	**P**	**14 24 26.9**	**-0.6**
	comp=Z,31nm,1.5s						
MBWA	**Marble Bar**	**37.11**	**82**	P	**P**	**14 24 27.7**	**-0.1**
	comp=Z,29nm,2.0s,comp=Z,0.0nm						
MBWA	**Marble Bar**	**37.11**	**82**	P	**P**	**14 24 27.7**	**-0.1**
GSI	**Gunungsitoli**	**37.57**	**30**	P	**P**	**14 24 34.3**	**+2.6**
	comp=Z,27nm,0.9s						
RPSI	**Rantau Prapat**	**39.40**	**31**		**P**	**14 24 47.2**	**+0.2**
TPI	**Tanjungpandan**	**39.44**	**47**	P	**P**	**14 24 48.8**	**+1.4**
	comp=Z,26nm,1.0s						
DSRI	**Dabo**	**39.46**	**41**	P	**P**	**14 24 49.7**	**+2.1**
	comp=Z,44nm,1.3s						
PSI	**Prapat**	**39.49**	**31**	P	**P**		
PSI				pmax	pmax		
	comp=Z,21nm,1.1s						
PALK	**Pallekele**	**39.58**	**1**	LR	LR	14 38 16.9	
	comp=Z,1μm,18.1s,baz=198,slow=32						
PALK	**Pallekele**	**39.58**	**1**	P	**P**	**14 24 49.0**	**+0.4**
PALK	**Pallekele**	**39.58**	**1**	P	**P**	**14 24 48.0**	**-0.6**
PALK	**Pallekele**	**39.58**	**1**	*i*P	**P**	**14 24 48.3**	**-0.3**
PALK				pmax	pmax		
	comp=Z,62nm,1.3s						
KCSI	**Kotacane, Aceh**	**39.66**	**29**	P	**P**	**14 24 51.4**	**+2.2**
	comp=Z,650nmcomp=Z,39nm,0.9s						
FORT	**Forrest**	**40.76**	**101**	P	**P**	**14 25 00.1**	**+1.8**
	comp=Z,15nm,1.5s						
SRBI	**Singaraja**	**40.77**	**61**	P	**P**	**14 25 01.0**	**+2.5**
	comp=Z,82nm,1.4s						
POGA	**Pongola**	**41.80**	**264**	P	**P**	**14 25 07.9**	**+1.0**
IPM	**Ipoh**	**41.92**	**33**	P	**P**	**14 25 07.8**	**-0.1**
KULM	**Kulim**	**42.47**	**32**	P	**P**	**14 25 13.2**	**+0.9**
KULM				IAmb	IAmb	14 25 14.9	
	comp=Z,95nm,1.4s						
WRKA	**Warakurna**	**42.78**	**93**	P	**P**	**14 25 14.3**	**-0.7**
WBSI	**Waikabubak, Su**	**42.96**	**67**	P	P	14 25 21.0	+4.5
	comp=Z,72nm,1.2s						
SYO	**Syowa Base**	**43.01**	**200**	⇓*i*P	**P**	**14 25 16.2**	**+0.1**
SYO	**Syowa Base**	**43.01**	**200**	⇓*e*P	**P**	**14 25 19.0**	**+2.9**
SYO	**Syowa Base**	**43.01**	**200**	⇓*e*P	sP	14 25 21.4	-0.4
FITZ	**Fitzroy Crossi**	**43.45**	**82**	LR	LR	14 41 36.1	
	comp=Z,1μm,19.4s,baz=259,slow=34						
EDFI	**Ende, Flores**	**45.29**	**68**	P	**P**	**14 25 35.7**	**+0.4**
	comp=Z,620nmcomp=Z,40nm,1.3s						
MMRI	**Maumere**	**45.79**	**68**	P	**P**	**14 25 39.6**	**+0.5**
MMRI				IAmb	IAmb	14 25 45.7	
	comp=Z,73nm,1.1s						
MMRI	**Maumere**	**45.79**	**68**	P	**P**	**14 25 40.8**	**+1.7**
	comp=Z,1μmcomp=Z,56nm,1.3s						
BSSI	**Bau Bau, Buton**	**45.99**	**64**	P	**P**	**14 25 40.5**	**-0.2**
	comp=Z,767nmcomp=Z,78nm,1.1s						
KAPI	**Kappang**	**46.17**	**62**	*i*P	**P**	**14 25 40.0**	**-2.1**
KAPI				pmax	pmax		
	comp=Z,27nm,1.4s						
BKSI	**Bulukumba**	**46.25**	**63**	P	**P**	**14 25 43.3**	**+0.6**
	comp=Z,27nm,1.5s						
SBUM	**Sibu**	**46.33**	**48**	P	**P**	**14 25 44.4**	**+1.1**
SBUM				IAmb	IAmb	14 25 45.7	
	comp=Z,103nm,1.6s						
SOEI	**Soe**	**46.74**	**71**	P	**P**	**14 25 47.3**	**+0.6**
BOSA	**Boshof**	**46.78**	**260**	P	**P**	**14 25 47.1**	**+0.2**
	comp=Z,19nm,1.0s,baz=113,slow=8.1,SNR=9.9						
BOSA				LR	LR	14 41 59.0	
	comp=Z,722nm,18.2s,baz=108,slow=32						
	comp=Z,19nm,1.0s						
BOSA	**Boshof**	**46.78**	**260**	P	**P**	**14 25 47.3**	**+0.4**
BOSA				IAmb	IAmb	14 25 48.9	
	comp=Z,44nm,1.2s						
BBOO	**Buckleboo**	**46.79**	**106**	P	**P**	**14 25 46.6**	**-0.2**
	comp=Z,32nm,1.6s						
BBOO	**Buckleboo**	**46.79**	**106**	P	**P**	**14 25 45.9**	**-0.8**
BBOO				IAmb	IAmb	14 25 51.3	
	comp=Z,64nm,1.4s						
BNSI	**Bone**	**46.84**	**62**	P	**P**	**14 25 48.2**	**+0.9**
	comp=Z,791nmcomp=Z,66nm,1.3s						
SPSI	**Sidrap Palu**	**46.88**	**61**	P	**P**	**14 25 47.7**	**+0.1**
	comp=Z,507nmcomp=Z,34nm,1.2s						
MREMI	**Moremi**	**47.15**	**268**	P	**P**	**14 25 49.7**	**-0.1**
MREMI				IAmb	IAmb	14 25 51.6	
	comp=Z,42nm,1.1s						
MATP	**Matopo**	**47.16**	**272**	P	P	14 26 01.0	+11
	comp=Z,15nm,1.1s,baz=136,slow=8.8,SNR=9.3						
MATP				LR	LR	14 42 34.5	
	comp=Z,2μm,19.4s,baz=112,slow=32						
KNRA	**Kununurra**	**47.23**	**81**	P	**P**	**14 25 50.4**	**-0.1**
	comp=Z,33nm,1.4s						
KNRA	**Kununurra**	**47.23**	**81**	P	**P**	**14 25 50.3**	**-0.1**
KNRA				IAmb	IAmb	14 25 54.6	
	comp=Z,83nm,1.6s						
TTSI	**Tana Toraja**	**47.53**	**60**	P	**P**	**14 25 53.7**	**+1.0**
	comp=Z,1μmcomp=Z,42nm,1.3s						
LBTB	**Lobatse**	**47.76**	**264**	P	**P**	**14 25 54.4**	**-0.1**
	comp=Z,18nm,0.6s,baz=121,slow=7.2,SNR=30						
LBTB				LR	LR	14 42 21.7	
	comp=Z,570nm,19.1s,baz=106,slow=32						
	comp=Z,18nm,0.6s						
LBTB	**Lobatse**	**47.76**	**264**	P	**P**	**14 25 54.3**	**-0.3**
LBTB				IAmb	IAmb	14 25 56.1	
	comp=Z,90nm,1.4s						
BROLN	**Tlhalogang**	**47.85**	**270**	*i*P	**P**	**14 25 55.6**	**+0.3**
BBSI	**Bau Bau**	**48.00**	**65**	P	**P**	**14 25 58.7**	**+2.3**
	comp=Z,1μmcomp=Z,98nm,1.1s						
ASAR	**Alice Springs**	**48.03**	**94**	P	**P**	**14 25 55.6**	**-0.9**
	comp=Z,10nm,0.8s,baz=246,slow=6.6,SNR=99						
ASAR				PcP	**PcP**	**14 27 23.0**	**-1.5**
	comp=Z,3.1nm,0.6s,baz=237,slow=3.3,SNR=9.0						
ASAR				LR	LR	14 43 32.4	
	comp=Z,611nm,21.8s,baz=261,slow=33						
	comp=Z,10nm,0.8s						
ASAR	**Alice Springs**	**48.03**	**94**	P	**P**	**14 25 55.3**	**-1.3**
AS31	**Alice Springs**	**48.03**	**94**	P	**P**	**14 25 55.5**	**-1.1**
MAKGR	**Makgori**	**48.13**	**263**	*i*P	**P**	**14 25 57.7**	**+0.3**
LPHEP	**Lephephe**	**48.17**	**267**		**P**	**14 25 58.2**	**+0.4**
LPHEP				IAmb	IAmb	14 26 00.0	
	comp=Z,63nm,1.1s						
LPHEP	**Lephephe**	**48.17**	**267**	*i*P	**P**	**14 25 58.8**	**+1.0**
HTT	**Hallett**	**48.93**	**108**	P	**P**	**14 26 03.4**	**-0.1**
	comp=Z,6.8nm,1.6s						
KHWEE	**KHWEE**	**49.09**	**268**	P	**P**	**14 26 05.8**	**+0.9**
KDWAN	**Kaudwane**	**49.17**	**266**	*i*P	**P**	**14 26 06.6**	**+1.1**
SUR	**Sutherland**	**49.27**	**253**	P	**P**	**14 26 07.4**	**+1.1**
SKOMA	**Sekoma**	**49.34**	**264**	*i*P	**P**	**14 26 06.8**	**0.0**
KIBK	**Kibwezi**	**49.42**	**299**	P	**P**	**14 26 08.5**	**+1.1**
KIBK				IAmb	IAmb	14 26 14.8	
	comp=Z,69nm,1.9s						
KIBK	**Kibwezi**	**49.42**	**299**	P	**P**	**14 26 08.8**	**+1.4**
	SNR=11						
HYBB	**Hyderabad (bro**	**49.68**	**358**	*e*P	**P**	**14 26 09.6**	**+0.5**
HYBB				IVmB_BB		14 26 09.9	
	comp=Z,600nm,1.6s						
HYBB				*e*PcP	**PcP**	**14 27 30.4**	**+0.1**
HYBB				*e*PP	**PP**	**14 28 04.0**	**+0.1**
HYBB				*e*S	**S**	**14 33 19.2**	**+1.9**
HYBB				IVMs_BB	IVMs_BB	14 47 57.0	
	comp=Z,619nm,19.0s						
LSZ	**Lusaka**	**49.81**	**277**	P	**P**	**14 26 11.5**	**+1.1**
	comp=Z,20nm,0.9s,baz=127,slow=8.0,SNR=19						
LSZ				LR	LR	14 42 54.5	
	comp=Z,360nm,21.2s,baz=111,slow=31						
	comp=Z,20nm,0.9s						
LSZ	**Lusaka**	**49.81**	**277**	P	**P**	**14 26 11.2**	**+0.8**
LSZ	**Lusaka**	**49.81**	**277**	P	**P**	**14 26 11.2**	**+0.8**
LSZ				pmax	pmax		
	comp=Z,40nm,1.1s						
MPSI	**Mapaga**	**49.91**	**57**	P	**P**	**14 26 11.5**	**+0.5**
	comp=Z,423nmcomp=Z,31nm,1.5s						
WRA	**Warramunga Arr**	**49.94**	**90**	P	**P**	**14 26 10.6**	**-0.6**
	comp=Z,17nm,0.8s,baz=246,slow=7.4,SNR=66						
WRA				PcP	**PcP**	**14 27 29.8**	**-1.7**
	comp=Z,3.8nm,0.6s,baz=243,slow=2.8,SNR=9.1						
WRA				LR	LR	14 46 35.0	
	comp=Z,890nm,18.0s,baz=252,slow=35						
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**49.94**	**90**	P	**P**	**14 26 10.7**	**-0.6**
WRA	**Warramunga Arr**	**49.94**	**90**	P	**P**	**14 26 10.7**	**-0.6**
WRA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
WRAB	**Tennant Creek**	**49.95**	**90**	P	**P**	**14 26 10.7**	**-0.6**
WRAB				IAmb	IAmb	14 26 15.3	
	comp=Z,52nm,1.3s						
WRAB	**Tennant Creek**	**49.95**	**90**	*ce*P	**P**	**14 26 08.9**	**-2.5**
WRAB				pmax	pmax		
	comp=Z,65nm,1.7s						
WB0	**Warramunga Arr**	**50.06**	**89**	P	**P**	**14 26 11.5**	**-0.7**
WR8	**Warramunga Arr**	**50.07**	**90**	P	**P**	**14 26 11.7**	**-0.6**
WR8				IAmb	IAmb	14 26 16.2	
	comp=Z,42nm,1.0s						
PHDHD	**Phuduhudu**	**50.60**	**270**	P	**P**	**14 26 17.4**	**+1.0**
PHDHD				IAmb	IAmb	14 26 18.5	
	comp=

GRTLG IAmb IAmb 14 26 35.4
comp=Z,90nm,1.3s
GRTLG Ghanzi 52.91 267 *i* P **P** **14 26 33.8 +0.1**
KMSI Cibinong 53.02 61 P **P** **14 26 38.2 +3.9**
KOOLE Kule 53.09 264 **P** **14 26 35.3 +0.3**
KOOLE Kule 53.09 264 *i* P **P** **14 26 35.6 +0.7**
QNGWA Qangwa 53.74 269 **P** **14 26 40.2 +0.4**
QNGWA IAmb IAmb 14 26 41.9
comp=Z,41nm,1.1s
QNGWA Qangwa 53.74 269 *i* P **P** **14 26 40.4 +0.6**
CMAR Chiang Mai Arr 53.87 23 P **P** **14 26 39.9 -0.6**
comp=Z,17nm,1.0s,baz=207,slow=7.0,SNR=85
comp=Z,17nm,1.0s
XAUDM Khaudum 54.04 270 P **P** **14 26 42.7 +0.7**
XAUDM IAmb IAmb 14 26 44.4
comp=Z,59nm,1.1s
XAUDM Khaudum 54.04 270 *i* P **P** **14 26 43.2 +1.2**
QIS Mount Isa 54.12 93 P **P** **14 26 41.9 -0.5**
comp=Z,41nm,0.9s
CHTO Chiang Mai 54.21 22 **P** **14 26 42.9 0.0**
CHTO Chiang Mai 54.21 22 P **P** **14 26 42.9 0.0**
CHTO pmax pmax
comp=Z,13nm,0.9s
CMSA Cobar Meteorol 54.95 108 P **P** **14 26 48.1 -0.2**
comp=Z,24nm,1.4s
LODK Lodwar 55.29 302 **P** **14 26 51.4 +0.4**
LODK Lodwar 55.29 302 P **P** **14 26 51.7 +0.8**
SNR=15
DMTO DMTO 55.37 331 P **P** **14 26 51.6 +0.3**
SHAO Shalim 55.37 332 P **P** **14 26 51.9 +0.6**
RBK Rabkut 55.49 330 P **P** **14 26 52.9 +0.7**
SNR=7.2
TROLL Troll, Antarti 55.53 202 ⇓P **P** **14 26 52.7 +0.7**
comp=Z,3µm,1.1s
QLP Quilpie 55.54 102 P **P** **14 26 52.3 -0.3**
comp=Z,27nm,1.7s
ABTO Aybut 55.75 329 P **P** **14 26 54.2 +0.1**
BRDH Bariadhala 56.03 13 LR LR 14 50 41.0
comp=Z,990nm,18.1s,baz=222,slow=36
WHFO Wadi Hawf 56.05 330 P **P** **14 26 56.3 +0.1**
SNR=7.9
YNG Young 56.19 112 P **P** **14 26 57.0 -0.2**
comp=Z,26nm,2.7s
ATD Arta Tunnel 56.32 315 LR LR 14 48 05.1
comp=Z,18nm,18.1s,baz=138,slow=33
ATD Arta Tunnel 56.32 315 **P** **14 26 59.2 +0.9**
ATD IAmb IAmb 14 27 01.2
comp=Z,56nm,1.2s
DOK Doka 56.52 330 P **P** **14 26 59.2 -0.3**
SNR=6.7
VNDA Vanda 56.77 165 P **P** **14 27 00.0 -0.5**
comp=Z,20nm,1.1s,baz=275,slow=8.2,SNR=42
VNDA LR LR 14 48 07.9
comp=Z,610nm,21.3s,baz=268,slow=33
comp=Z,20nm,1.1s
VNDA Vanda 56.77 165 **P** **14 27 00.1 -0.5**
VNDA IAmb IAmb 14 27 05.7
comp=Z,39nm,1.2s
VNDA Vanda 56.77 165 P **P** **14 27 00.1 -0.5**
VNDA pmax pmax
comp=Z,39nm,1.2s
TSUM Tsumeb 56.91 267 LR LR 14 47 50.8
comp=Z,1µm,19.3s,baz=127,slow=32
TSUM Tsumeb 56.91 267 **P** **14 27 03.0 +0.4**
FURI Furi 56.93 309 LR LR 14 49 14.6
comp=Z,675nm,18.2s,baz=106,slow=34
FAKI Fak Fak 57.15 70 **P** **14 27 03.6 -0.6**
FAKI Fak Fak 57.15 70 P **P** **14 27 08.4 +4.2**
comp=Z,873nmcomp=Z,64nm,1.2s
MHTO MHTO 57.19 335 P **P** **14 27 03.4 -0.8**
SNR=7.2
SNAA Sanae 57.22 202 ⇓P **P** **14 27 04.7 +0.7**
comp=Z,775nm,1.3s
SNAA Sanae 57.22 202 P **P** **14 27 04.9 +0.9**
comp=Z,34nm,1.0s,baz=98,slow=6.8,SNR=40
SNAA LR LR 14 49 36.5
comp=Z,250nm,18.0s,baz=15,slow=34
comp=Z,34nm,1.0s
SNAA Sanae 57.22 202 **P** **14 27 04.6 +0.7**
SNAA IAmb IAmb 14 27 06.2
comp=Z,93nm,1.3s
SNAA Sanae 57.22 202 *ce*P **P** **14 27 03.2 -0.8**
SNAA pmax pmax
comp=Z,78nm,1.3s
QSPA South Pole Qui 57.62 180 P **P** **14 27 08.9 +1.9**
comp=Z,60nm,1.0s,baz=285,slow=2.4,SNR=129
QSPA LR LR 14 49 55.9
comp=Z,2µm,18.3s,baz=292,slow=34
comp=Z,60nm,1.0s
QSPA South Pole Qui 57.62 180 P **P** **14 27 08.8 +1.9**
QSPA IAmb IAmb 14 27 14.5
comp=Z,92nm,1.2s
SWI Sorong 57.63 68 P **P** **14 27 08.3 +0.8**
comp=Z,2µmcomp=Z,46nm,1.2s
JLN Jalan Bani Buh 57.79 337 P **P** **14 27 07.8 -0.6**
SBA Scott Base 57.81 166 **P** **14 27 08.2 +0.2**
SBA IAmb IAmb 14 27 22.0
comp=Z,50nm,1.5s
SBA Scott Base 57.81 166 P **P** **14 27 08.2 +0.2**
SBA pmax pmax
comp=Z,49nm,1.5s
WBK Wadi Bani Khal 58.36 337 P **P** **14 27 12.3 -0.2**
QIZ Qiongzhong 58.73 34 P **P** **14 27 16.4 +1.3**
QIZ S **S** **14 35 21.3 +1.9**
QIZ pmax pmax
comp=Z,390nm,6.6s
QIZ LR LR
comp=Z,380nm,14.7s
QIZ LR LR
comp=Z,260nm,12.9s
QIZ LR LR
comp=Z,460nm,17.5s
WSAR Wadi Sarin 59.05 337 LR LR 14 47 48.9
comp=Z,6.1nm,18.2s,baz=200,slow=31
WSAR Wadi Sarin 59.05 337 P **P** **14 27 17.1 -0.1**
SMDO Samad 59.08 336 P **P** **14 27 17.4 -0.2**
VNA1 Neumayer--Stat 59.10 203 ⇓P **P** **14 27 18.6 +1.5**
comp=Z,81nm,1.1s
MTSU Mount Surprise 59.18 93 P **P** **14 27 18.0 -0.4**
comp=Z,8.2nm,1.0s
VNA3 Neumayer Olymp 59.44 202 ⇓P **P** **14 27 20.4 +1.0**
comp=Z,39nm,0.8s
UMZA Um Al Zommool 59.80 333 P **P** **14 27 21.8 -0.5**
HOQ Hoqain 59.82 336 P **P** **14 27 22.4 -0.1**
SNR=8.2
ARQ Araqi 59.87 335 P **P** **14 27 22.4 -0.5**
SNR=8.3
CTA Charters Tower 59.93 96 LR LR 14 52 42.9
comp=Z,21nm,18.1s,baz=232,slow=36
CTAO Charters Tower 59.93 96 P **P** **14 27 22.5 -1.0**
CTAO Charters Tower 59.93 96 P **P** **14 27 22.5 -1.0**
CTAO pmax pmax
comp=Z,21nm,1.1s
TNCH TengChong 59.93 20 ⇓*i*P **P** **14 27 23.5 0.0**
TNCH S **S** **14 35 37.1 +2.0**
TNCH pmax pmax
comp=Z,55nm,1.6s
TNCH pmax pmax
comp=Z,380nm,3.0s
TNCH LR LR
comp=Z,350nm,17.0s
TNCH LR LR
comp=Z,300nm,20.7s
TNCH LR LR
comp=Z,810nm,21.2s
COEN Coen 60.20 88 P **P** **14 27 24.9 -0.6**
comp=Z,16nm,2.0s
EVN Everest 60.51 7 **P** **14 27 27.3 -0.6**
SOHO SOHO 60.60 335 P **P** **14 27 27.7 -0.1**
SOHO SOHO 60.60 335 *i* P **P** **14 27 26.7 -1.1**
SNR=7.9
MZR Muzera 60.71 332 P **P** **14 27 29.3 +0.6**
SNR=8.5
MZR Muzera 60.71 332 *i* P **P** **14 27 27.7 -0.9**
SNR=22
TGY Tagaytay City 60.75 47 P **P** **14 27 31.4 +2.3**
comp=Z,102nm,0.3s,baz=220,slow=7.9,SNR=4.4
ALNE Al Ain 60.80 335 P **P** **14 27 29.4 +0.1**
SNR=14
ALNE Al Ain 60.80 335 *i* P **P** **14 27 29.3 0.0**
SNR=6.7
ASHO Ashiyiah 61.27 335 P **P** **14 27 32.0 -0.4**
ASHO Ashiyiah 61.27 335 P **P** **14 27 31.5 -1.0**
KMI Kunming 61.33 24 ⇓P **P** **14 27 34.0 +0.9**
KMI S **S** **14 35 56.3 +3.2**
KMI pmax pmax
comp=Z,31nm,1.2s
KMI pmax pmax
comp=Z,280nm,7.1s
KMI LR LR
comp=Z,290nm,19.4s
KMI LR LR
comp=Z,310nm,18.7s
KMI LR LR
comp=Z,430nm,20.5s
HATD Hatta, Dubai 61.37 335 P **P** **14 27 32.4 -0.7**
UOSS Minazif 61.46 335 P **P** **14 27 33.2 -0.5**
ASUD Al Ashush, Dub 61.48 334 P **P** **14 27 33.9 +0.1**
MDH Madha 61.75 336 P **P** **14 27 34.1 -1.5**
MDH Madha 61.75 336 P **P** **14 27 33.9 -1.7**
GHWR Ruwais 61.81 332 P **P** **14 27 36.4 +0.3**
MSFE Esma-Masafi 61.85 336 P **P** **14 27 35.4 -1.0**
MASF Masafi 61.86 336 P **P** **14 27 36.4 -0.1**
PZH PanZhiHua 62.28 22 P **P** **14 27 39.3 0.0**
PZH S **S** **14 36 09.8 +4.9**
PZH SS **SS** **14 40 10.0 +1.1**
PZH pmax pmax
comp=Z,30nm,1.3s
PZH pmax pmax
comp=Z,240nm,7.3s
PZH LR LR
comp=Z,260nm,14.1s
PZH LR LR
comp=Z,210nm,17.3s
PZH LR LR
comp=Z,430nm,20.2s
BANOM Banah 62.32 336 P **P** **14 27 38.8 -0.8**
BANOM Banah 62.32 336 P **P** **14 27 38.3 -1.2**
JRN Qarnain Island 62.70 332 P **P** **14 27 42.3 +0.3**
LSA Lhasa 62.80 11 P **P** **14 27 43.3 +0.1**
LSA Lhasa 62.80 11 P **P** **14 27 40.1 -3.1**
LSA S **S** **14 36 03.8 -8.2**
LSA pmax pmax
comp=Z,49nm,1.2s
LSA LR LR
comp=Z,430nm,21.4s
LSA LR LR
comp=Z,260nm,18.6s
LSA Lhasa 62.80 11 *i* P **P** **14 27 43.9 +0.7**
SNR=12
LSA Lhasa 62.80 11 P **P** **14 27 43.3 +0.1**
LSA pmax pmax
comp=Z,105nm,1.4s
TRNA Turayna 63.18 331 P **P** **14 27 45.3 +0.1**
BELA Belgrano 2 63.33 192 P **P** **14 27 45.3 -0.3**
BELA IAmb IAmb 14 27 50.4
comp=Z,32nm,1.3s
SMRA Abu-Samra 63.35 330 P **P** **14 27 46.4 +0.1**
GYA Guiyang 63.96 27 ⇓P **P** **14 27 50.8 +0.3**
GYA pmax pmax
comp=Z,17nm,1.5s
JAY Jayapura 64.22 76 LR LR 14 55 05.0
comp=Z,225nm,20.1s,baz=251,slow=35
SHMA Al-Shehemyia 64.27 331 P **P** **14 27 52.4 0.0**
GULI GuiLin 64.42 31 P **P** **14 27 50.5 -2.9**
GULI pmax pmax
comp=Z,24nm,1.0s
GULI pmax pmax
comp=Z,300nm,7.4s
GULI LR LR
comp=Z,300nm,17.5s
GULI LR LR
comp=Z,310nm,18.6s
GULI LR LR
comp=Z,570nm,19.1s
RAYN Ar Rayn 64.69 325 **P** **14 27 54.9 -0.3**
RAYN Ar Rayn 64.69 325 P **P** **14 27 56.0 +0.7**
RAYN Ar Rayn 64.69 325 *i* P **P** **14 27 55.4 +0.1**
SNR=133
RAYN Ar Rayn 64.69 325 P **P** **14 27 54.9 -0.3**
RAYN pmax pmax
comp=Z,110nm,1.0s
PMG Port Moresby 65.85 86 LR LR 14 55 40.0
comp=Z,792nm,18.3s,baz=234,slow=35
PMG Port Moresby 65.85 86 **P** **14 28 02.9 -0.1**
PMG IAmb IAmb 14 28 07.8
comp=Z,66nm,1.2s
PMG Port Moresby 65.85 86 *ce*P **P** **14 27 59.5 -3.5**
PMG pmax pmax
comp=Z,62nm,1.3s
CD2 Chengdu 67.01 22 P **P** **14 28 09.1 -1.0**
CD2 S **S** **14 37 02.9 -0.1**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,450nm,6.9s
CD2 LR LR
comp=Z,530nm,15.2s
CD2 LR LR
comp=Z,740nm,22.2s
CD2 LR LR
comp=Z,670nm,17.8s
KBL Kabul 67.49 350 **P** **14 28 12.9 -0.3**
KBL Kabul 67.49 350 P **P** **14 28 12.9 -0.3**
SNR=44
KBL Kabul 67.49 350 P **P** **14 28 12.9 -0.3**
KBL pmax pmax
comp=Z,67nm,1.0s
CNSH ChangSha 68.05 31 P **P** **14 28 17.4 +0.8**
CNSH pmax pmax
comp=Z,54nm,1.0s
SSLB Suanglung 68.35 40 **P** **14 28 18.4 -0.3**
ENH Enshi 68.46 27 P **P** **14 28 18.7 -0.5**
KBD Kabd 68.55 330 P **P** **14 28 19.1 -0.6**
RPZ Rata Peaks 69.14 129 LR LR 14 53 33.5
comp=Z,690nm,18.5s,baz=139,slow=32
GOMU GeErMu 69.78 13 P **P** **14 28 27.1 -0.6**
GOMU PcP **PcP** **14 28 52.5 +2.2**
GOMU S **S** **14 37 42.3 +5.9**
GOMU pmax pmax
comp=Z,12nm,1.0s
GOMU LR LR
comp=Z,210nm,15.6s
GOMU LR LR
comp=Z,260nm,16.8s
WHN Wuhan 70.71 31 ⇓P **P** **14 28 33.3 +0.3**
WHN pP **pP** **14 28 36.5 -0.7**
WHN S **S** **14 37 47.4 +0.7**
WHN pmax pmax
comp=Z,80nm,1.1s
WHN LR LR
comp=Z,2µm,18.8s
CHGR Chuyangaron 71.52 351 **P** **14 28 37.2 -0.7**
CHGR Chuyangaron 71.52 351 P **P** **14 28 37.2 -0.7**
CHGR pmax pmax
comp=Z,138nm,1.5s
XAN Xi'an 71.62 25 ⇓P **P** **14 28 38.4 -0.2**
XAN pP pwP 14 28 47.3 -0.2
XAN S **S** **14 38 01.0 +3.7**
XAN pmax pmax
comp=Z,49nm,0.8s
XAN pmax pmax
comp=Z,140nm,4.3s
XAN LR LR
comp=Z,710nm,15.1s
XAN LR LR
comp=Z,480nm,16.5s
XAN LR LR
comp=Z,750nm,18.6s
LZDM Lanzhou Array 71.68 20 P **P** **14 28 39.5 +0.3**
comp=Z,7.2nm,0.4s,baz=204,slow=6.5,SNR=11
LZDM LR LR 14 58 37.4
comp=Z,279nm,20.1s,baz=305,slow=35
comp=Z,7.2nm,0.4s
KSH Kashi 71.77 357 P **P** **14 28 36.1 -3.3**
KSH pP pP 14 28 41.3 -2.4
KSH pmax pmax
comp=Z,50nm,0.8s
KSH LR LR
comp=Z,800nm,18.5s
KSH LR LR
comp=Z,420nm,16.6s
KSH LR LR
comp=Z,730nm,19.8s
LZH Lanzhou 71.84 20 *e*P **P** **14 28 40.3 +0.3**
LZH sP pwP 14 28 50.9 +2.0
LZH S **S** **14 38 05.4 +5.4**
LZH SS **SS** **14 42 31.0 -6.1**
LZH pmax pmax
comp=Z,47nm,1.3s
LZH pmax pmax
comp=Z,470nm,4.5s
LZH LR LR
comp=Z,560nm,16.5s
LZH LR LR
comp=Z,400nm,15.1s
LZH LR LR
comp=Z,790nm,15.8s
RABL Rabaul 72.81 84 P **P** **14 28 44.7 -1.5**
RABL IAmb IAmb 14 28 49.1
comp=Z,32nm,0.9s
LYN LuoYang 73.41 28 P **P** **14 28 49.8 +0.7**
LYN S **SKiKP** **14 38 23.4 +3.8**
LYN pmax pmax
comp=Z,44nm,1.1s
LYN pmax pmax
comp=Z,450nm,6.7s
LYN LR LR
comp=Z,490nm,16.1s
LYN LR LR
comp=Z,450nm,18.3s
LYN LR LR
comp=Z,660nm,18.8s
ARSB Arslanbob 73.76 355 **P** **14 28 51.0 -0.2**
ARSB Arslanbob 73.76 355 P **P** **14 28 51.0 -0.2**
ARSB pmax pmax
comp=Z,175nm,1.5s
TARG Taragay, Kyrgy 73.91 358 **P** **14 28 51.8 -0.6**
TARG Taragay, Kyrgy 73.91 358 P **P** **14 28 51.8 -0.6**
TARG pmax pmax
comp=Z,19nm,0.7s
GTA Gaotai 73.92 16 P **P** **14 28 52.8 +0.6**
GTA pP pP 14 28 57.3 +0.8
GTA S **S** **14 38 24.3 +0.8**
GTA pmax pmax
comp=Z,32nm,1.2s
GTA pmax pmax
comp=Z,460nm,6.5s
GTA LR LR
comp=Z,450nm,19.3s
GTA LR LR
comp=Z,280nm,20.7s
GTA LR LR
comp=Z,570nm,21.4s
NJ2 Nanjing 74.02 34 *e*P **P** **14 28 52.8 0.0**
NJ2 pmax pmax
comp=Z,28nm,0.5s
NJ2 pmax pmax
comp=Z,400nm,4.5s
NJ2 LR LR
comp=Z,310nm,16.9s
NJ2 LR LR
comp=Z,410nm,18.8s
NJ2 LR LR
comp=Z,700nm,19.7s
ULHL Ulahol 74.48 357 P **P** **14 28 55.5 +0.1**
SNR=26
UCH Uchtor 74.55 356 P **P** **14 28 56.2 0.0**
SNR=24
PRZ Przheval'sk 74.65 359 P **P** **14 28 56.6 +0.2**
PRZ IAmb IAmb 14 28 58.3
comp=Z,78nm,1.5s
PRZ Przheval'sk 74.65 359 P **P** **14 28 56.7 +0.2**
PRZ pmax pmax
comp=Z,79nm,1.5s
BOOM Boomskoye usch 74.74 357 **P** **14 28 56.5 -0.4**
BOOM Boomskoye usch 74.74 357 P **P** **14 28 56.5 -0.4**
BOOM pmax pmax
comp=Z,37nm,1.4s
IUG luzhnay 74.86 352 *e*P **P** **14 28 57.4 -0.2**
comp=Z,50nm,1.4s
IUG luzhnay 74.86 352 *e*P **P** **14 28 57.3 -0.2**
IUG pmax pmax
comp=Z,50nm,1.4s
BKZ Black Stump Fm 74.86 127 P **P** **14 28 56.6 -1.3**
BKZ IAmb IAmb 14 29 06.4
comp=Z,50nm,1.2s
JOW Kunigami 74.86 44 P **P** **14 28 58.4 +0.6**
comp=Z,17nm,0.8s,baz=179,slow=1.9,SNR=3.7
comp=Z,17nm,0.8s
TOZ Tahuroa Road 74.89 125 P **P** **14 28 57.9 -0.1**
TOZ IAmb IAmb 14 29 02.9
comp=Z,64nm,1.2s
KBK Karagaybulak 74.95 356 P **P** **14 28 58.5 +0.3**
SNR=12
AAK Ala-Archa 74.96 356 P **P** **14 28 58.2 0.0**
AAK IAmb IAmb 14 28 59.7
comp=Z,43nm,1.2s
AAK Ala-Archa 74.96 356 P **P** **14 28 57.8 -0.4**
AAK Ala-Archa 74.96 356 P **P** **14 28 58.7 +0.5**
SNR=9.5
AAK Ala-Archa 74.96 356 *i* P **P** **14 28 58.4 +0.2**
SNR=9.4
AAK Ala-Archa 74.96 356 *ce*P **P** **14 28 58.8 +0.5**
AAK pmax pmax
comp=Z,44nm,1.3s
EKS2 Erkin-Say 75.03 355 P **P** **14 28 59.1 +0.5**
SNR=37
CHM Chimkent 75.08 352 *e*P **P** **14 28 58.8 0.0**
CHM Chimkent 75.08 352 *e*P **P** **14 28 58.7 0.0**
EIL Elat 75.12 320 LR LR 14 58 01.0
comp=Z,852nm,18.1s,baz=180,slow=33
TKM2 Tokmak 2 75.18 357 P **P** **14 28 59.0 -0.5**
SNR=34
SATY Saty 75.23 359 ⇓*i*P **P** **14 28 59.4 -0.4**
SATY Saty 75.23 359 *d* *i*P **P** **14 28 59.3 -0.4**
TNSS Tian-Shan 75.24 358 *e*P **P** **14 28 59.5 -0.6**
TNSS Tian-Shan 75.24 358 *e*P **P** **14 28 59.5 -0.6**
CHMS Chumysh 75.31 356 P **P** **14 28 59.8 -0.2**
SNR=8.1
SHLS Shalkode 75.32 360 *e*P **P** **14 28 59.9 -0.3**
comp=Z,43nm,1.4s
SHLS Shalkode 75.32 360 *e*P **P** **14 28 59.9 -0.3**
SHLS pmax pmax
comp=Z,43nm,1.4s
MDOK Medeo 75.37 358 *e*P **P** **14 29 00.2 -0.3**
MDOK Medeo 75.37 358 *e*P **P** **14 29 00.2 -0.3**
AAA Alma-Ata 75.42 358 *e*P **P** **14 29 00.5 -0.2**
comp=Z,85nm,1.3s
AAA Alma-Ata 75.42 358 *e*P **P** **14 29 00.5 -0.2**
AAA pmax pmax
comp=Z,85nm,1.3s
DZA Taraz 75.46 354 *e*P **P** **14 29 00.8 -0.1**
DZA Taraz 75.46 354 *e*P **P** **14 29 00.8 -0.1**
USP Ospenovka 75.59 356 P **P** **14 29 01.8 +0.1**
SNR=35
URZ Urewera 75.73 126 LR LR 14 57 49.0
comp=Z,604nm,18.2s,baz=146,slow=32
BRLS Boroldaу 75.75 352 ⇓*i*P **P** **14 29 01.1 -1.4**
KK31 Karatay Array 75.75 353 **P** **14 29 02.4 -0.2**
KK31 Karatay Array 75.75 353 P **P** **14 29 02.4 -0.2**
KK31 pmax pmax
comp=Z,71nm,0.9s
KKAR Karatay Array 75.75 353 P **P** **14 29 02.0 -0.5**
KKAR Karatay Array 75.75 353 P **P** **14 29 02.0 -0.5**
SGDS Sogindy 75.76 356 *e*P **P** **14 29 02.5 -0.2**
GHAJ Ghor Haditha 76.08 322 **P** **14 29 05.2 +0.6**
GHAJ IAmb IAmb 14 29 07.2
comp=Z,96nm,1.6s
ASF Jabal al Asfar 76.09 323 LR LR 14 59 23.6
comp=Z,364nm,18.6s,baz=118,slow=33
WMQ Urumqi 76.31 6 *e*P **P** **14 29 06.3 +0.5**
WMQ sP PcP 14 29 17.9 +0.3
WMQ pmax pmax
comp=Z,60nm,1.5s
WMQ pmax pmax
comp=Z,420nm,5.3s
WMQ LR LR
comp=Z,530nm,21.3s
WMQ LR LR
comp=Z,360nm,20.3s
HNR Honiara 76.64 93 LR LR 15 01 44.1
comp=Z,508nm,18.1s,baz=196,slow=35
SMAI San Martin Ant 76.66 192 **P** **14 29 07.8 +0.3**
SMAI IAmb IAmb 14 29 09.4
comp=Z,96nm,1.4s
TIA Tai'an 76.75 30 P **P** **14 29 08.1 -0.3**
TIA pmax pmax
comp=Z,40nm,1.3s
TIA LR LR
comp=Z,550nm,19.6s
TIA LR LR
comp=Z,710nm,15.7s
TIA LR LR
comp=Z,990nm,16.7s
HNS HongShan 76.78 28 ⇓P **P** **14 29 08.6 +0.1**
HNS S **S** **14 38 59.8 +4.9**

HNS pmax pmax
comp=Z,46nm,1.1s
HNS LR LR
comp=Z,550nm,18.2s
HNS LR LR
comp=Z,260nm,18.2s
HNS LR LR
comp=Z,700nm,19.4s
BTLS Baital 77.38 356 *e*P **P 14 29 11.4 -0.4**
comp=Z,35nm,1.3s
BTLS Baital 77.38 356 *e*P **P 14 29 11.3 -0.4**
BTLS pmax pmax
comp=Z,35nm,1.3s
MMAI Mount Meron Ar 77.52 323 P **P 14 29 12.3 -0.5**
comp=Z,26nm,1.1s,baz=126,slow=4.2,SNR=10
MMAI LR LR 14 58 14.2
comp=Z,412nm,21.9s,baz=143,slow=32
comp=Z,26nm,1.1s
BTO Baotou 77.91 23 *e*P **P 14 29 15.8 +0.9**
BTO PP **PP 14 32 14.8 +3.5**
BTO S **S 14 39 09.5 +2.1**
BTO pmax pmax
comp=Z,69nm,1.3s
BTO LR LR
comp=Z,720nm,12.7s
BTO LR LR
comp=Z,360nm,7.4s
BTO LR LR
comp=Z,1μm,17.3s
HHC Hu-ho-hao-te 78.65 24⇑*i*P **P 14 29 19.8 +0.8**
HHC pP pP 14 29 23.8 +0.5
HHC pmax pmax
comp=Z,26nm,0.8s
HHC pmax pmax
comp=Z,210nm,5.2s
HHC LR LR
comp=Z,510nm,18.5s
HHC LR LR
comp=Z,530nm,15.1s
HHC LR LR
comp=Z,840nm,19.3s
MK31 Makanchi Array 78.98 2 *i*P **P 14 29 19.1 -1.5**
MK31 pmax pmax
comp=Z,33nm,1.1s
MKAR Makanchi Array 78.98 2 P **P 14 29 19.4 -1.2**
comp=Z,13nm,0.9s,baz=166,slow=6.5,SNR=62
MKAR PKKPbc **PKKPbc 14 48 12.9 -2.7**
comp=Z,0.4nm,0.6s,baz=338,slow=1.3,SNR=4.0
comp=Z,13nm,0.9s
MKAR Makanchi Array 78.98 2 P **P 14 29 19.1 -1.4**
MKAR Makanchi Array 78.98 2*ce*P **P 14 29 19.3 -1.3**
MKAR pmax pmax
comp=Z,13nm,0.9s
GURO Guroymak-BITLI 79.00 331 **P 14 29 22.0 +0.9**
GURO IAmb IAmb 14 29 24.0
comp=Z,130nm,2.0s
PMSA Palmer Station 79.00 195 LR LR 15 02 25.5
comp=Z,236nm,19.7s,baz=146,slow=34
GNI Garni 79.30 333 LR LR 15 02 17.7
comp=Z,424nm,18.2s,baz=158,slow=34
GNI Garni 79.30 333 P **P 14 29 22.6 -0.1**
GNI Garni 79.30 333 P **P 14 29 23.7 +1.1**
GNI Garni 79.30 333*ce*P **P 14 29 22.7 +0.1**
GNI pmax pmax
comp=Z,84nm,1.3s
GNI Garni 79.30 333 P **P 14 29 21.7 -0.9**
comp=Z,1μmcomp=Z,58nm,1.5s
AKT Akhty 79.38 336 *e*P **P 14 29 23.7 +0.7**
AKT *e* 14 29 31.5
AKT pmax pmax
comp=Z,149nm,1.0s
BJI Beijing 79.63 28 P **P 14 29 23.9 -0.3**
BJI pP **pP 14 29 28.3 -0.2**
BJI sP **sP 14 29 31.0 +0.9**
BJI S **S 14 39 25.8 +0.3**
BJI pmax pmax
comp=Z,9.0nm,1.3s
BJI pmax pmax
comp=Z,210nm,7.4s
BJI LR LR
comp=Z,240nm,21.3s
BJI LR LR
comp=Z,210nm,22.7s
BJI LR LR
comp=Z,320nm,22.3s
ZSN Zaisan 79.73 3 *e*P **P 14 29 24.4 -0.3**
ZSN Zaisan 79.73 3 *e*P **P 14 29 24.4 -0.3**
GAZ Gaziantep 79.97 327 **P 14 29 27.3 +1.0**
GAZ IAmb IAmb 14 29 28.6
comp=Z,65nm,1.4s
CSS Mathiatis 80.11 323 P **P 14 29 26.7 -0.3**
comp=Z,663nmcomp=Z,23nm,2.1s
MAK Makhachkala 80.78 337*c i*P P 14 29 25.0 -5.3
MAK *e* 14 32 32.2
MAK *e*PPP PPP 14 34 23.7
MAK *e*S **S 14 39 30.9 -6.5**
MAK *e*SS **SS 14 44 47.9 -3.8**
MAK *e*SSS SSS 14 48 10.8
MAK pmax pmax
comp=Z,203nm,1.1s
KOPT Kop Dagi 80.87 330 **P 14 29 32.5 +1.2**
KOPT IAmb IAmb 14 29 34.4
comp=Z,74nm,1.2s
ARPR Arapgir-MALATY 81.03 328 P **P 14 29 32.8 +0.8**
JNU Nakatsue 81.06 41 P **P 14 29 30.9 -1.2**
comp=Z,22nm,1.0s,baz=357,slow=6.0,SNR=4.6
comp=Z,22nm,1.0s
TJN Taejon 81.67 37 *i*P **P 14 29 32.2 -3.0**
DGZ Jazzator, Alta 82.14 5 *i*P **P 14 29 37.0 -0.6**
DGZ pmax pmax
comp=Z,46nm,1.8s
KSRS Korea Array 82.78 37 P **P 14 29 40.4 -0.7**
comp=Z,3.0nm,0.8s,baz=223,slow=5.9,SNR=5.7
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 82.79 359 P **P 14 29 40.4 -0.4**
comp=Z,9.2nm,1.1s,baz=189,slow=5.2,SNR=40
KURBB PKKPbc **PKKPbc 14 48 04.3 -2.5**
comp=Z,0.2nm,0.4s,baz=350,slow=2.3,SNR=4.9
comp=Z,9.2nm,1.1s
KURBB Kurchatov Arra 82.79 359 P **P 14 29 40.2 -0.6**
KURK Kurchatov 82.88 359 P **P 14 29 40.3 -1.0**
KURK IAmb IAmb 14 29 42.0
comp=Z,46nm,1.5s
KURK Kurchatov 82.88 359 P **P 14 29 40.2 -1.0**
KURK Kurchatov 82.88 359*ce*P **P 14 29 41.1 -0.1**
KURK pmax pmax
comp=Z,29nm,1.3s
XLT XiLinHaoTe 82.93 25 *e*P **P 14 29 41.3 -0.5**
XLT sP sP 14 29 47.3 -0.4
XLT pmax pmax
comp=Z,19nm,1.3s
KBZ Khabaz 83.08 334 P **P 14 29 43.3 +1.0**
comp=Z,22nm,1.2s,baz=185,slow=4.9,SNR=26
comp=Z,22nm,1.2s
KBZ Khabaz 83.08 334*ce*P **P 14 29 43.4 +1.0**
KBZ pmax pmax
comp=Z,51nm,1.5s
KIRS Kirsehir-Merke 83.09 326 ⇑P **P 14 29 42.4 -0.4**
SHA1 Shidzhatmaz 83.17 334 *i*P **P 14 29 42.4 -0.9**
AB31 Akbulak array 83.34 347 **P 14 29 43.5 -0.2**
AB31 IAmb IAmb 14 29 45.6
comp=Z,75nm,1.6s
AB31 Akbulak array 83.34 347 *i*P **P 14 29 42.9 -0.7**
ABKAR Akbulak array 83.34 347 **P 14 29 42.9 -0.7**
KIV Kislovodsk 83.35 334 **P 14 29 44.5 +0.5**
KIV Kislovodsk 83.35 334 ⇑P **P 14 29 43.9 -0.1**
KIV Kislovodsk 83.35 334 *i*P **P 14 29 44.6 +0.7**
SNR=12
KIV Kislovodsk 83.35 334 *e*P **P 14 29 43.3 -0.7**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV Kislovodsk 83.35 334 P **P 14 29 43.8 -0.2**
comp=Z,688nmcomp=Z,40nm,1.4s
SONM Songino Array 83.46 18 P **P 14 29 44.2 -0.3**
comp=Z,8.4nm,0.7s,baz=198,slow=5.6,SNR=36
comp=Z,8.4nm,0.7s
SONM Songino Array 83.46 18 **P 14 29 44.0 -0.5**
SONM IAmb IAmb 14 29 45.5
comp=Z,61nm,1.6s
SONM Songino Array 83.46 18 P **P 14 29 44.0 -0.5**
SONM pmax pmax
comp=Z,61nm,1.6s
ULN Ulaanbaatar 83.65 18 **P 14 29 45.3 -0.3**
ULN IAmb IAmb 14 29 46.3
comp=Z,37nm,1.2s
ULN Ulaanbaatar 83.65 18 *i*P **P 14 29 43.7 -1.8**
ULN pmax pmax
comp=Z,37nm,1.3s
BR104 Keskin Array S 83.68 326 P **P 14 29 45.5 -0.3**
comp=Z,146nmcomp=Z,15nm,1.2s
BR131 Keskin Array S 83.69 326 P **P 14 29 45.7 -0.2**
SNR=12
BR131 Keskin Array S 83.69 326 *i*P **P 14 29 44.4 -1.5**
BRTR Keskin Array B 83.69 326 P **P 14 29 45.7 -0.2**
comp=Z,9.0nm,1.0s,baz=156,slow=6.7,SNR=39
BRTR LR LR 15 04 53.4
comp=Z,278nm,18.3s,baz=120,slow=34
comp=Z,9.0nm,1.0s
BR105 Keskin Array S 83.70 326 P **P 14 29 45.6 -0.3**
comp=Z,153nmcomp=Z,15nm,1.2s
BR106 Keskin Array S 83.71 326 P **P 14 29 45.7 -0.3**
comp=Z,143nmcomp=Z,15nm,1.2s
VSLR Vesyoloye 83.95 332 *i*P **P 14 29 47.3 +0.4**
GOF Gofitskoye 84.17 335*ce*P **P 14 29 48.5 +0.5**
SOC Sochi 84.18 332 *e*P **P 14 29 45.3 -2.8**
SOC *e*S **SKSac 14 40 07.5 -3.0**
SOC *e*SSS SSS 14 49 14.2
SOC pmax pmax
comp=Z,42nm,1.1s
ANTO Ankara 84.21 325 ⇑P **P 14 29 49.3 +0.8**
ANTO Ankara 84.21 325 P **P 14 29 49.2 +0.8**
ANTO Ankara 84.21 325 P **P 14 29 48.2 -0.2**
comp=Z,346nmcomp=Z,22nm,1.4s
KNGR Kungurtug, Tuv 84.22 11 *i*P **P 14 29 47.5 -0.8**
KNGR pmax pmax
comp=Z,36nm,1.4s
LABN Labinsk 84.67 333 *e*P **P 14 29 50.2 -0.4**
LABN pmax pmax
comp=Z,64nm,1.0s
IDI Anoyia 84.92 318 **P 14 29 52.5 +0.4**
ZAK Zakamensk 85.10 15 *e*P **P 14 29 51.7 -1.0**
ZAK pmax pmax
comp=Z,35nm,1.7s
BVA0 Borovoye Array 85.59 354 P **P 14 29 54.2 -0.8**
BVAR Borovoye Array 85.59 354 P **P 14 29 54.5 -0.4**
comp=Z,11nm,0.6s,baz=158,slow=7.0,SNR=59
BVAR LR LR 15 06 15.0
comp=Z,234nm,19.0s,baz=175,slow=34
comp=Z,11nm,0.6s
BORK Borovoye 85.62 354*ce*P **P 14 29 54.3 -0.8**
BORK pmax pmax
comp=Z,37nm,1.0s
ERBR Yeremizino-Bor 85.67 334 *e*P **P 14 29 55.2 -0.3**
ERBR pmax pmax
comp=Z,70nm,1.1s
APE Apeiranthos 85.84 319 ⇑P **P 14 29 56.4 -0.3**
APE Apeiranthos 85.84 319 P **P 14 29 56.3 -0.3**
MOY Mondy 85.86 13 *e*P **P 14 29 56.7 +0.2**
MOY pmax pmax
comp=Z,76nm,2.4s
ANN Anapa 86.11 331 *e*P **P 14 29 57.5 -0.2**
ANN pmax pmax
comp=Z,157nm,1.2s
ZAA0 Zalesovo Array 86.22 3 P **P 14 29 56.6 -1.4**
ZALV Zalesovo Beam 86.22 3 P **P 14 29 57.1 -1.0**
comp=Z,32nm,0.9s,baz=199,slow=3.1,SNR=87
comp=Z,32nm,0.9s
ZALV Zalesovo Beam 86.22 3 P **P 14 29 56.3 -1.8**
TLY Talaya 86.41 15*ce*P **P 14 29 58.5 -0.6**
TLY pmax pmax
comp=Z,58nm,2.5s
CN2 Changchun 86.60 31 *e*P **P 14 30 01.9 +1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
IRK Irkutsk 87.07 15 *e*P **P 14 30 00.1 -2.2**
IRK pmax pmax
comp=Z,81nm,2.5s
TORD Torodi Ar. Bea 87.29 287 P **P 14 30 04.0 -0.2**
comp=Z,18nm,1.0s,baz=114,slow=6.6,SNR=6.7
TORD LR LR 15 06 33.8
comp=Z,888nm,20.1s,baz=129,slow=34
comp=Z,18nm,1.0s
MAJO Matsushiro 87.70 43 P **P 14 30 05.5 -0.2**
MAJO Matsushiro 87.70 43 P **P 14 30 05.5 -0.2**
MAJO pmax pmax
comp=Z,104nm,1.8s
MJAR Matsushiro Arr 87.70 43 P **P 14 30 05.5 -0.2**
comp=Z,5.9nm,0.9s,baz=208,slow=5.6,SNR=12
MJAR PP **PP 14 33 33.4 +1.6**
comp=Z,2.5nm,0.8s,baz=187,slow=5.9,SNR=3.7
comp=Z,5.9nm,0.9s
HILR Hailar Array B 89.07 25 P **P 14 30 11.5 -0.4**
comp=Z,4.7nm,0.7s,baz=197,slow=4.6,SNR=9.7
comp=Z,4.7nm,0.7s
DBIC Dimbokro 89.14 278 P **P 14 30 13.7 +0.6**
comp=Z,4.7nm,0.8s,baz=155,slow=7.7,SNR=4.7
comp=Z,4.7nm,0.8s
CIT Chita 89.21 20 *e*P **P 14 30 12.4 -0.1**
CIT pmax pmax
comp=Z,129nm,2.9s
VRH Novokhopyorsk 89.89 337 *e*P **P 14 30 15.2 -0.4**
VRH pmax pmax
comp=Z,30nm,1.2s
USRK Ussuriysk Ar. 89.91 35 P **P 14 30 14.7 -1.2**
comp=Z,5.6nm,0.9s,baz=234,slow=6.4,SNR=7.7
comp=Z,5.6nm,0.9s
ARTI Arti 90.44 348 LR LR 15 10 35.3
comp=Z,375nm,18.5s,baz=165,slow=35
ARTI Arti 90.44 348*d i*P **P 14 30 16.0 -2.1**
ARTI 14 33 49.1
ARTI S **SKSac 14 40 46.5 -1.7**
ARTI pmax pmax
comp=Z,15nm,1.5s
CFR Carcaliu 90.48 326 ⇑P **P 14 30 18.9 +0.3**
CFR Carcaliu 90.48 326 P **P 14 30 18.8 +0.3**
SVE Sverdlovsk 90.49 350 *e*P **P 14 30 18.1 -0.2**
VORD Divnogorie 90.51 336 *e*P **P 14 30 17.0 -1.5**
VORD pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 90.77 336 *e*P **P 14 30 16.3 -3.4**
VSR pmax pmax
comp=Z,20nm,1.0s
VORR Voronezh 91.13 336 *e*P **P 14 30 21.3 -0.1**
VORR pmax pmax
comp=Z,42nm,1.0s
ISR Istrita 91.20 325 ⇑P **P 14 30 21.3 -0.7**
ISR Istrita 91.20 325 P **P 14 30 21.3 -0.7**
PLOR Plostina 91.68 326 ⇑P **P 14 30 24.7 +0.4**
PLOR Plostina 91.68 326 P **P 14 30 24.6 +0.4**
MLR Muntele Rosu 91.76 325 LR LR 15 09 25.9
comp=Z,295nm,18.2s,baz=104,slow=34
MLR Muntele Rosu 91.76 325 ⇑P **P 14 30 23.9 -0.8**
MLR Muntele Rosu 91.76 325 P **P 14 30 23.8 -0.8**
MLR Muntele Rosu 91.76 325 P **P 14 30 24.1 -0.6**
comp=Z,71nm,1.4s
LPSR Galich'ya Gora 92.00 336 *e*P **P 14 30 25.5 +0.1**
LPSR pmax pmax
comp=Z,45nm,1.0s
TURR Turia 92.13 326 ⇑P **P 14 30 24.8 -1.5**
VOIR 92.15 325 ⇑P **P 14 30 26.5 +0.1**
VOIR 92.15 325 P **P 14 30 26.5 +0.1**
ARR Arges 92.30 325 ⇑P **P 14 30 26.2 -0.9**
DOPR Dopca 92.37 325 ⇓P **P 14 30 27.7 +0.3**
HEH HeiHe 92.52 28 *e*P **P 14 30 26.4 -1.5**
HEH pmax pmax
comp=Z,18nm,0.7s
VAE Valguarnera 92.60 314 LR LR 15 11 41.2
comp=Z,228nm,18.3s,baz=154,slow=35
HERR Herculane 93.06 323 ⇑P **P 14 30 30.1 -0.5**
GZR Gura Zlata 93.24 324 ⇑P **P 14 30 31.0 -0.5**
GZR Gura Zlata 93.24 324 P **P 14 30 30.9 -0.5**
BURAR Bucovina Array 93.64 326 P **P 14 30 33.8 +0.5**
BURAR Bucovina Array 93.64 326 ⇑P **P 14 30 33.6 +0.2**
BURAR Bucovina Array 93.64 326 P **P 14 30 33.5 +0.2**
AK07 Malin Array Si 94.05 330 P **P 14 30 34.8 -0.1**
AK09 Malin Array Si 94.07 330 P **P 14 30 34.9 -0.1**
AK10 Malin Array Si 94.07 330 P **P 14 30 34.9 -0.1**
AK06 Malin Array Si 94.08 330 P **P 14 30 34.9 -0.2**
AK08 Malin Array Si 94.09 330 P **P 14 30 35.0 -0.1**
AK05 Malin Array Si 94.11 330 P **P 14 30 34.8 -0.4**
AK02 Malin Array Si 94.13 330 P **P 14 30 34.9 -0.4**
AK12 Malin Array Si 94.14 330 P **P 14 30 34.9 -0.5**
AK14 Malin Array Si 94.15 330 P **P 14 30 35.0 -0.4**
AK01 Malin Array Si 94.16 330 P **P 14 30 35.0 -0.4**
AKASG Malin Array Be 94.16 330 P **P 14 30 35.5 +0.1**
comp=Z,12nm,0.9s,baz=142,slow=3.9,SNR=37
AKASG LR LR 15 10 57.2
comp=Z,146nm,18.8s,baz=100,slow=34
comp=Z,12nm,0.9s
AKBB Malin Array Si 94.16 330*ce*P **P 14 30 35.2 -0.2**
AKBB pmax pmax
comp=Z,34nm,1.0s
KIEV Kiev 94.16 330 P **P 14 30 35.5 +0.1**
KIEV IAmb IAmb 14 30 36.7
comp=Z,26nm,1.0s
KIEV Kiev 94.16 330 ⇓P **P 14 30 34.7 -0.7**
KIEV Kiev 94.16 330 *i*P **P 14 30 35.5 +0.1**
SNR=10
LUBAR Lubar, Ukraine 94.19 329 P **P 14 30 35.5 -0.1**
DRGR 94.26 325 ⇑P **P 14 30 34.9 -1.3**
DRGR 94.26 325 P **P 14 30 34.8 -1.3**
KIRV Kirov 94.27 345*ce*P **P 14 30 35.2 -0.5**
KEST Kesra 94.72 310 P **P 14 30 39.2 +0.7**
comp=Z,7.4nm,0.8s,baz=76,slow=4.2,SNR=3.3
comp=Z,7.4nm,0.8s
OBN Obninsk 94.87 337 LR LR 15 11 44.7
comp=Z,222nm,21.0s,baz=48,slow=34
OBN Obninsk 94.87 337 *e*P **P 14 30 38.4 -0.1**
OBN pmax pmax
comp=Z,63nm,1.4s
MOS Moscow 95.03 338 *e*P **P 14 30 38.2 -1.1**
MOS *e* 14 34 29.5
MOS pmax pmax
comp=Z,24nm,0.7s
RNPP5 Staryi Chortor 95.97 329 P **P 14 30 44.2 +0.5**
RNPP8 Varash 96.06 329 P **P 14 30 44.2 +0.1**
RNPP9 Sopachiv 96.10 329 P **P 14 30 44.4 +0.1**
KWP Kalwaria Pacla 96.25 327 P **P 14 30 44.9 -0.2**
MNK Minsk 97.55 332 *i*P **P 14 30 50.3 -0.5**
MNK *i* 14 34 49.2
MNK *i*PPP PPP 14 36 52.5
MNK *i*S **SKSac 14 41 27.7 +0.7**
MNK *i*PS **PS 14 43 38.5 -1.2**
MNK *i*SS **SS 14 48 59.5 +4.4**
MNK *i*SSS SSS 14 52 42.6
MNK pmax pmax
comp=N,19nm,1.2s
MNK pmax pmax
comp=Z,9.0nm,0.6s
MNK pmax pmax
comp=E,23nm,0.8s
MNK MLR MLR
comp=Z,364nm,21.0s
MNK MLR MLR
comp=E,1μm,20.0s
MNK MLR MLR
comp=N,2μm,18.0s
KLMR Klimovskoe 98.72 341 *e*P **P 14 30 54.3 -1.6**
KLMR *e* 14 34 55.5
KLMR pmax pmax
comp=Z,37nm,1.4s
VRAC Vranov 98.98 324 LR LR 15 16 37.3
comp=Z,87nm,18.8s,baz=130,slow=36
NRIK Noril'sk 101.72 3 PP **PP 14 35 14.6 -5.6**
comp=Z,1.4nm,0.6s,baz=149,slow=7.2,SNR=5.0
CLL Collm 102.03 324 *e*P **Pdif 14 31 13.0 +2.1**
CLL *e*S 14 42 54.0
FINES FINESS Array B 103.28 337 PP **PKiKP 14 35 34.2 -1.0**
comp=Z,7.6nm,1.2s,baz=108,slow=12,SNR=3.5
APA Apatity 105.72 343 *e*P **Pdif 14 31 22.8 -4.1**
TBI Tubuai 107.15 133 *e*SS SS 14 51 09.8 +2.7
comp=Z,2μm,30.8s
TBI Tubuai 107.15 133 *e*LR LR 15 06 45.2
comp=Z,969nm,33.2s
TBI *e*LR LR 15 06 56.0
comp=Z,3μm,30.5s
PPT2 Papeete2 111.28 129 *e*SS SS 14 52 09.9 +6.7
comp=Z,172nm,27.5s
PPT2 Papeete2 111.28 129 *e*LR LR 15 08 45.2
comp=Z,640nm,25.2s
PPT2 *e*LR LR 15 08 49.6
comp=Z,530nm,28.8s
SPITS Spitsbergen Ar 116.48 348 PKP **PKPdf 14 35 58.5 -1.3**
comp=Z,9.7nm,1.0s,baz=106,slow=11,SNR=2.0
LPAZ La Paz 122.62 217 PKP **PKPdf 14 36 14.2 0.0**
comp=Z,2.7nm,1.0s,baz=57,slow=2.2,SNR=6.8
TAOE Nuku Hiva Isla 123.87 130 *e*LR LR 15 14 43.4
comp=Z,310nm,33.9s
NNA Nana 130.47 211*ce*PKIKP **PKPdf 14 36 27.2 -1.3**
NNA pmax pmax
comp=Z,50nm,1.7s
BOAV Boa Vista 132.28 239 *e*P **PKPdf 14 36 31.1 -0.8**
ILAR Eielson Array 137.00 27 PKP **PKPdf 14 36 37.4 -1.8**
comp=Z,2.1nm,0.8s,baz=297,slow=3.4,SNR=14
OTAV Otavalo 141.94 217 *e*P **PKPdf 14 36 48.7 -1.6**
ROSC El Rosal 143.40 227 PKhKP PKPpre 14 36 49.6
comp=Z,19nm,0.6s,baz=221,slow=21,SNR=5.5
SCHQ Schefferville 147.68 324 PKPbc **PKPbc 14 37 01.4 +0.3**
comp=Z,25nm,0.9s,baz=47,slow=5.4,SNR=18
YKA Yellowknife Ar 148.61 13 PKP **PKPdf 14 36 58.7 -1.0**
comp=Z,10nm,0.7s,baz=324,slow=3.5,SNR=28
YKA PKPbc **PKPbc 14 37 02.2 -1.2**
comp=Z,11nm,0.7s,baz=320,slow=3.8,SNR=36
ULM Lac du Bonnet 162.01 351 PKPab **PKPab 14 38 01.8 -2.4**
comp=Z,6.2nm,0.8s,baz=313,slow=6.2,SNR=4.1
NVAR Mina Array Bea 164.06 63 PKP **PKPdf 14 37 20.8 +0.1**
comp=Z,0.8nm,0.7s,baz=275,slow=0.4,SNR=9.5
NVAR PKPab **PKPab 14 38 13.5 -0.6**
comp=Z,2.9nm,0.8s,baz=266,slow=5.9,SNR=13
NVAR PP **PP 14 42 05.6 +5.4**
comp=Z,0.2nm,0.4s,baz=278,slow=5.4,SNR=4.7
PDAR Pinedale Array 167.34 33 PKP **PKPdf 14 37 22.6 -0.7**
comp=Z,1.1nm,0.9s,baz=132,slow=2.2,SNR=8.6
PDAR PKPab **PKPab 14 38 26.7 -1.6**
comp=Z,1.7nm,0.9s,baz=33,slow=1.8,SNR=7.4
TXAR Lajitas Array 175.59 135 PKP **PKPdf 14 37 27.8 +0.3**
comp=Z,3.7nm,1.0s,baz=348,slow=1.2,SNR=20
TXAR PKPab **PKPab 14 39 02.6 -2.5**
comp=Z,0.5nm,0.9s,baz=192,slow=3.0,SNR=2.5

KRNET ***13*** *14:17:36.8±0.1, 42°.92N×77°.29E, h24km, mb2.5*
SOME ***13*** *14:17:37.2, 42°.93N×77°.27E, h10km*
ISC 13 14:17:37.2±1.0, 42°.91N±0°.03×77°.24E±0°.03, h17km±8km, n14, σ1.9s06/27, 10C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNSS	**Tian-Shan** 3.4nm,0.0s	**0.25**	**300**	*e*P	**Pg**	**Pg**	**14 17 42.9**	**-0.2**
TNSS	38nm,0.1s			*e*S	**Sg**	**Sg**	**14 17 47.1**	**+0.1**
KOTS	**Kotyrbulak** 40nm,0.1s	**0.33**	**344**	*e*P	**Pg**	**Pg**	**14 17 44.0**	**-0.3**
KOTS	55nm,0.1s			*e*S	**Sg**	**Sg**	**14 17 49.0**	**-0.2**
IZV	**Izvestkoviy** 5.5nm,0.1s	**0.47**	**285**	*e*P	**Pg**	**Pg**	**14 17 47.0**	**+0.1**
IZV	53nm,0.1s			*e*S	**Sg**	**Sg**	**14 17 54.1**	**+0.8**
KDJ	**Kajisay**	**0.79**	**183**⇑	*i*P	**Pb**	**Pb**	**14 17 52.3**	**-0.3**
KDJ			⇑	*i*S	**Sb**	**Sb**	**14 18 03.0**	**0.0**
KST	**Kastek** 3.4nm,0.2s	**0.94**	**278**	*e*P	**Pb**	**Pb**	**14 17 55.3**	**0.0**
KST	9.8nm,0.2s			*e*S	**Sb**	**Sb**	**14 18 08.2**	**+0.7**
PRZ	**Przheval'sk**	**0.96**	**116**⇑	*e*P	**Pb**	**Pb**	**14 17 54.3**	**-1.2**
PRZ			⇑	*e*S	**Sb**	**Sb**	**14 18 06.5**	**-1.5**
ULHL	**Ulahol**	**0.99**	**228**⇑	*i*P	**Pb**	**Pb**	**14 17 55.8**	**-0.3**
ULHL			⇑	*i*S	**Sb**	**Sb**	**14 18 09.9**	**+0.9**
BOOM	**Boomskoye usch**	**1.05**	**247**⇑	*i*P	**Pb**	**Pb**	**14 17 56.8**	**-0.2**
BOOM			⇑	*i*S	**Sb**	**Sb**	**14 18 11.4**	**+0.9**
KUU	**Kurty** 1.9nm,0.0s	**1.18**	**326**	*e*P	**Pn**	**Pn**	**14 17 58.7**	**-0.2**
KUU	9.7nm,0.1s			*e*S	**Sb**	**Sb**	**14 18 14.2**	**+0.1**
KPKS	**Kokpek** 0.2nm,0.1s	**1.19**	**62**	*e*P	**Pn**	**Pn**	**14 17 58.6**	**-0.6**
KPKS	7.6nm,0.1s			*e*S	**Sn**	**Sn**	**14 18 13.9**	**-1.2**
TARG	**Taragay, Kyrgy**	**1.26**	**160**⇑	*i*P	**Pn**	**Pn**	**14 17 59.8**	**-0.6**
TARG			⇑	*i*S	**Sb**	**Sb**	**14 18 16.3**	**-0.5**
ARXS	**Arharly** 2.4nm,0.1s	**1.37**	**18**	*e*P	**Pn**	**Pn**	**14 18 01.3**	**-0.3**
ARXS	18nm,0.1s			*e*S	**Sn**	**Sn**	**14 18 18.7**	**-0.7**
KRBS	**Karabastau**	**1.38**	**305**	*e*P	**Pb**	**Pb**	**14 18 02.8**	**+0.1**
KRBS				*e*S	**Sb**	**Sb**	**14 18 21.1**	**+1.0**
SHLS	**Shalkode** 7.3nm,0.2s	**1.65**	**81**	*e*P	**Pg**	**Pg**	**14 18 12.8**	**+3.9**
SHLS	12nm,0.4s			*e*S	Sg	**Sg**	14 18 38.2	+7.9

NNC ***13*** *14:22:33.1±0.6, 42°.89N×77°.32E, h0km, mb1.6, mpv2.6,*
Error ellipse: s-maj=5.8km s-min=2.6km az=9.0

*SOME **13** 14:22:33.7, 42.92N×77.32E, h5km*

ISC 13 14:22:32.6±1.6, **42.92N**±0.07×**77.32E**±0.03, **h16**km±11km, **n15**, σ=**0.53**/**27**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.29**	**293**	P		**Pb**	**14 22 40.0**	**+0.2**
	0.8nm,0.1s							
TNSS				S		**Sb**	**14 22 44.4**	**-0.2**
	9.8nm,0.2s							
TNSS	**Tian-Shan**	**0.29**	**293**	*e*P		**Pb**	**14 22 40.0**	**+0.2**
	0.2nm,0.0s							
TNSS				*e*S		**Sb**	**14 22 44.4**	**-0.2**
	9.8nm,0.2s							
MDOK	**Medeo**	**0.31**	**321**	Pg		**Pb**	**14 22 40.2**	**+0.2**
	8.0nm,0.1s							
MDOK				Lg		Lg	14 22 44.6	
	16nm,0.2s							
KOTS	**Kotyrbulak**	**0.35**	**334**	P		**Pb**	**14 22 40.8**	**+0.3**
	22nm,0.1s							
KOTS				S		**Sb**	**14 22 46.0**	**0.0**
	22nm,0.2s							
KOTS	**Kotyrbulak**	**0.35**	**334**	*e*P		**Pb**	**14 22 40.8**	**+0.3**
	22nm,0.1s							
KOTS				*e*S		**Sb**	**14 22 46.0**	**0.0**
	21nm,0.2s							
IZV	**Izvestkoviy**	**0.53**	**283**	P		**Pb**	**14 22 43.7**	**0.0**
	2.7nm,0.1s							
IZV				S		**Sb**	**14 22 50.8**	**-0.4**
	11nm,0.2s							
IZV	**Izvestkoviy**	**0.53**	**283**	*e*P		**Pb**	**14 22 43.7**	**0.0**
	2.7nm,0.1s							
IZV				*e*S		**Sb**	**14 22 50.8**	**-0.4**
	5.9nm,0.1s							
SATY	**Saty**	**0.81**	**80**	P		**Pn**	**14 22 49.1**	**-0.4**
	0.7nm,0.1s							
SATY				S		**Sn**	**14 23 00.2**	**-1.2**
	5.7nm,0.2s							
KTBS	**Karatobe**	**0.92**	**330**	P		**Pn**	**14 22 50.5**	**-0.4**
	0.9nm,0.1s							
KST	**Kastek**	**1.00**	**277**	P		**Pn**	**14 22 52.4**	**+0.2**
	0.6nm,0.2s							
KST	**Kastek**	**1.00**	**277**	*e*P		**Pn**	**14 22 52.4**	**+0.2**
	0.2nm,0.1s							
KST				*e*S		**Sn**	**14 23 05.7**	**-0.3**
	1.3nm,0.2s							
KPKS	**Kokpek**	**1.14**	**61**	*e*P		**Pg**	**14 22 55.3**	**+0.7**
	0.2nm,0.1s							
KPKS				*e*S		**Sn**	**14 23 10.6**	**+1.2**
	2.6nm,0.1s							
DGS	**Degeres**	**1.18**	**286**	*e*P		**Pg**	**14 22 55.8**	**+0.5**
	0.7nm,0.2s							
DGS				*e*S		**Sn**	**14 23 11.5**	**+1.2**
	1.7nm,0.1s							
ARXS	**Arharly**	**1.34**	**16**	*e*P		**Pg**	**14 22 58.4**	**-0.1**
	0.6nm,0.1s							
ARXS				*e*S		**Sg**	**14 23 15.9**	**-0.1**
	4.3nm,0.2s							
KRBS	**Karabastau**	**1.43**	**303**	*e*P		**Pg**	**14 22 59.7**	**-0.4**
KRBS				*e*S		**Sg**	**14 23 18.2**	**-0.5**

*IDC **13** 14:28:02.3±0.4, 16.30N×121.79E, h52km±3km, mb4.0/22, mbtmp4.3/23, MS4.0/13, Error ellipse: s-maj=17.1km s-min=8.7km az=76.0*

*NEIC **13** 14:28:03.2±1.4, 16.30N±0.07×121.8E±0.1, h60km±7km, mb4.9/48, Error ellipse: s-maj=15.3km s-min=10.2km az=81.0*

*BJI **13** 14:28:05.0, 16.22N×121.64E, h81km, mB5.1/6, mb4.4/31, Ms4.1/14, Ms7 4.0/13*

*DJA **13** 14:28:12.2±1.4, 16°N±6°×12°2E±°, h139km±13km, M4.6/31, mb4.8/31, mB5.2/12, Mw(mB)4.6/12*

ISC 13 14:28:02.4±0.4, **16.29N**±0.04×**121.81E**±0.05, **h55**km±3km, **h55**km:**pP-P**, **n161**, σ=**1.78**/**174**, **mb4.7**/61, **MS4.1**/20, **4C-3D**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SZP	**Santa**	**1.80**	**314**	P		**Pn**	**14 28 32.2**	**+1.1**
TGY	**Tagaytay City**	**2.33**	**201**	P		**Pn**	**14 28 40.0**	**+1.6**
	1μm,0.5s,baz=350,slow=1.7,SNR=25							
TGY				S		**Sn**	**14 29 02.1**	**-3.9**
	4μm,0.6s,baz=181,slow=18,SNR=9.4							
TGY				LR		LR	14 29 49.4	
	comp=Z,1μm,18.0s,baz=88,slow=46							
TWGBT	**Beinan**	**6.53**	**354**	P		**Pn**	**14 29 40.6**	**+4.7**
TWG	**Pinlang**	**6.53**	**354**			**Pn**	**14 29 36.1**	**+0.1**
TPUB	**Ta-pu**	**7.06**	**351**			**Pn**	**14 29 43.2**	**-0.1**
TPUB	**Ta-pu**	**7.06**	**351**	P		**Pn**	**14 29 45.0**	**+1.7**
YULB	**Yu-li**	**7.08**	**356**			**Pn**	**14 29 44.3**	**+0.7**
YULB	**Yu-li**	**7.08**	**356**	P		**Pn**	**14 29 47.4**	**+3.9**
SSLB	**Suanglung**	**7.50**	**354**			**Pn**	**14 29 50.7**	**+1.4**
SSLB	**Suanglung**	**7.50**	**354**	P		**Pn**	**14 29 51.4**	**+2.1**
NACB	**Ninganchiao**	**7.85**	**359**	Pn		**Pn**	**14 29 55.0**	**+1.0**
YOJ	**Yonaguni jima**	**8.21**	**8**	Pn		**Pn**	**14 29 58.8**	**-0.1**
YHNB	**Yeheng**	**8.35**	**357**			**Pn**	**14 29 59.6**	**-1.3**
HKPS	**Hong Kong Po S**	**9.37**	**311**	Pn		**Pn**	**14 30 13.5**	**-1.4**
QIZ	**Qiongzhong**	**11.73**	**285**	Pn		**Pn**	**14 30 46.3**	**-0.8**
QIZ	**Qiongzhong**	**11.73**	**285**	P		**Pn**	**14 30 49.0**	**+1.9**
QIZ				S		**Sn**	**14 32 58.4**	**+1.9**
QIZ				LR		LR		
	comp=N,420nm,11.2s							
QIZ				LR		LR		
	comp=E,350nm,11.2s							
QIZ				LR		LR		
	comp=Z,410nm,13.7s							
JOW	**Kunigami**	**12.09**	**29**	P		**Pn**	**14 30 53.3**	**+1.3**
	12nm,0.7s,baz=151,slow=20,SNR=12							
JOW				S		**Sn**	**14 33 00.1**	**-5.2**
	4.4nm,0.3s,baz=146,slow=18,SNR=1.5							
JOW	**Kunigami**	**12.09**	**29**	Pn		**Pn**	**14 30 52.7**	**+0.7**
TOLI2	**Tolitoli**	**15.12**	**184**	Pn		**Pn**	**14 31 32.2**	**-0.5**
WHN	**Wuhan**	**15.74**	**336**	⇓P		**P**	**14 31 46.0**	**+2.3**
WHN				pmax		pmax		
	comp=Z,86nm,1.0s							
WHN				LR		LR		
	comp=Z,1μm,19.9s							
NJ2	**Nanjing**	**15.92**	**351**	⇑P		**P**	**14 31 49.0**	**+3.4**
NJ2				pmax		pmax		
	comp=Z,19nm,0.7s							
NJ2				pmax		pmax		
	comp=Z,130nm,3.8s							
MPSI	**Mapaga**	**15.96**	**187**	P		**P**	**14 31 47.1**	**+0.9**
TNTI	**Ternate**	**16.36**	**160**	Pn		**P**	**14 31 49.0**	**-1.7**
SBUM	**Sibu**	**16.68**	**215**			**Pn**	**14 31 52.7**	**+0.1**
LUWI	**Luwuk**	**17.25**	**177**			**P**	**14 31 59.8**	**-0.7**
LUWI	**Luwuk**	**17.25**	**177**	P		**P**	**14 32 02.3**	**+1.9**
LUWI	**Luwuk**	**17.25**	**177**	P		**P**	**14 32 03.9**	**+3.5**
GYA	**Guiyang**	**17.34**	**308**	⇓P		**P**	**14 32 03.3**	**+1.7**
GYA				pmax		pmax		
	comp=Z,12nm,0.9s							
ENH	**Enshi**	**17.92**	**323**			**Pn**	**14 32 08.1**	**+0.3**
ENH	**Enshi**	**17.92**	**323**	P		**Pn**	**14 32 10.3**	**+2.5**
JNU	**Nakatsue**	**18.66**	**24**	P		**Pn**	**14 32 19.2**	**+2.5**
	13nm,0.9s,baz=191,slow=10,SNR=3.3							
JNU	**Nakatsue**	**18.66**	**24**	P		**P**	**14 32 12.8**	**-3.1**
JNU				IAmb		IAmb	14 32 29.3	
	comp=Z,116nm,1.9s							
SANI	**Sanana**	**18.68**	**167**	P		**Pn**	**14 32 18.9**	**+1.7**
TTSI	**Tana Toraja**	**19.31**	**186**	P		**Pn**	**14 32 24.8**	**+0.2**
	comp=Z,30nm,0.9s							
SWI	**Sorong**	**19.43**	**150**	P		**Pn**	**14 32 27.6**	**+1.5**
	comp=Z,771nmcomp=Z,45nm,0.8s							
KMI	**Kunming**	**19.87**	**299**	P		**Pn**	**14 32 32.3**	**+0.9**
KMI				pP		sP	14 32 47.9	-0.9
KMI				S		S	14 35 59.3	-11
KMI				pmax		pmax		
	comp=Z,15nm,1.1s							
KMI				pmax		pmax		
	comp=Z,140nm,3.8s							
KMI				LR		LR		
	comp=Z,140nm,9.9s							
KMI				LR		LR		
	comp=Z,180nm,14.6s							
KMI				LR		LR		
	comp=Z,200nm,16.9s							
SPSI	**Sidrap Palu**	**20.23**	**186**	P		Pn	14 32 38.8	+3.4
	comp=Z,674nmcomp=Z,17nm,0.9s							
TJN	**Taejon**	**20.61**	**13**	P		**P**	**14 32 37.2**	**+0.2**
BNSI	**Bone**	**20.63**	**185**	P		Pn	14 32 39.5	-0.7
	comp=Z,25nm,0.8s							
MSAI	**Masohi**	**20.74**	**160**	P		Pn	14 32 41.8	+0.2
	comp=Z,918nmcomp=Z,90nm,1.1s							
BBKI	**Banjar Baru**	**20.80**	**200**	P		Pn	14 32 40.6	-1.7
	comp=Z,109nm,0.7s							
XAN	**Xi'an**	**21.14**	**329**	⇑P		**P**	**14 32 43.3**	**+0.4**
XAN				S		**S**	**14 36 36.3**	**+1.2**
XAN				pmax		pmax		
	comp=Z,22nm,1.3s							
XAN				pmax		pmax		
	comp=Z,130nm,2.9s							
PZH	**PanZhiHua**	**21.24**	**302**	P		**P**	**14 32 46.6**	**+2.4**
PZH				sP		sP	14 33 14.1	+11
PZH				S		**S**	**14 36 35.3**	**-2.1**
PZH				pmax		pmax		
	comp=Z,20nm,0.9s							
PZH				LR		LR		
	comp=Z,300nm,15.3s							
PZH				LR		LR		
	comp=Z,210nm,18.3s							
PZH				LR		LR		
	comp=Z,430nm,18.8s							
KAPI	**Kappang**	**21.27**	**186**	P		**P**	**14 32 44.1**	**-0.2**
	comp=Z,13nm,1.0s,baz=327,slow=10.0,SNR=4.3							
	comp=Z,13nm,1.0s							
KAPI	**Kappang**	**21.27**	**186**	P		**P**	**14 32 45.5**	**+1.2**
RKPI	**Ransiki, Papua**	**21.50**	**144**	P		**P**	**14 32 50.9**	**+4.1**
	comp=Z,102nm,1.2s							
FAKI	**Fak Fak**	**21.70**	**151**	P		**P**	**14 32 49.7**	**+0.8**
FAKI				IAmb		IAmb	14 32 53.5	
	comp=Z,78nm,0.9s							
FAKI	**Fak Fak**	**21.70**	**151**	P		**P**	**14 32 52.1**	**+3.2**
FAKI	**Fak Fak**	**21.70**	**151**	P		**P**	**14 32 52.3**	**+3.4**
	comp=Z,1μmcomp=Z,112nm,0.9s							
JCJ	**Chichijima**	**21.74**	**57**	LR		LR	14 39 33.0	
	comp=Z,94nm,21.8s,baz=122,slow=32							
KSRS	**Korea Array**	**21.76**	**13**	P		**P**	**14 32 50.6**	**+1.2**
	comp=Z,5.0nm,0.7s,baz=198,slow=11,SNR=16							
	comp=Z,5.0nm,0.7s							
CM31	**Chiang Mai Arr**	**21.93**	**279**	P		**P**	**14 32 51.9**	**+0.4**
CM31				IAmb		IAmb	14 32 53.9	
	comp=Z,29nm,0.9s							
CMAR	**Chiang Mai Arr**	**21.93**	**279**	P		**P**	**14 32 52.2**	**+0.8**
	comp=Z,16nm,0.8s,baz=84,slow=8.5,SNR=106							
CMAR				PcP		**PcP**		
	comp=Z,0.4nm,0.6s,baz=135,slow=1.1,SNR=4.2							
CMAR				ScP		**ScP**	**14 40 22.8**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=36,slow=2.5,SNR=4.4							
CMAR				LR		LR	14 41 05.2	
	comp=Z,237nm,21.4s,baz=200,slow=36							
	comp=Z,16nm,0.8s							
CMAR	**Chiang Mai Arr**	**21.93**	**279**	P		**P**	**14 32 51.7**	**+0.3**
CHTO	**Chiang Mai**	**21.94**	**280**			**P**	**14 32 51.2**	**-0.4**
CHTO	**Chiang Mai**	**21.94**	**280**	P		**P**	**14 32 52.3**	**+0.7**
HNS	**HongShan**	**21.95**	**345**	⇑P		**P**	**14 32 54.4**	**+3.0**
CD2	**Chengdu**	**21.98**	**315**	P		**P**	**14 32 53.3**	**+1.3**
CD2				pmax		pmax		
	comp=Z,30nm,1.1s							
BNDI	**Bandanaira**	**22.18**	**158**	P		**P**	**14 32 57.4**	**+3.3**
BNDI	**Bandanaira**	**22.18**	**158**	P		**P**	**14 32 58.4**	**+4.3**
	comp=Z,124nm,0.9s							
BSSI	**Bau Bau, Buton**	**22.33**	**183**	P		**P**	**14 32 58.9**	**+3.2**
	comp=Z,28nm,0.9s							
BAKI	**Biak**	**22.38**	**140**	P		**P**	**14 33 00.5**	**+4.2**
	comp=Z,46nm,1.4s							
GUMO	**Guam**	**22.44**	**94**	LR		LR	14 39 48.0	
	comp=Z,136nm,19.2s,baz=248,slow=31							
JHJ	**Hachijo jima 2**	**23.34**	**41**	LR		LR	14 41 24.7	
	comp=Z,71nm,21.2s,baz=70,slow=34							
TNCH	**TengChong**	**23.43**	**296**	⇑*i*P		**P**	**14 33 06.5**	**-0.7**
TNCH				pP		pP	14 33 20.0	-0.3
TNCH				sP		sP	14 33 30.8	+3.8
TNCH				S		**S**	**14 37 14.0**	**-2.7**
TNCH				pmax		pmax		
	comp=Z,71nm,1.1s							
TNCH				LR		LR		
	comp=Z,350nm,17.3s							
TNCH				LR		LR		
	comp=Z,300nm,20.4s							
TNCH				LR		LR		
	comp=Z,810nm,21.4s							
KULM	**Kulim**	**23.45**	**245**	P		**P**	**14 33 05.2**	**-2.0**
IPM	**Ipoh**	**23.54**	**242**	P		**P**	**14 33 06.6**	**-1.5**
IPM				IAmb		IAmb	14 33 08.1	
	comp=Z,23nm,0.7s							
IPM	**Ipoh**	**23.54**	**242**	P		**P**	**14 33 07.7**	**-0.3**
BJT	**Baijiatuan**	**24.15**	**349**	P		**P**	**14 33 13.9**	**+0.5**
BJT				IAmb		IAmb	14 33 29.5	
	comp=Z,27nm,1.0s							
BJI	**Beijing**	**24.17**	**349**	P		**P**	**14 33 14.8**	**+1.3**
BJI				PP		**PnPn**	**14 33 52.3**	**+6.9**
BJI				S		**S**	**14 37 24.8**	**-3.0**
BJI				pmax		pmax		
	comp=Z,5.0nm,0.8s							
BJI				LR		LR		
	comp=Z,140nm,18.1s							
BJI				LR		LR		
	comp=Z,210nm,23.2s							
SMPI	**Sarmi**	**24.67**	**136**	P		**P**	**14 33 21.0**	**+2.7**
	comp=Z,972nmcomp=Z,59nm,1.4s							
MMRI	**Maumere**	**24.77**	**179**			**P**	**14 33 20.5**	**+1.3**
MMRI				IAmb		IAmb	14 33 22.4	
	comp=Z,66nm,1.1s							
MMRI	**Maumere**	**24.77**	**179**	P		**P**	**14 33 21.8**	**+2.6**
MMRI	**Maumere**	**24.77**	**179**	P		**P**	**14 33 22.4**	**+3.2**
	comp=Z,44nm,0.9s							
EDFI	**Ende, Flores**	**24.88**	**180**	P		**P**	**14 33 20.9**	**+0.6**
	comp=Z,668nmcomp=Z,39nm,0.9s							
LZH	**Lanzhou**	**25.39**	**324**	*e*P		**P**	**14 33 29.9**	**+5.0**
LZH				pP		sP	14 33 44.3	-0.8
LZH				pmax		pmax		
	comp=Z,14nm,1.2s							
LZH				LR		LR		
	comp=Z,290nm,13.1s							
LZH				LR		LR		
	comp=Z,310nm,13.4s							
LZH				LR		LR		
	comp=Z,410nm,13.4s							
SOEI	**Soe**	**25.99**	**174**			**P**	**14 33 30.3**	**-0.1**
SOEI				IAmb		IAmb	14 33 54.5	
	comp=Z,46nm,0.9s							
SOEI	**Soe**	**25.99**	**174**	P		**P**	**14 33 33.6**	**+3.2**
SOEI	**Soe**	**25.99**	**174**	P		**P**	**14 33 31.7**	**+1.3**
	comp=Z,64nm,1.0s							
HHC	**Hu-ho-hao-te**	**26.03**	**342**	⇓*i*P		**P**	**14 33 32.0**	**+1.4**
HHC				pP		pP	14 33 47.3	+2.9
HHC				sP		sP	14 33 57.4	+6.5
HHC				pmax		pmax		
	comp=Z,14nm,0.8s							
HHC				LR		LR		
	comp=Z,200nm,20.2s							
HHC				LR		LR		
	comp=Z,360nm,21.9s							
HHC				LR		LR		
	comp=Z,320nm,18.5s							
PSI	**Prapat**	**26.20**	**242**	P		**P**	**14 33 34.5**	**+2.1**
RPSI	**Rantau Prapat**	**26.26**	**241**	P		**P**	**14 33 32.0**	**-0.7**
BTO	**Baotou**	**26.30**	**339**	*e*P		**P**	**14 33 38.1**	**+5.1**
BTO				pmax		pmax		
	comp=Z,18nm,0.5s							
BTO				pmax		pmax		
	comp=Z,430nm,4.3s							
BTO				LR		LR		
	comp=Z,350nm,10.2s							
BTO				LR		LR		
	comp=Z,900nm,16.1s							
BTO				LR		LR		
	comp=Z,680nm,25.5s							
BATI	**Baumata**	**26.39**	**176**	P		**P**	**14 33 34.7**	**+0.8**
GSI	**Gunungsitoli**	**28.14**	**240**	P		**P**	**14 33 48.3**	**-1.4**
GSI				IAmb		IAmb	14 33 49.5	
	comp=Z,15nm,0.8s							
USRK	**Ussuriysk Ar.**	**29.13**	**15**	P		**P**	**14 33 58.6**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=178,slow=7.2,SNR=1.5							
USRK				pP		**pP**	**14 34 12.8**	**+0.8**
	comp=Z,5.5nm,0.8s,baz=175,slow=7.2,SNR=6.6							
	comp=Z,1.8nm,0.8s							
MTN	**Manton Dam**	**30.38**	**162**	P		**P**	**14 34 07.3**	**-2.1**
MTN				IAmb		IAmb	14 34 11.0	
	comp=Z,14nm,0.9s							
KNRA	**Kununurra**	**32.50**	**167**	P		**P**	**14 34 27.8**	**-0.2**
KNRA				IAmb		IAmb	14 34 29.0	
	comp=Z,25nm,1.1s							
HILR	**Hailar Array B**	**33.22**	**358**	P		**P**	**14 34 33.0**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=154,slow=14,SNR=1.5							
HILR				pP		**pP**	**14 34 47.6**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=184,slow=13,SNR=3.6							
	comp=Z,0.5nm,0.3s							
ULN	**Ulaanbaatar**	**33.75**	**342**	P		**P**	**14 34 38.4**	**-0.5**
ULN				IAmb		IAmb	14 34 54.0	
	comp=Z,20nm,1.4s							
SONM	**Songino Array**	**33.93**	**341**	P		**P**	**14 34 40.9**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=160,slow=9.5,SNR=5.2							
SONM				pP		**pP**	**14 34 54.0**	**-0.4**
	comp=Z,6.4nm,0.9s,baz=164,slow=9.5,SNR=16							
	comp=Z,1.2nm,0.5s							
SONM	**Songino Array**	**33.93**	**341**	P		**P**	**14 34 40.6**	**+0.2**
EVN	**Everest**	**34.31**	**296**	P		**P**	**14 34 43.0**	**-1.6**
EVN				IAmb		IAmb	14 35 00.1	
	comp=Z,7.7nm,0.7s							
FITZ	**Fitzroy Crossi**	**34.38**	**174**			**P**	**14 34 42.8**	**-1.6**
MBWA	**Marble Bar**	**37.27**	**183**	P		**P**	**14 35 08.8**	**-0.4**
MBWA				IAmb		IAmb	14 35 10.1	
	comp=Z,20nm,0.7s							
PSA00	**Pilbara Seismi**	**37.68**	**183**	P		**P**	**14 35 11.7**	**-0.9**
PSA00				IAmb		IAmb	14 35 13.1	
	comp=Z,26nm,1.1s							
WRA	**Warramunga Arr**	**38.05**	**161**	P		**P**	**14 35 15.2**	**-0.6**
	comp=Z,46nm,0.8s,baz=340,slow=9.5,SNR=140							
WRA				pP		**pP**	**14 35 29.9**	**0.0**
	comp=Z,13nm,0.8s,baz=341,slow=9.4,SNR=8.1							
WRA	**Warramunga Arr**	**38.05**	**161**	P		**P**	**14 35 14.8**	**-1.0**
WMQ	**Urumqi**	**39.84**	**321**	*e*P		**P**	**14 35 31.4**	**+0.8**
WMQ				LR		LR		
	comp=Z,480nm,24.0s							
AS31	**Alice Springs**	**41.43**	**163**			**P**	**14 35 43.4**	**-0.5**
ASAR	**Alice Springs**	**41.43**	**163**	P		**P**	**14 35 43.5**	**-0.3**
	comp=Z,5.6nm,0.8s,baz=344,slow=7.0,SNR=137							
ASAR				pP		**pP**	**14 35 58.1**	**0.0**
	comp=Z,4.9nm,0.7s,baz=343,slow=7.5,SNR=7.8							
	comp=Z,5.6nm,0.8s							
ASAR	**Alice Springs**	**41.43**	**163**	P		**P**	**14 35 43.7**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**42.80**	**80**	T		T	15 22 08.6	
	baz=274,slow=75,SNR=135							
H11S1	**WAKE ISLAND Hy**	**42.81**	**80**	T		T	15 22 17.6	
	baz=274,slow=75,SNR=107							
H11S2	**WAKE ISLAND Hy**	**42.82**	**80**	T		T	15 22 10.0	
	baz=274,slow=75,SNR=140							
H11N1	**WAKE ISLAND Hy**	**42.92**	**78**	T		T	15 21 24.5	
	baz=273,slow=75,SNR=45							
H11N2	**WAKE ISLAND Hy**	**42.92**	**78**	T		T	15 21 25.0	
	baz=273,slow=75,SNR=106							
H11N3	**WAKE ISLAND Hy**	**42.94**	**78**	T		T	15 21 27.5	
	baz=273,slow=75,SNR=50							
MKAR	**Makanchi Array**	**44.64**	**322**	P		**P**	**14 36 09.9**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=122,slow=9.0,SNR=7.3							
MKAR				pP		**pP**	**14 36 24.4**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=116,slow=9.4,SNR=5.9							
	comp=Z,1.4nm,0.7s							
MORW	**Morawa**	**45.43**	**187**	P		**P**	**14 36 14.9**	**-1.1**
MORW				IAmb		IAmb	14 36 16.0	
	comp=Z,22nm,0.8s							
KSH	**Kashi**	**46.03**	**310**	P		**P**	**14 36 22.9**	**+2.0**
KSH				pP		sP	14 36 41.4	-0.3
KSH				pmax		pmax		
	comp=Z,4.0nm,0.7s							
KSH				LR		LR		
	comp=Z,800nm,19.2s							
KSH				LR		LR		
	comp=Z,420nm,16.6s							
PETK	**Petropavlovsk-**	**46.25**	**29**	P		**P**	**14 36 21.8**	**-0.4**
	comp=Z,7.0nm,0.8s,baz=247,slow=7.5,SNR=3.3							
PETK				pP		**pP**	**14 36 37.7**	**+0.9**
	comp=Z,4.5nm,0.9s,baz=95,slow=17,SNR=2.1							
	comp=Z,7.0nm,0.8s							
ZALV	**Zalesovo Beam**	**47.29**	**331**	P		**P**	**14 36 30.0**	**-0.3**
	comp=Z,3.8nm,1.1s,baz=123,slow=5.5,SNR=6.7							
ZALV				pP		**pP**	**14 36 44.1**	**-0.7**
	comp=Z,3.1nm,0.9s,baz=119,slow=5.6,SNR=5.6							
	comp=Z,3.8nm,1.1s							
INKA	**Innaminka**	**47.46**	**157**	P		**P**	**14 36 31.8**	**-0.1**
MA2	**Magadan**	**48.12**	**19**	LR		LR	14 56 41.7	
	comp=Z,127nm,20.4s,baz=334,slow=36							
KURK	**Kurchatov**	**48.68**	**325**	P		**P**	**14 36 41.0**	**0.0**
KURK				IAmb		IAmb	14 36 41.9	
	comp=Z,9.0nm,0.7s							
KURK	**Kurchatov**	**48.68**	**325**	P		**P**	**14 36 41.3**	**+0.2**
KURBB	**Kurchatov Arra**	**48.68**	**324**	P		**P**	**14 36 41.1**	**0.0**
	comp=Z,7.4nm,0.7s,baz=121,slow=8.2,SNR=45							
KURBB				pP		**pP**	**14 36 54.5**	**-1.1**
	comp=Z,5.4nm,0.8s,baz=122,slow=7.8,SNR=8.5							
	comp=Z,7.4nm,0.7s							
ARSB	**Arslanbob**	**48.73**	**311**			**P**	**14 36 41.5**	**-0.3**
ARSB				IAmb		IAmb	14 36 45.7	
	comp=Z,17nm,1.5s							
NWAO	**Narrogin (SRO)**	**49.13**	**185**	LR		LR	15 00 07.1	
	comp=Z,171nm,18.2s,baz=324,slow=39							
NWAO	**Narrogin (SRO)**	**49.13**	**185**	P		**P**	**14 36 44.0**	**-0.7**
GAR	**Garm**	**50.16**	**307**	P		**P**	**14 36 52.4**	**-0.4**
KBL	**Kabul**	**50.43**	**302**	P		**P**	**14 36 54.5**	**-0.5**
KBL				IAmb		IAmb	14 36 56.1	
	comp=Z,9.6nm,0.8s							
BBOO	**Buckleboo**	**50.69**	**164**	P		**P**	**14 36 56.0**	**-0.6**
KK31	**Karatay Array**	**50.98**	**313**	P		**P**	**14 36 58.5**	**-0.2**
KKAR	**Karatay Array**	**50.98**	**313**	P		**P**	**14 36 58.3**	**-0.5**
CHGR	**Chuyangaron**	**50.98**	**307**			**P**	**14 36 57.5**	**-1.4**
CHGR				IAmb		IAmb	14 37 26.7	
	comp=Z,16nm,0.8s							
STKA	**Stephens Creek**	**51.52**	**158**	P		**P**	**14 37 02.5**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=336,slow=7.9,SNR=11							
	comp=Z,5.5nm,0.7s							
STKA	**Stephens Creek**	**51.52**	**158**	P		**P**	**14 37 02.5**	**-0.2**
BVAR	**Borovoye Array**	**54.27**	**324**	P		**P**	**14 37 23.3**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=98,slow=9.4,SNR=16							
BVAR				pP		**pP**	**14 37 37.5**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=107,slow=8.1,SNR=4.5							
	comp=Z,2.9nm,0.6s							
BORK	**

HFS	**Hagfors**	**84.73**	**331**	P	**P**	**14 40 29.9**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=249,slow=1.3,SNR=4.6						
HFS				pP	**pP**	**14 40 44.9**	**-1.3**
	comp=Z,2.8nm,0.6s,baz=96,slow=7.4,SNR=4.3						
HFS				LR	LR	15 21 03.1	
	comp=Z,297nm,18.7s,baz=116,slow=38						
	comp=Z,1.1nm,0.6s						
KMBO	**Kilima Mbogo**	**85.09**	**267**	pP	pP	14 40 46.9	-2.4
	comp=Z,1.7nm,0.3s,baz=64,slow=9.5,SNR=2.3						
NB2	**NORSAR Subarra**	**85.46**	**333**	P	**P**	**14 40 33.3**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=65,slow=5.1						
NOA	**NORSAR Array B**	**85.46**	**333**	P	**P**	**14 40 33.0**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=64,slow=5.0,SNR=4.9						
NOA				pP	**pP**	**14 40 47.7**	**-2.2**
	comp=Z,3.6nm,0.8s,baz=65,slow=5.0,SNR=9.8						
NOA				LR	LR	15 22 24.0	
	comp=Z,115nm,19.3s,baz=145,slow=38						
	comp=Z,1.3nm,0.8s						
JMIC	**Jan Mayen**	**86.58**	**346**	LR	LR	15 26 05.4	
	comp=Z,141nm,19.3s,baz=331,slow=40						
BORG	**Borgarnes**	**94.46**	**345**	LR	LR	15 27 55.4	
	comp=Z,48nm,18.1s,baz=82,slow=38						
VNDA	**Vanda**	**96.44**	**172**	P	**P**	**14 41 25.2**	**+0.3**
	comp=Z,1.2nm,1.0s,baz=301,slow=4.1,SNR=7.0						
	comp=Z,1.2nm,1.0s						
PLCA	**Paso Flores**	**153.39**	**159**	PKPbc	**PKiKP**	**14 47 56.4**	**+1.4**
	comp=Z,2.3nm,0.7s,baz=160,slow=1.1,SNR=6.8						
PLCA				pPKPbc	**sPKPdf**	**14 48 11.6**	**+1.6**
	comp=Z,2.0nm,0.7s,baz=208,slow=5.7,SNR=3.5						
LPAZ	**La Paz**	**170.46**	**91**	PKPab	**PKPab**	**14 49 23.2**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=312,slow=6.1,SNR=5.0						

IDC ***13*** *14:33:38.2±0.7, 13°.17N×51°.13E, h0km, mb4.1/16, mbtmp4.1/18, ML3.6/2, MS4.2/10, Error ellipse: s-maj=19.2km s-min=17.4km az=133.0*
NEIC ***13*** *14:33:39.9±0.8, 13°.0N±0°.1×51°.1E±0°.1, h10km±1km, mb4.5/22, Error ellipse: s-maj=19.3km s-min=15.9km az=146.0*
OMAN ***13*** *14:33:41.9±0.9, 13°.90N×50°.66E, h10km, mb4.3/3, ml4.0/3, Error ellipse: s-maj=25.1km s-min=5.3km az=137.0*

ISC 13 14:33:40.7±0.6, 13°.24N±0°.08×51°.15E±0°.08, h16km, n66, σ1s72/65, mb4.3/26, MS4.3/10, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABTO	**Aybut**	**4.58**	**27**	P	**Pn**	**14 34 47.8**	**-1.7**
	SNR=18						
ABTO				S	**Sn**	**14 35 38.0**	**-4.5**
	SNR=9.4						
RBK	**Rabkut**	**5.16**	**34**	P	**Pn**	**14 34 56.3**	**-1.1**
	SNR=5.8						
RBK				S	**Sn**	**14 35 54.4**	**-2.3**
WHFO	**Wadi Hawf**	**5.29**	**28**	P	**Pn**	**14 34 58.0**	**-1.2**
	SNR=28						
WHFO				S	**Sn**	**14 35 55.0**	**-5.0**
DMTO	**DMTO**	**5.76**	**39**	P	**Pn**	**14 35 05.7**	**+0.1**
DMTO				S	**Sn**	**14 36 11.4**	**-0.1**
DOK	**Doka**	**6.06**	**28**	P	**Pn**	**14 35 08.6**	**-1.2**
DOK				S	**Sn**	**14 36 16.0**	**-2.9**
ATD	**Arta Tunnel**	**8.29**	**259**	Pn	**Pn**	**14 35 38.6**	**-1.8**
	0.6nm,0.3s,baz=64,slow=15,SNR=21						
ATD				LR	LR	14 38 04.4	
	comp=Z,72nm,20.1s,baz=36,slow=32						
	1.7nm,0.5s						
ATD	**Arta Tunnel**	**8.29**	**259**		**Pn**	**14 35 37.7**	**-2.7**
ATD	**Arta Tunnel**	**8.29**	**259**	P	**Pn**	**14 35 38.7**	**-1.8**
	SNR=7.2						
ARQ	**Araqi**	**11.26**	**26**	P	**Pn**	**14 36 19.8**	**-1.2**
ARQ				S	**Sn**	**14 38 21.5**	**-5.2**
RAYN	**Ar Rayn**	**11.54**	**333**	Pn	**Pn**	**14 36 27.7**	**+2.7**
FURI	**Furi**	**12.98**	**252**	Pn	**Pn**	**14 36 44.8**	**-0.1**
LODK	**Lodwar**	**18.40**	**239**		**P**	**14 37 52.8**	**-2.6**
LODK	**Lodwar**	**18.40**	**239**	P	**P**	**14 37 54.6**	**-0.8**
	SNR=5.9						
KMBO	**Kilima Mbogo**	**19.84**	**225**	P	**P**	**14 38 10.4**	**-0.9**
	0.3nm,0.3s,baz=52,slow=11,SNR=6.2						
	1.4nm,0.3s						
KIBK	**Kibwezi**	**20.22**	**221**		**P**	**14 38 12.3**	**-3.0**
HRA	**Herat**	**23.33**	**24**		**P**	**14 38 50.1**	**+1.6**
HRA				IAmb	IAmb	14 39 02.0	
	comp=Z,18nm,1.1s						
MARD	**Mardin**	**25.70**	**341**	P	**P**	**14 39 12.0**	**+1.6**
MARD				IAmb	IAmb	14 39 44.2	
	comp=Z,8.1nm,0.7s						
KBL	**Kabul**	**26.69**	**34**	P	**P**	**14 39 22.4**	**+2.9**
KBL				IAmb	IAmb	14 39 32.9	
	comp=Z,5.0nm,0.8s						
GNI	**Garni**	**27.39**	**349**	P	**P**	**14 39 27.4**	**+1.7**
GNI				IAmb	IAmb	14 39 49.1	
	comp=Z,14nm,1.1s						
CHGR	**Chuyangaron**	**29.93**	**29**	P	**P**	**14 39 49.7**	**+1.5**
BRTR	**Keskin Array B**	**30.56**	**333**	P	**P**	**14 39 55.9**	**+2.1**
	comp=Z,0.6nm,0.9s,baz=112,slow=1.6,SNR=2.1						
	comp=Z,0.6nm,0.9s						
OPO	**Ambohidratompo**	**31.85**	**187**	LR	LR	14 51 49.9	
	comp=Z,137nm,19.7s,baz=166,slow=34						
KK31	**Karatay Array**	**34.12**	**26**	P	**P**	**14 40 26.6**	**+1.7**
KK31				IAmb	IAmb	14 40 34.2	
	comp=Z,3.0nm,0.9s						
KKAR	**Karatay Array**	**34.12**	**26**	P	**P**	**14 40 26.7**	**+1.9**
BOOM	**Boomskoye usch**	**36.19**	**32**		**P**	**14 40 44.2**	**+1.3**
BOOM				IAmb	IAmb	14 40 57.3	
	comp=Z,8.4nm,1.2s						
EVN	**Everest**	**36.30**	**61**		**P**	**14 40 44.7**	**+0.2**
EVN				IAmb	IAmb	14 40 51.7	
	comp=Z,4.4nm,0.8s						
AB31	**Akbulak array**	**36.63**	**10**		**P**	**14 40 47.5**	**+1.2**
AB31				IAmb	IAmb	14 40 54.3	
	comp=Z,4.6nm,0.9s						
ABKAR	**Akbulak array**	**36.63**	**10**		**P**	**14 40 47.7**	**+1.3**
TARG	**Taragay, Kyrgy**	**36.65**	**34**		**P**	**14 40 48.8**	**+1.8**
TARG				IAmb	IAmb	14 40 56.3	
	comp=Z,8.4nm,1.1s						
MATP	**Matopo**	**40.20**	**214**	LR	LR	14 56 55.2	
	comp=Z,193nm,20.0s,baz=28,slow=35						
AKASG	**Malin Array Be**	**41.40**	**339**	P	**P**	**14 41 26.7**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=151,slow=7.5,SNR=6.5						
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**42.44**	**32**	P	**P**	**14 41 35.9**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=220,slow=8.5,SNR=19						
	comp=Z,1.3nm,0.5s						
BVAR	**Borovoye Array**	**42.55**	**17**	P	**P**	**14 41 36.2**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=181,slow=7.2,SNR=7.5						
BVAR				PcP	**PcP**	**14 43 28.0**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=189,slow=2.9,SNR=4.3						
	comp=Z,1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**43.43**	**25**	P	**P**	**14 41 43.4**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=224,slow=8.1,SNR=7.5						
	comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**43.54**	**25**		**P**	**14 41 44.8**	**+1.2**
TAM	**Tamanrasset**	**44.27**	**289**	P	**P**	**14 41 49.6**	**-0.5**
LBTB	**Lobatse**	**45.47**	**213**	LR	LR	15 01 29.2	
	comp=Z,127nm,18.5s,baz=20,slow=37						
CM31	**Chiang Mai Arr**	**46.16**	**77**	P	**P**	**14 42 04.8**	**-0.3**
CM31				IAmb	IAmb	14 42 16.9	
	comp=Z,7.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**46.16**	**77**	P	**P**	**14 42 05.1**	**0.0**
	comp=Z,5.2nm,0.8s,baz=275,slow=8.7,SNR=41						
	comp=Z,5.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.16**	**77**		**P**	**14 42 04.9**	**-0.1**
TSUM	**Tsumeb**	**46.18**	**226**	LR	LR	15 00 18.6	
	comp=Z,343nm,19.1s,baz=352,slow=35						
ZALV	**Zalesovo Beam**	**48.50**	**26**	P	**P**	**14 42 22.5**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=225,slow=9.6,SNR=6.4						
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**48.50**	**26**	P	**P**	**14 42 22.3**	**-0.4**
BOSA	**Boshof**	**48.57**	**211**	P	**P**	**14 42 24.0**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=21,slow=14,SNR=3.6						
BOSA				LR	LR	15 04 20.5	
	comp=Z,131nm,19.8s,baz=32,slow=38						
	comp=Z,4.1nm,0.9s						
FINES	**FINESS Array B**	**51.43**	**345**	P	**P**	**14 42 44.5**	**-0.4**
	comp=Z,5.1nm,1.0s,baz=161,slow=8.8,SNR=2.2						
	comp=Z,5.1nm,1.0s						
FINES	**FINESS Array B**	**51.43**	**345**	P	**P**	**14 42 44.7**	**-0.1**
HFS	**Hagfors**	**54.27**	**338**	P	**P**	**14 43 05.6**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=138,slow=11,SNR=2.4						
	comp=Z,2.2nm,0.7s						
ESDC	**Sonseca Array**	**54.93**	**309**	P	**P**	**14 43 11.1**	**0.0**
	comp=Z,3.3nm,1.0s,baz=94,slow=6.5,SNR=9.3						
	comp=Z,3.3nm,1.0s						
ESDC	**Sonseca Array**	**54.93**	**309**	P	**P**	**14 43 10.9**	**-0.1**
NOA	**NORSAR Array B**	**55.79**	**338**	P	**P**	**14 43 16.2**	**-0.7**
	comp=Z,2.6nm,1.1s,baz=125,slow=8.1,SNR=3.3						
	comp=Z,2.6nm,1.1s						

SONM	**Songino Array**	**57.17**	**41**	P	**P**	**14 43 28.4**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=251,slow=7.8,SNR=6.6						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**57.17**	**41**	P	**P**	**14 43 28.2**	**+1.2**
SONM				IAmb	IAmb	14 43 35.3	
	comp=Z,8.4nm,1.3s						
NRIK	**Noril'sk**	**60.60**	**14**	P	**P**	**14 43 50.5**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=169,slow=4.8,SNR=4.0						
NRIK				LR	LR	15 14 48.3	
	comp=Z,260nm,19.5s,baz=194,slow=41						
	comp=Z,2.0nm,0.6s						
NRIK	**Noril'sk**	**60.60**	**14**	P	**P**	**14 43 50.5**	**+0.2**
NRIK				IAmb	IAmb	14 43 57.6	
	comp=Z,4.6nm,0.8s						
BBTS	**Babate**	**65.47**	**280**	LR	LR	15 14 37.8	
	comp=Z,438nm,18.3s,baz=259,slow=38						
YAK	**Yakutsk**	**73.02**	**29**	LR	LR	15 17 59.3	
	comp=Z,366nm,20.0s,baz=244,slow=36						
TIXI	**Tiksi**	**73.65**	**19**	LR	LR	15 22 51.0	
	comp=Z,289nm,18.3s,baz=209,slow=40						
SEY	**Seymchan**	**83.36**	**27**	LR	LR	15 26 20.6	
	comp=Z,215nm,18.1s,baz=273,slow=38						
WRA	**Warramunga Arr**	**88.20**	**111**	P	**P**	**14 46 31.5**	**-0.2**
	comp=Z,3.2nm,1.0s,baz=297,slow=4.1,SNR=12						
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Arr**	**88.20**	**111**		**P**	**14 46 30.6**	**-1.1**
WB0	**Warramunga Arr**	**88.20**	**111**	P	**P**	**14 46 30.7**	**-1.0**
AS31	**Alice Springs**	**88.75**	**115**	P	**P**	**14 46 33.1**	**-1.2**
ASAR	**Alice Springs**	**88.75**	**115**	P	**P**	**14 46 33.7**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=286,slow=4.9,SNR=29						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**88.75**	**115**	P	**P**	**14 46 33.5**	**-0.8**
NVAR	**Mina Array Bea**	**127.66**	**350**	PKP	**PKiKP**	**14 52 45.9**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=315,slow=0.2,SNR=5.1						
TXAR	**Lajitas Array**	**131.19**	**330**	PKP	**PKiKP**	**14 52 53.9**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=114,slow=3.7,SNR=2.2						

IDC ***13*** *15:04:14.7±2.9, 2°.88S×104°.59E, h0km, mb3.4/8, mbtmp3.5/8, Error ellipse: s-maj=145.8km s-min=20.9km az=54.0*

ISC 13 15:04:19.3±2.7, 3°.0S±0°.5×104°.6E±0°.8, h35km, n9, σ1s21/9, mb3.6/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**4.88**	**142**	Sn	**Sn**	**15 06 24.8**	**-1.0**
	12nm,0.3s,baz=315,slow=20,SNR=4.1						
CMAR	**Chiang Mai Arr**	**22.00**	**346**	P	**P**	**15 09 11.2**	**+0.6**
	0.3nm,0.3s,baz=167,slow=9.7,SNR=1.4						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**33.58**	**122**	P	**P**	**15 10 56.9**	**+0.5**
	0.2nm,0.5s,baz=298,slow=8.1,SNR=1.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**35.02**	**129**	P	**P**	**15 11 10.2**	**+1.4**
	0.1nm,0.3s,baz=299,slow=8.3,SNR=4.8						
	0.1nm,0.3s						
SONM	**Songino Array**	**50.60**	**2**	P	**P**	**15 13 13.5**	**-1.3**
	0.2nm,0.3s,baz=177,slow=7.2,SNR=2.0						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**53.30**	**341**	P	**P**	**15 13 35.8**	**+1.0**
	0.3nm,0.4s,baz=153,slow=10,SNR=5.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**57.87**	**341**	P	**P**	**15 14 07.0**	**-0.5**
	0.4nm,0.7s,baz=160,slow=6.0,SNR=2.9						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**59.06**	**347**	P	**P**	**15 14 16.7**	**+1.0**
	0.9nm,0.4s,baz=158,slow=6.5,SNR=4.9						
	0.9nm,0.4s						
BVAR	**Borovoye Array**	**62.74**	**338**	P	**P**	**15 14 39.6**	**-1.2**
	0.2nm,0.3s,baz=138,slow=6.0,SNR=2.4						
	0.2nm,0.3s						

DNK ***13*** *15:17:58.3±0.7, 57°.60N×22°.48E, h0km, ML2.6(UPP), Suspected explosion*
UPP ***13*** *15:17:59.5±2.5, 57°.61N×22°.32E, h0km, ML2.6, Presumed earthquake*
HEL ***13*** *15:18:01.5±0.6, 57°.63N×21°.67E, h0km, ML2.6, Explosion*
EST ***13*** *15:18:01.7±0.2, 57°.68N×21°.90E, h0km, ML2.2(HEL), Explosion*
IDC ***13*** *15:18:03.7±1.3, 57°.88N×21°.97E, h0km, mbtmp3.1/5, ML2.3/5, Error ellipse: s-maj=14.1km s-min=8.2km az=155.0*
LVSN ***13*** *15:18:05.0±2.7, 57°.65N×22°.09E, h0km±44km, ML2.8*

ISC 13 15:18:01.4±0.8, 57°.75N±0°.03×21°.98E±0°.03, h0km, n67, σ1s20/90, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.21**	**126**	*e*P	**Pg**	**15 18 05.8**	**+0.3**
SLIT	**Slitere, Latvi**	**0.21**	**126**	*e*P	**Pg**	**15 18 05.8**	**+0.3**
SLIT				*e*S	**Sg**	**15 18 09.0**	**+0.8**
SLIT				AML	AML	15 18 19.2	
	comp=Z,7μm,0.6s						
SLIT				AML	AML	15 18 19.7	
	comp=E,10μm,0.5s						
SLIT				AML	AML	15 18 26.0	
	comp=N,8μm,0.5s						
SLIT	**Slitere, Latvi**	**0.21**	**126**	*e*P	**Pg**	**15 18 05.8**	**+0.3**
SLIT				*e*S	**Sg**	**15 18 08.4**	**+0.2**
EE06	**Soera, Palade,**	**1.30**	**20**	*e*P	**Pg**	**15 18 26.5**	**+0.1**
EE06				*e*SB	**Sn**	**15 18 45.2**	**+0.3**
EE01	**Perakula, Nova**	**1.69**	**30**	*e*P	**Pb**	**15 18 33.1**	**-0.4**
EE01				*e*PN	**Pg**	**15 18 33.5**	**-0.4**
EE01				*e*S	**Sg**	**15 18 55.7**	**-0.1**
GOTU	**Gotland**	**1.83**	**269**	P	**Pn**	**15 18 34.4**	**+0.4**
GOTU	**Gotland**	**1.83**	**269**	P	**Pn**	**15 18 34.4**	**+0.4**
EE08	**Sarghaua, Vand**	**1.95**	**61**	*e*P	**Pn**	**15 18 36.6**	**+0.8**
EE08				*e*SG	**Sg**	**15 19 04.1**	**0.0**
EE02	**Kiisa, Saku**	**2.03**	**44**	*e*P	**Pb**	**15 18 38.5**	**-0.6**
EE02				*e*PB	**Pg**	**15 18 39.0**	**-1.4**
EE02				*e*SB	**Sg**	**15 19 06.1**	**-0.5**
VSVD	**Vaisvydziai**	**2.08**	**148**	*e*P	**Pn**	**15 18 36.8**	**-0.7**
TVF	**Tvarminne**	**2.20**	**17**	*e*PB	**Pb**	**15 18 41.8**	**-0.3**
TVF				*e*SG	**Sg**	**15 19 12.0**	**0.0**
TVF				smax	smax	15 19 13.1	
	comp=Z,18nm,0.1s						
NYNU	**Nynaeshamn**	**2.44**	**303**	P	**Pn**	**15 18 43.7**	**+1.3**
NYNU	**Nynaeshamn**	**2.44**	**303**	P	**Pn**	**15 18 43.7**	**+1.3**
PABE	**Paberze**	**2.51**	**153**	*e*P	**Pn**	**15 18 44.6**	**+1.2**
PABE	**Paberze**	**2.51**	**153**	*e*P	**Pn**	**15 18 44.9**	**+1.5**
PABE				AML	AML	15 18 44.9	
	comp=Z,80nm,0.1s						
PABE				AML	AML	15 19 19.2	
	comp=N,52nm,0.2s						
PABE				AML	AML	15 19 19.2	
	comp=E,61nm,0.2s						
EE03	**Tooma soojaam,**	**2.53**	**62**	*e*P	**Pn**	**15 18 44.9**	**+1.2**
EE03				*e*PB	**Pb**	**15 18 46.7**	**-1.0**
EE03				*e*SB	**Sb**	**15 19 20.1**	**+0.8**
NRTU	**Norrtaelje**	**2.60**	**319**	P	**Pn**	**15 18 46.0**	**+1.3**
NRTU	**Norrtaelje**	**2.60**	**319**	P	**Pn**	**15 18 46.0**	**+1.3**
VSU	**Vasula**	**2.62**	**72**	*e*P	**Pb**	**15 18 47.5**	**-1.8**
VSU	**Vasula**	**2.62**	**72**	*e*P	**Pb**	**15 18 47.4**	**-1.9**
VSU				AML	AML	15 18 47.5	
	comp=Z,65nm,0.2s						
VSU				AML	AML	15 19 23.3	
	comp=N,65nm,0.4s						
VSU				AML	AML	15 19 25.2	
	comp=E,71nm,0.4s						
VSU	**Vasula**	**2.62**	**72**	*e*P	**Pn**	**15 18 45.1**	**+0.1**
VSU				*e*PB	**Pb**	**15 18 47.2**	**-2.1**
VSU				*e*SB	**Sb**	**15 19 21.7**	**-0.3**
AAL	**Aland**	**2.64**	**338**	P	**Pn**	**15 18 45.9**	**+0.7**
AAL	**Aland**	**2.64**	**338**	*e*P	**Pn**	**15 18 45.9**	**+0.7**
AAL	**Aland**	**2.64**	**338**	P	**Pn**	**15 18 45.9**	**+0.7**
AAL	**Aland**	**2.64**	**338**	*e*P	**Pn**	**15 18 45.9**	**+0.7**
ARBE	**Arbavere**	**2.69**	**49**	*e*P	**Pb**	**15 18 49.3**	**-1.2**
ARBE	**Arbavere**	**2.69**	**49**	*e*P	**Pb**	**15 18 49.3**	**-1.2**
ARBE				AML	AML	15 19 26.7	
	comp=N,278nm,0.1s						
ARBE				AML	AML	15 19 27.7	
	comp=Z,99nm,0.2s						
ARBE				AML	AML	15 19 29.7	
	comp=E,388nm,0.1s						
ARBE	**Arbavere**	**2.69**	**49**	*e*PB	**Pb**	**15 18 49.2**	**-1.2**
ARBE				*e*SB	**Sb**	**15 19 24.5**	**+0.5**
BYXU	**Byxelkrok**	**2.72**	**262**	P	**Pn**	**15 18 47.1**	**+0.8**
BYXU	**Byxelkrok**	**2.72**	**262**	P	**Pn**	**15 18 47.1**	**+0.8**
HEL5	**Espoo, Suvisaa**	**2.77**	**30**	*e*PB	**Pb**	**15 18 50.5**	**-1.3**
HEL5				*e*SB	**Sb**	**15 19 27.1**	**+0.9**
HEL5				smax	smax	15 19 30.5	
	comp=Z,6.7nm,0.1s						

MEF	**Metsahovi**	**2.77**	**26**	*e*P	**Pb**	**15 18 50.7**	**-1.1**
MEF	**Metsahovi**	**2.77**	**26**	*e*P	**Pb**	**15 18 50.7**	**-1.1**
MEF				AML	AML	15 19 29.4	
	comp=N,19nm,0.1s						
MEF				AML	AML	15 19 29.7	
	comp=E,19nm,0.2s						
MEF				AML	AML	15 19 30.1	
	comp=Z,13nm,0.1s						
MEF	**Metsahovi**	**2.77**	**26**	*e*PB	**Pb**	**15 18 50.6**	**-1.1**
MEF				*e*SB	**Sb**	**15 19 27.2**	**+1.0**
MEF				smax	smax	15 19 30.0	
	comp=Z,11nm,0.1s						
VIKU	**Vikbolandet**	**2.90**	**287**	P	**Pn**	**15 18 50.1**	**+1.4**
VIKU	**Vikbolandet**	**2.90**	**287**	P	**Pn**	**15 18 50.1**	**+1.4**
VSTU	**Vaestervik**	**2.92**	**270**	P	**Pn**	**15 18 50.2**	**+1.1**
VSTU	**Vaestervik**	**2.92**	**270**	P	**Pn**	**15 18 50.2**	**+1.1**
NUR	**Nurmijarvi**	**3.09**	**25**	*e*PB	**Pb**	**15 18 55.5**	**-1.7**
NUR				*e*SB	**Sb**	**15 19 35.7**	**+0.3**
NUR				smax	smax	15 19 38.3	
	comp=Z,3.9nm,0.1s						
GRAU	**Graesoe**	**3.14**	**327**	P	**Pn**	**15 18 52.9**	**+0.8**
GRAU	**Graesoe**	**3.14**	**327**	P	**Pn**	**15 18 52.9**	**+0.8**
RAF	**Rauma**	**3.28**	**358**	*e*P	**Pn**	**15 18 55.7**	**+1.7**
RAF	**Rauma**	**3.28**	**358**	*e*P	**Pn**	**15 18 55.9**	**+1.8**
RAF				*e*SB	**Sb**	**15 19 41.8**	**+0.9**
RAF				smax	smax	15 19 43.7	
	comp=Z,5.6nm,0.1s						
PVF	**Pernaja**	**3.44**	**34**	*e*SG	**Sg**	**15 19 50.5**	**-1.5**
PVF				smax	smax	15 19 53.6	
	comp=Z,3.9nm,0.1s						
EE04	**Vaivara Sinima**	**3.49**	**60**	*e*SB	**Sb**	**15 19 48.0**	**+1.1**
IGGU	**Iggoen**	**3.94**	**325**	P	**Pn**	**15 19 04.8**	**+1.7**
IGGU	**Iggoen**	**3.94**	**325**	P	**Pn**	**15 19 04.8**	**+1.7**
VJF	**Virojoki**	**4.01**	**43**	*e*P	**Pn**	**15 19 06.5**	**+2.5**
KPF	**Kankaanpaa**	**4.09**	**1**	*e*P	**Pn**	**15 19 06.9**	**+1.7**
FIA0	**FINESS Array S**	**4.25**	**28**	*e*P	**Pn**	**15 19 09.1**	**+1.8**
FINES	**FINESS Array B**	**4.25**	**28**	Pn	**Pn**	**15 19 08.0**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=207,slow=12,SNR=17						
FINES				Pg	**Pb**	**15 19 16.5**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=208,slow=14,SNR=21						
FINES				Sn	**Sn**	**15 19 57.9**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=207,slow=17,SNR=2.2						
FINES				Lg	Lg	15 20 13.4	
	comp=Z,2.1nm,0.3s,baz=211,slow=21,SNR=17						
	comp=Z,0.8nm,0.3s						
FIA1	**FINESS Array S**	**4.25**	**28**	*e*P	**Pn**	**15 19 09.1**	**+1.7**
ARNU	**Arnoeviken**	**4.58**	**331**	P	**Pn**	**15 19 12.5**	**+0.6**
ARNU	**Arnoeviken**	**4.58**	**331**	P	**Pn**	**15 19 12.5**	**+0.6**
KEF	**Keuruu**	**4.66**	**17**	*e*P	**Pn**	**15 19 15.4**	**+2.4**
KEF	**Keuruu**	**4.66**	**17**	*e*P	**Pn**	**15 19 15.3**	**+2.4**
KAF	**Kangasniemi**	**4.88**	**25**	*e*P	**Pn**	**15 19 17.4**	**+1.3**
HFS	**Hagfors**	**4.91**	**303**	Pn	**Pn**	**15 19 16.9**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=116,slow=14,SNR=31						
HFS				Pg	**Pb**	**15 19 26.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=117,slow=12,SNR=5.2						
HFS				Sn	**Sn**	**15 20 13.4**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=112,slow=26,SNR=5.9						
HFS				Lg	Lg	15 20 33.6	
	comp=Z,1.3nm,0.3s,baz=116,slow=29,SNR=7.3						
	comp=Z,1.6nm,0.3s						
RUF	**Ruokolahti**	**5.11**	**41**	*e*P	**Pn**	**15 19 19.5**	**+0.3**
VAF	**Ylistaro**	**5.32**	**3**	*e*P	**Pn**	**15 19 24.2**	**+2.2**
VAF	**Ylistaro**	**5.32**	**3**	*e*P	**Pn**	**15 19 23.9**	**+1.9**
NOA	**NORSAR Array B**	**6.41**	**305**	Pn	**Pn**	**15 19 36.6**	**-0.4**
	baz=118,slow=13,SNR=4.5						
NOA				Sn	**Sn**	**15 20 50.5**	**-0.2**
	baz=120,slow=20,SNR=4.2						
NOA				Lg	Lg	15 21 20.1	
	baz=119,slow=16,SNR=3.7						
	comp=Z,0.1nm,0.2s						
OUF	**Merijarvi**	**6.77**	**10**	*e*P	**Pn**	**15 19 43.1**	**+1.2**
JOF	**Joensuu**	**6.95**	**38**	*e*P	**Pn**	**15 19 44.7**	**+0.4**
JOF	**Joensuu**	**6.95**	**38**	*e*P	**Pn**	**15 19 44.1**	**-0.2**
GERES	**GERESS Array B**	**10.20**

Induced event
*HEL **13** 15:44:13.5±0.0,67˚.18N×20˚.66E,h1km,ML1.6,*
ML2.3(UPP),ML1.9(BER),Confirmed Induced event
*BER **13** 15:44:14.4±3.5,67˚.03N×20˚.85E,h0km±25km,ML1.9,*
Confirmed Induced event

ISC 13 15:44:11.7±0.7,**67˚.18N**±0˚.02×**20˚.79E**±0˚.02,**h0**km,**n54,**
σ0§**91**/88,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.10**	**236**	P	**Pg**	**15 44 14.6**	**+1.0**
DUNU				S	**Sg**	**15 44 15.8**	**+0.8**
DUNU	**Dundret**	**0.10**	**236**	*i* P	**Pg**	**15 44 14.6**	**+1.0**
DUNU				*i* S	**Sg**	**15 44 15.8**	**+0.8**
MASU	**Masugnsbyn**	**0.55**	**59**	P	**Pb**	**15 44 24.1**	**0.0**
MASU				S	**Sb**	**15 44 31.9**	**-0.6**
MASU	**Masugnsbyn**	**0.55**	**59**	*i* P	**Pb**	**15 44 24.1**	**0.0**
MASU				*i* S	**Sb**	**15 44 31.9**	**-0.6**
RATU	**Laukkuluspa**	**0.79**	**325**	P	**Pg**	**15 44 27.1**	**+0.2**
RATU				S	**Sg**	**15 44 37.4**	**+0.3**
RATU	**Laukkuluspa**	**0.79**	**325**	*i* P	**Pg**	**15 44 27.1**	**+0.2**
RATU				*i* S	**Sg**	**15 44 37.4**	**+0.3**
KUA	**Kurravaara**	**0.80**	**348**	P	**Pg**	**15 44 27.3**	**+0.3**
	baz=181						
KUA				S	**Sg**	**15 44 38.2**	**+1.0**
KUA	**Kurravaara**	**0.80**	**348**	*i* P	**Pg**	**15 44 27.3**	**+0.3**
KUA				*i* S	**Sg**	**15 44 38.2**	**+1.0**
ERTU	**Ertsjaerv**	**0.84**	**138**	P	**Pb**	**15 44 28.9**	**-0.1**
ERTU	**Ertsjaerv**	**0.84**	**138**	*e*P	**Pb**	**15 44 28.9**	**-0.1**
ERTU				*e*S	**Sb**	**15 44 40.5**	**-0.4**
SALU	**Saltoluokta**	**0.91**	**284**	P	**Pg**	**15 44 29.0**	**0.0**
SALU				S	**Sg**	**15 44 40.9**	**+0.1**
SALU	**Saltoluokta**	**0.91**	**284**	*e*P	**Pg**	**15 44 29.0**	**0.0**
SALU	**Saltoluokta**	**0.91**	**284**	*i* P	**Pg**	**15 44 29.0**	**0.0**
SALU				*i* S	**Sg**	**15 44 40.9**	**+0.1**
PAJU	**Pajala**	**0.92**	**99**	P	**Pb**	**15 44 30.8**	**+0.3**
PAJU				S	**Sb**	**15 44 44.2**	**+0.9**
PAJU	**Pajala**	**0.92**	**99**	*e*P	**Pb**	**15 44 30.8**	**+0.3**
PAJU				*e*S	**Sb**	**15 44 43.7**	**+0.4**
NIKU	**Nikkaluokta**	**0.96**	**316**	P	**Pg**	**15 44 30.1**	**0.0**
NIKU				S	**Sg**	**15 44 43.1**	**+0.5**
NIKU	**Nikkaluokta**	**0.96**	**316**	*e*P	**Pg**	**15 44 30.1**	**0.0**
NIKU				*e*S	**Sg**	**15 44 43.1**	**+0.5**
LANU	**Lannavaara**	**0.99**	**27**	P	**Pb**	**15 44 31.4**	**-0.3**
LANU	**Lannavaara**	**0.99**	**27**	*e*P	**Pb**	**15 44 31.4**	**-0.3**
LANU				*e*S	**Sb**	**15 44 44.6**	**-0.6**
HARU	**Harads**	**1.02**	**176**	P	**Pg**	**15 44 31.8**	**+0.5**
HARU				S	**Sb**	**15 44 46.2**	**0.0**
HARU	**Harads**	**1.02**	**176**	*e*P	**Pg**	**15 44 31.8**	**+0.5**
HARU				*e*S	**Sb**	**15 44 46.2**	**0.0**
HEF	**Hetta**	**1.65**	**40**	*e*P	**Pb**	**15 44 43.0**	**+0.1**
HEF				*e*S	**Sg**	**15 45 05.3**	**+0.8**
HEF	**Hetta**	**1.65**	**40**	*e*P	**Pb**	**15 44 43.0**	**+0.1**
HEF				*e*S	**Sg**	**15 45 05.0**	**+0.5**
HEF				smax	smax	15 45 06.8	
	comp=Z,2.1nm,0.1s						
KALU	**Kalix**	**1.68**	**141**	P	**Pg**	**15 44 43.8**	**0.0**
KALU	**Kalix**	**1.68**	**141**	*e*P	**Pg**	**15 44 43.7**	**0.0**
KALU				*e*S	**Sg**	**15 45 05.8**	**+0.3**
KALU				smax	smax	15 45 08.5	
	comp=Z,2.5nm,0.1s						
SJUU	**Sjulsmark**	**1.71**	**169**	P	**Pb**	**15 44 44.1**	**+0.2**
SJUU	**Sjulsmark**	**1.71**	**169**	*e*P	**Pb**	**15 44 44.1**	**+0.2**
TOF	**Tornio**	**1.79**	**126**	*e*P	**Pg**	**15 44 45.9**	**0.0**
TOF				*e*SG	**Sg**	**15 45 10.0**	**+0.9**
TOF				smax	smax	15 45 11.9	
	comp=Z,2.8nm,0.1s						
KIF	**Kilpisjarvi**	**1.83**	**0**	*e*P	**Pb**	**15 44 46.2**	**+0.2**
KIF				*e*S	**Sg**	**15 45 11.9**	**+1.4**
KIF	**Kilpisjarvi**	**1.83**	**0**	*e*P	**Pb**	**15 44 46.2**	**+0.2**
KIF				*e*SN	**Sg**	**15 45 10.9**	**+0.4**
KIF				smax	smax	15 45 13.4	
	comp=Z,4.6nm,0.1s						
KTK1	**Kautokeino**	**2.06**	**25**	*e*P	**Pb**	**15 44 50.0**	**+0.2**
KTK1				*e*S	**Sg**	**15 45 17.8**	**+0.2**
KTK1				IAML		15 45 18.8	
	comp=Z,20nm,0.8s						
KTK1	**Kautokeino**	**2.06**	**25**	*e*PB	**Pb**	**15 44 50.0**	**+0.2**
KTK1				*e*SG	**Sg**	**15 45 17.3**	**-0.3**
RNF	**Rovaniemi**	**2.14**	**103**	*e*PB	**Pb**	**15 44 51.4**	**+0.2**
RNF				*e*SB	**Sg**	**15 45 20.0**	**-0.3**
RNF				smax	smax	15 45 22.3	
	comp=Z,3.7nm,0.1s						
FAUS	**Fauske**	**2.15**	**278**	*e*P	**Pn**	**15 44 50.1**	**+1.5**
FAUS	**Fauske**	**2.15**	**278**	*e*P	**Pn**	**15 44 50.1**	**+1.5**
SGF	**Sodankyl**	**2.24**	**81**	*e*P	**Pb**	**15 44 52.3**	**-0.6**
SGF				*e*SB	**Sg**	**15 45 22.9**	**-0.6**
SGF				smax	smax	15 45 25.5	
	comp=Z,2.6nm,0.1s						
STEI	**Steigen**	**2.26**	**292**	*e*P	**Pn**	**15 44 51.1**	**+0.9**
STEI	**Steigen**	**2.26**	**292**	*e*P	**Pn**	**15 44 51.1**	**+0.9**
JETT	**Jettan, Norway**	**2.39**	**357**	*e*P	**Pb**	**15 44 55.1**	**-0.4**
JETT				*e*S	**Sg**	**15 45 27.8**	**-0.6**
JETT				IAML		15 45 28.4	
	comp=Z,32nm,0.3s						
JETT	**Jettan, Norway**	**2.39**	**357**	*e*PB	**Pb**	**15 44 55.1**	**-0.4**
JETT				*e*SG	**Sg**	**15 45 27.8**	**-0.6**
JETT				IAML		15 45 28.4	
	comp=Z,32nm,0.3s						
MOR8	**Moi Rana**	**2.72**	**251**	*e*P	**Pn**	**15 44 57.0**	**+0.4**
MOR8				IAML		15 45 33.3	
	comp=Z,13nm,0.4s						
MOR8	**Moi Rana**	**2.72**	**251**	*e*P	**Pn**	**15 44 57.0**	**+0.4**
MOR8				IAML		15 45 33.3	
	comp=Z,13nm,0.4s						
ARA0	**ARCESS Array S**	**2.94**	**34**	*e*P	**Pn**	**15 45 01.7**	**+2.1**
ARA0				IAML		15 45 43.8	
	comp=Z,4.4nm,0.4s						
ARA0	**ARCESS Array S**	**2.94**	**34**	*e*P	**Pn**	**15 45 01.7**	**+2.1**
ARA0				IAML		15 45 43.8	
	comp=Z,4.4nm,0.4s						
ARCES	**ARCESS Array B**	**2.94**	**34**	Pn	**Pn**	**15 45 01.0**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=217,slow=13,SNR=77						
ARCES				Sn	**Sn**	**15 45 35.7**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=218,slow=25,SNR=9.3						
	comp=Z,1.2nm,0.3s						
VAGH	**Vaagaholmen**	**2.99**	**265**	*e*P	**Pn**	**15 45 01.3**	**+1.0**
VAGH				IAML		15 45 47.9	
	comp=Z,7.4nm,0.4s						
VAGH	**Vaagaholmen**	**2.99**	**265**	*e*P	**Pn**	**15 45 01.3**	**+1.0**
VAGH				IAML		15 45 47.9	
	comp=Z,7.4nm,0.4s						
STOK	**Stokkvaagen**	**3.20**	**258**	*e*P	**Pn**	**15 45 04.4**	**+1.3**
STOK	**Stokkvaagen**	**3.20**	**258**	*e*P	**Pn**	**15 45 04.4**	**+1.3**
LEIR	**Leirfjorden**	**3.24**	**254**	*e*P	**Pn**	**15 45 04.8**	**+1.1**
LEIR	**Leirfjorden**	**3.24**	**254**	*e*P	**Pn**	**15 45 04.8**	**+1.1**
FINES	**FINESS Array B**	**6.20**	**156**	Pn	**Pn**	**15 45 45.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=5.4						
FINES				Sn	**Sn**	**15 46 54.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=341,slow=25,SNR=2.1						
FINES				Lg	Lg	15 47 24.3	
	comp=Z,0.5nm,0.3s,baz=344,slow=29,SNR=6.4						
	comp=Z,1.4nm,0.6s						
NOA	**NORSAR Array B**	**7.45**	**219**	Pn	**Pn**	**15 46 02.4**	**+1.0**
	baz=31,slow=11,SNR=1.2						
NOA				Sn	**Sn**	**15 47 23.2**	**-3.3**
	baz=36,slow=21,SNR=1.6						
NOA				Lg	Lg	15 48 04.3	
	baz=41,slow=19,SNR=5.3						
	comp=Z,0.2nm,0.5s						
HFS	**Hagfors**	**7.74**	**207**	Pn	**Pn**	**15 46 04.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=23,slow=12,SNR=6.1						
HFS				Sn	**Sn**	**15 47 29.9**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=27,slow=20,SNR=5.8						
HFS				Lg	Lg	15 48 13.7	
	comp=Z,0.1nm,0.3s,baz=21,slow=28,SNR=2.3						
	comp=Z,3.6nm,1.1s						

*IDC **13** 15:45:52.1±4.5,14˚.30S×167˚.22E,h198km±39km,mb3.4/7,*
mbtmp3.9/8,Error ellipse: s-maj=32.1km s-min=26.0km
az=7.0
*NEIC **13** 15:45:54.9±1.8,14˚.56S±0˚.09×167˚.5E±0˚.2,h224km±6km,*
mb4.0/9,Error ellipse: s-maj=24.6km s-min=10.8km
az=68.0

ISC 13 15:45:51.6±0.9,**14˚.31S**±0˚.09×**167˚.5E**±0˚.2,**h200**km,**n23,**
σ1§**56**/25,**mb3.7**/11,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.16**	**193**	Pn	Pn	15 46 27.5	+5.0
SANVU				Sn	**Sn**	**15 46 50.8**	**+4.2**
MARNC	**Mare, Loyalty**	**7.15**	**176**	Pn	**Pn**	**15 47 33.3**	**-0.5**
DZM	**Mont Dzumac**	**7.78**	**187**	P	**Pn**	**15 47 42.0**	**-0.1**
	3.6nm,0.9s,baz=37,slow=20,SNR=12						
DZM				S	**Sn**	**15 49 11.0**	**+1.0**
	2.9nm,0.9s,baz=339,slow=18,SNR=1.5						
ONTNC	**Ouen Toro**	**8.01**	**187**	Pn	**Pn**	**15 47 47.1**	**+2.1**
BKZ	**Black Stump Fm**	**26.01**	**164**	P	**P**	**15 51 03.5**	**-2.6**
STKA	**Stephens Creek**	**29.41**	**229**	P	**P**	**15 51 36.9**	**+0.5**
	2.5nm,0.4s,baz=58,slow=11,SNR=9.2						
	2.5nm,0.4s						
STKA	**Stephens Creek**	**29.41**	**229**	P	**P**	**15 51 36.5**	**+0.1**
WB0	**Warramunga Arr**	**32.05**	**256**	P	**P**	**15 51 59.2**	**-0.6**
WB0				IAmb	IAmb	15 52 09.9	
	comp=Z,6.6nm,1.4s						
WRA	**Warramunga Arr**	**32.11**	**255**	P	**P**	**15 51 58.8**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=85,slow=9.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**32.11**	**255**	P	**P**	**15 51 58.8**	**-1.6**
AS31	**Alice Springs**	**33.00**	**249**	P	**P**	**15 52 06.4**	**-1.7**
ASAR	**Alice Springs**	**33.00**	**249**	P	**P**	**15 52 06.3**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=83,slow=8.9,SNR=27						
ASAR				PcP	**PcP**	**15 54 46.4**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=82,slow=2.3,SNR=5.6						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**33.00**	**249**	P	**P**	**15 52 07.0**	**-1.0**
ASAR					**PcP**	**15 54 46.1**	**-1.1**
BBOO	**Buckleboo**	**33.98**	**232**	P	**P**	**15 52 16.1**	**-0.3**
BBOO				IAmb	IAmb	15 52 39.1	
	comp=Z,20nm,1.4s						
FITZ	**Fitzroy Crossi**	**40.28**	**259**	P	P	15 53 07.2	-2.4
	comp=Z,1.9nm,0.9s,baz=90,slow=8.8,SNR=1.6						
	comp=Z,1.9nm,0.9s						
VNDA	**Vanda**	**63.28**	**181**		**P**	**15 55 56.8**	**-1.8**
VNDA				IAmb	IAmb	15 56 02.2	
	comp=Z,0.9nm,1.1s						
SBA	**Scott Base**	**63.55**	**180**		**P**	**15 55 59.6**	**-0.7**
SBA				IAmb	IAmb	15 56 40.9	
	comp=Z,3.9nm,1.5s						
QSPA	**South Pole Qui**	**75.71**	**180**	P	**P**	**15 57 15.5**	**+0.6**
	comp=Z,8.9nm,0.6s,baz=58,slow=0.5,SNR=7.4						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**75.71**	**180**	P	**P**	**15 57 15.8**	**+0.9**
QSPA				IAmb	IAmb	15 57 37.7	
	comp=Z,2.5nm,1.2s						
ILAR	**Eielson Array**	**86.07**	**18**	P	**P**	**15 58 10.2**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=248,slow=6.1,SNR=2.2						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**97.03**	**316**	P	**P**	**15 59 02.3**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=87,slow=5.9,SNR=1.8						
	comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	**119.90**	**346**	PKP	**PKPdf**	**16 04 17.8**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=42,slow=2.2,SNR=12						
ARCES	**ARCESS Array B**	**119.90**	**346**	PKPdf	**PKPdf**	**16 04 17.9**	**+0.3**

*KRNET **13** 15:49:55.3±0.1,42˚.94N×77˚.29E,h15km,mb3.0*
*NNC **13** 15:49:55.3±0.4,42˚.94N×77˚.30E,h0km,mb3.0,mpv3.2,*
Error ellipse: s-maj=3.9km s-min=1.8km az=3.0
*SOME **13** 15:49:56.2,42˚.93N×77˚.30E,h10km*
*KNET **13** 15:49:57.3±0.5,42˚.87N×77˚.15E,h17km±4km,ml2.4,Error*
ellipse: s-maj=3.7km s-min=3.2km az=61.0

ISC 13 15:49:54.6±1.0,**42˚.90N**±0˚.02×**77˚.34E**±0˚.02,**h10**km±8km,
n52,σ0§**86**/97,**23C-12D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.32**	**295**	P	**Pg**	**15 50 00.6**	**-0.6**
	1.6nm,0.1s						
TNSS				S	**Sg**	**15 50 05.2**	**-0.4**
	41nm,0.2s						
TNSS	**Tian-Shan**	**0.32**	**295**	*e*P	**Pg**	**15 50 00.6**	**-0.6**
TNSS				*e*S	**Sg**	**15 50 05.2**	**-0.4**
TNSS	**Tian-Shan**	**0.32**	**295**	*e*P	**Pg**	**15 50 02.0**	**+0.8**
	19nm,0.1s						
TNSS				*e*S	**Sg**	**15 50 06.2**	**+0.7**
	258nm,0.2s						
MDOK	**Medeo**	**0.34**	**320**	Pg	**Pg**	**15 50 01.0**	**-0.5**
	22nm,0.1s						
MDOK				Lg	Lg	15 50 05.9	
	58nm,0.2s						
MDOK	**Medeo**	**0.34**	**320**	*e*P	**Pg**	**15 50 01.0**	**-0.5**
MDOK				*e*S	**Sg**	**15 50 05.9**	**-0.1**
KOTS	**Kotyrbulak**	**0.37**	**333**	P	**Pg**	**15 50 01.7**	**-0.4**
	73nm,0.1s						
KOTS				S	**Sg**	**15 50 07.1**	**+0.1**
	82nm,0.2s						
KOTS	**Kotyrbulak**	**0.37**	**333**	*e*P	**Pg**	**15 50 01.7**	**-0.4**
KOTS				*e*S	**Sg**	**15 50 07.1**	**+0.1**
KOTS	**Kotyrbulak**	**0.37**	**333**	*e*P	**Pg**	**15 50 02.8**	**+0.8**
	574nm,0.1s						
KOTS				*e*S	**Sg**	**15 50 07.9**	**+0.9**
	849nm,0.2s						
AAA	**Alma-Ata**	**0.44**	**314**	*e*P	**Pb**	**15 50 04.3**	**-0.2**
	555nm,0.1s						
AAA				*e*S	**Sg**	**15 50 10.3**	**+1.2**
	82nm,0.1s						
IZV	**Izvestkoviy**	**0.55**	**284**	P	**Pg**	**15 50 04.8**	**-0.6**
	6.0nm,0.1s						
IZV				S	**Sg**	**15 50 12.5**	**-0.2**
	33nm,0.1s						
IZV	**Izvestkoviy**	**0.55**	**284**	*e*P	**Pg**	**15 50 04.8**	**-0.6**
IZV				*e*S	**Sg**	**15 50 12.5**	**-0.2**
IZV	**Izvestkoviy**	**0.55**	**284**	*e*P	**Pg**	**15 50 06.1**	**+0.7**
	40nm,0.1s						
IZV				*e*S	**Sg**	**15 50 13.2**	**+0.5**
	225nm,0.2s						
MTBS	**Maitube**	**0.71**	**289**	P	**Pg**	**15 50 08.5**	**+0.2**
	8.8nm,0.2s						
MTBS				S	**Sg**	**15 50 17.6**	**0.0**
	61nm,0.3s						
MTBS	**Maitube**	**0.71**	**289**	*e*P	**Pg**	**15 50 08.0**	**-0.3**
MTBS				*e*S	**Sg**	**15 50 17.8**	**+0.2**
MTBS	**Maitube**	**0.71**	**289**	*e*P	**Pg**	**15 50 08.5**	**+0.2**
	4.4nm,0.1s						
MTBS				*e*S	**Sg**	**15 50 17.6**	**0.0**
	44nm,0.1s						
KDJ	**Kajisay**	**0.78**	**189**	⇑*i*P	**Pn**	**15 50 11.1**	**-0.8**
KDJ				⇑*i*S	**Sn**	**15 50 21.9**	**-1.8**
SATY	**Saty**	**0.80**	**78**	P	**Pn**	**15 50 11.3**	**-0.7**
	10nm,0.1s						
SATY				S	**Sn**	**15 50 22.2**	**-1.8**
	160nm,0.2s						
PRZ	**Przheval'sk**	**0.89**	**118**	⇑*i*P	**Pn**	**15 50 12.9**	**-0.4**
PRZ				⇑*i*S	**Sn**	**15 50 25.9**	**-0.4**
KTBS	**Karatobe**	**0.94**	**329**	P	**Pg**	**15 50 11.4**	**-1.3**
	2.8nm,0.1s						
KTBS				S	**Sg**	**15 50 23.8**	**-1.3**
	18nm,0.2s						
KST	**Kastek**	**1.02**	**278**	P	**Pb**	**15 50 14.6**	**+0.1**
	5.3nm,0.2s						
KST				S	**Sg**	**15 50 27.8**	**+0.2**
	74nm,0.5s						
KST	**Kastek**	**1.02**	**278**	*e*P	**Pb**	**15 50 14.6**	**+0.1**
	5.3nm,0.2s						
KST				*e*S	**Sg**	**15 50 27.8**	**+0.2**
	74nm,0.5s						
ULHL	**Ulahol**	**1.04**	**231**	⇑P	**Pg**	**15 50 14.0**	**-0.7**
	16nm,0.2s,SNR=45						
ULHL				⇓S	**Sb**	**15 50 29.0**	**+0.3**
	83nm,0.3s						
ULHL	**Ulahol**	**1.04**	**231**	⇓*i*P	**Pb**	**15 50 14.8**	**-0.1**
ULHL				⇓*i*S	**Sb**	**15 50 28.7**	**0.0**
BOOM	**Boomskoye usch**	**1.11**	**249**	⇑*i*P	**Pb**	**15 50 15.9**	**-0.2**
BOOM				⇑*i*S	**Sg**	**15 50 30.6**	**+0.1**
KPKS	**Kokpek**	**1.13**	**60**	P	**Pn**	**15 50 16.9**	**+0.3**
	0.3nm,0.1s						
KPKS				S	**Sn**	**15 50 31.7**	**-0.5**
	66nm,0.3s						
KPKS	**Kokpek**	**1.13**	**60**	*e*P	**Pn**	**15 50 16.3**	**-0.3**
KPKS				*e*S	**Sn**	**15 50 32.0**	**-0.2**
KPKS	**Kokpek**	**1.13**	**60**	*e*P	**Pn**	**15 50 16.9**	**+0.3**
	0.3nm,0.1s						
KPKS				*e*S	**Sn**	**15 50 31.7**	**-0.5**
	66nm,0.3s						
DGS	**Degeres**	**1.20**	**287**	P	**Pn**	**15 50 17.3**	**-0.2**
	8.9nm,0.3s						
DGS				S	**Sb**	**15 50 32.5**	**-0.6**
	56nm,0.5s						
DGS	**Degeres**	**1.20**	**287**	*e*P	**Pn**	**15 50 17.3**	**-0.2**
	8.9nm,0.3s						
DGS				*e*S	**Sb**	**15 50 32.5**	**-0.6**
	56nm,0.5s						
TARG	**Taragay, Kyrgy**	**1.22**	**164**	⇑*i*P	**Pn**	**15 50 19.1**	**+1.0**
TARG				⇑*i*S	**Sn**	**15 50 35.9**	**+1.0**
KUU	**Kurty**	**1.23**	**324**	*e*P	**Pn**	**15 50 17.0**	**-0.9**
KUU				*e*S	**Sb**	**15 50 33.2**	**-0.7**
KUU	**Kurty**	**1.23**	**324**	*e*P	**Pn**	**15 50 17.8**	**-0.1**
	0.9nm,0.0s						
KUU				*e*S	**Sb**	**15 50 33.2**	**-0.7**
	53nm,0.1s						
TKM2	**Tokmak 2**	**1.28**	**271**	⇑P	**Pn**	**15 50 18.9**	**+0.1**
	2.9nm,0.1s,SNR=10.0						
TKM2				⇑S	**Sb**	**15 50 35.1**	**-0.5**
	37nm,0.2s						
ARXS	**Arharly**	**1.36**	**15**	P	**Pb**	**15 50 20.2**	**0.0**
	23nm,0.2s						
ARXS				S	**Sb**	**15 50 37.5**	**0.0**
	110nm,0.3s						
ARXS	**Arharly**	**1.36**	**15**	*e*P	**Pb**	**15 50 20.2**	**0.0**
	23nm,0.2s						
ARXS				*e*S	**Sb**	**15 50 37.5**	**0.0**
	124nm,0.2s						
BLB	**Baldybastay**	**1.45**	**34**	P	**Pg**	**15 50 22.0**	**-0.5**
	37nm,0.3s						
BLB				S	**Sg**	**15 50 40.6**	**-0.8**
	193nm,0.3s						
KRBS	**Karabastau**	**1.45**	**304**	*e*P	**Pn**	**15 50 21.0**	**0.0**
KRBS				*e*S	**Sn**	**15 50 40.0**	**-0.1**
KRBS	**Karabastau**	**1.45**	**304**	*e*P	**Pb**	**15 50 21.7**	**-0.1**
KRBS				*e*S	**Sn**	**15 50 40.0**	**-0.1**
SHLS	**Shalkode**	**1.57**	**80**	Pg	Pg	15 50 30.9	+6.1
	33nm,0.2s						
SHLS				Lg	Lg	15 50 56.7	
	108nm,0.5s						
SHLS	**Shalkode**	**1.57**	**80**	*e*P	Pg	15 50 31.5	+6.6
	34nm,0.2s						
SHLS				*e*S	Sg	15 50 56.7	+11
	103nm,0.4s						
KBK	**Karagaybulak**	**1.78**	**263**	⇑P	**Pb**	**15 50 27.5**	**0.0**
	5.9nm,0.1s,SNR=17						
KBK				⇓S	**Sb**	**15 50 50.4**	**+0.5**
	59nm,0.3s						
KBK	**Karagaybulak**	**1.78**	**263**	⇓*e*P	**Pb**	**15 50 27.9**	**+0.5**
KBK				⇓*i*S	**Sb**	**15 50 50.4**	**+0.5**
CHMS	**Chumysh**	**1.91**	**274**	⇑P	**Pb**	**15 50 30.0**	**+0.5**
	5.0nm,0.3s						
CHMS				⇑S	**Sb**	**15 50 54.7**	**+1.4**
	25nm,0.2s						
SGDS	**Sogindy**	**2.06**	**286**	Pg	**Pb**	**15 50 31.8**	**-0.3**
	6.0nm,0.3s						
SGDS				Lg	Lg	15 50 58.0	
	24nm,0.5s						
AAK	**Ala-Archa**	**2.11**	**264**	⇑P	**Pb**	**15 50 32.8**	**-0.3**
	9.1nm,0.4s,SNR=7.1						
AAK				⇑S	**Sb**	**15 51 00.7**	**+1.3**
	25nm,0.5s						
USP	**Ospenovka**	**2.11**	**281**	⇓P	**Pb**	**15 50 32.9**	**-0.2**
	5.3nm,0.2s,SNR=7.4						
USP				⇑S	**Sb**	**15 51 00.5**	**+1.2**
	47nm,0.5s						
UCH	**Uchtor**	**2.20**	**253**	⇓P	**Pb**	**15 50 34.8**	**+0.1**
	3.0nm,0.3s,SNR=11						
UCH				⇑S	**Sb**	**15 51 03.1**	**+1.0**
	14nm,0.4s						
JNKS	**Jany-Kuch**	**2.23**	**215**	⇑*e*P	**Pb**	**15 50 35.1**	**-0.1**
JNKS				⇑*e*S	**Sb**	**15 51 02.8**	**-0.1**
ARLS	**Aral**	**2.47**	**246**	⇓*e*P	**Pb**	**15 50 37.3**	**-1.8**
ARLS				⇓*e*S	**Sb**	**15 51 08.3**	**-1.3**
SALK	**Salom-Alik**	**3.31**	**234**	⇑*e*P	**Pn**	**15 50 49.3**	**+2.6**
SALK				⇑*e*S	**Sn**	**15 51 28.3**	**+2.1**
KK31	**Karatay Array**	**5.01**	**275**	⇓Pg	**Pg**	**15 51 28.2**	**-2.4**
	0.5nm,0.4s						
KK31				⇓Lg	Lg	15 52 30.7	
	1.8nm,0.4s,baz=237,slow=67,SNR=10.0						
MK31	**Makanchi Array**	**5.24**	**40**	⇑Pg	**Pb**	**15 51 29.3**	**+2.9**
	0.4nm,0.5s,baz=217,slow=15,SNR=5.4						
MK31				Sn	**Sn**	**15 52 15.7**	**+2.2**
	0.5nm,0.3s,baz=221,slow=24,SNR=3.5						
MK31				Lg	Lg	15 52 36.6	
	0.2nm,0.2s,baz=219,slow=27,SNR=4.1						

*IDC **13** 15:56:50.7±1.3,0˚.43S×122˚.20E,h0km,mb3.3/4,*
mbtmp3.5/5,ML4.0/1,Error ellipse: s-maj=57.3km
s-min=22.4km az=71.0
*DJA **13** 15:56:55.5±0.2,1˚.S±2˚×12˚.2E±˚,h10km,M4.2/17,mB4.8/2,*
mb4.3/4,ML4.1/17,Mw(mB)4.1/2

ISC 13 15:56:57.3±0.9,**0.74S**±0˚.05×**122˚.24E**±0˚.04,**h49**km,**n19,**
σ2§**11**/23,**mb3.4**/4,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.61**	**119**	P	**Pn**	**15 57 07.6**	**-2.2**
LUWI				S	**Sn**	**15 57 16.0**	**-2.8**
APSI	**Ampana**	**0.62**	**254**	P	**Pn**	**15 57 06.9**	**-3.1**
MRSI	**Marisa**	**1.25**	**346**	P	**Pn**	**15 57 16.6**	**-1.8**
KMSI	**Cibinong**	**2.17**	**53**	P	**Pn**	**15 57 33.2**	**+2.1**
KMSI				S	**Sn**	**15 58 00.9**	**+4.1

AP01	**Chacalluta**	**1.60**	**22**	*e*P		**Pn**	**16 02 40.9**	**+0.2**
AP01				IAML			16 03 04.2	
	comp=Z,387nm,0.3s							
GO01	**Chusmiza**	**1.69**	**84**	*i*P		**Pb**	**16 02 43.6**	**-0.6**
GO01				*i* S		**Sb**	**16 03 04.8**	**-0.6**
GO01	**Chusmiza**	**1.69**	**84**	*e*P		**Pn**	**16 02 43.2**	**+0.7**
GO01				IAML			16 03 09.0	
	comp=Z,304nm,0.4s							
PB02	**IPOC Station P**	**1.77**	**145**	*i*P		**Pn**	**16 02 43.8**	**+0.5**
PB02				*i* S		**Sn**	**16 03 05.5**	**-0.1**
PB02				IAML			16 03 17.4	
	comp=N,630nm,0.4s							
PB02	**IPOC Station P**	**1.77**	**145**	*e*P		**Pn**	**16 02 43.6**	**+0.4**
PB02				IAML			16 03 14.9	
	comp=Z,542nm,0.4s							
PB01	**IPOC Station P**	**1.83**	**130**	*i*P		**Pn**	**16 02 44.8**	**+0.7**
PB01				*i* S		**Sn**	**16 03 07.1**	**+0.2**
PB01				IAML			16 03 14.4	
	comp=E,399nm,0.5s							
PB01	**IPOC Station P**	**1.83**	**130**	*e*P		**Pn**	**16 02 44.5**	**+0.5**
PB01				IAML			16 03 13.1	
	comp=Z,161nm,0.5s							
PB16	**IPOC Station P**	**2.06**	**43**	*i* S		**Sb**	**16 03 15.4**	**-0.6**
PB16				IAML			16 03 23.1	
	comp=N,192nm,0.4s							
PB16	**IPOC Station P**	**2.06**	**43**	*e*P		**Pn**	**16 02 48.5**	**+1.0**
PB16				IAML			16 03 22.1	
	comp=Z,276nm,0.5s							
PB03	**IPOC Station P**	**2.46**	**152**	IAML			16 03 41.5	
	comp=E,84nm,0.5s							
PB03	**IPOC Station P**	**2.46**	**152**	*e*P		**Pn**	**16 02 54.2**	**+1.4**
PB03				IAML			16 03 37.6	
	comp=Z,86nm,0.6s							
PB09	**IPOC Station P**	**2.52**	**140**	*i*P		**Pn**	**16 02 54.9**	**+1.3**
PB09				IAML			16 03 37.1	
	comp=E,275nm,0.6s							
PB09	**IPOC Station P**	**2.52**	**140**	*e*P		**Pn**	**16 02 55.1**	**+1.5**
PB09				IAML			16 03 39.1	
	comp=Z,183nm,0.4s							
PB05	**IPOC Station P**	**3.07**	**166**	IAML			16 04 01.8	
	comp=N,38nm,0.3s							
PB05	**IPOC Station P**	**3.07**	**166**	*e*P		**Pn**	**16 03 01.1**	**0.0**
PB05				IAML			16 04 07.9	
	comp=Z,33nm,0.5s							
PB06	**IPOC Station P**	**3.12**	**155**	IAML			16 03 57.1	
	comp=E,68nm,0.7s							
PB06	**IPOC Station P**	**3.12**	**155**	*e*P		**Pn**	**16 03 02.4**	**+0.5**
PB06				IAML			16 03 56.4	
	comp=Z,85nm,0.9s							
PB10	**IPOC Station P**	**3.66**	**174**	*e*P		**Pn**	**16 03 08.3**	**-0.8**
PB10				IAML			16 04 22.3	
	comp=Z,10.0nm,1.1s							

IDC ***13*** *16:07:35.0±2.2, 11°.08N×62°.13W, h56km±19km, mb3.6/5, mbtmp3.9/7, ML3.0/2, Error ellipse: s-maj=22.5km s-min=13.9km az=135.0*

NEIC ***13*** *16:07:36.6±2.0, 10°.96N±0°.08×62°.0W±0°.1, h81km±9km, mb4.2/2, Error ellipse: s-maj=16.4km s-min=10.5km az=108.0*

TRN ***13*** *16:07:37.7, 11°.09N×62°.04W, h56km, MD3.6, North of the Paria peninsula.*

ISC 13 16:07:36.8±0.7, 11°.04N±0°.04×62°.04W±0°.05, h82km±7km, n53, σ1§52/78, mb3.9/4, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSKH	**Kent House, Po**	**0.62**	**125**	*e*P	**Pn**	**16 07 52.4**	**+0.5**
PSKH				*e*S	**Sn**	**16 08 01.9**	**-1.2**
PSWS	**West Secondary**	**0.64**	**126**	*e*P	**Pn**	**16 07 52.5**	**+0.5**
PSWS				*e*S	**Sn**	**16 08 02.3**	**-1.0**
TRN	**Trinidad (W)**	**0.74**	**122**	*e*P	**Pn**	**16 07 53.4**	**+0.3**
TRN				*e*S	**Sn**	**16 08 03.7**	**-1.5**
TPP	**Pointe-a-Pierr**	**0.92**	**141**	*e*P	**Pn**	**16 07 56.2**	**+1.1**
TPP				*e*S	**Sn**	**16 08 10.7**	**+1.9**
GRFF	**Grenada Fort F**	**1.05**	**16**	*i* P	**Pn**	**16 07 56.5**	**-0.1**
GRFF				*e*S	**Sn**	**16 08 10.4**	**-1.0**
GRGR	**Grenville**	**1.15**	**19**		**Pn**	**16 07 58.1**	**+0.2**
GRGR	**Grenville**	**1.15**	**19**	*e*P	**Pn**	**16 07 58.0**	**+0.1**
GRGR				*e*S	**Sn**	**16 08 13.2**	**-0.4**
GRW	**Mount Saint Ca**	**1.17**	**18**	*e*P	**Pn**	**16 07 59.4**	**+1.1**
GRW				*e*S	**Sn**	**16 08 13.9**	**-0.4**
GRHS	**Sauteurs**	**1.24**	**18**	*e*P	**Pn**	**16 07 59.1**	**+0.1**
GRHS				*e*S	**Sn**	**16 08 15.2**	**-0.3**
GRSS	**Sisters**	**1.32**	**19**	*e*P	**Pn**	**16 08 00.2**	**+0.2**
GRSS				*e*S	**Sn**	**16 08 17.4**	**+0.1**
GCMP	**Grenada, Carri**	**1.56**	**23**	*e*P	**Pn**	**16 08 03.3**	**+0.3**
GCMP				*e*S	**Sn**	**16 08 22.0**	**-0.8**
SVB	**Belmont**	**2.35**	**19**	*e*P	**Pn**	**16 08 13.2**	**-0.2**
SVB				*e*S	**Sn**	**16 08 41.3**	**-0.2**
PCRV	**Puerto La Cruz**	**2.69**	**252**	*e*P	**Pn**	**16 08 20.8**	**+2.7**
PCRV				*e*S	**Sn**	**16 08 51.9**	**+2.0**
MCLT	**Moule a Chique**	**2.86**	**22**	*e*P	**Pn**	**16 08 21.1**	**+0.7**
MCLT				*e*S	**Sn**	**16 08 52.7**	**-1.2**
SLAC	**Saint Lucia, A**	**3.05**	**21**	*e*P	**Pn**	**16 08 23.6**	**+0.6**
SLAC				*e*S	**Sn**	**16 08 59.2**	**+0.7**
SLBI	**Saint Lucia, B**	**3.14**	**19**	*e*P	**Pn**	**16 08 24.7**	**+0.6**
SLBI				*e*S	**Sn**	**16 08 59.4**	**-1.2**
H05S1	**Guadeloupe/Mar**	**3.56**	**19**	P	**Pn**	**16 08 28.9**	**-0.9**
H05S1				S	**Sn**	**16 09 09.9**	**-1.0**
	SNR=30						
MPOM	**Morne Pois Mar**	**3.58**	**19**	Pn	**Pn**	**16 08 30.6**	**+0.6**
BIM	**Bigot**	**3.58**	**15**	Pn	**Pn**	**16 08 30.5**	**+0.3**
BIM	**Bigot**	**3.58**	**15**	*e*P	**Pn**	**16 08 30.6**	**+0.4**
BIM				*e*S	**Sn**	**16 09 10.7**	**-0.8**
SVN	**Savane Anatole**	**3.87**	**13**	Pn	**Pn**	**16 08 34.7**	**+0.6**
ILAM	**Ilet Lapin Mar**	**3.88**	**17**	Pn	**Pn**	**16 08 34.6**	**+0.4**
DSLB	**Salisbury**	**4.41**	**8**	*e*P	**Pn**	**16 08 42.8**	**+1.3**
DSLB				*e*S	**Sn**	**16 09 29.9**	**-1.7**
TDBA	**Terre de Bas,**	**4.80**	**5**	Pn	**Pn**	**16 08 48.6**	**+1.9**
TBG	**Guadeloupe-3**	**4.80**	**5**	*e*P	**Pn**	**16 08 48.6**	**+1.9**
MAGL	**Barre de l'Ile**	**4.94**	**9**	Pn	**Pn**	**16 08 49.0**	**+0.5**
MMLZ	**Guadeloupe Bro**	**4.99**	**4**	*e*P	**Pn**	**16 08 52.0**	**+2.8**
MMLZ				*e*S	**Sn**	**16 09 45.5**	**-0.1**
CBE	**Ff, Capester**	**5.02**	**5**	Pn	**Pn**	**16 08 51.3**	**+1.6**
ATGZ	**Broadband at L**	**5.04**	**3**	*e*P	**Pn**	**16 08 51.8**	**+1.9**
ATGZ				*e*S	**Sn**	**16 09 46.8**	**0.0**
DHSZ	**Broadband at M**	**5.21**	**3**	*e*P	**Pn**	**16 08 55.8**	**+3.5**
DHSZ				*e*S	**Sn**	**16 09 50.0**	**-1.0**
GDHS	**Morne Mazeau,**	**5.21**	**3**	Pn	**Pn**	**16 08 54.3**	**+2.0**
DSDZ	**La Diserade, G**	**5.33**	**10**	*e*P	**Pn**	**16 08 54.7**	**+0.8**
DSDZ				*e*S	**Sn**	**16 09 52.9**	**-1.0**
GDSD	**La Dsirade Is**	**5.33**	**10**	Pn	**Pn**	**16 08 53.9**	**0.0**
H05N1	**Guadeloupe/Mar**	**5.33**	**10**	P	**Pn**	**16 08 53.4**	**-0.5**
	SNR=7.2						
H05N1				S	**Sn**	**16 09 49.8**	**-4.2**
ABD	**La Joyeuse, An**	**5.43**	**6**	Pn	**Pn**	**16 08 57.6**	**+2.3**
MBFL	**Flemmings, Mon**	**5.68**	**358**	*e*P	**Pn**	**16 09 00.7**	**+2.0**
BAUV	**El Baul**	**6.27**	**251**	Pn	**Pn**	**16 09 06.5**	**-0.2**
BAUV	**El Baul**	**6.27**	**251**	*e*P	**Pn**	**16 09 07.8**	**+1.1**
BAUV				*e*S	**Sn**	**16 10 15.0**	**-2.0**
ANWB	**Willy Bob**	**6.59**	**2**	*e*P	**Pn**	**16 09 14.4**	**+3.2**
BOAV	**Boa Vista**	**8.72**	**170**	Pn	**Pn**	**16 09 38.7**	**-1.6**
SDV	**Santo Domingo**	**8.73**	**257**	P	**Pn**	**16 09 37.7**	**-2.9**
	0.4nm,0.3s,baz=72,slow=6.4,SNR=1.6						
SDV				S	**Sn**	**16 11 14.8**	**-2.7**
	3.4nm,0.4s,baz=43,slow=18,SNR=4.3 1.9nm,0.3s						
DR12	**Loma Pena Alta**	**10.47**	**318**	Pn	**Pn**	**16 10 05.2**	**+1.0**
BANI	**BANI**	**10.87**	**313**	Pn	**Pn**	**16 10 13.0**	**+3.4**
MDP	**Montagnes des**	**11.02**	**122**	P	**Pn**	**16 10 10.8**	**-0.8**
	0.5nm,0.3s,baz=312,slow=16,SNR=1.4						
MDP				S	Sn	16 12 00.3	-13
	17nm,0.4s,baz=18,slow=15,SNR=22 3.6nm,0.6s						
MAL2	**Monte Alegre,**	**15.15**	**148**	P	**Pn**	**16 11 07.2**	**+0.9**
MAL2				IAmb	IAmb	16 11 21.5	
	comp=Z,12nm,0.9s						
TXAR	**Lajitas Array**	**42.82**	**301**	P	**P**	**16 15 27.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=107,slow=11,SNR=4.6 comp=Z,0.1nm,0.3s						
PD31	**Pinedale Array**	**51.90**	**316**	P	**P**	**16 16 36.5**	**-0.9**
PD31				IAmb	IAmb	16 16 47.2	
	comp=Z,3.8nm,1.4s						
PDAR	**Pinedale Array**	**51.90**	**316**	P	**P**	**16 16 36.7**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=110,slow=8.1,SNR=3.0 comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**62.21**	**81**	P	**P**	**16 17 50.3**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=270,slow=2.9,SNR=1.6 comp=Z,1.1nm,0.3s						
ARCES	**ARCESS Array B**	**78.88**	**21**	P	**P**	**16 19 32.3**	**+1.5**
	comp=Z,2.7nm,0.9s,baz=270,slow=5.4,SNR=4.7 comp=Z,2.7nm,0.9s						
FINES	**FINESS Array B**	**79.49**	**29**	P	**P**	**16 19 36.2**	**+1.9**
	comp=Z,0.7nm,0.4s,baz=270,slow=1.4,SNR=8.5 comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**79.49**	**29**	P	**P**	**16 19 35.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**145.20**	**33**	PKPbc	**PKiKP**	**16 27 07.0**	**-2.8**
	comp=Z,1.7nm,0.7s,baz=328,slow=4.2,SNR=14						

IDC ***13*** *16:28:19.2±0.9, 27°.69N×53°.05E, h0km, mb4.0/19, mbtmp4.0/20, ML2.8/1, MS3.0/4, Error ellipse: s-maj=21.0km s-min=16.0km az=6.0*

TEH ***13*** *16:28:20.9, 27°.67N×53°.17E, h12km±21km*

NEIC ***13*** *16:28:21.8±1.0, 27°.77N±0°.08×53°.06E±0°.02, h10km±1km, mb4.3/28, Error ellipse: s-maj=13.0km s-min=3.4km az=182.0*

DSN ***13*** *16:28:23.6±1.8, 27°.58N×53°.12E, h10km, ML3.9/15, Error ellipse: s-maj=23.6km s-min=7.7km az=177.0*

OMAN ***13*** *16:28:24.8±0.7, 27°.48N×53°.15E, h11km, mb4.4/10, ml4.2/16, Error ellipse: s-maj=7.5km s-min=3.8km az=2.0*

ISC 13 16:28:21.0±0.4, 27°.68N±0°.04×53°.14E±0°.04, h10km, n138, σ1§64/145, mb4.2/29, MS3.3/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.34**	**177**	Pg	**Pg**	**16 28 28.1**	**+0.3**
JHRM	**Jahrom**	**0.91**	**25**	Pg	**Pb**	**16 28 39.1**	**+0.2**
LAR1	**LAR**	**1.09**	**90**	Pg	**Pn**	**16 28 42.7**	**+0.3**
DSBU	**Dashti - Bushe**	**1.80**	**293**	Pn	**Pb**	**16 28 55.0**	**+1.0**
SHI	**Shiraz**	**2.03**	**344**	Pn	**Pb**	**16 28 58.3**	**+0.2**
KAZ2	**Kazeron-Fars-I**	**2.32**	**326**	Pn	**Pb**	**16 29 02.4**	**-0.6**
SHMA	**Al-Shehemyia**	**2.66**	**227**	P	**Pn**	**16 29 06.2**	**+2.2**
	SNR=6.0						
GENO	**Geno**	**2.71**	**95**	Pn	**Pn**	**16 29 06.1**	**+1.4**
JRN	**Qarnain Island**	**2.74**	**186**	P	**Pn**	**16 29 06.6**	**+1.6**
IBND	**Bandar-abas**	**3.02**	**94**	Pn	**Pn**	**16 29 10.9**	**+2.0**
SHME	**Shamm**	**3.13**	**121**	P	**Pb**	**16 29 13.3**	**-3.5**
SHME	**Shamm**	**3.13**	**121**	P	**Pn**	**16 29 12.9**	**+2.5**
BANOM	**Banah**	**3.32**	**121**	P	**Pn**	**16 29 15.8**	**+2.8**
BANOM	**Banah**	**3.32**	**121**	*i* P	**Pn**	**16 29 14.4**	**+1.4**
	SNR=16						
BANOM				S	**Sn**	**16 29 53.4**	**+0.8**
TRNA	**Turayna**	**3.41**	**211**	P	**Pn**	**16 29 16.4**	**+2.2**
TRNA				S	**Sn**	**16 29 56.5**	**+1.8**
NAZ	**Nazwa, Dubai**	**3.51**	**139**	P	**Pn**	**16 29 17.5**	**+2.0**
AJN	**Ajban**	**3.52**	**151**	P	**Pn**	**16 29 18.4**	**+2.7**
	SNR=8.6						
AJN	**Ajban**	**3.52**	**151**	*i* P	**Pn**	**16 29 17.4**	**+1.6**
	SNR=8.6						
MASF	**Masafi**	**3.55**	**130**	P	**Pn**	**16 29 18.9**	**+2.7**
MASF				S	**Sn**	**16 30 00.3**	**+2.0**
MSFE	**Esma-Masafi**	**3.56**	**130**	P	**Pn**	**16 29 18.1**	**+1.8**
KLNJ	**Kolanjah**	**3.58**	**338**	Pn	**Pn**	**16 29 20.1**	**+3.2**
SMRA	**Abu-Samra**	**3.59**	**216**	P	**Pn**	**16 29 19.7**	**+3.1**
	SNR=5.9						
ASUD	**Al Ashush, Dub**	**3.62**	**147**	P	**Pn**	**16 29 20.0**	**+2.9**
	SNR=6.5						
ASUD	**Al Ashush, Dub**	**3.62**	**147**	P	**Pn**	**16 29 19.5**	**+2.3**
FAQ	**Al Faqa, Dubai**	**3.66**	**142**	P	**Pn**	**16 29 20.6**	**+2.9**
MDH	**Madha**	**3.69**	**129**	P	**Pn**	**16 29 21.0**	**+2.9**
MDH				S	**Sn**	**16 30 01.5**	**-0.2**
MDH	**Madha**	**3.69**	**129**	P	**Pn**	**16 29 20.3**	**+2.2**
GHWR	**Ruwais**	**3.71**	**184**	P	**Pn**	**16 29 20.4**	**+2.0**
NGRK	**Negar Kerman**	**3.71**	**57**	Pn	**Pn**	**16 29 20.3**	**+1.6**
SLWR	**Sila**	**3.83**	**200**	P	**Pn**	**16 29 21.4**	**+1.5**
UOSS	**Minazif**	**3.87**	**134**		**Pn**	**16 29 22.0**	**+1.4**
UOSS	**Minazif**	**3.87**	**134**	P	**Pn**	**16 29 23.1**	**+2.5**
UOSS				S	**Sn**	**16 30 06.5**	**+0.4**
HATD	**Hatta, Dubai**	**3.91**	**136**	P	**Pn**	**16 29 24.4**	**+3.2**
HATD	**Hatta, Dubai**	**3.91**	**136**	P	**Pn**	**16 29 23.3**	**+2.2**
IMEH	**Mehriz**	**3.91**	**19**	Pn	**Pn**	**16 29 24.0**	**+2.6**
KRBR	**Kerman**	**3.92**	**53**	Pn	**Pn**	**16 29 24.5**	**+3.1**
KHGB	**Koh Gabri**	**3.97**	**47**	Pn	**Pn**	**16 29 24.2**	**+2.1**
ASHO	**Ashiyiah**	**3.97**	**138**	P	**Pn**	**16 29 24.5**	**+2.5**
	SNR=24						
ASHO				S	**Sn**	**16 30 09.8**	**+1.2**
ASHO	**Ashiyiah**	**3.97**	**138**	*i* P	**Pn**	**16 29 24.4**	**+2.5**
	SNR=24						
ALNE	**Al Ain**	**4.31**	**146**	P	**Pn**	**16 29 29.8**	**+3.2**
	SNR=5.8						
ALNE				S	**Sn**	**16 30 18.1**	**+1.1**
ZRDN	**Zarand Kerman**	**4.42**	**41**	Pn	**Pn**	**16 29 30.1**	**+1.8**
CHMN	**Cheshme madani**	**4.43**	**60**	Pn	**Pn**	**16 29 31.3**	**+2.7**
IBAF	**Bafgh**	**4.43**	**28**	Pn	**Pn**	**16 29 30.6**	**+2.2**
KRM1	**Kerman Provinc**	**4.58**	**51**	Pn	**Pn**	**16 29 32.2**	**+1.7**
MZR	**Muzera**	**4.67**	**176**	P	**Pn**	**16 29 33.0**	**+1.4**
MZR	**Muzera**	**4.67**	**176**	P	**Pn**	**16 29 32.2**	**+0.7**
SOHO	**SOHO**	**4.67**	**138**	P	**Pn**	**16 29 33.5**	**+2.0**
SOHO				S	**Sn**	**16 30 28.0**	**+2.2**
SOHO	**SOHO**	**4.67**	**138**	*i* P	**Pn**	**16 29 33.7**	**+2.1**
	SNR=7.5						
ICHK	**Chekhek**	**4.68**	**13**	Pn	**Pn**	**16 29 34.1**	**+2.3**
IGAR	**Gharneh**	**4.80**	**349**	Pn	**Pn**	**16 29 35.8**	**+2.2**
KBAM	**BAM**	**4.90**	**72**	Pn	**Pn**	**16 29 37.2**	**+2.4**
UMZA	**Um Al Zommool**	**5.27**	**159**	P	**Pn**	**16 29 41.6**	**+1.7**
UMZA				S	**Sn**	**16 30 39.9**	**-0.8**
ARQ	**Araqi**	**5.29**	**144**	P	**Pn**	**16 29 42.0**	**+1.8**
	SNR=23						
ANAR	**Anarak**	**5.51**	**5**	Pn	**Pn**	**16 29 44.6**	**+1.3**
HOQ	**Hoqain**	**5.55**	**136**	Pn	**Pn**	**16 29 46.1**	**+2.4**
HOQ	**Hoqain**	**5.55**	**136**	P	**Pn**	**16 29 45.8**	**+2.1**
HOQ				S	**Sn**	**16 30 47.6**	**0.0**
TPRV	**Parvadeh(Tabas**	**6.15**	**29**	Pn	**Pn**	**16 29 53.9**	**+1.9**
SMDO	**Samad**	**6.39**	**135**	P	**Pn**	**16 29 57.4**	**+2.0**
SMDO				S	**Sn**	**16 31 10.2**	**+1.7**
	SNR=8.2						
WSAR	**Wadi Sarin**	**6.65**	**131**	P	**Pn**	**16 30 00.3**	**+1.6**
	SNR=10						
TKDS	**Koohdasht(Taba**	**6.83**	**29**	Pn	**Pn**	**16 30 02.9**	**+1.5**
TNSJ	**Nastanj**	**6.93**	**25**	Pn	**Pn**	**16 30 04.4**	**+1.6**
JMDO	**Jabal Madar**	**6.94**	**139**	P	**Pn**	**16 30 05.4**	**+2.6**
WBK	**Wadi Bani Khal**	**7.30**	**132**	P	**Pn**	**16 30 09.5**	**+1.7**
WBK				S	**Sn**	**16 31 32.1**	**+1.2**
NGCH	**Negor - Chabah**	**7.53**	**106**	P	**Pn**	**16 30 12.2**	**+1.5**
JLN	**Jalan Bani Buh**	**7.92**	**133**	P	**Pn**	**16 30 16.9**	**+0.8**
MHTO	**MHTO**	**7.99**	**146**	P	**Pn**	**16 30 18.5**	**+1.4**
	SNR=22						
RAYN	**Ar Rayn**	**8.04**	**241**	Pn	**Pn**	**16 30 17.2**	**-0.7**
RAYN	**Ar Rayn**	**8.04**	**241**	P	**Pn**	**16 30 18.0**	**0.0**
RAYN	**Ar Rayn**	**8.04**	**241**	*i* P	**Pn**	**16 30 17.8**	**-0.1**
	SNR=17						
SRVN	**Saravan**	**8.22**	**90**	Pn	**Pn**	**16 30 22.2**	**+1.8**
DOK	**Doka**	**9.07**	**174**	P	**Pn**	**16 30 32.4**	**+0.4**
WHFO	**Wadi Hawf**	**9.73**	**176**	P	**Pn**	**16 30 41.6**	**+0.4**
	SNR=5.1						
DMTO	**DMTO**	**10.06**	**170**	P	**Pn**	**16 30 46.4**	**+0.8**
RBK	**Rabkut**	**10.18**	**174**	P	**Pn**	**16 30 47.5**	**+0.3**
HRA	**Herat**	**10.27**	**47**	Pn	**Pn**	**16 30 50.0**	**+1.3**
ABTO	**Aybut**	**10.28**	**179**	P	**Pn**	**16 30 49.0**	**+0.4**
MARD	**Mardin**	**14.17**	**316**	Pn	**Pn**	**16 31 37.8**	**-4.0**
ASF	**Jabal al Asfar**	**14.78**	**292**	Pn	**Pn**	**16 31 49.7**	**-0.5**
	baz=115,slow=17,SNR=1.3						
ASF				Lg	Lg	16 36 06.9	
	0.1nm,0.3s,baz=112,slow=19,SNR=1.3 0.8nm,0.6s						
KBL	**Kabul**	**15.23**	**59**	Pn	**Pn**	**16 31 57.1**	**+0.8**
EIL	**Elat**	**16.09**	**281**	Lg	Lg	16 36 45.6	
	0.1nm,0.3s,baz=36,slow=19,SNR=1.8						
KOPT	**Kop Dagi**	**16.16**	**323**	Pn	**Pn**	**16 32 06.3**	**-2.0**
CHGR	**Chuyangaron**	**17.28**	**47**	Pn	**Pn**	**16 32 20.1**	**-2.4**
CHGR				IAmb	IAmb	16 32 26.2	
	comp=Z,25nm,1.0s						
KBZ	**Khabaz**	**18.02**	**335**	P	**P**	**16 32 33.7**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=143,slow=13,SNR=4.2						
GAR	**Garm**	**18.22**	**47**	Pn	**Pn**	**16 32 33.0**	**-1.1**
GAR				IAmb	IAmb	16 32 38.6	
	comp=Z,30nm,0.9s						
NIL	**Nilore**	**18.28**	**66**		**P**	**16 32 35.4**	**+0.4**
ATD	**Arta Tunnel**	**18.75**	**213**	LR	LR	16 41 03.5	
	comp=Z,5.2nm,18.9s,baz=154,slow=41						
DRK	**Karamyk**	**19.45**	**48**	P	**Pn**	**16 32 49.1**	**-0.1**
DRK				IAmb	IAmb	16 32 51.5	
	comp=Z,11nm,0.8s						
BRTR	**Keskin Array B**	**20.14**	**312**	P	**P**	**16 32 55.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=125,slow=13,SNR=7.0 comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**20.14**	**312**	P	**P**	**16 32 54.7**	**-0.7**
KK31	**Karatay Array**	**20.85**	**38**	P	**P**	**16 33 02.6**	**-0.3**
KKAR	**Karatay Array**	**20.85**	**38**	P	**P**	**16 33 02.3**	**-0.6**
ARSB	**Arslanbob**	**21.21**	**45**	P	**P**	**16 33 07.3**	**+0.4**
AB31	**Akbulak array**	**22.17**	**12**	P	**P**	**16 33 16.9**	**-0.1**
ABKAR	**Akbulak array**	**22.17**	**12**	P	**P**	**16 33 16.6**	**-0.4**
AAK	**Ala-Archa**	**22.88**	**44**	LR	LR	16 43 53.9	
	comp=Z,96nm,18.5s,baz=270,slow=41						
AAK	**Ala-Archa**	**22.88**	**44**	P	**P**	**16 33 25.2**	**+0.4**
AAK				IAmb	IAmb	16 33 35.4	
	comp=Z,6.3nm,0.8s						
AKTO	**Aktyubinsk**	**23.02**	**8**	LR	LR	16 44 09.7	
	comp=Z,95nm,19.2s,baz=150,slow=41						
FURI	**Furi**	**23.14**	**219**	LR	LR	16 43 11.3	
	comp=Z,64nm,20.0s,baz=78,slow=39						
BOOM	**Boomskoye usch**	**23.70**	**45**	P	**P**	**16 33 32.5**	**-0.6**
BOOM				IAmb	IAmb	16 33 37.2	
	comp=Z,10nm,0.8s						
KDJ	**Kajisay**	**24.31**	**47**	P	**P**	**16 33 39.5**	**+0.6**
KDJ				IAmb	IAmb	16 33 45.0	
	comp=Z,4.9nm,0.8s						
TARG	**Taragay, Kyrgy**	**24.54**	**49**	P	**P**	**16 33 41.4**	**+0.1**
TARG				IAmb	IAmb	16 33 45.5	
	comp=Z,4.6nm,0.8s						
BVAR	**Borovoye Array**	**28.37**	**22**	P	**P**	**16 34 14.9**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=210,slow=7.7,SNR=16 comp=Z,4.2nm,0.9s						
AKASG	**Malin Array Be**	**29.29**	**328**	P	**P**	**16 34 20.9**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=134,slow=9.1,SNR=2.6 comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**29.78**	**42**	P	**P**	**16 34 28.4**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=236,slow=11,SNR=10 comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**29.78**	**42**	P	**P**	**16 34 27.8**	**0.0**
KURBB	**Kurchatov Arra**	**29.94**	**33**	P	**P**	**16 34 30.3**	**+1.2**
	comp=Z,1.3nm,0.2s,baz=233,slow=9.1,SNR=5.7 comp=Z,1.3nm,0.2s						
KURK	**Kurchatov**	**30.04**	**33**	P	**P**	**16 34 29.3**	**-0.7**
ZAA0	**Zalesovo Array**	**35.03**	**33**	P	**P**	**16 35 13.9**	**+0.3**
ZAA0				IAmb	IAmb	16 35 16.3	
	comp=Z,5.0nm,1.1s						
ZALV	**Zalesovo Beam**	**35.03**	**33**	P	**P**	**16 35 13.4**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=237,slow=8.3,SNR=10 comp=Z,2.1nm,0.6s						
FINES	**FINESS Array B**	**38.30**	**339**	P	**P**	**16 35 40.8**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=135,slow=7.8,SNR=12 comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**38.30**	**339**	P	**P**	**16 35 41.0**	**-0.4**
GTA	**Gaotai**	**40.22**	**61**	*e*P	**P**	**16 35 58.9**	**+1.0**
GTA				pP	sP	16 36 03.6	+1.0
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HFS	**Hagfors**	**42.03**	**332**	P	**P**	**16 36 11.5**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=122,slow=10,SNR=9.4 comp=Z,1.1nm,0.5s						
CHTO	**Chiang Mai**	**42.80**	**92**	P	**P**	**16 36 19.8**	**+0.7**
CHTO				IAmb	IAmb	16 36 22.8	
	comp=Z,5.9nm,0.9s						
CM31	**Chiang Mai Arr**	**42.92**	**92**	P	**P**	**16 36 21.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**42.92**	**92**	P	**P**	**16 36 20.2**	**0.0**
	comp=Z,2.4nm,1.0s,baz=292,slow=8.5,SNR=13 comp=Z,2.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**42.92**	**92**	P	**P**	**16 36 21.6**	**+1.4**
PZH	**PanZhiHua**	**43.06**	**80**	P	**P**	**16 36 22.4**	**+1.0**
NOA	**NORSAR Array B**	**43.55**	**332**	P	**P**	**16 36 23.3**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=120,slow=8.2,SNR=4.1 comp=Z,

*GCG **13** 16:28:53.8±1.1, 13°.79N×91°.04W, h57km±13km, MD5.3, ML5.9*
*NEIC **13** 16:28:54.2, 13°.69N×90°.91W, h58km*
*RSNC **13** 16:28:55.5±0.7, 14°N-4°×9°.1W-°, h76km±5km, M5.1, mb5.2, mB5.5, ML5.8, Mw(mB)5.0, MwMwp5.1, Mwp5.4*
*MOS **13** 16:28:55.5±1.1, 13°.81N×90°.70W, h91km, mb5.5/16, MS4.8/8, Error ellipse: s-maj=11.8km s-min=6.4km az=113.7*
*SNET **13** 16:28:56.4±13.0, 13°.72N×90°.93W, h41km, ML5.9*
*UPA **13** 16:29:05.8±2.8, 13°.73N×90°.24W, h72km, MW5.6*

ISC 13 16:28:52.8±0.3, **13°.69N**±0°.03×**90°.91W**±0°.03, **h62**km±2km, **h62**km:**pP-P, n1311, σ1984**/994, **mb5.4**/308, **17C-6D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.42**	**108**	*i* P		**Pn**	**16 29 03.6**	**-0.6**
ESSG	**Sabana Grande**	**0.69**	**7**	*e*P		**Pn**	**16 29 06.9**	**-0.4**
ESSG				*i* S		**Sn**	**16 29 17.8**	**0.0**
ESSG				IAML			16 29 19.9	
	comp=E,314μm,0.4s							
FG16	**Alotenango, Sa**	**0.70**	**34**	*e*P		**Pn**	**16 29 08.3**	**+0.9**
FG16				IAML			16 29 22.2	
	comp=N,1499μm,0.4s							
PCG5	**San Vicente Pa**	**0.74**	**45**	*e*P		**Pn**	**16 29 07.7**	**-0.1**
PCG5				*i* S		**Sn**	**16 29 18.6**	**-0.3**
STG8	**El Palmar, Qui**	**0.87**	**331**	*i* P		**Pn**	**16 29 13.7**	**+4.2**
STG8				*i* S		**Sn**	**16 29 28.7**	**+6.9**
STG8				IAML			16 29 31.2	
	comp=E,135μm,0.4s							
STG2	**El Palmar, Qui**	**0.87**	**329**	*e*P		**Pn**	**16 29 13.1**	**+3.6**
FAME	**Alcaldia de Sa**	**0.89**	**80**	S		**Sn**	**16 29 22.9**	**+1.1**
FAME	**Alcaldia de Sa**	**0.89**	**80**	P		**Pn**	**16 29 09.9**	**+0.4**
GCG4	**OSOP**	**0.96**	**22**	*e*P		**Pn**	**16 29 11.4**	**+0.9**
GCG4				*e*S		**Sn**	**16 29 25.8**	**+1.9**
NUBE	**Las Nubes**	**1.12**	**79**	*e*P		**Pn**	**16 29 13.8**	**+1.1**
NUBE				*e*S		**Sn**	**16 29 28.6**	**+1.2**
NUBE	**Las Nubes**	**1.12**	**79**	P		**Pn**	**16 29 13.6**	**+0.9**
RTAL	**Retalhuleu**	**1.12**	**318**			**Pn**	**16 29 11.7**	**-0.9**
RTAL				Sn		**Sn**	**16 29 26.3**	**-1.1**
RTAL	**Retalhuleu**	**1.12**	**318**	S		**Sn**	**16 29 26.6**	**-0.7**
RTAL	**Retalhuleu**	**1.12**	**318**	P		**Pn**	**16 29 12.0**	**-0.6**
LOAL	**Lomas de Alarc**	**1.14**	**74**	P		**Pn**	**16 29 14.3**	**+1.5**
LOAL	**Lomas de Alarc**	**1.14**	**74**	S		**Sn**	**16 29 31.0**	**+3.2**
SLOZ	**Alcaldia de Sa**	**1.15**	**73**	S		**Sn**	**16 29 29.1**	**+1.2**
SLOZ	**Alcaldia de Sa**	**1.15**	**73**	P		**Pn**	**16 29 12.8**	**-0.2**
SOKI	**Kika Raxquin**	**1.22**	**337**	*e*P		**Pn**	**16 29 14.6**	**+0.3**
SOKI				*e*S		**Sn**	**16 29 29.0**	**-1.1**
CEVE	**Cerro Verde**	**1.26**	**84**	*e*P		**Pn**	**16 29 16.2**	**+1.6**
CEVE				*e*S		**Sn**	**16 29 33.5**	**+2.6**
CEVE	**Cerro Verde**	**1.26**	**84**	P		**Pn**	**16 29 15.9**	**+1.3**
UNIC	**Universidad Ca**	**1.35**	**78**	P		**Pn**	**16 29 17.5**	**+1.7**
UNIC	**Universidad Ca**	**1.35**	**78**	S		**Sn**	**16 29 36.3**	**+4.2**
APG	**El Apazote**	**1.38**	**18**	P		**Pn**	**16 29 17.8**	**+1.6**
	comp=E,2μm,0.4s,baz=205,slow=15,SNR=7773							
APG				S		**Sn**	**16 29 36.3**	**+2.7**
	comp=E,4μm,0.7s,baz=223,slow=18,SNR=49							
JAYA	**Jayaque - finc**	**1.42**	**91**	S		**Sn**	**16 29 36.5**	**+1.9**
JAYA	**Jayaque - finc**	**1.42**	**91**	P		**Pn**	**16 29 17.7**	**+1.0**
CEDA	**San Andres**	**1.48**	**86**	*e*P		**Pn**	**16 29 18.8**	**+1.5**
CEDA				*e*S		**Sn**	**16 29 37.4**	**+1.6**
CEDA	**San Andres**	**1.48**	**86**	P		**Pn**	**16 29 19.0**	**+1.7**
CEDA	**San Andres**	**1.48**	**86**	S		**Sn**	**16 29 38.4**	**+2.7**
PMON	**Piamonte**	**1.55**	**89**	P		**Pn**	**16 29 20.0**	**+1.6**
PMON	**Piamonte**	**1.55**	**89**	S		**Sn**	**16 29 40.2**	**+2.5**
LALI	**Alcalda de L**	**1.56**	**97**	*e*P		**Pn**	**16 29 19.3**	**+0.9**
LALI				*e*S		**Sn**	**16 29 40.0**	**+2.3**
LALI	**Alcalda de L**	**1.56**	**97**	P		**Pn**	**16 29 19.8**	**+1.4**
LALI	**Alcalda de L**	**1.56**	**97**	S		**Sn**	**16 29 40.7**	**+3.0**
BOQS	**Boqueron**	**1.59**	**88**	*i* P		**Pn**	**16 29 20.6**	**+1.7**
QUEZ	**Alcaldia de Qu**	**1.60**	**85**	*e*P		**Pn**	**16 29 21.1**	**+2.1**
QUEZ				*e*S		**Sn**	**16 29 39.2**	**+0.5**
UEES	**Universidad Ev**	**1.63**	**89**	P		**Pn**	**16 29 21.2**	**+1.8**
UEES	**Universidad Ev**	**1.63**	**89**	S		**Sn**	**16 29 42.0**	**+2.6**
MTO3	**Montecristo**	**1.66**	**65**			**Pn**	**16 29 21.5**	**+1.5**
MTO3	**Montecristo**	**1.66**	**65**	P		**Pn**	**16 29 21.6**	**+1.6**
MTO3	**Montecristo**	**1.66**	**65**	S		**Sn**	**16 29 44.0**	**+3.5**
UTEC	**Universidad Te**	**1.66**	**89**	P		**Pn**	**16 29 22.1**	**+2.3**
UTEC	**Universidad Te**	**1.66**	**89**	S		**Sn**	**16 29 43.6**	**+3.4**
PANCS	**Alcalda de**	**1.69**	**93**	P		**Pn**	**16 29 21.9**	**+1.7**
PANCS	**Alcalda de**	**1.69**	**93**	S		**Sn**	**16 29 43.2**	**+2.4**
IGN	**Direccin Gen**	**1.69**	**89**	P		**Pn**	**16 29 22.4**	**+2.1**
IGN	**Direccin Gen**	**1.69**	**89**	S		**Sn**	**16 29 43.9**	**+3.3**
LOMA	**Loma Larga**	**1.69**	**91**	P		**Pn**	**16 29 22.2**	**+1.9**
LOMA	**Loma Larga**	**1.69**	**91**	S		**Sn**	**16 29 43.7**	**+2.6**
UDBS	**Universidad Do**	**1.71**	**89**	*e*P		**Pn**	**16 29 22.5**	**+2.1**
UDBS	**Universidad Do**	**1.71**	**89**	P		**Pn**	**16 29 22.6**	**+2.1**
UDBS	**Universidad Do**	**1.71**	**89**	S		**Sn**	**16 29 44.9**	**+3.6**
HUEH	**Huehuetenango**	**1.71**	**341**			**Pn**	**16 29 21.9**	**+1.1**
HUEH	**Huehuetenango**	**1.71**	**341**	*i* P		**Pn**	**16 29 22.3**	**+1.6**
HUEH	**Huehuetenango**	**1.71**	**341**	P		**Pn**	**16 29 22.3**	**+1.6**
HUEH	**Huehuetenango**	**1.71**	**341**	S		**Sn**	**16 29 45.0**	**+3.2**
LFU	**La Fuente**	**1.75**	**88**	*i* P		**Pn**	**16 29 22.9**	**+1.9**
ESQI	**Esquipulas**	**1.75**	**60**			**Pn**	**16 29 22.9**	**+1.8**
ESQI	**Esquipulas**	**1.75**	**60**	*e*P		**Pn**	**16 29 22.9**	**+1.8**
ESQI				*e*S		**Sn**	**16 29 48.7**	**+6.3**
ESQI	**Esquipulas**	**1.75**	**60**	P		**Pn**	**16 29 22.9**	**+1.8**
ESQI	**Esquipulas**	**1.75**	**60**	S		**Sn**	**16 29 47.1**	**+4.7**
PAVA	**Las Pavas**	**1.92**	**89**	P		**Pn**	**16 29 25.5**	**+2.1**
PAVA	**Las Pavas**	**1.92**	**89**	S		**Sn**	**16 29 49.5**	**+3.0**
LLGN	**La Laguna**	**1.97**	**76**	P		**Pn**	**16 29 25.6**	**+1.6**
LLGN	**La Laguna**	**1.97**	**76**	S		**Sn**	**16 29 52.6**	**+4.9**
COEG	**Centro de Oper**	**1.98**	**92**	*e*P		Pn	16 29 44.2	+20
COEG				*e*S		Sn	16 30 08.5	+21
UESV	**Universidad de**	**2.07**	**91**	P		**Pn**	**16 29 27.5**	**+2.3**
UESV	**Universidad de**	**2.07**	**91**	S		**Sn**	**16 29 54.1**	**+4.1**
TECO	**Alcaldia de Te**	**2.08**	**94**	P		**Pn**	**16 29 27.8**	**+2.3**
TECO	**Alcaldia de Te**	**2.08**	**94**	S		**Sn**	**16 29 54.1**	**+3.8**
SCLA	**Alcaldia de Sa**	**2.12**	**89**	P		**Pn**	**16 29 28.1**	**+2.1**
SCLA	**Alcaldia de Sa**	**2.12**	**89**	S		**Sn**	**16 29 56.2**	**+4.8**
PQSS	**Presa 15 de Se**	**2.29**	**91**	P		**Pn**	**16 29 30.4**	**+2.1**
PQSS	**Presa 15 de Se**	**2.29**	**91**	S		**Sn**	**16 29 59.9**	**+4.5**
PACA	**Pacayal**	**2.53**	**95**	P		**Pn**	**16 29 34.0**	**+2.4**
PACA	**Pacayal**	**2.53**	**95**	S		**Sn**	**16 30 06.0**	**+4.6**
BLLM	**Bellamira**	**2.61**	**95**	*e*P		**Pn**	**16 29 35.1**	**+2.3**
CCIG	**Comitan**	**2.83**	**335**			**Pn**	**16 29 37.8**	**+1.9**
CCIG	**Comitan**	**2.83**	**335**	P		**Pn**	**16 29 38.0**	**+2.1**
CCIG	**Comitan**	**2.83**	**335**	S		**Sn**	**16 30 12.9**	**+3.9**
LCND	**La Casda**	**2.96**	**97**	P		**Pn**	**16 29 39.7**	**+2.2**
CNCH	**Conchagua**	**3.02**	**97**	P		**Pn**	**16 29 40.5**	**+2.1**
CNCH	**Conchagua**	**3.02**	**97**	S		**Sn**	**16 30 17.1**	**+3.6**
IZABA	**Izabal, Puerto**	**3.03**	**48**	P		**Pn**	**16 29 40.5**	**+2.2**
IZABA	**Izabal, Puerto**	**3.03**	**48**	S		Sn	16 30 31.2	+18
PETF	**Flores**	**3.36**	**17**			**Pn**	**16 29 45.0**	**+2.1**
PETF	**Flores**	**3.36**	**17**	P		**Pn**	**16 29 45.1**	**+2.1**
POTN	**Potosi Cosigui**	**3.38**	**101**	P		**Pn**	**16 29 45.2**	**+1.9**
POTN				S		**Sn**	**16 30 23.5**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.55**	**84**			**Pn**	**16 29 47.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.55**	**84**	P		**Pn**	**16 29 47.4**	**+1.8**
TGUH	**Tegucigalpa,Un**	**3.55**	**84**	P		**Pn**	**16 29 47.6**	**+1.9**
CRIN	**San Cristobal**	**3.89**	**104**			**Pn**	**16 29 52.1**	**+1.9**
CRIN	**San Cristobal**	**3.89**	**104**	P		**Pn**	**16 29 52.1**	**+1.9**
CRIN	**San Cristobal**	**3.89**	**104**	S		**Sn**	**16 30 37.8**	**+3.1**
CRIN	**San Cristobal**	**3.89**	**104**	*e*P		**Pn**	**16 29 51.4**	**+1.2**
CRIN	**San Cristobal**	**3.89**	**104**	P		**Pn**	**16 29 52.2**	**+2.0**
CRIN				S		**Sn**	**16 30 35.5**	**+0.8**
YUSH	**Yuscaran**	**3.96**	**86**	P		**Pn**	**16 29 53.1**	**+1.8**
PKGN	**Cerro Pekin**	**3.96**	**104**	P		**Pn**	**16 29 52.7**	**+1.5**
PKGN				S		**Sn**	**16 30 37.5**	**+1.1**
HERN	**Volcan Telica**	**4.12**	**105**			**Pn**	**16 29 53.2**	**-0.2**
POLN	**Al Sur del Vol**	**4.12**	**104**	P		**Pn**	**16 29 54.4**	**+1.0**
POLN				S		**Sn**	**16 30 38.6**	**-1.8**
CNGA	**Al SSO del Vol**	**4.27**	**106**	P		**Pn**	**16 29 56.7**	**+1.2**
CNGN	**Cerro Negro**	**4.27**	**106**			**Pn**	**16 29 56.6**	**+1.2**
CNGN	**Cerro Negro**	**4.27**	**106**	P		**Pn**	**16 29 56.8**	**+1.3**
CNGN	**Cerro Negro**	**4.27**	**106**	S		**Sn**	**16 30 44.6**	**+0.5**
CNGN	**Cerro Negro**	**4.27**	**106**	*e*P		**Pn**	**16 29 56.3**	**+0.8**
CNGN	**Cerro Negro**	**4.27**	**106**	P		**Pn**	**16 29 56.9**	**+1.4**
OCON	**Estacion meteo**	**4.31**	**90**	P		**Pn**	**16 29 57.9**	**+1.9**
MOM3	**MOM3**	**4.44**	**105**	P		**Pn**	**16 29 59.0**	**+1.3**
MOM3				S		**Sn**	**16 30 52.9**	**+4.8**
COPN	**Copaltepe**	**4.47**	**109**	P		**Pn**	**16 29 59.2**	**+1.0**
COPN	**Copaltepe**	**4.47**	**109**	*e*P		**Pn**	**16 29 58.5**	**+0.3**
MOM2	**El Cardon**	**4.49**	**106**	P		**Pn**	**16 29 59.6**	**+1.2**
MOM2				S		**Sn**	**16 30 48.5**	**-0.9**
RCVN	**Varillal2**	**4.59**	**91**	P		**Pn**	**16 30 02.0**	**+2.1**
RCON	**San Juan de Ri**	**4.63**	**92**	P		**Pn**	**16 30 02.5**	**+2.1**
SAPS	**Ciudad Sandino**	**4.65**	**108**	P		**Pn**	**16 30 02.8**	**+2.3**
SAPS	**Ciudad Sandino**	**4.65**	**108**	S		**Sn**	**16 30 52.0**	**-1.2**
APQ3	**Volcan Apoyequ**	**4.65**	**107**	S		**Sn**	**16 30 49.4**	**-3.8**
APYN	**Apoyeque**	**4.68**	**108**	P		**Pn**	**16 30 04.3**	**+3.3**
RCPN	**Sur Rio San Ju**	**4.69**	**91**	P		**Pn**	**16 30 03.4**	**+2.2**
APQ2	**Apoyeque**	**4.71**	**108**	P		**Pn**	**16 30 03.7**	**+2.3**
APQ2	**Apoyeque**	**4.71**	**108**	P		**Pn**	**16 30 03.5**	**+2.1**
APQ2				S		**Sn**	**16 30 54.2**	**-0.6**
TISN	**Laguna Tiscapa**	**4.78**	**108**	P		**Pn**	**16 30 04.6**	**+2.2**
UNAN	**Cigeo UNAN**	**4.79**	**109**	P		**Pn**	**16 30 04.5**	**+2.0**
UNAN				S		**Sn**	**16 30 56.0**	**-0.8**
CRUN	**El Crucero**	**4.81**	**110**	P		**Pn**	**16 30 04.7**	**+1.9**
WILN	**Americas 2**	**4.85**	**108**	P		**Pn**	**16 30 05.1**	**+1.8**
WILN				S		**Sn**	**16 30 57.5**	**-0.7**
MAS3	**Al N del Volca**	**4.91**	**109**	P		**Pn**	**16 30 06.0**	**+1.9**
MAS3				S		**Sn**	**16 30 55.6**	**-4.1**
MATN	**Matagalpa**	**4.91**	**98**	P		**Pn**	**16 30 05.0**	**+0.7**
MATN	**Matagalpa**	**4.91**	**98**	S		**Sn**	**16 31 01.9**	**+2.0**
MASN	**Masaya**	**4.94**	**110**	P		**Pn**	**16 30 07.0**	**+2.4**
MASN				S		**Sn**	**16 30 58.9**	**-1.7**
CMIG	**Matias Romero**	**5.11**	**312**	P		**Pn**	**16 30 07.2**	**+0.3**
	comp=E,221nm,0.3s,baz=127,slow=9.6,SNR=132							
CMIG				S		**Sn**	**16 31 03.4**	**-1.1**
	comp=E,907nm,0.6s,baz=133,slow=16,SNR=5.4							
CMIG				LR		LR	16 31 50.7	
	comp=E,4μm,20.7s,baz=144,slow=35							
NADN	**Granada**	**5.14**	**112**	P		**Pn**	**16 30 09.5**	**+2.2**
SCIG	**Sabancuy**	**5.25**	**357**	P		**Pn**	**16 30 09.3**	**+0.5**
JAPN	**Al SSO del Vol**	**5.54**	**112**	P		**Pn**	**16 30 15.8**	**+2.9**
JAPN	**Al SSO del Vol**	**5.54**	**112**	*e*P		**Pn**	**16 30 16.1**	**+3.3**
MORN	**Al O del Volca**	**5.56**	**112**	P		**Pn**	**16 30 15.2**	**+2.1**
CONN	**Concepcion**	**5.58**	**112**	P		**Pn**	**16 30 14.8**	**+1.5**
CONN				S		**Sn**	**16 31 20.4**	**+4.3**
OMEN	**Al SSO del Vol**	**5.60**	**112**	P		**Pn**	**16 30 15.6**	**+2.0**
OMEN				S		**Sn**	**16 31 17.5**	**+1.0**
CARN	**Rivas**	**5.82**	**115**	P		**Pn**	**16 30 18.8**	**+2.1**
CARN				S		**Sn**	**16 31 24.8**	**+2.7**
CARN	**Rivas**	**5.82**	**115**	*e*P		**Pn**	**16 30 18.2**	**+1.5**
SIUN	**Universidad Ur**	**5.97**	**89**			**Pn**	**16 30 20.6**	**+2.0**
SIUN	**Universidad Ur**	**5.97**	**89**	P		**Pn**	**16 30 20.6**	**+2.0**
SIUN				S		**Sn**	**16 31 30.3**	**+4.7**
ELI1	**Hacienda Flor**	**6.05**	**119**	*e*P		**Pn**	**16 30 23.7**	**+3.9**
ALIBA	**Liberia Airpor**	**6.08**	**120**	*e*P		**Pn**	**16 30 23.7**	**+3.5**
BUAI	**Buenos Aires**	**6.13**	**117**	*e*P		**Pn**	**16 30 23.9**	**+3.0**
VRLE	**La Escondida,**	**6.14**	**117**	*e*P		**Pn**	**16 30 23.3**	**+2.1**
DELF	**Filadelfia**	**6.15**	**121**	*e*P		**Pn**	**16 30 24.9**	**+3.8**
JUD3	**Juan Diaz 3**	**6.32**	**123**			**Pn**	**16 30 26.3**	**+2.8**
HORNC	**Hornillas**	**6.34**	**117**	*e*P		**Pn**	**16 30 25.5**	**+1.7**
ELVJ	**El Viejo (Barb**	**6.34**	**120**	*e*P		Pn	16 30 31.4	+7.6
VMAR	**Armenia, Volca**	**6.35**	**116**	*e*P		**Pn**	**16 30 26.0**	**+2.1**
CUI	**Cuipilapa**	**6.38**	**118**	*e*P		**Pn**	**16 30 27.2**	**+2.9**
CMARA	**Lajas Hojancha**	**6.49**	**124**	P		**Pn**	**16 30 29.0**	**+3.0**
INDI	**Punta indio, G**	**6.52**	**125**	*e*P		**Pn**	**16 30 28.6**	**+2.4**
INVE	**Universidad In**	**6.55**	**119**	*e*P		**Pn**	**16 30 29.5**	**+2.8**
ESPN	**Las Esperanzas**	**6.62**	**102**			**Pn**	**16 30 29.4**	**+1.9**
ESPN	**Las Esperanzas**	**6.62**	**102**	P		Pn	16 30 33.8	+6.3
	comp=E,1μm,1.0s							
ESPN				S		Sn	16 31 51.4	+10
	comp=E,1μm,1.0s							
CHIK	**Chiripa**	**6.70**	**118**	*e*P		Pn	16 30 34.3	+5.5
JTS	**Las Juntas de**	**6.74**	**119**	P		**Pn**	**16 30 32.0**	**+2.8**
	comp=E,140nm,0.3s,baz=306,slow=13,SNR=74							
JTS				S		**Sn**	**16 31 42.5**	**-2.2**
	comp=E,153nm,0.4s,baz=309,slow=14,SNR=0.9							
JTS				Lg		Lg	16 32 17.6	
	comp=E,63nm,0.3s,baz=348,slow=20,SNR=11							
JTS	**Las Juntas de**	**6.74**	**119**			**Pn**	**16 30 31.9**	**+2.6**
JTS	**Las Juntas de**	**6.74**	**119**	*i* P		**Pn**	**16 30 31.9**	**+2.6**
JTS	**Las Juntas de**	**6.74**	**119**	*e*P		Pn	16 30 34.7	+5.4
JTS				*i* S		Sn	16 32 06.1	+21
JTS	**Las Juntas de**	**6.74**	**119**	P		**Pn**	**16 30 31.8**	**+2.6**
JTS				S		**Sn**	**16 31 47.9**	**+3.2**
JTS	**Las Juntas de**	**6.74**	**119**	*e*P		**Pn**	**16 30 33.2**	**+4.0**
JTS	**Las Juntas de**	**6.74**	**119**	P		**Pn**	**16 30 32.3**	**+3.1**
	comp=E,6μmcomp=E,8μmcomp=E,1μm,1.0s							
ARE1	**Arenal 1**	**6.86**	**117**	*e*P		**Pn**	**16 30 33.5**	**+2.7**
CASO	**Castillo**	**6.86**	**118**	*e*P		**Pn**	**16 30 33.4**	**+2.5**
CEDE	**Laguna Cedeo**	**6.86**	**117**	*e*P		**Pn**	**16 30 34.6**	**+3.8**
FORC	**Fortuna**	**6.89**	**117**	*e*P		**Pn**	**16 30 34.8**	**+3.4**
TEIG	**Tepich**	**6.97**	**21**	P		**Pn**	**16 30 33.6**	**+1.3**
	comp=E,0.1nm,0.7s,baz=143,slow=20,SNR=333							
TEIG				S		**Sn**	**16 31 49.7**	**-0.5**
	baz=128,slow=20,SNR=7.7							
TEIG				Lg		Lg	16 32 33.0	
	baz=130,slow=24							
TEIG	**Tepich**	**6.97**	**21**	P		**Pn**	**16 30 33.6**	**+1.3**
TEIG	**Tepich**	**6.97**	**21**	P		**Pn**	**16 30 33.5**	**+1.2**
	comp=E,26μmcomp=E,138μmcomp=E,13μm,0.8s							
SOCE	**Pocosol**	**6.98**	**117**	Pn		**Pn**	**16 30 34.8**	**+2.3**
SOCE	**Pocosol**	**6.98**	**117**	P		**Pn**	**16 30 34.8**	**+2.3**
SOCE	**Pocosol**	**6.98**	**117**	S		**Sn**	**16 31 55.8**	**+5.2**
CBL1	**Cabuya**	**7.01**	**125**	*e*P		**Pn**	**16 30 36.0**	**+3.1**
COVE	**Coope Vega, Sa**	**7.02**	**114**	S		**Sn**	**16 31 57.8**	**+6.4**
ARZA	**Esparza**	**7.13**	**120**	*e*P		**Pn**	**16 30 38.7**	**+4.1**
MYIG	**Merida**	**7.31**	**9**	P		**Pn**	**16 30 38.0**	**+1.0**
BILN	**Bilwi Airport**	**7.33**	**86**			**Pn**	**16 30 38.5**	**+1.3**
BILN	**Bilwi Airport**	**7.33**	**86**	P		**Pn**	**16 30 39.0**	**+1.7**
BILN	**Bilwi Airport**	**7.33**	**86**	*e*P		**Pn**	**16 30 38.7**	**+1.9**
ARTO	**Rio Cuarto**	**7.35**	**116**	*e*P		Pn	16 30 42.9	+5.3
ATEO	**Atenas**	**7.38**	**119**	*e*P		**Pn**	**16 30 39.1**	**+1.0**
BELE	**Belen**	**7.55**	**119**	*e*P		**Pn**	**16 30 43.3**	**+2.9**
HEME	**Heredia, Merce**	**7.58**	**118**	*e*P		Pn	16 30 45.7	+4.9
HDC	**Heredia**	**7.60**	**118**	*e*P		**Pn**	**16 30 44.2**	**+3.1**
HDC	**Heredia**	**7.60**	**118**	*e*P		**Pn**	**16 30 45.1**	**+4.0**
ECI	**Escuela Centro**	**7.68**	**118**	*e*P		**Pn**	**16 30 45.7**	**+3.5**
LCR2	**La Lucha 2**	**7.82**	**119**	S		**Sn**	**16 32 12.5**	**+1.1**
CVTG	**V. Turrialba,**	**7.82**	**116**	*e*P		**Pn**	**16 30 48.2**	**+4.1**
QUEP	**Quepos**	**7.85**	**122**	S		**Sn**	**16 32 08.6**	**-3.3**
CVTQ	**Turrialba Volc**	**7.89**	**117**	*e*P		**Pn**	**16 30 48.7**	**+3.4**
CVTV	**Tajo**	**7.91**	**117**	*e*P		**Pn**	**16 30 48.2**	**+2.6**
ABRB	**Las Abras (San**	**7.94**	**117**	*e*P		**Pn**	**16 30 49.7**	**+3.8**
LCOCO	**El Coco**	**8.04**	**116**	*e*P		**Pn**	**16 30 49.6**	**+2.5**
BUS1	**Rivas**	**8.13**	**120**	*e*P		**Pn**	**16 30 52.4**	**+3.7**
TLIG	**Tlapa**	**8.32**	**299**			**Pn**	**16 30 51.6**	**+0.7**
TLIG	**Tlapa**	**8.32**	**299**	P		**Pn**	**16 30 53.1**	**+2.2**
TLIG	**Tlapa**	**8.32**	**299**	S		**Sn**	**16 31 49.8**	**+5.9**
SAJE	**San Jernim**	**8.44**	**120**	*e*P		**Pn**	**16 30 56.8**	**+4.1**
OCHAL	**Ojochal**	**8.46**	**122**	P		**Pn**	**16 30 56.6**	**+3.8**
EDPE	**Pejibaye, P**	**8.49**	**121**	*e*P		**Pn**	**16 30 57.4**	**+4.1**
DRK0	**Durika**	**8.71**	**120**	*i* P		**Pn**	**16 31 00.2**	**+3.9**
DRK0				*e*S		**Sn**	**16 32 24.7**	**-8.4**
DRK0	**Durika**	**8.71**	**120**	P		**Pn**	**16 30 59.7**	**+3.3**
DRK0	**Durika**	**8.71**	**120**	*e*P		**Pn**	**16 31 00.2**	**+3.9**
FIMO	**Fila Mora**	**8.76**	**121**	*e*P		**Pn**	**16 31 00.7**	**+3.7**
CEUA	**Cerro Uatsi, L**	**8.79**	**117**	*e*P		**Pn**	**16 31 01.3**	**+3.9**
EDP2	**Potrero Grande**	**8.89**	**121**	*e*P		Pn	16 31 03.6	+4.9
JIME	**Puerto Jimenez**	**9.04**	**124**	*e*P		Pn	16 31 06.2	+5.5
SAIC	**Isla e San And**	**9.04**	**96**	P		**Pn**	**16 31 04.6**	**+4.0**
	comp=E,6μmcomp=E,427nm,1.0s							
RGM0	**Gandoca**	**9.10**	**116**	*e*P		**Pn**	**16 31 06.1**	**+4.6**
EDAD	**Golfito**	**9.10**	**123**	*e*P		Pn	16 31 06.8	+5.2
PIRO	**Carate, Puerto**	**9.10**	**124**			**Pn**	**16 31 04.7**	**+3.1**
PIRO	**Carate, Puerto**	**9.10**	**124**	*e*P		**Pn**	**16 31 06.3**	**+4.7**
PIRO				*e*S		Sn	16 32 29.8	-13
PIRO	**Carate, Puerto**	**9.10**	**124**	P		**Pn**	**16 31 05.8**	**+4.2**
PIRO	**Carate, Puerto**	**9.10**	**124**	*e*P		Pn	16 31 07.4	+5.8
ALCO	**Alturas Coton,**	**9.22**	**120**	*e*P		**Pn**	**16 31 06.5**	**+3.1**
PRVC	**Isla de Provid**	**9.29**	**91**	Pn		**Pn**	**16 31 06.2**	**+2.1**
PRVC	**Isla de Provid**	**9.29**	**91**	*i* P		**Pn**	**16 31 06.5**	**+2.3**
PRVC				*e*S		Sn	16 33 26.7	+40
PRVC	**Isla de Provid**	**9.29**	**91**	P		**Pn**	**16 31 04.8**	**+0.6**
PRVC	**Isla de Provid**	**9.29**	**91**	P		**Pn**	**16 31 06.5**	**+2.3**
	comp=E,5μmcomp=E,674nm,0.9s							
BRU2	**Volcan**	**9.42**	**120**			**Pn**	**16 31 08.8**	**+2.8**
BRU2	**Volcan**	**9.42**	**120**	*e*P		**Pn**	**16 31 10.3**	**+4.3**
BRU2				*i* S		**Sn**	**16 32 45.3**	**-5.2**
BRU2	**Volcan**	**9.42**	**120**	P		**Pn**	**16 31 08.9**	**+3.0**
BRU2	**Volcan**	**9.42**	**120**	S		**Sn**	**16 32 53.6**	**+3.1**
BRU2	**Volcan**	**9.42**	**120**	*e*P		**Pn**	**16 31 08.7**	**+2.6**
BC3P	**Paso Ancho**	**9.47**	**120**	*e*P		**Pn**	**16 31 11.2**	**+4.4**
LESP3	**La Esperanza,**	**9.54**	**123**	*e*P		**Pn**	**16 31 11.2**	**+3.6**
JEFFS	**S de V. Baru**	**9.62**	**120**	*e*P		**Pn**	**16 31 12.2**	**+3.5**
BQTLY	**Boquete Panama**	**9.63**	**120**	*e*P		**Pn**	**16 31 12.5**	**+3.6**
LNBQ3	**Los Naranjos,**	**9.63**	**119**	*e*P		**Pn**	**16 31 12.9**	**+4.0**
PTAR3	**Potrerillos Ar**	**9.63**	**120**	*e*P		**Pn**	**16 31 13.3**	**+4.3**
BQSF3	**Alto Boquete,**	**9.66**	**120**	*e*P		**Pn**	**16 31 11.8**	**+2.4**
BAGA3	**Bagala, Chiriq**	**9.73**	**121**	*e*P		Pn	16 31 15.1	+4.9
PSOM3	**Paja de Sombre**	**9.79**	**120**	*e*P		**Pn**	**16 31 15.0**	**+4.1**
DVD	**David**	**9.81**	**121**	*e*P		**Pn**	**16 31 15.1**	**+3.9**
LOCO3	**Loma Colorada,**	**9.85**	**121**	*e*P		**Pn**	**16 31 15.3**	**+3.5**
LOMA3	**Las Lomas, Chi**	**9.86**	**121**	*e*P		**Pn**	**16 31 15.6**	**+3.6**
SERC	**Banco Serrana,**	**10.25**	**85**	P		**Pn**	**16 31 19.4**

comp=Z,2µmcomp=Z,204nm,1.1s
VILC Villavicencio, 19.48 118 P **Pn** **16 33 17.9 +1.2**
comp=Z,1µmcomp=Z,167nm,0.9s
TREL Terrell 19.53 347 IAmb IAmb 16 33 32.0
comp=Z,331nm,1.2s
TXAR Lajitas Array 19.55 325 P **Pn** **16 33 17.8 +0.4**
comp=Z,22nm,0.6s,baz=143,slow=9.8,SNR=200
TXAR S **Sn** **16 36 56.6 +0.2**
comp=Z,1.6nm,0.9s,baz=127,slow=14,SNR=1.4
TXAR PcP **PcP** **16 37 35.0 +1.1**
comp=Z,1.6nm,0.6s,baz=145,slow=2.4,SNR=4.2
TXAR ScP **ScP** **16 41 07.3 +2.5**
comp=Z,1.8nm,0.7s,baz=143,slow=3.8,SNR=5.6
TXAR P3KPbc 17 07 29.9
comp=Z,0.1nm,0.3s,baz=323,slow=5.5,SNR=2.1
TXAR Lajitas Array 19.55 325 **Pn** **16 33 17.2 -0.2**
SDDR Presa de Saban 19.55 72 P **Pn** **16 33 17.4 -0.1**
SDDR Presa de Saban 19.55 72 P Pn 16 33 26.3 +8.8
comp=Z,3µmcomp=Z,99nm,1.3s
Z41A Richland Creek 19.55 355 IAmb IAmb 16 33 33.1
comp=Z,506nm,1.4s
LRAL Lakeview Retre 19.58 10 P **Pn** **16 33 17.7 0.0**
LRAL IAmb IAmb 16 33 22.4
comp=Z,265nm,1.3s
Z38A Mt. Pleasant 19.83 350 IAmb IAmb 16 33 36.9
comp=Z,139nm,0.9s
WLAR White Oak Lake 20.01 355 IAmb IAmb 16 33 38.0
comp=Z,355nm,1.2s
FW06 Azle 20.13 344 IAmb IAmb 16 33 38.8
comp=Z,417nm,1.6s
154A Montrose 20.14 19 P Pn 16 33 24.1 -0.2
154A IAMs_20 IAMs_20 16 41 37.2
comp=Z,5µm,20.0s
SC01 Santiago de lo 20.16 71 P **P** **16 33 23.3 +1.0**
PLPT Palo Pinto 20.20 342 P **P** **16 33 23.9 +1.3**
PLPT IAmb IAmb 16 33 40.2
comp=Z,382nm,1.0s
257A Skidaway Islan 20.33 25 IAMs_20 IAMs_20 16 41 36.2
comp=Z,6µm,20.0s
ALPN Alpine 20.34 327 IAmb IAmb 16 33 28.9
comp=Z,206nm,1.2s
GRTK Grand Turk 20.38 65 P Pn 16 33 31.0 +3.8
comp=Z,11µmcomp=Z,634nm,1.7s
Z35A Perchaven, San 20.39 345 IAmb IAmb 16 33 41.3
comp=Z,324nm,1.2s
MACC Macarena, Meta 20.40 123 P Pn 16 33 27.4 -0.2
comp=Z,3µmcomp=Z,3µmcomp=Z,324nm,0.8s
SGCY Sterling City 20.41 334 P **P** **16 33 24.8 -0.1**
SDV Santo Domingo 20.45 101 P **P** **16 33 24.7 -0.9**
comp=Z,56nm,0.7s,baz=305,slow=7.1,SNR=19
SDV S **S** **16 37 08.7 -2.7**
comp=Z,2.6nm,0.5s,baz=202,slow=19,SNR=1.1
SDV LR LR 16 41 56.8
comp=Z,1µm,21.6s,baz=292,slow=38
comp=Z,56nm,0.7s
SDV Santo Domingo 20.45 101 P **P** **16 33 24.4 -1.2**
SDV Santo Domingo 20.45 101 eP **P** **16 33 24.3 -1.3**
SDV Santo Domingo 20.45 101 P **P** **16 33 23.2 -2.4**
comp=Z,1µmcomp=Z,150nm,0.9s
ABTX Abilene, Hawle 20.46 339 P **P** **16 33 25.5 +0.1**
ABTX IAmb IAmb 16 33 42.5
comp=Z,348nm,1.1s
Y49A Blount Mountai 20.49 11 P Pn 16 33 27.6 -0.8
MNHN Monahans 20.67 330 IAmb IAmb 16 33 46.1
comp=Z,154nm,1.1s
GOGA Godfrey 20.77 18 IAMs_20 IAMs_20 16 42 06.8
comp=Z,6µm,21.0s
OXF Oxford 20.77 4 IAmb IAmb 16 33 37.0
comp=Z,324nm,1.1s
PTGC Puerto Gaitan, 20.79 115 P **P** **16 33 29.8 +0.7**
comp=Z,3µmcomp=Z,366nm,0.8s
PTLC Puerto Leguiza 20.86 129 P Pn 16 33 34.6 +1.6
comp=Z,3µmcomp=Z,3µmcomp=Z,305nm,1.1s
MIAR Mount Ida 20.90 354 IAmb IAmb 16 33 50.1
comp=Z,206nm,1.2s
X48A Hartselle 20.96 9 IAmb IAmb 16 33 49.3
comp=Z,418nm,1.2s
MCRA Macar, Loja 20.98 148 P **P** **16 33 32.9 +1.7**
comp=Z,4µmcomp=Z,2µmcomp=Z,71nm,1.0s
Y52A Lilburn 21.02 16 IAMs_20 IAMs_20 16 42 05.6
comp=Z,6µm,21.0s
UALR University of 21.03 357 IAmb IAmb 16 33 50.9
comp=Z,163nm,0.8s
LPIG La Paz 21.04 302 P **P** **16 33 32.7 +0.9**
comp=Z,45nm,0.3s,baz=98,slow=2.8,SNR=7.0
LPIG S **S** **16 37 23.8 +1.1**
comp=Z,24nm,0.3s,baz=141,slow=2.9,SNR=1.5
LPIG LR LR 16 40 51.5
comp=Z,1µm,19.6s,baz=107,slow=34
comp=Z,45nm,0.3s
WTFS Witchita Falls 21.13 342 IAmb IAmb 16 33 53.8
comp=Z,133nm,1.0s
GUVC San Jose del G 21.20 120 P **P** **16 33 35.8 +2.3**
comp=Z,28µmcomp=Z,232nm,0.7s
PECS Pecos 21.24 328 IAmb IAmb 16 33 37.3
comp=Z,157nm,1.3s
APMT Aspermont 21.27 338 IAmb IAmb 16 33 50.9
comp=Z,379nm,1.5s
SN07 Snyder 07 21.35 336 IAmb IAmb 16 33 51.5
comp=Z,368nm,1.9s
VHRN Van Horn 21.39 325 IAmb IAmb 16 33 38.6
comp=Z,276nm,1.2s
WHAR Wooly Hollow 21.54 357 IAmb IAmb 16 33 56.2
comp=Z,234nm,1.3s
POST Post 21.57 335 IAmb IAmb 16 33 54.6
comp=Z,142nm,0.9s
NHSC New Hope 21.66 25 P **P** **16 33 40.8 +2.5**
NHSC IAMs_20 IAMs_20 16 42 27.5
comp=Z,5µm,20.0s
X34A Smith Ranch, M 21.74 344 IAmb IAmb 16 34 03.7
comp=Z,94nm,0.8s
HODGE Hodges 21.90 20 IAmb IAmb 16 33 60.0
comp=Z,208nm,1.0s
W50A Signal Mountai 22.00 12 IAmb IAmb 16 34 01.8
comp=Z,259nm,1.1s
HTMS Hat Mesa 22.02 330 P **P** **16 33 42.7 +0.5**
FCAR Ozark Folk Cen 22.13 357 IAmb IAmb 16 34 01.6
comp=Z,216nm,1.2s
GNAR Gosnell 22.19 2 P **P** **16 33 45.3 +1.3**
GNAR IAmb IAmb 16 34 06.6
comp=Z,322nm,1.1s
W52A Murphy 22.22 15 IAmb IAmb 16 34 04.4
comp=Z,246nm,1.1s
W52A IAMs_20 IAMs_20 16 42 54.3
comp=Z,6µm,20.0s
V48A Smith Brothers 22.26 9 IAmb IAmb 16 34 03.9
comp=Z,454nm,1.5s
LCAR Lake Charles 22.28 359 IAmb IAmb 16 34 02.2
comp=Z,249nm,1.2s
MNTX Cornudas Mount 22.30 326 IAmb IAmb 16 33 48.6
comp=Z,123nm,0.9s
Y57A Sumter 22.38 23 IAMs_20 IAMs_20 16 42 50.4
comp=Z,6µm,21.0s
OKCSW OKLAHOMA CITY 22.41 346 P **P** **16 33 46.6 +0.3**
WVT Waverly 22.51 7 P **P** **16 33 47.0 -0.4**
WVT IAmb IAmb 16 33 56.8
comp=Z,157nm,0.9s
WVT Waverly 22.51 7 P **P** **16 33 47.0 -0.4**
WVT pmax pmax
comp=Z,157nm,1.0s
Y58A Scranton 22.57 25 P **P** **16 33 49.3 +1.3**
Y58A IAMs_20 IAMs_20 16 42 45.5
comp=Z,5µm,21.0s
HHAR Hobbs 22.66 354 IAmb IAmb 16 34 06.0
comp=Z,180nm,1.4s
CLTN Cedars of Leba 22.68 10 IAmb IAmb 16 34 07.0
comp=Z,165nm,1.2s
OK029 Liberty Lake 22.79 346 IAmb IAmb 16 34 05.0
comp=Z,85nm,0.8s
TKL Tuckaleechee C 22.80 15 LR LR 16 43 23.1
comp=Z,6µm,21.9s,baz=203,slow=38
OK052 Battle Ridge R 22.83 348 IAmb IAmb 16 34 17.8
comp=Z,162nm,1.1s
U38A Gravette 22.86 353 IAmb IAmb 16 34 16.5
comp=Z,310nm,1.4s
PARMO Parma 22.90 2 IAmb IAmb 16 34 14.7
comp=Z,173nm,0.8s
BAUV El Baul 22.91 99 P **P** **16 33 51.0 -0.8**
BAUV IAmb IAmb 16 34 18.8
comp=Z,85nm,0.8s
SMWD Samnorwood 22.92 340 IAmb IAmb 16 34 14.3
comp=Z,121nm,0.9s
QUOK Quay 22.98 348 IAmb IAmb 16 34 17.3
comp=Z,229nm,1.3s
EPT El Paso 22.98 324 IAmb IAmb 16 34 02.4
comp=Z,109nm,1.1s
PBMO Poplar Bluff 23.00 1 IAmb IAmb 16 34 10.8
comp=Z,100nm,0.8s

KMSC Kings Mountain 23.04 20 IAMs_20 IAMs_20 16 42 51.0
comp=Z,6µm,22.0s
V53A Saluda 23.07 17 IAMs_20 IAMs_20 16 43 18.7
comp=Z,5µm,21.0s
AMTX Amarillo 23.24 337 IAmb IAmb 16 34 22.5
comp=Z,82nm,0.9s
X58A Rowland 23.27 25 IAMs_20 IAMs_20 16 42 54.9
comp=Z,6µm,21.0s
OK048 Pawnee Station 23.27 348 IAmb IAmb 16 34 24.0
comp=Z,271nm,1.2s
Y60A Bolivia 23.28 28 IAMs_20 IAMs_20 16 43 35.2
comp=Z,4µm,20.0s
T45A Paducah 23.32 5 P **P** **16 33 55.3 -0.2**
T45A IAMs_20 IAMs_20 16 44 45.1
comp=Z,3µm,21.0s
T47A Sharon Grove 23.45 8 IAMs_20 IAMs_20 16 44 42.7
comp=Z,3µm,20.0s
W57A Gilead 23.53 23 IAMs_20 IAMs_20 16 43 35.0
comp=Z,6µm,20.0s
CGM3 Cape Girardeau 23.54 3 IAmb IAmb 16 34 07.5
comp=Z,152nm,1.1s
TZTN Tazewell 23.69 15 IAMs_20 IAMs_20 16 43 28.2
comp=Z,5µm,22.0s
V55A Taylorsville 23.73 20 IAMs_20 IAMs_20 16 43 23.2
comp=Z,6µm,22.0s
T50A Nancy 23.86 12 IAMs_20 IAMs_20 16 43 58.6
comp=Z,3µm,22.0s
NOKA Waynoka 23.95 344 IAmb IAmb 16 34 33.0
comp=Z,171nm,1.0s
S44A Carbondale 23.95 3 IAmb IAmb 16 34 24.4
comp=Z,254nm,1.1s
S44A IAMs_20 IAMs_20 16 44 43.9
comp=Z,3µm,22.0s
SIUC Southern Illin 23.97 3 IAmb IAmb 16 34 24.6
comp=Z,260nm,1.1s
HSIG 24.04 313 IAmb IAmb 16 34 20.3
comp=Z,347nm,1.8s
ATAH Atahualpa 24.14 148 LR LR 16 42 29.3
comp=Z,2µm,20.6s,baz=328,slow=34
U54A Nelsons Funny 24.15 18 IAMs_20 IAMs_20 16 43 39.3
comp=Z,6µm,22.0s
W59A Clinton 24.16 26 IAMs_20 IAMs_20 16 43 53.7
comp=Z,5µm,21.0s
SJG San Juan 24.21 76 LR LR 16 44 57.9
comp=Z,524nm,18.8s,baz=282,slow=40
CCM Cathedral Cave 24.27 359 P **P** **16 34 03.2 -1.0**
CCM Cathedral Cave 24.27 359 P **P** **16 34 03.2 -1.0**
CCM pmax pmax
CCM MLR MLR
comp=Z,777nm,1.4s
comp=Z,400nm,18.0s
V58A Windy Hill, Pi 24.43 24 IAMs_20 IAMs_20 16 44 01.9
comp=Z,5µm,20.0s
U56A King 24.46 21 IAMs_20 IAMs_20 16 44 05.5
comp=Z,5µm,20.0s
R40A Maddies Statio 24.53 357 IAmb IAmb 16 34 23.8
comp=Z,214nm,1.0s
S51A Beattyville 24.73 14 IAMs_20 IAMs_20 16 44 23.5
comp=Z,5µm,20.0s
WCI Wyandotte Cave 24.78 9 P **P** **16 34 08.2 -0.6**
WCI Wyandotte Cave 24.78 9 IAMs_20 IAMs_20 16 45 01.9
comp=Z,3µm,21.0s
WCI Wyandotte Cave 24.78 9 P **P** **16 34 08.2 -0.6**
WCI pmax pmax
comp=Z,271nm,0.9s
WCI MLR MLR
comp=Z,3µm,21.0s
RTBA Rita Blanca 25.01 337 IAmb IAmb 16 34 32.6
comp=Z,185nm,1.6s
R49A Shelbyville 25.03 11 IAmb IAmb 16 34 38.0
comp=Z,205nm,1.1s
R49A IAMs_20 IAMs_20 16 44 58.5
comp=Z,3µm,20.0s
OLIL Olney 25.07 5 IAmb IAmb 16 34 48.6
comp=Z,184nm,1.1s
Q44A Meyer Farm, Va 25.17 3 IAmb IAmb 16 34 29.7
comp=Z,205nm,1.2s
Q44A IAMs_20 IAMs_20 16 45 31.1
comp=Z,3µm,22.0s
R50A Paris 25.18 12 IAmb IAmb 16 34 30.0
comp=Z,292nm,1.5s
R50A IAMs_20 IAMs_20 16 44 39.5
comp=Z,4µm,22.0s
BLA Blacksburg 25.23 20 IAMs_20 IAMs_20 16 44 30.9
comp=Z,5µm,21.0s
ANMO Albuquerque 25.40 329 LR LR 16 46 31.6
comp=Z,1µm,19.8s,baz=240,slow=42
ANMO Albuquerque 25.40 329 P **P** **16 34 16.2 +1.5**
ANMO Albuquerque 25.40 329 *ce*P **P** **16 34 16.5 +1.7**
ANMO pmax pmax
comp=Z,16nm,1.3s
TASM ASL Pad, Albuq 25.40 329 IAmb IAmb 16 34 34.1
comp=Z,14nm,0.9s
T57A Hurt 25.44 22 IAmb IAmb 16 34 34.8
comp=Z,166nm,1.1s
T57A IAMs_20 IAMs_20 16 44 33.6
comp=Z,5µm,20.0s
S54A Dingess, Beckl 25.49 18 IAmb IAmb 16 34 32.9
comp=Z,277nm,1.3s
V61A Roper 25.50 28 P **P** **16 34 17.0 +1.5**
V61A IAMs_20 IAMs_20 16 44 43.2
comp=Z,4µm,20.0s
R32A Long Quarter, 25.59 346 IAmb IAmb 16 34 45.8
comp=Z,178nm,1.0s
BLO Bloomington 25.68 8 IAmb IAmb 16 34 49.5
comp=Z,318nm,1.5s
P40A Paris 25.76 358 IAmb IAmb 16 34 34.8
comp=Z,134nm,1.0s
P43A Skaggs, Pawnee 25.88 2 IAMs_20 IAMs_20 16 46 27.9
comp=Z,3µm,21.0s
TUC Tucson 25.96 319 IAMs_20 IAMs_20 16 45 48.1
comp=Z,3µm,20.0s
P46A Rosedale 26.03 7 IAmb IAmb 16 34 45.5
comp=Z,221nm,1.3s
P46A IAMs_20 IAMs_20 16 45 21.0
comp=Z,3µm,22.0s
Q51A Peebles 26.11 13 IAMs_20 IAMs_20 16 44 55.1
comp=Z,5µm,22.0s
P48A Milroy 26.12 10 IAMs_20 IAMs_20 16 45 41.4
comp=Z,3µm,21.0s
S57A Dark Hollow, R 26.23 22 IAmb IAmb 16 34 39.6
comp=Z,114nm,1.2s
S57A IAMs_20 IAMs_20 16 45 19.4
comp=Z,4µm,19.0s
Q52A Bidwell 26.31 15 P **P** **16 34 22.1 -0.6**
SFIN Lafayette 26.80 6 IAmb IAmb 16 35 05.6
comp=Z,120nm,1.1s
SFIN IAMs_20 IAMs_20 16 45 57.3
comp=Z,3µm,22.0s
R58B Mineral 26.81 23 IAmb IAmb 16 34 45.9
comp=Z,280nm,1.5s
R58B IAMs_20 IAMs_20 16 45 34.7
comp=Z,4µm,20.0s
N41A Harden Midland 26.91 0 IAMs_20 IAMs_20 16 47 14.3
comp=Z,3µm,20.0s
SABA Saba 26.91 78 IAMs_20 IAMs_20 16 44 33.1
comp=Z,3µm,22.0s
O48B Farmland 26.94 10 IAmb IAmb 16 34 54.7
comp=Z,215nm,1.2s
O48B IAMs_20 IAMs_20 16 46 39.2
comp=Z,3µm,21.0s
X18A Snowflake 26.97 324 P **P** **16 34 30.8 +1.9**
X18A IAmb IAmb 16 34 47.6
comp=Z,154nm,1.6s
O49A Covington 27.02 11 IAMs_20 IAMs_20 16 45 58.2
comp=Z,4µm,22.0s
214A Organ Pipe Nat 27.07 316 IAmb IAmb 16 34 48.0
comp=Z,233nm,1.6s
CBN Corbin Frederi 27.21 24 IAMs_20 IAMs_20 16 45 45.5
comp=Z,4µm,20.0s
W18A Petrified Fore 27.27 325 IAmb IAmb 16 34 51.1
comp=Z,292nm,1.7s
PIX Pinacate 27.28 314 IAmb IAmb 16 34 50.3
comp=Z,88nm,1.2s
Q56A Snyder Ridge, 27.29 20 IAmb IAmb 16 34 51.0
comp=Z,108nm,1.2s
Q56A IAMs_20 IAMs_20 16 45 44.5
comp=Z,4µm,20.0s
ACSO Alum Creek Sta 27.34 13 IAMs_20 IAMs_20 16 45 55.7
comp=Z,4µm,21.0s
SGC2 Sao Gabriel da 27.41 118 P **P** **16 34 31.3 -1.6**
comp=Z,2µmcomp=Z,1µmcomp=Z,34nm,0.8s
N47A Urbana 27.47 9 IAmb IAmb 16 34 58.5
comp=Z,196nm,1.3s
N47A IAMs_20 IAMs_20 16 47 06.1
comp=Z,3µm,21.0s
S61A Accomac 27.48 27 IAMs_20 IAMs_20 16 45 10.4
comp=Z,4µm,21.0s

M44A Midewin, Midew 27.71 5 IAMs_20 IAMs_20 16 46 46.4
comp=Z,2µm,20.0s
N49A Columbus Grove 27.76 11 IAmb IAmb 16 35 21.2
comp=Z,56nm,0.9s
N49A IAMs_20 IAMs_20 16 46 20.8
comp=Z,3µm,22.0s
X16A Lo Mia Camp, P 27.77 322 P **P** **16 34 37.1 +0.9**
O54A Avella 27.96 17 IAmb IAmb 16 35 17.3
comp=Z,129nm,0.7s
P57A Homestead Farm 28.10 22 IAmb IAmb 16 34 57.1
comp=Z,197nm,1.4s
P57A IAMs_20 IAMs_20 16 46 06.8
comp=Z,4µm,21.0s
R61A Willards 28.16 27 IAMs_20 IAMs_20 16 46 35.6
comp=Z,3µm,20.0s
113A Mohawk Valley, 28.20 316 IAmb IAmb 16 34 58.9
comp=Z,125nm,1.3s
L42A Oliver, Polo 28.23 2 IAMs_20 IAMs_20 16 48 01.2
comp=Z,3µm,20.0s
L40A Anamosa 28.27 360 IAmb IAmb 16 34 57.5
comp=Z,280nm,1.6s
L40A IAMs_20 IAMs_20 16 48 07.2
comp=Z,3µm,21.0s
N53A Lisbon 28.41 16 IAmb IAmb 16 34 59.7
comp=Z,135nm,1.0s
Y14A Wickenburg 28.43 319 IAmb IAmb 16 35 00.1
comp=Z,139nm,1.5s
M50A Fremont 28.45 12 IAmb IAmb 16 34 59.1
comp=Z,82nm,1.0s
WUAZ Wupatki 28.49 323 IAmb IAmb 16 35 01.0
comp=Z,103nm,1.2s
L46A Eue Claire 28.50 7 IAMs_20 IAMs_20 16 47 19.4
comp=Z,3µm,21.0s
VTX Valle De La Tr 28.84 312 P **P** **16 34 47.3 +1.8**
BIM Bigot 28.95 85 IAMs_20 IAMs_20 16 46 15.9
comp=Z,2µm,20.0s
K43A Burlington 29.00 4 IAMs_20 IAMs_20 16 47 05.4
comp=Z,2µm,21.0s
ISCO Idaho Springs 29.05 336 P **P** **16 34 49.0 +1.5**
ISCO Idaho Springs 29.05 336 P **P** **16 34 49.0 +1.5**
ISCO pmax pmax
comp=Z,25nm,1.4s
ISCO MLR MLR
comp=Z,900nm,22.0s
NNA Nana 29.08 151 LR LR 16 45 36.2
comp=Z,527nm,21.6s,baz=336,slow=35
NNA Nana 29.08 151 P **P** **16 34 49.4 +1.6**
NNA Nana 29.08 151 *ce*P **P** **16 34 49.8 +2.1**
NNA pmax pmax
comp=Z,160nm,2.5s
NNA Nana 29.08 151 P **P** **16 34 48.0 +0.3**
GLA Glamis 29.09 316 IAmb IAmb 16 35 06.4
comp=Z,234nm,1.4s
PV02 Paradox Valley 29.10 330 IAmb IAmb 16 35 07.4
comp=Z,173nm,1.5s
PV13 Radium Mtn., P 29.10 330 IAmb IAmb 16 35 07.2
comp=Z,95nm,1.4s
JFWS Jewell Farm 29.12 1 IAMs_20 IAMs_20 16 48 40.8
comp=Z,3µm,20.0s
ILAM Ilet Lapin Mar 29.13 84 IAMs_20 IAMs_20 16 46 29.5
comp=Z,2µm,20.0s
MPOM Morne Pois Mar 29.15 85 IAMs_20 IAMs_20 16 46 22.3
comp=Z,2µm,19.0s
SSPA Standing Stone 29.16 21 P **P** **16 34 47.3 -0.9**
SSPA IAmb IAmb 16 35 05.9
comp=Z,125nm,1.3s
SSPA Standing Stone 29.16 21 IAMs_20 IAMs_20 16 46 52.1
comp=Z,4µm,20.0s
PV05 Paradox Valley 29.17 330 IAmb IAmb 16 35 07.5
comp=Z,82nm,1.4s
AAM Ann Arbor 29.19 11 IAMs_20 IAMs_20 16 47 26.7
comp=Z,3µm,21.0s
PV18 Skein Mesa, Pa 29.21 330 IAmb IAmb 16 34 52.3
comp=Z,84nm,1.2s
PV12 Saucer Basin, 29.21 330 IAmb IAmb 16 34 52.5
comp=Z,57nm,0.9s
PV16 Nyswonger Mesa 29.26 330 IAmb IAmb 16 35 08.6
comp=Z,91nm,1.5s
ESJX Sierra Juarez 29.28 313 IAmb IAmb 16 35 08.6
comp=Z,100nm,1.5s
PV19 Morning Glory 29.30 330 IAmb IAmb 16 35 08.7
comp=Z,132nm,1.5s
BLYC Blythe 29.30 317 IAmb IAmb 16 35 08.2
comp=Z,136nm,1.7s
PV20 West Nyswonger 29.31 330 IAmb IAmb 16 35 08.8
comp=Z,110nm,1.4s
PV04 Paradox Valley 29.32 330 IAmb IAmb 16 35 09.3
comp=Z,143nm,1.7s
PV10 Paradox Valley 29.38 330 P **P** **16 34 51.4 +0.9**
PV10 IAmb IAmb 16 35 08.8
comp=Z,99nm,1.3s
PAOC Oil Creek Stat 29.40 17 IAmb IAmb 16 35 47.0
comp=Z,116nm,1.4s
P61A Hammonton 29.52 26 IAMs_20 IAMs_20 16 47 26.4
comp=Z,4µm,20.0s
YUH Yuha Desert 29.61 314 IAmb IAmb 16 35 11.4
comp=Z,183nm,1.6s
U15A North Rim 29.66 324 P **P** **16 34 54.5 +1.6**
U15A IAmb IAmb 16 35 11.8
comp=Z,123nm,1.5s
W13A Hualapai Mount 29.73 320 IAmb IAmb 16 35 12.5
comp=Z,129nm,1.5s
HMU Henry Mountain 29.90 327 IAmb IAmb 16 35 13.5
comp=Z,167nm,1.6s
J47A Sumner 29.91 9 IAMs_20 IAMs_20 16 47 59.6
comp=Z,2µm,20.0s
IRM Iron Mountain 29.96 317 IAmb IAmb 16 35 14.2
comp=Z,122nm,1.4s
CBX Cerro Bola 29.96 313 IAmb IAmb 16 35 14.7
comp=Z,169nm,1.5s
NEE2 Needles Airpor 29.98 319 IAMs_20 IAMs_20 16 48 04.8
comp=Z,3µm,22.0s
M57A Sunshine Farm, 30.05 21 IAmb IAmb 16 35 14.5
comp=Z,106nm,1.1s
I40A Norwalk 30.10 0 IAMs_20 IAMs_20 16 49 10.5
comp=Z,3µm,20.0s
I42A Draeger Farm, 30.14 3 IAMs_20 IAMs_20 16 48 57.8
comp=Z,2µm,21.0s
BAR Barrett 30.16 313 P **P** **16 34 58.1 +1.0**
BORC Borrego Spring 30.30 314 IAmb IAmb 16 35 17.3
comp=Z,109nm,1.5s
BBSR BB Station 30.32 48 P **P** **16 34 58.3 -0.3**
BBSR sP **pP** **16 35 14.8 +1.1**
ECSD EROS Data Cent 30.34 352 **P** **16 34 58.4 -0.2**
ECSD IAmb IAmb 16 35 23.7
comp=Z,140nm,1.8s
KNB Kanab 30.37 324 IAmb IAmb 16 35 18.7
comp=Z,62nm,0.9s
DANC Danby, Needles 30.40 318 IAMs_20 IAMs_20 16 47 40.8
comp=Z,2µm,22.0s
BELC Belle Mtn. Jos 30.43 316 IAmb IAmb 16 35 18.5
comp=Z,134nm,1.4s
PMD Palm Desert 30.49 315 IAmb IAmb 16 35 18.9
comp=Z,96nm,1.4s
I45A Fountain 30.50 7 IAMs_20 IAMs_20 16 48 19.4
comp=Z,3µm,21.0s
DPP Dos Picos Cty 30.52 313 P **P** **16 35 01.8 +1.4**
PFO Pinyon Flats O 30.53 315 LR LR 16 49 27.7
comp=Z,1µm,18.9s,baz=132,slow=40
PFO Pinyon Flats O 30.53 315 **P** **16 35 02.1 +1.6**
PFO IAmb IAmb 16 35 19.4
comp=Z,90nm,1.5s
PFO Pinyon Flats O 30.53 315 P **P** **16 35 02.1 +1.6**
PFO pmax pmax
comp=Z,90nm,1.5s
PFO Pinyon Flats O 30.53 315 P **P** **16 35 02.8 +2.2**
PFO sP **pP** **16 35 18.0 +2.2**
DNR Dunn Ranch,Anz 30.62 315 IAmb IAmb 16 35 20.4
comp=Z,103nm,1.4s
SRU San Rafael Swe 30.68 329 IAmb IAmb 16 35 20.7
comp=Z,108nm,1.9s
V12A Nelson 30.73 320 **P** **16 35 04.2 +1.9**
MTPU Mount Pierson 30.74 326 IAmb IAmb 16 35 06.7
comp=Z,44nm,0.9s
H43A Windswept, Lux 30.79 4 IAMs_20 IAMs_20 16 48 43.0
comp=Z,3µm,22.0s
Q16A Castle Valley 30.86 328 IAmb IAmb 16 35 22.8
comp=Z,90nm,1.5s
SZCU Shurtz Canyon 30.93 324 IAmb IAmb 16 35 23.1
comp=Z,106nm,1.4s
I49A Point Hope 30.93 11 IAmb IAmb 16 35 29.0
comp=Z,129nm,1.1s
I49A IAMs_20 IAMs_20 16 48 07.8
comp=Z,4µm,22.0s
PAL Palisades 31.00 25 IAMs_20 IAMs_20 16 48 19.7
comp=Z,3µm,19.0s
CCUT Cedar City 31.05 324 IAmb IAmb 16 35 26.0

	comp=Z,54nm,1.0s								
N62A	**Caumsett State**	**31.12**	**26**		IAMs_20	IAMs_20	16 47 44.0		
	comp=Z,4µm,22.0s								
TMUT	**Trail Mountain**	**31.16**	**329**		P	**P**	**16 35 07.4**	**+1.2**	
TEFE	**Tefe**	**31.17**	**121**	*eP*		**P**	**16 35 06.4**	**+0.1**	
BINY	**Binghamton**	**31.21**	**22**		IAMs_20	IAMs_20	16 47 29.3		
	comp=Z,3µm,22.0s								
ELS	**Elsinore Mount**	**31.22**	**314**		IAmb	IAmb	16 35 25.3		
	comp=Z,107nm,1.9s								
TCRU	**Three Creeks R**	**31.30**	**326**		IAmb	IAmb	16 35 10.9		
	comp=Z,38nm,0.8s								
RDMU	**Red Mountain**	**31.37**	**332**		P	**P**	**16 35 08.9**	**+1.0**	
SPMN	**Marine on St.**	**31.47**	**357**		IAmb	IAmb	16 35 54.3		
	comp=Z,81nm,1.2s								
SPMN					IAMs_20	IAMs_20	16 49 36.8		
	comp=Z,2µm,22.0s								
G40A	**Rib Lake**	**31.48**	**1**		IAMs_20	IAMs_20	16 50 03.1		
	comp=Z,3µm,20.0s								
GSC	**Goldstone, Bar**	**31.73**	**317**		IAmb	IAmb	16 35 30.0		
	comp=Z,67nm,1.4s								
SHOC	**Shoshone, Teco**	**31.75**	**319**		IAmb	IAmb	16 35 29.8		
	comp=Z,90nm,1.4s								
SHOC					IAMs_20	IAMs_20	16 49 20.4		
	comp=Z,2µm,22.0s								
KSCT	**Kent School, K**	**31.78**	**25**		IAmb	IAmb	16 35 29.7		
	comp=Z,120nm,1.2s								
PRN	**Pahroc Range**	**31.94**	**322**		IAmb	IAmb	16 35 32.0		
	comp=Z,62nm,1.5s								
MWC	**Mount Wilson**	**31.97**	**314**		IAmb	IAmb	16 35 32.1		
	comp=Z,111nm,1.4s								
F42A	**Maple Grove Fa**	**32.05**	**4**		IAMs_20	IAMs_20	16 49 44.3		
	comp=Z,2µm,20.0s								
BOAV	**Boa Vista**	**32.06**	**108**			**P**	**16 35 13.8**	**-0.2**	
BOAV	**Boa Vista**	**32.06**	**108**	*eP*		**P**	**16 35 13.9**	**-0.2**	
QSM	**Queen of Sheba**	**32.17**	**318**		IAmb	IAmb	16 35 33.5		
	comp=Z,102nm,1.3s								
GWY	**Greenwater Val**	**32.17**	**319**		IAmb	IAmb	16 35 33.7		
	comp=Z,78nm,1.3s								
CCCA	**Chr Cany lake**	**32.23**	**317**		IAmb	IAmb	16 35 33.8		
	comp=Z,63nm,1.0s								
J57A	**Williamstown**	**32.27**	**21**		IAMs_20	IAMs_20	16 48 48.4		
	comp=Z,3µm,20.0s								
WSHM	**Spangler Hills**	**32.36**	**317**		P	**P**	**16 35 17.5**	**+0.9**	
WSHM					IAmb	IAmb	16 35 35.4		
	comp=Z,149nm,1.5s								
TPNV	**Topopah Spring**	**32.38**	**320**		IAmb	IAmb	16 35 36.3		
	comp=Z,111nm,1.4s								
TPNV					IAMs_20	IAMs_20	16 48 48.3		
	comp=Z,3µm,22.0s								
LRMC	**Laurel Mtn Rad**	**32.42**	**317**		IAmb	IAmb	16 35 36.0		
	comp=Z,124nm,1.4s								
TPO	**Tropico Hills**	**32.45**	**315**		IAmb	IAmb	16 35 35.9		
	comp=Z,122nm,1.4s								
FURC	**Furnace Creek,**	**32.47**	**319**		IAmb	IAmb	16 35 36.5		
	comp=Z,163nm,1.4s								
FURC					IAMs_20	IAMs_20	16 49 43.6		
	comp=Z,2µm,22.0s								
WCT	**Wildcat Mounta**	**32.52**	**320**		IAmb	IAmb	16 35 37.1		
	comp=Z,58nm,1.3s								
TRY	**Troy**	**32.55**	**24**		IAMs_20	IAMs_20	16 49 18.6		
	comp=Z,3µm,19.0s								
CLC	**China Lake**	**32.56**	**317**		IAmb	IAmb	16 35 36.9		
	comp=Z,99nm,1.3s								
SADO	**Sadowa**	**32.56**	**16**		LR	LR	16 49 16.1		
	comp=Z,5µm,21.4s,baz=218,slow=38								
SADO	**Sadowa**	**32.56**	**16**		IAmb	IAmb	16 35 35.0		
	comp=Z,95nm,1.0s								
SPR3	**Spring Creek 3**	**32.61**	**325**		IAmb	IAmb	16 35 37.2		
	comp=Z,107nm,1.4s								
MPMC	**Manual Prospec**	**32.63**	**318**		IAmb	IAmb	16 35 37.6		
	comp=Z,129nm,1.4s								
MPMC					IAMs_20	IAMs_20	16 48 58.8		
	comp=Z,2µm,21.0s								
TCUT	**Toone Canyon**	**32.66**	**331**		IAmb	IAmb	16 35 38.5		
	comp=Z,146nm,1.6s								
L61B	**Northampton**	**32.71**	**25**		IAMs_20	IAMs_20	16 48 32.0		
	comp=Z,3µm,20.0s								
E38A	**The Farm, Brul**	**32.81**	**359**		IAmb	IAmb	16 35 36.1		
	comp=Z,37nm,0.8s								
E38A					IAMs_20	IAMs_20	16 50 03.4		
	comp=Z,3µm,22.0s								
R11B	**Troy Canyon, C**	**32.88**	**323**		IAmb	IAmb	16 35 40.3		
	comp=Z,89nm,1.4s								
M65A	**Busby, Falmout**	**32.89**	**29**		P	**P**	**16 35 23.7**	**+2.7**	
	baz=218								
E46A	**Sault Ste Mari**	**33.04**	**8**		IAMs_20	IAMs_20	16 51 07.6		
	comp=Z,2µm,18.0s								
K62A	**Royalston**	**33.07**	**26**		IAMs_20	IAMs_20	16 48 29.6		
	comp=Z,3µm,22.0s								
GRAC	**Grapevine Rang**	**33.11**	**319**		P	**P**	**16 35 24.8**	**+1.7**	
PDAR	**Pinedale Array**	**33.14**	**334**		P	**P**	**16 35 23.6**	**0.0**	
PDAR	comp=Z,1.5nm,0.6s,baz=144,slow=8.8,SNR=13				pP	**pP**	**16 35 38.0**	**-0.9**	
PDAR	comp=Z,1.3nm,0.6s,baz=122,slow=11,SNR=4.9				PcP	**PcP**	**16 38 05.1**	**-0.3**	
PDAR	comp=Z,4.2nm,0.8s,baz=146,slow=2.3,SNR=8.0				ScP	**ScP**	**16 41 45.0**	**+0.5**	
PDAR	comp=Z,3.4nm,0.9s,baz=149,slow=2.5,SNR=10				PKiKP	**PKiKP**	**16 45 31.4**	**0.0**	
PDAR	comp=Z,0.5nm,0.6s,baz=11,slow=2.4,SNR=4.8				LR	LR	16 53 15.3		
PDAR	comp=Z,427nm,19.0s,baz=136,slow=44				P3KPbc		17 06 34.4		
PDAR	comp=Z,0.5nm,0.8s,baz=308,slow=4.1,SNR=5.1 comp=Z,1.5nm,0.6s **Pinedale Array**	**33.14**	**334**		P	**P**	**16 35 23.0**	**-0.5**	
GMN	**Gold Mountain**	**33.23**	**320**		IAmb	IAmb	16 35 43.3		
	comp=Z,60nm,1.4s								
CWC	**Cottonwood Cre**	**33.24**	**318**		IAmb	IAmb	16 35 43.2		
	comp=Z,80nm,1.7s								
CWC					IAMs_20	IAMs_20	16 49 08.9		
	comp=Z,2µm,22.0s								
VES	**Vestal, Richgr**	**33.56**	**316**		IAMs_20	IAMs_20	16 46 03.5		
	comp=Z,2µm,21.0s								
TIN	**Tinemaha, Big**	**33.70**	**319**		IAMs_20	IAMs_20	16 49 37.1		
	comp=Z,2µm,22.0s								
DSP	**Deep Springs**	**33.72**	**319**		IAmb	IAmb	16 35 47.5		
	comp=Z,113nm,1.5s								
E28A	**Huff**	**33.80**	**348**		IAMs_20	IAMs_20	16 50 55.2		
	comp=Z,2µm,22.0s								
HVU	**Hansel Valley**	**33.82**	**330**		IAmb	IAmb	16 35 48.5		
	comp=Z,118nm,1.5s								
HNH	**Hanover**	**33.91**	**25**		IAMs_20	IAMs_20	16 49 19.7		
	comp=Z,3µm,20.0s								
EYMN	**Ely**	**34.16**	**359**		IAMs_20	IAMs_20	16 51 47.9		
	comp=Z,2µm,20.0s								
SNOW	**Snow King Moun**	**34.22**	**334**		IAmb	IAmb	16 35 51.7		
	comp=Z,37nm,0.7s								
ELK	**Elko**	**34.33**	**326**		LR	LR	16 51 12.0		
	comp=Z,2µm,21.6s,baz=146,slow=39								
ELK	**Elko**	**34.33**	**326**		IAmb	IAmb	16 35 52.5		
	comp=Z,120nm,1.7s								
ELK					IAMs_20	IAMs_20	16 50 49.9		
	comp=Z,2µm,22.0s								
MACA	**Manacapuru-AM**	**34.35**	**117**		P	**P**	**16 35 33.9**	**-0.1**	
MACA	**Manacapuru-AM**	**34.35**	**117**	*eP*		**P**	**16 35 34.0**	**-0.1**	
I62A	**Tamworth**	**34.44**	**25**		IAMs_20	IAMs_20	16 49 22.8		
	comp=Z,2µm,21.0s								
LBNH	**Lisbon**	**34.50**	**24**		IAMs_20	IAMs_20	16 49 47.3		
	comp=Z,3µm,20.0s								
NVAR	**Mina Array Bea**	**34.58**	**320**		P	**P**	**16 35 37.5**	**+1.5**	
NVAR	comp=Z,31nm,1.0s,baz=130,slow=6.7,SNR=112				pP	**pP**	**16 35 51.7**	**+0.3**	
NVAR	comp=Z,56nm,0.7s,baz=126,slow=6.4,SNR=25				PcP	**PcP**	**16 38 11.2**	**+1.6**	
NVAR	comp=Z,3.1nm,0.6s,baz=93,slow=2.8,SNR=9.0				ScP	**ScP**	**16 41 52.1**	**+2.5**	
NVAR	comp=Z,6.6nm,1.0s,baz=106,slow=2.8,SNR=11				LR	LR	16 51 25.6		
	comp=Z,2µm,20.7s,baz=130,slow=39								
NVAR	comp=Z,31nm,1.0s **Mina Array Bea**	**34.58**	**320**		P	**P**	**16 35 38.3**	**+2.3**	
PKD	**Bear Valley Ra**	**34.61**	**315**		IAMs_20	IAMs_20	16 49 12.2		
	comp=Z,2µm,18.0s								
AGMN	**Agassiz Nation**	**34.75**	**354**		IAmb	IAmb	16 36 02.4		
	comp=Z,113nm,1.5s								
RYN	**Ryan**	**34.83**	**321**		IAmb	IAmb	16 35 57.4		
	comp=Z,127nm,1.5s								
PMPB	**Monarch Peak**	**34.94**	**315**		P	**P**	**16 35 40.1**	**+1.2**	
H62A	**Milan**	**35.09**	**25**		IAMs_20	IAMs_20	16 49 53.9		
	comp=Z,3µm,21.0s								
BBGB	**Big Mountain B**	**35.29**	**316**		IAmb	IAmb	16 36 29.2		
	comp=Z,65nm,1.2s								
YHL	**Hebgen Lake**	**35.53**	**335**		IAmb	IAmb	16 36 14.2		
	comp=Z,66nm,1.9s								
CMB	**Columbia Colle**	**35.66**	**318**		IAmb	IAmb	16 36 03.6		
	comp=Z,59nm,1.3s								
SAO	**San Andreas Ge**	**35.67**	**316**		P	**P**	**16 35 45.4**	**+0.2**	
SAO					IAmb	IAmb	16 36 03.5		
	comp=Z,48nm,1.2s								
SAO	**San Andreas Ge**	**35.67**	**316**		P	**P**	**16 35 45.4**	**+0.2**	
SAO					pmax	pmax			
	comp=Z,48nm,1.3s								
G62A	**West of Eustis**	**35.87**	**25**		IAMs_20	IAMs_20	16 50 52.6		
	comp=Z,2µm,20.0s								
EPLO	**Experimental L**	**35.95**	**357**		IAmb	IAmb	16 36 03.1		
	comp=Z,74nm,1.0s								
HLID	**Hailey**	**35.96**	**330**		IAmb	IAmb	16 36 06.6		
	comp=Z,43nm,1.2s								
PAHR	**Pah Rah Range**	**36.02**	**321**		IAmb	IAmb	16 36 07.3		
	comp=Z,126nm,1.6s								
MHC	**Mount Hamilton**	**36.11**	**316**		IAmb	IAmb	16 36 08.1		
	comp=Z,123nm,1.4s								
DLMT	**Dillon**	**36.53**	**334**		IAmb	IAmb	16 36 12.0		
	comp=Z,59nm,1.4s								
MFID	**Camas Ranch**	**36.54**	**329**		IAmb	IAmb	16 36 12.7		
	comp=Z,58nm,1.4s								
MFID					IAMs_20	IAMs_20	16 52 46.6		
	comp=Z,2µm,22.0s								
ULM	**Lac du Bonnet**	**36.68**	**355**		P	**P**	**16 35 52.4**	**-1.2**	
	comp=Z,13nm,0.7s,baz=172,slow=9.1,SNR=9.7								
ULM					pP	**pP**	**16 36 08.3**	**-0.8**	
	comp=Z,33nm,1.0s,baz=174,slow=10.0,SNR=7.4								
ULM					S	**S**	**16 41 26.4**	**-6.0**	
	comp=Z,1.3nm,0.3s,baz=164,slow=9.5,SNR=1.3								
ULM					LR	LR	16 54 49.8		
	comp=Z,1µm,18.7s,baz=170,slow=42								
ULM	comp=Z,13nm,0.7s **Lac du Bonnet**	**36.68**	**355**			**P**	**16 35 52.1**	**-1.5**	
ULM					IAmb	IAmb	16 36 17.5		
	comp=Z,64nm,1.2s								
ULM	**Lac du Bonnet**	**36.68**	**355**	*i*	P	**P**	**16 35 51.6**	**-2.0**	
BEKR	**Beckworth**	**36.72**	**321**		IAmb	IAmb	16 36 13.3		
	comp=Z,116nm,1.4s								
CVS	**Carnet Viney**	**37.19**	**317**		IAmb	IAmb	16 36 17.0		
	comp=Z,108nm,1.3s								
LPAZ	**La Paz**	**37.34**	**142**		P	**P**	**16 36 01.0**	**+0.8**	
	comp=Z,20nm,0.8s,baz=325,slow=8.7,SNR=81								
LPAZ					S	**S**	**16 41 48.2**	**+3.9**	
	comp=Z,1.3nm,0.9s,baz=16,slow=20,SNR=1.4								
LPAZ					LR	LR	16 52 08.7		
	comp=Z,403nm,18.0s,baz=310,slow=37								
	comp=Z,20nm,0.8s								
LPAZ	**La Paz**	**37.34**	**142**		P	**P**	**16 36 00.3**	**+0.1**	
LPAZ	**La Paz**	**37.34**	**142**	*eP*		**P**	**16 36 00.7**	**+0.4**	
LPAZ	**La Paz**	**37.34**	**142**		P	**P**	**16 36 01.0**	**+0.8**	
LPAZ					sP	**sP**	**16 36 19.6**	**-2.9**	
WVOR	**Wild Horse Val**	**37.34**	**325**		IAmb	IAmb	16 36 17.7		
	comp=Z,95nm,1.4s								
MNRC	**McLaughlin Min**	**37.47**	**318**		IAmb	IAmb	16 36 19.9		
	comp=Z,121nm,1.4s								
AP01	**Chacalluta**	**37.77**	**147**		IAMs_20	IAMs_20	16 50 23.0		
	comp=Z,1µm,21.0s								
O03E	**Paynes Creek**	**37.86**	**320**		IAmb	IAmb	16 36 29.6		
	comp=Z,74nm,1.1s								
HOPS	**Hopland Field**	**37.95**	**318**		IAmb	IAmb	16 36 23.9		
	comp=Z,142nm,1.8s								
HATC	**Hat Creek Radi**	**37.96**	**321**		IAMs_20	IAMs_20	16 53 19.0		
	comp=Z,2µm,22.0s								
PB12	**IPOC Station P**	**37.98**	**147**		IAmb	IAmb	16 36 07.5		
	comp=Z,76nm,1.0s								
PB12					IAMs_20	IAMs_20	16 50 28.5		
	comp=Z,2µm,20.0s								
PB16	**IPOC Station P**	**38.19**	**146**		IAmb	IAmb	16 36 10.8		
	comp=Z,72nm,0.9s								
BMO	**Blue Mountains**	**38.32**	**329**		IAMs_20	IAMs_20	16 53 40.5		
	comp=Z,2µm,21.0s								
M03C	**McCloud**	**38.63**	**321**		IAmb	IAmb	16 36 28.0		
	comp=Z,90nm,1.4s								
KCPM	**Cahto Peak**	**38.65**	**318**		IAMs_20	IAMs_20	16 51 27.2		
	comp=Z,2µm,21.0s								
K05A	**Summer Lake**	**38.80**	**324**		IAmb	IAmb	16 36 53.8		
	comp=Z,52nm,1.3s								
KHBM	**Hayfork Bally**	**38.96**	**320**		IAMs_20	IAMs_20	16 53 24.4		
	comp=Z,2µm,22.0s								
KMRM	**Mail Ridge**	**39.03**	**319**		P	**P**	**16 36 15.4**	**+1.8**	
F10A	**Beach Ranch, E**	**39.09**	**331**		IAmb	IAmb	16 36 33.3		
	comp=Z,78nm,0.8s								
M02C	**Callahan**	**39.15**	**321**		IAMs_20	IAMs_20	16 53 07.4		
	comp=Z,2µm,22.0s								
ITTB	**Itaituba**	**39.25**	**115**	*eP*		**P**	**16 36 14.8**	**-0.9**	
YBH	**Yreka Blue Hor**	**39.26**	**321**		LR	LR	16 54 34.7		
	comp=Z,106nm,21.8s,baz=133,slow=39								
PB11	**IPOC Station P**	**39.28**	**147**		IAMs_20	IAMs_20	16 50 15.0		
	comp=Z,1µm,22.0s								
J05D	**Fort Rock, OR**	**39.34**	**324**		IAmb	IAmb	16 36 36.1		
	comp=Z,64nm,1.5s								
KHMM	**Horse Mountain**	**39.40**	**320**		IAmb	IAmb	16 36 35.4		
	comp=Z,107nm,1.2s								
GO01	**Chusmiza**	**39.45**	**147**		P	**P**	**16 36 19.3**	**+1.6**	
GO01					IAmb	IAmb	16 36 21.3		
	comp=Z,94nm,1.1s								
HMBC	**Humberstone**	**39.59**	**148**		P	**P**	**16 36 19.4**	**+0.9**	
HMBC					IAmb	IAmb	16 36 21.1		
	comp=Z,100nm,1.5s								
HMBC					IAMs_20	IAMs_20	16 50 07.1		
	comp=Z,1µm,22.0s								
TA01	**Diego Aracena**	**39.68**	**149**		IAmb	IAmb	16 36 22.1		
	comp=Z,139nm,1.2s								
PB08	**IPOC Station P**	**39.86**	**147**		IAmb	IAmb	16 36 24.3		
	comp=Z,53nm,0.9s								
PB08					IAMs_20	IAMs_20	16 50 33.3		
	comp=Z,2µm,22.0s								
BBOR	**Butler Butte**	**39.93**	**323**		IAmb	IAmb	16 36 38.2		
	comp=Z,86nm,1.4s								
WIFE	**Three Sisters-**	**40.16**	**325**		P	**P**	**16 36 24.2**	**+1.1**	
I04A	**Tendick Farm,**	**40.33**	**324**		IAmb	IAmb	16 36 41.8		
	comp=Z,165nm,1.6s								
VILB	**Vilhena**	**40.34**	**130**	*eP*		**P**	**16 36 25.4**	**+0.7**	
PB01	**IPOC Station P**	**40.43**	**148**		IAmb	IAmb	16 36 28.2		
	comp=Z,58nm,1.0s								
PB02	**IPOC Station P**	**40.45**	**149**		IAmb	IAmb	16 36 28.7		
	comp=Z,112nm,1.0s								
G05A	**Wamic**	**40.65**	**327**		IAmb	IAmb	16 36 47.8		
	comp=Z,89nm,1.1s								
D08A	**Wollman Farm,**	**40.68**	**330**		P	**P**	**16 36 27.7**	**+0.5**	
NEW	**Newport**	**40.74**	**333**		LR	LR	16 56 02.9		
	comp=Z,1µm,21.6s,baz=136,slow=40								
NEW	**Newport**	**40.74**	**333**		IAMs_20	IAMs_20	16 55 51.8		
	comp=Z,2µm,21.0s								
H04A	**Detroit Lake**	**40.76**	**325**		IAmb	IAmb	16 36 29.8		
	comp=Z,82nm,0.9s								
I03D	**Drain, OR**	**40.81**	**323**		IAmb	IAmb	16 36 46.8		
	comp=Z,161nm,1.3s								
J01E	**Myrtle Point**	**40.83**	**322**		IAmb	IAmb	16 36 47.0		
	comp=Z,76nm,1.1s								
NPGB	**Novo Progresso**	**40.87**	**118**	*eP*		**P**	**16 36 28.0**	**-1.2**	
NPGB				*epP*		**pP**	**16 36 44.8**	**+0.1**	
BUCK	**Buck Mountain**	**40.91**	**324**		IAmb	IAmb	16 36 47.3		
	comp=Z,172nm,1.3s								
H04D	**Lebanon**	**40.97**	**325**		IAmb	IAmb	16 36 31.4		
	comp=Z,56nm,0.9s								
MXC	**Moxie City**	**41.02**	**329**		P	**P**	**16 36 30.6**	**+0.6**	
PB03	**IPOC Station P**	**41.14**	**149**		IAmb	IAmb	16 36 34.2		
	comp=Z,76nm,1.0s								
PB09	**IPOC Station P**	**41.18**	**149**		IAmb	IAmb	16 36 35.1		
	comp=Z,144nm,1.0s								
G04A	**Mulino**	**41.25**	**326**		IAmb	IAmb	16 36 49.7		
	comp=Z,96nm,0.9s								
COR	**Corvallis**	**41.32**	**325**		P	**P**	**16 36 33.4**	**+1.0**	
COR					IAmb	IAmb	16 36 35.4		
	comp=Z,159nm,1.4s								
COR	**Corvallis**	**41.32**	**325**		P	**P**	**16 36 33.4**	**+1.0**	
COR					pmax	pmax			
	comp=Z,159nm,1.4s								
I02E	**Swisshome, OR**	**41.34**	**324**		IAmb	IAmb	16 36 51.2		
	comp=Z,96nm,1.1s								
PB05	**IPOC Station P**	**41.60**	**151**		IAmb	IAmb	16 36 38.1		
	comp=Z,83nm,1.2s								
G03D	**McMinnville, O**	**41.69**	**325**		IAmb	IAmb	16 36 38.3		
	comp=Z,88nm,1.0s								
SIV	**San Ignacio**	**41.71**	**134**		LR	LR	16 53 16.4		
	comp=Z,2µm,21.2s,baz=316,slow=35								
PB06	**IPOC Station P**	**41.78**	**150**		IAmb	IAmb	16 36 39.4		
	comp=Z,92nm,1.0s								
FFC	**Flin Flon**	**41.85**	**350**		P	**P**	**16 36 36.0**	**-0.6**	
FFC	**Flin Flon**	**41.85**	**350**		P	**P**	**16 36 36.0**	**-0.6**	
FFC					pmax	pmax			
	comp=Z,36nm,1.2s								
FFC	**Flin Flon**	**41.85**	**350**		P	**P**	**16 36 36.2**	**-0.4**	
PB10	**IPOC Station P**	**42.00**	**151**		IAmb	IAmb	16 36 41.2		
	comp=Z,103nm,1.4s								
PDRB	**Porto dos Gac**	**42.20**	**125**	*eP*		**P**	**16 36 39.0**	**-1.1**	
PDRB				*epP*		**pP**	**16 36 56.0**	**+0.5**	
D05A	**Enumclaw**	**42.29**	**328**		IAmb	IAmb	16 36 58.9		
	comp=Z,70nm,1.2s								
F03A	**Seaside**	**42.30**	**326**		IAmb	IAmb	16 36 59.6		
	comp=Z,139nm,1.1s								
CLDB	**Colider**	**42.53**	**123**	*eP*		**P**	**16 36 41.5**	**-1.2**	
PTLB	**Pontes e Lacer**	**42.73**	**132**		IAmb	IAmb	16 36 45.8		
	comp=Z,57nm,1.1s								
PTLB	**Pontes e Lacer**	**42.73**	**132**	*eP*		**P**	**16 36 44.5**	**+0.3**	
RADR	**Rader Ridge**	**42.74**	**326**		IAmb	IAmb	16 37 04.3		
	comp=Z,98nm,1.0s								
GNW	**Green Mountain**	**42.96**	**328**		IAmb	IAmb	16 37 02.8		
	comp=Z,85nm,1.4s								
PB14	**IPOC Station P**	**43.03**	**152**		IAmb	IAmb	16 36 49.5		
	comp=Z,73nm,1.0s								
WISH	**Wishkah**	**43.16**	**327**		IAmb	IAmb	16 37 06.1		
	comp=Z,159nm,1.2s								
NLWA	**Neilton Lookou**	**43.39**	**327**		IAmb	IAmb	16 37 08.4		
	comp=Z,207nm,1.5s								
B04A	**Port Angeles**	**43.63**	**328**		IAmb	IAmb	16 37 09.3		
	comp=Z,108nm,1.4s								
A04D	**Lummi Island**	**43.67**	**330**		IAmb	IAmb	16 37 09.8		
	comp=Z,201nm,1.4s								
GO02	**Mina Guanaco**	**43.86**	**152**		IAmb	IAmb	16 36 56.6		
	comp=Z,104nm,1.1s								
PGC	**Sidney**	**43.99**	**329**		IAmb	IAmb	16 37 11.9		
	comp=Z,90nm,1.2s								
RPN	**Rapa Nui**	**44.34**	**204**		LR	LR	16 50 48.8		
	comp=Z,2µm,19.3s,baz=2.0,slow=30								
CLRS	**Cowichan Lake**	**44.45**	**329**		IAmb	IAmb	16 37 15.8		
	comp=Z,80nm,1.5s								
SCHQ	**Schefferville**	**45.15**	**19**		P	**P**	**16 37 01.8**	**-1.4**	
	comp=Z,23nm,0.6s,baz=219,slow=9.8,SNR=30								
SCHQ					pP	**pP**	**16 37 18.6**	**-0.5**	
	comp=Z,115nm,0.8s,baz=221,slow=11,SNR=15								
SCHQ					PcP	**PcP**	**16 38 42.0**	**-0.6**	
	comp=Z,5.9nm,0.5s,baz=217,slow=20,SNR=0.9								
SCHQ					LR	LR	16 56 44.8		
	comp=Z,4µm,20.6s,baz=235,slow=37								
	comp=Z,23nm,0.6s								
SCHQ	**Schefferville**	**45.15**	**19**		P	**P**	**16 37 01.6**	**-1.6**	
PRPB	**Parauapebas**	**45.32**	**113**	*eP*		**P**	**16 37 04.6**	**-0.5**	
TMAB	**Tom-Au,PA,Br**	**45.36**	**107**	*eP*		**P**	**16 37 05.8**	**+0.5**	
AC06	**Mina Casimiro**	**45.42**	**154**		IAmb	IAmb	16 37 08.2		
	comp=Z,48nm,0.9s								
AC02	**Maricunga**	**45.51**	**152**		IAmb	IAmb	16 37 10.4		
	comp=Z,94nm,1.1s								
SALV	**Santo Antonio**	**45.57**	**129**	*eP*		**P**	**16 37 07.0**	**+0.1**	
GO03	**Copiapo**	**45.68**	**154**		IAmb	IAmb	16 37 10.2		
	comp=Z,52nm,1.2s								
LCO	**Las Campanas**	**46.73**	**155**		P	**P**	**16 37 17.3**	**+1.1**	
LCO					IAmb	IAmb	16 37 18.7		
	comp=Z,87nm,0.9s								
LCO	**Las Campanas**	**46.73**	**155**		P	**P**	**16 37 17.3**	**+1.1**	
LCO					pmax	pmax			
	comp=Z,87nm,1.0s								
LCO	**Las Campanas**	**46.73**	**155**		P	**P**	**16 37 17.4**	**+1.1**	
LCO					sP	**sP**	**16 37 36.8**	**-2.3**	
LCO					PcP	**PcP**	**16 38 49.9**	**+1.0**	
AC05	**El Transito**	**46.75**	**155**		IAmb	IAmb	16 37 18.9		
	comp=Z,65nm,0.9s								
SNDB	**Serra Nova Dou**	**46.83**	**121**	*eP*		**P**	**16 37 16.2**	**-0.7**	
PP1B	**Ponte de Pedra**	**47.24**	**130**	*eP*		**P**	**16 37 20.6**	**+0.6**	
CO05	**La Serena**	**47.33**	**157**		IAmb	IAmb	16 37 22.9		
	comp=Z,51nm,1.1s								
GO04	**Tololo Observa**	**47.72**	**156**		P	**P**	**16 37 23.3**	**-0.5**	
BDQN	**Bodoquena, MS**	**47.74**	**135**	*eP*		**P**	**16 37 24.0**	**+0.1**	
CO06	**Fray Jorge**	**47.85**	**157**		IAmb	IAmb	16 37 27.1		
	comp=Z,77nm,1.5s								
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BO02	**Sierra Bellavi**	**51.87**	**159**	IAmb	IAmb	16 37 57.4	
	comp=Z,37nm,1.1s						
BO02				IAMs_20	IAMs_20	16 54 35.2	
	comp=Z,1µm,21.0s						
ITRB	**Iturama**	**51.91**	**129**	*e*P	**P**	**16 37 55.3**	**-0.3**
V35K	**Ketchikan**	**52.11**	**332**	P	**P**	**16 37 57.2**	**+0.7**
	baz=127						
KOTAN	**Kotaneelee Air**	**52.34**	**340**	P	**P**	**16 37 59.4**	**+1.2**
	baz=138						
FRB	**Frobisher Bay**	**52.38**	**12**	LR	LR	17 01 17.5	
	comp=Z,3µm,20.4s,baz=204,slow=37						
SDBA	**SAO DESIDERIO**	**52.46**	**118**	*e*P	**P**	**16 37 59.7**	**-0.2**
T35M	**Bob Quinn**	**52.53**	**334**	P	**P**	**16 38 00.8**	**+1.1**
	baz=129						
ML02	**Panimavida**	**52.53**	**160**	P	**P**	**16 38 00.7**	**+0.8**
ML02				IAMs_20	IAMs_20	16 54 40.8	
	comp=Z,896nm,20.0s						
IPMB	**Ipameri, GO**	**52.58**	**126**	*e*P	**P**	**16 38 00.3**	**-0.4**
CRAG	**Craig**	**52.90**	**331**	P	**P**	**16 38 04.0**	**+1.7**
	baz=125						
WRAK	**Wrangell Islan**	**53.10**	**333**	P	**P**	**16 38 05.5**	**+1.7**
	baz=126						
U33K	**Whale Pass**	**53.27**	**332**	P	**P**	**16 38 06.4**	**+1.4**
	baz=126						
DLBC	**Dease Lake**	**53.37**	**336**	LR	LR	17 03 46.3	
	comp=Z,788nm,21.3s,baz=104,slow=39						
BI02	**San Fabin de**	**53.40**	**160**	P	**P**	**16 38 07.0**	**+0.6**
BI02				IAmb	IAmb	16 38 08.8	
	comp=Z,82nm,1.2s						
BI02				IAMs_20	IAMs_20	16 54 58.8	
	comp=Z,1µm,22.0s						
S34M	**Telegraph Cree**	**53.48**	**335**	P	**P**	**16 38 08.1**	**+1.4**
	baz=129						
TAOE	**Nuku Hiva Isla**	**53.76**	**248**	*e*P	**P**	**16 38 12.5**	**+3.1**
	comp=Z,378nm,27.5s						
TAOE				*e*S	**S**	**16 45 41.4**	**+1.6**
	comp=Z,503nm,26.6s						
TAOE				*e*SS	**SKiKP**	**16 49 19.0**	**+0.7**
	comp=Z,297nm,29.6s						
TAOE				*e*LQ	LQ	16 51 19.3	
	comp=Z,2µm,32.0s						
TAOE				*e*LR	LR	16 53 42.0	
	comp=Z,1µm,23.4s						
PTGB	**Pitanga**	**53.80**	**135**	*e*P	**P**	**16 38 09.4**	**-0.1**
WTLY	**Watson Lake, Y**	**54.00**	**338**	P	**P**	**16 38 12.1**	**+1.6**
	baz=132						
BB19B	**Bebedouro**	**54.09**	**129**	*e*P	**P**	**16 38 11.6**	**-0.1**
PMNB	**Patos De Minas**	**54.29**	**125**	*e*P	**P**	**16 38 13.6**	**+0.4**
R33M	**Jennings River**	**54.36**	**336**	IAmb	IAmb	16 38 33.2	
	comp=Z,76nm,1.8s						
R33M	**Jennings River**	**54.36**	**336**	P	**P**	**16 38 14.5**	**+1.3**
	baz=130						
Q32M	**Nakina River**	**54.61**	**335**	P	**P**	**16 38 16.5**	**+1.5**
	baz=128						
FRTB	**Fartura**	**54.69**	**132**	*e*P	**P**	**16 38 16.0**	**0.0**
S32K	**Killisnoo**	**54.70**	**333**	P	**P**	**16 38 16.5**	**+1.0**
	baz=125						
SIT	**Sitka**	**54.81**	**332**	P	**P**	**16 38 16.7**	**+0.4**
	baz=124						
PSAL	**Palomas, Salto**	**54.82**	**145**	*e*P	**P**	**16 38 17.0**	**+0.3**
R32K	**Eaglecrest**	**55.14**	**334**	IAMs_20	IAMs_20	17 04 29.6	
	comp=Z,968nm,20.0s						
R32K	**Eaglecrest**	**55.14**	**334**	P	**P**	**16 38 20.1**	**+1.4**
	baz=125						
ITAB	**Concordia**	**55.42**	**137**	*e*P	**P**	**16 38 20.9**	**-0.2**
P32M	**Atlin**	**55.58**	**335**	P	**P**	**16 38 23.0**	**+1.1**
	baz=127						
P33M	**Teslin, Yukon**	**55.60**	**336**	P	**P**	**16 38 23.2**	**+1.2**
	baz=128						
S31K	**Pelican**	**55.72**	**333**	P	**P**	**16 38 24.2**	**+1.4**
	baz=123						
LR04	**Corral**	**55.73**	**164**	IAMs_20	IAMs_20	16 56 53.3	
	comp=Z,1µm,20.0s						
LR03	**Panguipulli**	**55.80**	**163**	P	**P**	**16 38 24.0**	**+0.3**
SKAG	**Skagway**	**56.17**	**335**	P	**P**	**16 38 27.0**	**+1.0**
	baz=125						
N32M	**Quiet Lake**	**56.28**	**337**	P	**P**	**16 38 27.7**	**+0.8**
	baz=128						
DIAM	**Diamantina, MG**	**56.39**	**123**	*e*P	**P**	**16 38 28.6**	**+0.2**
DIAM				*e*pP	**pP**	**16 38 43.9**	**-0.8**
VAO	**Valinhos**	**56.40**	**130**	*e*P	**P**	**16 38 28.2**	**-0.1**
SPB	**Sao Paulo**	**56.40**	**131**	IAmb	IAmb	16 38 29.1	
	comp=Z,64nm,1.2s						
SPB	**Sao Paulo**	**56.40**	**131**	*e*P	**P**	**16 38 28.5**	**+0.3**
LR05	**Currie**	**56.45**	**163**	P	**P**	**16 38 28.3**	**0.0**
LR05				IAmb	IAmb	16 38 30.3	
	comp=Z,49nm,1.1s						
PLBC	**Pleasant Camp**	**56.60**	**334**	P	**P**	**16 38 30.3**	**+1.2**
	baz=124						
WHY	**Whitehorse**	**56.69**	**336**	P	**P**	**16 38 30.8**	**+1.0**
	baz=126						
CPSB	**Cacapava Do Su**	**56.77**	**141**	*e*P	**P**	**16 38 30.2**	**-0.5**
PET01	**Itanhaem-SP**	**56.93**	**131**	*e*P	**P**	**16 38 32.0**	**+0.1**
BSCB	**Bom Sucesso**	**56.94**	**126**	*e*P	**P**	**16 38 32.6**	**+0.4**
P30M	**Million Dollar**	**57.23**	**335**	P	**P**	**16 38 34.8**	**+1.2**
	baz=124						
O30N	**Mendenhall**	**57.23**	**336**	P	**P**	**16 38 35.2**	**+1.5**
	baz=125						
P29M	**Windy Craggy**	**57.28**	**334**	P	**P**	**16 38 35.0**	**+1.0**
	baz=123						
PLCA	**Paso Flores**	**57.35**	**162**	P	**P**	**16 38 35.1**	**+0.4**
	comp=Z,30nm,1.0s,baz=337,slow=9.2,SNR=31						
PLCA				S	**S**	**16 46 28.1**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=347,slow=19,SNR=1.7						
PLCA				LR	LR	16 57 31.4	
	comp=Z,1µm,21.8s,baz=350,slow=30						
	comp=Z,30nm,1.0s						
PLCA	**Paso Flores**	**57.35**	**162**	P	**P**	**16 38 35.3**	**+0.6**
PLCA				IAmb	IAmb	16 38 37.0	
	comp=Z,79nm,1.2s						
PLCA	**Paso Flores**	**57.35**	**162**	P	**P**	**16 38 35.3**	**+0.6**
PLCA				pmax	pmax		
	comp=Z,79nm,1.3s						
PLCA	**Paso Flores**	**57.35**	**162**	*e*P	**P**	**16 38 35.7**	**+1.0**
PLCA	**Paso Flores**	**57.35**	**162**	P	**P**	**16 38 35.5**	**+0.8**
PLCA				sP	**sP**	**16 38 55.3**	**-2.7**
M31M	**Drury Creek, Y**	**57.43**	**337**	P	**P**	**16 38 36.1**	**+1.1**
	baz=128						
N31M	**Braeburn, Yuko**	**57.53**	**336**	IAmb	IAmb	16 39 01.6	
	comp=Z,34nm,1.2s						
N31M	**Braeburn, Yuko**	**57.53**	**336**	P	**P**	**16 38 37.0**	**+1.3**
	baz=126						
PARB	**Paraibuna**	**57.60**	**129**	*e*P	**P**	**16 38 37.3**	**+0.5**
PLTB	**Pedras Altas**	**57.64**	**142**	IAmb	IAmb	16 38 37.9	
	comp=Z,72nm,1.2s						
PLTB	**Pedras Altas**	**57.64**	**142**	*e*P	**P**	**16 38 37.0**	**+0.2**
HYT	**Haines Junctio**	**57.84**	**335**	P	**P**	**16 38 39.2**	**+1.2**
	baz=124						
RCBR	**Riachuelo**	**57.94**	**106**	P	**P**	**16 38 39.1**	**-0.3**
RCBR				IAmb	IAmb	16 39 12.1	
	comp=Z,55nm,1.2s						
RCBR	**Riachuelo**	**57.94**	**106**	IAMs_20	IAMs_20	17 05 16.7	
	comp=Z,574nm,20.0s						
RCBR	**Riachuelo**	**57.94**	**106**	P	**P**	**16 38 39.1**	**-0.3**
RCBR				pmax	pmax		
	comp=Z,55nm,1.2s						
RCBR				MLR	MLR		
	comp=Z,600nm,20.0s						
RCBR	**Riachuelo**	**57.94**	**106**	*e*P	**P**	**16 38 38.4**	**-1.0**
O29M	**Mount Kennedy**	**58.00**	**334**	P	**P**	**16 38 40.4**	**+1.2**
	baz=122						
PNL	**Peninsula**	**58.02**	**333**	P	**P**	**16 38 40.4**	**+1.2**
	baz=121						
N30M	**Aishikik Lake**	**58.03**	**336**	P	**P**	**16 38 40.5**	**+1.2**
	baz=124						
TRQA	**Tornquist**	**58.19**	**153**	P	**P**	**16 38 40.4**	**-0.2**
TRQA	**Tornquist**	**58.19**	**153**	P	**P**	**16 38 40.4**	**-0.2**
TRQA				pmax	pmax		
	comp=Z,107nm,1.6s						
YUK6	**Outpost Mounta**	**58.26**	**335**	P	**P**	**16 38 41.8**	**+0.8**
	baz=123						
LL01	**San Ignacio de**	**58.33**	**164**	IAMs_20	IAMs_20	16 58 20.2	
	comp=Z,995nm,18.0s						
CMC01	**Camacan, BA**	**58.45**	**118**	*e*P	**P**	**16 38 43.3**	**+0.5**
CMC01				*e*pP	**pP**	**16 38 59.0**	**-0.1**
M30M	**Minto, Yukon**	**58.55**	**337**	P	**P**	**16 38 44.4**	**+1.5**
	baz=125						
YUK4	**Talbot Arm**	**58.59**	**335**	P	**P**	**16 38 44.9**	**+1.6**
	baz=123						
PINM	**Pinnacle**	**58.61**	**334**	P	**P**	**16 38 45.1**	**+1.7**
	baz=120						
SJMB	**Sao Joao De Ma**	**58.63**	**122**	*e*P	**P**	**16 38 44.5**	**+0.5**
VAS01	**Vassouras-RJ**	**58.67**	**127**	*e*P	**P**	**16 38 45.1**	**+0.8**
GUA01	**Guaratinga, BA**	**58.77**	**119**	*e*P	**P**	**16 38 45.4**	**+0.4**
MAYO	**Mayo, Yukon**	**58.82**	**338**	P	**P**	**16 38 46.2**	**+1.6**
	baz=127						
O28M	**Mount Upton**	**58.93**	**334**	P	**P**	**16 38 47.4**	**+1.6**
	baz=121						
NBAN	**Anadia - AL**	**58.98**	**110**	*e*P	**P**	**16 38 46.7**	**+0.1**
YUK8	**Steele Glacier**	**59.02**	**335**	P	**P**	**16 38 47.9**	**+1.5**
	baz=121						
M29M	**Somme Creek**	**59.12**	**336**	IAmb	IAmb	16 39 20.9	
	comp=Z,22nm,0.9s						
M29M	**Somme Creek**	**59.12**	**336**	P	**P**	**16 38 48.3**	**+1.5**
	comp=123,SNR=10						
LL02	**Futaleuf**	**59.24**	**164**	IAmb	IAmb	16 38 49.4	
	comp=Z,40nm,1.1s						
LL02				IAMs_20	IAMs_20	16 58 01.2	
	comp=Z,1µm,22.0s						
L29M	**L29M**	**59.36**	**337**	P	**P**	**16 38 49.7**	**+1.3**
	baz=124						
MESA	**MESA**	**59.39**	**333**	P	**P**	**16 38 49.9**	**+1.0**
	baz=119						
C36M	**Paulatuk**	**59.43**	**347**	IAMs_20	IAMs_20	17 08 41.0	
	comp=Z,679nm,20.0s						
C36M	**Paulatuk**	**59.43**	**347**	P	**P**	**16 38 50.0**	**+1.3**
	baz=142						
SFJD	**Kangerlussuaq**	**59.49**	**17**	LR	LR	17 04 45.1	
	comp=Z,3µm,21.3s,baz=223,slow=36						
CTG	**Chitna Glacier**	**59.51**	**334**	P	**P**	**16 38 50.7**	**+1.1**
	baz=120						
K29M	**Barlow Dome**	**59.55**	**338**	P	**P**	**16 38 51.7**	**+1.9**
	baz=125						
YUK3	**Moose Creek**	**59.55**	**335**	P	**P**	**16 38 51.1**	**+1.1**
	baz=121						
J30M	**Hart River**	**59.56**	**339**	P	**P**	**16 38 51.3**	**+1.4**
	baz=127						
RIB01	**Linhares ES**	**59.58**	**122**	*e*P	**P**	**16 38 50.9**	**+0.3**
H31M	**Peel River**	**59.66**	**341**	P	**P**	**16 38 52.6**	**+2.2**
	baz=129						
CAM01	**Campos-RJ**	**59.83**	**125**	*e*P	**P**	**16 38 52.0**	**-0.2**
CAM01				*e*pP	**pP**	**16 39 07.9**	**-0.7**
I30M	**Mount Dempster**	**59.96**	**340**	P	**P**	**16 38 53.5**	**+0.9**
	baz=127						
BVCY	**Beaver Creek**	**60.05**	**336**	P	**P**	**16 38 54.2**	**+1.0**
	baz=121						
CRQE	**Cirque**	**60.16**	**333**	P	**P**	**16 38 55.3**	**+1.2**
	baz=118						
G31M	**Satah River**	**60.35**	**342**	IAMs_20	IAMs_20	17 09 08.3	
	comp=Z,1µm,20.0s						
G31M	**Satah River**	**60.35**	**342**	P	**P**	**16 38 55.6**	**+0.6**
	baz=130						
ABR01	**Abrolhos, BA**	**60.35**	**120**	*e*P	**P**	**16 38 55.2**	**-0.7**
DAWY	**Dawson**	**60.36**	**338**	P	**P**	**16 38 56.0**	**+0.7**
	baz=123						
KAIM	**Kayak Island**	**60.38**	**332**	P	**P**	**16 38 55.6**	**+0.2**
	baz=116						
M27K	**Edge Creek, AK**	**60.43**	**335**	P	**P**	**16 38 56.0**	**+0.1**
	baz=120						
MCARA	**McCarthy VSAT**	**60.43**	**334**	IAmb	IAmb	16 39 15.7	
	comp=Z,45nm,1.2s						
MCARA	**McCarthy VSAT**	**60.43**	**334**	P	**P**	**16 38 57.2**	**+1.5**
	baz=118						
F31M	**Tsiigehtchic**	**60.53**	**342**	P	**P**	**16 38 56.3**	**0.0**
	baz=131						
BCAR	**Beaver Creek A**	**60.74**	**336**	P	**P**	**16 38 57.9**	**0.0**
L27K	**Beaver Creek,**	**60.76**	**336**	IAmb	IAmb	16 39 60.0	
	comp=Z,24nm,1.0s						
L27K				IAMs_20	IAMs_20	17 07 25.1	
	comp=Z,1µm,21.0s						
L27K	**Beaver Creek,**	**60.76**	**336**	P	**P**	**16 38 58.5**	**+0.5**
	baz=120,SNR=7.0						
EPYK	**Eagle Plains**	**60.77**	**341**	P	**P**	**16 38 58.3**	**+0.3**
	baz=127						
GLB	**Gilahina Butte**	**60.79**	**334**	IAmb	IAmb	16 39 17.8	
	comp=Z,28nm,1.2s						
M26K	**Nabesna, AK**	**60.90**	**335**	P	**P**	**16 38 59.4**	**+0.4**
	baz=119						
BMRM	**Bremner River**	**60.92**	**333**	IAmb	IAmb	16 40 01.2	
	comp=Z,86nm,1.6s						
BMRM	**Bremner River**	**60.92**	**333**	P	**P**	**16 38 59.5**	**+0.3**
	baz=116						
G30M	**tAoh Zraii Nji**	**60.98**	**341**	P	**P**	**16 38 59.9**	**+0.4**
	baz=128						
RES	**Resolute Bay**	**61.03**	**359**	LR	LR	17 07 19.5	
	comp=Z,2µm,21.8s,baz=182,slow=38						
INK	**Inuvik**	**61.03**	**343**	LR	LR	17 09 27.2	
	comp=Z,778nm,21.1s,baz=148,slow=40						
INK	**Inuvik**	**61.03**	**343**	IAmb	IAmb	16 40 01.1	
	comp=Z,34nm,1.4s						
INK	**Inuvik**	**61.03**	**343**	P	**P**	**16 38 59.7**	**0.0**
	baz=131						
Q23K	**Middleton Isla**	**61.05**	**331**	P	**P**	**16 38 59.9**	**-0.1**
	baz=114						
N25K	**Chitina, Valde**	**61.20**	**334**	IAmb	IAmb	16 39 20.2	
	comp=Z,22nm,0.8s						
N25K	**Chitina, Valde**	**61.20**	**334**	P	**P**	**16 39 01.0**	**-0.1**
	baz=117,SNR=6.8						
H29M	**Whitestone**	**61.22**	**340**	P	**P**	**16 39 01.3**	**+0.2**
	baz=125						
F30M	**Barrier River**	**61.24**	**342**	IAmb	IAmb	16 40 00.4	
	comp=Z,37nm,1.0s						
F30M	**Barrier River**	**61.24**	**342**	P	**P**	**16 39 01.4**	**+0.3**
	baz=129						
EYAK	**Cordova Ski Ar**	**61.24**	**333**	P	**P**	**16 39 01.4**	**+0.2**
	baz=115						
I28M	**Miner Creek**	**61.31**	**339**	IAMs_20	IAMs_20	17 08 28.8	
	comp=Z,889nm,19.0s						
I28M	**Miner Creek**	**61.31**	**339**	P	**P**	**16 39 01.9**	**+0.1**
	baz=123						
K27K	**Chicken**	**61.34**	**337**	IAmb	IAmb	16 39 44.9	
	comp=Z,49nm,1.8s						
K27K	**Chicken**	**61.34**	**337**	P	**P**	**16 39 02.2**	**+0.3**
	baz=120						
L26K	**Log Cabin Wild**	**61.34**	**336**	P	**P**	**16 39 02.3**	**+0.3**
	baz=119						
COYC	**Coyhaique**	**61.40**	**165**	P	**P**	**16 39 03.4**	**+0.9**
COYC				IAmb	IAmb	16 39 04.8	
	comp=Z,59nm,1.0s						
DIV	**Divide**	**61.50**	**333**	IAmb	IAmb	16 39 40.0	
	comp=Z,35nm,1.1s						
G29M	**Pine Creek**	**61.51**	**341**	P	**P**	**16 39 03.1**	**+0.1**
	baz=126						
STCH	**Steam Cracks**	**61.53**	**285**	P	**P**	**16 39 04.9**	**+0.9**
HATHI	**Halema'uma'u T**	**61.65**	**285**	P	**P**	**16 39 06.2**	**+1.3**
KLU	**Klutina**	**61.72**	**333**	IAmb	IAmb	16 40 03.9	
	comp=Z,25nm,0.8s						
KLU	**Klutina**	**61.72**	**333**	P	**P**	**16 39 05.2**	**+0.6**
	baz=115,SNR=6.8						
A36M	**Sachs Harbour**	**61.76**	**349**	P	**P**	**16 39 05.4**	**+0.9**
	baz=142						
P23K	**Montague Islan**	**61.77**	**332**	P	**P**	**16 39 05.4**	**+0.6**
	baz=113						
HARP	**HAARP**	**61.79**	**335**	P	**P**	**16 39 05.7**	**+0.8**
	baz=116						
DOT	**Dot Lake**	**61.93**	**336**	IAmb	IAmb	16 39 39.7	
	comp=Z,31nm,1.4s						
I27K	**Kandik River**	**61.99**	**339**	IAMs_20	IAMs_20	17 08 59.6	
	comp=Z,853nm,20.0s						
I27K	**Kandik River**	**61.99**	**339**	P	**P**	**16 39 07.0**	**+0.7**
	baz=122						
SCRK	**Sand Creek**	**62.05**	**336**	P	**P**	**16 39 07.0**	**+0.2**
	baz=118						
M24K	**Tolsona, Glenn**	**62.09**	**334**	P	**P**	**16 39 07.3**	**+0.2**
	baz=115						
J26L	**Joseph Creek**	**62.14**	**337**	P	**P**	**16 39 08.3**	**+0.9**
	baz=119						
PAX	**Paxson**	**62.18**	**335**	P	**P**	**16 39 08.3**	**+0.7**
	baz=116,SNR=6.3						
RIDG	**Independent Ri**	**62.28**	**336**	P	**P**	**16 39 09.2**	**+1.0**
	baz=118						
H27K	**Steamboat Moun**	**62.29**	**339**	P	**P**	**16 39 09.3**	**+1.1**
	baz=122						
E29M	**Blow River**	**62.35**	**342**	IAmb	IAmb	16 40 08.4	
	comp=Z,31nm,1.3s						
E29M	**Blow River**	**62.35**	**342**	P	**P**	**16 39 09.1**	**+0.5**
	baz=127						
I26K	**Coal Creek Min**	**62.39**	**338**	P	**P**	**16 39 09.0**	**+0.1**
	baz=120						
SCM	**Sheep Creek Mo**	**62.47**	**334**	IAmb	IAmb	16 40 22.1	
	comp=Z,57nm,1.3s						
SCM	**Sheep Creek Mo**	**62.47**	**334**	P	**P**	**16 39 09.8**	**+0.2**
	baz=114						
F28M	**Old Crow**	**62.50**	**341**	IAmb	IAmb	16 39 29.0	
	comp=Z,30nm,0.8s						
F28M	**Old Crow**	**62.50**	**341**	P	**P**	**16 39 10.0**	**+0.3**
	baz=124						
PWL	**Port Wells**	**62.53**	**332**	P	**P**	**16 39 10.5**	**+0.6**
	baz=113						
M23K	**Glacier View**	**62.63**	**333**	P	**P**	**16 39 11.3**	**+0.7**
	baz=114						
G27K	**Doyon Strip**	**62.64**	**340**	P	**P**	**16 39 11.3**	**+0.7**
	baz=122						
K24K	**Donnelly Dome**	**62.68**	**336**	IAmb	IAmb	16 39 49.5	
	comp=Z,49nm,1.4s						
K24K	**Donnelly Dome**	**62.68**	**336**	P	**P**	**16 39 11.6**	**+0.7**
	baz=117						
SEW	**Seward**	**62.76**	**331**	P	**P**	**16 39 12.0**	**+0.6**
	baz=111						
KNK	**Knik Glacier**	**62.80**	**333**	IAmb	IAmb	16 39 30.1	
	comp=Z,24nm,0.9s						
KNK	**Knik Glacier**	**62.80**	**333**	P	**P**	**16 39 12.8**	**+1.0**
	baz=113						
AY03	**Cochrane**	**62.85**	**166**	P	**P**	**16 39 13.3**	**+1.2**
AY03				IAmb	IAmb	16 39 15.0	
	comp=Z,31nm,0.9s						
J25K	**Salcha River,**	**62.88**	**337**	P	**P**	**16 39 13.3**	**+1.0**
	baz=117,SNR=5.4						
SML	**Sawmill**	**62.90**	**333**	IAmb	IAmb	16 40 08.5	
	comp=Z,42nm,1.0s						
SML	**Sawmill**	**62.90**	**333**	P	**P**	**16 39 13.1**	**+0.7**
	baz=113						
WAT6	**Susitna Watana**	**62.96**	**334**	P	**P**	**16 39 13.9**	**+1.0**
	baz=114,SNR=9.6						
E28M	**Babbage River**	**62.97**	**342**	IAmb	IAmb	16 39 43.2	
	comp=Z,66nm,1.9s						
E28M				IAMs_20	IAMs_20	17 10 51.4	
	comp=Z,1µm,20.0s						
E28M	**Babbage River**	**62.97**	**342**	P	**P**	**16 39 13.2**	**+0.5**
	baz=125						
DHY	**Denali Highway**	**63.01**	**335**	P	**P**	**16 39 13.6**	**+0.3**
	baz=115						
GHO	**Glory Hole Cre**	**63.15**	**333**	IAmb	IAmb	16 39 32.3	
	comp=Z,44nm,0.9s						
D28M	**Stokes Point**	**63.15**	**343**	P	**P**	**16 39 15.0**	**+1.1**
	baz=126						
PMR	**Palmer**	**63.17**	**333**	P	**P**	**16 39 15.0**	**+0.9**
	baz=112						
BRSE	**Bradley Lake S**	**63.24**	**331**	P	**P**	**16 39 15.3**	**+0.6**
	baz=110						
E27K	**Coleen River**	**63.36**	**341**	IAmb	IAmb	16 40 15.1	
	comp=Z,53nm,1.6s						
E27K	**Coleen River**	**63.36**	**341**	P	**P**	**16 39 16.0**	**+0.6**
	baz=123						
WAT1	**Susitna Watana**	**63.40**	**334**	P	**P**	**16 39 16.3**	**+0.6**
	baz=113						
HDA	**Harding Lake**	**63.41**	**336**	IAmb	IAmb	16 39 57.7	
	comp=Z,58nm,1.7s						
HDA	**Harding Lake**	**63.41**	**336**	P	**P**	**16 39 16.0**	**+0.3**
	baz=116						
G26K	**Porcupine Rive**	**63.44**	**339**	P	**P**	**16 39 16.6**	**+0.8**
	baz=120						
KDAK	**Kodiak Island**	**63.53**	**328**	LR	LR	17 08 23.9	
	comp=Z,281nm,19.2s,baz=99,slow=37						
KDAK	**Kodiak Island**	**63.53**	**328**	P	**P**	**16 39 16.6**	**0.0**
	baz=107						
KDAK	**Kodiak Island**	**63.53**	**328**	P	**P**	**16 39 17.5**	**+0.9**
ILAR	**Eielson Array**	**63.54**	**337**	P	**P**	**16 39 16.0**	**-0.5**
	comp=Z,6.2nm,1.0s,baz=113,slow=6.0,SNR=31						
ILAR				pP	**pP**	**16 39 32.0**	**-1.2**
	comp=Z,8.3nm,0.9s,baz=122,slow=6.3,SNR=12						
ILAR				LR	LR	17 08 59.1	
	comp=Z,779nm,21.9s,baz=99,slow=38						
	comp=Z,6.2nm,1.0s						
ILAR	**Eielson Array**	**63.54**	**337**	P	**P**	**16 39 17.0**	**+0.4**
ILAR	**Eielson Array**	**63.54**	**337**	P	**P**	**16 39 17.0**	**+0.4**
Q20K	**Shuyak Island**	**63.69**	**329**	P	**P**	**16 39 17.5**	**0.0**
	baz=108						
OHAK	**Old Harbor**	**63.74**	**327**	P	**P**	**16 39 17.5**	**-0.4**
	baz=106						
D27M	**Malcolm River**	**63.75**	**342**	P	**P**	**16 39 17.8**	**-0.2**
	baz=124						
RND	**Reindeer**	**63.75**	**335**	IAmb	IAmb	16 39 37.1	
	comp=Z,42nm,1.0s						
H25L	**Birch Creek**	**63.82**	**338**	P	**P**	**16 39 18.8**	**+0.5**
	baz=118						
SUA	**Susitna One**	**63.84**	**332**	P	**P**	**16 39 18.3**	**-0.5**
	baz=111						
POKR	**Poker Plat Res**	**63.90**	**337**	P	**P**	**16 39 18.1**	**-0.8**
	baz=116						
MCK	**McKinley**	**63.92**	**335**	P	**P**	**16 39 19.1**	**0.0**
	baz=113						
TULEG	**Thule**	**63.92**	**6** *i*	P	**P**	**16 39 18.7**	**-0.1**
TULEG				IAmb	IAmb	16 39 19.6	
	comp=Z,14nm,0.8s						
F26K	**Sheenjek River**	**63.93**	**340**	P	**P**	**16 39 19.0**	**-0.1**
	baz=120						
BMAR	**Burnt Mountain**	**63.94**	**340**	P	**P**	**16 39 19.2**	**0.0**
COLA	**College**	**63.96**	**337** *i*	P	**P**	**16 39 19.9**	**+0.7**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SII	**Sitkinak Islan**	**64.03**	**327**	P	**P**	**16 39 19.6**	**-0.3**
	baz=105						
KIP	**Kipapa**	**64.04**	**287** *ce*	P	**P**	**16 39 21.2**	**+0.6**
KIP				pmax	pmax		
	comp=Z,118nm,2.5s						
G25K	**Bearman Lake**	**64.15**	**339**	P	**P**	**16 39 20.1**	**-0.4**
	baz=118						
O20K	**Slope Mountain**	**64.25**	**331**	P	**P**	**16 39 21.9**	**+0.5**
	baz=108						
NEA2	**Nenana**	**64.32**	**336**	P	**P**	**16 39 21.2**	**-0.5**
	baz=114						
SPU	**Mount Spurr**	**64.34**	**332**	IAmb	IAmb	16 39 40.6	
	comp=Z,42nm,1.2s						
TRF	**Thorofare Moun**	**64.37**	**335**	IAmb	IAmb	16 39 40.8	
	comp=Z,39nm,1.1s						
TRF	**Thorofare Moun**	**64.37**	**335**	P	**P**	**16 39 22.0**	**-0.2**
	baz=112,SNR=9.3						
SKT	**Skwentna**	**64.37**	**333**	IAmb	IAmb	16 39 40.1	
	comp=Z,58nm,1.3s						
SKT	**Skwentna**	**64.37**	**333**	P	**P**	**16 39 22.7**	**+0.6**
	baz=110,SNR=7.6						
H24K	**Noodor Dome**	**64.38**	**337**	P	**P**	**16 39 22.4**	**+0.3**
	baz=115						
F25K	**Christian Rive**	**64.38**	**340**	P	**P**	**16 39 23.0**	**+0.9**
	baz=118						
P19K	**Oil Pt**	**64.41**	**330**	P	**P**	**16 39 22.2**	**-0.2**
	baz=107						
N20K	**Mount Spurr**	**64.42**	**332**	P	**P**	**16 39 22.7**	**+0.2**
	baz=109						
R18K	**Karluk**	**64.44**	**328**	P	**P**	**16 39 23.1**	**+0.6**
	baz=105						
G24K	**Hadweenzic Riv**	**64.61**	**338**	IAMs_20	IAMs_20	17 10 05.8	
	comp=Z,855nm,22.0s						
G24K	**Hadweenzic Riv**	**64.61**	**338**	P	**P**	**16 39 23.5**	**0.0**
	baz=116						
E25K	**Arctic Village**	**64.61**	**340**	IAmb	IAmb	16 40 15.9	
	comp=Z,30n

baz=106
D25K Kavik River 65.44 341 P **P** **16 39 29.7 +0.7**
baz=118
R17L Mt. Peulik Vol 65.45 327 P **P** **16 39 30.1 +1.0**
baz=104
G23K Bananza Creek 65.53 338 IAMs_20 IAMs_20 17 09 59.2
comp=Z,1µm,22.0s
G23K Bananza Creek 65.53 338 P **P** **16 39 30.3 +0.7**
baz=114
E24K Your Creek 65.56 340 P **P** **16 39 30.4 +0.6**
baz=116
L20K Farewell, AK 65.58 333 P **P** **16 39 30.2 +0.3**
baz=108,SNR=11
PPT Papeete 65.69 243 LR LR 17 00 39.0
comp=Z,802nm,19.2s,baz=56,slow=29
PPT2 Papeete2 65.70 243 *eP* **P** **16 39 34.0 +2.5**
comp=Z,981nm,28.5s
PPT2 Papeete2 65.70 243 *e*PP **PP** **16 41 54.5 -2.4**
comp=Z,98nm,27.8s
PPT2 *e*S **S** **16 48 06.7 -6.6**
comp=Z,200nm,25.8s
PPT2 *e*SS **SS** **16 52 22.8 -6.1**
comp=Z,418nm,31.5s
PPT2 *e*LQ LQ 16 56 17.8
comp=Z,871nm,32.5s
PPT2 *e*LR LR 16 59 11.8
comp=Z,2µm,23.8s
PPT2 *e*LR LR 16 59 17.8
comp=Z,2µm,22.2s
H22K Ishtalitna Cre 65.72 337 P **P** **16 39 31.6 +0.9**
baz=112
COLD Coldfoot 65.80 338 P **P** **16 39 31.8 +0.6**
baz=114
Q16K King Salmon 65.85 329 P **P** **16 39 32.7 +1.1**
baz=104
P17K Kvichak River 65.87 329 P **P** **16 39 32.2 +0.5**
baz=104
L19K White Mountain 65.92 333 P **P** **16 39 32.8 +0.7**
baz=107
K20K Telida 65.93 334 P **P** **16 39 32.4 +0.2**
baz=108
E23K Chandalar 65.94 339 P **P** **16 39 32.8 +0.6**
baz=115
N18K Kilae Creek 65.98 331 IAmb IAmb 16 39 50.3
comp=Z,59nm,1.2s
N18K Kilae Creek 65.98 331 P **P** **16 39 33.0 +0.5**
baz=105
R16K Pilot Point 66.07 327 P **P** **16 39 33.9 +0.8**
baz=102
D24K Happy Valley 66.14 341 P **P** **16 39 33.8 +0.4**
baz=116
M18K Stony River 66.17 332 P **P** **16 39 33.2 -0.5**
baz=106
TOLK Toolik Lake Re 66.17 340 P **P** **16 39 33.4 -0.3**
baz=115
H21K Melozitna Rive 66.18 336 P **P** **16 39 34.1 +0.4**
baz=110
J20K Nowinta River 66.22 335 IAmb IAmb 16 39 52.1
comp=Z,36nm,1.5s
J20K Nowinta River 66.22 335 P **P** **16 39 33.9 -0.1**
baz=108
SUMG Summit 66.25 15 P **P** **16 39 33.9 -0.6**
SUMG IAmb IAmb 16 40 11.0
comp=Z,50nm,1.2s
SUMG Summit 66.25 15 P **P** **16 39 33.9 -0.6**
SUMG pmax pmax
comp=Z,50nm,1.2s
SUMG Summit 66.25 15 *i* P **P** **16 39 34.1 -0.5**
SUMG IAmb IAmb 16 39 36.2
comp=Z,13nm,0.8s
O17K Koliganek Bris 66.33 330 P **P** **16 39 34.6 -0.1**
baz=104,SNR=5.5
C24K Franklin Bluff 66.35 341 IAmb IAmb 16 40 22.9
comp=Z,60nm,1.3s
C24K Franklin Bluff 66.35 341 P **P** **16 39 34.9 +0.2**
baz=116
N17K Nushagak Hills 66.56 330 IAmb IAmb 16 39 54.8
comp=Z,59nm,1.2s
N17K Nushagak Hills 66.56 330 P **P** **16 39 36.0 -0.2**
baz=104
F22K John River 66.62 338 P **P** **16 39 36.3 -0.2**
baz=112
D23K Nanushuk River 66.67 340 P **P** **16 39 36.0 -0.8**
baz=114
E22K Anaktuvuk Pass 66.73 339 IAmb IAmb 16 40 00.7
comp=Z,36nm,1.4s
E22K Anaktuvuk Pass 66.73 339 P **P** **16 39 37.1 -0.1**
baz=112
G21K Allakaket 66.75 337 IAMs_20 IAMs_20 17 11 29.4
comp=Z,890nm,18.0s
G21K Allakaket 66.75 337 P **P** **16 39 37.4 +0.1**
baz=110
L18K Granite Mounta 66.76 332 P **P** **16 39 37.5 +0.1**
baz=105
O16K Kokwok River B 66.78 329 P **P** **16 39 37.6 0.0**
baz=103
J19K Poorman 66.79 334 P **P** **16 39 38.0 +0.5**
baz=107
NEEM North Greenlan 66.87 9 *i* P **P** **16 39 36.9 -1.4**
NEEM IAmb IAmb 16 39 38.9
comp=Z,7.5nm,0.5s
S14K Fog Glacier 66.88 326 P **P** **16 39 38.3 -0.1**
baz=100
M17K Holitna River 66.89 331 P **P** **16 39 38.6 +0.3**
baz=104
H20K Anotleneega Mo 66.94 336 P **P** **16 39 39.0 +0.5**
baz=108
F21K Alatna River 66.98 338 IAmb IAmb 16 39 59.2
comp=Z,31nm,0.8s
F21K Alatna River 66.98 338 P **P** **16 39 39.4 +0.6**
baz=110
C23K Itkillik River 67.00 341 IAmb IAmb 16 40 25.5
comp=Z,61nm,1.3s
C23K Itkillik River 67.00 341 P **P** **16 39 39.3 +0.4**
baz=114
J18K Innoko River 67.10 334 P **P** **16 39 39.9 +0.3**
baz=106
SDPT Sand Point 67.24 325 P **P** **16 39 39.7 -0.9**
baz=99
D22K Ayikyak River 67.30 340 P **P** **16 39 41.7 +0.9**
baz=112
N16K Nishlik Lake 67.31 330 P **P** **16 39 41.5 +0.5**
baz=103
L17K Donlin 67.47 332 P **P** **16 39 42.8 +0.8**
baz=104
M16K Timber Creek 67.52 331 P **P** **16 39 42.7 +0.5**
baz=103
GCSA Galena City Sc 67.53 335 P **P** **16 39 42.9 +0.7**
baz=106
O15K Ungalikthiuk R 67.56 329 P **P** **16 39 43.7 +1.1**
baz=101
H19K Roundabout Mou 67.57 336 P **P** **16 39 43.4 +0.9**
baz=107
K17K Iditarod 67.61 333 P **P** **16 39 43.5 +0.7**
baz=104
F20K Avaraart Lake 67.75 337 IAMs_20 IAMs_20 17 12 55.0
comp=Z,866nm,20.0s
F20K Avaraart Lake 67.75 337 P **P** **16 39 44.1 +0.4**
baz=108
N15K Kwethluk River 67.89 330 P **P** **16 39 45.6 +1.0**
baz=101
L16K Owhat River 67.91 331 P **P** **16 39 45.6 +0.8**
baz=102
G19K Purcell Mounta 68.00 336 P **P** **16 39 45.5 +0.2**
baz=106
TBI Tubuai 68.07 238 *e*PKP1 P 16 39 51.8 +5.5
comp=Z,1µm,29.5s
TBI *e*S **S** **16 48 37.0 -4.6**
comp=Z,956nm,29.2s
TBI *e*SS **SS** **16 53 01.7 -3.7**
comp=Z,2µm,36.2s
TBI *e*LQ LQ 16 57 23.5
comp=Z,444nm,25.8s
TBI *e*LR LR 17 00 18.6
comp=Z,2µm,30.0s
TBI *e*LR LR 17 00 18.8
comp=Z,10µm,27.8s
B22K Teshekpuk Lake 68.09 341 P **P** **16 39 45.1 -0.5**
baz=112
C21K Knifeblade Rid 68.11 340 P **P** **16 39 45.7 -0.1**
baz=110
J17K VABM Dome 68.11 333 P **P** **16 39 46.3 +0.3**
baz=104
S12K Black Hills 68.18 325 P **P** **16 39 47.1 +0.5**
baz=98
B21K Ikpikpuk River 68.21 340 P **P** **16 39 47.1 +0.6**
baz=110
H18K Honhosa River 68.24 335 P **P** **16 39 47.8 +1.0**
baz=105
M15K Kasigluk River 68.28 330 P **P** **16 39 47.4 +0.3**
baz=101
E20K Nigu River 68.30 339 P **P** **16 39 47.8 +0.7**
baz=108
O14K Tigyukauivet M 68.30 329 P **P** **16 39 47.3 +0.1**
baz=100
E19K Redstone River 68.44 338 P **P** **16 39 48.8 +0.8**
baz=107
F19K Shaleruckik Mo 68.46 337 P **P** **16 39 49.1 +1.1**
baz=106
G18K Tagagawik 68.55 336 P **P** **16 39 48.6 -0.1**
baz=105
D20K Etivluk River 68.59 339 P **P** **16 39 49.9 +0.9**
baz=108
N14K Kuskokwak Cree 68.63 329 P **P** **16 39 50.1 +0.9**
baz=100
J16K Anvik River 68.76 333 P **P** **16 39 50.8 +0.8**
baz=102
A22K Sinclair Lake 68.81 342 P **P** **16 39 50.7 +0.5**
baz=110
H17K Granite Mounta 68.83 335 P **P** **16 39 50.6 +0.2**
baz=103
L15K Ungalak Mounta 68.84 331 P **P** **16 39 51.4 +0.8**
baz=101
FALS False Pass 68.85 324 P **P** **16 39 51.8 +1.1**
baz=96
M14K Bethel 68.91 330 P **P** **16 39 52.4 +1.5**
baz=100
I17K Unalakleet 68.93 334 P **P** **16 39 52.5 +1.5**
baz=102
K15K Wolf Creek Mou 68.98 332 P **P** **16 39 52.2 +0.8**
baz=101
D19K Kuna River 69.05 339 P **P** **16 39 53.5 +1.7**
baz=106
F18K Selawik 69.12 337 P **P** **16 39 53.6 +1.4**
baz=104
B20K Meade River 69.18 340 P **P** **16 39 53.8 +1.4**
baz=108
G17K Kiwalik Mounta 69.26 335 P **P** **16 39 54.4 +1.3**
baz=103
L14K Kuka Creek 69.35 331 P **P** **16 39 54.2 +0.6**
baz=99
M13K Dall Lake 69.53 330 P **P** **16 39 55.7 +0.9**
baz=102
E18K Tukpahlearik C 69.68 337 P **P** **16 39 56.8 +1.2**
baz=104
C19K Lookout Ridge 69.74 339 P **P** **16 39 57.2 +1.2**
baz=105
H16K Elim 69.74 334 P **P** **16 39 56.9 +0.9**
baz=101
J14K Nanvaranak Lak 69.98 332 P **P** **16 39 58.5 +1.0**
baz=99
E17K Hotham Inlet 70.07 337 P **P** **16 39 58.1 +0.1**
baz=102
C18K Utukok River 70.19 339 P **P** **16 39 59.2 +0.4**
baz=104
K13K Kusilvak Mount 70.37 331 P **P** **16 40 00.3 +0.3**
baz=98
A19K Wainwright 70.52 340 P **P** **16 40 01.7 +1.0**
baz=104
G15K Niukluk 70.56 334 P **P** **16 40 01.1 +0.1**
baz=100
UNV Unalaska Valle 70.56 323 P **P** **16 40 01.2 0.0**
baz=93,SNR=5.4
B18K Kokolik River 70.56 339 P **P** **16 40 00.0 -1.0**
baz=103
D17K Noatak River 70.67 337 P **P** **16 40 02.6 +0.9**
baz=101
RDOG Red Dog Mine 70.68 338 IAMs_20 IAMs_20 17 15 00.3
comp=Z,791nm,20.0s
RDOG Red Dog Mine 70.68 338 P **P** **16 40 02.1 +0.3**
baz=102
C17K DeLong Mountai 70.86 338 P **P** **16 40 03.6 +0.8**
baz=102
F15K North Star Dit 70.93 335 P **P** **16 40 04.0 +0.7**
baz=99
M11K Mekoryuk 70.93 329 P **P** **16 40 03.6 +0.3**
baz=96
ANM Nome 71.06 334 P **P** **16 40 04.9 +0.8**
baz=98
EFI East Falkland 71.07 159 *ce*P **P** **16 40 05.8 +1.6**
EFI pmax pmax
comp=Z,66nm,1.7s
C16K Lisburne Hills 71.61 338 P **P** **16 40 07.4 0.0**
baz=99
DBG Daneborg 71.71 16 *i* P **P** **16 40 06.3 -1.6**
DBG IAmb IAmb 16 40 08.6
comp=Z,2.2nm,0.8s
NIKH Nikolski High 71.94 322 P **P** **16 40 09.6 +0.1**
baz=91
TNA Tin City 72.26 335 P **P** **16 40 11.3 +0.1**
baz=96
P08K Saint George I 72.43 325 P **P** **16 40 12.1 -0.3**
baz=92
DAG Danmarks Havn 72.72 13 *i* P **P** **16 40 12.3 -1.5**
DAG IAmb IAmb 16 40 14.0
comp=Z,9.2nm,0.6s
SPIA Saint Paul Isl 72.83 326 P **P** **16 40 14.6 -0.2**
baz=91
NOR Nord 74.25 8 *i* P **P** **16 40 21.1 -1.6**
NOR IAmb IAmb 16 40 22.4
comp=Z,15nm,1.3s
JMIC Jan Mayen 74.67 20 LR LR 17 12 36.4
comp=Z,747nm,22.0s,baz=240,slow=35
RAR Rarotonga 75.97 244 LR LR 17 05 21.5
comp=Z,469nm,18.3s,baz=66,slow=29
EKA Eskdalemuir Ar 77.60 36 P **P** **16 40 38.9 -3.3**
comp=Z,6.1nm,0.7s,baz=275,slow=5.8,SNR=11
EKA pP **pP** **16 40 58.9 -0.5**
comp=Z,5.1nm,0.8s,baz=268,slow=6.0,SNR=4.3
ESDC Sonseca Array 79.08 52 P **P** **16 40 47.5 -3.3**
comp=Z,1.0nm,0.6s,baz=279,slow=4.4,SNR=7.1
ESDC pP **pP** **16 41 07.5 -0.4**
comp=Z,3.3nm,0.9s,baz=280,slow=5.9,SNR=6.0
ESDC S **S** **16 50 42.4 -3.2**
comp=Z,0.6nm,0.9s,baz=259,slow=13,SNR=1.6
ESDC LR LR 17 09 02.3
comp=Z,275nm,20.9s,baz=276,slow=30
AMKA Amchitka 79.31 320 P **P** **16 40 51.2 -0.5**
MDT Midelt 79.65 59 LR LR 17 10 58.6
comp=Z,319nm,20.4s,baz=284,slow=32
SPITS Spitsbergen Ar 80.18 12 P **P** **16 40 54.7 -1.3**
comp=Z,7.0nm,0.9s,baz=256,slow=5.8,SNR=4.2
SPITS pP **pP** **16 41 12.2 -1.1**
comp=Z,17nm,1.0s,baz=255,slow=4.3,SNR=2.9
SPITS LR LR 17 18 11.5
comp=Z,2µm,20.5s,baz=282,slow=37
comp=Z,7.0nm,0.9s
PMSA Palmer Station 80.85 169 LR LR 17 09 10.9
comp=Z,447nm,19.2s,baz=323,slow=30
PMSA Palmer Station 80.85 169 *e*P **P** **16 41 01.3 +1.7**
ESPZ Base Esperanza 81.19 165 P **P** **16 41 02.1 +0.6**
BILL Bilibino 82.14 338 P **P** **16 41 06.9 +0.3**
BILL IAmb IAmb 16 41 24.3
comp=Z,21nm,0.8s
BILL Bilibino 82.14 338 *ce*P **P** **16 41 06.8 +0.3**
BILL pmax pmax
comp=Z,18nm,1.7s
BILL Bilibino 82.14 338 P **P** **16 41 06.8 +0.3**
BILL sP **pP** **16 41 23.8 0.0**
SHEM Shemya Is, Ala 82.22 322 LR LR 17 18 29.9
comp=Z,130nm,18.8s,baz=112,slow=36
DOU Dourbes 83.12 40 *d*P **P** **16 41 14.1 +2.1**
MEM Membach 83.88 40 *d*P **P** **16 41 14.9 -0.9**
NB2 NORSAR Subarra 83.91 29 P **P** **16 41 15.6 -0.3**
comp=Z,18nm,1.2s,baz=288,slow=4.8
NOA NORSAR Array B 83.91 29 P **P** **16 41 14.7 -1.2**
comp=Z,2.7nm,0.9s,baz=288,slow=5.0,SNR=5.1
NOA pP **pP** **16 41 32.4 -0.8**
comp=Z,5.3nm,1.0s,baz=285,slow=5.0,SNR=8.5
NOA LR LR 17 16 25.9
comp=Z,491nm,21.7s,baz=285,slow=34
comp=Z,2.7nm,0.9s
DBIC Dimbokro 84.63 84 P **P** **16 41 18.5 -1.9**
comp=Z,6.2nm,0.5s,baz=298,slow=7.8,SNR=9.9
DBIC pP **pP** **16 41 36.8 -0.9**
comp=Z,6.7nm,0.6s,baz=306,slow=10,SNR=5.0
DBIC LR LR 17 14 24.3
comp=Z,374nm,21.0s,baz=310,slow=32
comp=Z,6.2nm,0.5s
DBIC Dimbokro 84.63 84 P **P** **16 41 18.4 -2.0**
HFS Hagfors 85.36 29 P **P** **16 41 21.8 -1.3**
comp=Z,2.0nm,0.8s,baz=285,slow=2.8,SNR=5.2
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 86.10 18 P **P** **16 41 25.0 -1.7**
comp=Z,4.3nm,0.7s,baz=287,slow=3.7,SNR=16
ARCES pP **pP** **16 41 42.6 -1.5**
comp=Z,8.5nm,1.0s,baz=302,slow=4.9,SNR=2.5
ARCES LR LR 17 18 56.5
comp=Z,749nm,21.9s,baz=300,slow=35
comp=Z,4.3nm,0.7s
ARCES ARCESS Array B 86.10 18 P **P** **16 41 25.5 -1.2**
ARCES ARCESS Array B 86.10 18 *e*P **P** **16 41 25.5 -1.2**
DAVA Damuels 87.23 42 *e*P **P** **16 41 32.8 0.0**
comp=Z,9.6nm,1.3s
DAVOX Davos/Dischmat 87.38 43 LR LR 17 15 03.9
comp=Z,356nm,21.9s,baz=280,slow=32
RETA Reutte 87.74 42 *e*P **P** **16 41 34.4 -0.8**
comp=Z,14nm,1.2s
CLL Collm 87.92 38 *e*P **P** **16 41 35.0 -0.8**
CLL *e**PP **sP** **16 41 58.0 -2.0**
CLL *e*S **S** **16 52 08.0 -6.1**
CLL Collm 87.92 38 *e*Px Px 16 41 35.0
CLL *es*P sP 16 41 58.0 -2.0
CLL *ex* x 16 42 08.0
CLL *ex* x 16 42 23.0
CLL *e*SKSac **SKSac** **16 52 03.0 +4.1**
CLL *e*SP **SPn** **16 53 14.0 -0.3**
MOTA Moosalm 88.00 42 *e*P **P** **16 41 36.4 -0.1**
comp=Z,6.6nm,0.9s
KHC Kasperske Hory 88.99 39 *i* P **P** **16 41 40.5 -0.5**
KHC pmax pmax
comp=Z,13nm,1.9s
KHC Kasperske Hory 88.99 39 *e*P P 16 42 03.0 +22
KHC AMS AMS 17 15 10.0
comp=Z,600nm,22.1s
ABTA Abfaltersbach 89.11 42 *e*P **P** **16 41 41.3 -0.3**
comp=Z,1.1nm,1.3s
GERES GERESS Array B 89.17 40 P **P** **16 41 40.2 -1.7**
comp=Z,0.5nm,0.5s,baz=276,slow=6.7,SNR=3.8
GERES pP **pP** **16 41 56.8 -2.5**
comp=Z,0.9nm,0.7s,baz=274,slow=7.6,SNR=3.6
GERES LR LR 17 16 28.1
comp=Z,442nm,20.2s,baz=289,slow=32
comp=Z,0.5nm,0.5s
TORD Torodi Ar. Bea 89.42 77 P **P** **16 41 42.0 -1.6**
comp=Z,1.1nm,0.3s,baz=280,slow=8.6,SNR=1.6
TORD LR LR 17 18 46.5
comp=Z,260nm,21.4s,baz=291,slow=34
comp=Z,1.1nm,0.3s
SEY Seymchan 89.47 336 LR LR 17 26 29.0
comp=Z,298nm,21.3s,baz=55,slow=39
SEY Seymchan 89.47 336 *ce*P **P** **16 41 44.7 +1.8**
SEY pmax pmax
comp=Z,26nm,1.7s
APA Apatity 89.60 18 *e*P P 16 41 54.8 +11
APA MLR MLR
comp=Z,2µm,30.5s
MYKA Terra Mystica 89.88 42 *e*pP pP 16 42 02.3 -0.4
comp=Z,8.7nm,1.3s
KEST Kesra 90.23 53 LR LR 17 14 38.2
comp=Z,206nm,21.6s,baz=331,slow=30
FINES FINESS Array B 90.33 25 P **P** **16 41 46.2 -0.7**
comp=Z,2.2nm,0.9s,baz=302,slow=6.4,SNR=4.8
FINES pP **pP** **16 42 02.4 -2.0**
comp=Z,4.2nm,1.0s,baz=325,slow=2.3,SNR=2.3
FINES LR LR 17 22 57.7
comp=Z,473nm,20.1s,baz=308,slow=36
comp=Z,2.2nm,0.9s
FINES FINESS Array B 90.33 25 P **P** **16 41 44.4 -2.5**
TIXI Tiksi 90.77 348 LR LR 17 28 55.2
comp=Z,394nm,19.3s,baz=22,slow=40
TIXI Tiksi 90.77 348 P **P** **16 41 47.4 -1.4**
TIXI IAmb IAmb 16 42 07.1
comp=Z,9.4nm,0.8s
TIXI Tiksi 90.77 348 IAMs_20 IAMs_20 17 28 20.4
comp=Z,453nm,22.0s
TIXI Tiksi 90.77 348 P **P** **16 41 47.4 -1.4**
TIXI pmax pmax
comp=Z,9.0nm,0.8s
TIXI MLR MLR
comp=Z,500nm,22.0s
PETK Petropavlovsk- 91.49 326 P **P** **16 41 51.2 -1.3**
comp=Z,9.6nm,0.8s,baz=65,slow=6.8,SNR=7.4
PETK pP **pP** **16 42 08.8 -1.3**
comp=Z,17nm,0.9s,baz=77,slow=7.6,SNR=6.3
PETK LR LR 17 23 24.2
comp=Z,118nm,21.2s,baz=50,slow=36
comp=Z,9.6nm,0.8s
PETK Petropavlovsk- 91.49 326 P **P** **16 41 53.5 +1.0**
PETK Petropavlovsk- 91.49 326 P **P** **16 41 53.5 +1.0**
MA2 Magadan 91.84 333 LR LR 17 27 42.1
comp=Z,140nm,21.0s,baz=62,slow=38
VAE Valguarnera 93.55 50 LR LR 17 19 41.6
comp=Z,479nm,20.0s,baz=298,slow=33
RAO Raoul Island 94.01 241 LR LR 17 13 40.1
comp=Z,414nm,19.7s,baz=96,slow=29
MNK Minsk 94.70 31 *i* P **P** **16 42 07.3 0.0**
MNK *i* *SP **sP** **16 42 31.5 -0.1**
MNK *i* 16 45 56.9
MNK *i* PPP PPP 16 47 57.4
MNK *i* S **SKSac** **16 52 37.1 -0.2**
MNK *i* *SS **S** **16 53 07.9 -7.6**
MNK *i* SS **SS** **16 59 40.4 +1.1**
MNK *i* SSS SSS 17 03 24.9
MNK pmax pmax
comp=E,29nm,0.9s
MNK pmax pmax
comp=N,39nm,0.9s
MNK pmax pmax
comp=Z,12nm,0.6s
MNK MLR MLR
comp=E,1µm,19.0s
MNK MLR MLR
comp=N,1µm,21.0s
MNK MLR MLR
comp=Z,570nm,20.0s
BELA Belgrano 2 96.65 170 P **P** **16 42 15.4 -0.1**
BELA IAmb IAmb 16 42 17.1
comp=Z,21nm,1.2s
NRIK Noril'sk 97.18 1 LR LR 17 29 33.7
comp=Z,1µm,20.4s,baz=2.0,slow=37
AKASG Malin Array Be 97.40 34 LR LR 17 26 43.7
comp=Z,293nm,20.0s,baz=272,slow=36
YAK Yakutsk 98.08 342 LR LR 17 32 49.6
comp=Z,346nm,21.4s,baz=32,slow=39
MLR Muntele Rosu 98.14 39 LR LR 17 22 27.9
comp=Z,200nm,20.0s,baz=286,slow=33
OBN Obninsk 98.47 27 LR LR 17 25 37.5
comp=Z,414nm,20.8s,baz=224,slow=35
OBN Obninsk 98.47 27 *e*P **P** **16 42 24.4 +0.1**
OBN *e* 16 46 28.4
OBN *e*S S 16 52 49.7 -58
OBN pmax pmax
comp=Z,4.0nm,0.6s
OBN MLR MLR
comp=Z,490nm,19.0s
URZ Urewera 99.87 233 LR LR 17 17 40.7
comp=Z,376nm,21.7s,baz=85,slow=29
SNAA Sanae 102.29 161 P **Pdif** **16 42 40.1 -0.8**
comp=Z,2.9nm,0.9s,baz=299,slow=8.7,SNR=4.8
SNAA Sanae 102.29 161 **Pdif** **16 42 41.1 +0.2**
SNAA IAMs_20 IAMs_20 17 22 10.4
comp=Z,242nm,20.0s
SNAA Sanae 102.29 161 P **Pdif** **16 42 41.1 +0.2**
SNAA MLR MLR
comp=Z,200nm,20.0s
QSPA South Pole Qui 103.64 180 Pdiff **Pdif** **16 42 48.7 +1.6**
comp=Z,0.9nm,1.1s,baz=149,slow=2.6,SNR=3.1
QSPA South Pole Qui 103.64 180 **Pdif** **16 42 52.3 +5.1**
ANTO Ankara 105.36 42 IAMs_20 IAMs_20 17 36 11.3
comp=Z,298nm,22.0s
KIV Kislovodsk 108.75 34 IAMs_20 IAMs_20 17 33 22.1
comp=Z,418nm,21.0s
BVAR Borovoye Array 111.63 12 PKiKP **PKiKP** **16 47 20.1 -0.3**
comp=Z,1.6nm,0.6s,baz=349,slow=1.5,SNR=9.6
BVAR PKKPbc **PKKPbc** **16 58 13.9 -2.3**
comp=Z,0.2nm,0.3s,baz=204,slow=3.2,SNR=3.6
BVAR PKKPab **PKKPab** **16 58 23.3 -2.9**
comp=Z,1.2nm,0.9s,baz=197,slow=3.0,SNR=5.0
HIA Hailar 111.72 339 IAMs_20 IAMs_20 17 41 02.0
comp=Z,442nm,21.0s
MJAR Matsushiro Arr 111.89 319 PKiKP **PKiKP** **16 47 20.9 -0.5**
comp=Z,0.8nm,0.5s,baz=86,slow=1.5,SNR=2.5
MJAR Matsushiro Arr 111.89 319 **PKiKP** **16 47 20.1 -1.2**
MAK Makhachkala 111.96 32 *c* *i*P **Pdif** **16 43 25.7 +1.1**
MAK *i* 16 47 19.3
MAK *e* 16 47 39.6
MAK *e* 16 48 04.0
MAK *e*PPP PPP 16 50 27.2
MAK *e* 16 53 57.8
MAK *e*PS **PS** **16 57 36.1 -2.5**
MAK *e*SS SS 17 03 39.4 +2.6

MAK				pmax	pmax			
	comp=Z,195nm,1.4s							
GNI	**Garni**	**112.44**	**35**	IAMs_20	IAMs_20	17 35 51.1		
	comp=Z,393nm,22.0s							
ZALV	**Zalesovo Beam**	**112.53**	**3**	PKiKP	**PKiKP**	**16 47 20.8**	**-1.2**
	comp=Z,1.8nm,0.5s,baz=313,slow=1.1,SNR=12							
ZALV				PKKPbc	**PKKPbc**	**16 58 14.8**	**+1.7**
	comp=Z,1.6nm,0.9s,baz=188,slow=4.2,SNR=5.4							
KURK	**Kurchatov**	**115.22**	**7**		**PKiKP**	**16 47 27.1**	**-0.1**
KURK	**Kurchatov**	**115.22**	**7**	*c i*PKIKP	**PKPdf**	**16 47 27.7**	**+0.4**
KURK				pmax	pmax			
	comp=Z,11nm,2.5s							
KURBB	**Kurchatov Arra**	**115.30**	**7**	PKP	**PKiKP**	**16 47 26.9**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=350,slow=1.4,SNR=38							
KURBB				pPKP	PKPdf	16 47 44.4	+17	
	comp=Z,2.2nm,0.7s,baz=348,slow=1.3,SNR=7.3							
KURBB				PKKPbc	**PKKPbc**	**16 58 01.9**	**-1.9**	
	comp=Z,0.9nm,0.8s,baz=182,slow=3.0,SNR=7.4							
ULN	**Ulaanbaatar**	**116.66**	**347**	IAMs_20	IAMs_20	17 42 44.5		
	comp=Z,408nm,21.0s							
ULN	**Ulaanbaatar**	**116.66**	**347**	*c i*PKiKP	**PKiKP**	**16 47 31.6**	**+1.2**
ULN				pmax	pmax			
	comp=Z,10.0nm,2.5s							
SONM	**Songino Array**	**116.83**	**347**	PKP	**PKPdf**	**16 47 30.4**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=18,slow=0.6,SNR=11							
SONM				pPKP	pPKPdf	16 47 48.5	-0.3	
	comp=Z,4.1nm,1.1s,baz=15,slow=0.1,SNR=6.5							
SONM				PKKPbc	**PKKPbc**	**16 57 56.2**	**-2.3**	
	comp=Z,0.6nm,0.3s,baz=222,slow=1.9,SNR=4.0							
KSRS	**Korea Array**	**117.39**	**326**	PKP	**PKiKP**	**16 47 32.2**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=10,slow=2.0,SNR=13							
KSRS				pPKP	**pPKPdf**	**16 47 50.1**	**+0.2**	
	comp=Z,7.3nm,0.9s,baz=21,slow=1.9,SNR=7.7							
XLT	**XiLinHaoTe**	**117.62**	**338**	*e*PKP	**PKPdf**	**16 47 32.4**	**+0.2**	
KSANE	**Kasane**	**118.58**	**103**		**PKPdf**	**16 47 34.0**	**-0.8**	
BOSA	**Boshof**	**119.27**	**115**	PKP	**PKPdf**	**16 47 35.5**	**-0.4**	
	comp=Z,20nm,0.8s,baz=263,slow=2.7,SNR=28							
BOSA	**Boshof**	**119.27**	**115**	PKPdf	**PKPdf**	**16 47 35.1**	**-0.8**	
MK31	**Makanchi Array**	**119.48**	**5**	*c i*PKiKP	**PKPdf**	**16 47 35.5**	**-0.2**	
MKAR	**Makanchi Array**	**119.48**	**5**	PKP	**PKPdf**	**16 47 34.6**	**-1.0**	
	comp=Z,2.9nm,0.7s,baz=341,slow=3.2,SNR=18							
MKAR				pPKP	**pPKPdf**	**16 47 52.7**	**-1.1**	
	comp=Z,2.1nm,0.8s,baz=327,slow=2.4,SNR=6.1							
MKAR	**Makanchi Array**	**119.48**	**5**	PKPdf	**PKPdf**	**16 47 34.5**	**-1.2**	
MKAR					**pPKPdf**	**16 47 52.5**	**-1.3**	
LSZ	**Lusaka**	**121.18**	**100**	PKPdf	**PKPdf**	**16 47 38.9**	**-0.9**	
LSZ	**Lusaka**	**121.18**	**100**	PKiKP	**PKPdf**	**16 47 38.9**	**-0.9**	
HHC	**Hu-ho-hao-te**	**121.88**	**340**	*e*PKP	**PKiKP**	**16 47 41.8**	**+1.1**	
HHC				LR	LR			
	comp=Z,350nm,18.5s							
HHC				LR	LR			
	comp=Z,290nm,21.0s							
HHC				LR	LR			
	comp=Z,490nm,19.3s							
AAK	**Ala-Archa**	**122.37**	**13**	*ce*PKiKP	**PKiKP**	**16 47 43.2**	**+1.5**	
AAK				pmax	pmax			
	comp=Z,3.0nm,0.7s							
BTO	**Baotou**	**122.59**	**341**	*e*PKP	**PKPdf**	**16 47 40.3**	**-1.6**	
BTO				sPKP	**sPKPdf**	**16 48 12.3**	**+5.6**	
BTO				LR	LR			
	comp=Z,620nm,16.1s							
BTO				LR	LR			
	comp=Z,510nm,13.5s							
BTO				LR	LR			
	comp=Z,740nm,19.6s							
WMQ	**Urumqi**	**122.75**	**1**	*e*PKP	**PKiKP**	**16 47 43.3**	**+1.0**	
WMQ				LR	LR			
	comp=Z,640nm,24.1s							
WMQ				LR	LR			
	comp=Z,1μm,23.9s							
MAW	**Mawson**	**123.46**	**168**	PKP	**PKPdf**	**16 47 42.3**	**-0.2**	
	comp=Z,5.4nm,0.9s,baz=241,slow=4.4,SNR=7.7							
HNS	**HongShan**	**123.76**	**336**	⇑PKP	**PKiKP**	**16 47 44.9**	**+0.6**	
HNS				LR	LR			
	comp=Z,380nm,17.5s							
HNS				LR	LR			
	comp=Z,240nm,17.8s							
HNS				LR	LR			
	comp=Z,410nm,19.8s							
LODK	**Lodwar**	**124.06**	**76**	IAMs_20	IAMs_20	17 38 50.4		
	comp=Z,269nm,19.0s							
CHGR	**Chuyangaron**	**124.69**	**19**	PKPdf	**PKPdf**	**16 47 45.3**	**-0.7**	
CHGR	**Chuyangaron**	**124.69**	**19**	PKiKP	**PKPdf**	**16 47 45.3**	**-0.7**	
CTAO	**Charters Tower**	**125.14**	**255**	PKPdf	**PKiKP**	**16 47 47.8**	**+0.3**	
CTAO	**Charters Tower**	**125.14**	**255**	PKiKP	**PKiKP**	**16 47 47.8**	**+0.3**	
KSH	**Kashi**	**125.67**	**12**	PKP	**PKiKP**	**16 47 49.5**	**+1.2**	
KSH				LR	LR			
	comp=Z,320nm,22.0s							
KSH				LR	LR			
	comp=Z,310nm,20.9s							
KSH				LR	LR			
	comp=Z,500nm,22.8s							
GTA	**Gaotai**	**126.23**	**350**	PKP	**PKiKP**	**16 47 49.4**	**0.0**	
GTA				LR	LR			
	comp=Z,550nm,21.1s							
GTA				LR	LR			
	comp=Z,280nm,20.4s							
GTA				LR	LR			
	comp=Z,900nm,24.7s							
NJ2	**Nanjing**	**126.32**	**328**	*e*PKP	**PKiKP**	**16 47 50.0**	**+0.4**	
KBL	**Kabul**	**128.39**	**21**	PKPdf	**PKPdf**	**16 47 53.2**	**-0.1**	
KBL	**Kabul**	**128.39**	**21**	PKiKP	**PKPdf**	**16 47 53.2**	**-0.1**	
LZH	**Lanzhou**	**128.56**	**345**	*e*PKP	**PKiKP**	**16 47 54.8**	**+0.6**	
LZH				LR	LR			
	comp=Z,510nm,21.6s							
LZH				LR	LR			
	comp=Z,400nm,20.3s							
LZH				LR	LR			
	comp=Z,660nm,21.3s							
STKA	**Stephens Creek**	**128.82**	**240**	PKP	**PKPdf**	**16 47 53.4**	**-0.5**	
	comp=Z,15nm,0.9s,baz=72,slow=2.9,SNR=20							
STKA				pPKP	**pPKPdf**	**16 48 11.3**	**-0.7**	
	comp=Z,8.4nm,1.1s,baz=181,slow=1.1,SNR=4.2							
STKA	**Stephens Creek**	**128.82**	**240**	PKPdf	**PKiKP**	**16 47 54.5**	**-0.1**	
STKA	**Stephens Creek**	**128.82**	**240**	PKiKP	**PKiKP**	**16 47 54.5**	**-0.1**	
XAN	**Xi'an**	**128.91**	**339**	PKP	**Pdif**	**16 44 43.3**	**+3.0**	
WHN	**Wuhan**	**129.75**	**331**	PKP	**PKiKP**	**16 47 56.5**	**0.0**	
WHN				LR	LR			
	comp=Z,2μm,21.0s							
UOSS	**Minazif**	**129.96**	**40**	IAMs_20	IAMs_20	17 43 01.6		
	comp=Z,210nm,22.0s							
GOMU	**GeErMu**	**130.09**	**354**	PKP	**PKiKP**	**16 47 57.9**	**+0.4**	
GOMU				SS	SS	17 07 28.8	+0.3	
GOMU				LR	LR			
	comp=Z,240nm,21.6s							
GOMU				LR	LR			
	comp=Z,170nm,20.6s							
ENH	**Enshi**	**132.08**	**336**	PKPdf	**PKPdf**	**16 48 00.3**	**+0.1**	
CD2	**Chengdu**	**133.47**	**343**	PKP	**PKiKP**	**16 48 05.6**	**+1.5**	
WRAB	**Tennant Creek**	**136.33**	**255**	PKPdf	**PKPdf**	**16 48 09.1**	**+0.7**	
WRAB	**Tennant Creek**	**136.33**	**255**	*ce*PKIKP	**PKPdf**	**16 48 07.5**	**-0.9**	
WRAB				pmax	pmax			
	comp=Z,24nm,1.0s							
WRA	**Warramunga Arr**	**136.34**	**255**	PKhKP	PKPpre	16 47 54.9		
	comp=Z,1.5nm,0.8s,baz=92,slow=3.1,SNR=7.4							
WRA				PKP	**PKPdf**	**16 48 09.2**	**+0.8**	
	comp=Z,12nm,0.8s,baz=90,slow=2.0,SNR=36							
WRA				pPKP	pPKPdf	16 48 25.9	-0.7	
	comp=Z,5.5nm,0.9s,baz=95,slow=1.5,SNR=3.3							
WRA				PP	**PP**	**16 50 47.4**	**-2.5**	
	comp=Z,3.9nm,1.1s,baz=91,slow=7.3,SNR=7.1							
WRA				SKPab	**SKiKP**	**16 51 40.1**	**-0.9**	
	comp=Z,1.7nm,0.8s,baz=91,slow=2.8,SNR=5.2							
WRA	**Warramunga Arr**	**136.34**	**255**		**PKPdf**	**16 48 08.8**	**+0.4**	
SWI	**Sorong**	**136.37**	**283**	PKP	**PKiKP**	**16 48 11.3**	**+1.0**	
AS31	**Alice Springs**	**136.56**	**250**		PKPpre	16 47 59.0		
ASAR	**Alice Springs**	**136.56**	**250**	PKhKP	PKPpre	16 47 54.0		
	comp=Z,1.2nm,0.7s,baz=92,slow=3.4,SNR=11							
ASAR				PKP	**PKPdf**	**16 48 09.1**	**+0.4**	
	comp=Z,5.3nm,0.9s,baz=92,slow=2.1,SNR=16							
ASAR				pPKP	pPKPdf	16 48 26.1	-0.8	
	comp=Z,3.6nm,0.9s,baz=92,slow=1.7,SNR=4.3							
ASAR				PP	**PP**	**16 50 49.1**	**-2.1**	
	comp=Z,1.2nm,1.1s,baz=88,slow=4.9,SNR=2.7							
ASAR				SKPab	**SKiKP**	**16 51 40.5**	**-0.9**	
	comp=Z,1.3nm,0.9s,baz=94,slow=2.4,SNR=5.1							
ASAR				PKKP	**PKKPdf**	**16 57 44.2**	**-2.5**	
	comp=Z,0.5nm,1.0s,baz=273,slow=1.7,SNR=4.7							
ASAR	**Alice Springs**	**136.56**	**250**		PKPpre	16 47 56.4		
GYA	**Guiyang**	**136.59**	**337**	⇑PKP	**PKPdf**	**16 48 09.3**	**+0.4**	
LSA	**Lhasa**	**136.82**	**357**	PKPdf	**PKPdf**	**16 48 10.0**	**+0.3**	
LSA	**Lhasa**	**136.82**	**357**	PKiKP	**PKPdf**	**16 48 10.0**	**+0.3**	
LSA				MLR	MLR			
	comp=Z,500nm,22.0s							
PZH	**PanZhiHua**	**138.19**	**343**	PKP	**PKPdf**	**16 48 12.3**	**+0.4**	
ABPO	**Ambohimpanom**	**139.56**	**103**	PKPdf	**PKPdf**	**16 48 15.4**	**+0.9**	
ABPO	**Ambohimpanom**	**139.56**	**103**	PKIKP	**PKPdf**	**16 48 15.4**	**+0.9**	
FORT	**Forrest**	**140.36**	**238**	PKPdf	**PKPdf**	**16 48 16.5**	**+1.0**	
SHL	**Shillong**	**140.88**	**356**	PKPpre	PKPpre	16 48 09.6		
SHL	**Shillong**	**140.88**	**356**	PKHKP	PKPpre	16 48 09.6		
QIZ	**Qiongzhong**	**141.59**	**327**	PKP	**PKPdf**	**16 48 18.3**	**+0.3**	
QIZ				PP	**PP**	**16 51 21.4**	**+0.7**	
QIZ				SS	SS	17 09 47.4	+0.9	
QIZ				LR	LR			
	comp=Z,230nm,10.6s							
QIZ				LR	LR			
	comp=Z,350nm,11.7s							
QIZ				LR	LR			
	comp=Z,390nm,21.9s							
LUWI	**Luwuk**	**144.38**	**288**	PKPdf	PKPbc	16 48 21.9	+0.3	
FITZ	**Fitzroy Crossi**	**144.61**	**258**	PKPdf	PKPbc	16 48 22.4	+0.2	
SOEI	**Soe**	**145.35**	**273**	PKP	**PKPab**	**16 48 26.8**	**+1.8**	
APSI	**Ampana**	**145.37**	**289**	PKP	**PKPab**	**16 48 25.8**	**+0.9**	
BATI	**Baumata**	**146.02**	**272**	PKP	**PKPab**	**16 48 28.7**	**+1.3**	
CHTO	**Chiang Mai**	**146.27**	**343**	IAMs_20	IAMs_20	18 00 46.7		
	comp=Z,243nm,21.0s							
MPSI	**Mapaga**	**146.45**	**292**	PKP	**PKPdf**	**16 48 27.2**	**+0.6**	
CMAR	**Chiang Mai Arr**	**146.61**	**343**	PKPbc	**PKPbc**	**16 48 27.9**	**-0.5**	
	comp=Z,43nm,0.6s,baz=16,slow=2.5,SNR=352							
CMAR				pPKPbc	**pPKPdf**	**16 48 43.4**	**-1.5**	
	comp=Z,29nm,0.7s,baz=11,slow=2.6,SNR=13							
CMAR	**Chiang Mai Arr**	**146.61**	**343**	PKPdf	**PKPdf**	**16 48 25.7**	**-1.1**	
PCI	**Palu**	**147.02**	**290**	PKP	**PKiKP**	**16 48 32.0**	**-0.2**	
MMRI	**Maumere**	**147.11**	**275**	PKP	**PKPbc**	**16 48 29.7**	**-0.2**	
HYBB	**Hyderabad (bro**	**147.38**	**19**	*e*PKPdf	**PKPdf**	**16 48 28.5**	**+0.4**	
HYBB				*e*PKPbc	**PKPbc**	**16 48 30.9**	**+0.3**	
HYBB				*e*SKSdf	**SKSdf**	**16 55 33.4**	**+1.5**	
EDFI	**Ende, Flores**	**147.66**	**275**	PKP	**PKPdf**	**16 48 30.1**	**+1.3**	
TTSI	**Tana Toraja**	**147.85**	**286**	PKP	**PKPbc**	**16 48 32.9**	**+0.9**	
NWAO	**Narrogin (SRO)**	**148.00**	**228**		**PKPbc**	**16 48 32.2**	**+0.4**	
NWAO	**Narrogin (SRO)**	**148.00**	**228**	PKP2	**PKPbc**	**16 48 32.2**	**+0.4**	
BNSI	**Bone**	**148.04**	**284**	PKP	**PKPdf**	**16 48 30.9**	**+1.6**	
DLV	**Lat**	**148.08**	**322**	IAMs_20	IAMs_20	17 52 10.3		
	comp=Z,229nm,21.0s							
BSSI	**Bau Bau, Buton**	**148.20**	**281**	PKP	**PKPbc**	**16 48 33.2**	**+0.3**	
SPSI	**Sidrap Palu**	**148.22**	**285**	PKP	**PKPdf**	**16 48 30.5**	**+0.9**	
BKSI	**Bulukumba**	**148.31**	**282**	PKP	**PKPbc**	**16 48 33.2**	**0.0**	
KAPI	**Kappang**	**148.57**	**283**	PKPbc	**PKPbc**	**16 48 34.0**	**+0.2**	
KAPI	**Kappang**	**148.57**	**283**	PKP2	**PKPbc**	**16 48 34.0**	**+0.2**	
WSI	**Waingapu**	**149.19**	**274**	PKP	**PKiKP**	**16 48 36.3**	**-0.3**	
PSA00	**Pilbara Seismi**	**149.70**	**251**	PKPbc	**PKPbc**	**16 48 36.2**	**-0.3**	
PSA00	**Pilbara Seismi**	**149.70**	**251**		**PKPdf**	**16 48 31.4**	**-0.3**	
MBWA	**Marble Bar**	**149.87**	**251**	PKPbc	**PKPbc**	**16 48 36.7**	**-0.2**	
MORW	**Morawa**	**150.71**	**234**	PKPbc	**PKPbc**	**16 48 38.1**	**-0.6**	
SBUM	**Sibu**	**152.01**	**303**	IAMs_20	IAMs_20	18 12 53.3		
	comp=Z,180nm,19.0s							
TWSI	**Taliwang, Sumb**	**152.31**	**277**	PKP	**PKPdf**	**16 48 37.0**	**+1.1**	
IPM	**Ipoh**	**158.41**	**326**	PKPdf	**PKPdf**	**16 48 42.1**	**-2.2**	
KCSI	**Kotacane, Aceh**	**160.85**	**333**	PKP	**PKPdf**	**16 48 48.2**	**+1.7**	
PSI	**Prapat**	**160.93**	**329**	PKIKP	**PKPdf**	**16 48 46.6**	**-0.7**	
RPSI	**Rantau Prapat**	**161.02**	**328**	PKPdf	**PKPdf**	**16 48 46.5**	**-0.6**	
GSI	**Gunungsitoli**	**162.89**	**330**	PKP	**PKPdf**	**16 48 51.3**	**+2.2**	

*CATAC **13** 16:39:20.1±0.6, 14°N±3°×9°1W±°, h6km±3km, M4.2/12, MLv4.2/12, Error ellipse: s-maj=7.1km s-min=2.9km az=27.3, confirmed*
*SNET **13** 16:39:32.4±18.0, 13°.84N×91°.21W, h249km, ML4.3*
ISC 13 16:39:19.1±2.4, **13°.5N**±0°.1×**91°.03W**±0°.07, **h29**km, **n21**, σ0°48/21, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**1.04**	**71**	P	**Pb**	**16 39 39.3**	**+0.7**
FAME	**Alcaldia de Sa**	**1.04**	**71**	S	**Sb**	**16 39 51.8**	**0.0**
RTAL	**Retalhuleu**	**1.20**	**328**	P	**Pb**	**16 39 41.4**	**+0.1**
RTAL	**Retalhuleu**	**1.20**	**328**	S	**Sn**	**16 39 55.2**	**-0.1**
NUBE	**Las Nubes**	**1.28**	**72**	P	**Pb**	**16 39 42.8**	**+0.2**
NUBE	**Las Nubes**	**1.28**	**72**	S	**Sb**	**16 39 58.3**	**-0.4**
LOAL	**Lomas de Alarc**	**1.31**	**68**	P	**Pb**	**16 39 43.4**	**+0.3**
LOAL	**Lomas de Alarc**	**1.31**	**68**	S	**Sb**	**16 39 59.9**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.32**	**67**	P	**Pn**	**16 39 41.7**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.32**	**67**	S	**Sn**	**16 39 58.7**	**+0.5**
CEVE	**Cerro Verde**	**1.40**	**77**	P	**Pb**	**16 39 45.1**	**+0.3**
UNIC	**Universidad Ca**	**1.51**	**72**	P	**Pb**	**16 39 47.2**	**+0.6**
UNIC	**Universidad Ca**	**1.51**	**72**	S	**Sb**	**16 40 05.5**	**0.0**
JAYA	**Jayaque - finc**	**1.54**	**84**	S	**Sb**	**16 40 05.7**	**-0.7**
JAYA	**Jayaque - finc**	**1.54**	**84**	P	**Pb**	**16 39 47.1**	**-0.1**
PMON	**Piamonte**	**1.68**	**83**	P	**Pb**	**16 39 49.1**	**-0.4**
LOMA	**Loma Larga**	**1.81**	**85**	S	**Sb**	**16 40 13.4**	**-0.6**
MTO3	**Montecristo**	**1.85**	**61**	P	**Pb**	**16 39 51.8**	**-0.6**
MTO3	**Montecristo**	**1.85**	**61**	S	**Sb**	**16 40 15.1**	**-0.1**
ESQI	**Esquipulas**	**1.94**	**57**	P	**Pb**	**16 39 52.9**	**-1.0**
ESQI	**Esquipulas**	**1.94**	**57**	S	**Sb**	**16 40 18.1**	**+0.2**

*CATAC **13** 16:39:52.2±0.5, 14°N±3°×9°1W±°, h13km±2km, M4.2/14, MLv4.2/14, Error ellipse: s-maj=6.8km s-min=2.5km az=30.8, confirmed*
*GCG **13** 16:39:54.6±1.8, 13°.73N×90°.97W, h50km±17km, MD3.9, ML4.4*
ISC 13 16:39:49.4±1.6, **13°.59N**±0°.06×**90°.99W**±0°.04, **h1**km±10km, **n67**, σ0°60/73, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.48**	**93**	*i* P	**Pn**	**16 40 04.4**	**+0.9**
ESSG	**Sabana Grande**	**0.80**	**11**	*e*P	**Pn**	**16 40 07.6**	**-0.4**
ESSG				*e*S	**Sb**	**16 40 17.5**	**-0.2**
FG16	**Alotenango, Sa**	**0.82**	**35**	*e*P	**Pn**	**16 40 09.1**	**+0.6**
FG16				*e*S	**Sn**	**16 40 20.7**	**-0.7**
FG16				IAML		16 40 22.6	
	comp=N,73μm,0.3s						
PCG5	**San Vicente Pa**	**0.86**	**44**	*i* P	**Pn**	**16 40 08.5**	**-0.4**
STG8	**El Palmar, Qui**	**0.92**	**338**	*e*P	Pn	16 40 14.7	+4.9
STG8				IAML		16 40 30.4	
	comp=N,9μm,0.2s						
FAME	**Alcaldia de Sa**	**0.98**	**75**	P	**Pn**	**16 40 10.4**	**0.0**
FAME	**Alcaldia de Sa**	**0.98**	**75**	S	**Sb**	**16 40 23.1**	**+0.2**
RTAL	**Retalhuleu**	**1.15**	**324**	*e*S	**Sg**	**16 40 26.1**	**-0.4**
RTAL	**Retalhuleu**	**1.15**	**324**	S	**Sb**	**16 40 27.1**	**-0.6**
RTAL	**Retalhuleu**	**1.15**	**324**	P	**Pn**	**16 40 13.3**	**+0.5**
NUBE	**Las Nubes**	**1.22**	**75**	*i* P	**Pn**	**16 40 14.4**	**+0.5**
NUBE				*e*S	**Sb**	**16 40 29.8**	**0.0**
NUBE	**Las Nubes**	**1.22**	**75**	P	**Pn**	**16 40 14.4**	**+0.5**
LOAL	**Lomas de Alarc**	**1.25**	**71**	P	**Pn**	**16 40 15.4**	**+1.3**
LOAL	**Lomas de Alarc**	**1.25**	**71**	S	**Sn**	**16 40 31.4**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.25**	**70**	*e*S	**Sg**	**16 40 29.5**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.25**	**70**	S	**Sg**	**16 40 29.4**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.25**	**70**	*e*P	**Pg**	**16 40 13.0**	**-0.5**
SOKI	**Kika Raxquin**	**1.29**	**342**	*e*P	**Pn**	**16 40 15.4**	**+0.5**
SOKI				*e*S	**Sb**	**16 40 30.9**	**-1.0**
SOKI				IAML		16 40 36.3	
	comp=E,7μm,0.5s						
CEVE	**Cerro Verde**	**1.35**	**80**	S	**Sn**	**16 40 34.5**	**0.0**
QUEO	**Labor Ovalle**	**1.37**	**338**	*e*P	**Pb**	**16 40 17.0**	**+0.9**
QUEO				IAML		16 40 44.4	
	comp=E,5μm,0.4s						
RBDL	**Robledal**	**1.37**	**68**	*e*S	**Sn**	**16 40 35.0**	**+0.2**
RBDL	**Robledal**	**1.37**	**68**	*e*P	**Pb**	**16 40 17.1**	**+1.1**
SNJE	**San Jose**	**1.38**	**78**	*e*S	**Sn**	**16 40 34.4**	**-0.6**
SNJE	**San Jose**	**1.38**	**78**	*e*P	**Pb**	**16 40 17.0**	**+0.9**
SNJE	**San Jose**	**1.38**	**78**	*e*P	**Pb**	**16 40 17.1**	**+0.9**
JUAM	**Asuncion Mita**	**1.45**	**59**	*e*P	**Pg**	**16 40 18.1**	**+0.8**
JUAM				*e*S	**Sn**	**16 40 36.8**	**+0.1**
JUAM				IAML		16 40 39.0	
	comp=N,3μm,0.3s						
UNIC	**Universidad Ca**	**1.46**	**74**	P	**Pg**	**16 40 18.1**	**+0.7**
UNIC	**Universidad Ca**	**1.46**	**74**	S	**Sn**	**16 40 36.6**	**-0.2**
APG	**El Apazote**	**1.50**	**20**	*e*P	**Pg**	**16 40 18.7**	**+0.5**
JAYA	**Jayaque - finc**	**1.50**	**87**	*e*P	**Pg**	**16 40 18.5**	**+0.2**
JAYA				*e*S	**Sb**	**16 40 36.3**	**-1.6**
JAYA	**Jayaque - finc**	**1.50**	**87**	P	**Pg**	**16 40 18.5**	**+0.2**
CEDA	**San Andres**	**1.57**	**82**	P	**Pg**	**16 40 19.7**	**+0.2**
CEDA	**San Andres**	**1.57**	**82**	S	**Sg**	**16 40 40.0**	**+0.2**
LALI	**Alcalda de L**	**1.63**	**93**	*e*S	**Sn**	**16 40 40.3**	**-0.7**
LALI	**Alcalda de L**	**1.63**	**93**	*e*P	**Pb**	**16 40 20.3**	**-0.1**
LALI	**Alcalda de L**	**1.63**	**93**	P	**Pg**	**16 40 20.8**	**+0.1**
LALI	**Alcalda de L**	**1.63**	**93**	S	**Sn**	**16 40 40.8**	**-0.2**
LALI	**Alcalda de L**	**1.63**	**93**	*e*P	**Pb**	**16 40 20.3**	**-0.1**
PMON	**Piamonte**	**1.64**	**86**	S	**Sn**	**16 40 41.2**	**-0.2**
SMCA	**Catarina**	**1.64**	**320**	*e*P	**Pn**	**16 40 19.7**	**+0.2**
SMCA				IAML		16 40 40.8	
	comp=N,1μm,0.1s						
BOQS	**Boqueron**	**1.67**	**85**	*e*P	**Pb**	**16 40 21.4**	**+0.2**
QUIS	**Sacapulas**	**1.69**	**357**	*e*P	**Pg**	**16 40 21.9**	**0.0**
QUIS				*e*S	**Sg**	**16 40 43.5**	**-0.4**
QUIS				IAML		16 40 44.3	
	comp=E,3μm,0.4s						
UEES	**Universidad Ev**	**1.71**	**86**	S	**Sn**	**16 40 42.8**	**-0.3**
UTEC	**Universidad Te**	**1.75**	**86**	S	**Sb**	**16 40 44.4**	**-0.5**
PANCS	**Alcalda de**	**1.76**	**89**	P	**Pn**	**16 40 21.9**	**+0.7**
PANCS	**Alcalda de**	**1.76**	**89**	S	**Sn**	**16 40 43.5**	**-0.9**
LOMA	**Loma Larga**	**1.77**	**88**	*e*S	**Sb**	**16 40 44.9**	**-0.7**
LOMA	**Loma Larga**	**1.77**	**88**	P	**Pb**	**16 40 23.1**	**+0.3**
LOMA	**Loma Larga**	**1.77**	**88**	S	**Sn**	**16 40 44.8**	**+0.1**
LOMA	**Loma Larga**	**1.77**	**88**	*e*P	**Pb**	**16 40 22.8**	**0.0**
IGN	**Direccin Gen**	**1.78**	**86**	S	**Sb**	**16 40 45.6**	**-0.1**
MTO3	**Montecristo**	**1.78**	**63**	*e*P	**Pg**	**16 40 23.3**	**-0.2**
MTO3	**Montecristo**	**1.78**	**63**	*e*P	**Pg**	**16 40 23.5**	**-0.1**
MTO3	**Montecristo**	**1.78**	**63**	S	**Sg**	**16 40 46.1**	**-0.5**
MTO3	**Montecristo**	**1.78**	**63**	P	**Pg**	**16 40 23.5**	**-0.1**
HUEH	**Huehuetenango**	**1.79**	**344**	S	**Sb**	**16 40 45.8**	**-0.4**
UDBS	**Universidad Do**	**1.79**	**86**	S	**Sb**	**16 40 45.9**	**-0.3**
ESQI	**Esquipulas**	**1.87**	**59**	P	**Pg**	**16 40 25.3**	**0.0**
ESQI	**Esquipulas**	**1.87**	**59**	S	**Sg**	**16 40 49.1**	**-0.5**
ZAFR2	**Estanzuela, Za**	**1.87**	**58**	*e*P	**Pn**	**16 40 23.2**	**+0.5**
LBRS	**Las Brisas**	**1.90**	**85**	*e*P	**Pb**	**16 40 25.5**	**+0.5**
PAVA	**Las Pavas**	**2.00**	**86**	P	**Pn**	**16 40 25.6**	**+1.1**
PAVA	**Las Pavas**	**2.00**	**86**	S	**Sb**	**16 40 52.1**	**-0.2**
UESV	**Universidad de**	**2.15**	**89**	S	**Sn**	**16 40 54.6**	**+0.8**
TECO	**Alcaldia de Te**	**2.15**	**91**	S	**Sn**	**16 40 55.0**	**+1.0**
TECO	**Alcaldia de Te**	**2.15**	**91**	P	**Pb**	**16 40 28.5**	**-0.7**
CNCH	**Conchagua**	**3.09**	**95**	*e*P	**Pb**	**16 40 43.8**	**-1.6**

GII 13 16:44:22.5±0.0, **32°.672N**±0°.001×**35°.212E**±0°.001, **h21**km, **Mws1.6, confirmed, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HYGV	**Hayogev**	**0.06**	**188**	P	**Pb**	**16 44 26.4**	**+0.2**
HYGV	**Hayogev**	**0.06**	**188**	S	**Sb**	**16 44 29.5**	**+0.6**
BLGI	**Bet Lehem HaGe**	**0.06**	**344**	P	**Pb**	**16 44 26.5**	**+0.2**
BLGI	**Bet Lehem HaGe**	**0.06**	**344**	S	**Sb**	**16 44 29.5**	**+0.5

ARCES	**ARCESS Array B**	**30.70**	**35**	P		**P**		**16 59 22.8**	**-0.1**
	comp=Z,3.8nm,1.0s,baz=274,slow=7.7,SNR=1.6								
	comp=Z,3.8nm,1.0s								
FINES	**FINESS Array B**	**31.15**	**50**	P		**P**		**16 59 25.5**	**-1.5**
	comp=Z,2.4nm,0.9s,baz=272,slow=11,SNR=9.4								
	comp=Z,2.4nm,0.9s								
FINES	**FINESS Array B**	**31.15**	**50**	P		**P**		**16 59 26.5**	**-0.4**
BURAR	**Bucovina Array**	**35.15**	**75**	P		**P**		**17 00 02.4**	**+0.2**
KIEV	**Kiev**	**36.08**	**68**	P		**P**		**17 00 09.7**	**-0.2**
KIEV				IAmb		IAmb		17 00 10.6	
	comp=Z,14nm,1.5s								
AKASG	**Malin Array Be**	**36.08**	**68**	P		**P**		**17 00 07.5**	**-2.4**
	comp=Z,1.0nm,0.6s,baz=291,slow=8.8,SNR=2.3								
	comp=Z,1.0nm,0.6s								
AKBB	**Malin Array Si**	**36.08**	**68**	P		**P**		**17 00 10.2**	**+0.2**
AKBB				IAmb		IAmb		17 00 10.7	
	comp=Z,17nm,1.6s								
BRTR	**Keskin Array B**	**44.59**	**80**	P		**P**		**17 01 21.2**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=306,slow=6.9,SNR=2.7								
	comp=Z,0.7nm,0.7s								
TORD	**Torodi Ar. Bea**	**46.48**	**135**	P		**P**		**17 01 35.6**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=338,slow=12,SNR=1.7								
	comp=Z,1.3nm,0.3s								
F31M	**Tsiigehtchic**	**47.92**	**330**	P		**P**		**17 01 46.5**	**+0.2**
F31M				IAmb		IAmb		17 02 10.5	
	comp=Z,28nm,1.9s								
ARTI	**Arti**	**48.39**	**48**	P		**P**		**17 01 50.4**	**+0.3**
ARTI				IAmb		IAmb		17 01 51.7	
	comp=Z,12nm,0.6s								
G31M	**Satah River**	**48.40**	**329**	P		**P**		**17 01 49.7**	**-0.3**
G31M				IAmb		IAmb		17 03 36.3	
	comp=Z,11nm,0.8s								
F30M	**Barrier River**	**48.45**	**330**	P		**P**		**17 01 50.4**	**0.0**
F30M				IAmb		IAmb		17 03 37.4	
	comp=Z,8.8nm,0.5s								
AKTO	**Aktyubinsk**	**51.76**	**54**	P		**P**		**17 02 15.7**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=324,slow=6.4,SNR=5.3								
	comp=Z,2.3nm,0.7s								
BPMT	**Black Pine Rid**	**51.85**	**299**	P		**P**		**17 02 17.1**	**+0.2**
G24K	**Hadweenzic Riv**	**52.44**	**334**	P		**P**		**17 02 21.1**	**+0.4**
ABKAR	**Akbulak array**	**53.48**	**55**	P		**P**		**17 02 28.5**	**0.0**
BVAR	**Borovoye Array**	**55.92**	**46**	P		**P**		**17 02 45.0**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=313,slow=6.5,SNR=11								
	comp=Z,1.3nm,0.5s								
TXAR	**Lajitas Array**	**57.63**	**277**	P		**P**		**17 03 00.4**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=39,slow=6.0,SNR=1.8								
	comp=Z,0.2nm,0.5s								
KURBB	**Kurchatov Area**	**61.17**	**44**	P		**P**		**17 03 22.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=320,slow=6.5,SNR=4.6								
	comp=Z,0.5nm,0.8s								
MKAR	**Makanchi Array**	**65.70**	**44**	P		**P**		**17 03 53.5**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=338,slow=5.5,SNR=6.0								
	comp=Z,0.8nm,0.6s								
MKAR	**Makanchi Array**	**65.70**	**44**	P		**P**		**17 03 53.1**	**+0.3**
SONM	**Songino Array**	**73.67**	**29**	P		**P**		**17 04 43.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=324,slow=14,SNR=2.0								
	comp=Z,0.4nm,0.5s								
WRA	**Warramunga Arr**	**145.62**	**27**	PKPbc		**PKPab**		**17 12 47.6**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=344,slow=3.5,SNR=2.1								
ASAR	**Alice Springs**	**149.02**	**30**	PKPbc		**PKPbc**		**17 12 56.1**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=342,slow=2.4,SNR=9.1								
ASAR	**Alice Springs**	**149.02**	**30**			**PKPbc**		**17 12 55.7**	**-0.8**
VNDA	**Vanda**	**154.14**	**186**	PKPbc		**PKPbc**		**17 13 06.1**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=168,slow=2.0,SNR=5.7								

*IDC **13** 17:01:01.5±1.2,60˚01N×153˚22W,h95km±18km,mb3.7/10, mbtmp4.1/14,Error ellipse: s-maj=21.5km s-min=9.5km az=111.0*

*NEIC **13** 17:01:03.3±1.1,59˚94N±0˚05×153˚2W±0˚1,h116km±1km, Error ellipse: s-maj=7.4km s-min=6.9km az=111.0*

*AEIC **13** 17:01:04.8±1.6,59˚94N±0˚04×153˚17W±0˚10, h109km±4km,ML3.7,mb4.3/3(NEIC),ML3.9/180(NEIC), Error ellipse: s-maj=7.2km s-min=5.6km az=115.0*

ISC 13 17:01:03.0±0.6,59˚92N±0˚04×153˚09W±0˚04, h119km±5km,n239,σ0s97/214,mb4.2/11,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.04**	**13**		**Pn**	**17 01 19.3**	**-0.2**
ILS					**Sn**	**17 01 31.6**	**-0.2**
ILSW	**Iliamna Southw**	**0.07**	**337**		**Sn**	**17 01 31.1**	**-0.8**
ILSW	**Iliamna Southw**	**0.07**	**337**		**Pn**	**17 01 18.8**	**-0.6**
ILSW				IAML		17 01 32.2	
	comp=E,2μm,1.0s						
ILSW				IAML		17 01 32.7	
	comp=N,1μm,0.3s						
IVE	**Iliamna Volcan**	**0.11**	**19**		**Pn**	**17 01 19.4**	**-0.1**
IVE					**Sn**	**17 01 31.1**	**-0.9**
P19K	**Oil Pt**	**0.28**	**196**		**Sn**	**17 01 32.6**	**+0.1**
P19K	**Oil Pt**	**0.28**	**196**		**Pn**	**17 01 20.0**	**+0.2**
P19K				IAML		17 01 34.3	
	comp=N,7μm,0.6s						
O20K	**Slope Mountain**	**0.28**	**54**		**Pn**	**17 01 20.3**	**+0.4**
O20K					**Sn**	**17 01 32.3**	**-0.4**
RED	**Redoubt Volcan**	**0.53**	**17**		**Sn**	**17 01 34.1**	**-0.8**
RED	**Redoubt Volcan**	**0.53**	**17**		**Pn**	**17 01 21.1**	**-0.1**
RED				IAML		17 01 35.0	
	comp=E,3μm,0.8s						
RED				IAML		17 01 35.6	
	comp=N,2μm,0.9s						
AUL	**Augustine Lava**	**0.56**	**198**		**Pn**	**17 01 21.8**	**+0.5**
AU22	**Augustine Moun**	**0.57**	**194**		**Sn**	**17 01 35.3**	**+0.3**
RDSO	**Redoubt South**	**0.57**	**17**		**Pn**	**17 01 21.4**	**0.0**
RDSO					**Sn**	**17 01 34.6**	**-0.8**
AUCH	**Augustine Cone**	**0.58**	**198**		**Pn**	**17 01 22.1**	**+0.6**
AGU	**Augustine-Summ**	**0.59**	**198**		**Pn**	**17 01 21.9**	**+0.4**
RDWB	**Redoubt West**	**0.59**	**12**		**Pn**	**17 01 21.5**	**-0.1**
RDWB					**Sn**	**17 01 34.8**	**-0.9**
NCT	**North Crescent**	**0.65**	**7**		**Sn**	**17 01 35.3**	**-1.1**
RDJH	**Redoubt Jeurge**	**0.69**	**12**		**Pn**	**17 01 22.4**	**+0.1**
HOM	**Homer**	**0.78**	**109**		**Pn**	**17 01 23.7**	**+0.9**
HOM				IAML		17 01 40.5	
	comp=E,3μm,0.2s						
HOM				IAML		17 01 41.1	
	comp=N,4μm,0.4s						
CNPM	**China Poot**	**1.02**	**112**		**Sn**	**17 01 42.3**	**+0.4**
CNPM	**China Poot**	**1.02**	**112**		**Pn**	**17 01 25.7**	**+0.6**
CNPM				IAML		17 01 44.5	
	comp=N,2μm,0.3s						
CNPM				IAML		17 01 45.0	
	comp=E,2μm,0.4s						
Q19K	**Cape Douglas,**	**1.03**	**196**		**Pn**	**17 01 25.4**	**+0.1**
Q19K				IAML		17 01 47.3	
	comp=N,3μm,0.9s						
Q19K				IAML		17 01 49.0	
	comp=E,3μm,0.9s						
O18K	**Koktuh Hills**	**1.07**	**268**		**Pn**	**17 01 25.2**	**-0.5**
O18K					**Sn**	**17 01 41.3**	**-1.6**
BRLK	**Bradley Lake**	**1.12**	**97**		**Pn**	**17 01 26.6**	**+0.4**
BRLK				IAML		17 01 45.2	
	comp=E,3μm,0.2s						
BRLK				IAML		17 01 46.0	
	comp=N,2μm,0.3s						
N19K	**Bonanza Creek**	**1.14**	**323**		**Pn**	**17 01 26.0**	**-0.4**
N19K				IAML		17 01 43.6	
	comp=E,739nm,0.6s						
N19K				IAML		17 01 43.8	
	comp=N,460nm,0.5s						
BRSE	**Bradley Lake S**	**1.20**	**97**		**Sn**	**17 01 45.5**	**+0.3**
P18K	**Big Mountain,**	**1.21**	**245**		**Pn**	**17 01 26.4**	**-0.7**
CAPN	**Captain Cook N**	**1.29**	**48**		**Pn**	**17 01 30.1**	**+2.3**
SYI	**Shuyak Island**	**1.36**	**164**		**Sn**	**17 01 49.0**	**+0.7**
SYI	**Shuyak Island**	**1.36**	**164**		**Pn**	**17 01 29.5**	**+0.8**
SYI				IAML		17 01 50.2	
	comp=E,2μm,0.3s						
SPU	**Mount Spurr**	**1.37**	**21**		**Pn**	**17 01 29.0**	**+0.1**
SLKM	**Skilak Lake**	**1.55**	**66**		**Sn**	**17 01 52.0**	**-0.3**
SLKM	**Skilak Lake**	**1.55**	**66**		**Pn**	**17 01 31.3**	**+0.4**
N18K	**Kilae Creek**	**1.59**	**300**		**Pn**	**17 01 30.9**	**-0.5**
KAHC	**Katmai Hardscr**	**1.61**	**219**		**Pn**	**17 01 31.9**	**+0.1**
KAHG	**Katmai Hook Gl**	**1.61**	**208**		**Pn**	**17 01 32.2**	**+0.5**
STLK	**Strandline Lak**	**1.70**	**21**		**Pn**	**17 01 33.1**	**+0.3**
STLK				IAML		17 01 59.4	
	comp=E,329nm,0.2s						
STLK				IAML		17 02 00.1	
	comp=N,381nm,0.3s						
O22K	**Cooper Landing**	**1.77**	**70**		**Pn**	**17 01 34.2**	**+0.7**
KAWH	**Katmai**	**1.77**	**211**		**Pn**	**17 01 33.9**	**+0.2**
SEW	**Seward**	**1.83**	**83**		**Pn**	**17 01 34.8**	**+0.5**
SEW				IAML		17 01 59.1	
	comp=N,2μm,0.5s						
SEW				IAML		17 01 59.3	
	comp=E,2μm,0.3s						
FIS	**Fire Island**	**1.88**	**48**		**Pn**	**17 01 36.5**	**+1.7**
SUA	**Susitna One**	**1.93**	**36**	Pn	**Pn**	**17 01 36.4**	**+0.8**
SUA				IAML		17 02 02.7	
	comp=E,1μm,1.0s						
SUA				IAML		17 02 03.2	
	comp=N,1μm,0.3s						
M20K	**Styx River**	**1.97**	**359**		**Pn**	**17 01 36.5**	**+0.4**
KABU	**Katmai Buttres**	**2.00**	**215**		**Pn**	**17 01 37.1**	**+0.6**
O17K	**Koliganek Bris**	**2.03**	**268**		**Pn**	**17 01 36.6**	**-0.1**
RC01	**Rabbit Creek A**	**2.03**	**53**		**Pn**	**17 01 37.1**	**+0.4**
ACHA	**Angle Creek He**	**2.07**	**215**		**Pn**	**17 01 37.6**	**+0.3**
MGLS	**Mageik Landsli**	**2.08**	**212**		**Pn**	**17 01 38.0**	**+0.6**
ANCK	**Angle Creek**	**2.13**	**217**		**Pn**	**17 01 38.5**	**+0.5**
N17K	**Nushagak Hills**	**2.14**	**288**		**Pn**	**17 01 37.7**	**-0.3**
KDAK	**Kodiak Island**	**2.16**	**173**	P	**Pn**	**17 01 38.1**	**-0.2**
KDAK	comp=N,151nm,0.3s,baz=8.1,slow=9.3,SNR=129			S	**Sn**	**17 02 04.8**	**-0.5**
	comp=N,307nm,0.3s,baz=307,slow=20,SNR=29						
KDAK	**Kodiak Island**	**2.16**	**173**		**Pn**	**17 01 37.9**	**-0.4**
KDAK				IAML		17 02 06.3	
	comp=N,1μm,0.5s						
CNTC	**Contact Creek**	**2.20**	**222**		**Pn**	**17 01 39.2**	**+0.2**
SKT	**Skwentna**	**2.21**	**19**	IAML		17 02 10.8	
	comp=N,326nm,0.4s						
SKT				IAML		17 02 14.0	
	comp=E,293nm,0.4s						
KJL	**Kejulik**	**2.27**	**216**		**Pn**	**17 01 40.7**	**+0.8**
L19K	**White Mountain**	**2.43**	**340**		**Pn**	**17 01 41.3**	**-0.6**
R18K	**Karluk**	**2.46**	**197**		**Pn**	**17 01 41.6**	**-0.6**
R18K	**Karluk**	**2.46**	**197**	IAML		17 02 14.5	
	comp=N,992nm,0.4s						
PWL	**Port Wells**	**2.54**	**66**		**Pn**	**17 01 42.8**	**-0.4**
O16K	**Kokwok River B**	**2.56**	**265**		**Pn**	**17 01 43.6**	**+0.2**
PMR	**Palmer**	**2.57**	**47**	IAML		17 02 14.3	
	comp=N,809nm,0.3s						
PMR				IAML		17 02 14.4	
	comp=E,709nm,0.5s						
PMR	**Palmer**	**2.57**	**47**	P	**Pn**	**17 01 43.4**	**-0.1**
PMR	**Palmer**	**2.57**	**47**	S	**Sn**	**17 02 14.0**	**-0.7**
L20K	**Farewell, AK**	**2.60**	**352**		**Pn**	**17 01 44.2**	**+0.2**
M17K	**Holitna River**	**2.61**	**307**		**Pn**	**17 01 43.5**	**-0.6**
P16K	**Nushagak River**	**2.66**	**253**		**Pn**	**17 01 45.4**	**+0.7**
P16K				IAML		17 02 18.8	
	comp=N,298nm,0.9s						
P16K				IAML		17 02 18.9	
	comp=E,301nm,1.1s						
OHAK	**Old Harbor**	**2.71**	**182**		**Pn**	**17 01 44.4**	**-0.9**
OHAK				IAML		17 02 19.0	
	comp=N,332nm,0.3s						
OHAK				IAML		17 02 28.2	
	comp=E,213nm,0.6s						
OHAK	**Old Harbor**	**2.71**	**182**	P	**Pn**	**17 01 44.4**	**-0.9**
OHAK	**Old Harbor**	**2.71**	**182**	S	**Sn**	**17 02 15.6**	**-2.3**
PLK2	**Peulik 2**	**2.74**	**219**		**Pn**	**17 01 46.6**	**+0.8**
PLK5	**Peulik 5**	**2.75**	**227**		**Pn**	**17 01 46.4**	**+0.5**
GHO	**Glory Hole Cre**	**2.76**	**46**	IAML		17 02 21.4	
	comp=E,862nm,0.3s						
GHO				IAML		17 02 27.0	
	comp=N,790nm,0.7s						
PLK1	**Peulik 1**	**2.80**	**222**		**Pn**	**17 01 47.3**	**+0.7**
CUT	**Chulitna**	**2.84**	**27**		**Pn**	**17 01 47.4**	**+0.3**
CUT				IAML		17 02 22.0	
	comp=N,681nm,0.4s						
CUT				IAML		17 02 25.0	
	comp=E,749nm,0.3s						
L22K	**Petersville**	**2.85**	**22**		**Pn**	**17 01 47.7**	**+0.4**
L22K				IAML		17 02 24.1	
	comp=E,238nm,0.5s						
L22K				IAML		17 02 27.2	
	comp=N,192nm,0.4s						
PLK4	**Peulik 4**	**2.86**	**218**		**Pn**	**17 01 48.2**	**+0.8**
PLK4	**Peulik 4**	**2.86**	**218**	IAML		17 02 24.1	
	comp=N,99nm,0.9s						
PLK4				IAML		17 02 53.5	
	comp=E,109nm,0.7s						
P23K	**Montague Islan**	**2.86**	**86**		**Pn**	**17 01 48.0**	**+0.6**
N16K	**Nishlik Lake**	**2.89**	**284**		**Pn**	**17 01 48.1**	**+0.3**
L18K	**Granite Mounta**	**2.90**	**324**	IAML		17 02 21.6	
	comp=N,97nm,0.9s						
PLBL	**Peulik Blue Cr**	**2.95**	**223**		**Pn**	**17 01 49.3**	**+0.7**
SML	**Sawmill**	**3.00**	**49**		**Pn**	**17 01 48.8**	**-0.5**
SML				IAML		17 02 30.0	
	comp=N,429nm,0.7s						
SML				IAML		17 02 32.5	
	comp=E,518nm,0.8s						
PPLA	**Purkeypile**	**3.02**	**8**		**Pn**	**17 01 50.5**	**+0.9**
PPLA	**Purkeypile**	**3.02**	**8**	IAML		17 02 30.1	
	comp=E,94nm,0.6s						
PPLA				IAML		17 03 12.2	
	comp=N,93nm,1.1s						
M16K	**Timber Creek**	**3.11**	**293**		**Pn**	**17 01 50.7**	**+0.1**
HIN	**Hinchinbrook I**	**3.33**	**79**		**Pn**	**17 01 53.5**	**-0.1**
HIN	**Hinchinbrook I**	**3.33**	**79**	IAML		17 02 33.9	
	comp=N,576nm,0.3s						
HIN				IAML		17 02 34.1	
	comp=E,512nm,0.3s						
SII	**Sitkinak Islan**	**3.42**	**190**		**Pn**	**17 01 53.6**	**-1.1**
SII				IAML		17 02 34.1	
	comp=N,391nm,0.4s						
SII				IAML		17 02 37.1	
	comp=E,354nm,0.6s						
SII	**Sitkinak Islan**	**3.42**	**190**	P	**Pn**	**17 01 53.9**	**-0.8**
SII	**Sitkinak Islan**	**3.42**	**190**	S	**Sn**	**17 02 32.3**	**-2.4**
MID	**Middleton Isla**	**3.46**	**95**	Pn	**Pn**	**17 01 55.6**	**+0.4**
MID				IAML		17 02 37.4	
	comp=N,491nm,0.5s						
MID				IAML		17 02 37.5	
	comp=E,384nm,1.1s						
K20K	**Telida**	**3.48**	**353**		**Pn**	**17 01 55.5**	**0.0**
O15K	**Ungalikthiuk R**	**3.51**	**261**		**Pn**	**17 01 56.8**	**+0.9**
N15K	**Kwethluk River**	**3.52**	**277**		**Pn**	**17 01 56.9**	**+0.7**
N15K	**Kwethluk River**	**3.52**	**277**	IAML		17 02 37.9	
	comp=N,128nm,0.9s						
N15K				IAML		17 02 39.5	
	comp=E,78nm,0.8s						
L16K	**Owhat River**	**3.61**	**303**		**Pn**	**17 01 56.7**	**-0.5**
WAT1	**Susitna Watana**	**3.65**	**35**		**Pn**	**17 01 57.7**	**0.0**
EYAK	**Cordova Ski Ar**	**3.71**	**77**		**Pn**	**17 01 58.6**	**0.0**
EYAK	**Cordova Ski Ar**	**3.71**	**77**	IAML		17 02 42.2	
	comp=N,199nm,0.4s						
EYAK				IAML		17 02 42.3	
	comp=E,208nm,0.4s						
EYAK	**Cordova Ski Ar**	**3.71**	**77**	P	**Pn**	**17 01 59.0**	**+0.4**
K17K	**Iditarod**	**3.77**	**320**		**Pn**	**17 01 59.0**	**-0.3**
K17K	**Iditarod**	**3.77**	**320**	IAML		17 02 42.7	
	comp=N,52nm,0.7s						
TRF	**Thorofare Moun**	**3.79**	**19**	IAML		17 02 46.7	
	comp=N,119nm,0.6s						
TRF				IAML		17 03 10.5	
	comp=E,97nm,1.0s						
KTH	**Kantishna Hill**	**3.79**	**15**	IAML		17 02 44.9	
	comp=E,68nm,0.5s						
KTH				IAML		17 03 24.6	
	comp=N,70nm,1.1s						
DIV	**Divide**	**3.81**	**68**		**Pn**	**17 01 59.6**	**-0.5**
DIV	**Divide**	**3.81**	**68**	IAML		17 02 45.1	
	comp=E,209nm,0.4s						
CHUM	**Lake Minchumin**	**4.00**	**5**		**Pn**	**17 02 02.8**	**+0.5**
RND	**Reindeer**	**4.04**	**28**	IAML		17 03 07.3	
	comp=E,77nm,0.8s						
RND				IAML		17 03 11.4	
	comp=N,64nm,0.8s						
DHY	**Denali Highway**	**4.19**	**38**	IAML		17 02 55.0	
	comp=N,179nm,0.4s						
DHY				IAML		17 02 56.6	
	comp=E,181nm,0.5s						
O14K	**Tigyukauivet M**	**4.21**	**264**		**Pn**	**17 02 05.2**	**0.0**
O14K	**Tigyukauivet M**	**4.21**	**264**	IAML		17 02 53.9	
	comp=N,41nm,1.1s						
GOAT	**Goat Mountain**	**4.22**	**77**		**Pn**	**17 02 05.3**	**-0.2**
RAGM	**Ragged Mountai**	**4.23**	**80**		**Pn**	**17 02 05.6**	**0.0**
MCK	**McKinley**	**4.30**	**25**	IAML		17 02 59.3	
	comp=E,56nm,0.5s						
MCK				IAML		17 03 00.1	
	comp=N,57nm,0.5s						
BPAW	**Bear Paw Mtn.**	**4.31**	**12**		**Pn**	**17 02 05.8**	**-0.8**
BPAW	**Bear Paw Mtn.**	**4.31**	**12**	IAML		17 02 57.2	
	comp=E,48nm,0.5s						
CHIR	**Chirikof Islan**	**4.32**	**199**		**Pn**	**17 02 05.7**	**-1.1**
CHIR	**Chirikof Islan**	**4.32**	**199**	IAML		17 03 07.0	
	comp=E,104nm,1.2s						
CHIR				IAML		17 04 39.0	
	comp=N,95nm,1.0s						
CHIR	**Chirikof Islan**	**4.32**	**199**	P	**Pn**	**17 02 05.5**	**-1.3**
CHIR	**Chirikof Islan**	**4.32**	**199**	S	**Sn**	**17 02 53.2**	**-3.1**
N14K	**Kuskokwak Cree**	**4.33**	**274**		**Pn**	**17 02 07.4**	**+0.6**
N14K	**Kuskokwak Cree**	**4.33**	**274**	IAML		17 03 10.4	
	comp=N,42nm,1.0s						
N14K				IAML		17 03 27.1	
	comp=E,51nm,1.0s						
BMRM	**Bremner River**	**4.33**	**72**		**Pn**	**17 02 06.3**	**-0.6**
BMRM	**Bremner River**	**4.33**	**72**	IAML		17 02 58.2	
	comp=E,238nm,0.3s						
M14K	**Bethel**	**4.49**	**285**		**Pn**	**17 02 09.5**	**+0.6**
N25K	**Chitina, Valde**	**4.49**	**64**	IAML		17 02 59.5	
	comp=E,231nm,0.4s						
BWN	**Browne**	**4.60**	**20**	IAML		17 03 44.0	
	comp=E,132nm,1.1s						
BWN				IAML		17 03 57.3	
	comp=N,152nm,1.1s						
PAX	**Paxson**	**4.77**	**47**	IAML		17 03 10.0	
	comp=E,89nm,0.4s						
PAX				IAML		17 03 13.3	
	comp=N,98nm,0.5s						
GLB	**Gilahina Butte**	**4.81**	**67**		**Pn**	**17 02 12.9**	**-0.4**
GLB	**Gilahina Butte**	**4.81**	**67**	IAML		17 03 09.7	
	comp=E,111nm,0.5s						
GLB				IAML		17 03 09.9	
	comp=N,134nm,0.4s						
VNHG	**Veniaminof 1**	**4.91**	**224**		**Pn**	**17 02 15.7**	**+0.9**
J16K	**Anvik River**	**4.93**	**317**		**Pn**	**17 02 14.3**	**-0.5**
VRDI	**Verde Repeater**	**4.93**	**70**		**Pn**	**17 02 14.7**	**-0.4**
VRDI	**Verde Repeater**	**4.93**	**70**	IAML		17 03 13.0	
	comp=N,132nm,0.6s						
VRDI				IAML		17 03 13.2	
	comp=E,54nm,0.6s						
L14K	**Kuka Creek**	**4.94**	**291**		**Pn**	**17 02 15.7**	**+0.8**
KHIT	**Khitrov Hills**	**4.94**	**80**		**Pn**	**17 02 15.4**	**+0.3**
CRQM	**Cirque**	**5.01**	**76**		**Pn**	**17 02 17.1**	**+1.0**
NEA2	**Nenana**	**5.05**	**20**		**Pn**	**17 02 15.6**	**-1.0**
NEA2	**Nenana**	**5.05**	**20**	IAML		17 03 17.7	
	comp=E,24nm,1.1s						
VNKR	**Veniaminof 5**	**5.13**	**223**		**Pn**	**17 02 17.9**	**+0.2**
WRH	**Wood River Hil**	**5.13**	**25**		**Pn**	**17 02 17.2**	**-0.3**
WRH	**Wood River Hil**	**5.13**	**25**	IAML		17 03 17.0	
	comp=N,27nm,0.8s						
WRH				IAML		17 03 19.3	
	comp=E,25nm,0.7s						
SNH	**Sunshine Point**	**5.14**	**83**		**Pn**	**17 02 18.7**	**+0.9**
SNH	**Sunshine Point**	**5.14**	**83**	IAML		17 03 18.4	
	comp=N,153nm,0.8s						
M13K	**Dall Lake**	**5.15**	**280**		**Pn**	**17 02 19.2**	**+1.4**
MCARA	**McCarthy VSAT**	**5.17**	**69**		**Pn**	**17 02 18.7**	**+0.6**
TGL	**Tana Glacier**	**5.17**	**76**		**Pn**	**17 02 18.9**	**+0.8**
TGL	**Tana Glacier**	**5.17**	**76**	IAML		17 03 20.5	
	comp=N,126nm,0.5s						
K24K	**Donnelly Dome**	**5.21**	**38**		**Pn**	**17 02 20.0**	**+1.3**
HDA	**Harding Lake**	**5.35**	**30**		**Pn**	**17 02 20.3**	**-0.2**
CCB	**Clear Creek Bu**	**5.35**	**25**	IAML		17 03 23.5	
	comp=E,46nm,0.5s						
CCB				IAML		17 03 25.6	
	comp=N,30nm,0.3s						
KIAG	**Kiagna River**	**5.41**	**75**		**Pn**	**17 02 22.2**	**+0.7**
MENT	**Mentasta**	**5.42**	**52**	P	**Pn**	**17 02 22.6**	**+1.1**
BAGL	**Bagley Icefiel**	**5.52**	**79**		**Pn**	**17 02 24.1**	**+1.4**
COLA	**College**	**5.54**	**24**		**Pn**	**17 02 22.7**	**-0.3**
COLA	**College**	**5.54**	**24**	P	**Pn**	**17 02 22.1**	**-0.9**
ILAR	**Eielson Array**	**5.66**	**28**	P	**Pn**	**17 02 24.1**	**-0.6**
	comp=N,94nm,0.4s,baz=215,slow=14,SNR=1312						
ILAR				S	**Sn**	**17 03 25.4**	**-3.0**
	comp=N,7.7nm,0.4s,baz=214,slow=25,SNR=5.0						
DOT	**Dot Lake**	**5.69**	**45**		**Pn**	**17 02 24.8**	**-0.3**
YAH	**Yahtse**	**5.69**	**81**		**Pn**	**17 02 26.5**	**+1.3**
GRNC	**Granite Creek**	**5.69**	**77**		**Pn**	**17 02 26.4**	**+1.0**
RKAV	**Rock Avalanche**	**5.88**	**81**		**Pn**	**17 02 29.5**	**+1.6**
CTGM	**Chitina Glacie**	**5.91**	**75**		**Pn**	**17 02 29.8**	**+1.5**
M27K	**Edge Creek, AK**	**5.95**	**61**		**Pn**	**17 02 29.4**	**+0.6**
TABL	**Table Mountain**	**5.98**	**80**		**Pn**	**17 02 30.2**	**+0.9**
CHX	**Chaix Hills**	**6.01**	**83**		**Pn**	**17 02 31.3**	**+1.8**
LOGN	**Logan Glacier**	**6.06**	**76**		**Pn**	**17 02 31.0**	**+0.7**
IMAR	**Indian Mountai**	**6.10**	**357**		**Pn**	**17 02 30.0**	**-0.6**
H23K	**Yukon River**	**6.15**	**14**		**Pn**	**17 02 31.5**	**+0.3**
BCAR	**Beaver Creek A**	**6.26**	**55**		**Pn**	**17 02 32.5**	**-0.3**
YUK2	**White River**	**6.27**	**67**		**Pn**	**17 02 33.0**	**0.0**
PCA	**Pinnacle**	**6.44**	**83**		**Pn**	**17 02 36.8**	**+1.5**
O28M	**Mount Upton**	**6.46**	**77**		**Pn**	**17 02 37.4**	**+1.7**
K27K	**Chicken**	**6.62**	**47**		**Pn**	**17 02 37.4**	**-0.3**
G21K	**Allakaket**	**6.63**	**359**		**Pn**	**17 02 37.9**	**+0.2**
YUK8	**Steele Glacier**	**6.70**	**72**

KURK	**Kurchatov**	**62.07**	**326**	IAmb	IAmb	17 11 22.8	
	comp=Z,3.5nm,1.3s						
BVAR	**Borovoye Array**	**62.12**	**332**	P	**P**	**17 11 10.8**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=25,slow=7.5,SNR=9.4						
	comp=Z,1.5nm,0.6s						
KURBB	**Kurchatov Arra**	**62.18**	**326**	P	**P**	**17 11 10.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=28,slow=5.8,SNR=4.8						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**64.47**	**321**	P	**P**	**17 11 26.1**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=22,slow=6.7,SNR=1.9						
	comp=Z,0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**82.86**	**295**	P	**P**	**17 13 13.9**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=31,slow=5.6,SNR=1.9						
	comp=Z,0.4nm,0.5s						
QSPA	**South Pole Qui**	**149.72**	**180**	PKPbc	**PKiKP**	**17 20 39.8**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=0.0,slow=1.0,SNR=5.1						

IDC ***13*** *17:04:08.7±5.3,36°.52N×71°.58E,h223km±45km,mb3.2/4, mbtmp3.9/10,MS3.4/1,Error ellipse: s-maj=43.9km s-min=21.5km az=36.0*

NNC ***13*** *17:04:13.7±4.3,37°.02N×71°.55E,h217km±37km,mb2.8, mpv3.6,Error ellipse: s-maj=47.6km s-min=39.4km az=65.0*

ISC 13 17:04:06.6±1.3,36°.5N±0°.1×71°.4E±0°.1,h200km,n15, σ1§50/17,mb3.3/4,4C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**6.59**	**20**	P		**Pn**	**17 05 43.5**	**+1.9**
	5.4nm,0.5s,baz=164,slow=5.8,SNR=14							
AAK				S		**Sn**	**17 06 57.3**	**+0.3**
	2.4nm,0.4s,baz=162,slow=20,SNR=8.8							
KK31	**Karatay Array**	**6.65**	**354**	⇓P		**Pn**	**17 05 42.9**	**+0.7**
	2.2nm,0.4s,baz=172,slow=12,SNR=22							
KK31				⇑S		**Sn**	**17 06 54.0**	**-4.0**
	11nm,0.3s							
MKAR	**Makanchi Array**	**13.11**	**35**	P		**Pn**	**17 07 05.7**	**+0.3**
	1.3nm,0.3s,baz=219,slow=12,SNR=24							
KURBB	**Kurchatov Arra**	**15.04**	**18**	P		**Pn**	**17 07 28.7**	**-0.3**
	0.7nm,0.3s,baz=206,slow=10,SNR=13							
KURBB	**Kurchatov Arra**	**15.04**	**18**	⇑P		**Pn**	**17 07 28.1**	**-0.9**
	1.9nm,0.5s							
AB31	**Akbulak array**	**15.26**	**330**	P		**Pn**	**17 07 32.7**	**+0.9**
	2.0nm,0.6s,baz=144,slow=11,SNR=25							
BVA0	**Borovoye Array**	**16.56**	**358**	⇑P		**P**	**17 07 48.1**	**+1.7**
	0.6nm,0.5s,baz=148,slow=9.4,SNR=7.2							
BVAR	**Borovoye Array**	**16.56**	**358**	P		**P**	**17 07 47.1**	**+0.6**
	1.0nm,0.4s,baz=169,slow=12,SNR=10							
AKTO	**Aktyubinsk**	**16.96**	**329**	P		**P**	**17 07 51.8**	**+0.9**
	2.4nm,0.4s,baz=141,slow=11,SNR=8.3							
AKTO				LR		LR	17 15 48.3	
	comp=Z,132nm,18.6s,baz=215,slow=41							
AKTO	**Aktyubinsk**	**16.96**	**329**	⇑P		**P**	**17 07 52.4**	**+1.5**
	1.6nm,0.6s							
ZALV	**Zalesovo Beam**	**19.80**	**24**	P		**P**	**17 08 21.2**	**-0.3**
	3.6nm,0.3s,baz=215,slow=10,SNR=21							
FINES	**FINESS Array B**	**37.69**	**326**	P		**P**	**17 11 02.2**	**-0.1**
	0.5nm,0.6s,baz=127,slow=8.2,SNR=4.6							
	0.5nm,0.6s							
ARCES	**ARCESS Array B**	**41.29**	**337**	P		**P**	**17 11 32.0**	**+0.1**
	3.1nm,1.0s,baz=120,slow=9.5,SNR=4.1							
	3.1nm,1.0s							
WRA	**Warramunga Arr**	**81.70**	**122**	P		**P**	**17 16 02.0**	**-0.8**
	0.2nm,0.5s,baz=316,slow=5.4,SNR=2.1							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**83.97**	**125**	P		**P**	**17 16 13.1**	**-1.3**
	0.4nm,0.7s,baz=313,slow=4.4,SNR=9.6							
	0.4nm,0.7s							

GCG 13 17:09:45.3±1.4,13°.80N×90°.89W,h60km±14km,MD3.6, ML3.6,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.44**	**122**	*e*P		Pn	17 09 54.9	-1.7
ESSG	**Sabana Grande**	**0.59**	**5**	*e*P		Pn	17 09 58.3	-0.1
FG16	**Alotenango, Sa**	**0.60**	**38**	*e*P		Pn	17 09 59.8	+1.2
FG16				*i* S		Sn	17 10 11.5	+3.2
FG16				IAML			17 10 14.7	
	comp=E,4μm,0.2s							
PCG5	**San Vicente Pa**	**0.65**	**50**	*e*P		Pn	17 09 59.0	-0.1
NUBE	**Las Nubes**	**1.08**	**84**	*e*P		Pn	17 10 04.7	+0.1
NUBE				*e*S		Sn	17 10 19.2	+0.3
SOKI	**Kika Raxquin**	**1.14**	**334**	*e*P		Pn	17 10 06.1	+0.6
SOKI				*e*S		Sn	17 10 22.0	+1.4
APG	**El Apazote**	**1.27**	**19**	*e*P		Pn	17 10 09.2	+2.0
JAYA	**Jayaque - finc**	**1.41**	**96**	*e*P		Pn	17 10 08.8	0.0

HEL ***13*** *17:10:11.8±0.6,57°.58N×21°.57E,h0km,ML2.5,Explosion*

EST ***13*** *17:10:12.7±0.2,57°.69N×21°.91E,h0km,ML2.2(HEL), Explosion*

DNK ***13*** *17:10:12.3±1.8,57°.56N×22°.01E,h0km,ML3.0,Suspected explosion*

IDC ***13*** *17:10:14.4±2.2,57°.83N×21°.92E,h0km,mbtmp3.1/4, ML2.3/4,Error ellipse: s-maj=22.9km s-min=8.5km az=166.0*

BER ***13*** *17:10:14.1±2.1,57°.67N×22°.10E,h0km,ML2.3, ML3.0(DNK),Suspected explosion*

LVSN ***13*** *17:10:15.9±2.4,57°.65N×22°.10E,h0km±39km,ML2.8*

UPP ***13*** *17:10:17.1±1.6,57°.78N×21°.41E,h0km,ML2.6,Presumed earthquake*

ISC 13 17:10:12.0±0.8,57°.75N±0°.03×21°.91E±0°.03,h0km,n96, σ1§31/124,1C,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.23**	**120**	*e*P		**Pg**	**17 10 16.7**	**+0.2**
SLIT	**Slitere, Latvi**	**0.23**	**120**	*e*P		**Pg**	**17 10 16.7**	**+0.2**
SLIT				*e*S		**Sg**	**17 10 19.6**	**+0.1**
SLIT				AML		AML	17 10 29.6	
	comp=Z,7μm,0.5s							
SLIT				AML		AML	17 10 31.8	
	comp=E,9μm,0.4s							
SLIT				AML		AML	17 10 33.1	
	comp=N,7μm,0.6s							
SLIT	**Slitere, Latvi**	**0.23**	**120**	⇑*i*P		**Pg**	**17 10 16.7**	**+0.2**
SLIT	**Slitere, Latvi**	**0.23**	**120**	*e*P		**Pg**	**17 10 16.8**	**+0.2**
SLIT				*e*S		**Sg**	**17 10 19.7**	**+0.2**
EE06	**Soera, Palade,**	**1.32**	**22**	*e*P		**Pg**	**17 10 37.2**	**-0.1**
EE06				*e*SN		**Sn**	**17 10 57.4**	**+1.5**
EE01	**Perakula, Nova**	**1.72**	**31**	*e*P		**Pb**	**17 10 44.0**	**-0.4**
EE01				*e*PN		**Pg**	**17 10 44.4**	**-0.5**
EE01				*e*SG		**Sg**	**17 11 07.2**	**+0.1**
GOTU	**Gotland**	**1.79**	**269**	P		**Pn**	**17 10 45.2**	**+1.1**
GOTU	**Gotland**	**1.79**	**269**	P		**Pn**	**17 10 45.2**	**+1.1**
EE08	**Sarghaua, Vand**	**1.98**	**61**	*e*P		**Pn**	**17 10 47.6**	**+0.9**
EE08				*e*SG		**Sg**	**17 11 14.6**	**-1.0**
EE02	**Kiisa, Saku**	**2.06**	**44**	*e*P		**Pb**	**17 10 49.4**	**-0.8**
EE02				*e*PB		**Pg**	**17 10 49.9**	**-1.5**
EE02				*e*SG		**Sg**	**17 11 17.2**	**-0.8**
TVF	**Tvarminne**	**2.21**	**18**	*e*PB		**Pb**	**17 10 52.6**	**-0.2**
TVF				*e*SG		**Sg**	**17 11 23.2**	**+0.1**
TVF				smax		smax	17 11 24.6	
	comp=Z,20nm,0.1s							
NYNU	**Nynaeshamn**	**2.41**	**303**	P		**Pn**	**17 10 54.5**	**+1.9**
NYNU	**Nynaeshamn**	**2.41**	**303**	P		**Pn**	**17 10 54.5**	**+1.9**
PABE	**Paberze**	**2.52**	**152**	*e*P		**Pn**	**17 10 55.6**	**+1.5**
PABE	**Paberze**	**2.52**	**152**	*e*P		**Pn**	**17 10 55.7**	**+1.5**
PABE				AML		AML	17 10 55.9	
	comp=Z,98nm,0.2s							
PABE				AML		AML	17 11 29.2	
	comp=N,82nm,0.2s							
PABE				AML		AML	17 11 29.9	
	comp=E,76nm,0.2s							
EE03	**Tooma soojaam,**	**2.56**	**62**	*e*P		**Pn**	**17 10 55.8**	**+1.1**
EE03				*e*PB		**Pb**	**17 10 57.5**	**-1.3**
EE03				*e*SB		**Sb**	**17 11 31.1**	**+0.3**
AAL	**Aland**	**2.63**	**339**	*e*P		**Pn**	**17 10 56.9**	**+1.3**
AAL	**Aland**	**2.63**	**339**	*e*P		**Pn**	**17 10 56.7**	**+1.0**
AAL				*e*SB		**Sb**	**17 11 33.4**	**+0.6**
VSU	**Vasula**	**2.66**	**72**	*e*P		**Pn**	**17 10 56.6**	**+0.6**
VSU	**Vasula**	**2.66**	**72**	*e*P		**Pn**	**17 10 58.1**	**+2.1**
VSU				AML		AML	17 10 58.4	
	comp=Z,80nm,0.2s							
VSU				AML		AML	17 11 36.1	
	comp=N,62nm,0.2s							
VSU				AML		AML	17 11 38.0	
	comp=E,100nm,0.5s							
VSU	**Vasula**	**2.66**	**72**	*i* P		**Pn**	**17 10 55.9**	**-0.1**
VSU	**Vasula**	**2.66**	**72**	*i* P		**Pn**	**17 10 55.9**	**-0.1**
VSU	**Vasula**	**2.66**	**72**	*e*P		**Pn**	**17 10 56.0**	**-0.1**
VSU				*e*PB		**Pn**	**17 10 58.1**	**+2.1**
VSU				*e*SB		**Sb**	**17 11 32.7**	**-0.8**
BYXU	**Byxelkrok**	**2.69**	**262**	P		**Pn**	**17 10 58.0**	**+1.6**
BYXU	**Byxelkrok**	**2.69**	**262**	P		**Pn**	**17 10 58.0**	**+1.6**
ARBE	**Arbavere**	**2.72**	**50**	*e*P		**Pb**	**17 10 59.8**	**-1.7**
ARBE	**Arbavere**	**2.72**	**50**	*e*P		**Pb**	**17 11 00.1**	**-1.3**
ARBE				AML		AML	17 11 38.7	
	comp=Z,98nm,0.4s							
ARBE				AML		AML	17 11 40.3	
	comp=E,441nm,0.2s							
ARBE				AML		AML	17 11 42.3	
	comp=N,433nm,0.2s							
ARBE	**Arbavere**	**2.72**	**50**	*e*PB		**Pb**	**17 10 60.0**	**-1.5**
ARBE				*e*SB		**Sb**	**17 11 35.6**	**+0.2**
MEF	**Metsahovi**	**2.79**	**26**	*e*P		**Pb**	**17 11 01.8**	**-0.9**
MEF	**Metsahovi**	**2.79**	**26**	*e*P		**Pb**	**17 11 01.5**	**-1.2**
MEF				AML		AML	17 11 39.1	
	comp=E,22nm,0.1s							
MEF				AML		AML	17 11 40.2	
	comp=N,20nm,0.1s							
MEF				AML		AML	17 11 41.9	
	comp=Z,12nm,0.1s							
MEF	**Metsahovi**	**2.79**	**26**	*e*PB		**Pb**	**17 11 01.4**	**-1.2**
MEF				*e*SB		**Sb**	**17 11 38.1**	**+0.8**
MEF				smax		smax	17 11 38.6	
	comp=Z,11nm,0.1s							
HEL5	**Espoo, Suvisaa**	**2.79**	**30**	*e*PB		**Pb**	**17 11 01.3**	**-1.3**
VIKU	**Vikbolandet**	**2.87**	**287**	P		**Pn**	**17 11 00.9**	**+2.0**
VIKU	**Vikbolandet**	**2.87**	**287**	P		**Pn**	**17 11 00.9**	**+2.0**
HEL1	**Helsinki**	**2.88**	**31**	*e*PB		**Pb**	**17 11 02.9**	**-1.3**
HEL1				*e*SB		**Sb**	**17 11 40.5**	**+0.6**
HEL1				smax		smax	17 11 43.4	
	comp=Z,5.6nm,0.1s							
VSTU	**Vaestervik**	**2.89**	**271**	P		**Pn**	**17 11 01.1**	**+1.9**
VSTU	**Vaestervik**	**2.89**	**271**	P		**Pn**	**17 11 01.1**	**+1.9**
NUR	**Nurmijarvi**	**3.11**	**26**	*e*PB		**Pb**	**17 11 06.3**	**-1.7**
NUR				*e*SB		**Sb**	**17 11 46.4**	**-0.1**
NUR				smax		smax	17 11 49.1	
	comp=Z,6.2nm,0.1s							
OSKU	**Oskarshamn**	**3.19**	**262**	P		**Pn**	**17 11 04.7**	**+1.3**
OSKU	**Oskarshamn**	**3.19**	**262**	P		**Pn**	**17 11 04.7**	**+1.3**
RAF	**Rauma**	**3.29**	**359**	*e*P		**Pn**	**17 11 07.0**	**+2.3**
RAF	**Rauma**	**3.29**	**359**	*e*P		**Pn**	**17 11 06.7**	**+2.1**
IIGN	**Ignalina**	**3.39**	**133**	*e*P		**Pn**	**17 11 03.6**	**-2.4**
PVF	**Pernaja**	**3.46**	**34**	*e*PB		**Pb**	**17 11 13.4**	**-0.7**
VJF	**Virojoki**	**4.03**	**44**	*e*PG		**Pb**	**17 11 25.2**	**+1.3**
KPF	**Kankaanpaa**	**4.10**	**1**	*e*P		**Pn**	**17 11 17.8**	**+2.0**
FIA0	**FINESS Array S**	**4.27**	**28**	*e*P		**Pn**	**17 11 20.2**	**+2.1**
FINES	**FINESS Array B**	**4.27**	**28**	Pn		**Pn**	**17 11 18.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=212,slow=11,SNR=16							
FINES				Pg		**Pb**	**17 11 29.2**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=207,slow=15,SNR=20							
FINES				Sn		**Sn**	**17 12 10.5**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=215,slow=20,SNR=1.7							
FINES				Lg		Lg	17 12 25.6	
	comp=Z,1.6nm,0.3s,baz=211,slow=24,SNR=10.0							
	comp=Z,2.3nm,0.9s							
FIA1	**FINESS Array S**	**4.27**	**28**	*e*P		**Pn**	**17 11 20.0**	**+1.8**
DEL	**Delary**	**4.57**	**257**	*i* P		**Pn**	**17 11 22.0**	**-0.3**
DEL	**Delary**	**4.57**	**257**	*i* P		**Pn**	**17 11 22.0**	**-0.3**
KEF	**Keuruu**	**4.67**	**17**	*e*P		**Pn**	**17 11 26.8**	**+3.0**
KEF	**Keuruu**	**4.67**	**17**	*e*P		**Pn**	**17 11 26.0**	**+2.3**
KEF				smax		smax	17 12 24.8	
	comp=Z,2.3nm,0.2s							
BSD	**Bornholm Skovb**	**4.70**	**239**	*i* P		**Pn**	**17 11 23.8**	**-0.2**
BSD				*i* S		**Sn**	**17 12 17.8**	**-1.4**
BSD				IAML			17 12 49.7	
	comp=Z,12nm,0.8s							
BSD	**Bornholm Skovb**	**4.70**	**239**	*i* P		**Pn**	**17 11 23.8**	**-0.2**
BSD				*i* S		**Sn**	**17 12 17.8**	**-1.4**
BSD				IAML			17 12 49.7	
	comp=Z,12nm,0.8s							
HFS	**Hagfors**	**4.88**	**303**	Pn		**Pn**	**17 11 27.6**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=115,slow=16,SNR=41							
HFS				Sn		**Sn**	**17 12 23.9**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=114,slow=21,SNR=6.4							
HFS				Lg		Lg	17 12 44.1	
	comp=Z,1.4nm,0.3s,baz=120,slow=30,SNR=9.7							
	comp=Z,1.7nm,0.3s							
KAF	**Kangasniemi**	**4.90**	**25**	*e*P		**Pn**	**17 11 28.3**	**+1.5**
BORU	**Boraas**	**4.91**	**273**	*i* P		**Pn**	**17 11 28.6**	**+1.6**
BORU				*i* S		**Sn**	**17 12 26.6**	**+2.3**
BORU	**Boraas**	**4.91**	**273**	*i* P		**Pn**	**17 11 28.6**	**+1.6**
BORU				*i* S		**Sn**	**17 12 26.6**	**+2.3**
FABU	**Falkenberg**	**5.03**	**265**	*i* P		**Pn**	**17 11 29.9**	**+1.3**
FABU	**Falkenberg**	**5.03**	**265**	*i* P		**Pn**	**17 11 29.9**	**+1.3**
LUNU	**Lund**	**5.13**	**249**	*i* P		**Pn**	**17 11 30.5**	**+0.6**
LUNU	**Lund**	**5.13**	**249**	*i* P		**Pn**	**17 11 30.5**	**+0.6**
RUF	**Ruokolahti**	**5.13**	**41**	*e*P		**Pn**	**17 11 31.0**	**+0.9**
BJUU	**Bjuv**	**5.15**	**255**	*i* P		**Pn**	**17 11 30.2**	**-0.1**
BJUU	**Bjuv**	**5.15**	**255**	*i* P		**Pn**	**17 11 30.2**	**-0.1**
VAF	**Ylistaro**	**5.33**	**4**	*e*P		**Pn**	**17 11 35.0**	**+2.3**
VAF	**Ylistaro**	**5.33**	**4**	*e*P		**Pn**	**17 11 34.3**	**+1.7**
ONAU	**Onsala**	**5.39**	**270**	*i* P		**Pn**	**17 11 34.7**	**+1.1**
ONAU	**Onsala**	**5.39**	**270**	*i* P		**Pn**	**17 11 34.7**	**+1.1**
TJOU	**Tjoern**	**5.50**	**277**	*i* P		**Pn**	**17 11 36.1**	**+1.1**
TJOU				*i* S		**Sn**	**17 12 37.3**	**-1.6**
TJOU	**Tjoern**	**5.50**	**277**	*i* P		**Pn**	**17 11 36.1**	**+1.1**
TJOU				*i* S		**Sn**	**17 12 37.3**	**-1.6**
STRU	**Stroemstad**	**5.79**	**287**	*e*P		**Pn**	**17 11 40.8**	**+1.8**
STRU	**Stroemstad**	**5.79**	**287**	*i* P		**Pn**	**17 11 40.8**	**+1.8**
NC602	**NORSAR Array S**	**6.11**	**304**	*e*P		**Pn**	**17 11 43.6**	**+0.2**
NB201	**NORSAR Array S**	**6.35**	**306**	*e*P		**Pn**	**17 11 47.6**	**+0.8**
NOA	**NORSAR Array B**	**6.38**	**306**	Pn		**Pn**	**17 11 47.4**	**+0.2**
	baz=121,slow=10,SNR=11							
NOA				Sn		**Sn**	**17 12 58.3**	**-2.4**
	baz=109,slow=17,SNR=1.7							
NOA				Lg		Lg	17 13 31.1	
	comp=Z,0.1nm,0.3s,baz=121,slow=12,SNR=4.4							
	comp=Z,0.1nm,0.4s							
NC303	**NORSAR Array S**	**6.40**	**307**	*e*P		**Pn**	**17 11 48.3**	**+0.9**
NAO01	**NORSAR Array S**	**6.44**	**303**	*e*P		**Pn**	**17 11 48.7**	**+0.7**
NBO00	**NORSAR Array S**	**6.57**	**305**	*e*P		**Pn**	**17 11 50.5**	**+0.8**
NC204	**NORSAR Array S**	**6.68**	**307**	*e*P		**Pn**	**17 11 51.8**	**+0.4**
OUF	**Merijarvi**	**6.78**	**10**	*e*P		**Pn**	**17 11 53.9**	**+1.3**
JOF	**Joensuu**	**6.97**	**38**	*e*P		**Pn**	**17 11 54.9**	**-0.3**
JOF	**Joensuu**	**6.97**	**38**	*e*P		**Pn**	**17 11 54.5**	**-0.7**
HOMB	**Homborsund**	**7.14**	**280**	*i* P		**Pn**	**17 11 57.8**	**+0.2**
HOMB	**Homborsund**	**7.14**	**280**	*i* P		**Pn**	**17 11 57.8**	**+0.2**
SNART	**Snartemo**	**7.83**	**281**	*i* P		**Pn**	**17 12 08.1**	**+1.1**
SNART	**Snartemo**	**7.83**	**281**	*i* P		**Pn**	**17 12 08.1**	**+1.1**
NSS	**Namsos**	**8.32**	**329**	*e*P		**Pn**	**17 12 13.1**	**-0.6**
MOL	**Molde**	**8.63**	**310**	*e*P		**Pn**	**17 12 17.5**	**-0.5**
LEIR	**Leirfjorden**	**9.35**	**337**	*e*P		**Pn**	**17 12 27.8**	**0.0**
SALU	**Saltoluokta**	**9.79**	**352**	*e*P		**Pn**	**17 12 33.2**	**-0.7**
VAGH	**Vaagaholmen**	**9.86**	**340**	*e*P		**Pn**	**17 12 34.6**	**-0.2**
HEF	**Hetta**	**10.73**	**3**	*e*P		**Pn**	**17 12 45.2**	**-1.5**
KIF	**Kilpisjarvi**	**11.31**	**358**	*e*P		**Pn**	**17 12 53.9**	**-0.7**
ARCES	**ARCESS Array B**	**11.94**	**6**	Pn		**Pn**	**17 13 00.5**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=12							
	comp=Z,1.7nm,0.8s							

IDC 13 17:47:06.0±1.6,31°.13S×178°.39W,h0km,mb3.8/3, mbtmp3.8/4,ML3.1/1,Error ellipse: s-maj=40.4km s-min=26.8km az=107.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**1.91**	**13**	Pn		Pn	17 47 38.4	-1.4
	34nm,0.3s,baz=197,slow=19,SNR=1.5							
RAO				Sn		Sn	17 47 58.9	-5.7
	112nm,0.3s,baz=202,slow=23,SNR=2.9							
URZ	**Urewera**	**8.02**	**206**	Pn		Pn	17 49 03.0	-0.8
	0.2nm,0.3s,baz=31,slow=18,SNR=1.3							
URZ				Sn		Sn	17 50 33.0	-2.2
	0.8nm,0.3s,baz=93,slow=19,SNR=6.2							
	3.9nm,0.6s							
ASAR	**Alice Springs**	**42.74**	**268**	P		P	17 55 05.2	-0.1
	1.3nm,0.6s,baz=111,slow=8.1,SNR=42							
	1.3nm,0.6s							
WRA	**Warramunga Arr**	**43.79**	**273**	P		P	17 55 13.4	-0.4
	0.7nm,0.3s,baz=115,slow=8.1,SNR=9.9							
	0.7nm,0.3s							
QSPA	**South Pole Qui**	**58.99**	**180**	P		P	17 57 06.9	-0.4
	0.6nm,0.9s,baz=37,slow=8.2,SNR=1.3							
	0.6nm,0.9s							
H03S2	**Juan Fernandez**	**80.35**	**124**	T		T	19 28 28.7	
	baz=238,slow=74,SNR=19							
H03S1	**Juan Fernandez**	**80.36**	**124**	T		T	19 28 22.7	
	baz=238,slow=74,SNR=21							
H03S3	**Juan Fernandez**	**80.36**	**124**	T		T	19 28 21.4	
	baz=238,slow=74,SNR=24							
H03N3	**Juan Fernandez**	**80.54**	**123**	T		T	19 28 33.8	
	baz=241,slow=72,SNR=3.5							
H03N2	**Juan Fernandez**	**80.55**	**123**	T		T	19 28 33.4	
	baz=241,slow=72,SNR=4.2							
H03N1	**Juan Fernandez**	**80.56**	**123**	T		T	19 28 25.7	
	baz=241,slow=72,SNR=12							
FINES	**FINESS Array B**	**145.71**	**339**	PKPbc		PKPab	18 06 46.6	+0.2
	1.3nm,0.4s,baz=44,slow=4.6,SNR=5.8							

IDC ***13*** *17:57:44.9±0.8,27°.61N×53°.13E,h0km,mb4.0/22, mbtmp4.0/27,ML4.0/5,MS3.6/4,Error ellipse: s-maj=18.9km s-min=13.7km az=26.0*

MOS ***13*** *17:57:45.3±1.1,27°.69N×53°.07E,h13km,mb4.4/18,Error ellipse: s-maj=8.1km s-min=5.4km az=95.6*

THR ***13*** *17:57:46.5±0.0,27°.71N×52°.98E,h12km±4km,ML4.2*

TEH ***13*** *17:57:47.1,27°.68N×53°.05E,h16km±21km*

NEIC ***13*** *17:57:47.4±2.4,27°.77N±0°.07×53°.14E±0°.07,h10km±1km, mb4.3/32,Error ellipse: s-maj=12.4km s-min=10.6km az=206.0*

DSN ***13*** *17:57:49.1±1.3,27°.63N×53°.11E,h10km,ML3.7/14,Error ellipse: s-maj=17.9km s-min=5.5km az=179.0*

OMAN ***13*** *17:57:51.8±0.0,27°.58N×53°.15E,h151km±1km,mb3.9/8, ml4.2/17,Error ellipse: s-maj=1.8km s-min=0.8km az=9.0*

ISC 13 17:57:48.4±0.4,27°.68N±0°.03×53°.10E±0°.03,h20km,n228, σ1§52/233,mb4.2/49,MS3.4/3,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LMD1	**Lamerd**	**0.35**	**171**	Pg		**Pb**	**17 57 54.5**	**-1.5**
LMD1	**Lamerd**	**0.35**	**171**	*e*Pg		**Pb**	**17 57 54.4**	**-1.5**
LMD1				*e*Sg		**Sb**	**17 58 00.8**	**-0.2**
LMD1				IAML			17 58 06.3	
	comp=Z,23μm,1.0s							
JHRM	**Jahrom**	**0.92**	**27**	Pg		**Pb**	**17 58 05.0**	**-0.8**
LAR1	**LAR**	**1.13**	**90**	Pg		**Pn**	**17 58 09.2**	**0.0**
DSBU	**Dashti - Bushe**	**1.76**	**293**	Pg		**Pn**	**17 58 19.7**	**-0.4**
SHI	**Shiraz**	**2.02**	**345**	Pn		**Pn**	**17 58 21.9**	**+0.4**
SHMA	**Al-Shehemyia**	**2.64**	**227**	P		**Pb**	**17 58 33.9**	**-1.1**
	SNR=24							
SHMA				S		**Sb**	**17 59 07.8**	**+0.8**
JRN	**Qarnain Island**	**2.74**	**185**	P		**Pb**	**17 58 34.9**	**-1.9**
	SNR=23							
GENO	**Geno**	**2.74**	**95**	Pn		**Pn**	**17 58 32.6**	**+1.2**
IBND	**Bandar-abas**	**3.06**	**94**	Pn		**Pn**	**17 58 38.5**	**+2.8**
SHME	**Shamm**	**3.17**	**120**	P		**Pn**	**17 58 38.8**	**+1.6**
SHME				S		**Sn**	**17 59 15.9**	**+1.6**
SHME	**Shamm**	**3.17**	**120**	P		**Pn**	**17 58 38.9**	**+1.8**
SHME				S		**Sn**	**17 59 15.7**	**+1.4**
BANOM	**Banah**	**3.35**	**121**	P		**Pn**	**17 58 41.3**	**+1.6**
BANOM				S		**Sn**	**17 59 21.8**	**+2.8**
BANOM	**Banah**	**3.35**	**121**	*i* P		**Pn**	**17 58 41.1**	**+1.4**
	SNR=25							
TRNA	**Turayna**	**3.39**	**210**	P		**Pn**	**17 58 42.8**	**+2.6**
	SNR=6.6							
NAZ	**Nazwa, Dubai**	**3.53**	**139**	P		**Pn**	**17 58 45.0**	**+2.8**
	SNR=15							
NAZ				S		**Sn**	**17 59 26.9**	**+3.4**
NAZ	**Nazwa, Dubai**	**3.53**	**139**	*i* P		**Pn**	**17 58 44.5**	**+2.4**
	SNR=15							
AJN	**Ajban**	**3.54**	**151**	P		**Pn**	**17 58 45.8**	**+3.5**
	SNR=16							
AJN	**Ajban**	**3.54**	**151**	*i* P		**Pn**	**17 58 44.7**	**+2.5**
	SNR=16							
KLNJ	**Kolanjah**	**3.56**	**339**	Pn		**Pn**	**17 58

ITEG Tejag 7.13 42 Pn **Pn** 17 59 33.8 +2.0
ASAO Ashtian 7.33 340 *e*Pn **Pn** 17 59 35.2 +0.6
ASAO IAML 18 01 03.2
comp=Z,38nm,1.0s
IVRN Varamin 7.38 351 Pn **Pn** 17 59 35.6 +0.5
IDMV Damavand 7.92 354 Pn **Pn** 17 59 43.2 +0.5
DAMV Damavand 7.98 353 *e*Pn **Pn** 17 59 43.6 +0.1
DAMV IAML 18 00 37.7
comp=Z,4.6nm,1.0s
MHTO MHTO 8.01 145 P **Pn** 17 59 45.0 +1.3
SNR=26
RAYN Ar Rayn 8.01 241 17 59 43.5 -0.3
RAYN Ar Rayn 8.01 241 P **Pn** 17 59 44.1 +0.3
RAYN Ar Rayn 8.01 241 *i* P **Pn** 17 59 43.9 +0.1
SNR=26
RAYN Ar Rayn 8.01 241 P **Pn** 17 59 43.5 -0.3
SRVN Saravan 8.26 90 Pn **Pn** 17 59 48.7 +1.5
SRVN Saravan 8.26 90 *e*Pn **Pn** 17 59 48.5 +1.2
CHTH Charan 8.37 349 *e*Pn **Pn** 17 59 49.7 +0.9
SHRT Shahrakht 8.58 44 *e*Pn **Pn** 17 59 53.8 +2.2
SHRO Shahrood 8.64 16 *e*Pn **Pn** 17 59 54.2 +1.7
IGHG Ghaleghazi 8.68 321 Pn **Pn** 17 59 53.6 +0.6
SNGE Sanandaj 8.87 328 *e*Pn **Pn** 17 59 54.9 -0.8
IDHR Dehrash 9.05 322 Pn **Pn** 17 59 58.6 +0.4
DOK Doka 9.07 174 P **Pn** 17 59 58.2 -0.1
WHFO Wadi Hawf 9.74 176 P **Pn** 18 00 07.0 -0.5
SNR=20
SHAO Shalim 9.89 166 P **Pn** 18 00 09.0 -0.6
SNR=10
DMTO DMTO 10.07 170 P **Pn** 18 00 11.0 -1.0
SNR=16
MRVT Maraveh tapeh 10.26 13 *e*Pn **Pn** 18 00 17.4 +2.8
ABTO Aybut 10.28 179 P **Pn** 18 00 15.0 0.0
SNR=6.8
HRA Herat 10.30 47 **Pn** 18 00 13.4 -1.8
BJRD Bojnurd 10.62 19 *e*Pn **Pn** 18 00 21.8 +2.2
SRSL SARDASHT 10.71 324 *e*Pn **Pn** 18 00 20.7 -0.1
MARD Mardin 14.14 316 **Pn** 18 01 05.3 -2.4
GNI Garni 14.23 333 Pn **Pn** 18 01 09.7 +0.8
comp=Z,1.8nm,0.3s,baz=148,slow=4.9,SNR=7.9
comp=Z,2.6nm,0.4s
GNI Garni 14.23 333 *e*P **Pn** 18 01 06.2 -2.7
AKT Akhty 14.45 344 *e*P **P** 18 01 19.5 +0.9
AKT pmax pmax
comp=Z,4.0nm,0.5s
ASF Jabal al Asfar 14.74 292 Pn **Pn** 18 01 15.5 -0.4
comp=Z,0.4nm,0.3s,baz=90,slow=3.0,SNR=2.8
ASF Sn Sn 18 03 49.6 -9.2
comp=Z,0.2nm,0.3s,baz=94,slow=19,SNR=1.5
ASF Lg Lg 18 05 36.1
baz=63,slow=16
comp=Z,1.1nm,0.4s
GHAJ Ghor Haditha 15.69 287 Pn **Pn** 18 01 29.4 +1.1
EIL Elat 16.05 281 Pn **Pn** 18 01 32.2 -0.8
comp=Z,0.3nm,0.3s,baz=82,slow=7.1,SNR=4.4
EIL Sn **Sn** 18 04 31.6 +1.0
comp=Z,0.1nm,0.3s,baz=318,slow=15,SNR=1.8
EIL Lg Lg 18 06 16.8
comp=Z,0.1nm,0.3s,baz=24,slow=18,SNR=1.2
EIL LR LR 18 08 57.9
comp=Z,152nm,20.6s,baz=1.0,slow=42
comp=Z,0.7nm,0.4s
MMAI Mount Meron Ar 16.17 293 Pn **Pn** 18 01 34.7 +0.2
comp=Z,0.8nm,0.3s,baz=103,slow=18,SNR=1.4
MMAI Sn **Sn** 18 04 35.8 +2.4
comp=Z,2.9nm,0.3s,baz=111,slow=39,SNR=6.2
comp=Z,0.5nm,0.4s
KBZ Khabaz 18.00 335 P **P** 18 01 57.9 +0.1
comp=Z,0.2nm,0.3s,baz=150,slow=13,SNR=8.2
comp=Z,2.7nm,0.7s
SHA1 Shidzhatmaz 18.10 335 *i* P **Pn** 18 01 58.5 -0.3
BNN Bunyan 18.19 312 Pn **Pn** 18 01 57.7 -2.3
GAR Garm 18.25 47 P **Pn** 18 01 58.7 -1.9
GAR Sn IAmb IAmb 18 02 05.3
comp=Z,19nm,0.6s
KIV Kislovodsk 18.27 335 *e*P **Pn** 18 01 59.9 -0.9
KIV pmax pmax
comp=Z,7.0nm,1.0s
SOC Sochi 19.20 329 *e*P **P** 18 02 09.1 -1.8
e 18 05 42.4
SOC MLR MLR
comp=Z,53nm,11.0s
DRK Karamyk 19.48 48 P **P** 18 02 12.6 -1.8
DRK Karamyk 19.48 48 P **P** 18 02 12.6 -1.8
DRK pmax pmax
comp=Z,87nm,0.2s
BR131 Keskin Array S 20.11 312 P **P** 18 02 20.8 -0.3
BR131 Keskin Array S 20.11 312 P **P** 18 02 14.8 -6.3
SNR=6.3
BR131 Keskin Array S 20.11 312 *i* P **P** 18 02 20.7 -0.4
BRTR Keskin Array B 20.11 312 P **P** 18 02 22.1 +1.0
comp=Z,3.1nm,0.7s,baz=133,slow=15,SNR=16
comp=Z,3.1nm,0.7s
BRTR Keskin Array B 20.11 312 P **P** 18 02 21.2 +0.1
BRTR Keskin Array B 20.11 312 *i* P Pn 18 02 22.3 -0.7
BRTR pmax pmax
comp=Z,3.0nm,0.7s
ANTO Ankara 20.75 311 P Pn 18 02 29.5 -0.8
ANTO IAmb IAmb 18 02 37.6
comp=Z,10nm,0.8s
ANTO Ankara 20.75 311 P Pn 18 02 29.5 -0.8
ANTO pmax pmax
comp=Z,10.0nm,0.8s
ILGA Ilgaz 20.77 315 Pn 18 02 29.9 -0.9
ILGA IAmb IAmb 18 02 54.6
comp=Z,14nm,1.0s
KK31 Karatay Array 20.87 38 **P** 18 02 28.6 -0.6
KK31 IAmb IAmb 18 02 34.5
comp=Z,9.1nm,0.7s
KK31 Karatay Array 20.87 38 P **P** 18 02 29.7 +0.5
KKAR Karatay Array 20.87 38 **P** 18 02 28.8 -0.4
KKAR Karatay Array 20.87 38 P **P** 18 02 28.8 -0.4
ARSB Arslanbob 21.23 45 **P** 18 02 33.1 -0.1
ARSB IAmb IAmb 18 02 36.4
comp=Z,24nm,1.0s
ARSB Arslanbob 21.23 45 P **P** 18 02 33.1 -0.1
ARSB pmax pmax
comp=Z,24nm,1.0s
AB31 Akbulak array 22.18 12 *e*P **P** 18 02 43.6 +0.5
ABKAR Akbulak array 22.18 12 **P** 18 02 43.2 +0.1
AAK Ala-Archa 22.90 44 LR LR 18 13 23.3
comp=Z,130nm,19.6s,baz=252,slow=41
AAK Ala-Archa 22.90 44 *i* P **P** 18 02 52.0 +0.9
AAK pmax pmax
comp=Z,11nm,1.8s
KDJ Kajisay 24.34 47 P **P** 18 03 03.4 -1.7
KDJ Kajisay 24.34 47 P **P** 18 03 03.4 -1.7
TARG Taragay, Kyrgy 24.57 49 **P** 18 03 06.4 -1.1
TARG IAmb IAmb 18 03 49.6
comp=Z,4.6nm,0.9s
TARG Taragay, Kyrgy 24.57 49 P **P** 18 03 06.4 -1.1
TARG pmax pmax
comp=Z,5.0nm,0.9s
VRH Novokhopyorsk 25.02 343 *e*P **P** 18 03 11.5 +0.6
VRH pmax pmax
comp=Z,49nm,0.6s
BELG Belogornoye 25.02 352 *i* P **P** 18 03 08.8 -2.1
BELG pmax pmax
comp=Z,3.0nm,1.0s
VSR Storozhevoye 25.76 340 *e*P **P** 18 03 16.5 -1.1
VSR pmax pmax
comp=Z,9.0nm,1.0s
VORR Voronezh 26.14 340 *e*P **P** 18 03 21.9 +0.8
VORR pmax pmax
comp=Z,50nm,0.5s
LPSR Galich'ya Gora 27.04 341 *e*P **P** 18 03 27.7 -1.5
LPSR pmax pmax
comp=Z,13nm,0.6s
BORK Borovoye 28.38 22 *i* P **P** 18 03 40.8 -0.4
BORK pmax pmax
comp=Z,14nm,3.5s
BVAR Borovoye Array 28.38 22 P **P** 18 03 41.5 +0.3
comp=Z,1.4nm,0.4s,baz=214,slow=6.8,SNR=15
comp=Z,1.4nm,0.4s
AKASG Malin Array Be 29.27 328 P **P** 18 03 49.7 +0.6
comp=Z,0.6nm,0.4s,baz=126,slow=7.3,SNR=6.0
comp=Z,0.6nm,0.4s
AKASG Malin Array Be 29.27 328 IAmb IAmb 18 03 51.5
comp=Z,4.1nm,1.4s
AKASG Malin Array Be 29.27 328 *i* P **P** 18 03 50.0 +0.9
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV Kiev 29.27 328 P **P** 18 03 49.0 -0.1
KIEV IAmb IAmb 18 04 28.0
comp=Z,5.3nm,1.1s

KIEV Kiev 29.27 328 P **P** 18 03 49.0 -0.1
KIEV pmax pmax
comp=Z,5.0nm,1.2s
BURAR Bucovina Array 29.47 320 P **P** 18 03 52.0 +1.0
BUR08 Bucovina Ar. S 29.49 320 P **P** 18 03 51.9 +0.6
BUR08 IAmb IAmb 18 04 20.2
comp=Z,3.9nm,1.1s
MK31 Makanchi Array 29.81 42 P **P** 18 03 54.4 +0.5
MK31 IAmb IAmb 18 03 58.3
comp=Z,5.4nm,1.4s
MK31 Makanchi Array 29.81 42 *i* P **P** 18 03 54.5 +0.5
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 29.81 42 P **P** 18 03 54.4 +0.4
comp=Z,1.1nm,0.4s,baz=231,slow=9.1,SNR=18
comp=Z,1.1nm,0.4s
MKAR Makanchi Array 29.81 42 P **P** 18 03 52.8 -1.1
MKAR Makanchi Array 29.81 42 *i* P **P** 18 03 55.0 +1.0
MKAR pmax pmax
comp=Z,1.0nm,0.4s
OBN Obninsk 29.92 341 *e*P **P** 18 03 55.2 +0.4
OBN pmax pmax
comp=Z,7.0nm,0.9s
KURBB Kurchatov Arra 29.96 33 P **P** 18 03 56.0 +0.8
comp=Z,1.9nm,0.5s,baz=235,slow=8.5,SNR=7.2
comp=Z,1.9nm,0.5s
KURK Kurchatov 30.06 33 P **P** 18 03 56.0 -0.1
KURK Kurchatov 30.06 33 *i* P **P** 18 03 56.6 +0.5
KURK pmax pmax
comp=Z,3.0nm,1.4s
KIRV Kirov 31.00 356 *i* P **P** 18 04 03.9 -0.3
WMQ Urumqi 32.08 51 *e*P **P** 18 04 16.6 +2.5
STHS Stebnicka Huta 32.66 320 *e*P **P** 18 04 22.8 +3.7
STHS Stebnicka Huta 32.66 320 *e*P **P** 18 04 22.8 +3.7
KIBK Kibwezi 33.18 208 **P** 18 04 25.4 +1.4
KIBK IAmb IAmb 18 04 28.8
comp=Z,3.4nm,1.0s
LANS Liptovska Anna 33.55 319 *e*P **P** 18 04 29.3 +2.4
LANS Liptovska Anna 33.55 319 *e*P **P** 18 04 29.3 +2.4
OJC Ojcow 33.87 321 P **P** 18 04 29.3 -0.3
OJC Ojcow 33.87 321 P **P** 18 04 29.3 -0.3
DGZ Jazzator, Alta 34.21 41 *i* P **P** 18 04 33.6 +0.9
DGZ pmax pmax
comp=Z,8.0nm,2.4s
KLMR Klimovskoe 34.41 348 *e*P **P** 18 04 31.6 -2.5
KLMR pmax pmax
comp=Z,5.0nm,0.8s
ZAA0 Zalesovo Array 35.05 33 P **P** 18 04 38.3 -1.4
ZAA0 IAmb IAmb 18 04 42.5
comp=Z,5.0nm,1.2s
ZALV Zalesovo Beam 35.05 33 P **P** 18 04 39.8 +0.1
comp=Z,1.4nm,0.3s,baz=231,slow=8.0,SNR=11
comp=Z,1.4nm,0.3s
ZALV Zalesovo Beam 35.05 33 **P** 18 04 38.9 -0.8
ZALV Zalesovo Beam 35.05 33 *i* P **P** 18 04 40.2 +0.5
ZALV pmax pmax
comp=Z,1.0nm,0.3s
GERES GERESS Array B 36.90 316 P **P** 18 04 56.0 +0.2
comp=Z,0.1nm,0.3s,baz=95,slow=11,SNR=2.0
comp=Z,0.1nm,0.3s
WTTA Wattenberg 37.72 313 *e*P **P** 18 05 02.2 -0.7
comp=Z,1.4nm,0.4s
WATA Walderalm 37.78 313 *e*P **P** 18 05 04.0 +0.6
comp=Z,2.3nm,0.3s
KEST Kesra 37.83 293 LR LR 18 24 18.5
comp=Z,46nm,18.1s,baz=32,slow=42
SQTA Sankt Quirin 37.99 312 *e*P **P** 18 05 05.6 +0.5
comp=Z,2.1nm,0.5s
MOTA Moosalm 38.09 312 *i* P **P** 18 05 07.0 +1.0
comp=Z,1.6nm,0.5s
FIA1 FINESS Array S 38.29 339 P **P** 18 05 07.2 0.0
FINES FINESS Array B 38.29 339 P **P** 18 05 07.2 -0.1
comp=Z,2.8nm,0.4s,baz=141,slow=7.4,SNR=31
comp=Z,2.8nm,0.4s
FINES FINESS Array B 38.29 339 P **P** 18 05 06.8 -0.4
FINES FINESS Array B 38.29 339 *i* P **P** 18 05 07.5 +0.3
FINES pmax pmax
comp=Z,3.0nm,0.4s
DAVA Damuels 38.88 312 *e*P **P** 18 05 12.9 +0.3
comp=Z,3.7nm,0.3s
GTA Gaotai 40.25 61 *e*P **P** 18 05 25.1 +1.0
GTA pP pP 18 05 30.8 +0.3
GTA pmax pmax
comp=Z,5.0nm,0.7s
HFS Hagfors 42.01 332 P **P** 18 05 38.3 +0.2
comp=Z,2.3nm,0.5s,baz=132,slow=7.8,SNR=14
comp=Z,2.3nm,0.5s
CHTO Chiang Mai 42.84 92 **P** 18 05 45.9 +0.5
CHTO IAmb IAmb 18 05 49.6
comp=Z,5.2nm,1.2s
CHTO Chiang Mai 42.84 92 P **P** 18 05 45.9 +0.5
CHTO pmax pmax
comp=Z,5.0nm,1.3s
CMAR Chiang Mai Arr 42.96 92 P **P** 18 05 45.4 -1.0
comp=Z,0.6nm,0.7s,baz=289,slow=8.4,SNR=7.8
comp=Z,0.6nm,0.7s
CMAR Chiang Mai Arr 42.96 92 *i* P **P** 18 05 48.5 +2.1
CMAR pmax pmax
comp=Z,1.0nm,0.8s
PZH PanZhiHua 43.10 80 P **P** 18 05 49.9 +2.3
NC405 NORSAR Array S 43.36 332 P **P** 18 05 47.7 -1.4
NC405 IAmb IAmb 18 06 18.1
comp=Z,9.5nm,1.0s
NB2 NORSAR Subarra 43.53 332 P **P** 18 05 49.9 -0.6
comp=Z,6.4nm,1.2s,baz=121,slow=8.6
NOA NORSAR Array B 43.53 332 P **P** 18 05 49.4 -1.1
comp=Z,0.8nm,0.7s,baz=121,slow=8.1,SNR=5.0
comp=Z,0.8nm,0.7s
ARCES ARCESS Array B 44.84 347 P **P** 18 06 01.1 +0.3
comp=Z,7.1nm,1.1s,baz=145,slow=6.9,SNR=6.7
comp=Z,7.1nm,1.1s
ARCES ARCESS Array B 44.84 347 P **P** 18 06 00.4 -0.5
SONM Songino Array 45.68 49 P **P** 18 06 08.8 +0.8
comp=Z,1.5nm,0.5s,baz=266,slow=9.1,SNR=11
comp=Z,1.5nm,0.5s
SONM Songino Array 45.68 49 P **P** 18 06 08.7 +0.8
SONM IAmb IAmb 18 06 12.0
comp=Z,3.7nm,1.4s
SONM Songino Array 45.68 49 P **P** 18 06 08.7 +0.8
SONM pmax pmax
comp=Z,4.0nm,1.4s
NRIK Noril'sk 46.24 16 P **P** 18 06 10.4 -1.5
comp=Z,1.4nm,0.4s,baz=238,slow=6.4,SNR=4.3
comp=Z,1.4nm,0.4s
NRIK Noril'sk 46.24 16 IAmb IAmb 18 06 42.1
comp=Z,7.2nm,1.3s
ESDC Sonseca Array 48.24 300 P **P** 18 06 28.3 +0.3
comp=Z,1.0nm,0.9s,baz=79,slow=7.7,SNR=2.7
comp=Z,1.0nm,0.9s
ESDC Sonseca Array 48.24 300 IAmb IAmb 18 06 32.8
comp=Z,5.9nm,1.4s
EKA Eskdalemuir Ar 48.65 321 P **P** 18 06 30.8 0.0
comp=Z,1.1nm,0.3s,baz=100,slow=7.7,SNR=20
comp=Z,1.1nm,0.3s
EKB Eskdalemuir 48.66 321 P **P** 18 06 29.7 -1.2
HHC Hu-ho-hao-te 49.23 59 *e*P **P** 18 06 36.5 +0.8
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,120nm,4.5s
TSUM Tsumeb 57.92 220 LR LR 18 33 04.4
comp=Z,122nm,18.4s,baz=70,slow=37
DBIC Dimbokro 58.62 260 P **P** 18 07 40.0 -4.5
comp=Z,7.0nm,0.8s,baz=66,slow=6.6,SNR=6.9
DBIC Dimbokro 58.62 260 P **P** 18 07 43.6 -0.9
DBIC Dimbokro 58.62 260 P **P** 18 07 43.6 -0.9
DBIC pmax pmax
comp=Z,7.0nm,0.8s
LBTB Lobatse 58.71 209 P **P** 18 07 46.4 +1.4
LBTB Lobatse 58.71 209 P **P** 18 07 46.4 +1.4
LBTB pmax pmax
comp=Z,16nm,1.3s
BOSA Boshof 62.02 208 P **P** 18 08 06.8 -0.7
comp=Z,3.8nm,0.9s,baz=22,slow=4.1,SNR=2.6
comp=Z,3.8nm,0.9s
BOSA Boshof 62.02 208 IAmb IAmb 18 08 14.0
comp=Z,11nm,1.2s
KSRS Korea Array 62.31 60 P **P** 18 08 08.6 -0.8
comp=Z,0.9nm,0.7s,baz=278,slow=6.0,SNR=1.6
comp=Z,0.9nm,0.7s
FITZ Fitzroy Crossi 83.66 114 P **P** 18 10 15.4 -0.6
comp=Z,2.4nm,0.8s,baz=315,slow=5.7,SNR=2.7
comp=Z,2.4nm,0.8s
ILAR Eielson Array 86.54 8 P **P** 18 10 28.5 -1.3
comp=Z,0.2nm,0.5s,baz=336,slow=5.2,SNR=2.7
comp=Z,0.2nm,0.5s
WRA Warramunga Arr 91.70 112 P **P** 18 10 53.2 -1.6
comp=Z,0.5nm,0.7s,baz=301,slow=4.6,SNR=3.2
comp=Z,0.5nm,0.7s
WRA Warramunga Arr 91.70 112 IAmb IAmb 18 10 57.0
comp=Z,0.3nm,1.3s
ASAR Alice Springs 93.12 115 P **P** 18 11 00.5 -0.9
comp=Z,0.5nm,0.8s,baz=290,slow=4.5,SNR=7.8
comp=Z,0.5nm,0.8s

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*SDD **13** 17:59:08.7±1.6, 19°.31N×67°.24W, h22km±100km, MD3.6, ML3.1, MW3.5*
*NEIC **13** 17:59:09.2±0.9, 19°.22N±0°.04×67°.22W±0°.04, h10km±2km, ML3.0/13, Md2.9/13(RSPR), Error ellipse: s-maj=7.1km s-min=5.3km az=27.0*
*RSPR **13** 17:59:12.7, 19°.16N×67°.26W, h8km±31km, MD2.9/13*
ISC 13 17:59:09.7±1.7, 19°.19N±0°.07×67°.24W±0°.03, h11km±10km, n49, σ0°60/61, 11C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.73**	**170**		**Pb**	**17 59 24.7**	**+0.2**
AGPR					**Sb**	**17 59 35.5**	**+1.0**
AGPR	**Aguadilla, PR**	**0.73**	**170**	*e*Pg	**Pg**	**17 59 23.9**	**0.0**
AGPR				⇓*e*Sg	**Sb**	**17 59 35.5**	**+1.0**
AGPR				IAML		17 59 35.7	
	comp=E,428nm,0.2s						
AGPR				IAML		17 59 42.5	
	comp=N,583nm,0.2s						
AGPR	**Aguadilla, PR**	**0.73**	**170**	⇑*e*P	**Pb**	**17 59 24.7**	**+0.2**
AGPR	**Aguadilla, PR**	**0.73**	**170**	*e*S	**Sb**	**17 59 35.5**	**+1.0**
IDE	**Isla Desecheo**	**0.83**	**195**		**Pg**	**17 59 25.4**	**-0.3**
IDE					**Sg**	**17 59 36.9**	**+0.4**
AOPR	**Arecibo Observ**	**0.96**	**151**		**Pg**	**17 59 27.5**	**-0.7**
AOPR					**Sn**	**17 59 43.0**	**+0.2**
AOPR	**Arecibo Observ**	**0.96**	**151**	⇑*e*Pg	**Pg**	**17 59 27.5**	**-0.7**
AOPR				IAML		17 59 43.2	
	comp=N,520nm,0.2s						
PRSN	**Puerto Rico Se**	**0.97**	**174**		**Pg**	**17 59 28.5**	**0.0**
PRSN					**Sb**	**17 59 42.0**	**+0.6**
PRSN	**Puerto Rico Se**	**0.97**	**174**	⇑*e*P	**Pg**	**17 59 28.5**	**0.0**
PRSN	**Puerto Rico Se**	**0.97**	**174**	*e*S	**Sb**	**17 59 42.0**	**+0.6**
EMPR	**Esperanza - Ma**	**0.98**	**136**		**Pg**	**17 59 28.5**	**-0.1**
EMPR					**Sn**	**17 59 43.0**	**-0.3**
EMPR	**Esperanza - Ma**	**0.98**	**136**	⇓*e*P	**Pg**	**17 59 28.5**	**-0.1**
EMPR	**Esperanza - Ma**	**0.98**	**136**	*e*S	**Sn**	**17 59 43.0**	**-0.3**
LSP	**Las Mesas**	**1.02**	**171**		**Pg**	**17 59 29.2**	**-0.1**
LSP					**Sg**	**17 59 42.8**	**+0.1**
LSP	**Las Mesas**	**1.02**	**171**	⇑*e*P	**Pg**	**17 59 29.2**	**-0.1**
LSP	**Las Mesas**	**1.02**	**171**	*e*S	**Sg**	**17 59 42.8**	**+0.1**
UUPR	**Utuado, UPR, P**	**1.05**	**152**		**Pg**	**17 59 30.0**	**0.0**
UUPR					**Sg**	**17 59 43.6**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.05**	**152**	⇓*e*P	**Pg**	**17 59 30.0**	**0.0**
UUPR	**Utuado, UPR, P**	**1.05**	**152**	*e*S	**Sg**	**17 59 43.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.18**	**174**		**Pn**	**17 59 31.4**	**-0.8**
CRPR					**Sb**	**17 59 47.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.18**	**174**	*e*Pg	**Pn**	**17 59 31.4**	**-0.8**
CRPR				⇑⇓*e*Sg	**Sb**	**17 59 47.4**	**-0.2**
CRPR				IAML		17 59 48.2	
	comp=E,297nm,0.3s						
CRPR				IAML		17 59 52.5	
	comp=N,263nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.18**	**174**	⇑*e*P	**Pn**	**17 59 31.4**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.18**	**174**	*e*S	**Sb**	**17 59 47.3**	**-0.2**
ECPR	**Experimental S**	**1.20**	**136**	⇑*e*P	**Pn**	**17 59 31.8**	**-0.7**
ECPR	**Experimental S**	**1.20**	**136**	*e*S	**Sb**	**17 59 47.8**	**-0.3**
PCDR	**Punta Cana, DR**	**1.27**	**238**	*e*Pg	**Pn**	**17 59 32.5**	**-0.9**
PCDR				IAML		17 59 55.7	
	comp=N,282nm,0.5s						
OBIP	**Obispado Ponce**	**1.29**	**152**	Pn	**Pn**	**17 59 32.7**	**-1.0**
OBIP				IAML		17 59 51.0	
	comp=N,279nm,0.5s						
GCPR	**Guaynabo City**	**1.41**	**128**		**Pn**	**17 59 34.7**	**-0.6**
GCPR					**Sn**	**17 59 53.8**	**0.0**
GCPR	**Guaynabo City**	**1.41**	**128**	⇑*e*P	**Pn**	**17 59 34.7**	**-0.6**
GCPR	**Guaynabo City**	**1.41**	**128**	*e*S	**Sn**	**17 59 53.8**	**0.0**
SJG	**San Juan**	**1.49**	**136**		**Pn**	**17 59 36.8**	**+0.4**
SJG	**San Juan**	**1.49**	**136**	IAML		18 00 00.9	
	comp=N,171nm,0.3s						
SJG				IAML		18 00 05.4	
	comp=N,148nm,0.4s						
SJG	**San Juan**	**1.49**	**136**	⇑*e*P	**Pn**	**17 59 36.8**	**+0.4**
SJG	**San Juan**	**1.49**	**136**	*e*S	**Sn**	**17 59 55.6**	**-0.4**
HUMP	**Col San Antoni**	**1.68**	**128**		**Pn**	**17 59 39.5**	**+0.4**
HUMP					**Sn**	**18 00 00.6**	**0.0**
HUMP	**Col San Antoni**	**1.68**	**128**	IAML		18 00 06.9	
	comp=N,158nm,0.3s						
HUMP				IAML		18 00 12.6	
	comp=E,167nm,0.2s						
HUMP	**Col San Antoni**	**1.68**	**128**	⇑*e*P	**Pn**	**17 59 39.5**	**+0.4**
HUMP	**Col San Antoni**	**1.68**	**128**	*e*S	**Sn**	**18 00 00.6**	**0.0**
MIDR	**Miches**	**1.72**	**263**	*e*Pg	**Pn**	**17 59 39.6**	**0.0**
MIDR				*e*Sg	**Sn**	**18 00 00.2**	**-1.3**
MIDR				IAML		18 00 03.7	
	comp=E,175nm,0.4s						
MIDR				IAML		18 00 08.3	
	comp=N,108nm,0.5s						
MIDR				IAML		18 00 08.3	
	comp=N,108nm,0.5s						
MIDR	**Miches**	**1.72**	**263**	⇑*e*P	**Pn**	**17 59 39.9**	**+0.3**
MIDR	**Miches**	**1.72**	**263**	*e*S	**Sn**	**18 00 01.0**	**-0.6**
SMDR	**Samana, DR**	**1.84**	**273**	⇓*e*Pg	**Pn**	**17 59 40.1**	**-1.2**
SMDR				IAML		18 00 13.4	
	comp=E,130nm,0.9s						
SMDR				IAML		18 00 13.8	
	comp=N,97nm,0.5s						
DR12	**Loma Pena Alta**	**2.06**	**259**		**Pn**	**17 59 44.4**	**+0.1**
HATOM	**Hato Mayor del**	**2.06**	**259**	⇓*e*Pg	**Pn**	**17 59 44.8**	**+0.4**
HATOM				⇓*e*Sg	**Sb**	**18 00 11.8**	**-1.0**
HATOM				IAML		18 00 18.6	
	comp=E,72nm,0.4s						
HATOM				IAML		18 00 23.8	
	comp=N,56nm,0.2s						
DR08	**Loma La Naviza**	**2.64**	**266**	*e*Pg	**Pn**	**17 59 53.2**	**+0.9**
DR08				IAML		18 00 33.5	
	comp=N,2μm,0.2s						
DR08				IAML		18 00 36.8	
	comp=E,990nm,0.2s						
BANI	**BANI**	**3.05**	**255**		**Pn**	**17 59 58.6**	**+0.5**
SDDR	**Presa de Saban**	**3.83**	**268**		**Pn**	**18 00 08.4**	**-0.3**
SDDR	**Presa de Saban**	**3.83**	**268**	⇓*e*P	**Pn**	**18 00 10.2**	**+1.5**
SDDR	**Presa de Saban**	**3.83**	**268**	*e*S	**Sn**	**18 00 54.5**	**+0.8**

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*NEIC **13** 18:05:03.1±2.8, 14°.52S±0°.09×167°.5E±0°.2, h144km±5km, mb4.4/13, Error ellipse: s-maj=22.7km s-min=12.6km az=94.0*
*IDC **13** 18:05:06.1±2.4, 14°.61S×167°.30E, h175km±20km, mb3.8/12, mbtmp4.3/14, MS2.2/1, Error ellipse: s-maj=20.2km s-min=14.1km az=82.0*
ISC 13 18:05:04.9±0.6, 14°.59S±0°.07×167°.41E±0°.10, h170km, n45, σ1§65/48, mb4.2/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.88**	**193**		**Pn**	**18 05 27.3**	**-3.4**
SANVU				Sn	**Sn**	**18 05 44.9**	**-5.9**
MARNC	**Mare, Loyalty**	**6.88**	**175**		Pn	18 06 38.6	-4.9
MARNC	**Mare, Loyalty**	**6.88**	**175**	P	**Pn**	**18 06 41.8**	**-1.7**
YATNC	**Mamie plateau,**	**7.45**	**184**	P	**Pn**	**18 06 50.1**	**-0.9**
DZM	**Mont Dzumac**	**7.50**	**187**	P	**Pn**	**18 06 51.9**	**+0.1**
	32nm,0.3s,baz=346,slow=5.3,SNR=98						
DZM				S	**Sn**	**18 08 17.9**	**+1.8**
	3.8nm,0.3s,baz=306,slow=23,SNR=0.7						
ONTNC	**Ouen Toro**	**7.74**	**187**		**Pn**	**18 06 54.2**	**-0.5**
ONTNC	**Ouen Toro**	**7.74**	**187**	P	**Pn**	**18 06 55.6**	**+0.9**
OUENC	**Ouen Island, N**	**7.81**	**184**	P	**Pn**	**18 06 55.9**	**+0.2**
PINNC	**Pines Island,**	**7.99**	**180**		**Pn**	**18 06 57.9**	**-0.2**
PINNC	**Pines Island,**	**7.99**	**180**	P	**Pn**	**18 06 57.8**	**-0.2**
HNR	**Honiara**	**8.92**	**304**	P	**Pn**	**18 07 10.0**	**-0.5**
	29nm,0.2s,baz=201,slow=4.2,SNR=14						
HNR				S	**Sn**	**18 08 52.3**	**+2.5**
	28nm,0.4s,baz=28,slow=23,SNR=2.0						
HNR				LR	LR	18 10 46.0	
	comp=Z,14nm,21.2s,baz=17,slow=38						
HNR	**Honiara**	**8.92**	**304**		**Pn**	**18 07 09.6**	**-0.8**
RABL	**Rabaul**	**18.23**	**303**	P	**P**	**18 09 04.1**	**-1.4**
RABL				IAmb	IAmb	18 09 11.0	
	comp=Z,25nm,1.1s						
PMG	**Port Moresby**	**20.46**	**282**	P	**P**	**18 09 29.3**	**-0.2**
	comp=Z,4.2nm,0.5s,baz=49,slow=19,SNR=3.1						
	comp=Z,4.2nm,0.5s						
PMG	**Port Moresby**	**20.46**	**282**	P	**P**	**18 09 27.2**	**-2.3**
PMG				IAmb	IAmb	18 09 30.6	

comp=Z,24nm,1.4s
BKZ Black Stump Fm 25.76 164 P **P** 18 10 16.5 -3.4
STKA Stephens Creek 29.19 229 P **P** 18 10 51.6 +1.1
comp=Z,11nm,0.5s,baz=51,slow=8.6,SNR=35
STKA PcP **PcP** 18 13 54.2 +0.5
comp=Z,1.5nm,0.9s,baz=51,slow=3.5,SNR=4.5
comp=Z,11nm,0.5s
STKA Stephens Creek 29.19 229 P **P** 18 10 51.1 +0.6
TOO Toolangi 30.05 216 P **P** 18 10 59.5 +1.4
TOO IAmb IAmb 18 10 59.7
comp=Z,5.9nm,1.1s
WRA Warramunga Arr 31.99 256 P **P** 18 11 13.7 -1.7
comp=Z,1.0nm,0.8s,baz=86,slow=8.3,SNR=5.3
comp=Z,1.0nm,0.8s
AS31 Alice Springs 32.85 249 P **P** 18 11 20.8 -2.0
ASAR Alice Springs 32.85 249 P **P** 18 11 21.5 -1.3
comp=Z,2.3nm,0.5s,baz=77,slow=9.1,SNR=109
ASAR PcP **PcP** 18 14 02.5 -1.2
comp=Z,0.4nm,0.6s,baz=76,slow=3.7,SNR=5.8
comp=Z,2.3nm,0.5s
FITZ Fitzroy Crossi 40.17 259 P **P** 18 12 24.3 -0.6
comp=Z,1.9nm,0.7s,baz=85,slow=6.5,SNR=7.8
comp=Z,1.9nm,0.7s
MJAR Matsushiro Arr 57.84 332 P **P** 18 14 38.7 -0.1
comp=Z,1.0nm,0.6s,baz=172,slow=8.0,SNR=2.4
comp=Z,1.0nm,0.6s
MJAR Matsushiro Arr 57.84 332 IAmb IAmb 18 15 19.1
comp=Z,7.8nm,1.5s
VNDA Vanda 63.01 181 P **P** 18 15 13.8 +0.5
VNDA IAmb IAmb 18 15 15.7
comp=Z,3.8nm,0.7s
SBA Scott Base 63.28 180 P **P** 18 15 16.4 +1.4
PETK Petropavlovsk- 67.93 354 P **P** 18 15 46.5 +1.5
comp=Z,8.7nm,0.9s,baz=203,slow=5.3,SNR=3.8
comp=Z,8.7nm,0.9s
CMAR Chiang Mai Arr 75.02 294 P **P** 18 16 29.5 +1.2
comp=Z,0.2nm,0.4s,baz=106,slow=6.6,SNR=2.0
comp=Z,0.2nm,0.4s
QSPA South Pole Qui 75.44 180 PKP **P** 18 16 32.9 +2.9
comp=Z,4.8nm,0.7s,baz=265,slow=1.2,SNR=57
QSPA South Pole Qui 75.44 180 P **P** 18 16 32.9 +2.9
QSPA IAmb IAmb 18 16 34.4
comp=Z,6.4nm,0.8s
MAW Mawson 82.07 202 P **P** 18 17 06.8 +0.9
comp=Z,5.4nm,0.9s,baz=110,slow=6.1,SNR=8.9
comp=Z,5.4nm,0.9s
ILAR Eielson Array 86.35 18 P **P** 18 17 27.0 -0.4
comp=Z,0.8nm,0.8s,baz=228,slow=5.6,SNR=6.2
comp=Z,0.8nm,0.8s
SNAA Sanae 93.70 183 P **P** 18 18 01.3 -0.6
comp=Z,1.8nm,0.6s,baz=201,slow=20,SNR=6.3
comp=Z,1.8nm,0.6s
SNAA Sanae 93.70 183 P **P** 18 18 01.1 -0.8
SNAA IAmb IAmb 18 18 09.0
comp=Z,6.7nm,1.4s
TXAR Lajitas Array 96.09 61 P **P** 18 18 14.8 +1.1
comp=Z,0.3nm,0.8s,baz=249,slow=4.4,SNR=2.6
comp=Z,0.3nm,0.8s
TXAR Lajitas Array 96.09 61 P **P** 18 18 12.8 -0.9
ARCES ARCESS Array B 120.15 345 PKP **PKiKP** 18 23 35.5 +0.4
comp=Z,1.4nm,0.3s,baz=86,slow=2.6,SNR=60
FINES FINESS Array B 125.64 338 PKP **PKiKP** 18 23 46.4 +0.3
comp=Z,0.8nm,0.4s,baz=106,slow=1.6,SNR=11
NOA NORSAR Array B 130.52 345 PKP **PKiKP** 18 23 56.0 0.0
comp=Z,0.2nm,0.4s,baz=30,slow=2.0,SNR=2.7
HFS Hagfors 130.62 343 PKP **PKPdf** 18 23 55.1 -0.1
comp=Z,2.0nm,0.9s,baz=99,slow=9.3,SNR=4.6
CONA Conrad Observa 139.26 331 *e*PKiKP **PKiKP** 18 24 15.2 +1.0
comp=Z,1.1nm,0.5s
LESA Schwarzleotal 141.10 333 *e*PKiKP **PKiKP** 18 24 18.8 +0.8
comp=Z,1.5nm,0.4s
MOTA Moosalm 141.85 334 *e*PKiKP **PKiKP** 18 24 20.1 +0.6
comp=Z,1.1nm,0.3s
KEST Kesra 151.19 321 PKPbc **PKiKP** 18 24 39.2 +0.1
comp=Z,3.2nm,0.6s,baz=184,slow=1.7,SNR=8.2

*NEIC **13** 18:05:18.9±1.5, 40°.35N±0°.04×125°.23W±0°.05, h10km±2km, Error ellipse: s-maj=6.9km s-min=6.0km az=210.0*
NCEDC 13 18:05:22.1±2.9, 40°.37N±0°.03×125°.03W±0°.04, h8km±7km, ML3.1/56, ML2.9/79(NEIC), Error ellipse: s-maj=5.5km s-min=3.9km az=51.0, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETL	**Petrolia**	**0.53**	**98**		Pb	18 05 33.3	-0.3
PETL					Sb	18 05 41.0	-0.5
KCTM	**Capetown**	**0.54**	**78**		Pb	18 05 34.1	+0.2
KCTM					Sb	18 05 43.0	+1.1
KMPM	**Mount Pierce**	**0.70**	**86**		Sg	18 05 45.4	+0.8
KMPM	**Mount Pierce**	**0.70**	**86**		Pg	18 05 36.0	+0.5
JCC	**Jacoby Creek,**	**0.89**	**59**		Pg	18 05 38.3	-0.8
BRIC	**Briceland Vine**	**0.90**	**106**		Pg	18 05 39.5	0.0
KMRM	**Mail Ridge**	**1.02**	**98**		Pg	18 05 40.7	-1.0
DMOR	**Dinsmores, CA**	**1.07**	**71**		Pg	18 05 41.6	-1.0
KRPM	**Rodgers**	**1.10**	**44**		Pg	18 05 41.7	-1.6
KRPM				IAML		18 05 56.0	
	comp=E,386nm,0.5s						
KHMM	**Horse Mountain**	**1.11**	**62**		Pg	18 05 42.2	-1.3
KHMM				IAML		18 05 56.5	
	comp=N,210nm,0.3s						
KCPM	**Cahto Peak**	**1.30**	**121**		Pn	18 05 44.8	-1.9
INGLE	**Inglenook, Smi**	**1.32**	**129**		Pn	18 05 44.8	-2.1
KHBM	**Hayfork Bally**	**1.41**	**77**		Pn	18 05 46.3	-2.0
KFPM	**Farley Peak**	**1.43**	**120**		Pn	18 05 46.9	-1.6
MNDO	**Woodland Fire**	**1.44**	**136**		Pn	18 05 46.2	-2.3
KBNM	**Bluenose Ridge**	**1.48**	**108**		Pn	18 05 47.8	-1.5
GTC	**Three Chop Rid**	**1.49**	**130**		Pn	18 05 47.2	-2.0
KOMM	**Orleans Mounta**	**1.50**	**52**		Pn	18 05 47.5	-2.0
DCMP	**DeCamp, Califo**	**1.58**	**124**		Pn	18 05 48.6	-1.8
DCMP				IAML		18 06 08.3	
	comp=N,108nm,0.3s						
WEAV	**Weaverville**	**1.60**	**76**		Pn	18 05 49.1	-1.8
SIGP	**Signal Peak, C**	**1.67**	**25**		Pn	18 05 49.2	-2.5
KSXB	**Camp Six Broad**	**1.70**	**30**		Pn	18 05 49.7	-2.5
O02D	**Mt. Diablo Mer**	**1.73**	**96**		Pn	18 05 51.2	-1.4
GHOM	**Hamilton Openi**	**1.75**	**138**		Pn	18 05 50.8	-2.0
GWRM	**Wonder Ranch**	**1.77**	**130**		Pn	18 05 51.1	-2.0
GROM	**Round Mountain**	**1.86**	**103**		Pn	18 05 53.3	-1.2
N02D	**Trinity Center**	**1.87**	**70**		Pn	18 05 52.7	-1.8
N02D				IAML		18 06 16.3	
	comp=N,134nm,0.4s						
N02D				IAML		18 06 16.6	
	comp=E,158nm,0.3s						
BONV	**Boonville, CA**	**1.89**	**136**		Pn	18 05 52.6	-2.1
GVV	**Valley View**	**1.90**	**107**		Pn	18 05 53.5	-1.5
LBKM	**Bonanza King**	**1.94**	**68**		Pn	18 05 53.7	-1.8
KBO	**Bosley Butte**	**1.94**	**18**	Pn	Pn	18 05 52.9	-2.6
KBO				IAML		18 06 16.3	
	comp=N,136nm,0.4s						
KBO				IAML		18 06 19.1	
	comp=E,105nm,0.4s						
M02C	**Callahan**	**1.94**	**57**		Pn	18 05 53.5	-2.0
GSNM	**Snow Mountain**	**2.01**	**135**		Pn	18 05 54.5	-1.9
GALB	**Galbreath Wild**	**2.03**	**137**		Pn	18 05 54.3	-2.4
HOPS	**Hopland Field**	**2.04**	**132**		Pn	18 05 54.7	-2.0
L02F	**Cave Junction**	**2.07**	**32**		Pn	18 05 55.0	-2.2
L02F				IAML		18 06 21.9	
	comp=N,112nm,0.4s						
L02F				IAML		18 06 27.1	
	comp=E,97nm,0.5s						
GHGM	**Hogback Ridge**	**2.10**	**125**		Pn	18 05 56.2	-1.5
GPMM	**Pine Mountain**	**2.21**	**133**		Pn	18 05 57.5	-1.7
YBH	**Yreka Blue Hor**	**2.22**	**51**		Pn	18 05 57.8	-1.6
LCSM	**College of the**	**2.26**	**61**		Pn	18 05 58.8	-1.0
LSHM	**Sage Hen Hill**	**2.32**	**78**		Pn	18 05 59.5	-1.1
FTR	**Fort Ross**	**2.34**	**141**		Pn	18 05 58.9	-2.1
LGBM	**Gray Butte**	**2.36**	**65**		Pn	18 06 00.9	-0.5
M03C	**McCloud**	**2.39**	**67**		Pn	18 06 00.6	-1.0
M03C				IAML		18 06 15.4	
	comp=E,63nm,0.6s						
M03C				IAML		18 06 31.4	
	comp=N,76nm,0.4s						
LMPM	**Military Pass**	**2.44**	**62**		Pn	18 06 02.2	-0.3
B040	**Montague**	**2.46**	**53**		Pn	18 06 01.4	-1.1
B040	**Montague**	**2.46**	**53**		Pn	18 06 01.4	-1.1
O03E	**Paynes Creek**	**2.47**	**91**		Pn	18 06 00.9	-1.9
O03E				IAML		18 06 40.8	
	comp=E,58nm,0.7s						
LHEM	**Herd Peak**	**2.47**	**58**		Pn	18 06 02.1	-0.9
LDBM	**Digger Butte**	**2.48**	**87**		Pn	18 06 01.3	-1.6
MNRC	**McLaughlin Min**	**2.49**	**126**		Pn	18 06 02.0	-1.0
K02D	**Willamette Mer**	**2.54**	**23**		Pn	18 06 03.1	-0.7
K02D				IAML		18 06 31.9	
	comp=N,62nm,0.2s						
	comp=E,85nm,0.2s						
LBFM	**Black Fox Moun**	**2.58**	**67**		Pn	18 06 03.5	-0.8
LMEM	**Manzanita Entr**	**2.65**	**85**		Pn	18 06 05.1	-0.2
LCMM	**Colby Mountain**	**2.69**	**94**		Pn	18 06 03.8	-2.1
NTYM	**Taylor**	**2.70**	**136**		Pn	18 06 03.8	-1.9
OGOM	**Van Goodin Ran**	**2.72**	**104**		Pn	18 06 04.6	-1.5
SUTB	**Sutter Butte**	**2.75**	**113**	IAML		18 06 37.4	
	comp=E,60nm,0.5s						
SUTB				IAML		18 06 37.6	
	comp=N,50nm,0.3s						
HATC	**Hat Creek Radi**	**2.75**	**79**		Pn	18 06 05.5	-1.2
HATC				IAML		18 07 03.3	
	comp=E,41nm,3.7s						
HATC				IAML		18 07 03.5	
	comp=N,48nm,4.0s						
L04D	**Klamath Falls**	**2.76**	**47**		Pn	18 06 06.4	-0.5
L04D				IAML		18 06 41.0	
	comp=N,72nm,0.6s						
L04D				IAML		18 06 41.2	
	comp=E,45nm,0.5s						
MCCM	**Marconi Confer**	**2.78**	**142**	Pn	Pn	18 06 05.1	-1.8
MCCM				IAML		18 07 11.2	
	comp=E,40nm,1.6s						
MCCM				IAML		18 07 40.5	
	comp=N,36nm,2.0s						
ORV	**Oroville**	**2.83**	**106**		Pn	18 06 06.3	-1.4
ORV				IAML		18 06 42.0	
	comp=E,29nm,0.4s						
BBOR	**Butler Butte**	**3.07**	**34**		Pn	18 06 11.0	-0.2
BBOR				IAML		18 06 47.6	
	comp=N,40nm,0.6s						
BBOR				IAML		18 06 49.1	
	comp=E,39nm,0.6s						
FARB	**Farallon Islan**	**3.10**	**149**	IAML		18 06 44.6	
	comp=N,24nm,1.2s						
FARB				IAML		18 06 48.5	
	comp=E,34nm,1.0s						
J04A	**Umpqua Nationa**	**3.61**	**36**		Pn	18 06 17.0	-1.5
BEKR	**Beckworth**	**3.62**	**96**		Pn	18 06 17.6	-1.1
BEKR				IAML		18 07 02.9	
	comp=N,26nm,0.7s						
BEKR				IAML		18 07 03.7	
	comp=E,27nm,0.6s						
K05A	**Summer Lake**	**3.90**	**51**		Pn	18 06 20.9	-1.6
K05A				IAML		18 07 40.3	
	comp=N,22nm,4.7s						
K05A				IAML		18 08 33.1	
	comp=E,20nm,4.9s						
I04A	**Tendick Farm,**	**3.94**	**29**	IAML		18 08 32.4	
	comp=N,22nm,0.2s						
MPK	**Martis Peak**	**4.00**	**104**	IAML		18 07 13.4	
	comp=E,25nm,0.6s						
MHC	**Mount Hamilton**	**4.01**	**138**		Pn	18 06 22.8	-1.3
MHC				IAML		18 07 32.4	
	comp=E,14nm,3.8s						
MHC				IAML		18 08 09.2	
	comp=N,17nm,4.4s						
J05D	**Fort Rock, OR**	**4.07**	**43**		Pn	18 06 25.1	+0.4
J05D				IAML		18 06 53.2	
	comp=N,15nm,4.9s						
J05D				IAML		18 07 37.0	
	comp=E,16nm,4.9s						
WIFE	**Three Sisters-**	**4.39**	**32**	IAML		18 07 49.1	
	comp=N,13nm,4.5s						
PINE	**Pine Mountain**	**4.58**	**40**		Pn	18 06 31.0	-0.9
PINE				IAML		18 08 28.2	
	comp=N,11nm,4.8s						
HULI	**Fort Hunter Li**	**5.27**	**144**	Pn	Pn	18 06 39.0	-2.2
PMPB	**Monarch Peak**	**5.31**	**140**	Pn	Pn	18 06 39.5	-2.3
PKD	**Bear Valley Ra**	**5.66**	**140**	Pn	Pn	18 06 44.7	-1.8

*IDC **13** 18:08:00.9±1.5, 13°.52N×143°.54E, h95km±16km, mb3.6/14, mbtmp3.9/14, Error ellipse: s-maj=22.0km s-min=18.6km az=102.0*
ISC 13 18:07:55.3±0.8, 13°.6N±0°.1×143°.23E±0°.09, h35km, n21, σ1s 80/16, mb3.9/14, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.60**	**90**	P	**Pn**	**18 08 22.2**	**+1.2**
	208nm,0.3s,baz=48,slow=2.8,SNR=152						
GUMO				S	**Sn**	**18 08 42.2**	**+1.8**
	427nm,0.3s,baz=208,slow=23,SNR=19						
H11S3	**WAKE ISLAND Hy 23.06**	**75**		T	T	18 35 55.4	
	baz=259,slow=73,SNR=5.9						
H11S1	**WAKE ISLAND Hy 23.07**	**75**		T	T	18 36 01.1	
	baz=259,slow=73,SNR=5.1						
H11S2	**WAKE ISLAND Hy 23.07**	**75**		T	T	18 36 02.0	
	baz=259,slow=73,SNR=5.6						
H11N1	**WAKE ISLAND Hy 23.46**	**72**		T	T	18 36 30.7	
	baz=255,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy 23.47**	**72**		T	T	18 36 31.5	
	baz=255,slow=75,SNR=6.5						
H11N3	**WAKE ISLAND Hy 23.48**	**72**		T	T	18 36 32.2	
	baz=255,slow=75,SNR=9.7						
KSRS	**Korea Array**	**27.41**	**333**	P	**P**	**18 13 40.8**	**+3.3**
	1.0nm,0.9s,baz=145,slow=9.2,SNR=1.5						
	1.0nm,0.9s						
WRA	**Warramunga Arr**	**34.45**	**195**	P	**P**	**18 14 40.2**	**+0.3**
	1.1nm,0.8s,baz=19,slow=9.5,SNR=4.9						
	1.1nm,0.8s						
ASAR	**Alice Springs**	**38.13**	**194**	P	**P**	**18 15 11.5**	**+0.1**
	0.1nm,0.6s,baz=15,slow=14,SNR=4.1						
	0.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.76**	**283**	P	**P**	**18 15 50.1**	**+0.3**
	0.4nm,0.7s,baz=96,slow=8.4,SNR=2.4						
	0.4nm,0.7s						
SONM	**Songino Array**	**45.82**	**326**	P	**P**	**18 16 15.2**	**+1.3**
	0.5nm,0.5s,baz=137,slow=7.3,SNR=3.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**60.38**	**316**	P	**P**	**18 18 02.2**	**+1.1**
	0.6nm,0.7s,baz=91,slow=6.9,SNR=3.8						
	0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**60.70**	**325**	P	**P**	**18 18 04.3**	**+1.3**
	0.6nm,0.5s,baz=113,slow=7.8,SNR=4.2						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**63.59**	**320**	P	**P**	**18 18 23.6**	**+1.1**
	1.2nm,0.7s,baz=104,slow=6.7,SNR=12						
	1.2nm,0.7s						
BVAR	**Borovoye Array**	**68.94**	**322**	P	**P**	**18 18 57.6**	**+0.8**
	1.7nm,0.5s,baz=104,slow=8.1,SNR=18						
	1.7nm,0.5s						
ILAR	**Eielson Array**	**69.25**	**25**	P	**P**	**18 18 56.6**	**-1.8**
	0.8nm,0.6s,baz=252,slow=5.7,SNR=5.3						
	0.8nm,0.6s						
YKA	**Yellowknife Ar**	**83.59**	**27**	P	**P**	**18 20 18.2**	**-1.6**
	0.4nm,0.5s,baz=194,slow=5.8,SNR=6.9						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**86.59**	**342**	P	**P**	**18 20 34.1**	**-0.6**
	5.0nm,1.0s,baz=61,slow=5.5,SNR=2.3						
	5.0nm,1.0s						
NVAR	**Mina Array Bea**	**88.16**	**51**	P	**P**	**18 20 40.4**	**-2.8**
	2.0nm,0.6s,baz=260,slow=5.7,SNR=15						
	2.0nm,0.6s						
FINES	**FINESS Array B**	**90.48**	**335**	P	**P**	**18 20 50.7**	**-2.5**
	1.3nm,0.8s,baz=65,slow=4.7,SNR=1.6						
	1.3nm,0.8s						

*SOME **13** 18:33:37.8, 42°.93N×77°.28E, h10km*
*NNC **13** 18:33:37.0±0.7, 42°.91N×77°.31E, h0km, mb2.3, mpv2.9, Error ellipse: s-maj=5.8km s-min=3.0km az=6.0*
*KRNET **13** 18:33:37.8±0.1, 42°.93N×77°.28E, h20km, mb2.5*
ISC 13 18:33:37.9±0.9, 42°.93N±0°.02×77°.27E±0°.02, h13km±7km, n36, σ0s 96/69, 10C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.26**	**294**	P	**Pg**	**18 33 43.8**	**+0.1**
	1.3nm,0.1s						
TNSS				S	**Sg**	**18 33 48.1**	**+0.5**
	18nm,0.2s						
TNSS	**Tian-Shan**	**0.26**	**294**	*e*P	**Pg**	**18 33 43.8**	**+0.1**
TNSS				*e*S	**Sg**	**18 33 48.2**	**+0.7**
TNSS	**Tian-Shan**	**0.26**	**294**	*e*P	**Pg**	**18 33 43.8**	**+0.1**
	1.3nm,0.1s						
TNSS				*e*S	**Sg**	**18 33 48.2**	**+0.7**
	18nm,0.2s						
MDOK	**Medeo**	**0.28**	**325**	Pg	**Pg**	**18 33 43.9**	**0.0**
	17nm,0.2s						
MDOK				Lg	Lg	18 33 48.4	
	30nm,0.3s						
MDOK	**Medeo**	**0.28**	**325**	*e*P	**Pg**	**18 33 44.0**	**0.0**
MDOK				*e*S	**Sg**	**18 33 48.5**	**+0.5**
KOTS	**Kotyrbulak**	**0.33**	**339**	P	**Pg**	**18 33 44.7**	**0.0**
	47nm,0.1s						
KOTS				S	**Sg**	**18 33 49.6**	**+0.4**
	35nm,0.2s						
KOTS	**Kotyrbulak**	**0.33**	**339**	*e*P	**Pg**	**18 33 44.7**	**0.0**
KOTS				*e*S	**Sg**	**18 33 49.6**	**+0.4**
	47nm,0.1s						
KOTS				*e*S	**Sg**	**18 33 49.6**	**+0.4**
	43nm,0.3s						
AAA	**Alma-Ata**	**0.38**	**317**	P	**Pb**	**18 33 46.1**	**-0.5**
	52nm,0.1s						
AAA				S	**Sb**	**18 33 52.1**	**-0.5**
	6.1nm,0.1s						
AAA	**Alma-Ata**	**0.38**	**317**	*e*P	**Pb**	**18 33 46.1**	**-0.5**
	52nm,0.1s						
AAA				*e*S	**Sb**	**18 33 52.1**	**-0.5**
	2.4nm,0.1s						
MTBS	**Maitube**	**0.65**	**288**	P	**Pg**	**18 33 50.2**	**-0.5**
	0.8nm,0.1s						
MTBS				S	**Sg**	**18 33 59.0**	**-0.3**
	5.8nm,0.3s						
MTBS	**Maitube**	**0.65**	**288**	*e*P	**Pg**	**18 33 50.2**	**-0.5**
MTBS				*e*S	**Sg**	**18 33 59.1**	**-0.1**
MTBS	**Maitube**	**0.65**	**288**	*e*P	**Pg**	**18 33 50.1**	**-0.5**
	0.6nm,0.1s						
MTBS				*e*S	**Sg**	**18 33 59.1**	**-0.1**
	3.4nm,0.1s						
KDJ	**Kajisay**	**0.80**	**185**	⇓*i*P	**Pg**	**18 33 53.1**	**-0.4**
KDJ				⇓*i*S	**Sg**	**18 34 03.9**	**-0.2**
SATY	**Saty**	**0.84**	**81**	P	**Pg**	**18 33 53.0**	**-1.2**
	2.7nm,0.1s						
SATY				S	**Sg**	**18 34 03.9**	**-1.3**
	25nm,0.1s						
KTBS	**Karatobe**	**0.89**	**331**	P	**Pg**	**18 33 54.6**	**-0.6**
	2.2nm,0.1s						
KTBS				S	**Sg**	**18 34 06.3**	**-0.6**
	13nm,0.2s						
KTBS	**Karatobe**	**0.89**	**331**	*e*P	**Pg**	**18 33 54.6**	**-0.6**
KTBS				*e*S	**Sg**	**18 34 06.6**	**-0.3**
PRZ	**Przheval'sk**	**0.94**	**118**	⇓*e*P	**Pg**	**18 33 55.5**	**-0.7**
PRZ				⇓*e*S	**Sg**	**18 34 07.6**	**-0.9**
KST	**Kastek**	**0.97**	**277**	P	**Pg**	**18 33 56.3**	**-0.3**
	0.8nm,0.1s						
KST				S	**Sb**	**18 34 09.5**	**+0.1**
	3.4nm,0.2s						
KST	**Kastek**	**0.97**	**277**	*e*P	**Pg**	**18 33 56.3**	**-0.3**
KST				*e*S	**Sb**	**18 34 09.6**	**+0.1**
KST	**Kastek**	**0.97**	**277**	*e*P	**Pg**	**18 33 56.3**	**-0.3**
	0.3nm,0.1s						
KST				*e*S	**Sb**	**18 34 09.7**	**+0.1**
	3.0nm,0.1s						
ULHL	**Ulahol**	**1.02**	**228**	⇑*i*P	**Pg**	**18 33 57.0**	**-0.7**
ULHL				⇑*i*S	**Sg**	**18 34 10.9**	**-0.2**
BOOM	**Boomskoye usch**	**1.08**	**246**	⇑*i*P	**Pg**	**18 33 58.0**	**-0.7**
BOOM				⇑*i*S	**Sg**	**18 34 12.3**	**-0.5**
DGS	**Degeres**	**1.14**	**286**	P	**Pb**	**18 33 59.1**	**-0.6**
	1.3nm,0.3s						
DGS				S	**Sg**	**18 34 14.6**	**-0.2**
	3.1nm,0.3s						
DGS	**Degeres**	**1.14**	**286**	*e*P	**Pb**	**18 33 59.1**	**-0.6**
DGS				*e*S	**Sg**	**18 34 14.7**	**-0.2**
DGS	**Degeres**	**1.14**	**286**	*e*P	**Pb**	**18 33 59.1**	**-0.6**
	0.4nm,0.1s						
DGS				*e*S	**Sg**	**18 34 14.6**	**-0.2**
	3.1nm,0.3s						
KPKS	**Kokpek**	**1.16**	**62**	*e*P	**Pb**	**18 33 58.7**	**-1.3**
	0.1nm,0.1s						
KPKS				*e*S	**Sb**	**18 34 13.6**	**-1.4**
	5.8nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.26**	**162**	⇑*i*P	**Pn**	**18 34 01.0**	**-0.7**
TARG				⇑*i*S	**Sb**	**18 34 17.9**	**-0.3**
ARXS	**Arharly**	**1.34**	**17**	P	**Pn**	**18 34 01.9**	**-0.7**
	1.7nm,0.2s						
ARXS				S	**Sb**	**18 34 19.5**	**-0.7**
	11nm,0.2s						
ARXS	**Arharly**	**1.34**	**17**	*e*P	**Pn**	**18 34 01.9**	**-0.7**
	1.3nm,0.1s						
ARXS				*e*S	**Sb**	**18 34 19.6**	**-0.7**
	11nm,0.2s						
KRBS	**Karabastau**	**1.40**	**304**	*e*P	**Pn**	**18 34 03.5**	**+0.3**
KRBS				*e*S	**Sn**	**18 34 22.1**	**+0.5**
KRBS	**Karabastau**	**1.40**	**304**	*e*P	**Pn**	**18 34 03.5**	**+0.3**
KRBS				*e*S	**Sn**	**18 34 22.1**	**+0.5**
SHLS	**Shalkode**	**1.62**	**81**	Pg	**Pg**	**18 34 12.5**	**+3.5**
	2.2nm,0.1s						
SHLS				Lg	Lg	18 34 39.0	
	5.0nm,0.2s						
SHLS	**Shalkode**	**1.62**	**81**	*e*P	**Pg**	**18 34 13.5**	**+4.4**
	0.4nm,0.1s						
SHLS				*e*S	Sg	18 34 39.0	+8.9
	5.7nm,0.2s						
JNKS	**Jany-Kuch**	**2.23**	**213**	⇑*e*P	**Pn**	**18 34 15.8**	**+1.0**
JNKS				⇑*e*S	**Sn**	**18 34 44.3**	**+1.9**
ARLS	**Aral**	**2.43**	**245**	⇑*e*P	**Pn**	**18 34 18.5**	**+0.9**
ARLS				⇑*e*S	**Sn**	**18 34 49.2**	**+1.9**

*IDC **13** 18:37:37.4±7.7, 18°.90S×170°.56E, h251km±33km, mb3.9/3, mbtmp4.6/5, Error ellipse: s-maj=94.7km s-min=40.0km az=96.0*
*NEIC **13** 18:37:43.2±1.1, 18°.8S±0°.1×169°.7E±0°.1, h232km±9km, mb4.4/18, Error ellipse: s-maj=20.1km s-min=13.5km az=121.0*
ISC 13 18:37:43.8±0.8, 18°.87S±0°.10×169°.7E±0°.1, h246km, n27, σ2s 05/28, mb4.3/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.05**	**211**		**Pn**	**18 38 35.7**	**-0.9**
MARNC				Sn	**S**	**18 39 12.8**	**-5.6**
PINNC	**Pines Island,**	**4.30**	**209**		**Pn**	**18 38 50.6**	**-0.3**
PINNC				Sn	**S**	**18 39 44.4**	**+0.1**
DZM	**Mont Dzumac**	**4.44**	**223**	P	**Pn**	**18 38 52.3**	**-0.4**
	18nm,0.7s,baz=48,slow=17,SNR=37						
DZM				S	**S**	**18 39 54.1**	**+6.7**
	7.5nm,0.6s,baz=300,slow=22,SNR=0.9						
ONTNC	**Ouen Toro**	**4.60**	**221**		**Pn**	**18 38 54.0**	**-0.5**
HNR	**Honiara**	**13.33**	**313**	P	**P**	**18 40 46.4**	**+0.9**
	48nm,0.9s,baz=67,slow=3.7,SNR=3.7						
STKA	**Stephens Creek**	**28.44**	**237**	P	**P**	**18 43 16.3**	**+0.2**
	2.8nm,0.6s,baz=70,slow=8.3,SNR=7.4						
	2.8nm,0.6s						
STKA	**Stephens Creek**	**28.44**	**237**	IAmb	IAmb	18 43 23.4	
	comp=Z,63nm,1.5s						
WR8	**Warramunga Arr**	**33.21**	**262**	P	**P**	**18

comp=Z,4.2nm,1.1s
PMSA Palmer Station 87.10 160 P 18 50 03.8 +2.3

*IDC **13** 18:42:59.7±9.0, 14°.28S×167°.12E, h172km±80km, mb3.2/3, mbtmp3.7/4, Error ellipse: s-maj=70.4km s-min=25.0km az=1.0*
ISC 13 18:42:57.4±1.5, **14°.2S**±0°.1×**167°.1E**±0°.2, **h150**km, **n7**, σ1**§25/8**, **mb3.5/3**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.89**	**185**	P	**Pn**	**18 44 51.2**	**+1.7**
	3.6nm,0.5s,baz=106,slow=18,SNR=11						
DZM				S	**Sn**	**18 46 15.7**	**-1.8**
	3.3nm,0.7s,baz=49,slow=17,SNR=2.0						
RAO	**Raoul Island**	**20.43**	**140**	P	**P**	**18 47 22.7**	**-0.3**
	282nm,0.4s,baz=150,slow=20,SNR=4.6						
STKA	**Stephens Creek**	**29.25**	**229**	P	**P**	**18 48 46.0**	**+0.6**
	1.0nm,0.4s,baz=47,slow=8.4,SNR=4.9						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**31.82**	**255**	P	**P**	**18 49 07.8**	**-0.4**
	0.2nm,0.4s,baz=82,slow=6.8,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**32.74**	**248**	P	**P**	**18 49 15.7**	**-0.6**
	0.4nm,0.5s,baz=75,slow=9.3,SNR=25						
	0.4nm,0.5s						
ARCES	**ARCESS Array B**	**119.67**	**345**	PKP	**PKPdf**	**19 01 28.1**	**-0.9**
	3.4nm,1.0s,baz=80,slow=1.8,SNR=15						
FINES	**FINESS Array B**	**125.14**	**338**	PKP	**PKPdf**	**19 01 39.7**	**0.0**
	1.6nm,0.8s,baz=105,slow=4.9,SNR=1.8						

*SOME **13** 18:55:06.4, 40°.52N×71°.00E, h5km*
*NNC **13** 18:55:06.4±7.9, 40°.30N×70°.99E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=59.9km s-min=35.0km az=19.0*
*KRNET **13** 18:55:07.9±0.1, 40°.53N×70°.90E, h12km, mb2.8*
*ISU **13** 18:55:09, 40°.45N×70°.79E, h13km*
ISC 13 18:55:08.4±0.9, **40°.54N**±0°.02×**70°.92E**±0°.02, **h8**km±7km, **n32**, σ1**§80/55**, **16C-4D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MINT	**Mingtut**	**0.09**	**153**	P	**Pg**	**18 55 09.0**	**-1.6**
MINT	**Mingtut**	**0.09**	**153**	P	**Pg**	**18 55 11.0**	**+0.4**
MINT				S	**Sg**	**18 55 13.7**	**+1.5**
CHDK	**Chadak**	**0.45**	**343**	P	**Pb**	**18 55 18.0**	**-0.7**
CHDK				S	**Sb**	**18 55 25.9**	**+0.3**
FRG	**Fergana**	**0.68**	**104**	P	**Pg**	**18 55 21.5**	**0.0**
FRG				S	**Sb**	**18 55 32.4**	**+0.3**
NAM	**Namangan**	**0.72**	**51**	P	**Pn**	**18 55 26.4**	**+1.5**
TRKS	**Terek-Say**	**1.00**	**9**	↑*i*P	**Pg**	**18 55 25.9**	**-1.8**
TRKS				↑*i*S	**Sg**	**18 55 39.1**	**-1.5**
TSTA	**Tashata**	**1.19**	**88**	P	**Pb**	**18 55 30.6**	**-0.6**
TSTA				S	**Sn**	**18 55 48.4**	**+0.7**
DRK	**Karamyk**	**1.26**	**147**	↑*e*P	**Pn**	**18 55 31.7**	**-0.9**
DRK				↑*e*S	**Sb**	**18 55 48.8**	**-0.3**
OHH	**Osh**	**1.42**	**90**	↓*e*P	**Pn**	**18 55 34.7**	**+0.1**
OHH				↓*e*S	**Sg**	**18 55 54.4**	**+0.3**
ARK	**Arkit**	**1.48**	**32**	↑*i*P	**Pb**	**18 55 36.2**	**-0.1**
ARK				↑*i*S	**Sg**	**18 55 56.4**	**+0.4**
GAR	**Garm**	**1.61**	**197**	↑*i*P	**Pb**	**18 55 37.8**	**-0.7**
GAR				↑*i*S	**Sb**	**18 55 59.1**	**0.0**
IUG	**Iuzhnay**	**1.74**	**338**	P	**Pb**	**18 55 40.3**	**-0.4**
	52nm,0.3s						
IUG				S	**Sg**	**18 56 05.6**	**+1.3**
	227nm,0.2s						
ARSB	**Arslanbob**	**1.74**	**63**	↓*e*P	**Pb**	**18 55 41.0**	**+0.2**
ARSB				↓*e*S	**Sg**	**18 56 04.5**	**0.0**
CHM	**Chimkent**	**2.03**	**331**	*e*P	**Pb**	**18 55 45.9**	**+0.2**
	24nm,0.1s						
CHM				*e*S	**Sg**	**18 56 14.6**	**+0.9**
	171nm,0.2s						
SFK	**Sufi-Kurgan**	**2.04**	**104**	↑*i*P	**Pb**	**18 55 45.5**	**-0.5**
SFK				↑*i*S	**Sg**	**18 56 13.1**	**-1.0**
SALK	**Salom-Alik**	**2.23**	**80**	↑*e*P	**Pb**	**18 55 47.7**	**-1.4**
SALK				↑*e*S	**Sb**	**18 56 17.2**	**+0.3**
DZA	**Taraz**	**2.37**	**7**	Pg	**Pb**	**18 55 51.7**	**+0.4**
	62nm,0.1s						
DZA				Lg	Lg	18 56 23.6	
	81nm,0.2s						
DZA	**Taraz**	**2.37**	**7**	*e*P	**Pb**	**18 55 50.5**	**-0.8**
	16nm,0.1s						
DZA				*e*S	**Sb**	**18 56 22.4**	**+1.7**
	52nm,0.1s						
BXML	**Bakhmal**	**2.38**	**250**	S	**Sg**	**18 56 28.1**	**+3.3**
DZI	**Dzhizak**	**2.41**	**261**	P	**Pb**	**18 55 50.3**	**-1.7**
DZI				S	**Sb**	**18 56 21.2**	**-0.7**
KK31	**Karatay Array**	**2.58**	**353**	↑Pn	**Pb**	**18 55 55.2**	**+0.3**
	2.9nm,0.3s,baz=179,slow=16,SNR=35						
KK31				↑Sn	**Sg**	**18 56 29.2**	**-2.0**
	6.6nm,0.3s,baz=178,slow=29,SNR=13						
BRLS	**Boroldav**	**2.61**	**342**	Pg	**Pn**	**18 55 51.6**	**+0.6**
	2.7nm,0.1s						
BRLS				Lg	Lg	18 56 24.8	
	35nm,0.2s						
BRLS	**Boroldav**	**2.61**	**342**	*e*P	**Pn**	**18 55 51.6**	**+0.6**
	0.7nm,0.1s						
BRLS				*e*S	**Sn**	**18 56 24.6**	**+1.6**
	35nm,0.2s						
MRKS	**Merke**	**2.80**	**37**	Pg	**Pb**	**18 55 59.2**	**+0.5**
	5.2nm,0.2s						
MRKS				Lg	Lg	18 56 37.1	
	23nm,0.2s						
MRKS	**Merke**	**2.80**	**37**	*e*P	**Pb**	**18 55 59.2**	**+0.5**
	0.5nm,0.1s						
MRKS				*e*S	**Sg**	**18 56 37.4**	**-0.8**
	23nm,0.2s						
ARLS	**Aral**	**2.88**	**62**	↑*e*P	**Pn**	**18 55 57.0**	**+2.1**
ARLS				↑*e*S	**Sb**	**18 56 33.2**	**-2.5**
AGL	**Agalyk**	**3.27**	**253**	P	**Pg**	**18 56 08.8**	**-2.3**
AGL				S	**Sg**	**18 56 50.2**	**-3.2**
ZRB	**Zarabog**	**4.35**	**237**	S	**Sg**	**18 57 31.4**	**+3.4**
DGS	**Degeres**	**4.51**	**52**	Pg	**Pb**	**18 56 30.3**	**+2.3**
	1.4nm,0.2s						
DGS				Lg	Lg	18 57 30.2	
	5.2nm,0.5s						
KST	**Kastek**	**4.52**	**55**	*e*P	**Pb**	**18 56 29.2**	**+1.1**
	0.5nm,0.1s						
KST				*e*S	**Sg**	**18 57 28.8**	**-4.8**
	3.1nm,0.2s						
KTBS	**Karatobe**	**5.33**	**52**	Pg	**Pb**	**18 56 44.6**	**+2.8**
	0.5nm,0.3s						
KTBS				Lg	Lg	18 57 55.7	
	3.8nm,0.6s						
ARXS	**Arharly**	**6.29**	**52**	*e*P	**Pb**	**18 57 02.3**	**+4.1**
ARXS				*e*S	**Sg**	**18 58 25.4**	**-4.9**

*IDC **13** 19:07:27.3±0.8, 10°.98S×164°.30E, h0km, mb4.1/12, mbtmp4.2/13, ML5.0/1, MS3.8/47, Error ellipse: s-maj=23.2km s-min=19.9km az=104.0*
*NEIC **13** 19:07:28.9±2.6, 10°.82S±0°.10×164°.41E±0°.08, h10km±1km, mb4.9/46, Error ellipse: s-maj=20.1km s-min=7.0km az=35.0*
*GCMT **13** 19:07:30.9±0.3, 10°.83S±0°.02×164°.30E±0°.01, h28km±1km, MW4.9/92, Moment Tensor Solution. s25,c28; s92,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_r=0.06±.14; $M_{\theta\theta}$=1.57±.12; $M_{\phi\phi}$ 1.50±.10; $M_{r\theta}$=0.15±.17; $M_{r\phi}$=2.66±.09; $M_{\theta\phi}$=-1.03±.16; Best double couple: M_0=3.24300×10^{16} NP1:ϕs=255.00000°, δ71.00000°, λ2.00000°. NP2: ϕs=165.00000°, δ88.00000°, λ161.00000°. Principal axes: T 3.2500, Plg15.0000°, Azm118.0000°; N -0.0200, Plg71.0000°, Azm338.0000°; P -3.2360, Plg11.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 19:07:31.4±0.6, **10°.93N**±0°.08×**164°.38E**±0°.07, **h29**km, **n104**, σ1**§66/48**, **mb4.9/33**, **MS3.8/45**, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.61**	**288**	Pn	**Pn**	**19 08 38.6**	**-0.6**
	68nm,0.3s,baz=150,slow=7.3,SNR=24						
HNR				Sn	**Sn**	**19 09 34.4**	**+2.4**
	28nm,0.3s,baz=227,slow=22,SNR=4.5						
HNR				LR	LR	19 10 31.4	
	comp=Z,3μm,18.2s,baz=122,slow=40						
	237nm,0.5s						
SANVU	**Saraoutou**	**5.27**	**149**		**Pn**	**19 08 48.5**	**+0.3**
MARNC	**Mare, Loyalty**	**11.06**	**162**	Pn	**Pn**	**19 10 08.0**	**+0.2**
DZM	**Mont Dzumac**	**11.26**	**170**	Pn	**Pn**	**19 10 12.3**	**+1.8**
	3.5nm,0.3s,baz=324,slow=8.4,SNR=45						
DZM				Sn	**Sn**	**19 12 14.0**	**-1.5**
	0.9nm,0.3s,baz=166,slow=23,SNR=1.5						
ONTNC	**Ouen Toro**	**11.49**	**170**		**Pn**	**19 10 14.2**	**+0.6**
PINNC	**Pines Island,**	**11.98**	**166**		**Pn**	**19 10 22.3**	**+1.9**
RABL	**Rabaul**	**13.83**	**298**	Pn	**Pn**	**19 10 45.8**	**0.0**
MSVF	**Nonsavu**	**14.87**	**119**		**Pn**	**19 10 59.3**	**-0.5**
PMG	**Port Moresby**	**17.02**	**274**	LR	LR	19 17 49.5	
	comp=Z,652nm,18.3s,baz=119,slow=37						
PMG	**Port Moresby**	**17.02**	**274**	Pn	**Pn**	**19 11 24.6**	**-2.9**
MANU	**Manus Island**	**19.06**	**296**	P	**Pn**	**19 11 52.3**	**-0.3**
MANU					IAmb	IAmb	19 11 56.2
	comp=Z,150nm,1.8s						
CTA	**Charters Tower**	**19.68**	**240**	LR	LR	19 18 41.5	
	comp=Z,8.3nm,20.0s,baz=46,slow=34						
CTAO	**Charters Tower**	**19.68**	**240**	P	**P**	**19 11 58.3**	**-0.2**
COEN	**Coen**	**20.93**	**260**	P	**P**	**19 12 10.4**	**-1.6**
RAO	**Raoul Island**	**24.61**	**140**	LR	LR	19 21 16.9	
	comp=Z,152nm,20.1s,baz=304,slow=34						
SMPI	**Sarmi**	**26.99**	**287**	P	**P**	**19 13 11.1**	**+0.1**
	comp=Z,24nm,1.4s						
INKA	**Innaminka**	**27.79**	**230**		**P**	**19 13 18.0**	**-0.1**
H11S2	**WAKE ISLAND Hy**	**29.32**	**5**	T	T	19 43 53.9	
	baz=184,slow=76,SNR=30						
H11S3	**WAKE ISLAND Hy**	**29.32**	**4**	T	T	19 44 15.3	
	baz=184,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**29.34**	**4**	T	T	19 44 02.9	
	baz=184,slow=76,SNR=20						
URZ	**Urewera**	**29.51**	**159**	LR	LR	19 23 41.3	
	comp=Z,230nm,18.3s,baz=336,slow=33						
STKA	**Stephens Creek**	**29.62**	**222**	P	**P**	**19 13 32.4**	**-2.0**
	comp=Z,2.3nm,1.0s,baz=12,slow=11,SNR=3.6						
STKA				LR	LR	19 24 38.1	
	comp=Z,258nm,18.4s,baz=24,slow=35						
	comp=Z,2.3nm,1.0s						
WR8	**Warramunga Arr**	**30.13**	**249**	P	**P**	**19 13 37.6**	**-1.4**
WB0	**Warramunga Arr**	**30.18**	**249**		**P**	**19 13 37.7**	**-1.8**
WB0					IAmb	IAmb	19 13 44.9
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**30.27**	**249**	P	**P**	**19 13 37.8**	**-2.5**
	comp=Z,3.9nm,0.9s,baz=76,slow=8.9,SNR=10.0						
WRA				LR	LR	19 26 00.4	
	comp=Z,231nm,18.9s,baz=66,slow=37						
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**30.27**	**249**	P	**P**	**19 13 37.4**	**-2.9**
H11N1	**WAKE ISLAND Hy**	**30.55**	**5**	T	T	19 45 38.4	
	baz=184,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**30.55**	**5**	T	T	19 45 36.4	
	baz=184,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**30.56**	**5**	T	T	19 45 33.2	
	baz=184,slow=76,SNR=18						
GUMO	**Guam**	**31.11**	**321**	LR	LR	19 25 58.1	
	comp=Z,131nm,19.2s,baz=140,slow=36						
AS31	**Alice Springs**	**31.66**	**242**	P	**P**	**19 13 51.7**	**-0.8**
ASAR	**Alice Springs**	**31.66**	**242**	P	**P**	**19 13 50.3**	**-2.2**
	comp=Z,0.8nm,0.6s,baz=62,slow=10.0,SNR=17						
ASAR				LR	LR	19 26 24.6	
	comp=Z,296nm,18.3s,baz=66,slow=36						
	comp=Z,0.8nm,0.6s						
BBOO	**Buckleboo**	**33.94**	**226**	P	**P**	**19 14 13.6**	**+1.3**
BBOO					IAmb	IAmb	19 14 19.4
	comp=Z,26nm,1.2s						
KNRA	**Kununurra**	**34.96**	**258**	P	**P**	**19 14 18.6**	**-2.7**
KNRA					IAmb	IAmb	19 14 36.1
	comp=Z,17nm,1.0s						
RAR	**Rarotonga**	**35.85**	**111**	LR	LR	19 26 19.6	
	comp=Z,117nm,20.1s,baz=288,slow=32						
FITZ	**Fitzroy Crossi**	**38.12**	**255**	LR	LR	19 29 19.0	
	comp=Z,227nm,21.4s,baz=78,slow=34						
FITZ	**Fitzroy Crossi**	**38.12**	**255**	P	**P**	**19 14 45.6**	**-2.7**
BATI	**Baumata**	**40.02**	**267**	LR	LR	19 32 30.0	
	comp=Z,130nm,18.2s,baz=119,slow=38						
DAV	**Davao City (W)**	**42.56**	**293**	LR	LR	19 33 06.8	
	comp=Z,49nm,18.8s,baz=92,slow=36						
KAPI	**Kappang**	**44.55**	**274**	LR	LR	19 35 33.0	
	comp=Z,46nm,19.0s,baz=102,slow=38						
PPT	**Papeete**	**45.02**	**104**	LR	LR	19 31 41.1	
	comp=Z,122nm,18.6s,baz=282,slow=32						
TBI	**Tubuai**	**45.62**	**112**	*e*S	S	19 22 41.4	+11
	comp=Z,552nm,29.0s						
TBI				*e*LQ	LQ	19 27 04.2	
	comp=Z,2μm,29.2s						
TBI				*e*LR	LR	19 29 00.7	
	comp=Z,3μm,30.5s						
TBI				*e*LR	LR	19 29 02.4	
	comp=Z,769nm,26.2s						
NWAO	**Narrogin (SRO)**	**48.42**	**236**	LR	LR	19 36 20.4	
	comp=Z,254nm,19.2s,baz=78,slow=36						
TGY	**Tagaytay City**	**49.74**	**299**	LR	LR	19 35 04.8	
	comp=Z,131nm,21.3s,baz=106,slow=33						
MTKI	**Muara Teweh, K**	**50.14**	**278**	P	P	19 16 33.2	+8.5
MJAR	**Matsushiro Arr**	**53.26**	**334**	P	**P**	**19 16 49.0**	**+1.4**
	comp=Z,4.8nm,1.2s,baz=165,slow=8.4,SNR=1.2						
MJAR				LR	LR	19 38 18.6	
	comp=Z,68nm,21.1s,baz=146,slow=35						
	comp=Z,4.8nm,1.2s						
MJAR	**Matsushiro**	**53.26**	**334**	IAmb	IAmb	19 18 21.5	
	comp=Z,25nm,1.8s						
JNU	**Nakatsue**	**54.21**	**325**	LR	LR	19 39 18.3	
	comp=Z,58nm,18.1s,baz=118,slow=35						
LEM	**Lembang**	**56.17**	**269**	LR	LR	19 43 54.8	
	comp=Z,30nm,18.2s,baz=347,slow=39						
SHEM	**Shemya Is, Ala**	**63.95**	**7**	LR	LR	19 39 58.3	
	comp=Z,79nm,21.6s,baz=194,slow=30						
PETK	**Petropavlovsk-**	**64.03**	**356**	LR	LR	19 39 58.7	
	comp=Z,73nm,21.4s,baz=183,slow=30						
VNDA	**Vanda**	**66.59**	**181**	P	**P**	**19 18 19.7**	**+1.1**
	comp=Z,1.9nm,1.0s,baz=5.1,slow=7.3,SNR=7.6						
VNDA				LR	LR	19 43 37.0	
	comp=Z,72nm,18.9s,baz=9.0,slow=33						
	comp=Z,1.9nm,1.0s						
VNDA	**Vanda**	**66.59**	**181**	P	**P**	**19 18 20.5**	**+1.9**
SBA	**Scott Base**	**66.93**	**179**	P	**P**	**19 18 22.7**	**+2.0**
SBA					IAmb	IAmb	19 18 41.2
	comp=Z,19nm,1.6s						
CMAR	**Chiang Mai Arr**	**70.84**	**294**	P	**P**	**19 18 47.7**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=118,slow=4.4,SNR=6.5						
CMAR				LR	LR	19 51 20.2	
	comp=Z,19nm,18.3s,baz=110,slow=37						
	comp=Z,0.9nm,0.9s						
MA2	**Magadan**	**71.11**	**353**	LR	LR	19 44 40.9	
	comp=Z,48nm,19.2s,baz=124,slow=31						
KDAK	**Kodiak Island**	**76.97**	**22**	LR	LR	19 49 10.8	
	comp=Z,96nm,18.4s,baz=210,slow=32						
SONM	**Songino Array**	**77.78**	**324**	P	**P**	**19 19 26.7**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=123,slow=5.6,SNR=3.9						
SONM				LR	LR	19 51 50.1	
	comp=Z,33nm,20.9s,baz=112,slow=34						
	comp=Z,0.7nm,0.6s						
SONM	**Songino Array**	**77.78**	**324**	IAmb	IAmb	19 21 40.6	
	comp=Z,17nm,2.0s						
QSPA	**South Pole Qui**	**79.08**	**180**	P	**P**	**19 19 34.6**	**+1.6**
	comp=Z,5.1nm,0.9s,baz=354,slow=3.2,SNR=8.8						
QSPA				LR	LR	19 52 55.3	
	comp=Z,49nm,18.4s,baz=57,slow=34						
	comp=Z,5.1nm,0.9s						
QSPA	**South Pole Qui**	**79.08**	**180**	P	**P**	**19 19 36.8**	**+3.9**
QSPA					IAmb	IAmb	19 19 55.5
	comp=Z,12nm,1.1s						
M19K	**Big River Lodg**	**79.41**	**19**	IAmb	IAmb	19 19 46.1	
	comp=Z,27nm,1.2s						
L19K	**White Mountain**	**79.47**	**18**	P	**P**	**19 19 34.4**	**-0.5**
L19K					IAmb	IAmb	19 19 46.8
	comp=Z,15nm,0.9s						
IMAR	**Indian Mountai**	**82.67**	**16**	P	**P**	**19 19 51.4**	**-0.5**
GLB	**Gilahina Butte**	**82.72**	**22**	IAmb	IAmb	19 20 04.4	
	comp=Z,14nm,1.1s						
ILAR	**Eielson Array**	**83.83**	**19**	P	**P**	**19 19 57.7**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=229,slow=5.4,SNR=18						
ILAR				LR	LR	19 49 54.1	
	comp=Z,60nm,21.2s,baz=297,slow=30						
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**83.83**	**19**	P	**P**	**19 19 56.7**	**-1.2**
MAW	**Mawson**	**84.33**	**202**	LR	LR	19 53 09.3	
	comp=Z,38nm,21.5s,baz=86,slow=32						
L27K	**Beaver Creek,**	**84.46**	**22**	IAmb	IAmb	19 20 13.2	
	comp=Z,6.3nm,0.8s						
BCAR	**Beaver Creek A**	**84.47**	**22**	P	**P**	**19 20 00.9**	**-0.3**
COLD	**Coldfoot**	**84.55**	**16**	P	**P**	**19 20 02.1**	**+0.6**
COLD					IAmb	IAmb	19 20 14.8
	comp=Z,8.0nm,0.9s						
G24K	**Hadweenzic Riv**	**84.96**	**17**	P	**P**	**19 20 03.5**	**0.0**
PALK	**Pallekele**	**85.21**	**278**	LR	LR	20 01 22.9	
	comp=Z,24nm,19.4s,baz=103,slow=38						
BBB	**Bella Bella**	**85.24**	**35**	LR	LR	19 50 23.2	
	comp=Z,54nm,21.1s,baz=258,slow=30						
I26K	**Coal Creek Min**	**85.38**	**20**	IAmb	IAmb	19 20 17.5	
	comp=Z,12nm,1.0s						
DAWY	**Dawson**	**85.93**	**21**	IAmb	IAmb	19 20 20.4	
	comp=Z,7.3nm,1.0s						
I27K	**Kandik River**	**86.07**	**20**	IAmb	IAmb	19 20 30.3	
	comp=Z,16nm,1.2s						
F25K	**Christian Rive**	**86.09**	**17**	IAmb	IAmb	19 20 25.9	
	comp=Z,26nm,1.8s						
BMAR	**Burnt Mountain**	**86.29**	**18**	P	**P**	**19 20 10.8**	**+0.6**
E25K	**Arctic Village**	**86.46**	**17**	IAmb	IAmb	19 20 23.8	
	comp=Z,7.8nm,1.1s						
MPMC	**Manual Prospec**	**86.94**	**53**	P	**P**	**19 20 10.4**	**-4.0**
DLBC	**Dease Lake**	**86.94**	**29**	LR	LR	19 50 03.8	
	comp=Z,91nm,21.9s,baz=268,slow=29						
NVAR	**Mina Array Bea**	**86.97**	**50**	P	**P**	**19 20 13.5**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=264,slow=4.2,SNR=4.3						
NVAR				LR	LR	19 53 35.0	
	comp=Z,63nm,18.3s,baz=294,slow=32						
	comp=Z,0.9nm,0.8s						
D25K	**Kavik River**	**87.04**	**16**	IAmb	IAmb	19 20 25.5	
	comp=Z,7.2nm,1.0s						
PFO	**Pinyon Flats O**	**87.11**	**55**	LR	LR	19 52 52.3	
	comp=Z,38nm,18.0s,baz=216,slow=31						
E27K	**Coleen River**	**87.65**	**18**	IAmb	IAmb	19 20 29.3	
	comp=Z,9.5nm,0.9s						
I30M	**Mount Dempster**	**87.66**	**21**	IAmb	IAmb	19 20 29.0	
	comp=Z,7.6nm,0.9s						
C27K	**Jago River**	**87.95**	**16**	IAmb	IAmb	19 20 30.0	
	comp=Z,7.4nm,1.0s						
E28M	**Babbage River**	**88.52**	**18**	IAmb	IAmb	19 20 33.4	
	comp=Z,6.8nm,0.9s						
ELK	**Elko**	**89.87**	**49**	LR	LR	19 52 26.0	
	comp=Z,36nm,19.9s,baz=310,slow=30						
LPIG	**La Paz**	**90.17**	**66**	LR	LR	19 56 14.3	
	comp=Z,34nm,18.4s,baz=339,slow=32						
NEW	**Newport**	**90.53**	**41**	LR	LR	19 52 52.6	
	comp=Z,30nm,20.9s,baz=54,slow=30						
BELA	**Belgrano 2**	**90.70**	**176**	P	**P**	**19 20 31.3**	**+0.2**
BELA					IAmb	IAmb	19 20 33.3
	comp=Z,6.8nm,1.0s						
MKAR	**Makanchi Array**	**92.52**	**317**	P	**P**	**19 20 40.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=81,slow=7.5,SNR=4.4						
MKAR				LR	LR	20 00 24.2	
	comp=Z,34nm,21.6s,baz=46,slow=34						
	comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**92.68**	**324**	P	**P**	**19 20 39.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=90,slow=3.6,SNR=1.9						
ZALV				LR	LR	20 02 59.2	
	comp=Z,17nm,18.8s,baz=102,slow=36						
	comp=Z,0.4nm,0.5s						
PDAR	**Pinedale Array**	**94.46**	**47**	LR	LR	19 57 16.0	
	comp=Z,36nm,18.3s,baz=68,slow=32						
ANMO	**Albuquerque**	**95.48**	**56**	LR	LR	20 03 49.1	
	comp=Z,38nm,18.2s,baz=131,slow=35						
YKA	**Yellowknife Ar**	**95.48**	**27**	LR	LR	19 56 17.5	
	comp=Z,67nm,21.6s,baz=302,slow=31						
NRIK	**Noril'sk**	**95.55**	**340**	LR	LR	20 02 43.4	
	comp=Z,58nm,21.0s,baz=336,slow=35						
KURBB	**Kurchatov Arra**	**95.74**	**320**	LR	LR	20 06 02.7	
	comp=Z,36nm,18.3s,baz=164,slow=37						
TXAR	**Lajitas Array**	**96.95**	**62**	LR	LR	19 55 23.2	
	comp=Z,49nm,21.8s,baz=272,slow=30						
SNAA	**Sanae**	**97.14**	**184**	LR	LR	20 02 18.6	
	comp=Z,42nm,20.9s,baz=193,slow=34						
AAK	**Aa-Archa**	**97.22**	**312**	LR	LR	20 04 41.2	
	comp=Z,30nm,21.6s,baz=107,slow=35						
ESDC	**Sonseca Array**	**149.55**	**342**	PKPbc	**PKiKP**	**19 27 20.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=22,slow=2.4,SNR=1.7						

*NEIC **13** 19:26:51.9±2.1, 35°.57N±0°.02×117°.40W±0°.02, h10km±2km, Error ellipse: s-maj=3.6km s-min=3.1km az=346.0*
*IDC **13** 19:26:53.3±0.8, 35°.63N×117°.26W, h0km, mbtmp3.4/5, ML3.9/5, Error ellipse: s-maj=14.9km s-min=5.6km az=75.0.*
*PAS **13** 19:26:53.2±2.7, 35°.61N±0°.02×117°.41W±0°.02, h9km±5km, Mwr3.9/4, ML4.0/216(NEIC), Error ellipse: s-maj=2.8km s-min=2.3km az=109.0*
ISC 13 19:26:52.6±0.8, **35°.61N**±0°.02×**117°.39W**±0°.02, **h15**km±6km, **n101**, σ0**§79/84**, **Central California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSHM	**Spangler Hills**	**0.08**	**263**	Pg	**Pg**	**19 26 55.2**	**-0.6**
WSHM					IAML	19 26 57.4	
	125μm,0.2s						
CCCA	**Chr Cany lake**	**0.09**	**165**	Pg	**Pg**	**19 26 55.9**	**+0.1**
GPO	**China Lake**	**0.22**	**280**		**Pg**	**19 26 57.6**	**0.0**
CLC	**China Lake**	**0.27**	**321**		**Pg**	**19 26 58.4**	**0.0**
CLC					IAML	19 27 02.6	
	comp=N,26μm,0.5s						
CLC					IAML	19 27 02.6	
	comp=E,24μm,0.7s						
LRMC	**Laurel Mtn Rad**	**0.27**	**241**		**Pg**	**19 26 58.4**	**-0.1**
SRTC	**Snort**	**0.30**	**286**		**Pg**	**19 26 59.3**	**+0.3**
SRTC					**Sb**	**19 27 04.4**	**-0.2**
TOW	**Tower One**	**0.36**	**303**		**Pb**	**19 27 00.5**	**-0.3**
TO

comp=E,3µm,0.3s
MWC IAML 19 27 45.8
comp=N,2µm,0.5s
MTPC Mountain Pass 1.50 94 Pn 19 27 19.2 0.0
MTPC IAML 19 27 44.1
comp=E,1µm,0.3s
MTPC IAML 19 27 44.3
comp=N,1µm,0.3s
PASC Pasadena Art C 1.58 205 IAML 19 27 50.6
comp=N,1µm,0.5s
TIN Tinemaha, Big 1.59 335 IAML 19 27 50.2
comp=N,3µm,0.9s
TIN IAML 19 27 54.8
comp=E,2µm,1.2s
TPNV Topopah Spring 1.62 34 Pb 19 27 21.6 -0.7
TPNV IAML 19 27 48.6
comp=E,3µm,0.8s
TPNV IAML 19 27 48.9
comp=E,3µm,0.6s
DSP Deep Springs 1.82 345 Pb 19 27 24.3 -1.2
DANC Danby, Needles 1.91 120 Pn 19 27 24.5 -0.2
ELS Elsinore Mount 1.96 181 Pn 19 27 25.9 +0.6
BELC Belle Mtn. Jos 1.97 144 Pn 19 27 25.8 +0.2
BELC IAML 19 28 00.8
comp=N,2µm,0.6s
SHPR Sheep Range 2.02 63 Pn 19 27 27.1 +0.8
V12A Nelson 2.07 86 Pn 19 27 27.1 +0.2
PMD Palm Desert 2.13 157 Pn 19 27 27.6 0.0
PMD IAML 19 28 02.7
comp=E,921nm,0.3s
PFO Pinyon Flats O 2.14 159 Pn **Pn 19 27 28.3 +0.5**
comp=E,51nm,0.3s,baz=342,slow=14,SNR=45
PFO Pg **Pg 19 27 33.3 -0.3**
comp=E,81nm,0.3s,baz=328,slow=15,SNR=78
PFO Lg Lg 19 27 59.6
comp=E,94nm,0.3s,baz=216,slow=8.9,SNR=7.5
comp=E,151nm,0.5s
PFO Pinyon Flats O 2.14 159 Pn 19 27 27.9 +0.1
PFO IAML 19 28 02.9
comp=E,785nm,0.4s
PFO IAML 19 28 03.6
comp=E,674nm,0.5s
IRM Iron Mountain 2.35 127 Pn 19 27 30.1 -0.5
IRM IAML 19 28 12.6
comp=N,1µm,0.5s
NEE2 Needles Airpor 2.42 109 Pn 19 27 31.4 -0.3
NEE2 IAML 19 28 11.7
comp=E,1µm,0.4s
S11A Rachel 2.42 33 Pn 19 27 33.1 +1.3
S11A IAML 19 28 17.8
comp=N,1µm,1.0s
S11A IAML 19 28 28.2
comp=E,1µm,0.9s
MDPB Devils Postpil 2.43 327 Pn 19 27 32.5 +0.4
MDPB IAML 19 28 13.4
comp=E,469nm,0.7s
BORC Borrego Spring 2.47 161 Pn 19 27 32.6 +0.3
BORC IAML 19 28 13.9
comp=E,673nm,1.0s
BORC IAML 19 28 14.0
comp=N,573nm,0.4s
BC3 Big Chuckawall 2.52 140 Pn 19 27 32.8 -0.3
BC3 IAML 19 28 14.2
comp=N,871nm,0.5s
BC3 IAML 19 28 16.4
comp=E,1µm,0.6s
PKD Bear Valley Ra 2.58 278 Pn 19 27 33.8 -0.1
PRN Pahroc Range 2.60 46 Pn 19 27 35.5 +1.3
DPP Dos Picos Cty 2.63 172 IAML 19 28 15.8
comp=E,704nm,0.5s
CPE Camp Elliot 2.72 175 IAML 19 28 19.1
comp=E,555nm,0.5s
CPE IAML 19 28 19.4
comp=N,633nm,0.3s
LHV Little Huntoon 2.78 342 Pn 19 27 38.5 +1.9
LHV IAML 19 28 30.3
comp=N,367nm,1.1s
LHV IAML 19 28 31.9
comp=E,371nm,1.1s
PMPB Monarch Peak 2.83 283 Pn 19 27 37.9 +0.6
PMPB IAML 19 28 24.1
comp=E,723nm,1.0s
PMPB IAML 19 28 37.7
comp=N,801nm,0.7s
NVAR Mina Array Bea 2.91 346 Pn **Pn 19 27 40.0 +1.4**
comp=N,4.1nm,0.3s,baz=168,slow=13,SNR=38
NVAR Pg **Pg 19 27 47.2 -1.2**
comp=N,79nm,0.3s,baz=161,slow=17,SNR=111
NVAR Lg Lg 19 28 24.9
comp=N,12nm,0.3s,baz=32,slow=28,SNR=2.7
comp=N,4.6nm,0.3s
NVAR Mina Array Bea 2.91 346 Pn 19 27 39.8 +1.3
BAR Barrett 2.98 168 IAML 19 28 26.6
comp=E,787nm,0.5s
BAR IAML 19 28 27.8
comp=N,563nm,0.3s
BLYC Blythe 3.00 127 IAML 19 28 29.8
comp=N,720nm,0.5s
BLYC IAML 19 28 34.5
comp=E,544nm,0.8s
R11B Troy Canyon, C 3.09 27 Pn 19 27 41.7 +0.7
BBGB Big Mountain B 3.11 289 Pn 19 27 42.0 +0.8
RYN Ryan 3.15 344 Pn 19 27 42.9 +1.2
HULI Fort Hunter Li 3.15 279 IAML 19 28 36.3
comp=E,256nm,1.1s
HULI IAML 19 29 14.9
comp=N,235nm,1.2s
Q09A Carvers 3.22 3 Pn 19 27 44.3 +1.5
Q09A IAML 19 28 44.7
comp=E,504nm,0.6s
Q09A IAML 19 29 04.9
comp=N,516nm,0.8s
CBX Cerro Bola 3.34 169 Pn 19 27 45.4 +1.0
CMB Columbia Colle 3.41 316 IAML 19 28 40.6
comp=N,213nm,0.6s
CMB IAML 19 28 46.0
comp=E,286nm,0.9s
SAO San Andreas Ge 3.48 291 Pn 19 27 46.3 +0.2
ESJX Sierra Juarez 3.79 161 IAML 19 28 55.4
comp=E,186nm,0.5s
MHC Mount Hamilton 3.84 298 IAML 19 28 59.8
comp=N,158nm,0.9s
MHC IAML 19 29 10.0
comp=E,137nm,0.8s
PNTR Pine Nut 3.89 334 IAML 19 29 22.8
comp=N,179nm,0.8s
PNTR IAML 19 29 29.3
comp=E,194nm,1.3s
KNB Kanab 3.95 68 IAML 19 29 01.9
comp=E,156nm,1.0s
KNB IAML 19 29 07.4
comp=N,145nm,1.4s
PSUT Pine Spring 4.06 43 IAML 19 29 10.3
comp=N,179nm,0.9s
PSUT IAML 19 29 12.6
comp=E,278nm,1.0s
113A Mohawk Valley, 4.13 132 IAML 19 29 04.1
comp=N,129nm,0.7s
SPR3 Spring Creek 3 4.17 35 IAML 19 29 06.6
comp=E,178nm,1.3s
SPR3 IAML 19 29 09.2
comp=N,108nm,0.5s
U15A North Rim 4.21 77 IAML 19 29 07.6
comp=N,163nm,0.9s
U15A IAML 19 29 11.2
comp=E,181nm,1.1s
MPK Martis Peak 4.24 331 IAML 19 29 18.7
comp=E,281nm,1.2s
MPK IAML 19 29 22.8
comp=N,314nm,0.9s
VTX Valle De La Tr 4.42 162 IAML 19 29 16.7
comp=E,120nm,1.0s
VTX IAML 19 29 17.1
comp=N,103nm,1.2s
PKCU Pink Cliffs 4.48 64 IAML 19 29 15.1
comp=E,193nm,1.0s
PKCU IAML 19 29 16.0
comp=N,169nm,0.8s
BEKR Beckworth 4.86 332 IAML 19 29 42.7
comp=E,111nm,0.8s
BEKR IAML 19 29 46.5
comp=N,73nm,0.9s
CVS Carmenet Viney 4.89 305 IAML 19 30 03.6
comp=E,61nm,2.9s
WUAZ Wupatki 4.91 89 Pn 19 28 07.3 +1.3
WUAZ IAML 19 29 30.9
comp=E,105nm,0.8s
WUAZ IAML 19 29 35.6
comp=E,110nm,0.5s
TCRU Three Creeks R 4.96 51 IAML 19 29 38.8
comp=E,186nm,1.0s
TCRU IAML 19 29 42.6
comp=N,168nm,1.1s
X16A Lo Mia Camp, P 5.03 102 IAML 19 29 53.5
comp=N,55nm,1.4s
SFX San Felipe 5.03 154 IAML 19 29 40.9
comp=N,57nm,1.0s
MNRC McLaughlin Min 5.18 310 IAML 19 29 58.1
comp=E,98nm,2.8s
MNRC IAML 19 30 05.9
comp=N,121nm,1.7s
214A Organ Pipe Nat 5.27 132 IAML 19 29 49.6
comp=E,85nm,0.5s
214A IAML 19 29 50.8
comp=N,68nm,1.3s
ELK Elko 5.40 18 Pn **Pn 19 28 14.8 +2.0**
comp=N,1.0nm,0.3s,baz=196,slow=12,SNR=20
ELK Pg **Pg 19 28 33.4 -2.7**
comp=N,4.9nm,0.3s,baz=230,slow=16,SNR=14
ELK Lg Lg 19 29 41.3
comp=N,10nm,0.3s,baz=307,slow=10,SNR=12
comp=N,4.0nm,0.5s
TUC Tucson 6.40 119 Pn 19 28 25.8 -0.6
YBH Yreka Blue Hor 7.39 327 Pg **Pb 19 28 59.1 -1.5**
baz=185,slow=9.6,SNR=1.9
YBH Lg Lg 19 30 50.1
baz=46,slow=13,SNR=4.4
ANMO Albuquerque 8.97 91 Pg Pn 19 29 35.9 +34
comp=N,0.5nm,0.3s,baz=358,slow=12,SNR=10.0
ANMO Lg Lg 19 31 34.5
comp=N,0.3nm,0.3s,baz=250,slow=15,SNR=5.9
PDAR Pinedale Array 9.38 38 Pn Pn 19 29 12.5 +5.1
comp=N,0.1nm,0.3s,baz=213,slow=13,SNR=7.8
PDAR Lg Lg 19 31 45.0
baz=220,slow=32
comp=N,0.6nm,0.6s
TXAR Lajitas Array 13.16 115 Pn **Pn 19 30 01.9 +2.8**
comp=N,0.3nm,0.3s,baz=292,slow=13,SNR=15
TXAR Lg Lg 19 33 43.9
comp=N,0.1nm,0.3s,baz=196,slow=13,SNR=4.2
comp=N,0.5nm,0.4s

GII 13 19:41:45.9±0.0, 32°.827N±0°.004, 35°.608E±0°.001, h8km, Mws1.6, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMOT	**Ramot**	**0.05**	**63**	P	Pg	19 41 47.9	+0.3
RMOT	**Ramot**	**0.05**	**63**	S	Sg	19 41 49.4	+0.5
KNHM	**Kefar Nahum**	**0.06**	**337**	P	Pg	19 41 47.7	-0.1
KNHM	**Kefar Nahum**	**0.06**	**337**	S	Sg	19 41 49.4	+0.3
SPIR	**Sapir Facility**	**0.07**	**303**	P	Pg	19 41 48.0	+0.2
SPIR	**Sapir Facility**	**0.07**	**303**	S	Sg	19 41 49.5	+0.4
MGDL	**Migdal**	**0.09**	**279**	P	Pg	19 41 48.2	+0.2
MGDL	**Migdal**	**0.09**	**279**	S	Sg	19 41 50.2	+0.7
HDNS	**Had-Ness**	**0.10**	**16**	P	Pg	19 41 49.0	+0.6
HDNS	**Had-Ness**	**0.10**	**16**	S	Sg	19 41 51.1	+1.1
KSHT	**Keshet**	**0.23**	**48**	P	Pg	19 41 50.7	+0.1
KSHT	**Keshet**	**0.23**	**48**	S	Sg	19 41 55.3	+1.6
MMA0B	**Mount Meron ar**	**0.26**	**318**	P	Pb	19 41 52.0	-0.8
MMA0B	**Mount Meron ar**	**0.26**	**318**	S	Sb	19 41 56.0	-1.4
MMC7	**Mount Meron ar**	**0.27**	**317**	P	Pg	19 41 52.0	+0.8
BLGI	**Bet Lehem HaGe**	**0.36**	**255**	P	Pg	19 41 53.5	+0.5
BLGI	**Bet Lehem HaGe**	**0.36**	**255**	S	Sb	19 41 59.2	-1.2
GEM	**Giv'at Ha'Em**	**0.39**	**7**	P	Pg	19 41 54.0	+0.6
GEM	**Giv'at Ha'Em**	**0.39**	**7**	S	Sb	19 42 00.1	-1.0
MMLI	**Mount Malkishu**	**0.42**	**202**	P	Pg	19 41 54.6	+0.6
MMLI	**Mount Malkishu**	**0.42**	**202**	S	Sb	19 42 01.4	-0.7
NATI	**Neve Ativ**	**0.45**	**14**	P	Pb	19 41 55.4	-0.7
NATI	**Neve Ativ**	**0.45**	**14**	S	Sb	19 42 02.2	-0.7
OFRI	**`Ofer**	**0.56**	**249**	P	Pg	19 41 57.2	+0.4
OFRI	**`Ofer**	**0.56**	**249**	S	Sb	19 42 05.7	-0.5

*SNET **13** 19:59:14.1±8.7, 12°.88N×89°.16W, h29km, ML4.0*
*CATAC **13** 19:59:14.7±0.4, 13°.N±2°×8°.9W±°, h28km±2km, M4.4/33, MLv4.4/33, Error ellipse: s-maj=4.9km s-min=2.4km az=31.4, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.55; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$0.21; $M_{r\theta}$-2.51; $M_{\theta\phi}$0.19; $M_{r\phi}$2.39; Fault plane solution: M_o3.53740×10^{15} NP1: ϕ_s72.04210°, δ8.79641°, λ29.51469°. NP2:ϕ_s312.81715°, δ85.67939°, λ97.66947°. Principal axes: T 3.5602, Plg48.7693°, Azm231.0491°; N -0.0460, Plg7.6475°, Azm132.2359°; P -3.5142, Plg40.2045°, Azm35.7195°; confirmed*
*GCG **13** 19:59:17.1±1.2, 13°.09N×89°.29W, h45km±15km, MD4.4, ML4.4*
*UCR **13** 19:59:17.8±1.8, 12°.91N×88°.82W, h20km±167km, MW4.2*

ISC 13 19:59:14.2±1.2, 12°.91N±0°.04×89°.16W±0°.03, h27km±12km, n120, σ1§11/132, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.60**	**344**	*eP*	**Pn**	**19 59 26.6**	**-0.2**
LALI				*eS*	**Sb**	**19 59 34.5**	**+0.4**
LALI	**Alcalda de L**	**0.60**	**344**	P	**Pn**	**19 59 26.6**	**-0.2**
PANCS	**Alcalda de**	**0.70**	**358**	S	**Sn**	**19 59 37.5**	**-0.7**
TECO	**Alcaldia de Te**	**0.72**	**30**	*eP*	**Pb**	**19 59 27.8**	**-0.4**
TECO	**Alcaldia de Te**	**0.72**	**30**	P	**Pb**	**19 59 27.8**	**-0.4**
LOMA	**Loma Larga**	**0.73**	**359**	*i* P	**Pb**	**19 59 28.3**	**-0.2**
LOMA				*eS*	**Sn**	**19 59 38.3**	**-0.8**
LOMA	**Loma Larga**	**0.73**	**359**	P	**Pb**	**19 59 28.3**	**-0.1**
COEG	**Centro de Oper**	**0.75**	**21**	*eP*	**Sn**	**19 59 46.4**	**+6.8**
UTEC	**Universidad Te**	**0.79**	**357**	P	**Pn**	**19 59 29.8**	**+0.3**
UTEC	**Universidad Te**	**0.79**	**357**	S	**Sn**	**19 59 40.0**	**-0.4**
JAYA	**Jayaque - finc**	**0.79**	**339**	*eP*	**Pb**	**19 59 29.1**	**-0.3**
JAYA				*eS*	**Sb**	**19 59 39.6**	**-0.3**
JAYA	**Jayaque - finc**	**0.79**	**339**	*eP*	**Pb**	**19 59 29.1**	**-0.3**
JAYA	**Jayaque - finc**	**0.79**	**339**	P	**Pb**	**19 59 29.2**	**-0.3**
IGN	**Direccin Gen**	**0.80**	**359**	P	**Pb**	**19 59 29.3**	**-0.2**
IGN	**Direccin Gen**	**0.80**	**359**	S	**Sn**	**19 59 40.6**	**-0.1**
UDBS	**Universidad Do**	**0.80**	**360**	S	**Sn**	**19 59 40.6**	**-0.1**
UDBS	**Universidad Do**	**0.80**	**360**	P	**Pn**	**19 59 29.8**	**+0.1**
UEES	**Universidad Ev**	**0.80**	**354**	S	**Sn**	**19 59 40.7**	**-0.2**
UEES	**Universidad Ev**	**0.80**	**354**	P	**Pn**	**19 59 29.7**	**-0.1**
UESV	**Universidad de**	**0.80**	**26**	S	**Sn**	**19 59 40.5**	**-0.3**
UESV	**Universidad de**	**0.80**	**26**	P	**Pn**	**19 59 30.0**	**+0.3**
PMON	**Piamonte**	**0.81**	**349**	P	**Pb**	**19 59 29.6**	**-0.1**
PMON	**Piamonte**	**0.81**	**349**	S	**Sn**	**19 59 41.0**	**-0.1**
PAVA	**Las Pavas**	**0.82**	**15**	*eP*	**Pb**	**19 59 29.7**	**-0.3**
PAVA				*eS*	**Sn**	**19 59 40.9**	**-0.5**
PAVA	**Las Pavas**	**0.82**	**15**	P	**Pn**	**19 59 29.9**	**-0.2**
PAVA	**Las Pavas**	**0.82**	**15**	S	**Sn**	**19 59 41.2**	**-0.3**
BOQS	**Boqueron**	**0.83**	**352**	*i* P	**Pb**	**19 59 30.0**	**-0.1**
LBRS	**Las Brisas**	**0.83**	**8**	*eP*	**Pb**	**19 59 29.9**	**-0.2**
SCLA	**Alcaldia de Sa**	**0.89**	**28**	*eP*	**Pb**	**19 59 30.6**	**-0.4**
SCLA	**Alcaldia de Sa**	**0.89**	**28**	P	**Pn**	**19 59 30.9**	**0.0**
SCLA	**Alcaldia de Sa**	**0.89**	**28**	S	**Sn**	**19 59 43.0**	**+0.1**
PQSS	**Presa 15 de Se**	**0.91**	**39**	*eP*	**Pn**	**19 59 30.7**	**-0.5**
PQSS	**Presa 15 de Se**	**0.91**	**39**	P	**Pb**	**19 59 31.2**	**-0.2**
PQSS	**Presa 15 de Se**	**0.91**	**39**	S	**Sn**	**19 59 43.6**	**+0.2**
CEDA	**San Andres**	**0.92**	**345**	*eP*	**Pn**	**19 59 31.0**	**-0.3**
CEDA	**San Andres**	**0.92**	**345**	P	**Pn**	**19 59 31.1**	**-0.2**
CEDA	**San Andres**	**0.92**	**345**	S	**Sn**	**19 59 43.3**	**-0.3**
LCY	**Lacayo**	**0.98**	**59**	*i* P	**Pn**	**19 59 32.0**	**-0.2**
PACA	**Pacayal**	**0.98**	**56**	P	**Pb**	**19 59 32.4**	**-0.2**
PACA	**Pacayal**	**0.98**	**56**	S	**Sn**	**19 59 45.7**	**+0.3**
VSM	**San Miguel**	**1.00**	**59**	*i* P	**Pn**	**19 59 32.4**	**-0.2**
CEVE	**Cerro Verde**	**1.02**	**333**	P	**Pn**	**19 59 32.8**	**0.0**
CEVE	**Cerro Verde**	**1.02**	**333**	S	**Sb**	**19 59 45.8**	**-0.7**
BLLM	**Bellamira**	**1.04**	**59**	*i* P	**Pn**	**19 59 32.8**	**-0.2**
CNRM	**Centro Naciona**	**1.11**	**60**	S	**Sb**	**19 59 48.8**	**-0.1**
CNRM	**Centro Naciona**	**1.11**	**60**	P	**Pb**	**19 59 34.2**	**-0.5**
UNIC	**Universidad Ca**	**1.13**	**340**	*eP*	**Pn**	**19 59 34.4**	**+0.1**
UNIC				*eS*	**Sn**	**19 59 48.7**	**-0.2**
UNIC	**Universidad Ca**	**1.13**	**340**	P	**Pb**	**19 59 34.6**	**-0.5**
NUBE	**Las Nubes**	**1.16**	**328**	*eP*	**Pn**	**19 59 34.2**	**-0.5**
NUBE	**Las Nubes**	**1.16**	**328**	*eP*	**Pn**	**19 59 34.2**	**-0.5**
NUBE				*eS*	**Sn**	**19 59 47.0**	**-2.7**
NUBE	**Las Nubes**	**1.16**	**328**	P	**Pn**	**19 59 34.5**	**-0.2**
NUBE	**Las Nubes**	**1.16**	**328**	S	**Sn**	**19 59 49.1**	**-0.7**
LOAL	**Lomas de Alarc**	**1.24**	**331**	P	**Pb**	**19 59 36.3**	**-0.6**
LOAL	**Lomas de Alarc**	**1.24**	**331**	S	**Sn**	**19 59 51.3**	**-0.3**
FAME	**Alcaldia de Sa**	**1.25**	**318**	P	**Pn**	**19 59 35.3**	**-0.5**
FAME	**Alcaldia de Sa**	**1.25**	**318**	S	**Sn**	**19 59 50.9**	**-0.9**
LLGN	**La Laguna**	**1.26**	**9**	P	**Pn**	**19 59 35.8**	**-0.2**
LLGN	**La Laguna**	**1.26**	**9**	S	**Sn**	**19 59 51.7**	**-0.5**
SLOZ	**Alcaldia de Sa**	**1.27**	**331**	*eP*	**Pn**	**19 59 34.5**	**-1.6**
SLOZ	**Alcaldia de Sa**	**1.27**	**331**	S	**Sn**	**19 59 51.9**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.27**	**331**	P	**Pn**	**19 59 35.0**	**-1.1**
LCND	**La Caada**	**1.29**	**72**	*eP*	**Pn**	**19 59 36.2**	**-0.3**
LCND	**La Caada**	**1.29**	**72**	S	**Sb**	**19 59 53.7**	**-0.4**
LCND	**La Caada**	**1.29**	**72**	P	**Pn**	**19 59 36.5**	**+0.1**
RBDL	**Robledal**	**1.30**	**337**	*i* P	**Pn**	**19 59 36.6**	**-0.1**
MTO3	**Montecristo**	**1.49**	**352**	*i*|*i* P	**Pn**	**19 59 39.2**	**-0.2**
MTO3	**Montecristo**	**1.49**	**352**	P	**Pn**	**19 59 39.2**	**-0.2**
MTO3	**Montecristo**	**1.49**	**352**	S	**Sn**	**19 59 57.4**	**-0.7**
JUAM	**Asuncion Mita**	**1.51**	**339**	*eP*	**Pn**	**19 59 39.5**	**-0.1**
JUAM					IAML	20 00 00.6	
	comp=E,3µm,0.4s						
POTN	**Potosi Cosigui**	**1.61**	**87**	P	**Pn**	**19 59 41.1**	**+0.3**
POTN				S	**Sn**	**20 00 00.2**	**-0.4**
POTN	**Potosi Cosigui**	**1.61**	**87**	*eP*	**Pn**	**19 59 40.2**	**-0.5**
POTN				*eS*	**Sn**	**19 59 58.9**	**-1.8**
ESQI	**Esquipulas**	**1.65**	**354**	*eP*	**Pn**	**19 59 41.7**	**+0.2**
ESQI	**Esquipulas**	**1.65**	**354**	P	**Pn**	**19 59 41.6**	**+0.2**
ESQI	**Esquipulas**	**1.65**	**354**	S	**Sn**	**20 00 01.1**	**-0.7**
FG16	**Alotenango, Sa**	**1.89**	**316**	*eP*	**Pb**	**19 59 50.0**	**+1.8**
FG16				*eS*	**Sb**	**20 00 16.0**	**+4.6**
FG16					IAML	20 00 25.1	
	comp=E,16µm,0.2s						
CRIN	**San Cristobal**	**2.06**	**96**	P	**Pn**	**19 59 47.4**	**+0.3**
CRIN	**San Cristobal**	**2.06**	**96**	*eP*	**Pn**	**19 59 47.0**	**-0.1**
PKGN	**Cerro Pekin**	**2.14**	**96**	P	**Pn**	**19 59 48.6**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.16**	**58**	P	**Pn**	**19 59 48.6**	**+0.2**
ESSG	**Sabana Grande**	**2.19**	**312**	*eP*	**Pn**	**19 59 48.4**	**-0.5**
ESSG					IAML	20 00 21.3	
	comp=N,2µm,0.4s						
CNGN	**Cerro Negro**	**2.43**	**99**	P	**Pn**	**19 59 52.2**	**0.0**
CNGN	**Cerro Negro**	**2.43**	**99**	*eP*	**Pn**	**19 59 51.2**	**-0.9**
CNGN				*eS*	**Sn**	**20 00 18.6**	**-2.5**
APG	**El Apazote**	**2.44**	**329**	*eP*	**Pn**	**19 59 52.2**	**-0.2**
YUSH	**Yuscaran**	**2.48**	**65**	P	**Pn**	**19 59 52.7**	**-0.1**
YUSH	**Yuscaran**	**2.48**	**65**	S	**Sn**	**20 00 22.7**	**+0.5**
MOM3	**MOM3**	**2.60**	**99**	P	**Pn**	**19 59 54.7**	**+0.3**
COPN	**Copaltepe**	**2.61**	**106**	*eP*	**Pn**	**19 59 53.9**	**-0.6**
COPN				*eS*	**Sn**	**20 00 22.5**	**-2.8**
STG8	**El Palmar, Qui**	**2.63**	**306**	*eP*	**Pb**	**19 59 59.6**	**-1.1**
STG8				*eS*	**Sb**	**20 00 33.1**	**+0.4**
STG8					IAML	20 00 42.1	
	comp=E,1µm,0.2s						
STG2	**El Palmar, Qui**	**2.64**	**305**	*eP*	**Pb**	**20 00 00.3**	**-0.5**
STG2				*eS*	**Sb**	**20 00 32.1**	**-0.8**
MOM2	**El Cardon**	**2.65**	**100**	P	**Pn**	**19 59 55.1**	**+0.1**
UNAN	**Cigeo UNAN**	**2.93**	**105**	P	**Pn**	**20 00 00.1**	**+1.2**
RTAL	**Retalhuleu**	**2.94**	**303**	P	**Pn**	**19 59 59.5**	**+0.4**
RCVN	**Varillal2**	**2.96**	**77**	P	**Pn**	**19 59 59.4**	**-0.1**
RCON	**San Juan de Ri**	**2.98**	**79**	P	**Pn**	**19 59 59.6**	**-0.1**
MAS3	**Al N del Volca**	**3.04**	**107**	P	**Pn**	**20 00 01.4**	**+0.9**
LAPC	**Finca la Perla**	**4.22**	**120**	*eP*	**Pn**	**20 00 15.1**	**-1.7**
VRLE	**La Escondida,**	**4.27**	**119**	*eP*	**Pn**	**20 00 19.4**	**+2.0**
SAJU	**San Juanillo,**	**4.40**	**130**	*eP*	**Pn**	**20 00 19.9**	**+0.7**
MESS	**Mesas**	**4.44**	**119**	*eP*	**Pn**	**20 00 20.5**	**+0.7**
HORNC	**Hornillas**	**4.46**	**119**	*eP*	**Pn**	**20 00 19.8**	**-0.4**
JUD3	**Juan Diaz 3**	**4.47**	**127**	*eP*	**Pn**	**20 00 21.0**	**+0.8**
VMAR	**Armenia, Volca**	**4.47**	**117**	*eP*	**Pn**	**20 00 21.1**	**+0.9**
ELVJ	**El Viejo (Barb**	**4.48**	**123**	*eP*	**Pb**	**20 00 27.2**	**-4.9**
PLVR	**Palo Verde**	**4.51**	**124**	*eP*	**Pn**	**20 00 21.9**	**+1.0**
TENO	**El Achiote**	**4.64**	**118**	*eP*	**Pn**	**20 00 23.1**	**+0.6**
CMARA	**Lajas Hojancha**	**4.65**	**128**	*eP*	**Pn**	**20 00 23.9**	**+1.2**
TIMP	**Tierras Morena**	**4.67**	**119**	*eP*	**Pn**	**20 00 22.8**	**-0.1**
INDI	**Punta indio, G**	**4.69**	**130**	*eP*	**Pn**	**20 00 24.3**	**+1.2**
JTS	**Las Juntas de**	**4.87**	**122**	*eP*	**Pn**	**20 00 27.5**	**+1.8**
ARE1	**Arenal 1**	**4.98**	**119**	*eP*	**Pn**	**20 00 28.6**	**+1.4**
CASO	**Castillo**	**4.98**	**119**	*eP*	**Pn**	**20 00 27.9**	**+0.7**
VARE2	**V. Arenal**	**4.98**	**119**	*eP*	**Pn**	**20 00 27.2**	**-0.1**
PICV	**PH. Pirrs**	**5.86**	**123**	*eP*	**Pn**	**20 00 41.1**	**+1.8**
VICA	**Volcano Irazu**	**5.96**	**119**	*eP*	**Pn**	**20 00 41.5**	**+0.4**
PIEC	**Cerro El Cedra**	**6.06**	**122**	*eP*	**Pn**	**20 00 44.1**	**+1.9**
BUS1	**Rivas**	**6.27**	**122**	*eP*	**Pn**	**20 00 46.9**	**+1.6**
EDPE	**Pejibaye, P**	**6.63**	**124**	*eP*	**Pn**	**20 00 51.3**	**+1.4**
LAES	**El Progreso Va**	**6.76**	**117**	*eP*	**Pn**	**20 00 52.5**	**+1.0**
PIRO	**Carate, Puerto**	**7.26**	**128**	*eP*	**Pn**	**20 01 01.0**	**+2.4**
ALCO	**Alturas Coton,**	**7.35**	**122**	*eP*	**Pn**	**20 01 01.9**	**+2.0**

*TEH **13** 20:04:04.0, 28°.81N×57°.30E, h10km±999km*
*OMAN **13** 20:04:06.9±0.1, 28°.53N×57°.62E, h10km, ml3.3/15, Error ellipse: s-maj=1.6km s-min=1.1km az=336.0*
*DSN **13** 20:04:06.6±1.5, 28°.46N×57°.77E, h10km, ML2.7/6, Error ellipse: s-maj=49.0km s-min=10.2km az=125.0*

ISC 13 20:04:06.2±1.9, 28°.56N±0°.08×57°.61E±0°.06, h5km±17km, n30, σ0§90/46, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBAM	**BAM**	**0.94**	**52**	Pg	**Pg**	**20 04 24.5**	**+0.2**
KBAM				Sg	**Sn**	**20 04 40.3**	**+0.3**
CHMN	**Cheshme madani**	**1.30**	**358**	Pg	Pn	20 04 23.7	-7.6
NGRK	**Negar Kerman**	**1.33**	**325**	Pg	Pn	20 04 23.9	-7.8
IBND	**Bandar-abas**	**1.45**	**221**	Pg	**Pb**	**20 04 33.7**	**0.0**
GENO	**Geno**	**1.71**	**228**	Pg	**Pn**	**20 04 35.9**	**-0.9**
SHME	**Shamm**	**2.82**	**208**	P	**Pn**	**20 04 51.6**	**-0.3**
SHME				S	**Sn**	**20 05 26.0**	**-0.2**
SHME	**Shamm** SNR=18	**2.82**	**208**	*eP*	**Pn**	**20 04 51.3**	**-0.5**
SHME				S	**Sn**	**20 05 25.8**	**-0.4**
BANOM	**Banah**	**2.87**	**204**	P	**Pn**	**20 04 52.8**	**+0.1**
BANOM				S	**Sn**	**20 05 29.0**	**+1.4**
BANOM	**Banah** SNR=46	**2.87**	**204**	*eP*	**Pn**	**20 04 52.6**	**0.0**
BANOM				S	**Sn**	**20 05 28.3**	**+0.8**
MASF	**Masafi** SNR=6.8	**3.43**	**202**	P	**Pn**	**20 05 00.8**	**+0.5**
MASF				S	**Sn**	**20 05 43.0**	**+1.7**
MSFE	**Esma-Masafi** SNR=6.9	**3.44**	**202**	*i* P	**Pn**	**20 05 00.8**	**+0.4**
MDH	**Madha**	**3.45**	**200**	P	**Pn**	**20 05 01.6**	**+1.0**
MDH				S	**Sn**	**20 05 41.6**	**-0.2**
UMQ	**Umm Al-Quwin**	**3.48**	**210**	P	**Pn**	**20 05 00.3**	**-0.6**
UOSS	**Minazif**	**3.81**	**200**	P	**Pn**	**20 05 05.7**	**+0.2**
UOSS				S	**Sn**	**20 05 50.1**	**-0.6**
HATD	**Hatta, Dubai**	**3.94**	**200**	P	**Pn**	**20 05 08.3**	**+0.9**
HATD				S	**Sn**	**20 05 55.0**	**+1.0**
NAZ	**Nazwa, Dubai**	**3.96**	**206**	P	**Pn**	**20 05 07.4**	**-0.1**
NAZ				S	**Sn**	**20 05 54.0**	**-0.3**
ASHO	**Ashiyiah** SNR=11	**4.10**	**200**	P	**Pn**	**20 05 10.0**	**+0.4**
ASHO				S	**Sn**	**20 05 59.4**	**+1.5**
ASHO	**Ashiyiah** SNR=11	**4.10**	**200**	*i* P	**Pn**	**20 05 09.5**	**0.0**
FAQ	**Al Faqa, Dubai**	**4.20**	**206**	P	**Pn**	**20 05 11.1**	**+0.1**
FAQ				S	**Sn**	**20 05 59.9**	**-0.5**
ASUD	**Al Ashush, Dub** SNR=11	**4.41**	**208**	P	**Pn**	**20 05 13.5**	**-0.3**
ASUD				S	**Sn**	**20 06 05.6**	**0.0**
ASUD	**Al Ashush, Dub** SNR=11	**4.41**	**208**	*i* P	**Pn**	**20 05 13.4**	**-0.5**
NGCH	**Negor - Chabah**	**4.48

comp=N,792nm,0.1s
CNBA IAML 20 04 40.4
comp=E,854nm,0.3s
SDPT Sand Point 0.59 308 Sb 20 04 49.8 -0.5
SDPT Sand Point 0.59 308 Pn Pb 20 04 41.6 -0.7
SDPT IAML 20 04 50.0
comp=N,92nm,0.6s
SDPT IAML 20 04 51.0
comp=E,76nm,0.6s
VNKR Veniaminof 5 1.06 9 Pn 20 04 49.1 -0.5
VNKR Sn 20 05 03.1 -0.4
VNSW Veniaminof 7 1.09 3 Pn 20 04 49.7 -0.4
VNWF Veniaminof 8 1.17 3 Pn 20 04 51.1 -0.2
VNWF Sn 20 05 06.3 -0.1
PS1A Pavlof South-1 1.26 291 Pn 20 04 52.5 0.0
PS1A Sb 20 05 09.3 -0.2
VNHG Veniaminof 1 1.27 13 Pn 20 04 52.8 +0.2
DOL Dolgoi Island 1.27 278 Pn 20 04 52.2 -0.4
DOL Sn 20 05 08.4 -0.4
PVV Pavlof Volcano 1.28 288 Pn 20 04 52.6 0.0
PS4A Pavlof South-4 1.30 287 Pn 20 04 52.5 -0.5
PS4A Sb 20 05 10.6 -0.1
PN7A Pavlof North-7 1.41 289 Pn 20 04 54.2 -0.3
DT1 Dutton Round H 1.51 276 Pn 20 04 55.8 0.0
S12K Black Hills 1.54 299 Pn 20 04 56.4 +0.2
S12K Black Hills 1.54 299 IAML 20 05 19.4
comp=N,61nm,1.0s
S12K IAML 20 05 20.2
comp=E,71nm,0.2s
PLK4 Peulik 4 3.23 33 Pn Pn 20 05 19.9 +0.3
PLK4 IAML 20 05 52.7
comp=E,10nm,1.1s
AKUT Akutan 3.65 259 Pn Pn 20 05 25.3 +0.1
O15K Ungalikthiuk R 4.20 359 Pn Pn 20 05 34.0 +1.2
M17K Holitna River 6.54 9 Pn Pn 20 06 05.8 +0.9

GCG 13 20:23:11.9±0.9, 13°.75N×91°.07W, h37km±171km, MD3.7, ML3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.67**	**20**	*e*P	Pn	20 23 24.8	-0.3
ESSG				*e*S	Sn	20 23 35.0	+0.6
STG2	**El Palmar, Qui**	**0.74**	**337**	*e*P	Pn	20 23 31.7	+5.7
STG8	**El Palmar, Qui**	**0.75**	**339**	IAML		20 23 48.5	
	comp=E,509nm,0.1s						
FG16	**Alotenango, Sa**	**0.75**	**46**	*e*P	Pn	20 23 26.3	+0.1
FG16				IAML		20 23 38.2	
	comp=N,6μm,0.2s						
SOKI	**Kika Raxquin**	**1.11**	**343**	*e*S	Sn	20 23 47.7	+2.1
APG	**El Apazote**	**1.38**	**25**	*e*P	Pn	20 23 36.4	+1.6
JAYA	**Jayaque - finc**	**1.58**	**93**	*e*P	Pn	20 23 37.2	-0.3

*IDC **13** 20:25:09.9±3.1, 43°.38N×105°.00W, h0km, mbtmp3.6/2, ML3.4/2, Error ellipse: s-maj=70.5km s-min=11.1km az=154.0*
*NEIC **13** 20:25:12.7±1.6, 43°.57N±0°.06×105°.23W±0°.05, h0km±1km, ML3.3/70, Error ellipse: s-maj=10.9km s-min=5.7km az=156.0*

ISC 13 20:25:10.3±1.1, 43°.65N±0°.07×105°.00W±0°.06, h0km, n30, σ2s10/17, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.84**	**56**	Pg	**Pn**	**20 25 32.9**	**+3.2**
K22A	**Casper**	**1.50**	**229**		**Pb**	**20 25 39.3**	**+0.2**
K22A				IAML		20 26 04.2	
	307nm,0.2s						
RLMT	**Red Lodge**	**3.39**	**297**	Pn	**Pn**	**20 26 07.0**	**+2.4**
RLMT				IAML		20 27 07.7	
	75nm,0.5s						
RLMT				IAML		20 27 15.1	
	46nm,1.1s						
BW06	**Boulder Array**	**3.44**	**257**		**Pn**	**20 26 08.4**	**+3.0**
BW06				IAML		20 27 00.4	
	45nm,0.6s						
PD31	**Pinedale Array**	**3.44**	**257**	Pn	**Pn**	**20 26 07.4**	**+1.9**
PDAR	**Pinedale Array**	**3.44**	**257**	Pn	**Pn**	**20 26 07.6**	**+2.2**
	3.2nm,0.3s,baz=67,slow=15,SNR=43						
PDAR				Lg	Lg	20 26 55.4	
	2.5nm,0.3s,baz=71,slow=33,SNR=3.9 4.0nm,0.4s						
PDAR	**Pinedale Array**	**3.44**	**257**	Pn	**Pn**	**20 26 06.9**	**+1.4**
OGNE	**Ogallala**	**3.49**	**140**		**Pb**	**20 26 11.1**	**-1.9**
HAYD	**Hayden**	**3.55**	**209**	Pn	**Pn**	**20 26 08.7**	**+1.8**
HAYD				IAML		20 27 11.1	
	comp=N,53nm,1.0s						
HAYD				IAML		20 27 29.2	
	comp=E,53nm,0.8s						
YNE	**Yellowstone No**	**3.84**	**292**	Pn	**Pn**	**20 26 13.2**	**+2.3**
YNE				IAML		20 27 14.9	
	comp=N,52nm,0.8s						
YNE				IAML		20 27 20.4	
	comp=E,76nm,0.7s						
YMP	**Mirror Lake Pl**	**3.86**	**288**		**Pn**	**20 26 12.1**	**+0.9**
YMP				IAML		20 27 17.8	
	comp=N,79nm,1.0s						
ISCO	**Idaho Springs**	**3.88**	**187**	Pn	**Pn**	**20 26 13.3**	**+1.9**
ISCO				IAML		20 27 23.8	
	comp=N,32nm,0.7s						
LOHW	**Long Hollow**	**4.07**	**271**		**Pn**	**20 26 15.2**	**+1.3**
LOHW				IAML		20 27 41.2	
	comp=N,26nm,0.9s						
H17A	**Grant Village**	**4.09**	**282**		**Pg**	**20 26 25.9**	**-2.7**
H17A				IAML		20 27 28.3	
	comp=E,26nm,1.1s						
H17A				IAML		20 27 33.7	
	comp=N,38nm,1.1s						
FLWY	**Flagg Ranch**	**4.14**	**278**		**Pb**	**20 26 23.3**	**-0.9**
FLWY				IAML		20 27 32.6	
	comp=N,38nm,1.1s						
FLWY				IAML		20 27 36.1	
	comp=N,58nm,1.1s						
MOOW	**Moose Ponds**	**4.16**	**273**		**Pb**	**20 26 23.7**	**-0.8**
SNOW	**Snow King Moun**	**4.18**	**269**	IAML		20 27 31.3	
	comp=N,36nm,1.1s						
O20A	**White River Ci**	**4.26**	**216**	IAML		20 27 42.6	
	comp=N,51nm,1.2s						
YFT	**Old Faithful**	**4.28**	**283**	IAML		20 26 49.2	
	comp=E,31nm,1.0s						
YFT				IAML		20 27 42.5	
	comp=N,23nm,1.0s						
TPAW	**Teton Pass**	**4.33**	**270**	IAML		20 27 45.9	
	comp=N,28nm,1.1s						
TPAW				IAML		20 27 49.3	
	comp=N,49nm,1.1s						
YMR	**Madison River**	**4.41**	**285**	IAML		20 28 05.6	
	comp=N,47nm,1.1s						
YMR				IAML		20 28 08.9	
	comp=E,41nm,1.1s						
AHID	**Auburn Hatcher**	**4.54**	**261**	IAML		20 27 38.2	
	comp=E,45nm,1.1s						
AHID				IAML		20 28 05.8	
	comp=E,34nm,0.9s						
RDMU	**Red Mountain**	**4.58**	**229**	IAML		20 27 43.4	
	comp=E,39nm,1.1s						
RDMU				IAML		20 27 58.9	
	comp=N,28nm,1.0s						
YHB	**Horse Butte**	**4.58**	**286**	IAML		20 28 10.6	
	comp=E,18nm,1.1s						
YHL	**Hebgen Lake**	**4.60**	**287**	IAML		20 27 52.4	
	comp=N,28nm,1.1s						
YHL				IAML		20 28 03.3	
	comp=E,38nm,1.0s						
BOZ	**Bozeman (W)**	**5.11**	**295**	IAML		20 27 55.4	
	comp=E,14nm,0.9s						
BOZ				IAML		20 28 04.2	
	comp=E,12nm,0.8s						
HWUT	**Hardware Ranch**	**5.25**	**249**	IAML		20 28 11.3	
	comp=E,22nm,0.7s						
BSUT	**Blindstream Ca**	**5.29**	**236**	IAML		20 28 08.1	
	comp=N,14nm,0.9s						
BSUT				IAML		20 28 23.9	
	comp=E,14nm,1.1s						
I10CA	**LAC DU BONNET**	**8.98**	**40**	I	I	21 21 40.0	
	comp=E,0.1nm,1.6s,baz=218,slow=252,SNR=1.7						
ULM	**Lac du Bonnet**	**9.08**	**40**	Pn	**Pn**	**20 27 22.8**	**+0.3**
	comp=E,0.7nm,0.3s,baz=229,slow=12,SNR=2.6						
ULM				Pg		20 27 57.6	
	comp=E,0.4nm,0.3s,baz=217,slow=18,SNR=1.4						
ULM				Lg	Lg	20 29 54.8	
	comp=E,0.3nm,0.3s,baz=313,slow=16,SNR=1.6 comp=E,2.3nm,0.4s						

IDC 13 20:33:07.9±2.2, 7°.81S×129°.71E, h0km, mb3.6/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=136.8km s-min=32.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.87**	**160**	Pn	Pn	20 36 11.7	-0.6
	0.1nm,0.3s,baz=342,slow=13,SNR=3.7						
WRA				Sn	Sn	20 38 24.6	-12
	0.1nm,0.3s,baz=324,slow=50,SNR=1.2 0.3nm,0.5s						
ASAR	**Alice Springs**	**16.27**	**166**	Pn	Pn	20 36 58.7	+0.6
	0.1nm,0.3s,baz=348,slow=9.3,SNR=5.8						
ASAR				Sn	Sn	20 39 53.5	-5.9
	0.1nm,0.3s,baz=350,slow=26,SNR=4.1 0.3nm,0.7s						
MKAR	**Makanchi Array**	**68.74**	**327**	P	P	20 44 13.7	0.0
	0.3nm,0.4s,baz=115,slow=7.5,SNR=6.5 0.3nm,0.4s						

IDC 13 20:49:00.0±998.0, 54°.86N×0°.30E, h0km, Error ellipse: s-maj=447.3km s-min=172.1km az=102.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**10.24**	**120**	I	I	21 49 09.5	
	baz=311,slow=332,SNR=1.9						
I43RU	**DUBNA INFRASON**	**20.68**	**70**	I	I	22 56 40.0	
	baz=279,slow=321,SNR=1.5						
I31KZ	**AKTYUBINSK INF**	**34.46**	**73**	I	I	00 20 30.0	
	baz=303,slow=324,SNR=0.8						
I46RU	**ZALESOVO INFRA**	**46.31**	**54**	I	I	01 30 00.0	
	baz=306,slow=332,SNR=3.5						

*WEL **13** 20:58:39.4±0.9, 33°.5S±7°×17°.8W±1°.7, h12km, mB5.0/7, ML4.6/12, MLv4.9/12, Mw(mB)4.4/7, Error ellipse: s-maj=23.2km s-min=5.6km az=110.3, confirmed*
*IDC **13** 20:58:43.5±2.6, 32°.40S×178°.58W, h50km±23km, mb4.1/2, mbtmp4.5/4, ML4.5/2, MS3.3/1, Error ellipse: s-maj=46.9km s-min=19.8km az=119.0*

ISC 13 20:58:35.7±1.1, 32°.40S±0°.07×177°.9W±0°.2, h10km, n32, σ2s14/40, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.13**	**0**	P	**Pn**	**20 59 26.9**	**+1.9**
GLKZ				S	**Sn**	**20 59 58.2**	**-4.2**
RAO	**Raoul Island**	**3.14**	**0**	P	**Pb**	**20 59 31.2**	**-0.4**
	129nm,0.3s,baz=92,slow=23,SNR=4.1						
RAO				S	**Sn**	**21 00 02.5**	**-0.2**
	515nm,0.4s,baz=54,slow=20,SNR=6.9 286nm,0.3s						
MXZ	**Matakaoa Point**	**6.00**	**210**	P	**Pn**	**21 00 03.7**	**-0.8**
MXZ				S	**Sn**	**21 01 11.3**	**-1.9**
WMGZ	**Waiomatatini S**	**6.17**	**208**	P	**Pn**	**21 00 10.9**	**+4.0**
WMGZ				S	**Sn**	**21 01 15.8**	**-1.8**
PKGZ	**Pakihiroa**	**6.35**	**210**	P	**Pn**	**21 00 10.5**	**+1.1**
PKGZ				S	**Sn**	**21 01 21.2**	**-0.7**
HAZ	**Te Kaha**	**6.39**	**212**	P	**Pn**	**21 00 12.4**	**+2.6**
HAZ				S	**Sn**	**21 01 23.8**	**+1.0**
PUZ	**Puketiti**	**6.46**	**208**	P	**Pn**	**21 00 11.7**	**+0.9**
PUZ				S	**Sn**	**21 01 22.5**	**-2.0**
RUGZ	**Raukumara Rang**	**6.61**	**212**	P	**Pn**	**21 00 15.0**	**+2.0**
RUGZ				S	**Sn**	**21 01 28.1**	**-0.3**
TWGZ	**Tauwhareparae**	**6.66**	**209**	P	**Pn**	**21 00 16.3**	**+2.7**
TWGZ				S	**Sn**	**21 01 28.6**	**-0.9**
CNGZ	**Carnagh Statio**	**6.83**	**206**	P	**Pn**	**21 00 16.7**	**+0.8**
CNGZ				S	**Sn**	**21 01 30.1**	**-3.7**
MWZ	**Matawai**	**6.98**	**211**	P	**Pn**	**21 00 18.8**	**+0.9**
MWZ				S	**Sn**	**21 01 34.4**	**-3.1**
URZ	**Urewera**	**7.11**	**213**	P	**Pn**	**21 00 21.1**	**+1.4**
	3.4nm,0.3s,baz=240,slow=4.8,SNR=20						
URZ				S	**Sn**	**21 01 37.6**	**-2.9**
	41nm,0.6s,baz=195,slow=19,SNR=11 12nm,0.3s						
URZ	**Urewera**	**7.11**	**213**	P	**Pn**	**21 00 20.0**	**+0.4**
URZ				S	**Sn**	**21 01 38.6**	**-1.8**
RIGZ	**Rimuhau**	**7.20**	**208**	P	**Pn**	**21 00 20.5**	**-0.5**
RIGZ				S	**Sn**	**21 01 40.9**	**-1.9**
WCZ	**Waipu Caves**	**7.30**	**239**	P	**Pn**	**21 00 24.9**	**+2.6**
OUZ	**Omahuta**	**7.58**	**246**	P	**Pn**	**21 00 29.0**	**+2.8**
RAHZ	**Arahi**	**7.66**	**210**	P	**Pn**	**21 00 29.0**	**+1.7**
RAHZ				S	**Sn**	**21 01 51.8**	**-2.2**
ARHZ	**Aropaoanui**	**7.98**	**210**	P	**Pn**	**21 00 34.0**	**+2.2**
OTVZ	**Oturere**	**8.51**	**216**	P	**Pn**	**21 00 42.5**	**+3.3**
DZM	**Mont Dzumac**	**17.26**	**303**	LR	LR	21 07 39.2	
	comp=Z,102nm,19.2s,baz=120,slow=32						
ASAR	**Alice Springs**	**43.09**	**269**	P	**P**	**21 06 34.4**	**-1.8**
	1.7nm,0.6s,baz=106,slow=7.3,SNR=31 1.7nm,0.6s						
WRA	**Warramunga Arr**	**44.26**	**274**	P	**P**	**21 06 44.0**	**-1.6**
	3.6nm,0.3s,baz=114,slow=7.8,SNR=32 3.6nm,0.3s						
H03S2	**Juan Fernandez**	**79.33**	**123**	T	T	22 39 18.0	
	baz=236,slow=74,SNR=13						
H03S1	**Juan Fernandez**	**79.34**	**123**	T	T	22 39 19.5	
	baz=236,slow=74,SNR=13						
H03S3	**Juan Fernandez**	**79.34**	**123**	T	T	22 39 15.0	
	baz=236,slow=74,SNR=15						
H03N3	**Juan Fernandez**	**79.53**	**123**	T	T	22 39 33.6	
	baz=240,slow=74,SNR=10						
H03N2	**Juan Fernandez**	**79.53**	**123**	T	T	22 39 31.0	
	baz=240						
H03N1	**Juan Fernandez**	**79.55**	**123**	T	T	22 39 28.8	
	baz=240,slow=74,SNR=14						
FINES	**FINESS Array B**	**147.03**	**339**	PKPbc	**PKPdf**	**21 18 18.5**	**+2.6**
	1.7nm,0.4s,baz=54,slow=2.4,SNR=16						
NB2	**NORSAR Subarra**	**150.73**	**351**	PKP	**PKPbc**	**21 18 28.7**	**+1.2**
	comp=Z,2.3nm,0.8s,baz=13,slow=4.1						
NOA	**NORSAR Array B**	**150.73**	**351**	PKPbc	**PKPbc**	**21 18 28.7**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=22,slow=3.5,SNR=3.3						
HFS	**Hagfors**	**151.21**	**348**	PKPbc	**PKPbc**	**21 18 30.1**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=58,slow=9.3,SNR=4.2						

*SJA **13** 21:12:54.0±0.7, 19°.87S×71°.11W, h17km±4km, ML4.2, MW4.3*
*VAO **13** 21:12:55.1±1.4, 19°.87S×71°.43W, h36km±11km, mb4.2*
*IDC **13** 21:12:56.6±0.8, 19°.61S×70°.65W, h0km, mb3.9/9, mbtmp3.9/10, ML3.3/1, MS3.4/7, Error ellipse: s-maj=31.8km s-min=20.3km az=69.0*
*NEIC **13** 21:12:57.2±1.7, 19°.88S±0°.04×70°.94W±0°.07, h16km±5km, mb4.4/10, Mwr4.2/51, Mwr4.5(GUC), Error ellipse: s-maj=10.2km s-min=5.1km az=79.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.23; $M_{\theta\theta}$0.15; $M_{\phi\phi}$-2.38; $M_{r\theta}$0.29; $M_{\theta\phi}$0.70; $M_{r\phi}$-0.89; Fault plane solution: $M_0$2.59000×10^{15} NP1:ϕ_s347.28000°, δ34.42000°, λ92.79000°. NP2:ϕ_s163.90000°, δ55.63000°, λ88.09000°. Principal axes: T 2.4100, Plg79.0000°, Azm67.0000°; N 0.3258, Plg2.0000°, Azm165.0000°; P -2.7358, Plg11.0000°, Azm255.0000°;*
*NEIC **13** 21:12:57.4, 19°.92S×70°.96W, h15km*
*GUC **13** 21:12:58.3±0.8, 19°.84S×70°.91W, h28km±3km, ML4.2*

ISC 13 21:12:56.3±1.3, 19°.87S±0°.02×70°.94W±0°.05, h11km±8km, n118, σ1s51/122, mb4.3/11, MS3.6/4, 8C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.86**	**118**	*e*P	Pb	21 13 08.4	-4.9
TA02				IAML		21 13 27.7	
	comp=Z,6μm,0.9s						
TA01	**Diego Aracena**	**0.99**	**135**		**Pg**	**21 13 16.4**	**+0.9**
TA01				Sn	**Sn**	**21 13 29.7**	**-0.6**
TA01	**Diego Aracena**	**0.99**	**135**	i P	**Pg**	**21 13 16.4**	**+0.9**
TA01				*i* S	**Sn**	**21 13 29.8**	**-0.6**
TA01	**Diego Aracena**	**0.99**	**135**	*e*P	**Pn**	**21 13 15.7**	**-0.6**
TA01				IAML		21 13 35.6	
	comp=Z,4μm,0.9s						
HMBC	**Humberstone**	**1.07**	**113**		**Pg**	**21 13 17.4**	**+0.5**
HMBC				Sn	**Sn**	**21 13 31.9**	**-0.4**
HMBC	**Humberstone**	**1.07**	**113**	i P	**Pg**	**21 13 17.4**	**+0.5**
HMBC				*i* S	**Sn**	**21 13 31.8**	**-0.5**
HMBC				IAML		21 13 35.1	
	comp=N,9μm,0.8s						
HMBC	**Humberstone**	**1.07**	**113**	*e*P	**Pg**	**21 13 17.3**	**+0.5**
HMBC				IAML		21 13 36.3	
	comp=Z,3μm,0.4s						
PATCX	**Punta Patache**	**1.20**	**142**		**Pb**	**21 13 19.4**	**+0.3**
PATCX				Sn	**Sn**	**21 13 34.9**	**-0.7**
PATCX	**Punta Patache**	**1.20**	**142**	i P	**Pb**	**21 13 19.4**	**+0.3**
PATCX				*i* S	**Sn**	**21 13 34.7**	**-0.8**
PATCX				IAML		21 13 44.5	
	comp=E,5μm,0.7s						
PATCX	**Punta Patache**	**1.20**	**142**	*e*P	**Pn**	**21 13 18.8**	**-0.4**
PATCX				IAML		21 13 39.9	
	comp=Z,3μm,0.8s						
PB11	**IPOC Station P**	**1.21**	**85**		**Pb**	**21 13 19.4**	**+0.1**
PB11	**IPOC Station P**	**1.21**	**85**	i P	**Pb**	**21 13 19.5**	**+0.1**
PB11				*i* S	**Sn**	**21 13 35.6**	**-0.3**
PB11				IAML		21 13 37.6	
	comp=N,6μm,0.5s						
PB11	**IPOC Station P**	**1.21**	**85**	*e*P	**Pn**	**21 13 18.8**	**-0.6**
PB11				IAML		21 13 41.4	
	comp=Z,5μm,0.8s						
PB12	**IPOC Station P**	**1.37**	**25**		**Pb**	**21 13 21.8**	**-0.4**
PB12	**IPOC Station P**	**1.37**	**25**	i P	**Pb**	**21 13 21.8**	**-0.4**
PB12				*i* S	**Sb**	**21 13 39.3**	**-0.4**
PB12				IAML		21 13 44.7	
	comp=E,6μm,0.5s						
PB12	**IPOC Station P**	**1.37**	**25**	*e*P	**Pn**	**21 13 21.1**	**-0.5**
PB12				IAML		21 13 43.6	
	comp=Z,3μm,0.6s						
AP01	**Chacalluta**	**1.59**	**21**		**Pb**	**21 13 25.8**	**0.0**
AP01	**Chacalluta**	**1.59**	**21**	i P	**Pb**	**21 13 25.8**	**0.0**
AP01	**Chacalluta**	**1.59**	**21**	*e*P	**Pb**	**21 13 25.1**	**-0.7**
AP01				*e*S	**Sg**	**21 13 47.1**	**-0.5**
AP01				IAML		21 13 57.2	
	comp=Z,5μm,0.5s						
GO01	**Chusmiza**	**1.65**	**83**		**Pb**	**21 13 26.8**	**-0.3**
GO01	**Chusmiza**	**1.65**	**83**	i P	**Pb**	**21 13 26.8**	**-0.3**
GO01				*i* S	**Sb**	**21 13 48.5**	**+0.4**
GO01	**Chusmiza**	**1.65**	**83**	*e*P	**Pb**	**21 13 26.3**	**-0.8**
GO01				IAML		21 13 52.7	
	comp=Z,2μm,0.9s						
PB08	**IPOC Station P**	**1.70**	**100**		**Pb**	**21 13 26.9**	**-1.0**
PB08	**IPOC Station P**	**1.70**	**100**	i P	**Pb**	**21 13 27.2**	**-0.6**
PB08				*i* S	**Sb**	**21 13 50.0**	**+0.7**
PB08	**IPOC Station P**	**1.70**	**100**	*e*P	**Pb**	**21 13 27.2**	**-0.6**
PB08				IAML		21 13 56.7	
	comp=Z,2μm,1.2s						
PB02	**IPOC Station P**	**1.74**	**146**		**Pn**	**21 13 27.1**	**+0.4**
PB02	**IPOC Station P**	**1.74**	**146**	i P	**Pn**	**21 13 27.2**	**+0.4**
PB02				IAML		21 13 56.5	
	comp=N,4μm,0.6s						
PB02	**IPOC Station P**	**1.74**	**146**	*e*P	**Pn**	**21 13 27.1**	**+0.4**
PB02				IAML		21 13 58.5	
	comp=Z,3μm,0.5s						
PB01	**IPOC Station P**	**1.79**	**131**		**Pb**	**21 13 28.1**	**-1.2**
PB01	**IPOC Station P**	**1.79**	**131**	i P	**Pb**	**21 13 28.2**	**-1.2**
PB01				*i* S	**Sb**	**21 13 51.2**	**-0.7**
PB01				IAML		21 13 58.9	
	comp=N,4μm,0.8s						
PB01	**IPOC Station P**	**1.79**	**131**	*e*P	**Pb**	**21 13 28.1**	**-1.2**
PB01				IAML		21 13 56.9	
	comp=Z,1μm,0.8s						
PB16	**IPOC Station P**	**2.04**	**42**		**Pn**	**21 13 32.2**	**+1.0**
PB16	**IPOC Station P**	**2.04**	**42**	i P	**Pn**	**21 13 32.1**	**+1.0**
PB16				*i* S	**Sb**	**21 13 59.5**	**+0.2**
PB16				IAML		21 14 03.3	
	comp=N,3μm,0.3s						
PB16	**IPOC Station P**	**2.04**	**42**	*e*P	**Pn**	**21 13 32.1**	**+1.0**
PB16				IAML		21 14 10.1	
	comp=Z,3μm,0.6s						
PB03	**IPOC Station P**	**2.44**	**153**		**Pn**	**21 13 36.7**	**+0.4**
PB03	**IPOC Station P**	**2.44**	**153**	*i* P	**Pn**	**21 13 36.7**	**+0.4**
PB03	**IPOC Station P**	**2.44**	**153**	*e*P	**Pn**	**21 13 36.6**	**+0.3**
PB03				*e*S	**Sb**	**21 14 09.9**	**-0.6**
PB03				IAML		21 14 18.9	
	comp=Z,1μm,0.9s						
PB09	**IPOC Station P**	**2.49**	**141**		**Pn**	**21 13 37.8**	**+0.8**
PB09	**IPOC Station P**	**2.49**	**141**	i P	**Pn**	**21 13 38.7**	**+1.7**
PB09				*i* S	**Sg**	**21 14 16.3**	**-0.1**
PB09				IAML		21 14 20.6	
	comp=E,2μm,0.7s						
PB09	**IPOC Station P**	**2.49**	**141**	*e*P	**Pn**	**21 13 38.7**	**+1.7**
PB09				IAML		21 14 24.6	
	comp=Z,2μm,0.7s						
PB18	**Visviri**	**2.65**	**32**		**Pn**	**21 13 41.5**	**+2.0**
PB18	**Visviri**	**2.65**	**32**	*e*P	**Pb**	**21 13 42.1**	**-2.1**
PB18				*e*S	**Sg**	**21 14 20.6**	**-1.1**
PB05	**IPOC Station P**	**3.05**	**167**		**Pn**	**21 13 44.0**	**-0.7**
PB05	**IPOC Station P**	**3.05**	**167**	*i* P	**Pn**	**21 13 44.0**	**-0.7**
PB05				IAML		21 14 50.1	
	comp=E,517nm,0.7s						
PB05	**IPOC Station P**	**3.05**	**167**	*e*P	**Pn**	**21 13 45.0**	**+0.4**
PB05				*e*S	**Sg**	**21 14 35.5**	**+1.2**
PB05				IAML		21 14 49.1	
	comp=Z,391nm,1.0s						
PB06	**IPOC Station P**	**3.10**	**156**		**Pn**	**21 13 45.2**	**-0.2**
PB06	**IPOC Station P**	**3.10**	**156**	*i* P	**Pn**	**21 13 45.0**	**-0.3**
PB06				IAML		21 14 40.9	
	comp=E,2μm,1.0s						
PB06	**IPOC Station P**	**3.10**	**156**	*e*P	**Pn**	**21 13 45.3**	**0.0**
PB06				*e*S	**Sn**	**21 14 20.8**	**-1.7**
PB06				IAML		21 14 40.6	
	comp=Z,1μm,0.8s						
PB10	**IPOC Station P**	**3.65**	**174**		**Pn**	**21 13 51.9**	**-0.9**
PB10	**IPOC Station P**	**3.65**	**174**	*e*P	**Pn**	**21 13 51.6**	**-1.2**
PB10	**IPOC Station P**	**3.65**	**174**	*e*P	**Pn**	**21 13 51.9**	**-0.9**
PB10				*e*S	**Sg**	**21 14 52.6**	**-0.9**
PB10				IAML		21 15 05.9	
	comp=Z,153nm,1.0s						
LPAZ	**La Paz**	**4.45**	**37**	Pn	**Pn**	**21 14 07.4**	**+3.0**
	comp=Z,2.9nm,0.3s,baz=225,slow=7.9,SNR=40						
LPAZ				Sn	**Sn**	**21 14 54.9**	**-1.6**
	comp=Z,5.0nm,0.3s,baz=203,slow=16,SNR=3.6						
LPAZ				Lg	Lg	21 15 21.2	
	comp=Z,2.7nm,0.3s,baz=218,slow=10,SNR=3.6						
LPAZ	**La Paz**	**4.45**	**37**		**Pn**	**21 14 06.1**	**+1.8**
LPAZ	**La Paz**	**4.45**	**37**	*e*P	**Pn**	**21 14 04.6**	**+0.2**
PB14	**IPOC Station P**	**4.76**	**174**		**Pn**	**21 14 07.2**	**-1.2**
PB14	**IPOC Station P**	**4.76**	**174**	*e*P	**Pn**	**21 14 07.9**	**-0.5**
PB14				*e*S	**Sn**	**21 14 59.1**	**-4.7**
PB14				IAML		21 15 45.9	
	comp=Z,150nm,0.9s						
GO02	**Mina Guanaco**	**5.42**	**167**		**Pn**	**21 14 16.4**	**-1.0**
YJA	**Yavi**	**5.56**	**115**	*e*P	Pn	21 14 24.5	+5.0
AC02	**Maricunga**	**7.13**	**167**		**Pn**	**21 14 40.0**	**-1.1**
SIV	**San Ignacio**	**10.15**	**69**	Pn	**Pn**	**21 15 22.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=268,slow=8.0,SNR=21						
SIV				Sn	**Sn**	**21 17 15.3**	**-0.8**
	baz=322,slow=19						
SIV				LR	LR	21 19 42.6	
	comp=Z,272nm,21.9s,baz=295,slow=41						
CFA	**Coronel Fontan**	**11.94**	**169**	Pn	**Pn**	**21 15 50.5**	**+3.9**
	comp=Z,0.

PLCA	**Paso Flores**	**20.80**	**179**	*eP*		**P**	**21 17 33.0**	**-4.8**
OTAV	**Otavalo**	**21.29**	**339**	P		**P**	**21 17 43.2**	**-0.4**
OTAV	**Otavalo**	**21.29**	**339**	*eP*		**P**	**21 17 36.9**	**-6.8**
ITTB	**Itaituba**	**21.37**	**46**	*eP*		**P**	**21 17 41.2**	**-2.8**
IPMB	**Ipameri, GO**	**21.58**	**89**	*eP*		**P**	**21 17 48.4**	**+2.1**
FLOC	**Florencia**	**21.81**	**347**	P		**P**	**21 17 47.8**	**-1.0**
FLOC				IAmb		IAmb	21 18 08.0	
	comp=Z,15nm,0.9s							
BDFB	**Brasilia**	**22.22**	**83**	P		**P**	**21 17 50.9**	**-2.4**
	comp=Z,2.6nm,0.5s,baz=247,slow=12,SNR=5.4							
BDFB				LR		LR	21 26 32.9	
	comp=Z,56nm,20.1s,baz=263,slow=37							
	comp=Z,2.6nm,0.5s							
BDFB	**Brasilia**	**22.22**	**83**	P		**P**	**21 17 50.6**	**-2.7**
BDFB				IAmb		IAmb	21 17 58.1	
	comp=Z,11nm,1.1s							
MAL2	**Monte Alegre,**	**24.14**	**45**	P		**P**	**21 18 13.1**	**+0.4**
MAL2				IAmb		IAmb	21 18 16.3	
	comp=Z,12nm,0.8s							
BOAV	**Boa Vista**	**24.37**	**26**			**P**	**21 18 14.1**	**-0.7**
BOAV				IAmb		IAmb	21 18 15.4	
	comp=Z,11nm,0.7s							
BOAV	**Boa Vista**	**24.37**	**26**	*eP*		**P**	**21 18 12.6**	**-2.2**
ROSC	**El Rosal**	**24.78**	**352**	LR		LR	21 29 14.5	
	comp=Z,115nm,18.3s,baz=215,slow=40							
SMTB	**Santa Maria do**	**25.09**	**67**	*eP*		**P**	**21 18 20.8**	**-0.4**
RUSC	**La Rusia**	**25.68**	**355**			**P**	**21 18 27.5**	**+0.4**
RIB01	**Linhares ES**	**28.76**	**94**	*eP*		**P**	**21 18 54.6**	**+0.3**
BAUV	**El Baul**	**28.77**	**6**	P		**P**	**21 18 53.6**	**-0.7**
MDP	**Montagnes des**	**30.65**	**38**	LR		LR	21 32 11.1	
	comp=Z,178nm,18.5s,baz=230,slow=38							
TXAR	**Lajitas Array**	**58.22**	**326**	P		**P**	**21 22 52.3**	**+1.4**
	comp=Z,0.6nm,1.1s,baz=152,slow=7.5,SNR=3.7							
	comp=Z,0.6nm,1.1s							
SNAA	**Sanae**	**64.43**	**161**	P		**P**	**21 23 33.7**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=69,slow=23,SNR=2.0							
	comp=Z,1.0nm,0.7s							
PFO	**Pinyon Flats O**	**68.64**	**320**	P		**P**	**21 24 03.8**	**+3.8**
	comp=Z,1.2nm,0.5s,baz=330,slow=3.7,SNR=2.0							
	comp=Z,1.2nm,0.5s							
DBIC	**Dimbokro**	**70.12**	**75**	P		**P**	**21 24 08.8**	**-0.5**
	comp=Z,6.0nm,1.1s,baz=270,slow=5.1,SNR=3.0							
	comp=Z,6.0nm,1.1s							
QSPA	**South Pole Qui**	**70.31**	**180**	P		P	21 24 14.4	+4.5
	comp=Z,0.7nm,0.5s,baz=161,slow=4.4,SNR=3.5							
	comp=Z,0.7nm,0.5s							
PDAR	**Pinedale Array**	**71.76**	**331**	P		**P**	**21 24 20.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=133,slow=6.7,SNR=2.3							
	comp=Z,0.2nm,0.6s							
LBTB	**Lobatse**	**87.43**	**116**	LR		LR	22 01 29.5	
	comp=Z,40nm,18.9s,baz=264,slow=33							
YKA	**Yellowknife Ar**	**89.03**	**341**	P		**P**	**21 25 51.3**	**+0.3**
	comp=Z,2.1nm,1.1s,baz=132,slow=6.3,SNR=3.9							
	comp=Z,2.1nm,1.1s							
H11S2	**WAKE ISLAND Hyl**	**25.77**	**279**	T		T	23 51 18.7	
	baz=101,slow=74,SNR=20							
H11S1	**WAKE ISLAND Hyl**	**25.78**	**279**	T		T	23 51 19.3	
	baz=101,slow=74,SNR=11							
H11S3	**WAKE ISLAND Hyl**	**25.79**	**279**	T		T	23 51 22.0	
	baz=101,slow=74,SNR=3.6							
H11N3	**WAKE ISLAND Hyl**	**25.82**	**280**	T		T	23 51 22.2	
	baz=100							
H11N2	**WAKE ISLAND Hyl**	**25.83**	**280**	T		T	23 51 22.9	
	baz=100							
H11N1	**WAKE ISLAND Hyl**	**25.83**	**280**	T		T	23 51 21.9	
	baz=100							
ZALV	**Zalesovo Beam**	**141.24**	**23**	PKP		**PKPdf**	**21 32 26.9**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=286,slow=2.9,SNR=5.0							
MKAR	**Makanchi Array**	**145.37**	**33**	PKPbc		**PKPab**	**21 32 34.8**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=316,slow=3.9,SNR=7.4							
SONM	**Songino Array**	**152.02**	**4**	PKPbc		**PKiKP**	**21 32 52.9**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=328,slow=1.9,SNR=4.2							

*ISK **13** 21:21:21.9, 36°.44N×28°.75E, h5km, ML2.5/14*
*AFAD **13** 21:21:22.4, 36°.43N×28°.69E, h7km±2km, ML2.2*
ISC 13 21:21:22.7±1.3, 36°.44N±0°.04×28°.73E±0°.02, h9km±10km, n33, σ0°65/53, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.38**	**351**	Pg		**Pg**	**21 21 30.4**	**+0.1**
DALY				Sg		**Sb**	**21 21 36.6**	**-1.1**
IZZE	**Mula-Seydike**	**0.40**	**90**	P		**Pb**	**21 21 31.0**	**-1.0**
IZZE				S		**Sb**	**21 21 37.3**	**-0.9**
IZZE				*i*	IAML		21 21 42.0	
	comp=E,252nm,0.2s							
SABU	**Mula-Dalaman**	**0.43**	**26**	P		**Pg**	**21 21 31.3**	**+0.1**
SABU				S		**Sb**	**21 21 38.3**	**-0.8**
SABU				*i*	IAML		21 21 39.0	
	comp=N,190nm,0.2s							
SABU				*i*	IAML		21 21 41.0	
	comp=E,154nm,0.4s							
TURN	**Turunc**	**0.52**	**311**	P		**Pg**	**21 21 32.7**	**0.0**
TURN				S		**Sg**	**21 21 39.2**	**-0.3**
ARG	**Arkhangelos**	**0.54**	**246**	Pg		**Pb**	**21 21 33.7**	**-0.6**
ARG				Sg		**Sb**	**21 21 42.4**	**+0.3**
CAME	**Cameli-Denizli**	**0.68**	**42**	Pg		**Pg**	**21 21 35.9**	**-0.1**
CAME				Sg		**Sb**	**21 21 46.5**	**0.0**
AKAS	**Kas**	**0.74**	**106**	P		**Pb**	**21 21 37.6**	**-0.2**
AKAS				*i*	IAML		21 21 58.0	
	comp=N,134nm,0.7s							
YER	**Yerkesik**	**0.78**	**333**	Pg		**Pb**	**21 21 38.3**	**-0.2**
YER				Sg		**Sb**	**21 21 50.5**	**+1.2**
KNIK	**Mula-Seydike**	**0.79**	**59**	P		**Pg**	**21 21 37.7**	**-0.3**
KNIK				S		**Sb**	**21 21 50.0**	**+0.5**
KNIK				*i*	IAML		21 21 52.0	
	comp=N,80nm,0.9s							
KNIK				*i*	IAML		21 21 56.0	
	comp=E,68nm,0.7s							
CAEL	**Denizli, Camel**	**0.83**	**35**	P		**Pg**	**21 21 38.7**	**-0.1**
CAEL				S		**Sb**	**21 21 51.8**	**+1.1**
CAEL				*i*	IAML		21 22 00.0	
	comp=N,70nm,0.5s							
CAEL				*i*	IAML		21 22 08.0	
	comp=E,84nm,1.4s							
DNZT	**Denizli-Tavas-**	**0.87**	**16**	P		**Pg**	**21 21 39.4**	**-0.1**
DNZT				S		**Sb**	**21 21 51.2**	**-0.6**
MULA	**Mugla, Merkez-**	**0.88**	**338**	P		**Pn**	**21 21 41.7**	**+0.4**
MULA				S		**Sb**	**21 21 51.7**	**-0.4**
DAT	**Datca**	**0.97**	**288**	Pg		**Pb**	**21 21 41.8**	**0.0**
DAT				Sg		**Sn**	**21 21 56.8**	**+0.2**
ELL	**Elmali**	**1.00**	**72**	Pg		**Pg**	**21 21 41.7**	**-0.2**
ELL				Sg		**Sb**	**21 21 56.5**	**+1.0**
TAVA	**DENIZLI_Tavas**	**1.04**	**8**	P		**Pb**	**21 21 42.7**	**-0.2**
TAVA				S		**Sb**	**21 21 56.8**	**+0.2**
GOLH	**Golhisar**	**1.04**	**40**	P		**Pb**	**21 21 42.9**	**0.0**
GOLH				S		**Sn**	**21 21 58.2**	**-0.1**
GOLH				*i*	IAML		21 22 01.0	
	comp=E,60nm,0.3s							
GOLH				*i*	IAML		21 22 03.0	
	comp=N,57nm,0.3s							
YAZI	**Mula-Datşa-**	**1.06**	**284**	P		**Pn**	**21 21 43.3**	**-0.4**
YAZI				S		**Sb**	**21 21 56.9**	**-0.2**
APMY	**Acipayam-Deniz**	**1.13**	**24**	Pn		**Pn**	**21 21 44.6**	**-0.2**
MLSB	**Milas**	**1.15**	**318**	Pn		**Pn**	**21 21 45.1**	**+0.1**
BDRM	**Kayabasi**	**1.21**	**302**	P		**Pn**	**21 21 46.5**	**+0.8**
BDRM				S		**Sb**	**21 22 01.5**	**+0.1**
BDRM				*i*	IAML		21 22 06.0	
	comp=E,58nm,0.4s							
DNIZ	**Denizli-Tavas-**	**1.21**	**12**	P		**Pn**	**21 21 46.3**	**+0.4**
BODT	**Bodrum**	**1.30**	**299**	Pn		**Pg**	**21 21 48.3**	**+0.6**
ESEN	**Aydn-Nazilli**	**1.39**	**347**	P		**Pg**	**21 21 49.0**	**-0.5**
ESEN				S		**Sb**	**21 22 06.1**	**-0.6**
ESEN				*i*	IAML		21 22 09.0	
	comp=E,36nm,0.3s							
AYDN	**Tasoluk**	**1.40**	**331**	P		**Pg**	**21 21 49.6**	**0.0**
AYDN				S		**Sb**	**21 22 05.8**	**-1.1**
AYDN				*i*	IAML		21 22 10.0	
	comp=N,56nm,0.4s							
AYDN				*i*	IAML		21 22 10.0	
	comp=E,66nm,0.5s							
INCE	**Denizli-Bozkur**	**1.44**	**28**	P		**Pg**	**21 21 50.2**	**-0.1**
INCE				S		**Sg**	**21 22 10.2**	**+1.2**
INCE				*i*	IAML		21 22 15.0	
	comp=N,40nm,0.4s							
NAZL	**Nazilli-Aydin**	**1.56**	**347**	Pn		**Pg**	**21 21 51.9**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.65**	**336**	Pn		**Pg**	**21 21 53.5**	**-0.9**
GCAM	**G?zelcaml?**	**1.74**	**317**	P		**Pg**	**21 21 55.6**	**-0.4**
KIRA	**zmir-Kiraz**	**1.77**	**352**	P		**Pb**	**21 21 55.2**	**-0.2**
KIRA				*i*	IAML		21 22 25.0	
	comp=E,19nm,0.5s							
IZMR	**zmir-demi**	**1.81**	**340**	P		**Pb**	**21 21 55.6**	**-0.3**
BASM	**Basmaki-Afyon**	**1.81**	**35**	Pn		**Pb**	**21 21 55.7**	**-0.5**
KULA	**Kula-Manisa**	**2.07**	**358**	Pn		**Pb**	**21 21 59.3**	**-1.3**
GORD	**Gordes-Manisa**	**2.50**	**350**	Pn		**Pn**	**21 22 05.5**	**+1.8**

*SNET **13** 21:33:51.1±1.1, 13°.69N×89°.22W, h7km±3km, ML2.8*
*GCG **13** 21:33:51.9±1.2, 13°.71N×89°.23W, h6km±17km, MD3.8*
*CATAC **13** 21:33:51.3±0.3, 14°N±2°×89°.2W±0°.9, h8km±1km, M2.9/18, MLv2.9/18, Error ellipse: s-maj=3.3km s-min=1.9km az=13.2, confirmed*
ISC 13 21:33:50.7±0.8, 13°.71N±0°.03×89°.22W±0°.02, h16km±3km, n53, σ0°51/61, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
UEES	**Universidad Ev**	**0.02**	**297**	P		**Pg**	**21 33 53.6**	**0.0**
UEES	**Universidad Ev**	**0.02**	**297**	S		**Sg**	**21 33 54.6**	**-1.0**
UTEC	**Universidad Te**	**0.02**	**109**	P		**Pg**	**21 33 53.4**	**-0.2**
UTEC	**Universidad Te**	**0.02**	**109**	S		**Sg**	**21 33 54.7**	**-0.8**
UESS	**Universidad de**	**0.03**	**62**	*eP*		**Pg**	**21 33 53.6**	**0.0**
UESS				*eS*		**Sg**	**21 33 55.0**	**-0.5**
PIC2	**El Picacho**	**0.05**	**318**	*eP*		**Pg**	**21 33 53.9**	**0.0**
IGN	**Direccin Gen**	**0.05**	**84**	S		**Sg**	**21 33 55.4**	**-0.3**
IGN	**Direccin Gen**	**0.05**	**84**	P		**Pg**	**21 33 53.9**	**+0.1**
MAGS	**Ministerio de**	**0.07**	**249**	*eP*		**Pg**	**21 33 54.0**	**+0.1**
UDBS	**Universidad Do**	**0.07**	**84**	*eP*		**Pg**	**21 33 54.0**	**+0.2**
UDBS	**Universidad Do**	**0.07**	**84**	S		**Sg**	**21 33 55.8**	**-0.1**
UDBS	**Universidad Do**	**0.07**	**84**	P		**Pg**	**21 33 54.1**	**+0.2**
LOMA	**Loma Larga**	**0.08**	**142**	*i*	P	**Pg**	**21 33 54.0**	**-0.1**
LOMA				*eS*		**Sg**	**21 33 55.9**	**-0.3**
LOMA	**Loma Larga**	**0.08**	**142**	P		**Pg**	**21 33 54.0**	**-0.1**
PMON	**Piamonte**	**0.09**	**273**	*eP*		**Pb**	**21 33 54.5**	**+0.4**
PMON				*eS*		**Sg**	**21 33 56.5**	**+0.1**
PMON				*eS*			21 33 56.5	
PMON	**Piamonte**	**0.09**	**273**	P		**Pb**	**21 33 54.5**	**+0.4**
PANCS	**Alcalda de**	**0.10**	**156**	*eP*		**Pb**	**21 33 54.2**	**-0.1**
PANCS	**Alcalda de**	**0.10**	**156**	P		**Pb**	**21 33 54.3**	**-0.1**
PANCS	**Alcalda de**	**0.10**	**156**	S		**Sg**	**21 33 56.0**	**-0.5**
LFRS	**El Faro**	**0.18**	**118**	*i*	P	**Pb**	**21 33 55.8**	**+0.1**
CEDA	**San Andres**	**0.19**	**299**	P		**Pb**	**21 33 55.9**	**0.0**
JAYA	**Jayaque - finc**	**0.23**	**256**	*eP*		**Pb**	**21 33 56.7**	**+0.2**
JAYA				*eS*		**Sb**	**21 34 00.3**	**-0.1**
JAYA	**Jayaque - finc**	**0.23**	**256**	*i*	P	**Pb**	**21 33 56.7**	**+0.2**
JAYA				*eS*		**Sb**	**21 34 00.3**	**-0.1**
JAYA	**Jayaque - finc**	**0.23**	**256**	P		**Pb**	**21 33 56.7**	**+0.2**
LALI	**Alcalda de L**	**0.24**	**204**	*eP*		**Pb**	**21 33 57.1**	**+0.5**
LALI	**Alcalda de L**	**0.24**	**204**	*i*	P	**Pb**	**21 33 57.1**	**+0.5**
LALI				*eS*		**Sg**	**21 34 00.3**	**+0.7**
LALI	**Alcalda de L**	**0.24**	**204**	P		**Pb**	**21 33 57.1**	**+0.5**
PAVA	**Las Pavas**	**0.28**	**89**	*eP*		**Pb**	**21 33 58.0**	**+0.7**
PAVA				*eS*		**Sb**	**21 34 02.5**	**+0.7**
PAVA	**Las Pavas**	**0.28**	**89**	P		**Pb**	**21 33 58.0**	**+0.7**
SNJE	**San Jose**	**0.41**	**293**	*eP*		**Pb**	**21 34 00.2**	**+0.6**
CEVE	**Cerro Verde**	**0.41**	**287**	P		**Pb**	**21 33 59.9**	**+0.2**
CEVE	**Cerro Verde**	**0.41**	**287**	S		**Sb**	**21 34 06.0**	**+0.2**
UNIC	**Universidad Ca**	**0.42**	**311**	S		**Sb**	**21 34 06.2**	**+0.4**
UNIC	**Universidad Ca**	**0.42**	**311**	P		**Pb**	**21 34 00.1**	**+0.3**
TECO	**Alcaldia de Te**	**0.46**	**112**	P		**Pb**	**21 34 00.8**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.48**	**91**	P		**Pn**	**21 34 01.7**	**-1.3**
SCLA	**Alcaldia de Sa**	**0.48**	**91**	S		**Sb**	**21 34 08.6**	**+1.0**
NUBE	**Las Nubes**	**0.57**	**290**	*eP*		**Pb**	**21 34 03.1**	**+0.6**
NUBE	**Las Nubes**	**0.57**	**290**	S		**Sb**	**21 34 11.3**	**+0.8**
NUBE	**Las Nubes**	**0.57**	**290**	P		**Pb**	**21 34 03.2**	**+0.8**
RBDL	**Robledal**	**0.60**	**312**	*eP*		**Pb**	**21 34 03.4**	**+0.4**
LOAL	**Lomas de Alarc**	**0.61**	**298**	P		**Pb**	**21 34 03.7**	**+0.7**
LOAL	**Lomas de Alarc**	**0.61**	**298**	S		**Sb**	**21 34 12.6**	**+1.1**
PQSS	**Presa 15 de Se**	**0.65**	**97**	P		**Pb**	**21 34 03.8**	**+0.2**
PQSS	**Presa 15 de Se**	**0.65**	**97**	S		**Sb**	**21 34 13.0**	**+0.6**
MTO3	**Montecristo**	**0.70**	**349**	*eP*		**Pb**	**21 34 05.0**	**+0.3**
MTO3				*eS*		**Sb**	**21 34 14.6**	**+0.4**
MTO3	**Montecristo**	**0.70**	**349**	*eP*		**Pn**	**21 34 05.1**	**+0.4**
MTO3	**Montecristo**	**0.70**	**349**	P		**Pn**	**21 34 05.2**	**-0.9**
TECA	**Tecapa**	**0.73**	**107**	*eP*		**Pn**	**21 34 06.3**	**-0.3**
FAME	**Alcaldia de Sa**	**0.78**	**280**	P		**Pn**	**21 34 06.9**	**-0.1**
ESQI	**Esquipulas**	**0.85**	**352**	P		**Pn**	**21 34 08.2**	**0.0**
PACA	**Pacayal**	**0.91**	**105**	P		**Pn**	**21 34 08.8**	**-0.1**
APG	**El Apazote**	**1.76**	**317**	*eP*		**Pg**	**21 34 23.7**	**-0.9**

NNC 13 21:48:18.2±8.5, 37°.73N×70°.77E, h0km, mb3.7, mpv3.3, 1C-2D, Error ellipse: s-maj=137.3km s-min=54.8km az=106.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.37**	**358**	⇓P		Pn	21 49 39.9	+0.3
	1.2nm,0.3s,baz=179,slow=14,SNR=14							
KK31				S		Sn	21 50 43.3	+1.1
	10nm,0.3s,baz=169,slow=22,SNR=36							
AB31	**Akbulak array**	**13.93**	**329**	⇑P		Pn	21 51 35.8	-0.9
	0.6nm,0.5s,baz=134,slow=14,SNR=18							
AKTO	**Aktyubinsk**	**15.63**	**328**	⇓P		Pn	21 51 59.9	+0.2
	1.0nm,0.6s							

*IDC **13** 21:50:13.9±3.8, 19°.86S×169°.08E, h50km±32km, mb4.0/13, mbtmp4.2/14, ML4.0/1, MS3.2/7, Error ellipse: s-maj=27.5km s-min=21.6km az=89.0*
*NEIC **13** 21:50:15.0±1.9, 19°.88S±0°.07×169°.1E±0°.1, h54km±7km, mb4.5/22, Error ellipse: s-maj=16.7km s-min=9.6km az=100.0*
ISC 13 21:50:12.2±0.5, 19°.83S±0°.06×169°.19E±0°.10, h35km, n60, σ1°22/57, mb4.3/21, MS3.1/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.97**	**213**			**Pn**	**21 50 44.4**	**+1.3**
MARNC					Sn	**Sn**	**21 51 05.7**	**-0.8**
PINNC	**Pines Island,**	**3.21**	**210**			**Pn**	**21 51 02.8**	**+2.6**
PINNC					Sn	**Sn**	**21 51 37.2**	**0.0**
DZM	**Mont Dzumac**	**3.40**	**228**	P		**Pn**	**21 51 04.5**	**+1.6**
	14nm,0.3s,baz=94,slow=8.1,SNR=144							
DZM				S		**Sn**	**21 51 41.2**	**-0.8**
	344nm,0.4s,baz=129,slow=22,SNR=43							
DZM				LR		LR	21 52 22.8	
	comp=Z,322nm,21.8s,baz=118,slow=39							
	48nm,0.3s							
ONTNC	**Ouen Toro**	**3.55**	**225**			**Pn**	**21 51 07.3**	**+2.5**
ONTNC					Sn	**Sn**	**21 51 45.6**	**0.0**
SANVU	**Saraoutou**	**4.75**	**336**		Pn	**Pn**	**21 51 23.2**	**+1.9**
HNR	**Honiara**	**13.66**	**318**	LR		LR	21 58 31.9	
	comp=Z,48nm,18.8s,baz=158,slow=37							
EIDS	**Eidsvold**	**17.60**	**248**			**P**	**21 54 15.8**	**+0.3**
EIDS					IAmb	IAmb	21 54 38.4	
	comp=Z,38nm,1.5s							
ARMA	**Armidale**	**19.05**	**233**	P		**Pn**	**21 54 33.6**	**+1.0**
CTAO	**Charters Tower**	**21.55**	**265**	P		**P**	**21 55 00.3**	**+1.5**
COEN	**Coen**	**25.55**	**279**	P		**P**	**21 55 38.5**	**+0.6**
COEN					IAmb	IAmb	21 55 48.1	
	comp=Z,12nm,1.2s							
TOO	**Toolangi**	**27.16**	**224**	P		**P**	**21 55 52.8**	**+0.4**
TOO					IAmb	IAmb	21 56 10.9	
	comp=Z,9.1nm,1.3s							
STKA	**Stephens Creek**	**27.49**	**239**	P		**P**	**21 55 56.1**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=69,slow=11,SNR=9.6							
STKA				LR		LR	22 05 47.8	
	comp=Z,51nm,20.8s,baz=27,slow=34							
	comp=Z,3.0nm,0.6s							
STKA	**Stephens Creek**	**27.49**	**239**	P		**P**	**21 55 55.8**	**+0.4**
STKA					IAmb	IAmb	21 55 56.9	
	comp=Z,16nm,0.8s							
RAR	**Rarotonga**	**29.08**	**98**	LR		LR	22 05 16.2	
	comp=Z,12nm,19.7s,baz=155,slow=31							
WB0	**Warramunga Arr**	**32.70**	**264**	P		**P**	**21 56 40.5**	**-1.1**
WB0					IAmb	IAmb	21 56 40.9	
	comp=Z,3.3nm,0.9s							
WRA	**Warramunga Arr**	**32.73**	**264**	P		**P**	**21 56 40.8**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=90,slow=8.4,SNR=17							
	comp=Z,1.6nm,0.6s							
WRA	**Warramunga Arr**	**32.73**	**264**	P		**P**	**21 56 40.5**	**-1.4**
AS31	**Alice Springs**	**32.94**	**257**			**P**	**21 56 43.2**	**-0.5**
AS31					IAmb	IAmb	21 56 43.9	
	comp=Z,5.0nm,0.5s							
ASAR	**Alice Springs**	**32.94**	**257**	P		**P**	**21 56 43.2**	**-0.5**
	comp=Z,11nm,0.7s,baz=87,slow=9.0,SNR=171							
ASAR				LR		LR	22 10 21.5	
	comp=Z,71nm,18.4s,baz=110,slow=37							
	comp=Z,11nm,0.7s							
MTN	**Manton Dam**	**37.11**	**275**	P		**P**	**21 57 18.8**	**-0.8**
MTN					IAmb	IAmb	21 57 21.3	
	comp=Z,7.0nm,0.9s							
GUMO	**Guam**	**40.93**	**322**	LR		LR	22 14 53.4	
	comp=Z,27nm,18.4s,baz=42,slow=36							
FITZ	**Fitzroy Crossi**	**41.13**	**265**	LR		LR	22 13 13.1	
	comp=Z,76nm,20.7s,baz=17,slow=34							
FITZ	**Fitzroy Crossi**	**41.13**	**265**	P		**P**	**21 57 52.9**	**-0.4**
MBWA	**Marble Bar**	**46.19**	**259**	P		**P**	**21 58 33.5**	**-0.5**
VNDA	**Vanda**	**57.84**	**182**	P		**P**	**21 59 59.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=9.1,slow=7.7,SNR=5.2							
	comp=Z,0.6nm,0.5s							
VNDA	**Vanda**	**57.84**	**182**	P		**P**	**21 59 59.3**	**-0.6**
SBA	**Scott Base**	**58.08**	**181**	P		**P**	**22 00 02.1**	**+0.6**
SBA					IAmb	IAmb	22 00 03.4	
	comp=Z,5.3nm,0.9s							
SBUM	**Sibu**	**60.10**	**285**	P		**P**	**22 00 14.0**	**-2.5**
QSPA	**South Pole Qui**	**70.23**	**180**	P		**P**	**22 01 22.6**	**+1.0**
	comp=Z,3.0nm,0.6s,baz=28,slow=2.8,SNR=8.6							
	comp=Z,3.0nm,0.6s							
QSPA	**South Pole Qui**	**70.23**	**180**	P		**P**	**22 01 22.3**	**+0.8**
QSPA					IAmb	IAmb	22 01 24.6	
	comp=Z,6.6nm,1.1s							
PETK	**Petropavlovsk-**	**73.31**	**353**	P		**P**	**22 01 41.2**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=153,slow=5.4,SNR=4.6							
	comp=Z,2.7nm,0.8s							
MAW	**Mawson**	**77.87**	**202**	P		**P**	**22 02 05.6**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=152,slow=11,SNR=3.1							
	comp=Z,1.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**78.70**	**294**	P		**P**	**22 02 10.7**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=122,slow=5.5,SNR=4.9							
	comp=Z,1.1nm,0.3s							
CMAR	**Chiang Mai Arr**	**78.70**	**294**	P		**P**	**22 02 10.5**	**-0.9**
BELA	**Belgrano 2**	**81.52**	**175**	P		**P**	**22 02 24.3**	**-1.3**
BELA					IAmb	IAmb	22 02 48.8	
	comp=Z,4.7nm,0.6s							
M17K	**Holitna River**	**85.26**	**15**	P		**P**	**22 02 46.4**	**+1.6**
KHMM	**Horse Mountain**	**86.67**	**44**	P		**P**	**22 02 53.4**	**+0.9**
O02D	**Mt. Diablo Mer**	**86.95**	**45**	P		**P**	**22 02 54.5**	**+0.7**
O02D					IAmb	IAmb	22 02 56.6	
	comp=Z,3.4nm,0.8s							
SONM	**Songino Array**	**87.66**	**323**	P		**P**	**22 02 57.7**	**+0.5**
	comp=Z,1.1nm,1.0s,baz=164,slow=5.8,SNR=4.7							
	comp=Z,1.1nm,1.0s							
SNAA	**Sanae**	**88.57**	**183**	P		**P**	**22 02 59.9**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=205,slow=7.1,SNR=3.6							
	comp=Z,1.4nm,0.8s							
SNAA	**Sanae**	**88.57**	**183**	P		**P**	**22 02 59.4**	**-1.8**
SNAA					IAmb	IAmb	22 03 02.7	
	comp=Z,6.3nm,1.5s							
NVAR	**Mina Array Bea**	**89.23**	**49**	P		**P**	**22 03 04.1**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=304,slow=15,SNR=3.7							
	comp=Z,0.7nm,0.8s							
ILAR	**Eielson Array**	**90.81**	**17**	P		**P**	**22 03 11.8**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=231,slow=5.7,SNR=2.7							
	comp=Z,0.4nm,0.7s							
H03S2	**Juan Fernandez**	**96.04**	**129**	T		T	23 50 09.9	
	baz=200,slow=74							
H03S1	**Juan Fernandez**	**96.05**	**129**	T		T	23 50 13.5	
	baz=200,slow=74							
H03S3	**Juan Fernandez**	**96.06**	**129**	T		T	23 50 13.2	
	baz=200,slow=74							
PDAR	**Pinedale Array**	**97.05**	**47**	P		**P**	**22 03 40.9**	**0.0**
	comp=Z,0.9nm,1.1s,baz=336,slow=7.9,SNR=2.3							
	comp=Z,0.9nm,1.1s							
ARCES	**ARCESS Array B**	**125.62**	**345**	PKP		**PKPdf**	**22 09 08.0**	**-1.2**
	comp=Z,6.5n

LOMA	**Loma Larga**	**1.54 313**	*eP*		**Pn**	**22 08 47.7**	**+0.2**
LOMA			*eS*		**Sn**	**22 09 06.6**	**-0.1**
LOMA	**Loma Larga**	**1.54 313**	P		**Pn**	**22 08 47.8**	**+0.2**
LALI	**Alcalda de L**	**1.56 305**	*eS*		**Sn**	**22 09 05.3**	**-1.5**
LALI	**Alcalda de L**	**1.56 305**	*eP*		**Pn**	**22 08 47.4**	**-0.2**
LALI			*eS*		**Sn**	**22 09 04.8**	**-2.0**
LALI	**Alcalda de L**	**1.56 305**	S		**Sn**	**22 09 06.0**	**-0.8**
LALI	**Alcalda de L**	**1.56 305**	P		**Pn**	**22 08 47.7**	**+0.1**
UDBS	**Universidad Do**	**1.58 316**	P		**Pn**	**22 08 48.5**	**+0.5**
UDBS	**Universidad Do**	**1.58 316**	S		**Sn**	**22 09 07.9**	**+0.4**
AMTN	**Mateare**	**1.59 102**	P		**Pn**	**22 08 47.7**	**-0.2**
AMTN	**Mateare**	**1.59 102**	S		**Sn**	**22 09 08.1**	**+0.5**
IGN	**Direccin Gen**	**1.59 315**	P		**Pn**	**22 08 48.6**	**+0.6**
IGN	**Direccin Gen**	**1.59 315**	S		**Sn**	**22 09 08.3**	**+0.6**
UTEC	**Universidad Te**	**1.60 314**	P		**Pn**	**22 08 48.8**	**+0.5**
UTEC	**Universidad Te**	**1.60 314**	S		**Sn**	**22 09 08.5**	**+0.4**
SAPS	**Ciudad Sandino**	**1.63 104**	S		**Sn**	**22 09 08.7**	**+0.2**
SAPS	**Ciudad Sandino**	**1.63 104**	⇓P		**Pn**	**22 08 48.9**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.63 26**			**Pn**	**22 08 49.5**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.63 26**	⇓P		**Pn**	**22 08 49.7**	**+0.9**
TGUH			S		**Sn**	**22 09 09.4**	**+0.5**
UEES	**Universidad Ev**	**1.64 314**	P		**Pn**	**22 08 49.2**	**+0.4**
UEES	**Universidad Ev**	**1.64 314**	S		**Sn**	**22 09 09.3**	**+0.3**
APYN	**Apoyeque**	**1.66 102**	P		**Pn**	**22 08 49.6**	**+0.5**
APYN			S		**Sn**	**22 09 09.6**	**+0.2**
PIC2	**El Picacho**	**1.67 314**	*eP*		**Pn**	**22 08 50.1**	**+0.7**
BOQS	**Boqueron**	**1.68 313**	*eP*		**Pn**	**22 08 50.0**	**+0.5**
PMON	**Piamonte**	**1.69 312**	*eP*		**Pn**	**22 08 49.9**	**+0.5**
PMON			*eS*		**Sn**	**22 09 10.7**	**+0.5**
PMON	**Piamonte**	**1.69 312**	⇑P		**Pn**	**22 08 50.0**	**+0.5**
APQ2	**Apoyeque**	**1.69 103**	P		**Pn**	**22 08 49.9**	**+0.4**
APQ2			S		**Sn**	**22 09 10.2**	**0.0**
ABCN	**Banco Central**	**1.73 105**	S		**Sn**	**22 09 11.2**	**+0.2**
ABCN	**Banco Central**	**1.73 105**	P		**Pn**	**22 08 50.5**	**+0.6**
ALLN	**Telcor Managua**	**1.75 104**	S		**Sn**	**22 09 11.9**	**+0.3**
ALLN	**Telcor Managua**	**1.75 104**	P		**Pn**	**22 08 50.7**	**+0.5**
JAYA	**Jayaque - finc**	**1.76 307**	*eP*		**Pn**	**22 08 50.3**	**-0.1**
JAYA	**Jayaque - finc**	**1.76 307**	*eP*		**Pn**	**22 08 50.3**	**-0.1**
JAYA	**Jayaque - finc**	**1.76 307**	S		**Sn**	**22 09 12.3**	**+0.4**
JAYA	**Jayaque - finc**	**1.76 307**	⇑P		**Pn**	**22 08 50.4**	**0.0**
TISN	**Laguna Tiscapa**	**1.76 104**	⇓P		**Pn**	**22 08 50.8**	**+0.4**
USIM	**UNAN**	**1.76 105**	Pn		**Pn**	**22 08 50.9**	**+0.5**
UNAN	**Cigeo UNAN**	**1.77 105**	P		**Pn**	**22 08 50.7**	**+0.3**
UNAN			S		**Sn**	**22 09 11.7**	**-0.3**
YUSH	**Yuscaran**	**1.78 40**	S		**Sn**	**22 09 11.9**	**-0.4**
YUSH	**Yuscaran**	**1.78 40**	⇓P		**Pn**	**22 08 51.3**	**+0.7**
CEDA	**San Andres**	**1.81 312**	S		**Sn**	**22 09 13.9**	**+0.9**
CEDA	**San Andres**	**1.81 312**	P		**Pn**	**22 08 51.9**	**+0.9**
LLGN	**La Laguna**	**1.81 330**	⇓P		**Pn**	**22 08 51.5**	**+0.4**
OCON	**Estacion meteo**	**1.82 55**	⇓P		**Pn**	**22 08 51.5**	**+0.3**
OCON			S		**Sn**	**22 09 12.7**	**-0.7**
WILN	**Americas 2**	**1.83 103**	⇓P		**Pn**	**22 08 51.9**	**+0.6**
WILN			S		**Sn**	**22 09 13.9**	**+0.4**
AERN	**Aeropuerto Man**	**1.86 103**	P		**Pn**	**22 08 51.9**	**+0.3**
AERN	**Aeropuerto Man**	**1.86 103**	S		**Sn**	**22 09 14.4**	**+0.4**
MAS3	**Al N del Volca**	**1.88 107**	P		**Pn**	**22 08 52.2**	**+0.2**
MAS3			S		**Sn**	**22 09 14.1**	**-0.6**
MASN	**Masaya**	**1.92 108**	⇓P		**Pn**	**22 08 53.0**	**+0.6**
CEVE	**Cerro Verde**	**2.00 308**	*eP*		**Pn**	**22 08 54.6**	**+0.8**
CEVE	**Cerro Verde**	**2.00 308**	P		**Pn**	**22 08 54.4**	**+0.6**
CEVE	**Cerro Verde**	**2.00 308**	S		**Sn**	**22 09 19.2**	**+1.4**
SNJE	**San Jose**	**2.01 310**	*eP*		**Pn**	**22 08 54.6**	**+0.8**
RCON	**San Juan de Ri**	**2.02 63**	⇑P		**Pn**	**22 08 55.0**	**+1.0**
RCVN	**Varillal2**	**2.04 61**	P		**Pn**	**22 08 55.0**	**+0.8**
RCVN	**Varillal2**	**2.04 61**	S		**Sn**	**22 09 19.4**	**+0.8**
UNIC	**Universidad Ca**	**2.04 313**	S		**Sn**	**22 09 20.2**	**+1.5**
UNIC	**Universidad Ca**	**2.04 313**	P		**Pn**	**22 08 54.8**	**+0.7**
MATN	**Matagalpa**	**2.07 80**	S		**Sn**	**22 09 19.0**	**+0.4**
MATN	**Matagalpa**	**2.07 80**	⇓P		**Pn**	**22 08 53.9**	**-0.6**
RCPN	**Sur Rio San Ju**	**2.09 63**	P		**Pn**	**22 08 56.1**	**+1.2**
NUBE	**Las Nubes**	**2.16 308**	*eP*		**Pn**	**22 08 56.6**	**+0.7**
NUBE	**Las Nubes**	**2.16 308**	*eP*		**Pn**	**22 08 56.5**	**+0.6**
NUBE			*eS*		**Sn**	**22 09 21.1**	**-0.7**
NUBE	**Las Nubes**	**2.16 308**	S		**Sn**	**22 09 22.2**	**+0.5**
NUBE	**Las Nubes**	**2.16 308**	P		**Pn**	**22 08 56.5**	**+0.6**
LOAL	**Lomas de Alarc**	**2.22 310**	P		**Pn**	**22 08 57.6**	**+0.9**
LOAL	**Lomas de Alarc**	**2.22 310**	S		**Sn**	**22 09 24.7**	**+1.7**
RBDL	**Robledal**	**2.23 313**	*eP*		**Pn**	**22 08 57.2**	**+0.4**
MTO3	**Montecristo**	**2.23 324**			**Pn**	**22 08 57.6**	**+0.7**
MTO3	**Montecristo**	**2.23 324**	*i* P		**Pn**	**22 08 57.5**	**+0.6**
MTO3	**Montecristo**	**2.23 324**	*eP*		**Pn**	**22 08 57.5**	**+0.6**
MTO3	**Montecristo**	**2.23 324**	S		**Sn**	**22 09 24.4**	**+0.9**
MTO3	**Montecristo**	**2.23 324**	⇑P		**Pn**	**22 08 57.5**	**+0.7**
FAME	**Alcaldia de Sa**	**2.31 303**	P		**Pn**	**22 08 58.5**	**+0.6**
FAME	**Alcaldia de Sa**	**2.31 303**	S		**Sn**	**22 09 25.0**	**-0.3**
ESQI	**Esquipulas**	**2.35 327**			**Pn**	**22 08 59.4**	**+1.0**
ESQI	**Esquipulas**	**2.35 327**	*eP*		**Pn**	**22 08 59.4**	**+1.0**
ESQI	**Esquipulas**	**2.35 327**	S		**Sn**	**22 09 27.4**	**+1.2**
ESQI	**Esquipulas**	**2.35 327**	⇑P		**Pn**	**22 08 59.6**	**+1.2**
JAPN	**Al SSO del Vol**	**2.52 114**	P		**Pn**	**22 09 01.0**	**+0.4**
MORN	**Al O del Volca**	**2.53 114**	P		**Pn**	**22 09 01.5**	**+0.6**
CONN	**Concepcion**	**2.55 113**	P		**Pn**	**22 09 01.7**	**+0.6**
CONN			S		**Sn**	**22 09 33.1**	**+2.1**
CARN	**Rivas**	**2.81 119**	P		**Pn**	**22 09 06.5**	**+1.9**
CARN			S		**Sn**	**22 09 39.7**	**+2.4**
ELI1	**Hacienda Flor**	**3.09 128**	P		**Pn**	**22 09 10.1**	**+1.7**
SIUN	**Universidad Ur**	**3.35 70**			**Pn**	**22 09 13.0**	**+1.0**
SIUN	**Universidad Ur**	**3.35 70**	P		**Pn**	**22 09 12.9**	**+0.9**
APG	**El Apazote**	**3.38 316**	P		**Pn**	**22 09 14.0**	**+1.4**
	0.2nm,0.3s,baz=105,slow=12,SNR=7.7						
APG			S		**Sn**	**22 09 54.6**	**+2.9**
	1.3nm,0.4s,baz=68,slow=22,SNR=1.9						
APG	**El Apazote**	**3.38 316**	*eP*		**Pn**	**22 09 14.0**	**+1.4**
JUD3	**Juan Diaz 3**	**3.42 134**			**Pn**	**22 09 14.2**	**+1.2**
CMARA	**Lajas Hojancha**	**3.60 135**	P		**Pn**	**22 09 16.6**	**+1.2**
JTS	**Las Juntas de**	**3.77 127**	P		**Pn**	**22 09 18.7**	**+0.9**
	4.4nm,0.3s,baz=308,slow=18,SNR=10.0						
JTS			S		**Sn**	**22 09 58.7**	**-2.2**
	30nm,0.4s,baz=285,slow=12,SNR=4.1						
	8.5nm,0.3s						
JTS	**Las Juntas de**	**3.77 127**			**Pn**	**22 09 19.8**	**+2.0**
JTS	**Las Juntas de**	**3.77 127**	⇑P		**Pn**	**22 09 19.1**	**+1.4**
RTAL	**Retalhuleu**	**4.07 299**	Pn		**Pn**	**22 09 23.3**	**+1.5**
PETF	**Flores**	**4.67 338**			**Pn**	**22 09 32.0**	**+2.0**
BILN	**Bilwi Airport**	**4.75 72**	Pn		**Pn**	**22 09 31.5**	**+0.4**
DRK0	**Durika**	**5.73 125**	P		**Pn**	**22 09 47.1**	**+2.4**
DRK0	**Durika**	**5.73 125**	S		**Sn**	**22 10 50.7**	**+1.5**
PIRO	**Carate, Puerto**	**6.20 132**			**Pn**	**22 09 52.5**	**+1.6**
PIRO	**Carate, Puerto**	**6.20 132**	P		**Pn**	**22 09 53.5**	**+2.6**
BRU2	**Volcan**	**6.45 125**	Pn		**Pn**	**22 09 55.3**	**+0.8**
TEIG	**Tepich**	**7.61 358**	Pn		**Pn**	**22 10 11.2**	**+0.9**
CMIG	**Matias Romero**	**8.01 305**	P		**Pn**	**22 10 17.6**	**+1.8**
	0.9nm,0.3s,baz=139,slow=13,SNR=4.1						
CMIG			S		**Sn**	**22 11 44.9**	**-0.1**
	3.9nm,0.6s,baz=66,slow=18,SNR=1.8						
	2.8nm,0.3s						
SDV	**Santo Domingo**	**17.47 100**	LR		LR	22 20 04.1	
	comp=Z,29nm,20.2s,baz=69,slow=41						
GOGA	**Godfrey**	**21.15 11**	P		**P**	**22 13 02.5**	**+0.6**
GOGA			IAmb		IAmb	22 13 05.2	
	comp=Z,7.4nm,0.8s						
ATAH	**Atahualpa**	**21.80 153**	S		**S**	**22 17 07.2**	**-0.3**
	comp=Z,5.5nm,0.3s,baz=345,slow=12,SNR=14						
TXAR	**Lajitas Array**	**22.12 321**	P		**P**	**22 13 13.4**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=136,slow=10,SNR=35						
TXAR			S		**S**	**22 17 14.7**	**+1.9**
	comp=Z,0.3nm,0.9s,baz=146,slow=19,SNR=2.6						
	comp=Z,2.8nm,0.6s						
TXAR	**Lajitas Array**	**22.12 321**	P		**P**	**22 13 13.0**	**+0.4**
TX31	**Lajitas Ar. Si**	**22.12 321**			**P**	**22 13 12.9**	**+0.3**
TX31			IAmb		IAmb	22 13 14.2	
	comp=Z,4.3nm,0.8s						
MIAR	**Mount Ida**	**22.44 348**			**P**	**22 13 15.4**	**-0.4**
MIAR			IAmb		IAmb	22 13 19.4	
	comp=Z,14nm,0.9s						
LCAR	**Lake Charles**	**23.56 354**	P		**P**	**22 13 25.3**	**-1.6**
LCAR			IAmb		IAmb	22 13 30.4	
	comp=Z,10nm,1.4s						
VHRN	**Van Horn**	**23.96 322**	P		**P**	**22 13 30.7**	**-0.1**
WMOK	**Wichita Mounta**	**24.12 338**	P		**P**	**22 13 32.8**	**+0.7**
WMOK			IAmb		IAmb	22 13 36.6	
	comp=Z,2.2nm,1.0s						
MNTX	**Cornudas Mount**	**24.85 323**			**P**	**22 13 38.5**	**-0.2**
PDAR	**Pinedale Array**	**35.40 332**	P		**P**	**22 15 11.1**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=141,slow=7.4,SNR=8.7						
	comp=Z,0.6nm,0.6s						
PDAR	**Pinedale Array**	**35.40 332**	P		**P**	**22 15 11.6**	**-0.6**
HWUT	**Hardware Ranch**	**35.48 329**	P		**P**	**22 15 13.2**	**+0.4**
AHID	**Auburn Hatcher**	**36.12 331**	P		**P**	**22 15 18.3**	**0.0**
LOHW	**Long Hollow**	**36.53 332**	P		**P**	**22 15 21.5**	**-0.3**
LOHW			IAmb		IAmb	22 15 23.2	
	comp=Z,4.0nm,1.0s						
NVAR	**Mina Array Bea**	**37.24 319**	P		**P**	**22 15 29.3**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=121,slow=4.2,SNR=2.9						
	comp=Z,0.3nm,0.5s						
ULM	**Lac du Bonnet**	**38.11 352**	P		**P**	**22 15 33.2**	**-1.6**
	comp=Z,3.2nm,0.5s,baz=162,slow=6.4,SNR=2.2						
	comp=Z,3.2nm,0.5s						
MCMT	**McKenzie Canyo**	**38.50 331**	P		**P**	**22 15 39.3**	**+0.8**
SCHQ	**Schefferville**	**45.31 17**	P		**P**	**22 16 32.0**	**-1.6**
	comp=Z,2.4nm,0.5s,baz=203,slow=7.7,SNR=1.3						
	comp=Z,2.4nm,0.5s						
ILAR	**Eielson Array**	**65.68 336**	P		**P**	**22 18 59.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=101,slow=7.7,SNR=2.7						
	comp=Z,0.3nm,0.5s						

CATAC ***13*** *22:54:50.0±0.4, 14°N±2°×9°1W±°, h10km±2km, M3.7/36, MLv3.7/36, Error ellipse: s-maj=5.3km s-min=2.3km az=31.4, confirmed*

GCG ***13*** *22:54:51.4±1.7, 13°.72N×90°.97W, h58km±18km, MD3.7, ML3.9*

ISC 13 22:54:53.5±1.4, 13°.67N±0°.07×90°.90W±0°.05, h32km±11km, n55, σ1§20/61, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.40**	**106**	*i* P	**Pb**	**22 55 02.0**	**-0.5**
FG16	**Alotenango, Sa**	**0.71**	**32**	*eP*	**Pn**	**22 55 06.7**	**-0.7**
FG16				*eS*	**Sn**	**22 55 18.3**	**+0.9**
FG16				IAML		22 55 22.2	
	comp=E,9µm,0.2s						
ESSG	**Sabana Grande**	**0.71**	**5**	*eP*	**Pn**	**22 55 05.3**	**-2.2**
PCG5	**San Vicente Pa**	**0.74**	**43**	*i* P	**Pn**	**22 55 06.0**	**-1.9**
FAME	**Alcaldia de Sa**	**0.87**	**79**	S	**Sb**	**22 55 21.7**	**0.0**
FAME	**Alcaldia de Sa**	**0.87**	**79**	P	**Pn**	**22 55 08.3**	**-1.2**
STG8	**El Palmar, Qui**	**0.89**	**330**	*eP*	**Pb**	**22 55 11.9**	**+1.2**
STG8				*eS*	**Sb**	**22 55 26.6**	**+4.3**
NUBE	**Las Nubes**	**1.11**	**78**	*eP*	**Pn**	**22 55 11.9**	**-1.0**
NUBE				*eS*	**Sn**	**22 55 27.1**	**-0.1**
NUBE	**Las Nubes**	**1.11**	**78**	P	**Pn**	**22 55 12.1**	**-0.9**
LOAL	**Lomas de Alarc**	**1.13**	**73**	P	**Pn**	**22 55 12.9**	**-0.3**
LOAL	**Lomas de Alarc**	**1.13**	**73**	S	**Sb**	**22 55 29.1**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.14**	**72**	S	**Sn**	**22 55 27.6**	**-0.2**
SLOZ	**Alcaldia de Sa**	**1.14**	**72**	P	**Pn**	**22 55 11.2**	**-2.1**
RTAL	**Retalhuleu**	**1.15**	**318**	P	**Pn**	**22 55 11.0**	**-2.3**
SOKI	**Kika Raxquin**	**1.24**	**337**	*eP*	**Pn**	**22 55 13.0**	**-2.1**
SOKI				*eS*	**Sn**	**22 55 28.6**	**-2.3**
CEVE	**Cerro Verde**	**1.25**	**83**	S	**Sb**	**22 55 31.9**	**-0.6**
CEVE	**Cerro Verde**	**1.25**	**83**	P	**Pn**	**22 55 14.4**	**-0.5**
UNIC	**Universidad Ca**	**1.34**	**77**	P	**Pn**	**22 55 15.5**	**-0.6**
APG	**El Apazote**	**1.39**	**18**	*i* P	**Pn**	**22 55 16.5**	**-0.4**
APG				*eS*	**Sn**	**22 55 34.9**	**+0.6**
JAYA	**Jayaque - finc**	**1.41**	**91**	*eP*	**Pn**	**22 55 16.0**	**-1.0**
JAYA				*eS*	**Sn**	**22 55 34.2**	**-0.4**
JAYA	**Jayaque - finc**	**1.41**	**91**	P	**Pn**	**22 55 16.1**	**-1.0**
PMON	**Piamonte**	**1.54**	**88**	P	**Pn**	**22 55 18.5**	**-0.4**
PMON	**Piamonte**	**1.54**	**88**	S	**Sb**	**22 55 39.7**	**-1.0**
UEES	**Universidad Ev**	**1.61**	**88**	S	**Sb**	**22 55 41.8**	**-1.0**
UEES	**Universidad Ev**	**1.61**	**88**	P	**Pn**	**22 55 19.1**	**-0.7**
UTEC	**Universidad Te**	**1.65**	**89**	P	**Pn**	**22 55 19.9**	**-0.4**
MTO3	**Montecristo**	**1.66**	**64**	*eP*	**Pn**	**22 55 19.7**	**-0.9**
MTO3	**Montecristo**	**1.66**	**64**	P	**Pn**	**22 55 21.0**	**+0.4**
MTO3	**Montecristo**	**1.66**	**64**	S	**Sb**	**22 55 43.1**	**-1.1**
PANCS	**Alcalda de**	**1.67**	**92**	P	**Pn**	**22 55 20.3**	**-0.3**
LOMA	**Loma Larga**	**1.68**	**91**	P	**Pn**	**22 55 20.1**	**-0.7**
LOMA	**Loma Larga**	**1.68**	**91**	S	**Sn**	**22 55 42.6**	**+1.4**
IGN	**Direccin Gen**	**1.68**	**88**	P	**Pn**	**22 55 20.0**	**-0.7**
UDBS	**Universidad Do**	**1.69**	**88**	P	**Pn**	**22 55 20.6**	**-0.3**
HUEH	**Huehuetenango**	**1.74**	**340**	P	**Pn**	**22 55 20.4**	**-1.3**
ESQI	**Esquipulas**	**1.75**	**59**	P	**Pn**	**22 55 21.4**	**-0.3**
ESQI	**Esquipulas**	**1.75**	**59**	S	**Sb**	**22 55 45.5**	**-1.2**
PAVA	**Las Pavas**	**1.91**	**89**	P	**Pn**	**22 55 23.2**	**-0.7**
LLGN	**La Laguna**	**1.96**	**75**	P	**Pn**	**22 55 24.1**	**-0.5**
TECO	**Alcaldia de Te**	**2.06**	**93**	P	**Pn**	**22 55 25.6**	**-0.3**
SCLA	**Alcaldia de Sa**	**2.11**	**89**	P	**Pn**	**22 55 26.2**	**-0.4**
PQSS	**Presa 15 de Se**	**2.27**	**91**	P	**Pn**	**22 55 28.5**	**-0.3**
PACA	**Pacayal**	**2.51**	**94**	P	**Pn**	**22 55 32.0**	**-0.2**
PACA	**Pacayal**	**2.51**	**94**	S	**Sn**	**22 56 04.0**	**+2.2**
CNRM	**Centro Naciona**	**2.66**	**94**	P	**Pn**	**22 55 34.1**	**-0.1**
CCIG	**Comitan**	**2.86**	**335**	P	**Pn**	**22 55 36.1**	**-1.0**
CCIG	**Comitan**	**2.86**	**335**	S	**Sn**	**22 56 11.1**	**+0.6**
LCND	**La Caada**	**2.95**	**97**	P	**Pn**	**22 55 38.0**	**-0.1**
CNCH	**Conchagua**	**3.01**	**97**	P	**Pn**	**22 55 38.7**	**-0.3**
CNCH	**Conchagua**	**3.01**	**97**	S	**Sn**	**22 56 16.6**	**+2.6**
IZABA	**Izabal, Puerto**	**3.03**	**47**	P	**Pn**	**22 55 39.6**	**+0.3**
POTN	**Potosi Cosigui**	**3.37**	**101**	P	**Pn**	**22 55 43.6**	**-0.3**
PETF	**Flores**	**3.38**	**17**	P	**Pn**	**22 55 44.0**	**0.0**
TGUH	**Tegucigalpa,Un**	**3.54**	**83**	P	**Pn**	**22 55 46.0**	**-0.4**
CRIN	**San Cristobal**	**3.87**	**104**	P	**Pn**	**22 55 50.6**	**-0.3**

IDC ***13*** *23:02:49.9±0.9, 28°.28N×104°.81E, h0km, mb3.8/8, mbtmp3.8/11, ML4.0/3, Error ellipse: s-maj=44.2km s-min=16.2km az=68.0*

ISC 13 23:02:52.7±1.0, 28°.29N±0°.09×104°.8E±0°.2, h19km, n11, σ0§47/11, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**7.71**	**353**	Pn	**Pn**	**23 04 44.4**	**+0.2**
	baz=173,slow=13						
	2.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**11.18**	**210**	Pn	**Pn**	**23 05 31.3**	**-0.2**
	0.7nm,0.3s,baz=29,slow=13,SNR=15						
	0.7nm,0.3s						
SONM	**Songino Array**	**19.55**	**3**	P	**Pn**	**23 07 19.9**	**-0.8**
	0.1nm,0.3s,baz=176,slow=9.8,SNR=6.0						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**25.55**	**322**	P	**P**	**23 08 21.0**	**+0.7**
	0.8nm,0.7s,baz=124,slow=12,SNR=7.4						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**29.53**	**336**	P	**P**	**23 08 55.6**	**-0.2**
	1.1nm,0.6s,baz=131,slow=7.8,SNR=6.1						
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**29.88**	**326**	P	**P**	**23 08 59.1**	**+0.1**
	0.2nm,0.5s,baz=130,slow=9.8,SNR=4.0						
	0.2nm,0.5s						
NRIK	**Noril'sk**	**42.30**	**351**	P	**P**	**23 10 45.2**	**+0.4**
	1.5nm,0.4s,baz=140,slow=8.4,SNR=3.8						
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**55.80**	**146**	P	**P**	**23 12 28.8**	**0.0**
	1.1nm,0.6s,baz=336,slow=8.3,SNR=10						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**58.77**	**149**	P	**P**	**23 12 50.1**	**+0.4**
	0.6nm,0.5s,baz=328,slow=7.0,SNR=7.7						
	0.6nm,0.5s						
FINES	**FINESS Array B**	**60.26**	**327**	P	**P**	**23 12 59.3**	**-0.2**
	2.3nm,0.9s,baz=81,slow=8.6,SNR=5.8						
	2.3nm,0.9s						
NOA	**NORSAR Array B**	**67.37**	**328**	P	**P**	**23 13 46.3**	**-0.1**
	0.2nm,0.6s,baz=73,slow=5.5,SNR=2.1						
	0.2nm,0.6s						

SCB 13 23:07:02.8±1.3, 21°.34S×67°.42W, h172km±10km, MB5.8, ML3.5/4, Error ellipse: s-maj=3.7km s-min=3.2km az=2.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.67**	**87**	Pg	Pn	23 07 36.7	+0.4
MOCB				Sg	Sn	23 08 02.4	+0.4
MOCB				IAML		23 08 09.1	
	81nm,0.2s						
PB09	**IPOC Station P**	**1.75**	**255**	Pg	Pn	23 07 38.0	+1.1
PB01	**IPOC Station P**	**1.95**	**278**	Pg	Pn	23 07 40.0	+1.1
YJA	**Yavi**	**1.96**	**116**	Pg	Pn	23 07 40.1	+0.8
PB08	**IPOC Station P**	**2.01**	**306**	Pg	Pn	23 07 41.0	+1.1
PB02	**IPOC Station P**	**2.31**	**270**	Pg	Pn	23 07 44.2	+1.3
PB02				Sg	Sn	23 08 14.4	+0.4
PB02				IAML		23 08 16.4	
	180nm,0.2s						
GO01	**Chusmiza**	**2.35**	**315**	Pg	Pn	23 07 44.4	+0.6
PB06	**IPOC Station P**	**2.41**	**235**	Pg	Pn	23 07 44.9	+0.7
PB11	**IPOC Station P**	**2.62**	**306**	Pg	Pn	23 07 46.5	-0.1
PB11				Sg	Sn	23 08 19.7	-0.9
PB11				IAML		23 08 22.5	
	174nm,0.2s						
SOEO	**Opoqueri**	**2.80**	**351**	Pg	Pn	23 07 50.2	+1.1
SOET	**ToroToro**	**3.55**	**26**	Pg	Pn	23 07 57.9	-0.4
PB16	**IPOC Station P**	**3.58**	**326**	Pg	Pn	23 07 59.6	+0.7
PB14	**IPOC Station P**	**4.27**	**219**	Pg	Pn	23 08 07.8	+0.3
PB14				Sg	Sn	23 08 56.0	-2.0
PB14				IAML		23 08 58.0	
	76nm,0.5s						
GO02	**Mina Guanaco**	**4.30**	**207**	Pg	Pn	23 08 08.5	+0.7
BBOJ	**La Paz, Jacaqu**	**4.40**	**350**	Pg	Pn	23 08 10.1	+0.7
BBOE	**La Paz, Chanca**	**4.53**	**353**	Pg	Pn	23 08 11.8	+0.7
BBOD	**La Paz, Gloria**	**4.81**	**346**	Pg	Pn	23 08 15.2	+0.5
LPAZ	**La Paz**	**5.07**	**352**	Pg	Pn	23 08 18.2	0.0
BBOB	**La Paz, Bander**	**5.21**	**352**	Pg	Pn	23 08 19.9	-0.1

IDC ***13*** *23:14:34.1±0.5, 26°.60N×140°.59E, h386km±4km, mb4.0/27, mbtmp4.8/34, Error ellipse: s-maj=10.7km s-min=8.4km az=64.0*

MOS ***13*** *23:14:34.6±0.9, 26°.57N×140°.48E, h405km, mb4.6/68, Error ellipse: s-maj=9.1km s-min=4.9km az=116.4*

NEIC ***13*** *23:14:38.0±1.2, 26°.61N±0°.08×140°.5E±0°.1, h422km±3km, mb4.6/112, Error ellipse: s-maj=14.3km s-min=11.3km az=92.0*

JMA ***13*** *23:14:39.1±0.3, 27°N±1°×14°1E±°, h430km±2km, MD5.5/75, MV4.7/75, W OFF OGASAWARA*

JMA Felt I J1 at W OFF OGASAWARA .

NIED ***13*** *23:14:39.1, 26°.95N×141°.13E, h430km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-3.96; Mθθ4.21; Mφφ-0.25; Mrθ-7.18; Mθφ-1.87; Mφr-2.54; Fault plane solution: M₀8.81000×10¹⁵ NP1: φs314.00000°, δ22.00000°, λ-36.00000°. NP2:φs78.00000°, δ77.00000°, λ-108.00000°.*

ISC 13 23:14:37.4±0.4, 26°.63N±0°.04×140°.52E±0°.05, h420km±4km, n640, σ1§13/658, mb4.5/161, 31C-13D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.48**	**90**	P	**P**	**23 15 33.8**	**+1.3**
JHH2				S	**S**	**23 16 16.5**	**-0.4**
JHH2	**Haha-jima-NKT2**	**1.48**	**90**	A	A	23 15 33.8	
	comp=N,62nm,0.3s,comp=E,61nm,0.3s						
CBIJ	**Chichi jima**	**1.56**	**72**	*i* P	**P**	**23 15 33.5**	**+0.7**
CBIJ				*eS*	**S**	**23 16 15.0**	**-2.5**
CBIJ	**Chichi jima**	**1.56**	**72**	A	A	23 15 33.5	
	comp=N,18nm,0.4s,comp=E,22nm,0.8s						
JCJ	**Chichijima**	**1.56**	**72**	P	P	23 15 27.3	-5.5
	comp=E,1µm,0.3s,baz=279,slow=23,SNR=144						
JCJ		

ENH IAmb IAmb 23 19 48.7
comp=Z,50nm,1.2s
ENH Enshi 27.48 285 P **P** **23 19 48.0 +0.3**
HIA Hailar 27.74 330 *i* P **P** **23 19 49.2 -0.5**
HIA pmax pmax
comp=Z,13nm,1.5s
HHC Hu-ho-hao-te 27.79 308 ⇑ *i* P **P** **23 19 50.8 +0.4**
HHC pmax pmax
comp=Z,21nm,0.8s
HHC pmax pmax
comp=Z,56nm,5.2s
HILR Hailar Array B 27.95 330 P **P** **23 19 51.3 -0.2**
comp=Z,2.7nm,0.5s,baz=134,slow=6.4,SNR=4.9
comp=Z,2.7nm,0.5s
XAN Xi'an 28.17 293 ⇓ P **P** **23 19 53.8 0.0**
XAN pmax pmax
comp=Z,17nm,0.6s
ZEA Zeya 28.81 344 *e* P **P** **23 19 59.3 +0.3**
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,40nm,0.7s
PETK Petropavlovsk- 29.39 21 P **P** **23 20 03.9 -0.2**
comp=Z,2.5nm,0.5s,baz=212,slow=7.4,SNR=6.5
comp=Z,2.5nm,0.5s
PETK Petropavlovsk- 29.39 21 P **P** **23 20 04.6 +0.4**
PETK Petropavlovsk- 29.39 21 P **P** **23 20 04.6 +0.4**
FAKI Fak Fak 30.45 196 P **P** **23 20 13.2 -0.6**
FAKI IAmb IAmb 23 20 23.8
comp=Z,32nm,1.1s
CD2 Chengdu 32.41 286 P **P** **23 20 30.4 -0.2**
CD2 pmax pmax
comp=Z,50nm,0.5s
LZH Lanzhou 32.54 296 *e* P **P** **23 20 32.8 +0.9**
LZH S S 23 25 08.3 -7.9
LZH pmax pmax
comp=Z,30nm,1.3s
LZDM Lanzhou Array 32.65 296 P **P** **23 20 33.0 +0.1**
comp=Z,3.2nm,0.3s,baz=134,slow=8.3,SNR=12
comp=Z,3.2nm,0.3s
ULN Ulaanbaatar 33.65 318 P **P** **23 20 40.8 -0.4**
ULN Ulaanbaatar 33.65 318 P **P** **23 20 42.1 +0.9**
ULN Ulaanbaatar 33.65 318 *ce* P **P** **23 20 42.4 +1.3**
ULN pmax pmax
comp=Z,8.0nm,1.3s
SLVN Son La 33.79 269 P **P** **23 20 42.7 +0.1**
SLVN Son La 33.79 269 P **P** **23 20 43.9 +1.4**
KMI Kunming 33.94 276 ⇑ P **P** **23 20 45.5 +1.5**
KMI pmax pmax
comp=Z,25nm,1.0s
SONM Songino Array 34.03 318 P **P** **23 20 44.5 +0.2**
comp=Z,2.9nm,0.6s,baz=128,slow=7.3,SNR=20
SONM PcP **PcP** **23 23 10.9 +0.1**
comp=Z,1.1nm,0.6s,baz=113,slow=1.1,SNR=4.8
comp=Z,2.9nm,0.6s
SONM Songino Array 34.03 318 P **P** **23 20 44.2 -0.2**
SONM PcP **PcP** **23 23 11.4 +0.6**
PZH PanZhiHua 34.59 279 P **P** **23 20 50.1 +0.7**
PZH pmax pmax
comp=Z,30nm,0.9s
YAK Yakutsk 36.13 351 *ce* P **P** **23 21 02.6 +1.0**
YAK pmax pmax
comp=Z,57nm,2.5s
GTA Gaotai 36.13 301 P **P** **23 21 03.3 +1.1**
GTA pP pwP 23 22 23.5 -1.0
GTA PcP **PcP** **23 23 17.3 +0.1**
GTA pmax pmax
comp=Z,16nm,0.8s
ZAK Zakamensk 36.99 320 *e* P **P** **23 21 05.4 -3.7**
ZAK pmax pmax
comp=Z,17nm,1.7s
SEY Seymchan 37.14 9 P **P** **23 21 10.6 +0.6**
SEY pmax pmax
comp=Z,54nm,2.3s
CHTO Chiang Mai 38.99 267 P **P** **23 21 26.0 +0.1**
CHTO IAmb IAmb 23 21 27.3
comp=Z,21nm,0.8s
CHTO Chiang Mai 38.99 267 P **P** **23 21 24.1 -1.8**
CHTO Chiang Mai 38.99 267 P **P** **23 21 26.6 +0.7**
CHTO Chiang Mai 38.99 267 P **P** **23 21 26.0 +0.1**
CHTO pmax pmax
comp=Z,21nm,0.8s
CM31 Chiang Mai Arr 39.11 267 P **P** **23 21 27.4 +0.6**
CM31 IAmb IAmb 23 21 28.6
comp=Z,15nm,0.7s
CMAR Chiang Mai Arr 39.11 267 P **P** **23 21 27.7 +0.8**
comp=Z,7.8nm,0.6s,baz=59,slow=8.3,SNR=59
CMAR PcP **PcP** **23 23 27.2 +0.5**
comp=Z,2.5nm,0.3s,baz=73,slow=4.3,SNR=5.2
comp=Z,7.8nm,0.6s
CMAR Chiang Mai Arr 39.11 267 **P** **23 21 26.9 +0.1**
GOMU GeErMu 39.84 295 P **P** **23 21 34.0 +1.0**
GOMU PcP **PcP** **23 23 29.8 +0.6**
GOMU S **S** **23 27 07.3 +1.0**
GOMU pmax pmax
comp=Z,31nm,1.0s
COEN Coen 40.43 176 P **P** **23 21 37.4 0.0**
KNGR Kungurtug, Tuv 40.47 318 *i* P **P** **23 21 35.9 -1.7**
KNGR pmax pmax
comp=Z,19nm,1.8s
LSA Lhasa 43.37 286 **P** **23 22 01.4 0.0**
LSA Lhasa 43.37 286 P **P** **23 22 01.3 0.0**
LSA Lhasa 43.37 286 P **P** **23 22 01.4 0.0**
LSA pmax pmax
comp=Z,10.0nm,0.8s
SHL Shillong 43.48 280 P **P** **23 22 01.9 0.0**
SHL Shillong 43.48 280 P **P** **23 22 01.9 0.0**
SHL pmax pmax
comp=Z,44nm,0.8s
KULM Kulim 43.53 248 P **P** **23 22 02.1 -0.2**
IPM Ipoh 43.67 247 P **P** **23 22 03.2 -0.2**
IPM IAmb IAmb 23 22 04.6
comp=Z,20nm,1.2s
BILL Bilibino 44.25 14 **P** **23 22 07.9 +0.8**
BILL IAmb IAmb 23 22 09.5
comp=Z,32nm,1.0s
BILL Bilibino 44.25 14 *ce* P **P** **23 22 09.0 +1.9**
BILL pmax pmax
comp=Z,36nm,1.7s
TIXI Tiksi 45.53 355 **P** **23 22 16.5 -0.4**
TIXI Tiksi 45.53 355 *ce* P **P** **23 22 17.5 +0.6**
TIXI pmax pmax
comp=Z,11nm,1.3s
WMQ Urumqi 45.64 306 *e* P **P** **23 22 19.8 +1.4**
WMQ pmax pmax
comp=Z,39nm,0.9s
WMQ pmax pmax
comp=Z,120nm,4.3s
PSI Prapat 46.35 246 P **P** **23 22 25.2 +0.9**
PSI Prapat 46.35 246 P **P** **23 22 24.2 -0.1**
PSI pmax pmax
comp=Z,13nm,0.7s
RPSI Rantau Prapat 46.41 246 P **P** **23 22 24.2 -0.4**
RPSI IAmb IAmb 23 22 25.5
comp=Z,13nm,0.7s
DGZ Jazzator, Alta 46.52 314 *i* P **P** **23 22 24.6 -0.5**
DGZ pmax pmax
comp=Z,26nm,0.8s
WRAB Tennant Creek 46.67 188 P **P** **23 22 25.7 -0.7**
WRA Warramunga Arr 46.68 188 P **P** **23 22 25.8 -0.8**
comp=Z,5.1nm,0.3s,baz=13,slow=8.8,SNR=95
comp=Z,5.1nm,0.3s
WRA Warramunga Arr 46.68 188 P **P** **23 22 24.9 -1.6**
WRA Warramunga Arr 46.68 188 *i* P **P** **23 22 25.7 -0.8**
WRA pmax pmax
comp=Z,4.0nm,0.3s
FITZ Fitzroy Crossi 46.75 200 P **P** **23 22 26.8 -0.3**
CTAO Charters Tower 46.77 173 P **P** **23 22 26.9 -0.3**
CTAO Charters Tower 46.77 173 P **P** **23 22 26.9 -0.3**
CTAO pmax pmax
comp=Z,17nm,1.5s
EVN Everest 47.41 284 P **P** **23 22 33.2 +0.3**
EVN IAmb IAmb 23 22 35.5
comp=Z,21nm,0.7s
AKUT Akutan 47.76 40 P **P** **23 22 34.7 +0.5**
GSI Gunungsitoli 48.30 246 P **P** **23 22 38.7 -0.3**
GSI IAmb IAmb 23 22 39.7
comp=Z,20nm,0.5s
ZAA0 Zalesovo Array 48.87 320 P **P** **23 22 42.2 -0.4**
ZALV Zalesovo Beam 48.87 320 P **P** **23 22 42.2 -0.4**
comp=Z,12nm,0.7s,baz=107,slow=7.5,SNR=33
ZALV PcP **PcP** **23 23 58.7 -0.9**
comp=Z,4.4nm,0.7s,baz=109,slow=3.9,SNR=8.1
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 48.87 320 **P** **23 22 42.1 -0.6**
SANVU Saraoutou 49.22 145 P **P** **23 22 45.1 -0.5**
MK31 Makanchi Array 49.62 310 *ce* P **P** **23 22 49.8 +1.4**
MKAR Makanchi Array 49.62 310 P **P** **23 22 48.5 0.0**
comp=Z,5.9nm,0.7s,baz=90,slow=9.2,SNR=35
MKAR PcP **PcP** **23 24 02.6 0.0**
comp=Z,2.8nm,0.7s,baz=96,slow=4.8,SNR=7.2
comp=Z,5.9nm,0.7s
MKAR Makanchi Array 49.62 310 **P** **23 22 48.3 -0.2**
MAKZ Makanchi 49.84 310 P **P** **23 22 50.0 -0.1**
MAKZ Makanchi 49.84 310 P **P** **23 22 50.0 -0.1**
MAKZ pmax pmax
comp=Z,21nm,1.3s
ASAR Alice Springs 50.41 188 P **P** **23 22 53.6 -0.9**
comp=Z,1.2nm,0.5s,baz=0.1,slow=5.4,SNR=11
ASAR PcP **PcP** **23 24 05.6 -0.2**
comp=Z,2.0nm,0.8s,baz=13,slow=4.6,SNR=10
comp=Z,1.2nm,0.5s
ASAR Alice Springs 50.41 188 P **P** **23 22 53.3 -1.2**
K13K Kusilvak Mount 50.45 30 P **P** **23 22 55.5 +1.3**
baz=252
L14K Kuka Creek 51.18 31 P **P** **23 23 00.4 +0.8**
baz=254
N14K Kuskokwak Cree 51.29 33 P **P** **23 23 01.6 +1.2**
baz=256
CHNA Chernabura Isl 51.43 40 P **P** **23 23 02.5 +1.0**
baz=262
G15K Niukluk 51.73 26 P **P** **23 23 04.3 +0.7**
baz=250
M15K Kasigluk River 51.95 32 P **P** **23 23 06.5 +1.3**
baz=256
K15K Wolf Creek Mou 51.97 30 P **P** **23 23 07.0 +1.7**
baz=254
O15K Ungalikthiuk R 52.05 34 P **P** **23 23 06.7 +0.7**
baz=258
N15K Kwethluk River 52.12 33 P **P** **23 23 07.7 +1.1**
baz=257
KURK Kurchatov 52.25 315 **P** **23 23 07.0 -0.5**
KURK Kurchatov 52.25 315 P **P** **23 23 06.0 -1.6**
KURK Kurchatov 52.25 315 *ce* P **P** **23 23 07.9 +0.3**
KURK pmax pmax
comp=Z,28nm,1.0s
KURBB Kurchatov Arra 52.30 315 P **P** **23 23 07.7 -0.3**
comp=Z,16nm,0.7s,baz=93,slow=7.9,SNR=128
comp=Z,16nm,0.7s
H16K Elim 52.34 27 P **P** **23 23 08.7 +0.7**
baz=252
PRZ Przheval'sk 52.43 304 P **P** **23 23 10.4 +1.1**
PRZ Przheval'sk 52.43 304 P **P** **23 23 10.4 +1.1**
PRZ pmax pmax
comp=Z,44nm,0.8s
NRIK Noril'sk 52.54 339 P **P** **23 23 09.3 -0.1**
comp=Z,20nm,0.7s,baz=105,slow=8.9,SNR=57
comp=Z,20nm,0.7s
NRIK Noril'sk 52.54 339 P **P** **23 23 09.0 -0.4**
NRIK IAmb IAmb 23 23 10.5
comp=Z,26nm,0.8s
NRIK Noril'sk 52.54 339 *ce* P **P** **23 23 08.8 -0.6**
NRIK pmax pmax
comp=Z,31nm,0.8s
J16K Anvik River 52.64 29 P **P** **23 23 11.4 +1.2**
baz=255
I17K Unalakleet 52.77 28 P **P** **23 23 11.3 +0.2**
baz=254
N16K Nishlik Lake 52.83 33 P **P** **23 23 12.3 +0.7**
baz=258
M16K Timber Creek 52.85 32 P **P** **23 23 12.7 +0.9**
baz=258
TARG Taragay, Kyrgy 52.93 304 P **P** **23 23 13.3 +0.2**
TARG Taragay, Kyrgy 52.93 304 P **P** **23 23 13.3 +0.2**
TARG pmax pmax
comp=Z,16nm,0.9s
R16K Pilot Point 52.94 37 P **P** **23 23 13.5 +1.1**
baz=262
P16K Nushagak River 52.95 35 P **P** **23 23 13.8 +1.4**
baz=260
O16K Kokwok River B 52.99 34 P **P** **23 23 13.8 +1.0**
baz=260
D17K Noatak River 53.05 23 P **P** **23 23 14.7 +1.6**
baz=249
RDOG Red Dog Mine 53.24 23 P **P** **23 23 16.3 +1.8**
baz=249
G17K Kiwalik Mounta 53.24 26 P **P** **23 23 15.7 +1.2**
baz=253
E17K Hotham Inlet 53.29 24 P **P** **23 23 16.1 +1.3**
baz=251
J17K VABM Dome 53.34 29 P **P** **23 23 17.2 +2.0**
baz=256
KDJ Kajisay 53.36 304 P **P** **23 23 15.9 -0.1**
KDJ Kajisay 53.36 304 P **P** **23 23 15.9 -0.1**
KDJ pmax pmax
comp=Z,9.0nm,0.8s
H17K Granite Mounta 53.38 27 P **P** **23 23 16.9 +1.4**
baz=254
L17K Donlin 53.40 31 P **P** **23 23 17.3 +1.6**
baz=258
K17K Iditarod 53.52 30 P **P** **23 23 17.7 +1.2**
K17K IAmb IAmb 23 23 19.5
comp=Z,18nm,0.8s
K17K Iditarod 53.52 30 P **P** **23 23 18.6 +2.1**
baz=257
O17K Koliganek Bris 53.52 34 P **P** **23 23 18.0 +1.4**
baz=260
Q16K King Salmon 53.58 35 P **P** **23 23 18.2 +1.3**
baz=262
R17L Mt. Peulik Vol 53.59 37 P **P** **23 23 19.3 +2.2**
baz=263
N17K Nushagak Hills 53.61 33 P **P** **23 23 18.4 +1.2**
baz=260
M17K Holitna River 53.65 32 P **P** **23 23 19.3 +1.8**
baz=259
P17K Kvichak River 53.77 35 P **P** **23 23 20.1 +1.8**
baz=262
CHIR Chirikof Islan 53.80 39 P **P** **23 23 19.9 +1.3**
baz=265
E18K Tukpahlearik C 53.85 24 P **P** **23 23 20.4 +1.6**
baz=252
Q17K Contact Creek 53.92 36 P **P** **23 23 21.0 +1.4**
baz=263
F18K Selawik 53.96 25 P **P** **23 23 21.5 +2.0**
baz=253
C18K Utukok River 54.04 23 P **P** **23 23 21.6 +1.4**
baz=250
H18K Honhosa River 54.07 27 P **P** **23 23 21.1 +0.7**
H18K Honhosa River 54.07 27 P **P** **23 23 21.9 +1.4**
baz=256
G18K Tagagawik 54.15 26 P **P** **23 23 22.5 +1.5**
baz=255
L18K Granite Mounta 54.15 31 P **P** **23 23 22.2 +1.2**
L18K IAmb IAmb 23 23 24.0
comp=Z,26nm,1.4s
L18K Granite Mounta 54.15 31 P **P** **23 23 22.5 +1.5**
baz=259
BOOM Boomskoye usch 54.25 305 **P** **23 23 22.7 +0.4**
BOOM IAmb IAmb 23 23 24.2
comp=Z,21nm,0.6s
BOOM Boomskoye usch 54.25 305 P **P** **23 23 22.7 +0.4**
BOOM pmax pmax
comp=Z,21nm,0.6s
J18K Innoko River 54.39 29 P **P** **23 23 24.3 +1.6**
baz=258
M18K Stony River 54.43 32 P **P** **23 23 24.7 +1.7**
baz=260
TKM2 Tokmak 2 54.46 305 P **P** **23 23 24.6 +0.8**
SNR=20
O18K Koktuh Hills 54.48 34 P **P** **23 23 25.3 +1.9**
baz=262
KSH Kashi 54.54 301 P **P** **23 23 28.4 +4.1**
KSH pmax pmax
comp=Z,34nm,0.6s
R18K Karluk 54.61 37 P **P** **23 23 25.8 +1.6**
baz=264
SII Sitkinak Islan 54.66 38 P **P** **23 23 25.6 +0.8**
baz=266
F19K Shaleruckik Mo 54.74 25 P **P** **23 23 26.3 +1.2**
baz=255
C19K Lookout Ridge 54.74 22 P **P** **23 23 26.4 +1.2**
baz=252
H19K Roundabout Mou 54.94 27 P **P** **23 23 28.1 +1.6**
baz=257
KBK Karagaybulak 54.96 305 P **P** **23 23 28.1 +0.7**
SNR=20
N19K Bonanza Creek 54.97 33 P **P** **23 23 27.8 +0.9**
baz=262
J19K Poorman 54.97 29 P **P** **23 23 27.2 +0.4**
J19K Poorman 54.97 29 P **P** **23 23 28.3 +1.5**
baz=259
L19K White Mountain 54.99 31 P **P** **23 23 27.9 +0.9**
baz=261
D19K Kuna River 55.07 23 P **P** **23 23 28.3 +0.8**
baz=253
E19K Redstone River 55.11 25 P **P** **23 23 29.0 +1.3**
baz=255
M19K Big River Lodg 55.17 32 P **P** **23 23 29.4 +1.2**
baz=262
OHAK Old Harbor 55.21 37 P **P** **23 23 29.9 +1.4**
baz=266
USP Ospenovka 55.23 306 P **P** **23 23 29.4 +0.3**
SNR=9.5
AAK Ala-Archa 55.30 305 P **P** **23 23 29.8 +0.1**
AAK Ala-Archa 55.30 305 P **P** **23 23 29.9 +0.2**
SNR=11
AAK Ala-Archa 55.30 305 *ce* P **P** **23 23 30.7 +1.0**
AAK pmax pmax
comp=Z,14nm,1.7s
UCH Uchtor 55.33 304 P **P** **23 23 31.4 +1.1**
SNR=28
P19K Oil Pt 55.45 34 P **P** **23 23 31.3 +1.0**
baz=264
L20K Farewell, AK 55.49 31 P **P** **23 23 32.0 +1.5**
baz=262
F20K Avaraart Lake 55.57 25 P **P** **23 23 32.4 +1.4**
baz=257
H20K Anotleneega Mo 55.57 27 P **P** **23 23 32.1 +1.0**
baz=259
KDAK Kodiak Island 55.62 37 P **P** **23 23 31.6 +0.1**
KDAK IAmb IAmb 23 23 42.5
comp=Z,63nm,1.4s
KDAK Kodiak Island 55.62 37 P **P** **23 23 31.6 +0.1**
KDAK pmax pmax
comp=Z,63nm,1.4s
J20K Nowinta River 55.64 29 P **P** **23 23 33.0 +1.5**
baz=260
D20K Etivluk River 55.66 23 P **P** **23 23 32.8 +1.2**
baz=255
E20K Nigu River 55.69 24 P **P** **23 23 33.1 +1.2**
baz=256
M20K Styx River 55.76 32 P **P** **23 23 33.7 +1.2**
baz=263
Q20K Shuyak Island 55.79 36 P **P** **23 23 33.8 +1.2**
baz=266
O20K Slope Mountain 55.80 34 P **P** **23 23 33.6 +0.9**
baz=264
EKS2 Erkin-Say 55.82 305 P **P** **23 23 33.8 +0.5**
SNR=8.6
B20K Meade River 55.83 22 P **P** **23 23 34.2 +1.5**
baz=253
N20K Mount Spurr 56.11 33 P **P** **23 23 36.4 +1.4**
baz=264
SPCR Spurr Chakacha 56.11 33 P **P** **23 23 36.2 +1.2**
baz=264
HOM Homer 56.25 34 P **P** **23 23 36.9 +1.0**
baz=266
PPLA Purkeypile 56.32 31 P **P** **23 23 37.4 +0.9**
baz=263
G21K Allakaket 56.32 26 P **P** **23 23 37.5 +1.3**
baz=259
C21K Knifeblade Rid 56.41 23 P **P** **23 23 38.7 +1.9**
baz=256
SKT Skwentna 56.52 32 P **P** **23 23 38.6 +0.9**
baz=264
E21K Killik River 56.54 24 P **P** **23 23 39.0 +1.2**
baz=258
ARSB Arslanbob 56.57 303 **P** **23 23 39.0 +0.4**
ARSB IAmb IAmb 23 23 40.6
comp=Z,45nm,1.3s
ARSB Arslanbob 56.57 303 P **P** **23 23 39.0 +0.4**
ARSB pmax pmax
comp=Z,45nm,1.3s
B21K Ikpikpuk River 56.58 22 P **P** **23 23 39.2 +1.2**
baz=256
CAPN Captain Cook N 56.59 33 P **P** **23 23 38.9 +0.8**
baz=265
BRSE Bradley Lake S 56.72 34 P **P** **23 23 39.8 +0.7**
baz=266
A22K Sinclair Lake 56.81 21 P **P** **23 23 40.6 +1.1**
baz=255
SUA Susitna One 56.84 32 P **P** **23 23 41.5 +1.5**
baz=265
F22K John River 57.02 25 P **P** **23 23 43.0 +1.9**
baz=260
H22K Ishtalitna Cre 57.07 27 P **P** **23 23 43.6 +2.1**
baz=262
D22K Ayikyak River 57.09 23 P **P** **23 23 43.0 +1.5**
baz=258,SNR=5.6
CUT Chulitna 57.15 31 P **P** **23 23 43.5 +1.5**
baz=265
B22K Teshekpuk Lake 57.15 22 P **P** **23 23 42.9 +1.0**
baz=257
M22K Willow 57.16 32 P **P** **23 23 43.7 +1.6**
baz=266
G22K Bettles 57.18 26 P **P** **23 23 43.5 +1.4**
baz=261
TRF Thorofare Moun 57.24 30 P **P** **23 23 44.3 +1.4**
baz=264
E22K Anaktuvuk Pass 57.26 24 P **P** **23 23 44.3 +1.5**
baz=260,SNR=5.9
RC01 Rabbit Creek A 57.30 33 P **P** **23 23 43.4 +0.4**
RC01 IAmb IAmb 23 24 01.1
comp=Z,46nm,1.5s
RC01 Rabbit Creek A 57.30 33 P **P** **23 23 44.4 +1.3**
baz=266
BVAR Borovoye Array 57.38 318 P **P** **23 23 43.7 -0.1**
comp=Z,22nm,0.6s,baz=92,slow=8.0,SNR=143
BVAR PcP **PcP** **23 24 32.2 -0.1**
comp=Z,3.1nm,0.6s,baz=113,slow=3.3,SNR=4.7
comp=Z,22nm,0.6s
BORK Borovoye 57.42 318 *ce* P **P** **23 23 44.2 +0.2**
BORK pmax pmax
comp=Z,35nm,1.0s
NIL Nilore 57.69 294 P **P** **23 23 47.1 +0.8**
NIL IAmb IAmb 23 23 48.9
comp=Z,22nm,0.8s
NIL Nilore 57.69 294 P **P** **23 23 47.1 +0.8**
NIL pmax pmax
comp=Z,22nm,0.8s
G23K Bananza Creek 57.73 26 P **P** **23 23 47.6 +1.6**
baz=262
COLD Coldfoot 57.73 26 P **P** **23 23 47.5 +1.6**
baz=262
DRK Karamyk 57.74 301 P **P** **23 23 47.2 +0.3**
DRK IAmb IAmb 23 23 48.7
comp=Z,15nm,0.7s
DRK Karamyk 57.74 301 P **P** **23 23 47.2 +0.3**
DRK pmax pmax
comp=Z,15nm,0.7s
H23K Yukon River 57.81 27 P **P** **23 23 48.4 +1.9**
baz=264
I23K Minto, Yukon-K 57.81 28 P **P** **23 23 48.4 +1.9**
baz=264
D23K Nanushuk River 57.82 23 P **P** **23 23 48.3 +1.8**
baz=260
MCK McKinley 57.87 30 P **P** **23 23 47.2 +0.2**
MCK IAmb IAmb 23 23 48.9
comp=Z,22nm,0.8s
MCK McKinley 57.87 30 P **P** **23 23 47.2 +0.2**
MCK pmax pmax
comp=Z,22nm,0.8s
MCK McKinley 57.87 30 P **P** **23 23 47.7 +0.7**
baz=265
NEA2 Nenana 57.88 29 P **P** **23 23 48.5 +1.4**
baz=265
KNK Knik Glacier 57.94 32 P **P** **23 23 48.5 +1.0**
baz=267
PWL Port Wells 57.97 33 P **P** **23 23 49.6 +1.9**
baz=268
WAT1 Susitna Watana 57.97 31 P **P** **23 23 48.5 +0.8**
baz=266
C23K Itkillik River 57.99 22 P **P** **23 23 48.7 +1.1**
baz=260
SML Sawmill 58.02 32 P **P** **23 23 48.2 +0.1**
SML IAmb IAmb 23 23 49.1
comp=Z,28nm,1.2s
SML Sawmill 58.02 32 P **P** **23 23 49.3 +1.2**
baz=267
E23K Chandalar 58.06 25 P **P** **23 23 49.8 +1.5**
baz=262
KK31 Karatay Array 58.15 306 P **P** **23 23 49.4 +0.1**
KK31 Karatay Array 58.15 306 P **P** **23 23 49.4 +0.1**
KK31 pmax pmax
comp=Z,30nm,0.8s
KKAR Karatay Array 58.15 306 **P** **23 23 49.4 +0.1**
KKAR Karatay Array 58.15 306 P **P** **23 23 49.4 +0.1**

TOLK Toolik Lake Re 58.16 24 P P 23 23 50.4 +1.4
baz=262,SNR=6.3
STKA Stephens Creek 58.19 179 P P 23 23 49.1 -0.4
comp=Z,0.7nm,0.4s,baz=334,slow=11,SNR=3.0
comp=Z,0.7nm,0.4s
FORT Forrest 58.32 193 P P 23 23 49.6 -0.8
WAT6 Susitna Watana 58.33 31 P P 23 23 51.1 +0.7
baz=267
CCB Clear Creek Bu 58.43 29 P P 23 23 51.3 +0.5
E24K Your Creek 58.49 25 P P 23 23 52.5 +1.3
baz=263
SCM Sheep Creek Mo 58.49 32 P P 23 23 52.2 +0.8
baz=268
H24K Noodor Dome 58.49 27 P P 23 23 52.4 +1.1
baz=265
D24K Happy Valley 58.51 23 P P 23 23 52.5 +1.3
baz=262
DHY Denali Highway 58.52 31 P P 23 23 52.9 +1.3
baz=267
POKR Poker Plat Res 58.62 28 P P 23 23 53.6 +1.5
baz=266
C24K Franklin Bluff 58.63 23 P P 23 23 54.0 +2.0
baz=262
F24K Squaw Lake 58.65 25 P P 23 23 53.9 +1.6
baz=264
G24K Hadweenzic Riv 58.73 26 P P 23 23 54.3 +1.5
baz=265
HDA Harding Lake 58.78 29 P P 23 23 54.4 +1.2
baz=267
ILAR Eielson Array 58.83 29 P P 23 23 53.2 -0.3
comp=Z,5.2nm,0.8s,baz=257,slow=5.7,SNR=33
comp=Z,5.2nm,0.8s
ILAR Eielson Array 58.83 29 P P 23 23 52.8 -0.7
GAR Garm 58.96 301 P P 23 23 55.0 +0.1
M24K Tolsona, Glenn 59.04 32 P P 23 23 56.3 +1.3
baz=269
K24K Donnelly Dome 59.27 30 P P 23 23 57.9 +1.3
baz=268
H25L Birch Creek 59.36 27 P P 23 23 58.6 +1.6
baz=267
PAX Paxson 59.39 31 P P 23 23 58.8 +1.4
baz=269
D25K Kavik River 59.39 23 P P 23 23 58.8 +1.5
baz=264
J25K Salcha River, 59.48 29 P P 23 23 59.0 +1.1
baz=268
F25K Christian Rive 59.52 25 P P 23 23 59.5 +1.4
baz=266
HARP HAARP 59.52 31 P P 23 23 59.6 +1.3
baz=270
E25K Arctic Village 59.58 25 P P 23 23 60.0 +1.4
baz=266,SNR=7.2
RIDG Independent Ri 59.68 30 P P 23 24 00.7 +1.4
baz=269
N25K Chitina, Valde 59.79 32 P P 23 24 01.1 +1.0
baz=271
BMRM Bremner River 59.79 33 P P 23 24 01.4 +1.3
baz=271
PALK Pallekele 59.83 263 P P 23 24 00.9 -0.2
PALK IAmb IAmb 23 24 02.3
comp=Z,14nm,0.8s
PALK Pallekele 59.83 263 P P 23 24 00.9 -0.2
PALK pmax pmax
comp=Z,14nm,0.9s
CHGR Chuyangaron 59.91 301 P P 23 24 01.6 +0.2
CHGR Chuyangaron 59.91 301 P P 23 24 01.6 +0.2
CHGR pmax pmax
comp=Z,71nm,0.7s
BMAR Burnt Mountain 59.91 26 P P 23 24 02.3 +1.5
C26K Camden Bay 59.96 23 P P 23 24 02.3 +1.4
baz=265
SCRK Sand Creek 60.07 30 P P 23 24 03.1 +1.1
baz=270
F26K Sheenjek River 60.09 25 P P 23 24 03.4 +1.4
baz=267
G26K Porcupine Rive 60.20 26 P P 23 24 03.9 +1.2
baz=268
J26L Joseph Creek 60.25 29 P P 23 24 04.2 +1.0
baz=270,SNR=13
C27K Jago River 60.35 23 P P 23 24 05.0 +1.3
baz=267
M26K Nabesna, AK 60.53 31 P P 23 24 06.1 +1.0
baz=272
CRQE Cirque 60.54 33 P P 23 24 06.4 +1.2
baz=272
MCARA McCarthy VSAT 60.55 33 P P 23 24 06.4 +1.3
baz=272
KBL Kabul 60.89 296 P P 23 24 08.3 +0.2
KBL IAmb IAmb 23 24 09.9
comp=Z,28nm,0.9s
KBL Kabul 60.89 296 P P 23 24 09.0 +0.8
SNR=12
KBL S S 23 31 51.7 -1.0
KBL Kabul 60.89 296 P P 23 24 08.3 +0.2
KBL pmax pmax
comp=Z,28nm,1.0s
K27K Chicken 60.91 29 P P 23 24 08.9 +1.5
baz=271
G27K Doyon Strip 61.04 26 P P 23 24 09.6 +1.2
baz=270
L27K Beaver Creek, 61.05 31 P P 23 24 09.7 +1.3
baz=272
M27K Edge Creek, AK 61.05 31 P P 23 24 09.8 +1.1
baz=272
BCAR Beaver Creek A 61.07 31 P P 23 24 08.9 +0.3
E27K Coleen River 61.07 25 P P 23 24 09.6 +1.1
baz=270
I27K Kandik River 61.07 28 P P 23 24 09.6 +1.1
baz=271
H27K Steamboat Moun 61.10 27 P P 23 24 10.4 +1.7
baz=271
MESA MESA 61.13 34 P P 23 24 10.6 +1.4
baz=274
D27M Malcolm River 61.31 23 P P 23 24 11.5 +1.4
baz=270
CTG Chitna Glacier 61.38 33 P P 23 24 11.7 +0.9
baz=274
BVCY Beaver Creek 61.52 31 P P 23 24 12.7 +1.2
baz=273
F28M Old Crow 61.73 25 P P 23 24 14.5 +1.7
baz=271,SNR=7.0
YUK3 Moose Creek 61.75 32 P P 23 24 14.7 +1.4
baz=274
I28M Miner Creek 61.78 28 P P 23 24 14.4 +1.1
baz=273
E28M Babbage River 61.83 24 P P 23 24 15.5 +2.1
baz=271,SNR=12
O28M Mount Upton 61.96 33 P P 23 24 16.1 +1.3
baz=275
PINM Pinnacle 61.99 34 P P 23 24 15.3 +0.6
baz=275
DAWY Dawson 62.09 29 P P 23 24 15.9 +0.7
DAWY Dawson 62.09 29 P P 23 24 16.5 +1.3
baz=274
D28M Stokes Point 62.10 23 P P 23 24 16.7 +1.6
baz=272
YUK8 Steele Glacier 62.12 33 P P 23 24 16.8 +1.0
baz=275
H29M Whitestone 62.38 27 P P 23 24 18.6 +1.5
baz=274
E29M Blow River 62.44 24 P P 23 24 18.9 +1.5
baz=273
PNL Peninsula 62.46 34 P P 23 24 19.0 +1.2
baz=276
G29M Pine Creek 62.48 26 P P 23 24 18.7 +1.0
baz=274,SNR=9.4
M29M Somme Creek 62.63 31 P P 23 24 20.0 +1.0
baz=275,SNR=7.3
YUK4 Talbot Arm 62.66 32 P P 23 24 21.0 +1.7
baz=276
SVE Sverdlovsk 62.68 322 eP P 23 24 19.5 +0.3
SVE pmax pmax
comp=Z,20nm,1.1s
L29M L29M 62.72 30 P P 23 24 20.8 +1.4
baz=275,SNR=8.0
O29M Mount Kennedy 62.80 34 P P 23 24 21.5 +1.4
baz=276
K29M Barlow Dome 62.93 30 IAmb IAmb 23 24 23.2
comp=Z,11nm,0.9s
K29M Barlow Dome 62.93 30 P P 23 24 22.0 +1.2
baz=276
EPYK Eagle Plains 63.03 27 P P 23 24 22.0 +0.6
EPYK IAmb IAmb 23 24 24.0
comp=Z,20nm,0.9s
EPYK Eagle Plains 63.03 27 P P 23 24 22.7 +1.3
baz=275,SNR=14
G30M tAoh Zraii Nji 63.18 26 P P 23 24 23.4 +1.1
baz=275

HYT Haines Junctio 63.27 33 P P 23 24 24.6 +1.5
baz=277
I30M Mount Dempster 63.28 28 P P 23 24 24.5 +1.4
baz=276,SNR=5.1
F30M Barrier River 63.29 25 P P 23 24 24.8 +1.8
baz=275
P29M Windy Craggy 63.30 34 P P 23 24 24.8 +1.6
baz=278
J30M Hart River 63.37 29 P P 23 24 25.2 +1.5
baz=276
N30M Aishikik Lake 63.39 32 P P 23 24 25.3 +1.5
baz=277
M30M Minto, Yukon 63.39 31 P P 23 24 25.1 +1.3
baz=277
P30M Million Dollar 63.62 34 P P 23 24 26.6 +1.3
baz=278
MAYO Mayo, Yukon 63.67 30 P P 23 24 27.0 +1.5
baz=277
G31M Satah River 63.95 26 P P 23 24 27.8 +0.6
baz=277,SNR=6.7
O30N Mendenhall 63.96 33 P P 23 24 28.8 +1.3
baz=278
ARTI Arti 63.98 322 P P 23 24 26.8 -0.8
ARTI Arti 63.98 322 c iP P 23 24 28.0 +0.4
ARTI 23 24 53.3
ARTI *PP pwP 23 25 59.3 -0.2
ARTI 23 26 56.7
ARTI S S 23 32 30.0 +0.5
ARTI pmax pmax
comp=Z,20nm,0.8s
N31M Braeburn, Yuko 64.01 32 P P 23 24 28.8 +1.1
baz=278
PLBC Pleasant Camp 64.02 34 P P 23 24 29.4 +1.6
baz=279
H31M Peel River 64.06 27 P P 23 24 29.1 +1.2
baz=277,SNR=5.5
INK Inuvik 64.06 24 P 23 24 27.7 -0.2
INK Inuvik 64.06 24 P P 23 24 27.7 -0.2
INK pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 64.06 24 P P 23 24 29.0 +1.1
baz=277
F31M Tsiigehtchic 64.09 25 P P 23 24 29.1 +1.0
baz=277
S31K Pelican 64.32 36 P P 23 24 30.9 +1.2
baz=280
AB31 Akbulak array 64.35 314 P 23 24 29.5 -0.6
M31M Drury Creek, Y 64.55 31 P P 23 24 32.8 +1.6
baz=279,SNR=5.2
WHY Whitehorse 64.56 33 P P 23 24 32.9 +1.4
baz=279
SIT Sitka 64.96 37 P P 23 24 34.6 +0.8
baz=281
R32K Eaglecrest 65.16 35 P P 23 24 36.2 +1.1
baz=281
S32K Killisnoo 65.29 36 P P 23 24 37.2 +1.4
baz=281
P32M Atlin 65.33 34 P P 23 24 37.8 +1.6
baz=281
N32M Quiet Lake 65.34 32 P P 23 24 37.5 +1.2
baz=281
P33M Teslin, Yukon 65.65 33 P P 23 24 39.7 +1.4
baz=281
Q32M Nakina River 66.18 34 P P 23 24 42.8 +1.1
baz=282
A36M Sachs Harbour 66.22 20 P 23 24 42.3 +0.8
A36M Sachs Harbour 66.22 20 P P 23 24 43.1 +1.6
baz=283
HRA Herat 66.35 298 P P 23 24 43.0 -0.4
HRA IAmb IAmb 23 24 45.0
comp=Z,12nm,0.8s
R33M Jennings River 66.74 34 P P 23 24 46.3 +1.1
baz=283
S34M Telegraph Cree 67.00 35 P P 23 24 47.8 +1.2
baz=284
C36M Paulatuk 67.24 23 P P 23 24 49.0 +1.1
baz=285
V35K Ketchikan 67.36 38 P P 23 24 49.7 +0.8
baz=284
KIRV Kirov 68.24 326 ceP P 23 24 55.0 +0.8
LIRD Liard River Hi 69.14 33 P P 23 25 01.3 +1.6
baz=287
TOAD Toad River Com 69.73 34 P P 23 25 04.5 +1.1
baz=288
KOTAN Kotaneelee Air 69.91 32 P P 23 25 05.2 +0.8
baz=288
SPB2 Spitsbergen Ar 70.57 350 P P 23 25 08.2 +0.2
SPITS Spitsbergen Ar 70.57 350 P P 23 25 08.3 +0.2
comp=Z,3.7nm,0.5s,baz=92,slow=7.6,SNR=13
comp=Z,3.7nm,0.5s
KBS Kingsbay 70.76 351 P P 23 25 09.8 +0.7
KBS Kingsbay 70.76 351 P P 23 25 09.8 +0.7
KBS pmax pmax
comp=Z,36nm,1.3s
KBS Kingsbay 70.76 351 i P P 23 25 10.1 +0.9
BELG Belogornoye 71.06 320 i P P 23 25 09.7 -1.6
BELG pmax pmax
comp=Z,8.0nm,0.8s
NOR Nord 71.36 357 i P P 23 25 11.5 -1.2
NOR IAmb IAmb 23 25 13.6
comp=Z,3.3nm,0.8s
KLMR Klimovskoe 72.23 330 eP P 23 25 17.1 -1.0
KLMR pmax pmax
comp=Z,29nm,1.5s
JLN Jalan Bani Buh 72.82 287 P P 23 25 21.7 -0.5
RES Resolute Bay 72.86 13 P P 23 25 21.7 +0.2
RES IAmb IAmb 23 25 23.3
comp=Z,11nm,0.8s
RES Resolute Bay 72.86 13 P P 23 25 21.7 +0.2
RES pmax pmax
comp=Z,11nm,0.8s
KEV Kevo 72.92 340 P P 23 25 21.8 -0.2
KEV Kevo 72.92 340 P P 23 25 21.8 -0.2
KEV pmax pmax
comp=Z,33nm,1.0s
WSAR Wadi Sarin 73.07 288 P P 23 25 22.7 -1.1
WSAR S SKiKP 23 34 12.8 +1.8
YKA Yellowknife Ar 73.25 28 P P 23 25 24.5 +0.6
comp=Z,4.4nm,0.8s,baz=294,slow=6.4,SNR=6.4
comp=Z,4.4nm,0.8s
YKA Yellowknife Ar 73.25 28 P P 23 25 23.8 -0.2
ARCES ARCESS Array B 73.48 341 P P 23 25 25.6 +0.3
comp=Z,12nm,0.7s,baz=68,slow=8.3,SNR=36
comp=Z,12nm,0.7s
SMDO Samad 73.64 288 P P 23 25 26.6 -0.5
BANOM Banah 74.03 291 P P 23 25 28.4 -0.9
HOQ Hoqain 74.07 289 P P 23 25 29.7 +0.3
SHME Shamm 74.12 291 P P 23 25 28.8 -0.8
MDH Madha 74.27 291 P P 23 25 29.0 -1.5
MASF Masafi 74.36 291 P P 23 25 30.4 -0.7
UOSS Minazif 74.48 290 P P 23 25 31.2 -0.6
UOSS IAmb IAmb 23 25 33.1
comp=Z,8.9nm,0.9s
UOSS Minazif 74.48 290 P P 23 25 31.5 -0.2
MHTO MHTO 74.50 286 P P 23 25 31.3 -0.6
SNR=5.5
MHTO S S 23 34 29.4 -3.0
SOHO SOHO 74.51 289 P P 23 25 31.8 -0.1
HATD Hatta, Dubai 74.59 290 P P 23 25 32.1 -0.2
SNR=5.9
ASHO Ashiyiah 74.70 290 P P 23 25 32.3 -0.8
ARQ Araqi 74.83 289 P P 23 25 33.7 -0.1
SNR=9.1
JOF Joensuu 74.83 333 eP P 23 25 32.6 -0.4
AKT Akhty 74.84 309 eP P 23 25 33.3 -0.3
AKT pmax pmax
comp=Z,23nm,0.7s
VRH Novokhopyorsk 74.90 320 eP P 23 25 32.1 -1.5
VRH pmax pmax
comp=Z,10.0nm,0.8s
ALNE Al Ain 75.20 290 P P 23 25 36.2 +0.3
MOS Moscow 75.24 325 eP P 23 25 34.3 -1.1
MOS pmax pmax
comp=Z,31nm,1.1s
TULEG Thule 75.49 7 P P 23 25 36.9 +0.5
TULEG Thule 75.49 7 i P P 23 25 37.1 +0.6
TULEG IAmb IAmb 23 25 40.0
comp=Z,76nm,1.5s
LPSR Galich'ya Gora 75.90 322 eP P 23 25 37.6 -1.6
LPSR pmax pmax
comp=Z,10.0nm,1.0s
NEEM North Greenlan 75.92 3 i P P 23 25 39.7 +0.5
NEEM IAmb IAmb 23 25 40.6
comp=Z,25nm,0.7s
DAG Danmarks Havn 76.04 355 i P P 23 25 39.9 +0.3
DAG IAmb IAmb 23 25 40.6

comp=Z,5.3nm,0.7s
OBN Obninsk 76.06 325 ⇑ iP P 23 25 40.0 0.0
OBN eS S 23 34 48.9 +0.9
OBN pmax pmax
comp=Z,17nm,0.7s
OBN Obninsk 76.06 325 P P 23 25 40.2 +0.2
comp=Z,24nm,1.3s
VORR Voronezh 76.14 321 eP P 23 25 39.6 -0.9
VORR pmax pmax
comp=Z,16nm,0.8s
VSR Storozhevoye 76.36 321 eP P 23 25 39.7 -2.1
VSR pmax pmax
comp=Z,20nm,1.0s
VORD Divnogorie 76.39 320 eP P 23 25 40.1 -1.8
VORD pmax pmax
comp=Z,20nm,0.8s
I04A Tendick Farm, 76.84 48 P P 23 25 45.0 +0.3
I04A IAmb IAmb 23 25 46.8
comp=Z,9.4nm,1.0s
MXC Moxie City 77.05 44 P P 23 25 46.7 +1.0
MXC IAmb IAmb 23 25 48.1
comp=Z,13nm,0.9s
KBZ Khabaz 77.23 313 P P 23 25 47.1 +0.5
comp=Z,14nm,0.7s,baz=106,slow=5.0,SNR=38
comp=Z,14nm,0.7s
KBZ Khabaz 77.23 313 ceP P 23 25 47.6 +0.9
KBZ pmax pmax
comp=Z,19nm,0.9s
KIV Kislovodsk 77.27 313 P P 23 25 47.5 +0.4
KIV IAmb IAmb 23 25 49.6
comp=Z,9.4nm,0.7s
KIV Kislovodsk 77.27 313 eP P 23 25 46.3 -0.8
KIV pmax pmax
comp=Z,8.0nm,1.0s
SHA1 Shidzhatmaz 77.38 313 i P P 23 25 46.6 -1.3
GNI Garni 77.45 309 P 23 25 49.1 +0.9
GNI IAmb IAmb 23 25 51.0
comp=Z,20nm,1.4s
GNI Garni 77.45 309 ceP P 23 25 50.6 +2.4
GNI pmax pmax
comp=Z,12nm,1.3s
GNI Garni 77.45 309 P P 23 25 48.1 -0.1
comp=Z,11nm,1.5s
M02C Callahan 77.53 50 P 23 25 49.3 +0.7
M02C IAmb IAmb 23 25 51.2
comp=Z,9.3nm,1.1s
FIA1 FINESS Array S 77.70 333 P P 23 25 48.2 -0.7
FINES FINESS Array B 77.70 333 P P 23 25 48.2 -0.7
comp=Z,16nm,0.6s,baz=65,slow=5.3,SNR=155
comp=Z,16nm,0.6s
C09A Chrisman Ranch 77.76 43 P 23 25 49.8 +0.2
C09A IAmb IAmb 23 25 51.5
comp=Z,31nm,1.5s
KEF Keuruu 77.77 334 eP P 23 25 48.2 -1.0
M03C McCloud 78.08 50 P 23 25 52.4 +0.8
M03C IAmb IAmb 23 25 53.6
comp=Z,18nm,0.8s
VAF Ylistaro 78.09 336 eP P 23 25 50.6 -0.4
NEW Newport 78.25 42 P 23 25 52.9 +0.6
NEW IAmb IAmb 23 25 54.2
comp=Z,11nm,0.8s
NEW Newport 78.25 42 P P 23 25 52.9 +0.6
NEW pmax pmax
comp=Z,11nm,0.8s
DBG Daneborg 78.52 355 i P P 23 25 53.0 -0.2
DBG IAmb IAmb 23 25 54.3
comp=Z,8.2nm,1.0s
ARBE Arbavere 78.85 332 eP P 23 25 54.7 -0.5
MEF Metsahovi 79.07 333 eP P 23 25 55.7 -0.6
ILON Igloolik, Nuna 79.49 14 P P 23 25 58.2 -0.2
ILON IAmb IAmb 23 25 59.3
comp=Z,14nm,0.8s
RAF Rauma 79.64 334 eP P 23 25 58.4 -0.9
BEKR Beckworth 79.90 51 P 23 26 01.8 +0.4
BEKR IAmb IAmb 23 26 03.1
comp=Z,12nm,0.8s
GURO Guroymak-BITLI 80.03 308 P 23 26 02.2 +0.1
GURO IAmb IAmb 23 26 03.8
comp=Z,8.7nm,1.0s
JTMT Jette 80.18 41 P 23 26 03.3 +0.6
KOPT Kop Dagi 80.45 310 P 23 26 04.3 -0.2
KOPT IAmb IAmb 23 26 10.6
comp=Z,8.0nm,0.8s
PAHR Pah Rah Range 80.64 50 P 23 26 05.8 +0.4
PAHR IAmb IAmb 23 26 07.0
comp=Z,9.0nm,0.9s
AAL Aland 80.86 334 eP P 23 26 04.3 -1.4
SUMG Summit 81.05 360 i P P 23 26 08.1 +1.0
SUMG IAmb IAmb 23 26 09.0
comp=Z,11nm,0.9s
MARD Mardin 81.47 307 P P 23 26 09.7 +0.1
NVAR Mina Array Bea 81.97 51 P P 23 26 13.1 +0.8
comp=Z,6.3nm,0.9s,baz=274,slow=5.5,SNR=25
comp=Z,6.3nm,0.9s
NVAR Mina Array Bea 81.97 51 P P 23 26 12.6 +0.3
PABE Paberze 82.01 329 P P 23 26 11.2 -0.6
PABE Paberze 82.01 329 eP P 23 26 11.5 -0.3
AK03 Malin Array Si 82.09 323 P P 23 26 11.1 -1.2
AKASG Malin Array Be 82.10 323 P P 23 26 11.4 -1.0
comp=Z,16nm,0.8s,baz=48,slow=5.3,SNR=29
comp=Z,16nm,0.8s
AKASG Malin Array Be 82.10 323 P P 23 26 11.6 -0.8
AKASG IAmb IAmb 23 26 13.1
comp=Z,11nm,1.0s
AKASG Malin Array Be 82.10 323 P P 23 26 11.6 -0.8
AKASG pmax pmax
comp=Z,11nm,1.0s
AKBB Malin Array Si 82.10 323 i P P 23 26 11.4 -1.0
AKBB pmax pmax
comp=Z,23nm,0.9s
AKBB Malin Array Si 82.10 323 P P 23 26 11.7 -0.7
AK01 Malin Array Si 82.11 323 P P 23 26 12.1 -0.4
KIEV Kiev 82.11 323 P 23 26 11.6 -0.9
KIEV IAmb IAmb 23 26 12.7
comp=Z,18nm,0.9s
KIEV Kiev 82.11 323 ⇓ P P 23 26 12.0 -0.5
KIEV Kiev 82.11 323 ⇓ P P 23 26 12.0 -0.5
KIEV Kiev 82.11 323 P P 23 26 11.7 -0.8
comp=Z,79nm,0.6s
LRM Limekiln Ridge 82.22 42 P P 23 26 14.2 +0.7
SCO Scoresbysund 82.35 354 i P P 23 26 15.0 +1.7
SCO IAmb IAmb 23 26 15.9
comp=Z,9.8nm,1.0s
BCYI Bear Canyon 82.39 44 P 23 26 15.2 +0.8
EGMT Eagleton 82.67 40 P 23 26 15.5 0.0
EGMT IAmb IAmb 23 26 17.2
comp=Z,11nm,0.8s
MI28 Mi28,Pidlybu 82.80 324 P P 23 26 15.5 -0.5
BOZ Bozeman (W) 82.83 42 P P 23 26 16.7 +0.2
BOZ IAmb IAmb 23 26 18.4
comp=Z,6.8nm,0.8s
BOZ Bozeman (W) 82.83 42 P P 23 26 16.7 +0.2
BOZ pmax pmax
comp=Z,7.0nm,0.8s
FFC Flin Flon 82.91 31 P 23 26 16.8 +0.3
FFC IAmb IAmb 23 26 17.8
comp=Z,10nm,0.8s
FFC Flin Flon 82.91 31 P P 23 26 16.8 +0.3
FFC pmax pmax
comp=Z,10.0nm,0.8s
ELK Elko 82.96 48 P 23 26 17.8 +0.4
ELK IAmb IAmb 23 26 19.4
comp=Z,10nm,1.1s
ELK Elko 82.96 48 P P 23 26 17.8 +0.4
ELK pmax pmax
comp=Z,10.0nm,1.1s
HFS Hagfors 83.25 336 P P 23 26 16.7 -1.4
comp=Z,7.6nm,0.6s,baz=72,slow=4.8,SNR=35
comp=Z,7.6nm,0.6s
RNPP9 Sopachiv 83.45 325 P P 23 26 18.7 -0.5
NB2 NORSAR Subarra 83.48 338 P P 23 26 18.0 -1.2
comp=Z,8.9nm,0.6s,baz=46,slow=4.8
NOA NORSAR Array B 83.48 338 P P 23 26 18.1 -1.2
comp=Z,9.2nm,0.6s,baz=46,slow=4.8,SNR=45
comp=Z,9.2nm,0.6s
RNPP8 Varash 83.52 325 P P 23 26 18.6 -1.0
RNPP5 Staryi Chortor 83.56 325 P P 23 26 19.4 -0.4
MPMC Manual Prospec 83.65 53 P P 23 26 20.7 -0.2
RAYN Ar Rayn 83.97 293 P 23 26 22.2 -0.2
RAYN Ar Rayn 83.97 293 P P 23 26 22.2 -0.2
RAYN pmax pmax
comp=Z,22nm,0.8s
TPNV Topopah Spring 84.11 52 P P 23 26 22.7 -0.3
TPNV IAmb IAmb 23 26 24.8
comp=Z,10nm,0.8s

TPNV Topopah Spring 84.11 52 P P 23 26 22.7 -0.3
TPNV pmax pmax
comp=Z,10.0nm,0.8s
DUG Dugway, Tooele 84.84 47 P 23 26 26.2 -0.4
DUG IAmb IAmb 23 26 28.5
comp=Z,9.7nm,0.9s
DUG Dugway, Tooele 84.84 47 P P 23 26 26.2 -0.4
DUG pmax pmax
comp=Z,10.0nm,0.9s
KONO Kongsberg 85.05 337 *ceP* **P 23 26 27.5 +0.5**
KONO pmax pmax
comp=Z,61nm,2.5s
BRTR Keskin Array B 85.22 312 P P **23 26 27.9 -0.6**
comp=Z,2.3nm,0.7s,baz=100,slow=3.9,SNR=13
comp=Z,2.3nm,0.7s
BRTR Keskin Array B 85.22 312 P 23 26 27.3 -1.1
BR104 Keskin Array S 85.22 312 P P **23 26 28.6 +0.1**
comp=Z,3.4nm,0.8s
BR106 Keskin Array S 85.23 312 P P 23 26 27.7 -0.8
comp=Z,37nmcomp=Z,4.2nm,0.9s
PFO Pinyon Flats O 85.57 55 P P **23 26 30.0 -0.2**
PFO IAmb IAmb 23 26 31.9
comp=Z,14nm,1.0s
PFO Pinyon Flats O 85.57 55 P P 23 26 30.0 -0.2
PFO pmax pmax
comp=Z,14nm,1.0s
PDAR Pinedale Array 85.58 44 P P **23 26 31.0 +0.7**
comp=Z,2.4nm,0.9s,baz=278,slow=3.0,SNR=16
comp=Z,2.4nm,0.9s
PDAR Pinedale Array 85.58 44 P P 23 26 30.3 0.0
STNU Starunia 85.76 323 P P 23 26 30.4 -0.3
MORS Morshin 85.83 324 P P 23 26 31.2 +0.2
BURAR Bucovina Array 86.02 322 P 23 26 31.8 -0.4
BURAR IAmb IAmb 23 26 33.0
comp=Z,5.2nm,0.8s
BURAR Bucovina Array 86.02 322 ⇑P P 23 26 32.0 -0.1
BURAR Bucovina Array 86.02 322 ⇑P P 23 26 32.0 -0.1
SHIU Shidnytsya 86.05 324 P P 23 26 32.3 +0.1
KWP Kalwaria Pacla 86.15 325 P P **23 26 32.4 -0.2**
comp=Z,14nm,1.0s
VRI Vrincioaia 86.18 320 ⇓P P 23 26 33.1 +0.3
VRI Vrincioaia 86.18 320 ⇓P P 23 26 33.1 +0.3
PLOR Plostina 86.23 320 ⇓P P 23 26 33.5 +0.4
PLOR Plostina 86.23 320 ⇓P P 23 26 33.5 +0.4
SFJD Kangerlussuaq 86.28 4 P P 23 26 31.9 -0.9
SFJD Kangerlussuaq 86.28 4 P P **23 26 31.9 -0.9**
SFJD pmax pmax
comp=Z,43nm,1.4s
TURR Turia 86.48 321 ⇓P P 23 26 34.7 +0.5
OZUR 86.58 321 ⇓P P 23 26 35.5 +0.8
ESJX Sierra Juarez 86.72 56 P P 23 26 36.3 +0.4
KORU Korolevo 86.82 323 P P 23 26 35.9 +0.1
BERU Beregovo 87.03 324 P P 23 26 37.1 +0.3
STHS Stebnicka Huta 87.03 325 *eP* **P 23 26 36.7 -0.1**
STHS pmax pmax
comp=Z,4.0nm,1.2s
STHS Stebnicka Huta 87.03 325 *eP* **P 23 26 36.7 -0.1**
OJC Ojcow 87.25 326 P P 23 26 37.6 -0.2
OJC Ojcow 87.25 326 P P 23 26 37.6 -0.2
NIE Niedzica 87.51 326 P P 23 26 39.1 0.0
comp=Z,3.9nm,1.3s
ARR Arges 87.66 321 ⇑P P 23 26 40.2 +0.3
MARR Marisel-Cluj 87.72 322 ⇑P P 23 26 41.0 +0.8
DRGR 87.88 323 ⇑P P 23 26 40.5 -0.4
DRGR 87.88 323 ⇑P P 23 26 40.5 -0.4
LANS Liptovska Anna 88.10 326 *eP* **P 23 26 42.3 +0.5**
LANS pmax pmax
comp=Z,4.0nm,1.5s
LANS Liptovska Anna 88.10 326 *eP* **P 23 26 42.3 +0.5**
ELND Elena 88.37 318 ⇑P P 23 26 42.6 -0.6
KSP Ksiaz 88.53 328 P P **23 26 43.6 -0.2**
comp=Z,15nm,1.4s
MORC Moravsky Berou 88.65 327 ⇓P P 23 26 44.0 -0.4
MORC Moravsky Berou 88.65 327 *eP* **P 23 26 43.9 -0.5**
MORC Moravsky Berou 88.65 327 ⇓P P 23 26 44.0 -0.4
PSZ Piszkesteto 88.67 325 ⇓P P 23 26 45.1 +0.5
PSZ Piszkesteto 88.67 325 *eP* **P 23 26 44.5 -0.1**
PSZ Piszkesteto 88.67 325 ⇓P P 23 26 45.1 +0.5
DPC Dobruska-Polom 88.85 328 P P **23 26 45.1 -0.2**
comp=Z,8.2nm,1.2s
JAVC Velka Javorina 89.19 326 *eP* **P 23 26 47.5 +0.5**
VRAC Vranov 89.42 327 ⇑P P 23 26 47.6 -0.3
VRAC Vranov 89.42 327 *eP* **P 23 26 47.7 -0.3**
VRAC Vranov 89.42 327 ⇑P P 23 26 47.6 -0.3
SMOL Smolenice 89.54 326 *eP* **P 23 26 48.9 +0.4**
SMOL pmax pmax
comp=Z,7.0nm,1.1s
SRO Srobarova 89.55 325 *eP* **P 23 26 48.9 +0.3**
SRO pmax pmax
comp=Z,9.0nm,0.8s
SRO Srobarova 89.55 325 *eP* **P 23 26 48.9 +0.3**
KRUC Moravsky 89.68 327 *eP* **P 23 26 48.5 -0.7**
ISCO Idaho Springs 89.70 45 P 23 26 50.2 +0.3
ISCO Idaho Springs 89.70 45 P P **23 26 50.2 +0.3**
ISCO pmax pmax
comp=Z,5.0nm,0.9s
MODS Modra-Piesok 89.71 326 *eP* **P 23 26 49.6 +0.3**
MODS pmax pmax
comp=Z,35nm,1.4s
MODS Modra-Piesok 89.71 326 *eP* **P 23 26 49.6 +0.3**
MORH Mrgy, Hungar 90.42 324 ⇑P P 23 26 51.8 -0.8
MORH Mrgy, Hungar 90.42 324 P P **23 26 52.3 -0.3**
comp=Z,3.8nm,1.1s
RONA Rosalia, Austr 90.65 326 *ePcP* **P 23 26 53.7 0.0**
comp=Z,0.4nm,0.3s
CONA Conrad Observa 90.71 326 *ePcP* **P 23 26 54.1 +0.1**
comp=Z,1.2nm,0.5s
SDCO Great Sand Dun 90.95 46 P 23 26 56.0 +0.3
SDCO IAmb IAmb 23 26 57.5
comp=Z,4.6nm,0.8s
KHC Kasperske Hory 90.98 328 *ceP* **P 23 26 55.4 +0.2**
KHC pmax pmax
comp=Z,5.0nm,1.0s
KHC Kasperske Hory 90.98 328 P P **23 26 54.8 -0.4**
comp=Z,7.8nm,1.1s
GERES GERESS Array B 91.12 328 P P **23 26 55.2 -0.7**
comp=Z,2.7nm,0.8s,baz=35,slow=4.9,SNR=18
comp=Z,2.7nm,0.8s
MOA Molln 91.55 327 *ePcP* **P 23 26 57.6 -0.2**
comp=Z,1.4nm,0.4s
ANMO Albuquerque 91.91 49 P 23 26 59.4 -0.7
ANMO IAmb IAmb 23 27 02.5
comp=Z,5.2nm,0.9s
ANMO Albuquerque 91.91 49 *ceP* **P 23 27 01.4 +1.4**
ANMO pmax pmax
comp=Z,7.0nm,1.0s
KBA Koelnbreinsper 92.53 327 *ePcP* **P 23 27 02.3 -0.3**
comp=Z,1.3nm,0.5s
LESA Schwarzleotal 92.61 328 *eP* **P 23 27 01.8 -1.1**
comp=Z,3.1nm,0.6s
MYKA Terra Mystica 92.70 327 *eP* **P 23 27 02.1 -1.2**
comp=Z,2.8nm,0.5s
ABTA Abfaltersbach 93.17 327 *eP* **P 23 27 04.0 -1.4**
comp=Z,1.8nm,0.5s
SQTA Sankt Quirin 93.46 328 *eP* **P 23 27 05.7 -1.1**
comp=Z,1.3nm,0.6s
DAVA Damuels 94.03 329 *ePcP* **P 23 27 09.6 +0.1**
comp=Z,0.9nm,0.3s
FUORN Ofenpass-Fuorn 94.34 328 P P 23 27 10.3 -0.7
TXAR Lajitas Array 97.07 52 P Pdif 23 27 24.4 +0.9
comp=Z,1.3nm,0.8s,baz=315,slow=2.2,SNR=16
comp=Z,1.3nm,0.8s
QSPA South Pole Qui 116.41 180 PKP PKiKP 23 32 32.8 +1.4
comp=Z,0.7nm,0.7s,baz=165,slow=1.2,SNR=5.8
QSPA South Pole Qui 116.41 180 PKiKP 23 32 32.5 +1.1
TORD Torodi Ar. Bea 123.75 310 PKP PKPdf 23 32 46.5 -0.5
comp=Z,1.3nm,0.4s,baz=33,slow=4.5,SNR=1.6
SNAA Sanae 130.55 194 PKP PKiKP 23 32 58.6 -0.7
comp=Z,0.6nm,0.7s,baz=144,slow=20,SNR=1.6
SNAA Sanae 130.55 194 PKPdf 23 32 58.3 0.0
SDV Santo Domingo 133.52 45 PKPdf 23 33 04.6 -1.3
BAUV El Baul 135.06 42 PKPdf 23 33 07.9 -0.6
PLCA Paso Flores 150.75 127 PKPbc PKiKP 23 33 41.6 +0.1
comp=Z,3.7nm,0.4s,baz=242,slow=4.5,SNR=24
PB11 IPOC Station P 151.48 83 PKPbc 23 33 42.2 -1.2
LPAZ La Paz 151.48 75 PKPbc PKiKP 23 33 44.4 -0.1
comp=Z,12nm,0.8s,baz=277,slow=1.8,SNR=44
LPAZ La Paz 151.48 75 PKPbc 23 33 43.5 -0.6
LPAZ La Paz 151.48 75 PKIKP PKPbc 23 33 43.5 -0.6
MAL2 Monte Alegre, 151.75 32 PKPbc PKPbc 23 33 43.2 -0.9
GO01 Chusmiza 151.86 82 PKPbc PKiKP 23 33 44.8 -0.2
BO02 Sierra Bellavi 151.97 115 PKPbc 23 33 43.5 -0.5
PB01 IPOC Station P 152.04 85 PKPbc 23 33 44.1 -0.5
CO02 Combarbal 152.09 107 PKPbc 23 33 43.5 -1.0

AC05 El Transito 152.69 102 PKiKP 23 33 45.7 -0.4

CATAC 13 23:15:44.6±0.6, 13°N±5°×88°W±°, h33km±5km, M3.0/15, MLv3.0/15, Error ellipse: s-maj=11.1km s-min=3.2km az=27.4, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POTN	**Potosi Cosigui**	**0.54**	**51**	P	Pn	23 15 56.6	+0.6
POTN				S	Sn	23 16 06.1	+2.2
CNCH	**Conchagua**	**0.62**	**9**	P	Pn	23 15 57.5	+0.2
CNCH	**Conchagua**	**0.62**	**9**	S	Sn	23 16 07.8	+1.6
LCND	**La Caada**	**0.65**	**4**	P	Pb	23 15 57.7	+0.1
LCND	**La Caada**	**0.65**	**4**	S	Sn	23 16 08.2	+1.6
CRIN	**San Cristobal**	**0.86**	**87**	P	Pb	23 16 01.4	+0.1
CRIN	**San Cristobal**	**0.86**	**87**	S	Sb	23 16 13.7	+1.2
PACA	**Pacayal**	**0.89**	**335**	P	Pn	23 16 00.5	-0.4
PACA	**Pacayal**	**0.89**	**335**	S	Sb	23 16 13.2	-0.1
PKGN	**Cerro Pekin**	**0.93**	**89**	P	Pn	23 16 01.9	+0.4
PKGN				S	Sb	23 16 14.7	+0.2
POLN	**Al Sur del Vol**	**1.09**	**91**	P	Pn	23 16 03.8	+0.1
POLN				S	Sn	23 16 18.4	+0.6
PQSS	**Presa 15 de Se**	**1.14**	**328**	P	Pn	23 16 04.7	+0.4
PQSS	**Presa 15 de Se**	**1.14**	**328**	S	Sb	23 16 19.5	-0.7
TECO	**Alcaldia de Te**	**1.20**	**317**	P	Pn	23 16 05.3	+0.1
CNGA	**Al SSO del Vol**	**1.22**	**98**	S	Sn	23 16 21.2	+0.4
CNGN	**Cerro Negro**	**1.22**	**97**	P	Pn	23 16 05.3	-0.1
CNGN	**Cerro Negro**	**1.22**	**97**	S	Sn	23 16 21.3	+0.5
SCLA	**Alcaldia de Sa**	**1.29**	**323**	P	Pn	23 16 06.5	+0.1
LEVN	**Ruinas Leon Vi**	**1.31**	**101**	P	Pn	23 16 07.0	+0.3
COPN	**Copaltepe**	**1.40**	**110**	P	Pn	23 16 07.5	-0.4
MOM2	**El Cardon**	**1.43**	**99**	P	Pn	23 16 08.4	+0.1
MOM2				S	Sn	23 16 26.7	+0.6
LOMA	**Loma Larga**	**1.55**	**309**	P	Pn	23 16 10.3	+0.1
SAPS	**Ciudad Sandino**	**1.57**	**108**	P	Pn	23 16 10.4	+0.1
APQ3	**Volcan Apoyequ**	**1.58**	**104**	P	Pn	23 16 10.6	+0.3
LALI	**Alcalda de L**	**1.58**	**301**	P	Pn	23 16 10.7	+0.3

NEIC ***13*** *23:24:13.7±2.5, 6°S±11°×130°E±10°, 1, h168km±8km, mb4.4/14, Error ellipse: s-maj=16.7km s-min=11.1km az=88.0*
IDC ***13*** *23:24:14.1±2.4, 6°S±20°×130°E, h177km±24km, mb3.4/6, mbtmp4.2/11, MS3.4/2, Error ellipse: s-maj=22.9km s-min=14.6km az=42.0*
DJA ***13*** *23:24:14.1±0.2, 6°S±3°×130°E±°, h175km±4km, M4.6/23, mB5.1/8, mb4.4/23, MLv4.8/17, Mw(mB)4.5/8*
ISC 13 23:24:11.5±0.5, 6°31S±0.05×130°14E±0.05, h146km, n55, σ2s57/55, mb4.2/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.79**	**353**	P	**Pn**	**23 24 47.8**	**+3.8**
BNDI				S	**Sn**	**23 25 12.8**	**+3.8**
SAUI	**Saumlaki**	**2.02**	**145**		Pn	23 24 54.3	+7.6
SAUI				Sn	**Sn**	**23 25 21.1**	**+7.4**
SAUI	**Saumlaki**	**2.02**	**145**	P	Pn	23 24 54.0	+7.3
MSAI	**Masohi**	**3.18**	**338**	P	**Pn**	**23 25 02.7**	**+1.6**
AAI	**Ambon**	**3.25**	**323**	P	**Pn**	**23 25 04.4**	**+2.5**
FAKI	**Fak Fak**	**3.97**	**32**		**Pn**	**23 25 11.7**	**+0.3**
FAKI	**Fak Fak**	**3.97**	**32**	P	**Pn**	**23 25 11.6**	**+0.2**
NLAI	**Namlea**	**4.30**	**315**	P	**Pn**	**23 25 19.1**	**+3.5**
KMPI	**Kaimana, Papua**	**4.42**	**54**	P	**Pn**	**23 25 18.8**	**+1.5**
SWI	**Sorong** 1.9m7µm58nm,0.7s	**5.53**	**12**	P	**Pn**	**23 25 31.2**	**-0.7**
SANI	**Sanana** 0.1nm37nm,0.8s	**5.92**	**315**	P	**Pn**	**23 25 39.3**	**+2.1**
RKPI	**Ransiki, Papua**	**6.24**	**40**	P	**Pn**	**23 25 42.7**	**+1.2**
SOEI	**Soe**	**6.75**	**239**		**Pn**	**23 25 52.5**	**+4.1**
SOEI	**Soe** 0.6nm47nm,0.6s	**6.75**	**239**	P	Pn	23 25 52.7	+4.4
BATI	**Baumata** 39nm,0.5s,baz=144,slow=3.6,SNR=7.9	**7.49**	**238**	P	**Pn**	**23 26 00.8**	**+2.7**
BATI	87nm,0.4s,baz=334,slow=23,SNR=9.7			S	**Sn**	**23 27 24.5**	**+2.7**
BATI	**Baumata** 0.4nm62nm,0.7s	**7.49**	**238**	P	**Pn**	**23 26 01.4**	**+3.3**
BBSI	**Bau Bau** 0.1nm14nm,0.6s	**7.57**	**276**	P	**Pn**	**23 26 01.2**	**+1.9**
BAKI	**Biak**	**7.83**	**50**	P	**Pn**	**23 26 06.6**	**+3.8**
EDFI	**Ende, Flores** 18nm,0.7s	**8.72**	**253**	P	**Pn**	**23 26 18.5**	**+3.8**
BASI	**Baing, Sumba**	**10.22**	**247**	P	Pn	23 26 39.0	+4.3
WBSI	**Waikabubak, Su** 32nm,0.7s	**11.14**	**252**	P	**Pn**	**23 26 49.5**	**+2.6**
PLAI	**Plampang** 1µm27nm,1.0s	**12.51**	**258**	P	**Pn**	**23 27 06.5**	**+1.9**
FITZ	**Fitzroy Crossi** 4.3nm,0.3s,baz=27,slow=9.7,SNR=52	**12.51**	**200**	P	**Pn**	**23 27 05.5**	**+0.9**
FITZ	25nm,0.6s,baz=127,slow=17,SNR=10			S	**Sn**	**23 29 18.9**	**-4.0**
FITZ	**Fitzroy Crossi**	**12.51**	**200**		**Pn**	**23 27 05.3**	**+0.7**
TWSI	**Taliwang, Sumb** 17nm,0.7s	**13.36**	**259**	P	**Pn**	**23 27 16.9**	**+1.3**
WRA	**Waramunga Arr** 1.7nm,0.5s,baz=348,slow=13,SNR=10	**14.15**	**164**	P	**P**	**23 27 27.0**	**-1.7**
WRA	4.3nm,0.7s,baz=341,slow=20,SNR=6.0			S	**Sn**	**23 29 55.7**	**-6.8**
WRA	**Warramunga Arr**	**14.15**	**164**		**Pn**	**23 27 25.2**	**-0.4**
COEN	**Coen**	**14.91**	**122**		**P**	**23 27 36.9**	**-0.2**
JAGI	**Jajag, Banyuwa**	**16.00**	**261**		**Pn**	**23 27 47.7**	**-0.9**
JAGI	comp=Z,25nm,1.0s			IAmb	IAmb	23 27 50.6	
JAGI	**Jajag, Banyuwa** comp=Z,30nm,0.8s	**16.00**	**261**	P	**Pn**	**23 27 48.6**	**0.0**
PMG	**Port Moresby** comp=Z,25nm,0.7s,baz=288,slow=6.8,SNR=11	**17.14**	**101**	P	**Pn**	**23 28 05.0**	**+2.6**
PMG	**Port Moresby**	**17.14**	**101**		**Pn**	**23 28 03.4**	**+1.0**
AS31	**Alice Springs**	**17.63**	**169**	P	**Pn**	**23 28 08.9**	**+0.6**
ASAR	**Alice Springs** comp=Z,3.8nm,0.5s,baz=343,slow=9.1,SNR=32	**17.63**	**169**	P	**Pn**	**23 28 10.8**	**+2.5**
ASAR	comp=Z,3.9nm,0.8s,baz=352,slow=19,SNR=10			S	**S**	**23 31 21.9**	**-1.2**
ASAR	comp=Z,1.1nm,0.7s,baz=9.9,slow=2.2,SNR=4.9			ScP	**ScP**	**23 35 55.8**	**-5.0**
MBWA	**Marble Bar**	**17.87**	**213**	P	**P**	**23 28 10.7**	**+0.9**
MBWA	comp=Z,30nm,1.4s			IAmb	IAmb	23 28 35.1	
PCJI	**Pacitan** comp=Z,36nm,1.3s	**18.90**	**263**	P	**P**	**23 28 20.3**	**-0.8**
CTAO	**Charters Tower**	**20.80**	**133**	P	Pn	23 28 43.5	-2.2
CTAO	comp=Z,20nm,1.4s			IAmb	IAmb	23 28 44.2	
FORT	**Forrest**	**24.42**	**184**	P	**P**	**23 29 17.1**	**+0.6**
FORT	comp=Z,5.9nm,0.8s			IAmb	IAmb	23 29 18.8	
MORW	**Morawa**	**26.27**	**209**	P	**P**	**23 29 33.4**	**+0.1**
MORW	comp=Z,20nm,1.4s			IAmb	IAmb	23 29 47.0	
BBOO	**Buckleboo**	**26.94**	**169**	P	**P**	**23 29 38.6**	**-0.7**
BBOO	comp=Z,7.5nm,1.1s			IAmb	IAmb	23 29 39.4	
STKA	**Stephens Creek** comp=Z,1.8nm,0.8s,baz=349,slow=12,SNR=3.4 comp=Z,1.8nm,0.8s	**27.60**	**159**	P	**P**	**23 29 46.7**	**+1.5**
STKA	**Stephens Creek**	**27.60**	**159**	P	**P**	**23 29 45.6**	**+0.3**
STKA	comp=Z,18nm,1.1s			IAmb	IAmb	23 30 00.7	
NWAO	**Narrogin (SRO)**	**29.08**	**203**	P	**P**	**23 29 58.1**	**-0.2**
HNR	**Honiara** comp=Z,60nm,0.4s,baz=54,slow=6.5,SNR=3.7	**29.69**	**98**	P	**P**	**23 30 03.4**	**-0.5**
CMAR	**Chiang Mai Arr** comp=Z,1.3nm,0.3s,baz=132,slow=7.3,SNR=4.8 comp=Z,1.3nm,0.3s	**39.40**	**309**	P	**P**	**23 31 26.1**	**-1.2**
LZDM	**Lanzhou Array** comp=Z,50nm,18.1s,baz=170,slow=40	**48.83**	**331**	LR	LR	23 56 44.8	
SONM	**Songino Array** comp=Z,0.1nm,0.3s,baz=156,slow=5.9,SNR=1.7 comp=Z,0.1nm,0.3s	**57.84**	**341**	P	**P**	**23 33 46.0**	**-1.9**
MKAR	**Makanchi Array** comp=Z,1.2nm,0.6s,baz=112,slow=7.7,SNR=13 comp=Z,1.2nm,0.6s	**67.73**	**327**	P	**P**	**23 34 52.1**	**-1.1**
MAKZ	**Makanchi** comp=Z,5.9nm,1.1s	**67.91**	**326**	P	**P**	**23 34 52.8**	**-1.6**
MAKZ				IAmb	IAmb	23 35 17.9	
ARSB	**Arslanbob**	**70.47**	**318**	P	**P**	**23 35 08.9**	**-1.6**
KURBB	**Kurchatov Arra** comp=Z,0.6nm,0.6s,baz=129,slow=5.3,SNR=7.1 comp=Z,0.6nm,0.6s	**72.00**	**328**	P	**P**	**23 35 17.6**	**-1.6**
BVAR	**Borovoye Array** comp=Z,0.4nm,0.5s,baz=116,slow=8.1,SNR=2.8 comp=Z,0.4nm,0.5s	**77.56**	**328**	P	**P**	**23 35 48.4**	**-2.8**
TIXI	**Tiksi**	**77.81**	**360**	LR	LR	00 12 41.9	
	comp=Z,12nm,18.6s,baz=194,slow=37						
QSPA	**South Pole Qui**	**83.66**	**180**	P	**P**	**23 36 25.1**	**+1.4**
KMBO	**Kilima Mbogo** comp=Z,4.0nm,0.4s,baz=88,slow=4.2,SNR=6.5	**92.74**	**269**	PP	**PP**	**23 40 49.8**	**-2.7**

IDC ***14*** *00:00:44.0±1.6, 59°26S×151°08E, h0km, mb4.1/5, mbtmp4.1/6, ML3.5/1, MS3.7/19, Error ellipse: s-maj=79.1km s-min=18.3km az=82.0*
ISC 14 00:00:45.1±1.5, 59°2S±0°1×151°4E±0°5, h10km, n33, σ0s85/8, mb4.1/5, MS3.7/18, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda** 0.1nm,0.3s,baz=337,slow=12,SNR=15	**18.71**	**173**	P	**P**	**00 05 02.7**	**-0.5**
VNDA	comp=Z,361nm,18.4s,baz=346,slow=35 2.3nm,0.7s			LR	LR	00 11 35.6	
URZ	**Urewera** comp=Z,161nm,18.0s,baz=194,slow=36	**26.70**	**50**	LR	LR	00 16 55.1	
STKA	**Stephens Creek** comp=Z,82nm,19.0s,baz=203,slow=34	**28.14**	**342**	LR	LR	00 16 55.3	
QSPA	**South Pole Qui** 2.5nm,0.9s,baz=354,slow=4.7,SNR=6.0	**30.86**	**180**	P	**P**	**00 07 02.5**	**+1.4**
QSPA	comp=Z,184nm,19.4s,baz=10,slow=36 2.5nm,0.9s			LR	LR	00 19 14.0	
H01W1	**Cape Leeuwin H** baz=146,slow=74,SNR=146	**34.40**	**298**	T	T	00 42 57.1	
H01W2	**Cape Leeuwin H** baz=146,slow=74,SNR=170	**34.41**	**298**	T	T	00 43 04.2	
H01W3	**Cape Leeuwin H** baz=146,slow=74,SNR=185	**34.42**	**298**	T	T	00 43 02.2	
RAO	**Raoul Island** comp=Z,167nm,18.8s,baz=22,slow=34	**36.57**	**49**	LR	LR	00 21 33.9	
MAW	**Mawson** 2.0nm,0.9s,baz=102,slow=8.2,SNR=4.1	**37.11**	**219**	P	**P**	**00 07 55.1**	**+0.1**
MAW	comp=Z,82nm,19.3s,baz=103,slow=34 2.0nm,0.9s			LR	LR	00 21 37.3	
ASAR	**Alice Springs** 3.6nm,0.8s,baz=165,slow=9.2,SNR=27	**37.62**	**333**	P	**P**	**00 08 00.2**	**+0.4**
ASAR	0.4nm,0.7s,baz=151,slow=2.1,SNR=2.3			PcP	**PcP**	**00 10 17.3**	**0.0**
ASAR	comp=Z,52nm,18.1s,baz=152,slow=33 3.6nm,0.8s			LR	LR	00 21 40.9	
WRA	**Warramunga Arr** 5.2nm,0.9s,baz=168,slow=7.1,SNR=26 5.2nm,0.9s	**41.12**	**335**	P	**P**	**00 08 29.1**	**0.0**
SNAA	**Sanae** 0.9nm,0.6s,baz=204,slow=6.4,SNR=4.0	**48.14**	**191**	P	**P**	**00 09 23.6**	**-1.0**
SNAA	comp=Z,88nm,18.1s,baz=192,slow=36 0.9nm,0.6s			LR	LR	00 29 38.4	
PMG	**Port Moresby** comp=Z,76nm,19.6s,baz=155,slow=33	**49.82**	**355**	LR	LR	00 28 07.1	
HNR	**Honiara** comp=Z,84nm,21.6s,baz=164,slow=30	**50.12**	**11**	LR	LR	00 26 16.2	
BATI	**Baumata** comp=Z,51nm,18.3s,baz=261,slow=35	**53.19**	**325**	LR	LR	00 31 39.1	
H04S2	**CROZET ISLANDS** baz=140,slow=75,SNR=15	**55.54**	**235**	T	T	01 10 04.6	
H04S1	**CROZET ISLANDS** baz=140,slow=75,SNR=18	**55.54**	**235**	T	T	01 10 05.5	
H04S3	**CROZET ISLANDS** baz=140,slow=75,SNR=17	**55.55**	**235**	T	T	01 10 04.2	
KAPI	**Kappang** comp=Z,66nm,21.9s,baz=150,slow=33	**59.29**	**323**	LR	LR	00 33 24.4	
PSI	**Prapat** comp=Z,32nm,18.3s,baz=38,slow=34	**74.25**	**305**	LR	LR	00 42 22.8	
H08S2	**Diego Garcia H** baz=148,slow=76,SNR=24	**77.77**	**276**	T	T	01 37 01.8	
H08S1	**Diego Carcia H** baz=148,slow=76,SNR=20	**77.78**	**276**	T	T	01 37 02.8	
H08S3	**Diego Garcia H** baz=148,slow=76,SNR=28	**77.79**	**276**	T	T	01 37 03.3	
H03S2	**Juan Fernandez** baz=201,slow=74,SNR=37	**78.35**	**139**	T	T	01 40 05.0	
H03S1	**Juan Fernandez** baz=201,slow=74,SNR=37	**78.35**	**139**	T	T	01 40 06.2	
H03S3	**Juan Fernandez** baz=201,slow=74,SNR=24	**78.36**	**139**	T	T	01 40 04.7	
BOSA	**Boshof** comp=Z,35nm,21.4s,baz=188,slow=32	**81.81**	**226**	LR	LR	00 44 08.7	
LBTB	**Lobatse** comp=Z,22nm,21.0s,baz=170,slow=31	**84.94**	**228**	LR	LR	00 44 02.6	
MATP	**Matopo** comp=Z,32nm,20.2s,baz=119,slow=31	**87.93**	**232**	LR	LR	00 45 31.8	
CMAR	**Chiang Mai Arr** comp=Z,17nm,19.6s,baz=190,slow=34	**88.41**	**311**	LR	LR	00 51 11.0	
JHJ	**Hachijo jima 2** comp=Z,285nm,21.9s,baz=85,slow=34	**92.51**	**350**	LR	LR	00 53 11.6	
JNU	**Nakatsue** comp=Z,29nm,18.0s,baz=2.0,slow=36	**93.57**	**343**	LR	LR	00 57 41.1	
FINES	**FINESS Array B** 2.5nm,0.8s,baz=129,slow=4.4,SNR=4.8	**153.49**	**298**	PKPbc	**PKPbc**	**00 20 41.5**	**-0.6**

DJA 14 00:14:38.6±0.3, 0°S±3°×122°3E±°, h95km±7km, M4.0/17, mB5.4/2, mb4.0/6, MLv3.9/17, Mw(mB)4.8/2, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.02**	**204**	P	Pn	00 14 59.4	+0.6
LUWI				S	Sn	00 15 15.6	+1.6
KMSI	**Cibinong**	**1.04**	**49**	P	Pn	00 14 58.7	-0.4
MRSI	**Marisa**	**1.38**	**295**	P	Pn	00 15 02.5	-0.6
MRSI				S	Sn	00 15 20.8	-0.8
APSI	**Ampana**	**1.73**	**243**	P	Pn	00 15 08.1	+0.5
MPSI	**Mapaga**	**3.32**	**278**	P	Pn	00 15 29.4	+0.8
SANI	**Sanana**	**3.40**	**125**	P	Pn	00 15 27.0	-2.6
PCI	**Palu**	**3.44**	**257**	P	Pn	00 15 30.7	+0.5
KDI	**Kendari**	**3.86**	**188**	P	Pn	00 15 34.3	-1.6
TNTI	**Ternate**	**4.27**	**78**	P	Pn	00 15 44.7	+3.3
TTSI	**Tana Toraja**	**4.46**	**229**	P	Pn	00 15 44.3	+0.4
NLAI	**Namlea**	**4.99**	**129**	P	Pn	00 15 50.4	-0.8
SPSI	**Sidrap Palu**	**5.13**	**222**	P	Pn	00 15 53.8	+0.7
BNSI	**Bone** 0.1nm16nm,1.1s	**5.26**	**216**	P	Pn	00 15 55.5	+0.7
BBSI	**Bau Bau** 0.1nm14nm,0.6s	**5.38**	**187**	P	Pn	00 15 55.4	-1.1
EDFI	**Ende, Flores** 3.6nm,0.7s	**8.71**	**190**	P	Pn	00 16 43.5	+1.5
SOEI	**Soe**	**9.64**	**174**	P	Pn	00 16 54.2	-0.4

NEIC ***14*** *00:16:28.2±1.8, 5°9S±0°1×154°81E±0°09, h157km±7km, mb4.5/27, Error ellipse: s-maj=17.9km s-min=9.2km az=220.0*
IDC ***14*** *00:16:32.9±1.9, 5°97S×154°79E, h210km±17km, mb3.8/14, mbtmp4.3/16, Error ellipse: s-maj=15.1km s-min=10.9km az=120.0*
ISC 14 00:16:26.4±0.5, 5°85S±0°08×154°89E±0°08, h150km, n58, σ1s70/59, mb4.3/23, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 12nm,0.5s,baz=97,slow=6.1,SNR=6.1	**8.44**	**245**	P	**Pn**	**00 18 28.7**	**+3.1**
PMG	7.9nm,0.4s,baz=65,slow=19,SNR=2.1			S	**Sn**	**00 20 05.8**	**+6.3**
PMG	**Port Moresby**	**8.44**	**245**		**Pn**	**00 18 25.0**	**-0.7**
COEN	**Coen**	**14.07**	**234**	P	**P**	**00 19 40.7**	**-1.6**
JAY	**Jayapura** 14nm,0.7s,baz=112,slow=6.6,SNR=7.3	**14.53**	**283**	P	**Pn**	**00 19 45.1**	**+0.1**
CTAO	**Charters Tower**	**16.46**	**210**	P	**P**	**00 20 09.1**	**+0.3**
CTA

WB0 Warramunga Arr 24.26 233 P **P** **00 21 29.4 -0.4**
WB0 IAmb IAmb 00 21 31.0
comp=Z,7.2nm,0.5s
WRA Warramunga Arr 24.40 233 P **P** **00 21 31.0 0.0**
comp=Z,4.2nm,0.3s,baz=56,slow=10,SNR=51
WRA S **S** **00 25 35.0 -5.0**
comp=Z,1.5nm,0.8s,baz=54,slow=15,SNR=4.9
comp=Z,4.2nm,0.3s
WRA Warramunga Arr 24.40 233 P **P** **00 21 29.9 -1.1**
ARMA Armidale 24.64 187 P **P** **00 21 33.5 +0.3**
ARMA IAmb IAmb 00 21 34.3
comp=Z,9.6nm,0.8s
H11S3 WAKE ISLAND Hy 26.84 25 T T 00 50 06.3
baz=205,slow=75,SNR=9.9
H11S2 WAKE ISLAND Hy 26.84 25 T T 00 50 07.5
baz=205,slow=75,SNR=8.1
H11S1 WAKE ISLAND Hy 26.86 25 T T 00 50 07.9
baz=205,slow=75,SNR=5.2
AS31 Alice Springs 26.86 227 P **P** **00 21 52.0 -1.2**
ASAR Alice Springs 26.86 227 P **P** **00 21 52.3 -1.0**
comp=Z,0.9nm,0.3s,baz=57,slow=9.2,SNR=18
ASAR PcP **PcP** **00 25 11.4 -0.6**
comp=Z,0.9nm,0.5s,baz=61,slow=2.6,SNR=7.4
ASAR S **S** **00 26 13.1 -5.9**
comp=Z,0.3nm,0.7s,baz=50,slow=14,SNR=2.2
comp=Z,0.9nm,0.3s
ASAR Alice Springs 26.86 227 P **P** **00 21 52.6 -0.7**
STKA Stephens Creek 28.73 204 P **P** **00 22 10.1 +0.4**
comp=Z,1.5nm,0.5s,baz=16,slow=7.4,SNR=4.3
comp=Z,1.5nm,0.5s
STKA Stephens Creek 28.73 204 P **P** **00 22 09.6 -0.1**
STKA IAmb IAmb 00 22 14.3
comp=Z,10nm,0.7s
FITZ Fitzroy Crossi 31.03 244 P **P** **00 22 28.9 -1.3**
BBOO Buckleboo 32.05 211 P **P** **00 22 40.0 +0.9**
QRZ Quartz Range 38.25 158 P **P** **00 23 32.1 +0.2**
LTZ Lake Taylor 39.87 160 P **P** **00 23 45.3 -0.1**
TPUB Ta-pu 44.26 312 P **P** **00 24 20.4 -0.8**
CMAR Chiang Mai Arr 60.20 295 P **P** **00 26 19.6 +0.7**
comp=Z,1.0nm,0.6s,baz=123,slow=5.7,SNR=6.8
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 60.20 295 P **P** **00 26 19.1 +0.1**
SONM Songino Array 68.32 327 P **P** **00 27 12.6 +1.2**
comp=Z,1.1nm,0.5s,baz=144,slow=5.7,SNR=9.4
comp=Z,1.1nm,0.5s
SONM Songino Array 68.32 327 P **P** **00 27 12.4 +0.9**
VNDA Vanda 71.72 178 P **P** **00 27 30.5 -1.1**
comp=Z,1.2nm,0.9s,baz=341,slow=8.8,SNR=4.1
comp=Z,1.2nm,0.9s
VNDA Vanda 71.72 178 P **P** **00 27 31.2 -0.4**
EVN Everest 73.65 301 P **P** **00 27 44.6 -0.1**
PALK Pallekele 75.15 279 P **P** **00 27 52.7 -0.2**
PALK IAmb IAmb 00 28 08.9
comp=Z,20nm,1.4s
M16K Timber Creek 75.69 21 P **P** **00 27 56.3 +1.4**
M16K IAmb IAmb 00 28 00.3
comp=Z,22nm,1.4s
CNPM China Poot 77.77 25 P **P** **00 28 07.9 +1.3**
SLKM Skilak Lake 78.74 24 P **P** **00 28 12.9 +0.9**
ILAR Eielson Array 82.35 22 P **P** **00 28 30.6 -0.5**
comp=Z,0.5nm,0.4s,baz=237,slow=5.8,SNR=7.5
comp=Z,0.5nm,0.4s
MKAR Makanchi Array 82.48 319 P **P** **00 28 32.5 +0.3**
comp=Z,4.0nm,0.7s,baz=98,slow=5.9,SNR=25
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 82.48 319 P **P** **00 28 32.0 -0.2**
MAKZ Makanchi 82.69 319 P **P** **00 28 33.1 -0.1**
MAKZ IAmb IAmb 00 28 34.2
comp=Z,5.0nm,0.8s
ZAA0 Zalesovo Array 83.17 326 P **P** **00 28 34.5 -1.1**
ZAA0 IAmb IAmb 00 28 35.5
comp=Z,2.5nm,0.8s
ZALV Zalesovo Beam 83.17 326 P **P** **00 28 34.5 -1.1**
comp=Z,2.6nm,0.7s,baz=112,slow=5.4,SNR=14
comp=Z,2.6nm,0.7s
ZALV Zalesovo Beam 83.17 326 P **P** **00 28 34.6 -0.9**
QSPA South Pole Qui 84.12 180 P **P** **00 28 42.7 +2.4**
comp=Z,2.9nm,0.5s,baz=355,slow=0.9,SNR=11
QSPA South Pole Qui 84.12 180 P **P** **00 28 42.6 +2.2**
QSPA IAmb IAmb 00 28 43.1
comp=Z,3.6nm,0.6s
KDJ Kajisay 84.84 313 P **P** **00 28 46.0 +1.4**
KDJ IAmb IAmb 00 28 46.5
comp=Z,5.2nm,0.8s
MAW Mawson 85.41 203 P **P** **00 28 46.0 -0.6**
comp=Z,3.7nm,0.5s,baz=96,slow=4.7,SNR=11
comp=Z,3.7nm,0.5s
KURK Kurchatov 85.87 322 P **P** **00 28 48.4 -0.8**
KURK IAmb IAmb 00 28 49.0
comp=Z,1.6nm,0.4s
KURBB Kurchatov Arra 85.90 322 P **P** **00 28 48.4 -0.9**
comp=Z,0.7nm,0.5s,baz=101,slow=4.7,SNR=11
comp=Z,0.7nm,0.5s
NVAR Mina Array Bea 91.10 52 P **P** **00 29 16.5 +2.0**
comp=Z,3.0nm,0.9s,baz=255,slow=7.2,SNR=8.0
comp=Z,3.0nm,0.9s
NVAR Mina Array Bea 91.10 52 P **P** **00 29 15.7 +1.1**
BVAR Borovoye Array 91.32 323 P **P** **00 29 13.3 -1.6**
comp=Z,1.4nm,0.6s,baz=100,slow=6.3,SNR=6.7
comp=Z,1.4nm,0.6s
PDAR Pinedale Array 98.01 48 P **P** **00 29 46.2 +0.2**
comp=Z,0.2nm,0.6s,baz=277,slow=4.8,SNR=3.5
comp=Z,0.2nm,0.6s
PDAR Pinedale Array 98.01 48 P **P** **00 29 46.1 +0.1**
GERES GERESS Array B 126.02 329 PKP **PKPdf** **00 35 09.7 -1.3**
comp=Z,0.4nm,0.7s,baz=107,slow=3.4,SNR=2.4
TORD Tordi Ar. Bea 152.60 287 PKPbc **PKPbc** **00 36 04.4 -1.8**
comp=Z,1.9nm,0.4s,baz=59,slow=4.4,SNR=1.7

*IDC **14** 00:16:47.9±10.0, 36.°99N×71.°98E, h71km±53km, mb3.6/4, mbtmp3.9/9, ML3.3/5, MS4.4/1, Error ellipse: s-maj=123.6km s-min=39.5km az=163.0*
*NNC **14** 00:16:48.2±8.5, 37.°36N×71.°20E, h11km±171km, mb3.8, mpv3.7, Error ellipse: s-maj=152.8km s-min=51.9km az=175.0*

ISC 14 00:16:55.0±2.0, 37.°6N±0.°2×71.°8E±0.°1, h100km, n17, σ1§56/16, mb3.8/4, 2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.49**	**21**	P		**Pn**	**00 18 13.7**	**-0.7**
	1.2nm,0.3s,baz=198,slow=5.8,SNR=9.8							
AAK				LR		LR	00 20 30.7	
	comp=Z,16nm,20.9s,baz=248,slow=37							
	2.7nm,0.3s							
KK31	**Karatay Array**	**5.64**	**350**	P		**Pn**	**00 18 13.8**	**-2.5**
	2.5nm,0.3s,baz=177,slow=13,SNR=60							
KK31				⇓S		**Sn**	**00 19 20.7**	**+1.0**
	3.3nm,0.5s,baz=179,slow=20,SNR=4.5							
MK31	**Makanchi Array**	**12.07**	**37**	P		**Pn**	**00 19 44.2**	**+0.8**
	1.0nm,0.8s,baz=230,slow=12,SNR=4.6							
MKAR	**Makanchi Array**	**12.07**	**37**	P		**Pn**	**00 19 42.1**	**-1.3**
	baz=235,slow=10.0,SNR=5.3							
	1.3nm,0.9s							
KURBB	**Kurchatov Arra**	**13.93**	**18**	P		**Pn**	**00 20 04.3**	**-3.4**
	0.3nm,0.5s,baz=214,slow=12,SNR=3.3							
AB31	**Akbulak array**	**14.52**	**327**	P		Pn	00 20 09.9	-5.4
	0.5nm,0.5s,baz=137,slow=13,SNR=28							
BVA0	**Borovoye Array**	**15.51**	**357**	P		**P**	**00 20 31.4**	**+1.3**
	1.9nm,1.0s,baz=167,slow=9.3,SNR=3.6							
BVAR	**Borovoye Array**	**15.51**	**357**	P		**Pn**	**00 20 29.0**	**+1.1**
	baz=164,slow=12,SNR=5.0							
	1.0nm,0.6s							
AKTO	**Aktyubinsk**	**16.23**	**327**	P		**P**	**00 20 38.3**	**+0.2**
	0.6nm,0.3s,baz=126,slow=12,SNR=5.1							
	2.3nm,0.5s							
AKTO	**Aktyubinsk**	**16.23**	**327**	⇓P		**Pn**	**00 20 36.1**	**-0.8**
	2.9nm,0.9s							
ZALV	**Zalesovo Beam**	**18.70**	**25**	P		**P**	**00 21 05.0**	**-0.2**
	0.6nm,0.3s,baz=219,slow=10,SNR=11							
	2.2nm,0.4s							
KBZ	**Khabaz**	**22.72**	**295**	P		**P**	**00 21 47.4**	**-0.9**
	1.6nm,0.9s,baz=122,slow=11,SNR=4.4							
	1.6nm,0.9s							
ARCES	**ARCESS Array B**	**40.43**	**337**	P		**P**	**00 24 23.8**	**+0.8**
	5.4nm,1.0s,baz=109,slow=7.7,SNR=3.6							
	5.4nm,1.0s							
HFS	**Hagfors**	**42.65**	**321**	P		**P**	**00 24 41.2**	**0.0**
	1.4nm,0.6s,baz=96,slow=11,SNR=7.8							
	1.4nm,0.6s							
NB2	**NORSAR Subarra**	**43.94**	**322**	P		**P**	**00 24 53.7**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=95,slow=7.9							
NOA	**NORSAR Array B**	**43.94**	**322**	P		**P**	**00 24 51.2**	**-0.5**
	comp=Z,1.2nm,1.0s,baz=95,slow=7.9,SNR=3.8							
	comp=Z,1.2nm,1.0s							
KDAK	**Kodiak Island**	**77.99**	**23**	LR		LR	01 06 23.9	
	comp=Z,221nm,20.6s,baz=140,slow=38							

*SKHL **14** 00:21:22.6±0.2, 45.°60N×152.°40E, h49km±5km, mb5.5/3*
*MOS **14** 00:21:23.3±1.0, 45.°80N×152.°19E, h43km, mb4.8/15, Error ellipse: s-maj=8.2km s-min=7.5km az=123.8*
*NEIC **14** 00:21:24.5±1.7, 45.°8N±0.°1×152.°2E±0.°1, h35km±2km, mb4.6/29, Error ellipse: s-maj=19.7km s-min=12.9km az=141.0*
*IDC **14** 00:21:25.5±0.6, 45.°90N×151.°99E, h34km±5km, mb3.8/24, mbtmp4.0/27, ML3.6/3, MS3.6/6, Error ellipse: s-maj=17.6km s-min=12.7km az=143.0*

ISC 14 00:21:23.8±0.5, 45.70N±0.06×152.21E±0.06, h30km, n197, σ1§37/191, mb4.4/60, MS3.8/5, 16C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.09**	**263**	*e*PN		**Pn**	**00 22 11.8**	**+1.2**
KUR				*e*S		**Sn**	**00 22 48.3**	**+1.8**
KUR				pmax	pmax			
	comp=Z,332nm,0.4s							
KUR				pmax	pmax			
	comp=N,105nm,0.2s							
KUR				pmax	pmax			
	comp=E,69nm,0.2s							
KUR				smax	smax			
	comp=N,668nm,0.4s							
KUR				smax	smax			
	comp=E,233nm,0.3s							
KUR	**Kuril'sk**	**3.09**	**263**	*i* P		**Pn**	**00 22 11.0**	**+0.4**
KUR				AMB	AMB		00 22 12.5	
	comp=E,330nm,0.4s							
KUR				*i* S		**Sn**	**00 22 47.4**	**+0.9**
KUR				A	A		00 22 52.3	
	comp=E,670nm,0.4s							
KUR				A	A		00 22 52.3	
	comp=E,230nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**4.81**	**252**	*e*PN		**Pn**	**00 22 35.9**	**+1.7**
YUK				*e*S		**Sn**	**00 23 31.4**	**+2.5**
YUK				pmax	pmax			
	comp=Z,401nm,0.3s							
YUK				pmax	pmax			
	comp=N,120nm,0.2s							
YUK				pmax	pmax			
	comp=E,65nm,0.2s							
YUK				smax	smax			
	comp=N,171nm,0.2s							
YUK				smax	smax			
	comp=E,417nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**4.81**	**252**	*e*P		**Pn**	**00 22 35.4**	**+1.2**
YUK				AMB	AMB		00 22 36.9	
	comp=E,400nm,0.3s							
YUK				*e*S		**Sn**	**00 23 30.0**	**+1.1**
YUK				A	A		00 23 38.3	
	comp=E,170nm,0.4s							
YUK				A	A		00 23 38.3	
	comp=E,420nm,0.4s							
GLVR	**Golovnino**	**5.16**	**250**	*e*PN		**Pn**	**00 22 39.6**	**+0.7**
GLVR				pmax	pmax			
	comp=Z,184nm,0.3s							
GLVR				pmax	pmax			
	comp=N,129nm,0.2s							
GLVR	**Golovnino**	**5.16**	**250**	*e*P		**Pn**	**00 22 39.6**	**+0.7**
GLVR				AMB	AMB		00 22 41.2	
	comp=N,180nm,0.3s							
GLVR				*e*S		**Sn**	**00 23 37.6**	**+0.2**
GLVR				A	A		00 23 42.5	
	comp=N,330nm,0.3s							
GLVR				A	A		00 23 42.5	
	comp=N,340nm,0.3s							
NMR	**Nemuro--Hokkai**	**5.19**	**246**	*i* PN		**Pn**	**00 22 38.4**	**-1.0**
NMR	**Nemuro--Hokkai**	**5.19**	**246**	*i* P		**Pn**	**00 22 38.4**	**-1.0**
NMR				*i* S		**Sn**	**00 23 35.2**	**-3.0**
RUSJ	**Misakicho**	**5.20**	**255**	*e*PN		**Pn**	**00 22 42.1**	**+2.6**
RUSJ				*e*S		**Sn**	**00 23 42.0**	**+3.6**
SKR	**Severo-Kuril's**	**5.63**	**26**	*e*P		**Pn**	**00 22 44.8**	**-0.5**
AKK	**Akkeshi**	**5.93**	**246**	*e*P		**Pn**	**00 22 50.3**	**+0.8**
PAU	**Pauzhetka**	**6.53**	**26**	*e*P		**Pn**	**00 22 58.2**	**+0.5**
YSS	**Yuzhno-Sakhali**	**6.67**	**284**	P		**Pn**	**00 23 02.2**	**+2.5**
YSS	**Yuzhno-Sakhali**	**6.67**	**284**	*e*PN		**Pn**	**00 23 02.8**	**+3.1**
YSS				*e*S		**Sn**	**00 24 18.8**	**+4.2**
YSS				pmax	pmax			
	comp=Z,60nm,0.5s							
YSS				MLR	MLR			
	comp=Z,800nm,20.0s							
YSS	**Yuzhno-Sakhali**	**6.67**	**284**	*e*P		**Pn**	**00 23 02.2**	**+2.5**
YSS				*e*S		**Sn**	**00 24 16.6**	**+2.0**
JKA	**Kamikawa-asahi**	**7.01**	**260**			**Pn**	**00 23 06.7**	**+2.3**
JKA	**Kamikawa-asahi**	**7.01**	**260**	*e*P		**Pn**	**00 23 06.7**	**+2.3**
ASAJ	**Asahikawa**	**7.01**	**260**	Pn		**Pn**	**00 23 07.3**	**+3.0**
	comp=Z,4.5nm,0.3s,baz=81,slow=14,SNR=13							
ASAJ	**Asahikawa**	**7.01**	**260**	PN		**Pn**	**00 23 06.7**	**+2.3**
ERM	**Erimo**	**7.51**	**244**	Pn		**Pn**	**00 23 12.7**	**+1.5**
ERM	**Erimo**	**7.51**	**244**	PN		**Pn**	**00 23 12.7**	**+1.5**
TYV	**Tymovskoe**	**8.20**	**312**	*e*PN		**Pn**	**00 23 21.6**	**+0.9**
TYV				pmax	pmax			
	comp=Z,26nm,1.3s							
TYV				pmax	pmax			
	comp=Z,200nm,2.1s							
TYV	**Tymovskoe**	**8.20**	**312**	*e*P		**Pn**	**00 23 21.6**	**+0.9**
TYV				*e*S		**Sn**	**00 24 51.3**	**-0.9**
PEA0B	**Petropavlovsk-**	**8.23**	**24**	Pn		**Pn**	**00 23 20.8**	**-0.2**
PEA0B	**Petropavlovsk-**	**8.23**	**24**	*i* PN		**Pn**	**00 23 21.7**	**+0.6**
PETK	**Petropavlovsk-**	**8.23**	**24**	Pn		**Pn**	**00 23 21.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=172,slow=11,SNR=5.6							
	comp=Z,2.7nm,0.5s							
PETK	**Petropavlovsk-**	**8.23**	**24**			**Pn**	**00 23 20.9**	**-0.1**
JTM	**Tenmabayashi**	**9.50**	**243**			**Pn**	**00 23 36.9**	**-1.6**
JMM	**Marumori**	**11.56**	**231**	Pn		**Pn**	**00 24 07.0**	**+0.2**
MA2	**Magadan**	**13.93**	**357**	LR		LR	00 30 19.7	
	comp=Z,62nm,18.2s,baz=113,slow=39							
USRK	**Ussuriysk Ar.**	**14.40**	**271**	Pn		**Pn**	**00 24 45.5**	**0.0**
	comp=Z,1.9nm,0.3s,baz=77,slow=14,SNR=8.9							
	comp=Z,3.8nm,0.6s							
JGF	**Kuroka**	**15.11**	**233**	Pn		**Pn**	**00 24 53.9**	**-1.2**
MDJ	**Mudanjiang**	**15.99**	**274**			**Pn**	**00 25 04.9**	**-1.5**
ZEA	**Zeya**	**17.96**	**306**	*e*P		**Pn**	**00 25 27.2**	**-3.9**
KSRS	**Korea Array**	**19.90**	**254**	P		**P**	**00 25 53.6**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=53,slow=13,SNR=4.3							
	comp=Z,2.1nm,0.7s							
YAK	**Yakutsk**	**20.89**	**330**	LR		LR	00 33 56.6	
	comp=Z,49nm,19.1s,baz=95,slow=36							
YAK	**Yakutsk**	**20.89**	**330**	*e*P		Pn	00 26 07.2	+1.3
YAK				*e**PP		pwP	00 26 20.2	+9.2
YAK				*e*			00 26 32.9	
YAK				*e**SS		sS	00 30 17.9	+13
YAK				pmax	pmax			
	comp=Z,21nm,0.9s							
YAK				pmax	pmax			
	comp=N,3.0nm,0.9s							
YAK				pmax	pmax			
	comp=E,12nm,1.4s							
YAK				pmax	pmax			
	comp=Z,250nm,3.8s							
YAK				pmax	pmax			
	comp=N,230nm,3.2s							
YAK				pmax	pmax			
	comp=E,221nm,3.7s							
YAK	**Yakutsk**	**20.89**	**330**	*e*P		**P**	**00 26 05.4**	**+2.1**
HILR	**Hailar Array B**	**22.12**	**292**	P		**P**	**00 26 16.8**	**+0.2**
	comp=E,0.6nm,0.3s,baz=90,slow=10,SNR=3.4							
	comp=E,0.6nm,0.3s							
TIXI	**Tiksi**	**28.31**	**345**	LR		LR	00 39 29.3	
	comp=E,49nm,18.1s,baz=196,slow=39							
H11N2	**WAKE ISLAND Hy**	**28.60**	**150**	T		T	00 57 45.0	
	baz=338,slow=75,SNR=453							
H11N1	**WAKE ISLAND Hy**	**28.61**	**150**	T		T	00 57 38.5	
	baz=338,slow=75,SNR=228							
H11N3	**WAKE ISLAND Hy**	**28.61**	**150**	T		T	00 57 43.6	
	baz=338,slow=75,SNR=263							
H11S1	**WAKE ISLAND Hy**	**29.66**	**151**	T		T	00 59 01.6	
	baz=339,slow=76,SNR=303							
H11S3	**WAKE ISLAND Hy**	**29.67**	**151**	T		T	00 59 06.2	
	baz=339,slow=76,SNR=196							
H11S2	**WAKE ISLAND Hy**	**29.68**	**151**	T		T	00 59 03.9	
	baz=339,slow=76,SNR=235							
SONM	**Songino Array**	**31.11**	**291**	P		**P**	**00 27 40.2**	**+0.6**
	comp=E,0.3nm,0.3s,baz=84,slow=9.1,SNR=1.9							
	comp=E,0.3nm,0.3s							
N18K	**Kilae Creek**	**33.51**	**45**	P		**P**	**00 28 02.0**	**+1.7**
N18K						IAmb	IAmb	00 28 45.1
	comp=Z,10nm,1.2s							
LZH	**Lanzhou**	**37.30**	**273**	P		**P**	**00 28 34.8**	**+1.4**
LZH				pmax	pmax			
	comp=Z,50nm,1.2s							
LZDM	**Lanzhou Array**	**37.47**	**272**	P		**P**	**00 28 35.6**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=62,slow=3.5,SNR=8.5							
	comp=Z,2.1nm,0.3s							
GTA	**Gaotai**	**38.52**	**280**	*e*P		**P**	**00 28 44.3**	**+0.7**
GTA				pmax	pmax			
	comp=Z,9.0nm,0.7s							
DGZ	**Jazzator, Alta**	**42.57**	**300**	*i* P		**P**	**00 29 15.8**	**-1.1**
DGZ				pmax	pmax			
	comp=Z,3.0nm,1.3s							
ZALV	**Zalesovo Beam**	**42.73**	**306**	P		**P**	**00 29 15.1**	**-2.8**
	comp=Z,0.5nm,0.4s,baz=98,slow=11,SNR=1.8							
ZALV				PcP		**PcP**	**00 31 09.3**	**+0.3**
	comp=Z,3.1nm,1.1s,baz=78,slow=2.1,SNR=6.1							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**42.73**	**306**	P		**P**	**00 29 15.5**	**-2.4**
ZALV	**Zalesovo Beam**	**42.73**	**306**	P		**P**	**00 29 15.5**	**-2.4**
MK31	**Makanchi Array**	**46.87**	**298**	*i* P		**P**	**00 29 48.4**	**-2.7**
MK31				pmax	pmax			
	comp=Z,3.0nm,1.0s							
MKAR	**Makanchi Array**	**46.87**	**298**	P		**P**	**00 29 50.5**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=51,slow=4.4,SNR=5.1							
MKAR				PcP		**PcP**	**00 31 24.1**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=78,slow=3.1,SNR=4.2							
MKAR				LR		LR	00 50 30.1	
	comp=Z,89nm,18.0s,baz=108,slow=37							
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**46.87**	**298**	P		**P**	**00 29 50.3**	**-0.7**
MAKZ	**Makanchi**	**47.06**	**298**	P		**P**	**00 29 51.7**	**-0.8**
MAKZ	**Makanchi**	**47.06**	**298**	P		**P**	**00 29 51.7**	**-0.8**
MAKZ				pmax	pmax			
	comp=Z,4.0nm,1.1s							
KURK	**Kurchatov**	**47.43**	**304**	P		**P**	**00 29 53.2**	**-2.1**
KURK	**Kurchatov**	**47.43**	**304**	P		**P**	**00 29 53.7**	**-1.6**
KURK							00 31 25.2	
KURK	**Kurchatov**	**47.43**	**304**	*e*P		**P**	**00 29 53.7**	**-1.6**
KURBB	**Kurchatov Arra**	**47.52**	**304**	P		**P**	**00 29 53.7**	**-2.3**
	comp=Z,0.6nm,0.4s,baz=70,slow=8.5,SNR=6.6							
KURBB				PcP		**PcP**	**00 31 25.2**	**-0.5**
	comp=Z,0.3nm,0.2s,baz=79,slow=3.3,SNR=4.4							
	comp=Z,0.6nm,0.4s							
BVAR	**Borovoye Array**	**51.05**	**310**	P		**P**	**00 30 20.6**	**-2.3**
	comp=Z,0.7nm,0.4s,baz=51,slow=8.9,SNR=4.5							
	comp=Z,0.7nm,0.4s							
BORK	**Borovoye**	**51.07**	**310**	*i* P		**P**	**00 30 21.0**	**-2.1**
BORK				pmax	pmax			
	comp=Z,1.0nm,0.8s							
CHTO	**Chiang Mai**	**51.27**	**257**			**P**	**00 30 25.6**	**+0.6**
CHTO				IAmb	IAmb		00 30 27.5	
	comp=Z,4.1nm,0.8s							
CHTO	**Chiang Mai**	**51.27**	**257**	P		**P**	**00 30 25.6**	**+0.6**
CHTO				pmax	pmax			
	comp=Z,4.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**51.52**	**256**	P		**P**	**00 30 28.3**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=35,slow=8.4,SNR=6.6							
	comp=Z,0.6nm,0.3s							
SPITS	**Spitsbergen Ar**	**53.53**	**350**	P		**P**	**00 30 39.4**	**-1.6**
	comp=Z,4.4nm,1.0s,baz=64,slow=8.2,SNR=7.0							
	comp=Z,4.4nm,1.0s							
AAK	**Ala-Archa**	**53.74**	**297**	LR		LR	00 54 10.0	
	comp=Z,79nm,18.9s,baz=75,slow=37							
ARSB	**Arslanbob**	**55.40**	**296**	P		**P**	**00 30 55.3**	**0.0**
ARSB				IAmb	IAmb		00 30 57.7	
	comp=Z,6.9nm,1.3s							
ARSB	**Arslanbob**	**55.40**	**296**	P		**P**	**00 30 55.3**	**0.0**
ARSB				pmax	pmax			
	comp=Z,7.0nm,1.3s							
KK31	**Karatay Array**	**55.96**	**299**	P		**P**	**00 30 58.2**	**-0.9**
KK31	**Karatay Array**	**55.96**	**299**	*i* P		**P**	**00 30 58.4**	**-0.7**
KKAR	**Karatay Array**	**55.96**	**299**	P		**P**	**00 30 58.2**	**-0.9**
KKAR	**Karatay Array**	**55.96**	**299**	P		**P**	**00 30 58.2**	**-0.9**
GAR	**Garm**	**58.39**	**295**	P		**P**	**00 31 15.8**	**-0.8**
AB31	**Akbulak array**	**58.62**	**310**			**P**	**00 31 16.2**	**-1.5**
AB31				IAmb	IAmb		00 31 18.9	
	comp=Z,1.7nm,0.5s							
AB31	**Akbulak array**	**58.62**	**310**	*i* P		**P**	**00 31 16.1**	**-1.7**
ABKAR	**Akbulak array**	**58.62**	**310**			**P**	**00 31 16.2**	**-1.6**
ARCES	**ARCESS Array B**	**58.64**	**341**	P		**P**	**00 31 16.6**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=55,slow=5.9,SNR=8.7							
	comp=Z,1.1nm,0.5s							
ARCES	**ARCESS Array B**	**58.64**	**341**	P		**P**	**00 31 16.4**	**-1.2**
ARCES	**ARCESS Array B**	**58.64**	**341**	*e*P		**P**	**00 31 17.3**	**-0.3**
ARCES				pmax	pmax			
	comp=Z,14nm,1.3s							
CHGR	**Chuyangaron**	**59.33**	**295**			**P**	**00 31 22.7**	**-0.3**
CHGR	**Chuyangaron**	**59.33**	**295**	P		**P**	**00 31 22.7**	**-0.3**
CHGR				pmax	pmax			
	comp=Z,26nm,1.0s							
NIL	**Nilore**	**59.64**	**288**	P		**P**	**00 31 25.1**	**0.0**
NIL	**Nilore**	**59.64**	**288**	P		**P**	**00 31 25.1**	**0.0**
NIL				pmax	pmax			
	comp=Z,11nm,0.9s							
SUMG	**Summit**	**61.79**	**4**	P		**P**	**00 31 39.3**	**-0.3**
SUMG				IAmb	IAmb		00 31 42.7	
	comp=Z,6.5nm,1.0s							
SUMG	**Summit**	**61.79**	**4**	P		**P**	**00 31 39.3**	**-0.3**
SUMG				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KBL	**Kabul**	**61.87**	**292**			**P**	**00 31 39.6**	**-0.9**
KBL				IAmb	IAmb		00 31 40.4	
	comp=Z,4.8nm,0.7s							
KBL	**Kabul**	**61.87**	**292**	P		**P**	**00 31 39.6**	**-0.9**
KBL				pmax	pmax			
	comp=Z,5.0nm,0.7s							
NVAR	**Mina Array Bea**	**63.48**	**61**	P		**P**	**00 31 53.8**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=290,slow=6.8,SNR=2.4							
NVAR				pP		**sP**	**00 32 03.8**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=294,slow=7.5,SNR=5.7							
	comp=Z,0.3nm,0.6s							
FINES	**FINESS Array B**	**64.72**	**335**	P		**P**	**00 31 57.1**	**-1.6**
	comp=Z,3.2nm,0.5s,baz=40,slow=6.4,SNR=25							
	comp=Z,3.2nm,0.5s							
FINES	**FINESS Array B**	**64.72**	**335**	P		**P**	**00 31 56.9**	**-1.7**
OBN	**Obninsk**	**65.82**	**325**	*e*P		P	00 31 58.1	-7.7
OBN				*e**PP		sP	00 32 16.7	-0.7
OBN				*e*

AKBB	**Malin Array Si**	**72.07 326**		**P**	**P**	**00 32 42.9**	**-1.9**
AKBB			IAmb	IAmb		00 32 44.5	
	comp=Z,5.3nm,0.6s						
AKBB	**Malin Array Si**	**72.07 326**	P	**P**		**00 32 42.9**	**-1.9**
AKBB			pmax	pmax			
	comp=Z,5.0nm,0.6s						
AKBB	**Malin Array Si**	**72.07 326**	P	**P**		**00 32 44.1**	**-0.7**
AK04	**Malin Array Si**	**72.07 326**	P	**P**		**00 32 44.1**	**-0.7**
KIEV	**Kiev**	**72.08 326**		**P**		**00 32 43.0**	**-1.9**
KIEV			IAmb	IAmb		00 32 44.5	
	comp=Z,4.7nm,0.6s						
KIEV	**Kiev**	**72.08 326**	⇑P	**P**		**00 32 43.4**	**-1.4**
KIEV	**Kiev**	**72.08 326**	⇑P	**P**		**00 32 43.4**	**-1.4**
KIEV	**Kiev**	**72.08 326**	P	**P**		**00 32 44.1**	**-0.7**
	comp=Z,26nm,0.6s						
AK01	**Malin Array Si**	**72.08 326**	P	**P**		**00 32 44.1**	**-0.7**
AK21	**Malin Array Si**	**72.08 326**	P	**P**		**00 32 44.1**	**-0.7**
AK22	**Malin Array Si**	**72.08 326**	P	**P**		**00 32 44.1**	**-0.7**
AK11	**Malin Array Si**	**72.11 326**	P	**P**		**00 32 44.3**	**-0.7**
AK19	**Malin Array Si**	**72.13 326**	P	**P**		**00 32 44.4**	**-0.8**
AK14	**Malin Array Si**	**72.17 326**	P	**P**		**00 32 44.6**	**-0.8**
GNI	**Garni**	**72.73 310**	P	**P**		**00 32 49.3**	**+0.1**
GNI			IAmb	IAmb		00 33 04.0	
	comp=Z,7.9nm,1.1s						
GNI	**Garni**	**72.73 310**	P	**P**		**00 32 49.3**	**+0.1**
GNI			pmax	pmax			
	comp=Z,8.0nm,1.2s						
RNPP8	**Varash**	**72.85 328**	P	**P**		**00 32 48.5**	**-0.9**
RNPP5	**Staryi Chortor**	**72.92 328**	P	**P**		**00 32 48.9**	**-0.9**
LUBAR	**Lubar, Ukraine**	**73.26 326**	P	**P**		**00 32 51.2**	**-0.7**
SORM	**Soroca**	**74.45 325**	⇑P	**P**		**00 32 58.0**	**-0.9**
SORM	**Soroca**	**74.45 325**	⇑P	**P**		**00 32 58.0**	**-0.9**
KMPD	**K-Podol'skiy**	**74.86 326**	P	**P**		**00 33 00.5**	**-0.7**
GURO	**Guroymak-BITLI**	**75.33 310**	P	**P**		**00 33 04.8**	**+0.5**
STNU	**Starunia**	**75.49 327**	P	**P**		**00 33 04.1**	**-0.8**
KSV	**Kosov**	**75.60 327**	P	**P**		**00 33 04.6**	**-0.9**
OJC	**Ojcow**	**75.93 331**		**P**		**00 33 07.2**	**-0.1**
OJC	**Ojcow**	**75.93 331**	P	**P**		**00 33 07.3**	**-0.1**
BUR08	**Bucovina Ar. S**	**76.10 326**		**P**		**00 33 08.3**	**-0.2**
BUR08			IAmb	IAmb		00 33 09.4	
	comp=Z,5.2nm,0.7s						
BURAR	**Bucovina Array**	**76.11 326**	P	**P**		**00 33 08.3**	**-0.2**
BURAR			IAmb	IAmb		00 33 09.7	
	comp=Z,4.1nm,0.8s						
BURAR	**Bucovina Array**	**76.11 326**	⇑P	**P**		**00 33 08.4**	**-0.2**
BURAR	**Bucovina Array**	**76.11 326**	⇑P	**P**		**00 33 08.4**	**-0.2**
TESR	**Tescani**	**76.44 325**	⇑P	**P**		**00 33 10.0**	**-0.4**
TESR	**Tescani**	**76.44 325**	P	**P**		**00 33 09.6**	**-0.8**
	comp=Z,19nm,1.7s						
TRSU	**Trosnyk**	**76.58 328**	P	**P**		**00 33 11.1**	**0.0**
BERU	**Beregovo**	**76.58 328**	P	**P**		**00 33 10.3**	**-0.8**
MORC	**Moravsky Berou**	**77.07 332**		**P**		**00 33 13.3**	**-0.6**
MORC			IAmb	IAmb		00 33 15.0	
	comp=Z,7.3nm,1.0s						
MORC	**Moravsky Berou**	**77.07 332**	⇑P	**P**		**00 33 13.9**	**0.0**
MORC	**Moravsky Berou**	**77.07 332**	*e*P	**P**		**00 33 13.8**	**0.0**
MORC	**Moravsky Berou**	**77.07 332**	⇑P	**P**		**00 33 13.9**	**0.0**
TURR	**Turia**	**77.07 325**	⇑P	**P**		**00 33 15.3**	**+1.4**
OZUR		**77.13 325**	⇑P	**P**		**00 33 15.5**	**+1.2**
CLL	**Collm**	**77.16 335**	P	**P**		**00 33 13.6**	**-0.6**
CLL			IAmb	IAmb		00 33 14.7	
	comp=Z,8.6nm,1.1s						
CLL	**Collm**	**77.16 335**	*i* P	**P**		**00 33 14.1**	**-0.2**
CLL			pmax	pmax			
	comp=Z,10.0nm,1.3s						
CLL	**Collm**	**77.16 335**	P	**P**		**00 33 13.8**	**-0.5**
	comp=Z,8.6nm,0.9s						
CLL	**Collm**	**77.16 335**	*i* P	**P**		**00 33 14.1**	**-0.2**
	comp=Z,10.0nm,1.3s						
EKA	**Eskdalemuir Ar**	**77.21 346**	P	**P**		**00 33 14.3**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=16,slow=5.0,SNR=14						
	comp=Z,0.7nm,0.3s						
ISR	**Istrita**	**77.62 324**	P	**P**		**00 33 16.3**	**-0.7**
DRGR		**77.76 327**	⇑P	**P**		**00 33 18.2**	**+0.3**
DRGR		**77.76 327**	⇑P	**P**		**00 33 18.2**	**+0.3**
VRAC	**Vranov**	**77.79 332**	⇑P	**P**		**00 33 18.4**	**+0.5**
VRAC	**Vranov**	**77.79 332**	*e*P	**P**		**00 33 18.0**	**+0.1**
VRAC	**Vranov**	**77.79 332**	⇑P	**P**		**00 33 18.4**	**+0.5**
JAVC	**Velka Javorina**	**77.82 331**	*e*P	**P**		**00 33 19.0**	**+0.9**
KRUC	**Moravsky**	**78.07 332**	*e*P	**P**		**00 33 19.4**	**0.0**
ARR	**Arges**	**78.19 325**	⇓P	**P**		**00 33 19.6**	**-0.7**
TXAR	**Lajitas Array**	**78.56 60**	P	**P**		**00 33 23.7**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=301,slow=4.0,SNR=11						
TXAR			pP		**sP**	**00 33 35.1**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=303,slow=3.9,SNR=8.8						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**78.56 60**	P	**P**		**00 33 23.3**	**+0.7**
TXAR	**Lajitas Array**	**78.56 60**	P	**P**		**00 33 23.3**	**+0.7**
BRTR	**Keskin Array B**	**78.72 316**	P	**P**		**00 33 23.6**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=82,slow=3.2,SNR=6.7						
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**78.72 316**	P	**P**		**00 33 22.7**	**-0.7**
BRTR	**Keskin Array B**	**78.72 316**	P	**P**		**00 33 22.7**	**-0.7**
KHC	**Kasperske Hory**	**78.91 334**	P	**P**		**00 33 23.8**	**-0.3**
KHC			IAmb	IAmb		00 33 25.4	
	comp=Z,4.4nm,1.0s						
KHC	**Kasperske Hory**	**78.91 334**	P	**P**		**00 33 23.8**	**-0.3**
KHC			pmax	pmax			
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**79.12 334**	P	**P**		**00 33 25.1**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=41,slow=7.1,SNR=5.3						
	comp=Z,0.7nm,0.6s						
GERES	**GERESS Array B**	**79.12 334**	*e*P	**P**		**00 33 26.4**	**+1.1**
CONA	**Conrad Observa**	**79.23 332**	pP	pP		00 33 37.8	+3.2
RONA	**Rosalia, Austr**	**79.28 331**	*e*P	P		00 33 22.3	-3.9
	comp=Z,5.8nm,1.5s						
MOA	**Molln**	**79.82 333**	*e*P	P		00 33 23.0	-6.1
	comp=Z,6.6nm,1.4s						
ARSA	**Arzberg**	**79.93 332**	*i* PcP	**P**		**00 33 30.7**	**+1.0**
	comp=Z,5.8nm,1.4s						
BIOA	**Bad Ischl, Aus**	**80.16 333**	*e*PcP	**P**		**00 33 34.9**	**+4.0**
	comp=Z,5.5nm,1.3s						
SOKA	**Soboth**	**80.60 332**	*i* P	P		00 33 28.3	-5.0
	comp=Z,3.0nm,0.9s						
LESA	**Schwarzleotal**	**80.70 333**	*e*P	P		00 33 29.3	-4.5
	comp=Z,2.0nm,0.6s						
KBA	**Koelnbreinsper**	**80.79 333**	*e*P	P		00 33 27.1	-7.5
	comp=Z,2.7nm,0.5s						
OBKA	**Obir**	**80.90 332**	*e*P	**P**		**00 33 32.7**	**-2.4**
	comp=Z,11nm,1.4s						
WATA	**Walderalm**	**81.12 334**	*e*P	**P**		**00 33 32.6**	**-3.6**
	comp=Z,10nm,1.4s						
WTTA	**Wattenberg**	**81.16 334**	*i* PcP	**P**		**00 33 37.2**	**+0.7**
	comp=Z,6.5nm,0.5s						
RETA	**Reutte**	**81.23 335**	*e*P	P		00 33 28.0	-8.7
	comp=Z,0.6nm,0.3s						
SQTA	**Sankt Quirin**	**81.33 334**	*e*P	P		00 33 30.9	-6.4
	comp=Z,2.9nm,1.0s						
MMAI	**Mount Meron Ar**	**83.03 311**	P	**P**		**00 33 47.4**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=40,slow=5.8,SNR=8.7						
	comp=Z,1.5nm,0.5s						
H03N2	**Juan Fernandez**	**139.37 91**	T	T		03 16 26.3	
	baz=303,slow=74,SNR=13						
H03N3	**Juan Fernandez**	**139.38 91**	T	T		03 16 26.0	
	baz=303,slow=74,SNR=14						
H03N1	**Juan Fernandez**	**139.38 91**	T	T		03 16 27.1	
	baz=303,SNR=29						

*IDC **14** 00:23:24.4±27.0, 27°.77N×52°.75E, h0km, mb4.1/3, mbtmp3.9/4, ML3.2/1, MS3.6/1, Error ellipse: s-maj=539.1km s-min=43.3km az=1.0*
*TEH **14** 00:23:27.7, 27°.82N×52°.72E, h19km±33km*
ISC 14 00:23:27.8±1.0, 27°.83N±0°.08×52°.71E±0°.07, h15km, n16, σ1s25/15, mb4.0/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.63**	**140**	Pg	**Pg**	**00 23 39.7**	**-0.6**
JHRM	**Jahrom**	**1.02**	**48**	Pg	**Pb**	**00 23 46.6**	**-0.6**
DSBU	**Dashti - Bushe**	**1.39**	**293**	Pg	**Pn**	**00 23 54.2**	**+1.5**
LAR1	**LAR**	**1.48**	**96**	Pg	**Pb**	**00 23 55.5**	**+0.3**
SHI	**Shiraz**	**1.81**	**355**	Pn	**Pn**	**00 23 59.9**	**+1.2**
IMEH	**Mehriz**	**3.92**	**25**	Pn	**Pn**	**00 24 29.4**	**+1.7**
KRBR	**Kerman**	**4.15**	**58**	Pn	**Pn**	**00 24 32.7**	**+1.8**
KHGB	**Koh Gabri**	**4.16**	**52**	Pn	**Pn**	**00 24 32.1**	**+1.1**
IBAF	**Bafgh**	**4.50**	**33**	Pn	**Pn**	**00 24 36.6**	**+1.1**
ICHK	**Chekchek**	**4.64**	**18**	Pn	**Pn**	**00 24 38.7**	**+1.1**
CHMN	**Cheshme madani**	**4.70**	**63**	Pn	**Pn**	**00 24 39.8**	**+1.3**
BRTR	**Keskin Array B**	**19.75**	**312**	P	**P**	**00 27 57.8**	**+0.5**
	0.1nm,0.3s,baz=133,slow=12,SNR=5.0						
	0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**35.12**	**33**	P	**P**	**00 30 19.8**	**-0.7**
	1.0nm,0.4s,baz=234,slow=9.2,SNR=6.7						
	1.0nm,0.4s						
FINES	**FINESS Array B**	**38.03**	**340**	P	**P**	**00 30 44.1**	**-1.1**
	2.4nm,0.9s,baz=143,slow=8.3,SNR=8.1						
	2.4nm,0.9s						
HFS	**Hagfors**	**41.72**	**332**	P	**P**	**00 31 15.1**	**-0.8**
	3.1nm,0.9s,baz=120,slow=8.8,SNR=8.3						
	3.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**49.63**	**264**	LR	LR	00 55 21.5	
	comp=Z,62nm,20.0s,baz=332,slow=39						

*IDC **14** 00:25:25.3±1.2, 18°.93S×177°.79E, h0km, mb4.2/5, mbtmp4.2/5, MS3.4/11, Error ellipse: s-maj=49.5km s-min=28.5km az=160.0*
ISC 14 00:25:30.6±1.2, 18°.9S±0°.3×177°.7E±0°.2, h35km, n15, σ0s38/6, mb4.1/5, MS3.4/9, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.04**	**251**	LR	LR	00 31 47.6	
	comp=Z,428nm,19.4s,baz=222,slow=34						
RAO	**Raoul Island**	**11.06**	**160**	LR	LR	00 31 23.2	
	comp=Z,147nm,18.2s,baz=59,slow=32						
RAR	**Rarotonga**	**21.26**	**100**	LR	LR	00 36 30.2	
	comp=Z,47nm,21.6s,baz=257,slow=31						
PMG	**Port Moresby**	**31.05**	**283**	LR	LR	00 43 10.3	
	comp=Z,66nm,18.1s,baz=172,slow=34						
PPT	**Papeete**	**31.06**	**93**	LR	LR	00 40 51.3	
	comp=Z,51nm,21.8s,baz=269,slow=30						
STKA	**Stephens Creek**	**34.95**	**241**	P	**P**	**00 32 19.2**	**-0.2**
	7.1nm,1.0s,baz=63,slow=6.1,SNR=6.7						
STKA				LR	LR	00 45 16.6	
	comp=Z,78nm,19.3s,baz=28,slow=34						
	7.1nm,1.0s						
WRA	**Warramunga Arr**	**40.85**	**261**	P	**P**	**00 33 09.8**	**+0.4**
	1.3nm,0.8s,baz=99,slow=7.8,SNR=6.1						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**40.99**	**255**	P	**P**	**00 33 10.6**	**0.0**
	3.6nm,0.7s,baz=84,slow=8.5,SNR=37						
ASAR				LR	LR	00 49 28.4	
	comp=Z,55nm,20.6s,baz=103,slow=35						
	3.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**49.25**	**262**	LR	LR	00 55 12.6	
	comp=Z,57nm,18.1s,baz=48,slow=36						
DAV	**Davao City (W)**	**57.50**	**292**	LR	LR	01 00 19.1	
	comp=Z,8.9nm,18.1s,baz=72,slow=36						
QSPA	**South Pole Qui**	**71.17**	**180**	P	**P**	**00 36 45.7**	**0.0**
	0.7nm,0.4s,baz=315,slow=0.8,SNR=4.6						
	0.7nm,0.4s						
LPIG	**La Paz**	**82.11**	**61**	LR	LR	01 08 58.6	
	comp=Z,44nm,18.9s,baz=307,slow=32						
ANMO	**Albuquerque**	**89.59**	**53**	LR	LR	01 11 16.2	
	comp=Z,48nm,19.6s,baz=166,slow=31						
TXAR	**Lajitas Array**	**89.63**	**59**	P	**P**	**00 38 25.4**	**+0.2**
	1.0nm,1.0s,baz=231,slow=4.1,SNR=6.0						
	1.0nm,1.0s						
GERES	**GERESS Array B**	**147.44**	**340**	PKPbc	**PKPbc**	**00 45 10.4**	**-0.5**
	0.5nm,0.5s,baz=27,slow=4.8,SNR=4.4						

*DSN **14** 00:56:26.0±1.8, 27°.56N×58°.19E, h10km, ML3.2/9, Error ellipse: s-maj=25.2km s-min=15.7km az=149.0*
*IDC **14** 00:56:29.0±3.6, 27°.04N×58°.00E, h0km, mb3.7/8, mbtmp3.7/8, MS3.3/3, Error ellipse: s-maj=74.6km s-min=30.2km az=151.0*
*OMAN **14** 00:56:32.1±0.1, 27°.24N×58°.12E, h128km±1km, mb3.9/5, ml3.5/18, Error ellipse: s-maj=1.2km s-min=0.7km az=27.0*
*TEH **14** 00:56:32.8, 27°.07N×57°.94E, h20km±68km*
ISC 14 00:56:32.6±2.4, 27°.16N±0°.04×57°.98E±0°.04, h17km±15km, n70, σ1s91/89, mb3.6/7, MS3.3/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**1.31**	**283**	Pg	**Pn**	**00 56 57.1**	**+0.9**
GENO	**Geno**	**1.63**	**279**	Pg	**Pn**	**00 57 02.2**	**+1.6**
BANOM	**Banah**	**1.95**	**231**	S	**Sb**	**00 57 33.6**	**+2.0**
BANOM	**Banah**	**1.95**	**231**	P	**Pn**	**00 57 06.0**	**+1.1**
BANOM				S	**Sg**	**00 57 35.6**	**+0.3**
SHME	**Shamm**	**1.98**	**237**	P	**Pn**	**00 57 07.5**	**+2.2**
	SNR=5.8						
SHME				S	**Sb**	**00 57 33.7**	**+1.0**
SHME	**Shamm**	**1.98**	**237**	P	**Pn**	**00 57 06.2**	**+0.8**
SHME				S	**Sb**	**00 57 33.6**	**+0.9**
MDH	**Madha**	**2.39**	**220**	P	**Pn**	**00 57 10.1**	**-0.9**
MASF	**Masafi**	**2.42**	**223**	P	**Pn**	**00 57 12.9**	**+1.5**
	SNR=7.3						
MASF				S	**Sb**	**00 57 46.5**	**+1.2**
MSFE	**Esma-Masafi**	**2.43**	**223**	P	**Pn**	**00 57 11.6**	**+0.1**
NGRK	**Negar Kerman**	**2.71**	**336**	Pn	**Pn**	**00 57 17.5**	**+1.8**
CHMN	**Cheshme madani**	**2.72**	**352**	Pn	**Pn**	**00 57 18.6**	**+2.8**
UOSS	**Minazif**	**2.72**	**216**	Pn	**Pn**	**00 57 15.5**	**0.0**
UOSS	**Minazif**	**2.72**	**216**	P	**Pn**	**00 57 16.6**	**+1.1**
UOSS				S	**Sn**	**00 57 48.3**	**+0.1**
CHBR	**Chabahar**	**2.73**	**124**	Pn	**Pn**	**00 57 16.6**	**+1.0**
HATD	**Hatta, Dubai**	**2.86**	**216**	P	**Pn**	**00 57 18.4**	**+0.9**
HATD	**Hatta, Dubai**	**2.86**	**216**	P	**Pn**	**00 57 17.0**	**-0.4**
NAZ	**Nazwa, Dubai**	**3.00**	**224**	P	**Pn**	**00 57 20.5**	**+1.1**
KRBR	**Kerman**	**3.01**	**339**	Pn	**Pn**	**00 57 23.2**	**+3.5**
ASHO	**Ashiyiah**	**3.01**	**216**	P	**Pn**	**00 57 20.7**	**+1.1**
	SNR=12						
ASHO				S	**Sn**	**00 57 59.7**	**+4.3**
FAQ	**Al Faqa, Dubai**	**3.23**	**222**	S	**Sn**	**00 58 04.2**	**+3.6**
LAR1	**LAR**	**3.25**	**280**	Pn	**Pn**	**00 57 24.2**	**+1.4**
SOHO	**SOHO**	**3.28**	**204**	P	**Pn**	**00 57 22.5**	**-0.8**
SOHO	**SOHO**	**3.28**	**204**	P	**Pn**	**00 57 22.2**	**-1.1**
NGCH	**Negor - Chabah**	**3.35**	**122**	P	**Pn**	**00 57 22.2**	**-2.0**
KRM1	**Kerman Provinc**	**3.39**	**350**	Pn	**Pn**	**00 57 27.4**	**+2.4**
KHGB	**Koh Gabri**	**3.46**	**338**	Pn	**Pn**	**00 57 29.8**	**+3.8**
ASUD	**Al Ashush, Dub**	**3.48**	**224**	P	**Pn**	**00 57 27.0**	**+1.1**
	SNR=15						
ASUD				S	**Sn**	**00 58 10.6**	**+4.0**
ASUD	**Al Ashush, Dub**	**3.48**	**224**	P	**Pn**	**00 57 27.0**	**+1.1**
HOQ	**Hoqain**	**3.61**	**190**	Pn	**Pn**	**00 57 27.4**	**-0.5**
HOQ	**Hoqain**	**3.61**	**190**	P	**Pn**	**00 57 27.2**	**-0.6**
HOQ				S	**Sn**	**00 58 13.6**	**+3.4**
ALNE	**Al Ain**	**3.69**	**214**	P	**Pn**	**00 57 31.6**	**+2.7**
	SNR=9.8						
ALNE				S	**Sn**	**00 58 16.2**	**+4.2**
ALNE	**Al Ain**	**3.69**	**214**	P	**Pn**	**00 57 30.1**	**+1.2**
SRVN	**Saravan**	**3.94**	**85**	Pn	**Pn**	**00 57 35.1**	**+2.7**
WSAR	**Wadi Sarin**	**3.95**	**171**	P	**Pn**	**00 57 33.0**	**+0.5**
	SNR=8.7						
WSAR				S	**Sn**	**00 58 18.3**	**0.0**
ZRDN	**Zarand Kerman**	**4.00**	**342**	Pn	**Pn**	**00 57 36.4**	**+3.1**
ARQ	**Araqi**	**4.03**	**199**	P	**Pn**	**00 57 36.0**	**+2.4**
	SNR=74						
ARQ				S	**Sn**	**00 58 24.6**	**+4.2**
SMDO	**Samad**	**4.08**	**179**	P	**Pn**	**00 57 35.0**	**+0.6**
	SNR=8.0						
SMDO				S	**Sn**	**00 58 22.5**	**+0.7**
NHDN	**Nehbandan**	**4.59**	**23**	Pn	**Pn**	**00 57 43.8**	**+2.5**
WBK	**Wadi Bani Khal**	**4.62**	**169**	Pn	**Pn**	**00 57 41.8**	**+0.2**
WBK	**Wadi Bani Khal**	**4.62**	**169**	P	**Pn**	**00 57 42.0**	**+0.3**
	SNR=24						
WBK				S	**Sn**	**00 58 34.4**	**-0.6**
JMDO	**Jabal Madar**	**4.77**	**179**	P	**Pn**	**00 57 44.7**	**+1.0**
JMDO				S	**Sn**	**00 58 40.3**	**+1.6**
UMZA	**Um Al Zommool**	**5.11**	**211**	P	**Pn**	**00 57 50.3**	**+1.9**
IMEH	**Mehriz**	**5.14**	**326**	Pn	**Pn**	**00 57 51.1**	**+2.0**
JLN	**Jalan Bani Buh**	**5.15**	**165**	P	**Pn**	**00 57 49.1**	**+0.1**
	SNR=13						
JLN				S	**Sn**	**00 58 47.3**	**-0.8**
GHWR	**Ruwais**	**5.60**	**237**	P	**Pn**	**00 57 56.3**	**+1.1**
GHWR				S	**Sn**	**00 58 59.4**	**+0.2**
ITEG	**Tejag**	**5.76**	**6**	Pn	**Pn**	**00 57 60.0**	**+2.5**
MZR	**Muzera**	**5.81**	**226**	P	**Pn**	**00 57 58.4**	**+0.3**
ICHK	**Chekchek**	**5.94**	**329**	Pn	**Pn**	**00 58 02.6**	**+2.6**
MHTO	**MHTO**	**6.15**	**180**	P	**Pn**	**00 58 02.9**	**+0.2**
MHTO				S	**Sn**	**00 59 12.2**	**-0.3**
SHMA	**Al-Shehemyia**	**6.42**	**260**	P	**Pn**	**00 58 07.3**	**+0.9**
SHMA				S	**Sn**	**00 59 19.6**	**+0.4**
TRNA	**Turayna**	**6.55**	**250**	P	**Pn**	**00 58 09.2**	**+1.0**
	SNR=12						
TRNA				S	**Sn**	**00 59 21.8**	**-0.8**
SHRT	**Shahrakht**	**6.76**	**17**	Pn	**Pn**	**00 58 14.5**	**+3.3**
SMRA	**Abu-Samra**	**6.88**	**251**	P	**Pn**	**00 58 13.1**	**+0.5**
SMRA				S	**Sn**	**00 59 30.6**	**+0.1**
IBRJ	**Brojen**	**7.53**	**311**	Pn	**Pn**	**00 58 23.7**	**+1.9**
ISFB	**Sefidab**	**8.70**	**327**	Pn	**Pn**	**00 58 40.2**	**+2.4**
KBD	**Kabd**	**9.30**	**285**	P	**Pn**	**00 58 44.5**	**-1.4**
KBD				S	**Sn**	**01 00 27.0**	**-3.1**
WHFO	**Wadi Hawf**	**9.98**	**204**	P	**Pn**	**00 58 54.0**	**-1.4**
	SNR=12						
ABTO	**Aybut**	**10.68**	**205**	P	**Pn**	**00 59 01.6**	**-3.3**
RAYN	**Ar Rayn**	**11.85**	**255**	P	**Pn**	**00 59 17.9**	**-3.0**
RAYN	**Ar Rayn**	**11.85**	**255**	P	**Pn**	**00 59 17.8**	**-3.1**
BRTR	**Keskin Array B**	**23.78**	**308**	P	**P**	**01 01 44.7**	**+0.2**
	1.2nm,0.9s,baz=122,slow=9.7,SNR=6.1						
	1.2nm,0.9s						
BVAR	**Borovoye Array**	**27.44**	**16**	P	**P**	**01 02 17.4**	**-0.1**
	0.8nm,0.6s,baz=206,slow=6.3,SNR=4.7						
	0.8nm,0.6s						
ARTI	**Arti**	**29.21**	**0**	LR	LR	01 13 46.6	
	comp=Z,65nm,18.2s,baz=310,slow=35						
BRDH	**Bariadhala**	**30.80**	**91**	LR	LR	01 17 08.4	
	comp=Z,34nm,21.1s,baz=228,slow=40						
ZALV	**Zalesovo Beam**	**33.26**	**29**	P	**P**	**01 03 08.7**	**-0.1**
	0.4nm,0.3s,baz=238,slow=8.3,SNR=2.5						
	0.4nm,0.3s						
GERES	**GERESS Array B**	**40.34**	**315**	P	**P**	**01 04 08.4**	**-0.9**
	0.2nm,0.4s,baz=116,slow=3.1,SNR=3.7						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**40.39**	**337**	P	**P**	**01 04 09.4**	**0.0**
	1.0nm,0.5s,baz=141,slow=11,SNR=9.1						
FINES				LR	LR	01 22 13.6	
	comp=Z,62nm,18.1s,baz=222,slow=38						
	1.0nm,0.5s						
HFS	**Hagfors**	**44.58**	**330**	P	**P**	**01 04 43.2**	**-0.2**
	1.1nm,0.8s,baz=129,slow=12,SNR=4.3						
	1.1nm,0.8s						
ESDC	**Sonseca Array**	**52.26**	**301**	P	**P**	**01 05 42.5**	**-0.6**
	0.6nm,0.7s,baz=66,slow=7.7,SNR=5.3						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**54.24**	**267**	P	**P**	**01 05 57.1**	**-0.8**
	1.1nm,0.3s,baz=58,slow=9.8,SNR=1.9						
	1.1nm,0.3s						

*IDC **14** 01:20:05.9±3.8, 7°.34S×128°.47E, h122km±35km, mb4.0/11, mbtmp4.3/14, Error ellipse: s-maj=37.7km s-min=12.8km az=68.0*
*NEIC **14** 01:20:07.8±1.6, 7°.37S±0°.08×128°.40E±0°.07, h140km±7km, mb4.3/13, Error ellipse: s-maj=12.3km s-min=9.2km az=167.0*
*DJA **14** 01:20:10.5±1.1, 8°.S±3°×12°.8E±°, h26km±9km, M4.5/13, mB5.3/3, mb4.4/8, MLv4.5/13, Mw(mB)4.8/3*
ISC 14 01:20:08.6±0.4, 7°.49S±0°.06×128°.48E±0°.05, h151km, n67, σ1s55/68, mb4.2/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.83**	**100**	Pn	**Pn**	**01 20 54.0**	**+0.1**
SAUI				Sn	**Sn**	**01 21 29.3**	**+0.3**
SAUI	**Saumlaki**	**2.83**	**100**	P	**Pn**	**01 20 54.6**	**+0.7**
SAUI				S	**Sn**	**01 21 28.2**	**-0.7**
BNDI	**Bandanaira**	**3.27**	**26**	P	**Pn**	**01 21 01.2**	**+1.7**
MSAI	**Masohi**	**4.14**	**6**	P	**Pn**	**01 21 13.9**	**+3.1**
NLAI	**Namlea**	**4.45**	**342**	P	**Pn**	**01 21 18.4**	**+3.7**
SOEI	**Soe**	**4.73**	**241**	Pn	**Pn**	**01 21 18.6**	**0.0**
SOEI	**Soe**	**4.73**	**241**	P	**Pn**	**01 21 20.2**	**+1.6**
SOEI				S	**Sn**	**01 22 14.6**	**+1.4**
BATI	**Baumata**	**5.47**	**240**	P	**Pn**	**01 21 29.6**	**+1.3**
	300nm,0.5s,baz=124,slow=1.6,SNR=21						
BATI				S	**Sn**	**01 22 29.2**	**-1.4**
	338nm,0.7s,baz=76,slow=23,SNR=20						
BATI	**Baumata**	**5.47**	**240**	P	**Pn**	**01 21 29.9**	**+1.6**
FAKI	**Fak Fak**	**5.89**	**40**		**Pn**	**01 21 33.0**	**-0.9**
FAKI	**Fak Fak**	**5.89**	**40**	P	Pn	01 21 37.6	+3.7
	0.3nm2µm43nm,0.8s						
BBSI	**Bau Bau**	**6.20**	**288**	P	**Pn**	**01 21 41.9**	**+3.9**
	0.2nm55nm,0.9s						
KDI	**Kendari**	**6.81**	**301**	P	Pn	01 21

AB31					IAmb	IAmb	01 32 11.9	
	comp=Z,4.6nm,1.4s							
QSPA	**South Pole Qui**	**82.49**	**180**		P	**P**	**01 32 16.8**	**+2.7**
	comp=Z,1.5nm,0.4s,baz=309,slow=2.1,SNR=6.8							
	comp=Z,1.5nm,0.4s							
QSPA	**South Pole Qui**	**82.49**	**180**		P	**P**	**01 32 15.8**	**+1.7**
PDAR	**Pinedale Array**	**118.31**	**45**		PKP	**PKPdf**	**01 38 38.1**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=198,slow=0.5,SNR=4.0							
TXAR	**Lajitas Array**	**126.47**	**59**		PKP	**PKiKP**	**01 38 55.2**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=186,slow=4.0,SNR=4.2							
TXAR	**Lajitas Array**	**126.47**	**59**			**PKiKP**	**01 38 54.9**	**0.0**
CPUP	**Villa Florida**	**145.91**	**171**		PKPbc	**PKPbc**	**01 39 31.4**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=43,slow=2.4,SNR=3.6							
CPUP	**Villa Florida**	**145.91**	**171**			**PKPbc**	**01 39 31.1**	**0.0**
LPAZ	**La Paz**	**151.21**	**145**		PKPbc	**PKiKP**	**01 39 46.9**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=4.3,slow=1.6,SNR=14							
LPAZ	**La Paz**	**151.21**	**145**			**PKPbc**	**01 39 45.9**	**0.0**

*ISN **14** 01:23:50.9±0.9, 34.1°N×45.5°59E, h9km±4km, ML3.3*
*TEH **14** 01:23:50.3, 34.0°1N×45.1°65E, h7km±34km*
ISC 14 01:23:51.7±0.8, **34.0°09N**±0.0°04×**45.1°60E**±0.0°04, **h10**km, **n16,**
σ0.86/21, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.26**	**85**	Pg	**Pg**	**01 23 56.3**	**-0.7**
IGHG	**Ghaleghazi**	**0.84**	**73**	Pg	**Pg**	**01 24 07.8**	**-0.1**
IDHR	**Dehrash**	**0.89**	**47**	Pg	**Pg**	**01 24 08.5**	**-0.4**
IBDR	**Badra**	**1.02**	**164**	*e*Pg	**Pn**	**01 24 11.0**	**-0.2**
IBDR				*e*Sg	**Sb**	**01 24 25.0**	**+0.3**
KCHF	**Cheshme Sefid,**	**1.21**	**81**	Pg	**Pb**	**01 24 14.2**	**-0.6**
BHD	**Baghdad**	**1.30**	**231**	*e*Pg	**Pn**	**01 24 16.0**	**+0.1**
BHD				*e*Sg	**Sg**	**01 24 34.0**	**+0.4**
IKRK	**Kirkuk**	**1.67**	**322**	*e*Pn	**Pb**	**01 24 22.0**	**-0.5**
IKRK				*e*Sn	**Sb**	**01 24 44.0**	**+0.5**
IKRK				AML	AML	01 24 50.2	
	comp=E,372nm,0.4s						
IKRK				AML	AML	01 24 50.4	
	comp=N,589nm,0.2s						
SNQR	**Sonqor, Kerman**	**1.84**	**65**	Pn	**Pb**	**01 24 25.2**	**-0.4**
IBZA	**Bozab**	**1.91**	**78**	Pn	**Pb**	**01 24 26.2**	**-0.6**
RAFI	**Al-Rafai**	**2.40**	**169**	*e*Pn	**Pn**	**01 24 32.0**	**+1.0**
RAFI				*e*Sn	**Sb**	**01 25 03.0**	**-1.6**
MAHB	**Mahabad**	**2.67**	**2**	Pn	**Pb**	**01 24 36.1**	**-1.6**
MSL	**Mosul**	**3.08**	**319**	*e*Pn	**Pn**	**01 24 41.0**	**+0.7**
MSL				*e*Sn	**Sn**	**01 25 18.0**	**+0.9**
JHBN	**Jahan bin**	**4.64**	**112**	Pn	**Pn**	**01 25 02.8**	**+0.7**
IPIR	**Pirpir**	**4.65**	**106**	Pn	**Pn**	**01 25 03.0**	**+0.8**
IKLH	**Kolahrood**	**5.04**	**97**	Pn	**Pn**	**01 25 08.9**	**+1.3**
KLNJ	**Kolanjah**	**5.92**	**120**	Pn	**Pn**	**01 25 20.7**	**+1.0**

*ISN **14** 01:35:53.1±1.2, 34.2°12N×45.6°65E, h15km±7km, ML3.1*
*TEH **14** 01:35:54.5, 34.2°11N×45.6°68E, h8km±990km*
ISC 14 01:35:53.8±0.9, **34.2°10N**±0.0°04×**45.6°63E**±0.0°05, **h10**km, **n11,**
σ0.56/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.23**	**87**	Pg	**Pg**	**01 35 58.4**	**-0.2**
IGHG	**Ghaleghazi**	**0.81**	**74**	Pg	**Pb**	**01 36 10.0**	**-0.1**
IDHR	**Dehrash**	**0.86**	**46**	Pg	**Pg**	**01 36 10.3**	**-0.1**
IBDR	**Badra**	**1.02**	**166**	*e*Pg	**Pg**	**01 36 13.0**	**-0.4**
IBDR				*e*Sg	**Sg**	**01 36 26.0**	**-0.7**
KCHF	**Cheshme Sefid,**	**1.18**	**81**	Pg	**Pb**	**01 36 16.1**	**-0.3**
BHD	**Baghdad**	**1.33**	**232**	*e*Pg	**Pn**	**01 36 18.0**	**-0.4**
BHD				*e*Sg	**Sb**	**01 36 36.0**	**0.0**
IKRK	**Kirkuk**	**1.67**	**321**	*e*Pn	**Pn**	**01 36 23.0**	**-0.2**
IKRK				*e*Sn	**Sb**	**01 36 46.0**	**+0.2**
IKRK				AML	AML	01 36 52.4	
	comp=N,288nm,0.5s						
IKRK				AML	AML	01 36 58.4	
	comp=E,201nm,0.4s						
SNQR	**Sonqor, Kerman**	**1.81**	**65**	Pg	**Pg**	**01 36 28.1**	**-0.5**
IBZA	**Bozab**	**1.88**	**78**	Pn	**Pb**	**01 36 28.1**	**-0.3**
RAFI	**Al-Rafai**	**2.41**	**170**	*e*Pn	**Pn**	**01 36 34.0**	**+0.8**
RAFI				*e*Sn	**Sn**	**01 37 04.0**	**+1.3**
MSL	**Mosul**	**3.08**	**319**	*e*Pn	**Pn**	**01 36 43.0**	**+0.5**
MSL				*e*Sn	**Sn**	**01 37 20.0**	**+0.6**

JMA 14 01:39:29.7±0.5, **46°N**±3°×**14°6E**±°, **h424**km, **MV3.5/15,**
SOUTHERN SEA OF OKHOTSK, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTKR	**Abashiri--Toko**	**3.00**	**214**	*e*P	P	01 40 35.2	+0.5
JNK	**Nakash**	**3.08**	**201**	*e*P	P	01 40 36.2	+0.9
NEM2	**Nemuro 2**	**3.13**	**187**	*e*P	P	01 40 35.4	-0.3
NEM2				*e*S	S	01 41 28.0	-1.3
JAK	**Akkeshi**	**3.65**	**198**	*e*P	P	01 40 40.3	+0.2
JAK				*e*S	S	01 41 36.2	-1.1
JCH	**Churui**	**4.38**	**209**	*e*P	P	01 40 46.7	+0.1
JBT2	**Biratori 2**	**4.62**	**218**	*e*P	P	01 40 50.1	+1.2
JNBK	**Urakawa-nobuka**	**4.88**	**212**	*e*P	P	01 40 51.8	+0.2
JNBK				*e*S	S	01 41 56.8	-1.6
JOT	**Ohata**	**6.32**	**218**	*e*P	P	01 41 07.0	+0.6
JOT				*e*S	S	01 42 22.6	-3.0
JANG	**Nango**	**7.00**	**211**	*e*S	S	01 42 37.5	-1.6
JIW	**Iwasaki**	**7.42**	**220**	*e*P	P	01 41 19.2	+0.5

*CATAC **14** 01:40:46.7±0.8, 14°N±4°×9°1W±°, h26km±6km, M3.6/13,*
MLv3.6/13, Error ellipse: s-maj=9.6km s-min=3.3km
az=27.3, confirmed
*GCG **14** 01:40:47.7±1.2, 13°.85N×90°.89W, h71km±13km, MD3.6,*
ML3.8, MW3.1
*SNET **14** 01:40:50.0±1.2, 13°.94N×90°.82W, h46km±9km, ML3.4*
ISC 14 01:40:47.2±1.7, **13°69N**±0.0°08×**90°99W**±0.0°05, **h27**km±13km,
n41, σ0.64/46, 3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.49**	**105**	*i* P	**Pb**	**01 40 58.0**	**+0.6**
ESSG	**Sabana Grande**	**0.71**	**13**	*i* P	**Pb**	**01 41 01.2**	**+0.2**
ESSG				*i* S	**Sn**	**01 41 11.8**	**+0.3**
FG16	**Alotenango, Sa**	**0.74**	**39**	*e*P	**Pn**	**01 41 02.7**	**+0.6**
FG16				*e*S	**Sn**	**01 41 13.6**	**+1.0**
FG16				IAML		01 41 16.5	
	comp=E,11μm,0.2s						
PCG5	**San Vicente Pa**	**0.79**	**49**	*i* P	**Pb**	**01 41 02.0**	**-0.5**
FAME	**Alcaldia de Sa**	**0.96**	**81**	P	**Pn**	**01 41 04.4**	**-0.5**
FAME	**Alcaldia de Sa**	**0.96**	**81**	S	**Sn**	**01 41 17.4**	**-0.3**
RTAL	**Retalhuleu**	**1.07**	**321**	*e*P	**Pn**	**01 41 06.1**	**-0.3**
RTAL	**Retalhuleu**	**1.07**	**321**	P	**Pn**	**01 41 06.3**	**-0.2**
RTAL	**Retalhuleu**	**1.07**	**321**	S	**Sn**	**01 41 20.7**	**+0.3**
SOKI	**Kika Raxquin**	**1.19**	**340**	*e*P	**Pn**	**01 41 08.6**	**+0.1**
SOKI				*e*S	**Sn**	**01 41 23.6**	**-0.3**
NUBE	**Las Nubes**	**1.20**	**80‖**	*e*P	**Pn**	**01 41 07.9**	**-0.3**
NUBE	**Las Nubes**	**1.20**	**80**	*e*P	**Pn**	**01 41 07.9**	**-0.3**
NUBE				*e*S	**Sn**	**01 41 22.1**	**-1.5**
NUBE	**Las Nubes**	**1.20**	**80**	P	**Pn**	**01 41 08.0**	**-0.3**
NUBE	**Las Nubes**	**1.20**	**80**	S	**Sb**	**01 41 24.1**	**-0.4**
LOAL	**Lomas de Alarc**	**1.22**	**75**	*e*P	**Pn**	**01 41 08.8**	**+0.4**
LOAL	**Lomas de Alarc**	**1.22**	**75**	P	**Pn**	**01 41 08.8**	**+0.4**
LOAL	**Lomas de Alarc**	**1.22**	**75**	S	**Sb**	**01 41 25.3**	**+0.4**
SLOZ	**Alcaldia de Sa**	**1.22**	**74**	*e*P	**Pn**	**01 41 06.8**	**-1.6**
SLOZ				*e*S	**Sn**	**01 41 23.0**	**-1.1**
RTR	**El Retiro**	**1.32**	**81**	*e*P	**Pn**	**01 41 10.3**	**+0.3**
RBDL	**Robledal**	**1.33**	**71**	*e*P	**Pn**	**01 41 10.8**	**+0.6**
CEVE	**Cerro Verde**	**1.34**	**84**	*e*P	**Pn**	**01 41 09.8**	**-0.5**
CEVE	**Cerro Verde**	**1.34**	**84**	S	**Sb**	**01 41 28.0**	**-0.6**
CEVE	**Cerro Verde**	**1.34**	**84**	P	**Pn**	**01 41 09.8**	**-0.5**
SNJE	**San Jose**	**1.36**	**82‖**	*e*P	**Pn**	**01 41 10.7**	**+0.2**
UNIC	**Universidad Ca**	**1.43**	**78**	P	**Pn**	**01 41 11.6**	**+0.2**
UNIC	**Universidad Ca**	**1.43**	**78**	S	**Sb**	**01 41 30.4**	**-0.7**
JAYA	**Jayaque - finc**	**1.50**	**91‖**	*e*P	**Pn**	**01 41 12.0**	**-0.4**
JAYA	**Jayaque - finc**	**1.50**	**91**	P	**Pn**	**01 41 12.1**	**-0.4**
JAYA	**Jayaque - finc**	**1.50**	**91**	S	**Sn**	**01 41 30.9**	**-0.3**
PMON	**Piamonte**	**1.63**	**89**	*e*P	**Pn**	**01 41 14.5**	**+0.3**
PMON	**Piamonte**	**1.63**	**89**	P	**Pn**	**01 41 14.3**	**+0.1**
PMON	**Piamonte**	**1.63**	**89**	S	**Sn**	**01 41 34.9**	**+0.6**
BOQS	**Boqueron**	**1.66**	**88**	*e*P	**Pn**	**01 41 15.1**	**+0.3**
MTO3	**Montecristo**	**1.73**	**66**	*e*P	**Pn**	**01 41 16.8**	**+1.1**
MTO3	**Montecristo**	**1.73**	**66**	P	**Pn**	**01 41 16.2**	**+0.6**
LOMA	**Loma Larga**	**1.77**	**91**	*e*P	**Pn**	**01 41 16.5**	**+0.4**
LOMA	**Loma Larga**	**1.77**	**91**	P	**Pn**	**01 41 16.5**	**+0.4**
LOMA	**Loma Larga**	**1.77**	**91**	S	**Sn**	**01 41 38.7**	**+0.9**
LFRS	**El Faro**	**1.88**	**92**	*e*P	**Pn**	**01 41 18.2**	**+0.6**
LBRS	**Las Brisas**	**1.89**	**88**	*e*P	**Pn**	**01 41 19.0**	**+1.3**
PAVA	**Las Pavas**	**2.00**	**89**	P	**Pn**	**01 41 19.5**	**+0.3**

*IDC **14** 01:45:42.2±1.4, 0.°00S×121.°47E, h0km, mb3.5/4,*
mbtmp3.5/4, MS2.8/1, Error ellipse: s-maj=172.6km
s-min=22.8km az=64.0
*DJA **14** 01:45:58.9±0.5, 0.°N±4°×12.°2E±°, h113km±5km, M4.1/9,*
mb5.2/1, MLv3.5/9
ISC 14 01:45:57.3±0.9, **0.°42N**±0.°08×**122.°31E**±0.°07, **h114**km, **n13,**
σ2.25/14, mb3.5/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.37**	**280**	P	**Pn**	**01 46 16.1**	**+2.3**
MRSI				S	**Sn**	**01 46 29.7**	**+3.5**
APSI	**Ampana**	**1.47**	**207**	P	**Pn**	**01 46 25.6**	**+1.6**
LUWI	**Luwuk**	**1.52**	**162**	P	**Pn**	**01 46 26.6**	**+2.0**
LUWI				S	**Sn**	**01 46 47.6**	**+2.3**
KMSI	**Cibinong**	**1.68**	**85**	P	**Pn**	**01 46 28.0**	**+1.5**
MPSI	**Mapaga**	**2.41**	**268**	P	**Pn**	**01 46 37.6**	**+1.9**
TTSI	**Tana Toraja**	**4.24**	**216**	P	**Pn**	**01 47 00.3**	**+0.3**
SANI	**Sanana**	**4.42**	**124**	P	**Pn**	**01 47 03.8**	**+1.4**
BKB	**Balikpapan**	**5.66**	**253**	P	**Pn**	**01 47 19.1**	**0.0**
WRA	**Warramunga Arr**	**23.42**	**150**	P	**P**	**01 50 54.2**	**-2.1**
	0.8nm,0.6s,baz=325,slow=11,SNR=8.0						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**26.46**	**156**	P	**P**	**01 51 20.6**	**-3.2**
	0.3nm,0.5s,baz=341,slow=11,SNR=5.3						
	0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**38.85**	**21**	LR	LR	02 08 23.8	
	comp=Z,12nm,19.2s,baz=329,slow=34						
SONM	**Songino Array**	**49.21**	**346**	P	**P**	**01 54 33.9**	**-0.2**
	0.4nm,0.4s,baz=160,slow=4.6,SNR=2.2						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**57.90**	**329**	P	**P**	**01 55 35.5**	**-1.9**
	0.4nm,0.5s,baz=133,slow=8.4,SNR=3.8						
	0.4nm,0.5s						

*IDC **14** 01:49:33.9±1.3, 8.°11S×117.°71E, h0km, mb3.9/5,*
mbtmp3.9/8, ML3.6/3, Error ellipse: s-maj=54.3km
s-min=18.2km az=59.0
*DJA **14** 01:49:36.5±0.2, 8.°S±2°×11.°8E±°, h10km, M4.4/18, mb4.7/1,*
MLv4.2/18
ISC 14 01:49:35.9±0.7, **8.°03S**±0.°05×**117.°82E**±0.°04, **h10**km, **n23,**
σ1.03/26, mb4.1/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.80**	**183**	P	**Pg**	**01 49 51.4**	**+0.1**
PLAI				S	**Sb**	**01 50 02.9**	**+0.1**
TWSI	**Taliwang, Sumb**	**1.17**	**233**	P	**Pb**	**01 49 58.2**	**0.0**
TWSI				S	**Sg**	**01 50 13.8**	**+0.2**
WBSI	**Waikabubak, Su**	**2.23**	**136**	P	**Pn**	**01 50 14.3**	**+1.2**
SRBI	**Singaraja**	**2.58**	**269**	P	**Pn**	**01 50 18.2**	**+0.4**
DNP	**Denpasar**	**2.66**	**256**	P	**Pn**	**01 50 20.1**	**+1.2**
WSI	**Waingapu**	**2.94**	**124**	P	**Pn**	**01 50 23.3**	**+0.5**
BKSI	**Bau Bau, Buton**	**3.24**	**55**	P	**Pn**	**01 50 27.5**	**+0.6**
BASI	**Baing, Sumba**	**3.49**	**129**	P	**Pn**	**01 50 32.1**	**+1.8**
BKSI	**Bulukumba**	**3.53**	**41**	P	**Pn**	**01 50 31.0**	**+0.2**
KAPI	**Kappang**	**3.56**	**33**	Pn	**Pn**	**01 50 31.9**	**+0.7**
	26nm,0.3s,baz=209,slow=4.0,SNR=40						
KAPI				Sn	**Sn**	**01 51 13.1**	**-0.2**
	19nm,0.3s,baz=56,slow=21,SNR=13						
	76nm,0.3s						
ABJI	**Asem Bagus**	**3.56**	**273**	P	**Pn**	**01 50 32.2**	**+0.9**
JAGI	**Jajag, Banyuwa**	**3.66**	**263**	P	**Pn**	**01 50 32.4**	**-0.2**
KMMI	**Kalianget**	**3.94**	**284**	P	**Pn**	**01 50 37.8**	**+1.3**
BLJI	**Banyuglugur**	**4.20**	**274**	P	**Pn**	**01 50 41.1**	**+1.1**
BNSI	**Bone**	**4.26**	**32**	P	**Pn**	**01 50 43.2**	**+2.3**
SPSI	**Sidrap Palu**	**4.48**	**26**	P	**Pn**	**01 50 44.4**	**+0.5**
FITZ	**Fitzroy Crossi**	**12.57**	**144**	Pn	**Pn**	**01 52 34.2**	**-0.8**
	0.1nm,0.3s,baz=341,slow=14,SNR=1.6						
FITZ				Sn	Sn	01 54 45.7	-10
	0.3nm,0.3s,baz=202,slow=21,SNR=6.4						
	3.9nm,1.2s						
WRA	**Warramunga Arr**	**19.91**	**128**	P	**P**	**01 54 06.9**	**-1.0**
	0.2nm,0.3s,baz=302,slow=13,SNR=7.6						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**21.90**	**137**	P	**P**	**01 54 29.5**	**+0.1**
	1.5nm,0.7s,baz=309,slow=8.6,SNR=20						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**32.44**	**140**	P	**P**	**01 56 05.9**	**-0.5**
	0.7nm,0.3s,baz=286,slow=8.4,SNR=3.0						
	0.7nm,0.3s						
SONM	**Songino Array**	**56.53**	**351**	P	**P**	**01 59 19.8**	**+1.2**
	0.9nm,0.6s,baz=162,slow=7.2,SNR=5.2						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**63.07**	**333**	P	**P**	**02 00 03.7**	**+0.2**
	0.9nm,0.6s,baz=146,slow=7.3,SNR=6.0						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**67.72**	**340**	P	**P**	**02 00 31.4**	**-2.0**
	0.7nm,0.5s,baz=129,slow=4.2,SNR=4.0						
	0.7nm,0.5s						

*IDC **14** 02:08:47.7±7.6, 17.°82S×178.°48W, h535km±85km, mb2.9/5,*
mbtmp3.8/5, Error ellipse: s-maj=143.7km s-min=26.7km
az=155.0
*NEIC **14** 02:08:49.3±0.9, 18.°3S±0.°2×178.°2W±0.°1, h562km±8km,*
mb4.2/8, Error ellipse: s-maj=33.9km s-min=12.1km
az=158.0
ISC 14 02:08:48.8±0.7, **18.°3S**±0.°2×**178.°2W**±0.°1, **h557**km, **n20,**
σ0.64/21, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.58**	**278**	P	**P**	**02 10 08.9**	**+0.6**
NIUE	**Niue**	**7.91**	**97**	P	**P**	**02 10 45.9**	**0.0**
COEN	**Coen**	**37.27**	**271**	P	**P**	**02 15 15.0**	**+0.8**
COEN				IAmb	IAmb	02 15 25.8	
	comp=Z,15nm,1.4s						
BBOO	**Buckleboo**	**43.36**	**241**	P	**P**	**02 16 02.6**	**+0.1**
BBOO				IAmb	IAmb	02 16 06.2	
	comp=Z,15nm,1.4s						
WR8	**Warramunga Arr**	**44.57**	**260**	P	**P**	**02 16 11.0**	**-1.1**
WR8				IAmb	IAmb	02 16 52.2	
	comp=Z,8.3nm,1.4s						
WB0	**Warramunga Arr**	**44.69**	**260**	P	**P**	**02 16 12.2**	**-0.8**
WB0				IAmb	IAmb	02 16 26.9	
	comp=Z,9.1nm,1.4s						
WRA	**Warramunga Arr**	**44.72**	**260**	P	**P**	**02 16 12.3**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=95,slow=7.1,SNR=7.3						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.72**	**260**	P	**P**	**02 16 12.6**	**-0.7**
AS31	**Alice Springs**	**44.84**	**255**	P	**P**	**02 16 14.4**	**+0.3**
ASAR	**Alice Springs**	**44.84**	**255**	P	**P**	**02 16 13.8**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=88,slow=8.4,SNR=42						
ASAR				PcP	**PcP**	**02 17 43.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=110,slow=3.6,SNR=4.0						
	comp=Z,2.3nm,0.5s						
ASAR	**Alice Springs**	**44.84**	**255**	P	**P**	**02 16 13.7**	**-0.4**
CASY	**Casey**	**65.85**	**205**	P	**P**	**02 18 39.2**	**0.0**
NVAR	**Mina Array Bea**	**79.59**	**44**	P	**P**	**02 19 58.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=222,slow=9.0,SNR=5.9						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**79.59**	**44**	P	**P**	**02 19 58.8**	**0.0**
ISLE	**Juniper Island**	**83.78**	**17**	P	**P**	**02 20 19.6**	**0.0**
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**02 20 32.6**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=210,slow=6.9,SNR=6.6						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**02 20 31.6**	**+0.3**
PDAR	**Pinedale Array**	**87.52**	**43**	P	**P**	**02 20 37.5**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=202,slow=3.2,SNR=3.9						
	comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**145.17**	**315**	PKP	**PKPbc**	**02 27 24.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=48,slow=4.0,SNR=2.0						
GERES	**GERESS Array B**	**148.03**	**345**	PKPbc	**PKPbc**	**02 27 31.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=19,slow=3.4,SNR=5.9						

*IDC **14** 02:10:05.9±0.8, 28.°12S×13.°10W, h0km, mb4.2/10,*
mbtmp4.2/10, MS3.7/31, Error ellipse: s-maj=26.7km
s-min=20.6km az=108.0
*NEIC **14** 02:10:08.2±1.3, 28.°0S±0.°1×13.°2W±0.°1, h10km±1km,*
mb4.8/30, Error ellipse: s-maj=20.1km s-min=17.9km
az=138.0
ISC 14 02:10:07.5±0.5, **28.°01S**±0.°10×**13.°18W**±0.°10, **h10**km, **n73,**
σ0.79/45, mb4.6/24, MS3.8/31, 1C-4D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSUM	**Tsumeb**	**29.45**	**79**	LR	LR	02 26 22.4	
	comp=Z,243nm,18.2s,baz=230,slow=33						
KOOLE	**Kule**	**30.47**	**88**		**P**	**02 16 21.2**	**+0.4**
LKGWB	**Lokgwabe**	**31.08**	**91**	P	P	02 16 31.1	+4.9
GRTLG	**Ghanzi**	**31.87**	**86**		**P**	**02 16 33.4**	**+0.3**
GRTLG				IAmb	IAmb	02 16 40.0	
	comp=Z,14nm,1.1s						
KGCAE	**Kacgae**	**32.29**	**89**	P	**P**	**02 16 36.5**	**-0.3**
QNGWA	**Qangwa**	**32.46**	**83**	P	**P**	**02 16 38.9**	**+0.6**
QNGWA				IAmb	IAmb	02 16 40.3	
	comp=Z,7.2nm,0.8s						
BOSA	**Boshof**	**33.75**	**100**	P	**P**	**02 16 48.7**	**-0.8**
	comp=Z,3.3nm,1.0s,baz=278,slow=7.1,SNR=3.6						
BOSA				LR	LR	02 28 03.3	
	comp=Z,217nm,20.6s,baz=224,slow=32						
	comp=Z,3.3nm,1.0s						
BOSA	**Boshof**	**33.75**	**100**	P	**P**	**02 16 49.6**	**+0.1**
BDFB	**Brasilia**	**34.48**	**284**	P	**P**	**02 16 55.6**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=113,slow=6.5,SNR=3.4						
	comp=Z,2.9nm,0.8s						
BDFB	**Brasilia**	**34.48**	**284**	P	**P**	**02 16 55.4**	**-0.5**
BDFB				IAmb	IAmb	02 18 14.2	
	comp=Z,34nm,1.8s						
LBTB	**Lobatse**	**34.73**	**94**	LR	LR	02 28 45.0	
	comp=Z,134nm,19.7s,baz=248,slow=32						
LBTB	**Lobatse**	**34.73**	**94**	P	**P**	**02 16 57.9**	**-0.1**
LBTB				IAmb	IAmb	02 17 05.2	
	comp=Z,16nm,1.1s						
PHDHD	**Phuduhudu**	**35.19**	**86**		**P**	**02 17 02.5**	**+0.6**
PHDHD				IAmb	IAmb	02 17 03.7	
	comp=Z,10nm,0.7s						
LPHEP	**Lephephe**	**35.38**	**92**	P	**P**	**02 17 03.9**	**+0.3**
LPHEP				IAmb	IAmb	02 17 05.3	
	comp=Z,31nm,1.2s						
DBIC	**Dimbokro**	**35.40**	**14**	LR	LR	02 27 48.5	
	comp=Z,63nm,19.0s,baz=166,slow=30						
DBIC	**Dimbokro**	**35.40**	**14**	P	**P**	**02 17 03.1**	**-0.6**
DBIC				IAmb	IAmb	02 17 04.4	
	comp=Z,27nm,1.4s						
KHWEE	**KHWEE**	**35.42**	**89**	P	**P**	**02 17 04.0**	**0.0**
MATP	**Matopo**	**38.60**	**88**	LR	LR	02 31 14.4	
	comp=Z,289nm,21.5s,baz=246,slow=33						
EDA	**Edea**	**38.78**	**39**	P	**P**	**02 17 32.0**	**-0.4**
CPUP	**Villa Florida**	**39.16**	**262**	LR	LR	02 32 12.9	
	comp=Z,26nm,18.0s,baz=308,slow=34						
AQDB	**Aquidauana**	**39.34**	**271**	P	**P**	**02 17 37.7**	**+0.6**
TRQA	**Tornquist**	**41.71**	**243**	P	**P**	**02 17 56.5**	**-0.1**
TRQA				IAmb	IAmb	02 17 58.2	
	comp=Z,23nm,1.6s						
VNA1	**Neumayer--Stat**	**42.77**	**178**	⇓P	**P**	**02 18 05.3**	**+0.6**
	comp=Z,7.9nm,1.1s						
VNA2	**Neumayer--Watz**	**43.08**	**177**	⇓P	**P**	**02 18 08.3**	**+1.1**
	comp=Z,15nm,0.6s,baz=347,slow=9.8						
VNA3	**Neumayer Olymp**	**43.32**	**178**	⇓P	**P**	**02 18 09.9**	**+0.7**
	comp=Z,6.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**43.37**	**21**	P	**P**	**02 18 09.9**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=207,slow=6.9,SNR=4.0						
	comp=Z,1.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**43.37**	**21**	P	**P**	**02 18 09.7**	**-0.5**
SNAA	**Sanae**	**44.08**	**175**	⇓P	**P**	**02 18 15.9**	**+0.5**
	comp=Z,45nm,0.8s						
SNAA	**Sanae**	**44.08**	**175**	P	**P**	**02 18 13.5**	**-1.9**
	comp=Z,3.1nm,1.0s,baz=313,slow=3.5,SNR=5.7						
	comp=Z,3.1nm,1.0s						
SNAA	**Sanae**	**44.08**	**175**		**P**	**02 18 15.1**	**-0.3**
SNAA				IAmb	IAmb	02 18 27.3	
	comp=Z,23nm,1.7s						
PTLB	**Pontes e Lacer**	**44.24**	**277**		**P

IDC 14 02:33:03.2±6.7, 6°79'S×129°90'E, h158km±65km, mb2.9/1, mbtmp3.4/4, Error ellipse: s-maj=82.8km s-min=28.2km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.98**	**200**	P	Pn	02 35 49.2	+0.1
	3.8nm,1.1s,baz=41,slow=12,SNR=2.3						
FITZ				S	Sn	02 37 55.4	-6.3
	1.8nm,0.3s,baz=345,slow=23,SNR=13						
WRA	**Warramunga Arr**	**13.76**	**162**	P	Pn	02 36 11.4	-0.5
	0.2nm,0.3s,baz=339,slow=13,SNR=5.0						
WRA				S	Sn	02 38 32.1	-13
	0.1nm,0.3s,baz=351,slow=19,SNR=2.2						
ASAR	**Alice Springs**	**17.21**	**168**	P	Pn	02 36 54.6	+0.2
	0.3nm,0.5s,baz=342,slow=9.4,SNR=5.8						
ASAR				S	S	02 40 04.5	-0.4
	0.4nm,0.6s,baz=352,slow=27,SNR=3.7						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	02 43 45.3	-0.1
	0.1nm,0.3s,baz=111,slow=7.9,SNR=1.7						
	0.1nm,0.3s						

*NOU **14** 02:38:41.9, 42°.39S×173°.84E, h14km, MLv4.1/15, South Island, New Zealand*
*WEL **14** 02:38:43.0±0.4, 42°.52S±2°×17°.4E±°, h9km±3km, M3.5/21, ML3.4/13, MLv3.5/21, Error ellipse: s-maj=4.8km s-min=2.5km az=115.5, confirmed*
ISC 14 02:38:42.8±1.0, 42°.29S±0°.03×173°.79E±0°.03, h18km±3km, n64, σ0°85/72, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIKS	**Kaikoura**	**0.15**	**211**	P	Pg	02 38 47.6	+0.5
KIKS				S	Sg	02 38 51.6	+1.5
KHZ	**Kahutara**	**0.22**	**236**	P	Pb	02 38 48.1	0.0
KHZ	**Kahutara**	**0.22**	**236**	S	Sg	02 38 52.2	+0.5
KHZ	**Kahutara**	**0.22**	**236**	P	Pb	02 38 48.2	0.0
KHZ				S	Sg	02 38 52.2	+0.5
LOKS	**Mount Lookout**	**0.36**	**321**	P	Pg	02 38 49.5	-1.0
LOKS				S	Sg	02 38 54.2	-1.5
KEKS	**Kekerengu Vall**	**0.37**	**23**	P	Pg	02 38 50.4	0.0
MOLW	**Molesworth Sta**	**0.44**	**297**	P	Pg	02 38 51.1	-0.9
MOLW				S	Sg	02 38 56.8	-1.2
WDFS	**Ward Fire Stat**	**0.53**	**29**	P	Pg	02 38 54.2	+0.7
BSWZ	**Blackbirch Sta**	**0.58**	**6**	P	Pb	02 38 53.9	-0.5
CMWZ	**Cape Campbell**	**0.63**	**30**	P	Pg	02 38 56.2	+0.9
WTMC	**Te Mara Farm W**	**0.63**	**239**	P	Pg	02 38 56.2	+0.8
SEDS	**Seddon Fire St**	**0.66**	**19**	P	Pg	02 38 56.4	+0.7
SEDS				P	Pn	02 39 06.0	+8.8
WIGC	**Waiau Gorge**	**0.84**	**240**	P	Pn	02 38 59.7	+0.1
THZ	**Tophouse**	**0.84**	**309**	P	Pb	02 38 58.4	-0.5
BWRS	**Waikakaho Road**	**0.86**	**6**	P	Pb	02 38 59.4	+0.3
TUWZ	**Tuamarina**	**0.87**	**8**	P	Pb	02 38 60.0	+0.6
TUWZ				S	Sg	02 39 12.1	+0.9
GVZ	**Greta Valley S**	**0.87**	**219**	P	Pn	02 39 00.6	+0.4
GVZ				S	Sn	02 39 13.9	+1.4
NNZ	**Nelson**	**1.12**	**344**	P	Pn	02 39 03.1	-0.4
TCW	**Tory Channel**	**1.14**	**19**	P	Pn	02 39 03.5	-0.4
TCW				S	Sb	02 39 18.8	+0.4
MRNZ	**Matariki Terra**	**1.18**	**319**	P	Pn	02 39 04.7	+0.3
SNZO	**South Karori**	**1.20**	**35**	P	Pn	02 39 04.4	-0.2
SNZO	**South Karori**	**1.20**	**35**	S	Sn	02 39 20.6	+0.2
BHW	**Baring Head**	**1.20**	**43**	P	Pn	02 39 04.2	-0.4
AMCZ	**Amberley**	**1.22**	**223**	P	Pb	02 39 05.1	-0.2
LTZ	**Lake Taylor**	**1.22**	**246**	P	Pn	02 39 05.3	+0.2
WEL	**Wellington**	**1.25**	**36**	P	Pn	02 39 05.2	-0.1
WEL				S	Sb	02 39 21.7	+0.2
PLWZ	**Palliser**	**1.31**	**57**	P	Pn	02 39 05.3	-0.9
MSWZ	**Moikau Station**	**1.40**	**52**	P	Pn	02 39 06.7	-0.8
TKNZ	**Takaka Hill**	**1.40**	**333**	P	Pn	02 39 08.1	+0.7
DUWZ	**D'Urville Isla**	**1.49**	**4**	P	Pn	02 39 09.0	+0.2
CAW	**Cannon Point**	**1.52**	**39**	P	Pn	02 39 08.6	-0.5
PAWZ	**Paruwai Farm**	**1.53**	**54**	P	Pn	02 39 08.1	-1.0
OKCZ	**Okains Bay**	**1.53**	**200**	P	Pn	02 39 09.0	-0.2
DSZ	**Denniston Nort**	**1.58**	**290**	P	Pb	02 39 11.0	-0.4
MQZ	**McQueen's Vall**	**1.64**	**210**	P	Pn	02 39 09.8	-0.9
OXZ	**Oxford**	**1.65**	**231**	P	Pn	02 39 10.3	-0.6
KIW	**Kapiti Island**	**1.66**	**31**	P	Pn	02 39 10.9	-0.1
TRWZ	**Traveller**	**1.68**	**58**	P	Pn	02 39 09.9	-1.3
AKCZ	**Akaroa Harbour**	**1.71**	**202**	P	Pn	02 39 11.1	-0.5
MTW	**Mount Morrison**	**1.71**	**49**	P	Pn	02 39 10.6	-1.1
QRZ	**Quartz Range**	**1.74**	**327**	P	Pb	02 39 13.5	-0.7
QRZ	**Quartz Range**	**1.74**	**327**	S	Sb	02 39 36.4	+0.6
QRZ	**Quartz Range**	**1.74**	**327**	P	Pb	02 39 13.6	-0.7
OGWZ	**Otaki Gorge**	**1.80**	**36**	P	Pn	02 39 12.5	-0.5
RACZ	**Rakaia**	**1.88**	**220**	P	Pn	02 39 13.4	-0.5
TMWZ	**Te Maipa**	**1.97**	**54**	P	Pn	02 39 14.0	-1.3
MHCZ	**Mount Hutt**	**2.05**	**232**	P	Pn	02 39 15.7	-0.7
MRZ	**Mangatainoka R**	**2.11**	**40**	P	Pn	02 39 16.3	-1.0
WACZ	**Wakanui South**	**2.18**	**220**	P	Pn	02 39 17.5	-0.6
WVZ	**Waitaha Valley**	**2.38**	**250**	P	Pn	02 39 21.5	+0.6
BFZ	**Birch Farm**	**2.45**	**50**	P	Pn	02 39 20.1	-1.8
RPZ	**Rata Peaks**	**2.46**	**234**	P	Pn	02 39 21.5	-0.5
RPZ	**Rata Peaks**	**2.46**	**234**	S	Sn	02 39 50.7	-0.9
RPZ	**Rata Peaks**	**2.46**	**234**	P	Pn	02 39 21.5	-0.5
ARCZ	**Arundel**	**2.53**	**228**	P	Pn	02 39 22.6	-0.3
TSZ	**Takapari Road**	**2.77**	**37**	P	Pn	02 39 25.0	-1.3
TMZ	**Timaru**	**2.91**	**223**	P	Pn	02 39 27.7	-0.6
KHEZ	**Kahui Hut**	**3.00**	**3**	P	Pn	02 39 31.1	+1.6
ODZ	**Otahua Downs**	**3.57**	**219**	P	Pn	02 39 36.4	-0.9
ODZ	**Otahua Downs**	**3.57**	**219**	S	Sn	02 40 18.1	-0.9
HIZ	**Hauiti**	**3.86**	**13**	P	Pn	02 39 43.4	+2.1
JCZ	**Jackson Bay**	**4.07**	**242**	P	Pn	02 39 44.3	+0.1
URZ	**Urewera**	**4.76**	**33**	P	Pn	02 39 54.4	+0.8
CTZ	**Chatham Island**	**7.18**	**105**	P	Pn	02 40 25.0	-1.8

*IDC **14** 02:51:05.3±9.3, 6°.64S×129°.98E, h173km±96km, mb3.4/2, mbtmp4.0/6, Error ellipse: s-maj=83.2km s-min=26.2km az=40.0*
ISC 14 02:51:11.1±3.1, 7°.4S±0°.2×130°.1E±0°.1, h150km, n6, σ1°87/8, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.96**	**246**	P	Pn	02 52 49.4	-1.3
	19nm,0.3s,baz=360,slow=1.6,SNR=2.3						
BATI				S	Sn	02 54 09.3	+0.4
	22nm,0.4s,baz=6.3,slow=9.2,SNR=1.6						
FITZ	**Fitzroy Crossi**	**11.51**	**202**	P	Pn	02 53 51.3	+0.3
	2.6nm,0.3s,baz=34,slow=10,SNR=21						
FITZ				S	Sn	02 55 59.2	+1.0
	2.7nm,0.5s,baz=356,slow=15,SNR=1.7						
WRA	**Warramunga Arr**	**13.14**	**162**	P	Pn	02 54 13.4	+1.3
	0.5nm,0.3s,baz=343,slow=13,SNR=15						
WRA				S	Sn	02 56 35.5	-2.1
	1.6nm,0.8s,baz=351,slow=19,SNR=3.6						
ASAR	**Alice Springs**	**16.59**	**168**	P	Pn	02 54 57.6	+2.5
	0.8nm,0.4s,baz=339,slow=10,SNR=22						
ASAR				S	S	02 57 58.3	-1.4
	0.2nm,0.3s,baz=356,slow=28,SNR=4.5						
MKAR	**Makanchi Array**	**68.61**	**327**	P	P	03 01 45.2	-13
	1.1nm,0.5s,baz=122,slow=7.8,SNR=5.9						
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**72.89**	**329**	P	P	03 02 11.2	-12
	0.3nm,0.4s,baz=128,slow=6.0,SNR=2.0						
	0.3nm,0.4s						

*NEIC **14** 02:51:50.3±2.0, 19°.65N±0°.07×121°.28E±0°.06, h35km±2km, mb4.5/23, Error ellipse: s-maj=13.0km s-min=8.8km az=149.0*
*IDC **14** 02:51:51.8±3.6, 19°.58N×121°.49E, h64km±34km, mb4.0/16, mbtmp4.3/18, ML4.2/2, MS3.4/10, Error ellipse: s-maj=27.7km s-min=12.1km az=72.0*
*JMA **14** 02:51:51.2±0.9, 20°.N±4°×12°.1E±°, h0km, MV4.9/11, PHILIPPINE ISL REGION*
ISC 14 02:51:51.4±0.5, 19°.68N±0°.05×121°.39E±0°.07, h52km, n84, σ1°47/85, mb4.3/28, MS3.4/8, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.14**	**355**		Pn	02 52 38.6	+0.1
TPUB	**Ta-pu**	**3.68**	**349**		Pn	02 52 43.4	-2.4
YULB	**Yu-li**	**3.70**	**359**		Pn	02 52 45.0	-1.1
SSLB	**Suanglung**	**4.11**	**354**		Pn	02 52 49.8	-2.0
NACB	**Ninganchiao**	**4.48**	**2**		Pn	02 52 55.3	-1.5
HATJ	**Hateruma jima**	**4.91**	**27**	eP	Pn	02 53 01.0	-1.6
HATJ				eS	Sn	02 53 53.4	-4.7
YHNB	**Yeheng**	**4.97**	**360**		Pn	02 53 03.4	-0.2
YOJ	**Yonaguni jima**	**5.00**	**17**	eP	Pn	02 53 01.7	-2.1
IRIF	**Iriomote-Funau**	**5.12**	**25**	P	Pn	02 53 05.5	-0.1
IRIF				eS	Sn	02 54 00.7	-2.7
JKRS	**Kuro-shima**	**5.15**	**28**	eP	Pn	02 53 05.9	-0.1
JIJ	**Ishigaki jima**	**5.32**	**28**	P	Pn	02 53 08.2	-0.1
JIJ				eS	Sn	02 54 05.5	-2.8
JISG	**Ishigakijimahi**	**5.59**	**28**	P	Pn	02 53 11.8	-0.2
JISG				eS	Sn	02 54 12.3	-2.5
JTJ	**Tarama**	**5.82**	**31**	eP	Pn	02 53 15.1	0.0
JTJ				eS	Sn	02 54 18.2	-2.3
JIH	**Iheya**	**9.49**	**38**	eP	Pn	02 54 04.6	-0.9
JOW	**Kunigami**	**9.53**	**40**	P	Pn	02 54 05.9	-0.1
	5.2nm,0.3s,baz=206,slow=12,SNR=4.3						
	20nm,0.5s						
JOW	**Kunigami**	**9.53**	**40**	eP	Pn	02 54 07.3	+1.3
NJ2	**Nanjing**	**12.53**	**350**	eP	Pn	02 54 47.5	+0.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
DAV	**Davao City (W)**	**13.18**	**161**	LR	LR	03 00 36.6	
	comp=Z,197nm,21.2s,baz=344,slow=40						
JNU	**Nakatsue**	**15.85**	**30**	LR	LR	03 01 50.0	
	comp=Z,87nm,19.5s,baz=224,slow=38						
XAN	**Xi'an**	**18.10**	**325**	P	Pn	02 56 00.9	+1.8
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSAR	**Wonju Array Be**	**18.59**	**16**	P	P	02 56 03.9	-0.4
HNS	**HongShan**	**18.60**	**343**	⇑P	Pn	02 56 08.6	+3.5
HNS				pmax	pmax		
	comp=Z,27nm,0.9s						
KSRS	**Korea Array**	**18.61**	**16**	P	P	02 56 04.8	+0.3
	comp=Z,0.5nm,0.3s,baz=199,slow=12,SNR=7.4						
	comp=Z,3.9nm,0.6s						
PZH	**PanZhiHua**	**19.30**	**294**	P	Pn	02 56 13.1	-0.6
SBUM	**Sibu**	**19.32**	**209**		P	02 56 12.9	+0.4
SBUM				IAmb	IAmb	02 56 14.2	
	comp=Z,20nm,1.0s						
BJT	**Baijiatuan**	**20.77**	**349**	P	P	02 56 28.0	+0.1
BJT				IAmb	IAmb	02 56 33.3	
	comp=Z,14nm,0.8s						
BJI	**Beijing**	**20.79**	**349**	P	P	02 56 28.8	+0.7
BJI				pP	pP	02 56 37.8	-1.2
BJI				sP	pwP	02 56 41.9	-1.6
BJI				PcP	PcP	03 00 37.9	+2.3
BJI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,110nm,5.2s						
CHTO	**Chiang Mai**	**21.21**	**271**		P	02 56 32.7	-0.2
JGF	**Kuroka**	**21.21**	**38**	P	P	02 56 34.0	+1.2
JGF				IAmb	IAmb	02 56 44.4	
	comp=Z,52nm,1.5s						
CMAR	**Chiang Mai Arr**	**21.25**	**270**	P	P	02 56 33.8	+0.4
	comp=Z,2.5nm,0.6s,baz=77,slow=8.8,SNR=14						
	comp=Z,2.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**21.25**	**270**	P	P	02 56 31.7	-1.6
LZH	**Lanzhou**	**22.47**	**320**	eP	P	02 56 47.3	+0.8
LZH				sP	pwP	02 57 00.8	-0.6
LZH				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC	**Hu-ho-hao-te**	**22.71**	**340**	eP	P	02 56 48.8	-0.2
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.7s						
GUMO	**Guam**	**23.29**	**101**	LR	LR	03 04 03.8	
	comp=Z,39nm,21.0s,baz=336,slow=32						
KAPI	**Kappang**	**24.59**	**184**	P	P	02 57 04.7	-2.0
	comp=Z,6.6nm,0.7s,baz=324,slow=8.3,SNR=5.7						
KAPI				LR	LR	03 06 56.0	
	comp=Z,81nm,21.0s,baz=351,slow=37						
	comp=Z,6.6nm,0.7s						
BNX	**BinXian**	**26.46**	**9**	⇓P	P	02 57 23.5	0.0
BNX				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SONM	**Songino Array**	**30.62**	**340**	P	P	02 58 00.6	0.0
	comp=Z,2.1nm,0.8s,baz=156,slow=9.5,SNR=7.1						
SONM				LR	LR	03 09 59.8	
	comp=Z,76nm,21.8s,baz=120,slow=35						
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**30.62**	**340**	P	P	02 58 01.1	+0.5
EVN	**Everest**	**32.60**	**291**		P	02 58 18.5	-0.4
EVN				IAmb	IAmb	02 58 21.5	
	comp=Z,6.1nm,1.2s						
WMQ	**Urumqi**	**37.02**	**318**	eP	P	02 58 58.1	+1.9
MBWA	**Marble Bar**	**40.62**	**182**	P	P	02 59 25.2	-1.1
MBWA				IAmb	IAmb	02 59 25.9	
	comp=Z,17nm,1.1s						
WB0	**Warramunga Arr**	**41.22**	**161**	P	P	02 59 29.6	-1.8
WB0				IAmb	IAmb	02 59 30.2	
	comp=Z,4.9nm,0.8s						
WRA	**Warramunga Arr**	**41.37**	**161**	P	P	02 59 31.2	-1.4
	comp=Z,4.0nm,0.6s,baz=342,slow=9.0,SNR=11						
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**41.37**	**161**	P	P	02 59 31.0	-1.5
WR8	**Warramunga Arr**	**41.43**	**161**	P	P	02 59 32.1	-1.0
WR8				IAmb	IAmb	02 59 32.7	
	comp=Z,6.6nm,0.9s						
MKAR	**Makanchi Array**	**41.78**	**319**	P	P	02 59 36.9	+1.0
	comp=Z,5.6nm,0.5s,baz=115,slow=9.5,SNR=46						
MKAR				PcP	PcP	03 01 31.5	+0.3
	comp=Z,0.7nm,0.6s,baz=94,slow=5.8,SNR=4.3						
MKAR				LR	LR	03 20 06.2	
	comp=Z,49nm,18.5s,baz=221,slow=40						
	comp=Z,5.6nm,0.5s						
MKAR	**Makanchi Array**	**41.78**	**319**		P	02 59 36.4	+0.6
MKAR					PcP	03 01 30.8	-0.4
YAK	**Yakutsk**	**42.71**	**6**	LR	LR	03 18 07.6	
	comp=Z,45nm,18.1s,baz=50,slow=37						
H11S3	**WAKE ISLAND Hy**	**42.73**	**84**	T	T	03 45 33.5	
	baz=280,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**42.74**	**82**	T	T	03 45 32.5	
	baz=278,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**42.74**	**84**	T	T	03 45 27.8	
	baz=280,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**42.74**	**82**	T	T	03 45 28.2	
	baz=278,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**42.75**	**84**	T	T	03 45 31.1	
	baz=280,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**42.76**	**82**	T	T	03 45 26.2	
	baz=278,slow=75,SNR=18						
PEA0B	**Petropavlovsk-**	**43.55**	**31**	P	P	02 59 51.1	+1.1
ZALV	**Zalesovo Beam**	**44.17**	**330**	P	P	02 59 55.1	+0.2
	comp=Z,2.2nm,0.8s,baz=113,slow=7.4,SNR=7.8						
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**44.17**	**330**	P	P	02 59 55.9	+1.0
AS31	**Alice Springs**	**44.77**	**164**	P	P	02 59 59.7	-0.4
ASAR	**Alice Springs**	**44.77**	**164**	P	P	02 59 59.3	-0.8
	comp=Z,2.6nm,0.4s,baz=338,slow=6.9,SNR=15						
	comp=Z,2.6nm,0.4s						
ASAR	**Alice Springs**	**44.77**	**164**	P	P	03 00 00.6	+0.5
AAK	**Ala-Archa**	**45.49**	**311**	LR	LR	03 22 03.4	
	comp=Z,79nm,18.7s,baz=136,slow=40						
KURK	**Kurchatov**	**45.72**	**323**		P	03 00 06.9	-0.4
KURK				IAmb	IAmb	03 00 08.6	
	comp=Z,5.5nm,0.9s						
KURBB	**Kurchatov Arra**	**45.73**	**323**	P	P	03 00 08.1	+0.7
	comp=Z,6.8nm,0.7s,baz=122,slow=7.6,SNR=51						
	comp=Z,6.8nm,0.7s						
KK31	**Karatay Array**	**48.44**	**311**		P	03 00 28.6	-0.1
KK31				IAmb	IAmb	03 00 30.3	
	comp=Z,3.1nm,0.9s						
KKAR	**Karatay Array**	**48.44**	**311**		P	03 00 29.3	+0.6
KKAR				PcP	PcP	03 01 54.1	-0.2
CHGR	**Chuyangaron**	**48.69**	**305**	P	P	03 00 31.4	+0.6
CHGR				IAmb	IAmb	03 00 32.1	
	comp=Z,9.0nm,0.9s						
BVAR	**Borovoye Array**	**51.32**	**323**	P	P	03 00 50.1	-0.2
	comp=Z,1.0nm,0.6s,baz=113,slow=11,SNR=6.7						
BVAR				PcP	PcP	03 02 04.4	-0.2
	comp=Z,3.5nm,0.7s,baz=124,slow=5.2,SNR=10						
	comp=Z,1.0nm,0.6s						
NRIK	**Noril'sk**	**53.79**	**346**	P	P	03 01 08.6	+0.2
	comp=Z,7.1nm,0.9s,baz=128,slow=6.2,SNR=9.0						
NRIK				LR	LR	03 26 55.0	
	comp=Z,43nm,18.0s,baz=169,slow=39						
	comp=Z,7.1nm,0.9s						
NRIK	**Noril'sk**	**53.79**	**346**		P	03 01 09.1	+0.7
NRIK				IAmb	IAmb	03 01 10.0	
	comp=Z,9.7nm,1.1s						
STKA	**Stephens Creek**	**54.80**	**159**	P	P	03 01 12.3	-3.8
	comp=Z,0.9nm,0.4s,baz=348,slow=7.8,SNR=3.3						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**54.80**	**159**	P	P	03 01 15.1	-1.0
AB31	**Akbulak array**	**56.77**	**317**		P	03 01 30.4	+0.3
AB31				IAmb	IAmb	03 01 31.7	
	comp=Z,3.8nm,1.3s						
ABKAR	**Akbulak array**	**56.77**	**317**	P	P	03 01 30.4	+0.3
ABKAR				PcP	PcP	03 02 24.5	-1.0
ANM	**Nome**	**65.22**	**27**	P	P	03 02 30.9	+3.7
KBZ	**Khabaz**	**68.48**	**310**	P	P	03 02 46.7	-1.6
	comp=Z,2.0nm,0.9s,baz=135,slow=2.9,SNR=3.9						
	comp=Z,2.0nm,0.9s						
L19K	**White Mountain**	**69.90**	**30**		P	03 02 58.8	+2.0
ARCES	**ARCESS Array B**	**73.78**	**339**	P	P	03 03 18.9	-0.9
	comp=Z,3.6nm,0.9s,baz=70,slow=11,SNR=4.5						
	comp=Z,3.6nm,0.9s						
ARCES	**ARCESS Array B**	**73.78**	**339**	P	P	03 03 20.5	+0.6
FINES	**FINESS Array B**	**75.43**	**330**	P	P	03 03 29.5	0.0
	comp=Z,2.2nm,0.8s,baz=56,slow=7.7,SNR=13						
	comp=Z,2.2nm,0.8s						
TKNZ	**Takaka Hill**	**77.05**	**143**	P	P	03 03 42.0	+3.0
MLR	**Muntele Rosu**	**79.92**	**315**	LR	LR	03 43 38.9	
	comp=Z,69nm,19.1s,baz=316,slow=39						
HFS	**Hagfors**	**81.58**	**331**	P	P	03 04 03.0	-0.5
	comp=Z,2.2nm,0.7s,baz=94,slow=4.5,SNR=15						
	comp=Z,2.2nm,0.7s						
NB2	**NORSAR Subarra**	**82.29**	**333**	P	P	03 04 06.5	-0.7
	comp=Z,3.0nm,0.8s,baz=63,slow=5.3						
NOA	**NORSAR Array B**	**82.29**	**333**	P	P	03 04 06.1	-1.1
	comp=Z,2.3nm,0.8s,baz=68,slow=4.8,SNR=8.6						
	comp=Z,2.3nm,0.8s						

IDC 14 03:04:43.2±62.0, 12°.70S×172°.99W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=1208.0km s-min=198.7km az=76.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.76**	**238**	P	P	03 13 07.3	+0.5
	1.7nm,0.6s,baz=47,slow=8.1,SNR=6.7						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**50.89**	**255**	P	P	03 13 45.6	-0.9
	0.1nm,0.3s,baz=87,slow=5.7,SNR=1.9						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**51.37**	**250**	P	P	03 13 50.0	-0.2
	2.6nm,0.5s,baz=88,slow=8.2,SNR=54						
	2.6nm,0.5s						

*NEIC **14** 03:12:27.1±1.4, 21°.78S±0°.10×179°.7W±0°.2, h613km±10km, mb4.3/12, Error ellipse: s-maj=28.3km s-min=9.4km az=66.0*
*IDC **14** 03:12:32.7±20.0, 21°.87S×179°.94W, h688km±198km, mb2.9/3, mbtmp4.1/3, Error ellipse: s-maj=159.7km s-min=114.3km az=85.0*
ISC 14 03:12:28.7±1.0, 21°.6S±0°.1×179°.8W±0°.2, h650km, n25, σ1°52/25, mb4.0/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.32**	**332**	P	P	03 13 56.4	-3.8
MARNC	**Mare, Loyalty**	**11.31**	**268**	P	P	03 14 59.3	-1.8
RTZ	**Ruatahuna**	**17.21**	**189**	P	P	03 15 52.8	-2.2
NNZ	**Nelson**	**20.41**	**195**	P	P	03 16 21.7	-2.0
CTAO	**Charters Tower**	**31.71**	**266**	P	P	03 18 03.5	+0.9
CTAO				IAmb	IAmb	03 18 34.4	
	comp=Z,9.8nm,1.5s						
STKA	**Stephens Creek**	**35.80**	**245**	P	P	03 18 36.6	+0.2
	comp=Z,1.3nm,0.4s,baz=75,slow=12,SNR=4.5						
	comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**35.80**	**245**	P	P	03 18 36.2	-0.1
STKA				IAmb	IAmb	03 18 36.9	
	comp=Z,37nm,1.4s						
ASAR	**Alice Springs**	**42.63**	**258**	P	P	03 19 31.9	+0.9
	comp=Z,2.1nm,0.6s,baz=99,slow=8.0,SNR=27						
ASAR				PcP	PcP	03 21 07.2	-0.1
	comp=Z,0.5nm,0.9s,baz=110,slow=4.0,SNR=4.4						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**42.63**	**258**	P	P	03 19 31.5	+0.6
ASAR					PcP	03 21 07.0	-0.4
WR8	**Warramunga Arr**	**42.63**	**264**	P	P	03 19 31.8	+0.8
WR8				IAmb	IAmb	03 19 43.4	
	comp=Z,6.4nm,1.3s						
WB0	**Warramunga Arr**	**42.77**	**264**	P	P	03 19 32.8	+0.7
WRA	**Warramunga Arr**	**42.78**	**264**	P	P	03 19 32.8	+0.6
	comp=Z,0.9nm,0.3s,baz=96,slow=7.8,SNR=17						
	comp=Z,0.9nm,0.3s						
WRA	**Warramunga Arr**	**42.78**	**264**	P	P	03 19 31.0	-1.2
KNRA	**Kununurra**	**48.91**	**268**	P	P	03 20 19.6	+1.4
KNRA				IAmb	IAmb	03 21 02.0	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.22**	**264**	P	P	03 20 36.6	+1.6
CASY	**Casey**	**62.27**	**205**	P	P	03 21 51.4	+2.2
CASY				IAmb	IAmb	03 21 56.8	
	comp=Z,50nm,1.4s						
JSD	**Sado**	**71.18**	**326**	P	P	03 22 47.2	+3.1
SNAA	**Sanae**	**86.98**	**179**	P	P	03 24 06.4	-0.1
SNAA				I

ZALV	**Zalesovo Beam**	**42.35**	**311**	pP		pP		03 31 46.3	+1.9
	1.1nm,0.5s,baz=90,slow=7.4,SNR=4.0								
ZALV	**Zalesovo Beam**	**42.35**	**311**	P		**P**		**03 31 39.1**	**+2.6**
MKAR	**Makanchi Array**	**45.10**	**301**	pP		pP		03 32 08.2	+1.3
	0.7nm,0.7s,baz=87,slow=9.1,SNR=4.5								
MKAR	**Makanchi Array**	**45.10**	**301**	P		**P**		**03 31 59.7**	**+0.7**
ILAR	**Eielson Array**	**46.40**	**33**	P		**P**		**03 32 09.3**	**+0.5**
	0.7nm,0.7s,baz=265,slow=6.0,SNR=5.6								
ILAR				pP		**sP**		**03 32 18.7**	**-1.3**
	1.0nm,0.8s,baz=251,slow=6.6,SNR=4.4								
ILAR				sP		**pwP**		**03 32 25.7**	**+0.7**
	1.8nm,0.9s,baz=274,slow=7.5,SNR=6.7								
	0.7nm,0.7s								
ILAR	**Eielson Array**	**46.40**	**33**	P		**P**		**03 32 08.9**	**+0.1**
KURK	**Kurchatov**	**46.59**	**307**	P		P		03 32 20.7	+10
KURK				IAmb		IAmb		03 32 22.0	
	comp=Z,3.4nm,0.7s								
KURBB	**Kurchatov Arra**	**46.66**	**307**	P		**P**		**03 32 12.4**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=82,slow=8.1,SNR=4.6								
KURBB				pP		**sP**		**03 32 21.0**	**-1.6**
	comp=Z,3.6nm,0.7s,baz=81,slow=8.7,SNR=17								
	comp=Z,0.4nm,0.6s								
J25K	**Salcha River,**	**47.05**	**34**	P		**P**		**03 32 15.2**	**+1.1**
J25K				IAmb		IAmb		03 32 29.6	
	comp=Z,9.9nm,1.4s								
I30M	**Mount Dempster**	**50.80**	**32**	P		**P**		**03 32 44.0**	**+1.2**
I30M				IAmb		IAmb		03 32 45.3	
	comp=Z,3.5nm,1.1s								
BVAR	**Borovoye Array**	**50.98**	**312**	pP		pP		03 32 54.5	+2.3
	comp=Z,0.6nm,0.4s,baz=79,slow=8.8,SNR=3.3								
G31M	**Satah River**	**51.35**	**30**	P		**P**		**03 32 47.7**	**+1.0**
INK	**Inuvik**	**51.39**	**28**	LR		LR		03 57 35.9	
	comp=Z,67nm,19.2s,baz=355,slow=39								
INK	**Inuvik**	**51.39**	**28**	P		**P**		**03 32 48.1**	**+1.1**
H31M	**Peel River**	**51.53**	**31**	P		**P**		**03 32 48.7**	**+0.6**
H31M				IAmb		IAmb		03 33 04.4	
	comp=Z,6.2nm,1.1s								
Q32M	**Nakina River**	**54.18**	**39**	P		**P**		**03 33 08.8**	**+0.8**
AB31	**Akbulak array**	**58.45**	**310**	P		**P**		**03 33 38.2**	**-0.2**
ABKAR	**Akbulak array**	**58.45**	**310**	P		**P**		**03 33 38.3**	**-0.1**
SPITS	**Spitsbergen Ar**	**58.93**	**349**	LR		LR		04 00 18.4	
	comp=Z,75nm,19.8s,baz=14,slow=37								
WRA	**Warramunga Arr**	**59.54**	**191**	P		**P**		**03 33 44.8**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=8.1,slow=6.9,SNR=1.4								
WRA				pP		**pP**		**03 33 53.9**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=8.4,slow=7.1,SNR=1.9								
	comp=Z,0.5nm,0.8s								
RES	**Resolute Bay**	**59.94**	**15**	P		**P**		**03 33 49.4**	**+1.2**
RES				IAmb		IAmb		03 33 52.2	
	comp=Z,3.6nm,1.1s								
SFJD	**Kangerlussuaq**	**73.56**	**6**	P		**P**		**03 35 16.6**	**+1.5**
PV19	**Morning Glory**	**77.62**	**51**	P		**P**		**03 35 39.7**	**+0.5**
PV19				IAmb		IAmb		03 35 51.8	
	comp=Z,2.7nm,0.9s								

IDC 14 03:24:49.1±2.2,6°37'S×128°80E,h0km,mb3.6/1, mbtmp3.3/3,ML3.4/2,MS3.7/2,Error ellipse: s-maj=125.2km s-min=32.5km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
WRA	**Warramunga Arr**	**14.53**	**159**	Pn		Pn	03 28 17.7		+1.5
	0.2nm,0.3s,baz=338,slow=13,SNR=4.8								
WRA				Sn		Sn	03 30 43.3		-15
	0.5nm,0.3s,baz=342,slow=22,SNR=6.7								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**17.89**	**165**	P		Pn	03 28 58.6		-1.0
	0.1nm,0.3s,baz=344,slow=9.6,SNR=5.2								
ASAR				S		Sn	03 32 07.8		-12
	0.3nm,0.5s,baz=352,slow=24,SNR=2.7								
	0.3nm,0.4s								
TGY	**Tagaytay City**	**21.78**	**339**	LR		LR	03 39 14.9		
	comp=Z,96nm,18.2s,baz=302,slow=40								
MKAR	**Makanchi Array**	**67.05**	**327**	P		P	03 35 44.3		0.0
	0.3nm,0.4s,baz=109,slow=7.8,SNR=4.3								
	0.3nm,0.4s								
KDAK	**Kodiak Island**	**89.31**	**32**	LR		LR	04 16 53.5		
	comp=Z,73nm,20.2s,baz=64,slow=35								

*MOS **14** 03:28:25.3±1.0,48°.33N×154°.77E,h46km,mb4.8/19,Error ellipse: s-maj=11.5km s-min=6.4km az=79.8*
*SKHL **14** 03:28:25.0±0.3,48°.10N×155°.30E,h53km±6km,mb5.1/4*
*NEIC **14** 03:28:28.2±1.1,48°.4N±0°.1×154°.7E±0°.2,h54km±6km, mb4.6/97,Error ellipse: s-maj=19.0km s-min=10.5km az=133.0*
*IDC **14** 03:28:28.7±2.6,48°.33N×154°.73E,h67km±23km,mb3.9/25, mbtmp4.2/29,MS3.6/34,Error ellipse: s-maj=15.1km s-min=11.1km az=138.0*
ISC 14 03:28:24.8±0.5,48°.18N±0°.06×154°.95E±0°.06,h33km,n263, σ1'36/232,mb4.6/99,MS3.6/33,16C-9D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SKR	**Severo-Kuril's**	**2.62**	**16**	*e*PN		**Pn**	**03 29 04.4**		**-0.3**
SKR				*e*S		**Sn**	**03 29 34.7**		**-0.6**
SKR				pmax		pmax			
	comp=Z,794nm,0.8s								
SKR				smax		smax			
	comp=E,1μm,0.6s								
SKR				smax		smax			
	comp=N,2μm,0.7s								
SKR				MLR		MLR			
	comp=N,2μm,15.0s								
SKR				MLR		MLR			
	comp=Z,2μm,15.0s								
SKR				MLR		MLR			
	comp=E,900nm,14.0s								
SKR	**Severo-Kuril's**	**2.62**	**16**	*e*P		**Pn**	**03 29 04.8**		**+0.1**
SKR				AMB		AMB	03 29 07.8		
	comp=E,600nm,0.5s								
SKR				*e*S		**Sn**	**03 29 34.9**		**-0.4**
SKR				A		A	03 29 40.3		
	comp=E,900nm,0.3s								
SKR				A		A	03 29 40.3		
	comp=E,2μm,0.3s								
PAU	**Pauzhetka**	**3.50**	**19**	*e*P		**Pn**	**03 29 17.4**		**+0.5**
PAU				AMB		AMB	03 29 22.7		
	comp=E,310nm,0.6s								
PAU				*e*S		**Sn**	**03 29 56.5**		**-0.6**
PAU				A		A	03 30 06.7		
	comp=E,1μm,0.4s								
PAU				A		A	03 30 06.7		
	comp=E,1μm,0.4s								
PEA0B	**Petropavlovsk-**	**5.23**	**18**			**Pn**	**03 29 42.1**		**+1.4**
PEA0B	**Petropavlovsk-**	**5.23**	**18**	*ce*PN		**Pn**	**03 29 42.6**		**+1.9**
PETK	**Petropavlovsk-**	**5.23**	**18**	P		**Pn**	**03 29 41.9**		**+1.2**
	comp=E,129nm,0.6s,baz=184,slow=13,SNR=117								
PETK				LR		LR	03 31 57.4		
	comp=E,1000nm,19.8s,baz=197,slow=41								
PETK	**Petropavlovsk-**	**5.23**	**18**			**Pn**	**03 29 41.6**		**+1.0**
PET	**Petropavlovsk**	**5.39**	**25**			**Pn**	**03 29 43.4**		**+0.6**
PET	**Petropavlovsk**	**5.39**	**25**	*ce*PN		**Pn**	**03 29 43.3**		**+0.6**
PET				pmax		pmax			
	comp=Z,99nm,0.7s								
PET	**Petropavlovsk**	**5.39**	**25**	*e*P		**Pn**	**03 29 42.8**		**0.0**
PET				AMB		AMB	03 29 46.0		
	comp=Z,90nm,0.7s								
PET				*e*S		**Sn**	**03 30 42.8**		**-0.8**
PET				A		A	03 31 05.6		
	comp=Z,240nm,0.8s								
PET				A		A	03 31 05.6		
	comp=Z,320nm,0.8s								
KUR	**Kuril'sk**	**5.70**	**241**	*e*PN		**Pn**	**03 29 50.3**		**+3.3**
KUR				*e*S		**Sn**	**03 30 54.2**		**+3.0**
KUR				pmax		pmax			
	comp=Z,300nm,0.7s								
KUR				pmax		pmax			
	comp=E,75nm,0.3s								
KUR				pmax		pmax			
	comp=E,75nm,0.8s								
KUR				smax		smax			
	comp=E,317nm,0.7s								
KUR				smax		smax			
	comp=N,145nm,0.8s								
KUR	**Kuril'sk**	**5.70**	**241**	*e*P		**Pn**	**03 29 49.9**		**+2.9**
KUR				AMB		AMB	03 29 51.7		
	comp=N,400nm,0.7s								
KUR				*e*S		**Sn**	**03 30 54.3**		**+3.0**
KUR				A		A	03 31 04.7		
	comp=N,270nm,0.6s								
KUR				A		A	03 31 04.7		
	comp=N,270nm,0.6s								
TYV	**Tymovskoe**	**8.44**	**293**	*e*P		**Pn**	**03 30 28.8**		**+4.2**

JKA	**Kamikawa-asahi**	**9.49**	**249**	Pn		**Pn**	**03 30 41.4**		**+2.4**
JKA	**Kamikawa-asahi**	**9.49**	**249**	*e*P		**Pn**	**03 30 42.8**		**+3.7**
ASAJ	**Asahikawa**	**9.49**	**249**	P		**Pn**	**03 30 42.8**		**+3.7**
	comp=N,23nm,0.7s,baz=69,slow=16,SNR=7.8								
ASAJ				LR		LR	03 34 01.6		
	comp=N,136nm,20.8s,baz=170,slow=35								
ERM	**Erimo**	**10.37**	**238**	Pn		**Pn**	**03 30 49.2**		**-1.9**
ERM	**Erimo**	**10.37**	**238**	PN		**Pn**	**03 30 49.2**		**-1.9**
JTM	**Tenmabayashi**	**12.36**	**238**	Pn		**Pn**	**03 31 15.0**		**-3.3**
SHEM	**Shemya Is, Ala**	**13.01**	**62**	P		**Pn**	**03 31 26.5**		**-0.6**
	comp=N,36nm,0.5s,baz=276,slow=2.2,SNR=5.5								
SMY	**Shemya**	**13.01**	**62**	Pn		**Pn**	**03 31 26.7**		**-0.4**
SMY	**Shemya**	**13.01**	**62**	PN		**Pn**	**03 31 26.7**		**-0.4**
SEY	**Seymchan**	**14.86**	**355**	P		**Pn**	**03 31 54.5**		**+2.3**
	comp=N,3.3nm,0.5s,baz=163,slow=12,SNR=9.2								
USRK	**Ussuriysk Ar.**	**16.38**	**264**	P		**Pn**	**03 32 13.2**		**+1.2**
	comp=N,4.2nm,0.7s,baz=78,slow=11,SNR=5.6								
MAJO	**Matsushiro**	**16.94**	**233**	P		**Pn**	**03 32 17.6**		**-1.7**
MAJO	**Matsushiro**	**16.94**	**233**	*i* P		**Pn**	**03 32 15.5**		**-3.7**
MJAR	**Matsushiro Arr**	**16.94**	**233**	P		**Pn**	**03 32 17.1**		**-2.1**
	comp=N,6.3nm,0.7s,baz=30,slow=13,SNR=12								
MJAR				LR		LR	03 38 55.6		
	comp=N,176nm,21.5s,baz=32,slow=37								
MJAR	**Matsushiro Arr**	**16.94**	**233**	Pn		**Pn**	**03 32 16.3**		**-2.9**
MJAR	**Matsushiro Arr**	**16.94**	**233**	P		**Pn**	**03 32 16.3**		**-2.9**
MJAR				pmax		pmax			
	comp=Z,8.0nm,1.3s								
MJB9	**Matsu-Tunnel**	**16.94**	**233**			**Pn**	**03 32 16.8**		**-2.4**
YAK	**Yakutsk**	**19.85**	**324**	*e*P		Pn	03 33 02.8		+8.5
YAK				pmax		pmax			
	comp=Z,15nm,0.8s								
YAK				pmax		pmax			
	comp=E,7.0nm,1.3s								
YAK				pmax		pmax			
	comp=N,6.0nm,1.0s								
BILL	**Bilibino**	**20.72**	**12**			**P**	**03 33 00.4**		**-1.6**
BILL	**Bilibino**	**20.72**	**12**	*ce*P		**P**	**03 33 03.2**		**+1.1**
BILL				pmax		pmax			
	comp=Z,9.0nm,1.0s								
BILL	**Bilibino**	**20.72**	**12**	*e*P		**P**	**03 33 03.2**		**+1.1**
CN2	**Changchun**	**20.90**	**269**	P		**P**	**03 33 01.3**		**-2.8**
KSRS	**Korea Array**	**22.43**	**251**	P		**P**	**03 33 20.9**		**+0.3**
	comp=Z,4.7nm,0.7s,baz=51,slow=9.8,SNR=8.6								
	comp=Z,4.7nm,0.7s								
JCJ	**Chichijima**	**23.29**	**210**	LR		LR	03 41 13.4		
	comp=Z,90nm,21.8s,baz=138,slow=33								
JNU	**Nakatsue**	**23.53**	**239**	LR		LR	03 43 54.6		
	comp=Z,41nm,19.2s,baz=49,slow=39								
TIXI	**Tiksi**	**26.47**	**342**	*ce*P		**P**	**03 33 56.0**		**-2.4**
TIXI				pmax		pmax			
	comp=Z,12nm,2.5s								
M16K	**Timber Creek**	**28.95**	**46**	P		**P**	**03 34 20.4**		**-0.3**
M16K				IAmb		IAmb	03 34 28.1		
	comp=Z,20nm,1.4s								
O16K	**Kokwok River B**	**29.30**	**49**	P		**P**	**03 34 25.5**		**+1.7**
O16K				IAmb		IAmb	03 34 37.7		
	comp=Z,19nm,1.1s								
M17K	**Holitna River**	**29.72**	**46**	P		**P**	**03 34 28.2**		**+0.7**
M17K				IAmb		IAmb	03 35 00.5		
	comp=Z,28nm,1.4s								
H11N2	**WAKE ISLAND Hy**	**29.98**	**157**	T		T	04 06 20.2		
	baz=344,slow=76,SNR=230								
H11N1	**WAKE ISLAND Hy**	**30.00**	**157**	T		T	04 06 20.4		
	baz=344,slow=76,SNR=414								
H11N3	**WAKE ISLAND Hy**	**30.00**	**157**	T		T	04 06 18.7		
	baz=344,slow=76,SNR=220								
N18K	**Kilae Creek**	**30.43**	**47**	P		**P**	**03 34 35.1**		**+1.3**
N18K				IAmb		IAmb	03 34 58.6		
	comp=Z,21nm,1.4s								
C19K	**Lookout Ridge**	**30.46**	**30**	P		**P**	**03 34 35.0**		**+0.9**
J19K	**Poorman**	**30.81**	**41**	P		**P**	**03 34 38.0**		**+0.8**
J19K				IAmb		IAmb	03 35 04.8		
	comp=Z,13nm,1.4s								
H11S1	**WAKE ISLAND Hy**	**31.11**	**158**	T		T	04 07 39.7		
	baz=344,slow=76,SNR=2053								
H11S3	**WAKE ISLAND Hy**	**31.11**	**158**	T		T	04 07 40.3		
	baz=344,slow=76,SNR=3530								
H11S2	**WAKE ISLAND Hy**	**31.12**	**158**	T		T	04 07 41.0		
	baz=344,slow=76,SNR=2545								
HHC	**Hu-ho-hao-te**	**31.45**	**273**	*e*P		**P**	**03 34 43.9**		**+0.7**
HHC				pmax		pmax			
	comp=Z,13nm,0.7s								
HHC				pmax		pmax			
	comp=Z,150nm,4.0s								
NJ2	**Nanjing**	**31.61**	**253**	*e*P		**P**	**03 34 45.3**		**+0.8**
NJ2				pmax		pmax			
	comp=Z,8.0nm,0.6s								
M20K	**Styx River**	**31.80**	**45**	P		**P**	**03 34 47.6**		**+1.7**
M20K				IAmb		IAmb	03 35 23.2		
	comp=Z,13nm,1.5s								
PPLA	**Purkeypile**	**32.26**	**43**	P		**P**	**03 34 51.6**		**+1.6**
PPLA				IAmb		IAmb	03 35 00.4		
	comp=Z,20nm,1.3s								
B21K	**Ikpikpuk River**	**32.30**	**30**	P		**P**	**03 34 50.8**		**+0.7**
D22K	**Ayikyak River**	**32.79**	**32**	P		**P**	**03 34 55.3**		**+0.8**
D22K				IAmb		IAmb	03 35 35.7		
	comp=Z,17nm,1.4s								
H22K	**Ishtalitna Cre**	**32.83**	**38**	P		**P**	**03 34 56.2**		**+1.4**
H22K				IAmb		IAmb	03 34 57.0		
	comp=Z,6.6nm,0.8s								
B22K	**Teshekpuk Lake**	**32.88**	**29**	P		**P**	**03 34 55.7**		**+0.5**
E22K	**Anaktuvuk Pass**	**32.97**	**33**			**P**	**03 34 57.2**		**+1.2**
E22K				IAmb		IAmb	03 34 57.8		
	comp=Z,9.2nm,0.7s								
TRF	**Thorofare Moun**	**33.14**	**42**	P		**P**	**03 34 58.3**		**+0.6**
TRF				IAmb		IAmb	03 35 18.7		
	comp=Z,7.9nm,1.0s								
COLD	**Coldfoot**	**33.44**	**35**			**P**	**03 35 01.3**		**+1.2**
COLD				IAmb		IAmb	03 35 01.8		
	comp=Z,8.2nm,0.8s								
C23K	**Itkillik River**	**33.70**	**31**	P		**P**	**03 35 03.3**		**+0.9**
RND	**Reindeer**	**33.79**	**42**			**P**	**03 35 05.1**		**+1.8**
RND				IAmb		IAmb	03 35 15.2		
	comp=Z,11nm,1.0s								
RND	**Reindeer**	**33.79**	**42**	P		**P**	**03 35 05.1**		**+1.8**
RND				pmax		pmax			
	comp=Z,11nm,1.0s								
TOLK	**Toolik Lake Re**	**33.87**	**33**	P		**P**	**03 35 04.3**		**+0.4**
TOLK				IAmb		IAmb	03 35 21.6		
	comp=Z,5.2nm,0.5s								
SML	**Sawmill**	**34.07**	**45**	P		**P**	**03 35 06.6**		**+0.8**
WRH	**Wood River Hil**	**34.13**	**40**	P		**P**	**03 35 06.5**		**+0.4**
E24K	**Your Creek**	**34.19**	**34**	P		**P**	**03 35 07.8**		**+1.1**
COLA	**College**	**34.24**	**40**	*i* P		**P**	**03 35 07.7**		**+0.7**
COLA				pmax		pmax			
	comp=Z,15nm,0.9s								
C24K	**Franklin Bluff**	**34.34**	**31**	P		**P**	**03 35 09.7**		**+1.8**
C24K				IAmb		IAmb	03 35 13.5		
	comp=Z,17nm,1.4s								
F24K	**Squaw Lake**	**34.36**	**35**	P		**P**	**03 35 09.2**		**+1.0**
F24K				IAmb		IAmb	03 35 11.8		
	comp=Z,4.5nm,0.7s								
SCM	**Sheep Creek Mo**	**34.55**	**45**	P		**P**	**03 35 11.2**		**+1.3**
SCM	**Sheep Creek Mo**	**34.55**	**45**	P		**P**	**03 35 11.2**		**+1.3**
SCM				pmax		pmax			
	comp=Z,43nm,1.4s								
IL31		**34.65**	**40**	P		**P**	**03 35 10.4**		**-0.2**
ILAR	**Eielson Array**	**34.65**	**40**	P		**P**	**03 35 10.7**		**0.0**
	comp=Z,1.2nm,0.7s,baz=263,slow=9.9,SNR=12								
	comp=Z,1.2nm,0.7s								
F25K	**Christian Rive**	**35.23**	**35**	P		**P**	**03 35 16.3**		**+0.6**
E25K	**Arctic Village**	**35.29**	**34**	P		**P**	**03 35 17.1**		**+1.0**
E25K				IAmb		IAmb	03 35 18.6		
	comp=Z,6.2nm,0.9s								
GUMO	**Guam**	**35.49**	**197**	LR		LR	03 46 34.6		
	comp=Z,86nm,21.4s,baz=6.0,slow=30								
BMAR	**Burnt Mountain**	**35.63**	**35**			**P**	**03 35 19.5**		**+0.4**
F26K	**Sheenjek River**	**35.80**	**35**	P		**P**	**03 35 21.5**		**+0.9**
C27K	**Jago River**	**36.06**	**31**	P		**P**	**03 35 23.4**		**+0.7**
E27K	**Coleen River**	**36.77**	**34**	P		**P**	**03 35 30.4**		**+1.5**
XAN	**Xi'an**	**36.89**	**265**	P		**P**	**03 35 27.4**		**-2.8**
XAN				pmax		pmax			
	comp=Z,5.0nm,0.8s								
L27K	**Beaver Creek,**	**36.98**	**43**	P		**P**	**03 35 32.3**		**+1.6**
BCAR	**Beaver Creek A**	**37.00**	**43**			**P**	**03 35 32.1**		**+1.2**
M27K	**Edge Creek, AK**	**37.05**	**44**	P		**P**	**03 35 33.0**		**+1.6**
M27K				IAmb		IAmb	03 35 44.6		
	comp=Z,8.7nm,1.0s								
F28M	**Old Crow**	**37.44**	**35**			**P**	**03 35 36.0**		**+1.5**
F28M				IAmb		IAmb	03 35 37.1		
	comp=Z,12nm,1.1s								
CTGM	**Chitina Glacie**	**37.51**	**46**	P		**P**	**03 35 36.3**		**+0.9**
I28M	**Miner Creek**	**37.56**	**38**	P		**P**	**03 35 36.6**		**+0.9**
I28M				IAmb		IAmb	03 35 37.6		
	comp=Z,7.4nm,1.1s								

H29M	**Whitestone**	**38.13**	**37**	P		**P**	**03 35 42.0**		**+1.7**
H29M				IAmb		IAmb	03 35 42.9		
	comp=Z,6.8nm,0.8s								
NRIK	**Noril'sk**	**38.19**	**328**	LR		LR	03 51 37.7		
	comp=Z,49nm,18.5s,baz=52,slow=37								
L29M	**L29M**	**38.64**	**42**	P		**P**	**03 35 46.6**		**+1.9**
L29M				IAmb		IAmb	03 35 47.5		
	comp=Z,6.2nm,0.8s								
I30M	**Mount Dempster**	**39.07**	**39**	P		**P**	**03 35 49.4**		**+1.1**
I30M				IAmb		IAmb	03 35 50.4		
	comp=Z,8.1nm,0.9s								
LZH	**Lanzhou**	**39.10**	**271**	*e*P		**P**	**03 35 46.3**		**-2.7**
LZH				sP		sP	03 36 08.0		+5.8
LZH				pmax		pmax			
	comp=Z,17nm,1.0s								
G31M	**Satah River**	**39.67**	**36**	P		**P**	**03 35 54.1**		**+0.9**
G31M				IAmb		IAmb	03 35 54.5		
	comp=Z,21nm,1.4s								
INK	**Inuvik**	**39.77**	**33**			**P**	**03 35 55.3**		**+1.4**
INK				IAmb		IAmb	03 35 56.1		
	comp=Z,5.6nm,0.8s								
INK	**Inuvik**	**39.77**	**33**	P		**P**	**03 35 55.3**		**+1.4**
INK				pmax		pmax			
	comp=Z,6.0nm,0.8s								
P33M	**Teslin, Yukon**	**41.77**	**46**	P		**P**	**03 36 12.6**		**+1.9**
P33M				IAmb		IAmb	03 36 13.5		
	comp=Z,14nm,1.1s								
A36M	**Sachs Harbour**	**42.01**	**27**			**P**	**03 36 13.7**		**+1.3**
A36M				IAmb		IAmb	03 36 15.4		
	comp=Z,12nm,0.8s								
ZALV	**Zalesovo Beam**	**42.80**	**305**	P		**P**	**03 36 16.9**		**-2.1**
	comp=Z,0.7nm,0.4s,baz=59,slow=9.1,SNR=4.2								
ZALV				PcP		**PcP**	**03 38 09.8**		**0.0**
	comp=Z,0.7nm,0.3s,baz=44,slow=1.6,SNR=2.8								
	comp=Z,0.7nm,0.4s								
ZALV	**Zalesovo Beam**	**42.80**	**305**	*i* P		**P**	**03 36 17.2**		**-1.8**
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.5s								
C36M	**Paulatuk**	**42.95**	**31**	P		**P**	**03 36 21.2**		**+1.2**
C36M				IAmb		IAmb	03 36 21.6		
	comp=Z,9.0nm,0.8s								
WMQ	**Urumqi**	**45.58**	**291**	*e*P		**P**	**03 36 42.8**		**+1.3**
WMQ				pP		sP	03 36 58.5		+4.6
PZH	**PanZhiHua**	**46.45**	**262**	P		**P**	**03 36 49.1**		**+0.4**
MK31	**Makanchi Array**	**47.40**	**297**	*ce*P		**P**	**03 36 55.3**		**-0.4**
MKAR	**Makanchi Array**	**47.40**	**297**	P		**P**	**03 36 54.2**		**-1.5**
	comp=Z,2.2nm,0.7s,baz=66,slow=8.1,SNR=13								
MKAR				LR		LR	04 00 14.2		
	comp=Z,62nm,18.3s,baz=37,slow=40								
	comp=Z,2.2nm,0.7s								
KURK	**Kurchatov**	**47.62**	**303**			**P**	**03 36 55.4**		**-1.8**
KURK				IAmb		IAmb	03 36 56.6		
	comp=Z,5.0nm,0.7s								
KURK	**Kurchatov**	**47.62**	**303**	*ce*P		**P**	**03 36 56.3**		**-1.0**
KURK				pmax		pmax			
	comp=Z,3.0nm,0.6s								
KURK	**Kurchatov**	**47.62**	**303**	*e*P		**P**	**03 36 56.3**		**-1.0**
KURBB	**Kurchatov Arra**	**47.71**	**303**	P		**P**	**03 36 56.6**		**-1.4**
	comp=Z,4.1nm,0.7s,baz=66,slow=8.4,SNR=25								
	comp=Z,4.1nm,0.7s								
YKA	**Yellowknife Ar**	**49.03**	**38**	P		**P**	**03 37 08.8**		**+0.8**
	comp=Z,3.3nm,0.8s,baz=299,slow=8.2,SNR=4.1								
	comp=Z,3.3nm,0.8s								
RES	**Resolute Bay**	**49.08**	**19**	P		**P**	**03 37 08.3**		**+0.2**
	comp=Z,7.0nm,0.8s,baz=290,slow=8.6,SNR=9.0								
	comp=Z,7.0nm,0.8s								
RES	**Resolute Bay**	**49.08**	**19**			**P**	**03 37 09.1**		**+0.9**
BVAR	**Borovoye Array**	**50.92**	**309**	P		**P**	**03 37 20.8**		**-1.7**
	comp=Z,1.4nm,0.5s,baz=61,slow=7.2,SNR=6.6								
BVAR				LR		LR	04 00 28.2		
	comp=Z,88nm,19.7s,baz=59,slow=38								
	comp=Z,1.4nm,0.5s								
BORK	**Borovoye**	**50.94**	**309**	*ce*P		**P**	**03 37 22.2**		**-0.5**
BORK				pmax		pmax			
	comp=Z,2.0nm,1.0s								
JAY	**Jayapura**	**52.00**	**198**	LR		LR	03 57 04.9		
	comp=Z,21nm,21.2s,baz=338,slow=33								
SHL	**Shillong**	**53.65**	**269**	P		**P**	**03 37 43.3**		**0.0**
SHL	**Shillong**	**53.65**	**269**	P		**P**	**03 37 43.3**		**0.0**
SHL				pmax		pmax			
	comp=Z,9.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**53.92**	**257**	P		**P**

KNB	**Kanab**	**64.87**	**62**	P	**P**	**03 39 02.2**	**+1.4**
KNB				IAmb	IAmb	03 39 15.4	
	comp=Z,11nm,1.4s						
KNB	**Kanab**	**64.87**	**62**	P	**P**	**03 39 02.2**	**+1.4**
KNB				pmax	pmax		
	comp=Z,11nm,1.4s						
RSSD	**Black Hills**	**64.95**	**51**		**P**	**03 39 02.4**	**+1.2**
RSSD	**Black Hills**	**64.95**	**51**	P	**P**	**03 39 02.4**	**+1.2**
RSSD				pmax	pmax		
	comp=Z,11nm,0.8s						
HMU	**Henry Mountain**	**65.47**	**60**	P	**P**	**03 39 05.9**	**+1.2**
HMU				IAmb	IAmb	03 39 06.4	
	comp=Z,4.5nm,0.8s						
PV10	**Paradox Valley**	**66.15**	**59**	P	**P**	**03 39 10.8**	**+1.7**
PV20	**West Nyswonger**	**66.22**	**59**	P	**P**	**03 39 10.5**	**+1.0**
PV19	**Morning Glory**	**66.23**	**59**	P	**P**	**03 39 10.8**	**+1.2**
PV18	**Skein Mesa, Pa**	**66.31**	**59**		**P**	**03 39 11.4**	**+1.2**
PV05	**Paradox Valley**	**66.32**	**59**	P	**P**	**03 39 11.6**	**+1.4**
PV05				IAmb	IAmb	03 39 12.2	
	comp=Z,7.4nm,0.7s						
PV03	**Paradox Valley**	**66.34**	**59**	P	**P**	**03 39 11.6**	**+1.2**
PV02	**Paradox Valley**	**66.44**	**59**	P	**P**	**03 39 12.3**	**+1.3**
PV02				IAmb	IAmb	03 39 24.5	
	comp=Z,10nm,1.1s						
ISCO	**Idaho Springs**	**67.09**	**56**		**P**	**03 39 16.8**	**+1.6**
ISCO				IAmb	IAmb	03 39 29.0	
	comp=Z,5.0nm,1.0s						
ISCO	**Idaho Springs**	**67.09**	**56**	P	**P**	**03 39 16.8**	**+1.6**
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NOA	**NORSAR Array B**	**67.27**	**342**	P	**P**	**03 39 13.8**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=28,slow=6.5,SNR=4.6						
	comp=Z,0.5nm,0.7s						
X16A	**Lo Mia Camp, P**	**67.46**	**63**		**P**	**03 39 18.7**	**+1.2**
X16A				IAmb	IAmb	03 39 31.4	
	comp=Z,8.6nm,1.5s						
HFS	**Hagfors**	**67.54**	**340**	P	**P**	**03 39 16.3**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=66,slow=4.0,SNR=19						
HFS				LR	LR	04 10 49.6	
	comp=Z,54nm,18.9s,baz=343,slow=38						
	comp=Z,1.4nm,0.4s						
S22A	**4UR Ranch, Cre**	**67.84**	**58**	P	**P**	**03 39 21.9**	**+1.9**
ECSD	**EROS Data Cent**	**68.99**	**47**	P	**P**	**03 39 27.1**	**+0.5**
ECSD				IAmb	IAmb	03 39 27.7	
	comp=Z,4.2nm,0.7s						
ANMO	**Albuquerque**	**70.03**	**60**	*i* P	**P**	**03 39 32.2**	**-1.2**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WR8	**Warramunga Arr**	**70.26**	**200**		**P**	**03 39 35.0**	**+0.4**
WR8				IAmb	IAmb	03 39 35.7	
	comp=Z,8.2nm,0.8s						
WRAB	**Tennant Creek**	**70.27**	**201**	*ce*P	**P**	**03 39 32.5**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**70.28**	**201**	P	**P**	**03 39 35.2**	**+0.4**
	comp=Z,7.8nm,0.8s,baz=17,slow=6.6,SNR=23						
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**70.28**	**201**	P	**P**	**03 39 35.0**	**+0.3**
WRA	**Warramunga Arr**	**70.28**	**201**	*i* P	**P**	**03 39 35.0**	**+0.3**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SBM	**South Baldy**	**70.29**	**61**	P	**P**	**03 39 36.7**	**+1.4**
KIV	**Kislovodsk**	**70.68**	**315**	*eP*	**P**	**03 39 35.0**	**-2.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	**Khabaz**	**70.75**	**315**	LR	LR	04 13 18.4	
	comp=Z,71nm,18.8s,baz=354,slow=38						
FITZ	**Fitzroy Crossi**	**71.00**	**210**	LR	LR	04 12 43.5	
	comp=Z,13nm,18.9s,baz=22,slow=37						
AKASG	**Malin Array Be**	**71.04**	**327**	P	**P**	**03 39 37.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=37,slow=6.4,SNR=2.2						
	comp=Z,0.3nm,0.3s						
SOC	**Sochi**	**72.36**	**316**	*eP*	**P**	**03 39 47.2**	**+0.1**
SOC				*e*		03 42 23.3	
SOC				*ePPP*	PPP	03 44 06.1	
SOC				*eS*	**S**	**03 49 09.1**	**+1.0**
SOC				*eSS*	**SS**	**03 53 44.7**	**-0.9**
SOC				*eSSS*	SSS	03 56 49.0	
SOC				MLR	MLR		
	comp=Z,62nm,17.0s						
GNI	**Garni**	**72.54**	**311**	LR	LR	04 14 27.1	
	comp=Z,41nm,19.6s,baz=18,slow=38						
AS31	**Alice Springs**	**73.97**	**200**		**P**	**03 39 58.0**	**+1.2**
ASAR	**Alice Springs**	**73.97**	**200**	P	**P**	**03 39 58.1**	**+1.3**
	comp=Z,3.3nm,0.6s,baz=15,slow=5.4,SNR=40						
ASAR				LR	LR	04 12 37.2	
	comp=Z,18nm,19.7s,baz=288,slow=36						
	comp=Z,3.3nm,0.6s						
ASAR	**Alice Springs**	**73.97**	**200**		**P**	**03 39 57.7**	**+0.9**
ASAR	**Alice Springs**	**73.97**	**200**	P	**P**	**03 39 57.7**	**+0.9**
PALK	**Pallekele**	**74.12**	**263**	LR	LR	04 16 13.7	
	comp=Z,17nm,19.9s,baz=94,slow=39						
APMT	**Aspermont**	**74.81**	**57**	P	**P**	**03 40 02.6**	**+0.8**
APMT				IAmb	IAmb	03 40 03.1	
	comp=Z,7.5nm,0.9s						
BUR08	**Bucovina Ar. S**	**75.05**	**327**	P	**P**	**03 40 02.5**	**-0.5**
BURAR	**Bucovina Array**	**75.07**	**327**	⇓P	**P**	**03 40 02.5**	**-0.6**
BURAR	**Bucovina Array**	**75.07**	**327**	⇓P	**P**	**03 40 02.5**	**-0.6**
EKA	**Eskdalemuir Ar**	**75.23**	**347**	P	**P**	**03 40 03.5**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=15,slow=5.2,SNR=12						
	comp=Z,2.1nm,0.5s						
CHVC	**Chvalec**	**75.46**	**334**	*eP*	**P**	**03 40 05.1**	**-0.1**
CHVC	**Chvalec**	**75.46**	**334**	*eP*	**P**	**03 40 05.1**	**-0.1**
STEB	**Steborice**	**75.53**	**333**	*eP*	**P**	**03 40 05.5**	**-0.1**
DPC	**Dobruska-Polom**	**75.59**	**334**	*eP*	**P**	**03 40 06.2**	**+0.2**
DPC	**Dobruska-Polom**	**75.59**	**334**	*eP*	**P**	**03 40 06.2**	**+0.2**
CLL	**Collm**	**75.66**	**336**	*i* P	**P**	**03 40 05.9**	**-0.4**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL	**Collm**	**75.66**	**336**	*i* P	**P**	**03 40 05.9**	**-0.4**
	comp=Z,6.0nm,0.8s						
KRLC	**Kraliky**	**75.70**	**334**	*eP*	**P**	**03 40 06.3**	**-0.3**
KRLC	**Kraliky**	**75.70**	**334**	*eP*	**P**	**03 40 06.3**	**-0.3**
TX31	**Lajitas Ar. Si**	**75.71**	**62**		**P**	**03 40 08.1**	**+1.0**
TXAR	**Lajitas Array**	**75.71**	**62**	P	**P**	**03 40 08.0**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=301,slow=4.2,SNR=44						
	comp=Z,2.3nm,0.7s						
MORC	**Moravsky Berou**	**75.74**	**333**		**P**	**03 40 07.0**	**+0.2**
MORC				IAmb	IAmb	03 40 07.5	
	comp=Z,4.9nm,0.8s						
MORC	**Moravsky Berou**	**75.74**	**333**	⇑P	**P**	**03 40 07.2**	**+0.3**
MORC	**Moravsky Berou**	**75.74**	**333**	*eP*	**P**	**03 40 06.9**	**+0.1**
MORC	**Moravsky Berou**	**75.74**	**333**	P	**P**	**03 40 07.0**	**+0.2**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VRAC	**Vranov**	**76.44**	**333**	LR	LR	04 16 24.2	
	comp=Z,124nm,18.1s,baz=360,slow=38						
VRAC	**Vranov**	**76.44**	**333**	⇓P	**P**	**03 40 11.4**	**+0.6**
VRAC	**Vranov**	**76.44**	**333**	*eP*	**P**	**03 40 11.0**	**+0.2**
VRAC	**Vranov**	**76.44**	**333**	⇓P	**P**	**03 40 11.4**	**+0.6**
HARR	**Harsova**	**76.51**	**324**	⇓P	P	03 40 17.1	+5.9
HARR	**Harsova**	**76.51**	**324**	⇓P	P	03 40 17.1	+5.9
MLR	**Muntele Rosu**	**76.60**	**326**	LR	LR	04 19 50.4	
	comp=Z,94nm,18.6s,baz=30,slow=40						
MLR	**Muntele Rosu**	**76.60**	**326**	⇑P	**P**	**03 40 13.1**	**+1.2**
MLR	**Muntele Rosu**	**76.60**	**326**	⇑P	**P**	**03 40 13.1**	**+1.2**
KRUC	**Moravsky**	**76.72**	**333**	*eP*	**P**	**03 40 12.3**	**-0.1**
ZVC	**Zvikov**	**77.03**	**335**	*eP*	**P**	**03 40 14.1**	**0.0**
KHC	**Kasperske Hory**	**77.48**	**335**		**P**	**03 40 16.8**	**+0.2**
KHC				IAmb	IAmb	03 40 18.4	
	comp=Z,5.3nm,1.0s						
KHC	**Kasperske Hory**	**77.48**	**335**	*ce*P	**P**	**03 40 17.4**	**+0.7**
KHC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KHC	**Kasperske Hory**	**77.48**	**335**	*eP*	**P**	**03 40 16.7**	**0.0**
GERES	**GERESS Array B**	**77.70**	**335**	P	**P**	**03 40 17.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=17,slow=5.6,SNR=13						
GERES				LR	LR	04 16 42.2	
	comp=Z,99nm,18.4s,baz=11,slow=37						
	comp=Z,1.6nm,0.7s						
SURR	**Surduc**	**77.76**	**328**	⇑P	P	03 40 10.5	-7.7
GZR	**Gura Zlata**	**77.84**	**328**	⇓P	**P**	**03 40 18.3**	**-0.5**
GZR	**Gura Zlata**	**77.84**	**328**	⇓P	**P**	**03 40 18.3**	**-0.5**
CONA	**Conrad Observa**	**77.89**	**333**	*i* P	**P**	**03 40 19.6**	**+0.5**
	comp=Z,1.9nm,0.7s						
RONA	**Rosalia, Austr**	**77.97**	**333**	*eP*	**P**	**03 40 20.1**	**+0.6**
	comp=Z,2.8nm,0.8s						
BZS	**Buzias**	**78.06**	**329**	⇑P	**P**	**03 40 19.6**	**-0.3**
BZS	**Buzias**	**78.06**	**329**	⇑P	**P**	**03 40 19.6**	**-0.3**
BRTR	**Keskin Array B**	**78.19**	**318**	P	**P**	**03 40 18.7**	**-2.2**
	comp=Z,1.6nm,0.8s,baz=80,slow=3.1,SNR=6.8						
BRTR				LR	LR	04 18 07.4	
	comp=Z,17nm,18.8s,baz=298,slow=38						
	comp=Z,1.6nm,0.8s						
HERR	**Herculane**	**78.41**	**328**	⇑P	**P**	**03 40 21.2**	**-0.7**
MOA	**Molln**	**78.44**	**334**	*eP*	**P**	**03 40 23.2**	**+1.2**
	comp=Z,3.5nm,0.8s						
SOKA	**Soboth**	**79.27**	**333**	*i* P	**P**	**03 40 26.6**	**-0.1**
	comp=Z,2.1nm,0.6s						
LESA	**Schwarzleotal**	**79.28**	**335**	*eP*	**P**	**03 40 27.1**	**+0.4**
	comp=Z,2.6nm,0.5s						
KBA	**Koelnbreinsper**	**79.40**	**334**	*eP*	**P**	**03 40 28.0**	**+0.5**
	comp=Z,4.5nm,0.5s						
WATA	**Walderalm**	**79.67**	**336**	*i* P	**P**	**03 40 29.3**	**+0.4**
	comp=Z,3.5nm,0.6s						
WTTA	**Wattenberg**	**79.72**	**336**	*eP*	**P**	**03 40 29.8**	**+0.5**
	comp=Z,6.6nm,0.8s						
BOVS	**Bovan**	**79.75**	**327**	⇓P	**P**	**03 40 28.2**	**-1.0**
RETA	**Reutte**	**79.75**	**336**	*i* P	**P**	**03 40 29.5**	**+0.3**
	comp=Z,2.6nm,0.7s						
MOTA	**Moosalm**	**79.79**	**336**	*i* P	**P**	**03 40 30.0**	**+0.5**
	comp=Z,5.8nm,0.9s						
SQTA	**Sankt Quirin**	**79.87**	**336**	*eP*	**P**	**03 40 30.5**	**+0.5**
	comp=Z,1.3nm,0.4s						
DAVA	**Damuels**	**80.17**	**337**	*i* P	**P**	**03 40 31.8**	**+0.2**
	comp=Z,4.6nm,0.8s						
FETA	**Feichten**	**80.19**	**336**	*i* P	**P**	**03 40 32.2**	**+0.4**
	comp=Z,1.6nm,0.7s						
STKA	**Stephens Creek**	**80.59**	**191**	P	**P**	**03 40 32.6**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=311,slow=17,SNR=3.1						
STKA				LR	LR	04 14 02.0	
	comp=Z,26nm,21.9s,baz=25,slow=34						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**80.59**	**191**	IAmb	IAmb	03 40 35.0	
	comp=Z,37nm,1.4s						
TUE	**Stuetta**	**81.06**	**337**		**P**	**03 40 36.6**	**+0.1**
TUE				IAmb	IAmb	03 40 37.5	
	comp=Z,5.0nm,0.8s						
TKL	**Tuckaleechee C**	**81.47**	**45**	LR	LR	04 20 22.5	
	comp=Z,77nm,18.8s,baz=12,slow=38						
PPT	**Papeete**	**82.01**	**127**	LR	LR	04 09 21.6	
	comp=Z,26nm,19.6s,baz=326,slow=30						
PPT2	**Papeete2**	**82.03**	**127**	*e*LR	LR	04 06 16.1	
	comp=Z,41nm,24.2s						
ASF	**Jabal al Asfar**	**82.72**	**311**	LR	LR	04 20 49.2	
	comp=Z,22nm,19.4s,baz=69,slow=38						
MMAI	**Mount Meron Ar**	**82.78**	**313**	P	**P**	**03 40 44.4**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=64,slow=3.4,SNR=2.5						
	comp=Z,0.8nm,0.4s						
EIL	**Elat**	**85.72**	**311**	LR	LR	04 23 29.7	
	comp=Z,44nm,19.2s,baz=180,slow=39						
TBI	**Tubuai**	**86.86**	**131**	*e*LR	LR	04 08 35.0	
	comp=Z,380nm,27.0s						
H03N2	**Juan Fernandez**	**137.51**	**90**	T	T	06 20 47.2	
	baz=309,slow=77,SNR=38						
H03N1	**Juan Fernandez**	**137.52**	**90**	T	T	06 20 48.5	
	baz=309,slow=77,SNR=44						
H03N3	**Juan Fernandez**	**137.52**	**90**	T	T	06 20 55.4	
	baz=309,slow=77,SNR=40						
SNAA	**Sanae**	**154.28**	**196**	PKPab	**PKPab**	**03 48 34.3**	**0.0**
	comp=Z,3.0nm,0.9s,baz=134,slow=4.1,SNR=7.6						
SNAA	**Sanae**	**154.28**	**196**		**PKPab**	**03 48 34.6**	**+0.3**

*TEH **14** 03:33:57.1,27.˚61N×53.˚96E,h10km±990km*
*OMAN **14** 03:34:00.1±0.4,27.˚42N×54.˚36E,h200km,ml2.8/11,Error ellipse: s-maj=7.9km s-min=3.9km az=10.0*
ISC 14 03:33:58.6±1.2,**27.˚49N**±0.˚07×**54.˚03E**±0.˚06,**h23km,n23,**
σ1s86/35,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.36**	**59**	Pg	**Pb**	**03 34 04.8**	**-1.7**
LMD1	**Lamerd**	**0.78**	**259**	Pg	**Pb**	**03 34 11.9**	**-1.6**
SHME	**Shamm**	**2.37**	**127**	P	**Pn**	**03 34 38.9**	**+2.8**
BANOM	**Banah**	**2.56**	**127**	P	**Pn**	**03 34 41.6**	**+2.9**
BANOM				S	**Sn**	**03 35 10.7**	**+1.5**
MASF	**Masafi**	**2.84**	**137**	P	**Pn**	**03 34 45.2**	**+2.6**
MASF				S	**Sn**	**03 35 17.7**	**+1.5**
NAZ	**Nazwa, Dubai**	**2.89**	**149**	P	**Pn**	**03 34 45.1**	**+1.9**
MDH	**Madha**	**2.98**	**136**	P	**Pn**	**03 34 45.3**	**+0.8**
MDH				S	**Sn**	**03 35 22.2**	**+2.7**
ASUD	**Al Ashush, Dub**	**3.08**	**157**	P	**Pn**	**03 34 48.2**	**+2.4**
ASHO	**Ashiyiah** SNR=11	**3.33**	**146**	P	**Pn**	**03 34 51.0**	**+1.6**
ASHO				S	**Sn**	**03 35 29.5**	**+1.2**
ALNE	**Al Ain** SNR=9.6	**3.75**	**155**	P	**Pn**	**03 34 56.9**	**+1.8**
ALNE				S	**Sn**	**03 35 40.4**	**+1.8**
IMEH	**Mehriz**	**3.92**	**7**	Pn	**Pn**	**03 34 58.9**	**+1.2**
SOHO	**SOHO**	**4.03**	**145**	P	**Pn**	**03 34 59.9**	**+1.1**
SOHO				S	**Sn**	**03 35 47.7**	**+2.3**
KLNJ	**Kolanjah**	**4.11**	**329**	Pn	**Pn**	**03 35 00.4**	**+0.1**
ARQ	**Araqi** SNR=6.9	**4.71**	**151**	P	**Pn**	**03 35 10.2**	**+2.0**
BSY	**Bisya**	**5.53**	**148**	P	**Pn**	**03 35 20.5**	**+1.0**
BSY				S	**Sn**	**03 36 22.8**	**+0.4**
IZEF	**Zefreh**	**5.59**	**345**	Pn	**Pn**	**03 35 20.4**	**-0.2**
SMDO	**Samad**	**5.71**	**140**	P	**Pn**	**03 35 21.4**	**-0.8**
SMDO				S	**Sn**	**03 36 26.8**	**-0.3**
WSAR	**Wadi Sarin**	**5.93**	**134**	P	**Pn**	**03 35 23.1**	**-2.0**
WSAR				S	**Sn**	**03 36 31.1**	**-1.3**
WBK	**Wadi Bani Khal**	**6.61**	**136**	P	**Pn**	**03 35 33.7**	**-0.7**
WBK				S	**Sn**	**03 36 48.4**	**-0.6**
JLN	**Jalan Bani Buh**	**7.22**	**136**	P	**Pn**	**03 35 41.6**	**-1.1**
JLN				S	**Sn**	**03 36 59.7**	**-4.3**
MHTO	**MHTO** SNR=11	**7.40**	**150**	P	**Pn**	**03 35 45.3**	**+0.1**
MHTO				S	**Sn**	**03 37 05.7**	**-2.8**
DOK	**Doka**	**8.83**	**179**	P	**Pn**	**03 36 03.7**	**-1.1**
WHFO	**Wadi Hawf** SNR=6.4	**9.53**	**181**	P	**Pn**	**03 36 13.8**	**-0.7**

*CATAC **14** 03:41:30.9±0.7, 13˚N±4˚×9˚0W±˚,h15km±4km,M3.4/15, MLv3.4/15,Error ellipse: s-maj=7.7km s-min=5.1km az=17.7,confirmed*
*SNET **14** 03:41:31.8±1.1, 13˚.20N×89˚.92W,h32km±6km,ML3.3*
*GCG **14** 03:41:31.1±1.3, 13˚.20N×89˚.99W,h24km±9km,MD3.8, ML3.7*
ISC 14 03:41:33.4±1.9,**13˚26N**±0.˚08×**89˚84W**±0.˚06,**h29km**±11km,
n62,σ0s81/70,6C,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.54**	**44**	⇑*eP*	**Pn**	**03 41 44.6**	**-0.7**
JAYA				*eS*	**Sn**	**03 41 53.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.54**	**44**	*i* P	**Pn**	**03 41 44.6**	**-0.7**
JAYA				*eS*	**Sn**	**03 41 54.2**	**+0.7**
JAYA	**Jayaque - finc**	**0.54**	**44**	P	**Pn**	**03 41 44.7**	**-0.7**
LALI	**Alcalda de L**	**0.55**	**66**	*eP*	**Pn**	**03 41 44.4**	**-0.8**
LALI				*eS*	**Sb**	**03 41 53.1**	**+0.8**
LALI	**Alcalda de L**	**0.55**	**66**	*eP*	**Pn**	**03 41 44.5**	**-0.8**
LALI				*i* S	**Sb**	**03 41 53.1**	**+0.8**
LALI	**Alcalda de L**	**0.55**	**66**	P	**Pb**	**03 41 44.3**	**-0.4**
LALI	**Alcalda de L**	**0.55**	**66**	S	**Sb**	**03 41 52.5**	**+0.2**
CEVE	**Cerro Verde**	**0.60**	**21**	⇑*eP*	**Pn**	**03 41 45.5**	**-0.6**
CEVE	**Cerro Verde**	**0.60**	**21**	P	**Pn**	**03 41 45.5**	**-0.6**
CEVE	**Cerro Verde**	**0.60**	**21**	S	**Sn**	**03 41 55.6**	**+0.6**
FAME	**Alcaldia de Sa**	**0.60**	**344**	P	**Pn**	**03 41 44.4**	**-1.6**
FAME	**Alcaldia de Sa**	**0.60**	**344**	S	**Sn**	**03 41 54.3**	**-0.4**
NUBE	**Las Nubes**	**0.64**	**5**	*eP*	**Pn**	**03 41 45.6**	**-1.0**
NUBE	**Las Nubes**	**0.64**	**5**	*i* P	**Pn**	**03 41 45.6**	**-1.0**
NUBE				*eS*	**Sn**	**03 41 55.5**	**-0.3**
NUBE	**Las Nubes**	**0.64**	**5**	P	**Pn**	**03 41 45.6**	**-1.0**
NUBE	**Las Nubes**	**0.64**	**5**	S	**Sn**	**03 41 56.2**	**+0.3**
SNJE	**San Jose**	**0.64**	**21**	⇑*i*P	**Pn**	**03 41 46.0**	**-0.7**
RTR	**El Retiro**	**0.66**	**17**	⇑*i*P	**Pn**	**03 41 46.4**	**-0.5**
PMON	**Piamonte**	**0.68**	**49**	*eP*	**Pb**	**03 41 46.5**	**-0.4**
PMON	**Piamonte**	**0.68**	**49**	P	**Pb**	**03 41 46.4**	**-0.4**
PMON	**Piamonte**	**0.68**	**49**	S	**Sn**	**03 41 58.1**	**+1.3**
CEDA	**San Andres**	**0.69**	**39**	*eP*	**Pn**	**03 41 47.0**	**-0.3**
BOQS	**Boqueron**	**0.72**	**49**	*eP*	**Pn**	**03 41 47.2**	**-0.5**
PANCS	**Alcalda de**	**0.73**	**62**	*eP*	**Pb**	**03 41 46.8**	**-0.8**
PANCS	**Alcalda de**	**0.73**	**62**	P	**Pb**	**03 41 46.8**	**-0.8**
PANCS	**Alcalda de**	**0.73**	**62**	S	**Sb**	**03 41 58.3**	**+1.0**
LOAL	**Lomas de Alarc**	**0.73**	**5**	P	**Pn**	**03 41 47.5**	**-0.3**
LOAL	**Lomas de Alarc**	**0.73**	**5**	S	**Sn**	**03 41 58.9**	**+0.9**
UEES	**Universidad Ev**	**0.74**	**52**	P	**Pb**	**03 41 47.1**	**-0.7**
UEES	**Universidad Ev**	**0.74**	**52**	S	**Sn**	**03 41 59.4**	**+1.2**
LOMA	**Loma Larga**	**0.75**	**60**	*eP*	**Pb**	**03 41 47.2**	**-0.8**
LOMA				*eS*	**Sn**	**03 41 59.3**	**+0.6**
LOMA	**Loma Larga**	**0.75**	**60**	P	**Pb**	**03 41 47.2**	**-0.8**
UNIC	**Universidad Ca**	**0.77**	**22**	P	**Pn**	**03 41 47.8**	**-0.5**
UNIC	**Universidad Ca**	**0.77**	**22**	S	**Sn**	**03 42 00.3**	**+1.4**
QUEZ	**Alcaldia de Qu**	**0.79**	**44**	*eP*	**Pn**	**03 41 48.5**	**-0.1**
LFRS	**El Faro**	**0.84**	**65**	⇑*eP*	**Pb**	**03 41 48.7**	**-0.8**
LFRS				*eS*	**Sb**	**03 42 00.9**	**+0.5**
LFU	**La Fuente**	**0.86**	**56**	*eP*	**Pb**	**03 41 49.1**	**-0.6**
RBDL	**Robledal**	**0.86**	**10**	*i* P	**Pn**	**03 41 49.3**	**-0.3**
LBRS	**Las Brisas**	**0.91**	**59**	*eP*	**Pn**	**03 41 49.9**	**-0.3**
PAVA	**Las Pavas**	**0.99**	**63**	*eP*	**Pb**	**03 41 51.2**	**-0.7**
PAVA	**Las Pavas**	**0.99**	**63**	P	**Pb**	**03 41 51.3**	**-0.7**
PAVA	**Las Pavas**	**0.99**	**63**	S	**Sn**	**03 42 05.8**	**+1.4**
TECO	**Alcaldia de Te**	**1.07**	**75**	*eP*	**Pn**	**03 41 51.3**	**-1.0**
TECO	**Alcaldia de Te**	**1.07**	**75**	P	**Pn**	**03 41 51.4**	**-1.0**
TECO	**Alcaldia de Te**	**1.07**	**75**	S	**Sn**	**03 42 06.3**	**0.0**
JUAM	**Asuncion Mita**	**1.07**	**7**	*eP*	**Pb**	**03 41 52.5**	**-0.9**
JUAM				*i* S	**Sb**	**03 42 08.6**	**+1.5**
JUAM				IAML		03 42 09.5	
	comp=N,817nm,0.2s						
UESV	**Universidad de**	**1.09**	**70**	P	**Pn**	**03 41 52.1**	**-0.6**
UESV	**Universidad de**	**1.09**	**70**	S	**Sb**	**03 42 07.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.17**	**68**	P	**Pn**	**03 41 53.8**	**0.0**
SCLA	**Alcaldia de Sa**	**1.17**	**68**	S	**Sb**	**03 42 10.6**	**+0.8**
FG16	**Alotenango, Sa**	**1.20**	**327**	*eP*	**Pb**	**03 41 56.7**	**+1.2**
FG16				IAML		03 42 23.0	
	comp=E,3μm,0.2s						
MTO3	**Montecristo**	**1.22**	**22**	⇑*eP*	**Pb**	**03 41 54.8**	**-1.2**
MTO3	**Montecristo**	**1.22**	**22**	*i* P	**Pb**	**03 41 54.7**	**-1.2**
MTO3	**Montecristo**	**1.22**	**22**	P	**Pb**	**03 41 54.8**	**-1.2**
LLGN	**La Laguna**	**1.25**	**44**	P	**Pn**	**03 41 54.9**	**0.0**
ESQI	**Esquipulas**	**1.38**	**21**	P	**Pb**	**03 41 57.1**	**-1.4**
PACA	**Pacayal**	**1.49**	**82**	*eP*	**Pn**	**03 41 58.7**	**+0.4**
RANC	**El Ranchito**	**1.52**	**83**	*eP*	**Pn**	**03 41 58.3**	**-0.5**
BLLM	**Bellamira**	**1.57**	**83**	*eP*	**Pn**	**03 41 59.2**	**-0.2**
APG	**El Apazote**	**1.83**	**341**	*i* P	**Pn**	**03 42 02.8**	**-0.4**
LCND	**La Caada**	**1.90**	**88**	*eP*	**Pn**	**03 42 03.5**	**-0.3**
LCND	**La Caada**	**1.90**	**88**	P	**Pn**	**03 42 03.2**	**-0.6**

*NEIC **14** 04:15:34.3±1.1,41˚.55N±0˚.01×112˚.20W±0˚.02,h16km±5km, Error ellipse: s-maj=2.0km s-min=1.6km az=211.0*
UUSS 14 04:15:34.5±1.4,**41˚532N**±0˚.010×**112˚19W**±0˚.02,
h10km±6km,**ML2.5**/11,**ML2.7**/106(NEIC),**Error ellipse: s-maj=1.8km s-min=1.5km az=81.0,Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTU	**Little Mountai**	**0.07**	**324**		Pg	04 15 37.2	+0.2
LTU					Sg	04 15 38.9	0.0
BCUT	**Brigham City**	**0.16**	**97**		Pg	04 15 38.4	+0.3
BCUT					Sg	04 15 41.0	+0.3
WVUT	**Wellsville**	**0.19**	**66**		Pg	04 15 39.1	+0.4
EPU	**East Promontor**	**0.22**	**230**		Pg	04 15 39.1	0.0
PTU	**Portage**	**0.41**	**346**		Sg	04 15 48.6	+0.4
PTU	**Portage**	**0.41**	**346**		Pg	04 15 42.7	0.0
HDU	**Hyde Park**	**0.42**	**49**		Pg	04 15 43.0	+0.2
WBC	**Weber Canyon**	**0.45**	**151**		Pg	04 15 43.6	+0.3
HWUT	**Hardware Ranch**	**0.47**	**81**	Pg	Pg	04 15 43.8	0.0
HWUT				Sg	Sg	04 15 50.9	+0.7
MLI	**Malad Range**	**0.50**	**5**		Pg	04 15 44.4	+0.2
HVU	**Hansel Valley**	**0.50**	**300**		Pg	04 15 44.2	-0.2
HVU	**Hansel Valley**	**0.50**	**300**	Sg	Sg	04 15 50.8	-0.3
HVU				IAML		04 15 52.1	
	comp=E,328nm,0.4s

comp=N,25nm,5.0s
TCRU Three Creeks R 2.93 184 Pn Pn 04 16 22.8 +1.4
TCRU IAML 04 17 15.8
comp=E,14nm,1.0s
TCRU IAML 04 17 29.0
comp=N,15nm,4.0s
SPR3 Spring Creek 3 3.02 214 Pn 04 16 22.7 +0.1
SPR3 IAML 04 17 14.6
comp=N,14nm,0.6s
PSUT Pine Spring 3.26 204 Pn 04 16 26.1 +0.2
PSUT IAML 04 17 31.7
comp=E,10.0nm,3.0s
MFID Camas Ranch 3.28 306 Pn 04 16 25.8 -0.3
MFID IAML 04 17 19.6
comp=E,17nm,0.7s
MFID IAML 04 18 23.9
comp=E,14nm,4.8s
O20A White River Ci 3.31 114 Pn Pn 04 16 27.1 +0.6
O20A IAML 04 17 27.6
comp=E,36nm,2.9s
O20A IAML 04 17 59.5
comp=E,34nm,4.4s
MCMT McKenzie Canyo 3.33 352 Pn Pn 04 16 27.1 +0.3
YHL Hebgen Lake 3.40 12 Pn 04 16 27.5 -0.4
YHL IAML 04 16 58.3
comp=N,24nm,4.9s
YHL IAML 04 17 28.6
comp=E,17nm,5.0s
HMU Henry Mountain 3.76 162 Pn Pn 04 16 34.1 +1.3
HMU IAML 04 18 12.7
comp=E,14nm,4.9s
HMU IAML 04 18 47.5
comp=N,16nm,4.5s
DLMT Dillon 3.84 356 Pn Pn 04 16 34.2 +0.4
DLMT IAML 04 17 21.7
comp=N,24nm,4.4s
DLMT IAML 04 18 19.6
comp=N,24nm,4.7s
PV21 Cone Mtn., Par 3.86 139 Pn Pn 04 16 35.8 +1.6
PV21 IAML 04 17 45.1
comp=N,26nm,0.5s
HAYD Hayden 3.86 104 Pn Pn 04 16 33.8 -0.4
HAYD IAML 04 17 36.3
comp=E,27nm,0.4s
PV23 Carpenter Ridg 3.93 141 Pn Pn 04 16 35.5 +0.3
PV10 Paradox Valley 3.97 141 Pn Pn 04 16 38.3 +2.6
PV20 West Nyswonger 4.04 141 Pn Pn 04 16 36.3 -0.3
PV19 Morning Glory 4.05 142 Pn 04 16 38.3 +1.5
PV19 IAML 04 17 59.2
comp=E,21nm,4.8s
PV19 IAML 04 18 45.7
comp=N,23nm,4.9s
PV16 Nyswonger Mesa 4.08 141 Pn Pn 04 16 37.8 +0.6
PV16 IAML 04 17 58.9
comp=E,20nm,4.4s
R11B Troy Canyon, C 4.11 220 Pn Pn 04 16 38.0 +0.4
R11B IAML 04 17 46.5
comp=E,8.1nm,0.7s
R11B IAML 04 18 13.7
comp=N,4.5nm,4.8s
PV11 David Mesa, Pa 4.12 141 Pn Pn 04 16 37.9 +0.2
PV12 Saucer Basin, 4.13 140 Pn Pn 04 16 37.2 -0.7
PV18 Skein Mesa, Pa 4.14 141 Pn Pn 04 16 38.3 +0.4
PV03 Paradox Valley 4.16 141 Pn Pn 04 16 37.9 -0.4
PV03 IAML 04 17 08.8
comp=E,15nm,4.8s
PV03 IAML 04 17 54.4
comp=N,13nm,2.3s
PV13 Radium Mtn., P 4.25 141 Pn Pn 04 16 39.2 -0.3
PV13 IAML 04 17 24.5
comp=N,15nm,4.6s
PV02 Paradox Valley 4.25 140 Pn Pn 04 16 38.8 -0.7
K22A Casper 4.36 73 Pn Pn 04 16 41.2 +0.3
S11A Rachel 4.76 216 Pn Pn 04 16 46.4 0.0
TPNV Topopah Spring 5.56 216 Pn Pn 04 16 57.4 0.0

NEIC ***14*** *04:22:12.6±1.9, 19°.23N×0°.04×67°.17W±0°.02, h10km±1km, ML2.4/11, Md3.1/10(RSPR), Error ellipse: s-maj=6.8km s-min=2.9km az=202.0*
SDD ***14*** *04:22:14.1±1.1, 19°.20N×67°.20W, h23km±65km, MD3.5, ML2.4, MW2.9*
RSPR ***14*** *04:22:15.3, 19°.24N×67°.25W, h40km±12km, MD3.1/10*
ISC 14 04:22:13.5±1.7, 19°.23N±0°.07×67°.20W±0°.04, h26km±13km, n41, σ0°69/51, 17C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AGPR	**Aguadilla, PR**	**0.76**	**174**		**Pb**	**04 22 28.1**	**0.0**	
AGPR					**Sb**	**04 22 38.6**	**+0.5**	
AGPR	**Aguadilla, PR**	**0.76**	**174**	*e*Pg	**Pb**	**04 22 27.8**	**-0.3**	
AGPR				⇑*e*Sg	**Sb**	**04 22 37.4**	**-0.7**	
AGPR				IAML		04 22 38.2		
	comp=N,184nm,0.3s							
AGPR	**Aguadilla, PR**	**0.76**	**174**⇑	*e*P	**Pb**	**04 22 28.1**	**0.0**	
AGPR	**Aguadilla, PR**	**0.76**	**174**	*e*S	**Sb**	**04 22 38.6**	**+0.5**	
IDE	**Isla Desecheo**	**0.88**	**198**		**Pn**	**04 22 29.8**	**-0.3**	
IDE					**Sb**	**04 22 42.1**	**+0.7**	
IDE	**Isla Desecheo**	**0.88**	**198**⇓⇓	*e*P	**Pn**	**04 22 29.8**	**-0.3**	
IDE	**Isla Desecheo**	**0.88**	**198**	*e*S	**Sb**	**04 22 42.1**	**+0.7**	
AOPR	**Arecibo Observ**	**0.97**	**154**		**Pn**	**04 22 31.1**	**-0.4**	
AOPR	**Arecibo Observ**	**0.97**	**154**⇑	*e*Pg	**Pn**	**04 22 30.9**	**-0.5**	
AOPR				⇑*e*Sg	**Sb**	**04 22 43.5**	**-0.6**	
AOPR	**Arecibo Observ**	**0.97**	**154**⇑	*e*P	**Pn**	**04 22 31.1**	**-0.4**	
EMPR	**Esperanza - Ma**	**0.98**	**140**		**Pb**	**04 22 32.5**	**+0.8**	
EMPR					**Sn**	**04 22 45.5**	**+1.0**	
EMPR	**Esperanza - Ma**	**0.98**	**140**⇑	*e*P	**Pb**	**04 22 32.5**	**+0.8**	
EMPR	**Esperanza - Ma**	**0.98**	**140**	*e*S	**Sn**	**04 22 45.5**	**+1.0**	
PRSN	**Puerto Rico Se**	**1.01**	**177**		**Pb**	**04 22 32.7**	**+0.4**	
PRSN					**Sb**	**04 22 45.5**	**+0.4**	
PRSN	**Puerto Rico Se**	**1.01**	**177**⇑	*e*Pg	**Pn**	**04 22 31.6**	**-0.4**	
PRSN				*e*Sg	**Sb**	**04 22 43.4**	**-1.7**	
PRSN				IAML		04 22 46.6		
	comp=N,170nm,0.2s							
PRSN	**Puerto Rico Se**	**1.01**	**177**⇑	*e*P	**Pb**	**04 22 32.7**	**+0.4**	
PRSN	**Puerto Rico Se**	**1.01**	**177**	*e*S	**Sb**	**04 22 45.5**	**+0.4**	
UUPR	**Utuado, UPR, P**	**1.07**	**155**		**Pb**	**04 22 33.3**	**-0.1**	
UUPR					**Sn**	**04 22 46.9**	**+0.1**	
UUPR	**Utuado, UPR, P**	**1.07**	**155**⇑	*e*P	**Pb**	**04 22 33.3**	**-0.1**	
UUPR	**Utuado, UPR, P**	**1.07**	**155**	*e*S	**Sn**	**04 22 46.9**	**+0.1**	
ECPR	**Experimental S**	**1.20**	**139**⇑	*e*P	**Pn**	**04 22 34.7**	**+0.1**	
CRPR	**Cabo Rojo, PR**	**1.22**	**176**		**Pn**	**04 22 34.5**	**-0.3**	
CRPR					**Sn**	**04 22 49.9**	**-0.5**	
CRPR	**Cabo Rojo, PR**	**1.22**	**176**	IAML		04 22 53.9		
	comp=E,87nm,0.5s							
CRPR				IAML		04 22 54.1		
	comp=N,84nm,0.5s							
CRPR	**Cabo Rojo, PR**	**1.22**	**176**⇑	*e*Pg	**Pn**	**04 22 35.2**	**+0.4**	
CRPR				IAML		04 22 55.1		
	comp=N,97nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.22**	**176**⇑	*e*P	**Pn**	**04 22 34.5**	**-0.3**	
CRPR	**Cabo Rojo, PR**	**1.22**	**176**	*e*S	**Sn**	**04 22 49.9**	**-0.5**	
OBIP	**Obispado Ponce**	**1.30**	**155**		**Pn**	**04 22 36.1**	**+0.1**	
OBIP					**Sn**	**04 22 52.8**	**+0.2**	
OBIP	**Obispado Ponce**	**1.30**	**155**	IAML		04 22 57.1		
	comp=N,52nm,0.2s							
OBIP				IAML		04 22 57.5		
	comp=E,87nm,0.3s							
OBIP	**Obispado Ponce**	**1.30**	**155**⇑	*e*P	**Pn**	**04 22 36.1**	**+0.1**	
OBIP	**Obispado Ponce**	**1.30**	**155**	*e*S	**Sn**	**04 22 52.8**	**+0.2**	
GCPR	**Guaynabo City**	**1.40**	**131**		**Pb**	**04 22 37.9**	**-1.0**	
GCPR					**Sn**	**04 22 55.3**	**+0.4**	
GCPR	**Guaynabo City**	**1.40**	**131**⇑	*e*P	**Pb**	**04 22 37.9**	**-1.0**	
GCPR	**Guaynabo City**	**1.40**	**131**	*e*S	**Sn**	**04 22 55.3**	**+0.4**	
SJG	**San Juan**	**1.49**	**138**	Pn	**Pb**	**04 22 39.9**	**-0.6**	
SJG				IAML		04 23 05.7		
	comp=E,48nm,0.3s							
SJG				IAML		04 23 09.4		
	comp=E,61nm,0.3s							
HUMP	**Col San Antoni**	**1.67**	**130**		**Pn**	**04 22 41.5**	**+0.4**	
HUMP				IAML		04 23 12.1		
	comp=N,34nm,0.2s							
HUMP	**Col San Antoni**	**1.67**	**130**		**Sn**	**04 23 02.3**	**+0.6**	
HUMP	**Col San Antoni**	**1.67**	**130**⇑	*e*P	**Pb**	**04 22 42.2**	**-1.4**	
HUMP	**Col San Antoni**	**1.67**	**130**	*e*S	**Sn**	**04 23 02.3**	**+0.6**	
MIDR	**Miches**	**1.77**	**262**⇑	*e*Pg	**Pb**	**04 22 44.3**	**-0.9**	
MIDR				IAML		04 23 13.0		
	comp=N,15nm,0.2s							
DR12	**Loma Pena Alta**	**2.11**	**258**	Pn	**Pn**	**04 22 48.8**	**+1.6**	
HATOM	**Hato Mayor del**	**2.11**	**258**	*e*Pg	**Pb**	**04 22 49.6**	**-1.5**	
HATOM				⇑*e*Sg	**Sb**	**04 23 17.7**	**+0.7**	
HATOM				IAML		04 23 34.2		
	comp=N,15nm,1.6s							

NEIC ***14*** *04:33:07.7±1.6, 28°.8S×0°.1×176°.41W±0°.10, h10km±1km, mb4.5/10, Error ellipse: s-maj=20.3km s-min=11.8km az=147.0*
IDC ***14*** *04:33:12.9±5.0, 28°.77S×176°.53W, h48km±38km, mb3.6/4, mbtmp3.9/4, MS3.1/4, Error ellipse: s-maj=48.2km s-min=35.3km az=9.0*
ISC 14 04:33:11.1±0.9, 28°.8S±0°.1×176°.4W±0°.1, h36km, n26, σ0°89/25, mb4.3/7, MS3.2/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
RAO	**Raoul Island**	**1.38**	**249**	P	**Pn**	**04 33 34.2**	**+0.4**	
	comp=N,0.3s,baz=55,slow=12,SNR=12							
RAO				S	**Sn**	**04 33 51.2**	**+0.4**	
	comp=E,842nm,0.2s,baz=77,slow=14,SNR=12							
RAO	**Raoul Island**	**1.38**	**249**		**Pn**	**04 33 33.9**	**+0.1**	
RAO					**Sn**	**04 33 51.3**	**+0.4**	
MSVF	**Nonsavu**	**12.08**	**334**	Pn	**Pn**	**04 36 00.2**	**-0.6**	
KHZ	**Kahutara**	**15.86**	**208**	Pn	**Pn**	**04 36 51.0**	**-0.5**	
KHZ				IAmb	IAmb	04 37 28.7		
	comp=E,54nm,1.3s							
DZM	**Mont Dzumac**	**16.82**	**289**	LR	LR	04 42 16.9		
	comp=Z,56nm,19.1s,baz=252,slow=32							
ODZ	**Otahua Downs**	**19.22**	**209**	P	**P**	**04 37 30.3**	**-1.6**	
ODZ				IAmb	IAmb	04 37 36.0		
	comp=Z,43nm,1.2s							
PPT	**Papeete**	**27.03**	**72**	LR	LR	04 48 11.0		
	comp=Z,9.2nm,18.2s,baz=34,slow=33							
STKA	**Stephens Creek**	**36.20**	**254**	P	**P**	**04 40 10.4**	**0.0**	
	comp=Z,1.2nm,0.4s,baz=77,slow=12,SNR=3.4							
	comp=Z,1.2nm,0.4s							
STKA	**Stephens Creek**	**36.20**	**254**	P	**P**	**04 40 09.9**	**-0.5**	
ASAR	**Alice Springs**	**44.58**	**265**	P	**P**	**04 41 19.6**	**-0.3**	
	comp=Z,0.4nm,0.5s,baz=99,slow=7.0,SNR=11							
ASAR				LR	LR	04 59 23.8		
	comp=Z,30nm,18.6s,baz=140,slow=35							
	comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**44.58**	**265**	P	**P**	**04 41 19.1**	**-0.8**	
WR8	**Warramunga Arr**	**45.28**	**270**	P	**P**	**04 41 27.0**	**+1.5**	
WR8				IAmb	IAmb	04 41 49.7		
	comp=Z,9.0nm,1.5s							
WRAB	**Tennant Creek**	**45.42**	**270**	P	**P**	**04 41 27.5**	**+0.9**	
WRAB				IAmb	IAmb	04 41 33.0		
	comp=Z,7.6nm,1.3s							
WRA	**Warramunga Arr**	**45.43**	**270**	P	**P**	**04 41 26.6**	**-0.1**	
	comp=Z,1.1nm,0.6s,baz=110,slow=7.7,SNR=5.2							
	comp=Z,1.1nm,0.6s							
WRA	**Warramunga Arr**	**45.43**	**270**	P	**P**	**04 41 25.5**	**-1.2**	
WB0	**Warramunga Arr**	**45.44**	**270**	P	**P**	**04 41 27.8**	**+1.0**	
SBA	**Scott Base**	**49.77**	**185**	P	**P**	**04 41 59.5**	**0.0**	
SBA				IAmb	IAmb	04 42 06.8		
	comp=Z,7.8nm,1.4s							
VNDA	**Vanda**	**49.86**	**186**	P	**P**	**04 42 00.7**	**+0.5**	
BATI	**Baumata**	**58.81**	**275**	LR	LR	05 07 44.5		
	comp=Z,34nm,18.5s,baz=222,slow=35							
QSPA	**South Pole Qui**	**61.35**	**180**	P	**P**	**04 43 23.6**	**+0.6**	
	comp=Z,1.6nm,1.0s,baz=86,slow=2.3,SNR=3.7							
	comp=Z,1.6nm,1.0s							
QSPA	**South Pole Qui**	**61.35**	**180**	P	**P**	**04 43 23.4**	**+0.4**	
QSPA				IAmb	IAmb	04 43 24.4		
	comp=Z,3.7nm,1.1s							
MKAR	**Makanchi Array**	**117.75**	**310**	PKP	**PKPdf**	**04 51 52.2**	**-1.1**	
	comp=Z,0.4nm,0.7s,baz=128,slow=2.4,SNR=2.9							
FINES	**FINESS Array B**	**144.04**	**342**	PKP	**PKPdf**	**04 52 41.8**	**-0.3**	
	comp=Z,2.2nm,0.9s,baz=16,slow=2.0,SNR=5.1							
FINES	**FINESS Array B**	**144.04**	**342**		**PKPdf**	**04 52 41.4**	**-0.7**	
AKASG	**Malin Array Be**	**150.76**	**326**	PKPbc	**PKiKP**	**04 53 00.5**	**+0.7**	
	comp=Z,0.3nm,0.3s,baz=44,slow=3.1,SNR=4.2							
AKASG	**Malin Array Be**	**150.76**	**326**		**PKPdf**	**04 52 55.6**	**+2.0**	

IDC ***14*** *05:05:39.2±0.7, 9°.78N×57°.70E, h0km, mb4.0/13, mbtmp4.0/13, MS3.9/11, Error ellipse: s-maj=22.4km s-min=17.4km az=147.0*
NEIC ***14*** *05:05:40.7±0.8, 9°.8N±0°.1×57°.6E±0°.1, h10km±1km, mb4.5/17, Error ellipse: s-maj=24.2km s-min=18.0km az=157.0*
GCMT ***14*** *05:05:41.7±0.4, 9°.97N±0°.02×57°.45E±0°.04, h12km, MW4.7/73, Moment Tensor Solution. s16,c17; s73,c95; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.55±.06; Mθθ1.39±.05; Mφφ0.15±.06; Mrθ0.42±.21; Mrφ=-0.37±.05; Mθφ0.30±.30; Best double couple: M₀1.60300×10¹⁶ NP1:φs272.00000°, δ52.00000°, λ-106.00000°. Principal axes: T 1.5280, Plg6.0000°, Azm14.0000°; N 0.1470, Plg13.0000°, Azm282.0000°; P -1.6770, Plg76.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 05:05:41.4±0.7, 9°.8N±0°.1×57°.7E±0°.1, h17km, n51, σ0°89/39, mb4.3/25, MS3.8/11, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
WSAR	**Wadi Sarin**	**13.38**	**4**	LR	LR	05 13 16.3		
	comp=Z,6.6nm,18.6s,baz=204,slow=34							
ATD	**Arta Tunnel**	**14.65**	**278**	LR	LR	05 14 08.1		
	comp=Z,5.9nm,19.2s,baz=76,slow=35							
RAYN	**Ar Rayn**	**17.90**	**321**	P	**Pn**	**05 09 48.9**	**-0.9**	
PALK	**Pallekele**	**22.93**	**95**	LR	LR	05 17 30.0		
	comp=Z,176nm,21.5s,baz=290,slow=31							
KIBK	**Kibwezi**	**22.96**	**239**	P	**P**	**05 10 45.0**	**-0.4**	
LODK	**Lodwar**	**23.02**	**255**	P	**P**	**05 10 44.8**	**-1.2**	
LODK				IAmb	IAmb	05 10 56.9		
	comp=Z,32nm,1.3s							
KMBO	**Kilima Mbogo**	**23.04**	**243**	P	**P**	**05 10 48.0**	**+1.8**	
	comp=Z,3.4nm,0.7s,baz=53,slow=13,SNR=5.5							
KMBO				LR	LR	05 20 39.5		
	comp=Z,153nm,18.4s,baz=86,slow=39							
	comp=Z,3.4nm,0.7s							
HRA	**Herat**	**24.81**	**9**	P	**P**	**05 11 03.1**	**+0.2**	
HRA				IAmb	IAmb	05 11 08.0		
	comp=Z,12nm,1.1s							
MBAR	**Mbarara**	**28.72**	**250**	LR	LR	05 23 06.7		
	comp=Z,272nm,19.8s,baz=61,slow=36							
EIL	**Elat**	**28.98**	**316**	LR	LR	05 23 12.3		
	comp=Z,189nm,18.4s,baz=181,slow=36							
ASF	**Jabal al Asfar**	**29.38**	**322**	LR	LR	05 23 33.8		
	comp=Z,198nm,18.8s,baz=123,slow=36							
OPO	**Ambohidratompo**	**30.04**	**200**	LR	LR	05 20 49.3		
	comp=Z,311nm,21.6s,baz=194,slow=30							
MMAI	**Mount Meron Ar**	**30.87**	**322**	LR	LR	05 24 29.9		
	comp=Z,164nm,18.1s,baz=147,slow=37							
MARD	**Mardin**	**31.33**	**334**	P	**P**	**05 12 01.4**	**+0.3**	
MARD				IAmb	IAmb	05 12 09.1		
	comp=Z,5.1nm,0.6s							
GNI	**Garni**	**32.31**	**341**	LR	LR	05 26 42.7		
	comp=Z,373nm,18.7s,baz=180,slow=39							
EVN	**Everest**	**32.83**	**53**	P	**P**	**05 12 14.4**	**-0.6**	
EVN				IAmb	IAmb	05 12 23.9		
	comp=Z,5.2nm,0.8s							
BRDH	**Bariadhala**	**34.95**	**64**	LR	LR	05 26 41.4		
	comp=Z,293nm,18.4s,baz=299,slow=36							
AAK	**Ala-Archa**	**35.86**	**21**	LR	LR	05 28 20.3		
	comp=Z,150nm,20.6s,baz=268,slow=38							
BRTR	**Keskin Array B**	**36.66**	**328**	P	**P**	**05 12 49.8**	**+2.4**	
	comp=Z,1.1nm,0.9s,baz=140,slow=7.6,SNR=4.2							
	comp=Z,1.1nm,0.9s							
BRTR	**Keskin Array B**	**36.66**	**328**	P	**P**	**05 12 47.8**	**+0.3**	
CMAR	**Chiang Mai Arr**	**40.87**	**73**	P	**P**	**05 13 24.6**	**+1.8**	
	comp=Z,2.2nm,0.3s,baz=267,slow=7.6,SNR=8.8							
	comp=Z,2.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**40.87**	**73**	P	**P**	**05 13 22.4**	**-0.5**	
MATP	**Matopo**	**41.54**	**224**	LR	LR	05 28 12.9		
	comp=Z,197nm,20.9s,baz=54,slow=33							
MKAR	**Makanchi Array**	**42.39**	**25**	P	**P**	**05 13 35.2**	**+0.3**	
	comp=Z,0.7nm,0.6s,baz=219,slow=9.4,SNR=4.5							
	comp=Z,0.7nm,0.6s							
KURBB	**Kurchatov Arra**	**44.18**	**19**	P	**P**	**05 13 49.7**	**+0.4**	
	comp=Z,0.4nm,0.5s,baz=216,slow=8.0,SNR=5.1							
	comp=Z,0.4nm,0.5s							
KURK	**Kurchatov**	**44.29**	**19**	P	**P**	**05 13 49.5**	**-0.6**	
BVAR	**Borovoye Array**	**44.30**	**11**	P	**P**	**05 13 52.1**	**+1.9**	
	comp=Z,1.5nm,0.7s,baz=193,slow=6.1,SNR=5.7							
	comp=Z,1.5nm,0.7s							
ZAA0	**Zalesovo Array**	**49.08**	**21**		**P**	**05 14 27.6**	**-0.1**	
ZAA0				IAmb	IAmb	05 14 35.9		
	comp=Z,3.5nm,0.9s							
ZALV	**Zalesovo Beam**	**49.08**	**21**	P	**P**	**05 14 27.1**	**-0.6**	
	comp=Z,4.0nm,0.9s,baz=226,slow=8.0,SNR=11							
	comp=Z,4.0nm,0.9s							
ZALV	**Zalesovo Beam**	**49.08**	**21**		**P**	**05 14 27.9**	**+0.2**	
BOSA	**Boshof**	**49.39**	**218**	P	**P**	**05 14 31.4**	**+0.8**	
	comp=Z,4.9nm,1.1s,baz=36,slow=7.7,SNR=5.2							
	comp=Z,4.9nm,1.1s							
BOSA	**Boshof**	**49.39**	**218**	P	**P**	**05 14 30.3**	**-0.3**	
ABTA	**Abfaltersbach**	**53.05**	**322**	*i* P	**P**	**05 14 57.9**	**+0.1**	
	comp=Z,0.5nm,0.3s							
LESA	**Schwarzleotal**	**53.28**	**323**	*e*P	**P**	**05 14 59.3**	**-0.2**	
	comp=Z,0.6nm,0.3s							
WTTA	**Wattenberg**	**53.83**	**323**	*i* P	**P**	**05 15 03.5**	**-0.1**	
	comp=Z,1.4nm,0.4s							
WATA	**Walderalm**	**53.90**	**323**	*i* P	**P**	**05 15 03.9**	**-0.1**	
	comp=Z,2.4nm,0.6s							
MOTA	**Moosalm**	**54.18**	**322**	*i* P	**P**	**05 15 06.6**	**+0.5**	
	comp=Z,4.2nm,0.6s							
FETA	**Feichten**	**54.26**	**322**	*i* P	**P**	**05 15 06.4**	**-0.4**	
	comp=Z,1.5nm,0.6s							
SONM	**Songino Array**	**55.73**	**38**	P	**P**	**05 15 17.2**	**-0.1**	
	comp=Z,0.5nm,0.5s,baz=233,slow=6.5,SNR=4.7							
	comp=Z,0.5nm,0.5s							
DBIC	**Dimbokro**	**61.87**	**272**	P	**P**	**05 16 01.1**	**+0.7**	
	comp=Z,5.2nm,0.9s,baz=94,slow=9.4,SNR=4.3							
	comp=Z,5.2nm,0.9s							
DBIC	**Dimbokro**	**61.87**	**272**	P	**P**	**05 15 59.1**	**-1.3**	
ESBB	**Sonseca Array**	**62.01**	**310**	P	**P**	**05 16 00.5**	**-0.5**	
ESDC	**Sonseca Array**	**62.01**	**310**	P	**P**	**05 16 00.5**	**-0.5**	
	comp=Z,3.4nm,0.8s,baz=88,slow=6.1,SNR=16							
	comp=Z,3.4nm,0.8s							
ESDC	**Sonseca Array**	**62.01**	**310**	P	**P**	**05 16 00.8**	**-0.2**	
ESDC				IAmb	IAmb	05 16 07.9		
	comp=Z,2.8nm,1.0s							
WRA	**Warramunga Arr**	**81.03**	**112**	P	**P**	**05 17 55.6**	**-0.4**	
	comp=Z,0.7nm,0.8s,baz=294,slow=4.5,SNR=4.7							
	comp=Z,0.7nm,0.8s							
WRA	**Warramunga Arr**	**81.03**	**112**	P	**P**	**05 17 55.5**	**-0.6**	
WR8	**Warramunga Arr**	**81.17**	**112**	P	**P**	**05 17 56.5**	**-0.3**	
WR8				IAmb	IAmb	05 18 07.4		
	comp=Z,4.4nm,1.2s							
ASAR	**Alice Springs**	**81.54**	**116**	P	**P**	**05 17 58.1**	**-0.6**	
	comp=Z,0.9nm,0.9s,baz=286,slow=4.8,SNR=7.7							
	comp=Z,0.9nm,0.9s							
PDAR	**Pinedale Array**	**126.38**	**348**	PKP	**PKPdf**	**05 24 43.4**	**-0.7**	
	comp=Z,0.6nm,0.7s,baz=22,slow=1.5,SNR=6.6							
NVAR	**Mina Array Bea**	**131.85**	**356**	PKP	**PKiKP**	**05 24 57.3**	**+1.7**	
	comp=Z,0.5nm,0.7s,baz=36,slow=0.9,SNR=6.6							
TXAR	**Lajitas Array**	**137.10**	**336**	PKP	**PKiKP**	**05 25 05.4**	**-0.9**	
	comp=Z,0.7nm,1.0s,baz=48,slow=1.9,SNR=4.6							

IDC ***14*** *05:13:53.9±6.8, 16°.24S×175°.87W, h294km±65km, mb3.6/11, mbtmp4.2/11, Error ellipse: s-maj=24.2km s-min=19.6km az=149.0*
NEIC ***14*** *05:13:59.8±1.3, 16°.2S±0°.1×176°.0W±0°.1, h343km±10km, mb4.1/16, Error ellipse: s-maj=23.2km s-min=12.0km az=224.0*
ISC 14 05:14:00.4±0.5, 16°.2S±0°.1×175°.89W±0°.10, h360km, n39, σ1°21/41, mb4.0/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AFI	**Afiamalu**	**4.55**	**61**		**Pn**	**05 15 14.9**	**-0.9**	
MSVF	**Nonsavu**	**6.01**	**254**	Pn	**Pn**	**05 15 34.4**	**+2.5**	
NIUE	**Niue**	**6.38**	**118**		**Pn**	**05 15 35.5**	**-0.4**	
URZ	**Urewera**	**22.87**	**194**	P	**P**	**05 18 30.5**	**-3.2**	
	22nm,0.8s,baz=318,slow=15,SNR=7.7							
	22nm,0.8s							
WHZ	**Wether Hill Ro**	**32.59**	**201**	P	**P**	**05 19 59.6**	**+0.1**	
ARMA	**Armidale**	**32.91**	**239**	P	**P**	**05 20 02.8**	**+0.2**	
ARMA				IAmb	IAmb	05 20 07.1		
	comp=Z,18nm,1.4s							
CAN	**Canberra**	**36.68**	**232**	P	**P**	**05 20 34.1**	**-0.3**	
TOO	**Toolangi**	**40.14**	**230**	P	**P**	**05 21 03.0**	**+0.1**	
TOO				IAmb	IAmb	05 21 04.2		
	comp=Z,8.9nm,1.2s							
STKA	**Stephens Creek**	**41.59**	**240**	P	**P**	**05 21 13.6**	**-1.0**	
	comp=Z,1.6nm,0.3s,baz=79,slow=12,SNR=5.0							
	comp=Z,1.6nm,0.3s							
WR8	**Warramunga Arr**	**47.19**	**258**	P	**P**	**05 21 57.7**	**-1.0**	
WB0	**Warramunga Arr**	**47.31**	**258**	P	**P**	**05 21 58.6**	**-1.0**	
WB0				IAmb	IAmb	05 21 59.8		
	comp=Z,12nm,1.1s							
WRA	**Warramunga Arr**	**47.34**	**258**	P	**P**	**05 21 59.1**	**-0.7**	
	comp=Z,3.9nm,0.6s,baz=93,slow=6.9,SNR=66							
WRA				PcP	**PcP**	**05 23 23.4**	**-0.8**	
	comp=Z,0.6nm,0.5s,baz=94,slow=3.3,SNR=4.1							
	comp=Z,3.9nm,0.6s							
WRA	**Warramunga Arr**	**47.34**	**258**	P	**P**	**05 21 58.8**	**-1.1**	
AS31	**Alice Springs**	**47.60**	**253**	P	**P**	**05 22 01.1**	**-0.7**	
AS31				IAmb	IAmb	05 22 01.8		
	comp=Z,4.5nm,0.5s							
ASAR	**Alice Springs**	**47.60**	**253**	P	**P**	**05 22 01.2**	**-0.6**	
	comp=Z,11nm,0.3s,baz=87,slow=8.0,SNR=203							
ASAR				PcP	**PcP**	**05 23 25.5**	**+0.3**	
	comp=Z,0.8nm,0.7s,baz=90,slow=4.9,SNR=4.1							
	comp=Z,11nm,0.3s							
ASAR	**Alice Springs**	**47.60**	**253**	P	**P**	**05 22 01.5**	**-0.4**	
FITZ	**Fitzroy Crossi**	**55.72**	**259**	P	**P**	**05 23 01.8**	**+0.6**	
NWAO	**Narrogin (SRO)**	**62.17**	**241**	P	**P**	**05 23 44.4**	**-0.5**	
SBA	**Scott Base**	**62.32**	**184**	P	**P**	**05 23 47.5**	**+2.3**	
SBA				IAmb	IAmb	05 23 47.9		
	comp=Z,4.7nm,0.8s

1.5nm,0.3s,baz=111,slow=8.1,SNR=26
1.5nm,0.3s
FITZ Fitzroy Crossi 51.89 269 P **P** **05 26 06.1 +0.1**
0.9nm,0.6s,baz=145,slow=12,SNR=1.3
0.9nm,0.6s
QSPA South Pole Qui 60.60 180 P **P** **05 27 07.7 0.0**
1.9nm,0.7s,baz=57,slow=1.0,SNR=7.1
1.9nm,0.7s
H03S2 Juan Fernandez 81.35 124 T T 06 58 22.9
baz=238,slow=74,SNR=11
H03S1 Juan Fernandez 81.36 124 T T 06 58 25.1
baz=238,slow=74,SNR=11
H03S3 Juan Fernandez 81.37 124 T T 06 58 22.6
baz=238,slow=74,SNR=12

ASRS ***14*** *05:24:59.0±1.3, 54.°36N×86.°94E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 2014 p + CD-ROM, 2021.*

IDC 14 05:25:00.6±3.5, 54.°41N×87.°03E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=31.5km s-min=19.3km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**251**	I	I	05 32 18.8	
	baz=71,slow=336,SNR=32						
ZALV	**Zalesovo Beam**	**1.38**	**251**	Pg	Pg	05 25 24.8	-2.2
	1.1nm,0.3s,baz=71,slow=18,SNR=6.4						
ZALV				Lg	Lg	05 25 44.9	
	0.8nm,0.3s,baz=68,slow=28,SNR=4.4						
KURBB	**Kurchatov Arra**	**6.42**	**237**	Pn	Pn	05 26 37.1	+0.8
	0.1nm,0.3s,baz=53,slow=14,SNR=5.7						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**8.20**	**203**	Pn	Pn	05 27 02.1	+1.4
	0.1nm,0.3s,baz=26,slow=15,SNR=2.7						
	0.3nm,0.4s						

BJI ***14*** *05:26:16.0, 9.°20N×56.°96E, h10km, mB5.6/47, mb4.9/68, Ms5.3/64, Ms7 5.1/62*

IDC ***14*** *05:26:21.5±0.5, 9.°72N×57.°59E, h0km, mb4.8/45, mbtmp4.8/45, ML2.7/1, MS4.8/74, Error ellipse: s-maj=11.9km s-min=11.1km az=15.0*

MOS ***14*** *05:26:22.5±1.1, 9.°79N×57.°59E, h13km, mb5.4/82, MS4.8/22, Error ellipse: s-maj=6.0km s-min=3.7km az=95.1*

NEIC ***14*** *05:26:24.9, 9.°94N×57.°63E, h12km*

GCMT ***14*** *05:26:24.9±0.1, 9.°99N±0.°01×57.°48E±0.°01, h12km, MW5.5/150, Moment Tensor Solution. s100,c156; s150,c318; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr-1.72±.02; Mθθ 1.57±.02; Mϕϕ 0.15±.02; Mrθ 1.33±.05; Mθϕ-0.63±.01; Mϕr 0.25±.06; Best double couple: M◎2.22300×10^17 NP1:ϕs127.00000°, δ31.00000°, λ-60.00000°. NP2:ϕs273.00000°, δ64.00000°, λ-107.00000°. Principal axes: T 2.1710, Plg17.0000°, Azm15.0000°; N 0.1050, Plg15.0000°, Azm280.0000°; P -2.2750, Plg67.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *05:26:24.9, 9.°74N×57.°73E, h12km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 10^17Nm; Mrr-1.62; Mθθ 1.50; Mϕϕ 0.12; Mrθ 0.25; Mθϕ-0.57; Mϕr 0.95; Fault plane solution: M◎1.94000×10^17 NP1: ϕs266.52000°, δ48.93000°, λ-125.46000°. NP2: ϕs133.83000°, δ52.12000°, λ-56.35000°. Principal axes: T 1.7120, Plg2.0000°, Azm201.0000°; N 0.3913, Plg26.0000°, Azm292.0000°; P -2.1034, Plg64.0000°, Azm107.0000°;*

ISC-PP ***14*** *05:26:24, 9.°94N×57.°63E, h8km, Mwppsm6.8, Moment Tensor Solution. s52 Moment tensor: Scale 10^19Nm; Mrr-0.52±.05; Mθθ 0.18±.07; Mϕϕ-0.72±.09; Mrθ 0.25±.13; Mθϕ-0.17±.08; Mϕr-0.03±.10; Fault plane solution: M◎2.04000×10^19 NP1:ϕs48.10000°, δ52.80000°, λ191.20000°. NP2:ϕs311.30000°, δ81.10000°, λ-37.70000°.*

NEIC ***14*** *05:26:24.9±1.4, 9.°94N±0.°08×57.°63E±0.°09, h10km±1km, mb5.3/139, Ms_20 5.2/130, Mwb5.5/44, Mww5.5/24 Error ellipse: s-maj=14.5km s-min=14.1km az=114.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-1.81; Mθθ 1.84; Mϕϕ-0.03; Mrθ 1.55; Mθϕ-0.81; Mϕr-0.09; Fault plane solution: M◎2.53000×10^17 NP1: ϕs124.24000°, δ27.87000°, λ-67.33000°. NP2: ϕs278.95000°, δ64.45000°, λ-101.52000°. Principal axes: T 2.6426, Plg19.0000°, Azm18.0000°; N -0.2498, Plg10.0000°, Azm284.0000°; P -2.3928, Plg68.0000°, Azm166.0000°;*

NEIC ***14*** *05:26:25.4, 9.°93N×57.°62E, h10km*

OMAN ***14*** *05:26:26.9±0.1, 10.°05N×57.°52E, h10km, mb5.0/38, ms5.0/33, Mwp5.7/27, Error ellipse: s-maj=4.1km s-min=3.5km az=29.0*

ISC 14 05:26:24.1±0.4, 9.°81N±0.°04×57.°57E±0.°04, h9km±2km, h10km:pP-P, n699, σ1s58/706, mb5.2/242, MS5.1/176, 40C-26D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMTO	**DMTO**	**8.27**	**342**	P	**Pn**	**05 28 25.1**	**+0.8**
	SNR=7.2						
DMTO				P	**Pn**	**05 28 25.1**	**+0.8**
	SNR=7.2						
DMTO				P	**Pn**	**05 28 25.1**	**+0.8**
	SNR=7.2						
RBK	**Rabkut**	**8.32**	**337**	P	**Pn**	**05 28 25.9**	**+0.8**
	SNR=13						
RBK				P	**Pn**	**05 28 25.9**	**+0.8**
	SNR=13						
RBK				P	**Pn**	**05 28 25.9**	**+0.8**
	SNR=13						
SHAO	**Shalim**	**8.38**	**347**	P	**Pn**	**05 28 25.9**	**0.0**
	SNR=15						
SHAO				P	**Pn**	**05 28 25.9**	**0.0**
	SNR=15						
SHAO				P	**Pn**	**05 28 25.9**	**0.0**
	SNR=15						
SHAO	**Shalim**	**8.38**	**347**	*i* P	**Pn**	**05 28 25.1**	**-0.8**
	SNR=13						
ABTO	**Aybut**	**8.57**	**331**	P	**Pn**	**05 28 29.5**	**+0.9**
	SNR=14						
ABTO				P	**Pn**	**05 28 29.5**	**+0.9**
	SNR=14						
ABTO				P	**Pn**	**05 28 29.5**	**+0.9**
	SNR=14						
WHFO	**Wadi Hawf**	**8.87**	**336**	P	**Pn**	**05 28 33.1**	**+0.5**
	SNR=17						
WHFO				P	**Pn**	**05 28 33.1**	**+0.5**
	SNR=17						
DOK	**Doka**	**9.37**	**340**	P	**Pn**	**05 28 39.8**	**+0.3**
	SNR=22						
DOK				P	**Pn**	**05 28 39.8**	**+0.3**
	SNR=22						
DOK				P	**Pn**	**05 28 39.8**	**+0.3**
	SNR=22						
MHTO	**MHTO**	**11.12**	**2**	P	**Pn**	**05 29 03.5**	**+0.1**
	SNR=7.5						
MHTO				P	**Pn**	**05 29 03.5**	**+0.1**
	SNR=7.5						
MHTO				P	**Pn**	**05 29 03.5**	**+0.1**
	SNR=7.5						
JLN	**Jalan Bani Buh**	**12.40**	**8**	P	**Pn**	**05 29 20.8**	**-0.2**
JLN				P	**Pn**	**05 29 20.8**	**-0.2**
JLN				P	**Pn**	**05 29 20.8**	**-0.2**
JMDO	**Jabal Madar**	**12.50**	**2**	P	**Pn**	**05 29 23.7**	**+1.3**
	SNR=18						
JMDO				P	**Pn**	**05 29 23.7**	**+1.3**
	SNR=18						
JMDO				P	**Pn**	**05 29 23.7**	**+1.3**
	SNR=18						
WBK	**Wadi Bani Khal**	**12.80**	**6**	P	**Pn**	**05 29 28.9**	**+2.4**
WBK				P	**Pn**	**05 29 28.9**	**+2.4**
BSY	**Bisya**	**12.87**	**358**	P	**Pn**	**05 29 29.2**	**+1.8**
	SNR=8.8						
BSY				P	**Pn**	**05 29 29.2**	**+1.8**
	SNR=8.8						
UMZA	**Um Al Zommool**	**13.04**	**350**	P	**Pn**	**05 29 28.9**	**-0.8**
UMZA				P	**Pn**	**05 29 28.9**	**-0.8**
UMZA				P	**Pn**	**05 29 28.9**	**-0.8**
SMDO	**Samad**	**13.19**	**2**	P	**Pn**	**05 29 30.4**	**-1.3**
	SNR=10						
SMDO				P	**Pn**	**05 29 30.4**	**-1.3**
	SNR=10						
WSAR	**Wadi Sarin**	**13.40**	**4**	LR	LR	05 34 00.6	
	comp=Z,103nm,18.6s,baz=200,slow=34						
WSAR	**Wadi Sarin**	**13.40**	**4**	P	**Pn**	**05 29 34.0**	**-0.5**
	SNR=9.5						
ARQ	**Araqi**	**13.49**	**356**	P	**Pn**	**05 29 35.4**	**-0.4**
	SNR=22						
ARQ				P	**Pn**	**05 29 35.4**	**-0.4**
	SNR=22						
ARQ				P	**Pn**	**05 29 35.4**	**-0.4**
	SNR=22						
MZR	**Muzera**	**13.69**	**344**	P	**Pn**	**05 29 41.4**	**+2.8**
	SNR=9.9						
MZR				P	**Pn**	**05 29 41.4**	**+2.8**
	SNR=9.9						
MZR	**Muzera**	**13.69**	**344**	*i* P	**Pn**	**05 29 36.4**	**-2.2**
	SNR=6.5						
HOQ	**Hoqain**	**13.70**	**359**	P	**Pn**	**05 29 37.9**	**-0.9**
	SNR=26						
HOQ				P	**Pn**	**05 29 37.9**	**-0.9**
	SNR=26						
HOQ				P	**Pn**	**05 29 37.9**	**-0.9**
	SNR=26						
ALNE	**Al Ain**	**14.28**	**353**	P	**Pn**	**05 29 47.1**	**+0.5**
	SNR=29						
ALNE				P	**Pn**	**05 29 47.1**	**+0.5**
	SNR=29						
ALNE				P	**Pn**	**05 29 47.1**	**+0.5**
	SNR=29						
ALNE	**Al Ain**	**14.28**	**353**	*i* P	**Pn**	**05 29 43.7**	**-2.9**
	SNR=18						
SOHO	**SOHO**	**14.28**	**356**	P	**Pn**	**05 29 48.0**	**+1.3**
SOHO				P	**Pn**	**05 29 48.0**	**+1.3**
SOHO				P	**Pn**	**05 29 48.0**	**+1.3**
SOHO	**SOHO**	**14.28**	**356**	*i* P	**Pn**	**05 29 44.6**	**-2.1**
	SNR=8.1						
MSEY	**Mahe Island**	**14.54**	**188**		**Pn**	**05 29 48.8**	**-1.4**
MSEY	**Mahe Island**	**14.54**	**188**	P	**Pn**	**05 29 48.8**	**-1.4**
MSEY	**Mahe Island**	**14.54**	**188**	P	**Pn**	**05 29 48.8**	**-1.4**
ATD	**Arta Tunnel**	**14.57**	**278**	Pn	**Pn**	**05 29 49.4**	**-1.3**
	baz=102,slow=20,SNR=2.2						
ATD				LR	LR	05 34 53.2	
	comp=Z,87nm,19.5s,baz=90,slow=35						
ATD	**Arta Tunnel**	**14.57**	**278**		**Pn**	**05 29 51.5**	**+0.7**
ATD	**Arta Tunnel**	**14.57**	**278**	P	**Pn**	**05 29 52.1**	**+1.4**
	SNR=6.8						
ASHO	**Ashiyiah**	**14.87**	**355**	P	**Pn**	**05 29 55.4**	**+0.7**
	SNR=54						
ASHO				P	**Pn**	**05 29 55.4**	**+0.7**
	SNR=54						
ASHO	**Ashiyiah**	**14.87**	**355**	*i* P	**Pn**	**05 29 52.4**	**-2.3**
	SNR=21						
AJN	**Ajban**	**14.88**	**351**	P	**Pn**	**05 29 55.4**	**+0.5**
	SNR=6.8						
AJN				P	**Pn**	**05 29 55.4**	**+0.5**
	SNR=6.8						
AJN				P	**Pn**	**05 29 55.4**	**+0.5**
	SNR=6.8						
AJN	**Ajban**	**14.88**	**351**	*i* P	**Pn**	**05 29 52.1**	**-2.7**
	SNR=8.0						
ASUD	**Al Ashush, Dub**	**14.89**	**352**	P	**Pn**	**05 29 55.5**	**+0.5**
	SNR=11						
ASUD				P	**Pn**	**05 29 55.5**	**+0.5**
	SNR=11						
ASUD	**Al Ashush, Dub**	**14.89**	**352**	*i* P	**Pn**	**05 29 51.8**	**-3.2**
	SNR=11						
FAQ	**Al Faqa, Dubai**	**14.98**	**353**	P	**Pn**	**05 29 55.2**	**-0.9**
	SNR=24						
FAQ				P	**Pn**	**05 29 55.2**	**-0.9**
	SNR=24						
FAQ				P	**Pn**	**05 29 55.2**	**-0.9**
	SNR=24						
FAQ	**Al Faqa, Dubai**	**14.98**	**353**	*i* P	**Pn**	**05 29 53.0**	**-3.1**
	SNR=7.7						
HATD	**Hatta, Dubai**	**15.00**	**355**	P	**Pn**	**05 29 54.8**	**-1.7**
	SNR=30						
HATD				P	**Pn**	**05 29 54.8**	**-1.7**
	SNR=30						
HATD				P	**Pn**	**05 29 54.8**	**-1.7**
	SNR=30						
HATD	**Hatta, Dubai**	**15.00**	**355**	*i* P	**Pn**	**05 29 53.2**	**-3.2**
	SNR=18						
UOSS	**Minazif**	**15.11**	**355**		**Pn**	**05 29 55.6**	**-2.4**
UOSS	**Minazif**	**15.11**	**355**	P	**Pn**	**05 29 57.7**	**-0.2**
UOSS				P	**Pn**	**05 29 57.7**	**-0.2**
UOSS				P	**Pn**	**05 29 57.7**	**-0.2**
NAZ	**Nazwa, Dubai**	**15.21**	**353**	P	**Pn**	**05 30 00.2**	**+1.0**
	SNR=23						
NAZ				P	**Pn**	**05 30 00.2**	**+1.0**
	SNR=23						
NAZ				P	**Pn**	**05 30 00.2**	**+1.0**
	SNR=23						
NAZ	**Nazwa, Dubai**	**15.21**	**353**	*i* P	**Pn**	**05 29 55.7**	**-3.5**
	SNR=20						
SLWR	**Sila**	**15.25**	**339**	P	**Pn**	**05 29 58.9**	**-0.9**
SLWR				P	**Pn**	**05 29 58.9**	**-0.9**
SLWR				P	**Pn**	**05 29 58.9**	**-0.9**
MDH	**Madha**	**15.46**	**356**	P	**Pn**	**05 30 03.8**	**+1.3**
	SNR=17						
MDH				P	**Pn**	**05 30 03.8**	**+1.3**
	SNR=17						
MDH				P	**Pn**	**05 30 03.8**	**+1.3**
	SNR=17						
MDH	**Madha**	**15.46**	**356**	*i* P	**Pn**	**05 29 58.2**	**-4.3**
	SNR=11						
MSFE	**Esma-Masafi**	**15.53**	**355**	*i* P	**Pn**	**05 30 00.1**	**-3.4**
	SNR=26						
MASF	**Masafi**	**15.54**	**355**	P	**Pn**	**05 30 02.7**	**-0.9**
	SNR=40						
MASF				P	**Pn**	**05 30 02.7**	**-0.9**
	SNR=40						
MASF				P	**Pn**	**05 30 02.7**	**-0.9**
	SNR=40						
UMQ	**Umm Al-Quwin**	**15.74**	**354**	P	**Pn**	**05 30 05.4**	**-0.7**
UMQ				P	**Pn**	**05 30 05.4**	**-0.7**
UMQ				P	**Pn**	**05 30 05.4**	**-0.7**
NGCH	**Negor - Chabah**	**15.84**	**12**	P	**Pn**	**05 30 07.7**	**+0.4**
TRNA	**Turayna**	**16.03**	**339**	P	**Pn**	**05 30 08.7**	**-1.3**
BANOM	**Banah**	**16.07**	**356**	P	**Pn**	**05 30 10.1**	**-0.4**
BANOM				P	**Pn**	**05 30 10.1**	**-0.4**
BANOM				P	**Pn**	**05 30 10.1**	**-0.4**
BANOM	**Banah**	**16.07**	**356**	*i* P	**Pn**	**05 30 07.4**	**-3.2**
	SNR=10						
SMRA	**Abu-Samra**	**16.19**	**337**	P	**Pn**	**05 30 10.0**	**-1.9**
	SNR=12						
SHME	**Shamm**	**16.21**	**355**	P	**P**	**05 30 14.2**	**-1.2**
	SNR=24						
SHME				P	**P**	**05 30 14.2**	**-1.2**
	SNR=24						
SHME				P	**P**	**05 30 14.2**	**-1.2**
	SNR=24						
SHME	**Shamm**	**16.21**	**355**	*i* P	**Pn**	**05 30 08.5**	**-3.8**
	SNR=37						
RAYN	**Ar Rayn**	**17.86**	**321**		**Pn**	**05 30 31.3**	**-1.7**
RAYN	**Ar Rayn**	**17.86**	**321**	*i* P	**Pn**	**05 30 29.8**	**-3.3**
	SNR=25						
RAYN	**Ar Rayn**	**17.86**	**321**	P	**Pn**	**05 30 31.3**	**-1.7**
RAYN				pmax	pmax		
	comp=Z,64nm,0.9s						
KAAM	**Kaadhehdhoo**	**17.92**	**120**		**Pn**	**05 30 34.1**	**+0.3**
KAAM				IAmb	IAmb	05 30 41.3	
	comp=Z,330nm,1.4s						
KBD	**Kabd**	**21.38**	**336**	P	**P**	**05 31 12.4**	**+0.3**
HYBB	**Hyderabad (bro**	**21.74**	**67**	*e*P	**P**	**05 31 16.4**	**+0.4**
DGAR	**Diego Garcia**	**22.64**	**139**	IAMs_20	IAMs_20	05 37 58.1	
	comp=Z,8μm,19.0s						
KIBK	**Kibwezi**	**22.89**	**239**		**P**	**05 31 27.3**	**-1.2**
KIBK				IAmb	IAmb	05 31 39.8	
	comp=Z,157nm,1.1s						
LODK	**Lodwar**	**22.94**	**255**		**P**	**05 31 29.6**	**+0.6**
LODK				IAmb	IAmb	05 31 41.8	
	comp=Z,194nm,1.5s						
KMBO	**Kilima Mbogo**	**22.96**	**243**	P	**P**	**05 31 29.6**	**+0.2**
	comp=Z,5.8nm,0.7s,baz=54,slow=13,SNR=8.6						
KMBO				S	**S**	**05 35 47.1**	**+7.0**
	comp=Z,1.7nm,0.4s,baz=200,slow=17,SNR=1.5						
KMBO				LR	LR	05 41 24.3	
	comp=Z,2μm,18.4s,baz=60,slow=39						
	comp=Z,5.8nm,0.7s						
PALK	**Pallekele**	**23.01**	**94**	LR	LR	05 38 24.8	
	comp=Z,2μm,21.9s,baz=289,slow=32						
PALK	**Pallekele**	**23.01**	**94**		**P**	**05 31 28.8**	**-0.9**
PALK	**Pallekele**	**23.01**	**94**	P	**P**	**05 31 33.3**	**+3.6**
PALK				P	**P**	**05 31 33.3**	**+3.6**
PALK	**Pallekele**	**23.01**	**94**	*i* P	**P**	**05 31 29.6**	**-0.1**
PALK				pmax	pmax		
	comp=Z,290nm,2.3s						
HRA	**Herat**	**24.84**	**9**		**P**	**05 31 45.4**	**-1.8**
HRA				IAmb	IAmb	05 31 51.1	
	comp=Z,148nm,1.4s						
KBL	**Kabul**	**26.77**	**21**		**P**	**05 32 03.9**	**-0.7**
KBL	**Kabul**	**26.77**	**21**	P	**P**	**05 32 07.3**	**+2.7**
	SNR=27						
KBL	**Kabul**	**26.77**	**21**	P	**P**	**05 32 03.9**	**-0.7**
KBL				pmax	pmax		
	comp=Z,32nm,0.9s						
NIL	**Nilore**	**27.77**	**29**	P	**P**	**05 32 12.7**	**-0.7**
NIL				IAmb	IAmb	05 32 23.2	
	comp=Z,60nm,1.0s						
NIL	**Nilore**	**27.77**	**29**	IAMs_20	IAMs_20	05 44 06.8	
	comp=Z,4μm,19.0s						
NIL	**Nilore**	**27.77**	**29**	P	**P**	**05 32 12.7**	**-0.7**
NIL				pmax	pmax		
	comp=Z,60nm,1.0s						
NIL				MLR	MLR		
	comp=Z,4μm,19.0s						
MBAR	**Mbarara**	**28.64**	**250**	LR	LR	05 43 51.7	
	comp=Z,4μm,19.9s,baz=64,slow=37						
MBAR	**Mbarara**	**28.64**	**250**	P	**P**	**05 32 22.0**	**+0.4**
MBAR	**Mbarara**	**28.64**	**250**	IAMs_20	IAMs_20	05 43 19.7	
	comp=Z,4μm,20.0s						
MBAR	**Mbarara**	**28.64**	**250**	*i* P	**P**	**05 32 22.5**	**+0.9**
MBAR				pmax	pmax		
	comp=Z,15nm,1.3s						
EIL	**Elat**	**28.94**	**316**	P	**P**	**05 32 24.4**	**+0.6**
	comp=Z,14nm,1.0s,baz=146,slow=4.8,SNR=6.8						
EIL				LR	LR	05 43 47.7	
	comp=Z,3μm,18.1s,baz=127,slow=36						
	comp=Z,14nm,1.0s						
ASF	**Jabal al Asfar**	**29.35**	**322**	P	**P**	**05 32 30.8**	**+3.2**
	comp=Z,8.9nm,0.9s,baz=110,slow=6.4,SNR=5.2						
ASF				LR	LR	05 44 18.5	
	comp=Z,3μm,19.1s,baz=121,slow=37						
GHAJ	**Ghor Haditha**	**29.58**	**319**	P	**P**	**05 32 30.2**	**+0.7**
GHAJ				IAmb	IAmb	05 32 51.1	
	comp=Z,62nm,1.2s						
OPO	**Ambohidratompo**	**30.00**	**200**	LR	LR	05 41 55.1	
	comp=Z,4μm,20.4s,baz=178,slow=31						
BALJ	**Balqa**	**30.06**	**321**	P	**P**	**05 32 32.7**	**-1.1**
BALJ				IAmb	IAmb	05 32 48.6	
	comp=Z,60nm,1.5s						
ABPO	**Ambohimpanom**	**30.40**	**200**	P	**P**	**05 32 39.5**	**+2.4**
ABPO				IAmb	IAmb	05 32 48.2	
	comp=Z,42nm,1.1s						
ABPO	**Ambohimpanom**	**30.40**	**200**	IAMs_20	IAMs_20	05 41 49.9	
	comp=Z,5μm,20.0s						
ABPO	**Ambohimpanom**	**30.40**	**200**	P	**P**	**05 32 39.5**	**+2.4**
ABPO				pmax	pmax		
	comp=Z,42nm,1.2s						
CHGR	**Chuyangaron**	**30.55**	**18**	P	**P**	**05 32 37.7**	**-0.4**
CHGR	**Chuyangaron**	**30.55**	**18**	P	**P**	**05 32 37.7**	**-0.4**
CHGR				pmax	pmax		
	comp=Z,22nm,1.1s						
MMAI	**Mount Meron Ar**	**30.84**	**322**	PcP	**PcP**	**05 35 39.1**	**+1.3**
	comp=Z,3.7nm,0.7s,baz=142,slow=4.9,SNR=4.3						
MMAI				LR	LR	05 45 14.8	
	comp=Z,2μm,18.6s,baz=124,slow=37						
GAR	**Garm**	**31.23**	**19**	P	**P**	**05 32 43.7**	**-0.5**
MARD	**Mardin**	**31.30**	**334**	P	**P**	**05 32 45.4**	**+0.5**
MARD				IAmb	IAmb	05 33 01.1	
	comp=Z,27nm,0.8s						
GURO	**Guroymak-BITLI**	**31.84**	**337**	P	**P**	**05 32 49.8**	**+0.3**
GURO				IAmb	IAmb	05 32 59.6	
	comp=Z,24nm,0.8s						
DRK	**Karamyk**	**32.16**	**21**	P	**P**	**05 32 53.0**	**+0.4**
DRK				IAmb	IAmb	05 32 57.1	
	comp=Z,69nm,1.4s						
DRK	**Karamyk**	**32.16**	**21**	P	**P**	**05 32 53.0**	**+0.4**
DRK				pmax	pmax		
	comp=Z,69nm,1.4s						
GNI	**Garni**	**32.30**	**341**	P	**P**	**05 32 56.4**	**+2.8**
	comp=Z,20nm,0.9s,baz=212,slow=2.2,SNR=10						
GNI				LR	LR	05 47 27.2	
	comp=Z,6μm,18.6s,baz=152,slow=39						
GNI	**Garni**	**32.30**	**341**	P	**P**	**05 32 54.2**	**+0.5**
GNI				IAmb	IAmb	05 33 05.9	
	comp=Z,62nm,1.2s						
GNI	**Garni**	**32.30**	**341**	IAMs_20	IAMs_20	05 47 16.0	
	comp=Z,6μm,18.0s						
GNI	**Garni**	**32.30**	**341**	*ce*P	**P**	**05 32 55.1**	**+1.5**
GNI				pmax	pmax		
	comp=Z,89nm,2.5s						
AKT	**Akhty**	**32.72**	**346**	*e*P	**P**	**05 32 57.7**	**+0.5**
AKT				*e*PPP	PPP	05 34 16.7	
AKT				*e*		05 35 44.5	
AKT				*e*S	**S**	**05 38 13.9**	**0.0**
AKT				pmax	pmax		
	comp=Z,41nm,1.3s						
AKT				MLR	MLR		
	comp=Z,2μm,16.0s						
GAZ	**Gaziantep**	**32.87**	**329**	P	**P**	**05 32 56.7**	**-1.9**
GAZ				IAmb	IAmb	05 33 16.2	
	comp=Z,100nm,1.7s						
EVN	**Everest**	**32.90**	**53**		**P**	**05 32 57.2**	**-2.4**
VOI	**Vohitsoka**	**33.24**	**198**	P	**P**	**05 33 03.0**	**+1.0**
VOI				IAmb	IAmb	05 33 48.7	
	comp=Z,72nm,1.5s						
KOPT	**Kop Dagi**	**33.70**	**336**	P	**P**	**05 33 04.9**	**-1.1**
KOPT				IAmb	IAmb	05 33 18.1	
	comp=Z,52nm,1.0s						
KSH	**Kashi**	**33.84**	**26**	P	**P**	**05 33 04.3**	**-2.7**
KSH				pP	sP	05 33 09.8	+0.4
KSH				pmax	pmax		
	comp=Z,48nm,1.4s						
KSH				LR	LR		
	comp=Z,4μm,22.6s						
KSH				LR	LR		
	comp=Z,3μm,20.1s						
KSH				LR	LR		
	comp=Z,6μm,23.8s						
IUG	**Iuzhnay**	**34.02**	**17**	*e*P	**P**	**05 33 09.2**	**+0.5**
	comp=Z,36nm,1.2s						
IUG				*e*S	**S**	**05 38 35.6**	**+1.5**
IUG	**Iuzhnay**	**34.02**	**17**	*e*P	**P**	**05 33 09.1**	**+0.5**
IUG				*e*S	**S**	**05 38 35.6**	**+1.5**
IUG				pmax	pmax		
	comp=Z,35nm,1.2s						
CHM	**Chimkent**	**34.06**	**16**	*e*P	**P**	**05 33 09.7**	**+0.8**
	comp=Z,24nm,1.1s						
CHM	**Chimkent**	**34.06**	**16**	*e*P	**P**	**05 33 09.6**	**+0.8**
CHM				pmax	pmax		
	comp=Z,24nm,1.1s						
MAK	**Makhachkala**	**34.18**	**347**	*e*P	P	05 33 02.4	-7.4
MAK				*e*		05 34 20.9	
MAK				*e*SS	SS	05 40 38.6	-26
MAK				pmax	pmax		
	comp=Z,189nm,0.9s						
MAK				MLR	MLR		
	comp=Z,4μm,16.0s						
ARSB	**Arsianbob**	**34.21**	**21**	IAmb	IAmb	05 33 25.1	
	comp=Z,44nm,1.5s						
BRLS	**Borolday**	**34.79**	**16**	*e*P	**P**	**05 33 13.5**	**-1.6**
BRLS				*e*S	**S**	**05 38 43.5**	**-2.4**
BRLS	**Borolday**	**34.79**	**16**	*e*P	**P**	**05 33 13.5**	**-1.6**
BRLS				*e*S	**S**	**05 38 43.4**	**-2.4**
BNN	**Bunyan**	**34.85**	**330**	P	**P**	**05 33 15.8**	**0.0**
BRDH	**Bariadhala**	**35.03**	**64**	LR	LR	05 47 34.0	
	comp=Z,4μm,18.2s,baz=242,slow=36						
KK31	**Karatay Array**	**35.04**	**17**	P	**P**	**05 33 16.7**	**-0.6**
KK31	**Karatay Array**	**35.04**	**17**	P	**P**	**05 33 16.7**	**-0.6**
KK31				pmax	pmax		
	comp=Z,28nm,1.0s						
DZA	**Taraz**	**35.09**	**18**	*e*P	**P**	**05 33 18.4**	**+0.6**
DZA	**Taraz**	**35.09**	**18**	*e*P	**P**	**05 33 18.3**	**+0.6**
TOKA	**Tokat**	**35.70**	**332**	P	**P**	**05 33 22.6**	**-0.4**
TOKA				IAmb	IAmb	05 33 38.5	
	comp=Z,86nm,1.6s						
NEUR	**Neytrino**	**35.77**	**341**	*i* P	**P**	**05 33 22.2**	**-1.5**
NEUR				p

comp=Z,65nm,1.7s
FRU1 Bishkek 36.10 21 P **P** **05 33 26.6 +0.1**
FRU1 Bishkek 36.10 21 P **P** **05 33 26.6 +0.1**
FRU1 pmax pmax
comp=Z,70nm,0.4s
SHL Shillong 36.11 60 P **P** **05 33 26.2 -0.7**
SHL IAmb IAmb 05 33 35.4
comp=Z,38nm,1.0s
SHL Shillong 36.11 60 P **P** **05 33 30.1 +3.2**
SNR=19
SHL Shillong 36.11 60 P **P** **05 33 26.2 -0.7**
SHL pmax pmax
comp=Z,38nm,1.0s
KBZ Khabaz 36.12 342 P **P** **05 33 27.2 +0.7**
comp=Z,7.8nm,0.8s,baz=156,slow=5.8,SNR=11
KBZ PP **PP** **05 34 51.3 +2.6**
comp=Z,14nm,1.0s,baz=141,slow=11,SNR=5.6
KBZ LR LR 05 49 47.0
comp=Z,4µm,18.9s,baz=144,slow=39
comp=Z,7.8nm,0.8s
KBZ Khabaz 36.12 342 *ce*P **P** **05 33 27.1 +0.6**
KBZ pmax pmax
comp=Z,23nm,1.1s
SHA1 Shidzhatmaz 36.21 342 *i* P **P** **05 33 28.4 +0.9**
BOOM Boomskoye usch 36.32 23 P **P** **05 33 26.9 -1.6**
BOOM IAmb IAmb 05 33 43.8
comp=Z,98nm,1.4s
BOOM Boomskoye usch 36.32 23 P **P** **05 33 26.9 -1.6**
BOOM pmax pmax
comp=Z,98nm,1.4s
KIV Kislovodsk 36.39 342 P **P** **05 33 29.0 0.0**
KIV IAmb IAmb 05 33 36.7
comp=Z,53nm,1.1s
KIV IAMs_20 IAMs_20 05 49 45.3
comp=Z,3µm,19.0s
KIV Kislovodsk 36.39 342 *e*P **P** **05 33 29.2 +0.2**
KIV *e* 05 34 51.8
KIV *e*PPP PPP 05 35 06.4
KIV *e*S **S** **05 39 11.7 +1.2**
KIV *e*SS **SnSn** **05 41 40.2 +1.9**
KIV pmax pmax
comp=Z,34nm,1.1s
KIV MLR MLR
comp=Z,1µm,16.0s
TARG Taragay, Kyrgy 36.45 26 P **P** **05 33 27.8 -2.1**
TARG IAmb IAmb 05 33 47.7
comp=Z,74nm,1.3s
TARG Taragay, Kyrgy 36.45 26 P **P** **05 33 27.8 -2.1**
TARG pmax pmax
comp=Z,74nm,1.3s
BR104 Keskin Array S 36.62 328 P **P** **05 33 32.3 +1.3**
comp=Z,121nmcomp=Z,10.0nm,1.1s
BR131 Keskin Array S 36.63 328 P **P** **05 33 30.2 -0.9**
BR131 Keskin Array S 36.63 328 *i* P **P** **05 33 31.5 +0.4**
BRTR Keskin Array B 36.63 328 P **P** **05 33 31.3 +0.2**
comp=Z,3.4nm,0.9s,baz=141,slow=8.0,SNR=13
BRTR PP **PP** **05 34 56.9 +2.3**
comp=Z,11nm,1.1s,baz=144,slow=11,SNR=4.0
BRTR LR LR 05 49 15.4
comp=Z,1µm,21.0s,baz=109,slow=37
comp=Z,3.4nm,0.9s
BRTR Keskin Array B 36.63 328 P **P** **05 33 30.9 -0.3**
BR105 Keskin Array S 36.64 328 P **P** **05 33 32.5 +1.3**
comp=Z,284nmcomp=Z,9.0nm,1.1s
BR106 Keskin Array S 36.65 328 P **P** **05 33 32.6 +1.3**
comp=Z,233nmcomp=Z,8.3nm,1.2s
SGDS Sogindy 36.67 21 *e*P **P** **05 33 31.8 +0.6**
SGDS *e*S **S** **05 39 16.1 +1.5**
ELL Elmali 36.69 321 P **P** **05 33 31.9 +0.3**
ELL IAmb IAmb 05 33 48.2
comp=Z,69nm,1.2s
ELL Elmali 36.69 321 P **P** **05 33 31.9 +0.3**
ELL pmax pmax
comp=Z,69nm,1.2s
SOC Sochi 37.06 338 *e*P **P** **05 33 30.7 -3.9**
SOC *e*S **S** **05 39 16.0 -4.6**
SOC *e*SSS SSS 05 42 14.9
SOC pmax pmax
comp=Z,20nm,1.1s
SOC MLR MLR
comp=Z,1µm,16.0s
LSA Lhasa 37.08 53 P **P** **05 33 34.4 -1.1**
LSA IAmb IAmb 05 33 44.4
comp=Z,49nm,1.2s
LSA IAMs_20 IAMs_20 05 47 50.4
comp=Z,6µm,21.0s
LSA Lhasa 37.08 53 P **P** **05 33 34.4 -1.1**
LSA pmax pmax
comp=Z,49nm,1.2s
LSA MLR MLR
comp=Z,6µm,21.0s
TNSS Tian-Shan 37.18 24 *e*P **P** **05 33 36.1 0.0**
TNSS Tian-Shan 37.18 24 *e*P **P** **05 33 36.0 0.0**
ANTO Ankara 37.18 328 P **P** **05 33 34.9 -0.8**
ANTO Ankara 37.18 328 P **P** **05 33 34.9 -0.8**
ANTO pmax pmax
comp=Z,39nm,1.1s
ANTO MLR MLR
comp=Z,1µm,20.0s
ANTO Ankara 37.18 328 P **P** **05 33 37.0 +1.3**
comp=Z,416nmcomp=Z,19nm,1.2s
AAA Alma-Ata 37.31 24 *e*P **P** **05 33 37.2 +0.4**
comp=Z,26nm,0.6s
AAA Alma-Ata 37.31 24 *e*P **P** **05 33 37.2 +0.4**
AAA pmax pmax
comp=Z,26nm,0.6s
MDOK Medeo 37.32 24 *e*P **P** **05 33 37.3 +0.3**
MDOK *e*S **S** **05 39 26.2 +1.3**
MDOK Medeo 37.32 24 *e*P **P** **05 33 37.3 +0.3**
MDOK *e*S **S** **05 39 26.1 +1.2**
ILGA Ilgaz 37.59 330 P **P** **05 33 39.5 +0.2**
ILGA IAmb IAmb 05 33 53.4
comp=Z,71nm,1.2s
SATY Saty 37.79 25 *e*P **P** **05 33 41.4 +0.5**
comp=Z,59nm,1.7s
SATY *e*S **S** **05 39 33.2 +1.2**
SATY Saty 37.79 25 *e*P **P** **05 33 41.4 +0.5**
SATY *e*S **S** **05 39 33.1 +1.2**
SATY pmax pmax
comp=Z,59nm,1.7s
BTLS Baital 37.87 19 *e*P **P** **05 33 42.1 +0.7**
BTLS Baital 37.87 19 *e*P **P** **05 33 42.1 +0.7**
SHLS Shalkode 38.32 26 *e*P **P** **05 33 47.4 +1.9**
SHLS Shalkode 38.32 26 *e*P **P** **05 33 47.3 +1.9**
MANT Manisa 38.62 322 P **P** **05 33 47.2 -0.9**
MLSI Meulaboh, Aceh 38.91 95 P P 05 34 00.9 +10
ANN Anapa 38.96 337 *e*P **P** **05 33 49.7 -0.8**
ANN *e**PP **sP** **05 33 52.9 +0.1**
ANN *e*S **S** **05 39 50.0 +0.8**
ANN pmax pmax
comp=Z,55nm,1.0s
ANN MLR MLR
comp=E,2µm,15.0s
ANN MLR MLR
comp=N,564nm,12.0s
ANN MLR MLR
comp=Z,1µm,15.0s
IDI Anoyia 39.11 316 P **P** **05 33 52.5 +0.5**
comp=Z,44nm,0.8s,baz=110,slow=9.1,SNR=11
IDI LR LR 05 52 14.1
comp=Z,371nm,20.8s,baz=92,slow=40
comp=Z,44nm,0.8s
IDI Anoyia 39.11 316 P **P** **05 33 52.0 0.0**
IDI IAmb IAmb 05 34 01.9
comp=Z,85nm,1.1s
AB31 Akbulak array 39.37 2 P **P** **05 33 51.7 -2.2**
AB31 IAmb IAmb 05 33 56.7
comp=Z,51nm,1.1s
TDK Taldyqorghan 39.40 23 *e*P **P** **05 33 54.9 +0.6**
comp=Z,66nm,0.7s
TDK Taldyqorghan 39.40 23 *e*P **P** **05 33 54.9 +0.6**
TDK pmax pmax
comp=Z,66nm,0.7s
APE Apeiranthos 39.66 318 ⇑P **P** **05 33 58.6 +2.0**
APE Apeiranthos 39.66 318 *i* P **P** **05 33 58.1 +1.5**
APE pmax pmax
comp=Z,53nm,1.0s
KCSI Kotacane, Aceh 40.39 96 P **P** **05 34 03.6 +0.7**
comp=Z,733nmcomp=Z,19nm,1.0s
SIM Simferopol' 40.43 334 *e*P **P** **05 34 04.7 +1.9**
SIM *e*S **S** **05 40 04.5 -6.9**
SIM pmax pmax
comp=Z,62nm,1.1s
AKTO Aktyubinsk 40.51 0 P **P** **05 34 03.5 +0.2**
comp=Z,16nm,0.8s,baz=193,slow=8.6,SNR=14
comp=Z,16nm,0.8s
GSI Gunungsitoli 40.66 99 P **P** **05 34 05.5 +0.4**
GSI IAmb IAmb 05 34 16.7
comp=Z,96nm,1.4s
GSI Gunungsitoli 40.66 99 P **P** **05 34 07.5 +2.3**
comp=Z,51nm,1.8s
EZN Ezine 40.81 322 ⇑P **P** **05 34 08.4 +2.3**
EZN Ezine 40.81 322 P **P** **05 34 08.3 +2.3**
CM31 Chiang Mai Arr 40.95 73 P **P** **05 34 07.0 -0.5**
CMAR Chiang Mai Arr 40.95 73 P **P** **05 34 05.5 -2.0**
comp=Z,16nm,0.9s,baz=266,slow=8.6,SNR=36
CMAR LR LR 05 51 07.1
comp=Z,427nm,18.1s,baz=260,slow=36
comp=Z,16nm,0.9s
CMAR Chiang Mai Arr 40.95 73 P **P** **05 34 06.1 -1.4**
CMAR Chiang Mai Arr 40.95 73 P **P** **05 34 06.1 -1.4**
CHTO Chiang Mai 40.99 73 P **P** **05 34 06.5 -1.3**
CHTO IAmb IAmb 05 34 17.3
comp=Z,68nm,1.2s
CHTO Chiang Mai 40.99 73 P **P** **05 34 10.0 +2.2**
CHTO Chiang Mai 40.99 73 P **P** **05 34 06.5 -1.3**
CHTO pmax pmax
comp=Z,68nm,1.3s
CHTO MLR MLR
comp=Z,600nm,19.0s
MATP Matopo 41.48 223 LR LR 05 49 28.5
comp=Z,3µm,20.1s,baz=56,slow=34
ALN Alexandroupoli 41.65 323 P **P** **05 34 12.0 -0.9**
ALN Alexandroupoli 41.65 323 P **P** **05 34 12.0 -0.9**
ALN pmax pmax
comp=Z,21nm,1.1s
PSI Prapat 41.66 97 LR LR 05 48 50.3
comp=Z,459nm,21.6s,baz=284,slow=32
PSI Prapat 41.66 97 P **P** **05 34 13.6 +0.1**
PSI pmax pmax
comp=Z,45nm,1.3s
RPSI Rantau Prapat 41.68 97 P **P** **05 34 13.6 +0.1**
TNCH TengChong 41.71 63 P **P** **05 34 15.8 +1.9**
TNCH PP **PnPn** **05 35 55.4 +0.2**
TNCH S **S** **05 40 33.6 +2.3**
TNCH pmax pmax
comp=Z,47nm,0.5s
TNCH pmax pmax
comp=Z,690nm,2.8s
TNCH LR LR
comp=Z,2µm,14.7s
TNCH LR LR
comp=Z,2µm,15.4s
TNCH LR LR
comp=Z,3µm,23.4s
RDO Rodhopi 42.10 323 P **P** **05 34 15.7 -0.9**
ITM Ithomi 42.14 316 P **P** **05 34 16.5 -0.5**
MAKZ Makanchi 42.31 25 IAMs_20 IAMs_20 05 52 03.6
comp=Z,3µm,22.0s
MK31 Makanchi Array 42.43 25 *ce*P **P** **05 34 18.7 -0.6**
MKAR Makanchi Array 42.43 25 P **P** **05 34 19.8 +0.5**
comp=Z,12nm,0.9s,baz=215,slow=9.0,SNR=22
MKAR LR LR 05 53 45.0
comp=Z,2µm,19.6s,baz=216,slow=39
comp=Z,12nm,0.9s
MNSI Mandalling Nat 42.73 100 P **P** **05 34 22.8 +0.7**
comp=Z,45nm,1.1s
BROLN Tlhalogang 42.73 224 *i* P P 05 34 31.0 +8.9
TIRR Tirgusor 42.74 329 P **P** **05 34 21.6 -0.1**
TIRR Tirgusor 42.74 329 ⇓P **P** **05 34 23.3 +1.6**
TIRR Tirgusor 42.74 329 P **P** **05 34 21.6 -0.1**
TIRR pmax pmax
comp=Z,33nm,0.9s
TIRR MLR MLR
comp=Z,1µm,22.0s
TIRR Tirgusor 42.74 329 P **P** **05 34 21.8 +0.1**
comp=Z,40nm,1.0s
TIRR pP **sP** **05 34 25.6 +1.6**
comp=Z,40nm,1.0s
GOMU GeErMu 42.77 46 P **P** **05 34 22.6 0.0**
GOMU S **S** **05 40 45.3 -1.7**
GOMU SS **SS** **05 43 58.1 +0.3**
GOMU pmax pmax
comp=Z,11nm,0.9s
GOMU LR LR
comp=Z,860nm,16.9s
GOMU LR LR
comp=Z,1µm,16.1s
WMQ Urumqi 42.80 32 *e*P **P** **05 34 22.8 +0.5**
WMQ PP **PP** **05 36 05.8 +4.2**
WMQ PcP **PcP** **05 36 10.3 -3.3**
WMQ S **S** **05 40 46.5 -0.1**
WMQ pmax pmax
comp=Z,24nm,1.3s
WMQ pmax pmax
comp=Z,450nm,3.7s
WMQ LR LR
comp=Z,2µm,16.1s
WMQ LR LR
comp=Z,1µm,21.7s
WMQ LR LR
comp=Z,2µm,21.7s
KULM Kulim 42.92 93 P **P** **05 34 22.2 -1.4**
TPGR Topolog 43.02 329 ⇓P **P** **05 34 25.6 +1.6**
ELND Elena 43.05 326 ⇑P **P** **05 34 26.4 +2.1**
RAZG Razgrad 43.12 327 ⇑P **P** **05 34 25.9 +1.0**
HARR Harsova 43.15 329 ⇓P **P** **05 34 25.8 +0.8**
HARR Harsova 43.15 329 P **P** **05 34 25.8 +0.8**
NE56 Odesa 43.19 333 P **P** **05 34 25.3 0.0**
BELG Belogornoye 43.23 351 P **P** **05 34 25.5 0.0**
comp=Z,34nm,0.9s,baz=352,slow=1.6,SNR=11
BELG LR LR 05 56 35.7
comp=Z,2µm,18.7s,baz=124,slow=42
comp=Z,34nm,0.9s
BELG Belogornoye 43.23 351 *i* P **P** **05 34 25.0 -0.5**
BELG pmax pmax
comp=Z,16nm,1.1s
VRH Novokhopyorsk 43.28 345 *e*P **P** **05 34 26.0 0.0**
VRH pmax pmax
comp=Z,49nm,1.0s
LIT Litokhoron 43.35 320 P **P** **05 34 26.1 -0.7**
LIT Litokhoron 43.35 320 P **P** **05 34 26.1 -0.7**
LIT pmax pmax
comp=Z,31nm,1.1s
CFR Carcaliu 43.39 330 ⇓P **P** **05 34 28.6 +1.7**
CFR Carcaliu 43.39 330 P **P** **05 34 28.6 +1.7**
MREMI Moremi 43.66 222 P **P** **05 34 30.3 +0.7**
MREMI Moremi 43.66 222 *i* P P 05 34 38.9 +9.3
PPI Padang Panjang 43.82 101 P **P** **05 34 34.2 +3.2**
VSR Storozhevoye 43.97 343 *e*P **P** **05 34 30.5 -1.1**
VSR *e* 05 36 13.9
VSR pmax pmax
comp=Z,40nm,1.1s
VSR MLR MLR
comp=Z,2µm,21.0s
ZSN Zaisan 44.05 27 *e*P **P** **05 34 33.0 +0.7**
comp=Z,38nm,1.7s
ZSN Zaisan 44.05 27 *e*P **P** **05 34 33.0 +0.7**
ZSN pmax pmax
comp=Z,38nm,1.7s
ISR Istrita 44.15 328 ⇑P **P** **05 34 35.2 +1.9**
ISR Istrita 44.15 328 P **P** **05 34 35.1 +1.9**
ISR Istrita 44.15 328 P **P** **05 34 34.7 +1.5**
comp=Z,65nm,1.2s
KURBB Kurchatov Arra 44.22 19 P **P** **05 34 34.2 +0.6**
comp=Z,6.8nm,0.9s,baz=216,slow=8.2,SNR=37
KURBB LR LR 05 53 56.3
comp=Z,5µm,21.3s,baz=189,slow=37
comp=Z,6.8nm,0.9s
MILM Milestii Mici 44.32 332 *e*P **P** **05 34 33.0 -1.4**
comp=Z,100nm,1.3s
MILM *e*L L 05 56 07.0
MILM LRM MLR 05 57 15.0
comp=Z,700nm,16.5s
KURK Kurchatov 44.33 19 P **P** **05 34 33.8 -0.7**
KURK Kurchatov 44.33 19 P **P** **05 34 35.3 +0.8**
KURK P **P** **05 34 35.3 +0.8**
KURK P **P** **05 34 35.3 +0.8**
KURK Kurchatov 44.33 19 *ce*P **P** **05 34 35.2 +0.8**
KURK pmax pmax
comp=Z,49nm,2.5s
BVAR Borovoye Array 44.33 11 P **P** **05 34 35.1 +0.7**
comp=Z,9.1nm,0.8s,baz=182,slow=5.5,SNR=28
BVAR PcP **PP** **05 36 17.3 -0.5**
comp=Z,4.8nm,0.7s,baz=181,slow=5.8,SNR=4.3
BVAR LR LR 05 55 01.4
comp=Z,2µm,18.6s,baz=207,slow=39
comp=Z,9.1nm,0.8s
BORK Borovoye 44.34 11 *ce*P **P** **05 34 35.2 +0.7**
BORK pmax pmax
comp=Z,34nm,1.4s
VORR Voronezh 44.37 344 *e*P **P** **05 34 33.5 -1.2**
VORR *e* 05 36 19.9
VORR pmax pmax
comp=Z,40nm,0.9s
GHRR 44.37 330 ⇑P **P** **05 34 36.2 +1.3**
GHRR 44.37 330 P **P** **05 34 35.8 +0.9**
KIS Kishinev 44.37 332 *e*P **P** **05 34 32.0 -2.9**
KIS *e*L L 05 56 16.0
KIS LRM MLR 05 57 15.0
VRI Vrincioaia 44.58 329 ⇑P **P** **05 34 37.9 +1.4**
VRI Vrincioaia 44.58 329 P **P** **05 34 37.9 +1.4**
VRI Vrincioaia 44.58 329 P **P** **05 34 38.0 +1.4**
comp=Z,1µmcomp=Z,71nm,0.8s
HUMR Humele 44.59 327 ⇑P **P** **05 34 37.8 +1.2**
PLOR5 Plostina Array 44.59 329 P **P** **05 34 38.2 +1.5**
comp=Z,2µmcomp=Z,83nm,0.9s
KHWEE KHWEE 44.60 225 P **P** **05 34 38.0 +0.8**
KHWEE KHWEE 44.60 225 *i* P P 05 34 46.3 +9.2
PLOR Plostina 44.60 329 ⇓P **P** **05 34 38.3 +1.4**
PLOR Plostina 44.60 329 P **P** **05 34 38.2 +1.4**
MLR Muntele Rosu 44.72 328 P **P** **05 34 39.2 +1.4**
comp=Z,16nm,0.8s,baz=11,slow=22,SNR=17
MLR LR LR 05 55 33.3
comp=Z,917nm,18.3s,baz=133,slow=39
comp=Z,16nm,0.8s
MLR Muntele Rosu 44.72 328 IAmb IAmb 05 34 47.4
comp=Z,48nm,1.0s
MLR Muntele Rosu 44.72 328 ⇑P **P** **05 34 38.7 +0.9**
MLR Muntele Rosu 44.72 328 P **P** **05 34 38.7 +0.9**
MLR Muntele Rosu 44.72 328 P **P** **05 34 39.2 +1.4**
comp=Z,703nmcomp=Z,54nm,1.2s
COVR Voineasa-Covas 44.83 329 ⇑P **P** **05 34 39.7 +1.1**
PZH PanZhiHua 44.88 62 P **P** **05 34 40.3 +0.9**
PZH S **S** **05 41 18.0 +0.3**
PZH ScS **SS** **05 44 36.3 -2.7**
PZH pmax pmax
comp=Z,10.0nm,2.1s
PZH pmax pmax
comp=Z,360nm,3.8s
PZH LR LR
comp=Z,1µm,20.6s
PZH LR LR
comp=Z,1µm,19.4s
PZH LR LR
comp=Z,1µm,19.6s
TESR Tescani 45.06 330 ⇑P **P** **05 34 41.1 +0.7**
TESR Tescani 45.06 330 P **P** **05 34 40.9 +0.5**
comp=Z,1µmcomp=Z,88nm,1.0s
TURR Turia 45.06 329 ⇑P **P** **05 34 40.9 +0.4**
ONER Baraj Valea Uz 45.07 330 ⇓P **P** **05 34 41.2 +0.7**
OZUR 45.21 329 ⇑P **P** **05 34 42.0 +0.3**
LPHEP Lephephe 45.27 223 *i* P P 05 34 51.0 +8.5
LPSR Galich'ya Gora 45.28 344 *e*P **P** **05 34 42.5 +0.5**
LPSR pmax pmax
comp=Z,17nm,0.9s
ARR Arges 45.32 327 ⇓P **P** **05 34 42.9 +0.4**
DOPR Dopca 45.33 329 ⇓P **P** **05 34 42.8 +0.3**
SORM Soroca 45.42 333 ⇓P **P** **05 34 43.7 +0.4**
SORM Soroca 45.42 333 P **P** **05 34 43.6 +0.4**
KMI Kunming 45.47 64 P **P** **05 34 44.6 +0.4**
KMI sP pwP 05 34 50.4 +0.6
KMI S **S** **05 41 26.3 -0.1**
KMI SS **SS** **05 44 51.8 +1.9**
KMI pmax pmax
comp=Z,30nm,2.2s
KMI pmax pmax
comp=Z,440nm,4.0s
KMI LR LR
comp=Z,1µm,22.1s
SLVN Son La 45.92 70 P **P** **05 34 47.1 -0.6**
SLVN IAmb IAmb 05 34 56.3
comp=Z,32nm,1.1s
MDB Medias 45.97 328 ⇑P **P** **05 34 48.5 +0.9**
MDB Medias 45.97 328 P **P** **05 34 48.5 +0.9**
KDWAN Kaudwane 46.09 224 *i* P P 05 34 57.5 +8.6
QNGWA Qangwa 46.21 231 P **P** **05 34 51.3 +1.3**
QNGWA Qangwa 46.21 231 *i* P P 05 34 59.6 +10
HERR Herculane 46.22 325 ⇓P **P** **05 34 49.6 +0.1**
GZR Gura Zlata 46.34 326 ⇑P **P** **05 34 52.3 +1.6**
GZR Gura Zlata 46.34 326 P **P** **05 34 52.2 +1.6**
ARTI Arti 46.47 1 LR LR 05 57 10.4
comp=Z,1µm,20.9s,baz=188,slow=40
ARTI Arti 46.47 1 P **P** **05 34 50.5 -0.9**
ARTI IAmb IAmb 05 34 58.8
comp=Z,29nm,1.0s
ARTI Arti 46.47 1*c i*P **P** **05 34 52.6 +1.2**
ARTI 05 36 19.5
ARTI 05 36 47.9
ARTI S **S** **05 41 42.3 +2.8**
ARTI 05 44 49.1
ARTI pmax pmax
comp=Z,55nm,1.9s
ARTI MLR MLR
comp=Z,1µm,22.0s
BURAR Bucovina Array 46.53 330 P **P** **05 34 51.8 -0.4**
BURAR IAmb IAmb 05 35 01.0
comp=Z,17nm,0.7s
BURAR Bucovina Array 46.53 330 ⇑P **P** **05 34 53.0 +0.9**
BURAR Bucovina Array 46.53 330 P **P** **05 34 53.0 +0.9**
MDVR Moldovita 46.55 325 ⇑P **P** **05 34 53.2 +0.9**
BUR08 Bucovina Ar. S 46.56 330 P **P** **05 34 52.2 -0.1**
BUR08 IAmb IAmb 05 35 19.6
comp=Z,33nm,1.3s
LBTB Lobatse 46.58 221 LR LR 05 51 48.3
comp=Z,2µm,21.5s,baz=47,slow=33
LBTB Lobatse 46.58 221 P **P** **05 34 53.9 +1.1**
LBTB Lobatse 46.58 221 P **P** **05 34 53.9 +1.1**
LBTB pmax pmax
comp=Z,132nm,1.3s
CJR Cluj-Napoca 46.75 328 ⇑P **P** **05 34 54.6 +0.7**
CJR Cluj-Napoca 46.75 328 P **P** **05 34 54.5 +0.7**
CEL Celeste 46.85 314 P **P** **05 34 54.4 -0.4**
CEL IAmb IAmb 05 34 58.7
comp=Z,31nm,1.1s
CEL Celeste 46.85 314 P **P** **05 34 54.6 -0.2**
DGZ Jazzator, Alta 46.87 26 *i* P **P** **05 34 55.7 +0.9**
DGZ pmax pmax
comp=Z,41nm,2.5s
AK07 Malin Array Si 46.88 335 P **P** **05 34 54.2 -0.4**
AK10 Malin Array Si 46.90 336 P **P** **05 34 54.3 -0.5**
AK06 Malin Array Si 46.91 335 P **P** **05 34 54.4 -0.5**
SVE Sverdlovsk 46.97 2 *e*P **P** **05 34 55.7 +0.4**
SVE *e*S **S** **05 41 50.1 +3.6**
SVE pmax pmax
comp=Z,41nm,1.3s
MARR Marisel-Cluj 46.98 328 ⇓P **P** **05 34 56.9 +1.3**
AKASG Malin Array Be 46.98 336 P **P** **05 34 55.0 -0.5**
comp=Z,9.9nm,1.0s,baz=138,slow=7.2,SNR=23
AKASG PcP **PcP** **05 36 25.9 -1.8**
comp=Z,3.7nm,0.8s,baz=122,slow=2.3,SNR=7.6
AKASG PP **PP** **05 36 45.9 -0.1**
comp=Z,3.2nm,0.9s,baz=144,slow=9.7,SNR=4.2
AKASG LR LR 05 57 06.4
comp=Z,1µm,18.8s,baz=137,slow=39
comp=Z,9.9nm,1.0s
AKASG Malin Array Be 46.98 336 P **P** **05 34 54.0 -1.5**
AKASG Malin Array Be 46.98 336 *i* P **P** **05 34 55.5 0.0**
AKASG pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 46.98 336 P **P** **05 34 54.6 -0.8**
AKBB IAmb IAmb 05 35 02.2
comp=Z,33nm,1.1s
AKBB Malin Array Si 46.98 336*ce*P **P** **05 34 55.5 0.0**
AKBB pmax pmax
comp=Z,37nm,1.0s
KIEV Kiev 46.99 336 P **P** **05 34 54.6 -0.8**
KIEV IAmb IAmb 05 35 02.2
comp=Z,27nm,1.0s
KIEV Kiev 46.99 336 ⇑P **P** **05 34 55.2 -0.3**
KIEV Kiev 46.99 336 P **P** **05 34 55.2 -0.3**
BZS Buzias 47.12 326 ⇓P **P** **05 34 57.0 +0.4**
BZS Buzias 47.12 326 P **P** **05 34 57.0 +0.4**
DRGR 47.26 328 ⇑P **P** **05 34 59.2 +1.4**
DRGR 47.26 328 P **P** **05 34 59.2 +1.4**
GRTLG Ghanzi 47.27 229 P **P** **05 34 58.5 +0.3**
GRTLG Ghanzi 47.27 229 *i* P P 05 35 08.7 +10
EDA Edea 47.42 266 P **P** **05 34 59.2 -0.3**
EDA IAmb IAmb 05 35 15.3
comp=Z,50nm,1.2s
EDA IAMs_20 IAMs_20 05 54 29.0
comp=Z,2µm,21.0s
KGCAE Kacgae 47.47 226 P **P** **05 35 01.3 +1.5**
KGCAE Kacgae 47.47 226 *i* P P 05 35 08.4 +8.6

SIRR Siria 47.50 327 ⇑P P 05 35 00.3 +0.7
VAE Valguarnera 47.59 313 LR LR 05 55 06.8
comp=Z,377nm,19.5s,baz=126,slow=36
MAKGR Makgori 47.65 221 *i* P P 05 35 10.4 +9.3
CD2 Chengdu 47.71 57 P P 05 35 01.0 -0.5
CD2 S S 05 41 57.0 -1.0
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 LR LR
comp=Z,1μm,17.7s
CD2 LR LR
comp=Z,1μm,16.7s
LHSI Lahat 47.74 104 P P 05 35 02.2 +0.3
comp=Z,50nm,1.3s
GTA Gaotai 47.76 45 *e*P P 05 35 01.6 -0.3
GTA sP pwP 05 35 09.5 +2.1
GTA S S 05 41 53.8 -4.9
GTA SS SS 05 45 23.8 -3.3
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA pmax pmax
comp=Z,380nm,5.5s
GTA LR LR
comp=Z,1μm,17.1s
GTA LR LR
comp=Z,2μm,18.9s
GTA LR LR
comp=Z,2μm,23.3s
OBN Obninsk 48.15 344 P P 05 35 04.8 +0.3
comp=Z,17nm,0.4s,baz=154,slow=19,SNR=3.1
OBN LR LR 05 57 29.0
comp=Z,2μm,21.1s,baz=85,slow=39
comp=Z,17nm,0.4s
OBN Obninsk 48.15 344 P P 05 35 04.3 -0.2
OBN IAMs_20 IAMs_20 05 57 16.3
comp=Z,2μm,21.0s
OBN Obninsk 48.15 344 *e*P P 05 35 05.2 +0.8
OBN *e**PP pwP 05 35 10.1 -1.2
OBN *e* 05 36 26.0
OBN *e* 05 36 54.5
OBN *e*PPP PPP 05 37 41.2
OBN pmax pmax
comp=Z,13nm,1.3s
OBN MLR MLR
comp=Z,2μm,21.0s
MOS Moscow 48.43 345 *e*P P 05 35 06.2 -0.4
MOS *e* 05 37 02.5
MOS pmax pmax
comp=Z,75nm,1.1s
MOS MLR MLR
comp=Z,1μm,20.0s
MDSI Maura Dua 48.56 105 P P 05 35 09.5 +1.3
comp=Z,744nmcomp=Z,28nm,1.3s
RNPP5 Staryi Chortor 48.78 334 P P 05 35 09.5 +0.1
TSUM Tsumeb 48.83 234 LR LR 05 54 50.5
comp=Z,3μm,22.0s,baz=60,slow=35
TSUM Tsumeb 48.83 234 IAMs_20 IAMs_20 05 54 28.1
comp=Z,3μm,22.0s
RNPP8 Varash 48.87 334 P P 05 35 09.9 -0.2
RNPP9 Sopachiv 48.91 334 P P 05 35 10.2 -0.2
LKGWB Lokgwabe 48.96 226 P P 05 35 09.7 -1.6
KOOLE Kule 49.00 228 P P 05 35 12.3 +0.6
KOOLE Kule 49.00 228 *i* P P 05 35 21.4 +10
KIRV Kirov 49.07 354 P P 05 35 10.6 -0.9
comp=Z,15nm,0.7s,baz=125,slow=4.9,SNR=9.4
KIRV LR LR 06 00 02.3
comp=Z,2μm,18.2s,baz=174,slow=41
comp=Z,15nm,0.7s
KIRV Kirov 49.07 354*ce*P P 05 35 12.1 +0.7
ZAA0 Zalesovo Array 49.12 21 P P 05 35 11.0 -1.0
ZAA0 IAmb IAmb 05 35 19.5
comp=Z,42nm,0.8s
ZALV Zalesovo Beam 49.12 21 P P 05 35 11.8 -0.2
comp=Z,30nm,0.9s,baz=227,slow=7.9,SNR=37
ZALV LR LR 05 56 47.4
comp=Z,1μm,20.5s,baz=218,slow=37
comp=Z,30nm,0.9s
ZALV Zalesovo Beam 49.12 21 P P 05 35 10.9 -1.0
ZALV Zalesovo Beam 49.12 21 *i* P P 05 35 11.6 -0.4
ZALV pmax pmax
comp=Z,31nm,0.9s
KWP Kalwaria Pacla 49.13 331 *e*P P 05 35 13.1 +1.0
MORH Mrgy, Hungar 49.14 325 ⇓P P 05 35 12.2 -0.1
BLY Banja Luka 49.18 322 ⇑P P 05 35 14.1 +1.5
GYA Guiyang 49.19 64 ⇓P P 05 35 12.9 -0.2
GYA S S 05 42 16.1 -3.1
GYA pmax pmax
comp=Z,25nm,1.3s
GYA pmax pmax
comp=Z,490nm,3.1s
GYA LR LR
comp=Z,1μm,23.0s
GYA LR LR
comp=Z,910nm,22.7s
GYA LR LR
comp=Z,2μm,24.2s
LZDM Lanzhou Array 49.22 51 P P 05 35 13.0 -0.5
comp=Z,3.1nm,0.4s,baz=232,slow=7.3,SNR=7.8
LZDM LR LR 05 57 07.3
comp=Z,2μm,21.4s,baz=200,slow=38
comp=Z,3.1nm,0.4s
BOSA Boshof 49.33 218 P P 05 35 11.5 -2.5
comp=Z,17nm,0.8s,baz=26,slow=6.0,SNR=3.7
BOSA LR LR 05 53 24.0
comp=Z,4μm,21.9s,baz=44,slow=33
comp=Z,17nm,0.8s
BOSA Boshof 49.33 218 P P 05 35 14.5 +0.4
LZH Lanzhou 49.38 50 *e*P P 05 35 15.0 +0.5
LZH sP pwP 05 35 21.5 +1.5
LZH S S 05 42 22.4 +0.7
LZH SS SS 05 45 54.3 +0.8
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,550nm,5.2s
LZH LR LR
comp=Z,1μm,20.6s
LZH LR LR
comp=Z,2μm,17.4s
LZH LR LR
comp=Z,3μm,22.0s
PSZ Piszkesteto 49.46 327 P P 05 35 14.2 -0.6
PSZ Piszkesteto 49.46 327 P P 05 35 14.2 -0.6
PSZ pmax pmax
comp=Z,26nm,1.3s
STHS Stebnicka Huta 49.71 330 *e*P P 05 35 20.0 +3.4
STHS pmax pmax
comp=Z,12nm,0.9s
STHS Stebnicka Huta 49.71 330 *e*P P 05 35 20.0 +3.4
DLV Lat 49.99 83 IAMs_20 IAMs_20 05 54 20.1
comp=Z,2μm,21.0s
NIE Niedzica 50.18 329 *e*P P 05 35 21.4 +1.3
LANS Liptovska Anna 50.44 328 *e*P P 05 35 23.2 +1.0
LANS pmax pmax
comp=Z,7.0nm,1.0s
LANS Liptovska Anna 50.44 328 *e*P P 05 35 23.2 +1.0
MNK Minsk 50.44 338 *i* P P 05 35 19.3 -2.8
comp=E,20nm,0.8s
MNK *i* P P 05 35 19.3 -2.8
comp=N,20nm,0.8s
MNK *i* P P 05 35 19.3 -2.8
comp=Z,25nm,0.9s,baz=141
MNK *i* PP PP 05 37 15.4 -2.2
MNK *i* PPP PPP 05 38 08.9
MNK *i* S S 05 42 33.8 -1.8
MNK *i* SS SS 05 46 08.0 -1.5
MNK *i* SSS SSS 05 47 33.8
MNK *i* LQ LQ 05 52 45.5
MNK *i* LR LR 05 56 46.4
MNK *i* LRM MLR 05 59 00.6
comp=E,1μm,16.9s
MNK *i* LRM MLR 05 59 06.0
comp=N,1μm,16.8s
MNK *i* LRM MLR 05 59 07.0
comp=Z,2μm,19.2s
MNK Minsk 50.44 338 *i* P P 05 35 19.2 -2.8
MNK *i* 05 37 15.4
MNK *i* PPP PPP 05 38 08.9
MNK *i* S S 05 42 33.7 -1.8
MNK *i* SS SS 05 46 08.0 -1.5
MNK *i* SSS SSS 05 47 33.8
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=E,20nm,0.8s
MNK pmax pmax
comp=Z,25nm,0.9s
MNK MLR MLR
comp=E,1μm,17.0s
MNK MLR MLR
comp=N,1μm,17.0s
MNK MLR MLR
comp=Z,2μm,19.0s
KEST Kesra 50.76 308 P P 05 35 24.6 -0.3
comp=Z,8.7nm,0.9s,baz=316,slow=11,SNR=3.4
KEST LR LR 05 58 28.2
comp=Z,603nm,18.2s,baz=83,slow=38
comp=Z,8.7nm,0.9s
KEST Kesra 50.76 308 IAmb IAmb 05 36 00.3
comp=Z,45nm,1.2s
FDMO Fiordimonte 50.90 319 IAmb IAmb 05 35 34.0
comp=Z,33nm,0.8s
OJC Ojcow 50.94 330 *e*P P 05 35 26.4 +0.5
CESX Cesi 51.05 318 P P 05 35 27.6 +0.8
CESX IAmb IAmb 05 35 33.7
comp=Z,82nm,1.6s
WIN Windhoek 51.06 230 IAMs_20 IAMs_20 05 55 06.5
comp=Z,3μm,20.0s
MODS Modra-Piesok 51.15 326 *e*P P 05 35 27.9 +0.4
MODS pmax pmax
comp=Z,55nm,1.2s
MODS Modra-Piesok 51.15 326 *e*P P 05 35 27.9 +0.4
NACGM Naroch 51.16 338 *e*P P 05 35 26.2 -1.2
comp=Z,37nm,1.0s,baz=140
JAVC Velka Javorina 51.21 327 *e*P P 05 35 28.7 +0.7
QIZ Qiongzhong 51.29 74 P P 05 35 28.4 -0.6
QIZ S S 05 42 48.8 +0.4
QIZ SS SS 05 46 26.9 +2.7
QIZ LR LR
comp=Z,620nm,14.1s
QIZ LR LR
comp=Z,790nm,12.9s
QIZ LR LR
comp=Z,940nm,17.2s
RONA Rosalia, Austr 51.31 325 *e*P P 05 35 28.5 -0.2
comp=Z,9.2nm,0.7s
TAM Tamanrasset 51.35 291 P P 05 35 29.1 -0.5
TAM IAmb IAmb 05 35 39.6
comp=Z,23nm,0.6s
TAM Tamanrasset 51.35 291 P P 05 35 29.1 -0.5
TAM pmax pmax
comp=Z,23nm,0.6s
TAM MLR MLR
comp=Z,1μm,18.0s
MURB Monte Urbino 51.37 319 P P 05 35 28.8 -0.6
MURB IAmb IAmb 05 35 48.4
comp=Z,44nm,1.1s
MAUC Maruska 51.43 328 *e*P P 05 35 30.5 +0.9
ARSA Arzberg 51.50 324 *e*P P 05 35 31.3 +1.1
comp=Z,4.5nm,0.6s
CONA Conrad Observa 51.68 325 *i* P P 05 35 31.3 -0.2
comp=Z,14nm,1.0s
OBKA Obir 51.68 323 *e*pP pP 05 35 34.7 +1.4
comp=Z,4.1nm,0.6s
STEB Steborice 51.80 328 *e*P P 05 35 31.2 -1.1
STEB *e*pP pwP 05 35 38.9 -0.3
MORC Moravsky Berou 51.82 328 IAmb IAmb 05 35 39.5
comp=Z,35nm,1.2s
MORC Moravsky Berou 51.82 328 ⇑P P 05 35 32.2 -0.3
MORC Moravsky Berou 51.82 328 *e*P P 05 35 31.6 -0.9
MORC Moravsky Berou 51.82 328 P P 05 35 32.2 -0.3
SUW Suwalki 51.93 335 *e*P P 05 35 35.0 +1.8
SUW Suwalki 51.93 335 IAMs_20 IAMs_20 05 59 50.0
comp=Z,1μm,21.0s
KRUC Moravsky 52.02 327 *e*P P 05 35 33.9 -0.1
VRAC Vranov 52.05 327 P P 05 35 32.0 -2.2
comp=Z,5.3nm,0.7s,baz=132,slow=5.9,SNR=5.7
comp=Z,5.3nm,0.7s
VRAC Vranov 52.05 327 *e*P P 05 35 34.2 0.0
KNGR Kungurtug, Tuv 52.27 31 *i* P P 05 35 35.4 -0.6
KNGR pmax pmax
comp=Z,64nm,1.0s
MYKA Terra Mystica 52.28 323 *e*P P 05 35 36.4 +0.3
comp=Z,12nm,0.8s
KRLC Kraliky 52.40 328 *e*P P 05 35 35.8 -1.0
KRLC Kraliky 52.40 328 *e*P P 05 35 35.8 -1.0
MOA Mohn 52.54 324 *i* P P 05 35 37.8 -0.1
comp=Z,8.4nm,0.8s
STAL STALIGIAL 52.66 322 IAmb IAmb 05 35 45.6
comp=Z,43nm,1.1s
KLMR Klimovskoe 52.68 349 *e*P P 05 35 37.8 -0.8
KLMR *e* 05 36 45.8
KLMR pmax pmax
comp=Z,59nm,1.5s
KLMR MLR MLR
comp=Z,1μm,18.0s
KBA Koelnbreinsper 52.68 323 *e*P P 05 35 39.9 +0.7
comp=Z,6.4nm,1.0s,SNR=5.6
PABE Paberze 52.69 337 IAMs_20 IAMs_20 06 00 22.9
comp=Z,1μm,21.0s
XAN Xi'an 52.74 55 ⇓P P 05 35 38.1 -1.6
XAN pP sP 05 35 42.3 -0.2
XAN S S 05 43 06.9 -1.2
XAN pmax pmax
comp=Z,19nm,1.1s
XAN pmax pmax
comp=Z,350nm,3.8s
XAN LR LR
comp=Z,590nm,15.1s
XAN LR LR
comp=Z,1μm,17.9s
XAN LR LR
comp=Z,1μm,20.6s
DPC Dobruska-Polom 52.80 328 *e*P P 05 35 39.4 -0.4
DPC *e* 05 35 45.8
DPC Dobruska-Polom 52.80 328 *e*P P 05 35 39.4 -0.4
DPC *e*pP pwP 05 35 45.8 -0.9
BIOA Bad Ischl, Aus 52.82 324 *i* P P 05 35 39.6 -0.4
comp=Z,9.1nm,0.8s
ZCCA Zocca 52.86 319 P P 05 35 40.9 +0.5
OSTC Ostas 52.97 328 *e*P P 05 35 40.5 -0.5
OSTC *e* 05 35 47.2
OSTC Ostas 52.97 328 *e*P P 05 35 40.5 -0.5
OSTC *e*pP pwP 05 35 47.2 -0.8
ABTA Abfaltersbach 53.02 322 *e*P P 05 35 40.6 -0.9
comp=Z,6.4nm,0.9s
UPC Upice 53.05 328 *e*P P 05 35 43.0 +1.4
UPC Upice 53.05 328 *e*P P 05 35 43.0 +1.4
CHVC Chvalec 53.07 328 *e*P P 05 35 41.2 -0.6
CHVC Chvalec 53.07 328 *e*P P 05 35 41.2 -0.6
KSP Ksiaz 53.10 328 *e*P P 05 35 42.7 +0.8
LESA Schwarzleotal 53.25 323 *i* P P 05 35 42.1 -1.1
comp=Z,8.5nm,0.8s,SNR=6.6
GEC2 GERESS Array S 53.39 325 P P 05 35 43.6 -0.6
GERES GERESS Array B 53.39 325 P P 05 35 42.3 -1.9
comp=Z,1.4nm,0.7s,baz=120,slow=5.4,SNR=10
GERES LR LR 05 59 37.0
comp=Z,236nm,19.2s,baz=115,slow=37
comp=Z,1.4nm,0.7s
ZVC Zvikov 53.43 326 *e*P P 05 35 43.2 -1.2
ZVC *e*pP pwP 05 35 50.2 -1.1
PRMA PARMA 53.47 319 P P 05 35 44.0 -0.7
PRU Pruhonice 53.54 327 AMS AMS 06 04 20.0
comp=Z,900nm,15.6s
KHC Kasperske Hory 53.61 325 P P 05 35 45.1 -0.7
KHC Kasperske Hory 53.61 325*ce*P P 05 35 46.0 +0.2
KHC pmax pmax
comp=Z,15nm,1.0s
KHC Kasperske Hory 53.61 325 *e*P P 05 35 45.2 -0.6
KHC *e*pP sP 05 35 49.5 +0.9
PRA Prague 53.64 327 AMS AMS 06 04 30.0
comp=Z,800nm,16.4s
WTTA Wattenberg 53.79 323 *i* P P 05 35 46.3 -1.0
comp=Z,16nm,0.9s
WATA Walderalm 53.86 323 *e*P P 05 35 47.0 -0.8
comp=Z,12nm,0.8s
KPJI Karang Pucung 53.91 107 P P 05 35 48.8 +0.3
comp=Z,2μmcomp=Z,41nm,1.6s
SQTA Sankt Quirin 54.02 322 *i* P P 05 35 47.9 -1.1
comp=Z,9.5nm,0.6s
MOTA Moosalm 54.15 323 *e*P P 05 35 48.5 -1.4
comp=Z,18nm,1.0s,SNR=11
FETA Feichten 54.22 322 *e*P P 05 35 49.7 -0.8
comp=Z,12nm,0.9s,SNR=7.3
DAVOX Davos/Dischmat 54.63 321 P P 05 35 52.0 -1.4
comp=Z,15nm,0.9s,baz=134,slow=6.6,SNR=16
DAVOX LR LR 06 01 15.6
comp=Z,348nm,20.7s,baz=95,slow=38
comp=Z,15nm,0.9s
MOY Mondy 54.68 32 *e*P P 05 35 56.2 +2.6
MOY pmax pmax
comp=Z,60nm,2.1s
SUR Sutherland 54.70 218 P P 05 35 55.4 +1.3
SBUM Sibu 54.77 94 P P 05 35 54.3 -0.4
SBUM IAmb IAmb 05 36 03.9
comp=Z,57nm,1.8s
TORD Torodi Ar. Bea 54.77 279 P P 05 35 53.5 -1.3
comp=Z,12nm,0.8s,baz=74,slow=9.0,SNR=6.6
comp=Z,12nm,0.8s
TORD Torodi Ar. Bea 54.77 279 P P 05 35 54.9 +0.1
TORD IAmb IAmb 05 36 03.7
comp=Z,46nm,1.8s
DAVA Damuels 54.86 322 *i* P P 05 35 54.0 -1.1
comp=Z,8.4nm,0.7s
CLL Collm 55.08 328 *i* P P 05 35 57.1 +0.7
CLL *e*S S 05 43 44.0 +5.0
CLL pmax pmax
comp=Z,56nm,1.7s
CLL MLR MLR
comp=Z,500nm,21.5s
CLL Collm 55.08 328 *i* P P 05 35 57.1 +0.7
comp=Z,56nm,1.7s
CLL *i* x x 05 36 02.5
CLL *e*PP PP 05 38 06.0 +6.4
CLL *e*S S 05 43 44.0 +5.0
CLL AMS AMS 06 03 00.0
comp=Z,500nm,21.5s
ZAK Zakamensk 55.21 34 *e*P P 05 35 58.0 +0.5
ZAK pmax pmax
comp=Z,25nm,2.0s
BTO Baotou 55.46 47 *e*P P 05 35 59.0 -0.4
BTO sP pwP 05 36 06.0 +1.0
BTO PP PP 05 38 04.3 +0.9
BTO S S 05 43 44.0 -0.7
BTO pmax pmax
comp=Z,19nm,0.6s
BTO pmax pmax
comp=Z,860nm,4.2s
BTO LR LR
comp=Z,2μm,14.0s
BTO LR LR
comp=Z,4μm,16.9s
BTO LR LR
comp=Z,6μm,18.6s
HKPS Hong Kong Po S 55.48 70 IAMs_20 IAMs_20 06 02 46.2
comp=Z,1μm,20.0s
LYN LuoYang 55.71 55 P P 05 36 02.4 +1.1
LYN S S 05 43 47.8 -0.3
LYN SS SS 05 47 40.6 +7.1
LYN pmax pmax
comp=Z,13nm,0.8s
LYN pmax pmax
comp=Z,350nm,5.4s
LYN LR LR
comp=Z,1μm,11.3s
LYN LR LR
comp=Z,750nm,15.5s
LYN LR LR
comp=Z,2μm,22.0s
SONM Songino Array 55.79 38 P P 05 36 01.4 -0.4
comp=Z,11nm,1.1s,baz=236,slow=7.8,SNR=17
SONM LR LR 06 01 42.0
comp=Z,1μm,19.4s,baz=260,slow=38
comp=Z,11nm,1.1s
SONM Songino Array 55.79 38 P 05 36 01.5 -0.3
SONM IAmb IAmb 05 36 15.9
comp=Z,30nm,1.3s
SONM Songino Array 55.79 38 P P 05 36 01.5 -0.3
SONM pmax pmax
comp=Z,30nm,1.3s
SENIN Lac Senin/Sane 56.06 320 IAmb IAmb 05 36 12.7
comp=Z,18nm,0.7s
TLY Talaya 56.08 33 P P 05 36 02.6 -1.0
TLY Talaya 56.08 33 *i* P P 05 36 03.7 +0.1
TLY pmax pmax
comp=Z,42nm,1.9s
ULN Ulaanbaatar 56.20 38 P P 05 36 03.9 -0.8
ULN Ulaanbaatar 56.20 38 IAMs_20 IAMs_20 06 03 03.4
comp=Z,1μm,19.0s
ULN Ulaanbaatar 56.20 38*ce*P P 05 36 05.0 +0.3
ULN pmax pmax
comp=Z,24nm,1.7s
CRZF Crozet Islands 56.21 185 IAMs_20 IAMs_20 05 53 29.8
comp=Z,2μm,20.0s
BFO Black Forest 56.26 323 P P 05 36 04.6 -0.4
BFO IAmb IAmb 05 36 12.2
comp=Z,37nm,1.2s
BFO Black Forest 56.26 323 P P 05 36 04.6 -0.4
BFO pmax pmax
comp=Z,37nm,1.2s
TIY Taiyuan 56.43 51 *e*P P 05 36 08.3 +1.8
TIY S S 05 43 54.8 -2.9
TIY pmax pmax
comp=Z,30nm,0.5s
TIY pmax pmax
comp=Z,380nm,3.5s
TIY LR LR
comp=Z,1μm,20.6s
TIY LR LR
comp=Z,2μm,19.2s
TIY LR LR
comp=Z,2μm,20.6s
FINES FINESS Array B 56.48 342 P P 05 36 04.3 -1.9
comp=Z,6.6nm,0.9s,baz=131,slow=8.6,SNR=8.8
FINES LR LR 06 03 01.7
comp=Z,1μm,21.6s,baz=138,slow=39
comp=Z,6.6nm,0.9s
FINES FINESS Array B 56.48 342 P P 05 36 04.5 -1.8
FINES FINESS Array B 56.48 342 *i* P P 05 36 05.0 -1.2
FINES pmax pmax
comp=Z,7.0nm,0.9s
WHN Wuhan 56.54 60 P P 05 36 06.5 -0.7
HHC Hu-ho-hao-te 56.65 47 *e*P P 05 36 09.9 +1.9
HHC pP pwP 05 36 16.0 +2.5
HHC S S 05 43 59.6 -1.0
HHC sS sS 05 44 11.4 +7.9
HHC SS SS 05 47 54.3 +6.1
HHC pmax pmax
comp=Z,27nm,1.5s
HHC pmax pmax
comp=Z,300nm,5.7s
HHC LR LR
comp=Z,2μm,17.7s
HHC LR LR
comp=Z,2μm,16.8s
HHC LR LR
comp=Z,4μm,17.7s
HNS HongShan 58.11 52 ⇓P P 05 36 18.3 +0.1
HNS S S 05 44 25.3 +5.6
HNS pmax pmax
comp=Z,22nm,1.8s
HNS LR LR
comp=Z,930nm,19.0s
HNS LR LR
comp=Z,2μm,21.3s
HNS LR LR
comp=Z,2μm,22.1s
WLF Walferdange 58.13 323 IAmb IAmb 05 36 25.9
comp=Z,54nm,1.1s
WLF Walferdange 58.13 323 *d*P P 05 36 17.5 -0.7
comp=Z,25nm,1.2s
BHOU Houvegnez 58.51 324 *d*P P 05 36 20.0 -0.8
comp=Z,11nm,1.2s
BTNL Ternell 58.53 324 *d*P P 05 36 21.8 +0.8
comp=Z,10.0nm,1.3s
MEM Membach 58.61 324 *d*P P 05 36 19.0 -2.4
RCHB Rochefort 58.88 323 *d*P P 05 36 23.4 +0.1
comp=Z,18nm,0.9s
BGES Gesves 59.05 324 *d*P P 05 36 24.9 +0.3
BMRD Maredsous 59.21 324 *dx* x 05 36 30.8
DOU Dourbes 59.23 323 *d*P P 05 36 24.4 -1.3
UCC Uccle 59.65 324 IAmb IAmb 05 36 36.1
comp=Z,22nm,0.8s
UCC Uccle 59.65 324 *d*P P 05 36 26.9 -1.7
comp=Z,21nm,1.0s
TIA Tai'an 59.77 54 P P 05 36 28.8 -1.0
TIA S S 05 44 37.3 -4.0
TIA pmax pmax
comp=Z,20nm,1.2s
TIA LR LR
comp=Z,930nm,23.5s
TIA LR LR
comp=Z,950nm,17.7s
TIA LR LR
comp=Z,1μm,20.1s
BJT Baijiatuau 59.82 49 P P 05 36 29.1 -1.0
BJT IAmb IAmb 05 36 37.7

comp=Z,22nm,0.9s
BJT Baijiatuau 59.82 49 IAMs_20 IAMs_20 06 02 13.7
comp=Z,1μm,20.0s
BJT Baijiatuau 59.82 49 P **P** **05 36 29.1 -1.0**
BJT pmax pmax
comp=Z,22nm,0.9s
BJT MLR MLR
comp=Z,1μm,20.0s
BJI Beijing 59.83 49 P **P** **05 36 29.6 -0.5**
BJI pP **sP** **05 36 34.6 +1.6**
BJI sP **pwP** **05 36 36.9 +1.2**
BJI S **S** **05 44 40.3 -1.5**
BJI pmax pmax
comp=Z,10.0nm,1.1s
BJI pmax pmax
comp=Z,180nm,4.3s
BJI LR LR
comp=Z,870nm,14.8s
BJI LR LR
comp=Z,590nm,16.3s
BJI LR LR
comp=Z,1μm,17.2s
HFS Hagfors 59.86 336 P **P** **05 36 28.5 -1.4**
comp=Z,6.2nm,0.8s,baz=120,slow=5.3,SNR=7.3
HFS LR LR 06 04 45.5
comp=Z,2μm,20.9s,baz=126,slow=38
comp=Z,6.2nm,0.8s
APA Apatity 59.91 350 *e*P **P** **05 36 30.3 +0.2**
APA *e* 05 37 18.1
APA *e* 05 38 49.3
APA MLR MLR
comp=Z,900nm,18.9s
LVZ Lovozero 59.99 350 IAMs_20 IAMs_20 06 04 56.3
comp=Z,2μm,20.0s
NJ2 Nanjing 60.56 59 *e*P **P** **05 36 35.4 +0.1**
NJ2 S **S** **05 44 55.3 +3.8**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=Z,680nm,18.0s
NJ2 LR LR
comp=Z,750nm,20.8s
NJ2 LR LR
comp=Z,1μm,18.9s
XLT XiLinHaoTe 60.72 45 *e*P **P** **05 36 37.0 +0.7**
XLT sP pwP 05 36 44.0 +2.1
XLT S **S** **05 44 56.5 +3.1**
XLT SS **SS** **05 48 59.0 +6.9**
XLT pmax pmax
comp=Z,18nm,1.8s
XLT pmax pmax
comp=Z,310nm,5.4s
XLT LR LR
comp=Z,2μm,19.1s
XLT LR LR
comp=Z,2μm,19.6s
NB2 NORSAR Subarra 61.39 336 P **P** **05 36 38.7 -1.7**
comp=Z,17nm,1.4s,baz=126,slow=6.9
NOA NORSAR Array B 61.39 336 P **P** **05 36 38.9 -1.5**
comp=Z,2.3nm,0.9s,baz=118,slow=7.5,SNR=7.3
NOA LR LR 06 05 42.3
comp=Z,2μm,20.5s,baz=120,slow=38
comp=Z,2.3nm,0.9s
MDT Midelt 61.40 302 LR LR 06 04 07.7
comp=Z,492nm,18.2s,baz=100,slow=37
MD31 MD31 61.54 302 **P** **05 36 41.5 -0.5**
MD31 IAmb IAmb 05 36 50.9
comp=Z,19nm,1.1s
CIT Chita 61.72 36 *e*P **P** **05 36 44.6 +1.8**
CIT *e* 05 36 55.0
CIT *e* 05 37 26.4
CIT *e* 05 38 54.6
CIT pmax pmax
comp=Z,112nm,2.5s
DBIC Dimbokro 61.79 272 P **P** **05 36 41.6 -2.2**
comp=Z,16nm,0.8s,baz=112,slow=5.4,SNR=16
DBIC LR LR 06 03 39.1
comp=Z,441nm,19.0s,baz=106,slow=36
comp=Z,16nm,0.8s
DBIC Dimbokro 61.79 272 **P** **05 36 43.5 -0.4**
DBIC IAmb IAmb 05 36 55.4
comp=Z,29nm,1.0s
DBIC Dimbokro 61.79 272 P **P** **05 36 43.5 -0.4**
DBIC pmax pmax
comp=Z,29nm,1.0s
ESBB Sonseca Array 61.95 310 IAmb IAmb 05 36 53.3
comp=Z,25nm,0.8s
ESDC Sonseca Array 61.95 310 P **P** **05 36 44.7 0.0**
comp=Z,16nm,0.8s,baz=103,slow=6.0,SNR=46
comp=Z,16nm,0.8s
ESDC Sonseca Array 61.95 310 **P** **05 36 44.0 -0.7**
ESDC IAmb IAmb 05 36 51.7
comp=Z,28nm,1.2s
TGY Tagaytay City 61.99 79 LR LR 06 01 06.2
comp=Z,570nm,21.9s,baz=280,slow=34
PAB San Pablo 62.22 310 P **P** **05 36 46.1 -0.3**
PAB San Pablo 62.22 310 P **P** **05 36 46.2 -0.3**
PAB pmax pmax
comp=Z,46nm,1.2s
NRIK Noril'sk 62.54 12 P **P** **05 36 47.1 -0.9**
comp=Z,18nm,0.9s,baz=208,slow=6.7,SNR=18
NRIK LR LR 06 07 17.2
comp=Z,1μm,19.6s,baz=210,slow=39
comp=Z,18nm,0.9s
NRIK Noril'sk 62.54 12 **P** **05 36 47.1 -0.9**
NRIK IAmb IAmb 05 36 51.6
comp=Z,24nm,1.0s
NRIK Noril'sk 62.54 12*ce*P **P** **05 36 47.7 -0.2**
NRIK pmax pmax
comp=Z,26nm,1.0s
MPSI Mapaga 62.70 95 P P 05 36 57.5 +7.5
ARCES ARCESS Array B 63.12 348 P **P** **05 36 49.5 -2.3**
comp=Z,6.6nm,0.9s,baz=116,slow=2.8,SNR=7.4
ARCES LR LR 06 07 34.5
comp=Z,809nm,20.1s,baz=134,slow=39
comp=Z,6.6nm,0.9s
ARCES ARCESS Array B 63.12 348 P **P** **05 36 50.1 -1.7**
ARCES ARCESS Array B 63.12 348 P **P** **05 36 50.1 -1.7**
ARCES pmax pmax
comp=Z,91nm,1.9s
KAPI Kappang 63.67 101 LR LR 06 01 26.6
comp=Z,456nm,21.7s,baz=266,slow=33
KAPI Kappang 63.67 101 *i* P **P** **05 36 55.7 -0.7**
KAPI pmax pmax
comp=Z,48nm,1.3s
DL2 Dalian 63.75 51 P **P** **05 36 59.1 +2.5**
DL2 S **S** **05 45 35.3 +3.7**
DL2 pmax pmax
comp=Z,75nm,1.3s
DL2 pmax pmax
comp=Z,470nm,6.0s
DL2 LR LR
comp=Z,840nm,16.4s
DL2 LR LR
comp=Z,1μm,16.0s
DL2 LR LR
comp=Z,2μm,24.2s
BNSI Bone 63.88 100 P **P** **05 36 55.8 -2.0**
comp=Z,61nm,2.1s
PBAR Barrancos 64.07 308 *e*P **P** **05 36 59.3 +0.6**
PBAR *i* IAmb IAmb 05 37 08.5
comp=Z,36nm,2.1s
BKSI Bulukumba 64.10 101 P **P** **05 36 56.5 -2.8**
comp=Z,632nmcomp=Z,15nm,1.8s
BOD Bodaibo 64.24 30 *e*P **P** **05 36 58.2 -1.2**
BOD pmax pmax
comp=Z,27nm,1.6s
PBRG Braganca 64.42 312 *e*P **P** **05 37 01.4 +0.4**
MVO Moncorvo 64.52 311 *e*P **P** **05 37 04.7 +3.0**
HIA Hailar 64.58 40 P **P** **05 37 00.6 -1.3**
HIA Hailar 64.58 40 IAMs_20 IAMs_20 06 06 40.2
comp=Z,1μm,21.0s
HIA Hailar 64.58 40 P **P** **05 37 00.6 -1.3**
HIA pmax pmax
comp=Z,66nm,1.6s
HIA MLR MLR
comp=Z,1μm,21.0s
HILR Hailar Array B 64.66 40 P **P** **05 36 59.7 -2.7**
comp=Z,7.9nm,0.7s,baz=252,slow=7.4,SNR=11
HILR LR LR 06 07 03.8
comp=Z,815nm,19.3s,baz=60,slow=38
comp=Z,7.9nm,0.7s
MRSI Marisa 64.68 94 P **P** **05 37 00.3 -2.8**
comp=Z,27nm,0.8s
PBEJ Beja 64.70 307 *e*P **P** **05 37 05.4 +2.6**
EVO Evora 64.88 308 *e*P **P** **05 37 06.4 +2.4**
EVO *i* IAmb IAmb 05 37 15.9
comp=Z,51nm,2.1s
PARRA Arraiolos 64.94 308 *e*P P 05 37 04.7 -4.7
PARRA *i* IAmb IAmb 05 37 12.8
comp=Z,43nm,2.2s
POLO Lamas de Olo 65.13 311 *e*P **P** **05 37 06.6 +1.0**
PSARD Sardoal 65.14 309 *e*P **P** **05 37 08.3 +2.6**
EKA Eskdalemuir Ar 65.53 327 P **P** **05 37 05.8 -2.0**
comp=Z,3.6nm,0.7s,baz=104,slow=7.0,SNR=6.2
comp=Z,3.6nm,0.7s
SNY Shenyang 65.67 49 ⇑P **P** **05 37 08.6 -0.4**
SNY S **S** **05 45 50.3 -4.9**
SNY pmax pmax
comp=Z,13nm,1.0s
SNY pmax pmax
comp=Z,170nm,5.7s
SNY LR LR
comp=Z,580nm,21.8s
SNY LR LR
comp=Z,890nm,17.5s
SNY LR LR
comp=Z,1μm,21.3s
EDFI Ende, Flores 66.44 104 P **P** **05 37 11.5 -3.1**
comp=Z,612nmcomp=Z,12nm,1.4s
CN2 Changchun 67.33 47 P **P** **05 37 19.0 -0.6**
CN2 pmax pmax
comp=Z,20nm,1.8s
CN2 pmax pmax
comp=Z,290nm,5.0s
CN2 LR LR
comp=Z,1μm,20.0s
CN2 LR LR
comp=Z,2μm,20.0s
CN2 LR LR
comp=Z,2μm,21.0s
MORW Morawa 68.32 127 P **P** **05 37 26.0 -0.1**
comp=Z,26nm,2.2s
MBWA Marble Bar 68.35 117 P **P** **05 37 27.7 +1.3**
comp=Z,20nm,2.7s
JOW Kunigami 68.47 65 LR LR 06 09 51.6
comp=Z,429nm,18.6s,baz=318,slow=38
KSAR Wonju Array Be 68.49 54 P **P** **05 37 25.0 -2.0**
KSAR Wonju Array Be 68.49 54 P **P** **05 37 25.0 -2.0**
KSRS Korea Array 68.52 54 P **P** **05 37 26.4 -0.9**
comp=Z,4.6nm,0.7s,baz=265,slow=7.4,SNR=9.9
comp=Z,4.6nm,0.7s
PSAB1 Pilbara Seismi 68.58 118 P **P** **05 37 28.1 +0.3**
PSAA1 Pilbara Seismi 68.59 118 P **P** **05 37 28.9 +1.0**
comp=Z,23nm,1.3s
BATI Baumata 68.69 105 LR LR 06 08 04.6
comp=Z,173nm,18.3s,baz=268,slow=36
BNX BinXian 68.98 45 ⇑P **P** **05 37 28.8 -1.1**
BNX pmax pmax
comp=Z,15nm,2.0s
SANI Sanana 69.13 96 P **P** **05 37 31.9 +0.5**
comp=Z,21nm,1.4s
SOEI Soe 69.16 104 **P** **05 37 30.9 -0.9**
SOEI Soe 69.16 104 P **P** **05 37 30.2 -1.5**
MEEK Meekatharra 69.41 123 P **P** **05 37 33.7 +0.7**
comp=Z,19nm,2.0s
BLDU Ballidu 69.51 128 P **P** **05 37 33.6 +0.1**
comp=Z,13nm,0.9s
H01W3 Cape Leeuwin H 69.51 133 T T 06 53 18.6
baz=300,slow=75,SNR=18
H01W2 Cape Leeuwin H 69.51 133 T T 06 53 14.3
baz=300,slow=75,SNR=17
H01W1 Cape Leeuwin H 69.52 133 T T 06 53 15.3
baz=300,slow=75,SNR=20
HEH HeiHe 69.65 40 *e*P **P** **05 37 32.8 -1.2**
HEH pP **pP** **05 37 35.4 -0.7**
HEH S **S** **05 46 43.8 +1.2**
HEH pmax pmax
comp=Z,31nm,0.8s
HEH pmax pmax
comp=Z,460nm,4.2s
HEH LR LR
comp=N,1μm,19.7s
HEH LR LR
comp=E,680nm,19.0s
HEH LR LR
comp=Z,1μm,23.9s
ZEA Zeya 70.16 36 *e*P **P** **05 37 37.2 +0.1**
ZEA *e*S **S** **05 46 51.4 +2.9**
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA smax smax
comp=E,300nm,12.7s
ZEA MLR MLR
comp=E,300nm,19.0s
ZEA MLR MLR
comp=Z,600nm,19.0s
MDJ Mudanjiang 70.39 46 IAMs_20 IAMs_20 06 08 53.1
comp=Z,1μm,21.0s
KLBR Kellerberrin 70.73 128 P **P** **05 37 40.8 -0.1**
comp=Z,26nm,0.8s
JNU Nakatsue 70.76 58 LR LR 06 10 39.8
comp=Z,249nm,18.0s,baz=273,slow=38
JNU Nakatsue 70.76 58 **P** **05 37 39.9 -1.3**
NWAO Narrogin (SRO) 70.91 130 P **P** **05 37 42.3 +0.3**
comp=Z,20nm,0.8s
NWAO Narrogin (SRO) 70.91 130 LR LR 06 02 20.3
comp=Z,596nm,20.7s,baz=284,slow=30
SPB2 Spitsbergen Ar 71.42 352 P **P** **05 37 45.2 +0.9**
SPITS Spitsbergen Ar 71.43 352 P **P** **05 37 43.5 -0.9**
comp=Z,23nm,0.9s,baz=127,slow=9.5,SNR=8.3
SPITS LR LR 06 12 31.2
comp=Z,674nm,21.4s,baz=123,slow=39
comp=Z,23nm,0.9s
RKGY Rocky Gully 71.45 132 P **P** **05 37 46.6 +1.3**
comp=Z,42nm,2.2s
USRK Ussuriysk Ar. 72.06 47 P **P** **05 37 47.9 -0.9**
comp=Z,2.8nm,0.7s,baz=248,slow=10.0,SNR=3.3
comp=Z,2.8nm,0.7s
BBTS Babate 72.31 282 LR LR 06 09 08.8
comp=Z,387nm,18.7s,baz=80,slow=36
KBS Kingsbay 72.59 352 P **P** **05 37 51.2 -0.1**
KBS IAmb IAmb 05 37 57.6
comp=Z,37nm,1.1s
KBS Kingsbay 72.59 352 P **P** **05 37 51.2 -0.1**
KBS pmax pmax
comp=Z,37nm,1.1s
KBS Kingsbay 72.59 352 *i* P **P** **05 37 50.7 -0.6**
FITZ Fitzroy Crossi 72.67 112 LR LR 06 04 52.4
comp=Z,250nm,20.6s,baz=314,slow=32
FITZ Fitzroy Crossi 72.67 112 **P** **05 37 52.7 -0.1**
MBO M'Bour 72.75 282 P **P** **05 37 53.5 +0.1**
YAK Yakutsk 73.03 28 P **P** **05 37 52.6 -1.6**
comp=Z,54nm,0.7s,baz=310,slow=1.2,SNR=9.6
YAK LR LR 06 11 43.1
comp=Z,687nm,18.8s,baz=256,slow=37
comp=Z,54nm,0.7s
YAK Yakutsk 73.03 28 P **P** **05 37 52.2 -1.9**
YAK Yakutsk 73.03 28 IAMs_20 IAMs_20 06 11 25.8
comp=Z,868nm,19.0s
YAK Yakutsk 73.03 28 *e*P **P** **05 37 52.5 -1.6**
YAK *e**PP **PcP** **05 38 16.2 +5.2**
YAK *e* 05 40 38.3
YAK *e*PPP PPP 05 42 24.4
YAK *e*S S 05 47 11.6 -10
YAK *e**SS **SKSac** **05 47 55.0 -4.9**
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=Z,328nm,4.3s
YAK pmax pmax
comp=N,197nm,4.0s
YAK smax smax
comp=E,148nm,3.3s
YAK smax smax
comp=N,366nm,4.0s
YAK MLR MLR
comp=Z,634nm,17.0s
YAK MLR MLR
comp=N,333nm,19.0s
YAK MLR MLR
comp=E,509nm,17.0s
JMIC Jan Mayen 73.09 342 LR LR 06 11 33.1
comp=E,533nm,21.9s,baz=56,slow=37
KNRA Kununurra 74.89 109 P **P** **05 38 06.3 +0.4**
comp=Z,14nm,1.6s
TIXI Tiksi 74.89 18 LR LR 06 12 52.7
comp=Z,2μm,21.7s,baz=272,slow=37
TIXI Tiksi 74.89 18 **P** **05 38 03.4 -1.6**
TIXI IAmb IAmb 05 38 22.8
comp=Z,42nm,1.4s
TIXI Tiksi 74.89 18*ce*P **P** **05 38 03.0 -1.9**
TIXI pmax pmax
comp=Z,36nm,2.5s
MTN Manton Dam 76.43 106 P **P** **05 38 16.4 +1.6**
comp=Z,9.6nm,1.6s
BORG Borgarnes 76.45 334 LR LR 06 14 29.9
comp=Z,614nm,21.2s,baz=100,slow=38
MJAR Matsushiro Arr 76.74 55 P **P** **05 38 15.1 -1.2**
comp=Z,5.6nm,0.7s,baz=277,slow=4.6,SNR=10
MJAR LR LR 06 14 24.9
comp=Z,619nm,19.5s,baz=266,slow=38
comp=Z,5.6nm,0.7s
MJAR Matsushiro Arr 76.74 55 **P** **05 38 15.5 -0.7**
MJAR IAmb IAmb 05 38 23.3
comp=Z,54nm,1.9s
MJAR Matsushiro Arr 76.74 55 P **P** **05 38 15.5 -0.7**
MJAR pmax pmax
comp=Z,54nm,1.9s
WRKA Warakurna 77.06 119 P **P** **05 38 17.8 -0.5**
comp=Z,12nm,1.0s
MAW Mawson 77.31 178 P **P** **05 38 17.1 -1.5**
comp=Z,5.5nm,0.7s,baz=360,slow=7.0,SNR=12
MAW LR LR 06 05 29.2
comp=Z,996nm,19.1s,baz=348,slow=30
comp=Z,5.5nm,0.7s
SCO Scoresbysund 77.31 340 *i* P **P** **05 38 18.3 -0.4**
SCO IAmb IAmb 05 38 27.1
comp=Z,32nm,1.3s
DBG Daneborg 77.32 344 *i* P **P** **05 38 19.5 +0.8**
DBG IAmb IAmb 05 38 26.9
comp=Z,23nm,1.0s
DAG Danmarks Havn 77.37 347 *i* P **P** **05 38 18.0 -0.9**
DAG IAmb IAmb 05 38 26.1
comp=Z,53nm,1.1s
KDU Kakadu 77.67 105 P **P** **05 38 21.0 -0.8**
comp=Z,8.6nm,1.8s
NOR Nord 78.07 352 *i* P **P** **05 38 22.2 -0.6**
NOR IAmb IAmb 05 38 30.1
comp=Z,16nm,1.1s
JHJ Hachijo jima 2 78.22 58 LR LR 06 15 10.9
comp=Z,575nm,19.0s,baz=136,slow=37
FORT Forrest 78.63 124 P **P** **05 38 26.5 -0.3**
comp=Z,12nm,0.8s
FORT Forrest 78.63 124 P **P** **05 38 27.2 +0.5**
YSS Yuzhno-Sakhali 79.63 44 *i* P **P** **05 38 32.0 0.0**
YSS pmax pmax
comp=Z,105nm,1.5s
SYO Syowa Base 79.63 186 ⇑*i*P **P** **05 38 34.0 +2.6**
SYO Syowa Base 79.63 186 ‖ *i*pP pP 05 38 35.4 +1.9
SYO Syowa Base 79.63 186 ‖ *es*P sP 05 38 38.2 +4.0
ASAJ Asahikawa 79.69 47 LR LR 06 16 04.5
comp=Z,686nm,18.5s,baz=332,slow=37
JCJ Chichijima 80.84 64 LR LR 06 15 26.0
comp=Z,210nm,19.5s,baz=240,slow=36
WRA Warramunga Arr 81.09 112 P **P** **05 38 39.3 -1.1**
comp=Z,6.3nm,0.9s,baz=297,slow=4.2,SNR=20
comp=Z,6.3nm,0.9s
WRA Warramunga Arr 81.09 112 P **P** **05 38 39.4 -1.0**
WB0 Warramunga Arr 81.10 112 IAmb IAmb 05 38 48.4
comp=Z,32nm,1.4s
WRAB Tennant Creek 81.10 112 P **P** **05 38 39.8 -0.6**
WRAB IAmb IAmb 05 38 53.5
comp=Z,38nm,1.2s
WRAB Tennant Creek 81.10 112 *i* P **P** **05 38 38.9 -1.5**
WRAB pmax pmax
comp=Z,36nm,1.3s
WR8 Warramunga Arr 81.24 112 IAmb IAmb 05 38 49.2
comp=Z,46nm,1.6s
ASAR Alice Springs 81.61 116 P **P** **05 38 42.0 -1.1**
comp=Z,6.5nm,0.8s,baz=288,slow=4.6,SNR=12
ASAR LR LR 06 12 41.0
comp=Z,218nm,18.4s,baz=288,slow=34
comp=Z,6.5nm,0.8s
ASAR Alice Springs 81.61 116 **P** **05 38 41.9 -1.2**
ASAR Alice Springs 81.61 116 P **P** **05 38 41.9 -1.2**
SUMG Summit 82.52 342 P **P** **05 38 46.7 -0.7**
SUMG Summit 82.52 342 P **P** **05 38 46.7 -0.7**
SUMG pmax pmax
comp=Z,49nm,1.2s
SUMG Summit 82.52 342 *i* P **P** **05 38 47.0 -0.4**
SUMG IAmb IAmb 05 38 56.1
comp=Z,46nm,1.2s
MA2 Magadan 83.24 31 P **P** **05 38 50.7 -0.2**
comp=Z,13nm,0.7s,baz=217,slow=18,SNR=3.9
MA2 LR LR 06 19 45.0
comp=Z,626nm,18.0s,baz=292,slow=38
comp=Z,13nm,0.7s
MA2 Magadan 83.24 31 P **P** **05 38 50.5 -0.4**
MA2 Magadan 83.24 31 P **P** **05 38 50.5 -0.4**
MA2 pmax pmax
comp=Z,236nm,2.0s
SEY Seymchan 83.53 27 P **P** **05 38 51.8 -0.6**
comp=Z,6.7nm,0.7s,baz=236,slow=5.2,SNR=8.6
SEY LR LR 06 18 18.2
comp=Z,1μm,20.1s,baz=281,slow=37
comp=Z,6.7nm,0.7s
SEY Seymchan 83.53 27 *i* P **P** **05 38 52.0 -0.3**
SEY pmax pmax
comp=Z,33nm,1.3s
JAY Jayapura 83.67 94 LR LR 06 12 57.4
comp=Z,54nm,21.8s,baz=335,slow=33
NEEM North Greenlan 84.48 348 *i* P **P** **05 38 57.3 0.0**
NEEM IAmb IAmb 05 39 00.8
comp=Z,41nm,0.9s
CASY Casey 85.10 161 IAMs_20 IAMs_20 06 09 06.1
comp=Z,640nm,20.0s
GUMO Guam 85.14 77 LR LR 06 12 13.9
comp=Z,177nm,21.3s,baz=278,slow=32
BILL Bilibino 87.83 21 *i* P **P** **05 39 13.7 +0.1**
BILL pmax pmax
comp=Z,23nm,1.3s
SFJD Kangerlussuaq 88.01 338 LR LR 06 20 14.3
comp=Z,660nm,21.8s,baz=50,slow=37
PETK Petropavlovsk- 88.25 36 LR LR 06 21 30.0
comp=Z,834nm,20.1s,baz=282,slow=38
TULEG Thule 88.42 349 *i* P **P** **05 39 15.1 -1.1**
TULEG IAmb IAmb 05 39 18.7
comp=Z,30nm,0.9s
INKA Innaminka 88.54 118 IAmb IAmb 05 39 26.7
comp=Z,24nm,1.4s
STKA Stephens Creek 90.09 122 P **P** **05 39 22.9 -2.0**
comp=Z,2.3nm,0.8s,baz=256,slow=9.9,SNR=3.8
STKA LR LR 06 16 27.8
comp=Z,795nm,18.5s,baz=251,slow=33
comp=Z,2.3nm,0.8s
STKA Stephens Creek 90.09 122 P **P** **05 39 23.0 -2.0**
SNAA Sanae 90.38 196 P **P** **05 39 26.0 +0.6**
SNAA Sanae 90.38 196 P **P** **05 39 25.2 -0.2**
comp=Z,1.8nm,1.0s,baz=38,slow=7.6,SNR=3.8
SNAA LR LR 06 13 21.3
comp=Z,458nm,19.5s,baz=12,slow=31
comp=Z,1.8nm,1.0s
SNAA Sanae 90.38 196 **P** **05 39 26.1 +0.6**
SNAA IAmb IAmb 05 39 35.5
comp=Z,25nm,1.7s
SNAA IAMs_20 IAMs_20 06 13 09.2
comp=Z,487nm,19.0s
SNAA Sanae 90.38 196 *i* P **P** **05 39 24.3 -1.1**
SNAA pmax pmax
comp=Z,16nm,1.7s
PMG Port Moresby 91.17 99 LR LR 06 18 32.5
comp=Z,112nm,22.0s,baz=304,slow=34
VNA2 Neumayer--Watz 91.30 197 P **P** **05 39 31.5 +1.8**
baz=44,slow=5.7
VNA1 Neumayer--Stat 91.44 198 P **P** **05 39 32.4 +2.1**
VNA3 Neumayer Olymp 92.11 197 P **P** **05 39 35.5 +2.1**
RES Resolute Bay 93.96 353 LR LR 06 25 54.2
comp=Z,407nm,20.6s,baz=15,slow=38
RCBR Riachuelo 94.38 265 IAMs_20 IAMs_20 06 19 41.5
comp=Z,1μm,21.0s
FRB Frobisher Bay 96.13 339 LR LR 06 27 21.0
comp=Z,294nm,18.3s,baz=62,slow=38
C18K Utukok River 97.12 13 IAMs_20 IAMs_20 06 28 27.0
comp=Z,1μm,21.0s
RDOG Red Dog Mine 97.18 14 IAMs_20 IAMs_20 06 31 21.6
comp=Z,866nm,20.0s
SHEM Shemya Is, Ala 97.67 33 LR LR 06 25 59.7
comp=Z,771nm,21.8s,baz=291,slow=37
D19K Kuna River 97.92 13 IAMs_20 IAMs_20 06 32 23.2
comp=Z,982nm,21.0s
E18K Tukpahlearik C 98.23 14 IAMs_20 IAMs_20 06 31 08.3
comp=Z,768nm,19.0s
E19K Redstone River 98.97 13 IAMs_20 IAMs_20 06 32 55.9
comp=Z,1μm,19.0s
TOLK Toolik Lake Re 99.43 10 IAMs_20 IAMs_20 06 32 00.9
comp=Z,858nm,20.0s

E22K	**Anaktuvuk Pass**	**99.49**	**11**	IAMs_20	IAMs_20	06 30 58.4		
	comp=Z,862nm,20.0s							
QSPA	**South Pole Qui**	**99.74**	**180**	LR	LR	06 19 44.3		
	comp=Z,2μm,19.6s,baz=266,slow=32							
E23K	**Chandalar**	**99.94**	**10**	IAMs_20	IAMs_20	06 29 27.5		
	comp=Z,1μm,21.0s							
G19K	**Purcell Mounta**	**100.09**	**14**	IAMs_20	IAMs_20	06 27 23.5		
	comp=Z,756nm,21.0s							
E24K	**Your Creek**	**100.12**	**10**	IAMs_20	IAMs_20	06 31 53.2		
	comp=Z,850nm,20.0s							
E25K	**Arctic Village**	**100.53**	**9**	IAMs_20	IAMs_20	06 30 30.1		
	comp=Z,747nm,19.0s							
G21K	**Allakaket**	**100.56**	**12**	IAMs_20	IAMs_20	06 30 54.9		
	comp=Z,766nm,21.0s							
H22K	**Ishtalitna Cre**	**101.53**	**12**	IAMs_20	IAMs_20	06 31 15.6		
	comp=Z,1μm,22.0s							
VNDA	**Vanda**	**102.59**	**168**	PKKPbc	PKKPbc	05 56 21.9		-1.8
	comp=Z,0.5nm,0.7s,baz=128,slow=3.0,SNR=3.6							
ILAR	**Eielson Array**	**103.39**	**11**	PP	**PP**	**05 44 38.6**		**-0.8**
	comp=Z,1.7nm,0.9s,baz=342,slow=8.5,SNR=9.0							
SLKM	**Skilak Lake**	**106.52**	**14**	IAMs_20	IAMs_20	06 27 14.4		
	comp=Z,797nm,18.0s							
DLMT	**Dillon**	**124.38**	**352**	IAMs_20	IAMs_20	06 43 57.9		
	comp=Z,603nm,19.0s							
PLCA	**Paso Flores**	**124.91**	**227**	PKP	**PKPdf**	**05 45 23.8**		**-1.4**
	comp=Z,1.0nm,0.7s,baz=180,slow=1.0,SNR=3.4							
CFA	**Coronel Fontan**	**125.47**	**238**	PKP	**PKPdf**	**05 45 26.6**		**+0.2**
	comp=Z,2.8nm,0.8s,baz=83,slow=1.4,SNR=8.6							
PDAR	**Pinedale Array**	**126.37**	**348**	PKhKP	PKPpre	05 45 24.1		
	comp=Z,2.5nm,0.8s,baz=342,slow=3.8,SNR=8.1							
PDAR				PKP	**PKPdf**	**05 45 27.9**		**-0.2**
	comp=Z,2.6nm,0.8s,baz=29,slow=3.4,SNR=5.3							
AF01	**San Pedro de A**	**126.61**	**249**	IAMs_20	IAMs_20	06 36 24.7		
	comp=Z,702nm,22.0s							
BI02	**San Fabin de**	**126.70**	**231**	IAMs_20	IAMs_20	06 48 03.1		
	comp=Z,406nm,18.0s							
MT16	**CCHEN**	**126.96**	**235**	IAMs_20	IAMs_20	06 37 17.3		
	comp=Z,751nm,20.0s							
ML02	**Panimavida**	**127.07**	**232**	IAMs_20	IAMs_20	06 38 12.9		
	comp=Z,680nm,20.0s							
MT05	**Renca**	**127.14**	**235**	IAMs_20	IAMs_20	06 40 09.2		
	comp=Z,658nm,20.0s							
PEL	**Peldehue**	**127.16**	**236**	IAMs_20	IAMs_20	06 37 34.4		
	comp=Z,696nm,20.0s							
MT09	**Talagante**	**127.25**	**235**	IAMs_20	IAMs_20	06 37 16.0		
	comp=Z,635nm,20.0s							
CO01	**Juntas del Tor**	**127.35**	**240**	IAMs_20	IAMs_20	06 39 02.8		
	comp=Z,696nm,20.0s							
MT01	**Popeta**	**127.44**	**235**	IAMs_20	IAMs_20	06 37 21.0		
	comp=Z,690nm,20.0s							
MT02	**Curacav**	**127.50**	**236**	IAMs_20	IAMs_20	06 39 49.6		
	comp=Z,664nm,19.0s							
GO02	**Mina Guanaco**	**127.67**	**246**	IAMs_20	IAMs_20	06 39 20.5		
	comp=Z,602nm,20.0s							
CO03	**El Pedregal**	**127.68**	**239**	IAMs_20	IAMs_20	06 38 37.5		
	comp=Z,685nm,19.0s							
PB08	**IPOC Station P**	**127.71**	**252**	IAMs_20	IAMs_20	06 42 24.8		
	comp=Z,574nm,20.0s							
PB01	**IPOC Station P**	**127.97**	**251**	IAMs_20	IAMs_20	06 37 50.6		
	comp=Z,511nm,20.0s							
LCO	**Las Campanas**	**128.05**	**241**	IAMs_20	IAMs_20	06 36 58.4		
	comp=Z,698nm,21.0s							
TUL3	**Leonard**	**128.05**	**332**		**PKPdf**	**05 45 31.9**		**+0.7**
PB18	**Visviri**	**128.11**	**255**	IAMs_20	IAMs_20	06 36 59.6		
	comp=Z,539nm,22.0s							
PB16	**IPOC Station P**	**128.12**	**254**	IAMs_20	IAMs_20	06 40 24.8		
	comp=Z,686nm,20.0s							
PB11	**IPOC Station P**	**128.20**	**253**		**PKiKP**	**05 45 33.4**		**+0.7**
PB11				IAMs_20	IAMs_20	06 41 24.9		
	comp=Z,531nm,21.0s							
TA01	**Diego Aracena**	**128.65**	**252**	IAMs_20	IAMs_20	06 39 37.7		
	comp=Z,680nm,20.0s							
PB12	**IPOC Station P**	**128.89**	**254**	IAMs_20	IAMs_20	06 39 32.1		
	comp=Z,529nm,19.0s							
AP01	**Chacalluta**	**128.91**	**254**	IAMs_20	IAMs_20	06 38 01.7		
	comp=Z,493nm,20.0s							
ELK	**Elko**	**129.27**	**353**		**PKPdf**	**05 45 32.7**		**-1.0**
ELK	**Elko**	**129.27**	**353**	PKIKP	**PKPdf**	**05 45 32.7**		**-1.0**
NVAR	**Mina Array Bea**	**131.86**	**356**	PKP	**PKPdf**	**05 45 37.0**		**-1.7**
	comp=Z,0.4nm,0.6s,baz=55,slow=0.9,SNR=4.5							
NVAR	**Mina Array Bea**	**131.86**	**356**		**PKiKP**	**05 45 40.8**		**+1.1**
OTAV	**Otavalo**	**135.11**	**280**	IAMs_20	IAMs_20	06 50 14.8		
	comp=Z,452nm,22.0s							
OTAV	**Otavalo**	**135.11**	**280**	*e*P	**PKPdf**	**05 45 46.6**		**+0.9**
NNA	**Nana**	**135.22**	**263**	PKP	**PKPdf**	**05 45 45.5**		**+0.2**
	comp=Z,7.8nm,0.7s,baz=334,slow=4.0,SNR=4.6							
NNA	**Nana**	**135.22**	**263**	IAMs_20	IAMs_20	06 44 46.8		
	comp=Z,518nm,19.0s							
TUC	**Tucson**	**136.67**	**346**		**PKPdf**	**05 45 48.8**		**+1.1**
TUC	**Tucson**	**136.67**	**346**	PKIKP	**PKPdf**	**05 45 48.8**		**+1.1**
TXAR	**Lajitas Array**	**137.09**	**336**	PKhKP	PKPpre	05 45 43.0		
	comp=Z,0.4nm,0.8s,baz=72,slow=4.1,SNR=3.9							
TXAR				PKP	**PKPdf**	**05 45 47.8**		**-0.8**
	comp=Z,1.5nm,0.7s,baz=16,slow=2.0,SNR=18							
HDC	**Heredia**	**137.10**	**296**	IAMs_20	IAMs_20	06 39 21.0		
	comp=Z,324nm,20.0s							
TGUH	**Tegucigalpa,Un**	**137.83**	**304**		**PKPdf**	**05 45 51.0**		**+0.7**
TBI	**Tubuai**	**150.87**	**121**	*e*LR	LR	06 36 22.7		
	comp=Z,2μm,30.8s							
PPT2	**Papeete2**	**152.54**	**109**	*e*SS	SS	06 09 39.2		+2.6
	comp=Z,51nm,26.5s							
PPT2	**Papeete2**	**152.54**	**109**	*e*LR	LR	06 36 59.7		
PPT2	comp=Z,403nm,26.8s			*e*LR	LR	06 37 03.0		
	comp=Z,273nm,27.5s							
RKT	**Rikitea**	**162.13**	**139**	*e*LR	LR	06 41 35.3		
	comp=Z,12μm,39.2s							
TAOE	**Nuku Hiva Isla**	**162.49**	**88**	*e*LR	LR	06 41 43.8		
	comp=Z,466nm,24.1s							

NEIC 14 05:35:33.4±2.0, 40.63N±0.03×108.19W±0.02, h10km±2km, ML1.2/19, Error ellipse: s-maj=4.9km s-min=3.1km az=171.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O20A	**White River Ci**	**0.50**	**185**	Pg	Pb	05 35 44.0	-0.3
O20A				Sg	Sb	05 35 51.4	-0.4
O20A				IAML		05 35 51.6	
	12nm,0.5s						
HAYD	**Hayden**	**0.71**	**99**	Pg	Pg	05 35 47.1	-0.2
HAYD				IAML		05 35 54.2	
	comp=N,5.9nm,1.1s						
HAYD				Sg	Sb	05 35 57.4	-0.7
HAYD				IAML		05 35 58.4	
	comp=E,8.6nm,0.6s						
RDMU	**Red Mountain**	**1.05**	**267**	Pg	Pg	05 35 53.5	-0.2
RDMU				Sg	Sg	05 36 07.0	-0.4
RDMU				IAML		05 36 09.3	
	comp=N,3.2nm,0.6s						
BSUT	**Blindstream Ca**	**1.96**	**268**	Pn	Pn	05 36 07.0	-0.1
BSUT				IAML		05 36 52.7	
	comp=E,1.7nm,1.3s						
ISCO	**Idaho Springs**	**2.14**	**112**	Pn	Pn	05 36 09.1	-0.4
ISCO				IAML		05 37 08.7	
	comp=E,1.0nm,0.5s						
PV23	**Carpenter Ridg**	**2.27**	**197**	Pn	Pn	05 36 11.0	-0.2
PV23				IAML		05 36 59.4	
	comp=E,3.9nm,1.4s						
P17A	**Butcher Ranch,**	**2.28**	**240**	Pn	Pn	05 36 11.6	+0.4
P17A				IAML		05 36 53.6	
	comp=N,2.4nm,1.3s						
PV14	**Lion Creek, Pa**	**2.35**	**196**	Pn	Pn	05 36 11.3	-1.0
PV20	**West Nyswonger**	**2.37**	**195**	Pn	Pn	05 36 12.2	-0.3
K22A	**Casper**	**2.37**	**31**	Pn	Pn	05 36 13.2	+0.7

NOU 14 05:36:22.2, 21.73S×170.48E, h0km, MLv4.0/6, Southeast of Loyalty Islands
NEIC 14 05:36:22.1±0.7, 21.4S±0.2×170.6E±0.1, h138km±13km, mb4.2/15, Error ellipse: s-maj=25.2km s-min=14.6km az=178.0
IDC 14 05:36:25.5±4.8, 21.41S×170.24E, h158km±32km, mb3.6/4, mbtmp4.0/5, Error ellipse: s-maj=49.7km s-min=31.4km az=37.0
ISC 14 05:36:21.6±1.4, 21.4S±0.2×170.5E±0.1, h134km, n30, σ0.9s96/32, mb4.1/11, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.34**	**268**		**Pn**	**05 37 01.5**	**+1.6**
MARNC				Sn	**Sn**	**05 37 30.4**	**+1.0**
MARNC	**Mare, Loyalty**	**2.34**	**268**	P	**Pn**	**05 37 01.5**	**+1.6**
MARNC	**Mare, Loyalty**	**2.34**	**268**	S	**Sn**	**05 37 30.6**	**+1.2**
PINNC	**Pines Island,**	**3.11**	**247**		**Pn**	**05 37 10.3**	**+0.6**
PINNC	**Pines Island,**	**3.11**	**247**	P	**Pn**	**05 37 10.5**	**+0.8**
YATNC	**Mamie plateau,**	**3.45**	**259**	P	**Pn**	**05 37 14.5**	**+0.2**
OUENC	**Ouen Island, N**	**3.58**	**253**	P	**Pn**	**05 37 17.0**	**+1.1**
DZM	**Mont Dzumac**	**3.86**	**260**	P	**Pn**	**05 37 21.2**	**+1.4**
	22nm,0.5s,baz=74,slow=18,SNR=52						
DZM				S	**Sn**	**05 38 03.8**	**-1.0**
	49nm,0.4s,baz=171,slow=21,SNR=14						
ONTNC	**Ouen Toro**	**3.90**	**256**		**Pn**	**05 37 20.9**	**+0.8**
ONTNC	**Ouen Toro**	**3.90**	**256**	P	**Pn**	**05 37 21.6**	**+1.5**
ARMA	**Armidale**	**19.20**	**238**		**Pn**	**05 40 37.7**	**0.0**
ARMA				IAmb	IAmb	05 40 41.5	
	comp=Z,12nm,0.8s						
CTAO	**Charters Tower**	**22.75**	**269**	P	**P**	**05 41 11.7**	**-0.9**
CTAO				IAmb	IAmb	05 41 53.1	
	comp=Z,3.8nm,1.1s						
CAN	**Canberra**	**23.41**	**229**	P	**P**	**05 41 18.6**	**0.0**
CAN				IAmb	IAmb	05 41 20.5	
	comp=Z,11nm,0.7s						
STKA	**Stephens Creek**	**27.81**	**242**	P	**P**	**05 41 58.1**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=86,slow=12,SNR=3.3						
	comp=Z,1.4nm,0.5s						
WR8	**Warramunga Arr**	**33.70**	**266**	P	**P**	**05 42 49.4**	**-0.9**
WR8				IAmb	IAmb	05 43 06.8	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	**33.83**	**266**	P	**P**	**05 42 50.8**	**-0.6**
WB0				IAmb	IAmb	05 42 58.9	
	comp=Z,11nm,1.5s						
WB2	**Warramunga Arr**	**33.84**	**266**	P	**P**	**05 42 50.6**	**-0.8**
WB2				IAmb	IAmb	05 42 52.1	
	comp=Z,11nm,1.5s						
AS31	**Alice Springs**	**33.85**	**259**	P	**P**	**05 42 51.2**	**-0.4**
ASAR	**Alice Springs**	**33.85**	**259**	P	**P**	**05 42 50.9**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=84,slow=8.8,SNR=17						
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**33.86**	**266**	P	**P**	**05 42 50.2**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=100,slow=8.0,SNR=5.5						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**33.86**	**266**	P	**P**	**05 42 50.7**	**-0.9**
FORT	**Forrest**	**39.08**	**247**	P	**P**	**05 43 34.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**42.28**	**266**	P	**P**	**05 44 01.1**	**-1.0**
MBWA	**Marble Bar**	**47.17**	**261**	P	**P**	**05 44 40.2**	**-0.3**
NWAO	**Narrogin (SRO)**	**48.34**	**245**	P	**P**	**05 44 49.2**	**-0.7**
VNDA	**Vanda**	**56.30**	**182**	P	**P**	**05 45 47.8**	**0.0**
VNDA				IAmb	IAmb	05 46 26.6	
	comp=Z,3.1nm,1.4s						
SBA	**Scott Base**	**56.51**	**181**	P	**P**	**05 45 49.7**	**+0.4**
SBA				IAmb	IAmb	05 45 50.0	
	comp=Z,3.2nm,0.8s						
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**05 47 11.4**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=299,slow=0.9,SNR=10						
	comp=Z,1.9nm,0.8s						
QSPA	**South Pole Qui**	**68.64**	**180**	P	**P**	**05 47 11.2**	**+1.1**
QSPA				IAmb	IAmb	05 47 16.3	
	comp=Z,2.1nm,0.9s						
GERES	**GERESS Array B**	**146.98**	**332**	PKPbc	**PKPbc**	**05 55 48.4**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=22,slow=4.8,SNR=3.4						

GUC 14 05:40:02.9±0.9, 18.38S×69.46W, h123km±4km, ML3.7
SJA 14 05:40:02.7±2.1, 18.82S×69.24W, h100km, ML3.7, MW3.7
NEIC 14 05:40:02.7±1.0, 18.80S±0.04×69.49W±0.05, h136km±6km, mb4.3/8, ML3.7(GUC), Error ellipse: s-maj=8.6km s-min=3.2km az=45.0
VAO 14 05:40:04.0±1.0, 18.73S×69.25W, h148km±7km, mb4.1
ISC 14 05:40:02.0±0.6, 18.80S±0.03×69.44W±0.06, h137km±6km, n79, σ1.1s103/107, mb4.3/3, 6C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.47**	**352**		**Pn**	**05 40 22.4**	**-0.1**
PB16	**IPOC Station P**	**0.47**	**352**	*e*P	**Pn**	**05 40 22.3**	**-0.1**
PB16				*e*S	**Sn**	**05 40 37.1**	**-0.7**
PB16	**IPOC Station P**	**0.47**	**352**	*e*P	**Pn**	**05 40 22.3**	**-0.1**
PB16				*e*S	**Sn**	**05 40 37.3**	**-0.6**
PB16				IAML		05 40 38.4	
	comp=Z,4μm,0.4s						
PX02	**IPOC Station P**	**0.74**	**257**	*e*P	**Pn**	**05 40 22.9**	**-0.6**
PX02				*e*S	**Sn**	**05 40 38.7**	**-1.2**
PX02				IAML		05 40 39.9	
	comp=N,2μm,0.5s						
PB12	**IPOC Station P**	**0.87**	**282**		**Pn**	**05 40 24.1**	**-0.4**
PB12				Sn	**Sn**	**05 40 41.3**	**-0.3**
PB12	**IPOC Station P**	**0.87**	**282**	*e*P	**Pn**	**05 40 24.6**	**+0.1**
PB12				*e*S	**Sn**	**05 40 41.6**	**0.0**
PB12				IAML		05 40 42.4	
	comp=N,2μm,0.3s						
PB12	**IPOC Station P**	**0.87**	**282**	*e*P	**Pn**	**05 40 24.6**	**+0.1**
PB12				*e*S	**Sn**	**05 40 41.8**	**+0.3**
PB12				IAML		05 40 42.3	
	comp=Z,906nm,0.2s						
GO01	**Chusmiza**	**0.89**	**165**		**Pn**	**05 40 26.0**	**+0.8**
GO01				Sn	**Sn**	**05 40 43.2**	**+0.4**
GO01	**Chusmiza**	**0.89**	**165**	*e*P	**Pn**	**05 40 25.9**	**+0.8**
GO01				*e*S	**Sn**	**05 40 43.2**	**+0.4**
GO01	**Chusmiza**	**0.89**	**165**	*e*P	**Pn**	**05 40 25.9**	**+0.8**
GO01				*e*S	**Sn**	**05 40 43.2**	**+0.4**
GO01				IAML		05 40 44.7	
	comp=Z,1μm,0.4s						
AP01	**Chacalluta**	**0.96**	**296**		**Pn**	**05 40 25.2**	**0.0**
AP01				Sn	**Sn**	**05 40 43.0**	**+0.2**
AP01	**Chacalluta**	**0.96**	**296**	*e*P	**Pn**	**05 40 25.4**	**+0.3**
AP01				*e*S	**Sn**	**05 40 43.3**	**+0.5**
AP01				IAML		05 40 43.8	
	comp=N,3μm,0.2s						
AP01	**Chacalluta**	**0.96**	**296**	*e*P	**Pn**	**05 40 24.8**	**-0.4**
AP01				*e*S	**Sn**	**05 40 46.9**	**+4.1**
AP01				IAML		05 40 49.8	
	comp=Z,2μm,0.2s						
PB11	**IPOC Station P**	**0.98**	**192**		**Pn**	**05 40 26.2**	**+0.6**
PB11				Sn	**Sn**	**05 40 43.5**	**+0.1**
PB11	**IPOC Station P**	**0.98**	**192**	*e*P	**Pn**	**05 40 26.1**	**+0.6**
PB11				*e*S	**Sn**	**05 40 43.5**	**+0.1**
PB11	**IPOC Station P**	**0.98**	**192**	*e*P	**Pn**	**05 40 26.1**	**+0.6**
PB11				*e*S	**Sn**	**05 40 43.6**	**+0.1**
PB11				IAML		05 40 44.0	
	comp=Z,2μm,0.3s						
PB18	**Visviri**	**1.21**	**358**		**Pn**	**05 40 29.4**	**+1.3**
PB18	**Visviri**	**1.21**	**358**	*e*P	**Pn**	**05 40 29.4**	**+1.3**
PB08	**IPOC Station P**	**1.36**	**169**		**Pn**	**05 40 29.9**	**+0.4**
PB08	**IPOC Station P**	**1.36**	**169**	*e*P	**Pn**	**05 40 30.7**	**+1.1**
PB08				*e*S	**Sn**	**05 40 51.3**	**+0.8**
PB08	**IPOC Station P**	**1.36**	**169**	*e*P	**Pn**	**05 40 30.6**	**+1.1**
PB08				*e*S	**Sn**	**05 40 51.5**	**+1.0**
TA02	**Huaiquique**	**1.60**	**204**	*e*P	**Pn**	**05 40 31.6**	**-0.1**
TA02				*e*S	**Sn**	**05 40 54.1**	**-0.3**
TA01	**Diego Aracena**	**1.89**	**202**		**Pn**	**05 40 35.6**	**+0.5**
TA01				Sn	**Sn**	**05 40 58.9**	**-1.5**
TA01	**Diego Aracena**	**1.89**	**202**	*e*P	**Pn**	**05 40 35.5**	**+0.5**
TA01				*e*S	**Sn**	**05 40 59.1**	**-1.3**
TA01				IAML		05 41 05.4	
	comp=N,406nm,0.4s						
TA01	**Diego Aracena**	**1.89**	**202**	*e*P	**Pn**	**05 40 35.5**	**+0.5**
TA01				*e*S	**Sn**	**05 41 00.6**	**+0.2**
PATCX	**Punta Patache**	**2.12**	**198**		**Pn**	**05 40 38.5**	**+0.7**
PATCX	**Punta Patache**	**2.12**	**198**	*e*P	**Pn**	**05 40 38.2**	**+0.4**
PATCX				*e*S	**Sn**	**05 41 05.0**	**-0.4**
PATCX				IAML		05 41 08.1	
	comp=Z,436nm,0.4s						
PB01	**IPOC Station P**	**2.23**	**181**		**Pn**	**05 40 39.9**	**+0.7**
PB01	**IPOC Station P**	**2.23**	**181**	*e*P	**Pn**	**05 40 40.3**	**+1.0**
PB01				IAML		05 41 08.2	
	comp=N,598nm,0.2s						
PB01	**IPOC Station P**	**2.23**	**181**	*e*P	**Pn**	**05 40 39.9**	**+0.7**
PB01				*e*S	**Sn**	**05 41 07.8**	**-0.1**
PB01				IAML		05 41 08.1	
	comp=Z,269nm,0.2s						
PB02	**IPOC Station P**	**2.54**	**190**		**Pn**	**05 40 43.9**	**+0.7**
PB02	**IPOC Station P**	**2.54**	**190**	*e*P	**Pn**	**05 40 44.2**	**+1.1**
PB02				IAML		05 41 19.8	
	comp=E,502nm,0.3s						
PB02	**IPOC Station P**	**2.54**	**190**	*e*P	**Pn**	**05 40 44.1**	**+0.9**
PB02				*e*S	**Sn**	**05 41 14.0**	**-0.8**
PB02				IAML		05 41 16.1	
	comp=Z,483nm,0.4s						
LPAZ	**La Paz**	**2.79**	**27**		**Pn**	**05 40 47.4**	**+0.6**
LPAZ	**La Paz**	**2.79**	**27**	*e*P	**Pn**	**05 40 48.0**	**+1.2**
LPAZ	**La Paz**	**2.79**	**27**	*e*P	**Pn**	**05 40 47.6**	**+0.8**
PB09	**IPOC Station P**	**2.98**	**177**		**Pn**	**05 40 49.9**	**+1.1**
PB09	**IPOC Station P**	**2.98**	**177**	*e*P	**Pn**	**05 40 50.0**	**+1.2**
PB09				*e*S	**Sn**	**05 41 23.3**	**-1.7**
PB09				IAML		05 41 58.9	
	comp=Z,159nm,0.6s						
PB03	**IPOC Station P**	**3.24**	**185**		**Pn**	**05 40 53.0**	**+0.9**
PB03	**IPOC Station P**	**3.24**	**185**	*e*P	**Pn**	**05 40 52.7**	**+0.6**
PB03				*e*S	**Sn**	**05 41 30.8**	**-0.2**
PB03				IAML		05 41 32.8	
	comp=Z,146nm,0.2s						
PB06	**IPOC Station P**	**3.89**	**182**		**Pn**	**05 41 00.9**	**+0.3**
PB06	**IPOC Station P**	**3.89**	**182**	*e*P	**Pn**	**05 41 01.1**	**+0.5**
PB06				*e*S	**Sn**	**05 41 47.0**	**+0.9**
PB06				IAML		05 41 47.7	
	comp=Z,133nm,0.6s						
PB05	**IPOC Station P**	**4.09**	**190**	*e*P	**Pn**	**05 41 03.5**	**+0.2**
PB05				*e*S	**Sn**	**05 41 49.8**	**-1.0**
PB05				IAML		05 41 51.4	
	comp=Z,94nm,0.3s						
PB10	**IPOC Station P**	**4.80**	**192**	*e*P	**Pn**	**05 41 12.1**	**-0.5**
PB10				*e*S	**Sn**	**05 42 04.8**	**-2.8**
PB10				IAML		05 42 06.8	
	comp=Z,60nm,0.8s						
PB14	**IPOC Station P**	**5.87**	**189**		**Pn**	**05 41 25.3**	**-1.7**
GO02	**Mina Guanaco**	**6.33**	**181**		**Pn**	**05 41 32.7**	**-0.6**
VILB	**Vilhena**	**10.62**	**58**		**Pn**	**05 42 28.8**	**-1.7**
VILB	**Vilhena**	**10.62**	**58**	*e*P	**Pn**	**05 42 29.6**	**-0.9**
CO03	**El Pedregal**	**12.04**	**185**	Pn	**Pn**	**05 42 48.2**	**-1.0**
BDQN	**Bodoquena, MS**	**12.07**	**100**	*e*P	**Pn**	**05 42 47.2**	**-2.3**
AQDB	**Aquidauana**	**13.05**	**100**	*e*P	**Pn**	**05 43 01.1**	**-1.2**
SAJV	**Santo Antonio**	**13.43**	**80**	*e*P	**Pn**	**05 43 07.1**	**-0.2**
PP1B	**Ponte de Pedra**	**13.88**	**87**	*e*P	**Pn**	**05 43 12.4**	**-0.6**
PDRB	**Porto dos Gac**	**14.19**	**62**	*e*P	**Pn**	**05 43 16.8**	**-0.1**
MT02	**Curacav**	**14.48**	**186**	Pn	**Pn**	**05 43 21.1**	**+0.6**
MT09	**Talagante**	**14.98**	**185**		**P**	**05 43 31.7**	**+2.7**
ARAG	**Araguaiana, MT**	**17.11**	**82**	*e*P	**Pn**	**05 43 52.3**	**-0.7**
PTGB	**Pitanga**	**17.17**	**113**	*e*P	**Pn**	**05 43 53.4**	**-0.3**
MACA	**Manacapuru-AM**	**17.75**	**30**	P	**P**	**05 43 58.1**	**-1.4**
MACA	**Manacapuru-AM**	**17.75**	**30**	*e*P	**P**	**05 43 58.7**	**-0.8**
ITAB	**Concordia**	**17.99**	**121**	P	**Pn**	**05 44 02.0**	**-1.4**
ITAB	**Concordia**	**17.99**	**121**	*e*P	**Pn**	**05 44 03.1**	**-0.3**
NPGB	**Novo Progresso**	**18.00**	**51**	*e*P	**P**	**05 44 01.3**	**-1.0**
CPSB	**Cacapava Do Su**	**18.55**	**132**	*e*P	**P**	**05 44 07.8**	**-0.3**
SNDB	**Serra Nova Dou**	**18.75**	**71**	*e*P	**P**	**05 44 09.6**	**-0.9**
PLTB	**Pedras Altas**	**19.24**	**135**	P	**P**	**05 44 15.2**	**-0.5**
PLTB	**Pedras Altas**	**19.24**	**135**	*e*P	**Pn**	**05 44 16.3**	**-1.9**
ITTB	**Itaituba**	**19.62**	**45**	*e*P	**P**	**05 44 18.5**	**-1.4**
IPMB	**Ipameri, GO**	**20.16**	**91**	*e*P	**P**	**05 44 24.4**	**-1.4**
TRQA	**Tornquist**	**20.26**	**163**	P	Pn	**05 44 27.7**	**-2.3**
TRQA				IAmb	IAmb	05 44 29.2	
	comp=Z,9.7nm,0.7s						
PMNB	**Patos De Minas**	**21.79**	**93**	*e*P	**P**	**05 44 42.7**	**-0.5**
MAL2	**Monte Alegre,**	**22.40**	**44**	P	**P**	**05 44 47.7**	**-1.6**
MAL2				IAmb	IAmb	05 45 17.1	
	comp=Z,15nm,0.9s						
BOAV	**Boa Vista**	**22.82**	**24**	P	**P**	**05 44 52.7**	**-0.6**
BOAV	**Boa Vista**	**22.82**	**24**	*e*P	**P**	**05 44 53.0**	**-0.3**
SMTB	**Santa Maria do**	**23.37**	**68**	*e*P	**P**	**05 44 57.9**	**-0.6**
DIAM	**Diamantina, MG**	**24.43**	**93**	*e*P	**P**	**05 45 08.0**	**-0.2**
SDBA	**SAO DESIDERIO**	**24.45**	**79**	*e*P	**P**	**05 45 08.1**	**-0.2**
BELA	**Belgrano 2**	**61.48**	**172**	P	**P**	**05 50 04.7**	**+1.1**
BELA				IAmb	IAmb	05 50 13.2	
	comp=Z,4.0nm,1.1s						
SNAA	**Sanae**	**64.98**	**161**	P	**P**	**05 50 29.1**	**+2.3**
SNAA				IAmb	IAmb	05 50 44.1	
	comp=Z,6.7nm,1.5s						

TIR 14 05:42:46.8, 41.06N×19.92E, h19km, Ml2.5/6
PDG 14 05:42:47.8±0.4, 41.09N×19.96E, h8km±1km, ML2.7/10, Error ellipse: s-maj=1.1km s-min=2.4km az=0.0
SKO 14 05:42:48.0, 41.26N×20.00E, h21km
ISC 14 05:42:46.4±1.1, 41.09N±0.02×19.96E±0.03, h10km±10km, n24, σ1.3s30/42, 2D, Albania

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

APG	**El Apazote**	**1.53**	**21**	*eP*	**Pn**	**06 02 26.6**	**+0.6**
JAYA	**Jayaque - finc**	**1.53**	**86**	*eP*	**Pn**	**06 02 26.6**	**+0.6**
JAYA				*eS*	**Sn**	**06 02 45.0**	**-0.1**
JAYA	**Jayaque - finc**	**1.53**	**86**	P	**Pn**	**06 02 26.8**	**+0.8**
JAYA	**Jayaque - finc**	**1.53**	**86**	S	**Sn**	**06 02 45.1**	**+0.1**
SMCA	**Catarina**	**1.64**	**322**	*eP*	**Pb**	**06 02 28.4**	**-1.7**
PMON	**Piamonte**	**1.67**	**85**	S	**Sn**	**06 02 49.4**	**+1.2**
PMON	**Piamonte**	**1.67**	**85**	P	**Pn**	**06 02 28.9**	**+1.2**
MTO3	**Montecristo**	**1.81**	**63**	P	**Pn**	**06 02 30.6**	**+0.7**
MTO3	**Montecristo**	**1.81**	**63**	S	**Sn**	**06 02 52.8**	**+0.8**
TECO	**Alcaldia de Te**	**2.18**	**90**	S	**Sn**	**06 03 01.7**	**+0.8**
TECO	**Alcaldia de Te**	**2.18**	**90**	P	**Pn**	**06 02 35.8**	**+1.0**

CATAC ***14*** *06:19:44.5±0.7, 11°N±2°×8°7W±°, h17km±7km, M4.2/32, MLv4.2/32, Error ellipse: s-maj=6.1km s-min=4.2km az=44.0, confirmed*
UCR ***14*** *06:19:45.5±1.4, 11°.41N×86°.99W, h16km±8km, MW4.6*
IDC ***14*** *06:19:51.4±1.3, 10°.78N×85°.43W, h225km±13km, mb3.3/3, mbtmp3.8/3, Error ellipse: s-maj=84.0km s-min=25.9km az=32.0*

ISC 14 06:19:43.1±1.3, 11°.40N±0°.03×86°.98W±0°.05, h11km±9km, n90, σ1ᵍ23/106, 7C-15D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.86**	**26**	⇓P	**Pn**	**06 20 01.6**	**+0.4**
COPN	**Copaltepe**	**0.86**	**26**	⇓*e*P	**Pn**	**06 20 01.6**	**+0.4**
CRUN	**El Crucero**	**0.88**	**49**	⇑P	**Pn**	**06 20 01.3**	**-0.2**
SAPS	**Ciudad Sandino**	**0.95**	**36**	⇓P	**Pn**	**06 20 02.6**	**+0.3**
ABCN	**Banco Central**	**0.97**	**42**	P	**Pn**	**06 20 03.3**	**+0.6**
NADN	**Granada**	**0.99**	**69**	⇓P	**Pn**	**06 20 03.3**	**+0.4**
NADN				S	**Sn**	**06 20 16.7**	**-0.1**
NADN	**Granada**	**0.99**	**69**	*e*S	**Sn**	**06 20 17.0**	**+0.2**
NADN				⇓*i*P	**Pn**	**06 20 03.3**	**+0.4**
UNAN	**Cigeo UNAN**	**0.99**	**44**	⇓P	**Pn**	**06 20 03.1**	**+0.2**
MASN	**Masaya**	**1.00**	**54**	P	**Pn**	**06 20 03.4**	**+0.3**
MASN	**Masaya**	**1.00**	**54**	*e*P	**Pb**	**06 20 02.6**	**+0.2**
MAS3	**Al N del Volca**	**1.00**	**52**	⇓P	**Pn**	**06 20 03.1**	**0.0**
TISN	**Laguna Tiscapa**	**1.01**	**43**	⇓P	**Pg**	**06 20 02.4**	**-0.2**
APQ2	**Apoyeque**	**1.02**	**39**	P	**Pn**	**06 20 03.3**	**-0.1**
APQ2	**Apoyeque**	**1.02**	**39**	⇓P	**Pn**	**06 20 03.6**	**+0.3**
MGAN	**Managua**	**1.03**	**44**	*e*S	**Sn**	**06 20 18.2**	**+0.3**
MGAN				⇓*i*P	**Pn**	**06 20 03.5**	**0.0**
APYN	**Apoyeque**	**1.03**	**36**	P	**Pn**	**06 20 04.5**	**+1.0**
WILN	**Americas 2**	**1.08**	**45**	⇓P	**Pn**	**06 20 04.5**	**+0.4**
WILN				S	**Sn**	**06 20 19.5**	**+0.4**
AERN	**Aeropuerto Man**	**1.08**	**47**	P	**Pn**	**06 20 04.2**	**0.0**
AERN	**Aeropuerto Man**	**1.08**	**47**	S	**Sn**	**06 20 19.0**	**-0.2**
CNGA	**Al SSO del Vol**	**1.12**	**14**	⇓P	**Pn**	**06 20 05.1**	**+0.3**
CNGN	**Cerro Negro**	**1.13**	**14**	*e*S	**Sn**	**06 20 21.3**	**+1.0**
CNGN				⇑*i*P	**Pn**	**06 20 05.4**	**+0.5**
MOM2	**El Cardon**	**1.14**	**25**	⇓P	**Pn**	**06 20 05.4**	**+0.5**
MOM2				S	**Sn**	**06 20 21.3**	**+0.7**
MOM3	**MOM3**	**1.19**	**22**	⇓P	**Pg**	**06 20 06.1**	**0.0**
MOM3				S	**Sn**	**06 20 23.5**	**+1.6**
POLN	**Al Sur del Vol**	**1.25**	**7**	⇑P	**Pn**	**06 20 06.6**	**0.0**
POLN				S	**Sn**	**06 20 24.0**	**+0.6**
PKGN	**Cerro Pekin**	**1.26**	**360**	P	**Pg**	**06 20 07.4**	**0.0**
JAPN	**Al SSO del Vol**	**1.28**	**84**	P	**Pg**	**06 20 07.5**	**-0.2**
JAPN	**Al SSO del Vol**	**1.28**	**84**	*e*P	**Pg**	**06 20 07.5**	**-0.2**
CRIN	**San Cristobal**	**1.29**	**357**	P	**Pg**	**06 20 08.1**	**0.0**
CRIN	**San Cristobal**	**1.29**	**357**	⇑*e*P	**Pg**	**06 20 08.2**	**+0.2**
CRIN				*e*S	**Sg**	**06 20 26.0**	**+1.1**
MORN	**Al O del Volca**	**1.31**	**83**	P	**Pb**	**06 20 07.7**	**-0.1**
CONN	**Concepcion**	**1.33**	**83**	P	**Pb**	**06 20 07.9**	**-0.2**
CARN	**Rivas**	**1.44**	**98**	P	**Pb**	**06 20 09.7**	**-0.2**
CARN				S	**Sg**	**06 20 29.7**	**+0.1**
CARN	**Rivas**	**1.44**	**98**	*e*P	**Pn**	**06 20 09.5**	**+0.4**
CARN				*e*S	**Sg**	**06 20 30.8**	**+1.3**
ALIBA	**Liberia Airpor**	**1.62**	**120**	*e*P	**Pb**	**06 20 12.7**	**-0.3**
LAPC	**Finca la Perla**	**1.64**	**112**	*e*P	**Pn**	**06 20 12.1**	**+0.2**
POTN	**Potosi Cosigui**	**1.67**	**342**	⇑P	**Pb**	**06 20 13.3**	**-0.6**
POTN	**Potosi Cosigui**	**1.67**	**342**	⇑*e*P	**Pn**	**06 20 12.3**	**0.0**
POTN				*e*S	**Sb**	**06 20 34.8**	**-0.2**
DELF	**Filadelfia**	**1.69**	**124**	*e*P	**Pn**	**06 20 13.0**	**+0.5**
VRLE	**La Escondida,**	**1.69**	**111**	*e*P	**Pn**	**06 20 13.3**	**+0.6**
BUAI	**Buenos Aires**	**1.69**	**108**	*e*P	**Pb**	**06 20 13.8**	**-0.5**
GPS3	**Bodega del ICE**	**1.71**	**112**	*e*P	**Pg**	**06 20 15.8**	**0.0**
GPS1	**Guardaparques**	**1.71**	**111**	*e*P	**Pb**	**06 20 14.4**	**-0.2**
SACU	**Santa Cruz**	**1.77**	**129**	*e*P	**Pg**	**06 20 17.6**	**+0.4**
MATN	**Matagalpa**	**1.83**	**34**	⇓P	**Pn**	**06 20 14.0**	**-0.7**
MESS	**Mesas**	**1.87**	**110**	*e*P	**Pn**	**06 20 15.5**	**+0.4**
HORNC	**Hornillas**	**1.89**	**111**	*e*P	**Pb**	**06 20 16.7**	**-1.0**
PLVR	**Palo Verde**	**1.91**	**123**	*e*P	**Pb**	**06 20 18.7**	**+0.6**
VMAR	**Armenia, Volca**	**1.92**	**108**	*e*P	**Pn**	**06 20 16.6**	**+0.8**
VMAR				*e*S	**Sn**	**06 20 40.5**	**+0.6**
CUI	**Cuipilapa**	**1.93**	**112**	*e*P	**Pn**	**06 20 16.9**	**+1.0**
NICO	**Nicoya**	**1.96**	**130**	*e*P	**Pg**	**06 20 20.7**	**0.0**
MOTZ	**Rio Naranjo**	**2.00**	**111**	*e*P	**Pb**	**06 20 18.5**	**-1.0**
CNCH	**Conchagua**	**2.04**	**336**	⇑P	**Pn**	**06 20 18.3**	**+0.7**
CMARA	**Lajas Hojancha**	**2.05**	**132**	*e*P	**Pg**	**06 20 22.9**	**+0.4**
CNAS	**Canas**	**2.08**	**117**	*e*P	**Pg**	**06 20 22.1**	**-1.1**
TIMP	**Tierras Morena**	**2.09**	**113**	*e*P	**Pn**	**06 20 19.5**	**+1.4**
INVE	**Universidad In**	**2.09**	**116**	*e*P	**Pb**	**06 20 21.4**	**+0.3**
INVE				*e*S	**Sg**	**06 20 50.9**	**+0.5**
TILA	**Tilaran**	**2.18**	**115**	*e*P	**Pn**	**06 20 20.7**	**+1.4**
QUEB	**Quebradon, Cot**	**2.18**	**111**	*e*P	**Pn**	**06 20 20.4**	**+1.0**
NYURE	**Nandayure**	**2.19**	**129**	*e*P	**Pg**	**06 20 24.7**	**-0.5**
JUNT	**Juntas**	**2.27**	**119**	*e*P	**Pn**	**06 20 21.9**	**+1.3**
JTS	**Las Juntas de**	**2.27**	**119**	P	**Pn**	**06 20 21.5**	**+0.9**
JTS	30nm,0.3s,baz=339,slow=12,SNR=36			S	**Sn**	**06 20 47.3**	**-1.3**
JTS	40nm,0.4s,baz=289,slow=23,SNR=5.8 **Las Juntas de**	**2.27**	**119**	*e*P	**Pn**	**06 20 22.3**	**+1.6**
JTS				*e*S	**Sg**	**06 20 55.4**	**-0.8**
TABAC	**Tabacon**	**2.35**	**112**	*e*P	**Pb**	**06 20 24.5**	**-0.9**
MTEVE	**Monteverde**	**2.37**	**117**	*e*P	**Pn**	**06 20 23.8**	**+1.7**
JCR1	**Jicaral**	**2.39**	**130**	*e*P	**Pn**	**06 20 22.3**	**0.0**
CASO	**Castillo**	**2.40**	**113**	*e*P	**Pb**	**06 20 25.7**	**-0.7**
ARE1	**Arenal 1**	**2.40**	**113**	*e*P	**Pn**	**06 20 24.3**	**+1.9**
VARE2	**V. Arenal**	**2.40**	**113**	*e*P	**Pn**	**06 20 24.0**	**+1.5**
CEDE	**Laguna Cedeo**	**2.41**	**112**	*e*P	**Pb**	**06 20 25.6**	**-0.9**
VACR	**Volcan Arenal**	**2.44**	**112**	*e*P	**Pn**	**06 20 24.0**	**+1.1**
SOCE	**Pocosol**	**2.53**	**113**	*e*P	**Pb**	**06 20 27.3**	**-1.2**
QUEU	**Ciudad Quesada**	**2.71**	**113**	*e*P	**Pn**	**06 20 26.9**	**+0.2**
VPL2	**V. Platanar**	**2.77**	**113**	*e*P	**Pb**	**06 20 31.6**	**-1.2**
VPL1	**V. Platanar**	**2.81**	**114**	*e*P	**Pb**	**06 20 32.1**	**-1.3**
ZARE	**Zarcero**	**2.81**	**115**	*e*P	**Pn**	**06 20 30.9**	**+2.7**
NARAN	**Naranjo de Ala**	**2.86**	**117**	*e*P	**Pb**	**06 20 34.4**	**+0.1**
ATEO	**Atenas**	**2.91**	**119**	*e*P	**Pb**	**06 20 32.5**	**-2.7**
BELE	**Belen**	**3.08**	**117**	*e*P	**Pb**	**06 20 36.7**	**-1.3**
SANTA	**Santa Ana**	**3.11**	**118**	*e*P	**Pb**	**06 20 36.2**	**-2.3**
ACOS	**Acosta**	**3.19**	**120**	*e*P	**Pb**	**06 20 36.8**	**-3.2**
PITB	**Pirrs, San**	**3.38**	**120**	*e*P	**Pn**	**06 20 39.1**	**+3.1**
VICA	**Volcano Irazu**	**3.38**	**114**	*e*P	**Pb**	**06 20 40.6**	**-2.8**
PIEC	**Cerro El Cedra**	**3.45**	**120**	*e*P	**Pn**	**06 20 40.2**	**+3.1**
ABRB	**Las Abras (San**	**3.49**	**113**	*e*P	**Pn**	**06 20 41.2**	**+3.7**
VERB	**Verbena**	**3.53**	**114**	*e*P	**Pb**	**06 20 42.0**	**-3.8**
BUS1	**Rivas**	**3.67**	**120**	*e*P	**Pn**	**06 20 42.7**	**+2.6**
DRK0	**Durika**	**4.24**	**120**	*e*P	**Pn**	**06 20 51.0**	**+3.1**
ALCO	**Alturas Coton,**	**4.75**	**120**	*e*P	**Pn**	**06 20 56.6**	**+1.8**
TXAR	**Lajitas Array** 1.0nm,0.8s,baz=132,slow=7.4,SNR=15	**23.68**	**321**	P	**P**	**06 24 55.1**	**+0.1**
PDAR	1.0nm,0.8s **Pinedale Array** 0.3nm,0.6s,baz=134,slow=11,SNR=4.2 0.3nm,0.6s	**36.91**	**332**	P	**P**	**06 26 51.2**	**-1.0**

IDC ***14*** *06:21:00.2±0.7, 6°.76N×72°.87W, h167km±7km, mb2.9/2, mbtmp3.6/4, Error ellipse: s-maj=29.4km s-min=7.6km az=131.0*
RSNC ***14*** *06:21:01.4±0.0, 7°N±1°×7°3W±°, h151km±1km, M3.6, mb3.9, mB5.0, ML3.3, Mw(mB)4.3*

ISC 14 06:20:59.6±0.8, 6°.88N±0°.03×73°.10W±0°.04, h162km±6km, n51, σ1ᵍ49/75, mb3.4/3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.30**	**195**	P	**Pn**	**06 21 21.8**	**-0.1**
BARC				S	**Sn**	**06 21 37.3**	**-1.7**
PAMC	**Pamplona, Colo**	**0.60**	**42**	P	**Pn**	**06 21 24.6**	**+1.2**
PAMC				S	**Sn**	**06 21 41.7**	**0.0**
BRJC	**Barrancabermej**	**0.64**	**278**	P	**Pn**	**06 21 23.6**	**+0.6**
BRJC				S	**Sn**	**06 21 40.6**	**-0.3**
RUSC	**La Rusia**	**0.98**	**179**	P	**Pn**	**06 21 25.6**	**-0.4**
RUSC				S	**Sn**	**06 21 44.3**	**-1.9**
OCAC	**Ocana**	**1.36**	**351**	P	**Pn**	**06 21 29.9**	**+1.0**
OCAC				S	**Sn**	**06 21 52.8**	**+1.3**
PTBC	**PUERTO BERRIO,**	**1.39**	**256**	P	**Pn**	**06 21 28.3**	**-0.7**
PTBC				S	**Sn**	**06 21 50.0**	**-1.5**
SPBC	**San Pablo de B**	**1.56**	**218**	P	**Pn**	**06 21 30.6**	**-0.2**
SPBC				S	**Sn**	**06 21 52.9**	**-1.9**
CHIC	**Chingaza**	**2.33**	**196**	P	**Pn**	**06 21 39.3**	**-0.4**
CHIC				S	**Sn**	**06 22 08.6**	**-2.0**
ROSC	**El Rosal** 158nm,0.3s,baz=92,slow=15,SNR=82	**2.36**	**211**	P	**Pn**	**06 21 41.8**	**+1.7**
ROSC	462nm,0.4s,baz=93,slow=23,SNR=12			S	**Sn**	**06 22 13.4**	**+2.0**
ROSC	**El Rosal**	**2.36**	**211**	P	**Pn**	**06 21 41.2**	**+1.1**
ROSC				S	**Sn**	**06 22 11.6**	**+0.2**
HELC	**Santa Helena**	**2.51**	**254**	P	**Pn**	**06 21 43.1**	**+1.4**
HELC				S	**Sn**	**06 22 13.3**	**-1.0**
CVER	**Cruz Verde, Cu**	**2.54**	**202**	P	**Pn**	**06 21 42.8**	**+0.6**
CVER				S	**Sn**	**06 22 14.5**	**-0.7**
UREC	**San Jos de Ur**	**2.56**	**290**	P	**Pn**	**06 21 41.6**	**-0.4**
UREC				S	**Sn**	**06 22 13.5**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.79**	**234**	P	**Pn**	**06 21 45.7**	**+0.4**
GUY2C				S	**Sn**	**06 22 20.0**	**-0.6**
VILC	**Villavicencio,**	**2.81**	**192**	P	**Pn**	**06 21 44.7**	**-0.6**
VILC				S	**Sn**	**06 22 19.5**	**-1.3**
NIZA	**Niza - Manizal**	**2.97**	**233**	P	**Pn**	**06 21 50.6**	**+3.2**
NIZA				S	**Sn**	**06 22 27.4**	**+3.0**
CBOC	**Ciudad Bolivar**	**3.06**	**251**	P	**Pn**	**06 21 49.4**	**+1.0**
CBOC				S	**Sn**	**06 22 25.4**	**-0.8**
DBBC	**Dabeiba**	**3.09**	**273**	P	**Pn**	**06 21 49.4**	**+0.8**
DBBC				S	**Sn**	**06 22 25.2**	**-1.4**
SDV	**Santo Domingo** 22nm,0.3s,baz=243,slow=6.3,SNR=28	**3.15**	**51**	P	**Pn**	**06 21 51.0**	**+1.4**
SDV	81nm,0.4s,baz=3.6,slow=16,SNR=36			S	**Sn**	**06 22 27.2**	**-1.1**
SDV	**Santo Domingo**	**3.15**	**51**	P	**Pn**	**06 21 50.9**	**+1.4**
SDV				S	**Sn**	**06 22 28.6**	**+0.3**
PRAC	**Prado**	**3.62**	**209**	P	**Pn**	**06 21 54.8**	**-0.5**
PRAC				S	**Sn**	**06 22 37.1**	**-1.5**
SJCC	**San Jacinto, C**	**3.63**	**326**	P	**Pn**	**06 21 55.4**	**-0.1**
SJCC				S	**Sn**	**06 22 33.6**	**-5.4**
ORTC	**Ortega, Tolima**	**3.64**	**216**	P	**Pn**	**06 21 55.8**	**+0.2**
ORTC				S	**Sn**	**06 22 39.3**	**0.0**
LCBC	**Los crdobas,**	**3.78**	**301**	P	**Pn**	06 22 07.5	+10
LCBC				S	**Sn**	**06 22 44.0**	**+1.7**
URMC	**La Uribe, Meta**	**3.83**	**199**	P	**Pn**	**06 21 58.2**	**+0.1**
URMC				S	**Sn**	**06 22 42.8**	**-0.8**
CRJC	**Cerrejon, Guaj**	**4.12**	**3**	P	**Pn**	**06 22 01.9**	**+0.1**
CRJC				S	**Sn**	**06 22 48.3**	**-2.0**
YOTC	**Yotoco, Valle**	**4.33**	**228**	P	**Pn**	**06 22 04.3**	**-0.2**
SMRC	**Santa Marta, M**	**4.39**	**345**	P	**Pn**	**06 22 07.2**	**+1.9**
SMRC				S	**Sn**	**06 22 54.6**	**-2.0**
CAPC	**Capurgana**	**4.55**	**293**	P	**Pn**	**06 22 06.9**	**-0.5**
CAPC				S	**Sn**	**06 22 56.4**	**-3.9**
PTAC	**Punta Ardita,**	**4.68**	**273**	P	**Pn**	**06 22 09.3**	**+0.3**
MACC	**Macarena, Meta**	**4.76**	**189**	P	**Pn**	**06 22 08.2**	**-2.0**
URIC	**Uribia, Colomb**	**4.91**	**13**	P	**Pn**	**06 22 12.1**	**+0.1**
JAMC	**Jamundi, Valle** 11nm,0.5s	**5.09**	**224**	P	**Pn**	**06 22 14.5**	**-0.1**
GARC	**Garzon, Huila**	**5.24**	**207**	P	**Pn**	**06 22 15.4**	**-1.2**
POPC	**Popayan, Colom** 6.9nm,0.7s	**5.59**	**220**	P	**Pn**	**06 22 21.4**	**+0.1**
FLOC	**Florencia** 14nm,1.1s	**5.85**	**206**	P	**Pn**	**06 22 24.1**	**-0.3**
GCUF	**Volcan Galeras**	**7.03**	**217**	P	**Pn**	**06 22 42.2**	**+1.6**
MTDJ	**Mount Denham**	**12.07**	**339**	*eP*	**P**	**06 23 51.1**	**-1.5**
GTBY	**Guantanamo Bay**	**13.11**	**352**	*eP*	**P**	**06 24 05.0**	**+1.0**
MASC	**Masc**	**13.26**	**355**	*eP*	**P**	**06 24 04.5**	**-1.1**
MARVS	**Santiago de Cu**	**13.32**	**349**	*eP*	**P**	**06 24 07.2**	**+0.9**
QMBU	**Quimbuelo**	**13.34**	**353**	*eP*	**P**	**06 24 07.6**	**+1.0**
LMGC	**Las Mercedes**	**13.64**	**344**	*eP*	**P**	**06 24 09.8**	**-0.1**
PINC	**Pinares de May**	**13.77**	**349**	*eP*	**P**	**06 24 13.7**	**+2.4**
HLGC	**Holguin**	**14.21**	**349**	*eP*	P	06 24 21.5	+5.2
LPAZ	**La Paz** 0.4nm,0.3s,baz=353,slow=12,SNR=3.5 0.4nm,0.3s	**23.54**	**168**	P	**P**	**06 25 54.3**	**-1.7**
TXAR	**Lajitas Array** 0.3nm,0.6s,baz=134,slow=10,SNR=4.4 0.3nm,0.6s	**36.43**	**312**	P	**P**	**06 27 51.0**	**+2.1**
DBIC	**Dimbokro** 2.7nm,0.6s,baz=284,slow=3.5,SNR=4.3	**67.71**	**86**	P	P	06 31 34.2	-5.9
DBIC	**Dimbokro** 2.7nm,0.6s	**67.71**	**86**				
ASAR	**Alice Springs** 0.7nm,0.5s,baz=122,slow=3.8,SNR=14	**149.16**	**234**	PKPbc	**PKPbc**	**06 40 29.8**	**0.0**
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=108,slow=2.5,SNR=14	**150.38**	**241**	PKPbc	**PKPbc**	**06 40 32.8**	**0.0**

OTT 14 06:26:15.2±0.2, 44°.65N×56°.22W, h18km, ML3.6/6, 275km south from Grand Bank, NI Laurentian Slope Seismic Zone., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**3.83**	**283**	PN	Pn	06 27 12.9	-0.3
GBN				SN	Sn	06 27 55.3	-2.5
GBN				Trac		06 27 58.0	
	comp=Z,4.3nm,0.1s						
SJNN	**Saint John's**	**3.84**	**39**	PN	Pn	06 27 11.8	-1.5
SJNN				SN	Sn	06 27 54.8	-3.2
SJNN				Trac		06 27 58.2	
	comp=Z,94nm,0.7s						
DRLN	**Deer Lake**	**4.70**	**350**	PN	Pn	06 27 24.7	-0.4
DRLN				SN	Sn	06 28 16.0	-3.1
DRLN				Trac		06 28 17.2	
	comp=Z,19nm,0.3s						
HAL	**Halifax**	**5.26**	**272**	PN	Pn	06 27 32.4	-0.5
HAL				SN	Sn	06 28 28.8	-4.3
HAL				Trac		06 28 30.5	
	comp=Z,4.6nm,0.0s						
LMN	**Caledonia Moun**	**6.18**	**284**	PN	Pn	06 27 44.9	-0.7
LMN				SN	Sn	06 28 51.5	-4.3
LMN				Trac		06 28 54.2	
	comp=Z,22nm,0.5s						
ELNB	**Elgin, New Bru**	**6.42**	**284**	PN	Pn	06 27 48.2	-0.6
ELNB				SN	Sn	06 28 56.8	-4.8
ELNB				Trac		06 29 01.9	
	comp=Z,1.0nm,0.2s						
HKNB	**Havelock Quarr**	**6.60**	**285**	PN	Pn	06 27 44.9	-6.3
HKNB				SN	Sn	06 28 54.3	-12
HKNB				Trac		06 28 58.4	
	comp=Z,2.0nm,0.2s						
WCNB	**Wards Creek**	**6.65**	**282**	PN	Pn	06 27 51.1	-0.8
WCNB				SN	Sn	06 29 02.6	-4.6
WCNB				Trac		06 29 07.5	
	comp=Z,8.2nm,0.3s						
SRNB	**Snider Mountai**	**6.76**	**283**	PN	Pn	06 27 52.4	-1.0
SRNB				SN	Sn	06 29 04.6	-5.2
SRNB				Trac		06 29 06.6	
	comp=Z,8.0nm,0.3s						
BJBQ	**Baie Johan-Bee**	**7.20**	**324**	PN	Pn	06 27 59.2	-0.2
BJBQ				SN	Sn	06 29 15.5	-5.1
BJBQ				Trac		06 29 19.6	
	comp=Z,53nm,0.7s						
HSNB	**Heath Steele M**	**7.35**	**294**	PN	Pn	06 28 00.3	-1.2
HSNB				SN	Sn	06 29 18.1	-6.3
HSNB				Trac		06 29 22.1	
	comp=Z,1.2nm,0.1s						
PMAQ	**Port Menier**	**7.57**	**316**	PN	Pn	06 27 57.0	-7.5
PMAQ				SN	Sn	06 29 24.5	-5.3
PMAQ				Trac		06 29 29.2	
	comp=Z,713nm,1.7s						
MCNB	**McAdam**	**7.91**	**281**	SN	Sn	06 29 32.5	-5.8
SNFQ	**Sainte-Felicit**	**8.74**	**303**	SN	Sn	06 29 51.9	-6.7
ICQ	**Pointe Anglais**	**8.98**	**307**	SN	Sn	06 29 58.7	-5.7

IDC ***14*** *06:28:56.3±3.1, 54°.41N×87°.03E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=26.7km s-min=19.9km az=50.0*

ASRS 14 06:28:55.0±1.5, 54°.41N×86°.85E, h0km, M2.8, 2C-2D, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=70,slow=337,SNR=27	**1.28**	**250**	I	I	06 36 03.0	
ZAA0	**Zalesovo Array** 0.3nm,0.3s,baz=67,slow=16	**1.28**	**250**	⇓Pn	Pn	06 29 20.3	+0.2
ZAA0	1.2nm,0.3s			⇓Sn	Sn	06 29 43.4	+5.4
ZALV	**Zalesovo Beam** 4.0nm,0.3s,baz=68,slow=16,SNR=25	**1.28**	**250**	Pg	Pn	06 29 20.5	+0.4
ZALV				Lg	Lg	06 29 41.1	
	3.1nm,0.3s,baz=71,slow=27,SNR=7.7						
KURBB	**Kurchatov Arra** 0.3nm,0.3s,baz=54,slow=14,SNR=10	**6.34**	**237**	Pn	Pn	06 30 33.1	+3.5
KURBB				Sn	Sn	06 31 44.5	+1.9
	0.1nm,0.3s,baz=92,slow=27,SNR=1.8 1.6nm,0.4s						
KURBB	**Kurchatov Arra** 1.7nm,0.3s	**6.34**	**237**	⇑Pn	Pn	06 30 31.0	+1.4
KURBB	2.5nm,0.5s			⇑Sn	Sn	06 31 46.0	+3.5
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=23,slow=14,SNR=2.5 0.2nm,0.3s	**8.16**	**203**	Pn	Pn	06 30 57.4	+2.8

CATAC ***14*** *06:47:04.6±0.8, 14°N±4°×9°1W±°, h18km±5km, M3.1/12, MLv3.1/12, Error ellipse: s-maj=8.5km s-min=3.3km az=28.8, confirmed*
GCG ***14*** *06:47:05.3±1.7, 13°.73N×91°.00W, h58km±22km, MD3.6, ML3.4*
SNET ***14*** *06:47:09.0±1.0, 13°.66N×90°.70W, h28km±11km, ML2.9*

ISC 14 06:47:05.2±2.1, 13°.6N±0°.1×90°.94W±0°.06, h23km±15km, n38, σ1ᵍ33/44, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.43**	**97**	*i* P	**Pn**	**06 47 16.1**	**+0.1**
ESSG	**Sabana Grande**	**0.77**	**8**	*i* P	**Pb**	**06 47 19.4**	**-0.6**
FG16	**Alotenango, Sa**	**0.77**	**32**	*e*P	**Pn**	**06 47 20.9**	**0.0**
PCG5	**San Vicente Pa**	**0.81**	**42**	*e*P	**Pb**	**06 47 20.0**	**-0.7**
STG8	**El Palmar, Qui**	**0.92**	**334**	*i* P	**Pn**	**06 47 25.9**	**+2.9**
STG8				*e*S	**Sn**	**06 47 41.0**	**+5.4**
STG8	comp=N,508nm,0.2s			IAML		06 47 46.8	
FAME	**Alcaldia de Sa**	**0.92**	**76**	P	**Pn**	**06 47 22.4**	**-0.5**
FAME	**Alcaldia de Sa**	**0.92**	**76**	S	**Sb**	**06 47 35.4**	**+0.9**
NUBE	**Las Nubes**	**1.16**	**76**	*e*P	**Pn**	**06 47 26.0**	**-0.2**
NUBE				*e*S	**Sn**	**06 47 39.8**	**-1.6**
NUBE	**Las Nubes**	**1.16**	**76**	*e*P	**Pn**	**06 47 26.1**	**-0.2**
NUBE	**Las Nubes**	**1.16**	**76**	P	**Pn**	**06 47 26.0**	**-0.2**
NUBE	**Las Nubes**	**1.16**	**76**	S	**Sn**	**06 47 41.6**	**+0.2**
RTAL	**Retalhuleu**	**1.16**	**321**	S	**Sn**	**06 47 39.1**	**-2.2**
LOAL	**Lomas de Alarc**	**1.19**	**71**	*e*P	**Pn**	**06 47 26.1**	**-0.3**
LOAL				*e*S	**Sn**	**06 47 40.8**	**-1.1**
LOAL	**Lomas de Alarc**	**1.19**	**71**	P	**Pb**	**06 47 27.2**	**+0.1**
LOAL	**Lomas de Alarc**	**1.19**	**71**	S	**Sb**	**06 47 43.0**	**+0.9**
SLOZ	**Alcaldia de Sa**	**1.19**	**70**	P	**Pn**	**06 47 24.9**	**-1.7**
SLOZ	**Alcaldia de Sa**	**1.19**	**70**	S	**Sn**	**06 47 41.6**	**-0.4**
SOKI	**Kika Raxquin**	**1.28**	**339**	*e*P	**Pb**	**06 47 27.5**	**-1.3**
SOKI				*i* S	**Sn**	**06 47 42.9**	**-1.8**
RTR	**El Retiro**	**1.28**	**77**	*e*P	**Pn**	**06 47 28.4**	**+0.4**
CEVE	**Cerro Verde**	**1.29**	**81**	*e*P	**Pn**	**06 47 28.4**	**+0.2**
CEVE	**Cerro Verde**	**1.29**	**81**	P	**Pn**	**06 47 28.3**	**+0.2**
CEVE	**Cerro Verde**	**1.29**	**81**	S	**Sb**	**06 47 46.3**	**+0.9**
RBDL	**Robledal**	**1.31**	**68**	*e*P	**Pn**	**06 47 28.7**	**+0.4**
RBDL				*e*S	**Sn**	**06 47 43.4**	**-1.8**
SNJE	**San Jose**	**1.32**	**79**	*e*P	**Pn**	**06 47 28.6**	**+0.2**
UNIC	**Universidad Ca

QSPA	**South Pole Qui**	**72.06**	**180**	P	**P**	**07 00 42.3**	**-1.0**
QSPA				IAmb	IAmb	07 00 47.9	
	comp=Z,3.8nm,0.9s						
TPUB	**Ta-pu**	**72.57**	**302**	P	**P**	**07 00 46.3**	**-0.6**
PETK	**Petropavlovsk-**	**73.84**	**345**	P	**P**	**07 00 53.4**	**-0.1**
	comp=Z,7.1nm,0.9s,baz=117,slow=7.0,SNR=5.1						
	comp=Z,7.1nm,0.9s						
PETK	**Petropavlovsk-**	**73.84**	**345**	P	**P**	**07 00 53.1**	**-0.3**
KMRM	**Mail Ridge**	**76.87**	**40**		**P**	**07 01 10.8**	**0.0**
KMRM				IAmb	IAmb	07 01 12.6	
	comp=Z,7.6nm,0.8s						
MDPB	**Devils Postpil**	**78.31**	**44**	P	**P**	**07 01 18.9**	**0.0**
NVAR	**Mina Array Bea**	**79.26**	**44**	P	**P**	**07 01 24.1**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=224,slow=8.6,SNR=23						
	comp=Z,1.9nm,0.7s						
J05D	**Fort Rock, OR**	**80.19**	**38**		**P**	**07 01 28.7**	**+0.1**
J05D				IAmb	IAmb	07 01 29.8	
	comp=Z,6.5nm,0.8s						
I07A	**Izee**	**81.67**	**38**		**P**	**07 01 36.1**	**0.0**
M19K	**Big River Lodg**	**81.82**	**11**	P	**P**	**07 01 35.7**	**-0.7**
M19K				IAmb	IAmb	07 02 05.0	
	comp=Z,18nm,1.4s						
BELA	**Belgrano 2**	**82.04**	**173**	P	**P**	**07 01 36.5**	**-0.9**
BELA				IAmb	IAmb	07 01 38.2	
	comp=Z,8.6nm,1.5s						
SUA	**Susitna One**	**82.14**	**13**	P	**P**	**07 01 36.7**	**-1.5**
SUA				IAmb	IAmb	07 01 53.7	
	comp=Z,42nm,1.4s						
G08A	**Pilot Rock**	**82.68**	**38**		**P**	**07 01 40.4**	**-0.8**
G08A				IAmb	IAmb	07 01 42.4	
	comp=Z,5.8nm,1.2s						
MAW	**Mawson**	**83.89**	**200**	P	**P**	**07 01 47.7**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=67,slow=4.4,SNR=4.8						
	comp=Z,1.9nm,0.8s						
O28M	**Mount Upton**	**84.19**	**18**	P	**P**	**07 01 48.3**	**-0.4**
O28M				IAmb	IAmb	07 02 28.1	
	comp=Z,29nm,1.4s						
RND	**Reindeer**	**84.28**	**13**	P	**P**	**07 01 48.6**	**-0.1**
RND				IAmb	IAmb	07 01 48.8	
	comp=Z,9.2nm,0.8s						
TXAR	**Lajitas Array**	**85.77**	**57**	P	**P**	**07 01 57.9**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=220,slow=5.7,SNR=22						
	comp=Z,1.8nm,0.8s						
ILAR	**Eielson Array**	**85.89**	**13**	P	**P**	**07 01 55.3**	**-1.2**
	comp=Z,2.2nm,1.0s,baz=240,slow=4.6,SNR=7.2						
	comp=Z,2.2nm,1.0s						
PDAR	**Pinedale Array**	**87.19**	**43**	P	**P**	**07 02 02.6**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=230,slow=3.2,SNR=7.3						
	comp=Z,0.6nm,0.7s						
HHC	**Hu-ho-hao-te**	**87.56**	**314**	*e*P	**P**	**07 02 05.8**	**+0.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,5.7s						
CMAR	**Chiang Mai Arr**	**89.22**	**290**	P	**P**	**07 02 15.4**	**+2.3**
	comp=Z,1.5nm,0.3s,baz=115,slow=3.0,SNR=14						
	comp=Z,1.5nm,0.3s						
PZH	**PanZhiHua**	**89.48**	**298**	P	**P**	**07 02 14.8**	**+0.4**
PLCA	**Paso Flores**	**91.04**	**134**	P	**P**	**07 02 19.2**	**-2.1**
PLCA				IAmb	IAmb	07 02 37.1	
	comp=Z,4.5nm,1.4s						
F31M	**Tsiigehtchic**	**91.18**	**16**		**P**	**07 02 20.2**	**-0.9**
F31M				IAmb	IAmb	07 02 21.4	
	comp=Z,20nm,1.4s						
LPAZ	**La Paz**	**103.07**	**112**	Pdiff	**Pdif**	**07 03 20.6**	**+4.0**
	comp=Z,0.5nm,0.5s,baz=276,slow=6.1,SNR=5.8						
ARCES	**ARCESS Array B**	**126.45**	**350**	PKP	**PKPdf**	**07 08 15.2**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=45,slow=1.4,SNR=8.0						
BRTR	**Keskin Array B**	**145.07**	**315**	PKP	**PKPdf**	**07 08 51.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=124,slow=4.4,SNR=7.3						
GERES	**GERESS Array B**	**147.77**	**345**	PKPbc	**PKPbc**	**07 08 58.8**	**0.0**
	comp=Z,1.6nm,0.5s,baz=44,slow=4.1,SNR=11						
WTTA	**Wattenberg**	**149.73**	**347**	*e*PKiKP	**PKPbc**	**07 09 03.9**	**+0.2**
	comp=Z,6.6nm,0.5s						
MYKA	**Terra Mystica**	**149.84**	**344**	*e*PKP	**PKPbc**	**07 09 03.3**	**-0.6**
	comp=Z,5.9nm,0.8s						
SQTA	**Sankt Quirin**	**149.87**	**347**	*e*PKiKP	**PKPbc**	**07 09 04.1**	**+0.1**
	comp=Z,7.2nm,0.8s						
ABTA	**Abfaltersbach**	**150.02**	**345**	*e*PKP	**PKPbc**	**07 09 04.0**	**-0.3**
	comp=Z,6.0nm,0.6s						

ASRS **14** *06:59:38.0±1.6,54.°16N×86.°47E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 06:59:38.9±2.9, 54.°12N×86.°56E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=23.9km s-min=14.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**262**	I	I	07 05 21.9	
	baz=82,slow=338,SNR=11						
ZALV	**Zalesovo Beam**	**1.04**	**261**	Pg	Pg	06 59 57.6	-1.3
	0.8nm,0.3s,baz=82,slow=17,SNR=5.8						
ZALV				Lg	Lg	07 00 14.2	
	1.1nm,0.3s,baz=78,slow=29,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.04**	**238**	Pn	Pn	07 01 09.9	+0.5
	0.1nm,0.3s,baz=54,slow=13,SNR=2.0						
	0.3nm,0.2s						
MKAR	**Makanchi Array**	**7.82**	**202**	Pn	Pn	07 01 35.2	+1.3
	0.2nm,0.3s,baz=21,slow=14,SNR=7.1						
	0.2nm,0.3s						

ASRS **14** *07:13:30.0±1.6,49.°69N×81.°69E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

NNC **14** *07:13:35.0±2.1,49.°76N×81.°82E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=30.1km s-min=10.9km az=49.0, Suspected Mining explosion.*

IDC **14** *07:13:36.0±1.3,49.°77N×81.°69E, h0km, mbtmp2.6/3, ML2.0/3, Error ellipse: s-maj=18.4km s-min=10.0km az=60.0*

ISC 14 07:13:36.5±1.5, 49.°78N±0.°07×81.°66E±0.°09, h0km, n7, σ1ş36/7, 3C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.18**	**294**	Pn	**Pn**	**07 14 14.3**	**+0.4**
	0.3nm,0.3s,baz=112,slow=19,SNR=36						
KURBB				Lg	Lg	07 14 44.5	
	0.8nm,0.3s,baz=115,slow=30,SNR=17						
	5.6nm,0.6s						
KURBB	**Kurchatov Arra**	**2.18**	**294**	⇑Pn	**Pn**	**07 14 13.2**	**-0.8**
	17nm,0.6s						
KURBB				⇑Sn	**Sb**	**07 14 44.0**	**-0.3**
	76nm,0.7s						
MK31	**Makanchi Array**	**3.02**	**172**	Pn	**Pn**	**07 14 23.8**	**-1.7**
	3.5nm,0.8s,baz=4.7,slow=12,SNR=15						
MK31				⇑Lg	Lg	07 15 10.2	
	9.8nm,0.6s,baz=360,slow=27,SNR=16						
MKAR	**Makanchi Array**	**3.02**	**172**	Pn	**Pn**	**07 14 25.3**	**-0.2**
	0.6nm,0.3s,baz=354,slow=14,SNR=16						
MKAR				Sn	**Sn**	**07 15 04.2**	**+1.9**
	0.8nm,0.3s,baz=352,slow=25,SNR=7.7						
	2.6nm,0.7s						
ZAA0	**Zalesovo Array**	**4.61**	**24**	⇓Lg	Lg	07 16 02.7	
	1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**4.61**	**24**	Pn	**Pn**	**07 14 47.1**	**-0.3**
	0.2nm,0.3s,baz=213,slow=13,SNR=4.5						
ZALV				Lg	Lg	07 16 03.1	
	0.8nm,0.3s,baz=199,slow=26,SNR=12						
	0.7nm,0.5s						
I46RU	**ZALESOVO INFRA**	**4.61**	**24**	I	I	07 41 10.0	
	baz=198,slow=323,SNR=1.7						

IDC **14** *07:19:14.0±7.6,0.°22N×99.°13E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=385.2km s-min=25.0km az=55.0*

DJA **14** *07:19:30.3±0.6, 1.°N±4.°×10.°0E±.°, h136km±6km, M3.6/10, MLv3.6/10*

ISC 14 07:19:30.8±1.0, 0.°70N±0.°08×99.°61E±0.°08, h136km±8km, n13, σ1ş35/14, mb3.3/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.10**	**345**	P	**Pn**	**07 19 49.9**	**+0.7**
MNSI				S	**Sn**	**07 20 02.7**	**-0.5**
BKNI	**Bangkinang**	**1.48**	**104**	P	**Pn**	**07 19 57.8**	**-1.3**
PBSI	**Pulau Batu**	**1.52**	**241**	P	**Pn**	**07 19 59.2**	**-0.3**
PDSI	**Padang**	**1.81**	**152**	P	**Pn**	**07 20 04.5**	**+1.6**
SISI	**Saibi**	**2.08**	**194**	P	**Pn**	**07 20 04.8**	**-1.2**
GSI	**Gunungsitoli**	**2.12**	**287**	P	**Pn**	**07 20 06.4**	**-0.1**
KCSI	**Kotacane, Aceh**	**3.35**	**327**	P	**Pn**	**07 20 20.2**	**-2.0**
PPSI	**Pulau Pagai**	**3.46**	**173**	P	**Pn**	**07 20 22.4**	**-1.2**
SNSI	**Sinabang, Aceh**	**3.69**	**297**	P	**Pn**	**07 20 26.4**	**-0.2**
WRA	**Warramunga Arr**	**39.74**	**123**	P	**P**	**07 26 50.0**	**-0.4**
	0.1nm,0.5s,baz=300,slow=8.1,SNR=1.2						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**41.19**	**128**	P	**P**	**07 27 01.2**	**-1.0**
	0.1nm,0.3s,baz=305,slow=8.4,SNR=2.3						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**48.34**	**344**	P	**P**	**07 28 00.2**	**+1.7**
	0.5nm,0.3s,baz=160,slow=8.2,SNR=11						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**54.46**	**349**	P	**P**	**07 28 45.4**	**+1.5**
	1.3nm,0.4s,baz=176,slow=7.2,SNR=6.1						
	1.3nm,0.4s						

UPA **14** *07:27:31.5±3.3, 7.°62N×80.°94W, h0km±5km, MW4.1*
CATAC **14** *07:27:32.0±0.9, 8.°N±12.°×8.°1W±.°, h9km±12km, M3.9/11, MLv3.9/11, Error ellipse: s-maj=25.6km s-min=3.3km az=168.0, confirmed*
UCR **14** *07:27:32.3±1.5, 7.°51N×80.°92W, h12km±31km, MW3.9*
RSNC **14** *07:27:37.7±1.1, 7.°N±5.°×8.°1W±.°, h0km, M3.0, mB4.9, mb3.8, ML2.5, Mw(mB)4.2, MwMwp5.8, Mwp5.8*

ISC 14 07:27:32.0±0.8, 7.°60N±0.°03×80.°94W±0.°02, h13km±5km, n111, σ1ş41/146, 11C-8D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARI3	**Mariato, Verag**	**0.07**	**314**	*e*P	**Pg**	**07 27 34.7**	**0.0**
MARI3				*e*S	**Sg**	**07 27 36.8**	**+0.3**
CACAO	**El Cacao, Vera**	**0.27**	**162**	⇑*i*P	**Pg**	**07 27 38.0**	**+0.3**
CACAO				*e*S	**Sb**	**07 27 43.1**	**-0.2**
GMAL	**Guarumal, Vera**	**0.33**	**299**	⇑*e*P	**Pg**	**07 27 38.5**	**-0.3**
GMAL				*e*S	**Sg**	**07 27 43.9**	**+0.7**
RSUS3	**Rio de Jesus,**	**0.43**	**330**	⇑*e*P	**Pg**	**07 27 40.1**	**-0.6**
RSUS3				*e*S	**Sg**	**07 27 46.1**	**-0.4**
PESE3	**Pese, Herrera**	**0.45**	**47**	⇓*e*P	**Pg**	**07 27 41.1**	**+0.2**
PESE3				*e*S	**Sb**	**07 27 47.7**	**-0.6**
STIA3	**Santiago, Vera**	**0.49**	**357**	⇑*e*P	**Pg**	**07 27 41.3**	**-0.4**
STIA3				*e*S	**Sg**	**07 27 48.1**	**-0.2**
TOSI3	**Tonosi**	**0.54**	**111**	⇑*e*P	**Pg**	**07 27 42.7**	**+0.2**
TOSI3				*e*S	**Sb**	**07 27 52.2**	**+1.3**
MESA3	**La Mesa, Verag**	**0.59**	**336**	⇑*e*P	**Pg**	**07 27 42.7**	**-0.9**
MESA3				*e*S	**Sb**	**07 27 52.8**	**+0.2**
CHIT3	**Chitre**	**0.63**	**56**	⇓*i*P	**Pg**	**07 27 44.1**	**-0.2**
CHIT3				*e*S	**Sg**	**07 27 52.8**	**+0.2**
AZU	**Azuero**	**0.69**	**74**	⇓*i*P	**Pg**	**07 27 45.3**	**-0.2**
AZU				*e*S	**Sb**	**07 27 54.9**	**-0.4**
AZU				*e*S	**Sg**	**07 27 55.1**	**+0.5**
CRIS3	**El Cristo, Coc**	**0.72**	**27**	*e*P	**Pg**	**07 27 45.5**	**-0.6**
ACHO3	**Achotines, Los**	**0.79**	**104**	⇑*e*P	**Pg**	**07 27 46.9**	**-0.4**
ACHO3				*e*S	**Sb**	**07 27 58.9**	**+0.8**
PVID3	**Puerto Vidal,**	**0.79**	**304**	*e*P	**Pg**	**07 27 45.7**	**-1.8**
PEDA3	**Pedasi**	**0.91**	**95**	*e*P	**Pg**	**07 27 48.7**	**-1.0**
PEDA3				*e*S	**Sg**	**07 28 02.1**	**+0.3**
SAFE3	**Santa Fe, Vera**	**0.92**	**352**	*e*P	**Pb**	**07 27 48.3**	**-1.6**
PNME	**Penonome**	**1.07**	**35**	⇓*e*P	**Pb**	**07 27 51.5**	**-0.9**
PNME				*e*S	**Sb**	**07 28 05.7**	**-0.6**
REME3	**Remedios, Chir**	**1.08**	**305**	*e*P	**Pb**	**07 27 50.9**	**-1.6**
LOMA3	**Las Lomas, Chi**	**1.65**	**300**	*e*P	**Pg**	**07 28 04.3**	**+0.5**
PEDE3	**Pedregal, Chir**	**1.66**	**298**	*e*P	**Pn**	**07 28 01.8**	**+1.0**
PEDE3				*e*S	**Sb**	**07 28 23.5**	**+0.3**
LOCO3	**Loma Colorada,**	**1.67**	**299**	*e*P	**Pn**	**07 28 00.9**	**-0.1**
LOCO3				*e*S	**Sg**	**07 28 25.6**	**-0.1**
DVD	**David**	**1.71**	**299**	*e*P	**Pn**	**07 28 01.6**	**+0.1**
DVD				*e*S	**Sn**	**07 28 24.3**	**+1.1**
ZANG	**Zanguenga, Cho**	**1.71**	**38**	⇑*e*P	**Pn**	**07 28 02.3**	**+0.6**
ZANG				*e*S	**Sb**	**07 28 25.4**	**+0.5**
ZANG	**Zanguenga, Cho**	**1.71**	**38**	*e*P	**Pn**	**07 28 02.2**	**+0.6**
CHOR3	**La Chorrera**	**1.74**	**42**	*e*P	**Pb**	**07 28 03.5**	**-0.3**
CHOR3				*e*S	**Sg**	**07 28 27.5**	**-0.4**
PSOM3	**Paja de Sombre**	**1.74**	**308**	*e*P	**Pn**	**07 28 01.1**	**-0.8**
PSOM3				*e*S	**Sn**	**07 28 24.1**	**+0.0**
RBALA	**Bur**	**1.74**	**317**	⇑*i*P	**Pn**	**07 28 01.5**	**-0.5**
RBALA				*e*S	**Sn**	**07 28 24.2**	**+0.1**
PBNVO	**Pueblo Nuevo,**	**1.78**	**316**	⇑*e*P	**Pn**	**07 28 01.7**	**-0.8**
PBNVO				*e*S	**Sn**	**07 28 24.9**	**-0.1**
CHGR2	**Aguacate**	**1.78**	**318**	*e*P	**Pn**	**07 28 02.0**	**-0.5**
BAGA3	**Bagala, Chiriq**	**1.79**	**299**	*e*P	**Pn**	**07 28 03.3**	**+0.6**
TABO3	**Taboga, Panama**	**1.81**	**49**	*e*P	**Pg**	**07 28 06.5**	**-0.4**
TABO3				*e*S	**Sb**	**07 28 28.5**	**+0.8**
ARRA3	**Arraijan, Pana**	**1.86**	**43**	*e*P	**Pn**	**07 28 04.4**	**+0.8**
ARRA3				*e*S	**Sb**	**07 28 29.9**	**+0.9**
PTAR3	**Potrerillos Ar**	**1.88**	**305**	*e*P	**Pn**	**07 28 04.2**	**+0.2**
PTAR3				*e*S	**Sb**	**07 28 30.1**	**+0.3**
BQTLY	**Boquete Panama**	**1.89**	**307**	⇓*e*P	**Pn**	**07 28 03.8**	**-0.4**
LNBQ3	**Los Naranjos,**	**1.90**	**309**	*e*P	**Pn**	**07 28 03.8**	**-0.4**
LNBQ3				*e*S	**Sn**	**07 28 28.6**	**+0.5**
BCIP	**Isla Barro Col**	**1.90**	**35**	⇓*i*P	**Pn**	**07 28 05.1**	**+1.0**
BCIP				*e*S	**Sb**	**07 28 30.7**	**+0.5**
BCIP	**Isla Barro Col**	**1.90**	**35**	P	**Pn**	**07 28 05.2**	**+1.1**
BCIP				S	**Sb**	**07 28 30.2**	**0.0**
BCIP	**Isla Barro Col**	**1.90**	**35**	*e*P	**Pn**	**07 28 04.7**	**+0.6**
BCIP				*e*S	**Sb**	**07 28 30.3**	**+0.1**
FLAM	**Flamenco Islan**	**1.91**	**47**	*e*P	**Pb**	**07 28 05.5**	**-1.2**
FLAM				*e*S	**Sb**	**07 28 31.4**	**+1.1**
MLIR	**Monte Lirio**	**1.95**	**33**	*e*P	**Pb**	**07 28 06.3**	**-1.2**
UPA	**Univ. de Panam**	**1.95**	**45**	*e*P	**Pn**	**07 28 06.0**	**+1.1**
LMNES	**Limones**	**1.96**	**285**	*e*P	**Pn**	**07 28 05.0**	**0.0**
LESP3	**La Esperanza,**	**2.00**	**294**	*e*P	**Pn**	**07 28 05.6**	**+0.1**
LESP3				*e*S	**Sg**	**07 28 36.0**	**-0.3**
FRIJ	**El Hiral**	**2.01**	**37**	*e*P	**Pn**	**07 28 06.8**	**+1.2**
BC3P	**Paso Ancho**	**2.04**	**306**	⇓*e*P	**Pn**	**07 28 06.8**	**+0.5**
BC3P				*e*S	**Sb**	**07 28 35.1**	**+0.5**
BRU2	**Volcan**	**2.10**	**304**	⇓*i*P	**Pn**	**07 28 07.3**	**+0.3**
BRU2				*e*S	**Sb**	**07 28 36.7**	**+0.7**
BRU2	**Volcan**	**2.10**	**304**	P	**Pn**	**07 28 07.4**	**+0.4**
BRU2	**Volcan**	**2.10**	**304**	S	**Sn**	**07 28 34.8**	**+1.7**
BRU2	**Volcan**	**2.10**	**304**	*e*S	**Sb**	**07 28 36.2**	**+0.1**
BRU2				⇑*i*P	**Pn**	**07 28 07.0**	**0.0**
CDITO	**Canoas**	**2.14**	**297**	P	**Pn**	**07 28 08.3**	**+0.8**
CDITO	**Canoas**	**2.14**	**297**	S	**Sb**	**07 28 38.2**	**+1.1**
MLIR3	**Monte Lirio, C**	**2.21**	**303**	*e*P	**Pn**	**07 28 11.0**	**-0.9**
CAZU	**Cerro Azul, Pa**	**2.22**	**43**	*e*P	**Pn**	**07 28 09.9**	**+1.2**
NELY	**Ciudad Neily**	**2.24**	**298**	*e*P	**Pn**	**07 28 09.3**	**+0.5**
RSRNO	**Rio Sereno**	**2.25**	**303**	*e*P	**Pn**	**07 28 10.6**	**+1.6**
ALCO	**Alturas Coton,**	**2.30**	**306**	*e*P	**Pn**	**07 28 09.7**	**-0.2**
VITO	**San Vito**	**2.34**	**301**	*e*P	**Pn**	**07 28 11.4**	**+1.1**
CNI2	**El Empalme, Bo**	**2.36**	**320**	*e*P	**Pn**	**07 28 12.2**	**+1.8**
FITO	**Golfito**	**2.41**	**295**	*e*P	**Pn**	**07 28 12.3**	**+1.1**
PIRO	**Carate, Puerto**	**2.50**	**289**	*e*P	**Pn**	**07 28 13.3**	**+1.0**
PIRO	**Carate, Puerto**	**2.50**	**289**	P	**Pn**	**07 28 13.4**	**+1.0**
PIRO	**Carate, Puerto**	**2.50**	**289**	S	**Sn**	**07 28 44.9**	**+2.1**
PIRO	**Carate, Puerto**	**2.50**	**289**	*e*P	**Pn**	**07 28 12.4**	**-0.1**
RGM0	**Gandoca**	**2.57**	**320**	S	**Sb**	**07 28 48.6**	**-1.0**
RGM0	**Gandoca**	**2.57**	**320**	*e*P	**Pn**	**07 28 14.8**	**+1.5**
EDP2	**Potrero Grande**	**2.62**	**303**	*e*P	**Pn**	**07 28 15.1**	**+1.0**
BRIBI	**Bribri**	**2.73**	**317**	*e*P	**Pn**	**07 28 18.7**	**-2.0**
FIMO	**Fila Mora**	**2.75**	**300**	*e*P	**Pn**	**07 28 16.6**	**+0.5**
DRK0	**Durika**	**2.81**	**306**	*e*P	**Pn**	**07 28 18.0**	**+1.1**
DRK0	**Durika**	**2.81**	**306**	P	**Pn**	**07 28 17.8**	**+1.0**
DRK0	**Durika**	**2.81**	**306**	S	**Sn**	**07 28 54.0**	**+3.2**
DRK0	**Durika**	**2.81**	**306**	*e*P	**Pn**	**07 28 17.5**	**+0.7**
CEUA	**Cerro Uatsi, L**	**2.81**	**316**	*e*P	**Pn**	**07 28 19.8**	**+3.0**
PANP	**Palmar Norte**	**2.83**	**299**	*e*P	**Pn**	**07 28 18.3**	**+1.4**
BURE	**Buenos Aires**	**2.84**	**304**	*e*P	**Pn**	**07 28 18.6**	**+1.5**
TOTI	**Torti**	**2.92**	**63**	*e*P	**Pn**	**07 28 22.1**	**-1.9**
EDPE	**Pejibaye, P**	**3.02**	**301**	*e*P	**Pn**	**07 28 21.8**	**+2.1**
OCHAL	**Ojochal**	**3.06**	**299**	P	**Pn**	**07 28 22.7**	**+2.6**
SAJE	**San Jernim**	**3.07**	**304**	*e*P	**Pn**	**07 28 21.2**	**+0.7**
PTAC	**Punta Ardita,**	**3.14**	**98**	P	**Pn**	**07 28 20.0**	**-1.3**
PTAC				S	**Sn**	**07 28 55.5**	**-3.2**
VERH	**Veragua Rainfo**	**3.20**	**316**	*e*P	**Pn**	**07 28 24.3**	**+2.2**
BUS1	**Rivas**	**3.38**	**305**	*e*P	**Pn**	**07 28 26.3**	**+1.3**
VERB	**Verbena**	**3.58**	**311**	*e*P	**Pn**	**07 28 31.6**	**+4.2**
PIEC	**Cerro El Cedra**	**3.59**	**304**	*e*P	**Pn**	**07 28 29.1**	**+1.4**
RESJ	**San Isidro (Tu**	**3.60**	**312**	*e*P	**Pn**	**07 28 29.3**	**+1.7**
LLNJ	**Naranjito**	**3.63**	**301**	*e*P	**Pn**	**07 28 30.1**	**+2.1**
ABRB	**Las Abras (San**	**3.63**	**311**	*e*P	**Pn**	**07 28 31.5**	**+3.2**
PCAYA	**Pacayas**	**3.65**	**309**	*e*P	**Pn**	**07 28 31.7**	**+3.3**
CVTV	**Tajo**	**3.66**	**311**	*e*P	**Pn**	**07 28 31.5**	**+2.9**
CAP2	**Capurgana**	**3.70**	**73**	*e*P	**Pn**	**07 28 30.9**	**+2.0**
CAPC	**Capurgana**	**3.70**	**74**	P	**Pn**	**07 28 30.4**	**+1.5**
CAPC				S	**Sn**	**07 29 10.4**	**-2.1**
CVIMO	**Finca Echandi**	**3.82**	**309**	*e*P	**Pb**	**07 28 35.7**	**-3.7**
ACOS	**Acosta**	**3.86**	**305**	*e*P	**Pn**	**07 28 32.4**	**+1.2**
VARE2	**V. Arenal**	**4.69**	**308**	*e*P	**Pn**	**07 28 45.6**	**+3.0**
CEDE	**Laguna Cedeo**	**4.69**	**308**	*e*P	**Pn**	**07 28 43.6**	**+1.0**
JTS	**Las Juntas de**	**4.78**	**304**	*e*P	**Pn**	**07 28 46.6**	**+2.9**
CUI	**Cuipilapa**	**5.16**	**306**	*e*P	**Pn**	**07 28 50.3**	**+1.3**
CBOC	**Ciudad Bolivar**	**5.19**	**109**	P	**Pn**	**07 28 49.7**	**+0.1**
JUD3	**Juan Diaz 3**	**5.21**	**300**	*e*P	**Pn**	**07 28 53.0**	**+3.3**
UREC	**San Jos de Ur**	**5.36**	**88**	P	**Pn**	**07 28 53.9**	**+2.0**
YOTC	**Yotoco, Valle**	**5.82**	**128**	P	**Pn**	**07 28 57.7**	**-0.5**
	4.3nm,0.5s						
GUY2C	**Guyana, Caldas**	**6.03**	**113**	P	**Pn**	**07 29 03.4**	**+2.0**
	6.2nm,0.8s						
JAMC	**Jamundi, Valle**	**6.09**	**136**	P	**Pn**	**07 29 01.7**	**-0.3**
	6.8nm,2.0s						
SJCC	**San Jacinto, C**	**6.14**	**68**	P	**Pn**	**07 29 02.2**	**-0.3**
	512nm7.5nm,0.6s						
PTBC	**PUERTO BERRIO,**	**6.52**	**99**	P	**Pn**	**07 29 11.4**	**+3.6**
	2.3nm,0.7s						
POPC	**Popayan, Colom**	**6.58**	**140**	P	**Pn**	**07 29 07.4**	**-1.4**
	2.7nm,0.7s						
ORTC	**Ortega, Tolima**	**6.75**	**123**	P	**Pn**	**07 29 13.3**	**+2.3**
	9.3nm,0.7s						
PRAC	**Prado**	**7.16**	**122**	P	**Pn**	**07 29 18.6**	**+2.0**
	4.4nm,0.5s						
OCAC	**Ocana**	**7.58**	**85**	P	**Pn**	**07 29 24.7**	**+2.3**
	13nm,0.6s						
GARC	**Garzon, Huila**	**7.64**	**134**	P	**Pn**	**07 29 25.6**	**+2.2**
FLOC	**Florencia**	**7.97**	**138**	P	**Pn**	**07 29 29.3**	**+1.6**
	4.5nm,1.3s						
PAMC	**Pamplona, Colo**	**8.18**	**91**	P	Pn	07 29 36.1	+5.2

RSNC 14 07:29:14.5±0.0, 5.°N±1.°×7.°4W±.°, h0km±2km, M1.6, ML1.4, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIC	**Chingaza**	**0.23**	**302**	P	Pg	07 29 19.2	+0.4
CHIC				S	Sg	07 29 22.2	+0.4
VILC	**Villavicencio,**	**0.42**	**201**	P	Pg	07 29 21.9	-0.8
VILC				S	Sg	07 29 29.7	+1.5
CVER	**Cruz Verde, Cu**	**0.53**	**271**	P	Pb	07 29 26.0	-1.0
CVER	**Cruz Verde, Cu**	**0.53**	**271**	P	Pb	07 29 26.0	-1.0
CVER				S	Sb	07 29 34.6	-0.8
RUSC	**La Rusia**	**1.45**	**18**	P	Pg	07 29 39.7	-2.6
RUSC				S	Sg	07 30 00.9	-0.2
PRAC	**Prado**	**1.56**	**240**	P	Pn	07 29 43.3	-0.2
PRAC				S	Sg	07 30 08.7	+4.1
ORTC	**Ortega, Tolima**	**1.80**	**251**	P	Pn	07 29 47.3	+0.4
ORTC				S	Sg	07 30 13.7	+1.2
GUY2C	**Guyana, Caldas**	**1.95**	**291**	P	Pb	07 29 51.6	+0.4
GUY2C				S	Sg	07 30 17.7	+0.4
PTBC	**PUERTO BERRIO,**	**2.21**	**336**	P	Pn	07 29 50.0	-2.5
PTBC				S	Sn	07 30 21.9	+1.3
MACC	**Macarena, Meta**	**2.37**	**187**	P	Pn	07 29 56.3	+1.6
MACC				S	Sn	07 30 21.6	-2.9

IDC **14** *07:30:29.8±1.2, 36.°45N×142.°70E, h0km, mb4.

	comp=Z,2.0nm,0.7s								
J17K	**VABM Dome**		**44.02**	**33**	P		**P**	**07 38 40.4**	**+2.1**
J17K					IAmb		IAmb	07 38 53.9	
	comp=Z,10nm,1.2s								
NRIK	**Noril'sk**		**44.25**	**335**	*i* P		**P**	**07 38 42.8**	**+2.7**
NRIK					pmax		pmax		
	comp=Z,2.0nm,0.9s								
C18K	**Utukok River**		**44.37**	**26**	P		**P**	**07 38 42.2**	**+1.0**
C18K					IAmb		IAmb	07 38 48.5	
	comp=Z,9.3nm,1.1s								
G18K	**Tagagawik**		**44.65**	**30**	P		**P**	**07 38 43.5**	**+0.1**
G18K					IAmb		IAmb	07 39 08.7	
	comp=Z,7.1nm,1.1s								
C19K	**Lookout Ridge**		**45.05**	**25**	P		**P**	**07 38 46.7**	**+0.1**
MK31	**Makanchi Array**		**45.32**	**303**⇑	*i* P		**P**	**07 38 52.1**	**+3.1**
MKAR	**Makanchi Array**		**45.32**	**303**	P		**P**	**07 38 49.5**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=89,slow=10,SNR=20								
	comp=Z,2.5nm,0.6s								
MKAR	**Makanchi Array**		**45.32**	**303**	*e*P		**P**	**07 38 52.6**	**+3.6**
MKAR					pmax		pmax		
	comp=Z,3.0nm,0.7s								
D19K	**Kuna River**		**45.42**	**26**	P		**P**	**07 38 49.9**	**+0.4**
D19K					IAmb		IAmb	07 39 11.5	
	comp=Z,9.3nm,1.1s								
E19K	**Redstone River**		**45.52**	**28**	P		**P**	**07 38 50.5**	**+0.3**
E19K					IAmb		IAmb	07 39 11.0	
	comp=Z,11nm,1.1s								
B20K	**Meade River**		**46.11**	**24**	P		**P**	**07 38 54.6**	**-0.2**
KURK	**Kurchatov**		**47.12**	**309**			**P**	**07 39 02.8**	**-0.2**
KURK	**Kurchatov**		**47.12**	**309**⇑	*i* P		**P**	**07 39 02.9**	**-0.2**
KURK					pmax		pmax		
	comp=Z,4.0nm,0.8s								
KURBB	**Kurchatov Arra**		**47.20**	**309**	P		**P**	**07 39 03.5**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=84,slow=7.7,SNR=14								
	comp=Z,1.8nm,0.4s								
ILAR	**Eielson Array**		**49.45**	**32**	P		**P**	**07 39 20.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=252,slow=5.6,SNR=5.2								
	comp=Z,0.6nm,0.7s								
ILAR	**Eielson Array**		**49.45**	**32**	P		**P**	**07 39 21.9**	**+1.0**
ILAR	**Eielson Array**		**49.45**	**32**	*e*P		**P**	**07 39 23.1**	**+2.2**
ILAR					pmax		pmax		
	comp=Z,1.0nm,0.9s								
TARG	**Taragay, Kyrgy**		**49.60**	**297**	P		**P**	**07 39 22.7**	**-0.1**
TARG					IAmb		IAmb	07 39 49.2	
	comp=Z,4.9nm,0.8s								
TARG	**Taragay, Kyrgy**		**49.60**	**297**	P		**P**	**07 39 22.7**	**-0.1**
TARG					pmax		pmax		
	comp=Z,5.0nm,0.8s								
DOT	**Dot Lake**		**50.73**	**33**	P		**P**	**07 39 30.2**	**-0.4**
DOT					IAmb		IAmb	07 39 36.6	
	comp=Z,9.5nm,0.9s								
AAK	**Ala-Archa**		**51.69**	**299**	*i* P		**P**	**07 39 41.1**	**+2.8**
AAK					pmax		pmax		
	comp=Z,2.0nm,0.9s								
BVAR	**Borovoye Array**		**51.75**	**313**	P		**P**	**07 39 37.9**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=67,slow=11,SNR=3.2								
	comp=Z,0.6nm,0.4s								
BORK	**Borovoye**		**51.79**	**313**⇓	*i* P		**P**	**07 39 39.9**	**+1.3**
BORK					pmax		pmax		
	comp=Z,1.0nm,0.9s								
ARSB	**Arslanbob**		**53.17**	**298**			**P**	**07 39 48.5**	**-0.7**
ARSB					IAmb		IAmb	07 40 17.7	
	comp=Z,5.8nm,0.8s								
ARSB	**Arslanbob**		**53.17**	**298**	P		**P**	**07 39 48.6**	**-0.7**
ARSB					pmax		pmax		
	comp=Z,6.0nm,0.8s								
WRA	**Warramunga Arr**		**56.62**	**189**	P		**P**	**07 40 13.4**	**-0.7**
WRA	**Warramunga Arr**		**56.62**	**189**	P		**P**	**07 40 13.4**	**-0.7**
ARTI	**Arti**		**57.61**	**319**	P		**P**	**07 40 20.0**	**-0.8**
ARTI	**Arti**		**57.61**	**319***c*	*i* P		**P**	**07 40 20.6**	**-0.2**
ARTI								07 41 16.4	
ARTI					S		**S**	**07 48 16.9**	**-1.2**
ARTI					SS		**SS**	**07 52 10.6**	**+2.9**
ARTI					pmax		pmax		
	comp=Z,4.0nm,0.7s								
AB31	**Akbulak array**		**59.12**	**311**	P		**P**	**07 40 31.0**	**-0.4**
AB31					IAmb		IAmb	07 40 42.7	
	comp=Z,2.9nm,0.8s								
AS31	**Alice Springs**		**60.34**	**189**	P		**P**	**07 40 39.5**	**-0.6**
KIRV	**Kirov**		**61.36**	**323**	*i* P		**P**	**07 40 46.6**	**0.0**
YKA	**Yellowknife Ar**		**63.81**	**30**	LR		LR	08 11 51.7	
	comp=Z,48nm,18.7s,baz=354,slow=39								
OBN	**Obninsk**		**69.20**	**324**	*e*P		**P**	**07 41 38.4**	**+0.9**
OBN					pmax		pmax		
	comp=Z,4.0nm,0.8s								
KBZ	**Khabaz**		**72.09**	**311**	P		**P**	**07 41 56.1**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=45,slow=1.4,SNR=1.8								
	comp=Z,2.1nm,0.8s								
KBZ	**Khabaz**		**72.09**	**311**	*i* P		**P**	**07 41 56.2**	**+0.9**
KBZ					pmax		pmax		
	comp=Z,4.0nm,0.9s								
NVAR	**Mina Array Bea**		**74.52**	**54**	P		**P**	**07 42 10.7**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=279,slow=5.8,SNR=5.4								
	comp=Z,0.5nm,0.6s								
NVAR	**Mina Array Bea**		**74.52**	**54**	P		**P**	**07 42 10.2**	**+0.1**
AKASG	**Malin Array Be**		**75.41**	**323**	P		**P**	**07 42 14.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=46,slow=5.8,SNR=4.6								
	comp=Z,0.6nm,0.5s								
AKASG	**Malin Array Be**		**75.41**	**323**	*e*P		**P**	**07 42 13.5**	**-1.2**
AKASG					pmax		pmax		
	comp=Z,1.0nm,0.4s								
AKBB	**Malin Array Si**		**75.41**	**323**	*i* P		**P**	**07 42 16.8**	**+2.1**
AKBB					pmax		pmax		
	comp=Z,2.0nm,0.7s								
TXAR	**Lajitas Array**		**89.66**	**53**	P		**P**	**07 43 29.9**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=292,slow=2.7,SNR=7.3								
	comp=Z,0.6nm,0.8s								
LPAZ	**La Paz**		**146.08**	**62**	PKPbc		**PKPab**	**07 50 12.3**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=47,slow=3.7,SNR=6.3								

*IDC **14** 07:33:23.7±0.6, 9.˚54S×122.˚25E, h0km, mb4.4/10, mbtmp4.4/12, ML4.3/2, MS3.1/4, Error ellipse: s-maj=45.0km s-min=14.1km az=75.0*
*NEIC **14** 07:33:32.7±2.1, 9.˚85S±0.˚05×122.˚15E±0.˚06, h35km±2km, mb4.5/18, Error ellipse: s-maj=11.8km s-min=6.7km az=55.0*
*DJA **14** 07:33:33.6±0.2, 10.˚S±2.˚×12.˚2E±.˚, h70km±4km, M4.4/19, mB5.2/5, mb4.5/17, MLv4.3/19, Mw(mB)4.5/5*
ISC 14 07:33:31.3±0.4, 9.˚92S±0.˚05×122.˚30E±0.˚05, h35km, n66, σ2ϟ46/65, mb4.4/19, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.28**	**357**		**Pn**	**07 33 53.2**	**+0.6**
MMRI				Sn	**Sn**	**07 34 07.5**	**-1.1**
MMRI	**Maumere**	**1.28**	**357**	P	**Pn**	**07 33 53.5**	**+0.8**
MMRI				S	**Sn**	**07 34 08.9**	**+0.3**
EDFI	**Ende, Flores**	**1.31**	**332**	P	**Pn**	**07 33 53.3**	**+0.1**
BATI	**Baumata**	**1.37**	**102**	Pn	**Pn**	**07 33 58.5**	**+4.4**
	90nm,0.3s,baz=263,slow=5.4,SNR=10						
BATI				LR	LR	07 34 23.5	
	comp=Z,58nm,21.6s,baz=276,slow=39						
BATI	**Baumata**	**1.37**	**102**	P	**Pn**	**07 33 58.0**	**+4.0**
BASI	**Baing, Sumba**	**1.72**	**260**	P	**Pn**	**07 34 03.0**	**+4.2**
SOEI	**Soe**	**1.94**	**85**		**Pn**	**07 34 05.5**	**+3.6**
SOEI				Sn	**Sn**	**07 34 28.5**	**+3.2**
SOEI	**Soe**	**1.94**	**85**	P	**Pn**	**07 34 05.4**	**+3.4**
WSI	**Waingapu**	**1.99**	**277**	P	**Pn**	**07 34 05.4**	**+2.9**
WBSI	**Waikabubak, Su**	**2.88**	**275**	P	**Pn**	**07 34 17.1**	**+2.3**
BSSI	**Bau Bau, Buton**	**4.16**	**334**	P	**Pn**	**07 34 34.5**	**+2.2**
BBSI	**Bau Bau**	**4.41**	**3**	P	**Pn**	**07 34 37.0**	**+1.2**
PLAI	**Plampang**	**4.59**	**283**	P	**Pn**	**07 34 40.8**	**+2.4**
BKSI	**Bulukumba**	**5.05**	**335**	P	**Pn**	**07 34 45.9**	**+1.3**
TWSI	**Taliwang, Sumb**	**5.48**	**282**	P	**Pn**	**07 34 53.0**	**+2.5**
	2μm57nm,0.7s						
KAPI	**Kappang**	**5.49**	**332**	Pn	**Pn**	**07 34 51.8**	**+1.1**
	5.0nm,0.3s,baz=175,slow=9.6,SNR=5.9						
KAPI				LR	LR	07 37 13.0	
	comp=Z,113nm,19.6s,baz=170,slow=45						
BNSI	**Bone**	**5.90**	**338**	P	**Pn**	**07 34 59.0**	**+2.7**
	0.1nm38nm,1.0s						
KDI	**Kendari**	**5.93**	**3**	P	**Pn**	**07 34 57.7**	**+1.0**
NLAI	**Namlea**	**8.17**	**36**	P	**Pn**	**07 35 29.4**	**+1.9**
JAGI	**Jajag, Banyuwa**	**8.17**	**279**	Pn	**Pn**	**07 35 27.3**	**-0.3**
JAGI	**Jajag, Banyuwa**	**8.17**	**279**	P	**Pn**	**07 35 27.5**	**-0.1**
	18nm,0.5s						
FITZ	**Fitzroy Crossi**	**8.75**	**159**	Pn	**Pn**	**07 35 37.9**	**+2.4**
	1.9nm,0.3s,baz=2.6,slow=9.5,SNR=46						
FITZ				Sn	**Sn**	**07 37 09.7**	**-3.3**
	10nm,0.3s,baz=299,slow=5.4,SNR=13						
	6.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**8.75**	**159**		**Pn**	**07 35 38.0**	**+2.5**
MTN	**Manton Dam**	**9.13**	**109**		**Pn**	**07 35 39.5**	**-1.2**
PCI	**Palu**	**9.28**	**345**	P	**Pn**	**07 35 43.4**	**+0.6**
MBWA	**Marble Bar**	**11.45**	**192**	Pn	**Pn**	**07 36 15.5**	**+3.1**
MTKI	**Muara Teweh, K**	**11.57**	**320**	P	**Pn**	**07 36 15.3**	**+1.2**
FAKI	**Fak Fak**	**12.08**	**56**	Pn	**Pn**	**07 36 20.1**	**-1.0**
FAKI	**Fak Fak**	**12.08**	**56**	P	**Pn**	**07 36 21.6**	**+0.5**
	16nm,0.8s						
WB0	**Warramunga Arr**	**15.24**	**131**		**Pn**	**07 37 00.3**	**-3.7**
WB0				IAmb	IAmb	07 37 09.0	
	comp=Z,6.9nm,0.7s						
WRA	**Warramunga Arr**	**15.31**	**132**	Pn	**Pn**	**07 37 01.1**	**-3.8**
	comp=Z,1.0nm,0.3s,baz=303,slow=14,SNR=53						
WRA				Sn	Sn	07 39 40.5	-13
	comp=Z,1.9nm,0.3s,baz=305,slow=24,SNR=24						
WRA				LR	LR	07 44 18.1	
	comp=Z,82nm,18.6s,baz=62,slow=42						
WRA	**Warramunga Arr**	**15.31**	**132**		**Pn**	**07 37 00.3**	**-4.6**
AS31	**Alice Springs**	**17.60**	**142**		**Pn**	**07 37 33.6**	**-0.3**
ASAR	**Alice Springs**	**17.60**	**142**	P	**Pn**	**07 37 33.3**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=320,slow=12,SNR=56						
ASAR				S	**Sn**	**07 40 39.9**	**-9.1**
	comp=Z,5.7nm,0.7s,baz=319,slow=25,SNR=10						
ASAR				LR	LR	07 44 58.3	
	comp=Z,58nm,20.0s,baz=324,slow=39						
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**17.60**	**142**	P	**Pn**	**07 37 34.1**	**+0.1**
KASI	**Kota Agung**	**18.17**	**283**	P	**P**	**07 37 41.5**	**+0.4**
	comp=Z,22nm,1.1s						
FORT	**Forrest**	**21.44**	**166**	P	**P**	**07 38 16.9**	**+0.4**
FORT				IAmb	IAmb	07 38 18.0	
	comp=Z,8.1nm,0.8s						
NWAO	**Narrogin (SRO)**	**23.37**	**191**	P	**P**	**07 38 37.5**	**+0.6**
	comp=Z,5.8nm,0.3s,baz=23,slow=5.2,SNR=6.9						
	comp=Z,5.8nm,0.3s						
PMG	**Port Moresby**	**24.51**	**91**	LR	LR	07 49 40.2	
	comp=Z,77nm,18.1s,baz=174,slow=40						
CTAO	**Charters Tower**	**25.21**	**116**	P	**P**	**07 38 53.5**	**-0.6**
CTAO				IAmb	IAmb	07 38 54.8	
	comp=Z,10.0nm,0.8s						
GSI	**Gunungsitoli**	**27.02**	**293**	P	**P**	**07 39 08.7**	**-1.8**
GSI				IAmb	IAmb	07 39 19.8	
	comp=Z,21nm,1.4s						
STKA	**Stephens Creek**	**28.23**	**144**	P	**P**	**07 39 21.1**	**0.0**
	comp=Z,2.7nm,0.5s,baz=314,slow=9.2,SNR=13						
	comp=Z,2.7nm,0.5s						
TWG	**Pinlang**	**32.56**	**358**	P	**P**	**07 40 00.8**	**+1.4**
TWG				IAmb	IAmb	07 40 27.0	
	comp=Z,19nm,1.0s						
SSLB	**Suanglung**	**33.52**	**358**	P	**P**	**07 40 09.1**	**+1.3**
TOO	**Toolangi**	**34.56**	**147**	P	**P**	**07 40 19.3**	**+2.6**
TOO				IAmb	IAmb	07 40 48.0	
	comp=Z,7.2nm,1.2s						
CAN	**Canberra**	**35.09**	**140**	P	**P**	**07 40 23.4**	**+2.1**
CHTO	**Chiang Mai**	**36.69**	**321**	P	**P**	**07 40 34.2**	**-0.9**
CHTO				IAmb	IAmb	07 40 40.4	
	comp=Z,2.9nm,0.5s						
MAJO	**Matsushiro**	**48.58**	**17**	P	**P**	**07 42 11.9**	**+0.5**
MJB9	**Matsu-Tunnel**	**48.58**	**17**	P	**P**	**07 42 12.9**	**+1.5**
JYT	**Yasato**	**48.90**	**19**	P	**P**	**07 42 14.9**	**+1.0**
LSA	**Lhasa**	**49.51**	**324**	P	**P**	**07 42 18.4**	**-0.9**
LSA				IAmb	IAmb	07 42 29.6	
	comp=Z,6.9nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.57**	**9**	P	P	07 42 51.0	-5.0
	comp=Z,1.4nm,0.3s,baz=189,slow=6.6,SNR=6.4						
	comp=Z,1.4nm,0.3s						
SONM	**Songino Array**	**59.21**	**348**	P	P	07 43 24.4	-4.7
	comp=Z,0.8nm,0.5s,baz=165,slow=6.5,SNR=3.0						
	comp=Z,0.8nm,0.5s						
SONM	**Songino Array**	**59.21**	**348**	P	**P**	**07 43 29.2**	**+0.2**
HILR	**Hailar Array B**	**59.26**	**358**	P	P	07 43 24.2	-5.0
	comp=Z,4.4nm,0.5s,baz=176,slow=8.4,SNR=8.4						
	comp=Z,4.4nm,0.5s						
MKAR	**Makanchi Array**	**66.79**	**331**	P	P	07 44 15.4	-3.9
	comp=Z,2.2nm,0.7s,baz=134,slow=7.7,SNR=16						
	comp=Z,2.2nm,0.7s						
VNDA	**Vanda**	**70.59**	**172**	P	**P**	**07 44 42.5**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=314,slow=6.3,SNR=13						
	comp=Z,1.4nm,0.5s						
ZALV	**Zalesovo Beam**	**71.09**	**338**	P	P	07 44 39.8	-6.1
	comp=Z,1.7nm,0.4s,baz=138,slow=5.9,SNR=6.9						
	comp=Z,1.7nm,0.4s						
KURBB	**Kurchatov Arra**	**71.26**	**332**	P	P	07 44 42.8	-4.2
	comp=Z,0.8nm,0.4s,baz=147,slow=5.5,SNR=6.2						
	comp=Z,0.8nm,0.4s						
QSPA	**South Pole Qui**	**80.08**	**180**	P	**P**	**07 45 40.0**	**+2.6**
	comp=Z,2.6nm,0.7s,baz=314,slow=1.1,SNR=21						
QSPA	**South Pole Qui**	**80.08**	**180**	P	**P**	**07 45 39.1**	**+1.7**
QSPA				IAmb	IAmb	07 46 12.5	
	comp=Z,7.6nm,1.4s						
SNAA	**Sanae**	**90.98**	**195**	P	**P**	**07 46 31.2**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=204,slow=10.0,SNR=11						
	comp=Z,1.2nm,0.4s						
BELA	**Belgrano 2**	**91.40**	**185**	P	**P**	**07 46 32.5**	**-0.8**
BELA				IAmb	IAmb	07 46 33.5	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**132.95**	**59**	PKP	**PKPdf**	**07 52 42.8**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=291,slow=5.9,SNR=5.8						
TXAR				SKPbc	**SKPbc**	**07 56 03.4**	**-5.6**
	comp=Z,0.4nm,0.8s,baz=257,slow=3.0,SNR=5.4						
CPUP	**Villa Florida**	**143.97**	**181**	PKP	**PKPab**	**07 53 00.4**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=80,slow=2.5,SNR=7.8						
LPAZ	**La Paz**	**151.99**	**158**	PKPbc	**PKPbc**	**07 53 24.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=243,slow=2.3,SNR=5.9						

*IDC **14** 08:03:54.7±0.7, 44.˚65S×36.˚79E, h0km, mb4.1/11, mbtmp4.2/12, ML3.6/1, MS4.1/29, Error ellipse: s-maj=30.2km s-min=16.2km az=67.0*
*NEIC **14** 08:03:57.0±0.8, 44.˚67S±0.˚08×36.˚7E±0.˚1, h10km±1km, mb4.7/28, Error ellipse: s-maj=16.5km s-min=7.9km az=140.0*
*GCMT **14** 08:04:00.0±0.3, 44.˚79S±0.˚02×36.˚63E±0.˚05, h14km±1km, MW4.8/89, Moment Tensor Solution. s16,c19; s89,c111; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.14±.17; Mθθ 1.92±.12; Mθϕ 0.22±.09; Mrθ -0.61±.23; Mϕϕ 0.64±.07; Mrϕ 0.21±.29; Best double couple: M₀2.22900×10¹⁶ NP1:ϕ242.00000°, δ39.00000°, λ-105.00000°. NP2: ϕ81.00000°, δ53.00000°, λ-78.00000°. Principal axes: T 2.1930, Plg7.0000°, Azm163.0000°; N 0.0720, Plg9.0000°, Azm254.0000°; P -2.2650, Plg78.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 08:03:56.6±0.5, 44.˚66S±0.˚08×36.˚7E±0.˚1, h10km, n71, σ0ϟ76/52, mb4.5/25, MS4.1/28, 3C-1D, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRHM	**Grahamstown, E**	**13.88**	**321**	Pn	**Pn**	**08 07 11.0**	**-2.4**
SUR	**Sutherland**	**17.40**	**309**	Pn	**Pn**	**08 07 59.0**	**-0.5**
SUR				IAmb	IAmb	08 08 27.8	
	comp=Z,66nm,1.4s						
POGA	**Pongola**	**17.73**	**345**		**Pn**	**08 08 03.4**	**-0.1**
POGA				IAmb	IAmb	08 08 17.2	
	comp=Z,80nm,1.3s						
BOSA	**Boshof**	**18.41**	**327**	P	**Pn**	**08 08 12.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=160,slow=12,SNR=5.7						
BOSA				LR	LR	08 14 04.4	
	comp=Z,928nm,20.3s,baz=190,slow=33						
	comp=Z,14nm,1.1s						
BOSA	**Boshof**	**18.41**	**327**		**Pn**	**08 08 12.3**	**+0.3**
LBTB	**Lobatse**	**21.56**	**332**	P	**P**	**08 08 46.2**	**0.0**
	comp=Z,3.7nm,0.7s,baz=172,slow=10.0,SNR=10						
LBTB				LR	LR	08 15 50.2	
	comp=Z,779nm,21.1s,baz=176,slow=33						
	comp=Z,3.7nm,0.7s						
LBTB	**Lobatse**	**21.56**	**332**		**P**	**08 08 45.2**	**-1.1**
LPHEP	**Lephephe**	**23.01**	**334**	P	**P**	**08 09 02.6**	**+0.9**
PAF	**Port-aux-Franc**	**23.24**	**114**	P	**P**	**08 09 02.9**	**-0.8**
MREMI	**Moremi**	**23.30**	**338**	P	**P**	**08 09 05.2**	**+0.6**
MREMI				IAmb	IAmb	08 09 13.4	
	comp=Z,32nm,1.4s						
LKGWB	**Lokgwabe**	**24.05**	**323**	P	**P**	**08 09 10.1**	**-2.0**
KOOLE	**Kule**	**25.48**	**323**	P	**P**	**08 09 25.8**	**+0.8**
KOOLE				IAmb	IAmb	08 09 28.6	
	comp=Z,41nm,1.4s						
GRTLG	**Ghanzi**	**26.51**	**326**	P	**P**	**08 09 34.6**	**+0.3**
GRTLG				IAmb	IAmb	08 09 37.3	
	comp=Z,21nm,1.4s						
MAW	**Mawson**	**26.83**	**158**	P	**P**	**08 09 36.6**	**-0.1**
	comp=Z,6.6nm,1.0s,baz=314,slow=12,SNR=12						
MAW				LR	LR	08 17 38.6	
	comp=Z,378nm,20.8s,baz=316,slow=31						
	comp=Z,6.6nm,1.0s						
TSUM	**Tsumeb**	**29.95**	**322**	LR	LR	08 21 13.4	
	comp=Z,620nm,19.7s,baz=148,slow=35						
TSUM	**Tsumeb**	**29.95**	**322**	P	**P**	**08 10 06.1**	**+1.0**
SNAA	**Sanae**	**32.99**	**202**⇑	P	**P**	**08 10 31.0**	**-0.3**
	comp=Z,43nm,0.7s						
SNAA	**Sanae**	**32.99**	**202**	P	**P**	**08 10 30.8**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=91,slow=7.3,SNR=1.9						
SNAA				LR	LR	08 20 59.4	
	comp=Z,411nm,20.6s,baz=12,slow=31						
	comp=Z,2.3nm,0.9s						
VNA2	**Neumayer--Watz**	**33.88**	**204**⇑	P	**P**	**08 10 38.8**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=62,slow=10						
VNA1	**Neumayer--Stat**	**34.02**	**205**⇑	P	**P**	**08 10 40.4**	**+0.2**
	comp=Z,5.2nm,1.0s						
VNA3	**Neumayer Olymp**	**34.69**	**204**⇓	P	**P**	**08 10 45.8**	**-0.2**
	comp=Z,1.4nm,0.8s						
BELA	**Belgrano 2**	**42.86**	**197**	P	**P**	**08 11 54.4**	**0.0**
KMBO	**Kilima Mbogo**	**43.35**	**1**	LR	LR	08 27 49.9	
	comp=Z,359nm,21.6s,baz=122,slow=33						
MBAR	**Mbarara**	**44.18**	**351**	LR	LR	08 29 27.0	
	comp=Z,431nm,20.4s,baz=173,slow=35						
QSPA	**South Pole Qui**	**45.56**	**180**	P	**P**	**08 12 16.7**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=250,slow=3.6,SNR=8.2						
QSPA				LR	LR	08 29 26.3	
	comp=Z,391nm,21.8s,baz=247,slow=34						
	comp=Z,1.7nm,0.7s						
QSPA	**South Pole Qui**	**45.56**	**180**		**P**	**08 12 16.6**	**+0.3**
VNDA	**Vanda**	**53.54**	**167**	P	**P**	**08 13 16.2**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=260,slow=6.3,SNR=5.9						
VNDA				LR	LR	08 34 09.9	
	comp=Z,436nm,21.0s,baz=214,slow=34						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**53.54**	**167**		**P**	**08 13 17.0**	**+0.2**
EDA	**Edea**	**53.74**	**326**	P	**P**	**08 13 19.3**	**+0.3**
EDA				IAmb	IAmb	08 13 21.7	
	comp=Z,7.9nm,0.6s						
SBA	**Scott Base**	**54.04**	**168**		**P**	**08 13 20.7**	**+0.2**
SBA				IAmb	IAmb	08 13 46.4	
	comp=Z,9.0nm,1.2s						
PMSA	**Palmer Station**	**54.83**	**211**	LR	LR	08 32 18.5	
	comp=Z,62nm,20.8s,baz=104,slow=31						
H10S2	**ASCENSION HYDR**	**56.69**	**293**	T	T	09 14 51.8	
	baz=84,slow=74,SNR=890						
H10S3	**ASCENSION HYDR**	**56.71**	**293**	T	T	09 14 46.8	
	baz=136,slow=74,SNR=849						
DBIC	**Dimbokro**	**63.26**	**312**	P	**P**	**08 14 25.4**	**0.0**
	comp=Z,2.6nm,0.7s,baz=133,slow=7.5,SNR=4.2						
DBIC				LR	LR	08 40 54.3	
	comp=Z,65nm,18.2s,baz=173,slow=35						
	comp=Z,2.6nm,0.7s						
DBIC	**Dimbokro**	**63.26**	**312**	P	**P**	**08 14 25.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**65.71**	**322**	P	**P**	**08 14 41.4**	**0.0**
AY03	**Cochrane**	**69.36**	**223**	P	**P**	**08 15 04.5**	**+0.3**
PSI	**Prapat**	**72.68**	**68**	LR	LR	08 38 55.4	
	comp=Z,59nm,20.6s,baz=230,slow=29						
PLCA	**Paso Flores**	**72.85**	**229**	P	**P**	**08 15 24.8**	**-0.8**
	comp=Z,2.5nm,1.0s,baz=102,slow=7.5,SNR=3.7						
PLCA				LR	LR	08 44 03.4	
	comp=Z,28nm,18.1s,baz=88,slow=33						
	comp=Z,2.5nm,1.0s						
CPUP	**Villa Florida**	**74.67**	**248**	LR	LR	08 41 56.1	
	comp=Z,13nm,18.9s,baz=342,slow=30						
BDFB	**Brasilia**	**75.43**	**262**	LR	LR	08 41 21.8	
	comp=Z,52nm,19.1s,baz=214,slow=30						
BBTS	**Babate**	**76.25**	**307**	LR	LR	08 45 14.9	
	comp=Z,40nm,20.6s,baz=258,slow=32						
AQDB	**Aquidauana**	**77.52**	**254**	P	**P**	**08 15 53.0**	**+0.3**
AQDB				IAmb	IAmb	08 15 59.7	
	comp=Z,10nm,1.1s						
LMEL	**Las Melosas**	**77.52**	**235**	P	**P**	**08 15 52.6**	**-0.1**
LMEL				IAmb	IAmb	08 16 28.4	
	comp=Z,9.1nm,1.1s						
STKA	**Stephens Creek**	**77.78**	**123**	LR	LR	08 41 38.8	
	comp=Z,73nm,21.3s,baz=207,slow=29						
ASAR	**Alice Springs**	**78.63**	**112**	P	**P**	**08 15 57.6**	**-1.3**
	comp=Z,1.5nm,1.0s,baz=219,slow=5.1,SNR=6.8						
ASAR			

PPI S Sn 08 04 43.6 -1.2
BKNI Bangkinang 2.27 18 Pn 08 04 39.4 +0.1
BKNI Sn Sn 08 05 07.0 +0.7
BKNI Bangkinang 2.27 18 P Pn 08 04 42.8 +3.5
BKNI Bangkinang 2.27 18 P Pn 08 04 39.4 +0.1
MASI Maura Aman, Be 2.29 124 P Pn 08 04 39.0 -0.6
PBSI Pulau Batu 2.73 311 P Pn 08 04 46.0 +0.6
MNSI Mandailing Nat 2.74 344 P Pn 08 04 45.8 +0.2
KSI Kapahiang 2.87 129 P Pn 08 04 48.7 +1.2
MNAI Manna 3.61 134 Pn Pn 08 04 57.5 0.0
MNAI Sn Sn 08 05 38.9 -0.1
MNAI Manna 3.61 134 P Pn 08 04 58.1 +0.5
LHSI Lahat 3.74 122 P Pn 08 05 01.2 +1.9
GSI Gunungsitoli 4.18 319 Pn 08 05 04.8 -0.5
GSI Sn Sn 08 05 51.4 -1.5
GSI Gunungsitoli 4.18 319 P Pn 08 05 05.8 +0.5
GSI Gunungsitoli 4.18 319 P Pn 08 05 03.9 -1.4
DSRI Dabo 4.45 72 P Pn 08 05 08.0 -1.0
RPSI Rantau Prapat 4.73 343 Pn 08 05 12.8 -0.1
PSI Prapat 4.83 343 P Pn 08 05 11.8 -2.6
1.9nm,0.3s,baz=156,slow=9.5,SNR=18
PSI LR LR 08 07 23.9
comp=Z,638nm,21.6s,baz=170,slow=42
5.0nm,0.3s
PSI Prapat 4.83 343 P Pn 08 05 14.6 +0.2
PSI Prapat 4.83 343 P Pn 08 05 12.8 -1.6
TPRI Tanjung Pinang 5.01 57 P Pn 08 05 16.0 -0.7
SNSI Sinabang, Aceh 5.83 317 P Pn 08 05 28.6 +0.6
0.5nm87nm,0.9s
IPM Ipoh 6.33 6 Pn 08 05 35.6 +0.9
IPM Ipoh 6.33 6 P Pn 08 05 38.0 +3.2
KULM Kulim 7.10 2 Pn 08 05 46.8 +1.4
KULM Kulim 7.10 2 P Pn 08 05 47.9 +2.6
SBUM Sibu 12.62 70 Pn Pn 08 07 02.1 +1.2
SBUM Sibu 12.62 70 P Pn 08 07 03.6 +2.8
PBA Port Blair 15.40 331 Pn Pn 08 07 35.2 -2.3
UBPT Khong Chiam 17.76 16 P P 08 08 08.4 +1.3
KAPI Kappang 19.63 100 P P 08 08 27.8 +0.2
2.8nm,0.3s,baz=276,slow=6.3,SNR=4.8
KAPI LR LR 08 16 46.2
comp=Z,62nm,20.4s,baz=261,slow=39
4.1nm,0.3s
KAPI Kappang 19.63 100 P P 08 08 27.0 -0.5
KAPI Kappang 19.63 100 ⇑*iP* P 08 08 27.5 -0.1
KAPI pmax pmax
comp=Z,26nm,1.5s
CM31 Chiang Mai Arr 20.23 356 P P 08 08 33.4 -0.6
CMAR Chiang Mai Arr 20.23 356 P P 08 08 34.1 +0.1
comp=Z,13nm,1.0s,baz=186,slow=10.0,SNR=34
CMAR LR LR 08 17 22.8
comp=Z,122nm,18.1s,baz=180,slow=40
comp=Z,13nm,1.0s
CMAR Chiang Mai Arr 20.23 356 P P 08 08 33.3 -0.7
CMAR Chiang Mai Arr 20.23 356*ce*P P 08 08 35.0 +1.0
CMAR pmax pmax
comp=Z,3.0nm,0.4s
CHTO Chiang Mai 20.58 356 P Pn 08 08 39.9 -0.8
TOLI2 Tolitoli 20.65 82 P P 08 08 38.5 -0.2
TOLI2 Tolitoli 20.65 82 P Pn 08 08 42.7 +1.2
PALK Pallekele 21.59 295 P P 08 08 50.4 +1.6
comp=Z,2.5nm,0.5s,baz=97,slow=6.8,SNR=1.7
PALK LR LR 08 17 08.1
comp=Z,59nm,19.1s,baz=102,slow=36
comp=Z,2.5nm,0.5s
BRDH Bariadhala 25.81 341 LR LR 08 22 54.1
comp=Z,56nm,18.8s,baz=154,slow=44
DAV Davao City (W) 26.70 70 LR LR 08 19 59.8
comp=Z,26nm,19.0s,baz=182,slow=36
PZH PanZhiHua 28.22 3 P P 08 09 53.8 +2.7
SHL Shillong 28.46 344 P P 08 09 52.2 -1.1
SHL IAmb IAmb 08 09 54.2
comp=Z,14nm,0.9s
SHL Shillong 28.46 344 P P 08 09 52.2 -1.1
SHL pmax pmax
comp=Z,14nm,0.9s
HYBB Hyderabad (bro 28.78 313 *e*P P 08 09 57.6 +1.5
HYBB *ep*P **pP** 08 10 11.4 +0.2
FITZ Fitzroy Crossi 29.61 125 LR LR 08 22 18.3
comp=Z,52nm,20.6s,baz=358,slow=37
EVN Everest 32.36 337 P 08 10 27.9 -0.5
EVN IAmb IAmb 08 10 36.0
comp=Z,6.8nm,0.9s
XAN Xi'an 36.60 12 ⇑P P 08 11 03.0 -1.2
XAN pmax pmax
comp=Z,18nm,0.8s
LZDM Lanzhou Array 37.74 4 LR LR 08 27 49.6
comp=Z,113nm,18.5s,baz=80,slow=38
WB0 Warramunga Arr 37.75 121 P P 08 11 12.1 -2.0
WRA Warramunga Arr 37.77 121 P P 08 11 12.9 -1.5
comp=Z,1.8nm,0.6s,baz=301,slow=9.6,SNR=19
WRA PcP **PcP** 08 13 29.5 -0.7
comp=Z,0.5nm,0.5s,baz=309,slow=3.0,SNR=2.5
comp=Z,1.8nm,0.6s
WRA Warramunga Arr 37.77 121 P P 08 11 12.6 -1.7
WRA Warramunga Arr 37.77 121 *i* P P 08 11 12.8 -1.5
WRA pmax pmax
comp=Z,3.0nm,0.6s
LYN LuoYang 37.96 16 P P 08 11 15.8 +0.2
LYN pmax pmax
comp=Z,47nm,0.9s
NJ2 Nanjing 38.01 26 *e*P P 08 11 18.6 +2.5
NJ2 pmax pmax
comp=Z,13nm,0.5s
ASAR Alice Springs 39.06 126 P P 08 11 24.9 -0.3
comp=Z,6.2nm,0.8s,baz=305,slow=8.1,SNR=68
ASAR PcP **PcP** 08 13 34.1 0.0
comp=Z,1.1nm,0.7s,baz=301,slow=2.9,SNR=6.0
comp=Z,6.2nm,0.8s
ASAR Alice Springs 39.06 126 P 08 11 24.2 -0.9
ASAR Alice Springs 39.06 126 P P 08 11 24.2 -0.9
AS31 Alice Springs 39.07 126 P 08 11 24.8 -0.3
HNS HongShan 41.26 17 ⇓P P 08 11 43.5 +0.5
HNS pmax pmax
comp=Z,8.0nm,0.7s
BTO Baotou 43.17 11 *e*P P 08 12 03.4 +4.8
BTO pmax pmax
comp=Z,9.0nm,0.5s
BTO pmax pmax
comp=Z,240nm,4.4s
BTO LR LR
comp=Z,250nm,5.0s
BTO LR LR
comp=Z,370nm,5.1s
HHC Hu-ho-hao-te 43.71 12 *e*P P 08 12 06.5 +3.5
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,180nm,5.3s
JNU Nakatsue 45.17 37 LR LR 08 31 08.5
comp=Z,68nm,18.2s,baz=209,slow=36
JNU Nakatsue 45.17 37 P P 08 12 16.1 +1.4
KSRS Korea Array 46.72 30 P P 08 12 26.9 +0.2
comp=Z,2.1nm,0.7s,baz=218,slow=7.9,SNR=6.2
comp=Z,2.1nm,0.7s
KSH Kashi 46.85 334 P P 08 12 27.9 0.0
KSH pmax pmax
comp=Z,8.0nm,0.9s
WMQ Urumqi 46.86 347 *e*P P 08 12 30.0 +2.2
WMQ pmax pmax
comp=Z,39nm,1.5s
TARG Taragay, Kyrgy 47.95 337 P 08 12 38.0 +1.2
TARG IAmb IAmb 08 12 39.8
comp=Z,13nm,0.8s
TARG Taragay, Kyrgy 47.95 337 P P 08 12 38.0 +1.2
TARG pmax pmax
comp=Z,13nm,0.8s
KDJ Kajisay 48.54 337 P 08 12 41.4 +0.4
KDJ Kajisay 48.54 337 P P 08 12 41.4 +0.4
KDJ pmax pmax
comp=Z,43nm,1.0s
SHLS Shalkode 48.59 340 *e*P P 08 12 39.6 -1.7
comp=Z,9.3nm,0.7s
SHLS Shalkode 48.59 340 *e*P P 08 12 39.6 -1.7
SHLS pmax pmax
comp=Z,9.0nm,0.7s
DRK Karamyk 48.76 331 P P 08 12 43.9 +1.0
DRK IAmb IAmb 08 12 46.2
comp=Z,36nm,0.8s
DRK Karamyk 48.76 331 P P 08 12 43.9 +1.0
DRK pmax pmax
comp=Z,36nm,0.8s
SATY Saty 48.88 339 *e*P P 08 12 43.0 -0.5
comp=Z,15nm,1.2s
SATY Saty 48.88 339 *e*P P 08 12 43.0 -0.5
SATY pmax pmax
comp=Z,15nm,1.2s
STKA Stephens Creek 48.99 132 P P 08 12 44.0 -0.5
comp=Z,4.2nm,0.9s,baz=307,slow=11,SNR=5.7
comp=Z,4.2nm,0.9s
STKA Stephens Creek 48.99 132 P P 08 12 43.9 -0.5
STKA IAmb IAmb 08 12 59.4
comp=Z,41nm,1.2s
STKA Stephens Creek 48.99 132 ⇑*i*P P 08 12 43.4 -1.1
ULHL Ulahol 49.01 336 P P 08 12 46.2 +1.6
SNR=6.0
GAR Garm 49.14 329 P P 08 12 45.9 +0.3
GAR IAmb IAmb 08 12 48.1
comp=Z,17nm,1.0s
BOOM Boomskoye usch 49.33 336 P P 08 12 47.9 +0.8
BOOM IAmb IAmb 08 12 49.5
comp=Z,18nm,0.8s
BOOM Boomskoye usch 49.33 336 P P 08 12 47.9 +0.8
BOOM pmax pmax
comp=Z,18nm,0.8s
TNSS Tian-Shan 49.40 337 *e*P P 08 12 46.8 -1.1
TNSS Tian-Shan 49.40 337 *e*P P 08 12 46.8 -1.1
MDOK Medeo 49.47 338 *e*P P 08 12 47.6 -0.5
MDOK Medeo 49.47 338 *e*P P 08 12 47.5 -0.5
CHGR Chuyangaron 49.49 328 P 08 12 48.1 -0.2
CHGR IAmb IAmb 08 12 49.7
comp=Z,50nm,1.2s
CHGR Chuyangaron 49.49 328 P P 08 12 48.1 -0.2
CHGR pmax pmax
comp=Z,50nm,1.2s
JCJ Chichijima 49.52 51 LR LR 08 32 39.1
comp=Z,20nm,20.8s,baz=227,slow=35
AAA Alma-Ata 49.56 338 *e*P P 08 12 48.3 -0.4
AAA Alma-Ata 49.56 338 *e*P P 08 12 48.2 -0.4
ARSB Arslanbob 49.65 333 P P 08 12 50.2 +0.7
ARSB Arslanbob 49.65 333 P P 08 12 50.2 +0.7
ARSB pmax pmax
comp=Z,40nm,0.9s
UCH Uchtor 49.71 335 P P 08 12 52.0 +1.7
SNR=15
SONM Songino Array 49.77 5 P P 08 12 50.6 +0.4
comp=Z,6.4nm,0.8s,baz=188,slow=8.3,SNR=21
comp=Z,6.4nm,0.8s
SONM Songino Array 49.77 5 P P 08 12 50.4 +0.2
SONM IAmb IAmb 08 12 52.2
comp=Z,7.4nm,1.0s
SONM Songino Array 49.77 5 P P 08 12 50.4 +0.2
SONM pmax pmax
comp=Z,7.0nm,1.0s
TKM2 Tokmak 2 49.83 336 P P 08 12 52.5 +1.6
SNR=26
ULN Ulaanbaatar 49.86 6 P P 08 12 51.1 +0.2
ULN IAmb IAmb 08 12 52.2
comp=Z,7.4nm,1.2s
ULN Ulaanbaatar 49.86 6 ⇓*i*P P 08 12 50.9 0.0
ULN pmax pmax
comp=Z,4.0nm,1.0s
KBK Karagaybulak 49.88 336 P P 08 12 53.8 +2.5
SNR=7.8
AAK Ala-Archa 50.05 335 P 08 12 52.4 -0.1
AAK IAmb IAmb 08 12 55.3
comp=Z,5.3nm,0.8s
AAK Ala-Archa 50.05 335 P P 08 12 54.6 +2.1
SNR=5.7
AAK Ala-Archa 50.05 335 ⇓*i*P P 08 12 52.9 +0.4
AAK pmax pmax
comp=Z,4.0nm,0.9s
FRU1 Bishkek 50.14 335 P P 08 12 54.6 +1.6
FRU1 Bishkek 50.14 335 P P 08 12 54.6 +1.6
FRU1 pmax pmax
comp=Z,49nm,0.5s
KUU Kurty 50.36 338 *e*P P 08 12 54.3 -0.3
comp=Z,8.7nm,0.9s
KUU Kurty 50.36 338 *e*P P 08 12 54.3 -0.3
KUU pmax pmax
comp=Z,9.0nm,0.9s
EKS2 Erkin-Say 50.38 335 P P 08 12 57.0 +2.1
SNR=20
USP Ospenovka 50.57 336 P P 08 12 57.7 +1.5
SNR=14
TDK Taldyqorghan 50.57 340 *e*P P 08 12 55.8 -0.4
comp=Z,6.2nm,0.7s
TDK Taldyqorghan 50.57 340 *e*P P 08 12 55.8 -0.4
TDK pmax pmax
comp=Z,6.0nm,0.7s
HRA Herat 50.77 319 P P 08 12 59.3 +1.1
HRA IAmb IAmb 08 13 24.9
comp=Z,3.7nm,0.5s
ZSN Zaisan 50.94 347 *e*P P 08 12 58.6 -0.3
comp=Z,6.6nm,0.8s
ZSN Zaisan 50.94 347 *e*P P 08 12 58.6 -0.3
ZSN pmax pmax
comp=Z,7.0nm,0.8s
MK31 Makanchi Array 50.98 344*c i*P P 08 12 59.8 +0.5
MKAR Makanchi Array 50.98 344 P P 08 13 00.0 +0.7
comp=Z,16nm,0.6s,baz=147,slow=7.9,SNR=123
MKAR LR LR 08 37 11.8
comp=Z,58nm,18.0s,baz=322,slow=39
comp=Z,16nm,0.6s
MAKZ Makanchi 51.08 344 P P 08 13 00.8 +0.8
IUG luzhnay 51.67 331 *e*P P 08 13 03.9 -0.7
comp=Z,9.4nm,0.8s
IUG luzhnay 51.67 331 *e*P P 08 13 03.9 -0.7
IUG pmax pmax
comp=Z,9.0nm,0.8s
MJAR Matsushiro Arr 51.95 39 LR LR 08 36 30.0
comp=Z,39nm,18.2s,baz=176,slow=38
CHM Chimkent 52.00 331 *e*P P 08 13 06.6 -0.4
CHM Chimkent 52.00 331 *e*P P 08 13 06.6 -0.4
BTLS Baital 52.22 337 *e*P P 08 13 08.1 -0.5
BTLS Baital 52.22 337 *e*P P 08 13 08.0 -0.5
BRLS Borolday 52.44 332 *e*P P 08 13 08.7 -1.6
BRLS Borolday 52.44 332 *e*P P 08 13 08.6 -1.6
JYT Yasato 53.02 40 P P 08 13 14.5 -0.1
USRK Ussuriysk Ar. 53.87 28 P P 08 13 21.0 +0.3
comp=Z,8.8nm,0.7s,baz=222,slow=6.8,SNR=11
comp=Z,8.8nm,0.7s
HILR Hailar Array B 53.88 16 P P 08 13 20.5 -0.2
comp=Z,2.1nm,0.6s,baz=198,slow=9.8,SNR=4.7
comp=Z,2.1nm,0.6s
KURBB Kurchatov Arra 55.51 343 P P 08 13 32.9 +0.5
comp=Z,11nm,0.9s,baz=161,slow=6.9,SNR=61
comp=Z,11nm,0.9s
KURK Kurchatov 55.56 343 P 08 13 32.9 +0.2
KURK IAmb IAmb 08 13 34.3
comp=Z,14nm,0.8s
KURK Kurchatov 55.56 343*c i*P P 08 13 33.2 +0.4
KURK pmax pmax
comp=Z,20nm,0.9s
KURK Kurchatov 55.56 343 P P 08 13 33.3 +0.5
KURK pP **pP** 08 13 50.2 +0.8
KURK sP **sP** 08 13 56.9 +0.3
ZAA0 Zalesovo Array 57.09 349 P 08 13 42.7 -0.9
ZALV Zalesovo Beam 57.09 349 P P 08 13 43.8 +0.2
comp=Z,33nm,0.8s,baz=163,slow=5.7,SNR=101
comp=Z,33nm,0.8s
ZALV Zalesovo Beam 57.09 349 P 08 13 42.9 -0.6
ATD Arta Tunnel 58.66 285 LR LR 08 36 44.3
comp=Z,5.7nm,20.4s,baz=58,slow=33
BVAR Borovoye Array 60.16 340 P P 08 14 05.2 +0.2
comp=Z,4.5nm,0.8s,baz=142,slow=7.5,SNR=16
comp=Z,4.5nm,0.8s
BORK Borovoye 60.20 340*c i*P P 08 14 05.2 -0.1
BORK pmax pmax
comp=Z,8.0nm,0.9s
GNI Garni 65.66 316 ⇑*i*P P 08 14 39.8 -2.2
GNI pmax pmax
comp=Z,6.0nm,1.0s
ARTI Arti 67.25 336 P 08 14 51.4 -0.2
ARTI IAmb IAmb 08 17 02.5
comp=Z,17nm,0.4s
ARTI Arti 67.25 336*d i*P P 08 14 51.3 -0.2
ARTI *PP **pP** 08 15 09.8 +1.3
ARTI 08 17 17.9
ARTI S **S** 08 23 42.3 +0.8
ARTI SS **SS** 08 28 03.8 +1.5
ARTI pmax pmax
comp=Z,10.0nm,1.0s
YAK Yakutsk 67.51 14 LR LR 08 48 38.0
comp=Z,53nm,19.0s,baz=288,slow=40
YAK Yakutsk 67.51 14 ⇑*i*P P 08 14 52.3 -0.8
YAK pmax pmax
comp=Z,24nm,0.9s
KBZ Khabaz 68.42 319 P P 08 15 00.3 +1.2
comp=Z,5.7nm,0.7s,baz=120,slow=6.3,SNR=13
comp=Z,5.7nm,0.7s
KBZ Khabaz 68.42 319 ⇑*i*P P 08 14 59.2 0.0
KBZ pmax pmax
comp=Z,5.0nm,0.9s
SHA1 Shidzhatmaz 68.58 319 ⇑*i*P P 08 14 58.8 -1.7
BELG Belogornoye 69.78 329 ⇓*i*P P 08 15 07.6 +0.2
BELG pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 70.51 194 LR LR 08 39 04.1
comp=Z,49nm,20.6s,baz=32,slow=30
NRIK Noril'sk 71.58 355 P P 08 15 17.4 -0.6
comp=Z,6.2nm,0.9s,baz=174,slow=6.4,SNR=14
comp=Z,6.2nm,0.9s
NRIK Noril'sk 71.58 355 P P 08 15 17.6 -0.6
NRIK IAmb IAmb 08 15 19.3
comp=Z,15nm,1.1s
NRIK Noril'sk 71.58 355*c i*P P 08 15 17.6 -0.5
KIRV Kirov 72.38 335 ⇓*i*P P 08 15 23.8 +0.8
VRH Novokhopyorsk 72.39 326 *e*P P 08 15 22.0 -1.2
VRH pmax pmax
comp=Z,10.0nm,0.8s
PETK Petropavlovsk- 72.58 32 LR LR 08 47 32.5
comp=Z,33nm,19.7s,baz=57,slow=36
BR104 Keskin Array S 73.47 312 P P 08 15 30.1 0.0
comp=Z,4.3nm,0.8s
BR131 Keskin Array S 73.47 312 ⇑*i*P P 08 15 30.2 +0.1
BRTR Keskin Array B 73.47 312 P P 08 15 30.2 +0.1
comp=Z,1.7nm,0.7s,baz=129,slow=8.0,SNR=8.8
comp=Z,1.7nm,0.7s
BR105 Keskin Array S 73.49 312 P P 08 15 29.7 -0.5
comp=Z,2.8nm,0.9s
VORD Divnogorie 73.67 325 *e*P P 08 15 28.4 -2.4
VORD pmax pmax
comp=Z,7.0nm,1.0s
VSR Storozhevoye 73.85 325 *e*P P 08 15 29.5 -2.4
VSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 74.56 326 *e*P P 08 15 34.4 -1.5
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 75.36 22 P P 08 15 40.3 -0.1
comp=Z,2.8nm,0.7s,baz=252,slow=3.5,SNR=4.6
comp=Z,2.8nm,0.7s
TIXI Tiksi 75.66 9 P P 08 15 41.0 -0.9
TIXI IAmb IAmb 08 15 42.2
comp=Z,34nm,1.4s
TIXI Tiksi 75.66 9 ⇑*i*P P 08 15 41.1 -0.8
TIXI pmax pmax
comp=Z,26nm,1.5s
OBN Obninsk 76.85 328 *e*P P 08 15 48.3 -0.7
OBN *e* 08 16 00.3
OBN *e**PP **pP** 08 16 05.6 -0.6
OBN *e* 08 18 40.0
OBN pmax pmax
comp=Z,12nm,0.9s
OBN MLR MLR
comp=Z,51nm,10.0s
KLMR Klimovskoe 77.84 334 *e*P P 08 15 53.4 -1.0
KLMR *e**PP **PcP** 08 16 07.2 +3.1
KLMR pmax pmax
comp=Z,19nm,1.5s
BKZ Black Stump Fm 78.10 130 P P 08 15 55.6 -0.8
SYO Syowa Base 78.12 199 ⇓*e*PcP **PcP** 08 16 07.2 +2.1
IDI Anoyia 79.22 306 LR LR 08 53 43.8
comp=Z,84nm,20.4s,baz=127,slow=38
AK09 Malin Array Si 79.52 322 P P 08 16 04.3 +0.5
AK10 Malin Array Si 79.53 322 P P 08 16 04.3 +0.4
AK07 Malin Array Si 79.55 322 P P 08 16 04.6 +0.6
AK02 Malin Array Si 79.58 322 P P 08 16 04.1 -0.1
AKASG Malin Array Be 79.58 322 P P 08 16 03.8 -0.4
comp=Z,0.2nm,0.3s,baz=91,slow=4.6,SNR=2.3
comp=Z,0.2nm,0.3s
AK04 Malin Array Si 79.62 322 P P 08 16 04.2 -0.2
AK21 Malin Array Si 79.71 322 P P 08 16 05.3 +0.4
MI30 MI30,Zelenitsa 80.22 322 P P 08 16 07.9 +0.2
LUBAR Lubar, Ukraine 80.28 321 P P 08 16 07.8 -0.2
MI29 MI29, Kamyanyy 80.34 322 P P 08 16 07.4 -0.9
comp=Z,68nm,1.0s
MI28 Mi28,Pidlybu 80.59 322 P P 08 16 09.2 -0.4
KMPD K-Podol'skiy 80.77 320 P P 08 16 11.3 +0.7
MNK Minsk 81.39 326 *i* P P 08 16 10.8 -3.0
MNK *i* *PP **pP** 08 16 27.7 -3.4
MNK *i* 08 19 17.4
MNK *i* PPP PPP 08 21 06.8
MNK *i* S **S** **08 26 18.4 -1.5**
MNK *i* SS **SS** **08 31 36.2 -1.1**
MNK *i* SSS SSS 08 35 04.2
MNK pmax pmax
comp=Z,12nm,0.6s
MNK pmax pmax
comp=E,24nm,0.9s
MNK pmax pmax
comp=N,24nm,0.9s
MNK MLR MLR
comp=N,276nm,14.0s
MNK MLR MLR
comp=Z,94nm,14.0s
MNK MLR MLR
comp=E,629nm,22.0s
RNPP1 Kostyukhnivka 81.85 322 P P 08 16 15.3 -1.0
FINES FINESS Array B 84.14 332 P P 08 16 28.4 +0.4
comp=E,2.9nm,0.7s,baz=90,slow=7.6,SNR=7.9
comp=E,2.9nm,0.7s
ARCES ARCESS Array B 86.45 340 P P 08 16 39.9 +0.6
comp=E,1.6nm,0.8s,baz=107,slow=3.9,SNR=1.8
comp=E,1.6nm,0.8s
NVL N'lazarevskaya 87.77 199 *e*P P 08 16 44.1 -1.6
NVL *e* 08 20 09.8
NVL *e*PPP PPP 08 22 05.0
NVL *e*S **SKSac** **08 27 04.5 -3.5**
NVL *e*SS **SS** **08 33 09.9 -0.4**
NVL *e*SSS SSS 08 36 43.2
NVL pmax pmax
comp=Z,12nm,1.2s
NVL smax smax
comp=E,255µm,13.5s
NVL MLR MLR
comp=Z,160nm,23.0s
QSPA South Pole Qui 88.11 180 P P 08 16 49.2 +1.7
comp=Z,0.4nm,0.4s,baz=243,slow=2.3,SNR=1.4
comp=Z,0.4nm,0.4s
GERES GERESS Array B 89.16 319 P P 08 16 54.1 +1.2
comp=Z,0.6nm,0.6s,baz=122,slow=3.7,SNR=2.7
comp=Z,0.6nm,0.6s
HFS Hagfors 89.92 330 P P 08 16 56.6 +0.6
comp=Z,1.8nm,0.7s,baz=116,slow=3.4,SNR=2.2
comp=Z,1.8nm,0.7s
TBI Tubuai 107.73 115 *e*LR LR 08 54 00.5
comp=Z,612nm,25.0s
PPT2 Papeete2 108.53 109 *e*LR LR 08 54 19.3
comp=Z,154nm,25.5s
PPT2 *e*LR LR 08 54 20.2
comp=Z,110nm,24.0s
TAOE Nuku Hiva Isla 118.79 101 *e*LR LR 08 59 10.3
comp=Z,143nm,25.8s
TXAR Lajitas Array 144.38 38 PKP **PKPdf** **08 23 33.4 -0.5**
comp=Z,5.7nm,0.8s,baz=211,slow=1.3,SNR=61

UPP **14** *08:16:01.0±2.5, 57°.67N×22°.36E, h0km, ML2.5, Presumed earthquake*
DNK **14** *08:16:03.3±1.7, 57°.68N×21°.92E, h0km, ML2.9, Suspected explosion*
EST **14** *08:16:03.7±0.1, 57°.72N×21°.95E, h0km, ML2.1(HEL), Explosion*
HEL **14** *08:16:03.8±0.0, 57°.71N×21°.95E, h0km, ML2.0, Explosion*
LVSN **14** *08:16:06.2±2.9, 57°.66N×22°.04E, h0km±48km, ML2.7*
ISC 14 08:16:02.6±0.8, 57.75N±0.03×21.98E±0.03, h0km, n58, σ1§30/82, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.21**	**125**	*eP*	**Pg**	**08 16 06.6**	**+0.1**
SLIT	**Slitere, Latvi**	**0.21**	**125**	*i* P	**Pg**	**08 16 07.3**	**+0.8**
SLIT				*eS*	**Sg**	**08 16 11.2**	**+2.0**
SLIT				AML	AML	08 16 20.8	
	comp=N,6µm,0.4s						
SLIT				AML	AML	08 16 21.4	
	comp=Z,7µm,0.6s						
SLIT				AML	AML	08 16 25.5	
	comp=E,9µm,0.5s						
SLIT	**Slitere, Latvi**	**0.21**	**125**	*eP*	**Pg**	**08 16 07.3**	**+0.8**
SLIT				*eS*	**Sg**	**08 16 09.7**	**+0.5**
EE06	**Soera, Palade,**	**1.31**	**20**	*eP*	**Pg**	**08 16 27.8**	**+0.2**
EE06				*ePN*	**Pn**	**08 16 28.9**	**+0.8**
EE06				*eS*	**Sn**	**08 16 45.6**	**-0.6**
EE06				*eSN*	**Sb**	**08 16 47.7**	**+2.4**

EE01	**Perakula, Nova**	**1.70**	**30**	*e*P	**Pb**	**08 16 34.4**	**-0.2**
EE01				*e*PN	**Pg**	**08 16 35.0**	**-0.1**
EE01				*e*SG	**Sg**	**08 16 57.2**	**+0.2**
GOTU	**Gotland**	**1.83**	**269**	*e*P	**Pn**	**08 16 35.6**	**+0.4**
GOTU				*e*SN	**Sn**	**08 17 00.1**	**+1.0**
GOTU				smax	smax	08 17 02.7	
	comp=Z,7.1nm,0.1s						
EE08	**Sarghaua, Vand**	**1.95**	**61**	*e*P	**Pb**	**08 16 38.3**	**-0.7**
EE08				*e*SB	**Sg**	**08 17 04.1**	**-1.2**
EE02	**Kiisa, Saku**	**2.03**	**44**	*e*PG	**Pb**	**08 16 40.6**	**+0.2**
EE02				*e*SG	**Sg**	**08 17 07.3**	**-0.5**
TVF	**Tvarminne**	**2.20**	**17**	*e*PB	**Pb**	**08 16 42.9**	**-0.3**
TVF				*e*SB	**Sb**	**08 17 11.6**	**+0.6**
TVF				smax	smax	08 17 15.1	
	comp=Z,10nm,0.1s						
NYNU	**Nynaeshamn**	**2.44**	**303**	P	**Pn**	**08 16 44.9**	**+1.3**
NYNU	**Nynaeshamn**	**2.44**	**303**	P	**Pn**	**08 16 44.9**	**+1.3**
PABE	**Paberze**	**2.50**	**153**	*e*P	**Pn**	**08 16 45.7**	**+1.2**
PABE	**Paberze**	**2.50**	**153**	*e*P	**Pn**	**08 16 46.4**	**+1.9**
PABE				AML	AML	08 16 46.4	
	comp=Z,91nm,0.1s						
PABE				AML	AML	08 17 18.9	
	comp=E,50nm,0.1s						
PABE				AML	AML	08 17 20.4	
	comp=N,64nm,0.5s						
EE03	**Tooma soojaam,**	**2.53**	**62**	*e*P	**Pn**	**08 16 46.3**	**+1.4**
EE03				*e*PB	**Pb**	**08 16 48.1**	**-0.8**
EE03				*e*SG	**Sg**	**08 17 21.8**	**-2.1**
NRTU	**Norrtaelje**	**2.60**	**319**	*e*P	**Pn**	**08 16 47.2**	**+1.4**
NRTU				*e*SG	**Sb**	**08 17 24.3**	**+1.8**
NRTU				smax	smax	08 17 27.7	
	comp=Z,4.5nm,0.1s						
VSU	**Vasula**	**2.62**	**72**	*e*P	**Pb**	**08 16 48.6**	**-1.8**
VSU	**Vasula**	**2.62**	**72**	*e*P	**Pb**	**08 16 48.6**	**-1.8**
VSU				AML	AML	08 16 48.9	
	comp=Z,68nm,0.2s						
VSU				AML	AML	08 17 25.1	
	comp=N,76nm,0.4s						
VSU				AML	AML	08 17 29.4	
	comp=E,83nm,0.4s						
VSU	**Vasula**	**2.62**	**72**	*i* P	**Pb**	**08 16 48.6**	**-1.8**
VSU	**Vasula**	**2.62**	**72**	*e*P	**Pb**	**08 16 48.4**	**-2.0**
VSU				*e*SB	**Sb**	**08 17 23.3**	**+0.1**
AAL	**Aland**	**2.64**	**338**	P	**Pn**	**08 16 47.1**	**+0.7**
AAL	**Aland**	**2.64**	**338**	*e*P	**Pn**	**08 16 47.1**	**+0.7**
AAL	**Aland**	**2.64**	**338**	P	**Pn**	**08 16 47.1**	**+0.7**
AAL	**Aland**	**2.64**	**338**	*e*P	**Pn**	**08 16 47.1**	**+0.7**
AAL				*e*PB	**Pb**	**08 16 49.9**	**-0.8**
AAL				*e*SB	**Sb**	**08 17 24.2**	**+0.5**
AAL				smax	smax	08 17 30.2	
	comp=Z,5.6nm,0.1s						
ARBE	**Arbavere**	**2.69**	**49**	*e*P	**Pb**	**08 16 50.8**	**-0.8**
ARBE	**Arbavere**	**2.69**	**49**	*e*P	**Pb**	**08 16 50.7**	**-0.9**
HEL5	**Espoo, Suvisaa**	**2.77**	**30**	*e*PB	**Pb**	**08 16 51.9**	**-1.1**
HEL5				*e*SB	**Sb**	**08 17 28.8**	**+1.4**
HEL5				smax	smax	08 17 31.4	
	comp=Z,8.1nm,0.1s						
MEF	**Metsahovi**	**2.77**	**26**	*e*P	**Pb**	**08 16 52.1**	**-0.9**
MEF	**Metsahovi**	**2.77**	**26**	*e*P	**Pb**	**08 16 52.1**	**-0.9**
MEF				AML	AML	08 17 31.0	
	comp=N,14nm,0.2s						
MEF				AML	AML	08 17 32.8	
	comp=E,17nm,0.4s						
MEF				AML	AML	08 17 34.3	
	comp=Z,19nm,0.4s						
MEF	**Metsahovi**	**2.77**	**26**	*e*PB	**Pb**	**08 16 52.1**	**-0.9**
MEF				*e*SB	**Sb**	**08 17 28.0**	**+0.6**
MEF				smax	smax	08 17 29.1	
	comp=Z,7.5nm,0.1s						
HEL1	**Helsinki**	**2.86**	**30**	*e*PB	**Pb**	**08 16 53.4**	**-1.1**
HEL1				*e*SB	**Sb**	**08 17 31.2**	**+1.2**
HEL1				smax	smax	08 17 34.5	
	comp=Z,7.7nm,0.1s						
VIKU	**Vikbolandet**	**2.90**	**287**	P	**Pn**	**08 16 51.3**	**+1.3**
VIKU	**Vikbolandet**	**2.90**	**287**	P	**Pn**	**08 16 51.3**	**+1.3**
VSTU	**Vaestervik**	**2.92**	**271**	P	**Pn**	**08 16 51.9**	**+1.7**
VSTU	**Vaestervik**	**2.92**	**271**	P	**Pn**	**08 16 51.9**	**+1.7**
NUR	**Nurmijarvi**	**3.09**	**25**	*e*PB	**Pb**	**08 16 57.0**	**-1.3**
NUR				*e*SB	**Sb**	**08 17 36.1**	**-0.5**
NUR				smax	smax	08 17 38.1	
	comp=Z,6.3nm,0.1s						
GRAU	**Graesoe**	**3.14**	**327**	P	**Pn**	**08 16 54.1**	**+0.8**
GRAU	**Graesoe**	**3.14**	**327**	P	**Pn**	**08 16 54.1**	**+0.8**
OSKU	**Oskarshamn**	**3.22**	**263**	P	**Pn**	**08 16 54.9**	**+0.6**
OSKU	**Oskarshamn**	**3.22**	**263**	P	**Pn**	**08 16 54.9**	**+0.6**
FIBU	**Brunna**	**3.23**	**314**	P	**Pn**	**08 16 55.7**	**+1.2**
FIBU	**Brunna**	**3.23**	**314**	P	**Pn**	**08 16 55.7**	**+1.2**
ESKU	**Eskilstuna**	**3.29**	**299**	P	**Pn**	**08 16 56.5**	**+1.3**
ESKU	**Eskilstuna**	**3.29**	**299**	P	**Pn**	**08 16 56.5**	**+1.3**
RAF	**Rauma**	**3.29**	**358**	*e*P	**Pn**	**08 16 56.9**	**+1.7**
RAF	**Rauma**	**3.29**	**358**	*e*P	**Pn**	**08 16 57.1**	**+1.9**
EE04	**Vaivara Sinima**	**3.49**	**60**	*e*SG	**Sg**	**08 17 51.7**	**-3.0**
VJF	**Virojoki**	**4.01**	**43**	*e*P	**Pn**	**08 17 06.7**	**+1.5**
NRAU	**Nora**	**4.06**	**300**	P	**Pn**	**08 17 07.0**	**+1.2**
NRAU	**Nora**	**4.06**	**300**	P	**Pn**	**08 17 07.0**	**+1.2**
DEL	**Delary**	**4.60**	**257**	*i* P	**Pn**	**08 17 13.1**	**-0.3**
DEL				*i* S	**Sn**	**08 18 04.3**	**-3.0**
BSD	**Bornholm Skovb**	**4.73**	**239**	*i* P	**Pn**	**08 17 13.8**	**-1.2**
BSD				*i* S	**Sn**	**08 18 09.2**	**-1.3**
BSD				IAML		08 18 16.6	
	comp=Z,9.9nm,0.9s						
BORU	**Boraas**	**4.94**	**273**	*i* P	**Pn**	**08 17 19.4**	**+1.4**
FABU	**Falkenberg**	**5.07**	**265**	*i* P	**Pn**	**08 17 21.8**	**+2.2**
RUF	**Ruokolahti**	**5.11**	**41**	*e*P	**Pn**	**08 17 21.4**	**+1.1**
BJUU	**Bjuv**	**5.18**	**255**	*i* P	**Pn**	**08 17 20.8**	**-0.5**
BJUU				*i* S	**Sn**	**08 18 19.5**	**-2.3**
VAF	**Ylistaro**	**5.32**	**3**	*e*P	**Pn**	**08 17 24.9**	**+1.8**
TJOU	**Tjoern**	**5.53**	**277**	*i* P	**Pn**	**08 17 26.9**	**+0.9**
STRU	**Stroemstad**	**5.82**	**287**	*i* P	**Pn**	**08 17 30.6**	**+0.6**

IDC 14 08:20:01.3±3.3, 49°08′N×105°65′E, h0km, mbtmp3.4/1, ML2.7/1, Error ellipse: s-maj=24.7km s-min=20.3km az=6.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**1.34**	**158**	Pg	Pg	08 20 26.5	-0.4
	2.5nm,0.3s,baz=336,slow=18,SNR=22						
SONM				Lg	Lg	08 20 44.7	
	3.7nm,0.3s,baz=342,slow=31,SNR=6.1						
I34MN	**SONGINO INFRAS**	**1.37**	**158**	I	I	08 27 30.0	
	baz=337,slow=332,SNR=2.1						
ZALV	**Zalesovo Beam**	**13.84**	**298**	Pn	Pn	08 23 18.7	+0.1
	0.2nm,0.3s,baz=114,slow=15,SNR=1.9						
	0.3nm,0.4s						

UPA 14 08:21:13.4±1.2, 8°.38N×82°.79W, h24km±3km, MD3.8, ML3.9
CATAC 14 08:21:14.3±0.5, 8°N±3°×8°3W±°, h10km±2km, M3.5/8, MLv3.5/8, Error ellipse: s-maj=7.5km s-min=4.4km az=3.9, confirmed

ISC 14 08:21:13.4±1.0, 8°.42N±0°.04×82°.79W±0°.02, h30km±6km, n37, σ0°84/52, 10D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.01**	**174**	⇓*i*P	**Pb**	**08 21 18.0**	**-0.4**
LESP3				AMP		08 21 18.0	
	comp=Z,34μm,0.1s						
LESP3				*e*S	**Sb**	**08 21 21.3**	**-0.4**
CDITO	**Canoas**	**0.17**	**333**	P	**Pn**	**08 21 19.3**	**-0.7**
CDITO	**Canoas**	**0.17**	**333**	S	**Sb**	**08 21 24.1**	**+0.8**
BAGA3	**Bagala, Chiriq**	**0.27**	**79**	⇓*i*P	**Pn**	**08 21 20.5**	**-0.7**
BAGA3				AMP		08 21 20.8	
	comp=Z,21μm,0.1s						
BAGA3				*e*S	**Sb**	**08 21 25.4**	**+0.4**
DVD	**David**	**0.34**	**87**	⇓*i*P	**Pb**	**08 21 21.0**	**-0.3**
DVD				AMP		08 21 21.2	
	comp=Z,28μm,0.1s						
DVD				*e*S	**Sb**	**08 21 26.8**	**+0.1**
PEDE3	**Pedregal, Chir**	**0.37**	**95**	⇓*i*P	**Pb**	**08 21 21.1**	**-0.6**
PEDE3				*e*S	**Sb**	**08 21 27.1**	**-0.3**
LOCO3	**Loma Colorada,**	**0.37**	**91**	⇓*i*P	**Pb**	**08 21 21.4**	**-0.4**
LOCO3				*e*S	**Sb**	**08 21 26.8**	**-0.7**
MLIR3	**Monte Lirio, C**	**0.38**	**355**	*e*P	**Pn**	**08 21 22.8**	**-0.1**
BRU2	**Volcan**	**0.39**	**15**	⇓*i*P	**Pn**	**08 21 22.5**	**-0.6**
BRU2				*e*S	**Sn**	**08 21 30.5**	**+0.9**
BRU2	**Volcan**	**0.39**	**15**	P	**Pn**	**08 21 22.5**	**-0.6**
LOMA3	**Las Lomas, Chi**	**0.40**	**88**	*e*P	**Pb**	**08 21 21.7**	**-0.5**
LOMA3				*e*S	**Sb**	**08 21 28.1**	**-0.1**
PTAR3	**Potrerillos Ar**	**0.40**	**47**	⇓*i*P	**Pn**	**08 21 22.6**	**-0.7**
PTAR3				AMP		08 21 22.6	
	comp=Z,8μm,0.1s						
PTAR3				*e*S	**Sn**	**08 21 30.3**	**+0.5**
BC3P	**Paso Ancho**	**0.43**	**24**	*i* P	**Pn**	**08 21 23.0**	**-0.8**
BC3P				*e*S	**Sn**	**08 21 31.4**	**+0.6**
BQSF3	**Alto Boquete,**	**0.48**	**48**	⇓*i*P	**Pb**	**08 21 23.4**	**-0.2**
BQSF3				AMP		08 21 23.6	
	comp=Z,6μm,0.1s						
BQSF3				*e*S	**Sb**	**08 21 30.7**	**+0.2**
LNBQ3	**Los Naranjos,**	**0.51**	**43**	⇓*i*P	**Pb**	**08 21 23.7**	**-0.3**
LNBQ3				*e*S	**Sn**	**08 21 32.1**	**-0.4**
PTJ1	**Puerto Jimnez**	**0.52**	**283**	*e*P	**Pb**	**08 21 23.2**	**-0.8**
PTJ1	**Puerto Jimnez**	**0.52**	**283**	P	**Pb**	**08 21 23.4**	**-0.7**
PTJ1	**Puerto Jimnez**	**0.52**	**283**	S	**Sn**	**08 21 33.1**	**+0.5**
PSOM3	**Paja de Sombre**	**0.54**	**60**	⇓*i*P	**Pb**	**08 21 23.9**	**-0.5**
PSOM3				AMP		08 21 25.8	
	comp=Z,4μm,0.1s						
PSOM3				*e*S	**Sb**	**08 21 32.4**	**+0.5**
PIRO	**Carate, Puerto**	**0.54**	**269**	*e*P	**Pb**	**08 21 23.3**	**-1.0**
PIRO	**Carate, Puerto**	**0.54**	**269**	P	**Pb**	**08 21 23.4**	**-1.0**
CHGR2	**Aguacate**	**0.82**	**51**	*e*P	**Pb**	**08 21 28.2**	**-0.9**
DRK0	**Durika**	**0.95**	**332**	*e*P	**Pb**	**08 21 30.7**	**-0.8**
DRK0				*e*S	**Sn**	**08 21 44.7**	**+1.1**
DRK0	**Durika**	**0.95**	**332**	P	**Pb**	**08 21 30.7**	**-0.8**
REME3	**Remedios, Chir**	**0.97**	**101**	*e*P	**Pb**	**08 21 31.2**	**-0.4**
CNI2	**El Empalme, Bo**	**1.05**	**18**	*e*P	**Pn**	**08 21 31.8**	**-0.3**
OCHAL	**Ojochal**	**1.08**	**309**	P	**Pb**	**08 21 32.4**	**-1.1**
OCHAL	**Ojochal**	**1.08**	**309**	S	**Sn**	**08 21 48.2**	**+1.6**
MESA3	**La Mesa, Verag**	**1.61**	**99**	*e*P	**Pn**	**08 21 39.7**	**-0.1**
MESA3				*e*S	**Sn**	**08 21 59.2**	**-0.4**
GMAL	**Guarumal, Vera**	**1.67**	**113**	*e*P	**Pn**	**08 21 40.0**	**-0.7**
SAFE3	**Santa Fe, Vera**	**1.70**	**87**	*e*P	**Pn**	**08 21 42.2**	**+1.2**
CACAO	**El Cacao, Vera**	**2.19**	**119**	*e*P	**Pn**	**08 21 47.8**	**0.0**
PNME	**Penonome**	**2.44**	**88**	*e*P	**Pn**	**08 21 51.9**	**+0.7**
SOCE	**Pocosol**	**2.66**	**317**	P	**Pb**	**08 21 58.2**	**-2.1**
ZANG	**Zanguenga, Cho**	**2.94**	**79**	*e*P	**Pn**	**08 21 58.5**	**+0.4**
BCIP	**Isla Barro Col**	**3.01**	**75**	*e*P	**Pn**	**08 22 00.2**	**+1.1**
CMARA	**Lajas Hojancha**	**3.05**	**302**	P	**Pn**	**08 22 00.8**	**+1.1**
CMARA				S	**Sn**	**08 22 37.5**	**+2.3**

CATAC 14 08:22:47.7±0.5, 13°N±3°×9°0W±°, h24km±3km, M3.3/19, MLv3.3/19, Error ellipse: s-maj=6.3km s-min=4.8km az=50.2, confirmed
GCG 14 08:22:48.7±1.2, 13°.40N×89°.97W, h43km±21km, MD4.0, ML3.6, MW2.9
SNET 14 08:22:48.0±0.9, 13°.33N×89°.97W, h43km±11km, ML3.1

ISC 14 08:22:48.7±1.5, 13°.31N±0°.06×89°.91W±0°.04, h30km±11km, n73, σ0°72/79, 4C, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.54**	**349**	P	**Pb**	**08 22 59.3**	**-0.5**
JAYA	**Jayaque - finc**	**0.56**	**53**	*e*P	**Pb**	**08 23 00.1**	**-0.2**
JAYA				*e*S	**Sb**	**08 23 09.2**	**+0.9**
JAYA	**Jayaque - finc**	**0.56**	**53**	*e*P	**Pb**	**08 23 00.1**	**-0.2**
JAYA	**Jayaque - finc**	**0.56**	**53**	P	**Pb**	**08 23 00.2**	**-0.1**
CEVE	**Cerro Verde**	**0.58**	**28**	*e*P	**Pb**	**08 23 00.7**	**0.0**
CEVE	**Cerro Verde**	**0.58**	**28**	P	**Pb**	**08 23 00.7**	**0.0**
LALI	**Alcalda de L**	**0.60**	**73**	*e*P	**Pb**	**08 23 00.4**	**-0.4**
LALI				*e*S	**Sb**	**08 23 09.6**	**+0.6**
LALI	**Alcalda de L**	**0.60**	**73**	P	**Pb**	**08 23 00.5**	**-0.4**
NUBE	**Las Nubes**	**0.60**	**12**	⇓*e*P	**Pb**	**08 23 00.5**	**-0.4**
NUBE	**Las Nubes**	**0.60**	**12**	*i* P	**Pb**	**08 23 00.5**	**-0.4**
NUBE				*e*S	**Sb**	**08 23 09.9**	**+0.6**
NUBE	**Las Nubes**	**0.60**	**12**	P	**Pb**	**08 23 00.5**	**-0.4**
SNJE	**San Jose**	**0.63**	**28**	*e*P	**Pb**	**08 23 01.0**	**-0.4**
RTR	**El Retiro**	**0.64**	**24**	⇓*e*P	**Pb**	**08 23 01.4**	**-0.2**
LOAL	**Lomas de Alarc**	**0.69**	**10**	P	**Pb**	**08 23 02.1**	**-0.4**
LOAL	**Lomas de Alarc**	**0.69**	**10**	S	**Sb**	**08 23 13.2**	**+1.4**
CEDA	**San Andres**	**0.70**	**46**	S	**Sb**	**08 23 13.0**	**+1.1**
PMON	**Piamonte**	**0.70**	**55**	*e*P	**Pb**	**08 23 02.1**	**-0.5**
PMON	**Piamonte**	**0.70**	**55**	P	**Pb**	**08 23 02.1**	**-0.5**
PMON	**Piamonte**	**0.70**	**55**	S	**Sb**	**08 23 12.7**	**+0.6**
BOQS	**Boqueron**	**0.74**	**55**	*e*P	**Pb**	**08 23 02.9**	**-0.5**
UNIC	**Universidad Ca**	**0.75**	**28**	P	**Pb**	**08 23 02.7**	**-0.7**
UNIC	**Universidad Ca**	**0.75**	**28**	S	**Sb**	**08 23 14.1**	**+0.6**
UEES	**Universidad Ev**	**0.77**	**58**	*e*P	**Pb**	**08 23 03.0**	**-0.7**
UEES	**Universidad Ev**	**0.77**	**58**	P	**Pb**	**08 23 03.1**	**-0.6**
UEES	**Universidad Ev**	**0.77**	**58**	S	**Sb**	**08 23 14.5**	**+0.7**
PANCS	**Alcalda de**	**0.77**	**67**	P	**Pb**	**08 23 03.0**	**-0.7**
PANCS	**Alcalda de**	**0.77**	**67**	S	**Sb**	**08 23 13.6**	**-0.3**
LOMA	**Loma Larga**	**0.79**	**65**	*e*P	**Pb**	**08 23 03.0**	**-1.1**
LOMA	**Loma Larga**	**0.79**	**65**	P	**Pb**	**08 23 03.0**	**-1.1**
LOMA	**Loma Larga**	**0.79**	**65**	S	**Sb**	**08 23 14.6**	**0.0**
UESS	**Universidad de**	**0.80**	**59**	*e*P	**Pb**	**08 23 03.7**	**-0.5**
RBDL	**Robledal**	**0.83**	**15**	⇑*i*P	**Pb**	**08 23 03.8**	**-0.9**
UDBS	**Universidad Do**	**0.84**	**61**	S	**Sb**	**08 23 15.9**	**+0.1**
EL FR	**El Faro**	**0.88**	**69**	*e*P	**Pb**	**08 23 04.5**	**-1.1**
LFRS				*e*S	**Sb**	**08 23 16.7**	**-0.5**
LFU	**La Fuente**	**0.89**	**61**	*e*P	**Pb**	**08 23 05.1**	**-0.6**
LBRS	**Las Brisas**	**0.94**	**63**	*e*P	**Pn**	**08 23 05.8**	**-0.2**
PCG5	**San Vicente Pa**	**1.01**	**333**	*e*P	**Pb**	**08 23 09.3**	**+1.5**
PAVA	**Las Pavas**	**1.03**	**67**	*e*P	**Pn**	**08 23 07.3**	**+0.2**
PAVA	**Las Pavas**	**1.03**	**67**	P	**Pn**	**08 23 07.4**	**+0.2**
PAVA	**Las Pavas**	**1.03**	**67**	S	**Sb**	**08 23 21.0**	**-0.3**
JUAM	**Asuncion Mita**	**1.04**	**11**	*e*P	**Pn**	**08 23 04.9**	**-2.4**
TECO	**Alcaldia de Te**	**1.12**	**78**	*e*P	**Pn**	**08 23 07.7**	**-0.7**
TECO				*e*S	**Sn**	**08 23 22.7**	**-0.2**
TECO	**Alcaldia de Te**	**1.12**	**78**	P	**Pn**	**08 23 07.7**	**-0.7**
UESV	**Universidad de**	**1.14**	**73**	P	**Pn**	**08 23 08.5**	**-0.2**
UESV	**Universidad de**	**1.14**	**73**	S	**Sn**	**08 23 23.9**	**+0.6**
MTO3	**Montecristo**	**1.21**	**26**	⇑*e*P	**Pn**	**08 23 08.8**	**-0.9**
MTO3	**Montecristo**	**1.21**	**26**	*i* P	**Pn**	**08 23 08.8**	**-0.9**
MTO3	**Montecristo**	**1.21**	**26**	P	**Pn**	**08 23 08.9**	**-0.9**
MTO3	**Montecristo**	**1.21**	**26**	S	**Sn**	**08 23 25.1**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.21**	**71**	*e*P	**Pn**	**08 23 09.3**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.21**	**71**	P	**Pn**	**08 23 09.5**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.21**	**71**	S	**Sn**	**08 23 26.0**	**+0.8**
LLGN	**La Laguna**	**1.26**	**48**	P	**Pn**	**08 23 09.6**	**-0.8**
LLGN	**La Laguna**	**1.26**	**48**	S	**Sn**	**08 23 27.0**	**+0.5**
ESQI	**Esquipulas**	**1.36**	**24**	P	**Pn**	**08 23 11.1**	**-0.7**
ESQI	**Esquipulas**	**1.36**	**24**	S	**Sn**	**08 23 29.1**	**+0.3**
ZAFR2	**Estanzuela, Za**	**1.37**	**23**	*i* P	**Pb**	**08 23 15.3**	**+1.5**
ESSG	**Sabana Grande**	**1.39**	**320**	*e*P	**Pn**	**08 23 10.5**	**-1.7**
PACA	**Pacayal**	**1.55**	**84**	*e*P	**Pn**	**08 23 14.5**	**0.0**
PACA	**Pacayal**	**1.55**	**84**	P	**Pn**	**08 23 14.7**	**+0.3**
PACA	**Pacayal**	**1.55**	**84**	S	**Sn**	**08 23 34.9**	**+1.3**
RANC	**El Ranchito**	**1.58**	**85**	*e*P	**Pn**	**08 23 14.5**	**-0.4**
APG	**El Apazote**	**1.77**	**342**	*e*P	**Pn**	**08 23 16.7**	**-0.8**
STG8	**El Palmar, Qui**	**1.80**	**309**	*e*P	**Pb**	**08 23 21.3**	**+0.1**
LCND	**La Caada**	**1.97**	**90**	*e*P	**Pn**	**08 23 19.5**	**-0.5**
LCND	**La Caada**	**1.97**	**90**	P	**Pn**	**08 23 19.8**	**-0.2**
CNCH	**Conchagua**	**2.02**	**91**	*e*P	**Pn**	**08 23 20.4**	**-0.5**
CNCH	**Conchagua**	**2.02**	**91**	P	**Pn**	**08 23 20.6**	**-0.3**
CNCH	**Conchagua**	**2.02**	**91**	S	**Sn**	**08 23 46.0**	**+0.7**
PKGN	**Cerro Pekin**	**2.93**	**102**	P	**Pn**	**08 23 33.1**	**-0.2**
PKGN				S	**Sn**	**08 24 08.0**	**+0.5**
YUSH	**Yuscaran**	**3.05**	**78**	P	**Pn**	**08 23 34.8**	**-0.2**
POLN	**Al Sur del Vol**	**3.09**	**102**	P	**Pn**	**08 23 34.7**	**-0.8**
RCON	**San Juan de Ri**	**3.66**	**87**	P	**Pn**	**08 23 43.3**	**-0.2**

ASRS 14 08:23:36.0±0.7, 53°.79N×91°.09E, h0km, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.
IDC 14 08:23:42.0±2.2, 53°.46N×90°.84E, h0km, mbtmp3.4/5, ML3.0/5, Error ellipse: s-maj=22.1km s-min=16.7km az=25.0
NNC 14 08:23:48.6±2.5, 53°.30N×90°.34E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=21.2km s-min=16.0km az=79.0, Suspected Mining explosion.

ISC 14 08:23:40.6±1.4, 53°.6N±0°.1×90°.82E±0°.08, h0km, n10, σ1§60/14, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.58**	**279**	⇑Pn	**Pb**	**08 24 42.9**	**-1.9**
	2.5nm,0.8s						
ZAA0				⇑Lg	Lg	08 25 34.5	
	24nm,1.1s						
ZALV	**Zalesovo Beam**	**3.58**	**279**	Pn	**Pn**	**08 24 39.2**	**+1.8**
	2.4nm,0.3s,baz=97,slow=16,SNR=18						
ZALV				Sn	**Sn**	**08 25 21.6**	**+1.3**
	2.3nm,0.3s,baz=111,slow=23,SNR=5.3						
ZALV				Lg	Lg	08 25 34.0	
	5.1nm,0.3s,baz=82,slow=26,SNR=9.9						
	4.1nm,0.3s						
KURBB	**Kurchatov Arra**	**8.12**	**254**	Pn	**Pn**	**08 25 39.0**	**-0.7**
	0.2nm,0.3s,baz=66,slow=14,SNR=15						
KURBB				Sn	**Sn**	**08 27 12.7**	**+0.7**
	0.1nm,0.3s,baz=67,slow=25,SNR=10						
KURBB				Lg	Lg	08 27 55.5	
	baz=71,slow=31						
	2.4nm,0.5s						
KURBB	**Kurchatov Arra**	**8.12**	**254**	⇑Pn	**Pn**	**08 25 40.7**	**+1.1**
	7.8nm,1.1s						
KURBB				⇑Sn	**Sn**	**08 27 12.7**	**+0.7**
	80nm,0.9s						
KURBB				⇓Lg	Lg	08 27 57.2	
	60nm,0.9s						
MK31	**Makanchi Array**	**8.70**	**222**	⇑Pn	**Pn**	**08 25 50.2**	**+2.5**
	2.9nm,0.8s,baz=30,slow=12,SNR=18						
MK31				⇓Sn	**Sn**	**08 27 26.9**	**+0.4**
	5.9nm,0.9s,baz=36,slow=13,SNR=4.3						
MK31				⇓Lg	Lg	08 28 14.5	
	15nm,1.0s,baz=30,slow=11,SNR=4.8						
MKAR	**Makanchi Array**	**8.70**	**222**	Pn	**Pn**	**08 25 49.7**	**+2.0**
	0.6nm,0.3s,baz=32,slow=12,SNR=15						
MKAR				Sn	**Sn**	**08 27 25.8**	**-0.7**
	0.1nm,0.3s,baz=38,slow=26,SNR=3.8						
MKAR				Lg	Lg	08 28 12.7	
	0.1nm,0.3s,baz=30,slow=35,SNR=1.9						
	1.2nm,0.5s						
SONM	**Songino Array**	**11.41**	**114**	Pn	**Pn**	**08 26 24.5**	**-0.4**
	0.2nm,0.3s,baz=303,slow=16,SNR=1.7						
SONM				Lg	Lg	08 29 32.1	
	0.2nm,0.3s,baz=315,slow=23,SNR=4.2						
	0.3nm,0.5s						
I34MN	**SONGINO INFRAS**	**11.44**	**114**	I	I	09 30 00.0	
	baz=309,slow=305,SNR=1.3						
BVAR	**Borovoye Array**	**12.23**	**276**	Pn	**Pn**	**08 26 37.4**	**+1.4**
	baz=77,slow=12,SNR=2.1						
BVAR				Sn	**Sn**	**08 28 51.0**	**-1.9**
	baz=71,slow=28,SNR=2.3						
	0.5nm,0.4s						
AAK	**Ala-Archa**	**15.39**	**231**	Lg	Lg	08 31 36.9	
	0.2nm,0.3s,baz=172,slow=7.2,SNR=1.9						

NEIC 14 08:33:58.4±2.0, 16°.92N±0°.08×100°.59W±0°.06, h29km±7km, mb4.1/9, Md4.5/80(MEX), Error ellipse: s-maj=12.3km s-min=6.5km az=211.0
MEX 14 08:34:02.3±1.8, 17°.16N×100°.55W, h24km±10km, MD4.5

ISC 14 08:33:57.2±1.0, 17°.00N±0°.04×100°.66W±0°.03, h32km±7km, n118, σ2§28/180, 1C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATYC	**Atoyac**	**0.30**	**45**		**Pb**	**08 34 05.1**	**+0.2**
ATYC	**Atoyac**	**0.30**	**45**	*i* P	**Pb**	**08 34 05.1**	**+0.2**
ATYC				*i* S	**Sb**	**08 34 09.4**	**-0.7**
CAIG	**El Cayaco**	**0.38**	**82**		**Pb**	**08 34 07.2**	**+0.7**
CAIG	**El Cayaco**	**0.38**	**82**	⇑*i*P	**Pn**	**08 34 07.2**	**+0.7**
	baz=302,slow=12						
CAIG				*i* S	**Sn**	**08 34 12.3**	**-0.5**
VNTA	**La Mica**	**0.81**	**96**		**Pn**	**08 34 13.4**	**+1.0**
VNTA	**La Mica**	**0.81**	**96**	*e*P	**Pn**	**08 34 13.4**	**+1.0**
VNTA				*e*S	**Sn**	**08 34

PEIG				eS		Sn	08 35 26.3	-4.0	
TOIG	**Toxpalan**	**3.60**	**72**	eP		Pn	08 34 52.0	+1.1	
TOIG				eS		Sn	08 35 31.8	-0.7	
JRQG	**Juriquilla Cam**	**3.69**	**3**			Pn	08 34 56.1	+3.8	
JRQG	**Juriquilla Cam**	**3.69**	**3**	eP		Pn	08 34 57.4	+5.0	
JRQG				eS		Sb	08 35 43.6	-2.8	
CDAR	**Ciudad de Arme**	**3.73**	**302**	eP		Pn	08 34 57.6	+5.0	
CDAR				eS		Sn	08 35 38.6	+3.1	
MNGA	**Volcan de Coli**	**3.73**	**312**	eP		Pn	08 34 58.4	+5.4	
MNGA				eS		Sn	08 35 38.8	+2.7	
VHO	**Vista Hermosa**	**3.76**	**88**	eP		Pn	08 34 54.4	+1.2	
VHO				eS		Sn	08 35 36.8	+0.3	
OXIG	**Oaxaca**	**3.76**	**88**			Pn	08 34 54.4	+1.2	
INCO	**Volcan de Coli**	**3.76**	**312**	eP		Pn	08 34 58.6	+5.1	
INCO				eS		Sn	08 35 40.1	+3.2	
OXBJ	**Oaxaca**	**3.77**	**88**			Pb	08 35 03.4	+0.2	
OXBJ	**Oaxaca**	**3.77**	**88**	eP		Pb	08 35 03.4	+0.2	
OXBJ				eS		Sn	08 35 42.0	+5.3	
SOMAC	**Volcano de Col**	**3.78**	**312**	eP		Pn	08 34 58.9	+5.2	
SOMAC				eS		Sn	08 35 40.8	+3.5	
OXLC	**Oaxaca**	**3.79**	**88**	eP		Pb	08 35 00.5	-3.0	
OXLC				eS		Sn	08 35 39.6	+2.4	
IGIG	**Irapuato, Guan**	**3.79**	**350**	eP		Pb	08 35 01.5	-2.1	
IGIG				eS		Sn	08 35 41.5	+4.1	
POHV	**Veracruz**	**3.82**	**57**	e		Pn	08 34 32.3	-22	
CEGR	**Campo Tres**	**3.86**	**309**	eP		Pn	08 34 59.4	+4.8	
CEGR				eS		Sn	08 35 39.7	+0.6	
CXUV	**Coxquihui**	**4.29**	**42**	eP		Pn	08 34 58.8	-1.7	
CXUV				eS		Sn	08 35 54.5	+4.9	
JAUV	**Jalcomulco**	**4.36**	**57**			Pn	08 35 01.5	+0.2	
JAUV	**Jalcomulco**	**4.36**	**57**	eP		Pn	08 35 01.5	+0.2	
JAUV				eS		Sn	08 35 53.4	+2.2	
HUIG	**Huatulco**	**4.54**	**105**	eP		Pn	08 35 06.2	+2.4	
HUIG				eS		Sn	08 35 50.9	-4.6	
NEUV	**Arroyo Zacate**	**4.69**	**81**			Pn	08 35 06.6	+0.7	
NEUV	**Arroyo Zacate**	**4.69**	**81**	eP		Pn	08 35 06.6	+0.7	
NEUV				eS		Sn	08 35 58.7	-0.6	
CJM	**Chamela**	**4.85**	**302**	eP		Pn	08 35 13.8	+5.6	
CJM				eS		Sn	08 36 11.6	+8.3	
LVIG	**Laguna Verde**	**4.86**	**55**	eP		Pn	08 35 14.1	+5.9	
LVIG				eS		Sn	08 36 00.4	-2.9	
RPIG	**Rio Verde**	**4.90**	**7**	eP		Pb	08 35 19.9	-2.5	
RPIG				eS		Sb	08 36 15.5	-5.6	
CTUV	**Llano Grande**	**4.95**	**26**			Pn	08 35 10.7	+1.2	
CTUV	**Llano Grande**	**4.95**	**26**	eP		Pn	08 35 10.7	+1.2	
AAIG	**Aguscalientes**	**5.21**	**342**	eP		Pn	08 35 17.5	+4.3	
AAIG				eS		Sn	08 36 14.7	+2.5	
ANIG	**Ahuacatlan**	**5.44**	**318**	eP		Pb	08 35 29.7	-1.9	
ANIG				eS		Sn	08 36 14.2	-3.7	
PMUV	**Sontecomapan**	**5.50**	**73**	eP		Pn	08 35 11.6	-5.5	
ZAIG	**Zacatecas**	**6.02**	**343**			Pn	08 35 28.4	+4.0	
ZAIG	**Zacatecas**	**6.02**	**343**	eP		Pn	08 35 33.9	+10	
ZAIG				eS		Sn	08 36 36.5	+4.1	
UXUV	**UXUV**	**6.24**	**86**	eP		Pn	08 35 27.2	+0.1	
UXUV				eS		Sn	08 36 31.4	-5.9	
TGIG		**7.22**	**91**	eP		Pn	08 35 48.9	+8.2	
TGIG				eS		Sn	08 37 04.2	+2.5	
CCIG	**Comitan**	**8.20**	**94**	Pn		Pn	08 35 54.6	+0.3	
CCIG	**Comitan**	**8.20**	**94**	eP		Pn	08 35 57.4	+3.1	
CCIG				eS		Sn	08 37 25.8	-0.2	
PATR	**El Naranjo**	**8.31**	**102**	eP		Pn	08 35 57.5	+1.6	
PATR				eS		Sn	08 37 27.7	-1.2	
PAVE	**Pavencul**	**8.35**	**101**	eP		Pn	08 36 00.2	+3.8	
CHUJ	**Union Juarez**	**8.44**	**102**	eP		Pn	08 35 59.2	+1.6	
CHUJ				eS		Sn	08 37 25.4	-6.5	
MTO3	**Montecristo**	**11.18**	**102**	Pn		Pn	08 36 32.5	-2.7	
TEIG	**Tepich**	**12.17**	**73**	Pn		Pn	08 36 48.7	+0.2	
SAND	**Sanderson**	**12.97**	**354**	Pn		Pn	08 37 01.8	+2.3	
BRDY	**Brady**	**14.30**	**6**			Pn	08 37 18.6	+1.0	
MNHN	**Monahans**	**14.41**	**353**	Pn		Pn	08 37 21.5	+2.4	
HNVL	**Huntsville, TX**	**14.49**	**18**	Pn		Pn	08 37 22.1	+1.9	
WHTX	**Lake Whitney,**	**15.21**	**10**			Pn	08 37 31.6	+1.8	
WHTX					IAmb	IAmb	08 37 49.0		
	comp=Z,14nm,0.9s								
HSIG		**15.25**	**324**	Pn		Pn	08 37 32.1	+1.7	
GDL2	**Guadalupe Moun**	**15.50**	**348**	Pn		Pn	08 37 36.9	+3.1	
NATX	**Nacogdoches**	**15.67**	**19**	Pn		Pn	08 37 37.8	+2.0	
NATX					IAmb	IAmb	08 37 49.7		
	comp=Z,14nm,0.7s								
FCAR	**Ozark Folk Cen**	**20.29**	**20**	P		P	08 38 31.3	+0.9	
FCAR					IAmb	IAmb	08 38 39.4		
	comp=Z,3.6nm,0.7s								
YUH	**Yuha Desert**	**20.81**	**321**	P		P	08 38 37.5	+1.4	
OTAV	**Otavalo**	**27.49**	**125**	P		P	08 39 39.5	-2.0	
OTAV					IAmb	IAmb	08 40 10.4		
	comp=Z,3.9nm,1.1s								
FLOC	**Florencia**	**28.98**	**119**	P		P	08 39 52.3	-2.0	
PB16	**IPOC Station P**	**46.61**	**137**	P		P	08 42 21.8	-1.6	

*IDC **14** 08:34:50.9±0.6, 9.°85N×57.°64E, h0km, mb4.1/20, mbtmp4.1/20, MS3.7/27, Error ellipse: s-maj=18.9km s-min=14.7km az=155.0*
*NEIC **14** 08:34:53.1±1.6, 9.°90N±0.°09×57.°62E±0.°09, h10km±1km, mb4.6/32, Error ellipse: s-maj=17.2km s-min=13.7km az=227.0*

ISC 14 08:34:53.5±0.5, 9.°88N±0.°09×57.°64E±0.°08, h17km, n80, σ0s75/61, mb4.4/35, MS3.7/27, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UOSS	**Minazif**	**15.04**	**355**	Pn	**Pn**	**08 38 23.8**	**-1.7**
UOSS				IAmb	IAmb	08 38 37.5	
	comp=Z,15nm,0.8s						
HMDM	**Hanimaadhoo**	**15.69**	**100**	Pn	**Pn**	**08 38 33.0**	**-0.9**
RAYN	**Ar Rayn**	**17.84**	**321**	Pn	**Pn**	**08 38 59.5**	**-1.7**
PALK	**Pallekele**	**22.95**	**95**	LR	LR	08 46 51.5	
	comp=Z,90nm,21.0s,baz=290,slow=31						
KIBK	**Kibwezi**	**22.98**	**239**		**P**	**08 39 57.0**	**-0.6**
KIBK				IAmb	IAmb	08 40 07.1	
	comp=Z,15nm,1.1s						
KMBO	**Kilima Mbogo**	**23.05**	**243**	P	**P**	**08 39 59.6**	**+1.1**
	comp=Z,3.5nm,0.5s,baz=46,slow=17,SNR=6.0						
KMBO				LR	LR	08 49 50.7	
	comp=Z,82nm,18.6s,baz=98,slow=39						
	comp=Z,3.5nm,0.5s						
HRA	**Herat**	**24.75**	**9**		**P**	**08 40 14.1**	**-0.4**
HRA				IAmb	IAmb	08 40 25.7	
	comp=Z,14nm,1.1s						
KBL	**Kabul**	**26.67**	**21**	P	**P**	**08 40 31.5**	**-0.4**
KBL				IAmb	IAmb	08 40 32.8	
	comp=Z,4.9nm,0.5s						
NIL	**Nilore**	**27.67**	**29**	P	**P**	**08 40 42.0**	**+1.3**
MBAR	**Mbarara**	**28.73**	**250**	LR	LR	08 52 29.4	
	comp=Z,118nm,19.9s,baz=61,slow=37						
OPO	**Ambohidratompo**	**30.09**	**200**	LR	LR	08 50 12.8	
	comp=Z,144nm,21.5s,baz=172,slow=31						
GNI	**Garni**	**32.25**	**341**	LR	LR	08 55 46.2	
	comp=Z,168nm,19.7s,baz=167,slow=39						
EVN	**Everest**	**32.80**	**53**		**P**	**08 41 27.7**	**+0.8**
KOPT	**Kop Dagi**	**33.66**	**336**	P	**P**	**08 41 32.7**	**-1.1**
ARPR	**Arapgir-MALATY**	**33.82**	**332**	P	**P**	**08 41 35.6**	**+0.5**
BRDH	**Bariadhala**	**34.93**	**64**	LR	LR	08 56 13.0	
	comp=Z,134nm,18.2s,baz=202,slow=37						
AAK	**Ala-Archa**	**35.81**	**21**	LR	LR	08 57 20.7	
	comp=Z,84nm,18.7s,baz=224,slow=38						
AAK	**Ala-Archa**	**35.81**	**21**	P	**P**	**08 41 52.3**	**+0.1**
SHL	**Shillong**	**36.02**	**60**	P	**P**	**08 41 52.9**	**-1.4**
SHL				IAmb	IAmb	08 42 08.2	
	comp=Z,15nm,1.5s						
KBZ	**Khabaz**	**36.07**	**342**	P	**P**	**08 41 54.9**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=177,slow=5.5,SNR=4.0						
KBZ				LR	LR	08 58 04.3	
	comp=Z,124nm,21.7s,baz=175,slow=39						
	comp=Z,1.6nm,0.9s						
KDJ	**Kajisay**	**36.42**	**25**	P	**P**	**08 41 57.8**	**+0.4**
KDJ				IAmb	IAmb	08 42 16.6	
	comp=Z,14nm,1.3s						
BRTR	**Keskin Array B**	**36.60**	**328**	P	**P**	**08 41 59.9**	**+0.8**
	comp=Z,1.6nm,1.1s,baz=29,slow=2.8,SNR=4.0						
	comp=Z,1.6nm,1.1s						
BRTR	**Keskin Array B**	**36.60**	**328**	P	**P**	**08 41 59.0**	**0.0**
PRZ	**Przheval'sk**	**37.22**	**26**	P	**P**	**08 42 04.3**	**0.0**
PRZ				IAmb	IAmb	08 42 25.2	
	comp=Z,14nm,1.0s						
AB31	**Akbulak array**	**39.30**	**2**	P	**P**	**08 42 22.4**	**+0.9**
AB31				IAmb	IAmb	08 42 30.2	
	comp=Z,9.8nm,1.0s						
CM31	**Chiang Mai Arr**	**40.87**	**73**	P	**P**	**08 42 34.9**	**0.0**
CM31				IAmb	IAmb	08 42 37.9	
	comp=Z,7.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.87**	**73**	P	**P**	**08 42 36.6**	**+1.7**
	comp=Z,4.7nm,0.9s,baz=265,slow=8.5,SNR=24						
CMAR				LR	LR	08 59 17.5	
	comp=Z,14nm,18.4s,baz=265,slow=36						
	comp=Z,4.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.87**	**73**		**P**	**08 42 35.3**	**+0.3**
MATP	**Matopo**	**41.58**	**223**	LR	LR	08 58 05.9	
	comp=Z,112nm,18.9s,baz=49,slow=34						
PSI	**Prapat**	**41.60**	**97**	LR	LR	08 56 43.3	
	comp=Z,59nm,18.9s,baz=238,slow=32						
MKAR	**Makanchi Array**	**42.34**	**25**	P	**P**	**08 42 47.5**	**+0.8**
	comp=Z,1.9nm,1.0s,baz=203,slow=9.0,SNR=6.1						
MKAR				LR	LR	09 00 58.3	
	comp=Z,124nm,21.5s,baz=188,slow=37						
	comp=Z,1.9nm,1.0s						
MREMI	**Moremi**	**43.77**	**222**	P	**P**	**08 42 59.2**	**+0.6**
KURBB	**Kurchatov Arra**	**44.13**	**19**	P	**P**	**08 43 01.3**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=223,slow=7.6,SNR=4.0						
	comp=Z,0.7nm,0.8s						
KURK	**Kurchatov**	**44.23**	**19**	P	**P**	**08 43 01.8**	**0.0**
BVAR	**Borovoye Array**	**44.24**	**11**	P	**P**	**08 43 02.2**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=184,slow=8.9,SNR=5.6						
BVAR				LR	LR	09 01 11.1	
	comp=Z,87nm,19.0s,baz=222,slow=36						
	comp=Z,1.2nm,0.8s						
QNGWA	**Qangwa**	**46.31**	**231**	P	**P**	**08 43 19.7**	**+0.8**
QNGWA				IAmb	IAmb	08 43 29.9	
	comp=Z,10nm,1.2s						
ARTI	**Arti**	**46.40**	**1**	LR	LR	09 04 24.3	
	comp=Z,84nm,18.0s,baz=212,slow=38						
BURAR	**Bucovina Array**	**46.50**	**330**	P	**P**	**08 43 19.9**	**-0.2**
LBTB	**Lobatse**	**46.68**	**221**	LR	LR	09 00 15.3	
	comp=Z,103nm,20.6s,baz=20,slow=33						
LBTB	**Lobatse**	**46.68**	**221**	P	**P**	**08 43 21.1**	**-0.6**
AKASG	**Malin Array Be**	**46.95**	**336**	P	**P**	**08 43 22.4**	**-0.9**
	comp=Z,0.2nm,0.2s,baz=142,slow=7.1,SNR=5.9						
	comp=Z,0.2nm,0.2s						
TSUM	**Tsumeb**	**48.92**	**234**	LR	LR	09 03 28.4	
	comp=Z,86nm,21.4s,baz=123,slow=35						
ZAA0	**Zalesovo Array**	**49.03**	**21**		**P**	**08 43 39.1**	**-0.3**
ZAA0				IAmb	IAmb	08 43 47.5	
	comp=Z,7.0nm,1.1s						
ZALV	**Zalesovo Beam**	**49.03**	**21**	P	**P**	**08 43 39.1**	**-0.3**
	comp=Z,6.3nm,1.0s,baz=227,slow=7.9,SNR=15						
ZALV				LR	LR	09 04 31.0	
	comp=Z,66nm,19.2s,baz=248,slow=36						
	comp=Z,6.3nm,1.0s						
ZALV	**Zalesovo Beam**	**49.03**	**21**		**P**	**08 43 39.3**	**-0.1**
LZDM	**Lanzhou Array**	**49.12**	**51**	P	**P**	**08 43 40.8**	**0.0**
	comp=Z,1.0nm,0.3s,baz=224,slow=4.0,SNR=1.8						
LZDM				LR	LR	09 05 23.9	
	comp=Z,121nm,20.5s,baz=65,slow=37						
	comp=Z,1.0nm,0.3s						
BOSA	**Boshof**	**49.43**	**218**	P	**P**	**08 43 42.3**	**-0.7**
	comp=Z,3.7nm,0.8s,baz=74,slow=5.0,SNR=7.0						
BOSA				LR	LR	09 01 51.5	
	comp=Z,135nm,22.0s,baz=26,slow=33						
	comp=Z,3.7nm,0.8s						
CTI	**Castel Tesino**	**53.19**	**321**	P	**P**	**08 44 11.5**	**+0.6**
CTI				IAmb	IAmb	08 44 12.4	
	comp=Z,12nm,1.2s						
SBUM	**Sibu**	**54.71**	**94**	P	**P**	**08 44 22.5**	**+0.1**
SBUM				IAmb	IAmb	08 44 24.3	
	comp=Z,4.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**54.83**	**279**	P	**P**	**08 44 22.7**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=64,slow=9.9,SNR=3.9						
	comp=Z,1.9nm,0.3s						
SONM	**Songino Array**	**55.69**	**38**	P	**P**	**08 44 28.6**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=240,slow=7.7,SNR=6.7						
	comp=Z,2.1nm,1.0s						
FINES	**FINESS Array B**	**56.43**	**342**	LR	LR	09 12 27.2	
	comp=Z,82nm,18.4s,baz=216,slow=40						
MD01	**Midelt array s**	**61.55**	**302**	P	**P**	**08 45 10.1**	**-0.2**
DBIC	**Dimbokro**	**61.85**	**272**	P	**P**	**08 45 13.0**	**+0.6**
	comp=Z,6.6nm,0.7s,baz=109,slow=7.3,SNR=8.9						
	comp=Z,6.6nm,0.7s						
DBIC	**Dimbokro**	**61.85**	**272**		**P**	**08 45 12.4**	**0.0**
ESDC	**Sonseca Array**	**61.96**	**310**	P	**P**	**08 45 12.8**	**0.0**
	comp=Z,4.7nm,0.9s,baz=84,slow=6.0,SNR=16						
	comp=Z,4.7nm,0.9s						
ESDC	**Sonseca Array**	**61.96**	**310**		**P**	**08 45 12.6**	**-0.2**
ESDC				IAmb	IAmb	08 45 20.4	
	comp=Z,3.0nm,0.8s						
NRIK	**Noril'sk**	**62.45**	**12**	P	**P**	**08 45 15.6**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=180,slow=6.1,SNR=3.7						
	comp=Z,2.1nm,0.8s						
HILR	**Hailar Array B**	**64.56**	**40**	P	**P**	**08 45 31.1**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=238,slow=8.5,SNR=3.9						
	comp=Z,0.9nm,0.3s						
YAK	**Yakutsk**	**72.93**	**28**	LR	LR	09 20 10.6	
	comp=Z,38nm,18.1s,baz=290,slow=37						
TIXI	**Tiksi**	**74.80**	**18**	LR	LR	09 21 09.4	
	comp=Z,101nm,20.4s,baz=44,slow=37						
MJAR	**Matsushiro Arr**	**76.64**	**55**	P	**P**	**08 46 43.1**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=276,slow=5.5,SNR=2.4						
	comp=Z,1.5nm,0.8s						
DBG	**Daneborg**	**77.26**	**344**	*i* P	**P**	**08 46 47.0**	**+0.6**
DBG				IAmb	IAmb	08 46 48.5	
	comp=Z,3.6nm,1.1s						
DAG	**Danmarks Havn**	**77.31**	**347**	*i* P	**P**	**08 46 47.0**	**+0.3**
DAG				IAmb	IAmb	08 46 54.1	
	comp=Z,7.7nm,1.0s						
MAW	**Mawson**	**77.38**	**178**	LR	LR	09 13 57.2	
	comp=Z,47nm,19.9s,baz=358,slow=30						
WRA	**Warramunga Arr**	**81.06**	**112**	P	**P**	**08 47 08.1**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=305,slow=4.2,SNR=6.4						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**81.06**	**112**	P	**P**	**08 47 07.5**	**-0.7**
WB0	**Warramunga Arr**	**81.07**	**112**	P	**P**	**08 47 07.5**	**-0.8**
WB0				IAmb	IAmb	08 47 23.0	
	comp=Z,4.7nm,1.1s						
ASAR	**Alice Springs**	**81.58**	**116**	P	**P**	**08 47 10.6**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=294,slow=5.4,SNR=17						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**81.58**	**116**	P	**P**	**08 47 10.3**	**-0.7**
AS31	**Alice Springs**	**81.58**	**116**	P	**P**	**08 47 09.7**	**-1.3**
SUMG	**Summit**	**82.47**	**342**	*i* P	**P**	**08 47 16.7**	**+1.5**
SEY	**Seymchan**	**83.44**	**27**	LR	LR	09 28 48.9	
	comp=Z,46nm,18.6s,baz=306,slow=39						
NEEM	**North Greenlan**	**84.42**	**348**	*i* P	**P**	**08 47 25.6**	**+0.6**
NEEM				IAmb	IAmb	08 47 27.4	
	comp=Z,11nm,0.9s						
PETK	**Petropavlovsk-**	**88.15**	**36**	LR	LR	09 29 26.4	
	comp=Z,45nm,19.7s,baz=296,slow=37						
SNAA	**Sanae**	**90.47**	**196**	LR	LR	09 19 52.0	
	comp=Z,30nm,21.2s,baz=12,slow=30						
QSPA	**South Pole Qui**	**99.81**	**180**	LR	LR	09 28 21.6	
	comp=Z,60nm,18.8s,baz=252,slow=32						
PDAR	**Pinedale Array**	**126.31**	**348**	PKP	**PKPdf**	**08 53 55.8**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=62,slow=2.7,SNR=9.8						
NVAR	**Mina Array Bea**	**131.79**	**356**	PKP	**PKiKP**	**08 54 08.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=55,slow=1.7,SNR=6.7						
TXAR	**Lajitas Array**	**137.04**	**336**	PKP	**PKPdf**	**08 54 16.5**	**0.0**
	comp=Z,0.5nm,0.8s,baz=68,slow=1.6,SNR=5.4						

*JSN **14** 08:53:05.8±1.1, 18.°13N×75.°95W, h0km±18km, MD3.2*
*SSNC **14** 08:53:11.1±1.9, 18.°46N×76.°22W, h5km±11km, MD3.0, ML2.3*

ISC 14 08:53:04.0±1.6, 18.°23N±0.°08×75.°87W±0.°08, h15km±11km, n12, σ1s29/20, 2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJ	**Hope**	**0.86**	**255**	*i* P	**Pg**	**08 53 20.7**	**-0.1**
STH	**Stony Hill**	**0.90**	**260**	⇓*i* P	**Pg**	**08 53 20.9**	**-0.7**
MTDJ	**Mount Denham**	**1.58**	**270**	⇓*i* P	**Pn**	**08 53 32.4**	**+0.8**
MTDJ				*i* S	**Sn**	**08 53 53.5**	**+1.6**
MTDJ	**Mount Denham**	**1.58**	**270**	*e*P	**Pn**	**08 53 32.4**	**+0.8**
MTDJ				*e*S	**Sn**	**08 53 50.5**	**-1.4**
MTDJ				IAML		08 53 55.5	
	comp=Z,51nm,0.3s						
MTDJ				IAML		08 53 55.6	
	85nm,0.2s						
MARVS	**Santiago de Cu**	**1.76**	**359**	*e*P	**Pg**	**08 53 38.0**	**+0.2**
MARVS				*e*S	**Sn**	**08 53 56.5**	**+0.4**
RCC	**Rio Carpintero**	**1.76**	**5**	*e*P	**Pg**	**08 53 37.0**	**-0.9**
RCC				*e*S	**Sg**	**08 54 02.5**	**+1.8**
CHIV	**Chivirico**	**1.81**	**344**	*e*S	**Sn**	**08 53 56.8**	**-0.5**
GTBY	**Guantanamo Bay**	**1.83**	**23**	*e*P	**Pg**	**08 53 40.5**	**+1.3**
GTBY				*e*S	**Sg**	**08 54 03.0**	**0.0**
LMGC	**Las Mercedes**	**2.11**	**330**	*e*S	**Sn**	**08 54 01.5**	**-3.3**
QMBU	**Quimbuelo**	**2.20**	**27**	*e*P	**Pg**	**08 53 45.4**	**-0.8**
QMBU				*e*S	**Sg**	**08 54 14.0**	**-0.7**
QMBU				IAML		08 54 17.7	
	comp=N,12nm,0.3s						
QMBU				IAML		08 54 18.5	
	comp=E,14nm,0.3s						
PINC	**Pinares de May**	**2.24**	**2**	*e*P	**Pb**	**08 53 44.5**	**+0.2**
PINC				*e*S	**Sn**	**08 54 08.7**	**+0.6**
MASC	**Masc**	**2.48**	**39**	*e*P	**Pb**	**08 53 48.0**	**-0.3**
MASC				*e*S	**Sg**	**08 54 22.5**	**-1.2**
MASC				IAML		08 54 26.0	
	comp=E,23nm,0.4s						
MASC				IAML		08 54 26.6	
	comp=N,13nm,0.3s						

*NNC **14** 08:56:27.4±3.4, 39.°41N×72.°67E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.1km s-min=12.2km az=176.0*
*SOME **14** 08:56:27.1, 39.°43N×72.°78E, h5km*
*KRNET **14** 08:56:32.7±0.1, 39.°59N×72.°98E, h14km, mb3.2*

ISC 14 08:56:33.5±0.9, 39.°64N±0.°04×72.°88E±0.°03, h10km, n38, σ2s33/64, 29C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.60**	**52**	⇓*i* P	**Pg**	**08 56 44.1**	**-1.2**
SFK				⇓*i* S	**Sg**	**08 56 52.7**	**-0.6**
DRK	**Karamyk**	**0.85**	**259**	⇓*i* P	**Pb**	**08 56 50.4**	**-0.2**
DRK				⇓*i* S	**Sb**	**08 57 03.3**	**+1.1**
OHH	**Osh**	**0.88**	**355**	⇑*e*P	**Pb**	**08 56 50.7**	**-0.3**
OHH				⇑*i* S	**Sn**	**08 57 04.2**	**-0.8**
SALK	**Salom-Alik**	**1.43**	**30**	⇑*e*P	**Pb**	**08 56 59.7**	**-0.7**
SALK				⇑*e*S	**Sg**	**08 57 19.7**	**+0.1**
ARSB	**Arslanbob**	**1.68**	**3**	⇑*i* P	**Pg**	**08 57 05.1**	**-0.7**
ARSB				⇑*i* S	**Sg**	**08 57 28.8**	**+1.2**
GAR	**Garm**	**2.09**	**253**	⇑*i* P	**Pb**	**08 57 11.8**	**+0.2**
GAR				⇑*i* S	**Sg**	**08 57 40.5**	**-0.3**
ARK	**Arkit**	**2.26**	**342**	⇑*i* P	**Pb**	**08 57 14.7**	**+0.1**
ARK				⇑*i* S	**Sg**	**08 57 45.1**	**-1.2**
TRKS	**Terek-Say**	**2.31**	**325**	⇑*i* P	**Pb**	**08 57 14.4**	**-0.9**
TRKS				⇑*i* S	**Sb**	**08 57 44.7**	**+0.8**
ARLS	**Aral**	**2.47**	**26**	⇓*e*P	**Pb**	**08 57 16.4**	**-1.7**
ARLS				⇓*e*S	**Sb**	**08 57 48.2**	**-0.5**
JNKS	**Jany-Kuch**	**2.54**	**55**	⇑*i* P	**Pb**	**08 57 17.2**	**-2.2**
JNKS				⇑*i* S	**Sb**	**08 57 49.3**	**-1.6**
UCH	**Uchtor**	**2.86**	**25**	⇑*i* P	**Pb**	**08 57 22.3**	**-2.6**
UCH				⇑*i* S	**Sb**	**08 57 58.4**	**-1.8**
CHGR	**Chuyangaron**	**3.06**	**252**	⇓*i* P	**Pb**	**08 57 25.2**	**-2.9**
CHGR				⇓*i* S	**Sb**	**08 58 03.5**	**-2.0**
EKS2	**Erkin-Say**	**3.09**	**12**	⇑*i* P	**Pb**	**08 57 25.5**	**-3.0**
EKS2				⇑*i* S	**Sb**	**08 58 03.9**	**-2.5**
MRKS	**Merke**	**3.11**	**5**	Pg	**Pb**	**08 57 29.2**	**+0.2**
	3.1nm,0.5s						
MRKS				Lg	Lg	08 58 13.9	
	10nm,0.4s						
MRKS	**Merke**	**3.11**	**5**	*e*P	**Pb**	**08 57 29.2**	**+0.2**
	3.1nm,0.5s						
MRKS				*e*S	**Sg**	**08 58 13.9**	**+0.5**
	10nm,0.4s						
AAK	**Ala-Archa**	**3.23**	**22**	⇑*i* P	**Pb**	**08 57 27.1**	**-3.9**
AAK				⇑*i* S	**Sb**	**08 58 06.9**	**-3.6**
IUG	**Iuzhnay**	**3.31**	**320**	Pg	**Pb**	**08 57 30.3**	**-2.0**
	7.2nm,0.6s						
IUG				Lg	Lg	08 58 15.8	
	71nm,0.8s						
KBK	**Karagaybulak**	**3.39**	**27**	⇑*e*P	**Pb**	**08 57 29.5**	**-4.3**
KBK				⇑*i* S	**Sb**	**08 58 10.7**	**-4.4**
CHMS	**Chumysh**	**3.63**	**22**	⇓*i* P	**Pn**	**08 57 32.7**	**+2.8**
CHMS				⇓*i* S	**Sn**	**08 58 16.5**	**+3.6**
ULHL	**Ulahol**	**3.64**	**43**	⇓*i* P	**Pn**	**08 57 32.3**	**+2.2**
ULHL				⇓*i* S

CNGN	**Cerro Negro**	**1.13**	**14**	⇑*iP*		**Pn**	**08 59 29.5**	**-1.0**
MOM2	**El Cardon**	**1.15**	**25**	⇓P		**Pn**	**08 59 29.7**	**-0.9**
MOM2				S		**Sn**	**08 59 46.8**	**+0.6**
MOM3	**MOM3**	**1.20**	**22**	⇓P		**Pn**	**08 59 30.7**	**-0.7**
POLN	**Al Sur del Vol**	**1.26**	**8**	⇑P		**Pn**	**08 59 30.7**	**-1.4**
PKGN	**Cerro Pekin**	**1.27**	**0**	⇓P		**Pn**	**08 59 31.5**	**-0.8**
JAPN	**Al SSO del Vol**	**1.29**	**84**	P		**Pn**	**08 59 32.0**	**-0.5**
JAPN	**Al SSO del Vol**	**1.29**	**84**	*eP*		**Pn**	**08 59 32.0**	**-0.5**
CRIN	**San Cristobal**	**1.30**	**357**	⇓P		**Pn**	**08 59 32.3**	**-0.5**
CRIN	**San Cristobal**	**1.30**	**357**	⇓*iP*		**Pn**	**08 59 32.6**	**-0.2**
CRIN				*eS*		**Sb**	**08 59 50.0**	**+0.2**
MORN	**Al O del Volca**	**1.32**	**83**	⇑P		**Pn**	**08 59 31.9**	**-1.1**
CONN	**Concepcion**	**1.34**	**83**	⇑P		**Pn**	**08 59 32.2**	**-1.2**
CARN	**Rivas**	**1.45**	**98**	P		**Pn**	**08 59 34.5**	**-0.3**
CARN	**Rivas**	**1.45**	**98**	*eP*		**Pn**	**08 59 34.5**	**-0.3**
ALIBA	**Liberia Airpor**	**1.62**	**119**	*eP*		**Pn**	**08 59 36.6**	**-0.5**
LAPC	**Finca la Perla**	**1.65**	**112**	*eP*		**Pn**	**08 59 36.0**	**-1.5**
POTN	**Potosi Cosigui**	**1.67**	**342**	P		**Pn**	**08 59 37.4**	**-0.5**
POTN	**Potosi Cosigui**	**1.67**	**342**	*eP*		**Pn**	**08 59 37.4**	**-0.5**
VRLE	**La Escondida,**	**1.70**	**111**	*eP*		**Pn**	**08 59 37.5**	**-0.9**
BUAI	**Buenos Aires**	**1.70**	**107**	*eP*		**Pn**	**08 59 38.0**	**-0.3**
BUAI				*eS*		**Sg**	**09 00 02.9**	**-0.6**
MATN	**Matagalpa**	**1.84**	**34**	⇓P		**Pn**	**08 59 38.2**	**-2.1**
MESS	**Mesas**	**1.88**	**110**	*eP*		**Pn**	**08 59 40.1**	**-0.6**
HORNC	**Hornillas**	**1.90**	**111**	*eP*		**Pn**	**08 59 40.5**	**-0.6**
PLVR	**Palo Verde**	**1.91**	**123**	*eP*		**Pb**	**08 59 44.0**	**+0.3**
VMAR	**Armenia, Volca**	**1.93**	**107**	⇑*iP*		**Pn**	**08 59 40.9**	**-0.4**
CUI	**Cuipilapa**	**1.93**	**112**	*eP*		**Pn**	**08 59 40.6**	**-0.8**
NICO	**Nicoya**	**1.96**	**130**	*eP*		**Pg**	**08 59 46.3**	**-0.1**
UPAL	**Upala**	**2.00**	**104**	*eP*		**Pn**	**08 59 40.8**	**-1.5**
MOTZ	**Rio Naranjo**	**2.01**	**110**	*eP*		**Pn**	**08 59 41.7**	**-0.8**
CNCH	**Conchagua**	**2.04**	**336**	⇑P		**Pn**	**08 59 42.6**	**-0.5**
CMARA	**Lajas Hojancha**	**2.06**	**132**	*eP*		**Pb**	**08 59 45.2**	**-0.8**
TENO	**El Achiote**	**2.09**	**109**	*eP*		**Pn**	**08 59 43.1**	**-0.5**
TIMP	**Tierras Morena**	**2.09**	**112**	*eP*		**Pn**	**08 59 43.5**	**-0.3**
LCND	**La Caada**	**2.10**	**335**	P		**Pn**	**08 59 43.3**	**-0.4**
TILA	**Tilaran**	**2.18**	**115**	*eP*		**Pn**	**08 59 45.6**	**+0.6**
QUEB	**Quebradon, Cot**	**2.19**	**110**	*eP*		**Pn**	**08 59 44.7**	**-0.3**
NYURE	**Nandayure**	**2.20**	**129**	*eP*		**Pb**	**08 59 48.6**	**+0.2**
RCON	**San Juan de Ri**	**2.23**	**21**	⇓P		**Pn**	**08 59 45.5**	**-0.2**
JUNT	**Juntas**	**2.28**	**119**	*eP*		**Pb**	**08 59 47.8**	**-1.9**
JTS	**Las Juntas de**	**2.28**	**119**	*eP*		**Pn**	**08 59 47.5**	**+1.3**
RCPN	**Sur Rio San Ju**	**2.29**	**22**	⇓P		**Pn**	**08 59 46.6**	**+0.2**
RCVN	**Varillal2**	**2.31**	**19**	⇓P		**Pn**	**08 59 46.6**	**-0.1**
TABAC	**Tabacon**	**2.35**	**112**	*eP*		**Pb**	**08 59 49.6**	**-1.6**
MTEVE	**Monteverde**	**2.38**	**117**	*eP*		**Pn**	**08 59 49.1**	**+1.4**
JCR1	**Jicaral**	**2.40**	**130**	*eP*		**Pn**	**08 59 47.6**	**-0.3**
CASO	**Castillo**	**2.41**	**113**	*eP*		**Pn**	**08 59 47.5**	**-0.5**
ARE1	**Arenal 1**	**2.41**	**112**	*eP*		**Pn**	**08 59 49.6**	**+1.6**
VARE2	**V. Arenal**	**2.41**	**112**	*eP*		**Pn**	**08 59 49.3**	**+1.2**
CEDE	**Laguna Cedeo**	**2.42**	**112**	*eP*		**Pn**	**08 59 49.4**	**+1.3**
VACR	**Volcan Arenal**	**2.44**	**112**	*eP*		**Pb**	**08 59 51.5**	**-1.1**
FORC	**Fortuna**	**2.46**	**112**	*eP*		**Pb**	**08 59 52.1**	**-0.7**
ACOS	**Acosta**	**3.20**	**120**	*eP*		**Pn**	**09 00 00.0**	**+1.1**

*IDC **14** 09:15:15.9±0.6, 3˚.55S×128˚.14E, h0km, mb3.9/12, mbtmp3.9/15, ML3.4/3, MS3.4/14, Error ellipse: s-maj=28.0km s-min=14.3km az=71.0*

*DJA **14** 09:15:21.5±0.2, 4˚S×2˚.12˚.8E±˚, h10km, M4.6/18, mb4.6/18, mB5.2/6, MLv4.6/14, Mw(mB)4.5/6*

*NEIC **14** 09:15:26.1±2.6, 3˚.68S±0˚.06×128˚.44E±0˚.06, h80km±5km, mb4.4/18, Error ellipse: s-maj=10.2km s-min=8.0km az=137.0*

ISC 14 09:15:17.9±0.5, 3˚.51S±0˚.05×128˚.51E±0˚.04, h10km, n70, σ1§90/49, mb4.0/13, MS3.4/11, Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.36**	**240**	P			**Pg**	**09 15 25.4**	**+0.4**
AAI				S			**Sg**	**09 15 28.4**	**-1.4**
MSAI	**Masohi**	**0.45**	**69**	P			**Pn**	**09 15 33.7**	**+3.3**
MSAI				S			Sb	09 15 42.1	+7.4
NLAI	**Namlea**	**1.43**	**281**	P			**Pn**	**09 15 44.7**	**+0.8**
BNDI	**Bandanaire**	**1.72**	**126**	P			**Pg**	**09 15 50.2**	**-0.7**
SANI	**Sanana**	**2.91**	**300**	P			**Pn**	**09 16 06.3**	**+2.1**
FAKI	**Fak Fak**	**3.78**	**81**				**Pb**	**09 16 23.0**	**-1.7**
FAKI	**Fak Fak**	**3.78**	**81**	P			**Pb**	**09 16 22.6**	**-2.1**
SWI	**Sorong**	**3.80**	**46**	P			**Pb**	**09 16 23.8**	**-1.3**
TNTI	**Ternate**	**4.40**	**345**	Pn			**Pb**	**09 16 32.0**	**-3.3**
KMPI	**Kaimana, Papua** 1.2nm5µm191nm,0.8s	**5.19**	**92**	P			Pb	09 16 40.9	-7.9
RKPI	**Ransiki, Papua**	**6.00**	**71**	P			Pb	09 16 53.6	-9.0
LUWI	**Luwuk**	**6.23**	**293**	Pn			**Pn**	**09 16 54.6**	**+4.6**
LUWI	**Luwuk**	**6.23**	**293**	P			**Pn**	**09 16 52.7**	**+2.7**
APSI	**Ampana**	**7.32**	**290**	P			Pn	09 17 10.5	+5.5
SOEI	**Soe**	**7.50**	**214**	Pn			**Pn**	**09 17 09.7**	**+2.2**
MRSI	**Marisa**	**7.67**	**301**	P			Pn	09 17 18.5	+8.8
BATI	**Baumata** comp=Z,324nm,20.2s,baz=56,slow=39	**8.21**	**216**	LR			LR	09 20 28.4	
BNSI	**Bone**	**8.43**	**264**	P			Pn	09 17 31.9	+12
EDFI	**Ende, Flores** 15nm,0.8s	**8.55**	**232**	P			**Pn**	**09 17 23.3**	**+1.4**
BKSI	**Bulukumba** 465nm43nm,1.1s	**8.55**	**258**	P			**Pn**	**09 17 23.0**	**+1.1**
TTSI	**Tana Toraja** 805nm20nm,1.0s	**8.69**	**273**	P			**Pn**	**09 17 25.5**	**+1.8**
SPSI	**Sidrap Palu** 3µm33nm,1.1s	**8.73**	**267**	P			**Pn**	**09 17 25.3**	**+1.0**
KAPI	**Kappang** 1.5nm,0.3s,baz=77,slow=17,SNR=3.5	**8.86**	**260**	Pn			Pn	09 17 21.4	-4.7
KAPI	comp=Z,182nm,20.2s,baz=75,slow=40 2.1nm,0.2s			LR			LR	09 20 57.4	
KAPI	**Kappang**	**8.86**	**260**	Pn			Pn	09 17 31.0	+4.9
TOLI2	**Tolitoli**	**8.98**	**301**	Pn			Pn	09 17 33.9	+6.1
MPSI	**Mapaga** 1µm30nm,0.9s	**9.41**	**294**	P			**Pn**	**09 17 37.5**	**+3.8**
KNRA	**Kununurra**	**12.10**	**179**				**Pn**	**09 18 12.8**	**+2.4**
MYLDM	**Lahad Datu**	**13.21**	**311**	Pn			P	09 18 31.6	-4.1
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=16,slow=11,SNR=9.5	**14.77**	**191**	Pn			**Pn**	**09 18 44.4**	**-2.6**
FITZ	comp=Z,141nm,18.1s,baz=10,slow=43 2.9nm,0.6s			LR			LR	09 25 50.4	
FITZ	**Fitzroy Crossi**	**14.77**	**191**				**Pn**	**09 18 46.6**	**-0.4**
WB0	**Warramunga Arr**	**17.15**	**161**				**Pn**	**09 19 17.1**	**-0.7**
WB0	comp=Z,39nm,1.2s				IAmb		IAmb	09 19 24.9	
WRAB	**Tennant Creek**	**17.29**	**161**				**P**	**09 19 20.5**	**-0.6**
WRAB	comp=Z,38nm,1.4s				IAmb		IAmb	09 19 25.4	
WRA	**Warramunga Arr** comp=Z,6.2nm,0.7s,baz=340,slow=11,SNR=21	**17.30**	**161**	P			**Pn**	**09 19 17.7**	**-1.9**
WRA	**Warramunga Arr**	**17.30**	**161**	P			**Pn**	**09 19 18.9**	**-0.8**
WR8	**Warramunga Arr**	**17.36**	**161**				**Pn**	**09 19 20.2**	**-0.2**
WR8	comp=Z,26nm,1.2s				IAmb		IAmb	09 19 27.3	
COEN	**Coen**	**17.82**	**127**	P			**Pn**	**09 19 25.5**	**-0.7**
COEN	comp=Z,16nm,0.8s				IAmb		IAmb	09 19 34.5	
PMG	**Port Moresby** comp=Z,0.7nm,0.3s,baz=253,slow=6.3,SNR=6.8	**19.43**	**108**	P			**Pn**	**09 19 47.2**	**+1.4**
PMG	comp=Z,157nm,19.6s,baz=318,slow=43 comp=Z,7.2nm,0.8s			LR			LR	09 29 24.6	
PMG	**Port Moresby**	**19.43**	**108**	P			**Pn**	**09 19 45.8**	**0.0**
PMG	comp=Z,32nm,1.1s				IAmb		IAmb	09 19 56.1	
MBWA	**Marble Bar**	**19.51**	**205**	Pn			**P**	**09 19 46.3**	**+0.8**
MBWA	comp=Z,21nm,1.2s				IAmb		IAmb	09 19 57.7	
PSA00	**Pilbara Seismi**	**19.83**	**204**				**Pn**	**09 19 50.4**	**-0.2**
KPJI	**Karang Pucung** comp=Z,56nm,0.9s	**19.85**	**258**	P			**P**	**09 19 51.1**	**+1.8**
AS31	**Alice Springs**	**20.71**	**166**				Pn	09 20 01.1	+0.2
AS31	comp=Z,16nm,0.8s				IAmb		IAmb	09 20 05.7	
ASAR	**Alice Springs** comp=Z,56nm,0.9s,baz=348,slow=12,SNR=266	**20.71**	**166**	P			Pn	09 19 59.8	-1.1
ASAR	comp=Z,0.6nm,0.5s,baz=6.1,slow=1.7,SNR=5.9			PcP			**PcP**	**09 24 09.2**	**+0.6**
ASAR	comp=Z,151nm,18.7s,baz=342,slow=37			LR			LR	09 28 02.9	
ASAR	**Alice Springs**	**20.71**	**166**				Pn	09 20 01.4	+0.5
GUMO	**Guam** comp=Z,34nm,21.1s,baz=226,slow=37	**23.50**	**43**	LR			LR	09 29 57.5	
RABL	**Rabaul**	**23.61**	**92**	P			**P**	**09 20 33.5**	**+4.2**
CTAO	**Charters Tower**	**23.90**	**135**	P			**P**	**09 20 31.4**	**-0.6**
CTAO	comp=Z,23nm,1.4s				IAmb		IAmb	09 20 50.3	
JOW	**Kunigami**	**30.16**	**360**	LR			LR	09 31 54.9	
	comp=Z,56nm,21.4s,baz=100,slow=33								
PSI	**Prapat** comp=Z,113nm,19.8s,baz=112,slow=37	**30.23**	**282**	LR			LR	09 33 50.0	
STKA	**Stephens Creek** comp=Z,1.8nm,0.8s,baz=343,slow=11,SNR=4.0	**30.79**	**158**	P			**P**	**09 21 33.9**	**+0.1**
STKA	comp=Z,38nm,21.0s,baz=357,slow=37 comp=Z,1.8nm,0.8s			LR			LR	09 34 12.0	
HNR	**Honiara** comp=Z,97nm,19.3s,baz=342,slow=39	**31.77**	**102**	LR			LR	09 36 16.5	
JCJ	**Chichijima** comp=Z,40nm,18.2s,baz=182,slow=36	**33.17**	**23**	LR			LR	09 35 12.0	
CMAR	**Chiang Mai Arr** comp=Z,0.7nm,0.3s,baz=119,slow=9.5,SNR=5.3 comp=Z,0.7nm,0.3s	**36.40**	**308**	P			**P**	**09 22 20.7**	**-2.1**
KSRS	**Korea Array** comp=Z,1.0nm,0.9s,baz=182,slow=9.2,SNR=4.3 comp=Z,1.0nm,0.9s	**40.76**	**359**	P			**P**	**09 22 59.1**	**0.0**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.5s,baz=171,slow=8.6,SNR=5.4 comp=Z,1.0nm,0.5s	**40.86**	**12**	P			**P**	**09 23 01.2**	**+1.2**
MJAR	**Matsushiro Arr** comp=Z,1.1nm,1.5s	**40.86**	**12**	IAmb			IAmb	09 23 29.4	
EVN	**Everest**	**50.88**	**311**				**P**	**09 24 21.6**	**+1.5**
SONM	**Songino Array** comp=Z,0.5nm,0.6s,baz=174,slow=5.8,SNR=5.9 comp=Z,0.5nm,0.6s	**54.68**	**342**	P			**P**	**09 24 47.2**	**-0.1**
SONM	**Songino Array** comp=Z,5.2nm,1.5s	**54.68**	**342**	IAmb			IAmb	09 25 23.7	
URZ	**Urewera** comp=Z,40nm,18.1s,baz=324,slow=39	**56.15**	**135**	LR			LR	09 52 04.6	
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=113,slow=6.6,SNR=14	**64.51**	**327**	P			**P**	**09 25 53.4**	**-1.6**
MKAR	comp=Z,28nm,20.4s,baz=344,slow=37 comp=Z,0.2nm,0.5s			LR			LR	09 55 03.2	
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=123,slow=5.5,SNR=7.3 comp=Z,0.3nm,0.3s	**67.81**	**334**	P			**P**	**09 26 13.9**	**-2.1**
QSPA	**South Pole Qui** comp=Z,0.5nm,0.7s,baz=319,slow=0.6,SNR=6.8 comp=Z,0.5nm,0.7s	**86.45**	**180**	P			**P**	**09 27 60.0**	**-0.7**
KVAR	**Kislovodsk Arr** comp=Z,206nm,19.4s,slow=39	**89.39**	**314**	LR			LR	10 13 46.1	
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=231,slow=5.1,SNR=4.7 comp=Z,0.3nm,0.6s	**90.84**	**25**	P			**P**	**09 28 22.2**	**+0.9**
EIL	**Elat** comp=Z,24nm,18.6s,baz=0.0,slow=41	**94.81**	**299**	LR			LR	10 19 13.8	

*BJI **14** 09:23:30.5, 36˚.48N×71˚.59E, h79km, mB5.2/22, mb5.3/69, Ms4.5/19, Ms7 4.3/8*

*MOS **14** 09:23:31.8±1.0, 36˚.47N×71˚.68E, h95km, mb5.2/46, Error ellipse: s-maj=4.8km s-min=3.4km az=102.1*

*NEIC **14** 09:23:33.7±2.1, 36˚.47N±0˚.05×71˚.51E±0˚.08, h98km±5km, mb5.1/43, Error ellipse: s-maj=8.9km s-min=7.9km az=86.0*

*NNC **14** 09:23:34.8±6.4, 36˚.64N×71˚.44E, h118km±53km, mb4.7, mpv5.5, Error ellipse: s-maj=52.0km s-min=42.6km az=20.0*

*GCMT **14** 09:23:34.7±0.2, 36˚.32N±0˚.02×71˚.30E±0˚.02, h83km±3km, MW4.9/106, Moment Tensor Solution. s38,c44; s106,c168; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.39±.11; Mθθ=0.69±.10; Mϕϕ 1.08±.10; Mrθ 0.90±.05; Mθϕ=1.34±.09; Mϕr 2.31±.05; Best double couple: M₀2.96800×10¹⁶ NP1:ϕs292.00000°, δ33.00000°, λ=172.00000°. NP2:ϕs195.00000°, δ86.00000°, λ=57.00000°. Principal axes: T 2.8680, Plg32.0000°, Azm258.0000°; N 0.2030, Plg33.0000°, Azm12.0000°; P -3.0680, Plg40.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **14** 09:23:35.3±2.4, 36˚.43N×71˚.56E, h118km±22km, mb4.5/31, mbtmp4.9/33, MS3.7/43 Error ellipse: s-maj=11.2km s-min=8.1km az=7.0*

ISC 14 09:23:31.9±0.3, 36˚.38N±0˚.03×71˚.66E±0˚.03, h86km±2km, h86km:pP-P, n967, σ1§48/1014, mb5.1/215, 42C-34D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.81**	**230**				**Pn**	**09 24 15.8**	**+0.7**
KBL	**Kabul** SNR=275	**2.81**	**230**	P			**Pn**	**09 24 15.9**	**+0.9**
KBL				S			**Sn**	**09 24 49.8**	**+1.6**
KBL	**Kabul**	**2.81**	**230**	PN			**Pn**	**09 24 15.8**	**+0.7**
GAR	**Garm**	**2.83**	**338**				**Pn**	**09 24 14.9**	**-0.2**
CHGR	**Chuyangaron**	**3.02**	**320**				**Pn**	**09 24 16.4**	**-1.3**
CHGR	**Chuyangaron**	**3.02**	**320**	PN			**Pn**	**09 24 16.4**	**-1.3**
NIL	**Nilore**	**3.02**	**154**				**Pn**	**09 24 21.4**	**+3.7**
NIL	**Nilore**	**3.02**	**154**	PN			**Pn**	**09 24 21.4**	**+3.7**
DRK	**Karamyk**	**3.10**	**2**				**Pn**	**09 24 20.5**	**+1.6**
DRK	**Karamyk**	**3.10**	**2**	PN			**Pn**	**09 24 20.5**	**+1.6**
SRNI	**Srinagar**	**3.46**	**130**	*eP*			**Pn**	**09 24 25.8**	**+2.3**
SRNI				*eS*			**Sn**	**09 25 07.8**	**+4.2**
OHH	**Osh**	**4.23**	**12**	PN			**Pn**	**09 24 34.1**	**0.0**
JMU	**Jammu**	**4.53**	**143**	*eP*			**Pn**	**09 24 40.0**	**+2.0**
JMU				*eS*			**Sn**	**09 25 30.3**	**+0.9**
JMU	comp=N,2µm,0.3s				IAML			09 25 34.4	
JMU	comp=E,3µm,0.6s				IAML			09 25 39.6	
KSH	**Kashi**	**4.63**	**46**	P			**Pn**	**09 24 36.3**	**-3.2**
KSH				S			**Sn**	**09 25 23.8**	**-8.3**
ALCI	**Alchi Leh**	**5.01**	**114**	*eP*			**Pn**	**09 24 44.2**	**-0.8**
ALCI				*eS*			**Sn**	**09 25 42.3**	**+0.5**
ALCI	comp=N,2µm,0.3s				IAML			09 25 47.3	
ALCI	comp=E,2µm,0.2s				IAML			09 25 48.1	
TSSA	**Tissa**	**5.12**	**132**	*eP*			**Pn**	**09 24 47.4**	**+1.1**
TSSA				*eS*			**Sn**	**09 25 44.1**	**-0.1**
TSSA	comp=N,2µm,0.3s				IAML			09 25 47.5	
TSSA	comp=E,2µm,0.4s				IAML			09 25 48.1	
TRKS	**Terek-Say**	**5.16**	**356**	PN			**Pn**	**09 24 46.2**	**-0.6**
TLWR	**Talawar**	**5.67**	**140**	*eP*			**Pn**	**09 24 55.3**	**+1.7**
TLWR				*eS*			**Sn**	**09 25 56.6**	**-0.8**
TLWR	comp=E,2µm,0.3s				IAML			09 25 59.8	
TLWR	comp=N,2µm,0.4s				IAML			09 26 02.0	
IUG	**Iuzhnay**	**5.90**	**348**	*eP*			**Pn**	**09 24 56.7**	**-0.1**
IUG				*eS*			**Sn**	**09 26 02.2**	**-0.7**
IUG	**Iuzhnay**	**5.90**	**348**	*ePN*			**Pn**	**09 24 56.6**	**-0.1**
CHM	**Chimkent**	**6.14**	**346**	*eP*			**Pn**	**09 25 00.4**	**+0.3**
CHM	**Chimkent**	**6.14**	**346**	*ePN*			**Pn**	**09 25 00.3**	**+0.3**
UCH	**Uchtor** SNR=148	**6.25**	**20**	P			**Pn**	**09 25 03.2**	**+1.4**
EKS2	**Erkin-Say** SNR=74	**6.48**	**14**	P			**Pn**	**09 25 06.2**	**+1.4**
DZA	**Taraz**	**6.51**	**358**	*eP*			**Pn**	**09 25 05.1**	**0.0**
DZA				*eS*			**Sn**	**09 26 16.9**	**-0.9**
DZA	**Taraz**	**6.51**	**358**	*ePN*			**Pn**	**09 25 05.0**	**0.0**
AAK	**Ala-Archa** comp=N,104nm,0.4s,baz=204,slow=7.2,SNR=157	**6.62**	**18**	P			**Pn**	**09 25 08.0**	**+1.3**
AAK	comp=N,118nm,0.6s,baz=336,slow=22,SNR=9.4			S			**Sn**	**09 26 21.1**	**+0.4**
AAK	comp=N,74nm,21.0s,baz=209,slow=42			LR			LR	09 28 12.7	
AAK	**Ala-Archa**	**6.62**	**18**				**Pn**	**09 25 07.9**	**+1.2**
AAK	**Ala-Archa** SNR=220	**6.62**	**18**	*i* P			**Pn**	**09 25 07.9**	**+1.2**
AAK	**Ala-Archa** SNR=263	**6.62**	**18**	*i* P			**Pn**	**09 25 08.0**	**+1.3**
AAK	**Ala-Archa**	**6.62**	**18**	*ce*PN			**Pn**	**09 25 07.9**	**+1.2**
AAK	comp=Z,172nm,1.0s			pmax			pmax		
SRGN	**SRI GANGA NAGA**	**6.71**	**163**	*eP*			**Pn**	**09 25 08.1**	**+0.4**
SRGN				*eS*			**Sn**	**09 26 18.8**	**-3.8**
KBK	**Karagaybulak**	**6.76**	**21**	P			**Pn**	**09 25 10.1**	**+1.4**
	SNR=35								
KK31	**Karatay Array**	**6.77**	**353**				**Pn**	**09 25 08.5**	**-0.2**
KK31	**Karatay Array** comp=Z,193nm,0.5s,baz=188,slow=17,SNR=944	**6.77**	**353**	⇑P			**Pn**	**09 25 08.4**	**-0.2**
KK31				⇑S			**Sn**	**09 26 20.9**	**-3.3**
	comp=Z,225nm,0.6s,baz=176,slow=13,SNR=3.8								
KK31	**Karatay Array**	**6.77**	**353**	PN			**Pn**	**09 25 08.5**	**-0.2**
BRLS	**Borolday**	**6.79**	**349**	*eP*			**Pn**	**09 25 05.0**	**-3.8**
BRLS	**Borolday**	**6.79**	**349**	*ePN*			**Pn**	**09 25 05.0**	**-3.8**
FRU1	**Bishkek**	**6.82**	**19**				**Pn**	**09 25 08.9**	**-0.4**
FRU1	**Bishkek**	**6.82**	**19**	PN			**Pn**	**09 25 08.9**	**-0.4**
ULHL	**Ulahol** SNR=27	**6.85**	**30**	P			**Pn**	**09 25 10.9**	**+1.1**
BOOM	**Boomskoye usch**	**6.94**	**27**				**Pn**	**09 25 12.3**	**+1.2**
BOOM	**Boomskoye usch**	**6.94**	**27**	PN			**Pn**	**09 25 12.3**	**+1.2**
SMLA	**Simla**	**6.96**	**137**	*eP*			**Pn**	**09 25 11.5**	**+0.3**
SMLA				*eS*			**Sn**	**09 26 27.2**	**-1.6**
HNLY	**HANLEY**	**7.02**	**119**	*eP*			**Pn**	**09 25 12.2**	**-0.3**
HNLY				*eS*			**Sn**	**09 26 29.2**	**-1.9**
HNLY	comp=E,321nm,0.7s				IAML			09 26 30.8	
HNLY	comp=N,374nm,1.0s				IAML			09 26 31.9	
CHMS	**Chumysh** SNR=25	**7.03**	**19**	P			**Pn**	**09 25 13.4**	**+1.3**
KDJ	**Kajisay**	**7.16**	**35**				**Pn**	**09 25 16.0**	**+1.9**
KDJ	**Kajisay**	**7.16**	**35**	PN			**Pn**	**09 25 16.0**	**+1.9**
TARG	**Taragay, Kyrgy**	**7.17**	**40**				**Pn**	**09 25 15.6**	**+1.2**
TARG	**Taragay, Kyrgy**	**7.17**	**40**	PN			**Pn**	**09 25 15.6**	**+1.2**
TKM2	**Tokmak 2** SNR=95	**7.20**	**24**	P			**Pn**	**09 25 15.7**	**+1.0**
USP	**Ospenovka** SNR=45	**7.22**	**17**	P			**Pn**	**09 25 15.9**	**+1.2**
SGDS	**Sogindy**	**7.42**	**17**	*eP*			**Pn**	**09 25 17.6**	**0.0**
TNSS	**Tian-Shan**	**7.80**	**30**	*eP*			**Pn**	**09 25 22.5**	**-0.4**
TNSS	**Tian-Shan**	**7.80**	**30**	*ePN*			**Pn**	**09 25 22.5**	**-0.4**
AAA	**Alma-Ata**	**7.93**	**29**	*eP*			**Pn**	**09 25 24.4**	**-0.1**
AAA	**Alma-Ata**	**7.93**	**29**	*ePN*			**Pn**	**09 25 24.3**	**-0.1**
HRA	**Herat**	**7.94**	**258**				**Pn**	**09 25 24.9**	**+0.1**
MDOK	**Medeo**	**7.94**	**30**	*eP*			**Pn**	**09 25 24.8**	**0.0**
MDOK	**Medeo**	**7.94**	**30**	*ePN*			**Pn**	**09 25 24.7**	**0.0**
PRZ	**Przheval'sk**	**8.02**	**38**				**Pn**	**09 25 27.5**	**+1.7**
PRZ	**Przheval'sk**	**8.02**	**38**	PN			**Pn**	**09 25 27.5**	**+1.7**
DDI	**Dehra Dun**	**8.07**	**137**	*eP*			**Pn**	**09 25 26.4**	**+0.1**
DDI				*eS*			**Sn**	**09 26 49.8**	**-6.2**
DDI				*eS*				09 26 51.3	
RTK	**Rohtak**	**8.35**	**150**	*eS*			**Sn**	**09 26 59.3**	**-3.4**
SATY	**Saty**	**8.46**	**36**	*eP*			**Pn**	**09 25 31.5**	**-0.2**
SATY	**Saty**	**8.46**	**36**	*ePN*			**Pn**	**09 25 31.4**	**-0.2**
JOSI	**Joshimath**	**8.79**	**129**	*eP*			**Pn**	**09 25 36.2**	**-0.2**
JOSI				*eS*			**Sn**	**09 27 10.2**	**-3.6**
JOSI	comp=E,2µm,0.4s				IAML			09 27 17.2	
JOSI	comp=N,1µm,0.2s				IAML			09 27 17.6	
BTLS	**Baital**	**8.84**	**11**	*eP*			**Pn**	**09 25 36.4**	**-0.3**
BTLS	**Baital**	**8.84**	**11**	*ePN*			**Pn**	**09 25 36.4**	**-0.3**
NDI	**New Delhi**	**8.99**	**147**	*eP*			**Pn**	**09 25 37.7**	**-1.2**
NDI				*eS*			**Sn**	**09 27 13.7**	**-4.8**
NPLP	**NPLP New Delhi**	**9.01**	**147**	*eP*			**Pn**	**09 25 38.2**	**-1.0**
NPLP				*eS*			**Sn**	**09 27 13.6**	**-5.4**
SHLS	**Shalkode**	**9.05**	**39**	*eP*			**Pn**	**09 25 42.4**	**+2.7**
SHLS	**Shalkode**	**9.05**	**39**	*eP*			**Pn**	**09 25 42.4**	**+2.7**
LDR	**Lodi Road**	**9.08**	**147**	*eP*			**Pn**	**09 25 40.6**	**+0.5**
LDR				*eS*			**Sn**	**09 27 16.5**	**-4.0**
LDR	comp=N,2µm,0.4s				IAML			09 27 22.9	
LDR	comp=E,2µm,0.7s				IAML			09 27 32.8	
ARXS	**Arharly**	**9.13**	**29**	*eP*			**Pn**	**09 25 40.4**	**-0.4**
KUDL	**Kundal**	**9.17**	**152**	*eP*			**Pn**	**09 25 39.8**	**-1.5**
KUDL				*eS*			**Sn**	**09 27 16.4**	**-6.5**
KUDL	comp=N,259nm,0.5s				IAML			09 27 23.4	
KUDL	comp=E,357nm,0.5s				IAML			09 27 24.8	
SONA	**Sohna**	**9.31**	**149**	*eP*			**Pn**	**09 25 41.8**	**-1.5**
SONA				*eS*			**Sn**	**09 27 20.1**	**-6.1**
SONA	comp=E

comp=Z,142nm,0.9s
MDH Madha 17.18 234 P **Pn** **09 27 23.8 -2.6**
SNR=8.5
MDH Madha 17.18 234 *i* P **Pn** **09 27 24.8 -1.7**
SNR=11
MASF Masafi 17.22 235 P **Pn** **09 27 26.2 -0.8**
SNR=23
MSFE Esma-Masafi 17.23 235 *i* P **Pn** **09 27 25.4 -1.7**
SNR=15
WSAR Wadi Sarin 17.28 224 P **Pn** **09 27 27.7 0.0**
SNR=5.2
UOSS Minazif 17.48 234 **P** **09 27 28.6 -1.6**
UOSS Minazif 17.48 234 P **P** **09 27 29.5 -0.6**
BOK Bokaro 17.55 132 *e*P **P** **09 27 27.4 -3.4**
BOK *e*P **Pn** **09 27 28.1 -2.8**
DGZ Jazzator, Alta 17.56 36 *i* P **P** **09 27 29.4 -1.6**
DGZ pmax pmax
comp=Z,62nm,1.0s
WBK Wadi Bani Khal 17.59 222 P **Pn** **09 27 32.3 +0.8**
SNR=7.2
HATD Hatta, Dubai 17.61 233 P **P** **09 27 30.7 -0.9**
SNR=10
HATD Hatta, Dubai 17.61 233 *i* P **P** **09 27 30.5 -1.1**
SNR=13
LSA Lhasa 17.63 107 P **P** **09 27 27.6 -4.7**
LSA S **Sn** **09 30 46.6 -2.2**
LSA pmax pmax
comp=Z,91nm,0.9s
LSA LR LR
comp=N,340nm,9.2s
LSA LR LR
comp=E,180nm,9.2s
JLN Jalan Bani Buh 17.73 220 P **Pn** **09 27 33.4 +0.2**
SNR=5.1
SMDO Samad 17.75 225 P **P** **09 27 32.9 -0.2**
SNR=6.7
ASHO Ashiyiah 17.76 233 P **Pn** **09 27 33.5 -0.1**
SNR=42
ASHO Ashiyiah 17.76 233 *i* P **P** **09 27 33.2 0.0**
SNR=67
HOQ Hoqain 17.78 228 P **P** **09 27 32.6 -0.8**
SNR=7.6
NAZ Nazwa, Dubai 17.81 235 P **P** **09 27 33.5 -0.2**
SNR=19
NAZ Nazwa, Dubai 17.81 235 *i* P **P** **09 27 33.3 -0.4**
SNR=12
SOHO SOHO 17.85 231 P **P** **09 27 33.2 -0.9**
SOHO SOHO 17.85 231 P **P** **09 27 33.2 -0.9**
POO Poona 17.89 173 *e*P **P** **09 27 31.9 -2.8**
FAQ Al Faqa, Dubai 18.02 234 P **P** **09 27 36.0 -0.1**
SNR=9.8
JMDO Jabal Madar 18.26 224 P **Pn** **09 27 39.5 -0.1**
SNR=8.3
ASUD Al Ashush, Dub 18.28 235 P **P** **09 27 39.0 +0.2**
SNR=5.2
ASUD Al Ashush, Dub 18.28 235 *i* P **P** **09 27 39.0 +0.2**
SNR=7.7
ALNE Al Ain 18.40 233 P **P** **09 27 40.8 +0.6**
SNR=28
ALNE Al Ain 18.40 233 *i* P **P** **09 27 40.1 -0.1**
SNR=35
ARQ Araqi 18.44 229 P **Pn** **09 27 41.6 -0.1**
SNR=22
BSY Bisya 18.48 227 P **Pn** **09 27 42.4 +0.1**
SNR=11
AJN Ajban 18.55 235 P **P** **09 27 40.8 -0.9**
SNR=7.8
AJN Ajban 18.55 235 *i* P **P** **09 27 41.8 +0.1**
SNR=12
GOMU GeErMu 18.66 84 P **Pn** **09 27 45.3 +0.6**
GOMU S **S** **09 31 12.3 +0.8**
GOMU pmax pmax
comp=E,82nm,1.0s
AKT Akhty 19.28 293 *e*P **Pn** **09 27 50.7 -0.9**
AKT *e*S **S** **09 31 24.2 +0.7**
AKT pmax pmax
comp=Z,75nm,0.6s
MHTO MHTO 19.45 222 P **P** **09 27 52.3 +0.7**
SNR=30
MAK Makhachkala 19.68 297 *d* *i* P **P** **09 27 53.7 -0.3**
MAK *e*S **S** **09 31 30.4 -0.9**
MAK pmax pmax
comp=Z,215nm,1.3s
MAK MLR MLR
comp=Z,654nm,14.0s
UMZA Um Al Zommool 19.74 231 P **P** **09 27 54.7 -0.2**
JRN Qarnain Island 19.75 240 P **P** **09 27 52.4 -2.5**
SNR=8.3
ZAA0 Zalesovo Array 19.81 23 **P** **09 27 54.5 -0.8**
ZAA0 Zalesovo Array 19.81 23 ⇑P **P** **09 27 54.0 -1.3**
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 19.81 23 P **P** **09 27 55.0 -0.3**
comp=Z,69nm,0.5s,baz=226,slow=10,SNR=211
ZALV S **S** **09 31 30.5 -3.1**
comp=Z,6.4nm,0.8s,baz=222,slow=19,SNR=1.6
ZALV LR LR 09 36 11.0
comp=Z,47nm,21.9s,baz=266,slow=38
ZALV Zalesovo Beam 19.81 23 **P** **09 27 54.5 -0.8**
ZALV Zalesovo Beam 19.81 23 *i* P **P** **09 27 55.0 -0.3**
ZALV pmax pmax
comp=Z,69nm,0.5s
MZWR Madinat Zayed 19.83 236 P **P** **09 27 54.2 -1.6**
HYBB Hyderabad (bro 19.85 160 *e*P **P** **09 27 57.3 +1.3**
HYBB *e*S **Sn** **09 31 39.2 -2.3**
GHWR Ruwais 20.37 238 P **P** **09 27 59.9 -1.7**
SHL Shillong 20.38 116 **P** **09 28 02.0 +0.1**
SHL Shillong 20.38 116 P **P** **09 28 03.1 +1.2**
SNR=72
SHL Shillong 20.38 116 *e*S **S** **09 31 39.1 -6.5**
SHL Shillong 20.38 116 P **P** **09 28 02.0 +0.1**
SHMA Al-Shehemyia 20.55 245 P **P** **09 28 01.4 -2.1**
SNR=7.8
MZR Muzera 20.62 235 P **P** **09 28 03.0 -1.3**
SNR=32
MZR Muzera 20.62 235 P **P** **09 28 03.3 -1.0**
TRNA Turayna 21.04 242 P **P** **09 28 06.0 -2.8**
SMRA Abu-Samra 21.31 243 P **P** **09 28 09.2 -2.5**
SNR=12
KBD Kabd 21.36 257 P **P** **09 28 09.6 -2.6**
GNI Garni 21.43 288 P **P** **09 28 15.6 +2.5**
comp=Z,205nm,0.7s,baz=55,slow=1.2,SNR=95
GNI LR LR 09 38 37.5
comp=Z,155nm,20.2s,baz=92,slow=42
GNI Garni 21.43 288 **P** **09 28 14.4 +1.2**
GNI Garni 21.43 288 P **P** **09 28 15.6 +2.5**
GNI Garni 21.43 288 *ce*P **P** **09 28 14.9 +1.8**
GNI pmax pmax
comp=Z,582nm,1.7s
TBLG Delisi 21.53 293 P **P** **09 28 14.8 +0.8**
KFJS1 Al Wafrah 21.61 255 P **P** **09 28 13.6 -1.3**
BTHS 21.73 241 P **P** **09 28 14.1 -2.0**
SVE Sverdlovsk 21.76 344 *e*P **P** **09 28 15.6 -0.6**
SVE *e*S **S** **09 32 13.8 +2.0**
SVE pmax pmax
comp=Z,54nm,0.7s
WANAN Al Wanan 21.84 251 P **P** **09 28 15.3 -2.0**
ARTI Arti 21.93 340 P **P** **09 28 17.6 -0.4**
comp=Z,46nm,0.8s,baz=144,slow=5.6,SNR=27
ARTI LR LR 09 37 27.3
comp=Z,356nm,18.1s,baz=168,slow=38
comp=Z,46nm,0.8s
ARTI Arti 21.93 340 *d* *i* P **P** **09 28 17.8 -0.3**
ARTI 09 28 47.1
ARTI S **S** **09 32 15.2 +0.1**
ARTI SS **SnSn** **09 32 52.6 +4.6**
ARTI pmax pmax
comp=Z,63nm,0.9s
TRLG Trialeti 21.99 292 P **P** **09 28 19.7 +0.7**
BRDH Bariadhala 22.05 123 LR LR 09 37 10.3
comp=Z,168nm,21.5s,baz=331,slow=37
GTA Gaotai 22.39 74 P **P** **09 28 24.3 +1.0**
GTA pP pP 09 28 45.8 +4.1
GTA S **S** **09 32 20.6 -2.9**
GTA pmax pmax
comp=Z,200nm,0.7s
GTA pmax pmax
comp=Z,260nm,3.9s
GTA LR LR
comp=Z,310nm,13.8s
GTA LR LR
comp=Z,220nm,10.2s
SHAO Shalim 23.13 222 P **P** **09 28 31.1 +0.4**
SHAO Shalim 23.13 222 P **P** **09 28 30.8 +0.1**
KBZ Khabaz 23.13 297 P **P** **09 28 29.0 -1.5**
comp=Z,22nm,0.6s,baz=119,slow=8.9,SNR=53
KBZ S **S** **09 32 42.5 +7.5**
comp=Z,9.6nm,0.9s,baz=318,slow=21,SNR=2.2
KBZ LR LR 09 40 02.1
comp=Z,156nm,18.1s,baz=94,slow=43
comp=Z,22nm,0.6s
KBZ Khabaz 23.13 297 *ce*P **P** **09 28 29.9 -0.6**
KBZ pmax pmax
comp=Z,54nm,1.1s
NEUR Neytrino 23.20 296 *i* P **P** **09 28 32.6 +1.1**
NEUR pmax pmax
comp=Z,93nm,1.4s
GOF Gofitskoye 23.26 301 *c* *i* P **P** **09 28 32.2 +0.4**
SHA1 Shidzhatmaz 23.30 297 *c* *i* P **P** **09 28 32.2 -0.3**
KIV Kislovodsk 23.31 298 P **P** **09 28 30.8 -1.6**
KIV Kislovodsk 23.31 298 ⇑P **P** **09 28 32.9 +0.5**
KIV Kislovodsk 23.31 298 *i* P **P** **09 28 31.5 -0.9**
SNR=9.2
KIV Kislovodsk 23.31 298 *e*P **P** **09 28 31.3 -1.1**
KIV *e*S **S** **09 32 37.6 -0.6**
KIV pmax pmax
comp=Z,61nm,1.1s
KIV MLR MLR
comp=Z,179nm,14.0s
KIV Kislovodsk 23.31 298 P **P** **09 28 32.2 -0.2**
comp=Z,993nmcomp=Z,106nm,0.9s
BELG Belogornoye 23.32 321 *i* P **P** **09 28 31.1 -1.1**
BELG pmax pmax
comp=Z,16nm,0.6s
DOK Doka 23.49 226 P **P** **09 28 32.5 -1.6**
SNR=7.9
GURO Guroymak-BITLI 23.57 284 P **P** **09 28 35.9 +1.0**
DMTO DMTO 23.75 223 P **P** **09 28 37.0 +0.7**
WHFO Wadi Hawf 24.25 225 P **P** **09 28 40.3 -0.6**
RBK Rabkut 24.33 224 P **P** **09 28 40.9 -0.8**
MARD Mardin 24.68 281 P **P** **09 28 44.9 +0.1**
KOPT Kop Dagi 24.69 288 **P** **09 28 46.2 +1.1**
LABN Labinsk 24.81 299 *e*P **P** **09 28 47.2 +1.4**
LABN *e*S **S** **09 33 05.7 +3.6**
LABN pmax pmax
comp=Z,124nm,0.8s
ABTO Aybut 24.97 225 P **P** **09 28 47.2 -0.3**
SNR=12
ERBR Yeremizino-Bor 25.16 301 *e*P **P** **09 28 48.1 -0.9**
ERBR *e**PP **pP** **09 29 07.3 -2.0**
ERBR *e*S **S** **09 33 07.1 -0.5**
ERBR pmax pmax
comp=Z,124nm,0.8s
SOC Sochi 25.40 296 *e*P **P** **09 28 53.4 +2.2**
SOC *e* 09 29 31.7
SOC *e*S **S** **09 33 16.7 +5.2**
SOC *e*SS **SnSn** **09 34 18.1 +5.5**
SOC pmax pmax
comp=Z,95nm,0.7s
SOC MLR MLR
comp=Z,145nm,12.0s
LZDM Lanzhou Array 25.81 81 P **P** **09 28 57.8 +2.5**
comp=Z,14nm,0.5s,baz=263,slow=7.3,SNR=22
comp=Z,14nm,0.5s
MOY Mondy 25.82 44 *e*P **P** **09 28 59.7 +4.7**
MOY pmax pmax
comp=Z,61nm,1.4s
LZH Lanzhou 25.90 81 ⇓P **P** **09 28 58.5 +2.5**
LZH pP pP 09 29 16.9 +0.4
LZH pmax pmax
comp=Z,81nm,1.2s
RAYN Ar Rayn 25.94 248 P **P** **09 28 54.3 -2.0**
RAYN IAmb IAmb 09 29 01.8
comp=Z,25nm,0.6s
RAYN Ar Rayn 25.94 248 P **P** **09 28 54.8 -1.6**
RAYN Ar Rayn 25.94 248 *i* P **P** **09 28 55.7 -0.6**
SNR=35
RAYN Ar Rayn 25.94 248 P **P** **09 28 57.8 +1.5**
VRH Novokhopyorsk 25.97 314 *e*P **P** **09 28 55.7 -0.5**
VRH pmax pmax
comp=Z,45nm,0.8s
KIRV Kirov 26.58 334 *ce*P **P** **09 29 02.0 +0.4**
ZAK Zakamensk 26.67 48 *e*P **P** **09 29 03.2 +0.5**
ZAK *e* 09 29 32.4
ZAK pmax pmax
comp=Z,29nm,1.0s
ZAK pmax pmax
comp=Z,24nm,1.5s
ANN Anapa 27.16 299 *e*P **P** **09 29 07.4 +0.4**
ANN *e**PP **pP** **09 29 27.3 -0.3**
ANN *e*S **S** **09 33 41.1 +2.0**
ANN pmax pmax
comp=Z,50nm,0.6s
CD2 Chengdu 27.20 92 P **P** **09 29 09.9 +2.3**
CD2 pmax pmax
comp=Z,70nm,0.7s
VORD Divnogorie 27.31 312 *e*P **P** **09 29 06.7 -1.6**
VORD pmax pmax
comp=Z,20nm,1.0s
PZH PanZhiHua 27.39 103 P **P** **09 29 11.3 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 27.47 313 *e*P **P** **09 29 07.5 -2.2**
VSR pmax pmax
comp=Z,30nm,0.9s
VORR Voronezh 27.61 314 *e*P **P** **09 29 10.5 -0.4**
VORR pmax pmax
comp=Z,70nm,1.3s
SONM Songino Array 27.97 55 P **P** **09 29 16.2 +1.8**
comp=Z,32nm,0.7s,baz=256,slow=9.9,SNR=108
SONM LR LR 09 41 47.4
comp=Z,220nm,19.8s,baz=252,slow=39
comp=Z,32nm,0.7s
SONM Songino Array 27.97 55 P **P** **09 29 15.2 +0.9**
SONM IAmb IAmb 09 29 17.2
comp=Z,36nm,0.8s
LPSR Galich'ya Gora 28.11 316 *e*P **P** **09 29 14.3 -1.1**
LPSR pmax pmax
comp=Z,61nm,0.8s
ULN Ulaanbaatar 28.41 55 **P** **09 29 19.9 +1.5**
ULN IAmb IAmb 09 29 20.9
comp=Z,30nm,0.8s
ULN Ulaanbaatar 28.41 55 *ce*P **P** **09 29 19.8 +1.5**
ULN pmax pmax
comp=Z,33nm,0.8s
KMI Kunming 28.85 104 P **P** **09 29 23.8 +1.3**
KMI pmax pmax
comp=Z,18nm,0.6s
ASF Jabal al Asfar 28.93 272 LR LR 09 42 58.6
comp=Z,133nm,19.7s,baz=73,slow=40
SIM Simferopol' 29.52 299 *e*P **P** **09 29 27.3 -0.7**
SIM pmax pmax
comp=Z,24nm,1.2s
BZK Bozkurt 29.55 293 ⇓P **P** **09 29 29.9 +1.6**
CHTO Chiang Mai 29.70 119 P **P** **09 29 30.9 +1.1**
CHTO IAmb IAmb 09 29 34.0
comp=Z,108nm,1.8s
CHTO Chiang Mai 29.70 119 P **P** **09 29 31.6 +1.8**
CHTO Chiang Mai 29.70 119 P **P** **09 29 30.9 +1.1**
CHTO pmax pmax
comp=Z,109nm,1.8s
ILGA Ilgaz 29.81 291 P **P** **09 29 29.6 -1.3**
KIRS Kirsehir-Merke 29.83 287 ⇑P **P** **09 29 32.6 +1.7**
MMAI Mount Meron Ar 29.89 274 LR LR 09 44 10.3
comp=Z,105nm,18.1s,baz=40,slow=41
CM31 Chiang Mai Arr 29.93 119 IAmb IAmb 09 29 34.8
comp=Z,35nm,0.8s
CMAR Chiang Mai Arr 29.93 119 P **P** **09 29 33.1 +1.2**
comp=Z,26nm,0.8s,baz=302,slow=8.5,SNR=90
CMAR LR LR 09 45 15.0
comp=Z,55nm,19.4s,baz=290,slow=43
comp=Z,26nm,0.8s
CMAR Chiang Mai Arr 29.93 119 *i* P **P** **09 29 33.0 +1.2**
CMAR pmax pmax
comp=Z,30nm,0.8s
BR104 Keskin Array S 29.98 288 P **P** **09 29 33.2 +0.9**
comp=Z,89nmcomp=Z,9.0nm,1.2s
BR131 Keskin Array S 29.98 288 P **P** **09 29 31.9 -0.4**
BR131 Keskin Array S 29.98 288 *i* P **P** **09 29 33.0 +0.7**
BRTR Keskin Array B 29.98 288 P **P** **09 29 32.2 0.0**
comp=Z,6.7nm,0.6s,baz=104,slow=8.3,SNR=39
BRTR LR LR 09 45 05.7
comp=Z,96nm,18.7s,baz=88,slow=43
comp=Z,6.7nm,0.6s
BRTR Keskin Array B 29.98 288 *i* P **P** **09 29 32.9 +0.7**
BRTR pmax pmax
comp=Z,7.0nm,0.6s
BR106 Keskin Array S 29.99 288 P **P** **09 29 33.3 +0.9**
comp=Z,84nmcomp=Z,9.8nm,0.7s
BR105 Keskin Array S 29.99 288 P **P** **09 29 33.2 +0.8**
comp=Z,104nmcomp=Z,11nm,0.8s
MOS Moscow 30.09 321 *e*P **P** **09 29 31.3 -1.6**
MOS *e* 09 29 51.5
MOS *e* 09 36 11.3
MOS pmax pmax
comp=Z,64nm,0.9s
PALK Pallekele 30.13 162 LR LR 09 42 41.3
comp=Z,108nm,18.0s,baz=0.5,slow=38
PALK Pallekele 30.13 162 P **P** **09 29 34.2 +0.6**
PALK IAmb IAmb 09 29 35.7
comp=Z,28nm,0.7s
PALK Pallekele 30.13 162 *i* P **P** **09 29 34.7 +1.1**
PALK pmax pmax
comp=Z,32nm,0.6s
PALK Pallekele 30.13 162 P **P** **09 29 35.0 +1.4**
BTO Baotou 30.16 70 *e*P **P** **09 29 34.9 +1.1**
BTO pP **pP** **09 29 52.0 -3.0**
BTO sP **sP** **09 30 04.6 -1.0**
BTO PP **PnPn** **09 30 35.5 +0.8**
BTO S **S** **09 34 29.3 +2.6**
BTO pmax pmax
comp=Z,130nm,0.8s
BTO pmax pmax
comp=Z,450nm,5.4s
BTO LR LR
comp=Z,540nm,4.6s
BTO LR LR
comp=Z,700nm,6.8s
BTO LR LR
comp=Z,760nm,7.7s
OBN Obninsk 30.38 319 LR LR 09 45 03.8
comp=Z,194nm,18.1s,baz=49,slow=42
OBN Obninsk 30.38 319 **P** **09 29 35.1 -0.2**
OBN Obninsk 30.38 319 ⇑P **P** **09 29 36.4 +1.0**
OBN Obninsk 30.38 319 *ce*P **P** **09 29 35.6 +0.2**
OBN *e**PP **pP** **09 29 55.9 -0.5**
OBN *e*SP **sP** **09 30 07.0 0.0**
OBN *e* 09 30 34.3
OBN *e* 09 32 34.2
OBN pmax pmax
comp=Z,65nm,0.6s
OBN Obninsk 30.38 319 P **P** **09 29 35.8 +0.4**
comp=Z,125nm,0.7s
XAN Xi'an 30.42 83 ⇓P **P** **09 29 37.5 +1.4**
XAN pP pP 09 29 52.3 -4.6
XAN pmax pmax
comp=Z,51nm,1.1s
HHC Hu-ho-hao-te 31.31 69 ⇓*i* P **P** **09 29 46.3 +2.3**
HHC pmax pmax
comp=Z,33nm,0.8s
HHC pmax pmax
comp=Z,160nm,4.0s
GYA Guiyang 31.32 98 ⇑P **P** **09 29 45.9 +1.7**
GYA pmax pmax
comp=Z,26nm,0.8s
EIL Elat 31.36 268 LR LR 09 44 24.4
comp=Z,149nm,18.5s,baz=0.0,slow=40
SLVN Son La 31.80 109 IAmb IAmb 09 29 51.2
comp=Z,19nm,0.7s
SLVN Son La 31.80 109 P **P** **09 29 50.8 +2.4**
KLMR Klimovskoe 31.85 330 *e*P **P** **09 29 47.9 -0.4**
KLMR *e**PP **pP** **09 30 07.3 -2.1**
KLMR pmax pmax
comp=Z,34nm,0.9s
ENH Enshi 32.05 90 P **P** **09 29 52.8 +2.4**
TIY Taiyuan 32.39 75 *e*P **P** **09 29 56.1 +2.6**
TIY pmax pmax
comp=Z,52nm,0.7s
BAL3X Bal3x, Balta 32.86 304 P **P** **09 29 56.4 -0.9**
LYN LuoYang 33.12 81 P **P** **09 30 02.6 +2.9**
LYN pmax pmax
comp=Z,50nm,0.6s
LYN pmax pmax
comp=Z,300nm,6.2s
MILM Milestii Mici 33.33 302 ⇑*i* P **P** **09 30 00.5 -0.9**
comp=Z,120nm,1.2s
ELL Elmali 33.34 283 P **P** **09 30 01.9 +0.1**
ELL IAmb IAmb 09 31 05.4
comp=Z,31nm,0.7s
ELL Elmali 33.34 283 P **P** **09 30 01.9 +0.1**
ELL pmax pmax
comp=Z,31nm,0.7s
AK09 Malin Array Si 33.38 309 P **P** **09 30 01.9 +0.1**
AK10 Malin Array Si 33.40 309 P **P** **09 30 02.1 +0.1**
AK08 Malin Array Si 33.41 309 P **P** **09 30 02.0 0.0**
AK07 Malin Array Si 33.42 309 P **P** **09 30 02.3 +0.1**
AK06 Malin Array Si 33.43 309 P **P** **09 30 02.4 +0.1**
AKASG Malin Array Be 33.43 309 P **P** **09 30 02.2 -0.1**
comp=Z,9.5nm,0.5s,baz=88,slow=7.2,SNR=53
AKASG LR LR 09 44 26.4
comp=Z,121nm,18.2s,baz=61,slow=38
comp=Z,9.5nm,0.5s
AKASG Malin Array Be 33.43 309 P **P** **09 30 02.2 -0.1**
AKBB Malin Array Si 33.43 309 P **P** **09 30 01.4 -0.8**
AKBB Malin Array Si 33.43 309 *ce*P **P** **09 30 02.4 +0.1**
AKBB pmax pmax
comp=Z,64nm,1.5s
AKBB Malin Array Si 33.43 309 P **P** **09 30 02.2 -0.1**
AK05 Malin Array Si 33.44 309 P **P** **09 30 02.3 0.0**
AK02 Malin Array Si 33.44 309 P **P** **09 30 02.3 0.0**
AK01 Malin Array Si 33.44 309 P **P** **09 30 02.2 -0.1**
AK03 Malin Array Si 33.44 309 P **P** **09 30 02.2 -0.1**
KIEV Kiev 33.44 309 P **P** **09 30 01.7 -0.6**
KIEV Kiev 33.44 309 ⇓P **P** **09 30 02.7 +0.4**
KIEV Kiev 33.44 309 *i* P **P** **09 30 02.4 +0.1**
SNR=12
KIEV Kiev 33.44 309 P **P** **09 30 02.7 +0.4**
KIEV Kiev 33.44 309 P **P** **09 30 02.2 -0.1**
comp=Z,169nm,1.2s
KIEV Kiev 33.44 309 P **P** **09 30 02.3 0.0**
AK11 Malin Array Si 33.47 309 P **P** **09 30 02.4 -0.1**
AK12 Malin Array Si 33.47 309 P **P** **09 30 02.4 -0.2**
AK04 Malin Array Si 33.47 309 P **P** **09 30 02.5 -0.1**
AK14 Malin Array Si 33.50 309 P **P** **09 30 02.7 -0.1**
AK15 Malin Array Si 33.50 309 P **P** **09 30 02.7 -0.1**
AK16 Malin Array Si 33.50 309 P **P** **09 30 02.7 -0.2**
AK23 Malin Array Si 33.51 309 P **P** **09 30 02.4 -0.5**
AK13 Malin Array Si 33.52 309 P **P** **09 30 02.8 -0.2**
AK18 Malin Array Si 33.54 309 P **P** **09 30 02.9 -0.3**
AK17 Malin Array Si 33.54 309 P **P** **09 30 02.9 -0.3**
AK22 Malin Array Si 33.54 309 P **P** **09 30 02.9 -0.3**
AK21 Malin Array Si 33.56 309 P **P** **09 30 03.1 -0.3**
TPGR Topolog 33.56 298 ⇑P **P** **09 30 04.6 +1.1**
AK19 Malin Array Si 33.57 309 P **P** **09 30 03.2 -0.3**
AK20 Malin Array Si 33.58 309 P **P** **09 30 03.2 -0.3**
SORM Soroca 33.71 304 ⇓P **P** **09 30 05.1 +0.3**
SORM Soroca 33.71 304 P **P** **09 30 05.0 +0.3**
CFR Carcaliu 33.76 299 ⇑P **P** **09 30 06.1 +0.9**
CFR Carcaliu 33.76 299 P **P** **09 30 06.0 +0.9**
NRIK Noril'sk 34.15 10 P **P** **09 30 08.8 +0.5**
comp=Z,8.7nm,0.4s,baz=199,slow=6.1,SNR=21
NRIK LR LR 09 46 19.3
comp=Z,92nm,18.0s,baz=191,slow=40
comp=Z,8.7nm,0.4s
NRIK Noril'sk 34.15 10 P **P** **09 30 08.7 +0.5**
NRIK IAmb IAmb 09 31 00.9
comp=Z,24nm,1.0s
NRIK Noril'sk 34.15 10 *ce*P **P** **09 30 08.1 -0.2**
NRIK pmax pmax
comp=Z,10.0nm,0.4s
HNS HongShan 34.23 75 ⇓P **P** **09 30 11.6 +2.3**
HNS pmax pmax
comp=Z,47nm,1.1s
LUBAR Lubar, Ukraine 34.26 307 P **P** **09 30 09.5 0.0**
VRI Vrincioaia 34.75 300 ⇑P **P** **09 30 15.4 +1.7**
VRI Vrincioaia 34.75 300 P **P** **09 30 15.4 +1.7**
PLOR Plostina 34.80 300 ⇓P **P** **09 30 15.8 +1.6**
PLOR Plostina 34.80 300 P **P** **09 30 15.8 +1.6**
TESR Tescani 34.80 301 ⇑P **P** **09 30 15.4 +1.2**
ISR Istrita 34.89 299 ⇓P **P** **09 30 16.9 +1.9**
ISR Istrita 34.89 299 P **P** **09 30 16.9 +1.9**
BJT Baijiatuau 34.90 70 **P** **09 30 17.1 +2.0**
BJT IAmb IAmb 09 30 18.2
comp=Z,28nm,0.7s
BJT Baijiatuau 34.90 70 P **P** **09 30 17.5 +2.4**
BJT Baijiatuau 34.90 70 P **P** **09 30 17.1 +2.0**
BJT pmax pmax
comp=Z,28nm,0.7s
BJT Baijiatuau 34.90 70 P **P** **09 30 17.4 +2.4**
BJI Beijing 34.90 70 P **P** **09 30 16.8 +1.8**
BJI pP **pP** **09 30 39.8 +3.4**
BJI sP **sP** **09 30 51.1 +4.2**
BJI PP **PP** **09 31 36.9 +1.3**
BJI S **S** **09 35 38.8 -1.2**
BJI pmax pmax
comp=Z,20nm,0.7s

BJI pmax pmax
comp=Z,68nm,5.0s
BJI LR LR
comp=Z,100nm,9.7s
BJI LR LR
comp=Z,97nm,10.7s
BJI LR LR
comp=Z,150nm,8.3s
MNK Minsk 34.96 315 *i* P **P 09 30 14.4 -1.0**
comp=E,24nm,0.8s
MNK *i* P **P 09 30 14.4 -1.0**
comp=N,45nm,1.1s
MNK *i* P **P 09 30 14.4 -1.0**
comp=Z,52nm,0.9s,baz=103
MNK *i* pP **pP 09 30 35.5 -1.2**
MNK *i* PP **PnPn 09 31 33.7 -1.2**
MNK *i* S **S 09 35 40.0 -0.7**
MNK *i* sS **sS 09 36 16.3 -1.1**
MNK *i* SS **SnSn 09 38 04.5 +0.4**
MNK *i* LQ 09 42 48.6
MNK *i* LRM MLR 09 46 25.5
comp=Z,274nm,23.7s
MNK *i* LRM MLR 09 46 32.6
comp=N,325nm,22.3s
MNK *i* LRM MLR 09 47 11.7
comp=E,365nm,21.2s
MNK Minsk 34.96 315 *i* P **P 09 30 14.4 -1.0**
MNK *i* *PP **pP 09 30 35.5 -1.2**
MNK *i* 09 31 33.6
MNK *i* S **S 09 35 39.9 -0.7**
MNK *i* *SS **sS 09 36 16.2 -1.1**
MNK *i* SS **SnSn 09 38 04.5 +0.4**
MNK pmax pmax
comp=E,24nm,0.8s
MNK pmax pmax
comp=N,45nm,1.1s
MNK pmax pmax
comp=Z,52nm,0.9s
MNK MLR MLR
comp=Z,274nm,24.0s
MNK MLR MLR
comp=N,325nm,22.0s
MNK MLR MLR
comp=E,365nm,21.0s
ONER Baraj Valea Uz 34.98 301 ⇓P **P 09 30 17.4 +1.7**
BOD Bodaibo 35.11 39 *eP* P 09 30 06.8 -10
BOD pmax pmax
comp=Z,28nm,1.2s
COVR Voineasa-Covas 35.11 300 ⇑P **P 09 30 18.3 +1.4**
TURR Turia 35.24 300 ⇓P **P 09 30 19.5 +1.5**
MLR Muntele Rosu 35.30 299 LR LR 09 49 04.4
comp=Z,175nm,19.2s,baz=74,slow=43
MLR Muntele Rosu 35.30 299 ⇓P **P 09 30 20.5 +1.9**
MLR Muntele Rosu 35.30 299 P **P 09 30 20.5 +1.9**
ELND Elena 35.50 295 ⇓P **P 09 30 22.0 +1.7**
RNPP5 Staryi Chortor 35.60 309 P **P 09 30 21.2 +0.3**
RNPP9 Sopachiv 35.62 310 P **P 09 30 21.3 +0.2**
CNSH ChangSha 35.62 91 P **P 09 30 23.4 +2.0**
CNSH pmax pmax
comp=Z,110nm,0.8s
RNPP8 Varash 35.63 309 P **P 09 30 21.4 +0.2**
NACGM Naroch 35.67 316 *eP* **P 09 30 22.4 +0.9**
comp=Z,101nm,0.9s,baz=102
DOPR Dopca 35.68 300 ⇓P **P 09 30 23.3 +1.5**
BURAR Bucovina Array 35.80 303 P **P 09 30 22.7 -0.1**
BURAR IAmb IAmb 09 30 25.0
comp=Z,18nm,0.8s
BURAR Bucovina Array 35.80 303 ⇓P **P 09 30 23.9 +1.1**
BURAR Bucovina Array 35.80 303 P **P 09 30 23.9 +1.1**
BUR08 Bucovina Ar. S 35.81 303 P **P 09 30 23.4 +0.5**
BUR08 IAmb IAmb 09 30 24.8
comp=Z,19nm,0.9s
WHN Wuhan 35.87 87 ⇓P **P 09 30 25.6 +2.1**
WHN pmax pmax
comp=Z,150nm,1.0s
VOIR 35.93 299 ⇑P **P 09 30 25.0 +0.9**
VOIR 35.93 299 P **P 09 30 24.9 +0.9**
ARR Arges 36.23 299 ⇑P **P 09 30 28.1 +1.6**
JOF Joensuu 36.24 330 *eP* **P 09 30 25.9 -0.3**
STNU Staruia 36.30 305 P **P 09 30 27.9 +0.9**
ARCR ARCALIA 36.38 302 ⇑P **P 09 30 29.2 +1.6**
TIA Tai'an 36.38 76 P **P 09 30 29.8 +2.0**
TIA pmax pmax
comp=Z,47nm,1.5s
VSU Vasula 36.61 322 *eP* **P 09 30 28.7 -0.7**
VSU Vasula 36.61 322 *ceP* **P 09 30 28.7 -0.7**
VSU pmax pmax
comp=Z,46nm,0.8s
UBPT Khong Chiam 36.70 116 P **P 09 30 31.8 +1.1**
MORS Morshin 36.72 306 P **P 09 30 32.1 +1.6**
LOT Lotru 36.83 296 ⇑P **P 09 30 33.4 +1.7**
HILR Hailar Array B 36.95 54 P **P 09 30 34.1 +1.6**
comp=Z,1.7nm,0.4s,baz=275,slow=8.8,SNR=5.5
comp=Z,1.7nm,0.4s
MEZ Mezhgor'ye 36.95 305 P **P 09 30 34.3 +1.8**
MARR Marisel-Cluj 37.23 301 ⇓P **P 09 30 37.0 +2.0**
ARBE Arbavere 37.27 323 *eP* **P 09 30 35.3 +0.2**
PABE Paberze 37.37 316 *eP* **P 09 30 36.2 +0.3**
VSVD Vaisvydziai 37.48 317 *eP* **P 09 30 37.5 +0.7**
KWP Kalwaria Pacla 37.51 306 *eP* **P 09 30 37.7 +0.4**
DRGR 37.51 302 ⇑P **P 09 30 38.5 +1.1**
DRGR 37.51 302 P **P 09 30 38.5 +1.1**
GZR Gura Zlata 37.53 299 ⇑P **P 09 30 38.3 +0.7**
GZR Gura Zlata 37.53 299 P **P 09 30 38.2 +0.7**
SUW Suwalki 37.58 314 P **P 09 30 36.9 -0.8**
SUW Suwalki 37.58 314 *eP* **P 09 30 38.9 +0.2**
SUW Suwalki 37.58 314 P **P 09 30 36.9 -0.8**
BLKB Belogradchik 37.76 297 ⇓P **P 09 30 40.7 +1.3**
HERR Herculane 37.83 299 ⇑P **P 09 30 40.7 +0.7**
FIA1 FINESS Array S 37.88 326 P **P 09 30 40.5 +0.3**
FIA1 IAmb IAmb 09 30 41.5
comp=Z,31nm,0.8s
FINES FINESS Array B 37.88 326 P **P 09 30 40.4 +0.3**
comp=Z,18nm,0.6s,baz=112,slow=9.6,SNR=90
FINES LR LR 09 47 16.4
comp=Z,150nm,21.8s,baz=48,slow=38
comp=Z,18nm,0.6s
FINES FINESS Array B 37.88 326 **P 09 30 40.5 +0.4**
FINES FINESS Array B 37.88 326 P **P 09 30 40.6 +0.4**
APA Apatity 37.95 337 *eP* P 09 30 51.2 +11
APA MLR MLR
comp=Z,567nm,16.9s
SIRR Siria 38.26 301 ⇓P **P 09 30 45.5 +1.9**
MEF Metsahovi 38.27 324 *eP* **P 09 30 43.7 +0.3**
BZS Buzias 38.33 300 ⇑P **P 09 30 45.9 +1.7**
BZS Buzias 38.33 300 P **P 09 30 45.9 +1.7**
MDVR Moldovita 38.33 298 ⇓P **P 09 30 45.9 +1.6**
BOVS Bovan 38.46 297 ⇑P **P 09 30 46.3 +1.0**
STHS Stebnicka Huta 38.46 306 *eP* **P 09 30 44.9 -0.3**
STHS pmax pmax
comp=Z,8.0nm,0.9s
STHS Stebnicka Huta 38.46 306 *eP* **P 09 30 44.9 -0.3**
KEF Keuruu 38.67 327 *eP* **P 09 30 46.9 +0.1**
LHMI Lhok Sumawe 38.73 137 P **P 09 30 49.9 +2.1**
LHMI Lhok Sumawe 38.73 137 P **P 09 30 48.3 +0.5**
comp=Z,242nm,0.7s
BEL Belsk 38.82 310 *eP* **P 09 30 48.5 +0.3**
NJ2 Nanjing 38.97 82 ⇓P **P 09 30 51.8 +2.2**
NJ2 pmax pmax
comp=Z,49nm,0.9s
NIE Niedzica 39.08 306 *eP* **P 09 30 52.1 +1.7**
MLSI Meulaboh, Aceh 39.24 139 P **P 09 30 50.4 -1.6**
comp=Z,278nm,0.8s
DL2 Dalian 39.25 71 P **P 09 30 54.1 +2.2**
DL2 pmax pmax
comp=Z,110nm,0.6s
PSZ Piszkesteto 39.38 304 P **P 09 30 53.7 +0.7**
PSZ IAmb IAmb 09 30 55.4
comp=Z,76nm,2.0s
PSZ Piszkesteto 39.38 304 ⇑P **P 09 30 54.4 +1.4**
PSZ Piszkesteto 39.38 304 *eP* **P 09 30 54.4 +1.4**
PSZ Piszkesteto 39.38 304 P **P 09 30 54.4 +1.4**
OJC Ojcow 39.40 307 *eP* **P 09 30 53.4 +0.3**
LANS Liptovska Anna 39.62 306 *eP* **P 09 30 56.3 +1.3**
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 39.62 306 *eP* **P 09 30 56.3 +1.3**
RAF Rauma 39.74 324 *eP* **P 09 30 55.8 +0.1**
VAF Ylistaro 39.91 328 *eP* **P 09 30 56.9 -0.2**
SNY Shenyang 40.15 66 ⇓P **P 09 31 00.3 +1.0**
SNY pmax pmax
comp=Z,79nm,0.6s
MORH Mrgy, Hungar 40.35 301 ⇑P **P 09 31 01.4 +0.4**
AAL Aland 40.39 323 *eP* **P 09 31 00.6 -0.5**

KCSI Kotacane, Aceh 40.60 138 P **P 09 31 00.8 -2.5**
comp=Z,407nmcomp=Z,45nm,0.7s
VADS Vadso 40.62 339 *eP* **P 09 31 03.2 +0.4**
MAUC Maruska 40.69 306 *eP* **P 09 31 05.3 +1.5**
MAUC *ex* x 09 31 27.2
STEB Steborice 40.71 307 *eP* **P 09 31 04.8 +0.9**
SNSI Sinabang, Aceh 40.77 140 P **P 09 31 04.8 +0.1**
KULM Kulim 40.80 132 **P 09 31 06.3 +1.3**
KULM IAmb IAmb 09 31 07.4
comp=Z,36nm,0.9s
KULM Kulim 40.80 132 P **P 09 31 06.5 +1.5**
JAVC Velka Javorina 40.82 305 *eP* **P 09 31 06.3 +1.4**
MORC Moravsky Berou 40.86 307 **P 09 31 05.0 -0.2**
MORC IAmb IAmb 09 31 07.3
comp=Z,21nm,0.9s
MORC Moravsky Berou 40.86 307 ⇑P **P 09 31 06.4 +1.2**
MORC Moravsky Berou 40.86 307 *eP* **P 09 31 05.9 +0.7**
MORC Moravsky Berou 40.86 307 P **P 09 31 06.3 +1.2**
GKP Gorka Klasztor 41.05 312 *eP* **P 09 31 07.2 +0.6**
MODS Modra-Piesok 41.11 304 *eP* **P 09 31 08.0 +0.8**
MODS pmax pmax
comp=Z,31nm,1.1s
MODS Modra-Piesok 41.11 304 *eP* **P 09 31 08.0 +0.8**
CN2 Changchun 41.19 63 P **P 09 31 08.3 +0.4**
CN2 pmax pmax
comp=Z,20nm,0.8s
ARA0 ARCESS Array S 41.46 337 *eP* **P 09 31 10.2 +0.4**
ARCES ARCESS Array B 41.46 337 P **P 09 31 10.0 +0.2**
comp=Z,3.6nm,0.5s,baz=112,slow=7.5,SNR=34
ARCES LR LR 09 49 13.7
comp=Z,269nm,19.6s,baz=114,slow=37
comp=Z,3.6nm,0.5s
ARCES ARCESS Array B 41.46 337 P **P 09 31 09.9 +0.2**
ARCES IAmb IAmb 09 31 33.6
comp=Z,41nm,0.9s
ARCES ARCESS Array B 41.46 337 P **P 09 31 10.0 +0.2**
VRAC Vranov 41.50 306 P **P 09 31 11.5 +1.1**
comp=Z,17nm,0.7s,baz=88,slow=8.3,SNR=15
VRAC LR LR 09 53 30.1
comp=Z,151nm,18.2s,baz=86,slow=43
comp=Z,17nm,0.7s
VRAC Vranov 41.50 306 ⇓P **P 09 31 11.8 +1.4**
VRAC Vranov 41.50 306 *eP* **P 09 31 11.5 +1.1**
VRAC Vranov 41.50 306 P **P 09 31 11.7 +1.4**
DPC Dobruska-Polom 41.63 308 *eP* **P 09 31 12.6 +1.2**
DPC Dobruska-Polom 41.63 308 *eP* **P 09 31 12.6 +1.2**
KRUC Moravsky 41.65 306 *eP* **P 09 31 12.4 +0.8**
IPM Ipoh 41.67 133 **P 09 31 13.3 +1.2**
ZEA Zeya 41.76 47 *eP* **P 09 31 15.0 +2.6**
ZEA *e* 09 31 39.0
ZEA pmax pmax
comp=Z,10.0nm,0.6s
CHVC Chvalec 41.79 308 *eP* **P 09 31 14.2 +1.5**
CHVC Chvalec 41.79 308 *eP* **P 09 31 14.2 +1.5**
RONA Rosalia, Austr 41.82 304 *i* P **P 09 31 14.1 +1.0**
comp=Z,12nm,0.7s
RONA *epP* **pP 09 31 34.2 -0.4**
comp=Z,24nm,1.6s
PSI Prapat 41.83 137 LR LR 09 50 58.3
comp=Z,69nm,19.9s,baz=295,slow=39
PSI Prapat 41.83 137 P **P 09 31 13.8 +0.2**
PSI Prapat 41.83 137 P **P 09 31 13.7 +0.2**
PSI pmax pmax
comp=Z,55nm,0.8s
HEH HeiHe 41.90 53 *eP* **P 09 31 14.8 +1.2**
HEH pmax pmax
comp=Z,40nm,0.8s
RPSI Rantau Prapat 41.91 137 P **P 09 31 13.7 -0.4**
KTK1 Kautokeino 41.94 336 *eP* **P 09 31 13.7 0.0**
CONA Conrad Observa 42.09 304 *eP* **P 09 31 16.1 +0.9**
comp=Z,23nm,0.8s,SNR=9.2
CONA *epP* **pP 09 31 36.6 -0.2**
comp=Z,41nm,1.1s
TREC Trest 42.22 306 *eP* **P 09 31 17.9 +1.6**
TREC Trest 42.22 306 *eP* **P 09 31 17.9 +1.6**
BNX BinXian 42.30 59 ⇑P **P 09 31 18.6 +1.7**
BNX pmax pmax
comp=Z,26nm,0.9s
GSI Gunungsitoli 42.35 140 **P 09 31 19.8 +2.2**
GSI Gunungsitoli 42.35 140 P **P 09 31 19.7 +2.1**
GSI Gunungsitoli 42.35 140 P **P 09 31 18.4 +0.8**
ARSA Arzberg 42.38 303 *eP* **P 09 31 18.6 +1.0**
comp=Z,9.6nm,1.1s
ARSA *epP* **pP 09 31 40.0 +0.8**
comp=Z,11nm,1.1s
BSD Bornholm Skovb 42.47 315 *i* P **P 09 31 17.0 -1.1**
BSD IAmb IAmb 09 31 19.1
comp=Z,26nm,0.9s
GROS Grobnik 42.49 302 *i* P **P 09 31 19.3 +0.7**
HAMF Hammerfest 42.53 339 *eP* **P 09 31 18.3 -0.2**
PERS Pernice 42.73 302 *i* P **P 09 31 21.5 +1.0**
SOKA Soboth 42.78 302 *i* P **P 09 31 22.1 +1.1**
comp=Z,24nm,0.7s,SNR=12
SOKA *epP* **pP 09 31 42.8 +0.3**
comp=Z,33nm,1.0s
PRU Pruhonice 42.79 307 *eP* **P 09 31 22.4 +1.6**
PRU Pruhonice 42.79 307 *eP* **P 09 31 22.4 +1.6**
CKRC Cesky Krumlov 43.03 305 *eP* **P 09 31 23.9 +1.0**
CKRC Cesky Krumlov 43.03 305 *eP* **P 09 31 23.9 +1.0**
ZVC Zvikov 43.06 306 *eP* **P 09 31 24.4 +1.4**
ZVC *ex* x 09 31 45.1
JETT Jettan, Norway 43.08 336 *eP* **P 09 31 22.2 -0.8**
VNDS Vrh nad Dolski 43.09 301 *i* P **P 09 31 24.4 +1.1**
SGRT San Giovanni R 43.10 295 P **P 09 31 23.7 +0.2**
DEL Delary 43.11 317 *i* P **P 09 31 23.5 +0.2**
OBKA Obir 43.14 302 *eP* **P 09 31 25.0 +1.2**
comp=Z,11nm,0.9s
OBKA *epP* **pP 09 31 45.7 +0.3**
comp=Z,15nm,1.2s
MOA Molln 43.16 304 *i* P **P 09 31 24.9 +0.9**
comp=Z,18nm,0.8s,SNR=8.5
MOA *epP* **pP 09 31 45.4 -0.2**
comp=Z,18nm,0.9s
LUNU Lund 43.32 315 *i* P **P 09 31 25.3 +0.2**
INCN Inchon 43.42 71 P **P 09 31 27.3 +1.1**
INCN IAmb IAmb 09 31 28.3
comp=Z,30nm,0.8s
INCN Inchon 43.42 71 P **P 09 31 27.3 +1.1**
INCN pmax pmax
comp=Z,29nm,0.8s
GERES GERESS Array B 43.43 305 P **P 09 31 26.3 +0.1**
comp=Z,1.9nm,0.6s,baz=91,slow=6.7,SNR=13
comp=Z,1.9nm,0.6s
KHC Kasperske Hory 43.48 306 **P 09 31 27.1 +0.6**
KHC Kasperske Hory 43.48 306 *ceP* **P 09 31 28.0 +1.5**
KHC pmax pmax
comp=Z,31nm,2.5s
KHC Kasperske Hory 43.48 306 *eP* **P 09 31 28.3 +1.8**
KHC *ex* x 09 31 44.8
HFS Hagfors 43.49 322 P **P 09 31 26.3 0.0**
comp=Z,29nm,0.6s,baz=99,slow=9.5,SNR=64
HFS LR LR 09 51 54.3
comp=Z,171nm,19.3s,baz=80,slow=39
comp=Z,29nm,0.6s
TRO Tromso 43.59 336 *eP* **P 09 31 28.6 +1.6**
BIOA Bad Ischl, Aus 43.60 304 *i* P **P 09 31 28.1 +0.6**
comp=Z,10nm,0.9s
BIOA *epP* **pP 09 31 46.9 -2.3**
comp=Z,15nm,1.2s
CLL Collm 43.68 309 *i* P **P 09 31 28.6 +0.6**
CLL *i* *PP **pP 09 31 49.7 -0.2**
CLL pmax pmax
comp=Z,56nm,1.7s
CLL Collm 43.68 309 *i* P **P 09 31 28.6 +0.6**
comp=Z,56nm,1.7s
CLL *i* pP **pP 09 31 49.7 -0.2**
comp=Z,16nm,1.0s
CLL *ePP* **PP 09 33 12.0 +1.1**
CLL *epPP* 09 33 25.0
CLL *ePPP* PPP 09 33 50.0
MYKA Terra Mystica 43.74 302 *eP* **P 09 31 29.6 +1.0**
comp=Z,12nm,0.9s
YAK Yakutsk 43.76 35 *eP* **P 09 31 30.0 +1.6**
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=N,4.0nm,1.2s
BORU Boraas 43.77 318 *i* P **P 09 31 28.6 +0.1**
MNSI Mandailing Nat 43.85 137 P **P 09 31 30.2 +0.5**
comp=N,5µmcomp=N,252nm,0.9s
SABO M.te Sabotino 43.86 301 P **P 09 31 29.4 -0.2**
SABO IAmb IAmb 09 31 31.2
comp=Z,47nm,0.9s

PBSI Pulau Batu 43.87 140 P **P 09 31 30.8 +0.9**
comp=Z,365nm,1.0s
KBA Koelnbreinsper 43.88 303 *i* P **P 09 31 29.2 -0.7**
comp=Z,8.3nm,0.8s
KBA *epP* **pP 09 31 50.3 -1.2**
comp=Z,23nm,1.0s
COP Copenhagen 43.90 315 *i* P **P 09 31 31.3 +1.7**
COP IAmb IAmb 09 31 31.9
comp=Z,68nm,0.8s
MDJ Mudanjiang 44.00 61 P **P 09 31 32.0 +1.4**
MDJ pmax pmax
comp=Z,18nm,0.7s
MDJ Mudanjiang 44.00 61 P **P 09 31 32.2 +1.6**
SSLB Suanglung 44.03 92 **P 09 31 33.4 +2.2**
SSLB Suanglung 44.03 92 P **P 09 31 34.3 +3.1**
FAUS Fauske 44.16 332 *eP* **P 09 31 31.6 0.0**
MOR8 Moi Rana 44.18 331 *eP* **P 09 31 31.1 -0.7**
LESA Schwarzleotal 44.28 304 *i* P **P 09 31 33.0 0.0**
comp=Z,10nm,0.6s,SNR=5.3
LESA *epP* **pP 09 31 54.8 0.0**
comp=Z,20nm,0.8s
TJN Taejon 44.30 73 P **P 09 31 34.8 +1.7**
STEI Steigen 44.32 333 *eP* **P 09 31 33.3 +0.5**
KS19 Wonju Array Si 44.36 71 P **P 09 31 34.9 +1.2**
KS19 IAmb IAmb 09 31 36.1
comp=Z,38nm,0.9s
KSAR Wonju Array Be 44.39 71 P **P 09 31 35.4 +1.6**
KSAR Wonju Array Be 44.39 71 P **P 09 31 35.4 +1.6**
RAUS Rausandaksla 44.40 331 *eP* **P 09 31 33.6 +0.1**
KSRS Korea Array 44.42 71 P **P 09 31 35.2 +1.2**
comp=Z,24nm,0.8s,baz=281,slow=6.8,SNR=44
comp=Z,24nm,0.8s
STAL STALIGIAL 44.43 302 P **P 09 31 33.8 -0.3**
STAL IAmb IAmb 09 31 55.8
comp=Z,32nm,1.1s
ABTA Abfaltersbach 44.49 303 *eP* **P 09 31 34.8 +0.1**
comp=Z,9.8nm,1.0s
ABTA *epP* **pP 09 31 55.2 -1.2**
comp=Z,8.6nm,0.8s
YULB Yu-li 44.50 93 P **P 09 31 37.0 +2.1**
NC405 NORSAR Array S 44.56 323 P **P 09 31 35.1 +0.2**
NC405 IAmb IAmb 09 31 36.6
comp=Z,43nm,1.0s
TWG Pinlang 44.59 94 P **P 09 31 36.2 +0.6**
TWG IAmb IAmb 09 31 40.3
comp=Z,38nm,0.7s
TWGBT Beinan 44.60 94 P **P 09 31 39.7 +4.0**
NC602 NORSAR Array S 44.61 323 *eP* **P 09 31 34.6 -0.7**
STRU Stroemstad 44.67 320 *i* P **P 09 31 35.8 0.0**
LEIR Leirfjorden 44.70 330 *eP* **P 09 31 36.1 +0.2**
NC303 NORSAR Array S 44.74 323 **P 09 31 36.3 0.0**
NC303 IAmb IAmb 09 32 10.5
comp=Z,38nm,0.8s
NB201 NORSAR Array S 44.76 323 IAmb IAmb 09 31 37.4
comp=Z,20nm,0.8s
VAGH Vaagaholmen 44.77 331 *eP* **P 09 31 37.3 +1.0**
STOK Stokkvaagen 44.78 331 *eP* **P 09 31 35.6 -0.9**
NB2 NORSAR Subarra 44.80 323 P **P 09 31 36.1 -0.7**
comp=Z,51nm,1.2s,baz=94,slow=7.9
NOA NORSAR Array B 44.80 323 P **P 09 31 36.4 -0.4**
comp=Z,22nm,0.9s,baz=96,slow=7.8,SNR=58
NOA LR LR 09 51 10.8
comp=Z,100nm,19.4s,baz=95,slow=37
comp=Z,22nm,0.9s
NSS Namsos 44.88 328 *eP* **P 09 31 36.7 -0.7**
NAO01 NORSAR Array S 44.94 323 IAmb IAmb 09 32 25.9
comp=Z,70nm,1.4s
LOF Lofoten 44.99 333 *eP* **P 09 31 38.0 -0.1**
WTTA Wattenberg 45.01 303 *eP* **P 09 31 38.9 +0.1**
comp=Z,18nm,0.9s
WTTA *epP* **pP 09 31 60.0 -0.7**
comp=Z,25nm,1.2s
NBO00 NORSAR Array S 45.01 323 IAmb IAmb 09 32 11.8
comp=Z,37nm,1.1s
NC204 NORSAR Array S 45.03 323 **P 09 31 38.5 -0.2**
NC204 IAmb IAmb 09 31 39.6
comp=Z,35nm,1.0s
WATA Walderalm 45.03 304 *i* P **P 09 31 39.1 0.0**
comp=Z,13nm,0.8s
WATA *epP* **pP 09 31 59.5 -1.4**
comp=Z,26nm,1.2s
BKNI Bangkinang 45.05 136 P **P 09 31 39.2 0.0**
comp=Z,5µmcomp=Z,313nm,0.8s
VAE Valguarnera 45.16 289 LR LR 09 52 23.9
comp=Z,49nm,18.3s,baz=261,slow=38
CTI Castel Tesino 45.19 302 IAmb IAmb 09 31 41.4
comp=Z,19nm,0.7s
PSTR Posyet 45.25 63 *i* P **P 09 31 42.8 +2.2**
SQTA Sankt Quirin 45.30 303 *i* P **P 09 31 40.8 -0.3**
comp=Z,8.9nm,0.6s
SQTA *epP* **pP 09 32 02.3 -0.6**
comp=Z,22nm,1.1s
PPI Padang Panjang 45.34 137 P **P 09 31 41.8 +0.2**
comp=Z,µmcomp=Z,174nm,0.8s
MOTA Moosalm 45.35 304 *i* P **P 09 31 41.2 -0.4**
comp=Z,19nm,0.9s
MOTA *epP* **pP 09 32 01.7 -1.6**
comp=Z,20nm,0.9s
SISI Saibi 45.37 140 P **P 09 31 42.5 +0.7**
comp=Z,2µmcomp=Z,254nm,1.0s
KONO Kongsberg 45.51 321 *eP* **P 09 31 42.1 -0.4**
KONO Kongsberg 45.51 321 P **P 09 31 42.6 +0.2**
RETA Reutte 45.56 304 *eP* **P 09 31 43.0 -0.1**
comp=Z,13nm,1.2s
RETA *epP* **pP 09 32 04.6 -0.3**
comp=Z,12nm,1.1s
FETA Feichten 45.66 303 *eP* **P 09 31 43.9 -0.1**
comp=Z,8.6nm,0.7s
FETA *i* pP **pP 09 32 05.3 -0.5**
comp=Z,19nm,1.0s
TIXI Tiksi 45.69 22 **P 09 31 43.2 -0.4**
TIXI IAmb IAmb 09 32 08.6
comp=Z,31nm,0.8s
TIXI Tiksi 45.69 22 P **P 09 31 43.2 -0.4**
TIXI Tiksi 45.69 22 P **P 09 31 43.4 -0.2**
TIXI pP **pP 09 32 07.4 +1.8**
PDSI Padang 45.75 138 P **P 09 31 44.7 -0.2**
comp=Z,213nm,1.1s
USRK Ussuriysk Ar. 45.77 61 P **P 09 31 45.5 +0.9**
comp=Z,10.0nm,0.8s,baz=278,slow=7.6,SNR=9.3
comp=Z,10.0nm,0.8s
BTDF Bukit Timah Da 45.79 132 P **P 09 31 46.7 +1.6**
OSSC Osservatorio P 45.97 298 IAmb IAmb 09 32 09.6
comp=Z,37nm,1.1s
HOMB Homborsund 46.06 319 *eP* **P 09 31 47.7 +1.0**
DAVA Damuels 46.18 304 *i* P **P 09 31 48.2 +0.1**
comp=Z,33nm,0.7s,SNR=9.1
DAVA *i* pP **pP 09 32 09.5 -0.4**
comp=Z,78nm,1.4s
SKAR Skarslia 46.20 322 *eP* **P 09 31 49.1 +1.3**
DAVOX Davos/Dischmat 46.27 303 P **P 09 31 48.1 -0.8**
comp=Z,15nm,0.7s,baz=88,slow=7.9,SNR=19
DAVOX LR LR 09 53 16.2
comp=Z,63nm,20.5s,baz=83,slow=39
comp=Z,15nm,0.7s
MOL Molde 46.64 325 *eP* **P 09 31 51.6 +0.4**
TUE Stuetta 46.69 303 IAmb IAmb 09 32 25.1
comp=Z,53nm,1.8s
SNART Snartemo 46.74 319 *eP* **P 09 31 53.2 +1.2**
AKN Aaknes 46.88 324 *eP* **P 09 31 54.1 +1.0**
ODD1 Odda 47.02 321 *eP* **P 09 31 56.1 +1.9**
BLS5 Blasjo 47.11 321 *eP* **P 09 31 55.5 +0.6**
KRJI Kerinci 47.28 137 P **P 09 31 57.3 +0.4**
SPITS Spitsbergen Ar 47.73 347 P **P 09 31 59.3 -0.2**
comp=Z,2.0nm,0.4s,baz=104,slow=12,SNR=16
SPITS LR LR 09 54 36.9
comp=Z,72nm,19.0s,baz=121,slow=39
comp=Z,2.0nm,0.4s
DSRI Dabo 47.74 133 P **P 09 32 01.7 +1.4**
comp=Z,3µmcomp=Z,152nm,0.8s
SENIN Lac Senin/Sane 48.10 303 IAmb IAmb 09 32 04.0
comp=Z,19nm,0.7s
JNU Nakatsue 48.11 76 P **P 09 32 05.0 +1.9**
MEM Membach 48.15 309 *dP* **P 09 32 03.8 +0.7**
MEM *dpP* **pP 09 32 25.5 +0.2**
MEM *dsP* **sP 09 32 36.0 +0.5**
WLF Walferdange 48.22 308 *dP* **P 09 32 01.4 -2.3**
WLF *dpP* **pP 09 32 26.5 +0.8**
WLF *dsP* **sP 09 32 37.1 +1.2**
MASI Maura Aman, Be 48.58 137 P **P 09 32 06.9 +0.1**
BMRD Maredsous 48.99 309 *dP* **P 09 32 10.7 +1.2**
BMRD *dpP* **pP 09 32 32.1 +0.4**
KMBO Kilima Mbogo 49.14 228 P **P 09 32 11.5 +0.1**
comp=Z,3.3nm,0.4s,baz=42,slow=11,SNR=6.9
comp=Z,3.3nm,0.4s
KMBO Kilima Mbogo 49.14 228 *i* P **P 09 32 13.8 +2.4**

KMBO pmax pmax
comp=Z,3.0nm,0.4s
KSI Kapahiang 49.20 137 P **P** 09 32 11.3 -0.3
KIBK Kibwezi 49.64 227 **P** 09 32 15.5 +0.5
KIBK IAmb IAmb 09 32 16.9
comp=Z,14nm,0.7s
PPBI Pangkal Pinang 50.01 132 P **P** 09 32 18.9 +1.2
SBUM Sibu 50.39 123 P **P** 09 32 23.2 +2.6
MDSI Maura Dua 50.76 136 P **P** 09 32 21.2 -2.1
TYV Tymovskoe 51.44 50 eP P 09 32 15.4 -13
TYV pmax pmax
comp=Z,69nm,1.6s
TYV pmax pmax
comp=Z,400nm,2.7s
STKI Sintang 51.65 125 P **P** 09 32 32.7 +2.7
comp=Z,39nm,0.6s
KASI Kota Agung 51.80 137 P **P** 09 32 29.7 -1.4
comp=Z,60nm,0.7s
INU Inuyama 52.03 70 P **P** 09 32 35.0 +2.3
MJB9 Matsu-Tunnel 52.50 69 P **P** 09 32 37.9 +1.7
MAJO Matsushiro 52.50 69 **P** 09 32 37.0 +0.9
MAJO Matsushiro 52.50 69 P **P** 09 32 37.1 +0.9
MAJO Matsushiro 52.50 69 P **P** 09 32 37.0 +0.9
MAJO pmax pmax
comp=Z,58nm,0.7s
MAJO Matsushiro 52.50 69 P **P** 09 32 36.9 +0.7
MAJO pP **pP** 09 33 00.8 +2.0
MAJO PcP **PcP** 09 33 44.1 -1.4
MJAR Matsushiro Arr 52.50 69 P **P** 09 32 37.3 +1.2
comp=Z,40nm,0.9s,baz=290,slow=9.8,SNR=56
comp=Z,40nm,0.9s
MJAR Matsushiro Arr 52.50 69 **P** 09 32 37.4 +1.2
MJAR IAmb IAmb 09 32 38.2
comp=Z,15nm,0.9s
MJAR Matsushiro Arr 52.50 69 P **P** 09 32 37.4 +1.2
MJAR pmax pmax
comp=Z,15nm,0.9s
EKA Eskdalemuir Ar 52.74 316 P **P** 09 32 37.5 -0.2
comp=Z,8.5nm,0.8s,baz=86,slow=7.1,SNR=9.3
comp=Z,8.5nm,0.8s
MBAR Mbarara 52.87 235 LR LR 09 55 46.5
comp=Z,37nm,19.1s,baz=70,slow=37
MBAR Mbarara 52.87 235 P **P** 09 32 38.5 -0.8
MBAR IAmb IAmb 09 32 39.8
comp=Z,11nm,0.6s
MBAR Mbarara 52.87 235 P **P** 09 32 38.5 -0.8
MBAR pmax pmax
comp=Z,11nm,0.6s
MBAR Mbarara 52.87 235 P **P** 09 32 39.3 0.0
MBAR sP **sP** 09 33 11.6 -0.6
MYLDM Lahad Datu 52.93 114 P **P** 09 32 43.2 +3.7
ASAJ Asahikawa 53.17 58 LR LR 09 55 59.2
comp=Z,34nm,18.0s,baz=154,slow=36
JMM Marumori 53.95 66 P **P** 09 32 47.7 +0.9
NOR Nord 54.02 350 *i* P **P** 09 32 47.0 +0.5
DAG Danmarks Havn 54.99 344 *i* P **P** 09 32 54.9 +1.1
DAG IAmb IAmb 09 32 57.6
comp=Z,6.8nm,0.7s
DBG Daneborg 55.87 341 *i* P **P** 09 33 00.8 +0.8
DBG IAmb IAmb 09 33 03.7
comp=Z,2.6nm,0.6s
BBKI Banjar Baru 56.50 125 P **P** 09 33 07.2 +1.9
MPSI Mapaga 57.25 118 P **P** 09 33 12.8 +2.2
comp=Z,715nmcomp=Z,65nm,1.6s
TOLI2 Tolitoli 57.36 116 P **P** 09 33 11.5 +0.1
TOLI2 IAmb IAmb 09 33 13.5
comp=Z,12nm,0.7s
TOLI2 Tolitoli 57.36 116 P **P** 09 33 12.8 +1.4
ESDC Sonseca Array 57.98 298 P **P** 09 33 14.1 -1.5
comp=Z,4.1nm,0.8s,baz=61,slow=6.0,SNR=17
comp=Z,4.1nm,0.8s
MRSI Marisa 58.63 116 P **P** 09 33 22.2 +1.9
comp=Z,2µmcomp=Z,157nm,1.0s
BORG Borgarnes 58.97 330 LR LR 09 58 13.4
comp=Z,82nm,18.5s,baz=74,slow=35
APSI Ampana 59.37 117 P **P** 09 33 27.4 +2.0
comp=Z,980nmcomp=Z,82nm,1.1s
JCJ Chichijima 59.51 77 LR LR 10 00 38.8
comp=Z,29nm,18.0s,baz=88,slow=37
TTSI Tana Toraja 59.58 120 P **P** 09 33 27.6 +0.8
comp=Z,52nm,1.1s
PETK Petropavlovsk- 59.69 44 P **P** 09 33 26.5 -0.5
comp=Z,2.9nm,0.8s,baz=304,slow=2.8,SNR=2.3
PETK LR LR 09 58 58.0
comp=Z,54nm,19.2s,baz=297,slow=36
comp=Z,2.9nm,0.8s
SPSI Sidrap Palu 60.20 121 P **P** 09 33 33.1 +2.1
comp=Z,3µmcomp=Z,37nm,0.9s
BNSI Bone 60.74 121 P **P** 09 33 35.3 +0.5
comp=Z,29nm,1.1s
KAPI Kappang 60.94 122 **P** 09 33 36.4 +0.3
KAPI IAmb IAmb 09 33 37.7
comp=Z,36nm,1.1s
KAPI Kappang 60.94 122 P **P** 09 33 37.3 +1.2
KAPI Kappang 60.94 122 P **P** 09 33 36.4 +0.3
KAPI pmax pmax
comp=Z,36nm,1.1s
NEEM North Greenlan 61.26 348 *i* P **P** 09 33 38.1 +0.3
NEEM IAmb IAmb 09 33 39.7
comp=Z,8.4nm,0.9s
SUMG Summit 61.35 341 **P** 09 33 39.8 +1.2
SUMG Summit 61.35 341 *i* P **P** 09 33 40.0 +1.5
SUMG IAmb IAmb 09 33 41.0
comp=Z,11nm,0.8s
BKSI Bulukumba 61.42 122 P **P** 09 33 40.2 +0.9
BSSI Bau Bau, Buton 62.26 122 P **P** 09 33 46.3 +1.3
comp=Z,1µmcomp=Z,104nm,1.5s
TNTI Ternate 62.45 111 **P** 09 33 46.9 +0.6
TNTI Ternate 62.45 111 P **P** 09 33 50.4 +4.1
TNTI Ternate 62.45 111 P **P** 09 33 50.6 +4.3
SANI Sanana 63.30 115 P **P** 09 33 53.2 +1.3
SANI Sanana 63.30 115 P **P** 09 33 53.4 +1.5
comp=Z,745nmcomp=Z,59nm,1.6s
NLAI Namlea 64.92 115 P **P** 09 34 06.7 +4.2
EDFI Ende, Flores 64.96 123 P **P** 09 34 00.5 -2.4
TORD Torodi Ar. Bea 66.25 269 P **P** 09 34 08.0 -3.1
comp=Z,6.4nm,0.4s,baz=48,slow=9.9,SNR=5.9
SWI Sorong 66.45 110 P **P** 09 34 13.7 +1.3
comp=Z,2µmcomp=Z,94nm,1.1s
BATI Baumata 67.35 123 P **P** 09 34 18.3 +0.2
comp=Z,1µmcomp=Z,165nm,0.7s
C16K Lisburne Hills 67.39 20 P **P** 09 34 17.2 -0.3
baz=313
SOEI Soe 67.44 122 P **P** 09 34 19.2 +0.5
SOEI Soe 67.44 122 P **P** 09 34 18.9 +0.2
comp=Z,2µmcomp=Z,224nm,1.1s
B18K Kokolik River 67.55 18 P **P** 09 34 18.0 -0.5
baz=316
C17K DeLong Mountai 67.83 19 P **P** 09 34 20.0 -0.3
baz=315
A22K Sinclair Lake 67.88 15 P **P** 09 34 20.6 0.0
baz=321
SFJD Kangerlussuaq 68.06 339 LR LR 10 04 06.4
comp=Z,88nm,18.1s,baz=19,slow=36
B20K Meade River 68.17 16 P **P** 09 34 22.0 -0.4
baz=319
RDOG Red Dog Mine 68.20 19 P **P** 09 34 22.4 -0.2
baz=315
C18K Utukok River 68.22 18 P **P** 09 34 22.3 -0.5
baz=316
C19K Lookout Ridge 68.28 18 IAmb IAmb 09 34 24.7
comp=Z,22nm,0.6s
C19K Lookout Ridge 68.28 18 P **P** 09 34 23.0 -0.2
baz=318,SNR=5.3
D17K Noatak River 68.41 20 P **P** 09 34 23.7 -0.2
baz=315
TNA Tin City 68.47 23 P **P** 09 34 23.9 -0.4
baz=312
FAKI Fak Fak 68.54 111 **P** 09 34 26.3 +0.8
FAKI IAmb IAmb 09 34 27.7
comp=Z,49nm,1.0s
FAKI Fak Fak 68.54 111 P **P** 09 34 27.1 +1.6
FAKI Fak Fak 68.54 111 P **P** 09 34 27.4 +1.9
comp=Z,559nmcomp=Z,50nm,0.9s
GUMO Guam 68.62 89 LR LR 10 06 32.5
comp=Z,20nm,18.9s,baz=319,slow=38
B22K Teshekpuk Lake 68.73 15 P **P** 09 34 25.6 -0.2
baz=322
B21K Ikpikpuk River 69.04 16 P **P** 09 34 27.8 0.0
baz=322
D19K Kuna River 69.10 18 IAmb IAmb 09 34 29.0
comp=Z,26nm,0.6s
D19K Kuna River 69.10 18 P **P** 09 34 27.9 -0.4
baz=319
E17K Hotham Inlet 69.19 20 P **P** 09 34 28.3 -0.4
baz=316
E18K Tukpahlearik C 69.27 19 P **P** 09 34 29.0 -0.2
baz=317
D20K Etivluk River 69.29 17 P **P** 09 34 28.5 -1.0
baz=320
F15K North Star Dit 69.36 22 P **P** 09 34 29.7 -0.2
baz=314
C21K Knifebiade Rid 69.37 16 P **P** 09 34 29.3 -0.6
baz=322
KSANE Kasane 69.52 228 IAmb IAmb 09 34 33.0
comp=Z,32nm,1.4s
C23K Itkillik River 69.71 14 IAmb IAmb 09 34 59.2
comp=Z,20nm,0.8s
C23K Itkillik River 69.71 14 P **P** 09 34 31.5 -0.4
baz=325
E20K Nigu River 69.74 17 P **P** 09 34 32.0 -0.2
baz=320
ANM Nome 69.94 23 P **P** 09 34 33.1 -0.3
baz=314
G15K Niukluk 70.05 22 P **P** 09 34 33.7 -0.4
baz=315
D22K Ayikyak River 70.05 16 P **P** 09 34 34.0 -0.1
baz=323
E19K Redstone River 70.11 18 P **P** 09 34 33.7 -0.7
baz=320
E21K Killik River 70.11 16 P **P** 09 34 33.7 -0.8
baz=322
F18K Selawik 70.13 19 P **P** 09 34 33.9 -0.6
baz=318
C24K Franklin Bluff 70.18 14 P **P** 09 34 34.3 -0.5
baz=326
D23K Nanushuk River 70.41 15 P **P** 09 34 35.7 -0.5
baz=325
F19K Shaleruckik Mo 70.45 19 P **P** 09 34 35.9 -0.6
baz=320
D24K Happy Valley 70.63 14 P **P** 09 34 37.1 -0.5
baz=326
G17K Kiwalik Mounta 70.67 20 P **P** 09 34 37.1 -0.8
baz=318
C26K Camden Bay 70.71 13 P **P** 09 34 37.0 -1.1
baz=330
F20K Avaraart Lake 70.80 18 P **P** 09 34 37.2 -1.4
baz=321
E22K Anaktuvuk Pass 70.84 16 P **P** 09 34 37.7 -1.3
baz=324
H16K Elim 70.84 22 P **P** 09 34 38.1 -0.8
baz=316
BROLN Tlhalogang 70.87 224 *i* P **P** 09 34 39.4 -0.4
TOLK Toolik Lake Re 70.90 15 P **P** 09 34 38.8 -0.5
baz=326,SNR=7.7
G18K Tagagawik 70.93 20 P **P** 09 34 39.2 -0.3
baz=319
D25K Kavik River 70.96 13 P **P** 09 34 39.9 +0.3
baz=328,SNR=7.5
G19K Purcell Mounta 71.15 19 P **P** 09 34 40.8 0.0
baz=320
GIRL Giralia 71.16 139 P **P** 09 34 42.3 +1.0
comp=Z,70nm,1.1s
C27K Jago River 71.17 12 IAmb IAmb 09 35 07.8
comp=Z,28nm,1.4s
C27K Jago River 71.17 12 P **P** 09 34 40.8 -0.1
baz=331
F21K Alatna River 71.20 17 P **P** 09 34 41.0 -0.1
baz=323
F22K Jon River 71.27 16 P **P** 09 34 41.4 -0.1
baz=324
A36M Sachs Harbour 71.28 5 **P** 09 34 41.6 +0.2
A36M IAmb IAmb 09 35 09.5
comp=Z,28nm,0.8s
A36M Sachs Harbour 71.28 5 P **P** 09 34 41.3 -0.1
baz=346
H17K Granite Mounta 71.30 21 P **P** 09 34 40.2 -1.5
baz=318
E23K Chandalar 71.38 15 P **P** 09 34 42.0 -0.2
baz=326
H18K Honhosa River 71.57 20 P **P** 09 34 43.2 -0.2
baz=320
E24K Your Creek 71.60 15 P **P** 09 34 43.4 -0.2
baz=327
G21K Allakaket 71.76 17 P **P** 09 34 44.3 -0.1
baz=323
H19K Roundabout Mou 71.80 19 P **P** 09 34 44.2 -0.4
baz=321
J14K Nanvaranak Lak 71.80 23 P **P** 09 34 44.4 -0.3
baz=316
G22K Bettles 71.90 16 P **P** 09 34 45.1 -0.1
baz=325
COLD Coldfoot 71.94 16 P **P** 09 34 45.4 -0.1
COLD IAmb IAmb 09 35 12.5
comp=Z,19nm,0.9s
COLD Coldfoot 71.94 16 P **P** 09 34 44.7 -0.9
baz=326
D27M Malcolm River 71.97 12 P **P** 09 34 45.2 -0.5
baz=333
K13K Kusilvak Mount 72.02 24 P **P** 09 34 45.8 -0.2
baz=315
E25K Arctic Village 72.14 14 P **P** 09 34 46.4 -0.3
baz=329
F24K Squaw Lake 72.19 15 P **P** 09 34 46.6 -0.4
baz=328
H20K Anotleneega Mo 72.23 19 P **P** 09 34 46.7 -0.6
baz=322
D28M Stokes Point 72.25 11 P **P** 09 34 47.3 0.0
baz=335,SNR=6.3
GCSA Galena City Sc 72.29 20 P **P** 09 34 46.9 -0.7
baz=321
J16K Anvik River 72.33 22 P **P** 09 34 47.2 -0.7
baz=318
G23K Bananza Creek 72.41 16 P **P** 09 34 47.7 -0.7
baz=326
F25K Christian River 72.58 14 P **P** 09 34 48.8 -0.6
baz=329
M11K Mekoryuk 72.58 26 P **P** 09 34 48.9 -0.5
baz=314
KHWEE KHWEE 72.60 225 P **P** 09 34 49.7 -0.5
KHWEE IAmb IAmb 09 34 50.9
comp=Z,40nm,0.9s
H21K Melozitna Rive 72.62 18 P **P** 09 34 49.0 -0.7
baz=324
J17K VABM Dome 72.70 21 P **P** 09 34 49.0 -1.0
baz=319
H22K Ishtalitna Cre 72.77 17 P **P** 09 34 49.4 -1.1
baz=325
K15K Wolf Creek Mou 72.78 23 P **P** 09 34 50.0 -0.6
baz=318
E28M Babbage River 72.78 11 P **P** 09 34 50.0 -0.5
baz=334
F26K Sheenjek River 72.78 14 P **P** 09 34 50.3 -0.3
baz=330
E27K Coleen River 72.81 12 P **P** 09 34 50.1 -0.6
baz=333,SNR=5.2
G24K Hadweenzic Riv 72.97 15 P **P** 09 34 51.3 -0.3
baz=328
MBWA Marble Bar 73.06 133 P **P** 09 34 52.5 -0.2
comp=Z,33nm,1.3s
MBWA Marble Bar 73.06 133 P **P** 09 34 53.7 +1.0
L14K Kuka Creek 73.11 24 P **P** 09 34 51.9 -0.5
baz=317
G25K Bearman Lake 73.20 15 P **P** 09 34 52.9 -0.1
baz=329
I21K Tanana 73.21 18 P **P** 09 34 53.0 -0.1
baz=325
J19K Poorman 73.22 20 P **P** 09 34 53.4 +0.2
baz=322
E29M Blow River 73.23 11 P **P** 09 34 53.1 0.0
baz=336,SNR=6.1
SPIA Saint Paul Isl 73.24 30 P **P** 09 34 53.5 +0.1
baz=312
L15K Ungalak Mounta 73.25 23 P **P** 09 34 52.9 -0.4
baz=318
H23K Yukon River 73.26 16 P **P** 09 34 53.2 -0.1
baz=326
QNGWA Qangwa 73.26 229 *i* P **P** 09 34 54.4 +0.3
J18K Innoko River 73.33 21 P **P** 09 34 53.9 0.0
baz=321
PSAD1 Pilbara Seismi 73.34 134 P **P** 09 34 54.9 +0.5
comp=Z,72nm,0.8s
PSAC1 Pilbara Seismi 73.39 134 P **P** 09 34 55.2 +0.5
comp=Z,56nm,1.0s
PSA00 Pilbara Seismi 73.45 134 **P** 09 34 55.6 +0.5
PSA00 IAmb IAmb 09 34 56.4
comp=Z,34nm,1.1s
PSA00 Pilbara Seismi 73.45 134 **P** 09 34 54.7 -0.3
PSA00 IAmb IAmb 09 34 56.4
comp=Z,16nm,0.8s
PSA00 Pilbara Seismi 73.45 134 P **P** 09 34 55.5 +0.5
K17K Iditarod 73.45 22 P **P** 09 34 54.5 0.0
baz=320
J20K Nowinta River 73.47 19 IAmb IAmb 09 35 22.8
comp=Z,16nm,0.8s
J20K Nowinta River 73.47 19 P **P** 09 34 54.1 -0.5
baz=323
LPHEP Lephephe 73.49 223 *i* P **P** 09 34 55.2 -0.2
G26K Porcupine Rive 73.50 14 P **P** 09 34 54.6 -0.2
baz=331
M13K Dall Lake 73.56 25 P **P** 09 34 54.8 -0.3
baz=317
F28M Old Crow 73.62 12 P **P** 09 34 55.3 -0.2
baz=334
H24K Noodor Dome 73.62 16 P **P** 09 34 55.6 0.0
baz=328
M14K Bethel 73.78 24 P **P** 09 34 56.3 -0.1
baz=318
L16K Owhat River 73.86 23 P **P** 09 34 57.0 +0.1
baz=319
I23K Minto, Yukon-K 73.86 17 P **P** 09 34 56.7 -0.2
baz=327
AUDHS Darwin High Sc 73.88 119 P **P** 09 34 58.5 +0.8
L17K Donlin 73.90 22 P **P** 09 34 57.6 +0.4
baz=320
DRS Darwin Rock St 73.93 119 P **P** 09 34 58.9 +1.0
INK Inuvik 73.94 9 **P** 09 34 57.1 -0.1
INK IAmb IAmb 09 35 24.1
comp=Z,21nm,1.1s
INK Inuvik 73.94 9 P **P** 09 34 57.1 -0.1
INK pmax pmax
comp=Z,21nm,1.1s
INK Inuvik 73.94 9 P **P** 09 34 57.3 +0.1
baz=339,SNR=8.9
C36M Paulatuk 73.95 6 P **P** 09 34 56.4 -0.9
C36M IAmb IAmb 09 35 22.1
comp=Z,27nm,1.1s
C36M Paulatuk 73.95 6 P **P** 09 34 56.8 -0.4
baz=347,SNR=16
G27K Doyon Strip 74.03 13 P **P** 09 34 58.0 +0.2
baz=333
K20K Telida 74.15 20 P **P** 09 34 59.0 +0.4
baz=323
CHUM Lake Minchumin 74.19 19 P **P** 09 34 58.4 -0.4
baz=324
M15K Kasigluk River 74.24 24 P **P** 09 34 58.7 -0.5
baz=319
F30M Barrier River 74.27 11 P **P** 09 34 59.0 -0.3
baz=337
L18K Granite Mounta 74.31 21 P **P** 09 34 59.3 -0.3
baz=321
POKR Poker Plat Res 74.33 16 IAmb IAmb 09 35 51.2
comp=Z,16nm,0.8s
POKR Poker Plat Res 74.33 16 P **P** 09 34 59.4 -0.2
baz=328
BPAW Bear Paw Mtn. 74.34 18 P **P** 09 34 58.6 -1.1
baz=326
MTN Manton Dam 74.38 119 P **P** 09 35 00.8 +0.3
comp=Z,14nm,0.9s
FITZ Fitzroy Crossi 74.39 127 P **P** 09 35 01.4 +0.9
comp=Z,5.2nm,1.0s
FITZ Fitzroy Crossi 74.39 127 **P** 09 35 00.9 +0.4
FITZ Fitzroy Crossi 74.39 127 P **P** 09 35 01.5 +0.9
NEA2 Nenana 74.40 17 P **P** 09 34 59.2 -0.8
baz=327
COLA College 74.44 16 P **P** 09 35 00.5 +0.3
COLA College 74.44 16 P **P** 09 34 59.5 -0.7
baz=328
N14K Kuskokwak Cree 74.48 25 P **P** 09 34 60.0 -0.6
baz=318
M16K Timber Creek 74.55 23 P **P** 09 34 59.8 -1.2
baz=320
G29M Pine Creek 74.56 12 P **P** 09 35 00.6 -0.4
baz=336
H27K Steamboat Moun 74.57 13 P **P** 09 35 00.9 -0.2
baz=333
BWN Browne 74.66 17 P **P** 09 34 60.0 -1.5
KNRA Kununurra 74.72 123 P **P** 09 35 03.6 +1.1
comp=Z,63nm,0.8s
KNRA Kununurra 74.72 123 **P** 09 35 03.2 +0.8
F31M Tsiigehtchic 74.72 10 IAmb IAmb 09 35 28.6
comp=Z,16nm,0.8s
F31M Tsiigehtchic 74.72 10 P **P** 09 35 01.2 -0.6
baz=339,SNR=6.3
M17K Holitna River 74.73 22 P **P** 09 35 01.0 -1.0
baz=321
ILAR Eielson Array 74.75 16 P **P** 09 35 01.4 -0.7
comp=Z,4.0nm,0.9s,baz=319,slow=4.9,SNR=29
comp=Z,4.0nm,0.9s
ILAR Eielson Array 74.75 16 P **P** 09 35 01.0 -1.1
G30M tAoh Zraii Nji 74.79 11 P **P** 09 35 01.2 -1.1
baz=337
KTH Kantishna Hill 74.81 18 IAmb IAmb 09 35 30.2
comp=Z,26nm,1.0s
N15K Kwethluk River 74.83 24 P **P** 09 35 02.5 -0.1
baz=319
L19K White Mountain 74.87 21 P **P** 09 35 02.3 -0.6
baz=323
L20K Farewell, AK 74.91 20 P **P** 09 35 02.2 -0.8
baz=324
LBTB Lobatse 74.95 223 IAmb IAmb 09 35 04.9
comp=Z,72nm,1.6s
LBTB Lobatse 74.95 223 P **P** 09 35 04.3 +0.5
PPLA Purkeypile 75.03 19 P **P** 09 35 02.7 -1.2
baz=325
N16K Nishlik Lake 75.03 23 P **P** 09 35 02.7 -1.1
baz=320
HDA Harding Lake 75.05 16 P **P** 09 35 03.2 -0.6
baz=329
TRF Thorofare Moun 75.06 18 P **P** 09 35 03.4 -0.6
baz=326
I26K Coal Creek Min 75.07 14 P **P** 09 35 03.0 -0.9
baz=332
I27K Kandik River 75.11 14 P **P** 09 35 04.3 +0.1
baz=333
O14K Tigyukauivet M 75.13 25 P **P** 09 35 04.0 -0.3
baz=318
G31M Satah River 75.13 10 P **P** 09 35 04.2 0.0
baz=339
H29M Whitestone 75.14 12 IAmb IAmb 09 35 31.4
comp=Z,24nm,0.8s
H29M Whitestone 75.14 12 P **P** 09 35 04.0 -0.3
baz=335
M18K Stony River 75.14 21 P **P** 09 35 04.2 -0.2
baz=322
MCK McKinley 75.16 17 IAmb IAmb 09 35 32.2
comp=Z,24nm,1.3s
MCK McKinley 75.16 17 P **P** 09 35 03.8 -0.6
baz=327
KGCAE Kacgae 75.17 226 IAmb IAmb 09 35 06.4
comp=Z,36nm,1.1s
KGCAE Kacgae 75.17 226 *i* P **P** 09 35 05.6 +0.5
KDU Kakadu 75.22 118 P **P** 09 35 05.8 +0.4
comp=Z,8.6nm,1.0s
J25K Salcha River, 75.22 16 P **P** 09 35 04.4 -0.4
baz=330
DBIC Dimbokro 75.22 267 P **P** 09 35 03.2 -2.4
comp=Z,2.8nm,0.5s,baz=71,slow=6.6,SNR=6.4
DBIC LR LR 10 14 33.0
comp=Z,48nm,18.1s,baz=127,slow=41
comp=Z,2.8nm,0.5s
TSUM Tsumeb 75.26 232 P **P** 09 35 05.5 -0.3
TSUM Tsumeb 75.26 232 P **P** 09 35 05.5 -0.3
TSUM pP **pP** 09 35 33.4 +3.6
EPYK Eagle Plains 75.27 11 P **P** 09 35 04.4 -0.7
baz=337
FRB Frobisher Bay 75.33 343 LR LR 10 09 33.0
comp=Z,28nm,19.0s,baz=55,slow=37
N17K Nushagak Hills 75.48 23 P **P** 09 35 06.2 -0.1
baz=321
I28M Miner Creek 75.56 13 IAmb IAmb 09 35 33.4
comp=Z,18nm,0.7s
I28M Miner Creek 75.56 13 P **P** 09 35 06.1 -0.7
baz=334
M20K Styx River 75.60 20 P **P** 09 35 06.8 -0.3
baz=324
O15K Ungalikthiuk R 75.67 25 P **P** 09 35 06.4 -1.0
baz=320
J26L Joseph Creek 75.70 15 P **P** 09 35 07.0 -0.6
baz=331
N18K Kilae Creek 75.76 22 P **P** 09 35 07.1 -0.9
baz=322
K24K Donnelly Dome 75.83 16 IAmb IAmb 09 35 34.9
comp=Z,32nm,0.8s
K24K Donnelly Dome 75.83 16 P **P** 09 35 07.1 -1.2
baz=330
O16K Kokwok River B 75.92 24 P **P** 09 35 07.9 -0.9
baz=321
CUT Chulitna 75.94 19 P **P** 09 35 08.1 -0.7
baz=326
SKT Skwentna 75.95 19 IAmb IAmb 09 35 36.3
comp=Z,36nm,1.0s

SKT	Skwentna	75.95	19	P		P	09 35 08.3	-0.7
	baz=326							
WAT1	Susitna Watana	76.01	18	P		P	09 35 09.0	-0.4
	baz=328							
MAKGR	Makgori	76.01	223	*i* P		P	09 35 10.0	+0.1
SCRK	Sand Creek	76.07	15	P		P	09 35 09.4	-0.4
	baz=331							
N19K	Bonanza Creek	76.07	21	P		P	09 35 09.1	-0.8
	baz=323							
DHY	Denali Highway	76.09	17	P		P	09 35 09.2	-0.8
	baz=329							
RIDG	Independent Ri	76.09	16	P		P	09 35 09.4	-0.4
	baz=330							
O17K	Koliganek Bris	76.10	23	P		P	09 35 08.9	-0.9
	baz=322							
H31M	Peel River	76.17	11	IAmb		IAmb	09 35 36.6	
	comp=Z,20nm,0.7s							
H31M	Peel River	76.17	11	P		P	09 35 09.8	-0.3
	baz=339							
I30M	Mount Dempster	76.39	12	IAmb		IAmb	09 35 38.6	
	comp=Z,24nm,0.8s							
I30M	Mount Dempster	76.39	12	P		P	09 35 10.5	-1.0
	baz=337							
WAT6	Susitna Watana	76.42	18	P		P	09 35 11.1	-0.8
	baz=328							
K27K	Chicken	76.42	15	P		P	09 35 11.6	0.0
	baz=333							
KOOLE	Kule	76.47	228	IAmb		IAmb	09 35 55.8	
	comp=Z,45nm,1.6s							
M22K	Willow	76.52	19	P		P	09 35 11.8	-0.4
	baz=327							
SUA	Susitna One	76.59	19	P		P	09 35 11.7	-1.0
	baz=326							
PAX	Paxson	76.62	16	P		P	09 35 12.1	-0.8
	baz=330							
O18K	Koktuh Hills	76.62	22	P		P	09 35 12.2	-0.7
	baz=323							
NIKH	Nikolski High	76.70	33	P		P	09 35 12.6	-0.7
	baz=314							
MEEK	Meekatharra	76.72	138	P		P	09 35 13.9	+0.1
	comp=Z,42nm,1.2s							
MEEK	Meekatharra	76.72	138	P		P	09 35 14.4	+0.6
P17K	Kvichak River	76.77	23	P		P	09 35 13.2	-0.4
	baz=322							
PMR	Palmer	76.91	19	P		P	09 35 12.7	-1.6
	baz=327							
DAWY	Dawson	76.92	13			P	09 35 14.0	-0.5
DAWY	Dawson	76.92	13	P		P	09 35 13.8	-0.7
	baz=335							
SML	Sawmill	76.94	18	P		P	09 35 13.8	-0.8
	baz=328							
P18K	Big Mountain,	76.99	23	P		P	09 35 14.7	-0.3
	baz=323							
J30M	Hart River	76.99	12	P		P	09 35 14.3	-0.7
	baz=337							
L26K	Log Cabin Wild	77.05	16	P		P	09 35 14.9	-0.3
	baz=332							
M23K	Glacier View	77.10	18	P		P	09 35 14.8	-0.7
	baz=328							
Q16K	King Salmon	77.10	24	P		P	09 35 15.0	-0.5
	baz=322							
SCM	Sheep Creek Mo	77.16	18	P		P	09 35 15.6	-0.3
	baz=329							
RC01	Rabbit Creek A	77.18	19	P		P	09 35 15.6	-0.3
	baz=327							
HARP	HAARP	77.19	17	P		P	09 35 16.1	+0.1
	baz=330							
M24K	Tolsona, Glenn	77.21	17	P		P	09 35 16.2	0.0
	baz=330							
KNK	Knik Glacier	77.24	19	P		P	09 35 16.2	0.0
	baz=328							
MORW	Morawa	77.32	141	P		P	09 35 17.1	0.0
	comp=Z,50nm,1.2s							
MORW	Morawa	77.32	141			P	09 35 17.4	+0.3
MORW				IAmb		IAmb	09 35 17.9	
	comp=Z,32nm,0.9s							
MORW	Morawa	77.32	141	P		P	09 35 17.6	+0.6
L27K	Beaver Creek,	77.34	15	P		P	09 35 17.2	+0.4
	baz=333							
P19K	Oil Pt	77.38	22	P		P	09 35 16.9	-0.3
	baz=324							
K29M	Barlow Dome	77.46	13	IAmb		IAmb	09 35 44.8	
	comp=Z,16nm,0.8s							
K29M	Barlow Dome	77.46	13	P		P	09 35 17.5	-0.1
	baz=336							
S12K	Black Hills	77.50	28	P		P	09 35 17.6	-0.2
	baz=318							
FALS	False Pass	77.60	29	P		P	09 35 18.2	-0.1
	baz=318							
Q18K	Katmai Hardscr	77.65	23	P		P	09 35 17.9	-0.9
	baz=323							
R16K	Pilot Point	77.67	25	P		P	09 35 17.8	-0.9
	baz=321							
M26K	Nabesna, AK	77.68	16	P		P	09 35 18.0	-0.7
	baz=332							
Q17K	Contact Creek	77.68	24	P		P	09 35 18.3	-0.5
	baz=323							
O22K	Cooper Landing	77.69	20	P		P	09 35 18.8	+0.1
	baz=327							
PWL	Port Wells	77.74	19	P		P	09 35 17.9	-1.2
	baz=328							
KLU	Klutina	77.80	17	P		P	09 35 19.3	-0.1
	baz=330							
HOM	Homer	77.84	21	P		P	09 35 19.3	-0.3
	baz=326							
M27K	Edge Creek, AK	77.96	15	IAmb		IAmb	09 35 48.5	
	comp=Z,24nm,1.1s							
M27K	Edge Creek, AK	77.96	15	P		P	09 35 20.3	-0.1
	baz=333							
S14K	Fog Glacier	77.98	26	P		P	09 35 20.6	+0.1
	baz=320							
BOSA	Boshof	78.00	221	P		P	09 35 19.9	-1.0
	comp=Z,9.9nm,0.6s,baz=21,slow=4.2,SNR=29							
BOSA				LR		LR	10 13 44.1	
	comp=Z,22nm,19.3s,baz=25,slow=39							
	comp=Z,9.9nm,0.6s							
BOSA	Boshof	78.00	221	P		P	09 35 20.3	-0.7
BOSA				IAmb		IAmb	09 35 46.8	
	comp=Z,19nm,0.8s							
BOSA	Boshof	78.00	221	P		P	09 35 20.3	-0.7
BOSA				pmax		pmax		
	comp=Z,19nm,0.9s							
BOSA	Boshof	78.00	221	P		P	09 35 20.5	-0.5
BOSA				pP		pP	09 35 46.3	+1.4
N25K	Chitina, Valde	78.02	17	P		P	09 35 20.5	-0.1
	baz=331							
L29M	L29M	78.03	13	P		P	09 35 20.3	-0.4
	baz=336							
R17L	Mt. Peulik Vol	78.03	24	P		P	09 35 20.9	+0.1
	baz=322							
BRSE	Bradley Lake S	78.03	20	P		P	09 35 20.2	-0.4
	baz=326							
GLI	Glacier Island	78.04	18	P		P	09 35 20.7	-0.1
	baz=329							
SEW	Seward	78.08	20	P		P	09 35 21.2	+0.3
	baz=327							
BVCY	Beaver Creek	78.12	15	P		P	09 35 21.2	0.0
	baz=334							
SDPT	Sand Point	78.36	27	P		P	09 35 22.6	+0.1
	baz=320							
Q20K	Shuyak Island	78.49	22	P		P	09 35 23.2	0.0
	baz=325							
M29M	Somme Creek	78.57	14	P		P	09 35 23.3	-0.4
	baz=336							
BMRM	Bremner River	78.57	17	P		P	09 35 23.8	+0.1
	baz=331							
MCARA	McCarthy VSAT	78.57	16	P		P	09 35 23.7	+0.1
	baz=332							
EYAK	Cordova Ski Ar	78.66	18	P		P	09 35 24.1	0.0
	baz=330							
P23K	Montague Islan	78.72	19	P		P	09 35 24.1	-0.3
	baz=329							
M30M	Minto, Yukon	78.76	13	P		P	09 35 24.5	-0.3
	baz=337							
YUK3	Moose Creek	78.78	15	P		P	09 35 24.8	-0.2
	baz=334							
BLDU	Ballidu	78.92	142	P		P	09 35 25.9	+0.1
CHNA	Chernabura Isl	79.08	27	P		P	09 35 26.1	-0.4
	baz=320							
KDAK	Kodiak Island	79.11	22	P		P	09 35 26.9	+0.3
	baz=325							
CRQE	Cirque	79.12	17	P		P	09 35 26.4	-0.3
	baz=332							
CTG	Chitna Glacier	79.32	16	P		P	09 35 27.6	-0.4
	baz=334							
OHAK	Old Harbor	79.35	23	P		P	09 35 28.1	+0.2
	baz=325							
YUK8	Steele Glacier	79.37	15	P		P	09 35 27.8	-0.5
	baz=335							
Q23K	Middleton Isla	79.48	19	P		P	09 35 28.7	+0.1
	baz=330							
M31M	Drury Creek, Y	79.53	12	P		P	09 35 29.2	+0.3
	baz=339							
YUK4	Talbot Arm	79.54	14	P		P	09 35 28.7	-0.5
	baz=336							
SII	Sitkinu Islan	79.60	24	P		P	09 35 29.9	+0.6
	baz=324							
CHIR	Chirikof Islan	79.72	25	P		P	09 35 30.0	0.0
	baz=323							
N30M	Aishikik Lake	79.74	14	P		P	09 35 30.3	+0.2
	baz=337							
O28M	Mount Upton	79.74	15	P		P	09 35 30.5	+0.1
	baz=334							
MESA	MESA	79.89	16	P		P	09 35 31.2	+0.2
	baz=333							
N31M	Braeburn, Yuko	79.95	13	P		P	09 35 31.6	+0.4
	baz=338							
YUK6	Outpost Mounta	79.96	14	P		P	09 35 32.0	+0.5
	baz=336							
WRGLY	Wrigley	80.00	7	P		P	09 35 32.5	+1.2
	baz=348							
KLBR	Kellerberrin	80.23	141	P		P	09 35 32.7	-0.2
HYT	Haines Junctio	80.24	14	P		P	09 35 33.6	+0.8
	baz=337							
PINM	Pinnacle	80.34	16	P		P	09 35 33.8	+0.5
	baz=334							
O30N	Mendenhall	80.56	13	P		P	09 35 35.3	+0.8
	baz=338							
N32M	Quiet Lake	80.74	12	P		P	09 35 35.7	+0.3
	baz=340							
WHY	Whitehorse	80.89	13	P		P	09 35 36.3	0.0
	baz=339							
P30M	Million Dollar	81.00	14	P		P	09 35 37.5	+0.6
	baz=337							
P29M	Windy Craggy	81.29	15	P		P	09 35 38.8	+0.4
	baz=336							
YKA	Yellowknife Ar	81.34	3	P		P	09 35 37.9	-0.6
	comp=Z,6.2nm,0.8s,baz=347,slow=5.6,SNR=8.9							
	comp=Z,6.2nm,0.8s							
YKA	Yellowknife Ar	81.34	3	*i* P		P	09 35 38.5	0.0
YKA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
WB0	Warramunga Arr	81.39	122			P	09 35 39.4	0.0
WRA	Warramunga Arr	81.48	122	P		P	09 35 39.6	-0.2
	comp=Z,7.9nm,0.6s,baz=325,slow=5.0,SNR=51							
	comp=Z,7.9nm,0.6s							
WRA	Warramunga Arr	81.48	122	P		P	09 35 39.6	-0.2
WRAB	Tennant Creek	81.48	122	P		P	09 35 39.7	-0.1
WRAB	Tennant Creek	81.48	122	P		P	09 35 40.0	+0.1
WRAB	Tennant Creek	81.48	122	P		P	09 35 39.7	-0.1
WRAB				pmax		pmax		
	comp=Z,12nm,0.8s							
WRAB	Tennant Creek	81.48	122	P		P	09 35 39.6	-0.3
P33M	Teslin, Yukon	81.67	12	P		P	09 35 40.9	+0.5
	baz=340							
PLBC	Pleasant Camp	81.73	14	P		P	09 35 41.1	+0.5
	baz=328							
SKAG	Skagway	81.92	14	P		P	09 35 41.6	0.0
	baz=338							
WTLY	Watson Lake, Y	82.39	10	P		P	09 35 44.6	+0.5
	baz=344							
R33M	Jennings River	82.75	11	P		P	09 35 46.4	+0.2
	baz=342							
R31K	City Hall, Gus	82.82	14	P		P	09 35 47.4	+1.1
	baz=338							
Q32M	Nakina River	82.94	12	P		P	09 35 46.9	-0.3
	baz=341							
R32K	Eaglecrest	83.18	14	P		P	09 35 48.5	+0.3
	baz=339							
LIRD	Liard River Hi	83.43	9	P		P	09 35 50.6	+1.2
	baz=346							
ASAR	Alice Springs	83.75	125	P		P	09 35 51.3	-0.3
	comp=Z,6.4nm,0.6s,baz=308,slow=5.2,SNR=105							
	comp=Z,6.4nm,0.6s							
ASAR	Alice Springs	83.75	125			P	09 35 51.0	-0.6
DLBC	Dease Lake	83.81	11	LR		LR	10 18 51.6	
	comp=Z,83nm,18.4s,baz=168,slow=40							
DLBC	Dease Lake	83.81	11	P		P	09 35 52.0	+0.5
	baz=343							
TOAD	Toad River Com	84.08	9	P		P	09 35 53.4	+0.6
	baz=346							
S34M	Telegraph Cree	84.13	12	P		P	09 35 53.7	+0.7
	baz=342							
SIT	Sitka	84.17	14	P		P	09 35 53.3	+0.1
	baz=339							
T35M	Bob Quinn	85.17	12	P		P	09 35 57.8	-0.6
	baz=343							
QIS	Mount Isa	85.54	119	P		P	09 36 00.5	-0.2
CRAG	Craig	86.09	14	P		P	09 36 01.9	-0.9
	baz=340							
FFC	Flin Flon	89.10	356	P		P	09 36 17.1	-0.2
FFC				pP		pP	09 36 43.0	+1.3
CTA	Charters Tower	90.01	115	P		P	09 36 22.3	+0.2
CTAO	Charters Tower	90.01	115	P		P	09 36 21.5	-0.6
CTAO	Charters Tower	90.01	115	P		P	09 36 21.5	-0.6
CTAO				pmax		pmax		
	comp=Z,46nm,1.7s							
ULM	Lac du Bonnet	93.04	352	LR		LR	10 20 43.7	
	comp=Z,45nm,19.0s,baz=12,slow=37							
STKA	Stephens Creek	94.29	127	P		P	09 36 41.6	0.0
	comp=Z,2.3nm,0.7s,baz=330,slow=6.4,SNR=5.3							
	comp=Z,2.3nm,0.7s							
SADO	Sadowa	95.01	340	LR		LR	10 19 37.7	
	comp=Z,28nm,19.1s,baz=66,slow=35							
NEW	Newport	95.37	6	LR		LR	10 25 14.7	
	comp=Z,93nm,18.1s,baz=324,slow=39							
AUMAG	Moama Anglican	98.99	128	P		Pdif	09 37 04.4	+1.6
NVL	N'lazarevskaya	115.01	198	*i* PKIKP		PKiKP	09 42 05.3	+3.7
NVL				*e*			09 43 05.5	
NVL				*e*PPP		PPP	09 45 31.6	
NVL				*e*SS		SS	09 58 56.6	+4.6
NVL				*e*SSS		SSS	10 03 13.4	
NVL				pmax		pmax		
	comp=Z,8.0nm,1.2s							
QSPA	South Pole Qui	126.17	180	PKP		PKPdf	09 42 22.0	-1.3
	comp=Z,2.4nm,0.8s,baz=255,slow=2.0,SNR=9.3							
QSPA	South Pole Qui	126.17	180			PKPdf	09 42 22.2	-1.1
PPT2	Papeete2	139.13	74	*e*LR		LR	10 27 51.9	
	comp=Z,62nm,28.8s							
AC02	Maricunga	145.47	275			PKPdf	09 42 59.7	-1.0
CFA	Coronel Fontan	146.58	266	PKPbc		PKPdf	09 43 01.2	-0.7
	comp=Z,1.8nm,0.5s,baz=57,slow=4.7,SNR=7.0							
BO02	Sierra Bellavi	149.53	262			PKPbc	09 43 10.0	-1.4
PLCA	Paso Flores	150.28	250	PKPbc		PKPbc	09 43 11.3	-1.7
	comp=Z,1.6nm,0.6s,baz=38,slow=4.9,SNR=5.3							

ASRS ***14*** *09:39:53.0±1.2,54°.27N×86°.18E,h0km,M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 14 09:39:55.0±2.6, 54°.24N×86°.09E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=19.5km s-min=11.5km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.80	249	I		I	09 44 30.0	
	baz=68,slow=335,SNR=7.2							
ZALV	Zalesovo Beam	0.80	249	Pg		Pg	09 40 09.1	-1.3
	1.3nm,0.3s,baz=68,slow=17,SNR=11							
ZALV				Lg		Lg	09 40 22.6	
	4.2nm,0.3s,baz=72,slow=30,SNR=14							
KURBB	Kurchatov Arra	5.87	235	Pn		Pn	09 41 23.0	-0.1
	0.3nm,0.3s,baz=51,slow=13,SNR=3.8							
	1.0nm,0.3s							
MKAR	Makanchi Array	7.84	200	Pn		Pn	09 41 52.0	+1.8
	0.2nm,0.3s,baz=23,slow=14,SNR=6.9							
	0.3nm,0.3s							

BER ***14*** *10:00:12.0±0.8, 67°.49N×27°.07E, h0km, ML1.7, Suspected explosion*

UPP ***14*** *10:00:14.3±1.0, 67°.69N×26°.66E, h0km, ML1.9, Presumed earthquake*

HEL 14 10:00:12.9±0.1, 67°.73N×26°.96E, h0km, ML1.9, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAJF	Raja-Jooseppi	0.90	34	PG		Pg	10 00 29.3	-0.9
VRF	Varrio	1.01	88	PG		Pg	10 00 30.9	-1.3
VRF				smax		smax	10 00 43.8	
	comp=Z,10nm,0.2s							
VRF				SG		Sg	10 00 43.8	-1.5
RNF	Rovaniemi	1.19	198	PG		Pg	10 00 34.2	-1.4
RNF				SB		Sg	10 00 50.2	-0.8
HEF	Hetta	1.41	300	*e*P		Pn	10 00 38.6	-1.2
HEF	Hetta	1.41	300	PN		Pn	10 00 38.9	-0.9
	baz=116							
HEF				smax		smax	10 00 55.4	
	comp=Z,10nm,0.2s							
HEF				SN		Sn	10 00 59.1	0.0
PAJU	Pajala	1.65	246	P		Pn	10 00 42.3	-0.8
PAJU				S		Sn	10 01 03.8	-1.2
PAJU	Pajala	1.65	246	PG		Pn	10 00 42.7	-0.4
PAJU				SN		Sn	10 01 03.6	-1.3
KTK1	Kautokeino	1.88	315	*e*P		Pn	10 00 46.9	+0.6
KTK1				*e*S		Sb	10 01 12.0	-0.2
KTK1				IAML			10 01 17.2	
	comp=Z,16nm,0.6s							
KTK1	Kautokeino	1.88	315	PG		Pn	10 00 47.1	+0.8
KTK1				SG		Sb	10 01 12.0	-0.1
ARA0	ARCESS Array S	1.89	344	*e*P		Pn	10 00 47.0	+0.7
ARA0				IAML			10 01 15.8	
	comp=Z,8.2nm,0.2s							
ARA0	ARCESS Array S	1.89	344	PG		Pn	10 00 46.7	+0.3
	baz=158							
LANU	Lannavaara	1.90	282	P		Pn	10 00 46.9	+0.3
LANU	Lannavaara	1.90	282	PG		Pn	10 00 47.2	+0.6
LANU				SG		Sb	10 01 12.8	+0.1
MASU	Masugnsbyn	1.92	264	P		Pn	10 00 47.1	+0.3
MASU				S		Sn	10 01 12.2	+0.5
TOF	Tornio	1.96	213	PG		Pn	10 00 47.1	-0.2
	baz=31							
TOF				smax		smax	10 01 11.2	
	comp=Z,5.8nm,0.2s							
MSF	Maaselka	2.01	155	PG		Pb	10 00 49.5	-0.7
KEV	Kevo	2.03	0	*e*P		Pn	10 00 49.2	+0.9
KEV				*e*S		Sb	10 01 16.0	-0.4
KEV	Kevo	2.03	0	PG		Pn	10 00 49.0	+0.7
	baz=184							
KEV				SG		Sb	10 01 16.0	-0.3
KU6	Riekki	2.07	145	PG		Pn	10 00 49.9	+1.1
KU6				smax		smax	10 01 14.3	
	comp=Z,7.2nm,0.2s							
ERTU	Ertsjaerv	2.21	240	P		Pn	10 00 51.1	+0.3
ERTU	Ertsjaerv	2.21	240	PG		Pn	10 00 50.9	+0.2
	baz=54							
KALU	Kalix	2.36	219	P		Pn	10 00 53.1	+0.3
KALU	Kalix	2.36	219	PG		Pn	10 00 53.8	+1.0
KALU				SB		Sn	10 01 23.3	+0.9
KU1	Kurvinen	2.41	153	PB		Pn	10 00 54.0	+0.5
KUA	Kurravaara	2.52	278	P		Pn	10 00 55.1	+0.1
VADS	Vadso	2.55	19	*e*P		Pn	10 00 55.7	+0.2
OUL	Oulu	2.69	190	SN		Sn	10 01 26.7	-4.0
RATU	Laukkuluspa	2.80	275	P		Pn	10 00 59.0	+0.1
LVZ	Lovozero	2.92	83	SG		Sb	10 01 42.4	+0.3
SJUU	Sjulsmark	3.09	226	P		Pn	10 01 02.5	-0.4

HEL 14 10:00:19.5±0.2, 64°.69N×30°.70E, h0km, ML2.0, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RMF	Romuvaara	0.58	215	PG		Pg	10 00 30.1	-0.4
	baz=35							
RMF				SG		Sg	10 00 35.0	-3.0
RMF				smax		smax	10 00 37.9	
	comp=Z,24nm,0.2s							
KU1	Kurvinen	1.00	332	PG		Pg	10 00 37.7	-1.0
KU6	Riekki	1.38	346	PG		Pg	10 00 44.3	-1.7
	baz=164							
KU6				smax		smax	10 01 01.2	
	comp=Z,13nm,0.2s							
KU6				SG		Sg	10 01 02.5	-1.4
MSF	Maaselka	1.41	331	PG		Pn	10 00 44.9	-1.5
	baz=153							
MSF				SG		Sg	10 01 03.2	-1.5
KU2	Taivalkoski	1.46	316	PG		Pn	10 00 45.8	-1.3
	baz=133							
JOF	Joensuu	1.80	171	*e*P		Pb	10 00 53.2	0.0
JOF	Joensuu	1.80	171	PG		Pn	10 00 51.6	-0.2
JOF				SG		Sb	10 01 16.0	-0.3
NIF	Nilsia	1.82	226	PG		Pn	10 00 52.4	+0.4
NIF				smax		smax	10 01 13.7	
	comp=Z,8.4nm,0.2s							
OUL	Oulu	2.08	283	PG		Pn	10 00 56.8	+1.1
	baz=98							
OUL				SG		Sn	10 01 22.9	+0.6
OBF4	Vikkela, Lumij	2.40	275	PN		Pn	10 01 01.5	+1.6
OBF4				smax		smax	10 01 41.8	
	comp=Z,4.3nm,0.2s							
OBF4	Vikkela, Lumij	2.40	275	PG		Pn	10 01 01.5	+1.6
	baz=93							
OBF4				smax		smax	10 01 30.5	
	comp=Z,9.0nm,0.2s							
OBF4				SG		Sb	10 01 33.4	-0.2
OUF	Merijarvi	2.60	266	PB		Pn	10 01 03.7	+1.0
	baz=79							
OUF				smax		smax	10 01 36.2	
	comp=Z,11nm,0.2s							
OUF				SB		Sb	10 01 38.3	-1.0
OBF0	Syolatti, Pyha	2.79	269	PN		Pb	10 01 08.1	-2.1
OBF0	Syolatti, Pyha	2.79	269	PB		Pb	10 01 08.1	-2.1
OBF0				smax		smax	10 01 41.6	
	comp=Z,9.3nm,0.2s							
SUF	Sumiainen	2.83	228	PB		Pn	10 01 08.3	+2.4
	baz=48							
SUF				smax		smax	10 01 42.9	
	comp=Z,2.6nm,0.2s							
TOF	Tornio	3.01	300	PB		Pb	10 01 11.8	-2.1
TOF				smax		smax	10 01 47.9	
	comp=Z,2.8nm,0.2s							
OBF8	Ulkokalla	3.16	267	PN		Pn	10 01 11.1	+0.8
OBF8				SN		Sb	10 01 55.2	-0.1
OBF8	Ulkokalla	3.16	267	PN		Pn	10 01 11.1	+0.8
OBF8				SG		Sb	10 01 55.2	-0.1
KAF	Kangasniemi	3.25	219	PG		Pb	10 01 16.1	-2.0
KEF	Keuruu	3.64	229	*e*P		Pn	10 01 19.0	+2.0
KEF	Keuruu	3.64	229	PN		Pn	10 01 18.9	+1.9
VAF	Ylistaro	3.92	249	*e*P		Pn	10 01 22.7	+1.9
VAF	Ylistaro	3.92	249	PN		Pn	10 01 22.8	+2.0
	baz=65							
ERTU	Ertsjaerv	3.99	302	PN		Pn	10 01 20.9	-1.0
VJF	Virojoki	4.41	201	SG		Sb	10 02 35.0	+3.6
UMAU	Umeaa	4.44	264	SG		Sb	10 02 36.5	+4.3
HEF	Hetta	4.67	326	SG		Sb	10 02 42.0	+3.1
RAF	Rauma	5.50	232	*e*P		Pn	10 01 43.7	+1.2

IDC ***14*** *10:06:38.1±0.8, 6°.69N×72°.98W, h159km±10km, mb2.5/1, mbtmp3.6/3, Error ellipse: s-maj=46.9km s-min=7.8km az=132.0*

CATAC ***14*** *10:06:38.2±0.8, 7°.1N±3°×7°.3W±°, h149km±6km, M3.7/7, mb3.4/1, mB3.6/1, MLv3.8/7, Mw(mB)2.5/1, Error ellipse: s-maj=11.3km s-min=5.4km az=90.3, confirmed*

RSNC ***14*** *10:06:39.5±0.0, 7°.1N±1°×7°.3W±°, h144km±1km, M3.5, mB4.5, mb3.9, ML3.2, Mw(mB)3.7*

ISC 14 10:06:37.5±1.0, 6°.88N±0°.03×73°.13W±0°.04, h157km±6km, n44, σ1°57/76, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BARC	Barichara	0.29	190	P		Pn	10 06 59.0	-0.2
BARC				S		Sn	10 07 14.1	-1.6
BRJC	Barrancabermej	0.61	279	P		Pn	10 07 00.9	+0.7

ROSC			S		Sn	10 07 48.0	-0.3	
HELC	**Santa Helena**	**2.48 254**	P		Pn	10 07 20.2	+1.1	
HELC			S		Sn	10 07 49.4	-1.6	
HELC	**Santa Helena**	**2.48 254**	P		Pn	10 07 19.4	+0.4	
HELC			S		Sn	10 07 51.2	+0.2	
CVER	**Cruz Verde, Cu**	**2.52 202**	P		Pn	10 07 20.4	+0.7	
CVER			S		Sn	10 07 50.0	-2.3	
UREC	**San Jos de Ur**	**2.53 290**	P		Pn	10 07 19.1	-0.3	
UREC			S		Sn	10 07 50.0	-1.7	
GUY2C	**Guyana, Caldas**	**2.76 234**	P		Pn	10 07 23.3	+0.6	
GUY2C			S		Sn	10 07 57.3	-0.2	
VILC	**Villavicencio,**	**2.80 191**	P		Pn	10 07 22.2	-0.7	
VILC			S		Sn	10 07 57.0	-1.0	
NIZA	**Niza - Manizal**	**2.94 232**	P		Pn	10 07 26.4	+1.6	
NIZA			S		Sn	10 08 02.4	+1.1	
CBOC	**Ciudad Bolivar**	**3.03 251**	P		Pn	10 07 27.0	+1.2	
CBOC			S		Sn	10 08 02.5	-0.6	
DBBC	**Dabeiba**	**3.06 273**	P		Pn	10 07 27.0	+1.0	
DBBC			S		Sn	10 08 03.7	+0.2	
SDV	**Santo Domingo**	**3.18 51**	P		Pn	10 07 28.7	+1.0	
	69nm,0.3s,baz=237,slow=12,SNR=53							
SDV			S		Sn	10 08 07.6	+1.1	
	76nm,0.5s,baz=265,slow=19,SNR=14							
SDV	**Santo Domingo**	**3.18 51**	P		Pn	10 07 28.5	+0.8	
SDV			S		Sn	10 08 05.6	-0.9	
PRAC	**Prado**	**3.59 209**	P		Pn	10 07 32.9	+0.1	
PRAC			S		Sn	10 08 14.7	-1.0	
PRAC	**Prado**	**3.59 209**	P		Pn	10 07 32.4	-0.4	
PRAC			S		Sn	10 08 15.8	0.0	
SJCC	**San Jacinto, C**	**3.62 326**	P		Pn	10 07 33.0	-0.1	
SJCC			S		Sn	10 08 12.8	-3.5	
SJCC	**San Jacinto, C**	**3.62 326**	P		Pn	10 07 32.9	-0.2	
SJCC			S		Sn	10 08 14.9	-1.4	
ORTC	**Ortega, Tolima**	**3.62 216**	P		Pn	10 07 33.2	0.0	
ORTC			S		Sn	10 08 17.2	+0.8	
LCBC	**Los crdobas,**	**3.76 302**	P		Pn	10 07 35.0	+0.1	
LCBC			S		Sn	10 08 20.9	+1.5	
URMC	**La Uribe, Meta**	**3.81 199**	P		Pn	10 07 36.0	+0.3	
URMC			S		Sn	10 08 20.9	0.0	
CRJC	**Cerrejon, Guaj**	**4.12 3**	P		Pn	10 07 39.6	-0.1	
CRJC			S		Sn	10 08 25.4	-2.7	
YOTC	**Yotoco, Valle**	**4.30 228**	P		Pn	10 07 41.8	-0.2	
CAPC	**Capurgana**	**4.53 293**	P		Pn	10 07 43.5	-1.4	
CAPC			S		Sn	10 08 30.5	-6.9	
MACC	**Macarena, Meta**	**4.75 189**	P		Pn	10 07 46.0	-1.9	
MACC			S		Sn	10 08 37.8	-5.0	
URIC	**Uribia, Colomb**	**4.92 13**	P		Pn	10 07 49.6	-0.5	
JAMC	**Jamundi, Valle**	**5.07 224**	P		Pn	10 07 52.1	-0.1	
	686nm11nm,0.5s							
GARC	**Garzon, Huila**	**5.22 207**	P		Pn	10 07 53.2	-1.1	
POPC	**Popayan, Colom**	**5.57 219**	P		Pn	10 07 59.5	+0.6	
	9.9nm,0.7s							
FLOC	**Florencia**	**5.83 206**	P		Pn	10 08 01.8	-0.3	
	313nm12nm,0.9s							
CRUC	**La Cruz**	**6.50 216**	P		Pn	10 08 14.6	+3.2	
GCUF	**Volcan Galeras**	**7.01 217**	P		Pn	10 08 19.9	+1.6	
BCIP	**Isla Barro Col**	**7.02 289**	P		Pn	10 08 16.6	-1.3	
TXAR	**Lajitas Array**	**36.41 312**	P		P	10 13 29.6	+2.3	
	0.1nm,0.6s,baz=124,slow=7.1,SNR=1.7 0.1nm,0.6s							
ASAR	**Alice Springs**	**149.13 234**	PKPbc		**PKPbc**	10 26 08.1	-0.3	
	0.4nm,0.6s,baz=116,slow=3.2,SNR=6.7							
WRA	**Warramunga Arr**	**150.35 241**	PKPbc		**PKPbc**	10 26 11.2	-0.1	
	1.1nm,1.2s,baz=108,slow=2.4,SNR=6.5							

*IDC **14** 10:09:07.9±0.7, 8°.25S×114°.89E, h0km, mb4.0/10, mbtmp4.0/12, ML4.0/2, Error ellipse: s-maj=30.9km s-min=15.0km az=61.0*
*NEIC **14** 10:09:10.4±1.9, 8°.24S±0°.09×114°.91E±0°.05, h10km±1km, mb4.2/16, Error ellipse: s-maj=16.3km s-min=8.0km az=163.0*
*DJA **14** 10:09:10.6±0.2, 8°.5S×3°×11°.5E±°, h10km, M4.4/18, mB4.8/3, mb4.5/6, MLv4.4/18, Mw(mB)4.0/3*

ISC 14 10:09:10.7±0.5, 8°.24S±0°.05×114°.89E±0°.04, h18km, n60, σ0s89/60, mb4.1/16, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.35**	**65**	P	**Pg**	10 09 17.9	-0.3
SRBI				S	**Sg**	10 09 21.9	-1.4
DNP	**Denpasar**	**0.54**	**144**	P	**Pn**	10 09 23.1	-0.5
JAGI	**Jajag, Banyuwa**	**0.76**	**252**		**Pb**	10 09 25.3	-0.2
JAGI	**Jajag, Banyuwa**	**0.76**	**252**	P	**Pb**	10 09 25.0	-0.5
ABJI	**Asem Bagus**	**0.78**	**304**	P	**Pb**	10 09 24.9	-0.9
ABJI				S	**Sb**	10 09 35.3	-0.8
BLJI	**Banyuglugur**	**1.37**	**291**	P	**Pn**	10 09 35.0	0.0
BLJI				S	**Sn**	10 09 53.3	+0.6
KMMI	**Kalianget**	**1.49**	**322**	P	**Pn**	10 09 37.0	+0.4
TWSI	**Taliwang, Sumb**	**2.04**	**104**	P	**Pn**	10 09 44.8	+0.7
PLAI	**Plampang**	**2.92**	**102**	P	**Pn**	10 09 57.8	+1.5
PCJI	**Pacitan**	**3.67**	**270**	P	**Pn**	10 10 07.6	+0.9
UGM	**Wanagama**	**4.33**	**274**	Pn	**Pn**	10 10 18.7	+2.9
UGM	**Wanagama**	**4.33**	**274**	P	**Pn**	10 10 16.7	+0.9
WBSI	**Waikabubak, Su**	**4.66**	**108**	P	**Pn**	10 10 21.5	+1.1
KAPI	**Kappang**	**5.79**	**57**	Pn	**Pn**	10 10 34.9	-0.9
	5.8nm,0.3s,baz=214,slow=16,SNR=1.6 14nm,0.4s						
KAPI	**Kappang**	**5.79**	**57**		**Pn**	10 10 34.9	-0.9
BSSI	**Bau Bau, Buton**	**5.94**	**70**	P	**Pn**	10 10 38.1	+0.3
	0.6nm781nm40nm,0.9s						
BKSI	**Bulukumba**	**5.95**	**61**	P	**Pn**	10 10 38.6	+0.6
	0.2nm324nm27nm,0.6s						
EDFI	**Ende, Flores**	**6.75**	**95**	P	**Pn**	10 10 50.9	+1.8
	0.2nm26nm,0.6s						
TTSI	**Tana Toraja**	**7.12**	**44**	P	**Pn**	10 10 54.8	+0.7
MBWA	**Marble Bar**	**13.67**	**161**	Pn	**Pn**	10 12 21.1	-2.8
FITZ	**Fitzroy Crossi**	**14.34**	**134**	Pn	**Pn**	10 12 31.7	-1.3
	0.5nm,0.3s,baz=307,slow=10,SNR=11 1.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**14.34**	**134**		**Pn**	10 12 31.7	-1.3
GIRL	**Giralia**	**14.34**	**182**	Pn	**Pn**	10 12 32.1	-0.9
MTN	**Manton Dam**	**16.61**	**107**	Pn	**Pn**	10 13 02.6	-0.3
FAKI	**Fak Fak**	**18.06**	**74**		**Pn**	10 13 21.5	+0.5
FAKI				IAmb	IAmb	10 13 34.6	
	comp=Z,17nm,1.0s						
WB0	**Warramunga Arr**	**22.10**	**123**		**P**	10 14 05.0	-0.3
WB0				IAmb	IAmb	10 14 10.8	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**22.14**	**124**	P	**P**	10 14 05.0	-0.6
	comp=Z,3.0nm,0.8s,baz=297,slow=12,SNR=23 comp=Z,3.0nm,0.8s						
WRA	**Warramunga Arr**	**22.14**	**124**	P	**P**	10 14 04.4	-1.3
WRAB	**Tennant Creek**	**22.14**	**124**	P	**P**	10 14 06.3	+0.6
WRAB				IAmb	IAmb	10 14 11.4	
	comp=Z,7.0nm,0.8s						
WB2	**Warramunga Arr**	**22.15**	**124**	P	**P**	10 14 06.0	+0.2
WB2				IAmb	IAmb	10 14 11.4	
	comp=Z,8.1nm,0.8s						
WR8	**Warramunga Arr**	**22.27**	**124**		**P**	10 14 07.3	+0.1
WR8				IAmb	IAmb	10 14 09.6	
	comp=Z,8.5nm,1.1s						
WR0	**Warramunga Arr**	**22.31**	**124**	P	**P**	10 14 08.0	+0.5
WR0				IAmb	IAmb	10 14 15.6	
	comp=Z,6.8nm,0.9s						
AS31	**Alice Springs**	**23.82**	**132**		**P**	10 14 23.3	+0.3
ASAR	**Alice Springs**	**23.82**	**132**	P	**P**	10 14 23.0	0.0
	comp=Z,4.0nm,0.8s,baz=307,slow=8.8,SNR=50 comp=Z,4.0nm,0.8s						
ASAR	**Alice Springs**	**23.82**	**132**	P	**P**	10 14 23.0	0.0
FORT	**Forrest**	**25.59**	**153**	P	**P**	10 14 39.5	+0.5
COEN	**Coen**	**28.32**	**104**	P	**P**	10 15 04.2	+0.5
CMAR	**Chiang Mai Arr**	**30.84**	**329**	P	**P**	10 15 27.2	+1.2
	comp=Z,0.6nm,0.3s,baz=160,slow=8.3,SNR=5.8 comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.84**	**329**	P	**P**	10 15 27.2	+1.2
BBOO	**Buckleboo**	**31.35**	**144**	P	**P**	10 15 31.2	+0.8
STKA	**Stephens Creek**	**34.20**	**137**	P	**P**	10 15 55.8	+0.3
	comp=Z,3.2nm,0.8s,baz=317,slow=8.9,SNR=5.3 comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**56.33**	**353**	P	**P**	10 18 50.7	0.0
	comp=Z,0.9nm,0.7s,baz=166,slow=9.1,SNR=5.8 comp=Z,0.9nm,0.7s						
SONM	**Songino Array**	**56.33**	**353**	P	**P**	10 18 50.7	0.0
SONM	**Songino Array**	**56.33**	**353**	IAmb	IAmb	10 18 58.1	
	comp=Z,3.9nm,1.4s						
MKAR	**Makanchi Array**	**61.99**	**335**	P	**P**	10 19 29.8	-0.1
	comp=Z,1.2nm,0.7s,baz=149,slow=8.2,SNR=6.0 comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**61.99**	**335**	P	**P**	10 19 29.8	-0.1
KURBB	**Kurchatov Arra**	**66.54**	**336**	P	**P**	10 19 59.5	0.0
	comp=Z,0.3nm,0.6s,baz=152,slow=5.6,SNR=5.2 comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**66.58**	**336**	P	**P**	10 19 59.5	-0.2
KURK	**Kurchatov**	**66.58**	**336**	IAmb	IAmb	10 20 02.6	
	comp=Z,1.1nm,0.8s						
ZALV	**Zalesovo Beam**	**66.95**	**341**	P	**P**	10 20 02.0	0.0
	comp=Z,1.0nm,0.6s,baz=123,slow=5.5,SNR=4.5 comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**66.95**	**341**	P	**P**	10 20 02.0	0.0
MAW	**Mawson**	**68.60**	**199**	P	**P**	10 20 11.8	-0.5
	comp=Z,2.0nm,0.8s,baz=59,slow=5.9,SNR=8.9 comp=Z,2.0nm,0.8s						
MAW	**Mawson**	**68.60**	**199**	P	**P**	10 20 11.8	-0.5
AB31	**Akbulak array**	**74.63**	**326**	P	**P**	10 20 49.0	+0.1
ABKAR	**Akbulak array**	**74.63**	**326**	P	**P**	10 20 48.5	-0.4
QSPA	**South Pole Qui**	**81.76**	**180**	P	**P**	10 21 29.0	+0.6
	comp=Z,1.4nm,0.8s,baz=286,slow=1.9,SNR=6.6 comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**81.76**	**180**	P	**P**	10 21 29.0	+0.6
QSPA	**South Pole Qui**	**81.76**	**180**	IAmb	IAmb	10 21 36.8	
	comp=Z,6.1nm,1.4s						
CPUP	**Villa Florida**	**144.82**	**192**	PKP	**PKPab**	10 28 46.7	+0.4
	comp=Z,0.7nm,0.7s,baz=298,slow=0.4,SNR=4.0						
CPUP	**Villa Florida**	**144.82**	**192**		**PKPab**	10 28 46.7	+0.4

*IDC **14** 10:10:08.8±0.5, 8°.30S×114°.80E, h0km, mb4.3/19, mbtmp4.3/23, ML4.3/4, MS3.1/2, Error ellipse: s-maj=20.8km s-min=11.6km az=67.0*
*DJA **14** 10:10:12.3±0.3, 8°.5S×4°×11°.5E±°, h10km, M4.6/12, mB5.1/2, mb4.8/4, MLv4.5/12, Mw(mB)4.4/2*
*NEIC **14** 10:10:12.4±1.8, 8°.19S±0°.07×114°.89E±0°.05, h10km±1km, mb4.6/29, Error ellipse: s-maj=12.5km s-min=7.8km az=342.0*

ISC 14 10:10:11.7±0.3, 8°.32S±0°.04×114°.88E±0°.04, h10km, n99, σ1s94/99, mb4.6/39, MS4.3/3, 1C, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.40**	**54**	P	**Pb**	10 10 19.5	-1.4
SRBI	**Singaraja**	**0.40**	**54**	P	**Pb**	10 10 19.6	-1.4
DNP	**Denpasar**	**0.48**	**138**	P	**Pn**	10 10 24.4	-0.2
JAGI	**Jajag, Banyuwa**	**0.74**	**259**		**Pg**	10 10 27.1	+1.1
JAGI	**Jajag, Banyuwa**	**0.74**	**259**	P	**Pg**	10 10 26.9	+0.9
ABJI	**Asem Bagus**	**0.83**	**309**	P	**Pg**	10 10 26.7	-1.1
BLJI	**Banyuglugur**	**1.40**	**294**	P	**Pn**	10 10 37.1	-0.2
KMMI	**Kalianget**	**1.56**	**324**	P	**Pn**	10 10 38.9	-0.6
TWSI	**Taliwang, Sumb**	**2.02**	**102**	P	**Pn**	10 10 46.3	+0.4
GRJI	**Gresik**	**2.76**	**300**	P	**Pn**	10 10 55.3	-0.8
PLAI	**Plampang**	**2.90**	**100**	P	**Pn**	10 10 58.9	+0.8
NGJI	**Ngawi**	**3.52**	**285**	P	**Pb**	10 11 12.6	-1.6
UGM	**Wanagama**	**4.34**	**275**		**Pn**	10 11 18.4	+0.6
UGM	**Wanagama**	**4.34**	**275**	P	**Pb**	10 11 25.3	-2.8
UGM	**Wanagama**	**4.34**	**275**	P	**Pn**	10 11 18.8	+1.0
WBSI	**Waikabubak, Su**	**4.64**	**107**	P	**Pn**	10 11 25.9	+3.9
KAPI	**Kappang**	**5.85**	**56**	Pn	**Pn**	10 11 36.1	-2.4
	4.9nm,0.3s,baz=154,slow=15,SNR=1.5						
KAPI				Sn	**Sn**	10 12 40.6	-5.1
	3.6nm,0.3s,baz=206,slow=21,SNR=3.6						
KAPI				LR	LR	10 14 19.2	
	comp=Z,148nm,19.2s,baz=228,slow=42 15nm,0.3s						
BSSI	**Bau Bau, Buton**	**5.97**	**69**	P	**Pn**	10 11 41.3	+1.1
KPJI	**Karang Pucung**	**5.98**	**279**	P	**Pn**	10 11 42.3	+1.9
	0.2nm48nm,0.6s						
BKSI	**Bulukumba**	**6.00**	**61**	P	**Pn**	10 11 39.6	-1.0
	0.2nm580nm36nm,0.5s						
BNSI	**Bone**	**6.49**	**53**	P	**Pn**	10 11 48.7	+1.3
	0.2nm801nm43nm,0.5s						
BNSI	**Bone**	**6.49**	**53**	P	**Pn**	10 11 46.5	-0.9
	0.2nm799nm43nm,0.5s						
EDFI	**Ende, Flores**	**6.75**	**94**	P	**Pn**	10 11 52.1	+1.1
	0.2nm31nm,0.5s						
TTSI	**Tana Toraja**	**7.18**	**43**	P	**Pn**	10 11 57.1	+0.2
BATI	**Baumata**	**8.87**	**103**	Pn	**Pn**	10 12 19.4	-0.6
	3.6nm,0.3s,baz=285,slow=19,SNR=1.5 18nm,0.3s						
MBWA	**Marble Bar**	**13.59**	**160**	Pn	**Pn**	10 13 22.5	-2.2
PSA00	**Pilbara Seismi**	**14.02**	**161**	Pn	**Pn**	10 13 28.3	-2.2
GIRL	**Giralia**	**14.25**	**182**	Pn	**Pn**	10 13 32.9	-0.9
FITZ	**Fitzroy Crossi**	**14.28**	**134**	Pn	**Pn**	10 13 33.0	-1.1
	1.1nm,0.3s,baz=326,slow=12,SNR=7.2						
FITZ				Sn	Sn	10 16 03.1	-10
	0.2nm,0.3s,baz=63,slow=4.5,SNR=2.2						
FITZ				LR	LR	10 19 20.2	
	comp=Z,84nm,18.4s,baz=300,slow=38 4.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**14.28**	**134**	Pn	**Pn**	10 13 34.5	+0.4
KNRA	**Kununurra**	**15.41**	**120**		**Pn**	10 13 49.2	-0.2
KNRA				IAmb	IAmb	10 13 55.3	
	comp=Z,21nm,0.7s						
MTN	**Manton Dam**	**16.59**	**107**	Pn	**Pn**	10 14 04.1	-0.5
FAKI	**Fak Fak**	**18.09**	**74**		**Pn**	10 14 22.5	-0.9
RPSI	**Rantau Prapat**	**19.32**	**304**	P	**P**	10 14 35.3	-1.9
PSI	**Prapat**	**19.38**	**304**	P	**P**	10 14 35.3	-2.7
	comp=Z,1.5nm,0.3s,baz=118,slow=15,SNR=4.3 comp=Z,3.7nm,0.4s						
MORW	**Morawa**	**20.66**	**177**		Pn	10 14 55.6	+1.5
WB0	**Warramunga Arr**	**22.05**	**123**		**P**	10 15 06.8	-0.1
WB0				IAmb	IAmb	10 15 15.6	
	comp=Z,42nm,1.5s						
WRA	**Warramunga Arr**	**22.09**	**124**	P	**P**	10 15 05.6	-1.7
	comp=Z,7.0nm,0.8s,baz=299,slow=12,SNR=15 comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**22.09**	**124**	P	**P**	10 15 08.1	+0.8
WRAB	**Tennant Creek**	**22.09**	**124**	P	**P**	10 15 08.1	+0.7
WRAB				IAmb	IAmb	10 15 12.9	
	comp=Z,18nm,0.9s						
WR8	**Warramunga Arr**	**22.23**	**123**		**P**	10 15 08.9	+0.1
WR8				IAmb	IAmb	10 15 16.3	
	comp=Z,30nm,1.3s						
AS31	**Alice Springs**	**23.76**	**132**	P	**P**	10 15 25.6	+0.9
ASAR	**Alice Springs**	**23.76**	**132**	P	**P**	10 15 24.1	-0.5
	comp=Z,13nm,1.0s,baz=312,slow=8.9,SNR=20 comp=Z,13nm,1.0s						
ASAR	**Alice Springs**	**23.76**	**132**		**P**	10 15 25.4	+0.8
NWAO	**Narrogin (SRO)**	**24.58**	**175**	P	**P**	10 15 33.7	+1.7
NWAO				IAmb	IAmb	10 15 35.1	
	comp=Z,13nm,0.8s						
FORT	**Forrest**	**25.51**	**153**		**P**	10 15 41.6	+1.2
FORT				IAmb	IAmb	10 15 42.1	
	comp=Z,11nm,0.7s						
COEN	**Coen**	**28.30**	**104**		**P**	10 16 05.1	-0.8
COEN				IAmb	IAmb	10 16 12.4	
	comp=Z,16nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.91**	**330**	P	**P**	10 16 27.1	-1.8
	comp=Z,0.6nm,0.3s,baz=148,slow=7.2,SNR=4.3 comp=Z,0.6nm,0.3s						
BBOO	**Buckleboo**	**31.28**	**144**	P	**P**	10 16 33.3	+1.3
CTAO	**Charters Tower**	**32.51**	**114**	P	**P**	10 16 42.8	-0.3
CTAO				IAmb	IAmb	10 16 45.3	
	comp=Z,17nm,1.2s						
STKA	**Stephens Creek**	**34.14**	**137**	P	**P**	10 16 57.5	+0.3
	comp=Z,5.6nm,0.7s,baz=320,slow=8.8,SNR=7.7 comp=Z,5.6nm,0.7s						
STKA	**Stephens Creek**	**34.14**	**137**		**P**	10 16 57.8	+0.7
EIDS	**Eidsvold**	**38.40**	**121**	P	**P**	10 17 34.1	+0.5
EIDS				IAmb	IAmb	10 18 16.4	
	comp=Z,16nm,1.4s						
NJ2	**Nanjing**	**40.33**	**5**	eP	**P**	10 17 51.6	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SHL	**Shillong**	**40.44**	**327**		**P**	10 17 50.9	+0.1
EVN	**Everest**	**45.14**	**324**		**P**	10 18 29.8	+0.4
LZDM	**Lanzhou Array**	**45.29**	**347**	P	**P**	10 18 28.3	-1.8
	comp=Z,0.7nm,0.3s,baz=174,slow=14,SNR=4.9 comp=Z,0.7nm,0.3s						
LZH	**Lanzhou**	**45.38**	**347**	eP	P	10 18 35.3	+4.6
LZH				sP	sP	10 18 45.6	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
HNS	**HongShan**	**45.48**	**360**	⇑P	**P**	10 18 34.9	+3.7
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSRS	**Korea Array**	**47.15**	**14**	P	**P**	10 18 43.5	-0.7
	comp=Z,1.0nm,0.8s,baz=191,slow=6.6,SNR=2.3 comp=Z,1.0nm,0.8s						
BJI	**Beijing**	**48.13**	**1**	P	**P**	10 18 54.5	+2.6
BJI				pP	**sP**	10 18 59.1	+2.5
BJI				sP	**pP**	10 19 01.8	+6.5
BJI				PP	**PP**	10 20 46.5	+2.1
BJI				S	**S**	10 25 54.8	+4.0
BJI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BJI				LR	LR		
	comp=N,190nm,12.1s						
BJI				LR	LR		
	comp=E,140nm,7.0s						
BJI				LR	LR		
	comp=Z,130nm,11.6s						
JGF	**Kuroka**	**48.56**	**25**	P	**P**	10 18 55.9	+0.5
HHC	**Hu-ho-hao-te**	**49.02**	**357**	eP	**P**	10 19 01.4	+2.5
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.7s						
GTA	**Gaotai**	**49.51**	**345**	eP	**P**	10 19 07.1	+4.4
GTA				pP	sP	10 19 10.4	+3.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				LR	LR		
	comp=N,330nm,12.0s						
GTA				LR	LR		
	comp=E,440nm,10.9s						
GTA				LR	LR		
	comp=Z,310nm,15.6s						
MJAR	**Matsushiro Arr**	**49.72**	**25**	P	**P**	10 19 03.2	-1.0
	comp=Z,4.1nm,0.8s,baz=182,slow=6.5,SNR=4.7 comp=Z,4.1nm,0.8s						
MJAR	**Matsushiro Arr**	**49.72**	**25**	IAmb	IAmb	10 19 07.7	
	comp=Z,9.8nm,1.2s						
USRK	**Ussuriysk Ar.**	**54.52**	**15**	P	**P**	10 19 39.5	-0.4
	comp=Z,4.2nm,0.9s,baz=215,slow=7.5,SNR=6.6 comp=Z,4.2nm,0.9s						
SONM	**Songino Array**	**56.41**	**353**	P	**P**	10 19 53.1	-0.5
	comp=Z,2.6nm,0.7s,baz=172,slow=7.8,SNR=14 comp=Z,2.6nm,0.7s						
SONM	**Songino Array**	**56.41**	**353**	P	**P**	10 19 54.1	+0.6
WMQ	**Urumqi**	**57.46**	**337**	eP	**P**	10 20 00.3	-0.7
WMQ				PP	**PP**	10 22 15.0	+6.4
WMQ				LR	LR		
	comp=Z,180nm,23.8s						
HILR	**Hailar Array B**	**57.79**	**4**	P	**P**	10 20 02.5	-0.7
	comp=Z,6.6nm,0.7s,baz=179,slow=9.8,SNR=6.7 comp=Z,6.6nm,0.7s						
HEH	**HeiHe**	**59.34**	**9**	eP	**P**	10 20 15.8	+1.9
HEH				pmax	pmax		
	comp=Z,15nm,0.7s						
KSH	**Kashi**	**59.70**	**326**	P	**P**	10 20 18.6	+1.8
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MKAR	**Makanchi Array**	**62.07**	**335**	P	**P**	10 20 31.9	-0.8
	comp=Z,3.7nm,0.7s,baz=147,slow=7.8,SNR=20 comp=Z,3.7nm,0.7s						
BKZ	**Black Stump Fm**	**62.85**	**130**	P	**P**	10 20 38.4	+0.2
KURBB	**Kurchatov Arra**	**66.62**	**336**	P	**P**	10 21 00.2	-2.1
	comp=Z,1.2nm,0.8s,baz=151,slow=5.7,SNR=12 comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**66.66**	**336**	P	**P**	10 21 00.2	-2.3
KURK	**Kurchatov**	**66.66**	**336**	IAmb	IAmb	10 21 05.4	
	comp=Z,2.1nm,0.6s						
ZAA0	**Zalesovo Array**	**67.03**	**341**	IAmb	IAmb	10 21 07.9	
	comp=Z,3.2nm,0.8s						
ZALV	**Zalesovo Beam**	**67.03**	**341**	P	**P**	10 21 02.3	-2.5
	comp=Z,3.4nm,0.7s,baz=149,slow=4.3,SNR=11 comp=Z,3.4nm,0.7s						
ZALV	**Zalesovo Beam**	**67.03**	**341**		**P**	10 21 04.9	+0.1
MAW	**Mawson**	**68.52**	**199**	P	**P**	10 21 12.4	-1.6
	comp=Z,5.2nm,0.8s,baz=61,slow=8.6,SNR=8.7 comp=Z,5.2nm,0.8s						
PETK	**Petropavlovsk-**	**71.16**	**26**	P	**P**	10 21 27.6	-3.0
	comp=Z,5.4nm,1.0s,baz=197,slow=13,SNR=2.9 comp=Z,5.4nm,1.0s						
BVAR	**Borovoye Array**	**71.83**	**334**	P	**P**	10 21 31.7	-2.9
	comp=Z,1.9nm,0.7s,baz=120,slow=8.7,SNR=7.6 comp=Z,1.9nm,0.7s						
VNDA	**Vanda**	**73.31**	**170**	P	**P**	10 21 41.0	-2.0
	comp=Z,0.7nm,0.4s,baz=304,slow=8.1,SNR=5.8 comp=Z,0.7nm,0.4s						
VNDA	**Vanda**	**73.31**	**170**	P	**P**	10 21 44.5	+1.4
AB31	**Akbulak array**	**74.70**	**326**	IAmb	IAmb	10 21 53.9	
	comp=Z,3.8nm,0.7s						
ABKAR	**Akbulak array**	**74.70**	**326**		**P**	10 21 51.5	-0.1
TIXI	**Tiksi**	**80.34**	**4**	P	**P**	10 22 22.9	+0.2
TIXI				IAmb	IAmb	10 22 24.8	
	comp=Z,8.7nm,1.1s						
QSPA	**South Pole Qui**	**81.67**	**180**	P	**P**	10 22 29.8	-0.4
	comp=Z,4.1nm,1.0s,baz=327,slow=5.1,SNR=7.7 comp=Z,4.1nm,1.0s						
QSPA	**South Pole Qui**	**81.67**	**180**		**P**	10 22 33.1	+2.9
QSPA				IAmb	IAmb

ϕ_s=291.00000°, δ81.00000°, λ75.00000°. Principal axes: T 4.9350, Plg51.0000°, Azm184.0000°; N 0.5370, Plg15.0000°, Azm293.0000°; P -5.4690, Plg35.0000°, Azm34.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 10:21:39.7±0.5, 8.18S±0.03×114.89E±0.03, h16km±2km, h17km:pP-P,n509, σ1§89/503, mb5.2/139, MS4.4/72, 20C-11D, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**0.33**	**73**	P		**Pg**	**10 21 46.3**	**-0.4**
DNP	**Denpasar**	**0.58**	**147**	P		**Pg**	**10 21 51.9**	**+0.6**
ABJI	**Asem Bagus**	**0.75**	**301**	P		**Pg**	**10 21 53.4**	**-1.0**
JAGI	**Jajag, Banyuwa**	**0.78**	**249**			**Pg**	**10 21 53.8**	**-1.2**
JAGI	**Jajag, Banyuwa**	**0.78**	**249**	P		**Pg**	**10 21 54.3**	**-0.7**
JAGI	**Jajag, Banyuwa**	**0.78**	**249**	S		**Sb**	**10 22 05.9**	**+0.6**
JAGI	**Jajag, Banyuwa**	**0.78**	**249**	P		**Pg**	**10 21 53.5**	**-1.5**
BLJI	**Banyuglugur**	**1.35**	**289**	P		**Pn**	**10 22 03.6**	**-0.3**
KMMI	**Kalianget**	**1.45**	**321**	P		**Pb**	**10 22 05.6**	**-0.7**
TWSI	**Taliwang, Sumb**	**2.05**	**106**	P		**Pn**	**10 22 13.3**	**-0.1**
GRJI	**Gresik**	**2.70**	**298**	P		**Pn**	**10 22 22.3**	**-0.1**
PLAI	**Plampang**	**2.93**	**103**	P		**Pn**	**10 22 27.1**	**+1.6**
PLAI	**Plampang**	**2.93**	**103**	P		**Pn**	**10 22 26.3**	**+0.8**
BWJI	**Bawean**	**3.21**	**316**	P		**Pn**	**10 22 29.0**	**-0.3**
TBJI	**Tambak Boyo**	**3.31**	**294**	P		**Pn**	**10 22 30.9**	**+0.2**
NGJI	**Ngawi**	**3.49**	**283**	P		**Pn**	**10 22 32.7**	**-0.6**
PCJI	**Pacitan**	**3.67**	**270**	P		**Pn**	**10 22 36.4**	**+0.6**
UGM	**Wanagama**	**4.33**	**273**			**Pn**	**10 22 46.8**	**+1.9**
UGM	**Wanagama**	**4.33**	**273**	P		**Pn**	**10 22 48.8**	**+3.9**
UGM	**Wanagama**	**4.33**	**273**	P		**Pn**	**10 22 46.6**	**+1.7**
SMRI	**Semarang**	**4.55**	**284**			**Pn**	**10 22 49.7**	**+1.8**
SMRI	**Semarang**	**4.55**	**284**	P		**Pn**	**10 22 51.6**	**+3.7**
SMRI	**Semarang**	**4.55**	**284**	P		**Pn**	**10 22 47.3**	**-0.6**
YOGI	**Yogyakarta**	**4.56**	**274**	P		**Pn**	**10 22 49.9**	**+1.8**
WBSI	**Waikabubak, Su**	**4.68**	**108**	P		**Pn**	**10 22 49.4**	**-0.3**
BBKI	**Banjar Baru**	**4.69**	**359**	P		**Pn**	**10 22 49.8**	**0.0**
WSI	**Waingapu**	**5.54**	**106**	P		**Pn**	**10 23 01.7**	**+0.2**
KAPI	**Kappang**	**5.76**	**57**	Pn		**Pn**	**10 23 03.8**	**-0.8**
KAPI	24nm,0.3s,baz=210,slow=5.2,SNR=28			Sn		**Sn**	**10 24 08.3**	**-2.1**
	26nm,0.3s,baz=227,slow=22,SNR=4.1 50nm,0.3s							
KAPI	**Kappang**	**5.76**	**57**	P		**Pn**	**10 23 04.3**	**-0.3**
KAPI				S		**Sn**	**10 24 09.3**	**-1.1**
KAPI	**Kappang**	**5.76**	**57**	P		**Pn**	**10 23 04.0**	**-0.6**
BSSI	**Bau Bau, Buton**	**5.92**	**70**	P		**Pn**	**10 23 05.9**	**-0.7**
BKSI	**Bulukumba**	**5.92**	**62**	P		**Pn**	**10 23 05.3**	**-1.4**
	1.1nm4μm4μm287nm,0.7s							
KPJI	**Karang Pucung**	**5.96**	**278**	P		**Pn**	**10 23 09.6**	**+2.3**
	2.1nm4μm6μm381nm,1.0s							
BASI	**Baing, Sumba**	**5.97**	**110**	P		**Pn**	**10 23 08.9**	**+1.5**
BNSI	**Bone**	**6.40**	**54**	P		**Pn**	**10 23 13.2**	**-0.1**
	1.4nm5μm4μm274nm,0.5s							
SPSI	**Sidrap Palu**	**6.41**	**49**	P		**Pn**	**10 23 11.8**	**-1.6**
	4μm2μm108nm,0.8s							
EDFI	**Ende, Flores**	**6.75**	**95**	P		**Pn**	**10 23 19.7**	**+1.5**
	1.2nm3μm277nm,0.6s							
TTSI	**Tana Toraja**	**7.08**	**44**	P		**Pn**	**10 23 23.0**	**+0.4**
	0.8nm2μm180nm,0.5s							
MTKI	**Muara Teweh, K**	**7.19**	**0**	P		**Pn**	**10 23 23.5**	**-0.7**
BBJI	**Bungbulang**	**7.21**	**275**	P		**Pn**	**10 23 29.0**	**+4.5**
MMRI	**Maumere**	**7.28**	**94**			**Pn**	**10 23 27.1**	**+1.6**
MMRI	**Maumere**	**7.28**	**94**	P		**Pn**	**10 23 27.4**	**+1.9**
MMRI	**Maumere**	**7.28**	**94**	P		**Pn**	**10 23 26.5**	**+1.1**
	1.9nm2μm7μm486nm,0.8s							
CNJI	**Cibinong**	**7.74**	**276**	P		**Pn**	**10 23 35.5**	**+3.8**
	0.5nm131nm,1.1s							
BBSI	**Bau Bau**	**8.08**	**71**	P		**Pn**	**10 23 37.7**	**+1.3**
	3μm306nm,1.1s							
DBJI	**Dramaga**	**8.23**	**281**	P		**Pn**	**10 23 39.0**	**+0.5**
	282nm,1.0s							
SKJI	**Sukabumi**	**8.34**	**277**	P		**Pn**	**10 23 43.7**	**+3.7**
BATI	**Baumata**	**8.89**	**104**	Pn		**Pn**	**10 23 47.8**	**+0.2**
	28nm,0.3s,baz=246,slow=2.9,SNR=7.7							
BATI				Sn		**Sn**	**10 25 26.7**	**-0.8**
	12nm,0.3s,baz=257,slow=21,SNR=1.9							
BATI	**Baumata**	**8.89**	**104**	P		**Pn**	**10 23 47.8**	**+0.2**
	2μm167nm,0.6s							
SBJI	**Serang**	**8.93**	**283**	P		**Pn**	**10 23 48.5**	**+0.5**
	249nm,0.9s							
TPI	**Tanjungpandan**	**8.99**	**306**	P		**Pn**	**10 23 49.8**	**+0.9**
	99nm,0.8s							
XMI	**Christmas Isla**	**9.36**	**255**	P		**Pn**	**10 23 54.7**	**+0.8**
SOEI	**Soe**	**9.39**	**100**			**Pn**	**10 23 55.1**	**+0.6**
SOEI	**Soe**	**9.39**	**100**	P		**Pn**	**10 23 56.9**	**+2.4**
SOEI	**Soe**	**9.39**	**100**	P		**Pn**	**10 23 55.0**	**+0.5**
	3μm331nm,0.9s							
MPSI	**Mapaga**	**9.83**	**31**	P		**Pn**	**10 24 00.8**	**+0.5**
APSI	**Ampana**	**9.88**	**43**	P		**Pn**	**10 24 01.5**	**+0.5**
	1μm79nm,1.0s							
PPBI	**Pangkal Pinang**	**10.57**	**304**	P		**Pn**	**10 24 10.4**	**-0.1**
KASI	**Kota Agung**	**10.65**	**284**	P		**Pn**	**10 24 12.0**	**+0.3**
	139nm,0.9s							
SBUM	**Sibu**	**10.89**	**346**			**Pn**	**10 24 15.5**	**+0.5**
SBUM	**Sibu**	**10.89**	**346**	P		**Pn**	**10 24 16.4**	**+1.4**
TOLI2	**Tolitoli**	**10.94**	**33**			**Pn**	**10 24 16.4**	**+0.7**
TOLI2	**Tolitoli**	**10.94**	**33**	P		**Pn**	**10 24 17.2**	**+1.6**
MRSI	**Marisa**	**11.11**	**40**	P		**Pn**	**10 24 18.3**	**+0.4**
	2μm57nm,1.1s							
MDSI	**Maura Dua**	**11.26**	**288**	P		**Pn**	**10 24 22.2**	**+2.2**
	2μm129nm,1.3s							
LHSI	**Lahat**	**12.10**	**290**	P		**Pn**	**10 24 33.5**	**+2.0**
	2μm128nm,1.4s							
MNAI	**Manna**	**12.45**	**287**			**Pn**	**10 24 37.9**	**+1.5**
MNAI	**Manna**	**12.45**	**287**	P		**Pn**	**10 24 40.0**	**+3.6**
MNAI	**Manna**	**12.45**	**287**	P		**Pn**	**10 24 36.1**	**-0.3**
	307nm,1.4s							
SANI	**Sanana**	**12.62**	**62**	P		**Pn**	**10 24 42.5**	**+3.9**
SANI	**Sanana**	**12.62**	**62**	P		**Pn**	**10 24 40.3**	**+1.7**
	1μm146nm,1.0s							
DSRI	**Dabo**	**12.81**	**306**	P		**Pn**	**10 24 41.8**	**+0.6**
NLAI	**Namlea**	**13.10**	**69**	P		**Pn**	**10 24 46.6**	**+1.4**
	2μm135nm,1.6s							
MBWA	**Marble Bar**	**13.72**	**161**	P		Pn	10 24 49.1	-4.6
	comp=Z,104nm,0.8s							
MBWA	**Marble Bar**	**13.72**	**161**			Pn	10 24 49.4	-4.3
MBWA	**Marble Bar**	**13.72**	**161**	P		Pn	10 24 49.5	-4.1
MBWA				S		Sn	10 27 16.7	-9.1
MBWA	**Marble Bar**	**13.72**	**161**	P		**Pn**	**10 24 51.6**	**-2.0**
MYLDM	**Lahad Datu**	**13.75**	**15**			**Pn**	**10 24 55.5**	**+1.4**
MYLDM	**Lahad Datu**	**13.75**	**15**	P		**P**	**10 24 59.3**	**-3.3**
AAI	**Ambon**	**13.96**	**72**	P		**Pn**	**10 24 58.7**	**+1.7**
	comp=Z,3μmcomp=Z,167nm,1.4s							
PSAD1	**Pilbara Seismi**	**14.03**	**161**	P		Pn	10 24 53.2	-4.6
	comp=Z,80nm,0.8s							
PSAC1	**Pilbara Seismi**	**14.10**	**161**	P		Pn	10 24 54.7	-4.1
	comp=Z,103nm,0.6s							
PSAB1	**Pilbara Seismi**	**14.13**	**161**	P		**Pn**	**10 24 55.7**	**-3.6**
	comp=Z,86nm,0.8s							
PSAB2	**Pilbara Seismi**	**14.13**	**161**	P		Pn	10 24 54.7	-4.6
	comp=Z,97nm,0.6s							
PSAA2	**Pilbara Seismi**	**14.14**	**161**	P		**Pn**	**10 24 55.5**	**-3.8**
	comp=Z,89nm,1.0s							
PSA00	**Pilbara Seismi**	**14.14**	**161**			Pn	10 24 55.4	-4.0
PSA00	**Pilbara Seismi**	**14.14**	**161**	P		**Pn**	**10 24 56.4**	**-3.0**
PSAB3	**Pilbara Seismi**	**14.17**	**161**	P		Pn	10 24 55.5	-4.3
	comp=Z,90nm,0.9s							
FITZ	**Fitzroy Crossi**	**14.37**	**134**	P		**Pn**	**10 25 00.2**	**-2.4**
	comp=Z,16nm,0.8s							
FITZ	**Fitzroy Crossi**	**14.37**	**134**	Pn		**Pn**	**10 25 01.1**	**-1.5**
	comp=Z,2.3nm,0.3s,baz=314,slow=9.1,SNR=32							
FITZ				LR		LR	10 30 34.2	
	comp=Z,616nm,19.2s,baz=312,slow=38 comp=Z,11nm,0.5s							
FITZ	**Fitzroy Crossi**	**14.37**	**134**	P		**Pn**	**10 25 01.9**	**-0.6**
GIRL	**Giralia**	**14.39**	**182**	P		**Pn**	**10 24 59.9**	**-2.9**
	comp=Z,161nm,0.9s							
GIRL	**Giralia**	**14.39**	**182**			**Pn**	**10 25 00.1**	**-2.8**
BTDF	**Bukit Timah Da**	**14.59**	**310**	P		**P**	**10 25 09.4**	**-2.5**
TNTI	**Ternate**	**15.29**	**55**	Pn		**Pn**	**10 25 15.0**	**0.0**
TNTI				IAmb		IAmb	10 25 43.0	
	comp=Z,222nm,1.3s							
TNTI	**Ternate**	**15.29**	**55**	P		**P**	**10 25 19.6**	**-0.1**
TNTI	**Ternate**	**15.29**	**55**	P		**Pn**	**10 25 15.4**	**+0.4**
	comp=Z,2μmcomp=Z,146nm,1.8s							
BNDI	**Bandanaira**	**15.36**	**77**	P		**P**	**10 25 19.5**	**-1.0**
BNDI	**Bandanaira**	**15.36**	**77**	P		**Pn**	**10 25 18.2**	**+2.4**
KNRA	**Kununurra**	**15.48**	**120**	P		**Pn**	**10 25 14.2**	**-3.2**
	comp=Z,194nm,0.9s							
KNRA	**Kununurra**	**15.48**	**120**			**Pn**	**10 25 16.7**	**-0.7**
KNRA				IAmb		IAmb	10 25 28.6	
	comp=Z,114nm,0.7s							
PDSI	**Padang**	**16.09**	**296**	P		**Pn**	**10 25 24.9**	**-0.4**
AUDHS	**Darwin High Sc**	**16.24**	**106**	P		**Pn**	**10 25 29.1**	**+1.8**
DRS	**Darwin Rock St**	**16.30**	**106**	P		**Pn**	**10 25 26.6**	**-1.5**
PPI	**Padang Panjang**	**16.35**	**297**	P		**Pn**	**10 25 29.2**	**+0.5**
MTN	**Manton Dam**	**16.63**	**108**	P		**Pn**	**10 25 31.4**	**-0.7**
	comp=Z,81nm,1.5s							
MTN	**Manton Dam**	**16.63**	**108**	Pn		**Pn**	**10 25 29.8**	**-2.4**
MNSI	**Mandailing Nat**	**17.68**	**300**	P		**P**	**10 25 46.8**	**+0.6**
	comp=Z,75nm,1.0s							
SWI	**Sorong**	**17.86**	**67**	P		**P**	**10 25 48.6**	**+0.4**
	comp=Z,3μmcomp=Z,4μmcomp=Z,279nm,1.4s							
KDU	**Kakadu**	**17.86**	**106**	P		**Pn**	**10 25 45.6**	**-2.0**
	comp=Z,25nm,0.9s							
FAKI	**Fak Fak**	**18.05**	**74**	P		**Pn**	**10 25 48.9**	**-1.0**
FAKI	**Fak Fak**	**18.05**	**74**	P		**P**	**10 25 53.4**	**+3.1**
FAKI	**Fak Fak**	**18.05**	**74**	P		**Pn**	**10 25 48.2**	**-1.7**
	comp=Z,2μmcomp=Z,2μmcomp=Z,86nm,0.9s							
DAV	**Davao City (W)**	**18.52**	**35**	LR		LR	10 35 05.8	
	comp=Z,713nm,18.4s,baz=202,slow=44							
IPM	**Ipoh**	**18.69**	**312**	P		**Pn**	**10 25 58.7**	**+0.9**
IPM	**Ipoh**	**18.69**	**312**	P		**Pn**	**10 26 00.1**	**+2.3**
MEEK	**Meekatharra**	**18.69**	**170**	P		**P**	**10 25 55.2**	**-2.2**
	comp=Z,181nm,0.8s,comp=Z,0.0nm							
MEEK	**Meekatharra**	**18.69**	**170**	P		**P**	**10 25 58.1**	**+0.7**
KMPI	**Kaimana, Papua**	**19.24**	**78**	P		**P**	**10 26 03.7**	**+0.3**
	comp=Z,4μmcomp=Z,310nm,0.7s							
RPSI	**Rantau Prapat**	**19.24**	**304**			**P**	**10 26 03.2**	**-0.2**
PSI	**Prapat**	**19.30**	**304**	P		**P**	**10 26 04.6**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=130,slow=10,SNR=12							
PSI				LR		LR	10 34 11.5	
	comp=Z,1μm,21.6s,baz=142,slow=39 comp=Z,20nm,0.7s							
PSI	**Prapat**	**19.30**	**304**	P		**Pn**	**10 26 07.1**	**+1.8**
KULM	**Kulim**	**19.51**	**313**	IAmb		IAmb	10 26 13.8	
	comp=Z,147nm,1.0s							
KULM	**Kulim**	**19.51**	**313**	P		**Pn**	**10 26 07.9**	**+0.2**
GSI	**Gunungsitoli**	**19.67**	**298**	P		**P**	**10 26 09.0**	**+0.8**
GSI	**Gunungsitoli**	**19.67**	**298**	P		**Pn**	**10 26 12.1**	**+2.5**
GSI	**Gunungsitoli**	**19.67**	**298**	P		**P**	**10 26 08.4**	**+0.3**
RKPI	**Ransiki, Papua**	**20.32**	**72**	P		**P**	**10 26 15.1**	**-0.1**
	comp=Z,5μmcomp=Z,193nm,1.1s							
KCSI	**Kotacane, Aceh**	**20.66**	**304**	P		**P**	**10 26 18.8**	**-0.1**
	comp=Z,1μmcomp=Z,66nm,1.0s							
MORW	**Morawa**	**20.80**	**177**	P		**P**	**10 26 21.2**	**+0.8**
	comp=Z,81nm,0.8s,comp=Z,0.0nm							
MORW	**Morawa**	**20.80**	**177**	P		**P**	**10 26 21.7**	**+1.3**
MORW				IAmb		IAmb	10 26 28.6	
	comp=Z,69nm,0.9s							
MORW	**Morawa**	**20.80**	**177**	P		**P**	**10 26 21.1**	**+0.8**
DLV	**Lat**	**20.98**	**342**	P		Pn	10 26 25.0	-0.2
WRKA	**Warakurna**	**21.09**	**144**	P		**P**	**10 26 23.5**	**0.0**
	comp=Z,70nm,1.1s							
WB0	**Warramunga Arr**	**22.12**	**123**	IAmb		IAmb	10 26 45.0	
	comp=Z,115nm,1.2s							
WRA	**Warramunga Arr**	**22.16**	**124**	P		**P**	**10 26 33.5**	**-1.7**
	comp=Z,23nm,0.8s,baz=299,slow=12,SNR=67							
WRA				S		**S**	**10 30 33.1**	**-5.8**
	comp=Z,3.8nm,0.9s,baz=306,slow=2.6,SNR=4.5 comp=Z,23nm,0.8s							
WRA	**Warramunga Arr**	**22.16**	**124**	P		**P**	**10 26 33.4**	**-1.8**
WRAB	**Tennant Creek**	**22.17**	**124**	P		**P**	**10 26 33.3**	**-1.9**
WRAB				IAmb		IAmb	10 26 55.6	
	comp=Z,69nm,1.0s							
WRAB	**Tennant Creek**	**22.17**	**124**	P		**P**	**10 26 34.2**	**-0.9**
WRAB	**Tennant Creek**	**22.17**	**124**	*d* iP		**P**	**10 26 36.4**	**+1.3**
WRAB				pmax		pmax		
	comp=Z,30nm,0.5s							
WB1	**Warramunga Ar.**	**22.18**	**124**	P		**P**	**10 26 34.0**	**-1.3**
MLSI	**Meulaboh, Aceh**	**22.20**	**303**	P		**P**	**10 26 33.4**	**-2.1**
	comp=Z,2μmcomp=Z,274nm,0.9s							
WR8	**Warramunga Arr**	**22.30**	**124**	IAmb		IAmb	10 26 47.0	
	comp=Z,79nm,0.8s							
LHMI	**Lhok Sumawe**	**22.31**	**306**	P		**P**	**10 26 34.5**	**-2.2**
LHMI				IAmb		IAmb	10 26 54.1	
	comp=Z,121nm,0.9s							
LHMI	**Lhok Sumawe**	**22.31**	**306**	P		**P**	**10 26 40.5**	**+3.8**
LHMI	**Lhok Sumawe**	**22.31**	**306**	P		**P**	**10 26 35.3**	**-1.4**
	comp=Z,2μmcomp=Z,136nm,0.7s							
BLDU	**Ballidu**	**22.38**	**176**	P		**P**	**10 26 37.2**	**-0.1**
	comp=Z,86nm,0.9s							
BLDU	**Ballidu**	**22.38**	**176**	P		**P**	**10 26 38.0**	**+0.7**
TGY	**Tagaytay City**	**22.94**	**15**	LR		LR	10 37 03.7	
	comp=Z,403nm,18.0s,baz=150,slow=40							
KLBR	**Kellerberrin**	**23.45**	**174**	P		**P**	**10 26 48.6**	**+0.2**
	comp=Z,115nm,0.6s							
KLBR	**Kellerberrin**	**23.45**	**174**	P		**P**	**10 26 48.9**	**+0.6**
MUN	**Mundaring**	**23.71**	**177**	P		**P**	**10 26 52.1**	**+1.2**
ASAR	**Alice Springs**	**23.85**	**132**	P		**P**	**10 26 51.5**	**-0.9**
	comp=Z,27nm,0.8s,baz=311,slow=7.5,SNR=146							
ASAR				S		**S**	**10 31 07.8**	**-0.2**
	comp=Z,3.6nm,1.1s,baz=323,slow=21,SNR=2.5							
ASAR				ScP		**ScP**	**10 34 12.9**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=298,slow=2.0,SNR=4.1							
ASAR				LR		LR	10 37 06.1	
	comp=Z,596nm,18.6s,baz=302,slow=39 comp=Z,27nm,0.8s							
ASAR	**Alice Springs**	**23.85**	**132**	P		**P**	**10 26 52.2**	**-0.2**
AUALC	**St Philip's Co**	**23.85**	**132**	P		**P**	**10 26 52.5**	**+0.1**
AS31	**Alice Springs**	**23.85**	**132**			**P**	**10 26 51.5**	**-0.9**
KMBL	**Kambalda**	**23.97**	**165**	P		**P**	**10 26 52.0**	**-1.4**
	comp=Z,47nm,0.8s							
SMPI	**Sarmi**	**24.50**	**77**	P		**P**	**10 26 55.2**	**-3.2**
	comp=Z,96nm,1.1s							
NWAO	**Narrogin (SRO)**	**24.72**	**175**	P		**P**	**10 26 59.4**	**-0.8**
NWAO	**Narrogin (SRO)**	**24.72**	**175**	LR		LR	10 36 39.6	
	comp=Z,668nm,19.9s,baz=284,slow=37							
NWAO	**Narrogin (SRO)**	**24.72**	**175**	P		**P**	**10 27 00.3**	**+0.1**
NWAO				IAmb		IAmb	10 27 07.3	
	comp=Z,75nm,0.8s							
NWAO	**Narrogin (SRO)**	**24.72**	**175**	P		P	10 26 52.4	-7.8
NWAO	**Narrogin (SRO)**	**24.72**	**175**	P		**P**	**10 27 00.8**	**+0.6**
NWAO	**Narrogin (SRO)**	**24.72**	**175**	P		**P**	**10 27 00.3**	**+0.1**
NWAO				pmax		pmax		
	comp=Z,75nm,0.9s							
AUHAR	**St Anne's Scho**	**24.80**	**178**	P		**P**	**10 27 02.2**	**+1.2**
FORT	**Forrest**	**25.63**	**153**	P		**P**	**10 27 07.4**	**-1.1**
	comp=Z,75nm,0.7s							
FORT	**Forrest**	**25.63**	**153**	IAmb		IAmb	10 27 15.2	
	comp=Z,48nm,0.7s							
GENI	**Genyem**	**25.76**	**79**	P		**P**	**10 27 13.2**	**+3.3**
GENI	**Genyem**	**25.76**	**79**	P		**P**	**10 27 10.5**	**+0.6**
	comp=Z,3μmcomp=Z,80nm,0.8s							
JAY	**Jayapura**	**26.30**	**79**	P		**P**	**10 27 14.7**	**-0.1**
	comp=Z,7.5nm,0.9s,baz=231,slow=7.4,SNR=7.8							
JAY				LR		LR	10 39 44.4	
	comp=Z,920nm,21.1s,baz=267,slow=42 comp=Z,7.5nm,0.9s							
JAY	**Jayapura**	**26.30**	**79**	P		**P**	**10 27 14.5**	**-0.3**
RKGY	**Rocky Gully**	**26.37**	**176**	P		**P**	**10 27 14.7**	**-0.5**
	comp=Z,219nm,1.1s							
AUALB	**St Joseph's Co**	**26.83**	**175**	P		**P**	**10 27 20.6**	**+1.3**
QIS	**Mount Isa**	**26.87**	**120**	P		**P**	**10 27 19.3**	**-0.6**
	comp=Z,62nm,1.4s							
QIS	**Mount Isa**	**26.87**	**120**	P		**P**	**10 27 19.9**	**0.0**
QIZ	**Qiongzhong**	**27.49**	**350**	P		**P**	**10 27 26.6**	**+1.2**
QIZ				S		**S**	**10 32 08.9**	**+3.2**
QIZ				LR		LR		
	comp=Z,1μm,13.9s							
QIZ				LR		LR		
	comp=Z,490nm,11.8s							
QIZ				LR		LR		
	comp=Z,1μm,14.0s							
COEN	**Coen**	**28.33**	**104**	P		**P**	**10 27 32.2**	**-0.9**
	comp=Z,57nm,0.9s							
COEN	**Coen**	**28.33**	**104**	P		**P**	**10 27 32.1**	**-0.9**
COEN				IAmb		IAmb	10 27 38.9	
	comp=Z,40nm,0.8s							
COEN	**Coen**	**28.33**	**104**	P		**P**	**10 27 32.5**	**-0.5**
MTSU	**Mount Surprise**	**30.27**	**112**	P		**P**	**10 27 50.1**	**-0.1**
	comp=Z,28nm,0.6s							
MTSU	**Mount Surprise**	**30.27**	**112**	P		**P**	**10 27 50.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**30.80**	**329**	P		**P**	**10 27 55.9**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=159,slow=7.9,SNR=29							
CMAR				PcP		**PcP**	**10 30 53.9**	**+1.8**
	comp=Z,7.2nm,0.9s,baz=191,slow=2.8,SNR=9.0							
CMAR				ScP		**ScP**	**10 34 34.2**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=168,slow=3.1,SNR=7.4 comp=Z,6.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**30.80**	**329**	P		**P**	**10 27 55.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**30.80**	**329**	*i* P		**P**	**10 27 56.7**	**+1.9**
CMAR				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CHTO	**Chiang Mai**	**31.09**	**330**	P		**P**	**10 27 56.2**	**-1.2**
CHTO	**Chiang Mai**	**31.09**	**330**	P		**P**	**10 28 01.8**	**+4.4**
CHTO	**Chiang Mai**	**31.09**	**330**	P		**P**	**10 27 56.2**	**-1.2**
CHTO				pmax		pmax		
	comp=Z,16nm,1.0s							
SLVN	**Son La**	**31.25**	**340**	P		**P**	**10 28 01.2**	**+2.4**
BBOO	**Buckleboo**	**31.39**	**144**	P		**P**	**10 27 58.9**	**-1.1**
	comp=Z,128nm,0.9s							
BBOO	**Buckleboo**	**31.39**	**144**			**P**	**10 27 59.7**	**-0.2**
BBOO	**Buckleboo**	**31.39**	**144**	P		**P**	**10 27 59.7**	**-0.2**
PMG	**Port Moresby**	**31.91**	**95**	P		**P**	**10 28 04.6**	**-0.1**
	comp=Z,9.2nm,0.7s,baz=297,slow=9.0,SNR=2.8							
PMG				LR		LR	10 43 21.8	
	comp=Z,639nm,19.3s,baz=266,slow=41 comp=Z,9.2nm,0.7s							
WHYH	**Whyalla**	**32.44**	**143**	P		**P**	**10 28 10.0**	**+0.9**
CTA	**Charters Tower**	**32.57**	**115**	LR		LR	10 42 02.3	
	comp=Z,26nm,18.8s,baz=280,slow=38							
CTA	**Charters Tower**	**32.57**	**115**	P		**P**	**10 28 10.8**	**+0.4**
CTAO	**Charters Tower**	**32.57**	**115**	P		**P**	**10 28 10.5**	**+0.1**
CTAO				IAmb		IAmb	10 28 16.0	
	comp=Z,36nm,1.0s							
CTAO	**Charters Tower**	**32.57**	**115**	P		**P**	**10 28 10.8**	**+0.4**
CTAO	**Charters Tower**	**32.57**	**115**	P		**P**	**10 28 10.5**	**+0.1**
CTAO				pmax		pmax		
	comp=Z,36nm,1.0s							
AUJCS	**Jamestown Cent**	**33.18**	**142**	P		**P**	**10 28 16.1**	**+0.4**
QLP	**Quilpie**	**33.31**	**127**	P		**P**	**10 28 16.8**	**-0.1**
	comp=Z,76nm,0.8s							
QLP	**Quilpie**	**33.31**	**127**	P		**P**	**10 28 17.7**	**+0.8**
HTT	**Hallett**	**33.53**	**142**	P		**P**	**10 28 18.5**	**-0.3**
	comp=Z,28nm,0.7s							
HTT	**Hallett**	**33.53**	**142**	P		**P**	**10 28 19.0**	**+0.3**
STKA	**Stephens Creek**	**34.24**	**137**	P		**P**	**10 28 24.5**	**-0.4**
	comp=Z,174nm,0.7s							
STKA	**Stephens Creek**	**34.24**	**137**	P		**P**	**10 28 24.8**	**-0.2**
	comp=Z,14nm,0.5s,baz=310,slow=8.7,SNR=30							
STKA				LR		LR	10 43 21.5	
	comp=Z,290nm,18.2s,baz=305,slow=38 comp=Z,14nm,0.5s							
STKA	**Stephens Creek**	**34.24**	**137**	P		**P**	**10 28 24.7**	**-0.2**
STKA	**Stephens Creek**	**34.24**	**137**	*d* iP		**P**	**10 28 25.2**	**+0.3**
AUMBR	**Murray Bridge**	**34.92**	**144**	P		**P**	**10 28 32.3**	**+1.6**
KMI	**Kunming**	**35.16**	**341**	P		**P**	**10 28 34.3**	**+1.2**
KMI				pmax		pmax		
	comp=Z,20nm,1.2s							
KMI				pmax		pmax		
	comp=Z,290nm,8.5s							
KMI				LR		LR		
	comp=Z,420nm,12.1s							
KMI				LR		LR		
	comp=Z,1μm,15.3s							
KMI				LR		LR		
	comp=Z,1μm,13.3s							
TNCH	**TengChong**	**36.66**	**335**	P		**P**	**10 28 47.6**	**+1.

TIA Tai'an 44.21 3 P **P** **10 29 48.3 +0.3**
TIA S **S** **10 36 17.4 -3.4**
TIA SS **SS** **10 39 34.3 -4.9**
TIA pmax pmax
comp=Z,45nm,0.7s
TIA pmax pmax
comp=Z,330nm,8.2s
TIA LR LR
comp=Z,610nm,15.9s
TIA LR LR
comp=Z,460nm,16.5s
TIA LR LR
comp=Z,1μm,14.7s
SAVO Savo Central 44.40 95 P **P** **10 29 48.6 -1.4**
HNR Honiara 44.52 95 LR LR 10 51 03.4
comp=Z,292nm,19.2s,baz=264,slow=40
HNR Honiara 44.52 95 P **P** **10 29 53.5 +2.6**
LZDM Lanzhou Array 45.15 347 P **P** **10 29 57.0 +1.0**
comp=Z,27nm,0.9s,baz=172,slow=12,SNR=18
comp=Z,27nm,0.9s
LZH Lanzhou 45.24 347 *e*P **P** **10 29 58.3 +1.8**
LZH pP sP 10 30 02.3 -1.2
LZH PP **PP** **10 31 46.0 +3.5**
LZH S **S** **10 36 40.5 +4.3**
LZH SS **ScS** **10 39 54.5 +1.4**
LZH pmax pmax
comp=Z,59nm,1.1s
LZH pmax pmax
comp=Z,410nm,4.8s
LZH LR LR
comp=Z,680nm,15.3s
LZH LR LR
comp=Z,620nm,15.1s
LZH LR LR
comp=Z,770nm,16.5s
HNS HongShan 45.34 360 ⇑P **P** **10 29 57.4 +0.4**
HNS S **S** **10 36 37.1 -0.1**
HNS pmax pmax
comp=Z,37nm,1.1s
HNS LR LR
comp=Z,540nm,14.3s
HNS LR LR
comp=Z,540nm,16.2s
TIY Taiyuan 45.71 357 *e*P **P** **10 30 04.6 +4.5**
TIY S **S** **10 36 45.1 +2.4**
TIY SS **ScS** **10 39 57.0 +1.1**
TIY pmax pmax
comp=Z,40nm,0.5s
TIY pmax pmax
comp=Z,300nm,5.5s
TIY LR LR
comp=Z,480nm,14.4s
TIY LR LR
comp=Z,300nm,13.7s
TIY LR LR
comp=Z,530nm,15.8s
KSAR Wonju Array Be 46.99 14 P **P** **10 30 10.3 +0.4**
KSAR Wonju Array Be 46.99 14 P **P** **10 30 10.4 +0.4**
KSRS Korea Array 47.01 14 P **P** **10 30 10.8 +0.7**
comp=Z,7.5nm,0.9s,baz=193,slow=8.4,SNR=15
KSRS LR LR 10 54 16.3
comp=Z,65μm,19.0s,baz=205,slow=42
comp=Z,7.5nm,0.9s
JHJ Hachijo jima 2 47.41 29 LR LR 10 50 53.4
comp=Z,143nm,20.6s,baz=216,slow=37
BJT Baijiatuan 47.97 1 IAmb IAmb 10 30 22.8
comp=Z,29nm,0.9s
BJT Baijiatuan 47.97 1 P **P** **10 30 18.9 +1.3**
BJI Beijing 47.99 1 P **P** **10 30 18.0 +0.3**
BJI pP **sP** **10 30 22.4 -2.4**
BJI sP **pP** **10 30 25.0 +2.1**
BJI PP **PP** **10 32 09.8 -0.2**
BJI S **S** **10 37 15.4 +0.4**
BJI pmax pmax
comp=Z,13nm,1.2s
BJI pmax pmax
comp=Z,130nm,4.4s
BJI LR LR
comp=Z,180nm,14.4s
BJI LR LR
comp=Z,150nm,16.1s
BJI LR LR
comp=Z,310nm,15.0s
GOMU GeErMu 48.01 338 P **P** **10 30 19.8 +1.3**
GOMU S **S** **10 37 18.8 +2.5**
GOMU pmax pmax
comp=Z,13nm,0.8s
GOMU LR LR
comp=Z,350nm,12.9s
GOMU LR LR
comp=Z,310nm,14.5s
BTO Baotou 48.75 355 *e*P **P** **10 30 25.1 +1.3**
BTO pP **sP** **10 30 29.5 -1.3**
BTO S **S** **10 37 29.4 +3.4**
BTO SS **SS** **10 40 56.3 -0.5**
BTO pmax pmax
comp=Z,130nm,1.0s
BTO pmax pmax
comp=Z,600nm,5.0s
BTO LR LR
comp=Z,700nm,10.7s
BTO LR LR
comp=Z,1μm,16.0s
BTO LR LR
comp=Z,2μm,16.3s
HHC Hu-ho-hao-te 48.88 357 ⇑*i*P **P** **10 30 25.6 +0.8**
HHC pP sP 10 30 29.5 -2.3
HHC S **S** **10 37 30.5 +2.6**
HHC sS sS 10 37 38.4 +2.3
HHC pmax pmax
comp=Z,35nm,0.9s
HHC pmax pmax
comp=Z,250nm,4.9s
HHC LR LR
comp=Z,240nm,9.3s
HHC LR LR
comp=Z,340nm,16.8s
HHC LR LR
comp=Z,170nm,14.3s
GTA Gaotai 49.37 345 P **P** **10 30 29.8 +1.2**
GTA pP sP 10 30 34.8 -0.9
GTA PP **PP** **10 32 29.9 +7.1**
GTA S **S** **10 37 39.3 +4.4**
GTA pmax pmax
comp=Z,18nm,1.0s
GTA pmax pmax
comp=Z,330nm,8.4s
GTA LR LR
comp=Z,450nm,16.4s
GTA LR LR
comp=Z,720nm,15.6s
GTA LR LR
comp=Z,540nm,17.8s
MAJO Matsushiro 49.59 25 P **P** **10 30 30.1 0.0**
MAJO Matsushiro 49.59 25 P **P** **10 30 34.3 +4.2**
MAJO Matsushiro 49.59 25 ⇓*i*P **P** **10 30 29.6 -0.5**
MAJO pmax pmax
comp=Z,75nm,2.2s
MJAR Matsushiro Arr 49.59 25 P **P** **10 30 28.7 -1.5**
comp=Z,17nm,1.0s,baz=200,slow=6.9,SNR=16
MJAR LR LR 10 52 27.4
comp=Z,181nm,19.1s,baz=194,slow=37
comp=Z,17nm,1.0s
MJAR Matsushiro Arr 49.59 25 P **P** **10 30 28.7 -1.5**
MJAR IAmb IAmb 10 30 34.4
comp=Z,27nm,1.3s
SNY Shenyang 50.40 8 ⇑P **P** **10 30 39.6 +3.5**
SNY pmax pmax
comp=Z,25nm,0.9s
SANVU Saraoutou 51.61 103 P **P** **10 30 46.4 +0.6**
SANVU Saraoutou 51.61 103 P **P** **10 30 48.3 +2.6**
JMM Marumori 51.80 26 P **P** **10 30 50.6 +3.8**
YATNC Mamie plateau, 51.82 112 P **P** **10 30 48.6 +1.3**
XLT XiLinHaoTe 51.85 1 *e*P **P** **10 30 47.5 +0.4**
XLT pP sP 10 30 51.9 -2.3
XLT sP pP 10 30 53.8 +1.5
XLT S **S** **10 38 07.9 -1.1**
XLT pmax pmax
comp=Z,35nm,1.0s
XLT pmax pmax
comp=Z,220nm,3.5s
XLT LR LR
comp=Z,30nm,11.8s
XLT LR LR
comp=Z,240nm,13.2s
XLT LR LR
comp=Z,260nm,13.3s
CN2 Changchun 52.62 10 P **P** **10 30 56.3 +3.6**
CN2 pmax pmax
comp=Z,30nm,0.9s
MDJ Mudanjiang 54.20 13 P **P** **10 31 04.7 +0.3**
MDJ IAmb IAmb 10 31 11.1
comp=Z,39nm,0.9s
MDJ Mudanjiang 54.20 13 P **P** **10 31 08.6 +4.2**
MDJ pmax pmax
comp=Z,48nm,1.0s
MDJ Mudanjiang 54.20 13 P **P** **10 31 08.6 +4.2**
USRK Ussuriysk Ar. 54.39 15 P **P** **10 31 05.0 -0.7**
comp=Z,15nm,1.0s,baz=192,slow=5.3,SNR=16
comp=Z,15nm,1.0s
BNX BinXian 54.84 11 ⇑P **P** **10 31 08.3 -0.7**
BNX pmax pmax
comp=Z,10.0nm,1.1s
ULN Ulaanbaatar 56.23 354 P **P** **10 31 19.1 0.0**
ULN IAmb IAmb 10 31 24.1
comp=Z,17nm,0.8s
ULN Ulaanbaatar 56.23 354 P **P** **10 31 19.8 +0.7**
ULN Ulaanbaatar 56.23 354 *d*P **P** **10 31 19.0 -0.2**
ULN pmax pmax
comp=Z,20nm,1.1s
SONM Songino Array 56.28 353 P **P** **10 31 19.1 -0.3**
comp=Z,19nm,0.8s,baz=171,slow=8.8,SNR=48
SONM LR LR 10 58 49.7
comp=Z,353nm,19.5s,baz=175,slow=40
comp=Z,19nm,0.8s
SONM Songino Array 56.28 353 P **P** **10 31 19.0 -0.5**
SONM IAmb IAmb 10 31 24.3
comp=Z,22nm,0.8s
TEY Ternei 56.47 18 ⇓*e*P **P** **10 31 19.9 -0.8**
TEY pmax pmax
comp=N,10.0nm,0.9s
TEY pmax pmax
comp=Z,30nm,0.9s
WMQ Urumqi 57.33 337 *e*P P 10 31 32.8 +5.8
WMQ PcP **PcP** **10 32 23.3 +2.3**
WMQ S **S** **10 39 26.3 +3.5**
WMQ LR LR
comp=Z,190nm,13.5s
HIA Hailar 57.36 4 P **P** **10 31 31.6 +4.6**
NIL Nilore 57.37 319 P **P** **10 31 25.7 -1.7**
NIL Nilore 57.37 319 P **P** **10 31 25.7 -1.7**
NIL pmax pmax
comp=Z,39nm,0.6s
HILR Hailar Array B 57.65 4 P **P** **10 31 28.3 -0.8**
comp=Z,24nm,0.7s,baz=180,slow=10,SNR=16
comp=Z,24nm,0.7s
ASAJ Asahikawa 57.78 23 LR LR 10 56 54.9
comp=Z,149nm,21.1s,baz=176,slow=37
CASY Casey 58.09 182 P **P** **10 31 31.4 -0.4**
CASY IAmb IAmb 10 31 36.4
comp=Z,33nm,1.3s
JCZ Jackson Bay 58.77 137 P **P** **10 31 39.3 +2.1**
ZAK Zakamensk 59.19 351 *e*P **P** **10 31 36.6 -3.3**
ZAK pmax pmax
comp=Z,11nm,1.5s
HEH HeiHe 59.21 9 *e*P **P** **10 31 38.9 -0.9**
HEH pmax pmax
comp=Z,87nm,1.1s
KSH Kashi 59.59 326 P **P** **10 31 42.0 -0.9**
KSH pP pP 10 31 47.3 -0.8
KSH S **S** **10 39 47.4 -5.1**
KSH pmax pmax
comp=Z,43nm,0.8s
TARG Taragay, Kyrgy 60.17 329 IAmb IAmb 10 32 00.5
comp=Z,14nm,0.9s
RPZ Rata Peaks 60.20 136 P **P** **10 31 48.2 +1.3**
YSS Yuzhno-Sakhali 60.23 22 *e*P **P** **10 31 47.8 +0.9**
YSS pmax pmax
comp=Z,50nm,0.9s
SHLS Shalkode 60.40 331 *e*P **P** **10 31 45.4 -3.1**
comp=Z,20nm,1.1s
SHLS Shalkode 60.40 331 *e*P **P** **10 31 45.3 -3.1**
SHLS pmax pmax
comp=Z,20nm,1.1s
KBL Kabul 60.70 317 **P** **10 31 49.0 -1.7**
KBL IAmb IAmb 10 31 54.8
comp=Z,21nm,0.8s
KBL Kabul 60.70 317 P **P** **10 31 51.1 +0.4**
SNR=12
KBL Kabul 60.70 317 P **P** **10 31 49.0 -1.7**
KBL pmax pmax
comp=Z,21nm,0.8s
KDJ Kajisay 60.79 329 IAmb IAmb 10 31 56.7
comp=Z,19nm,0.8s
SATY Saty 60.84 330 *e*P **P** **10 31 49.9 -1.5**
SATY Saty 60.84 330 *e*P **P** **10 31 49.9 -1.5**
ZSN Zaisan 61.45 337 *e*P **P** **10 31 54.0 -1.3**
ZSN Zaisan 61.45 337 *e*P **P** **10 31 54.0 -1.3**
TNSS Tian-Shan 61.56 329 *e*P **P** **10 31 54.9 -1.8**
TNSS Tian-Shan 61.56 329 *e*P **P** **10 31 54.8 -1.8**
BOOM Boomskoye usch 61.69 328 IAmb IAmb 10 32 03.0
comp=Z,29nm,1.1s
MK31 Makanchi Array 61.95 335 *i*P **P** **10 31 57.3 -1.4**
MK31 pmax pmax
comp=Z,12nm,0.6s
MKAR Makanchi Array 61.95 335 P **P** **10 31 57.9 -0.8**
comp=Z,15nm,0.7s,baz=146,slow=7.7,SNR=65
comp=Z,15nm,0.7s
MSVF Nonsavu 62.04 106 P **P** **10 32 02.6 +2.6**
JLN Jalan Bani Buh 62.15 300 P P 10 31 54.7 -5.8
TDK Taldyqorghan 62.29 332 *e*P **P** **10 31 59.6 -1.4**
comp=Z,12nm,0.8s
TDK Taldyqorghan 62.29 332 *e*P **P** **10 31 59.5 -1.4**
TDK pmax pmax
comp=Z,13nm,0.8s
DGZ Jazzator, Alta 62.43 340 *d*iP **P** **10 32 01.7 -0.3**
DGZ pmax pmax
comp=Z,34nm,0.9s
ARSB Arslanbob 62.49 325 IAmb IAmb 10 32 08.7
comp=Z,33nm,0.8s
AAK Ala-Archa 62.55 327 LR LR 11 03 22.0
comp=Z,234nm,18.2s,baz=140,slow=40
AAK Ala-Archa 62.55 327 **P** **10 32 02.1 -0.9**
AAK IAmb IAmb 10 32 10.0
comp=Z,16nm,0.9s
AAK Ala-Archa 62.55 327 P **P** **10 32 02.4 -0.6**
AAK S **S** **10 40 30.0 -0.2**
AAK Ala-Archa 62.55 327 *d*iP **P** **10 32 02.2 -0.8**
AAK pmax pmax
comp=Z,9.0nm,1.0s
ZEA Zeya 62.57 8 *e*P **P** **10 32 02.8 +0.2**
ZEA *e* 10 40 42.6
ZEA pmax pmax
comp=Z,200nm,4.6s
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,30nm,1.4s
ZEA pmax pmax
comp=Z,60nm,1.0s
WBK Wadi Bani Khal 62.71 301 P **P** **10 32 04.5 +0.2**
BKZ Black Stump Fm 62.94 130 **P** **10 32 05.9 +0.3**
BKZ Black Stump Fm 62.94 130 P **P** **10 32 05.7 +0.1**
MHTO MHTO 62.96 298 P **P** **10 32 04.5 -1.4**
SNR=8.4
MHTO S **S** **10 40 33.3 -2.5**
RTZ Ruatahuna 63.20 129 **P** **10 32 07.3 -0.1**
URZ Urewera 63.23 129 LR LR 11 00 57.0
comp=Z,355nm,18.7s,baz=290,slow=37
WSAR Wadi Sarin 63.24 301 P **P** **10 32 07.0 -0.7**
WSAR S **S** **10 40 38.5 -0.7**
SMDO Samad 63.66 301 P **P** **10 32 09.6 -1.1**
BSY Bisya 64.27 300 P **P** **10 32 14.0 -0.6**
DZA Taraz 64.45 326 *e*P **P** **10 32 14.2 -1.2**
comp=Z,6.1nm,0.5s
DZA Taraz 64.45 326 *e*P **P** **10 32 14.1 -1.2**
DZA pmax pmax
comp=Z,6.0nm,0.5s
BTLS Baital 64.45 329 *e*P **P** **10 32 14.2 -1.2**
BTLS Baital 64.45 329 *e*P **P** **10 32 14.1 -1.2**
HOQ Hoqain 64.49 301 P **P** **10 32 14.0 -2.0**
HOQ S **S** **10 40 51.3 -3.5**
DMTO DMTO 64.54 294 P **P** **10 32 13.5 -2.9**
DMTO S **S** **10 40 51.5 -4.0**
IUG Iuzhnay 64.70 325 *e*P **P** **10 32 15.9 -1.3**
comp=Z,17nm,0.8s
IUG Iuzhnay 64.70 325 *e*P **P** **10 32 15.8 -1.3**
IUG pmax pmax
comp=Z,17nm,0.8s
KK31 Karatay Array 65.04 326 *i*P **P** **10 32 18.9 -0.3**
KKAR Karatay Array 65.04 326 **P** **10 32 19.2 0.0**
KKAR Karatay Array 65.04 326 P **P** **10 32 19.2 0.0**
CHM Chimkent 65.06 324 *e*P **P** **10 32 18.2 -1.2**
comp=Z,13nm,0.7s
CHM Chimkent 65.06 324 *e*P **P** **10 32 18.1 -1.2**
CHM pmax pmax
comp=Z,13nm,0.7s
ARQ Araqi 65.07 300 P **P** **10 32 18.8 -1.0**
RBK Rabkut 65.15 294 P **P** **10 32 18.7 -1.8**
RBK S **S** **10 40 59.5 -3.6**
SOHO SOHO 65.35 301 P **P** **10 32 20.3 -1.3**
BRLS Boroldoy 65.38 325 *e*P **P** **10 32 19.7 -1.7**
BRLS Boroldoy 65.38 325 *e*P **P** **10 32 19.7 -1.7**
BOD Bodaibo 65.78 359 *e*P **P** **10 32 23.7 +0.1**
BOD pmax pmax
comp=Z,43nm,1.2s
UOSS Minazif 65.94 302 P **P** **10 32 23.8 -1.6**
UOSS IAmb IAmb 10 32 29.9
comp=Z,25nm,1.1s
UOSS Minazif 65.94 302 P **P** **10 32 24.5 -0.9**
UOSS S **S** **10 41 08.0 -4.5**
HATD Hatta, Dubai 65.95 302 P **P** **10 32 24.6 -0.9**
ASHO Ashiyiah 65.96 302 P **P** **10 32 24.6 -1.0**
MDH Madha 65.99 302 P **P** **10 32 24.0 -1.7**
MASF Masafi 66.13 302 P **P** **10 32 25.0 -1.7**
MASF S **S** **10 41 11.6 -3.3**
RAO Raoul Island 66.17 118 LR LR 11 02 05.3
comp=Z,313nm,18.0s,baz=292,slow=37
BANOM Banah 66.23 303 P **P** **10 32 27.8 +0.5**
FAQ Al Faqa, Dubai 66.38 301 P **P** **10 32 27.5 -0.7**
SNR=10.0
NAZ Nazwa, Dubai 66.41 302 P **P** **10 32 26.8 -1.6**
KURBB Kurchatov Arra 66.50 336 P **P** **10 32 27.1 -1.3**
comp=Z,3.4nm,0.7s,baz=148,slow=5.1,SNR=29
comp=Z,3.4nm,0.7s
KURBB Kurchatov Arra 66.50 336 P **P** **10 32 25.7 -2.7**
KURK Kurchatov 66.53 336 **P** **10 32 27.6 -1.0**
KURK Kurchatov 66.53 336 P **P** **10 32 26.9 -1.7**
KURK S **S** **10 41 19.3 +0.6**
KURK Kurchatov 66.53 336 *d*iP **P** **10 32 27.2 -1.4**
KURK pmax pmax
comp=Z,7.0nm,0.9s
ASUD Al Ashush, Dub 66.56 301 P **P** **10 32 28.7 -0.7**
SNR=12
ASUD S **S** **10 41 19.0 -1.0**
ZAA0 Zalesovo Array 66.90 341 IAmb IAmb 10 32 35.4
comp=Z,15nm,0.8s
ZALV Zalesovo Beam 66.90 341 P **P** **10 32 29.3 -1.6**
comp=Z,11nm,0.7s,baz=144,slow=4.2,SNR=30
ZALV PP **PP** **10 35 03.8 +5.3**
comp=Z,1.7nm,0.7s,baz=145,slow=8.5,SNR=3.5
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 66.90 341 P **P** **10 32 29.0 -1.9**
MAW Mawson 68.65 199 P **P** **10 32 42.0 +0.3**
comp=Z,9.1nm,0.5s,baz=61,slow=6.3,SNR=26
MAW LR LR 10 58 39.4
comp=Z,113nm,18.1s,baz=50,slow=32
comp=Z,9.1nm,0.5s
YAK Yakutsk 70.94 7 LR LR 11 05 52.6
comp=Z,82nm,19.8s,baz=189,slow=37
YAK Yakutsk 70.94 7 *e*P **P** **10 32 54.5 -1.3**
YAK *e**PP **pP** **10 32 58.2 -2.9**
YAK *e* 10 35 28.7
YAK *e*PPP PPP 10 37 17.3
YAK *e*S **S** **10 42 09.8 -0.8**
YAK *e*SS **SS** **10 46 41.8 -2.0**
YAK pmax pmax
comp=Z,7.0nm,0.7s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.3s
YAK pmax pmax
comp=Z,162nm,3.3s
YAK pmax pmax
comp=E,236nm,3.0s
YAK pmax pmax
comp=N,236nm,3.7s
YAK smax smax
comp=E,138nm,2.7s
YAK smax smax
comp=N,263nm,3.3s
PETK Petropavlovsk- 71.03 26 P **P** **10 32 55.5 -1.2**
comp=N,7.7nm,1.1s,baz=224,slow=8.3,SNR=5.3
PETK LR LR 11 05 17.6
comp=N,55nm,19.6s,baz=241,slow=37
comp=N,7.7nm,1.1s
BVA0 Borovoye Array 71.71 334 P **P** **10 32 58.3 -2.4**
BVAR Borovoye Array 71.71 334 P **P** **10 32 59.5 -1.3**
comp=N,5.6nm,0.8s,baz=139,slow=7.3,SNR=21
BVAR LR LR 11 07 58.5
comp=N,220nm,19.3s,baz=137,slow=39
comp=N,5.6nm,0.8s
BORK Borovoye 71.76 334 *d*iP **P** **10 32 59.1 -1.9**
BORK pmax pmax
comp=Z,8.0nm,1.0s
MA2 Magadan 73.35 18 LR LR 11 09 41.0
comp=Z,32nm,18.0s,baz=250,slow=39
VNDA Vanda 73.44 170 P **P** **10 33 10.3 -0.4**
comp=Z,2.6nm,0.5s,baz=313,slow=7.1,SNR=22
VNDA LR LR 11 03 34.1
comp=Z,187nm,18.9s,baz=322,slow=34
comp=Z,2.6nm,0.5s
VNDA Vanda 73.44 170 **P** **10 33 11.2 +0.5**
VNDA IAmb IAmb 10 33 17.1
comp=Z,18nm,1.1s
VNDA Vanda 73.44 170 P **P** **10 33 11.2 +0.5**
VNDA pmax pmax
comp=Z,18nm,1.2s
ATD Arta Tunnel 74.27 284 LR LR 11 03 34.6
comp=Z,7.8nm,19.5s,baz=44,slow=34
SBA Scott Base 74.47 170 **P** **10 33 17.8 +1.1**
SBA Scott Base 74.47 170 P **P** **10 33 17.8 +1.1**
SBA pmax pmax
comp=Z,12nm,1.0s
AB31 Akbulak array 74.59 326 IAmb IAmb 10 33 22.6
comp=Z,40nm,1.1s
AB31 Akbulak array 74.59 326 *i*P **P** **10 33 15.8 -2.0**
ABKAR Akbulak array 74.59 326 P **P** **10 33 16.5 -1.4**
RAYN Ar Rayn 74.70 297 **P** **10 33 17.6 -1.5**
RAYN IAmb IAmb 10 33 23.4
comp=Z,14nm,0.8s
RAYN Ar Rayn 74.70 297 P **P** **10 33 17.2 -2.0**
RAYN S **SKiKP** **10 42 49.9 +5.4**
RAYN Ar Rayn 74.70 297 P **P** **10 33 17.6 -1.5**
RAYN pmax pmax
comp=Z,14nm,0.9s
AKTO Aktyubinsk 76.27 327 LR LR 11 12 05.2
comp=Z,281nm,19.9s,baz=155,slow=40
AKTO Aktyubinsk 76.27 327 P **P** **10 33 25.9 -1.6**
SEY Seymchan 76.49 17 LR LR 11 08 22.9
comp=Z,111nm,21.3s,baz=228,slow=37
SEY Seymchan 76.49 17 *e*P **P** **10 33 26.1 -2.3**
SEY pmax pmax
comp=Z,30nm,1.6s
KIBK Kibwezi 76.65 270 **P** **10 33 30.3 -0.3**
KIBK IAmb IAmb 10 33 36.7
comp=Z,30nm,1.0s
SYO Syowa Base 77.15 201 ⇑*i*P **P** **10 33 34.2 +2.1**
SYO Syowa Base 77.15 201 ⇑*i*pP pP 10 33 37.8 +0.2
KMBO Kilima Mbogo 77.60 271 P **P** **10 33 36.0 -0.1**
comp=Z,8.6nm,0.8s,baz=80,slow=8.8,SNR=4.9
KMBO LR LR 11 02 22.7
comp=Z,343nm,21.9s,baz=102,slow=32
comp=Z,8.6nm,0.8s
KMBO Kilima Mbogo 77.60 271 *i*P **P** **10 33 36.7 +0.6**
KMBO pmax pmax
comp=Z,19nm,1.0s
SVE Sverdlovsk 78.47 333 *e*P **P** **10 33 38.5 -1.2**
SVE pmax pmax
comp=Z,26nm,1.0s
SHEM Shemya Is, Ala 78.70 32 LR LR 11 06 22.2
comp=Z,54nm,21.5s,baz=295,slow=34
AKT Akhty 78.73 315 *e*P **P** **10 33 38.0 -3.6**
AKT *e* 10 33 46.1
AKT pmax pmax
comp=Z,13nm,1.0s
ARTI Arti 79.26 332 **P** **10 33 41.8 -2.2**
ARTI IAmb IAmb 10 33 48.4
comp=Z,33nm,1.2s
ARTI Arti 79.26 332 *c*iP **P** **10 33 42.0 -2.0**
ARTI S **S** **10 43 44.1 +0.6**
ARTI pmax pmax
comp=Z,12nm,1.0s
MAK Makhachkala 79.43 316 *c*iP P 10 33 37.0 -8.2
MAK *e*S S 10 43 33.2 -13

MAK eSS SS 10 48 47.2 -6.4
MAK eSSS SSS 10 52 08.6
MAK pmax pmax
comp=Z,111nm,0.8s
NRIK Noril'sk 79.63 350 P **P 10 33 45.4 -0.4**
comp=Z,1.7nm,0.5s,baz=162,slow=7.2,SNR=6.5
comp=Z,1.7nm,0.5s
NRIK Noril'sk 79.63 350⇑*iP* **P 10 33 44.3 -1.5**
TIXI Tiksi 80.20 4 LR LR 11 12 32.6
comp=Z,111nm,20.3s,baz=202,slow=38
TIXI Tiksi 80.20 4 *i*P **P 10 33 46.5 -2.3**
GNI Garni 80.39 313 LR LR 11 13 41.3
comp=Z,110nm,20.0s,baz=107,slow=39
QSPA South Pole Qui 81.81 180 P **P 10 33 58.4 +0.6**
comp=Z,9.5nm,0.9s,baz=276,slow=1.1,SNR=31
QSPA LR LR 11 08 13.8
comp=Z,122nm,21.1s,baz=326,slow=34
comp=Z,9.5nm,0.9s
QSPA South Pole Qui 81.81 180 **P 10 34 00.8 +3.0**
GURO Guroymak-BITLI 81.89 311 IAmb IAmb 10 34 03.9
comp=Z,19nm,0.9s
RAR Rarotonga 82.77 110 LR LR 11 07 36.0
comp=Z,53nm,22.0s,baz=289,slow=33
KBZ Khabaz 82.85 316 P **P 10 34 05.2 +1.8**
comp=Z,5.7nm,0.9s,baz=108,slow=3.4,SNR=9.5
KBZ LR LR 11 17 32.6
comp=Z,96nm,18.6s,baz=102,slow=40
comp=Z,5.7nm,0.9s
KBZ Khabaz 82.85 316⇑*iP* **P 10 34 02.3 -1.1**
BELG Belogornoye 82.95 325⇑*iP* **P 10 34 05.7 +2.0**
BELG pmax pmax
comp=Z,5.0nm,1.0s
SHA1 Shidzhatmaz 83.02 316⇑*iP* **P 10 34 07.5 +2.9**
KIV Kislovodsk 83.07 316 *eP* **P 10 34 02.1 -2.6**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,112nm,19.0s
MATP Matopo 83.83 250 LR LR 11 07 44.5
comp=Z,250nm,18.3s,baz=80,slow=33
MBAR Mbarara 84.13 270 LR LR 11 08 05.1
comp=Z,224nm,19.8s,baz=100,slow=33
MBAR Mbarara 84.13 270 P **P 10 34 11.2 +0.3**
MBAR IAmb IAmb 10 34 17.0
comp=Z,35nm,1.1s
MBAR Mbarara 84.13 270 P **P 10 34 07.9 -3.0**
MBAR Mbarara 84.13 270*ceP* **P 10 34 11.6 +0.7**
MBAR pmax pmax
comp=Z,34nm,1.3s
ASF Jabal al Asfar 84.28 304 LR LR 11 17 34.4
comp=Z,105nm,18.1s,baz=90,slow=40
KIRV Kirov 84.56 331 LR LR 11 18 07.2
comp=Z,245nm,20.5s,baz=117,slow=40
KIRV Kirov 84.56 331⇑*iP* **P 10 34 10.2 -1.6**
MREMI Moremi 84.56 248 IAmb IAmb 10 34 19.6
comp=Z,28nm,0.8s
MREMI Moremi 84.56 248 *i*P **P 10 34 14.0 +1.2**
BROLN Tlhalogang 84.83 250 *i*P **P 10 34 14.9 +0.7**
SOC Sochi 85.01 315 *eP* **P 10 34 11.4 -3.1**
SOC eS **SKSac 10 44 34.8 -3.7**
SOC eSS **SS 10 50 12.7 -3.9**
SOC eSSS SSS 10 53 45.1
EIL Elat 85.36 301 LR LR 11 15 03.5
comp=Z,359nm,19.1s,baz=176,slow=38
MMAI Mount Meron Ar 85.69 304 P **P 10 34 18.1 -0.1**
comp=Z,4.2nm,0.7s,baz=103,slow=3.8,SNR=9.1
MMAI LR LR 11 18 41.5
comp=Z,135nm,18.4s,baz=106,slow=40
comp=Z,4.2nm,0.7s
BOSA Boshof 85.82 242 P **P 10 34 18.9 -0.1**
comp=Z,4.2nm,1.0s,baz=114,slow=6.5,SNR=10.0
BOSA LR LR 11 06 00.4
comp=Z,322nm,21.5s,baz=34,slow=31
comp=Z,4.2nm,1.0s
BOSA Boshof 85.82 242 **P 10 34 19.6 +0.6**
BOSA IAmb IAmb 10 34 25.2
comp=Z,53nm,1.2s
LPHEP Lephephe 85.92 247 *i*P **P 10 34 20.5 +0.8**
LBTB Lobatse 85.95 245 LR LR 11 06 45.4
comp=Z,132nm,18.6s,baz=90,slow=32
VRH Novokhopyorsk 85.96 323 *eP* **P 10 34 20.6 +1.6**
VRH pmax pmax
comp=Z,12nm,0.8s
NVL N'lazarevskaya 86.60 199 *eP* **P 10 34 23.7 +1.8**
NVL pmax pmax
comp=Z,8.0nm,0.8s
KSANE Kasane 87.28 253 *i*P P 10 34 31.6 +5.2
VORD Divnogorie 87.35 322 *eP* **P 10 34 21.9 -3.9**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 87.50 322 *eP* **P 10 34 23.1 -3.4**
VSR pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 87.60 323 *eP* **P 10 34 24.4 -2.6**
VORR pmax pmax
comp=Z,32nm,0.7s
LPSR Galich'ya Gora 88.03 324 *eP* **P 10 34 31.0 +2.0**
LPSR pmax pmax
comp=Z,18nm,1.0s
BR131 Keskin Array S 88.50 310 IAmb IAmb 10 34 36.4
comp=Z,15nm,0.9s
BRTR Keskin Array B 88.50 310 P **P 10 34 30.3 -1.5**
comp=Z,3.0nm,0.7s,baz=126,slow=5.2,SNR=10.0
BRTR LR LR 11 18 52.9
comp=Z,102nm,18.7s,baz=102,slow=39
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 88.50 310 P **P 10 34 30.6 -1.2**
BRTR Keskin Array B 88.50 310 *i*P **P 10 34 29.7 -2.1**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
TROLL Troll, Antarti 89.01 197 ⇑P **P 10 34 35.4 +1.8**
comp=Z,353nm,0.6s
KGCAE Kacgae 89.32 247 **P 10 34 36.4 +0.4**
KGCAE Kacgae 89.32 247 *i*P **P 10 34 36.8 +0.7**
OBN Obninsk 90.03 326 LR LR 11 19 43.6
comp=Z,251nm,21.1s,baz=74,slow=39
OBN Obninsk 90.03 326 *eP* **P 10 34 38.2 -0.2**
OBN *e* 10 38 10.3
OBN *e*PPP PPP 10 40 06.2
OBN pmax pmax
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 90.05 332 *eP* **P 10 34 34.4 -3.9**
KLMR *e* 10 38 05.5
KLMR pmax pmax
comp=Z,18nm,1.4s
SNAA Sanae 90.67 196 ⇑P **P 10 34 42.4 +1.2**
comp=Z,267nm,0.9s
SNAA Sanae 90.67 196 P **P 10 34 40.8 -0.4**
comp=Z,3.0nm,0.5s,baz=90,slow=4.8,SNR=14
SNAA LR LR 11 12 04.5
comp=Z,163nm,18.5s,baz=190,slow=33
comp=Z,3.0nm,0.5s
SNAA Sanae 90.67 196 **P 10 34 42.4 +1.2**
SNAA IAmb IAmb 10 34 48.1
comp=Z,31nm,1.4s
SNAA Sanae 90.67 196⇓*iP* **P 10 34 42.4 +1.2**
SNAA pmax pmax
comp=Z,11nm,1.1s
TBI Tubuai 91.94 114 *eS* **S 10 45 42.2 -7.4**
comp=Z,1μm,45.0s
TBI *e*SS **SS 10 51 59.2 +1.1**
comp=Z,745nm,30.2s
TBI *e*LQ LQ 11 00 23.9
comp=Z,821nm,34.8s
TBI *e*LR LR 11 04 20.3
comp=Z,745nm,24.2s
VNA2 Neumayer--Watz 92.31 196 ⇑P **P 10 34 50.3 +1.5**
comp=Z,8.6nm,0.7s,baz=102,slow=5.5
BELA Belgrano 2 92.42 186 **P 10 34 50.0 +0.8**
BELA IAmb IAmb 10 34 55.0
comp=Z,29nm,1.4s
VNA1 Neumayer--Stat 92.70 196 ⇑P **P 10 34 52.1 +1.6**
comp=Z,3.3nm,0.8s
VNA3 Neumayer Olymp 92.74 195 ⇑P **P 10 34 51.2 +0.4**
comp=Z,8.9nm,0.8s
PPT2 Papeete2 92.78 108 *eP* **P 10 34 55.1 +3.0**
comp=Z,62nm,28.8s
PPT2 Papeete2 92.78 108 *eS* **S 10 45 56.9 -0.6**
comp=Z,52nm,26.5s
PPT2 *e*SS **SS 10 52 05.6 -5.1**
comp=Z,87nm,25.2s
PPT2 *e*LQ LQ 11 00 49.0
comp=Z,290nm,40.8s
PPT2 *e*LR LR 11 04 37.2
comp=Z,98nm,23.5s
PPT Papeete 92.79 108 LR LR 11 13 03.1
comp=Z,36nm,21.7s,baz=266,slow=33

AKASG Malin Array Be 93.53 321 P **P 10 34 51.6 -3.1**
comp=Z,1.2nm,0.6s,baz=84,slow=3.8,SNR=5.4
AKASG LR LR 11 25 12.7
comp=Z,128nm,18.9s,baz=68,slow=41
AKASG Malin Array Be 93.53 321 *i*P **P 10 34 58.5 +3.8**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AK01 Malin Array Si 93.53 321 P **P 10 34 54.9 +0.2**
GHRR 94.08 316 P **P 10 34 57.4 0.0**
TSUM Tsumeb 94.17 250 LR LR 11 11 17.1
comp=Z,239nm,21.6s,baz=136,slow=32
APA Apatity 94.26 338 *eP* P 10 34 51.8 -5.9
MLR Muntele Rosu 95.03 315 LR LR 11 25 08.9
comp=Z,132nm,18.4s,baz=64,slow=40
FINES FINESS Array B 96.55 331 P **P 10 35 06.9 -1.4**
comp=Z,3.2nm,0.9s,baz=105,slow=7.1,SNR=3.9
FINES LR LR 11 24 34.6
comp=Z,204nm,20.2s,baz=66,slow=39
comp=Z,3.2nm,0.9s
ARCES ARCESS Array B 97.39 339 LR LR 11 24 36.4
comp=Z,189nm,19.6s,baz=103,slow=39
KDAK Kodiak Island 98.21 33 LR LR 11 18 05.1
comp=Z,136nm,19.4s,baz=225,slow=34
ILAR Eielson Array 100.86 26 PP **PP 10 39 36.6 +1.2**
comp=Z,0.6nm,0.9s,baz=271,slow=9.1,SNR=4.1
ILAR PKKPbc **PKKPbc 10 51 44.6 +1.8**
comp=Z,1.1nm,0.9s,baz=70,slow=1.7,SNR=6.2
TAOE Nuku Hiva Isla 103.35 101 *eLR* LR 11 09 30.0
comp=Z,108nm,22.0s
GERES GERESS Array B 103.48 318 PP **PP 10 39 57.6 +1.9**
comp=Z,0.9nm,0.8s,baz=70,slow=4.4,SNR=4.4
NOA NORSAR Array B 103.73 331 PP **PKiKP 10 39 59.8 +1.3**
comp=Z,1.1nm,0.8s,baz=83,slow=2.0,SNR=3.4
RKT Rikitea 104.98 117 *eLR* LR 11 10 21.3
comp=Z,9μm,35.2s
YKA Yellowknife Ar 115.07 23 PKP **PKiKP 10 40 19.2 -0.5**
comp=Z,2.1nm,0.8s,baz=309,slow=2.9,SNR=3.7
ESDC Sonseca Array 117.30 310 PKP **PKiKP 10 40 25.8 +1.1**
comp=Z,3.3nm,0.9s,baz=14,slow=3.2,SNR=8.4
J05D Fort Rock, OR 119.97 44 **PKPdf 10 40 29.1 -0.9**
DBIC Dimbokro 120.28 273 PKP **PKPdf 10 40 31.6 +0.5**
comp=Z,2.3nm,0.9s,baz=45,slow=1.4,SNR=2.1
BEKR Beckworth 121.64 48 **PKPdf 10 40 31.9 -1.4**
NVAR Mina Array Bea 123.60 49 PKP **PKPdf 10 40 36.4 -0.7**
comp=Z,2.2nm,0.8s,baz=263,slow=2.5,SNR=5.2
ELK Elko 125.04 45 **PKPdf 10 40 38.9 -1.0**
ELK Elko 125.04 45 PKiKP **PKPdf 10 40 38.9 -1.0**
PDAR Pinedale Array 128.03 41 PKhKP PKPpre 10 40 37.5
comp=Z,4.5nm,1.2s,baz=83,slow=0.4,SNR=6.5
PDAR PKP **PKiKP 10 40 47.0 +0.9**
comp=Z,3.1nm,1.1s,baz=283,slow=3.9,SNR=6.2
PLCA Paso Flores 131.07 175 PKP **PKiKP 10 40 52.7 +0.6**
comp=Z,3.1nm,1.1s,baz=214,slow=3.4,SNR=4.0
PLCA SKPbc **SKPbc 10 44 14.7 -0.5**
comp=Z,3.0nm,1.0s,baz=219,slow=3.1,SNR=4.0
TXAR Lajitas Array 138.15 55 PKhKP PKPpre 10 40 54.9
comp=Z,1.2nm,0.9s,baz=265,slow=4.1,SNR=8.2
TXAR SKPbc **SKPbc 10 44 38.3 -0.2**
comp=Z,0.5nm,0.8s,baz=248,slow=3.4,SNR=3.5
CPUP Villa Florida 144.87 192 PKP **PKPab 10 41 16.3 +0.6**
comp=Z,15nm,1.0s,baz=28,slow=1.6,SNR=17
BDFB Brasilia 150.90 216 PKPbc **PKPbc 10 41 32.7 0.0**
comp=Z,16nm,0.7s,baz=176,slow=1.8,SNR=9.6
BDFB Brasilia 150.90 216 **PKPbc 10 41 32.4 -0.3**
BDFB Brasilia 150.90 216 PKIKP **PKPbc 10 41 32.4 -0.3**
LPAZ La Paz 155.50 173 PKP **PKPdf 10 41 33.7 -0.6**
comp=Z,1.7nm,1.0s,baz=70,slow=2.0,SNR=5.0

STR 14 10:22:02.8±0.1, 46°N±1°×±°, h0km, MLv1.5/7, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OG35	**Corcelles**	**0.36**	**43**	Pg	Pg	10 22 10.3	+0.6
OG35				Sg	Sg	10 22 14.8	+0.5
OGSM	**Saint Maurice**	**0.38**	**117**	Pg	Pg	10 22 10.4	+0.4
OGSM				Sg	Sg	10 22 15.2	+0.3
OGMY	**Moye**	**0.48**	**78**	Pg	Pg	10 22 11.7	-0.2
OGMY				Sg	Sg	10 22 17.8	-0.4
GRN	**Grenoble**	**0.65**	**146**	Pg	Pb	10 22 16.8	-0.4
GRN				Sg	Sg	10 22 25.1	+1.3
SSB	**Saint Sauveur**	**0.69**	**224**	Pg	Pb	10 22 18.6	+0.8

*KRNET **14** 10:42:04.6±0.1, 41°.19N×78°.88E, h19km, mb2.8*
*SOME **14** 10:42:05.5, 41°.22N×78°.75E, h5km*
*NNC **14** 10:42:06.8±1.3, 41°.22N×78°.70E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=8.6km s-min=5.5km az=167.0*
ISC 14 10:42:02.5±2.0, 40°.97N±0°.08×78°.69E±0°.05, h12km±12km, n26, σ1°12/40, 8C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.01**	**319**	⇓*iP*	**Pn**	**10 42 23.1**	**+0.2**
TARG				⇓*iS*	**Sb**	**10 42 36.6**	**+0.9**
PRZ	**Przheval'sk**	**1.53**	**352**	⇓*eP*	**Pn**	**10 42 29.9**	**+0.1**
PRZ				⇑*eS*	**Sn**	**10 42 48.2**	**-1.6**
KDJ	**Kajisay**	**1.62**	**316**	⇓*iP*	**Pg**	**10 42 33.3**	**-0.4**
KDJ				⇓*iS*	**Sg**	**10 42 54.9**	**+0.1**
SATY	**Saty** 4.6nm,0.7s	**2.10**	**354**	P	**Pb**	**10 42 40.4**	**-0.3**
SATY	11nm,0.2s			S	**Sb**	**10 43 05.5**	**-1.2**
ULHL	**Ulahol**	**2.24**	**306**	⇑*iP*	**Pg**	**10 42 44.9**	**-0.6**
ULHL				⇑*iS*	**Sg**	**10 43 13.0**	**-1.5**
SHLS	**Shalkode** 14nm,0.3s	**2.26**	**14**	Pg	**Pg**	**10 42 46.1**	**+0.2**
SHLS	42nm,0.5s			Lg	Lg	10 43 15.4	
SHLS	**Shalkode** 14nm,0.3s	**2.26**	**14**	*eP*	**Pg**	**10 42 46.1**	**+0.2**
SHLS	42nm,0.5s			*eS*	**Sg**	**10 43 15.4**	**+0.2**
JNKS	**Jany-Kuch**	**2.30**	**273**	⇓*eP*	**Pg**	**10 42 47.5**	**+0.8**
JNKS				⇓*eS*	**Sg**	**10 43 17.9**	**+1.4**
TNSS	**Tian-Shan** 4.5nm,0.8s	**2.44**	**328**	Pg	**Pb**	**10 42 48.1**	**+1.5**
TNSS	7.9nm,1.0s			Lg	Lg	10 43 18.5	
TNSS	**Tian-Shan** 4.5nm,0.8s	**2.44**	**328**	*eP*	**Pb**	**10 42 48.1**	**+1.5**
TNSS	7.9nm,1.0s			*eS*	**Sb**	**10 43 18.5**	**+1.7**
KPKS	**Kokpek** 0.3nm,0.2s	**2.50**	**360**	Pg	**Pb**	**10 42 47.4**	**+0.1**
KPKS	36nm,0.6s			Lg	Lg	10 43 17.7	
KOTS	**Kotyrbulak** 18nm,0.6s	**2.55**	**333**	Pg	**Pb**	**10 42 49.5**	**+1.2**
KOTS	48nm,0.4s			Lg	Lg	10 43 21.4	
KOTS	**Kotyrbulak** 18nm,0.6s	**2.55**	**333**	*eP*	**Pb**	**10 42 49.5**	**+1.2**
KOTS	48nm,0.4s			*eS*	**Sb**	**10 43 21.4**	**+1.7**
BOOM	**Boomskoye usch**	**2.56**	**307**	⇑*iP*	**Pb**	**10 42 49.0**	**+0.5**
BOOM				⇑*iS*	**Sb**	**10 43 20.5**	**+0.5**
MTBS	**Maitube** 13nm,0.6s	**2.74**	**323**	Pg	**Pg**	**10 42 54.3**	**-0.7**
MTBS	6.9nm,0.3s			Lg	Lg	10 43 29.2	
MTBS	**Maitube** 13nm,0.6s	**2.74**	**323**	*eP*	**Pg**	**10 42 54.3**	**-0.7**
MTBS	6.9nm,0.3s			*eS*	**Sg**	**10 43 29.2**	**-1.3**
KTMS	**Ketmen** 3.9nm,0.5s	**2.77**	**26**	Pg	**Pb**	**10 42 52.0**	**+0.1**
KTMS	18nm,1.0s			Lg	Lg	10 43 25.4	
KTMS	**Ketmen** 3.9nm,0.5s	**2.77**	**26**	*eP*	**Pb**	**10 42 52.0**	**+0.1**
KTMS	18nm,1.0s			*eS*	**Sb**	**10 43 25.4**	**-0.5**
KTBS	**Karatobe** 13nm,0.8s	**3.12**	**332**	Pg	**Pb**	**10 42 59.2**	**+1.2**
KTBS				Lg	Lg	10 43 38.2	
BLB	**Baldybastay** 8.5nm,0.5s	**3.13**	**357**	Pg	**Pb**	**10 42 58.3**	**+0.1**
BLB	36nm,0.7s			Lg	Lg	10 43 36.3	
DGS	**Degeres** 7.3nm,0.8s	**3.15**	**317**	Pg	**Pg**	**10 43 00.9**	**-1.9**
DGS	6.2nm,0.9s			Lg	Lg	10 43 40.5	
ARXS	**Arharly**	**3.31**	**349**	Pg	**Pb**	**10 43 02.2**	**+1.1**
	2.3nm,0.4s						
ARXS	49nm,0.5s			Lg	Lg	10 43 43.0	
ARXS	**Arharly**	**3.31**	**349**	*eP*	**Pb**	**10 43 02.2**	**+1.1**
ARXS				*eS*	**Sb**	**10 43 43.0**	**+1.7**
ARLS	**Aral**	**3.41**	**287**	⇑*eP*	**Pb**	**10 43 01.6**	**-1.3**
ARLS				⇑*eS*	**Sb**	**10 43 42.9**	**-1.4**
KNOS	**Konyrlen** 3.9nm,0.9s	**3.41**	**6**	Pg	**Pb**	**10 43 04.0**	**+1.1**
KNOS	13nm,0.8s			Lg	Lg	10 43 45.8	
KRBS	**Karabastau** 3.5nm,0.4s	**3.53**	**322**	Pg	**Pb**	**10 43 06.7**	**+1.8**
KRBS	1.2nm,0.6s			Lg	Lg	10 43 51.1	

DJA 14 10:55:53.9±0.3, 4°S±3°×113°2E±°, h10km, M4.1/12, mb4.7/1, MLv3.8/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.00**	**28**	P	Pg	10 56 13.2	0.0
FAKI				S	Sb	10 56 26.6	0.0
KMPI	**Kaimana, Papua**	**1.93**	**86**	P	Pn	10 56 27.9	+1.1
KMPI				S	Sn	10 56 51.4	+0.4
BNDI	**Bandanaira**	**2.00**	**249**	P	Pn	10 56 26.1	-1.7
BNDI				S	Sb	10 56 54.7	-0.7
MSAI	**Masohi**	**2.88**	**279**	P	Pn	10 56 39.3	-0.6
SWI	**Sorong**	**2.97**	**350**	P	Pn	10 56 41.1	-0.1
RKPI	**Ransiki, Papua**	**3.31**	**46**	P	Pn	10 56 45.5	-0.3
AAI	**Ambon**	**3.58**	**272**	P	Pn	10 56 49.5	0.0
BAKI	**Biak**	**5.04**	**59**	P	Pn	10 57 10.1	+0.4
SANI	**Sanana**	**6.04**	**287**	P	Pn	10 57 20.8	-2.6

DJA 14 11:02:10.7±0.2, 8°S±2°×115°5E±°, h10km, M3.7/17, mb3.9/4, MLv3.6/17, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**0.34**	**72**	P	Pg	11 02 18.1	+0.7
SRBI				S	Sb	11 02 23.8	-0.4
DNP	**Denpasar**	**0.58**	**147**	P	Pg	11 02 22.2	+0.2
ABJI	**Asem Bagus**	**0.76**	**301**	P	Pg	11 02 25.1	-0.3
ABJI				S	Sb	11 02 36.1	-0.3
JAGI	**Jajag, Banyuwa**	**0.78**	**249**	P	Pg	11 02 24.6	-1.2
BLJI	**Banyuglugur**	**1.36**	**289**	P	Pn	11 02 35.4	-0.3
BLJI				S	Sb	11 02 53.5	-0.1
KMMI	**Kalianget**	**1.46**	**321**	P	Pb	11 02 38.1	+0.2
TWSI	**Taliwang, Sumb**	**2.04**	**106**	P	Pn	11 02 45.6	+0.4
GRJI	**Gresik**	**2.71**	**298**	P	Pn	11 02 53.3	-1.0
PLAI	**Plampang**	**2.92**	**103**	P	Pn	11 02 57.9	+0.6
PCJI	**Pacitan**	**3.67**	**270**	P	Pn	11 03 07.9	+0.3
WBSI	**Waikabubak, Su**	**4.67**	**108**	P	Pn	11 03 21.8	+0.4
BKSI	**Bulukumba** 0.0nm8.8nm,0.7s	**5.93**	**62**	P	Pn	11 03 38.2	-0.4
EDFI	**Ende, Flores**	**6.75**	**95**	P	Pn	11 03 50.3	+0.3

*IDC **14** 11:06:30.4±0.9, 36°.32N×142°.63E, h0km, mb3.7/12, mbtmp3.7/15, ML3.1/3, MS3.0/1, Error ellipse: s-maj=21.5km s-min=19.6km az=75.0*
*NIED **14** 11:06:32.2, 36°.41N×142°.74E, h27km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}6.00; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-5.34; $M_{r\theta}$-1.92; $M_{\theta\phi}$-1.90; $M_{\phi r}$1.54; Fault plane solution: $M_0$6.46000×10^{14} NP1: ϕ_s217.00000°, δ44.00000°, λ117.00000°. NP2:ϕ_s1.00000°, δ52.00000°, λ66.00000°.*
*JMA **14** 11:06:32.2±0.4, 36°.4N±0°.8×14°.3E±°, h27km, MV3.6/25, FAR E OFF KANTO*
ISC 14 11:06:32.7±0.8, 36°.36N±0°.06×142°.63E±0°.09, h15km, n35, σ0°97/30, mb3.7/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.65**	**297**	*eP*	**Pn**	**11 07 01.3**	**+0.1**
ONAJ				*eS*	**Sn**	**11 07 22.2**	**+0.1**
JHYU	**Hitachinakayam**	**1.65**	**270**	P	**Pn**	**11 07 01.5**	**+0.3**
JHO	**Hitachi**	**1.68**	**279**	P	**Pn**	**11 07 01.5**	**-0.1**
BSO1	**Boso 1**	**2.17**	**219**	*eP*	**Pn**	**11 07 08.6**	**+0.7**
JOTO	**OTAMA OYAMA**	**2.20**	**304**	P	**Pn**	**11 07 09.2**	**+0.5**
JAG	**Ashikaga**	**2.57**	**272**	*eP*	**Pn**	**11 07 14.2**	**+0.4**
JMK	**Ichinoseki**	**2.82**	**337**	*eP*	**Pn**	**11 07 17.2**	**-0.1**
JRY	**Ryogami san**	**3.04**	**265**	*eP*	**Pn**	**11 07 20.8**	**+0.6**
JOD2	**Odawara 2**	**3.08**	**250**	*eP*	**Pn**	**11 07 21.9**	**+1.0**
JYK	**Kaneyama**	**3.13**	**325**	*eP*	**Pn**	**11 07 21.4**	**-0.1**
JOM	**Ohasama**	**3.28**	**342**	*eP*	**Pn**	**11 07 24.0**	**+0.4**
MJAR	**Matsushiro Arr** 0.6nm,0.3s,baz=88,slow=9.4,SNR=24	**3.57**	**274**	Pn	**Pn**	**11 07 28.6**	**+1.0**
MJAR	comp=Z,194nm,18.9s,baz=260,slow=42 5.6nm,0.6s			LR	LR	11 09 01.7	
MAT	**Matsushiro**	**3.57**	**274**	*eP*	**Pn**	**11 07 29.3**	**+1.7**
JHJ	**Hachijo jima 2** 12nm,0.3s,baz=55,slow=23,SNR=1.6	**4.00**	**217**	Pn	**Pn**	**11 07 32.9**	**-0.5**
JHJ	50nm,0.3s,baz=87,slow=23,SNR=5.9 149nm,0.9s			Sn	**Sn**	**11 08 18.6**	**-1.4**
ASAJ	**Asahikawa** 0.9nm,0.3s,baz=172,slow=17,SNR=6.5	**7.75**	**360**	Pn	**Pn**	**11 08 21.9**	**-2.9**
JCJ	**Chichijima** 3.9nm,0.3s,baz=300,slow=22,SNR=5.1	**9.25**	**182**	Pn	Pn	11 08 34.7	-11
JCJ	12nm,0.3s,baz=3.1,slow=18,SNR=6.3			Sn	Sn	11 10 12.6	-17
USRK	**Ussuriysk Ar.** 0.1nm,0.3s,baz=110,slow=12,SNR=1.5 2.2nm,0.8s	**11.28**	**317**	Pn	**Pn**	**11 09 14.1**	**+0.8**
HILR	**Hailar Array B** 1.0nm,0.4s,baz=124,slow=12,SNR=1.9 1.0nm,0.4s	**21.21**	**316**	P	**P**	**11 11 16.1**	**-1.7**
H11N2	**WAKE ISLAND Hy** baz=312,slow=75,SNR=5.8	**26.96**	**121**	T	T	11 40 23.9	
H11N1	**WAKE ISLAND Hy** baz=312,slow=75,SNR=5.2	**26.97**	**121**	T	T	11 40 19.7	
H11N3	**WAKE ISLAND Hy** baz=312,slow=75,SNR=5.0	**26.98**	**121**	T	T	11 40 24.5	
H11S1	**WAKE ISLAND Hy** baz=316	**27.67**	**124**	T	T	11 41 19.0	
H11S3	**WAKE ISLAND Hy** baz=316	**27.67**	**124**	T	T	11 41 38.7	
H11S2	**WAKE ISLAND Hy** baz=316	**27.69**	**124**	T	T	11 41 31.6	
SONM	**Songino Array** 0.7nm,0.5s,baz=98,slow=7.4,SNR=4.5 0.7nm,0.5s	**28.97**	**305**	P	**P**	**11 12 31.4**	**-0.3**
ZALV	**Zalesovo Beam** 1.0nm,0.5s,baz=90,slow=7.7,SNR=5.1 1.0nm,0.5s	**43.09**	**313**	P	**P**	**11 14 32.9**	**+0.9**
MKAR	**Makanchi Array** 1.1nm,0.7s,baz=94,slow=7.7,SNR=9.9 1.1nm,0.7s	**45.31**	**303**	P	**P**	**11 14 49.9**	**0.0**
KURBB	**Kurchatov Arra** 1.3nm,0.6s,baz=81,slow=7.8,SNR=14 1.3nm,0.6s	**47.19**	**309**	P	**P**	**11 15 04.3**	**-0.2**
ILAR	**Eielson Array** 0.4nm,0.8s,baz=270,slow=8.4,SNR=2.8 0.4nm,0.8s	**49.54**	**32**	P	**P**	**11 15 22.2**	**-0.3**
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=7.9,slow=7.5,SNR=3.7 0.5nm,0.5s	**56.55**	**189**	P	**P**	**11 16 14.2**	**-0.4**
ASAR	**Alice Springs** 0.3nm,0.9s,baz=4.7,slow=6.4,SNR=2.2 0.3nm,0.9s	**60.27**	**189**	P	**P**	**11 16 39.9**	**-0.7**
NVAR	**Mina Array Bea** 0.2nm,0.5s,baz=307,slow=6.1,SNR=3.7 0.2nm,0.5s	**74.60**	**54**	P	**P**	**11 18 12.5**	**+0.9**
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=39,slow=7.4,SNR=1.8 0.2nm,0.3s	**75.42**	**323**	P	**P**	**11 18 15.3**	**-0.5**
BRTR	**Keskin Array B** 0.7nm,0.8s,baz=46,slow=8.3,SNR=2.1 0.7nm,0.8s	**80.03**	**312**	P	**P**	**11 18 43.1**	**+1.3**
TXAR	**Lajitas Array** 0.2nm,0.6s,baz=310,slow=2.5,SNR=3.8 0.2nm,0.6s	**89.75**	**53**	P	**P**	**11 19 31.4**	**+0.5**

DJA 14 11:06:41.0±0.2, 8°S±2°×115°5E±°, h10km, M4.0/18, mb4.2/5, MLv3.8/18, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**0.32**	**73**	P	Pg	11 06 48.1	+0.6
SRBI				S	Sb	11 06 53.4	-0.8

DNP	**Denpasar**	**0.58**	**148**	P	Pb	11 06 53.1 -0.2
ABJI	**Asem Bagus**	**0.76**	**300**	P	Pg	11 06 55.7 0.0
JAGI	**Jajag, Banyuwa**	**0.79**	**249**	P	Pg	11 06 54.5 -1.9
BLJI	**Banyuglugur**	**1.36**	**288**	P	Pn	11 07 05.6 -0.5
BLJI				S	Sb	11 07 24.1 0.0
KMMI	**Kalianget**	**1.46**	**320**	P	Pb	11 07 08.0 -0.2
TWSI	**Taliwang, Sumb**	**2.04**	**106**	P	Pn	11 07 15.3 -0.1
PLAI	**Plampang**	**2.92**	**103**	P	Pn	11 07 28.2 +0.7
PCJI	**Pacitan**	**3.69**	**270**	P	Pn	11 07 38.1 0.0
UGM	**Wanagama**	**4.34**	**273**	P	Pn	11 07 47.3 +0.1
WBSI	**Waikabubak, Su**	**4.67**	**108**	P	Pn	11 07 51.4 -0.3
BSSI	**Bau Bau, Buton** 0.1nm17nm,0.8s	**5.91**	**70**	P	Pn	11 08 07.6 -1.0
BKSI	**Bulukumba** 0.0nm13nm,0.9s	**5.91**	**62**	P	Pn	11 08 08.0 -0.7
BNSI	**Bone** 0.1nm12nm,0.5s	**6.39**	**54**	P	Pn	11 08 16.1 +0.8
EDFI	**Ende, Flores**	**6.74**	**95**	P	Pn	11 08 20.7 +0.5

VIE ***14*** *11:06:55.2±0.8,50.80N×15.16E,h0km±3km,mb2.4/5, ml2.5/6,Error ellipse: s-maj=5.0km s-min=2.5km az=154.0*
5 km E of Liberec Suspected Mining induced.

ISC 14 11:06:51.8±2.9,51.0N±0.1×15.2E±0.1,h0km,n9,σ0s55/11, Poland

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VRAC	**Vranov**	**1.93**	**151**	*e*PN	**Pn**		**11 07 26.2**	**+0.4**
MORC	**Moravsky Berou**	**1.95**	**128**	*e*PN	**Pn**		**11 07 26.4**	**+0.2**
KRUC	**Moravsky**	**2.10**	**158**	*e*PN	**Pn**		**11 07 28.3**	**+0.1**
CONA	**Conrad Observa** 0.8nm,0.2s	**3.12**	**172**	Pn	**Pn**		**11 07 42.8**	**+0.6**
CONA	7.2nm,0.3s			Sg	**Sg**		**11 08 31.7**	**-0.1**
MOA	**Molln** 6.4nm,0.4s	**3.22**	**191**	*e*Sg	**Sg**		**11 08 35.8**	**+0.7**
RONA	**Rosalia, Austr** 3.3nm,0.3s	**3.39**	**167**	*e*Sn	**Sn**		**11 08 27.0**	**+0.1**
BIOA	**Bad Ischl, Aus** 4.8nm,0.4s	**3.47**	**198**	*e*Pg	**Pg**		**11 07 58.1**	**-0.1**
ARSA	**Arzberg** 3.3nm,0.4s	**3.77**	**176**	*e*Sg	**Sg**		**11 08 52.2**	**-0.6**
LESA	**Schwarzleotal** 0.8nm,0.2s	**3.94**	**206**	Pg	**Pg**		**11 08 06.4**	**-0.9**
LESA	1.6nm,0.3s			*e*Sg	**Sg**		**11 08 58.9**	**+0.5**

AUST 14 11:10:15.0±0.3,20.3S±43.4E±,h10km,mb3.8/7, ML2.6/6,Error ellipse: s-maj=9.0km s-min=6.0km az=168.1,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**0.30**	**101**	P	Pg		11 10 21.3	+0.3
WRAB				S	Sg		11 10 25.4	+0.3
WB10	**Warramunga Arr**	**0.35**	**72**	P	Pg		11 10 21.9	-0.1
WR0	**Warramunga Arr**	**0.48**	**100**	P	Pg		11 10 24.3	-0.1
QIS	**Mount Isa**	**5.27**	**98**	P	Pn		11 11 35.6	+1.7
QIS	**Mount Isa**	**5.27**	**98**	S	Sn		11 12 34.1	-0.7
KNRA	**Kununurra** comp=Z,0.0nmcomp=Z,11nm,1.5s	**6.53**	**309**	P	Pn		11 11 51.1	-0.2
KNRA				S	Sn		11 13 02.4	-3.4
NTNOZ	**Mutton Hole St** comp=Z,0.3nmcomp=Z,216nm,1.3s	**7.13**	**73**	P	Pn		11 12 00.3	+0.8
NTNOZ				S	Sn		11 13 19.0	-1.6
WRKA	**Warakurna** comp=Z,0.0nmcomp=Z,1.5nm,1.9s	**7.38**	**225**	P	Pn		11 12 02.6	-0.3
WRKA				S	Sn		11 13 23.0	-3.9
OOD	**Oodnadatta** comp=Z,0.0nmcomp=Z,1.7nm,1.1s	**8.02**	**169**	P	Pn		11 12 12.3	+0.6
OOD				S	Sn		11 13 39.3	-3.3
FITZ	**Fitzroy Crossi**	**8.14**	**281**	P	Pn		11 12 13.8	+0.5
COEN	**Coen** comp=Z,8.3nm,1.4s,comp=Z,0.0nm	**10.54**	**57**	P	Pn		11 12 46.1	-0.2
LCRK	**Leigh Creek** comp=Z,5.5nm,1.4s	**11.18**	**161**	P	Pn		11 12 55.6	+0.7
FORT	**Forrest** comp=Z,5.2nm,1.2s	**12.12**	**205**	P	Pn		11 13 06.5	-1.4

KRNET ***14*** *11:20:40.0±0.1,42.23N×80.04E,mb2.3*
SOME ***14*** *11:20:41.4,42.53N×79.50E,h10km*
NNC ***14*** *11:20:42.5±1.2,42.62N×79.57E,h0km,mb2.6,mpv2.6, Error ellipse: s-maj=8.4km s-min=3.7km az=163.0*

ISC 14 11:20:41.7±2.0,42.52N±0.06×79.59E±0.10,h10km,n13, σ1s80/25,8C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode** 3.0nm,0.1s	**0.64**	**352**	P	**Pg**		**11 20 53.9**	**-0.3**
SHLS	14nm,0.3s			S	**Sg**		**11 21 02.3**	**-0.3**
SHLS	**Shalkode** 3.0nm,0.1s	**0.64**	**352**	*e*P	**Pg**		**11 20 53.9**	**-0.3**
SHLS	14nm,0.3s			*e*S	**Sg**		**11 21 02.3**	**-0.3**
PRZ	**Przheval'sk**	**0.88**	**268**	⇑*e*P	**Pn**		**11 21 02.6**	**+2.2**
PRZ				⇑*e*S	**Sn**		**11 21 19.3**	**+6.0**
SATY	**Saty** 1.3nm,0.2s	**1.02**	**302**	P	**Pb**		**11 21 01.0**	**-0.6**
SATY	4.5nm,0.3s			S	**Sb**		**11 21 14.6**	**-0.6**
KPKS	**Kokpek** 0.2nm,0.1s	**1.16**	**325**	P	**Pb**		**11 21 02.5**	**-1.4**
KPKS	6.4nm,0.3s			S	**Sg**		**11 21 17.2**	**-1.7**
KPKS	**Kokpek** 0.2nm,0.1s	**1.16**	**325**	*e*P	**Pb**		**11 21 02.5**	**-1.4**
KPKS	6.4nm,0.3s			*e*S	**Sg**		**11 21 17.2**	**-1.7**
TARG	**Taragay, Kyrgy**	**1.55**	**240**	⇑*i*P	**Pn**		**11 21 09.6**	**-0.1**
TARG				⇑*i*S	**Sg**		**11 21 31.2**	**-0.3**
BLB	**Baldybastay** 1.7nm,0.1s	**1.77**	**333**	P	**Pb**		**11 21 13.5**	**-0.9**
BLB	2.7nm,0.3s			S	**Sb**		**11 21 36.2**	**-0.6**
KDJ	**Kajisay**	**1.83**	**258**	⇓*i*P	**Pb**		**11 21 14.7**	**-0.7**
KDJ				⇓*i*S	**Sg**		**11 21 39.8**	**-0.8**
ARXS	**Arharly** 0.5nm,0.3s	**2.12**	**323**	Pg	**Pb**		**11 21 19.9**	**-0.5**
ARXS	4.0nm,0.4s			Lg	Lg		11 21 46.9	
ARXS	**Arharly** 0.5nm,0.3s	**2.12**	**323**	*e*P	**Pb**		**11 21 19.9**	**-0.5**
ARXS	4.0nm,0.4s			*e*S	**Sb**		**11 21 46.9**	**+0.1**
ULHL	**Ulahol**	**2.50**	**265**	⇑*i*P	**Pb**		**11 21 24.2**	**-2.6**
ULHL				⇑*i*S	**Sb**		**11 21 56.9**	**-0.8**
BOOM	**Boomskoye usch**	**2.70**	**271**	⇑*i*P	**Pb**		**11 21 27.4**	**-2.8**
BOOM				⇑*i*S	**Sb**		**11 22 02.1**	**-1.4**

IDC ***14*** *11:30:35.5±1.1,21.94N×147.04E,h0km,mb4.0/14, mbtmp4.0/14,MS3.3/3,Error ellipse: s-maj=25.8km s-min=25.1km az=30.0*
NEIC ***14*** *11:30:37.7±2.1,21.95N±0.02×147.1E±0.1,h10km±1km, mb4.6/21,Error ellipse: s-maj=21.8km s-min=2.9km az=99.0*

ISC 14 11:30:36.9±0.6,21.98N±0.08×147.1E±0.1,h10km,n40, σ1s12/34,mb4.4/24,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima** 7.6nm,0.3s,baz=70,slow=22,SNR=11	**6.79**	**320**	Pn	**Pn**		11 32 07.7	-9.0
JCJ	16nm,0.3s,baz=282,slow=23,SNR=7.2			Sn	Sn		11 33 19.4	-15
JCJ	**Chichijima**	**6.79**	**320**		**Pn**		**11 32 16.4**	**-0.3**
GUMO	**Guam**	**8.62**	**195**	Pn	**Pn**		**11 32 42.6**	**+0.9**
MJAR	**Matsushiro Arr**	**16.45**	**334**	Pn	**Pn**		**11 34 27.1**	**-0.7**
JNU	**Nakatsue** comp=Z,87nm,18.5s,baz=269,slow=34	**18.16**	**311**	LR	LR		11 41 01.5	
KSRS	**Korea Array** 3.1nm,0.8s,baz=133,slow=9.5,SNR=9.6	**22.64**	**317**	P	**P**		**11 35 39.8**	**+1.6**
USRK	**Ussuriysk Ar.** 2.3nm,0.8s,baz=132,slow=8.7,SNR=2.4	**25.45**	**334**	P	**P**		**11 36 06.5**	**+1.6**
DAV	**Davao City (W)**	**25.53**	**238**	P	**P**		**11 36 06.4**	**+0.5**
SHEM	**Shemya Is, Ala** comp=Z,30nm,21.8s,baz=309,slow=33	**37.02**	**27**	LR	LR		11 50 55.2	

MTN	**Manton Dam**	**38.00**	**206**	P	**P**	**11 37 55.3 0.0**
MTN	comp=Z,24nm,1.5s			IAmb	IAmb	11 38 34.5
ULN	**Ulaanbaatar**	**41.11**	**319**	P	**P**	**11 38 21.7 +0.5**
SONM	**Songino Array** comp=Z,0.5nm,0.5s,baz=119,slow=8.4,SNR=3.6 comp=Z,0.5nm,0.5s	**41.50**	**318**	P	**P**	**11 38 24.6 +0.2**
WB0	**Warramunga Arr**	**43.32**	**198**	P	**P**	**11 38 38.4 -0.9**
WB0	comp=Z,7.0nm,1.4s			IAmb	IAmb	11 38 55.3
WR8	**Warramunga Arr**	**43.47**	**197**	P	**P**	**11 38 38.4 -2.1**
WR8	comp=Z,4.8nm,1.2s			IAmb	IAmb	11 38 55.7
WRA	**Warramunga Arr** comp=Z,0.4nm,0.5s,baz=15,slow=8.6,SNR=6.2 comp=Z,0.4nm,0.5s	**43.50**	**198**	P	**P**	**11 38 40.7 0.0**
CLES	**Cleveland East**	**44.94**	**36**	P	**P**	**11 38 49.8 -2.1**
FITZ	**Fitzroy Crossi**	**45.04**	**209**	P	**P**	**11 38 51.8 -1.2**
CMAR	**Chiang Mai Ar** comp=Z,0.3nm,0.3s,baz=64,slow=9.4,SNR=1.7 comp=Z,0.3nm,0.3s	**45.20**	**275**	P	**P**	**11 38 54.0 -0.5**
GIRL	**Giralia**	**54.72**	**218**	P	**P**	**11 40 06.2 -0.5**
OHAK	**Old Harbor**	**55.40**	**35**	P	**P**	**11 40 09.4 -1.8**
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.5s,baz=115,slow=8.1,SNR=6.1 comp=Z,1.0nm,0.5s	**56.28**	**321**	P	**P**	**11 40 16.8 -0.8**
CAN	**Canberra**	**57.01**	**178**	P	**P**	**11 40 23.0 +0.1**
MKAR	**Makanchi Array** comp=Z,2.3nm,0.6s,baz=89,slow=9.2,SNR=25 comp=Z,2.3nm,0.6s	**57.21**	**312**	P	**P**	**11 40 24.4 +0.1**
MAKZ	**Makanchi**	**57.42**	**312**	P	**P**	**11 40 25.2 -0.6**
MAKZ	comp=Z,3.9nm,0.8s			IAmb	IAmb	11 40 26.6
D20K	**Etivluk River**	**57.68**	**21**	P	**P**	**11 40 29.2 +1.9**
D20K	comp=Z,15nm,1.4s			IAmb	IAmb	11 41 02.5
KURK	**Kurchatov**	**59.77**	**317**	P	**P**	**11 40 42.2 +0.2**
KURK	**Kurchatov** comp=Z,2.1nm,0.5s	**59.77**	**317**	IAmb	IAmb	11 40 43.1
D23K	**Nanushuk River**	**59.78**	**22**	P	**P**	**11 40 43.4 +1.6**
D23K	comp=Z,8.5nm,1.4s			IAmb	IAmb	11 40 51.6
KURBB	**Kurchatov Arra** comp=Z,1.7nm,0.5s,baz=92,slow=7.7,SNR=14 comp=Z,1.7nm,0.5s	**59.82**	**317**	P	**P**	**11 40 42.2 -0.2**
C23K	**Itkillik River**	**60.08**	**21**	P	**P**	**11 40 44.7 +0.9**
C23K	comp=Z,2.8nm,0.7s			IAmb	IAmb	11 40 47.2
ILAR	**Eielson Array** comp=Z,1.1nm,0.9s,baz=245,slow=5.6,SNR=5.5 comp=Z,1.1nm,0.9s	**60.13**	**27**	P	**P**	**11 40 45.4 +1.1**
E24K	**Your Creek**	**60.30**	**23**	P	**P**	**11 40 47.3 +1.8**
E24K	comp=Z,6.1nm,1.2s			IAmb	IAmb	11 41 15.2
BOOM	**Boomskoye usch**	**61.84**	**307**	P	**P**	**11 40 56.4 -0.2**
BOOM	comp=Z,3.1nm,0.6s			IAmb	IAmb	11 40 57.5
AAK	**Ala-Archa** comp=Z,42nm,18.8s,baz=329,slow=38	**62.89**	**308**	LR	LR	12 10 16.5
BVAR	**Borovoye Array** comp=Z,2.5nm,0.6s,baz=79,slow=7.7,SNR=11 comp=Z,2.5nm,0.6s	**64.83**	**319**	P	**P**	**11 41 15.9 -0.1**
YKA	**Yellowknife Ar** comp=Z,1.0nm,0.9s,baz=53,slow=10,SNR=4.6 comp=Z,1.0nm,0.9s	**74.48**	**28**	P	**P**	**11 42 15.1 -0.2**
ARCES	**ARCESS Array B** comp=Z,3.4nm,0.9s,baz=76,slow=10,SNR=5.2 comp=Z,3.4nm,0.9s	**79.79**	**342**	P	**P**	**11 42 45.1 0.0**
ARCES	**ARCESS Array B** comp=Z,23nm,1.4s	**79.79**	**342**	IAmb	IAmb	11 43 04.4
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.7s,baz=271,slow=5.2,SNR=4.6 comp=Z,0.3nm,0.7s	**80.09**	**53**	P	**P**	**11 42 49.4 +1.9**
FINES	**FINESS Array B** comp=Z,1.8nm,0.4s,baz=72,slow=4.5,SNR=18 comp=Z,1.8nm,0.4s	**84.47**	**336**	P	**P**	**11 43 08.7 -1.0**

SCB ***14*** *11:38:33.1±1.4,18.00S×63.58W,h7km±10km,ML3.3/1, Error ellipse: s-maj=5.9km s-min=4.7km az=0.0*
VAO ***14*** *11:38:36.3±2.5,17.94S×63.59W,h12km±18km,mb4.2*

ISC 14 11:38:36.8±1.0,17.93S±0.09×63.52W±0.07,h10km,n26, σ1s39/27,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.65**	**261**	Pg	Pn		11 39 03.6	-2.5
SOET	**ToroToro**	**2.19**	**265**	Pg	**Pn**		**11 39 13.1**	**-0.5**
SOET				Sg	**Sn**		**11 39 41.7**	**+0.8**
SOET	217nm,0.5s			IAML			11 39 43.9	
SIV	**San Ignacio**	**3.03**	**51**	Pn	**Pn**		**11 39 27.6**	**+2.7**
MOCB	**Mochara**	**3.86**	**211**	Pn	**Pn**		**11 39 36.8**	**+0.1**
SOEO	**Opoqueri**	**4.20**	**261**	Pn	**Pn**		**11 39 42.8**	**+1.5**
BBOE	**La Paz, Chanca**	**4.40**	**284**	Pn	**Pn**		**11 39 45.7**	**+1.5**
BBOJ	**La Paz, Jacaqu**	**4.56**	**281**	Pn	**Pn**		**11 39 48.3**	**+2.0**
YJA	**Yavi**	**4.62**	**204**	Pn	**Pn**		**11 39 48.1**	**+0.9**
LPAZ	**La Paz**	**4.70**	**290**	Pn	**Pn**		**11 39 49.2**	**+0.8**
LPAZ	**La Paz**	**4.70**	**290**	*e*P	**Pn**		**11 39 46.9**	**-1.4**
LPAZ				*e*S	**Sn**		**11 40 41.2**	**-2.1**
BBOB	**La Paz, Bander**	**4.75**	**291**	Pn	**Pn**		**11 39 50.5**	**+1.5**
PTLB	**Pontes e Lacer**	**4.87**	**60**	Pn	**Pn**		**11 39 53.2**	**+3.1**
PTLB	**Pontes e Lacer**	**4.87**	**60**	*e*P	**Pn**		**11 39 50.5**	**+0.3**
BBOD	**La Paz, Gloria**	**5.02**	**284**	Pn	**Pn**		**11 39 54.7**	**+2.0**
VILB	**Vilhena**	**5.89**	**33**	*e*P	**Pn**		**11 40 04.6**	**+0.4**
MURT	**Porto Murtinho**	**6.69**	**125**	*e*P	**Pn**		**11 40 15.1**	**0.0**
BDQN	**Bodoquena, MS**	**6.87**	**112**	*e*P	**Pn**		**11 40 17.6**	**-0.1**
SALV	**Santo Antonio**	**7.76**	**76**	*e*P	**Pn**		**11 40 31.3**	**+1.5**
AQDB	**Aquidauana**	**7.81**	**110**	*e*P	**Pn**		**11 40 29.9**	**-0.6**
PP1B	**Ponte de Pedra**	**8.24**	**89**	*e*P	**Pn**		**11 40 36.9**	**+0.4**
PDRB	**Porto dos Gac**	**9.08**	**47**	*e*P	**Pn**		**11 40 48.3**	**+0.2**
CLDB	**Colider**	**10.25**	**48**	*e*P	**Pn**		**11 41 04.5**	**+0.4**
ARAG	**Araguaiana, MT**	**11.43**	**81**	*e*P	**Pn**		**11 41 20.4**	**+0.3**
SNDB	**Serra Nova Dou**	**13.21**	**65**	*e*P	**Pn**		**11 41 43.9**	**-0.7**
ITTB	**Itaituba**	**15.48**	**30**	*e*P	**Pn**		**11 42 14.2**	**-1.1**
TRQA	**Tornquist**	**20.10**	**176**	*e*P	**P**		**11 43 09.7**	**-1.0**

DJA 14 11:57:37.5±0.4,4.5S±6.4×140.0E±,h130km±11km,M3.6/6, mb3.7/4,MLv3.5/6,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.43**	**13**	P	Pn		11 58 05.8	+0.9
GENI				S	Sn		11 58 26.1	+0.4
JAY	**Jayapura**	**1.70**	**30**	P	Pn		11 58 07.4	-0.6
SMPI	**Sarmi**	**2.30**	**330**	P	Pn		11 58 15.3	+0.1
BAKI	**Biak**	**4.57**	**307**	P	Pn		11 58 46.5	+0.1
FAKI	**Fak Fak** 15nm,1.1s	**7.66**	**278**	P	Pn		11 59 26.5	0.0

IDC ***14*** *12:21:45.5±5.4,36.55N×71.24E,h212km±47km,mb3.2/5, mbtmp3.7/11,Error ellipse: s-maj=44.0km s-min=21.9km az=36.0*

ISC 14 12:21:43.1±1.3,36.5N±0.1×71.1E±0.1,h188km,n12, σ1s52/15,mb3.6/5,1C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 1.2nm,0.3s,baz=181,slow=14,SNR=5.8	**6.61**	**356**	⇑P	**Pn**		**12 23 20.4**	**+2.3**
KK31	1.6nm,0.3s,baz=188,slow=24,SNR=11			⇓S	**Sn**		**12 24 29.9**	**-3.3**
AAK	**Ala-Archa** 6.4nm,0.3s,baz=146,slow=4.6,SNR=30	**6.67**	**22**	P	**Pn**		**12 23 21.5**	**+2.4**
AAK	3.4nm,0.4s,baz=180,slow=20,SNR=6.6			S	**Sn**		**12 24 34.2**	**-0.7**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=224,slow=12,SNR=5.0	**13.25**	**36**	P	**Pn**		**12 24 44.7**	**+0.6**
MKAR	0.2nm,0.5s,baz=196,slow=20,SNR=1.8			S	**Sn**		**12 27 10.5**	**-1.0**
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=204,slow=12,SNR=2.8	**15.10**	**18**	P	**Pn**		**12 25 07.0**	**+0.1**
BVAR	**Borovoye Array** 0.4nm,0.3s,baz=156,slow=10.0,SNR=4.9	**16.53**	**359**	P	**Pn**		**12 25 24.9**	**+0.7**
AKTO	**Aktyubinsk** 0.9nm,0.3s,baz=216,slow=2.1,SNR=1.5	**16.81**	**330**	P	**Pn**		**12 25 28.1**	**+0.6**
ZALV	**Zalesovo Beam** 0.9nm,0.3s,baz=230,slow=11,SNR=4.5	**19.89**	**24**	P	**P**		**12 26 00.2**	**+0.3**
FINES	**FINESS Array B** 3.1nm,0.9s,baz=126,slow=7.1,SNR=2.3 3.1nm,0.9s	**37.52**	**326**	P	**P**		**12 28 38.5**	**-0.1**
ARCES	**ARCESS Array B** 1.6nm,0.8s,baz=121,slow=9.0,SNR=6.7	**41.17**	**338**	P	**P**		**12 29 09.0**	**+0.3**
HFS	**Hagfors** 1.6nm,0.8s	**43.11**	**322**	P	**P**		**12 29 23.7**	**-0.7**
WRA	**Warramunga Arr** 1.2nm,0.6s,baz=88,slow=11,SNR=1.9 1.2nm,0.6s	**81.93**	**122**	P	**P**		**12 33 40.8**	**-1.1**
ASAR	**Alice Springs** 0.2nm,0.6s,baz=317,slow=5.2,SNR=4.2 0.2nm,0.6s	**84.20**	**125**	P	**P**		**12 33 52.7**	**-0.8**

IDC ***14*** *12:23:21.7±1.0,9.42N×122.02E,h0km,mb3.8/8, mbtmp3.8/8,MS2.8/5,Error ellipse: s-maj=179.0km s-min=16.5km az=65.0*

ISC 14 12:23:27.0±0.9,9.5N±0.5×12.2E±,h37km,n13,σ0s66/11, mb3.8/8,MS2.6/3,Negros

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)** comp=Z,164nm,20.9s,baz=324,slow=46	**4.11**	**126**	LR	LR		12 26 36.1	
KAPI	**Kappang** comp=Z,24nm,18.4s,baz=310,slow=42	**14.62**	**190**	LR	LR		12 33 35.8	
GUMO	**Guam** comp=Z,14nm,19.8s,baz=285,slow=33	**22.56**	**77**	LR	LR		12 35 45.8	
PSI	**Prapat** comp=Z,21nm,20.4s,baz=82,slow=36	**24.08**	**255**	LR	LR		12 37 47.2	
CMAR	**Chiang Mai Arr** comp=Z,33nm,18.5s,baz=95,slow=35	**24.25**	**294**	LR	LR		12 37 35.2	
WRA	**Warramunga Arr** 1.1nm,0.8s,baz=338,slow=9.6,SNR=5.8	**31.59**	**158**	P	**P**		**12 29 46.3**	**-0.1**
WRA	0.3nm,0.8s,baz=335,slow=2.7,SNR=1.2 1.1nm,0.8s			PcP	**PcP**		**12 32 37.7**	**-0.7**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=333,slow=6.3,SNR=14	**34.88**	**161**	P	**P**		**12 30 15.3**	**+0.2**
ASAR	0.3nm,0.7s,baz=325,slow=3.2,SNR=2.2 0.4nm,0.6s			PcP	**PcP**		**12 32 47.4**	**-0.2**
SONM	**Songino Array** 0.6nm,0.6s,baz=161,slow=6.1,SNR=1.0 0.6nm,0.6s	**40.49**	**344**	P	**P**		**12 31 02.8**	**+0.4**
STKA	**Stephens Creek** 1.2nm,0.6s,baz=327,slow=8.1,SNR=3.0 1.2nm,0.6s	**45.12**	**157**	P	**P**		**12 31 40.2**	**+0.3**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=118,slow=9.3,SNR=5.7	**50.30**	**325**	P	**P**		**12 32 20.1**	**+0.1**
MKAR	0.4nm,0.7s,baz=134,slow=4.2,SNR=2.9 0.5nm,0.7s			PcP	**PcP**		**12 33 38.7**	**+0.3**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=142,slow=7.3,SNR=3.6 0.5nm,0.4s	**53.46**	**333**	P	**P**		**12 32 43.3**	**0.0**
KURBB	**Kurchatov Arra** 1.2nm,0.3s,baz=122,slow=8.3,SNR=3.6 1.2nm,0.3s	**54.50**	**327**	P	**P**		**12 32 51.4**	**+0.4**
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=74,slow=11,SNR=2.7 0.5nm,0.5s	**60.08**	**327**	P	**P**		**12 33 28.8**	**-1.5**

THE ***14*** *12:33:21.0,38.3N±0.5×20.5E±1.0,h17km±1km,M3.1/10, MLh3.1/10*
ATH ***14*** *12:33:22.1,38.25N×20.48E,h13km,ML3.0/32,Manual Solution by D.Makaris First location: 2019/11/14 12:34:18, This location: 2020/10/01 15:40:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 14 12:33:22.2±0.8,38.30N±0.02×20.53E±0.03,h11km±6km, n59,σ0s82/113,Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LXR1	**Lixouri, Cepha**	**0.12**	**214**	P	**Pg**		**12 33 25.1**	**-0.2**
LXR1				S	**Sg**		**12 33 28.3**	**+0.8**
ARG2	**Argostoli**	**0.13**	**194**	P	**Pg**		**12 33 25.0**	**-0.3**
ARG2				S	**Sg**		**12 33 27.6**	**0.0**
VLS	**Valsamata**	**0.14**	**159**	P	**Pg**		**12 33 25.0**	**-0.5**
VLS				S	**Sg**		**12 33 27.9**	**+0.1**
VLS	**Valsamata**	**0.14**	**159**	P	**Pg**		**12 33 25.0**	**-0.5**
VLS				S	**Sg**		**12 33 28.0**	**+0.1**
DMLN	**Damoulianata-K**	**0.14**	**242**	P	**Pg**		**12 33 25.0**	**-0.5**
DMLN				S	**Sg**		**12 33 27.6**	**-0.2**
DMLN	**Damoulianata-K**	**0.14**	**242**	P	**Pg**		**12 33 25.1**	**-0.5**
DMLN				S	**Sg**		**12 33 27.1**	**-0.8**
RTZL	**Ratzakli, Kefa**	**0.30**	**140**	P	**Pg**		**12 33 27.4**	**-0.8**
RTZL				S	**Sg**		**12 33 32.6**	**+0.2**
EVGI	**Lefkada island**	**0.33**	**18**	P	**Pg**		**12 33 28.0**	**-1.0**
EVGI				S	**Sg**		**12 33 33.5**	**+0.1**
NYDR	**Nydri-Lefkada**	**0.43**	**18**	P	**Pg**		**12 33 29.4**	**-1.3**
NYDR				S	**Sg**		**12 33 36.4**	**-0.1**
ORTH	**Orthonies,Zaky**	**0.47**	**163**	P	**Pg**		**12 33 31.4**	**-0.1**
ORTH				S	**Sg**		**12 33 36.6**	**-1.1**
LKD2	**Lefkada island**	**0.49**	**12**	P	**Pg**		**12 33 30.5**	**-1.5**
LKD2				S	**Sg**		**12 33 38.5**	**0.0**
LKD2	**Lefkada island**	**0.49**	**12**	P	**Pb**		**12 33 31.9**	**-1.0**
LKD2				S	**Sb**		**12 33 40.6**	**+0.5**
AST1	**Astakos**	**0.50**	**62**	P	**Pg**		**12 33 31.1**	**-1.0**
AST1				S	**Sg**		**12 33 38.8**	**+0.1**
TSLK	**Tsoukalades, L**	**0.53**	**11**	P	**Pg**		**12 33 31.2**	**-1.4**
TSLK				S	**Sb**		**12 33 39.7**	**-1.4**
KYPS	**Kipseli, Zakin**	**0.54**	**154**	P	**Pg**		**12 33 31.9**	**-0.8**
KYPS				S	**Sg**		**12 33 39.1**	**-0.7**
CLEM	**Kyllini,Ilia,G**	**0.63**	**131**	P	**Pg**		**12 33 34.0**	**-0.5**
CLEM				S	**Sg**		**12 33 42.7**	**-0.1**
LTHK	**Lithakia**	**0.64**	**157**	P	**Pg**		**12 33 33.2**	**-1.5**
LTHK				S	**Sg**		**12 33 43.1**	**0.0**
LTHK	**Lithakia**	**0.64**	**157**	P	**Pg**		**12 33 33.1**	**-1.5**
LTHK				S	**Sg**		**12 33 42.2**	**-0.9**
AXS	**Araxos**	**0.68**	**99**	P	**Pb**		**12 33 35.9**	**-0.1**
AXS				S	**Sb**		**12 33 45.7**	**+0.3**
RLS	**Riolos of Patr**	**0.78**	**108**	P	**Pb**		**12 33 37.8**	**0.0**
RLS				S	**Sg**		**12 33 47.7**	**+0.2**
AMPL	**Ampelaki**	**0.82**	**41**	P	**Pg**		**12 33 36.2**	**-1.9**
PVO	**Paravola**	**0.84**	**68**	P	**Pb**		**12 33 38.2**	**-0.3**
PVO				S	**Sn**		**12 33 52.2**	**-0.2**
DRO	**Drossia**	**1.00**	**110**	P	**Pg**		**12 33 40.8**	**-0.6**
DRO				S	**Sb**		**12 33 55.7**	**+1.1**
ANX	**Ano Chora**	**1.13**	**75**	P	**Pn**		**12 33 45.0**	**+1.0**
ANX				S	**Sn**		**12 33 59.9**	**+0.2**
EVR

KZN	Kozani	2.22	25	P		Pn	12 33 59.7	+0.7
KZN				S		Sn	12 34 27.4	+0.9
NEO	Neokhori	2.33	64	P		Pn	12 34 00.7	+0.2
NEO				S		Sn	12 34 30.7	+1.6
MET5	Makryloggos,Me	2.34	106	P		Pn	12 34 00.5	-0.1
MET5				S		Sn	12 34 29.7	+0.4
LIT	Litokhoron	2.35	40	P		Pn	12 34 02.1	+1.3
LIT				S		Sn	12 34 30.5	+0.8
MET4	Agioi Theodoro	2.37	106	P		Pn	12 34 01.0	0.0
MET4				S		Sn	12 34 30.9	+0.8
VLI	Veliai	2.49	129	P		Pn	12 34 03.2	+0.6
VLI				S		Sn	12 34 33.0	+0.1
VLY	Voula,Athens	2.62	99	P		Pn	12 34 04.2	-0.2
VLY				S		Sn	12 34 36.5	+0.4
DION	Dionisos Attik	2.69	94	P		Pn	12 34 05.7	+0.2
AOS2	Alonissos-2	2.73	71	P		Pn	12 34 06.8	+0.9
AOS2				S		Sn	12 34 40.8	+1.9
OHR	Ohrid	2.81	4	*i* Pn		Pn	12 34 07.9	+0.8
OHR				*i* Sn		Sn	12 34 43.5	+2.5
KYMI	Kymi, Euboea I	2.82	82	P		Pn	12 34 07.4	+0.1
KYMI				S		Sn	12 34 42.0	+0.8
HORT	Hortiatis	3.04	40	P		Pn	12 34 11.7	+1.5
PLG	Polygyros	3.06	47	P		Pn	12 34 11.3	+0.8
PLG				S		Sn	12 34 47.7	+0.5
KARY	Karystos	3.09	94	P		Pn	12 34 10.9	-0.1
KARY				S		Sn	12 34 48.5	+0.6

NEIC ***14*** *12:42:10.4±2.1,20°.2S±0°.1×177°.7W±0°.1,h500km±7km, mb4.4/38, Error ellipse: s-maj=17.6km s-min=14.6km az=153.0*

IDC ***14*** *12:42:11.4±2.4,20°.10S×177°.87W,h512km±25km, mb3.5/16, mbtmp4.4/17, Error ellipse: s-maj=15.6km s-min=13.9km az=147.0*

ISC 14 12:42:12.6±0.5, 20°.2S±0°.1×177°.68W±0°.09, h550km, n72, σ1°51/62, mb4.4/36, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.71**	**300**			**P**	**12 43 38.3**	**-2.0**
NIUE	**Niue**	**7.39**	**83**	P		**P**	**12 44 01.8**	**-2.6**
AFI	**Afiamalu**	**8.40**	**43**	P		**P**	**12 44 10.8**	**-3.8**
MARNC	**Mare, Loyalty**	**13.43**	**262**	P		**P**	**12 45 01.8**	**-4.1**
PINNC	**Pines Island,**	**14.07**	**257**	P		**P**	**12 45 11.5**	**-1.0**
DZM	**Mont Dzumac**	**14.94**	**260**	P		**P**	**12 45 21.1**	**-0.5**
	5.5nm,0.5s,baz=110,slow=20,SNR=14							
TOZ	**Tahuroa Road**	**18.48**	**197**	P		**P**	**12 45 55.2**	**+0.6**
URZ	**Urewera**	**18.58**	**193**	P		**P**	**12 45 52.5**	**-3.1**
	21nm,0.8s,baz=28,slow=15,SNR=12							
TCW	**Tory Channel**	**22.06**	**196**	P		**P**	**12 46 26.4**	**-0.7**
THZ	**Tophouse**	**22.96**	**198**	P		**P**	**12 46 33.6**	**-1.5**
PPT	**Papeete**	**26.70**	**89**	P		**P**	**12 47 09.7**	**+1.1**
	32nm,0.9s,baz=180,slow=1.0,SNR=2.0							
	32nm,0.9s							
EIDS	**Eidsvold**	**29.23**	**254**	P		**P**	**12 47 30.4**	**-0.1**
EIDS				IAmb		IAmb	12 47 30.8	
	comp=Z,8.2nm,0.8s							
ARMA	**Armidale**	**29.48**	**244**	P		**P**	**12 47 33.0**	**+0.2**
ARMA				IAmb		IAmb	12 47 33.9	
	comp=Z,7.3nm,0.8s							
CTAO	**Charters Tower**	**33.82**	**264**	P		**P**	**12 48 09.8**	**+0.1**
CTAO				IAmb		IAmb	12 48 10.7	
	comp=Z,14nm,0.7s							
TOO	**Toolangi**	**36.33**	**234**	P		**P**	**12 48 29.5**	**-0.9**
TOO				IAmb		IAmb	12 48 31.3	
	comp=Z,19nm,1.5s							
COEN	**Coen**	**37.86**	**273**	P		**P**	**12 48 43.4**	**+0.1**
COEN				IAmb		IAmb	12 48 45.8	
	comp=Z,10.0nm,1.1s							
STKA	**Stephens Creek**	**38.20**	**244**	P		**P**	**12 48 45.6**	**-0.2**
	comp=Z,5.4nm,0.5s,baz=85,slow=10,SNR=2.9							
	comp=Z,5.4nm,0.5s							
STKA	**Stephens Creek**	**38.20**	**244**			**P**	**12 48 45.8**	**0.0**
INKA	**Innaminka**	**38.59**	**251**			**P**	**12 48 49.9**	**+0.9**
BBOO	**Buckleboo**	**42.96**	**243**	P		**P**	**12 49 23.5**	**-0.2**
BBOO				IAmb		IAmb	12 49 24.0	
	comp=Z,15nm,0.7s							
WR0	**Warramunga Arr**	**44.76**	**262**	P		**P**	**12 49 37.4**	**-0.4**
WR0				IAmb		IAmb	12 49 38.7	
	comp=Z,19nm,1.2s							
WR8	**Warramunga Arr**	**44.79**	**262**			**P**	**12 49 37.6**	**-0.4**
WR8				IAmb		IAmb	12 49 39.5	
	comp=Z,14nm,1.2s							
AS31	**Alice Springs**	**44.89**	**256**			**P**	**12 49 38.8**	**0.0**
AS31				IAmb		IAmb	12 49 39.9	
	comp=Z,9.6nm,1.1s							
ASAR	**Alice Springs**	**44.89**	**256**	P		**P**	**12 49 38.5**	**-0.3**
	comp=Z,22nm,0.8s,baz=98,slow=7.7,SNR=322							
ASAR				PcP		**PcP**	**12 51 09.3**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=104,slow=3.9,SNR=6.9							
ASAR				ScP		**ScP**	**12 54 13.5**	**+4.8**
	comp=Z,0.7nm,1.0s,baz=80,slow=3.7,SNR=3.4							
	comp=Z,22nm,0.8s							
ASAR	**Alice Springs**	**44.89**	**256**			**P**	**12 49 38.9**	**+0.2**
WB0	**Warramunga Arr**	**44.92**	**262**			**P**	**12 49 38.5**	**-0.5**
WB2	**Warramunga Arr**	**44.93**	**262**	P		**P**	**12 49 38.8**	**-0.3**
WB2				IAmb		IAmb	12 49 39.4	
	comp=Z,21nm,1.1s							
WRAB	**Tennant Creek**	**44.94**	**262**	P		**P**	**12 49 38.5**	**-0.6**
WRAB				IAmb		IAmb	12 49 39.4	
	comp=Z,15nm,1.1s							
WRA	**Warramunga Arr**	**44.95**	**262**	P		**P**	**12 49 38.4**	**-0.8**
	comp=Z,8.3nm,0.7s,baz=98,slow=8.1,SNR=43							
WRA				PcP		**PcP**	**12 51 08.4**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=95,slow=3.0,SNR=4.2							
	comp=Z,8.3nm,0.7s							
WRA	**Warramunga Arr**	**44.95**	**262**	P		**P**	**12 49 38.3**	**-0.8**
MTN	**Manton Dam**	**49.46**	**270**	P		**P**	**12 50 13.2**	**0.0**
MTN				IAmb		IAmb	12 50 13.8	
	comp=Z,15nm,0.8s							
FORT	**Forrest**	**49.70**	**246**			**P**	**12 50 14.3**	**-0.4**
FORT				IAmb		IAmb	12 50 14.8	
	comp=Z,9.9nm,0.7s							
KNRA	**Kununurra**	**50.98**	**266**	P		**P**	**12 50 24.4**	**+0.1**
KNRA				IAmb		IAmb	12 50 25.0	
	comp=Z,8.0nm,0.7s							
FAKI	**Fak Fak**	**51.72**	**283**	P		**P**	**12 50 29.6**	**0.0**
FITZ	**Fitzroy Crossi**	**53.37**	**262**	P		**P**	**12 50 41.9**	**+0.6**
PSA00	**Pilbara Seismi**	**58.04**	**257**	P		**P**	**12 51 13.3**	**-0.3**
MBWA	**Marble Bar**	**58.22**	**257**	P		**P**	**12 51 14.7**	**-0.2**
MBWA				IAmb		IAmb	12 51 15.3	
	comp=Z,11nm,0.6s							
VNDA	**Vanda**	**58.26**	**185**	P		**P**	**12 51 15.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=356,slow=7.6,SNR=2.4							
	comp=Z,0.2nm,0.4s							
MORW	**Morawa**	**60.23**	**247**	P		**P**	**12 51 28.2**	**0.0**
MORW				IAmb		IAmb	12 51 48.1	
	comp=Z,24nm,1.4s							
GIRL	**Giralia**	**62.93**	**254**	P		**P**	**12 51 47.4**	**+1.5**
QSPA	**South Pole Qui**	**69.89**	**180**	P		P	12 52 32.4	+4.1
	comp=Z,2.9nm,0.8s,baz=339,slow=1.8,SNR=18							
	comp=Z,2.9nm,0.8s							
QSPA	**South Pole Qui**	**69.89**	**180**	IAmb		IAmb	12 52 33.6	
	comp=Z,4.6nm,1.0s							
MJAR	**Matsushiro Arr**	**70.13**	**323**	P		**P**	**12 52 31.1**	**+1.1**
	comp=Z,4.0nm,0.5s,baz=162,slow=6.1,SNR=14							
	comp=Z,4.0nm,0.5s							
MJAR	**Matsushiro Arr**	**70.13**	**323**	IAmb		IAmb	12 52 31.7	
	comp=Z,4.5nm,0.7s							
MAJO	**Matsushiro**	**70.13**	**323**	P		**P**	**12 52 31.3**	**+1.3**
MAJO				IAmb		IAmb	12 52 39.0	
	comp=Z,9.3nm,0.9s							
MJB9	**Matsu-Tunnel**	**70.13**	**323**	P		P	12 52 32.3	+2.2
MJB9				IAmb		IAmb	12 52 39.9	
	comp=Z,9.0nm,0.9s							
JKA	**Kamikawa-asahi**	**73.58**	**331**	P		P	12 52 52.8	+2.9
SSLB	**Suanglung**	**74.05**	**303**	P		**P**	**12 52 53.4**	**+0.4**
TPUB	**Ta-pu**	**74.05**	**303**	P		**P**	**12 52 52.9**	**-0.2**
PETK	**Petropavlovsk-**	**76.03**	**345**	P		**P**	**12 53 04.8**	**+1.3**
	comp=Z,6.3nm,0.8s,baz=178,slow=6.3,SNR=4.8							
	comp=Z,6.3nm,0.8s							
KSRS	**Korea Array**	**76.84**	**318**	P		**P**	**12 53 10.2**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=130,slow=5.8,SNR=4.2							
	comp=Z,1.1nm,0.6s							
USRK	**Ussuriysk Ar.**	**78.86**	**326**	P		P	12 53 21.1	+2.1
	comp=Z,4.8nm,0.7s,baz=180,slow=2.3,SNR=8.9							
	comp=Z,4.8nm,0.7s							
NVAR	**Mina Array Bea**	**80.58**	**43**	P		P	12 53 31.5	+3.0
	comp=Z,0.9nm,0.8s,baz=213,slow=7.4,SNR=6.4							
	comp=Z,0.9nm,0.8s							
K05A	**Summer Lake**	**81.52**	**39**	P		P	12 53 36.0	+2.8
MAW	**Mawson**	**81.97**	**200**	P		**P**	**12 53 35.6**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=135,slow=2.9,SNR=2.0							
	comp=Z,1.3nm,0.9s							

KULM	**Kulim**	**84.03**	**278**	P		**P**	**12 53 47.7**	**+1.6**
KULM				IAmb		IAmb	12 53 48.6	
	comp=Z,7.6nm,0.7s							
TXAR	**Lajitas Array**	**86.63**	**57**	P		P	12 54 01.6	+3.1
	comp=Z,0.8nm,0.7s,baz=218,slow=6.6,SNR=13							
	comp=Z,0.8nm,0.7s							
ILAR	**Eielson Array**	**87.93**	**13**	P		**P**	**12 54 04.2**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=224,slow=3.8,SNR=2.1							
	comp=Z,0.4nm,0.8s							
PDAR	**Pinedale Array**	**88.52**	**43**	P		**P**	**12 54 09.1**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=230,slow=3.5,SNR=3.6							
	comp=Z,0.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**90.29**	**289**	P		P	12 54 18.1	+2.4
	comp=Z,2.6nm,0.8s,baz=124,slow=2.9,SNR=17							
	comp=Z,2.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**90.29**	**289**	P		P	12 54 17.8	+2.2
CHTO	**Chiang Mai**	**90.42**	**290**	P		**P**	**12 54 17.8**	**+1.6**
CHTO				IAmb		IAmb	12 54 19.2	
	comp=Z,6.4nm,0.8s							
MKAR	**Makanchi Array**	**111.19**	**313**	PKiKP		**PKiKP**	**12 59 44.0**	**0.0**
	comp=Z,0.2nm,0.6s,baz=59,slow=2.3,SNR=4.1							
FINES	**FINESS Array B**	**135.54**	**344**	PKP		**PKiKP**	**13 00 33.0**	**+1.4**
	comp=Z,6.6nm,1.1s,baz=131,slow=8.8,SNR=2.2							
HFS	**Hagfors**	**139.26**	**351**	PKhKP		PKPpre	13 00 30.0	
	comp=Z,0.7nm,0.4s,baz=80,slow=8.1,SNR=4.2							
AKASG	**Malin Array Be**	**142.87**	**332**	PKhKP		PKPpre	13 00 41.6	
	comp=Z,3.8nm,0.5s,baz=42,slow=3.9,SNR=19							
LODK	**Lodwar**	**143.75**	**247**			**PKiKP**	**13 00 46.9**	**-3.1**
BR131	**Keskin Array S**	**146.84**	**313**			**PKPab**	**13 00 54.6**	**-2.1**
BRTR	**Keskin Array B**	**146.84**	**313**	PKPbc		**PKPab**	**13 00 54.8**	**-2.2**
	comp=Z,1.5nm,0.6s,baz=129,slow=3.9,SNR=7.2							
BURAR	**Bucovina Array**	**146.92**	**331**	PKPbc		**PKPab**	**13 00 56.2**	**-0.7**
MMAI	**Mount Meron Ar**	**147.91**	**300**	PKPbc		**PKPab**	**13 00 58.7**	**-2.6**
	comp=Z,1.6nm,0.4s,baz=134,slow=3.6,SNR=4.9							
GERES	**GERESS Array B**	**149.97**	**345**	PKPbc		**PKiKP**	**13 01 02.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=356,slow=1.9,SNR=6.9							

IDC ***14*** *12:47:25.3±0.9, 13°.12N×119°.79E, h0km, mb3.8/8, mbtmp3.8/8, MS2.8/1, Error ellipse: s-maj=22.4km s-min=17.5km az=77.0*

ISC 14 12:47:29.6±1.0, 13°.1N±0°.1×119°.8E±0°.1, h31km, n10, σ0°74/10, mb3.7/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**1.45**	**48**	Pn		**Pn**	**12 47 54.1**	**+0.4**
	134nm,0.3s,baz=223,slow=10.0,SNR=8.3							
TGY				Sn		**Sb**	**12 48 13.6**	**-0.5**
	289nm,0.3s,baz=220,slow=17,SNR=5.1							
KAPI	**Kappang**	**18.03**	**180**	LR		LR	12 58 27.5	
	comp=Z,32nm,20.1s,baz=52,slow=37							
CMAR	**Chiang Mai Arr**	**20.77**	**287**	P		**P**	**12 52 07.2**	**-1.1**
	1.9nm,1.0s,baz=89,slow=8.7,SNR=8.1							
	1.9nm,1.0s							
KSRS	**Korea Array**	**25.28**	**15**	P		**P**	**12 52 52.7**	**-0.5**
	1.1nm,0.8s,baz=188,slow=7.4,SNR=1.6							
	1.1nm,0.8s							
WRA	**Warramunga Arr**	**35.84**	**156**	P		**P**	**12 54 26.2**	**-0.5**
	0.7nm,0.7s,baz=335,slow=9.6,SNR=6.0							
	0.7nm,0.7s							
SONM	**Songino Array**	**36.36**	**345**	P		**P**	**12 54 30.9**	**-0.1**
	0.4nm,0.5s,baz=161,slow=9.2,SNR=2.0							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**39.08**	**159**	P		**P**	**12 54 54.5**	**+0.4**
	0.8nm,0.8s,baz=340,slow=7.0,SNR=20							
	0.8nm,0.6s							
MKAR	**Makanchi Array**	**45.98**	**324**	P		**P**	**12 55 51.3**	**+1.3**
	0.9nm,0.7s,baz=116,slow=8.5,SNR=7.5							
	0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**50.19**	**327**	P		**P**	**12 56 22.7**	**+0.3**
	1.3nm,0.2s,baz=130,slow=8.0,SNR=5.6							
	1.3nm,0.2s							
NRIK	**Noril'sk**	**59.77**	**347**	P		**P**	**12 57 31.3**	**0.0**
	0.9nm,0.3s,baz=124,slow=6.3,SNR=4.1							
	0.9nm,0.3s							

DJA 14 13:01:44.9±0.4, 8°.5S±0°.5×118°.8E±°, h176km±5km, M3.7/13, mB5.3/1, mb4.0/2, MLv3.6/13, Mw(mB)4.7/1, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLAI	**Plampang**	**0.73**	**214**	P		Pn	13 02 11.0	+0.6
PLAI				S		Sn	13 02 31.3	+1.2
TWSI	**Taliwang, Sumb**	**1.39**	**248**	P		Pn	13 02 15.6	+0.1
WBSI	**Waikabubak, Su**	**1.84**	**140**	P		Pn	13 02 20.2	+0.1
WSI	**Waingapu**	**2.53**	**125**	P		Pn	13 02 28.6	+0.9
DNP	**Denpasar**	**2.98**	**261**	P		Pn	13 02 33.0	-0.1
BASI	**Baing, Sumba**	**3.08**	**130**	P		Pn	13 02 33.5	-0.9
BKSI	**Bulukumba**	**3.46**	**34**	P		Pn	13 02 39.3	+0.2
EDFI	**Ende, Flores**	**3.50**	**99**	P		Pn	13 02 39.7	0.0
ABJI	**Asem Bagus**	**3.94**	**276**	P		Pn	13 02 45.7	+0.6
JAGI	**Jajag, Banyuwa**	**4.00**	**266**	P		Pn	13 02 46.1	+0.1
BNSI	**Bone**	**4.25**	**27**	P		Pn	13 02 48.6	-0.5
SOEI	**Soe**	**6.19**	**105**	P		Pn	13 03 14.5	-0.1
	0.1nm12nm,0.5s							
PCJI	**Pacitan**	**6.94**	**270**	P		Pn	13 03 24.6	+0.3

NEIC ***14*** *13:23:20.0±2.1,21°.2OS×179°.13W,h606km, mb4.6/28, Fiji Islands Region*

IDC ***14*** *13:23:21.2±1.4,21°.14S×179°.32W,h613km±16km, mb3.7/18, mbtmp4.7/20, Error ellipse: s-maj=15.4km s-min=12.6km az=122.0*

ISC 14 13:23:19.7±0.3, 21°.19S±0°.05×179°.26W±0°.06, h600km, n317, σ1°38/257, mb4.5/122, 27C-24D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.27**	**323**			**P**	**13 24 49.6**	**+2.3**
MSVF	**Nonsavu**	**4.27**	**323**	P		**P**	**13 24 49.5**	**+2.3**
RAO	**Raoul Island**	**8.12**	**172**	P		**P**	**13 25 20.6**	**+0.5**
	135nm,0.3s,baz=0.0,slow=11,SNR=1.9							
RAO				S		**S**	**13 26 56.5**	**-2.2**
	131nm,0.4s,baz=284,slow=24,SNR=1.6							
GLKZ	**Green Lake**	**8.13**	**172**	P		**P**	**13 25 20.9**	**+0.8**
GLKZ				S		**S**	**13 26 58.8**	**-0.1**
NIUE	**Niue**	**9.02**	**78**	P		**P**	**13 25 29.0**	**+0.2**
AFI	**Afiamalu**	**10.16**	**46**	P		**P**	**13 25 38.6**	**-1.7**
AFI	**Afiamalu**	**10.16**	**46**	P		**P**	**13 25 38.8**	**-1.5**
MARNC	**Mare, Loyalty**	**11.85**	**266**	P		**P**	**13 25 57.5**	**+0.6**
DZM	**Mont Dzumac**	**13.32**	**264**	P		**P**	**13 26 12.4**	**+0.4**
	6.9nm,0.5s,baz=87,slow=20,SNR=18							
SANVU	**Saraoutou**	**14.06**	**292**	P		**P**	**13 26 19.8**	**+0.5**
OUZ	**Omahuta**	**15.32**	**203**	P		**P**	**13 26 33.6**	**+3.0**
GRZ	**Great Barrier**	**15.70**	**196**	P		**P**	**13 26 36.3**	**+2.2**
WCZ	**Waipu Caves**	**15.73**	**199**	P		**P**	**13 26 37.6**	**+3.2**
KUZ	**Kuaotunu**	**16.11**	**195**	P		**P**	**13 26 38.2**	**+0.4**
KUZ	**Kuaotunu**	**16.11**	**195**	P		**P**	**13 26 40.0**	**+2.2**
WIAZ	**Waiheke Island**	**16.30**	**196**	P		**P**	**13 26 41.9**	**+2.4**
MBAZ	**Motutapu North**	**16.34**	**197**	P		**P**	**13 26 43.0**	**+3.0**
ETAZ	**East Tamaki Re**	**16.50**	**197**	P		**P**	**13 26 44.1**	**+2.7**
WTAZ	**Waiatarua**	**16.58**	**198**	P		**P**	**13 26 42.2**	**0.0**
MKAZ	**Moumakai**	**16.59**	**196**	P		**P**	**13 26 44.5**	**+2.3**
AWAZ	**Awhitu Peninsu**	**16.68**	**197**	P		**P**	**13 26 45.5**	**+2.4**
WMGZ	**Waiomatatini S**	**16.70**	**186**	P		**P**	**13 26 42.6**	**-0.6**
HAZ	**Te Kaha**	**16.71**	**188**	P		**P**	**13 26 42.4**	**-1.0**
PKGZ	**Pakihiroa**	**16.78**	**187**	P		**P**	**13 26 43.6**	**-0.4**
PUZ	**Puketiti**	**16.96**	**187**	P		**P**	**13 26 43.8**	**-1.9**
TOZ	**Tahuroa Road**	**17.10**	**194**	P		**P**	**13 26 48.7**	**+1.8**
TOZ	**Tahuroa Road**	**17.10**	**194**	P		**P**	**13 26 48.5**	**+1.7**
URZ	**Urewera**	**17.30**	**190**	P		**P**	**13 26 46.5**	**-2.2**
	17nm,0.3s,baz=344,slow=7.5,SNR=39							
URZ				S		**S**	**13 29 31.8**	**-6.8**
	48nm,0.9s,baz=60,slow=16,SNR=9.7							
URZ	**Urewera**	**17.30**	**190**	P		**P**	**13 26 48.2**	**-0.5**
URZ	**Urewera**	**17.30**	**190**	P		**P**	**13 26 46.8**	**-2.0**
MWZ	**Matawai**	**17.31**	**189**	P		**P**	**13 26 47.2**	**-1.7**
KNZ	**Kokohu**	**17.97**	**188**	P		**P**	**13 26 54.2**	**-0.6**
BKZ	**Black Stump Fm**	**18.29**	**191**	P		**P**	**13 26 56.0**	**-1.8**
PXZ	**Pawanui**	**19.07**	**189**	P		**P**	**13 27 03.9**	**-0.9**
BFZ	**Birch Farm**	**19.81**	**190**	P		**P**	**13 27 12.0**	**+0.5**
MRZ	**Mangatainoka R**	**19.90**	**192**	P		**P**	**13 27 10.3**	**-2.0**
BHW	**Baring Head**	**20.76**	**193**	P		**P**	**13 27 19.1**	**-0.9**
QRZ	**Quartz Range**	**20.78**	**198**	P		**P**	**13 27 19.8**	**-0.5**
QRZ	**Quartz Range**	**20.78**	**198**	P		**P**	**13 27 20.9**	**+0.6**
NNZ	**Nelson**	**20.92**	**196**	P		**P**	**13 27 21.8**	**+0.3**
NNZ	**Nelson**	**20.92**	**196**	P		**P**	**13 27 21.0**	**-0.5**
MRNZ	**Matariki Terra**	**21.25**	**197**	P		**P**	**13 27 23.8**	**-0.7**

DSZ	**Denniston Nort**	**21.84**	**198**	P		**P**	**13 27 29.5**	**-0.3**
KHZ	**Kahutara**	**22.02**	**194**	P		**P**	**13 27 31.6**	**+0.4**
KHZ	**Kahutara**	**22.02**	**194**	P		**P**	**13 27 29.9**	**-1.3**
GVZ	**Greta Valley S**	**22.66**	**195**	P		**P**	**13 27 35.5**	**-1.5**
LTZ	**Lake Taylor**	**22.67**	**196**	P		**P**	**13 27 35.7**	**-1.5**
INZ	**Inchbonnie**	**22.85**	**198**	P		**P**	**13 27 37.4**	**-1.3**
ODZ	**Otahua Downs**	**25.21**	**197**	P		**P**	**13 28 00.1**	**+0.6**
MLZ	**Mavora Lakes**	**26.26**	**200**			**P**	**13 28 10.0**	**+1.2**
WHZ	**Wether Hill Ro**	**26.78**	**200**	P		**P**	**13 28 14.4**	**+1.1**
TW1H	**Toowoomba 1 Ha**	**26.92**	**251**	P		**P**	**13 28 15.7**	**+0.8**
EIDS	**Eidsvold**	**27.53**	**256**	P		**P**	**13 28 21.0**	**+0.9**
EIDS				IAmb		IAmb	13 28 21.5	
	comp=Z,9.0nm,0.6s							
CTA	**Charters Tower**	**32.25**	**266**	P		**P**	**13 29 01.4**	**+0.6**
CTAO	**Charters Tower**	**32.25**	**266**	P		**P**	**13 29 01.4**	**+0.6**
CTAO	**Charters Tower**	**32.25**	**266**	P		**P**	**13 29 01.4**	**+0.6**
CMSA	**Cobar Meteorol**	**32.92**	**244**	P		**P**	**13 29 07.2**	**+0.9**
QLP	**Quilpie**	**33.73**	**254**	P		**P**	**13 29 13.5**	**+0.4**
PMG	**Port Moresby**	**34.36**	**285**			**P**	**13 29 18.8**	**+0.3**
PMG	**Port Moresby**	**34.36**	**285**	P		**P**	**13 29 18.9**	**+0.4**
MTSU	**Mount Surprise**	**34.38**	**269**	P		**P**	**13 29 19.3**	**+0.6**
STKA	**Stephens Creek**	**36.43**	**245**	P		**P**	**13 29 35.8**	**+0.5**
	comp=Z,10nm,0.9s,baz=79,slow=5.3,SNR=13							
	comp=Z,10nm,0.9s							
STKA	**Stephens Creek**	**36.43**	**245**			**P**	**13 29 36.2**	**+0.9**
STKA	**Stephens Creek**	**36.43**	**245**	P		**P**	**13 29 36.4**	**+1.1**
COEN	**Coen**	**36.46**	**275**	P		**P**	**13 29 36.4**	**+0.7**
COEN				IAmb		IAmb	13 29 37.5	
	comp=Z,15nm,0.8s							
COEN	**Coen**	**36.46**	**275**	P		**P**	**13 29 36.5**	**+0.7**
INKA	**Innaminka**	**36.86**	**252**			**P**	**13 29 39.0**	**0.0**
MANU	**Manus Island**	**37.66**	**296**	P		**P**	**13 29 46.2**	**+0.5**
MANU				IAmb		IAmb	13 29 47.3	
	comp=Z,24nm,1.4s							
BBOO	**Buckleboo**	**41.19**	**244**	P		**P**	**13 30 13.9**	**+0.3**
BBOO				IAmb		IAmb	13 30 14.6	
	comp=Z,14nm,0.8s							
JAY	**Jayapura**	**43.15**	**290**	P		**P**	**13 30 29.3**	**+0.1**
	comp=Z,52nmcomp=Z,43nm,0.8s							
WR8	**Warramunga Arr**	**43.19**	**263**	P		**P**	**13 30 29.0**	**-0.4**
WR8				IAmb		IAmb	13 30 30.4	
	comp=Z,9.7nm,0.8s							
AS31	**Alice Springs**	**43.21**	**258**	P		**P**	**13 30 29.7**	**+0.1**
AS31				IAmb		IAmb	13 30 30.4	
	comp=Z,6.7nm,0.7s							
ASAR	**Alice Springs**	**43.21**	**258**	P		**P**	**13 30 29.6**	**0.0**
	comp=Z,30nm,0.9s,baz=99,slow=7.7,SNR=381							
ASAR				PcP		**PcP**	**13 32 05.2**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=105,slow=3.7,SNR=11							
ASAR				ScP		**ScP**	**13 34 59.6**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=112,slow=4.4,SNR=5.7							
ASAR				S		**S**	**13 36 10.0**	**-4.4**
	comp=Z,1.6nm,0.9s,baz=96,slow=15,SNR=10							
	comp=Z,30nm,0.9s							
ASAR	**Alice Springs**	**43.21**	**258**			**P**	**13 30 29.8**	**+0.2**
ASAR						**PcP**	**13 32 05.3**	**+0.3**
AUALC	**St Philip's Co**	**43.23**	**258**	P		**P**	**13 30 30.0**	**+0.3**
WB0	**Warramunga Arr**	**43.32**	**

comp=Z,9.9nm,1.0s
KHMM Horse Mountain 80.43 39 IAmb IAmb 13 34 33.0
comp=Z,19nm,1.0s
MAW Mawson 80.52 200 P **P** **13 34 30.7 +0.6**
comp=Z,1.9nm,0.8s,baz=136,slow=9.4,SNR=4.6
comp=Z,1.9nm,0.8s
O02D Mt. Diablo Mer 80.56 40 IAmb IAmb 13 34 33.9
comp=Z,20nm,0.9s
KHBM Hayfork Bally 80.60 40 IAmb IAmb 13 34 33.7
comp=Z,16nm,1.0s
ISA Isabella, Lake 80.66 46 IAmb IAmb 13 34 33.7
comp=Z,9.5nm,0.9s
CMB Columbia Colle 80.77 43 IAmb IAmb 13 34 33.9
comp=Z,14nm,1.3s
ORV Oroville 80.97 41 IAmb IAmb 13 34 35.0
comp=Z,10nm,1.1s
N02D Trinity Center 81.10 40 IAmb IAmb 13 34 36.5
comp=Z,19nm,1.1s
O03E Paynes Creek 81.23 41 IAmb IAmb 13 34 37.1
comp=Z,32nm,1.2s
M02C Callahan 81.27 39 IAmb IAmb 13 34 37.4
comp=Z,18nm,0.8s
WSHM Spangler Hills 81.29 47 IAmb IAmb 13 34 36.6
comp=Z,8.2nm,1.0s
CLC China Lake 81.33 46 IAmb IAmb 13 34 37.0
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 81.56 39 IAmb IAmb 13 34 38.6
comp=Z,11nm,0.8s
WAKR Walker 81.65 43 IAmb IAmb 13 34 39.0
comp=Z,13nm,1.1s
MPK Martis Peak 81.73 42 IAmb IAmb 13 34 39.4
comp=Z,14nm,0.7s
BEKR Beckworth 81.86 42 IAmb IAmb 13 34 39.6
comp=Z,16nm,1.4s
PNTR Pine Nut 81.88 43 IAmb IAmb 13 34 40.0
comp=Z,22nm,0.9s
IPM Ipoh 82.05 278 P **P** **13 34 39.4 +0.5**
IPM Ipoh 82.05 278 P **P** **13 34 39.7 +0.8**
L04D Klamath Falls 82.10 39 IAmb IAmb 13 34 41.0
comp=Z,20nm,0.8s
LHV Little Huntoon 82.10 44 IAmb IAmb 13 34 41.1
comp=Z,10.0nm,1.0s
IRM Iron Mountain 82.13 49 IAmb IAmb 13 34 41.3
comp=Z,14nm,1.4s
GRAC Grapevine Rang 82.14 45 IAmb IAmb 13 34 41.3
comp=Z,9.4nm,0.8s
SHOC Shoshone, Teco 82.28 47 IAmb IAmb 13 34 41.6
comp=Z,9.5nm,1.0s
BNX BinXian 82.31 325 ⇓P **P** **13 34 40.0 +0.5**
BNX pmax pmax
comp=Z,10.0nm,0.7s
NVAR Mina Array Bea 82.33 44 P **P** **13 34 40.8 +0.7**
comp=Z,6.6nm,0.9s,baz=225,slow=8.3,SNR=40
comp=Z,6.6nm,0.8s
NVAR Mina Array Bea 82.33 44 P **P** **13 34 41.0 +1.0**
PAHR Pah Rah Range 82.38 42 IAmb IAmb 13 34 42.2
comp=Z,8.4nm,0.9s
I03D Drain, OR 82.42 37 P **P** **13 34 41.5 +1.4**
NV11 Mina Array Sit 82.43 44 IAmb IAmb 13 34 42.5
comp=Z,12nm,1.1s
I04A Tendick Farm, 83.01 38 IAmb IAmb 13 34 44.9
comp=Z,7.2nm,0.7s
K05A Summer Lake 83.24 39 IAmb IAmb 13 34 47.0
comp=Z,23nm,0.9s
H04D Lebanon 83.27 37 IAmb IAmb 13 34 46.8
comp=Z,18nm,0.9s
WIFE Three Sisters- 83.51 38 IAmb IAmb 13 34 48.0
comp=Z,12nm,0.8s
H04A Detroit Lake 83.68 37 IAmb IAmb 13 34 48.1
comp=Z,14nm,1.0s
PINE Pine Mountain 83.85 38 IAmb IAmb 13 34 50.0
comp=Z,20nm,0.9s
GSI Gunungsitoli 84.09 274 P **P** **13 34 49.5 +0.4**
GSI Gunungsitoli 84.09 274 P **P** **13 34 49.9 +0.8**
GSI Gunungsitoli 84.09 274 P **P** **13 34 50.8 +1.7**
comp=Z,46nm,1.1s
TUC Tucson 84.33 52 P **P** **13 34 51.4 +1.4**
NLWA Neilton Lookou 84.46 34 IAmb IAmb 13 34 52.5
comp=Z,10nm,0.8s
I07A Izee 84.86 39 IAmb IAmb 13 34 54.6
comp=Z,6.9nm,0.9s
319A Douglas 85.00 54 IAmb IAmb 13 34 56.2
comp=Z,11nm,0.9s
GNW Green Mountain 85.12 34 IAmb IAmb 13 34 55.3
comp=Z,5.7nm,0.8s
HEH HeiHe 85.28 329 *e*P **P** **13 34 54.3 +0.3**
HEH pmax pmax
comp=Z,12nm,0.6s
U15A North Rim 85.30 48 IAmb IAmb 13 34 57.1
comp=Z,8.9nm,0.7s
ENH Enshi 85.45 305 P **P** **13 34 55.9 +0.6**
PKCU Pink Cliffs 85.80 47 IAmb IAmb 13 35 00.1
comp=Z,7.9nm,0.9s
G08A Pilot Rock 85.88 38 IAmb IAmb 13 34 59.2
comp=Z,9.3nm,0.9s
MXC Moxie City 85.89 36 IAmb IAmb 13 34 59.0
comp=Z,6.9nm,0.8s
LTY Liberty 86.09 36 IAmb IAmb 13 34 59.2
comp=Z,3.8nm,0.6s
E07A Sunnyside 86.12 37 IAmb IAmb 13 35 00.3
comp=Z,12nm,0.9s
HAWA Hanford 86.20 37 IAmb IAmb 13 35 00.6
comp=Z,16nm,1.0s
TCRU Three Creeks R 86.30 46 IAmb IAmb 13 35 06.0
comp=Z,3.7nm,0.5s
E08A Dider Farm, El 86.52 37 IAmb IAmb 13 35 02.0
comp=Z,9.2nm,0.9s
BMO Blue Mountains 86.59 39 IAmb IAmb 13 35 02.2
comp=Z,6.6nm,1.0s
MFID Camas Ranch 86.67 41 IAmb IAmb 13 35 03.0
comp=Z,8.4nm,1.1s
D08A Wollman Farm, 86.93 37 IAmb IAmb 13 35 03.9
comp=Z,12nm,1.0s
TROLL Troll, Antarti 87.04 181 ⇓P **P** **13 35 01.9 -0.4**
comp=Z,113nm,0.6s
E09A Wood Farm, Sta 87.05 37 IAmb IAmb 13 35 04.2
comp=Z,16nm,1.1s
KTH Kantishna Hill 87.33 12 IAmb IAmb 13 35 03.2
comp=Z,10nm,0.8s
SNAA Sanae 87.35 179 ⇓P **P** **13 35 03.4 -0.2**
comp=Z,22nm,0.6s
B08A Colville Reser 87.47 35 IAmb IAmb 13 35 05.8
comp=Z,9.7nm,0.8s
TMUT Trail Mountain 87.48 46 IAmb IAmb 13 35 07.5
comp=Z,5.4nm,0.9s
LLLB Lillooet 87.50 32 IAmb IAmb 13 35 06.3
comp=Z,10.0nm,1.1s
VNA3 Neumayer Olymp 87.53 177 ⇓P **P** **13 35 03.7 -0.7**
comp=Z,11nm,0.8s
XAN Xi'an 87.61 308 ⇑P **P** **13 35 06.0 +0.5**
XAN pmax pmax
comp=Z,9.0nm,0.7s
HLID Hailey 87.62 41 IAmb IAmb 13 35 07.7
comp=Z,4.6nm,0.8s
HVU Hansel Valley 87.71 43 IAmb IAmb 13 35 07.8
comp=Z,14nm,1.4s
C09A Chrisman Ranch 87.72 36 IAmb IAmb 13 35 07.3
comp=Z,10nm,0.8s
SRU San Rafael Swe 87.85 47 IAmb IAmb 13 35 08.5
comp=Z,7.1nm,0.8s
Y22A Socorro 87.92 52 IAmb IAmb 13 35 09.3
comp=Z,4.6nm,1.0s
VNA2 Neumayer--Watz 87.96 177 ⇓P **P** **13 35 05.6 -0.8**
comp=Z,4.0nm,0.8s,baz=172,slow=2.9
MNTX Cornudas Mount 88.11 55 IAmb IAmb 13 35 10.1
comp=Z,4.7nm,0.9s
VNA1 Neumayer--Stat 88.19 177 ⇓P **P** **13 35 06.7 -0.7**
comp=Z,6.7nm,0.8s
TCUT Toone Canyon 88.26 44 IAmb IAmb 13 35 10.6
comp=Z,9.8nm,0.8s
P18A Preston Nutter 88.29 46 IAmb IAmb 13 35 10.2
comp=Z,6.2nm,1.1s
BSUT Blindstream Ca 88.39 45 IAmb IAmb 13 35 11.4
comp=Z,8.1nm,0.8s
HWUT Hardware Ranch 88.40 44 IAmb IAmb 13 35 10.6
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 88.42 58 P **P** **13 35 10.6 +1.2**
comp=Z,4.2nm,0.8s,baz=217,slow=5.8,SNR=40
comp=Z,4.2nm,0.8s
HILR Hailar Array B 88.73 325 P **P** **13 35 10.2 -0.1**
comp=Z,2.2nm,0.5s,baz=133,slow=6.1,SNR=4.0
comp=Z,2.2nm,0.5s
TASM ASL Pad, Albuq 88.75 52 IAmb IAmb 13 35 12.7
comp=Z,2.5nm,0.8s
ANMO Albuquerque 88.75 52 P **P** **13 35 10.9 0.0**
ANMO IAmb IAmb 13 35 15.2
comp=Z,5.9nm,1.4s
ALPN Alpine 88.89 57 IAmb IAmb 13 35 13.6

comp=Z,6.0nm,0.8s
HDA Harding Lake 88.92 13 P **P** **13 35 09.0 -1.8**
CCB Clear Creek Bu 88.94 13 **P** **13 35 09.4 -1.4**
HHC Hu-ho-hao-te 88.99 315 *e*P **P** **13 35 13.1 +1.3**
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,120nm,6.1s
COLA College 89.13 13 P **P** **13 35 11.3 -0.4**
RDMU Red Mountain 89.20 46 P **P** **13 35 13.1 +0.1**
RDMU IAmb IAmb 13 35 14.5
comp=Z,4.8nm,0.8s
F19K Shaleruckik Mo 89.22 8 P **P** **13 35 11.5 -0.6**
F19K IAmb IAmb 13 35 12.8
comp=Z,6.7nm,0.8s
CMAR Chiang Mai Arr 89.23 290 P **P** **13 35 14.5 +1.2**
comp=Z,4.0nm,0.8s,baz=134,slow=3.0,SNR=22
comp=Z,4.0nm,0.8s
IL31 89.25 13 **P** **13 35 10.9 -1.3**
ILAR Eielson Array 89.25 13 P **P** **13 35 11.8 -0.5**
comp=Z,2.4nm,0.5s,baz=213,slow=5.2,SNR=24
comp=Z,2.4nm,0.5s
ILAR Eielson Array 89.25 13 P **P** **13 35 10.7 -1.5**
H22K Ishtalitna Cre 89.36 11 IAmb IAmb 13 35 13.6
comp=Z,7.4nm,0.7s
CHTO Chiang Mai 89.37 290 P **P** **13 35 15.4 +1.5**
M29M Somme Creek 89.40 18 P **P** **13 35 13.5 +0.3**
J25K Salcha River, 89.44 14 P **P** **13 35 13.2 0.0**
J25K IAmb IAmb 13 35 13.7
comp=Z,5.1nm,0.6s
PZH PanZhiHua 89.99 298 P **P** **13 35 18.1 +1.3**
BW06 Boulder Array 90.27 44 IAmb IAmb 13 35 20.0
comp=Z,9.2nm,1.4s
PD31 Pinedale Array 90.27 44 IAmb IAmb 13 35 20.0
comp=Z,9.6nm,1.4s
PDAR Pinedale Array 90.27 44 P **P** **13 35 17.8 0.0**
comp=Z,2.3nm,0.8s,baz=198,slow=2.9,SNR=20
comp=Z,2.3nm,0.8s
PDAR Pinedale Array 90.27 44 P **P** **13 35 17.4 -0.5**
LZH Lanzhou 92.25 308 *e*P P 13 35 36.8 +10
LZH pmax pmax
comp=Z,13nm,1.0s
SONM Songino Array 95.50 319 P **P** **13 35 40.8 -0.7**
comp=Z,0.3nm,0.5s,baz=97,slow=6.0,SNR=1.9
comp=Z,0.3nm,0.5s
ZALV Zalesovo Beam 110.28 321 PKiKP **PKiKP** **13 40 42.7 -1.4**
comp=Z,1.0nm,0.6s,baz=190,slow=0.1,SNR=5.5
MKAR Makanchi Array 110.81 313 PKiKP **PKiKP** **13 40 43.7 -1.7**
comp=Z,0.4nm,0.4s,baz=174,slow=0.9,SNR=10
BVAR Borovoye Array 118.84 320 PKP **PKPdf** **13 40 59.4 -1.2**
comp=Z,3.2nm,0.4s,baz=129,slow=1.6,SNR=22
SPITS Spitsbergen Ar 122.47 356 PKP **PKPdf** **13 41 05.9 -1.0**
comp=Z,3.3nm,0.5s,baz=79,slow=0.7,SNR=7.2
ARCES ARCESS Array B 129.37 349 PKP **PKPdf** **13 41 19.3 -1.0**
comp=Z,4.0nm,0.6s,baz=47,slow=1.2,SNR=31
FINES FINESS Array B 136.09 343 PKP **PKPdf** **13 41 31.3 -1.8**
comp=Z,1.7nm,0.6s,baz=40,slow=1.7,SNR=7.3
FINES SKP **SKPbc** **13 44 09.1 -0.4**
comp=Z,4.5nm,1.1s,baz=56,slow=3.5,SNR=5.5
NB2 NORSAR Subarra 139.51 352 PKP **PKPdf** **13 41 32.6 -6.8**
comp=Z,0.7nm,0.5s,baz=16,slow=4.0
NOA NORSAR Array B 139.51 352 PKP **PKPdf** **13 41 38.2 -1.3**
comp=Z,0.6nm,0.6s,baz=23,slow=3.5,SNR=3.4
HFS Hagfors 140.02 350 PKhKP PKPpre 13 41 33.3
comp=Z,2.1nm,0.4s,baz=77,slow=3.3,SNR=18
ONAU Onsala 142.91 350 *i* P **PKPdf** **13 41 41.8 -3.7**
AKASG Malin Array Be 143.02 330 PKhKP PKPpre 13 41 42.9
comp=Z,13nm,0.4s,baz=44,slow=4.2,SNR=80
KIEV Kiev 143.04 330 PKPab 13 41 43.2 -0.6
DEL Delary 143.44 348 *i* P PKPab 13 41 44.6 -0.6
GOET G??ttrup 143.66 352 *i* P PKPbc 13 41 44.2 -1.7
BJUU Bjuv 143.98 348 *i* P PKPbc 13 41 46.8 -0.1
RNPP5 Staryi Chortor 144.15 333 PKP PKPbc 13 41 47.3 -0.4
LUNU Lund 144.31 348 *i* P PKPbc 13 41 47.5 -0.5
SORM Soroca 145.16 327 ⇑P **PKPbc** **13 41 50.3 -0.5**
EKA Eskdalemuir Ar 145.78 4 PKPbc **PKPbc** **13 41 51.5 -0.9**
comp=Z,5.4nm,0.6s,baz=347,slow=3.0,SNR=15
KMPD K-Podol'skiy 145.80 329 PKP **PKPdf** **13 41 51.3 +0.5**
BRTR Keskin Array B 146.41 311 PKPbc **PKPbc** **13 41 54.4 -0.5**
comp=Z,4.1nm,0.6s,baz=129,slow=3.4,SNR=18
KIRS Kirsehir-Merke 146.44 310 ⇓P **PKPbc** **13 41 54.8 -0.1**
STNU Starunia 146.61 331 PKP **PKPdf** **13 41 51.8 -0.4**
SHIU Shidnytsya 146.73 333 PKP **PKPdf** **13 41 52.1 -0.3**
VLDR Vladesti 146.76 324 ⇑P **PKPbc** **13 41 55.9 +0.5**
BURAR Bucovina Array 147.06 329 **PKPbc** **13 41 57.0 +0.7**
BURAR Bucovina Array 147.06 329 ⇓P **PKiKP** **13 41 57.6 -0.4**
MMAI Mount Meron Ar 147.11 298 PKPbc **PKPbc** **13 41 56.7 -0.1**
comp=Z,5.5nm,0.5s,baz=64,slow=1.9,SNR=11
TPGR Topolog 147.18 322 ⇑P **PKPbc** **13 41 56.7 +0.2**
ONER Baraj Valea Uz 147.34 326 ⇑P **PKPbc** **13 41 57.5 +0.6**
OJC Ojcow 147.35 337 *e*PKPbc **PKPbc** **13 41 56.7 -0.1**
VRI Vrincioaia 147.48 325 ⇑P **PKPbc** **13 41 57.2 -0.1**
TURR Turia 147.73 326 ⇑P **PKPbc** **13 41 58.2 +0.3**
NIE Niedzica 147.82 336 *e*PKPbc **PKPbc** **13 41 58.6 +0.6**
KSP Ksiaz 147.98 341 *e*PKPbc **PKPbc** **13 41 58.8 +0.5**
DOPR Dopca 148.11 327 ⇓P **PKPbc** **13 41 58.8 -0.1**
MLR Muriele Rosu 148.14 325 ⇓P **PKPbc** **13 41 58.5 -0.6**
OSTC Ostas 148.25 341 ⇑ *e*PKP **PKiKP** **13 42 00.2 -0.1**
CHVC Chvalec 148.28 341 ⇑ *e*PKP **PKPab** **13 42 05.6 +1.0**
STEB Steborice 148.30 339 ⇑ *e*PKP **PKPbc** **13 41 59.2 0.0**
STEB *e*PKPAB **PKPab** **13 42 05.4 +0.7**
DPC Dobruska-Polom 148.40 341 ⇑ *e*PKP **PKiKP** **13 42 00.1 -0.5**
DPC *e*PKPAB **PKPab** **13 42 05.9 +0.8**
CLL Collm 148.44 345 *i* PKPbc **PKPbc** **13 41 59.5 0.0**
comp=Z,12nm,0.7s
KRLC Kraliky 148.50 340 ⇑ *e*PKP **PKPbc** **13 42 00.1 +0.4**
MORC Moravsky Berou 148.51 339 ⇓P **PKPbc** **13 42 00.0 +0.3**
MORC Moravsky Berou 148.51 339 *e*PKP **PKPbc** **13 41 59.9 +0.1**
BORA Eskisehir 148.56 313 **PKPbc** **13 42 00.1 -0.2**
VOIR 148.64 326 ⇑P **PKPbc** **13 42 00.8 +0.5**
MARR Marisel-Cluj 148.73 330 ⇑P **PKiKP** **13 42 02.4 +0.9**
MAUC Maruska 148.76 338 ⇑ *e*PKP **PKiKP** **13 42 01.0 -0.4**
DRGR 148.84 330 ⇑P **PKPbc** **13 42 00.3 -0.3**
ARR Arges 148.91 326 ⇓P **PKiKP** **13 42 01.5 -0.3**
HSKC Hora Svate Kat 148.98 344 ⇑ *e*PKP **PKPbc** **13 42 01.1 +0.2**
PRA Prague 149.21 343 ⇑ *e*PKP **PKPbc** **13 42 01.7 +0.3**
VRAC Vranov 149.23 340 *e*PKP **PKPbc** **13 42 01.5 0.0**
JAVC Velka Javorina 149.25 338 *e*PKP **PKiKP** **13 42 02.8 +0.4**
PRU Pruhonice 149.25 342 ⇑ *e*PKP **PKPbc** **13 42 01.8 +0.3**
KRUC Moravsky 149.51 340 *e*PKP **PKPbc** **13 42 02.1 0.0**
SIRR Siria 149.71 331 ⇓P **PKPbc** **13 42 02.9 +0.1**
ELND Elena 149.81 322 ⇑P **PKPbc** **13 42 03.1 0.0**
GZR Gura Zlata 149.82 328 ⇓P **PKPbc** **13 42 03.1 0.0**
ZVC Zvikov 149.84 342 ⇑ *e*PKP **PKiKP** **13 42 03.7 +0.2**
ZVC *e*PKPAB **PKPab** **13 42 11.6 +0.5**
BZS Buzias 150.22 330 ⇑P **PKPbc** **13 42 03.7 -0.2**
KHC Kasperske Hory 150.29 343 **PKPbc** **13 42 03.5 -0.6**
KHC Kasperske Hory 150.29 343 ⇑ *e*PKP **PKPbc** **13 42 04.1 +0.1**
KHC *e*PKPAB **PKPab** **13 42 13.9 +0.9**
MEM Membach 150.34 353 *e*PKP **PKPbc** **13 42 03.9 -0.1**
BTNL Ternell 150.35 353 *d*PKP **PKPbc** **13 42 04.1 0.0**
CKRC Cesky Krumlov 150.37 342 ⇑ *e*PKP **PKPbc** **13 42 04.1 -0.1**
HERR Herculane 150.37 328 ⇓P **PKPbc** **13 42 03.8 -0.5**
GERES GERESS Array B 150.52 342 PKPbc **PKPbc** **13 42 04.1 -0.5**
comp=Z,3.5nm,0.6s,baz=29,slow=3.0,SNR=18
BGES Gesves 150.66 354 *d*PKP **PKiKP** **13 42 05.3 +0.1**
CONA Conrad Observa 150.67 339 *i* PKP **PKPbc** **13 42 05.1 +0.1**
comp=Z,7.1nm,0.6s
RONA Rosalia, Austr 150.72 338 *i* PKP **PKPbc** **13 42 05.2 +0.1**
comp=Z,10nm,0.4s
BMRD Maredsous 150.77 355 *d*PKP **PKPbc** **13 42 05.0 0.0**
BMRD *d*PKPab **PKPab** **13 42 14.4 -0.5**
MDVR Moldovita 150.78 329 ⇑P **PKPbc** **13 42 05.1 -0.2**
RCHB Rochefort 150.87 354 *d*PKP **PKPbc** **13 42 05.2 0.0**
DOU Dourbes 150.99 355 *d*PKP **PKPbc** **13 42 05.5 0.0**
BLKB Belogradchik 151.12 326 ⇑P **PKPbc** **13 42 05.8 -0.3**
MOA Molln 151.25 341 *i* PKP **PKPbc** **13 42 06.1 -0.1**
comp=Z,2.4nm,0.4s
WLF Walferdange 151.26 353 *d*PKP **PKiKP** **13 42 06.6 +0.2**
EZN Ezine 151.33 316 ⇑P **PKPbc** **13 42 06.2 -0.4**
BOVS Bovan 151.62 327 ⇓P **PKPbc** **13 42 06.8 -0.4**
LESA Schwarzleotal 152.10 343 *i* PKP **PKPbc** **13 42 08.1 -0.1**
comp=Z,1.0nm,0.2s
WTTA Wattenberg 152.53 344 *i* PKP **PKPbc** **13 42 08.6 -0.6**
comp=Z,3.9nm,0.3s
MYKA Terra Mystica 152.53 341 *i* PKP **PKPbc** **13 42 08.1 -1.1**
comp=Z,3.3nm,0.7s
ESDC Sonseca Array 161.14 11 PKPab **PKPab** **13 42 59.8 -0.3**
comp=Z,0.3nm,0.4s,baz=352,slow=6.9,SNR=3.8
KEST Kesra 163.66 334 PKPab **PKPab** **13 43 10.9 -0.5**
comp=Z,2.6nm,0.7s,baz=53,slow=8.7,SNR=3.8

*AEIC **14** 13:23:58.6±0.3,54.1°N±0.2°×165.7°W±0.2°,h121km±4km, Error ellipse: s-maj=40.1km s-min=7.2km az=153.0*
NEIC 14 13:23:59.1±0.3,54.1°N±0.3°×165.7°W±0.3°,h122km±2km, ML2.9/12,**ML2.4**(AEIC),**Error ellipse: s-maj=41.9km s-min=8.7km az=151.0,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.07**	**335**			Pn	13 24 15.9	+0.2
AKSA						Sn	13 24 28.0	-0.2
AKUT	**Akutan**	**0.10**	**310**			Pn	13 24 15.6	-0.1
AKUT						Sn	13 24 28.0	-0.2
AKUT	**Akutan**	**0.10**	**310**	IAML			13 24 28.8	
	comp=E,264nm,0.2s							
AHB	**Akutan Harbor**	**0.11**	**292**			Pn	13 24 15.7	0.0
AHB						Sn	13 24 28.0	-0.3
AKBBA	**Akutan Broad B**	**0.17**	**278**			Pn	13 24 15.9	0.0
AKBBA						Sn	13 24 28.4	-0.1
AKV	**Akutan Volcano**	**0.19**	**286**			Pn	13 24 16.1	+0.1
ZRO	**Akutan Zero**	**0.20**	**275**			Pn	13 24 16.0	+0.1
ZRO						Sn	13 24 28.6	0.0
AKMO	**Akutan Morgan**	**0.21**	**274**			Pn	13 24 16.3	+0.3
AKMO						Sn	13 24 28.9	+0.3
UNV	**Unalaska Valle**	**0.56**	**246**			Pn	13 24 17.5	-0.1
MNAT	**Makushin Natee**	**0.64**	**253**			Pn	13 24 18.2	0.0
MREP	**Makushin Rep't**	**0.70**	**248**			Pn	13 24 18.8	+0.1
WEBT	**Westdahl Beart**	**0.74**	**45**			Pn	13 24 18.8	-0.1
FALS	**False Pass**	**1.52**	**58**	Pn		Pn	13 24 26.9	+0.1
DT1	**Dutton Round H**	**2.22**	**61**			Pn	13 24 35.3	0.0
DOL	**Dolgoi Island**	**2.45**	**62**			Pn	13 24 38.5	+0.2
S12K	**Black Hills**	**2.64**	**50**	Pn		Pn	13 24 40.6	-0.1
S12K					IAML		13 25 14.9	
	comp=E,33nm,0.7s							
S12K					IAML		13 25 37.9	
	comp=N,34nm,1.1s							
SDPT	**Sand Point**	**3.26**	**65**	Pn	Pn	Pn	13 24 48.7	-0.1
SDPT					IAML		13 26 32.5	
	comp=E,35nm,1.2s							
CNBA	**Chernabura Isl**	**3.62**	**76**	Pn	Pn	Pn	13 24 52.5	-1.0
CNBA					IAML		13 25 33.8	
	comp=N,18nm,1.2s							
CNBA					IAML		13 27 19.2	
	comp=E,15nm,0.9s							
CHIR	**Chirikof Islan**	**6.04**	**69**	Pn	Pn	Pn	13 25 24.7	-1.2
ADK	**Adak**	**7.02**	**256**	Pn	Pn	Pn	13 25 38.4	-0.8

*TEH **14** 13:35:10.6,37.7°N×47.4°E,h8km±20km*
*IDC **14** 13:35:17.2±3.5,38.7°N×47.2°E,h0km,mb3.7/3, mbtmp3.5/5,ML3.3/2,MS3.1/2,Error ellipse: s-maj=92.7km s-min=19.6km az=172.0*
ISC 14 13:35:11.6±0.8,37.7°N±0.04°×47.3°E±0.06,h10km,n27, σ1§36/26,mb3.6/3,Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IHSH	**Hashtrud**	**0.47**	**191**		Pg	**Pg**	**13 35 19.3**	**-1.5**
IHSH					Sg	**Sg**	**13 35 26.2**	**-0.8**
IHRS	**Heris**	**0.61**	**335**		Pg	**Pg**	**13 35 23.4**	**0.0**
IHRS					Sg	**Sb**	**13 35 33.8**	**+0.6**
ITBZ	**Tabriz**	**1.07**	**296**		Pg	**Pb**	**13 35 32.1**	**-0.2**
IAZR	**Azarshahr**	**1.11**	**266**		Pg	**Pb**	**13 35 32.9**	**-0.1**
GRMI	**Germi**	**1.12**	**21**		Pg	**Pg**	**13 35 31.6**	**-1.4**
GAS1	**Astara - Iran**	**1.31**	**62**		Pg	**Pn**	**13 35 34.2**	**-1.7**
ISHB	**Shabestar**	**1.48**	**291**		Pg	**Pg**	**13 35 39.3**	**0.0**
IMRD	**Marand**	**1.62**	**306**		Pg	**Pg**	**13 35 42.8**	**+0.2**
MAHB	**Mahabad**	**1.66**	**234**		Pg	**Pb**	**13 35 42.2**	**-0.2**
IGZV	**Ghazvin**	**2.66**	**120**		Pn	**Pn**	**13 35 54.7**	**0.0**
QABG	**Abgarm-Qazvin**	**2.72**	**139**		Pn	**Pn**	**13 35 55.8**	**+0.3**
MZPU	**Pul - Mazandar**	**3.61**	**110**		Pn	**Pn**	**13 36 07.7**	**0.0**
IPRN	**Peran**	**4.26**	**109**		Pn	**Pn**	**13 36 16.2**	**-0.3**
IDMV	**Damavand**	**4.34**	**119**		Pn	**Pn**	**13 36 19.3**	**+1.5**
IVRN	**Varamin**	**4.47**	**127**		Pn	**Pn**	**13 36 20.5**	**+1.0**
IALA	**Alasht**	**4.67**	**109**		Pn	**Pn**	**13 36 23.8**	**+1.4**
ISFB	**Sefidab**	**5.21**	**129**		Pn	**Pn**	**13 36 29.8**	**+0.2**
IKIA	**Kiasar**	**5.29**	**105**		Pn	**Pn**	**13 36 31.6**	**+0.8**
IKLH	**Kolahrood**	**5.61**	**141**		Pn	**Pn**	**13 36 36.4**	**+1.2**
ANAR	**Anarak**	**6.91**	**129**		Pn	**Pn**	**13 36 54.3**	**+1.2**
BRTR	**Keskin Array B**	**10.90**	**285**		Pn	Pn	13 37 53.7	+5.9
	baz=84,slow=16,SNR=3.6							
	0.5nm,0.7s							
EIL	**Elat**	**13.11**	**236**		LR	LR	13 44 01.5	
	comp=Z,53nm,20.8s,baz=1.5,slow=38							
AKASG	**Malin Array Be**	**18.27**	**321**		P	**Pn**	**13 39 22.0**	**-3.1**
	0.9nm,0.3s,baz=119,slow=13,SNR=2.8							
	0.2nm,0.3s							
BVAR	**Borovoye Array**	**22.08**	**39**		P	**P**	**13 40 07.0**	**+0.4**
	1.6nm,0.6s,baz=241,slow=9.9,SNR=7.8							
	1.6nm,0.6s							
KURBB	**Kurchatov Arra**	**25.56**	**50**		P	**P**	**13 40 41.9**	**+1.4**
	1.7nm,0.2s,baz=260,slow=8.8,SNR=4.2							
	1.7nm,0.2s							
MKAR	**Makanchi Array**	**27.18**	**59**		P	**P**	**13 40 58.8**	**+3.6**
	0.2nm,0.5s,baz=262,slow=8.3,SNR=4.5							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**30.25**	**46**		LR	LR	13 53 45.2	
	comp=Z,47nm,18.7s,baz=356,slow=37							

*AEIC **14** 13:38:33.6±2.6,54.2°N±0.1°×166.9°W±0.2°,h154km±5km, Error ellipse: s-maj=24.1km s-min=6.1km az=148.0*
*NEIC **14** 13:38:33.7±1.8,54.0°N±0.1°×167.0°W±0.2°,h157km±7km, mb3.9/20,ML3.8/16,ML3.6(AEIC),Error ellipse: s-maj=24.1km s-min=4.1km az=145.0*
*IDC **14** 13:38:33.6±2.9,54.3°N×167.2°W,h141km±24km, mb3.3/13,mbtmp3.7/15,Error ellipse: s-maj=25.7km s-min=14.6km az=5.0*
ISC 14 13:38:34.1±0.6,54.2°N±0.1°×167.04W±0.06, h153km±5km,n114,σ1§23/111,mb3.6/13,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSW	**Makushin Switc**	**0.32**	**152**			**Pn**	**13 38 54.8**	**-0.3**
MNAT	**Makushin Natee**	**0.38**	**146**			**Pn**	**13 38 55.0**	**-0.3**
MAPS	**Pakushin South**	**0.39**	**171**			**Pn**	**13 38 55.0**	**-0.3**
MGOD	**Makushin Gods**	**0.41**	**166**			**Pn**	**13 38 55.1**	**-0.3**
MREP	**Makushin Rep't**	**0.42**	**156**			**Pn**	**13 38 55.1**	**-0.4**
UNV	**Unalaska Valle**	**0.47**	**138**			**Pn**	**13 38 55.2**	**-0.4**
UNV	**Unalaska Valle**	**0.47**	**138**			**Sn**	**13 39 11.5**	**-0.4**
AKRB	**Akutan Reef Bi**	**0.57**	**96**			**Pn**	**13 38 56.6**	**+0.4**
LVA	**Lava Point**	**0.59**	**93**			**Pn**	**13 38 56.6**	**+0.4**
LVA					IAML		13 39 20.8	
	comp=N,1μm,0.6s							
AKMO	**Akutan Morgan**	**0.61**	**99**			**Pn**	**13 38 56.6**	**+0.2**
AKMO						**Sn**	**13 39 13.7**	**+0.3**
AKGG	**Akutan Green G**	**0.62**	**89**			**Pn**	**13 38 56.7**	**+0.3**
ZRO	**Akutan Zero**	**0.63**	**99**			**Pn**	**13 38 56.6**	**+0.1**
ZRO						**Sn**	**13 39 14.0**	**+0.5**
AKV	**Akutan Volcano**	**0.64**	**96**			**Pn**	**13 38 56.6**	**0.0**
AKBBA	**Akutan Broad B**	**0.66**	**98**			**Sn**	**13 39 14.0**	**+0.1**
AHB	**Akutan Harbor**	**0.72**	**96**			**Sn**	**13 39 15.2**	**+0.6**
AKUT	**Akutan**	**0.75**	**94**			**Pn**	**13 38 57.5**	**+0.3**
AKUT			

	comp=E,144nm,4.4s							
SDPT	**Sand Point**	**3.97**	**70**	P	**Pn**	**13 39 34.3**	**+0.4**	
SDPT	**Sand Point**	**3.97**	**70**	S	**Sn**	**13 40 20.5**	**0.0**	
CHNA	**Chernabura Isl**	**4.39**	**79**	P	**Pn**	**13 39 39.0**	**-0.4**	
CHNA	**Chernabura Isl**	**4.39**	**79**	S	**Sn**	**13 40 29.2**	**-1.0**	
CNBA	**Chernabura Isl**	**4.39**	**79**	Pn	**Pn**	**13 39 39.1**	**-0.3**	
CNBA				IAML		13 41 44.2		
	comp=N,86nm,4.4s							
O14K	**Tigyukauivet M**	**5.98**	**30**	Pn	**Pn**	**13 40 02.3**	**+1.9**	
ADK	**Adak**	**6.26**	**252**	Pn	**Pn**	**13 40 04.3**	**+0.2**	
ADK	**Adak**	**6.26**	**252**	P	**Pn**	**13 40 04.4**	**+0.2**	
N14K	**Kuskokwak Cree**	**6.44**	**25**	Pn	**Pn**	**13 40 09.0**	**+2.5**	
CHIR	**Chirikof Islan**	**6.77**	**71**	Pn	**Pn**	**13 40 10.2**	**-0.6**	
CHIR	**Chirikof Islan**	**6.77**	**71**	P	**Pn**	**13 40 10.3**	**-0.6**	
SII	**Sitkinak Islan**	**7.70**	**67**	P	**Pn**	**13 40 22.2**	**-1.1**	
OHAK	**Old Harbor**	**8.34**	**63**	Pn	**Pn**	**13 40 29.9**	**-1.9**	
OHAK	**Old Harbor**	**8.34**	**63**	P	**Pn**	**13 40 30.2**	**-1.5**	
AMKA	**Amchitka**	**8.75**	**257**	Pn	**Pn**	**13 40 37.1**	**-0.2**	
Q19K	**Cape Douglas,**	**8.78**	**52**	Pn	**Pn**	**13 40 38.5**	**+0.8**	
KDAK	**Kodiak Island**	**8.86**	**60**	P	**Pn**	**13 40 37.3**	**-1.4**	
	comp=N,3.1nm,0.3s,baz=202,slow=6.1,SNR=15							
KDAK				S	**Sn**	**13 42 10.2**	**-6.8**	
	comp=N,2.8nm,0.4s,baz=168,slow=20,SNR=6.9							
KDAK	**Kodiak Island**	**8.86**	**60**		**Pn**	**13 40 37.2**	**-1.6**	
SYI	**Shuyak Island**	**9.24**	**56**	Pn	**Pn**	**13 40 43.1**	**-0.7**	
CNPM	**China Poot**	**10.16**	**52**	Pn	**Pn**	**13 40 55.2**	**-0.7**	
SLKM	**Skilak Lake**	**11.05**	**48**	Pn	**Pn**	**13 41 07.8**	**+0.2**	
SEW	**Seward**	**11.22**	**51**	Pn	**Pn**	**13 41 09.0**	**-0.8**	
PWL	**Port Wells**	**12.04**	**49**	Pn	**Pn**	**13 41 18.8**	**-1.7**	
KNK	**Knik Glacier**	**12.23**	**46**	Pn	**Pn**	**13 41 22.5**	**-0.5**	
HIN	**Hinchinbrook I**	**12.69**	**52**	Pn	**Pn**	**13 41 28.2**	**-0.7**	
FID	**Port Fidalgo**	**12.83**	**51**	Pn	**Pn**	**13 41 28.3**	**-2.3**	
SCM	**Sheep Creek Mo**	**12.91**	**46**	Pn	**Pn**	**13 41 31.4**	**-0.4**	
EYAK	**Cordova Ski Ar**	**13.09**	**52**	Pn	**Pn**	**13 41 33.1**	**-0.9**	
EYAK	**Cordova Ski Ar**	**13.09**	**52**	P	**Pn**	**13 41 34.0**	**0.0**	
KLU	**Klutina**	**13.36**	**48**	Pn	**Pn**	**13 41 36.8**	**-0.8**	
H21K	**Melozitna Rive**	**13.48**	**26**	Pn	**Pn**	**13 41 39.8**	**+0.8**	
N25K	**Chitina, Valde**	**13.99**	**49**	Pn	**Pn**	**13 41 45.5**	**0.0**	
GLB	**Gilahina Butte**	**14.29**	**50**	Pn	**Pn**	**13 41 48.9**	**-0.3**	
TGL	**Tana Glacier**	**14.53**	**53**	Pn	**Pn**	**13 41 52.3**	**0.0**	
ILAR	**Eielson Array**	**14.65**	**36**	P	**Pn**	**13 41 51.7**	**-1.9**	
	comp=N,0.4nm,0.8s,baz=220,slow=9.2,SNR=6.5							
I27K	**Kandik River**	**16.97**	**38**	P	**P**	**13 42 21.3**	**-0.2**	
I27K				IAmb	IAmb	13 42 33.1		
	comp=Z,2.5nm,0.6s							
M29M	**Somme Creek**	**17.00**	**50**	P	**P**	**13 42 21.0**	**-1.0**	
M29M				IAmb	IAmb	13 42 25.6		
	comp=Z,4.1nm,0.7s							
BMAR	**Burnt Mountain**	**17.05**	**30**	Pn	**Pn**	**13 42 25.6**	**+2.5**	
DAWY	**Dawson**	**17.14**	**44**	Pn	**Pn**	**13 42 25.4**	**+1.3**	
B22K	**Teshekpuk Lake**	**17.32**	**16**	P	**P**	**13 42 25.2**	**0.0**	
B22K				IAmb	IAmb	13 42 26.4		
	comp=Z,7.2nm,1.1s							
L29M	**L29M**	**17.34**	**48**	Pn	**Pn**	**13 42 28.1**	**+1.6**	
C23K	**Itkillik River**	**17.37**	**19**	P	**P**	**13 42 26.9**	**+1.1**	
C23K				IAmb	IAmb	13 42 31.4		
	comp=Z,3.7nm,0.8s							
N30M	**Aishikik Lake**	**17.40**	**53**	Pn	**Pn**	**13 42 30.1**	**+2.8**	
I28M	**Miner Creek**	**17.51**	**39**	P	**P**	**13 42 28.2**	**+0.8**	
I28M				IAmb	IAmb	13 42 32.6		
	comp=Z,3.4nm,0.8s							
O30N	**Mendenhall**	**17.76**	**56**	P	**P**	**13 42 28.7**	**-1.5**	
WHY	**Whitehorse**	**18.34**	**56**	P	**P**	**13 42 34.5**	**-2.1**	
WHY				IAmb	IAmb	13 42 41.9		
	comp=Z,9.3nm,0.8s							
H29M	**Whitestone**	**18.43**	**38**	P	**P**	**13 42 38.5**	**+1.1**	
J30M	**Hart River**	**18.57**	**44**	P	**P**	**13 42 38.7**	**-0.4**	
I30M	**Mount Dempster**	**18.77**	**42**	P	**P**	**13 42 41.7**	**+0.4**	
G29M	**Pine Creek**	**18.88**	**36**	P	**P**	**13 42 42.8**	**+0.5**	
EPYK	**Eagle Plains**	**19.10**	**38**	P	**P**	**13 42 45.8**	**+1.0**	
E29M	**Blow River**	**19.66**	**32**	P	**P**	**13 42 51.1**	**+0.4**	
E29M				IAmb	IAmb	13 42 56.1		
	comp=Z,3.3nm,0.7s							
F30M	**Barrier River**	**19.97**	**36**	P	**P**	**13 42 53.8**	**-0.3**	
F30M				IAmb	IAmb	13 42 56.0		
	comp=Z,4.3nm,0.5s							
G31M	**Satah River**	**20.21**	**38**	P	**P**	**13 42 55.9**	**-0.8**	
G31M				IAmb	IAmb	13 42 59.3		
	comp=Z,4.3nm,0.5s							
DLBC	**Dease Lake**	**20.78**	**63**	P	Pn	13 43 07.6	+0.4	
	comp=Z,2.7nm,0.8s,baz=213,slow=12,SNR=8.0							
PETK	**Petropavlovsk-**	**20.80**	**281**	P	**P**	**13 43 01.9**	**-1.1**	
	comp=Z,3.0nm,0.9s,baz=80,slow=12,SNR=7.0							
	comp=Z,3.0nm,0.9s							
INK	**Inuvik**	**21.05**	**35**	P	**P**	**13 43 05.5**	**0.0**	
	comp=Z,4.3nm,0.5s,baz=238,slow=13,SNR=14							
	comp=Z,4.3nm,0.5s							
INK	**Inuvik**	**21.05**	**35**	P	**P**	**13 43 05.9**	**+0.4**	
C36M	**Paulatuk**	**24.62**	**35**	P	**P**	**13 43 39.2**	**-0.6**	
C36M				IAmb	IAmb	13 43 42.2		
	comp=Z,1.3nm,0.6s							
YKA	**Yellowknife Ar**	**28.00**	**52**	P	**P**	**13 44 10.4**	**+0.3**	
	comp=Z,0.6nm,0.6s,baz=329,slow=17,SNR=4.7							
	comp=Z,0.6nm,0.6s							
NVAR	**Mina Array Bea**	**36.37**	**95**	P	**P**	**13 45 25.1**	**+1.6**	
	comp=Z,0.3nm,0.7s,baz=315,slow=7.9,SNR=3.6							
NVAR				PcP	**PcP**	**13 47 46.3**	**+1.8**	
	comp=Z,0.2nm,0.5s,baz=309,slow=3.6,SNR=2.6							
NVAR				ScP	**ScP**	**13 51 17.2**	**+0.9**	
	comp=Z,0.2nm,0.5s,baz=345,slow=3.5,SNR=2.3							
	comp=Z,0.3nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**39.76**	**220**	T	T	14 28 05.5		
	baz=25,slow=76,SNR=3.8							
H11N3	**WAKE ISLAND Hy**	**39.76**	**220**	T	T	14 27 50.4		
	baz=25,slow=76,SNR=3.6							
H11N1	**WAKE ISLAND Hy**	**39.77**	**220**	T	T	14 28 17.9		
	baz=25,slow=76,SNR=3.2							
H11S1	**WAKE ISLAND Hy**	**40.94**	**220**	T	T	14 29 16.6		
	baz=23							
H11S2	**WAKE ISLAND Hy**	**40.96**	**220**	T	T	14 29 31.6		
	baz=23							
H11S3	**WAKE ISLAND Hy**	**40.96**	**220**	T	T	14 29 37.6		
	baz=23							
TXAR	**Lajitas Array**	**51.37**	**92**	P	**P**	**13 47 24.6**	**+1.7**	
	comp=Z,0.5nm,0.4s,baz=293,slow=5.3,SNR=10							
	comp=Z,0.5nm,0.4s							
SONM	**Songino Array**	**51.56**	**301**	P	**P**	**13 47 24.1**	**-0.1**	
	comp=Z,0.3nm,0.5s,baz=38,slow=7.7,SNR=2.0							
	comp=Z,0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**62.03**	**319**	P	**P**	**13 48 37.8**	**+0.1**	
	comp=Z,0.2nm,0.2s,baz=56,slow=8.4,SNR=2.0							
	comp=Z,0.2nm,0.2s							
BVAR	**Borovoye Array**	**63.02**	**325**	P	**P**	**13 48 44.2**	**0.0**	
	comp=Z,0.5nm,0.5s,baz=69,slow=7.9,SNR=3.4							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**63.55**	**314**	P	**P**	**13 48 47.2**	**-0.7**	
	comp=Z,0.2nm,0.6s,baz=46,slow=4.2,SNR=2.8							
	comp=Z,0.2nm,0.6s							
FINES	**FINESS Array B**	**64.24**	**353**	P	**P**	**13 48 51.0**	**-1.0**	
	comp=Z,2.9nm,1.0s,baz=4.2,slow=5.7,SNR=2.5							
	comp=Z,2.9nm,1.0s							
HFS	**Hagfors**	**66.02**	**360**	P	**P**	**13 49 02.9**	**-0.6**	
	comp=Z,1.7nm,0.8s,baz=40,slow=2.5,SNR=1.9							
	comp=Z,1.7nm,0.8s							
WRA	**Warramunga Arr**	**89.23**	**233**	P	**P**	**13 51 12.5**	**+0.1**	
	comp=Z,0.3nm,0.5s,baz=34,slow=5.7,SNR=1.1							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**92.63**	**232**	P	**P**	**13 51 28.7**	**+0.6**	
	comp=Z,0.3nm,1.0s,baz=20,slow=4.0,SNR=1.3							
	comp=Z,0.3nm,1.0s							
H03N2	**Juan Fernandez**	**115.31**	**112**	T	T	16 02 17.9		
	baz=319							
H03N1	**Juan Fernandez**	**115.33**	**112**	T	T	16 02 31.3		
	baz=319							
H03N3	**Juan Fernandez**	**115.33**	**112**	T	T	16 02 24.4		
	baz=319							
QSPA	**South Pole Qui**	**143.96**	**180**	PKP	**PKiKP**	**13 57 51.7**	**-1.6**	
	comp=Z,0.5nm,0.4s,baz=37,slow=5.1,SNR=8.6							
BOSA	**Boshof**	**152.91**	**336**	PKPbc	**PKiKP**	**13 58 12.7**	**-0.3**	
	comp=Z,2.8nm,0.8s,baz=0.0,slow=1.0,SNR=0.5							

IDC 14 13:46:05.8±2.4, 5.81S×130.64E, h0km, mb3.4/1, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=130.0km s-min=32.5km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.51**	**166**	Pn	Pn	13 49 33.2	+0.7
	0.1nm,0.3s,baz=346,slow=9.7,SNR=5.6						
WRA				Sn	Sn	13 52 00.2	-14
	0.2nm,0.3s,baz=353,slow=21,SNR=5.8						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**18.03**	**170**	P	Pn	13 50 17.5	-0.6
	baz=1.0,slow=11,SNR=6.5						
ASAR				S	Sn	13 53 25.2	-15
	0.2nm,0.6s,baz=353,slow=28,SNR=2.5						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**67.59**	**326**	P	P	13 57 04.3	0.0
	0.1nm,0.3s,baz=121,slow=7.2,SNR=4.0						
	0.1nm,0.3s						

*SJA **14** 14:12:55.2±0.6, 24.17S×66.89W, h220km±5km, ML3.8, MW3.6*
*NEIC **14** 14:12:56.5±1.9, 24.17S±0.09×67.70W±0.2, h218km±18km, mb4.5/2, ML4.1(GUC), Error ellipse: s-maj=23.8km s-min=12.4km az=100.0*
*GUC **14** 14:12:57.8±0.6, 24.03S×66.89W, h196km±9km, ML4.4*
*IDC **14** 14:12:58.4±2.9, 23.90S×66.71W, h211km±28km, mb3.0/4, mbtmp3.7/6, Error ellipse: s-maj=24.1km s-min=19.0km az=66.0*

ISC 14 14:12:56.4±0.7, 24.12S±0.03×66.89W±0.04, h200km±6km, n81, σ1§55/111, mb3.3/4, 5C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.51**	**102**	*i* P	**Pn**	**14 13 25.2**	**+1.0**
SALTA		**0.51**	**102**	*e*P	Pn	14 13 19.4	-4.8
SALTA				*e*P	**Pn**	**14 13 25.2**	**+1.0**
SALTA				*e*P	**Pn**	**14 13 25.2**	**+1.0**
SALTA				*e*S	**S**	**14 13 42.3**	**-3.5**
SLA	**San Lorenzo**	**1.39**	**116**	i/*i*P	**Pn**	**14 13 30.2**	**+0.8**
SLA	**San Lorenzo**	**1.39**	**116**	*e*P	**Pn**	**14 13 30.7**	**+1.2**
AF01	**San Pedro de A**	**1.66**	**314**		**Pn**	**14 13 33.5**	**+1.5**
AF01	**San Pedro de A**	**1.66**	**314**	*e*P	Pn	14 13 17.8	-14
AF01				*e*S	S	14 13 44.7	-14
AF01				IAML		14 14 08.0	
	comp=Z,168nm,0.2s						
AZAP	**Zapla**	**1.67**	**94**	*e*P	**Pn**	**14 13 28.9**	**-3.0**
FSA	**Cafayete**	**2.15**	**158**	*e*P	**Pn**	**14 13 37.1**	**+0.4**
FSA				*e*S	**S**	**14 14 08.0**	**+0.4**
ASTB	**Santa Barbara**	**2.23**	**86**	*e*P	Pn	14 13 32.3	-5.3
YJA	**Yavi**	**2.31**	**33**	*e*P	**Pn**	**14 13 40.8**	**+2.0**
YJA	**Yavi**	**2.31**	**33**	*e*P	**Pn**	**14 13 40.4**	**+1.7**
YJA				*e*S	**S**	**14 14 13.0**	**+2.0**
GO02	**Mina Guanaco**	**2.67**	**247**		**Pn**	**14 13 43.5**	**+1.0**
GO02	**Mina Guanaco**	**2.67**	**247**	i/*i*P	**Pn**	**14 13 43.3**	**+0.7**
GO02				*e*S	**S**	**14 14 18.9**	**+1.0**
GO02				IAML		14 14 21.0	
	comp=N,1μm,0.4s						
GO02	**Mina Guanaco**	**2.67**	**247**	*e*P	**Pn**	**14 13 42.7**	**+0.2**
GO02				*e*S	**S**	**14 14 19.1**	**+1.2**
GO02				IAML		14 14 20.1	
	comp=Z,545nm,0.5s						
PB06	**IPOC Station P**	**2.84**	**299**		**Pn**	**14 13 45.5**	**+1.0**
PB06	**IPOC Station P**	**2.84**	**299**	i/*i*P	**Pn**	**14 13 45.4**	**+1.0**
PB06				*i* S	**S**	**14 14 20.8**	**-0.3**
PB06				IAML		14 14 22.7	
	comp=N,452nm,0.3s						
PB06	**IPOC Station P**	**2.84**	**299**	*e*P	**Pn**	**14 13 45.6**	**+1.2**
PB06				*e*S	**S**	**14 14 22.0**	**+0.8**
PB06				IAML		14 14 24.9	
	comp=Z,217nm,0.3s						
AHML	**Horco Molle**	**3.00**	**152**	*i* P	**Pn**	**14 13 43.6**	**-2.5**
AHML	**Horco Molle**	**3.00**	**152**	*e*P	**Pn**	**14 13 43.9**	**-2.2**
AHML				*e*S	**S**	**14 14 21.9**	**-2.5**
PB09	**IPOC Station P**	**3.17**	**316**		**Pn**	**14 13 49.7**	**+1.3**
PB09	**IPOC Station P**	**3.17**	**316**	i/*i*P	**Pn**	**14 13 49.6**	**+1.3**
PB09				*i* S	**S**	**14 14 28.2**	**0.0**
PB09	**IPOC Station P**	**3.17**	**316**	*e*P	Pn	14 13 35.6	-13
PB09				*e*S	**S**	**14 14 29.5**	**+1.3**
PB09				IAML		14 14 34.3	
	comp=Z,112nm,0.7s						
PB14	**IPOC Station P**	**3.25**	**260**		**Pn**	**14 13 49.1**	**-0.2**
PB14	**IPOC Station P**	**3.25**	**260**	*e*P	**Pn**	**14 13 49.5**	**+0.2**
PB14				*i* S	**S**	**14 14 28.7**	**-1.3**
PB14	**IPOC Station P**	**3.25**	**260**	*e*P	**Pn**	**14 13 49.6**	**+0.3**
PB14				*e*S	**S**	**14 14 29.5**	**-0.5**
PB14				IAML		14 14 31.9	
	comp=Z,171nm,0.4s						
PB05	**IPOC Station P**	**3.30**	**292**		**Pn**	**14 13 50.5**	**+0.7**
PB05	**IPOC Station P**	**3.30**	**292**	*e*P	**Pn**	**14 13 50.3**	**+0.5**
PB05				*i* S	**S**	**14 14 29.1**	**-1.6**
PB05	**IPOC Station P**	**3.30**	**292**	*e*P	Pn	14 13 39.9	-10
PB05				IAML		14 14 35.9	
	comp=Z,70nm,0.2s						
PB03	**IPOC Station P**	**3.35**	**307**		**Pn**	**14 13 51.2**	**+0.8**
PB03	**IPOC Station P**	**3.35**	**307**	i/*i*P	**Pn**	**14 13 51.1**	**+0.6**
PB03				*i* S	**S**	**14 14 30.7**	**-1.3**
PB03	**IPOC Station P**	**3.35**	**307**	*e*P	**Pn**	**14 13 51.3**	**+0.8**
PB03				*e*S	**S**	**14 14 32.1**	**0.0**
PB03				IAML		14 14 33.8	
	comp=Z,173nm,0.1s						
AC02	**Maricunga**	**3.38**	**216**		**Pn**	**14 13 50.8**	**-0.3**
AC02	**Maricunga**	**3.38**	**216**	*e*P	**Pn**	**14 13 52.3**	**+1.2**
AC02	**Maricunga**	**3.38**	**216**	*e*P	**Pn**	**14 13 52.6**	**+1.6**
AC02				*e*S	**S**	**14 14 28.5**	**-4.7**
PB10	**IPOC Station P**	**3.41**	**279**		**Pn**	**14 13 51.9**	**+0.8**
PB10	**IPOC Station P**	**3.41**	**279**	i/*i*P	**Pn**	**14 13 51.7**	**+0.7**
PB10				*i* S	**S**	**14 14 30.6**	**-2.5**
PB10	**IPOC Station P**	**3.41**	**279**	*e*P	**Pn**	**14 13 51.1**	**+0.1**
PB10				*e*S	**S**	**14 14 33.8**	**+0.7**
PB10				IAML		14 14 36.5	
	comp=Z,114nm,0.3s						
PB07	**IPOC Station P**	**3.65**	**310**	*e*P	**Pn**	**14 13 54.5**	**+0.4**
PB07	**IPOC Station P**	**3.65**	**310**	*e*P	**Pn**	**14 13 54.6**	**+0.4**
PB07				*e*S	**S**	**14 14 38.4**	**-0.2**
PB07				IAML		14 14 41.8	
	comp=Z,172nm,0.3s						
PB01	**IPOC Station P**	**3.89**	**321**		**Pn**	**14 13 57.1**	**+0.1**
PB01	**IPOC Station P**	**3.89**	**321**	*e*P	**Pn**	**14 13 57.1**	**+0.1**
PB01				*i* S	**S**	**14 14 42.2**	**-1.7**
PB01	**IPOC Station P**	**3.89**	**321**	*e*P	**Pn**	**14 13 57.4**	**+0.3**
PB01				*e*S	**S**	**14 14 43.8**	**-0.2**
PB01				IAML		14 14 45.9	
	comp=Z,85nm,0.2s						
AC01	**Pan de Azucar**	**3.92**	**238**		**Pn**	**14 13 56.7**	**-0.6**
AC01	**Pan de Azucar**	**3.92**	**238**	*e*P	**Pn**	**14 13 56.8**	**-0.6**
AC01				*e*S	**S**	**14 14 42.4**	**-2.1**
AC01	**Pan de Azucar**	**3.92**	**238**	*e*P	**Pn**	**14 13 56.0**	**-1.2**
AC01				*e*S	**S**	**14 14 42.6**	**-1.8**
AC01				IAML		14 14 43.1	
	comp=Z,80nm,0.3s						
PB02	**IPOC Station P**	**3.94**	**314**		**Pn**	**14 13 57.6**	**0.0**
PB02	**IPOC Station P**	**3.94**	**314**	*e*P	**Pn**	**14 13 57.6**	**0.0**
PB02				*i* S	**S**	**14 14 42.3**	**-2.6**
TINO	**Tinogasta**	**3.98**	**189**	*e*P	**Pn**	**14 13 59.1**	**+1.1**
PATCX	**Punta Patache**	**4.46**	**317**		**Pn**	**14 14 03.2**	**-1.0**
PATCX	**Punta Patache**	**4.46**	**317**	*e*P	**Pn**	**14 14 03.5**	**-0.6**
PATCX				*i* S	**S**	**14 14 52.0**	**-4.8**
PATCX	**Punta Patache**	**4.46**	**317**	*e*P	**Pn**	**14 14 03.9**	**-0.3**
PATCX				*e*S	**S**	**14 14 55.3**	**-1.5**
PATCX				IAML		14 15 02.9	
	comp=Z,52nm,0.4s						
PB08	**IPOC Station P**	**4.48**	**332**		**Pn**	**14 14 05.6**	**+0.8**
PB08	**IPOC Station P**	**4.48**	**332**	*e*P	**Pn**	**14 14 05.5**	**+0.8**
PB08				*i* S	**S**	**14 14 57.1**	**-0.6**
PB08	**IPOC Station P**	**4.48**	**332**	*e*P	**Pn**	**14 14 05.8**	**+1.1**
PB08				*e*S	**S**	**14 14 58.2**	**+0.4**
PB08				IAML		14 14 59.8	
	comp=Z,43nm,0.4s						
AC06	**Mina Casimiro**	**4.49**	**223**	*e*P	**Pn**	**14 14 03.8**	**-0.6**
AC06				*e*S	**S**	**14 14 55.8**	**-1.6**
GO03	**Copiapo**	**4.59**	**220**	*e*P	**Pn**	**14 14 05.5**	**-0.2**
GO03	**Copiapo**	**4.59**	**220**	*e*P	**Pn**	**14 14 05.2**	**-0.4**
GO03				*e*S	**S**	**14 14 58.4**	**-1.3**
GO03				IAML		14 15 01.0	
	comp=Z,48nm,0.5s						
TA01	**Diego Aracena**	**4.67**	**319**		**Pn**	**14 14 06.2**	**-0.6**
TA01	**Diego Aracena**	**4.67**	**319**	*e*P	**Pn**	**14 14 06.5**	**-0.2**
TA01	**Diego Aracena**	**4.67**	**319**	*e*P	**Pn**	**14 14 06.1**	**-0.6**
TA01				IAML		14 15 03.7	
	comp=Z,33nm,0.8s						
HMBC	**Humberstone**	**4.73**	**323**	*i* P	**Pn**	**14 14 06.4**	**-1.2**
HMBC				*e*S	**S**	**14 14 57.4**	**-5.6**
HMBC	**Humberstone**	**4.73**	**323**	*e*P	**Pn**	**14 14 06.5**	**-1.1**
HMBC				IAML		14 15 04.2	
	comp=Z,118nm,0.3s						
VCA	**Vinchina**	**4.75**	**194**	*e*P	**Pn**	**14 14 11.2**	**+3.5**
VCA				*e*S	**S**	**14 15 00.2**	**-3.3**
GO01	**Chusmiza**	**4.92**	**334**		**Pn**	**14 14 10.4**	**0.0**
GO01	**Chusmiza**	**4.92**	**334**	*e*P	**Pn**	**14 14 11.4**	**+1.1**
PB11	**IPOC Station P**	**5.04**	**329**		**Pn**	**14 14 10.7**	**-0.9**
PB11	**IPOC Station P**	**5.04**	**329**	*e*P	**Pn**	**14 14 10.9**	**-0.7**
PB11				IAML		14 15 13.3	
	comp=Z,42nm,0.2s						
PB16	**IPOC Station P**	**6.25**	**336**		**Pn**	**14 14 27.5**	**-0.1**
PB12	**IPOC Station P**	**6.35**	**329**		**Pn**	**14 14 27.4**	**-1.0**
LPAZ	**La Paz**	**7.88**	**351**	P	**Pn**	**14 14 48.1**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=121,slow=9.6,SNR=14						
LPAZ				S	**S**	**14 16 15.2**	**-2.8**
	comp=Z,0.6nm,0.5s,baz=196,slow=15,SNR=1.3						
VAO	**Valinhos**	**18.30**	**91**	P	**P**	**14 16 54.3**	**-1.4**
VAO				IAmb	IAmb	14 16 56.4	
	comp=Z,14nm,0.7s						
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**14 17 09.6**	**-0.5**
	comp=Z,6.4nm,0.6s,baz=239,slow=11,SNR=7.5						
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**14 17 10.7**	**+0.6**
BDFB				IAmb	IAmb	14 17 10.9	
	comp=Z,9.3nm,0.8s						
SNAA	**Sanae**	**59.20**	**161**	P	**P**	**14 22 36.0**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=285,slow=9.1,SNR=3.7						
	comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**63.84**	**324**	P	**P**	**14 23 08.7**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=149,slow=7.9,SNR=1.5						
	comp=Z,0.1nm,0.5s						
QSPA	**South Pole Qui**	**66.08**	**180**	P	**P**	**14 23 24.9**	**+3.2**
	comp=Z,0.5nm,0.5s,baz=182,slow=15,SNR=15						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.52**	**69**	P	**P**	**14 24 23.7**	**-1.1**
	comp=Z,3.8nm,0.6s,baz=199,slow=1.9,SNR=2.9						
PDAR	**Pinedale Array**	**77.30**	**329**	P	**P**	**14 24 29.1**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=141,slow=3.9,SNR=2.0						
	comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**128.39**	**205**	PKP	**PKPdf**	**14 31 39.9**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=151,slow=2.1,SNR=1.3						
WRA	**Warramunga Arr**	**131.57**	**207**	PKP	**PKiKP**	**14 31 46.5**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=143,slow=1.9,SNR=1.4						
MKAR	**Makanchi Array**	**146.55**	**40**	PKPbc	**PKPbc**	**14 32 13.4**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=300,slow=3.8,SNR=5.9						

*IDC **14** 14:13:10.8±1.2, 28.02N×104.97E, h0km, mb3.4/4, mbtmp3.3/6, ML3.6/1, Error ellipse: s-maj=36.3km s-min=23.2km az=74.0*

ISC 14 14:13:15.5±1.1, 28.0N±0.1×105.0E±0.2, h35km, n6, σ0§96/6, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.99**	**211**	Pn	**Pn**	**14 15 50.0**	**-0.3**
	0.1nm,0.3s,baz=30,slow=13,SNR=1.9						
	0.2nm,0.5s						
SONM	**Songino Array**	**19.83**	**3**	P	**P**	**14 17 43.4**	**+0.1**
	0.4nm,0.4s,baz=184,slow=10,SNR=1.3						
KSRS	**Korea Array**	**21.45**	**58**	P	**P**	**14 18 00.2**	**-0.5**
	0.6nm,0.5s,baz=243,slow=10,SNR=2.2						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**25.85**	**323**	P	**P**	**14 18 43.8**	**+0.1**
	0.9nm,0.8s,baz=125,slow=10,SNR=7.5						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**55.49**	**146**	P	**P**	**14 22 46.5**	**-0.6**
	0.4nm,0.8s,baz=319,slow=7.4,SNR=2.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**58.47**	**149**	P	**P**	**14 23 09.6**	**+1.4**
	0.2nm,0.5s,baz=334,slow=6.9,SNR=7.3						
	0.2nm,0.5s						

**IDC 14 14:25:45.9±7.9, 4.10S×142.79E, h0km, mb3.2/2,

FAKI Fak Fak 11.52 99 P **Pn** **14 43 06.8 -1.0**
BBJI Bungbulang 14.55 244 P **P** **14 43 55.2 -0.2**
MTN Manton Dam 15.41 139 Pn **Pn** **14 43 56.3 -4.4**
KNRA Kununurra 16.36 152 Pn **Pn** **14 44 09.2 -3.6**
FITZ Fitzroy Crossi 17.43 165 P **P** **14 44 27.3 0.0**
0.2nm,0.3s,baz=7.4,slow=5.8,SNR=6.4
FITZ LR LR 14 51 50.7
comp=Z,208nm,18.4s,baz=349,slow=39
10nm,1.2s
FITZ Fitzroy Crossi 17.43 165 Pn **Pn** **14 44 23.4 -2.9**
IPM Ipoh 20.60 286 P **P** **14 45 02.0 -0.1**
IPM IAmb IAmb 14 45 10.1
comp=Z,13nm,0.8s
KULM Kulim 21.18 288 **P** **14 45 07.4 -1.0**
KULM IAmb IAmb 14 45 18.5
comp=Z,16nm,1.1s
PSI Prapat 22.28 280 LR LR 14 54 51.4
comp=Z,197nm,19.6s,baz=86,slow=39
WB0 Warramunga Arr 22.71 145 **P** **14 45 22.2 -2.5**
WB0 IAmb IAmb 14 46 01.2
comp=Z,9.9nm,0.9s
WRAB Tennant Creek 22.82 146 P **P** **14 45 23.8 -2.0**
WRAB IAmb IAmb 14 45 57.1
comp=Z,14nm,1.1s
WRA Warramunga Arr 22.82 146 P **P** **14 45 25.4 -0.4**
comp=Z,2.2nm,0.7s,baz=339,slow=8.9,SNR=19
WRA LR LR 14 55 41.1
comp=Z,143nm,18.0s,baz=315,slow=40
comp=Z,2.2nm,0.7s
WRA Warramunga Arr 22.82 146 P **P** **14 45 23.3 -2.6**
WR8 Warramunga Arr 22.92 145 **P** **14 45 25.1 -1.8**
WR8 IAmb IAmb 14 45 57.3
comp=Z,13nm,0.8s
GSI Gunungsitoli 23.41 276 **P** **14 45 32.0 +0.1**
GSI IAmb IAmb 14 45 44.9
comp=Z,22nm,0.8s
TPUB Ta-pu 24.36 360 P **P** **14 45 38.9 -1.8**
YULB Yu-li 24.46 1 P **P** **14 45 38.3 -3.3**
YULB IAmb IAmb 14 45 53.9
comp=Z,44nm,1.1s
SSLB Suanglung 24.85 0 P **P** **14 45 41.8 -3.4**
AS31 Alice Springs 25.66 151 **P** **14 45 49.3 -3.2**
ASAR Alice Springs 25.66 151 P **P** **14 45 53.2 +0.7**
comp=Z,1.8nm,0.8s,baz=328,slow=7.7,SNR=29
ASAR PcP **PcP** **14 49 23.9 +1.2**
comp=Z,0.5nm,0.6s,baz=343,slow=1.9,SNR=6.0
ASAR LR LR 14 56 48.4
comp=Z,99nm,18.8s,baz=316,slow=38
comp=Z,1.8nm,0.8s
ASAR Alice Springs 25.66 151 P **P** **14 45 49.6 -2.9**
JOW Kunigami 28.79 14 LR LR 14 57 33.0
comp=Z,81nm,21.9s,baz=15,slow=36
CMAR Chiang Mai Arr 29.09 313 P **P** **14 46 25.9 +2.6**
comp=Z,0.6nm,0.3s,baz=142,slow=7.7,SNR=11
comp=Z,0.6nm,0.3s
NJ2 Nanjing 33.14 357 *e*P **P** **14 47 02.8 +4.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
PZH PanZhiHua 33.15 328 P P 14 47 04.0 +4.8
BBOO Buckleboo 34.54 157 P **P** **14 47 10.6 -0.4**
BBOO IAmb IAmb 14 47 28.6
comp=Z,20nm,1.3s
JCJ Chichijima 34.85 35 LR LR 14 58 41.7
comp=Z,44nm,21.2s,baz=224,slow=32
JNU Nakatsue 35.44 15 LR LR 15 01 56.5
comp=Z,99nm,20.4s,baz=228,slow=37
STKA Stephens Creek 36.25 149 P **P** **14 47 25.7 0.0**
comp=Z,2.4nm,0.7s,baz=319,slow=11,SNR=5.7
STKA LR LR 15 02 32.5
comp=Z,68nm,19.0s,baz=9.2,slow=37
comp=Z,2.4nm,0.7s
STKA Stephens Creek 36.25 149 **P** **14 47 24.1 -1.6**
LYN LuoYang 36.43 348 P P 14 47 34.3 +7.1
LYN pmax pmax
comp=Z,26nm,0.7s
XAN Xi'an 36.81 343 ⇑P P 14 47 35.8 +5.2
XAN pmax pmax
comp=Z,11nm,0.9s
JMN Monobe 36.85 18 P **P** **14 47 29.2 -1.7**
BRDH Bariadhala 37.06 312 LR LR 15 05 47.1
comp=Z,73nm,19.1s,baz=165,slow=41
KSRS Korea Array B 39.03 9 P **P** **14 47 51.4 +2.3**
comp=Z,1.2nm,0.8s,baz=188,slow=9.6,SNR=4.8
HNR Honiara 39.74 103 LR LR 15 04 51.4
comp=Z,42nm,19.5s,baz=206,slow=37
LZH Lanzhou 40.35 339 *e*P **P** **14 48 01.1 +0.7**
LZH pP pP 14 48 10.6 +0.2
LZH pmax pmax
comp=Z,22nm,1.0s
MAJO Matsushiro 40.88 22 P **P** **14 48 03.3 -1.3**
MAJO IAmb IAmb 14 48 48.5
comp=Z,37nm,1.4s
MJAR Matsushiro Arr 40.88 22 P **P** **14 48 03.8 -0.8**
comp=Z,1.1nm,0.5s,baz=189,slow=9.2,SNR=7.0
comp=Z,1.1nm,0.5s
PALK Pallekele 40.93 282 LR LR 15 05 29.2
comp=Z,78nm,20.5s,baz=104,slow=37
HHC Hu-ho-hao-te 42.71 350 *e*P **P** **14 48 23.4 +3.8**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,240nm,5.1s
BTO Baotou 42.77 348 *e*P P 14 48 26.3 +6.2
BTO pmax pmax
comp=Z,23nm,0.5s
BTO pmax pmax
comp=Z,300nm,5.2s
CAN Canberra 42.87 145 P **P** **14 48 20.8 -0.1**
CAN IAmb IAmb 14 48 48.5
comp=Z,15nm,1.1s
EVN Everest 43.69 314 **P** **14 48 25.4 -3.0**
EVN IAmb IAmb 14 48 45.3
comp=Z,6.6nm,0.6s
GTA Gaotai 44.80 337 *e*P **P** **14 48 39.5 +3.1**
GTA pmax pmax
comp=Z,3.0nm,0.8s
USRK Ussuriysk Ar. 46.29 11 P **P** **14 48 47.9 -0.1**
comp=Z,1.6nm,0.8s,baz=201,slow=7.7,SNR=2.0
comp=Z,1.6nm,0.8s
ASAJ Asahikawa 49.13 21 P **P** **14 49 11.7 +1.7**
comp=Z,11nm,1.0s,baz=200,slow=12,SNR=1.4
comp=Z,11nm,1.0s
JKA Kamikawa-asahi 49.14 21 P **P** **14 49 09.6 -0.5**
ULN Ulaanbaatar 50.34 348 P **P** **14 49 16.4 -2.9**
ULN IAmb IAmb 14 49 27.6
comp=Z,6.1nm,1.1s
SONM Songino Array 50.45 347 P **P** **14 49 21.8 +1.6**
comp=Z,2.1nm,0.7s,baz=168,slow=7.5,SNR=12
comp=Z,2.1nm,0.7s
SONM Songino Array 50.45 347 P **P** **14 49 19.1 -1.1**
HILR Hailar Array B 50.58 359 P **P** **14 49 21.3 +0.3**
comp=Z,2.1nm,0.5s,baz=179,slow=10,SNR=8.9
comp=Z,2.1nm,0.5s
WMQ Urumqi 53.75 331 *e*P **P** **14 49 47.9 +3.2**
WMQ LR LR
comp=Z,210nm,21.5s
KSH Kashi 57.68 320 P P 14 50 20.3 +7.2
KSH pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 58.54 330 P **P** **14 50 20.3 +1.4**
comp=Z,0.9nm,0.6s,baz=125,slow=8.0,SNR=13
MKAR LR LR 15 17 01.5
comp=Z,38nm,18.3s,baz=276,slow=38
comp=Z,0.9nm,0.6s
PETK Petropavlovsk- 62.25 24 P **P** **14 50 44.0 -0.1**
comp=Z,3.8nm,0.9s,baz=228,slow=8.0,SNR=1.6
comp=Z,3.8nm,0.9s
PETK Petropavlovsk- 62.25 24 P **P** **14 50 41.9 -2.2**
ZAA0 Zalesovo Array 62.55 337 P **P** **14 50 44.3 -1.7**
ZAA0 IAmb IAmb 14 50 53.0
comp=Z,4.5nm,0.9s
ZALV Zalesovo Beam 62.55 337 P **P** **14 50 45.5 -0.4**
comp=Z,1.4nm,0.8s,baz=122,slow=6.7,SNR=8.0
comp=Z,1.4nm,0.8s
ZALV Zalesovo Beam 62.55 337 P **P** **14 50 43.8 -2.2**
KURBB Kurchatov Arra 62.96 331 P **P** **14 50 48.9 +0.2**
comp=Z,0.7nm,0.5s,baz=138,slow=6.3,SNR=6.4
comp=Z,0.7nm,0.5s
KURK Kurchatov 62.97 331 **P** **14 50 47.8 -1.0**
KURK IAmb IAmb 14 51 08.0
comp=Z,7.9nm,0.9s
KKAR Karatay Array 63.06 321 P **P** **14 50 48.3 -1.4**
URZ Urewera 63.25 133 LR LR 15 20 16.6
comp=Z,46nm,18.0s,baz=308,slow=38
YAK Yakutsk 63.43 5 LR LR 15 18 19.5
comp=Z,42nm,21.7s,baz=298,slow=36
SEY Seymchan 68.21 15 LR LR 15 20 49.5
comp=Z,39nm,21.4s,baz=352,slow=36
BVAR Borovoye Array 68.43 330 P **P** **14 51 24.9 +0.8**
comp=Z,2.8nm,0.8s,baz=126,slow=7.5,SNR=12
comp=Z,2.8nm,0.8s
SHEM Shemya Is, Ala 69.69 31 LR LR 15 26 59.5
comp=Z,16nm,18.1s,baz=296,slow=40
ABKAR Akbulak array 72.38 323 **P** **14 51 48.4 +0.1**
TIXI Tiksi 72.92 3 LR LR 15 25 09.5
comp=Z,44nm,20.4s,baz=206,slow=37
NRIK Noril'sk 73.92 348 P **P** **14 51 57.3 +0.3**
comp=Z,1.1nm,0.4s,baz=132,slow=6.0,SNR=7.2
comp=Z,1.1nm,0.4s
MAW Mawson 77.14 199 LR LR 15 20 34.0
comp=Z,71nm,20.9s,baz=56,slow=31
VNDA Vanda 79.36 172 LR LR 15 29 28.7
comp=Z,30nm,18.1s,baz=314,slow=37
ASF Jabal al Asfar 85.52 302 LR LR 15 37 08.9
comp=Z,26nm,18.3s,baz=105,slow=40
BRTR Keskin Array B 88.62 310 LR LR 15 39 18.2
comp=Z,27nm,19.5s,baz=274,slow=40
QSPA South Pole Qui 88.73 180 P **P** **14 53 18.0 +2.4**
comp=Z,2.8nm,1.1s,baz=290,slow=1.4,SNR=7.0
QSPA LR LR 15 33 05.0
comp=Z,52nm,18.6s,baz=336,slow=36
comp=Z,2.8nm,1.1s
QSPA South Pole Qui 88.73 180 P **P** **14 53 17.2 +1.6**
QSPA IAmb IAmb 14 53 22.1
comp=Z,5.5nm,1.1s
KDAK Kodiak Island 89.18 32 LR LR 15 27 34.6
comp=Z,65nm,20.8s,baz=110,slow=32
PPT Papeete 89.23 107 LR LR 15 32 32.6
comp=Z,15nm,18.7s,baz=1.5,slow=35
MBAR Mbarara 90.10 269 LR LR 15 33 27.1
comp=Z,34nm,18.2s,baz=61,slow=35
BOSA Boshof 94.34 241 LR LR 15 31 24.3
comp=Z,47nm,19.7s,baz=29,slow=32
SNAA Sanae 98.95 195 LR LR 15 34 54.7
comp=Z,74nm,21.1s,baz=191,slow=33
LPAZ La Paz 160.48 153 PKP **PKPdf** **15 00 25.3 +1.7**
comp=Z,1.2nm,1.0s,baz=189,slow=4.1,SNR=3.7
LPAZ PKPab **PKPab** **15 01 06.3 +1.7**
comp=Z,0.8nm,0.7s,baz=175,slow=6.7,SNR=3.8

*ROM **14** 14:45:11.3±0.3, 39°.23N±0°.01×17°.12E±0°.02, h10km±1km, ML2.9/62, Error ellipse: s-maj=1.6km s-min=1.1km az=300.0*
*BEO **14** 14:45:18.3±0.8, 39°.47N×17°.85E, h28km±7km, ML2.8/7*
ISC 14 14:45:10.3±1.0, **39°.24N**±0°.04×**17°.20E**±0°.03, **h18**km±7km, **n47**, σ1**s63**/48, **1D**, **Southern Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LADO	**San Nicola del**	**0.18**	**285**	P	P	**Pg**	**14 45 14.6**	**-0.3**
LADO				S	S	**Sg**	**14 45 17.5**	**-0.5**
LADO					AML	AML		
	comp=E,3650μm,0.4s							
LADO					AML	AML		
	comp=N,2210μm,0.4s							
TIP	**Timpagrande**	**0.35**	**260**	⇓P	P	**Pg**	**14 45 17.3**	**-0.4**
TIP				S	S	**Sg**	**14 45 22.0**	**-0.7**
TIP					AML	AML		
	comp=E,2740μm,0.5s							
TIP					AML	AML		
	comp=N,2810μm,0.5s							
TIP					AML	AML		
	comp=E,2720μm,0.5s							
TIP					AML	AML		
	comp=E,2515μm,0.5s							
TIP					AML	AML		
	comp=E,2515μm,0.5s							
TIP					AML	AML		
	comp=N,2790μm,0.5s							
CELI	**Celico**	**0.56**	**287**	P	P	**Pg**	**14 45 21.2**	**-0.4**
CELI				S	S	**Sb**	**14 45 29.9**	**+0.4**
CELI					AML	AML		
	comp=N,4625μm,0.9s							
CELI					AML	AML		
CELI					AML	AML		
CELI					AML	AML		
	comp=E,5480μm,1.4s							
CELI					AML	AML		
CELI					AML	AML		
CELI					AML	AML		
CELI					AML	AML		
	comp=E,5480μm,0.6s							
CELI					AML	AML		
	comp=N,4625μm,1.1s							
SPS2	**Spezzano della**	**0.67**	**275**	P	P	**Pg**	**14 45 23.2**	**-0.4**
SPS2					AML	AML		
	comp=E,880μm,0.5s							
SPS2					AML	AML		
	comp=N,866μm,1.4s							
SPS2					AML	AML		
	comp=N,866μm,0.6s							
GRI	**Girifalco**	**0.74**	**236**	P	P	**Pg**	**14 45 24.4**	**-0.4**
GRI				S	S	**Sb**	**14 45 34.5**	**+0.1**
GRI					AML	AML		
	comp=N,1520μm,1.3s							
GRI					AML	AML		
	comp=E,2280μm,0.5s							
GRI					AML	AML		
	comp=N,1520μm,0.7s							
CAR1	**CAROLEI**	**0.77**	**271**	P	P	**Pg**	**14 45 24.9**	**-0.4**
CAR1					AML	AML		
	comp=N,1610μm,0.6s							
CAR1					AML	AML		
	comp=N,1520μm,0.4s							
CAR1					AML	AML		
	comp=N,1780μm,0.8s							
CAR1					AML	AML		
	comp=E,2830μm,0.6s							
CAR1					AML	AML		
	comp=N,1845μm,0.7s							
CAR1					AML	AML		
	comp=E,2465μm,0.6s							
CAR1					AML	AML		
	comp=N,1780μm,1.2s							
CAR1					AML	AML		
	comp=N,1845μm,1.3s							
TDS	**Terranova Siba**	**0.79**	**302**	P	P	**Pg**	**14 45 24.7**	**-1.0**
TDS				S	S	**Sb**	**14 45 36.3**	**+0.4**
TDS					AML	AML		
	comp=N,648μm,0.4s							
TDS					AML	AML		
	comp=E,961μm,1.4s							
TDS					AML	AML		
	comp=N,648μm,0.4s							
TDS					AML	AML		
	comp=E,961μm,0.6s							
TDS					AML	AML		
	comp=N,648μm,1.6s							
SALB	**San Lorenzo Be**	**0.92**	**314**	P	P	**Pg**	**14 45 27.3**	**-0.9**
SALB					AML	AML		
	comp=E,572μm,1.3s							
SALB					AML	AML		
	comp=E,572μm,0.7s							
SALB					AML	AML		
	comp=N,358μm,0.4s							
PLAC	**Placanica**	**0.99**	**217**	P	P	**Pg**	**14 45 28.5**	**-1.0**
PLAC					AML	AML		
	comp=E,663μm,1.3s							
PLAC					AML	AML		
	comp=N,623μm,0.6s							
PLAC					AML	AML		
	comp=E,616μm,0.9s							
PLAC					AML	AML		
	comp=N,638μm,1.3s							
PLAC					AML	AML		
	comp=N,638μm,0.7s							
PLAC					AML	AML		
	comp=E,616μm,1.1s							
PLAC					AML	AML		
	comp=E,663μm,0.7s							
ORI	**Oriolo Calabro**	**1.01**	**325**	P	P	**Pg**	**14 45 29.9**	**+0.1**
ORI					AML	AML		
	comp=E,1850μm,0.4s							
ORI					AML	AML		
	comp=N,1645μm,0.4s							
CET2	**Cetraro**	**1.01**	**287**	P	P	**Pg**	**14 45 28.5**	**-1.4**
CET2					AML	AML		
	comp=N,1900μm,0.6s							
CET2					AML	AML		
	comp=E,1058μm,0.6s							
MMN	**Mormanno**	**1.14**	**305**	P	P	**Pb**	**14 45 32.1**	**+0.6**
JOPP	**Joppolo**	**1.20**	**239**	P	P	**Pb**	**14 45 33.0**	**+0.4**
JOPP					AML	AML		
	comp=N,344μm,1.5s							
JOPP					AML	AML		
	comp=E,328μm,0.9s							
JOPP					AML	AML		
	comp=N,344μm,0.5s							
TAR1	**Taranto**	**1.29**	**3**	P	P	**Pn**	**14 45 35.0**	**+1.5**
SCHR	**S. Chirico Rap**	**1.29**	**318**	P	P	**Pn**	**14 45 35.2**	**+1.6**
SCHR					AML	AML		
	comp=E,241μm,0.5s							
SCHR					AML	AML		
	comp=N,192μm,0.4s							
SCHR					AML	AML		
	comp=N,192μm,1.6s							
SCHR					AML	AML		
	comp=E,241μm,1.5s							
CUC	**Castrocucco**	**1.31**	**306**	P	P	**Pg**	**14 45 35.5**	**-0.1**
CUC					AML	AML		
	comp=N,466μm,0.8s							
CUC					AML	AML		
	comp=E,620μm,0.7s							
CUC					AML	AML		
	comp=N,466μm,0.8s							
CUC					AML	AML		
	comp=N,446μm,0.8s							
CUC					AML	AML		
	comp=N,446μm,1.2s							
CUC					AML	AML		
	comp=N,466μm,1.2s							
CUC					AML	AML		
	comp=E,585μm,0.7s							
LTRZ	**Laterza**	**1.39**	**348**	P	P	**Pn**	**14 45 36.6**	**+1.7**
LTRZ					AML	AML		
	comp=N,19μm,0.5s							
LTRZ					AML	AML		
	comp=E,299μm,0.8s							
LTRZ					AML	AML		
	comp=N,19μm,0.5s							
SIRI	**Monte Sirino -**	**1.39**	**313**	P	P	**Pn**	**14 45 36.7**	**+1.6**
SIRI					AML	AML		
	comp=N,274μm,0.5s							
SIRI					AML	AML		
	comp=E,298μm,1.0s							
SIRI					AML	AML		
	comp=N,266μm,0.4s							
SIRI					AML	AML		
	comp=E,298μm,1.0s							
SIRI					AML	AML		
	comp=E,301μm,0.4s							
CEL	**Celeste**	**1.41**	**227**	P	P	**Pg**	**14 45 37.6**	**0.0**
MESG	**Mesagne**	**1.44**	**20**	P	P	**Pn**	**14 45 37.7**	**+2.1**
SOI	**Samo**	**1.47**	**218**	P	P	**Pg**	**14 45 38.7**	**0.0**
SOI					AML	AML		
	comp=E,164μm,1.6s							
SOI					AML	AML		
	comp=N,190μm,0.8s							
SOI					AML	AML		
	comp=N,190μm,1.2s							
SOI					AML	AML		
	comp=E,164μm,0.4s							
MIGL	**Miglionico**	**1.48**	**337**	P	P	**Pn**	**14 45 37.7**	**+1.5**
MIGL					AML	AML		
	comp=E,1014μm,1.3s							
MIGL					AML	AML		
	comp=N,1170μm,1.3s							
MIGL					AML	AML		
	comp=N,1170μm,0.7s							
MIGL					AML	AML		
	comp=E,1014μm,0.7s							
GMB	**Gambarie**	**1.51**	**225**	AML	AML			
	comp=N,822μm,0.4s							
GMB					AML	AML		
	comp=E,904μm,0.7s							
GMB					AML	AML		
	comp=N,822μm,1.6s							
SICLA	**Scilla**	**1.52**	**230**	AML	AML			
	comp=E,365μm,1.3s							
SICLA					AML	AML		
	comp=N,356μm,1.6s							
SICLA					AML	AML		
	comp=N,356μm,0.4s							
SICLA					AML	AML		
	comp=E,365μm,0.7s							
MCEL	**Monticello**	**1.53**	**316**	P	P	**Pn**	**14 45 38.3**	**+1.4**
MCEL					AML	AML		
	comp=N,260μm,0.6s							
MCEL					AML	AML		
	comp=N,264μm,0.6s							
MCEL					AML	AML		
	comp=N,260μm,1.4s							
MCEL					AML	AML		
	comp=N,264μm,1.4s							
MCEL					AML	AML		
	comp=E,206μm,1.1s							
MCEL					AML	AML		
	comp=E,213μm,1.1s							
STN3	**Satriano di Lu**	**1.75**	**318**	AML	AML			
	comp=N,12800μm,0.5s							
STN3					AML	AML		
	comp=E,14800μm,0.5s							
MILZ	**Milazzo**	**1.82**	**238**	AML	AML			
	comp=E,778μm,0.6s							
MILZ					AML	AML		
	comp=N,525μm,0.7s							
LLI	**Lipari**	**1.93**	**246**	AML	AML			
	comp=E,2720μm,1.4s							
LLI					AML	AML		
	comp=E,2720μm,0.6s							
LLI					AML	AML		
	comp=N,4695μm,0.6s							
KEK	**Kerkira**	**2.07**	**76**	P	P	**Pb**	**14 45 49.1**	**+1.8**
KEK					AML	AML		
	comp=E,178μm,0.6s							
KEK					AML	AML		
	comp=E,178μm,1.4s							
KEK					AML	AML		
	comp=N,195μm,0.9s							
ECTS	**Castiglione**	**2.12**	**231**	AML	AML			
	comp=N,129μm,1.1s							
ECTS					AML	AML		
	comp=E,169μm,0.7s							
MNO	**Monte Soro**	**2.36**	**237**	AML	AML			
	comp=N,152μm,1.6s							
MNO					AML	AML		
	comp=E,192μm,0.9s							
OHR	**Ohrid**	**3.33**	**55**	*i* Pn	**Pg**	**14 46 14.0**	**-0.1**	
TREB	**Trebinje**	**3.58**	**14**	*e*Pn	**Pn**	**14 46 06.9**	**+1.9**	
TREB				*e*Sn	**Sn**	**14 46 44.4**	**-2.5**	
STON	**Ston**	**3.65**	**6**	*e*Pn	**Pn**	**14 46 08.5**	**+2.6**	
STON				*e*Sn	**Sn**	**14 46 49.9**	**+1.4**	
SJES	**Sjenica**	**4.53**	**27**	*e*Pn	**Pn**	**14 46 19.5**	**+1.4**	
SJES				*e*Sn	Sn	14 47 04.5	-5.9	
VAY	**Valandovo**	**4.60**	**61**	*i* Pn	Pb	14 46 27.8	-2.8	
RUDO	**Rudo**	**4.67**	**20**	*e*Pn	**Pn**	**14 46 22.7**	**+2.7**	
RUDO				*e*Sn	**Sn**	**14 47 09.5**	**-4.2**	
IVAS	**Ivanjica**	**4.87**	**26**	*e*Pn	**Pn**	**14 46 24.5**	**+1.7**	
IVAS				*e*Sn	**Sn**	**14 47 13.8**	**-4.9**	
BBLS	**Lazi&#263i**	**4.91**	**19**	*e*Pn	**Pn**	**14 46 25.9**	**+2.6**	
BARS	**Barje**	**5.00**	**43**	*e*Pn	**Pn**	**14 46 24.9**	**+0.4**	
GOCS	**Kraljevo Serbi**	**5.13**	**31**	*e*Pn	**Pn**	**14 46 26.8**	**+0.5**	
GOCS				*e*Sn	Sn	14 47 18.8	-6.3	
DIVS	**Divibare**	**5.29**	**22**	*e*Pn	**Pn**	**14 46 30.3**	**+1.8**	
TRUS	**Trudelj**	**5.53**	**25**	*e*Pn	**Pn**	**14 46 32.1**	**+0.3**	
BOVS	**Bovan**	**5.54**	**36**	*e*Pn	**Pn**	**14 46 32.4**	**+0.4**	
BOVS				*e*Sn	Sn	14 47 27.4	-7.9	
TEKS	**Tekeris**	**5.58**	**17**	*e*Pn	**Pn**	**14 46 34.0**	**+1.5**	
ZAPS	**Zavoj**	**5.75**	**44**	*e*Pn	**Pn**	**14 46 33.5**	**-1.3**	
ZAGS	**Zajecar**	**5.93**	**38**	*e*Pn	**Pn**	**14 46 38.3**	**+1.1**	
ZAGS				*e*Sn	Sn	14 47 37.1	-7.6	

*IDC **14** 14:46:26.6±1.6, 3°.62S×119°.92E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=38.7km s-min=17.4km az=91.0*
*DJA **14** 14:46:29.9±0.2, 4°.S±1°×12°.0E±°, h10km, M3.9/14, MLv3.9/14*
ISC 14 14:46:31.5±1.0, **3°.74S**±0°.04×**119°.77E**±0°.09, **h35**km, **n17**, σ1**s74**/21, **mb3.4**/4, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SPSI	**Sidrap Palu**	**0.23**	**179**	P	P	**Pn**	**14 46 35.4**	**-3.2**
SPSI				S	S	**Sn**	**14 46 40.7**	**-2.7**
TTSI	**Tana Toraja**	**0.69**	**4**	P	P	**Pn**	**14 46 42.0**	**-2.8**
TTSI				S	S	**Sn**	**14 46 52.5**	**-1.7**
BNSI	**Bone**	**0.74**	**153**	P	P	**Pn**	**14 46 43.7**	**-1.8**

BNSI				S		Sn	14 46 56.4	+0.9
KAPI	**Kappang**	**1.27**	**181**	Pg		Pn	14 46 53.2	+0.4
	218nm,0.3s,baz=0.6,slow=14,SNR=141							
KAPI				Lg		Lg	14 47 11.1	
	273nm,0.3s,baz=6.0,slow=19,SNR=8.6							
BKSI	**Bulukumba**	**1.61**	**167**	P		Pn	14 46 58.1	+0.6
BKSI				S		Sn	14 47 19.5	+2.4
BSSI	**Bau Bau, Buton**	**2.50**	**163**	P		Pn	14 47 11.2	+1.6
PCI	**Palu**	**2.81**	**1**	P		Pn	14 47 16.3	+2.3
KDI	**Kendari**	**2.86**	**94**	P		Pn	14 47 13.9	-0.7
BBSI	**Bau Bau**	**3.29**	**122**	P		Pn	14 47 20.6	0.0
APSI	**Ampana**	**3.38**	**34**	P		Pn	14 47 22.8	+1.0
LUWI	**Luwuk**	**4.02**	**48**	P		Pn	14 47 30.1	-0.5
MPSI	**Mapaga**	**4.05**	**2**	P		Pn	14 47 33.2	+2.2
MRSI	**Marisa**	**4.72**	**27**	P		Pn	14 47 40.5	+0.3
WRA	**Warramunga Arr**	**21.48**	**140**	P		**P**	14 51 18.3	+1.1
	0.5nm,0.9s,baz=315,slow=10,SNR=2.2 0.5nm,0.9s							
ASAR	**Alice Springs**	**24.06**	**147**	P		**P**	14 51 43.7	-0.1
	0.4nm,0.5s,baz=332,slow=9.2,SNR=13 0.4nm,0.5s							
STKA	**Stephens Creek**	**34.70**	**146**	P		**P**	14 53 17.4	-0.8
	1.9nm,0.8s,baz=333,slow=9.0,SNR=3.1 1.9nm,0.8s							
MKAR	**Makanchi Array**	**60.19**	**331**	P		**P**	14 56 36.2	+0.3
	0.3nm,0.7s,baz=125,slow=7.2,SNR=2.2 0.3nm,0.7s							

UPP ***14*** *14:54:53.5±1.8,57.65N×22.26E, h0km, ML2.6, Presumed earthquake*
DNK ***14*** *14:54:54.6±2.2,57.64N×22.07E, h0km, ML3.0, Suspected explosion*
EST ***14*** *14:54:55.9±0.1,57.72N×21.96E, h0km, ML2.2(HEL), Explosion*
IDC ***14*** *14:54:55.5±1.1,57.69N×21.97E, h0km, mbtmp3.3/6, ML2.4/5, Error ellipse: s-maj=11.1km s-min=8.6km az=2.0*
HEL ***14*** *14:54:56.1±0.0,57.73N×21.96E, h0km, ML2.2, Explosion*
BER ***14*** *14:54:58.4±2.4,57.69N×21.77E, h0km, ML2.3, ML2.6(UPP), Suspected explosion*
LVSN ***14*** *14:54:58.7±2.4,57.62N×22.10E, h0km, 29km, ML2.9*

ISC 14 14:54:53.9±0.6,**57.73N**±0.03×**21.97E**±0.02,**h0km**,**n97,** σ1**s73**/136,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SLIT	**Slitere, Latvi**	**0.20**	**121**	*e*P		**Pg**	**14 54 59.3**	**+1.6**
SLIT	**Slitere, Latvi**	**0.20**	**121**	*e*P		**Pg**	**14 54 59.5**	**+1.8**
SLIT				*e*S		**Sg**	**14 55 02.4**	**+2.1**
SLIT				AML		AML	14 55 03.4	
	comp=Z,7μm,0.1s							
SLIT				AML		AML	14 55 13.2	
	comp=E,11μm,0.7s							
SLIT				AML		AML	14 55 16.6	
	comp=N,8μm,0.5s							
SLIT	**Slitere, Latvi**	**0.20**	**121**	*e*P		**Pg**	**14 54 59.5**	**+1.8**
SLIT				*e*S		**Sg**	**14 55 02.0**	**+1.7**
EE06	**Soera, Palade,**	**1.32**	**20**	*e*P		**Pb**	**14 55 20.1**	**+0.5**
EE06				*e*PB		**Pn**	**14 55 20.6**	**+1.0**
EE06				*e*PN		**Pg**	**14 55 21.5**	**+2.2**
EE06				*e*S		**Sb**	**14 55 37.4**	**+0.2**
EE06				*e*SN		**Sn**	**14 55 40.0**	**+2.1**
EE01	**Perakula, Nova**	**1.71**	**30**	*e*PN		**Pb**	**14 55 27.1**	**+0.8**
EE01				*e*SN		**Sg**	**14 55 49.8**	**+0.9**
GOTU	**Gotland**	**1.83**	**270**	P		**Pn**	**14 55 27.9**	**+1.4**
GOTU				S		**Sg**	**14 55 53.7**	**+1.2**
GOTU	**Gotland**	**1.83**	**270**	P		**Pn**	**14 55 27.9**	**+1.4**
GOTU				S		**Sg**	**14 55 53.7**	**+1.2**
GOTU	**Gotland**	**1.83**	**270**	*e*P		**Pn**	**14 55 27.9**	**+1.4**
GOTU				*e*SN		**Sn**	**14 55 51.9**	**+1.6**
GOTU				smax		smax	14 55 54.0	
	comp=Z,12nm,0.1s							
EE08	**Sarghaua, Vand**	**1.96**	**60**	*e*P		**Pb**	**14 55 30.4**	**-0.1**
EE08				*e*SG		**Sb**	**14 55 56.5**	**+1.0**
EE02	**Kiisa, Saku**	**2.05**	**43**	*e*PG		**Pb**	**14 55 32.7**	**+0.8**
EE02				*e*SG		**Sg**	**14 55 59.9**	**+0.3**
TVF	**Tvarminne**	**2.22**	**17**	*e*PB		**Pb**	**14 55 35.1**	**+0.3**
TVF				*e*SG		**Sg**	**14 56 04.3**	**-0.9**
TVF				smax		smax	14 56 05.7	
	comp=Z,13nm,0.1s							
NYNU	**Nynaeshamn**	**2.45**	**303**	P		**Pn**	**14 55 37.0**	**+1.9**
NYNU				S		**Sb**	**14 56 11.5**	**+2.1**
NYNU	**Nynaeshamn**	**2.45**	**303**	P		**Pn**	**14 55 37.0**	**+1.9**
NYNU				S		**Sb**	**14 56 11.5**	**+2.1**
PABE	**Paberze**	**2.49**	**153**	*e*P		**Pn**	**14 55 36.0**	**+0.4**
PABE	**Paberze**	**2.49**	**153**	*e*P		**Pn**	**14 55 38.4**	**+2.8**
PABE				AML		AML	14 55 38.6	
	comp=Z,119nm,0.1s							
PABE				AML		AML	14 56 12.0	
	comp=N,78nm,0.2s							
PABE				AML		AML	14 56 12.8	
	comp=E,79nm,0.1s							
EE03	**Tooma soojaam,**	**2.54**	**61**	*e*P		**Pn**	**14 55 38.6**	**+2.2**
EE03				*e*PB		**Pb**	**14 55 40.4**	**+0.1**
EE03				*e*SG		**Sb**	**14 56 13.9**	**+1.8**
NRTU	**Norrtaelje**	**2.62**	**320**	P		**Pn**	**14 55 39.6**	**+2.2**
NRTU	**Norrtaelje**	**2.62**	**320**	P		**Pn**	**14 55 39.6**	**+2.2**
NRTU	**Norrtaelje**	**2.62**	**320**	*e*P		**Pn**	**14 55 39.6**	**+2.2**
NRTU				*e*SG		**Sb**	**14 56 16.4**	**+2.2**
NRTU				smax		smax	14 56 21.0	
	comp=Z,6.9nm,0.1s							
VSU	**Vasula**	**2.63**	**72**	*e*P		**Pn**	**14 55 39.2**	**+1.6**
VSU	**Vasula**	**2.63**	**72**	*e*P		**Pb**	**14 55 40.9**	**-1.1**
VSU				AML		AML	14 55 41.1	
	comp=Z,84nm,0.1s							
VSU				AML		AML	14 56 18.8	
	comp=N,1μm,0.1s							
VSU				AML		AML	14 56 20.5	
	comp=E,1μm,0.1s							
VSU	**Vasula**	**2.63**	**72**	*i* P		**Pn**	**14 55 38.6**	**+1.0**
VSU	**Vasula**	**2.63**	**72**	*e*P		**Pn**	**14 55 39.0**	**+1.4**
VSU				*e*PB		**Pb**	**14 55 40.8**	**-1.1**
VSU				*e*SB		**Sb**	**14 56 15.1**	**+0.4**
AAL	**Aland**	**2.66**	**338**	P		**Pn**	**14 55 39.4**	**+1.4**
AAL	**Aland**	**2.66**	**338**	*e*P		**Pn**	**14 55 39.7**	**+1.8**
AAL	**Aland**	**2.66**	**338**	P		**Pn**	**14 55 39.4**	**+1.4**
AAL	**Aland**	**2.66**	**338**	*e*P		**Pn**	**14 55 39.4**	**+1.4**
AAL				*e*PB		**Pb**	**14 55 41.9**	**-0.4**
AAL				*e*SG		**Sb**	**14 56 17.6**	**+2.1**
AAL				smax		smax	14 56 21.2	
	comp=Z,7.6nm,0.1s							
ARBE	**Arbavere**	**2.71**	**49**	*e*P		**Pb**	**14 55 43.0**	**-0.2**
ARBE	**Arbavere**	**2.71**	**49**	*e*P		**Pb**	**14 55 42.8**	**-0.4**
ARBE				AML		AML	14 55 59.6	
	comp=Z,190nm,0.6s							
ARBE	**Arbavere**	**2.71**	**49**	*e*PB		**Pb**	**14 55 42.6**	**-0.5**
ARBE				*e*SB		**Sb**	**14 56 17.6**	**+0.7**
BYXU	**Byxelkrok**	**2.71**	**263**	P		**Pn**	**14 55 40.7**	**+2.0**
BYXU	**Byxelkrok**	**2.71**	**263**	P		**Pn**	**14 55 40.7**	**+2.0**
HEL5	**Espoo, Suvisaa**	**2.79**	**30**	*e*PB		**Pb**	**14 55 43.3**	**-1.2**
HEL5				*e*SB		**Sb**	**14 56 19.9**	**+0.7**
HEL5				smax		smax	14 56 23.6	
	comp=Z,7.9nm,0.1s							
MEF	**Metsahovi**	**2.79**	**26**	*e*P		**Pb**	**14 55 44.3**	**-0.2**
MEF	**Metsahovi**	**2.79**	**26**	*e*P		**Pb**	**14 55 44.4**	**-0.2**
MEF				*e*S		**Sb**	**14 56 18.8**	**-0.5**
MEF				AML		AML	14 56 21.5	
	comp=Z,14nm,0.1s							
MEF				AML		AML	14 56 22.7	
	comp=E,20nm,0.1s							
MEF				AML		AML	14 56 23.7	
	comp=N,24nm,0.1s							
MEF	**Metsahovi**	**2.79**	**26**	*e*PB		**Pb**	**14 55 44.4**	**-0.2**
MEF				*e*SB		**Sb**	**14 56 20.0**	**+0.7**
MEF				smax		smax	14 56 21.5	
	comp=Z,13nm,0.1s							
VIKU	**Vikbolandet**	**2.90**	**288**	P		**Pn**	**14 55 43.6**	**+2.3**
VIKU	**Vikbolandet**	**2.90**	**288**	P		**Pn**	**14 55 43.6**	**+2.3**
VSTU	**Vaestervik**	**2.92**	**271**	P		**Pn**	**14 55 43.7**	**+2.2**
VSTU	**Vaestervik**	**2.92**	**271**	P		**Pn**	**14 55 43.7**	**+2.2**
NUR	**Nurmijarvi**	**3.11**	**25**	*e*PB		**Pb**	**14 55 49.0**	**-1.0**
GRAU	**Graesoe**	**3.16**	**327**	P		**Pn**	**14 55 46.4**	**+1.6**
GRAU	**Graesoe**	**3.16**	**327**	P		**Pn**	**14 55 46.4**	**+1.6**
OSKU	**Oskarshamn**	**3.22**	**263**	P		**Pn**	**14 55 47.7**	**+2.1**
OSKU	**Oskarshamn**	**3.22**	**263**	P		**Pn**	**14 55 47.7**	**+2.1**
ESKU	**Eskilstuna**	**3.29**	**300**	P		**Pn**	**14 55 48.9**	**+2.2**
ESKU	**Eskilstuna**	**3.29**	**300**	P		**Pn**	**14 55 48.9**	**+2.2**
RAF	**Rauma**	**3.30**	**358**	*e*P		**Pn**	**14 55 49.9**	**+3.1**
RAF	**Rauma**	**3.30**	**358**	*e*P		**Pn**	**14 55 49.5**	**+2.7**
FINES	**FINESS Array B**	**4.27**	**28**	Pn		**Pn**	**14 56 02.5**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=18							
FINES				Pg		**Pb**	**14 56 12.3**	**+2.6**
	comp=Z,0.9nm,0.3s,baz=209,slow=14,SNR=20							
FINES				Sn		**Sn**	**14 56 51.7**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=205,slow=31,SNR=1.8							
FINES				Lg		Lg	14 57 10.2	
	comp=Z,0.7nm,0.3s,baz=212,slow=26,SNR=3.4 comp=Z,5.0nm,1.1s							
FIA1	**FINESS Array S**	**4.27**	**28**	*e*P		**Pn**	**14 56 03.0**	**+3.0**
DEL	**Delary**	**4.59**	**257**	*i* P		**Pn**	**14 56 05.0**	**+0.5**
DEL				*i* S		**Sn**	**14 56 58.3**	**-0.3**
KEF	**Keuruu**	**4.68**	**17**	*e*P		**Pn**	**14 56 09.8**	**+4.1**
BSD	**Bornholm Skovb**	**4.71**	**239**	*i* P		**Pn**	**14 56 06.0**	**-0.1**
BSD				*i* S		**Sn**	**14 57 01.8**	**+0.3**
BSD				IAML			14 57 30.4	
	comp=Z,12nm,0.9s							
HFS	**Hagfors**	**4.92**	**303**	Pn		**Pn**	**14 56 10.5**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=120,slow=14,SNR=30							
HFS				Sn		**Sn**	**14 57 07.0**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=115,slow=28,SNR=5.6							
HFS				Lg		Lg	14 57 28.3	
	comp=Z,1.3nm,0.3s,baz=116,slow=30,SNR=9.5 comp=Z,1.7nm,0.3s							
BORU	**Boraas**	**4.94**	**273**	*i* P		**Pn**	**14 56 10.7**	**+1.4**
FABU	**Falkenberg**	**5.06**	**266**	*i* P		**Pn**	**14 56 13.0**	**+2.0**
BJUU	**Bjuv**	**5.18**	**255**	*i* P		**Pn**	**14 56 13.0**	**+0.4**
BJUU				*i* S		**Sn**	**14 57 10.8**	**-2.1**
VAF	**Ylistaro**	**5.34**	**3**	*e*P		**Pn**	**14 56 17.6**	**+2.8**
ONAU	**Onsala**	**5.42**	**271**	*i* P		**Pn**	**14 56 17.3**	**+1.4**
ONAU				*i* S		**Sn**	**14 57 19.6**	**+0.7**
TJOU	**Tjoern**	**5.53**	**277**	*i* P		**Pn**	**14 56 16.8**	**-0.6**
TJOU				*i* S		**Sn**	**14 57 21.1**	**-0.5**
STRU	**Stroemstad**	**5.83**	**288**	*i* P		**Pn**	**14 56 21.9**	**+0.5**
STRU				*i* S		**Sn**	**14 57 28.3**	**-0.5**
NC602	**NORSAR Array S**	**6.14**	**304**	*e*P		**Pn**	**14 56 26.3**	**+0.5**
NC602				*e*S		**Sn**	**14 57 34.8**	**-1.8**
NC602				IAML			14 58 12.1	
	comp=Z,2.9nm,0.4s							
NB201	**NORSAR Array S**	**6.39**	**306**	*e*P		**Pn**	**14 56 32.1**	**+2.9**
NOA	**NORSAR Array B**	**6.42**	**306**	Pn		**Pn**	**14 56 28.3**	**-1.3**
	baz=114,slow=11,SNR=9.6							
NOA				Sn		**Sn**	**14 57 42.0**	**-1.5**
	baz=124,slow=19,SNR=1.7							
NOA				Lg		Lg	14 58 18.1	
	comp=Z,0.1nm,0.3s,baz=135,slow=27,SNR=5.9 comp=Z,0.2nm,0.4s							
NC303	**NORSAR Array S**	**6.44**	**307**	*e*P		**Pn**	**14 56 30.8**	**+0.9**
NAO01	**NORSAR Array S**	**6.48**	**303**	*e*P		**Pn**	**14 56 31.4**	**+1.0**
NBO00	**NORSAR Array S**	**6.61**	**305**	*e*P		**Pn**	**14 56 33.1**	**+0.9**
NC204	**NORSAR Array S**	**6.72**	**307**	*e*P		**Pn**	**14 56 34.1**	**+0.3**
JOF	**Joensuu**	**6.96**	**38**	*e*P		**Pn**	**14 56 38.0**	**+0.9**
JOF	**Joensuu**	**6.96**	**38**	*e*P		**Pn**	**14 56 37.9**	**+0.9**
HOMB	**Homborsund**	**7.18**	**280**	*e*P		**Pn**	**14 56 39.4**	**-0.5**
HOMB				IAML			14 58 03.1	
	comp=Z,5.9nm,0.8s							
SKAR	**Skarslia**	**7.61**	**299**	*e*P		**Pn**	**14 56 46.0**	**0.0**
SKAR				*e*S		**Sn**	**14 58 06.5**	**-6.4**
SKAR				IAML			14 58 36.8	
	comp=Z,2.1nm,0.9s							
SNART	**Snartemo**	**7.86**	**281**	*e*P		**Pn**	**14 56 49.7**	**+0.3**
SNART				IAML			14 58 36.2	
	comp=Z,7.8nm,0.4s							
SNART	**Snartemo**	**7.86**	**281**	*i* P		**Pn**	**14 56 50.4**	**+1.0**
AKASG	**Malin Array Be**	**8.22**	**146**	Pn		**Pn**	**14 56 52.5**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=341,slow=22,SNR=1.4 comp=Z,0.2nm,0.3s							
ODD1	**Odda**	**8.26**	**292**	*e*P		**Pn**	**14 56 55.0**	**+0.2**
ODD1				*e*S		Sn	14 58 16.7	-12
BLS5	**Blasjo**	**8.28**	**288**	*e*P		**Pn**	**14 56 55.2**	**0.0**
NSS	**Namsos**	**8.35**	**329**	*e*P		**Pn**	**14 56 55.7**	**-0.3**
AKN	**Aaknes**	**8.73**	**307**	*e*P		**Pn**	**14 57 01.9**	**+0.7**
HYA	**Hoyanger**	**8.74**	**300**	*e*P		**Pn**	**14 57 01.5**	**+0.1**
KMY	**Karmoy**	**8.89**	**287**	*e*P		**Pn**	**14 57 02.8**	**-0.6**
ASK	**Askoy**	**9.06**	**295**	*e*P		**Pn**	**14 57 05.3**	**-0.4**
MOR8	**Moi Rana**	**9.17**	**340**	*e*P		**Pn**	**14 57 06.4**	**-0.9**
LEIR	**Leirfjorden**	**9.38**	**337**	*e*P		**Pn**	**14 57 10.3**	**+0.2**
SUE	**Sulen**	**9.38**	**298**	*e*P		**Pn**	**14 57 08.7**	**-1.4**
RAUS	**Rausandaksla**	**9.48**	**340**	*e*P		**Pn**	**14 57 10.8**	**-0.8**
STOK	**Stokkvaagen**	**9.59**	**338**	*e*P		**Pn**	**14 57 12.9**	**-0.1**
VAGH	**Vaagaholmen**	**9.89**	**340**	*e*P		**Pn**	**14 57 17.4**	**+0.4**
FAUS	**Fauske**	**10.16**	**345**	*e*P		**Pn**	**14 57 20.8**	**+0.1**
STEI	**Steigen**	**10.68**	**346**	*e*P		**Pn**	**14 57 28.5**	**+0.6**
LOF	**Lofoten**	**11.11**	**343**	*e*P		**Pn**	**14 57 32.4**	**-1.3**
KTK1	**Kautokeino**	**11.34**	**2**	*e*P		**Pn**	**14 57 36.5**	**-0.4**
JETT	**Jettan, Norway**	**11.89**	**357**	*e*P		**Pn**	**14 57 43.8**	**-0.7**
ARA0	**ARCESS Array S**	**11.95**	**6**	*e*P		**Pn**	**14 57 42.2**	**-3.1**
ARCES	**ARCESS Array B**	**11.95**	**6**	Pn		**Pn**	**14 57 43.3**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=12							
ARCES				Sn		**Sn**	**14 59 51.7**	**-7.4**
	baz=193,slow=23,SNR=1.8 comp=Z,1.8nm,1.0s							
KVAR	**Kislovodsk Arr**	**18.90**	**128**	P		**P**	**14 59 15.3**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=331,slow=13,SNR=1.7							

IDC 14 14:57:48.7±9.7,**6.69S**×**130.48E**,**h136**km±99km,**mb3.1**/1, **mbtmp3.8**/5,**ML3.7**/4,**Error ellipse: s-maj=82.0km s-min=29.2km az=40.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BATI	**Baumata**	**7.59**	**242**	P		Pn	14 59 37.6	+0.9
	2.7nm,0.3s,baz=77,slow=16,SNR=1.7							
BATI				S		Sn	15 01 02.2	+0.8
	7.2nm,0.4s,baz=126,slow=19,SNR=1.7 10nm,0.4s							
FITZ	**Fitzroy Crossi**	**12.28**	**202**	P		Pn	15 00 37.6	-1.5
	0.6nm,0.3s,baz=34,slow=10,SNR=24							
FITZ				S		Sn	15 02 45.4	-9.3
	1.3nm,0.3s,baz=9.1,slow=19,SNR=7.2 1.1nm,0.3s							
WRA	**Warramunga Arr**	**13.69**	**164**	P		Pn	15 00 56.1	-1.3
	0.2nm,0.3s,baz=335,slow=13,SNR=11							
WRA				S		Sn	15 03 21.4	-7.3
	0.8nm,0.4s,baz=330,slow=23,SNR=9.4 0.5nm,0.5s							
ASAR	**Alice Springs**	**17.19**	**169**	P		Pn	15 01 42.1	+1.4
	0.2nm,0.3s,baz=352,slow=10,SNR=26							
ASAR				S		S	15 04 46.1	-6.4
	0.3nm,0.4s,baz=360,slow=28,SNR=8.0 1.0nm,0.5s							
MKAR	**Makanchi Array**	**68.23**	**327**	P		P	15 08 34.5	-0.1
	0.3nm,0.5s,baz=122,slow=7.0,SNR=2.4 0.3nm,0.5s							

IDC ***14*** *15:10:19.1±0.5,8.11S×114.98E, h0km, mb4.2/21, mbtmp4.2/25, ML4.2/4, MS3.3/10, Error ellipse: s-maj=16.9km s-min=10.0km az=59.0*
NEIC ***14*** *15:10:20.3±1.9,8.17S±0.07×114.91E±0.04, h10km±1km, mb4.6/41, Error ellipse: s-maj=11.8km s-min=5.9km az=165.0*
DJA ***14*** *15:10:21.6±0.2,8.2S×114.5E±0.1, h10km, M4.5/18, mb4.6/8, mB5.0/3, MLv4.5/18, Mw(mB)4.4/3*

ISC 14 15:10:19.0±1.3,**8.21S**±0.04×**114.93E**±0.03,**h5**km±8km, **n129,** σ1**s69**/137,**mb4.5**/45,**MS3.1**/9,**2C-3D**,**Bali region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SRBI	**Singaraja**	**0.30**	**66**	P		**Pb**	**15 10 29.0**	**+2.0**
SRBI				S		**Sb**	**15 10 34.9**	**+2.5**
DNP	**Denpasar**	**0.54**	**149**	P		**Pn**	**15 10 33.9**	**+0.5**
DNP				S		**Sn**	**15 10 42.9**	**0.0**
ABJI	**Asem Bagus**	**0.81**	**301**	P		**Pb**	**15 10 36.1**	**+0.5**
JAGI	**Jajag, Banyuwa**	**0.81**	**252**			**Pg**	**15 10 35.9**	**+1.2**
JAGI				Sg		**Sg**	**15 10 44.8**	**-0.5**
JAGI	**Jajag, Banyuwa**	**0.81**	**252**	P		**Pb**	**15 10 36.1**	**+0.4**
JAGI				S		**Sb**	**15 10 48.3**	**+1.3**
BLJI	**Banyuglugur**	**1.40**	**289**	P		**Pb**	**15 10 46.0**	**+0.2**
BLJI				S		**Sg**	**15 11 04.2**	**0.0**
KMMI	**Kalianget**	**1.50**	**320**	S		**Sg**	**15 11 07.7**	**+0.4**
GRJI	**Gresik**	**2.75**	**298**	P		**Pn**	**15 11 04.8**	**+0.9**
TBJI	**Tambak Boyo**	**3.36**	**294**	P		**Pn**	**15 11 13.2**	**+1.0**
PCJI	**Pacitan**	**3.72**	**270**	P		**Pn**	**15 11 18.9**	**+1.7**
UGM	**Wanagama**	**4.38**	**274**			**Pn**	**15 11 26.4**	**+0.1**
UGM				Sn		**Sn**	**15 12 20.2**	**+2.5**
UGM	**Wanagama**	**4.38**	**274**	P		**Pn**	**15 11 28.1**	**+1.8**
SMRI	**Semarang**	**4.60**	**284**	Pn		**Pn**	**15 11 26.7**	**-2.7**
SMRI	**Semarang**	**4.60**	**284**	P		**Pn**	**15 11 30.1**	**+0.8**
WBSI	**Waikabubak, Su**	**4.63**	**108**	P		**Pn**	**15 11 31.9**	**+2.1**
KAPI	**Kappang**	**5.75**	**57**	Pn		**Pn**	**15 11 45.4**	**+0.3**
	3.0nm,0.3s,baz=239,slow=18,SNR=4.8							
KAPI				Sn		**Sn**	**15 12 49.3**	**-2.2**
	4.8nm,0.3s,baz=204,slow=20,SNR=5.6 6.5nm,0.2s							
KAPI	**Kappang**	**5.75**	**57**			**Pn**	**15 11 44.7**	**-0.4**
BASI	**Baing, Sumba**	**5.92**	**110**	P		**Pn**	**15 11 49.4**	**+1.9**
	0.5nm176nm,0.9s							
KPJI	**Karang Pucung**	**6.01**	**278**	P		**Pn**	**15 11 50.2**	**+1.5**
	0.2nm52nm,0.6s							
SPSI	**Sidrap Palu**	**6.40**	**49**	P		**Pn**	**15 11 54.3**	**+0.2**
	13nm,0.8s							
TTSI	**Tana Toraja**	**7.07**	**44**	P		**Pn**	**15 12 05.5**	**+2.2**
	0.1nm340nm17nm,0.6s							
MMRI	**Maumere**	**7.24**	**94**			**Pn**	**15 12 06.3**	**+0.6**
MMRI	**Maumere**	**7.24**	**94**	P		**Pn**	**15 12 09.6**	**+4.0**
BATI	**Baumata**	**8.84**	**104**	Pn		**Pn**	**15 12 28.1**	**+0.4**
	4.0nm,0.3s,baz=279,slow=13,SNR=2.1							
BATI				Sn		**Sn**	**15 14 08.3**	**+0.4**
	2.9nm,0.3s,baz=264,slow=15,SNR=1.7 9.5nm,0.3s							
SBUM	**Sibu**	**10.93**	**346**			**Pn**	**15 12 54.8**	**-1.5**
MNAI	**Manna**	**12.50**	**287**	Pn		**Pn**	**15 13 19.4**	**+1.6**
MBWA	**Marble Bar**	**13.68**	**161**			**Pn**	**15 13 30.9**	**-2.9**
PSA00	**Pilbara Seismi**	**14.10**	**161**	Pn		**Pn**	**15 13 37.4**	**-2.3**
PSA00	**Pilbara Seismi**	**14.10**	**161**	Pn		**Pn**	**15 13 37.3**	**-2.4**
FITZ	**Fitzroy Crossi**	**14.32**	**134**	Pn		**Pn**	**15 13 42.6**	**0.0**
	0.5nm,0.3s,baz=316,slow=13,SNR=15							
FITZ				Sn		**Sn**	**15 16 16.9**	**-5.1**
	0.2nm,0.3s,baz=260,slow=17,SNR=2.5							
FITZ				LR		LR	15 19 18.8	
	comp=Z,156nm,21.6s,baz=331,slow=38 2.3nm,0.4s							
FITZ	**Fitzroy Crossi**	**14.32**	**134**			**Pn**	**15 13 42.2**	**-0.4**
GIRL	**Giralia**	**14.36**	**183**	Pn		**Pn**	**15 13 41.5**	**-1.7**
TNTI	**Ternate**	**15.27**	**55**	Pn		**Pn**	**15 13 52.0**	**-3.6**
TNTI				IAmb		IAmb	15 14 07.7	
	comp=Z,12nm,0.7s							
KNRA	**Kununurra**	**15.42**	**120**			**Pn**	**15 13 54.1**	**-3.5**
KNRA				IAmb		IAmb	15 14 08.7	
	comp=Z,25nm,1.1s							
BKNI	**Bangkinang**	**16.24**	**301**	Pn		**Pn**	**15 14 03.7**	**-4.5**
MTN	**Manton Dam**	**16.58**	**107**	Pn		**Pn**	**15 14 10.2**	**-2.3**
FAKI	**Fak Fak**	**18.01**	**74**	P		**Pn**	**15 14 27.8**	**-2.7**
FAKI				IAmb		IAmb	15 14 40.0	
	comp=Z,96nm,1.4s							
RPSI	**Rantau Prapat**	**19.30**	**304**	P		**Pn**	**15 14 46.7**	**+0.6**
PSI	**Prapat**	**19.35**	**304**	P		**Pn**	**15 14 46.7**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=132,slow=14,SNR=4.4							
PSI				LR		LR	15 22 33.2	
	comp=Z,99nm,19.6s,baz=141,slow=38 comp=Z,3.8nm,0.4s							
KULM	**Kulim**	**19.57**	**313**			**P**	**15 14 47.6**	**-0.5**
WB0	**Warramunga Arr**	**22.07**	**123**			**P**	**15 15 15.0**	**-0.2**
WB0				IAmb		IAmb	15 15 26.0	
	comp=Z,14nm,0.8s							
WRA	**Warramunga Arr**	**22.11**	**124**	P		**P**	**15 15 15.8**	**+0.2**
	comp=Z,4.5nm,0.7s,baz=299,slow=12,SNR=29							
WRA				S		**S**	**15 19 24.6**	**+4.6**
	comp=Z,0.7nm,0.9s,baz=290,slow=22,SNR=2.2							
WRA				LR		LR	15 24 12.2	
	comp=Z,69nm,18.8s,baz=9.5,slow=38 comp=Z,4.5nm,0.7s							
WRA	**Warramunga Arr**	**22.11**	**124**	P		**P**	**15 15 15.8**	**+0.2**
WRAB	**Tennant Creek**	**22.12**	**124**	P		**P**	**15 15 15.3**	**-0.3**
WR8	**Warramunga Arr**	**22.25**	**124**			**P**	**15 15 16.6**	**-0.5**
AS31	**Alice Springs**	**23.80**	**132**			**P**	**15 15 32.5**	**-0.6**
ASAR	**Alice Springs**	**23.80**	**132**	P		**P**	**15 15 33

KSH				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BOOM	**Boomskoye usch**	**61.73**	**328**	P	**P**	**15 20 39.1**	**+0.3**
BOOM				IAmb	IAmb	15 20 41.2	
	comp=Z,4.0nm,1.2s							
MKAR	**Makanchi Array**	**61.99**	**335**	P	**P**	**15 20 40.6**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=151,slow=7.4,SNR=20							
	comp=Z,1.6nm,0.6s							
MKAR	**Makanchi Array**	**61.99**	**335**		**P**	**15 20 39.4**	**-0.8**
ARSB	**Arslanbob**	**62.54**	**325**		**P**	**15 20 43.4**	**-0.8**
ARSB				IAmb	IAmb	15 20 50.8		
	comp=Z,5.3nm,0.9s							
AAK	**Ala-Archa**	**62.60**	**327**	P	**P**	**15 20 45.0**	**+0.4**
AAK				IAmb	IAmb	15 20 52.1		
	comp=Z,4.2nm,0.8s							
CHGR	**Chuyangaron**	**63.11**	**321**	P	**P**	**15 20 46.5**	**-1.5**
CHGR				IAmb	IAmb	15 20 51.9		
	comp=Z,4.0nm,0.9s							
KKAR	**Karatay Array**	**65.09**	**326**	P	**P**	**15 20 58.9**	**-1.9**
KURBB	**Kurchatov Arra**	**66.54**	**336**	P	**P**	**15 21 10.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=148,slow=5.3,SNR=5.9							
	comp=Z,0.8nm,0.6s							
KURK	**Kurchatov**	**66.58**	**336**	P	**P**	**15 21 09.2**	**-0.9**
ZAA0	**Zalesovo Array**	**66.94**	**341**	P	**P**	**15 21 11.2**	**-1.2**
ZAA0				IAmb	IAmb	15 21 18.2		
	comp=Z,1.6nm,0.7s							
ZALV	**Zalesovo Beam**	**66.94**	**341**	P	**P**	**15 21 12.1**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=151,slow=4.2,SNR=6.3							
	comp=Z,2.0nm,0.7s							
ZALV	**Zalesovo Beam**	**66.94**	**341**	P	**P**	**15 21 11.0**	**-1.4**
MAW	**Mawson**	**68.64**	**199**	P	**P**	**15 21 23.9**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=86,slow=13,SNR=7.2							
	comp=Z,2.9nm,0.8s							
PETK	**Petropavlovsk-**	**71.04**	**26**	P	**P**	**15 21 37.6**	**-0.4**
	comp=Z,3.1nm,1.0s,baz=233,slow=8.9,SNR=1.0							
	comp=Z,3.1nm,1.0s							
BVAR	**Borovoye Array**	**71.76**	**334**	P	**P**	**15 21 42.0**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=143,slow=8.4,SNR=4.3							
	comp=Z,1.1nm,0.7s							
AFI	**Afiamalu**	**71.92**	**102**	P	**P**	**15 21 44.3**	**+0.1**
NIUE	**Niue**	**73.37**	**107**	P	**P**	**15 21 51.4**	**-1.3**
VNDA	**Vanda**	**73.41**	**170**	P	**P**	**15 21 52.7**	**+0.9**
	comp=Z,1.1nm,1.0s,baz=329,slow=3.7,SNR=4.2							
	comp=Z,1.1nm,1.0s							
VNDA	**Vanda**	**73.41**	**170**	P	**P**	**15 21 52.4**	**+0.5**
AB31	**Akbulak array**	**74.64**	**326**		**P**	**15 21 57.5**	**-1.9**
AB31				IAmb	IAmb	15 22 04.9		
	comp=Z,3.2nm,0.8s							
ABKAR	**Akbulak array**	**74.64**	**326**		**P**	**15 21 58.2**	**-1.2**
ARTI	**Arti**	**79.31**	**332**	LR	LR	16 02 36.5		
	comp=Z,60nm,18.9s,baz=310,slow=40							
TIXI	**Tiksi**	**80.23**	**4**	P	**P**	**15 22 29.7**	**-0.6**
TIXI				IAmb	IAmb	15 22 35.1		
	comp=Z,4.4nm,0.8s							
QSPA	**South Pole Qui**	**81.78**	**180**	P	**P**	**15 22 41.6**	**+2.6**
	comp=Z,3.0nm,1.0s,baz=3.6,slow=1.0,SNR=12							
	comp=Z,3.0nm,1.0s							
QSPA	**South Pole Qui**	**81.78**	**180**	P	**P**	**15 22 40.1**	**+1.2**
QSPA				IAmb	IAmb	15 22 49.8		
	comp=Z,7.9nm,1.3s							
BRTR	**Keskin Array B**	**88.55**	**310**	P	**P**	**15 23 14.2**	**+0.8**
	comp=Z,1.3nm,1.0s,baz=127,slow=3.9,SNR=4.8							
	comp=Z,1.3nm,1.0s							
TROLL	**Troll, Antarti**	**88.99**	**197**	⇓P	**P**	**15 23 17.4**	**+2.6**
	comp=Z,144nm,0.9s							
SNAA	**Sanae**	**90.65**	**196**	⇓P	**P**	**15 23 25.7**	**+3.2**
	comp=Z,48nm,0.8s							
SNAA	**Sanae**	**90.65**	**196**	P	**P**	**15 23 23.8**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=100,slow=3.4,SNR=7.0							
	comp=Z,1.2nm,0.9s							
SNAA	**Sanae**	**90.65**	**196**	P	**P**	**15 23 26.6**	**+4.1**
SNAA				IAmb	IAmb	15 23 29.0		
	comp=Z,7.1nm,1.3s							
VNA2	**Neumayer--Watz**	**92.29**	**196**	⇓P	**P**	**15 23 31.9**	**+1.8**
	comp=Z,2.0nm,0.7s,baz=96,slow=3.8							
VNA1	**Neumayer--Stat**	**92.69**	**196**	⇑P	**P**	**15 23 29.4**	**-2.5**
	comp=Z,2.6nm,1.0s							
VNA3	**Neumayer Olymp**	**92.73**	**195**	⇑P	**P**	**15 23 34.0**	**+1.9**
	comp=Z,2.7nm,0.9s							
AKASG	**Malin Array Be**	**93.58**	**321**	P	**P**	**15 23 38.1**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=66,slow=2.4,SNR=1.9							
	comp=Z,0.2nm,0.3s							
NVAR	**Mina Array Bea**	**123.58**	**49**	PKP	**PKiKP**	**15 29 19.3**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=263,slow=2.8,SNR=2.0							
PDAR	**Pinedale Array**	**128.03**	**41**	PKP	**PKPdf**	**15 29 25.9**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=207,slow=0.3,SNR=4.4							
TXAR	**Lajitas Array**	**138.13**	**55**	PKP	**PKPdf**	**15 29 46.7**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=259,slow=3.2,SNR=1.8							
TXAR	**Lajitas Array**	**138.13**	**55**		**PKPdf**	**15 29 44.3**	**-1.8**
CPUP	**Villa Florida**	**144.85**	**192**	PKP	**PKPdf**	**15 29 58.2**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=243,slow=2.3,SNR=7.8							
CPUP	**Villa Florida**	**144.85**	**192**		PKPbc	15 29 58.0	+0.9
AC02	**Maricunga**	**144.94**	**174**		**PKPab**	**15 29 56.6**	**-1.4**
Q51A	**Peebles**	**145.20**	**25**		**PKPbc**	**15 29 56.8**	**-1.1**
WVT	**Waverly**	**145.31**	**33**		**PKPbc**	**15 29 56.5**	**-1.9**
BDFB	**Brasilia**	**150.90**	**216**	PKPbc	**PKiKP**	**15 30 15.2**	**+0.4**
	comp=Z,2.8nm,0.5s,baz=173,slow=8.1,SNR=5.1							
LPAZ	**La Paz**	**155.47**	**173**	PKP	**PKPdf**	**15 30 16.3**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=270,slow=9.1,SNR=1.9							
LPAZ				PKPab	**PKPab**	**15 30 42.2**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=180,slow=1.0,SNR=3.5							

*IDC **14** 15:10:45.0±1.0,57.89N×32.41W,h0km,mb3.8/11, mbtmp3.8/13,ML4.0/2,MS3.5/2,Error ellipse: s-maj=30.0km s-min=18.8km az=178.0*
*NEIC **14** 15:10:46.1±2.3,57.9N±0.1×32.40W±0.03,h10km±1km, mb4.4/16,Error ellipse: s-maj=19.2km s-min=3.2km az=183.0*

ISC 14 15:10:47.5±0.7,58.0N±0.1×32.44W±0.08,h18km,n39, σ1s23/33,mb4.0/16,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**8.60**	**34**	Pn	**Pn**	**15 12 51.8**	**+1.0**
	0.6nm,0.3s,baz=244,slow=6.1,SNR=1.5						
BORG				Sn	**Sn**	**15 14 26.2**	**-0.9**
	0.2nm,0.3s,baz=137,slow=8.5,SNR=1.0						
	4.5nm,0.6s						
BORG	**Borgarnes**	**8.60**	**34**		**Pn**	**15 12 51.0**	**+0.2**
EKA	**Eskdalemuir Ar**	**16.25**	**87**	Pn	**Pn**	**15 14 34.5**	**-0.1**
	baz=336,slow=11						
	2.0nm,0.8s						
JMIC	**Jan Mayen**	**16.41**	**28**	Sn	**Sn**	**15 17 35.5**	**-2.3**
	18nm,0.3s,baz=150,slow=16,SNR=2.0						
FRB	**Frobisher Bay**	**18.29**	**303**	LR	LR	15 20 49.4	
	comp=Z,165nm,18.7s,baz=78,slow=33						
HFS	**Hagfors**	**23.43**	**65**	P	**P**	**15 15 56.8**	**+1.6**
	1.8nm,0.7s,baz=261,slow=7.2,SNR=2.1						
	1.8nm,0.7s						
E62A	**Clayton Lake**	**25.04**	**259**	P	**P**	**15 16 08.8**	**-1.4**
E62A				IAmb	IAmb	15 16 14.0	
	comp=Z,19nm,1.3s						
KBS	**Kingsbay**	**25.29**	**18**	P	**P**	**15 16 10.5**	**-1.7**
SPB2	**Spitsbergen Ar**	**25.76**	**21**	P	**P**	**15 16 15.0**	**-1.5**
ARCES	**ARCESS Array B**	**26.90**	**41**	P	**P**	**15 16 27.1**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=284,slow=4.5,SNR=3.5						
	comp=Z,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**26.90**	**41**	P	**P**	**15 16 25.7**	**-1.1**
ARCES				IAmb	IAmb	15 17 00.2	
	comp=Z,9.7nm,1.3s						
BUR08	**Bucovina Ar. S**	**35.28**	**81**	P	**P**	**15 17 40.1**	**-0.9**
BUR08				IAmb	IAmb	15 17 44.3	
	comp=Z,9.8nm,1.5s						
BURAR	**Bucovina Array**	**35.31**	**81**	P	**P**	**15 17 40.4**	**-0.9**
J47A	**Sunmer**	**35.38**	**269**	P	**P**	**15 17 40.7**	**-1.1**
AKASG	**Malin Array Be**	**35.51**	**74**	P	**P**	**15 17 41.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=308,slow=8.2,SNR=1.7						
	comp=Z,0.5nm,0.5s						
JFWS	**Jewell Farm**	**38.49**	**273**	P	**P**	**15 18 07.5**	**-0.7**
I37A	**Lemond, Waseca**	**39.41**	**277**	P	**P**	**15 18 13.9**	**-2.0**
I37A				IAmb	IAmb	15 18 48.1	
	comp=Z,9.0nm,0.9s						
ALN	**Alexandroupoli**	**40.27**	**89**	P	**P**	**15 18 21.5**	**-1.5**
BRTR	**Keskin Array B**	**45.14**	**84**	P	**P**	**15 19 03.4**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=326,slow=7.8,SNR=3.3						
	comp=Z,0.8nm,0.8s						
BRTR	**Keskin Array B**	**45.14**	**84**	P	**P**	**15 19 02.8**	**0.0**
TOLK	**Toolik Lake Re**	**45.67**	**333**	P	**P**	**15 19 07.8**	**+1.3**
TOLK				IAmb	IAmb	15 19 13.5	
	comp=Z,6.6nm,1.3s						
D23K	**Nanushuk River**	**45.69**	**334**	P	**P**	**15 19 08.3**	**+1.7**
D23K				IAmb	IAmb	15 19 32.0	
	comp=Z,9.0nm,1.4s						
ILAR	**Eielson Array**	**47.90**	**328**	P	**P**	**15 19 25.4**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=32,slow=7.9,SNR=5.5						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**47.90**	**328**	P	**P**	**15 19 25.0**	**+1.1**
E19K	**Redstone River**	**48.40**	**335**	P	**P**	**15 19 29.1**	**+1.4**
NEW	**Newport**	**48.49**	**297**	LR	LR	15 38 48.0	
	comp=Z,48nm,20.5s,baz=313,slow=35						
PDAR	**Pinedale Array**	**48.69**	**287**	P	**P**	**15 19 31.1**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=68,slow=7.4,SNR=5.9						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**48.69**	**287**	P	**P**	**15 19 30.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**51.65**	**136**	P	**P**	**15 19 52.7**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=350,slow=8.3,SNR=5.2						
	comp=Z,2.3nm,0.3s						
BVAR	**Borovoye Array**	**52.90**	**48**	P	**P**	**15 20 03.5**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=316,slow=6.2,SNR=5.5						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**55.79**	**271**	P	**P**	**15 20 24.1**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=46,slow=7.7,SNR=1.9						
	comp=Z,0.2nm,0.6s						
KURK	**Kurchatov**	**57.87**	**44**	P	**P**	**15 20 38.2**	**+0.6**
KURK				IAmb	IAmb	15 21 15.4	
	comp=Z,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**57.91**	**45**	P	**P**	**15 20 39.4**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=323,slow=6.8,SNR=5.9						
	comp=Z,0.6nm,0.6s						
H10S3	**ASCENSION HYDR**	**68.20**	**161**	T	T	16 35 55.5	
	baz=230,slow=74,SNR=12						
H10S2	**ASCENSION HYDR**	**68.30**	**161**	T	T	16 35 42.6	
	baz=350,slow=74,SNR=10						
SONM	**Songino Array**	**69.17**	**28**	P	**P**	**15 21 52.9**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=336,slow=6.6,SNR=2.8						
	comp=Z,0.9nm,1.0s						
SONM	**Songino Array**	**69.17**	**28**	IAmb	IAmb	15 21 58.6	
	comp=Z,2.0nm,1.1s						
ASAR	**Alice Springs**	**144.31**	**22**	PKP	PKPbc	15 30 20.3	-0.1
	comp=Z,0.3nm,1.0s,baz=9.5,slow=2.4,SNR=2.1						
ASAR	**Alice Springs**	**144.31**	**22**		PKPbc	15 30 20.7	+0.3

IDC 14 15:36:17.1±20.0,30.63S×179.87W,h478km±103km, mb2.7/3,mbtmp3.7/4,Error ellipse: s-maj=319.1km s-min=26.8km az=48.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.01**	**197**	P	P	15 38 13.0	+0.1
	9.7nm,0.7s,baz=7.1,slow=8.1,SNR=10						
URZ				S	S	15 39 36.5	-11
	18nm,1.2s,baz=52,slow=19,SNR=1.3						
ASAR	**Alice Springs**	**41.49**	**268**	P	P	15 43 21.1	-0.5
	0.4nm,0.8s,baz=112,slow=8.1,SNR=9.5						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**42.50**	**273**	P	P	15 43 29.8	+0.2
	0.5nm,0.3s,baz=111,slow=8.1,SNR=12						
	0.5nm,0.3s						
VNDA	**Vanda**	**47.71**	**185**	P	P	15 44 08.8	-0.1
	0.5nm,0.6s,baz=44,slow=7.8,SNR=6.4						
	0.5nm,0.6s						

*NEIC **14** 15:42:43.6±0.8,20.9S±0.2×179.1W±0.3,h650km±26km, mb4.3/21,Error ellipse: s-maj=44.5km s-min=23.5km az=61.0*
*IDC **14** 15:42:46.3±3.6,20.50S×179.71W,h649km±29km,mb3.4/3, mbtmp4.4/4,Error ellipse: s-maj=103.9km s-min=49.7km az=167.0*

ISC 14 15:42:44.4±2.0,20.9S±0.2×179.3W±0.2,h650km,n29, σ0s60/31,mb4.2/14,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.98**	**321**	P	**P**	**15 44 13.2**	**-0.4**
MARNC	**Mare, Loyalty**	**11.80**	**265**	P	**P**	**15 45 20.4**	**-0.8**
PINNC	**Pines Island,**	**12.40**	**260**	P	**P**	**15 45 27.3**	**+0.6**
DZM	**Mont Dzumac**	**13.29**	**262**	P	**P**	**15 45 35.9**	**+0.9**
	2.0nm,0.4s,baz=82,slow=19,SNR=6.8						
QRZ	**Quartz Range**	**21.06**	**197**	P	**P**	**15 46 44.6**	**-0.7**
THZ	**Tophouse**	**21.84**	**196**	P	**P**	**15 46 51.8**	**-0.3**
EIDS	**Eidsvold**	**27.54**	**255**	P	**P**	**15 47 42.9**	**+0.4**
EIDS				IAmb	IAmb	15 47 50.1	
	comp=Z,8.2nm,1.2s						
ARMA	**Armidale**	**27.78**	**244**	P	**P**	**15 47 45.6**	**+1.0**
CTAO	**Charters Tower**	**32.21**	**265**	P	**P**	**15 48 23.0**	**+0.6**
CTAO				IAmb	IAmb	15 48 23.5	
	comp=Z,18nm,1.4s						
TOO	**Toolangi**	**34.67**	**234**	P	**P**	**15 48 43.4**	**+0.7**
TOO				IAmb	IAmb	15 48 54.4	
	comp=Z,7.2nm,1.2s						
COEN	**Coen**	**36.36**	**275**	P	**P**	**15 48 56.6**	**-0.2**
COEN				IAmb	IAmb	15 48 58.0	
	comp=Z,6.2nm,0.9s						
STKA	**Stephens Creek**	**36.50**	**244**	P	**P**	**15 48 58.3**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=90,slow=10,SNR=7.2						
	comp=Z,2.3nm,0.6s						
STKA	**Stephens Creek**	**36.50**	**244**	P	**P**	**15 48 58.1**	**+0.4**
INKA	**Innaminka**	**36.89**	**251**	P	**P**	**15 49 01.9**	**+0.9**
INKA				IAmb	IAmb	15 49 16.3	
	comp=Z,6.3nm,1.4s						
BBOO	**Buckleboo**	**41.26**	**244**	P	**P**	**15 49 35.7**	**0.0**
BBOO				IAmb	IAmb	15 50 06.3	
	comp=Z,21nm,1.4s						
WR8	**Warramunga Arr**	**43.16**	**263**	P	**P**	**15 49 49.8**	**-0.9**
WR8				IAmb	IAmb	15 49 51.4	
	comp=Z,6.1nm,0.3s						
AS31	**Alice Springs**	**43.21**	**257**	P	**P**	**15 49 51.3**	**+0.2**
ASAR	**Alice Springs**	**43.21**	**257**	P	**P**	**15 49 51.3**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=86,slow=7.6,SNR=213						
ASAR				ScP	**ScP**	**15 54 16.9**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=104,slow=4.2,SNR=1.5						
ASAR				S	**S**	**15 55 32.5**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=94,slow=14,SNR=4.8						
	comp=Z,4.4nm,0.6s						
ASAR	**Alice Springs**	**43.21**	**257**	P	**P**	**15 49 50.6**	**-0.5**
WB0	**Warramunga Arr**	**43.29**	**263**	P	**P**	**15 49 51.4**	**-0.3**
WRA	**Warramunga Arr**	**43.31**	**263**	P	**P**	**15 49 51.6**	**-0.3**
	comp=Z,3.8nm,0.3s,baz=97,slow=7.5,SNR=255						
	comp=Z,3.8nm,0.3s						
MTN	**Manton Dam**	**47.91**	**271**	P	**P**	**15 50 26.1**	**-0.5**
MTN				IAmb	IAmb	15 51 08.7	
	comp=Z,27nm,1.5s						
FORT	**Forrest**	**47.99**	**247**	P	**P**	**15 50 26.7**	**-0.4**
KNRA	**Kununurra**	**49.38**	**267**	P	**P**	**15 50 37.0**	**-0.5**
KNRA				IAmb	IAmb	15 51 05.7	
	comp=Z,32nm,1.4s						
FAKI	**Fak Fak**	**50.37**	**284**	P	**P**	**15 50 45.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**51.73**	**263**	P	**P**	**15 50 54.2**	**-0.1**
SOEI	**Soe**	**55.26**	**272**	P	**P**	**15 51 19.8**	**+0.5**
SOEI				IAmb	IAmb	15 51 21.4	
	comp=Z,8.5nm,0.7s						
PSA00	**Pilbara Seismi**	**56.36**	**257**	P	**P**	**15 51 26.2**	**-0.4**
PSA00				IAmb	IAmb	15 51 42.9	
	comp=Z,23nm,1.4s						
TOLI2	**Tolitoli**	**62.46**	**283**	P	**P**	**15 52 06.8**	**-0.2**

*NAO **14** 15:49:24.7,36.24N×25.14E,h33km,MB3.4*
*IDC **14** 15:49:24.8±0.8,36.62N×23.26E,h0km,mb3.9/13, mbtmp3.8/19,ML3.1/6,Error ellipse: s-maj=19.0km s-min=13.4km az=41.0*
*THE **14** 15:49:25.5,36.4N±0.9×23.3E±,h4km±1km,M3.2/15, MLh3.2/15*
*ATH **14** 15:49:25.9,36.46N×23.03E,h8km±1km,ML3.4/30, Manual Solution by D.Makaris First location: 2019/11/14 15:50:31, This location: 2019/11/14 16:09:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 14 15:49:25.7±0.9,36.46N±0.02×23.05E±0.03,h12km±6km, n88,σ1s41/137,mb3.9/11,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHA	**Kythira Island**	**0.21**	**176**	P	**Pg**	**15 49 30.2**	**0.0**
VLI	**Veliai**	**0.27**	**341**	P	**Pg**	**15 49 30.9**	**-0.5**
VLI				S	**Sg**	**15 49 35.4**	**+0.3**
VLI	**Veliai**	**0.27**	**341**	P	**Pg**	**15 49 31.3**	**0.0**
VLI				S	**Sg**	**15 49 35.5**	**+0.4**
ANKY	**Antikythira Is**	**0.63**	**161**	P	**Pg**	**15 49 37.9**	**-0.1**
ANKY				S	**Sb**	**15 49 47.3**	**-0.1**
ANKY	**Antikythira Is**	**0.63**	**161**	P	**Pb**	**15 49 38.4**	**-0.3**
ANKY				S	**Sg**	**15 49 47.0**	**+0.7**
VLX	**Vlachokerasia**	**1.05**	**330**	P	**Pg**	**15 49 44.4**	**-1.6**
VLX				S	**Sg**	**15 49 59.0**	**-0.7**
MHLO	**Agia Marina, M**	**1.11**	**78**	P	**Pn**	**15 49 48.4**	**+1.3**
MHLO				S	**Sn**	**15 50 04.8**	**+2.4**
MHLO	**Agia Marina, M**	**1.11**	**78**	P	**Pb**	**15 49 47.6**	**+0.6**
MHLO				S	**Sb**	**15 50 02.7**	**+1.3**
ITM	**Ithomi**	**1.15**	**309**	P	**Pg**	**15 49 45.4**	**-2.5**
ITM	**Ithomi**	**1.15**	**309**	P	**Pg**	**15 49 46.8**	**-1.1**
ITM				S	**Sb**	**15 50 03.2**	**+0.8**
MET2	**Kameni Chora,**	**1.17**	**11**	P	**Pb**	**15 49 48.3**	**+0.4**
MET2				S	**Sb**	**15 50 04.2**	**+1.2**
MET5	**Makryloggos,Me**	**1.18**	**12**	P	**Pn**	**15 49 48.8**	**+0.6**
MET5				S	**Sb**	**15 50 04.2**	**+0.8**
MET4	**Agioi Theodoro**	**1.19**	**14**	P	**Pn**	**15 49 49.2**	**+1.1**
MET4				S	**Sg**	**15 50 03.9**	**-0.3**
CHAN	**Chania**	**1.24**	**139**	P	**Pg**	**15 49 49.4**	**-0.2**
CHAN				S	**Sn**	**15 50 06.6**	**+1.1**
CHAN	**Chania**	**1.24**	**139**	P	**Pg**	**15 49 49.4**	**-0.2**
CHAN				S	**Sb**	**15 50 06.1**	**+1.1**
KNDR	**Palaiochora Ch**	**1.31**	**159**	P	**Pn**	**15 49 50.3**	**+0.4**
KNDR				S	**Sn**	**15 50 08.7**	**+1.4**
KNDR	**Palaiochora Ch**	**1.31**	**159**	P	**Pn**	**15 49 50.5**	**+0.7**
KNDR				S	**Sg**	**15 50 07.7**	**-0.3**
VLY	**Voula,Athens**	**1.51**	**23**	P	**Pn**	**15 49 53.4**	**+0.7**
VLY				S	**Sb**	**15 50 13.9**	**+1.1**
VLY	**Voula,Athens**	**1.51**	**23**	P	**Pn**	**15 49 53.3**	**+0.7**
VLY				S	**Sn**	**15 50 13.5**	**+1.3**
LTK	**Loutraki**	**1.56**	**358**	P	**Pn**	**15 49 53.8**	**+0.5**
LTK				S	**Sb**	**15 50 15.3**	**+1.1**
LTK	**Loutraki**	**1.56**	**358**	P	**Pn**	**15 49 54.0**	**+0.8**
LTK				S	**Sg**	**15 50 15.5**	**-0.4**
GUR	**Goura**	**1.57**	**339**	P	**Pn**	**15 49 53.5**	**-0.1**
GUR				S	**Sn**	**15 50 15.0**	**+1.1**
GUR	**Goura**	**1.57**	**339**	P	**Pn**	**15 49 54.0**	**+0.4**
GUR				S	**Sb**	**15 50 15.3**	**+0.5**
ATH	**Athens Observa**	**1.60**	**19**	S	**Sn**	**15 50 16.0**	**+1.7**
ATH	**Athens Observa**	**1.60**	**19**	P	**Pn**	**15 49 55.1**	**+1.3**
ATH				S	**Sn**	**15 50 15.1**	**+0.8**
ATHU	**Athens Univers**	**1.61**	**21**	P	**Pn**	**15 49 54.9**	**+0.9**
ATHU	**Athens Univers**	**1.61**	**21**	P	**Pn**	**15 49 55.0**	**+0.9**
ATHU				S	**Sn**	**15 50 16.1**	**+1.4**
MAGU	**Magoula**	**1.66**	**13**	S	**Sn**	**15 50 17.1**	**+1.3**
MAGU	**Magoula**	**1.66**	**13**	P	**Pn**	**15 49 55.9**	**+1.3**
MAGU				S	**Sn**	**15 50 17.1**	**+1.3**
VILL	**Villia**	**1.71**	**7**	P	**Pn**	**15 49 55.8**	**+0.4**
PTL	**Penteli**	**1.71**	**22**	P	**Pn**	**15 49 56.4**	**+1.0**
PTL	**Penteli**	**1.71**	**22**	P	**Pn**	**15 49 56.0**	**+0.5**
PTL				S	**Sn**	**15 50 18.8**	**+1.6**
KLV	**Kalavryta, Ach**	**1.73**	**336**	P	**Pn**	**15 49 55.7**	**0.0**
KLV	**Kalavryta, Ach**	**1.73**	**336**	P	**Pn**	**15 49 56.4**	**+0.7**
KLV				S	**Sn**	**15 50 19.3**	**+1.6**
VIL2	**Platees**	**1.75**	**6**	P	**Pn**	**15 49 56.3**	**+0.4**
VIL2				S	**Sn**	**15 50 19.4**	**+1.2**
STFN	**Stefani**	**1.76**	**13**	P	**Pn**	**15 49 57.7**	**-0.2**
STFN				S	**Sn**	**15 50 20.1**	**+1.7**
DION	**Dionisos Attik**	**1.76**	**23**	P	**Pn**	**15 49 56.8**	**+0.7**
DION	**Dionisos Attik**	**1.76**	**23**	P	**Pn**	**15 49 57.0**	**+0.9**
DION				S	**Sn**	**15 50 19.4**	**+1.0**
DRO	**Drossia**	**1.83**	**325**	P	**Pn**	**15 49 58.5**	**+1.5**
DRO				S	**Sn**	**15 50 19.9**	**-0.2**
SAP3	**Santorini-Thir**	**1.85**	**90**	P	**Pb**	**15 49 59.2**	**-0.3**
SAP3				S	**Sn**	**15 50 22.7**	**+2.0**
IDI	**Anoyia**	**1.90**	**128**	Pn	**Pn**	**15 49 59.4**	**+1.3**
	5.1nm,0.3s,baz=312,slow=17,SNR=36						
IDI				Sn	**Sn**	**15 50 23.0**	**+1.1**
	20nm,0.3s,baz=286,slow=19,SNR=7.2						
IDI	**Anoyia**	**1.90**	**128**	P	**Pn**	**15 49 58.8**	**+0.8**
IDI	**Anoyia**	**1.90**	**128**	P	**Pn**	**15 49 59.0**	**+1.0**
IDI				S	**Sn**	**15 50 23.8**	**+1.9**
KARY	**Karystos**	**1.92**	**35**	P	**Pn**	**15 49 59.5**	**+1.3**
KARY	**Karystos**	**1.92**	**35**	P	**Pn**	**15 49 59.5**	**+1.3**
KARY				S	**Sn**	**15 50 24.1**	**+1.9**
THERA	**Ancient Thera,**	**1.96**	**92**	P	**Pn**	**15 49 59.8**	**+1.0**
THERA				S	**Sn**	**15 50 24.7**	**+1.4**
IACM	**Heraklion**	**2.01**	**124**	P	**Pn**	**15 50 00.4

NVAR **Mina Array Bea** 97.36 330 P Pdif 16 03 01.0 +1.6
comp=Z,0.4nm,0.6s,baz=47,slow=6.1,SNR=2.3
comp=Z,0.4nm,0.6s
WRA **Warramunga Arr** 118.43 95 PKP **PKPdf** **16 08 13.3 -0.2**
comp=Z,0.2nm,0.7s,baz=309,slow=2.7,SNR=1.6
ASAR **Alice Springs** 119.96 99 PKP **PKPdf** **16 08 16.2 -0.2**
comp=Z,0.2nm,0.3s,baz=305,slow=1.6,SNR=10
QSPA **South Pole Qui** 126.32 180 PKP **PKiKP** **16 08 30.1 +2.3**
comp=Z,0.8nm,1.1s,baz=281,slow=2.9,SNR=1.6

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*MOS **14** 16:17:38.2±1.1, 1.°57N×126.°37E, h28km, mb7.2/91, MS6.9/84, Error ellipse: s-maj=6.4km s-min=3.7km az=114.4*
*NEIC **14** 16:17:40.6, 1.°62N×126.°41E, h33km*
*NEIC **14** 16:17:40.6±2.3, 1.°62N±0.°05×126.°42E±0.°06, h33km±1km, mb7.0/462, Ms_20 7.0/632, Mwb6.9/233, Mww7.1/75, Error ellipse: s-maj=9.5km s-min=9.1km az=92.0, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}2.47; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$-1.97; $M_{r\theta}$-0.51; $M_{\theta\phi}$-1.41; $M_{\phi r}$0.28; Fault plane solution: M_o2.73000×10^{19} NP1: ϕ_s225.15000°, δ46.98000°, λ109.77000°. NP2: ϕ_s17.37000°, δ46.52000°, λ70.08000°. Principal axes: T 2.6214, Plg76.0000°, Azm210.0000°; N 0.2071, Plg14.0000°, Azm31.0000°; P -2.8285, Plg0.0000°, Azm301.0000°;*
*IDC **14** 16:17:41.2±1.1, 1.°55N×126.°40E, h37km±8km, mb6.2/35, mbtmp6.4/38, ML5.8/3, MS6.7/52 Error ellipse: s-maj=14.0km s-min=7.8km az=73.0*
*BJI **14** 16:17:41.8, 1.°53N×126.°55E, h50km, mB6.9/68, mb6.7/85, Ms7.1/97, Ms7 7.1/95*
*IPGP **14** 16:17:41.0, 1.°59N×126.°42E, h29km, Mw7.2, Fault plane solution: NP1:ϕ_s21.00000°, δ39.00000°, λ79.00000°. NP2:ϕ_s215.00000°, δ52.00000°, λ99.00000°.*
*NEIC **14** 16:17:41.9, 1.°68N×126.°40E, h36km, Moment Tensor Solution. Duration: 17s2 Moment tensor: Scale 10^{19}Nm; M_{rr}4.76; $M_{\theta\theta}$-1.46; $M_{\phi\phi}$-3.30; $M_{r\theta}$-1.06; $M_{\theta\phi}$-2.33; $M_{\phi r}$-0.12; Fault plane solution: M_o4.94000×10^{19} NP1: ϕ_s24.84000°, δ41.65000°, λ75.78000°. NP2:ϕ_s223.57000°, δ49.89000°, λ102.32000°. Principal axes: T 4.9404, Plg80.0000°, Azm191.0000°; N -0.0075, Plg9.0000°, Azm36.0000°; P -4.9329, Plg4.0000°, Azm305.0000°;*
*NEIC **14** 16:17:41.9, 1.°58N×126.°40E, h36km*
*DJA **14** 16:17:42.9±0.2, 2.°N±1.°×12.°6E±.°, h58km±2km, M7.1/158, mB7.2/157, mb6.7/158, MLv6.9/24, Mw7.0/107, Mw(mB)7.2/157, MwMwp7.1/151, Mwp6.8/151*
*GCMT **14** 16:17:46.6±0.1, 1.°66N×126.°32E, h30km, MW7.1/170, Moment Tensor Solution. s170,c462; s167,c797; Duration: 8s6 Moment tensor: Scale 10^{19}Nm; M_{rr}4.94±.02; $M_{\theta\theta}$-1.00±.01; $M_{\phi\phi}$-3.95±.01; $M_{r\theta}$-1.84±.07; $M_{\theta\phi}$-2.31±.01; $M_{\phi r}$-0.56±.06; Best double couple: M_o5.43400×10^{19} NP1:ϕ_s15.00000°, δ39.00000°, λ67.00000°. NP2:ϕ_s223.00000°, δ54.00000°, λ107.00000°. Principal axes: T 5.4650, Plg74.0000°, Azm182.0000°; N -0.0690, Plg14.0000°, Azm33.0000°; P -5.4030, Plg8.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*
ISC 14 16:17:42.1±0.2,1.°56N±0.°02×126.°33E±0.°02, h49km±1km, **h49**km:**pP-P, n2825,** σ1**97**/3069, **mb6.9**/482, **MS7.0**/515, **230C-103D, Northern Moluca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.30**	**127**			**Pn**	**16 18 02.1**	**-1.8**
TNTI	**Ternate**	**1.30**	**127**	P		**Pn**	**16 18 02.8**	**-1.1**
TNTI	**Ternate**	**1.30**	**127**	P		**Pn**	**16 18 02.4**	**-1.5**
TNTI				S		**Sn**	**16 18 18.6**	**-1.6**
TNTI	**Ternate**	**1.30**	**127**	⇑P		**Pn**	**16 18 02.2**	**-1.8**
SGSI	**Sangihe**	**2.25**	**339**	P		**Pn**	**16 18 17.1**	**+0.1**
KMSI	**Cibinong**	**2.54**	**247**	P		**Pn**	**16 18 23.0**	**+2.1**
SANI	**Sanana**	**3.61**	**185**	P		**Pn**	**16 18 35.6**	**+0.1**
SANI				S		**Sn**	**16 19 19.1**	**+2.3**
SANI	**Sanana**	**3.61**	**185**	P		**Pn**	**16 18 35.1**	**-0.4**
SANI	**Sanana**	**3.61**	**185**	⇑P		**Pn**	**16 18 35.7**	**+0.1**
LUWI	**Luwuk**	**4.40**	**234**	P		**Pn**	**16 18 48.1**	**+1.7**
LUWI	**Luwuk**	**4.40**	**234**			**Pn**	**16 18 47.0**	**+0.6**
LUWI				Sn		**Sn**	**16 19 37.9**	**+1.5**
LUWI	**Luwuk**	**4.40**	**234**	P		**Pn**	**16 18 49.5**	**+3.1**
LUWI	**Luwuk**	**4.40**	**234**	⇓P		**Pn**	**16 18 47.9**	**+1.5**
MRSI	**Marisa**	**4.52**	**256**	P		**Pn**	**16 18 50.8**	**+2.8**
NLAI	**Namlea**	**4.83**	**171**	P		**Pn**	**16 18 53.2**	**+0.8**
APSI	**Ampana**	**5.29**	**242**	P		**Pn**	**16 19 02.1**	**+3.5**
SWI	**Sorong**	**5.49**	**116**	P		**Pn**	**16 19 01.2**	**-0.2**
	289µm8µm,1.0s							
DAV	**Davao City (W)**	**5.52**	**352**	Pn		**Pn**	**16 19 02.8**	**+1.0**
	176nm,0.3s,baz=23,slow=1.7,SNR=32							
DAV				Sn		**Sn**	**16 20 05.4**	**+1.3**
	1µm,0.3s,baz=291,slow=22,SNR=3.6							
	1µm,0.4s							
DAV	**Davao City (W)**	**5.52**	**352**			**Pn**	**16 18 59.7**	**-2.2**
DAV	**Davao City (W)**	**5.52**	**352**	P		**Pn**	**16 19 05.6**	**+3.8**
DAV				P		**Pn**	**16 19 05.6**	**+3.8**
DAV	**Davao City (W)**	**5.52**	**352**	⇓P		**Pn**	**16 19 02.7**	**+0.9**
DAV	**Davao City (W)**	**5.52**	**352**	P		**Pn**	**16 19 02.4**	**+0.6**
MSAI	**Masohi**	**5.53**	**152**	P		**Pn**	**16 19 04.4**	**+2.5**
AAI	**Ambon**	**5.54**	**160**	P		**Pn**	**16 19 03.8**	**+1.7**
	49nm202µm12µm,1.1s							
TOLI2	**Tolitoli**	**5.56**	**265**			**Pn**	**16 19 02.6**	**+0.2**
MPSI	**Mapaga**	**6.54**	**259**	P		**Pn**	**16 19 18.2**	**+2.3**
	53nm316µm15µm,1.1s							
KDI	**Kendari**	**6.62**	**214**	P		**Pn**	**16 19 18.7**	**+1.8**
PCI	**Palu**	**6.94**	**249**	P		**Pn**	**16 19 24.2**	**+2.9**
BNDI	**Bandanaira**	**7.02**	**149**	P		**Pn**	**16 19 23.1**	**+0.7**
	70nm247µm9µm,1.8s							
BNDI	**Bandanaira**	**7.02**	**149**	⇓P		**Pn**	**16 19 22.9**	**+0.4**
FAKI	**Fak Fak**	**7.41**	**127**			**Pn**	**16 19 27.5**	**-0.2**
FAKI	**Fak Fak**	**7.41**	**127**	P		**Pn**	**16 19 29.0**	**+1.3**
	42nm192µm12µm,0.9s							
FAKI	**Fak Fak**	**7.41**	**127**	⇓P		**Pn**	**16 19 27.6**	**-0.1**
BBSI	**Bau Bau**	**7.95**	**208**	P		**Pn**	**16 19 37.6**	**+2.5**
	952µm225µm14µm,0.9s							
TTSI	**Tana Toraja**	**7.96**	**235**	P		**Pn**	**16 19 37.5**	**+2.3**
	213µm13µm,0.9s							
RKPI	**Ransiki, Papua**	**8.42**	**111**	P		**Pn**	**16 19 42.8**	**+1.2**
	160µm5µm,1.1s							
SPSI	**Sidrap Palu**	**8.55**	**230**	P		**Pn**	**16 19 45.7**	**+2.3**
	97µm7µm,0.8s							
BNSI	**Bone**	**8.59**	**226**	P		**Pn**	**16 19 46.2**	**+2.3**
	115µm8µm,0.8s							
MYLDM	**Lahad Datu**	**8.60**	**295**			**Pn**	**16 19 46.8**	**+2.7**
KMPI	**Kaimana, Papua**	**9.02**	**125**	P		**Pn**	**16 19 50.3**	**+0.5**
BKSI	**Bulukumba**	**9.23**	**222**	P		**Pn**	**16 19 55.0**	**+2.3**
	105µm5µm,1.4s							
KAPI	**Kappang**	**9.27**	**225**	Pn		**Pn**	**16 19 55.7**	**+2.6**
	162nm,0.3s,baz=51,slow=8.5,SNR=221							
KAPI				Sn		**Sn**	**16 21 36.1**	**0.0**
	14nm,0.3s,baz=327,slow=15,SNR=0.9							
KAPI				ScS		**ScS**	**16 33 13.4**	**-0.7**
	6.4nm,0.4s,baz=145,slow=14,SNR=2.0							
KAPI				P3KPbc			16 56 52.0	
	8.2nm,0.3s,baz=210,slow=16,SNR=1.8							
KAPI	**Kappang**	**9.27**	**225**			**Pn**	**16 19 55.1**	**+1.9**
KAPI	**Kappang**	**9.27**	**225**	P		**Pn**	**16 19 55.8**	**+2.6**
KAPI				P		**Pn**	**16 19 55.8**	**+2.6**
KAPI				S		**Sn**	**16 21 40.6**	**+4.4**
KAPI				S		**Sn**	**16 21 40.6**	**+4.4**
KAPI	**Kappang**	**9.27**	**225**	*c* iP		**Pn**	**16 19 55.6**	**+2.4**
KAPI	**Kappang**	**9.27**	**225**	⇑P		**Pn**	**16 19 55.6**	**+2.4**
KAPI	**Kappang**	**9.27**	**225**	P		**Pn**	**16 19 55.4**	**+2.2**
KAPI				S		**Sn**	**16 21 35.5**	**-0.7**
BSSI	**Bau Bau, Buton**	**9.62**	**217**	P		**Pn**	**16 19 59.6**	**+1.5**
BKB	**Balikpapan**	**9.84**	**253**			**Pn**	**16 20 02.5**	**+1.4**
BKB	**Balikpapan**	**9.84**	**253**	P		**Pn**	**16 20 02.7**	**+1.6**
	137µm5µm,1.0s							
I39PW	**PALAU INFRASON**	**10.11**	**54**	Pn		**Pn**	**16 20 03.0**	**-1.8**
	baz=211,slow=17							
I39PW				Sn		**Sn**	**16 21 55.0**	**-1.9**
	baz=212,slow=43							
I39PW				I		I	17 08 15.7	
	baz=228,slow=308,SNR=1.9							
BAKI	**Biak**	**10.15**	**106**	P		**Pn**	**16 20 08.4**	**+3.0**
SAUI	**Saumlaki**	**10.70**	**152**			**Pn**	**16 20 11.9**	**-0.9**
SAUI	**Saumlaki**	**10.70**	**152**	P		**Pn**	**16 20 13.8**	**+0.9**
	115µm6µm,1.0s							
SAUI	**Saumlaki**	**10.70**	**152**	⇓P		**Pn**	**16 20 12.4**	**-0.4**
MMRI	**Maumere**	**10.92**	**202**			**Pn**	**16 20 17.3**	**+1.5**
MMRI	**Maumere**	**10.92**	**202**	P		**Pn**	**16 20 17.6**	**+1.7**
	714µm88µm3µm,1.2s							
EDFI	**Ende, Flores**	**11.24**	**204**	P		**Pn**	**16 20 22.3**	**+2.0**
	734µm61µm3µm,1.0s							
SOEI	**Soe**	**11.43**	**190**	P		**Pn**	**16 20 27.6**	**+4.7**
SOEI	**Soe**	**11.43**	**190**			**Pn**	**16 20 25.9**	**+3.0**
SOEI	**Soe**	**11.43**	**190**	P		**Pn**	**16 20 27.3**	**+4.4**
	180µm11µm,1.2s							
SOEI	**Soe**	**11.43**	**190**	⇑P		**Pn**	**16 20 27.2**	**+4.2**
MTKI	**Muara Teweh, K**	**11.70**	**258**	P		**Pn**	**16 20 28.1**	**+1.6**
	87µm3µm,1.3s							
BATI	**Baumata**	**11.99**	**193**	Pn		**Pn**	**16 20 32.5**	**+1.9**
	6.1nm,0.3s,baz=6.0,slow=0.6,SNR=44							
BATI				LR		LR	16 25 58.4	
	comp=Z,273µm,21.1s,baz=4.5,slow=42							
BATI				ScP		**ScP**	**16 29 44.4**	**+1.3**
	108nm,1.0s,baz=250,slow=20,SNR=3.5							
BATI				ScS		**ScS**	**16 33 20.1**	**+0.9**
	67nm,0.9s,baz=175,slow=22,SNR=3.2							
BATI				P3KPbc			16 56 44.5	
	5.3nm,0.5s,baz=298,slow=22,SNR=1.3							
BATI				PKPPKP		**P'P'df**	**16 57 57.7**	**+2.1**
	37nm,0.9s,baz=150,slow=8.1,SNR=4.3							
BATI	**Baumata**	**11.99**	**193**	P		**Pn**	**16 20 34.0**	**+3.5**
	916µm103µm4µm,1.1s							
BBKI	**Banjar Baru**	**12.52**	**246**	P		**Pn**	**16 20 41.5**	**+3.8**
	122µm4µm,1.6s							
WSI	**Waingapu**	**12.67**	**208**	P		**Pn**	**16 20 42.1**	**+2.3**
	680µm5µm,1.4s							
SMPI	**Sarmi**	**12.87**	**106**	P		**Pn**	**16 20 45.2**	**+2.7**
	4µm,2.1s							
BASI	**Baing, Sumba**	**13.03**	**206**	P		**Pn**	**16 20 46.1**	**+1.4**
	717µm126µm6µm,1.2s							
WBSI	**Waikabubak, Su**	**13.10**	**212**	P		**Pn**	**16 20 46.8**	**+1.1**
	606µm103µm5µm,0.9s							
PLAI	**Plampang**	**13.39**	**219**	P		**Pn**	**16 20 51.3**	**+1.7**
TGY	**Tagaytay City**	**13.55**	**337**	Pn		**Pn**	**16 20 52.5**	**+0.6**
	28nm,0.3s,baz=251,slow=3.1,SNR=12							
TGY				LR		LR	16 26 27.8	
	comp=Z,820µm,21.4s,baz=156,slow=39							
TGY				ScP		**ScP**	**16 29 46.5**	**+1.1**
	86nm,0.5s,baz=124,slow=3.4,SNR=3.0							
	347nm,0.6s							
TWSI	**Taliwang, Sumb**	**13.91**	**222**	P		**Pn**	**16 20 57.8**	**+1.1**
SBUM	**Sibu**	**14.13**	**274**	⇓P		**Pn**	**16 21 01.3**	**+1.6**
GENI	**Genyem**	**14.44**	**107**	P		**Pn**	**16 21 05.1**	**+1.3**
	6µm,2.0s							
GENI	**Genyem**	**14.44**	**107**	⇑P		**Pn**	**16 21 05.1**	**+1.3**
DRS	**Darwin Rock St**	**14.63**	**162**	P		**Pn**	**16 21 06.2**	**0.0**
SRBI	**Singaraja**	**14.65**	**229**	P		**Pn**	**16 21 08.9**	**+2.3**
	788µm147µm7µm,1.2s							
JAY	**Jayapura**	**14.93**	**106**	Pn		**Pn**	**16 21 09.1**	**-1.2**
	1.7nm,0.3s,baz=259,slow=9.1,SNR=78							
JAY				Sn		**Sn**	**16 23 53.2**	**-1.5**
	baz=342,slow=17							
JAY				LR		LR	16 26 35.4	
	comp=Z,779µm,20.3s,baz=294,slow=36							
JAY				ScS		**ScS**	**16 33 26.7**	**+0.5**
	23nm,1.0s,baz=107,slow=23,SNR=3.8							
JAY				P3KPbc			16 56 34.8	
	4.9nm,0.8s,baz=207,slow=8.0,SNR=3.6							
JAY	**Jayapura**	**14.93**	**106**	P		**Pn**	**16 21 10.5**	**+0.2**
KMMI	**Kalianget**	**15.01**	**235**	P		**P**	**16 21 14.2**	**-1.6**
	868µm130µm11µm,1.2s							
DNP	**Denpasar**	**15.04**	**227**	P		**P**	**16 21 14.9**	**-1.3**
MTN	**Manton Dam**	**15.09**	**162**			**Pn**	**16 21 08.1**	**-4.2**
ABJI	**Asem Bagus**	**15.23**	**232**	P		**P**	**16 21 16.4**	**-1.9**
	843µm124µm7µm,1.2s							
JAGI	**Jajag, Banyuwa**	**15.71**	**230**	Pn		**Pn**	**16 21 21.9**	**+1.5**
JAGI	**Jajag, Banyuwa**	**15.71**	**230**	P		**P**	**16 21 22.3**	**-1.3**
	690µm135µm8µm,1.0s							
JAGI	**Jajag, Banyuwa**	**15.71**	**230**	⇑P		**P**	**16 21 22.4**	**-1.2**
BLJI	**Banyuglugur**	**15.71**	**234**	P		**P**	**16 21 22.1**	**-1.5**
GRJI	**Gresik**	**16.18**	**238**	P		**P**	**16 21 27.8**	**-1.1**
	768µm100µm5µm,0.8s							
TBJI	**Tambak Boyo**	**16.68**	**240**	P		**P**	**16 21 34.1**	**-0.2**
	731µm137µm4µm,1.0s							
MMPI	**Merauke**	**17.19**	**126**	P		**Pn**	**16 21 38.8**	**-0.2**
	192µm10µm,1.7s							
NGJI	**Ngawi**	**17.28**	**239**	P		**P**	**16 21 42.3**	**+1.3**
	758µm154µm4µm,1.0s							
KNRA	**Kununurra**	**17.30**	**172**	Pn		**Pn**	**16 21 38.7**	**-1.6**
PCJI	**Pacitan**	**17.95**	**237**	P		**P**	**16 21 49.2**	**+0.8**
	497µm158µm7µm,0.8s							
SMRI	**Semarang**	**18.02**	**241**			**Pn**	**16 21 49.3**	**+0.1**
SMRI	**Semarang**	**18.02**	**241**	P		**Pn**	**16 21 49.8**	**+0.6**
	604µm114µm3µm,1.4s							
SMRI	**Semarang**	**18.02**	**241**	⇑P		**Pn**	**16 21 49.7**	**+0.5**
UGM	**Wanagama**	**18.36**	**239**			**Pn**	**16 21 52.8**	**-0.1**
UGM	**Wanagama**	**18.36**	**239**	P		**Pn**	**16 21 53.6**	**+0.2**
	348µm71µm3µm,1.0s							
YOGI	**Yogyakarta**	**18.51**	**240**	P		**Pn**	**16 21 55.3**	**+0.1**
TPI	**Tanjungpandan**	**19.16**	**257**	P		**P**	**16 22 02.2**	**+0.5**
	610µm104µm2µm,0.9s							
KPJI	**Karang Pucung**	**19.48**	**243**	P		**P**	**16 22 05.4**	**+0.2**
	600µm97µm5µm,1.1s							
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P		**P**	**16 22 05.1**	**-0.9**
	50nm,0.3s,baz=15,slow=8.9,SNR=396							
FITZ				S		**S**	**16 25 35.7**	**-8.5**
	139nm,0.8s,baz=259,slow=20,SNR=1.1							
FITZ				P3KPbc			16 56 20.0	
	2.9nm,1.0s,baz=183,slow=3.2,SNR=2.0							
	356nm,0.6s							
FITZ	**Fitzroy Crossi**	**19.55**	**182**			**P**	**16 22 04.5**	**-1.4**
FITZ	**Fitzroy Crossi**	**19.55**	**182**	⇑P		**P**	**16 22 05.0**	**-0.9**
DLV	**Lat**	**20.48**	**301**	P		**P**	**16 22 17.0**	**+0.7**
DLV				IAmb	IAmb	IAmb	16 22 26.8	
	comp=Z,14µm,1.7s							
DLV	**Lat**	**20.48**	**301**	⇓P		Pn	16 22 17.7	-1.1
PPBI	**Pangkal Pinang**	**20.52**	**260**	P		**P**	**16 22 17.2**	**+0.6**
CNJI	**Cibinong**	**21.09**	**245**	P		**P**	**16 22 22.0**	**-0.6**
	comp=Z,1µm,0.9s							
TNG	**Tangerang**	**21.10**	**248**	P		**P**	**16 22 23.2**	**+0.4**
	comp=Z,492µmcomp=Z,68µmcomp=Z,3µm,0.5s							
DBJI	**Dramaga**	**21.14**	**247**	P		**P**	**16 22 22.0**	**-1.3**
	comp=Z,508µmcomp=Z,80µmcomp=Z,2µm,0.8s							
MANU	**Manus Island**	**21.34**	**100**	P		**P**	**16 22 24.2**	**-1.1**
MANU	**Manus Island**	**21.34**	**100**	⇑P		**P**	**16 22 24.4**	**-1.0**
SKJI	**Sukabumi**	**21.49**	**246**	P		**P**	**16 22 26.4**	**-0.6**
	comp=Z,473µmcomp=Z,104µmcomp=Z,4µm,0.7s							
SBJI	**Serang**	**21.56**	**249**	P		**P**	**16 22 27.6**	**-0.1**
	comp=Z,495µmcomp=Z,65µmcomp=Z,3µm,1.9s							
TWG	**Pinlang**	**21.74**	**347**	P		**P**	**16 22 25.1**	**-4.5**
TWG				IAMs_20	IAMs_20	IAMs_20	16 31 21.6	
	comp=Z,717µm,22.0s							
TPRI	**Tanjung Pinang**	**21.81**	**269**	P		**P**	**16 22 30.7**	**+0.3**
	comp=Z,653µmcomp=Z,97µmcomp=Z,3µm,1.2s							
DSRI	**Dabo**	**21.84**	**265**	P		**P**	**16 22 31.6**	**+0.8**
	comp=Z,614µmcomp=Z,89µmcomp=Z,2µm,1.6s							
GUMO	**Guam**	**21.89**	**56**	P		**P**	**16 22 29.7**	**-1.6**
	comp=Z,2µm,1.1s,baz=25,slow=4.1,SNR=22							
GUMO				S		**S**	**16 26 27.9**	**-2.7**
	comp=Z,113nm,1.0s,baz=237,slow=16,SNR=1.0							
GUMO				LR		LR	16 30 37.3	
	comp=Z,69µm,19.3s,baz=230,slow=36							
GUMO				ScS		**ScS**	**16 33 46.4**	**-1.3**
	comp=Z,21nm,0.7s,baz=110,slow=16,SNR=1.8							
GUMO				P3KPbc			16 56 13.9	
	comp=Z,116nm,1.1s,baz=127,slow=4.6,SNR=5.4							
	comp=Z,2µm,1.1s							
GUMO	**Guam**	**21.89**	**56**	P		**P**	**16 22 31.4**	**+0.2**
GUMO	**Guam**	**21.89**	**56**	P		**P**	**16 22 28.1**	**-3.1**
GUMO				S		**S**	**16 26 27.9**	**-2.7**
GUMO							16 33 46.4	
GUMO				pmax	pmax			
	comp=Z,15µm,1.9s							
GUMO				MLR	MLR			
	comp=Z,137µm,20.0s							
GUMO	**Guam**	**21.89**	**56**	⇑P		**P**	**16 22 28.8**	**-2.4**
PMBI	**Palembang**	**22.01**	**258**	P		**P**	**16 22 33.1**	**+0.6**
PMBI				IAmb	IAmb	IAmb	16 22 47.3	
	comp=Z,6µm,1.1s							
PMBI				IAMs_20	IAMs_20	IAMs_20	16 31 58.1	
	comp=Z,567µm,21.0s							
PMBI	**Palembang**	**22.01**	**258**	P		**P**	**16 22 33.4**	**+0.9**
	comp=Z,631µmcomp=Z,101µmcomp=Z,5µm,1.1s							
PMBI	**Palembang**	**22.01**	**258**	⇑P		**P**	**16 22 33.7**	**+1.2**
BLSI	**Bandar Lampung**	**22.16**	**252**	P		**P**	**16 22 34.2**	**+0.1**
	comp=Z,455µmcomp=Z,2µm,0.7s							
YULB	**Yu-li**	**22.24**	**348**	P		**P**	**16 22 30.4**	**-4.5**
YULB				IAMs_20	IAMs_20	IAMs_20	16 32 13.0	
	comp=Z,607µm,21.0s							
TPUB	**Ta-pu**	**22.30**	**346**	P		**P**	**16 22 32.3**	**-3.3**
TPUB				IAmb	IAmb	IAmb	16 22 44.6	
	comp=Z,5µm,0.9s							
KLI	**Kotabumi**	**22.38**	**253**	P		**P**	**16 22 36.4**	**-0.2**
	comp=Z,552µmcomp=Z,50µmcomp=Z,4µm,0.8s							
WB0	**Warramunga Arr**	**22.63**	**160**	P		**P**	**16 22 37.3**	**-1.8**
WB0				IAmb	IAmb	IAmb	16 22 48.6	
	comp=Z,7µm,1.1s							
SSLB	**Suanglung**	**22.70**	**347**	P		**P**	**16 22 36.4**	**-3.4**
COEN	**Coen**	**22.73**	**133**	P		**P**	**16 22 37.0**	**-3.2**
COEN	**Coen**	**22.73**	**133**	⇑P		**P**	**16 22 36.2**	**-4.0**
WRAB	**Tennant Creek**	**22.77**	**160**	P		**P**	**16 22 39.0**	**-1.6**
WRAB				IAmb	IAmb	IAmb	16 22 48.3	
	comp=Z,5µm,1.1s							
WRAB	**Tennant Creek**	**22.77**	**160**	*c* iP		**P**	**16 22 39.3**	**-1.3**
WRAB				pmax	pmax			
	comp=Z,6µm,1.0s							
WRAB				MLR	MLR			
	comp=Z,348µm,22.0s							
WRA	**Warramunga Arr**	**22.77**	**160**	P		**P**	**16 22 39.6**	**-1.0**
	comp=Z,1µm,0.5s,baz=342,slow=11,SNR=719							
WRA				PcP		**PcP**	**16 26 31.1**	**-0.1**
	comp=Z,93nm,0.7s,baz=335,slow=2.2,SNR=3.0							
WRA				S		**S**	**16 26 42.0**	**-4.3**
	comp=Z,527nm,1.0s,baz=343,slow=19,SNR=6.8							
WRA				ScP		**ScP**	**16 30 05.8**	**+0.7**
	comp=Z,23nm,0.7s,baz=333,slow=3.4,SNR=1.7							
WRA				ScS		**ScS**	**16 33 51.7**	**+0.8**
	comp=Z,30nm,1.2s,baz=310,slow=4.0,SNR=2.8							
WRA				PKiKP		**PKiKP**	**16 34 15.5**	**-0.8**
	comp=Z,13nm,0.9s,baz=342,slow=0.9,SNR=2.5							
WRA				P3KPbc			16 56 10.8	
	comp=Z,0.8nm,0.5s,baz=156,slow=3.3,SNR=5.2							
WRA				PKP2ab		**P'P'ab**	**17 00 10.5**	**+0.2**
	comp=Z,20nm,1.3s,baz=160,slow=4.1,SNR=9.1							
	comp=Z,1µm,0.5s							
WRA	**Warramunga Arr**	**22.77**	**160**	P		**P**	**16 22 39.0**	**-1.7**
WR8	**Warramunga Arr**	**22.84**	**160**	IAmb		IAmb	16 23 06.1	
	comp=Z,4µm,1.0s							
MDSI	**Maura Dua**	**22.93**	**255**	P		**P**	**16 22 41.2**	**-1.2**
	comp=Z,572µmcomp=Z,52µmcomp=Z,2µm,0.7s							
NACB	**Ninganchiao**	**22.94**	**349**	P		**P**	**16 22 39.2**	**-3.1**
NACB	**Ninganchiao**	**22.94**	**349**	P		**P**	**16 22 39.4**	**-2.9**
YOJ	**Yonaguni jima**	**22.99**	**352**	P		**P**	**16 22 40.2**	**-2.5**
YOJ				IAmb	IAmb	IAmb	16 22 57.4	
	comp=Z,8µm,1.4s							
YOJ	**Yonaguni jima**	**22.99**	**352**	⇓P		**P**	**16 22 41.9**	**-0.9**
YOJ	**Yonaguni jima**	**22.99**	**352**	P		**P**	**16 22 44.2**	**+1.5**
LWLI	**Liwa**	**23.19**	**253**	P		**P**	**16 22 43.0**	**-2.0**
LHSI	**Lahat**	**23.41**	**257**	P		**P**	**16 22 46.6**	**-0.5**
	comp=Z,494µmcomp=Z,96µmcomp=Z,3µm,1.0s							
PMG	**Port Moresby**	**23.44**	**118**	LR		LR	16 34 28.4	
	comp=Z,439µm,19.0s,baz=340,slow=43							
PMG	**Port Moresby**	**23.44**	**118**	P		**P**	**16 22 44.8**	**-2.5**
PMG				IAmb	IAmb	IAmb	16 22 56.1	
	comp=Z,5µm,1.6s							
PMG	**Port Moresby**	**23.44**	**118**	*c* iP		**P**	**16 22 44.8**	**-2.5**
PMG				pmax	pmax			
	comp=Z,4µm,1.7s							
PMG				MLR	MLR			
	comp=Z,384µm,18.0s							
PMG	**Port Moresby**	**23.44**	**118**	⇑P		**P**	**16 22 45.2**	**-2.1**
YHNB	**Yeheng**	**23.46**	**349**	P		**P**	**16 22 44.5**	**-3.0**
YHNB	**Yeheng**	**23.46**	**349**	P		**P**	**16 22 45.6**	**-1.9**
MBWA	**Marble Bar**	**23.49**	**196**	P		**P**	**16 22 45.8**	**-1.9**
MBWA	**Marble Bar**	**23.49**	**196**	P		**P**	**16 22 47.2**	**-0.5**
MBWA				P		**P**	**16 22 47.

comp=Z,3µm,1.2s
IPM Ipoh 25.43 277 ⇓P **P 16 23 05.8 +0.2**
QIS Mount Isa 25.55 150 P **P 16 23 07.2 +0.6**
KULM Kulim 25.89 279 P **P 16 23 09.7 -0.1**
KULM IAmb IAmb 16 23 18.9
comp=Z,5µm,1.6s
KULM Kulim 25.89 279 ⇓P **P 16 23 09.4 -0.4**
PDSI Padang 25.98 265 P **P 16 23 10.1 -0.5**
PPI Padang Panjang 26.01 266 P **P 16 23 10.0 -0.8**
ASAR Alice Springs 26.14 164 P **P 16 23 11.4 -0.5**
comp=Z,439nm,0.5s,baz=344,slow=7.2,SNR=3132
ASAR PcP **PcP 16 26 38.5 0.0**
comp=Z,205nm,0.7s,baz=341,slow=2.0,SNR=5.5
ASAR S **S 16 27 40.6 +0.3**
comp=Z,168nm,0.8s,baz=350,slow=20,SNR=4.5
ASAR ScP **ScP 16 30 15.5 +1.1**
comp=Z,14nm,0.7s,baz=340,slow=3.2,SNR=1.3
ASAR ScS **ScS 16 34 02.3 -2.1**
comp=Z,11nm,1.1s,baz=338,slow=1.6,SNR=1.9
ASAR PKiKP **PKiKP 16 34 18.0 0.0**
comp=Z,8.8nm,0.8s,baz=342,slow=2.0,SNR=2.6
ASAR P3KPbc 16 55 53.1
comp=Z,16nm,0.8s,baz=150,slow=4.5,SNR=13
ASAR P3KP 16 57 00.7
comp=Z,9.4nm,1.0s,baz=153,slow=1.8,SNR=4.5
ASAR PKP2ab **P'P'ab 16 59 57.5 +2.2**
comp=Z,5.5nm,1.0s,baz=154,slow=3.9,SNR=6.1
comp=Z,439nm,0.5s
ASAR Alice Springs 26.14 164 P **P 16 23 10.7 -1.2**
MTSU Mount Surprise 26.40 139 P **P 16 23 14.6 +0.3**
RABL Rabaul 26.44 103 P **P 16 23 13.6 -1.2**
RABL Rabaul 26.44 103 ⇑P **P 16 23 13.8 -1.0**
PPSI Pulau Pagai 26.66 261 P **P 16 23 16.5 -0.2**
comp=Z,317µmcomp=Z,73µmcomp=Z,5µm,2.0s
MNSI Mandailing Nat 26.75 269 P **P 16 23 16.0 -1.6**
comp=Z,44µmcomp=Z,2µm,0.9s
GIRL Giralia 26.80 205 P **P 16 23 18.9 +1.1**
JAM Amami Oshima 26.88 6 P **P 16 23 19.4 +1.0**
SISI Saibi 27.39 264 P **P 16 23 21.7 -1.6**
comp=Z,315µmcomp=Z,46µmcomp=Z,2µm,0.8s
RPSI Rantau Prapat 27.41 273 P **P 16 23 23.0 -0.4**
PSI Prapat 27.41 273 P **P 16 23 24.0 +0.4**
PSI Prapat 27.41 273 P **P 16 23 23.0 -0.6**
PSI pmax pmax
comp=Z,2µm,1.1s
PBSI Pulau Batu 28.09 267 P **P 16 23 28.6 -0.9**
comp=Z,352µmcomp=Z,34µmcomp=Z,749nm,1.1s
GULI GuiLin 28.17 328 P **P 16 23 26.0 -4.1**
GULI S **S 16 28 15.6 +3.3**
GULI pmax pmax
comp=Z,500nm,1.9s
GULI LR LR
comp=N,257µm,21.1s
GULI LR LR
comp=E,146µm,19.5s
GULI LR LR
comp=Z,467µm,22.8s
KCSI Kotacane, Aceh 28.59 274 P **P 16 23 33.1 -1.0**
comp=Z,226µmcomp=Z,589nm,1.0s
GSI Gunungsitoli 28.75 270 P **P 16 23 33.8 -1.6**
GSI IAmb IAmb 16 23 40.2
comp=Z,3µm,1.1s
GSI Gunungsitoli 28.75 270 P **P 16 23 35.3 -0.1**
GSI Gunungsitoli 28.75 270 P **P 16 23 33.9 -1.5**
comp=Z,359µmcomp=Z,40µmcomp=Z,3µm,1.1s
GSI Gunungsitoli 28.75 270 ⇑P **P 16 23 34.0 -1.4**
TV1H Townsville Har 28.85 137 P **P 16 23 37.3 +1.1**
MEEK Meekatharra 29.01 194 P **P 16 23 38.2 +0.6**
CTA Charters Tower 29.07 139 LR LR 16 36 53.4
comp=Z,4µm,20.0s,baz=313,slow=40
CTAO Charters Tower 29.07 139 P **P 16 23 37.4 -0.8**
CTAO Charters Tower 29.07 139 P **P 16 23 38.5 +0.4**
CTAO Charters Tower 29.07 139 ⇑P **P 16 23 38.5 +0.4**
SLVN Son La 29.39 314 P **P 16 23 40.6 -0.5**
SLVN IAmb IAmb 16 23 48.2
comp=Z,4µm,2.0s
SLVN IAMs_20 IAMs_20 16 34 42.8
comp=Z,313µm,21.0s
SLVN Son La 29.39 314 P **P 16 23 42.0 +0.9**
CNSH ChangSha 29.41 335 P **P 16 23 41.8 +0.8**
CNSH S **S 16 28 37.3 +5.6**
CNSH LR LR
comp=Z,96µm,18.6s
CNSH LR LR
comp=Z,125µm,20.2s
CNSH LR LR
comp=Z,423µm,20.5s
LHMI Lhok Sumawe 29.55 278 P **P 16 23 42.4 -0.1**
LHMI IAmb IAmb 16 24 48.5
comp=Z,6µm,1.9s
LHMI Lhok Sumawe 29.55 278 P **P 16 23 43.1 +0.6**
LHMI Lhok Sumawe 29.55 278 P **P 16 23 41.7 -0.8**
comp=Z,387µmcomp=Z,36µmcomp=Z,1µm,1.2s
LHMI Lhok Sumawe 29.55 278 ⇑P **P 16 23 43.0 +0.5**
CBIJ Chichi jima 29.60 30 P **P 16 23 41.1 -1.6**
JCJ Chichijima 29.60 30 P P 16 23 34.1 -8.6
comp=Z,868nm,0.5s,baz=222,slow=6.1,SNR=49
JCJ S S 16 28 20.1 -15
comp=Z,81nm,0.9s,baz=350,slow=9.8,SNR=1.2
JCJ ScP **ScP 16 30 18.3 -6.6**
comp=Z,242nm,1.2s,baz=273,slow=14,SNR=2.7
JCJ LR LR 16 33 55.0
comp=Z,145µm,20.5s,baz=212,slow=33
JCJ Chichijima 29.60 30 **P 16 23 41.2 -1.5**
JCJ IAmb IAmb 16 24 09.1
comp=Z,3µm,0.9s
JCJ Chichijima 29.60 30 P **P 16 23 43.7 +1.0**
JCJ Chichijima 29.60 30 ⇑P **P 16 23 41.4 -1.3**
SSE Sheshan 29.77 351 P **P 16 23 45.3 +1.1**
SSE S **S 16 28 37.6 +0.3**
SSE pmax pmax
comp=Z,4µm,3.6s
SNSI Sinabang, Aceh 30.00 272 P **P 16 23 45.2 -1.3**
comp=Z,298µmcomp=Z,27µmcomp=Z,1µm,1.0s
MLSI Meulaboh, Aceh 30.00 276 P **P 16 23 45.8 -0.7**
comp=Z,315µmcomp=Z,27µmcomp=Z,1µm,1.2s
JSU Suzuyama 30.04 7 P **P 16 23 46.9 +0.3**
WHN Wuhan 30.98 340 ⇓P **P 16 23 56.3 +1.4**
WHN PcP **PcP 16 26 53.5 +3.2**
WHN S **S 16 28 57.4 +1.1**
WHN PcS **PcS 16 30 37.6 +3.2**
WHN ScS **ScS 16 34 29.8 +3.5**
WHN pmax pmax
comp=Z,2µm,1.0s
WHN LR LR
comp=Z,659µm,19.1s
WHN LR LR
comp=Z,693µm,21.6s
WHN LR LR
comp=Z,1498µm,23.4s
JFU Fukue jima 2 31.01 4 P **P 16 23 55.9 +0.7**
NJ2 Nanjing 31.13 348 ⇑*i*P **P 16 23 57.3 +1.1**
NJ2 pP **pwP 16 24 11.3 +0.7**
NJ2 PcP **PcP 16 26 54.6 +3.9**
NJ2 S **S 16 28 58.6 -0.1**
NJ2 pmax pmax
comp=Z,180nm,0.9s
NJ2 pmax pmax
comp=Z,22µm,7.1s
NJ2 LR LR
comp=Z,103µm,22.7s
NJ2 LR LR
comp=Z,168µm,20.8s
NJ2 LR LR
comp=Z,172µm,22.7s
GYA Guiyang 31.14 324 ⇑P **P 16 23 57.4 +0.8**
GYA S **S 16 28 59.4 +0.1**
GYA pmax pmax
comp=Z,240nm,1.0s
GYA pmax pmax
comp=Z,6µm,3.1s
GYA LR LR
comp=Z,260µm,20.9s
GYA LR LR
comp=Z,127µm,19.9s
GYA LR LR
comp=Z,353µm,20.8s
CMAR Chiang Mai Arr 31.67 304 P **P 16 24 01.3 +0.1**
comp=Z,99nm,0.8s,baz=128,slow=7.9,SNR=100
CMAR PcP **PcP 16 26 52.6 +0.2**
comp=Z,185nm,0.9s,baz=138,slow=0.8,SNR=11
CMAR S **S 16 29 05.8 -1.7**
comp=Z,8.1nm,0.8s,baz=105,slow=1.9,SNR=1.2
CMAR ScP **ScP 16 30 33.4 +1.5**
comp=Z,18nm,1.0s,baz=115,slow=4.0,SNR=1.9
CMAR PKiKP **PKiKP 16 34 21.4 -0.3**
comp=Z,10nm,0.7s,baz=232,slow=1.0,SNR=11
CMAR P3KPbc 16 55 32.5
comp=Z,3.8nm,1.0s,baz=291,slow=5.1,SNR=9.8
CMAR P3KP 16 56 50.1
comp=Z,2.1nm,1.0s,baz=324,slow=3.1,SNR=1.3
CMAR PKP2ab **P'P'ab 16 59 32.8 -1.1**
comp=Z,2.3nm,1.1s,baz=323,slow=3.1,SNR=1.9
comp=Z,99nm,0.8s
CMAR Chiang Mai Arr 31.67 304 P **P 16 24 00.4 -0.8**
CMAR Chiang Mai Arr 31.67 304 P **P 16 24 00.4 -0.8**
CMAR 16 26 52.7
CMAR S **S 16 29 05.8 -1.7**
JNU Nakatsue 31.68 7 P **P 16 24 01.1 0.0**
comp=Z,2µm,1.0s,baz=177,slow=3.6,SNR=56
JNU PcP **PcP 16 26 52.8 +0.6**
comp=Z,150nm,0.8s,baz=214,slow=3.1,SNR=2.6
JNU S **S 16 29 04.6 -2.7**
comp=Z,34nm,1.0s,baz=74,slow=15,SNR=1.6
JNU ScP **ScP 16 30 33.1 +1.4**
comp=Z,49nm,1.1s,baz=207,slow=2.3,SNR=3.2
JNU ScS **ScS 16 34 31.8 +2.0**
comp=Z,6.5nm,0.9s,baz=198,slow=12,SNR=1.0
JNU LR LR 16 35 34.2
comp=Z,123µm,22.0s,baz=184,slow=34
comp=Z,2µm,1.0s
JNU Nakatsue 31.68 7 P **P 16 24 00.1 -1.1**
JNU IAmb IAmb 16 24 05.8
comp=Z,3µm,1.1s
JNU Nakatsue 31.68 7 P **P 16 24 01.9 +0.8**
JNU Nakatsue 31.68 7 ⇑P **P 16 24 01.4 +0.2**
JNU Nakatsue 31.68 7 P **P 16 24 01.3 +0.2**
CHTO Chiang Mai 31.85 304 P **P 16 24 01.8 -0.9**
CHTO IAmb IAmb 16 24 10.9
comp=Z,2µm,1.5s
CHTO IAMs_20 IAMs_20 16 36 39.1
comp=Z,255µm,22.0s
CHTO Chiang Mai 31.85 304 P **P 16 24 03.1 +0.4**
CHTO P **P 16 24 03.1 +0.4**
CHTO S **S 16 29 06.7 -3.5**
CHTO S **S 16 29 06.7 -3.5**
CHTO Chiang Mai 31.85 304 P **P 16 24 02.6 -0.1**
comp=Z,499nm,2.5s
CHTO Chiang Mai 31.85 304 ⇓P **P 16 24 02.6 -0.1**
CHTO Chiang Mai 31.85 304 P **P 16 24 02.4 -0.3**
CHTO S **S 16 29 14.8 +4.6**
CHTO Chiang Mai 31.85 304 P **P 16 24 02.7 -0.1**
CHTO PcP **PcP 16 26 55.3 +2.4**
MORW Morawa 32.01 197 P **P 16 24 03.5 -0.6**
MORW Morawa 32.01 197 P **P 16 24 04.2 +0.2**
MORW Morawa 32.01 197 ⇑P **P 16 24 04.3 +0.3**
FORT Forrest 32.21 177 P **P 16 24 04.7 -1.0**
FORT IAmb IAmb 16 24 18.7
comp=Z,1µm,0.7s
INKA Innaminka 32.27 156 P **P 16 24 05.6 -0.7**
COCO West Island 32.32 244 P **P 16 24 04.9 -2.0**
COCO IAmb IAmb 16 24 11.4
comp=Z,5µm,1.9s
COCO IAMs_20 IAMs_20 16 38 36.6
comp=Z,246µm,21.0s
COCO West Island 32.32 244 P **P 16 24 05.9 -1.0**
COCO West Island 32.32 244 P **P 16 24 06.2 -0.7**
COCO West Island 32.32 244 ⇑P **P 16 24 05.5 -1.4**
KMI Kunming 32.66 318 ⇓P **P 16 24 10.6 +0.5**
KMI PP **PP 16 25 26.5 +1.9**
KMI PcP **PcP 16 26 57.9 +2.6**
KMI S **S 16 29 16.8 -6.4**
KMI ScP **ScP 16 30 37.3 +1.9**
KMI pmax pmax
comp=Z,890nm,2.0s
KMI pmax pmax
comp=Z,15µm,5.6s
KMI LR LR
comp=Z,262µm,22.8s
KMI LR LR
comp=Z,344µm,22.6s
KMI LR LR
comp=Z,624µm,22.8s
KMI Kunming 32.66 318 P **P 16 24 11.4 +1.4**
KMI PcP **PcP 16 26 57.4 +2.1**
ENH Enshi 32.72 332 IAmb IAmb 16 24 19.7
comp=Z,2µm,0.9s
ENH IAMs_20 IAMs_20 16 38 36.7
comp=Z,379µm,21.0s
ENH Enshi 32.72 332 P **P 16 24 10.5 +0.2**
ENH Enshi 32.72 332 P **P 16 24 10.5 +0.2**
CMBY CAMPBELL BAY 32.75 280 *e*P **P 16 24 09.5 -1.2**
CMBY IAmb IAmb 16 24 17.2
comp=Z,650nm,1.0s
CMBY IAMs_20 IAMs_20 16 39 41.1
comp=Z,235µm,22.4s
JMN Monobe 32.77 12 IAmb IAmb 16 24 16.2
comp=Z,4µm,1.3s
JMN Monobe 32.77 12 P **P 16 24 11.1 +0.4**
JMN Monobe 32.77 12 ⇑P **P 16 24 11.5 +0.8**
JMN Monobe 32.77 12 P **P 16 24 11.8 +1.1**
QLP Quilpie 32.89 150 P **P 16 24 10.5 -1.2**
JTU Tsushima 32.92 5 P **P 16 24 13.3 +1.4**
comp=Z,2µm,1.4s
JTU Tsushima 32.92 5 ⇑P **P 16 24 12.6 +0.7**
JTU Tsushima 32.92 5 P **P 16 24 12.7 +0.8**
BLDU Ballidu 33.29 195 P **P 16 24 14.7 -0.5**
comp=Z,2µm,1.1s
JHJ Hachijo jima 2 33.84 21 P **P 16 24 20.0 +0.1**
comp=Z,1µm,1.1s,baz=197,slow=10,SNR=12
JHJ PP **PP 16 25 34.1 -3.2**
comp=Z,398nm,0.9s,baz=183,slow=5.6,SNR=3.6
JHJ PcP **PcP 16 26 57.9 -0.2**
comp=Z,541nm,0.7s,baz=186,slow=6.5,SNR=5.0
JHJ S **S 16 29 40.5 -0.3**
comp=Z,86nm,0.7s,baz=38,slow=16,SNR=1.6
JHJ LR LR 16 36 57.9
comp=Z,107µm,21.5s,baz=206,slow=34
comp=Z,1µm,1.1s
JHJ2 Mitsune 33.84 21 IAmb IAmb 16 24 24.1
comp=Z,3µm,1.2s
JHJ2 Mitsune 33.84 21 P **P 16 24 22.0 +2.0**
comp=Z,2µm,1.5s
JHJ2 Mitsune 33.84 21 ⇑P **P 16 24 19.2 -0.7**
JHJ2 Mitsune 33.84 21 P **P 16 24 20.3 +0.3**
JHS Saijyo 33.86 10 P **P 16 24 18.6 -1.5**
KLBR Kellerberrin 33.96 193 P **P 16 24 20.9 -0.2**
comp=Z,4µm,0.7s
JAD Aida 34.00 12 P **P 16 24 20.9 -0.4**
JIE Ise 34.07 15 P **P 16 24 22.9 +1.0**
PZH PanZhiHua 34.25 319 P **P 16 24 23.5 -0.3**
PZH S **S 16 29 45.5 -2.1**
PZH sS **sS 16 30 09.8 +1.4**
PZH PcS **PcS 16 30 47.5 +1.3**
PZH pmax pmax
comp=Z,1µm,0.9s
PZH pmax pmax
comp=Z,17µm,8.6s
PZH LR LR
comp=Z,238µm,23.9s
PZH LR LR
comp=Z,243µm,24.1s
PZH LR LR
comp=Z,484µm,22.8s
JWT Wachi 34.59 13 P **P 16 24 27.3 +0.8**
TJN Taejon 34.65 1 P **P 16 24 26.8 -0.1**
TJN Taejon 34.65 1 P **P 16 24 29.9 +3.0**
comp=Z,4µm,1.6s
TJN Taejon 34.65 1*c i*P **P 16 24 27.7 +0.8**
TJN pmax pmax
comp=Z,72nm,1.5s
TJN MLR MLR
comp=Z,10µm,21.0s
MUN Mundaring 34.71 195 P **P 16 24 27.5 0.0**
comp=Z,975nm,1.2s
JSG Sagara 34.75 17 P **P 16 24 31.1 +3.3**
comp=Z,8µm,1.6s
JSG Sagara 34.75 17 ⇑P **P 16 24 28.9 +1.1**
JSG Sagara 34.75 17 P **P 16 24 28.6 +0.8**
PBA Port Blair 34.79 288 P **P 16 24 27.4 -1.0**
PBA Port Blair 34.79 288 P **P 16 24 28.7 +0.2**
SNR=22
PBA Port Blair 34.79 288 *e*P **P 16 24 29.9 +1.4**
PBA IAmb IAmb 16 24 42.8
comp=Z,978nm,1.2s
PBA IAMs_20 IAMs_20 16 38 33.6
comp=Z,342µm,22.4s
DGPR DIGLIPUR 35.01 291 *e*P **P 16 24 28.8 -1.5**
DGPR IAMs_20 IAMs_20 16 37 49.8
comp=Z,179µm,21.9s
DGPR IAMs_20 IAMs_20 16 38 13.1
comp=Z,212µm,23.3s
SAVO Savo Central 35.02 108 P **P 16 24 30.4 -0.1**
comp=Z,632nm,1.2s
INU Inuyama 35.05 15 P **P 16 24 28.3 -2.1**
INU IAMs_20 IAMs_20 16 37 32.8
comp=Z,218µm,22.0s
INU Inuyama 35.05 15 P **P 16 24 31.1 +0.7**
comp=Z,3µm,1.8s
INU Inuyama 35.05 15 ⇑P **P 16 24 30.9 +0.5**
INU Inuyama 35.05 15 ⇑P **P 16 24 31.2 +0.7**
HNR Honiara 35.22 109 P **P 16 24 30.6 -1.6**
comp=Z,657nm,0.7s,baz=220,slow=2.1,SNR=43
HNR LR LR 16 38 24.4
comp=Z,174µm,21.9s,baz=278,slow=35
comp=Z,657nm,0.7s
HNR Honiara 35.22 109 P **P 16 24 29.4 -2.8**
HNR IAmb IAmb 16 24 57.0
comp=Z,1µm,0.9s
HNR Honiara 35.22 109 P **P 16 24 32.0 -0.2**
comp=Z,1µm,1.1s
HNR Honiara 35.22 109 ⇑P **P 16 24 30.3 -1.9**
HNR Honiara 35.22 109 P **P 16 24 31.6 -0.6**
LYN LuoYang 35.28 340 P **P 16 24 32.8 +0.4**
LYN PcP **PcP 16 27 03.9 +1.7**
LYN S **S 16 29 59.8 -3.1**
LYN pmax pmax
comp=Z,560nm,1.2s
LYN pmax pmax
comp=Z,24µm,7.6s
LYN LR LR
comp=Z,191µm,20.3s
LYN LR LR
comp=Z,205µm,23.0s
LYN LR LR
comp=Z,542µm,26.4s
NWAO Narrogin (SRO) 35.37 193 LR LR 16 41 44.4
comp=Z,63µm,19.9s,baz=20,slow=41
NWAO Narrogin (SRO) 35.37 193 P **P 16 24 32.7 -0.4**
NWAO Narrogin (SRO) 35.37 193 P **P 16 24 33.3 +0.2**
NWAO P **P 16 24 33.3 +0.2**
NWAO S **S 16 29 59.9 -4.4**
NWAO S **S 16 29 59.9 -4.4**
NWAO Narrogin (SRO) 35.37 193 P **P 16 24 33.1 0.0**
comp=Z,748nm,0.9s
NWAO Narrogin (SRO) 35.37 193 P **P 16 24 32.9 -0.2**
comp=Z,748nm,0.9s
NWAO Narrogin (SRO) 35.37 193 P **P 16 24 32.7 -0.4**
NWAO pmax pmax
comp=Z,1µm,1.1s
NWAO MLR MLR
comp=Z,133µm,22.0s
NWAO Narrogin (SRO) 35.37 193 P **P 16 24 33.4 +0.2**
JGF Kuroka 35.38 16 IAmb IAmb 16 24 38.0
comp=Z,4µm,1.5s
JGF Kuroka 35.38 16 P **P 16 24 33.3 0.0**
comp=Z,2µm,1.8s
JGF Kuroka 35.38 16 ⇑P **P 16 24 33.4 +0.1**
JGF Kuroka 35.38 16 P **P 16 24 33.2 0.0**
BBOO Buckleboo 35.41 166 P **P 16 24 32.5 -1.0**
BBOO IAmb IAmb 16 24 44.8
comp=Z,4µm,1.5s
BBOO Buckleboo 35.41 166 P **P 16 24 32.5 -1.0**
comp=Z,1µm,0.7s
TIA Tai'an 35.51 347 P **P 16 24 34.0 -0.4**
TIA PcP **PcP 16 27 07.0 +4.1**
TIA S **S 16 30 00.4 -6.2**
TIA pmax pmax
comp=Z,440nm,0.8s
TIA pmax pmax
comp=Z,26µm,9.0s
TIA LR LR
comp=Z,112µm,23.0s
TIA LR LR
comp=Z,115µm,22.1s
TIA LR LR
comp=Z,217µm,28.9s
TNCH TengChong 35.56 313 ⇓*i*P **P 16 24 35.0 -0.2**
TNCH pP pwP 16 24 49.8 +2.2
TNCH PP **PP 16 26 01.0 +4.4**
TNCH PcP **PcP 16 27 00.0 -3.5**
TNCH sS sS 16 30 36.8 +8.0
TNCH SS **SnSn 16 32 33.0 +1.1**
TNCH pmax pmax
comp=Z,2µm,1.9s
TNCH LR LR
comp=Z,90µm,21.4s
TNCH LR LR
comp=Z,90µm,24.2s
TNCH LR LR
comp=Z,314µm,23.5s
JOD2 Odawara 2 35.57 18 P **P 16 24 33.4 -1.5**
KSAR Wonju Array Be 35.73 2 P **P 16 24 35.2 -1.0**
KSAR Wonju Array Be 35.73 2 P **P 16 24 35.2 -1.0**
INCN Inchon 35.74 0 P **P 16 24 35.6 -0.8**
INCN IAmb IAmb 16 24 41.8
comp=Z,1µm,1.4s
INCN Inchon 35.74 0 P **P 16 24 36.5 +0.1**
INCN P **P 16 24 36.5 +0.1**
INCN Inchon 35.74 0 P **P 16 24 35.6 -0.8**
INCN pmax pmax
comp=Z,1µm,1.4s
INCN MLR MLR
comp=Z,122µm,21.0s
INCN Inchon 35.74 0 ⇑P **P 16 24 37.3 +0.9**
KSRS Korea Array 35.74 2 P **P 16 24 37.5 +1.2**
comp=Z,157nm,0.9s,baz=178,slow=9.5,SNR=83
KSRS PcP **PcP 16 27 04.0 +0.5**
comp=Z,166nm,0.8s,baz=186,slow=2.7,SNR=11
KSRS S **S 16 30 09.7 -0.3**
comp=Z,7.6nm,0.7s,baz=287,slow=5.7,SNR=1.0
KSRS ScP **ScP 16 30 46.3 +0.5**
comp=Z,2.8nm,0.9s,baz=121,slow=30,SNR=3.5
KSRS P3KPbc 16 55 16.5
comp=Z,2.5nm,0.7s,baz=343,slow=5.6,SNR=4.5
comp=Z,157nm,0.9s
KS19 Wonju Array Si 35.79 2 IAmb IAmb 16 24 46.1
comp=Z,4µm,1.9s
EIDS Eidsvold 35.93 140 IAmb IAmb 16 24 42.6
comp=Z,2µm,1.2s
EIDS Eidsvold 35.93 140 P **P 16 24 37.5 -0.6**
comp=Z,2µm,1.4s
EIDS Eidsvold 35.93 140 ⇑P **P 16 24 37.2 -1.0**
JGN Niukaw 35.96 15 P **P 16 24 37.5 -0.7**
WHYH Whyalla 36.01 164 P **P 16 24 38.6 -0.1**
comp=Z,3µm,0.7s
CD2 Chengdu 36.17 326 P **P 16 24 39.8 -0.4**
CD2 pP pP 16 24 50.6 -2.0
CD2 PP **PP 16 26 01.9 -1.3**
CD2 S **S 16 30 13.8 -3.1**
CD2 pmax pmax
comp=Z,2µm,1.1s
CD2 pmax pmax
comp=Z,19µm,9.3s
CD2 LR LR
comp=Z,348µm,22.2s
CD2 LR LR
comp=Z,451µm,22.2s
CD2 LR LR
comp=Z,378µm,22.2s
XAN Xi'an 36.18 335 ⇓P **P 16 24 39.3 -0.9**
XAN S **S 16 30 19.0 +2.1**
XAN SS **SnSn 16 32 42.0 -4.5**
XAN pmax pmax
comp=Z,900nm,1.0s
XAN pmax pmax
comp=Z,24µm,10.0s
XAN LR LR
comp=Z,120µm,21.3s
XAN LR LR
comp=Z,171µm,22.0s
XAN LR LR
comp=Z,298µm,22.0s
XAN Xi'an 36.18 335 P **P 16 24 40.2 0.0**
JRY Ryogami san 36.21 17 P **P 16 24 38.9 -1.4**
PTPS Port Pirie 36.26 163 P **P 16 24 44.3 +3.5**
comp=Z,1µm,0.7s
STKA Stephens Creek 36.27 158 P **P 16 24 40.7 -0.2**
comp=Z,1µm,0.8s,baz=329,slow=9.0,SNR=346
STKA PP **PP 16 26 04.3 +0.1**
comp=Z,232nm,0.7s,baz=330,slow=12,SNR=1.3
STKA S **S 16 30 18.4 +0.1**
comp=Z,81nm,0.9s,baz=99,slow=16,SNR=3.6
STKA P3KPbc 16 55 15.0
comp=Z,3.4nm,0.8s,baz=128,slow=4.5,SNR=4.9
STKA P3KP 16 56 39.5
comp=Z,3.9nm,0.8s,baz=210,slow=3.9,SNR=3.1

comp=Z,1µm,0.8s
STKA Stephens Creek 36.27 158 P P 16 24 39.6 -1.4
STKA Stephens Creek 36.27 158 P P 16 24 40.1 -0.8
comp=Z,311nm,1.1s
HJU Haeju 36.31 359 P P 16 24 42.8 +1.7
HJU S **S** 16 30 23.5 +4.9
HJU AmB
comp=Z,6µm,2.7s
HJU AMS AMS
comp=Z,224µm,22.3s
MJAR Matsushiro Arr 36.50 16 P P 16 24 42.2 -0.7
comp=Z,447nm,1.0s,baz=185,slow=9.4,SNR=125
MJAR PP **PP** 16 26 09.6 +2.9
comp=Z,170nm,1.1s,baz=192,slow=10,SNR=0.9
MJAR PcP **PcP** 16 27 06.7 +0.8
comp=Z,250nm,0.8s,baz=181,slow=3.0,SNR=7.2
MJAR S **S** 16 30 18.6 -3.0
comp=Z,7.6nm,1.0s,baz=175,slow=5.3,SNR=2.2
MJAR ScP **ScP** 16 30 49.2 +0.5
comp=Z,77nm,1.1s,baz=208,slow=4.5,SNR=6.6
MJAR LR LR 16 39 13.6
comp=Z,167µm,21.4s,baz=236,slow=35
MJAR P3KPbc 16 55 14.2
comp=Z,6.1nm,0.9s,baz=7.8,slow=4.2,SNR=9.9
comp=Z,447nm,1.0s
MJAR Matsushiro Arr 36.50 16 P P 16 24 41.2 -1.6
MJAR IAmb IAmb 16 24 48.7
comp=Z,3µm,1.3s
MAJO Matsushiro 36.50 16 P P 16 24 41.3 -1.6
MAJO IAmb IAmb 16 24 48.6
comp=Z,5µm,1.2s
MAJO Matsushiro 36.50 16 P P 16 24 42.2 -0.6
comp=Z,4µm,1.8s
MAJO Matsushiro 36.50 16*c iP* **P 16 24 42.3 -0.6**
MAJO pmax pmax
comp=Z,8µm,2.1s
MAJO MLR MLR
comp=Z,197µm,22.0s
MAJO Matsushiro 36.50 16 ⇑P P 16 24 42.3 -0.6
MAJO Matsushiro 36.50 16 P P 16 24 42.2 -0.6
MAJO S **S** 16 30 19.8 -1.8
MAJO Matsushiro 36.50 16 P P 16 24 42.4 -0.4
MAJO PcP **PcP** 16 27 05.5 -0.4
MAT Matsushiro 36.50 16 P P 16 24 42.3 -0.6
MJB9 Matsu-Tunnel 36.50 16 P P 16 24 42.0 -0.9
MJB9 IAmb IAmb 16 24 49.6
comp=Z,5µm,1.2s
HTT Hallett 36.78 162 P P 16 24 45.3 0.0
comp=Z,990nm,1.1s
HTT Hallett 36.78 162 ⇑P P 16 24 45.3 0.0
JYT Yasato 36.81 19 P P 16 24 42.8 -2.6
HNS HongShan 37.23 345 ⇓P P 16 24 49.0 0.0
HNS PcP **PcP** 16 27 13.3 +5.3
HNS S **S** 16 30 29.6 -3.1
HNS PcS **PcS** 16 30 57.1 +0.8
HNS ScS **ScS** 16 34 59.5 +0.4
HNS pmax pmax
comp=Z,580nm,1.1s
HNS pmax pmax
comp=Z,30µm,11.9s
HNS LR LR
comp=Z,226µm,23.5s
HNS LR LR
comp=Z,86µm,23.0s
HNS LR LR
comp=Z,335µm,24.5s
PYAG Pyongyang 37.31 359 P P 16 24 52.0 +2.3
PYAG S **S** 16 30 38.0 +4.2
PYAG AmB
comp=Z,12µm,2.7s
PYAG AMS AMS
comp=Z,160µm,25.4s
DL2 Dalian 37.41 354 P P 16 24 51.6 +1.1
DL2 S **S** 16 30 38.0 +2.6
DL2 pmax pmax
comp=Z,5µm,1.3s
DL2 pmax pmax
comp=Z,38µm,11.7s
DL2 LR LR
comp=Z,145µm,19.0s
DL2 LR LR
comp=Z,186µm,19.9s
DL2 LR LR
comp=Z,306µm,19.4s
CMSA Cobar Meteorol 37.71 152 P P 16 24 52.6 -0.5
comp=Z,607nm,0.8s
JSD Sado 37.92 15 P P 16 24 52.5 -2.3
JSD Sado 37.92 15 P P 16 24 55.7 +0.9
comp=Z,1µm,1.1s
JSD Sado 37.92 15 ⇑P P 16 24 54.6 -0.1
JSD Sado 37.92 15 P P 16 24 54.4 -0.4
H01W3 Cape Leeuwin H 38.02 196 P P 16 24 55.2 -0.2
baz=31,slow=7.1,SNR=69
H01W1 Cape Leeuwin H 38.02 196 P P 16 24 58.3 +2.9
baz=31,slow=7.1,SNR=59
TW1H Toowoomba 1 Ha 38.03 141 P P 16 24 57.5 +1.5
comp=Z,584nm,0.8s
H01W2 Cape Leeuwin H 38.03 196 P P 16 24 58.8 +3.3
baz=31,slow=7.1,SNR=63
GHSS Government Hou 38.07 164 P P 16 24 59.2 +3.1
comp=Z,792nm,0.5s
TIY Taiyuan 38.18 342 *eP* **P 16 24 57.3 +0.2**
TIY PP **PnPn** 16 26 33.8 +6.7
TIY S **S** 16 30 51.3 +4.1
TIY pmax pmax
comp=Z,79nm,0.5s
TIY pmax pmax
comp=Z,16µm,6.3s
TIY LR LR
comp=Z,174µm,28.9s
TIY LR LR
comp=Z,123µm,21.3s
TIY LR LR
comp=Z,288µm,24.7s
HHU Hamhung 38.20 1 P P 16 24 59.3 +2.1
HHU S **S** 16 30 52.6 +5.3
HHU AmB
comp=Z,7µm,2.3s
HHU AMS AMS
comp=Z,155µm,29.0s
JMM Marumori 38.50 19 P P 16 25 00.0 +0.3
comp=Z,6µm,1.3s
JMM Marumori 38.50 19 ⇑P P 16 25 00.2 +0.5
JMM Marumori 38.50 19 P P 16 25 00.4 +0.7
JYA Atsumi 38.84 17 P P 16 25 03.7 +1.2
LKP Lekhapani 38.85 314 IAmb IAmb 16 25 05.4
comp=Z,3µm,0.7s
LKP IAMs_20 IAMs_20 16 40 23.8
comp=Z,171µm,21.3s
IMP Imphal 38.89 309 *eP* **P 16 25 02.3 -1.0**
IMP IAmb IAmb 16 25 10.6
comp=Z,1µm,1.2s
IMP IAMs_20 IAMs_20 16 43 33.0
comp=Z,126µm,20.7s
KOHI KOHIMA 39.23 310 *eP* **P 16 25 05.0 -1.2**
KOHI IAmb IAmb 16 25 13.7
comp=Z,2µm,0.8s
KOHI IAMs_20 IAMs_20 16 41 06.7
comp=Z,252µm,20.9s
MOKO MOKOCHONG 39.25 312 *eP* **P 16 25 05.8 -0.6**
MOKO IAmb IAmb 16 25 17.0
comp=Z,3µm,1.3s
MOKO IAMs_20 IAMs_20 16 41 49.1
comp=Z,239µm,20.4s
BJT Baijiatuau 39.38 348 P P 16 25 09.3 +2.3
comp=Z,1µm,1.1s
BJI Beijing 39.40 348 P P 16 25 07.5 +0.4
BJI pP **pP** 16 25 17.1 -2.5
BJI PP **PnPn** 16 26 46.1 +4.6
BJI S **S** 16 31 04.1 -1.2
BJI pmax pmax
comp=Z,650nm,1.2s
BJI pmax pmax
comp=Z,6µm,6.3s
BJI LR LR
comp=Z,31µm,24.1s
BJI LR LR
comp=Z,43µm,22.0s
BJI LR LR
comp=Z,78µm,25.1s
DIBR DIBRUGARH 39.61 313 IAmb IAmb 16 25 14.4
comp=Z,2µm,0.9s
DIBR IAMs_20 IAMs_20 16 43 20.7
comp=Z,101µm,20.4s
JORH JORHAT 39.68 312 *eP* **P 16 25 09.6 -0.2**
JORH IAmb IAmb 16 25 14.5
comp=Z,4µm,1.1s
JORH IAMs_20 IAMs_20 16 40 32.3
comp=Z,210µm,26.2s
JORH IAMs_20 IAMs_20 16 40 56.7
comp=Z,147µm,21.3s
SILR SILCHAR 39.76 308 *eP* **P 16 25 11.0 +0.7**
SILR IAMs_20 IAMs_20 16 42 19.2
comp=Z,75µm,18.7s
BELO BELONIA 40.10 305 *eP* **P 16 25 15.4 +2.1**
JOM Ohasama 40.12 18 P P 16 25 14.2 +0.9
LZDM Lanzhou Array 40.14 331 P P 16 25 14.8 +0.9
comp=Z,261nm,0.9s,baz=140,slow=9.4,SNR=33
LZDM PcP **PcP** 16 27 19.6 +2.0
comp=Z,332nm,0.7s,baz=170,slow=4.4,SNR=9.7
LZDM ScP **ScP** 16 31 03.8 +0.9
comp=Z,12nm,0.7s,baz=145,slow=5.3,SNR=1.5
LZDM S **S** 16 31 13.3 -4.0
comp=Z,67nm,1.0s,baz=110,slow=13,SNR=3.8
comp=Z,261nm,0.9s
SNY Shenyang 40.16 357 ⇑P P 16 25 14.3 +0.8
SNY S **S** 16 31 12.3 -4.4
SNY pmax pmax
comp=Z,12µm,5.5s
SNY LR LR
comp=Z,135µm,22.7s
SNY LR LR
comp=Z,114µm,21.3s
SNY LR LR
comp=Z,218µm,22.3s
LZH Lanzhou 40.18 331 ⇓P P 16 25 14.8 +0.9
LZH pP pP 16 25 26.3 -0.2
LZH PcP **PcP** 16 27 22.3 +4.8
LZH S **S** 16 31 12.0 -5.5
LZH ScS **ScS** 16 35 18.3 +1.6
LZH pmax pmax
comp=Z,2µm,1.2s
LZH pmax pmax
comp=Z,22µm,5.2s
LZH LR LR
comp=Z,197µm,20.3s
LZH LR LR
comp=Z,284µm,21.3s
LZH LR LR
comp=Z,474µm,22.0s
ITAN ITANAGAR 40.30 312 *eP* **P 16 25 13.7 -1.2**
ITAN IAmb IAmb 16 25 25.8
comp=Z,3µm,0.9s
ITAN IAMs_20 IAMs_20 16 40 52.5
comp=Z,141µm,28.3s
ITAN IAMs_20 IAMs_20 16 42 06.0
comp=Z,129µm,19.3s
ZIRO ZIRO 40.42 313 *eP* **P 16 25 15.6 -0.5**
ZIRO IAMs_20 IAMs_20 16 42 27.3
comp=Z,139µm,21.0s
AGT Agartala 40.56 306 *eP* **P 16 25 18.9 +1.9**
AGT IAMs_20 IAMs_20 16 38 04.0
comp=Z,108µm,17.4s
TEZP TEZPUR 40.71 311 *eP* **P 16 25 17.1 -1.2**
TEZP IAMs_20 IAMs_20 16 43 00.0
comp=Z,103µm,22.3s
SHL Shillong 40.87 309 P P 16 25 18.4 -1.5
SHL Shillong 40.87 309 P P 16 25 19.3 -0.5
SNR=629
SHL Shillong 40.87 309 *eP* **P 16 25 19.1 -0.8**
SHL IAmb IAmb 16 25 33.2
comp=Z,936nm,0.7s
SHL IAMs_20 IAMs_20 16 41 41.7
comp=Z,143µm,23.5s
SHL Shillong 40.87 309 P P 16 25 18.4 -1.5
SHL pmax pmax
comp=Z,1µm,0.7s
MSHR Mys Shultsa 41.06 5*c iP* **P 16 25 22.6 +1.7**
MSHR pmax pmax
comp=Z,2µm,1.2s
MSHR MLR MLR
comp=Z,64µm,22.0s
PSTR Posyet 41.10 5*c iP* **P 16 25 22.9 +1.7**
MGBR Mount Gambier 41.26 163 P P 16 25 22.4 -0.2
JTM Tenmabayashi 41.26 17 P P 16 25 21.8 -0.8
JTM IAmb IAmb 16 25 28.1
comp=Z,8µm,1.3s
JTM Tenmabayashi 41.26 17 P P 16 25 23.5 +0.9
comp=Z,5µm,1.6s
JTM Tenmabayashi 41.26 17 ⇑P P 16 25 23.8 +1.2
JTM Tenmabayashi 41.26 17 P P 16 25 23.7 +1.2
HHC Hu-ho-hao-te 41.33 343 ⇑*iP* **P 16 25 24.3 +1.0**
HHC S **S** 16 31 33.8 -0.6
HHC sS sS 16 31 57.3 +1.7
HHC pmax pmax
comp=Z,530nm,1.9s
HHC LR LR
comp=Z,215µm,22.7s
HHC LR LR
comp=Z,88µm,20.2s
HHC LR LR
comp=Z,372µm,21.0s
GUWA GUWAHATI 41.33 309 *eP* **P 16 25 23.3 -0.1**
GUWA IAmb IAmb 16 25 28.9
comp=Z,797nm,1.1s
GUWA IAMs_20 IAMs_20 16 42 57.5
comp=Z,58µm,22.9s
BTO Baotou 41.58 341 *eP* **P 16 25 29.4 +4.1**
BTO sP **sP** 16 25 48.5 +5.0
BTO PP PP 16 27 10.3 +8.1
BTO S **S** 16 31 47.1 +9.0
BTO pmax pmax
comp=Z,170nm,1.1s
BTO pmax pmax
comp=Z,49µm,7.4s
BTO LR LR
comp=Z,97µm,15.3s
BTO LR LR
comp=Z,62µm,18.6s
BTO LR LR
comp=Z,120µm,15.7s
VLA Vladivostok 41.67 6*d iP* **P 16 25 27.8 +1.9**
VLA pmax pmax
comp=Z,4µm,1.3s
VLA MLR MLR
comp=Z,138µm,21.0s
MGCD Mangrove Creek 41.75 148 P P 16 25 27.9 +1.2
comp=Z,576nm,0.7s
JOT Ohata 41.81 17 P P 16 25 28.2 +1.2
TAWA Tawang 41.93 311 *eP* **P 16 25 29.6 +0.8**
TAWA IAMs_20 IAMs_20 16 42 34.2
comp=Z,78µm,20.5s
SYDH Sydney Hard Ro 41.99 149 P P 16 25 30.6 +2.0
comp=Z,434nm,0.8s
CN2 Changchun 42.06 359 P P 16 25 29.4 +0.3
CN2 pP pwP 16 25 45.0 +1.3
CN2 PcP **PcP** 16 27 21.8 -1.5
CN2 PcS **PcS** 16 31 14.1 -0.8
CN2 S **S** 16 31 43.6 -1.4
CN2 SS **SS** 16 34 49.4 -4.5
CN2 pmax pmax
comp=Z,480nm,1.9s
CN2 pmax pmax
comp=Z,6µm,3.0s
CN2 LR LR
comp=Z,91µm,21.0s
CN2 LR LR
comp=Z,125µm,21.0s
CN2 LR LR
comp=Z,169µm,22.0s
BRAT Ballarat 42.20 159 P P 16 25 31.4 +1.1
comp=Z,624nm,0.7s
RIV Riverview 42.25 149 P P 16 25 32.9 +2.1
comp=Z,825nm,1.1s
RIV Riverview 42.25 149 ⇑P P 16 25 32.0 +1.3
CAN Canberra 42.38 152 P P 16 25 31.0 -0.9
CAN Canberra 42.38 152 P P 16 25 32.4 +0.5
comp=Z,2µm,0.8s
CAN Canberra 42.38 152 ⇑P P 16 25 32.6 +0.7
CAN Canberra 42.38 152 ⇑P P 16 25 32.9 +1.0
CAN PcP **PcP** 16 27 27.2 +2.6
CNB Canberra Magne 42.55 152 P P 16 25 34.0 +0.7
comp=Z,700nm,1.2s
JSH Shimam 42.71 15 P P 16 25 35.8 +1.5
USRK Ussuriysk Ar. 42.75 6 P P 16 25 35.8 +1.1
comp=Z,1µm,1.0s,baz=189,slow=7.2,SNR=268
USRK PP **PP** 16 27 15.2 +0.6
comp=Z,50nm,0.9s,baz=198,slow=8.7,SNR=0.6
USRK PKP2ab **P'P'ab** 16 58 44.7 +1.8
comp=Z,5.8nm,0.9s,baz=2.9,slow=3.8,SNR=4.8
comp=Z,1µm,1.0s
TOO Toolangi 42.79 157 P P 16 25 34.9 -0.3
TOO Toolangi 42.79 157 ⇑P P 16 25 36.3 +1.1
GEXS Deakin Univers 42.91 159 P P 16 25 39.2 +3.2
comp=Z,686nm,0.8s
MDJ Mudanjiang 42.97 3 IAMs_20 IAMs_20 16 45 36.1
comp=Z,227µm,21.0s
MDJ Mudanjiang 42.97 3 P P 16 25 37.6 +1.2
MDJ pP pP 16 25 48.5 -0.6
MDJ sP sP 16 25 51.4 -3.2
MDJ PP **PcP** 16 27 24.1 -2.2
MDJ S **S** 16 31 58.3 0.0
MDJ LR LR
comp=Z,171µm,17.8s
MDJ LR LR
comp=Z,57µm,21.1s
MDJ LR LR
comp=Z,302µm,21.1s
MDJ Mudanjiang 42.97 3 P P 16 25 37.8 +1.4
comp=Z,2µm,0.8s
MDJ Mudanjiang 42.97 3 P P 16 25 37.7 +1.2
H11S3 WAKE ISLAND Hy 42.99 64 P P 16 25 37.1 +0.2
baz=191,slow=74
H11S3 T T 17 12 46.9
baz=252,slow=75,SNR=554
H11S2 WAKE ISLAND Hy 43.01 64 P P 16 25 37.7 +0.7
baz=191,slow=74
H11S2 T T 17 12 48.0
baz=252,slow=75,SNR=781
H11S1 WAKE ISLAND Hy 43.01 64 P P 16 25 37.2 +0.2
baz=191
H11S1 T T 17 12 45.6
baz=252,slow=75,SNR=599
ERM Erimo 43.02 18 P P 16 25 36.7 -0.2
ERM Erimo 43.02 18 P P 16 25 39.5 +2.6
comp=Z,2µm,1.0s
ERM Erimo 43.02 18 ⇑P P 16 25 38.6 +1.7
ERM Erimo 43.02 18 P P 16 25 38.4 +1.5
ERM S **S** 16 32 00.9 +1.9
ERM Erimo 43.02 18 P P 16 25 39.0 +2.1
JEM Erimo 43.02 18 P P 16 25 39.7 +2.8
comp=Z,618nm,1.0s
JEM Erimo 43.02 18 P P 16 25 38.6 +1.7
XLT XiLinHaoTe 43.13 349 *eP* **P 16 25 38.8 +0.9**
XLT PcP **PcP** 16 27 27.8 +0.8
XLT PcS **PcS** 16 31 18.0 -1.4
XLT S **S** 16 32 06.9 +6.1
XLT sS sS 16 32 22.3 +0.2
XLT ScS **ScS** 16 35 29.6 -4.5
XLT pmax pmax
comp=Z,250nm,1.5s
XLT pmax pmax
comp=Z,10µm,4.1s
XLT LR LR
comp=Z,11µm,22.4s
XLT LR LR
comp=Z,89µm,21.9s
XLT LR LR
comp=Z,175µm,23.2s
WAKE Wake Island 43.22 63 P P 16 25 37.6 -1.2
WAKE IAmb IAmb 16 26 10.4
comp=Z,3µm,1.4s
WAKE Wake Island 43.22 63 P P 16 25 40.1 +1.3
comp=Z,750nm,1.1s
WAKE Wake Island 43.22 63 ⇑P P 16 25 38.5 -0.3
JEW Eniwo 43.27 16 P P 16 25 39.8 +0.9
H11N1 WAKE ISLAND Hy 43.57 63 P P 16 25 41.8 +0.3
baz=247,slow=11,SNR=31
H11N1 T T 17 13 36.5
baz=251,slow=74
H11N2 WAKE ISLAND Hy 43.58 63 P P 16 25 42.6 +1.1
baz=247,slow=11,SNR=18
H11N2 T T 17 13 31.5
baz=251,slow=74
H11N3 WAKE ISLAND Hy 43.59 63 P P 16 25 42.8 +1.2
baz=247,slow=11,SNR=29
H11N3 T T 17 13 24.3
baz=251
LSA Lhasa 43.59 313 IAmb IAmb 16 25 49.6
comp=Z,11µm,2.4s
LSA Lhasa 43.59 313 P P 16 25 39.1 -3.2
LSA S S 16 31 59.6 -9.2
LSA pmax pmax
comp=Z,1µm,2.3s
LSA LR LR
comp=N,60µm,25.5s
LSA LR LR
comp=E,54µm,23.0s
LSA LR LR
comp=Z,139µm,27.0s
LSA Lhasa 43.59 313 P P 16 25 43.0 +0.7
LSA PcP **PcP** 16 27 30.8 +1.5
BWNR Bhubaneshwar 43.73 298 *eP* **P 16 25 43.1 +0.1**
BWNR IAMs_20 IAMs_20 16 41 09.6
comp=Z,123µm,21.6s
SANVU Saraoutou 43.80 114 P P 16 25 42.6 -1.0
SANVU IAmb IAmb 16 25 57.1
comp=Z,3µm,1.2s
SANVU IAMs_20 IAMs_20 16 43 11.2
comp=Z,234µm,22.0s
SANVU Saraoutou 43.80 114 P P 16 25 46.0 +2.4
comp=Z,2µm,0.9s
SANVU Saraoutou 43.80 114 ⇑P P 16 25 44.2 +0.6
SANVU Saraoutou 43.80 114 P P 16 25 44.0 +0.4
MILA Mila 43.88 153 ⇑P P 16 25 44.8 +0.8
BNX BinXian 44.00 1 ⇑P P 16 25 44.8 0.0
BNX pP **pP** 16 25 57.5 +0.1
BNX sP **sP** 16 26 04.1 +1.2
BNX S **S** 16 32 16.4 +3.0
BNX sS **sS** 16 32 36.8 +2.1
BNX pmax pmax
comp=Z,1µm,1.1s
BNX pmax pmax
comp=Z,28µm,7.6s
BNX LR LR
comp=Z,89µm,22.8s
BNX LR LR
comp=Z,64µm,24.9s
BNX LR LR
comp=Z,152µm,24.9s
SHBG Sahibganj 44.07 306 *eP* **P 16 25 46.6 +1.0**
TEY Ternei 44.23 10⇑*eP* **P 16 25 48.1 +1.5**
TEY 16 32 14.0
TEY pmax pmax
comp=N,180nm,1.6s
TEY pmax pmax
comp=Z,350nm,1.7s
TEY pmax pmax
comp=N,7µm,3.1s
TEY pmax pmax
comp=Z,11µm,2.4s
TEY pmax pmax
comp=E,1µm,2.7s
TEY MLR MLR
comp=E,15µm,21.0s
TEY MLR MLR
comp=N,19µm,19.0s
TEY MLR MLR
comp=Z,26µm,19.0s
GTA Gaotai 44.76 331 P P 16 25 51.6 +0.5
GTA PcP **PP** 16 27 34.9 -1.4
GTA PcS **PcS** 16 31 29.6 +3.3
GTA S **S** 16 32 24.6 -0.2
GTA ScS **ScS** 16 35 45.6 +0.9
GTA pmax pmax
comp=Z,770nm,1.0s
GTA pmax pmax
comp=Z,26µm,12.0s
GTA LR LR
comp=Z,182µm,23.3s
GTA LR LR
comp=Z,180µm,21.8s
GTA LR LR
comp=Z,352µm,23.3s
ASAJ Asahikawa 44.77 17 LR LR 16 44 25.0
comp=Z,175µm,21.3s,baz=236,slow=36
ASAJ Asahikawa 44.77 17 P P 16 25 50.8 -0.1
ASAJ pmax pmax
comp=Z,4µm,1.2s
ASAJ Asahikawa 44.77 17 P P 16 25 52.3 +1.4
JKA Kamikawa-asahi 44.77 17 P P 16 25 50.8 -0.1
JKA IAmb IAmb 16 25 56.6
comp=Z,4µm,1.2s
JMP Maruseppu 44.89 17 P P 16 25 53.9 +2.0
BOK Bokaro 44.95 303 *eP* **P 16 25 52.9 +0.2**
BOK IAMs_20 IAMs_20 16 42 52.5
comp=Z,83µm,22.7s
GOMU GeErMu 45.15 323 P P 16 25 55.8 +1.3

GOMU S **S** **16 32 35.3 +4.2**
GOMU pmax pmax
comp=Z,540nm,1.8s
GOMU LR LR
comp=Z,54µm,18.6s
GOMU LR LR
comp=Z,94µm,21.6s
GOMU LR LR
comp=Z,528µm,20.1s
VIS Vishakhapatnam 45.17 294 *e*P **P** **16 25 54.5 0.0**
VIS IAMs_20 IAMs_20 16 44 44.5
comp=Z,227µm,21.7s
RAGD RAYAGADA 45.49 296 *e*P **P** **16 25 57.4 +0.3**
RAGD IAmb IAmb 16 26 03.0
comp=Z,884nm,1.0s
NOUC Port Laguerre 45.55 123 P **P** **16 25 57.1 -0.3**
JWK2 Keihoku 45.68 15 P **P** **16 25 59.6 +1.5**
YUK Yuzh-Kuril'sk 45.71 20*d i*P **P** **16 25 57.3 -1.1**
YUK *e* 16 27 41.0
YUK *e*PPP PPP 16 28 22.9
YUK *i* S **S** **16 32 34.9 -3.2**
YUK *i* SS **SS** **16 35 57.3 -5.9**
YUK *i* SSS SSS 16 36 54.2
YUK pmax pmax
comp=Z,3µm,3.2s
YUK pmax pmax
comp=Z,7µm,1.2s
YUK pmax pmax
comp=E,2µm,1.3s
YUK pmax pmax
comp=N,1µm,1.4s
HALK Hakmana 45.75 277 ⇑P **P** **16 25 58.0 -1.3**
ONTNC Ouen Toro 45.77 124 P **P** **16 25 58.1 -1.0**
ONTNC Ouen Toro 45.77 124 P **P** **16 26 00.3 +1.1**
comp=N,709nm,1.0s
ONTNC Ouen Toro 45.77 124 ⇑P **P** **16 25 59.0 -0.1**
PALK Pallekele 45.82 279 LR LR 16 47 52.5
comp=N,68µm,19.0s,baz=100,slow=40
PALK Pallekele 45.82 279 P **P** **16 25 58.4 -1.4**
PALK IAmb IAmb 16 26 05.8
comp=Z,3µm,1.8s
PALK Pallekele 45.82 279 P **P** **16 25 59.0 -0.8**
PALK P **P** **16 25 59.0 -0.8**
PALK P **P** **16 25 59.4 -0.4**
PALK P **P** **16 25 59.4 -0.4**
PALK S **S** **16 32 35.0 -5.7**
PALK S **S** **16 32 35.0 -5.7**
PALK Pallekele 45.82 279 *i* P **P** **16 25 59.1 -0.7**
PALK pmax pmax
comp=Z,3µm,2.0s
PALK MLR MLR
comp=Z,203µm,24.0s
PALK Pallekele 45.82 279 P **P** **16 25 58.8 -1.0**
PALK S **S** **16 32 36.4 -4.3**
PALK Pallekele 45.82 279 P **P** **16 25 59.0 -0.7**
GAYA Gaya 45.90 304 *e*P **P** **16 26 00.3 +0.1**
GAYA IAmb IAmb 16 26 06.0
comp=Z,2µm,1.6s
GAYA IAMs_20 IAMs_20 16 43 41.9
comp=Z,71µm,20.8s
EVN Everest 45.98 308 P **P** **16 26 00.1 -1.5**
EVN IAmb IAmb 16 26 23.8
comp=Z,3µm,1.3s
EVN Everest 45.98 308 ⇑P **P** **16 26 01.4 -0.1**
JHSG JHARSUGUGA 46.01 299 *e*P **P** **16 26 01.7 +0.6**
JHSG IAmb IAmb 16 26 06.9
comp=Z,1µm,1.0s
YATNC Mamie plateau, **46.02 123** P **P** **16 26 01.7 +0.5**
comp=Z,1µm,1.3s
MALK Mahakanadarawa 46.08 280 P **P** **16 26 01.3 -0.5**
MALK S **S** **16 32 43.8 -0.6**
MALK Mahakanadarawa 46.08 280 ⇑P **P** **16 26 01.2 -0.5**
OUENC Ouen Island, N 46.14 124 P **P** **16 26 03.0 +0.9**
comp=Z,632nm,1.2s
TARA Tarawa 46.58 90 IAMs_20 IAMs_20 16 43 26.8
comp=Z,176µm,22.0s
TARA Tarawa 46.58 90 P **P** **16 26 05.4 -0.3**
STMR SITAMARHI 46.67 306 *e*P **P** **16 26 08.0 +1.7**
GLAD Gladstone 46.72 157 P **P** **16 26 07.5 +1.1**
comp=Z,477nm,0.8s
PINNC Pines Island, 46.73 123 IAmb IAmb 16 26 21.7
comp=Z,1µm,1.2s
PINNC Pines Island, 46.73 123 P **P** **16 26 07.1 +0.4**
comp=Z,1µm,1.0s
MARNC Mare, Loyalty 46.74 122 P **P** **16 26 07.3 +0.4**
comp=Z,10nm,1.4s
MARNC Mare, Loyalty 46.74 122 ⇑P **P** **16 26 07.0 +0.1**
MDRS Chennai 47.02 286 *e*P **P** **16 26 10.0 +0.9**
MDRS IAMs_20 IAMs_20 16 44 55.3
comp=Z,95µm,21.9s
VJD Vijayawada 47.34 291 IAmb IAmb 16 26 24.3
comp=Z,1µm,1.1s
YSS Yuzhno-Sakhali 47.42 15 P **P** **16 26 11.2 -0.5**
YSS IAmb IAmb 16 26 16.8
comp=Z,4µm,1.3s
YSS Yuzhno-Sakhali 47.42 15 P **P** **16 26 13.0 +1.3**
comp=Z,2µm,1.4s
YSS Yuzhno-Sakhali 47.42 15*ωe*P **P** **16 26 12.4 +0.7**
YSS *e**PP **pwP** **16 26 26.2 -0.3**
YSS *e* 16 27 40.9
YSS *e* 16 27 58.8
YSS *e*S **S** **16 33 01.6 -0.9**
YSS pmax pmax
comp=Z,16µm,5.6s
YSS pmax pmax
comp=N,8µm,5.0s
YSS pmax pmax
comp=E,5µm,5.3s
YSS smax smax
comp=N,19µm,13.3s
YSS smax smax
comp=E,24µm,10.1s
YSS MLR MLR
comp=N,18µm,20.0s
YSS MLR MLR
comp=E,31µm,20.0s
YSS MLR MLR
comp=Z,31µm,20.0s
YSS Yuzhno-Sakhali 47.42 15 ⇑P **P** **16 26 12.5 +0.7**
YSS Yuzhno-Sakhali 47.42 15 P **P** **16 26 12.8 +1.1**
KUR Kuril'sk 47.45 21*c i*P **P** **16 26 11.7 -0.3**
KUR *e* 16 28 03.6
KUR *e*S **S** **16 33 01.7 -1.3**
KUR pmax pmax
comp=Z,6µm,1.4s
KUR pmax pmax
comp=Z,43µm,8.7s
KUR MLR MLR
comp=N,70µm,20.0s
KUR MLR MLR
comp=E,49µm,20.0s
KUR MLR MLR
comp=Z,75µm,20.0s
BLSP Bilaspur 47.57 299 *e*P **P** **16 26 12.7 -0.7**
BLSP IAmb IAmb 16 26 18.4
comp=Z,1µm,1.0s
MOO Moorlands 47.69 159 P **P** **16 26 17.6 +3.7**
comp=Z,788nm,1.1s
HIA Hailar 47.86 354 P **P** **16 26 18.2 +3.1**
comp=Z,3µm,1.8s
HIA Hailar 47.86 354 P **P** **16 26 16.3 +1.1**
HIA pP **pP** **16 26 24.5 -3.4**
HIA sP **pwP** **16 26 28.6 -1.3**
TAU Tasmania Unive 48.14 159 P **P** **16 26 16.9 -0.5**
TAU Tasmania Unive 48.14 159 P **P** **16 26 18.6 +1.2**
comp=Z,616nm,1.1s
TAU Tasmania Unive 48.14 159 P **P** **16 26 18.0 +0.7**
HILR Hailar Array B 48.14 354 P **P** **16 26 17.8 +0.4**
comp=Z,111nm,0.5s,baz=170,slow=9.5,SNR=86
HILR PcP **PcP** **16 27 46.0 +1.7**
comp=Z,120nm,0.6s,baz=160,slow=3.8,SNR=2.1
HILR ScP **ScP** **16 31 34.5 -0.4**
comp=Z,34nm,1.0s,baz=220,slow=3.8,SNR=1.8
HILR S **S** **16 33 09.3 -3.5**
comp=Z,2.5nm,0.4s,baz=165,slow=22,SNR=1.2
comp=Z,111nm,0.5s
HEH HeiHe 48.52 1 *e*P **P** **16 26 19.3 -0.8**
HEH pP **pP** **16 26 32.8 -0.1**
HEH S **S** **16 33 13.0 -5.0**
HEH sS **sS** **16 33 37.6 -1.9**
HEH SS **SS** **16 36 43.8 -4.7**
HEH pmax pmax
comp=Z,3µm,1.2s
HEH pmax pmax
comp=Z,39µm,7.1s
HEH LR LR
comp=Z,98µm,24.5s
HEH LR LR
comp=Z,77µm,24.5s
HEH LR LR
comp=Z,199µm,24.1s
SALM Salem 48.77 284 *e*P **P** **16 26 22.4 -0.3**
SALM IAmb IAmb 16 26 28.7
comp=Z,3µm,1.6s
ULN Ulaanbaatar 49.05 343 P **P** **16 26 24.3 -0.2**
ULN IAmb IAmb 16 26 31.2
comp=Z,1µm,1.1s
ULN Ulaanbaatar 49.05 343 IAMs_20 IAMs_20 16 48 35.3
comp=Z,153µm,22.0s
ULN Ulaanbaatar 49.05 343 P **P** **16 26 25.5 +1.0**
ULN P **P** **16 26 25.5 +1.0**
ULN S **S** **16 33 24.1 -1.7**
ULN S **S** **16 33 24.1 -1.7**
ULN Ulaanbaatar 49.05 343*c i*P **P** **16 26 25.3 +0.8**
ULN pmax pmax
comp=Z,1µm,1.1s
ULN MLR MLR
comp=Z,246µm,23.0s
ULN Ulaanbaatar 49.05 343 ⇓P **P** **16 26 25.0 +0.5**
ULN Ulaanbaatar 49.05 343 P **P** **16 26 25.3 +0.8**
SONM Songino Array 49.22 342 P **P** **16 26 26.5 +0.7**
comp=Z,372nm,0.9s,baz=160,slow=6.8,SNR=276
SONM PcP **PcP** **16 27 49.0 +0.7**
comp=Z,262nm,0.8s,baz=153,slow=4.5,SNR=4.7
SONM S **S** **16 33 28.3 +0.2**
comp=Z,18nm,1.2s,baz=172,slow=12,SNR=1.4
SONM PKiKP **PKiKP** **16 34 36.6 +0.4**
comp=Z,7.0nm,0.9s,baz=157,slow=2.0,SNR=1.9
SONM LR LR 16 48 21.1
comp=Z,149µm,21.2s,baz=157,slow=37
SONM P3KP 16 56 19.4
comp=Z,0.4nm,0.5s,baz=343,slow=4.5,SNR=1.5
SONM PKPPKP **P'P'df** **16 57 24.2 -0.5**
comp=Z,6.8nm,0.9s,baz=329,slow=1.7,SNR=6.3
SONM PKP2ab **P'P'ab** **16 58 17.0 +1.4**
comp=Z,43nm,1.4s,baz=298,slow=3.1,SNR=6.5
SONM P4KPbc 17 03 59.6
comp=Z,4.2nm,0.8s,baz=172,slow=4.3,SNR=11
comp=Z,372nm,0.9s
SONM Songino Array 49.22 342 P **P** **16 26 25.4 -0.3**
UGL Uglegorsk 49.23 14 *e*P **P** **16 26 27.0 +1.4**
UGL *e*S **S** **16 33 24.6 -3.3**
UGL pmax pmax
comp=Z,30µm,5.2s
UGL pmax pmax
comp=Z,5µm,1.2s
KOD Kodaikanal 49.30 282 *e*P **P** **16 26 26.2 -1.0**
KOD IAmb IAmb 16 26 32.4
comp=Z,2µm,1.1s
KOD IAMs_20 IAMs_20 16 46 07.3
comp=Z,148µm,22.7s
HYBB Hyderabad (bro 49.50 292 *e*P **P** **16 26 28.2 -0.1**
HYBB IVmB_BB 16 26 31.1
comp=Z,12µm,1.2s
HYBB *e*PcP **PcP** **16 27 49.4 -0.4**
HYBB *e*PP **PP** **16 28 23.5 +0.5**
HYBB *e*ScP **ScP** **16 31 42.5 +1.1**
HYBB *e*PcS **PcS** **16 31 46.1 -0.7**
HYBB *e*S **S** **16 33 34.8 +1.9**
HYBB *e*ScS **ScS** **16 36 17.4 +0.9**
HYBB IVMs_BB IVMs_BB 16 46 27.0
comp=Z,41µm,21.8s
TRD Trivandrum 49.62 280 *e*P **P** **16 26 28.4 -0.8**
TRD IAmb IAmb 16 26 34.6
comp=Z,2µm,0.8s
TRD IAMs_20 IAMs_20 16 43 54.6
comp=Z,87µm,20.6s
GRNR Gornyy 49.77 8⇑*i*P **P** **16 26 31.3 +1.6**
GRNR *e*S **S** **16 33 40.9 +5.4**
GRNR pmax pmax
comp=E,10.0nm,1.1s
GRNR pmax pmax
comp=N,120nm,1.4s
GRNR pmax pmax
comp=Z,170nm,0.9s
GRNR smax smax
comp=E,20nm,1.3s
GRNR MLR MLR
comp=E,25µm,20.0s
GRNR MLR MLR
comp=N,36µm,21.0s
GRNR MLR MLR
comp=Z,55µm,19.0s
BRCI Bahraich 50.00 305 *e*P **P** **16 26 33.8 +1.9**
BRCI IAmb IAmb 16 26 44.5
comp=Z,4µm,0.9s
BRCI IAMs_20 IAMs_20 16 43 33.1
comp=Z,59µm,22.4s
NFK Norfolk Island 50.11 131 ⇑P **P** **16 26 33.3 +0.6**
TYV Tymovskoe 51.03 13 *e*P **P** **16 26 40.9 +1.7**
TYV *e*S **S** **16 33 55.0 +2.0**
TYV pmax pmax
comp=Z,1µm,1.7s
TYV pmax pmax
comp=Z,10µm,3.7s
TYV smax smax
comp=N,23µm,6.9s
TYV smax smax
comp=E,33µm,6.9s
TYV smax smax
comp=N,168nm,2.5s
TYV smax smax
comp=E,120nm,2.5s
CIT Chita 51.41 350 *e*P **P** **16 26 44.0 +1.9**
CIT *e* 16 28 00.4
CIT *e*S **S** **16 34 00.6 +2.2**
CIT *e* 16 36 27.6
CIT pmax pmax
comp=Z,15µm,1.8s
AKL Akola 51.71 295 *e*P **P** **16 26 44.0 -0.8**
AKL IAMs_20 IAMs_20 16 40 54.3
comp=Z,68µm,21.7s
JHNI Jhansi 51.78 302 *e*P **P** **16 26 43.8 -1.5**
JHNI IAMs_20 IAMs_20 16 42 11.8
comp=Z,54µm,23.8s
LGTI Lohaghat 51.83 307 *e*P **P** **16 26 45.0 -0.6**
LGTI IAMs_20 IAMs_20 16 40 16.7
comp=Z,48µm,19.9s
ZEA Zeya 52.01 1 *e*P **P** **16 26 47.1 +0.6**
ZEA *e**PP **pP** **16 26 58.0 -1.4**
ZEA *e* 16 28 03.2
ZEA *e*S **S** **16 34 07.8 +1.4**
ZEA pmax pmax
comp=N,3µm,6.5s
ZEA pmax pmax
comp=Z,7µm,6.3s
ZEA pmax pmax
comp=N,280nm,1.2s
ZEA pmax pmax
comp=Z,660nm,1.1s
ZEA smax smax
comp=N,19µm,18.0s
ZEA MLR MLR
comp=E,24µm,18.0s
ZEA MLR MLR
comp=N,50µm,21.0s
ZEA MLR MLR
comp=Z,74µm,21.0s
BHPL Bhopal 52.05 298 *e*P **P** **16 26 46.9 -0.5**
BHPL IAmb IAmb 16 26 52.4
comp=Z,978nm,0.8s
BHPL IAMs_20 IAMs_20 16 43 22.5
comp=Z,59µm,20.8s
NRDN NARMADA NAGAR 52.12 298 *e*P **P** **16 26 50.9 +3.0**
NRDN IAmb IAmb 16 26 56.6
comp=Z,818nm,0.9s
MNGI Mangalore 52.22 285 *e*P **P** **16 26 47.3 -1.4**
MNGI IAmb IAmb 16 26 53.0
comp=Z,377nm,0.9s
ZAK Zakamensk 52.43 342 *e*P **P** **16 26 50.3 +0.5**
ZAK pmax pmax
comp=Z,682nm,2.5s
GUNA GUNA 52.55 300 *e*P **P** **16 26 50.6 -0.5**
GUNA IAmb IAmb 16 26 55.9
comp=Z,2µm,0.9s
GUNA IAMs_20 IAMs_20 16 45 20.4
comp=Z,74µm,21.8s
NKL Nikolayevsk 52.78 11 *e*P **P** **16 26 52.2 0.0**
NKL *e*S **S** **16 34 11.7 -5.1**
NKL pmax pmax
comp=E,3µm,1.3s
NKL pmax pmax
comp=N,4µm,1.2s
NKL pmax pmax
comp=Z,16µm,1.2s
NKL smax smax
comp=E,4µm,6.8s
NKL smax smax
comp=N,9µm,6.4s
NKL MLR MLR
comp=N,140µm,19.0s
NKL MLR MLR
comp=E,320µm,21.0s
NKL MLR MLR
comp=Z,321µm,21.0s
JOSI Joshimath 52.82 308 *e*P **P** **16 26 52.7 -0.5**
JOSI IAmb IAmb 16 26 58.2
comp=Z,1µm,1.0s
HMDM Hanimaadhoo 53.23 277 P **P** **16 26 55.4 -0.9**
HMDM IAmb IAmb 16 27 02.3
comp=Z,4µm,2.1s
HMDM Hanimaadhoo 53.23 277 P **P** **16 26 56.1 -0.2**
SNR=10
HMDM Hanimaadhoo 53.23 277 ⇑P **P** **16 26 55.8 -0.4**
KAAM Kaadhehdhoo 53.33 269 IAMs_20 IAMs_20 16 48 51.3
comp=Z,148µm,21.0s
KAAM Kaadhehdhoo 53.33 269 P **P** **16 26 57.1 +0.1**
SNR=24
KAAM Kaadhehdhoo 53.33 269 ⇑P **P** **16 26 56.0 -1.0**
TLY Talaya 53.45 343 P **P** **16 26 57.4 +0.1**
TLY Talaya 53.45 343 P **P** **16 26 58.3 +1.0**
TLY P **P** **16 26 58.3 +1.0**
TLY S **S** **16 34 23.0 -3.3**
TLY S **S** **16 34 23.0 -3.3**
TLY Talaya 53.45 343*c i*P **P** **16 26 58.8 +1.5**
TLY pmax pmax
comp=Z,647nm,0.9s
TLY MLR MLR
comp=Z,212µm,23.0s
TLY Talaya 53.45 343 P **P** **16 26 58.6 +1.3**
KAD Karad 53.56 290 *e*P **P** **16 26 57.1 -1.6**
GOA Goa 53.57 288 *e*P **P** **16 26 57.4 -1.3**
GOA IAMs_20 IAMs_20 16 41 47.5
comp=Z,75µm,20.6s
GOA IAMs_20 IAMs_20 16 42 08.8
comp=Z,90µm,26.0s
FUNA Funafuti 53.64 102 P **P** **16 26 57.6 -1.6**
FUNA Funafuti 53.64 102 IAMs_20 IAMs_20 16 46 23.8
comp=Z,119µm,22.0s
FUNA Funafuti 53.64 102 ⇑P **P** **16 26 59.6 +0.4**
IRK Irkutsk 53.77 343 *e*P **P** **16 27 00.9 +1.4**
IRK *e*S **S** **16 34 33.9 +3.4**
IRK pmax pmax
comp=Z,3µm,2.5s
JMIU JAMIA UNIVERSI 53.89 305 *e*P **P** **16 27 00.8 -0.1**
DDI Dehra Dun 53.92 307 *e*P **P** **16 27 01.9 +0.8**
DDI IAmb IAmb 16 27 22.1
comp=Z,1µm,0.6s
DDI IAMs_20 IAMs_20 16 44 16.9
comp=Z,43µm,23.9s
LDR Lodi Road 53.96 305 *e*P **P** **16 27 00.8 -0.6**
LDR IAmb IAmb 16 27 12.0
comp=Z,924nm,0.8s
NDI New Delhi 53.99 305 *e*P **P** **16 27 00.2 -1.4**
AYAN Aya Nagar 54.00 305 *e*P **P** **16 27 01.0 -0.6**
AYAN IAMs_20 IAMs_20 16 40 48.6
comp=Z,57µm,22.2s
NPLP NPLP New Delhi 54.02 305 *e*P **P** **16 27 01.2 -0.5**
NPLP IAmb IAmb 16 27 09.2
comp=Z,635nm,0.7s
POO Poona 54.11 292 *e*P **P** **16 27 01.3 -1.4**
POO IAmb IAmb 16 27 07.0
comp=Z,826nm,1.1s
POO IAMs_20 IAMs_20 16 43 13.2
comp=Z,36µm,19.8s
NRLA Narela 54.13 305 *e*P **P** **16 27 02.2 -0.4**
NRLA IAmb IAmb 16 27 11.1
comp=Z,4µm,1.5s
WMQ Urumqi 54.27 326 P **P** **16 27 04.8 +1.3**
WMQ PcP **PcP** **16 28 11.6 +4.4**
WMQ S **S** **16 34 34.0 -3.7**
WMQ pmax pmax
comp=Z,250nm,1.3s
WMQ pmax pmax
comp=Z,3µm,3.7s
WMQ LR LR
comp=Z,75µm,19.3s
WMQ LR LR
comp=Z,89µm,15.1s
WMQ LR LR
comp=Z,132µm,20.5s
MOY Mondy 54.27 341 *e*P **P** **16 27 04.3 +0.9**
MOY pmax pmax
comp=Z,2µm,2.2s
KUDL Kundal 54.41 304 *e*P **P** **16 27 03.3 -1.3**
KUDL IAmb IAmb 16 27 11.7
comp=Z,1µm,0.6s
KUDL IAMs_20 IAMs_20 16 45 12.3
comp=Z,45µm,22.3s
MSVF Nonsavu 54.41 113 P **P** **16 27 02.8 -2.1**
MSVF IAmb IAmb 16 27 18.8
comp=Z,2µm,1.1s
MSVF Nonsavu 54.41 113 IAMs_20 IAMs_20 16 51 08.4
comp=Z,127µm,20.0s
MSVF Nonsavu 54.41 113 P **P** **16 27 05.8 +0.9**
comp=Z,2µm,1.4s
MSVF Nonsavu 54.41 113*c i*P **P** **16 27 06.3 +1.4**
MSVF pmax pmax
comp=Z,1µm,1.0s
MSVF MLR MLR
comp=Z,123µm,20.0s
MSVF Nonsavu 54.41 113 P **P** **16 27 05.6 +0.7**
JHJR Jhajjar 54.44 304 *e*P **P** **16 27 04.8 0.0**
JHJR IAMs_20 IAMs_20 16 42 20.9
comp=Z,55µm,22.8s
H08S2 Diego Garcia H 54.47 260 P **P** **16 27 05.4 +0.5**
baz=52,slow=10,SNR=241
H08S3 Diego Garcia H 54.48 260 P **P** **16 27 04.9 -0.2**
baz=52,slow=10,SNR=147
DGAR Diego Garcia 54.48 260 P **P** **16 27 03.9 -1.4**
DGAR IAmb IAmb 16 27 12.2
comp=Z,3µm,1.3s
DGAR Diego Garcia 54.48 260 IAMs_20 IAMs_20 16 48 40.7
comp=Z,152µm,22.0s
DGAR Diego Garcia 54.48 260 P **P** **16 27 06.0 +0.6**
DGAR P **P** **16 27 06.0 +0.6**
DGAR S **S** **16 34 34.2 -7.0**
DGAR S **S** **16 34 34.2 -7.0**
DGAR Diego Garcia 54.48 260*ce*P **P** **16 27 06.1 +0.7**
DGAR pmax pmax
comp=Z,1µm,1.3s
H08S1 Diego Garcia H 54.49 260 P **P** **16 27 05.5 +0.4**
baz=52,slow=10,SNR=133
KNGR Kungurtug, Tuv 54.62 338 *i* P **P** **16 27 07.0 +1.1**
KNGR pmax pmax
comp=Z,536nm,1.1s
KNGR MLR MLR
comp=Z,64µm,19.0s
RTK Rohtak 54.77 305 *e*P **P** **16 27 07.3 +0.1**
RTK IAmb IAmb 16 27 14.6
comp=Z,4µm,1.0s
SMLA Simla 54.93 308 *e*P **P** **16 27 08.1 -0.2**
SMLA IAMs_20 IAMs_20 16 41 17.0
comp=Z,43µm,22.5s
SKR Severo-Kuril's 55.05 23*ce*P **P** **16 27 09.6 +0.8**
CGRH CHANDIGARH 55.09 307 *e*P **P** **16 27 11.0 +1.4**
CGRH IAmb IAmb 16 27 17.9
comp=Z,7µm,1.3s
CGRH IAMs_20 IAMs_20 16 41 45.7
comp=Z,56µm,23.9s
BHK Bhakra 55.64 308 *e*P **P** **16 27 13.3 -0.2**
UDPR Udaipur 55.68 299 *e*P **P** **16 27 13.5 -0.4**
UDPR IAmb IAmb 16 27 24.5
comp=Z,1µm,0.8s
ALCI Alchi Leh 56.15 311 *e*P **P** **16 27 17.1 -0.4**
ALCI IAMs_20 IAMs_20 16 42 53.1
comp=Z,62µm,19.7s
TLWR Talawar 56.20 308 *e*P **P** **16 27 17.1 -0.4**
TLWR IAmb IAmb 16 27 29.4
comp=Z,968nm,0.8s
TSSA Tissa 56.39 309 *e*P **P** **16 27 18.5 -0.6**
TSSA IAmb IAmb 16 27 30.6
comp=Z,2µm,0.9s
BOD Bodaibo 56.94 352⇓*i*P **P** **16 27 23.3 +1.1**
BOD pmax pmax
comp=Z,4µm,1.6s

BKNR BIKANER 57.05 303 *e*P **P** **16 27 23.1 -0.5**
BKNR IAmb IAmb 16 27 31.1
comp=Z,1µm,0.7s
SRGN SRI GANGA NAGA 57.15 305 *e*P **P** **16 27 23.9 -0.3**
SRGN IAmb IAmb 16 27 28.9
comp=Z,3µm,0.8s
JMU Jammu 57.32 308 *e*P **P** **16 27 26.4 +1.1**
JMU IAmb IAmb 16 27 30.8
comp=Z,2µm,0.7s
OUZ Omahuta 57.33 134 IAMs_20 IAMs_20 16 53 03.7
comp=Z,114µm,21.0s
OUZ Omahuta 57.33 134 P **P** **16 27 26.4 +1.0**
comp=Z,142nm,1.7s
PEA0B Petropavlovsk- 57.58 22 IAmb IAmb 16 27 32.5
comp=Z,3µm,1.4s
PEA0B Petropavlovsk- 57.58 22 *c iP* **P** **16 27 28.0 +1.2**
PETK Petropavlovsk- 57.58 22 P **P** **16 27 27.6 +0.8**
comp=Z,588nm,1.0s,baz=181,slow=4.5,SNR=288
PETK PP **PP** **16 29 36.0 +1.0**
comp=Z,23nm,0.7s,baz=204,slow=9.5,SNR=0.7
PETK PKiKP **PKiKP** **16 34 45.5 +0.2**
comp=Z,11nm,0.9s,baz=191,slow=1.4,SNR=2.9
PETK PKPPKP **P'P'df** **16 57 12.4 -0.3**
comp=Z,20nm,1.1s,baz=64,slow=3.4,SNR=3.8
comp=Z,588nm,1.0s
PETK Petropavlovsk- 57.58 22 P **P** **16 27 26.8 0.0**
PET Petropavlovsk 57.87 22 P **P** **16 27 29.2 +0.4**
PET IAmb IAmb 16 27 34.4
comp=Z,3µm,1.4s
PET Petropavlovsk 57.87 22 P **P** **16 27 30.0 +1.1**
comp=Z,7µm,1.6s
PET Petropavlovsk 57.87 22 *c iP* **P** **16 27 29.0 +0.2**
PET *e*S **S** **16 35 27.8 +2.9**
PET *e*SS **SS** **16 39 20.4 +4.0**
PET pmax pmax
comp=Z,2µm,1.5s
PET pmax pmax
comp=Z,32µm,11.7s
PET pmax pmax
comp=Z,42µm,11.8s
PET smax smax
comp=N,16µm,21.3s
PET smax smax
comp=E,22µm,15.0s
PET smax smax
comp=E,20µm,12.3s
PET smax smax
comp=N,11µm,18.7s
PET MLR MLR
comp=Z,40µm,20.0s
PET MLR MLR
comp=Z,35µm,20.0s
PET Petropavlovsk 57.87 22 P **P** **16 27 29.8 +1.0**
comp=Z,30µmcomp=Z,2µm,1.6s
PET Petropavlovsk 57.87 22 P **P** **16 27 29.9 +1.1**
SRNI Srinagar 57.88 310 *e*P **P** **16 27 30.3 +1.1**
SRNI IAmb IAmb 16 27 37.2
comp=Z,3µm,0.8s
ZSN Zaisan 58.11 328⇑ *iP* **P** **16 27 31.2 +0.5**
ZSN *e*S **S** **16 35 29.7 +1.4**
ZSN Zaisan 58.11 328 *c iP* **P** **16 27 31.2 +0.5**
ZSN *e*S **S** **16 35 29.7 +1.4**
DGZ Jazzator, Alta 58.28 331⇑ *iP* **P** **16 27 32.6 +0.6**
DGZ pmax pmax
comp=Z,696nm,1.1s
DGZ MLR MLR
comp=Z,257µm,22.0s
SHLS Shalkode 58.76 321⇑ *iP* **P** **16 27 34.2 -1.3**
comp=Z,2µm,1.9s
SHLS *e*S **S** **16 35 35.0 -2.2**
SHLS Shalkode 58.76 321 *c iP* **P** **16 27 34.2 -1.3**
SHLS *e*S **S** **16 35 35.0 -2.2**
SHLS pmax pmax
comp=Z,2µm,1.9s
BHUJ Bhuj 58.95 296 *e*P **P** **16 27 36.6 -0.3**
BHUJ IAmb IAmb 16 27 45.0
comp=Z,4µm,2.0s
BHUJ IAMs_20 IAMs_20 16 44 33.6
comp=Z,69µm,19.0s
PRZ Przheval'sk 59.09 320 IAmb IAmb 16 27 46.1
comp=Z,1µm,0.9s
TARG Taragay, Kyrgy 59.10 319 IAmb IAmb 16 28 01.6
comp=Z,751nm,0.9s
MK31 Makanchi Array 59.11 326 *ce*P **P** **16 27 37.9 +0.2**
MKAR Makanchi Array 59.11 326 P **P** **16 27 38.2 +0.5**
comp=Z,160nm,0.5s,baz=120,slow=7.7,SNR=765
MKAR PcP **PcP** **16 28 26.8 +0.9**
comp=Z,412nm,0.7s,baz=117,slow=4.5,SNR=5.5
MKAR ScP **ScP** **16 32 24.0 +1.2**
comp=Z,18nm,0.9s,baz=126,slow=4.4,SNR=1.7
MKAR PKiKP **PKiKP** **16 34 46.9 -0.5**
comp=Z,9.3nm,0.8s,baz=108,slow=3.6,SNR=1.0
MKAR S **S** **16 35 40.8 -0.6**
comp=Z,12nm,1.0s,baz=123,slow=16,SNR=2.8
MKAR ScS **ScS** **16 37 24.0 +0.3**
comp=Z,6.9nm,0.8s,baz=266,slow=1.5,SNR=1.8
MKAR LR LR 16 53 46.3
comp=Z,317µm,21.5s,baz=105,slow=37
MKAR PKPPKP **P'P'df** **16 57 10.8 -0.2**
comp=Z,5.6nm,0.9s,baz=251,slow=1.4,SNR=5.8
MKAR PKP2bc **P'P'bc** **16 57 21.7 +0.1**
comp=Z,39nm,1.0s,baz=300,slow=2.0,SNR=11
MKAR P4KPbc 17 04 43.8
comp=Z,10nm,0.8s,baz=113,slow=4.8,SNR=21
comp=Z,160nm,0.5s
DCZ Deep Cove 59.13 148 IAMs_20 IAMs_20 16 53 35.6
comp=Z,102µm,21.0s
JCZ Jackson Bay 59.15 145 P **P** **16 27 38.8 +0.7**
comp=Z,786nm,1.1s
MAKZ Makanchi 59.29 326 P **P** **16 27 39.1 +0.1**
KSH Kashi 59.30 316 P **P** **16 27 40.6 +1.3**
KSH S **S** **16 35 44.1 -0.3**
KSH pmax pmax
comp=Z,800nm,3.5s
KSH pmax pmax
comp=Z,20µm,13.9s
KSH LR LR
comp=Z,80µm,21.3s
KSH LR LR
comp=Z,87µm,20.4s
KSH LR LR
comp=Z,102µm,17.9s
PYZ Puysegur Point 59.34 148 IAMs_20 IAMs_20 16 53 55.1
comp=Z,126µm,20.0s
SATY Saty 59.37 321⇑ *iP* **P** **16 27 40.2 +0.5**
comp=Z,3µm,2.1s
SATY *e*S **S** **16 35 46.3 +1.0**
SATY Saty 59.37 321 *c iP* **P** **16 27 40.2 +0.5**
SATY *e*S **S** **16 35 46.2 +1.0**
SATY pmax pmax
comp=Z,3µm,2.1s
KPKS Kokpek 59.41 321 *e*P **P** **16 27 40.7 +0.7**
KPKS Kokpek 59.41 321 *e*P **P** **16 27 40.6 +0.7**
FOZ Fox Glacier 59.41 144 P **P** **16 27 39.3 -0.4**
QRZ Quartz Range 59.51 141 P **P** **16 27 40.8 +0.3**
comp=Z,582nm,0.9s
QRZ Quartz Range 59.51 141 P **P** **16 27 41.3 +0.8**
KUZ Kuaotunu 59.57 135 P **P** **16 27 41.2 +0.2**
comp=Z,441nm,0.9s
MLZ Mavora Lakes 59.59 147 IAMs_20 IAMs_20 16 53 58.3
comp=Z,112µm,21.0s
AIS Amsterdam Isla 59.64 224 P **P** **16 27 42.1 +0.7**
AIS IAmb IAmb 16 27 48.9
comp=Z,2µm,1.1s
AIS IAMs_20 IAMs_20 16 52 03.1
comp=Z,108µm,22.0s
AIS Amsterdam Isla 59.64 224 P **P** **16 27 44.2 +2.8**
KHEZ Kahui Hut 59.66 138 P **P** **16 27 46.1 +4.4**
comp=Z,805nm,1.3s
KHEZ Kahui Hut 59.66 138 P P 16 27 46.7 +5.0
WVZ Waitaha Valley 59.68 144 P **P** **16 27 43.6 +2.0**
KDJ Kajisay 59.70 319 IAmb IAmb 16 27 55.2
comp=Z,839nm,0.8s
DREZ Durham Road 59.73 138 P P 16 27 49.5 +7.4
HIZ Hauiti 59.83 137 P **P** **16 27 44.9 +2.1**
comp=Z,947nm,0.9s
HIZ Hauiti 59.83 137 P **P** **16 27 44.8 +2.0**
WHZ Wether Hill Ro 59.83 148 IAMs_20 IAMs_20 16 54 07.8
comp=Z,97µm,20.0s
MIDW Midway 59.85 58 P **P** **16 27 42.9 -0.2**
MIDW Midway 59.85 58⇑ P **P** **16 27 46.1 +3.0**
TOZ Tahuroa Road 59.89 136 IAmb IAmb 16 27 48.6
comp=Z,5µm,2.5s
TKNZ Takaka Hill 59.90 141 P **P** **16 27 41.9 -1.3**
TKNZ Takaka Hill 59.90 141 P **P** **16 27 45.6 +2.4**
INZ Inchbonnie 59.90 143 P **P** **16 27 43.5 +0.4**

MRNZ Matariki Terra 59.97 141 P **P** **16 27 42.2 -1.5**
MRNZ Matariki Terra 59.97 141 P **P** **16 27 43.6 0.0**
LREZ Lake Rotokare 60.01 138 P **P** **16 27 46.1 +2.2**
VRZ Vera Road 60.07 138 P **P** **16 27 45.7 +1.3**
LBZ Lake Benmore 60.14 145 IAmb IAmb 16 28 04.6
comp=Z,946nm,1.1s
RPZ Rata Peaks 60.24 144 LR LR 16 54 24.3
comp=Z,116µm,21.8s,baz=302,slow=37
RPZ PKP2bc 16 57 18.6
comp=Z,34nm,1.1s,baz=122,slow=1.9,SNR=10
RPZ Rata Peaks 60.24 144 IAMs_20 IAMs_20 16 56 08.6
comp=Z,105µm,20.0s
RPZ Rata Peaks 60.24 144 P **P** **16 27 45.5 0.0**
comp=Z,413nm,0.8s
RPZ Rata Peaks 60.24 144 P **P** **16 27 46.2 +0.6**
THZ Tophouse 60.26 141 P **P** **16 27 45.5 -0.2**
NNZ Nelson 60.26 141 IAmb IAmb 16 27 50.9
comp=Z,5µm,2.7s
NNZ Nelson 60.26 141 P **P** **16 27 46.6 +0.9**
TNSS Tian-Shan 60.29 320 *e*P **P** **16 27 46.6 +0.2**
TNSS Tian-Shan 60.29 320 *e*P **P** **16 27 46.5 +0.2**
ARXS Arharly 60.32 322 *e*P **P** **16 27 45.7 -0.4**
ULHL Ulahol 60.37 319 P **P** **16 27 47.1 +0.4**
SNR=130
YAK Yakutsk 60.37 2 PKPPKP 16 57 08.6
comp=Z,33nm,0.9s,baz=67,slow=4.4,SNR=5.1
YAK PKP2bc **P'P'bc** **16 57 17.9 +0.6**
comp=Z,98nm,0.9s,baz=16,slow=5.5,SNR=12
YAK Yakutsk 60.37 2 P **P** **16 27 45.8 -0.2**
YAK Yakutsk 60.37 2 IAMs_20 IAMs_20 16 55 50.4
comp=Z,114µm,21.0s
YAK Yakutsk 60.37 2 *c iP* **P** **16 27 46.9 +0.9**
YAK *e**PP **pwP** **16 28 00.3 -0.9**
YAK *e* 16 30 00.9
YAK *e*S **S** **16 35 55.3 -1.7**
YAK *e**SS **sS** **16 36 25.3 +6.3**
YAK *e* 16 37 32.9
YAK pmax pmax
comp=Z,6µm,1.1s
YAK pmax pmax
comp=N,3µm,1.2s
YAK pmax pmax
comp=E,715nm,1.2s
YAK pmax pmax
comp=Z,3µm,2.3s
YAK pmax pmax
comp=N,2µm,2.3s
YAK pmax pmax
comp=E,525nm,1.6s
YAK smax smax
comp=E,21µm,9.2s
YAK smax smax
comp=N,33µm,8.9s
YAK MLR MLR
comp=Z,78µm,19.0s
YAK MLR MLR
comp=N,65µm,24.0s
YAK MLR MLR
comp=E,25µm,22.0s
YAK Yakutsk 60.37 2 P **P** **16 27 46.8 +0.8**
TDK Taldyqorghan 60.37 323⇑ *iP* **P** **16 27 47.1 +0.6**
comp=E,5µm,1.8s
TDK *e*S **S** **16 35 59.1 +1.3**
TDK LR LR 16 56 23.3
comp=E,52µm,17.3s
TDK Taldyqorghan 60.37 323 *c iP* **P** **16 27 47.0 +0.6**
TDK *e*S **S** **16 35 59.0 +1.3**
TDK pmax pmax
comp=Z,5µm,1.8s
TDK MLR MLR
comp=Z,52µm,17.0s
DUWZ D'Urville Isla 60.39 140 P **P** **16 27 47.5 +0.9**
TGRZ Tauranga 60.42 136 P **P** **16 27 48.3 +1.5**
MHCZ Mount Hutt 60.44 144 P **P** **16 27 47.0 +0.1**
KUTZ Kaahu Road 60.48 137 P P 16 27 54.9 +7.7
TWVZ Taurewa 60.50 137 P **P** **16 27 52.2 +4.7**
WATZ Wairara 60.53 137 P **P** **16 27 50.9 +3.4**
WAZ Wanganui 60.54 138 P P 16 27 52.5 +4.9
KARZ Kaharoa 60.55 136 P **P** **16 27 52.3 +4.6**
PKVZ Pokaka 60.55 138 P **P** **16 27 50.5 +2.7**
OXZ Oxford 60.60 143 P **P** **16 27 46.3 -1.7**
OXZ IAMs_20 IAMs_20 16 57 23.1
comp=Z,111µm,19.0s
OXZ Oxford 60.60 143 P **P** **16 27 47.3 -0.6**
GRRZ Galatos Road 60.61 136 P **P** **16 27 49.4 +1.2**
WTVZ West Tongariro 60.63 137 P **P** **16 27 51.7 +3.3**
RATZ Rangitukua 60.63 137 P **P** **16 27 51.5 +3.2**
COVZ Chateau Observ 60.64 138 P **P** **16 27 51.2 +2.7**
KRVZ Karewarewa 60.65 137 P **P** **16 27 50.9 +2.4**
NNVZ North Ngauruho 60.65 137 P **P** **16 27 51.6 +3.0**
WHTZ Whakaora 60.66 137 P P 16 27 53.6 +5.1
NGZ Ngauruhoe 60.67 137 P **P** **16 27 51.9 +3.2**
FWVZ Far West T-bar 60.67 138 P **P** **16 27 50.4 +1.6**
OPRZ Ohinepanea 60.68 136 P **P** **16 27 51.5 +2.9**
NTVZ North Tongariro 60.68 137 P **P** **16 27 49.1 +0.3**
BOOM Boomskoye usch 60.68 319 IAmb IAmb 16 27 57.1
comp=Z,2µm,1.7s
HSRZ Hossack Road 60.69 136 P **P** **16 27 53.2 +4.6**
MAVZ Matarangi 60.69 138 P P 16 27 55.3 +6.3
TRVZ Turoa 60.69 138 P **P** **16 27 53.0 +4.1**
OTVZ Oturere 60.70 137 P **P** **16 27 52.3 +3.4**
TMVZ Te Maari 60.71 137 P **P** **16 27 51.8 +2.9**
WHVZ Whangaehu Hut 60.71 138 P **P** **16 27 53.5 +4.4**
ETVZ East Tongariro 60.72 137 P **P** **16 27 51.6 +2.6**
WPRZ Whakapapatarin 60.73 137 P P 16 27 55.1 +6.2
HLRZ Highlands Stat 60.73 136 P P 16 27 55.6 +6.6
TUWZ Tuamarina 60.73 140 P **P** **16 27 47.3 -1.6**
TUWZ Tuamarina 60.73 140 P **P** **16 27 49.1 +0.2**
WNVZ Wahianoa 60.74 138 P **P** **16 27 51.9 +2.7**
RITZ Rihia Road 60.74 137 P **P** **16 27 52.1 +3.1**
ODZ Otahua Downs 60.80 145 IAmb IAmb 16 28 39.4
comp=Z,2µm,2.5s
ODZ Otahua Downs 60.80 145 P **P** **16 27 48.9 -0.3**
comp=Z,159nm,1.0s
TARZ Mount Tarawera 60.83 136 P **P** **16 27 54.0 +4.2**
TCW Tory Channel 60.83 140 P **P** **16 27 48.7 -0.9**
BSWZ Blackbirch Sta 60.84 141 P **P** **16 27 50.1 +0.5**
ALRZ Allen Road 60.87 137 P **P** **16 27 52.4 +2.5**
SYZ Scrubby Hill 60.88 148 P **P** **16 27 50.8 +1.1**
comp=Z,192nm,0.9s
MOVZ Moawhango 60.88 138 P **P** **16 27 50.0 -0.1**
RRRZ Republican Roa 60.88 136 P **P** **16 27 53.0 +3.0**
AMCZ Amberley 60.89 143 P **P** **16 27 50.5 +0.6**
MA2 Magadan 60.89 14 LR LR 16 55 09.4
comp=Z,17µm,20.2s,baz=208,slow=37
MA2 Magadan 60.89 14 P **P** **16 27 50.2 +0.7**
MA2 Magadan 60.89 14 P **P** **16 27 51.1 +1.5**
comp=Z,4µm,1.7s
MA2 Magadan 60.89 14 *c iP* **P** **16 27 51.4 +1.8**
MA2 pmax pmax
comp=Z,4µm,1.1s
MA2 MLR MLR
comp=Z,82µm,22.0s
MA2 Magadan 60.89 14 P **P** **16 27 50.9 +1.3**
comp=Z,54µmcomp=Z,4µm,1.7s
MA2 Magadan 60.89 14 P **P** **16 27 51.4 +1.8**
EDRZ Edgecumbe 60.93 136 P **P** **16 27 53.6 +3.2**
WHRZ Whale Island 60.98 136 P **P** **16 27 54.1 +3.5**
OHWZ Ohakea 60.99 139 P **P** **16 27 51.5 +0.9**
GVZ Greta Valley S 61.00 142 P **P** **16 27 50.9 +0.2**
KHZ Kahutara 61.01 142 P **P** **16 27 49.5 -1.2**
comp=Z,685nm,0.9s
KHZ Kahutara 61.01 142 P **P** **16 27 50.1 -0.6**
MRHZ Matea Rd 61.05 137 P **P** **16 27 53.1 +1.9**
KIW Kapiti Island 61.06 139 P **P** **16 27 52.5 +1.3**
CMWZ Cape Campbell 61.08 141 P **P** **16 27 49.2 -2.0**
CMWZ Cape Campbell 61.08 141 P **P** **16 27 52.5 +1.3**
KUU Kurty 61.09 321 *e*P **P** **16 27 52.1 +0.8**
comp=Z,3µm,1.6s
KUU LR LR 16 56 51.6
comp=Z,49µm,19.3s
KUU Kurty 61.09 321 *e*P **P** **16 27 52.1 +0.8**
KUU pmax pmax
comp=Z,3µm,1.6s
KUU MLR MLR
comp=Z,49µm,19.0s
TKM2 Tokmak 2 61.11 319 P **P** **16 27 52.0 +0.3**
SNR=386
MUGZ Murupara 61.13 136 P **P** **16 27 56.1 +4.4**
SNZO South Karori 61.16 140 P **P** **16 27 49.4 -2.3**
SNZO South Karori 61.16 140 P **P** **16 27 50.1 -1.6**
comp=Z,416nm,0.8s
SNZO South Karori 61.16 140 P **P** **16 27 50.5 -1.3**
SNZO S **S** **16 36 05.5 -2.3**

MQZ McQueen's Vall 61.19 143 IAmb IAmb 16 27 56.4
comp=Z,6µm,2.7s
OGWZ Otaki Gorge 61.21 139 P **P** **16 27 51.5 -0.6**
URZ Urewera 61.26 136 P **P** **16 27 51.4 -1.1**
comp=Z,183nm,0.7s,baz=274,slow=3.4,SNR=29
URZ LR LR 16 55 42.8
comp=Z,102µm,19.7s,baz=308,slow=37
URZ PKPPKP **P'P'df** **16 57 06.9 -0.8**
comp=Z,36nm,1.1s,baz=112,slow=5.6,SNR=3.2
URZ PKP2bc **P'P'bc** **16 57 16.0 -0.5**
comp=Z,29nm,1.0s,baz=115,slow=3.2,SNR=8.2
comp=Z,183nm,0.7s
URZ Urewera 61.26 136 P **P** **16 27 51.2 -1.3**
comp=Z,437nm,0.8s
URZ Urewera 61.26 136 P **P** **16 27 51.8 -0.7**
BKZ Black Stump Fm 61.27 137 P **P** **16 27 50.8 -1.8**
BKZ Black Stump Fm 61.27 137 P **P** **16 27 51.6 -1.0**
comp=Z,518nm,0.9s
BKZ Black Stump Fm 61.27 137 P **P** **16 27 52.3 -0.3**
CAW Cannon Point 61.29 140 P **P** **16 27 53.3 +0.6**
BHW Baring Head 61.32 140 P **P** **16 27 51.5 -1.4**
RTZ Ruatahuna 61.34 136 IAmb IAmb 16 28 01.8
comp=Z,1µm,0.8s
RTZ Ruatahuna 61.34 136 P **P** **16 27 55.5 +2.4**
KWHZ Kaweka Forest 61.34 137 P **P** **16 27 55.0 +1.8**
TSZ Takapari Road 61.34 138 P **P** **16 27 54.8 +1.6**
MTHZ Maungataniwha 61.35 137 P **P** **16 27 53.1 -0.1**
POWZ Post Office Ro 61.38 139 P **P** **16 27 54.4 +1.1**
MRZ Mangatainoka R 61.39 139 P **P** **16 27 52.3 -1.1**
KBK Karagaybulak 61.41 319 P **P** **16 27 54.3 +0.6**
SNR=105
KRHZ Kereru 61.41 138 P **P** **16 27 53.4 -0.1**
RAO Raoul Island 61.42 125 LR LR 16 54 30.2
comp=Z,33µm,20.0s,baz=300,slow=36
PNHZ Pukenui 61.43 138 P **P** **16 27 55.3 +1.6**
NMHZ Naumai 61.45 137 P **P** **16 27 55.4 +1.5**
HOWZ Holdsworth Sta 61.47 139 P **P** **16 27 50.6 -3.3**
UCH Uchtor 61.50 318 P **P** **16 27 55.4 +0.7**
SNR=544
RUGZ Raukumara Rang 61.52 135 P **P** **16 27 55.6 +1.2**
MCHZ McNeill Hill 61.54 137 P **P** **16 27 54.9 +0.5**
RAHZ Arahi 61.55 137 P **P** **16 27 54.9 +0.3**
MSWZ Moikau Station 61.56 140 P **P** **16 27 53.4 -1.1**
MWZ Matawai 61.59 136 P **P** **16 27 54.6 -0.2**
MTW Mount Morrison 61.60 139 P **P** **16 27 55.3 +0.5**
PRWZ Pori Road 61.60 139 P **P** **16 27 56.0 +1.2**
PLWZ Palliser 61.65 140 P **P** **16 27 53.2 -1.9**
PLWZ Palliser 61.65 140 P **P** **16 27 54.1 -1.0**
TIWZ Tintock 61.65 139 P **P** **16 27 56.0 +0.8**
ARHZ Aropaoanui 61.66 137 P **P** **16 27 57.0 +1.8**
PAWZ Paruwai Farm 61.66 140 P **P** **16 27 55.3 +0.1**
SNGZ Shannon Statio 61.66 136 P **P** **16 27 55.4 +0.2**
WPHZ Waipukurau 61.67 138 P **P** **16 27 56.7 +1.4**
CHMS Chumysh 61.69 319 P **P** **16 27 55.7 +0.3**
SNR=50
AAK Ala-Archa 61.70 319 LR LR 16 55 51.3
comp=Z,131µm,21.9s,baz=104,slow=37
AAK Ala-Archa 61.70 319 P **P** **16 27 55.3 -0.3**
AAK IAmb IAmb 16 28 04.2
comp=Z,4µm,1.9s
AAK Ala-Archa 61.70 319 P **P** **16 27 56.6 +1.0**
AAK P **P** **16 27 56.6 +1.0**
AAK S **S** **16 36 10.5 -4.5**
AAK S **S** **16 36 10.5 -4.5**
AAK Ala-Archa 61.70 319 P **P** **16 27 56.2 +0.6**
SNR=66
AAK Ala-Archa 61.70 319 *ce*P **P** **16 27 56.4 +0.8**
AAK pmax pmax
comp=Z,2µm,1.9s
AAK MLR MLR
comp=Z,163µm,22.0s
AAK Ala-Archa 61.70 319 P **P** **16 27 55.8 +0.2**
AAK S **S** **16 36 12.4 -2.6**
AAK Ala-Archa 61.70 319 P **P** **16 27 56.4 +0.8**
AAK PcP **PcP** **16 28 37.6 +0.9**
WHHZ Waihua 61.73 137 P **P** **16 27 59.9 +4.2**
PKGZ Pakihiroa 61.76 135 P **P** **16 27 59.3 +3.4**
MXZ Matakaoa Point 61.78 135 IAMs_20 IAMs_20 16 54 09.2
comp=Z,102µm,21.0s
MXZ Matakaoa Point 61.78 135 P **P** **16 27 58.3 +2.3**
comp=Z,384nm,0.7s
MXZ Matakaoa Point 61.78 135 P **P** **16 27 58.7 +2.6**
TMWZ Te Maipa 61.82 139 P **P** **16 27 56.0 -0.3**
KAHZ Kahuranaki 61.83 138 P **P** **16 27 57.4 +1.0**
TWGZ Tauwhareparae 61.83 135 P **P** **16 27 56.6 +0.1**
TRWZ Traveller 61.84 140 P **P** **16 27 56.2 -0.2**
BFZ Birch Farm 61.84 139 P **P** **16 27 56.1 -0.3**
comp=Z,343nm,1.0s
BFZ Birch Farm 61.84 139 P **P** **16 27 56.9 +0.5**
TKGZ Te Karaka 61.86 136 P **P** **16 27 59.4 +2.9**
ANWZ Angora Road 61.88 138 P **P** **16 27 57.4 +0.7**
PRHZ Porangahau 61.90 138 P **P** **16 27 55.7 -1.0**
CKHZ Cape Kidnapper 61.90 137 P **P** **16 27 58.6 +1.8**
RIGZ Rimuhau 61.92 136 P **P** **16 27 58.7 +1.7**
CPWZ Castlepoint 61.93 139 P **P** **16 27 58.8 +1.9**
PXZ Pawanui 61.93 138 P **P** **16 27 56.5 -0.5**
WMGZ Waiomatatini S 61.97 135 P **P** **16 27 57.4 +0.1**
PUZ Puketiti 61.98 135 P **P** **16 27 58.4 +1.0**
SGDS Sogindy 61.98 320 *eP* **P** **16 27 57.5 +0.1**
USP Ospenovka 61.98 319 P **P** **16 27 57.6 +0.2**
SNR=402
KNZ Kokohu 62.01 136 P **P** **16 27 57.1 -0.4**
PRGZ Paritu Road 62.10 136 P **P** **16 28 01.5 +3.3**
CNGZ Carnagh Statio 62.13 136 P **P** **16 27 59.2 +0.9**
ARSB Arslanbob 62.14 317 IAmb IAmb 16 28 09.8
comp=Z,3µm,1.6s
EKS2 Erkin-Say 62.18 319 P **P** **16 27 59.4 +0.6**
SNR=266
DRK Karamyk 62.22 315 IAmb IAmb 16 28 11.8
comp=Z,3µm,1.4s
MHGZ Mahia Peninsul 62.23 136 P **P** **16 27 59.5 +0.5**
ZAA0 Zalesovo Array 62.33 334 P **P** **16 27 58.0 -1.4**
ZAA0 IAmb IAmb 16 28 12.8
comp=Z,1µm,1.3s
ZALV Zalesovo Beam 62.33 334 P **P** **16 27 59.0 -0.5**
comp=Z,139nm,0.6s,baz=130,slow=6.6,SNR=118
ZALV PKiKP **PKiKP** **16 34 52.5 +1.4**
comp=Z,7.6nm,0.6s,baz=188,slow=2.6,SNR=1.5
ZALV S **S** **16 36 19.3 -2.9**
comp=Z,8.5nm,0.8s,baz=137,slow=11,SNR=1.9
ZALV ScS **SKSac** **16 37 47.4 0.0**
comp=Z,12nm,1.1s,baz=120,slow=5.7,SNR=1.7
ZALV LR LR 16 56 49.0
comp=Z,96µm,20.9s,baz=134,slow=38
ZALV PKPPKP **P'P'df** **16 57 04.4 -1.0**
comp=Z,9.3nm,0.8s,baz=345,slow=4.6,SNR=8.1
ZALV PKP2bc **P'P'bc** **16 57 11.8 -1.4**
comp=Z,102nm,1.1s,baz=304,slow=3.4,SNR=12
ZALV P4KPbc 17 04 54.4
comp=Z,3.3nm,0.9s,baz=116,slow=3.4,SNR=8.3
comp=Z,139nm,0.6s
ZALV Zalesovo Beam 62.33 334 P **P** **16 27 58.2 -1.2**
ZALV Zalesovo Beam 62.33 334 *i* P **P** **16 27 59.2 -0.2**
ZALV pmax pmax
comp=Z,139nm,0.6s
KBU Kabul Universi 62.45 308 P **P** **16 28 00.7 -0.2**
KBL Kabul 62.53 308 P **P** **16 28 00.3 -1.1**
KBL IAmb IAmb 16 28 06.9
comp=Z,1µm,0.9s
KBL Kabul 62.53 308 P **P** **16 28 01.1 -0.3**
SNR=656
KBL P **P** **16 28 01.1 -0.3**
SNR=656
KBL Kabul 62.53 308 P **P** **16 28 00.3 -1.1**
KBL pmax pmax
comp=Z,1µm,1.0s
BTLS Baital 63.08 321 *eP* **P** **16 28 04.8 +0.1**
comp=Z,2µm,2.1s
BTLS *e*S **S** **16 36 33.4 +1.4**
BTLS Baital 63.08 321 *eP* **P** **16 28 04.7 +0.1**
BTLS *e*S **S** **16 36 33.4 +1.4**
BTLS pmax pmax
comp=Z,2µm,2.1s
GAR Garm 63.10 314 P **P** **16 28 04.0 -1.0**
AFI Afiamalu 63.20 106 P **P** **16 28 04.4 -1.6**
KURBB Kurchatov Arra 63.34 328 P **P** **16 28 06.2 0.0**
comp=Z,887nm,0.6s,baz=128,slow=6.3,SNR=609
KURBB PKPPKP **P'P'df** **16 57 02.9 -1.2**
comp=Z,20nm,1.1s,baz=283,slow=2.8,SNR=9.1
KURBB P4KPbc 17 04 59.8
comp=Z,3.8nm,0.9s,baz=129,slow=3.7,SNR=6.6
comp=Z,887nm,0.6s
KURK Kurchatov 63.35 328 P **P** **16 28 05.5 -0.7**
KURK Kurchatov 63.35 328 P **P** **16 28 06.3 +0.1**

KURK P P 16 28 06.3 +0.1
KURK S S 16 36 28.5 -6.6
KURK S S 16 36 28.5 -6.6
KURK Kurchatov 63.35 328 *c i* P P 16 28 06.5 +0.3
KURK pmax pmax
comp=Z,3µm,0.9s
KURK MLR MLR
comp=Z,54µm,22.0s
KURK Kurchatov 63.35 328 P P 16 28 06.9 +0.7
CHGR Chuyangaron 63.82 313 IAmb IAmb 16 28 19.5
comp=Z,3µm,1.0s
DZA Taraz 63.91 318 *e* P P 16 28 11.0 +0.8
comp=Z,2µm,2.0s
DZA Taraz 63.91 318 *e* P P 16 28 10.9 +0.8
DZA pmax pmax
comp=Z,2µm,2.0s
SEY Seymchan 64.22 13 LR LR 16 54 57.7
comp=Z,25µm,21.6s,baz=203,slow=35
SEY PKPPKP 16 57 02.0
comp=Z,22nm,1.0s,baz=60,slow=5.1,SNR=8.6
SEY P4KPbc 17 05 01.9
comp=Z,2.3nm,0.8s,baz=188,slow=8.3,SNR=2.2
SEY Seymchan 64.22 13 *c i* P P 16 28 14.0 +2.3
SEY pmax pmax
comp=Z,4µm,1.4s
SEY MLR MLR
comp=Z,43µm,19.0s
IUG luzhnay 64.49 317 ⇑ *i* P P 16 28 14.6 +0.4
comp=Z,1µm,1.2s
IUG *e* S S 16 36 50.9 +1.0
IUG luzhnay 64.49 317 *c i* P P 16 28 14.5 +0.4
IUG *e* S S 16 36 50.9 +1.0
IUG pmax pmax
comp=Z,1µm,1.2s
SHEM Shemya Is, Ala 64.53 30 LR LR 16 55 13.9
comp=Z,32µm,19.8s,baz=223,slow=35
SMY Shemya 64.53 30 P P 16 28 13.7 -0.2
SMY Shemya 64.53 30 P P 16 28 18.3 +4.4
comp=Z,3µm,1.6s
JOHN Johnston Islan 64.82 72 P P 16 28 14.9 -1.6
JOHN Johnston Islan 64.82 72 P P 16 28 19.1 +2.6
comp=Z,1µm,0.9s
JOHN Johnston Islan 64.82 72 P P 16 28 18.0 +1.5
CHM Chimkent 64.85 317 *e* P P 16 28 17.2 +0.9
comp=Z,4µm,2.3s
CHM LR LR 16 59 18.9
comp=Z,36µm,19.7s
CHM Chimkent 64.85 317 *e* P P 16 28 17.2 +0.9
CHM pmax pmax
comp=Z,4µm,2.3s
CHM MLR MLR
comp=Z,36µm,20.0s
BRLS Boroldaу 64.97 318 *e* P P 16 28 17.2 +0.1
BRLS *e* S S 16 36 57.1 +1.6
BRLS Boroldaу 64.97 318 *e* P P 16 28 17.2 +0.1
BRLS *e* S S 16 36 57.1 +1.6
ROCAM Rodrigues Isla 65.23 248 P P 16 28 21.2 +2.1
NIUE Niue 65.83 112 IAmb IAmb 16 28 31.5
comp=Z,2µm,1.1s
NIUE Niue 65.83 112 P P 16 28 26.5 +3.5
comp=Z,1µm,1.1s
BRZS Berezniki 66.22 325 *e* P P 16 28 25.7 +0.7
BRZS *e* S S 16 37 12.1 +1.6
BRZS Berezniki 66.22 325 *e* P P 16 28 25.7 +0.7
BRZS *e* S S 16 37 12.1 +1.6
NGCH Negor - Chabah 66.98 297 P P 16 28 31.1 +0.8
SNR=10
HRA Herat 67.88 307 IAmb IAmb 16 29 09.0
comp=Z,3µm,2.2s
CTZ Chatham Island 67.95 139 IAmb IAmb 16 28 41.1
comp=Z,4µm,2.8s
JLN Jalan Bani Buh 68.07 293 P P 16 28 36.6 -0.6
SNR=54
JLN P P 16 28 36.6 -0.6
SNR=54
WBK Wadi Bani Khal 68.53 294 P P 16 28 38.9 -1.3
SNR=36
WBK S S 16 37 32.0 -7.3
CASY Casey 68.63 187 P P 16 28 39.8 0.0
CASY Casey 68.63 187 P P 16 28 40.7 +0.9
KIWB Kanaga Island 68.70 34 IAmb IAmb 16 28 45.9
comp=Z,3µm,1.4s
DRV Dumont d'Urvil 68.78 174 P P 16 28 40.9 +0.2
BVAR Borovoye Array 68.91 328 P P 16 28 41.9 0.0
comp=Z,118nm,0.5s,baz=124,slow=7.4,SNR=404
BVAR S S 16 37 38.2 -4.5
comp=Z,34nm,1.2s,baz=105,slow=9.1,SNR=3.9
BVAR PKPPKP **P'P'df** 16 56 54.1 -0.7
comp=Z,3.6nm,0.9s,baz=294,slow=1.5,SNR=4.3
BVAR LR LR 16 59 40.3
comp=Z,121µm,21.6s,baz=124,slow=36
BVAR P4KPbc 17 05 25.9
comp=Z,4.9nm,0.9s,baz=129,slow=4.6,SNR=11
comp=Z,118nm,0.5s
WSAR Wadi Sarin 68.92 294 LR LR 16 59 20.3
comp=Z,511nm,21.9s,baz=106,slow=36
WSAR Wadi Sarin 68.92 294 P P 16 28 41.6 -1.0
SNR=51
BORK Borovoye 68.96 328 *c i* P P 16 28 42.7 +0.5
BORK pmax pmax
comp=Z,3µm,1.6s
BORK MLR MLR
comp=Z,123µm,20.0s
BORK Borovoye 68.96 328 P P 16 28 42.8 +0.5
ADK Adak 68.97 34 IAMs_20 IAMs_20 16 54 11.5
comp=Z,89µm,22.0s
ADK Adak 68.97 34 P P 16 28 43.1 +0.8
comp=Z,775nm,1.7s
ADK Adak 68.97 34 P P 16 28 41.7 -0.6
ADK pmax pmax
comp=Z,3µm,1.3s
ADK MLR MLR
comp=Z,89µm,22.0s
ADK Adak 68.97 34 P P 16 28 42.9 +0.7
MHTO MHTO 69.26 292 P P 16 28 43.5 -1.1
SNR=241
MHTO P P 16 28 43.5 -1.1
SNR=241
MHTO S S 16 37 40.6 -7.2
MHTO S S 16 37 40.6 -7.2
JMDO Jabal Madar 69.30 293 P P 16 28 44.1 -0.8
SNR=91
JMDO P P 16 28 44.1 -0.8
SNR=91
SMDO Samad 69.43 294 P P 16 28 44.9 -0.9
SNR=47
SMDO P P 16 28 44.9 -0.9
SNR=47
SMDO S S 16 37 42.3 -7.8
SMDO S S 16 37 42.3 -7.8
PAF Port-aux-Franc 69.88 215 P P 16 28 47.5 -0.4
PAF IAmb IAmb 16 28 55.4
comp=Z,3µm,1.7s
TIXI Tiksi 70.00 1 PKPPKP 16 56 51.1
comp=Z,23nm,0.9s,baz=52,slow=5.3,SNR=12
TIXI LR LR 16 58 05.0
comp=Z,77µm,21.8s,baz=202,slow=35
TIXI Tiksi 70.00 1 P P 16 28 47.5 -0.7
TIXI Tiksi 70.00 1 IAMs_20 IAMs_20 16 58 10.6
comp=Z,71µm,21.0s
TIXI Tiksi 70.00 1 *c i* P P 16 28 47.8 -0.4
TIXI pmax pmax
comp=Z,4µm,1.4s
TIXI Tiksi 70.00 1 P P 16 28 48.0 -0.3
BSY Bisya 70.17 294 P P 16 28 49.9 -0.4
SNR=78
BSY S S 16 37 48.8 -10
HOQ Hoqain 70.17 294 P P 16 28 49.8 -0.5
SNR=120
HOQ S S 16 37 52.9 -5.6
ATKA Atka Island 70.50 34 P P 16 28 52.4 +0.8
comp=Z,3µm,1.2s
ARQ Araqi 70.86 294 P P 16 28 53.8 -0.7
SNR=232
ARQ S S 16 37 56.6 -10
ARQ S S 16 37 59.2 -7.5
SOHO SOHO 70.95 295 P P 16 28 54.3 -0.7
SOHO P P 16 28 55.2 +0.2
SOHO S S 16 37 59.7 -7.8
MSEY Mahe Island 71.05 265 P P 16 28 54.2 -1.7
MSEY Mahe Island 71.05 265 P P 16 28 55.7 -0.2
MSEY Mahe Island 71.05 265 P P 16 28 54.2 -1.7
MSEY pmax pmax
comp=Z,522nm,1.3s
MSEY MLR MLR
comp=Z,122µm,22.0s

MSEY Mahe Island 71.05 265 P P 16 28 55.5 -0.3
SHAO Shalim 71.17 288 P P 16 28 55.6 -0.9
SNR=35
SHAO S S 16 38 04.6 -5.8
MDH Madha 71.30 296 P P 16 28 56.0 -1.1
SNR=22
MDH S S 16 38 02.9 -8.7
UOSS Minazif 71.34 296 P P 16 28 55.6 -1.8
UOSS Minazif 71.34 296 P P 16 28 56.2 -1.2
UOSS S S 16 38 02.6 -10
UOSS Minazif 71.34 296 P P 16 28 55.6 -1.8
BANOM Banah 71.38 297 P P 16 28 57.2 -0.5
BANOM S S 16 38 07.5 -5.2
HATD Hatta, Dubai 71.39 296 P P 16 28 57.3 -0.4
SNR=134
HATD S S 16 38 07.0 -5.7
HATD Hatta, Dubai 71.39 296 P P 16 28 56.7 -1.0
HATD S S 16 38 03.6 -9.1
MSFE Esma-Masafi 71.44 296 *i* P P 16 28 57.0 -1.0
SNR=105
MASF Masafi 71.44 296 P P 16 28 58.1 +0.1
SNR=73
MASF S S 16 38 06.8 -6.5
ASHO Ashiyiah 71.44 295 P P 16 28 58.3 +0.3
SNR=107
ASHO S S 16 38 06.8 -6.6
SHME Shamm 71.54 297 P P 16 28 58.2 -0.3
SNR=96
SHME S S 16 38 08.4 -5.9
SHME Shamm 71.54 297 *i* P P 16 28 58.8 +0.2
SNR=142
ALNE Al Ain 71.65 295 P P 16 28 59.2 0.0
SNR=523
ALNE S S 16 38 09.0 -6.7
ALNE Al Ain 71.65 295 *i* P P 16 28 58.2 -1.0
SNR=377
BILL Bilibino 71.74 15 P P 16 28 57.8 -1.0
BILL IAmb IAmb 16 29 04.1
comp=Z,3µm,1.7s
BILL Bilibino 71.74 15 *c i* P P 16 28 59.2 +0.3
BILL pmax pmax
comp=Z,2µm,1.7s
BILL MLR MLR
comp=Z,77µm,22.0s
BILL Bilibino 71.74 15 P P 16 28 59.4 +0.5
DMTO DMTO 71.80 288 P P 16 28 59.5 -0.7
SNR=27
DMTO S S 16 38 11.4 -6.1
NAZ Nazwa, Dubai 71.84 296 P P 16 29 00.4 +0.1
SNR=96
NAZ S S 16 38 11.7 -6.1
NAZ Nazwa, Dubai 71.84 296 P P 16 28 59.3 -1.1
FAQ Al Faqa, Dubai 71.87 295 P P 16 28 59.8 -0.7
SNR=122
FAQ S S 16 38 11.4 -6.8
FAQ Al Faqa, Dubai 71.87 295 P P 16 28 59.2 -1.3
UMQ Umm Al-Quwin 71.90 296 P P 16 29 01.0 +0.3
SNR=26
UMQ S S 16 38 14.1 -4.3
UMQ Umm Al-Quwin 71.90 296 *i* P P 16 29 01.0 +0.3
SNR=20
ASUD Al Ashush, Dub 72.09 295 P P 16 29 02.0 +0.1
SNR=105
ASUD S S 16 38 14.3 -6.5
ASUD Al Ashush, Dub 72.09 295 P P 16 29 01.7 -0.2
AJN Ajban 72.40 295 P P 16 29 03.0 -0.7
SNR=184
AJN S S 16 38 16.5 -7.7
AJN Ajban 72.40 295 *i* P P 16 29 02.8 -0.9
SNR=15
NRIK Noril'sk 72.42 347 P P 16 29 04.0 +1.0
comp=Z,1µm,0.7s,baz=129,slow=6.1,SNR=827
NRIK S S 16 38 18.9 -4.0
comp=Z,67nm,1.2s,baz=182,slow=20,SNR=14
NRIK PKPPKP **P'P'df** 16 56 42.6 -5.2
comp=Z,31nm,1.3s,baz=344,slow=2.3,SNR=18
NRIK LR LR 17 06 28.1
comp=Z,42µm,18.4s,baz=146,slow=40
comp=Z,1µm,0.7s
NRIK Noril'sk 72.42 347 *c i* P P 16 29 03.7 +0.7
NRIK pmax pmax
comp=Z,6µm,1.5s
NRIK MLR MLR
comp=Z,130µm,23.0s
RBK Rabkut 72.49 288 P P 16 29 03.3 -1.1
SNR=64
RBK S S 16 38 18.6 -7.0
DOK Doka 72.64 289 P P 16 29 04.2 -1.0
SNR=219
DOK S S 16 38 19.0 -8.2
WHFO Wadi Hawf 72.93 288 P P 16 29 05.5 -1.5
SNR=102
WHFO S S 16 38 22.2 -8.3
MZWR Madinat Zayed 73.32 294 P P 16 29 07.5 -1.7
MZWR S S 16 38 27.6 -7.1
ABTO Aybut 73.34 288 P P 16 29 08.5 -1.0
SNR=104
ABTO S S 16 38 27.7 -7.6
MZR Muzera 73.61 293 P P 16 29 10.6 -0.4
SNR=307
MZR S S 16 38 31.4 -6.7
MZR Muzera 73.61 293 *i* P P 16 29 10.2 -0.7
SNR=356
NIKH Nikolski High 73.81 35 IAmb IAmb 16 29 17.8
comp=Z,2µm,1.0s
NIKH Nikolski High 73.81 35 P P 16 29 14.2 +2.8
comp=Z,2µm,0.9s
NIKH Nikolski High 73.81 35 P P 16 29 12.4 +1.0
baz=250,SNR=15
NIKH S S 16 38 41.1 +1.9
baz=250
JRN Qarnain Island 74.37 295 P P 16 29 14.6 -0.7
SNR=100
JRN S S 16 38 41.5 -5.0
SPIA Saint Paul Isl 74.56 30 P P 16 29 17.3 +1.6
baz=248
SPIA S S 16 38 50.1 +2.8
baz=248
AKTO Aktyubinsk 75.10 322 LR LR 17 05 44.4
comp=Z,133µm,21.0s,baz=107,slow=38
SLWR Sila 75.34 294 P P 16 29 19.2 -1.7
SLWR S S 16 38 52.2 -5.2
UNV Unalaska Valle 75.42 34 IAMs_20 IAMs_20 16 58 00.1
comp=Z,93um,22.0s
UNV Unalaska Valle 75.42 34 P P 16 29 22.0 +1.2
comp=Z,2µm,1.7s
UNV Unalaska Valle 75.42 34 P P 16 29 21.9 +1.2
baz=252,SNR=71
UNV S S 16 38 58.8 +1.6
baz=252
RAR Rarotonga 75.59 112 LR LR 17 01 27.6
comp=Z,26µm,21.1s,baz=284,slow=35
RAR Rarotonga 75.59 112 P P 16 29 21.7 -0.7
RAR IAmb IAmb 16 29 27.4
comp=Z,4µm,2.3s
RAR Rarotonga 75.59 112 P P 16 29 26.9 +4.5
comp=Z,398nm,2.0s
RAR Rarotonga 75.59 112 P P 16 29 21.7 -0.7
RAR pmax pmax
comp=Z,4µm,2.3s
RAR MLR MLR
comp=Z,28µm,22.0s
SVE Sverdlovsk 75.59 329 *d i* P P 16 29 22.4 +0.7
SVE *e* S S 16 38 54.0 -4.9
SVE *e* SS SS 16 43 46.9 -3.8
SVE pmax pmax
comp=Z,5µm,1.9s
SVE pmax pmax
comp=Z,17µm,16.1s
SVE MLR MLR
comp=Z,89µm,24.0s
TRNA Turayna 75.83 295 P P 16 29 23.5 -0.2
SNR=72
TRNA S S 16 38 56.5 -6.3
KIP Kipapa 76.08 68 IAMs_20 IAMs_20 16 57 01.9
comp=Z,74µm,21.0s
KIP Kipapa 76.08 68 *c e* P P 16 29 26.6 +1.4
KIP pmax pmax
comp=Z,731nm,1.0s
KIP MLR MLR
comp=Z,52µm,19.0s
SHMA Al-Shehemyia 76.15 296 P P 16 29 25.4 -0.1
SNR=56
SHMA S S 16 39 00.4 -5.9
SMRA Abu-Samra 76.18 295 P P 16 29 25.4 -0.3
SNR=135

SMRA S S 16 39 00.0 -6.6
XMAS Kiritimati 76.18 88 P P 16 29 24.9 -1.0
XMAS IAmb IAmb 16 29 31.5
comp=Z,2µm,1.7s
XMAS Kiritimati 76.18 88 IAMs_20 IAMs_20 16 55 49.7
comp=Z,89µm,21.0s
GAMB Gambell 76.53 24 IAmb IAmb 16 29 32.9
comp=Z,2µm,1.2s
GAMB Gambell 76.53 24 P P 16 29 28.5 +1.6
baz=245,SNR=21
GAMB S S 16 39 12.6 +3.7
baz=245
CCD Concordia, Ant 76.59 181 ⇑ P P 16 29 29.0 +1.5
ARTI Arti 76.63 328 LR LR 17 04 44.3
comp=Z,77µm,21.4s,baz=117,slow=37
ARTI Arti 76.63 328 P P 16 29 26.9 -0.7
ARTI Arti 76.63 328 *c i* P P 16 29 27.5 -0.1
ARTI 16 32 15.0
ARTI PPP PPP 16 34 07.3
ARTI S S 16 39 10.4 +0.1
ARTI SSS SSS 16 47 21.3
ARTI pmax pmax
comp=Z,3µm,1.8s
ARTI pmax pmax
comp=Z,23µm,17.2s
ARTI MLR MLR
comp=Z,94µm,21.0s
ARTI Arti 76.63 328 P P 16 29 27.7 +0.1
SBV Sambava 77.16 256 P P 16 29 32.3 +1.0
SNR=136
FALS False Pass 77.44 34 P P 16 29 32.7 +0.5
baz=254,SNR=33
FALS S S 16 39 20.4 +1.2
baz=254
M11K Mekoryuk 77.66 28 IAmb IAmb 16 29 39.9
comp=Z,3µm,1.6s
M11K Mekoryuk 77.66 28 P P 16 29 34.3 +1.0
baz=251,SNR=7.4
M11K S S 16 39 25.7 +4.4
baz=251
HUH Hualalai 78.02 70 IAmb IAmb 16 29 42.2
comp=Z,1µm,1.3s
POHA Pohakuloa 78.31 70 P P 16 29 37.0 -1.1
POHA Pohakuloa 78.31 70 P P 16 29 43.3 +5.3
comp=Z,555nm,1.0s
S12K Black Hills 78.41 33 IAmb IAmb 16 29 42.6
comp=Z,4µm,1.9s
S12K Black Hills 78.41 33 P P 16 29 38.7 +1.1
baz=256,SNR=10
S12K S S 16 39 32.3 +2.6
baz=256
MLH Mauna Loa 78.44 71 P P 16 29 38.1 -0.6
HATHI Halema'uma'u T 78.55 71 P P 16 29 38.9 -0.3
STCH Steam Cracks 78.68 71 P P 16 29 39.5 -0.4
TNA Tin City 78.73 23 P P 16 29 40.7 +1.6
baz=248,SNR=10
TNA S S 16 39 34.4 +1.8
baz=248
K13K Kusilvak Mount 78.86 27 IAmb IAmb 16 29 46.4
comp=Z,3µm,1.1s
K13K Kusilvak Mount 78.86 27 P P 16 29 42.2 +2.3
baz=252,SNR=155
K13K S S 16 39 38.8 +4.6
baz=252
M13K Dall Lake 79.01 28 P P 16 29 42.6 +1.9
baz=253
M13K S S 16 39 40.0 +4.2
baz=253
SDPT Sand Point 79.20 34 P P 16 29 42.5 +0.6
comp=Z,3µm,0.9s
SDPT Sand Point 79.20 34 P P 16 29 42.7 +0.8
baz=257,SNR=94
SDPT S S 16 39 39.5 +1.4
baz=257
KBD Kabd 79.31 299 P P 16 29 41.5 -1.6
KBD S S 16 39 32.8 -7.6
F14K Arctic Creek 79.32 23 P P 16 29 44.6 +2.2
baz=250
F14K S S 16 39 42.8 +3.9
baz=250
ANM Nome 79.39 24 P P 16 29 44.2 +1.4
baz=251,SNR=7.2
ANM S S 16 39 43.4 +3.6
baz=251
CNBA Chernabura Isl 79.59 34 IAmb IAmb 16 29 49.4
comp=Z,2µm,1.2s
CHNA Chernabura Isl 79.59 34 P P 16 29 46.8 +2.8
comp=Z,1µm,1.7s
CHNA Chernabura Isl 79.59 34 P P 16 29 45.1 +1.1
baz=258,SNR=29
CHNA S S 16 39 44.6 +2.5
baz=258
L14K Kuka Creek 79.59 28 P P 16 29 45.9 +2.0
baz=254
L14K S S 16 39 45.0 +3.1
baz=254
J14K Nanvaranak Lak 79.60 26 IAmb IAmb 16 29 50.3
comp=Z,2µm,1.3s
J14K Nanvaranak Lak 79.60 26 P P 16 29 45.5 +1.6
baz=253,SNR=89
J14K S S 16 39 46.0 +4.0
baz=253
N14K Kuskokwak Cree 79.68 29 IAmb IAmb 16 29 50.4
comp=Z,3µm,1.2s
N14K Kuskokwak Cree 79.68 29 P P 16 29 45.5 +1.1
baz=255
N14K S S 16 39 45.8 +2.8
baz=255
O14K Tigyukauivet M 79.72 30 IAmb IAmb 16 29 50.6
comp=Z,2µm,1.2s
O14K Tigyukauivet M 79.72 30 P P 16 29 46.1 +1.5
baz=256
O14K S S 16 39 46.2 +2.8
baz=256
M14K Bethel 79.77 28 P P 16 29 46.9 +2.1
baz=255,SNR=187
M14K S S 16 39 47.1 +3.3
baz=255
S14K Fog Glacier 79.92 33 P P 16 29 47.3 +1.3
baz=258
S14K S S 16 39 47.6 +1.7
baz=258
F15K North Star Dit 80.05 23 IAmb IAmb 16 29 52.7
comp=Z,2µm,1.2s
F15K North Star Dit 80.05 23 P P 16 29 48.5 +2.2
baz=251,SNR=89
F15K S S 16 39 49.6 +2.8
baz=251
G15K Niukluk 80.07 24 P P 16 29 47.8 +1.4
baz=252
G15K S S 16 39 49.7 +2.7
baz=252
ABPO Ambohimpanom 80.21 251 P P 16 29 47.8 -0.6
ABPO Ambohimpanom 80.21 251 IAMs_20 IAMs_20 17 02 28.0
comp=Z,69µm,22.0s
ABPO Ambohimpanom 80.21 251 P P 16 29 47.8 -0.6
ABPO pmax pmax
comp=Z,550nm,0.9s
ABPO MLR MLR
comp=Z,69µm,22.0s
ABPO Ambohimpanom 80.21 251 ⇑ P P 16 29 49.2 +0.8
L15K Ungalak Mounta 80.23 27 P P 16 29 49.2 +1.9
baz=255
L15K S S 16 39 51.6 +2.8
baz=255
M15K Kasigluk River 80.36 29 P P 16 29 49.7 +1.6
baz=256
M15K S S 16 39 52.5 +2.5
baz=256
K15K Wolf Creek Mou 80.37 27 IAmb IAmb 16 29 55.5
comp=Z,3µm,1.1s
K15K Wolf Creek Mou 80.37 27 P P 16 29 50.4 +2.3
baz=255
K15K S S 16 39 54.7 +4.5
baz=255
O15K Ungalikthiuk R 80.42 30 IAmb IAmb 16 29 54.4
comp=Z,2µm,1.2s
O15K Ungalikthiuk R 80.42 30 P P 16 29 50.0 +1.5
baz=257
O15K S S 16 39 53.2 +2.4
baz=257
AKT Akhty 80.42 312 *i* P P 16 29 49.9 +0.9
AKT *e* 16 29 57.4
AKT *e* PP **pP** 16 30 01.7 -0.9
AKT *e* 16 32 55.5
AKT *e* PPP PPP 16 34 46.8
AKT *e* S S 16 39 51.0 -0.8

AKT eSS **SS** **16 45 08.5 +4.1**
AKT pmax pmax
comp=Z,4μm,2.1s
AKT pmax pmax
comp=Z,752nm,0.7s
AKT pmax pmax
comp=N,321nm,0.6s
AKT pmax pmax
comp=E,525nm,0.7s
AKT smax smax
comp=E,18μm,9.7s
AKT smax smax
comp=N,3μm,3.5s
H04N2 CROZET ISLANDS 80.45 223 P **P** **16 29 52.1 +3.6**
baz=193,slow=73,SNR=23
H04N1 CROZET ISLANDS 80.47 223 P **P** **16 29 50.5 +1.8**
baz=193,slow=73,SNR=7.6
H04N3 CROZET ISLANDS 80.47 223 P **P** **16 29 52.1 +3.4**
baz=193,slow=73,SNR=30
CRZF Crozet Islands 80.47 223 P **P** **16 29 49.0 +0.1**
N15K Kwethluk River 80.52 29 IAmb IAmb 16 29 55.2
comp=Z,3μm,1.3s
N15K Kwethluk River 80.52 29 P **P** **16 29 50.4 +1.4**
baz=256
N15K S **S** **16 39 54.6 +2.8**
baz=256
H04S1 CROZET ISLANDS 80.52 222 P **P** **16 29 50.1 +1.1**
baz=82,slow=5.8,SNR=9.1
H04S2 CROZET ISLANDS 80.54 222 P **P** **16 29 49.4 +0.3**
baz=82,slow=5.8,SNR=15
H04S3 CROZET ISLANDS 80.54 222 P **P** **16 29 51.9 +2.8**
baz=82,slow=5.8,SNR=23
C16K Lisburne Hills 80.64 21 IAmb IAmb 16 29 56.2
comp=Z,3μm,1.1s
C16K Lisburne Hills 80.64 21 P **P** **16 29 51.4 +2.0**
baz=250,SNR=114
C16K S **S** **16 39 55.4 +2.6**
baz=250
H16K Elim 80.70 24 P **P** **16 29 51.7 +1.9**
baz=254,SNR=127
H16K S **S** **16 39 56.9 +3.3**
baz=254
MAK Makhachkala 80.75 313*d i*P **P** **16 29 48.5 -2.1**
MAK *e**PP **pP** **16 30 02.8 -1.4**
MAK *e* 16 32 50.8
MAK *e*PPP PPP 16 34 45.0
MAK eS **S** **16 39 51.3 -3.6**
MAK eSS **SS** **16 45 07.7 -1.3**
MAK eSSS SSS 16 48 37.7
MAK pmax pmax
comp=Z,8μm,2.4s
MAK pmax pmax
comp=Z,4μm,2.5s
G16K Koyuk River 80.87 24 P **P** **16 29 52.4 +1.7**
baz=254
G16K S **S** **16 39 58.0 +2.7**
baz=254
VOI Vohitsoka 80.88 248 P **P** **16 29 51.8 0.0**
SNR=40
RAYN Ar Rayn 80.96 293 P **P** **16 29 51.8 -0.4**
RAYN IAmb IAmb 16 29 58.4
comp=Z,1μm,0.8s
RAYN Ar Rayn 80.96 293 S **S** **16 39 51.3 -6.7**
RAYN Ar Rayn 80.96 293 P **P** **16 29 51.8 -0.4**
RAYN pmax pmax
comp=Z,1μm,0.9s
RAYN MLR MLR
comp=Z,82μm,20.0s
RAYN Ar Rayn 80.96 293 P **P** **16 29 52.2 +0.1**
RAYN pP **pP** **16 30 02.4 -3.4**
RAYN sP **pwP** **16 30 06.5 -1.5**
FOMA Nahampoana Res 81.01 245 IAMs_20 IAMs_20 17 04 02.9
comp=Z,62μm,20.0s
J16K Anvik River 81.04 26 IAmb IAmb 16 29 58.5
comp=Z,3μm,1.1s
J16K Anvik River 81.04 26 P **P** **16 29 54.2 +2.6**
baz=255
J16K S **S** **16 40 01.7 +4.6**
baz=255
I17K Unalakleet 81.15 25 P **P** **16 29 54.8 +2.6**
baz=255,SNR=108
I17K S **S** **16 40 02.7 +4.4**
baz=255
L16K Owhat River 81.17 28 IAmb IAmb 16 29 58.7
comp=Z,3μm,1.2s
L16K Owhat River 81.17 28 P **P** **16 29 54.4 +2.0**
baz=257,SNR=261
L16K S **S** **16 40 01.2 +2.7**
baz=257
N16K Nishlik Lake 81.23 29 P **P** **16 29 55.2 +2.4**
baz=258
N16K S **S** **16 40 04.0 +4.7**
baz=258
R16K Pilot Point 81.24 32 P **P** **16 29 53.8 +0.9**
baz=259,SNR=8.2
R16K S **S** **16 40 02.2 +2.8**
baz=259
M16K Timber Creek 81.26 28 IAmb IAmb 16 29 59.2
comp=Z,2μm,1.2s
M16K Timber Creek 81.26 28 P **P** **16 29 54.7 +1.9**
baz=257,SNR=231
M16K S **S** **16 40 02.9 +3.4**
baz=257
D17K Noatak River 81.27 21 P **P** **16 29 55.3 +2.5**
baz=252,SNR=280
D17K S **S** **16 40 02.1 +2.8**
baz=252
P16K Nushagak River 81.31 30 IAmb IAmb 16 30 00.1
comp=Z,3μm,1.1s
P16K IAMs_20 IAMs_20 17 01 39.8
comp=Z,63μm,22.0s
P16K Nushagak River 81.31 30 P **P** **16 29 55.0 +1.9**
baz=258,SNR=62
P16K S **S** **16 40 04.4 +4.3**
baz=258
VNDA Vanda 81.34 173 P **P** **16 29 52.8 -0.2**
comp=Z,228nm,0.9s,baz=318,slow=5.9,SNR=416
VNDA S **S** **16 39 59.1 -0.7**
comp=Z,4.4nm,1.1s,baz=270,slow=20,SNR=5.6
VNDA PKKPbc **PKKPbc** **16 48 29.4 -1.9**
comp=Z,11nm,0.8s,baz=126,slow=7.5,SNR=13
VNDA PKPPKP **P'P'df** **16 56 26.4 -4.8**
comp=Z,9.2nm,1.0s,baz=146,slow=1.0,SNR=7.3
VNDA LR LR 17 04 20.8
comp=Z,51μm,21.8s,baz=338,slow=34
comp=Z,228nm,0.9s
VNDA Vanda 81.34 173 P **P** **16 29 53.1 +0.1**
VNDA Vanda 81.34 173 P **P** **16 29 53.1 +0.1**
VNDA pmax pmax
comp=Z,733nm,1.0s
VNDA Vanda 81.34 173 P **P** **16 29 53.8 +0.8**
VNDA pP **pP** **16 30 04.6 -2.4**
VNDA sP **sP** **16 30 08.2 -4.1**
O16K Kokwok River B 81.37 30 IAmb IAmb 16 30 00.3
comp=Z,2μm,1.2s
O16K Kokwok River B 81.37 30 P **P** **16 29 55.0 +1.5**
baz=258
O16K S **S** **16 40 03.5 +2.7**
baz=258
RDOG Red Dog Mine 81.44 21 IAmb IAmb 16 30 00.1
comp=Z,5μm,1.6s
RDOG Red Dog Mine 81.44 21 P **P** **16 29 55.9 +2.2**
baz=253,SNR=137
RDOG S **S** **16 40 03.3 +2.1**
baz=253
C17K DeLong Mountai 81.47 21 P **P** **16 29 56.0 +2.1**
baz=252
C17K S **S** **16 40 02.6 +1.1**
baz=252
E17K Hotham Inlet 81.55 22 P **P** **16 29 56.9 +2.6**
baz=254,SNR=106
E17K S **S** **16 40 05.7 +3.4**
baz=254
G17K Kiwalik Mounta 81.58 24 P **P** **16 29 56.7 +2.1**
baz=255
G17K S **S** **16 40 06.1 +3.4**
baz=255
F17K Baldwin Pennin 81.59 23 P **P** **16 29 56.9 +2.4**
baz=254
F17K S **S** **16 40 05.6 +2.9**
baz=254
MAW Mawson 81.60 200 P **P** **16 29 55.7 +1.2**
comp=Z,230nm,0.7s,baz=65,slow=6.0,SNR=261
MAW S **S** **16 40 03.4 +0.7**
comp=Z,4.6nm,0.9s,baz=232,slow=21,SNR=2.3
MAW PKKPbc **PKKPbc** **16 48 29.7 -0.7**
comp=Z,25nm,0.8s,baz=254,slow=4.4,SNR=17
MAW PKPPKP **P'P'df** **16 56 31.7 +0.5**
comp=Z,45nm,1.1s,baz=204,slow=2.1,SNR=16
MAW LR LR 17 01 54.1
comp=Z,31μm,21.4s,baz=56,slow=32
comp=Z,230nm,0.7s
J17K VABM Dome 81.73 26 IAmb IAmb 16 30 02.2
comp=Z,4μm,1.4s
J17K VABM Dome 81.73 26 P **P** **16 29 57.6 +2.3**
baz=257
J17K S **SKSac** **16 40 08.8 -2.3**
baz=257
H17K Granite Mounta 81.74 24 P **P** **16 29 57.9 +2.6**
baz=256
H17K S **SKSac** **16 40 08.9 -2.2**
baz=256
L17K Donlin 81.81 27 P **P** **16 29 58.4 +2.6**
baz=258
L17K S **S** **16 40 09.2 +4.1**
baz=258
KIRV Kirov 81.86 329 LR LR 17 08 34.8
comp=Z,66μm,21.5s,baz=97,slow=37
KIRV Kirov 81.86 329*c i*P **P** **16 29 56.4 +0.4**
BELG Belogornoye 81.87 323 LR LR 17 07 07.9
comp=Z,52μm,21.5s,baz=87,slow=36
BELG Belogornoye 81.87 323*c i*P **P** **16 29 56.9 +0.7**
BELG pmax pmax
comp=Z,470nm,1.1s
BELG MLR MLR
comp=Z,14μm,21.0s
R17L Mt. Peulik Vol 81.90 32 P **P** **16 29 57.3 +1.0**
baz=260
R17L S **S** **16 40 06.8 +0.5**
baz=260
PLK4 Peulik 4 81.90 32 IAmb IAmb 16 30 02.2
comp=Z,2μm,1.1s
O17K Koliganek Bris 81.91 30 P **P** **16 29 58.3 +2.0**
baz=259,SNR=203
O17K S **S** **16 40 09.3 +3.1**
baz=259
Q16K King Salmon 81.93 31 P **P** **16 29 57.1 +0.7**
baz=260,SNR=27
Q16K S **S** **16 40 10.3 +3.9**
baz=260
K17K Iditarod 81.93 27 P **P** **16 29 58.9 +2.5**
baz=258
K17K S **S** **16 40 10.2 +3.8**
baz=258
CHIR Chirikof Islan 82.00 34 P **P** **16 29 56.2 -0.6**
CHIR IAmb IAmb 16 30 02.9
comp=Z,3μm,1.1s
CHIR IAMs_20 IAMs_20 17 01 42.0
comp=Z,71μm,22.0s
CHIR Chirikof Islan 82.00 34 P **P** **16 29 58.6 +1.7**
comp=Z,2μm,1.7s
CHIR Chirikof Islan 82.00 34 P **P** **16 29 58.5 +1.7**
baz=261,SNR=19
CHIR S **SKSac** **16 40 11.5 -1.6**
baz=261
N17K Nushagak Hills 82.00 29 IAmb IAmb 16 30 03.7
comp=Z,3μm,1.5s
N17K Nushagak Hills 82.00 29 P **P** **16 29 59.6 +2.8**
baz=259
N17K S **SKSac** **16 40 12.2 -0.8**
baz=259
M17K Holitna River 82.06 28 P **P** **16 29 59.8 +2.7**
baz=258
M17K S **SKSac** **16 40 12.9 -0.4**
baz=258
E18K Tukpahlearik C 82.10 22 IAmb IAmb 16 30 04.0
comp=Z,3μm,1.1s
E18K Tukpahlearik C 82.10 22 P **P** **16 29 59.9 +2.7**
baz=255,SNR=486
E18K S **S** **16 40 11.3 +3.3**
baz=255
P17K Kvichak River 82.13 30 P **P** **16 29 59.0 +1.5**
baz=260,SNR=58
P17K S **S** **16 40 11.8 +3.3**
baz=260
B18K Kokolik River 82.20 20 P **P** **16 30 00.3 +2.6**
baz=253
B18K S **SKSac** **16 40 12.8 -1.2**
baz=253
C18K Utukok River 82.22 21 IAmb IAmb 16 30 04.1
comp=Z,2μm,1.1s
C18K Utukok River 82.22 21 P **P** **16 29 60.0 +2.1**
baz=254
C18K S **SKSac** **16 40 13.2 -1.1**
baz=254
Q17K Contact Creek 82.25 31 P **P** **16 29 58.7 +0.4**
baz=260
F18K Selawik 82.25 23 P **P** **16 30 00.1 +2.1**
baz=256,SNR=182
F18K S **SKSac** **16 40 13.4 -1.0**
baz=256
SBA Scott Base 82.26 172 IAMs_20 IAMs_20 17 06 53.9
comp=Z,63μm,22.0s
SBA Scott Base 82.26 172 P **P** **16 29 59.5 +1.7**
I55US WINDLESS BIGHT 82.29 172 P **P** **16 30 01.7 +3.8**
baz=338,slow=7.8,SNR=6.9
H18K Honhosa River 82.43 24 P **P** **16 30 00.4 +1.4**
H18K Honhosa River 82.43 24 P **P** **16 30 01.2 +2.2**
baz=257
H18K S **S** **16 40 14.3 +2.8**
baz=257
G18K Tagagawik 82.48 24 IAmb IAmb 16 30 05.4
comp=Z,3μm,1.3s
G18K Tagagawik 82.48 24 P **P** **16 30 01.0 +1.8**
baz=257,SNR=377
G18K S **SKSac** **16 40 15.6 -0.5**
baz=257
ACHA Angle Creek He 82.54 32 IAmb IAmb 16 30 07.9
comp=Z,5μm,2.4s
GNI Garni 82.56 310 P **P** **16 30 01.1 +0.7**
GNI IAmb IAmb 16 30 19.8
comp=Z,962nm,0.8s
GNI Garni 82.56 310 P **P** **16 30 01.1 +0.7**
GNI Garni 82.56 310*c i*P **P** **16 30 01.7 +1.3**
GNI pmax pmax
comp=Z,976nm,0.8s
GNI Garni 82.56 310 P **P** **16 30 01.3 +0.9**
comp=Z,22μmcomp=Z,1μm,0.8s
L18K Granite Mounta 82.56 27 P **P** **16 30 02.1 +2.4**
baz=259
L18K S **SKSac** **16 40 17.1 +0.4**
baz=259
N18K Kilae Creek 82.66 29 P **P** **16 30 02.7 +2.4**
baz=260
N18K S **SKSac** **16 40 18.4 +1.0**
baz=260
A19K Wainwright 82.69 19 P **P** **16 30 03.1 +3.0**
baz=254
A19K S **SKSac** **16 40 17.4 +0.2**
baz=254
Q18K Katmai Hardscr 82.77 31 P **P** **16 30 01.7 +0.7**
baz=261,SNR=118
Q18K S **S** **16 40 17.3 +1.9**
baz=261
P18K Big Mountain, 82.78 30 IAmb IAmb 16 30 06.2
comp=Z,3μm,1.8s
P18K IAMs_20 IAMs_20 17 05 17.4
comp=Z,62μm,22.0s
P18K Big Mountain, 82.78 30 P **P** **16 30 01.8 +0.9**
baz=261,SNR=35
P18K S **S** **16 40 17.1 +1.8**
baz=261
J18K Innoko River 82.79 26 P **P** **16 30 02.9 +2.0**
baz=259
J18K S **SKSac** **16 40 18.3 +0.1**
baz=259
M18K Stony River 82.83 28 P **P** **16 30 03.5 +2.3**
baz=260
M18K S **SKSac** **16 40 18.9 +0.4**
baz=260
O18K Koktuh Hills 82.86 30 IAMs_20 IAMs_20 17 02 51.7
comp=Z,52μm,22.0s
O18K Koktuh Hills 82.86 30 P **P** **16 30 03.2 +1.9**
baz=261,SNR=201
O18K S **SKSac** **16 40 19.5 +0.6**
baz=261
C19K Lookout Ridge 82.90 20 P **P** **16 30 04.3 +2.9**
baz=256
C19K S **SKSac** **16 40 19.1 +0.3**
baz=256
R18K Karluk 82.90 32 P **P** **16 30 02.5 +1.0**
baz=262
R18K S **S** **16 40 17.1 +0.7**
baz=262
SII Sitkinak Islan 82.90 33 P **P** **16 30 03.9 +2.3**
comp=Z,3μm,1.8s
SII Sitkinak Islan 82.90 33 P **P** **16 30 03.7 +2.1**
baz=262,SNR=44
SII S **S** **16 40 18.6 +2.0**
baz=262
GCSA Galena City Sc 82.97 25 P **P** **16 30 03.8 +2.1**
baz=259,SNR=673
GCSA S **SKSac** **16 40 20.5 +1.3**
baz=259
F19K Shaleruckik Mo 83.03 23 P **P** **16 30 03.9 +1.8**
baz=258
F19K S **S** **16 40 19.4 +1.9**
baz=258
G19K Purcell Mounta 83.16 23 P **P** **16 30 05.2 +2.4**
baz=258
G19K S **SKSac** **16 40 21.8 +1.3**
baz=258
D19K Kuna River 83.27 21 P **P** **16 30 05.7 +2.3**
baz=257,SNR=1000
D19K S **SKSac** **16 40 21.8 +0.5**
baz=257
H19K Roundabout Mou 83.30 24 P **P** **16 30 06.0 +2.6**
baz=259
H19K S **SKSac** **16 40 24.1 +2.8**
baz=259
ATD Arta Tunnel 83.30 281 LR LR 17 09 46.4
comp=Z,706nm,18.1s,baz=78,slow=38
ATD Arta Tunnel 83.30 281 P **P** **16 30 06.1 +1.5**
SNR=99
ATD Arta Tunnel 83.30 281 ⇑P **P** **16 30 06.7 +2.1**
ATD PcP **PcP** **16 30 10.9 +2.0**
J19K Poorman 83.36 26 P **P** **16 30 06.2 +2.4**
baz=260,SNR=907
J19K S **SKSac** **16 40 24.3 +2.3**
baz=260
N19K Bonanza Creek 83.36 29 P **P** **16 30 06.3 +2.3**
baz=261
N19K S **SKSac** **16 40 24.7 +2.4**
baz=261
E19K Redstone River 83.37 22 P **P** **16 30 06.5 +2.7**
baz=258
E19K S **SKSac** **16 40 23.2 +1.3**
baz=258
L19K White Mountain 83.40 28 P **P** **16 30 06.2 +2.1**
baz=261,SNR=809
L19K S **SKSac** **16 40 23.2 +0.9**
baz=261
OHAK Old Harbor 83.48 33 P **P** **16 30 05.3 +0.8**
OHAK IAmb IAmb 16 30 10.4
comp=Z,2μm,1.3s
OHAK Old Harbor 83.48 33 P **P** **16 30 05.7 +1.2**
comp=Z,2μm,1.8s
OHAK Old Harbor 83.48 33 P **P** **16 30 06.1 +1.6**
baz=263,SNR=76
OHAK S **S** **16 40 23.2 +0.9**
baz=263
M19K Big River Lodg 83.58 28 P **P** **16 30 07.5 +2.5**
baz=261
M19K S **S** **16 40 23.2 0.0**
baz=261
NCK Nalchik 83.65 313 ⇑*i*P **P** **16 30 06.6 +0.8**
NCK pmax pmax
comp=Z,1μm,0.9s
NCK MLR MLR
comp=Z,49μm,19.0s
P19K Oil Pt 83.82 30 IAmb IAmb 16 30 12.2
comp=Z,2μm,1.3s
P19K IAMs_20 IAMs_20 17 05 58.1
comp=Z,60μm,22.0s
P19K Oil Pt 83.82 30 P **P** **16 30 07.0 +0.7**
baz=262,SNR=65
P19K S **SKSac** **16 40 25.3 +0.2**
baz=262
D20K Etivluk River 83.86 21 P **P** **16 30 08.6 +2.3**
baz=258
D20K S **SKSac** **16 40 26.0 +0.9**
baz=258
F20K Avaraart Lake 83.87 23 P **P** **16 30 08.8 +2.5**
baz=259
F20K S **S** **16 40 27.3 +1.4**
baz=259
L20K Farewell, AK 83.90 27 P **P** **16 30 08.7 +2.0**
baz=262
L20K S **S** **16 40 29.1 +2.6**
baz=262
ILSW Iliamna Southw 83.91 30 P **P** **16 30 06.3 -0.6**
ILSW IAmb IAmb 16 30 11.4
comp=Z,2μm,1.3s
E20K Nigu River 83.92 21 P **P** **16 30 09.0 +2.3**
baz=259
E20K S **SKSac** **16 40 26.6 +1.0**
baz=259
KDAK Kodiak Island 83.92 32 LR LR 17 03 28.9
comp=Z,42μm,21.8s,baz=243,slow=33
KDAK Kodiak Island 83.92 32 P **P** **16 30 06.7 -0.1**
KDAK Kodiak Island 83.92 32 IAMs_20 IAMs_20 17 01 57.9
comp=Z,54μm,21.0s
KDAK Kodiak Island 83.92 32 P **P** **16 30 06.7 -0.1**
KDAK pmax pmax
comp=Z,5μm,1.5s
KDAK MLR MLR
comp=Z,54μm,21.0s
KDAK Kodiak Island 83.92 32 P **P** **16 30 08.4 +1.6**
baz=263
KDAK S **S** **16 40 27.9 +1.1**
baz=263
KDAK Kodiak Island 83.92 32 P **P** **16 30 08.4 +1.6**
KDAK pP **pP** **16 30 17.6 -2.9**
KDAK sP **sP** **16 30 21.0 -4.8**
H20K Anotleneega Mo 83.93 24 P **P** **16 30 09.1 +2.4**
baz=260,SNR=348
H20K S **S** **16 40 28.3 +1.6**
baz=260
B20K Meade River 83.94 20 P **P** **16 30 08.8 +2.2**
baz=258
B20K S **S** **16 40 28.4 +1.9**
baz=258
K20K Telida 83.94 26 P **P** **16 30 09.4 +2.5**
baz=261
K20K S **S** **16 40 28.4 +1.6**
baz=261
I20K Naaghedeneel 83.99 25 P **P** **16 30 09.5 +2.5**
baz=261
I20K S **SKSac** **16 40 27.5 +1.6**
baz=261
J20K Nowinta River 84.03 26 P **P** **16 30 09.4 +2.1**
baz=261,SNR=756
J20K S **S** **16 40 28.9 +1.2**
baz=261
Q20K Shuyak Island 84.12 31 P **P** **16 30 09.0 +1.2**
baz=263,SNR=39
Q20K S **S** **16 40 29.7 +1.0**
baz=263
SYI Shuyak Island 84.12 31 IAmb IAmb 16 30 13.4
comp=Z,2μm,1.2s
SYI IAMs_20 IAMs_20 17 03 31.0
comp=Z,73μm,22.0s
GOF Gofitskoye 84.15 315*c i*P **P** **16 30 09.1 +0.9**
GOF *e*S **SKSac** **16 40 27.9 +0.1**
M20K Styx River 84.16 28 IAMs_20 IAMs_20 17 06 21.1
comp=Z,56μm,22.0s
M20K Styx River 84.16 28 P **P** **16 30 09.9 +1.8**
baz=262,SNR=594
M20K S **SKSac** **16 40 27.5 +0.1**
baz=262
KBZ Khabaz 84.17 314 P **P** **16 30 08.8 +0.5**
comp=Z,436nm,0.9s,baz=103,slow=4.5,SNR=90
KBZ S **SKSac** **16 40 27.6 -0.3**
comp=Z,13nm,1.0s,baz=167,slow=23,SNR=5.7
KBZ PKKPbc **PKKPbc** **16 48 23.9 +0.7**
comp=Z,6.0nm,0.9s,baz=214,slow=3.6,SNR=4.1
KBZ PKPPKP **P'P'df** **16 56 27.6 -0.9**
comp=Z,11nm,1.1s,baz=346,slow=1.4,SNR=5.8
comp=Z,436nm,0.9s
O20K Slope Mountain 84.18 30 P **P** **16 30 08.7 +0.5**
baz=263,SNR=63
O20K S **SKSac** **16 40 28.4 +0.8**
baz=263
NEUR Neytrino 84.28 313 *i*P **P** **16 30 11.0 +1.8**
NEUR pmax pmax
comp=Z,1μm,2.1s
NEUR MLR MLR
comp=Z,104μm,23.2s
KIV Kislovodsk 84.33 314 P **P** **16 30 09.2 -0.1**
KIV IAmb IAmb 16 30 26.9
comp=Z,1μm,0.9s
KIV Kislovodsk 84.33 314 P **P** **16 30 09.8 +0.4**
KIV Kislovodsk 84.33 314 ⇑P **P** **16 30 10.2 +0.8**

KIV	**Kislovodsk**	**84.33**	**314**	*e*P		**P**		**16 30 09.5**	**+0.2**
KIV				*e*				16 33 25.1	
KIV				*e*PPP		PPP		16 35 17.2	
KIV				*e*				16 40 28.0	
KIV				*e*SS		SS		16 46 03.9	+1.5
KIV				pmax		pmax			
	comp=Z,1μm,3.6s								
KIV				pmax		pmax			
	comp=Z,717nm,1.1s								
KIV				MLR		MLR			
	comp=Z,37μm,20.0s								
KIV	**Kislovodsk**	**84.33**	**314**	P		**P**		**16 30 10.1**	**+0.8**
	comp=Z,26μmcomp=Z,1μm,0.9s								
KIV	**Kislovodsk**	**84.33**	**314**	P		**P**		**16 30 10.0**	**+0.6**
KIV				S		**SKSac**		**16 40 27.4**	**-1.9**
KIV	**Kislovodsk**	**84.33**	**314**	P		**P**		**16 30 10.2**	**+0.8**
SHA1	**Shidzhatmaz**	**84.34**	**314**	*c i*P		**P**		**16 30 09.6**	**0.0**
A21K	**Barrow**	**84.39**	**18**	P		**P**		**16 30 11.2**	**+2.4**
	baz=258								
A21K				S		**SKSac**		**16 40 29.5**	**+1.3**
	baz=258								
IMAR	**Indian Mountai**	**84.47**	**24**	P		**P**		**16 30 09.8**	**+0.4**
N20K	**Mount Spurr**	**84.52**	**29**	P		**P**		**16 30 10.8**	**+0.9**
	baz=263,SNR=355								
N20K				S		**SKSac**		**16 40 30.9**	**+1.2**
	baz=263								
SPCR	**Spurr Chakacha**	**84.52**	**29**	P		**P**		**16 30 10.8**	**+0.9**
	baz=263								
SPCR				S		**SKSac**		**16 40 31.3**	**+1.6**
	baz=263								
SPU	**Mount Spurr**	**84.59**	**29**	IAmb		IAmb		16 30 15.8	
	comp=Z,2μm,1.2s								
C21K	**Knifeblade Rid**	**84.59**	**21**	P		**P**		**16 30 12.3**	**+2.3**
	baz=260,SNR=280								
C21K				S		**SKSac**		**16 40 32.3**	**+2.5**
	baz=260								
HOM	**Homer**	**84.62**	**30**	P		**P**		**16 30 11.4**	**+1.1**
	baz=264,SNR=39								
HOM				S		**SKSac**		**16 40 32.2**	**+2.0**
	baz=264								
G21K	**Allakaket**	**84.65**	**23**	IAmb		IAmb		16 30 16.6	
	comp=Z,2μm,1.2s								
G21K	**Allakaket**	**84.65**	**23**	P		**P**		**16 30 12.1**	**+1.8**
	baz=262								
G21K				S		**S**		**16 40 34.3**	**+0.5**
	baz=262								
PPLA	**Purkeypile**	**84.73**	**27**	P		**P**		**16 30 12.5**	**+1.5**
	baz=263,SNR=187								
PPLA				S		**SKSac**		**16 40 32.8**	**+1.7**
	baz=263								
B21K	**Ikpikpuk River**	**84.73**	**20**	P		**P**		**16 30 12.9**	**+2.3**
	baz=260								
B21K				S		**S**		**16 40 33.8**	**-0.6**
	baz=260								
STLK	**Strandline Lak**	**84.73**	**28**	IAmb		IAmb		16 30 16.3	
	comp=Z,946nm,1.2s								
F21K	**Alatna River**	**84.76**	**23**	IAmb		IAmb		16 30 26.9	
	comp=Z,835nm,1.2s								
F21K	**Alatna River**	**84.76**	**23**	P		**P**		**16 30 12.4**	**+1.5**
	baz=262,SNR=85								
F21K				S		**SKSac**		**16 40 33.4**	**+2.5**
	baz=262								
E21K	**Killik River**	**84.76**	**21**	P		**P**		**16 30 12.8**	**+1.9**
	baz=261								
E21K				S		**S**		**16 40 34.2**	**-0.7**
	baz=261								
CHUM	**Lake Minchumin**	**84.79**	**26**	P		**P**		**16 30 12.9**	**+1.8**
	baz=263,SNR=177								
CHUM				S		**SKSac**		**16 40 33.5**	**+2.4**
	baz=263								
H21K	**Melozitna Rive**	**84.81**	**24**	P		**P**		**16 30 13.2**	**+2.0**
	baz=262,SNR=16								
H21K				S		**SKSac**		**16 40 34.4**	**+3.2**
	baz=262								
CNPM	**China Poot**	**84.81**	**30**	IAMs_20		IAMs_20		17 03 19.3	
	comp=Z,58μm,22.0s								
PPT	**Papeete**	**84.84**	**108**	P		**P**		**16 30 11.7**	**-0.6**
	comp=Z,38nm,0.6s,baz=130,slow=1.1,SNR=12								
PPT				LR		LR		17 06 06.3	
	comp=Z,27μm,21.5s,baz=262,slow=34								
	comp=Z,38nm,0.6s								
A22K	**Sinclair Lake**	**84.85**	**19**	P		**P**		**16 30 13.8**	**+2.6**
	baz=260								
A22K				S		**SKSac**		**16 40 33.0**	**+1.8**
	baz=260								
SKT	**Skwentna**	**84.92**	**28**	IAmb		IAmb		16 30 17.1	
	comp=Z,2μm,1.2s								
SKT				IAMs_20		IAMs_20		17 03 54.2	
	comp=Z,51μm,22.0s								
SKT	**Skwentna**	**84.92**	**28**	P		**P**		**16 30 12.0**	**+0.2**
	baz=264,SNR=313								
SKT				S		**SKSac**		**16 40 33.8**	**+1.6**
	baz=264								
CAPN	**Captain Cook N**	**84.98**	**29**	P		**P**		**16 30 14.1**	**+2.0**
	baz=264,SNR=6.3								
CAPN				S		**SKSac**		**16 40 34.4**	**+2.0**
	baz=264								
BRLK	**Bradley Lake**	**85.01**	**30**	P		**P**		**16 30 12.3**	**-0.1**
BRSE	**Bradley Lake S**	**85.08**	**30**	P		**P**		**16 30 13.6**	**+0.9**
	baz=265,SNR=270								
BRSE				S		**SKSac**		**16 40 35.8**	**+2.5**
	baz=265								
I21K	**Tanana**	**85.09**	**25**	P		**P**		**16 30 14.2**	**+1.7**
	baz=263,SNR=35								
I21K				S		**SKSac**		**16 40 36.7**	**+3.6**
	baz=263								
SUA	**Susitna One**	**85.24**	**29**	P		**P**		**16 30 14.1**	**+0.5**
	baz=264,SNR=215								
SUA				S		**S**		**16 40 38.7**	**-1.5**
	baz=264								
B22K	**Teshekpuk Lake**	**85.25**	**20**	P		**P**		**16 30 15.3**	**+2.1**
	baz=261								
B22K				S		**S**		**16 40 38.2**	**-1.4**
	baz=261								
D22K	**Ayikyak River**	**85.30**	**21**	P		**P**		**16 30 15.6**	**+2.1**
	baz=262								
D22K				S		**S**		**16 40 38.7**	**-1.4**
	baz=262								
F22K	**John River**	**85.30**	**22**	P		**P**		**16 30 15.8**	**+2.2**
	baz=263								
F22K				S		**S**		**16 40 39.3**	**-1.0**
	baz=263								
L22K	**Petersville**	**85.34**	**28**	IAmb		IAmb		16 30 19.4	
	comp=Z,1μm,0.9s								
KTH	**Kantishna Hill**	**85.37**	**26**	P		**P**		**16 30 13.8**	**-0.3**
KTH				IAmb		IAmb		16 30 19.2	
	comp=Z,2μm,1.8s								
BPAW	**Bear Paw Mtn.**	**85.40**	**26**	IAmb		IAmb		16 30 19.9	
	comp=Z,3μm,2.2s								
BPAW				IAMs_20		IAMs_20		17 07 25.6	
	comp=Z,48μm,21.0s								
BPAW	**Bear Paw Mtn.**	**85.40**	**26**	P		**P**		**16 30 15.4**	**+1.2**
	baz=264,SNR=13								
BPAW				S		**SKSac**		**16 40 38.8**	**+3.8**
	baz=264								
VRH	**Novokhopyorsk**	**85.40**	**321**	*e*P		**P**		**16 30 14.0**	**-0.4**
VRH				*e*				16 33 37.1	
VRH				*e*S		**SKSac**		**16 40 32.4**	**-3.1**
VRH				pmax		pmax			
	comp=Z,16μm,1.7s								
VRH				pmax		pmax			
	comp=Z,10μm,1.7s								
VRH				smax		smax			
	comp=N,18μm,13.0s								
VRH				MLR		MLR			
	comp=Z,68μm,20.0s								
H22K	**Ishtalitna Cre**	**85.42**	**24**	IAmb		IAmb		16 30 20.8	
	comp=Z,4μm,2.1s								
H22K	**Ishtalitna Cre**	**85.42**	**24**	P		**P**		**16 30 16.2**	**+1.9**
	baz=264,SNR=232								
H22K				S		**S**		**16 40 40.2**	**-1.4**
	baz=264								
G22K	**Bettles**	**85.49**	**23**	P		**P**		**16 30 16.0**	**+1.5**
	baz=263								
G22K				S		**S**		**16 40 42.1**	**+0.1**
	baz=263								
MARD	**Mardin**	**85.51**	**307**	IAmb		IAmb		16 30 21.0	
	comp=Z,1μm,1.0s								
E22K	**Anaktuvuk Pass**	**85.52**	**22**	P		**P**		**16 30 16.6**	**+1.8**
	baz=263,SNR=440								
E22K				S		**S**		**16 40 40.9**	**-1.5**
	baz=263								
CUT	**Chulitna**	**85.56**	**28**	P		**P**		**16 30 14.6**	**-0.3**
CUT	**Chulitna**	**85.56**	**28**	P		**P**		**16 30 15.5**	**+0.6**
	baz=265,SNR=95								
M22K	**Willow**	**85.57**	**28**	P		**P**		**16 30 15.4**	**+0.5**
	baz=265,SNR=278								
MLY	**Manley**	**85.60**	**25**	P		**P**		**16 30 15.4**	**+0.2**
MLY	**Manley**	**85.60**	**25**	P		**P**		**16 30 16.5**	**+1.4**
	baz=264,SNR=35								
TRF	**Thorofare Moun**	**85.64**	**27**	IAmb		IAmb		16 30 20.5	
	comp=Z,3μm,1.9s								
TRF	**Thorofare Moun**	**85.64**	**27**	P		**P**		**16 30 16.1**	**+0.6**
	baz=265,SNR=116								
O22K	**Cooper Landing**	**85.66**	**30**	P		**P**		**16 30 16.3**	**+0.9**
	baz=265,SNR=66								
RC01	**Rabbit Creek A**	**85.70**	**29**	P		**P**		**16 30 15.3**	**-0.4**
RC01				IAmb		IAmb		16 30 21.3	
	comp=Z,2μm,1.1s								
RC01	**Rabbit Creek A**	**85.70**	**29**	P		**P**		**16 30 16.4**	**+0.7**
	baz=265,SNR=101								
SEW	**Seward**	**85.76**	**30**	IAMs_20		IAMs_20		17 07 00.4	
	comp=Z,50μm,22.0s								
SEW	**Seward**	**85.76**	**30**	P		**P**		**16 30 16.5**	**+0.5**
	baz=266,SNR=90								
LABN	**Labinsk**	**85.78**	**314**	*c i*P		**P**		**16 30 17.7**	**+1.3**
LABN				*i* *PP		**pP**		**16 30 30.0**	**-0.1**
LABN				*i* S		**SKSac**		**16 40 39.3**	**+1.1**
LABN				pmax		pmax			
	comp=Z,2μm,1.1s								
LABN				pmax		pmax			
	comp=N,100nm,1.0s								
LABN				pmax		pmax			
	comp=E,47nm,0.6s								
LABN				MLR		MLR			
	comp=Z,74μm,21.0s								
LABN				MLR		MLR			
	comp=N,76μm,22.0s								
LABN				MLR		MLR			
	comp=E,126μm,20.0s								
ERBR	**Yeremizino-Bor**	**85.98**	**316**	*c i*P		**P**		**16 30 18.1**	**+0.7**
ERBR				*i* *PP		**pP**		**16 30 30.8**	**-0.3**
ERBR				*e*				16 33 41.9	
ERBR				*i* S		**SKSac**		**16 40 39.8**	**+0.4**
ERBR				*e*SS		**SS**		**16 46 32.4**	**+6.1**
ERBR				pmax		pmax			
	comp=N,71nm,0.9s								
ERBR				pmax		pmax			
	comp=Z,1μm,0.9s								
ERBR				pmax		pmax			
	comp=E,79nm,0.7s								
ERBR				MLR		MLR			
	comp=E,135μm,22.0s								
ERBR				MLR		MLR			
	comp=Z,96μm,23.0s								
ERBR				MLR		MLR			
	comp=N,57μm,20.0s								
D23K	**Nanushuk River**	**86.03**	**21**	P		**P**		**16 30 19.4**	**+2.3**
	baz=264								
PMR	**Palmer**	**86.03**	**29**	IAmb		IAmb		16 30 22.9	
	comp=Z,2μm,1.1s								
PMR	**Palmer**	**86.03**	**29**	P		**P**		**16 30 17.8**	**+0.6**
	baz=266,SNR=252								
COLD	**Coldfoot**	**86.03**	**23**	IAmb		IAmb		16 30 24.6	
	comp=Z,1μm,1.0s								
COLD	**Coldfoot**	**86.03**	**23**	P		**P**		**16 30 19.1**	**+1.9**
	baz=264,SNR=508								
G23K	**Bananza Creek**	**86.05**	**23**	IAmb		IAmb		16 30 24.9	
	comp=Z,1μm,1.0s								
G23K	**Bananza Creek**	**86.05**	**23**	P		**P**		**16 30 19.1**	**+1.7**
	baz=265								
GHO	**Glory Hole Cre**	**86.14**	**28**	IAmb		IAmb		16 30 23.9	
	comp=Z,1μm,1.3s								
C23K	**Itkillik River**	**86.14**	**20**	IAmb		IAmb		16 30 24.9	
	comp=Z,2μm,1.2s								
C23K	**Itkillik River**	**86.14**	**20**	P		**P**		**16 30 19.4**	**+1.8**
	baz=264								
H23K	**Yukon River**	**86.17**	**24**	P		**P**		**16 30 19.3**	**+1.4**
	baz=265								
I23K	**Minto, Yukon-K**	**86.19**	**25**	IAmb		IAmb		16 30 23.5	
	comp=Z,770nm,1.0s								
I23K	**Minto, Yukon-K**	**86.19**	**25**	P		**P**		**16 30 19.2**	**+1.2**
	baz=265,SNR=183								
VSLR	**Vesyoloye**	**86.24**	**313**	*c i*P		**P**		**16 30 19.4**	**+0.7**
VSLR				pmax		pmax			
	comp=Z,3μm,1.0s								
MCK	**McKinley**	**86.27**	**26**	P		**P**		**16 30 18.1**	**-0.4**
MCK	**McKinley**	**86.27**	**26**	P		**P**		**16 30 18.1**	**-0.4**
MCK				pmax		pmax			
	comp=Z,5μm,2.2s								
MCK				MLR		MLR			
	comp=Z,34μm,21.0s								
MCK	**McKinley**	**86.27**	**26**	P		**P**		**16 30 18.6**	**+0.1**
	baz=266,SNR=174								
NEA2	**Nenana**	**86.27**	**25**	P		**P**		**16 30 18.9**	**+0.5**
	baz=266,SNR=100								
NEA2				S		**S**		**16 40 49.0**	**-0.9**
	baz=266								
E23K	**Chandalar**	**86.33**	**22**	IAmb		IAmb		16 30 26.3	
	comp=Z,1μm,1.1s								
E23K	**Chandalar**	**86.33**	**22**	P		**P**		**16 30 20.6**	**+1.8**
	baz=265,SNR=830								
E23K				S		**S**		**16 40 50.1**	**-0.4**
	baz=265								
KNK	**Knik Glacier**	**86.34**	**29**	IAMs_20		IAMs_20		17 08 06.6	
	comp=Z,51μm,22.0s								
KNK	**Knik Glacier**	**86.34**	**29**	P		**P**		**16 30 19.9**	**+1.0**
	baz=266,SNR=244								
KNK				S		**S**		**16 40 48.5**	**-2.2**
	baz=266								
PWL	**Port Wells**	**86.36**	**29**	IAMs_20		IAMs_20		17 07 24.3	
	comp=Z,56μm,22.0s								
PWL	**Port Wells**	**86.36**	**29**	P		**P**		**16 30 19.8**	**+0.8**
	baz=267,SNR=284								
PWL				S		**S**		**16 40 49.8**	**-1.1**
	baz=267								
WAT1	**Susitna Watana**	**86.38**	**27**	P		**P**		**16 30 19.3**	**+0.2**
	baz=266								
WAT1				S		**S**		**16 40 48.7**	**-2.4**
	baz=266								
TOLK	**Toolik Lake Re**	**86.39**	**21**	IAmb		IAmb		16 30 26.4	
	comp=Z,1μm,1.1s								
TOLK	**Toolik Lake Re**	**86.39**	**21**	IAMs_20		IAMs_20		17 11 29.9	
	comp=Z,49μm,21.0s								
TOLK	**Toolik Lake Re**	**86.39**	**21**	P		**P**		**16 30 20.6**	**+1.5**
	baz=265,SNR=336								
TOLK				S		**S**		**16 40 53.3**	**+2.3**
	baz=265								
SML	**Sawmill**	**86.42**	**28**	P		**P**		**16 30 19.0**	**-0.3**
SML				IAmb		IAmb		16 30 26.0	
	comp=Z,2μm,1.2s								
SML	**Sawmill**	**86.42**	**28**	P		**P**		**16 30 20.0**	**+0.7**
	baz=267,SNR=230								
SML				S		**S**		**16 40 52.1**	**+0.6**
	baz=267								
SOC	**Sochi**	**86.47**	**313**	*e*P		**P**		**16 30 18.1**	**-1.8**
SOC				*e*				16 33 35.9	
SOC				*e*PPP		PPP		16 35 34.1	
SOC				*e*S		**SKSac**		**16 40 39.9**	**-2.7**
SOC				pmax		pmax			
	comp=Z,873nm,0.8s								
SOC				MLR		MLR			
	comp=Z,58μm,22.0s								
D24K	**Happy Valley**	**86.71**	**21**	P		**P**		**16 30 22.0**	**+1.5**
	baz=266								
D24K				S		**S**		**16 40 54.1**	**+0.2**
	baz=266								
M23K	**Glacier View**	**86.71**	**28**	P		**P**		**16 30 21.0**	**+0.3**
	baz=267,SNR=124								
M23K				S		**S**		**16 40 54.7**	**+0.5**
	baz=267								
WAT6	**Susitna Watana**	**86.74**	**28**	P		**P**		**16 30 21.5**	**+0.5**
	baz=267,SNR=181								
E24K	**Your Creek**	**86.75**	**22**	IAMs_20		IAMs_20		17 13 22.4	
	comp=Z,52μm,22.0s								
E24K	**Your Creek**	**86.75**	**22**	P		**P**		**16 30 22.1**	**+1.3**
	baz=266,SNR=289								
E24K				S		**S**		**16 40 54.6**	**+0.1**
	baz=266								
C24K	**Franklin Bluff**	**86.79**	**20**	IAmb		IAmb		16 30 26.6	
	comp=Z,707nm,0.9s								
C24K	**Franklin Bluff**	**86.79**	**20**	P		**P**		**16 30 22.3**	**+1.4**
	baz=266								
COLA	**College**	**86.81**	**25**	P		**P**		**16 30 20.1**	**-0.9**
COLA				IAmb		IAmb		16 30 28.2	
	comp=Z,3μm,2.6s								
COLA	**College**	**86.81**	**25**	P		**P**		**16 30 23.1**	**+2.1**
	comp=Z,162nm,1.1s								
COLA	**College**	**86.81**	**25**	*i* P		**P**		**16 30 20.6**	**-0.4**
COLA				pmax		pmax			
	comp=Z,200nm,0.9s								
COLA				MLR		MLR			
	comp=Z,44μm,21.0s								
COLA	**College**	**86.81**	**25**	P		**P**		**16 30 21.1**	**0.0**
	baz=267								
COLA				S		**S**		**16 40 56.0**	**+1.1**
	baz=267								
COLA	**College**	**86.81**	**25**	P		**P**		**16 30 20.6**	**-0.4**
COLA				S		**S**		**16 40 58.0**	**+3.1**
COLA	**College**	**86.81**	**25**	P		**P**		**16 30 20.7**	**-0.3**
H24K	**Noodor Dome**	**86.85**	**24**	P		**P**		**16 30 22.9**	**+1.5**
	baz=267								
SCM	**Sheep Creek Mo**	**86.90**	**28**	IAmb		IAmb		16 30 28.1	
	comp=Z,1μm,1.2s								
SCM	**Sheep Creek Mo**	**86.90**	**28**	P		**P**		**16 30 22.5**	**+0.8**
	baz=267,SNR=128								
SCM				S		**S**		**16 40 57.3**	**+1.1**
	baz=267								
VORD	**Divnogorie**	**86.92**	**321**	*e*P		**P**		**16 30 21.2**	**-0.7**
VORD				*e*				16 30 25.1	
VORD				*e*S		**SKSac**		**16 40 44.8**	**-0.2**
VORD				pmax		pmax			
	comp=Z,1μm,1.0s								
VORD				smax		smax			
	comp=N,6μm,8.7s								
VORD				MLR		MLR			
	comp=Z,18μm,19.0s								
DHY	**Denali Highway**	**86.93**	**27**	IAmb		IAmb		16 30 26.1	
	comp=Z,2μm,2.3s								
DHY	**Denali Highway**	**86.93**	**27**	P		**P**		**16 30 22.3**	**+0.4**
	baz=267,SNR=76								
DHY				S		**S**		**16 40 57.9**	**+1.2**
	baz=267								
F24K	**Squaw Lake**	**86.95**	**23**	IAmb		IAmb		16 30 28.7	
	comp=Z,643nm,1.0s								
F24K	**Squaw Lake**	**86.95**	**23**	P		**P**		**16 30 23.3**	**+1.6**
	baz=267								
F24K				S		**S**		**16 40 59.2**	**+2.8**
	baz=267								
GLI	**Glacier Island**	**86.97**	**29**	IAmb		IAmb		16 30 28.2	
	comp=Z,1μm,1.2s								
GLI				IAMs_20		IAMs_20		17 07 53.3	
	comp=Z,62μm,22.0s								
GLI	**Glacier Island**	**86.97**	**29**	P		**P**		**16 30 22.6**	**+0.7**
	baz=268,SNR=60								
GLI				S		**S**		**16 40 58.0**	**+1.3**
	baz=268								
VORR	**Voronezh**	**86.99**	**321**	*e*P		**P**		**16 30 22.0**	**-0.2**
VORR				*e*				16 30 25.8	
VORR				*e*S		**SKSac**		**16 40 42.9**	**-2.5**
VORR				pmax		pmax			
	comp=Z,3μm,0.9s								
VORR				smax		smax			
	comp=N,4μm,6.8s								
VORR				MLR		MLR			
	comp=Z,44μm,20.0s								
POKR	**Poker Plat Res**	**87.00**	**25**	P		**P**		**16 30 21.4**	**-0.6**
	baz=267								
VSR	**Storozhevoye**	**87.01**	**321**	*e*P		**P**		**16 30 22.3**	**0.0**
VSR				*e*				16 33 50.5	
VSR				*e*S		**SKSac**		**16 40 47.6**	**+2.1**
VSR				pmax		pmax			
	comp=Z,13μm,2.4s								
VSR				pmax		pmax			
	comp=Z,5μm,2.2s								
VSR				smax		smax			
	comp=N,11μm,9.6s								
VSR				MLR		MLR			
	comp=Z,67μm,21.0s								
G24K	**Hadweenzic Riv**	**87.06**	**23**	IAmb		IAmb		16 30 28.1	
	comp=Z,647nm,0.9s								
G24K	**Hadweenzic Riv**	**87.06**	**23**	P		**P**		**16 30 23.4**	**+1.2**
	baz=267								
G24K				S		**S**		**16 40 58.9**	**+1.5**
	baz=267								
KLMR	**Klimovskoe**	**87.08**	**331**	*d i*P		**P**		**16 30 21.5**	**-0.9**
KLMR				*e*				16 33 44.4	
KLMR				S		**SKSac**		**16 40 44.6**	**-1.0**
KLMR				pmax		pmax			
	comp=Z,4μm,1.3s								
KLMR				MLR		MLR			
	comp=Z,85μm,19.0s								
HDA	**Harding Lake**	**87.18**	**26**	P		**P**		**16 30 22.3**	**-0.5**
	baz=268,SNR=240								
HDA				S		**S**		**16 41 00.7**	**+2.1**
	baz=268								
LPSR	**Galich'ya Gora**	**87.18**	**322**	*e*P		**P**		**16 30 23.0**	**-0.1**
LPSR				*e*				16 33 52.4	
LPSR				*e*S		**SKSac**		**16 40 52.4**	**+5.9**
LPSR				pmax		pmax			
	comp=Z,3μm,1.0s								
LPSR				pmax		pmax			
	comp=Z,13μm,2.3s								
LPSR				smax		smax			
	comp=N,13μm,10.2s								
LPSR				MLR		MLR			
	comp=Z,77μm,21.0s								
ILAR	**Eielson Array**	**87.22**	**25**	P		**P**		**16 30 21.9**	**-1.2**
	comp=Z,107nm,1.0s,baz=241,slow=4.8,SNR=147								
ILAR				PP		**PP**		**16 33 46.7**	**-0.6**
	comp=Z,34nm,1.0s,baz=261,slow=6.1,SNR=6.2								
ILAR				S		**SKSac**		**16 40 46.5**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=269,slow=9.3,SNR=1.7								
ILAR				PKKP		**PKKPdf**		**16 48 10.1**	**-0.2**
	comp=Z,15nm,1.1s,baz=130,slow=1.9,SNR=7.4								
ILAR				PKPPKP				16 56 18.5	
	comp=Z,11nm,1.3s,baz=70,slow=1.5,SNR=8.0								
	comp=Z,107nm,1.0s								
ILAR	**Eielson Array**	**87.22**	**25**	P		**P**		**16 30 21.4**	**-1.6**
HIN	**Hinchinbrook I**	**87.25**	**30**	IAmb		IAmb		16 30 30.0	
	comp=Z,717nm,1.2s								
FID	**Port Fidalgo**	**87.27**	**29**	IAMs_20		IAMs_20		17 08 08.6	
	comp=Z,58μm,21.0s								
Q23K	**Middleton Isla**	**87.30**	**31**	P		**P**		**16 30 24.5**	**+1.1**
	baz=268								
Q23K				S		**S**		**16 41 01.6**	**+1.8**
	baz=268								
M24K	**Tolsona, Glenn**	**87.45**	**28**	IAmb		IAmb		16 30 30.9	
	comp=Z,1μm,0.9s								
M24K	**Tolsona, Glenn**	**87.45**	**28**	P		**P**		**16 30 25.8**	**+1.5**
	baz=268,SNR=93								
M24K				S		**S**		**16 41 02.8**	**+1.3**
	baz=268								
KLU	**Klutina**	**87.56**	**29**	P		**P**		**16 30 26.0**	**+1.1**
	baz=269,SNR=61								
KLU				S		**S**		**16 41 02.9**	**+0.3**
	baz=269								
D25K	**Kavik River**	**87.59**	**21**	P		**P**		**16 30 25.9**	**+1.1**
	baz=268,SNR=323								
D25K				S		**S**		**16 41 03.6**	**+1.1**
	baz=268								
G25K	**Bearman Lake**	**87.61**	**23**	P		**P**		**16 30 26.3**	**+1.4**
	baz=268								
G25K				S		**S**		**16 41 03.7**	**+1.1**
	baz=268								
EYAK	**Cordova Ski Ar**	**87.62**	**30**	P		**P**		**16 30 27.5**	**+2.5**
	comp=Z,235nm,1.5s								
EYAK	**Cordova Ski Ar**	**87.62**	**30**	P		**P**		**16 30 25.9**	**+0.8**
	baz=269,SNR=14								
EYAK				S		**S**		**16 41 03.2**	**+0.2**
	baz=269								
DIV	**Divide**	**87.62**	**29**	IAmb		IAmb		16 30 32.1	
	comp=Z,1μm,1.1s								
K24K	**Donnelly Dome**	**87.67**	**26**	P		**P**		**16 30 24.5**	**-0.9**
K24K				IAmb		IAmb		16 30 33.2	
	comp=Z,812nm,0.9s								
K24K	**Donnel

J25K	**Salcha River,**	**87.87**	**26**	P		**P**		**16 30 26.0**	**-0.3**
	baz=269,SNR=59								
HARP	**HAARP**	**87.93**	**28**	P		**P**		**16 30 27.3**	**+0.8**
	baz=269,SNR=62								
MOS	**Moscow**	**87.98**	**326**α	*i* P		**P**		**16 30 26.6**	**-0.3**
MOS				*e*				16 33 53.1	
MOS				*i*				16 40 47.2	
MOS				*i* S		**S**		**16 41 08.2**	**+1.6**
MOS				*e*PS		**PnS**		**16 42 09.8**	**-4.0**
MOS				pmax		pmax			
	comp=Z,11μm,2.6s								
MOS				pmax		pmax			
	comp=Z,3μm,1.5s								
MOS				smax		smax			
	comp=N,28μm,4.2s								
MOS				MLR		MLR			
	comp=E,74μm,20.0s								
MOS				MLR		MLR			
	comp=Z,90μm,20.0s								
RIDG	**Independent Ri**	**88.09**	**26**	IAmb		IAmb		16 30 32.5	
	comp=Z,852nm,1.1s								
RIDG	**Independent Ri**	**88.09**	**26**	P		**P**		**16 30 27.7**	**+0.4**
	baz=270,SNR=54								
RIDG				S		**S**		**16 41 08.2**	**+0.8**
	baz=270								
C26K	**Camden Bay**	**88.11**	**20**	P		**P**		**16 30 29.4**	**+2.2**
	baz=269								
C26K				S		**S**		**16 41 08.8**	**+1.5**
	baz=269								
ANN	**Anapa**	**88.12**	**315**d	*i* P		**P**		**16 30 27.7**	**-0.1**
ANN				*e**PP		**pP**		**16 30 40.8**	**-0.7**
ANN				*e*				16 33 57.9	
ANN				*e*PPP		PPP		16 35 51.1	
ANN				*i* S		**SKSac**		**16 40 52.0**	**-0.5**
ANN				pmax		pmax			
	comp=Z,4μm,1.2s								
ANN				pmax		pmax			
	comp=N,707nm,1.0s								
ANN				pmax		pmax			
	comp=Z,2μm,1.0s								
ANN				pmax		pmax			
	comp=E,431nm,1.0s								
ANN				MLR		MLR			
	comp=Z,84μm,23.0s								
ANN				MLR		MLR			
	comp=N,34μm,19.0s								
ANN				MLR		MLR			
	comp=E,116μm,23.0s								
RAGM	**Ragged Mountai**	**88.15**	**30**	IAMs_20		IAMs_20		17 06 46.6	
	comp=Z,59μm,22.0s								
BMRM	**Bremner River**	**88.19**	**29**	IAmb		IAmb		16 30 36.4	
	comp=Z,861nm,1.1s								
BMRM				IAMs_20		IAMs_20		17 08 53.5	
	comp=Z,50μm,22.0s								
BMRM	**Bremner River**	**88.19**	**29**	P		**P**		**16 30 28.8**	**+0.9**
	baz=270,SNR=62								
BMRM				S		**S**		**16 41 09.1**	**+0.6**
	baz=270								
N25K	**Chitina, Valde**	**88.19**	**29**	IAMs_20		IAMs_20		17 09 14.6	
	comp=Z,51μm,21.0s								
N25K	**Chitina, Valde**	**88.19**	**29**	P		**P**		**16 30 29.1**	**+1.2**
	baz=270,SNR=90								
N25K				S		**S**		**16 41 08.7**	**+0.1**
	baz=270								
BMAR	**Burnt Mountain**	**88.22**	**23**	P		**P**		**16 30 28.5**	**+0.6**
KAIM	**Kayak Island**	**88.28**	**30**	IAmb		IAmb		16 30 35.6	
	comp=Z,989nm,1.0s								
KAIM	**Kayak Island**	**88.28**	**30**	P		**P**		**16 30 29.8**	**+1.5**
	baz=270,SNR=7.9								
KAIM				S		**S**		**16 41 09.9**	**+0.7**
	baz=270								
KIBK	**Kibwezi**	**88.35**	**268**	P		**P**		**16 30 31.4**	**+1.8**
KIBK	**Kibwezi**	**88.35**	**268**	IAMs_20		IAMs_20		17 06 40.0	
	comp=Z,71μm,21.0s								
KIBK	**Kibwezi**	**88.35**	**268**	P		**P**		**16 30 31.2**	**+1.6**
	SNR=682								
HMT	**Hamilton**	**88.36**	**30**	IAMs_20		IAMs_20		17 06 51.1	
	comp=Z,50μm,22.0s								
F26K	**Sheenjek River**	**88.38**	**22**	P		**P**		**16 30 30.2**	**+1.6**
	baz=270,SNR=244								
F26K				S		**S**		**16 41 12.7**	**+2.6**
	baz=270								
SCRK	**Sand Creek**	**88.47**	**26**	P		**P**		**16 30 30.1**	**+0.9**
	baz=270,SNR=97								
SCRK				S		**S**		**16 41 11.6**	**+0.5**
	baz=270								
G26K	**Porcupine Rive**	**88.53**	**23**	IAmb		IAmb		16 30 35.9	
	comp=Z,754nm,1.1s								
G26K	**Porcupine Rive**	**88.53**	**23**	P		**P**		**16 30 30.8**	**+1.6**
	baz=270								
G26K				S		**S**		**16 41 13.9**	**+2.5**
	baz=270								
C27K	**Jago River**	**88.53**	**21**	IAmb		IAmb		16 30 35.2	
	comp=Z,969nm,0.9s								
C27K	**Jago River**	**88.53**	**21**	P		**P**		**16 30 31.0**	**+1.7**
	baz=270								
C27K				S		**S**		**16 41 11.6**	**+0.2**
	baz=270								
GLB	**Gilahina Butte**	**88.57**	**29**	P		**P**		**16 30 29.3**	**-0.3**
GLB				IAmb		IAmb		16 30 38.4	
	comp=Z,965nm,1.2s								
GLB				IAMs_20		IAMs_20		17 08 43.6	
	comp=Z,55μm,22.0s								
OBN	**Obninsk**	**88.59**	**325**	LR		LR		17 14 17.8	
	comp=Z,47μm,18.1s,baz=28,slow=38								
OBN	**Obninsk**	**88.59**	**325**	P		**P**		**16 30 28.9**	**-0.8**
OBN	**Obninsk**	**88.59**	**325**	$\Downarrow$P		**P**		**16 30 30.2**	**+0.5**
OBN	**Obninsk**	**88.59**	**325**c	*i*P		**P**		**16 30 29.4**	**-0.3**
OBN				*e**PP		**pP**		**16 30 40.9**	**-2.7**
OBN				*e*				16 33 56.5	
OBN				*e*PPP		PPP		16 35 55.0	
OBN				*e*S		**SKSac**		**16 40 56.3**	**+1.4**
OBN				*e*SS		**SS**		**16 47 06.2**	**+2.4**
OBN				pmax		pmax			
	comp=Z,4μm,1.5s								
OBN				MLR		MLR			
	comp=Z,117μm,22.0s								
OBN	**Obninsk**	**88.59**	**325**	P		**P**		**16 30 29.6**	**-0.1**
	comp=Z,26μmcomp=Z,2μm,1.8s								
OBN	**Obninsk**	**88.59**	**325**	P		**P**		**16 30 29.7**	**-0.1**
BERG	**Berg Lake**	**88.64**	**30**	IAmb		IAmb		16 30 38.9	
	comp=Z,774nm,1.1s								
J26L	**Joseph Creek**	**88.65**	**26**	P		**P**		**16 30 30.5**	**+0.5**
	baz=271,SNR=284								
J26L				S		**S**		**16 41 14.1**	**+1.3**
	baz=271								
ASF	**Jabal al Asfar**	**88.69**	**302**	LR		LR		17 14 29.4	
	comp=Z,61μm,21.6s,baz=79,slow=38								
VRDI	**Verde Repeater**	**88.75**	**29**	IAMs_20		IAMs_20		17 09 00.3	
	comp=Z,55μm,22.0s								
L26K	**Log Cabin Wild**	**88.77**	**27**	P		**P**		**16 30 31.4**	**+0.9**
	baz=271,SNR=87								
L26K				S		**S**		**16 41 14.7**	**+0.8**
	baz=271								
I26K	**Coal Creek Min**	**88.81**	**25**	P		**P**		**16 30 31.2**	**+0.6**
	baz=271,SNR=178								
BGLC	**Bering Glacier**	**88.85**	**30**	P		**P**		**16 30 32.9**	**+2.0**
	baz=271								
KHAM	**Kharkiv**	**88.86**	**320**	P		**P**		**16 30 31.6**	**+0.3**
CRQM	**Cirque**	**88.91**	**29**	IAmb		IAmb		16 30 40.3	
	comp=Z,810nm,1.2s								
CRQE	**Cirque**	**88.93**	**29**	P		**P**		**16 30 32.7**	**+1.2**
	baz=271,SNR=43								
CRQE				S		**S**		**16 41 15.0**	**-0.7**
	baz=271								
M26K	**Nabesna, AK**	**88.94**	**28**	IAMs_20		IAMs_20		17 09 13.3	
	comp=Z,57μm,22.0s								
M26K	**Nabesna, AK**	**88.94**	**28**	P		**P**		**16 30 32.5**	**+1.1**
	baz=271,SNR=83								
M26K				S		**S**		**16 41 16.3**	**+0.7**
	baz=271								
MCARA	**McCarthy VSAT**	**88.95**	**29**	IAmb		IAmb		16 30 40.5	
	comp=Z,776nm,1.1s								
MCARA				IAMs_20		IAMs_20		17 09 17.7	
	comp=Z,47μm,21.0s								
MCARA	**McCarthy VSAT**	**88.95**	**29**	P		**P**		**16 30 32.9**	**+1.5**
	baz=271,SNR=42								
MCARA				S		**S**		**16 41 15.1**	**-0.5**
	baz=271								
WAX	**Waxell Ridge**	**89.06**	**30**	IAmb		IAmb		16 30 37.7	
	comp=Z,594nm,1.2s								
TGL	**Tana Glacier**	**89.06**	**29**	IAmb		IAmb		16 30 41.0	
	comp=Z,666nm,1.1s								
FKH	**Fakeheh**	**89.06**	**304**	*e*P		**P**		**16 30 34.3**	**+1.6**
KMBO	**Kilima Mbogo**	**89.11**	**269**	P		**P**		**16 30 34.8**	**+1.4**
	comp=Z,98nm,0.8s,baz=93,slow=5.0,SNR=124								
KMBO				S		**SKSac**		**16 41 01.9**	**+1.7**
	comp=Z,0.9nm,0.2s,baz=51,slow=9.3,SNR=1.0								
KMBO				ScS		**ScS**		**16 41 26.9**	**+2.6**
	comp=Z,2.0nm,0.4s,baz=174,slow=22,SNR=8.7								
KMBO				PKPPKP				16 56 19.5	
	comp=Z,0.9nm,0.3s,baz=264,slow=4.4,SNR=8.5								
	comp=Z,98nm,0.8s								
KMBO	**Kilima Mbogo**	**89.11**	**269**	*i* P		**P**		**16 30 35.4**	**+2.0**
KMBO				pmax		pmax			
	comp=Z,98nm,0.8s								
LVZ	**Lovozero**	**89.20**	**338**	P		**P**		**16 30 31.3**	**-1.1**
LVZ				IAmb		IAmb		16 30 36.0	
	comp=Z,662nm,1.1s								
LVZ				IAMs_20		IAMs_20		17 17 57.1	
	comp=Z,64μm,19.0s								
LVZ	**Lovozero**	**89.20**	**338**ce	P		**P**		**16 30 32.2**	**-0.2**
LVZ				pmax		pmax			
	comp=Z,581nm,1.0s								
LVZ				MLR		MLR			
	comp=Z,62μm,20.0s								
LVZ	**Lovozero**	**89.20**	**338**	P		**P**		**16 30 31.6**	**-0.8**
BEIL	**Beino**	**89.24**	**304**	*e*P		**P**		**16 30 34.5**	**+1.2**
ISLE	**Juniper Island**	**89.31**	**30**	IAmb		IAmb		16 30 38.7	
	comp=Z,743nm,1.3s								
K27K	**Chicken**	**89.31**	**26**	IAmb		IAmb		16 30 39.8	
	comp=Z,2μm,1.1s								
K27K	**Chicken**	**89.31**	**26**	P		**P**		**16 30 34.9**	**+1.9**
	baz=272								
K27K				S		**S**		**16 41 20.1**	**+1.2**
	baz=272								
E27K	**Coleen River**	**89.33**	**22**	IAmb		IAmb		16 30 38.7	
	comp=Z,818nm,1.0s								
E27K	**Coleen River**	**89.33**	**22**	P		**P**		**16 30 34.5**	**+1.4**
	baz=272,SNR=624								
E27K				S		**S**		**16 41 19.8**	**+0.8**
	baz=272								
G27K	**Doyon Strip**	**89.37**	**23**	P		**P**		**16 30 34.9**	**+1.6**
	baz=272								
G27K				S		**S**		**16 41 22.0**	**+2.6**
	baz=272								
I27K	**Kandik River**	**89.44**	**25**	IAmb		IAmb		16 30 39.4	
	comp=Z,783nm,1.0s								
I27K	**Kandik River**	**89.44**	**25**	P		**P**		**16 30 35.3**	**+1.7**
	baz=272								
I27K				S		**S**		**16 41 19.1**	**-1.1**
	baz=272								
HWQ	**Hawqa**	**89.44**	**304**	*e*P		**P**		**16 30 35.5**	**+1.1**
H27K	**Steamboat Moun**	**89.45**	**24**	IAmb		IAmb		16 30 39.7	
	comp=Z,1μm,1.6s								
H27K	**Steamboat Moun**	**89.45**	**24**	P		**P**		**16 30 35.4**	**+1.7**
	baz=272								
H27K				S		**S**		**16 41 20.7**	**+0.6**
	baz=272								
L27K	**Beaver Creek,**	**89.46**	**27**	IAmb		IAmb		16 30 39.5	
	comp=Z,542nm,0.9s								
L27K	**Beaver Creek,**	**89.46**	**27**	P		**P**		**16 30 35.5**	**+1.7**
	baz=272								
L27K				S		**S**		**16 41 21.9**	**+1.6**
	baz=272								
M27K	**Edge Creek, AK**	**89.46**	**28**	P		**P**		**16 30 35.2**	**+1.3**
	baz=272,SNR=76								
M27K				S		**S**		**16 41 21.6**	**+0.9**
	baz=272								
BCAR	**Beaver Creek A**	**89.48**	**27**	P		**P**		**16 30 34.2**	**+0.3**
ZAHL	**Zahle**	**89.51**	**304**	*e*P		**P**		**16 30 36.0**	**+1.2**
D27M	**Malcolm River**	**89.51**	**21**	IAmb		IAmb		16 30 39.6	
	comp=Z,628nm,0.9s								
D27M	**Malcolm River**	**89.51**	**21**	P		**P**		**16 30 35.3**	**+1.4**
	baz=273								
D27M				S		**S**		**16 41 22.3**	**+1.6**
	baz=273								
MESA	**MESA**	**89.51**	**30**	P		**P**		**16 30 35.3**	**+1.0**
	baz=272,SNR=10								
MESA				S		**S**		**16 41 22.2**	**+0.9**
	baz=272								
RCY	**Rachaya**	**89.56**	**303**	*e*P		**P**		**16 30 36.4**	**+1.3**
GRNC	**Granite Creek**	**89.59**	**29**	IAmb		IAmb		16 30 40.4	
	comp=Z,781nm,1.2s								
YAH	**Yahtse**	**89.61**	**30**	IAmb		IAmb		16 30 40.7	
	comp=Z,898nm,1.2s								
YAH				IAMs_20		IAMs_20		17 06 47.0	
	comp=Z,48μm,21.0s								
BARN	**Barnard Glacie**	**89.62**	**29**	IAmb		IAmb		16 30 41.2	
	comp=Z,842nm,1.2s								
SHBL	**Chebaa**	**89.64**	**303**	*e*P		**P**		**16 30 36.8**	**+1.4**
QRWL	**Qaraoun**	**89.69**	**303**	*e*P		**P**		**16 30 36.8**	**+1.2**
APA	**Apatity**	**89.69**	**337**	$\Downarrow$*i*P		**P**		**16 30 32.3**	**-2.4**
APA				*i* S		**S**		**16 41 18.3**	**-3.9**
APA				*i* PS		**PnS**		**16 42 26.4**	**-7.2**
BHL	**Bhannes**	**89.70**	**304**	*e*P		**P**		**16 30 36.7**	**+1.1**
BALJ	**Balqa**	**89.76**	**302**	P		**P**		**16 30 36.4**	**+0.6**
DQRL	**Deir Qamar**	**89.77**	**304**	*e*P		**P**		**16 30 37.3**	**+1.4**
CTG	**Chitna Glacier**	**89.78**	**29**	P		**P**		**16 30 37.1**	**+1.7**
	baz=273,SNR=99								
CTG				S		**S**		**16 41 24.3**	**+0.6**
	baz=273								
CTGM	**Chitina Glacie**	**89.78**	**29**	IAmb		IAmb		16 30 42.0	
	comp=Z,1μm,1.2s								
GHAJ	**Ghor Haditha**	**89.85**	**301**	IAmb		IAmb		16 30 43.7	
	comp=Z,1μm,0.8s								
TABL	**Table Mountain**	**89.90**	**30**	P		**P**		**16 30 34.2**	**-1.9**
TABL				IAmb		IAmb		16 30 41.8	
	comp=Z,830nm,1.2s								
BVCY	**Beaver Creek**	**89.93**	**28**	P		**P**		**16 30 37.6**	**+1.6**
	baz=273,SNR=95								
BVCY				S		**S**		**16 41 25.0**	**+0.2**
	baz=273								
MMAI	**Mount Meron Ar**	**89.93**	**303**	P		**P**		**16 30 38.1**	**+1.4**
	comp=Z,313nm,0.8s,baz=93,slow=5.8,SNR=99								
MMAI				S		**SKSac**		**16 41 05.3**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=104,slow=10,SNR=1.6								
MMAI				PKKPbc		**PKKPbc**		**16 48 09.2**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=221,slow=0.9,SNR=7.0								
MMAI				PKPPKP				16 56 17.3	
	comp=Z,30nm,1.3s,baz=241,slow=6.5,SNR=6.8								
MMAI				LR		LR		17 14 55.5	
	comp=Z,38μm,21.8s,baz=86,slow=38								
	comp=Z,313nm,0.8s								
F28M	**Old Crow**	**90.02**	**22**	IAmb		IAmb		16 30 41.6	
	comp=Z,818nm,1.1s								
F28M				IAMs_20		IAMs_20		17 18 16.7	
	comp=Z,48μm,21.0s								
F28M	**Old Crow**	**90.02**	**22**	P		**P**		**16 30 37.3**	**+1.1**
	baz=274,SNR=414								
F28M				S		**S**		**16 41 25.8**	**+0.5**
	baz=274								
E28M	**Babbage River**	**90.07**	**21**	IAmb		IAmb		16 30 42.0	
	comp=Z,915nm,1.0s								
E28M	**Babbage River**	**90.07**	**21**	P		**P**		**16 30 37.6**	**+1.1**
	baz=274								
E28M				S		**S**		**16 41 25.9**	**+0.1**
	baz=274								
I28M	**Miner Creek**	**90.15**	**25**	IAmb		IAmb		16 30 42.7	
	comp=Z,910nm,1.1s								
I28M	**Miner Creek**	**90.15**	**25**	P		**P**		**16 30 38.4**	**+1.4**
	baz=274								
I28M				S		**S**		**16 41 27.6**	**+0.8**
	baz=274								
YUK3	**Moose Creek**	**90.16**	**28**	P		**P**		**16 30 38.8**	**+1.5**
	baz=274,SNR=52								
YUK3				S		**S**		**16 41 27.2**	**0.0**
	baz=274								
SYO	**Syowa Base**	**90.27**	**201**	$\Uparrow$*i*P		**P**		**16 30 38.6**	**+1.3**
SYO	**Syowa Base**	**90.27**	**201**	$\Downarrow$*i*pP		pP		16 30 48.0	-3.3
D28M	**Stokes Point**	**90.30**	**21**	P		**P**		**16 30 38.9**	**+1.4**
	baz=275								
D28M				S		**S**		**16 41 27.4**	**-0.3**
	baz=275								
O28M	**Mount Upton**	**90.35**	**29**	P		**P**		**16 30 39.1**	**+0.8**
	baz=274								
O28M				S		**S**		**16 41 29.4**	**+0.1**
	baz=274								
PCA	**Pinnacle**	**90.36**	**30**	IAmb		IAmb		16 30 43.8	
	comp=Z,862nm,1.3s								
PINM	**Pinnacle**	**90.37**	**30**	P		**P**		**16 30 39.5**	**+1.4**
	baz=274,SNR=13								
PINM				S		**S**		**16 41 26.2**	**-2.8**
	baz=274								
EIL	**Elat**	**90.43**	**300**	LR		LR		17 16 14.1	
	comp=Z,33μm,21.1s,baz=90,slow=39								
SIM	**Simferopol'**	**90.48**	**315**	*e*P		**P**		**16 30 39.2**	**+0.3**
SIM				*e*S		**SKSac**		**16 41 11.1**	**+4.6**
SIM				pmax		pmax			
	comp=Z,996nm,0.8s								
DAWY	**Dawson**	**90.48**	**26**	P		**P**		**16 30 38.5**	**0.0**
DAWY				IAmb		IAmb		16 30 44.5	
	comp=Z,728nm,1.2s								
DAWY	**Dawson**	**90.48**	**26**	P		**P**		**16 30 39.8**	**+1.3**
	baz=274,SNR=364								
DAWY				S		**S**		**16 41 28.4**	**-1.5**
	baz=274								
YUK8	**Steele Glacier**	**90.53**	**29**	P		**P**		**16 30 40.7**	**+1.6**
	baz=274								
YUK8				S		**S**		**16 41 28.1**	**-2.6**
	baz=274								
E29M	**Blow River**	**90.69**	**22**	IAmb		IAmb		16 30 44.5	
	comp=Z,1μm,1.6s								
E29M	**Blow River**	**90.69**	**22**	P		**P**		**16 30 40.2**	**+0.9**
	baz=276								
E29M				S		**S**		**16 41 33.5**	**+2.1**
	baz=276								
BZK	**Bozkurt**	**90.70**	**312**	$\Downarrow$P		**P**		**16 30 40.8**	**+0.9**
H29M	**Whitestone**	**90.73**	**24**	IAmb		IAmb		16 30 44.9	
	comp=Z,839nm,1.3s								
H29M	**Whitestone**	**90.73**	**24**	P		**P**		**16 30 40.6**	**+1.0**
	baz=275								
H29M				S		**S**		**16 41 34.7**	**+2.8**
	baz=275								
G29M	**Pine Creek**	**90.80**	**23**	IAmb		IAmb		16 30 45.2	
	comp=Z,2μm,1.1s								
G29M	**Pine Creek**	**90.80**	**23**	P		**P**		**16 30 40.7**	**+0.8**
	baz=276								
G29M				S		**S**		**16 41 34.0**	**+1.5**
	baz=276								
PNL	**Peninsula**	**90.83**	**30**	P		**P**		**16 30 41.4**	**+1.2**
	baz=274,SNR=8.8								
PNL				S		**S**		**16 41 29.3**	**-3.8**
	baz=274								
LODK	**Lodwar**	**90.87**	**273**	IAmb		IAmb		16 30 51.0	
	comp=Z,4μm,3.0s								
LODK	**Lodwar**	**90.87**	**273**	P		**P**		**16 30 42.3**	**+0.9**
	SNR=234								
KIRS	**Kirsehir-Merke**	**90.90**	**309**	$\Uparrow$P		**P**		**16 30 41.2**	**+0.1**
KIRS	**Kirsehir-Merke**	**90.90**	**309**	$\Uparrow$P		**PKKPbc**		**16 48 00.5**	**-6.4**
VADS	**Vadso**	**90.92**	**340**	*e*P		**P**		**16 30 40.1**	**-0.3**
VADS				IVmB_BB				16 30 42.4	
	comp=Z,10μm,2.3s								
VADS				*e*PP		**PP**		**16 34 17.7**	**+1.1**
VADS				*e*				16 41 05.1	
VADS				*e*SS		SS		16 47 37.9	+1.1
VADS				IVMs_BB		IVMs_BB		17 15 12.3	
	comp=Z,25μm,25.3s								
ILGA	**Ilgaz**	**90.96**	**311**	IAmb		IAmb		16 30 47.2	
	comp=Z,504nm,1.0s								
M29M	**Somme Creek**	**91.04**	**28**	IAmb		IAmb		16 30 47.3	
	comp=Z,624nm,1.0s								
M29M	**Somme Creek**	**91.04**	**28**	P		**P**		**16 30 42.8**	**+1.6**
	baz=275								
YUK4	**Talbot Arm**	**91.06**	**29**	P		**P**		**16 30 43.1**	**+1.6**
	baz=275,SNR=48								
BR104	**Keskin Array S**	**91.08**	**310**	P		**P**		**16 30 41.7**	**-0.3**
	comp=Z,2μmcomp=Z,266nm,0.8s								
BR131	**Keskin Array S**	**91.08**	**310**	P		**P**		**16 30 41.3**	**-0.7**
	SNR=148								
BR131	**Keskin Array S**	**91.08**	**310**c	*i*P		**P**		**16 30 41.7**	**-0.3**
BRTR	**Keskin Array B**	**91.08**	**310**	P		**P**		**16 30 41.7**	**-0.3**
	comp=Z,119nm,0.9s,baz=124,slow=5.2,SNR=170								
BRTR				PP		**PP**		**16 34 19.6**	**+0.5**
	comp=Z,9.8nm,0.7s,baz=97,slow=9.2,SNR=2.1								
BRTR				S		**SKSac**		**16 41 11.5**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=70,slow=1.4,SNR=1.0								
BRTR				PKKPbc		**PKKPbc**		**16 48 06.9**	**+0.4**
	comp=Z,9.0nm,1.0s,baz=235,slow=2.6,SNR=7.8								
BRTR				PKPPKP		**P'P'df**		**16 56 14.7**	**-1.4**
	comp=Z,3.6nm,1.1s,baz=274,slow=2.6,SNR=6.0								
BRTR				LR		LR		17 19 44.2	
	comp=Z,17μm,18.4s,baz=84,slow=41								
	comp=Z,119nm,0.9s								
BRTR	**Keskin Array B**	**91.08**	**310**	P		**P**		**16 30 40.4**	**-1.6**
BR106	**Keskin Array S**	**91.10**	**310**	P		**P**		**16 30 41.8**	**-0.3**
	comp=Z,2μmcomp=Z,290nm,0.8s								
BR105	**Keskin Array S**	**91.10**	**310**	P		**P**		**16 30 41.8**	**-0.3**
	comp=Z,2μmcomp=Z,326nm,0.8s								
HOPEN	**Hopen**	**91.13**	**347**	*e*P		**P**		**16 30 41.0**	**-0.2**
HOPEN				IVmB_BB				16 30 44.3	
	comp=Z,18μm,2.1s								
HOPEN				*e*PP		**PP**		**16 34 25.2**	**+7.0**
HOPEN				*e*				16 41 07.7	
HOPEN				IVMs_BB		IVMs_BB		17 14 23.5	
	comp=Z,42μm,24.5s								
L29M	**L29M**	**91.13**	**27**	P		**P**		**16 30 43.5**	**+1.9**
	baz=276								
L29M				S		**S**		**16 41 36.6**	**+0.8**
	baz=276								
O29M	**Mount Kennedy**	**91.19**	**30**	P		**P**		**16 30 43.5**	**+1.5**
	baz=275								
O29M				S		**S**		**16 41 36.8**	**+0.3**
	baz=275								
YUK6	**Outpost Mounta**	**91.23**	**29**	P		**P**		**16 30 43.7**	**+1.4**
	baz=275								
YUK6				S		**S**		**16 41 35.0**	**-2.1**
	baz=275								
K29M	**Barlow Dome**	**91.33**	**26**	IAmb		IAmb		16 30 48.2	
	comp=Z,987nm,1.4s								
K29M				IAMs_20		IAMs_20		17 11 00.4	
	comp=Z,44μm,22.0s								
K29M	**Barlow Dome**	**91.33**	**26**	P		**P**		**16 30 43.8**	**+1.2**
	baz=276								
K29M				S		**S**		**16 41 38.6**	**+0.9**
	baz=276								
EPYK	**Eagle Plains**	**91.37**	**24**	IAmb		IAmb		16 30 48.2	
	comp=Z,1μm,1.2s								
EPYK	**Eagle Plains**	**91.37**	**24**	P		**P**		**16 30 43.1**	**+0.5**
	baz=277,SNR=270								
EPYK				S		**S**		**16 41 35.7**	**-2.1**
	baz=277								
QSPA	**South Pole Qui**	**

J30M S **S** **16 41 41.1 -0.4**
baz=277
KEV **Kevo** **91.77 340** P **P** **16 30 43.3 -1.0**
KEV IAmb IAmb 16 30 48.2
comp=Z,692nm,1.0s
KEV IAMs_20 IAMs_20 17 15 28.1
comp=Z,62µm,22.0s
KEV **Kevo** **91.77 340** P **P** **16 30 43.3 -1.0**
KEV pmax pmax
comp=Z,692nm,1.0s
KEV MLR MLR
comp=Z,62µm,22.0s
KEV **Kevo** **91.77 340** P **P** **16 30 43.6 -0.7**
KEV S **S** **16 41 36.5 -4.7**
N30M **Aishikik Lake** **91.79 29** IAmb IAmb 16 30 50.7
comp=Z,829nm,1.2s
N30M **Aishikik Lake** **91.79 29** P **P** **16 30 46.2 +1.5**
baz=276
M30M **Minto, Yukon** **91.80 27** IAmb IAmb 16 30 50.6
comp=Z,1µm,1.2s
M30M IAMs_20 IAMs_20 17 10 58.9
comp=Z,45µm,22.0s
M30M **Minto, Yukon** **91.80 27** P **P** **16 30 46.5 +1.9**
baz=277,SNR=239
M30M S **S** **16 41 42.9 +1.1**
baz=277
P30M **Million Dollar** **92.01 30** P **P** **16 30 46.9 +1.2**
baz=276
MAYO **Mayo, Yukon** **92.08 26** P **P** **16 30 47.4 +1.5**
baz=278,SNR=64
MAYO S **S** **16 41 44.2 0.0**
baz=278
G31M **Satah River** **92.26 23** IAmb IAmb 16 30 51.3
comp=Z,1µm,1.1s
G31M IAMs_20 IAMs_20 17 17 17.0
comp=Z,45µm,21.0s
G31M **Satah River** **92.26 23** P **P** **16 30 47.0 +0.4**
baz=279,SNR=235
INK **Inuvik** **92.31 21** LR LR 17 13 51.3
comp=Z,32µm,20.8s,baz=270,slow=36
INK **Inuvik** **92.31 21** IAmb IAmb 16 30 51.5
comp=Z,1µm,1.3s
INK **Inuvik** **92.31 21** P **P** **16 30 47.2 +0.4**
baz=280,SNR=463
INK S **S** **16 41 41.5 -4.5**
baz=280
ARA0 **ARCESS Array S** **92.33 340** *e*P **P** **16 30 46.4 -0.6**
ARA0 IVmB_BB 16 30 49.0
comp=Z,16µm,2.3s
ARA0 *e*PP **PP** **16 34 33.0 +5.2**
ARA0 *e* 16 41 06.0
ARA0 IVMs_BB IVMs_BB 17 15 40.3
comp=Z,24µm,22.2s
ARCES **ARCESS Array B** **92.33 340** P **P** **16 30 46.6 -0.4**
comp=Z,714nm,0.8s,baz=78,slow=6.0,SNR=388
ARCES PKiKP **PKiKP** **16 35 36.8 +0.8**
comp=Z,18nm,0.9s,baz=124,slow=1.7,SNR=3.8
ARCES PKKP **PKKPdf** **16 48 02.3 +1.0**
comp=Z,6.4nm,0.5s,baz=253,slow=3.2,SNR=20
ARCES PKPPKP 16 56 12.1
comp=Z,3.1nm,0.9s,baz=267,slow=2.4,SNR=5.1
ARCES LR LR 17 16 16.1
comp=Z,68µm,21.9s,baz=86,slow=38
comp=Z,714nm,0.8s
ARCES **ARCESS Array B** **92.33 340** P **P** **16 30 46.2 -0.7**
O30N **Mendenhall** **92.36 29** IAmb IAmb 16 30 53.1
comp=Z,701nm,1.2s
O30N **Mendenhall** **92.36 29** P **P** **16 30 48.6 +1.3**
baz=277,SNR=87
O30N S **S** **16 41 46.3 -0.6**
baz=277
F31M **Tsiigehtchic** **92.38 22** P **P** **16 30 47.7 +0.6**
baz=280,SNR=326
PLBC **Pleasant Camp** **92.39 30** P **P** **16 30 48.8 +1.4**
baz=277,SNR=49
PLBC S **S** **16 41 48.5 +1.4**
baz=277
H31M **Peel River** **92.41 24** IAmb IAmb 16 30 52.3
comp=Z,1µm,1.4s
H31M **Peel River** **92.41 24** P **P** **16 30 47.9 +0.5**
baz=279
H31M S **S** **16 41 43.5 -3.6**
baz=279
N31M **Braeburn, Yuko** **92.41 28** IAmb IAmb 16 30 54.1
comp=Z,1µm,1.2s
N31M **Braeburn, Yuko** **92.41 28** P **P** **16 30 49.1 +1.6**
baz=278,SNR=124
N31M S **S** **16 41 47.0 -0.4**
baz=278
SPB2 **Spitsbergen Ar** **92.51 349** P **P** **16 30 47.2 -0.4**
SPA0 **Spitsbergen Ar** **92.51 349** *e*P **P** **16 30 46.8 -0.8**
SPA0 IVmB_BB 16 30 50.1
comp=Z,15µm,1.6s
SPA0 *e*PP **PP** **16 34 22.8 -6.3**
SPA0 *e* 16 41 13.6
SPA0 *e*SS SS 16 48 01.9 +2.5
SPA0 IVMs_BB IVMs_BB 17 12 07.7
comp=Z,22µm,25.9s
SPITS **Spitsbergen Ar** **92.51 349** P **P** **16 30 47.5 -0.1**
comp=Z,359nm,0.8s,baz=90,slow=5.9,SNR=47
SPITS PP **PP** **16 34 30.1 +1.1**
comp=Z,151nm,1.1s,baz=246,slow=10.0,SNR=3.8
SPITS PKKP **PKKPdf** **16 48 01.2 +0.1**
comp=Z,3.8nm,0.5s,baz=172,slow=4.4,SNR=7.9
SPITS LR LR 17 17 12.4
comp=Z,30µm,21.1s,baz=64,slow=39
comp=Z,359nm,0.8s
S31K **Pelican** **92.64 32** IAmb IAmb 16 30 54.3
comp=Z,682nm,1.3s
S31K IAMs_20 IAMs_20 17 08 03.3
comp=Z,47µm,22.0s
S31K **Pelican** **92.64 32** P **P** **16 30 50.0 +1.5**
baz=277,SNR=8.5
S31K S **S** **16 41 47.8 -1.6**
baz=277
HAMF **Hammerfest** **92.72 341** *e*P **P** **16 30 49.0 +0.4**
HAMF IVmB_BB 16 30 51.1
comp=Z,11µm,1.0s
HAMF *e*PP **PP** **16 34 30.9 +0.2**
HAMF *e* 16 41 15.4
HAMF *e*SS SS 16 48 02.8 +0.2
HAMF IVMs_BB IVMs_BB 17 16 33.1
comp=Z,32µm,22.7s
R31K **City Hall, Gus** **92.84 31** P **P** **16 30 50.8 +1.4**
baz=278
SKAG **Skagway** **92.91 30** P **P** **16 30 50.1 +0.4**
SKAG IAmb IAmb 16 30 56.3
comp=Z,668nm,1.1s
SKAG **Skagway** **92.91 30** P **P** **16 30 51.3 +1.5**
baz=278,SNR=112
SKAG S **S** **16 41 49.6 -2.1**
baz=278
M31M **Drury Creek, Y** **92.96 28** IAmb IAmb 16 30 55.4
comp=Z,948nm,1.3s
M31M IAMs_20 IAMs_20 17 11 42.6
comp=Z,52µm,22.0s
M31M **Drury Creek, Y** **92.96 28** P **P** **16 30 51.3 +1.3**
baz=279,SNR=115
M31M S **S** **16 41 50.3 -1.9**
baz=279
WHY **Whitehorse** **92.96 29** P **P** **16 30 51.8 +1.6**
baz=278,SNR=213
WHY S **S** **16 41 51.5 -0.9**
baz=278
KBS **Kingsbay** **93.05 350** P **P** **16 30 49.0 -1.0**
KBS IAMs_20 IAMs_20 17 19 50.4
comp=Z,68µm,22.0s
KBS **Kingsbay** **93.05 350** *e*P **P** **16 30 49.3 -0.7**
KBS *e*PP PP 16 34 41.3 +8.1
KBS IVmB_BB 16 35 02.6
comp=Z,7µm,10.9s
KBS *e* 16 41 15.7
KBS *e*SS SS 16 48 07.8 +0.7
KBS IVMs_BB IVMs_BB 17 12 11.9
comp=Z,31µm,22.4s
KBS **Kingsbay** **93.05 350** P **P** **16 30 49.1 -1.0**
KBS pmax pmax
comp=Z,224nm,0.8s
KBS MLR MLR
comp=Z,68µm,22.0s
KBS **Kingsbay** **93.05 350** *i* P **P** **16 30 50.6 +0.6**
HSPB **Hornsund (broa** **93.09 348** *e*P **P** **16 30 50.2 0.0**
HSPB *e*PP **PP** **16 34 32.9 -0.6**
HSPB *e*S **SKSac** **16 41 21.3 +1.4**
HSPB *e*PS **PS** **16 43 01.2 -10**
HSPB *e*SS SS 16 47 53.4 -14
BJO1 **Bjornoya** **93.09 345** *e*P **P** **16 30 50.2 -0.1**
BJO1 IVmB_BB 16 30 52.8
comp=Z,8µm,1.5s
BJO1 *e* 16 41 13.7
BJO1 IVMs_BB IVMs_BB 17 15 37.6
comp=Z,19µm,25.4s
SAHE **Sakarya_HENDEK** **93.13 311** ⇑P **P** **16 30 50.8 -0.5**
KTK1 **Kautokeino** **93.23 339** *e*P **P** **16 30 51.0 0.0**
KTK1 IVmB_BB 16 30 53.5
comp=Z,9µm,1.3s
KTK1 *e*PP **PP** **16 34 39.1 +4.3**
KTK1 *e* 16 41 15.5
KTK1 *e*SS SS 16 48 12.7 +2.7
KTK1 IVMs_BB IVMs_BB 17 16 07.8
comp=Z,19µm,20.0s
SIT **Sitka** **93.24 33** IAmb IAmb 16 30 58.0
comp=Z,1µm,1.2s
SIT **Sitka** **93.24 33** P **P** **16 30 53.3 +1.9**
baz=278,SNR=24
SIT S **S** **16 41 52.4 -2.3**
baz=278
AK09 **Malin Array Si** **93.28 321** P **P** **16 30 51.3 -0.4**
BESE **Bessie Mountai** **93.28 31** IAMs_20 IAMs_20 17 07 49.2
comp=Z,62µm,22.0s
AK08 **Malin Array Si** **93.30 321** P **P** **16 30 51.3 -0.4**
AKASG **Malin Array Be** **93.31 321** P **P** **16 30 51.0 -0.8**
comp=Z,121nm,0.9s,baz=70,slow=4.4,SNR=71
AKASG PP **PP** **16 34 36.2 +0.2**
comp=Z,23nm,0.9s,baz=63,slow=7.6,SNR=3.2
AKASG S **SKSac** **16 41 23.0 +0.9**
comp=Z,0.5nm,0.4s,baz=111,slow=12,SNR=4.8
AKASG PKKPbc **PKKPdf** **16 47 59.1 -0.1**
comp=Z,2.9nm,0.5s,baz=272,slow=3.3,SNR=5.2
AKASG PKPPKP 16 56 10.8
comp=Z,1.9nm,0.7s,baz=271,slow=2.6,SNR=4.8
AKASG LR LR 17 16 56.5
comp=Z,94µm,21.6s,baz=82,slow=38
comp=Z,121nm,0.9s
AKASG **Malin Array Be** **93.31 321** P **P** **16 30 50.4 -1.4**
AKASG **Malin Array Be** **93.31 321** *i* P **P** **16 30 51.2 -0.6**
AKASG pmax pmax
comp=Z,143nm,0.9s
AKBB **Malin Array Si** **93.31 321** *c i*P **P** **16 30 51.0 -0.8**
AKBB pmax pmax
comp=Z,297nm,1.0s
AKBB MLR MLR
comp=Z,107µm,21.0s
KIEV **Kiev** **93.32 321** ⇑P **P** **16 30 51.4 -0.5**
KIEV **Kiev** **93.32 321** ⇓P **PKKPdf** **16 47 58.7 -0.5**
KIEV **Kiev** **93.32 321** P **P** **16 30 51.3 -0.5**
PURM **Purcari** **93.32 317** ⇓P **P** **16 30 52.1 +0.1**
R32K **Eaglecrest** **93.50 32** IAmb IAmb 16 30 59.1
comp=Z,664nm,1.1s
R32K IAMs_20 IAMs_20 17 08 30.0
comp=Z,52µm,22.0s
R32K **Eaglecrest** **93.50 32** P **P** **16 30 53.1 +0.5**
baz=279,SNR=34
FIA1 **FINESS Array S** **93.54 332** P **P** **16 30 50.8 -1.8**
FIA1 IAmb IAmb 16 30 56.4
comp=Z,513nm,1.1s
FINES **FINESS Array B** **93.54 332** P **P** **16 30 52.0 -0.6**
comp=Z,144nm,0.8s,baz=91,slow=5.6,SNR=104
FINES PKKP **PKKPdf** **16 47 59.6 +0.6**
comp=Z,7.4nm,0.8s,baz=254,slow=1.9,SNR=6.6
FINES PKPPKP 16 56 09.7
comp=Z,2.2nm,0.9s,baz=237,slow=4.8,SNR=3.8
FINES LR LR 17 17 00.6
comp=Z,45µm,21.1s,baz=78,slow=38
comp=Z,144nm,0.8s
FINES **FINESS Array B** **93.54 332** P **P** **16 30 51.5 -1.1**
S32K **Killisnoo** **93.59 32** P **P** **16 30 53.0 +0.1**
S32K IAmb IAmb 16 30 58.5
comp=Z,592nm,1.4s
S32K IAMs_20 IAMs_20 17 07 53.4
comp=Z,55µm,22.0s
S32K **Killisnoo** **93.59 32** P **P** **16 30 54.3 +1.3**
baz=278,SNR=10
ISP **Isparta** **93.64 308** IAmb IAmb 16 30 58.1
comp=Z,3µm,2.3s
MNK **Minsk** **93.65 325** *i* P **P** **16 30 53.5 +0.2**
comp=Z,652nm,0.9s,baz=82
MNK *i* P **P** **16 30 53.6 +0.2**
comp=E,114nm,0.9s
MNK *i* P **P** **16 30 53.6 +0.2**
comp=N,392nm,1.1s
MNK *i* PP **PP** **16 34 40.3 +1.9**
MNK *i* PPP PPP 16 36 42.3
MNK *i* SSS SSS 16 52 04.0
MNK *i* LQ LQ 17 07 24.8
MNK *i* LR LR 17 12 47.4
MNK *i* LRM MLR 17 14 34.5
comp=N,98µm,21.9s
MNK *i* LRM MLR 17 14 40.6
comp=Z,125µm,21.4s
MNK *i* LRM MLR 17 14 48.2
comp=E,55µm,20.7s
MNK **Minsk** **93.65 325** *i* P **P** **16 30 53.4 +0.2**
MNK *i* 16 34 40.3
MNK *i* PPP PPP 16 36 42.3
MNK *i* S **SKSac** **16 41 23.9 +0.1**
MNK *i* SS **SS** **16 48 16.7 0.0**
MNK *i* SSS SSS 16 52 04.0
MNK pmax pmax
comp=Z,652nm,0.9s
MNK pmax pmax
comp=N,392nm,1.1s
MNK pmax pmax
comp=E,114nm,0.9s
MNK MLR MLR
comp=N,98µm,22.0s
MNK MLR MLR
comp=Z,125µm,21.0s
MNK MLR MLR
comp=E,55µm,21.0s
VSU **Vasula** **93.70 329** *c i*P **P** **16 30 51.7 -1.7**
VSU pmax pmax
comp=Z,231nm,0.6s
VSU MLR MLR
comp=Z,91µm,22.0s
P32M **Atlin** **93.70 30** IAmb IAmb 16 30 59.2
comp=Z,634nm,1.2s
P32M **Atlin** **93.70 30** P **P** **16 30 55.1 +1.6**
baz=279,SNR=48
P32M S **S** **16 41 59.8 +0.9**
baz=279
N32M **Quiet Lake** **93.75 29** P **P** **16 30 55.1 +1.4**
baz=280
CAVI **Cavuskoy** **93.96 310** *e*P **P** **16 30 53.6 -1.5**
KIS **Kishinev** **93.99 317** ⇓P **P** **16 30 56.2 +1.1**
KIS **Kishinev** **93.99 317** P **P** **16 30 56.2 +1.1**
KIS **Kishinev** **93.99 317** ⇑*i*P **P** **16 30 54.0 -1.1**
comp=Z,2µm,3.7s
MILM **Milestii Mici** **94.01 317** ⇑P **P** **16 30 53.6 -1.5**
MILM **Milestii Mici** **94.01 317** P **P** **16 30 53.6 -1.5**
MILM **Milestii Mici** **94.01 317** ⇑*i*P **P** **16 30 53.0 -2.1**
comp=Z,4µm,2.7s
MILM **Milestii Mici** **94.01 317** LRM MLR 17 19 40.0
comp=Z,45µm,22.0s
MILM **Milestii Mici** **94.01 317** *e*PS PS 16 43 55.0 +33
MILM **Milestii Mici** **94.01 317** *e*L L 17 07 48.0
ADVT **Abdulvahap** **94.02 311** *e*P **P** **16 30 55.8 +0.5**
HRT **Hereke** **94.03 311** *e*P **P** **16 30 55.2 -0.3**
P33M **Teslin, Yukon** **94.04 29** IAmb IAmb 16 31 00.7
comp=Z,716nm,1.2s
P33M **Teslin, Yukon** **94.04 29** P **P** **16 30 56.3 +1.2**
baz=280,SNR=112
P33M S **S** **16 41 56.4 -5.4**
baz=280
JETT **Jettan, Norway** **94.07 340** *e*P **P** **16 30 54.4 -0.6**
JETT IVmB_BB 16 30 57.0
comp=Z,19µm,2.2s
JETT *e*PP **PP** **16 34 40.0 -1.4**
JETT *e* 16 41 21.3
JETT IVMs_BB IVMs_BB 17 12 48.4
comp=Z,19µm,27.5s
A36M **Sachs Harbour** **94.16 17** IAmb IAmb 16 31 00.1
comp=Z,408nm,1.0s
A36M **Sachs Harbour** **94.16 17** P **P** **16 30 55.6 +0.4**
baz=288,SNR=106
A36M S **S** **16 42 00.7 -1.5**
baz=288
SORM **Soroca** **94.17 318** ⇓P **P** **16 30 55.8 0.0**
SORM **Soroca** **94.17 318** P **P** **16 30 55.8 0.0**
JURR **Jurilovca** **94.20 315** ⇓P **P** **16 30 56.5 +0.5**
NACGM **Naroch** **94.22 325** ⇑*i*P **P** **16 30 55.9 0.0**
comp=Z,506nm,1.0s,baz=81
ELL **Elmali** **94.22 307** P **P** **16 30 55.4 -1.2**
ELL IAmb IAmb 16 31 01.5
comp=Z,475nm,1.2s
ELL **Elmali** **94.22 307** P **P** **16 30 55.4 -1.2**
ELL pmax pmax
comp=Z,475nm,1.2s
YLV **Yalova** **94.28 311** *e*P **P** **16 30 56.3 -0.3**
TVSB **Tavsanli** **94.32 310** *e*P **P** **16 30 56.8 -0.1**
KLYT **Kilyos** **94.46 311** *e*P **P** **16 30 58.5 +1.2**
KLYT **Kilyos** **94.46 311** ⇑P **P** **16 30 57.1 -0.2**
ISK **Istanbul-Kandi** **94.47 311** *e*P **P** **16 31 00.1 +2.7**
AKAS **Kas** **94.51 306** IAmb IAmb 16 31 01.0
comp=Z,2µm,2.3s
MANR **Mangalia** **94.52 314** ⇑P **P** **16 30 58.6 +1.1**
TPGR **Topolog** **94.52 315** ⇓P **P** **16 30 58.1 +0.5**
TPGR **Topolog** **94.52 315** ⇓P **PKKPdf** **16 47 58.0 +1.0**
Q32M **Nakina River** **94.54 31** IAmb IAmb 16 31 03.5
comp=Z,916nm,1.4s
Q32M IAMs_20 IAMs_20 17 08 32.6
comp=Z,50µm,22.0s
Q32M **Nakina River** **94.54 31** P **P** **16 30 57.6 0.0**
baz=280
TRO **Tromso** **94.55 340** *e*P **P** **16 30 55.4 -1.7**
TRO IVmB_BB 16 30 58.8
comp=Z,8µm,1.9s
TRO *e*PP **PP** **16 34 45.5 +0.5**
TRO *e* 16 41 23.1
TRO IVMs_BB IVMs_BB 17 17 12.3
comp=Z,23µm,21.9s
T33K **Petersburg** **94.57 33** P **P** **16 30 58.1 +0.7**
baz=280,SNR=6.0
TIRR **Tirgusor** **94.57 315** P **P** **16 30 56.8 -0.9**
TIRR IAMs_20 IAMs_20 17 20 45.5
comp=Z,46µm,22.0s
TIRR **Tirgusor** **94.57 315** ⇑P **P** **16 30 57.9 +0.2**
TIRR **Tirgusor** **94.57 315** P **P** **16 30 57.9 +0.2**
U33K **Whale Pass** **94.59 34** P **P** **16 30 58.1 +0.6**
U33K IAmb IAmb 16 31 03.3
comp=Z,874nm,1.3s
U33K **Whale Pass** **94.59 34** P **P** **16 30 58.9 +1.4**
baz=280,SNR=13
U33K S **S** **16 42 05.8 -0.7**
baz=280
MFTR **Murfatlar** **94.59 314** ⇑P **P** **16 30 58.6 +0.7**
VLDR **Vladesti** **94.64 316** ⇑P **P** **16 30 58.4 +0.4**
BGKT **Bogazkoy** **94.67 311** *e*P **P** **16 30 58.0 -0.3**
MDNY **Mudanya-Bursa** **94.67 311** *e*P **P** **16 30 58.8 +0.5**
CFR **Carcaliu** **94.68 315** ⇑P **P** **16 30 58.3 0.0**
CFR **Carcaliu** **94.68 315** ⇑P **PKKPdf** **16 47 57.5 +0.9**
CFR **Carcaliu** **94.68 315** P **P** **16 30 58.2 0.0**
KALB **Balgarevo** **94.69 314** ⇑P **P** **16 30 59.5 +1.2**
CRAG **Craig** **94.70 34** IAmb IAmb 16 31 03.9
comp=Z,715nm,1.3s
CRAG **Craig** **94.70 34** P **P** **16 30 59.7 +1.6**
baz=280,SNR=7.4
SCTR **Scanteiesti** **94.72 316** ⇑P **P** **16 30 59.0 +0.5**
SIMA **Simav-Kutahya** **94.73 309** *e*P **P** **16 31 01.1 +2.3**
VASR **Vaslui** **94.74 317** ⇓P **P** **16 30 58.8 +0.3**
NDNU **Novodnistrovsk** **94.77 319** P **P** **16 30 58.5 -0.1**
VARL **Varlezi** **94.79 316** ⇑P **P** **16 30 58.8 +0.1**
IASR **Iasi** **94.82 317** ⇑P **P** **16 30 59.7 +0.9**
TLBR **Topalu** **94.82 315** ⇓P **P** **16 30 59.4 +0.5**
SCHLR **Schela** **94.86 316** ⇑P **P** **16 31 00.7 +1.7**
PSN **Preselentsi** **94.86 314** P **P** **16 31 00.2 +1.1**
PSN **Preselentsi** **94.86 314** P **SKSac** **16 41 29.4 -1.5**
CTKS **Kestanelik-??a** **94.86 311** *e*P **P** **16 31 02.2 +3.0**
HARR **Harsova** **94.88 315** ⇓P **P** **16 30 59.7 +0.5**
HARR **Harsova** **94.88 315** P **P** **16 30 59.6 +0.5**
FETY **Fethiye** **94.89 307** P P 16 30 50.2 -9.3
IZVR **Izvoarele** **94.89 316** ⇑P **P** **16 31 00.7 +1.5**
BIR **Birlad** **94.90 317** ⇓P **P** **16 31 00.4 +1.1**
BIR **Birlad** **94.90 317** P **P** **16 31 00.3 +1.1**
TUDR **94.95 316** ⇓P **P** **16 31 00.5 +1.1**
WRAK **Wrangell Islan** **94.97 33** IAmb IAmb 16 31 05.5
comp=Z,952nm,1.1s
WRAK **Wrangell Islan** **94.97 33** P **P** **16 31 00.3 +1.0**
baz=280,SNR=41
WRAK S **S** **16 42 07.1 -2.7**
baz=280
CTYL **Yalikoy Yolu** **95.00 312** *e*P **P** **16 30 59.7 -0.1**
CTYL **Yalikoy Yolu** **95.00 312** ⇓P **P** **16 30 59.5 -0.3**
ICOR **Ion Corvin** **95.05 314** ⇓P **P** **16 31 00.9 +1.0**
GHRR **95.08 316** ⇓P **P** **16 31 01.5 +1.4**
GHRR **95.08 316** ⇓P **PKKPdf** **16 47 55.5 -0.5**
GHRR **95.08 316** P **P** **16 31 01.2 +1.2**
SLVT **Silivri** **95.09 311** *e*P **P** **16 31 00.4 +0.2**
R33M **Jennings River** **95.12 30** IAmb IAmb 16 31 06.1
comp=Z,814nm,1.1s
R33M IAMs_20 IAMs_20 17 09 42.7
comp=Z,47µm,21.0s
R33M **Jennings River** **95.12 30** P **P** **16 31 01.9 +1.7**
baz=282,SNR=151
R33M S **S** **16 42 12.3 +0.9**
baz=282
COSR **Cosmesti PH** **95.17 316** ⇑P **P** **16 31 01.6 +1.1**
NOR **Nord** **95.20 355** *i* P **P** **16 31 00.4 +0.5**
NOR IAmb IAmb 16 31 04.2
comp=Z,2µm,1.5s
BAND **Balkesir-Ban** **95.27 311** ⇑P **P** **16 31 00.9 -0.2**
BAND **Balkesir-Ban** **95.27 311** ⇓P **PKKPdf** **16 47 55.7 +0.2**
PANC **Panciu** **95.28 316** ⇓P **P** **16 31 01.9 +0.9**
HORU **Horodok** **95.29 320** P **P** **16 31 00.5 -0.5**
RNPP9 **Sopachiv** **95.30 322** P **P** **16 31 00.9 0.0**
AMRR **Amara** **95.31 315** ⇓P **P** **16 31 02.4 +1.3**
AMRR **Amara** **95.31 315** P **P** **16 31 02.4 +1.3**
RNPP5 **Staryi Chortor** **95.33 322** P **P** **16 31 00.9 -0.2**
RNPP8 **Varash** **95.33 322** P **P** **16 31 00.9 -0.2**
S34M **Telegraph Cree** **95.33 32** IAmb IAmb 16 31 07.6
comp=Z,623nm,1.2s
S34M IAMs_20 IAMs_20 17 08 47.5
comp=Z,44µm,22.0s
S34M **Telegraph Cree** **95.33 32** P **P** **16 31 02.5 +1.6**
baz=281,SNR=87
S34M S **S** **16 42 12.4 -0.5**
baz=281
ODBI **Odobesti** **95.36 316** ⇓P **P** **16 31 03.1 +1.8**
ODBI **Odobesti** **95.36 316** ⇓P **PKKPdf** **16 47 55.5 0.0**
KMPD **K-Podol'skiy** **95.37 319** P **P** **16 31 01.0 -0.3**
C36M **Paulatuk** **95.37 20** P **P** **16 31 00.7 -0.1**
C36M IAmb IAmb 16 31 05.6
comp=Z,954nm,0.9s
C36M **Paulatuk** **95.37 20** P **P** **16 31 01.3 +0.5**
baz=289,SNR=217
C36M S **S** **16 42 11.4 -1.4**
baz=289
GORD **Gordes-Manisa** **95.37 309** *e*P **P** **16 31 02.8 +1.1**
PRD **Provadia** **95.45 313** P **P** **16 31 02.0 +0.2**
PRD **Provadia** **95.45 313** P **SKSac** **16 41 37.9 +3.9**
CRLT **Corlu** **95.45 311** *e*P **P** **16 31 05.5 +3.6**
H02S2 **DAWSON INLET T** **95.46 36** P **P** **16 31 01.5 0.0**
SNR=4.4
H02S2 T T 18 17 21.8
SNR=2.5
GRER **95.47 316** ⇑P **P** **16 31 03.8 +1.9**
YER **Yerkesik** **95.48 307** P **P** **16 31 04.0 +1.8**
TESR **Tescani** **95.54 317** ⇓P **P** **16 31 01.7 -0.4**
TESR **Tescani** **95.54 317** ⇓P **PKKPdf** **16 47 55.8 +0.6**
TESR **Tescani** **95.54 317** P **P** **16 31 02.5 +0.3**
comp=Z,7µmcomp=Z,806nm,0.7s
PHSR **Pinarhisar** **95.55 312** *e*P **P** **16 31 02.3 0.0**
PHSR **Pinarhisar** **95.55 312** ⇑P **P** **16 31 02.5 +0.2**
V35K **Ketchikan** **95.57 34** P **P** **16 31 03.3 +1.2**
baz=281,SNR=7.5
V35K S **S** **16 42 13.1 -2.0**
baz=281
VRI **Vrincioaia** **95.57 316** ⇑P **P** **16 31 03.3 +0.9**
VRI **Vrincioaia** **95.57 316** ⇓P **PKKPbc** **16 47 54.2 -0.7**
VRI **Vrincioaia** **95.57 316** P **P** **16 31 03.2 +0.9**
VRI **Vrincioaia** **95.57 316** P **P** **16 31 02.8 +0.4**
comp=Z,18µmcomp=Z,784nm,1.1s
MBAR **Mbarara** **95.60 270** LR LR 17 12 56.0
comp=Z,36µm,20.3s,baz=74,slow=35
MBAR **Mbarara** **95.60 270** P **P** **16 31 03.3 -0.1**
MBAR IAmb IAmb 16 31 08.7
comp=Z,1µm,2.8s
MBAR **Mbarara** **95.60 270** IAMs_20 IAMs_20 17 13 03.2
comp=Z,46µm,21.0s
MBAR **Mbarara** **95.60 270** P **P** **16 31 03.9 +0.5**
MBAR **Mbarara** **95.60 270** P **P** **16 31 03.3 -0.1**
MBAR pmax pmax
comp=Z,1µm,2.8s
MBAR MLR MLR
comp=Z,46µm,21.0s
BISRR **Bisoca** **95.63 316** ⇑P **P** **16 31 04.0 +1.3**
BISRR **Bisoca** **95.63 316** P **P** **16 31 03.5 +0.8**

comp=Z,41µmcomp=Z,2µm,1.8s
PLOR Plostina 95.63 316 ⇓P P 16 31 03.5 +0.8
PLOR Plostina 95.63 316 ⇓P PKKPbc 16 47 53.8 -1.0
PLOR Plostina 95.63 316 P P 16 31 03.4 +0.8
PABE Paberze 95.71 326 IAmb IAmb 16 31 09.1
comp=Z,1µm,1.3s
ONER Baraj Valea Uz 95.73 317 ⇓P P 16 31 03.9 +0.8
CHRU Chernivtsi 95.76 319 P P 16 31 03.1 0.0
comp=Z,7µmcomp=Z,439nm,0.9s
DLBC Dease Lake 95.80 31 LR LR 17 10 27.1
comp=Z,37µm,21.9s,baz=266,slow=33
DLBC Dease Lake 95.80 31 P P 16 31 04.6 +1.5
baz=282,SNR=91
DLBC S S 16 42 14.9 -2.2
baz=282
ISR Istrita 95.80 315 ⇑P P 16 31 04.5 +1.0
ISR Istrita 95.80 315 ⇑P PKKPbc 16 47 52.7 -1.6
ISR Istrita 95.80 315 P P 16 31 04.5 +1.0
ISR Istrita 95.80 315 P P 16 31 04.4 +0.9
comp=Z,15µmcomp=Z,256m,1.0s
SOMA Soma-Manisa 95.84 309 eP P 16 31 02.8 -0.9
KRBG Karabiga-Canak 95.87 311 eP P 16 31 03.5 -0.3
RKY Sarkoy-Tekirda 95.93 311 eP P 16 31 02.5 -1.6
NEHR Nehoiu 95.93 316 ⇑P P 16 31 05.0 +1.0
NEHR Nehoiu 95.93 316 ⇓P PKKPbc 16 47 53.1 -0.8
COVR Voineasa-Covas 95.94 316 ⇓P P 16 31 04.5 +0.5
T35M Bob Quinn 95.99 32 IAmb IAmb 16 31 10.7
comp=Z,454nm,1.2s
T35M Bob Quinn 95.99 32 P P 16 31 05.5 +1.5
baz=282,SNR=42
LOZB Loznitsa 96.01 314 ⇓P P 16 31 04.9 +0.5
LOZB Loznitsa 96.01 314 ⇑P PKKPbc 16 47 52.8 -0.8
WTLY Watson Lake, Y 96.03 29 P P 16 31 06.1 +2.0
baz=284,SNR=15
WTLY S S 16 42 17.2 -1.8
baz=284
TURR Turia 96.04 316 ⇑P P 16 31 05.1 +0.6
RAZG Razgrad 96.05 314 ⇓P P 16 31 05.0 +0.4
RAZG Razgrad 96.05 314 ⇑P PKKPbc 16 47 52.3 -1.2
SULR 96.07 315 ⇓P P 16 31 06.8 +2.2
EDRB Edirne 96.10 312 eP P 16 31 04.8 0.0
YAYO Edremit-Balk 96.14 310 eP P 16 31 04.6 -0.4
MLR Muntele Rosu 96.17 316 LR LR 17 21 14.7
comp=Z,67µm,21.4s,baz=77,slow=40
MLR Muntele Rosu 96.17 316 IAMs_20 IAMs_20 17 22 51.7
comp=Z,63µm,22.0s
MLR Muntele Rosu 96.17 316 ⇑P P 16 31 05.6 +0.3
MLR Muntele Rosu 96.17 316 ⇑P PKKPbc 16 47 52.8 -0.6
MLR Muntele Rosu 96.17 316 P P 16 31 05.5 +0.3
MLR Muntele Rosu 96.17 316 P P 16 31 05.7 +0.5
comp=Z,14µmcomp=Z,677nm,1.9s
JMB Yambol 96.18 313 P P 16 31 04.6 -0.5
JMB Yambol 96.18 313 P P 16 31 05.2 +0.1
OZUR 96.19 317 ⇑P P 16 31 05.7 +0.5
OZUR 96.19 317 ⇑P PKKPbc 16 47 54.4 +1.1
BODT Bodrum 96.26 307 P P 16 31 07.4 +1.7
UKOP Uzunkopru-Edir 96.28 311 eP P 16 31 06.5 +0.9
LPK Lapseki 96.28 311 eP P 16 31 06.9 +1.2
BLCB Balcova 96.31 309 P P 16 31 05.3 -0.6
BURAR Bucovina Array 96.34 318 P P 16 31 05.7 -0.2
BURAR IAmb IAmb 16 31 18.3
comp=Z,759nm,0.9s
BURAR Bucovina Array 96.34 318 ⇑P P 16 31 06.8 +0.9
BURAR Bucovina Array 96.34 318 ⇓P PKKPbc 16 47 53.1 0.0
BURAR Bucovina Array 96.34 318 P P 16 31 06.8 +0.9
DKL Dikili 96.34 309 eP P 16 31 05.8 -0.1
U35K Hyder 96.34 33 P P 16 31 06.3 +0.7
baz=282
U35K S S 16 42 22.3 +0.6
baz=282
BUR08 Bucovina Ar. S 96.34 318 P P 16 31 06.1 +0.2
BUR08 IAmb IAmb 16 31 11.1
comp=Z,684nm,0.9s
STEI Steigen 96.36 339 eP P 16 31 04.7 -0.7
STEI IVmB_BB 16 31 07.0
comp=Z,11µm,2.2s
STEI ePP PP 16 34 59.2 +0.1
STEI e 16 41 37.0
STEI eSS SS 16 48 52.6 -1.9
STEI IVMs_BB IVMs_BB 17 19 33.8
comp=Z,24µm,20.2s
ERIK Erikli-Kesan 96.43 311 eP P 16 31 06.5 +0.2
SUW Suwalki 96.45 325 eP P 16 31 05.8 -0.3
SUW ePP PP 16 34 59.6 -0.6
SUW eS SKSac 16 41 38.9 +0.1
SUW eSS SS 16 49 01.1 +4.6
SUW Suwalki 96.45 325 P P 16 31 05.2 -0.8
SUW Suwalki 96.45 325 P P 16 31 05.3 -0.8
SUW MLR MLR
comp=Z,121µm,22.0s
SZH Strazhitsa 96.47 314 P P 16 31 05.9 -0.6
SZH Strazhitsa 96.47 314 P P 16 31 06.7 +0.2
SZH Strazhitsa 96.47 314 P SKSac 16 41 45.7 +6.3
DOPR Dopca 96.48 316 ⇑P P 16 31 07.0 +0.5
DOPR Dopca 96.48 316 ⇓P PKKPbc 16 47 51.8 -0.6
GELI Tayfur-Gelibol 96.50 311 eP P 16 31 06.4 -0.2
FAUS Fauske 96.53 339 eP P 16 31 05.0 -1.2
FAUS IVmB_BB 16 31 07.5
comp=Z,11µm,2.2s
FAUS ePP PP 16 34 55.8 -4.7
FAUS e 16 41 35.3
FAUS eSS SS 16 48 57.6 +0.6
FAUS IVMs_BB IVMs_BB 17 20 46.9
comp=Z,29µm,18.5s
KARP Karpathos 96.56 306 IAmb IAmb 16 31 14.8
comp=Z,787nm,0.9s
KARP Karpathos 96.56 306 P P 16 31 05.9 -1.2
KARP Karpathos 96.56 306 P P 16 31 07.5 +0.4
comp=Z,13µmcomp=Z,988nm,0.9s
SMG Samos 96.56 308 P P 16 31 06.5 -0.5
ELND Elena 96.59 313 ⇑P P 16 31 07.3 +0.3
ELND Elena 96.59 313 ⇑P PKKPbc 16 47 51.6 -0.4
STNU Starunia 96.63 319 P P 16 31 07.3 +0.2
EZN Ezine 96.69 310 eP P 16 31 07.4 -0.1
EZN Ezine 96.69 310 P P 16 31 06.8 -0.7
EZN Ezine 96.69 310 ⇓P P 16 31 07.6 +0.1
EZN Ezine 96.69 310 ⇑P PKKPbc 16 47 49.8 -1.8
EZN Ezine 96.69 310 P P 16 31 07.6 +0.1
CAVK Edirne/Enez-Ca 96.69 311 ⇑P P 16 31 10.4 +2.9
ENEZ Enez 96.69 311 eP P 16 31 03.3 -4.2
LVV L'vov 96.73 320 P P 16 31 07.8 +0.3
ALN Alexandroupoli 96.75 311 eP P 16 31 09.5 +1.7
ALN Alexandroupoli 96.75 311 P P 16 31 06.9 -0.9
VOIR 96.80 316 ⇑P P 16 31 07.8 -0.3
VOIR 96.80 316 ⇑P PKKPbc 16 47 51.8 +0.1
VOIR 96.80 316 P P 16 31 07.7 -0.3
VOIR 96.80 316 P P 16 31 08.0 0.0
comp=Z,6µmcomp=Z,163nm,2.5s
PRK Paraskevi 96.80 310 eP P 16 31 07.2 -0.9
COPA Copaceanca 96.89 315 ⇑P P 16 31 09.5 +1.2
LOF Lofoten 96.89 340 eP P 16 31 06.6 -1.1
LOF IVmB_BB 16 31 09.4
comp=Z,6µm,2.3s
LOF ePP PP 16 35 02.2 -0.9
LOF e 16 41 33.7
LOF IVMs_BB IVMs_BB 17 20 03.1
comp=Z,19µm,19.7s
BOZC Bozcaada 96.89 310 eP P 16 31 08.2 -0.3
DIM Dimitrovgrad 96.94 313 P P 16 31 08.3 -0.3
MORS Morshin 96.94 320 P P 16 31 09.4 +0.9
GADA Gvkgeada 96.96 311 eP P 16 31 08.5 -0.2
GADA Gvkgeada 96.96 311 P P 16 31 07.6 -1.1
RAKU Rahkiv 96.97 319 P P 16 31 09.2 +0.6
TGMR Targu Mures 96.98 317 ⇑P P 16 31 10.3 +1.6
HUMR Humele 96.99 315 ⇑P P 16 31 08.7 -0.1
HUMR Humele 96.99 315 ⇓P PKKPbc 16 47 50.9 0.0
PVL Pavlikeni 97.07 314 P Pdif 16 31 09.7 +0.4
PVL Pavlikeni 97.07 314 P SKSac 16 41 45.7 +3.2
CHOS Chios island 97.08 309 P P 16 31 09.1 -0.4
RDO Rodhopi 97.10 312 eP P 16 31 08.8 -0.5
RDO Rodhopi 97.10 312 P P 16 31 08.0 -1.3
ARR Arges 97.10 316 ⇓P P 16 31 09.4 +0.1
SIGR SIGRI 97.13 310 eP P 16 31 09.1 -0.4
SIGR SIGRI 97.13 310 P P 16 31 08.4 -1.1
MDB Medias 97.15 317 ⇑P Pdif 16 31 10.5 +1.0
MDB Medias 97.15 317 ⇓P PKKPbc 16 47 51.3 +0.7
MDB Medias 97.15 317 P Pdif 16 31 10.5 +0.9
KDZ Kurdzhali 97.17 312 eP P 16 31 07.5 -2.2
KDZ Kurdzhali 97.17 312 P P 16 31 09.3 -0.4
SMTH Samothraki Isl 97.20 311 P P 16 31 08.6 -1.3
SHIU Shidnytsya 97.27 320 P Pdif 16 31 10.7 +0.6
MOR8 Moi Rana 97.27 338 eP P 16 31 07.6 -2.0
MOR8 IVmB_BB 16 31 22.9
comp=Z,4µm,2.3s
MOR8 ePP PP 16 35 05.2 -1.1
MOR8 e 16 41 37.3
MOR8 eSS SS 16 49 07.6 0.0
TNR Turnu Rosu 97.30 316 ⇑P Pdif 16 31 11.9 +1.6
TNR Turnu Rosu 97.30 316 ⇑P PKKPbc 16 47 49.9 -0.4
TNR Turnu Rosu 97.30 316 P Pdif 16 31 11.9 +1.6
MEZ Mezhgor'ye 97.31 319 P Pdif 16 31 11.0 +0.8
RAUS Rausandaksla 97.33 338 eP P 16 31 09.0 -0.9
RAUS IVmB_BB 16 31 11.3
comp=Z,8µm,2.2s
RAUS ePP PP 16 35 02.6 -4.1
RAUS e 16 41 38.8
RAUS eSS SS 16 49 11.9 +3.6
RAUS IVMs_BB IVMs_BB 17 23 13.2
comp=Z,25µm,18.9s
PLVB Pleven 97.43 314 ⇑P Pdif 16 31 12.0 +1.2
PLVB Pleven 97.43 314 ⇑P PKKPbc 16 47 48.8 -1.0
VLAD Vladila 97.49 315 ⇓P P 16 31 11.0 0.0
VLAD Vladila 97.49 315 ⇓P PKKPbc 16 47 50.0 +0.4
VAGH Vaagaholmen 97.51 338 eP P 16 31 09.0 -1.6
VAGH IVmB_BB 16 31 12.4
comp=Z,6µm,1.8s
VAGH ePP PP 16 35 08.5 +0.5
VAGH eSS SS 16 49 16.9 +6.2
LIRD Liard River Hi 97.53 29 P Pdif 16 31 11.9 +1.0
baz=286,SNR=14
PLD Plovdiv 97.53 313 P P 16 31 11.2 -0.2
PLD Plovdiv 97.53 313 P P 16 31 11.1 -0.2
PLD Plovdiv 97.53 313 P SKSac 16 41 46.5 +1.6
LIA Limnos Island 97.55 310 P P 16 31 10.7 -0.7
CJR Cluj-Napoca 97.58 317 ⇑P Pdif 16 31 12.7 +1.1
CJR Cluj-Napoca 97.58 317 P Pdif 16 31 12.6 +1.1
WRGLY Wrigley 97.60 25 IAmb IAmb 16 31 16.4
comp=Z,591nm,1.2s
WRGLY Wrigley 97.60 25 P Pdif 16 31 11.9 +0.8
baz=289
WRGLY S S 16 42 27.9 -4.4
baz=289
CBBR Cluj-Babes-Bol 97.60 317 ⇑P Pdif 16 31 12.5 +1.0
RZN Rozhen 97.61 312 P P 16 31 11.1 -0.8
RZN Rozhen 97.61 312 P P 16 31 11.8 -0.1
RZN Rozhen 97.61 312 P SKSac 16 41 49.0 +3.2
KWP Kalwaria Pacla 97.61 320 eP Pdif 16 31 11.8 +0.2
KWP eS SKSac 16 41 44.1 -0.9
KWP eSS SS 16 49 13.5 +0.3
KWP Kalwaria Pacla 97.61 320 P Pdif 16 31 12.1 +0.5
comp=Z,11µmcomp=Z,511nm,1.1s
KORU Korolevo 97.62 319 P Pdif 16 31 12.2 +0.6
BRIU Brid 97.66 319 P Pdif 16 31 12.3 +0.5
APE Apeiranthos 97.67 308 P P 16 31 10.2 -1.9
LOT Lotru 97.69 316 ⇑P Pdif 16 31 12.5 +0.4
LOT Lotru 97.69 316 P PKKPbc 16 47 50.3 +1.0
STOK Stokkvaagen 97.75 338 eP P 16 31 09.6 -2.1
STOK IVmB_BB 16 31 26.6
comp=Z,4µm,3.2s
STOK ePP PP 16 35 09.8 -0.1
STOK e 16 41 45.0
STOK IVMs_BB IVMs_BB 17 17 57.7
comp=Z,17µm,25.2s
THAS Thassos island 97.79 311 P P 16 31 11.5 -1.0
LEIR Leirfjorden 97.80 338 eP P 16 31 11.2 -0.8
LEIR IVmB_BB 16 31 13.4
comp=Z,7µm,2.3s
LEIR ePP PP 16 35 10.9 +0.7
LEIR e 16 41 41.9
LEIR eSS SS 16 49 22.5 +7.7
LEIR IVMs_BB IVMs_BB 17 24 28.3
comp=Z,19µm,19.9s
THERA Ancient Thera, 97.81 307 P P 16 31 10.6 -2.1
NPS Neapolis 97.85 306 P P 16 31 12.5 -0.4
MUKU Mukachevo 97.86 319 P Pdif 16 31 13.5 +0.9
CRAR CRAIOVA 97.86 315 ⇑P Pdif 16 31 15.0 +2.3
CRAR CRAIOVA 97.86 315 P Pdif 16 31 15.0 +2.3
KAVA Kavala 97.89 312 P P 16 31 12.0 -0.9
PGB Panagyurishte 97.89 313 P P 16 31 12.5 -0.5
PGB Panagyurishte 97.89 313 P SKSac 16 41 52.5 +5.6
MARR Marisel-Cluj 97.91 317 ⇑P Pdif 16 31 15.8 +2.7
MARR Marisel-Cluj 97.91 317 ⇓P PKKPbc 16 47 50.0 +1.3
BERU Beregovo 97.93 319 P Pdif 16 31 13.5 +0.6
MESR Meseseni 97.94 318 ⇓P Pdif 16 31 14.7 +1.7
R9F13 Warsaw-Wawer 98.03 323 eP Pdif 16 31 14.0 +0.7
comp=Z,7.8nm,1.0s
R9F13 e 16 36 46.2
R9F13 eS SKSac 16 41 50.1 +3.1
MPEP Malo Peshtene 98.07 314 P Pdif 16 31 14.0 +0.3
MPEP Malo Peshtene 98.07 314 P SKSac 16 41 49.3 +1.6
UZHM Uzhgorod 98.08 319 P Pdif 16 31 14.4 +0.8
TOAD Toad River Com 98.12 30 P Pdif 16 31 14.4 +0.8
baz=287
TOAD S S 16 42 33.4 -3.5
baz=287
CEI Carei 98.16 318 ⇑P Pdif 16 31 14.7 +0.7
CEI Carei 98.16 318 P Pdif 16 31 14.6 +0.6
DRGR 98.16 318 ⇑P Pdif 16 31 14.8 +0.6
DRGR 98.16 318 ⇓P PKKPbc 16 47 48.5 +0.5
DRGR 98.16 318 P Pdif 16 31 14.8 +0.6
SKY Skiros Island 98.18 309 P P 16 31 13.7 -0.6
DEV Deva 98.20 317 ⇓P Pdif 16 31 15.5 +1.2
DEV Deva 98.20 317 P Pdif 16 31 15.4 +1.1
VALD Valchedram 98.23 314 P Pdif 16 31 15.2 +0.8
BAIL Bailesti 98.23 315 ⇑P Pdif 16 31 16.1 +1.7
KOTAN Kotaneelee Air 98.31 28 P Pdif 16 31 15.7 +1.3
baz=288,SNR=100
KOTAN S S 16 42 34.7 -3.8
baz=288
BEL Belsk 98.33 323 eP Pdif 16 31 14.8 +0.1
BEL eS SKSac 16 41 49.4 +0.9
BEL ePS PS 16 44 08.8 -0.6
MMB Musomishta 98.37 312 P P 16 31 14.0 -1.1
MMB Musomishta 98.37 312 P P 16 31 14.7 -0.4
MMB Musomishta 98.37 312 P SKSac 16 41 50.9 +1.6
GZR Gura Zlata 98.38 316 ⇓P Pdif 16 31 16.0 +0.9
GZR Gura Zlata 98.38 316 ⇑P PKKPbc 16 47 47.4 +0.1
GZR Gura Zlata 98.38 316 P Pdif 16 31 16.0 +0.8
OUR Ouranopolis 98.39 311 P P 16 31 14.3 -0.9
KARY Karystos 98.40 309 P P 16 31 13.9 -1.3
IDI Anoyia 98.43 306 P P 16 31 14.5 -1.1
IDI Anoyia 98.43 306 LR LR 17 21 27.9
comp=Z,19µm,21.5s,baz=80,slow=39
IDI Anoyia 98.43 306 P P 16 31 14.5 -1.1
IDI Anoyia 98.43 306 P P 16 31 15.3 -0.3
PLNA Plana 98.45 313 P Pdif 16 31 15.9 +0.3
PLNA Plana 98.45 313 P SKSac 16 41 51.6 +1.7
PUNG Punghina 98.48 315 ⇑P PKKPbc 16 47 48.1 +1.2
BLSH Balsha 98.49 314 P Pdif 16 31 16.1 +0.4
SRS Serrai 98.55 312 P P 16 31 14.3 -1.6
VTS Vitosha 98.56 313 P P 16 31 15.3 -0.8
VTS Vitosha 98.56 313 P Pdif 16 31 16.4 +0.3
VTS Vitosha 98.56 313 P SKSac 16 41 48.3 -2.2
KYMI Kymi, Euboea I 98.57 309 P P 16 31 14.8 -1.3
RMGR Halanga-Turnu 98.58 315 ⇑P Pdif 16 31 16.8 +0.9
STHS Stebnicka Huta 98.59 320 iP Pdif 16 31 16.1 +0.2
STHS Stebnicka Huta 98.59 320 ePDIFF Pdif 16 31 16.1 +0.2
STHS ePP PP 16 35 30.1 +13
STHS eSS SS 16 47 50.6 -96
STHS ePP P'P'df 16 56 00.4 -0.8
HOLB Holberg 98.61 38 P P 16 31 14.5 -1.5
HOLB IAmb IAmb 16 31 21.6
comp=Z,594nm,1.3s
AOS Alonnisos 98.65 310 P P 16 31 15.3 -1.1
DJES Djerdap 98.70 315 ⇑P Pdif 16 31 16.9 +0.4
BORR Bors 98.73 318 ⇑P Pdif 16 31 17.6 +1.1
HERR Herculane 98.73 316 ⇑P Pdif 16 31 17.2 +0.6
HERR Herculane 98.73 316 ⇓P PKKPbc 16 47 46.8 +0.6
SURR Surduc 98.76 317 ⇓P PKKPbc 16 47 41.4 -4.7
KKB Krupnik 98.77 313 P P 16 31 15.2 -1.7
KKB Krupnik 98.77 313 P P 16 31 16.7 -0.2
KKB Krupnik 98.77 313 P SKSac 16 41 53.7 +2.4
SOH Sokhos 98.78 312 P P 16 31 15.8 -1.2
DION Dionisos Attik 98.78 309 P P 16 31 15.4 -1.7
BLKB Belogradchik 98.78 314 ⇓P Pdif 16 31 17.4 +0.4
MREMI Moremi 98.80 248 iP Pdif 16 31 18.3 +0.7
PTL Panteli 98.84 309 P P 16 31 15.4 -1.9
NSS Namsos 98.85 337 ePdif P 16 31 15.7 -1.0
NSS IVmB_BB 16 31 31.3
comp=Z,5µm,7.0s
NSS ePP PP 16 35 18.9 +0.6
NSS e 16 41 46.2
NSS IVMs_BB IVMs_BB 17 19 08.9
comp=Z,31µm,20.0s
ATHU Athens Univers 98.92 309 P P 16 31 15.8 -1.8
VLY Voula,Athens 98.93 309 P P 16 31 15.8 -1.9
TRAN Tran 98.95 314 P Pdif 16 31 17.9 +0.2
TRAN Tran 98.95 314 P SKSac 16 41 58.7 +6.5
BROLN Tlhalogang 98.95 249 iP Pdif 16 31 18.6 +0.3
ATH Athens Observa 98.97 309 P P 16 31 15.9 -1.9
SIRR Siria 98.98 317 ⇑P Pdif 16 31 18.4 +0.6
SIRR Siria 98.98 317 ⇑P PKKPbc 16 47 45.6 0.0
HORT Hortiatis 99.01 311 P Pdif 16 31 16.1 -2.0
KNT Kendrikon 99.06 312 P Pdif 16 31 16.9 -1.3
THE Thessaloniki 99.11 311 P Pdif 16 31 16.9 -1.5
BZS Buzias 99.14 317 ⇑P Pdif 16 31 18.6 +0.2
BZS Buzias 99.14 317 ⇓P PKKPbc 16 47 45.8 +0.7
BZS Buzias 99.14 317 P Pdif 16 31 18.6 +0.2
GRHM Grahamstown, E 99.18 237 P P 16 31 18.2 -0.8
NIE Niedzica 99.19 321 eP Pdif 16 31 19.4 +0.7
NIE eS SKSac 16 41 55.7 +2.6
NIE eSS SS 16 49 31.6 -3.8
NIE Niedzica 99.19 321 P Pdif 16 31 19.3 +0.7
comp=Z,3µmcomp=Z,92nm,1.1s
MDVR Moldovita 99.24 316 ⇓P Pdif 16 31 19.5 +0.5
MDVR Moldovita 99.24 316 ⇑P PKKPbc 16 47 45.2 +0.4
VILL Villia 99.25 309 P Pdif 16 31 17.1 -2.1
VAY Valandovo 99.28 312 iP Pdif 16 31 18.4 -0.7
OJC Ojcow 99.32 321 eP Pdif 16 31 19.4 +0.2
OJC eS SKSac 16 41 53.6 0.0
OJC ePS PS 16 44 11.4 -8.8
OJC eSS SS 16 49 36.3 -0.7
OJC Ojcow 99.32 321 P Pdif 16 31 18.1 -1.0
OJC Ojcow 99.32 321 P Pdif 16 31 18.1 -1.0
OJC Ojcow 99.32 321 P Pdif 16 31 19.5 +0.4
comp=Z,6µmcomp=Z,289nm,1.1s
DAG Danmarks Havn 99.33 352 iP Pdif 16 31 18.6 0.0
DAG IAmb IAmb 16 31 22.4
comp=Z,580nm,1.1s
NVL N'lazarevskaya 99.38 198 eP Pdif 16 31 20.8 +1.9
NVL e 16 35 21.8
NVL ePPP PPP 16 37 31.2
NVL eSS SS 16 49 40.1 +3.3
NVL eSSS SSS 16 53 29.3
NVL ePPP PPP 17 31 25.6
NVL pmax pmax
comp=Z,9.0nm,1.0s
NVL pmax pmax
comp=Z,10.0nm,0.7s
NVL MLR MLR
comp=Z,150nm,23.0s
ATAL Atalanti 99.39 309 P Pdif 16 31 18.0 -1.8
LKR Lokris 99.42 309 P Pdif 16 31 17.7 -2.1
BOVS Bovan 99.47 315 ⇑P Pdif 16 31 20.2 +0.2
BOVS Bovan 99.47 315 ⇓P PKKPbc 16 47 44.9 +0.8
LTK Loutraki 99.54 309 P Pdif 16 31 18.3 -2.1
LIT Litokhoron 99.56 311 P Pdif 16 31 18.9 -1.6
ANKY Antikythira Is 99.62 307 P Pdif 16 31 20.8 0.0
AXAR Agios Charalam 99.66 310 P Pdif 16 31 19.6 -1.4
HFS Hagfors 99.73 332 P Pdif 16 31 19.5 -1.2
comp=Z,87nm,0.7s,baz=70,slow=6.3,SNR=56
HFS PKKPbc PKKPbc 16 47 42.1 -1.8
comp=Z,5.6nm,0.6s,baz=197,slow=3.1,SNR=10
HFS LR LR 17 20 50.2
comp=Z,60µm,21.2s,baz=66,slow=38
comp=Z,87nm,0.7s
KTHA Kythira Island 99.75 307 P Pdif 16 31 20.4 -1.0
VLI Veliai 99.78 308 P Pdif 16 31 20.5 -1.0
LANS Liptovska Anna 99.78 320 iP Pdif 16 31 22.2 +0.9
LANS Liptovska Anna 99.78 320 ePDIFF Pdif 16 31 22.2 +0.9
LANS ePP PKiKP 16 35 41.7 -7.9
PSZ Piszkesteto 99.80 319 IAMs_20 IAMs_20 17 22 40.4
comp=Z,46µm,21.0s
AGG Agios Georgios 99.87 310 P Pdif 16 31 19.9 -2.0
SKO Skopje 99.99 313 iP Pdif 16 31 24.6 +2.3
THL Klokotos Trika 100.01 310 P Pdif 16 31 20.3 -2.1
MAKR Makrakomi, Fth 100.02 310 P Pdif 16 31 20.5 -2.0
GUR Goura 100.05 309 P Pdif 16 31 21.0 -1.8
KZN Kozani 100.06 311 P Pdif 16 31 20.5 -2.3
GKP Gorka Klasztor 100.06 325 eP Pdif 16 31 22.6 +0.2
GKP eS SKSac 16 41 58.4 +1.3
GKP ePS PS 16 44 19.3 -8.6
VLX Vlachokerasia 100.11 308 P Pdif 16 31 22.3 -0.7
KALE Kalithea 100.12 309 P Pdif 16 31 21.7 -1.4
KLV Kalavryta, Ach 100.18 309 P Pdif 16 31 22.0 -1.3
SERG Sergoula 100.18 309 P Pdif 16 31 22.1 -1.2
LPHEP Lephephe 100.23 247 iP Pdif 16 31 24.8 +0.9
ANX Ano Chora 100.26 310 P Pdif 16 31 22.6 -1.1
EVR Evrytania 100.28 310 P Pdif 16 31 23.0 -0.9
RAC Raciborz 100.35 322 ePDIFF Pdif 16 31 24.8 +1.1
RAC Raciborz 100.35 322 eP Pdif 16 31 24.8 +1.1
RAC MLR MLR
comp=Z,68µm,22.1s
OKC Ostrava-Krasne 100.44 321 eP Pdif 16 31 25.2 +1.1
OKC MLR MLR
comp=Z,47µm,20.0s
OKC Ostrava-Krasne 100.44 321 ePDIFF Pdif 16 31 25.2 +1.1
OKC AMS AMS 17 19 10.0
comp=Z,47µm,20.0s
BOSA Boshof 100.47 241 P Pdif 16 31 24.8 -0.1
comp=Z,50nm,1.1s,baz=110,slow=5.6,SNR=19
BOSA PP PP 16 35 30.4 -1.7
comp=Z,51nm,1.1s,baz=99,slow=7.9,SNR=5.7
BOSA PKiKP PKiKP 16 35 52.0 +0.5
comp=Z,28nm,1.1s,baz=46,slow=0.8,SNR=6.9
BOSA PKKPbc PKKPbc 16 47 40.3 -0.6
comp=Z,8.9nm,0.7s,baz=305,slow=2.7,SNR=10.0
BOSA Boshof 100.47 241 P Pdif 16 31 27.4 +2.5
ITM Itromi 100.50 308 P Pdif 16 31 24.1 -0.7
NC602 NORSAR Array S 100.50 333 ePdif Pdif 16 31 23.9 -0.3
NB2 NORSAR Subarra 100.53 333 P Pdif 16 31 23.5 -0.8
comp=Z,491nm,1.2s,baz=69,slow=4.4
NB2 PKKP PKKPbc 16 47 40.8 -0.9
comp=Z,3.0nm,0.6s,baz=234,slow=2.5
NB2 SKKP 16 51 59.2
comp=Z,802nm,3.3s,baz=247,slow=4.6
NOA NORSAR Array B 100.53 333 P Pdif 16 31 23.3 -1.0
comp=Z,101nm,0.8s,baz=69,slow=4.5,SNR=113
NOA PP PP 16 35 30.6 -0.7
comp=Z,25nm,1.0s,baz=66,slow=7.6,SNR=2.5
NOA PKKPbc PKKPbc 16 47 40.3 -1.4
comp=Z,7.6nm,0.9s,baz=69,slow=3.2,SNR=19
NOA PKPPKP P'P'df 16 55 56.4 -0.4
comp=Z,3.0nm,1.1s,baz=236,slow=2.1,SNR=3.5
DRO Drossia 100.53 309 P Pdif 16 31 24.8 0.0
PVO Paravola 100.56 310 P Pdif 16 31 24.1 -0.8
TETR Tetrakomo, Epi 100.61 310 P Pdif 16 31 24.5 -0.8
OHR Ohrid 100.63 312 iP Pdif 16 31 23.5 -1.7
STEB Steborice 100.65 321 ePDIFF Pdif 16 31 25.9 +0.8
KHWEE KHWEE 100.68 248 iP Pdif 16 31 26.9 +0.9
RLS Riolos of Patr 100.70 309 P Pdif 16 31 25.3 -0.2
PRMD Pramanda 100.72 311 P Pdif 16 31 25.1 -0.6
AMPL Ampelaki 100.74 310 P Pdif 16 31 24.9 -0.8
AXS Araxos 100.75 309 P Pdif 16 31 25.3 -0.5
MAUC Maruska 100.77 321 ePDIFF Pdif 16 31 26.9 +1.2
MAUC eSKS SKSac 16 42 02.6 +1.7
PHP Peshkopia 100.78 313 P Pdif 16 31 23.8 -2.1
BSD Bornholm Skovb 100.81 327 iP Pdif 16 31 25.9 +0.3
BSD IAmb IAmb 16 31 29.4
comp=Z,251nm,1.0s
MORC Moravsky Berou 100.84 321 ePDIFF Pdif 16 31 25.6 -0.4
MORC eSKS 16 42 02.6
MORC ePKPPKP P'P'df 16 55 46.4 -10
DEL Delary 100.92 329 iP Pdif 16 31 25.8 -0.2
IVA Berane 100.93 314⇑iP Pdif 16 31 26.5 -0.1
PVY Plav 100.94 314⇑iP Pdif 16 31 26.4 -0.3
JAVC Velka Javorina 101.00 320 ePDIFF Pdif 16 31 28.0 +1.3
JAVC eSKS 16 42 03.0
JAVC ePKPPKP P'P'df 16 55 47.4 -9.2
MORH Mrgy, Hungar 101.03 318 eP Pdif 16 31 26.9 +0.1
MORH Mrgy, Hungar 101.03 318 ⇑P Pdif 16 31 27.4 +0.6
MORH Mrgy, Hungar 101.03 318 ⇓P PKKPbc 16 47 42.8 +3.1
MORH Mrgy, Hungar 101.03 318 P Pdif 16 31 27.2 +0.4
comp=Z,5µmcomp=Z,181nm,2.2s
MAKGR Makgori 101.06 244 iP Pdif 16 31 26.1 -1.4
NEEM North Greenlan 101.07 359 eP Pdif 16 31 27.6 +0.9
NEEM IAmb IAmb 16 31 31.5
comp=Z,618nm,1.2s
BORU Boraas 101.07 330 iP Pdif 16 31 26.2 -0.5
KSANE Kasane 101.11 252 iP Pdif 16 31 29.2 +1.3
RUDO Rudo 101.13 315 eP Pdif 16 31 28.1 +0.7
NYDR Nydri-Lefkada 101.17 310 P Pdif 16 31 26.3 -1.3
PLE Pljevlja 101.19 315⇑iP Pdif 16 31 28.0 +0.2
KOME Kolasin 101.20 314⇑iP Pdif 16 31 27.7 -0.1
EVGI Lefkada island 101.22 310 P Pdif 16 31 26.9 -0.9
KRLC Kraliky 101.23 322 eP Pdif 16 31 28.6 +0.9

KRLC *e* 16 42 04.6
KRLC MLR MLR
comp=Z,72µm,23.2s
KRLC Kraliky 101.23 322 *e*PDIFF **Pdif 16 31 28.6 +0.9**
KRLC *e*SKS **SKSac 16 42 04.6 +1.5**
KRLC AMS AMS 17 20 30.0
comp=Z,72µm,23.2s
IGT Igoumenitsa 101.29 311 P **Pdif 16 31 26.5 -1.7**
KSP Ksiaz 101.31 323 *e*P **Pdif 16 31 28.7 +0.8**
KSP *e*S **SKSac 16 42 04.2 +0.8**
KSP *e*PS **PS 16 44 32.0 -10**
KSP Ksiaz 101.31 323 P **Pdif 16 31 28.8 +0.8**
comp=Z,5µmcomp=Z,177nm,2.3s
FABU Falkenberg 101.33 329 *i* P **Pdif 16 31 27.1 -0.7**
STRU Stroemstad 101.33 331 *i* P **Pdif 16 31 27.4 -0.4**
KDWAN Kaudwane 101.33 247 *i* P **Pdif 16 31 29.8 +1.0**
VLS Valsamata 101.36 309 P **Pdif 16 31 28.6 +0.1**
MODS Modra-Piesok 101.38 320 *i* P **Pdif 16 31 30.4 +2.0**
LUNU Lund 101.42 328 *i* P **Pdif 16 31 28.4 0.0**
DPC Dobruska-Polom 101.44 322 *e*P **Pdif 16 31 29.4 +0.8**
DPC *e* 16 42 03.7
DPC MLR MLR
comp=Z,79µm,22.8s
DPC Dobruska-Polom 101.44 322 *e*PDIFF **Pdif 16 31 29.4 +0.8**
DPC *e*SKS **SKSac 16 42 03.7 -0.4**
DPC AMS AMS 17 19 00.0
comp=Z,79µm,22.8s
DPC Dobruska-Polom 101.44 322 P **Pdif 16 31 29.3 +0.7**
comp=Z,4µmcomp=Z,91nm,1.9s
OSTC Ostas 101.44 322 *e*P **Pdif 16 31 30.2 +1.6**
OSTC Ostas 101.44 322 *e*PDIFF **Pdif 16 31 30.2 +1.6**
TROLL Troll, Antarti 101.45 195 ⇑P **Pdif 16 31 29.9 +1.6**
comp=Z,2µm,0.7s
TROLL ⇑pP pP 16 31 44.5 +2.0
TROLL ⇓PP **PP 16 35 40.1 +2.0**
TROLL ⇓SKSac **SKSac 16 42 07.3 +3.8**
TROLL ⇑PKKPbc **PKKPbc 16 47 37.4 -2.1**
PDG Podgorica 101.48 314 ⇑*i*P **Pdif 16 31 28.7 -0.2**
BJUU Bjuv 101.50 328 *i* P **Pdif 16 31 28.6 0.0**
TJOU Tjoern 101.50 330 *i* P **Pdif 16 31 28.1 -0.5**
TULEG Thule 101.52 4 *i* P **Pdif 16 31 31.1 +2.7**
TULEG IAmb IAmb 16 31 32.7
comp=Z,379nm,1.5s
CHVC Chvalec 101.53 322 *e*P **Pdif 16 31 30.2 +1.2**
CHVC *e* 16 42 06.2
CHVC MLR MLR
comp=Z,98µm,21.9s
CHVC Chvalec 101.53 322 *e*PDIFF **Pdif 16 31 30.2 +1.2**
CHVC *e*SKS **SKSac 16 42 06.2 +1.7**
CHVC AMS AMS 17 19 10.0
comp=Z,98µm,21.9s
ZST Bratislava 101.54 320 *i* P **Pdif 16 31 32.0 +2.9**
ZST Bratislava 101.54 320 *e*PDIFF **Pdif 16 31 32.0 +2.9**
UPM Unac-Piva 101.56 315 ⇑*i*P **Pdif 16 31 29.3 -0.2**
VRAC Vranov 101.56 321 ⇓P **Pdif 16 31 29.5 +0.4**
VRAC Vranov 101.56 321 *e*PDIFF **Pdif 16 31 29.9 +0.8**
VRAC *e*SKS **SKSac 16 42 05.8 +1.2**
VRAC *e*PKPPKP 16 55 45.1
VRAC Vranov 101.56 321 P **Pdif 16 31 29.5 +0.4**
UPC Upice 101.58 322 *e*P **Pdif 16 31 30.2 +1.0**
UPC *e* 16 42 07.4
UPC MLR MLR
comp=Z,103µm,22.0s
UPC Upice 101.58 322 *e*PDIFF **Pdif 16 31 30.2 +1.0**
UPC *e*PP **PKiKP 16 35 54.4 +1.6**
UPC *e*SKS **SKSac 16 42 07.4 +2.7**
UPC AMS AMS 17 19 10.0
comp=Z,103µm,22.0s
DRME Dracevica, Mon 101.59 314 ⇑*i*P **Pdif 16 31 29.2 -0.2**
ONAU Onsala 101.59 330 *i* P **Pdif 16 31 28.5 -0.5**
DBG Daneborg 101.59 351 *i* P **Pdif 16 31 29.4 +0.7**
DBG IAmb IAmb 16 31 33.1
comp=Z,263nm,1.1s
ULC Ulcinj 101.59 313 ⇑*i*P **Pdif 16 31 29.6 +0.1**
NKME Niksic 101.62 314 ⇑*i*P **Pdif 16 31 29.3 -0.3**
YKA Yellowknife Ar 101.62 24 P **Pdif 16 31 28.6 -0.5**
comp=Z,65nm,0.9s,baz=300,slow=4.6,SNR=30
YKA PP **PP 16 35 35.7 -3.6**
comp=Z,24nm,1.1s,baz=300,slow=8.3,SNR=4.0
YKA PKiKP **PKiKP 16 35 53.1 +0.6**
comp=Z,19nm,0.7s,baz=295,slow=2.2,SNR=20
YKA PKKPbc **PKKPbc 16 47 35.8 -2.7**
comp=Z,3.5nm,0.7s,baz=117,slow=1.5,SNR=4.0
YKA PKPPKP **P'P'df 16 55 53.8 -0.7**
comp=Z,2.0nm,0.8s,baz=98,slow=1.8,SNR=3.9
YKA Yellowknife Ar 101.62 24 *i* P **Pdif 16 31 32.0 +2.9**
YKA pmax pmax
comp=Z,65nm,0.9s
KRUC Moravsky 101.75 321 *e*PDIFF **Pdif 16 31 30.4 +0.4**
KRUC *e*SKS **SKSac 16 42 06.2 +0.7**
KRUC *e*PKKP **PKKPbc 16 47 38.4 +0.7**
KRUC *e*PKPPKP P'P'df 16 55 43.8 -11
KLINJ Klinje 101.79 315 *e*P **Pdif 16 31 33.0 +2.6**
COP Copenhagen 101.94 328 *i* P **Pdif 16 31 32.1 +1.5**
COP IAmb IAmb 16 31 34.9
comp=Z,167nm,1.0s
TREB Trebinje 102.07 314 *e*P **Pdif 16 31 31.3 -0.2**
NLWA Neilton Lookou 102.13 41 IAMs_20 IAMs_20 17 09 37.0
comp=Z,44µm,22.0s
RONA Rosalia, Austr 102.20 320 *i* Pdiff **Pdif 16 31 32.6 +0.5**
comp=Z,914nm,2.5s,SNR=17
RONA *e*PKiKP **PKiKP 16 35 58.5 +4.4**
comp=Z,1µm,2.8s
RONA *e*PKKP **PKKPdf 16 47 40.0 -3.1**
comp=Z,36nm,1.2s
BEHE Becsehely 102.22 318 *e*P **Pdif 16 31 30.2 -1.9**
TREC Trest 102.26 321 *e*SKS **SKSac 16 42 10.2 +2.2**
TREC AMS AMS 17 22 40.0
comp=Z,55µm,20.0s
RUE Ruedersdorf 102.30 325 *e*Pdiff **Pdif 16 31 34.7 +2.4**
baz=68,slow=4.7
BLY Banja Luka 102.39 316 *e*P **Pdif 16 31 34.1 +1.2**
BLY Banja Luka 102.39 316 ⇓P **PKKPbc 16 47 36.7 +1.0**
CONA Conrad Observa 102.42 320 *i* Pdiff **Pdif 16 31 33.7 +0.6**
comp=Z,1µm,2.5s,SNR=54
CONA *e*PKKP **PKKPdf 16 47 39.9 -2.9**
comp=Z,53nm,1.2s
PVCC Panska Ves 102.45 323 *e*P **Pdif 16 31 34.7 +1.6**
PVCC *e* 16 42 06.3
PVCC MLR MLR
comp=Z,90µm,20.5s
PVCC Panska Ves 102.45 323 *e*PDIFF **Pdif 16 31 34.7 +1.6**
PVCC *e*SKS **SKSac 16 42 06.3 -2.5**
PVCC AMS AMS 17 19 50.0
comp=Z,90µm,20.5s
OVD Ostervraa, Den 102.47 330 *i* P **Pdif 16 31 34.9 +2.0**
OVD IAmb IAmb 16 31 36.8
comp=Z,192nm,0.9s
PRU Pruhonice 102.64 322 *e*P **Pdif 16 31 35.1 +1.2**
PRU *e* 16 35 53.7
PRU MLR MLR
comp=Z,82µm,21.8s
PRU Pruhonice 102.64 322 *e*PDIFF **Pdif 16 31 35.1 +1.2**
PRU *e*PP **PKiKP 16 35 53.7 -1.0**
PRU *e*SKS **SKSac 16 42 02.4 -7.3**
PRU AMS AMS 17 20 00.0
comp=Z,82µm,21.8s
PRA Prague 102.68 322 AMS AMS 17 19 50.0
comp=Z,88µm,21.3s
BRG Berggiesshubel 102.72 323 *e*Pdiff **Pdif 16 31 34.7 +0.4**
baz=68,slow=4.7
RICC Richard 102.73 323 *e*PDIFF **Pdif 16 31 35.9 +1.6**
RICC *e*SKS **SKSac 16 42 09.3 -0.8**
RICC AMS AMS 17 20 10.0
comp=Z,76µm,21.0s
ARSA Arzberg 102.83 319 *i* Pdiff **Pdif 16 31 35.2 +0.3**
comp=Z,1µm,2.6s,SNR=44
ARSA *e*PKKP **PKKPdf 16 47 38.8 -3.2**
comp=Z,39nm,1.3s
HOMB Homborsund 102.92 331 *i* P **Pdif 16 31 35.8 +0.9**
KEBM Edson Butte 103.00 45 IAMs_20 IAMs_20 17 12 41.3
comp=Z,42µm,21.0s
ZVC Zvikov 103.02 322 *e*SKS **SKSac 16 42 13.3 +1.8**
ZVC AMS AMS 17 20 00.0
comp=Z,72µm,23.7s
SNAA Sanae 103.03 195 ⇑P **Pdif 16 31 36.7 +1.4**
comp=Z,351nm,0.6s
SNAA ⇓PP **PP 16 35 48.8 -1.0**
SNAA ⇑SKSac **SKSac 16 42 14.4 +3.6**
SNAA ⇑PKKPbc **PKKPbc 16 47 31.8 -3.0**
comp=Z,981nm,0.7s
SNAA Sanae 103.03 195 Pdiff **Pdif 16 31 35.3 0.0**
comp=Z,17nm,0.8s,baz=128,slow=5.1,SNR=22
SNAA PP **PP 16 35 50.4 +0.6**
comp=Z,24nm,0.9s,baz=197,slow=4.9,SNR=4.4
SNAA PKKPbc **PKKPbc 16 47 32.9 -1.9**
comp=Z,46nm,0.8s,baz=312,slow=1.6,SNR=22
SNAA PKPPKP 16 55 52.4
SNAA Sanae 103.03 195 *e*P **Pdif 16 31 34.8 -0.5**
SNAA Sanae 103.03 195 P **Pdif 16 31 34.8 -0.5**
SNAA MLR MLR
comp=Z,74µm,22.0s
GOET G??ttrup 103.08 330 *i* P **Pdif 16 31 37.1 +1.5**
GOET IAmb IAmb 16 31 39.9
comp=Z,242nm,1.1s
GOLS Golise 103.11 318 *e*Pdiff **Pdif 16 31 36.6 +0.5**
HSKC Hora Svate Kat 103.11 323 *e*PDIFF **Pdif 16 31 37.3 +1.3**
HSKC *e*SKS **SKSac 16 42 11.0 -1.0**
HSKC AMS AMS 17 20 10.0
comp=Z,81µm,21.5s
CLL Collm 103.14 324 *i* P **Pdif 16 31 36.5 +0.4**
CLL *e* 16 42 09.0
CLL pmax pmax
comp=Z,594nm,2.0s
CLL MLR MLR
comp=Z,98µm,21.0s
CLL Collm 103.14 324 *e*Pdiff **Pdif 16 31 36.8 +0.7**
baz=68,slow=4.7
CLL Collm 103.14 324 P **Pdif 16 31 36.5 +0.4**
comp=Z,4µmcomp=Z,86nm,1.4s
CKRC Cesky Krumlov 103.14 321 *e*P **Pdif 16 31 39.0 +2.8**
CKRC *e* 16 42 13.3
CKRC MLR MLR
comp=Z,54µm,20.0s
CKRC Cesky Krumlov 103.14 321 *e*PDIFF **Pdif 16 31 39.0 +2.8**
CKRC *e*PP PKiKP 16 36 04.3 +8.6
CKRC *e*SKS **SKSac 16 42 13.3 +1.1**
CKRC AMS AMS 17 23 10.0
comp=Z,54µm,20.0s
DOBS Dobrina 103.18 318 *i* Pdiff **Pdif 16 31 35.0 -1.4**
SOKA Soboth 103.31 319 *i* Pdiff **Pdif 16 31 37.6 +0.5**
comp=Z,1µm,2.7s,SNR=38
SOKA *e*PKKP **PKKPdf 16 47 37.3 -3.8**
comp=Z,32nm,1.4s
MUD Monsted U'grnd 103.34 329 *i* P **Pdif 16 31 39.1 +2.3**
MUD IAmb IAmb 16 31 43.7
comp=Z,216nm,1.2s
MOA Molln 103.47 320 *e*Pdiff **Pdif 16 31 38.5 +0.8**
comp=Z,2µm,2.8s,SNR=47
MOA *e*PKKP **PKKPdf 16 47 37.0 -3.8**
comp=Z,45nm,1.1s
SSRD Sdr. Stenderup 103.50 328 *i* P **Pdif 16 31 40.2 +2.6**
SSRD IAmb IAmb 16 31 42.7
comp=Z,222nm,1.0s
KHC Kasperske Hory 103.50 321 IAMs_20 IAMs_20 17 27 30.1
comp=Z,47µm,22.0s
KHC Kasperske Hory 103.50 321 *e*P **Pdif 16 31 38.4 +0.6**
KHC *e* 16 42 14.9
KHC MLR MLR
comp=Z,70µm,23.6s
KHC Kasperske Hory 103.50 321 *e*PDIFF **Pdif 16 31 38.4 +0.6**
KHC *e*PP PKiKP 16 36 05.1 +8.7
KHC *e*SKS **SKSac 16 42 14.9 +1.0**
KHC *e*PKKP **PKKPbc 16 47 34.0 +1.3**
KHC AMS AMS 17 20 10.0
comp=Z,70µm,23.6s
KHC Kasperske Hory 103.50 321 P **Pdif 16 31 38.6 +0.8**
comp=Z,4µmcomp=Z,68nm,1.0s
SNART Snartemo 103.50 332 *i* P **Pdif 16 31 39.6 +2.1**
GEC2 GERESS Array S 103.52 321 *e*Pdiff **Pdif 16 31 38.9 +0.9**
baz=68,slow=4.7
GERES GERESS Array B 103.52 321 Pdiff **Pdif 16 31 38.1 +0.1**
comp=Z,17nm,0.9s,baz=51,slow=5.3,SNR=26
GERES PP **PP 16 35 55.6 +1.5**
comp=Z,12nm,0.8s,baz=77,slow=7.8,SNR=5.1
GERES PKKPbc **PKKPbc 16 47 30.4 -2.2**
comp=Z,9.2nm,0.9s,baz=224,slow=3.5,SNR=4.9
GERES PKPPKP **P'P'df 16 55 51.5 -0.4**
comp=Z,2.0nm,1.0s,baz=203,slow=0.7,SNR=4.9
GERES GERESS Array B 103.52 321 **Pdif 16 31 37.1 -0.9**
GERES GERESS Array B 103.52 321 P **Pdif 16 31 37.1 -0.9**
GORT1 Trebel 103.53 326 *e*Pdiff **Pdif 16 31 39.3 +1.6**
baz=68,slow=4.7
KSXB Camp Six Broad 103.59 46 IAMs_20 IAMs_20 17 13 09.0
comp=Z,41µm,22.0s
KGCAE Kacgae 103.62 247 *i* P **Pdif 16 31 40.0 +1.0**
OBKA Obir 103.68 319 *e*Pdiff **Pdif 16 31 39.4 +0.6**
comp=Z,1µm,2.8s,SNR=19
OBKA *e*PKKP **PKKPdf 16 47 36.7 -3.8**
comp=Z,33nm,1.0s
BSEG Bad Segeberg 103.73 327 *e*Pdiff **Pdif 16 31 39.3 +0.7**
baz=68,slow=4.7
JCC Jacoby Creek, 103.73 47 IAMs_20 IAMs_20 17 09 41.8
comp=Z,35µm,21.0s
MATE Matera 103.76 312 ⇑P **Pdif 16 31 39.6 +0.6**
MATE Matera 103.76 312 ⇓P **PKKPbc 16 47 25.5 -6.0**
TANN Tannenbergstha 103.76 323 *e*Pdiff **Pdif 16 31 40.7 +1.8**
baz=68,slow=4.7
FLTG Flechtingen 103.81 325 *e*Pdiff **Pdif 16 31 40.7 +1.7**
baz=68,slow=4.7
LJU Ljubljana 103.83 318 *i* Pdiff **Pdif 16 31 40.7 +1.4**
NEUB Neuenburg 103.90 324 *e*Pdiff **Pdif 16 31 40.7 +1.3**
baz=68,slow=4.7
BIOA Bad Ischl, Aus 103.92 320 *e*Pdiff **Pdif 16 31 40.6 +0.9**
comp=Z,1µm,2.9s,SNR=15
BIOA *e*PKKP **PKKPbc 16 47 35.5 +4.2**
comp=Z,65nm,1.2s
PLN Plauen 103.92 323 *e*Pdiff **Pdif 16 31 41.2 +1.6**
baz=68,slow=4.7
WET Wettzell 103.93 322 *e*Pdiff **Pdif 16 31 40.7 +1.0**
baz=68,slow=4.7
KULLO Kullorsuaq 103.93 1 *i* P **Pdif 16 31 41.2 +2.1**
KULLO IAmb IAmb 16 31 43.5
comp=Z,251nm,1.3s
KHMM Horse Mountain 103.94 47 IAMs_20 IAMs_20 17 18 56.2
comp=Z,42µm,22.0s
CRNS Crni Vrh 104.00 318 *i* SKSac **SKSac 16 42 16.9 +0.6**
TIP Timpagrande 104.08 311 IAMs_20 IAMs_20 17 28 00.5
comp=Z,43µm,21.0s
TIP Timpagrande 104.08 311 ⇑P **Pdif 16 31 41.0 +0.4**
MANZ Manzenberg 104.12 323 *e*Pdiff **Pdif 16 31 41.4 +0.9**
baz=68,slow=4.7
ROTZ Rotzenmuhle 104.14 322 *e*Pdiff **Pdif 16 31 41.0 +0.4**
baz=68,slow=4.7
MOX Moxa 104.19 323 *e*Pdiff **Pdif 16 31 42.4 +1.6**
baz=68,slow=4.7
MOX *e*L L 17 24 03.6
comp=Z,60µm,21.3s
MYKA Terra Mystica 104.24 319 *e*Pdiff **Pdif 16 31 41.7 +0.5**
comp=Z,901nm,2.8s,SNR=11
MYKA *e*PKKP **PKKPbc 16 47 33.8 +3.4**
comp=Z,36nm,1.0s
KBA Koelnbreinsper 104.30 320 *e*Pdiff **Pdif 16 31 42.0 +0.5**
comp=Z,474nm,2.5s,SNR=13
KBA *e*PKKP **PKKPbc 16 47 32.6 +2.3**
comp=Z,47nm,1.4s
CADS Cadrg 104.30 319 *i* Pdiff **Pdif 16 31 41.1 -0.4**
CADS *e*SKSac **SKSac 16 42 16.5 -1.1**
CADS *e*SP **SP 16 45 07.0 +0.2**
CADS *e* 16 51 19.9
CADS *e* 17 01 03.7
LKGWB Lokgwabe 104.43 246 *i* P **Pdif 16 31 41.5 -1.1**
RJOB Jochberg 104.44 320 *e*Pdiff **Pdif 16 31 44.2 +2.2**
baz=68,slow=4.7
M02C Callahan 104.44 47 IAMs_20 IAMs_20 17 13 57.6
comp=Z,35µm,21.0s
CLZ Clausthal 104.49 325 *e*Pdiff **Pdif 16 31 43.5 +1.4**
baz=68,slow=4.7
CUC Castrocucco 104.58 312 IAMs_20 IAMs_20 17 22 30.8
comp=Z,42µm,22.0s
LESA Schwarzleotal 104.62 320 *e*Pdiff **Pdif 16 31 42.9 0.0**
comp=Z,866nm,2.8s,SNR=25
LESA *e*PKKP **PKKPbc 16 47 32.7 +3.4**
comp=Z,55nm,1.0s
GRTLG Ghanzi 104.64 248 *i* P **Pdif 16 31 44.6 +1.0**
VNA2 Neumayer--Watz 104.64 194 ⇑P **Pdif 16 31 43.6 +1.3**
comp=Z,19nm,0.8s,baz=124,slow=4.8
VNA2 ⇑pP **pPdif 16 31 58.3 +2.0**
baz=136,slow=6.4
VNA2 ⇑PP **PP 16 36 01.5 -0.2**
baz=90,slow=1.5
VNA2 ⇑SKSac **SKSac 16 42 20.9 +2.8**
baz=348,slow=18
VNA2 ⇓PKKPbc **PKKPbc 16 47 27.7 -2.2**
comp=Z,30nm,0.6s,baz=323,slow=6.6
N02D Trinity Center 104.66 47 IAMs_20 IAMs_20 17 19 21.4
comp=Z,43µm,22.0s
RETH Rethem/Aller, 104.72 326 *e*Pdiff **Pdif 16 31 45.4 +2.4**
baz=68,slow=4.7
GRF Grafenberg Arr 104.76 323 *e*Pdiff **Pdif 16 31 47.0 +3.6**
baz=68,slow=4.7
GRF *e*L L 17 21 57.3
comp=Z,88µm,21.6s
QNGWA Qangwa 104.80 250 *i* P **Pdif 16 31 45.2 +0.9**
HOPS Hopland Field 104.90 49 IAMs_20 IAMs_20 17 10 05.8
comp=Z,51µm,22.0s
ABTA Abfaltersbach 104.94 319 *i* Pdiff **Pdif 16 31 44.0 -0.3**
comp=Z,534nm,2.4s,SNR=13
ABTA *e*PKKP **PKKPbc 16 47 28.6 +0.3**
comp=Z,66nm,2.0s
CEL Celeste 104.95 310 P **Pdif 16 31 45.0 +0.5**
VNA3 Neumayer Olymp 104.97 193 ⇑P **Pdif 16 31 44.8 +1.0**
comp=Z,19nm,0.8s
VNA3 ⇑pP **pPdif 16 31 59.7 +1.9**
VNA3 ⇓PP **PP 16 36 01.8 -2.4**
VNA3 ⇑SKSac **SKSac 16 42 23.0 +3.4**
VNA3 ⇓PKKPbc **PKKPbc 16 47 28.9 0.0**
comp=Z,27nm,0.6s
VNA1 Neumayer--Stat 105.04 194 ⇑P **Pdif 16 31 45.6 +1.5**
comp=Z,12nm,0.8s
VNA1 ⇓PKKPbc **PKKPbc 16 47 26.8 -1.8**
comp=Z,52nm,0.7s
SCO Scoresbysund 105.08 349 *i* P **Pdif 16 31 45.6 +1.4**
SCO IAmb IAmb 16 31 49.6
comp=Z,343nm,1.6s
UBBA Unterbreizbach 105.08 324 *e*Pdiff **Pdif 16 31 46.8 +2.2**
baz=68,slow=4.7
MCCM Marconi Confer 105.25 50 IAMs_20 IAMs_20 17 10 14.3
comp=Z,48µm,22.0s
HAWA Hanford 105.27 41 IAMs_20 IAMs_20 17 14 11.0
comp=Z,47µm,21.0s
WTTA Wattenberg 105.34 320 *e*Pdiff **Pdif 16 31 45.8 -0.5**
comp=Z,1µm,2.5s,SNR=20
WTTA *e*pPKiKP **pPKiKP 16 36 12.6 -1.7**
comp=Z,1µm,2.3s
WTTA *e*SKS **SKSac 16 42 25.2 +2.6**
comp=Z,2µm,4.1s
WTTA *e*PKKP **PKKPbc 16 47 31.0 +3.8**
comp=Z,36nm,1.2s
SUMG Summit 105.35 355 P **Pdif 16 31 48.6 +2.6**
SUMG Summit 105.35 355 IAMs_20 IAMs_20 17 25 26.2
comp=Z,37µm,22.0s
SUMG Summit 105.35 355 *i* P **Pdif 16 31 48.6 +2.6**
WATA Walderalm 105.36 320 *e*Pdiff **Pdif 16 31 46.1 -0.1**
comp=Z,131nm,1.5s,SNR=14
WATA *e*pPKiKP **pPKiKP 16 36 14.7 +0.4**
comp=Z,703nm,1.7s
WATA SKS **SKSac 16 42 27.2 +4.6**
comp=Z,575nm,2.2s
MNRC McLaughlin Min 105.40 49 IAMs_20 IAMs_20 17 13 36.1
comp=Z,55µm,22.0s
KOOLE Kule 105.45 247 *i* P **Pdif 16 31 46.9 -0.3**
O03E Paynes Creek 105.51 47 IAMs_20 IAMs_20 17 10 47.8
comp=Z,50µm,21.0s
CVS Carmenet Viney 105.53 50 IAMs_20 IAMs_20 17 10 35.5
comp=Z,50µm,22.0s
SQTA Sankt Quirin 105.63 320 *e*Pdiff **Pdif 16 31 47.6 +0.2**
comp=Z,775nm,2.8s,SNR=20
SQTA *e*pPKiKP **pPKiKP 16 36 15.8 +1.1**
comp=Z,1µm,2.4s
SQTA *e*SKS **SKSac 16 42 26.9 +3.1**
comp=Z,2µm,5.1s
SQTA *i* PKKP **PKKPbc 16 47 30.1 +3.8**
comp=Z,31nm,0.9s
MOTA Moosalm 105.65 320 *e*Pdiff **Pdif 16 31 49.9 +2.3**
comp=Z,880nm,2.6s,SNR=16
AQU L'Aquila 105.69 315 P **Pdif 16 31 48.0 +0.2**
AQU L'Aquila 105.69 315 *e*P **Pdif 16 31 46.3 -1.4**
UPNV Upernavik 105.76 1 *i* P **Pdif 16 31 50.1 +2.9**
IBBN Ibbenburen 105.79 326 *e*Pdiff **Pdif 16 31 49.1 +1.3**
baz=68,slow=4.7
RETA Reutte 105.82 321 *i* Pdiff **Pdif 16 31 49.1 +0.9**
comp=Z,963nm,3.1s,SNR=11
RETA SKS **SKSac 16 42 24.0 -0.5**
comp=Z,2µm,5.9s
KASTN Kahler Asten 105.86 325 *e*Pdiff **Pdif 16 31 50.3 +2.0**
baz=68,slow=4.7
ORV Oroville 105.93 48 IAMs_20 IAMs_20 17 10 46.0
comp=Z,35µm,22.0s
FETA Feichten 106.00 320 *e*Pdiff **Pdif 16 31 49.3 +0.2**
comp=Z,1µm,2.7s,SNR=13
FETA *e*pPKiKP **pPKiKP 16 36 19.3 +3.8**
comp=Z,2µm,4.0s
FETA *e*PKKP **PKKPbc 16 47 27.0 +1.8**
comp=Z,40nm,1.3s
NEW Newport 106.16 38 IAMs_20 IAMs_20 17 12 30.4
comp=Z,35µm,21.0s
TNS Taunus Mts 106.23 324 *e*Pdiff **Pdif 16 31 52.4 +2.4**
baz=68,slow=4.7
VAE Valguarnera 106.28 310 Pdiff **Pdif 16 31 51.3 +0.8**
comp=Z,14nm,0.8s,baz=53,slow=5.1,SNR=6.9
VAE PP **PP 16 36 15.1 +0.1**
comp=Z,33nm,0.9s,baz=14,slow=4.2,SNR=4.1
STU Stuttgart 106.34 322 *e*Pdiff **Pdif 16 31 52.6 +2.2**
baz=68,slow=4.7
BUG Bochum--Univer 106.42 325 *e*Pdiff **Pdif 16 31 52.6 +1.9**
baz=68,slow=4.7
FUORN Ofenpass-Fuorn 106.44 320 IAMs_20 IAMs_20 17 24 45.1
comp=Z,47µm,22.0s
DAVA Damuels 106.45 321 *e*Pdiff **Pdif 16 31 51.1 -0.1**
comp=Z,1µm,3.1s,SNR=7.6
DAVA *e*PKKP **PKKPbc 16 47 28.4 +4.5**
comp=Z,48nm,1.1s
FORD Fort Ord Natur 106.47 51 IAMs_20 IAMs_20 17 20 14.5
comp=Z,36µm,19.0s
DAVOX Davos/Dischmat 106.64 320 Pdiff **Pdif 16 31 52.8 +0.8**
comp=Z,36nm,0.8s,baz=47,slow=4.7,SNR=22
DAVOX PKiKP **PKiKP 16 36 02.9 +0.5**
comp=Z,12nm,0.7s,baz=89,slow=3.6,SNR=1.5
DAVOX PP **PP 16 36 18.2 +0.8**
comp=Z,80nm,0.9s,baz=94,slow=4.1,SNR=7.2
SAO San Andreas Ge 106.71 51 IAMs_20 IAMs_20 17 21 41.8
comp=Z,41µm,20.0s
WELL Weller Preserv 106.81 49 IAMs_20 IAMs_20 17 11 38.6
comp=Z,36µm,22.0s
CMB Columbia Colle 107.18 49 IAMs_20 IAMs_20 17 19 58.3
comp=Z,33µm,20.0s
BMO Blue Mountains 107.26 42 IAMs_20 IAMs_20 17 14 55.7
comp=Z,39µm,21.0s
BTNL Ternell 107.44 325 *d*P **Pdif 16 31 59.7 +4.5**
MEM Membach 107.50 325 *d*Pdif **Pdif 16 31 58.3 +2.8**
BEBN Eben Emael 107.61 325 *d*P **Pdif 16 31 59.1 +3.2**
BHOU Houvegnez 107.61 325 *d*Pdif **Pdif 16 31 58.5 +2.5**
BSTI Sart Tilman 107.76 325 *d*P **Pdif 16 31 59.5 +2.8**
comp=Z,9.9nm,1.1s
WLF Walferdange 107.81 324 *d*Pdif **Pdif 16 31 57.8 +0.9**
comp=Z,33nm,1.0s
BGES Gesves 108.12 325 *d*Pdif **Pdif 16 31 55.6 -2.7**
comp=Z,0.8nm,1.3s
RCHB Rochefort 108.14 325 *d*Pdif **Pdif 16 32 01.4 +3.0**
comp=Z,18nm,1.0s
BMRD Maredsous 108.34 325 *d*Pdif **Pdif 16 32 02.2 +2.9**
comp=Z,23nm,1.1s
UCC Uccle 108.36 325 *d*P **Pdif 16 32 07.7 +3.5**
BIGH Upper Bighouse 108.42 335 *e*P 16 45 20.8
BIGH IAMs_20 IAMs_20 17 22 58.7
comp=Z,76µm,25.3s
DOU Dourbes 108.53 325 *d*Pdif **Pdif 16 32 03.3 +3.2**
comp=Z,21nm,1.1s
NVAR Mina Array Bea 108.64 48 Pdiff **Pdif 16 32 02.5 +1.3**
comp=Z,9.6nm,1.0s,baz=264,slow=5.7,SNR=16
NVAR PKiKP **PKiKP 16 36 06.7 +0.2**
comp=Z,14nm,0.7s,baz=249,slow=1.8,SNR=9.5
NVAR PP **PP 16 36 32.7 +0.3**
comp=Z,36nm,1.0s,baz=264,slow=4.9,SNR=8.4
NVAR PKKPbc **PKKPbc 16 47 17.0 +0.2**
comp=Z,9.9nm,0.9s,baz=151,slow=3.3,SNR=8.0
NVAR PKKPab **PKKPab 16 47 30.2 +0.9**
comp=Z,45nm,0.9s,baz=125,slow=4.9,SNR=17
NVAR PKPPKP **P'P'df 16 55 42.5 -0.4**
comp=Z,1.6nm,1.0s,baz=97,slow=2.7,SNR=3.6
NVAR Mina Array Bea 108.64 48 **Pdif 16 32 01.7 +0.6**
MCD Coleburn Disti 108.68 334 *e* 16 45 41.4
MCD IAMs_20 IAMs_20 17 23 20.2
comp=Z,86µm,23.8s
MSO Missoula 108.70 39 IAMs_20 IAMs_20 17 18 27.7
comp=Z,37µm,21.0s
DRUM Mains of Drumt 108.72 333 *e* 16 45 43.8
DRUM IAMs_20 IAMs_20 17 24 23.2
comp=Z,80µm,22.1s
MFID Camas Ranch 108.76 43 IAMs_20 IAMs_20 17 15 52.6
comp=Z,46µm,22.0s
VES Vestal, Richgr 108.79 51 IAMs_20 IAMs_20 17 15 35.1
comp=Z,45µm,22.0s
TIN Tinemaha, Big 109.10 50 IAMs_20 IAMs_20 17 21 54.2
comp=Z,40µm,20.0s

LINV Loch Inver, As 109.17 335 *e* 16 45 42.9
LINV IAMs_20 IAMs_20 17 23 33.5
comp=Z,77µm,23.4s
GDLE Glaisdale, N Y 109.31 330 *e* 16 45 46.0
GDLE IAMs_20 IAMs_20 17 23 58.3
comp=Z,104µm,24.7s
CWC Cottonwood Cre 109.40 50 IAMs_20 IAMs_20 17 20 44.1
comp=Z,49µm,20.0s
EDMD Edmundbyers 109.65 331 *e* 16 45 49.1
EDMD IAMs_20 IAMs_20 17 24 17.8
comp=Z,123µm,24.2s
HLID Hailey 109.67 42 IAMs_20 IAMs_20 17 16 32.4
comp=Z,40µm,22.0s
INVG Invergeldie, C 109.71 333 *e* 16 45 53.1
INVG IAMs_20 IAMs_20 17 26 33.5
comp=Z,75µm,22.4s
LEWI Lewis, Hebride 109.87 336 *e* 16 45 55.6
LEWI IAMs_20 IAMs_20 17 26 51.4
comp=Z,51µm,20.6s
EKA Eskdalemuir Ar 109.94 332 Pdiff **Pdif 16 32 06.7 +0.5**
comp=Z,30nm,1.1s,baz=64,slow=4.7,SNR=10
EKA PKiKP **PKiKP 16 36 09.0 +0.9**
comp=Z,12nm,0.8s,baz=38,slow=2.9,SNR=4.4
EKA PP **PP 16 36 40.3 -0.4**
comp=Z,26nm,0.9s,baz=111,slow=3.7,SNR=4.6
EKA PKKPbc **PKKPbc 16 47 11.6 -1.3**
comp=Z,9.9nm,0.5s,baz=239,slow=3.4,SNR=16
ESK Eskdalemuir 109.97 332 *e* 16 45 54.0
ESK IAMs_20 IAMs_20 17 24 36.8
comp=Z,132µm,26.1s
PASC Pasadena Art C 109.97 53 IAMs_20 IAMs_20 17 23 05.3
comp=Z,49µm,20.0s
MPMC Manual Prospec 109.97 51 IAMs_20 IAMs_20 17 24 14.2
comp=Z,49µm,20.0s
ELSH Elham, Standar 109.99 327 *e* 16 45 49.9
ELSH IAMs_20 IAMs_20 17 27 43.1
comp=Z,66µm,22.2s
LRMC Laurel Mtn Rad 109.99 51 IAMs_20 IAMs_20 17 16 20.8
comp=Z,46µm,21.0s
WSHM Spangler Hills 110.10 51 IAMs_20 IAMs_20 17 15 54.8
comp=Z,43µm,21.0s
ELK Elko 110.12 45 IAMs_20 IAMs_20 17 17 23.7
comp=Z,41µm,22.0s
FURC Furnace Creek, 110.33 50 IAMs_20 IAMs_20 17 26 24.6
comp=Z,34µm,20.0s
LAWE Loch Awe, Argy 110.41 334 *e* 16 45 59.1
LAWE IAMs_20 IAMs_20 17 25 16.1
comp=Z,87µm,21.4s
BOZ Bozeman (W) 110.67 40 IAMs_20 IAMs_20 17 17 59.8
comp=Z,37µm,21.0s
KEST Kesra 110.69 309 Pdiff **Pdif 16 32 10.8 +0.6**
comp=Z,15nm,0.8s,baz=356,slow=6.6,SNR=9.9
KEST PKiKP **PKiKP 16 36 09.3 -0.8**
comp=Z,27nm,1.2s,baz=315,slow=1.4,SNR=4.0
KEST PP **PP 16 36 47.7 +0.6**
comp=Z,62nm,0.8s,baz=35,slow=4.9,SNR=8.9
KEST PKKPbc **PKKPbc 16 47 11.2 +1.3**
comp=Z,26nm,0.7s,baz=297,slow=3.1,SNR=15
CLF Chambon-Foret 110.84 323 IAMs_20 IAMs_20 17 30 25.0
comp=Z,44µm,21.0s
GAL1 Galloway 110.93 332 *e* 16 46 02.6
GAL1 IAMs_20 IAMs_20 17 25 02.1
comp=Z,99µm,26.1s
SHOC Shoshone, Teco 110.95 51 IAMs_20 IAMs_20 17 26 56.3
comp=Z,29µm,19.0s
IOMK Kirk Michael 111.22 332 *e* 16 46 04.8
IOMK IAMs_20 IAMs_20 17 25 14.6
comp=Z,63µm,25.2s
FFC Flin Flon 111.32 28 IAMs_20 IAMs_20 17 19 26.1
comp=Z,40µm,22.0s
FOEL Foel Wylfa 111.34 330 *e* 16 46 06.0
FOEL IAMs_20 IAMs_20 17 25 12.5
comp=Z,111µm,25.3s
CLGH Cloghs, Cushen 111.45 333 *e* 16 46 12.4
CLGH IAMs_20 IAMs_20 17 21 30.7
comp=Z,74µm,27.6s
PFO Pinyon Flats O 111.50 53 IAMs_20 IAMs_20 17 22 46.1
comp=Z,46µm,21.0s
FLWY Flagg Ranch 111.92 41 IAMs_20 IAMs_20 17 18 23.8
comp=Z,46µm,21.0s
IDGL Inch Island, C 112.09 333 *e* 16 46 15.1
IDGL IAMs_20 IAMs_20 17 26 35.9
comp=Z,83µm,20.7s
SNOW Snow King Moun 112.14 41 IAMs_20 IAMs_20 17 16 48.0
comp=Z,48µm,22.0s
LOHW Long Hollow 112.18 41 IAMs_20 IAMs_20 17 18 21.8
comp=Z,46µm,22.0s
BC3 Big Chuckawall 112.29 53 IAMs_20 IAMs_20 17 15 38.8
comp=Z,35µm,22.0s
HWUT Hardware Ranch 112.36 43 IAMs_20 IAMs_20 17 14 40.9
comp=Z,44µm,22.0s
NEE2 Needles Airpor 112.60 51 IAMs_20 IAMs_20 17 22 17.8
comp=Z,38µm,20.0s
GLA Glamis 112.97 53 IAMs_20 IAMs_20 17 23 49.0
comp=Z,39µm,20.0s
BW06 Boulder Array 113.23 42 IAMs_20 IAMs_20 17 18 54.8
comp=Z,48µm,20.0s
PDAR Pinedale Array 113.23 42 Pdiff **Pdif 16 32 23.2 +1.7**
comp=Z,3.1nm,1.1s,baz=280,slow=2.6,SNR=11
PDAR PKiKP **PKiKP 16 36 15.1 +0.1**
comp=Z,20nm,0.7s,baz=236,slow=1.1,SNR=19
PDAR PP **PP 16 37 06.4 +1.2**
comp=Z,23nm,1.0s,baz=67,slow=5.0,SNR=3.9
PDAR PKKPbc **PKKPbc 16 46 59.9 -2.0**
comp=Z,18nm,0.8s,baz=122,slow=5.1,SNR=18
PDAR Pinedale Array 113.23 42 **Pdif 16 32 22.6 +1.1**
LAO LASA Array 113.50 37 IAMs_20 IAMs_20 17 16 46.6
comp=Z,40µm,22.0s
FRB Frobisher Bay 113.92 7 PKKPbc PKKPbc 16 46 58.6 -1.3
comp=Z,35nm,1.1s,baz=127,slow=8.5,SNR=2.3
CCA1 Carnmenellis 113.92 328 *e* 16 46 30.0
CCA1 IAMs_20 IAMs_20 17 26 49.8
comp=Z,50µm,23.2s
IGLA Glengowla, Co 113.99 333 *e* 16 46 32.1
IGLA IAMs_20 IAMs_20 17 29 44.6
comp=Z,57µm,20.1s
WUAZ Wupatki 114.84 49 IAMs_20 IAMs_20 17 25 17.0
comp=Z,28µm,20.0s
PV05 Paradox Valley 115.53 46 **PKiKP 16 36 18.2 -1.4**
PV11 David Mesa, Pa 115.60 46 **PKiKP 16 36 18.2 -1.5**
EDA Edea 115.99 275 **PKPdf 16 36 19.6 -1.2**
MVCO Mesa Verde 116.32 47 IAMs_20 IAMs_20 17 20 18.2
comp=Z,40µm,21.0s
TUC Tucson 116.44 53 IAMs_20 IAMs_20 17 23 06.6
comp=Z,39µm,20.0s
PMSA Palmer Station 116.48 175 PKP **PKiKP 16 36 20.3 +0.1**
comp=Z,32nm,1.0s,baz=6.3,slow=2.9,SNR=4.7
PMSA PKKPbc **PKKPbc 16 46 50.4 -0.7**
comp=Z,18nm,0.9s,baz=14,slow=6.4,SNR=4.5
PMSA Palmer Station 116.48 175 **PKiKP 16 36 20.6 +0.4**
MDND Maddock 116.63 33 IAMs_20 IAMs_20 17 22 53.9
comp=Z,35µm,22.0s
E28A Huff 116.77 34 IAMs_20 IAMs_20 17 26 59.8
comp=Z,32µm,20.0s
SRIG Santa Rosalia 116.83 58 **PKPdf 16 36 21.1 -0.9**
ULM Lac du Bonnet 117.04 29 Pdiff **Pdif 16 32 40.2 +2.2**
comp=Z,2.6nm,0.6s,baz=337,slow=2.3,SNR=1.6
ULM PKP **PKPdf 16 36 21.7 -0.1**
comp=Z,126nm,0.7s,baz=312,slow=1.9,SNR=22
ULM PP **PP 16 37 30.7 -0.5**
comp=Z,26nm,1.0s,baz=315,slow=8.0,SNR=4.1
ULM PKKPbc **PKKPbc 16 46 49.0 +0.3**
comp=Z,11nm,0.5s,baz=119,slow=4.1,SNR=8.0
ULM Lac du Bonnet 117.04 29 **PKPdf 16 36 21.1 -0.7**
ISCO Idaho Springs 117.22 43 IAMs_20 IAMs_20 17 21 40.5
comp=Z,32µm,20.0s
IVI Ivigtut 117.26 357 IAMs_20 IAMs_20 17 33 53.8
comp=Z,30µm,22.0s
HSIG 117.40 56 **PKPdf 16 36 19.6 -3.6**
TAM Tamanrasset 117.52 297 IAMs_20 IAMs_20 17 34 24.1
comp=Z,33µm,21.0s
CART Cartagena 117.72 314 PKP **PKiKP 16 36 26.1 +2.6**
319A Douglas 117.96 53 **PKPdf 16 36 21.6 -2.8**
SDCO Great Sand Dun 118.24 45 IAMs_20 IAMs_20 17 19 00.6
comp=Z,41µm,21.0s
AGMN Agassiz Nation 118.32 31 IAMs_20 IAMs_20 17 24 26.4
comp=Z,36µm,21.0s
SBM South Baldy 118.62 50 **PKiKP 16 36 26.4 +0.5**
LENM Lemitar 118.70 49 **PKiKP 16 36 26.5 +0.8**
ANMO Albuquerque 118.76 48 IAMs_20 IAMs_20 17 29 02.8
comp=Z,33µm,21.0s
ESDC Sonseca Array 118.79 318 Pdiff **Pdif 16 32 47.9 +1.8**
comp=Z,2.4nm,0.9s,baz=43,slow=4.4,SNR=6.8
ESDC PKP **PKiKP 16 36 27.0 +1.4**
comp=Z,16nm,1.0s,baz=4.9,slow=1.0,SNR=16
ESDC PP **PP 16 37 43.0 -0.9**
comp=Z,19nm,1.0s,baz=52,slow=7.4,SNR=5.0
ESDC PKKPbc **PKKPbc 16 46 42.1 -0.1**
comp=Z,12nm,0.9s,baz=247,slow=3.8,SNR=14
Y22A Socorro 118.80 50 **PKPdf 16 36 25.0 -1.0**
BNM Barren Site 118.97 49 **PKPdf 16 36 25.3 -1.0**
SUSD Miller 119.00 36 IAMs_20 IAMs_20 17 34 30.9
comp=Z,31µm,21.0s
OGNE Ogallala 119.04 40 IAMs_20 IAMs_20 17 22 22.3
comp=Z,41µm,22.0s
PAB San Pablo 119.12 318 IAMs_20 IAMs_20 17 36 46.8
comp=Z,43µm,21.0s
PBRG Braganca 119.50 321 *e*PKPdf **PKiKP 16 36 31.5 +4.6**
PBRG *e*PP PP 16 38 00.7 +12
K30B Basset 119.63 38 IAMs_20 IAMs_20 17 23 29.6
comp=Z,34µm,22.0s
KSCO Kaye Shedlock' 119.63 43 IAMs_20 IAMs_20 17 32 22.1
comp=Z,36µm,22.0s
F33A 5 Mile Ranch, 119.66 33 IAMs_20 IAMs_20 17 28 43.0
comp=Z,33µm,22.0s
EPT El Paso 120.01 52 IAMs_20 IAMs_20 17 19 47.1
comp=Z,39µm,22.0s
MVO Moncorvo 120.03 321 *e*PKPdf **PKiKP 16 36 31.5 +3.5**
MVO *e*PP PP 16 38 05.8 +13
MVO *i* tx tx 16 47 37.5
MVO *e*S 16 55 05.9
MVO *e*LR LR 17 23 05.0
MVO *i* IAMs_20 IAMs_20 17 31 46.6
comp=Z,40µm,22.0s
H06S1 SOCORRO T 120.22 67 PKP **PKiKP 16 36 29.8 +1.0**
SNR=6.6
H06E1 SOCORRO T-PHAS 120.24 67 PKP **PKiKP 16 36 29.7 +0.8**
PCAB Cabril 120.35 322 *e*PKPdf **PKiKP 16 36 30.9 +2.3**
PCAB *e*PP PP 16 37 39.3 -15
PGAV Gavieira, Arco 120.36 322 *e*PKPdf **PKiKP 16 36 31.9 +3.2**
PGAV *e*PP PP 16 38 07.2 +13
PGAV *i* tx tx 16 47 36.6
PGAV *e*S P'P'df 16 54 59.7 -20
PGAV *e*LR LR 17 18 26.1
PGAV *i* IAMs_20 IAMs_20 17 31 41.2
comp=Z,33µm,22.0s
POLO Lamas de Olo 120.39 321 *e*PKPdf **PKiKP 16 36 32.3 +3.6**
POLO *e*PP **PP 16 38 01.6 +6.7**
PVRL Vila Real 120.40 321 *e*PKPdf **PKiKP 16 36 30.6 +1.9**
PVRL *e*PP **PP 16 38 00.5 +5.7**
EYMN Ely 120.72 29 IAMs_20 IAMs_20 17 34 07.7
comp=Z,38µm,21.0s
MTE Manteigas 120.77 320 *e*PKPdf **PKiKP 16 36 31.2 +1.7**
MTE *e*PP PP 16 38 10.9 +14
MTE *i* tx tx 16 47 42.5
MTE *e*S P'P'df 16 55 01.0 -18
MTE *e*LR LR 17 19 20.5
MTE *i* IAMs_20 IAMs_20 17 32 22.4
comp=Z,46µm,22.0s
PVIS Viseu 120.82 321 *e*PKPdf **PKiKP 16 36 30.0 +0.5**
PVIS *e*PP **PP 16 37 59.7 +2.0**
MNTX Cornudas Mount 120.92 51 IAMs_20 IAMs_20 17 27 08.1
comp=Z,36µm,21.0s
PCBR Castelo Branco 121.03 320 *e*PKPdf **PKiKP 16 36 31.4 +1.5**
PCAS Casmilo, Conde 121.57 320 *e*PKPdf **PKiKP 16 36 32.3 +1.4**
PCAS *e*PP **PP 16 38 00.1 -2.7**
PSARD Sardoal 121.60 320 *e*PKPdf **PKiKP 16 36 32.9 +1.8**
PSARD *e*PP PP 16 38 13.6 +10
PBAR Barrancos 121.62 318 PKP **PKiKP 16 36 31.6 +0.5**
PBAR Barrancos 121.62 318 *e*PKPdf **PKiKP 16 36 32.8 +1.7**
PBAR *e*PP PP 16 38 16.6 +13
E38A The Farm, Brul 121.62 30 IAMs_20 IAMs_20 17 33 30.7
comp=Z,41µm,22.0s
PESTR Estremoz 121.62 319 PKP **PKiKP 16 36 31.6 +0.5**
PESTR Estremoz 121.62 319 *e*PKPdf **PKiKP 16 36 32.3 +1.2**
PESTR *e*PP **PP 16 38 03.0 -0.3**
SFS San Fernando 121.92 316 PKP **PKPdf 16 36 30.7 -0.9**
SPMN Marine on St. 121.92 32 IAMs_20 IAMs_20 17 29 02.9
comp=Z,33µm,21.0s
PMTG Montargil 121.93 319 *e*PKPdf **PKiKP 16 36 34.9 +3.2**
PMTG *e*PP **PP 16 38 10.1 +4.8**
PARRA Arraiolos 121.95 319 *e*PKPdf **PKiKP 16 36 33.5 +1.8**
PARRA *e*PP PP 16 38 14.8 +9.4
L34A Svendsen Farm, 121.99 37 **PKPdf 16 36 30.8 -0.8**
L34A IAMs_20 IAMs_20 17 25 23.0
comp=Z,30µm,22.0s
PSBE So Bento 122.06 320 *e*PKPdf **PKiKP 16 36 36.7 +4.7**
PSBE *e*PP **PP 16 38 08.0 +1.8**
PBEJ Beja 122.25 318 *e*PKPdf **PKiKP 16 36 34.1 +1.7**
PBEJ *e*PP PP 16 38 24.1 +17
AMTX Amarillo 122.30 46 IAMs_20 IAMs_20 17 33 23.2
comp=Z,29µm,20.0s
MOE Montemor 122.31 319 *e*PKPdf **PKiKP 16 36 33.8 +1.3**
MOE *e*PP PP 16 38 22.1 +14
I37A Lemond, Waseca 122.41 33 IAMs_20 IAMs_20 17 36 13.7
comp=Z,30µm,22.0s
PVAQ Vaqueiros 122.48 317 *e*PKPdf **PKiKP 16 36 33.6 +0.8**
PVAQ *e*PP PP 16 38 22.0 +13
PVAQ *i* tx tx 16 47 47.3
PVAQ *e*S 16 54 55.0
PVAQ *e*LR LR 17 16 42.0
PVAQ *i* IAMs_20 IAMs_20 17 38 14.9
comp=Z,33µm,20.0s
IFR Ifrane 122.55 312 PKP **PKPdf 16 36 30.7 -2.5**
PCVE Castro Verde 122.58 318 PKP **PKPdf 16 36 33.0 +0.1**
PCVE Castro Verde 122.58 318 *e*PKPdf **PKiKP 16 36 34.2 +1.2**
PCVE *e*PP **PP 16 38 16.6 +6.8**
MESJ Messejana 122.59 318 *e*PKPdf **PKiKP 16 36 34.2 +1.1**
MESJ *e*PP PP **16 38 11.6 +1.8**
MESJ *e*SS SS 16 54 52.7 +4.8
MESJ IAMs_20 IAMs_20 17 31 04.4
comp=Z,58µm,31.4s
MESJ Messejana 122.59 318 *e*PKPdf **PKiKP 16 36 33.9 +0.9**
MESJ *e*PP PP 16 38 23.0 +13
MESJ Messejana 122.59 318 *e*PKIKP **PKiKP 16 36 34.2 +1.1**
MESJ *e* 16 38 11.6
MESJ *e*SS SS 16 54 52.7 +4.8
PMAFR Mafra 122.68 320 *e*PKPdf **PKiKP 16 36 38.1 +4.9**
PBDV Barranco-do-Ve 122.71 317 PKP **PKiKP 16 36 34.3 +1.0**
PBDV Barranco-do-Ve 122.71 317 *e*PKPdf **PKiKP 16 36 35.0 +1.6**
PBDV *e*PP PP 16 38 25.5 +15
LIS Lisbon 122.73 319 *e*PKPdf **PKiKP 16 36 34.5 +1.3**
LIS *e*PP **PP 16 38 12.7 +2.0**
LIS IAMs_20 IAMs_20 17 28 18.6
comp=E,63µm,25.3s
LIS Lisbon 122.73 319 *e*PKPdf **PKiKP 16 36 36.6 +3.3**
LIS *e*PP PP 16 38 27.0 +16
LIS Lisbon 122.73 319 *e*PKIKP **PKiKP 16 36 34.5 +1.3**
LIS *e* 16 38 12.7
SCHQ Schefferville 122.75 9 PKP **PKiKP 16 36 33.9 +1.0**
comp=E,211nm,0.8s,baz=348,slow=1.4,SNR=67
SCHQ PP **PP 16 38 10.9 +1.0**
comp=E,111nm,1.1s,baz=12,slow=7.7,SNR=4.7
SCHQ PKKPbc **PKKPab 16 46 26.9 +0.2**
comp=E,22nm,0.7s,baz=167,slow=4.7,SNR=13
SCHQ SKKPbc SKKPbc 16 50 13.4 0.0
comp=E,14nm,0.8s,baz=168,slow=6.1,SNR=3.8
SCHQ Schefferville 122.75 9 **SKKPbc 16 50 13.4 0.0**
PTEO Sao Teotonio 123.08 318 *e*PKPdf **PKiKP 16 36 37.4 +3.4**
PTEO *e*PP PP 16 38 27.2 +14
MORF Marmelete 123.17 318 *e*PKPdf **PKiKP 16 36 35.4 +1.1**
MORF IAMs_20 IAMs_20 17 26 37.5
comp=E,59µm,23.2s
MORF Marmelete 123.17 318 *e*PKPdf **PKiKP 16 36 37.7 +3.5**
MORF *e*PP PP 16 38 27.0 +13
MORF Marmelete 123.17 318 *e*PKIKP **PKiKP 16 36 35.3 +1.1**
TORD Torodi Ar. Bea 123.18 287 PKP **PKiKP 16 36 34.8 0.0**
comp=E,93nm,0.8s,baz=54,slow=3.2,SNR=53
TORD PP **PP 16 38 16.1 +1.1**
comp=E,29nm,0.9s,baz=72,slow=4.7,SNR=1.8
TORD PKKPbc **PKKPbc 16 46 24.1 -0.9**
comp=E,17nm,1.0s,baz=300,slow=3.1,SNR=6.2
TXAR Lajitas Array 123.22 53 Pdiff **Pdif 16 33 06.7 +0.7**
comp=E,0.8nm,0.9s,baz=252,slow=7.8,SNR=7.5
TXAR PKP **PKiKP 16 36 35.2 +0.5**
comp=E,64nm,0.8s,baz=237,slow=1.4,SNR=41
TXAR PKKPbc **PKKPab 16 46 24.9 -0.2**
comp=E,24nm,1.0s,baz=116,slow=2.9,SNR=15
TXAR SKKPbc SKKPbc 16 50 09.9 -1.0
comp=E,15nm,1.1s,baz=131,slow=5.3,SNR=4.7
G40A Rib Lake 123.23 30 IAMs_20 IAMs_20 17 34 17.3
comp=Z,41µm,22.0s
PFVI Vila Bisbo 123.38 318 PKP **PKiKP 16 36 37.0 +2.4**
PFVI Vila Bisbo 123.38 318 *e*PKPdf **PKiKP 16 36 37.3 +2.7**
PFVI *e*PP PP 16 38 34.4 +19
KSU1 Kansas State U 123.53 39 IAMs_20 IAMs_20 17 25 04.1
comp=Z,40µm,22.0s
OK038 West end E0370 123.57 43 IAMs_20 IAMs_20 17 32 34.5
comp=Z,39µm,22.0s
F42A Maple Grove Fa 123.89 29 IAMs_20 IAMs_20 17 35 15.7
comp=Z,37µm,22.0s
APMT Aspermont 124.18 47 **PKPdf 16 36 35.4 -0.7**
WMOK Wichita Mounta 124.45 45 IAMs_20 IAMs_20 17 22 23.9
comp=Z,30µm,21.0s
N38A Joes South For 124.57 36 IAMs_20 IAMs_20 17 23 12.3
comp=Z,28µm,22.0s
OK029 Liberty Lake 124.81 43 IAMs_20 IAMs_20 17 25 45.4
comp=Z,38µm,21.0s
OK048 Pawnee Station 124.83 42 IAMs_20 IAMs_20 17 36 49.6
comp=Z,30µm,20.0s
OK051 E0350 and S346 124.85 42 IAMs_20 IAMs_20 17 29 21.2
comp=Z,28µm,21.0s
ABTX Abilene, Hawle 124.87 48 IAMs_20 IAMs_20 17 26 08.4
comp=Z,37µm,20.0s
L40A Anamosa 124.89 34 IAMs_20 IAMs_20 17 35 22.6
comp=Z,35µm,21.0s
H43A Windswept, Lux 125.01 29 IAMs_20 IAMs_20 17 33 17.3
comp=Z,36µm,22.0s
P38A Dawn 125.13 37 IAMs_20 IAMs_20 17 38 39.1
comp=Z,28µm,21.0s
OK052 Battle Ridge R 125.15 43 IAMs_20 IAMs_20 17 32 59.3
comp=Z,34µm,22.0s
TIO Tiouine 125.34 310 PKP **PKiKP 16 36 39.7 +0.8**
USHA Ushuaia 125.55 170 PKP **PKiKP 16 36 40.0 +1.7**
comp=Z,371nm,0.9s,baz=188,slow=1.9,SNR=22
USHA PP **PP 16 38 29.0 +0.3**
comp=Z,15nm,0.3s,baz=149,slow=4.8,SNR=1.3
HOPE Hope Point 125.59 192 **PKPdf 16 36 38.0 0.0**
HOPE Hope Point 125.59 192 IAMs_20 IAMs_20 17 35 40.7
comp=Z,38µm,22.0s
HOPE Hope Point 125.59 192 PKIKP **PKPdf 16 36 38.0 0.0**
HOPE MLR MLR
comp=Z,38µm,22.0s
MG01 Puerto William 125.59 170 IAMs_20 IAMs_20 17 32 48.0
comp=Z,32µm,22.0s
L42A Oliver, Polo 125.78 33 IAMs_20 IAMs_20 17 40 34.0
comp=Z,35µm,20.0s
TUL3 Leonard 125.88 42 IAMs_20 IAMs_20 17 32 45.6
comp=Z,31µm,20.0s
K43A Burlington 126.00 31 IAMs_20 IAMs_20 17 39 34.6
comp=Z,34µm,21.0s
N41A Harden Midland 126.00 35 IAMs_20 IAMs_20 17 28 47.0
comp=Z,39µm,22.0s
P40A Paris 126.08 36 IAMs_20 IAMs_20 17 33 22.2
comp=Z,30µm,21.0s
L44A Lake County Fo 126.59 31 IAMs_20 IAMs_20 17 40 24.3
comp=Z,32µm,20.0s
R40A Maddies Statio 126.73 38 IAMs_20 IAMs_20 17 24 58.6
comp=Z,33µm,22.0s
HQIL Hanson Quary C 126.89 32 IAMs_20 IAMs_20 17 41 22.3
comp=Z,32µm,21.0s
M44A Midewin, Midew 127.08 32 IAMs_20 IAMs_20 17 38 33.4
comp=Z,33µm,22.0s
MG02 Cerro Sombrero 127.34 168 IAMs_20 IAMs_20 17 34 29.2
comp=Z,37µm,22.0s
J47A Sumner 127.35 28 IAMs_20 IAMs_20 17 33 10.2
comp=Z,40µm,22.0s
MGMO Mountain Grove 127.44 39 **PKPdf 16 36 40.8 -1.4**
P43A Skaggs, Pawnee 127.47 35 IAMs_20 IAMs_20 17 29 42.0
comp=Z,38µm,22.0s
CCM Cathedral Cave 127.50 37 IAMs_20 IAMs_20 17 37 57.0
comp=Z,30µm,21.0s
L46A Eue Claire 127.54 30 IAMs_20 IAMs_20 17 39 13.4
comp=Z,42µm,22.0s
GO09 Cerro Castillo 128.03 165 IAMs_20 IAMs_20 17 33 45.5
comp=Z,27µm,21.0s
H09N1 TRISTAN DA CUN 128.06 222 PKP **PKPdf 16 36 43.5 +0.2**
SNR=35
MIAR Mount Ida 128.15 42 IAMs_20 IAMs_20 17 27 48.6
comp=Z,36µm,22.0s
Q44A Meyer Farm, Va 128.26 35 IAMs_20 IAMs_20 17 42 19.9
comp=Z,32µm,21.0s
SFIN Lafayette 128.31 32 IAMs_20 IAMs_20 17 36 44.8
comp=Z,40µm,20.0s
KVTX Kingsville 128.58 52 IAMs_20 IAMs_20 17 23 56.2
comp=Z,30µm,20.0s
AAM Ann Arbor 128.62 28 IAMs_20 IAMs_20 17 31 26.8
comp=Z,38µm,22.0s
P46A Rosedale 128.78 33 IAMs_20 IAMs_20 17 38 41.5
comp=Z,30µm,22.0s
OLIL Olney 128.90 35 **PKPdf 16 36 43.4 -1.5**
S44A Carbondale 128.93 36 IAMs_20 IAMs_20 17 30 49.7
comp=Z,34µm,22.0s
NATX Nacogdoches 128.94 46 IAMs_20 IAMs_20 17 35 55.1
comp=Z,30µm,20.0s
DRLN Deer Lake 129.27 3 **PKPdf 16 36 44.0 -1.3**
M50A Fremont 129.60 29 IAMs_20 IAMs_20 17 31 44.8
comp=Z,36µm,22.0s
D62A Allapoint, All 129.71 14 IAMs_20 IAMs_20 17 37 34.8
comp=Z,39µm,22.0s
T45A Paducah 129.74 37 IAMs_20 IAMs_20 17 41 05.3
comp=Z,38µm,22.0s
P48A Milroy 129.86 32 IAMs_20 IAMs_20 17 41 57.8
comp=Z,29µm,20.0s
O49A Covington 129.89 31 IAMs_20 IAMs_20 17 38 52.5
comp=Z,40µm,22.0s
EFI East Falkland 129.93 176 **PKPdf 16 36 45.4 -1.0**
EFI East Falkland 129.93 176 IAMs_20 IAMs_20 17 32 16.7
comp=Z,27µm,21.0s
EFI East Falkland 129.93 176 PKIKP **PKPdf 16 36 45.4 -1.0**
EFI MLR MLR
comp=Z,27µm,21.0s
WCI Wyandotte Cave 130.27 34 IAMs_20 IAMs_20 17 43 04.9
comp=Z,38µm,22.0s
N51A Ashland 130.30 29 IAMs_20 IAMs_20 17 45 38.2
comp=Z,32µm,21.0s
J55A Hilton 130.38 23 IAMs_20 IAMs_20 17 41 50.9
comp=Z,33µm,21.0s
ACSO Alum Creek Sta 130.53 30 IAMs_20 IAMs_20 17 37 09.5
comp=Z,31µm,21.0s
441A DeRidder 130.55 46 IAMs_20 IAMs_20 17 31 22.6
comp=Z,27µm,21.0s
DBIC Dimbokro 130.60 280 PKhKP PKPpre 16 36 35.2
comp=Z,9.5nm,0.8s,baz=86,slow=3.9,SNR=4.6
DBIC PKP **PKiKP 16 36 49.6 0.0**
comp=Z,120nm,0.8s,baz=103,slow=2.1,SNR=20
DBIC PP **PP 16 39 04.8 +0.7**
comp=Z,29nm,0.8s,baz=118,slow=6.8,SNR=3.1
DBIC SKPbc **SKPab 16 40 09.0 +0.3**
comp=Z,63nm,0.9s,baz=306,slow=8.5,SNR=11
DBIC Dimbokro 130.60 280 PKP **PKPdf 16 36 49.1 +0.3**
T47A Sharon Grove 130.67 36 IAMs_20 IAMs_20 17 30 43.7
comp=Z,36µm,21.0s
SHEL Horse Pasture 130.67 250 IAMs_20 IAMs_20 17 27 42.1
comp=Z,36µm,22.0s
PMPST Porto Santo, M 130.73 318 *e*PKPdf **PKiKP 16 36 51.5 +2.1**
PMPST *e*PP PP 16 38 51.2 -13
PMPS Porto Santo 130.75 318 *e*PKPdf **PKiKP 16 36 51.6 +2.2**
J57A Williamstown 130.94 21 IAMs_20 IAMs_20 17 33 45.8
comp=Z,38µm,22.0s
F64A Sherman 131.02 14 IAMs_20 IAMs_20 17 38 33.5
comp=Z,32µm,20.0s
G62A West of Eustis 131.07 16 IAMs_20 IAMs_20 17 41 28.9
comp=Z,27µm,22.0s
N53A Lisbon 131.11 27 IAMs_20 IAMs_20 17 32 18.5
comp=Z,39µm,22.0s
Q51A Peebles 131.26 31 IAMs_20 IAMs_20 17 42 49.9
comp=Z,34µm,20.0s
K57A Scipio Center 131.33 22 IAMs_20 IAMs_20 17 37 43.1
comp=Z,25µm,20.0s
PMAR Madeira 131.34 318 *e*PKPdf **PKiKP 16 36 52.6 +1.7**
PMAR *e*PP **PP 16 39 08.7 +0.8**
PKME Peaks-Kenny Pk 131.35 15 IAMs_20 IAMs_20 17 41 23.3
comp=Z,35µm,22.0s
FUL Funchal 131.37 318 *e*PKPdf **PKiKP 16 36 52.0 +1.3**
J59A Piesco 131.43 20 IAMs_20 IAMs_20 17 33 24.5
comp=Z,28µm,21.0s
PLAL Pickwick Lake 131.44 38 IAMs_20 IAMs_20 17 42 40.2
comp=Z,37µm,22.0s
PMOZ Porto Moniz, M 131.47 318 PKP **PKiKP 16 36 52.1 +1.0**
PMOZ Porto Moniz, M 131.47 318 *e*PKPdf **PKiKP 16 36 51.4 +0.3**
PMOZ *i* IAMs_20 IAMs_20 17 35 46.5
comp=Z,25µm,22.0s
H62A Milan 131.49 17 IAMs_20 IAMs_20 17 42 31.0
comp=Z,38µm,21.0s
VBMS Vicksburg 131.58 43 IAMs_20 IAMs_20 17 26 59.6
comp=Z,39µm,22.0s
AY03 Cochrane 131.61 163 IAMs_20 IAMs_20 17 37 29.3
comp=Z,30µm,20.0s
V48A Smith Brothers 131.69 37 IAMs_20 IAMs_20 17 43 08.8
comp=Z,32µm,21.0s
G65A Princeton 131.83 13 IAMs_20 IAMs_20 17 36 55.9
comp=Z,39µm,22.0s
Q52A Bidwell 131.86 30 IAMs_20 IAMs_20 17 42 47.6
comp=Z,28µm,21.0s
P53A Whipple 131.88 29 IAMs_20 IAMs_20 17 41 32.2
comp=Z,33µm,22.0s

WVL Waterville 131.91 15 IAMs_20 IAMs_20 17 40 55.0
comp=Z,39µm,22.0s
HNH Hanover 131.94 18 IAMs_20 IAMs_20 17 34 08.0
comp=Z,34µm,22.0s
BINY Binghamton 131.99 22 IAMs_20 IAMs_20 17 37 47.5
comp=Z,30µm,21.0s
I62A Tamworth 132.07 17 IAMs_20 IAMs_20 17 42 24.5
comp=Z,29µm,21.0s
I63A Otisfield 132.13 16 IAMs_20 IAMs_20 17 42 33.0
comp=Z,40µm,22.0s
M57A Sunshine Farm, 132.28 24 PKPdf **PKPdf 16 36 49.3 -1.9**
M57A IAMs_20 IAMs_20 17 43 22.2
comp=Z,33µm,21.0s
EMMW East Machias 132.32 13 IAMs_20 IAMs_20 17 39 10.9
comp=Z,27µm,21.0s
L59A Walton 132.35 21 IAMs_20 IAMs_20 17 34 28.0
comp=Z,32µm,22.0s
X48A Hartselle 132.42 38 IAMs_20 IAMs_20 17 44 32.3
comp=Z,35µm,21.0s
Q54A Coxs Mills 132.55 29 IAMs_20 IAMs_20 17 33 20.7
comp=Z,30µm,22.0s
SSPA Standing Stone 132.55 25 PKPpre 16 36 40.1
346A Big Creek Wild 132.80 43 IAMs_20 IAMs_20 17 41 44.7
comp=Z,29µm,20.0s
K62A Royalston 132.90 19 IAMs_20 IAMs_20 17 33 41.3
comp=Z,36µm,22.0s
W50A Signal Mountai 132.95 36 IAMs_20 IAMs_20 17 42 24.2
comp=Z,30µm,22.0s
CMLA Cha da Macela 133.00 329 IAMs_20 IAMs_20 17 39 08.6
comp=Z,28µm,20.0s
HRV Adam Dziewonsk 133.25 18 PKPpre 16 36 41.0
HRV Adam Dziewonsk 133.25 18 IAMs_20 IAMs_20 17 36 42.7
comp=Z,31µm,22.0s
HRV Adam Dziewonsk 133.25 18 PKHKP PKPpre 16 36 41.1
HRV MLR MLR
comp=Z,31µm,22.0s
COYC Coyhaique 133.28 162 PKPdf **PKPdf 16 36 51.0 -2.0**
COYC Coyhaique 133.28 162 IAMs_20 IAMs_20 17 31 14.4
comp=Z,34µm,21.0s
Q56A Snyder Ridge, 133.28 27 IAMs_20 IAMs_20 17 40 17.0
comp=Z,30µm,22.0s
LRAL Lakeview Retre 133.39 39 IAMs_20 IAMs_20 17 41 44.9
comp=Z,30µm,20.0s
R55A Marlinton 133.44 29 IAMs_20 IAMs_20 17 34 01.4
comp=Z,34µm,22.0s
BCX Boston College 133.53 18 IAMs_20 IAMs_20 17 44 02.0
comp=Z,24µm,21.0s
X51A Calhoun 133.66 36 IAMs_20 IAMs_20 17 43 33.0
comp=Z,28µm,21.0s
L64A Middleborough 133.99 18 IAMs_20 IAMs_20 17 45 29.3
comp=Z,26µm,21.0s
N62A Caumsett State 134.02 21 IAMs_20 IAMs_20 17 37 07.2
comp=Z,30µm,22.0s
H07N1 FLORES T-PHASE 134.03 336 PKP **PKiKP 16 36 55.9 -0.1**
SNR=24
V53A Saluda 134.04 33 IAMs_20 IAMs_20 17 44 06.7
comp=Z,32µm,21.0s
M63A Gales Ferry 134.09 19 IAMs_20 IAMs_20 17 36 14.9
comp=Z,34µm,21.0s
AY01 Puyuhuapi 134.13 161 IAMs_20 IAMs_20 17 32 01.0
comp=Z,29µm,21.0s
BLA Blacksburg 134.13 30 IAMs_20 IAMs_20 17 36 57.8
comp=Z,37µm,21.0s
H07S1 FLORES T-PHASE 134.33 336 PKP **PKPdf 16 36 55.1 -0.1**
M65A Busby, Falmout 134.39 18 IAMs_20 IAMs_20 17 48 49.9
comp=Z,29µm,20.0s
M65A Busby, Falmout 134.39 18 PKiKP **PKiKP 16 36 56.3 -0.3**
baz=336
S57A Dark Hollow, R 134.41 28 IAMs_20 IAMs_20 17 40 31.1
comp=Z,30µm,21.0s
P61A Hammonton 134.62 23 IAMs_20 IAMs_20 17 35 37.3
comp=Z,38µm,22.0s
R58B Mineral 134.75 27 IAMs_20 IAMs_20 17 43 39.9
comp=Z,36µm,21.0s
T57A Hurt 134.88 29 IAMs_20 IAMs_20 17 38 50.5
comp=Z,31µm,21.0s
152A Waverly Hall 135.06 38 IAMs_20 IAMs_20 17 38 12.0
comp=Z,35µm,22.0s
LL07 Hotel Espejo d 135.25 159 IAMs_20 IAMs_20 17 32 08.8
comp=Z,31µm,21.0s
GOGA Godfrey 135.29 36 IAMs_20 IAMs_20 17 44 06.2
comp=Z,36µm,21.0s
LL02 Futaleuf 135.49 161 IAMs_20 IAMs_20 17 31 09.0
comp=Z,34µm,21.0s
R61A Willards 135.55 24 IAMs_20 IAMs_20 17 34 26.9
comp=Z,37µm,22.0s
LL05 Los Muermos 136.50 158 IAMs_20 IAMs_20 17 33 12.9
comp=Z,22µm,21.0s
TIGA Tifton 136.59 38 IAMs_20 IAMs_20 17 46 32.8
comp=Z,31µm,21.0s
V61A Roper 137.12 28 **PKPdf 16 36 57.3 -3.1**
Y60A Bolivia 137.76 31 IAMs_20 IAMs_20 17 43 34.8
comp=Z,28µm,22.0s
456A Hilliard 138.06 38 IAMs_20 IAMs_20 17 40 29.4
comp=Z,35µm,22.0s
LR05 Currie 138.07 159 PKPpre 16 36 51.8
PLCA Paso Flores 138.12 161 PKhKP PKPpre 16 36 48.7
comp=Z,34nm,1.0s,baz=197,slow=4.9,SNR=29
PLCA PKP **PKPdf 16 37 02.1 -0.1**
comp=Z,166nm,1.1s,baz=214,slow=4.1,SNR=18
PLCA PP **PP 16 39 50.3 +0.4**
comp=Z,9.5nm,0.9s,baz=171,slow=3.8,SNR=1.3
PLCA SKP **SKPbc 16 40 34.6 +2.0**
comp=Z,26nm,0.9s,baz=197,slow=8.2,SNR=2.9
PLCA Paso Flores 138.12 161 PKP PKPpre 16 36 52.3
TEIG Tepich 139.76 56 **PKPdf 16 37 02.0 -3.7**
TEIG IAMs_20 IAMs_20 17 30 40.7
comp=Z,35µm,22.0s
BBTS Babate 139.86 295 PKhKP PKPpre 16 36 57.0
BBTS PP **PP 16 40 03.8 +1.5**
comp=Z,145nm,0.8s,baz=170,slow=23,SNR=7.4
H03S2 Juan Fernandez 140.13 146 PKP **PKPdf 16 37 04.9 -0.8**
baz=337,slow=9.8,SNR=22
H03S1 Juan Fernandez 140.14 146 PKP **PKPdf 16 37 05.3 -0.4**
baz=337,slow=9.8,SNR=18
H03S3 Juan Fernandez 140.15 146 PKP **PKPdf 16 37 06.1 +0.3**
baz=337,slow=9.8,SNR=18
DWPF Disney Wildern 140.24 40 **PKPdf 16 37 02.9 -3.5**
DWPF Disney Wildern 140.24 40 IAMs_20 IAMs_20 17 37 14.4
comp=Z,31µm,21.0s
DWPF Disney Wildern 140.24 40 *eP* PKPpre 16 36 57.2
MBO M'Bour 140.33 295 PKPpre 16 37 02.6
ASCN Ascension 140.34 260 PKPpre 16 37 01.6
H03N3 Juan Fernandez 140.42 146 PKhKP PKPpre 16 37 02.6
baz=164,slow=17,SNR=19
H03N2 Juan Fernandez 140.43 146 PKhKP PKPpre 16 37 02.2
baz=164,slow=17,SNR=21
H03N1 Juan Fernandez 140.44 146 PKhKP PKPpre 16 37 02.3
baz=164,slow=17,SNR=20
H10N1 ASCENSION HYDR 140.47 260 PKP **PKPdf 16 37 00.6 -6.2**
baz=122,slow=3.9,SNR=9.5
H10N2 ASCENSION HYDR 140.48 260 PKP **PKPdf 16 37 05.8 -1.0**
baz=122,slow=3.9,SNR=6.5
H10S2 ASCENSION HYDR 140.48 258 PKP **PKPdf 16 37 06.6 -0.3**
baz=204,slow=74,SNR=4.8
H10N3 ASCENSION HYDR 140.49 260 PKP **PKPdf 16 37 06.8 -0.1**
baz=122,slow=3.9,SNR=7.2
H10S3 ASCENSION HYDR 140.50 258 PKP **PKPdf 16 37 07.4 +0.5**
baz=16,slow=74,SNR=4.1
BI05 Punta Hualpn 140.62 155 IAMs_20 IAMs_20 17 33 03.1
comp=Z,26µm,22.0s
BI02 San Fabin de 141.47 157 IAMs_20 IAMs_20 17 33 28.5
comp=Z,25µm,22.0s
060A Indiantown 141.66 40 IAMs_20 IAMs_20 17 41 57.2
comp=Z,31µm,22.0s
ML02 Panimavida 142.19 156 PKPpre 16 37 05.5
SOR Soroa 142.54 48 *eP* PKPpre 16 37 06.9
TRQA Tornquist 142.89 169 **PKPdf 16 37 07.5 -3.4**
TRQA IAMs_20 IAMs_20 17 43 21.7
comp=Z,35µm,22.0s
TRQA Tornquist 142.89 169 PKIKP **PKPdf 16 37 07.5 -3.4**
TRQA MLR MLR
comp=Z,35µm,22.0s
TRQA Tornquist 142.89 169 PKP PKPpre 16 37 05.6
TGUH Tegucigalpa,Un 143.27 64 IAMs_20 IAMs_20 17 31 53.6
comp=Z,26µm,22.0s
BO02 Sierra Bellavi 143.29 156 IAMs_20 IAMs_20 17 41 37.9
comp=Z,21µm,22.0s
CAMR Camarioca 143.57 46 *eP* PKPab 16 37 08.6 -0.3
MT01 Popeta 143.90 155 IAMs_20 IAMs_20 17 43 07.0
comp=Z,21µm,22.0s
CRIN San Cristobal 143.97 66 *eP* PKPbc 16 37 11.1 -0.2
BO04 La Punta 144.06 156 IAMs_20 IAMs_20 17 41 09.2
comp=Z,22µm,21.0s
LMEL Las Melosas 144.35 156 IAMs_20 IAMs_20 17 42 55.8
comp=Z,31µm,21.0s
CNGN Cerro Negro 144.36 66 *eP* **PKPab 16 37 12.1 -0.1**

MT05 Renca 144.52 155 PKPbc 16 37 12.5 -0.1
COPN Copaltepe 144.57 66 *eP* **PKPab 16 37 13.0 +0.1**
BBSR BB Station 144.67 16 IAMs_20 IAMs_20 17 47 07.9
comp=Z,29µm,21.0s
MGAN Managua 144.89 66 *eP* **PKPdf 16 37 14.9 0.0**
VA03 San Esteban 145.14 155 IAMs_20 IAMs_20 17 45 40.9
comp=Z,22µm,21.0s
JAPN Al SSO del Vol 145.63 67 *eP* **PKPab 16 37 18.1 +1.3**
CARN Rivas 145.89 67 *eP* **PKPbc 16 37 17.1 -0.2**
SACV Santiago Islan 146.02 300 IAMs_20 IAMs_20 17 46 30.9
comp=Z,28µm,22.0s
ELI1 Hacienda Flor 146.04 68 *eP* **PKPab 16 37 19.7 +1.3**
ALIBA Liberia Airpor 146.06 68 *eP* **PKPab 16 37 19.5 +1.0**
SAJU San Juanillo, 146.08 69 *eP* **PKPab 16 37 18.3 -0.2**
DELF Filadelfia 146.10 69 *eP* **PKPdf 16 37 17.4 +0.4**
LAPC Finca la Perla 146.11 68 *eP* **PKPdf 16 37 16.4 -0.7**
VRLE La Escondida, 146.17 68 *eP* **PKPdf 16 37 17.6 +0.3**
BUAI Buenos Aires 146.17 68 *eP* **PKPbc 16 37 17.8 -0.4**
GPS1 Guardaparques 146.19 68 *eP* **PKPbc 16 37 17.9 -0.4**
JUD3 Juan Diaz 3 146.21 69 *eP* **PKPab 16 37 19.0 -0.1**
CO02 Combarbal 146.27 153 IAMs_20 IAMs_20 17 44 21.9
comp=Z,26µm,22.0s
NICO Nicoya 146.30 69 *eP* **PKPbc 16 37 18.3 -0.3**
ELVJ El Viejo (Barb 146.32 69 *eP* **PKiKP 16 37 24.7 +3.0**
PLVR Palo Verde 146.32 69 *eP* **PKPbc 16 37 18.5 -0.4**
INDI Punta indio, G 146.34 70 *eP* **PKPbc 16 37 19.1 +0.4**
MESS Mesas 146.34 68 *eP* **PKPdf 16 37 17.1 -0.4**
CMARA Lajas Hojancha 146.36 69 *eP* **PKPbc 16 37 18.3 -0.6**
HORNC Hornillas 146.37 68 *eP* **PKPdf 16 37 18.0 +0.4**
VMAR Armenia, Volca 146.39 68 *eP* **PKPdf 16 37 17.4 -0.2**
CUI Cuipilapa 146.40 68 *eP* **PKPdf 16 37 17.8 +0.2**
CO06 Fray Jorge 146.41 151 IAMs_20 IAMs_20 17 39 54.8
comp=Z,24µm,22.0s
MOTZ Rio Naranjo 146.47 68 *eP* **PKPdf 16 37 18.0 +0.2**
NYURE Nandayure 146.53 69 *eP* **PKPbc 16 37 19.6 +0.3**
CNAS Canas 146.54 68 *eP* **PKPab 16 37 21.0 +0.6**
INVE Universidad In 146.55 68 *eP* **PKPbc 16 37 19.9 +0.5**
TENO El Achiote 146.56 68 *eP* **PKPdf 16 37 17.6 -0.3**
TIMP Tierras Morena 146.56 68 *eP* **PKPdf 16 37 18.1 +0.2**
TILA Tilaran 146.64 68 *i P* **PKPbc 16 37 20.1 +0.4**
ESPN Las Esperanzas 146.65 65 *eP* **PKPdf 16 37 18.5 +0.6**
QUEB Quebradon, Cot 146.66 68 *eP* **PKPbc 16 37 19.2 -0.5**
JCR1 Jicaral 146.71 69 *eP* **PKPbc 16 37 19.4 -0.5**
CHIK Chiripa 146.71 68 *eP* **PKPab 16 37 20.8 -0.4**
JUNT Juntas 146.71 69 *eP* **PKPbc 16 37 19.4 -0.4**
JTS Las Juntas de 146.71 69 PKPbc **PKPdf 16 37 18.7 +0.6**
comp=Z,140nm,0.8s,baz=314,slow=2.9,SNR=47
JTS PP **PP 16 40 43.9 +0.1**
comp=Z,25nm,1.1s,baz=338,slow=14,SNR=1.4
JTS Las Juntas de 146.71 69 **PKPdf 16 37 15.6 -2.6**
JTS Las Juntas de 146.71 69 *eP* **PKPdf 16 37 18.3 +0.2**
CO03 El Pedregal 146.72 153 IAMs_20 IAMs_20 17 40 25.8
comp=Z,25µm,22.0s
BILN Bilwi Airport 146.73 61 *eP* **PKPbc 16 37 19.6 -0.2**
CBL1 Cabuya 146.81 70 *eP* **PKPab 16 37 21.1 -0.2**
TABAC Tabacon 146.82 68 *eP* **PKPdf 16 37 18.8 +0.5**
MTEVE Monteverde 146.82 68 *eP* **PKPbc 16 37 20.3 0.0**
CASO Castillo 146.87 68 *eP* **PKPbc 16 37 20.7 +0.4**
ARE1 Arenal 1 146.88 68 *eP* **PKPdf 16 37 18.1 -0.3**
VARE2 V. Arenal 146.88 68 *eP* **PKPdf 16 37 18.1 -0.3**
PAQE Paquera 146.88 69 *eP* **PKPab 16 37 21.1 -0.5**
CEDE Laguna Cedeo 146.88 68 *eP* **PKPdf 16 37 18.8 +0.4**
VACR Volcan Arenal 146.91 68 *eP* **PKPbc 16 37 20.6 +0.2**
FORC Fortuna 146.92 68 *eP* **PKPbc 16 37 21.0 +0.6**
ROBF Roble, Puntare 147.01 69 *eP* **PKPbc 16 37 20.8 +0.1**
ARZA Esparza 147.08 69 *eP* **PKPbc 16 37 21.7 +0.8**
CFA Coronel Fontan 147.10 157 PKPbc **PKPbc 16 37 19.5 -1.0**
comp=Z,212nm,0.7s,baz=235,slow=2.1,SNR=168
QUEU Ciudad Quesada 147.19 68 *eP* **PKPbc 16 37 21.1 -0.1**
SRA1 San Ramn 147.22 69 *eP* **PKPbc 16 37 21.7 +0.3**
CO05 La Serena 147.23 151 IAMs_20 IAMs_20 17 35 03.4
comp=Z,26µm,21.0s
RAMO San Ramon 147.23 69 *eP* **PKPbc 16 37 21.7 +0.2**
OROT Orotina 147.23 69 *eP* **PKPbc 16 37 21.3 0.0**
VPL2 V. Platanar 147.24 68 *eP* **PKPbc 16 37 21.5 0.0**
VPL1 V. Platanar 147.27 68 *eP* **PKPbc 16 37 21.5 -0.2**
PALD Palmares 147.27 69 *eP* **PKPbc 16 37 22.2 +0.7**
CCCC Cccc 147.33 45 *eP* **PKPdf 16 37 18.9 -0.1**
ATEO Atenas 147.35 69 *eP* **PKPbc 16 37 22.2 +0.5**
ARTO Ro Cuarto 147.38 68 *eP* **PKPbc 16 37 21.5 -0.2**
TCS1 Tacares 147.40 69 *eP* **PKPbc 16 37 22.4 +0.5**
VPS8 V Poas 147.41 68 *eP* **PKPdf 16 37 20.1 +0.4**
VPS5 V. Poas 147.42 68 *eP* **PKPbc 16 37 21.1 -1.1**
PURI Puriscal 147.46 69 *eP* **PKPbc 16 37 23.1 +1.0**
BELE Belen 147.53 69 *eP* **PKPbc 16 37 21.0 -1.3**
SANTA Santa Ana 147.54 69 *eP* **PKPbc 16 37 22.4 +0.1**
HEME Heredia, Merce 147.57 69 *eP* **PKPbc 16 37 23.2 +0.9**
HDC Heredia 147.59 69 *eP* **PKPdf 16 37 20.4 +0.7**
HDC Heredia 147.59 69 *eP* **PKPdf 16 37 15.8 -3.9**
ACOS Acosta 147.61 69 *eP* **PKiKP 16 37 24.6 +0.1**
DOMI Santo Domingo 147.62 69 *eP* **PKPbc 16 37 22.9 +0.4**
PICV PH. Pirrs 147.63 69 *eP* **PKPbc 16 37 21.8 -0.6**
CENT San Jose 147.64 69 *eP* **PKiKP 16 37 24.3 -0.3**
LUJA Lujan 147.65 69 *eP* **PKPbc 16 37 22.5 -0.1**
LUPE Guadalupe 147.66 69 *eP* **PKPbc 16 37 22.4 -0.3**
ECI Escuela Centro 147.67 69 *eP* **PKPbc 16 37 21.5 -1.2**
SJS3 Mercedes San J 147.67 69 *eP* **PKPbc 16 37 22.9 +0.2**
AMPA Desamparados 147.67 69 *eP* **PKPbc 16 37 23.4 +0.8**
TRIO Tres Rios 147.73 69 *eP* **PKPbc 16 37 22.4 -0.5**
CVIMO Finca Echandi 147.74 68 *eP* **PKPdf 16 37 21.0 +0.9**
LLNJ Naranjito 147.77 70 *eP* **PKPbc 16 37 23.6 +0.9**
PITB Pirrs, San 147.78 69 *eP* **PKPbc 16 37 24.5 -0.5**
RAZU San Marcos de 147.78 69 *eP* **PKPbc 16 37 23.8 +0.8**
CORNA Casa Canada 147.79 64 *eP* **PKPdf 16 37 19.0 -0.8**
TAGO Cartago 147.81 69 *eP* **PKPbc 16 37 23.8 +0.7**
CARI Cariari 147.82 68 *eP* **PKPbc 16 37 22.4 -0.5**
PILE Guapiles 147.82 68 *eP* **PKPdf 16 37 20.9 +1.0**
VICA Volcano Irazu 147.84 68 *eP* **PKPdf 16 37 21.5 +1.0**
PIEC Cerro El Cedra 147.86 69 *eP* **PKPdf 16 37 21.8 +1.5**
CVTG V. Turrialba, 147.86 68 *eP* **PKiKP 16 37 24.1 -0.8**
REPA Paraso 147.87 69 *eP* **PKPbc 16 37 22.4 -0.9**
PCAYA Pacayas 147.90 69 *eP* **PKPbc 16 37 23.8 +0.4**
VTUN Crater Central 147.91 68 *eP* **PKPdf 16 37 21.6 +1.0**
CVTQ Turrialba Volc 147.91 68 *eP* **PKPdf 16 37 21.9 +1.4**
CVTR Volcan Turrial 147.91 68 *eP* **PKPdf 16 37 22.0 +1.4**
VTR0 Volcan Turrial 147.91 68 *eP* **PKPdf 16 37 21.7 +1.0**
CVTV Tajo 147.93 68 *eP* **PKPdf 16 37 21.3 +0.8**
ABRB Las Abras (San 147.96 68 *eP* **PKPdf 16 37 21.8 +1.4**
VINA Juan Vinas 147.97 69 *eP* **PKiKP 16 37 25.5 +0.2**
VERB Verbena 148.00 68 *eP* **PKPbc 16 37 22.2 -1.4**
EGUB Earth Gu¡pi 148.01 68 *eP* **PKPdf 16 37 21.7 +1.5**
RESJ San Isidro (Tu 148.02 68 *eP* **PKPbc 16 37 22.1 -1.4**
TURIB Turrialba 148.02 69 *eP* **PKPbc 16 37 22.4 -1.1**
RVLA Villa Bonita 148.04 68 *eP* **PKPdf 16 37 21.8 +1.6**
BUS1 Rivas 148.07 69 *eP* **PKPdf 16 37 21.5 +0.6**
LCOCO El Coco 148.08 68 *eP* **PKPdf 16 37 21.5 +1.1**
IRES Siquirres 148.12 68 *eP* **PKPdf 16 37 20.8 +0.4**
LCO Las Campanas 148.24 151 **PKPdf 16 37 21.4 +0.8**
LCO Las Campanas 148.24 151 IAMs_20 IAMs_20 17 35 18.3
comp=Z,21µm,22.0s
LCO Las Campanas 148.24 151 PKIKP **PKPdf 16 37 21.4 +0.8**
LCO MLR MLR
comp=Z,21µm,22.0s
EDPE Pejibaye, P 148.36 70 *eP* **PKPdf 16 37 22.2 +1.3**
SAJE San Jernim 148.36 69 *eP* **PKPbc 16 37 23.1 -1.5**
VERH Veragua Rainfo 148.47 68 *eP* **PKPdf 16 37 21.3 +0.3**
PANP Palmar Norte 148.53 70 *eP* **PKPbc 16 37 23.4 -1.3**
AC05 El Transito 148.59 151 IAMs_20 IAMs_20 17 33 54.5
comp=Z,23µm,22.0s
LMGC Las Mercedes 148.61 46 *eP* **PKPdf 16 37 21.4 +0.3**
FIMO Fila Mora 148.62 70 *eP* **PKPdf 16 37 23.2 +1.8**
DRK0 Durika 148.64 69 *eP* **PKPdf 16 37 22.7 +1.2**
LAES El Progreso Va 148.66 68 *eP* **PKPdf 16 37 22.4 +1.1**
AC04 Llanos de Chal 148.72 149 IAMs_20 IAMs_20 17 40 17.0
comp=Z,32µm,22.0s
HLGC Holguin 148.72 43 *eP* **PKPdf 16 37 22.4 +1.1**
EDP2 Potrero Grande 148.73 70 *eP* **PKPbc 16 37 24.4 -1.0**
JIME Puerto Jimenez 148.78 71 *eP* **PKPbc 16 37 25.2 -0.2**
CEUA Cerro Uatsi, L 148.81 69 *eP* **PKPdf 16 37 23.1 +1.4**
PIRO Carate, Puerto 148.81 71 *eP* **PKPdf 16 37 23.1 +1.6**
YAR Yar 148.86 44 *eP* **PKPdf 16 37 23.3 +1.8**
EDAD Golfito 148.90 70 *eP* **PKPbc 16 37 24.3 -1.5**
FITO Golfito 148.92 71 *eP* **PKPdf 16 37 23.2 +1.5**
BRIBI Bribri 148.92 68 *eP* **PKPdf 16 37 23.2 +1.5**
CHIV Chivirico 149.08 45 *eP* **PKPdf 16 37 22.6 +0.8**
NELY Ciudad Neily 149.11 70 *eP* **PKPdf 16 37 24.1 +2.1**
ALCO Alturas Coton, 149.12 70 *eP* **PKPdf 16 37 23.8 +1.5**
RGM0 Gandoca 149.12 68 *eP* **PKPdf 16 37 23.2 +1.2**
PINC Pinares de May 149.18 44 *eP* **PKPdf 16 37 22.9 +1.0**
SCLRA Santa Clara, W 149.21 70 *eP* **PKPdf 16 37 24.1 +1.7**
DMCAL E. de Neily 149.25 70 *eP* **PKPdf 16 37 23.5 +1.1**

BRU2 Volcan 149.30 70 *eP* **PKPdf 16 37 23.4 +0.9**
LMNES Limones 149.35 71 *eP* **PKPdf 16 37 24.1 +1.7**
MTDJ Mount Denham 149.37 49 *i P* **PKPdf 16 37 24.0 +1.5**
MTDJ Mount Denham 149.37 49 *eP* **PKPdf 16 37 23.2 +0.7**
MARVS Santiago de Cu 149.43 44 *eP* **PKPdf 16 37 23.1 +0.7**
JEFFS S de V. Baru 149.49 70 *eP* **PKPdf 16 37 23.9 +1.2**
BQTLY Boquete Panama 149.53 70 *eP* **PKPdf 16 37 24.2 +1.3**
WILLF Boquete 149.56 70 *eP* **PKPdf 16 37 24.1 +1.2**
DAP26 falda E V. Bar 149.56 70 *eP* **PKPdf 16 37 22.9 0.0**
RCC Rio Carpintero 149.58 44 *eP* **PKPdf 16 37 23.4 +0.8**
MOAC Moa 149.63 42 *eP* **PKPdf 16 37 24.0 +1.4**
GO03 Copiapo 149.64 150 IAMs_20 IAMs_20 17 39 43.4
comp=Z,22µm,21.0s
PBNVO Pueblo Nuevo, 149.74 69 *eP* **PKPdf 16 37 23.6 +0.6**
RBALA Bur 149.78 69 *eP* **PKPdf 16 37 22.9 -0.2**
PLTB Pedras Altas 149.96 180 PKP **PKPdf 16 37 24.6 +1.6**
PLTB Pedras Altas 149.96 180 *eP* **PKPdf 16 37 18.4 -4.6**
STH Stony Hill 150.00 48 *i P* **PKPbc 16 37 26.5 -1.8**
GTBY Guantanamo Bay 150.03 43 IAMs_20 IAMs_20 17 42 00.2
comp=Z,23µm,21.0s
GTBY Guantanamo Bay 150.03 43 *eP* **PKPdf 16 37 24.3 +0.9**
QMBU Quimbuelo 150.04 43 *eP* **PKPdf 16 37 24.2 +0.8**
GWJ Greenwich 150.07 48 *i P* **PKPbc 16 37 28.5 -0.1**
KKNTU Kakint² 150.12 69 *eP* **PKPdf 16 37 23.8 +0.1**
PDCAN Manzana , Fuen 150.39 70 *eP* **PKPdf 16 37 26.6 +2.4**
PSAL Palomas, Salto 150.41 173 *eP* **PKPdf 16 37 19.2 -4.4**
MASC Masc 150.45 42 *eP* **PKPdf 16 37 25.4 +1.4**
AC02 Maricunga 150.82 151 IAMs_20 IAMs_20 17 41 47.5
comp=Z,27µm,22.0s
GMAL Guarumal, Vera 150.99 71 *eP* **PKPdf 16 37 25.3 +0.3**
CPSB Cacapava Do Su 151.31 180 PKP **PKPdf 16 37 26.8 +1.8**
CPSB Cacapava Do Su 151.31 180 *eP* **PKPdf 16 37 20.4 -4.6**
GRTK Grand Turk 151.41 36 IAMs_20 IAMs_20 17 52 51.9
comp=Z,31µm,22.0s
GRTK Grand Turk 151.41 36 *eP* **PKPdf 16 37 26.6 +1.1**
BCIP Isla Barro Col 151.84 67 *eP* **PKPdf 16 37 26.4 +0.1**
ZANG Zanguenga, Cho 151.88 68 *eP* **PKPdf 16 37 25.2 -1.2**
AZU Azuero 151.89 70 *eP* **PKPdf 16 37 26.5 +0.1**
PB14 IPOC Station P 151.94 146 PKP **PKPdf 16 37 27.7 +1.1**
GO02 Mina Guanaco 151.96 148 IAMs_20 IAMs_20 17 45 07.9
comp=Z,24µm,22.0s
CAZU Cerro Azul, Pa 152.21 67 *eP* **PKPdf 16 37 27.1 +0.1**
CNLB Canela 152.27 185 PKP **PKPdf 16 37 27.9 +1.2**
CNLB Canela 152.27 185 *eP* **PKPdf 16 37 22.3 -4.4**
PB10 IPOC Station P 152.72 144 IAMs_20 IAMs_20 17 43 57.6
comp=Z,26µm,21.0s
SDDR Presa de Saban 153.23 39 *eP* **PKPdf 16 37 26.2 -2.0**
SDDR Presa de Saban 153.23 39 *eP* **PKPdf 16 37 28.8 +0.5**
PB06 IPOC Station P 153.92 145 IAMs_20 IAMs_20 17 36 30.1
comp=Z,26µm,21.0s
ITAB Concordia 154.43 183 PKP **PKPdf 16 37 30.8 +1.1**
ITAB Concordia 154.43 183 *eP* **PKPdf 16 37 25.4 -4.3**
TUMC Tumaco 154.72 82 **PKPdf 16 37 33.2 +2.7**
ATAH Atahualpa 154.75 103 PKP **PKPdf 16 37 32.7 +1.6**
comp=Z,223nm,1.2s,baz=301,slow=1.2,SNR=48
PB02 IPOC Station P 154.79 142 IAMs_20 IAMs_20 17 44 35.4
comp=Z,28µm,22.0s
NNA Nana 154.80 115 PKP **PKPdf 16 37 31.9 +1.3**
comp=Z,294nm,1.2s,baz=297,slow=2.8,SNR=22
NNA Nana 154.80 115 **PKPdf 16 37 30.8 +0.2**
NNA Nana 154.80 115 PKiKP **PKPdf 16 37 30.8 +0.2**
CPUP Villa Florida 155.13 172 PKP **PKPdf 16 37 32.0 +1.3**
comp=Z,52nm,1.1s,baz=339,slow=0.7,SNR=44
CPUP PKPab **PKPab 16 37 55.8 +0.6**
comp=Z,104nm,1.0s,baz=69,slow=3.2,SNR=9.1
CPUP PP **PP 16 41 30.4 +0.6**
comp=Z,6.3nm,0.8s,baz=345,slow=15,SNR=1.3
CPUP Villa Florida 155.13 172 PKP **PKPdf 16 37 31.5 +0.8**
OTAV Otavalo 155.16 86 PKP **PKPdf 16 37 32.6 +0.9**
OTAV Otavalo 155.16 86 *eP* **PKPdf 16 37 26.5 -5.2**
SLOR San Lorenzo - 155.17 88 **PKPdf 16 37 33.2 +1.5**
TA01 Diego Aracena 155.17 141 IAMs_20 IAMs_20 17 37 57.7
comp=Z,18µm,22.0s
PB01 IPOC Station P 155.24 143 IAMs_20 IAMs_20 17 38 43.5
comp=Z,22µm,22.0s
TIJ01 Guaruva-PR 155.95 190 PKP **PKPdf 16 37 32.6 +0.6**
PB08 IPOC Station P 156.13 142 PKP **PKPdf 16 37 33.7 +1.1**
GO01 Chusmiza 156.45 141 IAMs_20 IAMs_20 17 44 26.7
comp=Z,20µm,21.0s
PB12 IPOC Station P 156.47 137 IAMs_20 IAMs_20 17 36 37.4
comp=Z,23µm,22.0s
PET01 Itanhaem-SP 156.57 195 PKP **PKPdf 16 37 33.7 +1.0**
PET01 Itanhaem-SP 156.57 195 *eP* **PKPdf 16 37 31.6 -1.1**
AP01 Chacalluta 156.62 137 IAMs_20 IAMs_20 17 37 37.6
comp=Z,23µm,22.0s
CAM01 Campos-RJ 156.71 209 PKP **PKPdf 16 37 34.1 +1.2**
CAM01 Campos-RJ 156.71 209 *eP* **PKPdf 16 37 28.6 -4.3**
DUB01 Friburgo-RJ 156.83 208 PKP **PKPdf 16 37 34.8 +1.6**
DUB01 Friburgo-RJ 156.83 208 *eP* **PKPdf 16 37 29.0 -4.1**
SJG San Juan 156.91 32 PKP **PKPdf 16 37 33.1 -0.1**
comp=Z,125nm,0.7s,baz=336,slow=1.8,SNR=18
SJG PKPab **PKPab 16 38 03.9 +0.8**
comp=Z,165nm,0.8s,baz=331,slow=7.2,SNR=4.6
SJG PP **PP 16 41 42.1 +1.7**
comp=Z,28nm,0.2s,baz=354,slow=9.4,SNR=5.8
SJG San Juan 156.91 32 **PKPdf 16 37 33.4 +0.2**
SJG **PKPab 16 38 02.4 -0.7**
SJG San Juan 156.91 32 IAMs_20 IAMs_20 18 00 30.2
comp=Z,25µm,22.0s
SJG San Juan 156.91 32 *eP* **PKPdf 16 37 31.6 -1.6**
PTGB Pitanga 156.93 184 PKP **PKPdf 16 37 34.7 +1.4**
PTGB Pitanga 156.93 184 *eP* **PKPdf 16 37 32.2 -1.0**
PARB Paraibuna 156.99 199 PKP **PKPdf 16 37 34.9 +1.5**
PARB Paraibuna 156.99 199 *eP* **PKPdf 16 37 28.5 -4.8**
VAS01 Vassouras-RJ 157.13 205 PKP **PKPdf 16 37 34.7 +1.2**
VAS01 Vassouras-RJ 157.13 205 *eP* **PKPdf 16 37 29.7 -3.8**
SIM2 UHE Simplicio 157.17 207 PKP **PKPdf 16 37 34.2 +0.7**
SPB Sao Paulo 157.28 195 *eP* **PKPdf 16 37 29.6 -4.0**
VAO Valinhos 157.72 196 *eP* **PKPdf 16 37 29.5 -4.8**
VABB Valinhos 157.72 196 PKP **PKPdf 16 37 34.8 +0.5**
PB18 Visviri 157.75 137 IAMs_20 IAMs_20 17 37 58.6
comp=Z,20µm,22.0s
FRTB Fartura 157.99 190 PKP **PKPdf 16 37 35.9 +1.4**
FRTB Fartura 157.99 190 *eP* **PKPdf 16 37 33.2 -1.3**
ABR01 Abrolhos, BA 158.05 221 PKP **PKPdf 16 37 36.7 +2.1**
ABR01 Abrolhos, BA 158.05 221 *eP* **PKPdf 16 37 33.8 -0.8**
RIB01 Linhares ES 158.09 216 *eP* **PKPdf 16 37 29.7 -5.0**
ROSC El Rosal 158.41 73 PKP **PKPdf 16 37 37.1 +1.3**
comp=Z,232nm,0.8s,baz=303,slow=0.5,SNR=37
ROSC PP **PP 16 41 50.6 -0.2**
comp=Z,12nm,0.4s,baz=115,slow=9.0,SNR=1.6
RCLB Rio Claro- Sao 158.43 196 PKP **PKPdf 16 37 36.2 +1.1**
RCLB PKP **PKPdf 16 37 36.7 +1.6**
AMBA Amambai (Brazi 158.73 177 *eP* **PKPdf 16 37 32.0 -3.4**
SABA Saba 158.73 26 IAMs_20 IAMs_20 18 02 51.9
comp=Z,27µm,22.

DSDZ	**La Diserade, G**	**160.79**	**22**	*eP*		**PKPdf**	**16 37 37.7**	**-0.1**
GDSD	**La Dsirade Is**	**160.79**	**22**			**PKPdf**	**16 37 33.4**	**-4.5**
GDSD				PKPab		**PKPab**	**16 38 17.8**	**-2.1**
H05N1	**Guadeloupe/Mar**	**160.79**	**22**	PKP		**PKPdf**	**16 37 38.4**	**+0.5**
	SNR=34							
H05N1				PKPab		**PKPab**	**16 38 20.8**	**+0.8**
MMLZ	**Guadeloupe Bro**	**160.80**	**24**	*eP*		**PKPdf**	**16 37 37.1**	**-0.8**
NBAN	**Anadia - AL**	**160.92**	**244**	PKP		**PKPdf**	**16 37 38.7**	**+0.6**
NBAN	**Anadia - AL**	**160.92**	**244**	*eP*		**PKPdf**	**16 37 35.5**	**-2.6**
TBG	**Guadaloupe-3**	**160.99**	**24**	*eP*		**PKPdf**	**16 37 37.8**	**-0.2**
BDQN	**Bodoquena, MS**	**160.99**	**171**	*eP*		**PKPdf**	**16 37 35.4**	**-2.6**
NBPV	**Pedro Velho**	**161.04**	**255**	PKP		**PKPdf**	**16 37 39.2**	**+1.0**
AQDB	**Aquidauana**	**161.10**	**174**	PKP		**PKPdf**	**16 37 39.0**	**+0.8**
AQDB	**Aquidauana**	**161.10**	**174**	*eP*		**PKPdf**	**16 37 35.5**	**-2.7**
NBCA	**Caruaru-PE**	**161.21**	**249**	PKP		**PKPdf**	**16 37 39.5**	**+1.0**
DWS	**Wesley**	**161.38**	**24**	*eP*		**PKPdf**	**16 37 38.9**	**+0.4**
DSLB	**Salisbury**	**161.45**	**24**	*eP*		**PKPdf**	**16 37 38.3**	**-0.3**
GDU01	**Guandu, BA**	**161.55**	**228**	*eP*		**PKPdf**	**16 37 35.5**	**-3.3**
DLPL	**La Plaine**	**161.62**	**24**	*eP*		**PKPdf**	**16 37 35.5**	**-3.3**
NBLA	**Lagarto - SE**	**161.66**	**239**	PKP		**PKPdf**	**16 37 39.8**	**+1.0**
ITRB	**Iturama**	**161.68**	**190**	PKP		**PKPdf**	**16 37 39.8**	**+1.0**
ITRB				PKP		**PKPdf**	**16 37 40.2**	**+1.4**
ITRB	**Iturama**	**161.68**	**190**	*eP*		**PKPdf**	**16 37 35.6**	**-3.1**
PMNB	**Patos De Minas**	**161.70**	**202**	PKP		**PKPdf**	**16 37 40.1**	**+1.2**
PMNB	**Patos De Minas**	**161.70**	**202**	*eP*		**PKPdf**	**16 37 34.6**	**-4.3**
RCBR	**Riachuelo**	**161.77**	**256**	PKP		**PKPdf**	**16 37 40.4**	**+1.3**
RCBR	**Riachuelo**	**161.77**	**256**	*eP*		**PKPdf**	**16 37 35.0**	**-4.0**
ANA01	**Lindo Horizont**	**161.86**	**224**	PKP		**PKPdf**	**16 37 39.9**	**+0.8**
JQT1	**Jequitai-MG**	**161.93**	**210**	PKP		**PKPdf**	**16 37 39.4**	**+0.3**
SVN	**Savane Anatole**	**162.09**	**24**	*eP*		**PKPdf**	**16 37 39.0**	**-0.3**
MC01	**Montes Claros**	**162.16**	**212**	PKP		**PKPdf**	**16 37 40.3**	**+0.9**
ILAM	**Ilet Lapin Mar**	**162.27**	**23**	*eP*		**PKPdf**	**16 37 36.6**	**-2.8**
BAUV	**El Baul**	**162.28**	**54**	*eP*		**PKPdf**	**16 37 39.0**	**-0.5**
BIM	**Bigot**	**162.42**	**24**	*eP*		**PKPdf**	**16 37 39.2**	**-0.5**
H05S1	**Guadeloupe/Mar**	**162.60**	**24**	PKP		**PKPdf**	**16 37 39.9**	**+0.2**
H05S1				PKPab		**PKPab**	**16 38 28.6**	**+0.8**
	SNR=40							
SFA1	**Serra Facao**	**162.67**	**199**	PKP		**PKPdf**	**16 37 41.0**	**+1.1**
ITU3	**Corumbazu**	**162.79**	**196**	PKP		**PKPdf**	**16 37 40.3**	**+0.3**
IPMB	**Ipameri, GO**	**162.82**	**198**	PKP		**PKPdf**	**16 37 40.1**	**+0.1**
IPMB	**Ipameri, GO**	**162.82**	**198**	*eP*		**PKPdf**	**16 37 37.7**	**-2.4**
C2SB	**Chapadao do Su**	**162.88**	**183**	PKP		**PKPdf**	**16 37 41.7**	**+1.7**
C2SB	**Chapadao do Su**	**162.88**	**183**	*eP*		**PKPdf**	**16 37 36.1**	**-3.8**
SLBI	**Saint Lucia, B**	**162.91**	**25**	*eP*		**PKPdf**	**16 37 39.9**	**-0.1**
NBPA	**Parau_RN**	**162.96**	**255**	PKP		**PKPdf**	**16 37 41.4**	**+1.2**
SLC	**Saint Lucia, A**	**163.05**	**25**	*eP*		**PKPdf**	**16 37 38.3**	**-1.9**
BAT3	**Ipameri**	**163.15**	**201**	PKP		**PKPdf**	**16 37 41.0**	**+0.7**
BAT2	**UHE Batalha**	**163.16**	**201**	PKP		**PKPdf**	**16 37 41.0**	**+0.7**
MCLT	**Moule a Chique**	**163.20**	**25**	*eP*		**PKPdf**	**16 37 35.7**	**-4.7**
SVB	**Belmont**	**163.45**	**27**	*eP*		**PKPdf**	**16 37 35.6**	**-5.1**
SIV	**San Ignacio**	**163.91**	**153**	PKP		**PKPdf**	**16 37 42.4**	**+1.4**
	comp=Z,47nm,0.7s,baz=215,slow=1.6,SNR=135							
SIV				PKPab		**PKPab**	**16 38 33.8**	**+0.1**
	comp=Z,309nm,1.1s,baz=209,slow=5.9,SNR=16							
SIV				PP		**PP**	**16 42 20.2**	**+2.2**
	comp=Z,7.8nm,0.7s,baz=171,slow=8.8,SNR=1.4							
PP1B	**Ponte de Pedra**	**164.02**	**176**	*eP*		**PKPdf**	**16 37 39.6**	**-1.5**
PCIV	**Puerto La Cruz**	**164.03**	**43**	*eP*		**PKPdf**	**16 37 35.7**	**-5.5**
GCMP	**Grenada, Carri**	**164.06**	**29**	*eP*		**PKPdf**	**16 37 38.2**	**-3.0**
NBMA	**Muriti-CE**	**164.06**	**248**	PKP		**PKPdf**	**16 37 42.3**	**+1.0**
GRSS	**Sisters**	**164.13**	**30**	*eP*		**PKPdf**	**16 37 38.6**	**-2.6**
GRHS	**Sauteurs**	**164.18**	**30**	*eP*		**PKPdf**	**16 37 34.9**	**-6.4**
GRW	**Mount Saint Ca**	**164.22**	**30**	*eP*		**PKPdf**	**16 37 37.7**	**-3.7**
GRGR	**Grenville**	**164.25**	**30**	*eP*		**PKPdf**	**16 37 34.9**	**-6.5**
BBGH	**Gun Hill**	**164.26**	**22**	*eP*		**PKPdf**	**16 37 43.1**	**+1.8**
BDFB	**Brasilia**	**164.94**	**201**	PKP		**PKPdf**	**16 37 41.7**	**-0.3**
	comp=Z,103nm,1.0s,baz=161,slow=1.0,SNR=51							
BDFB				PKPab		**PKPab**	**16 38 39.8**	**+1.6**
	comp=Z,77nm,0.8s,baz=171,slow=4.9,SNR=6.3							
BDFB				PP		**PP**	**16 42 24.1**	**+0.8**
	comp=Z,39nm,1.1s,baz=24,slow=2.2,SNR=2.5							
BDFB	**Brasilia**	**164.94**	**201**	PKP		**PKPdf**	**16 37 43.0**	**+0.9**
PTLB	**Pontes e Lacer**	**165.19**	**159**	PKP		**PKPdf**	**16 37 43.2**	**+1.1**
PTLB	**Pontes e Lacer**	**165.19**	**159**	*eP*		**PKPdf**	**16 37 39.7**	**-2.4**
NBPB	**Pedra_Branca-C**	**165.40**	**254**	PKP		**PKPdf**	**16 37 43.1**	**+0.7**
SALV	**Santo Antonio**	**165.62**	**172**	PKP		**PKPdf**	**16 37 43.4**	**+0.9**
SALV	**Santo Antonio**	**165.62**	**172**	*eP*		**PKPdf**	**16 37 38.4**	**-4.1**
TRN	**Trinidad (W)**	**165.63**	**32**	*eP*		**PKPdf**	**16 37 40.7**	**-1.9**
LABB	**Lıbrea**	**165.79**	**123**	PKP		**PKPdf**	**16 37 43.3**	**+0.6**
LABB				PKP		**PKPdf**	**16 37 43.6**	**+0.9**
ARAG	**Araguaiana, MT**	**165.83**	**187**	*eP*		**PKPdf**	**16 37 40.5**	**-2.2**
SDBA	**SAO DESIDERIO**	**166.16**	**218**	PKP		**PKPdf**	**16 37 43.4**	**+0.4**
SDBA	**SAO DESIDERIO**	**166.16**	**218**	*eP*		**PKPdf**	**16 37 40.9**	**-2.2**
NBMO	**Morrinhos-CE**	**166.27**	**262**	PKP		**PKPdf**	**16 37 42.8**	**-0.3**
NBMO				PKP		**PKPdf**	**16 37 43.7**	**+0.6**
SBBR	**Sobral**	**166.44**	**261**	PKP		**PKPdf**	**16 37 43.6**	**+0.3**
SBBR				PKP		**PKPdf**	**16 37 43.7**	**+0.5**
MA01	**UHE Manso**	**166.59**	**171**	PKP		**PKPdf**	**16 37 44.4**	**+1.1**
SGC2	**Sao Gabriel da**	**166.62**	**84**	PKP		**PKPdf**	**16 37 43.5**	**+0.1**
VILB	**Vilhena**	**166.97**	**151**	PKP		**PKPdf**	**16 37 44.9**	**+1.3**
VILB	**Vilhena**	**166.97**	**151**	*eP*		**PKPdf**	**16 37 39.5**	**-4.2**
NBPS	**Pedro II - PI**	**167.47**	**257**	PKP		**PKPdf**	**16 37 43.7**	**-0.4**
TEFE	**Tefe**	**168.88**	**100**	PKP		**PKPdf**	**16 37 45.5**	**+0.5**
TEFE				PKP		**PKPdf**	**16 37 45.7**	**+0.7**
TEFE	**Tefe**	**168.88**	**100**	*eP*		**PKPdf**	**16 37 43.1**	**-1.9**
SNDB	**Serra Nova Dou**	**169.39**	**193**	PKP		**PKPdf**	**16 37 45.6**	**+0.4**
SNDB				PKP		**PKPdf**	**16 37 45.8**	**+0.6**
SNDB	**Serra Nova Dou**	**169.39**	**193**	*eP*		**PKPdf**	**16 37 42.5**	**-2.8**
PDRB	**Porto dos Gac**	**169.57**	**163**	PKP		**PKPdf**	**16 37 45.7**	**+0.3**
PDRB	**Porto dos Gac**	**169.57**	**163**	*eP*		**PKPdf**	**16 37 43.5**	**-1.9**
LAJE	**UHE Lajeado**	**170.09**	**212**	PKP		**PKPdf**	**16 37 45.7**	**0.0**
CLDB	**Colider**	**170.51**	**167**	PKP		**PKPdf**	**16 37 46.0**	**+0.1**
CLDB	**Colider**	**170.51**	**167**	*eP*		**PKPdf**	**16 37 41.8**	**-4.2**
SMTB	**Santa Maria do**	**170.56**	**220**	PKP		**PKPdf**	**16 37 45.9**	**0.0**
SMTB				PKP		**PKPdf**	**16 37 46.2**	**+0.3**
SMTB	**Santa Maria do**	**170.56**	**220**	*eP*		**PKPdf**	**16 37 43.9**	**-2.1**
PAL2	**UHE Estreito -**	**171.84**	**231**	PKP		**PKPdf**	**16 37 46.7**	**0.0**
PAL2				PKP		**PKPdf**	**16 37 47.2**	**+0.6**
PAL01	**Palmeiras do T**	**172.09**	**230**	PKP		**PKPdf**	**16 37 46.8**	**0.0**
PAL01				PKP		**PKPdf**	**16 37 47.0**	**+0.2**
BOAV	**Boa Vista**	**172.10**	**60**	PKP		**PKPdf**	**16 37 46.8**	**+0.1**
BOAV				PKP		**PKPdf**	**16 37 47.0**	**+0.3**
BOAV	**Boa Vista**	**172.10**	**60**	*eP*		**PKPdf**	**16 37 44.7**	**-2.0**
MACA	**Manacapuru-AM**	**172.82**	**103**	PKP		**PKPdf**	**16 37 46.7**	**-0.3**
MACA				PKP		**PKPdf**	**16 37 47.0**	**0.0**
MACA	**Manacapuru-AM**	**172.82**	**103**	*eP*		**PKPdf**	**16 37 44.7**	**-2.3**
MDP	**Montagnes des**	**173.30**	**351**	PKP		**PKPdf**	**16 37 47.3**	**+0.1**
	comp=Z,406nm,1.3s,baz=340,slow=0.6,SNR=33							
MDP				PKPab		**PKPab**	**16 39 15.3**	**+0.2**
	comp=Z,208nm,0.9s,baz=3.6,slow=5.6,SNR=16							
MDP				PP		**PP**	**16 43 06.6**	**+1.5**
	comp=Z,101nm,1.1s,baz=18,slow=5.6,SNR=13							
PRPB	**Parauapebas**	**174.02**	**220**	PKP		**PKPdf**	**16 37 47.6**	**+0.1**
PRPB				PKP		**PKPdf**	**16 37 47.9**	**+0.3**
PRPB	**Parauapebas**	**174.02**	**220**	*eP*		**PKPdf**	**16 37 45.1**	**-2.4**
NPGB	**Novo Progresso**	**174.30**	**163**	PKP		**PKPdf**	**16 37 47.3**	**-0.3**
NPGB				PKP		**PKPdf**	**16 37 47.9**	**+0.3**
NPGB	**Novo Progresso**	**174.30**	**163**	*eP*		**PKPdf**	**16 37 45.9**	**-1.7**
TMAB	**Tom-Au,PA,Br**	**174.37**	**262**	PKP		**PKPdf**	**16 37 47.9**	**+0.3**
TMAB				PKP		**PKPdf**	**16 37 48.2**	**+0.6**
TMAB	**Tom-Au,PA,Br**	**174.37**	**262**	*eP*		**PKPdf**	**16 37 45.3**	**-2.3**
TUC4	**UHE Tucurui**	**175.08**	**237**	PKP		**PKPdf**	**16 37 47.3**	**-0.6**
TUC4				PKP		**PKPdf**	**16 37 47.7**	**-0.1**
ITTB	**Itaituba**	**176.54**	**144**	PKP		**PKPdf**	**16 37 48.3**	**+0.2**
ITTB				PKP		**PKPdf**	**16 37 48.4**	**+0.2**
ITTB	**Itaituba**	**176.54**	**144**	*eP*		**PKPdf**	**16 37 45.9**	**-2.3**
BMO1	**UHE Belo Monte**	**177.52**	**230**	PKP		**PKPdf**	**16 37 47.4**	**-1.0**
BMO1				PKP		**PKPdf**	**16 37 47.7**	**-0.6**
MAL2	**Monte Alegre,**	**179.32**	**132**	PKP		**PKPdf**	**16 37 48.6**	**0.0**
MAL2				PKP		**PKPdf**	**16 37 48.8**	**+0.3**

*SJA **14** 16:24:06.7±0.7, 22.˚14S×68.˚55W, h135km±5km, ML3.7, MW3.7*
*GUC **14** 16:24:08.7±0.8, 22.˚14S×68.˚56W, h126km±7km, ML3.8*
ISC 14 16:24:07.8±1.3, 22.˚13S±0.˚03×68.˚66W±0.˚05, h137km±9km, n36, σ1°45/57, 9C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.64**	**302**	⇓*iP*	**Pn**	**16 24 28.8**	**0.0**
PB09				*i* S	**Sn**	**16 24 43.4**	**-1.2**
PB09				IAML		16 24 45.6	
	comp=N,1μm,0.3s						
PB09	**IPOC Station P**	**0.64**	**302**	*eP*	**Pn**	**16 24 28.2**	**-0.6**
PB09				IAML		16 24 44.8	
	comp=Z,2μm,0.7s						
AF01	**San Pedro de A**	**0.93**	**152**	*eP*	**Pn**	**16 24 30.1**	**-1.1**
AF01				IAML		16 25 03.6	
	comp=Z,1μm,0.7s						
PB03	**IPOC Station P**	**1.02**	**274**	⇑*iP*	**Pn**	**16 24 32.2**	**+0.5**
PB03				*i* S	**Sn**	**16 24 49.8**	**-0.1**
PB03				IAML		16 24 51.6	
	comp=N,2μm,0.2s						
PB03	**IPOC Station P**	**1.02**	**274**	*eP*	**Pn**	**16 24 32.2**	**+0.5**
PB03				IAML		16 24 55.4	
	comp=Z,729nm,0.2s						
PB06	**IPOC Station P**	**1.02**	**236**	⇑*iP*	**Pn**	**16 24 32.0**	**+0.3**
PB06				*i* S	**Sn**	**16 24 50.0**	**0.0**
PB06				IAML		16 24 51.3	
	comp=N,1μm,0.6s						
PB06	**IPOC Station P**	**1.02**	**236**	*eP*	**Pn**	**16 24 32.0**	**+0.3**
PB06				*e*S	**Sn**	**16 24 50.6**	**+0.7**
PB06				IAML		16 24 51.0	
	comp=Z,671nm,0.4s						
PB07	**IPOC Station P**	**1.21**	**289**	⇑*iP*	**Pn**	**16 24 34.3**	**+0.7**
PB07				*i* S	**Sn**	**16 24 53.5**	**+0.4**
PB07				IAML		16 24 55.2	
	comp=E,1μm,0.4s						
PB07	**IPOC Station P**	**1.21**	**289**	*eP*	**Pn**	**16 24 34.2**	**+0.7**
PB07				IAML		16 24 57.8	
	comp=Z,774nm,0.5s						
PB01	**IPOC Station P**	**1.33**	**324**	⇑*iP*	**Pn**	**16 24 34.9**	**+0.1**
PB01				*i* S	**Sn**	**16 24 55.2**	**-0.1**
PB01				IAML		16 24 57.1	
	comp=E,1μm,0.2s						
PB01	**IPOC Station P**	**1.33**	**324**	*eP*	**Pn**	**16 24 34.8**	**+0.1**
PB01				IAML		16 24 58.9	
	comp=Z,679nm,0.2s						
PB02	**IPOC Station P**	**1.41**	**305**	⇑*iP*	**Pn**	**16 24 36.2**	**+0.6**
PB02				*i* S	**Sn**	**16 24 57.2**	**+0.6**
PB02				IAML		16 24 58.5	
	comp=N,1μm,0.4s						
PB02	**IPOC Station P**	**1.41**	**305**	*eP*	**Pn**	**16 24 36.2**	**+0.6**
PB02				IAML		16 25 00.6	
	comp=Z,1μm,0.5s						
PB05	**IPOC Station P**	**1.60**	**243**	⇑*iP*	**Pn**	**16 24 38.2**	**+0.6**
PB05				*i* S	**Sn**	**16 24 59.2**	**-1.2**
PB05	**IPOC Station P**	**1.60**	**243**	*eP*	**Pn**	**16 24 38.0**	**+0.4**
PB05				IAML		16 25 02.7	
	comp=Z,227nm,0.4s						
TA01	**Diego Aracena**	**2.11**	**317**	⇑*iP*	**Pn**	**16 24 43.6**	**+0.1**
TA01				*i* S	**Sn**	**16 25 11.4**	**+0.5**
TA01				IAML		16 25 13.6	
	comp=E,708nm,0.3s						
TA01	**Diego Aracena**	**2.11**	**317**	*eP*	**Pn**	**16 24 43.8**	**+0.3**
TA01				*e*S	**Sn**	**16 25 07.6**	**-3.3**
TA01				IAML		16 25 20.1	
	comp=Z,359nm,0.6s						
HMBC	**Humberstone**	**2.17**	**328**	⇑*iP*	**Pn**	**16 24 44.4**	**-0.1**
HMBC				*i* S	**Sn**	**16 25 12.4**	**-0.1**
HMBC				IAML		16 25 15.4	
	comp=E,1μm,0.6s						
HMBC	**Humberstone**	**2.17**	**328**	*eP*	**Pn**	**16 24 44.4**	**-0.1**
HMBC				*e*S	**Sn**	**16 25 13.8**	**+1.3**
HMBC				IAML		16 25 17.2	
	comp=Z,747nm,0.4s						
PB10	**IPOC Station P**	**2.23**	**231**	*eP*	**Pn**	**16 24 45.7**	**+0.8**
TA02	**Huaiquique**	**2.31**	**323**	*eP*	**Pn**	**16 24 46.1**	**+0.2**
TA02				*e*S	**Sn**	**16 25 17.1**	**+1.9**
TA02				IAML		16 25 23.1	
	comp=Z,381nm,0.1s						
GO01	**Chusmiza**	**2.50**	**348**	*eP*	**Pn**	**16 24 49.3**	**+0.5**
GO01				*i* S	**Sn**	**16 25 21.4**	**+1.1**
GO01	**Chusmiza**	**2.50**	**348**	*eP*	**Pn**	**16 24 49.4**	**+0.5**
GO01				*e*S	**Sn**	**16 25 23.4**	**+3.0**
GO01				IAML		16 25 24.5	
	comp=Z,261nm,0.1s						
PB11	**IPOC Station P**	**2.54**	**338**	⇑*iP*	**Pn**	**16 24 48.8**	**-0.2**
PB11				*i* S	**Sn**	**16 25 19.6**	**-1.0**
PB11				IAML		16 25 21.8	
	comp=E,944nm,0.3s						
PB11	**IPOC Station P**	**2.54**	**338**	*eP*	**Pn**	**16 24 48.9**	**-0.2**
PB11				*e*S	**Sn**	**16 25 21.4**	**+0.8**
PB11				IAML		16 25 25.9	
	comp=Z,435nm,0.3s						
YJA	**Yavi**	**2.92**	**91**	*eP*	**Pn**	**16 24 53.3**	**-0.7**
PB14	**IPOC Station P**	**2.96**	**213**	*eP*	**Pn**	**16 24 51.8**	**-2.6**
PB14				*e*S	Sn	16 25 19.8	-11
PB14				IAML		16 25 38.3	
	comp=Z,72nm,0.4s						
SALTA		**2.98**	**135**	*eP*	**Pn**	**16 24 54.9**	**-0.1**
SALTA				*eP*		16 24 55.0	
GO02	**Mina Guanaco**	**3.14**	**196**	*eP*	**Pn**	**16 24 56.7**	**0.0**
GO02				*e*S	**Sn**	**16 25 34.1**	**-0.4**
GO02				IAML		16 25 39.2	
	comp=Z,126nm,0.1s						
PB12	**IPOC Station P**	**3.83**	**336**	*eP*	**Pn**	**16 25 04.3**	**-1.4**
PB12				*e*S	**Sn**	**16 25 46.3**	**-4.2**
PB12				IAML		16 26 03.7	
	comp=Z,114nm,0.5s						
PB16	**IPOC Station P**	**3.86**	**348**	*eP*	**Pn**	**16 25 07.1**	**+0.6**
PB16				*e*S	Sn	16 25 38.7	-13
PB16				IAML		16 25 57.2	
	comp=Z,45nm,0.4s						
SLA	**San Lorenzo**	**3.88**	**132**	*eP*	**Pn**	**16 25 07.1**	**+0.8**
AZAP	**Zapla**	**3.91**	**123**	*eP*	**Pn**	**16 25 05.7**	**-1.1**
AP01	**Chacalluta**	**4.06**	**337**	*eP*	**Pn**	**16 25 09.5**	**+0.9**
AP01				IAML		16 26 13.6	
	comp=Z,235nm,0.3s						
AC01	**Pan de Azucar**	**4.37**	**204**	*eP*	**Pn**	**16 25 11.6**	**-1.1**
AC01				*e*S	**Sn**	**16 26 00.7**	**-2.5**
AC01				IAML		16 26 17.1	
	comp=Z,35nm,0.9s						
AC02	**Maricunga**	**4.70**	**185**	*eP*	**Pn**	**16 25 18.1**	**+0.6**
AC02				*e*S	**Sn**	**16 26 17.6**	**+6.0**
AC02				IAML		16 26 38.7	
	comp=Z,20nm,1.4s						

*IDC **14** 16:26:06.5±0.7, 1.˚74N×126.˚44E, h0km, mb4.7/13, mbtmp4.8/15, ML4.9/2, Error ellipse: s-maj=36.5km s-min=14.8km az=83.0*
*NEIC **14** 16:26:10.6±1.3, 1.˚68N±0.˚08×126.˚42E±0.˚06, h25km±5km, mb5.3/27, Error ellipse: s-maj=12.3km s-min=6.7km az=205.0*
ISC 14 16:26:11.5±0.4, 1.˚66N±0.˚06×126.˚38E±0.˚06, h35km, n51, σ1°07/56, mb5.1/24, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.32**	**132**	Pn	**Pn**	**16 26 31.3**	**-2.3**
TNTI				Sn	**Sn**	**16 26 50.0**	**0.0**
LUWI	**Luwuk**	**4.50**	**233**	Pn	**Pn**	**16 27 17.9**	**+0.6**
LUWI				Sn	**Sn**	**16 28 09.9**	**+1.5**
TOLI2	**Tolitoli**	**5.63**	**264**	Pn	**Pn**	**16 27 32.7**	**0.0**
TOLI2				Sn	**Sn**	**16 28 33.8**	**-2.4**
KAPI	**Kappang**	**9.37**	**225**	Pn	**Pn**	**16 28 25.0**	**+0.8**
	9.3nm,0.3s,baz=56,slow=8.3,SNR=6.5						
KAPI				Sn	**Sn**	**16 30 07.2**	**-1.3**
	1.0nm,0.3s,baz=264,slow=13,SNR=1.6						
	38nm,0.4s						
KAPI	**Kappang**	**9.37**	**225**		**Pn**	**16 28 24.0**	**-0.3**
SBUM	**Sibu**	**14.18**	**273**		**P**	**16 29 34.8**	**-2.2**
JAGI	**Jajag, Banyuwa**	**15.81**	**230**	Pn	**Pn**	**16 29 50.7**	**-1.0**
JAGI				IAmb	IAmb	16 30 05.2	
	comp=Z,252nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**16 30 36.5**	**-1.0**
	comp=Z,2.5nm,0.3s,baz=344,slow=7.4,SNR=0.9						
	comp=Z,40nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**16 30 36.6**	**-0.9**
YULB	**Yu-li**	**22.16**	**348**	P	**P**	**16 31 02.8**	**-1.7**
TPUB	**Ta-pu**	**22.22**	**346**	P	**P**	**16 31 05.2**	**-0.1**
SSLB	**Suanglung**	**22.61**	**347**	P	**P**	**16 31 08.9**	**-0.6**
SSLB				IAmb	IAmb	16 31 11.6	
	comp=Z,106nm,1.3s						
WB0	**Warramunga Arr**	**22.70**	**160**	P	**P**	**16 31 09.6**	**-0.8**
WB0				IAmb	IAmb	16 31 17.1	
	comp=Z,230nm,1.4s						
WRAB	**Tennant Creek**	**22.84**	**160**	P	**P**	**16 31 11.3**	**-0.5**
WRAB				IAmb	IAmb	16 31 17.9	
	comp=Z,192nm,1.3s						
WRA	**Warramunga Arr**	**22.85**	**160**	P	**P**	**16 31 11.8**	**-0.2**
	comp=Z,24nm,0.6s,baz=340,slow=11,SNR=6.9						
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**26.22**	**164**	P	**P**	**16 31 44.0**	**+0.7**
	comp=Z,16nm,0.8s,baz=343,slow=11,SNR=2.6						
ASAR				PcP	**PcP**	**16 35 09.7**	**-0.1**
	comp=Z,5.9nm,0.9s,baz=344,slow=2.2,SNR=1.3						
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**26.22**	**164**	P	**P**	**16 31 43.1**	**-0.3**
NWAO	**Narrogin (SRO)**	**35.47**	**193**	P	**P**	**16 33 05.0**	**+0.2**
BBOO	**Buckleboo**	**35.49**	**166**	P	**P**	**16 33 04.9**	**0.0**
KSRS	**Korea Array**	**35.64**	**2**	P	**P**	**16 33 06.0**	**-0.2**
	comp=Z,11nm,0.3s,baz=180,slow=9.7,SNR=2.3						
	comp=Z,11nm,0.3s						
MAJO	**Matsushiro**	**36.39**	**16**	P	**P**	**16 33 11.9**	**-0.8**
MAJO				IAmb	IAmb	16 33 28.8	
	comp=Z,78nm,1.5s						
MJAR	**Matsushiro Arr**	**36.39**	**16**	P	**P**	**16 33 12.6**	**0.0**
	comp=Z,5.4nm,1.0s,baz=180,slow=9.7,SNR=5.4						
	comp=Z,5.4nm,1.0s						
MJAR	**Matsushiro Arr**	**36.39**	**16**	P	**P**	**16 33 11.7**	**-1.0**
JMM	**Marumori**	**38.39**	**18**	P	**P**	**16 33 29.2**	**-0.4**
JMM				IAmb	IAmb	16 33 46.1	
	comp=Z,79nm,1.4s						
PALK	**Pallekele**	**45.86**	**278**	P	**P**	**16 34 31.9**	**+1.0**
EVN	**Everest**	**45.97**	**308**	P	**P**	**16 34 35.3**	**+3.0**
EVN				IAmb	IAmb	16 34 35.5	
	comp=Z,76nm,1.4s						
HILR	**Hailar Array B**	**48.05**	**354**	P	**P**	**16 34 47.0**	**-0.4**
	comp=Z,5.7nm,0.7s,baz=181,slow=7.2,SNR=1.7						
	comp=Z,5.7nm,0.7s						
HYBB	**Hyderabad (bro**	**49.52**	**292**	*eP*	**P**	**16 34 59.1**	**-0.1**
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**16 36 07.7**	**-0.5**
	comp=Z,7.5nm,0.6s,baz=117,slow=7.6,SNR=5.4						
	comp=Z,7.5nm,0.6s						
MAKZ	**Makanchi**	**59.24**	**326**	P	**P**	**16 36 09.7**	**+0.3**
KDJ	**Kajisay**	**59.66**	**319**	P	**P**	**16 36 12.5**	**-0.2**
LBZ	**Lake Benmore**	**60.19**	**145**	P	**P**	**16 36 15.7**	**-0.3**
TUWZ	**Tuamarina**	**60.78**	**141**	P	**P**	**16 36 19.5**	**-0.6**
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	**P**	**16 36 36.5**	**-0.2**
	comp=Z,6.4nm,0.6s,baz=128,slow=6.2,SNR=6.5						
	comp=Z,6.4nm,0.6s						
KURK	**Kurchatov**	**63.29**	**328**	P	**P**	**16 36 35.7**	**-1.1**
CASY	**Casey**	**68.74**	**187**	P	**P**	**16 37 11.8**	**+0.3**
CASY				IAmb	IAmb	16 37 15.9	
	comp=Z,19nm,1.2s						
BVAR	**Borovoye Array**	**68.86**	**328**	P	**P**	**16 37 12.4**	**-0.1**
	comp=Z,7.7nm,0.7s,baz=121,slow=5.6,SNR=2.1						
	comp=Z,7.7nm,0.7s						
NRIK	**Noril'sk**	**72.34**	**346**	P	**P**	**16 37 33.6**	**+0.2**
	comp=Z,12nm,0.6s

AMTN	**Mateare**	**1.47**	**90**	S		**Sn**	**16 31 12.7**	**+0.2**
AMTN	**Mateare**	**1.47**	**90**	P		**Pb**	**16 30 54.3**	**-0.6**
SAPS	**Ciudad Sandino**	**1.50**	**92**	P		**Pn**	**16 30 54.0**	**-0.1**
AESN	**El Sauce Leon**	**1.51**	**64**	S		**Sn**	**16 31 13.0**	**-0.4**
TECO	**Alcaldia de Te**	**1.54**	**328**	P		**Pn**	**16 30 55.0**	**+0.4**
TECO	**Alcaldia de Te**	**1.54**	**328**	S		**Sn**	**16 31 14.1**	**0.0**
APYN	**Apoyeque**	**1.55**	**90**	S		**Sn**	**16 31 14.5**	**0.0**
APQ2	**Apoyeque**	**1.58**	**91**	P		**Pn**	**16 30 54.6**	**-0.5**
APQ2				S		**Sn**	**16 31 14.6**	**-0.4**
APQ2	**Apoyeque**	**1.58**	**91**	P		**Pn**	**16 30 55.6**	**+0.4**
APQ2				S		**Sn**	**16 31 15.0**	**-0.1**
ABCN	**Banco Central**	**1.60**	**94**	S		**Sb**	**16 31 16.8**	**0.0**
ABCN	**Banco Central**	**1.60**	**94**	P		**Pn**	**16 30 55.4**	**0.0**
CRUN	**El Crucero**	**1.62**	**99**	P		**Pn**	**16 30 55.4**	**-0.5**
ALLN	**Telcor Managua**	**1.63**	**93**	S		**Sn**	**16 31 16.3**	**-0.1**
ALLN	**Telcor Managua**	**1.63**	**93**	P		**Pn**	**16 30 55.6**	**-0.3**
UNAN	**Cigeo UNAN**	**1.64**	**94**	P		**Pn**	**16 30 55.4**	**-0.6**
UNAN				S		**Sb**	**16 31 17.3**	**-0.7**
MGAN	**Managua**	**1.66**	**93**	P		**Pn**	**16 30 55.8**	**-0.4**
MGAN	**Managua**	**1.66**	**93**	S		**Sn**	**16 31 17.6**	**+0.6**
WILN	**Americas 2**	**1.71**	**92**	P		**Pn**	**16 30 57.0**	**0.0**
WILN				S		**Sb**	**16 31 19.2**	**-1.1**
AERN	**Aeropuerto Man**	**1.73**	**93**	S		**Sn**	**16 31 19.3**	**+0.4**
MAS3	**Al N del Volca**	**1.74**	**97**	P		**Pn**	**16 30 57.3**	**-0.1**
MAS3				S		**Sn**	**16 31 18.7**	**-0.3**
LFRS	**El Faro**	**1.76**	**322**	*eP*		**Pn**	**16 30 57.3**	**-0.5**
MASN	**Masaya**	**1.76**	**98**	S		**Sn**	**16 31 20.3**	**+0.5**
NADN	**Granada**	**1.93**	**104**	S		**Sn**	**16 31 23.8**	**+0.1**
BOQS	**Boqueron**	**1.98**	**319**	*eP*		**Pn**	**16 31 01.6**	**+0.6**
BOQS				*eS*		**Sb**	**16 31 27.6**	**-0.7**
OCON	**Estacion meteo**	**1.99**	**46**	P		**Pn**	**16 31 01.0**	**+0.1**
OCON				S		**Sn**	**16 31 25.7**	**+0.4**
JAYA	**Jayaque - finc**	**2.04**	**314**	*eP*		**Pn**	**16 31 00.8**	**-0.9**
JAYA				*eS*		**Sn**	**16 31 24.9**	**-1.8**
MATN	**Matagalpa**	**2.08**	**70**	S		**Sn**	**16 31 28.1**	**+0.4**
MATN	**Matagalpa**	**2.08**	**70**	P		**Pn**	**16 31 01.6**	**-0.6**
RCON	**San Juan de Ri**	**2.14**	**54**	P		**Pn**	**16 31 03.7**	**+0.7**
RCVN	**Varillal2**	**2.17**	**52**	S		**Sn**	**16 31 30.4**	**+0.6**
RCVN	**Varillal2**	**2.17**	**52**	⇑P		**Pn**	**16 31 03.5**	**+0.1**
RCPN	**Sur Rio San Ju**	**2.21**	**54**	P		**Pn**	**16 31 04.4**	**+0.4**
JAPN	**Al SSO del Vol**	**2.32**	**107**	P		**Pn**	**16 31 06.0**	**+0.6**
CONN	**Concepcion**	**2.36**	**106**	P		**Pn**	**16 31 06.1**	**+0.2**
CONN				S		**Sn**	**16 31 34.4**	**0.0**
CARN	**Rivas**	**2.58**	**113**	P		**Pn**	**16 31 09.6**	**+0.5**
CARN				S		**Sn**	**16 31 41.1**	**+1.1**
ELI1	**Hacienda Flor**	**2.82**	**124**	S		**Sn**	**16 31 47.4**	**+1.7**
CMARA	**Lajas Hojancha**	**3.31**	**131**	S		**Sn**	**16 31 57.7**	**-0.2**
OCHAL	**Ojochal**	**5.24**	**126**	S		**Sn**	**16 32 46.5**	**+0.9**
DRK0	**Durika**	**5.47**	**122**	S		**Sn**	**16 32 52.7**	**+1.2**
PTJ1	**Puerto Jimnez**	**5.86**	**128**	P		**Pn**	**16 31 54.8**	**+0.8**
PIRO	**Carate, Puerto**	**5.91**	**130**	S		**Sn**	**16 33 02.3**	**+0.2**

*IDC **14** 16:30:51.5±0.8,1.37N×126.21E,h0km,mb4.3/9, mbtmp4.4/10,ML3.9/1,Error ellipse: s-maj=53.0km s-min=15.3km az=73.0*

*DJA **14** 16:30:56.6±0.9,1.1N±2.2×12.6E±.°,h37km±19km,M5.0/19, mb4.8/7,MLv5.1/19*

*NEIC **14** 16:30:57.3±2.4,1.46N±0.09×126.43E±0.07,h35km±2km, mb4.9/18,Error ellipse: s-maj=16.2km s-min=10.1km az=208.0*

ISC 14 16:30:56.6±0.5,1.46N±0.05×126.36E±0.05,h35km,n47, σ1§15/50,mb4.7/17,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**124**		**Pn**	**16 31 17.1**	**-0.2**
TNTI	**Ternate**	**1.22**	**124**	P	**Pn**	**16 31 17.0**	**-0.2**
TNTI				S	**Sn**	**16 31 33.4**	**+0.9**
SGSI	**Sangihe**	**2.36**	**339**	P	**Pn**	**16 31 32.5**	**-0.4**
SGSI				S	**Sn**	**16 32 01.7**	**+1.0**
KMSI	**Cibinong**	**2.54**	**250**	P	**Pn**	**16 31 34.3**	**-1.0**
KMSI				S	**Sn**	**16 32 04.4**	**-0.6**
SANI	**Sanana**	**3.51**	**186**	P	**Pn**	**16 31 48.9**	**+0.2**
LUWI	**Luwuk**	**4.36**	**235**	Pn	**Pn**	**16 32 01.5**	**+1.0**
LUWI	**Luwuk**	**4.36**	**235**	P	**Pn**	**16 32 00.4**	**-0.1**
MRSI	**Marisa**	**4.52**	**258**	P	**Pn**	**16 32 02.0**	**-0.7**
NLAI	**Namlea**	**4.73**	**171**	P	**Pn**	**16 32 05.8**	**+0.3**
APSI	**Ampana**	**5.27**	**243**	P	**Pn**	**16 32 12.9**	**0.0**
	3.8nm119nm,1.0s						
SWI	**Sorong**	**5.42**	**115**	P	**Pn**	**16 32 15.7**	**+0.7**
MSAI	**Masohi**	**5.42**	**152**	P	**Pn**	**16 32 15.6**	**+0.5**
MPSI	**Mapaga**	**6.55**	**260**	P	**Pn**	**16 32 30.6**	**0.0**
BNDI	**Bandanaira**	**6.92**	**149**	P	**Pn**	**16 32 35.9**	**+0.3**
	245nm,1.5s						
FAKI	**Fak Fak**	**7.32**	**126**	Pn	**Pn**	**16 32 42.7**	**+1.5**
TTSI	**Tana Toraja**	**7.92**	**236**	P	**Pn**	**16 32 49.4**	**0.0**
	56nm,0.7s						
SPSI	**Sidrap Palu**	**8.51**	**231**	P	**Pn**	**16 32 58.3**	**+0.8**
MYLDM	**Lahad Datu**	**8.67**	**295**	Pn	**Pn**	**16 33 02.0**	**+2.4**
SBUM	**Sibu**	**14.16**	**274**	Pn	**Pn**	**16 34 14.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**16 35 20.5**	**+0.1**
	0.3nm,0.3s,baz=166,slow=10,SNR=1.3 15nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**16 35 19.7**	**-0.7**
TPUB	**Ta-pu**	**22.41**	**346**	P	**P**	**16 35 50.4**	**-2.0**
TPUB				IAmb	IAmb	16 36 01.3	
	comp=Z,106nm,1.5s						
WB0	**Warramunga Arr**	**22.52**	**160**	P	**P**	**16 35 53.0**	**-0.6**
WB0				IAmb	IAmb	16 36 02.9	
	comp=Z,36nm,1.1s						
COEN	**Coen**	**22.64**	**133**	P	**P**	**16 35 54.2**	**-0.6**
COEN				IAmb	IAmb	16 36 02.0	
	comp=Z,73nm,1.4s						
WRAB	**Tennant Creek**	**22.66**	**160**		**P**	**16 35 55.1**	**0.0**
WRAB				IAmb	IAmb	16 35 56.3	
	comp=Z,49nm,1.1s						
WRA	**Warramunga Arr**	**22.67**	**160**	P	**P**	**16 35 54.4**	**-0.7**
	comp=Z,7.1nm,0.6s,baz=334,slow=10,SNR=11 comp=Z,7.1nm,0.6s						
SSLB	**Suanglung**	**22.80**	**347**	P	**P**	**16 35 54.7**	**-1.9**
TATO	**Taipei**	**23.84**	**349**	P	**P**	**16 36 07.3**	**+0.6**
JMZ	**Minamidaito 2**	**24.67**	**11**	P	**P**	**16 36 15.7**	**+1.4**
AS31	**Alice Springs**	**26.03**	**164**	P	**P**	**16 36 26.7**	**0.0**
ASAR	**Alice Springs**	**26.03**	**164**	P	**P**	**16 36 25.2**	**-1.6**
	comp=Z,2.2nm,0.6s,baz=343,slow=7.1,SNR=8.9 comp=Z,2.2nm,0.6s						
RABL	**Rabaul**	**26.39**	**102**	P	**P**	**16 36 27.6**	**-2.6**
RABL				IAmb	IAmb	16 36 30.5	
	comp=Z,34nm,1.3s						
BBOO	**Buckleboo**	**35.30**	**166**	P	**P**	**16 37 48.1**	**-0.3**
STKA	**Stephens Creek**	**36.17**	**158**	P	**P**	**16 37 55.7**	**-0.2**
	comp=Z,7.4nm,0.9s,baz=338,slow=8.2,SNR=4.8 comp=Z,7.4nm,0.9s						
USRK	**Ussuriysk Ar.**	**42.85**	**6**	P	**P**	**16 38 53.6**	**+2.2**
	comp=Z,2.0nm,0.8s,baz=216,slow=5.0,SNR=2.0 comp=Z,2.0nm,0.8s						
PETK	**Petropavlovsk-**	**57.66**	**22**	P	**P**	**16 40 43.5**	**+0.1**
	comp=Z,6.8nm,1.1s,baz=192,slow=8.8,SNR=1.5 comp=Z,6.8nm,1.1s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**16 40 53.6**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=120,slow=8.0,SNR=14 comp=Z,1.6nm,0.4s						
MAKZ	**Makanchi**	**59.39**	**326**	P	**P**	**16 40 55.6**	**0.0**
KDJ	**Kajisay**	**59.80**	**319**	P	**P**	**16 40 57.2**	**-1.5**
KDJ				IAmb	IAmb	16 41 08.4	
	comp=Z,10nm,1.2s						
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**16 41 22.2**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=118,slow=7.7,SNR=12 comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**63.45**	**328**	P	**P**	**16 41 20.7**	**-2.2**
KURK				IAmb	IAmb	16 41 25.6	
	comp=Z,17nm,1.1s						
CASY	**Casey**	**68.54**	**187**	P	**P**	**16 41 56.2**	**+0.9**
CASY				IAmb	IAmb	16 41 59.9	
	comp=Z,12nm,0.6s						
BVAR	**Borovoye Array**	**69.01**	**328**	P	**P**	**16 42 00.1**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=94,slow=4.3,SNR=5.7 comp=Z,1.2nm,0.5s						
ADK	**Adak**	**69.04**	**34**	P	**P**	**16 42 00.2**	**+1.5**
NRIK	**Noril'sk**	**72.53**	**347**	P	**P**	**16 42 20.8**	**+1.1**
	comp=Z,3.9nm,0.6s,baz=238,slow=18,SNR=1.4 comp=Z,3.9nm,0.6s						
NRIK	**Noril'sk**	**72.53**	**347**	P	**P**	**16 42 20.0**	**+0.4**
NRIK				IAmb	IAmb	16 42 23.3	
	comp=Z,9.1nm,0.9s						
SLKM	**Skilak Lake**	**85.49**	**30**	P	**P**	**16 43 28.2**	**-2.6**

*IDC **14** 16:31:14.8±0.9,1.49N×126.41E,h0km,mb4.4/9, mbtmp4.4/9,Error ellipse: s-maj=47.9km s-min=17.4km az=73.0*

*NEIC **14** 16:31:19.8±1.7,1.4N±0.1×126.70E±0.08,h35km±2km, mb5.0/10,Error ellipse: s-maj=20.2km s-min=11.3km az=209.0*

ISC 14 16:31:19.3±0.6,1.43N±0.09×126.66E±0.09,h35km,n22, σ1§27/22,mb4.6/15,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.96**	**132**	Pn	**Pn**	**16 31 34.7**	**-1.6**
LUWI	**Luwuk**	**4.59**	**238**	Pn	**Pn**	**16 32 25.1**	**-1.1**
WB0	**Warramunga Arr**	**22.39**	**161**	P	**P**	**16 36 13.9**	**-0.9**
WB0				IAmb	IAmb	16 36 29.8	
	comp=Z,73nm,1.2s						
TPUB	**Ta-pu**	**22.52**	**345**	P	**P**	**16 36 14.1**	**-2.0**
TPUB				IAmb	IAmb	16 36 20.1	
	comp=Z,63nm,1.3s						
WRA	**Warramunga Arr**	**22.54**	**161**	P	**P**	**16 36 17.9**	**+1.6**
	comp=Z,6.1nm,0.6s,baz=341,slow=11,SNR=6.1 comp=Z,6.1nm,0.6s						
WR8	**Warramunga Arr**	**22.60**	**160**	P	**P**	**16 36 16.3**	**-0.8**
SSLB	**Suanglung**	**22.91**	**346**	P	**P**	**16 36 18.8**	**-1.4**
ASAR	**Alice Springs**	**25.92**	**165**	P	**P**	**16 36 49.9**	**+1.5**
	comp=Z,2.9nm,0.5s,baz=348,slow=8.8,SNR=4.7 comp=Z,2.9nm,0.5s						
STKA	**Stephens Creek**	**36.02**	**158**	P	**P**	**16 38 19.3**	**+2.0**
	comp=Z,26nm,1.2s,baz=342,slow=9.2,SNR=2.3 comp=Z,26nm,1.2s						
MJAR	**Matsushiro Arr**	**36.54**	**16**	P	**P**	**16 38 22.5**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=194,slow=9.7,SNR=3.4 comp=Z,3.0nm,0.8s						
JMM	**Marumori**	**38.52**	**18**	P	**P**	**16 38 38.8**	**+0.4**
JMM				IAmb	IAmb	16 38 48.9	
	comp=Z,27nm,1.2s						
ARMA	**Armidale**	**39.61**	**145**	P	**P**	**16 38 47.0**	**-0.8**
ARMA				IAmb	IAmb	16 39 06.7	
	comp=Z,33nm,1.4s						
HYBB	**Hyderabad (bro**	**49.85**	**292**	*eP*	**P**	**16 40 10.0**	**+0.4**
PETK	**Petropavlovsk-**	**57.58**	**22**	P	**P**	**16 41 06.1**	**+0.7**
	comp=Z,6.4nm,1.0s,baz=223,slow=7.5,SNR=9.7 comp=Z,6.4nm,1.0s						
MKAR	**Makanchi Array**	**59.40**	**326**	P	**P**	**16 41 18.2**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=119,slow=7.8,SNR=11 comp=Z,1.4nm,0.4s						
MAKZ	**Makanchi**	**59.59**	**326**	P	**P**	**16 41 19.5**	**-0.1**
MAKZ				IAmb	IAmb	16 41 22.2	
	comp=Z,22nm,1.3s						
LBZ	**Lake Benmore**	**59.84**	**145**	P	**P**	**16 41 21.4**	**0.0**
KDJ	**Kajisay**	**60.02**	**319**	P	**P**	**16 41 21.8**	**-1.1**
KDJ				IAmb	IAmb	16 41 39.8	
	comp=Z,12nm,1.2s						
KURBB	**Kurchatov Arra**	**63.63**	**328**	P	**P**	**16 41 44.9**	**-1.9**
	comp=Z,1.4nm,0.5s,baz=129,slow=6.6,SNR=5.6 comp=Z,1.4nm,0.5s						
KURK	**Kurchatov**	**63.64**	**328**	P	**P**	**16 41 46.0**	**-0.7**
BVAR	**Borovoye Array**	**69.20**	**327**	P	**P**	**16 42 23.1**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=109,slow=7.8,SNR=1.0 comp=Z,0.6nm,0.4s						
NRIK	**Noril'sk**	**72.64**	**346**	P	**P**	**16 42 44.4**	**+1.5**
	comp=Z,2.6nm,0.5s,baz=124,slow=7.3,SNR=1.1 comp=Z,2.6nm,0.5s						

*IDC **14** 16:32:34.2±1.9,1.99N×127.37E,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=152.8km s-min=25.0km az=67.0*

*NEIC **14** 16:32:37.8±1.4,2.18N±0.04×127.63E±0.09,h35km±2km, mb4.9/11,Error ellipse: s-maj=15.7km s-min=6.3km az=274.0*

ISC 14 16:32:37.6±0.7,2.14N±0.10×127.7E±0.1,h35km,n19, σ1§10/19,mb4.4/8,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**192**	Pn	**Pn**	**16 33 01.1**	**+0.6**
FAKI	**Fak Fak**	**6.80**	**138**	Pn	**Pn**	**16 34 15.6**	**+0.6**
MYLDM	**Lahad Datu**	**9.62**	**289**	Pn	**Pn**	**16 34 52.9**	**-0.9**
TPUB	**Ta-pu**	**22.11**	**343**	P	**P**	**16 37 31.3**	**+1.1**
TPUB				IAmb	IAmb	16 37 38.0	
	comp=Z,48nm,1.3s						
PMG	**Port Moresby**	**22.56**	**121**	P	**P**	**16 37 35.9**	**+0.9**
WB0	**Warramunga Arr**	**22.75**	**163**	P	**P**	**16 37 36.9**	**-0.1**
WB0				IAmb	IAmb	16 37 49.6	
	comp=Z,36nm,1.1s						
WRAB	**Tennant Creek**	**22.90**	**164**	P	**P**	**16 37 38.7**	**+0.1**
WRA	**Warramunga Arr**	**22.90**	**164**	P	**P**	**16 37 38.8**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=343,slow=11,SNR=1.2 comp=Z,1.9nm,0.5s						
AS31	**Alice Springs**	**26.36**	**167**	P	**P**	**16 38 10.4**	**-0.3**
ASAR	**Alice Springs**	**26.36**	**167**	P	**P**	**16 38 11.5**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=344,slow=11,SNR=1.3 comp=Z,2.0nm,0.8s						
EIDS	**Eidsvold**	**35.53**	**142**	P	**P**	**16 39 30.8**	**-0.8**
EIDS				IAmb	IAmb	16 39 33.5	
	comp=Z,24nm,1.5s						
BBOO	**Buckleboo**	**35.66**	**168**	P	**P**	**16 39 30.8**	**-1.7**
BBOO				IAmb	IAmb	16 39 39.6	
	comp=Z,29nm,1.5s						
MARNC	**Mare, Loyalty**	**45.93**	**123**	P	**P**	**16 40 57.8**	**+0.4**
MKAR	**Makanchi Array**	**59.38**	**325**	P	**P**	**16 42 37.9**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=128,slow=8.1,SNR=1.1 comp=Z,0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**63.57**	**327**	P	**P**	**16 43 07.0**	**+2.3**
	comp=Z,1.3nm,0.8s,baz=128,slow=6.4,SNR=1.1 comp=Z,1.3nm,0.8s						
KURK	**Kurchatov**	**63.57**	**328**	P	**P**	**16 43 04.1**	**-0.7**
SDPT	**Sand Point**	**77.99**	**34**	P	**P**	**16 44 31.5**	**-0.8**
ANM	**Nome**	**78.33**	**24**	P	**P**	**16 44 32.7**	**-1.3**
SYO	**Syowa Base**	**91.28**	**201⇑**	*eP*	**P**	**16 45 40.4**	**+1.3**

IDC 14 16:33:35.2±1.9,1.62N×126.05E,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=188.2km s-min=24.8km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.92**	**160**	P	P	16 38 39.9	-1.2
	2.7nm,0.6s,baz=338,slow=11,SNR=2.1 2.7nm,0.6s						
ASAR	**Alice Springs**	**26.27**	**164**	P	P	16 39 13.5	+1.0
	1.5nm,0.5s,baz=342,slow=8.8,SNR=2.1 1.5nm,0.5s						
MKAR	**Makanchi Array**	**58.90**	**326**	P	P	16 43 35.0	-1.1
	0.7nm,0.9s,baz=117,slow=6.9,SNR=1.2 0.7nm,0.9s						
KURBB	**Kurchatov Arra**	**63.15**	**328**	P	P	16 44 05.8	+1.0
	0.5nm,0.5s,baz=128,slow=6.3,SNR=1.8 0.5nm,0.5s						

*IDC **14** 16:34:41.0±1.1,1.48N×126.06E,h0km,mb4.1/6, mbtmp4.1/7,ML3.4/1,Error ellipse: s-maj=100.7km s-min=18.5km az=70.0*

*NEIC **14** 16:34:47.1±1.6,1.43N±0.04×126.33E±0.07,h35km±1km, mb4.8/15,Error ellipse: s-maj=11.7km s-min=6.3km az=249.0*

ISC 14 16:34:46.7±0.6,1.39N±0.08×126.29E±0.07,h35km,n26, σ1§02/26,mb4.3/11,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**120**	Pn	**Pn**	**16 35 06.7**	**-0.8**
LUWI	**Luwuk**	**4.27**	**236**	Pn	**Pn**	**16 35 48.4**	**-0.8**
TOLI2	**Tolitoli**	**5.51**	**267**	Pn	**Pn**	**16 36 06.5**	**+0.1**
MYLDM	**Lahad Datu**	**8.64**	**296**	Pn	**Pn**	**16 36 51.3**	**+1.9**
KNRA	**Kununurra**	**17.13**	**172**		**Pn**	**16 38 45.0**	**+1.5**
KNRA				IAmb	IAmb	16 38 53.2	
	comp=Z,72nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.37**	**182**	P	**P**	**16 39 10.8**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=6.4,slow=12,SNR=2.8 comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.37**	**182**	P	**P**	**16 39 09.6**	**0.0**
WRAB	**Tennant Creek**	**22.61**	**160**	P	**P**	**16 39 43.4**	**-1.2**
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**16 39 45.5**	**+0.9**
	comp=Z,4.5nm,0.6s,baz=337,slow=11,SNR=4.8 comp=Z,4.5nm,0.6s						
ASAR	**Alice Springs**	**25.98**	**164**	P	**P**	**16 40 16.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=344,slow=11,SNR=4.3 comp=Z,1.4nm,0.7s						
NWAO	**Narrogin (SRO)**	**35.19**	**193**	P	**P**	**16 41 37.8**	**+0.3**
BBOO	**Buckleboo**	**35.24**	**166**	P	**P**	**16 41 38.3**	**+0.3**
BBOO				IAmb	IAmb	16 41 56.2	
	comp=Z,23nm,1.4s						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**16 41 45.9**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=318,slow=7.1,SNR=2.9 comp=Z,1.9nm,0.7s						

ARMA	**Armidale**	**39.79**	**145**	P		**P**	**16 42 16.2**	**-0.4**
ARMA				IAmb		IAmb	16 42 24.9	
	comp=Z,15nm,1.3s							
JKA	**Kamikawa-asahi**	**44.95**	**17**	P		**P**	**16 42 58.0**	**-0.3**
JKA				IAmb		IAmb	16 43 02.8	
	comp=Z,19nm,1.1s							
TARG	**Taragay, Kyrgy**	**59.21**	**319**	P		**P**	**16 44 45.3**	**+0.3**
TARG				IAmb		IAmb	16 44 52.2	
	comp=Z,15nm,1.4s							
MKAR	**Makanchi Array**	**59.23**	**326**	P		**P**	**16 44 43.6**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=123,slow=8.8,SNR=2.7 comp=Z,1.1nm,0.7s							
MAKZ	**Makanchi**	**59.42**	**326**	P		**P**	**16 44 45.2**	**-0.7**
LTZ	**Lake Taylor**	**60.32**	**142**	P		**P**	**16 44 51.5**	**-0.7**
KURBB	**Kurchatov Arra**	**63.48**	**328**	P		**P**	**16 45 10.4**	**-2.7**
	comp=Z,1.7nm,0.7s,baz=127,slow=6.0,SNR=5.7 comp=Z,1.7nm,0.7s							
KURK	**Kurchatov**	**63.48**	**328**	P		**P**	**16 45 12.4**	**-0.8**
KURK				IAmb		IAmb	16 45 15.8	
	comp=Z,4.4nm,0.8s							
NRIK	**Noril'sk**	**72.59**	**347**	P		**P**	**16 46 09.7**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=124,slow=7.2,SNR=4.1 comp=Z,2.9nm,0.8s							
NIKH	**Nikolski High**	**73.97**	**35**	P		**P**	**16 46 17.6**	**-0.9**
D19K	**Kuna River**	**83.45**	**21**	P		**P**	**16 47 10.9**	**+0.5**
B21K	**Ikpikpuk River**	**84.91**	**20**	P		**P**	**16 47 18.6**	**+1.0**
M31M	**Drury Creek, Y**	**93.13**	**28**	P		**P**	**16 47 57.1**	**+0.1**

IDC 14 16:35:40.7±2.1,1.96N×126.96E,h0km,mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=198.0km s-min=24.5km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.94**	**162**	P	P	16 40 46.3	-0.4
	2.0nm,0.6s,baz=340,slow=10.0,SNR=1.6 2.0nm,0.6s						
ASAR	**Alice Springs**	**26.35**	**166**	P	P	16 41 17.5	-1.2
	1.0nm,0.7s,baz=341,slow=6.6,SNR=1.0 1.0nm,0.7s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	P	16 45 44.2	+1.0
	0.8nm,0.7s,baz=123,slow=7.2,SNR=2.1 0.8nm,0.7s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	P	16 46 11.8	+0.2
	0.5nm,0.7s,baz=126,slow=6.5,SNR=1.2 0.5nm,0.7s						

IDC 14 16:36:04.2±3.0,1.65N×126.18E,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=324.8km s-min=29.2km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.91**	**160**	P	P	16 41 08.6	-1.3
	1.2nm,0.5s,baz=336,slow=9.7,SNR=1.4 1.2nm,0.5s						
ASAR	**Alice Springs**	**26.27**	**164**	P	P	16 41 41.5	+0.1
	1.5nm,0.8s,baz=346,slow=8.6,SNR=1.8 1.5nm,0.8s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	P	16 46 06.1	+0.7
	0.3nm,0.5s,baz=117,slow=8.3,SNR=1.2 0.3nm,0.5s						

IDC 14 16:36:46.0±2.1,1.99N×127.32E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=178.7km s-min=25.0km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**163**	P	P	16 41 51.2	0.0
	1.9nm,0.8s,baz=342,slow=10,SNR=1.7 1.9nm,0.8s						
ASAR	**Alice Springs**	**26.29**	**166**	P	P	16 42 23.0	-0.5
	1.1nm,0.9s,baz=344,slow=9.4,SNR=1.3 1.1nm,0.9s						
MKAR	**Makanchi Array**	**59.31**	**326**	P	P	16 46 50.0	+0.2
	0.5nm,0.7s,baz=125,slow=7.6,SNR=1.7 0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.52**	**328**	P	P	16 47 18.2	+0.1
	0.3nm,0.5s,baz=120,slow=7.1,SNR=1.5 0.3nm,0.5s						

IDC 14 16:37:36.7±1.9,1.65N×126.46E,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=179.4km s-min=22.8km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.81**	**161**	P	P	16 42 40.8	-0.6
	2.5nm,0.6s,baz=339,slow=11,SNR=5.9 2.5nm,0.6s						
ASAR	**Alice Springs**	**26.19**	**164**	P	P	16 43 13.8	+0.5
	1.4nm,0.6s,baz=346,slow=10,SNR=5.4 1.4nm,0.6s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	P	16 47 38.7	-0.3
	1.0nm,0.7s,baz=132,slow=7.8,SNR=4.4 1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	P	16 48 07.7	+0.2
	0.8nm,0.6s,baz=118,slow=7.5,SNR=4.1 0.8nm,0.6s

TTSI	**Tana Toraja**	**8.01**	**235**	P	**Pn**	**16 40 49.6**	**+1.3**
	68nm,0.8s						
SPSI	**Sidrap Palu**	**8.60**	**230**	P	**Pn**	**16 40 59.0**	**+2.6**
	76nm,0.8s						
BNSI	**Bone**	**8.63**	**227**	P	**Pn**	**16 40 58.7**	**+1.9**
	77nm,0.9s						
MYLDM	**Lahad Datu**	**8.68**	**295**		**Pn**	**16 40 57.5**	**0.0**
BKSI	**Bulukumba**	**9.27**	**223**	P	**Pn**	**16 41 07.3**	**+1.7**
	44nm,0.8s						
KAPI	**Kappang**	**9.31**	**226**	Pn	**Pn**	**16 41 04.4**	**-1.7**
	5.1nm,0.3s,baz=47,slow=5.6,SNR=5.4						
KAPI				Sn	**Sn**	**16 42 48.3**	**-1.3**
	2.8nm,0.3s,baz=223,slow=16,SNR=1.4						
	7.9nm,0.4s						
BSSI	**Bau Bau, Buton**	**9.65**	**218**	P	**Pn**	**16 41 14.1**	**+3.2**
	39nm,0.9s						
BAKI	**Biak**	**10.07**	**106**	P	Pn	16 41 24.0	+7.4
EDFI	**Ende, Flores**	**11.25**	**205**	P	**Pn**	**16 41 35.7**	**+2.8**
SOEI	**Soe**	**11.42**	**191**		Pn	16 41 29.3	-6.0
SOEI	**Soe**	**11.42**	**191**	P	**Pn**	**16 41 38.9**	**+3.7**
BATI	**Baumata**	**11.99**	**193**	Pn	Pn	16 41 49.4	+6.5
	5.7nm,0.3s,baz=67,slow=4.5,SNR=4.5						
BATI	**Baumata**	**11.99**	**193**	P	Pn	16 41 47.6	+4.7
	41nm,1.0s						
SMPI	**Sarmi**	**12.79**	**106**	P	Pn	16 41 58.7	+4.9
	63nm,1.5s						
SBUM	**Sibu**	**14.21**	**274**		**Pn**	**16 42 13.1**	**0.0**
AUDHS	**Darwin High Sc**	**14.57**	**163**	P	**Pn**	**16 42 19.7**	**+1.6**
DRS	**Darwin Rock St**	**14.58**	**162**	P	**Pn**	**16 42 20.3**	**+2.0**
JAY	**Jayapura**	**14.85**	**106**	Pn	**P**	**16 42 26.4**	**-0.9**
	0.3nm,0.3s,baz=295,slow=7.7,SNR=3.8						
JAY	**Jayapura**	**14.85**	**106**	P	**Pn**	**16 42 22.7**	**+0.7**
	25nm,0.9s						
MTN	**Manton Dam**	**15.04**	**162**	Pn	**Pn**	**16 42 20.5**	**-3.9**
KNRA	**Kununurra**	**17.27**	**172**		**Pn**	**16 42 51.2**	**-1.6**
KNRA				IAmb	IAmb	16 42 55.0	
	comp=Z,106nm,1.1s						
PCJI	**Pacitan**	**18.00**	**237**	P	**P**	**16 43 03.7**	**+1.5**
	comp=Z,71nm,2.0s						
FITZ	**Fitzroy Crossi**	**19.53**	**182**	P	**P**	**16 43 18.5**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=10,slow=7.5,SNR=10						
	comp=Z,9.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.53**	**182**	P	**P**	**16 43 16.4**	**-2.6**
KPJI	**Karang Pucung**	**19.54**	**243**	P	**Pn**	**16 43 20.9**	**+0.3**
	comp=Z,49nm,0.9s						
PMBI	**Palembang**	**22.08**	**258**	P	**P**	**16 43 48.7**	**+2.1**
YULB	**Yu-li**	**22.28**	**348**	P	**P**	**16 43 45.4**	**-3.2**
TPUB	**Ta-pu**	**22.34**	**346**		**P**	**16 43 47.1**	**-2.2**
COEN	**Coen**	**22.66**	**133**	P	**P**	**16 43 49.5**	**-3.2**
COEN				IAmb	IAmb	16 44 08.4	
	comp=Z,38nm,1.3s						
WRAB	**Tennant Creek**	**22.72**	**160**	P	**P**	**16 43 50.9**	**-2.5**
WRAB	**Tennant Creek**	**22.72**	**160**	P	**P**	**16 43 53.0**	**-0.4**
WRA	**Warramunga Arr**	**22.73**	**160**	P	**P**	**16 43 52.8**	**-0.6**
	comp=Z,23nm,0.6s,baz=340,slow=11,SNR=32						
	comp=Z,23nm,0.6s						
SSLB	**Suanglung**	**22.73**	**347**	P	**P**	**16 43 51.3**	**-2.2**
SSLB				IAmb	IAmb	16 43 57.1	
	comp=Z,84nm,1.5s						
MBWA	**Marble Bar**	**23.49**	**196**	P	**P**	**16 43 58.7**	**-2.4**
MBWA				IAmb	IAmb	16 44 01.8	
	comp=Z,22nm,0.8s						
YHNB	**Yeheng**	**23.50**	**348**	P	**P**	**16 43 58.1**	**-3.1**
YHNB				IAmb	IAmb	16 44 19.2	
	comp=Z,28nm,1.0s						
PSA00	**Pilbara Seismi**	**23.85**	**195**	P	**P**	**16 44 02.7**	**-1.9**
PSA00				IAmb	IAmb	16 44 05.7	
	comp=Z,19nm,0.8s						
MNAI	**Manna**	**24.16**	**256**	P	**P**	**16 44 05.3**	**-2.2**
QIS	**Mount Isa**	**25.49**	**150**	P	**P**	**16 44 20.9**	**+1.4**
IPM	**Ipoh**	**25.51**	**277**	P	**P**	**16 44 18.2**	**-1.6**
AS31	**Alice Springs**	**26.10**	**164**	P	**P**	**16 44 24.4**	**-0.7**
ASAR	**Alice Springs**	**26.10**	**164**	P	**P**	**16 44 25.3**	**+0.2**
	comp=Z,6.9nm,0.5s,baz=346,slow=7.6,SNR=24						
	comp=Z,6.9nm,0.5s						
ASAR	**Alice Springs**	**26.10**	**164**	P	**P**	**16 44 24.6**	**-0.5**
RABL	**Rabaul**	**26.36**	**103**	P	**P**	**16 44 22.3**	**-5.2**
RABL				IAmb	IAmb	16 44 33.8	
	comp=Z,17nm,0.6s						
GIRL	**Giralia**	**26.81**	**206**	P	**P**	**16 44 29.7**	**-1.8**
GSI	**Gunungsitoli**	**28.82**	**270**	P	**P**	**16 44 48.3**	**-1.3**
GSI				IAmb	IAmb	16 44 53.8	
	comp=Z,26nm,1.2s						
CTA	**Charters Tower**	**29.00**	**139**	P	P	16 44 56.1	+5.0
NJ2	**Nanjing**	**31.17**	**348**	*e*P	**P**	**16 45 10.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GYA	**Guiyang**	**31.21**	**324**	‖P	**P**	**16 45 11.0**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
JNU	**Nakatsue**	**31.69**	**7**	P	**P**	**16 45 11.8**	**-3.0**
CHTO	**Chiang Mai**	**31.92**	**304**	P	**P**	**16 45 15.4**	**-1.5**
MORW	**Morawa**	**32.02**	**197**	P	**P**	**16 45 16.5**	**-1.1**
FORT	**Forrest**	**32.18**	**177**	P	**P**	**16 45 18.7**	**-0.3**
FORT				IAmb	IAmb	16 45 27.3	
	comp=Z,21nm,1.4s						
INKA	**Innaminka**	**32.22**	**156**	P	**P**	**16 45 18.5**	**-0.8**
BLDU	**Ballidu**	**33.29**	**195**	P	**P**	**16 45 32.1**	**+3.4**
KLBR	**Kellerberrin**	**33.96**	**193**	P	**P**	**16 45 36.2**	**+1.6**
PZH	**PanZhiHua**	**34.32**	**318**	P	**P**	**16 45 39.4**	**+1.5**
INU	**Inuyama**	**35.05**	**15**	P	**P**	**16 45 42.0**	**-2.0**
INU				IAmb	IAmb	16 45 45.6	
	comp=Z,18nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.36**	**193**	P	**P**	**16 45 46.8**	**+0.1**
NWAO				IAmb	IAmb	16 45 51.5	
	comp=Z,19nm,1.0s						
BBOO	**Buckleboo**	**35.37**	**166**	P	**P**	**16 45 46.5**	**-0.2**
BBOO				IAmb	IAmb	16 45 47.6	
	comp=Z,18nm,1.0s						
KSRS	**Korea Array**	**35.76**	**2**	P	**P**	**16 45 51.2**	**+1.2**
	comp=Z,9.0nm,0.3s,baz=182,slow=9.8,SNR=6.3						
	comp=Z,9.0nm,0.3s						
EIDS	**Eidsvold**	**35.87**	**140**	P	**P**	**16 45 50.2**	**-0.9**
EIDS				IAmb	IAmb	16 46 08.6	
	comp=Z,25nm,1.5s						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**16 45 53.9**	**-0.2**
	comp=Z,9.2nm,0.7s,baz=330,slow=9.6,SNR=13						
	comp=Z,9.2nm,0.7s						
XAN	**Xi'an**	**36.23**	**335**	P	**P**	**16 45 52.4**	**-1.8**
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
MJAR	**Matsushiro Arr**	**36.50**	**16**	P	**P**	**16 45 57.0**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=181,slow=9.5,SNR=6.0						
	comp=Z,2.4nm,0.8s						
JMM	**Marumori**	**38.49**	**18**	P	**P**	**16 46 11.1**	**-2.1**
LZH	**Lanzhou**	**40.23**	**331**	*e*P	P	16 46 33.8	+5.8
LZH				sP	sP	16 46 47.5	+5.7
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
JTM	**Tenmabayashi**	**41.26**	**17**	P	**P**	**16 46 33.3**	**-2.9**
HHC	**Hu-ho-hao-te**	**41.37**	**343**	*e*P	**P**	**16 46 38.9**	**+1.7**
BTO	**Baotou**	**41.62**	**341**	*e*P	**P**	**16 46 39.6**	**+0.3**
BTO				S	**S**	**16 53 00.8**	**+7.3**
BTO				pmax	pmax		
	comp=Z,17nm,0.5s						
BTO				pmax	pmax		
	comp=Z,8μm,8.8s						
BTO				LR	LR		
	comp=N,25μm,17.9s						
BTO				LR	LR		
	comp=E,25μm,16.5s						
BTO				LR	LR		
	comp=Z,62μm,19.1s						
CAN	**Canberra**	**42.33**	**152**	P	**P**	**16 46 44.1**	**-1.0**
CAN				IAmb	IAmb	16 46 47.6	
	comp=Z,23nm,1.3s						
TOO	**Toolangi**	**42.74**	**157**	P	**P**	**16 46 47.6**	**-0.8**
USRK	**Ussuriysk Ar.**	**42.76**	**6**	P	**P**	**16 46 49.5**	**+1.1**
	comp=Z,5.6nm,0.9s,baz=186,slow=6.2,SNR=7.3						
	comp=Z,5.6nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**42.93**	**64**	T	T	17 33 26.1	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**42.95**	**64**	T	T	17 33 31.6	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**42.95**	**64**	T	T	17 33 28.3	
	baz=252						
EVN	**Everest**	**46.06**	**308**		**P**	**16 47 12.7**	**-3.1**
EVN				IAmb	IAmb	16 47 16.7	
	comp=Z,14nm,1.2s						
HEH	**HeiHe**	**48.54**	**1**	*e*P	**P**	**16 47 37.3**	**+3.4**
HEH				pmax	pmax		
	comp=Z,13nm,0.7s						
SONM	**Songino Array**	**49.26**	**342**	P	**P**	**16 47 39.0**	**-0.8**
	comp=Z,3.5nm,0.9s,baz=165,slow=7.9,SNR=6.3						
	comp=Z,3.5nm,0.9s						
WMQ	**Urumqi**	**54.33**	**326**	*e*P	**P**	**16 48 16.8**	**-0.8**
WMQ				pP	pP	16 48 27.8	+0.2
WMQ				PcP	**PcP**	**16 49 27.0**	**+5.7**
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
PETK	**Petropavlovsk-**	**57.56**	**22**	P	**P**	**16 48 41.7**	**+1.3**
	comp=Z,4.7nm,0.8s,baz=194,slow=5.6,SNR=11						
	comp=Z,4.7nm,0.8s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**16 48 51.0**	**-0.7**
	comp=Z,4.6nm,0.5s,baz=120,slow=7.1,SNR=20						
	comp=Z,4.6nm,0.5s						
MAKZ	**Makanchi**	**59.35**	**326**	P	**P**	**16 48 54.2**	**+1.1**
MAKZ	**Makanchi**	**59.35**	**326**	P	**P**	**16 48 54.1**	**+1.0**
ZALV	**Zalesovo Beam**	**62.38**	**334**	P	**P**	**16 49 12.9**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=128,slow=7.3,SNR=2.4						
	comp=Z,1.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.40**	**328**	P	**P**	**16 49 19.4**	**-0.9**
	comp=Z,11nm,0.8s,baz=132,slow=6.2,SNR=22						
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**63.41**	**328**		**P**	**16 49 17.9**	**-2.4**
KURK	**Kurchatov**	**63.41**	**328**	P	**P**	**16 49 19.7**	**-0.6**
KURK				sP	**sP**	**16 49 35.4**	**+0.9**
KURK	**Kurchatov**	**63.41**	**328**	P	**P**	**16 49 19.5**	**-0.8**
KK31	**Karatay Array**	**64.61**	**318**	P	**P**	**16 49 26.8**	**-1.7**
KK31				IAmb	IAmb	16 49 29.1	
	comp=Z,13nm,1.4s						
BVAR	**Borovoye Array**	**68.97**	**328**	P	**P**	**16 49 55.8**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=139,slow=13,SNR=6.9						
	comp=Z,2.1nm,0.6s						
NRIK	**Noril'sk**	**72.46**	**346**	P	**P**	**16 50 17.5**	**+0.6**
	comp=Z,7.0nm,0.6s,baz=111,slow=5.7,SNR=12						
	comp=Z,7.0nm,0.6s						
VNDA	**Vanda**	**81.31**	**173**	P	**P**	**16 51 08.6**	**+1.9**
	comp=Z,3.2nm,0.7s,baz=307,slow=7.0,SNR=2.8						
	comp=Z,3.2nm,0.7s						
VNDA	**Vanda**	**81.31**	**173**	P	**P**	**16 51 05.6**	**-1.1**
VNDA				IAmb	IAmb	16 51 16.9	
	comp=Z,11nm,1.3s						
MAW	**Mawson**	**81.61**	**200**	P	**P**	**16 51 08.1**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=336,slow=3.7,SNR=2.3						
	comp=Z,4.9nm,0.9s						
KBZ	**Khabaz**	**84.24**	**314**	P	**P**	**16 51 22.9**	**+0.4**
	comp=Z,5.2nm,1.0s,baz=151,slow=4.0,SNR=2.7						
	comp=Z,5.2nm,1.0s						
ILAR	**Eielson Array**	**87.20**	**25**	P	**P**	**16 51 36.7**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=307,slow=3.3,SNR=1.5						
	comp=Z,1.5nm,1.0s						
KMBO	**Kilima Mbogo**	**89.19**	**269**	P	**P**	**16 51 46.4**	**-1.2**
	comp=Z,1.2nm,0.4s,baz=227,slow=16,SNR=1.3						
	comp=Z,1.2nm,0.4s						
MMAI	**Mount Meron Ar**	**90.01**	**303**	P	**P**	**16 51 49.8**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=101,slow=7.5,SNR=4.3						
	comp=Z,0.5nm,0.4s						
BRTR	**Keskin Array B**	**91.16**	**310**	P	**P**	**16 51 55.3**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=114,slow=4.5,SNR=3.1						
	comp=Z,1.4nm,0.8s						
BRTR	**Keskin Array B**	**91.16**	**310**	P	**P**	**16 51 54.6**	**-1.5**
ARCES	**ARCESS Array B**	**92.38**	**340**	P	**P**	**16 52 00.7**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=123,slow=4.6,SNR=5.1						
	comp=Z,3.9nm,0.9s						
ARCES	**ARCESS Array B**	**92.38**	**340**	P	**P**	**16 52 00.2**	**-0.8**
SPITS	**Spitsbergen Ar**	**92.55**	**349**	P	**P**	**16 52 02.0**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=69,slow=7.9,SNR=1.7						
	comp=Z,5.3nm,0.8s						
AKASG	**Malin Array Be**	**93.37**	**321**	P	**P**	**16 52 06.1**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=74,slow=4.8,SNR=2.3						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**93.59**	**332**	P	**P**	**16 52 05.3**	**-1.4**
	comp=Z,3.5nm,0.8s,baz=61,slow=5.5,SNR=2.2						
	comp=Z,3.5nm,0.8s						
BURAR	**Kocovina Array**	**96.41**	**318**	P	**P**	**16 52 19.1**	**-1.0**
HFS	**Hagfors**	**99.79**	**332**	P	**Pdif**	**16 52 34.7**	**-0.1**
	comp=Z,5.6nm,1.1s,baz=101,slow=7.5,SNR=2.0						
	comp=Z,5.6nm,1.1s						
TXAR	**Lajitas Array**	**123.17**	**53**	PKP	**PKPdf**	**16 57 48.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=298,slow=2.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**123.26**	**287**	PKP	**PKPdf**	**16 57 49.0**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=54,slow=2.6,SNR=2.9						
PLCA	**Paso Flores**	**138.07**	**161**	PKP	**PKPdf**	**16 58 17.0**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=229,slow=7.8,SNR=4.1						
MT13	**San Alfonso**	**144.35**	**156**	PKPdf	**PKPab**	**16 58 26.1**	**+0.5**
CO02	**Combarbal**	**146.21**	**153**		**PKPdf**	**16 58 31.9**	**+1.1**

IDC 14 16:41:13.0±2.2, 1°.93N×127°.23E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=198.2km s-min=24.9km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.83**	**163**	P	P	16 46 18.1	+0.3
	2.4nm,0.6s,baz=341,slow=10.0,SNR=3.1						
	2.4nm,0.6s						
ASAR	**Alice Springs**	**26.26**	**166**	P	P	16 46 49.5	-0.6
	0.5nm,0.5s,baz=345,slow=10,SNR=1.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**59.31**	**326**	P	P	16 51 15.9	-0.8
	0.4nm,0.4s,baz=118,slow=8.3,SNR=1.3						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.52**	**328**	P	P	16 51 46.1	+1.0
	0.6nm,0.6s,baz=124,slow=6.4,SNR=2.1						
	0.6nm,0.6s						

*IDC **14** 16:42:49.5±1.6, 1°.72N×126°.42E, h0km, mb3.8/5, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=122.8km s-min=20.0km az=69.0*
*NEIC **14** 16:42:53.4±2.1, 1°.39N±0°.10×126°.00E±0°.06, h35km±2km, mb4.1/10, Error ellipse: s-maj=17.5km s-min=8.6km az=196.0*

ISC 14 16:42:53.7±0.8, 1°.41N±0°.10×126°.0E±0°.1, h35km, n21, σ1§64/20, mb4.0/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.53**	**114**	Pn	**Pn**	**16 43 17.3**	**-1.2**
LUWI	**Luwuk**	**4.02**	**233**	Pn	**Pn**	**16 43 52.1**	**-0.7**
TOLI2	**Tolitoli**	**5.20**	**267**	Pn	**Pn**	**16 44 08.7**	**-0.4**
MYLDM	**Lahad Datu**	**8.35**	**297**	Pn	**Pn**	**16 44 51.5**	**-0.9**
MTN	**Manton Dam**	**15.06**	**160**		**P**	**16 46 27.8**	**-1.2**
MTN				IAmb	IAmb	16 46 39.9	
	comp=Z,6.8nm,0.9s						
KNRA	**Kununurra**	**17.20**	**171**		**Pn**	**16 46 51.1**	**-0.3**
KNRA				IAmb	IAmb	16 46 52.4	
	comp=Z,9.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.39**	**181**	P	**Pn**	**16 47 20.9**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=7.1,slow=8.1,SNR=1.7						
	comp=Z,1.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.39**	**181**	P	**P**	**16 47 16.1**	**-0.6**
TPUB	**Ta-pu**	**22.37**	**347**	P	**P**	**16 47 47.3**	**-1.7**
WRAB	**Tennant Creek**	**22.75**	**159**	P	**P**	**16 47 50.4**	**-2.6**
WRA	**Warramunga Arr**	**22.75**	**159**	P	**P**	**16 47 55.0**	**+1.9**
	comp=Z,2.4nm,0.5s,baz=339,slow=10.0,SNR=5.7						
	comp=Z,2.4nm,0.5s						
MBWA	**Marble Bar**	**23.25**	**195**	P	**P**	**16 47 55.7**	**-2.4**
AS31	**Alice Springs**	**26.09**	**163**	P	**P**	**16 48 26.4**	**+2.0**
ASAR	**Alice Springs**	**26.09**	**163**	P	**P**	**16 48 26.2**	**+1.9**
	comp=Z,1.2nm,0.8s,baz=343,slow=11,SNR=4.3						
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**59.04**	**326**	P	**P**	**16 52 51.4**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=120,slow=7.4,SNR=4.4						
	comp=Z,0.6nm,0.4s						
MAKZ	**Makanchi**	**59.22**	**326**	P	**P**	**16 52 52.4**	**+0.9**
MAKZ				IAmb	IAmb	16 53 00.6	
	comp=Z,2.9nm,1.2s						
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	**P**	**16 53 20.1**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=126,slow=6.8,SNR=4.1						
	comp=Z,0.6nm,0.6s						
KURK	**Kurchatov**	**63.29**	**328**	P	**P**	**16 53 20.1**	**+1.2**
KURK	**Kurchatov**	**63.29**	**328**	IAmb	IAmb	16 53 25.5	
	comp=Z,2.3nm,1.0s						
BVAR	**Borovoye Array**	**68.85**	**328**	P	**P**	**16 53 55.8**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=114,slow=3.6,SNR=2.9						
	comp=Z,1.0nm,0.7s						
D19K	**Kuna River**	**83.54**	**21**	P	**P**	**16 55 17.6**	**-0.2**

*IDC **14** 16:43:45.9±1.0, 1°.59N×126°.12E, h0km, mb4.1/9, mbtmp4.1/10, ML4.1/1, Error ellipse: s-maj=110.3km s-min=15.2km az=69.0*
*DJA **14** 16:43:49.4±0.2, 2°.N±3°×12°6E±°, h10km, M4.3/10, MLv4.3/10*
*NEIC **14** 16:43:51.3±1.6, 1°.58N±0°.08×126°.38E±0°.04, h35km±2km, mb4.4/15, Error ellipse: s-maj=13.0km s-min=6.3km az=178.0*

ISC 14 16:43:51.0±0.6, 1°.61N±0°.06×126°.40E±0°.07, h35km, n39, σ1§12/37, mb4.2/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**131**	Pn	**Pn**	**16 44 13.0**	**+0.6**
TNTI	**Ternate**	**1.28**	**131**	P	**Pn**	**16 44 12.2**	**-0.2**
TNTI				S	**Sn**	**16 44 30.4**	**+2.1**
SGSI	**Sangihe**	**2.24**	**337**	P	**Pn**	**16 44 27.0**	**+1.4**
KMSI	**Cibinong**	**2.63**	**247**	P	**Pn**	**16 44 32.2**	**+1.3**
SANI	**Sanana**	**3.66**	**186**	P	**Pn**	**16 44 47.3**	**+2.2**
LUWI	**Luwuk**	**4.48**	**234**	Pn	**Pn**	**16 44 56.3**	**-0.1**
LUWI	**Luwuk**	**4.48**	**234**	P	**Pn**	**16 44 58.3**	**+1.9**
TOLI2	**Tolitoli**	**5.64**	**265**	Pn	**Pn**	**16 45 11.0**	**-1.3**
MYLDM	**Lahad Datu**	**8.64**	**294**		**Pn**	**16 45 55.3**	**+1.7**
MTN	**Manton Dam**	**15.11**	**162**		**Pn**	**16 47 21.6**	**-0.4**
MTN				IAmb	IAmb	16 47 27.3	
	comp=Z,26nm,1.5s						
KNRA	**Kununurra**	**17.34**	**172**	P	**Pn**	**16 47 50.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**16 48 15.8**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=9.1,slow=12,SNR=1.7						
	comp=Z,1.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**16 48 14.9**	**-1.5**
YULB	**Yu-li**	**22.21**	**348**	P	**P**	**16 48 45.8**	**+1.2**
TPUB	**Ta-pu**	**22.27**	**346**	P	**P**	**16 48 45.1**	**-0.2**
WRAB	**Tennant Creek**	**22.79**	**160**	P	**P**	**16 48 49.5**	**-1.2**
WRAB				IAmb	IAmb	16 49 08.5	
	comp=Z,8.5nm,0.9s						
WRA	**Warramunga Arr**	**22.79**	**160**	P	**P**	**16 48 49.6**	**-1.2**
	comp=Z,3.7nm,0.6s,baz=337,slow=10.0,SNR=8.8						
	comp=Z,3.7nm,0.6s						
AS31	**Alice Springs**	**26.16**	**164**	P	**P**	**16 49 21.3**	**-1.0**
ASAR	**Alice Springs**	**26.16**	**164**	P	**P**	**16 49 23.1**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=341,slow=8.0,SNR=12						
	comp=Z,2.4nm,0.5s						
ASAR	**Alice Springs**	**26.16**	**164**	P	**P**	**16 49 22.2**	**-0.1**
FORT	**Forrest**	**32.25**	**177**	P	**P**	**16 50 14.6**	**-1.6**
FORT				IAmb	IAmb	16 50 20.2	
	comp=Z,4.9nm,0.9s						
INKA	**Innaminka**	**32.28**	**156**	P	**P**	**16 50 17.5**	**+0.9**
INKA				IAmb	IAmb	16 50 18.3	
	comp=Z,3.9nm,1.1s						
BBOO	**Buckleboo**	**35.43**	**166**	P	**P**	**16 50 43.2**	**-0.7**
STKA	**Stephens Creek**	**36.29**	**158**	P	**P**	**16 50 52.5**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=346,slow=8.3,SNR=2.3						
	comp=Z,2.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**42.91**	**64**	T	T	17 38 42.3	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**42.93**	**64**	T	T	17 38 58.6	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**42.93**	**64**	T	T	17 39 09.9	
	baz=252						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**16 53 47.2**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=117,slow=6.9,SNR=9.8						
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**62.32**	**334**	P	**P**	**16 54 08.7**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=140,slow=7.9,SNR=2.1						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**16 54 15.7**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=127,slow=6.1,SNR=10.0						
	comp=Z,1.6nm,0.6s						
KURK	**Kurchatov**	**63.35**	**328**	P	**P**	**16 54 15.6**	**-1.0**
KURK				IAmb	IAmb	16 54 18.6	
	comp=Z,4.1nm,0.7s						
BVAR	**Borovoye Array**	**68.91**	**328**	P	**P**	**16 54 51.9**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=146,slow=8.0,SNR=1.4						
	comp=Z,0.7nm,0.5s						
NRIK	**Noril'sk**	**72.40**	**346**	P	**P**	**16 55 13.7**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=118,slow=3.7,SNR=5.2						
	comp=Z,2.5nm,0.6s						
ABKAR	**Akbulak array**	**73.58**	**321**	P	**P**	**16 55 19.2**	**-1.3**
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**16 56 04.5**	**+0.9**
	comp=Z,2.7nm,1.0s,baz=121,slow=2.2,SNR=4.6						
	comp=Z,2.7nm,1.0s						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**16 56 03.3**	**-0.3**
VNDA				IAmb	IAmb	16 56 22.1	
	comp=Z,8.8nm,1.1s						
D20K	**Etivluk River**	**83.79**	**21**		**P**	**16 56 16.7**	**+0.3**
SKT	**Skwentna**	**84.85

0.4nm20nm,1.0s
APSI Ampana 5.48 242 P Pn 16 53 27.3 +2.0
TOLI2 Tolitoli 5.73 264 Pn 16 53 28.7 0.0
TOLI2 Sn Sn 16 54 30.5 -2.7
MPSI Mapaga 6.72 258 P Pn 16 53 43.7 +1.4
26nm,0.8s
FAKI Fak Fak 7.37 128 Pn Pn 16 53 53.0 +1.8
TTSI Tana Toraja 8.16 235 P Pn 16 54 03.5 +1.4
25nm,0.6s
MYLDM Lahad Datu 8.69 294 Pn 16 54 10.7 +1.4
SPSI Sidrap Palu 8.75 230 P Pn 16 54 12.3 +2.1
19nm,0.6s
BNSI Bone 8.79 226 P Pn 16 54 12.0 +1.3
BKSI Bulukumba 9.43 222 P Pn 16 54 21.1 +1.6
8µm14nm,0.6s
KAPI Kappang 9.47 225 Pn Pn 16 54 16.5 -3.5
2.9nm,0.3s,baz=44,slow=5.5,SNR=5.7
3.3nm,0.4s
KAPI Kappang 9.47 225 Pn 16 54 17.6 -2.4
BSSI Bau Bau, Buton 9.82 217 P Pn 16 54 26.7 +1.8
EDFI Ende, Flores 11.42 205 P Pn 16 54 48.5 +1.5
SOEI Soe 11.59 191 Pn Pn 16 54 49.0 -0.2
SBUM Sibu 14.27 273 Pn 16 55 28.9 +3.1
MTN Manton Dam 15.16 162 Pn Pn 16 55 36.5 -1.3
KNRA Kununurra 17.41 173 P Pn 16 56 05.3 -1.0
FITZ Fitzroy Crossi 19.69 182 P P 16 56 31.4 -1.0
0.3nm,0.3s,baz=4.5,slow=12,SNR=8.8
3.2nm,0.6s
FITZ Fitzroy Crossi 19.69 182 P P 16 56 30.6 -1.8
YULB Yu-li 22.15 347 P P 16 56 56.5 -2.5
YULB IAmb IAmb 16 57 03.8
comp=Z,31nm,1.1s
TPUB Ta-pu 22.21 346 P P 16 56 59.0 -0.7
SSLB Suanglung 22.60 347 P P 16 57 03.2 -0.7
SSLB IAmb IAmb 16 57 30.9
comp=Z,106nm,1.5s
COEN Coen 22.71 134 P P 16 57 04.2 -0.9
COEN IAmb IAmb 16 57 13.5
comp=Z,29nm,1.2s
WRAB Tennant Creek 22.84 161 P P 16 57 05.1 -1.3
WRAB IAmb IAmb 16 57 10.4
comp=Z,27nm,1.1s
WRA Warramunga Arr 22.84 161 P P 16 57 05.5 -1.0
comp=Z,111nm,0.6s,baz=338,slow=11,SNR=18
comp=Z,111nm,0.6s
YHNB Yeheng 23.37 348 P P 16 57 11.8 +0.1
YHNB IAmb IAmb 16 57 19.6
comp=Z,57nm,1.2s
MBWA Marble Bar 23.66 196 P P 16 57 12.4 -2.0
MBWA IAmb IAmb 16 57 27.0
comp=Z,48nm,1.5s
PSA00 Pilbara Seismi 24.02 195 P P 16 57 16.7 -1.1
PSA00 IAmb IAmb 16 57 16.9
comp=Z,38nm,1.4s
JOW Kunigami 25.05 4 P P 16 57 26.4 -0.8
AS31 Alice Springs 26.22 164 P P 16 57 37.3 -0.6
ASAR Alice Springs 26.22 164 P P 16 57 38.2 +0.3
comp=Z,2.8nm,0.6s,baz=349,slow=15,SNR=22
ASAR PcP PcP 17 01 04.7 +0.4
comp=Z,0.5nm,0.4s,baz=336,slow=2.3,SNR=1.3
comp=Z,2.8nm,0.6s
GIRL Giralia 26.98 206 P P 16 57 44.4 -0.3
CHTO Chiang Mai 31.90 304 P P 16 58 28.0 -0.5
CHTO IAmb IAmb 16 58 52.4
comp=Z,13nm,1.4s
MORW Morawa 32.18 197 P P 16 58 30.6 -0.2
MORW IAmb IAmb 16 58 49.7
comp=Z,26nm,1.4s
INKA Innaminka 32.33 156 P P 16 58 34.2 +2.1
FORT Forrest 32.33 177 P P 16 58 31.8 -0.3
FORT IAmb IAmb 16 58 36.6
comp=Z,7.5nm,0.7s
BBOO Buckleboo 35.49 166 P P 16 58 58.0 -1.5
BBOO IAmb IAmb 16 59 19.8
comp=Z,32nm,1.5s
KSRS Korea Array 35.61 2 P P 16 59 00.9 +0.5
comp=Z,0.8nm,0.8s,baz=184,slow=9.5,SNR=4.5
comp=Z,0.8nm,0.8s
MJAR Matsushiro Arr 36.33 16 P P 16 59 08.0 +1.3
comp=Z,2.5nm,0.9s,baz=186,slow=9.7,SNR=2.8
comp=Z,2.5nm,0.9s
STKA Stephens Creek 36.34 158 P P 16 59 07.6 +0.8
comp=Z,2.9nm,0.6s,baz=332,slow=9.1,SNR=6.9
comp=Z,2.9nm,0.6s
JMM Marumori 38.32 18 P P 16 59 23.8 +0.3
ARMA Armidale 39.93 145 P P 16 59 35.9 -1.3
ARMA IAmb IAmb 16 59 39.0
comp=Z,21nm,1.4s
CAN Canberra 42.42 152 P P 16 59 57.9 +0.3
CAN IAmb IAmb 17 00 10.0
comp=Z,35nm,1.4s
USRK Ussuriysk Ar. 42.60 6 P P 16 59 59.9 +1.1
comp=Z,3.5nm,0.8s,baz=185,slow=8.7,SNR=4.4
comp=Z,3.5nm,0.8s
H11S3 WAKE ISLAND Hy 42.80 64 T T 17 46 43.9
baz=252
H11S2 WAKE ISLAND Hy 42.81 64 T T 17 46 37.8
baz=252
H11S1 WAKE ISLAND Hy 42.82 64 T T 17 46 37.8
baz=252
TOO Toolangi 42.86 158 P P 17 00 00.6 -0.4
EVN Everest 46.02 308 P P 17 00 25.1 -2.2
EVN IAmb IAmb 17 00 45.9
comp=Z,12nm,1.2s
TARA Tarawa 46.42 90 P P 17 00 27.2 -2.7
HILR Hailar Array B 48.03 354 P P 17 00 43.4 +1.6
comp=Z,1.4nm,0.5s,baz=179,slow=10,SNR=2.1
comp=Z,1.4nm,0.5s
SONM Songino Array 49.14 342 P P 17 00 52.1 +1.6
comp=Z,0.9nm,0.6s,baz=156,slow=7.7,SNR=2.2
comp=Z,0.9nm,0.6s
MKAR Makanchi Array 59.08 326 P P 17 02 03.3 +0.4
comp=Z,2.2nm,0.4s,baz=121,slow=7.0,SNR=32
comp=Z,2.2nm,0.4s
TARG Taragay, Kyrgy 59.10 319 P P 17 02 02.8 -0.8
TARG IAmb IAmb 17 02 18.0
comp=Z,8.0nm,1.4s
MAKZ Makanchi 59.27 326 P P 17 02 03.3 -0.9
MAKZ IAmb IAmb 17 02 05.9
comp=Z,3.9nm,0.7s
KDJ Kajisay 59.70 319 P P 17 02 07.4 -0.1
LBZ Lake Benmore 60.16 145 P P 17 02 10.0 -0.3
TUWZ Tuamarina 60.74 141 P P 17 02 13.4 -0.9
BKZ Black Stump Fm 61.26 137 P P 17 02 17.8 -0.2
BHW Baring Head 61.32 140 P P 17 02 17.4 -0.9
ARSB Arslanbob 62.15 317 P P 17 02 23.8 -0.3
ZALV Zalesovo Beam 62.28 334 P P 17 02 24.1 -0.4
comp=Z,0.7nm,0.3s,baz=133,slow=7.0,SNR=5.3
comp=Z,0.7nm,0.3s
GAR Garm 63.12 313 P P 17 02 30.0 -0.6
KURBB Kurchatov Arra 63.31 328 P P 17 02 31.6 +0.1
comp=Z,2.7nm,0.5s,baz=129,slow=6.3,SNR=26
comp=Z,2.7nm,0.5s
KURK Kurchatov 63.32 328 P P 17 02 32.0 +0.5
KURK IAmb IAmb 17 02 38.0
comp=Z,7.4nm,0.6s
BVAR Borovoye Array 68.88 327 P P 17 03 07.5 +0.2
comp=Z,1.7nm,0.5s,baz=134,slow=9.3,SNR=9.2
comp=Z,1.7nm,0.5s
TIXI Tiksi 69.86 1 P P 17 03 13.3 +0.4
comp=Z,1.3nm,0.5s,baz=280,slow=8.0,SNR=3.4
comp=Z,1.3nm,0.5s
TIXI Tiksi 69.86 1 IAmb IAmb 17 03 18.7
comp=Z,18nm,1.5s
NRIK Noril'sk 72.33 346 P P 17 03 29.2 +1.3
comp=Z,3.5nm,0.7s,baz=134,slow=5.0,SNR=5.9
comp=Z,3.5nm,0.7s
AB31 Akbulak array 73.56 321 P 17 03 34.8 -0.8
ABKAR Akbulak array 73.56 321 P P 17 03 35.2 -0.3
VNDA Vanda 81.45 173 P P 17 04 19.2 +0.1
comp=Z,0.6nm,0.5s,baz=331,slow=5.8,SNR=4.0
comp=Z,0.6nm,0.5s
VNDA Vanda 81.45 173 P P 17 04 19.2 +0.1
D19K Kuna River 83.09 21 P P 17 04 29.1 +1.1
E19K Redstone River 83.19 22 P P 17 04 29.2 +0.7
E19K IAmb IAmb 17 04 41.9
comp=Z,12nm,1.1s
KBZ Khabaz 84.19 314 P P 17 04 33.2 -0.7
comp=Z,1.3nm,0.9s,baz=69,slow=8.6,SNR=2.1
comp=Z,1.3nm,0.9s
B21K Ikpikpuk River 84.55 20 P P 17 04 35.7 +0.5
SKT Skwentna 84.74 28 P P 17 04 36.7 +0.2
B22K Teshekpuk Lake 85.08 20 P P 17 04 37.9 0.0
C23K Itkillik River 85.96 20 P P 17 04 42.5 +0.2
KLU Klutina 87.37 29 P P 17 04 48.6 -1.0
KLU IAmb IAmb 17 05 06.5
comp=Z,16nm,1.4s
C27K Jago River 88.35 21 P P 17 04 55.8 +1.8
D27M Malcolm River 89.34 21 P P 17 04 59.7 +1.0
ARCES ARCESS Array B 92.26 340 P P 17 05 11.8 -0.4
comp=Z,2.5nm,0.8s,baz=76,slow=5.8,SNR=5.3
comp=Z,2.5nm,0.8s
ARCES ARCESS Array B 92.26 340 IAmb IAmb 17 05 22.2
comp=Z,12nm,1.4s
FINES FINESS Array B 93.49 332 P P 17 05 19.2 +1.3
comp=Z,2.4nm,0.9s,baz=62,slow=5.1,SNR=3.7
comp=Z,2.4nm,0.9s
F42A Maple Grove Fa 123.70 29 PKPdf 17 11 00.9 +0.5
J61A Chester 132.01 19 PKPpre 17 11 02.7
LR03 Panguipulli 138.53 158 PKPpre 17 11 22.3

*IDC **14** 16:55:59.1±1.6, 1.61N×126.38E, h0km, mb3.8/5, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=120.1km s-min=19.7km az=69.0*
*NEIC **14** 16:56:04.1±0.6, 1.6N±0.1×126.49E±0.05, h35km±2km, mb4.0/6, Error ellipse: s-maj=17.9km s-min=7.7km az=179.0*
ISC 14 16:56:03.5±0.9, 1.6N±0.1×126.5E±0.1, h35km, n15, σ0s74/14, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.22	134		Pn	16 56 24.2	+0.1
LUWI	Luwuk	4.57	235	Pn	Pn	16 57 10.4	+0.1
KNRA	Kununurra	17.34	173	P	Pn	17 00 03.8	+0.8
KNRA				IAmb	IAmb	17 00 40.2	
comp=Z,35nm,1.5s							
FITZ	Fitzroy Crossi	19.62	182	P	P	17 00 28.6	-0.6
comp=Z,0.1nm,0.3s,baz=12,slow=9.3,SNR=3.2							
comp=Z,6.2nm,1.1s							
FITZ	Fitzroy Crossi	19.62	182	IAmb	IAmb	17 00 31.4	
comp=Z,6.0nm,1.4s							
WRA	Warramunga Arr	22.78	161	P	P	17 01 03.2	+0.1
comp=Z,2.8nm,0.5s,baz=339,slow=11,SNR=7.2							
comp=Z,2.8nm,0.5s							
AS31	Alice Springs	26.16	164	P	P	17 01 33.8	-1.0
ASAR	Alice Springs	26.16	164	P	P	17 01 35.9	+1.1
comp=Z,1.2nm,0.5s,baz=347,slow=12,SNR=13							
comp=Z,1.2nm,0.5s							
ASAR	Alice Springs	26.16	164	P	P	17 01 34.2	-0.6
JNU	Nakatsue	31.60	7	P	P	17 02 22.9	-0.2
BBOO	Buckleboo	35.43	166	P	P	17 02 56.1	-0.3
MKAR	Makanchi Array	59.15	326	P	P	17 06 01.2	+0.4
comp=Z,1.0nm,0.7s,baz=123,slow=6.9,SNR=0.6							
comp=Z,1.0nm,0.7s							
KURBB	Kurchatov Arra	63.38	328	P	P	17 06 30.1	+0.7
comp=Z,0.3nm,0.5s,baz=128,slow=6.0,SNR=1.7							
comp=Z,0.3nm,0.5s							
KURK	Kurchatov	63.38	328	P	P	17 06 28.4	-1.0
BVAR	Borovoye Array	68.95	328	P	P	17 07 06.0	+0.9
comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=1.5							
comp=Z,0.3nm,0.4s							

IDC 14 16:59:36.3±1.8, 1.78N×126.71E, h0km, mb3.3/4, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=125.2km s-min=22.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.78	183	P	P	17 04 07.1	-1.2
0.1nm,0.3s,baz=11,slow=10,SNR=1.5							
2.1nm,1.1s							
WRA	Warramunga Arr	22.85	161	P	P	17 04 41.7	+0.3
0.8nm,0.6s,baz=341,slow=11,SNR=7.4							
0.8nm,0.6s							
ASAR	Alice Springs	26.24	165	P	P	17 05 13.6	+0.3
0.2nm,0.4s,baz=346,slow=9.4,SNR=4.6							
0.2nm,0.4s							
MKAR	Makanchi Array	59.14	326	P	P	17 09 38.8	-0.2
0.2nm,0.4s,baz=114,slow=7.4,SNR=0.7							
0.2nm,0.4s							
KURBB	Kurchatov Arra	63.37	328	P	P	17 10 07.6	+0.2
0.1nm,0.3s,baz=119,slow=7.7,SNR=1.1							
0.1nm,0.3s							

*IDC **14** 17:00:57.9±0.7, 1.69N×126.50E, h0km, mb4.1/10, mbtmp4.1/11, ML3.8/1, Error ellipse: s-maj=77.4km s-min=14.0km az=70.0*
*NEIC **14** 17:01:01.1±1.8, 1.68N±0.10×126.51E±0.05, h18km±4km, mb4.4/14, Error ellipse: s-maj=14.8km s-min=5.3km az=196.0*
*DJA **14** 17:01:01.7±1.7, 2°N±3°×12°6E±°, h19km±16km, M4.1/12, MLv4.1/12*
ISC 14 17:01:03.1±0.6, 1.67N±0.06×126.47E±0.07, h35km, n40, σ1s16/40, mb4.3/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.26	135		Pn	17 01 23.9	-0.3
TNTI	Ternate	1.26	135	P	Pn	17 01 24.7	+0.5
TNTI				S	Sn	17 01 41.3	+1.3
SGSI	Sangihe	2.21	335	P	Pn	17 01 38.3	+1.0
KMSI	Cibinong	2.72	246	P	Pn	17 01 46.3	+2.1
SANI	Sanana	3.73	187	P	Pn	17 01 58.7	+0.6
LUWI	Luwuk	4.58	234		Pn	17 02 09.9	+0.1
LUWI	Luwuk	4.58	234	P	Pn	17 02 10.6	+0.8
MRSI	Marisa	4.68	255	P	Pn	17 02 12.4	+1.1
NLAI	Namlea	4.92	173	P	Pn	17 02 15.4	+0.9
TOLI2	Tolitoli	5.71	265	Pn	Pn	17 02 26.0	+0.5
FAKI	Fak Fak	7.36	128	Pn	Pn	17 02 50.4	+2.3
MYLDM	Lahad Datu	8.69	294	Pn	Pn	17 03 07.6	+1.3
MTKI	Muara Teweh, K	11.86	257	P	Pn	17 03 59.6	+10
MTN	Manton Dam	15.14	162	Pn	Pn	17 04 34.5	+0.1
MTN				IAmb	IAmb	17 04 44.6	
comp=Z,16nm,1.3s							
KNRA	Kununurra	17.38	173	Pn	Pn	17 05 01.3	-1.7
KNRA				IAmb	IAmb	17 05 04.0	
comp=Z,25nm,1.3s							
FITZ	Fitzroy Crossi	19.66	182	P	Pn	17 05 29.0	-1.7
comp=Z,0.2nm,0.3s,baz=34,slow=5.9,SNR=8.1							
comp=Z,1.9nm,0.6s							
FITZ	Fitzroy Crossi	19.66	182	P	P	17 05 26.9	-2.2
TPUB	Ta-pu	22.24	346	P	P	17 05 54.4	-2.5
WRAB	Tennant Creek	22.82	161	P	P	17 06 02.5	-0.6
WRAB				IAmb	IAmb	17 06 04.6	
comp=Z,11nm,0.6s							
WRA	Warramunga Arr	22.82	161	P	P	17 06 02.5	-0.7
comp=Z,3.4nm,0.6s,baz=339,slow=10,SNR=40							
comp=Z,9.4nm,0.6s							
AS31	Alice Springs	26.20	164		P	17 06 34.9	+0.2
ASAR	Alice Springs	26.20	164	P	P	17 06 35.5	+0.8
comp=Z,2.5nm,0.5s,baz=346,slow=8.4,SNR=17							
ASAR				PcP	PcP	17 10 01.3	+0.1
comp=Z,2.4nm,1.1s,baz=348,slow=4.0,SNR=5.0							
comp=Z,2.5nm,0.5s							
ASAR	Alice Springs	26.20	164		PcP	17 10 01.6	+0.4
FORT	Forrest	32.30	177	P	P	17 07 30.0	+1.2
FORT				IAmb	IAmb	17 08 04.1	
comp=Z,6.5nm,1.1s							
INKA	Innaminka	32.30	156	P	P	17 07 29.7	+0.9
INKA				IAmb	IAmb	17 07 58.9	
comp=Z,3.4nm,1.2s							
BBOO	Buckleboo	35.47	166	P	P	17 07 57.2	+0.9
STKA	Stephens Creek	36.32	158	P	P	17 08 03.2	-0.4
comp=Z,1.4nm,0.5s,baz=354,slow=6.2,SNR=3.8							
comp=Z,1.4nm,0.5s							
EVN	Everest	46.03	308	P	P	17 09 22.7	-1.6
EVN				IAmb	IAmb	17 09 26.0	
comp=Z,6.9nm,1.1s							
MARNC	Mare, Loyalty	46.68	122	P	P	17 09 27.7	-1.0
SONM	Songino Array	49.16	342	P	P	17 09 48.7	+1.1
comp=Z,1.0nm,0.9s,baz=147,slow=8.2,SNR=3.7							
comp=Z,1.0nm,0.9s							
MKAR	Makanchi Array	59.10	326	P	P	17 10 59.8	-0.2
comp=Z,1.4nm,0.6s,baz=122,slow=8.1,SNR=18							
comp=Z,1.4nm,0.6s							
MAKZ	Makanchi	59.28	326	P	P	17 11 01.2	-0.1
MAKZ				IAmb	IAmb	17 11 03.8	
comp=Z,3.9nm,1.1s							
ZALV	Zalesovo Beam	62.30	334	P	P	17 11 21.7	+0.1
comp=Z,0.5nm,0.4s,baz=124,slow=7.2,SNR=2.6							
comp=Z,0.5nm,0.4s							
KURBB	Kurchatov Arra	63.33	328	P	P	17 11 28.5	-0.1
comp=Z,1.9nm,0.8s,baz=130,slow=6.4,SNR=18							
comp=Z,1.9nm,0.8s							
KURK	Kurchatov	63.34	328	P	P	17 11 28.5	-0.1
KURK	Kurchatov	63.34	328	IAmb	IAmb	17 11 31.8	
comp=Z,5.1nm,0.9s							
BVAR	Borovoye Array	68.90	328	P	P	17 12 03.4	-0.9
comp=Z,0.6nm,0.5s,baz=153,slow=9.7,SNR=3.4							
comp=Z,0.6nm,0.5s							
NRIK	Noril'sk	72.36	346	P	P	17 12 26.8	+1.7
comp=Z,1.8nm,0.5s,baz=135,slow=8.2,SNR=5.9							
comp=Z,1.8nm,0.5s							
VNDA	Vanda	81.43	173	P	P	17 13 16.6	+0.7
comp=Z,0.7nm,0.5s,baz=312,slow=8.1,SNR=8.4							
comp=Z,0.7nm,0.5s							
TXAR	Lajitas Array	123.05	53	PKP	PKiKP	17 19 55.5	-1.4
comp=Z,0.5nm,0.4s,baz=266,slow=6.8,SNR=10							

IDC 14 17:06:31.1±2.9, 2.21N×127.39E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=249.4km s-min=27.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.04	163	P	P	17 11 37.0	-1.1
0.5nm,0.5s,baz=341,slow=10,SNR=6.5							
0.5nm,0.5s							
ASAR	Alice Springs	26.49	167	P	P	17 12 11.0	+0.7
0.3nm,0.4s,baz=345,slow=11,SNR=7.5							
0.3nm,0.4s							
MKAR	Makanchi Array	59.17	325	P	P	17 16 33.9	0.0
0.1nm,0.4s,baz=137,slow=6.7,SNR=4.2							
0.1nm,0.4s							

IDC 14 17:07:15.1±2.1, 1.65N×126.61E, h0km, mb3.4/3, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=123.8km s-min=27.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.64	183	P	P	17 11 45.8	+0.3
0.1nm,0.3s,baz=16,slow=14,SNR=2.3							
3.8nm,1.1s							
WRA	Warramunga Arr	22.75	161	P	P	17 12 18.7	-0.5
2.6nm,1.1s,baz=339,slow=12,SNR=6.5							
2.6nm,1.1s							
ASAR	Alice Springs	26.14	165	P	P	17 12 51.6	+0.4
0.2nm,0.4s,baz=346,slow=11,SNR=6.7							
0.2nm,0.4s							
MKAR	Makanchi Array	59.20	326	P	P	17 17 17.8	-0.3
0.3nm,0.6s,baz=118,slow=7.8,SNR=2.0							
0.3nm,0.6s							

IDC 14 17:07:45.0±1.6, 1.73N×126.57E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=170.7km s-min=21.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.85	161	P	P	17 12 48.9	-1.2
0.8nm,0.3s,baz=339,slow=11,SNR=6.8							
0.8nm,0.3s							
ASAR	Alice Springs	26.23	165	P	P	17 13 22.9	+1.0
0.3nm,0.5s,baz=343,slow=11,SNR=5.6							
0.3nm,0.5s							
MKAR	Makanchi Array	59.10	326	P	P	17 17 47.4	+0.1
0.2nm,0.4s,baz=118,slow=7.5,SNR=4.4							
0.2nm,0.4s							
ZALV	Zalesovo Beam	62.29	334	P	P	17 18 08.5	-0.4
0.4nm,0.6s,baz=108,slow=8.4,SNR=2.1							
0.4nm,0.4s							
KURBB	Kurchatov Arra	63.33	328	P	P	17 18 16.1	+0.2
0.3nm,0.3s,baz=112,slow=7.4,SNR=1.7							
0.3nm,0.3s							

*IDC **14** 17:10:24.5±1.4, 1.46N×126.12E, h0km, mb3.8/5, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=118.4km s-min=18.0km az=69.0*
*DJA **14** 17:10:26.5±1.2, 2°N±3°×12°7E±°, h10km±11km, M4.5/15, mb4.1/6, MLv4.7/15*
ISC 14 17:10:28.9±1.1, 1.58N±0.07×126.49E±0.08, h35km, n14, σ1s03/14, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.19	133	P	Pn	17 10 47.9	-1.2
SGSI	Sangihe	2.30	335	P	Pn	17 11 03.6	-0.7
KMSI	Cibinong	2.70	248	P	Pn	17 11 09.4	-0.4
SANI	Sanana	3.64	188	P	Pn	17 11 23.3	+0.5
LUWI	Luwuk	4.54	235	P	Pn	17 11 33.8	-1.4
NLAI	Namlea	4.83	173	P	Pn	17 11 38.5	-0.6
MSAI	Masohi	5.47	154	P	Pn	17 11 47.7	-0.3
0.5nm35nm,0.7s							
AAI	Ambon	5.51	162	P	Pn	17 11 48.0	-0.5
FITZ	Fitzroy Crossi	19.58	182	P	P	17 14 54.0	0.0
0.1nm,0.3s,baz=5.5,slow=11,SNR=2.2							
2.1nm,0.8s							
WRA	Warramunga Arr	22.74	161	P	P	17 15 27.9	-0.2
1.4nm,0.3s,baz=338,slow=11,SNR=16							
1.4nm,0.3s							
ASAR	Alice Springs	26.11	164	P	P	17 16 00.2	+0.4
0.6nm,0.4s,baz=344,slow=11,SNR=17							
0.6nm,0.4s							
MKAR	Makanchi Array	59.18	326	P	P	17 20 26.1	-0.3
0.6nm,0.4s,baz=121,slow=8.2,SNR=13							
0.6nm,0.4s							
ZALV	Zalesovo Beam	62.38	334	P	P	17 20 50.6	+2.5
0.2nm,0.3s,baz=123,slow=7.1,SNR=1.7							
0.2nm,0.3s							
KURBB	Kurchatov Arra	63.41	328	P	P	17 20 54.5	-0.4
0.6nm,0.6s,baz=127,slow=6.3,SNR=6.0							
0.6nm,0.6s							

*IDC **14** 17:11:31.8±0.4, 1.63N×126.30E, h0km, mb4.7/31, mbtmp4.7/33, ML4.6/2, Error ellipse: s-maj=21.3km s-min=9.9km az=77.0*
*MOS **14** 17:11:31.4±1.0, 1.63N×126.26E, h11km, mb5.0/39, Error ellipse: s-maj=11.9km s-min=5.0km az=116.7*
*NEIC **14** 17:11:33.3±1.8, 1.67N±0.07×126.33E±0.05, h9km±3km, mb5.0/102, Error ellipse: s-maj=9.9km s-min=6.4km az=160.0*
*BJI **14** 17:11:36.4, 1.47N×126.35E, h58km, mb4.9/53, Ms5.6/2, Ms7 5.6/2*
*DJA **14** 17:11:36.2±0.2, 2°N±2°×12°6E±°, h10km, M4.8/27, mb4.9/27, mB5.7/1, MLv4.8/24, Mw(mB)5.2/1*
ISC 14 17:11:37.1±0.3, 1.66N±0.03×126.37E±0.05, h35km, n337, σ1s47/342, mb4.9/126, 15C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.33	131		Pn	17 11 58.2	-0.9
TNTI	Ternate	1.33	131	P	Pn	17 11 58.9	-0.2
TNTI	Ternate	1.33	131	P	Pn	17 11 58.8	-0.3
SGSI	Sangihe	2.19	337	P	Pn	17 12 12.1	+1.1
LBMI	Labuha	2.54	154	P	Pn	17 12 17.9	+2.0
KMSI	Cibinong	2.62	246	P	Pn	17 12 19.9	+3.0
SANI	Sanana	3.70	186	P	Pn	17 12 36.2	+4.4
SANI	Sanana	3.70	186	S	Sn	17 13 16.0	+1.8
SANI	Sanana	3.70	186	P	Pn	17 12 32.7	+0.9
LUWI	Luwuk	4.49	233		Pn	17 12 41.1	-1.5
LUWI	Luwuk	4.49	233	P	Pn	17 12 45.8	+3.2
MRSI	Marisa	4.58	255	P	Pn	17 12 47.6	+3.7
NLAI	Namlea	4.92	171	P	Pn	17 12 50.0	+1.5
APSI	Ampana	5.37	242	P	Pn	17 12 59.8	+5.1
DAV	Davao City (W)	5.44	352	Pn	Pn	17 12 55.8	+0.1
25nm,0.3s,baz=71,slow=21,SNR=1.2							
DAV				Sn	Sn	17 14 00.9	+3.8
37nm,0.3s,baz=258,slow=21,SNR=1.4							
73nm,0.3s							
DAV	Davao City (W)	5.44	352	Pn	Pn	17 12 57.0	+1.3
SWI	Sorong	5.49	117	P	Pn	17 12 57.0	+0.6
0.3nm54nm,0.8s							
MSAI	Masohi	5.59	153	P	Pn	17 13 01.0	+3.2
0.5nm154nm,0.8s							
AAI	Ambon	5.61	161	P	Pn	17 13 00.2	+2.1
0.4nm87nm,0.7s							
TOLI2	Tolitoli	5.61	265		Pn	17 12 58.4	+0.3
TOLI2	Tolitoli	5.61	265	P	Pn	17 12 59.7	+1.6
MPSI	Mapaga	6.60	259	P	Pn	17 13 13.2	+1.5
0.3nm74nm,0.8s							
KDI	Kendari	6.72	214	P	Pn	17 13 15.9	+2.6
PCI	Palu	7.01	249	P	Pn	17 13 21.0	+3.7
0.4nm92nm,1.0s							
BNDI	Bandanaira	7.08	150	P	Pn	17 13 19.7	+1.4
BNDI	Bandanaira	7.08	150	P	Pn	17 13 20.2	+1.9
0.5nm91nm,0.7s							
FAKI	Fak Fak	7.43	128		Pn	17 13 23.9	+0.8

FAKI Fak Fak 7.43 128 P **Pn** 17 13 24.8 +1.7
FAKI Fak Fak 7.43 128 P **Pn** 17 13 24.9 +1.8
0.3nm65nm,0.9s
TTSI Tana Toraja 8.04 235 P **Pn** 17 13 34.1 +2.6
73nm,0.6s
BBSI Bau Bau 8.05 208 P **Pn** 17 13 34.1 +2.5
107nm,0.9s
MYLDM Lahad Datu 8.60 294 **Pn** 17 13 41.2 +2.0
MYLDM Lahad Datu 8.60 294 P **Pn** 17 13 43.5 +4.3
SPSI Sidrap Palu 8.64 230 P **Pn** 17 13 42.8 +3.1
68nm,0.5s
BNSI Bone 8.68 226 P **Pn** 17 13 43.4 +3.1
68nm,0.7s
BKSI Bulukumba 9.33 222 P **Pn** 17 13 52.1 +3.0
50nm,0.7s
KAPI Kappang 9.36 225 Pn **Pn** 17 13 51.5 +1.9
4.5nm,0.3s,baz=45,slow=8.6,SNR=12
KAPI Sn **Sn** 17 15 32.2 -1.5
1.4nm,0.3s,baz=36,slow=21,SNR=1.2
KAPI Kappang 9.36 225 **Pn** 17 13 51.4 +1.8
BSSI Bau Bau, Buton 9.72 217 P **Pn** 17 13 57.5 +3.0
BAKI Biak 10.14 106 P **Pn** 17 14 02.8 +2.6
92nm,1.1s
EDFI Ende, Flores 11.34 204 P **Pn** 17 14 19.2 +2.4
16nm,0.8s
SOEI Soe 11.53 190 Pn **Pn** 17 14 17.9 -1.4
BATI Baumata 12.09 193 Pn **Pn** 17 14 28.0 +1.0
2.4nm,0.3s,baz=98,slow=7.1,SNR=7.9
BATI Baumata 12.09 193 P **Pn** 17 14 27.6 +0.6
45nm,1.2s
SMPI Sarmi 12.86 106 P **Pn** 17 14 39.2 +1.7
TWSI Taliwang, Sumb 14.00 222 P **P** 17 14 58.1 -2.5
3µm95nm,0.8s
SBUM Sibu 14.16 273 **Pn** 17 14 59.4 +4.1
DRS Darwin Rock St 14.70 162 P **Pn** 17 15 05.2 +2.6
JAY Jayapura 14.92 106 Pn **P** 17 15 11.3 +0.5
0.8nm,0.3s,baz=243,slow=11,SNR=7.8
MTN Manton Dam 15.16 162 **Pn** 17 15 08.9 +0.2
MTN IAmb IAmb 17 15 14.1
comp=Z,20nm,0.6s
JAGI Jajag, Banyuwa 15.80 230 **Pn** 17 15 16.7 -0.3
JAGI Jajag, Banyuwa 15.80 230 P **Pn** 17 15 18.4 +1.4
KSM Kuching 16.06 270 P **Pn** 17 15 21.6 +1.2
KNRA Kununurra 17.38 172 **Pn** 17 15 36.6 -0.4
PCJI Pacitan 18.04 237 P **P** 17 15 47.8 +2.5
SMRI Semarang 18.10 241 P **Pn** 17 15 44.4 -1.5
UGM Wanagama 18.44 239 P **P** 17 15 49.7 -0.2
UGM IAmb IAmb 17 15 55.4
comp=Z,101nm,1.6s
UGM Wanagama 18.44 239 P **Pn** 17 15 51.4 +1.3
TPI Tanjungpandan 19.22 257 P **P** 17 15 59.7 +1.4
FITZ Fitzroy Crossi 19.64 182 P **P** 17 16 02.1 -0.8
comp=Z,1.0nm,0.3s,baz=7.7,slow=11,SNR=14
FITZ S **S** 17 19 41.8 -1.0
comp=Z,1.7nm,0.9s,baz=185,slow=23,SNR=0.9
comp=Z,4.6nm,0.5s
FITZ Fitzroy Crossi 19.64 182 **P** 17 16 01.4 -1.5
BBJI Bungbulang 20.76 244 P Pn 17 16 18.3 +0.6
TWG Pinlang 21.66 347 P **P** 17 16 22.9 -1.9
YULB Yu-li 22.16 348 P **P** 17 16 27.2 -2.9
YULB IAmb IAmb 17 16 35.7
comp=Z,169nm,1.9s
YULB Yu-li 22.16 348 P **P** 17 16 30.1 0.0
TPUB Ta-pu 22.23 346 P **P** 17 16 28.7 -2.1
TPUB IAmb IAmb 17 16 32.8
comp=Z,57nm,0.7s
TPUB Ta-pu 22.23 346 P **P** 17 16 29.8 -1.0
SSLB Suanglung 22.62 347 **P** 17 16 31.4 -3.6
SSLB IAmb IAmb 17 16 37.5
comp=Z,34nm,0.8s
SSLB Suanglung 22.62 347 P **P** 17 16 33.4 -1.6
COEN Coen 22.76 133 P **P** 17 16 33.5 -3.1
COEN Coen 22.76 133 P **P** 17 16 36.6 0.0
WRAB Tennant Creek 22.84 160 P **P** 17 16 34.4 -3.0
WRAB IAmb IAmb 17 16 46.5
comp=Z,47nm,0.7s
WRAB Tennant Creek 22.84 160 P **P** 17 16 36.0 -1.4
WRAB Tennant Creek 22.84 160 *ce*P **P** 17 16 36.7 -0.7
WRAB pmax pmax
comp=Z,37nm,0.7s
WRA Warramunga Arr 22.84 160 P **P** 17 16 36.0 -1.4
comp=Z,30nm,0.6s,baz=336,slow=11,SNR=39
WRA PcP **PcP** 17 20 28.2 +0.2
comp=Z,0.9nm,0.6s,baz=312,slow=2.7,SNR=1.8
WRA S **S** 17 20 40.9 -3.7
comp=Z,4.6nm,0.9s,baz=335,slow=19,SNR=5.4
comp=Z,30nm,0.6s
WRA Warramunga Arr 22.84 160 *ce*P **P** 17 16 36.0 -1.4
WRA pmax pmax
comp=Z,33nm,0.6s
NACB Ninganchiao 22.86 349 P **P** 17 16 34.9 -2.6
YOJ Yonaguni jima 22.90 352 P **P** 17 16 36.9 -1.1
YOJ Yonaguni jima 22.90 352 P **P** 17 16 36.9 -1.1
YOJ pmax pmax
comp=Z,294nm,1.4s
JMJ Miyako jima 2 23.05 357 P **P** 17 16 40.0 +0.6
YHNB Yeheng 23.38 348 P **P** 17 16 41.6 -1.2
YHNB IAmb IAmb 17 16 44.8
comp=Z,50nm,0.9s
YHNB Yeheng 23.38 348 P **P** 17 16 42.2 -0.7
PMG Port Moresby 23.44 118 P **P** 17 16 43.3 -0.2
comp=Z,8.4nm,0.9s,baz=105,slow=15,SNR=1.5
comp=Z,8.4nm,0.9s
PMG Port Moresby 23.44 118 P **P** 17 16 43.4 -0.1
MBWA Marble Bar 23.59 196 P **P** 17 16 43.1 -1.7
MBWA Marble Bar 23.59 196 P **P** 17 16 44.1 -0.7
QIZ Qiongzhong 23.67 318 P **P** 17 16 45.2 -0.4
QIZ IAmb IAmb 17 16 58.6
comp=Z,80nm,1.4s
QIZ Qiongzhong 23.67 318 P **P** 17 16 46.3 +0.7
PSA00 Pilbara Seismi 23.95 195 P **P** 17 16 47.4 -0.8
PSA00 Pilbara Seismi 23.95 195 P **P** 17 16 46.5 -1.7
PSA00 IAmb IAmb 17 16 54.6
comp=Z,11nm,0.7s
PSA00 Pilbara Seismi 23.95 195 P **P** 17 16 50.2 +2.0
MNAI Manna 24.15 256 P **P** 17 16 49.0 -1.2
MNAI Manna 24.15 256 P **P** 17 16 51.9 +1.7
JMZ Minamidaito 2 24.48 11 P **P** 17 16 51.1 -1.9
JOW Kunigami 25.10 4 P **P** 17 16 58.4 -0.3
comp=Z,72nm,0.8s,baz=169,slow=6.1,SNR=7.2
comp=Z,72nm,0.8s
JOW Kunigami 25.10 4 P **P** 17 16 56.9 -1.8
IPM Ipoh 25.46 277 P **P** 17 17 01.5 -0.7
QIS Mount Isa 25.60 150 P **P** 17 17 04.4 +1.1
KULM Kulim 25.92 279 P **P** 17 17 05.8 -0.5
AS31 Alice Springs 26.21 164 **P** 17 17 08.5 -0.3
ASAR Alice Springs 26.21 164 P **P** 17 17 08.8 0.0
comp=Z,7.5nm,0.5s,baz=346,slow=7.3,SNR=48
ASAR PcP **PcP** 17 20 35.4 +0.1
comp=Z,1.2nm,0.6s,baz=337,slow=3.1,SNR=3.0
ASAR S **S** 17 21 37.3 -1.6
comp=Z,2.7nm,1.0s,baz=344,slow=19,SNR=6.1
comp=Z,7.5nm,0.5s
ASAR Alice Springs 26.21 164 **P** 17 17 08.0 -0.8
RABL Rabaul 26.42 103 P **P** 17 17 10.5 -0.3
MTSU Mount Surprise 26.44 139 P **P** 17 17 12.0 +1.1
RPSI Rantau Prapat 27.45 273 P **P** 17 17 18.0 -2.0
PSI Prapat 27.45 273 P **P** 17 17 18.0 -2.2
PSI pmax pmax
comp=Z,15nm,1.1s
GSI Gunungsitoli 28.79 270 P **P** 17 17 30.8 -1.2
GSI IAmb IAmb 17 17 35.1
comp=Z,30nm,1.2s
GSI Gunungsitoli 28.79 270 P **P** 17 17 31.9 -0.1
CTAO Charters Tower 29.11 139 P **P** 17 17 33.2 -1.5
CTAO Charters Tower 29.11 139 P **P** 17 17 33.3 -1.5
CTAO pmax pmax
comp=Z,8.0nm,1.0s
MEEK Meekatharra 29.11 194 P **P** 17 17 35.3 +0.6
SLVN Son La 29.36 313 P **P** 17 17 35.5 -1.6
JCJ Chichijima 29.50 30 P **P** 17 17 37.9 -0.3
NJ2 Nanjing 31.05 348 *e*P **P** 17 17 53.3 +1.5
NJ2 pmax pmax
comp=Z,11nm,0.6s
JNU Nakatsue 31.59 7 P **P** 17 17 56.5 0.0
comp=Z,24nm,0.8s,baz=200,slow=4.9,SNR=11
comp=Z,24nm,0.8s
JNU Nakatsue 31.59 7 **P** 17 17 55.8 -0.8
CM31 Chiang Mai Arr 31.66 304 P **P** 17 17 56.6 -0.7
CMAR Chiang Mai Arr 31.66 304 P **P** 17 17 57.9 +0.5
comp=Z,1.9nm,0.7s,baz=114,slow=8.7,SNR=13
CMAR PcP **PcP** 17 20 49.7 +0.7
comp=Z,1.2nm,0.7s,baz=110,slow=3.7,SNR=7.3
comp=Z,1.9nm,0.7s
CMAR Chiang Mai Arr 31.66 304 P **P** 17 17 56.6 -0.7
CMAR Chiang Mai Arr 31.66 304 *ce*P **P** 17 17 58.2 +0.8
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CHTO Chiang Mai 31.83 304 **P** 17 17 57.8 -1.1
CHTO Chiang Mai 31.83 304 P **P** 17 17 59.1 +0.2
CHTO Chiang Mai 31.83 304 P **P** 17 17 57.8 -1.1
CHTO pmax pmax
comp=Z,5.0nm,0.8s
MORW Morawa 32.11 197 P **P** 17 18 00.9 -0.3
MORW Morawa 32.11 197 P **P** 17 18 01.6 +0.4
FORT Forrest 32.29 177 **P** 17 18 01.7 -1.0
FORT IAmb IAmb 17 18 05.8
comp=Z,12nm,0.8s
INKA Innaminka 32.33 156 P **P** 17 18 02.1 -1.0
INKA IAmb IAmb 17 18 18.7
comp=Z,17nm,1.9s
KMI Kunming 32.62 318 P **P** 17 18 07.5 +1.5
KMI pmax pmax
comp=Z,11nm,1.0s
ENH Enshi 32.66 332 P **P** 17 18 04.8 -1.2
ENH IAmb IAmb 17 18 07.0
comp=Z,26nm,0.7s
JMN Monobe 32.67 12 P **P** 17 18 06.9 +0.8
BLDU Ballidu 33.39 195 P **P** 17 18 13.6 +1.3
JHJ2 Mitsune 33.74 21 P **P** 17 18 14.4 -0.9
JHS Saijyo 33.76 10 P **P** 17 18 15.5 -0.1
KLBR Kellerberrin 34.06 193 P **P** 17 18 19.5 +1.3
PZH PanZhiHua 34.21 318 P **P** 17 18 18.9 -0.8
PZH pmax pmax
comp=Z,10.0nm,0.9s
MUN Mundaring 34.81 195 P **P** 17 18 26.4 +1.7
INU Inuyama 34.95 15 P **P** 17 18 25.4 -0.5
INU IAmb IAmb 17 18 27.1
comp=Z,17nm,0.7s
INU Inuyama 34.95 15 P **P** 17 18 26.9 +1.0
JGF Kuroka 35.28 16 P **P** 17 18 27.7 -1.0
JGF IAmb IAmb 17 18 58.3
comp=Z,44nm,1.3s
JGF Kuroka 35.28 16 P **P** 17 18 29.3 +0.6
NWAO Narrogin (SRO) 35.46 193 P **P** 17 18 29.9 -0.4
NWAO IAmb IAmb 17 18 51.0
comp=Z,36nm,1.3s
NWAO Narrogin (SRO) 35.46 193 P **P** 17 18 31.5 +1.2
NWAO Narrogin (SRO) 35.46 193 P **P** 17 18 29.9 -0.4
NWAO pmax pmax
comp=Z,36nm,1.3s
BBOO Buckleboo 35.48 166 P **P** 17 18 29.8 -0.7
BBOO IAmb IAmb 17 18 34.0
comp=Z,34nm,1.2s
BBOO Buckleboo 35.48 166 P **P** 17 18 29.7 -0.7
KSAR Wonju Array Be 35.64 2 P **P** 17 18 31.3 -0.4
KSAR Wonju Array Be 35.64 2 P **P** 17 18 31.3 -0.4
KSRS Korea Array 35.65 2 P **P** 17 18 33.1 +1.4
comp=Z,4.1nm,0.6s,baz=175,slow=10,SNR=16
comp=Z,4.1nm,0.6s
INCN Inchon 35.65 0 P **P** 17 18 31.4 -0.5
INCN Inchon 35.65 0 P **P** 17 18 31.4 -0.5
INCN pmax pmax
comp=Z,74nm,1.4s
KS19 Wonju Array Si 35.70 2 P **P** 17 18 31.6 -0.6
EIDS Eidsvold 35.98 140 **P** 17 18 34.5 -0.3
EIDS IAmb IAmb 17 18 38.1
comp=Z,13nm,1.1s
XAN Xi'an 36.12 335 P **P** 17 18 35.3 -0.6
XAN pP pP 17 18 47.3 +1.7
XAN pmax pmax
comp=Z,22nm,0.8s
CD2 Chengdu 36.12 326 *e*P **P** 17 18 36.0 0.0
STKA Stephens Creek 36.34 158 P **P** 17 18 38.1 +0.3
comp=Z,9.9nm,0.7s,baz=334,slow=7.6,SNR=13
comp=Z,9.9nm,0.7s
STKA Stephens Creek 36.34 158 *i*P **P** 17 18 36.9 -0.9
MJAR Matsushiro Arr 36.40 16 P **P** 17 18 37.7 -0.6
comp=Z,7.5nm,0.8s,baz=181,slow=9.7,SNR=20
comp=Z,7.5nm,0.8s
MAJO Matsushiro 36.40 16 P **P** 17 18 37.2 -1.1
MAJO IAmb IAmb 17 18 40.7
comp=Z,23nm,1.0s
MAJO Matsushiro 36.40 16 P **P** 17 18 38.2 0.0
MAJO Matsushiro 36.40 16 *i*P **P** 17 18 38.3 0.0
MAJO pmax pmax
comp=Z,10.0nm,0.8s
JYT Yasato 36.71 19 P **P** 17 18 39.3 -1.5
HTT Hallett 36.85 162 P **P** 17 18 44.1 +1.9
HNS HongShan 37.16 345 ⇓P **P** 17 18 44.5 -0.2
HNS pmax pmax
comp=Z,14nm,1.0s
DL2 Dalian 37.33 354 P **P** 17 18 47.4 +1.3
DL2 pmax pmax
comp=Z,110nm,0.7s
CMSA Cobar Meteorol 37.77 153 P **P** 17 18 50.6 +0.7
JSD Sado 37.82 15 P **P** 17 18 49.4 -0.8
JMM Marumori 38.40 19 P **P** 17 18 55.3 +0.1
JMM IAmb IAmb 17 18 57.9
comp=Z,39nm,0.6s
JMM Marumori 38.40 19 P **P** 17 18 56.1 +1.0
BJT Baijiatuan 39.30 348 P **P** 17 19 01.9 -0.7
BJT IAmb IAmb 17 19 03.9
comp=Z,15nm,0.6s
BJT Baijiatuan 39.30 348 P **P** 17 19 02.0 -0.7
BJT pmax pmax
comp=Z,15nm,0.6s
BJI Beijing 39.32 348 P **P** 17 19 02.8 0.0
BJI pmax pmax
comp=Z,10.0nm,0.6s
SNY Shenyang 40.07 357 ⇓P **P** 17 19 10.0 +1.0
SNY pmax pmax
comp=Z,34nm,0.8s
LZDM Lanzhou Array 40.09 331 P **P** 17 19 09.1 -0.6
comp=Z,2.7nm,0.4s,baz=139,slow=11,SNR=1.8
comp=Z,2.7nm,0.4s
LZH Lanzhou 40.12 331 *e*P **P** 17 19 10.6 +0.8
LZH pmax pmax
comp=Z,32nm,1.1s
SHL Shillong 40.85 309 P **P** 17 19 14.3 -1.7
SHL IAmb IAmb 17 19 19.4
comp=Z,12nm,0.7s
SHL Shillong 40.85 309 P **P** 17 19 14.3 -1.7
SHL pmax pmax
comp=Z,12nm,0.7s
MSHR Mys Shultsa 40.97 5 *ce*P **P** 17 19 19.4 +2.9
MSHR pmax pmax
comp=Z,10.0nm,1.0s
JTM Tenmabayashi 41.16 17 P **P** 17 19 17.6 -0.5
JTM Tenmabayashi 41.16 17 P **P** 17 19 19.7 +1.6
HHC Hu-ho-hao-te 41.25 343 *e*P **P** 17 19 19.9 +0.9
BTO Baotou 41.51 341 *e*P **P** 17 19 23.6 +2.5
BTO S **S** 17 25 38.9 +4.4
BTO pmax pmax
comp=Z,9.0nm,0.6s
CAN Canberra 42.44 152 P **P** 17 19 27.2 -1.5
CAN IAmb IAmb 17 19 29.4
comp=Z,40nm,1.4s
CAN Canberra 42.44 152 P **P** 17 19 30.0 +1.3
CAN Canberra 42.44 152 P **P** 17 19 27.2 -1.5
CAN pmax pmax
comp=Z,40nm,1.4s
USRK Ussuriysk Ar. 42.66 6 P **P** 17 19 30.9 +0.7
comp=Z,13nm,0.7s,baz=185,slow=7.1,SNR=17
comp=Z,13nm,0.7s
USRK Ussuriysk Ar. 42.66 6 P **P** 17 19 31.0 +0.7
TOO Toolangi 42.86 158 P **P** 17 19 30.3 -1.8
TOO Toolangi 42.86 158 P **P** 17 19 30.3 -1.8
TOO pmax pmax
comp=Z,12nm,1.3s
MDJ Mudanjiang 42.88 3 P **P** 17 19 31.4 -0.6
MDJ IAmb IAmb 17 19 34.1
comp=Z,17nm,0.9s
MDJ Mudanjiang 42.88 3 P **P** 17 19 32.8 +0.8
MDJ pmax pmax
comp=Z,24nm,0.9s
H11S3 WAKE ISLAND Hy 42.92 64 T T 18 06 33.0
baz=253
H11S2 WAKE ISLAND Hy 42.93 64 T T 18 06 55.4
baz=253
H11S1 WAKE ISLAND Hy 42.93 64 T T 18 06 53.1
baz=253
XLT XiLinHaoTe 43.05 349 *e*P **P** 17 19 33.0 -0.6
XLT pP pP 17 19 44.9 +1.4
XLT pmax pmax
comp=Z,30nm,0.9s
LSA Lhasa 43.56 313 P **P** 17 19 37.0 -1.4
LSA IAmb IAmb 17 19 44.3
comp=Z,12nm,0.9s
LSA Lhasa 43.56 313 P **P** 17 19 37.0 -1.4
LSA pmax pmax
comp=Z,12nm,0.9s
BNX BinXian 43.91 1 ⇑P **P** 17 19 41.1 +0.7
BNX pmax pmax
comp=Z,12nm,0.9s
ASAJ Asahikawa 44.67 17 P **P** 17 19 45.8 -0.6
ASAJ pmax pmax
comp=Z,288nm,2.0s
JKA Kamikawa-asahi 44.67 17 P **P** 17 19 45.8 -0.6
GTA Gaotai 44.70 330 P **P** 17 19 47.6 +0.6
GTA pmax pmax
comp=Z,10.0nm,0.9s
GTA Gaotai 44.70 330 P **P** 17 19 47.8 +0.8
GTA PcP **PcP** 17 21 31.0 +1.9
GTA pmax pmax
comp=Z,10.0nm,0.7s
EVN Everest 45.96 308 **P** 17 19 56.1 -1.6
EVN IAmb IAmb 17 19 59.1
comp=Z,21nm,1.3s
PINNC Pines Island, 46.74 124 P **P** 17 20 03.7 +0.5
YSS Yuzhno-Sakhali 47.32 15 P **P** 17 20 07.8 +0.5
HIA Hailar 47.77 354 P **P** 17 20 10.8 0.0
HIA IAmb IAmb 17 20 13.1
comp=Z,19nm,1.1s
HIA Hailar 47.77 354 P **P** 17 20 10.8 0.0
HIA pmax pmax
comp=Z,19nm,1.1s
HILR Hailar Array B 48.06 354 P **P** 17 20 14.5 +1.5
comp=Z,6.6nm,0.5s,baz=181,slow=9.5,SNR=12
comp=Z,6.6nm,0.5s
HEH HeiHe 48.43 1 *e*P **P** 17 20 16.1 +0.3
HEH pmax pmax
comp=Z,27nm,0.8s
ULN Ulaanbaatar 48.98 343 **P** 17 20 19.9 -0.3
ULN IAmb IAmb 17 20 21.6
comp=Z,8.1nm,0.8s
ULN Ulaanbaatar 48.98 343 *ce*P **P** 17 20 21.0 +0.7
ULN pmax pmax
comp=Z,6.0nm,0.7s
SONM Songino Array 49.15 342 P **P** 17 20 21.8 +0.3
comp=Z,4.0nm,0.6s,baz=155,slow=9.0,SNR=31
SONM PcP **PcP** 17 21 45.0 +0.3
comp=Z,2.2nm,0.8s,baz=175,slow=2.6,SNR=3.9
comp=Z,4.0nm,0.6s
HYBB Hyderabad (bro 49.51 292 *e*P **P** 17 20 23.5 -1.2
ZEA Zeya 51.91 1 *e*P **P** 17 20 41.8 -0.4
ZEA *e* 17 28 08.7
ZEA pmax pmax
comp=Z,10.0nm,0.8s
TLY Talaya 53.38 343 P **P** 17 20 53.1 0.0
TLY IAmb IAmb 17 20 59.1
comp=Z,5.6nm,0.6s
MOY Mondy 54.20 341 *e*P **P** 17 21 00.1 +0.8
WMQ Urumqi 54.22 326 *e*P **P** 17 21 01.3 +1.8
PETK Petropavlovsk- 57.48 22 P **P** 17 21 23.6 +1.1
comp=Z,6.8nm,0.6s,baz=194,slow=5.3,SNR=22
comp=Z,6.8nm,0.6s
ZSN Zaisan 58.05 328 *e*P **P** 17 21 26.6 -0.2
ZSN Zaisan 58.05 328 *e*P **P** 17 21 26.5 -0.2
DGZ Jazzator, Alta 58.22 331 *i*P **P** 17 21 28.3 +0.3
DGZ pmax pmax
comp=Z,3.0nm,0.5s
SHLS Shalkode 58.72 321 *e*P **P** 17 21 28.9 -2.7
comp=Z,9.5nm,1.1s
SHLS Shalkode 58.72 321 *e*P **P** 17 21 28.9 -2.7
SHLS pmax pmax
comp=Z,10.0nm,1.1s
PRZ Przheval'sk 59.05 320 **P** 17 21 33.0 -1.0
PRZ IAmb IAmb 17 21 35.9
comp=Z,10nm,0.6s
PRZ Przheval'sk 59.05 320 P **P** 17 21 33.0 -1.0
PRZ pmax pmax
comp=Z,10.0nm,0.6s
MK31 Makanchi Array 59.06 326 *ce*P **P** 17 21 33.5 -0.2
MKAR Makanchi Array 59.06 326 P **P** 17 21 33.5 -0.3
comp=Z,13nm,0.5s,baz=121,slow=8.3,SNR=74
MKAR PcP **PcP** 17 22 21.1 -1.3
comp=Z,4.2nm,0.8s,baz=128,slow=5.3,SNR=4.1
comp=Z,13nm,0.5s
MKAR Makanchi Array 59.06 326 **P** 17 21 32.8 -1.0
MKAR PcP **PcP** 17 22 21.0 -1.3
TARG Taragay, Kyrgy 59.06 319 **P** 17 21 32.6 -1.7
TARG IAmb IAmb 17 21 50.1
comp=Z,5.8nm,0.8s
TARG Taragay, Kyrgy 59.06 319 P **P** 17 21 32.6 -1.7
TARG pmax pmax
comp=Z,6.0nm,0.8s
KSH Kashi 59.27 316 P **P** 17 21 36.8 +1.3
KSH pmax pmax
comp=Z,5.0nm,1.0s
SATY Saty 59.33 321 *e*P **P** 17 21 35.3 -0.6
comp=Z,10nm,1.0s
SATY Saty 59.33 321 *e*P **P** 17 21 35.3 -0.6
SATY pmax pmax
comp=Z,10.0nm,1.0s
KDJ Kajisay 59.66 319 P **P** 17 21 35.9 -2.3
KDJ IAmb IAmb 17 21 39.5
comp=Z,8.6nm,0.8s
KDJ Kajisay 59.66 319 P **P** 17 21 35.9 -2.3
KDJ pmax pmax
comp=Z,9.0nm,0.8s
TNSS Tian-Shan 60.25 320 *e*P **P** 17 21 41.6 -0.9
TNSS Tian-Shan 60.25 320 *e*P **P** 17 21 41.6 -0.9
YAK Yakutsk 60.28 2 **P** 17 21 40.3 -1.5
YAK Yakutsk 60.28 2 *e*P **P** 17 21 41.1 -0.7
YAK *e*S **S** 17 29 55.1 +1.7
YAK pmax pmax
comp=Z,48nm,0.8s
YAK pmax pmax
comp=N,20nm,1.2s
YAK pmax pmax
comp=E,14nm,1.5s
YAK smax smax
comp=N,454nm,3.4s
YAK smax smax
comp=E,758nm,4.8s
TDK Taldyqorghan 60.33 323 *e*P **P** 17 21 42.0 -0.6
comp=E,5.9nm,0.5s
TDK Taldyqorghan 60.33 323 *e*P **P** 17 21 41.9 -0.6
TDK pmax pmax
comp=Z,6.0nm,0.5s
BOOM Boomskoye usch 60.64 319 IAmb IAmb 17 21 47.2
comp=Z,9.8nm,1.4s
MA2 Magadan 60.79 14 P **P** 17 21 46.8 +1.4
comp=Z,64nm,1.2s
AAK Ala-Archa 61.66 319 *ce*P **P** 17 21 53.5 +1.7
AAK pmax pmax
comp=Z,6.0nm,1.3s
ARSB Arslanbob 62.10 317 IAmb IAmb 17 21 56.4
comp=Z,11nm,1.2s
DRK Karamyk 62.18 315 P **P** 17 21 54.0 -1.6
DRK IAmb IAmb 17 22 05.2
comp=Z,11nm,0.9s
DRK Karamyk 62.18 315 P **P** 17 21 54.0 -1.6
DRK pmax pmax
comp=Z,11nm,0.9s
ZALV Zalesovo Beam 62.27 334 P **P** 17 21 54.7 -0.8
comp=Z,2.4nm,0.4s,baz=133,slow=6.4,SNR=14
comp=Z,2.4nm,0.4s
BTLS Baital 63.04 321 *e*P **P** 17 21 60.0 -0.8
BTLS Baital 63.04 321 *e*P **P** 17 21 59.9 -0.8
KURBB Kurchatov Arra 63.29 328 P **P** 17 22 02.1 -0.1
comp=Z,14nm,0.6s,baz=127,slow=6.1,SNR=106
comp=Z,14nm,0.6s
KURK Kurchatov 63.30 328 **P** 17 22 01.7 -0.6
KURK Kurchatov 63.30 328 *ce*P **P** 17 22 02.1 -0.2
KURK pmax pmax
comp=Z,28nm,0.7s
CHGR Chuyangaron 63.79 313 IAmb IAmb 17 22 07.5
comp=Z,15nm,0.8s
DZA Taraz 63.87 318 *e*P **P** 17 22 05.6 -0.8
DZA Taraz 63.87 318 *e*P **P** 17 22 05.6 -0.8
SEY Seymchan 64.12 13 *ce*P **P** 17 22 09.9 +2.4
SEY pmax pmax
comp=Z,16nm,1.3s
IUG luzhnay 64.46 317 *e*P **P** 17 22 09.5 -0.8
comp=Z,6.6nm,0.7s
IUG luzhnay 64.46 317 *e*P **P** 17 22 09.5 -0.8
IUG pmax pmax
comp=Z,7.0nm,0.7s
KK31 Karatay Array 64.51 318 IAmb IAmb 17 22 11.6
comp=Z,6.4nm,1.0s
KKAR Karatay Array 64.51 318 **P** 17 22 08.9 -1.6
KKAR Karatay Array 64.51 318 P **P** 17 22 08.9 -1.6
CHM Chimkent 64.82 317 *e*P **P** 17 22 11.8 -0.7
comp=Z,13nm,0.8s

CHM	**Chimkent**	**64.82**	**317**	*e*P		**P**	**17 22 11.8**	**-0.7**
CHM					pmax	pmax			
	comp=Z,13nm,0.8s								
BRLS	**Boroldaу**	**64.93**	**318**	*e*P		**P**	**17 22 12.4**	**-1.0**
BRLS	**Boroldaу**	**64.93**	**318**	*e*P		**P**	**17 22 12.3**	**-1.0**
BRZS	**Berezniki**	**66.17**	**325**	*e*P		**P**	**17 22 20.9**	**-0.2**
BRZS	**Berezniki**	**66.17**	**325**	*e*P		**P**	**17 22 20.9**	**-0.2**
BVAR	**Borovoye Array**	**68.86**	**328**	P		**P**	**17 22 37.9**	**-0.2**
	comp=Z,8.0nm,0.6s,baz=134,slow=9.8,SNR=37								
	comp=Z,8.0nm,0.6s								
BORK	**Borovoye**	**68.91**	**328**	*i* P		**P**	**17 22 37.9**	**-0.4**
BORK					pmax	pmax			
	comp=Z,12nm,0.8s								
TIXI	**Tiksi**	**69.91**	**1**			**P**	**17 22 43.2**	**-0.9**
TIXI					IAmb	IAmb	17 22 45.0		
	comp=Z,11nm,0.7s								
TIXI	**Tiksi**	**69.91**	**1**	*ce*	P	**P**	**17 22 44.6**	**+0.5**
TIXI					pmax	pmax			
	comp=Z,13nm,0.8s								
NRIK	**Noril'sk**	**72.35**	**346**		P	**P**	**17 22 59.6**	**+0.6**
	comp=Z,27nm,0.7s,baz=125,slow=6.0,SNR=68								
	comp=Z,27nm,0.7s								
NRIK	**Noril'sk**	**72.35**	**346**	*ce*	P	**P**	**17 22 59.5**	**+0.5**
NRIK					pmax	pmax			
	comp=Z,30nm,0.8s								
AB31	**Akbulak array**	**73.53**	**321**		IAmb	IAmb	17 23 08.3		
	comp=Z,5.7nm,0.7s								
ABKAR	**Akbulak array**	**73.53**	**321**			**P**	**17 23 05.2**	**-1.2**
SVE	**Sverdlovsk**	**75.53**	**329**	*e*P		**P**	**17 23 18.0**	**+0.1**
SVE					pmax	pmax			
	comp=Z,30nm,0.8s								
ARTI	**Arti**	**76.57**	**328**			**P**	**17 23 22.8**	**-1.0**
ARTI					IAmb	IAmb	17 23 24.0		
	comp=Z,18nm,0.7s								
ARTI	**Arti**	**76.57**	**328**	*c* *i* P		**P**	**17 23 23.2**	**-0.6**
ARTI							17 26 15.9		
ARTI					S	**S**	**17 33 06.0**	**-1.4**
ARTI					pmax	pmax			
	comp=Z,12nm,0.7s								
RAYN	**Ar Rayn**	**80.97**	**293**			**P**	**17 23 46.6**	**-2.1**
RAYN	**Ar Rayn**	**80.97**	**293**		P	**P**	**17 23 46.6**	**-2.1**
RAYN					pmax	pmax			
	comp=Z,4.0nm,0.8s								
VNDA	**Vanda**	**81.43**	**173**		P	**P**	**17 23 50.1**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=311,slow=5.7,SNR=17								
	comp=Z,3.0nm,0.7s								
VNDA	**Vanda**	**81.43**	**173**			**P**	**17 23 49.8**	**-0.2**
VNDA	**Vanda**	**81.43**	**173**		P	**P**	**17 23 49.8**	**-0.2**
VNDA					pmax	pmax			
	comp=Z,4.0nm,0.8s								
MAW	**Mawson**	**81.70**	**200**		P	**P**	**17 23 52.6**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=96,slow=2.2,SNR=6.2								
	comp=Z,1.7nm,0.6s								
KIRV	**Kirov**	**81.80**	**329**	*ce*	P	**P**	**17 23 52.9**	**+0.6**
BELG	**Belogornoye**	**81.82**	**323**	*i* P		**P**	**17 23 52.3**	**-0.2**
BELG					pmax	pmax			
	comp=Z,6.0nm,0.8s								
N19K	**Bonanza Creek**	**83.27**	**29**		IAmb	IAmb	17 24 05.2		
	comp=Z,15nm,1.0s								
KBZ	**Khabaz**	**84.14**	**314**		P	**P**	**17 24 04.8**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=122,slow=7.6,SNR=8.5								
	comp=Z,4.0nm,0.8s								
KBZ	**Khabaz**	**84.14**	**314**	*ce*	P	**P**	**17 24 05.6**	**+0.9**
KBZ					pmax	pmax			
	comp=Z,5.0nm,0.9s								
KIV	**Kislovodsk**	**84.30**	**314**		P	**P**	**17 24 05.2**	**-0.6**
KIV					IAmb	IAmb	17 24 10.6		
	comp=Z,12nm,0.6s								
KIV	**Kislovodsk**	**84.30**	**314**	*e*P		**P**	**17 24 05.8**	**+0.1**
KIV					pmax	pmax			
	comp=Z,10.0nm,1.0s								
KIV	**Kislovodsk**	**84.30**	**314**		P	**P**	**17 24 06.2**	**+0.5**
	comp=Z,11nm,0.8s								
SHA1	**Shidzhatmaz**	**84.31**	**314**	*i* P		**P**	**17 24 05.5**	**-0.5**
VRH	**Novokhopyorsk**	**85.36**	**321**	*e*P		**P**	**17 24 09.2**	**-1.5**
VRH					pmax	pmax			
	comp=Z,32nm,0.9s								
MARD	**Mardin**	**85.49**	**307**			**P**	**17 24 11.0**	**-0.9**
MARD					IAmb	IAmb	17 24 13.5		
	comp=Z,9.7nm,0.7s								
VSLR	**Vesyoloye**	**86.21**	**313**	*i* P		**P**	**17 24 15.3**	**+0.2**
VSLR					pmax	pmax			
	comp=Z,41nm,0.9s								
VORD	**Divnogorie**	**86.88**	**321**	*e*P		**P**	**17 24 17.5**	**-0.7**
VORD					pmax	pmax			
	comp=Z,10.0nm,0.9s								
VORR	**Voronezh**	**86.95**	**321**	*e*P		**P**	**17 24 17.6**	**-0.9**
VORR					pmax	pmax			
	comp=Z,48nm,1.0s								
VSR	**Storozhevoye**	**86.96**	**321**	*e*P		**P**	**17 24 15.8**	**-2.8**
VSR					pmax	pmax			
	comp=Z,10.0nm,0.8s								
KLMR	**Klimovskoe**	**87.03**	**331**	*e*P		**P**	**17 24 16.2**	**-2.5**
KLMR					pmax	pmax			
	comp=Z,34nm,1.3s								
ILAR	**Eielson Array**	**87.12**	**25**		P	**P**	**17 24 17.9**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=243,slow=4.6,SNR=5.1								
	comp=Z,0.3nm,0.5s								
ILAR	**Eielson Array**	**87.12**	**25**		P	**P**	**17 24 18.0**	**-1.2**
LPSR	**Galich'ya Gora**	**87.14**	**322**	*e*P		**P**	**17 24 19.3**	**-0.1**
LPSR					pmax	pmax			
	comp=Z,28nm,0.9s								
C27K	**Jago River**	**88.43**	**21**		P	**P**	**17 24 25.4**	**+0.1**
C27K					IAmb	IAmb	17 24 27.5		
	comp=Z,3.9nm,0.7s								
OBN	**Obninsk**	**88.54**	**325**	*e*P		**P**	**17 24 25.7**	**-0.4**
OBN				*e*			17 27 55.1		
OBN					pmax	pmax			
	comp=Z,9.0nm,1.1s								
KMBO	**Kilima Mbogo**	**89.15**	**269**		P	**P**	**17 24 30.5**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=202,slow=11,SNR=3.4								
	comp=Z,1.2nm,0.3s								
GHAJ	**Ghor Haditha**	**89.84**	**301**		P	**P**	**17 24 31.6**	**-1.1**
GHAJ					IAmb	IAmb	17 24 34.3		
	comp=Z,11nm,0.8s								
MMAI	**Mount Meron Ar**	**89.92**	**303**		P	**P**	**17 24 34.0**	**+0.8**
	comp=Z,3.1nm,0.6s,baz=92,slow=5.8,SNR=9.0								
	comp=Z,3.1nm,0.6s								
PLTM	**Poltava**	**89.94**	**319**		P	**P**	**17 24 34.2**	**+1.4**
BR104	**Keskin Array S**	**91.06**	**310**		P	**P**	**17 24 37.9**	**-0.5**
	comp=Z,2.7nm,0.8s								
BR131	**Keskin Array S**	**91.06**	**310**		P	**P**	**17 24 36.3**	**-2.1**
BR131					IAmb	IAmb	17 26 43.4		
	comp=Z,14nm,1.6s								
BR131	**Keskin Array S**	**91.06**	**310**		P	**P**	**17 24 36.3**	**-2.1**
BR131					pmax	pmax			
	comp=Z,14nm,1.7s								
BRTR	**Keskin Array B**	**91.06**	**310**		P	**P**	**17 24 37.6**	**-0.8**
	comp=Z,2.1nm,0.9s,baz=107,slow=4.1,SNR=8.9								
	comp=Z,2.1nm,0.9s								
BR106	**Keskin Array S**	**91.08**	**310**		P	**P**	**17 24 38.1**	**-0.4**
	comp=Z,2.6nm,0.8s								
BR105	**Keskin Array S**	**91.08**	**310**		P	**P**	**17 24 37.9**	**-0.6**
	comp=Z,2.9nm,1.1s								
CSS	**Mathiatis**	**91.56**	**305**		P	**P**	**17 24 40.6**	**-0.1**
	comp=Z,24nm,1.1s								
QSPA	**South Pole Qui**	**91.58**	**180**		P	**P**	**17 24 43.8**	**+3.6**
	comp=Z,0.8nm,0.5s,baz=269,slow=2.7,SNR=7.9								
QSPA	**South Pole Qui**	**91.58**	**180**		IAmb	IAmb	17 25 23.7		
	comp=Z,25nm,1.9s								
ARCES	**ARCESS Array B**	**92.26**	**340**		P	**P**	**17 24 42.6**	**-0.5**
	comp=Z,5.4nm,0.8s,baz=80,slow=6.9,SNR=14								
	comp=Z,5.4nm,0.8s								
SPITS	**Spitsbergen Ar**	**92.43**	**349**		P	**P**	**17 24 44.0**	**+0.1**
	comp=Z,5.2nm,0.7s,baz=59,slow=14,SNR=2.7								
	comp=Z,5.2nm,0.7s								
SPITS	**Spitsbergen Ar**	**92.43**	**349**		P	**P**	**17 24 44.0**	**+0.1**
NE56	**Odesa**	**92.57**	**317**		P	**P**	**17 24 44.3**	**-0.7**
AK10	**Malin Array Si**	**93.26**	**321**		P	**P**	**17 24 47.8**	**-0.3**
AKASG	**Malin Array Be**	**93.26**	**321**		P	**P**	**17 24 47.7**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=76,slow=3.9,SNR=2.2								
	comp=Z,0.6nm,0.5s								
FINES	**FINESS Array B**	**93.48**	**332**		P	**P**	**17 24 47.8**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=56,slow=3.4,SNR=10								
	comp=Z,1.0nm,0.5s								
FINES	**FINESS Array B**	**93.48**	**332**	*i* P		**P**	**17 24 50.4**	**+1.5**
FINES					pmax	pmax			
	comp=Z,1.0nm,0.4s								
MNK	**Minsk**	**93.60**	**325**	*i* P		**P**	**17 24 47.3**	**-2.3**
MNK				*i*			17 28 29.1		
MNK				*i* S		**SKSac**	**17 35 17.7**	**-3.8**
MNK				*i* SS		**SS**	**17 42 10.8**	**-2.6**
MNK				*i* SSS		SSS	17 45 52.4		
MNK					pmax	pmax			
	comp=Z,7.0nm,0.8s								
MNK					pmax	pmax			
	comp=N,10.0nm,1.0s								
MNK					pmax	pmax			
	comp=E,14nm,0.9s								
LUBAR	**Lubar, Ukraine**	**94.29**	**320**	P		**P**	**17 24 52.4**	**-0.5**
BURAR	**Bucovina Array**	**96.30**	**318**			**P**	**17 25 00.9**	**-1.3**
BURAR					IAmb	IAmb	17 25 05.9		
	comp=Z,4.8nm,1.1s								
BUR08	**Bucovina Ar. S**	**96.30**	**318**			**P**	**17 25 01.2**	**-1.2**
BUR08					IAmb	IAmb	17 25 16.6		
	comp=Z,14nm,1.6s								
HFS	**Hagfors**	**99.67**	**332**		P	**Pdif**	**17 25 15.8**	**-1.3**
	comp=Z,2.4nm,0.9s,baz=90,slow=8.9,SNR=2.3								
	comp=Z,2.4nm,0.9s								
NOA	**NORSAR Array B**	**100.47**	**333**		P	**Pdif**	**17 25 19.2**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=65,slow=4.6,SNR=4.4								
SCHQ	**Schefferville**	**122.66**	**9**		PKP	**PKPdf**	**17 30 29.4**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=153,slow=4.5,SNR=1.4								
TXAR	**Lajitas Array**	**123.14**	**53**		PKP	**PKPdf**	**17 30 31.9**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=337,slow=3.3,SNR=2.6								
TORD	**Torodi Ar. Bea**	**123.20**	**287**		PKP	**PKPdf**	**17 30 31.4**	**+0.2**
	comp=Z,8.7nm,1.0s,baz=83,slow=3.3,SNR=3.8								
PLCA	**Paso Flores**	**138.19**	**161**		PKP	**PKPdf**	**17 30 57.7**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=173,slow=8.1,SNR=2.0								
LPAZ	**La Paz**	**159.62**	**136**		PKP	**PKPdf**	**17 31 35.2**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=270,slow=3.0,SNR=3.8								

IDC ***14*** *17:14:20.0±1.6, 1.45N×126.26E, h0km, mb3.9/5, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=125.2km s-min=20.4km az=69.0*

ISC 14 17:14:24.9±1.9, 1.5N±0.3×126.6E±0.8, h35km, n6, σ1s47/6, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.50**	**183**	P	**P**	**17 18 49.0**	**-0.1**
	0.2nm,0.3s,baz=19,slow=13,SNR=1.9						
	2.0nm,0.6s						
WRA	**Warrunga Arr**	**22.63**	**161**	P	**P**	**17 19 22.4**	**-0.6**
	4.5nm,0.7s,baz=338,slow=11,SNR=5.1						
	4.5nm,0.7s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**17 19 55.6**	**+0.8**
	2.0nm,0.8s,baz=344,slow=9.7,SNR=5.3						
	2.0nm,0.8s						
MKAR	**Makanchi Array**	**59.29**	**326**	P	**P**	**17 24 21.8**	**-1.4**
	0.5nm,0.5s,baz=116,slow=7.4,SNR=2.1						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.52**	**328**	P	**P**	**17 24 50.6**	**-1.1**
	0.8nm,0.5s,baz=122,slow=7.1,SNR=2.8						
	0.8nm,0.5s						
BVAR	**Borovoye Array**	**69.09**	**328**	P	**P**	**17 25 28.9**	**+1.5**
	0.4nm,0.6s,baz=140,slow=9.2,SNR=2.0						
	0.4nm,0.6s						

NEIC ***14*** *17:15:24.1±1.8, 19.1N±0.1×155.44W±0.09, h35km±2km, Error ellipse: s-maj=22.5km s-min=3.6km az=320.0*

HVO 14 17:15:25.0±1.6, 19.09N±0.05×155.39W±0.04, h41km±4km, ML2.6/28, ML2.8/38(NEIC), Error ellipse: s-maj=8.1km s-min=3.4km az=151.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.15**	**358**		Pn	17 15 31.5	-0.5
HPO	**Honuapo**	**0.15**	**270**		Sn	17 15 36.0	-0.9
HLP	**Hilina Pali**	**0.22**	**21**		Pn	17 15 31.8	-0.8
HLP				IAML		17 15 40.9	
	comp=E,1μm,0.6s						
HLP				IAML		17 15 41.5	
	comp=N,1μm,0.6s						
KHU	**Kahuku**	**0.26**	**307**		Pn	17 15 31.8	-1.4
KHU					Sn	17 15 36.6	-2.3
AIN	**Ainahou**	**0.29**	**348**		Sn	17 15 38.7	-0.6
AIN	**Ainahou**	**0.29**	**348**		Pn	17 15 32.4	-1.0
AIN				IAML		17 15 39.0	
	comp=E,3μm,0.4s						
AIN				IAML		17 15 39.9	
	comp=N,3μm,0.4s						
SDHHI	**Sand Hill**	**0.31**	**17**		Pn	17 15 32.4	-1.3
SDHHI					Sn	17 15 38.2	-1.4
RIM	**Rim**	**0.32**	**20**		Pn	17 15 32.7	-1.0
RIM					Sn	17 15 39.1	-0.8
KKO	**Keanakako'i**	**0.33**	**21**		Pn	17 15 32.9	-1.0
PUH	**Pauahi**	**0.33**	**31**		Sn	17 15 38.1	-1.8
PUH	**Pauahi**	**0.33**	**31**		Pn	17 15 32.6	-1.2
PUH				IAML		17 15 39.1	
	comp=E,560nm,0.7s						
PUH				IAML		17 15 41.0	
	comp=N,615nm,0.5s						
UWE	**Uwekahuna**	**0.34**	**16**		Sn	17 15 39.4	-0.8
UWE	**Uwekahuna**	**0.34**	**16**		Pn	17 15 33.3	-0.7
UWE				IAML		17 15 44.3	
	comp=E,1μm,0.6s						
UWE				IAML		17 15 46.0	
	comp=N,1μm,1.0s						
BYL	**Byron's Ledge**	**0.34**	**21**		Pn	17 15 32.1	-1.9
BYL				IAML		17 15 40.6	
	comp=E,668nm,0.9s						
BYL				IAML		17 15 43.6	
	comp=N,852nm,0.7s						
UWB	**Uwekahuna Bluf**	**0.35**	**18**		Pn	17 15 32.9	-1.1
HATHI	**Halema'uma'u T**	**0.35**	**21**		Pn	17 15 33.0	-1.1
HATHI					Sn	17 15 39.5	-1.0
HATHI	**Halema'uma'u T**	**0.35**	**21**	IAML		17 15 46.3	
	comp=N,860nm,0.8s						
HATHI				IAML		17 15 53.0	
	comp=E,961nm,0.7s						
SBLHI	**Steaming Bluff**	**0.36**	**19**		Pn	17 15 33.1	-1.0
KNHH	**Kane Nui o Ham**	**0.36**	**36**		Pn	17 15 32.7	-1.4
RSD	**Rainshed**	**0.39**	**16**		Pn	17 15 33.3	-1.2
RSD					Sn	17 15 39.2	-1.9
RSD	**Rainshed**	**0.39**	**16**	IAML		17 15 40.3	
	comp=E,291nm,0.9s						
RSD				IAML		17 15 42.8	
	comp=N,290nm,0.6s						
STCH	**Steam Cracks**	**0.39**	**41**		Pn	17 15 33.4	-1.0
STCH				IAML		17 15 40.1	
	comp=N,504nm,0.6s						
JCUZ	**Jacuzzi**	**0.40**	**43**		Pn	17 15 33.5	-1.1
MLH	**Mauna Loa**	**0.40**	**1**		Sn	17 15 40.0	-1.6
MLH	**Mauna Loa**	**0.40**	**1**	Pn	Pn	17 15 32.8	-2.0
MLH				IAML		17 15 40.6	
	comp=E,594nm,0.7s						
MLH				IAML		17 15 46.2	
	comp=N,654nm,0.5s						
NPOC	**North of Pu'u**	**0.40**	**42**		Pn	17 15 33.4	-1.2
MWH	**Mokuaweoweo**	**0.44**	**334**		Pn	17 15 33.6	-1.9
MWH	**Mokuaweoweo**	**0.44**	**334**		Sn	17 15 40.6	-2.2
JOKA	**Jonika Flow**	**0.50**	**47**		Pn	17 15 34.6	-1.3
JOKA				IAML		17 15 44.8	
	comp=N,655nm,0.8s						
JOKA	**Jonika Flow**	**0.50**	**47**		Sn	17 15 42.6	-0.9
ALEP	**Alea Permanent**	**0.51**	**332**		Pn	17 15 34.5	-1.7
HMH	**Humu'ula Sheep**	**0.52**	**351**		Sn	17 15 41.9	-2.4
HMH	**Humu'ula Sheep**	**0.52**	**351**		Pn	17 15 34.0	-2.3
HMH				IAML		17 15 43.1	
	comp=E,1μm,0.5s						
HMH				IAML		17 15 43.2	
	comp=N,943nm,0.7s						
HUH	**Hualalai**	**0.72**	**325**	Pn	Pn	17 15 36.9	-2.1
HUH				IAML		17 15 57.0	
	comp=N,499nm,0.8s						
HUH				IAML		17 16 03.9	
	comp=E,532nm,0.5s						

IDC ***14*** *17:16:44.2±0.5, 1.59N×126.33E, h0km, mb4.3/18, mbtmp4.3/20, ML4.1/2, Error ellipse: s-maj=29.5km s-min=10.6km az=73.0*

DJA ***14*** *17:16:45.7±0.3, 2.1N±4.1×12.6E±.1, h10km, M4.4/11, mb4.4/2, MLv4.3/11*

NEIC ***14*** *17:16:46.5±2.0, 1.57N±0.05×126.43E±0.06, h13km±3km, mb4.7/30, Error ellipse: s-maj=9.8km s-min=6.6km az=63.0*

ISC 14 17:16:45.8±0.4, 1.53N±0.06×126.35E±0.08, h10km, n65, σ1s05/62, mb4.6/37, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**127**		**Pn**	**17 17 08.6**	**-1.0**
TNTI	**Ternate**	**1.26**	**127**	P	Pn	17 17 08.4	-1.2
SGSI	**Sangihe**	**2.29**	**339**	P	**Pn**	**17 17 24.2**	**+0.5**
KMSI	**Cibinong**	**2.56**	**248**	P	**Pn**	**17 17 26.9**	**-0.4**
SANI	**Sanana**	**3.58**	**186**	P	**Pn**	**17 17 42.4**	**+1.0**
LUWI	**Luwuk**	**4.40**	**234**	Pn	**Pn**	**17 17 53.9**	**+1.2**
SWI	**Sorong**	**5.45**	**116**	P	**Pn**	**17 18 07.7**	**+0.5**
FAKI	**Fak Fak**	**7.37**	**127**		**Pn**	**17 18 33.1**	**-0.5**
MYLDM	**Lahad Datu**	**8.63**	**295**	Pn	**Pn**	**17 18 51.6**	**+0.7**
KAPI	**Kappang**	**9.26**	**225**	Pn	**Pn**	**17 18 59.4**	**-0.2**
	3.0nm,0.3s,baz=168,slow=18,SNR=1.6						
	6.4nm,0.3s						
SBUM	**Sibu**	**14.15**	**274**	P	**P**	**17 20 14.6**	**+0.5**
MTN	**Manton Dam**	**15.05**	**162**	Pn	**Pn**	**17 20 19.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.52**	**182**	P	**P**	**17 21 15.3**	**+1.8**
	0.3nm,0.3s,baz=12,slow=12,SNR=2.6						
	2.3nm,0.6s						
WB0	**Warramunga Arr**	**22.59**	**160**	P	**P**	**17 21 45.7**	**-1.1**
WB0				IAmb	IAmb	17 21 50.1	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**22.73**	**160**	P	**P**	**17 21 47.5**	**-0.6**
WRAB				IAmb	IAmb	17 21 51.6	
	comp=Z,24nm,1.1s						
SSLB	**Suanglung**	**22.73**	**347**	P	**P**	**17 21 47.9**	**-0.3**
SSLB				IAmb	IAmb	17 21 49.8	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**22.73**	**160**	P	**P**	**17 21 48.1**	**-0.1**
	comp=Z,13nm,0.6s,baz=339,slow=11,SNR=15						
WRA				PcP	**PcP**	**17 25 41.0**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=303,slow=3.1,SNR=1.7						
WRA				S	**S**	**17 25 53.7**	**-3.4**
	comp=Z,0.6nm,0.8s,baz=125,slow=24,SNR=3.4						
	comp=Z,13nm,0.6s						
WR8	**Warramunga Arr**	**22.80**	**160**	P	**P**	**17 21 48.6**	**-0.3**
WR8				IAmb	IAmb	17 21 51.8	
	comp=Z,16nm,0.9s						
AS31	**Alice Springs**	**26.10**	**164**	P	**P**	**17 22 20.0**	**-0.1**
ASAR	**Alice Springs**	**26.10**	**164**	P	**P**	**17 22 20.3**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=349,slow=12,SNR=10						
ASAR				PcP	**PcP**	**17 25 48.5**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=341,slow=2.0,SNR=4.8						
ASAR				S	**S**	**17 26 55.0**	**+3.3**
	comp=Z,0.7nm,0.7s,baz=333,slow=11,SNR=4.9						
	comp=Z,3.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**31.71**	**304**	P	**P**	**17 23 09.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=122,slow=7.9,SNR=4.9						
CMAR				PcP	**PcP**	**17 26 01.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=118,slow=2.9,SNR=4.2						
	comp=Z,0.4nm,0.3s						
CHTO	**Chiang Mai**	**31.88**	**304**	P	**P**	**17 23 12.0**	**+0.4**
BBOO	**Buckleboo**	**35.37**	**166**	P	**P**	**17 23 41.9**	**+0.1**
BBOO				IAmb	IAmb	17 23 43.3	
	comp=Z,26nm,1.3s						
KSRS	**Korea Array**	**35.77**	**2**	P	**P**	**17 23 48.1**	**+3.0**
	comp=Z,1.6nm,0.8s,baz=184,slow=9.8,SNR=4.3						
STKA	**Stephens Creek**	**36.24**	**158**	P	**P**	**17 23 48.8**	**-0.4**
	comp=Z,4.0nm,0.7s,baz=357,slow=7.4,SNR=7.7						
	comp=Z,4.0nm,0.7s						
MJAR	**Matsushiro Arr**	**36.52**	**16**	P	**P**	**17 23 50.7**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=178,slow=9.2,SNR=6.1						
	comp=Z,2.8nm,0.9s						
ARMA	**Armidale**	**39.87**	**145**	P	**P**	**17 24 20.4**	**+0.4**
ARMA				IAmb	IAmb	17 25 01.3	
	comp=Z,22nm,1.4s						
LZH	**Lanzhou**	**40.22**	**331**	*e*P	P	17 24 21.0	-1.9
LZH				pP	pP	17 24 28.1	+2.5
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
SHL	**Shillong**	**40.91**	**309**	P	**P**	**17 24 27.9**	**-0.9**
USRK	**Ussuriysk Ar.**	**42.78**	**6**	P	**P**	**17 24 44.3**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=174,slow=5.8,SNR=5.0						
	comp=Z,4.2nm,0.8s						
GTA	**Gaotai**	**44.80**	**331**	*e*P	**P**	**17 25 00.8**	**+0.7**
GTA				pP	pP	17 25 05.6	+2.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EVN	**Everest**	**46.02**	**309**		**P**	**17 25 09.6**	**-1.1**
EVN				IAmb	IAmb	17 25 13.4	
	comp=Z,5.0nm,0.9s						
HILR	**Hailar Array B**	**48.18**	**354**	P	**P**	**17 25 28.5**	**+2.1**
	comp=Z,2.3nm,0.4s,baz=172,slow=12,SNR=5.0						
SONM	**Songino Array**	**49.26**	**342**	P	**P**	**17 25 34.5**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=154,slow=8.0,SNR=6.2						
SONM				PcP	**PcP**	**17 26 57.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=151,slow=3.3,SNR=2.5						
	comp=Z,2.2nm,0.9s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**17 26 46.4**	**-0.5**
	comp=Z,5.5nm,0.8s,baz=121,slow=8.0,SNR=13						
MKAR				PcP	**PcP**	**17 27 35.2**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=111,slow=4.4,SNR=3.7						
	comp=Z,5.5nm,0.8s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	P	17 26 45.1	-1.7
MAKZ	**Makanchi**	**59.33**	**326**	P	**P**	**17 26 47.6**	**-0.5**
MAKZ				IAmb	IAmb	17 26 51.3	
	comp=Z,7.3nm,0.9s						
KDJ	**Kajisay**	**59.74**	**319**	P	**P**	**17 26 50.5**	**-0.8**
KDJ				IAmb	IAmb	17 26 53.9	
	comp=Z,4.9nm,0.9s						
YAK	**Yakutsk**	**

MORN				S	Sn	17 22 46.9	-0.6	
CONN	**Concepcion**	**0.54**	**43**	P	Pb	17 22 38.7	+0.7	
CONN				S	Sn	17 22 46.9	-1.3	
NADN	**Granada**	**0.57**	**357**	S	Sn	17 22 48.3	-0.8	
UNAN	**Cigeo UNAN**	**0.97**	**344**	P	Pn	17 22 46.2	+0.5	
UNAN				S	Sn	17 22 59.3	+0.3	
WILN	**Americas 2**	**1.00**	**349**	P	Pb	17 22 45.9	0.0	
WILN				S	Sn	17 22 59.8	+0.1	
APQ2	**Apoyeque**	**1.07**	**343**	P	Pn	17 22 47.3	+0.2	
APQ2				S	Sn	17 23 01.9	+0.6	
APQ3	**Volcan Apoyequ**	**1.15**	**342**	S	Sn	17 23 03.7	+0.3	
COPN	**Copaltepe**	**1.16**	**330**	P	Pn	17 22 47.3	-1.0	
MOM2	**El Cardon**	**1.34**	**339**	P	Pn	17 22 50.7	-0.1	
MOM2				S	Sb	17 23 09.7	+1.2	
JTS	**Las Juntas de**	**1.35**	**130**	P	Pb	17 22 51.6	-0.3	
JTS				S	Sn	17 23 08.1	-0.3	
CNGA	**Al SSO del Vol**	**1.48**	**332**	P	Pn	17 22 52.6	-0.3	
CNGN	**Cerro Negro**	**1.49**	**333**	P	Pn	17 22 52.6	-0.2	
CNGN	**Cerro Negro**	**1.49**	**333**	S	Sb	17 23 12.5	-0.2	
POLN	**Al Sur del Vol**	**1.67**	**332**	P	Pn	17 22 55.3	0.0	
POLN				S	Sn	17 23 16.8	+0.5	
PKGN	**Cerro Pekin**	**1.77**	**327**	P	Pn	17 22 56.6	-0.1	
PKGN				S	Sn	17 23 18.0	-0.6	
CRIN	**San Cristobal**	**1.83**	**326**	S	Sn	17 23 20.3	0.0	
CRIN	**San Cristobal**	**1.83**	**326**	P	Pn	17 22 57.9	+0.2	

*IDC **14** 17:23:00.7±1.1, 1°.63N×126°.22E, h0km, mb4.0/7, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=101.7km s-min=16.8km az=70.0*
*DJA **14** 17:23:04.1±0.3,2°N±3°×12°6E±°, h10km, M4.1/12, mb4.3/7, MLv4.0/12*
*NEIC **14** 17:23:06.3±1.8, 1°.69N±0°.10×126°.42E±0°.04, h35km±2km, mb4.3/14, Error ellipse: s-maj=17.2km s-min=4.0km az=197.0*

ISC 14 17:23:05.8±0.6, 1°.72N±0°.06×126°.48E±0°.06, h35km, n38, σ1§00/37, mb4.1/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**137**		**Pn**	**17 23 28.5**	**+1.2**
TNTI	**Ternate**	**1.29**	**137**	P	**Pn**	**17 23 27.6**	**+0.3**
SGSI	**Sangihe**	**2.17**	**334**	P	**Pn**	**17 23 39.9**	**+0.4**
KMSI	**Cibinong**	**2.75**	**246**	P	**Pn**	**17 23 47.9**	**+0.6**
SANI	**Sanana**	**3.77**	**188**	P	**Pn**	**17 24 01.4**	**-0.1**
LUWI	**Luwuk**	**4.61**	**234**		**Pn**	**17 24 13.8**	**+0.8**
LUWI				Sn	**Sn**	**17 25 07.8**	**+2.4**
LUWI	**Luwuk**	**4.61**	**234**	P	**Pn**	**17 24 13.6**	**+0.6**
MRSI	**Marisa**	**4.70**	**255**	P	**Pn**	**17 24 14.7**	**+0.4**
NLAI	**Namlea**	**4.96**	**173**	P	**Pn**	**17 24 17.9**	**0.0**
APSI	**Ampana**	**5.49**	**242**	P	**Pn**	**17 24 25.2**	**+0.1**
TOLI2	**Tolitoli**	**5.73**	**264**	Pn	**Pn**	**17 24 27.1**	**-1.3**
BBSI	**Bau Bau** 14nm,1.1s	**8.15**	**209**	P	**Pn**	**17 25 01.4**	**-0.3**
TTSI	**Tana Toraja** 15nm,0.7s	**8.17**	**235**	P	**Pn**	**17 25 01.9**	**0.0**
SPSI	**Sidrap Palu** 8.6nm,0.7s	**8.77**	**230**	P	**Pn**	**17 25 10.4**	**+0.3**
BNSI	**Bone**	**8.80**	**226**	P	**Pn**	**17 25 10.9**	**+0.3**
MTN	**Manton Dam**	**15.19**	**162**	Pn	**Pn**	**17 26 36.8**	**-1.0**
MTN	comp=Z,16nm,1.3s			IAmb	IAmb	17 27 18.7	
KNRA	**Kununurra**	**17.43**	**173**	Pn	**Pn**	**17 27 03.9**	**-2.4**
KNRA	comp=Z,16nm,1.1s			IAmb	IAmb	17 27 10.1	
FITZ	**Fitzroy Crossi** comp=Z,0.2nm,0.3s,baz=0.3,slow=12,SNR=3.2 comp=Z,1.2nm,0.7s	**19.71**	**182**	P	**P**	**17 27 31.3**	**-1.1**
FITZ	**Fitzroy Crossi** comp=Z,2.4nm,1.4s	**19.71**	**182**	IAmb	IAmb	17 27 38.1	
TPUB	**Ta-pu**	**22.19**	**346**	P	**P**	**17 27 57.7**	**-1.5**
WB0	**Warramunga Arr**	**22.72**	**160**	P	**P**	**17 28 03.4**	**-1.4**
WB0	comp=Z,3.8nm,0.6s			IAmb	IAmb	17 28 11.8	
WRA	**Warramunga Arr** comp=Z,1.5nm,0.5s,baz=338,slow=11,SNR=9.9 comp=Z,1.5nm,0.5s	**22.87**	**161**	P	**P**	**17 28 04.9**	**-1.4**
WR8	**Warramunga Arr**	**22.93**	**160**	P	**P**	**17 28 05.4**	**-1.6**
WR8	comp=Z,5.9nm,1.1s			IAmb	IAmb	17 28 08.7	
AS31	**Alice Springs**	**26.25**	**164**	P	**P**	**17 28 37.0**	**-0.8**
ASAR	**Alice Springs** comp=Z,0.9nm,0.6s,baz=343,slow=11,SNR=10	**26.25**	**164**	P	**P**	**17 28 37.6**	**-0.2**
ASAR	comp=Z,0.4nm,0.9s,baz=348,slow=2.3,SNR=2.1 comp=Z,0.9nm,0.6s			PcP	**PcP**	**17 32 04.0**	**-0.1**
BBOO	**Buckleboo**	**35.52**	**166**	P	**P**	**17 29 59.6**	**+0.2**
BBOO	comp=Z,16nm,1.3s			IAmb	IAmb	17 30 40.4	
MAJO	**Matsushiro**	**36.31**	**16**	P	**P**	**17 30 07.6**	**+1.4**
MJB9	**Matsu-Tunnel**	**36.31**	**16**	P	**P**	**17 30 06.9**	**+0.7**
MJB9	comp=Z,22nm,1.4s			IAmb	IAmb	17 30 27.1	
MKAR	**Makanchi Array** comp=Z,0.9nm,0.6s,baz=123,slow=8.2,SNR=10 comp=Z,0.9nm,0.6s	**59.06**	**326**	P	**P**	**17 33 02.3**	**-0.2**
INZ	**Inchbonnie**	**59.93**	**143**	P	**P**	**17 33 08.8**	**+0.3**
KURBB	**Kurchatov Arra** comp=Z,1.5nm,0.2s,baz=126,slow=6.1,SNR=7.2 comp=Z,1.5nm,0.2s	**63.30**	**328**	P	**P**	**17 33 30.7**	**-0.3**
KURK	**Kurchatov**	**63.30**	**328**	P	**P**	**17 33 30.7**	**-0.4**
KURK	**Kurchatov** comp=Z,2.0nm,0.6s	**63.30**	**328**	IAmb	IAmb	17 33 35.3	
BVAR	**Borovoye Array** comp=Z,0.7nm,0.7s,baz=132,slow=6.4,SNR=3.6 comp=Z,0.7nm,0.7s	**68.87**	**327**	P	**P**	**17 34 06.1**	**-0.7**
NRIK	**Noril'sk** comp=Z,1.9nm,0.6s,baz=127,slow=10,SNR=2.1 comp=Z,1.9nm,0.6s	**72.31**	**346**	P	**P**	**17 34 28.5**	**+1.1**
NRIK	**Noril'sk** comp=Z,1.9nm,0.5s	**72.31**	**346**	IAmb	IAmb	17 34 29.2	
ABKAR	**Akbulak array**	**73.55**	**321**	P	**P**	**17 34 34.5**	**-0.7**
VNDA	**Vanda** comp=Z,0.5nm,0.4s,baz=281,slow=21,SNR=6.5 comp=Z,0.5nm,0.4s	**81.48**	**173**	P	**P**	**17 35 20.1**	**+1.1**

IDC 14 17:29:08.8±3.2, 2°.12N×127°.40E, h0km, mb3.1/3, mbtmp3.1/3, Error ellipse: s-maj=291.0km s-min=28.4km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=341,slow=10,SNR=6.9 0.5nm,0.5s	**22.96**	**163**	P	P	17 34 15.0	-0.1
ASAR	**Alice Springs** 0.2nm,0.5s,baz=349,slow=8.1,SNR=6.4 0.2nm,0.5s	**26.41**	**166**	P	P	17 34 47.2	-0.1
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=107,slow=7.0,SNR=2.6 0.1nm,0.4s	**59.25**	**326**	P	P	17 39 12.3	+0.1

*IDC **14** 17:29:50.4±0.8, 1°.64N×126°.45E, h0km, mb4.1/10, mbtmp4.0/11, ML4.0/1, Error ellipse: s-maj=59.6km s-min=14.8km az=72.0*
*DJA **14** 17:29:53.8±0.2,2°N±3°×12°6E±°, h10km, M4.2/15, mb4.3/6, MLv4.1/15*
*NEIC **14** 17:29:55.9±1.4, 1°.64N±0°.10×126°.45E±0°.08, h38km±8km, mb4.1/13, Error ellipse: s-maj=16.1km s-min=9.1km az=216.0*

ISC 14 17:29:55.4±0.6, 1°.63N±0°.07×126°.46E±0°.07, h35km, n41, σ1§08/40, mb4.1/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**133**	Pn	**Pn**	**17 30 16.7**	**+0.4**
TNTI	**Ternate**	**1.25**	**133**	P	**Pn**	**17 30 16.3**	**0.0**
TNTI				S	**Sn**	**17 30 31.6**	**-0.3**
SGSI	**Sangihe**	**2.24**	**335**	P	**Pn**	**17 30 32.0**	**+1.9**
KMSI	**Cibinong**	**2.69**	**247**	P	**Pn**	**17 30 36.7**	**+0.4**
SANI	**Sanana**	**3.69**	**187**	P	**Pn**	**17 30 50.2**	**+0.3**
LUWI	**Luwuk**	**4.54**	**234**		**Pn**	**17 31 02.0**	**+0.2**
LUWI	**Luwuk**	**4.54**	**234**	P	**Pn**	**17 31 03.1**	**+1.4**
MRSI	**Marisa**	**4.66**	**256**	P	**Pn**	**17 31 04.9**	**+1.5**
NLAI	**Namlea**	**4.88**	**172**	P	**Pn**	**17 31 07.4**	**+1.0**
APSI	**Ampana**	**5.43**	**242**	P	**Pn**	**17 31 15.8**	**+1.8**
TOLI2	**Tolitoli**	**5.70**	**265**	Pn	**Pn**	**17 31 17.4**	**-0.3**
MPSI	**Mapaga** 0.1nm16nm,0.9s	**6.69**	**259**	P	**Pn**	**17 31 32.8**	**+1.6**
TTSI	**Tana Toraja** 17nm,0.6s	**8.10**	**235**	P	**Pn**	**17 31 51.2**	**+0.5**
MYLDM	**Lahad Datu**	**8.69**	**294**		**Pn**	**17 31 58.7**	**0.0**
SPSI	**Sidrap Palu** 13nm,0.6s	**8.70**	**230**	P	**Pn**	**17 31 59.7**	**+0.9**
BNSI	**Bone**	**8.73**	**227**	P	**Pn**	**17 31 58.3**	**-1.0**
MTN	**Manton Dam**	**15.11**	**162**		**Pn**	**17 33 25.8**	**-0.6**
MTN	comp=Z,15nm,1.4s			IAmb	IAmb	17 34 02.2	
FITZ	**Fitzroy Crossi** comp=Z,0.3nm,0.3s,baz=13,slow=8.1,SNR=12 comp=Z,1.0nm,0.4s	**19.62**	**182**	P	**P**	**17 34 20.6**	**-0.4**
TPUB	**Ta-pu**	**22.27**	**346**	P	**P**	**17 34 47.8**	**-1.8**
WB0	**Warramunga Arr**	**22.65**	**160**	P	**P**	**17 34 54.0**	**+0.3**
WB0	comp=Z,6.3nm,0.9s			IAmb	IAmb	17 34 58.7	
WRAB	**Tennant Creek**	**22.79**	**161**	P	**P**	**17 34 55.6**	**+0.5**
WRAB	comp=Z,6.3nm,0.9s			IAmb	IAmb	17 34 59.5	
WRA	**Warramunga Arr** comp=Z,2.1nm,0.3s,baz=340,slow=11,SNR=32 comp=Z,2.1nm,0.3s	**22.79**	**161**	P	**P**	**17 34 54.0**	**-1.2**
AS31	**Alice Springs**	**26.17**	**164**	P	**P**	**17 35 26.9**	**+0.2**
ASAR	**Alice Springs** comp=Z,1.2nm,0.5s,baz=348,slow=12,SNR=15 comp=Z,1.2nm,0.5s	**26.17**	**164**	P	**P**	**17 35 27.4**	**+0.6**
BBOO	**Buckleboo**	**35.44**	**166**	P	**P**	**17 36 47.7**	**-0.7**
STKA	**Stephens Creek** comp=Z,1.0nm,0.7s,baz=322,slow=12,SNR=3.8 comp=Z,1.0nm,0.7s	**36.29**	**158**	P	**P**	**17 36 54.7**	**-1.0**
PEA0B	**Petropavlovsk-**	**57.46**	**22**	P	**P**	**17 39 42.7**	**+2.0**
PETK	**Petropavlovsk-** comp=Z,5.6nm,1.0s,baz=209,slow=7.3,SNR=1.8 comp=Z,5.6nm,1.0s	**57.46**	**22**	P	**P**	**17 39 41.4**	**+0.6**
MKAR	**Makanchi Array** comp=Z,0.6nm,0.4s,baz=115,slow=7.2,SNR=9.2 comp=Z,0.6nm,0.4s	**59.12**	**326**	P	**P**	**17 39 53.0**	**+0.4**
MAKZ	**Makanchi**	**59.31**	**326**	P	**P**	**17 39 53.4**	**-0.4**
MAKZ	comp=Z,2.8nm,1.1s			IAmb	IAmb	17 40 37.0	
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.3s,baz=142,slow=7.3,SNR=4.5 comp=Z,0.6nm,0.3s	**62.33**	**334**	P	**P**	**17 40 13.6**	**-0.6**
KURBB	**Kurchatov Arra** comp=Z,3.6nm,0.2s,baz=128,slow=6.2,SNR=4.5 comp=Z,3.6nm,0.2s	**63.36**	**328**	P	**P**	**17 40 21.1**	**+0.1**
KURK	**Kurchatov**	**63.36**	**328**	P	**P**	**17 40 21.1**	**0.0**
KURK	**Kurchatov** comp=Z,2.2nm,0.7s	**63.36**	**328**	IAmb	IAmb	17 40 32.1	
BVAR	**Borovoye Array** comp=Z,0.4nm,0.5s,baz=117,slow=4.4,SNR=2.8 comp=Z,0.4nm,0.5s	**68.93**	**328**	P	**P**	**17 40 57.0**	**+0.1**
NRIK	**Noril'sk** comp=Z,1.6nm,0.5s,baz=149,slow=5.2,SNR=4.2 comp=Z,1.6nm,0.5s	**72.39**	**346**	P	**P**	**17 41 18.1**	**+0.5**
NRIK	**Noril'sk** comp=Z,1.7nm,0.8s	**72.39**	**346**	IAmb	IAmb	17 41 20.9	
AB31	**Akbulak array**	**73.60**	**321**	P	**P**	**17 41 23.3**	**-1.8**
ABKAR	**Akbulak array**	**73.60**	**321**	P	**P**	**17 41 23.3**	**-1.8**
VNDA	**Vanda** comp=Z,0.2nm,0.6s,baz=314,slow=3.8,SNR=1.7 comp=Z,0.2nm,0.6s	**81.39**	**173**	P	**P**	**17 42 10.6**	**+2.4**
VNDA	**Vanda**	**81.39**	**173**	P	**P**	**17 42 08.3**	**+0.2**
VNDA	comp=Z,2.1nm,1.3s			IAmb	IAmb	17 42 26.4	

IDC 14 17:31:03.2±1.5, 1°.57N×126°.28E, h0km, mb4.0/4, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=118.2km s-min=22.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=6.9,slow=13,SNR=1.3 0.7nm,0.4s	**19.56**	**182**	P	P	17 35 32.7	0.0
WRA	**Warramunga Arr** 2.6nm,0.7s,baz=339,slow=11,SNR=3.0 2.6nm,0.7s	**22.80**	**160**	P	P	17 36 07.2	-0.5
ASAR	**Alice Springs** 0.7nm,0.4s,baz=343,slow=9.4,SNR=5.2	**26.16**	**164**	P	P	17 36 39.6	+0.1
ASAR	0.6nm,1.0s,baz=339,slow=2.6,SNR=4.4 0.7nm,0.4s			PcP	PcP	17 40 07.1	+0.1
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=130,slow=7.9,SNR=4.2 0.2nm,0.3s	**59.08**	**326**	P	P	17 41 04.7	-0.6
KURBB	**Kurchatov Arra** 2.6nm,0.2s,baz=125,slow=7.3,SNR=2.0 2.6nm,0.2s	**63.31**	**328**	P	P	17 41 34.5	+0.5

*IDC **14** 17:35:29.9±1.5, 1°.55N×126°.35E, h0km, mb3.9/5, mbtmp3.9/6, ML3.5/1, MS4.8/1, Error ellipse: s-maj=119.5km s-min=18.8km az=69.0*
*DJA **14** 17:35:32.9±0.2,2°N±2°×12°6E±°, h10km, M3.9/12, mB5.4/1, mb3.8/3, MLv3.9/12, Mw(mB)4.8/1*

ISC 14 17:35:35.2±0.9, 1°.56N±0°.06×126°.53E±0°.08, h35km, n13, σ0§73/14, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.15**	**133**	P	**Pn**	**17 35 54.8**	**0.0**
TNTI				S	**Sn**	**17 36 10.7**	**+1.4**
SGSI	**Sangihe**	**2.33**	**335**	P	**Pn**	**17 36 11.5**	**+0.4**
SGSI				S	**Sn**	**17 36 39.8**	**+1.2**
KMSI	**Cibinong**	**2.73**	**249**	P	**Pn**	**17 36 16.6**	**0.0**
SANI	**Sanana**	**3.63**	**189**	P	**Pn**	**17 36 29.0**	**+0.1**
LUWI	**Luwuk**	**4.56**	**235**	P	**Pn**	**17 36 42.5**	**+0.7**
NLAI	**Namlea**	**4.80**	**173**	P	**Pn**	**17 36 45.6**	**+0.5**
DAV	**Davao City (W)** comp=Z,9µm,21.8s,baz=258,slow=33	**5.55**	**350**	LR	LR	17 38 32.7	
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=11,slow=11,SNR=2.1 2.5nm,1.0s	**19.56**	**183**	P	**P**	**17 39 59.9**	**-0.2**
WRA	**Warramunga Arr** 3.0nm,0.5s,baz=338,slow=11,SNR=21 3.0nm,0.5s	**22.70**	**161**	P	**P**	**17 40 33.5**	**-0.6**
ASAR	**Alice Springs** 1.2nm,0.7s,baz=343,slow=9.1,SNR=13 1.2nm,0.7s	**26.09**	**164**	P	**P**	**17 41 05.8**	**0.0**
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=116,slow=7.2,SNR=7.5 0.5nm,0.5s	**59.22**	**326**	P	**P**	**17 45 32.6**	**-0.3**
KURBB	**Kurchatov Arra** 1.3nm,0.3s,baz=132,slow=6.3,SNR=1.7 1.3nm,0.3s	**63.45**	**328**	P	**P**	**17 46 01.0**	**-0.5**
BVAR	**Borovoye Array** 0.3nm,0.6s,baz=134,slow=6.2,SNR=2.0 0.3nm,0.6s	**69.02**	**328**	P	**P**	**17 46 36.4**	**-0.8**

GCG 14 17:35:51.9±0.7, 14°.11N×91°.09W, h77km±18km, MD3.3, ML3.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.37**	**43**	*i* P	Pn	17 36 04.6	+0.1
ESSG				*e*P		17 36 04.6	
ESSG				*e*S	Sn	17 36 14.3	+0.6
STG8	**El Palmar, Qui**	**0.42**	**323**	*e*P	Pn	17 36 09.6	+4.6
STG8				*e*S	Sn	17 36 22.0	+7.3
FG16	**Alotenango, Sa**	**0.59**	**74**	*i* P	Pn	17 36 05.5	-0.9
FG16				*e*S	Sn	17 36 16.2	-1.0
JAYA	**Jayaque - finc**	**1.66**	**106**	*e*P	Pn	17 36 18.9	-0.4

*JMA **14** 17:36:53.9±0.8, 44°N±3°×15°0E±°, h30km, MV3.9/12, SE OFF ETOROFU*
*IDC **14** 17:37:27.5±12.0, 46°.94N×147°.46E, h151km±147km, mb3.5/10, mbtmp4.0/10, Error ellipse: s-maj=160.4km s-min=27.9km az=164.0*

ISC 14 17:36:52.8±2.2, 43°.8N±0°.2×149°.7E±0°.2, h35km, n20, σ1§70/21, mb4.0/10, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.94**	**263**	*e*P	**Pn**	**17 37 37.7**	**+0.8**
NEM2				*e*S	**Sn**	**17 38 10.3**	**-0.7**
JRA	**Rausu**	**3.34**	**274**	*e*P	**Pn**	**17 37 44.2**	**+1.7**
JNK	**Nakash**	**3.65**	**268**	*e*P	**Pn**	**17 37 47.8**	**+1.1**
JAK	**Akkeshi**	**3.77**	**259**	*e*P	**Pn**	**17 37 49.0**	**+0.7**
JAK				*e*S	**Sn**	**17 38 30.3**	**-1.0**
JTKR	**Abashiri--Toko**	**4.22**	**274**	*e*P	**Pn**	**17 37 56.1**	**+1.6**
JAR	**Ashorobuto**	**4.37**	**265**	*e*P	**Pn**	**17 37 58.6**	**+2.0**
JCH	**Churui**	**4.81**	**258**	*e*P	**Pn**	**17 38 05.0**	**+2.3**
JNBK	**Urakawa-nobuka**	**5.34**	**256**	*e*P	**Pn**	**17 38 12.0**	**+2.0**
JANG	**Nango**	**7.01**	**244**	*e*S	**Sn**	**17 39 48.7**	**-2.8**
SONM	**Songino Array** 0.4nm,0.5s,baz=69,slow=7.9,SNR=3.0 0.4nm,0.5s	**30.18**	**293**	P	**P**	**17 43 00.7**	**+1.1**
ILAR	**Eielson Array** 0.3nm,0.5s,baz=278,slow=8.7,SNR=1.8 0.3nm,0.5s	**40.33**	**36**	P	P	17 44 37.0	+11
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=93,slow=7.9,SNR=2.0 0.3nm,0.3s	**42.46**	**308**	P	**P**	**17 44 41.0**	**-2.9**
MKAR	**Makanchi Array** 1.2nm,0.8s,baz=76,slow=8.8,SNR=9.4 1.2nm,0.8s	**46.21**	**298**	P	**P**	**17 45 14.5**	**+0.4**
KURBB	**Kurchatov Arra** 2.2nm,0.2s,baz=75,slow=8.5,SNR=1.5 2.2nm,0.2s	**47.13**	**305**	P	**P**	**17 45 19.6**	**-1.6**
ARCES	**ARCESS Array B** 2.2nm,0.9s,baz=57,slow=5.6,SNR=1.6 2.2nm,0.9s	**59.83**	**340**	P	**P**	**17 46 51.7**	**-2.4**
FINES	**FINESS Array B** 1.8nm,0.6s,baz=43,slow=7.5,SNR=15 1.8nm,0.6s	**65.66**	**334**	P	**P**	**17 47 32.4**	**-0.6**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=29,slow=6.5	**70.21**	**340**	P	**P**	**17 48 01.8**	**+0.2**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.5s,baz=32,slow=6.6,SNR=6.2 comp=Z,0.7nm,0.5s	**70.21**	**340**	P	**P**	**17 48 01.8**	**+0.2**
HFS	**Hagfors** comp=Z,2.5nm,0.7s,baz=47,slow=6.5,SNR=7.4 comp=Z,2.5nm,0.7s	**70.34**	**338**	P	**P**	**17 48 02.1**	**-0.3**
KBZ	**Khabaz** comp=Z,2.1nm,1.0s,baz=50,slow=7.5,SNR=3.5 comp=Z,2.1nm,1.0s	**71.15**	**313**	P	**P**	**17 48 09.1**	**+1.6**

IDC 14 17:38:52.1±2.8, 1°.51N×125°.73E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=313.9km s-min=29.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=335,slow=9.8,SNR=2.5 0.4nm,0.4s	**22.93**	**159**	P	P	17 43 56.2	-1.7
ASAR	**Alice Springs** 0.2nm,0.5s,baz=345,slow=9.9,SNR=1.7 0.2nm,0.5s	**26.25**	**163**	P	P	17 44 29.7	+0.5
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=129,slow=7.6,SNR=1.5 0.1nm,0.4s	**58.83**	**326**	P	P	17 48 53.2	+0.7

*IDC **14** 17:40:35.0±0.5, 1°.57N×126°.27E, h0km, mb4.2/24, mbtmp4.2/25, ML4.6/1, MS5.4/3, Error ellipse: s-maj=27.9km s-min=11.2km az=77.0*
*NEIC **14** 17:40:37.7±1.6, 1°.66N±0°.06×126°.47E±0°.05, h20km±4km, mb4.6/35, Error ellipse: s-maj=9.0km s-min=7.2km az=174.0*
*DJA **14** 17:40:38.6±0.3,2°N±3°×12°6E±°, h10km, M4.4/11, mB5.5/1, mb4.4/1, MLv4.5/11, Mw(mB)5.0/1*

ISC 14 17:40:40.3±0.3, 1°.61N±0°.04×126°.40E±0°.06, h35km, n125, σ1§51/121, mb4.5/43, 2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**131**		**Pn**	**17 40 59.9**	**-1.8**
TNTI	**Ternate**	**1.28**	**131**	P	**Pn**	**17 41 01.9**	**+0.2**
SGSI	**Sangihe**	**2.23**	**337**	P	**Pn**	**17 41 15.0**	**+0.2**
KMSI	**Cibinong**	**2.62**	**247**	P	**Pn**	**17 41 20.9**	**+0.7**
SANI	**Sanana**	**3.66**	**186**	P	**Pn**	**17 41 35.4**	**+1.0**
SANI	**Sanana**	**3.66**	**186**	S	**Sn**	**17 42 17.6**	**+1.2**
SANI	**Sanana**	**3.66**	**186**	P	**Pn**	**17 41 35.2**	**+0.8**
LUWI	**Luwuk**	**4.48**	**234**		**Pn**	**17 41 46.1**	**+0.4**
LUWI	**Luwuk**	**4.48**	**234**	P	**Pn**	**17 41 47.9**	**+2.2**
NLAI	**Namlea**	**4.87**	**172**	P	**Pn**	**17 41 52.8**	**+1.7**
TOLI2	**Tolitoli**	**5.63**	**265**		**Pn**	**17 42 00.2**	**-1.4**
TOLI2	**Tolitoli**	**5.63**	**265**	P	**Pn**	**17 42 01.4**	**-0.2**
TOLI2	**Tolitoli**	**5.63**	**265**	S	**Sn**	**17 43 06.9**	**+1.8**
FAKI	**Fak Fak**	**7.38**	**128**	Pn	Pn	17 42 22.1	-3.6
FAKI	**Fak Fak**	**7.38**	**128**	P	**Pn**	**17 42 27.2**	**+1.6**
FAKI	**Fak Fak**	**7.38**	**128**	P	**Pn**	**17 42 27.9**	**+2.3**
MYLDM	**Lahad Datu**	**8.64**	**294**		**Pn**	**17 42 41.9**	**-1.0**
MYLDM	**Lahad Datu**	**8.64**	**294**	P	**Pn**	**17 42 45.6**	**+2.7**
KAPI	**Kappang** 4.4nm,0.3s,baz=299,slow=15,SNR=4.2	**9.35**	**225**	Pn	**Pn**	**17 42 55.5**	**+2.9**
KAPI	2.5nm,0.3s,baz=126,slow=23,SNR=1.3			Sn	**Sn**	**17 44 35.3**	**-1.3**
KAPI	**Kappang**	**9.35**	**225**	Pn	**Pn**	**17 42 53.0**	**+0.4**
SAUI	**Saumlaki**	**10.71**	**153**	P	**Pn**	**17 43 12.1**	**+0.8**
SOEI	**Soe**	**11.49**	**191**		**Pn**	**17 43 21.0**	**-1.0**
BATI	**Baumata** 1.7nm,0.3s,baz=42,slow=13,SNR=5.0	**12.05**	**193**	Pn	Pn	17 43 34.8	+5.2
BATI	comp=Z,6µm,21.9s,baz=260,slow=43			LR	LR	17 49 13.2	
PLAI	**Plampang**	**13.47**	**219**	P	**Pn**	**17 43 49.3**	**+0.3**
SBUM	**Sibu**	**14.19**	**274**		**Pn**	**17 43 58.8**	**-0.1**
SBUM	**Sibu**	**14.19**	**274**	P	**Pn**	**17 44 02.1**	**+3.2**
DRS	**Darwin Rock St**	**14.65**	**162**	P	**Pn**	**17 44 05.3**	**+0.2**
JAY	**Jayapura** 0.2nm,0.3s,baz=53,slow=6.9,SNR=2.4	**14.88**	**106**	Pn	**P**	**17 44 14.7**	**+1.1**
MTN	**Manton Dam**	**15.11**	**162**		**Pn**	**17 44 09.3**	**-2.0**
JAGI	**Jajag, Banyuwa** comp=Z,29nm,1.0s	**15.79**	**230**	Pn	**Pn**	**17 44 19.6**	**-0.5**
JAGI				IAmb	IAmb	17 44 37.4	
KNRA	**Kununurra** comp=Z,45nm,1.5s	**17.34**	**172**	P	**Pn**	**17 44 37.0**	**-2.6**
KNRA				IAmb	IAmb	17 44 50.4	
FITZ	**Fitzroy Crossi** comp=Z,1.5nm,0.3s,baz=12,slow=9.7,SNR=45 comp=Z,3.7nm,0.4s	**19.60**	**182**	P	**P**	**17 45 05.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**17 45 02.8**	**-2.8**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**17 45 05.2**	**-0.4**
BBJI	**Bungbulang**	**20.76**	**244**	P	**P**	**17 45 18.9**	**+0.5**
YULB	**Yu-li**	**22.21**	**348**	P	**P**	**17 45 30.6**	**-3.2**
YULB	comp=Z,32nm,1.2s			IAmb	IAmb	17 45 57.0	
TPUB	**Ta-pu**	**22.27**	**346**	P	**P**	**17 45 31.4**	**-3.1**
TPUB	comp=Z,46nm,1.0s			IAmb	IAmb	17 45 37.3	
TPUB	**Ta-pu**	**22.27**	**346**	P	**P**	**17

CMAR Chiang Mai Arr 31.70 304 P P 17 47 02.0 +1.1
comp=Z,0.2nm,0.4s,baz=107,slow=8.8,SNR=7.3
comp=Z,0.2nm,0.4s
CHTO Chiang Mai 31.88 304 P P 17 47 00.8 -1.7
MORW Morawa 32.08 197 P P 17 47 03.7 -0.4
MORW Morawa 32.08 197 P P 17 47 04.8 +0.7
FORT Forrest 32.25 177 P P 17 47 05.0 -0.5
FORT IAmb IAmb 17 47 13.6
comp=Z,5.6nm,0.8s
INKA Innaminka 32.28 156 P P 17 47 05.1 -0.7
JMN Monobe 32.71 12 P P 17 47 07.2 -2.4
ENH Enshi 32.71 332 P P 17 47 08.4 -1.2
BLDU Ballidu 33.35 195 P P 17 47 15.9 +0.7
KLBR Kellerberrin 34.03 193 P P 17 47 21.1 0.0
PZH PanZhiHua 34.26 318 P P 17 47 24.6 +1.3
MUN Mundaring 34.78 195 P P 17 47 27.8 +0.3
NWAO Narrogin (SRO) 35.43 193 P P 17 47 33.5 +0.4
BBOO Buckleboo 35.44 166 P P 17 47 32.8 -0.4
KSRS Korea Array 35.69 2 P P 17 47 36.1 +0.8
comp=Z,1.3nm,0.7s,baz=179,slow=9.8,SNR=6.5
comp=Z,1.3nm,0.7s
XAN Xi'an 36.16 335 ⇓P P 17 47 42.1 +2.6
XAN pmax pmax
comp=Z,12nm,0.8s
STKA Stephens Creek 36.29 158 P P 17 47 40.6 0.0
comp=Z,4.0nm,0.6s,baz=342,slow=8.8,SNR=7.8
comp=Z,4.0nm,0.6s
MJAR Matsushiro Arr 36.44 16 P P 17 47 41.8 0.0
comp=Z,1.0nm,0.5s,baz=182,slow=9.5,SNR=4.8
comp=Z,1.0nm,0.5s
HTT Hallett 36.80 162 P P 17 47 46.3 +1.3
HNS HongShan 37.20 345 ⇓P P 17 47 47.8 -0.4
HNS pmax pmax
comp=Z,9.0nm,1.6s
CMSA Cobar Meteorol 37.72 153 P P 17 47 54.3 +1.6
LZH Lanzhou 40.17 331 eP P 17 48 17.8 +4.4
LZH sP sP 17 48 30.6 +3.4
LZH ScP ScP 17 54 08.8 +4.8
LZH pmax pmax
comp=Z,21nm,1.0s
HHC Hu-ho-hao-te 41.30 343 eP P 17 48 23.3 +0.7
HHC pmax pmax
comp=Z,15nm,0.5s
HHC pmax pmax
comp=Z,580nm,6.4s
USRK Ussuriysk Ar. 42.70 6 P P 17 48 35.4 +1.6
comp=Z,1.2nm,0.6s,baz=190,slow=7.1,SNR=4.6
comp=Z,1.2nm,0.6s
GTA Gaotai 44.75 331 eP P 17 48 51.3 +0.8
GTA pP pP 17 48 54.8 -5.6
GTA pmax pmax
comp=Z,3.0nm,0.8s
EVN Everest 46.01 308 P 17 48 59.7 -1.6
EVN IAmb IAmb 17 49 05.7
comp=Z,6.2nm,0.9s
HILR Hailar Array B 48.10 354 P P 17 49 17.8 +1.2
comp=Z,1.2nm,0.4s,baz=146,slow=8.0,SNR=3.7
comp=Z,1.2nm,0.4s
HEH HeiHe 48.47 1 eP P 17 49 26.3 +7.0
HEH pmax pmax
comp=Z,9.0nm,0.8s
SONM Songino Array 49.19 342 P P 17 49 25.1 0.0
comp=Z,0.9nm,0.5s,baz=143,slow=8.6,SNR=9.8
comp=Z,0.9nm,0.5s
PETK Petropavlovsk- 57.51 22 P P 17 50 27.4 +1.5
comp=Z,6.6nm,1.1s,baz=213,slow=7.1,SNR=4.3
comp=Z,6.6nm,1.1s
MKAR Makanchi Array 59.10 326 P P 17 50 36.7 -0.6
comp=Z,3.1nm,0.7s,baz=122,slow=7.9,SNR=25
comp=Z,3.1nm,0.7s
MKAR Makanchi Array 59.10 326 P 17 50 36.2 -1.1
ZALV Zalesovo Beam 62.32 334 P P 17 50 58.4 -0.6
comp=Z,0.8nm,0.4s,baz=147,slow=6.7,SNR=5.8
comp=Z,0.8nm,0.4s
KURBB Kurchatov Arra 63.34 328 P P 17 51 05.0 -0.8
comp=Z,4.4nm,0.7s,baz=128,slow=6.3,SNR=14
comp=Z,4.4nm,0.7s
KURK Kurchatov 63.34 328 P P 17 51 04.9 -1.0
CHGR Chuyangaron 63.84 313 P P 17 51 08.5 -1.0
BVAR Borovoye Array 68.91 328 P P 17 51 41.9 +0.3
comp=Z,1.6nm,0.6s,baz=145,slow=9.9,SNR=8.3
comp=Z,1.6nm,0.6s
TIXI Tiksi 69.95 1 P P 17 51 47.8 +0.2
comp=Z,1.8nm,0.4s,baz=198,slow=4.5,SNR=18
comp=Z,1.8nm,0.4s
TIXI Tiksi 69.95 1 IAmb IAmb 17 52 13.0
comp=Z,5.8nm,1.1s
NRIK Noril'sk 72.39 346 P P 17 52 03.0 +0.6
comp=Z,3.4nm,0.5s,baz=125,slow=7.4,SNR=9.9
comp=Z,3.4nm,0.5s
NRIK Noril'sk 72.39 346 IAmb IAmb 17 52 08.9
comp=Z,5.7nm,0.8s
RAYN Ar Rayn 81.01 293 P 17 52 50.8 -1.4
RAYN IAmb IAmb 17 52 56.7
comp=Z,5.6nm,0.9s
VNDA Vanda 81.38 173 P P 17 52 53.3 +0.4
comp=Z,0.9nm,0.4s,baz=324,slow=6.8,SNR=12
comp=Z,0.9nm,0.4s
VNDA Vanda 81.38 173 P 17 52 53.1 +0.2
MAW Mawson 81.67 200 P P 17 52 54.2 -0.3
comp=Z,1.6nm,0.8s,baz=72,slow=3.2,SNR=2.2
comp=Z,1.6nm,0.8s
KBZ Khabaz 84.19 314 P P 17 53 07.5 -0.7
comp=Z,1.4nm,0.7s,baz=154,slow=5.0,SNR=4.4
comp=Z,1.4nm,0.7s
GURO Guroymak-BITLI 84.59 308 P 17 53 09.1 -1.4
I23K Minto, Yukon-K 86.12 25 P P 17 53 14.4 -3.0
ILAR Eielson Array 87.15 25 P P 17 53 21.9 -0.6
comp=Z,0.4nm,0.5s,baz=252,slow=4.7,SNR=3.2
comp=Z,0.4nm,0.5s
MMAI Mount Meron Ar 89.97 303 P P 17 53 37.0 +0.4
comp=Z,0.7nm,0.4s,baz=92,slow=5.9,SNR=3.9
comp=Z,0.7nm,0.4s
BRTR Keskin Array B 91.11 310 P P 17 53 41.9 +0.1
comp=Z,0.9nm,0.9s,baz=83,slow=4.9,SNR=3.2
comp=Z,0.9nm,0.9s
QSPA South Pole Qui 91.53 180 P P 17 53 46.7 +3.6
comp=Z,0.7nm,0.7s,baz=116,slow=2.3,SNR=5.0
QSPA South Pole Qui 91.53 180 IAmb IAmb 17 53 50.7
comp=Z,4.7nm,1.4s
ARCES ARCESS Array B 92.31 340 P P 17 53 45.9 -0.7
comp=Z,2.8nm,0.9s,baz=78,slow=4.8,SNR=6.9
comp=Z,2.8nm,0.8s
SPITS Spitsbergen Ar 92.48 349 LR LR 18 39 58.7
comp=Z,3µm,21.7s,baz=252,slow=38
AKASG Malin Array Be 93.31 321 LR LR 18 39 39.5
comp=Z,3µm,21.7s,baz=269,slow=38
FINES FINESS Array B 93.53 332 P P 17 53 50.6 -1.7
comp=Z,2.4nm,0.9s,baz=63,slow=5.2,SNR=5.1
comp=Z,2.4nm,0.9s
HFS Hagfors 99.72 332 P Pdif 17 54 21.0 +0.6
comp=Z,0.7nm,0.6s,baz=103,slow=6.5,SNR=4.2
TXAR Lajitas Array 123.14 53 PKP PKPdf 17 59 34.8 +0.6
comp=Z,0.5nm,0.8s,baz=344,slow=3.1,SNR=3.8
TORD Torodi Ar. Bea 123.23 287 PKP PKPdf 17 59 34.3 -0.2
comp=Z,1.0nm,0.3s,baz=46,slow=4.2,SNR=3.0
DBIC Dimbokro 130.65 280 PKP PKPdf 17 59 48.8 +0.1
comp=Z,1.7nm,0.7s,baz=180,slow=4.0,SNR=3.1
PLCA Paso Flores 138.14 161 PKP PKPdf 18 00 03.4 +1.2
comp=Z,1.5nm,0.7s,baz=190,slow=4.6,SNR=4.7
LPAZ La Paz 159.57 136 PKP PKPdf 18 00 38.0 +0.9
comp=Z,0.5nm,0.6s,baz=92,slow=2.8,SNR=2.4

*IDC **14** 17:44:36.7±0.5,1°.57N×126°.28E,h0km,mb4.4/24, mbtmp4.4/25,ML4.1/1,Error ellipse: s-maj=28.3km s-min=11.6km az=76.0*
*NEIC **14** 17:44:38.6±2.1,1°.69N±0°.06×126°.51E±0°.06,h14km±2km, mb4.6/49,Error ellipse: s-maj=10.4km s-min=7.7km az=46.0*
*DJA **14** 17:44:43.7±0.2,2°N±3°×12°6E±°,h44km±13km,M4.5/18, mB5.3/1,mb4.7/13,MLv4.5/18,Mw(mB)4.7/1*
ISC 14 17:44:41.6±0.4,1°.66N±0°.05×126°.49E±0°.06,h35km,n118, σ1§54/115,**mb4.5/52,1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.24	135				Pn	17 45 02.8	+0.3
TNTI	Ternate	1.24	135	P		Pn	Pn	17 45 03.4	+0.9
SGSI	Sangihe	2.23	334	P		Pn	Pn	17 45 17.7	+1.6
KMSI	Cibinong	2.73	247	P		Pn	Pn	17 45 25.1	+2.1
SANI	Sanana	3.72	188	P		Pn	Pn	17 45 38.7	+2.1
LUWI	Luwuk	4.59	234			Pn	Pn	17 45 48.2	-0.4
LUWI	Luwuk	4.59	234	P		Pn	Pn	17 45 50.0	+1.5
MRSI	Marisa	4.70	256	P		Pn	Pn	17 45 52.4	+2.3
NLAI	Namlea	4.90	173	P		Pn	Pn	17 45 54.9	+2.0
SWI	Sorong	5.38	118	P		Pn	Pn	17 46 01.3	+1.8
DAV	Davao City (W)	5.45	350	Pn		Pn	Pn	17 46 04.2	+3.8
	38nm,0.3s,baz=317,slow=1.0,SNR=4.1								
DAV				Sn		Sn	Sn	17 47 13.1	+11
	78nm,0.3s,baz=29,slow=19,SNR=2.1								
APSI	Ampana	5.47	242	P		Pn	Pn	17 46 04.2	+3.5
TOLI2	Tolitoli	5.74	265			Pn	Pn	17 46 04.1	-0.2
MPSI	Mapaga	6.72	259	P		Pn	Pn	17 46 19.9	+2.0
	0.2nm55nm,0.7s								
PCI	Palu	7.13	249	P		Pn	Pn	17 46 25.1	+1.6
	0.3nm55nm,1.1s								
FAKI	Fak Fak	7.33	128	Pn		Pn	Pn	17 46 24.1	-2.2
BBSI	Bau Bau	8.11	209	P		Pn	Pn	17 46 39.3	+2.4
	43nm,1.0s								
TTSI	Tana Toraja	8.14	235	P		Pn	Pn	17 46 39.0	+1.6
	43nm,0.6s								
MYLDM	Lahad Datu	8.71	294				Pn	17 46 44.8	-0.4
SPSI	Sidrap Palu	8.74	230	P		Pn	Pn	17 46 47.9	+2.3
	35nm,0.9s								
BNSI	Bone	8.77	227	P		Pn	Pn	17 46 48.0	+2.0
	35nm,0.8s								
BKSI	Bulukumba	9.41	223	P		Pn	Pn	17 46 57.3	+2.5
	13nm,0.7s								
KAPI	Kappang	9.45	225	Pn		Pn	Pn	17 46 57.6	+2.3
	1.8nm,0.3s,baz=350,slow=14,SNR=4.0								
KAPI				Sn		Sn	Sn	17 48 40.6	+0.2
	2.2nm,0.3s,baz=220,slow=20,SNR=1.3								
BSSI	Bau Bau, Buton	9.80	218	P		Pn	Pn	17 47 04.0	+3.9
	1µm34nm,0.6s								
EDFI	Ende, Flores	11.39	205	P		Pn	Pn	17 47 25.8	+3.7
SOEI	Soe	11.55	191	Pn		Pn	Pn	17 47 23.2	-1.1
SOEI	Soe	11.55	191	P		Pn	Pn	17 47 26.9	+2.6
BATI	Baumata	12.12	193	Pn		P		17 47 40.7	-3.5
	1.9nm,0.3s,baz=60,slow=7.0,SNR=4.0								
TWSI	Taliwang, Sumb	14.09	223	P		P	P	17 48 07.1	+1.1
SBUM	Sibu	14.29	273				Pn	17 48 01.8	+0.2
JAY	Jayapura	14.80	106	Pn		P		17 48 20.0	+6.0
	0.3nm,0.3s,baz=329,slow=12,SNR=2.7								
MTN	Manton Dam	15.13	162	Pn			Pn	17 48 10.4	-2.4
JAGI	Jajag, Banyuwa	15.89	231				Pn	17 48 22.4	-0.4
JAGI	Jajag, Banyuwa	15.89	231	P			P	17 48 28.4	+2.3
KNRA	Kununurra	17.37	173	Pn			Pn	17 48 39.9	-1.5
FITZ	Fitzroy Crossi	19.65	182	P			P	17 49 06.9	-0.6
	0.4nm,0.3s,baz=17,slow=12,SNR=7.3								
	3.8nm,0.7s								
FITZ	Fitzroy Crossi	19.65	182	P			P	17 49 06.6	-0.9
KPJI	Karang Pucung	19.67	243	P			P	17 49 08.0	+0.2
TPUB	Ta-pu	22.25	346	P			P	17 49 32.9	-2.7
SSLB	Suanglung	22.64	347	P			P	17 49 37.3	-2.6
COEN	Coen	22.67	134	P			P	17 49 38.0	-2.2
COEN				IAmb		IAmb	IAmb	17 49 44.3	
	comp=Z,15nm,1.1s								
WRAB	Tennant Creek	22.80	161	P			P	17 49 39.3	-2.2
WRAB				IAmb		IAmb	IAmb	17 49 47.9	
	comp=Z,24nm,0.9s								
WRA	Warramunga Arr	22.80	161	P			P	17 49 41.5	0.0
	comp=Z,10nm,0.5s,baz=336,slow=10,SNR=24								
	comp=Z,10nm,0.5s								
YHNB	Yeheng	23.41	348	P			P	17 49 45.8	-1.8
MBWA	Marble Bar	23.62	196	P			P	17 49 48.7	-0.9
MBWA				IAmb		IAmb	IAmb	17 50 24.7	
	comp=Z,14nm,1.1s								
QIZ	Qiongzhong	23.75	318	P			P	17 49 48.2	-2.7
QIZ				IAmb		IAmb	IAmb	17 50 00.5	
	comp=Z,44nm,1.3s								
PSA00	Pilbara Seismi	23.99	195	P			P	17 49 51.3	-1.8
PSA00				IAmb		IAmb	IAmb	17 50 07.6	
	comp=Z,11nm,0.9s								
PSA00	Pilbara Seismi	23.99	195	P			P	17 49 51.7	-1.4
PSA00				IAmb		IAmb	IAmb	17 49 56.7	
	comp=Z,4.9nm,1.1s								
BKNI	Bangkinang	25.48	267	P			P	17 50 05.9	-1.0
AS31	Alice Springs	26.18	164				P	17 50 11.6	-1.5
ASAR	Alice Springs	26.18	164	P			P	17 50 13.9	+0.8
	comp=Z,3.3nm,0.7s,baz=345,slow=13,SNR=16								
ASAR				PcP			PcP	17 53 40.6	+0.9
	comp=Z,0.8nm,0.6s,baz=342,slow=2.7,SNR=4.5								
	comp=Z,3.3nm,0.7s								
ASAR	Alice Springs	26.18	164				P	17 50 12.3	-0.8
CTAO	Charters Tower	29.03	139	P			P	17 50 37.4	-1.2
CTAO				IAmb		IAmb	IAmb	17 50 42.0	
	comp=Z,11nm,1.3s								
NJ2	Nanjing	31.08	347	eP			P	17 50 58.3	+1.8
NJ2				pmax		pmax	pmax		
	comp=Z,9.0nm,0.5s								
CMAR	Chiang Mai Arr	31.76	303	P			P	17 51 02.1	-0.7
	comp=Z,1.1nm,0.8s,baz=111,slow=8.5,SNR=7.3								
CMAR				PcP			PcP	17 53 53.9	+0.1
	comp=Z,0.9nm,0.8s,baz=167,slow=1.8,SNR=8.3								
	comp=Z,1.1nm,0.8s								
CHTO	Chiang Mai	31.93	304	P			P	17 51 03.0	-1.2
MORW	Morawa	32.15	197	P			P	17 51 05.7	-0.4
MORW				IAmb		IAmb	IAmb	17 51 11.8	
	comp=Z,15nm,1.2s								
INKA	Innaminka	32.28	156	P			P	17 51 06.4	-0.9
FORT	Forrest	32.29	177	P			P	17 51 05.8	-1.4
FORT				IAmb		IAmb	IAmb	17 51 48.4	
	comp=Z,10nm,1.2s								
ENH	Enshi	32.72	332	P			P	17 51 09.9	-1.1
PZH	PanZhiHua	34.29	318	P			P	17 51 26.9	+2.0
PZH				pmax		pmax	pmax		
	comp=Z,14nm,0.9s								
JGF	Kuroka	35.25	15	P			P	17 51 32.7	-0.2
JGF				IAmb		IAmb	IAmb	17 52 14.8	
	comp=Z,11nm,1.1s								
BBOO	Buckleboo	35.45	166	P			P	17 51 34.5	-0.2
BBOO				IAmb		IAmb	IAmb	17 51 45.9	
	comp=Z,6.6nm,0.8s								
NWAO	Narrogin (SRO)	35.49	193	P			P	17 51 34.5	-0.6
KSRS	Korea Array	35.65	2	P			P	17 51 37.5	+1.3
	comp=Z,1.9nm,0.8s,baz=172,slow=11,SNR=5.7								
	comp=Z,1.9nm,0.8s								
XAN	Xi'an	36.16	335	⇓P			P	17 51 40.8	-0.1
XAN				pmax		pmax	pmax		
	comp=Z,11nm,0.6s								
STKA	Stephens Creek	36.30	158	P			P	17 51 40.4	-1.6
	comp=Z,3.1nm,0.7s,baz=323,slow=15,SNR=3.8								
	comp=Z,3.1nm,0.7s								
MJAR	Matsushiro Arr	36.36	16	P			P	17 51 42.9	+0.4
	comp=Z,3.0nm,0.9s,baz=184,slow=10.0,SNR=8.0								
	comp=Z,3.0nm,0.9s								
JMM	Marumori	38.35	18	P			P	17 52 00.3	+1.0
BJI	Beijing	39.34	347	P			P	17 52 07.9	+0.4
BJI				pmax		pmax	pmax		
	comp=Z,10.0nm,1.9s								
LZH	Lanzhou	40.17	331	eP			P	17 52 14.8	0.0
LZH				sP		sP	sP	17 52 31.6	+3.0
LZH				pmax		pmax	pmax		
	comp=Z,17nm,1.2s								
SHL	Shillong	40.94	308	P			P	17 52 20.0	-1.3
SHL				IAmb		IAmb	IAmb	17 52 21.8	
	comp=Z,5.5nm,0.5s								
JTM	Tenmabayashi	41.12	17	P			P	17 52 24.6	+2.2
HHC	Hu-ho-hao-te	41.29	343	eP			P	17 52 24.3	+0.5
USRK	Ussuriysk Ar.	42.64	6	P			P	17 52 36.5	+1.8
	comp=Z,6.3nm,0.8s,baz=186,slow=8.8,SNR=7.0								
	comp=Z,6.3nm,0.8s								
LSA	Lhasa	43.65	313				P	17 52 41.6	-2.0
LSA				IAmb		IAmb	IAmb	17 52 44.9	
	comp=Z,5.2nm,0.7s								
GTA	Gaotai	44.76	330	eP			P	17 52 53.3	+1.4
GTA				pP		pP	pP	17 52 59.3	-2.5
GTA				pmax		pmax	pmax		
	comp=Z,5.0nm,0.7s								
EVN	Everest	46.05	308				P	17 53 00.2	-2.8
EVN				IAmb		IAmb	IAmb	17 53 04.2	
	comp=Z,12nm,1.3s								
HILR	Hailar Array B	48.07	354	P			P	17 53 19.4	+1.8
	comp=Z,4.4nm,0.5s,baz=180,slow=12,SNR=5.7								
	comp=Z,4.4nm,0.5s								
HEH	HeiHe	48.42	1	eP			P	17 53 21.5	+1.2
HEH				pmax		pmax	pmax		
	comp=Z,14nm,0.7s								
ULN	Ulaanbaatar	49.01	343	P			P	17 53 23.5	-1.6
ULN				IAmb		IAmb	IAmb	17 53 26.5	
	comp=Z,5.0nm,0.9s								
SONM	Songino Array	49.18	342	P			P	17 53 26.8	+0.5
	comp=Z,2.7nm,0.8s,baz=156,slow=9.0,SNR=13								
SONM				PcP			PcP	17 54 50.1	+0.9
	comp=Z,1.2nm,0.8s,baz=162,slow=3.8,SNR=4.4								
	comp=Z,2.7nm,0.8s								
PETK	Petropavlovsk-	57.43	22	P			P	17 54 28.4	+1.6
	comp=Z,5.0nm,0.9s,baz=219,slow=7.1,SNR=4.3								
	comp=Z,5.0nm,0.9s								
MKAR	Makanchi Array	59.12	326	P			P	17 54 38.6	-0.1
	comp=Z,6.6nm,0.6s,baz=121,slow=8.1,SNR=19								
MKAR				PcP			PcP	17 55 27.3	+0.1
	comp=Z,2.1nm,0.8s,baz=108,slow=4.5,SNR=1.9								
	comp=Z,6.6nm,0.6s								
MKAR	Makanchi Array	59.12	326				P	17 54 37.4	-1.4
MKAR				PcP			PcP	17 55 26.8	-0.3
PRZ	Przheval'sk	59.12	320	P			P	17 54 36.7	-2.4
PRZ				IAmb		IAmb	IAmb	17 54 41.5	
	comp=Z,8.3nm,0.9s								
TARG	Taragay, Kyrgy	59.14	319				P	17 54 37.0	-2.5
TARG				IAmb		IAmb	IAmb	17 54 44.0	
	comp=Z,4.1nm,0.8s								
KDJ	Kajisay	59.74	319				P	17 54 42.1	-1.2
KDJ				IAmb		IAmb	IAmb	17 54 44.6	
	comp=Z,6.5nm,0.9s								
YAK	Yakutsk	60.27	2				P	17 54 46.2	0.0
AAK	Ala-Archa	61.74	319	P			P	17 54 57.4	+0.5
	comp=Z,2.2nm,0.9s,baz=207,slow=3.1,SNR=3.3								
	comp=Z,2.2nm,0.9s								
AAK	Ala-Archa	61.74	319	IAmb		IAmb	IAmb	17 55 02.6	
	comp=Z,3.3nm,1.1s								
ZALV	Zalesovo Beam	62.32	334	P			P	17 54 59.9	-0.5
	comp=Z,2.0nm,0.6s,baz=118,slow=8.6,SNR=6.0								
	comp=Z,2.0nm,0.6s								
KBL	Kabul	62.60	308	P			P	17 55 02.2	-0.7
KBL				IAmb		IAmb	IAmb	17 55 04.0	
	comp=Z,5.9nm,0.8s								
KURBB	Kurchatov Arra	63.35	328	P			P	17 55 07.3	+0.1
	comp=Z,9.3nm,0.6s,baz=126,slow=6.2,SNR=22								
	comp=Z,9.3nm,0.6s								
KURK	Kurchatov	63.36	328				P	17 55 07.1	-0.2
CHGR	Chuyangaron	63.88	313				P	17 55 10.4	-0.7
KKAR	Karatay Array	64.59	318	P			P	17 55 14.8	-0.7
BVAR	Borovoye Array	68.92	327	P			P	17 55 43.1	+0.1
	comp=Z,2.5nm,0.6s,baz=104,slow=7.8,SNR=8.8								
	comp=Z,2.5nm,0.6s								
TIXI	Tiksi	69.90	1				P	17 55 48.1	-0.5
TIXI				IAmb		IAmb	IAmb	17 55 50.4	
	comp=Z,5.3nm,0.8s								
NRIK	Noril'sk	72.37	346	P			P	17 56 04.8	+1.1
	comp=Z,1.1nm,0.8s,baz=129,slow=6.6,SNR=21								
	comp=Z,1.1nm,0.8s								
AB31	Akbulak array	73.60	321				P	17 56 10.4	-0.9
RAYN	Ar Rayn	81.08	293	P			P	17 56 52.6	-1.2
RAYN				IAmb		IAmb	IAmb	17 56 56.4	
	comp=Z,3.4nm,0.8s								
VNDA	Vanda	81.42	173	P			P	17 56 55.5	+1.1
	comp=Z,1.7nm,0.8s,baz=319,slow=6.6,SNR=10								
	comp=Z,1.7nm,0.8s								
MAW	Mawson	81.74	200	P			P	17 56 55.2	-1.1
	comp=Z,1.0nm,0.7s,baz=89,slow=5.1,SNR=3.7								
	comp=Z,1.0nm,0.7s								
E19K	Redstone River	83.22	22	P			P	17 57 03.9	-0.2
KBZ	Khabaz	84.22	314	P			P	17 57 09.8	+0.1
	comp=Z,2.3nm,0.8s,baz=59,slow=5.7,SNR=4.9								
	comp=Z,2.3nm,0.8s								
GURO	Guroymak-BITLI	84.64	308				P	17 57 12.3	+0.2
MMAI	Mount Meron Ar	90.02	303	P			P	17 57 38.9	+0.7
	comp=Z,1.6nm,0.6s,baz=129,slow=3.9,SNR=5.0								
	comp=Z,1.6nm,0.6s								
BRTR	Keskin Array B	91.15	310	P			P	17 57 43.0	-0.4
	comp=Z,1.0nm,0.8s,baz=142,slow=4.6,SNR=5.2								
	comp=Z,1.0nm,0.8s								
QSPA	South Pole Qui	91.58	180	P			P	17 57 48.7	+4.0
	comp=Z,0.8nm,0.7s,baz=303,slow=9.4,SNR=2.3								
QSPA	South Pole Qui	91.58	180	IAmb		IAmb	IAmb	17 58 25.4	
	comp=Z,5.2nm,1.4s								
ARCES	ARCESS Array B	92.30	340	P			P	17 57 47.5	-0.3
	comp=Z,3.1nm,0.8s,baz=99,slow=6.7,SNR=5.1								
	comp=Z,3.1nm,0.8s								
ARCES	ARCESS Array B	92.30	340	IAmb		IAmb	IAmb	17 57 55.4	
	comp=Z,11nm,1.2s								
AKASG	Malin Array Be	93.34	321	P			P	17 57 52.8	-0.2
	comp=Z,1.1nm,0.8s,baz=68,slow=5.1,SNR=2.0								
	comp=Z,1.1nm,0.8s								
FINES	FINESS Array B	93.53	332	P			P	17 57 52.9	-0.8
	comp=Z,3.9nm,1.0s,baz=94,slow=5.6,SNR=4.4								
	comp=Z,3.9nm,1.0s								
BUR08	Bucovina Ar. S	96.38	318				P	17 58 06.8	-0.4
TXAR	Lajitas Array	123.03	53	PKP			PKPdf	18 03 35.2	0.0
	comp=Z,0.2nm,0.6s,baz=336,slow=1.3,SNR=2.3								
TORD	Torodi Ar. Bea	123.31	287	PKP			PKPdf	18 03 36.8	+0.8
	comp=Z,0.8nm,0.3s,baz=51,slow=4.0,SNR=2.3								

*IDC **14** 17:46:47.0±2.0,1°.45N×126°.12E,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=203.6km s-min=24.7km az=66.0*
*DJA **14** 17:46:49.8±0.3,2°N±4°×12°6E±°,h10km,M3.8/7,MLv3.8/7*
ISC 14 17:46:51.6±1.2,1°.64N±0°.10×126°.5E±0°.1,h35km,n7, σ1§50/7,**mb3.7/4,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.22	135			P	Pn	17 47 12.0	-0.1
SGSI	Sangihe	2.26	334	P		P	Pn	17 47 26.1	-0.3
KMSI	Cibinong	2.73	247	P		P	Pn	17 47 32.9	-0.1
WRA	Warramunga Arr	22.78	161	P		P	P	17 51 50.8	-0.5
	1.3nm,0.5s,baz=338,slow=11,SNR=3.5								
	1.3nm,0.5s								
ASAR	Alice Springs	26.16	164	P		P	P	17 52 22.6	-0.3
	0.5nm,0.5s,baz=348,slow=8.5,SNR=1.0								
	0.5nm,0.5s								
MKAR	Makanchi Array	59.15	326	P		P	P	17 56 47.3	-1.6
	0.2nm,0.3s,baz=114,slow=8.8,SNR=0.9								
	0.2nm,0.3s								
KURBB	Kurchatov Arra	63.38	328	P		P	P	17 57 19.9	+2.5
	1.1nm,0.2s,baz=118,slow=7.1,SNR=2.3								
	1.1nm,0.2s								

*IDC **14** 17:48:32.1±1.0,1°.59N×126°.47E,h0km,mb3.9/9, mbtmp3.9/10,ML3.8/1,Error ellipse: s-maj=106.5km s-min=15.5km az=70.0*
*DJA **14** 17:48:35.6±0.3,2°N±3°×12°6E±°,h10km,M4.0/12,mb3.9/2, MLv4.1/12*
*NEIC **14** 17:48:37.3±1.9,1°.57N±0°.08×126°.54E±0°.08,h32km±5km, mb4.2/13,Error ellipse: s-maj=14.8km s-min=8.2km az=46.0*
**ISC 14 17:48:37.3

	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**17 58 34.0**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=120,slow=7.3,SNR=7.4						
	comp=Z,0.5nm,0.4s						
MAKZ	**Makanchi**	**59.38**	**326**	P	**P**	**17 58 35.5**	**-0.7**
MAKZ				IAmb	IAmb	17 58 48.5	
	comp=Z,4.6nm,1.4s						
KURBB	**Kurchatov Arra**	**63.43**	**328**	P	**P**	**17 59 02.8**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=121,slow=7.3,SNR=4.7						
	comp=Z,0.7nm,0.3s						
KURK	**Kurchatov**	**63.43**	**328**	P	**P**	**17 59 02.8**	**-0.8**
BVAR	**Borovoye Array**	**69.00**	**328**	P	**P**	**17 59 40.4**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=92,slow=12,SNR=3.6						
	comp=Z,0.4nm,0.5s						
NRIK	**Noril'sk**	**72.47**	**346**	P	**P**	**17 59 60.0**	**0.0**
	comp=Z,1.8nm,0.6s,baz=156,slow=7.0,SNR=2.4						
	comp=Z,1.8nm,0.6s						
NRIK	**Noril'sk**	**72.47**	**346**	IAmb	IAmb	18 00 01.0	
	comp=Z,2.3nm,0.7s						
ABKAR	**Akbulak array**	**73.67**	**321**	P	**P**	**18 00 07.2**	**-0.3**
VNDA	**Vanda**	**81.32**	**173**	P	**P**	**18 00 51.6**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=319,slow=4.0,SNR=2.7						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**81.32**	**173**	IAmb	IAmb	18 01 02.8	
	comp=Z,2.2nm,1.2s						

*KRNET **14** 17:49:03.6±0.1,42.°04N×77.°14E,h21km,mb3.6*
*SOME **14** 17:49:03.5,42.°05N×77.°15E,h15km*
*NNC **14** 17:49:04.0±0.7,42.°10N×77.°17E,h0km,mb4.0,mpv3.8,*
Error ellipse: s-maj=4.9km s-min=2.5km az=11.0
*KNET **14** 17:49:05.8±0.5,42.°09N×77.°04E,h22km±2km,ml3.2,Error ellipse: s-maj=5.2km s-min=3.2km az=22.0*

ISC 14 17:49:04.3±0.9,42°09N±0'.03×77°14E±0'.02,h11km±6km,
n63,σ1s06/118,25C-28D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.06**	**37**	⇑*iP*	**Pg**	**17 49 06.8**	**0.0**
KDJ				⇑*iS*	**Sg**	**17 49 09.2**	**+0.7**
TARG	**Taragay, Kyrgy**	**0.61**	**125**	⇑*iP*	**Pg**	**17 49 14.9**	**-1.5**
TARG				⇑*iS*	**Sg**	**17 49 22.8**	**-1.7**
ULHL	**Ulahol**	**0.68**	**284**	⇓P	**Pg**	**17 49 17.5**	**-0.1**
	50nm,0.1s						
ULHL				⇓S	**Sb**	**17 49 27.4**	**-0.6**
	185nm,0.1s						
ULHL	**Ulahol**	**0.68**	**284**	⇑*iP*	**Pg**	**17 49 17.2**	**-0.4**
ULHL				⇑*iS*	**Sg**	**17 49 26.9**	**+0.3**
TNSS	**Tian-Shan**	**0.96**	**352**	P	**Pg**	**17 49 22.3**	**-0.6**
	118nm,0.5s						
TNSS				S	**Sb**	**17 49 35.4**	**-0.8**
	53nm,0.6s						
TNSS	**Tian-Shan**	**0.96**	**352**	*e*P	**Pg**	**17 49 22.3**	**-0.6**
	118nm,0.5s						
TNSS				*e*S	**Sb**	**17 49 35.4**	**-0.8**
	53nm,0.6s						
BOOM	**Boomskoye usch**	**0.97**	**295**	⇑*iP*	**Pg**	**17 49 22.4**	**-0.7**
BOOM				⇑*iS*	**Sg**	**17 49 35.7**	**-0.2**
PRZ	**Przheval'sk**	**1.02**	**67**	⇑*iP*	**Pg**	**17 49 22.9**	**-1.1**
PRZ				⇑*iS*	**Sg**	**17 49 36.9**	**-0.4**
IZV	**Izvestkoviy**	**1.02**	**338**	P	**Pg**	**17 49 23.5**	**-0.6**
	203nm,0.2s						
IZV				S	**Sb**	**17 49 37.9**	**+0.1**
	134nm,0.3s						
IZV	**Izvestkoviy**	**1.02**	**338**	*e*P	**Pg**	**17 49 23.5**	**-0.6**
	203nm,0.2s						
IZV				*e*S	**Sb**	**17 49 37.9**	**+0.1**
	134nm,0.3s						
KOTS	**Kotyrbulak**	**1.15**	**359**	P	**Pb**	**17 49 25.9**	**-0.4**
	624nm,0.2s						
KOTS				S	**Sn**	**17 49 41.8**	**-0.5**
	493nm,0.5s						
KOTS	**Kotyrbulak**	**1.15**	**359**	*e*P	**Pb**	**17 49 25.9**	**-0.4**
KOTS				*e*S	**Sn**	**17 49 41.8**	**-0.5**
KOTS	**Kotyrbulak**	**1.15**	**359**	*e*P	**Pb**	**17 49 25.9**	**-0.4**
	624nm,0.2s						
KOTS				*e*S	**Sn**	**17 49 41.8**	**-0.5**
	493nm,0.5s						
MTBS	**Maitube**	**1.17**	**334**	P	**Pg**	**17 49 25.9**	**-0.9**
	171nm,0.3s						
MTBS				S	**Sb**	**17 49 42.0**	**+0.2**
	165nm,0.3s						
MTBS	**Maitube**	**1.17**	**334**	*e*P	**Pg**	**17 49 25.9**	**-0.9**
MTBS				*e*S	**Sb**	**17 49 42.0**	**+0.2**
MTBS	**Maitube**	**1.17**	**334**	*e*P	**Pg**	**17 49 25.9**	**-0.9**
	171nm,0.3s						
MTBS				*e*S	**Sb**	**17 49 42.0**	**+0.2**
	165nm,0.3s						
KST	**Kastek**	**1.29**	**318**	P	**Pg**	**17 49 28.2**	**-0.9**
	119nm,0.8s						
KST				S	**Sn**	**17 49 46.3**	**+0.5**
	694nm,0.4s						
KST	**Kastek**	**1.29**	**318**	*e*P	**Pg**	**17 49 28.2**	**-0.9**
KST				*e*S	**Sn**	**17 49 46.3**	**+0.5**
KST	**Kastek**	**1.29**	**318**	*e*P	**Pg**	**17 49 28.2**	**-0.9**
	119nm,0.8s						
KST				*e*S	**Sn**	**17 49 46.3**	**+0.5**
	694nm,0.4s						
SATY	**Saty**	**1.35**	**44**	P	**Pg**	**17 49 28.8**	**-1.5**
	46nm,0.3s						
SATY				S	**Sb**	**17 49 47.0**	**-0.1**
	213nm,0.3s						
TKM2	**Tokmak 2**	**1.41**	**307**	P	**Pn**	**17 49 30.5**	**+0.3**
	74nm,0.2s,SNR=180						
TKM2				⇑S	**Sn**	**17 49 49.9**	**+1.0**
	412nm,0.2s						
TKM2	**Tokmak 2**	**1.41**	**307**	⇑*e*P	**Pn**	**17 49 30.1**	**-0.1**
TKM2				⇑*iS*	**Sb**	**17 49 49.3**	**+0.4**
JNKS	**Jany-Kuch**	**1.51**	**228**	⇓*iP*	**Pn**	**17 49 31.0**	**-0.7**
JNKS				⇓*iS*	**Sn**	**17 49 50.8**	**-0.7**
DGS	**Degeres**	**1.53**	**319**	P	**Pb**	**17 49 32.4**	**-0.4**
	37nm,0.4s						
DGS				S	**Sg**	**17 49 53.0**	**-0.6**
	356nm,0.5s						
DGS	**Degeres**	**1.53**	**319**	*e*P	**Pb**	**17 49 32.4**	**-0.4**
DGS				*e*S	**Sg**	**17 49 53.0**	**-0.6**
DGS	**Degeres**	**1.53**	**319**	*e*P	**Pb**	**17 49 32.4**	**-0.4**
	37nm,0.4s						
DGS				*e*S	**Sg**	**17 49 53.0**	**-0.6**
	356nm,0.5s						
KTBS	**Karatobe**	**1.66**	**349**	P	**Pb**	**17 49 34.7**	**-0.3**
	54nm,0.4s						
KTBS				S	**Sg**	**17 49 57.3**	**-0.4**
	162nm,0.3s						
KTBS	**Karatobe**	**1.66**	**349**	*e*P	**Pb**	**17 49 34.7**	**-0.3**
KTBS				*e*S	**Sg**	**17 49 57.3**	**-0.4**
KBK	**Karagaybulak**	**1.72**	**290**	⇓P	**Pb**	**17 49 36.0**	**-0.1**
	33nm,0.2s,SNR=33						
KBK				⇑S	**Sg**	**17 49 59.6**	**0.0**
	360nm,0.4s						
KBK	**Karagaybulak**	**1.72**	**290**	⇑*iP*	**Pn**	**17 49 35.2**	**+0.8**
KBK				⇑*iS*	**Sb**	**17 49 58.2**	**+0.5**
KPKS	**Kokpek**	**1.79**	**39**	P	**Pb**	**17 49 36.4**	**-0.8**
	0.3nm,0.2s						
KPKS				S	**Sg**	**17 50 00.1**	**-1.8**
	489nm,0.4s						
KPKS	**Kokpek**	**1.79**	**39**	*e*P	**Pb**	**17 49 36.4**	**-0.8**
	0.3nm,0.2s						
KPKS				*e*S	**Sg**	**17 50 00.1**	**-1.8**
	489nm,0.4s						
KUU	**Kurty**	**1.90**	**342**	P	**Pb**	**17 49 38.5**	**-0.5**
	35nm,0.4s						
KUU				S	**Sg**	**17 50 03.9**	**-1.5**
	163nm,0.5s						
KUU	**Kurty**	**1.90**	**342**	*e*P	**Pb**	**17 49 38.6**	**-0.5**
KUU				*e*S	**Sg**	**17 50 04.0**	**-1.4**
KUU	**Kurty**	**1.90**	**342**	*e*P	**Pb**	**17 49 38.5**	**-0.5**
	35nm,0.4s						
KUU				*e*S	**Sg**	**17 50 03.9**	**-1.5**
	163nm,0.5s						
UCH	**Uchtor**	**1.96**	**275**	⇓P	**Pb**	**17 49 40.1**	**-0.2**
	9.6nm,0.3s,SNR=28						
UCH				⇓S	**Sb**	**17 50 05.8**	**+1.0**
	81nm,0.3s						
UCH	**Uchtor**	**1.96**	**275**	⇓*iP*	**Pn**	**17 49 38.4**	**+0.5**
UCH				⇓*iS*	**Sn**	**17 50 03.9**	**+1.2**
CHMS	**Chumysh**	**1.98**	**298**	⇓P	**Pb**	**17 49 39.8**	**-0.7**
	14nm,0.2s,SNR=14						
CHMS				⇑S	**Sg**	**17 50 06.9**	**-1.2**
	209nm,0.4s						
CHMS	**Chumysh**	**1.98**	**298**	⇑*e*P	**Pn**	**17 49 38.9**	**+1.0**
CHMS				⇑*iS*	**Sn**	**17 50 04.5**	**+1.7**
FRU1	**Bishkek**	**1.99**	**292**	⇓*iP*	**Pn**	**17 49 39.2**	**+1.2**
FRU1				⇓*iS*	**Sb**	**17 50 05.2**	**-0.3**
SHLS	**Shalkode**	**2.02**	**57**	Pg	**Pg**	**17 49 45.2**	**+2.0**
	19nm,0.2s						
SHLS				Lg	Lg	17 50 15.5	
	109nm,0.5s						
SHLS	**Shalkode**	**2.02**	**57**	*e*P	**Pg**	**17 49 45.2**	**+2.0**
	19nm,0.2s						
SHLS				*e*S	**Sg**	**17 50 15.5**	**+6.1**
	109nm,0.5s						
AAK	**Ala-Archa**	**2.03**	**287**	⇓P	**Pb**	**17 49 40.9**	**-0.5**
	16nm,0.2s,SNR=28						
AAK				⇓S	**Sb**	**17 50 08.2**	**+1.4**
	215nm,0.5s						
AAK	**Ala-Archa**	**2.03**	**287**	⇓*iP*	**Pn**	**17 49 39.6**	**+0.9**
AAK				⇓*iS*	**Sn**	**17 50 05.8**	**+1.6**
ARLS	**Aral**	**2.11**	**265**	⇓*e*P	**Pn**	**17 49 40.6**	**+0.8**
ARLS				⇓*e*S	**Sn**	**17 50 07.2**	**+1.1**
ARXS	**Arharly**	**2.19**	**13**	Pg	**Pb**	**17 49 43.3**	**-0.7**
	38nm,0.5s						
ARXS				Lg	Lg	17 50 11.8	
	124nm,0.5s						
ARXS	**Arharly**	**2.19**	**13**	*e*P	**Pb**	**17 49 43.3**	**-0.7**
	38nm,0.5s						
ARXS				*e*S	**Sb**	**17 50 11.8**	**+0.7**
	124nm,0.5s						
BLB	**Baldybastay**	**2.24**	**26**	Pg	**Pb**	**17 49 44.4**	**-0.4**
	77nm,0.3s						
BLB				Lg	Lg	17 50 14.0	
	124nm,0.5s						
USP	**Ospenovka**	**2.27**	**302**	⇓P	**Pb**	**17 49 44.5**	**-1.0**
	40nm,0.3s,SNR=33						
USP				⇓S	**Sb**	**17 50 13.5**	**-0.1**
	179nm,0.3s						
USP	**Ospenovka**	**2.27**	**302**	⇓*iP*	**Pn**	**17 49 43.1**	**+1.2**
USP				⇓*iS*	**Sn**	**17 50 11.7**	**+1.7**
SGDS	**Sogindy**	**2.29**	**307**	Pg	**Pb**	**17 49 45.2**	**-0.6**
	20nm,0.2s						
SGDS				Lg	Lg	17 50 15.6	
	225nm,0.6s						
EKS2	**Erkin-Say**	**2.55**	**284**	⇑*iP*	**Pn**	**17 49 46.8**	**+1.0**
EKS2				⇑*iS*	**Sn**	**17 50 18.1**	**+1.1**
KNOS	**Konyrlen**	**2.72**	**33**	Pg	**Pb**	**17 49 52.8**	**-0.3**
	8.8nm,0.5s						
KNOS				Lg	Lg	17 50 28.0	
	52nm,0.5s						
KTMS	**Ketmen**	**2.73**	**59**	Pg	**Pb**	**17 49 52.1**	**-1.2**
	2.4nm,0.3s						
KTMS				Lg	Lg	17 50 26.9	
	29nm,0.4s						
KTMS	**Ketmen**	**2.73**	**59**	*e*P	**Pb**	**17 49 52.1**	**-1.2**
	2.4nm,0.3s						
KTMS				*e*S	**Sb**	**17 50 26.9**	**+0.1**
	29nm,0.4s						
SALK	**Salom-Alik**	**2.77**	**245**	⇓*iP*	**Pn**	**17 49 49.4**	**+0.6**
SALK				⇓*iS*	**Sn**	**17 50 22.5**	**+0.2**
MRKS	**Merke**	**2.97**	**284**	Pg	**Pb**	**17 49 58.3**	**+1.0**
	6.3nm,0.5s						
MRKS				Lg	Lg	17 50 37.3	
	83nm,0.4s						
MRKS	**Merke**	**2.97**	**284**	*e*P	**Pb**	**17 49 58.3**	**+1.0**
	6.3nm,0.5s						
MRKS				*e*S	**Sg**	**17 50 37.3**	**-2.4**
	83nm,0.4s						
ARSB	**Arslanbob**	**3.20**	**258**	⇓*e*P	**Pn**	**17 49 56.0**	**+1.2**
ARSB				⇓*e*S	**Sn**	**17 50 33.7**	**+0.7**
SFK	**Sufi-Kurgan**	**3.44**	**234**	⇓*iP*	**Pn**	**17 49 58.6**	**+0.5**
SFK				⇓*iS*	**Sn**	**17 50 38.8**	**-0.2**
KAPS	**Kapalarasan**	**3.58**	**26**	Pg	**Pb**	**17 50 07.2**	**-0.5**
	5.7nm,0.8s						
KAPS				Lg	Lg	17 50 52.9	
	65nm,0.4s						
ARK	**Arkit**	**3.87**	**267**	⇑*iP*	**Pn**	**17 50 05.0**	**+1.1**
ARK				⇑*iS*	**Sn**	**17 50 49.6**	**+0.2**
TRKS	**Terek-Say**	**4.52**	**265**	⇑*iP*	**Pn**	**17 50 13.7**	**+0.9**
TRKS				⇑*iS*	**Sn**	**17 51 04.7**	**-0.7**

IDC 14 17:50:59.0±2.2,1.°43N×126.°09E,h0km,mb3.4/3,
mbtmp3.4/3,Error ellipse: s-maj=179.8km
s-min=29.4km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.73**	**160**	P	P	17 56 02.8	-0.1
	0.6nm,0.4s,baz=338,slow=11,SNR=1.4						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**26.08**	**164**	P	P	17 56 34.6	0.0
	0.3nm,0.5s,baz=344,slow=12,SNR=3.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	18 01 01.2	0.0
	0.2nm,0.4s,baz=121,slow=7.8,SNR=2.1						
	0.2nm,0.4s						

*MOS **14** 17:55:15.4±1.5,1.°61N×126.°42E,h10km,mb5.1/31,Error ellipse: s-maj=14.9km s-min=6.2km az=114.2*
*IDC **14** 17:55:15.2±0.4,1.°58N×126.°46E,h0km,mb4.6/30,*
mbtmp4.6/31,ML4.2/1,Error ellipse: s-maj=22.4km
s-min=9.1km az=73.0
*NEIC **14** 17:55:16.1±2.2,1.°67N±0'.06×126.°52E±0'.08,h5km±4km,*
mb5.1/43,Error ellipse: s-maj=11.3km s-min=7.9km
az=70.0
*BJI **14** 17:55:19.4,1.°45N×126.°31E,h50km,mB5.8/5,mb4.8/59,*
Ms5.3/2,Ms7 5.0/2
*DJA **14** 17:55:19.2±0.2,2.°N±2.°×12.°6E±°,h10km,M5.0/28,*
mb5.0/28,mB5.6/3,MLv4.9/22,Mw(mB)5.1/3

ISC 14 17:55:20.7±0.3,1.°62N±0'.04×126.°49E±0'.06,h35km,n205,
σ1s50/202,mb4.8/91,16C-4D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.22**	**134**		**Pn**	**17 55 39.9**	**-1.3**
TNTI	**Ternate**	**1.22**	**134**	P	**Pn**	**17 55 40.0**	**-1.3**
SGSI	**Sangihe**	**2.27**	**335**	P	**Pn**	**17 55 56.5**	**+0.8**
KMSI	**Cibinong**	**2.71**	**248**	P	**Pn**	**17 56 01.5**	**-0.3**
SANI	**Sanana**	**3.68**	**188**	P	**Pn**	**17 56 12.9**	**-2.2**
LUWI	**Luwuk**	**4.56**	**235**		**Pn**	**17 56 27.8**	**+0.5**
LUWI	**Luwuk**	**4.56**	**235**	P	**Pn**	**17 56 28.6**	**+1.4**
MRSI	**Marisa**	**4.68**	**256**	P	**Pn**	**17 56 29.6**	**+0.7**
NLAI	**Namlea**	**4.86**	**173**	P	**Pn**	**17 56 33.0**	**+1.6**
SWI	**Sorong**	**5.37**	**117**	P	**Pn**	**17 56 37.7**	**-0.7**
APSI	**Ampana**	**5.45**	**243**	P	**Pn**	**17 56 40.1**	**+0.6**
	247nm,0.7s						
DAV	**Davao City (W)**	**5.49**	**351**	Pn	**Pn**	**17 56 42.8**	**+2.7**
	44nm,0.3s,baz=51,slow=4.2,SNR=1.5						
DAV				Sn	Sn	17 57 52.2	+10
	39nm,0.3s,baz=198,slow=20,SNR=4.1						
DAV	**Davao City (W)**	**5.49**	**351**	Pn	**Pn**	**17 56 37.7**	**-2.4**
MSAI	**Masohi**	**5.50**	**154**	P	**Pn**	**17 56 41.1**	**+0.9**
	0.8nm224nm,0.9s						
AAI	**Ambon**	**5.54**	**162**	P	**Pn**	**17 56 43.4**	**+2.7**
	0.8nm151nm,0.6s						
TOLI2	**Tolitoli**	**5.72**	**265**		**Pn**	**17 56 43.0**	**-0.3**
MPSI	**Mapaga**	**6.71**	**259**	P	**Pn**	**17 56 57.5**	**+0.7**
	0.3nm68nm,0.7s						
BNDI	**Bandanaira**	**6.99**	**151**	P	**Pn**	**17 57 00.9**	**+0.2**
	0.7nm167nm,1.0s						
PCI	**Palu**	**7.11**	**249**	P	**Pn**	**17 57 02.6**	**+0.3**
	0.5nm166nm,0.9s						
FAKI	**Fak Fak**	**7.31**	**128**		**Pn**	**17 57 06.0**	**+0.8**
FAKI	**Fak Fak**	**7.31**	**128**	P	**Pn**	**17 57 05.9**	**+0.8**
	0.3nm96nm,0.9s						
BBSI	**Bau Bau**	**8.07**	**209**	P	**Pn**	**17 57 16.8**	**+1.3**
	103nm,0.9s						
TTSI	**Tana Toraja**	**8.12**	**235**	P	**Pn**	**17 57 16.3**	**+0.2**
	2μm73nm,0.8s						
SPSI	**Sidrap Palu**	**8.71**	**230**	P	**Pn**	**17 57 25.1**	**+0.9**
	3μm54nm,0.6s						
MYLDM	**Lahad Datu**	**8.72**	**294**		**Pn**	**17 57 26.0**	**+1.6**
BNSI	**Bone**	**8.74**	**227**	P	**Pn**	**17 57 25.3**	**+0.6**
	70nm,0.8s						
BKSI	**Bulukumba**	**9.38**	**223**	P	**Pn**	**17 57 33.9**	**+0.5**
	55nm,0.8s						
KAPI	**Kappang**	**9.41**	**226**	Pn	**Pn**	**17 57 35.7**	**+1.8**
	4.5nm,0.3s,baz=348,slow=4.4,SNR=12						
KAPI				Sn	**Sn**	**17 59 20.4**	**+1.7**
	1.6nm,0.3s,baz=231,slow=21,SNR=1.1						
KAPI	**Kappang**	**9.41**	**226**	Pn	**Pn**	**17 57 32.5**	**-1.5**
KAPI	**Kappang**	**9.41**	**226**	*i* P	**Pn**	**17 57 37.8**	**+3.8**
BSSI	**Bau Bau, Buton**	**9.76**	**218**	P	**Pn**	**17 57 39.5**	**+0.8**
	93nm,0.8s						
BAKI	**Biak**	**10.02**	**106**	P	**Pn**	**17 57 44.5**	**+2.3**
	188nm,1.1s						
EDFI	**Ende, Flores**	**11.35**	**205**	P	**Pn**	**17 58 01.2**	**+0.6**
	26nm,0.9s						
SOEI	**Soe**	**11.51**	**191**	P	**Pn**	**17 58 03.9**	**+1.1**
	146nm,1.0s						
MTKI	**Muara Teweh, K**	**11.86**	**258**	P	**Pn**	**17 58 08.1**	**+0.6**
	4μm25nm,0.8s						
BATI	**Baumata**	**12.08**	**193**	Pn	**Pn**	**17 58 14.4**	**+3.9**
	2.3nm,0.3s,baz=226,slow=3.2,SNR=4.7						
BATI	**Baumata**	**12.08**	**193**	P	**Pn**	**17 58 14.8**	**+4.3**
	47nm,0.9s						
SMPI	**Sarmi**	**12.74**	**106**	P	**Pn**	**17 58 22.2**	**+2.8**
	43nm,1.2s						
PLAI	**Plampang**	**13.53**	**220**	P	**Pn**	**17 58 33.7**	**+3.4**
	75nm,0.9s						
TGY	**Tagaytay City**	**13.56**	**336**	Pn	**P**	**17 58 38.6**	**-0.7**
	baz=52,slow=19						
TGY				Sn	**Sn**	**18 01 01.8**	**+1.4**
	96nm,0.3s,baz=1.0,slow=3.0,SNR=3.8						
TWSI	**Taliwang, Sumb**	**14.05**	**223**	P	**Pn**	**17 58 37.7**	**+0.3**
	149nm,1.1s						
JAY	**Jayapura**	**14.80**	**106**	Pn	**P**	**17 58 54.3**	**+1.2**
	0.6nm,0.3s,baz=259,slow=10,SNR=6.4						
MTN	**Manton Dam**	**15.09**	**162**		**Pn**	**17 58 50.7**	**-0.7**
MTN				IAmb	IAmb	17 58 54.9	
	comp=Z,30nm,0.8s						
KNRA	**Kununurra**	**17.33**	**173**		**Pn**	**17 59 19.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.61**	**182**	P	**P**	**17 59 44.6**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=12,slow=7.2,SNR=18						
	comp=Z,13nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.61**	**182**	IAmb	IAmb	17 59 49.5	
	comp=Z,2.8nm,0.8s						
KPJI	**Karang Pucung**	**19.64**	**243**	P	**P**	**17 59 47.7**	**+1.1**
	comp=Z,72nm,0.9s						
YULB	**Yu-li**	**22.22**	**347**	P	**P**	**18 00 11.2**	**-3.2**
YULB				IAmb	IAmb	18 00 22.7	
	comp=Z,38nm,0.8s						
TPUB	**Ta-pu**	**22.29**	**346**	P	**P**	**18 00 12.5**	**-2.7**
TPUB				IAmb	IAmb	18 00 16.6	
	comp=Z,93nm,1.0s						
SSLB	**Suanglung**	**22.68**	**347**	P	**P**	**18 00 17.7**	**-1.6**
SSLB				IAmb	IAmb	18 00 24.4	
	comp=Z,33nm,0.7s						
WRAB	**Tennant Creek**	**22.76**	**161**	P	**P**	**18 00 18.6**	**-1.6**
WRAB				IAmb	IAmb	18 00 22.2	
	comp=Z,77nm,0.8s						
WRAB	**Tennant Creek**	**22.76**	**161**	*i* P	**P**	**18 00 19.7**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,93nm,0.9s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**18 00 17.9**	**-2.3**
	comp=Z,69nm,0.7s,baz=340,slow=10,SNR=84						
WRA				PcP	**PcP**	**18 04 11.8**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=323,slow=2.7,SNR=3.2						
WRA				S	**S**	**18 04 25.8**	**-1.2**
	comp=Z,6.9nm,1.1s,baz=338,slow=16,SNR=11						
	comp=Z,69nm,0.7s						
PMG	**Port Moresby**	**23.32**	**118**	P	**P**	**18 00 24.2**	**-1.8**
	comp=Z,9.2nm,0.8s,baz=321,slow=10,SNR=3.5						
	comp=Z,9.2nm,0.8s						
AS31	**Alice Springs**	**26.15**	**164**	P	**P**	**18 00 50.4**	**-1.5**
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**18 00 52.0**	**+0.1**
	comp=Z,24nm,0.8s,baz=349,slow=14,SNR=75						
ASAR				PcP	**PcP**	**18 04 18.6**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=336,slow=2.3,SNR=3.6						
ASAR				S	**S**	**18 05 24.1**	**+2.7**
	comp=Z,2.8nm,0.8s,baz=344,slow=20,SNR=7.3						
	comp=Z,24nm,0.8s						
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**18 00 49.2**	**-2.6**
RABL	**Rabaul**	**26.30**	**103**	P	**P**	**18 00 51.4**	**-2.0**
RABL				IAmb	IAmb	18 01 01.3	
	comp=Z,14nm,0.6s						
CTAO	**Charters Tower**	**29.00**	**139**	P	**P**	**18 01 14.9**	**-2.6**
CTAO				IAmb	IAmb	18 01 24.0	
	comp=Z,18nm,1.1s						
CTAO	**Charters Tower**	**29.00**	**139**	P	**P**	**18 01 14.9**	**-2.6**
CTAO				pmax	pmax		
	comp=Z,18nm,1.1s						
NJ2	**Nanjing**	**31.12**	**347**	*e*P	**P**	**18 01 37.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
GYA	**Guiyang**	**31.19**	**324**	⇑P	**P**	**18 01 37.3**	**+0.4**
GYA				pmax	pmax		
	comp=Z,22nm,1.2s						
CMAR	**Chiang Mai Arr**	**31.78**	**304**	P	**P**	**18 01 42.5**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=116,slow=6.6,SNR=22						
CMAR				PcP	**PcP**	**18 04 33.9**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=112,slow=3.0,SNR=4.6						
	comp=Z,2.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**31.78**	**304**	*ce*P	**P**	**18 01 43.7**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**31.95**	**304**	P	**P**	**18 01 42.7**	**-0.8**
CHTO	**Chiang Mai**	**31.95**	**304**	P	**P**	**18 01 42.7**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FORT	**Forrest**	**32.25**	**177**	P	**P**	**18 01 45.8**	**-0.2**
FORT				IAmb	IAmb	18 01 49.7	
	comp=Z,19nm,0.7s						
INKA	**Innaminka**	**32.25**	**156**	P	**P**	**18 01 44.6**	**-1.4**
KMI	**Kunming**	**32.73**	**318**	P	**P**	**18 01 51.0**	**+0.5**
KMI				pmax	pmax		
	comp=Z,21nm,1.2s						
ENH	**Enshi**	**32.75**	**332**	P	**P**	**18 01 49.6**	**-0.9**
ENH				IAmb	IAmb	18 01 54.4	
	comp=Z,34nm,0.9s						
PZH	**PanZhiHua**	**34.31**

baz=259
H11N3 WAKE ISLAND Hy 43.42 63 T T 18 49 59.0
baz=259
BNX BinXian 43.95 1 ⇓P P **18 03 24.1 -0.2**
BNX pmax pmax
comp=Z,13nm,1.0s
GTA Gaotai 44.79 330 *e*P P 18 03 20.3 -11
GTA sP pP 18 03 31.4 -10
GTA pmax pmax
comp=Z,4.0nm,1.2s
EVN Everest 46.08 308 P P **18 03 40.5 -1.7**
EVN IAmb IAmb 18 04 06.0
comp=Z,21nm,1.0s
HIA Hailar 47.82 354 P P **18 03 52.5 -2.3**
HIA IAmb IAmb 18 04 04.5
comp=Z,14nm,0.9s
HIA Hailar 47.82 354 P P **18 03 52.6 -2.3**
HIA pmax pmax
comp=Z,14nm,0.9s
HILR Hailar Array B 48.11 354 P P **18 03 57.8 +0.7**
comp=Z,4.8nm,0.5s,baz=183,slow=9.5,SNR=6.3
comp=Z,4.8nm,0.5s
HEH HeiHe 48.46 1 *e*P P **18 03 59.4 -0.3**
HEH pmax pmax
comp=Z,21nm,1.1s
ULN Ulaanbaatar 49.05 343 *ce*P P **18 04 04.6 +0.1**
ULN pmax pmax
comp=Z,22nm,1.7s
SONM Songino Array 49.22 342 P P **18 04 05.7 0.0**
comp=Z,5.8nm,0.9s,baz=154,slow=9.3,SNR=20
SONM PcP **PcP** **18 05 29.9 +1.4**
comp=Z,1.4nm,0.8s,baz=198,slow=3.4,SNR=1.5
comp=Z,5.8nm,0.9s
HYBB Hyderabad (bro 49.63 292 *e*P P **18 04 08.6 -0.7**
ZEA Zeya 51.95 1 *e*P P **18 04 29.3 +3.2**
ZEA pmax pmax
comp=Z,10.0nm,1.6s
MOY Mondy 54.28 341 *e*P P **18 04 45.9 +2.5**
MOY pmax pmax
comp=Z,19nm,1.7s
WMQ Urumqi 54.32 326 *e*P P **18 04 45.8 +2.0**
PETK Petropavlovsk- 57.47 22 P P **18 05 07.1 +1.0**
comp=Z,8.9nm,1.0s,baz=223,slow=7.7,SNR=6.1
comp=Z,8.9nm,1.0s
DGZ Jazzator, Alta 58.31 331 *i* P P **18 05 12.1 -0.2**
DGZ pmax pmax
comp=Z,8.0nm,1.1s
MK31 Makanchi Array 59.15 326 *ce*P P **18 05 17.8 -0.2**
MKAR Makanchi Array 59.15 326 P P **18 05 17.6 -0.4**
comp=Z,8.5nm,0.8s,baz=120,slow=7.0,SNR=66
comp=Z,8.5nm,0.6s
MKAR Makanchi Array 59.15 326 P P **18 05 17.2 -0.8**
MKAR Makanchi Array 59.15 326 *ce*P P **18 05 17.3 -0.7**
MKAR pmax pmax
comp=Z,5.0nm,0.4s
TARG Taragay, Kyrgy 59.16 319 P P **18 05 17.4 -1.3**
TARG IAmb IAmb 18 05 23.0
comp=Z,11nm,0.9s
TARG Taragay, Kyrgy 59.16 319 P P **18 05 17.4 -1.3**
TARG pmax pmax
comp=Z,11nm,0.9s
KSH Kashi 59.37 316 P P **18 05 20.3 +0.5**
KSH sP sP 18 05 36.9 +3.0
KSH pmax pmax
comp=Z,9.0nm,1.0s
KDJ Kajisay 59.77 319 P **18 05 20.8 -1.8**
KDJ IAmb IAmb 18 05 24.2
comp=Z,17nm,1.0s
KDJ Kajisay 59.77 319 P P **18 05 20.8 -1.8**
KDJ pmax pmax
comp=Z,17nm,1.0s
YAK Yakutsk 60.31 2 P P **18 05 25.8 +0.2**
YAK Yakutsk 60.31 2 *e*P P **18 05 24.7 -0.9**
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.5s
TKM2 Tokmak 2 61.17 319 P P **18 05 31.9 -0.2**
SNR=9.4
KBK Karagaybulak 61.47 319 P P **18 05 34.8 +0.6**
SNR=7.1
UCH Uchtor 61.57 318 P P **18 05 35.4 +0.2**
SNR=16
AAK Ala-Archa 61.76 319 P P **18 05 35.9 -0.3**
comp=E,3.5nm,0.9s,baz=166,slow=5.9,SNR=6.5
comp=E,3.5nm,0.9s
AAK Ala-Archa 61.76 319 *ce*P P **18 05 36.5 +0.4**
AAK pmax pmax
comp=Z,14nm,1.7s
USP Ospenovka 62.04 319 P P **18 05 37.4 -0.5**
SNR=11
ARSB Arslanbob 62.21 317 IAmb IAmb 18 05 40.5
comp=Z,11nm,1.0s
EKS2 Erkin-Say 62.25 318 P P **18 05 39.3 0.0**
SNR=10
DRK Karamyk 62.29 314 P P **18 05 38.9 -1.0**
DRK IAmb IAmb 18 05 41.3
comp=Z,14nm,1.0s
DRK Karamyk 62.29 314 P P **18 05 38.9 -1.0**
DRK pmax pmax
comp=Z,14nm,1.0s
ZALV Zalesovo Beam 62.35 334 P P **18 05 38.4 -1.2**
comp=Z,2.1nm,0.5s,baz=108,slow=5.2,SNR=10
comp=Z,2.1nm,0.5s
ZALV Zalesovo Beam 62.35 334 *i* P P **18 05 40.9 +1.3**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
KURBB Kurchatov Arra 63.38 328 P P **18 05 45.6 -0.9**
comp=Z,15nm,0.7s,baz=126,slow=6.2,SNR=30
comp=Z,15nm,0.7s
KURK Kurchatov 63.39 328 P P **18 05 45.9 -0.7**
KURK Kurchatov 63.39 328 *ce*P P **18 05 46.0 -0.6**
KURK pmax pmax
comp=Z,28nm,0.8s
CHGR Chuyangaron 63.90 313 P P **18 05 48.7 -1.7**
CHGR Chuyangaron 63.90 313 P P **18 05 48.7 -1.7**
CHGR pmax pmax
comp=Z,34nm,1.1s
SEY Seymchan 64.13 13 *ce*P P **18 05 54.2 +3.0**
SEY pmax pmax
comp=Z,34nm,2.5s
BVAR Borovoye Array 68.95 328 P P **18 06 21.7 -0.6**
comp=Z,5.1nm,0.6s,baz=122,slow=7.2,SNR=25
comp=Z,5.1nm,0.6s
BORK Borovoye 69.00 328 *ce*P P **18 06 21.2 -1.4**
BORK pmax pmax
comp=Z,6.0nm,0.6s
TIXI Tiksi 69.94 1 *ce*P P **18 06 28.0 0.0**
TIXI pmax pmax
comp=Z,14nm,1.3s
NRIK Noril'sk 72.41 346 P P **18 06 42.5 -0.5**
comp=Z,16nm,0.8s,baz=134,slow=6.1,SNR=30
comp=Z,16nm,0.8s
NRIK Noril'sk 72.41 346 IAmb IAmb 18 06 44.4
comp=Z,25nm,1.1s
NRIK Noril'sk 72.41 346 *ce*P P **18 06 43.2 +0.2**
NRIK pmax pmax
comp=Z,29nm,1.0s
AB31 Akbulak array 73.63 321 P P **18 06 49.2 -1.4**
ABKAR Akbulak array 73.63 321 P P **18 06 49.2 -1.4**
SVE Sverdlovsk 75.63 329 *e*P P **18 07 02.1 +0.1**
SVE pmax pmax
comp=Z,48nm,1.2s
ARTI Arti 76.67 328 *d i*P P **18 07 07.4 -0.5**
ARTI 18 09 59.9
ARTI S **S** **18 16 53.6 +1.5**
ARTI SS **SS** **18 21 43.9 -4.1**
ARTI pmax pmax
comp=Z,38nm,1.3s
VNDA Vanda 81.38 173 P P **18 07 33.9 +0.6**
comp=Z,5.6nm,0.8s,baz=308,slow=8.6,SNR=16
comp=Z,5.6nm,0.8s
VNDA Vanda 81.38 173 P P **18 07 33.8 +0.5**
VNDA Vanda 81.38 173 P P **18 07 33.8 +0.5**
VNDA pmax pmax
comp=Z,7.0nm,0.8s
MAW Mawson 81.70 200 P P **18 07 35.8 +0.6**
comp=Z,3.3nm,0.8s,baz=77,slow=7.0,SNR=5.6
comp=Z,3.3nm,0.8s
KIRV Kirov 81.89 329 *ce*P P **18 07 36.9 +0.5**
BELG Belogornoye 81.92 323 *i* P P **18 07 35.8 -0.9**
BELG pmax pmax
comp=Z,5.0nm,0.9s
J19K Poorman 83.25 26 P **18 07 44.6 +1.2**
J19K IAmb IAmb 18 07 52.5
comp=Z,13nm,1.0s
KBZ Khabaz 84.25 314 P P **18 07 48.5 -0.4**
comp=Z,4.9nm,0.9s,baz=26,slow=3.5,SNR=8.4
comp=Z,4.9nm,0.9s
KBZ Khabaz 84.25 314 *ce*P P **18 07 49.7 +0.8**
KBZ pmax pmax
comp=Z,10.0nm,1.0s
KIV Kislovodsk 84.41 314 *e*P P **18 07 49.6 -0.3**
KIV pmax pmax
comp=Z,10.0nm,1.1s
B21K Ikpikpuk River 84.63 20 P P **18 07 51.1 +0.8**
VRH Novokhopyorsk 85.46 321 *e*P P **18 07 54.4 -0.4**
VRH pmax pmax
comp=Z,52nm,1.0s
KOPT Kop Dagi 85.89 310 P P **18 07 58.9 +1.3**
VORR Voronezh 87.05 321 *e*P P **18 08 03.4 +0.7**
VORR pmax pmax
comp=Z,31nm,0.8s
VSR Storozhevoye 87.07 321 *e*P P **18 07 59.8 -3.0**
VSR pmax pmax
comp=Z,10.0nm,1.0s
ILAR Eielson Array 87.10 25 P P **18 08 01.1 -1.6**
comp=Z,0.4nm,0.8s,baz=270,slow=7.5,SNR=2.4
comp=Z,0.4nm,0.8s
KLMR Klimovskoe 87.11 331 *e*P P **18 08 01.3 -1.5**
KLMR pmax pmax
comp=Z,20nm,1.1s
LPSR Galich'ya Gora 87.24 322 *e*P P **18 08 03.9 +0.3**
LPSR pmax pmax
comp=Z,34nm,1.0s
MOS Moscow 88.03 326 *e*P P **18 08 06.3 -1.0**
C27K Jago River 88.43 21 IAmb IAmb 18 08 13.5
comp=Z,4.6nm,0.8s
KIBK Kibwezi 88.51 268 P P **18 08 09.4 -1.2**
KIBK IAmb IAmb 18 08 12.9
comp=Z,20nm,1.7s
OBN Obninsk 88.64 325 *e*P P **18 08 08.5 -1.6**
OBN *e* 18 11 35.8
OBN *e*PPP PPP 18 13 35.2
OBN pmax pmax
comp=Z,14nm,1.0s
OBN MLR MLR
comp=Z,3μm,21.0s
KMBO Kilima Mbogo 89.27 269 P P **18 08 14.5 +0.2**
comp=Z,2.4nm,0.7s,baz=76,slow=4.6,SNR=5.7
comp=Z,2.4nm,0.7s
D27M Malcolm River 89.41 21 IAmb IAmb 18 08 35.5
comp=Z,17nm,1.8s
MMAI Mount Meron Ar 90.04 303 P P **18 08 17.7 +0.3**
comp=Z,2.4nm,0.6s,baz=79,slow=8.6,SNR=8.8
comp=Z,2.4nm,0.6s
BR104 Keskin Array S 91.17 310 P P **18 08 22.0 -0.6**
comp=Z,3.1nm,0.9s
BRTR Keskin Array B 91.17 310 P P **18 08 22.1 -0.5**
comp=Z,1.6nm,0.9s,baz=111,slow=5.6,SNR=5.2
comp=Z,1.6nm,0.9s
BR105 Keskin Array S 91.19 310 P P **18 08 22.1 -0.6**
comp=Z,2.8nm,0.9s
QSPA South Pole Qui 91.54 180 P P **18 08 26.3 +2.7**
comp=Z,1.9nm,0.9s,baz=328,slow=4.4,SNR=3.6
QSPA South Pole Qui 91.54 180 IAmb IAmb 18 08 30.9
comp=Z,27nm,1.9s
ARCES ARCESS Array B 92.33 340 P P **18 08 26.1 -1.0**
comp=Z,3.9nm,0.9s,baz=60,slow=6.0,SNR=6.6
comp=Z,3.9nm,0.9s
SPITS Spitsbergen Ar 92.49 349 P P **18 08 29.2 +1.5**
comp=Z,4.7nm,0.8s,baz=106,slow=9.4,SNR=1.8
comp=Z,4.7nm,0.8s
AK03 Malin Array Si 93.36 321 P P **18 08 31.4 -0.9**
AKASG Malin Array Be 93.37 321 P P **18 08 32.2 0.0**
comp=Z,0.5nm,0.4s,baz=72,slow=4.5,SNR=4.5
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 93.37 321 *ce*P P **18 08 34.5 +2.2**
AKBB Malin Array Si 93.37 321 P P **18 08 31.4 -0.9**
KIEV Kiev 93.38 321 P P **18 08 31.3 -1.0**
AK14 Malin Array Si 93.45 321 P P **18 08 32.4 -0.2**
FINES FINESS Array B 93.57 332 P P **18 08 32.0 -0.9**
comp=Z,2.8nm,0.8s,baz=46,slow=6.0,SNR=7.7
comp=Z,2.8nm,0.8s
FINES FINESS Array B 93.57 332 *i* P P **18 08 36.2 +3.3**
FINES pmax pmax
comp=Z,2.0nm,0.7s
LUBAR Lubar, Ukraine 94.40 320 P P **18 08 35.6 -1.4**
KMPD K-Podol'skiy 95.43 319 P P **18 08 40.6 -1.2**
RNPP1 Kostyukhnivka 95.44 322 P P **18 08 40.2 -1.6**
BURAR Bucovina Array 96.40 318 P **18 08 45.2 -1.2**
BURAR IAmb IAmb 18 08 53.4
comp=Z,4.4nm,0.8s
HFS Hagfors 99.76 332 P Pdif **18 09 02.7 +1.7**
comp=Z,1.3nm,0.8s,baz=106,slow=5.1,SNR=4.6
comp=Z,1.3nm,0.8s
NOA NORSAR Array B 100.56 333 P Pdif **18 09 04.2 -0.4**
comp=Z,0.8nm,0.8s,baz=68,slow=4.4,SNR=3.7
TXAR Lajitas Array 123.07 53 PKP PKPdf **18 14 14.9 +0.5**
comp=Z,0.4nm,0.8s,baz=209,slow=2.7,SNR=4.0
DBIC Dimbokro 130.74 280 PKP PKPdf **18 14 29.7 +0.4**
comp=Z,3.4nm,1.0s,baz=180,slow=5.1,SNR=1.7
BRNJ Basking Ridge 133.73 22 PKPdf **18 14 30.2 -4.0**
PLCA Paso Flores 138.12 161 PKhKP PKPpre 18 14 35.5
comp=Z,2.1nm,1.0s,baz=297,slow=4.8,SNR=3.2
MT13 San Alfonso 144.39 156 PKPab **18 14 53.1 +1.0**
BILN Bilwi Airport 146.57 61 PKPdf **18 14 54.2 -3.9**
CO01 Juntas del Tor 147.69 152 PKPbc **18 15 03.9 +1.3**
GO03 Copiapo 149.61 150 PKPbc **18 15 08.1 +0.7**
CPUP Villa Florida 155.16 172 PKP PKPdf **18 15 12.2 +1.2**
comp=Z,0.5nm,0.8s,baz=108,slow=3.2,SNR=1.5
LPAZ La Paz 159.51 136 PKP PKPdf **18 15 18.4 +0.9**
comp=Z,1.4nm,0.9s,baz=307,slow=4.1,SNR=3.6

DJA 14 17:55:37.6±0.3, 9°S±3°, 11°0E±°, h10km, M4.6/23, mB5.3/2, mb4.7/10, MLv4.5/23, Mw(mB)4.7/2, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOGI	**Yogyakarta**	**1.25**	**23**	P	Pn	17 56 00.8	-0.4
UGM	**Wanagama**	**1.28**	**34**	P	Pn	17 56 00.8	-0.8
UGM				S	Sb	17 56 16.3	-2.1
PCJI	**Pacitan**	**1.57**	**60**	P	Pn	17 56 04.4	-1.1
PCJI				S	Sn	17 56 22.8	-3.1
KPJI	**Karang Pucung**	**1.85**	**332**	P	Pn	17 56 10.4	+1.0
SMRI	**Semarang**	**2.02**	**18**	P	Pb	17 56 13.6	-0.9
NGJI	**Ngawi**	**2.30**	**46**	P	Pb	17 56 18.5	-0.6
TBJI	**Tambak Boyo**	**2.96**	**44**	P	Pn	17 56 25.4	+0.8
CNJI	**Cibinong**	**3.12**	**302**	P	Pn	17 56 26.4	-0.5
GRJI	**Gresik**	**3.35**	**52**	P	Pn	17 56 30.6	+0.5
SKJI	**Sukabumi**	**3.76**	**301**	P	Pn	17 56 36.0	+0.2
BLJI	**Banyuglugur**	**3.95**	**72**	P	Pn	17 56 38.6	+0.3
JAGI	**Jajag, Banyuwa**	**4.33**	**84**	P	Pn	17 56 43.3	-0.3
ABJI	**Asem Bagus**	**4.54**	**75**	P	Pn	17 56 46.7	+0.2
SRBI	**Singaraja**	**5.43**	**81**	P	Pn	17 56 58.8	+0.2
	0.4nm47nm,0.6s						
KASI	**Kota Agung**	**6.28**	**303**	P	Pn	17 57 10.0	-0.4
	0.2nm25nm,1.1s						
TPI	**Tanjungpandan**	**6.54**	**341**	P	Pn	17 57 14.8	+0.8
	0.1nm27nm,1.2s						
TWSI	**Taliwang, Sumb**	**7.00**	**89**	P	Pn	17 57 20.4	+0.1
	51nm,0.5s						
MDSI	**Maura Dua**	**7.15**	**308**	P	Pn	17 57 22.6	+0.3
PLAI	**Plampang**	**7.88**	**90**	P	Pn	17 57 32.3	-0.1
	2μm56nm,0.6s						
MNAI	**Manna**	**8.20**	**304**	P	Pn	17 57 36.4	-0.4
MASI	**Maura Aman, Be**	**9.49**	**307**	P	Pn	17 57 54.9	+0.4

IDC 14 18:00:50.4±2.3, 1°40N×126°28E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=188.0km s-min=29.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.64**	**160**	P	P	18 05 52.7	-0.5
	0.7nm,0.6s,baz=338,slow=11,SNR=1.9						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**26.00**	**164**	P	P	18 06 25.5	+0.3
	0.8nm,0.8s,baz=346,slow=11,SNR=1.3						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	P	18 10 53.5	0.0
	0.2nm,0.6s,baz=110,slow=8.9,SNR=1.7						
	0.2nm,0.6s						

IDC 14 18:01:23.3±5.4, 16°46S×175°71W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=170.0km s-min=108.1km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.59**	**240**	P	P	18 09 13.5	+0.3
	1.3nm,0.6s,baz=63,slow=9.0,SNR=2.9						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**47.45**	**258**	P	P	18 10 00.3	+0.1
	0.6nm,0.5s,baz=95,slow=7.5,SNR=5.9						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**47.68**	**253**	P	P	18 10 01.8	-0.2
	4.4nm,0.6s,baz=88,slow=8.4,SNR=37						
ASAR				PcP	PcP	18 11 31.3	-0.2
	0.4nm,0.9s,baz=95,slow=3.6,SNR=1.0						
	4.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**55.83**	**259**	P	P	18 11 02.2	-0.7
	1.2nm,0.6s,baz=97,slow=8.1,SNR=1.8						
	1.2nm,0.6s						

IDC 14 18:01:33.1±2.2, 1°36N×126°01E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=175.9km s-min=29.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.69**	**159**	P	P	18 06 36.5	+0.1
	1.4nm,0.5s,baz=337,slow=11,SNR=4.7						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**26.03**	**163**	P	P	18 07 08.1	-0.1
	0.4nm,0.6s,baz=348,slow=7.9,SNR=1.6						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	P	18 11 35.3	-0.1
	0.2nm,0.4s,baz=121,slow=8.5,SNR=1.3						
	0.2nm,0.4s						

IDC 14 18:02:41.4±1.7, 1°61N×126°29E, h0km, mb3.7/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=122.0km s-min=21.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P	P	18 07 11.6	+0.2
	0.1nm,0.3s,baz=16,slow=7.4,SNR=2.2						
	7.1nm,1.3s						
WRA	**Warramunga Arr**	**22.83**	**160**	P	P	18 07 45.9	-0.5
	1.3nm,0.5s,baz=338,slow=11,SNR=4.7						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**26.20**	**164**	P	P	18 08 18.4	+0.4
	0.3nm,0.5s,baz=346,slow=8.1,SNR=1.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	P	18 12 43.2	-0.1
	0.3nm,0.4s,baz=118,slow=7.3,SNR=5.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.28**	**328**	P	P	18 13 12.0	0.0
	0.6nm,0.3s,baz=117,slow=6.4,SNR=1.4						
	0.6nm,0.3s						

*IDC **14** 18:03:16.4±1.6, 1°67N×126°61E, h0km, mb3.7/5, mbtmp3.7/6, ML3.6/1, MS4.7/1, Error ellipse: s-maj=121.3km s-min=19.7km az=69.0*
ISC 14 18:03:20.8±1.9, 1°8N±0°3×127°2E±0°7, h35km, n7, σ1§57/6, mb3.6/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.87**	**184**	P	**P**	**18 07 48.6**	**-0.5**
	0.1nm,0.3s,baz=11,slow=11,SNR=1.2						
	2.3nm,1.1s						
WRA	**Warramunga Arr**	**22.73**	**162**	P	**P**	**18 08 19.1**	**-0.8**
	0.9nm,0.4s,baz=338,slow=10,SNR=5.0						
	0.9nm,0.4s						
JOW	**Kunigami**	**24.88**	**2**	LR	LR	18 17 51.5	
	comp=Z,2μm,21.1s,baz=314,slow=35						
ASAR	**Alice Springs**	**26.16**	**166**	P	**P**	**18 08 53.1**	**+1.0**
	0.7nm,0.5s,baz=344,slow=8.5,SNR=8.7						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**59.40**	**326**	P	**P**	**18 13 17.9**	**-1.8**
	0.4nm,0.4s,baz=121,slow=8.4,SNR=5.4						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.60**	**328**	P	**P**	**18 13 49.4**	**+1.4**
	0.8nm,0.4s,baz=129,slow=6.0,SNR=2.2						
	0.8nm,0.4s						
BVAR	**Borovoye Array**	**69.18**	**327**	P	**P**	**18 14 23.5**	**-0.3**
	0.2nm,0.4s,baz=133,slow=6.1,SNR=1.9						
	0.2nm,0.4s						

IDC 14 18:09:17.9±1.7, 1°40N×126°39E, h0km, mb3.3/4, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=125.1km s-min=20.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.39**	**182**	P	P	18 13 45.0	-0.5
	0.1nm,0.3s,baz=355,slow=11,SNR=1.6						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.60**	**160**	P	P	18 14 20.6	+0.3
	0.4nm,0.5s,baz=340,slow=11,SNR=5.3						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**25.97**	**164**	P	P	18 14 52.5	+0.1
	0.4nm,0.6s,baz=344,slow=8.6,SNR=9.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**59.27**	**326**	P	P	18 19 21.2	-0.2
	0.2nm,0.5s,baz=127,slow=6.9,SNR=4.7						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	P	18 19 50.1	+0.1
	0.3nm,0.5s,baz=126,slow=6.0,SNR=4.5						
	0.3nm,0.5s						

IDC 14 18:14:50.5±2.1, 1°80N×126°53E, h0km, mb3.3/3, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=116.4km s-min=26.6km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.79**	**182**	P	Pn	18 19 23.4	-0.6
	0.2nm,0.3s,baz=0.0,slow=11,SNR=8.5						
	1.8nm,1.0s						
WRA	**Warramunga Arr**	**22.92**	**161**	P	P	18 19 55.3	-1.1
	0.5nm,0.4s,baz=338,slow=11,SNR=10						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.31**	**165**	P	P	18 20 28.6	+0.4
	0.2nm,0.4s,baz=344,slow=13,SNR=11						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	18 24 52.2	-0.1
	0.2nm,0.5s,baz=113,slow=7.5,SNR=1.4						
	0.2nm,0.5s						

*DJA **14** 18:14:56.3±0.3, 2°N±3°×12°6E±°, h10km, M4.0/13, mb4.1/6, MLv4.0/13*
*IDC **14** 18:14:57.2±1.1, 1°78N×126°61E, h0km, mb4.0/9, mbtmp4.0/10, ML3.8/1, Error ellipse: s-maj=78.1km s-min=15.3km az=69.0*
*NEIC **14** 18:15:02.9±1.9, 1°6N±0°1×126°45E±0°05, h37km±9km, mb4.1/11, Error ellipse: s-maj=17.3km s-min=4.6km az=201.0*
ISC 14 18:15:02.1±0.7, 1°64N±0°08×126°45E±0°08, h35km, n37, σ1§16/35, mb4.1/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**133**		**Pn**	**18 15 23.0**	**-0.1**
TNTI	**Ternate**	**1.25**	**133**	P	**Pn**	**18 15 21.8**	**-1.4**
SGSI	**Sangihe**	**2.24**	**336**	P	Pn	18 15 30.1	-6.6
KMSI	**Cibinong**	**2.69**	**247**	P	**Pn**	**18 15 39.9**	**-3.0**
SANI	**Sanana**	**3.69**	**187**	P	**Pn**	**18 15 57.0**	**+0.3**
LUWI	**Luwuk**	**4.54**	**234**		**Pn**	**18 16 07.0**	**-1.5**
LUWI	**Luwuk**	**4.54**	**234**	P	**Pn**	**18 16 06.9**	**-1.5**
MRSI	**Marisa**	**4.66**	**256**	P	**Pn**	**18 16 07.7**	**-2.3**
NLAI	**Namlea**	**4.88**	**172**	P	**Pn**	**18 16 14.5**	**+1.3**
	0.2nm26nm,0.9s						
SWI	**Sorong**	**5.41**	**117**	P	**Pn**	**18 16 20.7**	**+0.3**
TOLI2	**Tolitoli**	**5.69**	**265**	Pn	**Pn**	**18 16 24.8**	**+0.6**
BBSI	**Bau Bau**	**8.07**	**209**	P	**Pn**	**18 16 56.6**	**-0.3**
MYLDM	**Lahad Datu**	**8.68**	**294**		**Pn**	**18 17 07.6**	**+2.2**
MTN	**Manton Dam**	**15.12**	**162**	Pn	**Pn**	**18 18 33.1**	**-0.1**
MTN				IAmb	IAmb	18 19 07.2	
	comp=Z,9.7nm,1.1s						
KNRA	**Kununurra**	**17.35**	**173**		**Pn**	**18 19 02.4**	**+0.6**
KNRA				IAmb	IAmb	18 19 05.2	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**Pn**	**18 19 29.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=21,slow=11,SNR=3.2						
	comp=Z,2.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**18 19 27.0**	**-0.8**

WB0	**Warramunga Arr**	**22.65 160**	P	**P**	**18 20 00.3**	**-0.1**
WB0			IAmb	IAmb	18 20 07.9	
	comp=Z,11nm,1.1s					
WRA	**Warramunga Arr**	**22.80 161**	P	**P**	**18 20 01.6**	**-0.5**
	comp=Z,4.7nm,0.6s,baz=339,slow=11,SNR=31					
	comp=Z,4.7nm,0.6s					
WR8	**Warramunga Arr**	**22.86 160**	P	**P**	**18 20 01.0**	**-1.7**
WR8			IAmb	IAmb	18 20 04.2	
	comp=Z,7.6nm,0.9s					
AS31	**Alice Springs**	**26.17 164**	P	**P**	**18 20 34.3**	**+0.8**
ASAR	**Alice Springs**	**26.17 164**	P	**P**	**18 20 35.6**	**+2.1**
	comp=Z,1.5nm,0.4s,baz=353,slow=16,SNR=22					
	comp=Z,1.5nm,0.4s					
CMAR	**Chiang Mai Arr**	**31.74 304**	P	**P**	**18 21 23.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=116,slow=8.9,SNR=4.9					
	comp=Z,0.4nm,0.6s					
FORT	**Forrest**	**32.27 177**	P	**P**	**18 21 29.1**	**+1.5**
FORT			IAmb	IAmb	18 21 31.2	
	comp=Z,4.1nm,0.8s					
BBOO	**Buckleboo**	**35.44 166**	P	**P**	**18 21 55.3**	**+0.2**
SONM	**Songino Array**	**49.19 342**	P	**P**	**18 23 47.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=150,slow=9.0,SNR=5.6					
	comp=Z,0.9nm,0.7s					
MKAR	**Makanchi Array**	**59.12 326**	P	**P**	**18 24 59.4**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=120,slow=7.8,SNR=13					
	comp=Z,1.3nm,0.4s					
MKAR	**Makanchi Array**	**59.12 326**	P	**P**	**18 24 57.7**	**-1.5**
MAKZ	**Makanchi**	**59.30 326**	P	**P**	**18 25 00.2**	**-0.3**
MAKZ			IAmb	IAmb	18 25 01.8	
	comp=Z,2.4nm,1.0s					
ZALV	**Zalesovo Beam**	**62.32 334**	P	**P**	**18 25 20.3**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=138,slow=6.0,SNR=2.3					
	comp=Z,0.4nm,0.3s					
KURBB	**Kurchatov Arra**	**63.35 328**	P	**P**	**18 25 27.9**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=130,slow=6.6,SNR=28					
	comp=Z,1.5nm,0.5s					
KURK	**Kurchatov**	**63.35 328**		**P**	**18 25 27.5**	**-0.3**
KKAR	**Karatay Array**	**64.58 318**	P	**P**	**18 25 35.2**	**-0.8**
BVAR	**Borovoye Array**	**68.92 328**	P	**P**	**18 26 03.9**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=137,slow=7.3,SNR=8.8					
	comp=Z,0.6nm,0.4s					
ABKAR	**Akbulak array**	**73.59 321**	P	**P**	**18 26 31.7**	**-0.1**
VNDA	**Vanda**	**81.40 173**	P	**P**	**18 27 15.4**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=317,slow=6.0,SNR=2.4					
	comp=Z,0.4nm,0.6s					
VNDA	**Vanda**	**81.40 173**	IAmb	IAmb	18 27 47.4	
	comp=Z,2.9nm,1.4s					

*IDC **14** 18:17:12.7±1.7, 1.°69N×126.°60E, h0km, mb3.7/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=122.3km s-min=20.6km az=69.0*
*DJA **14** 18:17:16.0±0.3, 2.°N±3.°×12.°6E±.°, h10km, M3.8/8, MLv3.8/8*
ISC 14 18:17:18.4±1.0, 1.°55N±0.°08×126.°53E±0.°09, h35km, n8, σ0ᵍ90/10, mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**133**	P	**Pn**	**18 17 38.0**	**+0.1**
TNTI				S	**Sn**	**18 17 53.0**	**+0.7**
SGSI	**Sangihe**	**2.35**	**335**	P	**Pn**	**18 17 54.4**	**-0.1**
SGSI				S	**Sn**	**18 18 23.7**	**+1.6**
KMSI	**Cibinong**	**2.73**	**249**	P	**Pn**	**18 18 00.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**19.55**	**183**	P	**P**	**18 21 42.8**	**-0.4**
	0.1nm,0.3s,baz=29,slow=10,SNR=2.4						
	5.0nm,1.2s						
WRA	**Warramunga Arr**	**22.69**	**161**	P	**P**	**18 22 17.0**	**-0.2**
	1.1nm,0.4s,baz=340,slow=10,SNR=5.9						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**18 22 49.8**	**+0.8**
	0.7nm,0.6s,baz=346,slow=12,SNR=5.4						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**18 27 15.6**	**-0.8**
	0.5nm,0.6s,baz=125,slow=7.5,SNR=4.1						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**63.46**	**328**	P	**P**	**18 27 43.8**	**-1.1**
	1.4nm,0.9s,baz=129,slow=6.1,SNR=8.7						
	1.4nm,0.9s						

*IDC **14** 18:18:59.6±1.4, 1.°60N×126.°24E, h0km, mb3.8/5, mbtmp3.8/6, ML3.0/1, Error ellipse: s-maj=116.3km s-min=18.5km az=69.0*
*DJA **14** 18:19:02.1±0.2, 2.°N±3.°×12.°7E±.°, h10km, M3.7/11, mb3.7/1, MLv3.7/11*
ISC 14 18:19:04.5±1.0, 1.°68N±0.°08×126.°56E±0.°09, h35km, n11, σ0ᵍ80/12, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.21**	**138**	P	**Pn**	**18 19 24.9**	**-0.1**
TNTI				S	**Sn**	**18 19 40.9**	**+0.7**
SGSI	**Sangihe**	**2.24**	**333**	P	**Pn**	**18 19 39.3**	**+0.2**
KMSI	**Cibinong**	**2.80**	**247**	P	**Pn**	**18 19 46.7**	**-0.1**
SANI	**Sanana**	**3.75**	**189**	P	**Pn**	**18 20 00.2**	**+0.3**
MRSI	**Marisa**	**4.77**	**256**	P	**Pn**	**18 20 14.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	**P**	**18 23 29.5**	**-1.2**
	baz=6.3,slow=9.2,SNR=1.2						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**22.81**	**161**	P	**P**	**18 24 03.4**	**-1.1**
	2.7nm,0.7s,baz=339,slow=11,SNR=10						
	2.7nm,0.7s						
ASAR	**Alice Springs**	**26.19**	**165**	P	**P**	**18 24 37.1**	**+1.0**
	1.2nm,0.6s,baz=344,slow=11,SNR=9.9						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**18 29 01.4**	**-0.3**
	0.6nm,0.4s,baz=118,slow=8.1,SNR=7.7						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**62.33**	**334**	P	**P**	**18 29 24.0**	**+0.8**
	0.3nm,0.3s,baz=132,slow=6.5,SNR=2.4						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.37**	**328**	P	**P**	**18 29 29.4**	**-0.8**
	0.5nm,0.5s,baz=129,slow=6.4,SNR=5.8						
	0.5nm,0.5s						

*IDC **14** 18:22:57.3±1.2, 1.°24N×126.°11E, h0km, mb3.8/7, mbtmp3.8/8, ML3.7/1, MS4.1/1, Error ellipse: s-maj=118.1km s-min=16.2km az=69.0*
*NEIC **14** 18:23:00.3±2.6, 1.°4N±0.°1×126.°54E±0.°05, h18km±6km, mb4.2/10, Error ellipse: s-maj=15.9km s-min=4.9km az=203.0*
*DJA **14** 18:23:03.3±0.3, 1.°N±3.°×12.°6E±.°, h44km±36km, M4.0/12, mb4.0/4, MLv4.0/12*
ISC 14 18:23:02.2±0.7, 1.°40N±0.°07×126.°53E±0.°07, h35km, n32, σ1ᵍ22/30, mb4.0/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.05**	**126**		**Pn**	**18 23 19.7**	**-0.7**
TNTI	**Ternate**	**1.05**	**126**	P	**Pn**	**18 23 22.9**	**+2.5**
SGSI	**Sangihe**	**2.48**	**336**	P	**Pn**	**18 23 40.8**	**+0.7**
KMSI	**Cibinong**	**2.67**	**252**	P	**Pn**	**18 23 44.0**	**+1.3**
KMSI				S	**Sn**	**18 24 14.3**	**+0.4**
SANI	**Sanana**	**3.47**	**189**	P	**Pn**	**18 23 55.4**	**+1.7**
LUWI	**Luwuk**	**4.47**	**237**		**Pn**	**18 24 06.6**	**-0.8**
LUWI	**Luwuk**	**4.47**	**237**	P	**Pn**	**18 24 08.5**	**+1.0**
TOLI2	**Tolitoli**	**5.75**	**267**	Pn	**Pn**	**18 24 24.6**	**-0.5**
MPSI	**Mapaga**	**6.71**	**261**	P	**Pn**	**18 24 38.2**	**-0.1**
	0.0nm5.1nm,0.8s						
TTSI	**Tana Toraja**	**8.03**	**237**	P	**Pn**	**18 24 56.5**	**+0.1**
MYLDM	**Lahad Datu**	**8.85**	**295**		**Pn**	**18 25 08.5**	**+0.9**
SOEI	**Soe**	**11.31**	**191**	Pn	**Pn**	**18 25 40.8**	**-0.7**
TGY	**Tagaytay City**	**13.78**	**337**	LR	LR	18 31 48.4	
	comp=Z,730nm,18.2s,baz=328,slow=39						
MTN	**Manton Dam**	**14.87**	**162**	Pn	**Pn**	**18 26 31.3**	**+1.3**
KNRA	**Kununurra**	**17.11**	**173**		**Pn**	**18 26 58.9**	**+0.2**
KNRA				IAmb	IAmb	18 27 08.5	
	comp=Z,22nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.39**	**183**	P	**P**	**18 27 23.4**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=4.9,slow=11,SNR=6.1						
	comp=Z,2.6nm,1.1s						
WB0	**Warramunga Arr**	**22.41**	**160**	P	**P**	**18 27 55.8**	**-2.1**
WB0				IAmb	IAmb	18 28 02.4	
	comp=Z,6.6nm,0.5s						
TPUB	**Ta-pu**	**22.51**	**346**	P	**P**	**18 27 57.2**	**-1.8**
WRA	**Warramunga Arr**	**22.55**	**161**	P	**P**	**18 27 58.5**	**-1.0**
	comp=Z,3.9nm,0.5s,baz=336,slow=11,SNR=20						
	comp=Z,3.9nm,0.5s						
WR8	**Warramunga Arr**	**22.62**	**160**	P	**P**	**18 27 57.5**	**-2.7**
WR8				IAmb	IAmb	18 28 04.1	
	comp=Z,6.5nm,1.2s						
AS31	**Alice Springs**	**25.93**	**164**		**P**	**18 28 31.6**	**+0.3**
ASAR	**Alice Springs**	**25.93**	**164**	P	**P**	**18 28 30.6**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=343,slow=8.0,SNR=20						
	comp=Z,0.8nm,0.5s						
FORT	**Forrest**	**32.03**	**178**	P	**P**	**18 29 26.1**	**+0.6**
FORT				IAmb	IAmb	18 29 44.5	
	comp=Z,5.5nm,1.1s						
BBOO	**Buckleboo**	**35.20**	**166**	P	**P**	**18 29 52.5**	**-0.6**
STKA	**Stephens Creek**	**36.05**	**158**	P	**P**	**18 30 01.1**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=342,slow=9.4,SNR=4.0						
	comp=Z,1.5nm,0.6s						
SONM	**Songino Array**	**49.43**	**342**	P	**P**	**18 31 49.7**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=135,slow=6.7,SNR=3.1						
	comp=Z,0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**18 33 00.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=117,slow=8.1,SNR=9.7						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.59**	**328**	P	**P**	**18 33 28.7**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=130,slow=6.1,SNR=11						
	comp=Z,0.8nm,0.6s						
KURK	**Kurchatov**	**63.59**	**328**	P	**P**	**18 33 28.7**	**-0.7**
KURK	**Kurchatov**	**63.59**	**328**	IAmb	IAmb	18 33 32.0	
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**81.16**	**173**	P	**P**	**18 35 14.4**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=339,slow=2.6,SNR=2.2						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	**81.16**	**173**	IAmb	IAmb	18 35 30.0	
	comp=Z,1.2nm,1.1s						

*IDC **14** 18:25:21.9±1.3, 1.°44N×126.°05E, h0km, mb3.9/6, mbtmp3.9/7, ML3.0/1, Error ellipse: s-maj=120.0km s-min=17.4km az=69.0*
*DJA **14** 18:25:24.9±0.3, 2.°N±3.°×12.°6E±.°, h10km, M3.8/8, MLv3.8/8*
ISC 14 18:25:26.9±0.9, 1.°60N±0.°08×126.°56E±0.°10, h35km, n10, σ1ᵍ56/12, mb3.9/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.16**	**136**	P	**Pn**	**18 25 46.9**	**+0.3**
TNTI				S	**Sn**	**18 26 03.6**	**+2.4**
SGSI	**Sangihe**	**2.31**	**334**	P	**Pn**	**18 26 02.5**	**0.0**
SGSI				S	**Sn**	**18 26 32.0**	**+2.3**
KMSI	**Cibinong**	**2.77**	**248**	P	**Pn**	**18 26 09.8**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.60**	**183**	P	**P**	**18 29 49.5**	**-2.7**
	baz=11,slow=16,SNR=2.3						
	2.0nm,1.0s						
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**18 30 25.4**	**-0.6**
	2.9nm,0.4s,baz=338,slow=11,SNR=12						
	2.9nm,0.4s						
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**18 30 58.1**	**+0.4**
	0.8nm,0.4s,baz=345,slow=8.3,SNR=13						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**18 35 24.2**	**-0.4**
	0.4nm,0.4s,baz=120,slow=8.1,SNR=7.9						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**62.40**	**334**	P	**P**	**18 35 44.8**	**-1.3**
	0.3nm,0.4s,baz=92,slow=7.2,SNR=1.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.43**	**328**	P	**P**	**18 35 52.7**	**-0.4**
	1.5nm,0.6s,baz=127,slow=6.2,SNR=15						
	1.5nm,0.6s						
BVAR	**Borovoye Array**	**69.00**	**327**	P	**P**	**18 36 28.8**	**0.0**
	0.5nm,0.6s,baz=141,slow=9.3,SNR=2.9						
	0.5nm,0.6s						

*NEIC **14** 18:26:11.8±0.2, 35.°990N±0.°008×96.°80W±0.°01, h7km±1km, Error ellipse: s-maj=1.6km s-min=1.2km az=91.0*
NEIC 14 18:26:11.7±0.4, 35.°982N±0.°008×96.°80W±0.°01, h5km±1km, ML2.3/58, ML2.5/23, Error ellipse: s-maj=2.0km s-min=1.7km az=337.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK052	**Battle Ridge R**	**0.01**	**3**		Pg	18 26 13.2	+0.5
OK052					Sg	18 26 14.0	+0.6
OK052				IAML		18 26 15.1	
	4µm,0.2s						
QUOK	**Quay**	**0.20**	**22**		Pg	18 26 16.4	+0.6
QUOK					Sg	18 26 19.4	+0.9
QUOK				IAML		18 26 19.5	
	comp=E,1µm,0.3s						
DEOK	**Depew**	**0.28**	**119**		Pg	18 26 18.0	+0.8
DEOK					Sg	18 26 22.2	+1.2
DEOK				IAML		18 26 22.3	
	comp=E,530nm,0.2s						
DEOK				IAML		18 26 22.3	
	comp=N,657nm,0.3s						
OK048	**Pawnee Station**	**0.45**	**345**		Pg	18 26 20.6	+0.2
OK048				IAML		18 26 27.0	
	comp=N,225nm,0.1s						
OK051	**E0350 and S346**	**0.52**	**357**		Pg	18 26 22.1	+0.3
OK051				IAML		18 26 30.2	
	comp=N,234nm,0.1s						
OK051				IAML		18 26 31.6	
	comp=N,206nm,0.2s						
OK029	**Liberty Lake**	**0.56**	**251**		Pg	18 26 22.9	+0.5
OK029					Sg	18 26 30.7	+1.0
OK029				IAML		18 26 31.4	
	comp=N,186nm,0.2s						
BCOK	**Bluff Creek, N**	**0.73**	**244**		Pg	18 26 26.1	+0.4
BCOK					Sg	18 26 36.2	+1.0
OKCFA	**Oklahoma City**	**0.77**	**223**		Pg	18 26 26.8	+0.2
OKCFA					Sg	18 26 32.5	+0.9
TUL3	**Leonard**	**0.82**	**95**		Pg	18 26 27.4	-0.1
TUL3					Sg	18 26 38.7	+0.4
BLOK	**Blackwell**	**0.84**	**337**		Pg	18 26 28.0	0.0
BLOK					Sg	18 26 39.2	+0.3
FNO	**Franklin**	**0.87**	**214**		Pg	18 26 28.2	-0.3
FNO					Sb	18 26 40.6	-0.7
FNO				IAML		18 26 43.2	
	comp=E,86nm,0.3s						
T35A	**Sooner Cattle**	**0.96**	**14**		Pg	18 26 30.1	-0.1
T35A					Sg	18 26 43.1	+0.4
T35A				IAML		18 26 43.6	
	comp=E,96nm,0.1s						
T35A				IAML		18 26 43.6	
	comp=E,113nm,0.1s						
CROK	**Carrier**	**1.09**	**299**		Pg	18 26 32.4	-0.2
CROK					Sb	18 26 47.2	-0.4
CROK				IAML		18 26 54.4	
	comp=E,108nm,0.2s						
KAN13	**South Haven SW**	**1.16**	**332**		Pg	18 26 33.8	-0.3
KAN13					Sg	18 26 49.3	+0.2
GC02	**Grant County #**	**1.22**	**316**		Pg	18 26 34.7	-0.4
GC02					Sb	18 26 51.2	0.0
KAN01	**Argonia South**	**1.40**	**327**		Pn	18 26 38.1	+0.2
RLO	**Rose Lookout**	**1.45**	**82**		Pn	18 26 38.6	-0.1
CSTR	**Hydro, Custer**	**1.57**	**258**		Pn	18 26 40.7	+0.4
WMOK	**Wichita Mounta**	**2.04**	**233**		Pn	18 26 47.5	+0.8

*IDC **14** 18:26:57.5±2.2, 1.°40N×126.°01E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=184.0km s-min=28.8km az=65.0*
*DJA **14** 18:27:00.1±0.3, 1.°N±4.°×12.°6E±.°, h10km, M3.7/7, MLv3.7/7*
ISC 14 18:27:02.7±1.0, 1.°48N±0.°10×126.°47E±0.°09, h35km, n7, σ1ᵍ12/8, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**128**	P	**Pn**	**18 27 21.7**	**-0.5**
TNTI				S	**Sn**	**18 27 37.3**	**+0.7**
SGSI	**Sangihe**	**2.39**	**337**	P	**Pn**	**18 27 39.8**	**+0.4**
KMSI	**Cibinong**	**2.64**	**250**	P	**Pn**	**18 27 42.8**	**-0.1**
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**18 32 00.4**	**-0.6**
	0.4nm,0.3s,baz=337,slow=10,SNR=4.7						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**18 32 32.4**	**-0.3**
	0.2nm,0.5s,baz=345,slow=11,SNR=1.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**18 36 59.4**	**-1.5**
	0.3nm,0.6s,baz=125,slow=7.4,SNR=2.3						
	0.3nm,0.6s						
VNDA	**Vanda**	**81.24**	**173**	P	**P**	**18 39 16.3**	**+1.7**
	0.2nm,0.4s,baz=315,slow=4.3,SNR=1.5						
	0.2nm,0.4s						

IDC 14 18:27:18.5±1.8, 1.°68N×126.°25E, h0km, mb3.6/5, mbtmp3.6/5, MS4.3/1, Error ellipse: s-maj=182.6km s-min=21.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**12.09**	**192**	LR	LR	18 35 56.1	
	comp=Z,1µm,19.6s,baz=187,slow=43						

WRA	**Warramunga Arr**	**22.91 160**	P	P	18 32 22.6	-1.6
	1.4nm,0.5s,baz=338,slow=11,SNR=4.7					
	1.4nm,0.5s					
ASAR	**Alice Springs**	**26.27 164**	P	P	18 32 57.1	+1.4
	0.7nm,0.8s,baz=345,slow=12,SNR=4.7					
	0.7nm,0.8s					
MKAR	**Makanchi Array**	**58.97 326**	P	P	18 37 19.9	+0.1
	0.3nm,0.4s,baz=123,slow=7.9,SNR=7.8					
	0.3nm,0.4s					
KURBB	**Kurchatov Arra**	**63.20 328**	P	P	18 37 48.2	-0.3
	0.3nm,0.3s,baz=126,slow=6.5,SNR=2.9					
	0.3nm,0.3s					
VNDA	**Vanda**	**81.47 173**	P	P	18 39 37.1	+0.1
	0.2nm,0.4s,baz=305,slow=1.7,SNR=1.7					
	0.2nm,0.4s					

*IDC **14** 18:29:48.5±2.3, 1.°77N×126.°48E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=189.4km s-min=28.1km az=66.0*
*DJA **14** 18:29:53.7±0.3, 2.°N±3.°×12.°6E±.°, h10km, M3.4/8, MLv3.4/8*
ISC 14 18:29:54.9±1.2, 1.°72N±0.°08×126.°54E±0.°10, h35km, n8, σ1ᵍ77/8, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**139**	P	**Pn**	**18 30 16.3**	**+0.3**
TNTI				S	**Sn**	**18 30 33.7**	**+2.0**
SGSI	**Sangihe**	**2.19**	**333**	P	**Pn**	**18 30 30.5**	**+1.6**
KMSI	**Cibinong**	**2.80**	**246**	P	**Pn**	**18 30 37.9**	**+0.7**
SANI	**Sanana**	**3.79**	**188**	P	**Pn**	**18 30 52.1**	**+1.3**
MRSI	**Marisa**	**4.76**	**255**	P	**Pn**	18 31 08.8	+4.6
WRA	**Warramunga Arr**	**22.85**	**161**	P	**P**	**18 34 53.2**	**-2.1**
	0.8nm,0.5s,baz=339,slow=11,SNR=6.8						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**18 35 26.8**	**-0.1**
	0.3nm,0.4s,baz=348,slow=8.5,SNR=7.9						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**18 39 50.3**	**-1.5**
	0.5nm,0.4s,baz=132,slow=7.1,SNR=1.3						
	0.5nm,0.4s						

*DJA **14** 18:30:15.0±0.4, 7.°N±3.°×9.°4E±.°, h146km±7km, M5.1/20, mB5.5/7, mb5.1/20, MLv5.2/12, Mw(mB)4.9/7*
*BKK **14** 18:30:15.9±0.6, 7.°N±3.°×9.°5E±.°, h113km±6km, M4.4/24, mB4.7/13, mb4.8/24, ML4.9/6, MLv4.8/6, Mw(mB)3.9/13*
*NDI **14** 18:30:16.0±4.4, 7.°17N×95.°15E, h126km±16km, mb5.0, ML4.7, MW4.6*
*BJI **14** 18:30:16.1, 6.°72N×94.°55E, h155km, mB5.2/8, mb4.9/51*
*MOS **14** 18:30:17.5±0.9, 7.°01N×94.°77E, h147km, mb5.0/38, Error ellipse: s-maj=11.0km s-min=4.3km az=115.3*
*IDC **14** 18:30:19.0±1.0, 7.°00N×94.°86E, h147km±8km, mb4.4/31, mbtmp4.8/34, Error ellipse: s-maj=12.6km s-min=6.4km az=58.0*
*NEIC **14** 18:30:18.8±2.4, 7.°10N±0.°08×94.°84E±0.°10, h138km±3km, mb4.9/48, Error ellipse: s-maj=15.8km s-min=8.2km az=56.0*
ISC 14 18:30:17.5±0.4, 6.°96N±0.°03×94.°68E±0.°04, h135km±3km, h135km:pP-P,n520,σ1ᵍ55/549, mb4.9/156, 37C-23D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.75**	**274**	*eP*	**Pn**	**18 30 39.0**	**+0.3**
CMBY				*eS*	**Sn**	**18 30 53.7**	**-1.0**
CMBY				IAML		18 31 00.2	
	comp=E,13µm,0.6s						
CMBY				IAML		18 31 00.9	
	comp=N,20µm,0.6s						
LHMI	**Lhok Sumawe**	**2.84**	**127**	Pn	**Pn**	**18 31 03.5**	**+1.2**
LHMI	**Lhok Sumawe**	**2.84**	**127**	P	**Pn**	**18 31 03.1**	**+0.9**
LHMI	**Lhok Sumawe**	**2.84**	**127**	P	**Pn**	**18 31 02.2**	**0.0**
MLSI	**Meulaboh, Aceh**	**3.18**	**147**	P	**Pn**	**18 31 06.0**	**-0.7**
MLSI				S	**Sn**	**18 31 43.2**	**-1.4**
PKDT	**Phuket**	**3.74**	**75**	P	**Pn**	**18 31 14.7**	**+0.7**
RNTT	**Ranong**	**4.47**	**57**	P	**Pn**	**18 31 24.3**	**+0.7**
KCSI	**Kotacane, Aceh**	**4.60**	**138**	P	**Pn**	**18 31 24.9**	**-0.5**
KCSI				S	**Sn**	**18 32 15.7**	**-2.5**
SNSI	**Sinabang, Aceh**	**4.81**	**160**	P	**Pn**	**18 31 24.0**	**-4.2**
SNSI				S	**Sn**	**18 32 18.5**	**-4.7**
PBA	**Port Blair**	**5.04**	**338**		**Pn**	**18 31 29.9**	**-1.4**
PBA	**Port Blair**	**5.04**	**338**	P	**Pn**	**18 31 30.2**	**-1.0**
PBA				S	**Sn**	**18 32 26.2**	**-2.4**
PBA	**Port Blair**	**5.04**	**338**	*eP*	**Pn**	**18 31 29.8**	**-1.4**
PBA				*eS*	**Sn**	**18 32 26.1**	**-2.6**
PBA				IAML		18 32 31.7	
	comp=N,1µm,0.6s						
PBA				IAML		18 32 34.5	
	comp=E,1µm,0.2s						
PSI	**Prapat**	**5.91**	**134**	P	**Pn**	**18 31 43.5**	**+0.5**
	comp=E,163nm,0.6s,baz=309,slow=9.9,SNR=72						
PSI				S	**Sn**	**18 32 49.6**	**-0.3**
	comp=E,53nm,0.6s,baz=53,slow=23,SNR=2.0						
PSI	**Prapat**	**5.91**	**134**	P	**Pn**	**18 31 42.9**	**-0.2**
RPSI	**Rantau Prapat**	**5.99**	**135**		**Pn**	**18 31 43.5**	**-0.4**
RPSI	**Rantau Prapat**	**5.99**	**135**		**Pn**	**18 31 43.5**	**-0.4**
RPSI					**Sn**	**18 32 49.6**	**-1.9**
KULM	**Kulim**	**6.17**	**105**		**Pn**	**18 31 45.6**	**-0.7**
KULM	**Kulim**	**6.17**	**105**	P	**Pn**	**18 31 46.6**	**+0.3**
GSI	**Gunungsitoli**	**6.32**	**153**		**Pn**	**18 31 45.2**	**-3.2**
GSI	**Gunungsitoli**	**6.32**	**153**	P	**Pn**	**18 31 46.1**	**-2.3**
	comp=E,0.7nmcomp=E,70nm,0.6s						
DGPR	**DIGLIPUR**	**6.41**	**345**	*eP*	**Pn**	**18 31 48.5**	**-1.1**
DGPR				*eS*	**Sn**	**18 32 56.1**	**-5.5**
DGPR				IAML	

BWNR Bhubaneshwar 15.80 328 *e*P **Pn** **18 33 51.3 -1.3**
KASI Kota Agung 15.81 141 P **Pn** **18 33 47.2 -5.5**
RAGD RAYAGADA 16.37 319 *e*P **P** **18 34 00.3 +0.2**
RAGD IAmb IAmb 18 34 04.1
comp=Z,46nm,0.6s
SALM Salem 16.91 287 *e*P **Pn** **18 34 09.8 +3.5**
KOD Kodaikanal 17.32 282 *e*P **Pn** **18 34 14.1 +2.5**
KOD IAmb IAmb 18 34 22.1
comp=Z,22nm,0.8s
IMP Imphal 17.78 358 *e*P **P** **18 34 14.1 -1.5**
IMP IAmb IAmb 18 34 22.9
comp=Z,32nm,0.5s
IMP *e*S **S** **18 37 27.8 -5.6**
JHSG JHARSUGUGA 18.09 326 *e*P **Pn** **18 34 20.4 +0.1**
JHSG IAmb IAmb 18 34 24.6
comp=Z,43nm,0.7s
TNCH TengChong 18.34 11 P **Pn** **18 34 23.5 +0.1**
TNCH pmax pmax
comp=Z,140nm,0.9s
KOHI KOHIMA 18.66 358⇑ *e*P **P** **18 34 23.2 -2.1**
KOHI IAmb IAmb 18 34 28.1
comp=Z,56nm,0.4s
KOHI *e*S **S** **18 37 45.7 -5.3**
SHL Shillong 18.69 352 P **P** **18 34 24.7 -0.9**
SHL Shillong 18.69 352 *e*P **P** **18 34 22.9 -2.7**
SHL IAmb IAmb 18 34 27.8
comp=Z,26nm,0.9s
BOK Bokaro 18.75 334 *e*P **P** **18 34 26.1 +0.1**
BOK IAmb IAmb 18 34 29.6
comp=Z,60nm,1.0s
HYBB Hyderabad (bro 18.86 305 *e*P **Pn** **18 34 29.9 +0.4**
MOKO MOKOCHONG 19.25 360 *e*P **P** **18 34 29.9 -1.8**
MOKO IAmb IAmb 18 34 34.1
comp=Z,60nm,0.6s
MOKO *e*S **S** **18 37 57.3 -5.4**
BBJI Bungbulang 19.31 138 P **P** **18 34 30.8 -1.5**
BLSP Bilaspur 19.34 323 *e*P **P** **18 34 33.5 +1.0**
BLSP IAmb IAmb 18 34 37.0
comp=Z,59nm,0.8s
SHBG Sahibganj 19.35 341 *e*P **P** **18 34 32.0 -0.6**
SHBG IAmb IAmb 18 34 36.1
comp=Z,55nm,0.7s
TEZP TEZPUR 19.63 355 *e*P **P** **18 34 32.8 -2.8**
TEZP IAmb IAmb 18 34 39.7
comp=Z,16nm,0.8s
KMI Kunming 19.64 22 P **Pn** **18 34 39.3 +0.6**
KMI pmax pmax
comp=Z,38nm,1.1s
GAYA Gaya 19.91 334 *e*P **P** **18 34 37.9 -0.7**
GAYA IAmb IAmb 18 34 42.7
comp=Z,54nm,1.1s
ITAN ITANAGAR 20.09 358 *e*P **P** **18 34 38.9 -1.7**
ITAN IAmb IAmb 18 34 40.5
comp=Z,35nm,0.5s
ITAN *e*S **S** **18 38 15.2 -3.9**
LKP Lekhapani 20.29 3 IAmb IAmb 18 34 36.2
comp=Z,34nm,0.9s
LKP *e*P **P** **18 34 36.9 -5.8**
LKP *e*S **S** **18 38 14.9 -8.1**
ZIRO ZIRO 20.47 358 *e*P **P** **18 34 42.4 -2.4**
ZIRO IAmb IAmb 18 34 43.9
comp=Z,58nm,0.7s
ZIRO *e*S **S** **18 38 21.4 -5.4**
PZH PanZhiHua 20.57 18 P **P** **18 34 47.1 +1.3**
PZH pmax pmax
comp=Z,30nm,1.0s
TAWA Tawang 20.69 353⇑ *e*P **P** **18 34 45.7 -1.7**
TAWA IAmb IAmb 18 34 50.8
comp=Z,48nm,0.3s
AKL Akola 21.89 310 *e*P **P** **18 35 02.0 +2.1**
AKL IAmb IAmb 18 35 04.1
comp=Z,54nm,0.9s
EVN Everest 22.17 341 **P** **18 35 00.8 -2.6**
EVN IAmb IAmb 18 35 04.8
comp=Z,21nm,0.6s
KAD Karad 22.50 299 *e*P **P** **18 35 08.2 +2.2**
KAD IAmb IAmb 18 35 15.7
comp=Z,38nm,0.6s
GYA Guiyang 22.50 29 ⇓P **P** **18 35 07.4 +1.3**
GYA pmax pmax
comp=Z,61nm,1.0s
LSA Lhasa 22.86 352 **P** **18 35 08.8 -1.1**
LSA IAmb IAmb 18 35 12.4
comp=Z,44nm,0.9s
LSA Lhasa 22.86 352 P **P** **18 35 08.8 -1.1**
LSA pmax pmax
comp=Z,44nm,0.9s
NRDN NARMADA NAGAR 23.02 315 *e*P **P** **18 35 15.1 +4.1**
NRDN IAmb IAmb 18 35 17.5
comp=Z,50nm,0.8s
BHPL Bhopal 23.18 316 *e*P **P** **18 35 13.7 +1.3**
BHPL IAmb IAmb 18 35 16.3
comp=Z,50nm,1.5s
POO Poona 23.31 302 *e*P **P** **18 35 16.0 +2.3**
MYLDM Lahad Datu 23.75 93 P **P** **18 35 20.5 +2.8**
JHNI Jhansi 24.00 322 *e*P **P** **18 35 19.5 -0.4**
JHNI IAmb IAmb 18 35 22.4
comp=Z,58nm,1.1s
GUNA GUNA 24.19 319 *e*P **P** **18 35 23.0 +1.4**
LGTI Lohaghat 26.18 330 *e*P **P** **18 35 39.9 +0.4**
LGTI IAmb IAmb 18 35 40.9
comp=Z,57nm,0.8s
H08S3 Diego Garcia H 26.46 237 T T 19 01 28.5
baz=58,slow=76,SNR=128
H08S2 Diego Garcia H 26.46 237 T T 19 01 58.1
baz=58,slow=76,SNR=126
H08S1 Diego Carcia H 26.47 237 T T 19 01 35.8
baz=58,slow=76,SNR=107
UDPR Udaipur 26.65 313 *e*P **P** **18 35 45.1 +1.3**
AYAN Aya Nagar 27.08 324 *e*P **P** **18 35 47.0 -0.6**
NDI New Delhi 27.18 325 *e*P **P** **18 35 48.1 -0.5**
KUDL Kundal 27.21 323 *e*P **P** **18 35 48.6 -0.1**
JOSI Joshimath 27.43 331 *e*P **P** **18 35 51.0 +0.1**
JOSI IAmb IAmb 18 35 57.1
comp=Z,52nm,0.7s
PLAI Plampang 27.86 124 P **P** **18 35 54.1 -0.6**
SMLA Simla 29.10 328 *e*P **P** **18 36 05.4 0.0**
SMLA IAmb IAmb 18 36 10.4
comp=Z,34nm,0.5s
BHK Bhakra 29.72 327 *e*P **P** **18 36 11.3 +0.2**
XAN Xi'an 29.99 24 P **P** **18 36 13.8 +0.4**
XAN S **S** **18 41 03.6 +2.1**
XAN pmax pmax
comp=Z,66nm,0.7s
XAN pmax pmax
comp=Z,910nm,10.9s
LZDM Lanzhou Array 30.02 15 P **P** **18 36 13.7 -0.2**
comp=Z,9.4nm,0.4s,baz=206,slow=9.9,SNR=5.8
comp=Z,9.4nm,0.4s
LZH Lanzhou 30.18 15 *e*P **P** **18 36 15.8 +0.6**
LZH pmax pmax
comp=Z,27nm,1.1s
TSSA Tissa 30.97 329 *e*P **P** **18 36 21.7 -0.6**
TSSA IAmb IAmb 18 36 25.5
comp=Z,56nm,0.4s
JMU Jammu 31.54 327 *e*P **P** **18 36 28.0 +1.0**
ALCI Alchi Leh 31.57 332 *e*P **P** **18 36 27.5 -0.2**
ALCI IAmb IAmb 18 36 28.7
comp=Z,46nm,0.8s
GTA Gaotai 32.64 7 P **P** **18 36 37.8 +1.1**
GTA ScP **ScP** **18 42 49.8 -1.5**
GTA pmax pmax
comp=Z,21nm,0.7s
BATI Baumata 33.53 120 P **P** **18 36 42.0 -2.6**
comp=Z,10nm,0.4s,baz=224,slow=0.3,SNR=5.5
comp=Z,10nm,0.4s
NJ2 Nanjing 33.63 39 *e*P **P** **18 36 45.8 +0.6**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
SOEI Soe 33.83 119 P **P** **18 36 44.9 -2.5**
HNS HongShan 35.35 28 ⇓P **P** **18 37 02.3 +2.3**
HNS pP **pwP** **18 37 32.6 +0.4**
HNS pmax pmax
comp=Z,33nm,1.1s
BTO Baotou 36.20 20 *e*P **P** **18 37 08.5 +1.2**
BTO pP **pwP** **18 37 39.8 +0.3**
BTO PP **PnPn** **18 38 39.3 +5.7**
BTO S **S** **18 42 40.3 +2.8**
BTO pmax pmax
comp=Z,75nm,0.9s
BTO pmax pmax
comp=Z,570nm,3.9s
BTO LR LR
comp=Z,2μm,17.9s
BTO LR LR
comp=Z,2μm,13.9s
BTO LR LR
comp=Z,3μm,18.5s
KBL Kabul 36.22 323 P **P** **18 37 08.1 +0.5**
KSH Kashi 36.52 335 P **P** **18 37 08.6 -1.5**
KSH pmax pmax
comp=Z,28nm,0.8s
HHC Hu-ho-hao-te 36.96 21⇑ *i*P **P** **18 37 15.8 +2.0**
HHC pmax pmax
comp=Z,33nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.6s
JLN Jalan Bani Buh 37.20 298 P **P** **18 37 18.8 +2.9**
WMQ Urumqi 37.22 352 *e*P **P** **18 37 17.6 +1.7**
WMQ LR LR
comp=Z,2μm,19.7s
WMQ LR LR
comp=Z,2μm,20.5s
WMQ LR LR
comp=Z,3μm,22.3s
MBWA Marble Bar 37.23 139 P **P** **18 37 15.8 -0.4**
PSAC1 Pilbara Seismi 37.55 140 P **P** **18 37 18.6 -0.2**
comp=Z,30nm,0.8s
PSA00 Pilbara Seismi 37.60 140 P **P** **18 37 18.8 -0.4**
comp=Z,16nm,0.7s
PSAB3 Pilbara Seismi 37.62 140 P **P** **18 37 19.0 -0.5**
comp=Z,21nm,1.0s
PSAC2 Pilbara Seismi 37.63 139 P **P** **18 37 19.4 -0.1**
comp=Z,23nm,1.2s
TARG Taragay, Kyrgy 37.73 339 **P** **18 37 21.8 +1.2**
TARG Taragay, Kyrgy 37.73 339 P **P** **18 37 21.8 +1.2**
TARG pmax pmax
comp=Z,42nm,0.9s
WBK Wadi Bani Khal 37.73 298 P **P** **18 37 22.8 +2.4**
MHTO MHTO 38.13 295 P **P** **18 37 26.2 +2.4**
BJI Beijing 38.16 27 P **P** **18 37 25.6 +1.9**
BJI pmax pmax
comp=Z,8.0nm,1.0s
KDJ Kajisay 38.30 339 **P** **18 37 25.9 +0.8**
KDJ Kajisay 38.30 339 P **P** **18 37 25.9 +0.8**
KDJ pmax pmax
comp=Z,56nm,0.9s
JMDO Jabal Madar 38.42 297 P **P** **18 37 28.8 +2.6**
SHLS Shalkode 38.46 342 *e*P **P** **18 37 26.1 -0.3**
comp=Z,22nm,0.9s
SHLS Shalkode 38.46 342 *e*P **P** **18 37 26.1 -0.3**
SHLS pmax pmax
comp=Z,22nm,0.9s
SMDO Samad 38.68 298 P **P** **18 37 31.2 +2.7**
SNR=5.6
SATY Saty 38.70 341 *e*P **P** **18 37 29.1 +0.7**
comp=Z,14nm,0.8s
SATY Saty 38.70 341 *e*P **P** **18 37 29.1 +0.7**
SATY pmax pmax
comp=Z,14nm,0.8s
ULHL Ulahol 38.74 338 P **P** **18 37 29.8 +0.9**
SNR=6.1
BOOM Boomskoye usch 39.07 338 IAmb IAmb 18 37 32.9
comp=Z,31nm,0.8s
TNSS Tian-Shan 39.18 339 *e*P **P** **18 37 33.2 +0.4**
TNSS Tian-Shan 39.18 339 *e*P **P** **18 37 33.1 +0.4**
BSY Bisya 39.33 298 P **P** **18 37 36.7 +3.0**
SNR=6.2
UCH Uchtor 39.40 336 P **P** **18 37 36.0 +1.4**
SNR=7.2
FITZ Fitzroy Crossi 39.42 130 P **P** **18 37 33.4 -1.1**
comp=Z,2.2nm,1.3s
FITZ Fitzroy Crossi 39.42 130 P **P** **18 37 33.5 -1.1**
comp=Z,3.7nm,0.3s,baz=343,slow=9.7,SNR=41
FITZ PcP **PcP** **18 39 40.8 +0.6**
comp=Z,3.2nm,0.4s,baz=351,slow=5.1,SNR=5.8
FITZ ScP **ScP** **18 43 13.3 -3.1**
comp=Z,2.5nm,0.6s,baz=323,slow=5.4,SNR=6.3
comp=Z,3.7nm,0.3s
FITZ Fitzroy Crossi 39.42 130 P **P** **18 37 33.4 -1.1**
HOQ Hoqain 39.49 299 P **P** **18 37 38.0 +2.9**
TKM2 Tokmak 2 39.57 338 P **P** **18 37 36.4 +0.7**
SNR=31
KBK Karagaybulak 39.59 337 P **P** **18 37 37.3 +1.5**
SNR=71
AAK Ala-Archa 39.75 337 **P** **18 37 38.0 +0.8**
AAK IAmb IAmb 18 37 39.5
comp=Z,34nm,0.8s
AAK Ala-Archa 39.75 337 P **P** **18 37 38.3 +1.1**
AAK Ala-Archa 39.75 337 P **P** **18 37 38.5 +1.3**
SNR=18
AAK Ala-Archa 39.75 337 *ce*P **P** **18 37 38.7 +1.5**
AAK pmax pmax
comp=Z,49nm,1.0s
AAK Ala-Archa 39.75 337 P **P** **18 37 38.4 +1.3**
ARXS Arharly 39.92 341 *e*P **P** **18 37 38.6 +0.1**
CHMS Chumysh 39.96 337 P **P** **18 37 39.8 +1.1**
SNR=7.1
EKS2 Erkin-Say 40.06 336 P **P** **18 37 41.0 +1.4**
SNR=6.0
ARQ Araqi 40.10 298 P **P** **18 37 42.9 +2.7**
USP Ospenovka 40.28 337 P **P** **18 37 42.3 +0.9**
SNR=41
SGDS Sogindy 40.39 337 *e*P **P** **18 37 42.9 +0.6**
KNRA Kununurra 40.57 124 P **P** **18 37 42.9 -1.1**
comp=Z,9.9nm,1.7s
MEEK Meekatharra 40.67 146 P **P** **18 37 44.8 0.0**
comp=Z,11nm,1.3s
MK31 Makanchi Array 41.09 347 *ce*P **P** **18 37 48.0 0.0**
MKAR Makanchi Array 41.09 347 P **P** **18 37 48.0 0.0**
comp=Z,9.8nm,0.6s,baz=169,slow=8.4,SNR=71
MKAR ScP **ScP** **18 43 20.8 -1.7**
comp=Z,0.3nm,0.3s,baz=157,slow=5.0,SNR=8.3
comp=Z,9.8nm,0.6s
MKAR Makanchi Array 41.09 347 P **P** **18 37 47.7 -0.3**
MKAR Makanchi Array 41.09 347 P **P** **18 37 48.0 0.0**
DOK Doka 41.10 290 P **P** **18 37 51.4 +3.0**
SNR=15
UMZA Um Al Zommool 41.12 297 P **P** **18 37 51.1 +2.6**
MAKZ Makanchi 41.17 347 P **P** **18 37 48.6 0.0**
ZSN Zaisan 41.21 350 *e*P **P** **18 37 49.6 +0.7**
ZSN Zaisan 41.21 350 *e*P **P** **18 37 49.6 +0.7**
MTN Manton Dam 41.22 118 P **P** **18 37 47.6 -1.8**
comp=Z,24nm,0.4s
MTN Manton Dam 41.22 118 **P** **18 37 47.7 -1.8**
DZA Taraz 41.28 334 *e*P **P** **18 37 50.2 +0.6**
comp=Z,15nm,0.6s
DZA Taraz 41.28 334 *e*P **P** **18 37 50.1 +0.6**
DZA pmax pmax
comp=Z,15nm,0.6s
IUG Iuzhnay 41.28 332 *e*P **P** **18 37 50.3 +0.6**
IUG Iuzhnay 41.28 332 *e*P **P** **18 37 50.3 +0.6**
MORW Morawa 41.31 151 P **P** **18 37 50.0 +0.1**
comp=Z,12nm,2.2s
WHFO Wadi Hawf 41.31 289 P **P** **18 37 52.8 +2.6**
SNR=6.2
CHM Chimkent 41.61 332 *e*P **P** **18 37 53.1 +0.8**
comp=Z,21nm,0.7s
CHM Chimkent 41.61 332 *e*P **P** **18 37 53.1 +0.8**
CHM pmax pmax
comp=Z,21nm,0.7s
ABTO Aybut 41.66 288 P **P** **18 37 55.8 +2.7**
KK31 Karatay Array 41.81 333 P **P** **18 37 54.2 +0.3**
KK31 Karatay Array 41.81 333 P **P** **18 37 54.2 +0.3**
KK31 pmax pmax
comp=Z,64nm,1.1s
KKAR Karatay Array 41.81 333 P **P** **18 37 53.9 0.0**
KKAR Karatay Array 41.81 333 P **P** **18 37 53.9 0.0**
SONM Songino Array 41.94 12 P **P** **18 37 55.7 +0.7**
comp=Z,26nm,0.7s,baz=196,slow=8.5,SNR=199
SONM ScP **ScP** **18 43 24.1 -1.8**
comp=Z,1.6nm,0.8s,baz=197,slow=4.1,SNR=7.6
comp=Z,26nm,0.7s
BTLS Baital 41.96 338 *e*P **P** **18 37 55.5 +0.5**
comp=Z,17nm,0.6s
BTLS Baital 41.96 338 *e*P **P** **18 37 55.5 +0.5**
BTLS pmax pmax
comp=Z,17nm,0.6s
BRLS Borolday 42.06 333 *e*P **P** **18 37 55.1 -0.8**
BRLS Borolday 42.06 333 *e*P **P** **18 37 55.1 -0.8**
ULN Ulaanbaatar 42.10 12 P **P** **18 37 56.0 -0.4**
ULN IAmb IAmb 18 37 57.8
comp=Z,25nm,0.8s
ULN Ulaanbaatar 42.10 12 P **P** **18 37 57.0 +0.7**
ULN Ulaanbaatar 42.10 12 *ce*P **P** **18 37 56.8 +0.5**
ULN pmax pmax
comp=Z,35nm,1.0s
ULN Ulaanbaatar 42.10 12 P **P** **18 37 56.8 +0.5**
BLDU Ballidu 42.92 152 P **P** **18 38 03.0 0.0**
comp=Z,17nm,1.7s
DGZ Jazzator, Alta 43.03 353 *i* P **P** **18 38 03.5 -0.3**
DGZ pmax pmax
comp=Z,9.0nm,1.5s
GHWR Ruwais 43.48 298 P **P** **18 38 10.0 +2.4**
KNGR Kungurtug, Tuv 43.56 3 *i* P **P** **18 38 09.1 +1.1**
KNGR pmax pmax
comp=Z,19nm,0.8s
MUN Mundaring 43.84 153 P **P** **18 38 11.0 +0.7**
comp=Z,26nm,1.1s
KLBR Kellerberrin 44.23 151 P **P** **18 38 13.5 +0.1**
comp=Z,36nm,0.7s
NWAO Narrogin (SRO) 45.10 153 P **P** **18 38 20.3 0.0**
comp=Z,54nm,0.9s
NWAO Narrogin (SRO) 45.10 153 P **P** **18 38 21.0 +0.7**
comp=Z,29nm,0.7s,baz=315,slow=6.9,SNR=20
comp=Z,29nm,0.7s
NWAO Narrogin (SRO) 45.10 153 P **P** **18 38 20.8 +0.5**
CN2 Changchun 45.52 31 P **P** **18 38 25.8 +2.3**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
KURBB Kurchatov Arra 45.56 346 P **P** **18 38 24.1 +0.5**
comp=Z,3.9nm,0.3s,baz=166,slow=6.8,SNR=82
KURBB PcP **PcP** **18 40 00.3 +0.3**
comp=Z,1.0nm,0.5s,baz=164,slow=3.7,SNR=1.0
KURBB ScP **ScP** **18 43 38.9 -1.5**
comp=Z,1.1nm,0.8s,baz=168,slow=3.1,SNR=6.4
comp=Z,3.9nm,0.3s
KURK Kurchatov 45.62 346 P **P** **18 38 24.3 +0.1**
KURK Kurchatov 45.62 346 **PcP** **18 40 00.3 +0.1**
KURK **ScP** **18 43 38.9 -1.8**
KURK Kurchatov 45.62 346 P **P** **18 38 24.8 +0.6**
KURK Kurchatov 45.62 346 *ce*P **P** **18 38 24.8 +0.6**
KURK pmax pmax
comp=Z,26nm,1.7s
KURK Kurchatov 45.62 346 P **P** **18 38 24.8 +0.6**
KMBL Kambalda 46.14 147 P **P** **18 38 29.0 +0.4**
comp=Z,8.3nm,1.0s
RKGY Rocky Gully 46.41 154 P **P** **18 38 30.3 -0.2**
comp=Z,79nm,0.9s
BRZS Berezniki 46.67 341 *e*P **P** **18 38 33.3 +0.8**
BRZS Berezniki 46.67 341 *e*P **P** **18 38 33.3 +0.8**
WRA Warramunga Arr 47.30 125 P **P** **18 38 37.0 -0.9**
comp=Z,4.4nm,0.5s,baz=305,slow=8.7,SNR=44
WRA PcP **PcP** **18 40 07.0 +0.2**
comp=Z,2.9nm,0.5s,baz=314,slow=2.8,SNR=8.3
comp=Z,4.4nm,0.5s
WRAB Tennant Creek 47.31 125 P **P** **18 38 36.1 -1.8**
WRAB IAmb IAmb 18 38 37.6
comp=Z,9.2nm,0.6s
WRAB Tennant Creek 47.31 125 P **P** **18 38 37.0 -0.8**
WRAB Tennant Creek 47.31 125 *ce*P **P** **18 38 37.7 -0.1**
WRAB pmax pmax
comp=Z,16nm,1.3s
WRAB Tennant Creek 47.31 125 P **P** **18 38 37.1 -0.8**
WRAB pP **pP** **18 39 08.3 +0.1**
WC2 Warramunga Arr 47.31 125 P **P** **18 38 36.9 -1.0**
HILR Hailar Array B 47.40 22 P **P** **18 38 38.3 +0.2**
comp=Z,2.0nm,0.3s,baz=193,slow=12,SNR=6.8
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 47.53 352 P **P** **18 38 39.4 +0.4**
comp=Z,6.5nm,0.3s,baz=168,slow=7.6,SNR=64
ZALV PcP **PcP** **18 40 06.5 -0.4**
comp=Z,1.0nm,0.3s,baz=170,slow=7.6,SNR=1.1
ZALV ScP **ScP** **18 43 46.2 -2.4**
comp=Z,0.9nm,0.6s,baz=151,slow=3.4,SNR=3.7
ZALV S **S** **18 45 21.5 -2.0**
comp=Z,0.8nm,0.6s,baz=186,slow=7.4,SNR=3.7
comp=Z,6.5nm,0.3s
BNX BinXian 47.87 31 ⇑P **P** **18 38 42.8 +1.0**
BNX pmax pmax
comp=Z,13nm,0.8s
ASAR Alice Springs 48.93 130 P **P** **18 38 49.5 -0.7**
comp=Z,11nm,0.6s,baz=302,slow=7.0,SNR=109
ASAR PcP **PcP** **18 40 13.1 +0.4**
comp=Z,4.2nm,0.8s,baz=318,slow=4.8,SNR=8.3
ASAR ScP **ScP** **18 43 54.5 -0.7**
comp=Z,0.6nm,0.5s,baz=311,slow=4.8,SNR=5.0
ASAR S **S** **18 45 39.6 -4.6**
comp=Z,0.8nm,0.8s,baz=288,slow=14,SNR=6.3
comp=Z,11nm,0.6s
ASAR Alice Springs 48.93 130 P **P** **18 38 49.1 -1.2**
FORT Forrest 49.30 141 P **P** **18 38 53.3 +0.4**
comp=Z,36nm,1.0s
FORT Forrest 49.30 141 **P** **18 38 53.8 +0.9**
FORT IAmb IAmb 18 38 54.7
comp=Z,26nm,0.8s
KBD Kabd 49.41 303 P **P** **18 38 54.4 +0.6**
RAYN Ar Rayn 49.95 295 P **P** **18 38 59.2 +1.1**
RAYN IAmb IAmb 18 39 00.6
comp=Z,11nm,0.6s
RAYN Ar Rayn 49.95 295 P **P** **18 39 00.1 +2.0**
RAYN Ar Rayn 49.95 295 P **P** **18 39 00.0 +1.9**
RAYN Ar Rayn 49.95 295 P **P** **18 38 59.9 +1.8**
RAYN pP **pP** **18 39 28.3 -0.6**
BVAR Borovoye Array 50.02 341 P **P** **18 38 58.1 +0.1**
comp=Z,12nm,0.8s,baz=135,slow=9.4,SNR=50
BVAR ScP **ScP** **18 43 57.3 -2.0**
comp=Z,0.5nm,0.7s,baz=163,slow=1.5,SNR=3.0
comp=Z,12nm,0.8s
BORK Borovoye 50.06 341 *ce*P **P** **18 38 58.7 +0.3**
BORK pmax pmax
comp=Z,21nm,1.0s
BORK Borovoye 50.06 341 P **P** **18 38 58.6 +0.3**
HEH HeiHe 51.07 27 *e*P **P** **18 39 04.4 -1.6**
HEH pmax pmax
comp=Z,19nm,0.7s
ABKAR Akbulak array 51.28 331 P **P** **18 39 08.3 +0.7**
QIS Mount Isa 51.93 123 P **P** **18 39 12.0 -0.9**
comp=Z,7.6nm,1.1s
ZEA Zeya 53.57 23 *e*P **P** **18 39 25.4 +1.0**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
AKT Akhty 53.94 317 *e*P **P** **18 39 24.9 -2.5**
AKT *e* 18 41 27.3
AKT *e*S S 18 46 42.9 -10
AKT pmax pmax
comp=Z,26nm,1.5s
MTSU Mount Surprise 54.96 118 P **P** **18 39 34.6 -0.5**
comp=Z,2.7nm,1.0s
GNI Garni 55.45 315 *ce*P **P** **18 39 39.7 +1.3**
GNI pmax pmax
comp=Z,20nm,1.0s
BBOO Buckleboo 55.78 138 P **P** **18 39 40.1 -0.6**
comp=Z,14nm,1.8s
BBOO Buckleboo 55.78 138 IAmb IAmb 18 39 40.7
comp=Z,10nm,0.5s
SVE Sverdlovsk 56.44 338 *e*P **P** **18 39 45.5 +0.6**
SVE pmax pmax
comp=Z,37nm,0.7s
ARTI Arti 56.97 337 *d i*P **P** **18 39 49.1 +0.4**
ARTI 18 40 42.0
ARTI S **S** **18 47 33.4 +1.1**
ARTI SS **SS** **18 51 23.7 +0.9**
ARTI pmax pmax
comp=Z,34nm,1.0s
ARTI Arti 56.97 337 P **P** **18 39 49.0 +0.3**
KMBO Kilima Mbogo 57.86 264 P **P** **18 39 57.8 +1.8**
comp=Z,1.6nm,0.3s,baz=61,slow=10,SNR=4.5
comp=Z,1.6nm,0.3s
HTT Hallett 58.08 137 P **P** **18 39 57.0 +0.1**
comp=Z,6.8nm,1.6s
KBZ Khabaz 58.12 318 P **P** **18 39 57.3 +0.4**
comp=Z,9.8nm,0.9s,baz=107,slow=6.6,SNR=19
comp=Z,9.8nm,0.9s
KBZ Khabaz 58.12 318 *ce*P **P** **18 39 57.4 +0.4**
KBZ pmax pmax
comp=Z,11nm,0.9s
SHA1 Shidzhatmaz 58.28 318 *i* P **P** **18 39 59.0 +0.6**
KIV Kislovodsk 58.35 318 *e*P **P** **18 39 58.7 0.0**
KIV pmax pmax
comp=Z,25nm,1.0s
KIV Kislovodsk 58.35 318 P **P** **18 39 58.7 0.0**
comp=Z,27nm,0.9s
KIV Kislovodsk 58.35 318 P **P** **18 39 58.9 +0.2**
QLP Quilpie 58.46 127 P **P** **18 39 59.7 0.0**
comp=Z,41nm,0.7s
STKA Stephens Creek 59.09 134 P **P** **18 40 03.1 -0.8**
comp=Z,49nm,0.9s
STKA Stephens Creek 59.09 134 P **P** **18 40 03.7 -0.2**
comp=Z,3.4nm,0.5s,baz=310,slow=6.3,SNR=20
comp=Z,3.4nm,0.5s
STKA Stephens Creek 59.09 134 *i* P **P** **18 40 02.9 -1.0**
BELG Belogornoye 59.36 329 *i* P **P** **18 40 05.4 +0.1**
BELG pmax pmax
comp=Z,17nm,0.7s
MMAI Mount Meron Ar 60.56 304 P **P** **18 40 15.6 +1.5**
comp=Z,1.8nm,0.5s,baz=103,slow=9.5,SNR=8.7

comp=Z,1.8nm,0.5s
YAK Yakutsk 60.69 18 *ce* P **P** 18 40 14.5 +0.3
YAK pmax pmax
comp=Z,27nm,0.6s
YAK Yakutsk 60.69 18 P **P** 18 40 14.5 +0.3
CMSA Cobar Meteorol 61.93 131 P **P** 18 40 23.2 +0.1
comp=Z,14nm,0.6s
ARPS Mount Arapiles 61.95 138 P **P** 18 40 22.4 -0.8
comp=Z,15nm,1.4s
VRH Novokhopyorsk 61.98 325 *e* P **P** 18 40 21.9 -1.2
VRH pmax pmax
comp=Z,67nm,0.8s
KIRV Kirov 62.06 335 *ce* P **P** 18 40 24.0 +0.5
NRIK Noril'sk 62.47 357 P **P** 18 40 26.4 +0.3
comp=Z,5.3nm,0.4s,baz=158,slow=5.9,SNR=12
comp=Z,5.3nm,0.4s
NRIK Noril'sk 62.47 357 IAmb IAmb 18 40 27.2
comp=Z,8.3nm,0.6s
NRIK Noril'sk 62.47 357 *ce* P **P** 18 40 26.2 +0.1
NRIK pmax pmax
comp=Z,7.0nm,0.6s
KIRS Kirsehir-Merke 63.08 310 ⇓P **P** 18 40 30.9 +0.1
VORD Divnogorie 63.26 324 *e* P **P** 18 40 29.2 -2.5
VORD pmax pmax
comp=Z,30nm,0.8s
BR104 Keskin Array S 63.42 311 P **P** 18 40 32.4 -0.7
comp=Z,217nmcomp=Z,21nm,0.7s
BR131 Keskin Array S 63.42 311 P **P** 18 40 32.6 -0.6
BR131 Keskin Array S 63.42 311 *i* P **P** 18 40 33.1 -0.1
BRTR Keskin Array B 63.42 311 P **P** 18 40 32.5 -0.7
comp=Z,14nm,0.6s,baz=132,slow=7.1,SNR=96
comp=Z,14nm,0.6s
BR105 Keskin Array S 63.44 311 P **P** 18 40 32.5 -0.8
comp=Z,221nmcomp=Z,23nm,0.6s
VSR Storozhevoye 63.44 325 *e* P **P** 18 40 28.9 -3.9
VSR pmax pmax
comp=Z,20nm,0.9s
BR106 Keskin Array S 63.44 311 P **P** 18 40 32.3 -1.0
comp=Z,176nmcomp=Z,19nm,0.7s
VORR Voronezh 63.60 325 *e* P **P** 18 40 32.2 -1.7
VORR pmax pmax
comp=Z,51nm,0.8s
ANTO Ankara 64.09 311 P **P** 18 40 37.0 -0.5
ANTO Ankara 64.09 311 P **P** 18 40 36.7 -0.7
comp=Z,8.9nm,1.0s
ANTO Ankara 64.09 311 P **P** 18 40 37.2 -0.2
LPSR Galich'ya Gora 64.14 326 *e* P **P** 18 40 36.1 -1.3
LPSR pmax pmax
comp=Z,49nm,0.8s
H04N2 CROZET ISLANDS 65.23 211 T T 19 49 25.5
baz=48,slow=75,SNR=32
H04N1 CROZET ISLANDS 65.23 211 T T 19 49 22.1
baz=48,slow=75,SNR=31
YNG Young 65.24 133 P **P** 18 40 44.7 -0.2
comp=Z,10nm,1.2s
H04N3 CROZET ISLANDS 65.24 211 T T 19 49 20.7
baz=48,slow=75,SNR=34
H04S1 CROZET ISLANDS 65.62 211 T T 19 49 54.6
baz=57,slow=74,SNR=4.1
H04S3 CROZET ISLANDS 65.63 211 T T 19 50 03.9
baz=57,slow=74,SNR=7.3
H04S2 CROZET ISLANDS 65.64 211 T T 19 49 53.4
baz=57
BORA Eskisehir 65.85 311 IAmb IAmb 18 40 48.7
comp=Z,6.4nm,0.5s
MOS Moscow 66.13 329 *e* P **P** 18 40 47.9 -2.3
MOS *e* S **S** 18 49 22.1 -5.7
MOS pmax pmax
comp=Z,82nm,0.6s
CAN Canberra 66.16 133 P **P** 18 40 51.4 +0.6
comp=Z,17nm,0.6s
CAN Canberra 66.16 133 P **P** 18 40 51.1 +0.3
CAN IAmb IAmb 18 40 51.9
comp=Z,12nm,0.6s
CAN Canberra 66.16 133 P **P** 18 40 51.3 +0.6
CAN Canberra 66.16 133 P **P** 18 40 51.1 +0.3
CAN pmax pmax
comp=Z,12nm,0.6s
CAN Canberra 66.16 133 P **P** 18 40 51.5 +0.6
OBN Obninsk 66.43 328 ⇑P **P** 18 40 51.3 -0.7
OBN Obninsk 66.43 328 *de* P **P** 18 40 52.0 -0.1
OBN *e* 18 41 19.3
OBN *e** PP **pP** 18 41 24.8 +0.7
OBN *e** SP **sP** 18 41 38.9 +0.5
OBN *e* 18 43 19.0
OBN *e* PPP PPP 18 44 57.4
OBN pmax pmax
comp=Z,116nm,1.7s
OBN Obninsk 66.43 328 P **P** 18 40 51.4 -0.7
comp=Z,73nm,0.9s
OBN Obninsk 66.43 328 P **P** 18 40 51.7 -0.3
KLMR Klimovskoe 67.50 334 *e* P **P** 18 40 57.5 -1.3
KLMR *e** PP **pP** 18 41 29.6 -1.4
KLMR *e* 18 43 27.7
KLMR pmax pmax
comp=Z,39nm,1.3s
TIXI Tiksi 68.02 11 P **P** 18 41 01.6 -0.2
TIXI Tiksi 68.02 11 *ce* P **P** 18 41 01.5 -0.2
TIXI pmax pmax
comp=Z,67nm,2.5s
TIXI Tiksi 68.02 11 P **P** 18 41 01.6 -0.2
PHSR Pinarhisar 68.37 312 ⇑P **P** 18 41 05.1 +0.5
PETK Petropavlovsk- 68.43 35 P **P** 18 41 03.9 -0.9
comp=Z,3.7nm,0.9s,baz=231,slow=13,SNR=1.1
comp=Z,3.7nm,0.9s
MILM Milestii Mici 68.54 318 ⇑P **P** 18 41 04.3 -1.2
MILM Milestii Mici 68.54 318 P **P** 18 41 04.3 -1.2
CFR Carcaliu 68.61 316 ⇑P **P** 18 41 06.4 +0.3
CFR Carcaliu 68.61 316 P **P** 18 41 06.3 +0.3
HARR Harsova 68.66 315 ⇑P **P** 18 41 06.7 +0.4
HARR Harsova 68.66 315 P **P** 18 41 06.7 +0.4
VLDR Vladesti 68.79 317 ⇑P **P** 18 41 06.5 -0.6
SORM Soroca 69.12 319 ⇑P **P** 18 41 08.2 -0.8
SORM Soroca 69.12 319 P **P** 18 41 08.7 -0.4
AK09 Malin Array Si 69.14 322 P **P** 18 41 08.4 -0.7
AK10 Malin Array Si 69.15 322 P **P** 18 41 08.6 -0.6
AK08 Malin Array Si 69.16 322 P **P** 18 41 08.6 -0.7
AK07 Malin Array Si 69.17 322 P **P** 18 41 08.8 -0.5
AK02 Malin Array Si 69.19 322 P **P** 18 41 08.8 -0.7
AKASG Malin Array Be 69.19 322 P **P** 18 41 08.9 -0.7
comp=Z,8.4nm,0.7s,baz=92,slow=5.1,SNR=37
comp=Z,8.4nm,0.7s
AKASG Malin Array Be 69.19 322 *i* P **P** 18 41 08.8 -0.7
AKASG pmax pmax
comp=Z,17nm,0.8s
AKBB Malin Array Si 69.19 322 *ce* P **P** 18 41 09.1 -0.4
AKBB pmax pmax
comp=Z,22nm,0.9s
AKBB Malin Array Si 69.19 322 P **P** 18 41 08.7 -0.8
AK03 Malin Array Si 69.20 322 P **P** 18 41 08.7 -0.8
KIEV Kiev 69.20 322 P **P** 18 41 08.3 -1.2
KIEV IAmb IAmb 18 41 09.8
comp=Z,18nm,0.8s
KIEV Kiev 69.20 322 ⇓P **P** 18 41 09.0 -0.6
KIEV Kiev 69.20 322 P **P** 18 41 09.0 -0.6
KIEV Kiev 69.20 322 P **P** 18 41 08.7 -0.8
comp=Z,90nm,0.8s
KIEV Kiev 69.20 322 P **P** 18 41 08.9 -0.6
KIEV PcP **PcP** 18 41 32.6 +0.1
VRI Vrincioaia 69.72 316 ⇓P **P** 18 41 13.3 +0.4
VRI Vrincioaia 69.72 316 P **P** 18 41 13.9 +1.0
PLOR Plostina 69.77 316 ⇓P **P** 18 41 13.8 +0.6
PLOR Plostina 69.77 316 P **P** 18 41 14.3 +1.1
TESR Tescani 69.90 317 ⇓P **P** 18 41 13.8 -0.2
TESR Tescani 69.90 317 P **P** 18 41 14.3 +0.3
comp=Z,38nm,0.8s
LUBAR Lubar, Ukraine 69.91 321 P **P** 18 41 12.9 -1.0
MI29 MI29, Kamyanyy 69.97 321 P **P** 18 41 13.5 -0.8
comp=Z,255nm,1.0s
ONER Baraj Valea Uz 70.04 317 ⇓P **P** 18 41 15.0 +0.2
COVR Voineasa-Covas 70.08 316 ⇑P **P** 18 41 15.6 +0.5
MLR Muntele Rosu 70.19 316 P **P** 18 41 16.1 +0.2
MLR IAmb IAmb 18 41 17.7
comp=Z,14nm,0.6s
MLR Muntele Rosu 70.19 316 ⇑P **P** 18 41 16.2 +0.2
MLR Muntele Rosu 70.19 316 P **P** 18 41 16.1 +0.2
MLR pmax pmax
comp=Z,14nm,0.6s
TURR Turia 70.25 316 ⇓P **P** 18 41 16.5 +0.4
KMPD K-Podol'skiy 70.44 319 P **P** 18 41 15.7 -1.5
DOPR Dopca 70.66 316 ⇑P **P** 18 41 18.7 +0.1
HUMR Humele 70.70 315 ⇓P **P** 18 41 18.9 +0.1
PLVB Pleven 70.78 313 ⇓P **P** 18 41 20.0 +0.7
VOIR 70.80 316 ⇑P **P** 18 41 19.3 -0.3
VOIR 70.80 316 P **P** 18 41 19.5 -0.1
VOIR 70.80 316 P **P** 18 41 19.2 -0.3
MNK Minsk 70.98 325 *i* P **P** 18 41 20.6 +0.3
MNK *i** PP **pP** 18 41 54.1 +1.4
MNK *i* 18 43 59.7
MNK *i* PPP PPP 18 45 43.8
MNK *i* S **S** 18 50 26.1 +0.9
MNK *i* SS **SS** 18 55 01.9 +1.2
MNK pmax pmax
comp=Z,103nm,0.9s
MNK pmax pmax
comp=N,48nm,0.9s
MNK pmax pmax
comp=E,14nm,0.9s
MNK MLR MLR
comp=E,875nm,23.0s
BURAR Bucovina Array 71.08 318 P **P** 18 41 22.0 +0.8
BURAR IAmb IAmb 18 41 22.7
comp=Z,8.2nm,0.6s
BURAR Bucovina Array 71.08 318 ⇓P **P** 18 41 22.1 +0.8
BURAR Bucovina Array 71.08 318 P **P** 18 41 22.0 +0.8
ARR Arges 71.08 316 ⇓P **P** 18 41 21.4 +0.1
KSV Kosov 71.31 319 P **P** 18 41 21.9 -0.5
RNPP5 Stanyi Chortor 71.37 322 P **P** 18 41 22.4 -0.3
RNPP9 Sopachiv 71.41 322 P **P** 18 41 22.6 -0.3
LOT Lotru 71.69 316 ⇑P **P** 18 41 24.5 -0.5
NACGM Naroch 71.70 326 ⇓ *i* P **P** 18 41 25.2 +0.6
comp=Z,124nm,0.8s,baz=104
LIT Litokhoron 71.93 310 IAmb IAmb 18 41 26.4
comp=Z,22nm,0.6s
MREMI Moremi 71.99 244 P **P** 18 41 28.3 +1.2
MREMI IAmb IAmb 18 41 30.1
comp=Z,26nm,1.1s
BLKB Belogradchik 72.21 314 ⇓P **P** 18 41 28.4 +0.4
MARR Marisel-Cluj 72.33 317 ⇑P **P** 18 41 29.6 +0.9
GZR Gura Zlata 72.38 315 ⇑P **P** 18 41 30.1 +1.1
GZR Gura Zlata 72.38 315 P **P** 18 41 30.0 +1.1
LVZ Lovozero 72.59 340 P **P** 18 41 29.2 -0.6
LVZ Lovozero 72.59 340 P **P** 18 41 29.9 +0.1
DRGR 72.62 317 ⇓P **P** 18 41 31.2 +0.7
DRGR 72.62 317 P **P** 18 41 31.1 +0.7
VSU Vasula 72.64 329 *ce* P **P** 18 41 30.0 -0.1
VSU pmax pmax
comp=Z,30nm,1.0s
KSANE Kasane 72.88 249 P **P** 18 41 34.6 +2.2
APA Apatity 72.88 339 ⇓ *e* P **P** 18 41 30.4 -1.0
APA *e* 18 41 50.7
APA MLR MLR
comp=Z,990nm,29.5s
BOVS Bovan 72.91 313 ⇓P **P** 18 41 32.3 +0.2
KWP Kalwaria Pacla 73.07 320 *e* P **P** 18 41 33.4 +0.5
BZS Buzias 73.22 315 ⇑P **P** 18 41 34.3 +0.4
BZS Buzias 73.22 315 P **P** 18 41 34.2 +0.4
SIRR Siria 73.27 316 ⇑P **P** 18 41 34.8 +0.6
SUW Suwalki 73.55 324 *e* P **P** 18 41 35.7 +0.1
LPHEP Lephephe 73.61 243 IAmb IAmb 18 41 39.8
comp=Z,14nm,0.8s
FIA1 FINESS Array S 73.76 332 IAmb IAmb 18 41 37.7
comp=Z,30nm,0.7s
FINES FINESS Array B 73.76 332 P **P** 18 41 37.0 +0.3
comp=Z,23nm,0.4s,baz=97,slow=5.2,SNR=279
comp=Z,23nm,0.4s
FINES FINESS Array B 73.76 332 P **P** 18 41 37.0 +0.3
CASY Casey 73.97 173 P **P** 18 41 39.0 +1.3
STHS Stebnicka Huta 73.98 319 *e* P **P** 18 41 38.0 -0.2
STHS pmax pmax
comp=Z,4.0nm,0.4s
STHS Stebnicka Huta 73.98 319 *e* P **P** 18 41 38.0 -0.2
PHDHD Phuduhudu 74.01 247 IAmb IAmb 18 41 42.0
comp=Z,15nm,0.6s
PSZ Piszkesteto 74.67 318 ⇑P **P** 18 41 42.9 +0.5
PSZ Piszkesteto 74.67 318 P **P** 18 41 42.8 +0.5
OJC Ojcow 75.01 320 *e* P **P** 18 41 44.9 +0.8
OJC Ojcow 75.01 320 P **P** 18 41 44.1 0.0
OJC Ojcow 75.01 320 P **P** 18 41 44.2 0.0
LANS Liptovska Anna 75.09 319 *e* P **P** 18 41 46.2 +1.5
LANS pmax pmax
comp=Z,2.0nm,0.3s
LANS Liptovska Anna 75.09 319 *e* P **P** 18 41 46.2 +1.5
VADS Vadso 75.23 341 *e* P **P** 18 41 45.6 +0.7
BOSA Boshof 75.56 238 P **P** 18 41 49.1 +1.2
comp=Z,6.1nm,0.5s,baz=80,slow=3.6,SNR=32
comp=Z,6.1nm,0.5s
BOSA Boshof 75.56 238 IAmb IAmb 18 41 50.6
comp=Z,13nm,0.9s
BOSA Boshof 75.56 238 P **P** 18 41 49.1 +1.2
MAUC Maruska 76.19 319 *e* P **P** 18 41 52.0 +1.1
JAVC Velka Javorina 76.24 319 *e* P **P** 18 41 52.6 +1.3
STEB Steborice 76.28 320 *e* P **P** 18 41 52.7 +1.3
ARA0 ARCESS Array S 76.30 340 *e* P **P** 18 41 51.8 +0.7
ARCES ARCESS Array B 76.30 340 P **P** 18 41 51.8 +0.7
comp=Z,4.0nm,0.4s,baz=102,slow=6.8,SNR=150
comp=Z,4.0nm,0.4s
ARCES ARCESS Array B 76.30 340 IAmb IAmb 18 41 52.2
comp=Z,4.6nm,0.5s
MORC Moravsky Berou 76.41 319 ⇑P **P** 18 41 53.0 +0.8
MORC Moravsky Berou 76.41 319 *e* P **P** 18 41 52.7 +0.5
MORC Moravsky Berou 76.41 319 P **P** 18 41 53.0 +0.8
MODS Modra-Piesok 76.46 318 *e* P **P** 18 41 52.6 +0.1
MODS pmax pmax
comp=Z,16nm,0.8s
MODS Modra-Piesok 76.46 318 *e* P **P** 18 41 52.5 +0.1
ZST Bratislava 76.56 318 *e* P **P** 18 41 53.9 +0.9
ZST pmax pmax
comp=Z,4.0nm,0.6s
ZST Bratislava 76.56 318 *e* P **P** 18 41 53.8 +0.8
KRLC Kraliky 76.93 320 *e* P **P** 18 41 56.4 +1.3
KRLC Kraliky 76.93 320 *e* P **P** 18 41 56.4 +1.3
KTK1 Kautokeino 76.93 339 *e* P **P** 18 41 55.5 +0.3
VRAC Vranov 76.99 319 *e* P **P** 18 41 55.9 +0.5
RONA Rosalia, Austr 77.06 317 *e* P **P** 18 41 56.8 +0.9
comp=Z,4.2nm,0.6s
KRUC Moravsky 77.10 319 *e* P **P** 18 41 56.5 +0.5
HAMF Hammerfest 77.21 341 *e* P **P** 18 41 56.9 +0.7
MARNC Mare, Loyalty 77.23 114 P **P** 18 41 57.3 +0.1
DPC Dobruska-Polom 77.24 320 *e* P **P** 18 41 58.3 +1.4
DPC Dobruska-Polom 77.24 320 *e* P **P** 18 41 58.3 +1.4
OSTC Ostas 77.33 320 *e* P **P** 18 41 58.7 +1.4
OSTC Ostas 77.33 320 *e* P **P** 18 41 58.7 +1.4
CONA Conrad Observa 77.37 317 *i* P **P** 18 41 58.4 +0.7
comp=Z,2.0nm,0.6s
GOLS Golise 77.42 315 *i* P **P** 18 41 58.9 +0.9
CHVC Chvalec 77.43 320 *e* P **P** 18 41 59.2 +1.3
CHVC Chvalec 77.43 320 *e* P **P** 18 41 59.2 +1.3
GROS Grobnik 77.53 316 *i* P **P** 18 41 59.4 +0.8
MAW Mawson 77.76 192 P **P** 18 42 00.5 +1.3
comp=Z,2.1nm,1.4s
MAW Mawson 77.76 192 P **P** 18 42 00.9 +1.8
comp=Z,4.9nm,0.7s,baz=24,slow=2.6,SNR=16
comp=Z,4.9nm,0.7s
PERS Pernice 77.81 316 *i* P **P** 18 42 00.9 +0.8
SOKA Soboth 77.87 316 *i* P **P** 18 42 01.5 +1.1
comp=Z,9.1nm,0.8s,SNR=12
JETT Jettan, Norway 78.03 340 *e* P **P** 18 42 01.5 +0.6
OBKA Obir 78.19 316 *e* P **P** 18 42 03.7 +1.4
comp=Z,8.6nm,0.9s
PRU Pruhonice 78.36 320 *e* P **P** 18 42 04.3 +1.3
PRU Pruhonice 78.36 320 *e* P **P** 18 42 04.3 +1.3
PVCC Panska Ves 78.37 320 *e* P **P** 18 42 04.2 +1.2
PVCC Panska Ves 78.37 320 *e* P **P** 18 42 04.2 +1.2
CRNS Crni Vrh 78.38 316 *i* P **P** 18 42 03.9 +0.7
MOA Molln 78.44 317 *e* P **P** 18 42 04.1 +0.6
comp=Z,1.3nm,0.4s
CKRC Cesky Krumlov 78.45 318 *e* P **P** 18 42 05.1 +1.5
CKRC Cesky Krumlov 78.45 318 *e* P **P** 18 42 05.1 +1.5
BSD Bornholm Skovb 78.47 325 *i* P **P** 18 42 04.0 +0.6
BSD IAmb IAmb 18 42 04.4
comp=Z,18nm,0.8s
TRO Tromso 78.56 340 *e* P **P** 18 42 03.6 0.0
ZVC Zvikov 78.56 319 *e* P **P** 18 42 04.9 +0.8
MYKA Terra Mystica 78.82 316 *e* P **P** 18 42 06.7 +1.0
comp=Z,3.1nm,0.5s
GERES GERESS Array B 78.86 318 P **P** 18 42 07.0 +1.1
comp=Z,6.2nm,0.7s,baz=74,slow=4.7,SNR=48
comp=Z,6.2nm,0.7s
BIOA Bad Ischl, Aus 78.86 317 *e* P **P** 18 42 06.7 +0.9
comp=Z,2.4nm,0.3s
KHC Kasperske Hory 78.95 319 *ce* P **P** 18 42 07.7 +1.4
KHC pmax pmax
comp=Z,18nm,2.5s
KHC Kasperske Hory 78.95 319 *e* P **P** 18 42 07.2 +0.9
KBA Koelnbreinsper 79.04 317 *e* P **P** 18 42 07.5 +0.5
comp=Z,2.1nm,0.4s
DEL Delary 79.15 326 *i* P **P** 18 42 07.2 0.0
LUNU Lund 79.34 325 *i* P **P** 18 42 08.8 +0.6
CLL Collm 79.40 321 *i* P **P** 18 42 08.8 +0.2
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL Collm 79.40 321 *i* P **P** 18 42 08.8 +0.2
comp=Z,8.0nm,1.1s
LESA Schwarzleotal 79.50 317 *i* P **P** 18 42 09.5 +0.1
comp=Z,5.3nm,0.3s,SNR=11
HFS Hagfors 79.51 330 P **P** 18 42 09.5 +0.5
comp=Z,7.8nm,0.5s,baz=108,slow=4.8,SNR=62
comp=Z,7.8nm,0.5s
FAUS Fauske 79.53 337 *e* P **P** 18 42 09.0 0.0
BJUU Bjuv 79.60 326 *i* P **P** 18 42 09.9 +0.3
ABTA Abfaltersbach 79.60 316 *e* P **P** 18 42 10.2 +0.2
comp=Z,1.4nm,0.6s
STEI Steigen 79.61 338 *e* P **P** 18 42 09.7 +0.3
CIMO Cimolais 79.65 316 IAmb IAmb 18 42 11.7
comp=Z,22nm,0.8s
RAUS Rausandaksla 79.91 336 *e* P **P** 18 42 11.1 0.0
WTTA Wattenberg 80.21 317 *i* P **P** 18 42 13.5 +0.2
comp=Z,5.3nm,0.3s,SNR=6.5
LEIR Leirfjorden 80.25 336 *e* P **P** 18 42 13.9 +1.1
LOF Lofoten 80.27 338 *e* P **P** 18 42 12.9 -0.1
SQTA Sankt Quirin 80.50 317 *i* P **P** 18 42 15.0 +0.2
comp=Z,5.1nm,0.4s,SNR=6.1
MOTA Moosalm 80.57 317 *i* P **P** 18 42 15.3 +0.1
comp=Z,4.0nm,0.6s,SNR=4.7
NC602 NORSAR Array S 80.61 330 *e* P **P** 18 42 14.4 -0.5
NSS Namsos 80.62 334 *e* P **P** 18 42 15.3 +0.4
NB2 NORSAR Subarra 80.78 331 P **P** 18 42 15.6 -0.3
comp=Z,5.4nm,0.8s,baz=91,slow=5.6
NOA NORSAR Array B 80.78 331 P **P** 18 42 16.0 +0.1
comp=Z,3.5nm,0.7s,baz=93,slow=5.4,SNR=22
comp=Z,3.5nm,0.7s
NOA NORSAR Array B 80.78 331 P **P** 18 42 16.0 +0.1
RETA Reutte 80.80 317 *i* P **P** 18 42 16.7 +0.3
comp=Z,6.1nm,0.6s,SNR=6.9
FETA Feichten 80.83 316 *i* P **P** 18 42 17.2 +0.6
comp=Z,6.7nm,1.1s,SNR=5.9
SPA0 Spitsbergen Ar 80.83 348 *e* P **P** 18 42 15.8 0.0
SPITS Spitsbergen Ar 80.83 348 P **P** 18 42 15.7 -0.2
comp=Z,13nm,0.7s,baz=102,slow=10,SNR=31
comp=Z,13nm,0.7s
DAVA Damuels 81.40 317 *i* P **P** 18 42 20.3 +0.7
comp=Z,2.7nm,0.4s
KONO Kongsberg 81.55 329 *e* P **P** 18 42 19.3 -0.6
DOMB Dombas 81.84 332 *e* P **P** 18 42 21.7 +0.2
KEST Kesra 82.20 305 P **P** 18 42 25.4 +1.5
comp=Z,4.5nm,0.8s,baz=358,slow=3.0,SNR=4.3
comp=Z,4.5nm,0.8s
MOL Molde 82.55 332 *e* P **P** 18 42 26.0 +1.0
AKN Aaknes 82.81 332 *e* P **P** 18 42 27.5 +1.1
ODD1 Odda 83.05 330 *e* P **P** 18 42 27.9 +0.1
BLS5 Blasjo 83.15 329 *e* P **P** 18 42 29.3 +1.0
CCD Concordia, Ant 83.74 173 P **P** 18 42 32.7 +1.3
SYO Syowa Base 84.70 197 ⇓ *e* P **P** 18 42 37.3 +1.5
SYO Syowa Base 84.70 197 ⇓ *e* PcP **PcP** 18 42 40.2 +1.2
QRZ Quartz Range 85.40 132 P **P** 18 42 40.2 +0.2
NIKH Nikolski High 88.38 37 P **P** 18 42 55.5 +1.4
EKA Eskdalemuir Ar 88.77 326 P **P** 18 42 56.8 +0.9
comp=Z,4.6nm,0.8s,baz=94,slow=4.8,SNR=6.4
comp=Z,4.6nm,0.8s
VNDA Vanda 91.94 168 P **P** 18 43 10.3 +0.2
comp=Z,1.4nm,0.8s,baz=300,slow=3.5,SNR=10
comp=Z,1.4nm,0.8s
VNDA Vanda 91.94 168 IAmb IAmb 18 43 12.0
comp=Z,1.4nm,0.8s
AFI Afiamalu 95.07 103 P **P** 18 43 26.0 0.0
QSPA South Pole Qui 96.87 180 P **P** 18 43 36.5 +3.4
comp=Z,0.7nm,0.5s,baz=247,slow=0.1,SNR=7.7
QSPA South Pole Qui 96.87 180 IAmb IAmb 18 43 43.4
comp=Z,1.4nm,0.8s
SNAA Sanae 98.94 199 *ce* P dif 18 43 43.8 +1.6
SNAA pmax pmax
comp=Z,6.0nm,1.7s
ELK Elko 125.13 28 PKP **PKPdf** 18 49 02.1 -0.6
comp=Z,0.8nm,0.6s,baz=230,slow=2.3,SNR=3.7
NVAR Mina Array Bea 125.42 32 PKP **PKiKP** 18 49 03.6 0.0
comp=Z,0.7nm,0.8s,baz=330,slow=1.7,SNR=4.1
PDAR Pinedale Array 125.81 22 PKP **PKPdf** 18 49 03.6 -0.3
comp=Z,0.3nm,0.5s,baz=100,slow=4.5,SNR=4.0
PDAR PKKPbc **PKKPab** 18 58 39.0 -0.9
comp=Z,0.6nm,0.6s,baz=132,slow=6.1,SNR=6.4
ANMO Albuquerque 133.79 24 SKPbc **SKPbc** 18 52 32.2 -3.7
comp=Z,1.7nm,0.6s,baz=34,slow=3.6,SNR=3.2
TXAR Lajitas Array 139.83 25 PKP **PKPdf** 18 49 29.9 -0.6
comp=Z,0.2nm,0.4s,baz=191,slow=1.1,SNR=6.6
TXAR SKPbc **SKPbc** 18 52 51.6 -2.4
comp=Z,1.0nm,0.8s,baz=326,slow=1.8,SNR=7.5
BDFB Brasilia 142.47 253 PKP **PKPdf** 18 49 35.4 -0.1
comp=Z,1.8nm,0.4s,baz=72,slow=9.6,SNR=3.3
PLCA Paso Flores 143.88 199 PKP PKPbc 18 49 36.3 +1.0
comp=Z,9.0nm,0.8s,baz=154,slow=2.9,SNR=21
PLCA SKPbc **SKPbc** 18 53 03.1 -0.7
comp=Z,1.9nm,0.7s,baz=162,slow=3.2,SNR=3.6
CPUP Villa Florida 147.12 231 PKPbc **PKPdf** 18 49 43.2 +0.1
comp=Z,2.0nm,0.8s,baz=351,slow=3.0,SNR=10
ACAN Cantantal 149.68 211 *e* P **PKPbc** 18 49 52.3 +0.3
AAGR Agrelo 149.83 208 *e* P **PKiKP** 18 49 54.1 +0.8
ARCO CERRO ARCO 150.08 208 *e* P **PKiKP** 18 49 54.1 +0.2
ASAL Salagasta 150.24 209 *e* P **PKiKP** 18 49 54.3 +0.1
PEL Peldehue 150.62 206 *e* P **PKPbc** 18 49 53.4 -0.9
AUSP Uspallata 150.81 208 *e* P **PKiKP** 18 49 56.5 +0.9
VA03 San Esteban 150.88 206 *e* P **PKPbc** 18 49 54.7 -0.3
ROC1 El Roble 150.90 205 *e* P **PKPbc** 18 49 55.4 +0.2
ZON Zonda 151.02 210 *e* P **PKPbc** 18 49 55.4 +0.2
RTLS Leoncito 151.11 209 *e* P **PKiKP** 18 49 57.1 +0.8
LPAZ La Paz 160.79 240 PKP **PKPdf** 18 50 02.6 -0.7
comp=Z,0.4nm,0.4s,baz=28,slow=2.8,SNR=4.4

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*JMA **14** 18:32:04.2±0.6, 45°N±4°×15°1E±°, h30km, MV4.5/15, KURILE ISLANDS REGION*
*SKHL **14** 18:32:05.9±0.7, 44°.70N×150°.80E, h39km±9km, mb4.8/3*
ISC 14 18:32:03.9±4.2, 44°.6N±0°.1×151°.1E±0°.2, h35km, n18, σ2°.934/29, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.36**	**287**	*e* P		**Pn**	**18 32 39.1**	**-1.0**
KUR				*i* S		**Sn**	**18 33 03.5**	**-4.3**
KUR				A	A		18 33 07.2	
	690nm,0.3s							
KUR				A	A		18 33 07.2	
	370nm,0.3s							
SHO	**Shikotan**	**3.12**	**259**	*e* P		Pn	18 32 58.3	+7.8
SHO					AMB	AMB	18 32 59.7	
	120nm,0.8s							
SHO				*e* S		**Sn**	**18 33 32.0**	**+5.6**
SHO				A	A		18 33 34.7	
	130nm,0.7s							
SHO				A	A		18 33 34.7	
	110nm,0.7s							
YUK	**Yuzh-Kuril'sk**	**3.77**	**264**	*i* P		**Pn**	**18 33 00.7**	**+1.3**
YUK					AMB	AMB	18 33 01.8	
	110nm,0.3s							
YUK				*e* S		**Sn**	**18 33 41.7**	**-0.8**
YUK				A	A		18 33 47.8	
	150nm,0.4s							
YUK				A	A		18 33 47.8	
	310nm,0.4s							
NEM2	**Nemuro 2**	**4.02**	**254**	*e* P		**Pn**	**18 33 04.0**	**+1.1**
NEM2				*e* S		**Sn**	**18 33 48.8**	**+0.1**
NMR	**Nemuro--Hokkai**	**4.03**	**255**	*e* P		**Pn**	**18 33 03.8**	**+0.8**
NMR				*i* S		**Sn**	**18 33 48.0**	**-0.9**
GLVR	**Golovnino**	**4.07**	**260**	*e* P		**Pn**	**18 33 04.8**	**+1.3**
GLVR					AMB	AMB	18 33 05.6	
	140nm,0.2s							
GLVR				*e* S		**Sn**	**18 33 48.8**	**-1.1**
GLVR				A	A		18 33 53.9	
	310nm,0.2s							
GLVR				A	A		18 33 53.9	
	150nm,0.2s							
JRA	**Rausu**	**4.31**	**264**	*e* P		**Pn**	**18 33 09.0**	**+2.1**
JRA				*e* S		**Sn**	**18 33 57.1**	**+1.3**
JNK	**Nakash**	**4.67**	**260**	*e* P		**Pn**	**18 33 13.5**	**+1.7**
JNK				*e* S		**Sn**	**18 34 04.2**	**-0.6**
AKK	**Akkeshi**	**4.76**	**253**	*e* P		**Pn**	**18 33 14.2**	**+1.2**
JAK	**Akkeshi**	**4.86**	**253**	*e* P		**Pn**	**18 33 15.5**	**+1.0**
JAK				*e* S		**Sn**	**18 34 09.2**	**-0.4**
JTKR	**Abashiri--Toko**	**5.17**	**266**	*e* P		**Pn**	**18 33 20.5**	**+1.9**
JAR	**Ashorobuto**	**5.41**	**259**	*e* P		**Pn**	**18 33 24.4**	**+2.3**
JAR				*e* S		**Sn**	**18 34 23.1**	**0.0**
JCH	**Churui**	**5.92**	**253**	*e* P		**Pn**	**18 33 30.2**	**+1.2**
JCH				*e* S		**Sn**	**18 34 35.5**	**0.0**

JKK2	**Kamakawa 2**	**6.01 266**	*eP*	**Pn**	**18 33 33.0**	**+2.8**
JAB	**Ashibetsu**	**6.45 264**	*eP*	Pn	18 33 42.6	+6.3
JNBK	**Urakawa-nobuka**	**6.46 252**	*eP*	**Pn**	**18 33 37.5**	**+1.0**
JNBK			S	**Sn**	**18 34 44.9**	**-4.0**
JANG	**Nango**	**8.20 243**	*eP*	**Pn**	**18 34 00.6**	**+0.3**
JANG			*eS*	**Sn**	**18 35 27.2**	**-4.5**
JTH	**Tanohata**	**8.24 239**	*eS*	**Sn**	**18 35 28.5**	**-4.1**

IDC ***14*** *18:32:45.1±2.2, 1°.68N×126°.59E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=174.9km s-min=27.6km az=66.0*

DJA ***14*** *18:32:48.7±0.3, 1°.N±3°×12°6E±°, h10km, M3.6/7, MLv3.6/7*

ISC 14 18:32:51.1±1.1, 1°.48N±0°.08×126°.56E±0°.09, h35km, n6, σ1§59/8, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
TNTI	**Ternate**	**1.07**	**131**	P		**Pn**	**Pn**	**18 33 09.1**	**-0.6**
TNTI				S		**Sn**	**Sn**	**18 33 25.2**	**+1.8**
SGSI	**Sangihe**	**2.42**	**335**	P		**Pn**	**Pn**	**18 33 28.1**	**-0.1**
SGSI				S		**Sn**	**Sn**	**18 33 58.6**	**+1.9**
KMSI	**Cibinong**	**2.73**	**251**	P		**Pn**	**Pn**	**18 33 32.4**	**0.0**
WRA	**Warramunga Arr**	**22.62**	**161**	P		**P**	**P**	**18 37 48.6**	**-0.5**
	1.5nm,0.5s,baz=339,slow=11,SNR=12								
	1.5nm,0.5s								
ASAR	**Alice Springs**	**26.00**	**164**	P		**P**	**P**	**18 38 22.4**	**+1.4**
	0.4nm,0.4s,baz=345,slow=12,SNR=15								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**59.30**	**326**	P		**P**	**P**	**18 42 47.8**	**-1.7**
	0.2nm,0.4s,baz=129,slow=6.5,SNR=1.6								
	0.2nm,0.4s								

IDC ***14*** *18:40:39.8±0.8, 1°.39N×125°.90E, h0km, mb3.9/11, mbtmp3.9/12, ML3.8/1, Error ellipse: s-maj=74.3km s-min=14.0km az=71.0*

NEIC ***14*** *18:40:44.8±2.5, 1°.7N±0°.1×126°.58E±0°.09, h35km±2km, mb4.2/13, Error ellipse: s-maj=20.6km s-min=9.5km az=37.0*

DJA ***14*** *18:40:44.4±1.2, 2°.N±3°×12°6E±°, h21km±11km, M4.0/9, MLv4.0/9*

ISC 14 18:40:44.8±0.6, 1°.62N±0°.06×126°.56E±0°.07, h35km, n37, σ1§35/37, mb4.1/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
TNTI	**Ternate**	**1.17**	**136**				**Pn**	**18 41 05.8**	**+1.2**
TNTI	**Ternate**	**1.17**	**136**	P		**Pn**	**Pn**	**18 41 05.5**	**+0.8**
TNTI				S		**Sn**	**Sn**	**18 41 21.1**	**+1.7**
SGSI	**Sangihe**	**2.30**	**334**	P		**Pn**	**Pn**	**18 41 20.2**	**0.0**
SGSI				S		**Sn**	**Sn**	**18 41 48.4**	**+1.1**
KMSI	**Cibinong**	**2.77**	**248**	P		**Pn**	**Pn**	**18 41 27.8**	**+1.0**
SANI	**Sanana**	**3.69**	**189**	P		**Pn**	**Pn**	**18 41 40.6**	**+1.3**
LUWI	**Luwuk**	**4.61**	**235**				**Pn**	**18 41 53.3**	**+1.2**
LUWI	**Luwuk**	**4.61**	**235**	P		**Pn**	**Pn**	**18 41 53.7**	**+1.6**
TOLI2	**Tolitoli**	**5.79**	**265**				**Pn**	**18 42 06.8**	**-1.6**
FAKI	**Fak Fak**	**7.26**	**128**	Pn			**Pn**	**18 42 27.2**	**-1.2**
MYLDM	**Lahad Datu**	**8.78**	**294**				**Pn**	**18 42 51.1**	**+1.7**
SBUM	**Sibu**	**14.35**	**274**	P			**P**	**18 44 12.4**	**+0.3**
MTN	**Manton Dam**	**15.07**	**163**	P			**Pn**	**18 44 16.7**	**+1.4**
MTN				IAmb			IAmb	18 44 21.7	
	comp=Z,13nm,1.3s								
KNRA	**Kununurra**	**17.32**	**173**				**Pn**	**18 44 43.8**	**-0.2**
KNRA				IAmb			IAmb	18 44 49.7	
	comp=Z,18nm,1.4s								
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P			**P**	**18 45 08.8**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=33,slow=14,SNR=2.3								
	comp=Z,2.5nm,0.7s								
TPUB	**Ta-pu**	**22.31**	**346**	P			**P**	**18 45 38.4**	**-1.0**
COEN	**Coen**	**22.60**	**134**	P			**P**	**18 45 41.1**	**-1.5**
COEN				IAmb			IAmb	18 45 59.4	
	comp=Z,15nm,1.3s								
WB0	**Warramunga Arr**	**22.60**	**160**	P			**P**	**18 45 41.0**	**-1.5**
WRAB	**Tennant Creek**	**22.74**	**161**	P			**P**	**18 45 42.4**	**-1.7**
WRAB				IAmb			IAmb	18 45 52.0	
	comp=Z,6.3nm,0.5s								
WRA	**Warramunga Arr**	**22.75**	**161**	P			**P**	**18 45 43.2**	**-0.9**
	comp=Z,4.6nm,0.6s,baz=342,slow=10,SNR=25								
	comp=Z,4.6nm,0.6s								
WR8	**Warramunga Arr**	**22.81**	**160**	P			**P**	**18 45 43.7**	**-1.1**
WR8				IAmb			IAmb	18 46 17.9	
	comp=Z,4.3nm,0.6s								
AS31	**Alice Springs**	**26.13**	**165**	P			**P**	**18 46 14.4**	**-1.4**
ASAR	**Alice Springs**	**26.13**	**165**	P			**P**	**18 46 15.6**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=348,slow=14,SNR=17								
	comp=Z,0.9nm,0.5s								
KSRS	**Korea Array**	**35.68**	**2**	P			**P**	**18 47 43.1**	**+3.3**
	comp=Z,0.4nm,0.4s,baz=24,slow=28,SNR=1.3								
	comp=Z,0.4nm,0.4s								
STKA	**Stephens Creek**	**36.24**	**158**	P			**P**	**18 47 44.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=325,slow=10,SNR=4.2								
	comp=Z,1.3nm,0.5s								
SONM	**Songino Array**	**49.24**	**342**	P			**P**	**18 49 30.9**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=106,slow=3.1,SNR=2.2								
	comp=Z,0.3nm,0.6s								
MKAR	**Makanchi Array**	**59.19**	**326**	P			**P**	**18 50 41.5**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=123,slow=7.1,SNR=12								
	comp=Z,0.5nm,0.4s								
ZALV	**Zalesovo Beam**	**62.38**	**334**	P			**P**	**18 51 02.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=120,slow=8.8,SNR=2.4								
	comp=Z,0.3nm,0.3s								
KURBB	**Kurchatov Arra**	**63.42**	**328**	P			**P**	**18 51 09.9**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=126,slow=6.2,SNR=9.7								
	comp=Z,1.0nm,0.5s								
KURK	**Kurchatov**	**63.42**	**328**	P			**P**	**18 51 09.9**	**-1.0**
KKAR	**Karatay Array**	**64.66**	**318**	P			**P**	**18 51 18.9**	**-0.3**
BVAR	**Borovoye Array**	**68.99**	**327**	P			**P**	**18 51 46.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=194,slow=34,SNR=2.5								
	comp=Z,0.4nm,0.4s								
NRIK	**Noril'sk**	**72.43**	**346**	P			**P**	**18 52 07.2**	**0.0**
	comp=Z,2.5nm,0.6s,baz=118,slow=7.9,SNR=4.6								
	comp=Z,2.5nm,0.6s								
NRIK	**Noril'sk**	**72.43**	**346**	IAmb			IAmb	18 52 08.6	
	comp=Z,3.3nm,0.8s								
AB31	**Akbulak array**	**73.67**	**321**	P			**P**	**18 52 12.8**	**-2.1**
ABKAR	**Akbulak array**	**73.67**	**321**	P			**P**	**18 52 13.0**	**-1.9**
VNDA	**Vanda**	**81.37**	**173**	P			**P**	**18 52 57.6**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=326,slow=7.2,SNR=5.5								
	comp=Z,0.9nm,0.8s								
VNDA	**Vanda**	**81.37**	**173**	IAmb			IAmb	18 53 22.7	
	comp=Z,2.0nm,1.2s								

IDC 14 18:45:00.0±2.4, 1°.94N×126°.83E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=243.6km s-min=23.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
WRA	**Warramunga Arr**	**22.96**	**162**	P			P	18 50 05.1	-1.2
	1.1nm,0.7s,baz=340,slow=12,SNR=4.8								
	1.1nm,0.7s								
ASAR	**Alice Springs**	**26.37**	**165**	P			P	18 50 39.4	+1.2
	0.3nm,0.3s,baz=348,slow=14,SNR=5.4								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**59.08**	**326**	P			P	18 55 02.3	+0.1
	0.2nm,0.4s,baz=119,slow=8.5,SNR=2.5								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**63.29**	**328**	P			P	18 55 30.2	-0.4
	0.3nm,0.4s,baz=139,slow=5.8,SNR=1.9								
	0.3nm,0.4s								

MOS ***14*** *18:45:36.4±1.1, 1°.44N×126°.28E, h19km, mb6.1/63, MS5.2/10, Error ellipse: s-maj=7.6km s-min=4.1km az=114.2*

IDC ***14*** *18:45:38.4±1.7, 1°.47N×126°.35E, h19km±10km, mb5.5/37, mbtmp5.5/41, ML4.7/3, MS5.1/15, Error ellipse: s-maj=14.5km s-min=8.6km az=76.0*

BJI ***14*** *18:45:39.2, 1°.35N×126°.35E, h51km, mB5.9/34, mb5.8/88, Ms5.3/74, Ms7 5.3/72*

NEIC ***14*** *18:45:39.1±1.7, 1°.43N±0°.06×126°.36E±0°.06, h27km±3km, mb5.8/321, Error ellipse: s-maj=9.4km s-min=8.3km az=61.0*

DJA ***14*** *18:45:41.7±0.2, 2°.N±1°×12°6E±°, h54km±2km, M5.6/120, mb5.8/120, mB6.0/96, MLv5.9/24, Mw(mB)5.6/96, MwMwp6.9/2, Mwp6.7/2*

GCMT ***14*** *18:45:45.1±0.4, 1°.64N±0°.03×126°.15E±0°.03, h36km±1km, MW6.0/90, Moment Tensor Solution. s90, c133; Duration: 2§4 Moment tensor: Scale 10¹⁸Nm; Mrr0.99±.17; Mθθ0.28±.09; Mϕϕ-1.27±.09; Mrθ0.11±.06;*

Mrϕ-0.51±.04; Mθϕ-0.26±.06; Best double couple: M₀1.24900×10¹⁸ NP1:ϕ33.00000°, δ42.00000°, λ114.00000°. NP2:ϕ182.00000°, δ52.00000°, λ70.00000°. Principal axes: T 1.0580, Plg73.0000°, Azm34.0000°; N 0.3800, Plg16.0000°, Azm195.0000°; P -1.4400, Plg5.0000°, Azm286.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 18:45:40.0±0.4, 1°.46N±0°.03×126°.39E±0°.03, h33km±2km, h33km:pP-P, n1280, σ1§59/1290, mb5.8/342, MS5.2/49, 61C-38D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
TNTI	**Ternate**	**1.19**	**125**	Pn			**Pn**	**18 45 59.1**	**-1.3**
TNTI	**Ternate**	**1.19**	**125**	P			**Pb**	**18 46 01.5**	**-0.5**
TNTI	**Ternate**	**1.19**	**125**	S			**Sn**	**18 46 15.7**	**+0.3**
TNTI	**Ternate**	**1.19**	**125**	P			**Pn**	**18 45 59.5**	**-0.9**
TNTI				S			**Sn**	**18 46 14.3**	**-1.1**
SGSI	**Sangihe**	**2.37**	**339**	P			**Pn**	**18 46 17.2**	**+0.6**
KMSI	**Cibinong**	**2.57**	**250**	P			**Pn**	**18 46 20.7**	**+1.4**
SANI	**Sanana**	**3.51**	**187**	P			**Pn**	**18 46 34.2**	**+1.9**
SANI	**Sanana**	**3.51**	**187**	S			**Sn**	**18 47 13.5**	**+0.7**
SANI	**Sanana**	**3.51**	**187**	P			**Pn**	**18 46 33.4**	**+1.1**
LUWI	**Luwuk**	**4.39**	**236**				**Pn**	**18 46 44.4**	**0.0**
LUWI	**Luwuk**	**4.39**	**236**	P			**Pn**	**18 46 47.6**	**+3.2**
LUWI	**Luwuk**	**4.39**	**236**	S			**Sn**	**18 47 35.8**	**+1.3**
LUWI	**Luwuk**	**4.39**	**236**	P			**Pn**	**18 46 46.4**	**+2.0**
MRSI	**Marisa**	**4.56**	**258**	P			**Pn**	**18 46 48.7**	**+2.0**
NLAI	**Namlea**	**4.72**	**171**	P			**Pn**	**18 46 50.5**	**+1.5**
APSI	**Ampana**	**5.30**	**244**	P			**Pn**	**18 46 59.9**	**+3.0**
SWI	**Sorong**	**5.39**	**115**	P			**Pn**	**18 46 58.7**	**+0.6**
	113µm12µm565nm,1.5s								
MSAI	**Masohi**	**5.41**	**152**	P			**Pn**	**18 47 01.4**	**+3.0**
AAI	**Ambon**	**5.42**	**161**	P			**Pn**	**18 47 01.0**	**+2.4**
	5.4nm14µm968nm,0.8s								
TOLI2	**Tolitoli**	**5.62**	**267**				**Pn**	**18 47 01.1**	**-0.3**
TOLI2	**Tolitoli**	**5.62**	**267**	P			**Pn**	**18 47 01.9**	**+0.6**
TOLI2	**Tolitoli**	**5.62**	**267**	S			**Sn**	**18 48 06.8**	**+2.0**
DAV	**Davao City (W)**	**5.63**	**352**	Pn			**Pn**	**18 47 05.6**	**+4.1**
	81nm,0.3s,baz=152,slow=2.2,SNR=9.2								
DAV				Sn			**Sn**	**18 48 02.6**	**-2.5**
	153nm,0.3s,baz=201,slow=18,SNR=4.0								
DAV				LR			LR	18 49 27.4	
	comp=Z,16µm,20.5s,baz=154,slow=41								
DAV	**Davao City (W)**	**5.63**	**352**				**Pn**	**18 47 01.1**	**-0.4**
DAV	**Davao City (W)**	**5.63**	**352**	P			**Pn**	**18 47 05.1**	**+3.6**
DAV	**Davao City (W)**	**5.63**	**352**	P			**Pn**	**18 47 03.9**	**+2.4**
MPSI	**Mapaga**	**6.59**	**260**	P			**Pn**	**18 47 17.8**	**+3.2**
	2.4nm11µm702nm,0.9s								
BNDI	**Bandanaira**	**6.90**	**149**	P			**Pn**	**18 47 21.3**	**+2.4**
BNDI	**Bandanaira**	**6.90**	**149**	P			**Pn**	**18 47 20.6**	**+1.7**
	5.4nm18µm1µm,1.0s								
PCI	**Palu**	**6.96**	**250**	P			**Pn**	**18 47 21.3**	**+1.5**
	4.9nm16µm1µm,1.0s								
FAKI	**Fak Fak**	**7.29**	**127**				**Pn**	**18 47 25.3**	**+0.9**
FAKI	**Fak Fak**	**7.29**	**127**	P			**Pn**	**18 47 26.2**	**+1.9**
FAKI	**Fak Fak**	**7.29**	**127**	P			**Pn**	**18 47 26.4**	**+2.0**
	4.3nm14µm1µm,1.0s								
BBSI	**Bau Bau**	**7.89**	**209**	P			**Pn**	**18 47 36.1**	**+3.6**
TTSI	**Tana Toraja**	**7.95**	**236**	P			**Pn**	**18 47 35.5**	**+2.1**
	4.1nm10µm909nm,1.1s								
RKPI	**Ransiki, Papua**	**8.32**	**111**	P			**Pn**	**18 47 38.3**	**-0.2**
	659nm,1.0s								
SPSI	**Sidrap Palu**	**8.54**	**231**	P			**Pn**	**18 47 43.3**	**+1.9**
	12µm1µm,1.2s								
BNSI	**Bone**	**8.56**	**227**	P			**Pn**	**18 47 42.8**	**+1.0**
	10µm932nm,0.7s								
MYLDM	**Lahad Datu**	**8.70**	**295**				**Pn**	**18 47 45.3**	**+1.6**
MYLDM	**Lahad Datu**	**8.70**	**295**	P			**Pn**	**18 47 46.0**	**+2.4**
KMPI	**Kaimana, Papua**	**8.90**	**125**	P			**Pn**	**18 47 47.9**	**+1.4**
	2µm,1.6s								
BKSI	**Bulukumba**	**9.20**	**223**	P			**Pn**	**18 47 52.3**	**+1.8**
	7µm432nm,1.0s								
KAPI	**Kappang**	**9.24**	**226**	Pn			**Pn**	**18 47 52.2**	**+1.1**
	12nm,0.3s,baz=39,slow=8.4,SNR=59								
KAPI				Sn			**Sn**	**18 49 37.3**	**+3.3**
	2.2nm,0.3s,baz=70,slow=21,SNR=1.2								
	129nm,0.6s								
KAPI	**Kappang**	**9.24**	**226**				**Pn**	**18 47 52.7**	**+1.7**
KAPI	**Kappang**	**9.24**	**226**	P			**Pn**	**18 47 54.0**	**+3.0**
KAPI				S			**Sn**	**18 49 38.6**	**+4.6**
KAPI	**Kappang**	**9.24**	**226**	P			**Pn**	**18 47 53.7**	**+2.6**
KAPI	**Kappang**	**9.24**	**226**	P			**Pn**	**18 47 52.7**	**+1.7**
KAPI								18 49 37.3	
BSSI	**Bau Bau, Buton**	**9.58**	**218**	P			**Pn**	**18 47 57.5**	**+1.8**
	8µm500nm,0.5s								
BKB	**Balikpapan**	**9.87**	**254**				**Pn**	**18 48 01.5**	**+1.8**
BKB	**Balikpapan**	**9.87**	**254**	P			**Pn**	**18 48 01.8**	**+2.1**
BKB	**Balikpapan**	**9.87**	**254**	P			**Pn**	**18 48 00.8**	**+1.1**
	5µm366nm,0.7s								
BAKI	**Biak**	**10.06**	**105**	P			**Pn**	**18 48 06.8**	**+4.4**
SAUI	**Saumlaki**	**10.58**	**153**	Pn			**Pn**	**18 48 09.2**	**-0.2**
MMRI	**Maumere**	**10.85**	**202**				**Pn**	**18 48 12.3**	**-0.8**
MMRI	**Maumere**	**10.85**	**202**	P			**Pn**	**18 48 15.0**	**+1.8**
MMRI	**Maumere**	**10.85**	**202**	P			**Pn**	**18 48 15.2**	**+2.0**
	5µm316nm,0.9s								
EDFI	**Ende, Flores**	**11.17**	**205**	P			**Pn**	**18 48 20.7**	**+3.0**
	3µm227nm,0.8s								
SOEI	**Soe**	**11.34**	**191**				**Pn**	**18 48 23.6**	**+3.6**
SOEI	**Soe**	**11.34**	**191**	P			**Pn**	**18 48 23.4**	**+3.4**
SOEI	**Soe**	**11.34**	**191**	P			**Pn**	**18 48 25.1**	**+5.1**
MTKI	**Muara Teweh, K**	**11.74**	**258**	P			**Pn**	**18 48 28.0**	**+2.7**
BATI	**Baumata**	**11.90**	**193**	Pn			**Pn**	**18 48 29.6**	**+2.1**
	5.9nm,0.3s,baz=174,slow=1.1,SNR=27								
BATI				LR			LR	18 52 32.6	
	comp=Z,4µm,21.9s,baz=9.5,slow=35								
BATI	**Baumata**	**11.90**	**193**	P			Pn	18 48 32.8	+5.2
	7µm552nm,1.0s								
BBKI	**Banjar Baru**	**12.54**	**247**	P			**Pn**	**18 48 38.2**	**+1.9**
	7µm250nm,1.5s								
WSI	**Waingapu**	**12.61**	**209**	P			**Pn**	**18 48 40.8**	**+3.5**
	11µm746nm,1.3s								
SMPI	**Sarmi**	**12.78**	**106**	P			**Pn**	**18 48 41.6**	**+2.0**
	568nm,1.7s								
BASI	**Baing, Sumba**	**12.97**	**206**	P			**Pn**	**18 48 44.5**	**+2.4**
	9µm795nm,1.4s								
WBSI	**Waikabubak, Su**	**13.05**	**212**	P			**Pn**	**18 48 45.9**	**+2.6**
	3µm339nm,0.8s								
PLAI	**Plampang**	**13.35**	**220**	P			**Pn**	**18 48 49.5**	**+2.2**
PLAI	**Plampang**	**13.35**	**220**	P			**Pn**	**18 48 50.7**	**+3.4**
	8µm934nm,1.1s								
TGY	**Tagaytay City**	**13.67**	**337**	Pn			**Pn**	**18 48 51.1**	**-0.6**
	112nm,0.3s,baz=90,slow=7.7,SNR=5.7								
TWSI	**Taliwang, Sumb**	**13.88**	**223**	P			**P**	**18 48 58.7**	**-3.6**
	8µm916nm,1.0s								
SBUM	**Sibu**	**14.20**	**274**				**Pn**	**18 48 59.2**	**+0.2**
SBUM	**Sibu**	**14.20**	**274**	P			**Pn**	**18 49 01.0**	**+2.1**
GENI	**Genyem**	**14.35**	**106**	P			**Pn**	**18 49 01.8**	**+0.8**
GENI	**Genyem**	**14.35**	**106**	P			**Pn**	**18 49 02.6**	**+1.6**
	759nm,1.2s								
AUDHS	**Darwin High Sc**	**14.50**	**162**	P			**Pn**	**18 49 02.9**	**-0.1**
DRS	**Darwin Rock St**	**14.51**	**162**	P			**Pn**	**18 49 03.8**	**+0.7**
SRBI	**Singaraja**	**14.64**	**229**	P			**Pn**	**18 49 06.3**	**+1.4**
	6µm431nm,0.9s								
JAY	**Jayapura**	**14.84**	**105**	Pn			**Pn**	**18 49 08.7**	**+1.0**
	0.5nm,0.3s,baz=274,slow=9.8,SNR=18								
	16nm,0.8s								
JAY	**Jayapura**	**14.84**	**105**	P			**Pn**	**18 49 08.8**	**+1.0**
MTN	**Manton Dam**	**14.97**	**162**	P			**Pn**	**18 49 08.2**	**-1.2**
	comp=Z,232nm,0.8s								
MTN	**Manton Dam**	**14.97**	**162**				**Pn**	**18 49 07.0**	**-2.3**
KMMI	**Kalianget**	**15.01**	**236**	P			**P**	**18 49 12.8**	**-2.1**
	comp=Z,7µmcomp=Z,707nm,0.8s								
DNP	**Denpasar**	**15.02**	**228**	P			**P**	**18 49 14.5**	**-0.6**
ABJI	**Asem Bagus**	**15.22**	**233**	P			**P**	**18 49 14.7**	**-2.6**
	comp=Z,6µmcomp=Z,458nm,1.1s								
PBKI	**Pangkalan Bun**	**15.29**	**254**	P			**Pn**	**18 49 14.9**	**+1.3**
KDU	**Kakadu**	**15.30**	**157**	P			**Pn**	**18 49 15.1**	**+1.4**
	comp=Z,437nm,0.9s								
JAGI	**Jajag, Banyuwa**	**15.69**	**231**				**Pn**	**18 49 17.2**	**-1.6**
JAGI	**Jajag, Banyuwa**	**15.69**	**231**	P			**P**	**18 49 21.1**	**-1.4**
JAGI	**Jajag, Banyuwa**	**15.69**	**231**	P			**P**	**18 49 21.6**	**-0.9**
	comp=Z,8µmcomp=Z,622nm,1.0s								
BLJI	**Banyuglugur**	**15.70**	**234**	P			**P**	**18 49 21.4**	**-1.2**
	comp=Z,6µmcomp=Z,678nm,0.9s								
GRJI	**Gresik**	**16.19**	**239**	P			**P**	**18 49 27.8**	**-0.2**
	comp=Z,5µmcomp=Z,284nm,1.0s								
SZP	**Santa**	**17.02**	**340**	P			**P**	**18 49 36.6**	**-0.6**
MMPI	**Merauke**	**17.08**	**125**	P			**P**	**18 49 38.3**	**+0.3**
	comp=Z,16µmcomp=Z,655nm,1.4s								
KNRA	**Kununurra**	**17.19**	**172**	P			**P**	**18 49 37.9**	**-1.2**
	comp=Z,821nm,1.5s								
KNRA	**Kununurra**	**17.19**	**172**	P			**Pn**	**18 49 37.5**	**-0.3**
KNRA				IAmb			IAmb	18 49 39.9	
	comp=Z,1µm,1.3s								
NGJI	**Ngawi**	**17.29**	**239**	P			**P**	**18 49 40.4**	**+0.2**
	comp=Z,5µmcomp=Z,264nm,1.2s								
PCJI	**Pacitan**	**17.95**	**237**	P			**P**	**18 49 48.9**	**+1.4**
	comp=Z,6µmcomp=Z,625nm,1.1s								
SMRI	**Semarang**	**18.02**	**242**	P			**Pn**	**18 49 47.0**	**-1.2**
SMRI	**Semarang**	**18.02**	**242**	P			**P**	**18 49 50.5**	**+2.1**
SMRI	**Semarang**	**18.02**	**242**	P			**P**	**18 49 49.2**	**+0.8**
	comp=Z,328nm,1.3s								
UGM	**Wanagama**	**18.36**	**239**	P			**Pn**	**18 49 51.5**	**-0.8**
UGM	**Wanagama**	**18.36**	**239**	P			**Pn**	**18 49 54.6**	**+2.3**
UGM	**Wanagama**	**18.36**	**239**	P			**Pn**	**18 49 53.8**	**+1.5**
	comp=Z,4µmcomp=Z,259nm,1.1s								
YOGI	**Yogyakarta**	**18.51**	**240**	P			**Pn**	**18 49 55.9**	**+1.8**
	comp=Z,6µmcomp=Z,416nm,0.8s								
TPI	**Tanjungpandan**	**19.20**	**257**	P			**P**	**18 50 00.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P			**P**	**18 50 03.9**	**-0.1**
	comp=Z,5.0nm,0.3s,baz=11,slow=7.8,SNR=67								
	comp=Z,44nm,0.7s								
KPJI	**Karang Pucung**	**19.49**	**243**	P			**P**	**18 50 04.3**	**-0.2**
	comp=Z,4µmcomp=Z,427nm,0.9s								
PPBI	**Pangkal Pinang**	**20.57**	**260**	P			**P**	**18 50 15.7**	**-0.6**
DLV	**Lat**	**20.59**	**301**	P			**P**	**18 50 15.3**	**-1.3**
DLV	**Lat**	**20.59**	**301**	P			Pn	18 50 18.0	-1.0
BBJI	**Bungbulang**	**20.69**	**244**	P			**P**	**18 50 16.1**	**-1.6**
CNJI	**Cibinong**	**21.10**	**245**	P			**P**	**18 50 22.5**	**+0.5**
DBJI	**Dramaga**	**21.16**	**248**	P			**P**	**18 50 25.2**	**+2.5**
	comp=Z,4µmcomp=Z,182nm,1.1s								
MANU	**Manus Island**	**21.26**	**99**	P			**P**	**18 50 22.0**	**-1.7**
SKJI	**Sukabumi**	**21.51**	**247**	P			**P**	**18 50 28.1**	**+1.7**
	comp=Z,5µmcomp=Z,365nm,0.9s								
TWGBT	**Beinan**	**21.85**	**347**	P			**P**	**18 50 27.4**	**-2.5**
TWG	**Pinlang**	**21.85**	**347**	P			**P**	**18 50 26.4**	**-3.6**
TWG				IAmb			IAmb	18 50 33.7	
	comp=Z,196nm,0.7s								
TPRI	**Tanjung Pinang**	**21.87**	**269**	P			**P**	**18 50 31.1**	**+0.8**
GUMO	**Guam**	**21.90**	**56**	P			**P**	**18 50 30.4**	**-0.1**
	comp=Z,158nm,0.7s,baz=156,slow=15,SNR=11								
GUMO				LR			LR	18 57 10.7	
	comp=Z,2µm,19.2s,baz=236,slow=32								
	comp=Z,158nm,0.7s								
GUMO	**Guam**	**21.90**	**56**	P			**P**	**18 50 26.9**	**-3.6**
GUMO				IAmb			IAmb	18 50 47.9	
	comp=Z,167nm,0.7s								
GUMO	**Guam**	**21.90**	**56**	P			**P**	**18 50 31.1**	**+0.6**
DSRI	**Dabo**	**21.90**	**265**	P			**P**	**18 50 31.1**	**+0.5**
	comp=Z,4µmcomp=Z,247nm,1.6s								
PMBI	**Palembang**	**22.05**	**259**	P			**P**	**18 50 27.5**	**-4.7**
PMBI				IAmb			IAmb	18 50 53.9	
	comp=Z,364nm,0.8s								
YULB	**Yu-li**	**22.35**	**348**	P			**P**	**18 50 31.6**	**-3.8**
YULB				IAmb			IAmb	18 50 40.7	
	comp=Z,287nm,0.8s								
YULB	**Yu-li**	**22.35**	**348**	P			**P**	**18 50 32.9**	**-2.5**
KLI	**Kotabumi**	**22.41**	**254**	P			**P**	**18 50 35.8**	**-0.3**
	comp=Z,4µmcomp=Z,301nm,0.

comp=Z,4µmcomp=Z,416nm,0.7s
KNMB Chin-men Tao 24.14 342 P **P** 18 50 52.4 -0.7
KNMB IAmb IAmb 18 50 56.4
comp=Z,391nm,1.0s
KSI Kapahiang 24.32 258 P **P** 18 50 55.1 0.0
comp=Z,5µmcomp=Z,412nm,0.8s
QZH Quanzhou 24.53 343 P **P** 18 50 56.3 -0.4
QZH S **S** 18 55 14.8 -0.6
QZH pmax pmax
comp=Z,330nm,1.0s
QZH LR LR
comp=Z,4µm,19.6s
QZH LR LR
comp=Z,3µm,16.1s
QZH LR LR
comp=Z,8µm,20.6s
MASI Maura Aman, Be 24.57 259 P **P** 18 50 57.7 +0.4
JMZ Minamidaito 2 24.66 10 P **P** 18 50 58.4 +0.5
JMZ Minamidaito 2 24.66 10 P **P** 18 51 00.0 +2.1
UJBPT Khong Chiam 24.80 305 P **P** 18 51 00.0 +0.8
GZH Guangzhou 24.95 330 P **P** 18 51 03.3 +2.8
GZH S **S** 18 55 25.4 +3.2
GZH pmax pmax
comp=Z,540nm,0.9s
GZH LR LR
comp=Z,5µm,15.3s
GZH LR LR
comp=Z,5µm,18.6s
GZH LR LR
comp=Z,7µm,19.8s
KRJI Kerinci 25.18 262 P **P** 18 51 02.8 0.0
JOW Kunigami 25.29 4 P **P** 18 51 03.6 0.0
comp=Z,698nm,0.9s,baz=191,slow=8.2,SNR=51
comp=Z,698nm,0.9s
JOW Kunigami 25.29 4 P **P** 18 51 03.3 -0.3
JOW Kunigami 25.29 4 P **P** 18 51 05.9 +2.3
BKNI Bangkinang 25.38 268 P **P** 18 51 02.3 -2.3
BKNI IAmb IAmb 18 51 14.3
comp=Z,278nm,0.7s
BKNI Bangkinang 25.38 268 P **P** 18 51 06.0 +1.5
BKNI Bangkinang 25.38 268 P **P** 18 51 04.2 -0.3
comp=Z,4µmcomp=Z,440nm,1.0s
QIS Mount Isa 25.43 150 P **P** 18 51 04.8 -0.1
comp=Z,255nm,0.9s
QIS Mount Isa 25.43 150 P **P** 18 51 04.3 -0.6
IPM Ipoh 25.51 277 P **P** 18 51 04.0 -1.7
IPM Ipoh 25.51 277 P **P** 18 51 05.5 -0.3
KULM Kulim 25.97 279 P **P** 18 51 08.9 -1.1
KULM Kulim 25.97 279 P **P** 18 51 10.2 +0.2
AS31 Alice Springs 26.02 164 P **P** 18 51 08.5 -1.8
AS31 IAmb IAmb 18 51 19.1
comp=Z,90nm,0.6s
ASAR Alice Springs 26.02 164 P **P** 18 51 11.1 +0.8
comp=Z,119nm,0.7s,baz=338,slow=6.0,SNR=144
ASAR PcP **PcP** 18 54 39.2 +1.1
comp=Z,7.2nm,0.3s,baz=357,slow=2.1,SNR=5.0
ASAR S **S** 18 55 44.9 +5.6
comp=Z,37nm,0.8s,baz=349,slow=21,SNR=7.8
ASAR ScP **ScP** 18 58 16.4 +0.8
comp=Z,17nm,1.1s,baz=349,slow=3.3,SNR=5.0
ASAR ScS **ScS** 19 02 04.2 -1.3
comp=Z,2.7nm,1.1s,baz=358,slow=3.0,SNR=4.5
ASAR P3KPbc 19 24 00.5
comp=Z,1.1nm,1.0s,baz=160,slow=4.9,SNR=5.9
comp=Z,119nm,0.7s
ASAR Alice Springs 26.02 164 P **P** 18 51 08.9 -1.5
PDSI Padang 26.04 265 P **P** 18 51 09.2 -1.4
comp=Z,2µmcomp=Z,108nm,1.1s
AUALC St Philip's Co 26.04 164 P **P** 18 51 10.1 -0.4
PPI Padang Panjang 26.06 266 P **P** 18 51 10.3 -0.5
comp=Z,2µmcomp=Z,106nm,1.1s
MTSU Mount Surprise 26.28 139 P **P** 18 51 12.8 +0.1
comp=Z,126nm,1.0s
MTSU Mount Surprise 26.28 139 P **P** 18 51 12.2 -0.5
RABL Rabaul 26.36 102 P **P** 18 51 12.9 -0.6
RABL IAmb IAmb 18 51 22.8
comp=Z,242nm,0.6s
WRKA Warakurna 26.41 176 P **P** 18 51 14.0 +0.2
comp=Z,93nm,0.8s
PPSI Pulau Pagai 26.71 261 P **P** 18 51 15.7 -0.9
comp=Z,4µmcomp=Z,473nm,1.1s
GIRL Giralia 26.73 206 P **P** 18 51 18.0 +1.4
comp=Z,134nm,1.1s
GIRL Giralia 26.73 206 P **P** 18 51 14.6 -2.1
MNSI Mandailing Nat 26.82 269 P **P** 18 51 17.1 -0.5
comp=Z,162nm,1.1s
SISI Saibi 27.44 264 P **P** 18 51 21.6 -1.6
comp=Z,216nm,0.8s
RPSI Rantau Prapat 27.48 273 P **P** 18 51 21.5 -2.1
RPSI IAmb IAmb 18 51 28.1
comp=Z,137nm,0.9s
PSI Prapat 27.48 273 P **P** 18 51 23.0 -0.7
PSI Prapat 27.48 273 P **P** 18 51 21.5 -2.2
PSI pmax pmax
comp=Z,137nm,0.9s
GULI GuiLin 28.29 328 P **P** 18 51 27.3 -3.4
GULI pmax pmax
comp=Z,100nm,1.2s
GULI LR LR
comp=Z,3µm,20.6s
GULI LR LR
comp=Z,4µm,20.6s
GULI LR LR
comp=Z,6µm,20.1s
KCSI Kotacane, Aceh 28.66 275 P **P** 18 51 33.0 -1.2
TV1H Townsville Har 28.73 137 P **P** 18 51 35.3 +0.7
GSI Gunungsitoli 28.81 270 P **P** 18 51 32.8 -2.6
GSI IAmb IAmb 18 51 41.3
comp=Z,208nm,0.8s
GSI Gunungsitoli 28.81 270 P **P** 18 51 34.7 -0.7
GSI Gunungsitoli 28.81 270 P **P** 18 51 34.0 -1.4
comp=Z,3µmcomp=Z,336nm,1.0s
MEEK Meekatharra 28.93 195 P **P** 18 51 36.0 -0.3
comp=Z,122nm,1.1s
MEEK Meekatharra 28.93 195 P **P** 18 51 36.2 -0.1
CTA Charters Tower 28.95 139 P **P** 18 51 36.6 0.0
CTAO Charters Tower 28.95 139 P **P** 18 51 36.0 -0.6
CTAO IAmb IAmb 18 51 39.1
comp=Z,184nm,1.2s
CTAO Charters Tower 28.95 139 P **P** 18 51 37.0 +0.4
CTAO Charters Tower 28.95 139 P **P** 18 51 36.0 -0.6
CTAO pmax pmax
comp=Z,184nm,1.3s
SLVN Son La 29.51 314 P **P** 18 51 40.4 -1.2
SLVN Son La 29.51 314 P **P** 18 51 42.0 +0.4
LHMI Lhok Sumawe 29.63 278 P **P** 18 51 41.0 -1.7
LHMI Lhok Sumawe 29.63 278 P **P** 18 51 42.9 +0.2
LHMI Lhok Sumawe 29.63 278 P **P** 18 51 41.7 -1.0
comp=Z,85nm,0.7s
JCJ Chichijima 29.65 29 P **P** 18 51 41.8 -0.9
JCJ Chichijima 29.65 29 P **P** 18 51 42.1 -0.6
SSE Sheshan 29.88 351 P **P** 18 51 46.1 +1.4
SSE pP **pP** 18 51 52.9 -0.8
SSE S **S** 18 56 45.9 +6.1
SSE pmax pmax
comp=Z,32nm,0.9s
SSE pmax pmax
comp=Z,560nm,3.6s
SSE LR LR
comp=Z,1µm,20.4s
SNSI Sinabang, Aceh 30.06 272 P **P** 18 51 46.5 0.0
comp=Z,144nm,0.9s
WHN Wuhan 31.10 340 P **P** 18 51 55.8 +0.4
WHN PP **PnPn** 18 53 00.3 +2.7
WHN S **S** 18 57 00.3 +1.4
WHN SS **SnSn** 18 58 42.6 +0.6
WHN pmax pmax
comp=Z,160nm,0.8s
WHN pmax pmax
comp=Z,2µm,5.9s
WHN LR LR
comp=Z,13µm,20.2s
WHN LR LR
comp=Z,7µm,20.2s
WHN LR LR
comp=Z,9µm,16.6s
NJ2 Nanjing 31.25 348 ⇓P **P** 18 51 58.4 +1.7
NJ2 pmax pmax
comp=Z,180nm,0.9s
NJ2 LR LR
comp=Z,2µm,19.4s
NJ2 LR LR
comp=Z,2µm,20.8s
NJ2 LR LR
comp=Z,3µm,19.9s
GYA Guiyang 31.27 324 ⇑P **P** 18 51 58.0 +0.9
GYA S **S** 18 57 01.1 -0.8
GYA pmax pmax
comp=Z,140nm,1.0s
GYA LR LR
comp=Z,4µm,19.5s
GYA LR LR
comp=Z,2µm,15.3s
GYA LR LR
comp=Z,4µm,19.6s
JNU Nakatsue 31.77 7 P **P** 18 52 02.0 +0.6
comp=Z,198nm,0.9s,baz=182,slow=6.0,SNR=69
comp=Z,198nm,0.9s
JNU Nakatsue 31.77 7 P **P** 18 52 01.3 -0.1
JNU Nakatsue 31.77 7 P **P** 18 52 02.2 +0.8
CM31 Chiang Mai Arr 31.79 304 P **P** 18 52 00.4 -1.3
CMAR Chiang Mai Arr 31.79 304 P **P** 18 52 01.9 +0.3
comp=Z,21nm,0.8s,baz=127,slow=7.4,SNR=89
CMAR PcP **PcP** 18 54 54.3 +1.7
comp=Z,17nm,0.9s,baz=150,slow=1.3,SNR=7.5
CMAR ScP **ScP** 18 58 36.6 +2.8
comp=Z,7.3nm,1.0s,baz=140,slow=2.0,SNR=8.3
CMAR PKiKP **PKiKP** 19 02 20.9 -0.8
comp=Z,0.9nm,0.8s,baz=267,slow=1.3,SNR=5.2
comp=Z,21nm,0.8s
CMAR Chiang Mai Arr 31.79 304 **ScP** 18 58 36.2 +2.4
CMAR Chiang Mai Arr 31.79 304 P **P** 18 52 01.0 -0.7
CMAR Chiang Mai Arr 31.79 304 P **P** 18 52 01.0 -0.7
CMAR 18 54 54.3
MORW Morawa 31.93 197 P **P** 18 52 03.1 +0.2
comp=Z,89nm,1.1s
MORW Morawa 31.93 197 P **P** 18 52 01.0 -1.9
MORW Morawa 31.93 197 P **P** 18 52 03.1 +0.2
CHTO Chiang Mai 31.96 304 P **P** 18 52 01.6 -1.6
CHTO Chiang Mai 31.96 304 P **P** 18 52 03.2 0.0
CHTO S **S** 18 57 10.8 -1.9
CHTO Chiang Mai 31.96 304 P **P** 18 52 03.6 +0.4
CHTO Chiang Mai 31.96 304 P **P** 18 52 01.6 -1.6
CHTO pmax pmax
comp=Z,53nm,0.9s
FORT Forrest 32.10 177 P **P** 18 52 04.5 +0.2
comp=Z,159nm,0.8s
FORT Forrest 32.10 177 P **P** 18 52 03.3 -1.0
FORT IAmb IAmb 18 52 10.6
comp=Z,109nm,0.8s
INKA Innaminka 32.15 156 P **P** 18 52 03.2 -1.5
QLP Quilpie 32.77 150 P **P** 18 52 09.6 -0.5
comp=Z,87nm,0.7s
QLP Quilpie 32.77 150 P **P** 18 52 10.1 -0.1
KMI Kunming 32.78 318 ⇑P **P** 18 52 11.1 +0.5
KMI PcP **PcP** 18 54 57.3 +1.8
KMI pmax pmax
comp=Z,130nm,1.2s
KMI LR LR
comp=Z,3µm,19.7s
KMI LR LR
comp=Z,3µm,21.0s
KMI LR LR
comp=Z,4µm,19.7s
ENH Enshi 32.84 332 P **P** 18 52 09.5 -1.3
JMN Monobe 32.86 12 P **P** 18 52 11.3 +0.4
JMN IAmb IAmb 18 52 14.2
comp=Z,141nm,1.0s
JMN Monobe 32.86 12 P **P** 18 52 12.0 +1.1
JTU Tsushima 33.01 5 P **P** 18 52 13.3 +1.1
BLDU Ballidu 33.20 195 P **P** 18 52 14.6 +0.6
comp=Z,110nm,0.9s
BLDU Ballidu 33.20 195 P **P** 18 52 13.7 -0.3
KLBR Kellerberrin 33.88 193 P **P** 18 52 20.1 +0.3
comp=Z,218nm,0.6s
KLBR Kellerberrin 33.88 193 P **P** 18 52 19.7 -0.1
JHJ2 Mitsune 33.92 20 P **P** 18 52 19.1 -1.0
AUNRC North Rockhamp 34.06 138 P **P** 18 52 21.8 +0.3
PZH PanZhiHua 34.37 319 P P 18 52 33.6 +9.3
PZH S **S** 18 57 48.6 -1.6
PZH PcS **PcS** 18 58 47.1 +0.6
PZH PanZhiHua 34.37 319 ScS ScS 19 02 45.4 -0.2
PZH pmax pmax
comp=Z,190nm,1.0s
PZH pmax pmax
comp=Z,470nm,10.3s
PZH LR LR
comp=N,1µm,22.1s
PZH LR LR
comp=E,2µm,22.1s
PZH LR LR
comp=Z,3µm,24.0s
MUN Mundaring 34.63 195 P **P** 18 52 26.8 +0.4
comp=Z,65nm,0.7s
MUN Mundaring 34.63 195 P **P** 18 52 27.0 +0.7
AUMAZ Mazenod Senior 34.71 196 P **P** 18 52 27.5 +0.5
TJN Taejon 34.75 1 P **P** 18 52 26.7 -0.6
TJN Taejon 34.75 1 P **P** 18 52 29.8 +2.5
TJN Taejon 34.75 1 P **P** 18 52 26.7 -0.6
TJN pmax pmax
comp=Z,346nm,0.9s
GD1S Gladstone Soft 34.82 138 P **P** 18 52 29.4 +1.3
JSG Sagara 34.83 17 P **P** 18 52 27.6 -0.4
JSG Sagara 34.83 17 P **P** 18 52 30.2 +2.2
SAVO Savo Central 34.92 108 P **P** 18 52 28.0 -1.1
HNR Honiara 35.13 109 P **P** 18 52 29.1 -1.8
HNR Honiara 35.13 109 P **P** 18 52 30.6 -0.3
HNR Honiara 35.13 109 P **P** 18 52 29.1 -1.8
HNR pmax pmax
comp=Z,497nm,1.3s
INU Inuyama 35.14 15 P **P** 18 52 28.9 -1.7
INU Inuyama 35.14 15 P **P** 18 52 31.8 +1.2
NWAO Narrogin (SRO) 35.28 193 P **P** 18 52 32.3 +0.4
comp=Z,73nm,0.5s
NWAO Narrogin (SRO) 35.28 193 P **P** 18 52 29.6 -2.3
NWAO IAmb IAmb 18 52 39.3
comp=Z,92nm,1.0s
NWAO Narrogin (SRO) 35.28 193 P **P** 18 52 32.9 +1.0
NWAO S **S** 18 58 05.0 +1.2
NWAO Narrogin (SRO) 35.28 193 P **P** 18 52 32.5 +0.6
NWAO Narrogin (SRO) 35.28 193 P **P** 18 52 32.0 +0.1
NWAO Narrogin (SRO) 35.28 193 P **P** 18 52 29.6 -2.3
NWAO pmax pmax
comp=Z,92nm,1.0s
BBOO Buckleboo 35.29 166 P **P** 18 52 32.0 -0.1
comp=Z,179nm,1.1s
BBOO Buckleboo 35.29 166 P **P** 18 52 30.1 -1.9
BBOO Buckleboo 35.29 166 P **P** 18 52 32.4 +0.4
LYN LuoYang 35.40 340 P **P** 18 52 33.4 +0.5
LYN sP sP 18 52 50.8 +5.1
LYN PP **PnPn** 18 53 50.3 -1.7
LYN S **S** 18 58 05.4 -0.1
LYN pmax pmax
comp=Z,160nm,0.9s
LYN LR LR
comp=Z,3µm,21.3s
LYN LR LR
comp=Z,4µm,19.9s
LYN LR LR
comp=Z,8µm,22.7s
JGF Kuroka 35.46 15 P **P** 18 52 32.6 -0.9
JGF IAmb IAmb 18 53 04.4
comp=Z,90nm,0.9s
JGF Kuroka 35.46 15 P **P** 18 52 33.8 +0.3
TIA Tai'an 35.63 347 P **P** 18 52 34.5 -0.4
TIA pmax pmax
comp=Z,83nm,1.0s
TIA LR LR
comp=Z,2µm,20.6s
TIA LR LR
comp=Z,790nm,19.1s
TIA LR LR
comp=Z,5µm,22.6s
TNCH TengChong 35.67 313 ⇑*i*P **P** 18 52 35.3 -0.4
TNCH S **S** 18 58 04.9 -5.6
TNCH pmax pmax
comp=Z,210nm,1.3s
TNCH LR LR
comp=Z,1µm,13.9s
TNCH LR LR
comp=Z,1µm,14.8s
TNCH LR LR
comp=Z,4µm,24.3s
AUHAR St Anne's Scho 35.77 195 P **P** 18 52 38.6 +2.5
EIDS Eidsvold 35.81 140 P **P** 18 52 36.0 -0.6
comp=Z,138nm,1.4s
EIDS Eidsvold 35.81 140 P **P** 18 52 35.0 -1.7
EIDS IAmb IAmb 18 52 38.0
comp=Z,209nm,1.2s
EIDS Eidsvold 35.81 140 P **P** 18 52 35.8 -0.8
KSAR Wonju Array Be 35.83 2 P **P** 18 52 36.7 +0.1
KSAR Wonju Array Be 35.83 2 P **P** 18 52 36.7 +0.1
KSRS Korea Array 35.84 2 P **P** 18 52 37.9 +1.2
comp=Z,66nm,0.8s,baz=180,slow=10,SNR=58
KSRS PcP **PcP** 18 55 05.5 +1.7
comp=Z,14nm,0.8s,baz=180,slow=2.8,SNR=7.9
comp=Z,66nm,0.8s
INCN Inchon 35.85 0 P **P** 18 52 36.3 -0.5
INCN Inchon 35.85 0 P **P** 18 52 38.0 +1.3
INCN Inchon 35.85 0 P **P** 18 52 36.3 -0.5
INCN pmax pmax
comp=Z,50nm,0.8s
KS19 Wonju Array Si 35.89 2 P **P** 18 52 36.9 -0.2
KS19 IAmb IAmb 18 52 50.0
comp=Z,80nm,0.8s
WHYH Whyalla 35.90 164 P **P** 18 52 37.7 +0.5
STKA Stephens Creek 36.16 158 P **P** 18 52 39.1 -0.3
comp=Z,547nm,0.9s
STKA Stephens Creek 36.16 158 P **P** 18 52 39.1 -0.3
comp=Z,56nm,0.6s,baz=331,slow=8.8,SNR=53
comp=Z,56nm,0.6s
STKA Stephens Creek 36.16 158 P **P** 18 52 38.5 -0.9
CD2 Chengdu 36.30 326 P **P** 18 52 40.4 -0.3
CD2 S **S** 18 58 21.0 +1.4
CD2 pmax pmax
comp=Z,360nm,0.8s
CD2 LR LR
comp=Z,6µm,20.1s
CD2 LR LR
comp=Z,7µm,23.0s
XAN Xi'an 36.30 335 ⇓P **P** 18 52 40.1 -0.6
XAN S **S** 18 58 21.4 +1.9
XAN pmax pmax
comp=Z,240nm,1.4s
XAN pmax pmax
comp=Z,490nm,3.6s
AUJCS Jamestown Cent 36.35 163 P **P** 18 52 41.3 +0.2
MAJO Matsushiro 36.58 16 P **P** 18 52 41.9 -1.2
MAJO IAmb IAmb 18 52 46.4
comp=Z,182nm,1.0s
MAJO Matsushiro 36.58 16 P **P** 18 52 42.5 -0.5
MAJO Matsushiro 36.58 16 P **P** 18 52 41.9 -1.2
MAJO pmax pmax
comp=Z,182nm,1.0s
MJAR Matsushiro Arr 36.58 16 P **P** 18 52 42.2 -0.8
comp=Z,105nm,0.9s,baz=185,slow=8.9,SNR=94
MJAR PcP **PcP** 18 55 07.7 +1.7
comp=Z,22nm,0.8s,baz=179,slow=3.1,SNR=6.1
MJAR ScP **ScP** 18 58 50.3 -0.1
comp=Z,8.0nm,1.1s,baz=196,slow=4.4,SNR=4.6
comp=Z,105nm,0.9s
HTT Hallett 36.66 162 P **P** 18 52 43.8 0.0
comp=Z,32nm,1.4s
HTT Hallett 36.66 162 P **P** 18 52 43.6 -0.2
RKGY Rocky Gully 36.95 193 P **P** 18 52 47.2 +1.0
comp=Z,278nm,0.9s
AULRC Lightning Ridg 37.01 148 P **P** 18 52 46.2 -0.6
AUALB St Joseph's Co 37.13 192 P **P** 18 52 50.0 +2.3
HNS HongShan 37.35 345 ⇑P **P** 18 52 49.0 -0.5
HNS pmax pmax
comp=Z,120nm,1.0s
DL2 Dalian 37.52 354 P **P** 18 52 51.8 +0.9
DL2 S **S** 18 58 41.6 +3.7
DL2 pmax pmax
comp=Z,750nm,0.9s
DL2 pmax pmax
comp=Z,3µm,3.5s
DL2 LR LR
comp=Z,2µm,18.1s
DL2 LR LR
comp=Z,4µm,18.7s
DL2 LR LR
comp=Z,5µm,19.6s
CMSA Cobar Meteorol 37.59 152 P **P** 18 52 51.4 -0.3
comp=Z,95nm,1.1s
CMSA Cobar Meteorol 37.59 152 P **P** 18 52 51.6 0.0
TW1H Toowoomba 1 Ha 37.91 141 P **P** 18 52 56.0 +1.5
AUMAR Marden Senior 37.94 164 P **P** 18 52 55.8 +1.3
GHSS Government Hou 37.96 164 P **P** 18 52 56.3 +1.6
JSD Sado 38.00 15 P **P** 18 52 54.0 -1.0
JSD IAmb IAmb 18 52 59.7
comp=Z,87nm,0.7s
JSD Sado 38.00 15 P **P** 18 52 55.7 +0.7
TIY Taiyuan 38.30 342 *e*P **P** 18 52 58.5 +0.9
TIY S **S** 18 58 42.8 -7.0
TIY pmax pmax
comp=Z,87nm,0.8s
TIY pmax pmax
comp=Z,500nm,10.3s
TIY LR LR
comp=Z,2µm,21.3s
TIY LR LR
comp=Z,2µm,23.4s
TIY LR LR
comp=Z,4µm,31.6s
AUMBR Murray Bridge 38.35 163 P **P** 18 52 59.4 +1.4
AUWSH Wavell State H 38.48 140 P **P** 18 52 59.0 -0.2
JMM Marumori 38.57 18 P **P** 18 52 59.5 -0.3
JMM Marumori 38.57 18 P **P** 18 53 00.6 +0.8
LKP Lekhapani 38.97 314 IAmb IAmb 18 52 58.0
comp=Z,299nm,1.3s
LKP *e*P **P** 18 52 59.2 -4.2
IMP Imphal 39.00 309 *e*P **P** 18 53 02.7 -1.1
IMP IAmb IAmb 18 53 06.2
comp=Z,104nm,0.9s
GC1S Gold Coast 1 S 39.31 141 P **P** 18 53 06.6 +0.4
KOHI KOHIMA 39.35 311 *e*P **P** 18 53 06.1 -0.7
KOHI IAmb IAmb 18 53 08.4
comp=Z,469nm,1.2s
MOKO MOKOCHONG 39.37 312 *e*P **P** 18 53 06.1 -0.8
MOKO IAmb IAmb 18 53 11.7
comp=Z,148nm,0.7s
BJT Baijiatuau 39.49 348 IAmb IAmb 18 53 12.6
comp=Z,138nm,0.8s
BJT Baijiatuau 39.49 348 P **P** 18 53 07.6 +0.1
BJI Beijing 39.51 348 P **P** 18 53 07.5 -0.1
BJI S **S** 18 59 08.3 +0.5
BJI pmax pmax
comp=Z,97nm,1.0s
BJI pmax pmax
comp=Z,650nm,5.3s
BJI LR LR
comp=Z,660nm,22.7s
BJI LR LR
comp=Z,810nm,27.1s
BJI LR LR
comp=Z,2µm,25.5s
AUDCS Dubbo College 39.58 150 P **P** 18 53 08.3 0.0
JORH JORHAT 39.80 312 *e*P **P** 18 53 09.9 -0.3
JORH IAmb IAmb 18 53 12.2
comp=Z,215nm,1.1s
AUPHS Peel High Scho 39.89 146 P **P** 18 53 11.0 0.0
BELO BELONIA 40.22 305 *e*P **P** 18 53 15.6 +1.8
LZDM Lanzhou Array 40.26 331 P **P** 18 53 14.6 +0.2
comp=Z,100nm,1.1s,baz=168,slow=7.6,SNR=16
LZDM PcP **PcP** 18 55 19.6 +1.7
comp=Z,3.4nm,0.4s,baz=197,slow=3.0,SNR=2.3
comp=Z,100nm,1.1s
SNY Shenyang 40.27 357 ⇓P **P** 18 53 14.8 +0.9
SNY pmax pmax
comp=Z,110nm,0.7s
LZH Lanzhou 40.30 331 *e*P **P** 18 53 14.8 +0.3
LZH pP sP 18 53 25.0 -2.4
LZH S **S** 18 59 17.0 -3.2
LZH pmax pmax
comp=Z,320nm,1.2s
LZH LR LR
comp=Z,6µm,18.9s
LZH LR LR
comp=Z,3µm,17.5s
LZH LR LR
comp=Z,7µm,22.7s
ITAN ITANAGAR 40.41 312 *e*P **P** 18 53 15.1 -0.3
ITAN IAmb IAmb 18 53 18.0
comp=Z,504nm,1.0s
ZIRO ZIRO 40.53 313 *e*P **P** 18 53 16.2 -0.4
ZIRO IAmb IAmb 18 53 19.0
comp=Z,470nm,1.1s
ARPS Mount Arapiles 40.66 161 P **P** 18 53 17.4 +0.2
comp=Z,97nm,0.8s
AGT Agartala 40.67 306 *e*P **P** 18 53 19.1 +1.6
AGT IAmb IAmb 18 53 23.4
comp=Z,72nm,0.8s
TEZP TEZPUR 40.82 311 *e*P **P** 18 53 18.6 -0.2
TEZP IAmb IAmb 18 53 23.0
comp=Z,75nm,1.0s
SHL Shillong 40.98 309 P **P** 18 53 18.9 -1.4

SHL IAmb IAmb 18 53 22.2
comp=Z,118nm,0.7s
SHL Shillong 40.98 309 P P 18 53 20.6 +0.3
SNR=62
SHL Shillong 40.98 309 *e*P **P 18 53 19.3 -1.1**
SHL IAmb IAmb 18 53 22.4
comp=Z,102nm,0.8s
SHL Shillong 40.98 309 P **P 18 53 18.9 -1.4**
SHL pmax pmax
comp=Z,118nm,0.7s
YNG Young 41.14 152 P **P 18 53 21.7 +0.4**
comp=Z,115nm,1.0s
MSHR Mys Shultsa 41.16 5*ce*P **P 18 53 23.3 +2.0**
MSHR pmax pmax
comp=Z,155nm,1.0s
JTM Tenmabayashi 41.34 17 P **P 18 53 24.1 +1.3**
HHC Hu-ho-hao-te 41.44 343⇑*i*P **P 18 53 24.6 +0.8**
HHC pmax pmax
comp=Z,73nm,1.0s
GUWA GUWAHATI 41.45 309 *e*P **P 18 53 23.6 -0.4**
GUWA IAmb IAmb 18 53 25.8
comp=Z,69nm,1.1s
MGCD Mangrove Creek 41.63 148 P **P 18 53 25.5 +0.3**
comp=Z,62nm,0.8s
MGCD Mangrove Creek 41.63 148 P **P 18 53 27.4 +2.1**
BTO Baotou 41.70 341 *e*P **P 18 53 27.8 +1.9**
BTO S **S 18 59 47.3 +6.6**
BTO pmax pmax
comp=Z,36nm,0.7s
BTO pmax pmax
comp=Z,2μm,5.4s
BTO LR LR
comp=Z,5μm,20.0s
BTO LR LR
comp=Z,6μm,19.2s
BTO LR LR
comp=Z,7μm,19.6s
SYDH Sydney Hard Ro 41.87 149 P **P 18 53 29.3 +2.1**
TAWA Tawang 42.04 311 *e*P **P 18 53 30.2 +1.0**
TAWA IAmb IAmb 18 53 35.6
comp=Z,94nm,0.7s
BRAT Ballarat 42.08 159 P **P 18 53 31.1 +2.3**
AUMTC Mt Clear Colle 42.11 159 P **P 18 53 30.9 +1.8**
CN2 Changchun 42.17 359 P **P 18 53 30.3 +0.8**
CN2 pmax pmax
comp=Z,70nm,1.0s
AUMTS Mt Stromlo 42.26 152 P **P 18 53 31.4 +0.9**
CAN Canberra 42.26 152 P **P 18 53 30.7 +0.2**
comp=Z,121nm,1.0s
CAN Canberra 42.26 152 P **P 18 53 29.7 -0.8**
CAN Canberra 42.26 152 P **P 18 53 31.4 +0.9**
CAN Canberra 42.26 152 P **P 18 53 29.7 -0.8**
CAN pmax pmax
comp=Z,106nm,1.0s
AUDAR Daramalan Coll 42.27 152 P **P 18 53 31.9 +1.4**
AUSIS Research Schoo 42.28 152 P **P 18 53 33.0 +2.4**
CNB Canberra Magne 42.43 152 P **P 18 53 33.5 +1.6**
TOO Toolangi 42.67 157 P **P 18 53 34.2 +0.4**
comp=Z,22nm,1.0s
TOO Toolangi 42.67 157 P **P 18 53 32.1 -1.7**
TOO Toolangi 42.67 157 P **P 18 53 32.1 -1.7**
TOO pmax pmax
comp=Z,17nm,0.9s
USRK Ussuriysk Ar. 42.84 6 P **P 18 53 35.8 +0.8**
comp=Z,196nm,1.0s,baz=189,slow=7.5,SNR=83
comp=Z,196nm,1.0s
AUSMG Snowy Mountain 42.99 153 P **P 18 53 38.0 +1.6**
AUUHS Ulladulla High 42.99 151 P **P 18 53 38.1 +1.8**
MDJ Mudanjiang 43.07 3 IAmb IAmb 18 53 43.1
comp=Z,225nm,0.8s
MDJ Mudanjiang 43.07 3 P **P 18 53 37.4 +0.6**
MDJ S **S 19 00 06.8 +6.2**
MDJ pmax pmax
comp=Z,78nm,1.1s
MDJ pmax pmax
comp=Z,1μm,4.1s
MDJ LR LR
comp=Z,3μm,24.1s
MDJ LR LR
comp=Z,2μm,19.7s
MDJ LR LR
comp=Z,5μm,22.8s
MDJ Mudanjiang 43.07 3 P **P 18 53 38.2 +1.4**
XLT XiLinHaoTe 43.24 349 *e*P **P 18 53 38.4 0.0**
XLT S **S 19 00 04.5 +1.1**
XLT ScS **ScS 19 03 30.6 -5.7**
XLT pmax pmax
comp=Z,150nm,0.9s
XLT pmax pmax
comp=Z,2μm,5.1s
XLT LR LR
comp=Z,230nm,22.2s
XLT LR LR
comp=Z,2μm,20.7s
XLT LR LR
comp=Z,4μm,23.4s
SANVU Saraoutou 43.70 114 P **P 18 53 40.5 -1.8**
SANVU IAmb IAmb 18 53 51.9
comp=Z,182nm,0.9s
SANVU Saraoutou 43.70 114 P **P 18 53 43.2 +0.8**
LSA Lhasa 43.71 313 IAmb IAmb 18 53 50.0
comp=Z,402nm,1.7s
BNX BinXian 44.10 1⇑P **P 18 53 44.4 -0.7**
BNX sP **sP 18 54 02.8 +4.6**
BNX PP **PcP 18 55 30.8 +0.8**
BNX S **S 19 00 13.1 -2.6**
BNX sS **sS 19 00 34.8 +3.9**
BNX pmax pmax
comp=Z,190nm,1.0s
BNX pmax pmax
comp=Z,1μm,4.6s
BNX LR LR
comp=Z,1μm,20.1s
BNX LR LR
comp=Z,2μm,19.0s
BNX LR LR
comp=Z,5μm,24.9s
SHBG Sahibganj 44.18 306 *e*P **P 18 53 46.4 +0.4**
TEY Ternei 44.32 10⇑*e*P **P 18 53 48.0 +1.1**
TEY *e* 18 55 35.0
TEY pmax pmax
comp=N,30nm,0.9s
TEY pmax pmax
comp=Z,60nm,1.0s
ASAJ Asahikawa 44.85 17 P **P 18 53 51.6 +0.5**
comp=Z,128nm,0.9s,baz=230,slow=17,SNR=23
comp=Z,128nm,0.9s
ASAJ Asahikawa 44.85 17 P **P 18 53 50.9 -0.2**
ASAJ pmax pmax
comp=Z,212nm,1.0s
JKA Kamikawa-asahi 44.85 17 P **P 18 53 50.9 -0.2**
JKA IAmb IAmb 18 53 57.4
comp=Z,212nm,1.0s
GTA Gaotai 44.88 331 P **P 18 53 51.8 +0.2**
GTA PcP **PcP 18 55 34.6 +1.6**
GTA S **S 19 00 28.8 +1.4**
GTA ScS **ScS 19 03 45.9 -1.0**
GTA pmax pmax
comp=Z,82nm,0.9s
BOK Bokaro 45.06 303 *e*P **P 18 53 54.0 +0.9**
VIS Vishakhapatnam 45.27 294 *e*P **P 18 53 55.5 +0.6**
GOMU GeErMu 45.27 323 P **P 18 53 55.3 +0.2**
GOMU PcP **PcP 18 55 36.5 +1.8**
GOMU S **S 19 00 37.4 +3.7**
GOMU pmax pmax
comp=Z,73nm,1.4s
GOMU LR LR
comp=Z,2μm,19.1s
GOMU LR LR
comp=Z,1μm,20.2s
GOMU LR LR
comp=Z,2μm,17.1s
RAGD RAYAGADA 45.59 296 *e*P **P 18 53 57.5 +0.1**
RAGD IAmb IAmb 18 54 00.4
comp=Z,58nm,0.8s
ONTNC Ouen Toro 45.66 124 IAmb IAmb 18 53 59.9
comp=Z,177nm,1.3s
ONTNC Ouen Toro 45.66 124 P **P 18 53 57.9 0.0**
AUBRN Burnie High Sc 45.87 159 P **P 18 54 00.5 +1.3**
PALK Pallekele 45.90 279 P **P 18 53 59.0 -1.0**
PALK Pallekele 45.90 279 P **P 18 54 00.7 +0.7**
PALK Pallekele 45.90 279 P **P 18 53 59.0 -1.0**
PALK pmax pmax
comp=Z,104nm,1.6s
YATNC Mamie plateau, 45.91 123 P **P 18 54 00.7 +0.8**

GAYA Gaya 46.01 304 *e*P **P 18 54 00.3 -0.3**
GAYA IAmb IAmb 18 54 03.1
comp=Z,232nm,1.5s
OUENC Ouen Island, N 46.03 123 P **P 18 54 01.8 +1.0**
EVN Everest 46.10 309 P **P 18 54 01.1 -1.0**
EVN IAmb IAmb 18 54 09.2
comp=Z,136nm,0.9s
PINNC Pines Island, 46.62 123 P **P 18 54 06.0 +0.5**
PINNC Pines Island, 46.62 123 P **P 18 54 06.4 +1.0**
MARNC Mare, Loyalty 46.64 122 P **P 18 54 06.3 +0.7**
CORO Coronation Par 46.69 159 P **P 18 54 07.6 +2.0**
YSS Yuzhno-Sakhali 47.51 15 P **P 18 54 11.5 -0.4**
YSS IAmb IAmb 18 54 14.7
comp=Z,125nm,0.9s
YSS Yuzhno-Sakhali 47.51 15 P **P 18 54 13.1 +1.2**
YSS Yuzhno-Sakhali 47.51 15 *e*P **P 18 54 12.4 +0.5**
YSS *e* 18 55 39.9
YSS *e* 18 56 02.1
YSS *e*S **S 19 01 03.9 -0.7**
YSS pmax pmax
comp=Z,2μm,4.7s
YSS pmax pmax
comp=Z,140nm,0.9s
YSS MLR MLR
comp=Z,3μm,14.0s
YSS MLR MLR
comp=N,1μm,13.0s
YSS MLR MLR
comp=E,2μm,13.0s
MOO Moorlands 47.57 159 P **P 18 54 12.9 +0.3**
comp=Z,62nm,1.4s
BLSP Bilaspur 47.68 299 *e*P **P 18 54 13.1 -0.7**
BLSP IAmb IAmb 18 54 20.5
comp=Z,48nm,0.7s
HIA Hailar 47.97 354 P **P 18 54 16.9 +1.3**
HILR Hailar Array B 48.25 354 P **P 18 54 18.5 +0.7**
comp=Z,34nm,0.5s,baz=154,slow=12,SNR=54
HILR PcP **PcP 18 55 46.3 +1.8**
comp=Z,14nm,0.5s,baz=163,slow=4.7,SNR=2.2
comp=Z,34nm,0.5s
HEH HeiHe 48.62 1 *e*P **P 18 54 20.4 -0.1**
HEH pmax pmax
comp=Z,240nm,1.2s
HEH LR LR
comp=Z,2μm,23.8s
HEH LR LR
comp=Z,1μm,22.5s
HEH LR LR
comp=Z,6μm,23.3s
SALM Salem 48.86 284 *e*P **P 18 54 22.6 -0.3**
ULN Ulaanbaatar 49.16 343 P **P 18 54 25.1 +0.1**
ULN IAmb IAmb 18 54 50.1
comp=Z,160nm,1.4s
ULN Ulaanbaatar 49.16 343*ce*P **P 18 54 25.6 +0.6**
ULN pmax pmax
comp=Z,67nm,0.8s
UGL Uglegorsk 49.31 14 *e*P **P 18 54 28.4 +2.6**
SONM Songino Array 49.34 342 P **P 18 54 26.7 +0.4**
comp=Z,50nm,0.8s,baz=158,slow=6.9,SNR=166
comp=Z,50nm,0.8s
KOD Kodaikanal 49.38 282 *e*P **P 18 54 26.0 -1.3**
KOD IAmb IAmb 18 54 33.1
comp=Z,156nm,1.1s
HYBB Hyderabad (bro 49.60 292 *e*P **P 18 54 27.8 -0.8**
HYBB *es*P **sP 18 54 39.4 -2.3**
HYBB *e*PcP **PcP 18 55 48.9 -1.2**
HYBB *e*PP **PP 18 56 23.0 -0.3**
HYBB *e*S **S 19 01 34.9 -0.2**
HYBB IVMs_BB IVMs_BB 19 02 06.9
comp=Z,2μm,24.3s
TRD Trivandrum 49.70 280 *e*P **P 18 54 28.5 -0.9**
GRNR Gornyy 49.86 8⇑*i*P **P 18 54 31.1 +1.1**
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR MLR MLR
comp=E,380nm,15.0s
TYV Tymovskoe 51.11 13 *e*P **P 18 54 42.9 +3.4**
TYV *e*S S 19 02 06.0 +11
TYV pmax pmax
comp=Z,53nm,1.4s
TYV pmax pmax
comp=Z,1μm,4.7s
TYV smax smax
comp=N,1μm,4.5s
TYV smax smax
comp=E,1μm,4.5s
CIT Chita 51.52 350 *e*P **P 18 54 44.0 +1.4**
CIT *e* 18 54 53.4
CIT *e* 18 55 55.4
CIT *e* 18 56 44.2
CIT pmax pmax
comp=Z,1μm,1.9s
AKL Akola 51.81 295 *e*P **P 18 54 44.2 -1.0**
AKL IAmb IAmb 18 54 47.9
comp=Z,104nm,0.6s
JHNI Jhansi 51.89 302 *e*P **P 18 54 43.6 -2.1**
LGTI Lohaghat 51.94 307 *e*P **P 18 54 45.6 -0.5**
LGTI IAmb IAmb 18 54 54.6
comp=Z,38nm,0.7s
ZEA Zeya 52.11 1 *e*P **P 18 54 47.2 +0.3**
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA MLR MLR
comp=E,600nm,20.0s
ZEA MLR MLR
comp=Z,2μm,23.0s
BHPL Bhopal 52.15 299 *e*P **P 18 54 46.8 -1.0**
BHPL IAmb IAmb 18 54 54.5
comp=Z,98nm,0.6s
NRDN NARMADA NAGAR 52.23 298 *e*P **P 18 54 50.6 +2.3**
NRDN IAmb IAmb 18 54 57.9
comp=Z,148nm,1.1s
MNGI Mangalore 52.31 285 *e*P **P 18 54 48.5 -0.5**
MNGI IAmb IAmb 18 54 53.9
comp=Z,70nm,0.7s
ZAK Zakamensk 52.55 342 *e*P **P 18 54 50.0 -0.3**
ZAK pmax pmax
comp=Z,48nm,1.5s
GUNA GUNA 52.66 300 *e*P **P 18 54 50.4 -1.1**
GUNA IAmb IAmb 18 54 58.1
comp=Z,216nm,0.8s
JOSI Joshimath 52.93 308 *e*P **P 18 54 53.0 -0.7**
JOSI IAmb IAmb 18 55 05.2
comp=Z,98nm,0.8s
KAAM Kaadhehdhoo 53.40 270 P **P 18 54 56.0 -1.1**
FUNA Funafuti 53.56 102 P **P 18 54 57.9 -0.3**
FUNA Funafuti 53.56 102 P **P 18 54 59.3 +1.0**
TLY Talaya 53.57 343 P **P 18 54 57.3 -0.4**
TLY IAmb IAmb 18 55 06.1
comp=Z,78nm,0.9s
TLY Talaya 53.57 343 P **P 18 54 59.7 +1.9**
TLY Talaya 53.57 343*ce*P **P 18 54 59.8 +2.0**
TLY pmax pmax
comp=Z,130nm,1.7s
KAD Karad 53.65 290 *e*P **P 18 54 56.8 -2.2**
KAD IAmb IAmb 18 55 03.9
comp=Z,58nm,1.0s
IRK Irkutsk 53.88 343 *e*P **P 18 55 02.1 +2.1**
IRK pmax pmax
comp=Z,266nm,2.0s
NDI New Delhi 54.10 305 *e*P **P 18 55 00.7 -1.3**
NDI IAmb IAmb 18 55 06.7
comp=Z,59nm,0.7s
AYAN Aya Nagar 54.11 305 *e*P **P 18 55 00.6 -1.4**
AYAN IAmb IAmb 18 55 03.9
comp=Z,246nm,1.2s
NPLP NPLP New Delhi 54.13 305 *e*P **P 18 55 00.2 -2.0**
NPLP IAmb IAmb 18 55 06.8
comp=Z,76nm,0.7s
POO Poona 54.21 292 *e*P **P 18 55 01.4 -1.6**
POO IAmb IAmb 18 55 08.0
comp=Z,85nm,1.2s
MSVF Nonsavu 54.31 113 P **P 18 55 02.9 -0.9**
MSVF IAmb IAmb 18 55 12.6
comp=Z,192nm,1.2s
MSVF Nonsavu 54.31 113 P **P 18 55 05.5 +1.7**
MSVF Nonsavu 54.31 113 P **P 18 55 02.9 -0.9**
MSVF pmax pmax
comp=Z,192nm,1.2s
MOY Mondy 54.39 341 *e*P **P 18 55 04.6 +0.7**
MOY pmax pmax
comp=Z,176nm,1.8s
WMQ Urumqi 54.39 326⇑P **P 18 55 04.5 +0.5**
WMQ sP sP 18 55 22.3 +5.2
WMQ pmax pmax
comp=Z,170nm,0.9s
WMQ pmax pmax
comp=Z,420nm,3.6s
WMQ LR LR
comp=Z,5μm,17.9s
WMQ LR LR
comp=Z,2μm,18.9s
WMQ LR LR
comp=Z,3μm,19.9s
KUDL Kundal 54.52 304 *e*P **P 18 55 02.8 -2.3**
KUDL IAmb IAmb 18 55 10.1
comp=Z,151nm,1.0s
SMLA Simla 55.05 308 *e*P **P 18 55 08.3 -0.5**
SMLA IAmb IAmb 18 55 11.6
comp=Z,191nm,0.9s
BHK Bhakra 55.75 308 *e*P **P 18 55 13.7 -0.2**
BHK IAmb IAmb 18 55 22.4
comp=Z,147nm,1.1s
UDPR Udaipur 55.79 299 *e*P **P 18 55 13.7 -0.7**
UDPR IAmb IAmb 18 55 17.1
comp=Z,171nm,0.8s
ALCI Alchi Leh 56.26 311 *e*P **P 18 55 17.0 -1.0**
ALCI IAmb IAmb 18 55 20.1
comp=Z,180nm,1.0s
TLWR Talawar 56.32 308 *e*P **P 18 55 17.5 -0.6**
TLWR IAmb IAmb 18 55 20.2
comp=Z,187nm,1.1s
TSSA Tissa 56.50 309 *e*P **P 18 55 18.2 -1.4**
TSSA IAmb IAmb 18 55 26.3
comp=Z,120nm,1.2s
BOD Bodaibo 57.05 352 *e*P **P 18 55 22.9 +0.3**
BOD pmax pmax
comp=Z,192nm,1.0s
JMU Jammu 57.43 308 *e*P **P 18 55 26.7 +0.9**
JMU IAmb IAmb 18 55 33.0
comp=Z,129nm,0.8s
PEA0B Petropavlovsk- 57.65 22*ce*P **P 18 55 30.6 +3.6**
PETK Petropavlovsk- 57.65 22 P **P 18 55 27.9 +1.0**
comp=Z,72nm,0.8s,baz=186,slow=4.7,SNR=58
comp=Z,72nm,0.8s
PETK Petropavlovsk- 57.65 22 P **P 18 55 28.0 +1.0**
PET Petropavlovsk 57.94 22 P **P 18 55 28.9 -0.1**
PET IAmb IAmb 18 55 34.4
comp=Z,143nm,1.3s
PET Petropavlovsk 57.94 22 P **P 18 55 30.4 +1.4**
PET Petropavlovsk 57.94 22*ce*P **P 18 55 31.4 +2.4**
PET pmax pmax
comp=Z,168nm,1.7s
PET Petropavlovsk 57.94 22 P **P 18 55 30.4 +1.4**
comp=Z,83nm,1.5s
ZSN Zaisan 58.23 328‖*i*P **P 18 55 31.3 0.0**
ZSN Zaisan 58.23 328*d i*P **P 18 55 31.2 0.0**
SHLS Shalkode 58.88 321 *e*P **P 18 55 34.2 -1.8**
comp=Z,110nm,1.0s
SHLS Shalkode 58.88 321 *e*P **P 18 55 34.2 -1.8**
SHLS pmax pmax
comp=Z,110nm,1.0s
DCZ Deep Cove 59.01 148 IAmb IAmb 18 55 37.9
comp=Z,105nm,1.4s
JCZ Jackson Bay 59.03 145 P **P 18 55 37.7 +0.8**
TARG Taragay, Kyrgy 59.22 319 IAmb IAmb 18 55 49.8
comp=Z,97nm,0.9s
MK31 Makanchi Array 59.23 326*ce*P **P 18 55 37.9 -0.3**
MKAR Makanchi Array 59.23 326 P **P 18 55 37.7 -0.5**
comp=Z,44nm,0.5s,baz=122,slow=7.7,SNR=249
MKAR S **S 19 03 48.6 +4.6**
comp=Z,2.0nm,0.9s,baz=148,slow=12,SNR=5.3
MKAR LR LR 19 22 05.7
comp=Z,3μm,20.9s,baz=47,slow=37
MKAR PKPPKP **P'P'df 19 25 05.6 -5.1**
comp=Z,1.1nm,0.9s,baz=258,slow=1.1,SNR=5.5
MKAR PKP2ab **P'P'ab 19 25 37.5 +3.5**
comp=Z,2.6nm,1.1s,baz=62,slow=2.9,SNR=3.9
comp=Z,44nm,0.5s
MKAR Makanchi Array 59.23 326 P **P 18 55 37.5 -0.7**
KSH Kashi 59.42 316 P **P 18 55 41.3 +1.5**
KSH pmax pmax
comp=Z,100nm,1.1s
SATY Saty 59.49 321 *e*P **P 18 55 40.2 -0.1**
comp=Z,136nm,1.0s
SATY *e*S **S 19 03 47.6 -0.2**
SATY Saty 59.49 321 *e*P **P 18 55 40.1 -0.1**
SATY *e*S **S 19 03 47.6 -0.2**
SATY pmax pmax
comp=Z,137nm,1.0s
WHZ Wether Hill Ro 59.71 148 IAmb IAmb 18 55 47.2
comp=Z,72nm,1.1s
TOZ Tahuroa Road 59.77 136 IAmb IAmb 18 55 48.9
comp=Z,51nm,0.9s
TKNZ Takaka Hill 59.78 141 P **P 18 55 41.4 -0.7**
LBZ Lake Benmore 60.02 145 P **P 18 55 43.1 -0.5**
THZ Tophouse 60.14 141 P **P 18 55 44.1 -0.5**
THZ IAmb IAmb 18 55 51.0
comp=Z,48nm,0.8s
LTZ Lake Taylor 60.31 143 P **P 18 55 45.1 -0.7**
LTZ IAmb IAmb 18 55 49.4
comp=Z,159nm,1.5s
TNSS Tian-Shan 60.41 320 *e*P **P 18 55 46.2 -0.6**
TNSS Tian-Shan 60.41 320 *e*P **P 18 55 46.2 -0.6**
YAK Yakutsk 60.47 2 P **P 18 55 45.8 -0.5**
YAK Yakutsk 60.47 2 *e*P **P 18 55 45.8 -0.5**
YAK *e*PPP PPP 18 59 24.8
YAK *e*S **S 19 03 55.3 -4.0**
YAK *e**SS sS 19 04 31.1 +16
YAK *e*SS **SS 19 08 01.3 +3.6**
YAK *e*SSS SSS 19 10 35.9
YAK pmax pmax
comp=Z,217nm,1.0s
YAK pmax pmax
comp=N,106nm,1.1s
YAK pmax pmax
comp=E,23nm,1.2s
YAK smax smax
comp=E,572nm,3.7s
YAK smax smax
comp=N,390nm,3.3s
OXZ Oxford 60.48 143 P **P 18 55 46.0 -0.8**
OXZ IAmb IAmb 18 55 49.7
comp=Z,146nm,1.7s
ULHL Ulahol 60.49 319 P **P 18 55 47.3 +0.1**
SNR=53
TDK Taldyqorghan 60.49 323 *e*P **P 18 55 47.1 +0.1**
comp=Z,87nm,0.7s
TDK Taldyqorghan 60.49 323 *e*P **P 18 55 47.0 +0.1**
TDK pmax pmax
comp=Z,87nm,0.7s
BOOM Boomskoye usch 60.80 319 IAmb IAmb 18 55 52.7
comp=Z,117nm,1.2s
GVZ Greta Valley S 60.88 142 P **P 18 55 49.2 -0.4**
KHZ Kahutara 60.89 142 IAmb IAmb 18 55 55.4
comp=Z,68nm,0.9s
MA2 Magadan 60.97 14 P **P 18 55 50.2 +0.4**
MA2 Magadan 60.97 14 P **P 18 55 51.8 +2.0**
MA2 Magadan 60.97 14*ce*P **P 18 55 52.5 +2.7**
MA2 pmax pmax
comp=Z,306nm,1.7s
MA2 Magadan 60.97 14 P **P 18 55 51.3 +1.5**
comp=Z,187nm,0.8s
BKZ Black Stump Fm 61.15 137 IAmb IAmb 18 55 54.8
comp=Z,45nm,0.7s
BKZ Black Stump Fm 61.15 137 P **P 18 55 50.6 -0.9**
BHW Baring Head 61.20 140 IAmb IAmb 18 55 58.4
comp=Z,140nm,1.5s
KUU Kurty 61.21 321 *e*P **P 18 55 51.8 -0.1**
comp=Z,136nm,1.0s
KUU Kurty 61.21 321 *e*P **P 18 55 51.7 -0.1**
KUU pmax pmax
comp=Z,136nm,1.0s
TKM2 Tokmak 2 61.23 320 P **P 18 55 51.8 -0.4**
SNR=113
KBK Karagaybulak 61.53 319 P **P 18 55 54.6 +0.4**
SNR=39
UCH Uchtor 61.62 318 P **P 18 55 55.3 +0.1**
SNR=175
CHMS Chumysh 61.81 319 P **P 18 55 56.3 +0.4**
SNR=19
AAK Ala-Archa 61.82 319 P **P 18 55 56.0 -0.1**
comp=Z,22nm,0.6s,baz=154,slow=5.7,SNR=29
comp=Z,22nm,0.6s
AAK Ala-Archa 61.82 319 P **P 18 55 55.6 -0.5**
AAK IAmb IAmb 18 56 04.5
comp=Z,49nm,0.9s

AAK Ala-Arcba 61.82 319 P P 18 55 56.8 +0.7
AAK Ala-Arcba 61.82 319 P P 18 55 57.1 +1.0
SNR=21
AAK Ala-Arcba 61.82 319 *ce* P P 18 55 56.9 +0.7
AAK pmax pmax
comp=Z,46nm,1.0s
SGDS Sogindy 62.10 320 ⇓ *i* P P 18 55 57.6 -0.3
USP Ospenovka 62.10 319 P P 18 55 57.3 -0.6
SNR=105
EKS2 Erkin-Say 62.30 319 P P 18 55 59.2 -0.1
SNR=61
ZALV Zalesovo Beam 62.45 334 P P 18 55 59.4 -0.5
comp=Z,14nm,0.4s,baz=116,slow=6.8,SNR=77
ZALV S S 19 04 22.3 -2.5
comp=Z,2.2nm,0.8s,baz=156,slow=7.8,SNR=4.3
ZALV LR LR 19 24 37.5
comp=Z,2µm,20.6s,baz=326,slow=38
ZALV PKPPKP **P'P'df 19 25 08.2 +3.1**
comp=Z,0.9nm,0.6s,baz=259,slow=1.5,SNR=5.2
comp=Z,14nm,0.4s
KBL Kabul 62.64 309 P P 18 55 60.0 -1.9
KBL Kabul 62.64 309 P P 18 56 01.7 -0.1
SNR=83
KBL Kabul 62.64 309 P P 18 56 00.0 -1.9
KBL pmax pmax
comp=Z,142nm,0.9s
BTLS Baital 63.20 321 ⇓ *i* P P 18 56 04.9 -0.3
BTLS *e* S S 19 04 34.5 -0.1
BTLS Baital 63.20 321 *d i* P P 18 56 04.8 -0.3
BTLS *e* S S 19 04 34.5 -0.1
GAR Garm 63.22 314 P P 18 56 04.6 -0.9
KURBB Kurchatov Arra 63.47 328 P P 18 56 06.2 -0.5
comp=Z,118nm,0.8s,baz=130,slow=6.0,SNR=454
KURBB S S 19 04 40.3 +2.7
comp=Z,0.6nm,0.2s,baz=131,slow=12,SNR=5.7
KURBB PKPPKP **P'P'df 19 25 00.2 -3.5**
comp=Z,0.6nm,0.6s,baz=290,slow=3.7,SNR=4.3
comp=Z,118nm,0.8s
KURK Kurchatov 63.47 328 P P 18 56 06.0 -0.8
KURK Kurchatov 63.47 328 P P 18 56 07.0 +0.3
KURK Kurchatov 63.47 328 *ce* P P 18 56 06.5 -0.2
KURK pmax pmax
comp=Z,211nm,0.7s
DZA Taraz 64.03 318 *e* P P 18 56 10.3 -0.3
DZA Taraz 64.03 318 *e* P P 18 56 10.3 -0.3
SEY Seymchan 64.30 13 *ce* P P 18 56 14.0 +2.0
SEY pmax pmax
comp=Z,188nm,1.3s
SMY Shemya 64.58 30 P P 18 56 14.9 +0.9
IUG luzhnay 64.61 317 *e* P P 18 56 14.4 -0.3
comp=Z,68nm,1.0s
IUG *e* S S 19 04 51.9 -0.6
IUG luzhnay 64.61 317 *e* P P 18 56 14.3 -0.3
IUG *e* S S 19 04 51.8 -0.6
IUG pmax pmax
comp=Z,68nm,1.0s
KK31 Karatay Array 64.66 318 IAmb IAmb 18 56 18.6
comp=Z,114nm,1.3s
KKAR Karatay Array 64.66 318 P P 18 56 13.8 -1.0
KKAR Karatay Array 64.66 318 P P 18 56 13.8 -1.0
CHM Chimkent 64.97 317 *e* P P 18 56 16.5 -0.4
comp=Z,57nm,0.9s
CHM Chimkent 64.97 317 *e* P P 18 56 16.4 -0.4
CHM pmax pmax
comp=Z,57nm,0.9s
BRLS Boroldaу 65.09 318 ⇓ *i* P P 18 56 17.4 -0.2
BRLS Boroldaу 65.09 318 *d i* P P 18 56 17.4 -0.2
BRZS Berezniki 66.34 325 *e* P P 18 56 25.6 +0.1
BRZS Berezniki 66.34 325 *e* P P 18 56 25.6 +0.1
NGCH Negor - Chabah 67.08 297 P P 18 56 30.1 -0.6
HRA Herat 67.99 307 IAmb IAmb 18 56 40.3
comp=Z,120nm,1.8s
JLN Jalan Bani Buh 68.17 293 P P 18 56 37.3 -0.3
CASY Casey 68.54 187 P P 18 56 38.4 -0.6
KIWB Kanaga Island 68.75 34 P P 18 56 39.2 -1.4
KIWB IAmb IAmb 18 57 00.3
comp=Z,74nm,0.8s
WSAR Wadi Sarin 69.03 294 P P 18 56 42.7 -0.3
SNR=6.1
BVAR Borovoye Array 69.03 328 P P 18 56 42.5 +0.1
comp=Z,46nm,0.7s,baz=131,slow=6.7,SNR=129
BVAR S S 19 05 41.8 -3.4
comp=Z,4.2nm,1.1s,baz=126,slow=15,SNR=4.1
BVAR PKP2ab **P'P'ab 19 24 58.0 +3.0**
comp=Z,0.9nm,0.8s,baz=302,slow=2.8,SNR=4.7
comp=Z,46nm,0.7s
BORK Borovoye 69.08 328 *ce* P P 18 56 42.7 0.0
BORK pmax pmax
comp=Z,182nm,1.3s
MHTO MHTO 69.36 292 P P 18 56 44.9 -0.1
SNR=9.9
JMDO Jabal Madar 69.40 293 P P 18 56 45.5 +0.2
SNR=9.0
SMDO Samad 69.53 294 P P 18 56 45.6 -0.6
TIXI Tiksi 70.10 1 P P 18 56 47.4 -1.2
TIXI IAmb IAmb 18 56 55.2
comp=Z,120nm,1.1s
TIXI Tiksi 70.10 1 P P 18 56 48.6 0.0
BSY Bisya 70.27 294 P P 18 56 50.3 -0.3
SNR=6.2
HOQ Hoqain 70.27 294 P P 18 56 50.6 0.0
SNR=5.1
ATKA Atka Island 70.55 34 P P 18 56 53.1 +1.4
ARQ Araqi 70.96 294 P P 18 56 54.7 -0.2
SNR=13
SOHO SOHO 71.05 295 P P 18 56 55.5 +0.2
SHAO Shalim 71.27 288 P P 18 56 56.8 +0.1
UOSS Minazif 71.45 296 P P 18 56 56.1 -1.6
UOSS Minazif 71.45 296 P P 18 56 58.2 +0.4
BANOM Banah 71.49 297 P P 18 56 58.5 +0.5
HATD Hatta, Dubai 71.50 296 P P 18 56 58.3 +0.3
SNR=7.6
HATD Hatta, Dubai 71.50 296 P P 18 56 59.0 +0.9
MSFE Esma-Masafi 71.54 296 P P 18 56 58.8 +0.5
MASF Masafi 71.54 296 P P 18 56 59.0 +0.7
SNR=6.2
ASHO Ashiyiah 71.55 295 P P 18 56 59.0 +0.6
SNR=11
SHME Shamm 71.64 297 P P 18 56 59.6 +0.7
SNR=6.6
SHME Shamm 71.64 297 P P 18 56 59.0 +0.2
ALNE Al Ain 71.75 295 P P 18 56 59.5 0.0
SNR=37
BILL Bilibino 71.82 15 P P 18 56 59.1 0.0
BILL Bilibino 71.82 15 *ce* P P 18 57 03.0 +3.9
BILL pmax pmax
comp=Z,52nm,1.7s
DMTO DMTO 71.89 288 P P 18 57 00.6 +0.1
NAZ Nazwa, Dubai 71.94 296 P P 18 57 01.0 +0.3
SNR=8.5
NAZ Nazwa, Dubai 71.94 296 P P 18 57 00.1 -0.6
FAQ Al Faqa, Dubai 71.97 295 P P 18 57 01.2 +0.3
SNR=11
FAQ Al Faqa, Dubai 71.97 295 P P 18 57 00.0 -0.9
ASUD Al Ashush, Dub 72.20 295 P P 18 57 02.2 0.0
SNR=17
ASUD Al Ashush, Dub 72.20 295 P P 18 57 01.8 -0.4
AJN Ajban 72.50 295 P P 18 57 03.8 -0.2
SNR=19
AJN Ajban 72.50 295 P P 18 57 03.5 -0.6
NRIK Noril'sk 72.54 347 P P 18 57 03.6 +0.3
comp=Z,96nm,0.6s,baz=133,slow=6.1,SNR=102
NRIK S S 19 06 27.3 +1.9
comp=Z,8.8nm,1.1s,baz=339,slow=22,SNR=9.6
NRIK LR LR 19 32 40.2
comp=Z,707nm,18.1s,baz=145,slow=39
comp=Z,96nm,0.6s
NRIK Noril'sk 72.54 347 IAmb IAmb 18 57 07.8
comp=Z,98nm,0.7s
RBK Rabkut 72.58 288 P P 18 57 05.1 +0.4
DOK Doka 72.73 289 P P 18 57 05.4 -0.1
SNR=7.4
MZWR Madinat Zayed 73.42 294 P P 18 57 09.3 -0.2
ABTO Aybut 73.43 288 P P 18 57 09.6 -0.2
ABKAR Akbulak array 73.69 321 P P 18 57 09.3 -1.2
MZR Muzera 73.71 293 P P 18 57 11.2 0.0
SNR=29
MZR Muzera 73.71 293 P P 18 57 10.4 -0.9
NIKH Nikolski High 73.86 35 P P 18 57 11.8 +0.3
baz=250
JRN Qarnain Island 74.47 295 P P 18 57 15.5 -0.1
SNR=18
AKTO Aktyubinsk 75.22 322 P P 18 57 19.3 -0.2
comp=Z,95nm,0.8s,baz=104,slow=5.1,SNR=146
AKTO S S 19 06 57.3 +1.0
comp=Z,2.7nm,1.0s,baz=51,slow=12,SNR=3.6
AKTO LR LR 19 31 59.1
comp=Z,2µm,21.6s,baz=80,slow=37
comp=Z,95nm,0.8s
UNV Unalaska Valle 75.47 34 P P 18 57 22.7 +1.9
UNV Unalaska Valle 75.47 34 P P 18 57 21.1 +0.3
baz=252
SVE Sverdlovsk 75.71 329 *de* P P 18 57 22.0 -0.1
SVE *e* S S 19 06 59.2 -2.2
SVE pmax pmax
comp=Z,359nm,1.1s
TRNA Turayna 75.93 295 P P 18 57 23.9 -0.2
SNR=7.2
KIP Kipapa 76.06 68 *ce* P P 18 57 27.0 +2.2
KIP pmax pmax
comp=Z,143nm,1.7s
SHMA Al-Shehemyia 76.25 296 P P 18 57 25.6 -0.3
SNR=6.6
SMRA Abu-Samra 76.29 295 P P 18 57 26.0 0.0
SNR=10
GAMB Gambell 76.59 24 P P 18 57 28.3 +1.3
baz=245
ARTI Arti 76.75 328 P P 18 57 26.9 -1.1
ARTI Arti 76.75 328 *c i* P P 18 57 27.5 -0.5
ARTI 19 00 19.3
ARTI PPP PPP 19 02 10.1
ARTI S S 19 07 12.5 -0.3
ARTI SS SS 19 12 06.0 -3.1
ARTI pmax pmax
comp=Z,204nm,1.1s
FALS False Pass 77.49 34 P P 18 57 33.6 +1.4
FALS False Pass 77.49 34 P P 18 57 32.8 +0.6
baz=254
M11K Mekoryuk 77.72 28 P P 18 57 34.0 +0.6
baz=251
MWH Mokuaweoweo 78.21 71 IAmb IAmb 18 57 39.8
comp=Z,132nm,1.2s
POHA Pohakuloa 78.28 70 P P 18 57 38.7 +1.0
AIN Ainahou 78.34 71 IAmb IAmb 18 57 54.0
comp=Z,156nm,1.1s
MLH Mauna Loa 78.41 71 P P 18 57 36.8 -1.6
S12K Black Hills 78.46 33 P P 18 57 38.2 +0.5
baz=255
BYL Byron's Ledge 78.53 71 IAmb IAmb 18 57 44.2
comp=Z,107nm,1.0s
PUH Pauahi 78.56 71 P P 18 57 37.5 -1.5
PUH IAmb IAmb 18 57 44.4
comp=Z,111nm,0.9s
STCH Steam Cracks 78.65 71 P P 18 57 38.4 -1.1
STCH IAmb IAmb 18 57 44.7
comp=Z,116nm,1.0s
TNA Tin City 78.80 23 P P 18 57 40.6 +1.4
baz=248
K13K Kusilvak Mount 78.92 27 P P 18 57 41.3 +1.3
baz=252
M13K Dall Lake 79.07 28 P P 18 57 41.1 +0.2
baz=253
SDPT Sand Point 79.25 34 P P 18 57 43.5 +1.6
SDPT Sand Point 79.25 34 P P 18 57 42.0 +0.1
baz=257,SNR=7.4
F14K Arc Creek 79.39 23 P P 18 57 42.8 +0.3
baz=250
KBD Kabd 79.42 299 P P 18 57 43.6 +0.1
ANM Nome 79.46 24 P P 18 57 43.2 +0.3
baz=251
CHNA Chernabura Isl 79.64 34 P P 18 57 43.3 -0.7
baz=258
L14K Kuka Creek 79.65 28 IAmb IAmb 18 57 50.6
comp=Z,101nm,0.9s
L14K Kuka Creek 79.65 28 P P 18 57 43.4 -0.6
baz=254
J14K Nanvaranak Lak 79.66 26 P P 18 57 43.8 -0.2
baz=253
N14K Kuskokwak Cree 79.74 29 P P 18 57 44.0 -0.5
baz=255
O14K Tigyukauivet M 79.78 30 P P 18 57 44.4 -0.3
baz=255
M14K Bethel 79.83 28 P P 18 57 44.8 -0.1
baz=255,SNR=5.9
S14K Fog Glacier 79.97 33 P P 18 57 46.0 0.0
baz=257
F15K North Star Dit 80.12 23 P P 18 57 46.0 -0.5
baz=251
G15K Niukluk 80.14 24 P P 18 57 47.0 +0.4
baz=252
L15K Ungalak Mounta 80.29 27 P P 18 57 48.2 +0.8
baz=255
M15K Kasigluk River 80.42 28 P P 18 57 48.8 +0.6
baz=256
K15K Wolf Creek Mou 80.43 27 IAmb IAmb 18 57 55.1
comp=Z,101nm,1.1s
K15K Wolf Creek Mou 80.43 27 P P 18 57 49.4 +1.2
baz=255
O15K Ungalikthiuk R 80.47 30 P P 18 57 49.6 +1.1
baz=257
AKT Akhty 80.54 312 *e* P P 18 57 48.1 -1.3
AKT *e* 18 57 54.2
AKT *eS* S 19 07 49.8 -4.5
AKT pmax pmax
comp=Z,104nm,1.0s
N15K Kwethluk River 80.58 29 IAmb IAmb 18 58 15.1
comp=Z,65nm,1.0s
N15K Kwethluk River 80.58 29 P P 18 57 49.7 +0.7
baz=256
C16K Lisburne Hills 80.72 21 P P 18 57 50.6 +1.0
baz=250,SNR=6.8
H16K Elim 80.77 24 P P 18 57 51.5 +1.5
baz=254
VOI Vohitsoka 80.90 248 P P 18 57 52.5 +0.8
G16K Koyuk River 80.94 24 P P 18 57 51.9 +1.1
baz=254
RAYN Ar Rayn 81.06 293 P P 18 57 51.2 -1.3
RAYN IAmb IAmb 18 58 03.6
comp=Z,62nm,0.8s
RAYN Ar Rayn 81.06 293 P P 18 57 51.2 -1.3
RAYN pmax pmax
comp=Z,62nm,0.8s
J16K Anvik River 81.10 26 IAmb IAmb 18 57 58.7
comp=Z,95nm,1.0s
J16K Anvik River 81.10 26 P P 18 57 53.0 +1.2
baz=255
I17K Unalakleet 81.22 25 P P 18 57 53.7 +1.4
baz=255
L16K Owhat River 81.23 28 P P 18 57 53.5 +1.1
baz=257,SNR=7.8
VNDA Vanda 81.23 173 P P 18 57 52.3 +0.1
comp=Z,18nm,0.6s,baz=317,slow=6.6,SNR=92
VNDA LR LR 19 33 07.5
comp=Z,912nm,21.2s,baz=322,slow=35
comp=Z,18nm,0.6s
N16K Nishlik Lake 81.28 29 P P 18 57 54.3 +1.4
baz=258
R16K Pilot Point 81.29 32 P P 18 57 53.5 +0.7
baz=259
M16K Timber Creek 81.31 28 P P 18 57 53.6 +0.7
baz=257
D17K Noatak River 81.34 21 P P 18 57 54.2 +1.3
baz=252,SNR=6.8
P16K Nushagak River 81.37 30 IAmb IAmb 18 58 03.5
comp=Z,109nm,0.8s
P16K Nushagak River 81.37 30 P P 18 57 54.3 +1.0
baz=258
O16K Kokwok River B 81.43 30 IAmb IAmb 18 58 01.3
comp=Z,80nm,1.1s
O16K Kokwok River B 81.43 30 P P 18 57 54.8 +1.2
baz=256
RDOG Red Dog Mine 81.51 21 P P 18 57 55.0 +1.2
baz=253,SNR=7.3
MAW Mawson 81.52 200 P P 18 57 54.5 +0.6
comp=Z,25nm,1.0s,baz=80,slow=4.9,SNR=28
comp=Z,25nm,1.0s
C17K DeLong Mountai 81.54 21 P P 18 57 55.7 +1.6
baz=252
E17K Hotham Inlet 81.62 22 P P 18 57 55.7 +1.3
baz=254
G17K Kiwalik Mounta 81.65 24 P P 18 57 56.3 +1.7
baz=255
F17K Baldwin Pennin 81.66 23 P P 18 57 56.1 +1.4
baz=254
J17K VABM Dome 81.80 26 IAmb IAmb 18 58 02.4
comp=Z,91nm,1.0s
J17K VABM Dome 81.80 26 P P 18 57 56.5 +1.1
baz=257
H17K Granite Mounta 81.81 24 IAmb IAmb 18 58 02.5
comp=Z,85nm,1.2s
H17K Granite Mounta 81.81 24 P P 18 57 57.2 +1.7
baz=256
L17K Donlin 81.87 27 P P 18 57 57.0 +1.2
baz=258
R17L Mt. Peulik Vol 81.95 32 P P 18 57 57.4 +1.0
baz=260
PLK4 Peulik 4 81.95 32 IAmb IAmb 18 58 01.2
comp=Z,85nm,0.9s
O17K Koliganek Bris 81.96 30 P P 18 57 56.4 0.0
baz=259
KIRV Kirov 81.98 329 *ce* P P 18 57 56.6 +0.2
Q16K King Salmon 81.98 31 P P 18 57 57.2 +0.8
baz=260
K17K Iditarod 81.99 27 IAmb IAmb 18 58 03.5
comp=Z,114nm,0.9s
K17K Iditarod 81.99 27 P P 18 57 58.1 +1.6
baz=258
CHIR Chirikof Islan 82.05 34 P P 18 57 58.0 +1.1
baz=261
N17K Nushagak Hills 82.06 29 IAmb IAmb 18 58 02.2
comp=Z,98nm,1.6s
N17K Nushagak Hills 82.06 29 P P 18 57 58.1 +1.2
baz=259
M17K Holitna River 82.11 28 P P 18 57 57.7 +0.5
baz=258
SBA Scott Base 82.15 172 P P 18 57 57.6 +0.6
SBA Scott Base 82.15 172 P P 18 57 57.6 +0.6
SBA pmax pmax
comp=Z,46nm,1.0s
E18K Tukpahlearik C 82.17 22 IAmb IAmb 18 58 04.2
comp=Z,156nm,1.1s
E18K Tukpahlearik C 82.17 22 P P 18 57 59.1 +1.7
baz=255,SNR=25
P17K Kvichak River 82.19 30 P P 18 57 58.4 +0.9
baz=260
B18K Kokolik River 82.28 20 P P 18 57 58.3 +0.4
baz=253
C18K Utukok River 82.29 21 IAmb IAmb 18 58 03.8
comp=Z,69nm,1.1s
C18K Utukok River 82.29 21 P P 18 57 59.4 +1.4
baz=254
Q17K Contact Creek 82.31 31 P P 18 57 58.6 +0.2
baz=260
F18K Selawik 82.32 23 P P 18 57 59.5 +1.4
baz=256,SNR=5.3
H18K Honhosa River 82.50 24 IAmb IAmb 18 58 05.5
comp=Z,80nm,1.1s
H18K Honhosa River 82.50 24 P P 18 57 59.8 +0.7
baz=257,SNR=6.1
G18K Tagagawik 82.55 24 IAmb IAmb 18 58 05.6
comp=Z,69nm,1.0s
G18K Tagagawik 82.55 24 P P 18 58 00.3 +1.0
baz=257,SNR=17
L18K Granite Mounta 82.62 27 IAmb IAmb 18 58 06.6
comp=Z,98nm,0.9s
L18K Granite Mounta 82.62 27 P P 18 58 01.4 +1.6
baz=259,SNR=28
GNI Garni 82.67 310 P P 18 58 01.1 +0.3
GNI IAmb IAmb 18 58 31.9
comp=Z,109nm,0.9s
GNI Garni 82.67 310 P P 18 58 01.5 +0.7
GNI Garni 82.67 310 P P 18 58 01.1 +0.3
GNI pmax pmax
comp=Z,109nm,1.0s
GNI Garni 82.67 310 P P 18 58 02.1 +1.3
comp=Z,1µmcomp=Z,129nm,0.9s
N18K Kilae Creek 82.72 29 P P 18 58 01.9 +1.5
baz=260
A19K Wainwright 82.76 19 P P 18 58 01.8 +1.4
baz=254
Q18K Katmai Hardscr 82.82 31 P P 18 58 00.9 -0.1
baz=261
P18K Big Mountain, 82.83 30 P P 18 58 01.8 +0.8
baz=261
J18K Innoko River 82.85 26 IAmb IAmb 18 58 07.2
comp=Z,69nm,0.8s
J18K Innoko River 82.85 26 P P 18 58 01.9 +0.9
baz=259,SNR=17
M18K Stony River 82.89 28 P P 18 58 02.9 +1.7
baz=260
O18K Koktuh Hills 82.92 30 P P 18 58 02.3 +0.9
baz=261
R18K Karluk 82.95 32 IAmb IAmb 18 58 07.3
comp=Z,88nm,1.3s
R18K Karluk 82.95 32 P P 18 58 02.8 +1.3
baz=262
SII Sitkinak Islan 82.95 33 P P 18 58 02.5 +0.8
baz=262
C19K Lookout Ridge 82.97 20 P P 18 58 03.7 +2.1
baz=256
GCSA Galena City Sc 83.03 25 P P 18 58 02.8 +1.0
baz=259,SNR=35
F19K Shaleruckik Mo 83.11 23 P P 18 58 03.0 +0.8
baz=258
G19K Purcell Mounta 83.23 23 P P 18 58 04.5 +1.6
baz=258
D19K Kuna River 83.34 21 P P 18 58 04.9 +1.4
baz=257
H19K Roundabout Mou 83.36 24 P P 18 58 05.2 +1.7
baz=259
ATD Arta Tunnel 83.39 281 IAmb IAmb 18 58 08.3
comp=Z,68nm,0.8s
ATD Arta Tunnel 83.39 281 P P 18 58 05.7 +0.9
SNR=8.2
N19K Bonanza Creek 83.42 29 P P 18 58 05.6 +1.5
baz=261
J19K Poorman 83.43 26 IAmb IAmb 18 58 10.5
comp=Z,96nm,1.0s
J19K Poorman 83.43 26 P P 18 58 05.5 +1.6
baz=260
E19K Redstone River 83.44 22 P P 18 58 05.7 +1.8
baz=258
L19K White Mountain 83.46 28 IAmb IAmb 18 58 21.0
comp=Z,84nm,1.0s
L19K White Mountain 83.46 28 P P 18 58 05.6 +1.4
baz=261,SNR=18
OHAK Old Harbor 83.53 33 IAmb IAmb 18 58 13.9
comp=Z,69nm,0.9s
OHAK Old Harbor 83.53 33 P P 18 58 06.4 +1.8
OHAK Old Harbor 83.53 33 P P 18 58 05.5 +0.9
baz=263
M19K Big River Lodg 83.64 28 IAmb IAmb 18 58 11.7
comp=Z,73nm,0.9s
M19K Big River Lodg 83.64 28 P P 18 58 05.9 +0.8
baz=261
P19K Oil Pt 83.88 30 P P 18 58 06.7 +0.3
baz=262
D20K Etivluk River 83.93 21 P P 18 58 07.7 +1.3
baz=258
F20K Avaraart Lake 83.94 23 IAmb IAmb 18 58 13.1
comp=Z,58nm,0.9s
F20K Avaraart Lake 83.94 23 P P 18 58 07.4 +1.0
baz=259
L20K Farewell, AK 83.96 27 IAmb IAmb 18 58 28.1
comp=Z,86nm,1.2s
L20K Farewell, AK 83.96 27 P P 18 58 08.0 +1.2
baz=262
ILSW Iliamna Southw 83.96 30 IAmb IAmb 18 58 28.7
comp=Z,205nm,2.0s
KDAK Kodiak Island 83.98 32 P P 18 58 07.5 +0.6
KDAK Kodiak Island 83.98 32 P P 18 58 07.5 +0.6
KDAK pmax pmax
comp=Z,117nm,1.1s
KDAK Kodiak Island 83.98 32 P P 18 58 07.8 +1.0
baz=263
E20K Nigu River 83.99 21 P P 18 58 08.2 +1.3
baz=259
H20K Anotleneega Mo 84.00 24 P P 18 58 08.1 +1.2
baz=260
K20K Telida 84.00 26 P P 18 58 08.3 +1.4
baz=261
B20K Meade River 84.01 20 P P 18 58 08.0 +1.3
baz=258
I20K Naaghedeneel 84.05 25 P P 18 58 08.4 +1.3
baz=261
J20K Nowinta River 84.10 26 P P 18 58 08.6 +1.2
baz=261,SNR=16
Q20K Shuyak Island 84.17 31 P P 18 58 08.5 +0.7
baz=263
M20K Styx River 84.22 28 IAmb IAmb 18 58 34.3
comp=Z,97nm,1.0s
M20K Styx River 84.22 28 P P 18 58 08.9 +0.7
baz=262
O20K Slope Mountain 84.23 30 P P 18 58 08.7 +0.5
baz=263
GOF Gofitskoye 84.27 315 *ce* P P 18 58 08.2 -0.4
KBZ Khabaz 84.29 314 P P 18 58 08.9 +0.2
comp=Z,58nm,0.9s,baz=110,slow=3.8,SNR=58
comp=Z,58nm,0.9s
KBZ Khabaz 84.29 314 *ce* P P 18 58 09.2 +0.5

NEUR **Neytrino** **84.40 313** *i* P **P** **18 58 10.9 +1.3**
NEUR pmax pmax
comp=Z,68nm,1.0s
KIV **Kislovodsk** **84.45 314** P **P** **18 58 09.8 0.0**
KIV **Kislovodsk** **84.45 314** ⇑P **P** **18 58 10.7 +0.9**
KIV **Kislovodsk** **84.45 314** *e*P **P** **18 58 09.7 0.0**
KIV *e* 19 08 29.3
KIV pmax pmax
comp=Z,76nm,1.0s
KIV pmax pmax
comp=Z,129nm,3.8s
KIV MLR MLR
comp=Z,770nm,20.0s
KIV **Kislovodsk** **84.45 314** P **P** **18 58 10.6 +0.9**
comp=Z,2µmcomp=Z,106nm,0.9s
A21K **Barrow** **84.46 18** P **P** **18 58 10.5 +1.5**
baz=258
IMAR **Indian Mountai** **84.54 24** P **P** **18 58 09.7 +0.2**
N20K **Mount Spurr** **84.57 29** P **P** **18 58 10.4 +0.5**
baz=263,SNR=16
SPCR **Spurr Chakacha** **84.57 29** P **P** **18 58 10.3 +0.3**
baz=263,SNR=7.5
SPU **Mount Spurr** **84.65 29** IAmb IAmb 18 58 15.8
comp=Z,44nm,1.0s
C21K **Knifeblade Rid** **84.66 21** P **P** **18 58 11.6 +1.4**
baz=260
HOM **Homer** **84.68 30** P **P** **18 58 10.7 +0.3**
baz=264
G21K **Allakaket** **84.72 23** IAmb IAmb 18 58 19.2
comp=Z,42nm,1.0s
G21K **Allakaket** **84.72 23** P **P** **18 58 11.6 +1.1**
baz=262
PPLA **Purkeypile** **84.79 27** P **P** **18 58 11.7 +0.6**
baz=263
B21K **Ikpikpuk River** **84.80 20** IAmb IAmb 18 58 15.8
comp=Z,82nm,0.8s
B21K **Ikpikpuk River** **84.80 20** P **P** **18 58 12.0 +1.2**
baz=260
F21K **Alatna River** **84.83 23** P **P** **18 58 12.2 +1.1**
baz=262
E21K **Killik River** **84.84 21** IAmb IAmb 18 58 19.0
comp=Z,62nm,1.0s
E21K **Killik River** **84.84 21** P **P** **18 58 12.1 +1.0**
baz=261
CHUM **Lake Minchumin** **84.85 26** P **P** **18 58 12.7 +1.5**
baz=263
H21K **Melozitna Rive** **84.88 24** P **P** **18 58 12.7 +1.4**
baz=262
A22K **Sinclair Lake** **84.92 19** P **P** **18 58 12.9 +1.5**
baz=260
SKT **Skwentna** **84.98 28** P **P** **18 58 13.6 +1.7**
baz=264,SNR=12
BRSE **Bradley Lake S** **85.14 30** P **P** **18 58 13.2 +0.5**
baz=265,SNR=10
I21K **Tanana** **85.16 25** P **P** **18 58 13.6 +0.9**
baz=263
SUA **Susitna One** **85.30 29** P **P** **18 58 13.7 0.0**
baz=264,SNR=11
B22K **Teshekpuk Lake** **85.33 20** P **P** **18 58 14.4 +1.0**
baz=261
D22K **Ayikyak River** **85.37 21** P **P** **18 58 14.8 +1.1**
baz=262
F22K **John River** **85.37 22** P **P** **18 58 15.5 +1.8**
baz=263
BPAW **Bear Paw Mtn.** **85.46 26** P **P** **18 58 15.2 +0.9**
baz=264
SLKM **Skilak Lake** **85.47 30** P **P** **18 58 13.9 -0.5**
H22K **Ishtalitna Cre** **85.49 24** P **P** **18 58 15.9 +1.5**
baz=264
VRH **Novokhopyorsk** **85.52 321** *e*P **P** **18 58 14.3 -0.5**
VRH pmax pmax
comp=Z,287nm,1.0s
G22K **Bettles** **85.56 23** P **P** **18 58 15.8 +1.1**
baz=263
E22K **Anaktuvuk Pass** **85.59 22** IAmb IAmb 18 58 30.7
comp=Z,31nm,0.7s
E22K **Anaktuvuk Pass** **85.59 22** P **P** **18 58 15.9 +1.1**
baz=263,SNR=17
CUT **Chulitna** **85.62 28** P **P** **18 58 15.7 +0.7**
baz=265
M22K **Willow** **85.63 28** P **P** **18 58 15.5 +0.5**
baz=265,SNR=10
MLY **Manley** **85.66 25** P **P** **18 58 15.8 +0.5**
baz=264
TRF **Thorofare Moun** **85.70 27** P **P** **18 58 15.8 +0.1**
baz=265
O22K **Cooper Landing** **85.71 30** P **P** **18 58 15.3 -0.3**
baz=265
RC01 **Rabbit Creek A** **85.76 29** IAmb IAmb 18 58 20.8
comp=Z,87nm,1.0s
RC01 **Rabbit Creek A** **85.76 29** P **P** **18 58 15.9 +0.2**
baz=265,SNR=8.2
SEW **Seward** **85.82 30** P **P** **18 58 16.4 +0.3**
baz=266
LABN **Labinsk** **85.89 314** *e*P **P** **18 58 17.2 +0.4**
LABN *e*S **SKSac** **19 08 39.3 -1.1**
LABN pmax pmax
comp=Z,151nm,1.0s
PMR **Palmer** **86.09 28** IAmb IAmb 19 00 16.9
comp=Z,41nm,0.6s
PMR **Palmer** **86.09 28** P **P** **18 58 18.4 +1.1**
PMR **Palmer** **86.09 28** P **P** **18 58 17.7 +0.3**
baz=266,SNR=7.9
D23K **Nanushuk River** **86.10 21** P **P** **18 58 18.2 +0.9**
baz=264
ERBR **Yeremizino-Bor** **86.10 316** *e*P **P** **18 58 17.2 -0.6**
ERBR *e**PP **sP** **18 58 30.0 -1.5**
ERBR *e*S **SKSac** **19 08 39.3 -2.3**
ERBR pmax pmax
comp=Z,296nm,1.0s
COLD **Coldfoot** **86.10 23** IAmb IAmb 18 58 24.2
comp=Z,61nm,1.0s
COLD **Coldfoot** **86.10 23** P **P** **18 58 17.5 +0.2**
baz=264,SNR=23
G23K **Bananza Creek** **86.12 23** IAmb IAmb 18 58 24.5
comp=Z,48nm,0.9s
G23K **Bananza Creek** **86.12 23** P **P** **18 58 18.0 +0.4**
baz=265
C23K **Itkillik River** **86.21 20** IAmb IAmb 18 58 24.4
comp=Z,50nm,0.8s
C23K **Itkillik River** **86.21 20** P **P** **18 58 18.4 +0.6**
baz=264,SNR=35
H23K **Yukon River** **86.23 24** IAmb IAmb 18 58 23.7
comp=Z,34nm,0.8s
H23K **Yukon River** **86.23 24** P **P** **18 58 18.8 +0.7**
baz=265
I23K **Minto, Yukon-K** **86.26 25** IAmb IAmb 18 58 23.5
comp=Z,36nm,0.8s
I23K **Minto, Yukon-K** **86.26 25** P **P** **18 58 18.6 +0.5**
baz=265,SNR=12
MCK **McKinley** **86.33 26** P **P** **18 58 19.2 +0.6**
baz=266,SNR=11
NEA2 **Nenana** **86.34 25** P **P** **18 58 19.0 +0.4**
baz=266
KNK **Knik Glacier** **86.39 29** P **P** **18 58 19.1 +0.1**
KNK **Knik Glacier** **86.39 29** P **P** **18 58 19.8 +0.8**
baz=266,SNR=7.2
E23K **Chandalar** **86.40 22** IAmb IAmb 18 58 25.9
comp=Z,98nm,0.9s
E23K **Chandalar** **86.40 22** P **P** **18 58 19.7 +0.7**
baz=265,SNR=67
PWL **Port Wells** **86.42 29** IAmb IAmb 18 58 25.6
comp=Z,89nm,0.9s
PWL **Port Wells** **86.42 29** P **P** **18 58 19.7 +0.6**
baz=267,SNR=6.6
WAT1 **Susitna Watana** **86.44 27** P **P** **18 58 19.5 +0.4**
baz=266
TOLK **Toolik Lake Re** **86.47 21** P **P** **18 58 20.1 +0.9**
baz=265,SNR=22
SML **Sawmill** **86.48 28** IAmb IAmb 19 00 16.2
comp=Z,53nm,0.6s
SML **Sawmill** **86.48 28** P **P** **18 58 19.8 +0.4**
baz=266,SNR=6.7
SOC **Sochi** **86.59 313** *e*P **P** **18 58 18.2 -2.0**
SOC *e* 19 01 38.0
SOC *e*PPP PPP 19 03 35.0
SOC *e*S **SKSac** **19 08 41.5 -3.2**
SOC *e*SS **SS** **19 14 34.8 -1.3**
SOC pmax pmax
comp=Z,135nm,0.9s
SOC MLR MLR
comp=Z,865nm,21.0s
M23K **Glacier View** **86.77 28** P **P** **18 58 21.8 +1.0**
baz=267,SNR=12
D24K **Happy Valley** **86.78 21** IAmb IAmb 18 58 25.4
comp=Z,50nm,0.8s
D24K **Happy Valley** **86.78 21** P **P** **18 58 21.3 +0.6**
baz=266,SNR=18
WAT6 **Susitna Watana** **86.80 28** P **P** **18 58 21.4 +0.3**
baz=267,SNR=14
E24K **Your Creek** **86.82 22** P **P** **18 58 21.6 +0.6**
baz=266
C24K **Franklin Bluff** **86.86 20** IAmb IAmb 18 58 27.1
comp=Z,54nm,0.9s
C24K **Franklin Bluff** **86.86 20** P **P** **18 58 21.7 +0.7**
baz=266,SNR=16
COLA **College** **86.88 25** P **P** **18 58 22.2 +1.0**
H24K **Noodor Dome** **86.92 24** P **P** **18 58 22.2 +0.7**
baz=267
SCM **Sheep Creek Mo** **86.96 28** P **P** **18 58 22.3 +0.5**
SCM IAmb IAmb 19 00 29.6
comp=Z,59nm,0.6s
SCM **Sheep Creek Mo** **86.96 28** P **P** **18 58 22.3 +0.5**
SCM pmax pmax
comp=Z,59nm,0.6s
SCM **Sheep Creek Mo** **86.96 28** P **P** **18 58 21.6 -0.2**
baz=267
DHY **Denali Highway** **86.99 27** P **P** **18 58 22.3 +0.3**
baz=267
F24K **Squaw Lake** **87.02 23** IAmb IAmb 18 58 27.8
comp=Z,39nm,0.9s
F24K **Squaw Lake** **87.02 23** P **P** **18 58 22.5 +0.6**
baz=267
GLI **Glacier Island** **87.03 29** P **P** **18 58 22.6 +0.6**
baz=268
VORD **Divnogorie** **87.04 321** *e*P **P** **18 58 21.3 -1.0**
VORD pmax pmax
comp=Z,140nm,0.9s
VORR **Voronezh** **87.11 321** *e*P **P** **18 58 21.4 -1.2**
VORR pmax pmax
comp=Z,290nm,0.9s
VSR **Storozhevoye** **87.13 321** *e*P **P** **18 58 20.7 -2.0**
VSR pmax pmax
comp=Z,110nm,0.9s
G24K **Hadweenzic Riv** **87.13 23** P **P** **18 58 23.1 +0.7**
baz=267
KLMR **Klimovskoe** **87.20 331** *e*P **P** **18 58 20.3 -2.5**
KLMR pmax pmax
comp=Z,201nm,1.3s
HDA **Harding Lake** **87.24 26** P **P** **18 58 23.3 +0.3**
baz=268,SNR=18
ILAR **Eielson Array** **87.28 25** P **P** **18 58 22.6 -0.5**
comp=Z,6.6nm,0.8s,baz=249,slow=4.3,SNR=18
ILAR PP **PP** **19 01 46.3 -1.1**
comp=Z,1.6nm,0.8s,baz=269,slow=8.4,SNR=1.9
ILAR PKKPbc **PKKPdf** **19 16 11.2 +1.2**
comp=Z,1.5nm,1.2s,baz=164,slow=3.9,SNR=4.0
comp=Z,6.6nm,0.8s
ILAR **Eielson Array** **87.28 25** P **P** **18 58 21.1 -2.1**
ILAR **Eielson Array** **87.28 25** P **P** **18 58 21.1 -2.1**
ILAR 19 01 46.3
LPSR **Galich'ya Gora** **87.30 322** *e*P **P** **18 58 23.6 +0.1**
LPSR pmax pmax
comp=Z,210nm,1.0s
Q23K **Middleton Isla** **87.35 31** P **P** **18 58 24.4 +0.8**
baz=268
M24K **Tolsona, Glenn** **87.51 28** P **P** **18 58 25.1 +0.7**
baz=268
KLU **Klutina** **87.62 29** IAmb IAmb 19 00 42.6
comp=Z,83nm,1.0s
KLU **Klutina** **87.62 29** P **P** **18 58 25.6 +0.7**
baz=269
D25K **Kavik River** **87.66 21** P **P** **18 58 24.9 0.0**
baz=268
G25K **Bearman Lake** **87.68 23** P **P** **18 58 25.6 +0.6**
baz=268
EYAK **Cordova Ski Ar** **87.68 30** P **P** **18 58 25.3 +0.1**
baz=269
DIV **Divide** **87.68 29** IAmb IAmb 18 59 05.3
comp=Z,58nm,1.2s
K24K **Donnelly Dome** **87.74 26** P **P** **18 58 24.6 -0.8**
K24K IAmb IAmb 18 58 30.9
comp=Z,71nm,1.0s
K24K **Donnelly Dome** **87.74 26** P **P** **18 58 25.4 0.0**
baz=269,SNR=8.9
H25L **Birch Creek** **87.78 24** P **P** **18 58 26.3 +0.8**
baz=269
PAX **Paxson** **87.86 27** P **P** **18 58 25.9 -0.2**
baz=269
F25K **Christian Rive** **87.88 23** P **P** **18 58 27.0 +0.9**
baz=269
E25K **Arctic Village** **87.92 22** IAmb IAmb 18 58 32.1
comp=Z,41nm,0.9s
E25K **Arctic Village** **87.92 22** P **P** **18 58 27.4 +1.2**
baz=269,SNR=31
J25K **Salcha River,** **87.93 26** P **P** **18 58 26.7 +0.3**
baz=269
HARP **HAARP** **87.99 28** P **P** **18 58 26.9 +0.2**
baz=269
MOS **Moscow** **88.11 326** *e*P **P** **18 58 25.8 -1.5**
MOS *e* 19 01 54.0
MOS *e* 19 08 51.0
MOS *e*S **S** **19 09 05.2 -3.8**
MOS pmax pmax
comp=Z,223nm,1.1s
MOS pmax pmax
comp=Z,300nm,1.3s
MOS MLR MLR
comp=Z,1µm,22.0s
RIDG **Independent Ri** **88.15 26** IAmb IAmb 18 58 32.0
comp=Z,42nm,0.8s
RIDG **Independent Ri** **88.15 26** P **P** **18 58 27.6 +0.2**
baz=270
C26K **Camden Bay** **88.19 20** P **P** **18 58 28.3 +1.0**
baz=269
ANN **Anapa** **88.24 315** *e*P **P** **18 58 28.6 +0.5**
ANN *e* 18 58 31.9
ANN *e**PP **pP** **18 58 36.4 -1.7**
ANN *e*S **SKSac** **19 08 53.7 -1.0**
ANN *e*SSS SSS 19 18 33.3
ANN pmax pmax
comp=Z,275nm,1.1s
ANN MLR MLR
comp=Z,1µm,22.0s
ANN MLR MLR
comp=E,183nm,12.0s
ANN MLR MLR
comp=N,427nm,12.0s
BMRM **Bremner River** **88.25 29** P **P** **18 58 28.4 +0.4**
baz=270
N25K **Chitina, Valde** **88.25 29** P **P** **18 58 28.3 +0.3**
baz=270
BMAR **Burnt Mountain** **88.28 23** P **P** **18 58 28.2 +0.2**
KAIM **Kayak Island** **88.34 30** P **P** **18 58 29.2 +0.8**
baz=270
KIBK **Kibwezi** **88.41 268** P **P** **18 58 29.1 -0.6**
KIBK IAmb IAmb 18 58 39.4
comp=Z,38nm,0.9s
KIBK **Kibwezi** **88.41 268** P **P** **18 58 30.1 +0.4**
SNR=25
F26K **Sheenjek River** **88.45 22** P **P** **18 58 29.5 +0.7**
baz=270
SCRK **Sand Creek** **88.53 26** P **P** **18 58 30.0 +0.7**
baz=270
G26K **Porcupine Rive** **88.60 23** P **P** **18 58 30.1 +0.8**
baz=270
C27K **Jago River** **88.60 21** IAmb IAmb 18 58 35.2
comp=Z,49nm,0.8s
C27K **Jago River** **88.60 21** P **P** **18 58 30.2 +0.8**
baz=270
GLB **Gilahina Butte** **88.63 29** IAmb IAmb 18 58 37.5
comp=Z,37nm,1.1s
MENT **Mentasta** **88.66 27** IAmb IAmb 18 58 40.8
comp=Z,26nm,0.8s
MENT **Mentasta** **88.66 27** P **P** **18 58 31.3 +1.5**
J26L **Joseph Creek** **88.71 26** P **P** **18 58 30.8 +0.7**
baz=271,SNR=15
OBN **Obninsk** **88.71 325** LR LR 19 41 59.5
comp=Z,665nm,19.2s,baz=20,slow=38
OBN **Obninsk** **88.71 325** P **P** **18 58 28.8 -1.3**
OBN **Obninsk** **88.71 325** ⇑P **P** **18 58 30.6 +0.5**
OBN **Obninsk** **88.71 325** *ce*P **P** **18 58 29.1 -1.0**
OBN *i* 18 58 33.4
OBN *e* 19 01 58.7
OBN *e*PPP PPP 19 03 52.8
OBN *e*S **SKSac** **19 09 00.3 +3.3**
OBN pmax pmax
comp=Z,101nm,1.0s
OBN MLR MLR
comp=Z,1µm,21.0s
OBN **Obninsk** **88.71 325** P **P** **18 58 29.4 -0.7**
comp=Z,2µmcomp=Z,169nm,0.8s
L26K **Log Cabin Wild** **88.83 27** IAmb IAmb 19 00 13.2
comp=Z,16nm,0.4s
baz=266,SNR=18
L26K **Log Cabin Wild** **88.83 27** P **P** **18 58 31.0 +0.4**
baz=271
I26K **Coal Creek Min** **88.87 25** P **P** **18 58 30.5 -0.2**
baz=271
KHAM **Kharkiv** **88.98 320** P **P** **18 58 32.3 +0.7**
CRQE **Cirque** **88.99 29** P **P** **18 58 31.3 -0.2**
baz=271
M26K **Nabesna, AK** **89.00 28** P **P** **18 58 31.9 +0.4**
baz=271
MCARA **McCarthy VSAT** **89.01 29** P **P** **18 58 31.8 +0.4**
baz=271
KMBO **Kilima Mbogo** **89.17 269** P **P** **18 58 34.8 +1.2**
comp=Z,17nm,0.8s,baz=70,slow=6.1,SNR=30
KMBO LR LR 19 35 59.6
comp=Z,1µm,21.4s,baz=108,slow=34
comp=Z,17nm,0.8s
FKH **Fakeheh** **89.17 304** *e*P **P** **18 58 33.4 +0.4**
LVZ **Lovozero** **89.31 338** P **P** **18 58 32.3 -0.5**
LVZ IAmb IAmb 18 58 39.6
comp=Z,61nm,1.0s
LVZ **Lovozero** **89.31 338** *ce*P **P** **18 58 33.1 +0.3**
LVZ pmax pmax
comp=Z,32nm,0.8s
LVZ **Lovozero** **89.31 338** P **P** **18 58 32.3 -0.5**
comp=Z,77nm,0.9s
BEIL **Beino** **89.35 304** *e*P **P** **18 58 33.8 +0.1**
K27K **Chicken** **89.37 26** IAmb IAmb 18 58 39.2
comp=Z,47nm,0.9s
K27K **Chicken** **89.37 26** P **P** **18 58 33.8 +0.7**
baz=272
E27K **Coleen River** **89.41 22** IAmb IAmb 18 58 39.8
comp=Z,30nm,0.9s
E27K **Coleen River** **89.41 22** P **P** **18 58 33.5 +0.2**
baz=272
G27K **Doyon Strip** **89.44 23** P **P** **18 58 34.0 +0.5**
baz=272
I27K **Kandik River** **89.51 25** IAmb IAmb 18 58 39.4
comp=Z,45nm,0.8s
I27K **Kandik River** **89.51 25** P **P** **18 58 34.5 +0.7**
baz=272
H27K **Steamboat Moun** **89.52 24** P **P** **18 58 34.7 +0.9**
baz=272
L27K **Beaver Creek,** **89.52 27** IAmb IAmb 18 58 39.5
comp=Z,28nm,0.8s
L27K **Beaver Creek,** **89.52 27** P **P** **18 58 34.6 +0.7**
baz=272
BNN **Bunyan** **89.52 309** IAmb IAmb 18 58 39.8
comp=Z,39nm,1.0s
M27K **Edge Creek, AK** **89.52 28** P **P** **18 58 33.8 -0.2**
baz=272
BCAR **Beaver Creek A** **89.54 27** P **P** **18 58 33.9 -0.1**
HWQ **Hawqa** **89.56 304** *e*P **P** **18 58 35.0 +0.2**
MESA **MESA** **89.57 30** P **P** **18 58 34.1 -0.2**
baz=272
D27M **Malcolm River** **89.58 21** P **P** **18 58 34.5 +0.4**
baz=273
SHBL **Chelba** **89.75 303** *e*P **P** **18 58 35.5 -0.2**
APA **Apatity** **89.81 337** ⇓*i*P **P** **18 58 33.2 -1.8**
APA *i* 19 02 06.3
APA *i*S **S** **19 09 21.5 -3.1**
APA *e*SS **SS** **19 15 31.5 +10**
APA MLR MLR
comp=Z,2µm,28.9s
BHL **Bhannes** **89.81 304** *e*P **P** **18 58 36.0 +0.1**
CTG **Chitna Glacier** **89.84 29** P **P** **18 58 35.8 +0.3**
baz=273
CTGM **Chitina Glacie** **89.84 29** IAmb IAmb 18 59 14.7
comp=Z,56nm,1.1s
BVCY **Beaver Creek** **89.99 28** P **P** **18 58 36.5 +0.4**
baz=273
MMAI **Mount Meron Ar** **90.04 303** P **P** **18 58 38.4 +1.4**
comp=Z,23nm,0.6s,baz=84,slow=7.6,SNR=33
MMAI LR LR 19 45 20.6
comp=Z,583nm,20.4s,baz=136,slow=40
comp=Z,23nm,0.6s
F28M **Old Crow** **90.09 22** P **P** **18 58 37.0 +0.6**
baz=274
E28M **Babbage River** **90.14 21** P **P** **18 58 37.3 +0.7**
baz=274
SYO **Syowa Base** **90.20 201** ⇑*e*P **P** **18 58 37.2 +0.4**
SYO **Syowa Base** **90.20 201** ⇑*e*PcP **PcP** **18 58 38.2 +0.2**
SYO **Syowa Base** **90.20 201** ⇑*es*P sP 18 58 49.8 -0.6
I28M **Miner Creek** **90.21 25** IAmb IAmb 18 58 42.6
comp=Z,33nm,0.8s
I28M **Miner Creek** **90.21 25** P **P** **18 58 37.8 +0.6**
baz=274
YUK3 **Moose Creek** **90.22 28** P **P** **18 58 37.9 +0.5**
baz=274
D28M **Stokes Point** **90.37 21** P **P** **18 58 38.3 +0.7**
baz=275
O28M **Mount Upton** **90.41 29** P **P** **18 58 38.7 +0.3**
baz=274
PINM **Pinnacle** **90.42 30** P **P** **18 58 38.5 +0.3**
baz=274
DAWY **Dawson** **90.55 26** P **P** **18 58 39.0 +0.3**
baz=274
YUK8 **Steele Glacier** **90.58 29** P **P** **18 58 39.5 +0.3**
baz=274
SIM **Simferopol'** **90.59 315** *e*P **P** **18 58 39.8 +0.6**
SIM pmax pmax
comp=Z,88nm,0.7s
E29M **Blow River** **90.76 22** P **P** **18 58 40.4 +0.9**
baz=276
H29M **Whitestone** **90.79 24** P **P** **18 58 40.6 +0.9**
baz=275
BZK **Bozkurt** **90.81 312** IAmb IAmb 18 58 50.7
comp=Z,53nm,0.8s
BZK **Bozkurt** **90.81 312** ⇑P **P** **18 58 40.8 +0.5**
G29M **Pine Creek** **90.86 23** IAmb IAmb 18 58 45.3
comp=Z,42nm,0.9s
G29M **Pine Creek** **90.86 23** P **P** **18 58 40.2 +0.2**
baz=276
PNL **Peninsula** **90.88 30** P **P** **18 58 40.8 +0.5**
baz=274
LODK **Lodwar** **90.94 273** P **P** **18 58 41.1 -0.5**
SNR=6.9
VADS **Vadso** **91.03 340** *e*P **P** **18 58 40.9 +0.2**
ILGA **Ilgaz** **91.07 311** IAmb IAmb 18 58 54.4
comp=Z,42nm,1.0s
M29M **Somme Creek** **91.10 28** P **P** **18 58 42.2 +0.9**
baz=275
YUK4 **Talbot Arm** **91.12 29** P **P** **18 58 42.7 +1.1**
baz=275
L29M **L29M** **91.19 27** IAmb IAmb 18 58 47.8
comp=Z,48nm,0.9s
L29M **L29M** **91.19 27** P **P** **18 58 42.4 +0.7**
baz=276
BR131 **Keskin Array S** **91.20 310** P **P** **18 58 42.5 +0.1**
SNR=11
BRTR **Keskin Array B** **91.20 310** P **P** **18 58 41.4 -1.0**
comp=Z,8.9nm,0.7s,baz=134,slow=3.7,SNR=19
BRTR PP **PP** **19 02 18.7 -0.8**
comp=Z,0.8nm,0.7s,baz=40,slow=42,SNR=3.1
comp=Z,8.9nm,0.7s
BRTR **Keskin Array B** **91.20 310** P **P** **18 58 40.8 -1.6**
BR106 **Keskin Array S** **91.21 310** P **P** **18 58 43.8 +1.4**
BR105 **Keskin Array S** **91.22 310** P **P** **18 58 44.2 +1.8**
O29M **Mount Kennedy** **91.24 30** P **P** **18 58 42.6 +0.6**
baz=275
YUK6 **Outpost Mounta** **91.29 29** P **P** **18 58 42.7 +0.3**
baz=275
QSPA **South Pole Qui** **91.38 180** P **P** **18 58 42.2 -0.3**
comp=Z,4.2nm,1.0s,baz=327,slow=2.4,SNR=14
QSPA S **SKSac** **19 09 14.0 +1.6**
comp=Z,2.5nm,1.0s,baz=184,slow=2.1,SNR=9.9
QSPA PKKPbc **PKKPdf** **19 16 03.9 +0.2**
comp=Z,2.6nm,0.8s,baz=355,slow=1.3,SNR=4.2
comp=Z,4.2nm,1.0s
QSPA **South Pole Qui** **91.38 180** P **P** **18 58 42.3 -0.3**
QSPA IAmb IAmb 18 59 11.2
comp=Z,36nm,1.1s
K29M **Barlow Dome** **91.39 26** P **P** **18 58 43.1 +0.4**
baz=276
EPYK **Eagle Plains** **91.44 24** IAmb IAmb 18 58 47.7
comp=Z,32nm,0.9s
EPYK **Eagle Plains** **91.44 24** P **P** **18 58 43.0 +0.2**
baz=277
G30M **tAoh Zraii Nji** **91.56 23** P **P** **18 58 43.8 +0.5**
baz=277
F30M **Barrier River** **91.65 22** IAmb IAmb 18 59 09.0
comp=Z,30nm,0.9s
F30M **Barrier River** **91.65 22** P **P** **18 58 44.4 +0.8**
baz=276
CSS **Mathiatis** **91.69 305** P **P** **18 58 46.1 +1.6**
comp=Z,100nm,0.9s
HYT **Haines Junctio** **91.72 29** P **P** **18 58 44.6 +0.3**
baz=276

I30M **Mount Dempster** **91.72 25** P **P** **18 58 44.6 +0.4**
baz=277
P29M **Windy Craggy** **91.73 30** P **P** **18 58 45.0 +0.8**
baz=276
J30M **Hart River** **91.82 25** P **P** **18 58 45.3 +0.6**
baz=277
ANTO **Ankara** **91.84 310** P **P** **18 58 43.9 -1.4**
ANTO **Ankara** **91.84 310** ⇑P **P** **18 58 46.2 +0.9**
ANTO **Ankara** **91.84 310** P **P** **18 58 43.9 -1.4**
ANTO pmax pmax
comp=Z,15nm,0.9s
ANTO **Ankara** **91.84 310** P **P** **18 58 49.6 +4.4**
N30M **Aishikik Lake** **91.85 29** P **P** **18 58 45.4 +0.7**
baz=276
M30M **Minto, Yukon** **91.86 27** P **P** **18 58 45.5 +0.7**
baz=277
P30M **Million Dollar** **92.06 30** P **P** **18 58 46.2 +0.4**
baz=276
MAYO **Mayo, Yukon** **92.14 26** P **P** **18 58 46.5 +0.5**
baz=278
G31M **Satah River** **92.33 23** IAmb IAmb 18 58 50.8
comp=Z,36nm,0.9s
G31M **Satah River** **92.33 23** P **P** **18 58 47.2 +0.4**
baz=279
INK **Inuvik** **92.38 21** P **P** **18 58 47.6 +0.7**
baz=280
O30N **Mendenhall** **92.41 29** P **P** **18 58 47.9 +0.5**
baz=277
PLBC **Pleasant Camp** **92.44 30** P **P** **18 58 48.0 +0.6**
baz=277
ARA0 **ARCESS Array S** **92.45 340** *e*P **P** **18 58 46.9 -0.4**
ARCES **ARCESS Array B** **92.45 340** P **P** **18 58 46.5 -0.7**
comp=Z,36nm,0.8s,baz=75,slow=5.3,SNR=50
ARCES PKKPbc **PKKPdf** **19 16 01.8 +0.7**
comp=Z,1.3nm,0.7s,baz=258,slow=3.4,SNR=22
comp=Z,36nm,0.8s
ARCES **ARCESS Array B** **92.45 340** P **P** **18 58 46.2 -1.1**
ARCES IAmb IAmb 18 58 48.4
comp=Z,48nm,0.9s
F31M **Tsiigehtchic** **92.45 22** IAmb IAmb 18 58 51.8
comp=Z,32nm,0.9s
F31M **Tsiigehtchic** **92.45 22** P **P** **18 58 48.1 +0.8**
baz=280
N31M **Braeburn, Yuko** **92.47 28** IAmb IAmb 18 58 53.1
comp=Z,38nm,0.9s
N31M **Braeburn, Yuko** **92.47 28** P **P** **18 58 48.1 +0.5**
baz=278
H31M **Peel River** **92.48 24** IAmb IAmb 18 59 07.6
comp=Z,45nm,1.5s
H31M **Peel River** **92.48 24** P **P** **18 58 48.0 +0.4**
baz=279
SPB2 **Spitsbergen Ar** **92.62 349** IAmb IAmb 18 58 57.7
comp=Z,37nm,0.8s
SPA0 **Spitsbergen Ar** **92.62 349** *e*P **P** **18 58 47.8 -0.3**
SPITS **Spitsbergen Ar** **92.62 349** P **P** **18 58 48.9 +0.9**
comp=Z,20nm,0.8s,baz=87,slow=6.8,SNR=10
SPITS S **SKSac** **19 09 15.9 -2.9**
comp=Z,1.9nm,0.4s,baz=43,slow=15,SNR=11
SPITS LR LR 19 47 13.4
comp=Z,416nm,18.4s,baz=66,slow=40
comp=Z,20nm,0.8s
SPITS **Spitsbergen Ar** **92.62 349** P **P** **18 58 47.7 -0.3**
SPITS pmax pmax
comp=Z,35nm,0.8s
HAMF **Hammerfest** **92.83 341** *e*P **P** **18 58 48.1 -0.9**
SKAG **Skagway** **92.97 30** IAmb IAmb 18 58 57.6
comp=Z,44nm,1.2s
SKAG **Skagway** **92.97 30** P **P** **18 58 51.3 +1.5**
SKAG **Skagway** **92.97 30** P **P** **18 58 50.6 +0.7**
baz=278
WHY **Whitehorse** **93.02 29** P **P** **18 58 50.9 +0.7**
baz=278
M31M **Drury Creek, Y** **93.02 28** IAmb IAmb 18 59 09.4
comp=Z,22nm,0.9s
M31M **Drury Creek, Y** **93.02 28** P **P** **18 58 50.8 +0.7**
baz=279
KBS **Kingsbay** **93.16 350** *e*P **P** **18 58 51.1 +0.7**
KBS **Kingsbay** **93.16 350** *i*P **P** **18 58 49.1 -1.3**
SIT **Sitka** **93.30 33** P **P** **18 58 52.1 +0.7**
baz=278
KTK1 **Kautokeino** **93.34 339** *e*P **P** **18 58 50.9 -0.6**
AK09 **Malin Array Si** **93.40 321** P **P** **18 58 51.4 -0.6**
AKASG **Malin Array Be** **93.43 321** P **P** **18 58 51.4 -0.8**
comp=Z,22nm,0.7s,baz=70,slow=4.4,SNR=28
AKASG LR LR 19 44 15.0
comp=Z,1μm,21.1s,baz=81,slow=38
comp=Z,22nm,0.7s
AKBB **Malin Array Si** **93.43 321** *e*P **P** **18 58 51.8 -0.4**
AKBB **Malin Array Si** **93.43 321** P **P** **18 58 51.3 -0.9**
KIEV **Kiev** **93.44 321** P **P** **18 58 50.4 -1.8**
KIEV IAmb IAmb 18 58 56.7
comp=Z,21nm,0.8s
KIEV **Kiev** **93.44 321** ⇓P **P** **18 58 52.2 0.0**
KIEV **Kiev** **93.44 321** P **P** **18 58 52.2 0.0**
KIEV **Kiev** **93.44 321** P **P** **18 58 51.7 -0.5**
comp=Z,117nm,0.9s
PURM **Purcari** **93.44 317** ⇓P **P** **18 58 53.0 +0.7**
R32K **Eaglecrest** **93.55 32** P **P** **18 58 53.2 +0.6**
baz=278
S32K **Killisnoo** **93.64 32** P **P** **18 58 53.8 +0.8**
baz=278
FINES **FINESS Array B** **93.66 332** P **P** **18 58 52.8 -0.2**
comp=Z,18nm,0.9s,baz=60,slow=2.6,SNR=23
comp=Z,18nm,0.9s
FINES **FINESS Array B** **93.66 332** P **P** **18 58 51.1 -1.9**
P32M **Atlin** **93.76 30** P **P** **18 58 54.2 +0.6**
baz=279
MNK **Minsk** **93.77 325** *i*P **P** **18 58 52.9 -0.8**
MNK *i* 19 02 38.0
MNK *i*S **SKSac** **19 09 24.5 -1.4**
MNK *i*SS **SS** **19 16 19.7 +0.4**
MNK *i*SSS SSS 19 20 01.1
MNK pmax pmax
comp=N,17nm,1.0s
MNK pmax pmax
comp=Z,46nm,0.9s
MNK pmax pmax
comp=E,23nm,1.2s
MNK MLR MLR
comp=N,1μm,23.0s
MNK MLR MLR
comp=Z,1μm,24.0s
N32M **Quiet Lake** **93.81 29** P **P** **18 58 54.2 +0.4**
baz=280
P33M **Teslin, Yukon** **94.10 29** P **P** **18 58 55.5 +0.3**
baz=280
MILM **Milestii Mici** **94.13 317** ⇓P **P** **18 58 55.5 0.0**
MILM **Milestii Mici** **94.13 317** P **P** **18 58 55.4 0.0**
JETT **Jettan, Norway** **94.19 340** *e*P **P** **18 58 55.1 -0.2**
A36M **Sachs Harbour** **94.24 17** P **P** **18 58 56.2 +0.8**
baz=288
SORM **Soroca** **94.29 318** ⇓P **P** **18 58 56.5 +0.3**
SORM **Soroca** **94.29 318** P **P** **18 58 56.5 +0.3**
TLCR **94.32 315** ⇑P **P** **18 58 56.6 +0.2**
TLCR **94.32 315** P **P** **18 58 56.6 +0.2**
ELL **Elmali** **94.33 307** IAmb IAmb 18 59 01.6
comp=Z,30nm,1.0s
LUBAR **Lubar, Ukraine** **94.46 320** P **P** **18 58 55.9 -1.0**
Q32M **Nakina River** **94.60 31** P **P** **18 58 58.2 +0.6**
baz=280
U33K **Whale Pass** **94.64 34** P **P** **18 58 57.9 +0.3**
baz=280
TRO **Tromso** **94.66 340** *e*P **P** **18 58 56.3 -1.1**
TIRR **Tirgusor** **94.69 315** ⇓P **P** **18 58 58.9 +0.8**
TIRR **Tirgusor** **94.69 315** P **P** **18 58 58.9 +0.8**
CRAG **Craig** **94.75 34** P **P** **18 58 57.0 -1.1**
baz=280
CFR **Carcaliu** **94.80 315** ⇓P **P** **18 58 59.3 +0.7**
CFR **Carcaliu** **94.80 315** P **P** **18 58 59.2 +0.7**
VASR **Vaslui** **94.86 317** ⇓P **P** **18 58 59.9 +1.1**
NDNU **Novodnistrovsk** **94.89 319** P **P** **18 58 59.8 +0.9**
TLBR **Topalu** **94.94 315** ⇑P **P** **18 59 00.3 +1.0**
WRAK **Wrangell Islan** **95.02 33** P **P** **18 58 58.8 -0.6**
baz=280
R33M **Jennings River** **95.17 30** P **P** **18 58 59.6 -0.6**
baz=282
COSR **Cosmesti PH** **95.29 316** ⇓P **P** **18 59 00.9 +0.1**
NOR **Nord** **95.31 355** *i*P **P** **18 58 59.5 -0.8**
NOR IAmb IAmb 18 59 07.6
comp=Z,25nm,1.1s
BAND **Balkesir-Ban** **95.39 311** ⇓P **P** **18 59 01.4 0.0**
S34M **Telegraph Cree** **95.39 32** P **P** **18 59 00.7 -0.4**
baz=281
RNPP9 **Sopachiv** **95.42 322** P **P** **18 59 02.1 +0.8**
C36M **Paulatuk** **95.45 20** IAmb IAmb 18 59 05.6
comp=Z,40nm,0.8s

C36M **Paulatuk** **95.45 20** P **P** **18 59 01.2 +0.2**
baz=289
RNPP5 **Staryi Chortor** **95.45 322** P **P** **18 59 01.7 +0.3**
RNPP8 **Varash** **95.45 322** P **P** **18 59 02.2 +0.8**
KMPD **K-Podol'skiy** **95.49 319** P **P** **18 59 01.0 -0.7**
TESR **Tescani** **95.65 317** ⇑P **P** **18 59 02.5 0.0**
TESR **Tescani** **95.65 317** P **P** **18 59 01.9 -0.6**
comp=Z,71nm,0.8s
VRI **Vrincioaia** **95.69 316** ⇑P **P** **18 59 03.5 +0.7**
VRI **Vrincioaia** **95.69 316** P **P** **18 59 03.4 +0.7**
VRI **Vrincioaia** **95.69 316** P **P** **18 59 04.8 +2.1**
PLOR **Plostina** **95.75 316** ⇑P **P** **18 59 03.6 +0.6**
PLOR **Plostina** **95.75 316** P **P** **18 59 03.6 +0.6**
PABE **Paberze** **95.83 326** IAmb IAmb 18 59 08.5
comp=Z,48nm,0.8s
DLBC **Dease Lake** **95.85 31** P **P** **18 59 03.8 +0.6**
comp=Z,5.9nm,0.9s,baz=214,slow=6.1,SNR=5.6
comp=Z,5.9nm,0.9s
ONER **Baraj Valea Uz** **95.85 317** ⇓P **P** **18 59 03.7 +0.3**
NEHR **Nehoiu** **96.05 316** ⇓P **P** **18 59 05.3 +0.9**
COVR **Voineasa-Covas** **96.06 316** ⇑P **P** **18 59 04.8 +0.4**
TURR **Turia** **96.16 316** ⇑P **P** **18 59 05.6 +0.7**
MLR **Muntele Rosu** **96.29 316** LR LR 19 49 15.6
comp=Z,1μm,20.7s,baz=69,slow=40
MLR **Muntele Rosu** **96.29 316** IAmb IAmb 18 59 16.4
comp=Z,30nm,0.8s
MLR **Muntele Rosu** **96.29 316** ⇑P **P** **18 59 06.0 +0.3**
MLR **Muntele Rosu** **96.29 316** P **P** **18 59 05.9 +0.3**
MLR **Muntele Rosu** **96.29 316** P **P** **18 59 06.1 +0.5**
comp=Z,41nm,0.8s
BURAR **Bucovina Array** **96.46 318** P **P** **18 59 05.2 -1.0**
BURAR **Bucovina Array** **96.46 318** ⇑P **P** **18 59 06.6 +0.3**
BURAR **Bucovina Array** **96.46 318** P **P** **18 59 06.6 +0.3**
STEI **Steigen** **96.48 339** *e*P **P** **18 59 03.9 -1.8**
SUW **Suwalki** **96.57 325** *e*P **P** **18 59 06.6 +0.1**
FAUS **Fauske** **96.65 339** *e*P **P** **18 59 06.1 -0.4**
KARP **Karpathos** **96.67 306** P **P** **18 59 09.2 +1.8**
ELND **Elena** **96.71 313** ⇓P **P** **18 59 08.0 +0.6**
STNU **Starunia** **96.75 319** P **P** **18 59 07.3 -0.1**
EZN **Ezine** **96.80 310** ⇓P **P** **18 59 08.0 +0.2**
EZN **Ezine** **96.80 310** P **P** **18 59 08.0 +0.2**
VOIR **96.92 316** ⇑P **P** **18 59 08.8 +0.4**
VOIR **96.92 316** P **P** **18 59 08.8 +0.4**
VOIR **96.92 316** P **P** **18 59 12.8 +4.4**
HUMR **Humele** **97.11 315** ⇑P Pdif 18 59 09.3 0.0
ARR **Arges** **97.22 316** ⇓P Pdif 18 59 10.2 +0.4
SHIU **Shidnytsya** **97.39 320** P Pdif 18 59 11.2 +0.8
MOR8 **Moi Rana** **97.39 338** *e*P **P** **18 59 08.8 -1.2**
MEZ **Mezhgor'ye** **97.42 319** P Pdif 18 59 11.0 +0.4
RAUS **Rausandaksla** **97.45 338** *e*P **P** **18 59 08.8 -1.4**
VLAD **Vladila** **97.60 315** ⇑P Pdif 18 59 12.0 +0.5
VAGH **Vaagaholmen** **97.63 338** *e*P **P** **18 59 10.7 -0.3**
CJR **Cluj-Napoca** **97.70 317** ⇑P Pdif 18 59 11.9 0.0
CJR **Cluj-Napoca** **97.70 317** P Pdif 18 59 11.9 0.0
KWP **Kalwaria Pacla** **97.73 320** P Pdif 18 59 11.9 0.0
BRIU **Brid** **97.78 319** P Pdif 18 59 13.5 +1.4
LOT **Lotru** **97.81 316** ⇑P Pdif 18 59 12.8 +0.3
STOK **Stokkvaagen** **97.87 338** *e*P Pdif 18 59 14.0 +1.9
LEIR **Leirfjorden** **97.92 338** *e*P **P** **18 59 11.7 -0.5**
MUKU **Mukachevo** **97.98 319** P Pdif 18 59 13.2 +0.2
MARR **Marisel-Cluj** **98.03 317** ⇑P Pdif 18 59 14.2 +0.8
BERU **Beregovo** **98.05 319** P Pdif 18 59 13.4 +0.1
UZHM **Uzhgorod** **98.20 319** P Pdif 18 59 14.7 +0.7
DRGR **98.28 318** ⇓P Pdif 18 59 15.0 +0.4
DRGR **98.28 318** P Pdif 18 59 14.9 +0.4
KOTAN **Kotaneelee Air** **98.37 28** P **P** **18 59 14.0 -0.5**
baz=288
GZR **Gura Zlata** **98.50 316** ⇑P Pdif 18 59 15.7 +0.2
GZR **Gura Zlata** **98.50 316** P Pdif 18 59 15.7 +0.2
STHS **Stebnicka Huta** **98.71 320** *i*P **P** **18 59 15.3 -1.0**
STHS **Stebnicka Huta** **98.71 320** *e*PDIFF **P** **18 59 15.3 -1.0**
HERR **Herculane** **98.85 316** ⇑P Pdif 18 59 17.3 +0.3
BLKB **Belogradchik** **98.90 314** ⇓P **P** **18 59 17.1 -0.2**
NSS **Namsos** **98.97 337** *e*P **P** **18 59 13.8 -3.2**
SIRR **Siria** **99.10 317** ⇓P **Pdif** **18 59 18.0 -0.1**
BZS **Buzias** **99.26 317** ⇓P **Pdif** **18 59 19.0 +0.2**
BZS **Buzias** **99.26 317** P **Pdif** **18 59 19.0 +0.2**
NVL **N'lazarevskaya** **99.30 198** *e*P **Pdif** **18 59 17.8 -0.6**
NVL *e* 19 03 20.3
NVL *e*PPP PPP 19 05 27.7
NVL *e*S **SKSac** **19 09 52.1 -2.0**
NVL *e*SS **SS** **19 17 37.5 +0.8**
NVL *e*SSS SSS 19 21 26.6
NVL pmax pmax
comp=Z,9.0nm,1.1s
NVL smax smax
comp=N,683nm,17.5s
NVL MLR MLR
comp=Z,103nm,22.0s
NIE **Niedzica** **99.31 321** *e*P **Pdif** **18 59 25.0 +6.0**
NIE **Niedzica** **99.31 321** P **Pdif** **18 59 21.9 +2.9**
MDVR **Moldovita** **99.36 316** ⇑P **Pdif** **18 59 19.9 +0.5**
OJC **Ojcow** **99.44 321** P **Pdif** **18 59 22.1 +2.6**
DAG **Danmarks Havn** **99.44 352** *i*P **Pdif** **18 59 18.0 -0.9**
DAG IAmb IAmb 18 59 25.8
comp=Z,18nm,0.8s
BOVS **Bovan** **99.59 315** ⇓P **Pdif** **18 59 21.0 +0.7**
HFS **Hagfors** **99.85 332** P **Pdif** **18 59 20.2 -0.9**
comp=Z,8.4nm,0.9s,baz=132,slow=2.2,SNR=15
HFS LR LR 19 49 41.6
comp=Z,895nm,19.7s,baz=71,slow=38
comp=Z,8.4nm,0.9s
LANS **Liptovska Anna** **99.90 320** *i*P **Pdif** **18 59 23.7 +2.1**
LANS **Liptovska Anna** **99.90 320** *e*PDIFF **Pdif** **18 59 23.7 +2.1**
PSZ **Piszkesteto** **99.92 319** ⇓P **Pdif** **18 59 22.6 +0.8**
PSZ **Piszkesteto** **99.92 319** P **Pdif** **18 59 22.5 +0.8**
BOSA **Boshof** **100.48 241** P **Pdif** **18 59 23.4 -1.4**
comp=Z,3.0nm,0.7s,baz=86,slow=2.1,SNR=5.4
NB2 **NORSAR Subarra** **100.65 333** P **Pdif** **18 59 22.9 -1.8**
comp=Z,15nm,1.0s,baz=69,slow=4.4
NB2 PKKP **PKKPbc** **19 15 40.7 -0.5**
comp=Z,1.2nm,0.8s,baz=237,slow=2.4
NOA **NORSAR Array B** **100.65 333** P **Pdif** **18 59 22.9 -1.8**
comp=Z,6.1nm,0.8s,baz=69,slow=4.5,SNR=22
NOA PP **PP** **19 03 33.5 +1.7**
comp=Z,3.5nm,0.9s,baz=76,slow=8.0,SNR=4.0
NOA PKKPbc **PKKPbc** **19 15 41.6 +0.4**
comp=Z,1.5nm,0.7s,baz=68,slow=2.7,SNR=8.5
STEB **Steborice** **100.77 321** *e*PDIFF **Pdif** **18 59 26.5 +1.1**
NAO01 **NORSAR Array S** **100.88 333** *e*P **Pdif** **18 59 25.2 -0.4**
MAUC **Maruska** **100.89 321** *e*PDIFF **Pdif** **18 59 29.5 +3.5**
MORC **Moravsky Berou** **100.96 321** ⇓P **Pdif** **18 59 26.9 +0.6**
MORC **Moravsky Berou** **100.96 321** *e*PDIFF **Pdif** **18 59 29.3 +3.0**
MORC **Moravsky Berou** **100.96 321** P **Pdif** **18 59 26.9 +0.6**
JAVC **Velka Javorina** **101.12 320** *e*PDIFF **Pdif** **18 59 29.8 +2.7**
NEEM **North Greenlan** **101.17 359** *i*P **Pdif** **18 59 26.8 -0.2**
NEEM IAmb IAmb 18 59 30.5
comp=Z,17nm,1.0s
KRLC **Kraliky** **101.35 322** *e*P **Pdif** **18 59 32.9 +4.8**
KRLC **Kraliky** **101.35 322** *e*PDIFF **Pdif** **18 59 32.9 +4.8**
TROLL **Troll, Antarti** **101.37 195** ⇓P **PKiKP** **19 03 53.5 +1.6**
comp=Z,124nm,0.5s
TROLL ⇓x x 19 15 32.7
comp=Z,96nm,0.5s
KSP **Ksiaz** **101.43 323** P **Pdif** **18 59 33.7 +5.4**
MODS **Modra-Piesok** **101.50 320** *i*P **Pdif** **18 59 33.6 +4.9**
MODS **Modra-Piesok** **101.50 320** *e*PDIFF **Pdif** **18 59 33.6 +4.9**
DPC **Dobruska-Polom** **101.56 322** *e*P **Pdif** **18 59 30.3 +1.3**
DPC MLR MLR
comp=Z,1μm,22.4s
DPC **Dobruska-Polom** **101.56 322** *e*PDIFF **Pdif** **18 59 30.3 +1.3**
DPC AMS AMS 19 46 20.0
comp=Z,1μm,22.4s
DPC **Dobruska-Polom** **101.56 322** P **Pdif** **18 59 34.5 +5.5**
OSTC **Ostas** **101.56 322** *e*P **Pdif** **18 59 35.0 +6.0**
OSTC **Ostas** **101.56 322** *e*PDIFF **Pdif** **18 59 35.0 +6.0**
VRAC **Vranov** **101.68 321** ⇑P **Pdif** **18 59 29.8 +0.2**
VRAC **Vranov** **101.68 321** *e*PDIFF **Pdif** **18 59 31.1 +1.6**
VRAC **Vranov** **101.68 321** P **Pdif** **18 59 29.7 +0.2**
YKA **Yellowknife Ar** **101.69 24** P **Pdif** **18 59 29.1 0.0**
comp=Z,4.2nm,0.9s,baz=300,slow=5.6,SNR=7.4
YKA PKiKP **PKiKP** **19 03 51.6 -0.9**
comp=Z,1.1nm,0.6s,baz=316,slow=6.0,SNR=4.2
DBG **Daneborg** **101.70 351** *i*P **Pdif** **18 59 28.6 -0.5**
KRUC **Moravsky** **101.88 321** *e*PDIFF **Pdif** **18 59 31.5 +1.1**
RONA **Rosalia, Austr** **102.32 320** *e*pPdiff pPdif 18 59 37.4 -5.0
comp=Z,2.3nm,0.6s
CONA **Conrad Observa** **102.53 320** *e*pPdiff **pPdif** **18 59 37.9 -5.5**
comp=Z,1.6nm,0.5s
CONA *e*PKiKP **PKiKP** **19 03 51.7 -3.0**
comp=Z,2.6nm,0.7s
PRU **Pruhonice** **102.76 322** *e*P **Pdif** **18 59 37.4 +3.2**
PRU **Pruhonice** **102.76 322** *e*PDIFF **Pdif** **18 59 37.4 +3.2**

ARSA **Arzberg** **102.95 319** *i* PKiKP **PKiKP** **19 03 52.5 -2.9**
comp=Z,0.9nm,0.3s
SNAA **Sanae** **102.95 195** ⇓P **PKiKP** **19 03 59.0 +4.3**
comp=Z,83nm,1.0s
SNAA ⇓x x 19 15 29.3
comp=Z,85nm,0.8s
SNAA **Sanae** **102.95 195** Pdiff **Pdif** **18 59 34.3 -0.4**
comp=Z,2.0nm,0.9s,baz=185,slow=13,SNR=7.7
SNAA PKiKP **PKiKP** **19 03 55.0 +0.3**
comp=Z,3.5nm,0.9s,baz=158,slow=6.9,SNR=4.1
SNAA PKKPbc **PKKPbc** **19 15 32.9 -2.0**
comp=Z,3.2nm,0.8s,baz=298,slow=3.3,SNR=9.4
ZVC **Zvikov** **103.14 322** *e*PDIFF **Pdif** **18 59 39.7 +3.7**
CKRC **Cesky Krumlov** **103.26 321** *e*P **Pdif** **18 59 39.4 +2.8**
CKRC **Cesky Krumlov** **103.26 321** *e*PDIFF **Pdif** **18 59 39.4 +2.8**
CLL **Collm** **103.26 324** *i* P **Pdif** **18 59 41.3 +4.9**
CLL *e*S **Sdif** **19 11 18.0 -3.6**
CLL pmax pmax
comp=Z,9.0nm,0.8s
CLL **Collm** **103.26 324** *i* Pdif **Pdif** **18 59 41.3 +4.9**
comp=Z,9.0nm,0.8s
SOKA **Soboth** **103.43 319** *e*pPdiff pPdif 18 59 42.3 -5.2
comp=Z,2.4nm,0.8s
MOA **Molln** **103.58 320** *e*Pdiff **Pdif** **18 59 40.4 +2.3**
comp=Z,6.8nm,0.6s
KHC **Kasperske Hory** **103.62 321** *e*P **Pdif** **18 59 41.3 +3.1**
KHC **Kasperske Hory** **103.62 321** *e*PDIFF **Pdif** **18 59 41.3 +3.1**
KHC **Kasperske Hory** **103.62 321** P **Pdif** **18 59 44.8 +6.6**
GERES **GERESS Array B** **103.64 321** Pdiff **Pdif** **18 59 38.8 +0.5**
comp=Z,7.7nm,0.9s,baz=54,slow=6.9,SNR=8.5
GERES PKiKP **PKiKP** **19 03 56.0 -0.7**
comp=Z,1.7nm,0.9s,baz=91,slow=6.7,SNR=4.8
GERES PKKPbc **PKKPbc** **19 15 28.4 -3.8**
comp=Z,0.2nm,0.3s,baz=259,slow=7.0,SNR=2.5
KBA **Koelnbreinsper** **104.42 320** *e*pPdiff **pPdif** **18 59 48.2 -3.7**
comp=Z,1.7nm,0.6s
KBA *i* pPKiKP pPKiKP 19 04 09.1 +0.6
comp=Z,5.0nm,1.0s
VNA2 **Neumayer--Watz** **104.56 194** ⇑P **PP** **19 03 59.8 -0.9**
comp=Z,6.3nm,0.7s,baz=118,slow=1.6
VNA2 ⇓x x 19 15 26.1
comp=Z,2.5nm,0.5s,baz=287,slow=5.6
VNA3 **Neumayer Olymp** **104.88 193** ⇑P **PP** **19 04 03.7 +0.5**
comp=Z,4.5nm,0.8s
ABTA **Abfaltersbach** **105.06 319** *e*Pdiff **Pdif** **18 59 47.0 +2.3**
comp=Z,2.6nm,0.6s
ABTA *e*pPKiKP **pPKiKP** **19 04 10.8 +1.1**
comp=Z,2.4nm,0.7s
WTTA **Wattenberg** **105.46 320** *e*Pdiff **Pdif** **18 59 46.7 +0.1**
comp=Z,6.4nm,0.6s
SQTA **Sankt Quirin** **105.75 320** *e*pPdiff **Pdif** **18 59 51.1 +3.3**
comp=Z,4.0nm,0.6s
MOTA **Moosalm** **105.77 320** *e*pPdiff **pPdif** **18 59 52.3 -5.6**
comp=Z,4.6nm,0.7s
MOTA *e*PP **PP** **19 04 12.3 +1.7**
comp=Z,10nm,1.0s
FETA **Feichten** **106.12 320** *e*pPdiff **Pdif** **18 59 52.5 +3.0**
comp=Z,2.8nm,0.7s
FETA *i* PP **PP** **19 04 15.2 +2.0**
comp=Z,5.7nm,1.1s
DAVA **Damuels** **106.57 321** *i* PP **PP** **19 04 19.8 +3.3**
comp=Z,9.3nm,1.0s
NVAR **Mina Array Bea** **108.66 49** Pdiff **Pdif** **19 00 00.5 -0.6**
comp=Z,0.5nm,0.7s,baz=270,slow=5.9,SNR=3.5
NVAR PKiKP **PKiKP** **19 04 06.5 +0.1**
comp=Z,0.8nm,0.7s,baz=261,slow=3.5,SNR=3.5
NVAR PP **PP** **19 04 33.9 +1.7**
comp=Z,2.3nm,0.9s,baz=270,slow=6.3,SNR=5.2
NVAR PKKPbc **PKKPbc** **19 15 17.5 +0.9**
comp=Z,0.7nm,1.0s,baz=340,slow=5.4,SNR=1.5
EKA **Eskdalemuir Ar** **110.06 332** PKiKP **PKiKP** **19 04 06.5 -1.7**
comp=Z,0.7nm,0.5s,baz=28,slow=3.7,SNR=3.7
EKA PKKPbc **PKKPbc** **19 15 14.3 +2.0**
comp=Z,3.0nm,0.7s,baz=242,slow=3.4,SNR=7.5
KEST **Kesra** **110.80 309** PP **PP** **19 04 47.7 +0.1**
comp=Z,18nm,1.1s,baz=126,slow=2.2,SNR=5.4
PDAR **Pinedale Array** **113.27 42** Pdiff **Pdif** **19 00 21.0 -0.5**
comp=Z,0.3nm,0.8s,baz=297,slow=1.3,SNR=2.0
PDAR PKiKP **PKiKP** **19 04 15.5 +0.5**
comp=Z,1.3nm,0.6s,baz=220,slow=1.4,SNR=9.0
PDAR PKKPbc **PKKPbc** **19 15 03.1 +1.5**
comp=Z,2.6nm,0.8s,baz=114,slow=4.8,SNR=3.8
RSSD **Black Hills** **116.17 38** **PKPdf** **19 04 19.0 -1.6**
RSSD **Black Hills** **116.17 38** PKiKP **PKPdf** **19 04 19.0 -1.6**
ULM **Lac du Bonnet** **117.10 29** PKP **PKPdf** **19 04 20.5 -1.3**
comp=Z,7.4nm,0.6s,baz=2,slow=1.4,SNR=4.7
ESDC **Sonsea Array** **118.91 318** PKP **PKiKP** **19 04 27.0 +1.2**
comp=Z,0.5nm,0.6s,baz=30,slow=2.5,SNR=1.3
ESDC PP **PP** **19 05 47.0 +2.5**
comp=Z,6.2nm,1.0s,baz=59,slow=6.2,SNR=6.8
ESDC PKKPbc **PKKPab** **19 14 42.6 -0.9**
comp=Z,2.2nm,0.9s,baz=257,slow=3.8,SNR=4.8
SCHQ **Schefferville** **122.84 9** PKP **PKPdf** **19 04 32.2 -0.5**
comp=Z,12nm,0.5s,baz=32,slow=3.6,SNR=14
SCHQ PKKPbc **PKKPbc** **19 14 28.7 +1.5**
comp=Z,7.6nm,0.9s,baz=226,slow=17,SNR=3.6
TXAR **Lajitas Array** **123.23 53** PKP **PKPdf** **19 04 34.3 -0.1**
comp=Z,4.7nm,0.6s,baz=202,slow=1.3,SNR=24
TXAR PKKPbc **PKKPbc** **19 14 25.2 +0.1**
comp=Z,1.2nm,0.9s,baz=130,slow=5.3,SNR=4.5
TXAR **Lajitas Array** **123.23 53** **PKiKP** **19 04 35.1 +0.5**
TORD **Torodi Ar. Bea** **123.27 287** PKP **PKiKP** **19 04 35.2 +0.3**
comp=Z,12nm,0.8s,baz=80,slow=3.1,SNR=8.7
TORD PKKPbc **PKKPab** **19 14 27.2 +2.4**
comp=Z,3.6nm,0.7s,baz=290,slow=1.9,SNR=4.0
POST **Post** **123.31 48** **PKPdf** **19 04 30.3 -4.1**
CCM **Cathedral Cave** **127.55 37** **PKPdf** **19 04 41.3 -0.9**
CCM **Cathedral Cave** **127.55 37** PKiKP **PKPdf** **19 04 41.3 -0.9**
DBIC **Dimbokro** **130.68 280** PKP **PKPdf** **19 04 48.1 -0.7**
comp=Z,2.8nm,0.8s,baz=84,slow=0.8,SNR=4.1
DBIC PP PP 19 07 14.2 +10
comp=Z,12nm,1.0s,baz=51,slow=6.8,SNR=4.4
DBIC SKPbc **SKPab** **19 08 11.2 +0.7**
comp=Z,33nm,0.9s,baz=118,slow=5.5,SNR=8.1
DBIC **Dimbokro** **130.68 280** **PKiKP** **19 04 51.9 +2.2**
LL05 **Los Muermos** **136.38 158** **PKPdf** **19 04 56.6 -2.2**
PLCA **Paso Flores** **138.00 161** PKhKP PKPpre 19 04 54.1
comp=Z,2.7nm,0.8s,baz=196,slow=7.7,SNR=5.6
PLCA PKP **PKPdf** **19 05 02.2 +0.3**
comp=Z,15nm,1.0s,baz=12,slow=3.1,SNR=9.5
PLCA SKPbc **SKPbc** **19 08 36.1 +2.3**
comp=Z,8.9nm,1.0s,baz=187,slow=2.8,SNR=5.8
TRQA **Tornquist** **142.78 169** **PKPdf** **19 05 06.9 -3.7**
TRQA **Tornquist** **142.78 169** PKiKP **PKPdf** **19 05 06.9 -3.7**
HDC **Heredia** **147.57 69** *e*P **PKPdf** **19 05 19.1 -0.5**
LCO **Las Campanas** **148.12 151** **PKPbc** **19 05 23.0 -0.5**
LCO **Las Campanas** **148.12 151** PKP2 **PKPbc** **19 05 23.0 -0.5**
AC05 **El Transito** **148.47 151** **PKPbc** **19 05 22.8 -1.4**
PSAL **Palomas, Salto** **150.30 173** *e*P **PKPdf** **19 05 23.8 +0.4**
CPSB **Cacapava Do Su** **151.21 180** *e*P **PKPdf** **19 05 24.8 -0.1**
DR12 **Loma Pena Alta** **154.59 37** **PKPdf** **19 05 27.0 -3.2**
NNA **Nana** **154.70 115** **PKPdf** **19 05 27.0 -3.4**
NNA **Nana** **154.70 115** PKiKP **PKPdf** **19 05 27.0 -3.4**
CPUP **Villa Florida** **155.02 172** PKP **PKPdf** **19 05 30.4 -0.1**
comp=Z,2.3nm,1.1s,baz=255,slow=5.1,SNR=4.1
CPUP PKPab **PKPab** **19 05 55.5 +0.9**
comp=Z,4.6nm,0.8s,baz=14,slow=3.3,SNR=6.9
OTAV **Otavalo** **155.10 86** *e*P **PKPdf** **19 05 30.2 -1.3**
ROSC **El Rosal** **158.38 73** PKP **PKPdf** **19 05 35.2 -0.5**
comp=Z,28nm,0.8s,baz=229,slow=7.5,SNR=6.8
ROSC PKPab **PKPab** **19 06 11.4 +1.3**
comp=Z,33nm,0.7s,baz=135,slow=7.4,SNR=6.0
LPAZ **La Paz** **159.46 137** PKP **PKPdf** **19 05 36.6 -0.5**
comp=Z,7.9nm,0.9s,baz=234,slow=2.7,SNR=20
LPAZ PKPab **PKPab** **19 06 15.8 +0.9**
comp=Z,19nm,1.0s,baz=267,slow=1.3,SNR=7.5
LPAZ **La Paz** **159.46 137** *e*P **PKPdf** **19 05 35.0 -2.1**
SDV **Santo Domingo** **160.16 58** *e*P **PKPdf** **19 05 36.7 -0.7**
AQDB **Aquidauana** **160.99 174** *e*P **PKPdf** **19 05 36.6 -1.3**
PP1B **Ponte de Pedra** **163.91 176** *e*P **PKPdf** **19 05 39.7 -1.2**
BDFB **Brasilia** **164.87 201** PKP **PKPdf** **19 05 42.1 +0.2**
comp=Z,12nm,1.0s,baz=219,slow=0.8,SNR

TMAB	**Tom-Au,PA,Br**	**174.42 261**	*eP*		**PKPdf**	**19 05 46.9**	**-0.7**
ITTB	**Itaituba**	**176.42 144**	*eP*		**PKPdf**	**19 05 47.7**	**-0.4**

*IDC **14** 18:54:24.7±0.9, 1°.68N×126°.18E, h0km, mb4.2/7, mbtmp4.2/8, ML3.7/1, MS5.1/1, Error ellipse: s-maj=56.3km s-min=17.1km az=74.0*
*NEIC **14** 18:54:30.2±1.4, 1°.71N±0°.06×126°.32E±0°.05, h36km±8km, mb4.6/17, Error ellipse: s-maj=10.3km s-min=3.1km az=142.0*
ISC 14 18:54:29.7±0.6, **1°.69N**±0°.08×**126°.33E**±0°.08, **h35km, n30, σ0§73/27, mb4.4/16, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**131**	Pn	**Pn**	**18 54 52.7**	**+0.2**
LUWI	**Luwuk**	**4.47**	**233**	Pn	**Pn**	**18 55 34.9**	**-0.2**
TOLI2	**Tolitoli**	**5.58**	**264**	Pn	**Pn**	**18 55 51.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P	**P**	**18 58 55.9**	**0.0**
	0.2nm,0.3s,baz=360,slow=12,SNR=1.4 3.2nm,0.7s						
TPUB	**Ta-pu**	**22.18**	**346**	P	**P**	**18 59 21.7**	**-1.3**
TPUB				IAmb	IAmb	18 59 47.0	
	comp=Z,89nm,1.4s						
WB0	**Warramunga Arr**	**22.75**	**160**	P	**P**	**18 59 28.9**	**-0.2**
WB0				IAmb	IAmb	18 59 45.8	
	comp=Z,13nm,1.1s						
COEN	**Coen**	**22.81**	**133**	P	**P**	**18 59 30.0**	**+0.2**
COEN				IAmb	IAmb	18 59 34.8	
	comp=Z,20nm,1.2s						
WRAB	**Tennant Creek**	**22.88**	**160**	P	**P**	**18 59 30.8**	**+0.3**
WRA	**Warramunga Arr**	**22.89**	**160**	P	**P**	**18 59 30.4**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=341,slow=11,SNR=8.6 comp=Z,2.7nm,0.5s						
WR8	**Warramunga Arr**	**22.96**	**160**	P	**P**	**18 59 31.1**	**-0.1**
WR8				IAmb	IAmb	18 59 31.6	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**26.26**	**164**	P	**P**	**19 00 01.1**	**-0.8**
ASAR	**Alice Springs**	**26.26**	**164**	P	**P**	**19 00 02.1**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=349,slow=13,SNR=6.7 comp=Z,2.9nm,0.6s						
BBOO	**Buckleboo**	**35.52**	**166**	P	**P**	**19 01 22.7**	**-0.7**
STKA	**Stephens Creek**	**36.39**	**158**	P	**P**	**19 01 30.3**	**-0.6**
	comp=Z,4.9nm,0.9s,baz=344,slow=10,SNR=2.3 comp=Z,4.9nm,0.9s						
HILR	**Hailar Array B**	**48.02**	**354**	LR	LR	19 22 59.8	
	comp=Z,2μm,21.2s,baz=95,slow=36						
PETK	**Petropavlovsk-**	**57.46**	**22**	P	**P**	**19 04 16.1**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=205,slow=9.5,SNR=7.1 comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**19 04 26.0**	**0.0**
	comp=Z,2.1nm,0.7s,baz=121,slow=7.4,SNR=7.2 comp=Z,2.1nm,0.7s						
MAKZ	**Makanchi**	**59.19**	**326**	P	**P**	**19 04 26.6**	**-0.7**
MAKZ				IAmb	IAmb	19 04 36.4	
	comp=Z,7.3nm,1.2s						
LBZ	**Lake Benmore**	**60.24**	**145**	P	**P**	**19 04 34.8**	**+0.2**
KURBB	**Kurchatov Arra**	**63.24**	**328**	P	**P**	**19 04 54.0**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=128,slow=6.2,SNR=6.9 comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**19 04 54.0**	**-0.7**
KURK	**Kurchatov**	**63.24**	**328**	IAmb	IAmb	19 04 59.3	
	comp=Z,6.4nm,0.8s						
CASY	**Casey**	**68.76**	**187**	P	**P**	**19 05 29.6**	**-0.2**
CASY				IAmb	IAmb	19 05 59.7	
	comp=Z,6.1nm,1.1s						
TIXI	**Tiksi**	**69.87**	**1**	P	**P**	**19 05 37.2**	**+0.6**
TIXI				IAmb	IAmb	19 06 18.1	
	comp=Z,9.9nm,1.1s						
ABKAR	**Akbulak array**	**73.47**	**321**	P	**P**	**19 05 58.2**	**-0.5**
M14K	**Bethel**	**79.66**	**28**	P	**P**	**19 06 32.1**	**-1.4**
L16K	**Owhat River**	**81.06**	**28**	P	**P**	**19 06 40.8**	**-0.2**
VNDA	**Vanda**	**81.47**	**173**	P	**P**	**19 06 44.1**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=314,slow=6.8,SNR=6.9 comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**81.47**	**173**	IAmb	IAmb	19 06 46.7	
	comp=Z,2.5nm,1.1s						
L22K	**Petersville**	**85.22**	**28**	P	**P**	**19 07 04.0**	**+1.4**
L22K				IAmb	IAmb	19 07 04.2	
	comp=Z,9.3nm,1.4s						

*NEIC **14** 18:59:19.5±0.8, 62°.79N±0°.03×150°.98W±0°.08, h103km±7km, Error ellipse: s-maj=5.1km s-min=4.7km az=92.0*
AEIC 14 18:59:20.0±0.8, **62°.79N**±0°.03×**150°.99W**±0°.07, **h98km**±5km, **ML2.4, ML2.7**/120(NEIC), **Error ellipse: s-maj=5.0km s-min=4.5km az=132.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
L22K	**Petersville**	**0.28**	**159**	Pn	Pn	18 59 34.4	0.0
L22K				IAML		18 59 45.4	
	comp=E,396nm,0.3s						
L22K				IAML		18 59 45.7	
	comp=N,383nm,0.5s						
CUT	**Chulitna**	**0.51**	**139**		Pn	18 59 35.7	+0.1
CUT					Sn	18 59 47.9	+0.6
CUT	**Chulitna**	**0.51**	**139**	IAML		18 59 48.8	
	comp=N,306nm,0.5s						
PPLA	**Purkeypile**	**0.56**	**281**		Pn	18 59 36.5	+0.3
PPLA					Sn	18 59 48.8	+0.4
PPLA	**Purkeypile**	**0.56**	**281**	IAML		18 59 49.6	
	comp=N,273nm,1.0s						
PPLA				IAML		18 59 49.8	
	comp=E,122nm,1.0s						
TRF	**Thorofare Moun**	**0.73**	**25**		Pn	18 59 37.6	-0.2
TRF					Sn	18 59 51.2	+0.2
KTH	**Kantishna Hill**	**0.77**	**2**		Pn	18 59 38.0	+0.1
SKT	**Skwentna**	**0.85**	**198**		Pn	18 59 38.6	-0.1
SKT					Sn	18 59 52.7	0.0
SKT	**Skwentna**	**0.85**	**198**	IAML		18 59 53.9	
	comp=E,311nm,0.5s						
SKT				IAML		18 59 54.3	
	comp=N,197nm,0.4s						
WAT7	**Susitna Watana**	**0.98**	**87**		Pn	18 59 40.1	-0.1
WAT7					Sn	18 59 55.2	-0.1
M22K	**Willow**	**1.12**	**158**		Pn	18 59 41.7	+0.2
M22K					Sn	18 59 57.7	0.0
WAT1	**Susitna Watana**	**1.12**	**87**		Pn	18 59 41.6	0.0
WAT1					Sn	18 59 57.8	-0.1
RND	**Reindeer**	**1.15**	**57**		Pn	18 59 42.0	0.0
RND	**Reindeer**	**1.15**	**57**	IAML		18 59 59.0	
	comp=N,206nm,0.2s						
CHUM	**Lake Minchumin**	**1.25**	**332**		Pn	18 59 43.1	0.0
CHUM					Sn	19 00 00.1	-0.4
BPAW	**Bear Paw Mtn.**	**1.31**	**0**		Pn	18 59 43.6	-0.2
MCK	**McKinley**	**1.32**	**44**		Pn	18 59 44.0	0.0
SUA	**Susitna One**	**1.34**	**175**		Pn	18 59 44.7	+0.5
SUA	**Susitna One**	**1.34**	**175**	IAML		19 00 05.3	
	comp=E,63nm,1.2s						
SUA				IAML		19 00 07.2	
	comp=N,66nm,0.6s						
M20K	**Styx River**	**1.35**	**229**		Pn	18 59 44.0	-0.4
M20K					Sn	19 00 02.0	-0.9
M20K	**Styx River**	**1.35**	**229**	IAML		19 00 02.8	
	comp=E,138nm,0.5s						
M20K				IAML		19 00 03.0	
	comp=N,76nm,0.6s						
STLK	**Strandline Lak**	**1.36**	**197**		Pn	18 59 44.3	-0.2
STLK	**Strandline Lak**	**1.36**	**197**	IAML		19 00 03.8	
	comp=E,182nm,0.8s						
STLK				IAML		19 00 04.0	
	comp=N,88nm,0.3s						
L20K	**Farewell, AK**	**1.37**	**258**		Pn	18 59 44.1	-0.5
L20K					Sn	19 00 02.5	-0.6
L20K	**Farewell, AK**	**1.37**	**258**	IAML		19 00 03.1	
	comp=E,49nm,0.5s						
L20K				IAML		19 00 03.3	
	comp=N,70nm,0.5s						
GHO	**Glory Hole Cre**	**1.41**	**136**		Pn	18 59 45.3	+0.3
GHO					Sn	19 00 05.2	+1.2
GHO	**Glory Hole Cre**	**1.41**	**136**	IAML		19 00 10.0	
	comp=E,204nm,0.5s						
GHO				IAML		19 00 10.7	
	comp=N,221nm,0.5s						
PMR	**Palmer**	**1.48**	**143**		Pn	18 59 45.9	0.0
PMR	**Palmer**	**1.48**	**143**	IAML		19 00 10.9	
	comp=E,70nm,0.4s						
PMR				IAML		19 00 13.2	
	comp=N,52nm,0.3s						
WAT6	**Susitna Watana**	**1.51**	**97**		Pn	18 59 46.0	-0.4
K20K	**Telida**	**1.51**	**293**		Pn	18 59 46.0	-0.3
K20K	**Telida**	**1.51**	**293**	IAML		19 00 05.8	
	comp=E,57nm,0.5s						
K20K				IAML		19 00 06.1	
	comp=N,55nm,0.6s						
BWN	**Browne**	**1.55**	**26**	Pn	Pn	18 59 46.4	-0.3
BWN				IAML		19 00 29.6	
	comp=E,66nm,1.0s						
BWN				IAML		19 00 29.9	
	comp=N,59nm,0.5s						
SPCG	**Spurr Capps Gl**	**1.58**	**198**		Pn	18 59 47.2	-0.1
SML	**Sawmill**	**1.58**	**127**		Pn	18 59 47.4	+0.2
SML	**Sawmill**	**1.58**	**127**	IAML		19 00 12.6	
	comp=E,181nm,0.5s						
SML				IAML		19 00 15.0	
	comp=N,138nm,0.6s						
SPCN	**Chakachatna No**	**1.67**	**200**		Pn	18 59 48.9	+0.6
DHY	**Denali Highway**	**1.68**	**79**		Pn	18 59 48.5	0.0
DHY	**Denali Highway**	**1.68**	**79**	IAML		19 00 11.0	
	comp=E,88nm,0.4s						
DHY				IAML		19 00 14.3	
	comp=N,102nm,0.5s						
FIS	**Fire Island**	**1.69**	**167**	Pn	Pn	18 59 47.5	-1.0
SPCR	**Spurr Chakacha**	**1.70**	**200**		Pn	18 59 48.7	0.0
RC01	**Rabbit Creek A**	**1.81**	**160**	IAML		19 00 13.7	
	comp=E,63nm,0.3s						
RC01				IAML		19 00 20.2	
	comp=N,52nm,0.3s						
KNK	**Knik Glacier**	**1.82**	**138**	IAML		19 00 20.4	
	comp=N,94nm,0.4s						
L19K	**White Mountain**	**1.90**	**253**		Pn	18 59 50.6	-0.5
SCM	**Sheep Creek Mo**	**1.96**	**118**	Pn	Pn	18 59 48.7	-3.4
SCM				IAML		19 00 23.1	
	comp=N,102nm,0.5s						
SCM				IAML		19 00 23.3	
	comp=E,83nm,0.6s						
J20K	**Nowinta River**	**1.99**	**316**	Pn	Pn	18 59 52.6	+0.3
J20K				IAML		19 00 17.4	
	comp=N,39nm,0.6s						
J20K				IAML		19 00 17.8	
	comp=E,27nm,1.0s						
NEA2	**Nenana**	**2.00**	**24**		Pn	18 59 52.2	-0.3
WRH	**Wood River Hil**	**2.13**	**36**		Pn	18 59 53.9	-0.2
PWL	**Port Wells**	**2.31**	**146**		Pn	18 59 55.9	-0.7
PWL	**Port Wells**	**2.31**	**146**	IAML		19 00 33.7	
	comp=E,55nm,0.8s						
PWL				IAML		19 00 37.5	
	comp=N,62nm,0.4s						
SLKM	**Skilak Lake**	**2.32**	**171**	Pn	Pn	18 59 55.7	-1.0
SLKM				IAML		19 00 34.1	
	comp=E,46nm,0.3s						
SLKM				IAML		19 00 34.6	
	comp=N,43nm,0.9s						
M24K	**Tolsona, Glenn**	**2.34**	**105**		Pn	18 59 57.1	+0.1
M24K	**Tolsona, Glenn**	**2.34**	**105**	IAML		19 00 33.3	
	comp=N,101nm,0.7s						
M24K				IAML		19 00 33.9	
	comp=E,106nm,0.5s						
CCB	**Clear Creek Bu**	**2.34**	**36**		Pn	18 59 56.5	-0.3
O22K	**Cooper Landing**	**2.39**	**165**	Pn	Pn	18 59 58.0	+0.4
J19K	**Poorman**	**2.41**	**302**	Pn	Pn	18 59 57.8	0.0
J19K				IAML		19 00 27.3	
	comp=N,18nm,0.8s						
HDA	**Harding Lake**	**2.43**	**46**		Pn	18 59 57.4	-0.6
HDA				IAML		19 00 28.7	
	comp=N,26nm,0.4s						
HDA				IAML		19 00 32.3	
	comp=E,26nm,0.5s						
PAX	**Paxson**	**2.53**	**83**		Pn	18 59 60.0	+0.5
PAX	**Paxson**	**2.53**	**83**	IAML		19 00 35.4	
	comp=E,41nm,0.5s						
PAX				IAML		19 00 36.5	
	comp=N,41nm,0.3s						
K24K	**Donnelly Dome**	**2.56**	**64**	Pn	Pn	19 00 00.2	+0.4
N19K	**Bonanza Creek**	**2.59**	**221**	Pn	Pn	19 00 00.3	+0.1
M18K	**Stony River**	**2.62**	**242**		Pn	18 59 60.0	-0.6
GLI	**Glacier Island**	**2.66**	**134**		Pn	19 00 00.6	-0.6
GLI	**Glacier Island**	**2.66**	**134**	IAML		19 00 44.9	
	comp=E,80nm,0.9s						
GLI				IAML		19 00 45.0	
	comp=N,76nm,0.6s						
J18K	**Innoko River**	**2.69**	**287**	Pn	Pn	19 00 00.7	-0.8
IL31		**2.70**	**41**		Pn	19 00 01.2	-0.3
ILAR	**Eielson Array**	**2.70**	**41**	Pn	Pn	19 00 00.8	-0.7
L18K	**Granite Mounta**	**2.71**	**260**	Pn	Pn	19 00 01.2	-0.5
KLU	**Klutina**	**2.71**	**116**	Pn	Pn	19 00 00.4	-1.4
FID	**Port Fidalgo**	**2.96**	**132**	Pn	Pn	19 00 04.2	-1.0
FID				IAML		19 00 40.6	
	comp=N,44nm,0.7s						
J25K	**Salcha River,**	**3.10**	**51**	IAML		19 00 45.3	
	comp=E,15nm,1.2s						
J25K				IAML		19 00 49.6	
	comp=N,13nm,0.7s						
N18K	**Kilae Creek**	**3.15**	**230**	Pn	Pn	19 00 06.9	-0.8
HIN	**Hinchinbrook I**	**3.22**	**136**		Pn	19 00 08.1	-0.5
DOT	**Dot Lake**	**3.25**	**72**	Pn	Pn	19 00 08.2	-0.8
DOT				IAML		19 00 52.4	
	comp=N,15nm,0.9s						
DOT				IAML		19 00 56.7	
	comp=E,12nm,0.5s						
CNPM	**China Poot**	**3.28**	**182**	Pn	Pn	19 00 09.6	+0.2
MENT	**Mentasta**	**3.33**	**84**	Pn	Pn	19 00 09.6	-0.5
MENT				IAML		19 01 03.8	
	comp=N,30nm,0.6s						
K17K	**Iditarod**	**3.37**	**272**	Pn	Pn	19 00 10.5	0.0
K17K				IAML		19 00 42.0	
	comp=E,11nm,1.0s						
K17K				IAML		19 01 14.5	
	comp=N,7.4nm,0.8s						
SCRK	**Sand Creek**	**3.37**	**66**		Pn	19 00 10.3	-0.4
L17K	**Donlin**	**3.46**	**262**		Pn	19 00 11.2	-0.5
L26K	**Log Cabin Wild**	**3.50**	**83**		Pn	19 00 12.2	-0.2
L26K				IAML		19 01 01.2	
	comp=E,28nm,0.9s						
L26K				IAML		19 01 03.2	
	comp=N,29nm,0.4s						
GLB	**Gilahina Butte**	**3.63**	**109**	Pn	Pn	19 00 12.5	-1.6
GLB				IAML		19 01 13.4	
	comp=N,16nm,0.4s						
GLB				IAML		19 01 15.7	
	comp=E,13nm,1.0s						
N17K	**Nushagak Hills**	**3.73**	**235**	Pn	Pn	19 00 15.1	-0.3
N17K				IAML		19 01 22.6	
	comp=N,8.6nm,1.1s						
J26L	**Joseph Creek**	**3.73**	**59**		Pn	19 00 15.4	-0.1
J26L	**Joseph Creek**	**3.73**	**59**	IAML		19 01 02.7	
	comp=N,15nm,0.5s						
J26L				IAML		19 01 04.9	
	comp=E,16nm,1.2s						
MCARA	**McCarthy VSAT**	**4.00**	**107**	Pn	Pn	19 00 18.6	-0.5
K27K	**Chicken**	**4.20**	**69**	Pn	Pn	19 00 21.4	-0.2
K27K				IAML		19 01 15.2	
	comp=E,5.3nm,0.6s						
K27K				IAML		19 01 18.7	
	comp=N,5.2nm,0.8s						
L27K	**Beaver Creek,**	**4.20**	**82**	Pn	Pn	19 00 20.6	-1.1
BCAR	**Beaver Creek A**	**4.22**	**82**	Pn	Pn	19 00 21.3	-0.7
M27K	**Edge Creek, AK**	**4.24**	**92**	Pn	Pn	19 00 23.1	+0.7
M27K				IAML		19 01 27.7	
	comp=N,7.5nm,1.1s						
M27K				IAML		19 01 44.7	
	comp=E,6.2nm,1.0s						
I26K	**Coal Creek Min**	**4.27**	**50**	Pn	Pn	19 00 22.4	-0.2
I26K				IAML		19 01 19.1	
	comp=E,7.9nm,1.2s						
I26K				IAML		19 01 33.7	
	comp=N,3.9nm,1.2s						

*IDC **14** 18:59:55.1±1.7, 1°.88N×126°.99E, h0km, mb3.7/4, mbtmp3.7/5, ML2.8/1, Error ellipse: s-maj=114.0km s-min=20.6km az=69.0*
*DJA **14** 18:59:59.8±0.2, 2°.N±2°.×12°.6E±°, h10km, M3.7/11, MLv3.7/11*
ISC 14 19:00:01.6±1.0, **1°.58N**±0°.06×**126°.47E**±0°.08, **h35km, n13, σ1§71/13, mb3.6/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.20**	**132**	P	**Pn**	**19 00 22.0**	**0.0**
TNTI				S	**Sn**	**19 00 38.1**	**+1.0**
SGSI	**Sangihe**	**2.29**	**336**	P	**Pn**	**19 00 37.6**	**+0.6**
SGSI				S	**Sn**	**19 01 06.4**	**+2.3**
KMSI	**Cibinong**	**2.68**	**248**	S	Sn	19 01 27.8	+14
SANI	**Sanana**	**3.63**	**188**	P	**Pn**	**19 00 58.4**	**+3.0**
LUWI	**Luwuk**	**4.52**	**235**	P	**Pn**	**19 01 09.0**	**+1.4**
MRSI	**Marisa**	**4.66**	**256**	P	**Pn**	**19 01 07.5**	**-2.0**
NLAI	**Namlea**	**4.83**	**172**	P	**Pn**	**19 01 10.6**	**-1.2**
SWI	**Sorong**	**5.37**	**117**	P	Pn	19 01 10.3	-9.0
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**Pn**	**19 04 28.1**	**-0.1**
	baz=15,slow=12,SNR=1.2 1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.74**	**161**	P	**P**	**19 04 59.1**	**-1.8**
	0.8nm,0.4s,baz=340,slow=11,SNR=10 0.8nm,0.4s						
ASAR	**Alice Springs**	**26.11**	**164**	P	**P**	**19 05 33.5**	**+1.0**
	0.9nm,0.7s,baz=354,slow=16,SNR=6.2 0.9nm,0.7s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**19 09 58.4**	**-0.8**
	0.3nm,0.5s,baz=119,slow=7.7,SNR=5.6 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.41**	**328**	P	**P**	**19 10 26.3**	**-1.3**
	0.4nm,0.2s,baz=125,slow=6.2,SNR=4.6 0.4nm,0.2s						

*IDC **14** 19:00:50.6±1.1, 1°.27N×125°.90E, h0km, mb3.8/5, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=72.4km s-min=19.5km az=74.0*
ISC 14 19:00:55.8±1.1, **1°.3N**±0°.2×**125°.9E**±0°.5, **h35km, n6, σ1§13/6, mb3.7/5, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.23**	**181**	P	**P**	**19 05 18.2**	**+1.1**
	0.1nm,0.3s,baz=0.0,slow=11,SNR=1.2 2.3nm,1.0s						
WRA	**Warramunga Arr**	**22.62**	**159**	P	**P**	**19 05 52.6**	**-1.2**
	1.2nm,0.5s,baz=339,slow=11,SNR=7.8 1.2nm,0.5s						
ASAR	**Alice Springs**	**25.95**	**163**	P	**P**	**19 06 25.2**	**-0.1**
	0.4nm,0.5s,baz=343,slow=8.0,SNR=5.5 0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**43.11**	**6**	P	**P**	**19 08 53.2**	**+0.6**
	2.3nm,0.7s,baz=174,slow=6.7,SNR=4.3 2.3nm,0.7s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**19 10 52.2**	**-0.9**
	0.2nm,0.3s,baz=121,slow=8.5,SNR=4.4 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.40**	**328**	P	**P**	**19 11 21.8**	**0.0**
	0.6nm,0.2s,baz=130,slow=6.1,SNR=2.8 0.6nm,0.2s						

*IDC **14** 19:03:27.5±1.1, 1°.42N×126°.09E, h0km, mb4.0/9, mbtmp4.0/10, ML3.9/1, Error ellipse: s-maj=113.7km s-min=14.5km az=69.0*
*DJA **14** 19:03:30.8±0.2, 2°.N±2°.×12°.6E±°, h10km, M4.0/9, MLv4.0/9*
*NEIC **14** 19:03:30.8±1.8, 1°.5N±0°.1×126°.37E±0°.09, h17km±5km, mb4.4/12, Error ellipse: s-maj=19.5km s-min=8.2km az=214.0*
ISC 14 19:03:33.0±0.6, **1°.51N**±0°.06×**126°.46E**±0°.07, **h35km, n34, σ1§47/35, mb4.2/14, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.17**	**129**		**Pn**	**19 03 53.1**	**+0.3**
TNTI	**Ternate**	**1.17**	**129**	P	**Pn**	**19 03 53.5**	**+0.7**
TNTI				S	**Sn**	**19 04 08.3**	**+0.8**
SGSI	**Sangihe**	**2.35**	**337**	P	**Pn**	**19 04 09.0**	**-0.2**
SGSI				S	**Sn**	**19 04 38.8**	**+1.9**
KMSI	**Cibinong**	**2.65**	**250**	P	**Pn**	**19 04 13.8**	**+0.7**
SANI	**Sanana**	**3.56**	**188**	P	**Pn**	**19 04 26.8**	**+1.0**
LUWI	**Luwuk**	**4.47**	**236**		**Pn**	**19 04 37.1**	**-1.2**
MRSI	**Marisa**	**4.63**	**257**	P	**Pn**	**19 04 44.4**	**+3.9**
NLAI	**Namlea**	**4.76**	**172**	P	**Pn**	**19 04 44.1**	**+1.9**
AAI	**Ambon**	**5.44**	**161**	P	Pn	19 04 43.9	-7.8
TOLI2	**Tolitoli**	**5.69**	**266**		**Pn**	**19 04 53.1**	**-1.9**
FAKI	**Fak Fak**	**7.27**	**127**	Pn	**Pn**	**19 05 18.4**	**+1.6**
MYLDM	**Lahad Datu**	**8.74**	**295**		**Pn**	**19 05 35.6**	**-1.3**
KNRA	**Kununurra**	**17.23**	**172**		**Pn**	**19 07 30.6**	**-0.4**
KNRA				IAmb	IAmb	19 07 33.6	
	comp=Z,25nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**19 07 56.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=11,slow=8.8,SNR=10 comp=Z,2.3nm,0.7s						
TPUB	**Ta-pu**	**22.39**	**346**	P	**P**	**19 08 25.8**	**-2.7**
WB0	**Warramunga Arr**	**22.53**	**160**	P	**P**	**19 08 29.2**	**-0.8**
WB0				IAmb	IAmb	19 08 33.8	
	comp=Z,9.5nm,0.8s						
WRAB	**Tennant Creek**	**22.67**	**160**	P	**P**	**19 08 29.3**	**-2.2**
WRAB				IAmb	IAmb	19 08 33.0	
	comp=Z,9.7nm,0.6s						
WRA	**Warramunga Arr**	**22.68**	**160**	P	**P**	**19 08 30.4**	**-1.1**
	comp=Z,8.1nm,0.7s,baz=338,slow=11,SNR=43 comp=Z,8.1nm,0.7s						
WR8	**Warramunga Arr**	**22.74**	**160**	P	**P**	**19 08 31.2**	**-1.0**
WR8				IAmb	IAmb	19 08 45.7	
	comp=Z,9.1nm,1.1s						
AS31	**Alice Springs**	**26.05**	**164**		**P**	**19 09 03.3**	**+0.1**
ASAR	**Alice Springs**	**26.05**	**164**	P	**P**	**19 09 02.4**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=345,slow=7.9,SNR=25 comp=Z,1.8nm,0.4s						
FORT	**Forrest**	**32.14**	**177**	P	**P**	**19 09 56.3**	**-1.0**
FORT				IAmb	IAmb	19 10 06.4	
	comp=Z,9.9nm,1.4s						
STKA	**Stephens Creek**	**36.17**	**158**	P	**P**	**19 10 32.3**	**0.0**
	comp=Z,1.6nm,0.5s,baz=335,slow=9.1,SNR=6.1 comp=Z,1.6nm,0.5s						
SONM	**Songino Array**	**49.31**	**342**	P	**P**	**19 12 19.7**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=145,slow=11,SNR=2.2 comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**19 13 29.6**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=123,slow=6.7,SNR=14 comp=Z,1.0nm,0.5s						
KDJ	**Kajisay**	**59.83**	**319**	P	**P**	**19 13 34.3**	**-0.9**
TCW	**Tory Channel**	**60.70**	**140**	P	**P**	**19 13 40.3**	**-0.7**
ZALV	**Zalesovo Beam**	**62.44**	**334**	P	**P**	**19 13 52.1**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=139,slow=9.6,SNR=2.0 comp=Z,0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.46**	**328**	P	**P**	**19 13 57.8**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=124,slow=6.6,SNR=13 comp=Z,1.4nm,0.6s						
KURK	**Kurchatov**	**63.47**	**328**	P	**P**	**19 13 58.9**	**-0.5**
KKAR	**Karatay Array**	**64.67**	**318**	P	**P**	**19 14 08.0**	**+0.5**
BVAR	**Borovoye Array**	**69.03**	**328**	P	**P**	**19 14 33.6**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=111,slow=11,SNR=2.4 comp=Z,0.5nm,0.4s						
TIXI	**Tiksi**	**

SFS	**San Fernando**	**2.08**	**353**	Pn	**Pn**	**19 04 33.6**	**+2.0**
EMIJ	**Mijas**	**2.34**	**22**	Pn	**Pn**	**19 04 37.7**	**+2.5**
GOG	**Mont Gurugu**	**2.51**	**70**	P	**Pn**	**19 04 40.1**	**+2.5**
GOG	**Mont Gurugu**	**2.51**	**70**	S	**Sb**	**19 05 12.1**	**-1.8**
SRHM	**Skhour des Reh**	**2.56**	**222**	P	**Pn**	**19 04 41.4**	**+3.2**
SRHM	**Skhour des Reh**	**2.56**	**222**	S	**Sb**	**19 05 14.2**	**-0.9**
TISM	**Timmit**	**2.71**	**190**	P	**Pn**	**19 04 39.9**	**-0.3**
TISM	**Timmit**	**2.71**	**190**	S	**Sn**	**19 05 11.6**	**-0.2**
GOLM	**Goulmima**	**2.79**	**164**	P	**Pn**	**19 04 42.9**	**+1.4**
GOLM	**Goulmima**	**2.79**	**164**	S	**Sn**	**19 05 16.5**	**+2.3**
TAF	**Taforalt**	**2.89**	**81**	P	**Pn**	**19 04 45.7**	**+3.0**
TAF	**Taforalt**	**2.89**	**81**	S	**Sb**	**19 05 21.7**	**-3.0**
PBDV	**Barranco-do-Ve**	**3.29**	**330**	Pn	**Pn**	**19 04 49.1**	**+0.8**
PBDV				Sn	**Sn**	**19 05 25.4**	**-1.0**
PBDV	**Barranco-do-Ve**	**3.29**	**330**	*eP*	**Pn**	**19 04 49.2**	**+0.8**
PBDV				*eS*	**Sn**	**19 05 25.9**	**-0.5**
PBDV				*i* IAML		19 05 35.7	
PVAQ	**Vaqueiros**	**3.35**	**334**	*eP*	**Pn**	**19 04 50.0**	**+1.0**
PVAQ				*eS*	**Sn**	**19 05 27.1**	**-0.7**
PVAQ				*i* IAML		19 05 27.8	
PVAQ				*i* IAML		19 05 29.4	
EGRO	**El Granado**	**3.39**	**338**	Pn	**Pn**	**19 04 50.7**	**+1.1**
EGRO				Sn	**Sn**	**19 05 27.9**	**-0.8**
EGRO	**El Granado**	**3.39**	**338**	Pn	**Pn**	**19 04 50.2**	**+0.6**
EGRO				Sn	**Sn**	**19 05 27.1**	**-1.6**
EGRO				*i* IVmb_Lg		19 05 44.3	
EMIN	**Mina Concepcio**	**3.43**	**349**	Pn	**Pn**	**19 04 51.0**	**+1.0**
EMIN	**Mina Concepcio**	**3.43**	**349**	Pn	**Pn**	**19 04 50.9**	**+0.8**
EMIN				*i* IVmb_Lg		19 04 56.0	
EMIN				Sn	**Sn**	**19 05 27.0**	**-2.6**
OUK	**Oukaimeden**	**3.59**	**208**	P	**Pn**	**19 04 52.7**	**0.0**
PFVI	**Vila Bisbo**	**3.63**	**320**	*eP*	**Pn**	**19 04 55.2**	**+2.2**
TIO	**Tiouine**	**3.65**	**199**	Pn	**Pn**	**19 04 53.8**	**+0.5**
TIO				Sn	**Sn**	**19 05 32.8**	**-2.5**
MORF	**Marmelete**	**3.67**	**323**	*eP*	**Pn**	**19 04 54.4**	**+0.8**
MORF	**Marmelete**	**3.67**	**323**	*eP*	**Pn**	**19 04 55.2**	**+1.7**
MORF				*i* IAML		19 05 40.7	
MORF				*i* IAML		19 05 51.0	
PCVE	**Castro Verde**	**3.67**	**332**	Pn	**Pn**	**19 04 54.5**	**+1.1**
PCVE				Sn	**Sn**	**19 05 34.3**	**-1.4**
PCVE	**Castro Verde**	**3.67**	**332**	*eP*	**Pn**	**19 04 54.7**	**+1.2**
PCVE				*eS*	**Sn**	**19 05 34.8**	**-0.9**
PCVE				*i* IAML		19 05 38.8	
ECAB	**El Cabril**	**3.69**	**6**	Pn	**Pn**	**19 04 56.1**	**+2.3**
ECAB	**El Cabril**	**3.69**	**6**	Pn	**Pn**	**19 04 56.0**	**+2.2**
ECAB				Sn	**Sn**	**19 05 33.9**	**-2.3**
ECAB				*i* IVmb_Lg		19 06 07.8	
PBAR	**Barrancos**	**3.89**	**346**	Pn	**Pn**	**19 04 57.5**	**+1.1**
PBAR	**Barrancos**	**3.89**	**346**	*eP*	**Pn**	**19 04 57.5**	**+1.1**
PBAR				*eS*	**Sn**	**19 05 36.6**	**-1.4**
PBAR				*i* IAML		19 05 43.6	
PBAR				*i* IAML		19 05 43.6	
PBAR				*i* IAML		19 05 45.0	
PTEO	**Sao Teotonio**	**3.90**	**325**	*eP*	**Pn**	**19 04 57.4**	**+0.9**
PTEO				*eS*	**Sn**	**19 05 41.5**	**+0.3**
EADA	**Adamuz**	**3.91**	**15**	Pn	**Pn**	**19 04 58.5**	**+1.7**
EADA	**Adamuz**	**3.91**	**15**	Pn	**Pn**	**19 04 58.4**	**+1.6**
EADA				Sn	**Sn**	**19 05 39.0**	**-2.6**
EADA				*i* IVmb_Lg		19 06 29.1	
MESJ	**Messejana**	**3.92**	**332**	*eP*	**Pn**	**19 04 57.5**	**+0.6**
MESJ	**Messejana**	**3.92**	**332**	*eP*	**Pn**	**19 04 58.0**	**+1.1**
MESJ				*eS*	**Sn**	**19 05 42.2**	**+0.3**
MESJ				*i* IAML		19 05 44.7	
EBAD	**Badajoz**	**4.45**	**348**	Pn	**Pn**	**19 05 06.3**	**+2.1**
EBAD	**Badajoz**	**4.45**	**348**	Pn	**Pn**	**19 05 06.2**	**+2.1**
EBAD				Sn	**Sn**	**19 05 51.8**	**-3.0**
EBAD				*i* IVmb_Lg		19 06 04.8	
PESTR	**Estremoz**	**4.67**	**343**	Pn	**Pn**	**19 05 08.7**	**+1.5**
PSIM	**Granatula de C**	**4.73**	**21**	Pn	**Pn**	**19 05 09.7**	**+1.5**
PSIM				Sn	**Sn**	**19 05 58.7**	**-3.2**
PARRA	**Arraiolos**	**4.74**	**339**	*eP*	**Pn**	**19 05 09.5**	**-3.4**
PARRA				*eS*	Sn	19 06 00.7	-10
PARRA				*i* IAML		19 06 01.7	

*IDC **14** 19:05:57.5±0.6, 1°.65N×126°.31E, h0km, mb4.2/17, mbtmp4.2/19, ML3.9/2, Error ellipse: s-maj=29.9km s-min=12.5km az=78.0*
*DJA **14** 19:06:01.7±0.2, 2°N±2°×12°6E±°, h10km, M4.3/17, mB5.0/1, mb4.5/7, MLv4.2/17, Mw(mB)4.4/1*
*NEIC **14** 19:06:02.9±1.6, 1°.64N±0°.07×126°.46E±0°.07, h32km±6km, mb4.4/17, Error ellipse: s-maj=11.5km s-min=8.8km az=217.0*

ISC 14 19:06:02.9±0.5, **1°.69N**±0°.06×**126°.44E**±0°.07, **h35**km, **n58, σ1§36/49, mb4.3/24, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.31**	**135**			**Pn**	**19 06 24.6**	**0.0**
TNTI	**Ternate**	**1.31**	**135**	P		**Pn**	**19 06 24.7**	**0.0**
TNTI				S		**Sn**	**19 06 41.3**	**+0.4**
SGSI	**Sangihe**	**2.18**	**335**	P		**Pn**	**19 06 37.1**	**+0.4**
KMSI	**Cibinong**	**2.69**	**246**	P		**Pn**	**19 06 45.8**	**+2.0**
SANI	**Sanana**	**3.75**	**187**	P		**Pn**	**19 06 59.0**	**+0.7**
LUWI	**Luwuk**	**4.56**	**233**			**Pn**	**19 07 10.8**	**+1.3**
LUWI	**Luwuk**	**4.56**	**233**	P		**Pn**	**19 07 12.7**	**+3.2**
MRSI	**Marisa**	**4.65**	**255**	P		**Pn**	**19 07 13.4**	**+2.6**
NLAI	**Namlea**	**4.95**	**172**	P		**Pn**	**19 07 16.9**	**+2.1**
APSI	**Ampana**	**5.44**	**242**	P		**Pn**	**19 07 25.1**	**+3.5**
	0.6nm176nm,1.0s							
SWI	**Sorong**	**5.45**	**118**	P		**Pn**	**19 07 24.4**	**+2.7**
TOLI2	**Tolitoli**	**5.68**	**264**			**Pn**	**19 07 25.1**	**+0.1**
MPSI	**Mapaga**	**6.67**	**258**	P		**Pn**	**19 07 42.2**	**+3.7**
	0.1nm36nm,0.8s							
PCI	**Palu**	**7.09**	**249**	P		Pn	19 07 59.6	+15
BBSI	**Bau Bau**	**8.11**	**208**	P		Pn	19 08 09.2	+11
TTSI	**Tana Toraja**	**8.12**	**235**	P		Pn	19 08 05.5	+7.1
MYLDM	**Lahad Datu**	**8.64**	**294**	Pn		**Pn**	**19 08 05.8**	**+0.2**
SPSI	**Sidrap Palu**	**8.72**	**230**	P		Pn	19 08 19.0	+12
BNSI	**Bone**	**8.76**	**226**	P		Pn	19 08 16.5	+9.4
BKSI	**Bulukumba**	**9.40**	**222**	P		Pn	19 08 25.4	+9.4
KAPI	**Kappang**	**9.43**	**225**	Pn		**Pn**	**19 08 13.6**	**-2.9**
	2.4nm,0.3s,baz=37,slow=5.9,SNR=4.0 2.3nm,0.3s							
BSSI	**Bau Bau, Buton**	**9.79**	**217**	P		Pn	19 08 29.6	+8.3
SOEI	**Soe**	**11.58**	**191**	P		Pn	19 09 12.2	+26
SBUM	**Sibu**	**14.23**	**273**	P		**P**	**19 09 29.1**	**+0.2**
MTN	**Manton Dam**	**15.18**	**162**	Pn		**Pn**	**19 09 33.7**	**-1.1**
MTN				IAmb		IAmb	19 09 52.3	
	comp=Z,20nm,1.4s							
KNRA	**Kununurra**	**17.41**	**172**			**Pn**	**19 10 04.3**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P		**P**	**19 10 28.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=360,slow=13,SNR=1.9 comp=Z,1.1nm,0.6s							
TPUB	**Ta-pu**	**22.20**	**346**	P		**P**	**19 10 54.9**	**-1.5**
SSLB	**Suanglung**	**22.60**	**347**	P		**P**	**19 10 59.8**	**-0.8**
SSLB				IAmb		IAmb	19 11 32.6	
	comp=Z,34nm,1.2s							
WB0	**Warramunga Arr**	**22.71**	**160**	P		**P**	**19 11 01.1**	**-0.8**
WB0				IAmb		IAmb	19 11 07.6	
	comp=Z,8.6nm,0.6s							
WRA	**Warramunga Arr**	**22.86**	**161**	P		**P**	**19 11 02.4**	**-1.0**
	comp=Z,4.7nm,0.6s,baz=338,slow=11,SNR=17 comp=Z,4.7nm,0.6s							
WR8	**Warramunga Arr**	**22.92**	**160**	P		**P**	**19 11 03.2**	**-0.9**
WR8				IAmb		IAmb	19 11 10.2	
	comp=Z,8.9nm,1.0s							
AS31	**Alice Springs**	**26.23**	**164**	P		**P**	**19 11 34.6**	**-0.2**
ASAR	**Alice Springs**	**26.23**	**164**	P		**P**	**19 11 35.1**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=344,slow=11,SNR=14							
ASAR				PcP		**PcP**	**19 15 01.3**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=336,slow=1.9,SNR=4.3 comp=Z,1.9nm,0.5s							
CMAR	**Chiang Mai Arr**	**31.69**	**303**	P		**P**	**19 12 23.2**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=116,slow=7.2,SNR=4.6 comp=Z,0.3nm,0.3s							
FORT	**Forrest**	**32.33**	**177**	P		**P**	**19 12 28.4**	**-0.5**
FORT				IAmb		IAmb	19 12 28.6	
	comp=Z,7.8nm,1.1s							
KSRS	**Korea Array**	**35.61**	**2**	P		**P**	**19 12 58.0**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=181,slow=10,SNR=4.2 comp=Z,1.5nm,0.7s							
MJAR	**Matsushiro Arr**	**36.35**	**16**	P		**P**	**19 13 03.5**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=185,slow=9.9,SNR=7.1 comp=Z,3.3nm,0.9s							
STKA	**Stephens Creek**	**36.35**	**158**	P		**P**	**19 13 02.6**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=326,slow=7.6,SNR=3.1 comp=Z,1.8nm,0.7s							
USRK	**Ussuriysk Ar.**	**42.61**	**6**	P		**P**	**19 13 56.4**	**+0.6**
	comp=Z,4.3nm,0.9s,baz=197,slow=4.5,SNR=4.3 comp=Z,4.3nm,0.9s							
HILR	**Hailar Array B**	**48.02**	**354**	P		**P**	**19 14 38.9**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=171,slow=10,SNR=4.0 comp=Z,2.2nm,0.6s							
SONM	**Songino Array**	**49.13**	**342**	P		**P**	**19 14 47.5**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=156,slow=9.1,SNR=6.6 comp=Z,1.4nm,0.8s							
PETK	**Petropavlovsk-**	**57.41**	**22**	P		**P**	**19 15 48.8**	**+0.8**
	comp=Z,4.9nm,1.0s,baz=212,slow=6.4,SNR=1.6 comp=Z,4.9nm,1.0s							
MKAR	**Makanchi Array**	**59.06**	**326**	P		**P**	**19 15 59.3**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=121,slow=8.2,SNR=41 comp=Z,2.0nm,0.5s							
MKAR	**Makanchi Array**	**59.06**	**326**	P		**P**	**19 15 59.1**	**-0.5**
MAKZ	**Makanchi**	**59.24**	**326**	P		**P**	**19 16 00.5**	**-0.4**
MAKZ				IAmb		IAmb	19 16 02.4	
	comp=Z,1.8nm,0.7s							
KDJ	**Kajisay**	**59.67**	**319**	P		**P**	**19 16 04.3**	**+0.1**
KDJ				IAmb		IAmb	19 16 23.5	
	comp=Z,3.7nm,0.8s							
ZALV	**Zalesovo Beam**	**62.26**	**334**	P		**P**	**19 16 20.1**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=124,slow=7.2,SNR=4.3 comp=Z,0.7nm,0.3s							
KURBB	**Kurchatov Arra**	**63.29**	**328**	P		**P**	**19 16 27.7**	**-0.5**
	comp=Z,4.1nm,0.5s,baz=128,slow=6.2,SNR=40 comp=Z,4.1nm,0.5s							
KURK	**Kurchatov**	**63.30**	**328**			**P**	**19 16 27.7**	**-0.5**
BVAR	**Borovoye Array**	**68.86**	**328**	P		**P**	**19 17 03.3**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=120,slow=8.8,SNR=14 comp=Z,2.2nm,0.6s							
NRIK	**Noril'sk**	**72.33**	**346**	P		**P**	**19 17 25.1**	**+0.4**
	comp=Z,6.3nm,0.7s,baz=122,slow=7.4,SNR=12 comp=Z,6.3nm,0.7s							
NRIK	**Noril'sk**	**72.33**	**346**	IAmb		IAmb	19 17 25.9	
	comp=Z,6.7nm,0.8s							
AB31	**Akbulak array**	**73.54**	**321**	IAmb		IAmb	19 17 32.9	
	comp=Z,1.6nm,0.7s							
VNDA	**Vanda**	**81.46**	**173**	P		**P**	**19 18 16.0**	**0.0**
	comp=Z,0.8nm,0.7s,baz=312,slow=7.5,SNR=3.6 comp=Z,0.8nm,0.7s							
E19K	**Redstone River**	**83.21**	**22**	P		**P**	**19 18 25.6**	**+0.2**
ARCES	**ARCESS Array B**	**92.25**	**340**	P		**P**	**19 19 07.8**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=92,slow=8.1,SNR=4.3 comp=Z,3.3nm,0.8s							
ARCES	**ARCESS Array B**	**92.25**	**340**	IAmb		IAmb	19 19 08.5	
	comp=Z,8.9nm,1.1s							

*IDC **14** 19:09:46.5±4.1, 1°.75N×126°.78E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=496.1km s-min=24.2km az=66.0*
*DJA **14** 19:09:50.0±0.3, 1°N±3°×12°6E±°, h10km, M3.5/9, MLv3.5/9*
ISC 14 19:09:52.1±1.1, **1°.45N**±0°.08×**126°.23E**±0°.08, **h35**km, **n8, σ1§61/9, mb3.4/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.32**	**121**	P		**Pn**	**19 10 14.7**	**+0.6**
TNTI				S		**Sn**	**19 10 27.5**	**-2.9**
SGSI	**Sangihe**	**2.33**	**342**	P		**Pn**	**19 10 28.9**	**+0.9**
KMSI	**Cibinong**	**2.41**	**249**	P		**Pn**	**19 10 28.2**	**-0.9**
SANI	**Sanana**	**3.49**	**184**	P		**Pn**	**19 10 46.0**	**+2.1**
WRA	**Warramunga Arr**	**22.70**	**160**	P		**P**	**19 14 51.1**	**+0.1**
	0.6nm,0.5s,baz=339,slow=11,SNR=6.7 0.6nm,0.5s							
ASAR	**Alice Springs**	**26.06**	**164**	P		**P**	**19 15 22.9**	**+0.5**
	0.2nm,0.4s,baz=346,slow=9.1,SNR=1.9 0.2nm,0.4s							
MKAR	**Makanchi Array**	**59.15**	**326**	P		**P**	**19 19 49.6**	**+0.2**
	0.2nm,0.5s,baz=113,slow=7.2,SNR=2.0 0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**63.39**	**328**	P		**P**	**19 20 17.9**	**0.0**
	0.3nm,0.2s,baz=123,slow=7.1,SNR=2.5 0.3nm,0.2s							

*IDC **14** 19:10:41.6±1.0, 7°.08S×106°.60E, h0km, mb4.0/9, mbtmp4.0/10, ML4.9/1, MS4.8/1, Error ellipse: s-maj=41.1km s-min=15.9km az=45.0*
*NEIC **14** 19:10:52.3±1.9, 6°.94S±0°.09×106°.93E±0°.09, h81km±6km, mb4.2/10, Error ellipse: s-maj=15.8km s-min=9.7km az=219.0*
*DJA **14** 19:10:56.6±0.3, 7°S±5°×10°7E±°, h117km±3km, M4.2/14, mB5.2/1, mb4.3/7, MLv4.1/14, Mw(mB)4.6/1*
ISC 14 19:10:57.1±0.7, **7°.2S**±0°.1×**106°.82E**±0°.08, **h150**km, **n47, σ2§24/37, mb3.9/13, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNJI	**Cibinong**	**0.32**	**105**	P		**Pn**	**19 11 14.4**	**-3.3**
CNJI				S		**Sn**	**19 11 27.1**	**-6.2**
SKJI	**Sukabumi**	**0.34**	**310**	P		**Pn**	**19 11 15.1**	**-2.7**
SKJI				S		**Sn**	**19 11 27.9**	**-5.6**
DBJI	**Dramaga**	**0.67**	**354**	P		**Pn**	**19 11 17.6**	**-1.9**
TNG	**Tangerang**	**1.06**	**351**	P		**Pn**	**19 11 21.2**	**-1.3**
SBJI	**Serang**	**1.30**	**328**	P		**Pn**	**19 11 23.4**	**-1.2**
KPJI	**Karang Pucung**	**2.10**	**93**	P		**Pn**	**19 11 32.8**	**-0.6**
KASI	**Kota Agung**	**2.86**	**306**	P		**Pn**	**19 11 42.6**	**-0.2**
UGM	**Wanagama**	**3.73**	**101**	Pn		Pn	19 11 46.3	-7.7
UGM						**Sn**	**19 12 34.2**	**-3.8**
PCJI	**Pacitan**	**4.42**	**103**	P		**Pn**	**19 12 02.5**	**-0.4**
TPI	**Tanjungpandan**	**4.52**	**11**	P		**Pn**	**19 12 04.1**	**-0.1**
NGJI	**Ngawi**	**4.61**	**92**	P		**Pn**	**19 12 05.5**	**+0.2**
MNAI	**Manna**	**4.79**	**306**	Pn		Pn	19 12 01.0	-6.7
MNAI	**Manna**	**4.79**	**306**	P		**Pn**	**19 12 07.8**	**+0.1**
JAGI	**Jajag, Banyuwa**	**7.37**	**100**	Pn		Pn	19 12 37.0	-5.2
JAGI	**Jajag, Banyuwa**	**7.37**	**100**	P		**Pn**	**19 12 42.8**	**+0.7**
	0.2nm20nm,1.0s							
PPSI	**Pulau Pagai**	**8.10**	**303**	P		**Pn**	**19 12 50.4**	**-1.6**
	77nm,1.2s							
SRBI	**Singaraja**	**8.36**	**96**	P		**Pn**	**19 12 55.9**	**+0.5**
	19nm,0.5s							
TWSI	**Taliwang, Sumb**	**10.08**	**99**	P		**Pn**	**19 13 16.6**	**-1.6**
	9.5nm,1.1s							
PLAI	**Plampang**	**10.97**	**99**	P		**Pn**	**19 13 28.4**	**-1.6**
	17nm,0.9s							
BATI	**Baumata**	**16.91**	**101**	Pn		**P**	**19 14 42.5**	**-2.1**
	3.9nm,0.3s,baz=296,slow=12,SNR=5.9							
BATI				S		**Sn**	**19 17 55.6**	**+1.4**
	5.3nm,0.3s,baz=154,slow=18,SNR=1.9 4.3nm,0.3s							
LUWI	**Luwuk**	**17.05**	**70**			**P**	**19 14 43.2**	**-2.9**
LUWI				IAmb		IAmb	19 14 53.0	
	comp=Z,19nm,0.8s							
SOEI	**Soe**	**17.44**	**100**			**P**	**19 14 50.0**	**-0.5**
SOEI				IAmb		IAmb	19 15 02.1	
	comp=Z,11nm,0.7s							
KNRA	**Kununurra**	**23.07**	**113**	P		**P**	**19 15 50.1**	**+0.5**
KNRA				IAmb		IAmb	19 16 34.1	
	comp=Z,17nm,1.2s							
CMAR	**Chiang Mai Arr**	**26.68**	**343**	P		**P**	**19 16 22.1**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=180,slow=8.9,SNR=15 comp=Z,1.1nm,0.6s							
WRA	**Warramunga Arr**	**29.52**	**118**	P		**P**	**19 16 50.0**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=308,slow=9.2,SNR=2.3 comp=Z,0.4nm,0.7s							
AS31	**Alice Springs**	**30.70**	**125**	P		**P**	**19 16 58.0**	**-0.1**
ASAR	**Alice Springs**	**30.70**	**125**	P		**P**	**19 17 00.5**	**+2.4**
H08S2	**Diego Garcia H**	**34.04**	**267**	T		T	19 53 23.3	
	baz=91,slow=76,SNR=17							
H08S3	**Diego Garcia H**	**34.05**	**267**	T		T	19 53 28.5	
	baz=91,slow=76,SNR=27							
H08S1	**Diego Garcia H**	**34.05**	**267**	T		T	19 53 13.4	
	baz=91,slow=76,SNR=14							
STKA	**Stephens Creek**	**40.62**	**132**	P		**P**	**19 18 26.2**	**+3.7**
	comp=Z,1.7nm,0.3s,baz=318,slow=8.6,SNR=9.6 comp=Z,1.7nm,0.3s							
MJAR	**Matsushiro Arr**	**52.56**	**32**	LR		LR	19 42 57.8	
	comp=Z,976nm,21.3s,baz=170,slow=37							
MKAR	**Makanchi Array**	**58.04**	**340**	P		**P**	**19 20 33.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=150,slow=8.8,SNR=6.9 comp=Z,0.4nm,0.5s							
H04N2	**CROZET ISLANDS**	**60.97**	**221**	T		T	20 27 44.8	
	baz=68,slow=75,SNR=14							
H04N1	**CROZET ISLANDS**	**60.99**	**221**	T		T	20 27 45.2	
	baz=68,slow=75,SNR=13							
H04N3	**CROZET ISLANDS**	**60.99**	**221**	T		T	20 27 43.9	
	baz=68,slow=75,SNR=9.5							
KURBB	**Kurchatov Arra**	**62.60**	**340**	P		**P**	**19 21 05.5**	**+0.3**
	comp=Z,0.4nm,0.2s,baz=154,slow=5.9,SNR=5.0 comp=Z,0.4nm,0.2s							
KURK	**Kurchatov**	**62.65**	**340**	P		**P**	**19 21 05.5**	**0.0**
KURK	**Kurchatov**	**62.65**	**340**	IAmb		IAmb	19 21 30.2	
	comp=Z,1.6nm,1.0s							
BVAR	**Borovoye Array**	**67.51**	**337**	P		**P**	**19 21 38.4**	**+1.5**
	comp=Z,1.4nm,0.5s,baz=130,slow=8.6,SNR=8.3 comp=Z,1.4nm,0.5s							
AB31	**Akbulak array**	**69.52**	**329**			**P**	**19 21 50.4**	**+1.0**
AB31				IAmb		IAmb	19 21 51.6	
	comp=Z,4.0nm,1.0s							
ABKAR	**Akbulak array**	**69.52**	**329**			**P**	**19 21 50.0**	**+0.6**
VNDA	**Vanda**	**75.78**	**169**	P		P	19 22 29.9	+3.9
	comp=Z,0.6nm,0.8s,baz=312,slow=5.1,SNR=2.7 comp=Z,0.6nm,0.8s							
SBA	**Scott Base**	**76.85**	**169**	P		P	19 22 36.0	+3.9
SBA				IAmb		IAmb	19 23 05.1	
	comp=Z,2.9nm,1.3s							
BRTR	**Keskin Array B**	**81.84**	**312**	P		**P**	**19 23 02.2**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=146,slow=5.8,SNR=4.5 comp=Z,0.7nm,0.8s							
SNAA	**Sanae**	**89.26**	**197**	P		P	19 23 40.6	+4.7
ARCES	**ARCESS Array B**	**93.69**	**340**	P		**P**	**19 23 58.4**	**+2.1**
	comp=Z,2.7nm,1.0s,baz=103,slow=3.9,SNR=2.2 comp=Z,2.7nm,1.0s							

*IDC **14** 19:11:22.5±1.7, 1°.35N×125°.98E, h0km, mb3.6/4, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=122.7km s-min=21.6km az=68.0*
*DJA **14** 19:11:27.2±1.8, 1°N±6°×12°6E±°, h27km±17km, M3.5/5, MLv3.5/5*
ISC 14 19:11:27.0±1.3, **1°.4N**±0°.2×**126°.2E**±0°.2, **h35**km, **n6, σ1§18/7, mb3.7/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.27**	**118**	P		**Pn**	**19 11 47.8**	**-0.5**
TNTI				S		**Sn**	**19 12 04.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**19.36**	**182**	P		**P**	**19 15 48.4**	**-1.3**
	0.1nm,0.3s,baz=6.2,slow=10,SNR=1.9 1.8nm,0.9s							
WRA	**Warramunga Arr**	**22.62**	**160**	P		**P**	**19 16 25.4**	**+0.4**
	1.3nm,0.4s,baz=339,slow=11,SNR=7.1 1.3nm,0.4s							
ASAR	**Alice Springs**	**25.98**	**164**	P		**P**	**19 16 58.5**	**+1.8**
	0.4nm,0.4s,baz=346,slow=9.2,SNR=5.4 0.4nm,0.4s							
MKAR	**Makanchi Array**	**59.22**	**326**	P		**P**	**19 21 24.6**	**-0.2**
	0.4nm,0.6s,baz=116,slow=7.1,SNR=4.3 0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**63.46**	**328**	P		**P**	**19 21 53.5**	**+0.1**
	0.2nm,0.3s,baz=131,slow=6.1,SNR=3.0 0.2nm,0.3s							

*NDI **14** 19:11:38.0±3.5, 27°.14N×91°.33E, h10km, ML2.9, MW2.9*
ISC 14 19:11:37.1±1.8, **27°.13N**±0°.06×**91°.36E**±0°.07, **h5**km±15km, **n7, σ0§81/13, Bhutan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TAWA	**Tawang**	**0.65**	**44**	*eP*		**Pg**	**19 11 50.1**	**+0.4**
TAWA				*eS*		**Sg**	**19 11 58.2**	**+0.1**
TAWA				IAML			19 11 58.3	
	comp=E,572nm,0.1s							
TAWA				IAML			19 11 59.1	
	comp=N,542nm,0.3s							
TEZP	**TEZPUR**	**1.38**	**111**	*eP*		**Pn**	**19 12 01.9**	**-1.1**
TEZP				*eS*		**Sn**	**19 12 21.8**	**+0.1**
TEZP				IAML			19 12 23.1	
	comp=N,582nm,0.2s							
TEZP				IAML			19 12 24.0	
	comp=E,479nm,0.1s							
SHL	**Shillong**	**1.62**	**163**	*eP*		**Pb**	**19 12 08.0**	**+0.4**
SHL				*eS*		**Sn**	**19 12 28.6**	**+0.8**
SHL				IAML			19 12 29.6	
	comp=N,107nm,0.2s							
SHL				IAML			19 12 30.4	
	comp=E,119nm,0.2s							
ITAN	**ITANAGAR**	**2.11**	**89**	*eP*		**Pb**	**19 12 16.6**	**+0.8**
ITAN				*eS*		**Sb**	**19 12 41.8**	**-0.5**
ITAN				IAML			19 12 44.5	
	comp=N,93nm,0.3s							
ITAN				IAML			19 12 45.3	
	comp=E,84nm,0.1s							
ZIRO	**ZIRO**	**2.25**	**79**	*eP*		**Pb**	**19 12 18.1**	**-0.2**
ZIRO				*eS*		**Sn**	**19 12 44.5**	**+1.1**
ZIRO				IAML			19 12 49.5	
	comp=N,448nm,0.4s							
ZIRO				IAML	

CABF				*e*Sg		**Sg**	**19 20 10.2**	**+0.9**
	2.8nm,0.2s							
LMR	**La Mourre**	**1.82**	**181**	*e*Sg		**Sg**	**19 20 18.8**	**-0.8**
	0.5nm,0.2s							

IDC 14 19:19:55.5±2.3, 1°20'N×126°31'E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=208.8km s-min=28.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.43**	**160**	P	P	19 24 55.2	-1.0
	0.5nm,0.6s,baz=338,slow=10,SNR=2.0 0.5nm,0.6s						
ASAR	**Alice Springs**	**25.79**	**164**	P	P	19 25 29.2	+0.7
	0.2nm,0.4s,baz=345,slow=9.7,SNR=2.5 0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.40**	**326**	P	P	19 29 59.9	0.0
	0.1nm,0.4s,baz=126,slow=8.2,SNR=4.3 0.1nm,0.4s						

IDC 14 19:21:38.1±2.2, 1°31'N×126°06'E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=182.1km s-min=29.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.63**	**159**	P	P	19 26 40.5	-0.3
	0.6nm,0.6s,baz=338,slow=11,SNR=4.7 0.6nm,0.6s						
ASAR	**Alice Springs**	**25.98**	**163**	P	P	19 27 12.9	+0.2
	0.1nm,0.4s,baz=344,slow=9.6,SNR=2.1 0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	19 31 40.8	0.0
	0.3nm,0.7s,baz=120,slow=8.5,SNR=2.0 0.3nm,0.7s						

*IDC **14** 19:22:32.7±0.7, 1°33'N×125°88'E, h0km, mb4.2/11, mbtmp4.1/12, ML4.0/1, Error ellipse: s-maj=56.3km s-min=13.5km az=72.0*
*DJA **14** 19:22:36.2±0.2, 2°N±3°×12°6E±°, h10km, M4.2/12, mB5.3/1, mb4.4/7, MLv4.1/12, Mw(mB)4.7/1*
*NEIC **14** 19:22:38.3±1.8, 1°44'N±0°09'×126°47'E±0°06, h35km±2km, mb4.4/17, Error ellipse: s-maj=16.9km s-min=5.6km az=208.0*
ISC 14 19:22:37.7±0.5, 1°52'N±0°06'×126°50'E±0°06, h35km, n48, σ1§49/47, mb4.3/19, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.14**	**131**		**Pn**	**19 22 58.4**	**+1.2**
TNTI	**Ternate**	**1.14**	**131**	P	**Pn**	**19 22 57.9**	**+0.7**
TNTI				S	**Sn**	**19 23 13.3**	**+1.7**
KMSI	**Cibinong**	**2.69**	**250**	P	**Pn**	**19 23 18.4**	**-0.1**
SANI	**Sanana**	**3.58**	**188**	P	**Pn**	**19 23 31.0**	**+0.2**
LUWI	**Luwuk**	**4.51**	**236**		**Pn**	**19 23 43.6**	**0.0**
LUWI	**Luwuk**	**4.51**	**236**	P	**Pn**	**19 23 45.2**	**+1.6**
MRSI	**Marisa**	**4.67**	**257**	P	**Pn**	**19 23 46.0**	**+0.2**
SWI	**Sorong**	**5.32**	**116**	P	**Pn**	**19 23 58.2**	**+3.6**
APSI	**Ampana**	**5.42**	**244**	P	Pn	19 24 01.3	+5.2
TOLI2	**Tolitoli**	**5.73**	**266**		**Pn**	**19 23 58.9**	**-1.5**
MPSI	**Mapaga**	**6.71**	**260**	P	**Pn**	**19 24 17.0**	**+3.3**
PCI	**Palu**	**7.09**	**250**	P	Pn	19 24 25.4	+6.4
BBSI	**Bau Bau**	**7.99**	**209**	P	**Pn**	**19 24 34.9**	**+3.5**
	33nm,0.8s						
TTSI	**Tana Toraja**	**8.07**	**236**	P	**Pn**	**19 24 32.8**	**+0.3**
BNSI	**Bone**	**8.69**	**227**	P	**Pn**	**19 24 44.8**	**+3.9**
MYLDM	**Lahad Datu**	**8.77**	**295**		**Pn**	**19 24 43.4**	**+1.3**
SBUM	**Sibu**	**14.30**	**274**	P	**P**	**19 26 04.3**	**-0.3**
MTN	**Manton Dam**	**14.99**	**162**	Pn	**Pn**	**19 26 06.6**	**-0.5**
KNRA	**Kununurra**	**17.23**	**173**	P	**Pn**	**19 26 35.8**	**0.0**
KNRA				IAmb	IAmb	19 26 37.5	
	comp=Z,19nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.51**	**182**	P	**P**	**19 27 01.0**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=18,slow=9.7,SNR=10 comp=Z,2.7nm,0.6s						
YULB	**Yu-li**	**22.32**	**347**	P	**P**	**19 27 33.1**	**+0.7**
TPUB	**Ta-pu**	**22.39**	**346**	P	**P**	**19 27 33.1**	**0.0**
TPUB				IAmb	IAmb	19 27 39.7	
	comp=Z,29nm,0.9s						
WB0	**Warramunga Arr**	**22.53**	**160**	P	**P**	**19 27 33.8**	**-0.9**
WB0				IAmb	IAmb	19 27 44.6	
	comp=Z,9.1nm,0.8s						
COEN	**Coen**	**22.57**	**133**	P	**P**	**19 27 34.7**	**-0.5**
COEN				IAmb	IAmb	19 27 36.4	
	comp=Z,22nm,1.4s						
WRA	**Warramunga Arr**	**22.68**	**161**	P	**P**	**19 27 35.5**	**-0.8**
	comp=Z,6.9nm,0.6s,baz=339,slow=11,SNR=40 comp=Z,6.9nm,0.6s						
WR8	**Warramunga Arr**	**22.74**	**160**	P	**P**	**19 27 36.3**	**-0.7**
WR8				IAmb	IAmb	19 27 46.1	
	comp=Z,9.9nm,0.9s						
PSA00	**Pilbara Seismi**	**23.86**	**195**	P	**P**	**19 27 47.2**	**-0.7**
PSA00				IAmb	IAmb	19 28 01.1	
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**26.05**	**164**	P	**P**	**19 28 08.5**	**+0.5**
ASAR	**Alice Springs**	**26.05**	**164**	P	**P**	**19 28 08.0**	**0.0**
	comp=Z,2.5nm,0.5s,baz=343,slow=7.6,SNR=42 comp=Z,2.5nm,0.5s						
FORT	**Forrest**	**32.16**	**177**	P	**P**	**19 29 01.9**	**-0.2**
FORT				IAmb	IAmb	19 29 14.7	
	comp=Z,4.3nm,0.8s						
BBOO	**Buckleboo**	**35.32**	**166**	P	**P**	**19 29 29.6**	**-0.1**
STKA	**Stephens Creek**	**36.17**	**158**	P	**P**	**19 29 37.3**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=321,slow=13,SNR=7.4 comp=Z,3.6nm,0.7s						
MJAR	**Matsushiro Arr**	**36.49**	**16**	P	**P**	**19 29 43.1**	**+3.4**
	comp=Z,2.0nm,1.0s,baz=195,slow=8.8,SNR=4.2 comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**49.31**	**342**	P	**P**	**19 31 24.5**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=162,slow=7.8,SNR=5.8 comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**19 32 34.4**	**-1.2**
	comp=Z,1.3nm,0.4s,baz=122,slow=7.3,SNR=17 comp=Z,1.3nm,0.4s						
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**19 32 34.7**	**-0.9**
MAKZ	**Makanchi**	**59.42**	**326**	P	**P**	**19 32 36.2**	**-0.6**
MAKZ				IAmb	IAmb	19 32 41.8	
	comp=Z,2.7nm,0.8s						
LBZ	**Lake Benmore**	**60.00**	**145**	P	**P**	**19 32 38.6**	**-2.4**
ZALV	**Zalesovo Beam**	**62.45**	**334**	P	**P**	**19 32 57.3**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=144,slow=5.5,SNR=3.8 comp=Z,0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	**P**	**19 33 02.6**	**-1.5**
	comp=Z,2.3nm,0.6s,baz=128,slow=6.1,SNR=12 comp=Z,2.3nm,0.6s						
KURK	**Kurchatov**	**63.48**	**328**	P	**P**	**19 33 03.2**	**-0.9**
KKAR	**Karatay Array**	**64.69**	**318**	P	**P**	**19 33 12.2**	**-0.2**
BVAR	**Borovoye Array**	**69.04**	**328**	P	**P**	**19 33 39.9**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=141,slow=8.7,SNR=9.4 comp=Z,1.1nm,0.5s						
TIXI	**Tiksi**	**70.04**	**1**	P	**P**	**19 33 45.9**	**+0.3**
TIXI				IAmb	IAmb	19 33 54.1	
	comp=Z,2.3nm,0.9s						
AB31	**Akbulak array**	**73.71**	**321**	P	**P**	**19 34 06.5**	**-1.6**
ABKAR	**Akbulak array**	**73.71**	**321**	P	**P**	**19 34 07.1**	**-1.0**
VNDA	**Vanda**	**81.28**	**173**	P	**P**	**19 34 50.1**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=320,slow=6.7,SNR=7.3 comp=Z,0.8nm,0.5s						
FINES	**FINESS Array B**	**93.66**	**332**	P	**P**	**19 35 48.7**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=97,slow=14,SNR=3.4 comp=Z,1.7nm,0.8s						

IDC 14 19:27:34.2±2.6, 6°17S×129°92E, h0km, mb3.3/1, mbtmp3.5/4, ML3.8/3, Error ellipse: s-maj=112.7km s-min=30.2km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.57**	**199**	Pn	Pn	19 30 34.1	-0.4
	0.5nm,0.3s,baz=20,slow=12,SNR=18						
FITZ				Sn	Sn	19 32 47.6	-7.7
	0.4nm,0.3s,baz=60,slow=22,SNR=2.5 0.4nm,0.3s						
WRA	**Warramunga Arr**	**14.35**	**163**	Pn	Pn	19 30 58.0	-0.8
	0.3nm,0.3s,baz=344,slow=10,SNR=4.6						
WRA				Sn	Sn	19 33 27.0	-12
	0.6nm,0.3s,baz=337,slow=22,SNR=9.9 0.6nm,0.7s						
ASAR	**Alice Springs**	**17.81**	**168**	P	P	19 31 44.4	-0.2
	0.4nm,0.3s,baz=350,slow=10,SNR=11 1.0nm,0.7s						
MKAR	**Makanchi Array**	**67.49**	**327**	P	P	19 38 32.2	+0.1
	0.2nm,0.4s,baz=120,slow=7.2,SNR=2.2 0.2nm,0.4s						

IDC 14 19:37:54.0±1.9, 1°65'N×126°29E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=177.9km s-min=23.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**160**	P	P	19 42 58.6	-0.7
	0.7nm,0.5s,baz=338,slow=11,SNR=7.6 0.7nm,0.5s						
ASAR	**Alice Springs**	**26.23**	**164**	P	P	19 43 31.7	+0.7
	0.2nm,0.5s,baz=350,slow=10,SNR=4.4 0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	19 47 56.4	+0.6
	0.3nm,0.8s,baz=111,slow=6.3,SNR=1.6 0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**63.25**	**328**	P	P	19 48 23.6	-0.8
	0.1nm,0.3s,baz=125,slow=6.5,SNR=1.8 0.1nm,0.3s						

*IDC **14** 19:38:27.4±1.7, 1°71N×126°78E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=123.6km s-min=20.5km az=69.0*
*DJA **14** 19:38:32.5±0.3, 1°N±3°×12°6E±°, h10km, M3.7/7, MLv3.7/7*
ISC 14 19:38:33.7±1.1, 1°64N±0°09'×126°50E±0°10, h35km, n8, σ2§09/9, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**135**	P	**Pn**	**19 38 53.9**	**-0.4**
TNTI				S	**Sn**	**19 39 12.9**	**+3.3**
SGSI	**Sangihe**	**2.25**	**334**	P	**Pn**	**19 39 09.1**	**+0.5**
KMSI	**Cibinong**	**2.73**	**247**	P	**Pn**	**19 39 15.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**19 42 58.8**	**-0.6**
	0.1nm,0.3s,baz=9.5,slow=12,SNR=1.5 1.7nm,0.9s						
WRA	**Warramunga Arr**	**22.78**	**161**	P	**P**	**19 43 29.8**	**-3.6**
	0.6nm,0.4s,baz=339,slow=10,SNR=8.4 0.6nm,0.4s						
ASAR	**Alice Springs**	**26.16**	**164**	P	**P**	**19 44 05.0**	**-0.1**
	0.4nm,0.5s,baz=340,slow=8.1,SNR=6.1 0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**19 48 31.3**	**+0.3**
	0.3nm,0.4s,baz=116,slow=6.6,SNR=6.5 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.37**	**328**	P	**P**	**19 48 58.5**	**-1.0**
	0.4nm,0.5s,baz=129,slow=6.8,SNR=4.7 0.4nm,0.5s						

IDC 14 19:40:45.9±1.9, 1°34N×126°10E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=192.6km s-min=24.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.64**	**160**	P	P	19 45 48.5	-0.3
	0.9nm,0.7s,baz=338,slow=10,SNR=4.9 0.9nm,0.7s						
ASAR	**Alice Springs**	**25.99**	**164**	P	P	19 46 20.7	0.0
	0.3nm,0.8s,baz=337,slow=8.4,SNR=2.3 0.3nm,0.8s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	P	19 50 47.7	-0.9
	0.1nm,0.4s,baz=119,slow=8.9,SNR=1.4 0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.41**	**328**	P	P	19 51 18.3	+1.0
	0.1nm,0.3s,baz=122,slow=6.7,SNR=2.0 0.1nm,0.3s						

*IDC **14** 19:42:44.8±1.7, 1°82N×126°97E, h0km, mb3.5/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=120.0km s-min=19.9km az=69.0*
*DJA **14** 19:42:49.5±0.3, 1°N±5°×12°6E±°, h10km, M4.0/12, mb4.1/7, MLv4.0/12*
ISC 14 19:42:51.2±1.1, 1°50N±0°09'×126°55E±0°08, h35km, n12, σ1§07/12, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.09**	**131**	P	**Pn**	**19 43 09.6**	**-0.4**
SGSI	**Sangihe**	**2.40**	**335**	P	**Pn**	**19 43 28.7**	**+0.7**
KMSI	**Cibinong**	**2.73**	**250**	P	**Pn**	**19 43 33.0**	**+0.5**
SWI	**Sorong**	**5.26**	**116**	P	**Pn**	**19 44 09.1**	**+1.6**
APSI	**Ampana**	**5.45**	**244**	P	**Pn**	**19 44 09.4**	**-0.6**
	0.2nm32nm,0.7s						
MPSI	**Mapaga**	**6.75**	**260**	P	**Pn**	**19 44 28.2**	**+0.4**
	0.0nm10.0nm,0.8s						
PCI	**Palu**	**7.12**	**250**	P	**Pn**	**19 44 32.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.50**	**183**	P	**Pn**	**19 47 18.3**	**+1.5**
	0.1nm,0.3s,baz=353,slow=12,SNR=2.0 1.7nm,0.9s						
WRA	**Warramunga Arr**	**22.64**	**161**	P	**P**	**19 47 49.3**	**-0.1**
	1.5nm,0.6s,baz=340,slow=11,SNR=10 1.5nm,0.6s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**19 48 21.4**	**+0.2**
	0.3nm,0.6s,baz=348,slow=8.5,SNR=11 0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.28**	**326**	P	**P**	**19 52 47.7**	**-1.8**
	0.2nm,0.3s,baz=118,slow=8.9,SNR=7.1 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	**P**	**19 53 17.1**	**-0.8**
	0.4nm,0.5s,baz=127,slow=6.0,SNR=5.4 0.4nm,0.5s						

*IDC **14** 19:46:22.1±1.1, 43°26S×74°09W, h0km, mb4.1/7, mbtmp4.1/9, ML3.8/2, Error ellipse: s-maj=31.6km s-min=17.1km az=113.0*
*GUC **14** 19:46:25.8±0.8, 43°25S×74°32W, h22km±6km, ML3.9*
*NEIC **14** 19:46:25.3±2.4, 43°18S±0°04'×74°3W±0°1, h20km±4km, mb4.4/10, Mwr4.3(GUC), Error ellipse: s-maj=11.4km s-min=5.3km az=102.0*
ISC 14 19:46:23.9±2.2, 43°21S±0°03'×74°23W±0°07, h15km±13km, n65, σ1§45/70, mb4.3/13, 3C-7D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO07	**Milladeo Hill,**	**0.42**	**77**		**Pn**	**19 46 35.0**	**-0.3**
GO07	**Milladeo Hill,**	**0.42**	**77**	↓*i*P	**Pn**	**19 46 35.2**	**-0.2**
GO07				*e*S	**Sn**	**19 46 41.8**	**-1.1**
LL07	**Hotel Espejo d**	**0.67**	**56**		**Pn**	**19 46 39.1**	**+0.4**
LL07	**Hotel Espejo d**	**0.67**	**56**	*i*P	**Pn**	**19 46 39.2**	**+0.6**
VNTQ	**Ventisquero**	**1.34**	**77**	*e*P	**Pb**	**19 46 49.0**	**+0.4**
VNTQ				*e*S	**Sg**	**19 47 07.3**	**+0.1**
VNTQ				IAML		19 47 09.6	
	comp=E,2μm,0.7s						
PDRA	**Piedra**	**1.43**	**76**	↓*i*P	**Pb**	**19 46 50.4**	**+0.3**
PDRA				*e*S	**Sg**	**19 47 10.2**	**+0.3**
PDRA				IAML		19 47 12.5	
	comp=N,3μm,0.5s						
LL01	**San Ignacio de**	**1.57**	**59**		**Pb**	**19 46 52.6**	**+0.1**
AY01	**Puyuhuapi**	**1.67**	**137**		**Pb**	**19 46 53.9**	**-0.3**
AY01	**Puyuhuapi**	**1.67**	**137**	↑*i*P	**Pb**	**19 46 54.1**	**-0.1**
AY01				*e*S	**Sb**	**19 47 15.1**	**+0.1**
MGDN	**Magdalena**	**1.71**	**147**	↑*i*P	**Pn**	**19 46 54.4**	**+1.4**
MGDN				*e*S	**Sb**	**19 47 17.0**	**+0.8**
MGDN				IAML		19 47 19.2	
	comp=N,3μm,0.4s						
LL02	**Futaleuf**	**1.74**	**90**		**Pb**	**19 46 55.5**	**+0.1**
LL02	**Futaleuf**	**1.74**	**90**	*e*P	**Pb**	**19 46 55.8**	**+0.3**
LL02				*e*S	**Sg**	**19 47 18.7**	**-1.2**
LL02				IAML		19 47 27.9	
	comp=N,1μm,0.7s						
LL05	**Los Muermos**	**1.89**	**18**	*e*P	**Pb**	**19 46 57.8**	**-0.1**
LL05				*e*S	**Sb**	**19 47 22.1**	**+0.8**
LL05				IAML		19 47 32.5	
	comp=E,3μm,0.4s						
USPA	**Uspallante**	**1.92**	**155**	↑*i*P	**Pn**	**19 46 56.9**	**+0.9**
USPA				*e*S	**Sn**	**19 47 20.9**	**+1.0**
USPA				IAML		19 47 33.7	
	comp=E,2μm,1.0s						
ETRA	**Estrella**	**2.07**	**162**	*e*P	**Pb**	**19 47 00.6**	**-0.5**
ETRA				*e*S	**Sb**	**19 47 26.9**	**+0.2**
ETRA				IAML		19 47 32.5	
	comp=E,878nm,0.4s						
CUEV	**Cuervo**	**2.12**	**158**	*e*P	**Pn**	**19 47 00.7**	**+1.8**
COYC	**Coyhaique**	**2.82**	**148**		**Pn**	**19 47 10.4**	**+2.1**
COYC	**Coyhaique**	**2.82**	**148**	*e*P	**Pb**	**19 47 14.2**	**+0.3**
LR04	**Corral**	**3.38**	**11**		**Pn**	**19 47 17.1**	**+1.1**
LR04	**Corral**	**3.38**	**11**	*e*P	**Pn**	**19 47 20.1**	**+4.1**
LR05	**Currie**	**3.41**	**30**		**Pn**	**19 47 18.2**	**+1.8**
LR05	**Currie**	**3.41**	**30**	*e*P	**Pn**	**19 47 18.8**	**+2.4**
LR05				*e*S	**Sn**	**19 48 00.1**	**+3.6**
LR05				IAML		19 48 12.6	
PLCA	**Paso Flores**	**3.69**	**49**	Pn	**Pn**	**19 47 21.9**	**+1.6**
	comp=E,2.4nm,0.3s,baz=231,slow=12,SNR=36						
PLCA				Lg	Lg	19 48 18.2	
	comp=E,6.3nm,0.3s,baz=331,slow=18,SNR=2.9 comp=E,14nm,0.6s						
LR03	**Panguipulli**	**3.84**	**22**	Pn	**Pn**	**19 47 23.6**	**+1.2**
GO06	**Curarrehue**	**4.17**	**31**	*e*P	**Pn**	**19 47 29.8**	**+2.7**
GO06				*e*S	**Sn**	**19 48 18.5**	**+3.0**
AY03	**Cochrane**	**4.21**	**165**		**Pn**	**19 47 29.5**	**+2.2**
BI05	**Punta Hualpn**	**6.50**	**7**	Pn	**Pn**	**19 47 59.3**	**+0.4**
BI02	**San Fabin de**	**6.92**	**20**	Pn	**Pn**	**19 48 06.0**	**+1.3**
BO02	**Sierra Bellavi**	**8.82**	**19**		**Pn**	**19 48 32.1**	**+1.3**
BO01	**Tunca**	**9.14**	**17**		**Pn**	**19 48 35.2**	**+0.1**
MT01	**Popeta**	**9.62**	**15**	Pn	**Pn**	**19 48 41.2**	**-0.4**
BO04	**La Punta**	**9.63**	**18**	Pn	**Pn**	**19 48 41.0**	**-0.9**
MT09	**Talagante**	**9.75**	**16**	Pn	**Pn**	**19 48 42.2**	**-1.5**
LMEL	**Las Melosas**	**9.86**	**20**	Pn	**Pn**	**19 48 44.5**	**-0.6**
H03S1	**Juan Fernandez**	**10.04**	**337**	T	T	19 59 07.7	
	baz=161,slow=74,SNR=49						
H03S2	**Juan Fernandez**	**10.05**	**337**	T	T	19 59 06.7	
	baz=161,slow=74,SNR=40						
H03S3	**Juan Fernandez**	**10.06**	**337**	T	T	19 59 08.1	
	baz=161,slow=74,SNR=52						
MT02	**Curacav**	**10.22**	**15**	Pn	**Pn**	**19 48 48.8**	**-1.2**
TRQA	**Tornquist**	**10.63**	**65**	Pn	**Pn**	**19 48 55.2**	**-0.4**
CFA	**Coronel Fontan**	**12.52**	**24**	Pn	**Pn**	**19 49 22.9**	**+1.5**
	comp=E,0.3nm,0.3s,baz=212,slow=13,SNR=4.1 comp=E,1.2nm,0.4s						
LCO	**Las Campanas**	**14.45**	**12**	Pn	**Pn**	**19 49 47.6**	**-0.4**
CPUP	**Villa Florida**	**21.75**	**45**	P	**P**	**19 51 14.7**	**0.0**
	comp=E,3.5nm,0.8s,baz=84,slow=9.9,SNR=16 comp=E,3.5nm,0.8s						
CPUP	**Villa Florida**	**21.75**	**45**		**P**	**19 51 14.5**	**-0.2**
PB16	**IPOC Station P**	**25.11**	**11**	P	**P**	**19 51 44.7**	**-4.0**
PB16				IAmb	IAmb	19 51 53.2	
	comp=Z,7.9nm,1.1s						
LPAZ	**La Paz**	**27.33**	**13**	P	**P**	**19 52 10.6**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=181,slow=8.9,SNR=5.5 comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**27.33**	**13**	P	**P**	**19 52 05.6**	**-3.2**
PTLB	**Pontes e Lacer**	**30.53**	**30**	P	**P**	**19 52 35.7**	**-0.8**
PTLB				IAmb	IAmb	19 52 49.9	
	comp=Z,5.5nm,1.0s						
VNA3	**Neumayer Olymp**	**41.66**	**154**	↓P	**P**	**19 54 11.9**	**+0.8**
	comp=Z,3.3nm,0.7s						
VNA1	**Neumayer--Stat**	**42.06**	**153**	↓P	**P**	**19 54 15.4**	**+1.1**
	comp=Z,3.5nm,0.8s						
VNA2	**Neumayer--Watz**	**42.37**	**153**	↓P	**P**	**19 54 17.8**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=271,slow=7.7						
SNAA	**Sanae**	**43.87**	**154**	↓P	**P**	**19 54 29.6**	**+0.4**
	comp=Z,93nm,1.0s						
SNAA	**Sanae**	**43.87**	**154**	P	**P**	**19 54 29.5**	**+0.4**
	comp=Z,3.6nm,0.9s,baz=270,slow=7.9,SNR=10 comp=Z,3.6nm,0.9s						
SNAA	**Sanae**	**43.87**	**154**	P	**P**	**19 54 29.1**	**+0.1**
SNAA				IAmb	IAmb	19 54 34.3	
	comp=Z,8.7nm,1.1s						
TROLL	**Troll, Antarti**	**45.54**	**155**	↓P	**P**	**19 54 43.6**	**+1.1**
	comp=Z,326nm,0.8s						
BOAV	**Boa Vista**	**47.05**	**19**	P	**P**	**19 54 53.0**	**-1.7**
BOAV				IAmb	IAmb	19 54 55.4	
	comp=Z,7.8nm,1.3s						
BAUV	**El Baul**	**52.21**	**8**	P	**P**	**19 55 32.4**	**-1.6**
VNDA	**Vanda**	**54.75**	**193**	P	**P**	**19 55 54.0**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=135,slow=4.3,SNR=3.5 comp=Z,0.7nm,0.9s						
VNDA	**Vanda**	**54.75**	**193**	IAmb	IAmb	19 56 09.1	
	comp=Z,2.7nm,1.4s						
TXAR	**Lajitas Array**	**77.08**	**334**	P	**P**	**19 58 16.8**	**+0.4**
	comp=Z,1.1nm,1.0s,baz=154,slow=3.7,SNR=4.7 comp=Z,1.1nm,1.0s						
BOSA	**Boshof**	**77.34**	**117**	P	**P**	**19 58 17.0**	**-1.1**
	comp=Z,6.0nm,0.9s,baz=220,slow=3.6,SNR=5.9 comp=Z,6.0nm,0.9s						
BOSA	**Boshof**	**77.34**	**117**	IAmb	IAmb	19 58 18.8	
	comp=Z,23nm,1.2s						
DBIC	**Dimbokro**	**79.80**	**71**	P	**P**	**19 58 31.7**	**+0.1**
	comp=Z,5.6nm,0.8s,baz=200,slow=4.8,SNR=5.9 comp=Z,5.6nm,0.8s						
DBIC	**Dimbokro**	**79.80**	**71**	IAmb	IAmb	19 58 32.9	
	comp=Z,7.4nm,0.8s						
MKAR	**Makanchi Array**	**163.03**	**70**	PKPab	**PKPab**	**20 07 14.7**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=277,slow=4.2,SNR=12						
MKAR	**Makanchi Array**	**163.03**	**70**		**PKPab**	**20 07 14.0**	**-0.8**

IDC 14 19:47:10.5±2.1, 1°89N×126°81E, h0km, mb3.3/3, mbtmp3.3/4, ML2.9/1, Error ellipse: s-maj=119.8km s-min=27.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.89**	**183**	P	P	19 51 44.2	+0.6
	baz=14,slow=12,SNR=1.1 1.0nm,0.8s						
WRA	**Warramunga Arr**	**22.92**	**162**	P	P	19 52 15.7	-0.5
	0.8nm,0.6s,baz=340,slow=11,SNR=7.6 0.8nm,0.6s						
ASAR	**Alice Springs**	**26.32**	**165**	P	P	19 52 48.4	+0.2
	0.3nm,0.7s,baz=344,slow=8.7,SNR=4.5 0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	P	19 57 12.7	-0.1
	0.2nm,0.6s,baz=129,slow=7.3,SNR=1.7 0.2nm,0.6s						

*IDC **14** 19:49:39.3±2.1, 1°68N×126°47E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=167.1km s-min=26.5km az=66.0*
*DJA **14** 19:49:43.3±0.4, 2°N±6°×12°7E±°, h10km, M3.4/6, mb3.6/1, MLv3.3/6*
ISC 14 19:49:44.9±1.3, 1°5N±0°2'×126°3E±0°3, h35km, n6, σ1§29/6, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**123**	P	**Pn**	**19 50 05.

0.4nm,0.8s

IDC 14 19:55:05.0±1.9,1°45N×126°11E,h0km,mb3.5/4, mbtmp3.6/4,Error ellipse: s-maj=192.1km s-min=22.9km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.73**	**160**	P	P	20 00 07.0	-1.8
	0.8nm,0.4s,baz=338,slow=11,SNR=5.6						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**164**	P	P	20 00 42.0	+1.4
	0.5nm,0.7s,baz=342,slow=11,SNR=5.0						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	20 05 07.6	+0.5
	0.5nm,0.6s,baz=126,slow=7.4,SNR=4.2						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	P	20 05 35.3	-0.5
	0.4nm,0.6s,baz=126,slow=6.2,SNR=4.3						
	0.4nm,0.6s						

IDC 14 19:55:33.1±1.6,6°48S×130°35E,h0km,mb4.0/2, mbtmp3.6/5,ML3.1/3,MS3.9/1,Error ellipse: s-maj=81.4km s-min=17.4km az=75.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.43**	**201**	Pn	Pn	19 58 31.5	+0.1
	0.1nm,0.3s,baz=21,slow=12,SNR=2.1						
FITZ				Sn	Sn	20 00 43.1	-7.5
	0.1nm,0.3s,baz=253,slow=21,SNR=2.0						
	1.8nm,0.9s						
WRA	**Warramunga Arr**	**13.93**	**164**	Pn	Pn	19 58 52.2	+0.2
	0.1nm,0.3s,baz=344,slow=13,SNR=5.1						
WRA				Sn	Sn	20 01 26.8	-0.7
	0.2nm,0.3s,baz=347,slow=22,SNR=5.6						
WRA				LR	LR	20 04 35.7	
	comp=Z,504nm,20.7s,baz=304,slow=39						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.42**	**169**	P	P	19 59 39.7	+0.5
	0.1nm,0.3s,baz=352,slow=12,SNR=6.1						
ASAR				S	Sn	20 02 52.8	+0.3
	0.4nm,0.8s,baz=352,slow=25,SNR=2.9						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**67.99**	**327**	P	P	20 06 34.3	+0.1
	0.9nm,0.5s,baz=122,slow=8.1,SNR=11						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**72.26**	**328**	P	P	20 07 00.1	-0.1
	1.1nm,0.7s,baz=127,slow=4.5,SNR=13						
	1.1nm,0.7s						

*IDC **14** 19:59:06.5±2.4,1°14N×126°99E,h0km,mb3.3/4, mbtmp3.3/4,Error ellipse: s-maj=249.0km s-min=24.7km az=67.0*
*DJA **14** 19:59:02.7±0.4,2°N±6°×12°7E±°,**h10**km,**M3.4**/7,**MLv3.4**/7,* **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**137**	P	Pn	19 59 25.1	-0.7
SGSI	**Sangihe**	**2.25**	**334**	P	Pn	19 59 40.7	+0.7
KMSI	**Cibinong**	**2.77**	**247**	P	Pg	20 00 00.2	+4.4
WRA	**Warramunga Arr**	**22.80**	**161**	P	P	20 04 04.0	-1.8
	0.8nm,0.7s,baz=339,slow=11,SNR=4.8						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**26.18**	**165**	P	P	20 04 37.7	+0.1
	0.3nm,0.6s,baz=350,slow=10,SNR=3.0						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	P	20 09 14.4	+11
	0.1nm,0.4s,baz=114,slow=7.9,SNR=1.6						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.37**	**328**	P	P	20 09 41.5	+9.3
	0.2nm,0.5s,baz=126,slow=6.7,SNR=1.9						
	0.2nm,0.5s						

DJA 14 20:00:35.0±0.3,0°S±3°×12°3E±°,h93km±6km,M3.8/18, mB4.3/1,mb3.9/7,MLv3.8/18,Mw(mB)3.4/1,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.93**	**42**	P	Pn	20 00 55.8	+1.7
KMSI				S	Sn	20 01 10.9	+2.5
LUWI	**Luwuk**	**1.09**	**213**	P	Pn	20 00 55.7	-0.2
LUWI				S	Sn	20 01 10.7	-0.9
MRSI	**Marisa**	**1.54**	**293**	P	Pn	20 01 00.9	-0.5
APSI	**Ampana**	**1.88**	**245**	P	Pn	20 01 05.8	0.0
SANI	**Sanana**	**3.25**	**126**	P	Pn	20 01 23.2	-0.8
MPSI	**Mapaga**	**3.49**	**277**	P	Pn	20 01 25.8	-1.4
PCI	**Palu**	**3.61**	**258**	P	Pn	20 01 29.0	+0.2
TNTI	**Ternate**	**4.10**	**78**	P	Pn	20 01 34.9	-0.6
TTSI	**Tana Toraja**	**4.58**	**231**	P	Pn	20 01 42.5	+0.5
SPSI	**Sidrap Palu**	**5.24**	**223**	P	Pn	20 01 52.1	+1.1
	0.1nm12nm,0.6s						
BNSI	**Bone**	**5.35**	**217**	P	Pn	20 01 52.4	-0.1
	0.1nm13nm,0.9s						
BBSI	**Bau Bau**	**5.39**	**188**	P	Pn	20 01 52.7	-0.3
	0.1nm8.6nm,0.6s						
BKSI	**Bulukumba**	**6.09**	**212**	P	Pn	20 02 03.2	+0.6
BSSI	**Bau Bau, Buton**	**6.63**	**206**	P	Pn	20 02 11.4	+1.5

*IDC **14** 20:03:06.5±1.8,1°65N×126°43E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=179.3km s-min=22.1km az=66.0*
*DJA **14** 20:03:10.4±0.3,2°N±4°×12°7E±°,h10km,M3.5/9,mb3.8/1, MLv3.4/9*
ISC 14 20:03:11.3±1.4,1°8N±0°1×126°8E±0°1,h35km,n8,σ0°50/7, mb3.4/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.17**	**152**	P	**Pn**	**20 03 31.7**	**+0.5**
SGSI	**Sangihe**	**2.26**	**326**	P	Pn	20 03 55.9	+10
SANI	**Sanana**	**3.92**	**192**	P	**Pn**	**20 04 09.2**	**+0.1**
LUWI	**Luwuk**	**4.93**	**235**	P	**Pn**	**20 04 23.3**	**+0.3**
WRA	**Warramunga Arr**	**22.85**	**161**	P	**P**	**20 08 10.8**	**-0.8**
	0.5nm,0.5s,baz=339,slow=11,SNR=7.5						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.25**	**165**	P	**P**	**20 08 43.4**	**0.0**
	0.3nm,0.3s,baz=342,slow=8.1,SNR=8.9						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**20 13 08.8**	**0.0**
	1.5nm,1.1s,baz=128,slow=8.2,SNR=4.5						
	1.5nm,1.1s						
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	**P**	**20 13 37.1**	**0.0**
	0.3nm,0.7s,baz=133,slow=6.6,SNR=4.4						
	0.3nm,0.7s						

IDC 14 20:03:21.6±2.0,1°60N×125°98E,h0km,mb3.3/3, mbtmp3.4/4,ML3.6/1,Error ellipse: s-maj=126.0km s-min=26.0km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.58**	**181**	P	P	20 07 51.9	+0.5
	0.1nm,0.3s,baz=25,slow=9.9,SNR=1.5						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**22.93**	**159**	P	P	20 08 27.1	-0.5
	0.6nm,0.5s,baz=337,slow=10,SNR=6.5						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.27**	**163**	P	P	20 08 58.8	-0.1
	0.2nm,0.4s,baz=345,slow=13,SNR=5.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.88**	**326**	P	P	20 13 22.6	+0.1
	0.2nm,0.5s,baz=119,slow=7.9,SNR=4.0						
	0.2nm,0.5s						

IDC 14 20:03:58.0±2.2,1°81N×126°70E,h0km,mb3.4/3, mbtmp3.5/4,ML3.3/1,Error ellipse: s-maj=127.6km s-min=27.6km az=69.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.81**	**183**	P	P	20 08 28.5	-1.7
	0.1nm,0.3s,baz=5.2,slow=13,SNR=1.1						
	1.7nm,1.1s						
WRA	**Warramunga Arr**	**22.88**	**161**	P	P	20 09 02.8	-0.6
	0.8nm,0.7s,baz=342,slow=10,SNR=2.4						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**26.28**	**165**	P	P	20 09 36.4	+1.1
	0.3nm,0.5s,baz=349,slow=13,SNR=5.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	P	20 14 00.5	+0.1
	0.4nm,0.6s,baz=113,slow=8.4,SNR=2.2						
	0.4nm,0.6s						

*IDC **14** 20:06:59.8±0.6,1°61N×126°29E,h0km,mb4.3/19, mbtmp4.3/20,ML4.5/1,Error ellipse: s-maj=33.8km s-min=11.7km az=75.0*
*DJA **14** 20:07:03.9±0.2,2°N±2°×12°6E±°,h10km,M4.4/19,mB5.0/2, mb4.6/13,MLv4.4/19,Mw(mB)4.3/2*
*NEIC **14** 20:07:04.4±2.0,1°70N±0°05×126°53E±0°07,h28km±4km, mb4.6/26,Error ellipse: s-maj=10.8km s-min=6.6km az=60.0*
ISC 14 20:07:05.2±0.4,1°63N±0°05×126°46E±0°07,h35km,n95, σ1°31/100,mb4.6/38,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**133**		**Pn**	**20 07 26.1**	**0.0**
TNTI	**Ternate**	**1.24**	**133**	P	**Pn**	**20 07 26.6**	**+0.5**
TNTI	**Ternate**	**1.24**	**133**	P	**Pn**	**20 07 26.0**	**-0.1**
SGSI	**Sangihe**	**2.25**	**336**	P	**Pn**	**20 07 40.2**	**+0.3**
SGSI				S	**Sn**	**20 08 08.0**	**+1.6**
KMSI	**Cibinong**	**2.69**	**247**	P	**Pn**	**20 07 46.4**	**+0.4**
SANI	**Sanana**	**3.68**	**187**	P	**Pn**	**20 08 00.1**	**+0.4**
SANI	**Sanana**	**3.68**	**187**	P	**Pn**	**20 07 59.9**	**+0.2**
LUWI	**Luwuk**	**4.54**	**234**		**Pn**	**20 08 12.4**	**+0.9**
LUWI	**Luwuk**	**4.54**	**234**	P	**Pn**	**20 08 12.9**	**+1.4**
LUWI	**Luwuk**	**4.54**	**234**	P	**Pn**	**20 08 12.7**	**+1.2**
MRSI	**Marisa**	**4.66**	**256**	P	**Pn**	**20 08 13.1**	**0.0**
NLAI	**Namlea**	**4.88**	**172**	P	**Pn**	**20 08 18.7**	**+2.6**
SWI	**Sorong**	**5.40**	**117**	P	**Pn**	**20 08 26.3**	**+3.0**
APSI	**Ampana**	**5.43**	**242**	P	**Pn**	**20 08 25.9**	**+2.2**
MSAI	**Masohi**	**5.52**	**153**	P	**Pn**	**20 08 27.1**	**+2.1**
	0.2nm56nm,1.3s						
TOLI2	**Tolitoli**	**5.70**	**265**		**Pn**	**20 08 26.4**	**-1.1**
TOLI2	**Tolitoli**	**5.70**	**265**	P	**Pn**	**20 08 26.7**	**-0.7**
MPSI	**Mapaga**	**6.69**	**259**	P	**Pn**	**20 08 43.1**	**+2.1**
	0.1nm37nm,0.8s						
KDI	**Kendari**	**6.75**	**215**	P	**Pn**	**20 08 42.9**	**+1.1**
PCI	**Palu**	**7.08**	**249**	P	**Pn**	**20 08 48.3**	**+1.8**
	0.2nm49nm,1.1s						
FAKI	**Fak Fak**	**7.34**	**128**	Pn	**Pn**	**20 08 48.2**	**-1.8**
FAKI	**Fak Fak**	**7.34**	**128**	P	**Pn**	**20 08 52.2**	**+2.2**
	0.1nm23nm,1.0s						
BBSI	**Bau Bau**	**8.07**	**209**	P	**Pn**	**20 09 02.7**	**+2.7**
	40nm,1.2s						
TTSI	**Tana Toraja**	**8.10**	**235**	P	**Pn**	**20 09 01.7**	**+1.3**
	32nm,0.6s						
MYLDM	**Lahad Datu**	**8.69**	**294**		**Pn**	**20 09 09.9**	**+1.4**
MYLDM	**Lahad Datu**	**8.69**	**294**	P	**Pn**	**20 09 11.5**	**+2.9**
SPSI	**Sidrap Palu**	**8.69**	**230**	P	**Pn**	**20 09 07.0**	**-1.6**
	22nm,0.5s						
BNSI	**Bone**	**8.73**	**227**	P	**Pn**	**20 09 09.9**	**+0.9**
	27nm,0.6s						
BKSI	**Bulukumba**	**9.37**	**222**	P	**Pn**	**20 09 19.0**	**+1.2**
	399nm17nm,0.7s						
KAPI	**Kappang**	**9.40**	**225**	Pn	**Pn**	**20 09 19.4**	**+1.1**
	1.8nm,0.3s,baz=45,slow=4.5,SNR=5.5						
KAPI	**Kappang**	**9.40**	**225**		**Pn**	**20 09 18.5**	**+0.2**
BSSI	**Bau Bau, Buton**	**9.75**	**218**	P	**Pn**	**20 09 24.2**	**+1.1**
SAUI	**Saumlaki**	**10.70**	**153**	P	**Pn**	**20 09 37.0**	**+0.9**
SOEI	**Soe**	**11.52**	**191**		**Pn**	**20 09 48.5**	**+1.1**
BATI	**Baumata**	**12.08**	**193**	Pn	**Pn**	**20 09 57.3**	**+2.3**
	1.4nm,0.3s,baz=20,slow=6.9,SNR=5.4						
SBUM	**Sibu**	**14.25**	**274**		**P**	**20 10 30.8**	**-0.8**
MTN	**Manton Dam**	**15.11**	**162**		**Pn**	**20 10 34.5**	**-1.7**
JAGI	**Jajag, Banyuwa**	**15.85**	**231**	Pn	**Pn**	**20 10 44.1**	**-1.8**
JAGI				IAmb	IAmb	20 11 20.5	
	comp=Z,21nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**20 11 30.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=13,slow=9.6,SNR=17						
	comp=Z,2.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**20 11 31.4**	**+0.6**
WB0	**Warramunga Arr**	**22.64**	**160**	P	**P**	**20 12 03.3**	**-0.2**
WB0				IAmb	IAmb	20 12 06.2	
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**22.78**	**161**	P	**P**	**20 12 04.0**	**-0.9**
WRAB				IAmb	IAmb	20 12 08.1	
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	**22.79**	**161**	P	**P**	**20 12 03.8**	**-1.2**
	comp=Z,17nm,0.7s,baz=341,slow=11,SNR=56						
	comp=Z,17nm,0.7s						
WR8	**Warramunga Arr**	**22.86**	**160**	P	**P**	**20 12 04.8**	**-0.8**
AS31	**Alice Springs**	**26.16**	**164**		**P**	**20 12 36.1**	**-0.4**
ASAR	**Alice Springs**	**26.16**	**164**	P	**P**	**20 12 36.5**	**0.0**
	comp=Z,3.9nm,0.5s,baz=348,slow=14,SNR=30						
ASAR				PcP	**PcP**	**20 16 03.4**	**0.0**
	comp=Z,0.5nm,0.4s,baz=342,slow=2.2,SNR=5.3						
	comp=Z,3.9nm,0.5s						
ASAR	**Alice Springs**	**26.16**	**164**		**P**	**20 12 36.4**	**-0.2**
RPSI	**Rantau Prapat**	**27.54**	**273**	P	**P**	**20 12 50.7**	**+1.7**
RPSI				IAmb	IAmb	20 12 51.7	
	comp=Z,8.4nm,1.1s						
NJ2	**Nanjing**	**31.10**	**347**	*e*P	**P**	**20 13 22.5**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.75**	**304**	P	**P**	**20 13 25.9**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=111,slow=8.0,SNR=4.8						
CMAR				PcP	**PcP**	**20 16 18.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=121,slow=4.7,SNR=5.5						
	comp=Z,0.4nm,0.6s						
ENH	**Enshi**	**32.73**	**332**	P	**P**	**20 13 33.5**	**-1.3**
ENH				IAmb	IAmb	20 13 34.4	
	comp=Z,8.7nm,0.8s						
PZH	**PanZhiHua**	**34.29**	**318**	P	**P**	**20 13 51.8**	**+3.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JGF	**Kuroka**	**35.29**	**15**	P	**P**	**20 13 56.0**	**-0.9**
BBOO	**Buckleboo**	**35.44**	**166**	P	**P**	**20 13 58.2**	**0.0**
BBOO				IAmb	IAmb	20 14 01.5	
	comp=Z,12nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.46**	**193**	P	**P**	**20 13 58.2**	**-0.2**
KSRS	**Korea Array**	**35.68**	**2**	P	**P**	**20 14 01.5**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=184,slow=8.9,SNR=1.8						
	comp=Z,0.9nm,0.6s						
XAN	**Xi'an**	**36.18**	**335**	⇑P	**P**	**20 14 02.6**	**-2.0**
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**36.28**	**158**	P	**P**	**20 14 05.4**	**-0.1**
	comp=Z,5.2nm,0.7s,baz=330,slow=8.8,SNR=11						
	comp=Z,5.2nm,0.7s						
MJAR	**Matsushiro Arr**	**36.40**	**16**	P	**P**	**20 14 05.9**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=180,slow=10.0,SNR=5.2						
	comp=Z,0.8nm,0.4s						
JMM	**Marumori**	**38.40**	**18**	P	**P**	**20 14 23.1**	**-0.2**
BJI	**Beijing**	**39.36**	**348**	P	**P**	**20 14 32.5**	**+1.2**
BJI				S	**S**	**20 20 32.3**	**+2.0**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,160nm,5.5s						
LZH	**Lanzhou**	**40.18**	**331**	*e*P	**P**	**20 14 36.9**	**-1.6**
LZH				sP	pwP	20 14 51.3	+1.0
LZH				ScP	**ScP**	**20 20 28.6**	**-0.4**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.30**	**343**	*e*P	**P**	**20 14 49.3**	**+1.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.1s						
LSA	**Lhasa**	**43.65**	**313**	P	**P**	**20 15 07.6**	**+0.4**
GTA	**Gaotai**	**44.77**	**330**	*e*P	**P**	**20 15 15.9**	**+0.3**
GTA				sP	pP	20 15 23.8	-1.7
GTA				PcP	**PcP**	**20 16 58.1**	**+0.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
EVN	**Everest**	**46.05**	**308**		**P**	**20 15 24.8**	**-1.7**
EVN				IAmb	IAmb	20 15 31.2	
	comp=Z,3.3nm,0.6s						
HILR	**Hailar Array B**	**48.09**	**354**	P	**P**	**20 15 42.7**	**+1.3**
	comp=Z,3.1nm,0.5s,baz=180,slow=5.9,SNR=1.9						
	comp=Z,3.1nm,0.5s						
HEH	**HeiHe**	**48.45**	**1**	*e*P	**P**	**20 15 43.0**	**-1.2**
HEH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**49.03**	**343**	P	**P**	**20 15 49.2**	**+0.3**
ULN				IAmb	IAmb	20 16 24.6	
	comp=Z,6.7nm,1.2s						
SONM	**Songino Array**	**49.20**	**342**	P	**P**	**20 15 49.3**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=153,slow=7.7,SNR=8.9						
	comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.47**	**22**	P	**P**	**20 16 51.9**	**+1.3**
	comp=Z,12nm,1.0s,baz=186,slow=6.2,SNR=2.7						
	comp=Z,12nm,1.0s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**20 17 01.4**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=119,slow=7.3,SNR=33						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	**59.13**	**326**		**P**	**20 17 01.0**	**-1.4**
ZAA0	**Zalesovo Array**	**62.33**	**334**	P	**P**	**20 17 23.7**	**-0.3**
ZAA0				IAmb	IAmb	20 17 53.0	
	comp=Z,2.8nm,1.1s						
ZALV	**Zalesovo Beam**	**62.33**	**334**	P	**P**	**20 17 22.3**	**-1.7**
	comp=Z,1.2nm,0.3s,baz=134,slow=7.4,SNR=9.3						
	comp=Z,1.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	**P**	**20 17 29.9**	**-1.0**
	comp=Z,4.4nm,0.6s,baz=130,slow=6.0,SNR=44						
	comp=Z,4.4nm,0.6s						
KURK	**Kurchatov**	**63.36**	**328**		**P**	**20 17 29.3**	**-1.6**
KK31	**Karatay Array**	**64.59**	**318**	P	**P**	**20 17 37.3**	**-1.9**
KKAR	**Karatay Array**	**64.59**	**318**	P	**P**	**20 17 37.3**	**-1.9**
BVAR	**Borovoye Array**	**68.93**	**328**	P	**P**	**20 18 05.7**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=128,slow=7.3,SNR=15						
	comp=Z,1.4nm,0.4s						
TIXI	**Tiksi**	**69.93**	**1**	P	**P**	**20 18 12.0**	**-0.5**
TIXI				IAmb	IAmb	20 18 13.6	
	comp=Z,13nm,1.4s						
NRIK	**Noril'sk**	**72.39**	**346**	P	**P**	**20 18 27.5**	**+0.1**
	comp=Z,6.9nm,0.8s,baz=128,slow=6.0,SNR=11						
	comp=Z,6.9nm,0.8s						
NRIK	**Noril'sk**	**72.39**	**346**	IAmb	IAmb	20 18 28.4	
	comp=Z,7.0nm,0.8s						
AB31	**Akbulak array**	**73.60**	**321**	P	**P**	**20 18 33.7**	**-1.3**
ABKAR	**Akbulak array**	**73.60**	**321**	P	**P**	**20 18 33.5**	**-1.4**
VNDA	**Vanda**	**81.39**	**173**	P	**P**	**20 19 18.2**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=325,slow=6.7,SNR=14						
	comp=Z,1.0nm,0.6s						
VNDA	**Vanda**	**81.39**	**173**	P	**P**	**20 19 17.6**	**-0.3**
VNDA				IAmb	IAmb	20 19 21.2	
	comp=Z,1.7nm,0.8s						
MAW	**Mawson**	**81.70**	**200**	P	**P**	**20 19 20.4**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=69,slow=3.8,SNR=2.2						
	comp=Z,1.1nm,0.7s						
E19K	**Redstone River**	**83.27**	**22**	P	**P**	**20 19 28.0**	**+0.1**
GURO	**Guroymak-BITLI**	**84.63**	**308**		**P**	**20 19 35.2**	**-0.5**
GURO				IAmb	IAmb	20 19 36.8	
	comp=Z,5.6nm,0.9s						
SKT	**Skwentna**	**84.81**	**28**	P	**P**	**20 19 36.0**	**+0.1**
SKT				IAmb	IAmb	20 19 43.8	
	comp=Z,7.7nm,1.2s						
MMAI	**Mount Meron Ar**	**90.01**	**303**	P	**P**	**20 20 02.0**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=95,slow=7.8,SNR=2.1						
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**92.31**	**340**	P	**P**	**20 20 10.5**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=68,slow=4.3,SNR=5.3						
	comp=Z,2.1nm,0.9s						
FINES	**FINESS Array B**	**93.54**	**332**	P	**P**	**20 20 16.2**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=98,slow=3.9,SNR=4.1						
	comp=Z,2.9nm,0.9s						
CO02	**Combarbal**	**146.26**	**152**	PKPdf	**PKPdf**	**20 26 42.3**	**+0.4**

DJA 14 20:08:16.7±1.2,4°N±3°×9°6E±°,h22km±8km,M3.8/10, mb4.5/3,MLv3.5/10,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.63**	**50**	P	Pn	20 08 30.0	-0.3
MLSI				S	Sn	20 08 39.0	-0.7
SNSI	**Sinabang, Aceh**	**1.50**	**164**	P	Pn	20 08 42.3	0.0
SNSI				S	Sn	20 09 01.3	+0.2
LHMI	**Lhok Sumawe**	**1.70**	**37**	P	Pn	20 08 45.5	+0.4
KCSI	**Kotacane, Aceh**	**1.88**	**100**	P	Pn	20 08 47.4	-0.1
GSI	**Gunungsitoli**	**3.03**	**147**	P	Pn	20 09 03.5	+0.1
PBSI	**Pulau Batu**	**4.55**	**149**	P	Pn	20 09 23.9	-0.4
PPSI	**Pulau Pagai**	**7.75**	**148**	P	Pn	20 10 08.7	+0.5
	61nm,0.9s						

IDC 14 20:09:45.1±7.5,17°53S×178°76W,h543km±87km, mb3.2/3,mbtmp4.0/4,Error ellipse: s-maj=191.4km s-min=42.0km az=149.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.63**	**250**	P	P	20 12 51.4	+0.4
	3.9nm,0.8s,baz=72,slow=16,SNR=2.2						
ASAR	**Alice Springs**	**44.57**	**254**	P	P	20 17 09.0	-0.3
	5.9nm,0.6s,baz=91,slow=7.5,SNR=7.7						
	5.9nm,0.6s						
ILAR	**Eielson Array**	**85.60**	**13**	P	P	20 21 25.3	-0.5
	0.2nm,0.4s,baz=205,slow=5.7,SNR=4.1						
	0.2nm,0.4s						
PDAR	**Pinedale Array**	**87.31**	**44**	P	P	20 21 34.6	-0.1
	0.3nm,0.5s,baz=228,slow=2.3,SNR=4.3						
	0.3nm,0.5s						
GERES	**GERESS Array B**	**147.16**	**345**	PKPbc	PKPbc	20 28 27.3	-0.2
	0.5nm,0.6s,baz=355,slow=2.3,SNR=3.1						

*IDC **14** 20:10:44.6±0.4,1°62N×126°21E,h0km,mb4.7/27, mbtmp4.7/28,ML4.4/1,Error ellipse: s-maj=23.5km s-min=10.4km az=75.0*
*MOS **14** 20:10:47.9±1.1,1°64N×126°18E,h36km,mb5.2/38,Error ellipse: s-maj=12.2km s-min=6.0km az=112.8*
*BJI **14** 20:10:49.5,1°51N×125°94E,h47km,mB5.4/7,mb4.8/56, Ms4.8/16,Ms7 4.6/16*
*DJA **14** 20:10:49.0±0.2,2°N±3°×12°6E±°,h10km,M4.7/21, mB5.2/16,mb5.2/18,MLv4.9/21,Mw(mB)4.6/16*
*NEIC **14** 20:10:49.7±1.6,1°72N±0°06×126°30E±0°06,h35km±1km, mb5.1/80,Error ellipse: s-maj=12.1km s-min=8.8km az=44.0*
ISC 14 20:10:48.8±0.6,1°65N±0°04×126°31E±0°05,h30km±3km, n338,σ1°85/318,mb5.0/126,MS4.7/4,25C-7D,Northern Molucca Sea

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

KAPI **Kappang** 9.31 225 P **Pn** **20 13 02.8 +1.7**
KAPI **Kappang** 9.31 225 *i* P **Pn** **20 13 02.5 +1.4**
BSSI **Bau Bau, Buton** 9.68 217 P **Pn** **20 13 10.5 +4.4**
BAKI **Biak** 10.20 106 P Pn **20 13 23.3 +10**
MMRI **Maumere** 10.99 202 Pn **Pn** **20 13 21.5 -2.7**
MMRI **Maumere** 10.99 202 P Pn **20 13 38.0 +14**
SOEI **Soe** 11.51 190 **Pn** **20 13 32.1 +0.7**
SOEI **Soe** 11.51 190 P Pn **20 13 40.1 +8.7**
MTKI **Muara Teweh, K** 11.70 257 P Pn **20 13 41.6 +7.8**
BATI **Baumata** 12.07 193 Pn Pn **20 13 44.1 +5.2**
1.4nm,0.3s,baz=176,slow=3.3,SNR=19
BATI **Baumata** 12.07 193 P **P** **20 13 47.2 -4.2**
PLAI **Plampang** 13.44 219 P **Pn** **20 13 59.3 +1.7**
SBUM **Sibu** 14.10 273 **Pn** **20 14 08.2 +1.5**
DRS **Darwin Rock St** 14.71 162 P **Pn** **20 14 16.3 +1.3**
JAY **Jayapura** 14.98 106 Pn **P** **20 14 24.7 +0.8**
0.3nm,0.3s,baz=235,slow=9.4,SNR=4.0
MTN **Manton Dam** 15.17 162 P **Pn** **20 14 22.5 +1.3**
comp=Z,32nm,1.0s
MTN **Manton Dam** 15.17 162 **Pn** **20 14 19.8 -1.4**
KDU **Kakadu** 15.50 157 P **Pn** **20 14 24.4 -1.1**
JAGI **Jajag, Banyuwa** 15.74 230 **Pn** **20 14 29.3 +0.6**
JAGI IAmb IAmb 20 14 36.7
comp=Z,71nm,0.9s
KNRA **Kununurra** 17.39 172 P **Pn** **20 14 48.6 -0.8**
KNRA **Kununurra** 17.39 172 P **Pn** **20 14 48.7 -0.7**
KNRA IAmb IAmb 20 14 51.7
comp=Z,84nm,0.8s
FITZ **Fitzroy Crossi** 19.63 182 P **P** **20 15 14.9 -0.3**
comp=Z,0.8nm,0.3s,baz=18,slow=8.2,SNR=25
comp=Z,14nm,0.7s
FITZ **Fitzroy Crossi** 19.63 182 P **P** **20 15 13.4 -1.8**
BBJI **Bungbulang** 20.70 244 P Pn **20 15 28.6 -0.7**
TPUB **Ta-pu** 22.22 346 P **P** **20 15 41.1 -2.0**
TPUB IAmb IAmb 20 15 59.9
comp=Z,77nm,1.0s
TPUB **Ta-pu** 22.22 346 P **P** **20 15 44.3 +1.2**
SSLB **Suanglung** 22.61 347 P **P** **20 15 45.4 -1.9**
SSLB IAmb IAmb 20 15 50.8
comp=Z,60nm,1.2s
SSLB **Suanglung** 22.61 347 P **P** **20 15 47.5 +0.2**
COEN **Coen** 22.80 133 P **P** **20 15 48.4 -1.1**
COEN IAmb IAmb 20 16 09.1
comp=Z,62nm,1.4s
COEN **Coen** 22.80 133 P **P** **20 15 50.5 +1.1**
WRAB **Tennant Creek** 22.85 160 P **P** **20 15 48.9 -1.0**
WRAB **Tennant Creek** 22.85 160 P **P** **20 15 49.5 -0.4**
WRAB **Tennant Creek** 22.85 160 *ce*P **P** **20 15 49.1 -0.8**
WRAB pmax pmax
comp=Z,104nm,1.0s
WRA **Warramunga Arr** 22.86 160 P **P** **20 15 48.8 -1.2**
comp=Z,78nm,0.8s,baz=339,slow=11,SNR=65
WRA PcP **PcP** **20 19 40.8 +0.2**
comp=Z,3.2nm,0.8s,baz=324,slow=1.9,SNR=6.1
comp=Z,78nm,0.8s
JMJ **Miyako jima 2** 23.05 358 P **P** **20 15 54.2 +2.3**
YHNB **Yeheng** 23.38 349 P **P** **20 15 56.8 +1.6**
MBWA **Marble Bar** 23.56 196 P **P** **20 15 53.7 -3.2**
MBWA **Marble Bar** 23.56 196 P **P** **20 15 56.1 -0.9**
MBWA IAmb IAmb 20 15 59.0
comp=Z,39nm,0.9s
MBWA **Marble Bar** 23.56 196 P **P** **20 15 59.1 +2.1**
PSAC1 **Pilbara Seismi** 23.90 195 P **P** **20 16 00.4 +0.2**
comp=Z,41nm,0.9s
PSAC2 **Pilbara Seismi** 23.90 195 P **P** **20 15 60.0 -0.3**
comp=Z,48nm,0.8s
PSA00 **Pilbara Seismi** 23.93 195 P **P** **20 15 60.0 -0.5**
PSA00 **Pilbara Seismi** 23.93 195 P **P** **20 15 60.0 -0.5**
PSA00 **Pilbara Seismi** 23.93 195 P **P** **20 16 01.4 +1.0**
PSAB3 **Pilbara Seismi** 23.94 195 P **P** **20 16 00.1 -0.5**
comp=Z,36nm,1.0s
IPM **Ipoh** 25.40 277 P **P** **20 16 13.3 -0.7**
QIS **Mount Isa** 25.63 150 P **P** **20 16 16.7 +0.7**
comp=Z,34nm,0.9s
QIS **Mount Isa** 25.63 150 P **P** **20 16 17.6 +1.6**
AS31 **Alice Springs** 26.23 164 P **P** **20 16 21.2 -0.2**
ASAR **Alice Springs** 26.23 164 P **P** **20 16 21.4 0.0**
comp=Z,26nm,0.8s,baz=345,slow=12,SNR=61
ASAR PcP **PcP** **20 19 48.3 +0.4**
comp=Z,4.7nm,0.8s,baz=340,slow=2.6,SNR=6.3
ASAR S **S** **20 20 48.3 -3.7**
comp=Z,1.2nm,0.9s,baz=343,slow=22,SNR=3.4
comp=Z,26nm,0.8s
ASAR **Alice Springs** 26.23 164 P **P** **20 16 20.8 -0.6**
ASAR **Alice Springs** 26.23 164 P **P** **20 16 20.8 -0.6**
ASAR 20 19 48.3
ASAR S **S** **20 20 48.3 -3.7**
MTSU **Mount Surprise** 26.47 139 P **P** **20 16 23.9 +0.2**
comp=Z,17nm,0.9s
WRKA **Warakurna** 26.60 176 P **P** **20 16 25.0 +0.3**
comp=Z,16nm,1.0s
GIRL **Giralia** 26.86 205 P **P** **20 16 28.0 +0.9**
comp=Z,88nm,0.9s
GIRL **Giralia** 26.86 205 P **P** **20 16 26.8 -0.3**
MEEK **Meekatharra** 29.08 194 P **P** **20 16 26.8 -0.1**
comp=Z,33nm,1.0s
MEEK **Meekatharra** 29.08 194 P **P** **20 16 47.4 +0.4**
CTAO **Charters Tower** 29.14 139 P **P** **20 16 46.5 -1.1**
CTAO **Charters Tower** 29.14 139 P **P** **20 16 46.5 -1.1**
CTAO pmax pmax
comp=Z,25nm,1.3s
NJ2 **Nanjing** 31.05 348 *e*P **P** **20 17 06.3 +2.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
CMAR **Chiang Mai Arr** 31.61 304 P **P** **20 17 09.3 -0.1**
comp=Z,1.2nm,0.6s,baz=127,slow=7.9,SNR=4.3
CMAR PcP **PcP** **20 20 02.0 +0.6**
comp=Z,0.9nm,0.4s,baz=126,slow=3.1,SNR=6.5
comp=Z,1.2nm,0.6s
CMAR **Chiang Mai Arr** 31.61 304 P **P** **20 17 08.5 -0.9**
CMAR **Chiang Mai Arr** 31.61 304 P **P** **20 17 08.5 -0.9**
CMAR 20 20 02.1
CHTO **Chiang Mai** 31.78 304 P **P** **20 17 10.2 -0.6**
CHTO **Chiang Mai** 31.78 304 P **P** **20 17 11.6 +0.7**
CHTO **Chiang Mai** 31.78 304 P **P** **20 17 10.3 -0.6**
CHTO pmax pmax
comp=Z,6.0nm,0.7s
MORW **Morawa** 32.09 197 P **P** **20 17 13.7 +0.3**
comp=Z,38nm,1.1s
MORW **Morawa** 32.09 197 P **P** **20 17 13.6 +0.2**
MORW IAmb IAmb 20 17 14.8
comp=Z,34nm,0.9s
FORT **Forrest** 32.29 177 P **P** **20 17 15.0 -0.1**
comp=Z,25nm,0.9s
FORT **Forrest** 32.29 177 P **P** **20 17 14.9 -0.3**
FORT IAmb IAmb 20 17 17.4
comp=Z,17nm,0.8s
ENH **Enshi** 32.64 332 P **P** **20 17 17.3 -1.0**
ENH IAmb IAmb 20 17 22.4
comp=Z,30nm,0.9s
KMBL **Kambalda** 33.10 187 P **P** **20 17 22.8 +0.5**
comp=Z,11nm,0.8s
BLDU **Ballidu** 33.36 195 P **P** **20 17 24.9 +0.4**
comp=Z,46nm,1.0s
BLDU **Ballidu** 33.36 195 P **P** **20 17 25.1 +0.5**
KLBR **Kellerberrin** 34.04 193 P **P** **20 17 31.0 +0.6**
comp=Z,102nm,0.8s
KLBR **Kellerberrin** 34.04 193 P **P** **20 17 31.4 +0.9**
PZH **PanZhiHua** 34.17 318 P **P** **20 17 31.6 -0.2**
PZH pmax pmax
comp=Z,10.0nm,0.9s
MUN **Mundaring** 34.79 195 P **P** **20 17 37.5 +0.6**
comp=Z,39nm,1.0s
MUN **Mundaring** 34.79 195 P **P** **20 17 37.7 +0.8**
NWAO **Narrogin (SRO)** 35.44 193 P **P** **20 17 43.0 +0.4**
comp=Z,44nm,0.9s
NWAO **Narrogin (SRO)** 35.44 193 P **P** **20 17 43.1 +0.5**
NWAO **Narrogin (SRO)** 35.44 193 P **P** **20 17 42.7 +0.2**
NWAO **Narrogin (SRO)** 35.44 193 P **P** **20 17 43.5 +1.0**
NWAO **Narrogin (SRO)** 35.44 193 P **P** **20 17 42.7 +0.2**
NWAO pmax pmax
comp=Z,36nm,1.0s
TNCH **TengChong** 35.48 313 P **P** **20 17 43.4 +0.1**
TNCH pmax pmax
comp=Z,10.0nm,0.9s
BBOO **Buckleboo** 35.49 166 P **P** **20 17 42.7 -0.3**
comp=Z,37nm,0.9s
BBOO **Buckleboo** 35.49 166 P **P** **20 17 42.2 -0.8**
BBOO **Buckleboo** 35.49 166 P **P** **20 17 43.1 +0.1**
KSRS **Korea Array** 35.66 2 P **P** **20 17 45.5 +1.2**
comp=Z,8.6nm,1.1s,baz=184,slow=10,SNR=9.6
comp=Z,8.6nm,1.1s
EIDS **Eidsvold** 36.01 140 P **P** **20 17 46.4 -1.1**
comp=Z,11nm,1.3s
EIDS **Eidsvold** 36.01 140 P **P** **20 17 46.8 -0.8**
EIDS IAmb IAmb 20 17 52.8
comp=Z,30nm,1.5s
CD2 **Chengdu** 36.09 326 P **P** **20 17 48.3 +0.1**
XAN **Xi'an** 36.09 335 P **P** **20 17 47.4 -0.8**
XAN pmax pmax
comp=Z,14nm,0.9s
STKA **Stephens Creek** 36.36 158 P **P** **20 17 50.3 -0.2**
comp=Z,148nm,0.8s
STKA **Stephens Creek** 36.36 158 P **P** **20 17 49.8 -0.7**
comp=Z,25nm,0.8s,baz=331,slow=8.5,SNR=20
comp=Z,25nm,0.8s
STKA **Stephens Creek** 36.36 158 P **P** **20 17 51.0 +0.6**
STKA **Stephens Creek** 36.36 158 *i* P **P** **20 17 50.1 -0.3**
MAJO **Matsushiro** 36.43 16 *i* P **P** **20 17 51.9 +0.9**
MAJO pmax pmax
comp=Z,13nm,1.0s
MJAR **Matsushiro Arr** 36.43 16 P **P** **20 17 50.5 -0.4**
comp=Z,6.8nm,0.9s,baz=184,slow=9.6,SNR=13
comp=Z,6.8nm,0.9s
HTT **Hallett** 36.86 162 P **P** **20 17 56.1 +1.3**
HTT **Hallett** 36.86 162 P **P** **20 17 56.1 +1.3**
RKGY **Rocky Gully** 37.12 193 P **P** **20 17 59.0 +2.2**
comp=Z,112nm,0.9s
HNS **HongShan** 37.15 345 ⇓P **P** **20 17 57.6 +0.6**
HNS PcP **PcP** **20 20 18.5 +1.6**
HNS pmax pmax
comp=Z,10.0nm,1.0s
CMSA **Cobar Meteorol** 37.79 152 P **P** **20 18 02.6 0.0**
comp=Z,16nm,1.2s
JMM **Marumori** 38.42 19 P **P** **20 18 06.5 -1.3**
BJT **Baijiatuau** 39.29 348 P **P** **20 18 16.2 +1.1**
BJT IAmb IAmb 20 18 39.4
comp=Z,65nm,1.9s
BJT **Baijiatuau** 39.29 348 P **P** **20 18 16.2 +1.1**
BJT pmax pmax
comp=Z,65nm,1.9s
BJI **Beijing** 39.31 348 P **P** **20 18 15.8 +0.6**
BJI pmax pmax
comp=Z,7.0nm,0.9s
SNY **Shenyang** 40.08 357 ⇑P **P** **20 18 23.1 +1.5**
SNY pmax pmax
comp=Z,26nm,0.9s
LZH **Lanzhou** 40.09 331 *e*P **P** **20 18 22.5 +0.5**
LZH pP pP 20 18 30.6 +0.2
LZH sP sP 20 18 35.3 +1.5
LZH ScS ScS 20 28 26.6 -0.6
LZH pmax pmax
comp=Z,26nm,1.1s
LZH LR LR
comp=Z,460nm,14.1s
LZH LR LR
comp=Z,420nm,14.8s
LZH LR LR
comp=Z,670nm,17.0s
SHL **Shillong** 40.80 309 P **P** **20 18 26.4 -1.7**
SHL IAmb IAmb 20 18 33.5
comp=Z,18nm,0.6s
SHL **Shillong** 40.80 309 P **P** **20 18 26.4 -1.7**
SHL pmax pmax
comp=Z,18nm,0.6s
ARPS **Mount Arapiles** 40.86 161 P **P** **20 18 29.4 +1.2**
comp=Z,31nm,0.8s
HHC **Hu-ho-hao-te** 41.24 343 *e*P **P** **20 18 33.0 +1.6**
HHC pmax pmax
comp=Z,9.0nm,0.5s
HHC pmax pmax
comp=Z,130nm,4.6s
BTO **Baotou** 41.49 341 *e*P **P** **20 18 38.1 +4.7**
BTO S **S** **20 24 54.3 +7.1**
BTO pmax pmax
comp=Z,13nm,0.6s
BTO pmax pmax
comp=Z,280nm,4.2s
BTO LR LR
comp=Z,950nm,16.1s
BTO LR LR
comp=Z,550nm,10.6s
BTO LR LR
comp=Z,860nm,18.1s
USRK **Ussuriysk Ar.** 42.67 6 P **P** **20 18 45.0 +2.2**
comp=Z,6.1nm,0.8s,baz=200,slow=8.3,SNR=6.0
comp=Z,6.1nm,0.8s
H11S3 **WAKE ISLAND Hy** 42.98 64 T T 21 05 50.7
baz=252,slow=74
H11S2 **WAKE ISLAND Hy** 42.99 64 T T 21 05 46.0
baz=252,slow=74
H11S1 **WAKE ISLAND Hy** 42.99 64 T T 21 05 56.5
baz=252
LSA **Lhasa** 43.52 313 P **P** **20 18 51.1 +0.6**
BNX **BinXian** 43.92 1 ⇑P P 20 18 58.1 +5.2
BNX pmax pmax
comp=Z,6.0nm,1.0s
GTA **Gaotai** 44.67 331 P **P** **20 18 59.9 +0.7**
GTA sP sP 20 19 16.3 +5.3
GTA PcP **PP** **20 20 43.3 -0.6**
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA LR LR
comp=Z,280nm,17.1s
GTA LR LR
comp=Z,330nm,18.9s
GTA LR LR
comp=Z,670nm,24.0s
DZM **Mont Dzumac** 45.72 123 P **P** **20 19 08.3 +0.6**
comp=Z,7.8nm,0.9s,baz=270,slow=4.8,SNR=4.1
comp=Z,7.8nm,0.9s
EVN **Everest** 45.91 308 P **P** **20 19 08.5 -1.3**
EVN IAmb IAmb 20 19 17.0
comp=Z,25nm,1.1s
HIA **Hailar** 47.77 354 IAmb IAmb 20 19 31.0
comp=Z,27nm,1.1s
HILR **Hailar Array B** 48.06 354 P **P** **20 19 27.3 +1.7**
comp=Z,8.4nm,0.7s,baz=172,slow=12,SNR=8.1
HILR PcP **PcP** **20 20 54.4 +1.3**
comp=Z,7.2nm,0.8s,baz=144,slow=3.8,SNR=4.1
comp=Z,8.4nm,0.7s
HEH **HeiHe** 48.44 1 *e*P **P** **20 19 28.5 +0.1**
HEH pmax pmax
comp=Z,13nm,1.3s
ULN **Ulaanbaatar** 48.96 343 P **P** **20 19 31.7 -1.0**
ULN **Ulaanbaatar** 48.96 343 *ce*P **P** **20 19 33.9 +1.2**
ULN pmax pmax
comp=Z,16nm,1.7s
SONM **Songino Array** 49.13 342 P **P** **20 19 34.1 +0.2**
comp=Z,5.9nm,1.0s,baz=166,slow=8.9,SNR=16
SONM PcP **PcP** **20 20 57.5 +0.4**
comp=Z,5.2nm,0.9s,baz=161,slow=4.5,SNR=5.7
comp=Z,5.9nm,1.0s
HYBB **Hyderabad (bro** 49.45 292 *e*P **P** **20 19 37.4 +0.7**
HYBB *es*P **sP** **20 19 50.6 +2.0**
HYBB **Hyderabad (bro** 49.45 292 *e*PKiKP **PKiKP** **20 27 46.1 -0.4**
CIT **Chita** 51.33 350 *e*P **P** **20 19 48.6 -1.8**
CIT *e* 20 19 55.8
CIT *e* 20 20 04.4
CIT *e* 20 21 02.2
CIT *e* 20 21 50.4
CIT *e* 20 22 55.0
CIT pmax pmax
comp=Z,410nm,1.4s
ZEA **Zeya** 51.92 1 *e*P **P** **20 19 55.4 +0.7**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
WMQ **Urumqi** 54.19 326 *e*P **P** **20 20 09.8 -2.0**
WMQ pmax pmax
comp=Z,32nm,0.7s
WMQ LR LR
comp=Z,690nm,10.7s
WMQ LR LR
comp=Z,1μm,21.5s
WMQ LR LR
comp=Z,1μm,16.7s
PETK **Petropavlovsk-** 57.51 22 P **P** **20 20 36.7 +1.4**
comp=Z,7.1nm,0.9s,baz=204,slow=4.9,SNR=6.0
comp=Z,7.1nm,0.9s
DGZ **Jazzator, Alta** 58.20 331 *i* P **P** **20 20 39.9 -0.5**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
PRZ **Przheval'sk** 59.01 320 P **P** **20 20 45.5 -0.7**
PRZ **Przheval'sk** 59.01 320 P **P** **20 20 45.5 -0.7**
PRZ pmax pmax
comp=Z,22nm,0.9s
TARG **Taragay, Kyrgy** 59.02 319 P **P** **20 20 45.4 -1.2**
TARG IAmb IAmb 20 21 09.2
comp=Z,12nm,0.9s
TARG **Taragay, Kyrgy** 59.02 319 P **P** **20 20 45.4 -1.2**
TARG pmax pmax
comp=Z,12nm,0.9s
MK31 **Makanchi Array** 59.02 326 *ce*P **P** **20 20 46.1 +0.1**
MKAR **Makanchi Array** 59.02 326 P **P** **20 20 45.4 -0.6**
comp=Z,22nm,0.9s,baz=121,slow=7.9,SNR=35
comp=Z,22nm,0.9s
MKAR **Makanchi Array** 59.02 326 P **P** **20 20 44.9 -1.1**
MKAR **Makanchi Array** 59.02 326 *i* P **P** **20 20 45.7 -0.3**
MKAR pmax pmax
comp=Z,23nm,0.9s
MAKZ **Makanchi** 59.21 326 P **P** **20 20 47.1 -0.2**
MAKZ sP **sP** **20 21 00.2 +1.1**
KSH **Kashi** 59.23 316 P **P** **20 20 50.3 +2.6**
KSH pmax pmax
comp=Z,9.0nm,0.9s
KDJ **Kajisay** 59.62 319 IAmb IAmb 20 20 55.7
comp=Z,16nm,0.9s
YAK **Yakutsk** 60.29 2 P **P** **20 20 54.0 -0.3**
YAK **Yakutsk** 60.29 2 *ce*P **P** **20 20 55.3 +0.9**
YAK pmax pmax
comp=Z,46nm,1.0s
YAK **Yakutsk** 60.29 2 P **P** **20 20 54.9 +0.5**
BOOM **Boomskoye usch** 60.60 319 P **P** **20 20 56.4 -0.8**
BOOM **Boomskoye usch** 60.60 319 P **P** **20 20 56.4 -0.8**
BOOM pmax pmax
comp=Z,6.0nm,1.0s
AAK **Ala-Archa** 61.62 319 P **P** **20 21 02.8 -1.2**
AAK **Ala-Archa** 61.62 319 *ce*P **P** **20 21 03.5 -0.6**
AAK pmax pmax
comp=Z,6.0nm,1.0s
ARSB **Arslanbob** 62.06 317 P **P** **20 21 06.1 -1.0**
ARSB IAmb IAmb 20 21 13.8
comp=Z,11nm,1.0s
ARSB **Arslanbob** 62.06 317 P **P** **20 21 06.1 -1.0**
ARSB pmax pmax
comp=Z,11nm,1.0s
ZALV **Zalesovo Beam** 62.25 334 P **P** **20 21 06.8 -1.1**
comp=Z,2.0nm,0.5s,baz=130,slow=6.2,SNR=10.0
comp=Z,2.0nm,0.5s
ZALV **Zalesovo Beam** 62.25 334 P **P** **20 21 06.5 -1.3**
ZALV **Zalesovo Beam** 62.25 334 *i* P **P** **20 21 08.8 +1.0**
ZALV pmax pmax
comp=Z,2.0nm,0.5s
KBL **Kabul** 62.46 308 P **P** **20 21 08.9 -1.0**
KBL IAmb IAmb 20 21 14.2
comp=Z,14nm,0.9s
KBL **Kabul** 62.46 308 P **P** **20 21 08.9 -1.0**
KBL pmax pmax
comp=Z,14nm,0.9s
GAR **Garm** 63.03 314 P **P** **20 21 12.5 -1.0**
KURBB **Kurchatov Arra** 63.26 328 P **P** **20 21 13.9 -0.7**
comp=Z,11nm,0.9s,baz=125,slow=6.2,SNR=44
comp=Z,11nm,0.9s
KURK **Kurchatov** 63.27 328 P **P** **20 21 13.6 -1.0**
KURK **Kurchatov** 63.27 328 *ce*P **P** **20 21 14.2 -0.5**
KURK pmax pmax
comp=Z,22nm,1.0s
KURK **Kurchatov** 63.27 328 P **P** **20 21 14.1 -0.5**
CHGR **Chuyangaron** 63.75 313 P **P** **20 21 17.0 -1.2**
CHGR **Chuyangaron** 63.75 313 P **P** **20 21 17.0 -1.2**
CHGR pmax pmax
comp=Z,22nm,0.8s
SEY **Seymchan** 64.14 13 *i* P **P** **20 21 21.1 +0.9**
SEY pmax pmax
comp=Z,6.0nm,0.9s
KKAR **Karatay Array** 64.47 318 **P** **20 21 21.3 -1.5**
KKAR **Karatay Array** 64.47 318 P **P** **20 21 21.3 -1.5**
HRA **Herat** 67.81 307 P **P** **20 21 44.3 -0.3**
CASY **Casey** 68.71 187 P **P** **20 21 49.4 +0.1**
CASY **Casey** 68.71 187 P **P** **20 21 50.6 +1.2**
CASY PcP **PcP** **20 22 15.1 +1.1**
BVAR **Borovoye Array** 68.83 328 P **P** **20 21 49.8 -0.6**
comp=Z,12nm,0.9s,baz=126,slow=7.7,SNR=21
comp=Z,12nm,0.9s
BORK **Borovoye** 68.88 328 *ce*P **P** **20 21 50.4 -0.3**
BORK pmax pmax
comp=Z,18nm,1.0s
TIXI **Tiksi** 69.92 1 P **P** **20 21 55.7 -1.0**
TIXI IAmb IAmb 20 22 11.2
comp=Z,23nm,1.1s
TIXI **Tiksi** 69.92 1 *ce*P **P** **20 21 57.0 +0.3**
TIXI pmax pmax
comp=Z,18nm,1.3s
TIXI **Tiksi** 69.92 1 P **P** **20 21 57.1 +0.3**
NRIK **Noril'sk** 72.34 347 P **P** **20 22 12.2 +0.7**
comp=Z,10nm,0.7s,baz=119,slow=6.3,SNR=19
comp=Z,10nm,0.7s
NRIK **Noril'sk** 72.34 347 IAmb IAmb 20 22 25.8
comp=Z,19nm,0.9s
NRIK **Noril'sk** 72.34 347 *ce*P **P** **20 22 12.0 +0.5**
SVE **Sverdlovsk** 75.51 329 *e*P **P** **20 22 30.5 +0.3**
SVE pmax pmax
comp=Z,19nm,0.9s
ARTI **Arti** 76.54 328 **P** **20 22 34.0 -2.2**
ARTI IAmb IAmb 20 22 39.4
comp=Z,12nm,1.0s
ARTI **Arti** 76.54 328 *d i*P **P** **20 22 36.9 +0.7**
ARTI 20 25 24.6
ARTI S **S** **20 32 21.1 +0.9**
ARTI SS **SS** **20 37 08.0 -7.5**
ARTI pmax pmax
comp=Z,12nm,1.0s
CCD **Concordia, Ant** 76.67 181 P **P** **20 22 38.4 +1.4**
ABPO **Ambohimpanom** 80.22 251 P **P** **20 22 56.2 -1.3**
ABPO IAmb IAmb 20 24 11.4
comp=Z,42nm,1.8s
ABPO **Ambohimpanom** 80.22 251 P **P** **20 22 56.2 -1.3**
ABPO pmax pmax
comp=Z,42nm,1.8s
RAYN **Ar Rayn** 80.91 293 P **P** **20 22 59.7 -1.2**
RAYN **Ar Rayn** 80.91 293 ⇑P **P** **20 22 59.8 -1.2**
RAYN **Ar Rayn** 80.91 293 P **P** **20 23 00.5 -0.5**
RAYN PcP **PcP** **20 23 05.4 -2.1**
VNDA **Vanda** 81.43 173 P **P** **20 23 03.1 +0.6**
comp=Z,10.0nm,0.8s,baz=311,slow=6.2,SNR=50
comp=Z,10.0nm,0.8s
VNDA **Vanda** 81.43 173 IAmb IAmb 20 23 04.8
comp=Z,10nm,0.8s
VNDA **Vanda** 81.43 173 P **P** **20 23 03.2 +0.7**
VNDA PcP **PcP** **20 23 09.0 +0.5**
MAW **Mawson** 81.67 200 P **P** **20 23 04.3 +0.4**
comp=Z,1.5nm,0.9s
MAW **Mawson** 81.67 200 P **P** **20 23 04.5 +0.6**
comp=Z,6.9nm,0.9s,baz=60,slow=3.9,SNR=10.0
comp=Z,6.9nm,0.9s
KIRV **Kirov** 81.77 329 *ce*P **P** **20 23 04.8 +0.1**
BELG **Belogornoye** 81.79 323 *i* P **P** **20 23 03.8 -1.1**
BELG pmax pmax
comp=Z,6.0nm,0.9s
SBA **Scott Base** 82.34 172 P **P** **20 23 07.8 +0.4**
SBA **Scott Base** 82.34 172 P **P** **20 23 07.8 +0.4**
SBA pmax pmax
comp=Z,8.0nm,1.0s
GNI **Garni** 82.49 310 *i* P **P** **20 23 10.2 +1.1**
GNI pmax pmax
comp=Z,10.0nm,1.0s
GNI **Garni** 82.49 310 P **P** **20 23 09.5 +0.4**
comp=Z,10nm,0.8s
N19K **Bonanza Creek** 83.30 29 IAmb IAmb 20 23 16.1
comp=Z,19nm,0.9s
L19K **White Mountain** 83.34 28 IAmb IAmb 20 23 16.2
comp=Z,18nm,1.0s
KBZ **Khabaz** 84.10 314 P **P** **20 23 18.7 +1.6**
comp=Z,4.7nm,0.9s,baz=63,slow=2.3,SNR=7.4
comp=Z,4.7nm,0.9s
KBZ **Khabaz** 84.10 314 *i* P **P** **20 23 16.6 -0.4**
KBZ pmax pmax
comp=Z,8.0nm,1.1s
KIV **Kislovodsk** 84.26 314 *e*P **P** **20 23 15.2 -2.9**
KIV pmax pmax
comp=Z,10.0nm,1.0s
SPU **Mount Spurr** 84.53 29 IAmb IAmb 20 23 34.8
comp=Z,13nm,1.3s
VRH **Novokhopyorsk** 85.32 321 *e*P **P** **20 23 20.7 -2.4**
VRH pmax pmax
comp=Z,20nm,1.0s
MLY **Manley** 85.53 25 P **P** **20 23 23.6 -0.3**
COLD **Coldfoot** 85.96 23 IAmb IAmb 20 23 29.1
comp=Z,7.9nm,0.8s
C23K **Itkillik River** 86.07 20 IAmb IAmb 20 23 29.8
comp=Z,14nm,0.9s
VORD **Divnogorie** 86.84 321 *e*P **P** **20 23 28.4 -2.2**
VORD pmax pmax
comp=Z,20nm,0.9s
VORR **Voronezh** 86.91 321 *e*P **P** **20 23 29.9 -1.0**
VORR pmax pmax

comp=Z,50nm,0.9s
VSR **Storozhevoye** **86.93 321** *e*P **P** **20 23 28.4 -2.6**
VSR pmax pmax
comp=Z,20nm,0.9s
KLMR **Klimovskoe** **87.00 331** *e*P **P** **20 23 29.6 -1.5**
KLMR *e**PP **pP** **20 23 39.1 -1.0**
KLMR pmax pmax
comp=Z,26nm,1.3s
LPSR **Galich'ya Gora** **87.10 322** *e*P **P** **20 23 30.6 -1.2**
LPSR pmax pmax
comp=Z,30nm,0.9s
ILAR **Eielson Array** **87.15 25** P **P** **20 23 30.9 -0.9**
comp=Z,0.7nm,0.7s,baz=259,slow=5.1,SNR=4.9
comp=Z,0.7nm,0.7s
E25K **Arctic Village** **87.78 22** IAmb IAmb 20 24 20.3
comp=Z,28nm,1.9s
MOS **Moscow** **87.90 326** *e*P **P** **20 23 34.9 -0.7**
MOS pmax pmax
comp=Z,24nm,0.7s
KIBK **Kibwezi** **88.33 268** P **P** **20 23 38.3 -0.3**
C27K **Jago River** **88.46 21** IAmb IAmb 20 24 09.8
comp=Z,11nm,1.4s
OBN **Obninsk** **88.51 325** *e*P **P** **20 23 38.2 -0.3**
OBN *e* 20 27 07.7
OBN *e*PPP PPP 20 29 04.7
OBN pmax pmax
comp=Z,9.0nm,0.8s
OBN **Obninsk** **88.51 325** P **P** **20 23 38.9 +0.4**
comp=Z,17nm,0.8s
KMBO **Kilima Mbogo** **89.09 269** P **P** **20 23 43.2 +0.8**
comp=Z,4.0nm,0.7s,baz=74,slow=4.8,SNR=6.9
comp=Z,4.0nm,0.7s
K27K **Chicken** **89.24 26** IAmb IAmb 20 23 44.7
comp=Z,13nm,1.1s
D27M **Malcolm River** **89.44 21** IAmb IAmb 20 24 00.1
comp=Z,13nm,1.6s
MMAI **Mount Meron Ar** **89.87 303** P **P** **20 23 46.4 +0.9**
comp=Z,2.0nm,0.6s,baz=83,slow=7.8,SNR=6.6
comp=Z,2.0nm,0.6s
E28M **Babbage River** **90.00 21** IAmb IAmb 20 24 56.8
comp=Z,18nm,1.6s
SYO **Syowa Base** **90.34 201**⇓*e*P **P** **20 23 48.0 +1.2**
BRTR **Keskin Array B** **91.01 310** P **P** **20 23 49.8 -1.0**
comp=Z,2.7nm,0.9s,baz=131,slow=5.5,SNR=10
comp=Z,2.7nm,0.9s
BRTR **Keskin Array B** **91.01 310** *i* P **P** **20 23 50.2 -0.6**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BR106 **Keskin Array S** **91.03 310** P **P** **20 23 50.5 -0.3**
comp=Z,4.2nm,0.9s
BR105 **Keskin Array S** **91.03 310** P **P** **20 23 50.0 -0.9**
comp=Z,3.7nm,0.9s
L29M **L29M** **91.07 27** IAmb IAmb 20 23 52.9
comp=Z,9.0nm,0.9s
CSS **Mathiatis** **91.51 305** P **P** **20 23 52.2 -0.8**
QSPA **South Pole Qui** **91.57 180** P **P** **20 23 55.3 +2.6**
comp=Z,3.0nm,0.8s,baz=316,slow=2.8,SNR=11
QSPA **South Pole Qui** **91.57 180** P **P** **20 23 54.3 +1.6**
QSPA IAmb IAmb 20 24 11.4
comp=Z,5.3nm,0.9s
ARCES **ARCESS Array B** **92.24 340** P **P** **20 23 56.1 +0.5**
comp=Z,3.6nm,0.9s,baz=76,slow=5.4,SNR=8.8
comp=Z,3.6nm,0.9s
AK10 **Malin Array Si** **93.22 321** P **P** **20 24 02.2 +1.7**
AKASG **Malin Array Be** **93.23 321** P **P** **20 24 01.0 +0.5**
comp=Z,2.1nm,0.8s,baz=70,slow=4.5,SNR=4.9
comp=Z,2.1nm,0.8s
AKASG **Malin Array Be** **93.23 321** IAmb IAmb 20 24 15.1
comp=Z,18nm,1.9s
AKASG **Malin Array Be** **93.23 321** *i* P **P** **20 24 03.7 +3.2**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AK02 **Malin Array Si** **93.25 321** P **P** **20 24 02.3 +1.7**
FINES **FINESS Array B** **93.45 332** P **P** **20 24 00.5 -0.9**
comp=Z,4.6nm,1.1s,baz=57,slow=5.1,SNR=5.4
comp=Z,4.6nm,1.1s
FINES **FINESS Array B** **93.45 332** *i* P **P** **20 24 01.0 -0.3**
FINES pmax pmax
comp=Z,7.0nm,1.2s
NACGM **Naroch** **94.14 325** *e*P **P** **20 24 06.1 +1.5**
comp=Z,6.0nm,0.9s,baz=81
NOR **Nord** **95.11 355** *i* P **P** **20 24 08.6 0.0**
NOR IAmb IAmb 20 24 09.5
comp=Z,12nm,1.1s
TESR **Tescani** **95.46 317** ⇑P **P** **20 24 09.0 -1.9**
TESR **Tescani** **95.46 317** P **P** **20 24 10.8 -0.1**
comp=Z,15nm,0.8s
VRI **Vrincioaia** **95.50 316** ⇑P **P** **20 24 09.2 -1.9**
VRI **Vrincioaia** **95.50 316** P **P** **20 24 09.2 -1.9**
GIRR **Girov** **95.50 317** ⇑P P 20 24 01.7 -9.4
PLOR **Plostina** **95.55 316** ⇑P **P** **20 24 08.9 -2.5**
PLOR **Plostina** **95.55 316** ⇑P **P** **20 24 08.9 -2.5**
BISRR **Bisoca** **95.55 316** ⇓P P 20 24 06.1 -5.4
NEHR **Nehoiu** **95.86 316** ⇑P P 20 24 06.4 -6.5
MLR **Muntele Rosu** **96.09 316** IAmb IAmb 20 24 31.7
comp=Z,8.0nm,0.9s
MLR **Muntele Rosu** **96.09 316** ⇑P P 20 24 07.5 -6.5
MLR **Muntele Rosu** **96.09 316** ⇑P P 20 24 07.5 -6.5
MLR **Muntele Rosu** **96.09 316** P **P** **20 24 13.6 -0.4**
comp=Z,10nm,0.9s
BURAR **Bucovina Array** **96.26 318** ⇑P **P** **20 24 15.1 +0.4**
LOT **Lotru** **97.61 316** ⇑P P 20 24 11.7 -9.2
MARR **Marisel-Cluj** **97.83 317** ⇓P Pdif 20 24 23.5 +1.7
DRGR **98.09 318** ⇑P Pdif 20 24 25.5 +2.6
DRGR **98.09 318** ⇑P Pdif 20 24 25.5 +2.6
SIRR **Siria** **98.90 317** ⇓P **P** **20 24 23.6 -2.9**
DAG **Danmarks Havn** **99.25 352** *i* P **Pdif** **20 24 26.5 -0.9**
DAG IAmb IAmb 20 24 28.0
comp=Z,5.1nm,0.8s
NVL **N'lazarevskaya** **99.45 198** *e*P **Pdif** **20 24 11.9 -16**
NVL pmax pmax
comp=Z,14nm,1.0s
HFS **Hagfors** **99.65 332** P **Pdif** **20 24 28.8 -0.7**
comp=Z,3.9nm,1.0s,baz=132,slow=2.2,SNR=4.4
comp=Z,3.9nm,1.0s
NEEM **North Greenlan** **100.99 359** *i* P **Pdif** **20 24 37.0 +1.5**
NEEM IAmb IAmb 20 24 38.2
comp=Z,7.6nm,1.2s
DBG **Daneborg** **101.50 351** *i* P **Pdif** **20 24 37.3 -0.2**
DBG IAmb IAmb 20 24 38.4
comp=Z,5.1nm,1.0s
PDAR **Pinedale Array** **113.19 42** PKKPab PKKPab 20 40 17.6 -0.6
comp=Z,1.8nm,0.9s,baz=125,slow=5.8,SNR=7.2
TORD **Torodi Ar. Bea** **123.14 287** PKP **PKiKP** **20 29 44.0 +0.1**
comp=Z,3.3nm,0.6s,baz=59,slow=3.5,SNR=5.6
TORD **Torodi Ar. Bea** **123.14 287** **PKiKP** **20 29 44.5 +0.6**
TXAR **Lajitas Array** **123.19 53** PKP **PKiKP** **20 29 44.3 +0.5**
comp=Z,1.2nm,1.0s,baz=329,slow=4.4,SNR=5.3
DBIC **Dimbokro** **130.56 280** PKP **PKiKP** **20 29 58.7 -0.1**
comp=Z,5.2nm,0.9s,baz=75,slow=5.3,SNR=4.6
PLCA **Paso Flores** **138.21 161** PKP **PKiKP** **20 30 13.2 -0.5**
comp=Z,3.7nm,0.9s,baz=202,slow=6.3,SNR=4.7
PLCA **Paso Flores** **138.21 161** **PKiKP** **20 30 13.8 +0.1**
PEL **Peldehue** **144.84 155** *e*P **PKPdf** **20 30 23.6 -0.1**
ROC1 **El Roble** **144.84 154** *e*P **PKPdf** **20 30 24.5 +0.6**
MT08 **Bocatoma Ro** **144.86 156** **PKPdf** **20 30 23.6 -0.3**
VA03 **San Esteban** **145.23 155** *e*P **PKPdf** **20 30 25.4 +1.0**
AAGR **Agrelo** **145.65 157**⇓*e*P **PKiKP** **20 30 27.6 -1.6**
ASAL **Salagasta** **146.08 157** *e*P **PKPab** **20 30 28.3 +1.0**
AUSP **Uspallata** **146.18 156** *e*P **PKiKP** **20 30 29.6 -1.0**
RTLS **Leoncito** **146.59 155** *e*P **PKPab** **20 30 29.6 +0.1**
ACAN **Cantantal** **146.99 159** *e*P **PKPbc** **20 30 29.4 0.0**
ZON **Zonda** **147.06 156** *e*P **PKPbc** **20 30 29.6 0.0**
LCO **Las Campanas** **148.32 151** **PKPbc** **20 30 33.5 +0.1**
LCO **Las Campanas** **148.32 151** PKP2 **PKPbc** **20 30 33.5 +0.1**
AC05 **El Transito** **148.68 151** **PKPbc** **20 30 34.3 +0.2**
AGUA **GUANDACOL** **148.94 154** *e*P **PKiKP** **20 30 36.4 +0.3**
GO03 **Copiapo** **149.72 150** *e*P **PKiKP** **20 30 38.4 +0.7**
PLTB **Pedras Altas** **150.05 180** **PKPbc** **20 30 37.5 +0.3**
TINO **Tinogasta** **150.57 154** *e*P **PKiKP** **20 30 40.2 +0.7**
AC02 **Maricunga** **150.90 151** *e*P **PKiKP** **20 30 41.1 +0.4**
CYA **Choya** **150.95 158** *e*P **PKiKP** **20 30 40.2 0.0**
CYA *e*P **pPKPdf** **20 30 41.7 -1.4**
AHML **Horco Molle** **152.62 157** *e*P **PKPbc** **20 30 42.6 -0.8**
FSA **Cafayete** **152.96 155** *e*P **PKiKP** **20 30 46.4 +1.8**
CPUP **Villa Florida** **155.21 172** PKPab **PKPab** **20 31 05.8 +1.2**
comp=Z,2.1nm,1.1s,baz=239,slow=5.9,SNR=5.2

*IDC **14** 20:14:43.9±1.6, 1.°77N×126.°52E, h0km, mb3.8/5, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=125.1km s-min=19.9km az=69.0*
*NEIC **14** 20:14:47.1±1.9, 1.°77N±0.°09×126.°55E±0.°10, h20km±7km, mb4.6/9, Error ellipse: s-maj=18.1km s-min=6.2km az=47.0*

ISC 14 20:14:48.1±0.8,**1.°79N**±0.°10×**126.°54E**±0.°09,**h35**km,**n19, σ1s07/17, mb4.2**/10,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.31**	**141**	Pn	**Pn**	**20 15 08.9**	**-0.9**
LUWI	**Luwuk**	**4.70**	**233**	Pn	**Pn**	**20 15 57.1**	**+0.6**
TOLI2	**Tolitoli**	**5.79**	**263**	Pn	**Pn**	**20 16 09.5**	**-2.0**
MYLDM	**Lahad Datu**	**8.70**	**293**	Pn	**Pn**	**20 16 51.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.78**	**183**	P	**P**	**20 19 15.3**	**-0.1**
	0.1nm,0.3s,baz=4.8,slow=12,SNR=1.7						
	4.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.78**	**183**	IAmb	IAmb	20 19 21.1	
	comp=Z,1.0nm,0.8s						
TPUB	**Ta-pu**	**22.14**	**345**	P	**P**	**20 19 40.7**	**-0.1**
WB0	**Warramunga Arr**	**22.77**	**161**	P	**P**	**20 19 48.6**	**+1.0**
WB0				IAmb	IAmb	20 19 59.3	
	comp=Z,20nm,1.1s						
YOJ	**Yonaguni jima**	**22.80**	**352**	P	**P**	**20 19 47.5**	**-0.4**
WRA	**Warramunga Arr**	**22.91**	**161**	P	**P**	**20 19 48.9**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=340,slow=11,SNR=6.7						
	comp=Z,1.6nm,0.6s						
WR8	**Warramunga Arr**	**22.98**	**160**	P	**P**	**20 19 49.7**	**-0.1**
WR8				IAmb	IAmb	20 20 09.2	
	comp=Z,22nm,1.2s						
ASAR	**Alice Springs**	**26.30**	**165**	P	**P**	**20 20 22.2**	**+1.6**
	comp=Z,1.3nm,0.9s,baz=346,slow=11,SNR=4.7						
	comp=Z,1.3nm,0.9s						
BBOO	**Buckleboo**	**35.57**	**166**	P	**P**	**20 21 41.2**	**-1.0**
BBOO				IAmb	IAmb	20 21 42.7	
	comp=Z,14nm,1.2s						
MKAR	**Makanchi Array**	**59.04**	**326**	P	**P**	**20 24 46.0**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=112,slow=8.3,SNR=4.1						
	comp=Z,0.9nm,0.6s						
MAKZ	**Makanchi**	**59.22**	**326**	P	**P**	**20 24 46.0**	**+0.1**
MAKZ				IAmb	IAmb	20 25 15.2	
	comp=Z,10.0nm,1.5s						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	**P**	**20 25 14.1**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=124,slow=7.1,SNR=4.5						
	comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**63.27**	**328**	P	**P**	**20 25 14.1**	**+0.9**
KURK	**Kurchatov**	**63.27**	**328**	IAmb	IAmb	20 25 20.0	
	comp=Z,1.6nm,0.7s						
BVAR	**Borovoye Array**	**68.84**	**327**	P	**P**	**20 25 50.4**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=129,slow=5.9,SNR=2.7						
	comp=Z,0.4nm,0.6s						

*IDC **14** 20:17:33.4±0.7, 1.°50N×126.°15E, h0km, mb4.1/12, mbtmp4.1/13, ML3.8/1, MS5.0/1, Error ellipse: s-maj=52.6km s-min=13.7km az=74.0*
*DJA **14** 20:17:37.2±0.2, 2.°N±3.°×12.°6E±.°, h10km, M4.7/15, mb4.4/4, MLv4.9/15*
*NEIC **14** 20:17:39.2±1.2, 1.°61N±0.°09×126.°57E±0.°04, h35km±2km, mb4.2/16, Error ellipse: s-maj=16.7km s-min=3.8km az=203.0*

ISC 14 20:17:38.7±0.6,**1.°60N**±0.°06×**126.°53E**±0.°07,**h35**km,**n44, σ1s12/42, mb4.2**/17,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.18**	**135**		**Pn**	**20 17 58.9**	**+0.2**
TNTI	**Ternate**	**1.18**	**135**	P	**Pn**	**20 17 59.9**	**+1.2**
SGSI	**Sangihe**	**2.30**	**334**	P	**Pn**	**20 18 14.0**	**-0.2**
SGSI				S	**Sn**	**20 18 41.8**	**+0.6**
KMSI	**Cibinong**	**2.75**	**248**	P	**Pn**	**20 18 20.3**	**0.0**
SANI	**Sanana**	**3.67**	**188**	P	**Pn**	**20 18 33.4**	**+0.4**
LUWI	**Luwuk**	**4.58**	**235**		**Pn**	**20 18 47.1**	**+1.5**
LUWI	**Luwuk**	**4.58**	**235**	P	**Pn**	**20 18 44.3**	**-1.3**
MRSI	**Marisa**	**4.72**	**256**	P	**Pn**	**20 18 48.0**	**+0.5**
NLAI	**Namlea**	**4.84**	**173**	P	**Pn**	**20 18 51.2**	**+2.0**
APSI	**Ampana**	**5.48**	**243**	P	**Pn**	**20 18 59.8**	**+1.8**
	110nm,0.7s						
TOLI2	**Tolitoli**	**5.77**	**265**		**Pn**	**20 18 59.8**	**-2.1**
MPSI	**Mapaga**	**6.75**	**259**	P	**Pn**	**20 19 14.0**	**-1.4**
	2.5nm24nm,0.9s						
MYLDM	**Lahad Datu**	**8.77**	**294**		**Pn**	**20 19 44.6**	**+1.6**
SOEI	**Soe**	**11.51**	**191**		**Pn**	**20 20 21.9**	**+1.2**
SBUM	**Sibu**	**14.32**	**274**	P	**P**	**20 21 07.2**	**+1.4**
MTN	**Manton Dam**	**15.06**	**162**	Pn	**Pn**	**20 21 08.8**	**-0.3**
KNRA	**Kununurra**	**17.31**	**173**	Pn	**Pn**	**20 21 37.2**	**-0.6**
KNRA				IAmb	IAmb	20 21 44.6	
	comp=Z,31nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.60**	**183**	P	**P**	**20 22 03.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=0.1,slow=8.2,SNR=8.1						
	comp=Z,3.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.60**	**183**	IAmb	IAmb	20 22 12.3	
	comp=Z,1.6nm,1.1s						
WB0	**Warramunga Arr**	**22.60**	**160**	P	**P**	**20 22 36.1**	**-0.4**
WRAB	**Tennant Creek**	**22.74**	**161**	P	**P**	**20 22 37.7**	**-0.2**
WRA	**Warramunga Arr**	**22.74**	**161**	P	**P**	**20 22 36.8**	**-1.2**
	comp=Z,6.4nm,0.6s,baz=338,slow=11,SNR=23						
	comp=Z,6.4nm,0.6s						
WB2	**Warramunga Arr**	**22.75**	**161**	P	**P**	**20 22 37.2**	**-0.8**
WB2				IAmb	IAmb	20 22 41.6	
	comp=Z,11nm,0.9s						
WR8	**Warramunga Arr**	**22.81**	**160**	P	**P**	**20 22 37.4**	**-1.3**
WR8				IAmb	IAmb	20 22 47.5	
	comp=Z,12nm,1.2s						
AS31	**Alice Springs**	**26.12**	**164**	P	**P**	**20 23 09.4**	**-0.3**
ASAR	**Alice Springs**	**26.12**	**164**	P	**P**	**20 23 09.5**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=346,slow=12,SNR=13						
	comp=Z,1.9nm,0.6s						
KSRS	**Korea Array**	**35.70**	**2**	P	**P**	**20 24 34.9**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=185,slow=9.1,SNR=1.9						
	comp=Z,1.2nm,0.8s						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**20 24 37.9**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=305,slow=7.9,SNR=3.6						
	comp=Z,2.4nm,0.7s						
EVN	**Everest**	**46.12**	**308**	P	**P**	**20 26 00.1**	**-0.6**
EVN				IAmb	IAmb	20 26 03.6	
	comp=Z,2.6nm,0.8s						
SONM	**Songino Array**	**49.24**	**342**	P	**P**	**20 26 23.9**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=157,slow=8.3,SNR=4.8						
	comp=Z,1.1nm,0.8s						
PETK	**Petropavlovsk-**	**57.46**	**22**	P	**P**	**20 27 25.7**	**+1.6**
	comp=Z,8.5nm,1.0s,baz=166,slow=0.6,SNR=3.5						
	comp=Z,8.5nm,1.0s						
MK31	**Makanchi Array**	**59.19**	**326**	P	**P**	**20 27 36.0**	**-0.3**
MKAR	**Makanchi Array**	**59.19**	**326**	P	**P**	**20 27 34.9**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=118,slow=7.5,SNR=11						
MKAR				LR	LR	20 55 37.0	
	comp=Z,1μm,21.2s,baz=101,slow=39						
	comp=Z,1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**62.39**	**334**	P	**P**	**20 27 57.1**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=131,slow=6.5,SNR=2.2						
	comp=Z,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**63.42**	**328**	P	**P**	**20 28 03.6**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=128,slow=6.2,SNR=9.5						
	comp=Z,1.8nm,0.7s						
KURK	**Kurchatov**	**63.42**	**328**	P	**P**	**20 28 05.6**	**+0.7**
KK31	**Karatay Array**	**64.65**	**318**	P	**P**	**20 28 12.9**	**-0.2**
KK31				IAmb	IAmb	20 28 14.8	
	comp=Z,3.2nm,1.2s						
BVAR	**Borovoye Array**	**68.99**	**327**	P	**P**	**20 28 40.0**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=108,slow=4.8,SNR=4.6						
	comp=Z,1.2nm,0.8s						
NRIK	**Noril'sk**	**72.44**	**346**	P	**P**	**20 29 01.6**	**+0.5**
	comp=Z,1.6nm,0.2s,baz=131,slow=8.0,SNR=4.0						
	comp=Z,1.6nm,0.2s						
NRIK	**Noril'sk**	**72.44**	**346**	IAmb	IAmb	20 29 24.9	
	comp=Z,3.9nm,1.1s						
AB31	**Akbulak array**	**73.67**	**321**	P	**P**	**20 29 06.7**	**-2.1**
AB31				IAmb	IAmb	20 29 23.5	
	comp=Z,2.8nm,1.4s						
ABKAR	**Akbulak array**	**73.67**	**321**	P	**P**	**20 29 07.0**	**-1.8**
VNDA	**Vanda**	**81.36**	**173**	P	**P**	**20 29 51.8**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=332,slow=5.4,SNR=5.2						
	comp=Z,0.7nm,0.8s						
VNDA	**Vanda**	**81.36**	**173**	IAmb	IAmb	20 30 04.9	
	comp=Z,2.0nm,1.1s						

*IDC **14** 20:19:35.5±0.7, 1.°52N×126.°22E, h0km, mb4.3/15, mbtmp4.2/16, ML3.9/1, Error ellipse: s-maj=52.3km s-min=13.1km az=73.0*

ISC 14 20:19:40.7±0.6,**1.°5N**±0.°1×**126.°3E**±0.°3,**h35**km,**n20, σ0s72/20, mb4.3**/15,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.52**	**182**	P	**P**	**20 24 05.0**	**-0.2**
	0.3nm,0.3s,baz=41,slow=10,SNR=2.4						
	2.7nm,0.7s						
WRA	**Warramunga Arr**	**22.75**	**160**	P	**P**	**20 24 39.0**	**-1.1**
	13nm,0.6s,baz=341,slow=11,SNR=18						
	13nm,0.6s						
ASAR	**Alice Springs**	**26.12**	**164**	P	**P**	**20 25 11.8**	**+0.2**
	4.8nm,0.6s,baz=349,slow=14,SNR=34						
	4.8nm,0.6s						
WHN	**Wuhan**	**31.00**	**340**	P	**P**	**20 25 54.0**	**-0.9**
STKA	**Stephens Creek**	**36.26**	**158**	P	**P**	**20 26 40.6**	**-0.1**
	4.4nm,0.7s,baz=326,slow=10,SNR=6.7						
	4.4nm,0.7s						
STKA	**Stephens Creek**	**36.26**	**158**	P	**P**	**20 26 40.6**	**-0.1**
MJAR	**Matsushiro Arr**	**36.54**	**16**	P	**P**	**20 26 43.5**	**+0.5**
	1.1nm,0.7s,baz=179,slow=10,SNR=2.9						
	1.1nm,0.7s						
SONM	**Songino Array**	**49.24**	**342**	P	**P**	**20 28 26.2**	**+0.3**
	1.0nm,0.7s,baz=140,slow=9.1,SNR=4.2						
	1.0nm,0.7s						
SONM	**Songino Array**	**49.24**	**342**	P	**P**	**20 28 26.2**	**+0.3**
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**20 29 37.4**	**-0.4**
	1.7nm,0.4s,baz=122,slow=7.9,SNR=21						
	1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**62.35**	**334**	P	**P**	**20 29 59.2**	**-0.4**
	0.6nm,0.3s,baz=140,slow=9.0,SNR=3.0						
	0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**20 30 05.8**	**-0.6**
	2.8nm,0.5s,baz=128,slow=6.5,SNR=15						
	2.8nm,0.5s						
BVAR	**Borovoye Array**	**68.92**	**328**	P	**P**	**20 30 42.6**	**+0.6**
	0.9nm,0.4s,baz=124,slow=6.9,SNR=8.2						
	0.9nm,0.4s						
NRIK	**Noril'sk**	**72.45**	**347**	P	**P**	**20 31 04.2**	**+1.0**
	1.8nm,0.5s,baz=119,slow=7.8,SNR=4.0						
	1.8nm,0.5s						
VNDA	**Vanda**	**81.32**	**173**	P	**P**	**20 31 53.2**	**+0.2**
	1.1nm,0.6s,baz=323,slow=8.4,SNR=7.5						
	1.1nm,0.6s						
MAW	**Mawson**	**81.56**	**200**	P	**P**	**20 31 55.5**	**+1.1**
	1.7nm,0.8s,baz=65,slow=8.6,SNR=3.6						
	1.7nm,0.8s						
BRTR	**Keskin Array B**	**91.08**	**310**	P	**P**	**20 32 42.2**	**0.0**
	0.4nm,0.7s,baz=150,slow=2.3,SNR=1.9						
	0.4nm,0.7s						
ARCES	**ARCESS Array B**	**92.35**	**340**	P	**P**	**20 32 47.5**	**+0.3**
	1.8nm,0.8s,baz=103,slow=5.4,SNR=1.8						
	1.8nm,0.8s						
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**20 32 51.9**	**-1.0**
	2.8nm,0.9s,baz=92,slow=7.4,SNR=1.7						
	2.8nm,0.9s						
PLCA	**Paso Flores**	**138.10**	**161**	PKP	**PKPdf**	**20 39 01.1**	**-1.4**
	2.3nm,0.7s,baz=178,slow=4.8,SNR=5.0						

*BJI **14** 20:19:41.0, 1.°31N×126.°26E, h15km, mB5.5/21, mb5.2/73, Ms4.9/60, Ms7 4.8/61*
*IDC **14** 20:19:43.7±0.4, 1.°65N×126.°18E, h0km, mb5.2/30, mbtmp5.2/32, ML4.6/2, MS4.3/2, Error ellipse: s-maj=17.3km s-min=10.0km az=77.0*
*MOS **14** 20:19:43.6±1.1, 1.°68N×126.°10E, h13km, mb5.6/60, MS4.9/7, Error ellipse: s-maj=8.5km s-min=4.5km az=116.1*
*NEIC **14** 20:19:44.5, 1.°99N×126.°56E, h18km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^{16}Nm; M_{rr}6.57; $M_{\theta\theta}$0.17; $M_{\phi\phi}$ -6.73; $M_{r\theta}$ -2.02; $M_{\theta\phi}$ -5.03; $M_{\phi r}$4.60; Fault plane solution: $M_0$9.73000×10^{16} NP1: ϕ_s235.76000°, δ42.06000°, λ136.52000°. NP2:ϕ_s0.91000°, δ62.55000°, λ56.79000°. Principal axes: T 9.4219, Plg58.0000°, Azm223.0000°; N 0.5948, Plg29.0000°, Azm18.0000°; P -10.0167, Plg11.0000°, Azm114.0000°;*
*NEIC **14** 20:19:44.5, 1.°79N×126.°46E, h18km*
*NEIC **14** 20:19:45.5±2.2, 1.°78N±0.°08×126.°45E±0.°06, h20km±4km, mb5.4/96, Mww5.3/6, Error ellipse: s-maj=11.6km s-min=8.3km az=208.0*
*DJA **14** 20:19:46.9±0.4, 2.°N±2.°×12.°6E±.°, h26km±3km, M5.2/107, mb5.5/107, mB5.7/72, MLv5.5/21, Mw(mB)5.2/72*
*GCMT **14** 20:19:52.5±0.4, 1.°71N±0.°03×126.°42E±0.°03, h30km, MW5.6/81, Moment Tensor Solution. s33,c38; s81,c109; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}3.63±.27; $M_{\theta\theta}$-1.09±.15; $M_{\phi\phi}$ -2.54±.16; $M_{r\theta}$0.29±.19; $M_{\theta\phi}$-1.10±.08; $M_{r\phi}$0.17±.17; Best double couple: M_o3.39700×10^{17} NP1:ϕ_s206.00000°, δ43.00000°, λ86.00000°. NP2:ϕ_s31.00000°, δ47.00000°, λ93.00000°. Principal axes: T 3.6490, Plg87.0000°, Azm344.0000°; N -0.5050, Plg2.0000°, Azm209.0000°; P -3.1440, Plg2.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 20:19:47.2±0.6,**1.°69N**±0.°03×**126.°36E**±0.°04,**h25**km±4km, **n910, σ1s59/940, mb5.4**/211,**MS4.7**/33,**33C-43D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**132**		**Pn**	**20 20 10.3**	**-0.2**
TNTI				Sg	**Sn**	**20 20 27.5**	**-0.3**
TNTI	**Ternate**	**1.36**	**132**	P	**Pb**	**20 20 11.6**	**-0.4**
TNTI	**Ternate**	**1.36**	**132**	P	**Pn**	**20 20 10.4**	**-0.2**
SGSI	**Sangihe**	**2.15**	**337**	P	**Pn**	**20 20 17.0**	**-4.6**
KMSI	**Cibinong**	**2.62**	**245**	P	**Pn**	**20 20 29.3**	**+1.3**
SANI	**Sanana**	**3.73**	**186**	P	**Pn**	**20 20 44.5**	**+1.2**
SANI	**Sanana**	**3.73**	**186**	P	**Pn**	**20 20 44.0**	**+0.7**
LUWI	**Luwuk**	**4.50**	**233**		**Pn**	**20 20 55.0**	**+1.2**
LUWI	**Luwuk**	**4.50**	**233**	P	**Pn**	**20 20 56.0**	**+2.2**
LUWI	**Luwuk**	**4.50**	**233**	P	**Pn**	**20 20 56.9**	**+3.1**
MRSI	**Marisa**	**4.58**	**255**	P	**Pn**	**20 20 53.4**	**-1.5**
NLAI	**Namlea**	**4.95**	**171**	P	**Pn**	**20 20 59.5**	**-0.5**
	3.6nm10μm482nm,0.7s						
APSI	**Ampana**	**5.37**	**241**	P	**Pn**	**20 21 06.2**	**+0.4**
DAV	**Davao City (W)**	**5.41**	**352**	Pn	**Pn**	**20 21 09.1**	**+2.8**
	59nm,0.3s,baz=199,slow=3.1,SNR=6.4						
DAV				Sn	**Sn**	**20 22 06.1**	**-1.7**

MMRI **Maumere** 11.05 202 P Pn 20 22 26.5 +2.7
MMRI **Maumere** 11.05 202 P Pn 20 22 26.0 +2.2
179nm,1.3s
EDFI **Ende, Flores** 11.36 204 P Pn 20 22 30.1 +1.9
1µm73nm,0.8s
SOEI **Soe** 11.55 190 Pn 20 22 32.0 +1.1
SOEI **Soe** 11.55 190 P Pn 20 22 35.7 +4.9
MTKI **Muara Teweh, K** 11.76 257 P Pn 20 22 35.5 +2.0
2µm127nm,1.1s
BATI **Baumata** 12.12 193 Pn Pn 20 22 42.9 +4.4
5.2nm,0.3s,baz=153,slow=1.3,SNR=34
BATI **Baumata** 12.12 193 P Pn 20 22 42.3 +3.9
2µm207nm,0.7s
BBKI **Banjar Baru** 12.60 246 P Pn 20 22 47.1 +2.1
3µm104nm,0.8s
WSI **Waingapu** 12.79 208 P Pn 20 22 50.3 +2.6
263nm,1.6s
SMPI **Sarmi** 12.88 106 P Pn 20 22 53.1 +4.3
4µm181nm,1.4s
BASI **Baing, Sumba** 13.15 206 P Pn 20 22 55.0 +2.4
4µm285nm,1.8s
WBSI **Waikabubak, Su** 13.22 212 P Pn 20 22 55.7 +2.1
2µm220nm,0.8s
PLAI **Plampang** 13.50 219 P Pn 20 23 00.0 +2.7
PLAI **Plampang** 13.50 219 P Pn 20 22 59.6 +2.3
TWSI **Taliwang, Sumb** 14.02 222 P Pn 20 23 06.5 +2.1
4µm456nm,1.1s
SBUM **Sibu** 14.15 273 P 20 23 11.1 -2.5
SBUM **Sibu** 14.15 273 P Pn 20 23 07.2 +1.0
GENI **Genyem** 14.44 107 P Pn 20 23 12.8 +2.5
GENI **Genyem** 14.44 107 P Pn 20 23 11.6 +1.3
5µm344nm,1.1s
AUDHS **Darwin High Sc** 14.72 163 P Pn 20 23 14.3 +0.3
DRS **Darwin Rock St** 14.73 162 P Pn 20 23 14.8 +0.7
SRBI **Singaraja** 14.76 229 P Pn 20 23 16.5 +2.0
2µm264nm,1.2s
JAY **Jayapura** 14.94 106 Pn P 20 23 20.1 -2.3
0.4nm,0.3s,baz=253,slow=8.2,SNR=4.3
10nm,0.6s
JAY **Jayapura** 14.94 106 P Pn 20 23 17.2 +0.2
2µm90nm,0.8s
KMMI **Kalianget** 15.11 235 P P 20 23 21.7 -2.5
3µm285nm,0.7s
DNP **Denpasar** 15.15 227 P P 20 23 22.6 -2.0
MTN **Manton Dam** 15.19 162 P Pn 20 23 19.6 -0.7
MTN **Manton Dam** 15.19 162 Pn 20 23 16.7 -3.6
ABJI **Asem Bagus** 15.33 232 P Pn 20 23 24.1 +2.0
3µm163nm,0.7s
KDU **Kakadu** 15.52 157 P Pn 20 23 20.7 -3.8
BLJI **Banyuglugur** 15.81 233 P P 20 23 31.9 -0.1
3µm270nm,0.7s
JAGI **Jajag, Banyuwa** 15.81 230 P 20 23 30.8 -1.2
JAGI IAmb IAmb 20 23 37.0
comp=Z,292nm,0.9s
JAGI **Jajag, Banyuwa** 15.81 230 P P 20 23 30.2 -1.8
JAGI **Jajag, Banyuwa** 15.81 230 P P 20 23 30.2 -1.8
comp=Z,4µmcomp=Z,355nm,1.2s
SZP **Santa** 16.80 340 P P 20 23 42.4 -0.5
MMPI **Merauke** 17.24 126 P P 20 23 47.2 -0.6
comp=Z,7µmcomp=Z,307nm,1.0s
NGJI **Ngawi** 17.37 239 P P 20 23 49.3 0.0
KNRA **Kununurra** 17.41 172 P Pn 20 23 48.3 -0.3
comp=Z,275nm,1.0s
KNRA **Kununurra** 17.41 172 P Pn 20 23 47.7 -0.9
KNRA IAmb IAmb 20 23 56.3
comp=Z,506nm,1.4s
PCJI **Pacitan** 18.04 237 P P 20 23 57.5 +0.8
comp=Z,3µmcomp=Z,196nm,0.8s
SMRI **Semarang** 18.10 241 P P 20 23 57.8 +0.4
SMRI **Semarang** 18.10 241 P P 20 23 58.6 +1.2
SMRI **Semarang** 18.10 241 P P 20 23 58.0 +0.6
comp=Z,120nm,0.9s
UGM **Wanagama** 18.45 239 P P 20 24 01.1 -0.2
UGM **Wanagama** 18.45 239 P Pn 20 24 02.4 +0.9
comp=Z,119nm,1.1s
YOGI **Yogyakarta** 18.60 239 P Pn 20 24 04.4 +1.2
TPI **Tanjungpandan** 19.21 257 P Pn 20 24 10.9 +0.2
KPJI **Karang Pucung** 19.56 243 P P 20 24 13.1 -0.3
comp=Z,2µmcomp=Z,117nm,0.6s
FITZ **Fitzroy Crossi** 19.67 182 P P 20 24 13.2 -1.4
comp=Z,5.2nm,0.3s,baz=14,slow=8.5,SNR=82
comp=Z,62nm,0.7s
FITZ **Fitzroy Crossi** 19.67 182 P 20 24 13.7 -0.8
BBJI **Bungbulang** 20.76 244 P P 20 24 26.5 -0.1
CNJI **Cibinong** 21.17 245 P P 20 24 31.1 +0.2
SKJI **Sukabumi** 21.57 246 P P 20 24 36.4 +1.2
comp=Z,226nm,1.2s
TWGBT **Beinan** 21.62 347 P P 20 24 33.6 -2.1
TWG **Pinlang** 21.63 347 P P 20 24 32.8 -3.0
GUMO **Guam** 21.80 56 P P 20 24 40.8 +3.2
comp=Z,62nm,0.7s,baz=173,slow=12,SNR=4.6
comp=Z,62nm,0.7s
TPRI **Tanjung Pinang** 21.84 268 P P 20 24 38.6 +0.5
DSRI **Dabo** 21.89 265 P P 20 24 39.4 +0.8
comp=Z,3µmcomp=Z,140nm,1.2s
YULB **Yu-li** 22.13 348 P P 20 24 36.5 -4.6
YULB **Yu-li** 22.13 348 P P 20 24 39.4 -1.7
TPUB **Ta-pu** 22.19 346 P P 20 24 40.2 -1.6
TPUB IAmb IAmb 20 24 53.4
comp=Z,190nm,0.9s
TPUB **Ta-pu** 22.19 346 P P 20 24 40.9 -0.9
BTDF **Bukit Timah Da** 22.58 269 P P 20 24 46.2 +0.1
SSLB **Suanglung** 22.59 347 P P 20 24 44.8 -1.2
COEN **Coen** 22.79 134 P P 20 24 49.4 +1.2
comp=Z,70nm,0.7s
COEN **Coen** 22.79 134 P P 20 24 45.0 -3.2
COEN **Coen** 22.79 134 P P 20 24 48.6 +0.3
NACB **Ninganchiao** 22.83 349 P P 20 24 45.4 -3.1
NACB **Ninganchiao** 22.83 349 P P 20 24 50.3 +1.8
WRAB **Tennant Creek** 22.87 160 P P 20 24 47.9 -1.1
WRAB **Tennant Creek** 22.87 160 *i* P P 20 24 48.3 -0.8
WRA **Warramunga Arr** 22.88 160 P P 20 24 48.2 -0.9
comp=Z,144nm,0.6s,baz=341,slow=11,SNR=66
WRA S S 20 28 53.1 -4.4
comp=Z,23nm,1.1s,baz=344,slow=19,SNR=6.1
comp=Z,144nm,0.6s
WRA **Warramunga Arr** 22.88 160 P P 20 24 47.7 -1.4
KASI **Kota Agung** 22.98 252 P P 20 24 49.2 -1.1
comp=Z,72nm,0.8s
MDSI **Maura Dua** 23.00 254 P P 20 24 48.4 -2.0
LWLI **Liwa** 23.25 253 P P 20 24 53.0 -0.2
comp=Z,2µmcomp=Z,285nm,0.7s
YHNB **Yeheng** 23.35 348 P P 20 24 53.8 -0.2
PMG **Port Moresby** 23.47 118 P P 20 24 51.2 -4.0
PMG **Port Moresby** 23.47 118 P P 20 24 56.7 +1.6
PMG **Port Moresby** 23.47 118 P P 20 24 56.9 +1.8
PMG **Port Moresby** 23.47 118 P P 20 24 51.2 -4.0
PMG pmax pmax
comp=Z,36nm,0.9s
LHSI **Lahat** 23.47 256 P P 20 24 55.6 +0.4
comp=Z,2µmcomp=Z,120nm,1.2s
MBWA **Marble Bar** 23.61 196 P P 20 24 55.3 -1.2
comp=Z,102nm,0.8s
MBWA **Marble Bar** 23.61 196 P P 20 24 55.1 -1.4
MBWA IAmb IAmb 20 25 00.2
comp=Z,75nm,0.8s
MBWA **Marble Bar** 23.61 196 P P 20 24 56.3 -0.2
MBWA P P 20 24 56.3 -0.2
MBWA S S 20 29 09.5 -0.2
MBWA S S 20 29 09.5 -0.2
MBWA **Marble Bar** 23.61 196 P P 20 24 56.1 -0.4
TATO **Taipei** 23.63 349 P P 20 24 55.8 -0.7
QIZ **Qiongzhong** 23.64 318 P P 20 24 56.8 0.0
QIZ IAmb IAmb 20 25 11.1
comp=Z,66nm,0.9s
QIZ **Qiongzhong** 23.64 318 P P 20 24 57.5 +0.7
QIZ pmax pmax
comp=Z,64nm,1.3s
QIZ LR LR
comp=Z,2µm,22.6s
QIZ LR LR
comp=Z,1µm,22.6s
QIZ LR LR
comp=Z,3µm,21.9s
QIZ **Qiongzhong** 23.64 318 P P 20 24 58.5 +1.7
XMI **Christmas Isla** 23.84 239 P P 20 25 00.5 +1.7
PSAC1 **Pilbara Seismi** 23.95 195 P P 20 24 58.8 -0.9
comp=Z,76nm,0.9s
PSAC2 **Pilbara Seismi** 23.95 195 P P 20 24 58.9 -0.8
comp=Z,104nm,1.0s
PSA00 **Pilbara Seismi** 23.98 195 P P 20 24 59.4 -0.6
comp=Z,86nm,0.7s
PSA00 **Pilbara Seismi** 23.98 195 P P 20 24 58.7 -1.2
PSA00 IAmb IAmb 20 25 07.7
comp=Z,52nm,0.7s
PSA00 **Pilbara Seismi** 23.98 195 P P 20 24 59.0 0.0
PSAB3 **Pilbara Seismi** 24.00 195 P P 20 24 59.6 -0.5
comp=Z,80nm,0.7s
QZH **Quanzhou** 24.31 343 *e* P P 20 25 01.3 -1.6
QZH pmax pmax
comp=Z,160nm,1.3s
QZH LR LR
comp=Z,3µm,20.6s
QZH LR LR
comp=Z,1µm,19.9s
QZH LR LR
comp=Z,2µm,21.5s
MASI **Maura Aman, Be** 24.58 259 P P 20 25 06.0 +0.3
comp=Z,4µmcomp=Z,289nm,1.3s
UBPT **Khong Chiam** 24.64 304 P P 20 25 06.2 +0.1
JOW **Kunigami** 25.07 4 P P 20 25 06.3 -3.5
JOW **Kunigami** 25.07 4 P P 20 25 11.3 +1.5
KRJI **Kerinci** 25.17 262 P P 20 25 11.3 +0.2
comp=Z,316nm,1.4s
BKNI **Bangkinang** 25.35 267 P P 20 25 13.0 +0.4
IPM **Ipoh** 25.45 277 P P 20 25 11.9 -1.5
IPM IAmb IAmb 20 25 42.9
comp=Z,258nm,1.7s
IPM **Ipoh** 25.45 277 P P 20 25 13.1 -0.4
QIS **Mount Isa** 25.64 150 P P 20 25 15.6 +0.5
comp=Z,98nm,0.8s
QIS **Mount Isa** 25.64 150 P P 20 25 16.5 +1.4
KULM **Kulim** 25.91 279 P P 20 25 16.8 -0.8
KULM IAmb IAmb 20 25 42.2
comp=Z,101nm,1.3s
KULM **Kulim** 25.91 279 P P 20 25 17.8 +0.2
PPI **Padang Panjang** 26.05 266 P P 20 25 18.9 0.0
comp=Z,1µmcomp=Z,60nm,1.0s
ASAR **Alice Springs** 26.25 164 P P 20 25 20.9 +0.2
comp=Z,58nm,0.7s,baz=350,slow=14,SNR=40
ASAR PcP PcP 20 28 47.2 +0.1
comp=Z,10nm,0.6s,baz=343,slow=2.9,SNR=7.7
ASAR S S 20 29 49.5 -2.3
comp=Z,6.5nm,0.8s,baz=347,slow=20,SNR=3.6
comp=Z,58nm,0.7s
AUALC **St Hilip's Co** 26.26 164 P P 20 25 20.6 -0.2
RABL **Rabaul** 26.44 103 P P 20 25 18.1 -4.4
RABL IAmb IAmb 20 25 28.3
comp=Z,61nm,0.6s
MTSU **Mount Surprise** 26.47 139 P P 20 25 23.1 +0.4
comp=Z,56nm,0.8s
MTSU **Mount Surprise** 26.47 139 P P 20 25 23.4 +0.8
PPSI **Pulau Pagai** 26.71 261 P P 20 25 25.0 +0.1
comp=Z,3µmcomp=Z,165nm,1.2s
MNSI **Mandailing Nat** 26.79 268 P P 20 25 25.0 -0.6
comp=Z,54nm,1.3s
GIRL **Giralia** 26.92 205 P P 20 25 27.4 +0.7
comp=Z,150nm,1.2s
GIRL **Giralia** 26.92 205 P P 20 25 26.8 +0.2
GIRL IAmb IAmb 20 25 28.6
comp=Z,110nm,0.8s
SISI **Saibi** 27.43 264 P P 20 25 30.9 -0.5
comp=Z,82nm,0.7s
RPSI **Rantau Prapat** 27.43 273 P P 20 25 29.1 -2.3
RPSI IAmb IAmb 20 25 32.6
comp=Z,72nm,1.1s
PSI **Prapat** 27.44 273 P P 20 25 30.6 -1.0
comp=Z,35nm,0.8s,baz=103,slow=5.6,SNR=25
PSI PcP PcP 20 28 50.0 -0.1
comp=Z,6.3nm,0.4s,baz=186,slow=6.6,SNR=3.6
comp=Z,35nm,0.8s
PSI **Prapat** 27.44 273 P P 20 25 30.5 -1.0
KCSI **Kotacane, Aceh** 28.61 274 P P 20 25 40.5 -1.5
comp=Z,25nm,0.8s
GSI **Gunungsitoli** 28.78 270 P 20 25 40.7 -2.7
GSI IAmb IAmb 20 25 48.4
comp=Z,111nm,1.1s
GSI **Gunungsitoli** 28.78 270 P P 20 25 42.0 -1.4
GSI **Gunungsitoli** 28.78 270 P P 20 25 41.8 -1.6
comp=Z,94nm,0.9s
TV1H **Townsville Har** 28.92 137 P P 20 25 47.1 +2.5
MEEK **Meekatharra** 29.13 194 P P 20 25 45.7 -0.7
comp=Z,76nm,0.9s
MEEK **Meekatharra** 29.13 194 P P 20 25 46.1 -0.3
CTA **Charters Tower** 29.14 139 LR LR 20 39 32.5
comp=Z,23nm,18.6s,baz=300,slow=41
CTA **Charters Tower** 29.14 139 P P 20 25 48.0 +1.5
CTAO **Charters Tower** 29.14 139 P P 20 25 42.7 -3.8
CTAO **Charters Tower** 29.14 139 P P 20 25 48.3 +1.8
CTAO **Charters Tower** 29.14 139 P P 20 25 42.7 -3.8
CTAO pmax pmax
comp=Z,32nm,0.8s
SLVN **Son La** 29.33 313 P P 20 25 47.8 -0.5
SLVN IAmb IAmb 20 26 00.2
comp=Z,84nm,1.7s
SLVN **Son La** 29.33 313 P P 20 25 48.8 +0.5
LHMI **Lhok Sumawe** 29.56 278 P P 20 25 50.1 -0.3
LHMI **Lhok Sumawe** 29.56 278 P P 20 25 49.7 -0.7
comp=Z,56nm,1.2s
SNSI **Sinbang, Aceh** 30.02 272 P P 20 25 54.0 -0.4
comp=Z,76nm,1.1s
NJ2 **Nanjing** 31.02 348 *e* P P 20 26 04.1 +1.1
NJ2 pmax pmax
comp=Z,33nm,1.3s
NJ2 LR LR
comp=Z,870nm,22.7s
NJ2 LR LR
comp=Z,950nm,17.1s
NJ2 LR LR
comp=Z,690nm,15.2s
GYA **Guiyang** 31.06 324 ⇓P P 20 26 03.6 0.0
GYA S S 20 31 07.3 -0.4
GYA pmax pmax
comp=Z,28nm,1.3s
GYA pmax pmax
comp=Z,340nm,4.2s
GYA LR LR
comp=Z,980nm,19.2s
GYA LR LR
comp=Z,640nm,13.9s
GYA LR LR
comp=Z,1µm,16.7s
JNU **Nakatsue** 31.56 7 P P 20 26 07.0 -0.8
JNU IAmb IAmb 20 26 17.5
comp=Z,60nm,1.0s
JNU **Nakatsue** 31.56 7 P P 20 26 08.4 +0.6
CMAR **Chiang Mai Arr** 31.63 304 P P 20 26 09.2 +0.5
comp=Z,3.9nm,0.8s,baz=132,slow=7.7,SNR=16
CMAR PcP PcP 20 29 01.7 +1.1
comp=Z,7.5nm,1.1s,baz=116,slow=2.9,SNR=7.0
comp=Z,3.9nm,0.8s
CMAR **Chiang Mai Arr** 31.63 304 *i* P P 20 26 09.5 +0.9
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CHTO **Chiang Mai** 31.80 304 P P 20 26 09.4 -0.7
CHTO **Chiang Mai** 31.80 304 P P 20 26 09.6 -0.6
CHTO P P 20 26 09.6 -0.6
CHTO **Chiang Mai** 31.80 304 P P 20 26 09.1 -1.0
CHTO **Chiang Mai** 31.80 304 P P 20 26 09.4 -0.7
CHTO pmax pmax
comp=Z,15nm,0.6s
MORW **Morawa** 32.14 197 P P 20 26 13.1 +0.2
comp=Z,75nm,1.3s
MORW **Morawa** 32.14 197 P 20 26 12.4 -0.5
MORW IAmb IAmb 20 26 14.6
comp=Z,54nm,0.9s
MORW **Morawa** 32.14 197 P P 20 26 12.9 0.0
FORT **Forrest** 32.33 177 P P 20 26 13.5 -1.0
comp=Z,63nm,0.7s
FORT **Forrest** 32.33 177 IAmb IAmb 20 26 20.0
comp=Z,45nm,0.7s
INKA **Innaminka** 32.37 156 P P 20 26 12.3 -2.6
KMI **Kunming** 32.59 318 P P 20 26 16.3 -0.9
KMI PcP PcP 20 29 04.8 +1.4
KMI pmax pmax
comp=Z,40nm,1.5s
KMI LR LR
comp=Z,1µm,23.6s
KMI LR LR
comp=Z,2µm,21.6s
KMI LR LR
comp=Z,3µm,21.1s
ENH **Enshi** 32.63 332 P P 20 26 16.7 -0.5
JMN **Monobe** 32.65 12 P P 20 26 18.9 +1.6
JTU **Tsushima** 32.79 5 P P 20 26 19.2 +0.7
QLP **Quilpie** 32.98 150 P P 20 26 20.4 +0.2
comp=Z,58nm,0.7s
QLP **Quilpie** 32.98 150 P P 20 26 20.5 +0.2
KMBL **Kambalda** 33.15 187 P P 20 26 21.9 +0.2
comp=Z,33nm,0.7s
BLDU **Ballidu** 33.41 195 P P 20 26 23.9 -0.1
comp=Z,86nm,1.2s
BLDU **Ballidu** 33.41 195 P P 20 26 23.9 -0.1
KLBR **Kellerberrin** 34.09 193 P P 20 26 29.6 -0.3
comp=Z,215nm,0.6s
KLBR **Kellerberrin** 34.09 193 P P 20 26 29.9 0.0
PZH **PanZhiHua** 34.18 318 P P 20 26 30.5 -0.4
PZH S S 20 31 58.3 +2.1
PZH pmax pmax
comp=Z,30nm,0.9s
PZH LR LR
comp=Z,1µm,22.1s
PZH LR LR
comp=Z,1µm,22.1s
PZH LR LR
comp=Z,2µm,22.6s
AUNRC **North Rockhamp** 34.25 138 P P 20 26 33.0 +1.6
TJN **Taejon** 34.53 1 P 20 26 34.1 +0.4
TJN **Taejon** 34.53 1 P P 20 26 35.9 +2.2
TJN **Taejon** 34.53 1 P P 20 26 34.1 +0.4
TJN pmax pmax
comp=Z,681nm,1.6s
MUN **Mundaring** 34.84 195 P P 20 26 36.4 0.0
comp=Z,72nm,0.6s
MUN **Mundaring** 34.84 195 P P 20 26 36.6 +0.2
INU **Inuyama** 34.93 15 P 20 26 38.1 +1.0
INU IAmb IAmb 20 26 53.5
comp=Z,97nm,1.2s
INU **Inuyama** 34.93 15 P P 20 26 38.4 +1.3
LYN **LuoYang** 35.17 340 P P 20 26 40.8 +1.6
LYN pmax pmax
comp=Z,52nm,1.1s
LYN LR LR
comp=Z,1µm,21.6s
LYN LR LR
comp=Z,690nm,17.2s
LYN LR LR
comp=Z,2µm,27.8s
JGF **Kuroka** 35.26 16 P 20 26 39.9 -0.1
JGF **Kuroka** 35.26 16 P P 20 26 39.9 -0.1
TIA **Tai'an** 35.40 347 P P 20 26 40.8 -0.4
TIA pmax pmax
comp=Z,23nm,1.3s
TIA LR LR
comp=Z,880nm,17.3s
TIA LR LR
comp=Z,770nm,21.5s
TIA LR LR
comp=Z,1µm,23.9s
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 42.8 +0.8
comp=Z,118nm,0.6s
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 41.8 -0.2
comp=Z,74nm,0.6s
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 41.5 -0.5
NWAO IAmb IAmb 20 26 45.3
comp=Z,45nm,0.7s
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 42.9 +0.9
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 42.5 +0.5
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 42.4 +0.5
NWAO **Narrogin (SRO)** 35.49 193 P P 20 26 41.5 -0.5
NWAO pmax pmax
comp=Z,45nm,0.7s
TNCH **TengChong** 35.50 313 ⇓ *i* P P 20 26 42.3 -0.1
TNCH pmax pmax
comp=Z,190nm,1.9s
TNCH LR LR
comp=Z,690nm,21.5s
TNCH LR LR
comp=Z,690nm,18.4s
TNCH LR LR
comp=Z,2µm,21.0s
BBOO **Buckleboo** 35.52 166 P P 20 26 41.8 -0.5
comp=Z,124nm,1.4s
BBOO **Buckleboo** 35.52 166 P 20 26 41.0 -1.2
BBOO **Buckleboo** 35.52 166 P P 20 26 42.0 -0.2
KSRS **Korea Array** 35.62 2 P P 20 26 44.5 +1.5
comp=Z,17nm,0.9s,baz=182,slow=9.9,SNR=20
comp=Z,17nm,0.9s
KS19 **Wonju Array Si** 35.67 2 P P 20 26 40.1 -3.4
EIDS **Eidsvold** 36.01 140 P P 20 26 46.7 +0.2
comp=Z,50nm,1.3s
EIDS **Eidsvold** 36.01 140 P P 20 26 46.7 +0.2
XAN **Xi'an** 36.08 335 ⇓P P 20 26 46.0 -1.1
XAN S S 20 32 28.1 +2.9
XAN pmax pmax
comp=Z,100nm,1.1s
XAN pmax pmax
comp=Z,330nm,3.9s
XAN LR LR
comp=Z,740nm,15.8s
XAN LR LR
comp=Z,750nm,24.0s
XAN LR LR
comp=Z,1µm,22.7s
CD2 **Chengdu** 36.09 326 P P 20 26 46.1 -1.2
CD2 S S 20 32 27.3 +1.9
CD2 pmax pmax
comp=Z,130nm,1.0s
CD2 LR LR
comp=Z,2µm,21.1s
CD2 LR LR
comp=Z,2µm,22.6s
WHYH **Whyalla** 36.12 164 P P 20 26 47.3 -0.1
MAJO **Matsushiro** 36.38 16 P P 20 26 45.7 -3.9
MAJO **Matsushiro** 36.38 16 P P 20 26 49.8 +0.2
MAJO **Matsushiro** 36.38 16 *ce* P P 20 26 50.3 +0.7
MAJO pmax pmax
comp=Z,107nm,2.5s
MJAR **Matsushiro Arr** 36.38 16 P P 20 26 49.5 -0.1
comp=Z,18nm,0.9s,baz=184,slow=9.4,SNR=28
comp=Z,18nm,0.9s
MJAR **Matsushiro Arr** 36.38 16 P P 20 26 46.5 -3.1
STKA **Stephens Creek** 36.38 158 P P 20 26 49.4 -0.2
comp=Z,442nm,0.7s
STKA **Stephens Creek** 36.38 158 P P 20 26 50.0 +0.4
comp=Z,74nm,0.7s,baz=331,slow=8.6,SNR=84
STKA PcP PcP 20 29 13.9 +0.1
comp=Z,13nm,0.6s,baz=310,slow=4.9,SNR=2.6
comp=Z,74nm,0.7s
STKA **Stephens Creek** 36.38 158 P P 20 26 49.0 -0.6
STKA **Stephens Creek** 36.38 158 *i* P P 20 26 49.2 -0.4
MJB9 **Matsu-Tunnel** 36.38 16 P 20 26 46.7 -2.8
AUJCS **Jamestown Cent** 36.58 163 P P 20 26 52.2 +0.9
HTT **Hallett** 36.88 162 P P 20 26 55.1 +1.1
comp=Z,26nm,1.6s
HTT **Hallett** 36.88 162 P P 20 26 55.6 +1.6
HNS **HongShan** 37.12 345 ⇓P P 20 26 55.5 -0.4
HNS PcP PcP 20 29 17.8 +1.8
HNS pmax pmax
comp=Z,40nm,1.2s
HNS LR LR
comp=Z,1µm,23.0s
HNS LR LR
comp=Z,430nm,24.5s
HNS LR LR
comp=Z,2µm,22.6s
RKGY **Rocky Gully** 37.16 193 P P 20 26 57.8 +1.6
comp=Z,214nm,0.8s
AULRC **Lightning Ridg** 37.22 148 P P 20 26 56.6 -0.2
DL2 **Dalian** 37.30 354 P P 20 26 58.6 +1.3
DL2 S S 20 32 49.0 +5.6
DL2 pmax pmax
comp=Z,230nm,1.1s
DL2 pmax pmax
comp=Z,1µm,6.3s
DL2 LR LR
comp=Z,2µm,18.8s
DL2 LR LR
comp=Z,1µm,17.5s
DL2 LR LR
comp=Z,2µm,19.1s
CMSA **Cobar Meteorol** 37.80 153 P P 20 27 02.9 +1.2
comp=Z,34nm,1.3s
CMSA **Cobar Meteorol** 37.80 153 P P 20 27 02.3 +0.6
TW1H **Toowoomba 1 Ha** 38.10 142 P P 20 27 06.7 +2.3
AUMAR **Marden Senior** 38.16 164 P P 20 27 06.7 +2.0
JMM **Marumori** 38.37 19 P P 20 27 06.7 +0.3
JMM IAmb IAmb 20 27 10.5
comp=Z,81nm,0.8s
JMM **Marumori** 38.37 19 P P 20 27 08.2 +1.8
AUMBR **Murray Bridge** 38.58 163 P P 20 27 09.0 +0.8
AUWSH **Wavell State H** 38.68 140 P P 20 27 11.5 +2.4
LKP **Lekhapani** 38.79 314 IAmb IAmb 20 27 05.6
comp=Z,118nm,0.9s
IMP **Imphal** 38.84 309 *eP* P 20 27 08.5 -2.1
IMP IAmb IAmb 20 27 23.1
comp=Z,24nm,1.2s

KOHI KOHIMA 39.18 310 *e*P P **20 27 11.8 -1.8**
KOHI IAmb IAmb 20 27 13.9
comp=Z,64nm,0.9s
MOKO MOKOCHONG 39.20 311 *e*P P **20 27 12.5 -1.2**
MOKO IAmb IAmb 20 27 15.9
comp=Z,230nm,1.8s
BJT Baijiatuau 39.26 348 P P **20 27 13.7 -0.2**
BJT IAmb IAmb 20 27 17.6
comp=Z,56nm,1.0s
BJT Baijiatuau 39.26 348 P P **20 27 14.3 +0.4**
BJT Baijiatuau 39.26 348 P P **20 27 13.7 -0.2**
BJT pmax pmax
comp=Z,56nm,1.0s
BJI Beijing 39.28 348 P P **20 27 13.9 -0.1**
BJI sP **pP** **20 27 20.8 -0.3**
BJI PP **PnPn** **20 28 48.8 +1.6**
BJI S **S** **20 33 15.0 +1.6**
BJI pmax pmax
comp=Z,31nm,1.2s
BJI pmax pmax
comp=Z,140nm,3.9s
BJI LR LR
comp=Z,290nm,19.3s
BJI LR LR
comp=Z,260nm,22.8s
BJI LR LR
comp=Z,360nm,26.7s
JORH JORHAT 39.63 312 *e*P P **20 27 15.7 -1.4**
JORH IAmb IAmb 20 27 17.7
comp=Z,132nm,1.2s
AUDCS Dubbo College 39.78 150 P P **20 27 18.9 +0.5**
ARMA Armidale 39.99 145 P P **20 27 20.8 +0.6**
ARMA IAmb IAmb 20 27 25.4
comp=Z,62nm,0.9s
SNY Shenyang 40.04 357 ⇓P P **20 27 21.4 +1.1**
SNY pmax pmax
comp=Z,130nm,1.1s
LZDM Lanzhou Array 40.05 331 P P **20 27 20.3 -0.6**
comp=Z,6.8nm,0.4s,baz=141,slow=9.6,SNR=12
LZDM PcP **PcP** **20 29 26.8 +1.2**
comp=Z,12nm,0.6s,baz=174,slow=4.2,SNR=5.2
comp=Z,6.8nm,0.4s
LZH Lanzhou 40.09 331 *e*P P **20 27 21.4 +0.4**
LZH sP pP 20 27 28.4 +0.3
LZH PcP **PcP** **20 29 27.4 +1.9**
LZH pmax pmax
comp=Z,150nm,1.1s
LZH LR LR
comp=Z,1μm,16.0s
LZH LR LR
comp=Z,1μm,16.7s
LZH LR LR
comp=Z,2μm,19.4s
AUPHS Peel High Scho 40.09 146 P P **20 27 22.1 +1.1**
ITAN ITANAGAR 40.24 312 *e*P P **20 27 22.0 -0.3**
ITAN IAmb IAmb 20 27 23.4
comp=Z,89nm,1.2s
ZIRO ZIRO 40.36 313 *e*P P **20 27 22.6 -0.8**
ZIRO IAmb IAmb 20 27 24.2
comp=Z,64nm,0.7s
TEZP TEZPUR 40.65 311 *e*P P **20 27 24.9 -0.8**
TEZP IAmb IAmb 20 27 26.6
comp=Z,121nm,1.8s
SHL Shillong 40.82 309 P P **20 27 26.2 -1.0**
SHL IAmb IAmb 20 27 29.7
comp=Z,53nm,0.8s
SHL Shillong 40.82 309 P P **20 27 26.7 -0.6**
SNR=20
SHL Shillong 40.82 309 *e*P P **20 27 26.0 -1.2**
SHL IAmb IAmb 20 27 34.1
comp=Z,36nm,0.6s
SHL Shillong 40.82 309 P P **20 27 26.2 -1.0**
SHL pmax pmax
comp=Z,53nm,0.8s
ARPS Mount Arapiles 40.88 161 P P **20 27 29.0 +1.7**
comp=Z,84nm,1.2s
JTM Tenmabayashi 41.14 17 P P **20 27 30.1 +0.7**
HHC Hu-ho-hao-te 41.22 343 ⇓*i*P P **20 27 30.4 +0.2**
HHC sP pP 20 27 37.0 -0.3
HHC pmax pmax
comp=Z,31nm,1.2s
YNG Young 41.35 152 P P **20 27 32.5 +1.2**
comp=Z,48nm,1.2s
BTO Baotou 41.47 341 *e*P P 20 27 37.6 +5.3
BTO pP sP 20 27 49.8 +7.6
BTO PP **PcP** **20 29 31.5 +1.7**
BTO S **S** **20 33 53.8 +7.4**
BTO SS **SS** **20 36 52.5 +1.1**
BTO pmax pmax
comp=Z,17nm,0.6s
BTO pmax pmax
comp=Z,280nm,4.5s
BTO LR LR
comp=N,2μm,15.7s
BTO LR LR
comp=E,1μm,13.0s
BTO LR LR
comp=Z,3μm,17.1s
VLA Vladivostok 41.55 6 *i*P P **20 27 34.8 +2.1**
VLA pmax pmax
comp=Z,50nm,1.2s
TAWA Tawang 41.87 311 *e*P P **20 27 36.1 0.0**
TAWA IAmb IAmb 20 27 38.0
comp=Z,179nm,1.5s
CN2 Changchun 41.94 359 P P **20 27 38.9 +2.9**
CN2 PcP **PcP** **20 29 32.8 +1.6**
CN2 S **S** **20 33 54.6 +1.6**
CN2 LR LR
comp=Z,660nm,17.0s
CN2 LR LR
comp=Z,860nm,17.0s
CN2 LR LR
comp=Z,1μm,19.0s
BRAT Ballarat 42.30 159 P P **20 27 40.6 +1.7**
AUMTS Mt Stromlo 42.47 152 P P **20 27 42.0 +1.5**
CAN Canberra 42.47 152 P P **20 27 41.7 +1.2**
comp=Z,87nm,1.0s
CAN Canberra 42.47 152 P P **20 27 39.1 -1.4**
CAN IAmb IAmb 20 27 46.1
comp=Z,74nm,1.0s
CAN Canberra 42.47 152 P P **20 27 41.9 +1.4**
CAN Canberra 42.47 152 P P **20 27 39.1 -1.4**
CAN pmax pmax
comp=Z,74nm,1.0s
AUDAR Daramalan Coll 42.48 152 P P **20 27 42.8 +2.3**
AUSIS Research Schoo 42.49 152 P P **20 27 43.0 +2.4**
USRK Ussuriysk Ar. 42.63 6 P P **20 27 42.5 +1.0**
comp=Z,17nm,0.7s,baz=191,slow=6.4,SNR=20
comp=Z,17nm,0.7s
CNB Canberra Magne 42.64 152 P P **20 27 44.1 +2.2**
MDJ Mudanjiang 42.84 3 P P **20 27 42.6 -0.7**
MDJ Mudanjiang 42.84 3 P P **20 27 42.8 -0.5**
MDJ pmax pmax
comp=Z,24nm,2.1s
MDJ Mudanjiang 42.84 3 P P **20 27 44.3 +1.0**
TOO Toolangi 42.89 158 P P **20 27 45.5 +1.6**
comp=Z,19nm,1.4s
TOO Toolangi 42.89 158 P **20 27 45.5 +1.6**
TOO Toolangi 42.89 158 P P **20 27 45.5 +1.6**
TOO pmax pmax
comp=Z,11nm,0.8s
H11S3 WAKE ISLAND Hy 42.91 64 T T 21 14 56.6
baz=252,slow=75,SNR=16
H11S2 WAKE ISLAND Hy 42.93 64 T T 21 14 35.1
baz=252,slow=75,SNR=14
H11S1 WAKE ISLAND Hy 42.93 64 T T 21 14 34.5
baz=252,slow=75,SNR=13
XLT XiLinHaoTe 43.02 349 *e*P P **20 27 44.6 -0.2**
XLT pmax pmax
comp=Z,22nm,0.9s
XLT LR LR
comp=Z,68nm,20.7s
XLT LR LR
comp=Z,440nm,18.0s
XLT LR LR
comp=Z,950nm,20.5s
AUSMG Snowy Mountain 43.20 154 P P **20 27 47.9 +1.5**
LSA Lhasa 43.53 313 P P **20 27 49.0 -0.7**
LSA IAmb IAmb 20 28 02.1
comp=Z,46nm,0.8s
LSA Lhasa 43.53 313 P P **20 27 46.0 -3.7**
LSA S **S** **20 34 25.6 +7.8**
LSA LR LR
comp=Z,500nm,22.6s
LSA LR LR
comp=Z,290nm,23.0s
LSA Lhasa 43.53 313 P P **20 27 49.0 -0.7**
LSA pmax pmax
comp=Z,46nm,0.8s
SANVU Saraoutou 43.82 114 P **20 27 52.3 +0.7**
SANVU Saraoutou 43.82 114 P P **20 27 54.0 +2.4**
BNX BinXian 43.88 1 ⇓P P **20 27 51.9 +0.3**
BNX pmax pmax
comp=Z,24nm,1.3s
SHBG Sahibganj 44.02 305 *e*P P **20 27 52.9 -0.3**
TEY Ternei 44.11 10⇑*e*P P **20 27 54.6 +1.2**
TEY pmax pmax
TEY comp=N,50nm,0.7s pmax pmax
comp=Z,70nm,0.7s
GTA Gaotai 44.67 330 P P **20 27 58.0 -0.2**
GTA sP sP 20 28 09.1 +0.9
GTA PcP **PP** **20 29 42.0 -0.8**
GTA ScP **ScP** **20 33 33.6 +2.1**
GTA PcS **PcS** **20 33 36.3 +2.1**
GTA ScS **SS** **20 37 53.6 -0.6**
GTA pmax pmax
comp=Z,37nm,1.2s
GTA LR LR
comp=Z,790nm,19.6s
GTA LR LR
comp=Z,690nm,20.7s
GTA LR LR
comp=Z,2μm,23.3s
BOK Bokaro 44.91 303 *e*P P **20 27 59.8 -0.5**
GOMU GeErMu 45.07 323 P P **20 28 01.9 +0.1**
GOMU S S **20 34 44.8 +5.0**
GOMU pmax pmax
comp=Z,28nm,1.1s
RAGD RAYAGADA 45.46 296 *e*P P **20 28 03.8 -1.0**
DZM Mont Dzumac 45.70 123 LR LR 20 46 48.6
comp=Z,574nm,21.8s,baz=270,slow=36
ONTNC Ouen Toro 45.81 124 P P **20 28 09.9 +2.5**
PALK Pallekele 45.83 278 P P **20 28 06.1 -1.6**
PALK IAmb IAmb 20 28 08.6
comp=Z,123nm,1.8s
PALK Pallekele 45.83 278 P P **20 28 07.0 -0.8**
PALK Pallekele 45.83 278 *i*P P **20 28 07.4 -0.4**
PALK pmax pmax
comp=Z,29nm,1.1s
GAYA Gaya 45.86 304 *e*P P **20 28 06.6 -1.2**
GAYA IAmb IAmb 20 28 08.7
comp=Z,59nm,1.2s
YATNC Mamie plateau, 46.06 123 P P **20 28 10.7 +1.3**
OUENC Ouen Island, N 46.18 124 P P **20 28 13.2 +2.9**
YSS Yuzhno-Sakhali 47.30 15 *e*P P **20 28 19.6 +1.0**
YSS pmax pmax
comp=Z,40nm,0.9s
YSS MLR MLR
comp=Z,1μm,14.0s
BLSP Bilaspur 47.54 299 *e*P P **20 28 19.4 -1.7**
BLSP IAmb IAmb 20 28 21.7
comp=Z,40nm,0.8s
HIA Hailar 47.74 354 P P **20 28 22.7 +0.6**
HIA Hailar 47.74 354 P P **20 28 23.8 +1.7**
HIA Hailar 47.74 354 P P **20 28 22.7 +0.6**
HIA pmax pmax
comp=Z,178nm,1.3s
HILR Hailar Array B 48.03 354 P P **20 28 25.9 +1.6**
comp=Z,19nm,0.6s,baz=172,slow=11,SNR=36
HILR PcP **PcP** **20 29 54.1 +2.0**
comp=Z,15nm,0.6s,baz=150,slow=5.8,SNR=5.6
comp=Z,19nm,0.6s
HEH HeiHe 48.40 1 *e*P P **20 28 27.3 +0.2**
HEH pmax pmax
comp=Z,74nm,1.4s
HEH LR LR
comp=Z,690nm,19.2s
HEH LR LR
comp=Z,800nm,19.7s
HEH LR LR
comp=Z,2μm,22.2s
SALM Salem 48.77 284 *e*P P **20 28 29.9 -0.7**
SALM IAmb IAmb 20 28 31.8
comp=Z,49nm,1.0s
ULN Ulaanbaatar 48.94 343 P P **20 28 29.0 -2.6**
ULN IAmb IAmb 20 28 33.7
comp=Z,48nm,1.1s
ULN Ulaanbaatar 48.94 343 P P **20 28 31.7 +0.1**
ULN Ulaanbaatar 48.94 343 *i*P P **20 28 31.4 -0.2**
ULN pmax pmax
comp=Z,48nm,1.1s
SONM Songino Array 49.11 342 P P **20 28 32.6 -0.2**
comp=Z,32nm,1.0s,baz=162,slow=6.7,SNR=58
SONM PcP **PcP** **20 29 56.5 +0.4**
comp=Z,9.5nm,0.8s,baz=166,slow=3.1,SNR=5.4
comp=Z,32nm,1.0s
KOD Kodaikanal 49.30 282 *e*P P **20 28 33.8 -1.2**
KOD IAmb IAmb 20 28 35.6
comp=Z,42nm,0.7s
TRD Trivandrum 49.63 280 *e*P P **20 28 36.1 -1.1**
GRNR Gornyy 49.64 8⇑*i*P P **20 28 38.0 +1.3**
GRNR pmax pmax
comp=Z,20nm,0.7s
CIT Chita 51.30 350 *e*P P **20 28 50.4 +1.2**
CIT *e* 20 28 55.4
CIT *e* 20 30 05.2
CIT *e* 20 30 45.6
CIT pmax pmax
comp=Z,303nm,1.6s
AKL Akola 51.69 295 *e*P P **20 28 50.7 -1.9**
JHNI Jhansi 51.74 301 *e*P P **20 28 50.4 -2.6**
JHNI IAmb IAmb 20 28 52.0
comp=Z,553nm,2.5s
LGTI Lohaghat 51.78 307 *e*P P **20 28 52.3 -0.9**
LGTI IAmb IAmb 20 28 58.2
comp=Z,41nm,0.8s
ZEA Zeya 51.88 1 *e*P P **20 28 53.9 +0.4**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=Z,600nm,18.0s
BHPL Bhopal 52.02 298 *e*P P **20 28 54.0 -1.1**
BHPL IAmb IAmb 20 28 56.4
comp=Z,45nm,0.8s
NRDN NARMADA NAGAR 52.09 298 *e*P P **20 28 58.2 +2.6**
NRDN IAmb IAmb 20 29 00.8
comp=Z,51nm,0.7s
ZAK Zakamensk 52.33 342 *e*P P **20 28 55.8 -1.2**
ZAK pmax pmax
comp=Z,12nm,1.3s
GUNA GUNA 52.52 300 *e*P P **20 28 57.4 -1.4**
GUNA IAmb IAmb 20 28 59.2
comp=Z,161nm,0.9s
JOSI Joshimath 52.77 308 *e*P P **20 28 59.9 -0.9**
JOSI IAmb IAmb 20 29 02.4
comp=Z,75nm,1.1s
TLY Talaya 53.35 343 P P **20 29 03.0 -1.4**
TLY Talaya 53.35 343 P P **20 29 04.7 +0.3**
TLY Talaya 53.35 343 *i*P P **20 29 04.0 -0.4**
TLY pmax pmax
comp=Z,21nm,1.0s
KAAM Kaadhehdhoo 53.37 269 P P **20 29 04.5 -0.7**
IRK Irkutsk 53.66 343 *e*P P 20 29 12.1 +5.4
IRK pmax pmax
comp=Z,59nm,2.1s
DDI Dehra Dun 53.87 307 *e*P P **20 29 07.6 -1.1**
DDI IAmb IAmb 20 29 22.5
comp=Z,76nm,0.9s
AYAN Aya Nagar 53.95 304 *e*P P **20 29 07.3 -1.9**
AYAN IAmb IAmb 20 29 09.4
comp=Z,76nm,1.0s
NPLP NPLP New Delhi 53.97 305 *e*P P **20 29 07.7 -1.7**
NPLP IAmb IAmb 20 29 11.7
comp=Z,42nm,0.5s
MOY Mondy 54.17 341 *e*P P **20 29 11.3 +0.7**
MOY pmax pmax
comp=Z,38nm,1.7s
WMQ Urumqi 54.19 326 *e*P P **20 29 11.6 +0.8**
WMQ sP pwP 20 29 20.1 0.0
WMQ S **S** **20 36 40.5 -6.1**
WMQ pmax pmax
comp=Z,53nm,1.5s
WMQ LR LR
comp=Z,930nm,18.3s
WMQ LR LR
comp=Z,1μm,18.3s
WMQ LR LR
comp=Z,1μm,23.5s
KUDL Kundal 54.36 304 *e*P P **20 29 09.6 -2.6**
KUDL IAmb IAmb 20 29 12.0
comp=Z,78nm,0.8s
MSVF Nonsavu 54.43 113 P P **20 29 15.4 +2.4**
MSVF Nonsavu 54.43 113*c e*P P **20 29 16.4 +3.4**
MSVF pmax pmax
comp=Z,62nm,1.7s
KNGR Kungurtug, Tuv 54.52 338 *i*P P **20 29 12.4 -0.7**
KNGR pmax pmax
comp=Z,36nm,1.1s
SMLA Simla 54.88 307 IAmb IAmb 20 29 19.7
comp=Z,85nm,0.8s
BHK Bhakra 55.59 308 *e*P P **20 29 20.6 -0.5**
BHK IAmb IAmb 20 29 24.8
comp=Z,77nm,0.8s
ALCI Alchi Leh 56.09 311 *e*P P **20 29 23.5 -1.6**
ALCI IAmb IAmb 20 29 28.2
comp=Z,24nm,0.6s
TSSA Tissa 56.34 309 *e*P P **20 29 24.6 -2.1**
TSSA IAmb IAmb 20 29 30.5
comp=Z,88nm,0.9s
PETK Petropavlovsk- 57.45 22 P P **20 29 35.0 +1.1**
comp=Z,13nm,0.8s,baz=191,slow=4.2,SNR=22
comp=Z,13nm,0.8s
ZSN Zaisan 58.02 328 *e*P P **20 29 37.1 -1.0**
ZSN Zaisan 58.02 328 *e*P P **20 29 37.1 -1.0**
DGZ Jazzator, Alta 58.19 331 *i*P P **20 29 38.5 -0.9**
DGZ pmax pmax
comp=Z,29nm,1.2s
SHLS Shalkode 58.69 321 *e*P P **20 29 39.9 -3.0**
comp=Z,16nm,0.8s
SHLS Shalkode 58.69 321 *e*P P **20 29 39.9 -3.0**
SHLS pmax pmax
comp=Z,16nm,0.8s
NIL Nilore 58.89 309 P P **20 29 43.1 -1.3**
NIL Nilore 58.89 309 P P **20 29 43.2 -1.3**
NIL pmax pmax
comp=Z,152nm,1.8s
MK31 Makanchi Array 59.02 326 *i*P P **20 29 44.3 -0.8**
MKAR Makanchi Array 59.02 326 P P **20 29 44.6 -0.5**
comp=Z,29nm,0.6s,baz=122,slow=8.1,SNR=47
comp=Z,29nm,0.6s
MKAR Makanchi Array 59.02 326 P P **20 29 44.4 -0.7**
TARG Taragay, Kyrgy 59.03 319 P P **20 29 44.0 -1.7**
TARG IAmb IAmb 20 30 00.2
comp=Z,40nm,1.0s
TARG Taragay, Kyrgy 59.03 319 P P **20 29 44.0 -1.7**
TARG pmax pmax
comp=Z,40nm,1.0s
JCZ Jackson Bay 59.23 146 P P **20 29 48.9 +2.2**
KSH Kashi 59.23 316 P P **20 29 46.8 0.0**
KSH pmax pmax
comp=Z,17nm,0.8s
SATY Saty 59.30 321⇑*i*P P **20 29 46.0 -1.2**
comp=Z,27nm,0.9s
SATY Saty 59.30 321*c i*P P **20 29 46.0 -1.2**
SATY pmax pmax
comp=Z,27nm,0.9s
TNSS Tian-Shan 60.22 320 *e*P P **20 29 52.3 -1.6**
TNSS Tian-Shan 60.22 320 *e*P P **20 29 52.3 -1.6**
LBZ Lake Benmore 60.22 145 P P **20 29 52.6 -0.7**
YAK Yakutsk 60.25 2 P P **20 29 53.1 -0.1**
YAK Yakutsk 60.25 2*c i*P P **20 29 53.6 +0.4**
YAK *e*S S **20 38 05.1 -0.4**
YAK *e**SS sS 20 38 28.0 +10
YAK *e*SS **SS** **20 42 01.2 -2.0**
YAK *e*SSS SSS 20 44 44.4
YAK pmax pmax
comp=Z,117nm,0.8s
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK pmax pmax
comp=N,51nm,1.1s
YAK smax smax
comp=E,173nm,2.1s
YAK smax smax
comp=N,549nm,4.2s
TDK Taldyqorghan 60.30 323 *e*P P **20 29 52.9 -1.0**
comp=N,29nm,0.9s
TDK Taldyqorghan 60.30 323 *e*P P **20 29 52.9 -1.0**
TDK pmax pmax
comp=Z,29nm,0.9s
ULHL Ulahol 60.30 319 P P **20 29 53.4 -0.9**
SNR=15
MA2 Magadan 60.76 14 *i*P P **20 29 57.7 +0.9**
MA2 pmax pmax
comp=Z,51nm,0.9s
KUU Kurty 61.02 321 *e*P P **20 29 57.8 -1.0**
comp=Z,24nm,1.3s
KUU Kurty 61.02 321 *e*P P **20 29 57.8 -1.0**
KUU pmax pmax
comp=Z,24nm,1.3s
TKM2 Tokmak 2 61.03 319 P P **20 29 58.5 -0.7**
SNR=20
BKZ Black Stump Fm 61.33 137 P P **20 29 58.5 -2.6**
BKZ Black Stump Fm 61.33 137 P P **20 30 01.3 +0.2**
KBK Karagaybulak 61.34 319 P P **20 29 58.2 -3.1**
SNR=14
UCH Uchtor 61.43 318 P P **20 30 01.9 -0.3**
SNR=23
CHMS Chumysh 61.62 319 P P **20 30 02.8 -0.2**
SNR=12
AAK Ala-Archa 61.63 319 P P **20 30 01.3 -1.8**
AAK Ala-Archa 61.63 319 P P **20 30 02.5 -0.7**
AAK Ala-Archa 61.63 319 P P **20 30 02.5 -0.7**
SNR=16
AAK Ala-Archa 61.63 319 *i*P P **20 30 02.0 -1.2**
AAK pmax pmax
comp=Z,23nm,1.3s
SGDS Sogindy 61.91 320 *e*P P **20 30 03.6 -1.3**
USP Ospenovka 61.91 319 P P **20 30 03.8 -1.1**
SNR=25
EKS2 Erkin-Say 62.11 318 P P **20 30 06.1 -0.3**
SNR=30
ZAA0 Zalesovo Array 62.24 334 P P **20 30 04.8 -2.0**
ZALV Zalesovo Beam 62.24 334 P P **20 30 05.7 -1.1**
comp=Z,12nm,0.6s,baz=120,slow=7.4,SNR=19
ZALV PKP2bc **P'P'bc** **20 59 20.1 -1.8**
comp=Z,2.7nm,1.0s,baz=264,slow=3.0,SNR=6.1
comp=Z,12nm,0.6s
KBL Kabul 62.48 308 P P **20 30 06.6 -2.5**
KBL IAmb IAmb 20 30 15.7
comp=Z,27nm,0.7s
KBL Kabul 62.48 308 P P **20 30 08.4 -0.8**
SNR=14
KBL Kabul 62.48 308 P P **20 30 06.6 -2.5**
KBL pmax pmax
comp=Z,27nm,0.7s
BTLS Baital 63.01 321⇑*i*P P **20 30 10.9 -1.3**
BTLS Baital 63.01 321*c i*P P **20 30 10.8 -1.3**
GAR Garm 63.04 314 P P **20 30 10.7 -2.0**
KURBB Kurchatov Arra 63.26 328 P P **20 30 13.3 -0.4**
comp=Z,47nm,0.8s,baz=124,slow=5.9,SNR=59
KURBB PKPPKP **P'P'df** **20 59 12.1 -0.5**
comp=Z,1.0nm,0.8s,baz=298,slow=3.8,SNR=5.5
comp=Z,47nm,0.8s
KURK Kurchatov 63.26 328 P P **20 30 13.6 -0.1**
KURK Kurchatov 63.26 328 *i*P P **20 30 12.1 -1.6**
KURK pmax pmax
comp=Z,87nm,0.8s
DZA Taraz 63.84 318 *e*P P **20 30 16.4 -1.4**
DZA Taraz 63.84 318 *e*P P **20 30 16.4 -1.4**
SEY Seymchan 64.09 13 LR LR 20 59 09.2
comp=Z,157nm,20.9s,baz=200,slow=37
SEY Seymchan 64.09 13 *i*P P **20 30 20.0 +1.1**
SEY pmax pmax
comp=Z,24nm,1.0s
IUG Iuzhnay 64.43 317⇑*i*P P **20 30 20.4 -1.3**
comp=Z,28nm,1.2s
IUG Iuzhnay 64.43 317*c i*P P **20 30 20.4 -1.3**
IUG pmax pmax
comp=Z,28nm,1.2s
KK31 Karatay Array 64.48 318 IAmb IAmb 20 30 23.3
comp=Z,43nm,1.2s
KKAR Karatay Array 64.48 318 P P **20 30 20.6 -1.3**
KKAR Karatay Array 64.48 318 P P **20 30 20.6 -1.3**
CHM Chimkent 64.79 317 *e*P P **20 30 22.8 -1.2**
CHM Chimkent 64.79 317 *e*P P **20 30 22.7 -1.2**
BRLS Boroldaу 64.90 318⇑*i*P P **20 30 23.4 -1.3**
BRLS Boroldaу 64.90 318*c i*P P **20 30 23.4 -1.3**
BRZS Berezniki 66.14 325 *e*P P **20 30 31.7 -0.8**
BRZS Berezniki 66.14 325 *e*P P **20 30 31.7 -0.8**

JLN **Jalan Bani Buh** 68.05 293 P **P** 20 30 44.3 -0.9
CASY **Casey** 68.76 187 P **P** 20 30 48.2 -0.5
CASY IAmb IAmb 20 30 52.9
comp=Z,17nm,0.9s
BVAR **Borovoye Array** 68.83 328 P **P** 20 30 48.8 -0.7
comp=Z,26nm,0.7s,baz=133,slow=10.0,SNR=36
comp=Z,26nm,0.7s
BORK **Borovoye** 68.88 328 *i* P **P** 20 30 48.4 -1.3
BORK pmax pmax
comp=Z,41nm,0.9s
WSAR **Wadi Sarin** 68.90 294 P **P** 20 30 49.8 -0.8
MHTO **MHTO** 69.24 292 P **P** 20 30 51.9 -0.8
SNR=5.5
JMDO **Jabal Madar** 69.28 293 P **P** 20 30 52.0 -0.9
SMDO **Samad** 69.41 294 P **P** 20 30 52.9 -0.9
TIXI **Tiksi** 69.88 1 P **P** 20 30 53.5 -2.1
TIXI **Tiksi** 69.88 1 *i* P **P** 20 30 54.4 -1.2
TIXI pmax pmax
comp=Z,26nm,0.5s
HOQ **Hoqain** 70.15 294 P **P** 20 30 57.1 -1.2
BSY **Bisya** 70.15 293 P **P** 20 30 57.0 -1.3
ARQ **Araqi** 70.84 294 P **P** 20 31 01.7 -0.8
SOHO **SOHO** 70.92 295 P **P** 20 31 02.6 -0.4
UOSS **Minazif** 71.32 296 P **P** 20 31 03.3 -2.1
UOSS **Minazif** 71.32 296 P **P** 20 31 04.5 -0.8
BANOM **Banah** 71.36 297 P **P** 20 31 05.3 -0.3
HATD **Hatta, Dubai** 71.37 296 P **P** 20 31 05.2 -0.5
HATD **Hatta, Dubai** 71.37 296 P **P** 20 31 04.8 -0.9
MSFE **Esma-Masafi** 71.41 296 P **P** 20 31 06.2 +0.3
MASF **Masafi** 71.41 296 P **P** 20 31 05.5 -0.4
ASHO **Ashiyiah** 71.42 295 P **P** 20 31 05.5 -0.5
BILL **Bilibino** 71.61 15 *i* P **P** 20 31 07.9 +1.7
BILL pmax pmax
comp=Z,9.0nm,1.2s
ALNE **Al Ain** 71.62 295 P **P** 20 31 06.6 -0.6
SNR=9.6
ALNE **Al Ain** 71.62 295 P **P** 20 31 06.6 -0.6
UMZA **Um Al Zommool** 72.02 293 P **P** 20 31 09.1 -0.5
ASUD **Al Ashush, Dub** 72.07 295 P **P** 20 31 09.6 -0.3
NRIK **Noril'sk** 72.31 346 P **P** 20 31 10.8 +0.4
comp=Z,39nm,0.6s,baz=129,slow=6.3,SNR=51
comp=Z,39nm,0.6s
NRIK **Noril'sk** 72.31 346 *i* P **P** 20 31 10.8 +0.4
NRIK pmax pmax
comp=Z,46nm,0.7s
AJN **Ajban** 72.37 295 P **P** 20 31 11.0 -0.6
SNR=6.1
AJN **Ajban** 72.37 295 P **P** 20 31 10.7 -0.9
DOK **Doka** 72.63 289 P **P** 20 31 12.4 -0.9
MZWR **Madinat Zayed** 73.30 294 P **P** 20 31 16.4 -0.8
ABTO **Aybut** 73.33 288 P **P** 20 31 16.6 -0.9
MZR **Muzera** 73.59 293 P **P** 20 31 18.5 -0.4
SNR=8.1
MZR **Muzera** 73.59 293 P **P** 20 31 18.3 -0.6
NIKH **Nikolski High** 73.69 35 P **P** 20 31 20.0 +1.2
baz=250
JRN **Qarnain Island** 74.35 295 P **P** 20 31 22.9 -0.4
SPIA **Saint Paul Isl** 74.44 30 P **P** 20 31 24.3 +1.2
baz=248
SLWR **Sila** 75.32 294 P **P** 20 31 28.3 -0.6
SVE **Sverdlovsk** 75.50 329 *de* P **P** 20 31 28.9 -0.4
SVE pmax pmax
comp=Z,113nm,1.2s
TRNA **Turayna** 75.81 295 P **P** 20 31 31.0 -0.7
SHMA **Al-Shehemyia** 76.13 296 P **P** 20 31 32.8 -0.7
SMRA **Abu-Samra** 76.16 295 P **P** 20 31 32.8 -0.9
ARTI **Arti** 76.54 328 *c i* P **P** 20 31 32.9 -2.3
ARTI 20 34 20.7
ARTI S **S** 20 41 18.2 -1.5
ARTI pmax pmax
comp=Z,95nm,1.3s
SBV **Sambava** 77.22 256 P **P** 20 31 40.4 +0.5
FALS **False Pass** 77.33 34 P **P** 20 31 41.4 +1.8
baz=254
M11K **Mekoryuk** 77.53 28 P **P** 20 31 42.4 +1.7
baz=251
S12K **Black Hills** 78.29 33 P **P** 20 31 46.0 +1.0
baz=255
TNA **Tin City** 78.60 23 P **P** 20 31 48.1 +1.6
baz=248
K13K **Kusilvak Mount** 78.74 27 P **P** 20 31 48.7 +1.4
baz=252
M13K **Dall Lake** 78.89 28 P **P** 20 31 49.4 +1.2
baz=253
SDPT **Sand Point** 79.09 34 P **P** 20 31 51.1 +1.7
baz=257
F14K **Arctic Creek** 79.19 23 P **P** 20 31 51.0 +1.2
baz=250
ANM **Nome** 79.27 24 P **P** 20 31 52.6 +2.4
baz=251
KBD **Kabd** 79.28 299 P **P** 20 31 50.3 -0.8
L14K **Kuka Creek** 79.47 28 P **P** 20 31 53.4 +2.0
baz=254
CHNA **Chernabura Isl** 79.47 34 P **P** 20 31 53.5 +2.0
baz=258
J14K **Nanvaranak Lak** 79.47 26 P **P** 20 31 53.5 +2.1
baz=253
N14K **Kuskokwak Cree** 79.56 29 P **P** 20 31 54.1 +2.2
baz=255
O14K **Tigyukauivet M** 79.60 30 P **P** 20 31 54.4 +2.3
baz=255
M14K **Bethel** 79.64 28 P **P** 20 31 54.6 +2.2
baz=254
S14K **Fog Glacier** 79.80 33 P **P** 20 31 55.5 +2.1
baz=257
F15K **North Star Dit** 79.93 23 P **P** 20 31 56.2 +2.4
baz=251
G15K **Niukluk** 79.95 24 P **P** 20 31 56.2 +2.3
baz=252
L15K **Ungalak Mounta** 80.11 27 P **P** 20 31 57.1 +2.2
baz=255
M15K **Kasigluk River** 80.23 29 P **P** 20 31 57.4 +1.8
baz=256
K15K **Wolf Creek Mou** 80.25 27 P **P** 20 31 57.7 +2.1
baz=255
ABPO **Ambohimpanom** 80.28 251 P **P** 20 31 55.9 -1.0
ABPO IAmb IAmb 20 32 11.9
comp=Z,27nm,0.9s
ABPO **Ambohimpanom** 80.28 251 P **P** 20 31 55.9 -1.0
ABPO pmax pmax
comp=Z,27nm,1.0s
O15K **Ungalikthiuk R** 80.30 30 P **P** 20 31 57.8 +1.9
baz=257
AKT **Akhty** 80.37 312 *e* P **P** 20 31 55.4 -1.4
AKT *e* 20 32 02.3
AKT *e* 20 34 58.9
AKT *eS* **S** 20 42 00.5 -1.1
AKT pmax pmax
comp=Z,20nm,0.8s
N15K **Kwethluk River** 80.40 29 P **P** 20 31 58.4 +1.9
baz=256
MDSM **Mandiavato** 80.47 250 P **P** 20 31 58.7 +0.8
C16K **Lisburne Hills** 80.52 21 P **P** 20 31 59.3 +2.4
baz=250
H16K **Elim** 80.58 24 P **P** 20 31 59.6 +2.2
baz=254
G16K **Koyuk River** 80.75 24 P **P** 20 32 00.3 +2.2
baz=253
J16K **Anvik River** 80.92 26 P **P** 20 32 01.4 +2.3
baz=255
RAYN **Ar Rayn** 80.94 293 P **P** 20 31 59.1 -1.1
VOI **Vohitsoka** 80.95 248 P **P** 20 31 59.1 -1.2
VOI IAmb IAmb 20 32 07.0
comp=Z,34nm,0.6s
VOI **Vohitsoka** 80.95 248 P **P** 20 31 59.9 -0.5
I17K **Unalakleet** 81.03 25 P **P** 20 32 01.9 +2.2
baz=255
L16K **Owhat River** 81.05 28 P **P** 20 32 02.2 +2.3
baz=257
N16K **Nishlik Lake** 81.11 29 P **P** 20 32 02.1 +1.9
baz=257
R16K **Pilot Point** 81.12 32 P **P** 20 32 01.1 +0.8
baz=259
M16K **Timber Creek** 81.13 28 P **P** 20 32 02.1 +1.7
baz=257
D17K **Noatak River** 81.14 21 P **P** 20 32 01.7 +1.4
baz=252,SNR=5.8
P16K **Nushagak River** 81.19 30 P **P** 20 32 01.8 +1.1
baz=258
O16K **Kokwok River B** 81.25 30 P **P** 20 32 02.6 +1.5
baz=259
RDOG **Red Dog Mine** 81.31 21 P **P** 20 32 03.2 +2.0
baz=252
C17K **DeLong Mountai** 81.34 21 P **P** 20 32 03.2 +1.9
baz=252
E17K **Hotham Inlet** 81.43 22 P **P** 20 32 03.8 +2.0
baz=254
VNDA **Vanda** 81.46 173 P **P** 20 32 01.9 +0.1
comp=Z,19nm,0.7s,baz=314,slow=6.1,SNR=58
comp=Z,19nm,0.7s
G17K **Kiwalik Mounta** 81.46 24 P **P** 20 32 03.7 +1.7
baz=255
F17K **Baldwin Pennin** 81.47 23 P **P** 20 32 03.6 +1.6
baz=254
J17K **VABM Dome** 81.61 26 P **P** 20 32 04.1 +1.2
baz=257
H17K **Granite Mounta** 81.62 24 P **P** 20 32 04.0 +1.2
baz=256
L17K **Donlin** 81.68 27 P **P** 20 32 04.9 +1.6
baz=258
MAW **Mawson** 81.72 200 P **P** 20 32 03.5 +0.2
comp=Z,18nm,0.9s,baz=82,slow=5.4,SNR=33
comp=Z,18nm,0.9s
KIRV **Kirov** 81.77 329 *i* P **P** 20 32 03.8 +0.1
R17L **Mt. Peulik Vol** 81.78 32 P **P** 20 32 04.6 +0.7
baz=260
O17K **Koliganek Bris** 81.79 30 P **P** 20 32 05.1 +1.3
baz=259
BELG **Belogornoye** 81.79 323 *i* P **P** 20 32 02.9 -1.1
BELG pmax pmax
comp=Z,25nm,1.0s
K17K **Iditarod** 81.81 27 P **P** 20 32 06.0 +2.1
baz=258
Q16K **King Salmon** 81.81 31 P **P** 20 32 05.2 +1.3
baz=260
CHIR **Chirikof Islan** 81.88 34 P **P** 20 32 05.7 +1.3
baz=261
N17K **Nushagak Hills** 81.88 29 P **P** 20 32 06.2 +1.9
baz=259
M17K **Holitna River** 81.93 28 P **P** 20 32 06.4 +1.8
baz=258
E18K **Tukpahlearik C** 81.98 22 P **P** 20 32 06.5 +1.8
baz=255,SNR=5.3
P17K **Kvichak River** 82.01 30 P **P** 20 32 06.4 +1.4
baz=260
B18K **Kokolik River** 82.08 20 P **P** 20 32 07.4 +2.1
baz=253
C18K **Utukok River** 82.09 21 P **P** 20 32 06.9 +1.6
baz=254
F18K **Selawik** 82.13 23 P **P** 20 32 07.4 +2.0
baz=256
Q17K **Contact Creek** 82.13 31 P **P** 20 32 06.6 +0.7
baz=260
H18K **Honhosa River** 82.31 24 P **P** 20 32 08.2 +1.7
baz=257
G18K **Tagagawik** 82.36 24 P **P** 20 32 08.6 +1.8
baz=257
SBA **Scott Base** 82.38 172 P **P** 20 32 05.5 -1.0
SBA IAmb IAmb 20 32 23.8
comp=Z,22nm,1.0s
SBA **Scott Base** 82.38 172 P **P** 20 32 05.6 -1.0
SBA pmax pmax
comp=Z,22nm,1.0s
L18K **Granite Mounta** 82.44 27 P **P** 20 32 08.8 +1.6
baz=259
GNI **Garni** 82.50 310 P **P** 20 32 07.3 -1.0
GNI **Garni** 82.50 310 P **P** 20 32 08.0 -0.3
GNI **Garni** 82.50 310 *i* P **P** 20 32 07.5 -0.8
GNI pmax pmax
comp=Z,24nm,0.8s
N18K **Kilae Creek** 82.54 29 P **P** 20 32 09.4 +1.6
baz=260
A19K **Wainwright** 82.56 19 P **P** 20 32 10.0 +2.3
baz=254
Q18K **Katmai Hardscr** 82.65 31 P **P** 20 32 09.7 +1.2
baz=261
P18K **Big Mountain,** 82.65 30 P **P** 20 32 10.3 +1.9
baz=261
J18K **Innoko River** 82.67 26 P **P** 20 32 10.5 +2.1
baz=259
M18K **Stony River** 82.71 28 P **P** 20 32 10.7 +2.0
baz=260
O18K **Koktuh Hills** 82.74 30 P **P** 20 32 10.3 +1.5
baz=261
C19K **Lookout Ridge** 82.77 20 P **P** 20 32 10.9 +2.0
baz=255
SII **Sitkinak Islan** 82.78 33 P **P** 20 32 10.7 +1.6
baz=262
GCSA **Galena City Sc** 82.84 25 P **P** 20 32 11.1 +1.9
baz=258
F19K **Shaleruckik Mo** 82.91 23 P **P** 20 32 11.2 +1.6
baz=257
G19K **Purcell Mounta** 83.04 23 P **P** 20 32 11.7 +1.4
baz=258
D19K **Kuna River** 83.15 21 P **P** 20 32 12.5 +1.7
baz=257
H19K **Roundabout Mou** 83.17 24 P **P** 20 32 13.3 +2.3
baz=259
J19K **Poorman** 83.24 26 P **P** 20 32 13.2 +1.9
baz=260
N19K **Bonanza Creek** 83.24 29 P **P** 20 32 13.1 +1.5
baz=261
E19K **Redstone River** 83.25 22 P **P** 20 32 13.4 +2.0
baz=258,SNR=28
L19K **White Mountain** 83.28 28 IAmb IAmb 20 32 16.0
comp=Z,58nm,1.2s
L19K **White Mountain** 83.28 28 P **P** 20 32 13.6 +2.0
baz=261
OHAK **Old Harbor** 83.36 33 P **P** 20 32 13.8 +1.8
baz=263
M19K **Big River Lodg** 83.45 28 P **P** 20 32 14.6 +2.1
baz=261
NCK **Nalchik** 83.59 313 *ce* P **P** 20 32 13.8 +0.2
P19K **Oil Pt** 83.70 30 P **P** 20 32 15.8 +2.0
baz=262
D20K **Etivluk River** 83.73 21 P **P** 20 32 15.5 +1.7
baz=258
F20K **Avaraart Lake** 83.75 23 P **P** 20 32 15.9 +2.0
baz=259
L20K **Farewell, AK** 83.78 27 P **P** 20 32 16.2 +2.0
baz=262
E20K **Nigu River** 83.80 21 P **P** 20 32 16.3 +2.1
baz=259
KDAK **Kodiak Island** 83.81 32 P **P** 20 32 15.7 +1.3
baz=263
H20K **Anotleneega Mo** 83.81 24 P **P** 20 32 15.9 +1.7
baz=260
B20K **Meade River** 83.81 20 P **P** 20 32 16.8 +2.7
baz=258
K20K **Telida** 83.82 26 P **P** 20 32 15.6 +1.2
baz=261
I20K **Naaghedeneel** 83.86 25 P **P** 20 32 16.2 +1.7
baz=261
J20K **Nowinta River** 83.91 26 P **P** 20 32 16.5 +1.8
baz=261
Q20K **Shuyak Island** 84.00 31 P **P** 20 32 16.4 +1.1
baz=263
M20K **Styx River** 84.04 28 P **P** 20 32 17.4 +1.8
baz=262
KBZ **Khabaz** 84.11 314 P **P** 20 32 16.2 0.0
comp=Z,23nm,1.1s,baz=69,slow=2.9,SNR=16
comp=Z,23nm,1.1s
KBZ **Khabaz** 84.11 314 *i* P **P** 20 32 15.7 -0.5
KBZ pmax pmax
comp=Z,25nm,1.0s
A21K **Barrow** 84.26 18 P **P** 20 32 18.0 +1.6
baz=258
KIV **Kislovodsk** 84.27 314 P **P** 20 32 16.4 -0.8
KIV IAmb IAmb 20 32 30.4
comp=Z,26nm,0.8s
KIV **Kislovodsk** 84.27 314 P **P** 20 32 17.2 0.0
KIV **Kislovodsk** 84.27 314 ⇑P **P** 20 32 19.1 +1.9
KIV **Kislovodsk** 84.27 314 *eP* **P** 20 32 15.8 -1.4
KIV pmax pmax
comp=Z,25nm,1.1s
SHA1 **Shidzhatmaz** 84.28 314 *i* P **P** 20 32 16.6 -0.8
N20K **Mont Spurr** 84.39 29 P **P** 20 32 18.1 +0.7
baz=263,SNR=9.3
SPCR **Spurr Chakacha** 84.39 29 P **P** 20 32 18.6 +1.2
baz=263,SNR=8.5
C21K **Knifeblade Rid** 84.47 21 P **P** 20 32 18.5 +1.0
baz=260
HOM **Homer** 84.50 30 P **P** 20 32 19.2 +1.3
baz=264
G21K **Allakaket** 84.53 23 P **P** 20 32 19.6 +1.7
baz=261
PPLA **Purkeypile** 84.60 27 P **P** 20 32 20.4 +1.8
baz=263
B21K **Ikpikpuk River** 84.61 20 P **P** 20 32 19.9 +1.8
baz=260
F21K **Alatna River** 84.64 23 P **P** 20 32 20.2 +1.7
baz=261
E21K **Killik River** 84.64 21 P **P** 20 32 20.2 +1.7
baz=261
CHUM **Lake Minchumin** 84.67 26 P **P** 20 32 20.7 +2.1
baz=263
SKT **Skwentna** 84.80 28 P **P** 20 32 20.3 +0.9
baz=264,SNR=5.4
CAPN **Captain Cook N** 84.86 29 P **P** 20 32 19.7 +0.1
baz=264
BRSE **Bradley Lake S** 84.96 30 P **P** 20 32 21.1 +0.8
baz=264,SNR=5.5
I21K **Tanana** 84.97 25 P **P** 20 32 21.6 +1.4
baz=263
SUA **Susitna One** 85.12 29 P **P** 20 32 22.3 +1.1
baz=264,SNR=5.7
B22K **Teshekpuk Lake** 85.13 20 P **P** 20 32 22.2 +1.4
baz=261
D22K **Ayikyak River** 85.17 21 P **P** 20 32 23.0 +1.9
baz=262
F22K **John River** 85.18 22 P **P** 20 32 22.8 +1.6
baz=263
H22K **Ishtalitna Cre** 85.30 24 P **P** 20 32 23.5 +1.6
baz=263
VRH **Novokhopyorsk** 85.33 321 *eP* **P** 20 32 20.9 -1.3
VRH pmax pmax
comp=Z,162nm,1.0s
G22K **Bettles** 85.37 23 P **P** 20 32 23.8 +1.7
baz=263
E22K **Anaktuvuk Pass** 85.39 22 P **P** 20 32 23.8 +1.6
baz=263,SNR=9.7
CUT **Chulitna** 85.44 28 P **P** 20 32 23.6 +1.1
baz=265
M22K **Willow** 85.45 28 P **P** 20 32 23.9 +1.3
baz=265,SNR=5.2
MARD **Mardin** 85.47 307 IAmb IAmb 20 32 30.3
comp=Z,28nm,0.7s
RC01 **Rabbit Creek A** 85.58 29 P **P** 20 32 24.7 +1.5
baz=265,SNR=5.4
SEW **Seward** 85.64 30 P **P** 20 32 24.0 +0.5
baz=266
LABN **Labinsk** 85.71 314 *eP* **P** 20 32 21.7 -2.6
LABN *e**PP **pP** 20 32 31.8 0.0
LABN *eS* **SKSac** 20 42 43.4 -5.0
LABN pmax pmax
comp=Z,80nm,1.2s
D23K **Nanushuk River** 85.90 21 P **P** 20 32 26.5 +1.8
baz=264
PMR **Palmer** 85.91 29 P **P** 20 32 26.0 +1.1
PMR **Palmer** 85.91 29 P **P** 20 32 25.9 +1.1
baz=266
COLD **Coldfoot** 85.91 23 P **P** 20 32 26.1 +1.3
baz=264,SNR=6.3
ERBR **Yeremizino-Bor** 85.92 316 *eP* **P** 20 32 23.1 -2.2
ERBR *e**PP **pP** 20 32 33.3 +0.5
ERBR *eS* **SKSac** 20 42 45.7 -4.0
ERBR pmax pmax
comp=Z,147nm,1.1s
G23K **Bananza Creek** 85.93 23 P **P** 20 32 26.6 +1.6
baz=265
C23K **Itkillik River** 86.02 20 P **P** 20 32 26.6 +1.4
baz=264,SNR=12
H23K **Yukon River** 86.05 24 P **P** 20 32 26.6 +1.0
baz=265
I23K **Minto, Yukon-K** 86.07 25 P **P** 20 32 26.9 +1.3
baz=265
NEA2 **Nenana** 86.15 25 P **P** 20 32 26.8 +0.8
baz=266
VSLR **Vesyoloye** 86.18 313 *i* P **P** 20 32 26.1 -0.5
VSLR pmax pmax
comp=Z,275nm,1.1s
E23K **Chandalar** 86.20 22 P **P** 20 32 28.2 +1.8
baz=265
KNK **Knik Glacier** 86.22 29 P **P** 20 32 27.3 +0.9
baz=266,SNR=6.2
PWL **Port Wells** 86.24 29 P **P** 20 32 28.1 +1.5
baz=266
WAT1 **Susitna Watana** 86.26 27 P **P** 20 32 28.2 +1.6
baz=266
TOLK **Toolik Lake Re** 86.27 21 P **P** 20 32 28.3 +1.7
baz=265
SML **Sawmill** 86.30 28 P **P** 20 32 28.2 +1.3
baz=266
SOC **Sochi** 86.41 313 *eP* **P** 20 32 25.0 -2.8
SOC *e* 20 35 43.6
SOC *ePPP* PPP 20 37 40.7
SOC *eS* **SKSac** 20 42 47.8 -5.0
SOC *eSS* **SS** 20 48 46.3 +3.8
SOC *eSSS* SSS 20 52 12.8
SOC pmax pmax
comp=Z,61nm,0.8s
SOC MLR MLR
comp=Z,253nm,19.0s
D24K **Happy Valley** 86.58 21 P **P** 20 32 29.5 +1.4
baz=266
M23K **Glacier View** 86.59 28 P **P** 20 32 29.5 +1.2
baz=267
WAT6 **Susitna Watana** 86.62 28 P **P** 20 32 29.5 +0.9
baz=267
E24K **Your Creek** 86.63 22 P **P** 20 32 29.2 +0.8
baz=266
C24K **Franklin Bluff** 86.67 20 P **P** 20 32 29.5 +1.0
baz=266
H24K **Noodor Dome** 86.73 24 P **P** 20 32 29.9 +1.0
baz=267
SCM **Sheep Creek Mo** 86.78 28 P **P** 20 32 30.5 +1.2
baz=267
DHY **Denali Highway** 86.81 27 P **P** 20 32 30.8 +1.3
baz=267
F24K **Squaw Lake** 86.82 23 P **P** 20 32 30.8 +1.5
baz=266
VORD **Divnogorie** 86.85 321 *eP* **P** 20 32 26.4 -3.3
VORD pmax pmax
comp=Z,110nm,1.1s
GLI **Glacier Island** 86.85 29 P **P** 20 32 30.9 +1.3
baz=268
VORR **Voronezh** 86.92 321 *eP* **P** 20 32 29.5 -0.5
VORR pmax pmax
comp=Z,171nm,0.9s
VSR **Storozhevoye** 86.93 321 *eP* **P** 20 32 26.8 -3.3
VSR pmax pmax
comp=Z,70nm,1.1s
KLMR **Klimovskoe** 86.99 331 *eP* **P** 20 32 27.4 -2.8
KLMR pmax pmax
comp=Z,144nm,1.4s
HDA **Harding Lake** 87.06 26 P **P** 20 32 32.3 +1.8
baz=268
ILAR **Eielson Array** 87.10 25 P **P** 20 32 30.6 -0.1
comp=Z,1.7nm,0.6s,baz=239,slow=5.0,SNR=13
comp=Z,1.7nm,0.6s
LPSR **Galich'ya Gora** 87.11 322 *eP* **P** 20 32 28.0 -2.9
LPSR pmax pmax
comp=Z,140nm,1.2s
M24K **Tolsona, Glenn** 87.33 28 P **P** 20 32 33.8 +1.8
baz=268
KLU **Klutina** 87.44 29 P **P** 20 32 34.3 +1.8
baz=269
D25K **Kavik River** 87.46 21 P **P** 20 32 33.5 +1.1
baz=268
G25K **Bearman Lake** 87.49 23 P **P** 20 32 34.0 +1.6
baz=268
K24K **Donnelly Dome** 87.55 26 P **P** 20 32 33.6 +0.7
baz=269
H25L **Birch Creek** 87.59 24 P **P** 20 32 34.9 +1.9
baz=268
PAX **Paxson** 87.67 27 P **P** 20 32 34.9 +1.3
baz=269
F25K **Christian Rive** 87.69 23 P **P** 20 32 34.4 +0.9
baz=269
E25K **Arctic Village** 87.72 22 P **P** 20 32 35.0 +1.3
baz=269,SNR=9.6
J25K **Salcha River,** 87.74 26 P **P** 20 32 34.1 +0.2
baz=269
HARP **HAARP** 87.81 28 P **P** 20 32 36.0 +1.8
baz=269
MOS **Moscow** 87.90 326 *eP* **P** 20 32 33.3 -1.4
MOS *e* 20 36 03.4
MOS *e* 20 43 15.9
MOS pmax pmax
comp=Z,74nm,0.7s
MOS MLR MLR
comp=Z,700nm,20.0s
RIDG **Independent Ri** 87.96 26 P **P** 20 32 36.8 +1.9
baz=270
C26K **Camden Bay** 87.99 20 P **P** 20 32 37.2 +2.3
baz=269
ANN **Anapa** 88.06 315 *eP* **P** 20 32 33.7 -2.0
ANN *e**PP **pP** 20 32 43.6 +0.3
ANN *eS* **SKSac** 20 42 59.1 -3.7
ANN pmax pmax
comp=Z,67nm,0.7s

BMRM	Bremner River	88.07	29	P		P		20 32 37.2	+1.7
	baz=270									
N25K	Chitina, Valde	88.07	29	P		P		20 32 37.2	+1.7
	baz=270									
F26K	Sheenjek River	88.26	22	P		P		20 32 37.9	+1.7
	baz=270									
SCRK	Sand Creek	88.34	26	P		P		20 32 38.0	+1.2
	baz=270									
KIBK	Kibwezi	88.38	268	P		P		20 32 38.3	+0.3
	SNR=25									
G26K	Porcupine Rive	88.40	23	P		P		20 32 38.3	+1.4
	baz=270									
C27K	Jago River	88.41	21	P		P		20 32 38.4	+1.6
	baz=270									
OBN	Obninsk	88.51	325	P		P		20 32 35.7	-1.8
OBN	Obninsk	88.51	325	⇑P		P		20 32 37.5	0.0
OBN	Obninsk	88.51	325	*d* *i* P		P		20 32 36.9	-0.7
OBN				*e*				20 36 04.2		
OBN				pmax	pmax					
	comp=Z,52nm,0.9s									
OBN				MLR	MLR					
	comp=Z,993nm,22.0s									
J26L	Joseph Creek	88.52	26	P		P		20 32 38.2	+0.6
	baz=271									
L26K	Log Cabin Wild	88.64	27	P		P		20 32 38.6	+0.5
	baz=271									
I26K	Coal Creek Min	88.69	25	P		P		20 32 39.0	+0.8
	baz=271									
CRQE	Cirque	88.81	29	P		P		20 32 40.8	+1.7
	baz=271									
M26K	Nabesna, AK	88.82	28	P		P		20 32 40.0	+1.0
	baz=271									
MCARA	McCarthy VSAT	88.83	29	P		P		20 32 40.6	+1.6
	baz=271									
KMBO	Kilima Mbogo	89.14	269	P		P		20 32 42.3	+0.5
	comp=Z,12nm,0.9s,baz=102,slow=5.8,SNR=37									
	comp=Z,12nm,0.9s									
K27K	Chicken	89.19	26	P		P		20 32 42.0	+1.4
	baz=272									
E27K	Coleen River	89.21	22	P		P		20 32 42.4	+1.7
	baz=272									
G27K	Doyon Strip	89.25	23	P		P		20 32 42.6	+1.7
	baz=272									
I27K	Kandik River	89.32	25	P		P		20 32 42.5	+1.2
	baz=272									
H27K	Steamboat Moun	89.33	24	P		P		20 32 42.3	+1.0
	baz=272									
L27K	Beaver Creek,	89.33	27	IAmb		IAmb		20 32 44.8		
	comp=Z,29nm,1.6s									
L27K	Beaver Creek,	89.33	27	P		P		20 32 42.4	+1.1
	baz=272									
D27M	Malcolm River	89.39	21	P		P		20 32 42.9	+1.4
	baz=273									
APA	Apatity	89.59	337	⇓*e*P		P		20 32 38.4	-4.0
APA				MLR	MLR					
	comp=Z,800nm,25.5s									
CTG	Chitna Glacier	89.66	29	P		P		20 32 43.9	+0.8
	baz=273									
BVCY	Beaver Creek	89.81	28	P		P		20 32 44.7	+1.0
	baz=273									
F28M	Old Crow	89.89	22	P		P		20 32 45.1	+1.2
	baz=274									
MMAI	Mount Meron Ar	89.89	303	P		P		20 32 45.2	+0.5
	comp=Z,20nm,0.8s,baz=79,slow=8.6,SNR=36									
	comp=Z,20nm,0.8s									
E28M	Babbage River	89.95	21	P		P		20 32 45.5	+1.4
	baz=274									
I28M	Miner Creek	90.03	25	P		P		20 32 46.0	+1.4
	baz=274									
YUK3	Moose Creek	90.04	28	P		P		20 32 45.9	+1.0
	baz=273									
D28M	Stokes Point	90.17	21	P		P		20 32 46.6	+1.5
	baz=275									
O28M	Mount Upton	90.23	29	P		P		20 32 46.8	+0.9
	baz=274									
PINM	Pinnacle	90.25	30	P		P		20 32 46.8	+1.0
	baz=274									
DAWY	Dawson	90.36	26	P		P		20 32 47.0	+0.8
	baz=274									
SYO	Syowa Base	90.40	201	⇓*e*P		P		20 32 45.6	-0.5
SYO	Syowa Base	90.40	201	⇑*e*PcP		P		20 32 46.3	+0.2
SYO	Syowa Base	90.40	201	⇓*es*P		sP		20 32 55.8	-0.7
SYO	Syowa Base	90.40	201	⇑*e*PzP				20 32 49.0		
SYO	Syowa Base	90.40	201	⇑*e*pP		pP		20 32 51.6	-2.2
YUK8	Steele Glacier	90.40	29	P		P		20 32 46.6	-0.1
	baz=274									
SIM	Simferopol'	90.41	315	*e*P		P		20 32 46.2	-0.6
SIM				pmax	pmax					
	comp=Z,29nm,0.7s									
E29M	Blow River	90.57	22	P		P		20 32 48.3	+1.3
	baz=276									
H29M	Whitestone	90.60	24	P		P		20 32 48.2	+0.9
	baz=275									
G29M	Pine Creek	90.67	23	P		P		20 32 48.4	+0.8
	baz=276									
KIRS	Kirsehir-Merke	90.85	309	⇓P		P		20 32 48.4	-0.7
M29M	Somme Creek	90.92	28	P		P		20 32 49.9	+1.0
	baz=275									
YUK4	Talbot Arm	90.94	29	P		P		20 32 49.9	+0.8
	baz=275									
L29M	L29M	91.01	27	P		P		20 32 50.6	+1.3
	baz=276									
BR131	Keskin Array S	91.03	310	IAmb		IAmb		20 33 02.8		
	comp=Z,9.5nm,0.8s									
BR131	Keskin Array S	91.03	310	P		P		20 32 48.9	-1.1
	SNR=6.2									
BRTR	Keskin Array B	91.03	310	P		P		20 32 48.5	-1.4
	comp=Z,10nm,1.1s,baz=108,slow=3.7,SNR=23									
BRTR				PP		PP		20 36 24.9	-1.6
	comp=Z,2.6nm,1.1s,baz=109,slow=8.3,SNR=4.8									
	comp=Z,10nm,1.1s									
BRTR	Keskin Array B	91.03	310			P		20 32 48.1	-1.9
BRTR	Keskin Array B	91.03	310	*i* P		P		20 32 48.5	-1.4
BRTR				pmax	pmax					
	comp=Z,7.0nm,1.0s									
O29M	Mount Kennedy	91.07	30	P		P		20 32 50.7	+1.0
	baz=275									
YUK6	Outpost Mounta	91.11	29	P		P		20 32 50.2	+0.2
	baz=275									
K29M	Barlow Dome	91.20	26	P		P		20 32 51.5	+1.3
	baz=276									
EPYK	Eagle Plains	91.25	24	P		P		20 32 51.4	+1.1
	baz=277									
G30M	tAoh Zrail Nji	91.37	23	P		P		20 32 52.0	+1.2
	baz=277									
F30M	Barrier River	91.45	22	P		P		20 32 52.4	+1.3
	baz=278									
I30M	Mount Dempster	91.53	25	P		P		20 32 53.0	+1.3
	baz=277									
HYT	Haines Junctio	91.54	29	P		P		20 32 53.0	+1.1
	baz=276									
P29M	Windy Craggy	91.55	30	P		P		20 32 52.4	+0.7
	baz=276									
QSPA	South Pole Qui	91.61	180	P		P		20 32 55.1	+3.1
	comp=Z,8.5nm,0.7s,baz=312,slow=1.4,SNR=23									
J30M	Hart River	91.64	25	P		P		20 32 53.4	+1.2
	baz=277									
N30M	Aishikik Lake	91.67	29	P		P		20 32 53.4	+1.0
	baz=276									
ANTO	Ankara	91.67	310	P		P		20 32 51.4	-1.4
ANTO				IAmb		IAmb		20 32 53.5		
	comp=Z,31nm,1.3s									
ANTO	Ankara	91.67	310	P		P		20 32 51.4	-1.4
ANTO				pmax	pmax					
	comp=Z,31nm,1.3s									
M30M	Minto, Yukon	91.68	27	P		P		20 32 53.2	+0.9
	baz=277									
G31M	Satah River	92.14	23	P		P		20 32 55.0	+0.8
	baz=279									
INK	Inuvik	92.19	21	P		P		20 32 55.0	+0.6
	baz=280									
ARCES	ARCESS Array B	92.23	340	P		P		20 32 53.9	-0.8
	comp=Z,12nm,0.9s,baz=50,slow=3.8,SNR=3.9									
ARCES				PKKP		PKKPdf		20 50 09.3	-0.5
	comp=Z,1.4nm,0.8s,baz=252,slow=2.9,SNR=6.2									
	comp=Z,12nm,0.9s									
ARCES	ARCESS Array B	92.23	340			P		20 32 52.9	-1.8
ARCES	ARCESS Array B	92.23	340	P		P		20 32 52.9	-1.8
ARCES				pmax	pmax					
	comp=Z,52nm,1.5s									
O30N	Mendenhall	92.23	29	P		P		20 32 55.1	+0.2
	baz=277									
F31M	Tsiigehtchic	92.25	22	P		P		20 32 53.0	-1.8
F31M	Tsiigehtchic	92.25	22	P		P		20 32 55.6	+0.8
	baz=280									
PLBC	Pleasant Camp	92.27	30	P		P		20 32 55.4	+0.4
	baz=277									
H31M	Peel River	92.29	24	P		P		20 32 55.6	+0.5
	baz=279									
N31M	Braeburn, Yuko	92.29	28	P		P		20 32 55.9	+0.7
	baz=278									
SPA0	Spitsbergen Ar	92.40	349	*e*P		P		20 32 55.1	-0.2
SPITS	Spitsbergen Ar	92.40	349	P		P		20 32 55.1	-0.2
	comp=Z,13nm,0.7s,baz=102,slow=8.0,SNR=9.7									
	comp=Z,13nm,0.7s									
SPITS	Spitsbergen Ar	92.40	349	P		P		20 32 52.9	-2.4
SPITS				pmax	pmax					
	comp=Z,23nm,0.9s									
HAMF	Hammerfest	92.61	341	*e*P		P		20 32 55.1	-1.3
SKAG	Skagway	92.79	30	P		P		20 32 58.3	+0.9
	baz=278									
M31M	Drury Creek, Y	92.84	28	P		P		20 32 59.0	+1.3
	baz=279									
WHY	Whitehorse	92.84	29	P		P		20 32 58.5	+0.7
	baz=278									
KBS	Kingsbay	92.94	350	*i* P		P		20 32 57.5	-0.2
BJO1	Bjornoya	92.98	345	*e*P		P		20 32 57.7	-0.4
SAHE	Sakarya_HENDEK	93.08	311	⇓P		P		20 32 57.1	-2.1
KTK1	Kautokeino	93.12	339	*e*P		P		20 32 58.1	-0.7
SIT	Sitka	93.12	33	P		P		20 32 59.9	+0.9
	baz=278									
AKASG	Malin Array Be	93.23	321	P		P		20 32 59.0	-0.6
	comp=Z,3.5nm,0.6s,baz=75,slow=4.2,SNR=16									
	comp=Z,3.5nm,0.6s									
AKASG	Malin Array Be	93.23	321	P		P		20 32 58.0	-1.7
AKASG				IAmb		IAmb		20 33 13.6		
	comp=Z,23nm,1.4s									
AKASG	Malin Array Be	93.23	321	*i* P		P		20 32 58.5	-1.2
AKASG				pmax	pmax					
	comp=Z,5.0nm,0.6s									
AKBB	Malin Array Si	93.23	321	IAmb		IAmb		20 33 13.3		
	comp=Z,36nm,1.5s									
KIEV	Kiev	93.24	321	P		P		20 32 58.5	-1.2
KIEV				IAmb		IAmb		20 33 13.3		
	comp=Z,29nm,1.4s									
KIEV	Kiev	93.24	321	⇓P		P		20 32 59.6	-0.1
KIEV	Kiev	93.24	321	⇓P		P		20 32 59.6	-0.1
R32K	Eaglecrest	93.38	32	P		P		20 33 01.3	+1.1
	baz=278									
FINES	FINESS Array B	93.45	332	P		P		20 32 59.1	-1.3
	comp=Z,5.1nm,0.7s,baz=66,slow=3.6,SNR=8.8									
	comp=Z,5.1nm,0.7s									
BORA	Eskisehir	93.47	310	IAmb		IAmb		20 33 00.7		
	comp=Z,21nm,1.2s									
S32K	Killisnoo	93.47	32	P		P		20 33 01.4	+0.9
	baz=278									
MNK	Minsk	93.57	325	*i* P		P		20 33 00.4	-0.7
MNK				*i*				20 36 44.7		
MNK				*i* PPP		PPP		20 38 45.4		
MNK				*i* S		SKSac		20 43 31.9	-2.2
MNK				*i* SS		SS		20 50 25.0	-0.4
MNK				*i* SSS		SSS		20 54 06.7		
MNK				pmax	pmax					
	comp=Z,34nm,0.9s									
MNK				pmax	pmax					
	comp=N,16nm,1.0s									
MNK				pmax	pmax					
	comp=E,18nm,0.9s									
MNK				MLR	MLR					
	comp=Z,707nm,22.0s									
MNK				MLR	MLR					
	comp=N,532nm,23.0s									
MNK				MLR	MLR					
	comp=E,424nm,23.0s									
P32M	Atlin	93.58	30	P		P		20 33 01.8	+0.6
	baz=279									
P33M	Teslin, Yukon	93.92	29	P		P		20 33 03.5	+0.8
	baz=280									
MILM	Milestii Mici	93.94	317	⇓P		P		20 33 00.7	-2.3
MILM	Milestii Mici	93.94	317	⇓P		P		20 33 00.7	-2.3
JETT	Jettan, Norway	93.97	340	*e*P		P		20 33 00.3	-2.4
A36M	Sachs Harbour	94.03	17	P		P		20 33 03.7	+0.8
	baz=288									
SORM	Soroca	94.11	318	⇓P		P		20 33 02.6	-1.1
SORM	Soroca	94.11	318	⇓P		P		20 33 02.6	-1.1
NACGM	Naroch	94.14	325	⇓*i* P		P		20 33 03.1	-0.7
	comp=Z,36nm,1.0s,baz=81									
TRO	Tromso	94.44	340	*e*P		P		20 33 04.0	-0.8
U33K	Whale Pass	94.47	34	P		P		20 33 05.3	+0.1
	baz=280									
VLDR	Vladesti	94.57	316	⇓P		P		20 33 06.9	+0.9
CRAG	Craig	94.58	34	P		P		20 33 06.5	+0.7
	baz=280									
R33M	Jennings River	95.00	30	P		P		20 33 08.1	+0.3
	baz=282									
MANT	Manisa	95.07	309	IAmb		IAmb		20 33 09.2		
	comp=Z,16nm,1.0s									
NOR	Nord	95.08	355	*i* P		P		20 33 07.4	-0.2
NOR				IAmb		IAmb		20 33 08.7		
	comp=Z,19nm,1.0s									
C36M	Paulatuk	95.25	20	P		P		20 33 09.2	+0.7
	baz=289									
TESR	Tescani	95.47	317	⇓P		P		20 33 09.6	-0.4
VRI	Vrincioaia	95.51	316	⇑P		P		20 33 10.7	+0.4
VRI	Vrincioaia	95.51	316	⇑P		P		20 33 10.7	+0.4
PLOR	Plostina	95.56	316	⇓P		P		20 33 10.3	-0.2
PLOR	Plostina	95.56	316	⇓P		P		20 33 10.3	-0.2
ONER	Baraj Valea Uz	95.67	317	⇓P		P		20 33 11.0	0.0
NEHR	Nehoiu	95.87	316	⇑P		P		20 33 12.2	+0.3
COVR	Voineasa-Covas	95.87	316	⇓P		P		20 33 11.9	-0.1
WTLY	Watson Lake, Y	95.91	29	P		P		20 33 12.7	+0.9
	baz=284									
TURR	Turia	95.97	316	⇓P		P		20 33 13.5	+1.1
MLR	Muntele Rosu	96.10	316	⇑P		P		20 33 13.1	0.0
MLR	Muntele Rosu	96.10	316	⇑P		P		20 33 13.1	0.0
STEI	Steigen	96.26	339	*e*P		P		20 33 12.4	-0.8
BURAR	Bucovina Array	96.27	318	⇓P		P		20 33 13.9	+0.1
BURAR	Bucovina Array	96.27	318	⇓P		P		20 33 13.9	+0.1
BUR08	Bucovina Ar. S	96.27	318	P		P		20 33 13.0	-0.9
SUW	Suwalki	96.37	325	*e*P		P		20 33 14.0	0.0
FAUS	Fauske	96.43	339	*e*P		P		20 33 12.6	-1.4
EZN	Ezine	96.63	310	⇓P		P		20 33 14.5	-1.0
EZN	Ezine	96.63	310	⇓P		P		20 33 14.5	-1.0
LOF	Lofoten	96.78	340	*e*P		P		20 33 14.2	-1.4
ARR	Arges	97.03	316	⇓P		P		20 33 16.5	-0.8
RDO	Rodhopi	97.04	312	IAmb		IAmb		20 33 29.8		
	comp=Z,12nm,1.0s									
MOR8	Moi Rana	97.17	338	*e*P		Pdif		20 33 18.5	+1.0
VAGH	Vaagaholmen	97.41	338	*e*P		Pdif		20 33 21.4	+3.0
CJR	Cluj-Napoca	97.51	317	⇑P		Pdif		20 33 20.1	+0.7
CJR	Cluj-Napoca	97.51	317	⇑P		Pdif		20 33 20.1	+0.6
LOT	Lotru	97.62	316	⇓P		P		20 33 19.7	-0.3
STOK	Stokkvaagen	97.65	338	*e*P		Pdif		20 33 20.9	+1.4
MARR	Marisel-Cluj	97.84	317	⇑P		Pdif		20 33 22.6	+1.6
DRGR		98.10	318	⇑P		P		20 33 21.4	-0.7
DRGR		98.10	318	⇑P		P		20 33 21.4	-0.7
KOTAN	Kotaneelee Air	98.19	28	P		Pdif		20 33 22.7	+0.7
	baz=288									
HERR	Herculane	98.67	316	⇓P		P		20 33 24.2	-0.4
BLKB	Belogradchik	98.72	314	⇑P		P		20 33 23.9	-1.0
SIRR	Siria	98.91	317	⇓P		P		20 33 25.4	-0.2
BZS	Buzias	99.07	317	⇓P		Pdif		20 33 25.7	-0.7
BZS	Buzias	99.07	317	⇓P		Pdif		20 33 25.7	-0.7
MDVR	Moldovita	99.18	316	⇑P		Pdif		20 33 26.8	-0.1
DAG	Danmarks Havn	99.22	352	*i* P		Pdif		20 33 25.5	-0.8
DAG				IAmb		IAmb		20 33 26.4		
	comp=Z,17nm,0.8s									
VAY	Valandovo	99.22	312	*i* P		Pdif		20 33 25.0	-2.1
BOVS	Bovan	99.41	315	⇑P		Pdif		20 33 27.5	-0.4
NVL	N'lazarevskaya	99.50	198	*e*P		Pdif		20 33 26.5	-1.2
NVL				*e*				20 37 30.3		
NVL				*e*PPP		PPP		20 39 36.8		
NVL				*e*S		SKSac		20 44 04.0	-0.3
NVL				*e*SS		SS		20 51 52.0	+3.5
NVL				*e*SSS		SSS		20 55 41.1		
NVL				pmax	pmax					
	comp=Z,7.0nm,0.6s									
NVL				smax	smax					
	comp=E,282nm,14.4s									
NVL				MLR	MLR					
	comp=Z,61nm,18.0s									
HFS	Hagfors	99.64	332	P		Pdif		20 33 27.0	-1.5
	comp=Z,1.7nm,0.5s,baz=101,slow=6.2,SNR=12									
	comp=Z,1.7nm,0.5s									
HFS	Hagfors	99.64	332	P		Pdif		20 33 27.0	-1.5
NB2	NORSAR Subarra	100.44	333	P		Pdif		20 33 30.5	-1.6
	comp=Z,16nm,1.7s,baz=70,slow=4.3									
NB2				PKKP		PKKPbc		20 49 48.1	-2.2
	comp=Z,0.6nm,0.6s,baz=235,slow=2.5									
NOA	NORSAR Array B	100.44	333	P		Pdif		20 33 30.3	-1.9
	comp=Z,1.4nm,0.7s,baz=69,slow=4.4,SNR=6.6									
NOA				PKKPbc		PKKPbc		20 49 48.2	-2.0
	comp=Z,0.8nm,0.7s,baz=240,slow=2.2,SNR=6.2									
MORC	Moravsky Berou	100.76	321	⇓P		Pdif		20 33 36.8	+3.0
MORC	Moravsky Berou	100.76	321	*e*PDIFF		Pdif		20 33 35.8	+1.9
MORC	Moravsky Berou	100.76	321	⇓P		Pdif		20 33 36.8	+3.0
JAVC	Velka Javorina	100.93	320	*e*PDIFF		Pdif		20 33 36.3	+1.7
NEEM	North Greenlan	100.95	359	*i* P		Pdif		20 33 35.1	+0.6
NEEM				IAmb		IAmb		20 33 36.0		
	comp=Z,11nm,0.8s									
DBG	Daneborg	101.47	351	*i* P		Pdif		20 33 36.1	-0.3
DBG				IAmb		IAmb		20 33 37.0		
	comp=Z,19nm,1.1s									
VRAC	Vranov	101.49	321	*e*PDIFF		Pdif		20 33 38.4	+1.4
YKA	Yellowknife Ar	101.50	24	P		Pdif		20 33 37.1	+0.4
	comp=Z,1.1nm,0.8s,baz=284,slow=4.3,SNR=4.0									
KRUC	Moravsky	101.68	321	*e*PDIFF		Pdif		20 33 38.9	+1.0
SNAA	Sanae	103.16	195	⇓P		Pdif		20 33 44.7	+0.7
	comp=Z,17nm,0.5s									
SNAA	Sanae	103.16	195	Pdiff		Pdif		20 33 44.1	+0.1
	comp=Z,0.7nm,0.5s,baz=195,slow=5.1,SNR=8.8									
GERES	GERESS Array B	103.44	321	Pdiff		Pdif		20 33 47.1	+1.3
	comp=Z,0.8nm,0.8s,baz=75,slow=5.7,SNR=5.2									
GERES				PP		PP		20 38 00.1	-1.4
	comp=Z,0.6nm,0.5s,baz=52,slow=7.4,SNR=4.0									
VNA2	Neumayer--Watz	104.77	194	⇓P		Pdif		20 33 55.1	+3.9
	comp=Z,0.9nm,0.6s,baz=123,slow=4.8									
VNA3	Neumayer Olymp	105.09	193	⇓P		Pdif		20 33 54.4	+1.8
	comp=Z,1.8nm,0.8s									
NVAR	Mina Array Bea	108.53	48	PKKPbc		PKKPbc		20 49 25.2	-0.2
	comp=Z,1.0nm,0.9s,baz=158,slow=4.8,SNR=4.4									
EKA	Eskdalemuir Ar	109.84	332	PKKPbc		PKKPbc		20 49 19.9	-1.6
	comp=Z,1.7nm,0.7s,baz=241,slow=2.8,SNR=3.5									
PDAR	Pinedale Array	113.12	42	PKiKP		PKiKP		20 38 24.4	+1.2
	comp=Z,0.6nm,0.6s,baz=130,slow=0.5,SNR=6.0									
PDAR				PKKPbc		PKKPbc		20 49 09.4	-1.1
	comp=Z,1.0nm,0.6s,baz=114,slow=4.9,SNR=10									
ESDC	Sonseca Array	118.73	318	PKP		PKiKP		20 38 34.5	+0.7
	comp=Z,1.2nm,0.9s,baz=21,slow=2.6,SNR=5.1									
SCHQ	Schefferville	122.63	9	PKP		PKiKP		20 38 41.3	+0.4
	comp=Z,4.7nm,0.6s,baz=17,slow=4.3,SNR=4.4									
TXAR	Lajitas Array	123.13	53	PKP		PKiKP		20 38 43.5	+0.7
	comp=Z,1.9nm,0.8s,baz=266,slow=1.4,SNR=12									
TXAR				PKKPab		PKKPbc		20 48 34.5	+0.6
	comp=Z,0.9nm,0.9s,baz=116,slow=8.5,SNR=6.0									
TORD	Torodi Ar. Bea	123.18	287	PKP		PKiKP		20 38 43.3	+0.1
	comp=Z,10nm,0.7s,baz=65,slow=3.5,SNR=12									
DBIC	Dimbokro	130.60	280	PKP		PKiKP		20 38 57.7	-0.3
	comp=Z,16nm,0.7s,baz=101,slow=1.8,SNR=22									
S54A	Dingess, Becki	133.11	30			PKPdf		20 38 59.8	-1.5
PLCA	Paso Flores	138.22	161	PKP		PKPdf		20 39 11.7	+0.9
	comp=Z,6.6nm,0.7s,baz=213,slow=2.9,SNR=12									
PLCA	Paso Flores	138.22	161	*e*P		PKPdf		20 39 09.1	-1.7
BI02	San Fabin de	141.57	157			PKPdf		20 39 12.9	-4.1
TRQA	Tornquist	143.00	169			PKPbc		20 39 16.2	0.0
TRQA	Tornquist	143.00	169	PKiKP		PKPbc		20 39 16.2	+0.1
BO01	Tunca	143.61	155			PKPbc		20 39 17.9	0.0
AC05	El Transito	148.68	151			PKPbc		20 39 32.0	-1.2
CHIV	Chivirico	148.97	45			PKPdf		20 39 31.3	+1.3
NMDO	Nuevo Mundo	149.57	42			PKPbc		20 39 35.0	-0.5
PLTB	Pedras Altas	150.08	180			PKiKP		20 39 37.1	-0.3
AC02	Maricunga	150.91	151			PKPbc		20 39 39.0	-0.2
CPUP	Villa Florida	155.24	172	PKPbc		PKPbc		20 39 48.8		
	comp=Z,1.7nm,0.8s,baz=70,slow=4.3,SNR=9.2									
CPUP				PKPab		PKPab		20 40 04.1	+0.2
	comp=Z,3.1nm,0.7s,baz=37,slow=1.8,SNR=10									
ROSC	El Rosal	158.35	72	PKP		PKPdf		20 39 45.0	+0.9
	comp=Z,7.1nm,0.3s,baz=214,slow=17,SNR=3.6									
ROSC	El Rosal	158.35	72	PKiKP		PKPdf		20 39 45.0	+0.9
LPAZ	La Paz	159.65	136	PKP		PKPdf		20 39 47.1	+1.4
	comp=Z,2.9nm,0.7s,baz=215,slow=2.1,SNR=11									
LPAZ	La Paz	159.65	136	*e*P		PKPdf		20 39 43.1	-2.7
SDV	Santo Domingo	160.07	58	*e*P		PKPdf		20 39 44.2	-1.6
BDFB	Brasilia	165.06	202	PKPab		PKPab		20 40 46.8	-0.2
	comp=Z,5.1nm,0.8s,baz=74,slow=6.1,SNR=4.4									
TEFE	Tefe	168.87	100	*e*P		PKPdf		20 39 51.7	-1.6
BOAV	Boa Vista	172.01	60	*e*P		PKPdf		20 39 54.4	-0.7
MACA	Manacapuru-AM	172.81	102	*e*P		PKPdf		20 39 52.6	-2.8

IDC

MBWA	**Marble Bar**	**23.37 195**	P	**P**	**20 28 45.1**	**+0.2**
MBWA			IAmb	IAmb	20 28 46.5	
	comp=Z,11nm,0.8s					
PSA00	**Pilbara Seismi**	**23.74 195**	P	**P**	**20 28 49.2**	**+0.8**
PSA00			IAmb	IAmb	20 29 22.5	
	comp=Z,10nm,0.8s					
ASAR	**Alice Springs**	**26.10 164**	P	**P**	**20 29 11.7**	**+1.7**
	comp=Z,5.2nm,0.5s,baz=344,slow=11,SNR=8.2					
	comp=Z,5.2nm,0.5s					
BBOO	**Buckleboo**	**35.36 166**	P	**P**	**20 30 30.1**	**-1.4**
BBOO			IAmb	IAmb	20 31 02.3	
	comp=Z,8.5nm,0.9s					
EIDS	**Eidsvold**	**35.96 140**	P	**P**	**20 30 36.8**	**-0.1**
EIDS			IAmb	IAmb	20 30 38.0	
	comp=Z,6.0nm,0.9s					
ARMA	**Armidale**	**39.93 145**	P	**P**	**20 31 11.0**	**+0.7**
SONM	**Songino Array**	**49.25 342**	P	**P**	**20 32 26.0**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=154,slow=7.0,SNR=2.9					
	comp=Z,2.0nm,0.8s					
SONM	**Songino Array**	**49.25 342**	P	**P**	**20 32 26.0**	**+1.4**
MKAR	**Makanchi Array**	**59.10 326**	P	**P**	**20 33 36.0**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=119,slow=8.4,SNR=6.3					
	comp=Z,2.6nm,0.5s					
MAKZ	**Makanchi**	**59.28 326**	P	**P**	**20 33 37.3**	**-0.2**
MAKZ			IAmb	IAmb	20 33 40.1	
	comp=Z,4.9nm,0.9s					
KDJ	**Kajisay**	**59.67 319**	P	**P**	**20 33 40.9**	**+0.4**
KDJ			IAmb	IAmb	20 34 02.7	
	comp=Z,4.7nm,1.0s					
ZALV	**Zalesovo Beam**	**62.34 334**	P	**P**	**20 33 57.1**	**-1.0**
KURBB	**Kurchatov Arra**	**63.34 328**	P	**P**	**20 34 04.3**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=126,slow=6.3,SNR=4.2					
	comp=Z,4.1nm,0.7s					
KURK	**Kurchatov**	**63.34 328**	P	**P**	**20 34 04.3**	**-0.5**
KURK	**Kurchatov**	**63.34 328**	IAmb	IAmb	20 34 07.5	
	comp=Z,8.1nm,0.8s					
KKAR	**Karatay Array**	**64.51 318**	P	**P**	**20 34 11.6**	**-1.1**
BVAR	**Borovoye Array**	**68.91 328**	P	**P**	**20 34 41.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=124,slow=7.7,SNR=4.0					
	comp=Z,1.9nm,0.7s					
TIXI	**Tiksi**	**70.08 1**	P	**P**	**20 34 48.1**	**+0.7**
TIXI			IAmb	IAmb	20 35 04.7	
	comp=Z,3.0nm,0.8s					
AB31	**Akbulak array**	**73.55 321**	P	**P**	**20 35 08.3**	**-0.4**
ABKAR	**Akbulak array**	**73.55 321**	P	**P**	**20 35 08.4**	**-0.3**
VNDA	**Vanda**	**81.28 173**	P	**P**	**20 35 52.1**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=336,slow=3.9,SNR=2.3					
	comp=Z,2.0nm,0.6s					
VNDA	**Vanda**	**81.28 173**	IAmb	IAmb	20 36 04.9	
	comp=Z,2.5nm,0.8s					
D19K	**Kuna River**	**83.40 21**	P	**P**	**20 36 03.2**	**+0.5**
D19K			IAmb	IAmb	20 36 13.9	
	comp=Z,5.8nm,1.0s					
MT02	**Curacav**	**144.45 155**	PKPdf	**PKPab**	**20 43 11.9**	**+1.1**
CO02	**Combarbal**	**146.26 153**	PKPbc	**PKPbc**	**20 43 18.1**	**+1.1**
CO03	**El Pedregal**	**146.71 153**		**PKPbc**	**20 43 19.3**	**+1.0**

IDC 14 20:28:49.2±1.9, 1°.60N×126°.28E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=186.8km s-min=23.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.82 160**		P	P	20 33 53.4	-0.7
	0.6nm,0.5s,baz=339,slow=11,SNR=4.6						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.19 164**		P	P	20 34 26.4	+0.6
	0.3nm,0.4s,baz=343,slow=9.0,SNR=4.6						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.05 326**		P	P	20 38 50.4	-0.8
	0.2nm,0.4s,baz=116,slow=7.6,SNR=1.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.29 328**		P	P	20 39 20.5	+0.7
	0.4nm,0.5s,baz=130,slow=6.6,SNR=2.5						
	0.4nm,0.5s						

SCB 14 20:29:34.9±1.1, 18°.21S×66°.94W, h275km±12km, MB4.4, ML4.0/3, Error ellipse: s-maj=4.8km s-min=3.3km az=1.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEO	**Opoqueri**	**0.96 248**		Pg	Pn	20 30 14.1	+1.0
SOET	**ToroToro**	**1.08 85**		Pg	Pn	20 30 13.6	+0.1
AOEA	**Aiquile**	**1.62 89**		Pg	Pn	20 30 17.1	+0.2
BBOE	**La Paz, Chanca**	**1.71 324**		Pg	Pn	20 30 18.5	+0.6
BBOJ	**La Paz, Jacaqu**	**1.71 316**		Pg	Pn	20 30 18.5	+0.6
LPAZ	**La Paz**	**2.22 329**		Pg	Pn	20 30 22.2	0.0
BBOD	**La Paz, Gloria**	**2.22 314**		Pg	Pn	20 30 22.4	+0.3
BBOB	**La Paz, Bander**	**2.35 331**		Pg	Pn	20 30 22.9	-0.3
PB16	**IPOC Station P**	**2.44 267**		Pg	Pn	20 30 25.1	+1.0
GO01	**Chusmiza**	**2.58 235**		Pg	Pn	20 30 26.0	+0.7
PB08	**IPOC Station P**	**2.84 227**		Pg	Pn	20 30 28.7	+0.9
PB11	**IPOC Station P**	**3.00 239**		Pg	Pn	20 30 30.3	+1.2
PB11				Sg	S	20 31 10.9	-1.4
PB11				IAML		20 31 13.9	
	114nm,0.2s						
MOCB	**Mochara**	**3.27 158**		Pg	Pn	20 30 33.1	+0.8
PB01	**IPOC Station P**	**3.70 220**		Pg	Pn	20 30 37.5	+0.9
PB01				Sg	S	20 31 24.5	-1.4
PB01				IAML		20 31 26.7	
	184nm,0.4s						
PB02	**IPOC Station P**	**4.16 221**		Pg	Pn	20 30 42.8	+1.0
PB02				Sg	S	20 31 33.1	-2.2
PB02				IAML		20 31 37.8	
	144nm,0.2s						
YJA	**Yavi**	**4.17 161**		Pg	Pn	20 30 43.2	+1.0
PB09	**IPOC Station P**	**4.17 211**		Pg	Pn	20 30 43.3	+1.3
PB06	**IPOC Station P**	**5.11 208**		Pg	Pn	20 30 54.0	+1.0

IDC 14 20:29:56.0±1.6, 1°.72N×126°.49E, h0km, mb3.7/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=119.1km s-min=20.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.71 182**		P	P	20 34 26.5	-0.7
	0.1nm,0.3s,baz=16,slow=14,SNR=1.3						
	1.4nm,0.7s						
WRA	**Warramunga Arr**	**22.86 161**		P	P	20 35 00.2	-1.0
	1.5nm,0.5s,baz=340,slow=11,SNR=8.1						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**26.24 164**		P	P	20 35 34.3	+1.2
	0.5nm,0.4s,baz=343,slow=11,SNR=7.0						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.07 326**		P	P	20 39 58.1	-0.1
	0.3nm,0.4s,baz=122,slow=7.3,SNR=6.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.30 328**		P	P	20 40 26.6	-0.1
	0.5nm,0.5s,baz=129,slow=6.0,SNR=5.5						
	0.5nm,0.5s						

IDC 14 20:34:03.4±1.2, 1°.47N×126°.17E, h0km, mb3.9/7, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=118.7km s-min=16.0km az=69.0
DJA 14 20:34:07.3±0.3, 2°.N±3°×12°.6E±°, h10km, M4.1/14, mb4.1/4, MLv4.1/14
NEIC 14 20:34:09.6±2.0, 1°.54N±0°.09×126°.54E±0°.09, h38km±6km, mb4.1/10, Error ellipse: s-maj=16.5km s-min=8.9km az=223.0

ISC 14 20:34:08.8±0.8, 1°.57N±0°.07×126°.57E±0°.08, h35km, n31, σ1§08/28, mb4.1/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.12 135**			**Pn**	**20 34 28.9**	**+0.9**
TNTI	**Ternate**	**1.12 135**		P	**Pn**	**20 34 29.1**	**+1.1**
SGSI	**Sangihe**	**2.35 334**		P	**Pn**	**20 34 44.6**	**-0.2**
KMSI	**Cibinong**	**2.77 249**		P	**Pn**	**20 34 49.8**	**-0.8**
SANI	**Sanana**	**3.64 189**		P	**Pn**	**20 35 02.5**	**-0.1**
LUWI	**Luwuk**	**4.60 236**			**Pn**	**20 35 16.5**	**+0.7**
LUWI	**Luwuk**	**4.60 236**		P	**Pn**	**20 35 16.5**	**+0.7**
MRSI	**Marisa**	**4.75 257**		P	**Pn**	**20 35 18.5**	**+0.6**
APSI	**Ampana**	**5.50 243**		P	**Pn**	**20 35 29.3**	**+1.1**
	0.3nm95nm,1.1s						
TOLI2	**Tolitoli**	**5.80 266**			**Pn**	**20 35 30.2**	**-2.1**
MPSI	**Mapaga**	**6.78 260**		P	**Pn**	**20 35 47.5**	**+1.7**
	0.1nm14nm,1.1s						
MYLDM	**Lahad Datu**	**8.81 294**			**Pn**	**20 36 15.1**	**+1.4**
SBUM	**Sibu**	**14.37 274**		P	**P**	**20 37 37.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**19.56 183**		P	**P**	**20 38 32.4**	**-1.3**
	0.2nm,0.3s,baz=6.2,slow=11,SNR=6.2						
	2.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.56 183**		IAmb	IAmb	20 38 37.7	
	comp=Z,1.5nm,1.2s						
WB0	**Warramunga Arr**	**22.55 160**		P	**P**	**20 39 04.8**	**-1.2**
WB0				IAmb	IAmb	20 39 07.1	
	comp=Z,6.5nm,0.8s						
WRAB	**Tennant Creek**	**22.69 161**		P	**P**	**20 39 06.9**	**-0.6**
WRAB				IAmb	IAmb	20 39 08.9	
	comp=Z,4.4nm,0.7s						
WRA	**Warramunga Arr**	**22.70 161**		P	**P**	**20 39 06.4**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=339,slow=11,SNR=24						
	comp=Z,3.1nm,0.5s						
WRA	**Warramunga Arr**	**22.70 161**		IAmb	IAmb	20 39 13.1	
	comp=Z,0.5nm,1.4s						
WR8	**Warramunga Arr**	**22.76 160**			**P**	**20 39 07.2**	**-1.0**
WR8				IAmb	IAmb	20 39 13.5	
	comp=Z,9.1nm,1.2s						
AS31	**Alice Springs**	**26.08 165**			**P**	**20 39 38.9**	**-0.4**
AS31				IAmb	IAmb	20 39 44.5	
	comp=Z,1.8nm,1.1s						
ASAR	**Alice Springs**	**26.08 165**		P	**P**	**20 39 38.8**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=346,slow=7.4,SNR=18						
	comp=Z,1.1nm,0.6s						
FORT	**Forrest**	**32.20 178**		P	**P**	**20 40 32.8**	**-0.7**
FORT				IAmb	IAmb	20 41 09.4	
	comp=Z,8.0nm,1.2s						
STKA	**Stephens Creek**	**36.19 158**		P	**P**	**20 41 08.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=310,slow=12,SNR=3.4						
	comp=Z,2.3nm,0.8s						
SONM	**Songino Array**	**49.29 342**		P	**P**	**20 42 55.3**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=151,slow=7.1,SNR=2.8						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**59.24 326**		P	**P**	**20 44 05.2**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=123,slow=6.9,SNR=11						
	comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**63.47 328**		P	**P**	**20 44 33.8**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=128,slow=6.2,SNR=19						
	comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**63.47 328**		P	**P**	**20 44 34.9**	**-0.3**
CASY	**Casey**	**68.67 187**		P	**P**	**20 45 07.8**	**-0.4**
VNDA	**Vanda**	**81.32 173**		P	**P**	**20 46 22.4**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=319,slow=7.6,SNR=2.6						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**81.32 173**		IAmb	IAmb	20 46 36.3	
	comp=Z,2.8nm,1.4s						

NEIC 14 20:35:31.5±1.9, 35°.14N±0°.02×95°.40W±0°.02, h5km±1km, mb_Lg2.6/19, ML2.8/8, ML3.0/16, Error ellipse: s-maj=3.4km s-min=2.8km az=143.0

NEIC 14 20:35:31.5±2.1, 35°.14N±0°.02×95°.37W±0°.01, h6km±4km, Error ellipse: s-maj=3.1km s-min=1.2km az=153.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUL3	**Leonard**	**0.84 336**			Pg	20 35 47.6	-0.1
TUL3					Sg	20 35 59.0	+0.3
TUL3				IAML		20 35 59.2	
	387nm,0.3s						
RLO	**Rose Lookout**	**1.06 15**			Pg	20 35 51.5	-0.4
RLO					Sg	20 36 06.0	+0.3
RLO				IAML		20 36 12.7	
	comp=N,496nm,0.2s						
DEOK	**Depew**	**1.16 308**			Pg	20 35 53.3	-0.4
DEOK					Sg	20 36 08.7	-0.1
DEOK				IAML		20 36 09.0	
	comp=N,378nm,0.2s						
DEOK				IAML		20 36 10.8	
	comp=E,297nm,0.2s						
OK052	**Battle Ridge R**	**1.45 307**			Pn	20 35 58.1	-0.1
OK052					Sg	20 36 17.8	-0.2
QUOK	**Quay**	**1.50 314**			Pn	20 35 59.0	0.0
QUOK					Sg	20 36 19.6	-0.2
U38A	**Gravette**	**1.52 31**			Pn	20 35 59.5	+0.2
U38A					Sb	20 36 19.8	0.0
MIAR	**Mount Ida**	**1.59 111**			Pb	20 36 00.8	-0.5
MIAR					Sg	20 36 22.2	-0.4
HHAR	**Hobbs**	**1.63 45**			Pn	20 36 01.2	+0.5
HHAR					Sb	20 36 23.1	+0.3
FNO	**Franklin**	**1.67 275**			Pn	20 36 01.8	+0.5
FNO					Sg	20 36 24.8	-0.3
OKCSW	**OKLAHOMA CITY**	**1.71 280**			Pn	20 36 00.1	-1.8
ADOK	**Arcadia Dam**	**1.71 288**			Pn	20 36 01.2	-0.7
OK004	**Okla Sci Mus**	**1.76 283**			Pn	20 36 03.3	+0.7
OK048	**Pawnee Station**	**1.81 315**			Pn	20 36 03.3	+0.1
OK048					Sn	20 36 26.4	0.0
OK051	**E0350 and S346**	**1.81 319**			Pn	20 36 01.5	-1.8
OK029	**Liberty Lake**	**1.82 292**			Pb	20 36 04.4	-0.9
OK029					Sg	20 36 29.6	-0.5
Z38A	**Mt. Pleasant**	**1.90 170**			Pn	20 36 04.6	+0.1
BCOK	**Bluff Creek, N**	**1.90 286**			Pb	20 36 05.6	-1.0
BCOK					Sg	20 36 32.0	-0.6
T35A	**Sooner Cattle**	**2.00 333**		Pn	Pn	20 36 05.3	-0.6
T35A					Pb	20 36 07.6	-0.8
T35A					Sb	20 36 34.5	+0.9
X34A	**Smith Ranch, M**	**2.10 256**		IAmb_Lg		20 36 37.0	
	comp=Z,13nm,0.8s						
X40A	**Basin Creek Fa**	**2.19 107**			Pn	20 36 07.6	-0.8
BLOK	**Blackwell**	**2.21 318**			Sb	20 36 40.5	+1.1
Z35A	**Perchaven, San**	**2.38 221**			Pn	20 36 10.2	-0.9
Z35A				IAmb_Lg		20 36 50.8	
	comp=Z,14nm,0.9s						
TREL	**Terrell**	**2.48 194**			Pb	20 36 14.5	-1.9
UALR	**University of**	**2.51 97**		IAmb_Lg		20 36 53.3	
	comp=Z,36nm,1.0s						
CROK	**Carrier**	**2.52 303**			Pb	20 36 15.8	-1.5
WHAR	**Wooly Hollow**	**2.53 86**			Pn	20 36 11.9	-1.2
FCAR	**Ozark Folk Cen**	**2.75 73**			Pn	20 36 15.8	-0.3
KAN01	**Argonia South**	**2.79 317**		IAmb_Lg		20 37 04.7	
	comp=Z,17nm,0.8s						
WMOK	**Wichita Mounta**	**2.83 263**			Pn	20 36 17.7	+0.4
KAN08	**Anthony NE Sta**	**2.96 315**		IAmb_Lg		20 37 09.4	
	comp=Z,20nm,0.7s						
MGMO	**Mountain Grove**	**3.22 50**		IAmb_Lg		20 37 18.1	
	comp=Z,20nm,0.8s						
SMWD	**Samnorwood**	**3.99 271**			Pb	20 36 42.8	+0.5
R40A	**Maddies Statio**	**4.01 37**			Pb	20 36 42.7	+0.1
R40A				IAmb_Lg		20 37 38.5	
	comp=Z,22nm,0.8s						
CCM	**Cathedral Cave**	**4.42 48**		IAmb_Lg		20 37 56.2	
	comp=Z,26nm,1.1s						
P40A	**Paris**	**5.12 30**		IAmb_Lg		20 38 11.6	
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**5.96 220**		IAmb_Lg		20 38 48.8	
	comp=Z,25nm,1.0s						

IDC 14 20:36:16.4±1.0, 1°.64N×126°.55E, h0km, mb3.9/11, mbtmp3.9/12, ML4.0/1, Error ellipse: s-maj=74.8km s-min=14.1km az=72.0
DJA 14 20:36:21.1±0.3, 2°.N±3°×12°.6E±°, h10km, M4.3/15, mb4.4/6, MLv4.2/15
NEIC 14 20:36:21.1±1.4, 1°.58N±0°.07×126°.46E±0°.06, h28km±6km, mb4.2/11, Error ellipse: s-maj=10.3km s-min=9.0km az=167.0

ISC 14 20:36:22.3±0.7, 1°.59N±0°.07×126°.51E±0°.08, h35km, n39, σ1§42/38, mb4.1/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18 134**			**Pn**	**20 36 42.4**	**0.0**
TNTI	**Ternate**	**1.18 134**		P	**Pn**	**20 36 42.7**	**+0.3**
SGSI	**Sangihe**	**2.30 335**		P	**Pn**	**20 36 58.5**	**+0.8**
KMSI	**Cibinong**	**2.72 248**		P	**Pn**	**20 37 03.9**	**+0.4**
SANI	**Sanana**	**3.66 188**		P	**Pn**	**20 37 17.2**	**+0.8**
LUWI	**Luwuk**	**4.56 235**		Pn	**Pn**	**20 37 27.3**	**-1.6**
LUWI	**Luwuk**	**4.56 235**		P	**Pn**	**20 37 30.2**	**+1.3**
MRSI	**Marisa**	**4.70 256**		P	**Pn**	**20 37 31.3**	**+0.5**
NLAI	**Namlea**	**4.84 173**		P	**Pn**	**20 37 35.2**	**+2.6**
APSI	**Ampana**	**5.46 243**		P	**Pn**	**20 37 42.0**	**+0.8**
TOLI2	**Tolitoli**	**5.75 265**		Pn	**Pn**	**20 37 44.3**	**-0.8**
MPSI	**Mapaga**	**6.73 259**		P	**Pn**	**20 38 00.7**	**+2.1**
	0.1nm15nm,0.7s						
FAKI	**Fak Fak**	**7.28 128**		P	**Pn**	**20 38 09.2**	**+3.0**
	0.1nm23nm,1.3s						
TTSI	**Tana Toraja**	**8.12 235**		P	**Pn**	**20 38 18.3**	**+0.5**
MYLDM	**Lahad Datu**	**8.75 294**		Pn	**Pn**	**20 38 28.6**	**+2.2**
SOEI	**Soe**	**11.49 191**		Pn	**Pn**	**20 39 02.0**	**-2.2**
MTN	**Manton Dam**	**15.06 162**		P	**Pn**	**20 39 55.5**	**+2.9**
MTN				IAmb	IAmb	20 40 15.3	
	comp=Z,12nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.59 182**		P	**P**	**20 40 45.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=357,slow=8.7,SNR=7.2						
	comp=Z,1.8nm,0.6s						
WB0	**Warramunga Arr**	**22.59 160**		P	**P**	**20 41 18.8**	**-1.2**
WB0				IAmb	IAmb	20 41 26.2	
	comp=Z,6.6nm,0.7s						
WRAB	**Tennant Creek**	**22.73 161**		P	**P**	**20 41 19.9**	**-1.6**
WRAB				IAmb	IAmb	20 41 26.1	
	comp=Z,15nm,1.3s						
WRA	**Warramunga Arr**	**22.74 161**		P	**P**	**20 41 20.1**	**-1.4**
	comp=Z,3.4nm,0.4s,baz=340,slow=11,SNR=24						
	comp=Z,3.4nm,0.4s						
WRA	**Warramunga Arr**	**22.74 161**		P	**P**	**20 41 20.2**	**-1.3**
WR8	**Warramunga Arr**	**22.80 160**		P	**P**	**20 41 20.9**	**-1.3**
WR8				IAmb	IAmb	20 41 28.5	
	comp=Z,6.9nm,0.9s						
AS31	**Alice Springs**	**26.12 164**		P	**P**	**20 41 52.6**	**-0.6**
AS31				IAmb	IAmb	20 41 59.1	
	comp=Z,2.3nm,0.3s						
ASAR	**Alice Springs**	**26.12 164**		P	**P**	**20 41 52.4**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=347,slow=11,SNR=14						
	comp=Z,1.8nm,0.4s						
ASAR	**Alice Springs**	**26.12 164**		P	**P**	**20 41 51.6**	**-1.5**
BBOO	**Buckleboo**	**35.39 166**		P	**P**	**20 43 14.2**	**-0.6**
NWAO	**Narrogin (SRO)**	**35.44 194**		P	**P**	**20 43 14.2**	**-1.0**
	comp=Z,5.1nm,0.9s,baz=21,slow=8.6,SNR=1.5						
	comp=Z,5.1nm,0.9s						
STKA	**Stephens Creek**	**36.23 158**		P	**P**	**20 43 21.6**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=346,slow=6.5,SNR=4.6						
	comp=Z,1.6nm,0.6s						
SONM	**Songino Array**	**49.25 342**		P	**P**	**20 45 06.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=156,slow=6.5,SNR=3.7						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.18 326**		P	**P**	**20 46 18.9**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=123,slow=6.8,SNR=15						
	comp=Z,0.7nm,0.4s						
MAKZ	**Makanchi**	**59.37 326**		P	**P**	**20 46 20.4**	**-0.7**
ZALV	**Zalesovo Beam**	**62.39 334**		P	**P**	**20 46 40.0**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=129,slow=8.4,SNR=2.0						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.42 328**		P	**P**	**20 46 47.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=129,slow=6.2,SNR=11						
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**63.42 328**		P	**P**	**20 46 47.6**	**-0.7**
KURK				IAmb	IAmb	20 46 50.6	
	comp=Z,2.2nm,0.5s						
BVAR	**Borovoye Array**	**68.99 328**		P	**P**	**20 47 24.3**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=145,slow=5.3,SNR=3.6						
	comp=Z,0.4nm,0.4s						
VNDA	**Vanda**	**81.35 173**		P	**P**	**20 48 35.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=309,slow=5.5,SNR=4.1						
	comp=Z,0.3nm,0.4s						
VNDA	**Vanda**	**81.35 173**		IAmb	IAmb	20 48 36.4	
	comp=Z,2.2nm,1.3s						
MAW	**Mawson**	**81.69 200**		P	**P**	**20 48 37.8**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=97,slow=6.4,SNR=1.7						
	comp=Z,1.2nm,0.8s						

NOU 14 20:38:48.9, 37°.12S×177°.47E, h241km, MLv3.7/9, Off E. Coast of N. Island, N.Z.
WEL 14 20:38:54.4±1.0, 37°.5±8°×17°.7E±°, h183km±9km, M3.3/22, ML3.4/8, MLv3.3/22, Error ellipse: s-maj=11.8km s-min=6.9km az=33.4, confirmed

ISC 14 20:38:49.4±2.2, 37°.13S±0°.07×177°.29E±0°.08, h229km±12km, n101, σ1§56/108, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.74 148**		P	**Pn**	**20 39 21.4**	**+0.6**
HAZ				S	**S**	**20 39 42.7**	**-2.7**
RUGZ	**Raukumara Rang**	**0.89 160**		P	**Pn**	**20 39 22.1**	**+0.4**
RUGZ				S	**S**	**20 39 43.9**	**-3.2**
MXZ	**Matakaoa Point**	**0.92 119**		P	**Pn**	**20 39 22.5**	**+0.9**
MXZ	**Matakaoa Point**	**0.92 119**		P	**Pn**	**20 39 22.6**	**+0.9**
PKGZ	**Pakihiroa**	**0.97 140**		P	**Pn**	**20 39 23.6**	**+1.6**
MARZ	**Manawahe**	**0.99 210**		P	**Pn**	**20 39 23.4**	**+1.3**
WMGZ	**Waiomatatini S**	**1.13 128**		P	**Pn**	**20 39 24.6**	**+1.6**
URZ	**Urewera**	**1.14 187**		P	**Pn**	**20 39 24.0**	**+1.0**
URZ	**Urewera**	**1.14 187**		P	**Pn**	**20 39 24.0**	**+1.0**
URZ				S	**S**	**20 39 47.7**	**-1.7**
TWGZ	**Tauwhareparae**	**1.18 153**		P	**Pn**	**20 39 25.5**	**+2.1**
TWGZ				S	**S**	**20 39 50.5**	**+0.4**
PUZ	**Puketiti**	**1.22 141**		P	**Pn**	**20 39 25.2**	**+1.6**
PUZ				S	**S**	**20 39 49.1**	**-1.3**
MWZ	**Matawai**	**1.22 171**		P	**Pn**	**20 39 25.1**	**+1.4**
MWZ				S	**S**	**20 39 49.5**	**-1.0**
KUZ	**Kuaotunu**	**1.32 286**		P	**Pn**	**20 39 24.5**	**+0.2**
KUZ	**Kuaotunu**	**1.32 286**		P	**Pn**	**20 39 24.4**	**+0.2**
RRRZ	**Republican Roa**	**1.36 207**		P	**Pn**	**20 39 25.2**	**+0.5**
RAGZ	**Rawiri**	**1.37 176**		P	**Pn**	**20 39 26.4**	**+1.7**
TKGZ	**Te Karaka**	**1.38 162**		P	**Pn**	**20 39 26.7**	**+1.9**
TKGZ				S	**S**	**20 39 51.4**	**-1.1**
MUGZ	**Murupara**	**1.41 197**		P	**Pn**	**20 39 26.3**	**+1.3**
HSRZ	**Hossack Road**	**1.44 215**		P	**Pn**	**20 39 27.7**	**+2.4**
HRRZ	**Handcock Road**	**1.49 212**		P	**Pn**	**20 39 27.7**	**+2.0**
RTZ	**Ruatahuna**	**1.51 189**		P	**Pn**	**20 39 27.2**	**+1.3**
CNGZ	**Carnag

DUWZ	D'Urville Isla	4.51 215	P		Pn	20 39 58.9 +0.4
MSWZ	Moikau Station	4.57 200	P		Pn	20 39 59.1 0.0
SNZO	South Karori	4.63 205	P		Pn	20 39 59.8 -0.1
BHW	Baring Head	4.67 203	P		Pn	20 40 00.2 -0.2
TCW	Tory Channel	4.70 209	P		Pn	20 40 01.0 +0.2
PLWZ	Palliser	4.71 199	P		Pn	20 40 01.1 +0.2
BSWZ	Blackbirch Sta	5.29 209	P		Pn	20 40 08.8 +0.7
THZ	Tophouse	5.74 215	P		Pn	20 40 14.9 +1.1
KHZ	Kahutara	6.02 208	P		Pn	20 40 16.9 -0.3
KHZ	Kahutara	6.02 208	P		Pn	20 40 17.3 +0.1
GVZ	Greta Valley S	6.68 208	P		Pn	20 40 25.4 -0.3
LTZ	Lake Taylor	6.84 213	P		Pn	20 40 28.4 +0.7
OKCZ	Okains Bay	7.34 205	P		Pn	20 40 34.7 +0.7
OXZ	Oxford	7.38 211	P		Pn	20 40 35.9 +1.3
MQZ	McQueen's Vall	7.46 207	P		Pn	20 40 35.0 -0.6
AKCZ	Akaroa Harbour	7.52 205	P		Pn	20 40 36.2 -0.1

IDC ***14*** *20:39:03.1±0.3,1˚.62N×126˚.18E,h0km,mb5.2/39, mbtmp5.2/40,ML5.1/1,MS4.5/7,Error ellipse: s-maj=15.9km s-min=9.0km az=80.0*

MOS ***14*** *20:39:06.5±1.2,1˚.66N×126˚.11E,h33km,mb5.6/59,Error ellipse: s-maj=8.3km s-min=4.4km az=114.4*

NEIC ***14*** *20:39:09.3±2.3,1˚.68N±0˚.05×126˚.36E±0˚.05,h35km±1km, mb5.5/248,Mww5.3/7,Error ellipse: s-maj=9.0km s-min=8.6km az=178.0*

NEIC ***14*** *20:39:09.3,1˚.98N×126˚.36E,h30km,Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10^17Nm; Mrr0.93; Mθθ0.20; Mϕϕ-1.12; Mrθ-0.64; Mθϕ-0.44; Mϕr0.28; Fault plane solution: M0 1.32000×10^17 NP1: ϕs225.41000°,δ51.56000°,λ134.34000°. NP2: ϕs347.87000°,δ55.93000°,λ48.63000°. Principal axes: T 1.3825, Plg57.0000°, Azm200.0000°; N -0.2146, Plg33.0000°, Azm14.0000°; P -1.2579, Plg2.0000°, Azm106.0000°;*

DJA ***14*** *20:39:09.4±0.2,2˚N±1˚×12˚6E±˚,h34km±2km,M5.3/80, mb5.5/80,mB5.7/60,MLv5.5/24,Mw(mB)5.3/60*

NEIC ***14*** *20:39:09.3,1˚.68N×126˚.36E,h30km*

GCMT ***14*** *20:39:12.3±0.4,1˚.80N±0˚.03×126˚.26E±0˚.03,h33km, MW5.7/66,Moment Tensor Solution. s23,c25; s66,c90; Duration: 1s6 Moment tensor: Scale 10^17Nm; Mrr4.40±.30; Mθθ-1.11±.16; Mϕϕ-3.29±.18; Mrθ-0.55±.20; Mθϕ-0.89±.09; Mϕr0.43±.19; Best double couple: M04.05000×10^17 NP1:ϕs206.00000°,δ44.00000°, λ100.00000°. NP2:ϕs12.00000°,δ47.00000°,λ80.00000°. Principal axes: T 4.4890, Plg83.0000°, Azm212.0000°; N -0.8770, Plg7.0000°, Azm19.0000°; P -3.6120, Plg2.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 20:39:08.5±0.4,1˚.66N±0˚.03×126˚.36E±0˚.04,h33km±2km, h33km:pP-P,n1021,σ1s60/992,mb5.5/286,MS4.7/27, 42C-25D,Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.34 131			Pn	20 39 30.4	-0.5
TNTI	Ternate	1.34 131		P	Pn	20 39 30.3	-0.6
TNTI	Ternate	1.34 131		P	Pn	20 39 29.8	-1.1
SGSI	Sangihe	2.18 338		P	Pn	20 39 41.9	-0.5
KMSI	Cibinong	2.61 246		P	Pn	20 39 49.8	+1.5
SANI	Sanana	3.70 186		P	Pn	20 40 04.0	+0.6
SANI	Sanana	3.70 186		S	Sn	20 40 47.0	+1.1
SANI	Sanana	3.70 186		P	Pn	20 40 03.2	-0.2
LUWI	Luwuk	4.47 233			Pn	20 40 14.7	+0.7
LUWI	Luwuk	4.47 233		P	Pn	20 40 17.0	+3.0
LUWI	Luwuk	4.47 233		P	Pn	20 40 16.6	+2.6
MRSI	Marisa	4.57 255		P	Pn	20 40 17.0	+1.7
NLAI	Namlea	4.92 171		P	Pn	20 40 21.3	+1.1
	2.4nm7μm302nm,0.9s						
APSI	Ampana	5.35 242		P	Pn	20 40 29.3	+3.2
DAV	Davao City (W)	5.43 352		Pn	Pn	20 40 28.6	+1.3
	24nm,0.3s,baz=96,slow=2.5,SNR=8.4						
DAV				Sn	Sn	20 41 30.8	+2.1
	58nm,0.3s,baz=58,slow=20,SNR=4.2						
DAV	Davao City (W)	5.43 352			Pn	20 40 26.3	-1.0
DAV	Davao City (W)	5.43 352			Sn	20 41 30.8	+2.1
DAV	Davao City (W)	5.43 352		P	Pn	20 40 26.4	-0.8
DAV				S	Sn	20 41 29.3	+0.7
DAV	Davao City (W)	5.43 352		P	Pn	20 40 27.5	+0.3
SWI	Sorong	5.51 117		P	Pn	20 40 30.4	+2.2
MSAI	Masohi	5.60 153		P	Pn	20 40 33.7	+4.2
	2.0nm7μm435nm,0.8s						
TOLI2	Tolitoli	5.60 265			Pn	20 40 29.3	-0.2
TOLI2	Tolitoli	5.60 265		P	Pn	20 40 29.6	+0.1
TOLI2	Tolitoli	5.60 265		S	Sn	20 41 33.9	+1.2
AAI	Ambon	5.62 161		P	Pn	20 40 31.9	+2.1
	1.3nm4μm339nm,0.8s						
MPSI	Mapaga	6.59 259		P	Pn	20 40 45.5	+2.4
KDI	Kendari	6.71 214		P	Pn	20 40 46.3	+1.5
PCI	Palu	7.00 249		P	Pn	20 40 51.5	+2.8
BNDI	Bandanaira	7.09 159		P	Pn	20 40 49.8	-0.2
BNDI	Bandanaira	7.09 150		P	Pn	20 40 52.5	+2.5
	1.8nm414nm,1.5s						
FAKI	Fak Fak	7.44 128			Pn	20 40 56.2	+1.4
FAKI	Fak Fak	7.44 128		P	Pn	20 40 57.1	+2.2
FAKI	Fak Fak	7.44 128		P	Pn	20 40 58.1	+3.2
	1.2nm5μm272nm,1.2s						
TTSI	Tana Toraja	8.03 234		P	Pn	20 41 04.5	+1.6
BBSI	Bau Bau	8.04 208		P	Pn	20 41 06.4	+3.3
	6μm488nm,0.9s						
RKPI	Ransiki, Papua	8.43 112		P	Pn	20 41 11.2	+2.8
	194nm,1.1s						
MYLDM	Lahad Datu	8.59 294			Pn	20 41 13.5	+3.0
MYLDM	Lahad Datu	8.59 294		P	Pn	20 41 13.3	+2.8
SPSI	Sidrap Palu	8.63 230		P	Pn	20 41 13.2	+2.0
	4μm236nm,0.6s						
BNSI	Bone	8.67 226		P	Pn	20 41 13.5	+1.8
	5μm333nm,0.7s						
KMPI	Kaimana, Papua	9.05 126		P	Pn	20 41 19.9	+3.0
	676nm,1.5s						
BKSI	Bulukumba	9.32 222		P	Pn	20 41 22.3	+1.7
	3μm255nm,1.0s						
KAPI	Kappang	9.35 225		Pn	Pn	20 41 22.9	+1.9
	11nm,0.3s,baz=19,slow=3.9,SNR=35						
KAPI	Kappang	9.35 225		P	Pn	20 41 23.4	+2.4
KAPI				S	Sn	20 43 08.5	+3.3
KAPI	Kappang	9.35 225		P	Pn	20 41 22.9	+1.9
KAPI	Kappang	9.35 225	*i*	P	Pn	20 41 19.7	-1.3
BSSI	Bau Bau, Buton	9.71 217		P	Pn	20 41 28.1	+2.1
	3μm320nm,1.2s						
BKB	Balikpapan	9.89 253			Pn	20 41 27.6	-0.9
BKB	Balikpapan	9.89 253		P	Pn	20 41 29.8	+1.3
BKB	Balikpapan	9.89 253		P	Pn	20 41 29.7	+1.3
	4μm240nm,1.4s						
BAKI	Biak	10.15 106		P	Pn	20 41 37.6	+5.5
	564nm,1.4s						
MMRI	Maumere	11.02 202		P	Pn	20 41 45.7	+1.8
MMRI	Maumere	11.02 202		P	Pn	20 41 47.0	+3.1
	4μm144nm,1.2s						
EDFI	Ende, Flores	11.34 204		P	Pn	20 41 50.5	+2.2
SOEI	Soe	11.53 190			Pn	20 41 53.2	+2.3
SOEI	Soe	11.53 190		P	Pn	20 41 55.3	+4.3
MTKI	Muara Teweh, K	11.74 257		P	Pn	20 41 56.0	+2.1
	5μm133nm,1.4s						
BATI	Baumata	12.09 193		Pn	Pn	20 42 02.3	+3.8
	12nm,0.3s,baz=319,slow=0.8,SNR=28						
BATI	Baumata	12.09 193		P	Pn	20 42 03.1	+4.6
	2μm278nm,0.8s						
BBKI	Banjar Baru	12.58 246		P	Pn	20 42 08.3	+3.0
	5μm261nm,1.9s						
WSI	Waingapu	12.77 208		P	Pn	20 42 11.1	+3.3
	181nm,1.0s						
SMPI	Sarmi	12.87 106		P	Pn	20 42 12.9	+3.6
	4μm202nm,2.0s						
BASI	Baing, Sumba	13.12 206		P	Pn	20 42 15.1	+2.4
	6μm478nm,1.7s						
WBSI	Waikabubak, Su	13.19 212		P	Pn	20 42 16.9	+3.2
	2μm170nm,0.9s						
PLAI	Plampang	13.47 219		P	Pn	20 42 20.7	+3.2
PLAI	Plampang	13.47 219		P	Pn	20 42 21.1	+3.6
	3μm366nm,0.9s						
TGY	Tagaytay City	13.48 337		Pn	P	20 42 22.2	-4.2
	27nm,0.3s,baz=338,slow=13,SNR=5.1						
TGY				LR	LR	20 47 47.8	
	comp=Z,3μm,21.6s,baz=160,slow=39						
TWSI	Taliwang, Sumb	13.99 222		P	Pn	20 42 28.1	+3.5
	3μm327nm,1.0s						
SBUM	Sibu	14.15 273		P	Pn	20 42 29.8	+3.1
SBUM	Sibu	14.15 273		P	Pn	20 42 29.0	+2.3
GENI	Genyem	14.44 107		P	Pn	20 42 29.7	-1.0
GENI	Genyem	14.44 107		P	Pn	20 42 33.2	+2.5
	5μm323nm,0.9s						
AUDHS	Darwin High Sc	14.69 163		P	Pn	20 42 34.3	+0.2
DRS	Darwin Rock St	14.71 162		P	Pn	20 42 34.0	-0.3
SRBI	Singaraja	14.73 229		P	Pn	20 42 37.2	+2.5
	2μm165nm,0.9s						
JAY	Jayapura	14.93 106		Pn	P	20 42 41.7	-0.9
	0.3nm,0.3s,baz=259,slow=8.8,SNR=5.0						
JAY				LR	LR	20 47 59.9	
	comp=Z,3μm,20.1s,baz=309,slow=36						
JAY	Jayapura	14.93 106		P	Pn	20 42 38.8	+1.4
KMMI	Kalianget	15.09 235		P	P	20 42 42.7	-1.6
	3μm251nm,0.9s						
DNP	Denpasar	15.13 227		P	P	20 42 43.1	-1.6
MTN	Manton Dam	15.17 162		P	Pn	20 42 38.7	-1.7
MTN	Manton Dam	15.17 162			Pn	20 42 38.4	-2.1
KDU	Kakadu	15.49 157		P	Pn	20 42 41.8	-2.9
JAGI	Jajag, Banyuwa	15.79 230			P	20 42 51.3	-0.8
JAGI	Jajag, Banyuwa	15.79 230		P	P	20 42 52.9	+0.8
	3μm260nm,1.1s						
BLJI	Banyuglugur	15.79 234		P	P	20 42 52.4	+0.3
	3μm187nm,0.8s						
NGJI	Ngawi	17.35 239		P	P	20 43 10.9	+1.5
	3μm153nm,1.0s						
KNRA	Kununurra	17.39 172		P	Pn	20 43 07.4	-1.3
	comp=Z,248nm,0.9s						
KNRA	Kununurra	17.39 172			Pn	20 43 08.3	-0.4
PCJI	Pacitan	18.02 237		P	P	20 43 18.0	+1.2
	comp=Z,182nm,0.8s						
SMRI	Semarang	18.08 241		P	P	20 43 18.3	+0.8
UGM	Wanagama	18.43 239		P	Pn	20 43 22.7	+1.1
UGM	Wanagama	18.43 239		P	Pn	20 43 22.9	+1.3
YOGI	Yogyakarta	18.58 239		P	Pn	20 43 24.8	+1.4
TPI	Tanjungpandan	19.20 257		P	Pn	20 43 31.1	+0.2
KPJI	Karang Pucung	19.54 243		P	P	20 43 34.0	+0.4
	comp=Z,2μmcomp=Z,133nm,0.8s						
FITZ	Fitzroy Crossi	19.64 182		P	P	20 43 32.9	-1.7
	comp=Z,4.2nm,0.3s,baz=12,slow=8.4,SNR=65						
	comp=Z,41nm,0.8s						
FITZ	Fitzroy Crossi	19.64 182		P	P	20 43 33.1	-1.5
DLV	Lat	20.45 301		P	Pn	20 43 45.7	-0.2
PPBI	Pangkal Pinang	20.57 259		P	Pn	20 43 46.2	-0.9
BBJI	Bungbulang	20.74 244		P	P	20 43 46.4	-0.3
CNJI	Cibinong	21.15 245		P	P	20 43 52.9	+1.9
TWGBT	Beinan	21.65 347		P	P	20 43 53.3	-3.0
GUMO	Guam	21.82 56		P	P	20 44 00.1	+1.9
	comp=Z,71nm,0.8s,baz=181,slow=10,SNR=3.7						
GUMO				LR	LR	20 52 43.4	
	comp=Z,866nm,18.1s,baz=233,slow=37						
	comp=Z,71nm,0.8s						
TPRI	Tanjung Pinang	21.84 268		P	P	20 43 59.7	+1.3
	comp=Z,97nm,1.3s						
TPRI				pP	pP	20 44 06.3	-0.3
	comp=Z,97nm,1.3s						
DSRI	Dabo	21.88 265		P	P	20 44 00.1	+1.3
	comp=Z,3μmcomp=Z,117nm,1.2s						
PMBI	Palembang	22.05 258		P	P	20 44 02.0	+1.3
YULB	Yu-li	22.16 348		P	P	20 43 57.8	-3.9
YULB				IAmb	IAmb	20 44 04.9	
	comp=Z,258nm,1.6s						
YULB	Yu-li	22.16 348		P	P	20 43 58.6	-3.1
TPUB	Ta-pu	22.22 346		P	P	20 43 58.9	-3.5
TPUB				IAmb	IAmb	20 44 16.2	
	comp=Z,178nm,0.9s						
TPUB	Ta-pu	22.22 346		P	P	20 43 59.7	-2.7
BTDF	Bukit Timah Da	22.58 270		P	P	20 44 06.2	-0.1
SSLB	Suanglung	22.61 347		P	P	20 44 03.6	-3.0
SSLB	Suanglung	22.61 347		P	P	20 44 03.9	-2.7
WB0	Warramunga Arr	22.71 160		P	P	20 44 05.7	-2.0
WB0				IAmb	IAmb	20 44 15.2	
	comp=Z,291nm,1.1s						
COEN	Coen	22.77 133		P	P	20 44 05.5	-2.9
COEN	Coen	22.77 133		P	P	20 44 06.2	-2.2
COEN	Coen	22.77 133		P	P	20 44 05.9	-2.5
WRAB	Tennant Creek	22.84 160		P	P	20 44 06.7	-2.4
WRAB				IAmb	IAmb	20 44 16.7	
	comp=Z,206nm,1.1s						
WRAB	Tennant Creek	22.84 160		P	P	20 44 07.6	-1.5
WRAB	Tennant Creek	22.84 160	*ce*	P	P	20 44 07.6	-1.5
WRAB				pmax	pmax		
	comp=Z,191nm,1.0s						
WRA	Warramunga Arr	22.85 160		P	P	20 44 07.2	-2.0
	comp=Z,107nm,0.5s,baz=340,slow=10,SNR=63						
WRA				PcP	PcP	20 47 59.8	+0.1
	comp=Z,11nm,0.7s,baz=324,slow=2.3,SNR=5.5						
	comp=Z,107nm,0.5s						
WRA	Warramunga Arr	22.85 160		P	P	20 44 07.3	-1.8
WR8	Warramunga Arr	22.92 160		IAmb	IAmb	20 44 13.8	
	comp=Z,234nm,1.1s						
MDSI	Maura Dua	22.98 255		P	P	20 44 12.1	+1.5
	comp=Z,63nm,1.0s						
LWLI	Liwa	23.24 253		P	P	20 44 14.6	+1.3
	comp=Z,3μmcomp=Z,197nm,0.7s						
YHNB	Yeheng	23.38 349		P	P	20 44 13.1	-1.4
YHNB				IAmb	IAmb	20 44 19.9	
	comp=Z,141nm,1.2s						
YHNB	Yeheng	23.38 349		P	P	20 44 14.4	-0.1
PMG	Port Moresby	23.46 118		P	P	20 44 14.8	-0.5
	comp=Z,30nm,0.9s,baz=330,slow=8.1,SNR=15						
PMG				LR	LR	20 54 53.6	
	comp=Z,1μm,20.0s,baz=0.5,slow=40						
	comp=Z,30nm,0.9s						
PMG	Port Moresby	23.46 118		P	P	20 44 14.6	-0.7
PMG	Port Moresby	23.46 118		P	P	20 44 15.3	0.0
PMG	Port Moresby	23.46 118	*ce*	P	P	20 44 15.7	+0.4
PMG				pmax	pmax		
	comp=Z,129nm,1.7s						
LHSI	Lahat	23.46 257		P	P	20 44 16.1	+0.8
	comp=Z,2μmcomp=Z,106nm,1.1s						
MBWA	Marble Bar	23.58 196		P	P	20 44 14.9	-1.5
	comp=Z,141nm,0.8s						
MBWA	Marble Bar	23.58 196		P	P	20 44 14.6	-1.8
MBWA				IAmb	IAmb	20 44 21.7	
	comp=Z,103nm,0.8s						
MBWA	Marble Bar	23.58 196		P	P	20 44 15.4	-1.0
MBWA				S	S	20 48 32.3	+3.6
MBWA	Marble Bar	23.58 196		P	P	20 44 15.1	-1.3
QIZ	Qiongzhong	23.66 318		P	P	20 44 17.3	+0.1
QIZ				S	S	20 48 33.6	+3.6
QIZ				pmax	pmax		
	comp=Z,44nm,0.9s						
QIZ				LR	LR		
	comp=Z,1μm,18.7s						
QIZ				LR	LR		
	comp=Z,1μm,23.6s						
QIZ				LR	LR		
	comp=Z,3μm,23.3s						
QIZ	Qiongzhong	23.66 318		P	P	20 44 16.9	-0.3
PSAC1	Pilbara Seismi	23.92 195		P	P	20 44 17.9	-1.7
	comp=Z,89nm,0.8s						
PSAC2	Pilbara Seismi	23.92 195		P	P	20 44 18.1	-1.6
	comp=Z,114nm,0.8s						
PSA00	Pilbara Seismi	23.95 195		P	P	20 44 18.7	-1.2
	comp=Z,112nm,1.0s						
PSA00	Pilbara Seismi	23.95 195		P	P	20 44 17.4	-2.5
PSA00	Pilbara Seismi	23.95 195		IAmb	IAmb	20 44 25.8	
	comp=Z,60nm,0.7s						
PSA00	Pilbara Seismi	23.95 195		P	P	20 44 18.9	-1.0
PSAB3	Pilbara Seismi	23.97 195		P	P	20 44 18.4	-1.6
	comp=Z,93nm,1.0s						
MNAI	Manna	24.13 256		P	P	20 44 24.3	+2.6
	comp=Z,227nm,1.1s						
MASI	Maura Aman, Be	24.57 259		P	P	20 44 27.6	+1.8
UBPT	Khong Chiam	24.65 304		P	P	20 44 26.6	+0.2
GZH	Guangzhou	24.76 330		P	P	20 44 29.1	+1.8
JOW	Kunigami	25.10 4		P	P	20 44 31.0	+0.7
	comp=Z,124nm,1.0s,baz=178,slow=9.1,SNR=10						
	comp=Z,124nm,1.0s						
JOW	Kunigami	25.10 4		IAmb	IAmb	20 44 39.8	
	comp=Z,144nm,1.0s						
JOW	Kunigami	25.10 4		P	P	20 44 31.0	+0.7
IPM	Ipoh	25.45 277		P	P	20 44 32.9	-0.8
IPM				IAmb	IAmb	20 44 43.1	
	comp=Z,113nm,1.1s						
IPM	Ipoh	25.45 277		P	P	20 44 33.2	-0.5
QIS	Mount Isa	25.61 150		P	P	20 44 34.4	-0.7
	comp=Z,80nm,0.9s						
QIS	Mount Isa	25.61 150		P	P	20 44 34.6	-0.5
KULM	Kulim	25.91 279		P	P	20 44 37.8	0.0
KULM	Kulim	25.91 279		P	P	20 44 38.5	+0.7
ASAR	Alice Springs	26.22 164		P	P	20 44 39.8	-0.8
	comp=Z,46nm,0.5s,baz=334,slow=6.5,SNR=120						
ASAR				PcP	PcP	20 48 07.1	+0.1
	comp=Z,16nm,0.6s,baz=345,slow=2.2,SNR=12						
	comp=Z,46nm,0.5s						
AUALC	St Philip's Co	26.24 164		P	P	20 44 40.1	-0.6
RABL	Rabaul	26.44 103		P	P	20 44 42.6	0.0
RABL				IAmb	IAmb	20 44 49.2	
	comp=Z,60nm,0.6s						
MTSU	Mount Surprise	26.45 139		P	P	20 44 42.1	-0.6
	comp=Z,48nm,0.8s						
MTSU	Mount Surprise	26.45 139		P	P	20 44 42.4	-0.3
WRKA	Warakurna	26.60 176		P	P	20 44 43.4	-0.6
	comp=Z,37nm,1.2s						
PPSI	Pulau Pagai	26.70 261		P	P	20 44 46.4	+1.4
	comp=Z,2μmcomp=Z,113nm,0.7s						
MNSI	Mandailing Nat	26.78 268		P	P	20 44 47.9	+2.1
	comp=Z,2μmcomp=Z,64nm,0.9s						
GIRL	Giralia	26.89 205		P	P	20 44 45.8	-0.8
	comp=Z,204nm,1.1s						
GIRL	Giralia	26.89 205		P	P	20 44 47.1	+0.5
GIRL				IAmb	IAmb	20 44 48.8	
	comp=Z,148nm,0.9s						
SISI	Saibi	27.42 264		P	P	20 44 51.7	+0.2
	comp=Z,120nm,0.9s						
SISI				pP	pP	20 44 59.2	-1.2
	comp=Z,120nm,0.9s						
PSI	Prapat	27.43 273		P	P	20 44 53.7	+1.9
GSI	Gunungsitoli	28.77 270		P	P	20 45 02.0	-1.6
GSI				IAmb	IAmb	20 45 06.4	
	comp=Z,134nm,1.0s						
GSI	Gunungsitoli	28.77 270		P	P	20 45 05.3	+1.7
TV1H	Townsville Har	28.90 137		P	P	20 45 04.9	+0.3
MEEK	Meekatharra	29.11 194		P	P	20 45 05.6	-0.7
	comp=Z,86nm,1.2s						
MEEK	Meekatharra	29.11 194		P	P	20 45 05.5	-0.9
CTAO	Charters Tower	29.12 139		P	P	20 45 05.7	-0.9
CTAO	Charters Tower	29.12 139		P	P	20 45 06.7	+0.1
CTAO	Charters Tower	29.12 139		P	P	20 45 05.7	-0.9
CTAO				pmax	pmax		
	comp=Z,22nm,0.9s						
SLVN	Son La	29.35 313		P	P	20 45 07.5	-1.2
SLVN				IAmb	IAmb	20 45 13.4	
	comp=Z,140nm,1.9s						
SLVN	Son La	29.35 313		P	P	20 45 08.8	+0.2
WHN	Wuhan	30.90 340		P	P	20 45 21.8	-0.4
NJ2	Nanjing	31.05 348	*e*	P	P	20 45 27.3	+3.8
NJ2				S	S	20 50 34.9	+8.3
NJ2				pmax	pmax		
	comp=Z,28nm,1.0s						
NJ2				LR	LR		
	comp=Z,670nm,17.1s						
NJ2				LR	LR		
	comp=Z,1μm,18.0s						
NJ2				LR	LR		
	comp=Z,460nm,22.7s						
GYA	Guiyang	31.09 324	⇑	P	P	20 45 23.8	-0.2
GYA				S	S	20 50 27.6	0.0
GYA				pmax	pmax		
	comp=Z,18nm,1.8s						
GYA				pmax	pmax		
	comp=Z,190nm,3.3s						
GYA				LR	LR		
	comp=Z,790nm,16.8s						
GYA				LR	LR		
	comp=Z,680nm,23.8s						
GYA				LR	LR		
	comp=Z,890nm,13.2s						
JNU	Nakatsue	31.59 7		P	P	20 45 28.1	-0.1
	comp=Z,48nm,1.1s,baz=166,slow=6.2,SNR=11						
JNU				LR	LR	20 57 16.9	
	comp=Z,436nm,20.3s,baz=188,slow=35						
	comp=Z,48nm,1.1s						
JNU	Nakatsue	31.59 7		P	P	20 45 27.7	-0.5
JNU				IAmb	IAmb	20 45 29.8	
	comp=Z,104nm,1.3s						
JNU	Nakatsue	31.59 7		P	P	20 45 28.3	0.0
CMAR	Chiang Mai Arr	31.65 304		P	P	20 45 27.8	-1.1
	comp=Z,8.7nm,0.8s,baz=122,slow=7.0,SNR=22						
CMAR				PcP	PcP	20 48 21.0	+0.3
	comp=Z,4.3nm,0.9s,baz=174,slow=1.2,SNR=7.3						
CMAR				ScP	ScP	20 52 04.8	+3.0
	comp=Z,1.2nm,0.8s,baz=120,slow=3.1,SNR=5.5						
	comp=Z,8.7nm,0.8s						
CMAR	Chiang Mai Arr	31.65 304		P	P	20 45 28.3	-0.7
CHTO	Chiang Mai	31.82 304		P	P	20 45 28.6	-1.8
CHTO	Chiang Mai	31.82 304		P	P	20 45 29.6	-0.8
CHTO	Chiang Mai	31.82 304		P	P	20 45 29.6	-0.8
CHTO	Chiang Mai	31.82 304		P	P	20 45 28.6	-1.8
CHTO				pmax	pmax		
	comp=Z,30nm,1.1s						
CHTO	Chiang Mai	31.82 304		P	P	20 45 29.4	-1.0
CHTO				PcP	PcP	20 48 22.4	+1.2
MORW	Morawa	32.11 197		P	P	20 45 32.2	-0.6
	comp=Z,85nm,1.3s						
MORW	Morawa	32.11 197		IAmb	IAmb	20 45 33.5	
	comp=Z,52nm,0.8s						
MORW	Morawa	32.11 197		P	P	20 45 32.6	-0.2
FORT	Forrest	32.30 177		P	P	20 45 33.6	-0.8
	comp=Z,66nm,0.7s						
FORT	Forrest	32.30 177		IAmb	IAmb	20 45 41.6	
	comp=Z,47nm,0.7s						
KMI	Kunming	32.61 318		P	P	20 45 38.0	+0.4
KMI				PcP	PcP	20 48 25.3	+1.8
KMI				ScP	ScP	20 52 07.8	+2.6
KMI				pmax	pmax		
	comp=Z,46nm,1.5s						
KMI				LR	LR		
	comp=Z,1μm,21.3s						
KMI				LR	LR		
	comp=Z,2μm,20.6s						
KMI				LR	LR		
	comp=Z,3μm,21.7s						
ENH	Enshi	32.65 332		P	P	20 45 36.1	-1.5
ENH				IAmb	IAmb	20 45 41.3	
	comp=Z,105nm,0.9s						
ENH	Enshi	32.65 332		P	P	20 45 36.4	-1.3
ENH	Enshi	32.65 332		P	P	20 45 36.8	-0.9
ENH				sP	sP	20 45 52.4	+2.0
JMN	Monobe	32.67 12		P	P	20 45 38.4	+0.6
JMN				IAmb	IAmb	20 45 39.7	
	comp=Z,96nm,1.1s						
JMN	Monobe	32.67 12		P	P	20 45 38.8	+1.0
QLP	Quilpie	32.95 150		P	P	20 45 38.8	-1.5
	comp=Z,61nm,1.0s						
QLP	Quilpie	32.95 150		P	P	20 45 39.6	-0.7

NWAO Narrogin (SRO) 35.46 193 P **P** **20 46 01.5 -0.4**
NWAO IAmb IAmb 20 46 02.8
comp=Z,125nm,1.3s
NWAO Narrogin (SRO) 35.46 193 P **P** **20 46 02.1 +0.1**
NWAO Narrogin (SRO) 35.46 193 P **P** **20 46 02.0 +0.1**
NWAO Narrogin (SRO) 35.46 193 P **P** **20 46 01.9 0.0**
NWAO Narrogin (SRO) 35.46 193 P **P** **20 46 01.5 -0.4**
NWAO pmax pmax
comp=Z,125nm,1.3s
BBOO Buckleboo 35.49 166 P **P** **20 46 00.9 -1.3**
comp=Z,122nm,0.8s
BBOO Buckleboo 35.49 166 IAmb IAmb 20 46 05.9
comp=Z,104nm,0.9s
BBOO Buckleboo 35.49 166 P **P** **20 46 01.2 -1.0**
TNCH TengChong 35.52 313 ⇓*i*P **P** **20 46 01.8 -1.0**
TNCH PP **PP** **20 47 24.3 +0.5**
TNCH S **S** **20 51 35.9 -0.6**
TNCH pmax pmax
comp=Z,45nm,0.9s
TNCH LR LR
comp=Z,730nm,19.7s
TNCH LR LR
comp=Z,820nm,18.5s
TNCH LR LR
comp=Z,2μm,22.3s
KSAR Wonju Array Be 35.64 2 P **P** **20 46 03.2 -0.2**
KSAR Wonju Array Be 35.64 2 P **P** **20 46 03.2 -0.2**
KSRS Korea Array 35.65 2 P **P** **20 46 03.8 +0.3**
comp=Z,7.5nm,0.7s,baz=180,slow=9.9,SNR=21
KSRS PcP **PcP** **20 48 31.6 0.0**
comp=Z,2.0nm,0.8s,baz=176,slow=3.7,SNR=4.1
comp=Z,7.5nm,0.7s
EIDS Eidsvold 35.99 140 P **P** **20 46 04.9 -1.6**
comp=Z,35nm,1.6s
EIDS Eidsvold 35.99 140 P **P** **20 46 05.5 -1.1**
EIDS IAmb IAmb 20 46 10.7
comp=Z,156nm,1.9s
EIDS Eidsvold 35.99 140 P **P** **20 46 05.6 -1.0**
WHYH Whyalla 36.09 164 P **P** **20 46 07.1 -0.2**
XAN Xi'an 36.11 335 ⇓P **P** **20 46 05.8 -1.7**
XAN pP pP 20 46 13.1 -3.5
XAN S **S** **20 51 44.6 -0.4**
XAN pmax pmax
comp=Z,72nm,1.5s
XAN LR LR
comp=Z,610nm,18.5s
XAN LR LR
comp=Z,960nm,16.5s
XAN LR LR
comp=Z,1μm,16.5s
CD2 Chengdu 36.11 326 P **P** **20 46 06.3 -1.3**
CD2 S **S** **20 51 48.1 +2.9**
CD2 pmax pmax
comp=Z,110nm,0.8s
CD2 LR LR
comp=Z,2μm,21.6s
CD2 LR LR
comp=Z,2μm,18.6s
STKA Stephens Creek 36.35 158 P **P** **20 46 08.6 -1.0**
comp=Z,338nm,0.8s
STKA Stephens Creek 36.35 158 P **P** **20 46 08.8 -0.8**
comp=Z,53nm,0.7s,baz=328,slow=9.4,SNR=83
STKA PcP **PcP** **20 48 33.7 -0.1**
comp=Z,15nm,0.8s,baz=300,slow=5.0,SNR=2.3
comp=Z,53nm,0.7s
STKA Stephens Creek 36.35 158 P **P** **20 46 09.1 -0.5**
STKA Stephens Creek 36.35 158 *i*P **P** **20 46 08.3 -1.3**
MAJO Matsushiro 36.40 16 P **P** **20 46 09.7 -0.4**
MAJO IAmb IAmb 20 46 12.2
comp=Z,65nm,1.0s
MAJO Matsushiro 36.40 16 P **P** **20 46 09.4 -0.6**
MAJO Matsushiro 36.40 16 *i*P **P** **20 46 07.5 -2.5**
MAJO pmax pmax
comp=Z,42nm,1.0s
MAJO Matsushiro 36.40 16 P **P** **20 46 09.7 -0.4**
MAJO PcP **PcP** **20 48 34.8 +0.8**
MJAR Matsushiro Arr 36.40 16 P **P** **20 46 08.8 -1.2**
comp=Z,24nm,0.9s,baz=184,slow=9.4,SNR=45
MJAR LR LR 21 00 34.2
comp=Z,1μm,21.4s,baz=215,slow=35
comp=Z,24nm,0.9s
MJAR Matsushiro Arr 36.40 16 P **P** **20 46 09.0 -1.0**
MJB9 Matsu-Tunnel 36.41 16 P **P** **20 46 10.3 +0.3**
MJB9 IAmb IAmb 20 46 13.1
comp=Z,63nm,1.0s
AUJCS Jamestown Cent 36.55 163 P **P** **20 46 11.1 -0.2**
HTT Hallett 36.86 162 P **P** **20 46 13.3 -0.6**
comp=Z,14nm,1.5s
HTT Hallett 36.86 162 P **P** **20 46 14.3 +0.3**
RKGY Rocky Gully 37.13 193 P **P** **20 46 17.3 +1.1**
comp=Z,244nm,1.1s
HNS HongShan 37.15 345 ⇑P **P** **20 46 15.9 -0.4**
HNS PcP **PcP** **20 48 37.1 +1.0**
HNS pmax pmax
comp=Z,27nm,1.6s
HNS LR LR
comp=Z,930nm,21.4s
HNS LR LR
comp=Z,240nm,12.0s
HNS LR LR
comp=Z,1μm,21.6s
AULRC Lightning Ridg 37.20 148 P **P** **20 46 15.8 -1.0**
DL2 Dalian 37.32 354 P **P** **20 46 18.3 +0.6**
DL2 S **S** **20 52 06.5 +3.2**
DL2 pmax pmax
comp=Z,250nm,1.4s
DL2 pmax pmax
comp=Z,1μm,6.5s
DL2 LR LR
comp=Z,2μm,23.9s
DL2 LR LR
comp=Z,2μm,21.4s
DL2 LR LR
comp=Z,2μm,21.3s
CMSA Cobar Meteorol 37.78 153 P **P** **20 46 21.2 -0.5**
comp=Z,27nm,0.9s
CMSA Cobar Meteorol 37.78 153 P **P** **20 46 21.6 -0.1**
AUMAR Marden Senior 38.14 164 P **P** **20 46 25.2 +0.5**
JMM Marumori 38.40 19 P **P** **20 46 27.5 +0.6**
AUMBR Murray Bridge 38.55 163 P **P** **20 46 28.6 +0.5**
LKP Lekhapani 38.81 314 *e*P P 20 46 21.4 -9.1
LKP IAmb IAmb 20 46 26.3
comp=Z,242nm,1.1s
IMP Imphal 38.85 309 *e*P **P** **20 46 28.0 -2.9**
KOHI KOHIMA 39.19 310 *e*P **P** **20 46 31.6 -2.3**
KOHI IAmb IAmb 20 46 39.6
comp=Z,95nm,0.9s
MOKO MOKOCHONG 39.21 312 *e*P **P** **20 46 32.3 -1.8**
MOKO IAmb IAmb 20 46 40.2
comp=Z,69nm,0.7s
BJT Baijiatuan 39.29 348 P **P** **20 46 33.9 -0.4**
BJT Baijiatuan 39.29 348 P **P** **20 46 34.1 -0.2**
BJT Baijiatuan 39.29 348 P **P** **20 46 33.9 -0.4**
BJT pmax pmax
comp=Z,51nm,1.0s
BJT Baijiatuan 39.29 348 P **P** **20 46 34.3 0.0**
BJT pP **pP** **20 46 44.2 +0.8**
BJI Beijing 39.31 348 P **P** **20 46 34.3 -0.1**
BJI pP **pP** **20 46 39.3 -4.3**
BJI PcP **PcP** **20 48 44.0 +1.2**
BJI S **S** **20 52 33.9 +0.6**
BJI pmax pmax
comp=Z,18nm,0.8s
BJI LR LR
comp=Z,240nm,22.9s
BJI LR LR
comp=Z,230nm,23.5s
BJI LR LR
comp=Z,310nm,20.5s
AUDCS Dubbo College 39.76 150 P **P** **20 46 38.4 0.0**
AUPHS Peel High Scho 40.07 146 P **P** **20 46 41.4 +0.4**
LZDM Lanzhou Array 40.08 331 P **P** **20 46 40.2 -1.1**
comp=Z,3.4nm,0.4s,baz=169,slow=16,SNR=4.9
LZDM PcP **PcP** **20 48 46.4 +0.6**
comp=Z,12nm,0.6s,baz=160,slow=4.7,SNR=5.9
comp=Z,3.4nm,0.4s
LZH Lanzhou 40.11 331 *e*P **P** **20 46 40.4 -1.0**
LZH PcP **PcP** **20 48 47.1 +1.4**
LZH pmax pmax
comp=Z,100nm,1.3s
LZH pmax pmax
comp=Z,520nm,4.1s
LZH LR LR
comp=Z,1μm,16.3s
LZH LR LR
comp=Z,840nm,17.5s
LZH LR LR
comp=Z,2μm,17.5s
ITAN ITANAGAR 40.26 312 *e*P **P** **20 46 41.7 -0.8**
ZIRO ZIRO 40.37 313 *e*P **P** **20 46 42.5 -1.3**
TEZP TEZPUR 40.67 311 *e*P **P** **20 46 44.3 -1.7**
TEZP IAmb IAmb 20 46 49.7
comp=Z,64nm,1.3s
SHL Shillong 40.83 309 P **P** **20 46 46.3 -1.2**
SHL IAmb IAmb 20 46 50.6
comp=Z,169nm,1.2s
SHL Shillong 40.83 309 P **P** **20 46 46.4 -1.2**
SNR=43
SHL Shillong 40.83 309 *e*P **P** **20 46 45.8 -1.8**
SHL IAmb IAmb 20 46 51.0
comp=Z,126nm,1.2s
SHL Shillong 40.83 309 P **P** **20 46 46.3 -1.2**
SHL pmax pmax
comp=Z,169nm,1.2s
ARPS Mount Arapiles 40.85 161 P **P** **20 46 47.4 +0.1**
comp=Z,47nm,0.8s
MSHR Mys Shultsa 40.97 5*ce*P **P** **20 46 50.7 +2.5**
MSHR pmax pmax
comp=Z,50nm,1.7s
JTM Tenmabayashi 41.17 17 P **P** **20 46 50.6 +0.7**
JTM IAmb IAmb 20 46 51.8
comp=Z,107nm,0.9s
HHC Hu-ho-hao-te 41.25 343 *e*P **P** **20 46 52.3 +1.7**
HHC sP pP 20 46 56.3 -3.5
HHC pmax pmax
comp=Z,19nm,1.6s
HHC pmax pmax
comp=Z,130nm,5.2s
HHC LR LR
comp=Z,740nm,21.0s
HHC LR LR
comp=Z,500nm,19.3s
HHC LR LR
comp=Z,990nm,21.0s
GUWA GUWAHATI 41.30 309 *e*P **P** **20 46 49.3 -1.8**
YNG Young 41.33 152 P **P** **20 46 51.5 +0.1**
comp=Z,38nm,0.9s
BTO Baotou 41.50 341 *e*P **P** **20 46 56.1 +3.4**
BTO S **S** **20 53 09.9 +3.6**
BTO pmax pmax
comp=Z,11nm,0.5s
BTO pmax pmax
comp=Z,890nm,5.2s
BTO LR LR
comp=Z,1μm,20.2s
BTO LR LR
comp=Z,1μm,16.5s
BTO LR LR
comp=Z,2μm,20.2s
VLA Vladivostok 41.58 6 *i*P **P** **20 46 53.8 +0.7**
MGCD Mangrove Creek 41.81 148 P **P** **20 46 55.1 -0.1**
comp=Z,65nm,0.8s
MGCD Mangrove Creek 41.81 148 P **P** **20 46 55.9 +0.7**
TAWA Tawang 41.89 311 *e*P **P** **20 46 55.8 -0.6**
TAWA IAmb IAmb 20 47 04.0
comp=Z,121nm,1.1s
CN2 Changchun 41.97 359 P **P** **20 46 57.4 +1.0**
CN2 S **S** **20 53 13.1 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.7s
CN2 LR LR
comp=Z,710nm,19.0s
CN2 LR LR
comp=Z,460nm,19.0s
CN2 LR LR
comp=Z,860nm,19.0s
SYDH Sydney Hard Ro 42.05 149 P **P** **20 46 57.7 +0.5**
BRAT Ballarat 42.27 159 P **P** **20 46 59.6 +0.7**
AUMTS Mt Stromlo 42.45 152 P **P** **20 47 00.9 +0.4**
CAN Canberra 42.45 152 P **P** **20 47 00.6 +0.1**
comp=Z,63nm,0.9s
CAN Canberra 42.45 152 P **P** **20 46 59.5 -1.0**
CAN Canberra 42.45 152 P **P** **20 47 01.1 +0.6**
CAN Canberra 42.45 152 P **P** **20 46 59.5 -1.0**
CAN pmax pmax
comp=Z,37nm,0.8s
CAN Canberra 42.45 152 P **P** **20 47 01.1 +0.6**
CAN PcP **PcP** **20 48 53.3 +0.1**
CNB Canberra Magne 42.62 152 P **P** **20 47 02.1 +0.2**
USRK Ussuriysk Ar. 42.66 6 P **P** **20 47 02.4 +0.4**
comp=Z,34nm,0.9s,baz=196,slow=7.5,SNR=22
comp=Z,34nm,0.9s
TOO Toolangi 42.87 157 P **P** **20 47 04.2 +0.3**
comp=Z,18nm,2.3s
TOO Toolangi 42.87 157 P **P** **20 47 04.0 +0.1**
TOO Toolangi 42.87 157 P **P** **20 47 04.0 +0.1**
TOO pmax pmax
comp=Z,34nm,1.6s
MDJ Mudanjiang 42.87 3 P **P** **20 47 03.4 -0.3**
MDJ Mudanjiang 42.87 3 P **P** **20 47 04.5 +0.8**
MDJ pmax pmax
comp=Z,37nm,1.2s
MDJ Mudanjiang 42.87 3 P **P** **20 47 04.3 +0.6**
XLT XiLinHaoTe 43.04 349 *e*P **P** **20 47 05.9 +0.7**
XLT PP **PP** **20 48 48.8 +3.2**
XLT S **S** **20 53 33.3 +4.4**
XLT pmax pmax
comp=Z,34nm,1.2s
XLT LR LR
comp=Z,63nm,24.4s
XLT LR LR
comp=Z,550nm,18.3s
XLT LR LR
comp=Z,710nm,24.4s
AUSMG Snowy Mountain 43.18 153 P **P** **20 47 07.3 +0.9**
LSA Lhasa 43.55 313 P **P** **20 47 10.0 0.0**
SANVU Saraoutou 43.82 114 P **P** **20 47 11.2 -0.6**
SANVU IAmb IAmb 20 47 13.4
comp=Z,91nm,1.1s
BNX BinXian 43.91 1 ⇓P **P** **20 47 11.5 -0.6**
BNX pmax pmax
comp=Z,18nm,1.4s
SHBG Sahibganj 44.03 305 *e*P **P** **20 47 13.7 +0.3**
ASAJ Asahikawa 44.67 17 P **P** **20 47 19.5 +1.3**
comp=Z,48nm,0.8s,baz=229,slow=16,SNR=12
comp=Z,48nm,0.8s
ASAJ Asahikawa 44.67 17 P **P** **20 47 18.5 +0.3**
ASAJ pmax pmax
comp=Z,90nm,1.0s
JKA Kamikawa-asahi 44.67 17 P **P** **20 47 18.4 +0.3**
JKA IAmb IAmb 20 47 20.3
comp=Z,90nm,1.0s
GTA Gaotai 44.69 331 P **P** **20 47 18.3 -0.3**
GTA PcP **PP** **20 49 02.3 -1.0**
GTA ScP **ScP** **20 52 51.4 +0.6**
GTA ScS **ScS** **20 57 13.9 -0.3**
GTA pmax pmax
comp=Z,22nm,0.9s
GTA LR LR
comp=Z,460nm,20.0s
GTA LR LR
comp=Z,650nm,22.2s
GTA LR LR
comp=Z,1μm,24.4s
BOK Bokaro 44.92 303 *e*P **P** **20 47 19.6 -1.0**
GOMU GeErMu 45.09 323 P **P** **20 47 21.5 -0.6**
GOMU pmax pmax
comp=Z,30nm,1.5s
RAGD RAYAGADA 45.47 296 *e*P **P** **20 47 24.6 -0.4**
RAGD IAmb IAmb 20 47 29.1
comp=Z,61nm,1.0s
PALK Pallekele 45.83 278 P **P** **20 47 27.5 -0.5**
PALK Pallekele 45.83 278 P **P** **20 47 27.5 -0.5**
PALK Pallekele 45.83 278 *i*P **P** **20 47 28.2 +0.3**
PALK pmax pmax
comp=Z,43nm,1.0s
GAYA Gaya 45.87 304 *e*P **P** **20 47 26.9 -1.1**
GAYA IAmb IAmb 20 47 33.1
comp=Z,78nm,1.2s
EVN Everest 45.95 308 P **P** **20 47 28.1 -1.3**
YATNC Mamie plateau, 46.05 123 P **P** **20 47 30.0 +0.5**
YSS Yuzhno-Sakhali 47.33 15 *e*P **P** **20 47 38.2 -0.8**
YSS pmax pmax
comp=Z,50nm,1.1s
BLSP Bilaspur 47.55 299 *e*P **P** **20 47 41.1 -0.2**
BLSP IAmb IAmb 20 47 44.5
comp=Z,76nm,1.1s
HIA Hailar 47.77 354 P **P** **20 47 42.8 +0.3**
HIA Hailar 47.77 354 P **P** **20 47 43.3 +0.8**
HIA Hailar 47.77 354 P **P** **20 47 42.8 +0.3**
HIA pmax pmax
comp=Z,185nm,1.5s
HILR Hailar Array B 48.05 354 P **P** **20 47 44.2 -0.6**
comp=Z,46nm,1.0s,baz=171,slow=10,SNR=26
HILR PcP **PcP** **20 49 12.1 -0.2**
comp=Z,14nm,0.6s,baz=149,slow=5.5,SNR=5.1
comp=Z,46nm,1.0s
HEH HeiHe 48.43 1 *e*P **P** **20 47 46.9 -0.6**
HEH pmax pmax
comp=Z,69nm,1.1s
HEH LR LR
comp=Z,740nm,19.3s
HEH LR LR
comp=Z,990nm,17.7s
HEH LR LR
comp=Z,1μm,20.6s
SALM Salem 48.77 284 *e*P **P** **20 47 51.4 +0.6**
SALM IAmb IAmb 20 47 54.6
comp=Z,63nm,1.1s
ULN Ulaanbaatar 48.97 343 P **P** **20 47 51.0 -1.0**
ULN Ulaanbaatar 48.97 343*ce*P **P** **20 47 51.9 0.0**
ULN pmax pmax
comp=Z,31nm,1.0s
ULN Ulaanbaatar 48.97 343 P **P** **20 47 51.2 -0.7**
ULN PcP **PcP** **20 49 16.3 +0.5**
SONM Songino Array 49.14 342 P **P** **20 47 52.5 -0.7**
comp=Z,14nm,0.8s,baz=160,slow=7.9,SNR=52
SONM PcP **PcP** **20 49 16.6 +0.3**
comp=Z,9.6nm,0.7s,baz=165,slow=4.2,SNR=6.1
comp=Z,14nm,0.8s
KOD Kodaikanal 49.31 282 *e*P **P** **20 47 53.1 -2.1**
HYBB Hyderabad (bro 49.49 292 *e*P **P** **20 47 56.7 +0.4**
HYBB *ep*P **pP** **20 48 06.5 +0.8**
GRNR Gornyy 49.67 8 ⇓*i*P **P** **20 47 58.3 +1.2**
GRNR pmax pmax
comp=N,10.0nm,0.8s
GRNR pmax pmax
comp=Z,20nm,1.1s
TYV Tymovskoe 50.93 13 *e*P **P** **20 48 05.3 -1.3**
TYV pmax pmax
comp=Z,300nm,2.6s
TYV pmax pmax
comp=Z,47nm,1.6s
CIT Chita 51.33 350 *e*P **P** **20 48 10.6 +1.0**
CIT *e* 20 48 21.6
CIT *e* 20 49 23.6
CIT *e* 20 55 37.6
CIT pmax pmax
comp=Z,353nm,1.7s
AKL Akola 51.69 295 *e*P **P** **20 48 10.8 -2.1**
AKL IAmb IAmb 20 48 13.6
comp=Z,78nm,1.4s
JHNI Jhansi 51.75 301 *e*P **P** **20 48 10.5 -2.7**
JHNI IAmb IAmb 20 48 15.2
comp=Z,76nm,1.2s
LGTI Lohaghat 51.79 307 *e*P **P** **20 48 11.3 -2.1**
LGTI IAmb IAmb 20 48 16.7
comp=Z,35nm,1.0s
ZEA Zeya 51.91 1 *e*P **P** **20 48 13.7 -0.2**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,20nm,0.8s
BHPL Bhopal 52.02 298 *e*P **P** **20 48 14.0 -1.3**
BHPL IAmb IAmb 20 48 18.6
comp=Z,55nm,1.0s
NRDN NARMADA NAGAR 52.10 298 *e*P **P** **20 48 17.3 +1.4**
NRDN IAmb IAmb 20 48 22.8
comp=Z,102nm,1.4s
ZAK Zakamensk 52.35 342 *e*P **P** **20 48 16.5 -0.9**
ZAK pmax pmax
comp=Z,19nm,1.6s
GUNA GUNA 52.53 300 *e*P **P** **20 48 17.7 -1.3**
GUNA IAmb IAmb 20 48 22.1
comp=Z,103nm,0.7s
JOSI Joshimath 52.78 308 *e*P **P** **20 48 19.8 -1.2**
JOSI IAmb IAmb 20 48 24.3
comp=Z,51nm,0.9s
TLY Talaya 53.38 343 *i*P **P** **20 48 24.3 -0.5**
TLY pmax pmax
comp=Z,23nm,1.1s
KAD Karad 53.55 290 *e*P **P** **20 48 23.3 -3.4**
FUNA Funafuti 53.63 102 P **P** **20 48 26.9 -0.4**
FUNA Funafuti 53.63 102 P **P** **20 48 27.8 +0.5**
IRK Irkutsk 53.69 343 *e*P **P** **20 48 25.9 -1.2**
IRK pmax pmax
comp=Z,74nm,2.0s
AYAN Aya Nagar 53.97 304 *e*P **P** **20 48 27.8 -1.7**
AYAN IAmb IAmb 20 48 32.4
comp=Z,43nm,1.1s
NPLP NPLP New Delhi 53.98 305 *e*P **P** **20 48 27.0 -2.7**
MOY Mondy 54.20 341 *e*P **P** **20 48 31.1 +0.2**
MOY pmax pmax
comp=Z,50nm,2.4s
WMQ Urumqi 54.21 326 *e*P **P** **20 48 31.3 +0.2**
WMQ pmax pmax
comp=Z,93nm,1.1s
WMQ LR LR
comp=Z,990nm,19.5s
WMQ LR LR
comp=Z,1μm,20.3s
WMQ LR LR
comp=Z,1μm,20.3s
KUDL Kundal 54.38 304 *e*P **P** **20 48 30.2 -2.3**
KUDL IAmb IAmb 20 48 34.9
comp=Z,65nm,0.8s
MSVF Nonsavu 54.42 113 P **P** **20 48 33.7 +0.6**
KNGR Kungurtug, Tuv 54.54 338 *i*P **P** **20 48 33.3 -0.2**
KNGR pmax pmax
comp=Z,24nm,1.2s
SMLA Simla 54.90 308 *e*P **P** **20 48 34.9 -1.4**
SMLA IAmb IAmb 20 48 40.2
comp=Z,71nm,1.0s
UDPR Udaipur 55.66 299 *e*P **P** **20 48 40.0 -1.9**
ALCI Alchi Leh 56.11 311 *e*P **P** **20 48 44.1 -1.3**
ALCI IAmb IAmb 20 48 48.8
comp=Z,18nm,1.2s
TSSA Tissa 56.35 309 *e*P **P** **20 48 45.2 -1.7**
PETK Petropavlovsk- 57.48 22 P **P** **20 48 54.4 +0.1**
comp=Z,26nm,0.7s,baz=184,slow=4.3,SNR=25
comp=Z,26nm,0.7s
ZSN Zaisan 58.04 328 *e*P **P** **20 48 57.4 -1.0**
ZSN Zaisan 58.04 328 *e*P **P** **20 48 57.4 -1.0**
DGZ Jazzator, Alta 58.21 331 *i*P **P** **20 48 56.7 -3.0**
DGZ pmax pmax
comp=Z,17nm,0.8s
SHLS Shalkode 58.71 321 *e*P **P** **20 49 00.4 -2.8**
comp=Z,18nm,0.9s
SHLS Shalkode 58.71 321 *e*P **P** **20 49 00.4 -2.8**
SHLS pmax pmax
comp=Z,18nm,0.9s
PRZ Przheval'sk 59.03 320 **P** **20 49 04.9 -0.7**
PRZ Przheval'sk 59.03 320 P **P** **20 49 04.9 -0.7**
PRZ pmax pmax
comp=Z,102nm,1.0s
MK31 Makanchi Array 59.05 326*ce*P **P** **20 49 05.0 -0.4**
MKAR Makanchi Array 59.05 326 P **P** **20 49 04.0 -1.4**
comp=Z,71nm,0.8s,baz=124,slow=7.6,SNR=69
comp=Z,71nm,0.8s
MKAR Makanchi Array 59.05 326*ce*P **P** **20 49 04.0 -1.4**
MKAR pmax pmax
comp=Z,72nm,0.8s
TARG Taragay, Kyrgy 59.05 319 IAmb IAmb 20 49 12.0
comp=Z,50nm,1.1s
MAKZ Makanchi 59.23 326 P **P** **20 49 05.7 -0.9**
MAKZ pP **pP** **20 49 15.4 -0.7**
KSH Kashi 59.25 316 P **P** **20 49 07.4 +0.3**
KSH sP pP 20 49 14.8 -1.8
KSH pmax pmax
comp=Z,23nm,1.0s
SATY Saty 59.32 321 *e*P **P** **20 49 06.4 -1.1**
comp=Z,27nm,0.9s
SATY Saty 59.32 321 *e*P **P** **20 49 06.4 -1.1**
SATY pmax pmax
comp=Z,27nm,0.9s
KDJ Kajisay 59.65 319 P **P** **20 49 08.7 -1.1**
KDJ IAmb IAmb 20 49 14.6
comp=Z,60nm,0.9s
KDJ Kajisay 59.65 319 P **P** **20 49 08.7 -1.1**
KDJ pmax pmax
comp=Z,60nm,0.9s
LBZ Lake Benmore 60.20 145 P **P** **20 49 12.7 -0.6**
LBZ IAmb IAmb 20 49 18.1
comp=Z,50nm,0.9s
TNSS Tian-Shan 60.24 320 *e*P **P** **20 49 12.8 -1.4**

TNSS Tian-Shan 60.24 320 *e*P P 20 49 12.7 -1.4
ARXS Arharly 60.27 322 *e*P P 20 49 12.6 -1.3
YAK Yakutsk 60.28 2 P P 20 49 13.5 +0.1
comp=Z,150nm,0.7s,baz=195,slow=0.4,SNR=87
comp=Z,150nm,0.7s
YAK Yakutsk 60.28 2 P P 20 49 13.6 +0.1
YAK Yakutsk 60.28 2 *e*P P 20 49 12.9 -0.6
YAK *e**PP **sP** 20 49 29.3 +2.6
YAK *e* 20 51 36.1
YAK *e*S **S** 20 57 22.3 -3.0
YAK *e**SS **sS** 20 57 43.6 +2.6
YAK *e*SS **SS** 21 01 19.3 -3.9
YAK pmax pmax
comp=Z,145nm,0.9s
YAK pmax pmax
comp=N,55nm,1.1s
YAK pmax pmax
comp=E,6.0nm,0.7s
YAK pmax pmax
comp=Z,497nm,4.2s
YAK pmax pmax
comp=N,668nm,3.8s
YAK pmax pmax
comp=E,781nm,4.5s
YAK smax smax
comp=E,161nm,2.6s
YAK smax smax
comp=N,191nm,3.2s
YAK Yakutsk 60.28 2 P P 20 49 13.9 +0.4
YAK pP **pP** 20 49 23.3 +0.3
TDK Taldyqorghan 60.31 323 *e*P P 20 49 13.2 -1.0
comp=N,16nm,0.7s
TDK Taldyqorghan 60.31 323 *e*P P 20 49 13.2 -1.0
TDK pmax pmax
comp=Z,16nm,0.7s
ULHL Ulahol 60.32 319 P P 20 49 14.3 -0.2
SNR=15
BOOM Boomskoye usch 60.63 319 IAmb IAmb 20 49 21.2
comp=Z,39nm,1.1s
MA2 Magadan 60.79 14 P P 20 49 18.0 +0.9
comp=Z,56nm,0.8s,baz=200,slow=6.6,SNR=12
comp=Z,56nm,0.8s
MA2 Magadan 60.79 14 IAmb IAmb 20 49 19.3
comp=Z,81nm,0.9s
MA2 Magadan 60.79 14 *ce*P P 20 49 19.0 +1.9
MA2 pmax pmax
comp=Z,48nm,1.0s
MA2 Magadan 60.79 14 P P 20 49 18.2 +1.1
comp=Z,122nm,1.0s
TKM2 Tokmak 2 61.05 319 P P 20 49 18.6 -0.9
SNR=26
BKZ Black Stump Fm 61.31 137 P P 20 49 19.4 -1.7
BKZ IAmb IAmb 20 49 25.3
comp=Z,37nm,1.2s
BKZ Black Stump Fm 61.31 137 P P 20 49 20.2 -0.9
KBK Karagaybulak 61.36 319 P P 20 49 25.5 +4.0
SNR=18
RTZ Ruatahuna 61.39 136 P P 20 49 19.7 -1.9
RTZ IAmb IAmb 20 49 26.2
comp=Z,70nm,1.1s
UCH Uchtor 61.45 318 P P 20 49 20.9 -1.6
SNR=45
CHMS Chumysh 61.64 319 P P 20 49 26.9 +3.6
SNR=10.0
AAK Ala-Archa 61.65 319 P P 20 49 22.0 -1.5
AAK IAmb IAmb 20 49 28.3
comp=Z,43nm,1.2s
AAK Ala-Archa 61.65 319 P P 20 49 23.1 -0.3
AAK Ala-Archa 61.65 319 P P 20 49 23.3 -0.1
SNR=21
AAK Ala-Archa 61.65 319 *ce*P P 20 49 23.2 -0.3
AAK pmax pmax
comp=Z,31nm,1.0s
SGDS Sogindy 61.93 320 *e*P P 20 49 24.0 -1.2
USP Ospenovka 61.93 319 P P 20 49 24.0 -1.1
SNR=34
MCQ Macquarie Isla 62.10 159 P P 20 49 22.9 -3.1
EKS2 Erkin-Say 62.13 318 P P 20 49 26.1 -0.5
SNR=25
ZALV Zalesovo Beam 62.26 334 P P 20 49 25.5 -1.6
comp=Z,6.6nm,0.5s,baz=112,slow=6.6,SNR=27
comp=Z,6.6nm,0.5s
ZALV Zalesovo Beam 62.26 334 *i* P P 20 49 25.5 -1.6
ZALV pmax pmax
comp=Z,6.0nm,0.5s
KBL Kabul 62.49 308 P P 20 49 29.2 -0.2
BTLS Baital 63.03 321 *e*P P 20 49 31.1 -1.3
BTLS Baital 63.03 321 *e*P P 20 49 31.1 -1.3
KURBB Kurchatov Arra 63.28 328 P P 20 49 32.8 -1.2
comp=Z,45nm,0.8s,baz=127,slow=6.1,SNR=129
comp=Z,45nm,0.8s
KURK Kurchatov 63.28 328 P P 20 49 32.4 -1.6
KURK Kurchatov 63.28 328 P P 20 49 33.2 -0.8
KURK Kurchatov 63.28 328 *ce*P P 20 49 32.9 -1.1
KURK pmax pmax
comp=Z,88nm,0.8s
KURK Kurchatov 63.28 328 P P 20 49 32.7 -1.3
KURK pP **pP** 20 49 42.8 -0.7
DZA Taraz 63.86 318 *e*P P 20 49 36.9 -1.1
DZA Taraz 63.86 318 *e*P P 20 49 36.9 -1.1
SEY Seymchan 64.12 13 P P 20 49 40.5 +1.2
comp=Z,30nm,1.0s,baz=210,slow=7.4,SNR=16
comp=Z,30nm,1.0s
SEY Seymchan 64.12 13 *ce*P P 20 49 41.0 +1.7
SEY pmax pmax
comp=Z,113nm,1.7s
IUG Iuzhnay 64.44 317 *e*P P 20 49 40.8 -1.2
comp=Z,25nm,1.0s
IUG Iuzhnay 64.44 317 *e*P P 20 49 40.7 -1.2
IUG pmax pmax
comp=Z,25nm,1.0s
CHM Chimkent 64.80 317 *e*P P 20 49 43.1 -1.1
CHM Chimkent 64.80 317 *e*P P 20 49 43.1 -1.1
BRLS Boroldaу 64.92 318 *e*P P 20 49 43.6 -1.4
BRLS Boroldaу 64.92 318 *e*P P 20 49 43.5 -1.4
BRZS Berezniki 66.16 325 *e*P P 20 49 51.8 -1.0
BRZS Berezniki 66.16 325 *e*P P 20 49 51.8 -1.0
JLN Jalan Bani Buh 68.06 293 P P 20 50 05.6 +0.2
WBK Wadi Bani Khal 68.52 294 P P 20 50 08.5 +0.2
CASY Casey 68.73 187 P P 20 50 08.5 -0.1
CASY Casey 68.73 187 P P 20 50 08.5 -0.1
CASY PcP **PcP** 20 50 31.4 -1.9
BVAR Borovoye Array 68.85 328 P P 20 50 08.7 -1.0
comp=Z,48nm,1.0s,baz=120,slow=8.8,SNR=54
comp=Z,48nm,1.0s
DRV Dumont d'Urvil 68.86 174 P P 20 50 09.4 0.0
BORK Borovoye 68.90 328 *ce*P P 20 50 09.4 -0.6
BORK pmax pmax
comp=Z,72nm,1.0s
MHTO MHTO 69.25 292 P P 20 50 13.0 +0.2
SNR=7.2
JMDO Jabal Madar 69.28 293 P P 20 50 13.3 +0.2
SNR=6.0
SMDO Samad 69.42 294 P P 20 50 15.1 +1.1
TIXI Tiksi 69.91 1 P P 20 50 14.9 -0.9
TIXI IAmb IAmb 20 50 16.8
comp=Z,75nm,1.1s
TIXI Tiksi 69.91 1 *ce*P P 20 50 15.0 -0.9
TIXI pmax pmax
comp=Z,91nm,1.3s
TIXI Tiksi 69.91 1 P P 20 50 15.1 -0.8
HOQ Hoqain 70.16 294 P P 20 50 18.8 +0.4
BSY Bisya 70.16 293 P P 20 50 18.8 +0.3
ARQ Araqi 70.85 294 P P 20 50 22.7 +0.1
SNR=5.7
SHAO Shalim 71.17 288 P P 20 50 24.8 +0.2
UOSS Minazif 71.33 296 P P 20 50 24.9 -0.6
UOSS Minazif 71.33 296 P P 20 50 26.7 +1.2
BANOM Banah 71.36 297 P P 20 50 26.2 +0.5
HATD Hatta, Dubai 71.38 296 P P 20 50 26.3 +0.5
MASF Masafi 71.42 296 P P 20 50 26.7 +0.6
ASHO Ashiyiah 71.43 295 P P 20 50 26.5 +0.3
SHME Shamm 71.52 297 P P 20 50 27.2 +0.5
ALNE Al Ain 71.63 295 P P 20 50 27.1 -0.3
SNR=17
BILL Bilibino 71.64 15 *ce*P P 20 50 27.4 +0.9
BILL pmax pmax
comp=Z,59nm,2.5s
NAZ Nazwa, Dubai 71.82 296 P P 20 50 28.9 +0.5
SNR=5.3
UMZA Um Al Zommool 72.03 293 P P 20 50 28.2 -1.6
ASUD Al Ashush, Dub 72.08 295 P P 20 50 29.2 -0.8
SNR=10.0
NRIK Noril'sk 72.34 347 P P 20 50 30.5 -0.2
comp=Z,50nm,0.7s,baz=126,slow=6.1,SNR=68
comp=Z,50nm,0.7s
NRIK Noril'sk 72.34 347 IAmb IAmb 20 50 31.7
comp=Z,72nm,0.8s
NRIK Noril'sk 72.34 347 *ce*P P 20 50 30.8 +0.1
NRIK pmax pmax
comp=Z,82nm,0.9s
AJN Ajban 72.38 295 P P 20 50 31.1 -0.7
SNR=9.1
DOK Doka 72.63 289 P P 20 50 31.5 -1.9
SNR=5.3
WHFO Wadi Hawf 72.92 288 P P 20 50 34.0 -1.2
MZWR Madinat Zayed 73.30 294 P P 20 50 36.7 -0.6
ABTO Aybut 73.34 288 P P 20 50 37.4 -0.3
MZR Muzera 73.60 293 P P 20 50 38.3 -0.8
SNR=10
NIKH Nikolski High 73.72 35 P P 20 50 40.8 +1.6
baz=250
GHWR Ruwais 74.24 294 P P 20 50 41.7 -1.1
JRN Qarnain Island 74.35 295 P P 20 50 43.2 -0.2
SNR=7.3
SPIA Saint Paul Isl 74.46 30 P P 20 50 44.6 +1.2
baz=248
SLWR Sila 75.33 294 P P 20 50 50.5 +1.5
UNV Unalaska Valle 75.33 34 P P 20 50 49.7 +1.2
baz=252
SVE Sverdlovsk 75.52 329 *e*P P 20 50 49.0 -0.5
SVE pmax pmax
comp=Z,146nm,1.9s
TRNA Turayna 75.82 295 P P 20 50 52.5 +0.6
SNR=5.6
KIP Kipapa 76.02 68 *ce*P P 20 50 55.5 +2.4
KIP pmax pmax
comp=Z,119nm,2.5s
SHMA Al-Shehemyia 76.14 296 P P 20 50 53.4 -0.3
SMRA Abu-Samra 76.17 295 P P 20 50 53.8 -0.1
SNR=8.2
ARTI Arti 76.56 328 P P 20 50 53.6 -1.9
ARTI IAmb IAmb 20 50 58.6
comp=Z,43nm,0.8s
ARTI Arti 76.56 328 *c i*P P 20 50 54.1 -1.4
ARTI 20 53 42.6
ARTI S **S** 21 00 36.7 -2.6
ARTI SS **SS** 21 05 29.2 -5.6
ARTI pmax pmax
comp=Z,131nm,2.0s
ARTI Arti 76.56 328 P P 20 50 54.1 -1.4
ARTI sP **sP** 20 51 09.1 +0.1
CCD Concordia, Ant 76.68 181 P P 20 50 57.2 +0.9
FALS False Pass 77.35 34 P P 20 51 01.0 +1.1
baz=254
M11K Mekoryuk 77.56 28 P P 20 51 02.5 +1.6
baz=251
MLH Mauna Loa 78.38 71 P P 20 51 06.1 -0.6
TNA Tin City 78.63 23 P P 20 51 08.9 +2.1
baz=248
K13K Kusilvak Mount 78.77 27 IAmb IAmb 20 51 10.8
comp=Z,105nm,1.2s
K13K Kusilvak Mount 78.77 27 P P 20 51 09.4 +1.8
baz=252
M13K Dall Lake 78.92 28 P P 20 51 09.7 +1.2
baz=254
SDPT Sand Point 79.11 34 P P 20 51 10.3 +0.7
baz=257
F14K Arctic Creek 79.22 23 P P 20 51 12.0 +2.0
baz=250
KBD Kabd 79.29 299 P P 20 51 10.9 -0.3
ANM Nome 79.30 24 P P 20 51 11.8 +1.3
baz=251
L14K Kuka Creek 79.49 28 P P 20 51 12.8 +1.2
baz=254,SNR=11
CHNA Chernabura Isl 79.50 34 P P 20 51 12.4 +0.7
baz=258
J14K Nanvaranak Lak 79.50 26 P P 20 51 13.1 +1.5
baz=253
N14K Kuskokwak Cree 79.59 29 P P 20 51 13.2 +1.1
baz=255
O14K Tigyukauivet M 79.62 30 P P 20 51 13.6 +1.3
baz=256
M14K Bethel 79.67 28 P P 20 51 13.6 +1.1
baz=255,SNR=6.2
S14K Fog Glacier 79.83 33 P P 20 51 14.7 +1.0
baz=258
F15K North Star Dit 79.96 23 P P 20 51 15.6 +1.5
baz=251
G15K Niukluk 79.98 24 P P 20 51 15.5 +1.4
baz=252
L15K Ungalak Mounta 80.14 27 P P 20 51 16.4 +1.3
baz=255
M15K Kasigluk River 80.26 29 P P 20 51 16.8 +1.0
baz=256
ABPO Ambohimpanom 80.27 251 P P 20 51 16.3 -0.6
ABPO Ambohimpanom 80.27 251 P P 20 51 16.3 -0.6
ABPO pmax pmax
comp=Z,23nm,0.9s
ABPO Ambohimpanom 80.27 251 P P 20 51 17.0 +0.1
K15K Wolf Creek Mou 80.28 27 IAmb IAmb 20 51 19.3
comp=Z,89nm,1.1s
K15K Wolf Creek Mou 80.28 27 P P 20 51 17.1 +1.3
baz=255,SNR=7.6
O15K Ungalikthiuk R 80.33 30 P P 20 51 17.4 +1.2
baz=257
AKT Akhty 80.38 312 *e*P P 20 51 16.5 -0.5
AKT *e* 20 51 23.9
AKT *e*S **S** 21 01 20.0 -1.1
AKT pmax pmax
comp=Z,44nm,1.0s
N15K Kwethluk River 80.42 29 P P 20 51 17.3 +0.6
baz=256
C16K Lisburne Hills 80.55 21 P P 20 51 18.0 +0.9
baz=250
H16K Elim 80.61 24 P P 20 51 18.8 +1.2
baz=254
G16K Koyuk River 80.77 24 P P 20 51 19.3 +0.9
baz=254
VOI Vohitsoka 80.94 248 P P 20 51 19.7 -0.7
J16K Anvik River 80.94 26 IAmb IAmb 20 51 22.4
comp=Z,53nm,0.9s
J16K Anvik River 80.94 26 P P 20 51 20.5 +1.1
baz=256,SNR=9.3
RAYN Ar Rayn 80.95 293 P P 20 51 19.2 -1.1
RAYN IAmb IAmb 20 51 25.3
comp=Z,38nm,0.9s
RAYN Ar Rayn 80.95 293 P P 20 51 19.8 -0.6
RAYN Ar Rayn 80.95 293 ⇑P P 20 51 19.6 -0.8
RAYN Ar Rayn 80.95 293 P P 20 51 19.6 -0.8
I17K Unalakleet 81.06 25 P P 20 51 21.3 +1.3
baz=255
L16K Owhat River 81.08 28 IAmb IAmb 20 51 22.6
comp=Z,49nm,1.0s
L16K Owhat River 81.08 28 P P 20 51 20.9 +0.8
baz=257,SNR=9.8
N16K Nishlik Lake 81.13 29 P P 20 51 21.7 +1.2
baz=258,SNR=9.8
R16K Pilot Point 81.15 32 P P 20 51 21.9 +1.3
baz=259
M16K Timber Creek 81.16 28 IAmb IAmb 20 51 23.1
comp=Z,52nm,1.0s
M16K Timber Creek 81.16 28 P P 20 51 21.8 +1.2
baz=257
D17K Noatak River 81.17 21 P P 20 51 21.7 +1.2
baz=252
P16K Nushagak River 81.22 30 P P 20 51 21.9 +1.0
baz=258
O16K Kokwok River B 81.28 30 IAmb IAmb 20 51 24.2
comp=Z,93nm,1.4s
O16K Kokwok River B 81.28 30 P P 20 51 22.2 +1.0
baz=258,SNR=7.7
RDOG Red Dog Mine 81.34 21 IAmb IAmb 20 51 24.0
comp=Z,109nm,1.5s
RDOG Red Dog Mine 81.34 21 P P 20 51 22.7 +1.3
baz=253
C17K DeLong Mountai 81.37 21 P P 20 51 22.8 +1.1
baz=252
VNDA Vanda 81.43 173 P P 20 51 21.5 -0.2
comp=Z,23nm,0.8s,baz=318,slow=6.0,SNR=123
comp=Z,23nm,0.8s
VNDA Vanda 81.43 173 P P 20 51 21.6 -0.2
E17K Hotham Inlet 81.46 22 P P 20 51 23.5 +1.5
baz=254,SNR=6.2
G17K Kiwalik Mounta 81.49 24 P P 20 51 23.5 +1.2
baz=255,SNR=5.6
F17K Baldwin Pennin 81.50 23 P P 20 51 23.4 +1.2
baz=254
J17K VABM Dome 81.64 26 IAmb IAmb 20 51 26.1
comp=Z,77nm,1.2s
J17K VABM Dome 81.64 26 P P 20 51 24.6 +1.5
baz=257
H17K Granite Mounta 81.65 24 P P 20 51 24.5 +1.4
baz=256
MAW Mawson 81.69 200 P P 20 51 23.6 +0.4
comp=Z,6.1nm,1.1s
MAW Mawson 81.69 200 P P 20 51 23.1 -0.1
comp=Z,16nm,0.8s,baz=75,slow=5.7,SNR=36
comp=Z,16nm,0.8s
L17K Donlin 81.71 27 P P 20 51 25.1 +1.6
baz=258,SNR=12
KIRV Kirov 81.79 329 *ce*P P 20 51 23.3 -0.6
R17L Mt. Peulik Vol 81.80 32 P P 20 51 24.9 +0.7
baz=260
PLK4 Peulik 4 81.81 32 IAmb IAmb 20 51 25.6
comp=Z,56nm,1.1s
BELG Belogornoye 81.81 323 *i* P P 20 51 21.6 -2.6
BELG pmax pmax
comp=Z,34nm,1.0s
O17K Koliganek Bris 81.81 30 P P 20 51 25.0 +1.0
baz=259,SNR=7.3
K17K Iditarod 81.83 27 P P 20 51 25.6 +1.5
baz=258,SNR=18
Q16K King Salmon 81.83 31 P P 20 51 25.2 +1.1
baz=260
CHIR Chirikof Islan 81.91 34 P P 20 51 25.5 +0.8
baz=261
N17K Nushagak Hills 81.91 29 IAmb IAmb 20 51 27.6
comp=Z,62nm,1.4s
N17K Nushagak Hills 81.91 29 P P 20 51 26.0 +1.4
baz=259
M17K Holitna River 81.96 28 IAmb IAmb 20 51 28.1
comp=Z,102nm,1.4s
M17K Holitna River 81.96 28 P P 20 51 25.8 +1.0
baz=259
E18K Tukpahlearik C 82.01 22 IAmb IAmb 20 51 27.8
comp=Z,62nm,1.0s
E18K Tukpahlearik C 82.01 22 P P 20 51 26.4 +1.5
baz=255,SNR=10
P17K Kvichak River 82.04 30 P P 20 51 25.7 +0.5
baz=260
B18K Kokolik River 82.11 20 P P 20 51 26.4 +0.9
baz=254
C18K Utukok River 82.12 21 IAmb IAmb 20 51 27.9
comp=Z,40nm,1.0s
C18K Utukok River 82.12 21 P P 20 51 26.4 +0.8
baz=254
F18K Selawik 82.16 23 P P 20 51 26.5 +0.8
baz=256,SNR=5.1
Q17K Contact Creek 82.16 31 P P 20 51 25.8 -0.3
baz=260
H18K Honhosa River 82.34 24 IAmb IAmb 20 51 29.2
comp=Z,92nm,1.2s
H18K Honhosa River 82.34 24 P P 20 51 27.2 +0.5
baz=257
SBA Scott Base 82.35 172 P P 20 51 27.4 +0.9
SBA Scott Base 82.35 172 P P 20 51 27.4 +0.9
SBA pmax pmax
comp=Z,28nm,1.0s
SBA Scott Base 82.35 172 P P 20 51 27.6 +1.1
G18K Tagagawik 82.39 24 IAmb IAmb 20 51 29.3
comp=Z,72nm,1.2s
G18K Tagagawik 82.39 24 P P 20 51 28.2 +1.2
baz=257
L18K Granite Mounta 82.47 27 IAmb IAmb 20 51 30.4
comp=Z,74nm,1.0s
L18K Granite Mounta 82.47 27 P P 20 51 28.8 +1.3
baz=259
GNI Garni 82.52 310 P P 20 51 28.6 +0.1
GNI IAmb IAmb 20 51 47.5
comp=Z,49nm,1.0s
GNI Garni 82.52 310 P P 20 51 28.6 +0.1
GNI Garni 82.52 310 *ce*P P 20 51 29.3 +0.8
GNI pmax pmax
comp=Z,65nm,1.7s
GNI Garni 82.52 310 P P 20 51 28.5 0.0
comp=Z,608nmcomp=Z,50nm,1.1s
N18K Kilae Creek 82.57 29 P P 20 51 29.5 +1.5
baz=260
A19K Wainwright 82.59 19 P P 20 51 28.8 +0.9
baz=254
Q18K Katmai Hardscr 82.68 31 P P 20 51 29.5 +0.7
baz=261
P18K Big Mountain, 82.68 30 P P 20 51 30.0 +1.3
baz=261
J18K Innoko River 82.69 26 IAmb IAmb 20 51 31.0
comp=Z,77nm,1.0s
J18K Innoko River 82.69 26 P P 20 51 29.6 +1.0
baz=259
M18K Stony River 82.74 28 P P 20 51 29.6 +0.7
baz=260
O18K Koktuh Hills 82.77 30 P P 20 51 29.6 +0.5
baz=261,SNR=7.6
C19K Lookout Ridge 82.80 20 P P 20 51 30.8 +1.6
baz=256
SII Sitkinak Islan 82.81 33 P P 20 51 30.5 +1.1
baz=262
GCSA Galena City Sc 82.87 25 P P 20 51 30.3 +0.8
baz=259,SNR=17
F19K Shaleruckik Mo 82.94 23 P P 20 51 30.7 +0.9
baz=258
G19K Purcell Mounta 83.06 23 P P 20 51 32.0 +1.5
baz=258,SNR=27
D19K Kuna River 83.18 21 P P 20 51 32.3 +1.2
baz=257
H19K Roundabout Mou 83.20 24 P P 20 51 32.6 +1.4
baz=259,SNR=29
J19K Poorman 83.27 26 P P 20 51 33.0 +1.4
baz=260
N19K Bonanza Creek 83.27 29 P P 20 51 32.6 +0.8
baz=261
E19K Redstone River 83.28 22 P P 20 51 32.7 +1.1
baz=258
L19K White Mountain 83.31 28 P P 20 51 33.2 +1.4
baz=261
OHAK Old Harbor 83.39 33 P P 20 51 33.0 +0.8
baz=263
M19K Big River Lodg 83.48 28 IAmb IAmb 20 51 35.5
comp=Z,57nm,0.9s
M19K Big River Lodg 83.48 28 P P 20 51 34.3 +1.6
baz=261
P19K Oil Pt 83.73 30 P P 20 51 34.6 +0.5
baz=262
D20K Etivluk River 83.76 21 P P 20 51 35.2 +1.2
baz=258
F20K Avaraart Lake 83.77 23 IAmb IAmb 20 51 36.9
comp=Z,72nm,1.1s
F20K Avaraart Lake 83.77 23 P P 20 51 35.2 +1.1
baz=260
L20K Farewell, AK 83.80 27 IAmb IAmb 20 51 37.0
comp=Z,60nm,1.0s
L20K Farewell, AK 83.80 27 P P 20 51 35.5 +1.1
baz=262
ILSW Iliamna Southw 83.81 30 IAmb IAmb 20 51 35.3
comp=Z,44nm,1.1s
E20K Nigu River 83.83 21 P P 20 51 35.9 +1.4
baz=259,SNR=36
KDAK Kodiak Island 83.83 32 P P 20 51 34.8 +0.2
comp=Z,28nm,0.9s,baz=231,slow=3.1,SNR=11
comp=Z,28nm,0.9s
KDAK Kodiak Island 83.83 32 P P 20 51 34.6 0.0
KDAK Kodiak Island 83.83 32 P P 20 51 35.4 +0.9
baz=263
H20K Anotleneega Mo 83.84 24 P P 20 51 35.8 +1.3
baz=260
B20K Meade River 83.84 20 P P 20 51 36.0 +1.6
baz=258
K20K Telida 83.85 26 P P 20 51 35.9 +1.3
baz=261
I20K Naaghedeneel 83.89 25 P P 20 51 35.9 +1.1
baz=261
J20K Nowinta River 83.94 26 P P 20 51 36.2 +1.2
baz=261
Q20K Shuyak Island 84.03 31 P P 20 51 36.4 +0.9
baz=263
M20K Styx River 84.07 28 P P 20 51 37.1 +1.2
baz=262
O20K Slope Mountain 84.08 30 P P 20 51 36.5 +0.5
baz=263
KBZ Khabaz 84.12 314 P P 20 51 35.9 -0.5
comp=Z,5.8nm,0.7s,baz=87,slow=7.3,SNR=13
comp=Z,5.8nm,0.7s
KBZ Khabaz 84.12 314 *ce*P P 20 51 36.4 0.0
KBZ pmax pmax
comp=Z,35nm,1.0s
A21K Barrow 84.29 18 P P 20 51 37.7 +1.1
baz=258
KIV Kislovodsk 84.29 314 P P 20 51 37.3 -0.1
KIV Kislovodsk 84.29 314 P P 20 51 37.7 +0.4
KIV Kislovodsk 84.29 314 ⇑P P 20 51 38.8 +1.4

KIV **Kislovodsk** 84.29 314 *e*P P 20 51 36.0 -1.4
KIV pmax pmax
comp=Z,39nm,1.0s
KIV **Kislovodsk** 84.29 314 P P 20 51 37.9 +0.5
comp=Z,553nmcomp=Z,40nm,1.4s
N20K **Mount Spurr** 84.42 29 P P 20 51 37.4 -0.2
baz=263,SNR=19
SPCR **Spurr Chakacha** 84.42 29 P P 20 51 37.7 +0.1
baz=263,SNR=13
SPU **Mount Spurr** 84.49 29 IAmb IAmb 20 51 39.7
comp=Z,47nm,1.1s
C21K **Knifeblade Rid** 84.50 21 P P 20 51 38.8 +1.1
baz=260
HOM **Homer** 84.53 30 P P 20 51 38.6 +0.5
baz=264
G21K **Allakaket** 84.55 23 IAmb IAmb 20 51 40.6
comp=Z,42nm,1.1s
G21K **Allakaket** 84.55 23 P P 20 51 39.1 +1.0
baz=262
PPLA **Purkeypile** 84.63 27 IAmb IAmb 20 51 41.5
comp=Z,55nm,1.4s
PPLA **Purkeypile** 84.63 27 P P 20 51 39.4 +0.6
baz=263
B21K **Ikpikpuk River** 84.63 20 P P 20 51 39.5 +1.1
baz=260
STLK **Strandline Lak** 84.64 28 IAmb IAmb 20 51 40.1
comp=Z,56nm,1.6s
F21K **Alatna River** 84.67 23 P P 20 51 39.6 +0.9
baz=262
E21K **Killik River** 84.67 21 IAmb IAmb 20 51 41.1
comp=Z,38nm,1.1s
E21K **Killik River** 84.67 21 P P 20 51 39.7 +1.0
baz=261
CHUM **Lake Minchumin** 84.70 26 P P 20 51 39.9 +1.1
baz=263
A22K **Sinclair Lake** 84.75 19 P P 20 51 40.0 +1.0
baz=260
SKT **Skwentna** 84.83 28 IAmb IAmb 20 51 41.0
comp=Z,30nm,0.8s
SKT **Skwentna** 84.83 28 P P 20 51 40.3 +0.7
baz=264,SNR=9.6
BRSE **Bradley Lake S** 84.99 30 P P 20 51 41.5 +1.0
baz=265,SNR=9.0
I21K **Tanana** 85.00 25 P P 20 51 41.2 +0.9
baz=263
SUA **Susitna One** 85.15 29 P P 20 51 41.9 +0.5
baz=264,SNR=8.6
B22K **Teshekpuk Lake** 85.16 20 P P 20 51 42.1 +1.1
baz=261
D22K **Ayikyak River** 85.20 21 P P 20 51 42.5 +1.1
baz=262
F22K **John River** 85.21 22 P P 20 51 42.8 +1.4
baz=263
L22K **Petersville** 85.24 28 IAmb IAmb 20 51 43.3
comp=Z,31nm,0.9s
BPAW **Bear Paw Mtn.** 85.30 26 P P 20 51 41.9 0.0
baz=264
H22K **Ishtalitna Cre** 85.33 24 IAmb IAmb 20 52 08.1
comp=Z,38nm,1.4s
H22K **Ishtalitna Cre** 85.33 24 P P 20 51 43.2 +1.2
baz=264
VRH **Novokhopyorsk** 85.35 321 *e*P P 20 51 38.8 -3.6
VRH pmax pmax
comp=Z,60nm,0.9s
G22K **Bettles** 85.39 23 P P 20 51 43.5 +1.2
baz=263,SNR=9.6
E22K **Anaktuvuk Pass** 85.42 22 P P 20 51 43.6 +1.1
baz=263,SNR=12
CUT **Chulitna** 85.46 28 P P 20 51 43.8 +1.0
baz=265
M22K **Willow** 85.47 28 P P 20 51 43.6 +0.8
baz=265
MARD **Mardin** 85.48 307 IAmb IAmb 20 51 49.5
comp=Z,32nm,0.8s
TRF **Thorofare Moun** 85.55 27 IAmb IAmb 20 52 38.5
comp=Z,74nm,1.9s
TRF **Thorofare Moun** 85.55 27 P P 20 51 43.9 +0.6
baz=265
O22K **Cooper Landing** 85.56 30 P P 20 51 43.7 +0.4
baz=266
RC01 **Rabbit Creek A** 85.60 29 P P 20 51 43.6 +0.2
baz=265,SNR=6.4
SEW **Seward** 85.67 30 IAmb IAmb 20 51 46.7
comp=Z,48nm,1.0s
SEW **Seward** 85.67 30 P P 20 51 44.3 +0.5
baz=266
LABN **Labinsk** 85.73 314 *e*P P 20 51 41.9 -2.6
LABN *e**PP pP 20 51 51.6 -2.7
LABN *e*S SKSac 21 02 05.4 -2.4
LABN pmax pmax
comp=Z,81nm,1.3s
D23K **Nanushuk River** 85.93 21 P P 20 51 46.0 +1.0
baz=264,SNR=5.4
ERBR **Yeremizino-Bor** 85.93 316 *e*P P 20 51 43.6 -1.9
ERBR *e**PP pP 20 51 54.9 -0.4
ERBR *e*S SKSac 21 02 05.9 -3.1
ERBR pmax pmax
comp=Z,112nm,1.3s
PMR **Palmer** 85.93 29 IAmb IAmb 20 51 46.9
comp=Z,49nm,1.2s
PMR **Palmer** 85.93 29 P P 20 51 45.5 +0.4
baz=266,SNR=6.3
COLD **Coldfoot** 85.94 23 IAmb IAmb 20 51 47.5
comp=Z,18nm,0.7s
COLD **Coldfoot** 85.94 23 P P 20 51 45.7 +0.7
baz=265,SNR=16
G23K **Bananza Creek** 85.96 23 IAmb IAmb 20 51 48.7
comp=Z,33nm,1.1s
G23K **Bananza Creek** 85.96 23 P P 20 51 46.0 +0.8
baz=265,SNR=8.9
C23K **Itkillik River** 86.04 20 IAmb IAmb 20 51 50.0
comp=Z,32nm,0.8s
C23K **Itkillik River** 86.04 20 P P 20 51 46.3 +0.8
baz=264
GHO **Glory Hole Cre** 86.04 28 IAmb IAmb 20 51 47.2
comp=Z,26nm,1.0s
H23K **Yukon River** 86.07 24 P P 20 51 46.3 +0.6
baz=265
I23K **Minto, Yukon-K** 86.09 25 IAmb IAmb 20 51 47.4
comp=Z,20nm,0.8s
I23K **Minto, Yukon-K** 86.09 25 P P 20 51 46.2 +0.4
baz=266
MCK **McKinley** 86.17 26 P P 20 51 46.2 -0.1
baz=266
NEA2 **Nenana** 86.18 25 P P 20 51 46.9 +0.7
baz=266
VSLR **Vesyoloye** 86.19 313 *i* P P 20 51 43.9 -2.9
VSLR pmax pmax
comp=Z,270nm,1.1s
E23K **Chandalar** 86.23 22 IAmb IAmb 20 51 49.6
comp=Z,40nm,1.1s
E23K **Chandalar** 86.23 22 P P 20 51 47.4 +0.9
baz=265,SNR=17
KNK **Knik Glacier** 86.24 29 P P 20 51 47.5 +0.8
baz=267,SNR=7.7
PWL **Port Wells** 86.27 29 P P 20 51 47.3 +0.5
baz=267,SNR=8.9
WAT1 **Susitna Watana** 86.29 27 P P 20 51 48.0 +1.1
baz=266
TOLK **Toolik Lake Re** 86.30 21 IAmb IAmb 20 51 50.2
comp=Z,45nm,1.4s
TOLK **Toolik Lake Re** 86.30 21 P P 20 51 47.9 +1.0
baz=265,SNR=8.7
SML **Sawmill** 86.33 28 IAmb IAmb 20 51 49.2
comp=Z,38nm,0.8s
SML **Sawmill** 86.33 28 P P 20 51 48.4 +1.3
baz=267,SNR=7.2
SOC **Sochi** 86.43 313 *e*P P 20 51 44.5 -3.4
SOC *e*S SKSac 21 02 07.5 -4.7
SOC *e*SS SS 21 08 03.0 +0.8
SOC *e*SSS SSS 21 11 31.0
SOC pmax pmax
comp=Z,71nm,0.9s
D24K **Happy Valley** 86.61 21 IAmb IAmb 20 51 51.2
comp=Z,22nm,0.7s
D24K **Happy Valley** 86.61 21 P P 20 51 49.5 +1.2
baz=266
WAT6 **Susitna Watana** 86.65 28 P P 20 51 49.1 +0.3
baz=267,SNR=5.3
E24K **Your Creek** 86.66 22 P P 20 51 49.4 +0.8
baz=266
C24K **Franklin Bluff** 86.70 20 IAmb IAmb 20 51 51.3
comp=Z,21nm,0.9s
C24K **Franklin Bluff** 86.70 20 P P 20 51 49.4 +0.7
baz=266
H24K **Noodor Dome** 86.76 24 P P 20 51 49.5 +0.4
baz=267
SCM **Sheep Creek Mo** 86.80 28 IAmb IAmb 20 51 54.1
comp=Z,33nm,1.0s
SCM **Sheep Creek Mo** 86.80 28 P P 20 51 50.3 +0.8
baz=268
DHY **Denali Highway** 86.84 27 IAmb IAmb 20 51 58.0
comp=Z,49nm,1.8s
DHY **Denali Highway** 86.84 27 P P 20 51 50.5 +0.8
baz=267
F24K **Seguy Lake** 86.85 23 P P 20 51 50.8 +1.2
baz=267
VORD **Divnogorie** 86.87 321 *e*P P 20 51 47.2 -2.7
VORD pmax pmax
comp=Z,80nm,0.9s
GLI **Glacier Island** 86.88 29 P P 20 51 50.3 +0.6
baz=268
POKR **Poker Plat Res** 86.91 25 P P 20 51 50.5 +0.6
baz=267
VORR **Voronezh** 86.94 321 *e*P P 20 51 47.2 -3.0
VORR pmax pmax
comp=Z,130nm,0.9s
VSR **Storozhevoye** 86.95 321 *e*P P 20 51 47.6 -2.7
VSR pmax pmax
comp=Z,70nm,0.9s
G24K **Hadweenzic Riv** 86.97 23 P P 20 51 49.6 -0.5
baz=267
KLMR **Klimovskoe** 87.02 331 *e*P P 20 51 47.3 -3.1
KLMR pmax pmax
comp=Z,136nm,1.4s
HDA **Harding Lake** 87.08 26 P P 20 51 50.9 +0.2
baz=268,SNR=5.9
ILAR **Eielson Array** 87.12 25 P P 20 51 49.5 -1.3
comp=Z,3.1nm,0.7s,baz=238,slow=5.2,SNR=20
ILAR PP PP 20 55 16.4 +1.8
comp=Z,0.7nm,0.7s,baz=269,slow=6.6,SNR=6.3
comp=Z,3.1nm,0.7s
LPSR **Galich'ya Gora** 87.13 322 *e*P P 20 51 48.8 -2.3
LPSR pmax pmax
comp=Z,110nm,0.9s
Q23K **Middleton Isla** 87.20 31 P P 20 51 52.0 +0.7
baz=268
M24K **Tolsona, Glenn** 87.36 28 P P 20 51 52.7 +0.5
baz=268
KLU **Klutina** 87.46 29 P P 20 51 53.2 +0.5
baz=269
D25K **Kavik River** 87.49 21 IAmb IAmb 20 51 55.8
comp=Z,41nm,1.6s
D25K **Kavik River** 87.49 21 P P 20 51 53.4 +0.8
baz=268
G25K **Bearman Lake** 87.52 23 P P 20 51 53.2 +0.5
baz=268
DIV **Divide** 87.53 29 IAmb IAmb 20 51 58.2
comp=Z,46nm,1.1s
K24K **Donnelly Dome** 87.58 26 IAmb IAmb 20 51 55.2
comp=Z,23nm,0.8s
K24K **Donnelly Dome** 87.58 26 P P 20 51 53.6 +0.4
baz=269
H25L **Birch Creek** 87.62 24 P P 20 51 54.2 +1.1
baz=269
PAX **Paxson** 87.70 27 IAmb IAmb 20 51 55.0
comp=Z,29nm,1.3s
PAX **Paxson** 87.70 27 P P 20 51 54.5 +0.7
baz=269,SNR=7.0
F25K **Christian Rive** 87.71 23 P P 20 51 54.7 +1.0
baz=269
E25K **Arctic Village** 87.75 22 IAmb IAmb 20 51 55.8
comp=Z,22nm,1.0s
E25K **Arctic Village** 87.75 22 P P 20 51 54.7 +0.8
baz=269,SNR=19
J25K **Salcha River,** 87.77 26 P P 20 51 53.6 -0.5
baz=269
HARP **HAARP** 87.84 28 P P 20 51 54.6 +0.2
baz=269
MOS **Moscow** 87.92 326 *e*P P 20 51 50.9 -4.0
MOS *e* 21 02 32.1
MOS pmax pmax
comp=Z,79nm,0.8s
C26K **Camden Bay** 88.02 20 P P 20 51 55.9 +0.9
baz=269
ANN **Anapa** 88.08 315 *e*P P 20 51 53.0 -2.8
ANN *e**PP pP 20 52 03.6 -2.1
ANN *e*S SKSac 21 02 19.6 -2.6
ANN pmax pmax
comp=Z,88nm,0.9s
BMRM **Bremner River** 88.09 29 P P 20 51 56.6 +0.9
baz=270
N25K **Chitina, Valde** 88.10 29 P P 20 51 56.1 +0.3
baz=270
KAIM **Kayak Island** 88.19 30 P P 20 51 56.8 +0.7
baz=270
F26K **Sheenjek River** 88.29 22 P P 20 51 57.1 +0.6
baz=270
DOT **Dot Lake** 88.34 27 IAmb IAmb 20 51 57.1
comp=Z,46nm,1.6s
SCRK **Sand Creek** 88.37 26 P P 20 51 57.6 +0.5
baz=270
KIBK **Kibwezi** 88.38 268 P P 20 51 57.6 -0.4
KIBK **Kibwezi** 88.38 268 P P 20 51 58.1 0.0
SNR=26
G26K **Porcupine Rive** 88.43 23 IAmb IAmb 20 51 59.8
comp=Z,24nm,1.3s
G26K **Porcupine Rive** 88.43 23 P P 20 51 58.0 +0.9
baz=270
C27K **Jago River** 88.44 21 IAmb IAmb 20 51 59.0
comp=Z,23nm,0.8s
C27K **Jago River** 88.44 21 P P 20 51 57.9 +0.8
baz=270
GLB **Gilahina Butte** 88.48 29 IAmb IAmb 20 55 11.9
comp=Z,63nm,1.7s
OBN **Obninsk** 88.53 325 P P 20 51 56.9 -0.8
OBN **Obninsk** 88.53 325 *de*P P 20 51 56.6 -1.1
OBN *e* 20 55 26.0
OBN *e*SS SS 21 08 32.1 -0.2
OBN pmax pmax
comp=Z,94nm,1.7s
OBN MLR MLR
comp=Z,281nm,8.0s
OBN **Obninsk** 88.53 325 P P 20 51 56.9 -0.8
comp=Z,50nm,0.7s
J26L **Joseph Creek** 88.55 26 P P 20 51 58.1 +0.2
baz=271
L26K **Log Cabin Wild** 88.67 27 P P 20 51 58.6 +0.3
baz=271
I26K **Coal Creek Min** 88.71 25 P P 20 51 58.7 +0.3
baz=271
CRQE **Cirque** 88.84 29 P P 20 51 59.9 +0.6
baz=271
TOKA **Tokat** 88.84 310 IAmb IAmb 20 52 07.3
comp=Z,29nm,1.1s
KMBO **Kilima Mbogo** 89.14 269 P P 20 52 01.6 -0.2
comp=Z,7.1nm,0.9s,baz=77,slow=4.5,SNR=26
comp=Z,7.1nm,0.9s
K27K **Chicken** 89.21 26 IAmb IAmb 20 52 03.1
comp=Z,30nm,0.9s
K27K **Chicken** 89.21 26 P P 20 52 02.1 +1.3
baz=272
E27K **Coleen River** 89.24 22 IAmb IAmb 20 52 02.7
comp=Z,18nm,0.9s
E27K **Coleen River** 89.24 22 P P 20 52 02.0 +1.1
baz=272
G27K **Doyon Strip** 89.28 23 P P 20 52 01.7 +0.6
baz=272
I27K **Kandik River** 89.35 25 IAmb IAmb 20 52 03.3
comp=Z,33nm,0.9s
I27K **Kandik River** 89.35 25 P P 20 52 02.4 +0.9
baz=272
L27K **Beaver Creek,** 89.36 27 IAmb IAmb 20 52 03.4
comp=Z,17nm,0.8s
L27K **Beaver Creek,** 89.36 27 P P 20 52 01.7 +0.1
baz=272,SNR=11
M27K **Edge Creek, AK** 89.37 28 IAmb IAmb 20 52 32.8
comp=Z,41nm,1.7s
M27K **Edge Creek, AK** 89.37 28 P P 20 52 02.2 +0.5
baz=272
BNN **Bunyan** 89.37 309 IAmb IAmb 20 52 10.9
comp=Z,21nm,1.0s
D27M **Malcolm River** 89.42 21 P P 20 52 02.2 +0.5
baz=273
APA **Apatity** 89.61 337 ǁ *e*P P 20 51 59.3 -3.3
APA MLR MLR
comp=Z,808nm,24.7s
CTG **Chitna Glacier** 89.69 29 P P 20 52 03.5 +0.2
baz=273
BVCY **Beaver Creek** 89.84 28 P P 20 52 04.2 +0.3
baz=273
MMAI **Mount Meron Ar** 89.91 303 P P 20 52 05.1 +0.2
comp=Z,21nm,0.9s,baz=82,slow=6.0,SNR=18
comp=Z,21nm,0.9s
F28M **Old Crow** 89.92 22 P P 20 52 04.9 +0.8
baz=274,SNR=10.0
E28M **Babbage River** 89.98 21 IAmb IAmb 20 52 05.9
comp=Z,25nm,1.1s
E28M **Babbage River** 89.98 21 P P 20 52 05.1 +0.7
baz=274
I28M **Miner Creek** 90.05 25 IAmb IAmb 20 52 06.5
comp=Z,16nm,0.8s
I28M **Miner Creek** 90.05 25 P P 20 52 05.3 +0.4
baz=274
YUK3 **Moose Creek** 90.06 28 P P 20 52 05.2 +0.1
baz=274
D28M **Stokes Point** 90.20 21 P P 20 52 05.7 +0.4
baz=275,SNR=5.9
O28M **Mount Upton** 90.26 29 P P 20 52 06.1 0.0
baz=274
PINM **Pinnacle** 90.27 30 P P 20 52 06.7 +0.7
baz=274
SYO **Syowa Base** 90.37 201 ⇑ *i*P P 20 52 05.6 -0.5
DAWY **Dawson** 90.39 26 IAmb IAmb 20 52 08.4
comp=Z,38nm,1.5s
DAWY **Dawson** 90.39 26 P P 20 52 07.2 +0.8
baz=274,SNR=7.4
SIM **Simferopol'** 90.43 315 *e*P P 20 52 02.7 -4.2
SIM pmax pmax
comp=Z,24nm,0.7s
YUK8 **Steele Glacier** 90.43 29 P P 20 52 07.4 +0.5
baz=274
E29M **Blow River** 90.60 22 IAmb IAmb 20 52 08.4
comp=Z,32nm,1.6s
E29M **Blow River** 90.60 22 P P 20 52 07.8 +0.6
baz=276,SNR=6.8
H29M **Whitestone** 90.63 24 P P 20 52 07.6 +0.2
baz=276
G29M **Pine Creek** 90.70 23 IAmb IAmb 20 52 09.1
comp=Z,33nm,1.1s
G29M **Pine Creek** 90.70 23 P P 20 52 07.5 -0.2
baz=276,SNR=9.3
PNL **Peninsula** 90.73 30 P P 20 52 08.6 +0.5
baz=274
KIRS **Kirsehir-Merke** 90.86 309 ⇑ *i*P P 20 52 08.4 -0.8
LODK **Lodwar** 90.89 273 P P 20 52 10.4 +0.5
ILGA **Ilgaz** 90.92 311 IAmb IAmb 20 52 13.4
comp=Z,33nm,1.0s
M29M **Somme Creek** 90.95 28 P P 20 52 09.9 +0.8
baz=275,SNR=6.3
YUK4 **Talbot Arm** 90.96 29 P P 20 52 10.0 +0.7
baz=275
L29M **L29M** 91.04 27 IAmb IAmb 20 52 11.7
comp=Z,29nm,0.9s
L29M **L29M** 91.04 27 P P 20 52 10.2 +0.8
baz=276
BR104 **Keskin Array S** 91.04 310 P P 20 52 08.7 -1.4
comp=Z,79nmcomp=Z,9.8nm,0.9s
BR131 **Keskin Array S** 91.05 310 P P 20 52 09.4 -0.7
SNR=6.5
BRTR **Keskin Array B** 91.05 310 P P 20 52 08.5 -1.7
comp=Z,7.4nm,0.8s,baz=118,slow=5.6,SNR=26
BRTR PP PP 20 55 46.7 -0.1
comp=Z,1.9nm,1.1s,baz=91,slow=7.2,SNR=4.9
comp=Z,7.4nm,0.8s
BR106 **Keskin Array S** 91.06 310 P P 20 52 09.0 -1.2
comp=Z,85nmcomp=Z,11nm,0.9s
BR105 **Keskin Array S** 91.06 310 P P 20 52 09.0 -1.2
comp=Z,102nmcomp=Z,14nm,0.8s
O29M **Mount Kennedy** 91.09 30 IAmb IAmb 20 52 13.7
comp=Z,58nm,1.6s
O29M **Mount Kennedy** 91.09 30 P P 20 52 10.0 +0.1
baz=275
K29M **Barlow Dome** 91.23 26 IAmb IAmb 20 52 12.2
comp=Z,66nm,1.8s
K29M **Barlow Dome** 91.23 26 P P 20 52 10.4 0.0
baz=276,SNR=5.6
EPYK **Eagle Plains** 91.28 24 IAmb IAmb 20 52 11.5
comp=Z,42nm,1.4s
EPYK **Eagle Plains** 91.28 24 P P 20 52 10.7 +0.2
baz=277,SNR=5.7
G30M **tAoh Zraii Nji** 91.40 23 P P 20 52 11.2 +0.2
baz=278
F30M **Barrier River** 91.48 22 IAmb IAmb 20 52 12.6
comp=Z,20nm,1.0s
F30M **Barrier River** 91.48 22 P P 20 52 11.6 +0.2
baz=278
CSS **Mathiatis** 91.54 305 P P 20 52 11.1 -1.3
comp=Z,54nm,0.9s
I30M **Mount Dempster** 91.56 25 P P 20 52 12.5 +0.6
baz=277
HYT **Haines Junctio** 91.57 29 P P 20 52 12.9 +0.8
baz=276
QSPA **South Pole Qui** 91.58 180 P P 20 52 14.7 +2.8
comp=Z,9.4nm,0.8s,baz=319,slow=1.8,SNR=26
QSPA **South Pole Qui** 91.58 180 P P 20 52 14.7 +2.8
P29M **Windy Craggy** 91.58 30 P P 20 52 12.6 +0.6
baz=276
J30M **Hart River** 91.66 25 P P 20 52 13.2 +0.8
baz=277
N30M **Aishikik Lake** 91.70 29 P P 20 52 13.1 +0.6
baz=276
M30M **Minto, Yukon** 91.70 27 P P 20 52 13.5 +1.0
baz=277,SNR=7.1
P30M **Million Dollar** 91.91 30 P P 20 52 12.4 -1.2
baz=277
MAYO **Mayo, Yukon** 91.98 26 P P 20 52 14.1 +0.3
baz=278
G31M **Satah River** 92.17 23 IAmb IAmb 20 52 15.2
comp=Z,19nm,0.9s
G31M **Satah River** 92.17 23 P P 20 52 13.9 -0.6
baz=279,SNR=7.8
INK **Inuvik** 92.21 21 P P 20 52 14.1 -0.6
comp=Z,11nm,1.0s,baz=275,slow=5.5,SNR=10
comp=Z,11nm,1.0s
INK **Inuvik** 92.21 21 IAmb IAmb 20 52 15.4
comp=Z,28nm,1.2s
INK **Inuvik** 92.21 21 P P 20 52 14.4 -0.3
baz=280,SNR=9.7
ARA0 **ARCESS Array S** 92.25 340 *e*P P 20 52 14.0 -0.8
ARCES **ARCESS Array B** 92.25 340 P P 20 52 12.9 -1.9
comp=Z,11nm,0.8s,baz=83,slow=4.4,SNR=21
ARCES PKKP PKKPdf 21 09 29.3 -0.5
comp=Z,1.1nm,0.7s,baz=258,slow=3.8,SNR=6.6
comp=Z,11nm,0.8s
ARCES **ARCESS Array B** 92.25 340 P P 20 52 13.0 -1.9
O30N **Mendenhall** 92.26 29 P P 20 52 15.0 -0.1
baz=277
F31M **Tsiigehtchic** 92.28 22 IAmb IAmb 20 52 15.6
comp=Z,29nm,1.1s
F31M **Tsiigehtchic** 92.28 22 P P 20 52 15.1 +0.1
baz=280,SNR=7.8
PLBC **Pleasant Camp** 92.29 30 P P 20 52 15.7 +0.5
baz=277
H31M **Peel River** 92.32 24 P P 20 52 15.7 +0.5
baz=279
N31M **Braeburn, Yuko** 92.32 28 IAmb IAmb 20 52 17.4
comp=Z,26nm,1.1s
N31M **Braeburn, Yuko** 92.32 28 P P 20 52 16.0 +0.6
baz=278
SPA0 **Spitsbergen Ar** 92.43 349 *e*P P 20 52 14.7 -0.8
SPITS **Spitsbergen Ar** 92.43 349 P P 20 52 14.9 -0.7
comp=Z,15nm,0.7s,baz=100,slow=8.5,SNR=14
comp=Z,15nm,0.7s
HAMF **Hammerfest** 92.64 341 *e*P P 20 52 15.2 -1.4
SKAG **Skagway** 92.82 30 P P 20 52 18.7 +1.1
baz=278
MDUB **Mudurnu** 92.86 310 IAmb IAmb 20 52 22.3
comp=Z,43nm,1.3s
M31M **Drury Creek, Y** 92.87 28 P P 20 52 18.5 +0.6
baz=279
WHY **Whitehorse** 92.87 29 P P 20 52 18.6 +0.6
baz=278
KBS **Kingsbay** 92.96 350 *e*P P 20 52 15.8 -2.2
KBS **Kingsbay** 92.96 350 *i* P P 20 52 17.3 -0.7
KTK1 **Kautokeino** 93.15 339 *e*P P 20 52 17.7 -1.4
SIT **Sitka** 93.15 33 P P 20 52 19.7 +0.5
baz=278
AK09 **Malin Array Si** 93.22 321 P P 20 52 18.6 -1.1
AK10 **Malin Array Si** 93.25 321 P P 20 52 18.7 -1.1
AK03 **Malin Array Si** 93.25 321 P P 20 52 18.8 -1.0
AKASG **Malin Array Be** 93.25 321 P P 20 52 17.8 -2.1
comp=Z,3.3nm,0.7s,baz=71,slow=4.5,SNR=14
comp=Z,3.3nm,0.7s
AKASG **Malin Array Be** 93.25 321 *i* P P 20 52 18.2 -1.6
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB **Malin Array Si** 93.25 321 IAmb IAmb 20 52 24.6
comp=Z,14nm,0.9s
AKBB **Malin Array Si** 93.25 321 *ce*P P 20 52 19.6 -0.2
AKBB **Malin Array Si** 93.25 321 P P 20 52 18.4 -1.4
KIEV **Kiev** 93.26 321 P P 20 52 18.5 -1.3
KIEV IAmb IAmb 20 52 24.6
comp=Z,14nm,1.0s

KIEV Kiev 93.26 321 ⇑P P 20 52 18.6 -1.3
KIEV Kiev 93.26 321 ⇑P P 20 52 18.6 -1.3
R32K Eaglecrest 93.41 32 P P 20 52 20.4 0.0
baz=279
FINES FINESS Array B 93.47 332 P P 20 52 18.8 -1.8
comp=Z,2.4nm,0.5s,baz=62,slow=4.3,SNR=16
comp=Z,2.4nm,0.5s
FINES FINESS Array B 93.47 332 *i* P P 20 52 19.2 -1.4
FINES pmax pmax
comp=Z,2.0nm,0.5s
BORA Eskisehir 93.48 310 IAmb IAmb 20 52 24.2
comp=Z,28nm,1.3s
S32K Killisnoo 93.50 32 P P 20 52 21.4 +0.6
baz=278
MNK Minsk 93.59 325 *i* P P 20 52 18.5 -2.8
MNK *i* 20 56 03.4
MNK *i* PPP PPP 20 58 04.5
MNK *i* S SKSac 21 02 50.1 -3.3
MNK *i* SS SS 21 09 45.1 -0.1
MNK *i* SSS SSS 21 13 26.7
MNK pmax pmax
comp=Z,14nm,0.8s
MNK MLR MLR
comp=Z,555nm,21.0s
MNK MLR MLR
comp=N,1μm,18.0s
MNK MLR MLR
comp=E,562nm,18.0s
P32M Atlin 93.61 30 P P 20 52 21.9 +0.5
baz=279
N32M Quiet Lake 93.66 29 P P 20 52 21.9 +0.3
baz=280
P33M Teslin, Yukon 93.95 29 P P 20 52 23.5 +0.6
baz=280
JETT Jettan, Norway 93.99 340 *e*P P 20 52 22.0 -1.0
A36M Sachs Harbour 94.06 17 P P 20 52 24.1 +0.9
baz=288
SORM Soroca 94.12 318 ⇓P P 20 52 22.4 -1.5
SORM Soroca 94.12 318 ⇓P P 20 52 22.4 -1.5
Q32M Nakina River 94.45 31 P P 20 52 25.6 +0.1
baz=281
TRO Tromso 94.47 340 *e*P P 20 52 22.7 -2.3
CRAG Craig 94.61 34 P P 20 52 27.1 +1.2
baz=280
R33M Jennings River 95.02 30 IAmb IAmb 20 52 30.2
comp=Z,19nm,1.1s
R33M Jennings River 95.02 30 P P 20 52 28.4 +0.4
baz=282
MANT Manisa 95.08 309 IAmb IAmb 20 52 30.3
comp=Z,14nm,1.0s
NOR Nord 95.11 355 *i* P P 20 52 27.3 -0.5
NOR IAmb IAmb 20 52 28.0
comp=Z,19nm,0.9s
S34M Telegraph Cree 95.24 32 P P 20 52 29.6 +0.8
baz=282
C36M Paulatuk 95.28 20 P P 20 52 29.9 +1.2
baz=289
KMPD K-Podol'skiy 95.31 319 P P 20 52 28.0 -1.4
TESR Tescani 95.49 317 ⇓P P 20 52 29.6 -0.6
VRI Vrincioaia 95.52 316 ⇓P P 20 52 28.9 -1.5
VRI Vrincioaia 95.52 316 ⇓P P 20 52 28.9 -1.5
VRI Vrincioaia 95.52 316 P P 20 52 29.6 -0.8
comp=Z,24nm,1.5s
PLOR Plostina 95.58 316 ⇑P P 20 52 30.3 -0.4
PLOR Plostina 95.58 316 ⇑P P 20 52 30.3 -0.4
ONER Baraj Valea Uz 95.69 317 ⇑P P 20 52 30.7 -0.5
DLBC Dease Lake 95.70 31 P P 20 52 31.6 +0.6
baz=282
COVR Voineasa-Covas 95.89 316 ⇓P P 20 52 36.0 +3.8
T35M Bob Quinn 95.90 32 P P 20 52 32.6 +0.7
baz=282
WTLY Watson Lake, Y 95.94 29 P P 20 52 32.7 +0.6
baz=284,SNR=6.6
MLR Muntele Rosu 96.12 316 IAmb IAmb 20 52 42.2
comp=Z,17nm,0.8s
MLR Muntele Rosu 96.12 316 ⇑P P 20 52 33.0 -0.3
MLR Muntele Rosu 96.12 316 ⇑P P 20 52 33.0 -0.3
KSV Kosov 96.27 319 P P 20 52 32.5 -1.3
STEI Steigen 96.28 339 *e*P P 20 52 31.0 -2.3
BURAR Bucovina Array 96.29 318 ⇓P P 20 52 33.6 -0.4
BURAR Bucovina Array 96.29 318 ⇓P P 20 52 33.6 -0.4
SUW Suwalki 96.39 325 *e*P P 20 52 34.4 +0.3
KARP Karpathos 96.52 306 P P 20 52 34.2 -1.0
comp=Z,57nm,2.2s
ELND Elena 96.55 313 ⇓P P 20 52 36.5 +1.4
STNU Starunia 96.57 319 P P 20 52 34.4 -0.7
EZN Ezine 96.65 310 ⇑P P 20 52 34.7 -0.9
EZN Ezine 96.65 310 ⇑P P 20 52 34.7 -0.9
ARR Arges 97.05 316 ⇓P P 20 52 37.5 0.0
MEZ Mezhgor'ye 97.25 319 P P 20 52 37.6 -0.6
VLAD Vladila 97.44 315 ⇓P Pdif 20 52 44.2 +5.0
CJR Cluj-Napoca 97.53 317 ⇑P Pdif 20 52 39.9 +0.3
CJR Cluj-Napoca 97.53 317 ⇑P Pdif 20 52 39.9 +0.3
MUKU Mukachevo 97.81 319 P P 20 52 39.9 -0.8
MARR Marisel-Cluj 97.86 317 ⇓P Pdif 20 52 42.8 +1.6
TOAD Toad River Com 98.02 30 P Pdif 20 52 42.0 +0.5
baz=287
DRGR 98.11 318 ⇑P P 20 52 41.9 -0.3
DRGR 98.11 318 ⇑P P 20 52 41.9 -0.3
KOTAN Kotaneelee Air 98.22 28 P Pdif 20 52 42.6 +0.3
baz=288
STHS Stebnicka Huta 98.54 320 *i* P Pdif 20 52 47.9 +3.9
STHS Stebnicka Huta 98.54 320 *e*PDIFF Pdif 20 52 47.9 +3.9
HERR Herculane 98.68 316 ⇓P P 20 52 44.1 -0.6
SURR Surduc 98.72 317 ⇑P P 20 52 36.4 -8.4
SIRR Siria 98.93 317 ⇓P P 20 52 45.3 -0.5
BZS Buzias 99.09 317 ⇑P Pdif 20 52 45.7 -0.8
BZS Buzias 99.09 317 ⇑P Pdif 20 52 45.7 -0.8
NIE Niedzica 99.14 321 P Pdif 20 52 46.2 -0.5
comp=Z,5.3nm,1.8s
MDVR Moldovita 99.19 316 ⇓P Pdif 20 52 47.4 +0.3
VAY Valandovo 99.24 312 *i* P Pdif 20 52 45.3 -1.9
DAG Danmarks Havn 99.24 352 *i* P Pdif 20 52 45.3 -1.2
DAG IAmb IAmb 20 52 46.1
comp=Z,24nm,0.9s
OJC Ojcow 99.26 321 *e*P Pdif 20 52 52.4 +5.2
BOVS Bovan 99.43 315 ⇓P Pdif 20 52 47.8 -0.2
HFS Hagfors 99.67 332 P Pdif 20 52 47.0 -1.7
comp=Z,4.2nm,1.1s,baz=109,slow=3.6,SNR=6.8
comp=Z,4.2nm,1.1s
HFS Hagfors 99.67 332 P Pdif 20 52 47.0 -1.7
LANS Liptovska Anna 99.73 320 *e*PDIFF Pdif 20 52 53.9 +4.6
RES Resolute Bay 99.91 10 P Pdif 20 52 49.6 +0.1
comp=Z,8.1nm,0.9s,baz=286,slow=6.5,SNR=7.1
comp=Z,8.1nm,0.8s
NB2 NORSAR Subarra100.46 333 P Pdif 20 52 50.1 -2.2
comp=Z,6.8nm,1.1s,baz=69,slow=4.4
NB2 PKKP PKKPbc 21 09 07.5 -2.8
comp=Z,0.7nm,0.7s,baz=236,slow=2.2
NOA NORSAR Array B100.46 333 P Pdif 20 52 50.4 -1.9
comp=Z,1.8nm,0.8s,baz=69,slow=4.6,SNR=7.6
NOA PP PP 20 56 57.0 -1.8
comp=Z,0.8nm,0.8s,baz=64,slow=7.9,SNR=3.5
NOA PKKPbc PKKPbc 21 09 07.9 -2.4
comp=Z,1.1nm,0.8s,baz=251,slow=2.7,SNR=5.2
STEB Steborice 100.60 321 *e*PDIFF Pdif 20 52 59.1 +6.0
MAUC Maruska 100.71 321 *e*PDIFF Pdif 20 52 59.6 +5.9
MORC Moravsky Berou 100.78 321 ⇓P Pdif 20 53 00.5 +6.5
MORC Moravsky Berou 100.78 321 ⇓P Pdif 20 53 00.5 +6.5
NEEM North Greenlan 100.98 359 *i* P Pdif 20 52 54.7 +0.1
NEEM IAmb IAmb 20 52 55.8
comp=Z,16nm,1.0s
DPC Dobruska-Polom 101.38 322 *e*P Pdif 20 53 02.6 +5.9
DPC Dobruska-Polom 101.38 322 *e*PDIFF Pdif 20 53 02.6 +5.9
CHVC Chvalec 101.47 322 *e*P Pdif 20 53 03.0 +5.9
CHVC Chvalec 101.47 322 *e*PDIFF Pdif 20 53 03.0 +5.9
DBG Daneborg 101.50 351 *i* P Pdif 20 52 56.1 -0.5
DBG IAmb IAmb 20 52 56.7
comp=Z,7.5nm,0.9s
YKA Yellowknife Ar 101.53 24 P Pdif 20 52 57.0 0.0
comp=Z,1.5nm,0.8s,baz=294,slow=4.7,SNR=4.6
YKA PKiKP PKiKP 20 57 21.2 +0.5
comp=Z,0.4nm,0.7s,baz=275,slow=2.4,SNR=5.2
YKA Yellowknife Ar 101.53 24 *i* P Pdif 20 52 57.0 0.0
YKA pmax pmax
comp=Z,2.0nm,0.8s
TROLL Troll, Antarti 101.55 195 ⇓P Pdif 20 52 57.9 +0.8
comp=Z,192nm,0.3s
RONA Rosalia, Austr 102.15 320 *e*PP PP 20 57 16.4 +4.4
comp=Z,12nm,1.9s
CONA Conrad Observa 102.36 320 *e*pPKiKP PKiKP 20 57 27.9 +5.1
comp=Z,6.7nm,1.4s
ZVC Zvikov 102.97 322 *e*PDIFF Pdif 20 53 10.3 +6.6
CLL Collm 103.08 324 *i* P Pdif 20 53 04.2 +0.1
CLL pmax pmax
comp=Z,4.0nm,0.8s
SNAA Sanae 103.13 195 P Pdif 20 53 04.4 +0.4
SNAA Sanae 103.13 195 Pdiff Pdif 20 53 04.3 +0.3
comp=Z,1.6nm,0.8s,baz=171,slow=8.8,SNR=8.7
SNAA PKKPbc PKKPbc 21 09 00.5 -2.4
comp=Z,0.9nm,0.7s,baz=237,slow=2.2,SNR=3.6
KHC Kasperske Hory 103.45 321 *e*P Pdif 20 53 11.7 +5.8
KHC Kasperske Hory 103.45 321 *e*PDIFF Pdif 20 53 11.7 +5.8
GERES GERESS Array B 103.46 321 Pdiff Pdif 20 53 08.8 +2.8
comp=Z,2.2nm,0.9s,baz=108,slow=3.2,SNR=9.7
BIOA Bad Ischl, Aus 103.86 320 *e*pPKiKP PKiKP 20 57 33.9 +8.4
comp=Z,4.8nm,0.9s
NVAR Mina Array Bea 108.56 48 Pdiff Pdif 20 53 30.0 +0.9
comp=Z,0.7nm,0.8s,baz=259,slow=4.8,SNR=4.2
NVAR PP PP 20 57 58.5 -1.4
comp=Z,2.6nm,1.1s,baz=298,slow=6.9,SNR=4.5
NVAR PKKPbc PKKPbc 21 08 45.3 0.0
comp=Z,0.5nm,0.7s,baz=132,slow=4.9,SNR=4.3
NVAR PKKP PKKPab 21 08 57.9 0.0
comp=Z,1.1nm,0.7s,baz=127,slow=5.7,SNR=6.6
PDAR Pinedale Array 113.15 42 PKiKP PKiKP 20 57 43.0 -0.2
comp=Z,0.6nm,0.6s,baz=271,slow=3.0,SNR=6.2
PDAR PKKPbc PKKPbc 21 08 28.8 -1.7
comp=Z,1.8nm,0.9s,baz=117,slow=2.7,SNR=6.3
RSSD Black Hills 116.04 38 PKiKP 20 57 47.6 -1.2
RSSD Black Hills 116.04 38 PKiKP PKiKP 20 57 47.6 -1.2
ULM Lac du Bonnet 116.94 29 PKP PKPdf 20 57 49.2 -0.8
comp=Z,4.9nm,0.8s,baz=338,slow=5.4,SNR=3.2
ANMO Albuquerque 118.68 48 PKPdf 20 57 54.1 0.0
ANMO Albuquerque 118.68 48 PKiKP PKPdf 20 57 54.1 0.0
ESDC Sonseca Array 118.74 318 PKP PKiKP 20 57 54.2 +0.3
comp=Z,0.8nm,0.9s,baz=115,slow=2.4,SNR=2.0
ECSD EROS Data Cent 120.69 35 PKPdf 20 57 56.7 -0.8
VHRN Van Horn 121.52 52 PKPdf 20 57 59.6 0.0
SCHQ Schefferville 122.66 9 PKP PKPdf 20 58 00.8 -0.1
comp=Z,4.9nm,0.7s,baz=286,slow=5.0,SNR=5.0
G40A Rib Lake 123.14 30 PKPdf 20 58 02.0 -0.1
TXAR Lajitas Array 123.15 53 PKP PKiKP 20 58 03.1 +0.2
comp=Z,2.9nm,0.8s,baz=230,slow=1.1,SNR=21
TXAR PKKPab PKKPbc 21 07 54.8 +0.9
comp=Z,0.8nm,0.9s,baz=114,slow=8.5,SNR=6.1
TORD Torodi Ar. Bea 123.18 287 PKP PKPdf 20 58 02.9 0.0
comp=Z,9.8nm,0.6s,baz=61,slow=3.7,SNR=12
WMOK Wichita Mounta 124.36 45 PKPdf 20 58 04.5 -0.3
WMOK Wichita Mounta 124.36 45 PKiKP PKPdf 20 58 04.5 -0.3
USHA Ushuaia 125.63 170 PKP PKiKP 20 58 08.2 +1.3
comp=Z,14nm,0.5s,baz=198,slow=3.2,SNR=4.3
U38A Gravette 126.42 41 PKPdf 20 58 08.7 0.0
CCM Cathedral Cave 127.41 37 PKPdf 20 58 10.6 +0.1
CCM Cathedral Cave 127.41 37 PKiKP PKPdf 20 58 10.6 +0.1
DBIC Dimbokro 130.61 280 PKP PKPdf 20 58 17.4 +0.2
comp=Z,15nm,0.8s,baz=125,slow=1.8,SNR=20
WVT Waverly 130.74 37 PKPdf 20 58 16.9 +0.1
WVT Waverly 130.74 37 PKiKP PKPdf 20 58 16.9 +0.1
PLCA Paso Flores 138.20 161 PKhKP PKPpre 20 58 20.1
comp=Z,2.6nm,0.8s,baz=207,slow=4.0,SNR=5.9
PLCA PKP PKPdf 20 58 31.6 +0.9
comp=Z,13nm,0.7s,baz=226,slow=2.8,SNR=17
BO01 Tunca 143.59 155 PKPbc 20 58 38.3 +0.4
CNGN Cerro Negro 144.30 66 PKPab 20 58 40.3 0.0
JTS Las Juntas de 146.66 68 PKPbc PKPdf 20 58 46.9 +0.5
comp=Z,17nm,0.7s,baz=345,slow=3.8,SNR=8.0
JTS Las Juntas de 146.66 68 PKPdf 20 58 48.2 +0.1
CFA Coronel Fontan 147.18 157 PKPbc PKPdf 20 58 47.3 +0.4
comp=Z,39nm,0.7s,baz=221,slow=3.0,SNR=44
LCO Las Campanas 148.31 151 PKPbc 20 58 52.3 -0.2
LCO Las Campanas 148.31 151 PKP2 PKPbc 20 58 52.3 -0.2
PRVC Isla de Provid 148.71 61 PKPbc 20 58 54.0 +0.5
PLTB Pedras Altas 150.06 180 PKPdf 20 58 51.9 +0.4
PB14 IPOC Station P 152.00 146 PKPbc 20 59 01.5 -0.1
ATAH Atahualpa 154.74 103 PKPbc PKiKP 20 59 09.7 +1.7
comp=Z,17nm,0.8s,baz=208,slow=3.1,SNR=4.3
CPUP Villa Florida 155.21 172 PKPbc PKPbc 20 59 08.6
comp=Z,5.0nm,0.9s,baz=155,slow=3.4,SNR=9.1
CPUP PKPab PKPab 20 59 23.8 -0.1
comp=Z,3.8nm,0.8s,baz=171,slow=4.3,SNR=6.8
SDV Santo Domingo 160.09 58 PKP PKPdf 20 59 05.6 -0.2
comp=Z,6.1nm,0.5s,baz=34,slow=1.6,SNR=7.6
SDV PKPab PKPab 20 59 46.8 +1.1
comp=Z,4.9nm,0.4s,baz=245,slow=2.9,SNR=4.3
BAUV El Baul 162.20 53 PKPab 20 59 53.6 -1.1
BDFB Brasilia 165.04 201 PKPab PKPab 21 00 07.0 +0.1
comp=Z,6.7nm,0.8s,baz=180,slow=10,SNR=3.1

IDC ***14*** *20:40:08.5±1.7, 1°.36N×125°.91E, h0km, mb4.7/5, mbtmp4.8/5, MS4.3/3, Error ellipse: s-maj=145.1km s-min=23.1km az=65.0*
NEIC ***14*** *20:40:13.0±1.9, 1°.56N±0°.08×126°.14E±0°.07, h35km±2km, mb4.4/18, Error ellipse: s-maj=15.2km s-min=10.1km az=41.0*
ISC 14 20:40:12.5±0.6,**1°.52N**±0°.09×**126°.13E**±0°.09,**h35**km,**n32,**
σ1°**39**/27,**mb4.6**/11,**MS4.2**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.44	121	Pn	Pn	20 40 36.1	+0.1
LUWI	Luwuk	4.21	233	Pn	Pn	20 41 14.2	0.0
FAKI	Fak Fak	7.54	126	Pn	Pn	20 42 00.3	+0.4
MTN	Manton Dam	15.11	161		Pn	20 43 43.3	-0.1
TWG	Pinlang	21.74	347	P	P	20 45 04.0	+3.1
TWG				IAmb	IAmb	20 45 08.8	
comp=Z,11nm,0.4s							
YULB	Yu-li	22.25	348	P	P	20 45 06.5	+0.1
YULB				IAmb	IAmb	20 45 27.1	
comp=Z,8.1nm,0.5s							
TPUB	Ta-pu	22.30	347	P	P	20 45 06.4	-0.7
WB0	Warramunga Arr	22.65	159	P	P	20 45 10.7	-0.1
SSLB	Suanglung	22.70	348	P	P	20 45 12.6	+1.3
SSLB				IAmb	IAmb	20 45 46.8	
comp=Z,5.8nm,0.5s							
WRA	Warramunga Arr	22.80	160	P	P	20 45 12.0	-0.3
comp=Z,29nm,0.8s,baz=337,slow=10,SNR=1.4							
comp=Z,29nm,0.8s							
WRA	Warramunga Arr	22.80	160	IAmb	IAmb	20 45 21.2	
comp=Z,2.0nm,0.5s							
WB2	Warramunga Arr	22.80	160	P	P	20 45 12.4	+0.1
WR8	Warramunga Arr	22.86	159	P	P	20 45 13.2	+0.2
YHNB	Yeheng	23.47	349	P	P	20 45 20.9	+1.8
ASAR	Alice Springs	26.15	164	P	P	20 45 43.7	+0.1
comp=Z,11nm,0.6s,baz=341,slow=7.8,SNR=0.6							
comp=Z,11nm,0.6s							
JCJ	Chichijima	29.73	30	LR	LR	20 55 36.4	
comp=Z,499nm,20.1s,baz=230,slow=31							
CHTO	Chiang Mai	31.71	305	P	P	20 46 32.1	-1.1
CHTO				IAmb	IAmb	20 46 43.0	
comp=Z,2.8nm,0.5s							
ENH	Enshi	32.67	333	P	P	20 46 39.0	-2.5
ENH				IAmb	IAmb	20 46 40.3	
comp=Z,2.6nm,0.5s							
NWAO	Narrogin (SRO)	35.27	193	LR	LR	21 04 33.8	
comp=Z,395nm,18.3s,baz=354,slow=42							
BBOO	Buckleboo	35.41	165	P	P	20 47 05.5	+0.3
KSRS	Korea Array	35.80	2	LR	LR	21 05 05.7	
comp=Z,87μm,18.0s,baz=180,slow=42							
EIDS	Eidsvold	36.03	140	P	P	20 47 10.1	-0.5
HILR	Hailar Array B	48.17	354	LR	LR	21 10 39.1	
comp=Z,494nm,21.9s,baz=115,slow=38							
MKAR	Makanchi Array	59.03	326	P	P	20 50 10.8	+1.8
comp=Z,4.8nm,0.5s,baz=120,slow=7.5,SNR=5.9							
comp=Z,4.8nm,0.5s							
MAKZ	Makanchi	59.22	326	P	P	20 50 12.3	+2.0
MAKZ				IAmb	IAmb	20 50 38.6	
comp=Z,1.7nm,0.5s							
KDJ	Kajisay	59.61	319	P	P	20 50 13.3	0.0
LBZ	Lake Benmore	60.21	145	P	P	20 50 17.6	+0.4
KURBB	Kurchatov Arra	63.28	328	P	P	20 50 38.4	+0.8
comp=Z,7.5nm,0.6s,baz=128,slow=6.1,SNR=6.7							
comp=Z,7.5nm,0.6s							
KURK	Kurchatov	63.28	328	P	P	20 50 38.4	+0.7
MMAI	Mount Meron Ar	89.79	303	P	P	20 53 10.0	+2.0
comp=Z,2.8nm,0.8s,baz=96,slow=5.8,SNR=4.8							
comp=Z,2.8nm,0.8s							
PV13	Radium Mtn., P	115.87	46		PKiKP	20 58 49.0	-3.3
X48A	Hartselle	132.58	38		PKPdf	20 59 23.8	-0.2

IDC ***14*** *20:43:14.8±0.8, 1°.45N×126°.31E, h0km, mb4.2/10, mbtmp4.2/10, Error ellipse: s-maj=49.9km s-min=17.8km az=72.0*
NEIC ***14*** *20:43:19.7±1.4, 1°.5N±0°.1×126°.51E±0°.08, h32km±6km, mb4.9/8, Error ellipse: s-maj=17.4km s-min=9.1km az=207.0*
ISC 14 20:43:19.6±0.6,**1°.48N**±0°.09×**126°.44E**±0°.08,**h35**km,**n28,**
σ1°**37**/27,**mb4.4**/14,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.17	127		Pn	20 43 39.1	-0.4
LUWI	Luwuk	4.44	236	Pn	Pn	20 44 25.4	+0.8
TOLI2	Tolitoli	5.67	266	Pn	Pn	20 44 39.5	-1.9
FAKI	Fak Fak	7.27	127	Pn	Pn	20 45 04.6	+1.1
COEN	Coen	22.59	133	P	P	20 48 15.9	-1.4
COEN				IAmb	IAmb	20 48 24.5	
comp=Z,52nm,1.3s							
WRAB	Tennant Creek	22.65	160	P	P	20 48 15.5	-2.5
WRA	Warramunga Arr	22.66	160	P	P	20 48 16.9	-1.1
comp=Z,9.3nm,0.6s,baz=338,slow=10,SNR=12							
comp=Z,9.3nm,0.6s							
ASAR	Alice Springs	26.03	164	P	P	20 48 50.1	+0.3
comp=Z,2.6nm,0.4s,baz=343,slow=11,SNR=5.0							
comp=Z,2.6nm,0.4s							
BBOO	Buckleboo	35.30	166		P	20 50 12.5	+1.1
BBOO				IAmb	IAmb	20 50 28.8	
comp=Z,16nm,1.1s							
MJAR	Matsushiro Arr	36.55	16	P	P	20 50 21.9	-0.3
comp=Z,0.9nm,0.6s,baz=182,slow=9.4,SNR=4.7							
comp=Z,0.9nm,0.6s							
SONM	Songino Array	49.33	342	P	P	20 52 05.8	+0.2
comp=Z,0.7nm,0.5s,baz=148,slow=8.8,SNR=2.5							
comp=Z,0.7nm,0.5s							
PETK	Petropavlovsk-	57.61	22	P	P	20 53 08.1	+2.0
comp=Z,1.8nm,0.6s,baz=190,slow=7.2,SNR=1.4							
comp=Z,1.8nm,0.6s							
MKAR	Makanchi Array	59.24	326	P	P	20 53 18.0	+0.4
comp=Z,1.4nm,0.4s,baz=120,slow=7.2,SNR=11							
comp=Z,1.4nm,0.4s							
MAKZ	Makanchi	59.42	326	P	P	20 53 18.8	-0.1
MAKZ				IAmb	IAmb	20 53 35.1	
comp=Z,13nm,1.2s							
ZALV	Zalesovo Beam	62.45	334	P	P	20 53 38.9	-0.3
comp=Z,0.7nm,0.4s,baz=141,slow=5.9,SNR=2.3							
comp=Z,0.7nm,0.4s							
KURBB	Kurchatov Arra	63.47	328	P	P	20 53 46.4	+0.3
comp=Z,1.9nm,0.5s,baz=127,slow=6.0,SNR=7.1							
comp=Z,1.9nm,0.5s							
KURK	Kurchatov	63.48	328	P	P	20 53 46.4	+0.2
KURK	Kurchatov	63.48	328	IAmb	IAmb	20 53 50.1	
comp=Z,4.5nm,0.6s							
KURK	Kurchatov	63.48	328	P	P	20 53 46.6	+0.5
BVAR	Borovoye Array	69.04	328	P	P	20 54 21.7	0.0
comp=Z,0.6nm,0.4s,baz=122,slow=4.6,SNR=2.0							
comp=Z,0.6nm,0.4s							
TIXI	Tiksi	70.08	1	P	P	20 54 28.3	+0.5
TIXI				IAmb	IAmb	20 56 05.3	
comp=Z,21nm,1.8s							
NRIK	Noril'sk	72.53	346	P	P	20 54 43.0	+0.3
comp=Z,2.4nm,0.6s,baz=117,slow=4.6,SNR=1.9							
comp=Z,2.4nm,0.6s							
AB31	Akbulak array	73.70	321	P	P	20 54 50.1	+0.1
ABKAR	Akbulak array	73.70	321	P	P	20 54 50.2	+0.2
MGMO	Mountain Grove	127.44	39		PKPdf	21 02 17.6	-3.8
CCM	Cathedral Cave	127.50	37		PKPdf	21 02 21.3	-0.1
W57A	Cleiad	135.96	32		PKPdf	21 02 35.0	-2.5
CFA	Coronel Fontan	146.98	157	PKPbc	PKPbc	21 03 00.8	+1.4
comp=Z,1.1nm,0.3s,baz=180,slow=6.1,SNR=6.0							

IDC 14 20:47:16.9±1.9,**1°.73N×126°.47E, h0km, mb3.7**/4,
mbtmp3.7/4,**Error ellipse: s-maj=181.9km**
s-min=22.6km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.88	161	P	P	20 52 21.1	-1.3
1.2nm,0.5s,baz=339,slow=11,SNR=4.7							
1.2nm,0.5s							
ASAR	Alice Springs	26.26	164	P	P	20 52 55.1	+1.1
0.5nm,0.3s,baz=344,slow=11,SNR=5.4							
0.5nm,0.3s							
MKAR	Makanchi Array	59.05	326	P	P	20 57 18.7	-0.2
0.3nm,0.4s,baz=120,slow=7.7,SNR=4.6							
0.3nm,0.4s							
KURBB	Kurchatov Arra	63.28	328	P	P	20 57 47.5	0.0
0.6nm,0.5s,baz=127,slow=6.7,SNR=5.7							
0.6nm,0.5s							

IDC ***14*** *20:48:09.2±1.2, 1°.60N×126°.47E, h0km, mb3.9/7, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=122.8km s-min=16.1km az=69.0*
DJA ***14*** *20:48:13.4±0.3, 2°.1N±4°×12°.6E±°, h10km, M4.2/10, MLv4.2/10*
NEIC ***14*** *20:48:13.8±1.7, 1°.7N±0°.1×126°.61E±0°.09, h26km±7km, mb4.6/10, Error ellipse: s-maj=18.2km s-min=9.7km az=215.0*
ISC 14 20:48:14.7±0.7,**1°.56N**±0°.07×**126°.58E**±0°.07,**h35**km,**n25,**
σ1°**06**/25,**mb4.2**/13,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.11	135	Pn	Pn	20 48 34.3	+0.6
TNTI	Ternate	1.11	135	P	Pn	20 48 34.4	+0.7
SGSI	Sangihe	2.36	334	P	Pn	20 48 53.0	+2.0
KMSI	Cibinong	2.78	249	P	Pn	20 48 56.9	+0.2
LUWI	Luwuk	4.60	236		Pn	20 49 22.8	+1.0
LUWI	Luwuk	4.60	236	P	Pn	20 49 24.1	+2.3
MRSI	Marisa	4.76	257	P	Pn	20 49 24.9	+0.9
TOLI2	Tolitoli	5.82	266	Pn	Pn	20 49 38.4	-0.1
FITZ	Fitzroy Crossi	19.55	183	P	P	20 52 39.8	+0.2
0.2nm,0.3s,baz=357,slow=13,SNR=1.1							
1.9nm,1.0s							
WB0	Warramunga Arr	22.54	160	P	P	20 53 10.9	-0.9
WB0				IAmb	IAmb	20 53 22.0	
comp=Z,7.8nm,0.9s							
WRA	Warramunga Arr	22.68	161	P	P	20 53 12.7	-0.7
comp=Z,2.7nm,0.4s,baz=339,slow=11,SNR=11							
comp=Z,2.7nm,0.4s							
WR8	Warramunga Arr	22.75	160	P	P	20 53 13.3	-0.7
ASAR	Alice Springs	26.06	165	P	P	20 53 45.2	+0.2
comp=Z,1.0nm,0.6s,baz=344,slow=9.4,SNR=7.2							
comp=Z,1.0nm,0.6s							
BBOO	Buckleboo	35.34	166	P	P	20 55 07.7	+0.9
BBOO				IAmb	IAmb	20 55 39.0	
comp=Z,28nm,1.5s							
STKA	Stephens Creek	36.17	158	P	P	20 55 14.8	+0.8
comp=Z,0.8nm,0.3s,baz=305,slow=14,SNR=2.2							
comp=Z,0.8nm,0.3s							
SONM	Songino Array	49.30	342	P	P	20 57 00.0	-0.3
comp=Z,0.5nm,0.6s,baz=142,slow=5.3,SNR=2.7							
comp=Z,0.5nm,0.6s							
MKAR	Makanchi Array	59.26	326	P	P	20 58 12.0	-0.8
comp=Z,0.9nm,0.4s,baz=120,slow=8.4,SNR=14							
comp=Z,0.9nm,0.4s							
MAKZ	Makanchi	59.44	326	P	P	20 58 12.8	-1.2
MAKZ				IAmb	IAmb	20 58 45.2	
comp=Z,9.8nm,1.5s							
ZALV	Zalesovo Beam	62.45	334	P	P	20 58 33.3	-0.9
comp=Z,0.4nm,0.5s,baz=132,slow=8.3,SNR=1.6							
comp=Z,0.4nm,0.5s							
KURBB	Kurchatov Arra	63.48	328	P	P	20 58 40.0	-1.1
comp=Z,1.9nm,0.6s,baz=127,slow=6.1,SNR=20							
comp=Z,1.9nm,0.6s							
KURK	Kurchatov	63.49	328	P	P	20 58 40.0	-1.2
KURK				IAmb	IAmb	20 58 40.9	
comp=Z,3.6nm,0.6s							
AB31	Akbulak array	73.73	321	P	P	20 59 44.1	-1.1
AB31				IAmb	IAmb	21 00 01.9	
comp=Z,1.4nm,0.8s							
D19K	Kuna River	83.19	21	P	P	21 00 37.6	+0.5
C23K	Itkillik River	86.06	20	P	P	21 00 52.8	+1.4
C23K				IAmb	IAmb	21 01 00.0	
comp=Z,10.0nm,1.3s							
I23K	Minto, Yukon-K	86.09	25	P	P	21 00 51.1	-0.6

**PRU 14 20:48:40.4, 49°.85N×18°.52

DPC	**Dobruska-Polom**	**1.50**	**290**	*e*PG		Pn	20 49 06.9	-1.7
DPC				*e*SG		Sg	20 49 27.8	-0.8

IDC 14 20:50:32.8±1.6, 1°67'N×126°30'E, h0km, mb3.6/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=121.5km s-min=20.7km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	P	20 55 02.3	-1.0
	0.1nm,0.3s,baz=5.0,slow=11,SNR=2.1 2.2nm,0.9s						
WRA	**Warramunga Arr**	**22.88**	**160**	P	P	20 55 38.3	+0.1
	1.5nm,0.4s,baz=340,slow=10,SNR=8.2 1.5nm,0.4s						
ASAR	**Alice Springs**	**26.25**	**164**	P	P	20 56 10.1	+0.3
	0.3nm,0.4s,baz=344,slow=9.0,SNR=4.4 0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.00**	**326**	P	P	21 00 34.3	-0.1
	0.2nm,0.3s,baz=119,slow=7.2,SNR=5.3 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.24**	**328**	P	P	21 01 03.1	+0.1
	0.3nm,0.4s,baz=128,slow=6.2,SNR=5.6 0.3nm,0.4s						

IDC 14 20:51:21.7±2.1, 2°02'N×125°38'E, h0km, mb3.4/3, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=134.6km s-min=26.6km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.00**	**179**	P	P	20 55 54.5	-1.5
	0.1nm,0.3s,baz=22,slow=11,SNR=1.5 1.3nm,0.7s						
WRA	**Warramunga Arr**	**23.53**	**158**	P	P	20 56 33.0	-0.8
	0.4nm,0.4s,baz=339,slow=9.9,SNR=1.3 0.4nm,0.4s						
ASAR	**Alice Springs**	**26.85**	**162**	P	P	20 57 04.5	+0.3
	0.3nm,0.5s,baz=341,slow=8.9,SNR=1.5 0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.20**	**326**	P	P	21 01 18.7	+1.0
	0.6nm,1.0s,baz=114,slow=11,SNR=1.4 0.6nm,1.0s						

*OSUNB **14** 20:52:26.8±0.7, 8°64'S×74°47'W, h116km±5km, mb4.7/36, Error ellipse: s-maj=3.4km s-min=3.9km az=0.0*
*VAO **14** 20:52:26.4±0.3, 8°61'S×74°44'W, h114km, mb4.8*
*IDC **14** 20:52:26.8±0.6, 8°62'S×74°68'W, h132km±5km, mb4.1/20, mbtmp4.5/25, Error ellipse: s-maj=10.8km s-min=8.5km az=54.0*
*NEIC **14** 20:52:27.3±2.2, 8°58'S±0°06'×74°60'W±0°08, h130km±5km, mb4.9/246, Error ellipse: s-maj=12.1km s-min=8.5km az=70.0*

ISC 14 20:52:26.0±0.4, 8°58'S±0°04'×74°57'W±0°04, h124km±3km, h125km:pP-P, n333, σ19°40/278, mb4.9/130, 12C-9D, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.05**	**290**	P	Pn	20 53 26.5	-0.3
	547nm,0.8s,baz=153,slow=2.3,SNR=287						
ATAH				S	Sn	20 54 12.7	-1.1
	260nm,0.7s,baz=94,slow=19,SNR=4.2						
NNA	**Nana**	**4.06**	**213**	P	Pn	20 53 27.7	+1.1
	84nm,0.3s,baz=22,slow=9.6,SNR=35						
NNA				S	Sn	20 54 11.9	-1.7
	593nm,0.3s,baz=342,slow=23,SNR=25						
NNA	**Nana**	**4.06**	**213**		Pn	20 53 27.4	+0.8
NNA	**Nana**	**4.06**	**213**	P	Pn	20 53 27.5	+0.9
NNA				S	Sn	20 54 12.0	-1.5
MCRA	**Macar, Loja**	**6.79**	**308**	P	Pn	20 53 59.9	-3.4
MCRA				S	Sn	20 55 13.5	-5.8
PIAT	**Ana Tenorio**	**8.38**	**334**	P	Pn	20 54 24.1	-0.9
PTLC	**Puerto Leguiza**	**8.69**	**358**	P	Pn	20 54 23.9	-5.0
SLOR	**San Lorenzo -**	**8.72**	**333**		Pn	20 54 29.0	-0.8
LABB	**L¡brea**	**8.81**	**95**	P	Pn	20 54 30.6	+0.1
LABB				S	Sn	20 56 04.3	-4.0
PPLP	**Puerto Lpez**	**9.33**	**318**	P	Pn	20 54 37.5	0.0
BONI	**La Bonita**	**9.44**	**342**	P	Pn	20 54 40.1	+0.9
	2µm42nm,0.6s						
OTAV	**Otavalo**	**9.57**	**336**		Pn	20 54 39.6	-1.5
OTAV	**Otavalo**	**9.57**	**336**	P	Pn	20 54 43.0	+1.8
OTAV	**Otavalo**	**9.57**	**336**	*e*P	Pn	20 54 42.6	+1.4
OTAV				*e*S	Sn	20 56 29.9	+2.6
OTAV	**Otavalo**	**9.57**	**336**	P	Pn	20 54 41.8	+0.6
	15nm,0.7s						
CUSE	**Cuicocha Este**	**9.61**	**336**	P	Pn	20 54 43.8	+2.1
	4µm52nm,0.9s						
PAC1	**Pacto, Paraso**	**9.74**	**334**	P	Pn	20 54 44.5	+1.3
TULM	**Tulcn-Chalpat**	**9.77**	**341**	P	Pn	20 54 45.6	+1.7
	39nm,0.7s						
LPAZ	**La Paz**	**9.91**	**141**	P	Pn	20 54 45.6	-0.3
	16nm,0.8s,baz=326,slow=6.3,SNR=40						
LPAZ	**La Paz**	**9.91**	**141**	Pn	Pn	20 54 44.9	-0.9
LPAZ	**La Paz**	**9.91**	**141**	P	Pn	20 54 45.6	-0.3
CMBC	**Cumbal**	**10.00**	**341**	P	Pn	20 54 49.0	+2.1
GCUF	**Volcan Galeras**	**10.12**	**344**	P	Pn	20 54 49.4	+0.8
	44nm,0.8s						
FLOC	**Florencia**	**10.15**	**354**		Pn	20 54 48.0	-0.6
FLOC	**Florencia**	**10.15**	**354**	P	Pn	20 54 48.7	+0.1
	680nm31nm,1.0s						
PB18	**Visviri**	**10.24**	**152**		Pn	20 54 48.3	-1.8
CRUC	**La Cruz**	**10.35**	**347**	P	Pn	20 54 53.5	+1.9
	1µm,1.6s						
MACC	**Macarena, Meta**	**10.67**	**4**	P	Pn	20 54 55.5	-0.1
GARC	**Garzon, Huila**	**10.73**	**355**	P	Pn	20 54 56.7	+0.1
PB12	**IPOC Station P**	**10.79**	**158**		Pn	20 54 57.1	-0.1
PB16	**IPOC Station P**	**10.88**	**154**		Pn	20 54 59.4	+0.6
TEFE	**Tefe**	**11.08**	**64**	P	Pn	20 55 01.6	+0.5
TEFE				S	Sn	20 57 00.1	-3.1
TEFE	**Tefe**	**11.08**	**64**	*e*P	Pn	20 55 00.7	-0.4
TEFE				*e*S	Sn	20 57 00.5	-2.7
POPC	**Popayan, Colom**	**11.24**	**349**	P	Pn	20 55 04.3	+0.9
	32nm,1.1s						
SGC2	**Sao Gabriel da**	**11.28**	**42**	P	Pn	20 55 03.1	-0.5
SGC2	**Sao Gabriel da**	**11.28**	**42**	P	Pn	20 55 02.7	-0.9
URMC	**La Uribe, Meta**	**11.75**	**1**	P	Pn	20 55 09.8	-0.1
JAMC	**Jamundi, Valle**	**11.90**	**350**	P	Pn	20 55 13.5	+1.4
	1µm21nm,1.2s						
PB11	**IPOC Station P**	**12.09**	**157**		Pn	20 55 15.1	+0.6
GO01	**Chusmiza**	**12.19**	**155**		Pn	20 55 16.0	-0.1
PRAC	**Prado**	**12.21**	**358**	P	Pn	20 55 16.9	+0.9
	21nm,0.8s						
ORTC	**Ortega, Tolima**	**12.42**	**357**	P	Pn	20 55 20.3	+1.6
	1µm126nm,1.0s						
HMBC	**Humberstone**	**12.48**	**159**		Pn	20 55 17.9	-1.7
YOTC	**Yotoco, Valle**	**12.60**	**352**	P	Pn	20 55 20.3	-0.8
VILC	**Villavicencio,**	**12.63**	**4**	P	P	20 55 30.7	+2.7
PB08	**IPOC Station P**	**12.63**	**156**		Pn	20 55 21.6	-0.2
BOG	**Bogota**	**13.12**	**2**	P	P	20 55 31.0	-2.6
	409µm25µm,0.5s						
CHIC	**Chingaza**	**13.14**	**4**	P	Pn	20 55 29.4	+1.0
	24nm,0.9s						
PB02	**IPOC Station P**	**13.45**	**161**		Pn	20 55 32.2	+0.1
GUY2C	**Guyana, Caldas**	**13.73**	**357**	P	P	20 55 42.2	+1.7
PB07	**IPOC Station P**	**13.83**	**161**	Pn	Pn	20 55 36.7	-0.4
PB09	**IPOC Station P**	**14.11**	**159**	P	Pn	20 55 40.5	-0.1
PB03	**IPOC Station P**	**14.17**	**161**	P	Pn	20 55 41.0	-0.5
CBOC	**Ciudad Bolivar**	**14.42**	**354**	P	P	20 55 49.6	+1.8
RUSC	**La Rusia**	**14.45**	**6**		P	20 55 48.6	+0.2
RUSC	**La Rusia**	**14.45**	**6**	P	P	20 55 48.8	+0.3
HELC	**Santa Helena**	**14.70**	**356**	P	P	20 55 52.1	+0.9
VILB	**Vilhena**	**14.77**	**108**		Pn	20 55 48.5	-0.4
VILB	**Vilhena**	**14.77**	**108**	P	Pn	20 55 49.8	+1.0
VILB	**Vilhena**	**14.77**	**108**	*e*P	Pn	20 55 48.4	-0.4
VILB				*e*S	Sn	20 58 30.6	-1.8
MACA	**Manacapuru-AM**	**14.82**	**70**		Pn	20 55 47.9	-1.5
MACA	**Manacapuru-AM**	**14.82**	**70**	P	Pn	20 55 50.2	+0.7
MACA				S	Sn	20 58 37.4	+3.9
MACA	**Manacapuru-AM**	**14.82**	**70**	*e*P	Pn	20 55 48.3	-1.2
MACA				*e*S	Sn	20 58 31.6	-1.8
PB06	**IPOC Station P**	**14.85**	**162**		Pn	20 55 47.9	-2.0
PTBC	**PUERTO BERRIO,**	**15.02**	**0**	P	P	20 55 54.8	+0.5
	6µm45nm,0.9s						
SIV	**San Ignacio**	**15.10**	**121**	P	Pn	20 55 53.8	+0.8
	30nm,0.5s,baz=290,slow=9.5,SNR=78						
BARC	**Barichara**	**15.13**	**5**	P	P	20 55 57.6	+1.8
DBBC	**Dabeiba**	**15.58**	**354**	P	P	20 56 03.7	+3.1
PAMC	**Pamplona, Colo**	**15.92**	**7**	P	P	20 56 06.8	+2.0
	1µm135nm,0.8s						
UREC	**San Jos de Ur**	**16.25**	**357**	P	P	20 56 08.5	+0.5
	904nm29nm,1.0s						
PB14	**IPOC Station P**	**16.45**	**167**	P	P	20 56 11.7	+1.3
PTLB	**Pontes e Lacer**	**16.56**	**116**		Pn	20 56 10.3	-0.7
PTLB	**Pontes e Lacer**	**16.56**	**116**	P	Pn	20 56 11.1	+0.1
PTLB	**Pontes e Lacer**	**16.56**	**116**	*e*P	Pn	20 56 10.7	-0.3
PTLB				*e*S	Sn	20 59 13.5	-1.9
OCAC	**Ocana**	**16.75**	**4**	P	P	20 56 14.2	+0.6
	126nm,0.7s						
GO02	**Mina Guanaco**	**17.16**	**165**		Pn	20 56 19.7	+1.1
CAPC	**Capurgana**	**17.32**	**351**	P	Pn	20 56 22.5	+2.2
	49nm,0.8s						
BOAV	**Boa Vista**	**17.74**	**53**		Pn	20 56 25.8	+0.4
BOAV	**Boa Vista**	**17.74**	**53**	P	Pn	20 56 26.0	+0.7
BOAV	**Boa Vista**	**17.74**	**53**	*e*P	Pn	20 56 25.1	-0.3
BOAV				*e*S	S	20 59 42.3	-0.3
BOAV	**Boa Vista**	**17.74**	**53**	P	Pn	20 56 26.1	+0.7
	15nm,0.8s						
SDV	**Santo Domingo**	**17.78**	**13**	P	P	20 56 25.5	+0.4
	9.4nm,0.4s,baz=136,slow=7.0,SNR=11						
SDV	**Santo Domingo**	**17.78**	**13**		Pn	20 56 26.3	+0.2
SDV	**Santo Domingo**	**17.78**	**13**	P	Pn	20 56 26.7	+0.6
SDV	**Santo Domingo**	**17.78**	**13**	*e*P	Pn	20 56 26.6	+0.6
SDV				*e*S	Sn	20 59 45.1	0.0
SDV	**Santo Domingo**	**17.78**	**13**	P	Pn	20 56 26.2	+0.2
	36nm,0.8s						
PDRB	**Porto dos Gac**	**17.82**	**101**	P	Pn	20 56 26.2	-0.1
PDRB	**Porto dos Gac**	**17.82**	**101**	*e*P	P	20 56 25.5	+0.2
PDRB				*e*S	S	20 59 43.2	-0.9
SJCC	**San Jacinto, C**	**18.36**	**358**	P	Pn	20 56 32.6	-0.2
	3µm117nm,1.0s						
CLDB	**Colider**	**18.64**	**99**	P	P	20 56 34.8	+0.5
CLDB	**Colider**	**18.64**	**99**	*e*P	Pn	20 56 35.2	-0.8
CLDB				*e*S	S	21 00 00.2	-0.2
AC02	**Maricunga**	**18.88**	**165**	Pn	Pn	20 56 39.1	-0.1
NPGB	**Novo Progresso**	**19.09**	**87**	P	P	20 56 40.2	+0.9
NPGB	**Novo Progresso**	**19.09**	**87**	*e*P	P	20 56 39.6	+0.4
AC06	**Mina Casimiro**	**19.10**	**168**	P	P	20 56 39.5	+0.3
ITTB	**Itatiuba**	**19.17**	**79**	P	Pn	20 56 41.3	-1.0
ITTB	**Itatiuba**	**19.17**	**79**	*e*P	P	20 56 40.2	+0.1
ITTB				*e*S	S	21 00 10.4	-0.4
MAS01	**UHE Manso**	**19.39**	**111**	P	P	20 56 43.4	+0.9
CRJC	**Cerrejon, Guaj**	**19.54**	**5**	P	P	20 56 42.8	-1.3
SMRC	**Santa Marta, M**	**19.61**	**1**	P	P	20 56 44.9	+0.1
SMRC	**Santa Marta, M**	**19.61**	**1**	P	P	20 56 45.6	+0.8
SALV	**Santo Antonio**	**19.82**	**113**	P	P	20 56 48.3	+1.2
SALV	**Santo Antonio**	**19.82**	**113**	*e*P	P	20 56 47.2	+0.1
SALV				*e*S	S	21 00 23.8	+0.2
URIC	**Uribia, Colomb**	**20.31**	**7**	P	P	20 56 50.5	-1.8
AC05	**El Transito**	**20.56**	**169**	P	P	20 56 54.6	-0.4
BDQN	**Bodoquena, MS**	**20.87**	**126**	*e*P	P	20 56 57.7	-0.6
BDQN				*e*S	S	21 00 44.7	+0.3
MURT	**Porto Murtinho**	**20.88**	**130**	*e*P	P	20 56 59.7	+1.3
PP1B	**Ponte de Pedra**	**21.15**	**117**	*e*P	P	20 57 02.5	+1.1
MAL2	**Monte Alegre,**	**21.31**	**73**		P	20 57 03.5	+0.4
MAL2	**Monte Alegre,**	**21.31**	**73**	P	P	20 57 04.4	+1.3
AQDB	**Aquidauana**	**21.73**	**125**		P	20 57 07.0	-0.5
AQDB	**Aquidauana**	**21.73**	**125**	P	P	20 57 06.6	-0.9
AQDB	**Aquidauana**	**21.73**	**125**	*e*P	P	20 57 06.8	-0.8
AQDB				*e*S	S	21 01 01.5	+1.1
CO02	**Combarbal**	**22.76**	**172**	P	P	20 57 18.9	+1.0
CO02				IAmb	IAmb	20 57 20.7	
	comp=Z,35nm,0.9s						
BMO2	**UHE Belo Monte**	**23.04**	**78**	P	P	20 57 20.6	-0.1
SNDB	**Serra Nova Dou**	**23.14**	**100**	P	P	20 57 22.0	+0.4
SNDB	**Serra Nova Dou**	**23.14**	**100**	*e*P	P	20 57 21.7	+0.1
BMO1	**UHE Belo Monte**	**23.31**	**78**	P	P	20 57 23.9	+0.7
ARAG	**Araguaiana, MT**	**23.33**	**110**	*e*P	P	20 57 23.1	-0.2
ARAG				*e*S	S	21 01 27.8	+1.1
C2SB	**Chapadao do Su**	**23.39**	**118**	P	P	20 57 25.1	+1.3
C2SB	**Chapadao do Su**	**23.39**	**118**	*e*P	P	20 57 25.9	-0.9
AMBA	**Amambai (Brazi**	**23.59**	**129**	*e*P	P	20 57 24.8	-0.9
AMBA				*e*S	S	21 01 31.8	+1.0
CFA	**Coronel Fontan**	**23.66**	**166**	P	P	20 57 26.2	0.0
	comp=Z,6.2nm,0.6s,baz=352,slow=10,SNR=20 comp=Z,6.2nm,0.6s						
CPUP	**Villa Florida**	**24.07**	**139**	P	P	20 57 29.1	-0.9
	comp=Z,2.9nm,0.9s,baz=248,slow=11,SNR=14 comp=Z,2.9nm,0.9s						
CPUP	**Villa Florida**	**24.07**	**139**	IAmb	IAmb	20 57 31.0	
	comp=Z,3.3nm,0.9s						
CPUP	**Villa Florida**	**24.07**	**139**	P	P	20 57 29.5	-0.5
PRPB	**Parauapebas**	**24.66**	**86**	P	P	20 57 37.3	+1.8
PRPB	**Parauapebas**	**24.66**	**86**	*e*P	P	20 57 37.3	+1.8
PRPB				*e*S	S	21 01 49.0	+0.8
TUC4	**UHE Tucurui**	**25.23**	**82**	P	P	20 57 42.0	+1.4
ITRB	**Iturama**	**25.91**	**118**	P	P	20 57 48.4	+1.7
ITRB	**Iturama**	**25.91**	**118**	*e*P	P	20 57 47.0	+0.3
LAJE	**UHE Lajeado**	**25.94**	**95**	P	P	20 57 48.9	+1.8
SMTB	**Santa Maria do**	**26.67**	**93**	P	P	20 57 55.9	+2.3
PTGB	**Pitanga**	**26.81**	**129**	P	P	20 57 54.2	-0.6
PTGB	**Pitanga**	**26.81**	**129**	*e*P	P	20 57 53.9	-1.0
BDFB	**Brasilia**	**26.88**	**108**	P	P	20 57 58.1	+2.5
	comp=Z,15nm,0.7s,baz=273,slow=11,SNR=19 comp=Z,15nm,0.7s						
BDFB	**Brasilia**	**26.88**	**108**	IAmb	IAmb	20 57 59.0	
	comp=Z,18nm,0.8s						
BDFB	**Brasilia**	**26.88**	**108**	P	P	20 57 57.7	+2.1
PAL2	**UHE Estreito -**	**27.05**	**88**	P	P	20 57 59.3	+2.2
IPMB	**Ipameri, GO**	**27.27**	**113**	P	P	20 57 58.1	-0.8
IPMB	**Ipameri, GO**	**27.27**	**113**	*e*P	P	20 57 58.2	-0.8
BAT3	**Ipameri**	**27.73**	**111**	P	P	20 58 02.6	-0.5
BAT2	**UHE Batalha**	**27.78**	**111**	P	P	20 58 02.9	-0.7
SJG	**San Juan**	**27.79**	**17**	P	P	20 58 03.5	+0.1
SJG				IAmb	IAmb	20 58 07.8	
	comp=Z,20nm,0.6s						
AOPR	**Arecibo Observ**	**27.84**	**16**	P	P	20 58 04.0	+0.1
FRTB	**Fartura**	**28.10**	**124**	P	P	20 58 05.8	-0.5
FRTB	**Fartura**	**28.10**	**124**	*e*P	P	20 58 05.5	-0.8
ITAB	**Concordia**	**28.20**	**134**	P	P	20 58 07.3	+0.2
ITAB	**Concordia**	**28.20**	**134**	*e*P	P	20 58 06.4	-0.7
RCLB	**Rio Claro- Sao**	**29.39**	**121**	*e*P	P	20 58 17.7	-0.1
SDBA	**SAO DESIDERIO**	**29.41**	**100**	P	P	20 58 19.9	+1.9
SDBA	**SAO DESIDERIO**	**29.41**	**100**	*e*P	P	20 58 20.5	+2.5
VABB	**Valinhos**	**30.10**	**122**	P	P	20 58 25.0	+0.9
JQT1	**Jequitai-MG**	**30.64**	**109**	P	P	20 58 29.8	+0.9
TRQA	**Tornquist**	**31.48**	**161**		P	20 58 35.1	-0.8
TRQA				IAmb	IAmb	20 58 36.3	
	comp=Z,24nm,1.0s						
TRQA	**Tornquist**	**31.48**	**161**	P	P	20 58 35.4	-0.5
DIAM	**Diamantina, MG**	**31.52**	**111**	P	P	20 58 38.6	+1.9
VAS01	**Vassouras-RJ**	**32.86**	**118**	*e*S	S	21 03 57.8	+1.0
ANA01	**Lindo Horizont**	**33.63**	**103**	P	P	20 58 55.9	+0.8
RIB01	**Linhares ES**	**34.77**	**112**	P	P	20 59 04.4	-0.4
GUA01	**Guaratinga, BA**	**34.80**	**107**	P	P	20 59 05.7	+0.6
CMC01	**Camacan, BA**	**34.91**	**105**	P	P	20 59 07.2	+1.2
NBIT	**Itapeh - BA**	**34.94**	**104**	P	P	20 59 08.3	+2.0
NBMA	**Muriti-CE**	**35.47**	**91**	P	P	20 59 08.4	-2.5
NBAN	**Anadia - AL**	**37.81**	**95**	P	P	20 59 29.8	-0.9
HNDO	**Hondo**	**44.74**	**329**	IAmb	IAmb	21 00 29.3	
	comp=Z,31nm,0.8s						
T59A	**Double "B" Far**	**45.39**	**357**	IAmb	IAmb	21 00 33.4	
	comp=Z,29nm,1.1s						
V48A	**Smith Brothers**	**45.57**	**346**	IAmb	IAmb	21 00 33.5	
	comp=Z,17nm,0.8s						
UALR	**University of**	**46.28**	**340**	IAmb	IAmb	21 00 39.9	
	comp=Z,21nm,0.8s						
WHAR	**Wooly Hollow**	**46.73**	**340**	IAmb	IAmb	21 00 42.7	
	comp=Z,17nm,0.9s						
OZNA	**Ozona**	**46.81**	**328**	IAmb	IAmb	21 00 44.4	
	comp=Z,48nm,1.7s						
TXAR	**Lajitas Array**	**46.97**	**324**	P	P		**21 00 45.0 +0.2**
	comp=Z,2.5nm,0.6s,baz=149,slow=8.6,SNR=20						
TXAR				pP	pP		**21 01 15.4 +1.9**
	comp=Z,1.6nm,0.8s,baz=153,slow=8.4,SNR=2.1						
TXAR				PcP	PcP		**21 02 15.4 +0.1**
	comp=Z,0.9nm,0.6s,baz=136,slow=5.8,SNR=4.2 comp=Z,2.5nm,0.6s						
FCAR	**Ozark Folk Cen**	**47.22**	**341**	IAmb	IAmb	21 02 00.6	
	comp=Z,24nm,0.9s						
ABTX	**Abilene, Hawle**	**47.44**	**331**	IAmb	IAmb	21 00 49.8	
	comp=Z,26nm,0.8s						
HHAR	**Hobbs**	**48.20**	**339**	IAmb	IAmb	21 00 54.2	
	comp=Z,18nm,0.9s						
APMT	**Aspermont**	**48.24**	**331**	IAmb	IAmb	21 00 56.0	
	comp=Z,27nm,1.1s						
MVL	**Millersville**	**48.36**	**358**	IAmb	IAmb	21 00 56.9	
	comp=Z,18nm,0.8s						
MGMO	**Mountain Grove**	**48.42**	**341**	IAmb	IAmb	21 00 55.7	
	comp=Z,29nm,1.1s						
TUL3	**Leonard**	**48.56**	**337**	IAmb	IAmb	21 00 57.6	
	comp=Z,21nm,0.7s						
FVM	**French Village**	**48.63**	**343**	IAmb	IAmb	21 00 57.1	
	comp=Z,20nm,0.7s						
POST	**Post**	**48.71**	**330**	IAmb	IAmb	21 00 59.3	
	comp=Z,26nm,0.8s						
DKNS	**Dickens**	**48.91**	**331**	IAmb	IAmb	21 01 01.0	
	comp=Z,16nm,0.7s						
CCM	**Cathedral Cave**	**48.93**	**343**	P	P		**21 00 58.6 -1.0**
CCM				IAmb	IAmb	21 02 22.2	
	comp=Z,10nm,0.8s						
N58A	**Sunbury**	**49.21**	**358**	IAmb	IAmb	21 01 03.2	
	comp=Z,14nm,0.8s						
T35A	**Sooner Cattle**	**49.72**	**337**	IAmb	IAmb	21 01 06.6	
	comp=Z,30nm,1.3s						
MSTX	**Muleshoe**	**50.06**	**329**	IAmb	IAmb	21 01 09.2	
	comp=Z,18nm,1.1s						
P40A	**Paris**	**50.53**	**342**	IAmb	IAmb	21 01 11.3	
	comp=Z,11nm,0.7s						
P38A	**Dawn**	**51.08**	**341**	IAmb	IAmb	21 01 15.6	
	comp=Z,16nm,0.8s						
J59A	**Piesco**	**51.79**	**0**	P	P		**21 01 21.7 +0.7**
J59A				IAmb	IAmb	21 01 22.4	
	comp=Z,30nm,1.1s						
RTBA	**Rita Blanca**	**52.02**	**331**	IAmb	IAmb	21 01 24.7	
	comp=Z,37nm,1.6s						
CBKS	**Cedar Bluff**	**52.64**	**335**	IAmb	IAmb	21 01 28.8	
	comp=Z,18nm,0.7s						
L40A	**Anamosa**	**52.65**	**344**	IAmb	IAmb	21 01 27.3	
	comp=Z,14nm,0.9s						
ANMO	**Albuquerque**	**52.75**	**327**		P		**21 01 28.6 +0.1**
ANMO	**Albuquerque**	**52.75**	**327**	P	P		**21 01 28.9 +0.5**
ANMO				sP	sP		**21 02 10.5 -1.1**
TASM	**ASL Pad, Albuq**	**52.75**	**327**	IAmb	IAmb	21 01 29.9	
	comp=Z,9.7nm,1.2s						
SADO	**Sadowa**	**53.26**	**356**	P	P		**21 01 30.9 -0.8**
	comp=Z,7.0nm,0.8s,baz=202,slow=4.8,SNR=3.5 comp=Z,7.0nm,0.8s						
T25A	**Trinidad**	**53.38**	**330**	IAmb	IAmb	21 01 34.8	
	comp=Z,17nm,0.9s						
MNTQ	**Montreal, Queb**	**53.83**	**1**	P	P		**21 01 36.5 +0.6**
KSCO	**Kaye Shedlock'**	**54.05**	**333**	IAmb	IAmb	21 01 39.2	
	comp=Z,17nm,0.9s						
214A	**Organ Pipe Nat**	**54.39**	**320**	IAmb	IAmb	21 01 42.0	
	comp=Z,14nm,1.0s						
SDCO	**Great Sand Dun**	**54.40**	**330**	IAmb	IAmb	21 01 42.1	
	comp=Z,12nm,0.7s						
X18A	**Snowflake**	**54.40**	**324**	IAmb	IAmb	21 01 42.2	
	comp=Z,11nm,1.0s						
X16A	**Lo Mia Camp, P**	**55.20**	**323**	IAmb	IAmb	21 01 48.1	
	comp=Z,8.0nm,0.8s						
ECSD	**EROS Data Cent**	**55.78**	**341**	IAmb	IAmb	21 01 49.5	
	comp=Z,10nm,0.9s						
WUAZ	**Wupatki**	**55.92**	**324**	IAmb	IAmb	21 01 53.2	
	comp=Z,16nm,0.9s						
PV15	**Paradox Valley**	**56.37**	**328**	IAmb	IAmb	21 01 56.9	
	comp=Z,15nm,1.0s						
PV13	**Radium Mtn., P**	**56.41**	**328**	IAmb	IAmb	21 01 56.2	
	comp=Z,16nm,0.8s						
PV05	**Paradox Valley**	**56.50**	**328**	IAmb	IAmb	21 01 56.5	
	comp=Z,11nm,0.8s						
PV18	**Skein Mesa, Pa**	**56.52**	**328**	IAmb	IAmb	21 01 56.9	
	comp=Z,14nm,0.9s						
PV16	**Nyswonger Mesa**	**56.57**	**328**	IAmb	IAmb	21 01 57.9	
	comp=Z,13nm,1.5s						
BLYC	**Blythe**	**56.65**	**320**	IAmb	IAmb	21 01 58.2	
	comp=Z,12nm,1.1s						
BC3	**Big Chuckawall**	**57.19**	**319**		P		**21 02 00.7 +0.3**
BC3				IAmb	IAmb	21 02 02.0	
	comp=Z,11nm,1.0s						
IRM	**Iron Mountain**	**57.31**	**320**	IAmb	IAmb	21 02 02.9	
	comp=Z,17nm,0.9s						
F33A	**5 Mile Ranch,**	**57.57**	**342**	IAmb	IAmb	21 02 02.1	
	comp=Z,9.5nm,0.7s						
O20A	**White River Ci**	**57.60**	**330**	IAmb	IAmb	21 02 04.6	
	comp=Z,9.4nm,1.0s						
BELC	**Belle Mtn. Jos**	**57.76**	**319**		P		**21 02 04.8 +0.5**
PFO	**Pinyon Flats O**	**57.81**	**319**	P	P		**21 02 05.4 +0.7**
V12A	**N

J04A	**Umpqua Nationa**	**67.25**	**324**		IAmb		IAmb	21 03 08.6	
	comp=Z,16nm,0.7s								
K02D	**Willamette Mer**	**67.83**	**323**		IAmb		IAmb	21 03 12.0	
	comp=Z,11nm,0.9s								
NEW	**Newport**	**67.88**	**331**		P		**P**	**21 03 11.0**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=148,slow=9.4,SNR=3.7								
	comp=Z,2.8nm,0.7s								
NLWA	**Neilton Lookou**	**70.76**	**327**		IAmb		IAmb	21 03 30.4	
	comp=Z,10nm,0.8s								
DBIC	**Dimbokro**	**71.12**	**80**		P		**P**	**21 03 31.1**	**-0.5**
	comp=Z,7.3nm,0.8s,baz=276,slow=5.4,SNR=7.1								
DBIC					pP		**pP**	**21 04 04.6**	**+2.1**
	comp=Z,7.2nm,1.0s,baz=236,slow=4.6,SNR=3.3								
DBIC					sP		**sP**	**21 04 20.1**	**+4.2**
	comp=Z,3.6nm,0.9s,baz=221,slow=9.3,SNR=2.1								
	comp=Z,7.3nm,0.8s								
DBIC	**Dimbokro**	**71.12**	**80**		IAmb		IAmb	21 04 06.1	
	comp=Z,7.3nm,0.9s								
DBIC	**Dimbokro**	**71.12**	**80**		P		**P**	**21 03 30.6**	**-1.0**
DBIC	**Dimbokro**	**71.12**	**80**		P		**P**	**21 03 31.2**	**-0.4**
DBIC					pP		**pP**	**21 04 04.2**	**+1.7**
DBIC					sP		**sP**	**21 04 17.9**	**+2.0**
VNA3	**Neumayer Olymp**	**73.98**	**162**		⇑PcP		**PcP**	**21 04 02.5**	**+0.3**
	comp=Z,0.7nm,0.6s								
VNA3					⇑pP		**pP**	**21 04 23.1**	**+4.4**
	comp=Z,3.5nm,1.1s								
VNA1	**Neumayer--Stat**	**74.21**	**162**		⇑PcP		**PcP**	**21 04 03.3**	**+0.1**
	comp=Z,3.3nm,1.0s								
VNA1					⇑pP		**pP**	**21 04 22.4**	**+2.5**
	comp=Z,7.0nm,1.1s								
VNA2	**Neumayer--Watz**	**74.57**	**162**		⇑PcP		**PcP**	**21 04 05.1**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=287,slow=5.3								
VNA2					⇑pP		**pP**	**21 04 23.7**	**+1.6**
	comp=Z,2.6nm,0.6s,baz=175,slow=30								
SNAA	**Sanae**	**76.19**	**162**		⇑PcP		**PcP**	**21 04 14.6**	**+2.8**
	comp=Z,31nm,0.6s								
SNAA					⇑pP		**pP**	**21 04 33.2**	**+1.6**
	comp=Z,97nm,0.7s								
SNAA	**Sanae**	**76.19**	**162**		P		**P**	**21 04 00.7**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=292,slow=10,SNR=7.4								
SNAA					pP		**pP**	**21 04 33.1**	**+1.6**
	comp=Z,3.7nm,0.6s,baz=269,slow=8.5,SNR=9.0								
	comp=Z,0.6nm,0.5s								
SNAA	**Sanae**	**76.19**	**162**				pP	21 04 33.3	+1.8
YKA	**Yellowknife Ar**	**77.27**	**342**		P		**P**	**21 04 05.7**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=162,slow=9.6,SNR=20								
	comp=Z,6.3nm,0.8s								
TROLL	**Troll, Antarti**	**77.91**	**162**		⇑PcP		**PcP**	**21 04 25.3**	**+6.0**
	comp=Z,64nm,0.7s								
TROLL					⇑pP		**pP**	**21 04 43.9**	**+2.5**
	comp=Z,245nm,0.8s								
TORD	**Torodi Ar. Bea**	**78.74**	**75**		P		**P**	**21 04 14.4**	**-1.0**
	comp=Z,2.8nm,0.6s,baz=276,slow=2.6,SNR=2.3								
	comp=Z,2.8nm,0.6s								
ESDC	**Sonseca Array**	**80.83**	**48**		P		**P**	**21 04 26.8**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=264,slow=6.0,SNR=9.2								
	comp=Z,4.0nm,1.0s								
STCH	**Steam Cracks**	**84.02**	**291**		P		**P**	**21 04 43.7**	**+0.4**
RES	**Resolute Bay**	**84.05**	**355**		P		**P**	**21 04 43.0**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=111,slow=8.6,SNR=1.9								
	comp=Z,1.8nm,0.6s								
TAM	**Tamanrasset**	**84.26**	**66**				**P**	**21 04 45.2**	**+0.7**
M29M	**Somme Creek**	**85.92**	**335**		IAmb		IAmb	21 07 07.2	
	comp=Z,10nm,0.8s								
J30M	**Hart River**	**86.08**	**338**		IAmb		IAmb	21 07 10.9	
	comp=Z,28nm,1.8s								
I30M	**Mount Dempster**	**86.41**	**338**		IAmb		IAmb	21 08 04.5	
	comp=Z,37nm,1.9s								
M27K	**Edge Creek, AK**	**87.31**	**334**		IAmb		IAmb	21 04 59.9	
	comp=Z,14nm,0.8s								
F30M	**Barrier River**	**87.39**	**340**		IAmb		IAmb	21 05 01.7	
	comp=Z,11nm,0.8s								
H29M	**Whitestone**	**87.61**	**339**		IAmb		IAmb	21 05 00.6	
	comp=Z,9.1nm,0.7s								
E29M	**Blow River**	**88.46**	**341**		IAmb		IAmb	21 05 04.4	
	comp=Z,14nm,0.8s								
VNDA	**Vanda**	**88.53**	**190**		P		**P**	**21 05 05.1**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=92,slow=6.8,SNR=4.3								
	comp=Z,0.6nm,0.8s								
DOT	**Dot Lake**	**88.74**	**335**		IAmb		IAmb	21 05 06.1	
	comp=Z,12nm,0.6s								
I26K	**Coal Creek Min**	**89.01**	**337**		IAmb		IAmb	21 06 55.3	
	comp=Z,10nm,1.0s								
PAX	**Paxson**	**89.08**	**334**		IAmb		IAmb	21 06 51.6	
	comp=Z,11nm,0.9s								
E27K	**Coleen River**	**89.61**	**340**		IAmb		IAmb	21 06 58.7	
	comp=Z,16nm,1.1s								
DOU	**Dourbes**	**89.63**	**39**		*d*P		**P**	**21 05 09.7**	**-0.1**
	comp=Z,8.7nm,1.0s								
DOU					*d*pP		**pP**	**21 05 37.8**	**-4.1**
BMRD	**Maredsous**	**89.79**	**39**		*d*P		**P**	**21 05 10.3**	**-0.1**
BMRD					*d*PP		**PP**	**21 08 44.4**	**-0.1**
D27M	**Malcolm River**	**89.84**	**341**		IAmb		IAmb	21 05 11.5	
	comp=Z,9.3nm,0.8s								
BGES	**Gesves**	**90.01**	**39**		*d*P		**P**	**21 05 11.5**	**+0.1**
	comp=Z,8.9nm,1.1s								
RCHB	**Rochefort**	**90.04**	**39**		*d*P		**P**	**21 05 11.1**	**-0.5**
RCHB					*d*pP		**pP**	**21 05 38.7**	**-5.1**
KEST	**Kesra**	**90.05**	**54**		P		**P**	**21 05 12.5**	**+0.4**
	comp=Z,4.3nm,0.9s,baz=289,slow=5.3,SNR=3.6								
	comp=Z,4.3nm,0.9s								
ILAR	**Eielson Array**	**90.29**	**336**		P		**P**	**21 05 12.1**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=144,slow=3.3,SNR=15								
	comp=Z,2.2nm,0.8s								
SYO	**Syowa Base**	**90.44**	**161**	⇑	*e*P		**P**	**21 05 10.2**	**-3.0**
BHOU	**Houvegnez**	**90.57**	**39**		*d*P		**P**	**21 05 14.3**	**+0.2**
BHOU					*d*pP		**pP**	**21 05 43.6**	**-2.7**
MOTA	**Moosalm**	**93.32**	**43**		*e*P		**P**	**21 05 26.8**	**-0.3**
	comp=Z,2.3nm,0.5s								
SQTA	**Sankt Quirin**	**93.37**	**43**		*e*PcP		**P**	**21 05 27.3**	**0.0**
	comp=Z,3.3nm,0.4s								
WTTA	**Wattenberg**	**93.66**	**43**		*e*PcP		**P**	**21 05 28.9**	**+0.2**
	comp=Z,2.5nm,0.6s								
ABTA	**Abfaltersbach**	**94.18**	**44**		*e*PcP		**P**	**21 05 31.1**	**+0.1**
	comp=Z,2.2nm,0.6s								
LESA	**Schwarzleotal**	**94.39**	**43**		*i* PcP		**P**	**21 05 32.1**	**+0.2**
	comp=Z,2.2nm,0.6s								
MYKA	**Terra Mystica**	**94.94**	**44**		*i* PcP		**P**	**21 05 34.5**	**+0.1**
	comp=Z,1.7nm,0.4s								
NB2	**NORSAr Subarra**	**95.39**	**29**		P		**P**	**21 05 36.7**	**+0.6**
	comp=Z,11nm,1.2s,baz=262,slow=4.6								
NOA	**NORSAr Array B**	**95.39**	**29**		P		**P**	**21 05 36.1**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=259,slow=4.6,SNR=6.0								
	comp=Z,1.8nm,0.9s								
HFS	**Hagfors**	**96.50**	**30**		P		**P**	**21 05 41.0**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=198,slow=4.1,SNR=2.1								
	comp=Z,1.9nm,0.8s								
STKA	**Stephens Creek**	**126.97**	**219**		PKP		**PKPdf**	**21 11 15.4**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=81,slow=4.0,SNR=3.9								
BVAR	**Borovoye Array**	**127.38**	**26**		PKP		**PKPdf**	**21 11 15.9**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=5.7,slow=3.0,SNR=6.6								
ZALV	**Zalesovo Beam**	**131.81**	**16**		PKP		**PKPdf**	**21 11 24.5**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=281,slow=2.4,SNR=15								
KURK	**Kurchatov**	**132.49**	**23**				**PKPdf**	**21 11 26.2**	**+0.4**
KURBB	**Kurchatov Arra**	**132.53**	**23**		PKP		**PKPdf**	**21 11 26.2**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=307,slow=2.7,SNR=9.0								
MKAR	**Makanchi Array**	**137.09**	**23**		PKP		**PKPdf**	**21 11 34.4**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=344,slow=2.1,SNR=6.2								
HILR	**Hailar Array B**	**137.43**	**346**		PKP		**PKPdf**	**21 11 34.8**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=64,slow=6.6,SNR=2.8								
ASAR	**Alice Springs**	**137.56**	**220**		PKhKP		PKPpre	21 11 26.2	
	comp=Z,0.2nm,0.5s,baz=127,slow=2.1,SNR=4.1								
ASAR					PKP		**PKPdf**	**21 11 35.5**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=128,slow=2.0,SNR=11								
MJAR	**Matsushiro Arr**	**139.24**	**318**		PKP		**PKPdf**	**21 11 37.0**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=60,slow=1.3,SNR=2.7								
WRA	**Warramunga Arr**	**139.84**	**225**		PKhKP		PKPpre	21 11 34.6	
	comp=Z,2.5nm,0.5s,baz=131,slow=1.8,SNR=5.3								
WRA					PKP		**PKPdf**	**21 11 39.8**	**-0.7**
	comp=Z,2.5nm,0.5s,baz=131,slow=1.8,SNR=19								
SONM	**Songino Array**	**140.87**	**359**		PKhKP		PKPpre	21 11 34.2	
	comp=Z,1.4nm,0.8s,baz=29,slow=3.3,SNR=5.8								
KSRS	**Korea Array**	**144.77**	**328**		PKP		**PKPab**	**21 11 47.2**	**-0.5**
	comp=Z,6.8nm,0.8s,baz=39,slow=1.7,SNR=12								
JNU	**Nakatsue**	**146.10**	**320**		PKPbc		**PKPdf**	**21 11 50.0**	**-1.1**
	comp=Z,11nm,1.0s,baz=331,slow=7.4,SNR=5.3								
BJI	**Beijing**	**147.23**	**345**		PKPbc		**PKPbc**	**21 11 54.3**	**-0.8**
HHC	**Hu-ho-hao-te**	**147.40**	**351**		*e*P		**PKPbc**	**21 11 54.6**	**-1.1**
GTA	**Gaotai**	**148.89**	**8**		PKPbc		**PKPbc**	**21 11 59.3**	**-0.4**
GTA					sPKP			21 12 33.8	
HNS	**HongShan**	**150.10**	**345**	⇑	PKPbc		**PKPbc**	**21 12 02.8**	**+0.3**
HNS					PKPab		**PKPab**	**21 12 08.6**	**-0.1**
HNS					sPKP		**sPKPdf**	**21 12 40.6**	**-3.3**
LZH	**Lanzhou**	**152.58**	**3**		*e*PKPbc		**PKPbc**	**21 12 07.8**	**-0.8**
LZH					sPKP		sPKPdf	21 12 47.6	-0.4
NJ2	**Nanjing**	**153.52**	**334**		*e*P		**PKPdf**	**21 12 03.8**	**+1.1**
NJ2					pmax		pmax		
	comp=Z,13nm,0.5s								
PZH	**PanZhiHua**	**161.83**	**11**		PKP		**PKPdf**	**21 12 12.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**168.33**	**32**		PKP		**PKPdf**	**21 12 18.3**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=355,slow=1.0,SNR=3.0								
CMAR					PKPab		**PKPab**	**21 13 28.5**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=332,slow=4.5,SNR=13								

BJI **14** *20:53:57.7, 1°.21N×126°.40E, h30km, mB5.4/16, mb5.1/72, Ms4.8/30, Ms7 4.8/30*

MOS **14** *20:54:00.3±1.2, 1°.60N×126°.10E, h22km, mb5.5/51, Error ellipse: s-maj=9.3km s-min=4.9km az=114.2*

IDC **14** *20:54:00.6±3.2, 1°.58N×126°.14E, h12km±19km, mb5.1/35, mbtmp5.1/36, ML5.0/1, MS4.4/5, Error ellipse: s-maj=16.7km s-min=9.2km az=82.0*

NEIC **14** *20:54:02.3±2.2, 1°.70N±0°.06×126°.44E±0°.06, h35km±1km, mb5.3/116, Error ellipse: s-maj=11.6km s-min=8.0km az=44.0*

DJA **14** *20:54:03.0±0.2,2°N±3°×126°6E±°, h10km, M5.2/21, mB5.6/18, mb5.5/18, MLv5.4/21, Mw(mB)5.2/18*

GCMT **14** *20:54:06.3±0.4, 1°.71N±0°.04×126°.37E±0°.03, h26km±1km, MW5.6/63, Moment Tensor Solution. s30,c30; s63,c73; Duration: 1s5 Moment tensor: Scale 10^17Nm; Mrr3.01±.23; Mθθ-0.88±.13; Mφφ-2.13±.14; Mrθ-0.38±.38; Mθφ-0.62±.08; Mφr1.25±.26; Best double couple: M₀2.96900×10^17 NP1:φs211.00000°, δ35.00000°, λ108.00000°. NP2:φs9.00000°, δ57.00000°, λ77.00000°. Principal axes: T 3.3600, Plg75.0000°, Azm243.0000°; N -0.7790, Plg11.0000°, Azm116.0000°; P -2.5790, Plg11.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 20:54:03.1±0.5, 1°.57N±0°.03×126°.26E±0°.04, h33km±2km, h34km:pP-P, n710, σ1s66/701, mb5.3/155, MS4.7/16, 42C-16D, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**126**		Op	**Pn**	**20 54 24.7**	**-1.1**
TNTI				Sn		**Sn**	**20 54 37.8**	**-4.9**
TNTI	**Ternate**	**1.36**	**126**	P		**Pn**	**20 54 26.0**	**+0.2**
TNTI	**Ternate**	**1.36**	**126**	P		**Pn**	**20 54 25.9**	**+0.2**
SGSI	**Sangihe**	**2.23**	**341**	P		**Pn**	**20 54 39.1**	**+1.3**
KMSI	**Cibinong**	**2.48**	**247**	P		**Pb**	**20 54 44.9**	**-2.2**
SANI	**Sanana**	**3.60**	**184**	P		**Pn**	**20 54 58.6**	**+1.9**
SANI	**Sanana**	**3.60**	**184**	P		**Pn**	**20 54 58.6**	**+1.9**
LUWI	**Luwuk**	**4.35**	**233**			**Pn**	**20 55 10.2**	**+3.3**
LUWI	**Luwuk**	**4.35**	**233**	P		Pb	20 55 12.0	-6.8
LUWI	**Luwuk**	**4.35**	**233**	P		Pb	20 55 11.9	-6.9
MRSI	**Marisa**	**4.45**	**256**	P		Pb	20 55 13.9	-6.7
NLAI	**Namlea**	**4.85**	**170**	P		**Pn**	**20 55 16.3**	**+2.5**
APSI	**Ampana**	**5.23**	**242**	P		Pb	20 55 25.8	-8.0
TOLI2	**Tolitoli**	**5.50**	**265**			**Pn**	**20 55 24.4**	**+1.7**
TOLI2	**Tolitoli**	**5.50**	**265**	P		**Pn**	**20 55 25.2**	**+2.5**
DAV	**Davao City (W)**	**5.51**	**353**	Pn		**Pn**	**20 55 25.8**	**+2.9**
	32nm,0.3s,baz=118,slow=4.3,SNR=5.4							
DAV				Sn		**Sn**	**20 56 26.3**	**+1.2**
	37nm,0.3s,baz=249,slow=24,SNR=3.5							
DAV				LR		LR	20 57 46.0	
	comp=Z,6μm,19.3s,baz=132,slow=41							
DAV	**Davao City (W)**	**5.51**	**353**			**Pn**	**20 55 20.2**	**-2.7**
SWI	**Sawu**	**5.55**	**116**	P		**Pn**	**20 55 24.5**	**+1.1**
MSAI	**Masohi**	**5.56**	**151**	P		**Pn**	**20 55 27.9**	**+4.3**
	1.9nm6μm429nm,1.2s							
AAI	**Ambon**	**5.56**	**160**	P		**Pn**	**20 55 26.8**	**+3.1**
	1.3nm4μm286nm,1.1s							
MPSI	**Mapaga**	**6.48**	**259**	P		Pn	20 55 42.0	+5.8
	1.5nm4μm502nm,0.8s							
PCI	**Palu**	**6.88**	**249**	P		Pn	20 55 47.6	+5.9
BNDI	**Bandanaira**	**7.06**	**149**	P		**Pn**	**20 55 45.9**	**+1.7**
BNDI	**Bandanaira**	**7.06**	**149**	P		**Pn**	**20 55 47.8**	**+3.6**
	1.6nm5μm322nm,1.8s							
FAKI	**Fak Fak**	**7.46**	**127**			**Pn**	**20 55 47.9**	**-1.8**
FAKI	**Fak Fak**	**7.46**	**127**	P		**Pn**	**20 55 50.6**	**+0.9**
FAKI	**Fak Fak**	**7.46**	**127**	P		**Pn**	**20 55 51.7**	**+2.0**
	0.8nm3μm270nm,0.9s							
TTSI	**Tana Toraja**	**7.90**	**235**	P		Pn	20 56 01.9	+6.1
	4μm427nm,1.0s							
BBSI	**Bau Bau**	**7.92**	**208**	P		Pn	20 56 02.1	+6.1
	3μm323nm,1.1s							
RKPI	**Ransiki, Papua**	**8.48**	**111**	P		**Pn**	**20 56 05.7**	**+1.9**
	5μm127nm,0.8s							
SPSI	**Sidrap Palu**	**8.50**	**230**	P		**Pn**	**20 56 07.4**	**+3.4**
	3μm198nm,0.5s							
MYLDM	**Lahad Datu**	**8.54**	**295**			**Pn**	**20 56 07.5**	**+3.0**
MYLDM	**Lahad Datu**	**8.54**	**295**	P		Pn	20 56 09.0	+4.5
BNSI	**Bone**	**8.54**	**226**	P		**Pn**	**20 56 07.3**	**+2.7**
	3μm281nm,1.0s							
BKSI	**Bulukumba**	**9.19**	**222**	P		Pn	20 56 17.7	+4.3
	2μm205nm,0.9s							
KAPI	**Kappang**	**9.22**	**225**	Pn		Pn	20 56 17.8	+3.9
	20nm,0.3s,baz=30,slow=5.0,SNR=40							
KAPI				Sn		**Sn**	**20 57 56.9**	**+0.4**
	2.8nm,0.3s,baz=242,slow=20,SNR=1.3							
KAPI	**Kappang**	**9.22**	**225**			**Pn**	**20 56 15.5**	**+1.6**
KAPI	**Kappang**	**9.22**	**225**	P		Pn	20 56 18.5	+4.6
KAPI	**Kappang**	**9.22**	**225**	*i* P		**Pn**	**20 56 16.5**	**+2.6**
BSSI	**Bau Bau, Buton**	**9.58**	**217**	P		Pn	20 56 23.1	+4.2
	3μm183nm,0.5s							
BKB	**Balikpapan**	**9.78**	**253**			**Pn**	**20 56 22.7**	**+1.2**
BKB	**Balikpapan**	**9.78**	**253**	P		Pn	20 56 24.9	+3.4
MMRI	**Maumere**	**10.90**	**202**			**Pn**	**20 56 38.2**	**+1.3**
MMRI	**Maumere**	**10.90**	**202**	P		Pn	20 56 41.2	+4.3
BATI	**Baumata**	**11.98**	**192**	Pn		Pn	20 56 57.1	+5.4
	6.0nm,0.3s,baz=127,slow=5.1,SNR=15							
BATI				LR		LR	21 01 13.1	
	comp=Z,1μm,21.9s,baz=11,slow=36							
PLAI	**Plampang**	**13.35**	**219**	P		P	20 57 14.1	-5.4
TGY	**Tagaytay City**	**13.52**	**337**	Pn		**P**	**20 57 18.3**	**-3.2**
	33nm,0.3s,baz=145,slow=14,SNR=1.3							
TGY				LR		LR	21 02 35.2	
	comp=Z,3μm,21.3s,baz=160,slow=38							
SBUM	**Sibu**	**14.06**	**274**			**P**	**20 57 25.4**	**-2.1**
SBUM	**Sibu**	**14.06**	**274**	P		**P**	**20 57 25.0**	**-2.5**
AUDHS	**Darwin High Sc**	**14.64**	**162**	P		**Pn**	**20 57 28.3**	**+0.4**
DRS	**Darwin Rock St**	**14.65**	**162**	P		**Pn**	**20 57 29.7**	**+1.6**
JAY	**Jaura**	**15.00**	**106**	LR		LR	21 03 02.8	
	comp=Z,2μm,18.1s,baz=278,slow=36							
MTN	**Manton Dam**	**15.11**	**161**	P		**Pn**	**20 57 34.0**	**-0.3**
	comp=Z,64nm,0.7s							
MTN	**Manton Dam**	**15.11**	**161**			**Pn**	**20 57 32.8**	**-1.5**
KDU	**Kakadu**	**15.45**	**157**	P		**Pn**	**20 57 37.1**	**-1.5**
JAGI	**Jajag, Banyuwa**	**15.66**	**230**			**Pn**	**20 57 42.1**	**+0.6**
JAGI	**Jajag, Banyuwa**	**15.66**	**230**	P		**P**	**20 57 44.8**	**-0.4**
SZP	**Santa**	**16.88**	**341**	P		**P**	**20 57 58.2**	**-0.5**
KNRA	**Kununurra**	**17.31**	**172**	P		**Pn**	**20 58 02.9**	**+0.5**
	comp=Z,213nm,0.9s							
KNRA	**Kununurra**	**17.31**	**172**			**Pn**	**20 58 00.9**	**-1.4**
KNRA				IAmb		IAmb	20 58 10.5	
	comp=Z,169nm,0.9s							
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P		**P**	**20 58 28.0**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=5.0,slow=7.0,SNR=51							
	comp=Z,26nm,0.7s							
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P		**P**	**20 58 26.5**	**-1.7**
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P		**P**	**20 58 28.0**	**-0.2**
DLV	**Lat**	**20.42**	**301**	P		**P**	**20 58 37.0**	**-0.9**
DLV	**Lat**	**20.42**	**301**	P		Pn	20 58 41.3	+1.1
BBJI	**Bungbulang**	**20.62**	**244**	P		Pn	20 58 43.9	+1.5
MANU	**Manus Island**	**21.40**	**100**	P		**P**	**20 58 46.8**	**-1.6**
TWGBT	**Beinan**	**21.71**	**347**	P		**P**	**20 58 50.7**	**-0.9**
TWG	**Pinlang**	**21.72**	**347**	P		**P**	**20 58 49.0**	**-2.6**
TWG				IAmb		IAmb	20 59 01.8	
	comp=Z,54nm,0.6s							
GUMO	**Guam**	**21.95**	**56**	P		**P**	**20 58 56.1**	**+2.0**
	comp=Z,39nm,0.6s,baz=210,slow=20,SNR=2.2							
GUMO				LR		LR	21 06 17.3	
	comp=Z,885nm,20.8s,baz=230,slow=33							
	comp=Z,39nm,0.6s							
GUMO	**Guam**	**21.95**	**56**			**P**	**20 58 51.2**	**-2.9**
GUMO				IAmb		IAmb	20 59 09.3	
	comp=Z,94nm,1.0s							
YULB	**Yu-li**	**22.22**	**348**	P		**P**	**20 58 53.1**	**-4.0**
YULB				IAmb		IAmb	20 59 03.7	
	comp=Z,65nm,0.7s							
YULB	**Yu-li**	**22.22**	**348**	P		**P**	**20 58 54.5**	**-2.6**
TPUB	**Ta-pu**	**22.29**	**346**	P		**P**	**20 58 54.6**	**-3.1**
TPUB	**Ta-pu**	**22.29**	**346**	P		**P**	**20 58 57.1**	**-0.6**
BTDF	**Bukit Timah Da**	**22.48**	**270**	P		**P**	**20 59 04.4**	**+4.5**
SSLB	**Suanglung**	**22.68**	**347**	P		**P**	**20 58 58.7**	**-3.3**
SSLB				IAmb		IAmb	20 59 05.9	
	comp=Z,108nm,0.8s							
SSLB	**Suanglung**	**22.68**	**347**	P		**P**	**20 59 00.3**	**-1.6**

COEN	**Coen**	**22.78**	**133**		P		**P**	**20 59 01.5**	**-1.5**
COEN	**Coen**	**22.78**	**133**		P		**P**	**20 59 02.1**	**-1.0**
WRAB	**Tennant Creek**	**22.79**	**160**		P		**P**	**20 59 02.1**	**-1.0**
WRAB					IAmb		IAmb	20 59 07.5	
	comp=Z,113nm,0.8s								
WRAB	**Tennant Creek**	**22.79**	**160**		P		**P**	**20 59 02.8**	**-0.3**
WRAB	**Tennant Creek**	**22.79**	**160**	*ce*	P		**P**	**20 59 02.9**	**-0.2**
WRAB					pmax		pmax		
	comp=Z,222nm,1.3s								
WRA	**Warramunga Arr**	**22.80**	**160**		P		**P**	**20 59 01.5**	**-1.7**
	comp=Z,69nm,0.7s,baz=335,slow=11,SNR=97								
WRA					PcP		**PcP**	**21 02 55.5**	**+1.4**
	comp=Z,7.7nm,0.7s,baz=332,slow=2.2,SNR=5.5								
WRA					S		**S**	**21 03 08.1**	**-2.2**
	comp=Z,14nm,0.8s,baz=338,slow=17,SNR=7.6								
NACB	**Ninganchiao**	**22.92**	**349**				**P**	**20 59 03.9**	**-0.5**
YHNB	**Yeheng**	**23.45**	**349**				**P**	**20 59 08.1**	**-1.7**
YHNB	**Yeheng**	**23.45**	**349**		P		**P**	**20 59 09.9**	**+0.1**
MBWA	**Marble Bar**	**23.47**	**195**		P		**P**	**20 59 08.2**	**-1.8**
MBWA	**Marble Bar**	**23.47**	**195**		P		**P**	**20 59 09.6**	**-0.4**
PMG	**Port Moresby**	**23.50**	**118**		P		**P**	**20 59 10.4**	**+0.1**
	comp=Z,20nm,0.7s,baz=319,slow=8.4,SNR=8.7								
	comp=Z,20nm,0.7s								
PMG	**Port Moresby**	**23.50**	**118**		P		**P**	**20 59 06.0**	**-4.3**
PMG					IAmb		IAmb	20 59 16.1	
	comp=Z,150nm,1.9s								
PMG	**Port Moresby**	**23.50**	**118**		P		**P**	**20 59 11.2**	**+0.9**
PMG	**Port Moresby**	**23.50**	**118**		P		**P**	**20 59 11.4**	**+1.1**
PMG	**Port Moresby**	**23.50**	**118**	*ce*	P		**P**	**20 59 12.0**	**+1.7**
PMG					pmax		pmax		
	comp=Z,124nm,2.5s								
QIZ	**Qiongzhong**	**23.66**	**318**		P		**P**	**20 59 12.1**	**+0.3**
QIZ					S		**S**	**21 03 26.3**	**+1.6**
QIZ					LR		LR		
	comp=Z,1μm,20.2s								
QIZ					LR		LR		
	comp=Z,690nm,19.4s								
QIZ					LR		LR		
	comp=Z,2μm,22.8s								
XMI	**Christmas Isla**	**23.70**	**239**		P		**P**	**20 59 14.2**	**+2.0**
TATO	**Taipei**	**23.72**	**349**		P		**P**	**20 59 09.5**	**-2.8**
PSA00	**Pilbara Seismi**	**23.84**	**195**		P		**P**	**20 59 11.5**	**-1.9**
PSA00					IAmb		IAmb	20

PZH pmax pmax
comp=Z,20nm,0.9s
PZH LR LR
comp=Z,870nm,22.6s
PZH LR LR
comp=Z,670nm,21.6s
PZH LR LR
comp=Z,2µm,20.6s
AUNRC **North Rockhamp** 34.23 138 P **P** 21 00 47.4 +1.4
MUN **Mundaring** 34.70 195 P **P** 21 00 51.2 +1.2
AUMAZ **Mazenod Senior** 34.77 195 P **P** 21 00 53.0 +2.4
GD1S **Gladstone Soft** 34.99 138 P **P** 21 00 53.5 +0.9
INU **Inuyama** 35.07 15 P **P** 21 00 49.8 -3.3
INU **Inuyama** 35.07 15 P **P** 21 00 54.1 +1.0
INU **Inuyama** 35.07 15 P **P** 21 00 54.5 +1.4
LYN **LuoYang** 35.25 340 P **P** 21 00 56.3 +1.6
LYN pmax pmax
comp=Z,36nm,0.5s
LYN LR LR
comp=Z,810nm,19.6s
LYN LR LR
comp=Z,870nm,19.9s
LYN LR LR
comp=Z,2µm,24.7s
NWAO **Narrogin (SRO)** 35.35 193 P **P** 21 00 56.2 +0.6
comp=Z,31nm,0.5s,baz=16,slow=7.9,SNR=39
comp=Z,31nm,0.5s
NWAO **Narrogin (SRO)** 35.35 193 P **P** 21 00 54.0 -1.6
NWAO **Narrogin (SRO)** 35.35 193 P **P** 21 00 57.3 +1.6
NWAO **Narrogin (SRO)** 35.35 193 P **P** 21 00 57.2 +1.6
JGF **Kuroka** 35.40 16 P **P** 21 00 52.4 -3.7
JGF IAmb IAmb 21 01 11.7
comp=Z,40nm,1.2s
JGF **Kuroka** 35.40 16 P **P** 21 00 57.0 +1.0
BBOO **Buckleboo** 35.42 166 P **P** 21 00 53.1 -3.1
BBOO IAmb IAmb 21 01 00.3
comp=Z,65nm,0.9s
BBOO **Buckleboo** 35.42 166 P **P** 21 00 56.3 +0.1
TNCH **TengChong** 35.51 313 ⇓*i* P **P** 21 00 57.8 +0.5
TNCH S **S** 21 06 24.6 -6.3
TNCH pmax pmax
comp=Z,26nm,1.3s
TNCH LR LR
comp=Z,610nm,16.5s
TNCH LR LR
comp=Z,440nm,13.6s
TNCH LR LR
comp=Z,1µm,20.1s
KSRS **Korea Array** 35.74 2 P **P** 21 00 59.4 +0.5
comp=Z,7.2nm,0.6s,baz=181,slow=10.0,SNR=32
comp=Z,7.2nm,0.6s
EIDS **Eidsvold** 35.98 140 P **P** 21 01 01.7 +0.6
WHYH **Whyalla** 36.03 164 P **P** 21 01 02.2 +0.8
CD2 **Chengdu** 36.13 326 P **P** 21 01 02.0 -0.4
CD2 pmax pmax
comp=Z,50nm,0.8s
XAN **Xi'an** 36.15 335 ⇑P **P** 21 01 01.3 -1.2
XAN pmax pmax
comp=Z,58nm,0.8s
XAN pmax pmax
comp=Z,1µm,11.9s
STKA **Stephens Creek** 36.30 158 P **P** 21 01 03.9 +0.1
comp=Z,44nm,0.8s,baz=328,slow=9.0,SNR=38
comp=Z,44nm,0.8s
STKA **Stephens Creek** 36.30 158 P **P** 21 01 03.9 +0.1
STKA **Stephens Creek** 36.30 158 *i* P **P** 21 01 03.2 -0.6
AUJCS **Jamestown Cent** 36.49 162 P **P** 21 01 06.3 +0.9
MJAR **Matsushiro Arr** 36.52 16 P **P** 21 01 05.3 -0.3
comp=Z,13nm,0.8s,baz=188,slow=8.9,SNR=20
MJAR PcP **PcP** 21 03 30.1 +1.3
comp=Z,7.4nm,0.9s,baz=204,slow=3.4,SNR=5.2
comp=Z,13nm,0.8s
MAJO **Matsushiro** 36.52 16 P **P** 21 01 02.4 -3.2
MAJO IAmb IAmb 21 01 06.7
comp=Z,79nm,1.4s
MAJO **Matsushiro** 36.52 16 P **P** 21 01 05.6 0.0
MAJO **Matsushiro** 36.52 16 *i* P **P** 21 01 06.8 +1.2
MAJO pmax pmax
comp=Z,37nm,1.2s
HTT **Hallett** 36.80 162 P **P** 21 01 10.0 +1.9
AULRC **Lightning Ridg** 37.17 148 P **P** 21 01 13.1 +1.9
HNS **HongShan** 37.21 345 ⇓P **P** 21 01 11.3 -0.1
HNS PcP **PcP** 21 03 34.0 +3.1
HNS pmax pmax
comp=Z,27nm,1.0s
DL2 **Dalian** 37.40 354 P **P** 21 01 14.0 +1.0
DL2 *e*S **S** 21 07 00.3 +1.2
DL2 LR LR
comp=Z,1µm,17.0s
DL2 LR LR
comp=Z,1µm,20.4s
DL2 LR LR
comp=Z,1µm,19.1s
CMSA **Cobar Meteorol** 37.74 152 P **P** 21 01 17.2 +1.2
TW1H **Toowoomba 1 Ha** 38.07 141 P **P** 21 01 19.6 +0.6
AUMAR **Marden Senior** 38.08 163 P **P** 21 01 21.6 +2.8
AUMBR **Murray Bridge** 38.49 163 P **P** 21 01 24.2 +1.9
JMM **Marumori** 38.52 19 P **P** 21 01 23.2 +0.8
BJT **Baijiatuau** 39.36 348 IAmb IAmb 21 01 31.3
comp=Z,36nm,0.8s
BJT **Baijiatuau** 39.36 348 P **P** 21 01 30.0 +0.5
BJT **Baijiatuau** 39.36 348 P **P** 21 01 29.6 +0.1
BJI **Beijing** 39.38 348 P **P** 21 01 29.8 +0.2
BJI PcP **PcP** 21 03 39.9 +2.3
BJI S **S** 21 07 29.8 +0.9
BJI pmax pmax
comp=Z,23nm,0.8s
BJI pmax pmax
comp=Z,140nm,4.1s
BJI LR LR
comp=Z,210nm,19.3s
BJI LR LR
comp=Z,160nm,19.1s
BJI LR LR
comp=Z,190nm,18.2s
AUDCS **Dubbo College** 39.73 150 P **P** 21 01 33.9 +1.2
LZDM **Lanzhou Array** 40.11 331 P **P** 21 01 35.8 -0.4
comp=Z,2.8nm,0.4s,baz=147,slow=8.8,SNR=4.6
LZDM PcP **PcP** 21 03 41.8 +1.3
comp=Z,11nm,0.5s,baz=186,slow=4.5,SNR=7.5
comp=Z,2.8nm,0.4s
LZH **Lanzhou** 40.14 331 *e*P **P** 21 01 36.4 +0.1
LZH pP pP 21 01 41.5 -4.0
LZH PcP **PcP** 21 03 43.1 +2.7
LZH pmax pmax
comp=Z,73nm,1.1s
LZH LR LR
comp=Z,790nm,16.8s
LZH LR LR
comp=Z,1µm,17.9s
LZH LR LR
comp=Z,1µm,18.7s
SNY **Shenyang** 40.15 357 ⇑P **P** 21 01 37.1 +1.1
SNY pmax pmax
comp=Z,98nm,0.6s
SHL **Shillong** 40.81 309 P **P** 21 01 40.2 -1.7
SHL **Shillong** 40.81 309 P **P** 21 01 40.3 -1.7
SHL pmax pmax
comp=Z,42nm,1.1s
HHC **Hu-ho-hao-te** 41.30 343 ⇓*i* P **P** 21 01 46.8 +1.1
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,250nm,5.8s
HHC LR LR
comp=Z,750nm,21.0s
HHC LR LR
comp=Z,380nm,17.7s
HHC LR LR
comp=Z,1µm,21.0s
BTO **Baotou** 41.55 341 *e*P **P** 21 01 50.6 +2.8
BTO S **S** 21 08 08.1 +6.4
BTO pmax pmax
comp=Z,13nm,0.9s
BTO pmax pmax
comp=Z,220nm,3.6s
BTO LR LR
comp=Z,1µm,14.6s
BTO LR LR
comp=Z,710nm,11.9s
BTO LR LR
comp=Z,2µm,20.0s
VLA **Vladivostok** 41.68 6 *i* P **P** 21 01 49.7 +1.2
VLA pmax pmax
comp=Z,36nm,1.2s
BRAT **Ballarat** 42.22 159 P **P** 21 01 55.5 +2.4

AUMTS **Mt Stromlo** 42.41 152 P **P** 21 01 56.4 +1.6
CAN **Canberra** 42.41 152 P **P** 21 01 52.1 -2.7
CAN IAmb IAmb 21 02 00.4
comp=Z,208nm,1.9s
CAN **Canberra** 42.41 152 P **P** 21 01 56.7 +1.9
CAN **Canberra** 42.41 152 P **P** 21 01 52.1 -2.7
CAN pmax pmax
comp=Z,208nm,1.9s
CAN **Canberra** 42.41 152 P **P** 21 01 56.4 +1.6
AUDAR **Daramalan Coll** 42.42 152 P **P** 21 01 57.9 +3.0
AUSIS **Research Schoo** 42.43 152 P **P** 21 01 57.0 +2.1
USRK **Ussuriysk Ar.** 42.76 6 P **P** 21 01 57.9 +0.5
comp=Z,25nm,0.8s,baz=191,slow=6.6,SNR=20
comp=Z,25nm,0.8s
MDJ **Mudanjiang** 42.97 3 P **P** 21 01 59.5 +0.5
MDJ IAmb IAmb 21 02 11.3
comp=Z,36nm,0.8s
MDJ **Mudanjiang** 42.97 3 P **P** 21 01 58.9 -0.2
MDJ S **S** 21 08 23.4 +1.2
MDJ pmax pmax
comp=Z,12nm,1.8s
MDJ **Mudanjiang** 42.97 3 P **P** 21 02 00.2 +1.1
MDJ **Mudanjiang** 42.97 3 P **P** 21 02 00.4 +1.3
H11S3 **WAKE ISLAND Hy** 43.05 64 T T 21 49 19.2
baz=252
H11S2 **WAKE ISLAND Hy** 43.07 64 T T 21 49 06.0
baz=252,slow=74
H11S1 **WAKE ISLAND Hy** 43.07 64 T T 21 49 23.6
baz=252,slow=74
XLT **XiLinHaoTe** 43.11 349 *e*P **P** 21 02 01.6 +1.2
XLT pmax pmax
comp=Z,45nm,0.6s
XLT pmax pmax
comp=Z,340nm,5.4s
LSA **Lhasa** 43.54 313 IAmb IAmb 21 02 14.5
comp=Z,30nm,0.7s
H11N1 **WAKE ISLAND Hy** 43.63 63 T T 21 50 21.3
baz=250
H11N2 **WAKE ISLAND Hy** 43.64 63 T T 21 50 18.0
baz=250
H11N3 **WAKE ISLAND Hy** 43.65 63 T T 21 50 21.1
baz=250
BNX **BinXian** 44.00 1 ⇑P **P** 21 02 07.6 +0.2
BNX pmax pmax
comp=Z,20nm,0.9s
GTA **Gaotai** 44.72 331 P **P** 21 02 13.8 +0.4
GTA pP pP 21 02 18.8 -4.0
GTA PcP **PcP** 21 03 55.8 +0.3
GTA pmax pmax
comp=Z,25nm,0.9s
GTA LR LR
comp=Z,680nm,20.7s
GTA LR LR
comp=Z,510nm,18.2s
GTA LR LR
comp=Z,1µm,21.8s
ASAJ **Asahikawa** 44.78 17 P **P** 21 02 15.3 +1.6
comp=Z,54nm,1.1s,baz=235,slow=15,SNR=5.2
comp=Z,54nm,1.1s
JKA **Kamikawa-asahi** 44.78 17 P **P** 21 02 15.3 +1.6
JKA **Kamikawa-asahi** 44.78 17 IAmb IAmb 21 02 16.6
comp=Z,195nm,1.4s
EVN **Everest** 45.93 309 P **P** 21 02 21.2 -2.6
EVN IAmb IAmb 21 02 40.0
comp=Z,34nm,0.9s
YATNC **Mamie plateau,** 46.08 123 P **P** 21 02 25.5 +1.2
YSS **Yuzhno-Sakhali** 47.44 15 *e*P **P** 21 02 35.1 +0.6
YSS pmax pmax
comp=Z,40nm,1.0s
HIA **Hailar** 47.85 354 P **P** 21 02 39.4 +1.7
HILR **Hailar Array B** 48.13 354 P **P** 21 02 41.9 +2.0
comp=Z,25nm,0.6s,baz=176,slow=11,SNR=32
HILR PcP **PcP** 21 04 10.0 +2.9
comp=Z,11nm,0.5s,baz=149,slow=5.2,SNR=6.1
comp=Z,25nm,0.6s
HEH **HeiHe** 48.52 1 *e*P **P** 21 02 41.1 -1.7
HEH pmax pmax
comp=Z,62nm,1.1s
ULN **Ulaanbaatar** 49.03 343 P **P** 21 02 43.8 -3.2
ULN IAmb IAmb 21 02 53.5
comp=Z,26nm,0.9s
ULN **Ulaanbaatar** 49.03 343 *ce*P **P** 21 02 47.8 +0.8
ULN pmax pmax
comp=Z,25nm,1.0s
ULN **Ulaanbaatar** 49.03 343 P **P** 21 02 46.6 -0.4
ULN PcP **PcP** 21 04 12.0 +1.5
SONM **Songino Array** 49.20 342 P **P** 21 02 48.4 +0.1
comp=Z,24nm,1.1s,baz=158,slow=6.9,SNR=52
SONM PcP **PcP** 21 04 12.5 +1.4
comp=Z,13nm,0.8s,baz=158,slow=4.3,SNR=9.3
comp=Z,24nm,1.1s
HYBB **Hyderabad (bro** 49.44 292 *e*P **P** 21 02 49.9 -0.6
HYBB *e*PcP **PcP** 21 04 11.6 -0.9
GRNR **Gornyy** 49.77 8 ⇑*i* P **P** 21 02 54.3 +1.8
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,30nm,0.9s
CIT **Chita** 51.40 350 *e*P **P** 21 03 06.2 +1.5
CIT *e* 21 03 10.8
CIT *e* 21 03 16.6
CIT *e* 21 04 21.0
CIT pmax pmax
comp=Z,247nm,1.3s
ZEA **Zeya** 52.00 1 *e*P **P** 21 03 09.5 +0.3
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZAK **Zakamensk** 52.41 342 *e*P **P** 21 03 11.2 -1.2
ZAK pmax pmax
comp=Z,11nm,1.5s
TLY **Talaya** 53.43 343 *i* P **P** 21 03 20.7 +0.9
TLY pmax pmax
comp=Z,11nm,0.7s
WMQ **Urumqi** 54.23 326 *e*P **P** 21 03 27.0 +1.1
WMQ S S 21 10 51.8 -9.4
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ LR LR
comp=Z,2µm,10.1s
WMQ LR LR
comp=Z,1µm,23.9s
MOY **Mondy** 54.25 341 *e*P **P** 21 03 26.5 +0.6
MOY pmax pmax
comp=Z,50nm,3.8s
MSVF **Nonsavu** 54.47 113 P **P** 21 03 28.4 +0.4
PETK **Petropavlovsk-** 57.60 22 P **P** 21 03 50.2 +0.5
comp=Z,11nm,0.6s,baz=186,slow=5.2,SNR=21
comp=Z,11nm,0.6s
ZSN **Zaisan** 58.07 328 *e*P **P** 21 03 53.3 +0.1
ZSN **Zaisan** 58.07 328 *e*P **P** 21 03 53.2 +0.1
DGZ **Jazzator, Alta** 58.24 331 *i* P **P** 21 03 55.1 +0.6
DGZ pmax pmax
comp=Z,10.0nm,0.6s
SHLS **Shalkode** 58.72 321 *e*P **P** 21 03 55.8 -2.1
comp=Z,14nm,0.7s
SHLS **Shalkode** 58.72 321 *e*P **P** 21 03 55.8 -2.1
SHLS pmax pmax
comp=Z,14nm,0.7s
PRZ **Przheval'sk** 59.04 320 P **P** 21 03 59.4 -0.9
PRZ **Przheval'sk** 59.04 320 P **P** 21 03 59.4 -0.9
PRZ pmax pmax
comp=Z,52nm,0.8s
TARG **Taragay, Kyrgy** 59.05 319 P **P** 21 03 59.1 -1.5
TARG IAmb IAmb 21 04 13.1
comp=Z,26nm,0.9s
TARG **Taragay, Kyrgy** 59.05 319 P **P** 21 03 59.1 -1.5
TARG pmax pmax
comp=Z,26nm,0.9s
MK31 **Makanchi Array** 59.07 326 *ce*P **P** 21 04 00.7 +0.6
MKAR **Makanchi Array** 59.07 326 P **P** 21 03 59.5 -0.6
comp=Z,22nm,0.6s,baz=119,slow=7.5,SNR=80
comp=Z,22nm,0.6s
MAKZ **Makanchi** 59.25 326 P **P** 21 04 00.7 -0.7
KSH **Kashi** 59.25 316 P **P** 21 04 03.0 +1.3
KSH pP pP 21 04 10.0 -1.3
KSH pmax pmax
comp=Z,19nm,0.8s
SATY **Saty** 59.33 321 ⇑*i* P **P** 21 04 01.9 -0.3
comp=Z,24nm,1.1s
SATY **Saty** 59.33 321 *c* *i* P **P** 21 04 01.8 -0.3
SATY pmax pmax
comp=Z,24nm,1.1s
KDJ **Kajisay** 59.66 319 IAmb IAmb 21 04 11.0
comp=Z,28nm,0.8s

LBZ **Lake Benmore** 60.18 145 P **P** 21 04 05.8 -2.0
LBZ IAmb IAmb 21 04 11.9
comp=Z,27nm,0.7s
MDOK **Medeo** 60.24 320 *e*P **P** 21 04 08.3 -0.2
MDOK **Medeo** 60.24 320 *e*P **P** 21 04 08.2 -0.2
TNSS **Tian-Shan** 60.25 320 *e*P **P** 21 04 08.4 -0.5
TNSS **Tian-Shan** 60.25 320 *e*P **P** 21 04 08.3 -0.5
ULHL **Ulahol** 60.32 319 P **P** 21 04 10.2 +1.1
SNR=8.0
TDK **Taldyqorghan** 60.33 323 *e*P **P** 21 04 08.9 0.0
comp=Z,23nm,0.7s
TDK **Taldyqorghan** 60.33 323 *e*P **P** 21 04 08.8 0.0
TDK pmax pmax
comp=Z,23nm,0.7s
YAK **Yakutsk** 60.37 2 P **P** 21 04 09.1 +0.4
comp=Z,126nm,0.8s,baz=9.1,slow=0.1,SNR=41
comp=Z,126nm,0.8s
YAK **Yakutsk** 60.37 2 P **P** 21 04 06.3 -2.4
YAK **Yakutsk** 60.37 2 *e*P **P** 21 04 09.0 +0.3
YAK *e*S **S** 21 12 19.9 -1.2
YAK pmax pmax
comp=Z,105nm,0.8s
YAK pmax pmax
comp=N,54nm,1.1s
YAK pmax pmax
comp=E,19nm,1.3s
YAK smax smax
comp=E,336nm,3.0s
YAK smax smax
comp=N,368nm,3.6s
YAK **Yakutsk** 60.37 2 P **P** 21 04 09.4 +0.7
YAK pP **pP** 21 04 18.9 +0.5
TUWZ **Tuamarina** 60.78 140 P **P** 21 04 08.3 -3.6
MA2 **Magadan** 60.90 14 P **P** 21 04 13.5 +1.1
comp=N,44nm,0.7s,baz=208,slow=6.4,SNR=11
comp=N,44nm,0.7s
MA2 **Magadan** 60.90 14 P **P** 21 04 09.4 -3.0
MA2 **Magadan** 60.90 14 P **P** 21 04 14.3 +1.9
MA2 **Magadan** 60.90 14 *ce*P **P** 21 04 15.3 +2.9
MA2 pmax pmax
comp=Z,59nm,0.7s
TKM2 **Tokmak 2** 61.06 320 P **P** 21 04 13.5 -0.7
SNR=16
BKZ **Black Stump Fm** 61.31 137 P **P** 21 04 12.5 -3.2
BKZ IAmb IAmb 21 04 25.3
comp=Z,23nm,0.7s
KBK **Karagaybulak** 61.36 319 P **P** 21 04 17.5 +1.4
SNR=13
RTZ **Ruatahuna** 61.38 136 P P 21 04 11.9 -4.3
RTZ IAmb IAmb 21 04 19.7
comp=Z,36nm,0.8s
UCH **Uchtor** 61.45 318 P **P** 21 04 17.7 +0.6
SNR=19
AAK **Ala-Archa** 61.65 319 P **P** 21 04 15.8 -2.2
AAK IAmb IAmb 21 04 32.3
comp=Z,24nm,1.4s
AAK **Ala-Archa** 61.65 319 P **P** 21 04 19.0 +0.9
SNR=9.7
AAK **Ala-Archa** 61.65 319 *ce*P **P** 21 04 19.6 +1.5
AAK pmax pmax
comp=Z,11nm,1.0s
AAK **Ala-Archa** 61.65 319 P **P** 21 04 19.5 +1.5
SGDS **Sogindy** 61.93 320 *e*P **P** 21 04 19.8 -0.1
USP **Ospenovka** 61.93 319 P **P** 21 04 19.3 -0.5
SNR=16
ARSB **Arslanbob** 62.09 317 IAmb IAmb 21 04 31.1
comp=Z,25nm,1.0s
EKS2 **Erkin-Say** 62.14 319 P **P** 21 04 21.7 +0.5
SNR=18
DRK **Karamyk** 62.17 315 IAmb IAmb 21 04 28.1
comp=Z,27nm,0.9s
ZALV **Zalesovo Beam** 62.30 334 P **P** 21 04 20.6 -1.4
comp=Z,7.3nm,0.5s,baz=121,slow=7.0,SNR=33
comp=Z,7.3nm,0.5s
ZALV **Zalesovo Beam** 62.30 334 *i* P **P** 21 04 21.1 -0.9
ZALV pmax pmax
comp=Z,6.0nm,0.4s
BTLS **Baital** 63.04 321 *e*P **P** 21 04 26.9 -0.2
BTLS **Baital** 63.04 321 *e*P **P** 21 04 26.9 -0.2
GAR **Garm** 63.05 314 P **P** 21 04 24.5 -2.9
KURBB **Kurchatov Arra** 63.31 328 P **P** 21 04 28.1 -0.7
comp=Z,30nm,0.7s,baz=129,slow=6.0,SNR=183
comp=Z,30nm,0.7s
KURK **Kurchatov** 63.31 328 P **P** 21 04 26.3 -2.4
KURK **Kurchatov** 63.31 328 *ce*P **P** 21 04 28.2 -0.6
KURK pmax pmax
comp=Z,64nm,0.7s
KURK **Kurchatov** 63.31 328 P **P** 21 04 28.1 -0.7
KURK sP **sP** 21 04 43.9 +1.6
DZA **Taraz** 63.86 318 *e*P **P** 21 02 32.4 -0.2
DZA **Taraz** 63.86 318 *e*P **P** 21 02 32.4 -0.2
SEY **Seymchan** 64.23 13 P **P** 21 04 35.5 +1.0
comp=Z,26nm,0.9s,baz=220,slow=5.7,SNR=16
comp=Z,26nm,0.9s
SEY **Seymchan** 64.23 13 *ce*P **P** 21 04 37.5 +2.9
SEY pmax pmax
comp=Z,98nm,1.7s
IUG **Iuzhnay** 64.44 317 ⇑*i* P **P** 21 04 36.3 -0.3
IUG **Iuzhnay** 64.44 317 *c* *i* P **P** 21 04 36.2 -0.3
CHM **Chimkent** 64.81 317 *e*P **P** 21 04 38.6 -0.2
CHM **Chimkent** 64.81 317 *e*P **P** 21 04 38.6 -0.2
BRZS **Berezniki** 66.18 325 *e*P **P** 21 04 47.9 +0.3
BRZS **Berezniki** 66.18 325 *e*P **P** 21 04 47.8 +0.3
CASY **Casey** 68.63 187 P **P** 21 05 02.2 -0.4
CASY **Casey** 68.63 187 P **P** 21 05 04.0 +1.4
BVAR **Borovoye Array** 68.88 328 P **P** 21 05 03.9 -0.6
comp=Z,9.0nm,0.6s,baz=129,slow=9.9,SNR=39
comp=Z,9.0nm,0.6s
BORK **Borovoye** 68.92 328 *ce*P **P** 21 05 04.6 -0.2
BORK pmax pmax
comp=Z,44nm,1.7s
TIXI **Tiksi** 70.00 1 P **P** 21 05 09.7 -1.3
TIXI IAmb IAmb 21 05 13.1
comp=Z,48nm,1.0s
TIXI **Tiksi** 70.00 1 *ce*P **P** 21 05 12.1 +1.1
TIXI pmax pmax
comp=Z,67nm,1.3s
TIXI **Tiksi** 70.00 1 P **P** 21 05 10.4 -0.6
BILL **Bilibino** 71.75 15 *ce*P **P** 21 05 24.3 +2.5
BILL pmax pmax
comp=Z,12nm,1.7s
NRIK **Noril'sk** 72.41 347 P **P** 21 05 25.8 +0.2
comp=Z,62nm,0.6s,baz=126,slow=6.0,SNR=110
comp=Z,62nm,0.6s
NRIK **Noril'sk** 72.41 347 *ce*P **P** 21 05 26.0 +0.3
NRIK pmax pmax
comp=Z,75nm,0.7s
SVE **Sverdlovsk** 75.55 329 *e*P **P** 21 05 44.2 -0.1
SVE pmax pmax
comp=Z,98nm,1.5s
CCD **Concordia, Ant** 76.59 181 P **P** 21 05 51.8 +1.4
ARTI **Arti** 76.59 328 P **P** 21 05 47.4 -2.8
ARTI IAmb IAmb 21 05 52.4
comp=Z,34nm,0.6s
ARTI **Arti** 76.59 328 *c* *i* P **P** 21 05 50.3 +0.1
ARTI 21 08 40.3
ARTI S **S** 21 15 34.7 +0.6
ARTI SS **SS** 21 20 27.1 -2.6
ARTI pmax pmax
comp=Z,64nm,1.8s
ARTI **Arti** 76.59 328 P **P** 21 05 49.1 -1.1
ARTI sP **sP** 21 06 04.5 +0.7
FALS **False Pass** 77.48 34 P **P** 21 05 55.7 +0.5
baz=254
M11K **Mekoryuk** 77.69 28 P **P** 21 05 56.6 +0.4
baz=251
S12K **Black Hills** 78.45 33 P **P** 21 06 00.6 0.0
baz=256
K13K **Kusilvak Mount** 78.89 27 P **P** 21 06 03.9 +1.0
baz=252
M13K **Dall Lake** 79.04 28 P **P** 21 06 04.7 +1.0
baz=253
SDPT **Sand Point** 79.24 34 P **P** 21 06 05.3 +0.3
baz=257
ANM **Nome** 79.42 24 P **P** 21 06 06.9 +1.2
baz=251
L14K **Kuka Creek** 79.62 28 P **P** 21 06 08.0 +1.1
baz=254
CHNA **Chernabura Isl** 79.62 34 P **P** 21 06 08.0 +1.0
baz=258
J14K **Nanvaranak Lak** 79.62 26 P **P** 21 06 08.1 +1.3
baz=253
N14K **Kuskokwak Cree** 79.71 29 P **P** 21 06 08.8 +1.4
baz=255
O14K **Tigyukauivet M** 79.75 30 P **P** 21 06 09.1 +1.5
baz=256

M14K Bethel 79.80 28 P P 21 06 09.2 +1.3
baz=255
S14K Fog Glacier 79.95 33 P P 21 06 09.8 +0.9
baz=258
F15K North Star Dit 80.08 23 P P 21 06 10.5 +1.2
baz=251
G15K Niukluk 80.10 24 P P 21 06 11.1 +1.7
baz=252
ABPO Ambohimpanom 80.15 251 P P 21 06 09.4 -1.4
ABPO Ambohimpanom 80.15 251 P P 21 06 09.4 -1.4
ABPO pmax pmax
comp=Z,14nm,0.9s
ABPO Ambohimpanom 80.15 251 P P 21 06 11.4 +0.6
L15K Ungalak Mounta 80.26 27 P P 21 06 11.7 +1.3
baz=255
AKT Akhty 80.37 312 eP P 21 06 11.5 -0.1
AKT e 21 06 16.7
AKT ePPP PPP 21 11 06.5
AKT eS S 21 16 17.0 +1.5
AKT pmax pmax
comp=Z,30nm,1.4s
M15K Kasigluk River 80.39 29 P P 21 06 12.7 +1.6
baz=256
K15K Wolf Creek Mou 80.40 27 P P 21 06 12.5 +1.4
baz=255
O15K Ungalikthiuk R 80.45 30 P P 21 06 12.6 +1.2
baz=257
N15K Kwethluk River 80.55 29 P P 21 06 13.3 +1.3
baz=256
C16K Lisburne Hills 80.66 21 P P 21 06 13.7 +1.3
baz=250
H16K Elim 80.73 24 P P 21 06 14.4 +1.6
baz=254
VOI Vohitsoka 80.82 248 P P 21 06 12.1 -2.3
G16K Koyuk River 80.89 24 P P 21 06 15.4 +1.8
baz=254
RAYN Ar Rayn 80.90 293 P P 21 06 12.1 -2.6
RAYN IAmb IAmb 21 06 20.9
comp=Z,33nm,1.0s
RAYN Ar Rayn 80.90 293 P P 21 06 12.1 -2.6
RAYN pmax pmax
comp=Z,33nm,1.0s
RAYN Ar Rayn 80.90 293 P P 21 06 13.4 -1.3
RAYN pP pP 21 06 23.6 -1.0
J16K Anvik River 81.07 26 P P 21 06 16.4 +1.8
baz=255
I17K Unalakleet 81.18 25 P P 21 06 17.1 +1.9
baz=255
L16K Owhat River 81.20 28 P P 21 06 17.2 +1.9
baz=257
N16K Nishlik Lake 81.26 29 P P 21 06 17.5 +1.7
baz=258
R16K Pilot Point 81.28 32 P P 21 06 17.5 +1.6
baz=259
M16K Timber Creek 81.28 28 P P 21 06 16.9 +1.0
baz=257
D17K Noatak River 81.29 21 P P 21 06 17.6 +1.8
baz=252
P16K Nushagak River 81.34 30 P P 21 06 18.0 +1.8
baz=258
VNDA Vanda 81.35 173 P P 21 06 16.8 +0.8
comp=Z,8.9nm,0.6s,baz=318,slow=7.3,SNR=43
comp=Z,8.9nm,0.6s
VNDA Vanda 81.35 173 IAmb IAmb 21 06 20.6
comp=Z,10nm,0.7s
VNDA Vanda 81.35 173 P P 21 06 16.8 +0.8
O16K Kokwok River B 81.41 30 P P 21 06 17.8 +1.3
baz=258
RDOG Red Dog Mine 81.46 21 P P 21 06 17.9 +1.2
baz=253
C17K DeLong Mountai 81.49 21 P P 21 06 18.7 +1.9
baz=252
E17K Hotham Inlet 81.57 22 P P 21 06 18.9 +1.7
baz=254
MAW Mawson 81.58 200 P P 21 06 18.2 +1.0
comp=Z,10.0nm,0.9s,baz=80,slow=3.6,SNR=18
comp=Z,10.0nm,0.9s
G17K Kiwalik Mounta 81.61 24 P P 21 06 19.0 +1.5
baz=255
F17K Baldwin Pennin 81.62 23 P P 21 06 19.2 +1.7
baz=254
J17K VABM Dome 81.76 26 P P 21 06 20.1 +1.8
baz=257
H17K Granite Mounta 81.77 24 P P 21 06 19.8 +1.5
baz=256
KIRV Kirov 81.82 329 ceP P 21 06 19.0 +0.3
BELG Belogornoye 81.83 323 i P P 21 06 18.3 -0.6
BELG pmax pmax
comp=Z,13nm,0.7s
L17K Donlin 81.83 27 P P 21 06 21.0 +2.3
baz=258
R17L Mt. Peulik Vol 81.93 32 P P 21 06 20.4 +1.1
baz=260
O17K Koliganek Bris 81.94 30 P P 21 06 21.5 +2.2
baz=259
K17K Iditarod 81.96 27 P P 21 06 21.6 +2.2
baz=258
Q16K King Salmon 81.96 31 P P 21 06 21.6 +2.2
baz=260
CHIR Chirikof Islan 82.03 34 P P 21 06 21.6 +1.7
baz=261
N17K Nushagak Hills 82.03 29 P P 21 06 21.5 +1.7
baz=259
M17K Holitna River 82.08 28 P P 21 06 22.0 +1.9
baz=259
E18K Tukpahlearik C 82.12 22 P P 21 06 22.1 +1.9
baz=255
P17K Kvichak River 82.16 30 P P 21 06 22.0 +1.5
baz=260
B18K Kokolik River 82.22 20 P P 21 06 22.6 +2.0
baz=253
C18K Utukok River 82.24 21 P P 21 06 22.7 +1.8
baz=254
F18K Selawik 82.28 23 P P 21 06 22.7 +1.8
baz=256
H18K Honhosa River 82.46 24 P P 21 06 23.8 +1.8
baz=257
G18K Tagagawik 82.50 24 P P 21 06 23.9 +1.7
baz=257
GNI Garni 82.51 310 i P P 21 06 25.3 +2.3
GNI pmax pmax
comp=Z,16nm,1.0s
L18K Granite Mounta 82.59 27 P P 21 06 24.6 +1.9
baz=259
N18K Kilae Creek 82.69 29 P P 21 06 25.9 +2.6
baz=260
Q18K Katmai Hardscr 82.80 31 P P 21 06 25.1 +1.1
baz=261
P18K Big Mountain, 82.81 30 P P 21 06 25.0 +1.1
baz=261
J18K Innoko River 82.81 26 P P 21 06 25.6 +1.7
baz=259
M18K Stony River 82.86 28 P P 21 06 26.1 +2.0
baz=260
O18K Koktuh Hills 82.89 30 P P 21 06 26.1 +1.8
baz=261
C19K Lookout Ridge 82.92 20 P P 21 06 26.5 +2.2
baz=256
SII Sitkinak Islan 82.94 33 P P 21 06 25.9 +1.2
baz=262
GCSA Galena City Sc 82.99 25 P P 21 06 26.5 +1.8
baz=259
F19K Shaleruckik Mo 83.06 23 P P 21 06 27.1 +2.1
baz=258
G19K Purcell Mounta 83.18 23 P P 21 06 27.9 +2.1
baz=258
D19K Kuna River 83.29 21 P P 21 06 28.1 +1.8
baz=257,SNR=19
H19K Roundabout Mou 83.32 24 P P 21 06 28.3 +1.9
baz=259
J19K Poorman 83.39 26 P P 21 06 29.0 +2.2
baz=260
N19K Bonanza Creek 83.39 29 P P 21 06 29.1 +2.1
baz=261
E19K Redstone River 83.40 22 P P 21 06 28.6 +1.8
baz=258
L19K White Mountain 83.43 28 P P 21 06 28.7 +1.6
baz=261
OHAK Old Harbor 83.51 33 P P 21 06 29.0 +1.4
baz=263
M19K Big River Lodg 83.60 28 P P 21 06 29.5 +1.5
baz=261
P19K Oil Pt 83.85 30 P P 21 06 31.0 +1.6
baz=262
D20K Etivluk River 83.88 21 P P 21 06 31.4 +2.2
baz=258
F20K Avaraart Lake 83.89 23 P P 21 06 31.8 +2.5
baz=259

L20K Farewell, AK 83.93 27 P P 21 06 31.9 +2.3
baz=262
E20K Nigu River 83.94 21 P P 21 06 31.9 +2.2
baz=259
B20K Meade River 83.95 20 P P 21 06 32.1 +2.5
baz=258
KDAK Kodiak Island 83.96 32 P P 21 06 31.7 +1.9
baz=263
H20K Anotleneega Mo 83.96 24 P P 21 06 32.4 +2.6
baz=260
K20K Telida 83.97 26 P P 21 06 31.9 +2.1
baz=261
J20K Nowinta River 84.06 26 P P 21 06 32.9 +2.6
baz=261
KBZ Khabaz 84.12 314 P P 21 06 31.1 +0.1
comp=Z,8.5nm,0.7s,baz=90,slow=3.2,SNR=21
comp=Z,8.5nm,0.7s
KBZ Khabaz 84.12 314 ceP P 21 06 32.6 +1.7
KBZ pmax pmax
comp=Z,15nm,1.2s
Q20K Shuyak Island 84.15 31 P P 21 06 32.6 +1.8
baz=263
M20K Styx River 84.19 28 P P 21 06 32.7 +1.6
baz=262
O20K Slope Mountain 84.21 30 P P 21 06 33.1 +1.9
baz=263
KIV Kislovodsk 84.29 314 P P 21 06 28.7 -3.3
KIV IAmb IAmb 21 06 45.6
comp=Z,24nm,0.6s
KIV Kislovodsk 84.29 314 ⇑P P 21 06 33.4 +1.5
KIV Kislovodsk 84.29 314 eP P 21 06 32.2 +0.2
KIV pmax pmax
comp=Z,18nm,0.9s
KIV Kislovodsk 84.29 314 P P 21 06 33.0 +1.0
comp=Z,434nmcomp=Z,23nm,0.8s
SHA1 Shidzhatmaz 84.29 314 i P P 21 06 31.9 -0.3
N20K Mount Spurr 84.55 29 P P 21 06 33.3 +0.5
baz=263,SNR=8.3
SPCR Spurr Chakacha 84.55 29 P P 21 06 33.5 +0.6
baz=263,SNR=7.2
C21K Knifeblade Rid 84.61 21 P P 21 06 34.0 +1.1
baz=260,SNR=6.1
HOM Homer 84.65 30 P P 21 06 34.1 +0.8
baz=264
G21K Allakaket 84.67 23 P P 21 06 34.6 +1.3
baz=262
B21K Ikpikpuk River 84.75 20 P P 21 06 35.6 +2.0
baz=260
PPLA Purkeypile 84.75 27 P P 21 06 35.0 +1.0
baz=263
F21K Alatna River 84.78 23 P P 21 06 34.9 +1.0
baz=262
E21K Killik River 84.79 21 P P 21 06 35.7 +1.8
baz=261
CHUM Lake Minchumin 84.82 26 P P 21 06 34.7 +0.7
baz=263
SKT Skwentna 84.95 28 P P 21 06 36.0 +1.1
baz=264,SNR=6.0
BRSE Bradley Lake S 85.12 30 P P 21 06 36.9 +1.2
baz=265,SNR=6.5
I21K Tanana 85.12 25 P P 21 06 36.6 +1.1
baz=263
B22K Teshekpuk Lake 85.27 20 P P 21 06 38.1 +1.9
baz=261
SUA Susitna One 85.27 29 P P 21 06 37.6 +1.0
baz=264,SNR=7.2
D22K Ayikyak River 85.32 21 P P 21 06 38.7 +2.1
baz=262
F22K John River 85.32 22 P P 21 06 38.0 +1.4
baz=263
VRH Novokhopyorsk 85.36 321 eP P 21 06 34.7 -2.3
VRH pmax pmax
comp=Z,60nm,0.9s
BPAW Bear Paw Mtn. 85.42 26 P P 21 06 37.8 +0.6
baz=264
H22K Ishtalitna Cre 85.45 24 P P 21 06 38.3 +1.0
baz=264
MARD Mardin 85.46 307 IAmb IAmb 21 06 45.6
comp=Z,18nm,0.7s
G22K Bettles 85.51 23 P P 21 06 38.9 +1.4
baz=263,SNR=5.3
E22K Anaktuvuk Pass 85.54 22 P P 21 06 39.3 +1.6
baz=263,SNR=10
M22K Willow 85.60 28 P P 21 06 39.4 +1.4
baz=265,SNR=5.2
MLY Manley 85.62 25 P P 21 06 38.9 +0.7
baz=264
TRF Thorofare Moun 85.67 27 P P 21 06 39.2 +0.6
baz=265
O22K Cooper Landing 85.69 30 P P 21 06 39.5 +1.0
baz=266
LABN Labinsk 85.72 314 eP P 21 06 39.4 +0.4
LABN e*PP pwP 21 06 50.1 -1.1
LABN pmax pmax
comp=Z,34nm,0.8s
RC01 Rabbit Creek A 85.73 29 P P 21 06 39.6 +0.9
baz=265,SNR=7.3
SEW Seward 85.79 30 P P 21 06 40.0 +1.0
baz=266
ERBR Yeremizino-Bor 85.93 316 eP P 21 06 40.7 +0.7
ERBR e*PP pwP 21 06 52.1 -0.1
ERBR pmax pmax
comp=Z,53nm,0.8s
D23K Nanushuk River 86.05 21 P P 21 06 41.9 +1.8
baz=264
COLD Coldfoot 86.05 23 P P 21 06 41.8 +1.6
baz=264,SNR=11
PMR Palmer 86.06 29 P P 21 06 41.2 +0.9
baz=266
G23K Bananza Creek 86.08 23 P P 21 06 42.2 +1.8
baz=265
C23K Itkillik River 86.16 20 P P 21 06 41.8 +1.2
baz=264
VSLR Vesyoloye 86.19 313 i P P 21 06 41.9 +0.5
VSLR pmax pmax
comp=Z,82nm,0.7s
H23K Yukon River 86.19 24 P P 21 06 41.6 +0.6
baz=265
I23K Minto, Yukon-K 86.22 25 P P 21 06 41.5 +0.5
baz=265
MCK McKinley 86.30 26 IAmb IAmb 21 07 03.1
comp=Z,36nm,1.4s
MCK McKinley 86.30 26 P P 21 06 42.1 +0.6
baz=266
NEA2 Nenana 86.30 25 P P 21 06 41.9 +0.4
baz=266
E23K Chandalar 86.35 22 P P 21 06 42.8 +1.1
baz=265
KNK Knik Glacier 86.37 29 P P 21 06 42.5 +0.6
baz=266
PWL Port Wells 86.39 29 P P 21 06 42.3 +0.3
baz=267,SNR=7.7
WAT1 Susitna Watana 86.41 27 P P 21 06 42.4 +0.3
baz=266
TOLK Toolik Lake Re 86.42 21 P P 21 06 42.4 +0.4
baz=265,SNR=6.6
SOC Sochi 86.42 313 eP P 21 06 40.6 -1.9
SOC e 21 09 58.1
SOC ePPP PPP 21 12 00.9
SOC eS SKSac 21 17 03.5 -3.2
SOC eSS SS 21 22 58.0 +1.3
SOC pmax pmax
comp=Z,29nm,0.8s
SML Sawmill 86.45 28 P P 21 06 42.7 +0.4
baz=267
D24K Happy Valley 86.73 21 P P 21 06 45.3 +1.8
baz=266
M23K Glacier View 86.74 28 P P 21 06 44.4 +0.7
baz=267,SNR=6.2
WAT6 Susitna Watana 86.77 28 P P 21 06 44.4 +0.3
baz=267
E24K Your Creek 86.78 22 P P 21 06 45.4 +1.6
baz=266
C24K Franklin Bluff 86.81 20 P P 21 06 45.3 +1.5
baz=266
CCB Clear Creek Bu 86.84 25 P P 21 06 41.0 -3.1
CCB IAmb IAmb 21 06 45.2
comp=Z,29nm,1.4s
H24K Noodor Dome 86.88 24 P P 21 06 45.6 +1.3
baz=267
VORD Divnogorie 86.88 321 eP P 21 06 43.6 -0.9
VORD pmax pmax
comp=Z,40nm,1.0s
SCM Sheep Creek Mo 86.93 28 P P 21 06 45.2 +0.5
baz=268
VORR Voronezh 86.95 321 eP P 21 06 43.2 -1.7
VORR pmax pmax

comp=Z,70nm,0.9s
DHY Denali Highway 86.96 27 P P 21 06 45.9 +0.9
baz=267
VSR Storozhevoye 86.96 321 eP P 21 06 42.1 -2.9
VSR pmax pmax
comp=Z,30nm,0.9s
F24K Squaw Lake 86.97 23 P P 21 06 45.7 +1.0
baz=267
KLMR Klimovskoe 87.05 331 eP P 21 06 43.7 -1.5
KLMR pmax pmax
comp=Z,86nm,1.4s
G24K Hadweenzic Riv 87.09 23 P P 21 06 45.9 +0.7
baz=267
LPSR Galich'ya Gora 87.14 322 eP P 21 06 43.4 -2.4
LPSR pmax pmax
comp=Z,50nm,0.9s
HDA Harding Lake 87.20 26 IAmb IAmb 21 06 46.5
comp=Z,11nm,0.8s
HDA Harding Lake 87.20 26 P P 21 06 45.8 -0.1
baz=268,SNR=7.6
ILAR Eielson Array 87.25 25 P P 21 06 44.6 -1.5
comp=Z,3.3nm,0.6s,baz=247,slow=5.0,SNR=25
M24K Tolsona, Glenn 87.48 28 P P 21 06 48.1 +0.8
baz=268
KLU Klutina 87.59 29 P P 21 06 48.7 +0.9
baz=269
D25K Kavik River 87.61 21 P P 21 06 48.6 +0.8
baz=268
G25K Bearman Lake 87.63 23 P P 21 06 48.7 +0.8
baz=268
K24K Donnelly Dome 87.70 26 P P 21 06 49.2 +0.9
baz=269
PAX Paxson 87.82 27 P P 21 06 49.9 +0.9
baz=269
F25K Christian Rive 87.83 23 P P 21 06 49.7 +0.8
baz=269
E25K Arctic Village 87.87 22 P P 21 06 50.3 +1.2
baz=269,SNR=12
J25K Salcha River, 87.89 26 P P 21 06 49.1 -0.2
baz=269
MOS Moscow 87.94 326 eP P 21 06 48.5 -1.1
MOS pmax pmax
comp=Z,46nm,1.3s
ANN Anapa 88.07 315 eP P 21 06 49.4 -1.0
ANN e*PP pP 21 06 59.7 -0.7
ANN eS SKSac 21 17 13.0 -3.7
ANN pmax pmax
comp=Z,54nm,0.6s
RIDG Independent Ri 88.11 26 P P 21 06 51.4 +1.1
baz=270
C26K Camden Bay 88.13 20 P P 21 06 51.8 +1.6
baz=269,SNR=10.0
BMRM Bremner River 88.22 29 P P 21 06 52.4 +1.5
baz=270
N25K Chitina, Valde 88.22 29 P P 21 06 52.1 +1.2
baz=270
KIBK Kibwezi 88.28 268 P P 21 06 51.3 -0.9
KIBK IAmb IAmb 21 06 55.6
comp=Z,30nm,1.3s
GAZ Gaziantep 88.31 307 IAmb IAmb 21 06 54.2
comp=Z,29nm,1.0s
F26K Sheenjek River 88.41 22 P P 21 06 53.5 +1.9
baz=270
SCRK Sand Creek 88.49 26 P P 21 06 53.8 +1.6
baz=270
OBN Obninsk 88.55 325 P P 21 06 52.1 -0.3
OBN Obninsk 88.55 325 deP P 21 06 52.7 +0.3
OBN e 21 10 19.5
OBN ePPP PPP 21 12 17.3
OBN pmax pmax
comp=Z,42nm,1.3s
OBN MLR MLR
comp=Z,2μm,25.0s
OBN Obninsk 88.55 325 P P 21 06 52.8 +0.3
comp=Z,37nm,1.1s
G26K Porcupine Rive 88.55 23 P P 21 06 54.1 +1.9
baz=270
C27K Jago River 88.55 21 P P 21 06 54.1 +1.9
baz=270
J26L Joseph Creek 88.67 26 IAmb IAmb 21 06 54.6
comp=Z,12nm,0.7s
J26L Joseph Creek 88.67 26 P P 21 06 54.4 +1.4
baz=271
L26K Log Cabin Wild 88.79 27 P P 21 06 54.8 +1.3
baz=271
I26K Coal Creek Min 88.83 25 P P 21 06 54.7 +1.1
baz=271
CRQE Cirque 88.96 29 P P 21 06 55.9 +1.4
baz=271
MCARA McCarthy VSAT 88.98 29 P P 21 06 56.1 +1.7
baz=271
KMBO Kilima Mbogo 89.04 269 P P 21 06 56.5 +0.5
comp=Z,1.8nm,0.3s,baz=85,slow=4.9,SNR=21
comp=Z,1.8nm,0.3s
KMBO Kilima Mbogo 89.04 269 i P P 21 06 58.5 +2.5
KMBO pmax pmax
comp=Z,2.0nm,0.3s
K27K Chicken 89.33 26 P P 21 06 58.1 +2.1
baz=272
E27K Coleen River 89.36 22 P P 21 06 57.1 +1.1
baz=272,SNR=11
G27K Doyon Strip 89.40 23 P P 21 06 57.8 +1.5
baz=272
I27K Kandik River 89.47 25 IAmb IAmb 21 06 59.3
comp=Z,16nm,0.8s
I27K Kandik River 89.47 25 P P 21 06 57.8 +1.2
baz=272
H27K Steamboat Moun 89.47 24 P P 21 06 58.1 +1.4
baz=273
L27K Beaver Creek, 89.48 27 IAmb IAmb 21 06 59.4
comp=Z,11nm,0.7s
L27K Beaver Creek, 89.48 27 P P 21 06 58.1 +1.4
baz=272
M27K Edge Creek, AK 89.49 28 P P 21 06 57.8 +0.9
baz=272
D27M Malcolm River 89.53 21 P P 21 06 58.5 +1.6
baz=273
APA Apatity 89.66 337 eP P 21 06 55.8 -1.6
APA MLR MLR
comp=Z,1μm,30.8s
GHAJ Ghor Haditha 89.79 301 IAmb IAmb 21 07 01.3
comp=Z,31nm,0.9s
CTG Chitna Glacier 89.81 29 P P 21 06 59.4 +0.9
baz=273
MMAI Mount Meron Ar 89.88 303 P P 21 07 00.1 +0.7
comp=Z,5.4nm,0.5s,baz=90,slow=6.7,SNR=23
comp=Z,5.4nm,0.5s
BVCY Beaver Creek 89.96 28 P P 21 07 00.1 +1.1
baz=273
F28M Old Crow 90.04 22 IAmb IAmb 21 07 01.5
comp=Z,11nm,0.9s
F28M Old Crow 90.04 22 P P 21 07 00.3 +1.1
baz=274,SNR=8.0
E28M Babbage River 90.09 21 IAmb IAmb 21 07 02.0
comp=Z,24nm,1.1s
E28M Babbage River 90.09 21 P P 21 07 00.6 +1.1
baz=274,SNR=15
I28M Miner Creek 90.17 25 IAmb IAmb 21 07 02.5
comp=Z,11nm,0.7s
I28M Miner Creek 90.17 25 P P 21 07 01.2 +1.2
baz=274
YUK3 Moose Creek 90.19 28 P P 21 07 01.0 +0.7
baz=274
SYO Syowa Base 90.25 201 ⇓ePcP PcP 21 07 02.1 +0.8
D28M Stokes Point 90.32 21 P P 21 07 01.5 +1.1
baz=275
O28M Mount Upton 90.38 29 P P 21 07 01.9 +0.6
baz=274
PINM Pinnacle 90.40 30 P P 21 07 01.8 +0.6
baz=274
SIM Simferopol' 90.43 315 eP P 21 07 01.2 -0.3
SIM pmax pmax
comp=Z,17nm,0.7s
DAWY Dawson 90.51 26 IAmb IAmb 21 07 15.3
comp=Z,25nm,1.6s
DAWY Dawson 90.51 26 P P 21 07 02.6 +1.0
baz=274,SNR=5.9
YUK8 Steele Glacier 90.55 29 P P 21 07 02.1 0.0
baz=274
E29M Blow River 90.71 22 P P 21 07 02.7 +0.4
baz=276
H29M Whitestone 90.75 24 P P 21 07 03.2 +0.7
baz=275
G29M Pine Creek 90.82 23 P P 21 07 03.4 +0.6
baz=276
KIRS Kirsehir-Merke 90.84 309 ⇑P P 21 07 02.3 -1.4
PNL Peninsula 90.86 30 P P 21 07 03.7 +0.4
baz=274

BR104	**Keskin Array S**	91.03	310	P		P	21 07 04.0	-0.6
	comp=Z,56nmcomp=Z,7.1nm,0.9s							
BRTR	**Keskin Array B**	91.03	310	P		P	21 07 03.5	-1.1
	comp=Z,4.0nm,0.7s,baz=120,slow=5.5,SNR=27							
	comp=Z,4.0nm,0.7s							
BRTR	**Keskin Array B**	91.03	310	*i* P		P	21 07 04.0	-0.6
BRTR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
BR106	**Keskin Array S**	91.05	310	P		P	21 07 03.8	-0.9
	comp=Z,53nmcomp=Z,6.4nm,1.0s							
BR105	**Keskin Array S**	91.05	310	P		P	21 07 03.7	-1.0
	comp=Z,66nmcomp=Z,8.5nm,0.9s							
M29M	**Somme Creek**	91.07	28	P		P	21 07 05.5	+1.2
	baz=275							
YUK4	**Talbot Arm**	91.09	29	P		P	21 07 04.7	+0.2
	baz=275							
L29M	**L29M**	91.16	27	P		P	21 07 05.8	+1.2
	baz=276							
O29M	**Mount Kennedy**	91.22	30	P		P	21 07 05.7	+0.7
	baz=275							
YUK6	**Outpost Mounta**	91.26	29	P		P	21 07 05.8	+0.4
	baz=275							
K29M	**Barlow Dome**	91.36	26	P		P	21 07 06.0	+0.4
	baz=276							
EPYK	**Eagle Plains**	91.40	24	P		P	21 07 06.4	+0.8
	baz=277,SNR=5.6							
QSPA	**South Pole Qui**	91.49	180	P		P	21 07 08.9	+2.8
	comp=Z,3.7nm,0.7s,baz=295,slow=3.1,SNR=6.4							
QSPA	**South Pole Qui**	91.49	180	P		P	21 07 11.1	+5.0
QSPA				IAmb		IAmb	21 07 15.4	
	comp=Z,53nm,2.0s							
G30M	**tAoh Zraii Nji**	91.52	23	P		P	21 07 07.1	+1.0
	baz=277							
CSS	**Mathiatis**	91.52	305	P		P	21 07 07.1	+0.3
	comp=Z,29nm,0.9s							
F30M	**Barrier River**	91.60	22	IAmb		IAmb	21 07 08.5	
	comp=Z,12nm,0.9s							
F30M	**Barrier River**	91.60	22	P		P	21 07 07.7	+1.3
	baz=278							
I30M	**Mount Dempster**	91.68	25	P		P	21 07 08.0	+0.9
	baz=277							
HYT	**Haines Junctio**	91.69	29	P		P	21 07 07.9	+0.7
	baz=276							
P29M	**Windy Craggy**	91.70	30	P		P	21 07 08.6	+1.4
	baz=276							
J30M	**Hart River**	91.78	25	P		P	21 07 08.9	+1.3
	baz=277							
N30M	**Aishikik Lake**	91.82	29	P		P	21 07 08.9	+1.2
	baz=276							
M30M	**Minto, Yukon**	91.83	27	P		P	21 07 09.0	+1.3
	baz=277							
P30M	**Million Dollar**	92.04	30	P		P	21 07 10.2	+1.5
	baz=277							
G31M	**Satah River**	92.28	23	IAmb		IAmb	21 07 11.2	
	comp=Z,24nm,1.1s							
G31M	**Satah River**	92.28	23	P		P	21 07 10.6	+1.0
	baz=279							
ARCES	**ARCESS Array B**	92.30	340	P		P	21 07 08.7	-1.0
	comp=Z,20nm,0.9s,baz=78,slow=5.7,SNR=39							
ARCES				PKKP		PKKPdf	21 24 25.1	+0.7
	comp=Z,2.6nm,0.8s,baz=266,slow=3.5,SNR=6.6							
	comp=Z,20nm,0.9s							
INK	**Inuvik**	92.33	21	IAmb		IAmb	21 07 11.6	
	comp=Z,17nm,1.2s							
INK	**Inuvik**	92.33	21	P		P	21 07 10.9	+1.1
	baz=280							
O30N	**Mendenhall**	92.39	29	P		P	21 07 11.4	+1.1
	baz=277							
F31M	**Tsiigehtchic**	92.40	22	P		P	21 07 11.2	+1.1
	baz=280							
PLBC	**Pleasant Camp**	92.42	30	P		P	21 07 11.4	+1.0
	baz=277							
H31M	**Peel River**	92.44	24	P		P	21 07 11.0	+0.6
	baz=279							
N31M	**Braeburn, Yuko**	92.44	28	P		P	21 07 11.4	+0.9
	baz=278							
SPITS	**Spitsbergen Ar**	92.50	349	P		P	21 07 10.8	+0.3
	comp=Z,18nm,0.8s,baz=88,slow=6.8,SNR=11							
	comp=Z,18nm,0.8s							
SKAG	**Skagway**	92.94	30	P		P	21 07 14.4	+1.6
	baz=278							
M31M	**Drury Creek, Y**	92.99	28	P		P	21 07 14.7	+1.7
	baz=279							
WHY	**Whitehorse**	92.99	29	P		P	21 07 14.7	+1.5
	baz=278							
AK09	**Malin Array Si**	93.23	321	P		P	21 07 14.4	0.0
AK08	**Malin Array Si**	93.25	321	P		P	21 07 14.4	0.0
AKASG	**Malin Array Be**	93.26	321	P		P	21 07 13.5	-1.0
	comp=Z,2.1nm,0.6s,baz=71,slow=4.1,SNR=10							
	comp=Z,2.1nm,0.6s							
AKASG	**Malin Array Be**	93.26	321	*i* P		P	21 07 15.3	+0.8
AKASG				pmax	pmax			
	comp=Z,4.0nm,0.7s							
AKBB	**Malin Array Si**	93.26	321	*ce* P		P	21 07 15.8	+1.3
KIEV	**Kiev**	93.27	321	P		P	21 07 13.0	-1.5
KIEV	**Kiev**	93.27	321	⇑P		P	21 07 19.0	+4.5
KIEV	**Kiev**	93.27	321	P		P	21 07 13.0	-1.5
KIEV				pmax	pmax			
	comp=Z,6.0nm,0.9s							
AK17	**Malin Array Si**	93.37	321	P		P	21 07 14.7	-0.3
FINES	**FINESS Array B**	93.50	332	P		P	21 07 15.0	-0.4
	comp=Z,2.8nm,0.5s,baz=53,slow=7.4,SNR=17							
	comp=Z,2.8nm,0.5s							
FINES	**FINESS Array B**	93.50	332	*i* P		P	21 07 15.1	-0.2
FINES				pmax	pmax			
	comp=Z,3.0nm,0.5s							
MNK	**Minsk**	93.61	325	*i* P		P	21 07 15.0	-1.0
MNK				*i*			21 10 59.4	
MNK				*i* PPP		PPP	21 12 59.9	
MNK				*i* S		SKSac	21 17 46.5	-1.6
MNK				*i* SS		SS	21 24 40.2	+0.2
MNK				*i* SSS		SSS	21 28 20.6	
MNK				pmax	pmax			
	comp=E,11nm,1.0s							
MNK				pmax	pmax			
	comp=N,8.0nm,0.9s							
MNK				pmax	pmax			
	comp=Z,14nm,1.0s							
MNK				MLR	MLR			
	comp=E,696nm,20.0s							
MNK				MLR	MLR			
	comp=Z,426nm,16.0s							
N32M	**Quiet Lake**	93.78	29	P		P	21 07 17.9	+1.2
	baz=280							
MILM	**Milestii Mici**	93.96	317	⇑P		P	21 07 16.9	-0.9
MILM	**Milestii Mici**	93.96	317	⇑P		P	21 07 16.9	-0.9
P33M	**Teslin, Yukon**	94.07	29	P		P	21 07 19.8	+1.6
	baz=280							
SORM	**Soroca**	94.13	318	⇑P		P	21 07 19.0	+0.5
SORM	**Soroca**	94.13	318	⇑P		P	21 07 19.0	+0.5
NACGM	**Naroch**	94.18	325	*e* P		P	21 07 18.4	-0.2
	comp=Z,7.0nm,0.9s,baz=81							
Q32M	**Nakina River**	94.58	31	P		P	21 07 22.2	+1.6
	baz=281							
CRAG	**Craig**	94.73	34	P		P	21 07 22.8	+1.7
	baz=280							
R33M	**Jennings River**	95.15	30	P		P	21 07 24.1	+0.9
	baz=282							
NOR	**Nord**	95.19	355	*i* P		P	21 07 23.8	+1.1
NOR				IAmb		IAmb	21 07 24.2	
	comp=Z,14nm,0.9s							
KMPD	**K-Podol'skiy**	95.32	319	P		P	21 07 23.4	-0.6
S34M	**Telegraph Cree**	95.36	32	P		P	21 07 25.9	+1.9
	baz=282							
TESR	**Tescani**	95.49	317	⇑P		P	21 07 24.2	-0.6
TESR	**Tescani**	95.49	317	P		P	21 07 24.2	-0.6
	comp=Z,31nm,0.7s							
VRI	**Vrincioaia**	95.52	316	⇑P		P	21 07 26.6	+1.6
VRI	**Vrincioaia**	95.52	316	⇑P		P	21 07 26.6	+1.6
VRI	**Vrincioaia**	95.52	316	P		P	21 07 26.6	+1.6
PLOR	**Plostina**	95.58	316	⇓P		P	21 07 31.3	+6.0
PLOR	**Plostina**	95.58	316	⇓P		P	21 07 31.3	+6.0
DLBC	**Dease Lake**	95.83	31	P		P	21 07 27.8	+1.6
	baz=282							
NEHR	**Nehoiu**	95.89	316	⇓P		P	21 07 28.0	+1.3
TURR	**Turia**	95.99	316	⇓P		P	21 07 28.2	+1.0
T35M	**Bob Quinn**	96.02	32	P		P	21 07 29.1	+2.0
	baz=282							
WTLY	**Watson Lake, Y**	96.06	29	P		P	21 07 29.1	+2.0
	baz=284							
MLR	**Muntele Rosu**	96.12	316	IAmb		IAmb	21 07 33.5	
	comp=Z,11nm,0.9s							
MLR	**Muntele Rosu**	96.12	316	⇓P		P	21 07 27.8	-0.1
MLR	**Muntele Rosu**	96.12	316	⇓P		P	21 07 27.8	-0.1
BURAR	**Bucovina Array**	96.29	318	⇑P		P	21 07 28.6	0.0
BURAR	**Bucovina Array**	96.29	318	⇑P		P	21 07 28.6	0.0
SUW	**Suwalki**	96.41	325	P		P	21 07 26.3	-2.5
SUW	**Suwalki**	96.41	325	P		P	21 07 26.3	-2.5
ARR	**Arges**	97.05	316	⇑P		P	21 07 27.2	-4.8
BMR	**Baia Mare**	97.43	318	⇓P		Pdif	21 07 35.1	+1.4
BMR	**Baia Mare**	97.43	318	⇓P		Pdif	21 07 35.1	+1.4
CBBR	**Cluj-Babes-Bol**	97.56	317	⇑P		Pdif	21 07 35.3	+1.0
MARR	**Marisel-Cluj**	97.86	317	⇓P		Pdif	21 07 38.9	+3.2
DRGR		98.12	318	⇑P		Pdif	21 07 36.7	-0.1
DRGR		98.12	318	⇑P		P	21 07 36.7	-0.1
SURR	**Surduc**	98.72	317	⇑P		P	21 07 33.5	-5.9
SIRR	**Siria**	98.93	317	⇓P		P	21 07 38.9	-1.5
DAG	**Danmarks Havn**	99.32	352	*i* P		Pdif	21 07 41.8	+0.3
BOVS	**Bovan**	99.42	315	⇓P		Pdif	21 07 43.9	+1.3
HFS	**Hagfors**	99.70	332	P		Pdif	21 07 42.9	-0.6
	comp=Z,2.8nm,0.8s,baz=169,slow=1.5,SNR=7.7							
	comp=Z,2.8nm,0.8s							
RES	**Resolute Bay**	100.01	10	P		Pdif	21 07 45.6	+1.1
	comp=Z,2.7nm,0.8s,baz=288,slow=5.6,SNR=4.1							
RES	**Resolute Bay**	100.01	10	IAmb		IAmb	21 07 47.4	
	comp=Z,40nm,1.8s							
NB2	**NORSAR Subarra**	100.50	333	P		Pdif	21 07 46.0	-1.1
	comp=Z,6.9nm,1.1s,baz=68,slow=4.4							
NOA	**NORSAR Array B**	100.50	333	P		Pdif	21 07 45.6	-1.4
	comp=Z,1.4nm,0.7s,baz=68,slow=4.5,SNR=8.1							
NEEM	**North Greenlan**	101.07	359	*i* P		Pdif	21 07 51.0	+1.4
DBG	**Daneborg**	101.58	351	*i* P		Pdif	21 07 52.1	+0.6
SNAA	**Sanae**	103.02	195	P		Pdif	21 08 00.2	+2.1
	comp=Z,0.7nm,0.8s,baz=150,slow=8.1,SNR=3.1							
SNAA				PKKPbc		PKKPbc	21 23 55.6	-2.1
	comp=Z,0.7nm,0.6s,baz=260,slow=3.8,SNR=6.7							
GERES	**GERESS Array B**	103.47	321	Pdiff		Pdif	21 08 04.0	+3.4
	comp=Z,0.4nm,0.7s,baz=55,slow=8.6,SNR=1.7							
GERES				PP		PKiKP	21 12 20.8	+1.5
	comp=Z,0.6nm,0.7s,baz=77,slow=8.6,SNR=3.4							
NVAR	**Mina Array Bea**	108.69	48	Pdiff		Pdif	21 08 25.7	+1.4
	comp=Z,0.5nm,0.7s,baz=286,slow=4.4,SNR=3.3							
NVAR				PKKP		PKKPdf	21 23 53.7	-0.5
	comp=Z,1.2nm,0.7s,baz=92,slow=3.6,SNR=7.6							
PDAR	**Pinedale Array**	113.28	42	PKiKP		PKiKP	21 12 39.3	+1.2
	comp=Z,0.5nm,0.6s,baz=203,slow=1.3,SNR=2.8							
PDAR				PKKPbc		PKKPbc	21 23 23.9	-0.8
	comp=Z,0.4nm,0.5s,baz=116,slow=6.8,SNR=4.1							
PDAR				PKKPab		PKKPab	21 23 32.1	+0.6
	comp=Z,2.3nm,0.9s,baz=121,slow=7.1,SNR=9.1							
ESDC	**Sonseca Array**	118.75	318	PP		PP	21 14 10.5	+4.1
	comp=Z,1.6nm,1.1s,baz=67,slow=7.8,SNR=4.2							
SCHQ	**Schefferville**	122.76	9	PKP		PKiKP	21 12 56.9	+1.1
	comp=Z,6.0nm,0.6s,baz=262,slow=2.0,SNR=7.5							
TORD	**Torodi Ar. Bea**	123.12	287	PKP		PKiKP	21 12 58.0	+0.4
	comp=Z,13nm,0.8s,baz=41,slow=4.8,SNR=8.8							
TXAR	**Lajitas Array**	123.28	53	PKP		PKPdf	21 12 57.7	+0.2
	comp=Z,3.0nm,0.7s,baz=235,slow=1.1,SNR=19							
TXAR				PKKPab		PKKPbc	21 22 49.8	+1.8
	comp=Z,0.3nm,0.6s,baz=139,slow=5.9,SNR=3.7							
RLO	**Rose Lookout**	126.29	41			PKPpre	21 12 52.2	
HHAR	**Hobbs**	126.94	41			PKPpre	21 12 52.5	
SADO	**Sadowa**	128.62	23	PKP		PKiKP	21 13 08.8	+1.0
	comp=Z,6.6nm,0.8s,baz=3.8,slow=0.4,SNR=3.7							
S44A	**Carbondale**	128.97	36			PKPdf	21 13 04.1	-3.9
DBIC	**Dimbokro**	130.53	280	PKP		PKiKP	21 13 13.5	+1.0
	comp=Z,12nm,0.8s,baz=93,slow=3.0,SNR=12							
U56A	**King**	134.85	31			PKPpre	21 13 03.8	
PLCA	**Paso Flores**	138.14	161	PKhKP		PKPpre	21 13 17.7	
	comp=Z,2.8nm,0.9s,baz=231,slow=3.2,SNR=3.7							
PLCA				PKP		PKiKP	21 13 27.0	-0.3
	comp=Z,8.7nm,0.8s,baz=216,slow=3.3,SNR=14							
TRQA	**Tornquist**	142.91	169			PKPdf	21 13 31.7	-2.2
TRQA	**Tornquist**	142.91	169	PKIKP		PKPdf	21 13 31.7	-2.2
SIUN	**Universidad Ur**	145.69	63			PKPdf	21 13 35.0	-4.3
LCO	**Las Campanas**	148.28	151			PKPbc	21 13 46.1	-0.8
LCO	**Las Campanas**	148.28	151	PKP2		PKPbc	21 13 46.2	-0.8
GO03	**Copiapo**	149.68	150			PKiKP	21 13 51.3	-0.1
NMDO	**Nuevo Mundo**	149.72	42			PKiKP	21 13 52.3	+0.8
AC06	**Mina Casimiro**	149.81	150			PKiKP	21 13 52.2	+0.6
PLTB	**Pedras Altas**	149.97	180			PKiKP	21 13 52.6	+0.8
GTBY	**Guantanamo Bay**	150.07	43			PKiKP	21 13 53.5	+1.2
BCIP	**Isla Barro Col**	151.90	67			PKPdf	21 13 43.4	-6.0
BCIP	**Isla Barro Col**	151.90	67	PKIKP		PKPdf	21 13 43.4	-6.0
CPUP	**Villa Florida**	155.14	172	PKP		PKPdf	21 13 55.3	+1.6
	comp=Z,0.7nm,0.7s,baz=226,slow=4.3,SNR=3.4							
ROSC	**El Rosal**	158.47	73	PKP		PKPdf	21 14 00.6	+1.7
	comp=Z,6.7nm,0.3s,baz=134,slow=21,SNR=1.8							
ROSC				PKPab		PKPab	21 14 32.5	-1.1
	comp=Z,11nm,0.5s,baz=99,slow=21,SNR=2.0							
LPAZ	**La Paz**	159.63	137	PKP		PKPdf	21 14 01.5	+1.1
	comp=Z,5.6nm,0.8s,baz=224,slow=0.4,SNR=18							
LPAZ				PKPab		PKPab	21 14 38.6	0.0
	comp=Z,4.1nm,0.9s,baz=268,slow=1.7,SNR=4.8							
BDFB	**Brasilia**	164.92	202	PKP		PKPdf	21 14 06.1	+1.0
	comp=Z,4.2nm,0.8s,baz=101,slow=10,SNR=3.6							
MACA	**Manacapuru-AM**	172.88	103	*e* P		PKPdf	21 14 07.3	-2.8

IDC 14 21:07:00.3±1.8,1°35N×125°97E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=183.0km s-min=23.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	22.70	159	P	P	21 12 03.5	-0.3
	1.4nm,0.7s,baz=337,slow=11,SNR=6.2						
	1.4nm,0.7s						
ASAR	**Alice Springs**	26.04	163	P	P	21 12 35.8	+0.3
	0.3nm,0.6s,baz=346,slow=8.6,SNR=2.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	59.09	326	P	P	21 17 03.6	+1.0
	0.5nm,0.9s,baz=118,slow=6.8,SNR=4.2						
	0.5nm,0.9s						
KURBB	**Kurchatov Arra**	63.34	328	P	P	21 17 30.2	-1.0
	0.3nm,0.6s,baz=126,slow=6.3,SNR=4.1						
	0.3nm,0.6s						

*IDC **14** 21:07:23.4±0.4, 1°.56N×126°.29E, h0km, mb4.8/31, mbtmp4.8/32, ML5.0/1, Error ellipse: s-maj=20.1km s-min=9.8km az=75.0*
*BJI **14** 21:07:23.6, 0°.96N×126°.32E, h46km, mB5.4/11, mb4.9/65, Ms5.6/12, Ms7 5.4/12*
*MOS **14** 21:07:27.1±1.0, 1°.55N×126°.31E, h39km, mb5.4/58, Error ellipse: s-maj=9.6km s-min=4.9km az=116.4*
*DJA **14** 21:07:29.7±0.2,2°N±2°×12°6E±°, h35km±2km, M5.1/83, mb5.2/83, mB5.6/47, MLv5.3/23, Mw(mB)5.1/47, MwMwp5.9/1, Mwp6.0/1*
*NEIC **14** 21:07:29.1±1.7, 1°.57N±0°.06×126°.47E±0°.06, h35km±1km, mb5.3/198, Mww5.1/10, Error ellipse: s-maj=10.7km s-min=8.5km az=222.0*

ISC 14 21:07:29.3±0.4,1°57N±0°03×126°42E±0°04, h41km±3km, h41km:pP-P,n587,σ1s36/599, mb5.2/218**, MS5.4**/7**, 12C-3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.23	130	Pn	Pn	21 07 49.4	-0.6
TNTI	**Ternate**	1.23	130	P	Pn	21 07 49.1	-1.0
TNTI	**Ternate**	1.23	130	P	Pn	21 07 50.3	+0.2
SGSI	**Sangihe**	2.29	337	P	Pn	21 08 03.7	-0.8
KMSI	**Cibinong**	2.63	248	P	Pn	21 08 10.2	+0.9
SANI	**Sanana**	3.62	187	P	Pn	21 08 23.8	+0.9
SANI	**Sanana**	3.62	187	S	Sn	21 09 06.3	+1.9
SANI	**Sanana**	3.62	187	P	Pn	21 08 23.1	+0.2
LUWI	**Luwuk**	4.47	235		Pn	21 08 35.0	+0.4
LUWI	**Luwuk**	4.47	235	P	Pn	21 08 36.8	+2.1
LUWI	**Luwuk**	4.47	235	S	Sn	21 09 27.9	+2.4
LUWI	**Luwuk**	4.47	235	P	Pn	21 08 36.7	+2.1
MRSI	**Marisa**	4.61	256	P	Pn	21 08 38.0	+1.6
NLAI	**Namlea**	4.82	172	P	Pn	21 08 41.1	+1.7
APSI	**Ampana**	5.37	243	P	Pn	21 08 49.4	+2.5
SWI	**Sorong**	5.41	116	P	Pn	21 08 49.4	+1.9
	137nm,1.3s						
MSAI	**Masohi**	5.49	153	P	Pn	21 08 52.8	+4.2
	1.5nm6μm305nm,0.9s						
AAI	**Ambon**	5.51	161	P	Pn	21 08 52.5	+3.6
	1.2nm3μm288nm,0.7s						
DAV	**Davao City (W)**	5.53	351	Pn	Pn	21 08 51.2	+2.1
	82nm,0.3s,baz=119,slow=7.0,SNR=5.1						
DAV	**Davao City (W)**	5.53	351		Pn	21 08 50.3	+1.1
TOLI2	**Tolitoli**	5.65	265		Pn	21 08 49.8	-1.1
TOLI2	**Tolitoli**	5.65	265	P	Pn	21 08 50.4	-0.4
MPSI	**Mapaga**	6.63	259	P	Pn	21 09 06.2	+1.9
	1.8nm4μm448nm,0.9s						
KDI	**Kendari**	6.67	215	P	Pn	21 09 06.0	+1.1
BNDI	**Bandanaira**	6.98	150	P	Pn	21 09 09.5	+0.4
BNDI	**Bandanaira**	6.98	150	P	Pn	21 09 12.4	+3.3
	1.2nm10μm243nm,1.9s						

PCI	**Palu**	7.03	250	P		Pn	21 09 12.0	+2.3
FAKI	**Fak Fak**	7.34	127			Pn	21 09 17.0	+3.0
FAKI	**Fak Fak**	7.34	127	P		Pn	21 09 16.0	+2.0
FAKI	**Fak Fak**	7.34	127	P		Pn	21 09 17.9	+3.9
	0.8nm2μm237nm,1.1s							
BBSI	**Bau Bau**	7.99	209	P		Pn	21 09 25.6	+2.6
	4μm329nm,0.9s							
TTSI	**Tana Toraja**	8.03	235	P		Pn	21 09 24.3	+0.8
	4μm278nm,0.8s							
RKPI	**Ransiki, Papua**	8.34	111	P		Pn	21 09 30.7	+3.0
	3μm98nm,0.8s							
SPSI	**Sidrap Palu**	8.62	230	P		Pn	21 09 33.2	+1.6
	2μm203nm,0.8s							
BNSI	**Bone**	8.66	227	P		Pn	21 09 33.8	+1.7
	2μm259nm,1.0s							
MYLDM	**Lahad Datu**	8.68	295			Pn	21 09 33.9	+1.5
MYLDM	**Lahad Datu**	8.68	295	P		Pn	21 09 34.6	+2.2
KMPI	**Kaimana, Papua**	8.94	126	P		Pn	21 09 39.3	+3.3
BKSI	**Bulukumba**	9.29	223	P		Pn	21 09 41.7	+0.9
	2μm118nm,0.5s							
KAPI	**Kappang**	9.33	225	Pn		Pn	21 09 41.8	+0.5
	13nm,0.3s,baz=25,slow=8.3,SNR=26							
KAPI				Sn		Sn	21 11 26.1	+1.0
	5.3nm,0.3s,baz=210,slow=23,SNR=7.4							
KAPI	**Kappang**	9.33	225			Pn	21 09 41.5	+0.1
KAPI	**Kappang**	9.33	225	P		Pn	21 09 43.3	+1.9
KAPI	**Kappang**	9.33	225	S		Sn	21 11 27.7	+2.6
KAPI	**Kappang**	9.33	225	*i* P		Pn	21 09 42.2	+0.8
BSSI	**Bau Bau, Buton**	9.68	218	P		Pn	21 09 46.7	+0.6
BKB	**Balikpapan**	9.93	254	P		Pn	21 09 50.6	+1.1
BAKI	**Biak**	10.07	106	P		Pn	21 09 55.3	+3.9
	5μm293nm,1.1s							
MMRI	**Maumere**	10.96	202	P		Pn	21 10 05.4	+1.8
EDFI	**Ende, Flores**	11.28	205	P		Pn	21 10 09.8	+1.7
SOEI	**Soe**	11.45	191			Pn	21 10 11.4	+0.9
SOEI	**Soe**	11.45	191	P		Pn	21 10 11.7	+1.2
SOEI	**Soe**	11.45	191	P		Pn	21 10 15.2	+4.7
BATI	**Baumata**	12.01	193	Pn		Pn	21 10 19.6	+1.5
	7.7nm,0.3s,baz=130,slow=0.9,SNR=30							
BATI	**Baumata**	12.01	193	P		Pn	21 10 21.3	+3.2
	3μm163nm,0.9s							
BBKI	**Banjar Baru**	12.61	247	P		Pn	21 10 27.9	+1.7
	77nm,1.1s							
WSI	**Waingapu**	12.72	209	P		Pn	21 10 30.1	+2.4
	134nm,1.1s							
SMPI	**Sarmi**	12.79	106	P		Pn	21 10 32.4	+3.8
	3μm134nm,1.7s							
BASI	**Baing, Sumba**	13.07	206	P		Pn	21 10 34.1	+1.6
	3μm280nm,1.7s							
WBSI	**Waikabubak, Su**	13.15	212	P		Pn	21 10 35.9	+2.2
	1μm122nm,0.8s							
PLAI	**Plampang**	13.45	220	P		Pn	21 10 40.4	+2.7
PLAI	**Plampang**	13.45	220	P		Pn	21 10 40.3	+2.6
TWSI	**Taliwang, Sumb**	13.97	223	P		Pn	21 10 48.1	+3.3
	3μm329nm,1.2s							
SBUM	**Sibu**	14.22	274			Pn	21 10 48.0	-0.2
SBUM	**Sibu**	14.22	274	P		Pn	21 10 51.1	+2.9
GENI	**Genyem**	14.35	107	P		Pn	21 10 50.2	+0.2
GENI	**Genyem**	14.35	107	P		P	21 10 53.3	-2.9
	3μm161nm,1.6s							
AUDHS	**Darwin High Sc**	14.59	163	P		Pn	21 10 53.0	-0.1
DRS	**Darwin Rock St**	14.60	162	P		Pn	21 10 53.7	+0.4
SRBI	**Singaraja**	14.72	229	P		Pn	21 10 57.1	+2.1
	146nm,1.1s							
JAY	**Jayapura**	14.85	106	Pn		P	21 11 02.7	+0.9
	0.4nm,0.3s,baz=312,slow=9.8,SNR=4.2							
JAY	**Jayapura**	14.85	106	P		Pn	21 10 58.5	+1.9
MTN	**Manton Dam**	15.06	162	P		Pn	21 10 57.7	-1.7
MTN	**Manton Dam**	15.06	162	Pn		Pn	21 10 58.3	-1.1
KMMI	**Kalianget**	15.09	235	P		P	21 11 02.9	-1.5
	2μm179nm,0.8s							
DNP	**Denpasar**	15.11	227	P		P	21 11 03.3	-1.4
KDU	**Kakadu**	15.38

QIZ S **S** **21 16 53.3 +2.2**
QIZ pmax pmax
comp=Z,41nm,1.4s
PSAC1 Pilbara Seismi 23.85 195 P **P** **21 12 36.7 -2.3**
comp=Z,45nm,1.3s
PSAC2 Pilbara Seismi 23.86 195 P **P** **21 12 37.4 -1.6**
comp=Z,45nm,0.8s
PSA00 Pilbara Seismi 23.88 195 P **P** **21 12 38.0 -1.2**
comp=Z,54nm,1.9s
PSA00 Pilbara Seismi 23.88 195 **P** **21 12 37.8 -1.4**
PSA00 Pilbara Seismi 23.88 195 P **P** **21 12 37.1 -2.1**
PSA00 IAmb IAmb 21 12 39.9
comp=Z,135nm,1.9s
PSA00 Pilbara Seismi 23.88 195 P **P** **21 12 38.9 -0.3**
PSAB3 Pilbara Seismi 23.90 195 P **P** **21 12 37.6 -1.8**
comp=Z,62nm,1.8s
MASI Maura Aman, Be 24.62 259 P **P** **21 12 48.2 +2.0**
UBPT Khong Chiam 24.76 305 P **P** **21 12 48.6 +1.3**
JOW Kunigami 25.18 4 P **P** **21 12 51.8 +0.7**
JOW IAmb IAmb 21 13 13.1
comp=Z,76nm,0.9s
JOW Kunigami 25.18 4 P **P** **21 12 52.9 +1.8**
QIS Mount Isa 25.50 150 P **P** **21 12 53.9 -0.2**
comp=Z,58nm,0.9s
QIS Mount Isa 25.50 150 P **P** **21 12 54.2 +0.1**
IPM Ipoh 25.52 277 P **P** **21 12 52.9 -1.5**
IPM Ipoh 25.52 277 P **P** **21 12 57.2 +2.9**
KULM Kulim 25.98 279 P **P** **21 12 58.4 -0.1**
KULM Kulim 25.98 279 P **P** **21 13 01.0 +2.5**
PDSI Padang 26.07 265 P **P** **21 13 01.0 +1.6**
comp=Z,30nm,1.1s
PPI Padang Panjang 26.10 266 P **P** **21 13 01.6 +2.1**
AS31 Alice Springs 26.12 164 P **P** **21 12 59.3 -0.3**
ASAR Alice Springs 26.12 164 P **P** **21 12 58.6 -1.0**
comp=Z,27nm,0.7s,baz=344,slow=7.2,SNR=122
ASAR PcP **PcP** **21 16 26.9 +0.3**
comp=Z,4.7nm,0.7s,baz=337,slow=2.1,SNR=5.2
ASAR S **S** **21 17 28.1 -0.5**
comp=Z,2.3nm,0.7s,baz=347,slow=12,SNR=4.5
comp=Z,27nm,0.7s
AUALC St Philip's Co 26.14 164 P **P** **21 12 59.5 -0.3**
MTSU Mount Surprise 26.34 139 P **P** **21 13 01.2 -0.5**
comp=Z,31nm,0.9s
MTSU Mount Surprise 26.34 139 P **P** **21 13 02.5 +0.8**
WRKA Warakurna 26.51 176 P **P** **21 13 01.7 -1.5**
comp=Z,43nm,1.1s
PPSI Pulau Pagai 26.75 261 P **P** **21 13 07.6 +2.2**
comp=Z,86nm,1.0s
GIRL Giralia 26.84 206 P **P** **21 13 04.4 -1.7**
comp=Z,111nm,1.1s
GIRL Giralia 26.84 206 P **P** **21 13 05.9 -0.2**
GIRL IAmb IAmb 21 13 08.1
comp=Z,93nm,1.0s
RPSI Rantau Prapat 27.50 273 P **P** **21 13 12.2 0.0**
PSI Prapat 27.50 273 P **P** **21 13 13.2 +0.9**
PSI Prapat 27.50 273 P **P** **21 13 12.2 -0.1**
PSI pmax pmax
comp=Z,36nm,1.0s
KCSI Kotacane, Aceh 28.68 274 P **P** **21 13 22.5 -0.3**
TV1H Townsville Har 28.79 137 P **P** **21 13 24.9 +1.3**
GSI Gunungsitoli 28.84 270 IAmb IAmb 21 13 27.2
comp=Z,43nm,0.9s
GSI Gunungsitoli 28.84 270 P **P** **21 13 22.3 -1.8**
CTAO Charters Tower 29.01 139 P **P** **21 13 25.4 -0.1**
CTAO Charters Tower 29.01 139 P **P** **21 13 26.5 +0.9**
CTAO Charters Tower 29.01 139 P **P** **21 13 25.4 -0.1**
CTAO pmax pmax
comp=Z,18nm,0.9s
MEEK Meekatharra 29.04 195 P **P** **21 13 24.0 -1.7**
comp=Z,46nm,1.1s
MEEK Meekatharra 29.04 195 P **P** **21 13 25.3 -0.4**
SLVN Son La 29.45 313 P **P** **21 13 29.5 -0.1**
SLVN Son La 29.45 313 P **P** **21 13 30.0 +0.4**
WHN Wuhan 31.01 340 P **P** **21 13 43.5 +0.4**
NJ2 Nanjing 31.15 348 *eP* **P** **21 13 46.6 +2.3**
NJ2 pmax pmax
comp=Z,15nm,0.6s
JNU Nakatsue 31.67 7 P **P** **21 13 47.9 -1.1**
comp=Z,14nm,0.9s,baz=285,slow=4.0,SNR=8.6
comp=Z,14nm,0.9s
JNU Nakatsue 31.67 7 P **P** **21 13 48.4 -0.5**
JNU Nakatsue 31.67 7 P **P** **21 13 49.8 +0.9**
CMAR Chiang Mai Arr 31.75 304 P **P** **21 13 48.1 -1.7**
comp=Z,1.0nm,0.6s,baz=129,slow=9.2,SNR=9.0
CMAR PcP **PcP** **21 16 41.5 +0.8**
comp=Z,4.2nm,0.9s,baz=174,slow=1.9,SNR=12
comp=Z,1.0nm,0.6s
CHTO Chiang Mai 31.92 304 P **P** **21 13 50.3 -1.0**
CHTO Chiang Mai 31.92 304 P **P** **21 13 50.8 -0.5**
CHTO Chiang Mai 31.92 304 P **P** **21 13 50.3 -1.0**
CHTO pmax pmax
comp=Z,9.0nm,0.6s
MORW Morawa 32.04 197 P **P** **21 13 50.7 -1.6**
comp=Z,51nm,1.3s
MORW Morawa 32.04 197 **P** **21 13 51.4 -0.8**
MORW IAmb IAmb 21 13 58.7
comp=Z,72nm,1.2s
MORW Morawa 32.04 197 P **P** **21 13 52.0 -0.2**
FORT Forrest 32.20 177 P **P** **21 13 52.9 -0.7**
comp=Z,34nm,0.7s
FORT Forrest 32.20 177 **P** **21 13 53.1 -0.5**
FORT IAmb IAmb 21 13 59.0
comp=Z,21nm,0.7s
INKA Innaminka 32.23 156 P **P** **21 13 53.6 -0.2**
KMI Kunming 32.72 318 P **P** **21 13 58.8 +0.3**
KMI pmax pmax
comp=Z,17nm,1.8s
KMI LR LR
comp=Z,10μm,22.4s
KMI LR LR
comp=Z,8μm,26.4s
KMI LR LR
comp=Z,19μm,25.2s
ENH Enshi 32.76 332 P **P** **21 13 57.2 -1.4**
ENH IAmb IAmb 21 14 05.1
comp=Z,28nm,0.8s
ENH Enshi 32.76 332 P **P** **21 13 57.8 -0.8**
ENH Enshi 32.76 332 P **P** **21 13 58.0 -0.6**
QLP Quilpie 32.84 150 P **P** **21 14 00.4 +1.1**
comp=Z,24nm,1.4s
KMBL Kambalda 33.04 187 P **P** **21 14 00.9 0.0**
comp=Z,23nm,0.9s
BLDU Ballidu 33.31 195 P **P** **21 14 00.8 -2.5**
comp=Z,70nm,1.0s
BLDU Ballidu 33.31 195 P **P** **21 14 03.5 +0.2**
JHS Saijyo 33.84 10 P **P** **21 14 07.8 -0.1**
KLBR Kellerberrin 33.99 193 P **P** **21 14 07.6 -1.6**
comp=Z,192nm,0.7s
KLBR Kellerberrin 33.99 193 P **P** **21 14 09.3 +0.1**
AUNRC North Rockhamp 34.12 138 P **P** **21 14 11.2 +0.8**
PZH PanZhiHua 34.31 318 P **P** **21 14 11.5 -0.7**
PZH pmax pmax
comp=Z,10.0nm,1.2s
MUN Mundaring 34.74 195 P **P** **21 14 14.9 -0.8**
comp=Z,47nm,0.7s
MUN Mundaring 34.74 195 P **P** **21 14 15.7 0.0**
AUMAZ Mazenod Senior 34.81 196 P **P** **21 14 17.2 +0.9**
INU Inuyama 35.03 15 P **P** **21 14 18.1 -0.1**
INU IAmb IAmb 21 14 20.2
comp=Z,64nm,1.2s
INU Inuyama 35.03 15 P **P** **21 14 19.0 +0.9**
BBOO Buckleboo 35.39 166 P **P** **21 14 20.0 -1.3**
comp=Z,74nm,0.8s
BBOO Buckleboo 35.39 166 **P** **21 14 20.0 -1.3**
BBOO IAmb IAmb 21 14 22.5
comp=Z,50nm,0.8s
BBOO Buckleboo 35.39 166 P **P** **21 14 21.2 -0.1**
NWAO Narrogin (SRO) 35.39 193 P **P** **21 14 21.1 -0.2**
comp=Z,85nm,1.3s
NWAO Narrogin (SRO) 35.39 193 P **P** **21 14 20.3 -1.0**
NWAO Narrogin (SRO) 35.39 193 P **P** **21 14 21.7 +0.4**
NWAO Narrogin (SRO) 35.39 193 P **P** **21 14 21.6 +0.3**
NWAO Narrogin (SRO) 35.39 193 P **P** **21 14 20.3 -1.0**
NWAO pmax pmax
comp=Z,268nm,1.9s
TNCH TengChong 35.62 313 P **P** **21 14 23.1 -0.5**
TNCH S **S** **21 19 51.0 -6.4**
TNCH pmax pmax
comp=Z,18nm,0.6s
TNCH LR LR
comp=Z,3μm,17.4s
TNCH LR LR
comp=Z,3μm,9.6s
TNCH LR LR
comp=Z,9μm,21.2s

KSRS Korea Array 35.74 2 P **P** **21 14 25.4 +1.2**
comp=Z,4.3nm,0.6s,baz=182,slow=9.7,SNR=12
KSRS PcP **PcP** **21 16 53.3 +1.7**
comp=Z,2.0nm,0.7s,baz=209,slow=2.1,SNR=4.3
comp=Z,4.3nm,0.6s
KS19 Wonju Array Si 35.78 2 P **P** **21 14 25.8 +1.2**
KS19 IAmb IAmb 21 14 57.8
comp=Z,74nm,1.5s
EIDS Eidsvold 35.88 140 P **P** **21 14 24.2 -1.4**
comp=Z,20nm,1.2s
EIDS Eidsvold 35.88 140 P **P** **21 14 24.5 -1.1**
EIDS IAmb IAmb 21 14 29.5
comp=Z,45nm,1.4s
EIDS Eidsvold 35.88 140 P **P** **21 14 25.1 -0.5**
WHYH Whyalla 35.99 164 P **P** **21 14 26.8 +0.4**
XAN Xi'an 36.21 335 ⇓P **P** **21 14 26.6 -1.8**
XAN pP pP 21 14 37.4 -1.8
XAN sP pwP 21 14 41.4 +0.2
XAN pmax pmax
comp=Z,30nm,1.1s
XAN pmax pmax
comp=Z,450nm,10.0s
CD2 Chengdu 36.22 326 P **P** **21 14 27.3 -1.2**
CD2 pmax pmax
comp=Z,30nm,0.5s
STKA Stephens Creek 36.24 158 P **P** **21 14 27.5 -1.1**
comp=Z,225nm,0.8s
STKA Stephens Creek 36.24 158 P **P** **21 14 28.4 -0.3**
comp=Z,47nm,0.8s,baz=332,slow=8.5,SNR=54
comp=Z,47nm,0.8s
STKA Stephens Creek 36.24 158 P **P** **21 14 28.5 -0.1**
STKA Stephens Creek 36.24 158 *i* P **P** **21 14 28.1 -0.5**
AUJCS Jamestown Cent 36.45 163 P **P** **21 14 31.1 +0.8**
MAJO Matsushiro 36.47 16 P **P** **21 14 30.5 0.0**
MAJO IAmb IAmb 21 15 09.0
comp=Z,42nm,1.3s
MAJO Matsushiro 36.47 16 *i* P **P** **21 14 30.1 -0.4**
MAJO pmax pmax
comp=Z,93nm,2.3s
MJAR Matsushiro Arr 36.47 16 P **P** **21 14 29.8 -0.7**
comp=Z,5.0nm,0.5s,baz=180,slow=9.1,SNR=14
MJAR PcP **PcP** **21 16 55.5 +1.6**
comp=Z,3.5nm,0.8s,baz=182,slow=3.2,SNR=4.3
comp=Z,5.0nm,0.5s
MJB9 Matsu-Tunnel 36.47 16 P **P** **21 14 30.4 -0.1**
MJB9 IAmb IAmb 21 15 10.0
comp=Z,41nm,1.3s
HTT Hallett 36.75 162 P **P** **21 14 33.6 +0.6**
comp=Z,13nm,1.5s
HTT Hallett 36.75 162 P **P** **21 14 33.6 +0.6**
JYT Yasato 36.77 19 P **P** **21 14 33.1 +0.1**
RKGY Rocky Gully 37.06 193 P **P** **21 14 36.6 +1.1**
comp=Z,168nm,0.8s
AULRC Lightning Ridg 37.09 148 P **P** **21 14 36.0 +0.2**
HNS HongShan 37.26 345 ⇓P **P** **21 14 37.5 +0.4**
HNS pmax pmax
comp=Z,18nm,1.0s
DL2 Dalian 37.42 354 P **P** **21 14 39.8 +1.3**
CMSA Cobar Meteorol 37.67 153 P **P** **21 14 40.6 -0.1**
comp=Z,20nm,1.2s,comp=Z,0.0nm
CMSA Cobar Meteorol 37.67 153 P **P** **21 14 41.5 +0.8**
AUMAR Marden Senior 38.03 164 P **P** **21 14 44.9 +1.2**
AUMBR Murray Bridge 38.45 163 P **P** **21 14 48.5 +1.3**
JMM Marumori 38.46 18 P **P** **21 14 46.9 -0.4**
JMM IAmb IAmb 21 14 50.7
comp=Z,100nm,1.2s
JMM Marumori 38.46 18 P **P** **21 14 48.4 +1.1**
BJT Baijiatuan 39.39 348 P **P** **21 14 55.0 -0.1**
BJT Baijiatuan 39.39 348 P **P** **21 14 55.5 +0.4**
BJT Baijiatuan 39.39 348 P **P** **21 14 55.0 -0.1**
BJT pmax pmax
comp=Z,18nm,0.9s
BJI Beijing 39.41 348 P **P** **21 14 55.6 +0.4**
BJI pP **pP** **21 15 05.4 -0.7**
BJI PcP **PcP** **21 17 04.0 +1.2**
BJI pmax pmax
comp=Z,11nm,0.9s
AUDCS Dubbo College 39.65 150 P **P** **21 14 58.2 +0.8**
SNY Shenyang 40.16 357 ⇑P **P** **21 15 02.3 +0.9**
SNY pmax pmax
comp=Z,52nm,0.8s
LZDM Lanzhou Array 40.19 331 P **P** **21 15 01.7 -0.5**
comp=Z,1.2nm,0.3s,baz=189,slow=7.5,SNR=4.5
LZDM PcP **PcP** **21 17 07.5 +1.6**
comp=Z,6.3nm,0.6s,baz=193,slow=5.3,SNR=6.6
comp=Z,1.2nm,0.3s
LZH Lanzhou 40.22 331 *eP* **P** **21 15 02.3 +0.1**
LZH sP pwP 21 15 14.3 -1.0
LZH PcP **PcP** **21 17 07.3 +1.5**
LZH pmax pmax
comp=Z,40nm,1.0s
LZH LR LR
comp=Z,9μm,17.5s
LZH LR LR
comp=Z,6μm,17.2s
LZH LR LR
comp=Z,16μm,21.8s
ARPS Mount Arapiles 40.75 161 P **P** **21 15 05.8 -0.6**
comp=Z,45nm,1.0s
SHL Shillong 40.94 309 P **P** **21 15 07.2 -1.2**
SHL Shillong 40.94 309 P **P** **21 15 07.2 -1.2**
SHL pmax pmax
comp=Z,22nm,0.6s
YNG Young 41.22 152 P **P** **21 15 10.4 0.0**
comp=Z,37nm,1.2s
HHC Hu-ho-hao-te 41.35 343 *eP* **P** **21 15 15.3 +3.9**
HHC pmax pmax
comp=Z,8.0nm,0.5s
HHC pmax pmax
comp=Z,190nm,4.8s
BTO Baotou 41.60 341 *eP* **P** **21 15 17.1 +3.6**
BTO S **S** **21 21 31.0 +3.9**
BTO pmax pmax
comp=Z,6.0nm,0.5s
BTO pmax pmax
comp=Z,540nm,5.9s
BTO LR LR
comp=Z,3μm,18.6s
BTO LR LR
comp=Z,5μm,20.8s
BTO LR LR
comp=Z,5μm,18.4s
BRAT Ballarat 42.17 159 P **P** **21 15 20.7 +2.7**
AUMTS Mt Stromlo 42.34 152 P **P** **21 15 20.7 +1.2**
CAN Canberra 42.34 152 P **P** **21 15 20.0 +0.5**
comp=Z,45nm,1.5s
CAN Canberra 42.34 152 P **P** **21 15 19.3 -0.2**
CAN IAmb IAmb 21 15 30.1
comp=Z,108nm,1.7s
CAN Canberra 42.34 152 P **P** **21 15 20.8 +1.3**
CAN Canberra 42.34 152 P **P** **21 15 19.3 -0.2**
CAN pmax pmax
comp=Z,108nm,1.7s
CAN Canberra 42.34 152 P **P** **21 15 20.6 +1.1**
CAN sP **sP** **21 15 35.7 +0.9**
CNB Canberra Magne 42.51 152 P **P** **21 15 22.8 +1.9**
USRK Ussuriysk Ar. 42.74 6 P **P** **21 15 22.5 -0.1**
comp=Z,15nm,0.9s,baz=196,slow=7.5,SNR=11
comp=Z,15nm,0.9s
TOO Toolangi 42.76 158 P **P** **21 15 22.4 -0.4**
TOO Toolangi 42.76 158 P **P** **21 15 22.5 -0.4**
TOO pmax pmax
comp=Z,11nm,1.2s
MDJ Mudanjiang 42.96 3 P **P** **21 15 24.3 -0.1**
MDJ Mudanjiang 42.96 3 P **P** **21 15 25.8 +1.5**
MDJ pmax pmax
comp=Z,17nm,0.9s
MDJ pmax pmax
comp=Z,440nm,4.8s
MDJ Mudanjiang 42.96 3 P **P** **21 15 26.3 +2.0**
AUSMG Snowy Mountain 43.07 154 P **P** **21 15 27.0 +1.5**
LSA Lhasa 43.66 313 P **P** **21 15 30.1 -0.7**
LSA IAmb IAmb 21 15 36.2
comp=Z,163nm,2.0s
LSA Lhasa 43.66 313 P **P** **21 15 30.1 -0.7**
LSA pmax pmax
comp=Z,163nm,2.0s
LSA Lhasa 43.66 313 P **P** **21 15 30.9 +0.1**
LSA pP **pP** **21 15 40.1 -1.7**
SANVU Saraoutou 43.72 114 P **P** **21 15 29.1 -1.8**
SANVU IAmb IAmb 21 15 38.6
comp=Z,91nm,1.4s
BNX BinXian 44.00 1 ⇑P **P** **21 15 33.0 +0.3**
BNX pmax pmax
comp=Z,12nm,1.1s

GTA Gaotai 44.80 331 P **P** **21 15 39.6 +0.2**
GTA PcP **PcP** **21 17 22.6 +1.7**
GTA pmax pmax
comp=Z,14nm,0.9s
GTA LR LR
comp=Z,3μm,17.1s
GTA LR LR
comp=Z,2μm,19.3s
GTA LR LR
comp=Z,2μm,21.4s
ONTNC Ouen Toro 45.69 124 P **P** **21 15 44.4 -2.2**
ONTNC IAmb IAmb 21 16 20.3
comp=Z,30nm,1.1s
PALK Pallekele 45.91 279 P **P** **21 15 47.6 -0.9**
PALK Pallekele 45.91 279 P **P** **21 15 47.6 -0.9**
PALK pmax pmax
comp=Z,26nm,1.2s
YATNC Mamie plateau, 45.95 123 P **P** **21 15 49.9 +1.3**
EVN Everest 46.05 308 P **P** **21 15 49.3 -0.8**
EVN IAmb IAmb 21 16 14.6
comp=Z,37nm,1.0s
YSS Yuzhno-Sakhali 47.40 15 *eP* **P** **21 16 02.2 +2.7**
YSS pmax pmax
comp=Z,30nm,1.0s
HIA Hailar 47.86 354 P **P** **21 16 03.1 0.0**
HIA IAmb IAmb 21 16 05.3
comp=Z,58nm,1.3s
HIA Hailar 47.86 354 P **P** **21 16 04.7 +1.6**
HIA Hailar 47.86 354 P **P** **21 16 03.1 0.0**
HIA pmax pmax
comp=Z,58nm,1.3s
HILR Hailar Array B 48.15 354 P **P** **21 16 06.4 +1.0**
comp=Z,4.9nm,0.4s,baz=178,slow=10,SNR=17
comp=Z,4.9nm,0.4s
HEH HeiHe 48.51 1 *eP* **P** **21 16 07.9 -0.2**
HEH pmax pmax
comp=Z,34nm,1.0s
ULN Ulaanbaatar 49.07 343 P **P** **21 16 12.4 -0.3**
ULN IAmb IAmb 21 16 47.1
comp=Z,22nm,1.1s
ULN Ulaanbaatar 49.07 343 *i* P **P** **21 16 13.0 +0.4**
ULN pmax pmax
comp=Z,13nm,0.9s
ULN Ulaanbaatar 49.07 343 P **P** **21 16 13.0 +0.4**
ULN PcP **PcP** **21 17 37.2 +1.3**
SONM Songino Array 49.24 342 P **P** **21 16 13.6 -0.3**
comp=Z,5.3nm,0.7s,baz=161,slow=7.1,SNR=25
SONM PcP **PcP** **21 17 37.5 +1.0**
comp=Z,6.4nm,0.8s,baz=154,slow=3.9,SNR=6.8
comp=Z,5.3nm,0.7s
HYBB Hyderabad (bro 49.59 292 *eP* **P** **21 16 18.0 +1.1**
TYV Tymovskoe 51.01 13 *eP* P 21 16 19.5 -7.5
TYV pmax pmax
comp=Z,800nm,2.1s
TYV pmax pmax
comp=Z,65nm,1.6s
CIT Chita 51.42 350 *eP* **P** **21 16 31.8 +1.6**
CIT *e* 21 17 46.0
CIT pmax pmax
comp=Z,192nm,1.7s
ZEA Zeya 52.00 1 *eP* **P** **21 16 34.7 +0.3**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
TLY Talaya 53.48 343 P **P** **21 16 44.9 -0.5**
FUNA Funafuti 53.55 102 P **P** **21 16 45.7 -0.9**
MOY Mondy 54.30 341 *eP* P 21 16 57.3 +5.7
MOY pmax pmax
comp=Z,41nm,2.4s
WMQ Urumqi 54.32 326 *eP* **P** **21 16 52.6 +0.8**
WMQ pmax pmax
comp=Z,30nm,0.9s
WMQ LR LR
comp=Z,8μm,20.9s
WMQ LR LR
comp=Z,6μm,20.9s
WMQ LR LR
comp=Z,8μm,20.1s
PETK Petropavlovsk- 57.54 22 P **P** **21 17 15.8 +1.2**
comp=Z,16nm,1.0s,baz=183,slow=3.9,SNR=5.6
comp=Z,16nm,1.0s
ZSN Zaisan 58.15 328 *eP* **P** **21 17 18.9 -0.2**
ZSN Zaisan 58.15 328 *eP* **P** **21 17 18.8 -0.2**
DGZ Jazzator, Alta 58.32 331 *i* P **P** **21 17 20.2 -0.1**
DGZ pmax pmax
comp=Z,14nm,1.7s
SHLS Shalkode 58.81 321 ⇑*i* P **P** **21 17 21.6 -2.3**
comp=Z,16nm,1.2s
SHLS Shalkode 58.81 321 *c i* P **P** **21 17 21.6 -2.3**
SHLS pmax pmax
comp=Z,16nm,1.2s
PRZ Przheval'sk 59.14 320 P **P** **21 17 25.6 -0.6**
PRZ IAmb IAmb 21 17 32.8
comp=Z,28nm,0.8s
PRZ Przheval'sk 59.14 320 P **P** **21 17 25.6 -0.6**
PRZ pmax pmax
comp=Z,28nm,0.8s
MK31 Makanchi Array 59.16 326 *i* P **P** **21 17 25.3 -0.7**
MKAR Makanchi Array 59.16 326 P **P** **21 17 24.9 -1.1**
comp=Z,7.7nm,0.4s,baz=121,slow=7.1,SNR=57
comp=Z,7.7nm,0.4s
MKAR Makanchi Array 59.16 326 *i* P **P** **21 17 24.8 -1.2**
MKAR pmax pmax
comp=Z,8.0nm,0.4s
TARG Taragay, Kyrgy 59.16 319 P **P** **21 17 26.1 -0.5**
TARG Taragay, Kyrgy 59.16 319 P **P** **21 17 26.1 -0.5**
TARG pmax pmax
comp=Z,11nm,0.8s
MAKZ Makanchi 59.34 326 P **P** **21 17 26.7 -0.6**
MAKZ IAmb IAmb 21 17 37.8
comp=Z,19nm,0.7s
MAKZ Makanchi 59.34 326 P **P** **21 17 26.7 -0.6**
MAKZ pmax pmax
comp=Z,19nm,0.7s
MAKZ Makanchi 59.34 326 P **P** **21 17 26.9 -0.3**
MAKZ pP **pP** **21 17 37.1 -1.5**
KSH Kashi 59.36 316 P **P** **21 17 28.0 +0.3**
KSH pmax pmax
comp=Z,11nm,0.9s
SATY Saty 59.43 321 ⇑*i* P **P** **21 17 27.7 -0.4**
comp=Z,11nm,0.7s
SATY Saty 59.43 321 *c i* P **P** **21 17 27.6 -0.5**
SATY pmax pmax
comp=Z,11nm,0.7s
MLZ Mavora Lakes 59.54 147 P **P** **21 17 28.3 -0.4**
KDJ Kajisay 59.76 319 **P** **21 17 30.0 -0.5**
KDJ IAmb IAmb 21 17 35.1
comp=Z,16nm,0.9s
KDJ Kajisay 59.76 319 P **P** **21 17 30.0 -0.5**
KDJ pmax pmax
comp=Z,16nm,0.9s
TNSS Tian-Shan 60.35 320 *eP* **P** **21 17 34.0 -0.8**
TNSS Tian-Shan 60.35 320 *eP* **P** **21 17 34.0 -0.8**
YAK Yakutsk 60.37 2 P **P** **21 17 34.1 +0.2**
YAK Yakutsk 60.37 2 *eP* **P** **21 17 34.5 +0.5**
YAK *eS* **S** **21 25 45.4 -0.2**
YAK pmax pmax
comp=Z,579nm,1.2s
YAK pmax pmax
comp=N,229nm,1.1s
YAK pmax pmax
comp=E,80nm,1.3s
YAK smax smax
comp=E,110nm,1.6s
YAK smax smax
comp=N,460nm,2.5s
ARXS Arharly 60.38 322 *eP* **P** **21 17 33.3 -1.2**
TDK Taldyqorghan 60.42 323 *eP* **P** **21 17 34.5 -0.3**
comp=N,10nm,0.8s
TDK Taldyqorghan 60.42 323 *eP* **P** **21 17 34.5 -0.3**
TDK pmax pmax
comp=Z,10.0nm,0.8s
OXZ Oxford 60.55 143 P **P** **21 17 35.2 -0.4**
TUWZ Tuamarina 60.68 140 P **P** **21 17 35.4 -1.1**
MA2 Magadan 60.86 14 *i* P **P** **21 17 39.3 +1.9**
MA2 pmax pmax
comp=Z,46nm,1.1s
RTZ Ruatahuna 61.28 136 P **P** **21 17 40.4 -0.3**
AAK Ala-Archa 61.76 319 P **P** **21 17 43.2 -0.8**
AAK Ala-Archa 61.76 319 *i* P **P** **21 17 42.3 -1.7**
AAK pmax pmax
comp=Z,22nm,2.2s
SGDS Sogindy 62.04 320 *eP* **P** **21 17 45.5 -0.3**
ARSB Arsianbob 62.20 317 IAmb IAmb 21 17 57.0
comp=Z,34nm,1.2s
ZALV Zalesovo Beam 62.37 334 P **P** **21 17 46.3 -1.4**

comp=Z,3.1nm,0.4s,baz=134,slow=7.1,SNR=22
ZALV PKP2bc **P'P'bc** **21 47 00.9 -0.4**
comp=Z,1.7nm,0.9s,baz=270,slow=1.4,SNR=3.8
comp=Z,3.1nm,0.4s
ZALV Zalesovo Beam 62.37 334 *i* P **P** **21 17 46.7 -1.0**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
BTLS Baital 63.14 321 *eP* **P** **21 17 52.2 -0.9**
BTLS Baital 63.14 321 *eP* **P** **21 17 52.1 -0.9**
KURBB Kurchatov Arra 63.39 328 P **P** **21 17 53.9 -0.6**
comp=Z,22nm,0.7s,baz=126,slow=6.2,SNR=158
comp=Z,22nm,0.7s
KURK Kurchatov 63.39 328 P **P** **21 17 53.6 -1.0**
KURK Kurchatov 63.39 328 *i* P **P** **21 17 53.3 -1.3**
KURK pmax pmax
comp=Z,48nm,0.9s
KURK Kurchatov 63.39 328 P **P** **21 17 53.9 -0.7**
KURK sP **sP** **21 18 08.6 -2.1**
CHGR Chuyangaron 63.88 313 IAmb IAmb 21 18 06.1
comp=Z,30nm,0.9s
DZA Taraz 63.97 318 *eP* **P** **21 17 58.2 -0.4**
DZA Taraz 63.97 318 *eP* **P** **21 17 58.2 -0.4**
SEY Seymchan 64.19 13 *i* P **P** **21 18 00.5 +0.9**
SEY pmax pmax
comp=Z,18nm,1.2s
IUG Iuzhnay 64.55 317⇑ *i* P **P** **21 18 02.0 -0.6**
comp=Z,8.2nm,0.6s
IUG Iuzhnay 64.55 317 *c i* P **P** **21 18 01.9 -0.6**
IUG pmax pmax
comp=Z,8.0nm,0.6s
CHM Chimkent 64.91 317 *eP* **P** **21 18 04.3 -0.4**
CHM Chimkent 64.91 317 *eP* **P** **21 18 04.3 -0.4**
BRLS Boroldaу 65.03 318 *eP* **P** **21 18 04.7 -0.9**
BRLS Boroldaу 65.03 318 *eP* **P** **21 18 04.6 -0.9**
BRZS Berezniki 66.27 325 *eP* **P** **21 18 13.2 -0.1**
BRZS Berezniki 66.27 325 *eP* **P** **21 18 13.2 -0.1**
CASY Casey 68.65 187 P **P** **21 18 27.8 -0.2**
CASY Casey 68.65 187 P **P** **21 18 27.4 -0.6**
CASY sP **sP** **21 18 43.0 -1.2**
CASY PcP **PcP** **21 18 52.7 0.0**
BVAR Borovoye Array 68.96 328 P **P** **21 18 29.4 -0.8**
comp=Z,10nm,0.7s,baz=132,slow=9.2,SNR=35
comp=Z,10nm,0.7s
BORK Borovoye 69.01 328 *i* P **P** **21 18 30.7 +0.2**
BORK pmax pmax
comp=Z,19nm,0.9s
BORK Borovoye 69.01 328 P **P** **21 18 30.8 +0.2**
TIXI Tiksi 69.99 1 P **P** **21 18 36.3 +0.1**
TIXI IAmb IAmb 21 18 37.4
comp=Z,41nm,1.2s
TIXI Tiksi 69.99 1 *i* P **P** **21 18 35.8 -0.4**
TIXI pmax pmax
comp=Z,39nm,1.3s
TIXI Tiksi 69.99 1 P **P** **21 18 36.6 +0.3**
NRIK Noril'sk 72.44 346 P **P** **21 18 51.2 +0.1**
comp=Z,18nm,0.6s,baz=130,slow=5.8,SNR=42
comp=Z,18nm,0.6s
NRIK Noril'sk 72.44 346 IAmb IAmb 21 18 53.5
comp=Z,22nm,0.7s
NRIK Noril'sk 72.44 346 *i* P **P** **21 18 51.1 0.0**
NRIK pmax pmax
comp=Z,81nm,2.0s
SVE Sverdlovsk 75.63 329 *ceP* **P** **21 19 09.8 -0.2**
SVE pmax pmax
comp=Z,38nm,1.1s
CCD Concordia, Ant 76.59 181 P **P** **21 19 16.8 +1.2**
ARTI Arti 76.67 328 P **P** **21 19 15.3 -0.6**
ARTI Arti 76.67 328 *c i* P **P** **21 19 15.4 -0.6**
ARTI 21 22 03.9
ARTI S **S** **21 29 01.4 +1.8**
ARTI SS **SS** **21 34 00.3 +4.6**
ARTI pmax pmax
comp=Z,46nm,1.9s
ARTI Arti 76.67 328 P **P** **21 19 15.1 -0.8**
ABPO Ambohimpanom 80.30 251 P **P** **21 19 36.2 -0.7**
ABPO IAmb IAmb 21 19 54.2
comp=Z,30nm,1.4s
ABPO Ambohimpanom 80.30 251 P **P** **21 19 36.2 -0.7**
ABPO pmax pmax
comp=Z,30nm,1.4s
ABPO Ambohimpanom 80.30 251 P **P** **21 19 37.2 +0.3**
AKT Akhty 80.49 312 *eP* **P** **21 19 37.1 -0.3**
AKT *e* 21 19 43.8
AKT pmax pmax
comp=Z,11nm,0.6s
J16K Anvik River 81.00 26 IAmb IAmb 21 20 08.5
comp=Z,82nm,1.5s
RAYN Ar Rayn 81.05 293 P **P** **21 19 39.0 -1.7**
RAYN Ar Rayn 81.05 293 P **P** **21 19 39.0 -1.7**
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN Ar Rayn 81.05 293 P **P** **21 19 39.5 -1.2**
O16K Kokwok River B 81.33 30 IAmb IAmb 21 19 43.9
comp=Z,30nm,1.1s
VNDA Vanda 81.33 173 P **P** **21 19 41.2 +0.2**
comp=Z,6.4nm,0.8s,baz=316,slow=6.3,SNR=41
comp=Z,6.4nm,0.8s
VNDA Vanda 81.33 173 P **P** **21 19 41.5 +0.4**
VNDA sP **sP** **21 19 57.9 +0.5**
MAW Mawson 81.63 200 P **P** **21 19 43.4 +0.6**
comp=Z,4.8nm,0.8s,baz=75,slow=4.5,SNR=9.1
comp=Z,4.8nm,0.8s
K17K Iditarod 81.88 27 IAmb IAmb 21 19 48.1
comp=Z,45nm,1.1s
KIRV Kirov 81.90 329 *i* P **P** **21 19 43.8 -0.5**
BELG Belogornoye 81.92 323 *i* P **P** **21 19 44.5 -0.1**
BELG pmax pmax
comp=Z,9.0nm,0.9s
E18K Tukpahlearik C 82.06 22 IAmb IAmb 21 19 48.8
comp=Z,30nm,0.9s
SBA Scott Base 82.25 172 P **P** **21 19 46.4 +0.6**
SBA Scott Base 82.25 172 P **P** **21 19 46.4 +0.6**
SBA pmax pmax
comp=Z,17nm,1.2s
L18K Granite Mounta 82.52 27 IAmb IAmb 21 19 50.7
comp=Z,36nm,1.0s
GNI Garni 82.63 310 P **P** **21 19 49.0 +0.1**
GNI IAmb IAmb 21 20 10.9
comp=Z,22nm,0.9s
GNI Garni 82.63 310 *i* P **P** **21 19 48.9 +0.1**
GNI pmax pmax
comp=Z,9.0nm,0.9s
J18K Innoko River 82.74 26 P **P** **21 19 48.0 -0.8**
J18K IAmb IAmb 21 19 51.3
comp=Z,33nm,1.1s
C19K Lookout Ridge 82.86 20 P **P** **21 19 49.3 0.0**
F19K Shaleruckik Mo 83.00 23 P **P** **21 19 48.9 -1.0**
F19K IAmb IAmb 21 19 52.3
comp=Z,23nm,1.1s
D19K Kuna River 83.24 21 P **P** **21 19 51.6 +0.4**
H19K Roundabout Mou 83.25 24 P **P** **21 19 51.3 0.0**
N19K Bonanza Creek 83.32 29 P **P** **21 19 52.2 +0.3**
J19K Poorman 83.32 26 P **P** **21 19 51.9 +0.2**
J19K IAmb IAmb 21 19 55.1
comp=Z,42nm,1.0s
E19K Redstone River 83.34 22 P **P** **21 19 52.8 +1.1**
L19K White Mountain 83.36 28 P **P** **21 19 52.6 +0.7**
L19K IAmb IAmb 21 19 54.9
comp=Z,39nm,1.1s
ATD Arta Tunnel 83.39 281 P **P** **21 19 52.8 -0.3**
ATD IAmb IAmb 21 19 57.9
comp=Z,22nm,1.0s
Q19K Cape Douglas, 83.46 31 P **P** **21 19 52.1 -0.5**
M19K Big River Lodg 83.53 28 P **P** **21 19 53.1 +0.3**
M19K IAmb IAmb 21 19 56.0
comp=Z,28nm,1.0s
NCK Nalchik 83.71 313 *ceP* **P** **21 19 54.7 +0.5**
D20K Etivluk River 83.82 21 P **P** **21 19 55.2 +1.0**
F20K Avaraart Lake 83.83 23 P **P** **21 19 55.0 +0.8**
F20K IAmb IAmb 21 19 57.2
comp=Z,35nm,1.1s
L20K Farewell, AK 83.85 27 P **P** **21 19 55.5 +1.0**
L20K IAmb IAmb 21 19 57.4
comp=Z,23nm,1.0s
K20K Telida 83.90 26 P **P** **21 19 56.2 +1.6**
K20K IAmb IAmb 21 19 57.7
comp=Z,31nm,1.2s
B20K Meade River 83.90 20 P **P** **21 19 55.3 +0.8**
J20K Nowinta River 83.99 26 P **P** **21 19 55.6 +0.5**
J20K IAmb IAmb 21 19 58.1
comp=Z,26nm,1.1s
M20K Styx River 84.12 28 IAmb IAmb 21 19 58.7
comp=Z,35nm,1.1s
KBZ Khabaz 84.23 314 P **P** **21 19 57.0 +0.3**
comp=Z,6.6nm,0.7s,baz=182,slow=2.9,SNR=8.5
comp=Z,6.6nm,0.7s
KBZ Khabaz 84.23 314 *i* P **P** **21 19 56.7 0.0**
KBZ pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 84.40 314 *eP* **P** **21 19 58.0 +0.2**
KIV pmax pmax
comp=Z,14nm,1.0s
SHA1 Shidzhatmaz 84.41 314 *i* P **P** **21 19 58.0 0.0**
SPU Mount Spurr 84.54 29 P **P** **21 19 58.0 0.0**
SPU IAmb IAmb 21 20 00.0
comp=Z,18nm,1.1s
G21K Allakaket 84.61 23 P **P** **21 19 58.9 +0.7**
G21K IAmb IAmb 21 20 52.6
comp=Z,30nm,1.4s
GURO Guroymak-BITLI 84.63 308 **P** **21 19 58.9 -0.2**
STLK Strandline Lak 84.68 28 P **P** **21 19 58.0 -0.7**
STLK IAmb IAmb 21 19 59.9
comp=Z,22nm,1.4s
B21K Ikpikpuk River 84.69 20 P **P** **21 19 59.6 +1.1**
E21K Killik River 84.73 21 P **P** **21 19 59.5 +0.7**
E21K IAmb IAmb 21 20 27.6
comp=Z,42nm,1.4s
CNPM China Poot 84.76 30 P **P** **21 19 59.0 -0.2**
SKT Skwentna 84.88 28 **P** **21 19 59.7 0.0**
SKT IAmb IAmb 21 20 01.4
comp=Z,20nm,1.1s
BRLK Bradley Lake 84.97 30 P **P** **21 20 00.3 +0.2**
SUA Susitna One 85.20 29 P **P** **21 20 01.7 +0.3**
SUA IAmb IAmb 21 20 06.2
comp=Z,32nm,1.0s
B22K Teshekpuk Lake 85.22 20 **P** **21 20 01.7 +0.6**
D22K Ayikyak River 85.26 21 P **P** **21 20 01.8 +0.3**
D22K IAmb IAmb 21 20 44.4
comp=Z,34nm,1.4s
L22K Petersville 85.29 27 P **P** **21 20 00.1 -1.7**
L22K IAmb IAmb 21 20 03.7
comp=Z,15nm,1.0s
SLKM Skilak Lake 85.36 30 **P** **21 20 01.9 -0.3**
H22K Ishtalitna Cre 85.38 24 P **P** **21 20 03.2 +1.1**
H22K IAmb IAmb 21 21 01.4
comp=Z,38nm,1.8s
VRH Novokhopyorsk 85.45 321 *eP* **P** **21 20 00.4 -2.3**
VRH pmax pmax
comp=Z,40nm,0.9s
E22K Anaktuvuk Pass 85.48 22 P **P** **21 20 02.7 +0.1**
MARD Mardin 85.58 307 **P** **21 20 03.5 -0.3**
MARD IAmb IAmb 21 20 07.7
comp=Z,16nm,0.7s
O22K Cooper Landing 85.61 30 P **P** **21 20 04.7 +1.4**
RC01 Rabbit Creek A 85.65 29 P **P** **21 20 03.3 -0.2**
RC01 IAmb IAmb 21 20 06.4
comp=Z,23nm,0.9s
KOPT Kop Dagi 85.87 310 **P** **21 20 06.6 +1.2**
PMR Palmer 85.98 28 P **P** **21 20 05.6 +0.5**
PMR IAmb IAmb 21 20 07.2
comp=Z,19nm,1.1s
PMR Palmer 85.98 28 P **P** **21 20 05.6 +0.5**
PMR pmax pmax
comp=Z,19nm,1.1s
COLD Coldfoot 85.99 23 **P** **21 20 06.1 +1.0**
COLD IAmb IAmb 21 20 08.8
comp=Z,17nm,0.9s
G23K Bananza Creek 86.01 23 P **P** **21 20 05.9 +0.6**
G23K IAmb IAmb 21 20 08.6
comp=Z,16nm,1.0s
BWN Browne 86.03 26 P **P** **21 20 06.3 +1.0**
C23K Itkillik River 86.11 20 **P** **21 20 06.7 +1.1**
C23K IAmb IAmb 21 20 08.6
comp=Z,15nm,0.8s
H23K Yukon River 86.13 24 P **P** **21 20 06.6 +0.8**
H23K IAmb IAmb 21 20 33.2
comp=Z,42nm,1.8s
I23K Minto, Yukon-K 86.15 25 P **P** **21 20 06.7 +0.9**
MCK McKinley 86.22 26 P **P** **21 20 06.2 -0.1**
MCK IAmb IAmb 21 20 09.9
comp=Z,12nm,1.0s
MCK McKinley 86.22 26 P **P** **21 20 06.3 -0.1**
MCK pmax pmax
comp=Z,12nm,1.0s
NEA2 Nenana 86.23 25 P **P** **21 20 07.2 +0.9**
NEA2 IAmb IAmb 21 21 37.4
comp=Z,36nm,1.9s
KNK Knik Glacier 86.29 29 P **P** **21 20 07.3 +0.5**
E23K Chandalar 86.29 22 P **P** **21 20 07.6 +0.9**
E23K IAmb IAmb 21 20 10.0
comp=Z,18nm,0.8s
VSLR Vesyoloye 86.30 313 *i* P **P** **21 20 07.4 +0.3**
PWL Port Wells 86.32 29 **P** **21 20 08.1 +1.2**
PWL IAmb IAmb 21 20 09.9
comp=Z,30nm,1.0s
TOLK Toolik Lake Re 86.36 21 **P** **21 20 07.1 +0.1**
TOLK Toolik Lake Re 86.36 21 **P** **21 20 08.1 +1.1**
SOC Sochi 86.53 313 *eP* **P** **21 20 04.4 -3.9**
SOC *e* 21 23 26.4
SOC *eS* **SKSac** **21 30 27.0 -4.8**
SOC pmax pmax
comp=Z,24nm,0.8s
D24K Happy Valley 86.67 21 P **P** **21 20 09.5 +1.1**
D24K IAmb IAmb 21 20 12.1
comp=Z,17nm,1.0s
E24K Your Creek 86.72 22 P **P** **21 20 09.2 +0.4**
C24K Franklin Bluff 86.76 20 P **P** **21 20 07.4 -1.3**
C24K IAmb IAmb 21 20 12.2
comp=Z,22nm,1.1s
CCB Clear Creek Bu 86.78 25 P **P** **21 20 09.1 +0.1**
H24K Noodor Dome 86.81 24 P **P** **21 20 08.8 -0.4**
H24K IAmb IAmb 21 20 16.4
comp=Z,26nm,1.7s
F24K Squaw Lake 86.91 23 **P** **21 20 09.3 -0.4**
VORD Divnogorie 86.98 321 *eP* **P** **21 20 08.1 -2.1**
VORD pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 87.05 321 *eP* **P** **21 20 08.4 -2.2**
VORR pmax pmax
comp=Z,40nm,0.9s
VSR Storozhevoye 87.06 321 *eP* **P** **21 20 07.1 -3.5**
VSR pmax pmax
comp=Z,20nm,0.8s
KLMR Klimovskoe 87.12 331 *eP* **P** **21 20 08.0 -2.7**
KLMR pmax pmax
comp=Z,89nm,1.9s
HDA Harding Lake 87.14 26 P **P** **21 20 10.1 -0.7**
ILAR Eielson Array 87.18 25 P **P** **21 20 09.6 -1.4**
comp=Z,12nm,1.4s,baz=238,slow=5.4,SNR=8.8
comp=Z,12nm,1.4s
LPSR Galich'ya Gora 87.24 322 *eP* **P** **21 20 09.5 -2.0**
LPSR pmax pmax
comp=Z,30nm,1.0s
D25K Kavik River 87.55 21 P **P** **21 20 12.7 -0.1**
D25K IAmb IAmb 21 21 44.9
comp=Z,8.5nm,0.6s
K24K Donnelly Dome 87.63 26 P **P** **21 20 13.6 +0.4**
E25K Arctic Village 87.81 22 **P** **21 20 14.4 +0.5**
E25K IAmb IAmb 21 20 16.8
comp=Z,10nm,0.9s
MOS Moscow 88.03 326 *eP* **P** **21 20 12.4 -2.8**
MOS pmax pmax
comp=Z,38nm,0.7s
RIDG Independent Ri 88.04 26 P **P** **21 20 15.4 +0.2**
RIDG IAmb IAmb 21 20 24.6
comp=Z,21nm,1.0s
GAZ Gaziantep 88.43 307 **P** **21 20 17.1 -0.6**
KIBK Kibwezi 88.44 268 P **P** **21 20 17.3 -0.8**
KIBK IAmb IAmb 21 20 40.8
comp=Z,34nm,1.3s
C27K Jago River 88.50 21 P **P** **21 20 16.7 -0.4**
C27K IAmb IAmb 21 20 19.4
comp=Z,11nm,0.8s
J26L Joseph Creek 88.60 26 P **P** **21 20 17.6 -0.2**
OBN Obninsk 88.64 325 P **P** **21 20 17.6 -0.5**
OBN Obninsk 88.64 325 *d i* P **P** **21 20 17.2 -0.9**
OBN *e* 21 23 47.6
OBN pmax pmax
comp=Z,13nm,0.5s
OBN MLR MLR
comp=Z,844nm,20.0s
TOKA Tokat 88.95 310 P **P** **21 20 19.8 -0.2**
TOKA IAmb IAmb 21 20 26.1
comp=Z,11nm,0.7s
KMBO Kilima Mbogo 89.20 269 P **P** **21 20 22.5 +0.6**
comp=Z,4.5nm,0.9s,baz=79,slow=4.9,SNR=23
comp=Z,4.5nm,0.9s
K27K Chicken 89.26 26 P **P** **21 20 21.6 +0.7**
K27K IAmb IAmb 21 20 23.9
comp=Z,15nm,0.9s
E27K Coleen River 89.30 22 P **P** **21 20 21.7 +0.8**
I27K Kandik River 89.40 25 P **P** **21 20 20.6 -1.0**
I27K IAmb IAmb 21 20 24.1
comp=Z,14nm,1.0s
L27K Beaver Creek, 89.41 27 P **P** **21 20 22.0 +0.3**
BNN Bunyan 89.47 309 **P** **21 20 21.8 -0.8**
BNN IAmb IAmb 21 20 25.4
comp=Z,34nm,1.6s
D27M Malcolm River 89.48 21 P **P** **21 20 22.0 +0.2**
BALJ Balqa 89.84 302 **P** **21 20 23.9 -0.4**
GHAJ Ghor Haditha 89.92 301 **P** **21 20 24.0 -0.6**
F28M Old Crow 89.98 22 P **P** **21 20 24.9 +0.8**
MMAI Mount Meron Ar 90.01 303 P **P** **21 20 25.3 +0.2**
comp=Z,4.5nm,0.6s,baz=92,slow=5.8,SNR=13
comp=Z,4.5nm,0.6s
E28M Babbage River 90.03 21 IAmb IAmb 21 20 26.2
comp=Z,19nm,1.3s
SYO Syowa Base 90.31 201⇑ *eP* **P** **21 20 25.5 -0.1**
DAWY Dawson 90.44 26 P **P** **21 20 26.8 +0.3**
DAWY IAmb IAmb 21 20 28.1
comp=Z,12nm,1.2s
SIM Simferopol' 90.54 315 *eP* **P** **21 20 25.6 -1.6**
SIM pmax pmax
comp=Z,15nm,0.8s
G29M Pine Creek 90.76 23 P **P** **21 20 27.9 0.0**
G29M IAmb IAmb 21 20 31.7
comp=Z,15nm,1.1s
LODK Lodwar 90.96 273 P **P** **21 20 29.0 -1.0**
LODK IAmb IAmb 21 20 52.2
comp=Z,17nm,1.6s
M29M Somme Creek 91.00 28 P **P** **21 20 28.8 -0.3**
M29M IAmb IAmb 21 20 31.4
comp=Z,14nm,1.2s
ILGA Ilgaz 91.02 311 P **P** **21 20 29.0 -0.8**
ILGA IAmb IAmb 21 20 33.7
comp=Z,15nm,1.0s
L29M L29M 91.09 27 **P** **21 20 29.8 +0.3**
L29M IAmb IAmb 21 20 32.0
comp=Z,19nm,1.1s
BR104 Keskin Array S 91.15 310 P **P** **21 20 29.6 -0.8**
comp=Z,4.9nm,0.9s
BRTR Keskin Array B 91.15 310 P **P** **21 20 29.4 -1.1**
comp=Z,3.5nm,0.9s,baz=114,slow=5.2,SNR=19
comp=Z,3.5nm,0.9s
BRTR Keskin Array B 91.15 310 *i* P **P** **21 20 29.2 -1.2**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BR106 Keskin Array S 91.17 310 P **P** **21 20 28.9 -1.6**
comp=Z,4.8nm,0.9s
BR105 Keskin Array S 91.17 310 P **P** **21 20 29.0 -1.5**
comp=Z,6.1nm,0.9s
K29M Barlow Dome 91.28 26 P **P** **21 20 30.4 0.0**
K29M IAmb IAmb 21 20 55.6
comp=Z,38nm,1.9s
QSPA South Pole Qui 91.49 180 P **P** **21 20 31.1 -0.2**
comp=Z,2.6nm,0.8s,baz=329,slow=2.0,SNR=8.5
comp=Z,2.6nm,0.8s
QSPA South Pole Qui 91.49 180 P **P** **21 20 30.2 -1.1**
F30M Barrier River 91.54 22 P **P** **21 20 31.9 +0.5**
CSS Mathiatis 91.65 305 **P** **21 20 31.8 -0.9**
CSS Mathiatis 91.65 305 P **P** **21 20 31.9 -0.7**
comp=Z,29nm,0.9s
INK Inuvik 92.27 21 **P** **21 20 35.3 +0.6**
INK IAmb IAmb 21 20 36.4
comp=Z,12nm,1.1s
INK Inuvik 92.27 21 P **P** **21 20 35.3 +0.6**
INK pmax pmax
comp=Z,12nm,1.2s
F31M Tsiigehtchic 92.34 22 P **P** **21 20 35.0 0.0**
ARCES ARCESS Array B 92.36 340 P **P** **21 20 34.3 -0.9**
comp=Z,9.8nm,0.9s,baz=77,slow=6.2,SNR=18
comp=Z,9.8nm,0.9s
N31M Braeburn, Yuko 92.36 28 **P** **21 20 36.7 +1.3**
SPB2 Spitsbergen Ar 92.52 349 P **P** **21 20 34.1 -1.6**
SPITS Spitsbergen Ar 92.53 349 P **P** **21 20 35.3 -0.5**
comp=Z,10nm,0.8s,baz=116,slow=17,SNR=4.9
comp=Z,10nm,0.8s
WHY Whitehorse 92.91 29 P **P** **21 20 38.8 +0.7**
AKASG Malin Array Be 93.36 321 P **P** **21 20 39.1 -1.1**
comp=Z,0.8nm,0.4s,baz=69,slow=5.1,SNR=8.9
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 93.36 321 *i* P **P** **21 20 39.4 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AK22 Malin Array Si 93.45 321 P **P** **21 20 40.7 +0.1**
AK18 Malin Array Si 93.46 321 P **P** **21 20 41.1 +0.5**
FINES FINESS Array B 93.58 332 P **P** **21 20 40.1 -0.8**
comp=Z,2.2nm,0.5s,baz=46,slow=5.5,SNR=13
comp=Z,2.2nm,0.5s
FINES FINESS Array B 93.58 332 *i* P **P** **21 20 40.9 0.0**
FINES pmax pmax
comp=Z,2.0nm,0.4s
N32M Quiet Lake 93.70 29 P **P** **21 20 42.4 +0.8**
NOR Nord 95.20 355 *i* P **P** **21 20 47.4 -0.6**
NOR IAmb IAmb 21 20 49.0
comp=Z,9.9nm,1.1s
C36M Paulatuk 95.34 20 **P** **21 20 49.1 +0.3**
C36M IAmb IAmb 21 20 49.9
comp=Z,12nm,0.8s
RNPP9 Sopachiv 95.35 322 P **P** **21 20 49.5 +0.3**
KMPD K-Podol'skiy 95.42 319 P **P** **21 20 49.7 0.0**
TESR Tescani 95.60 317 P **P** **21 20 49.9 -0.6**
comp=Z,17nm,1.0s
VRI Vrincioaia 95.63 316 P **P** **21 20 51.7 +1.0**
MBAR Mbarara 95.69 270 P **P** **21 20 51.3 -0.6**
MBAR Mbarara 95.69 270 P **P** **21 20 51.3 -0.6**
MBAR pmax pmax
comp=Z,6.0nm,1.2s
WTLY Watson Lake, Y 95.98 29 P **P** **21 20 53.1 +1.1**
MLR Muntele Rosu 96.23 316 P **P** **21 20 52.0 -1.6**
MLR IAmb IAmb 21 20 55.5
comp=Z,25nm,1.4s
MLR Muntele Rosu 96.23 316 P **P** **21 20 52.0 -1.6**
MLR pmax pmax
comp=Z,25nm,1.4s
SUW Suwalki 96.50 325 P **P** **21 20 53.7 -0.7**
SUW Suwalki 96.50 325 P **P** **21 20 53.7 -0.7**
DAG Danmarks Havn 99.34 352 *i* P **Pdif** **21 21 05.8 -0.9**
DAG IAmb IAmb 21 21 08.8
comp=Z,8.1nm,0.9s
HFS Hagfors 99.77 332 P **Pdif** **21 21 08.4 -0.6**
comp=Z,0.7nm,0.3s,baz=90,slow=5.9,SNR=12
comp=Z,0.7nm,0.3s
PSZ Piszkesteto 99.86 319 Pdif **Pdif** **21 21 08.6 -1.2**
PSZ IAmb IAmb 21 21 19.5
comp=Z,8.8nm,1.1s
PSZ Piszkesteto 99.86 319 P **Pdif** **21 21 08.6 -1.2**
PSZ pmax pmax
comp=Z,9.0nm,1.1s
CBB Campbell River 100.41 39 Pdif **Pdif** **21 21 09.9 -2.2**
BOSA Boshof 100.55 241 Pdif **Pdif** **21 21 13.5 +0.1**
BOSA Boshof 100.55 241 P **Pdif** **21 21 13.5 +0.1**
NB2 NORSAR Subarra 100.57 333 P **Pdif** **21 21 10.4 -2.2**
comp=Z,2.9nm,1.0s,baz=74,slow=4.4
NOA NORSAR Array B 100.57 333 P **Pdif** **21 21 11.2 -1.5**
comp=Z,1.0nm,0.8s,baz=67,slow=4.5,SNR=5.2
NEEM North Greenlan 101.07 359 *i* P **Pdif** **21 21 16.3 +1.4**
NEEM IAmb IAmb 21 21 16.8
comp=Z,7.7nm,1.1s
DBG Daneborg 101.60 351 *i* P **Pdif** **21 21 16.0 -0.8**
KULLO Kullorsuaq 103.93 1 *i* P **Pdif** **21 21 31.1 +3.9**
KULLO IAmb IAmb 21 21 32.6
comp=Z,43nm,1.0s
NVAR Mina Array Bea 108.57 49 PKKP 21 37 18.2
comp=Z,0.6nm,0.7s,baz=118,slow=2.0,SNR=3.6
PDAR Pinedale Array 113.17 42 PKKPab PKKPab 21 36 56.0 -1.3
comp=Z,2.0nm,0.9s,baz=94,slow=3.1,SNR=6.9
RSSD Black Hills 116.07 38 **PKPdf** **21 26 09.1 +0.6**
RSSD Black Hills 116.07 38 PKIKP **PKPdf** **21 26 09.1 +0.6**
ANMO Albuquerque 118.69 48 PKP **PKiKP** **21 26 15.1 +1.2**
comp=Z,2.4nm,0.7s,baz=312,slow=2.6,SNR=3.8
ANMO Albuquerque 118.69 48 **PKiKP** **21 26 15.8 +1.9**
ECSD EROS Data Cent 120.73 35 **PKPdf** **21 26 17.0 -0.3**
RTBA Rita Blanca 120.74 45 PKPdf **PKPdf** **21 26 17.3 -0.3**
MNTX Cornudas Mount 120.84 51 PKPdf **PKPdf** **21 26 17.9 +0.1**
SCHQ Schefferville 122.74 9 PKP **PKiKP** **21 26 21.6 +0.6**
comp=Z,7.6nm,0.8s,baz=178,slow=3.9,SNR=4.1
TXAR Lajitas Array 123.15 53 PKP **PKiKP** **21 26 23.6 +1.0**
comp=Z,1.8nm,0.8s,baz=246,slow=1.8,SNR=9.5
TORD Torodi Ar. Bea 123.27 287 PKP **PKiKP** **21 26 23.4 +0.3**
comp=Z,6.6nm,0.9s,baz=48,slow=4.2,SNR=5.5
L40A Anamosa 124.84 34 **PKiKP** **21 26 25.5 0.0**
RLO Rose Lookout 126.19 42 **PKPdf** **21 26 26.6 -1.3**
DBIC Dimbokro 130.69 280 PKP **PKPdf** **21 26 36.1 -1.0**
comp=Z,7.3nm,0.9s,baz=133,slow=4.4,SNR=7.5

TKL	**Tuckaleechee C**	**133.46**	**34**	PKP		**PKPdf**	**21 26 42.0**	**+0.3**
	comp=Z,111nm,0.8s,baz=75,slow=3.8,SNR=7.5							
CMIG	**Matias Romero**	**135.26**	**64**	PKP		**PKPdf**	**21 26 45.7**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=315,slow=4.3,SNR=4.3							
PLCA	**Paso Flores**	**138.09**	**161**	PKhKP		PKPpre	21 26 45.8	
	comp=Z,1.3nm,0.7s,baz=217,slow=3.1,SNR=3.4							
PLCA				PKP		**PKPdf**	**21 26 51.3**	**+1.0**
	comp=Z,4.5nm,0.8s,baz=230,slow=3.1,SNR=6.7							
TRQA	**Tornquist**	**142.88**	**169**			**PKPdf**	**21 26 55.9**	**-3.1**
TRQA	**Tornquist**	**142.88**	**169**	PKIKP		**PKPdf**	**21 26 55.9**	**-3.1**
CNGN	**Cerro Negro**	**144.27**	**66**			PKPbc	21 27 01.1	+0.8
JTS	**Las Juntas de**	**146.63**	**69**	PKPbc		**PKPbc**	**21 27 07.7**	**0.0**
	comp=Z,3.7nm,0.3s,baz=214,slow=4.6,SNR=5.5							
JTS	**Las Juntas de**	**146.63**	**69**			**PKPab**	**21 27 08.7**	**-0.1**
LCO	**Las Campanas**	**148.20**	**151**			**PKiKP**	**21 27 13.2**	**-0.5**
LCO	**Las Campanas**	**148.20**	**151**	PKP2		**PKiKP**	**21 27 13.2**	**-0.5**
AC05	**El Transito**	**148.55**	**151**			**PKiKP**	**21 27 14.3**	**0.0**
CHIV	**Chivirico**	**149.02**	**45**			**PKiKP**	**21 27 15.4**	**+0.2**
CPUP	**Villa Florida**	**155.12**	**172**	PKP		**PKPdf**	**21 27 18.1**	**-0.7**
	comp=Z,1.3nm,1.1s,baz=297,slow=2.3,SNR=3.2							
CPUP				PKPbc		**pPKPdf**	**21 27 28.6**	**-2.7**
	comp=Z,1.7nm,0.8s,baz=73,slow=0.3,SNR=8.0							
HUMP	**Col San Antoni**	**156.99**	**31**			**PKPdf**	**21 27 17.9**	**-3.6**
LPAZ	**La Paz**	**159.52**	**136**	PKP		**PKPdf**	**21 27 26.7**	**+1.3**
	comp=Z,3.9nm,0.9s,baz=90,slow=0.9,SNR=12							
SDV	**Santo Domingo**	**160.08**	**58**	PKP		**PKPdf**	**21 27 26.0**	**+0.5**
	comp=Z,8.4nm,0.8s,baz=131,slow=2.4,SNR=8.7							
BDFB	**Brasilia**	**164.98**	**201**	PKPab		**PKPab**	**21 28 27.7**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=170,slow=6.1,SNR=2.1							

MOS **14** *21:12:51.1±1.1, 1.˚45N×126.˚22E, h13km, mb6.1/93, MS5.4/64, Error ellipse: s-maj=7.4km s-min=4.2km az=113.3*

IDC **14** *21:12:51.7±0.3, 1.˚53N×126.˚28E, h0km, mb5.6/36, mbtmp5.6/38, ML4.8/2, MS5.4/53, Error ellipse: s-maj=13.7km s-min=9.1km az=73.0*

BJI **14** *21:12:53.7, 1.˚31N×126.˚11E, h37km, mB5.9/55, mb5.6/86, Ms5.7/95, Ms7 5.6/92*

NEIC **14** *21:12:53.5, 1.˚56N×126.˚26E, h26km, Moment Tensor Solution. Duration: 5s0 Moment tensor: Scale 10¹⁸Nm; Mrr1.00; Mθθ0.05; Mϕϕ -1.05; Mrθ-0.54; Mθϕ-0.37; Mϕr-0.34; Fault plane solution: M₀1.27000×10¹⁸ NP1: ϕs357.03000°, δ36.55000°, λ56.25000°. NP2: ϕs216.79000°, δ60.32000°, λ112.38000°. Principal axes: T 1.2606, Plg67.0000°, Azm170.0000°; N 0.0116, Plg19.0000°, Azm25.0000°; P -1.2722, Plg13.0000°, Azm291.0000°;*

NEIC **14** *21:12:53.5, 1.˚56N×126.˚46E, h26km*

ISC-PP **14** *21:12:54, 1.˚54N×126.˚42E, h35km, Mwppsmc6.4, Moment Tensor Solution. s51 Moment tensor: Scale 10¹⁸Nm; Mrr0.70±.07; Mθθ-0.12±.07; Mϕϕ-0.55±.05; Mrθ-0.30±.05; Mθϕ-0.07±.14; Mϕr-0.02±.06; Fault plane solution: M₀5.50000×10¹⁸ NP1:ϕs201.00000°, δ51.90000°, λ112.40000°. NP2:ϕs347.20000°, δ43.30000°, λ64.10000°.*

NEIC **14** *21:12:54.9, 1.˚54N×126.˚47E, h26km*

NEIC **14** *21:12:54.8±2.9, 1.˚54N±0.˚06×126.˚42E±0.˚06, h23km±1km, mb6.0/446, Ms_20 5.7/448, Mwb5.8/73, Mww6.0/26, Error ellipse: s-maj=10.3km s-min=9.7km az=222.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr5.78; Mθθ-1.42; Mϕϕ-4.36; Mrθ-0.31; Mθϕ-2.77; Mϕr-1.71; Fault plane solution: M₀6.15000×10¹⁷ NP1: ϕs37.06000°, δ37.61000°, λ99.56000°. NP2:ϕs205.06000°, δ53.00000°, λ82.71000°. Principal axes: T 6.0613, Plg80.0000°, Azm83.0000°; N 0.1806, Plg6.0000°, Azm209.0000°; P -6.2419, Plg8.0000°, Azm300.0000°;*

DJA **14** *21:12:58.0±0.1, 2.˚N±1.˚×12.˚6E±.˚, h45km±2km, M5.9/144, mb5.8/144, mB6.2/132, MLv6.0/23, Mw(mB)5.9/132, MwMwp6.1/25, Mwp6.1/25*

GCMT **14** *21:13:00.8±0.1, 1.˚72N±0.˚01×126.˚10E±0.˚01, h26km, MW6.1/153, Moment Tensor Solution. s153,c321; s153,c351; Duration: 2s7 Moment tensor: Scale 10¹⁸ Nm; Mrr1.12±.02; Mθθ-0.01±.01; Mϕϕ-1.10±.01; Mrθ-0.74±.03; Mθϕ-0.50±.01; Mϕr-0.82±.03; Best double couple: M₀1.64200×10¹⁸ NP1:ϕs5.00000°, δ27.00000°, λ62.00000°. NP2:ϕs216.00000°, δ67.00000°, λ103.00000°. Principal axes: T 1.5960, Plg66.0000°, Azm149.0000°; N 0.0990, Plg12.0000°, Azm31.0000°; P -1.6880, Plg21.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 14 21:12:55.6±0.3, 1.˚61N±0.˚02×126.˚40E±0.˚03, h31km±1km, h31km:pP-P, n2163, σ180/2097, mb6.0/436, MS5.7/368, 148C-55D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
TNTI	**Ternate**	**1.28**	**131**			**Pn**	**21**	**13 15.7**	**-1.7**
TNTI	**Ternate**	**1.28**	**131**	P		**Pb**	**21**	**13 18.6**	**-0.5**
TNTI	**Ternate**	**1.28**	**131**	P		**Pb**	**21**	**13 18.3**	**-0.8**
TNTI	**Ternate**	**1.28**	**131**	↑P		**Pb**	**21**	**13 18.1**	**-1.0**
SGSI	**Sangihe**	**2.24**	**337**	P		**Pn**	**21**	**13 31.9**	**+1.3**
KMSI	**Cibinong**	**2.63**	**247**	P		**Pn**	**21**	**13 37.3**	**+1.3**
SANI	**Sanana**	**3.66**	**186**	P		**Pn**	**21**	**13 50.8**	**+0.6**
SANI	**Sanana**	**3.66**	**186**	P		**Pn**	**21**	**13 51.9**	**+1.7**
SANI	**Sanana**	**3.66**	**186**	P		**Pn**	**21**	**13 51.1**	**+0.9**
SANI	**Sanana**	**3.66**	**186**	↑P		**Pn**	**21**	**13 51.2**	**+0.9**
LUWI	**Luwuk**	**4.48**	**234**	P		**Pn**	**21**	**14 03.4**	**+1.9**
LUWI	**Luwuk**	**4.48**	**234**	Pn		**Pn**	**21**	**14 01.6**	**+0.1**
LUWI	**Luwuk**	**4.48**	**234**	P		**Pn**	**21**	**14 02.4**	**+0.9**
LUWI	**Luwuk**	**4.48**	**234**	↑P		**Pn**	**21**	**14 05.3**	**+3.7**
MRSI	**Marisa**	**4.60**	**256**	P		**Pn**	**21**	**14 04.5**	**+1.4**
NLAI	**Namlea**	**4.87**	**172**	P		**Pn**	**21**	**14 08.7**	**+1.9**
APSI	**Ampana**	**5.37**	**242**	P		**Pn**	**21**	**14 17.6**	**+3.9**
SWI	**Sorong**	**5.45**	**117**	P		**Pn**	**21**	**14 17.4**	**+2.6**
	3.9nm160µm16µm941nm,1.0s								
DAV	**Davao City (W)**	**5.48**	**351**	Pn		Pn	21	14 20.1	+4.8
	66nm,0.3s,baz=60,slow=1.6,SNR=8.3								
DAV				Sn		**Sb**	**21**	**15 29.9**	**-6.2**
	80nm,0.3s,baz=158,slow=18,SNR=3.5								
DAV	**Davao City (W)**	**5.48**	**351**			**Pn**	**21**	**14 16.0**	**+0.7**
DAV	**Davao City (W)**	**5.48**	**351**	P		Pn	21	14 21.5	+6.2
DAV				S		Sn	21	15 26.9	+9.5
DAV	**Davao City (W)**	**5.48**	**351**	P		Pn	21	14 21.5	+6.2
MSAI	**Masohi**	**5.54**	**153**	P		Pn	21	14 20.5	+4.5
	11nm157µm33µm3µm,1.0s								
AAI	**Ambon**	**5.56**	**161**	P		**Pn**	**21**	**14 19.5**	**+3.1**
	8.5nm102µm20µm2µm,1.4s								
TOLI2	**Tolitoli**	**5.64**	**265**	Pn		**Pn**	**21**	**14 16.7**	**-0.7**
TOLI2	**Tolitoli**	**5.64**	**265**	P		**Pn**	**21**	**14 17.8**	**+0.4**
MPSI	**Mapaga**	**6.62**	**259**	P		**Pn**	**21**	**14 33.0**	**+2.1**
	8.2nm35µm2µm,1.6s								
KDI	**Kendari**	**6.70**	**214**	P		**Pn**	**21**	**14 34.4**	**+2.4**
PCI	**Palu**	**7.02**	**249**	P		**Pn**	**21**	**14 38.7**	**+2.2**
BNDI	**Bandanaira**	**7.03**	**150**	P		Pn	21	14 41.8	+5.3
BNDI	**Bandanaira**	**7.03**	**150**	P		**Pn**	**21**	**14 39.1**	**+2.6**
	7.5nm86µm24µm1µm,1.7s								
BNDI	**Bandanaira**	**7.03**	**150**	⇓P		**Pn**	**21**	**14 39.6**	**+3.1**
FAKI	**Fak Fak**	**7.38**	**128**			**Pn**	**21**	**14 40.9**	**-0.5**
FAKI	**Fak Fak**	**7.38**	**128**	P		**Pn**	**21**	**14 44.2**	**+2.8**
FAKI	**Fak Fak**	**7.38**	**128**	P		**Pn**	**21**	**14 45.0**	**+3.6**
	6.3nm99µm18µm2µm,1.1s								
FAKI	**Fak Fak**	**7.38**	**128**	↑P		**Pn**	**21**	**14 44.7**	**+3.3**
BBSI	**Bau Bau**	**8.02**	**208**	P		**Pn**	**21**	**14 52.6**	**+2.4**
TTSI	**Tana Toraja**	**8.04**	**235**	P		**Pn**	**21**	**14 51.9**	**+1.5**
RKPI	**Ransiki, Papua**	**8.37**	**112**	P		Pn	21	15 00.1	+5.1
	12µm879nm,1.0s								
SPSI	**Sidrap Palu**	**8.64**	**230**	P		**Pn**	**21**	**15 01.1**	**+2.5**
	17µm1µm,1.1s								
MYLDM	**Lahad Datu**	**8.64**	**294**	Pn		Pn	21	14 58.4	-0.3
MYLDM	**Lahad Datu**	**8.64**	**294**	P		**Pn**	**21**	**15 02.1**	**+3.4**
MYLDM	**Lahad Datu**	**8.64**	**294**	⇓P		**Pn**	**21**	**15 01.7**	**+3.0**
BNSI	**Bone**	**8.67**	**226**	P		**Pn**	**21**	**15 00.7**	**+1.6**
	21µm1µm,0.8s								
KMPI	**Kaimana, Papua**	**8.99**	**126**	P		**Pn**	**21**	**15 07.1**	**+3.7**
BKSI	**Bulukumba**	**9.31**	**222**	P		**Pn**	**21**	**15 09.6**	**+1.7**
	14µm835nm,1.1s								
KAPI	**Kappang**	**9.35**	**225**	Pn		**Pn**	**21**	**15 08.7**	**+0.3**
	24nm,0.3s,baz=46,slow=5.4,SNR=46								
KAPI				Sn		**Sn**	**21**	**16 56.3**	**+3.8**
	19nm,0.3s,baz=188,slow=21,SNR=4.8								
KAPI	**Kappang**	**9.35**	**225**			**Pn**	**21**	**15 07.7**	**-0.7**
KAPI	**Kappang**	**9.35**	**225**	P		**Pn**	**21**	**15 12.2**	**+3.8**
KAPI				S		**Sn**	**21**	**17 00.0**	**+7.4**
KAPI	**Kappang**	**9.35**	**225**	P		**Pn**	**21**	**15 11.1**	**+2.7**
KAPI	**Kappang**	**9.35**	**225**	*i* P		**Pn**	**21**	**15 09.3**	**+0.9**
KAPI	**Kappang**	**9.35**	**225**	⇓P		**Pn**	**21**	**15 10.1**	**+1.7**
BSSI	**Bau Bau, Buton**	**9.70**	**217**	P		**Pn**	**21**	**15 16.1**	**+2.9**
	13µm885nm,1.1s								
BKB	**Balikpapan**	**9.92**	**253**			**Pn**	**21**	**15 15.2**	**-1.0**
BKB	**Balikpapan**	**9.92**	**253**	P		**Pn**	**21**	**15 18.2**	**+2.0**
BKB	**Balikpapan**	**9.92**	**253**	P		**Pn**	**21**	**15 18.4**	**+2.2**
	108µm1µm,1.9s								
BKB	**Balikpapan**	**9.92**	**253**	⇓P		**Pn**	**21**	**15 18.5**	**+2.3**
BAKI	**Biak**	**10.10**	**106**	P		Pn	21	15 25.1	+6.4
SAUI	**Saumlaki**	**10.71**	**153**			**Pn**	**21**	**15 24.0**	**-3.1**
SAUI	**Saumlaki**	**10.71**	**153**	P		**Pn**	**21**	**15 28.3**	**+1.2**
	51µm9µm686nm,0.9s								
SAUI	**Saumlaki**	**10.71**	**153**	↑P		Pn	21	15 31.5	+4.4
MMRI	**Maumere**	**10.99**	**202**			**Pn**	**21**	**15 28.1**	**-2.9**
MMRI	**Maumere**	**10.99**	**202**	P		**Pn**	**21**	**15 33.7**	**+2.8**
	8µm468nm,0.8s								
EDFI	**Ende, Flores**	**11.31**	**204**	P		**Pn**	**21**	**15 37.4**	**+2.0**
	228nm,0.6s								
SOEI	**Soe**	**11.49**	**191**	P		**Pn**	**21**	**15 40.6**	**+2.7**
SOEI	**Soe**	**11.49**	**191**			**Pn**	**21**	**15 34.4**	**-3.5**
SOEI	**Soe**	**11.49**	**191**	P		**Pn**	**21**	**15 40.4**	**+2.6**
SOEI	**Soe**	**11.49**	**191**	↑P		Pn	21	15 43.0	+5.2
MTKI	**Muara Teweh, K**	**11.78**	**258**	P		**Pn**	**21**	**15 43.9**	**+2.2**
	69µm19µm697nm,1.9s								
BATI	**Baumata**	**12.05**	**193**	Pn		Pn	21	15 50.0	+4.5
	19nm,0.3s,baz=200,slow=1.7,SNR=23								
BATI	**Baumata**	**12.05**	**193**	P		Pn	21	15 49.7	+4.2
	9µm939nm,0.9s								
BBKI	**Banjar Baru**	**12.61**	**246**	P		**Pn**	**21**	**15 55.6**	**+2.6**
	39µm1µm,2.1s								
WSI	**Waingapu**	**12.75**	**208**	P		**Pn**	**21**	**15 57.8**	**+2.9**
	10µm600nm,1.4s								
SMPI	**Sarmi**	**12.82**	**106**	P		**Pn**	**21**	**15 59.1**	**+3.2**
	59µm982nm,1.3s								
BASI	**Baing, Sumba**	**13.10**	**206**	P		**Pn**	**21**	**16 02.4**	**+2.6**
	13µm833nm,1.0s								
WBSI	**Waikabubak, Su**	**13.18**	**212**	P		**Pn**	**21**	**16 03.3**	**+2.4**
	8µm572nm,0.9s								
PLAI	**Plampang**	**13.47**	**220**	P		**Pn**	**21**	**16 07.3**	**+2.5**
TGY	**Tagaytay City**	**13.54**	**337**	Pn		**Pn**	**21**	**16 08.3**	**+2.5**
	79nm,0.3s,baz=49,slow=3.8,SNR=4.0								
TGY						LR	21	21 49.2	
	comp=Z,26µm,21.1s,baz=159,slow=40								
TWSI	**Taliwang, Sumb**	**13.99**	**223**	P		**Pn**	**21**	**16 14.5**	**+2.6**
SBUM	**Sibu**	**14.20**	**274**			**Pn**	**21**	**16 13.6**	**-1.1**
SBUM	**Sibu**	**14.20**	**274**	P		**Pn**	**21**	**16 14.4**	**-0.3**
SBUM	**Sibu**	**14.20**	**274**	⇓P		**Pn**	**21**	**16 15.9**	**+1.1**
GENI	**Genyem**	**14.38**	**107**	P		**P**	**21**	**16 20.4**	**-3.5**
	20µm1µm,1.4s								
GENI	**Genyem**	**14.38**	**107**	↑P		**P**	**21**	**16 21.1**	**-2.8**
DRS	**Darwin Rock St**	**14.65**	**162**	P		**Pn**	**21**	**16 21.7**	**+0.8**
SRBI	**Singaraja**	**14.74**	**229**	P		**Pn**	**21**	**16 24.0**	**+1.9**
	10µm758nm,1.2s								
JAY	**Jayapura**	**14.88**	**106**	Pn		**Pn**	**21**	**16 26.1**	**+2.0**
	0.4nm,0.3s,baz=270,slow=10.0,SNR=33								
JAY						LR	LR	21 21 49.3	
	comp=Z,38µm,20.6s,baz=300,slow=36								
	80nm,1.2s								
JAY	**Jayapura**	**14.88**	**106**	P		**Pn**	**21**	**16 25.7**	**+1.7**
	6µm289nm,0.9s								
KMMI	**Kalianget**	**15.10**	**235**	P		**P**	**21**	**16 29.7**	**-2.1**
MTN	**Manton Dam**	**15.11**	**162**	P		**Pn**	**21**	**16 25.5**	**-1.6**
MTN	**Manton Dam**	**15.11**	**162**			**Pn**	**21**	**16 23.5**	**-3.6**
DNP	**Denpasar**	**15.13**	**227**	P		**P**	**21**	**16 30.2**	**-1.9**
ABJI	**Asem Bagus**	**15.32**	**232**	P		**P**	**21**	**16 33.3**	**-0.9**
	10µm362nm,1.3s								
KDU	**Kakadu**	**15.43**	**157**	P		**Pn**	**21**	**16 29.0**	**-2.3**
JAGI	**Jajag, Banyuwa**	**15.79**	**230**			**Pn**	**21**	**16 34.2**	**-1.8**
JAGI	**Jajag, Banyuwa**	**15.79**	**230**	P		**P**	**21**	**16 38.5**	**-1.0**
JAGI	**Jajag, Banyuwa**	**15.79**	**230**	P		**P**	**21**	**16 38.1**	**-1.4**
	15µm1µm,1.1s								
JAGI	**Jajag, Banyuwa**	**15.79**	**230**	⇓P		**Pn**	**21**	**16 37.0**	**+1.0**
BLJI	**Banyuglugur**	**15.80**	**234**	P		**P**	**21**	**16 38.1**	**-1.5**
	15µm785nm,1.9s								
GRJI	**Gresik**	**16.27**	**238**	P		**P**	**21**	**16 43.4**	**-1.4**
	13µm677nm,1.6s								
TBJI	**Tambak Boyo**	**16.76**	**240**	P		**P**	**21**	**16 51.0**	**+0.7**
	10µm786nm,1.0s								
MMPI	**Merauke**	**17.16**	**126**	P		**P**	**21**	**16 54.2**	**-0.5**
	966nm,1.5s								
KNRA	**Kununurra**	**17.34**	**172**	P		**P**	**21**	**16 55.5**	**-1.1**
	comp=Z,2µm,1.4s								
KNRA	**Kununurra**	**17.34**	**172**	P		**Pn**	**21**	**16 53.7**	**-1.7**
NGJI	**Ngawi**	**17.37**	**239**	P		**P**	**21**	**16 58.2**	**+1.2**
	comp=Z,11µmcomp=Z,633nm,1.8s								
PCJI	**Pacitan**	**18.04**	**237**	P		**P**	**21**	**17 06.5**	**+2.1**
	comp=Z,11µmcomp=Z,731nm,1.1s								
SMRI	**Semarang**	**18.10**	**241**	P		**Pn**	**21**	**17 03.5**	**-1.4**
SMRI	**Semarang**	**18.10**	**241**	P		**P**	**21**	**17 07.4**	**+2.3**
	comp=Z,11µmcomp=Z,397nm,1.2s								
UGM	**Wanagama**	**18.45**	**239**	P		**P**	**21**	**17 08.3**	**-0.6**
UGM	**Wanagama**	**18.45**	**239**	P		**Pn**	**21**	**17 11.4**	**+2.2**
UGM	**Wanagama**	**18.45**	**239**	P		**Pn**	**21**	**17 11.7**	**+2.5**
	comp=Z,9µmcomp=Z,414nm,1.6s								
YOGI	**Yogyakarta**	**18.59**	**240**	P		**Pn**	**21**	**17 12.8**	**+1.8**
TPI	**Tanjungpandan**	**19.24**	**257**	P		**P**	**21**	**17 18.1**	**+0.5**
KPJI	**Karang Pucung**	**19.56**	**243**	P		**P**	**21**	**17 19.5**	**-1.7**
	comp=Z,11µmcomp=Z,537nm,1.1s								
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P		**P**	**21**	**17 20.3**	**-1.2**
	comp=Z,78nm,1.3s								
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P		**P**	**21**	**17 20.4**	**-1.1**
	comp=Z,9.5nm,0.3s,baz=10,slow=13,SNR=36								
FITZ					S	**S**	**21**	**20 57.2**	**-4.0**
	comp=Z,15nm,0.8s,baz=6.8,slow=18,SNR=1.0								
	comp=Z,149nm,0.7s								
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P		**P**	**21**	**17 19.0**	**-2.5**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P		**P**	**21**	**17 20.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	↑P		**P**	**21**	**17 21.0**	**-0.5**
DLV	**Lat**	**20.52**	**301**	P		**P**	**21**	**17 31.3**	**-0.5**
DLV					IAmb	IAmb	21	17 42.0	
	comp=Z,1µm,1.2s								
DLV	**Lat**	**20.52**	**301**	P		Pn	21	17 34.8	+0.7
DLV	**Lat**	**20.52**	**301**	⇓P		**P**	**21**	**17 33.0**	**+1.2**
PPBI	**Pangkal Pinang**	**20.60**	**260**	P		**P**	**21**	**17 33.4**	**+0.9**
BBJI	**Bungbulang**	**20.76**	**244**	P		**P**	**21**	**17 32.7**	**-1.6**
CNJI	**Cibinong**	**21.17**	**245**	P		**P**	**21**	**17 40.9**	**+2.3**
DBJI	**Dramaga**	**21.23**	**247**	P		**P**	**21**	**17 41.1**	**+1.8**
MANU	**Manus Island**	**21.27**	**100**	P		**P**	**21**	**17 36.9**	**-2.9**
MANU					IAmb	IAmb	21	17 49.8	
	comp=Z,732nm,1.6s								
SKJI	**Sukabumi**	**21.57**	**246**	P		**P**	**21**	**17 44.9**	**+1.9**
	comp=Z,11µmcomp=Z,447nm,1.1s								
SBJI	**Serang**	**21.65**	**249**	P		**P**	**21**	**17 46.5**	**+2.8**
	comp=Z,7µmcomp=Z,412nm,1.9s								
TWGBT	**Beinan**	**21.70**	**347**	P		**P**	**21**	**17 44.4**	**+0.1**
TWG	**Pinlang**	**21.71**	**347**	P		**P**	**21**	**17 42.4**	**-1.9**
GUMO	**Guam**	**21.81**	**56**	P		**P**	**21**	**17 49.1**	**+3.7**
	comp=Z,139nm,0.7s,baz=204,slow=12,SNR=8.4								
	comp=Z,139nm,0.7s								
GUMO	**Guam**	**21.81**	**56**	P		**P**	**21**	**17 42.4**	**-3.1**
TPRI	**Tanjung Pinang**	**21.88**	**268**	P		**P**	**21**	**17 49.5**	**+3.2**
	comp=Z,7µmcomp=Z,341nm,1.6s								
DSRI	**Dabo**	**21.92**	**265**	P		**P**	**21**	**17 48.0**	**+1.3**
	comp=Z,12µmcomp=Z,543nm,1.8s								
PMBI	**Palembang**	**22.09**	**258**	P		**P**	**21**	**17 48.3**	**-0.2**
PMBI					IAmb	IAmb	21	18 11.1	
	comp=Z,897nm,1.1s								
PMBI	**Palembang**	**22.09**	**258**	P		**P**	**21**	**17 52.3**	**+3.8**
	comp=Z,10µmcomp=Z,780nm,1.0s								
YULB	**Yu-li**	**22.21**	**348**	P		**P**	**21**	**17 47.3**	**-2.4**
YULB	**Yu-li**	**22.21**	**348**	P		**P**	**21**	**17 50.1**	**+0.4**
BLSI	**Bandar Lampung**	**22.24**	**252**	P		**P**	**21**	**17 51.9**	**+1.8**
	comp=Z,253nm,0.6s								
TPUB	**Ta-pu**	**22.27**	**346**	P		**P**	**21**	**17 48.1**	**-2.3**
TPUB					IAmb	IAmb	21	18 00.0	
	comp=Z,724nm,0.9s								
TPUB					IAMs_20	IAMs_20	21	27 29.3	
	comp=Z,26µm,22.0s								
TPUB	**Ta-pu**	**22.27**	**346**	P		**P**	**21**	**17 50.0**	**-0.4**
KLI	**Kotabumi**	**22.46**	**253**	P		**P**	**21**	**17 54.5**	**+2.0**
	comp=Z,5µmcomp=Z,303nm,0.8s								
BTDF	**Bukit Timah Da**	**22.62**	**270**	P		**P**	**21**	**17 57.3**	**+3.1**
WB0	**Warramunga Arr**	**22.65**	**160**	P		**P**	**21**	**17 52.8**	**-1.6**
SSLB	**Suanglung**	**22.67**	**347**	P		**P**	**21**	**17 53.5**	**-1.2**
SSLB					IAMs_20	IAMs_20	21	27 44.6	
	comp=Z,43µm,21.0s								
SSLB	**Suanglung**	**22.67**	**347**	P		**P**	**21**	**17 53.9**	**-0.7**
COEN	**Coen**	**22.71**	**133**	P		**P**	**21**	**17 53.8**	**-1.4**
COEN	**Coen**	**22.71**	**133**	P		**P**	**21**	**17 52.1**	**-3.1**
COEN					IAmb	IAmb	21	17 58.2	
	comp=Z,636nm,1.6s								
COEN	**Coen**	**22.71**	**133**	P		**P**	**21**	**17 54.6**	**-0.5**
WRAB	**Tennant Creek**	**22.79**	**160**	P		**P**	**21**	**17 54.3**	**-1.6**
WRAB	**Tennant Creek**	**22.79**	**160**	P		**P**	**21**	**17 55.0**	**-0.9**
WRAB	**Tennant Creek**	**22.79**	**160**	*i* P		**P**	**21**	**17 54.1**	**-1.8**
WRA	**Warramunga Arr**	**22.79**	**160**	P		**P**	**21**	**17 54.8**	**-1.2**
	comp=Z,497nm,0.6s,baz=338,slow=11,SNR=94								
WRA					S	**S**	**21**	**21 59.6**	**-3.6**
	comp=Z,54nm,1.2s,baz=338,slow=17,SNR=6.5								
WRA					P3KPbc		21	51 31.0	
	comp=Z,6.8nm,1.2s,baz=157,slow=4.1,SNR=6.6								
	comp=Z,497nm,0.6s								
WRA	**Warramunga Arr**	**22.79**	**160**	*i* P		**P**	**21**	**17 54.7**	**-1.2**
WRA					pmax	pmax			
	comp=Z,455nm,0.8s								
WB2	**Warramunga Arr**	**22.80**	**160**	P		**P**	**21**	**17 54.8**	**-1.2**
WB1	**Warramunga Ar.**	**22.81**	**160**	P		**P**	**21**	**17 55.1**	**-1.1**
WR8	**Warramunga Arr**	**22.86**	**160**	P		**P**	**21**	**17 54.5**	**-2.2**
WR0	**Warramunga Arr**	**22.88**	**160**	P		**P**	**21**	**17 55.2**	**-1.6**
WR0					IAmb	IAmb	21	18 00.2	
	comp=Z,719nm,0.9s								
NACB	**Ninganchiao**	**22.91**	**349**	P		**P**	**21**	**17 54.6**	**-2.5**
NACB	**Ninganchiao**	**22.91**	**349**	P		**P**	**21**	**17 57.6**	**+0.5**
YOJ	**Yonaguni jima**	**22.95**	**352**	P		**P**	**21**	**17 55.4**	**-2.1**
YOJ					IAmb	IAmb	21	18 03.1	
	comp=Z,716nm,1.1s								
YOJ	**Yonaguni jima**	**22.95**	**352**	P		**P**	**21**	**18 00.6**	**+3.1**
YOJ	**Yonaguni jima**	**22.95**	**352**	P		**P**	**21**	**17 55.4**	**-2.1**
YOJ					pmax	pmax			
	comp=Z,716nm,1.1s								
YOJ	**Yonaguni jima**	**22.95**	**352**	⇓P		**P**	**21**	**18 00.2**	**+2.7**
YOJ	**Yonaguni jima**	**22.95**	**352**	P		**P**	**21**	**17 59.3**	**+1.8**
KASI	**Kota Agung**	**23.00**	**252**	P		**P**	**21**	**17 57.3**	**-0.8**
	comp=Z,307nm,1.0s								
MDSI	**Maura Dua**	**23.02**	**255**	P		**P**	**21**	**17 58.1**	**-0.2**
	comp=Z,5µmcomp=Z,277nm,1.6s								
JMJ	**Miyako jima 2**	**23.09**	**357**	P		**P**	**21**	**18 00.0**	**+1.0**
LWLI	**Liwa**	**23.27**	**253**	P		**P**	**21**	**18 00.5**	**-0.5**
	comp=Z,5µmcomp=Z,569nm,0.8s								
PMG	**Port Moresby**	**23.40**	**118**	P		**P**	**21**	**18 01.

IPM	Ipoh	25.50	277	P	P	21 18 22.5	+0.9	GYA		LR	LR	
QIS	Mount Isa	25.55	150	P	P	21 18 22.0	0.0		comp=Z,14µm,21.5s			
	comp=Z,432nm,1.2s							JNU	Nakatsue	31.63	7	P	P	21 19 17.1	+1.0
QIS	Mount Isa	25.55	150	P	P	21 18 22.4	+0.4		comp=Z,192nm,1.1s,baz=188,slow=5.6,SNR=22						
KULM	Kulim	25.96	279	P	P	21 18 24.2	-1.5	JNU				LR	LR	21 34 57.6	
KULM	Kulim	25.96	279	P	P	21 18 27.1	+1.4		comp=Z,3µm,18.8s,baz=206,slow=42						
KULM	Kulim	25.96	279	⇓P	P	21 18 25.1	-0.6		comp=Z,192nm,1.1s						
PDSI	Padang	26.06	265	P	P	21 18 25.9	-0.8	JNU	Nakatsue	31.63	7	P	P	21 19 15.6	-0.5
	comp=Z,4µmcomp=Z,219nm,1.4s							JNU				IAmb	IAmb	21 19 23.6	
PPI	Padang Panjang	26.08	266	P	P	21 18 25.6	-1.3		comp=Z,144nm,0.8s						
AS31	Alice Springs	26.16	164	P	P	21 18 26.4	-1.1	JNU	Nakatsue	31.63	7	P	P	21 19 17.5	+1.5
ASAR	Alice Springs	26.16	164	P	P	21 18 26.9	-0.6	JNU	Nakatsue	31.63	7	P	P	21 19 16.5	+0.4
	comp=Z,129nm,0.8s,baz=344,slow=6.8,SNR=102							CM31	Chiang Mai Arr	31.71	304	P	P	21 19 17.2	+0.3
ASAR				PcP	PcP	21 21 53.7	-0.7	CMAR	Chiang Mai Arr	31.71	304	P	P	21 19 17.1	+0.2
	comp=Z,14nm,0.5s,baz=344,slow=2.7,SNR=6.4								comp=Z,16nm,1.1s,baz=119,slow=6.6,SNR=30						
ASAR				S	S	21 23 04.8	+7.2	CMAR				PcP	PcP	21 22 11.2	+2.8
	comp=Z,34nm,0.8s,baz=347,slow=20,SNR=5.0								comp=Z,33nm,1.0s,baz=158,slow=1.7,SNR=11						
ASAR				P3KPbc		21 51 17.7		CMAR				ScP	ScP	21 25 53.2	+3.5
	comp=Z,0.9nm,0.8s,baz=177,slow=4.8,SNR=4.3								comp=Z,3.4nm,0.9s,baz=155,slow=2.7,SNR=5.0						
	comp=Z,129nm,0.8s							CMAR				PKiKP	PKiKP	21 29 38.1	+0.6
RABL	Rabaul	26.38	103	P	P	21 18 29.7	0.0		comp=Z,0.5nm,0.3s,baz=252,slow=1.4,SNR=5.5						
RABL				IAmb	IAmb	21 18 38.6		CMAR				LR	LR	21 33 20.1	
	comp=Z,213nm,0.5s								comp=Z,6µm,19.8s,baz=110,slow=39						
RABL	Rabaul	26.38	103	⇑P	P	21 18 30.3	+0.7		comp=Z,16nm,1.1s						
MTSU	Mount Surprise	26.39	139	P	P	21 18 29.4	-0.2	CMAR	Chiang Mai Arr	31.71	304	*i* P	P	21 19 18.3	+1.4
	comp=Z,237nm,1.0s							CMAR				pmax	pmax		
MTSU	Mount Surprise	26.39	139	P	P	21 18 29.9	+0.3		comp=Z,11nm,0.9s						
WRKA	Warakurna	26.55	176	P	P	21 18 31.5	+0.4	CHTO	Chiang Mai	31.88	304	P	P	21 19 17.4	-1.0
	comp=Z,234nm,1.3s							CHTO	Chiang Mai	31.88	304	P	P	21 19 20.0	+1.5
PPSI	Pulau Pagai	26.74	261	P	P	21 18 35.0	+2.2	CHTO				S	S	21 24 25.3	-2.3
	comp=Z,10µmcomp=Z,279nm,0.9s							CHTO	Chiang Mai	31.88	304	P	P	21 19 19.8	+1.4
JAM	Amami Oshima	26.82	6	P	P	21 18 35.5	+2.1	CHTO	Chiang Mai	31.88	304	P	P	21 19 17.4	-1.0
MNSI	Mandailing Nat	26.83	269	P	P	21 18 32.6	-1.0	CHTO				pmax	pmax		
	comp=Z,4µmcomp=Z,135nm,1.0s								comp=Z,44nm,0.8s						
GIRL	Giralia	26.87	206	P	P	21 18 35.4	+1.6	CHTO				MLR	MLR		
	comp=Z,486nm,1.2s								comp=Z,8µm,22.0s						
GIRL	Giralia	26.87	206	P	P	21 18 33.2	-0.7	MORW	Morawa	32.08	197	P	P	21 19 19.3	-0.8
GIRL				IAmb	IAmb	21 18 37.3			comp=Z,255nm,1.2s						
	comp=Z,677nm,1.2s							MORW	Morawa	32.08	197	P	P	21 19 18.7	-1.3
SISI	Saibi	27.46	264	P	P	21 18 38.7	-0.6	MORW				IAmb	IAmb	21 19 24.8	
	comp=Z,4µmcomp=Z,183nm,2.2s								comp=Z,230nm,1.0s						
RPSI	Rantau Prapat	27.48	273	P	P	21 18 38.1	-1.3	MORW	Morawa	32.08	197	P	P	21 19 19.8	-0.2
RPSI				IAmb	IAmb	21 18 47.2		MORW	Morawa	32.08	197	⇑P	P	21 19 19.7	-0.4
	comp=Z,410nm,1.4s							FORT	Forrest	32.25	177	P	P	21 19 22.2	+0.8
RPSI	Rantau Prapat	27.48	273		PcP	21 21 58.4	+0.7		comp=Z,194nm,0.7s						
PSI	Prapat	27.48	273	P	P	21 18 38.9	-0.7	FORT	Forrest	32.25	177	P	P	21 19 19.8	-1.7
	comp=Z,43nm,0.8s,baz=88,slow=10.0,SNR=26							FORT				IAmb	IAmb	21 19 26.1	
PSI				PcP	PcP	21 21 58.4	+0.5		comp=Z,167nm,0.9s						
	comp=Z,51nm,1.1s,baz=162,slow=6.0,SNR=4.3							INKA	Innaminka	32.28	156	P	P	21 19 20.6	-1.2
PSI				S	S	21 23 16.0	-2.8	COCO	West Island	32.41	244	P	P	21 19 21.4	-1.7
	comp=Z,3.1nm,0.4s,baz=240,slow=20,SNR=1.0							COCO				IAmb	IAmb	21 19 59.7	
PSI				ScP	ScP	21 25 39.1	+2.7		comp=Z,273nm,1.3s						
	comp=Z,3.6nm,0.3s,baz=132,slow=7.1,SNR=4.0							COCO	West Island	32.41	244	P	P	21 19 21.4	-1.7
	comp=Z,43nm,0.8s							COCO				pmax	pmax		
PBSI	Pulau Batu	28.16	267	P	P	21 18 47.0	+1.4		comp=Z,273nm,1.3s						
	comp=Z,9µmcomp=Z,99nm,1.0s							COCO				MLR	MLR		
GULI	GuiLin	28.17	328	P	P	21 18 43.1	-2.4		comp=Z,7µm,21.0s						
GULI				S	S	21 23 22.5	-6.6	KMI	Kunming	32.67	318	⇓P	P	21 19 25.3	-0.3
GULI				pmax	pmax			KMI				PcP	PcP	21 22 14.1	+2.9
	comp=Z,70nm,1.4s							KMI				S	S	21 24 39.0	-1.2
GULI				LR	LR			KMI				pmax	pmax		
	comp=Z,11µm,20.1s								comp=Z,130nm,1.5s						
GULI				LR	LR			KMI				pmax	pmax		
	comp=Z,7µm,22.2s								comp=Z,1.0nm,2.7s						
GULI				LR	LR			KMI				LR	LR		
	comp=Z,14µm,24.9s								comp=Z,3µm,19.6s						
KCSI	Kotacane, Aceh	28.66	274	P	P	21 18 48.2	-1.8	KMI				LR	LR		
GSI	Gunungsitoli	28.82	270	P	P	21 18 48.8	-2.6		comp=Z,8µm,19.8s						
GSI				IAmb	IAmb	21 18 55.1		KMI				LR	LR		
	comp=Z,303nm,1.2s								comp=Z,10µm,20.8s						
GSI	Gunungsitoli	28.82	270	P	P	21 18 50.8	-0.6	JMN	Monobe	32.71	12	P	P	21 19 25.2	-0.3
GSI	Gunungsitoli	28.82	270	P	P	21 18 50.1	-1.3	JMN				IAmb	IAmb	21 19 30.1	
	comp=Z,4µmcomp=Z,254nm,1.2s								comp=Z,321nm,1.3s						
GSI	Gunungsitoli	28.82	270	⇓P	P	21 18 48.8	-2.6	JMN	Monobe	32.71	12	P	P	21 19 27.7	+2.2
TV1H	Townsville Har	28.84	137	P	P	21 18 53.1	+1.6	JMN	Monobe	32.71	12	⇑P	P	21 19 27.8	+2.2
CTA	Charters Tower	29.05	139	LR	LR	21 33 44.7		JMN	Monobe	32.71	12	P	P	21 19 27.9	+2.3
	comp=Z,377nm,18.3s,baz=315,slow=43							ENH	Enshi	32.71	332	P	P	21 19 24.3	-1.3
CTAO	Charters Tower	29.05	139	P	P	21 18 51.3	-2.2	ENH				IAmb	IAmb	21 19 28.9	
CTAO				IAmb	IAmb	21 19 00.3			comp=Z,347nm,1.1s						
	comp=Z,484nm,1.4s							ENH				IAMs_20	IAMs_20	21 34 13.2	
CTAO	Charters Tower	29.05	139	P	P	21 18 55.1	+1.7		comp=Z,15µm,21.0s						
CTAO	Charters Tower	29.05	139	P	P	21 18 51.3	-2.2	ENH	Enshi	32.71	332	P	P	21 19 27.2	+1.6
CTAO				pmax	pmax			CMBY	CAMPBELL BAY	32.81	280	IAMs_20	IAMs_20	21 36 38.3	
	comp=Z,484nm,1.4s								comp=Z,9µm,19.6s						
CTAO				MLR	MLR			JTU	Tsushima	32.86	5	P	P	21 19 30.2	+3.4
	comp=Z,11µm,18.0s							JTU	Tsushima	32.86	5	⇓P	P	21 19 30.4	+3.5
CTAO	Charters Tower	29.05	139	⇑P	P	21 18 54.3	+0.8	JTU	Tsushima	32.86	5	P	P	21 19 28.9	+2.1
MEEK	Meekatharra	29.07	194	P	P	21 18 53.1	-0.5	QLP	Quilpie	32.89	150	P	P	21 19 27.0	-0.2
	comp=Z,279nm,1.1s								comp=Z,248nm,1.6s						
MEEK	Meekatharra	29.07	194	P	P	21 18 53.1	-0.5	QLP	Quilpie	32.89	150	P	P	21 19 29.3	+2.1
CNSH	ChangSha	29.39	335	P	P	21 18 57.3	+1.0	QLP	Quilpie	32.89	150	⇑P	P	21 19 27.2	0.0
CNSH				S	S	21 23 51.3	+3.0	KMBL	Kambalda	33.08	187	P	P	21 19 28.6	-0.1
CNSH				pmax	pmax				comp=Z,106nm,1.2s						
	comp=Z,72nm,1.5s							BLDU	Ballidu	33.35	195	P	P	21 19 30.5	-0.7
CNSH				LR	LR				comp=Z,286nm,1.1s						
	comp=Z,9µm,18.5s							BLDU	Ballidu	33.35	195	P	P	21 19 31.1	0.0
CNSH				LR	LR			JHS	Saijyo	33.80	10	P	P	21 19 37.2	+2.2
	comp=Z,11µm,22.4s							JAD	Aida	33.94	11	P	P	21 19 37.5	+1.3
CNSH				LR	LR			JIE	Ise	34.00	15	P	P	21 19 38.6	+1.9
	comp=Z,18µm,22.6s							KLBR	Kellerberrin	34.03	193	P	P	21 19 36.7	-0.3
SLVN	Son La	29.41	313	P	P	21 18 56.5	-0.2		comp=Z,546nm,1.2s						
SLVN	Son La	29.41	313	P	P	21 18 58.0	+1.4	KLBR	Kellerberrin	34.03	193	P	P	21 19 37.5	+0.5
CBIJ	Chichi jima	29.52	29	P	P	21 18 55.7	-1.8	PZH	PanZhiHua	34.26	318	P	P	21 19 38.6	-0.7
JCJ	Chichijima	29.52	29	P	P	21 18 49.3	-8.2	PZH				PP	PnPn	21 20 55.8	+1.8
	comp=Z,147nm,0.5s,baz=282,slow=6.0,SNR=10							PZH				PcP	PcP	21 22 17.0	+1.5
JCJ				LR	LR	21 29 51.0		PZH				S	S	21 24 58.5	-6.1
	comp=Z,7µm,21.9s,baz=210,slow=34							PZH				sS	sS	21 25 24.3	+5.5
JCJ	Chichijima	29.52	29	P	P	21 18 56.1	-1.3	PZH				ScS	ScS	21 30 01.3	+0.1
JCJ				IAmb	IAmb	21 19 16.4		PZH				pmax	pmax		
	comp=Z,307nm,0.8s								comp=Z,100nm,1.3s						
JCJ	Chichijima	29.52	29	P	P	21 19 00.9	+3.4	PZH				pmax	pmax		
JCJ	Chichijima	29.52	29	⇑P	P	21 18 57.9	+0.4		comp=Z,500nm,3.5s						
LHMI	Lhok Sumawe	29.61	278	P	P	21 18 58.3	-0.2	PZH				LR	LR		
LHMI	Lhok Sumawe	29.61	278	P	P	21 18 59.5	+1.0		comp=Z,4µm,24.9s						
	comp=Z,4µmcomp=Z,136nm,1.1s							PZH				LR	LR		
LHMI				pP	sP	21 19 09.8	-0.7		comp=Z,9µm,23.5s						
	comp=Z,4µmcomp=Z,136nm,1.1s							PZH				LR	LR		
SSE	Sheshan	29.74	351	P	P	21 19 01.9	+2.6		comp=Z,16µm,24.1s						
SSE				pP	pP	21 19 06.4	-1.4	JWT	Wachi	34.53	13	P	P	21 19 42.9	+1.6
SSE				S	S	21 23 55.3	+1.7	TJN	Taejon	34.60	1	P	P	21 19 41.1	-0.8
SSE				pmax	pmax			TJN	Taejon	34.60	1	*i* P	P	21 19 44.2	+2.3
	comp=Z,460nm,10.1s							TJN				pmax	pmax		
SSE				LR	LR				comp=Z,8.0nm,1.6s						
	comp=Z,3µm,20.1s							JSG	Sagara	34.68	17	P	P	21 19 41.1	-1.5
SNSI	Sinabang, Aceh	30.06	272	P	P	21 19 02.8	+0.3	MUN	Mundaring	34.78	195	P	P	21 19 43.5	0.0
	comp=Z,4µmcomp=Z,215nm,1.8s								comp=Z,154nm,1.1s						
MLSI	Meulaboh, Aceh	30.07	276	P	P	21 19 02.3	-0.2	MUN	Mundaring	34.78	195	P	P	21 19 43.7	+0.2
	comp=Z,3µmcomp=Z,111nm,0.5s							PBA	Port Blair	34.84	288	P	P	21 19 42.9	-1.4
JFU	Fukue jima 2	30.96	4	P	P	21 19 12.9	+2.8	PBA				IAmb	IAmb	21 20 07.1	
WHN	Wuhan	30.96	340	P	P	21 19 12.1	+2.0		comp=Z,178nm,1.2s						
WHN				pP	sP	21 19 20.9	-1.3	PBA	Port Blair	34.84	288	P	P	21 19 45.3	+1.0
WHN				PcP	PcP	21 22 08.5	+2.4	PBA				S	S	21 25 10.9	-2.7
WHN				S	S	21 24 15.4	+2.6	MTKN	Mount Kenneth	34.85	196	P	P	21 19 46.7	+2.6
WHN				sS	sS	21 24 26.3	-0.5	SAVO	Savo Central	34.97	108	P	P	21 19 46.1	+0.7
WHN				SS	SnSn	21 26 02.5	+7.9	INU	Inuyama	34.99	15	P	P	21 19 45.0	-0.3
WHN				pmax	pmax			INU	Inuyama	34.99	15	P	P	21 19 49.2	+3.9
	comp=Z,520nm,1.7s							INU	Inuyama	34.99	15	⇑P	P	21 19 47.3	+2.0
WHN				LR	LR			DGPR	DIGLIPUR	35.06	291	IAMs_20	IAMs_20	21 37 04.0	
	comp=Z,48µm,23.6s								comp=Z,7µm,18.3s						
WHN				LR	LR			HNR	Honiara	35.17	109	LR	LR	21 33 38.8	
	comp=Z,17µm,20.3s								comp=Z,10µm,20.7s,baz=280,slow=35						
WHN				LR	LR			HNR	Honiara	35.17	109	P	P	21 19 45.3	-1.9
	comp=Z,62µm,24.6s							HNR	Honiara	35.17	109	IAMs_20	IAMs_20	21 33 27.7	
NJ2	Nanjing	31.10	348	⇓*i* P	P	21 19 14.1	+2.7		comp=Z,11µm,21.0s						
NJ2				sP	sP	21 19 24.8	+1.4	HNR	Honiara	35.17	109	P	P	21 19 45.3	-1.9
NJ2				PP	PnPn	21 20 17.8	+4.3	HNR				pmax	pmax		
NJ2				S	S	21 24 17.6	+2.6		comp=Z,431nm,1.3s						
NJ2				SS	SnSn	21 26 03.8	+5.8	HNR				MLR	MLR		
NJ2				pmax	pmax				comp=Z,11µm,21.0s						
	comp=Z,76nm,1.2s							LYN	LuoYang	35.26	340	⇓P	P	21 19 47.6	0.0
NJ2				LR	LR			LYN				pP	sP	21 20 00.0	+0.3
	comp=Z,3µm,16.1s							LYN				PcP	PcP	21 22 21.3	+3.3
NJ2				LR	LR			LYN				S	S	21 25 15.3	-4.2
	comp=Z,5µm,20.8s							LYN				ScS	ScS	21 30 07.4	+1.5
NJ2				LR	LR			LYN				pmax	pmax		
	comp=Z,7µm,21.0s								comp=Z,130nm,1.2s						
GYA	Guiyang	31.15	324	⇓P	P	21 19 14.1	+2.1	LYN				pmax	pmax		
GYA				S	S	21 24 16.8	+0.7		comp=Z,1µm,3.9s						
GYA				pmax	pmax			LYN				LR	LR		
	comp=Z,120nm,1.4s								comp=Z,7µm,21.3s						
GYA				pmax	pmax			LYN				LR	LR		
	comp=Z,1µm,4.2s								comp=Z,8µm,18.9s						
GYA				LR	LR			LYN				LR	LR		
	comp=Z,7µm,27.0s								comp=Z,20µm,25.1s						
GYA				LR	LR			JGF	Kuroka	35.32	16	P	P	21 19 46.4	-1.8
	comp=Z,9µm,21.4s														

JGF				IAmb	IAmb	21 19 52.0		
	comp=Z,463nm,1.7s							
JGF	Kuroka	35.32	16	P	P	21 19 49.6	+1.4	
JGF	Kuroka	35.32	16	⇑P	P	21 19 50.0	+1.8	
JGF	Kuroka	35.32	16	P	P	21 19 49.7	+1.6	
NWAO	Narrogin (SRO)	35.43	193	P	P	21 19 49.5	+0.4	
	comp=Z,252nm,1.1s							
NWAO	Narrogin (SRO)	35.43	193	LR	LR	21 35 46.7		
	comp=Z,4µm,21.1s,baz=12,slow=39							
NWAO	Narrogin (SRO)	35.43	193	P	P	21 19 47.9	-1.2	
NWAO				IAmb	IAmb	21 19 52.6		
	comp=Z,186nm,0.8s							
NWAO	Narrogin (SRO)	35.43	193	P	P	21 19 49.4	+0.4	
NWAO				S	S	21 25 19.3	-2.9	
NWAO	Narrogin (SRO)	35.43	193	P	P	21 19 49.6	+0.5	
NWAO	Narrogin (SRO)	35.43	193	P	P	21 19 47.9	-1.2	
NWAO				pmax	pmax			
	comp=Z,186nm,0.8s							
NWAO				MLR	MLR			
	comp=Z,3µm,20.0s							
BBOO	Buckleboo	35.43	166	P	P	21 19 48.7	-0.5	
	comp=Z,433nm,1.2s							
BBOO	Buckleboo	35.43	166	P	P	21 19 47.5	-1.6	
BBOO	Buckleboo	35.43	166	P	P	21 19 48.7	-0.5	
TIA	Tai'an	35.48	347	P	P	21 19 50.8	+1.2	
TIA				S	S	21 25 19.8	-3.2	
TIA				pmax	pmax			
	comp=Z,98nm,1.2s							
TIA				pmax	pmax			
	comp=Z,800nm,6.4s							
TIA				LR	LR			
	comp=Z,6µm,22.6s							
TIA				LR	LR			
	comp=Z,7µm,24.5s							
TIA				LR	LR			
	comp=Z,12µm,25.0s							
JOD2	Odawara 2	35.50	18	P	P	21 19 48.3	-1.5	
TNCH	TengChong	35.58	313	⇓*i* P	P	21 19 50.1	-0.6	
TNCH				PP	PP	21 21 14.1	+2.2	
TNCH				S	S	21 25 27.8	+2.7	
TNCH				pmax	pmax			
	comp=Z,180nm,1.6s							
TNCH				pmax	pmax			
	comp=Z,940nm,3.0s							
TNCH				LR	LR			
	comp=Z,2µm,15.7s							
TNCH				LR	LR			
	comp=Z,4µm,18.6s							
TNCH				LR	LR			
	comp=Z,13µm,24.5s							
KSRS	Korea Array	35.70	2	P	P	21 19 52.6	+1.4	
	comp=Z,9.1nm,0.7s,baz=182,slow=9.9,SNR=17							
KSRS				PcP	PcP	21 22 20.6	+1.4	
	comp=Z,12nm,0.9s,baz=183,slow=2.8,SNR=5.9							
	comp=Z,9.1nm,0.7s							
INCN	Inchon	35.70	0	P	P	21 19 49.3	-2.1	
INCN	Inchon	35.70	0	S	S	21 25 23.8	-2.4	
INCN	Inchon	35.70	0	P	P	21 19 49.3	-2.1	
INCN				pmax	pmax			
	comp=Z,163nm,1.4s							
INCN				MLR	MLR			
	comp=Z,5µm,20.0s							
KS19	Wonju Array Si	35.74	2	P	P	21 19 51.2	-0.5	
KS19				IAmb	IAmb	21 20 05.0		
	comp=Z,381nm,1.7s							
JGN	Niukaw	35.89	15	P	P	21 19 54.6	+1.4	
EIDS	Eidsvold	35.92	140	P	P	21 19 53.1	-0.5	
	comp=Z,287nm,1.5s							
EIDS	Eidsvold	35.92	140	P	P	21 19 52.6	-0.9	
EIDS	Eidsvold	35.92	140	P	P	21 19 54.6	+1.1	
EIDS	Eidsvold	35.92	140	⇑P	P	21 19 53.0	-0.5	
JRY	Ryogami san	36.14	17	P	P	21 19 55.5	+0.3	
XAN	Xi'an	36.17	335	⇓P	P	21 19 54.5	-1.0	
XAN				pP	pP	21 20 01.4	-2.7	
XAN				PP	PP	21 21 20.8	+2.7	
XAN				S	S	21 25 36.8	+3.2	
XAN				SS	SnSn	21 27 55.5	-5.4	
XAN				pmax	pmax			
	comp=Z,290nm,1.4s							
XAN				pmax	pmax			
	comp=Z,1µm,3.6s							
XAN				LR	LR			
	comp=Z,6µm,20.6s							
XAN				LR	LR			
	comp=Z,6µm,19.2s							
XAN				LR	LR			
	comp=Z,6µm,22.3s							
CD2	Chengdu	36.17	326	P	P	21 19 56.9	+1.3	
CD2				S	S	21 25 30.3	-3.5	
CD2				pmax	pmax			
	comp=Z,340nm,1.0s							
CD2				LR	LR			
	comp=Z,15µm,26.0s							
CD2				LR	LR			
	comp=Z,18µm,26.0s							
CD2				LR	LR			
	comp=Z,16µm,26.5s							
STKA	Stephens Creek	36.29	158	P	P	21 19 56.6	+0.1	
	comp=Z,1µm,1.1s							
STKA	Stephens Creek	36.29	158	P	P	21 19 56.3	-0.2	
	comp=Z,143nm,0.8s,baz=331,slow=8.7,SNR=90							
STKA				S	S	21 25 35.2	-0.2	
	comp=Z,5.5nm,0.6s,baz=144,slow=16,SNR=1.8							
STKA				LR	LR	21 38 08.7		
	comp=Z,5µm,18.1s,baz=341,slow=42							
	comp=Z,143nm,0.8s							
STKA	Stephens Creek	36.29	158	P	P	21 19 56.8	+0.3	
STKA	Stephens Creek	36.29	158	*i* P	P	21 19 56.1	-0.4	
MJAR	Matsushiro Arr	36.43	16	P	P	21 19 58.0	+0.3	
	comp=Z,90nm,1.0s,baz=192,slow=8.1,SNR=57							
MJAR				PcP	PcP	21 22 23.3	+1.8	
	comp=Z,21nm,0.9s,baz=185,slow=2.5,SNR=5.3							
MJAR				ScP	ScP	21 26 07.1	+1.1	
	comp=Z,7.9nm,1.1s,baz=222,slow=4.9,SNR=4.6							
MJAR				LR	LR	21 34 35.4		
	comp=Z,9µm,21.2s,baz=208,slow=36							
	comp=Z,90nm,1.0s							
MAJO	Matsushiro	36.44	16	P	P	21 19 56.7	-1.0	
MAJO				IAmb	IAmb	21 20 12.9		
	comp=Z,311nm,1.2s							
MAJO	Matsushiro	36.44	16	IAMs_20	IAMs_20	21 34 34.5		
	comp=Z,10µm,21.0s							
MAJO	Matsushiro	36.44	16	P	P	21 20 00.7	+3.0	
MAJO	Matsushiro	36.44	16	*i* P	P	21 19 57.8	+0.1	
MAJO				pmax	pmax			
	comp=Z,440nm,1.8s							
MAJO	Matsushiro	36.44	16	⇑P	P	21 19 58.0	+0.3	
MAT	Matsushiro	36.44	16	P	P	21 19 57.8	+0.1	
MJB9	Matsu-Tunnel	36.44	16	P	P	21 19 57.6	-0.2	
MJB9				IAmb	IAmb	21 20 13.9		
	comp=Z,306nm,1.2s							
JYT	Yasato	36.74	19	P	P	21 19 58.8	-1.4	
HTT	Hallett	36.80	162	P	P	21 20 02.0	+1.2	
	comp=Z,73nm,1.3s							
HTT	Hallett	36.80	162	P	P	21 20 02.1	+1.2	
HTT	Hallett	36.80	162	⇑P	P	21 20 01.1	+0.2	
RKGY	Rocky Gully	37.10	193	P	P	21 20 05.2	+1.8	
	comp=Z,914nm,1.0s							
HNS	HongShan	37.21	345	⇑P	P	21 20 05.8	+1.6	
HNS				PcP	PcP	21 22 27.1	+3.3	
HNS				S	S	21 25 45.5	-3.7	
HNS				pmax	pmax			
	comp=Z,140nm,1.3s							
HNS				LR	LR			
	comp=Z,8µm,23.7s							
HNS				LR	LR			
	comp=Z,5µm,23.1s							
HNS				LR	LR			
	comp=Z,16µm,23.0s							
DL2	Dalian	37.37	354	P	P	21 20 07.3	+1.7	
DL2				S	S	21 25 55.5	+3.8	
DL2				pmax	pmax			
	comp=Z,560nm,1.1s							
DL2				pmax	pmax			
	comp=Z,2µm,3.7s							
DL2				LR	LR			
	comp=Z,6µm,19.2s							
DL2				LR	LR			
	comp=Z,8µm,19.0s							
DL2				LR	LR			
	comp=Z,12µm,19.5s							
CMSA	Cobar Meteorol	37.72	153	P	P	21 20 07.7	-0.9	
	comp=Z,118nm,1.2s							
CMSA	Cobar Meteorol	37.72	153	P	P	21 20 08.9	+0.3	
JSD	Sado	37.85	15	P	P	21 20 08.6	-1.1	
JSD	Sado	37.85	15	P	P	21 20 12.9	+3.2	

JSD Sado 37.85 15 ⇑P **P 21 20 11.6 +1.9**
JSD Sado 37.85 15 P **P 21 20 10.7 +1.0**
H01W3 Cape Leeuwin H 38.08 196 P P 21 20 15.9 +4.5
baz=25,slow=5.9,SNR=5.0
H01W1 Cape Leeuwin H 38.09 196 P **P 21 20 15.0 +3.6**
baz=25,slow=5.9,SNR=5.8
H01W2 Cape Leeuwin H 38.10 196 P **P 21 20 13.7 +2.2**
baz=25,slow=5.9,SNR=5.4
TIY Taiyuan 38.16 342 *e*P **P 21 20 13.9 +1.5**
TIY S **S 21 26 00.8 -3.0**
TIY pmax pmax
comp=Z,40nm,0.5s
TIY pmax pmax
comp=Z,480nm,5.4s
TIY LR LR
comp=Z,6µm,25.4s
TIY LR LR
comp=Z,5µm,23.4s
TIY LR LR
comp=Z,12µm,25.4s
JMM Marumori 38.43 18 P **P 21 20 14.3 -0.3**
JMM Marumori 38.43 18 P **P 21 20 15.9 +1.3**
JMM Marumori 38.43 18 ⇑P **P 21 20 15.8 +1.3**
JMM Marumori 38.43 18 P **P 21 20 15.9 +1.3**
JYA Atsumi 38.77 17 P **P 21 20 20.4 +3.0**
LKP Lekhapani 38.87 314 IAmb IAmb 21 20 13.9
comp=Z,631nm,1.3s
LKP IAMs_20 IAMs_20 21 37 00.9
comp=Z,7µm,19.7s
IMP Imphal 38.91 309 *e*P **P 21 20 16.8 -2.1**
IMP IAmb IAmb 21 20 32.2
comp=Z,100nm,1.2s
IMP IAMs_20 IAMs_20 21 40 12.0
comp=Z,9µm,17.6s
KOHI KOHIMA 39.26 310 *e*P **P 21 20 20.9 -1.0**
KOHI IAmb IAmb 21 20 24.6
comp=Z,317nm,1.2s
KOHI IAMs_20 IAMs_20 21 38 27.3
comp=Z,9µm,17.4s
MOKO MOKOCHONG 39.27 312 *e*P **P 21 20 21.2 -0.8**
MOKO IAmb IAmb 21 20 25.2
comp=Z,660nm,1.6s
MOKO IAMs_20 IAMs_20 21 35 28.3
comp=Z,14µm,21.9s
BJT Baijiatuau 39.34 348 P **P 21 20 21.8 -0.4**
BJT Baijiatuau 39.34 348 P **P 21 20 24.3 +2.1**
BJT Baijiatuau 39.34 348 P **P 21 20 21.8 -0.4**
BJT pmax pmax
comp=Z,193nm,1.2s
BJT MLR MLR
comp=Z,3µm,22.0s
BJI Beijing 39.36 348 P **P 21 20 23.9 +1.6**
BJI pP **sP 21 20 31.6 -2.9**
BJI sP **pP 21 20 34.6 +3.6**
BJI PP **PnPn 21 21 59.4 +3.4**
BJI S **S 21 26 20.9 -0.8**
BJI SS **SS 21 29 12.3 -4.1**
BJI pmax pmax
comp=Z,77nm,1.1s
BJI pmax pmax
comp=Z,410nm,4.4s
BJI LR LR
comp=Z,2µm,23.3s
BJI LR LR
comp=Z,2µm,21.3s
BJI LR LR
comp=Z,3µm,27.1s
JORH JORHAT 39.70 312 *e*P **P 21 20 26.1 +0.7**
JORH IAmb IAmb 21 20 29.8
comp=Z,403nm,1.0s
JORH IAMs_20 IAMs_20 21 37 51.4
comp=Z,6µm,19.2s
BRDH Bariadhala 39.72 305 P **P 21 20 27.0 +1.5**
comp=Z,164nm,0.4s,baz=86,slow=8.4,SNR=10
comp=Z,164nm,0.4s
JOM Ohasama 40.06 18 P **P 21 20 29.4 +1.3**
SNY Shenyang 40.12 357 ⇓P **P 21 20 31.3 +2.7**
SNY S **S 21 26 33.8 +0.8**
SNY pmax pmax
comp=Z,290nm,1.4s
SNY pmax pmax
comp=Z,950nm,11.4s
SNY LR LR
comp=Z,5µm,22.3s
SNY LR LR
comp=Z,3µm,19.9s
SNY LR LR
comp=Z,7µm,24.9s
LZDM Lanzhou Array 40.14 331 P **P 21 20 29.6 +0.4**
comp=Z,124nm,1.2s,baz=143,slow=5.2,SNR=42
LZDM PcP **PcP 21 22 35.5 +2.1**
comp=Z,27nm,0.6s,baz=145,slow=5.4,SNR=9.4
comp=Z,124nm,1.2s
LZH Lanzhou 40.17 331 ⇓P **P 21 20 29.8 +0.5**
LZH pP sP 21 20 42.5 +0.9
LZH PcP **PcP 21 22 36.3 +3.0**
LZH S **S 21 26 30.8 -3.5**
LZH ScS **ScS 21 30 34.8 +0.6**
LZH pmax pmax
comp=Z,380nm,1.2s
LZH pmax pmax
comp=Z,1µm,4.4s
LZH LR LR
comp=Z,2µm,19.4s
LZH LR LR
comp=Z,11µm,21.5s
LZH LR LR
comp=Z,19µm,22.0s
ITAN ITANAGAR 40.32 312 *e*P **P 21 20 32.0 +1.5**
ITAN IAmb IAmb 21 20 50.4
comp=Z,303nm,1.0s
ZIRO ZIRO 40.44 313 *i* Pg **P 21 20 31.2 -0.5**
ZIRO IAmb IAmb 21 20 35.2
comp=Z,544nm,1.4s
ZIRO IAMs_20 IAMs_20 21 34 42.5
comp=Z,9µm,20.9s
AGT Agartala 40.59 306 *e*P **P 21 20 32.3 -0.5**
AGT IAMs_20 IAMs_20 21 37 40.9
comp=Z,9µm,17.1s
TEZP TEZPUR 40.73 311 *e*P **P 21 20 32.7 -1.2**
TEZP IAmb IAmb 21 20 37.2
comp=Z,485nm,1.7s
ARPS Mount Arapiles 40.80 161 P **P 21 20 35.0 +0.7**
comp=Z,275nm,1.2s
SHL Shillong 40.90 309 P **P 21 20 33.5 -2.0**
SHL Shillong 40.90 309 P **P 21 20 36.6 +1.1**
SNR=67
SHL Shillong 40.90 309 *e*P **P 21 20 34.4 -1.2**
SHL IAmb IAmb 21 20 41.4
comp=Z,138nm,1.1s
SHL IAMs_20 IAMs_20 21 39 51.6
comp=Z,7µm,18.2s
SHL Shillong 40.90 309 P **P 21 20 33.5 -2.0**
SHL pmax pmax
comp=Z,167nm,1.0s
MSHR Mys Shultsa 41.01 5*ce*P **P 21 20 39.2 +3.3**
MSHR pmax pmax
comp=Z,124nm,1.2s
PSTR Posyet 41.05 5 *i* P **P 21 20 38.9 +2.6**
JTM Tenmabayashi 41.20 17 P **P 21 20 36.0 -1.6**
JTM IAmb IAmb 21 20 42.0
comp=Z,638nm,1.3s
JTM Tenmabayashi 41.20 17 P **P 21 20 39.5 +2.0**
JTM Tenmabayashi 41.20 17 ⇑P **P 21 20 39.5 +2.0**
JTM Tenmabayashi 41.20 17 P **P 21 20 39.9 +2.4**
YNG Young 41.27 152 P **P 21 20 39.1 +0.8**
comp=Z,166nm,1.8s
MGBR Mount Gambier 41.28 163 P **P 21 20 37.5 -0.7**
MGBR IAmb IAmb 21 20 44.1
comp=Z,326nm,1.1s
HHC Hu-ho-hao-te 41.30 343 ⇑*i*P **P 21 20 40.3 +1.7**
HHC S **S 21 26 49.9 -1.1**
HHC pmax pmax
comp=Z,66nm,1.2s
HHC pmax pmax
comp=Z,330nm,5.6s
HHC LR LR
comp=Z,8µm,21.0s
HHC LR LR
comp=Z,5µm,20.2s
HHC LR LR
comp=Z,14µm,21.9s
GUWA GUWAHATI 41.36 309 *e*P **P 21 20 40.9 +1.8**
GUWA IAmb IAmb 21 20 46.7
comp=Z,56nm,1.0s
GUWA IAMs_20 IAMs_20 21 37 00.6
comp=Z,8µm,20.4s
BTO Baotou 41.56 341 *e*P **P 21 20 42.3 +1.7**
BTO S **S 21 26 58.9 +4.2**
BTO pmax pmax
comp=Z,27nm,1.1s
BTO pmax pmax
comp=Z,2µm,4.3s
BTO LR LR
comp=Z,16µm,23.4s
BTO LR LR
comp=Z,12µm,20.0s
BTO LR LR
comp=Z,25µm,20.0s
VLA Vladivostok 41.62 6 *i* P **P 21 20 43.5 +2.6**
VLA pmax pmax
comp=Z,315nm,1.4s
JOT Ohata 41.74 17 P **P 21 20 44.2 +2.2**
MGCD Mangrove Creek 41.75 148 P **P 21 20 44.1 +1.9**
comp=Z,92nm,0.9s
MGCD Mangrove Creek 41.75 148 P **P 21 20 44.0 +1.8**
TAWA Tawang 41.95 311 *e*P **P 21 20 44.9 +0.5**
TAWA IAmb IAmb 21 20 48.7
comp=Z,625nm,1.4s
CN2 Changchun 42.02 359 P **P 21 20 45.9 +1.7**
CN2 pmax pmax
comp=Z,40nm,1.5s
RIV Riverview 42.26 149 P **P 21 20 47.9 +1.6**
comp=Z,160nm,1.9s
CAN Canberra 42.39 152 P **P 21 20 48.5 +1.0**
comp=Z,199nm,1.7s
CAN Canberra 42.39 152 P **P 21 20 45.3 -2.2**
CAN IAMs_20 IAMs_20 21 41 36.5
comp=Z,10µm,19.0s
CAN Canberra 42.39 152 P **P 21 20 48.8 +1.4**
CAN Canberra 42.39 152 P **P 21 20 45.3 -2.2**
CAN pmax pmax
comp=Z,167nm,1.0s
CAN MLR MLR
comp=Z,10µm,19.0s
CAN Canberra 42.39 152 ⇑P **P 21 20 48.4 +0.9**
CNB Canberra Magne 42.55 152 P **P 21 20 50.0 +1.2**
comp=Z,139nm,1.8s
CNB Canberra Magne 42.55 152 P **P 21 20 50.0 +1.2**
USRK Ussuriysk Ar. 42.70 6 P **P 21 20 51.3 +1.6**
comp=Z,138nm,1.1s,baz=187,slow=5.9,SNR=62
comp=Z,138nm,1.1s
TOO Toolangi 42.81 158 P **P 21 20 53.1 +2.3**
comp=Z,59nm,1.3s
TOO Toolangi 42.81 158 P **P 21 20 49.1 -1.7**
TOO Toolangi 42.81 158 P **P 21 20 49.1 -1.7**
TOO pmax pmax
comp=Z,215nm,1.8s
TOO Toolangi 42.81 158 ⇑P **P 21 20 52.4 +1.6**
H11S3 WAKE ISLAND Hy 42.91 64 T T 22 07 52.4
baz=252,slow=75,SNR=103
MDJ Mudanjiang 42.92 3 P **P 21 20 52.7 +1.2**
MDJ IAMs_20 IAMs_20 21 41 17.4
comp=Z,9µm,20.0s
MDJ Mudanjiang 42.92 3 P **P 21 20 54.3 +2.8**
MDJ S **S 21 27 12.3 -2.1**
MDJ pmax pmax
comp=Z,150nm,1.2s
MDJ pmax pmax
comp=Z,640nm,3.5s
MDJ LR LR
comp=Z,8µm,20.6s
MDJ LR LR
comp=Z,2µm,18.5s
MDJ LR LR
comp=Z,12µm,21.1s
MDJ Mudanjiang 42.92 3 P **P 21 20 55.0 +3.5**
H11S2 WAKE ISLAND Hy 42.92 64 T T 22 07 53.5
baz=252,slow=75,SNR=74
H11S1 WAKE ISLAND Hy 42.93 64 T T 22 07 54.1
baz=252,slow=75,SNR=62
ERM Erimo 42.95 18 P **P 21 20 51.4 -0.4**
ERM Erimo 42.95 18 P **P 21 20 51.4 -0.4**
ERM pmax pmax
comp=Z,207nm,1.1s
ERM MLR MLR
comp=Z,7µm,22.0s
JEM Erimo 42.95 18 P **P 21 20 54.0 +2.1**
XLT XiLinHaoTe 43.10 349 *e*P **P 21 20 54.0 +0.9**
XLT S **S 21 27 15.3 -2.0**
XLT pmax pmax
comp=Z,110nm,1.1s
XLT pmax pmax
comp=Z,1µm,6.8s
XLT LR LR
comp=Z,340nm,23.8s
XLT LR LR
comp=Z,3µm,20.8s
XLT LR LR
comp=Z,6µm,22.5s
WAKE Wake Island 43.13 63 P **P 21 20 51.5 -2.2**
WAKE IAmb IAmb 21 21 32.6
comp=Z,740nm,1.8s
H11N1 WAKE ISLAND Hy 43.48 63 T T 22 08 33.7
baz=251,slow=75,SNR=4.3
H11N2 WAKE ISLAND Hy 43.49 63 T T 22 08 38.3
baz=251,slow=75,SNR=3.6
H11N3 WAKE ISLAND Hy 43.50 63 T T 22 08 36.0
baz=251,slow=75,SNR=4.7
LSA Lhasa 43.61 313 P **P 21 20 57.2 -0.7**
LSA IAmb IAmb 21 21 05.4
comp=Z,601nm,1.8s
LSA Lhasa 43.61 313 P **P 21 20 57.3 -0.7**
LSA pmax pmax
comp=Z,601nm,1.8s
LSA MLR MLR
comp=Z,5µm,22.0s
SANVU Saraoutou 43.76 114 P **P 21 20 58.6 -0.1**
SANVU IAMs_20 IAMs_20 21 38 26.0
comp=Z,12µm,22.0s
SANVU Saraoutou 43.76 114 P **P 21 21 01.3 +2.6**
SANVU Saraoutou 43.76 114 ⇑P **P 21 20 59.0 +0.3**
BWNR Bhubaneshwar 43.77 298 *e*P **P 21 20 59.3 +0.6**
BWNR IAMs_20 IAMs_20 21 39 30.3
comp=Z,7µm,20.7s
MILA Mila 43.89 153 P **P 21 21 01.8 +2.2**
comp=Z,32nm,1.4s
MILA Mila 43.89 153 ⇓P **P 21 21 01.1 +1.5**
BNX BinXian 43.95 1 ⇓P **P 21 21 00.9 +1.0**
BNX pP **sP 21 21 09.4 -2.7**
BNX sP **pP 21 21 14.0 +5.4**
BNX S **S 21 27 32.8 +3.2**
BNX pmax pmax
comp=Z,59nm,1.2s
BNX pmax pmax
comp=Z,920nm,5.2s
BNX LR LR
comp=Z,4µm,21.7s
BNX LR LR
comp=Z,4µm,22.8s
BNX LR LR
comp=Z,7µm,22.8s
SHBG Sahibganj 44.10 305 *e*P **P 21 21 03.2 +1.9**
SHBG IAmb IAmb 21 21 18.1
comp=Z,166nm,0.9s
SHBG ⇓*ex* x 21 21 18.1
TEY Ternei 44.17 10 *e*P **P 21 21 03.6 +2.0**
ASAJ Asahikawa 44.70 17 P **P 21 21 08.3 +2.4**
comp=Z,187nm,1.0s,baz=232,slow=8.7,SNR=15
ASAJ LR LR 21 39 47.5
comp=Z,10µm,21.6s,baz=212,slow=36
comp=Z,187nm,1.0s
ASAJ Asahikawa 44.70 17 P **P 21 21 08.1 +2.2**
JKA Kamikawa-asahi 44.70 17 P **P 21 21 04.4 -1.4**
JKA IAmb IAmb 21 21 11.2
comp=Z,408nm,1.3s
GTA Gaotai 44.75 330 P **P 21 21 06.9 +0.4**
GTA PcP **PP 21 22 50.8 -0.6**
GTA ScP **ScP 21 26 36.6 -2.2**
GTA PcS **PcS 21 26 43.1 +1.0**
GTA S **S 21 27 38.3 -3.4**
GTA ScS **ScS 21 31 02.8 +0.6**
GTA pmax pmax
comp=Z,100nm,1.7s
GTA pmax pmax
comp=Z,980nm,4.0s
GTA LR LR
comp=Z,8µm,23.3s
GTA LR LR
comp=Z,4µm,21.1s
GTA LR LR
comp=Z,12µm,24.0s
BOK Bokaro 44.98 303 *e*P **P 21 21 09.6 +1.1**
BOK IAmb IAmb 21 21 14.9
comp=Z,292nm,1.7s
BOK IAMs_20 IAMs_20 21 39 42.0
comp=Z,8µm,21.8s
GOMU GeErMu 45.15 323 P **P 21 21 10.8 +0.7**
GOMU PcP **PcP 21 22 49.1 -1.1**
GOMU S **S 21 27 44.8 -3.3**
GOMU pmax pmax
comp=Z,98nm,1.3s
GOMU LR LR
comp=Z,3µm,15.9s
GOMU LR LR
comp=Z,4µm,20.0s
VIS Vishakhapatnam 45.21 293 *e*P **P 21 21 09.3 -1.1**
VIS IAMs_20 IAMs_20 21 40 13.5
comp=Z,6µm,20.5s
RAGD RAYAGADA 45.53 296 *e*P **P 21 21 13.1 +0.2**
RAGD IAmb IAmb 21 21 29.1
comp=Z,237nm,1.5s
YUK Yuzh-Kuril'sk 45.64 20*d i*P **P 21 21 14.4 +1.1**
YUK *e*S **S 21 27 55.5 +1.4**
YUK pmax pmax
comp=Z,770nm,1.1s
YUK pmax pmax
comp=N,184nm,0.9s
YUK pmax pmax
comp=E,597nm,1.1s
ONTNC Ouen Toro 45.73 124 P **P 21 21 13.5 -0.9**
ONTNC IAmb IAmb 21 21 20.9
comp=Z,152nm,1.0s
ONTNC Ouen Toro 45.73 124 ⇑P **P 21 21 15.1 +0.7**
HALK Hakmana 45.82 277 ⇓P **P 21 21 15.9 +0.7**
PALK Pallekele 45.88 279 LR LR 21 41 51.3
comp=Z,5µm,21.9s,baz=99,slow=38
PALK Pallekele 45.88 279 P **P 21 21 13.2 -2.6**
PALK IAmb IAmb 21 21 21.5
comp=Z,450nm,1.9s
PALK Pallekele 45.88 279 P **P 21 21 15.6 -0.2**
PALK S S 21 27 50.4 -8.2
PALK Pallekele 45.88 279 P **P 21 21 13.2 -2.6**
PALK pmax pmax
comp=Z,450nm,1.9s
GAYA Gaya 45.93 304 *e*P **P 21 21 15.0 -0.9**
GAYA IAmb IAmb 21 21 21.7
comp=Z,566nm,1.9s
GAYA IAMs_20 IAMs_20 21 39 14.4
comp=Z,8µm,20.3s
YATNC Mamie plateau, 45.99 123 P **P 21 21 19.0 +2.5**
EVN Everest 46.01 308 P **P 21 21 15.7 -1.6**
EVN Everest 46.01 308 ⇓P **P 21 21 16.6 -0.7**
JHSG JHARSUGUGA 46.05 299 *e*P **P 21 21 18.0 +1.1**
JHSG IAmb IAmb 21 21 32.9
comp=Z,278nm,1.2s
OUENC Ouen Island, N 46.10 124 P **P 21 21 19.8 +2.5**
MALK Mahakanadarawa 46.14 280 P **P 21 21 15.5 -2.3**
MALK Mahakanadarawa 46.14 280 ⇓P **P 21 21 16.3 -1.5**
TARA Tarawa 46.51 90 P **P 21 21 18.4 -2.3**
TARA IAmb IAmb 21 21 50.0
comp=Z,166nm,1.2s
TARA Tarawa 46.51 90 IAMs_20 IAMs_20 21 38 50.9
comp=Z,7µm,20.0s
PINNC Pines Island, 46.69 124 P **P 21 21 19.6 -2.3**
PINNC IAmb IAmb 21 21 29.3
comp=Z,247nm,1.1s
MARNC Mare, Loyalty 46.71 122 P **P 21 21 18.7 -3.4**
MARNC Mare, Loyalty 46.71 122 P **P 21 21 24.5 +2.4**
MARNC Mare, Loyalty 46.71 122 ⇑P **P 21 21 23.0 +0.9**
GLAD Gladstone 46.74 157 P **P 21 21 22.9 +0.9**
YSS Yuzhno-Sakhali 47.36 15 P **P 21 21 24.6 -2.1**
YSS Yuzhno-Sakhali 47.36 15 ⇓*e*P **P 21 21 28.8 +2.1**
YSS *e* 21 23 21.2
YSS *e*S **S 21 28 19.1 +0.5**
YSS *e*SS **SS 21 31 44.7 -1.9**
YSS pmax pmax
comp=Z,160nm,1.0s
YSS pmax pmax
comp=Z,1µm,4.4s
YSS smax smax
comp=N,1µm,5.0s
YSS smax smax
comp=E,2µm,7.4s
YSS MLR MLR
comp=Z,3µm,15.0s
YSS MLR MLR
comp=N,3µm,16.0s
YSS Yuzhno-Sakhali 47.36 15 ⇑P **P 21 21 29.6 +2.8**
VJD Vijayawada 47.39 291 *e*P P 21 21 34.1 +6.6
BLSP Bilaspur 47.61 299 *e*P **P 21 21 29.5 +0.3**
MOO Moorlands 47.70 159 P **P 21 21 31.6 +2.1**
HIA Hailar 47.82 354 P **P 21 21 31.3 +1.0**
HIA Hailar 47.82 354 P **P 21 21 33.0 +2.7**
HIA Hailar 47.82 354 P **P 21 21 31.3 +1.0**
HIA pmax pmax
comp=Z,444nm,1.4s
HIA MLR MLR
comp=Z,5µm,22.0s
HILR Hailar Array B 48.10 354 P **P 21 21 35.0 +2.4**
comp=Z,61nm,0.6s,baz=177,slow=10,SNR=54
HILR PcP **PcP 21 23 02.8 +2.8**
comp=Z,22nm,0.7s,baz=134,slow=4.2,SNR=4.3
HILR LR LR 21 45 12.1
comp=Z,3µm,19.3s,baz=120,slow=40
comp=Z,61nm,0.6s
HEH HeiHe 48.47 1 *e*P **P 21 21 36.0 +0.7**
HEH pP **sP 21 21 48.8 +1.2**
HEH PP **PP 21 23 24.8 -3.5**
HEH S **S 21 28 33.8 -0.5**
HEH SS **SS 21 32 05.5 +1.0**
HEH pmax pmax
comp=Z,700nm,1.1s
HEH pmax pmax
comp=Z,2µm,4.5s
HEH LR LR
comp=Z,3µm,22.9s
HEH LR LR
comp=Z,3µm,23.4s
HEH LR LR
comp=Z,8µm,22.5s
SALM Salem 48.83 284 *e*P **P 21 21 38.5 -0.2**
ULN Ulaanbaatar 49.02 343 P **P 21 21 38.4 -1.4**
ULN IAmb IAmb 21 22 28.2
comp=Z,268nm,1.6s
ULN Ulaanbaatar 49.02 343 P **P 21 21 41.7 +1.9**
ULN S **S 21 28 38.4 -4.1**
ULN Ulaanbaatar 49.02 343*ce*P **P 21 21 40.5 +0.7**
ULN pmax pmax
comp=Z,132nm,1.3s
ULN Ulaanbaatar 49.02 343 ⇓P **P 21 21 41.1 +1.3**
SONM Songino Array 49.19 342 P **P 21 21 42.7 +1.6**
comp=Z,72nm,1.0s,baz=162,slow=4.8,SNR=92
SONM PcP **PcP 21 23 05.7 +1.7**
comp=Z,35nm,0.9s,baz=164,slow=3.4,SNR=5.6
SONM LR LR 21 43 19.7
comp=Z,7µm,20.8s,baz=156,slow=37
comp=Z,72nm,1.0s
KOD Kodaikanal 49.36 282 *e*P **P 21 21 43.0 -0.1**
KOD IAmb IAmb 21 21 45.8
comp=Z,222nm,1.5s
HYBB Hyderabad (bro 49.55 292 *e*P **P 21 21 44.2 0.0**
HYBB *es*P **sP 21 21 54.0 -2.6**
HYBB *e*PcP **PcP 21 23 06.1 +0.3**
HYBB *e*PP **PP 21 23 39.3 +0.5**
HYBB *e*ScP **ScP 21 26 59.7 +0.4**
HYBB *e*S **S 21 28 51.6 +1.1**
TRD Trivandrum 49.68 280 *e*P **P 21 21 43.6 -1.6**
TRD IAmb IAmb 21 21 52.3
comp=Z,477nm,1.5s
GRNR Gornyy 49.71 8 ⇑*i*P **P 21 21 46.8 +2.0**
GRNR pmax pmax
comp=Z,40nm,1.1s
GRNR MLR MLR
comp=N,2µm,18.0s
GRNR MLR MLR
comp=E,1µm,18.0s
GRNR MLR MLR
comp=Z,3µm,17.0s
TYV Tymovskoe 50.97 13 *e*P **P 21 21 55.6 +1.3**
TYV *e*S **S 21 29 12.1 +3.0**
TYV pmax pmax
comp=Z,76nm,1.4s
TYV pmax pmax
comp=Z,400nm,2.5s
TYV smax smax
comp=N,500nm,2.8s

TYV smax smax
comp=E,1μm,2.8s
CIT Chita 51.38 350 *e*P **P 21 21 59.8 +2.4**
CIT *e* 21 22 09.6
CIT *e* 21 23 15.4
CIT *e* 21 24 55.0
CIT pmax pmax
comp=Z,1μm,1.3s
AKL Akola 51.75 295 *e*P **P 21 22 01.2 +0.5**
AKL IAmb IAmb 21 22 04.9
comp=Z,151nm,0.7s
AKL IAMs_20 IAMs_20 21 40 24.2
comp=Z,5μm,20.2s
JHNI Jhansi 51.81 301 *e*P **P 21 21 59.8 -1.3**
JHNI IAmb IAmb 21 22 02.6
comp=Z,510nm,1.8s
LGTI Lohaghat 51.86 307 *e*P **P 21 22 00.3 -1.1**
LGTI IAmb IAmb 21 22 08.4
comp=Z,42nm,0.8s
ZEA Zeya 51.96 1 *e*P **P 21 22 02.9 +1.2**
ZEA *e* 21 23 20.0
ZEA *e* 21 23 55.6
ZEA *e*S **S 21 29 19.1 -3.6**
ZEA *e* 21 31 54.7
ZEA *e*SS **SS 21 33 07.6 +7.5**
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=N,50nm,0.8s
ZEA pmax pmax
comp=Z,90nm,1.0s
ZEA pmax pmax
comp=Z,600nm,7.3s
ZEA pmax pmax
comp=Z,500nm,4.4s
ZEA smax smax
comp=E,500nm,14.5s
ZEA MLR MLR
comp=N,2μm,22.0s
ZEA MLR MLR
comp=Z,3μm,22.0s
BHPL Bhopal 52.09 298 *e*P **P 21 22 02.6 -0.6**
BHPL IAmb IAmb 21 22 10.1
comp=Z,177nm,1.1s
BHPL IAMs_20 IAMs_20 21 35 51.2
comp=Z,5μm,19.3s
NRDN NARMADA NAGAR 52.16 298 *e*P **P 21 22 06.6 +2.8**
MNGI Mangalore 52.28 285 *e*P **P 21 22 05.6 +0.9**
MNGI IAmb IAmb 21 22 12.0
comp=Z,44nm,0.8s
ZAK Zakamensk 52.41 342 *e*P **P 21 22 05.8 +0.6**
ZAK pmax pmax
comp=Z,76nm,2.5s
GUNA GUNA 52.59 300 *e*P **P 21 22 05.4 -1.6**
GUNA IAmb IAmb 21 22 13.4
comp=Z,331nm,0.6s
JOSI Joshimath 52.85 308 *e*P **P 21 22 09.0 0.0**
JOSI IAmb IAmb 21 22 11.8
comp=Z,248nm,1.2s
KAAM Kaadhehdhoo 53.41 269 P **P 21 22 11.8 -1.3**
KAAM IAmb IAmb 21 22 20.1
comp=Z,502nm,2.0s
KAAM Kaadhehdhoo 53.41 269 P **P 21 22 13.1 0.0**
TLY Talaya 53.43 343 P **P 21 22 11.0 -1.7**
TLY Talaya 53.43 343 P **P 21 22 14.2 +1.5**
TLY S **S 21 29 42.7 -0.3**
TLY Talaya 53.43 343 *ce*P **P 21 22 15.7 +3.0**
TLY pmax pmax
comp=Z,71nm,1.3s
FUNA Funafuti 53.58 102 P **P 21 22 13.1 -1.2**
FUNA Funafuti 53.58 102 ⇓P **P 21 22 16.4 +2.0**
KAD Karad 53.61 290 *e*P **P 21 22 14.0 -0.5**
GOA Goa 53.62 288 *e*P **P 21 22 11.3 -3.4**
GOA IAMs_20 IAMs_20 21 36 56.1
comp=Z,6μm,21.4s
DDI Dehra Dun 53.95 307 *e*P **P 21 22 17.2 +0.4**
NDI New Delhi 54.02 305 *e*P **P 21 22 16.3 -1.1**
AYAN Aya Nagar 54.03 304 *e*P **P 21 22 17.1 -0.3**
AYAN IAmb IAmb 21 22 19.9
comp=Z,221nm,1.2s
NPLP NPLP New Delhi 54.05 305 *e*P **P 21 22 17.1 -0.5**
POO Poona 54.16 292 *e*P **P 21 22 18.3 -0.3**
POO IAmb IAmb 21 22 34.5
comp=Z,45nm,0.8s
POO IAMs_20 IAMs_20 21 38 01.3
comp=Z,7μm,21.4s
MOY Mondy 54.25 341 *e*P **P 21 22 23.0 +4.2**
MOY pmax pmax
comp=Z,282nm,3.2s
WMQ Urumqi 54.27 326 ⇑*i*P **P 21 22 20.3 +1.3**
WMQ S **S 21 29 55.6 +0.8**
WMQ ScS **ScS 21 32 06.1 -0.2**
WMQ pmax pmax
comp=Z,65nm,1.7s
WMQ pmax pmax
comp=Z,890nm,3.7s
WMQ LR LR
comp=Z,8μm,20.1s
WMQ LR LR
comp=Z,6μm,22.9s
WMQ LR LR
comp=Z,8μm,22.9s
MSVF Nonsavu 54.36 113 P **P 21 22 19.6 -0.5**
MSVF IAmb IAmb 21 22 38.5
comp=Z,184nm,1.1s
MSVF Nonsavu 54.36 113 IAMs_20 IAMs_20 21 45 42.2
comp=Z,6μm,20.0s
MSVF Nonsavu 54.36 113 P **P 21 22 22.9 +2.8**
MSVF Nonsavu 54.36 113 P **P 21 22 19.6 -0.5**
MSVF pmax pmax
comp=Z,184nm,1.1s
MSVF MLR MLR
comp=Z,6μm,20.0s
MSVF Nonsavu 54.36 113 ⇑P **P 21 22 22.1 +2.0**
KUDL Kundal 54.44 304 *e*P **P 21 22 18.4 -2.0**
KUDL IAmb IAmb 21 22 24.9
comp=Z,835nm,1.9s
H08S2 Diego Garcia H 54.55 260 P **P 21 22 23.4 +2.3**
baz=48,slow=9.4,SNR=11
H08S3 Diego Garcia H 54.55 260 P **P 21 22 23.3 +2.1**
baz=48,slow=9.4,SNR=5.2
DGAR Diego Garcia 54.56 260 P **P 21 22 18.7 -2.8**
DGAR IAmb IAmb 21 22 24.2
comp=Z,105nm,0.9s
DGAR Diego Garcia 54.56 260 P **P 21 22 18.7 -2.8**
DGAR pmax pmax
comp=Z,105nm,0.9s
DGAR MLR MLR
comp=Z,4μm,20.0s
DGAR Diego Garcia 54.56 260 ⇑P **P 21 22 23.5 +2.0**
H08S1 Diego Garcia H 54.57 260 P **P 21 22 23.5 +2.2**
baz=48,slow=9.4,SNR=5.5
KNGR Kungurtug, Tuv 54.60 338 *i* P **P 21 22 22.6 +1.3**
KNGR pmax pmax
comp=Z,107nm,1.3s
SMLA Simla 54.96 308 *e*P **P 21 22 23.5 -0.6**
SMLA IAmb IAmb 21 22 31.8
comp=Z,323nm,0.9s
BHK Bhakra 55.66 308 *e*P **P 21 22 29.3 +0.1**
BHK IAmb IAmb 21 22 37.0
comp=Z,202nm,0.9s
UDPR Udaipur 55.72 299 *e*P **P 21 22 28.2 -1.6**
UDPR IAmb IAmb 21 22 35.2
comp=Z,397nm,1.0s
ALCI Alchi Leh 56.17 311 *e*P **P 21 22 32.4 -0.9**
ALCI IAmb IAmb 21 22 43.0
comp=Z,91nm,0.7s
ALCI IAMs_20 IAMs_20 21 39 57.5
comp=Z,5μm,18.6s
TLWR Talawar 56.23 308 *e*P **P 21 22 32.8 -0.5**
TSSA Tissa 56.41 309 *e*P **P 21 22 33.1 -1.7**
TSSA IAmb IAmb 21 22 48.1
comp=Z,271nm,0.9s
BOD Bodaibo 56.90 352 *e*P **P 21 22 38.6 +1.1**
BOD pmax pmax
comp=Z,434nm,1.4s
OUZ Omahuta 57.31 134 IAMs_20 IAMs_20 21 48 28.4
comp=Z,7μm,22.0s
OUZ Omahuta 57.31 134 P **P 21 22 43.6 +2.8**
OUZ Omahuta 57.31 134 P **P 21 22 41.9 +1.0**
JMU Jammu 57.34 308 *e*P **P 21 22 41.1 0.0**
JMU IAmb IAmb 21 22 49.3
comp=Z,311nm,0.9s
PEA0B Petropavlovsk- 57.51 22 P **P 21 22 40.3 -1.6**
PEA0B IAmb IAmb 21 23 02.0
comp=Z,194nm,1.4s
PEA0B Petropavlovsk- 57.51 22 *ce*P **P 21 22 43.5 +1.6**
PETK Petropavlovsk- 57.51 22 P **P 21 22 43.9 +1.9**
comp=Z,44nm,0.6s,baz=185,slow=4.8,SNR=68
PETK LR LR 21 47 40.3
comp=Z,3μm,20.2s,baz=213,slow=36
comp=Z,44nm,0.6s
PET Petropavlovsk 57.80 22 P **P 21 22 41.0 -2.9**
PET IAmb IAmb 21 22 48.3
comp=Z,331nm,1.5s
PET Petropavlovsk 57.80 22 *ce*P **P 21 22 47.8 +3.9**
PET pmax pmax
comp=Z,125nm,1.0s
PET Petropavlovsk 57.80 22 P **P 21 22 46.4 +2.5**
comp=Z,148nm,1.5s
SRNI Srinagar 57.90 310 *e*P **P 21 22 45.3 +0.3**
ZSN Zaisan 58.10 328 ⇑*i*P **P 21 22 47.3 +1.0**
ZSN Zaisan 58.10 328 *c i*P **P 21 22 47.3 +1.0**
DGZ Jazzator, Alta 58.27 331 *i* P **P 21 22 48.6 +1.0**
DGZ pmax pmax
comp=Z,42nm,0.8s
SHLS Shalkode 58.77 321 ⇑*i*P **P 21 22 49.9 -1.2**
comp=Z,91nm,1.1s
SHLS *e*S **S 21 30 51.9 -2.6**
SHLS Shalkode 58.77 321 *c i*P **P 21 22 49.9 -1.2**
SHLS *e*S **S 21 30 51.9 -2.6**
SHLS pmax pmax
comp=Z,91nm,1.1s
BHUJ Bhuj 58.99 296 *e*P **P 21 22 49.9 -2.9**
PRZ Przheval'sk 59.10 320 P **P 21 22 53.0 -0.5**
PRZ IAmb IAmb 21 23 04.1
comp=Z,111nm,0.8s
PRZ Przheval'sk 59.10 320 P **P 21 22 53.0 -0.5**
PRZ pmax pmax
comp=Z,111nm,0.8s
MK31 Makanchi Array 59.11 326 P **P 21 22 53.4 +0.1**
MK31 IAmb IAmb 21 22 58.0
comp=Z,126nm,1.1s
MK31 Makanchi Array 59.11 326 *ce*P **P 21 22 54.6 +1.3**
MKAR Makanchi Array 59.11 326 P **P 21 22 52.6 -0.7**
comp=Z,30nm,0.4s,baz=120,slow=7.7,SNR=51
MKAR S **S 21 30 52.3 -6.2**
comp=Z,2.2nm,1.1s,baz=109,slow=18,SNR=2.3
MKAR LR LR 21 49 17.7
comp=Z,6μm,21.5s,baz=103,slow=37
MKAR PKP2bc **P'P'bc 21 52 32.9 -4.6**
comp=Z,3.2nm,1.1s,baz=90,slow=1.4,SNR=3.6
comp=Z,30nm,0.4s
TARG Taragay, Kyrgy 59.11 319 P **P 21 22 54.2 +0.4**
TARG Taragay, Kyrgy 59.11 319 P **P 21 22 54.3 +0.4**
TARG pmax pmax
comp=Z,75nm,1.0s
DCZ Deep Cove 59.13 148 P **P 21 22 50.8 -2.5**
DCZ IAMs_20 IAMs_20 21 49 22.5
comp=Z,6μm,19.0s
JCZ Jackson Bay 59.15 146 P **P 21 22 55.7 +2.0**
JCZ Jackson Bay 59.15 146 P **P 21 22 55.3 +1.6**
KSH Kashi 59.32 316 P **P 21 22 56.3 +1.3**
KSH pP sP 21 23 04.8 -2.6
KSH S **S 21 30 58.8 -2.9**
KSH ScS **ScS 21 32 40.4 -2.9**
KSH pmax pmax
comp=Z,62nm,2.2s
KSH LR LR
comp=Z,3μm,18.6s
KSH LR LR
comp=Z,3μm,22.9s
KSH LR LR
comp=Z,6μm,24.4s
PYZ Puysegur Point 59.34 149 IAMs_20 IAMs_20 21 49 09.1
comp=Z,8μm,21.0s
SATY Saty 59.38 321 *e*P **P 21 22 56.0 +0.6**
comp=Z,78nm,1.0s
SATY *e*S **S 21 31 03.2 +0.8**
SATY Saty 59.38 321 *e*P **P 21 22 56.0 +0.6**
SATY *e*S **S 21 31 03.2 +0.8**
SATY pmax pmax
comp=Z,78nm,1.0s
FOZ Fox Glacier 59.41 145 IAMs_20 IAMs_20 21 52 45.9
comp=Z,4μm,20.0s
FOZ Fox Glacier 59.41 145 P **P 21 22 59.3 +4.0**
QRZ Quartz Range 59.50 141 P **P 21 22 53.1 -3.0**
QRZ IAmb IAmb 21 23 48.8
comp=Z,261nm,1.4s
QRZ IAMs_20 IAMs_20 21 50 48.4
comp=Z,4μm,19.0s
QRZ Quartz Range 59.50 141 P **P 21 22 58.0 +1.9**
DSZ Denniston Nort 59.56 142 P **P 21 22 55.5 -1.0**
DSZ IAmb IAmb 21 24 32.0
comp=Z,237nm,1.3s
DSZ IAMs_20 IAMs_20 21 50 12.9
comp=Z,6μm,20.0s
MLZ Mavora Lakes 59.59 147 IAMs_20 IAMs_20 21 50 32.6
comp=Z,6μm,20.0s
MLZ Mavora Lakes 59.59 147 P **P 21 22 57.3 +0.6**
WVZ Waitaha Valley 59.68 144 P **P 21 23 00.6 +3.4**
KDJ Kajisay 59.71 319 P **P 21 22 57.2 -0.5**
KDJ IAmb IAmb 21 23 05.7
comp=Z,147nm,1.0s
KDJ Kajisay 59.71 319 P **P 21 22 57.2 -0.5**
KDJ pmax pmax
comp=Z,147nm,1.0s
AIS Amsterdam Isla 59.72 224 P **P 21 22 56.8 -0.8**
WKZ Wanaka 59.75 146 IAMs_20 IAMs_20 21 50 24.8
comp=Z,7μm,22.0s
WKZ Wanaka 59.75 146 P **P 21 23 01.3 +3.6**
WHZ Wether Hill Ro 59.84 148 P **P 21 22 56.9 -1.4**
WHZ IAMs_20 IAMs_20 21 49 33.1
comp=Z,6μm,20.0s
TOZ Tahuroa Road 59.88 136 P **P 21 22 57.6 -1.0**
TOZ IAMs_20 IAMs_20 21 52 25.2
comp=Z,5μm,18.0s
TKNZ Takaka Hill 59.89 141 P **P 21 22 57.4 -1.3**
INZ Inchbonnie 59.90 143 P **P 21 22 56.2 -2.5**
INZ IAmb IAmb 21 23 04.4
comp=Z,93nm,1.0s
INZ IAMs_20 IAMs_20 21 53 33.8
comp=Z,6μm,21.0s
LBZ Lake Benmore 60.13 145 P **P 21 22 58.2 -2.1**
LBZ IAmb IAmb 21 23 10.1
comp=Z,234nm,1.4s
LBZ IAMs_20 IAMs_20 21 50 36.1
comp=Z,4μm,20.0s
LBZ Lake Benmore 60.13 145 P **P 21 23 00.6 +0.2**
EAZ Earnscleugh 60.16 146 P **P 21 23 03.2 +2.7**
RPZ Rata Peaks 60.24 144 LR LR 21 49 27.3
comp=Z,4μm,21.9s,baz=308,slow=36
RPZ Rata Peaks 60.24 144 P **P 21 22 58.9 -2.2**
RPZ IAMs_20 IAMs_20 21 46 28.9
comp=Z,5μm,22.0s
RPZ Rata Peaks 60.24 144 P **P 21 23 03.1 +2.0**
RPZ Rata Peaks 60.24 144 P **P 21 23 01.8 +0.6**
THZ Tophouse 60.25 141 P **P 21 22 58.7 -2.6**
THZ IAMs_20 IAMs_20 21 53 15.2
comp=Z,4μm,19.0s
NNZ Nelson 60.25 141 P **P 21 22 59.2 -2.0**
NNZ IAmb IAmb 21 23 13.2
comp=Z,144nm,1.3s
NNZ IAMs_20 IAMs_20 21 50 51.3
comp=Z,4μm,20.0s
TNSS Tian-Shan 60.30 320 *e*P **P 21 23 02.4 +0.3**
TNSS Tian-Shan 60.30 320 *e*P **P 21 23 02.3 +0.3**
YAK Yakutsk 60.32 2 P **P 21 23 00.9 -0.3**
YAK Yakutsk 60.32 2 *e*P **P 21 23 02.4 +1.2**
YAK *e* 21 23 44.1
YAK *e* 21 25 15.6
YAK *e*S **S 21 31 13.2 -0.3**
YAK *e*S **S 21 31 13.2 -0.3**
YAK *e**SS sS 21 31 40.6 +12
YAK *e* 21 32 52.2
YAK *e*SS **SS 21 35 12.9 +1.5**
YAK *e*SSS SSS 21 37 55.7
YAK pmax pmax
comp=Z,507nm,1.0s
YAK pmax pmax
comp=N,262nm,1.2s
YAK pmax pmax
comp=E,73nm,1.3s
YAK pmax pmax
comp=Z,305nm,2.5s
YAK pmax pmax
comp=N,141nm,1.9s
YAK pmax pmax
comp=E,219nm,2.5s
YAK smax smax
comp=N,156nm,1.9s
YAK smax smax
comp=E,1μm,3.3s
YAK MLR MLR
comp=Z,3μm,19.0s
YAK MLR MLR
comp=N,1μm,18.0s
YAK MLR MLR
comp=E,1μm,21.0s
YAK Yakutsk 60.32 2 ⇑P **P 21 23 02.4 +1.2**
ARXS Arharly 60.33 322 *e*P **P 21 23 02.3 +0.5**
TDK Taldyqorghan 60.38 323 ⇑*i*P **P 21 23 02.9 +0.9**
comp=E,109nm,0.9s
TDK *e*S **S 21 31 16.4 +1.4**
TDK Taldyqorghan 60.38 323 *c i*P **P 21 23 02.9 +0.9**
TDK *e*S **S 21 31 16.3 +1.4**
TDK pmax pmax
comp=Z,109nm,0.9s
ULHL Ulahol 60.38 319 P **P 21 23 04.3 +1.9**
SNR=32
LTZ Lake Taylor 60.43 143 P **P 21 22 59.9 -2.6**
LTZ IAmb IAmb 21 23 17.6
comp=Z,145nm,1.3s
LTZ IAMs_20 IAMs_20 21 52 05.9
comp=Z,6μm,19.0s
OXZ Oxford 60.60 143 P **P 21 23 02.6 -1.0**
OXZ IAmb IAmb 21 23 13.9
comp=Z,205nm,1.8s
OXZ IAMs_20 IAMs_20 21 54 15.4
comp=Z,6μm,20.0s
NGZ Ngauruhoe 60.65 138 P P 21 23 10.0 +5.8
BOOM Boomskoye usch 60.69 319 P **P 21 23 04.1 -0.3**
BOOM IAmb IAmb 21 23 09.6
comp=Z,224nm,1.6s
BOOM Boomskoye usch 60.69 319 P **P 21 23 04.1 -0.3**
BOOM pmax pmax
comp=Z,224nm,1.6s
TUWZ Tuamarina 60.73 141 P **P 21 23 03.7 -0.7**
TUZ Tuapeka 60.78 147 P **P 21 23 05.2 +0.5**
ODZ Otahua Downs 60.79 145 P **P 21 23 01.6 -3.3**
ODZ Otahua Downs 60.79 145 P **P 21 23 06.0 +1.2**
ODZ Otahua Downs 60.79 145 ⇑P **P 21 23 08.6 +3.8**
TCW Tory Channel 60.82 140 P **P 21 23 02.7 -2.4**
MA2 Magadan 60.83 14 LR LR 21 49 28.0
comp=Z,1μm,21.8s,baz=200,slow=36
MA2 Magadan 60.83 14 P **P 21 23 04.5 -0.3**
MA2 Magadan 60.83 14 *ce*P **P 21 23 05.8 +1.0**
MA2 pmax pmax
comp=Z,257nm,1.0s
MA2 Magadan 60.83 14 ⇑P **P 21 23 07.6 +2.8**
MA2 Magadan 60.83 14 P **P 21 23 07.0 +2.2**
comp=Z,212nm,1.0s
BSWZ Blackbirch Sta 60.84 141 P **P 21 23 02.9 -2.3**
AMCZ Amberley 60.88 143 P **P 21 23 04.8 -0.6**
SYZ Scrubby Hill 60.88 148 P **P 21 23 07.6 +2.2**
GVZ Greta Valley S 61.00 142 P **P 21 23 04.2 -2.0**
GVZ IAmb IAmb 21 23 25.5
comp=Z,256nm,1.6s
GVZ IAMs_20 IAMs_20 21 52 23.0
comp=Z,5μm,19.0s
KHZ Kahutara 61.01 142 P **P 21 23 04.1 -2.2**
KHZ IAMs_20 IAMs_20 21 53 41.1
comp=Z,7μm,19.0s
KHZ Kahutara 61.01 142 P **P 21 23 05.7 -0.6**
KHZ Kahutara 61.01 142 ⇑P **P 21 23 06.0 -0.3**
CMWZ Cape Campbell 61.07 141 P **P 21 23 05.2 -1.6**
KUU Kurty 61.10 321 *e*P **P 21 23 07.8 +0.8**
comp=Z,119nm,1.2s
KUU Kurty 61.10 321 *e*P **P 21 23 07.8 +0.8**
KUU pmax pmax
comp=Z,119nm,1.2s
TKM2 Tokmak 2 61.12 319 P **P 21 23 09.2 +1.8**
SNR=70
SNZO South Karori 61.15 140 P **P 21 23 05.7 -1.6**
SNZO IAmb IAmb 21 23 14.0
comp=Z,104nm,0.8s
SNZO South Karori 61.15 140 P **P 21 23 08.5 +1.2**
MQZ McQueen's Vall 61.18 143 P **P 21 23 06.6 -0.9**
MQZ IAmb IAmb 21 23 11.8
comp=Z,224nm,1.7s
MQZ McQueen's Vall 61.18 143 P **P 21 23 09.6 +2.2**
URZ Urewera 61.24 136 LR LR 21 50 56.9
comp=Z,5μm,19.9s,baz=306,slow=37
URZ Urewera 61.24 136 P **P 21 23 10.1 +2.1**
URZ Urewera 61.24 136 P **P 21 23 08.5 +0.5**
URZ Urewera 61.24 136 ⇑P **P 21 23 08.7 +0.7**
BKZ Black Stump Fm 61.25 137 P **P 21 23 05.8 -2.4**
BKZ IAmb IAmb 21 23 27.2
comp=Z,174nm,1.5s
BKZ IAMs_20 IAMs_20 21 52 42.6
comp=Z,5μm,19.0s
BKZ Black Stump Fm 61.25 137 P **P 21 23 09.4 +1.3**
BKZ Black Stump Fm 61.25 137 P **P 21 23 09.7 +1.6**
BHW Baring Head 61.31 140 P **P 21 23 05.2 -3.2**
BHW IAMs_20 IAMs_20 21 54 13.2
comp=Z,4μm,18.0s
RTZ Ruatahuna 61.32 136 P **P 21 23 05.8 -2.8**
RTZ IAMs_20 IAMs_20 21 48 26.5
comp=Z,6μm,22.0s
KWHZ Kaweka Forest 61.33 137 P **P 21 23 11.6 +3.0**
TSZ Takapari Road 61.33 138 P **P 21 23 08.6 0.0**
MRZ Mangatainoka R 61.38 139 P **P 21 23 07.1 -1.8**
MRZ IAMs_20 IAMs_20 21 51 57.2
comp=Z,5μm,20.0s
MRZ Mangatainoka R 61.38 139 P **P 21 23 07.9 -1.1**
RAO Raoul Island 61.39 125 LR LR 21 49 43.4
comp=Z,2μm,20.3s,baz=318,slow=36
KRHZ Kereru 61.40 138 P **P 21 23 09.0 -0.1**
KBK Karagaybulak 61.42 319 P **P 21 23 11.5 +2.1**
SNR=29
PNHZ Pukenui 61.42 138 P **P 21 23 09.3 0.0**
NMHZ Naumai 61.43 137 P **P 21 23 10.2 +0.8**
HAZ Te Kaha 61.48 135 P **P 21 23 12.9 +3.3**
UCH Uchtor 61.51 318 P **P 21 23 12.7 +2.4**
SNR=96
MCHZ McNeill Hill 61.52 137 P **P 21 23 10.5 +0.6**
RAHZ Arahi 61.54 137 P **P 21 23 11.1 +1.0**
MSWZ Moikau Station 61.55 140 P **P 21 23 09.1 -1.0**
MWZ Matawai 61.57 136 P **P 21 23 10.3 0.0**
PLWZ Palliser 61.64 140 P **P 21 23 09.5 -1.2**
ARHZ Aropaoanui 61.64 137 P **P 21 23 09.9 -0.8**
SNGZ Shannon Statio 61.65 136 P **P 21 23 11.1 +0.3**
FRU1 Bishkek 61.70 319 P **P 21 23 11.6 +0.5**
FRU1 Bishkek 61.70 319 P **P 21 23 11.6 +0.5**
FRU1 pmax pmax
comp=Z,71nm,1.2s
CHMS Chumysh 61.70 319 P **P 21 23 12.6 +1.5**
SNR=28
AAK Ala-Archa 61.71 319 P **P 21 23 12.1 +0.8**
comp=Z,8.2nm,0.4s,baz=136,slow=5.5,SNR=24
comp=Z,8.2nm,0.4s
AAK Ala-Archa 61.71 319 P **P 21 23 10.7 -0.7**
AAK IAmb IAmb 21 23 21.3
comp=Z,158nm,1.4s
AAK Ala-Archa 61.71 319 IAMs_20 IAMs_20 21 54 16.9
comp=Z,7μm,22.0s
AAK Ala-Archa 61.71 319 P **P 21 23 11.9 +0.6**
AAK S **S 21 31 27.7 -4.6**
AAK Ala-Archa 61.71 319 P **P 21 23 12.5 +1.2**
SNR=41
AAK Ala-Archa 61.71 319 *ce*P **P 21 23 13.1 +1.8**
AAK pmax pmax
comp=Z,132nm,1.7s
MXZ Matakaoa Point 61.76 135 IAMs_20 IAMs_20 21 52 54.3
comp=Z,6μm,18.0s
KAHZ Kahuranaki 61.82 138 P **P 21 23 12.0 +0.1**
BFZ Birch Farm 61.83 139 IAMs_20 IAMs_20 21 54 07.1
comp=Z,7μm,18.0s
BFZ Birch Farm 61.83 139 P **P 21 23 13.2 +1.3**
RIGZ Rimuhau 61.91 136 P **P 21 23 12.0 -0.5**
WMGZ Waiomatatini S 61.96 135 P **P 21 23 13.5 +0.7**
SGDS Sogindy 61.99 320 ⇑*i*P **P 21 23 13.8 +0.8**
USP Ospenovka 61.99 319 P **P 21 23 14.8 +1.7**
SNR=86
CNGZ Carnagh Statio 62.11 136 P **P 21 23 13.4 -0.5**
ARSB Arslanbob 62.16 317 P **P 21 23 13.8 -0.5**
ARSB IAmb IAmb 21 23 20.2
comp=Z,225nm,1.3s
ARSB Arslanbob 62.16 317 P **P 21 23 13.8 -0.5**
ARSB pmax pmax
comp=Z,225nm,1.3s
EKS2 Erkin-Say 62.19 318 P **P 21 23 16.8 +2.2**
SNR=42
DRK Karamyk 62.23 315 P **P 21 23 15.5 +0.4**

DRK IAmb IAmb 21 23 25.5
comp=Z,129nm,1.1s
DRK Karamyk 62.23 315 P **P** **21 23 15.5 +0.4**
DRK pmax pmax
comp=Z,129nm,1.1s
ZAA0 Zalesovo Array 62.32 334 P **P** **21 23 14.8 -0.1**
ZAA0 IAmb IAmb 21 23 45.8
comp=Z,132nm,1.4s
ZALV Zalesovo Beam 62.32 334 P **P** **21 23 14.5 -0.4**
comp=Z,17nm,0.4s,baz=135,slow=6.3,SNR=34
ZALV LR LR 21 52 09.1
comp=Z,4μm,20.9s,baz=134,slow=38
ZALV PKPPKP **P'P'df** **21 52 14.4 -6.9**
comp=Z,1.7nm,1.0s,baz=308,slow=7.3,SNR=3.5
ZALV PKP2bc **P'P'bc** **21 52 29.0 -0.1**
comp=Z,6.2nm,1.0s,baz=305,slow=5.1,SNR=9.7
comp=Z,17nm,0.4s
ZALV Zalesovo Beam 62.32 334 *i* P **P** **21 23 14.3 -0.7**
ZALV pmax pmax
comp=Z,17nm,0.4s
KBU Kabul Universi 62.48 308 P **P** **21 23 15.1 -1.6**
KBL Kabul 62.56 308 P **P** **21 23 16.6 -0.6**
KBL IAmb IAmb 21 23 26.0
comp=Z,84nm,0.9s
KBL Kabul 62.56 308 P **P** **21 23 16.6 -0.6**
KBL pmax pmax
comp=Z,84nm,1.0s
BTLS Baital 63.09 321 ⇑ *i* P **P** **21 23 21.0 +0.6**
comp=Z,126nm,2.7s
BTLS Baital 63.09 321 *c i* P **P** **21 23 20.9 +0.6**
BTLS pmax pmax
comp=Z,126nm,2.7s
GAR Garm 63.12 314 P **P** **21 23 20.7 -0.1**
AFI Afiamalu 63.15 106 P **P** **21 23 18.0 -3.3**
AFI IAmb IAmb 21 23 49.5
comp=Z,119nm,1.2s
AFI Afiamalu 63.15 106 P **P** **21 23 18.0 -3.3**
AFI pmax pmax
comp=Z,119nm,1.2s
KURBB Kurchatov Arra 63.34 328 P **P** **21 23 21.4 -0.4**
comp=Z,95nm,0.8s,baz=128,slow=6.0,SNR=88
KURBB S **S** **21 31 48.5 -3.7**
comp=Z,0.5nm,0.7s,baz=115,slow=15,SNR=1.2
KURBB PKPPKP **P'P'df** **21 52 21.1 +1.2**
comp=Z,1.9nm,0.8s,baz=290,slow=3.3,SNR=3.4
KURBB LR LR 21 52 33.6
comp=Z,2μm,21.1s,baz=128,slow=38
comp=Z,95nm,0.8s
KURK Kurchatov 63.35 328 P **P** **21 23 20.5 -1.4**
KURK Kurchatov 63.35 328 P **P** **21 23 22.0 +0.1**
KURK S **S** **21 31 48.6 -3.6**
KURK Kurchatov 63.35 328 *ce* P **P** **21 23 21.5 -0.3**
KURK pmax pmax
comp=Z,191nm,0.8s
CHGR Chuyangaron 63.84 313 P **P** **21 23 24.1 -1.4**
CHGR Chuyangaron 63.84 313 P **P** **21 23 24.1 -1.4**
CHGR pmax pmax
comp=Z,307nm,1.1s
DZA Taraz 63.92 318 *e* P **P** **21 23 26.4 +0.5**
DZA Taraz 63.92 318 *e* P **P** **21 23 26.4 +0.5**
SEY Seymchan 64.16 13 LR LR 21 50 52.4
comp=Z,1μm,21.9s,baz=206,slow=36
SEY Seymchan 64.16 13 *ce* P **P** **21 23 30.9 +3.9**
SEY pmax pmax
comp=Z,448nm,1.7s
SHEM Shemya Is, Ala 64.45 30 LR LR 21 46 59.4
comp=Z,2μm,21.8s,baz=248,slow=32
SHEM Shemya Is, Ala 64.45 30 P **P** **21 23 28.5 -0.5**
SMY Shemya 64.45 30 P **P** **21 23 29.0 -0.1**
SMY Shemya 64.45 30 P **P** **21 23 29.0 -0.1**
SMY pmax pmax
comp=Z,605nm,1.5s
IUG luzhnay 64.51 317 ⇑ *i* P **P** **21 23 30.5 +0.6**
comp=Z,110nm,1.2s
IUG *e* S **S** **21 32 08.1 +0.8**
IUG luzhnay 64.51 317 *c i* P **P** **21 23 30.4 +0.6**
IUG *e* S **S** **21 32 08.0 +0.8**
IUG pmax pmax
comp=Z,110nm,1.2s
KK31 Karatay Array 64.56 318 P **P** **21 23 29.2 -0.8**
KK31 IAmb IAmb 21 23 34.6
comp=Z,157nm,1.1s
KK31 Karatay Array 64.56 318 P **P** **21 23 29.2 -0.8**
KK31 pmax pmax
comp=Z,157nm,1.2s
JOHN Johnston Islan 64.73 72 P P 21 23 27.0 -4.6
JOHN IAmb IAmb 21 24 20.0
comp=Z,124nm,0.9s
CHM Chimkent 64.87 317 *e* P **P** **21 23 32.8 +0.7**
comp=Z,188nm,1.7s
CHM Chimkent 64.87 317 *e* P **P** **21 23 32.8 +0.7**
CHM pmax pmax
comp=Z,188nm,1.7s
BRLS Borolday 64.98 318 ⇑ *i* P **P** **21 23 33.5 +0.6**
BRLS Borolday 64.98 318 *c i* P **P** **21 23 33.4 +0.6**
NIUE Niue 65.78 112 P **P** **21 23 34.7 -3.7**
BRZS Berezniki 66.22 325 *e* P **P** **21 23 41.7 +1.0**
BRZS Berezniki 66.22 325 *e* P **P** **21 23 41.6 +1.0**
AMKA Amchitka 66.44 33 P **P** **21 23 40.8 -1.1**
HRA Herat 67.91 307 P **P** **21 23 49.9 -2.1**
HRA IAmb IAmb 21 23 57.1
comp=Z,168nm,1.9s
CTZ Chatham Island 67.94 139 IAMs_20 IAMs_20 21 57 03.8
comp=Z,4μm,21.0s
JLN Jalan Bani Buh 68.11 293 P **P** **21 23 52.5 -0.7**
WBK Wadi Bani Khal 68.58 294 P **P** **21 23 56.9 +0.8**
KIWB Kanaga Island 68.62 34 P **P** **21 23 53.9 -1.9**
KIWB IAmb IAmb 21 23 59.1
comp=Z,177nm,1.0s
CASY Casey 68.69 187 P **P** **21 23 54.2 -1.6**
ADK Adak 68.89 34 P **P** **21 23 54.9 -2.5**
ADK IAmb IAmb 21 24 00.7
comp=Z,156nm,1.1s
ADK Adak 68.89 34 IAMs_20 IAMs_20 21 49 56.8
comp=Z,5μm,22.0s
ADK Adak 68.89 34 P **P** **21 23 59.7 +2.3**
ADK Adak 68.89 34 P **P** **21 23 54.9 -2.5**
ADK pmax pmax
comp=Z,156nm,1.1s
ADK MLR MLR
comp=Z,5μm,22.0s
BVAR Borovoye Array 68.91 328 P **P** **21 23 57.4 -0.2**
comp=Z,116nm,1.1s,baz=133,slow=8.7,SNR=46
BVAR S **S** **21 32 55.7 -4.2**
comp=Z,3.0nm,1.0s,baz=134,slow=12,SNR=5.1
BVAR LR LR 21 55 01.3
comp=Z,2μm,21.6s,baz=120,slow=37
comp=Z,116nm,1.1s
BORK Borovoye 68.96 328 *ce* P **P** **21 23 58.5 +0.7**
BORK pmax pmax
comp=Z,158nm,1.3s
WSAR Wadi Sarin 68.97 294 LR LR 21 54 38.6
comp=Z,12nm,22.0s,baz=107,slow=36
WSAR Wadi Sarin 68.97 294 P **P** **21 23 59.4 +0.8**
SNR=7.8
MHTO MHTO 69.31 292 P **P** **21 24 01.3 +0.7**
SNR=16
JMDO Jabal Madar 69.34 293 P **P** **21 24 02.2 +1.4**
SNR=9.7
SMDO Samad 69.48 294 P **P** **21 24 02.6 +0.7**
SNR=6.7
TIXI Tiksi 69.95 1 P **P** **21 24 03.0 -0.6**
TIXI IAMs_20 IAMs_20 21 56 17.7
comp=Z,4μm,22.0s
TIXI Tiksi 69.95 1 *ce* P **P** **21 24 04.3 +0.7**
TIXI pmax pmax
comp=Z,299nm,1.3s
HOQ Hoqain 70.22 294 P **P** **21 24 07.0 +0.8**
SNR=16
BSY Bisya 70.22 293 P **P** **21 24 07.3 +1.0**
SNR=13
ATKA Atka Island 70.42 34 P **P** **21 24 04.2 -2.6**
ATKA Atka Island 70.42 34 P **P** **21 24 08.5 +1.7**
ARQ Araqi 70.91 294 P **P** **21 24 11.6 +1.2**
SNR=14
SOHO SOHO 70.99 295 P **P** **21 24 11.9 +0.9**
MSEY Mahe Island 71.13 265 P **P** **21 24 10.9 -1.1**
MSEY Mahe Island 71.13 265 IAMs_20 IAMs_20 21 52 44.1
comp=Z,4μm,22.0s
MSEY Mahe Island 71.13 265 P **P** **21 24 10.9 -1.1**
MSEY pmax pmax
comp=Z,93nm,1.5s
MSEY MLR MLR
comp=Z,4μm,22.0s
SHAO Shalim 71.23 288 P **P** **21 24 13.5 +1.1**
MDH Madha 71.35 296 P **P** **21 24 14.0 +0.9**

UOSS Minazif 71.39 296 P **P** **21 24 11.4 -2.0**
UOSS Minazif 71.39 296 P **P** **21 24 13.8 +0.5**
BANOM Banah 71.42 297 P **P** **21 24 15.0 +1.4**
HATD Hatta, Dubai 71.44 296 P **P** **21 24 14.8 +1.1**
SNR=16
MASF Masafi 71.48 296 P **P** **21 24 15.1 +1.2**
SNR=10
ASHO Ashiyiah 71.49 295 P **P** **21 24 15.2 +1.2**
SNR=12
SHME Shamm 71.58 297 P **P** **21 24 15.3 +0.9**
SNR=12
BILL Bilibino 71.67 15 P **P** **21 24 13.9 -0.3**
BILL Bilibino 71.67 15 *ce* P **P** **21 24 16.6 +2.4**
BILL pmax pmax
comp=Z,133nm,2.5s
ALNE Al Ain 71.69 295 P **P** **21 24 16.0 +0.8**
SNR=34
DMTO DMTO 71.85 288 P **P** **21 24 17.8 +1.6**
NAZ Nazwa, Dubai 71.88 296 P **P** **21 24 17.6 +1.3**
SNR=16
FAQ Al Faqa, Dubai 71.92 295 P **P** **21 24 18.4 +1.9**
SNR=14
UMZA Um Al Zommool 72.09 293 P **P** **21 24 16.3 -1.2**
ASUD Al Ashush, Dub 72.14 295 P **P** **21 24 18.8 +1.0**
SNR=15
NRIK Noril'sk 72.40 346 P **P** **21 24 20.2 +1.7**
comp=Z,77nm,0.6s,baz=128,slow=6.9,SNR=71
comp=Z,77nm,0.6s
NRIK Noril'sk 72.40 346 P **P** **21 24 19.4 +0.9**
NRIK Noril'sk 72.40 346 *ce* P **P** **21 24 19.4 +0.9**
NRIK pmax pmax
comp=Z,345nm,1.4s
AJN Ajban 72.44 295 P **P** **21 24 20.0 +0.4**
SNR=19
RBK Rabkut 72.54 288 P **P** **21 24 20.6 +0.2**
DOK Doka 72.69 289 P **P** **21 24 21.1 -0.2**
SNR=14
WHFO Wadi Hawf 72.98 288 P **P** **21 24 23.4 +0.4**
SNR=7.0
ABTO Aybut 73.39 288 P **P** **21 24 25.9 +0.4**
SNR=6.5
AB31 Akbulak array 73.58 321 P **P** **21 24 25.1 -0.7**
MZR Muzera 73.66 293 P **P** **21 24 26.8 -0.1**
SNR=22
NIKH Nikolski High 73.73 35 P **P** **21 24 24.0 -2.7**
NIKH IAmb IAmb 21 24 34.9
comp=Z,180nm,1.0s
NIKH Nikolski High 73.73 35 P **P** **21 24 26.6 -0.1**
baz=250
JRN Qarnain Island 74.41 295 P **P** **21 24 31.7 +0.5**
SNR=12
KEKH Kekaha 74.46 68 P **P** **21 24 29.8 -1.8**
KEKH IAmb IAmb 21 24 35.7
comp=Z,230nm,1.3s
SPIA Saint Paul Isl 74.48 30 P **P** **21 24 32.0 +1.1**
baz=248
AKTO Aktyubinsk 75.11 322 LR LR 22 01 05.2
comp=Z,5μm,20.1s,baz=90,slow=38
UNV Unalaska Valle 75.34 34 P **P** **21 24 34.3 -1.7**
UNV IAmb IAmb 21 24 39.3
comp=Z,285nm,1.4s
UNV Unalaska Valle 75.34 34 P **P** **21 24 39.3 +3.3**
UNV Unalaska Valle 75.34 34 P **P** **21 24 38.5 +2.5**
baz=252
RAR Rarotonga 75.54 112 LR LR 21 56 41.8
comp=Z,1μm,20.6s,baz=288,slow=35
RAR Rarotonga 75.54 112 P **P** **21 24 35.2 -2.6**
RAR IAmb IAmb 21 24 54.6
comp=Z,160nm,1.4s
RAR Rarotonga 75.54 112 P **P** **21 24 35.2 -2.6**
RAR pmax pmax
comp=Z,160nm,1.4s
SVE Sverdlovsk 75.59 329 *ce* P **P** **21 24 37.8 +0.4**
SVE *e* S **S** **21 34 11.0 -5.2**
SVE pmax pmax
comp=Z,359nm,1.4s
LVA Lava Point 75.70 34 P **P** **21 24 34.6 -3.5**
AKUT Akutan 75.84 34 P **P** **21 24 38.6 -0.2**
TRNA Turayna 75.88 295 P **P** **21 24 40.7 +1.0**
SNR=11
KIP Kipapa 76.00 68 P **P** **21 24 38.5 -1.9**
KIP Kipapa 76.00 68 *ce* P **P** **21 24 43.9 +3.5**
KIP pmax pmax
comp=Z,177nm,1.7s
HON Honolulu 76.00 69 P **P** **21 24 38.3 -2.1**
HON Honolulu 76.00 69 P **P** **21 24 38.3 -2.1**
HON pmax pmax
comp=Z,395nm,1.2s
XMAS Kiritimati 76.11 88 P **P** **21 24 39.6 -1.7**
SHMA Al-Shehemyia 76.19 296 P **P** **21 24 41.5 +0.1**
SNR=10
SMRA Abu-Samra 76.23 295 P **P** **21 24 41.7 0.0**
SNR=15
GAMB Gambell 76.45 24 P **P** **21 24 42.5 +0.4**
GAMB Gambell 76.45 24 P **P** **21 24 44.8 +2.6**
baz=245
ARTI Arti 76.62 328 P **P** **21 24 42.8 -0.5**
ARTI IAmb IAmb 21 24 47.1
comp=Z,146nm,0.8s
ARTI IAMs_20 IAMs_20 22 03 25.2
comp=Z,3μm,22.0s
ARTI Arti 76.62 328 *d i* P **P** **21 24 42.7 -0.5**
ARTI 21 27 30.8
ARTI S **S** **21 34 27.0 -0.6**
ARTI SS **SS** **21 39 20.3 -3.0**
ARTI SSS SSS 21 42 45.6
ARTI pmax pmax
comp=Z,277nm,1.1s
ARTI MLR MLR
comp=Z,3μm,21.0s
SBV Sambava 77.24 256 P **P** **21 24 49.1 +1.6**
SNR=14
FALS False Pass 77.36 34 P **P** **21 24 45.8 -1.6**
FALS False Pass 77.36 34 P **P** **21 24 48.7 +1.3**
baz=254
KHLH Kahului Airpor 77.44 69 P **P** **21 24 46.3 -2.3**
KHLH IAmb IAmb 21 24 53.0
comp=Z,340nm,1.4s
M11K Mekoryuk 77.58 28 P **P** **21 24 50.6 +2.0**
baz=251
HLK Haleakala 77.60 69 P **P** **21 24 47.2 -2.6**
HLK IAmb IAmb 21 24 53.7
comp=Z,275nm,1.5s
MHA Mahukona 77.90 70 P **P** **21 24 51.8 +0.6**
MHA Mahukona 77.90 70 P **P** **21 24 51.8 +0.6**
HUH Hualalai 77.94 70 P **P** **21 24 50.0 -1.8**
HUH IAmb IAmb 21 24 57.4
comp=Z,134nm,1.2s
HPAH Hawaii Prepara 78.08 70 P **P** **21 24 51.4 -0.9**
HPAH IAmb IAmb 21 27 26.7
comp=Z,192nm,0.8s
MWH Mokuaweoweo 78.15 71 P **P** **21 24 52.2 -1.0**
MWH IAmb IAmb 21 24 57.4
comp=Z,180nm,1.2s
POHA Pohakuloa 78.23 70 P **P** **21 24 51.4 -1.9**
POHA IAmb IAmb 21 24 57.5
comp=Z,278nm,1.2s
HMH Humu'ula Sheep 78.27 70 P **P** **21 24 53.5 -0.1**
AIN Ainahou 78.28 71 P **P** **21 24 52.5 -1.0**
S12K Black Hills 78.33 33 P **P** **21 24 54.2 +1.3**
baz=255
MLH Mauna Loa 78.35 71 P **P** **21 24 52.9 -1.1**
HLP Hilina Pali 78.42 71 P **P** **21 24 53.7 -0.4**
HLP IAmb IAmb 21 25 27.0
comp=Z,216nm,1.2s
UWE Uwekahuna 78.44 71 P **P** **21 24 52.3 -2.0**
RSD Rainshed 78.45 71 P **P** **21 24 54.5 +0.1**
HATHI Halema'uma'u T 78.47 71 P **P** **21 24 52.5 -2.0**
HATHI IAmb IAmb 21 24 58.1
comp=Z,262nm,1.3s
BYL Byron's Ledge 78.47 71 P **P** **21 24 52.2 -2.3**
BYL IAmb IAmb 21 24 58.1
comp=Z,177nm,1.1s
PUH Pauahi 78.51 71 P **P** **21 24 52.9 -1.9**
PUH IAmb IAmb 21 24 58.9
comp=Z,277nm,1.2s
KNHH Kane Nui o Ham 78.55 71 P **P** **21 24 53.4 -1.6**
STCH Steam Cracks 78.59 71 P **P** **21 24 52.9 -2.3**
STCH IAmb IAmb 21 24 58.6
comp=Z,225nm,1.2s
JOKA Jonika Flow 78.71 71 P **P** **21 24 54.6 -1.1**
K13K Kusilvak Mount 78.79 27 P **P** **21 24 55.7 +0.5**
K13K IAmb IAmb 21 24 59.5
comp=Z,223nm,1.2s
K13K Kusilvak Mount 78.79 27 P **P** **21 24 58.0 +2.8**
baz=252
M13K Dall Lake 78.94 28 P **P** **21 24 54.9 -1.1**
M13K IAmb IAmb 21 25 00.5
comp=Z,174nm,1.1s
M13K Dall Lake 78.94 28 P **P** **21 24 58.8 +2.8**
baz=253
SDPT Sand Point 79.12 34 P **P** **21 24 56.6 -0.6**
SDPT Sand Point 79.12 34 P **P** **21 24 58.4 +1.2**
SDPT Sand Point 79.12 34 P **P** **21 24 59.2 +2.0**
baz=257,SNR=6.2
F14K Arctic Creek 79.25 23 P **P** **21 25 00.5 +2.9**
baz=250
ANM Nome 79.32 24 P **P** **21 25 00.6 +2.5**
baz=251
KBD Kabd 79.35 299 P **P** **21 24 58.8 -0.2**
CNBA Chernabura Isl 79.51 34 P **P** **21 24 57.5 -1.7**
CNBA IAmb IAmb 21 25 05.4
comp=Z,127nm,1.0s
CHNA Chernabura Isl 79.51 34 P **P** **21 25 01.7 +2.4**
CHNA Chernabura Isl 79.51 34 P **P** **21 25 00.9 +1.6**
baz=258
L14K Kuka Creek 79.51 28 P **P** **21 24 57.2 -1.9**
L14K Kuka Creek 79.51 28 P **P** **21 25 01.5 +2.3**
baz=254
J14K Nanvaranak Lak 79.52 26 P **P** **21 24 57.8 -1.3**
J14K IAmb IAmb 21 25 03.5
comp=Z,243nm,1.4s
J14K Nanvaranak Lak 79.52 26 P **P** **21 25 01.6 +2.4**
baz=253
N14K Kuskokwak Cree 79.61 29 P **P** **21 24 58.3 -1.4**
N14K Kuskokwak Cree 79.61 29 P **P** **21 25 01.7 +2.1**
baz=255
O14K Tigyukauivet M 79.64 30 P **P** **21 24 59.1 -0.8**
O14K IAmb IAmb 21 25 04.5
comp=Z,198nm,1.2s
O14K Tigyukauivet M 79.64 30 P **P** **21 25 01.9 +2.0**
baz=256
M14K Bethel 79.69 28 P **P** **21 24 59.8 -0.3**
M14K Bethel 79.69 28 P **P** **21 25 02.4 +2.3**
baz=255,SNR=18
S14K Fog Glacier 79.84 33 P **P** **21 25 02.8 +1.6**
baz=258,SNR=5.7
F15K North Star Dit 79.98 23 P **P** **21 25 00.8 -0.9**
F15K IAmb IAmb 21 25 05.9
comp=Z,182nm,1.3s
F15K North Star Dit 79.98 23 P **P** **21 25 04.2 +2.5**
baz=251
G15K Niukluk 80.00 24 P **P** **21 25 04.4 +2.6**
baz=252
L15K Ungalak Mounta 80.16 27 P **P** **21 25 05.0 +2.3**
baz=255,SNR=15
M15K Kasigluk River 80.28 28 P **P** **21 25 05.8 +2.5**
baz=256,SNR=15
ABPO Ambohimpanom 80.29 251 P **P** **21 25 02.2 -2.3**
ABPO Ambohimpanom 80.29 251 P **P** **21 25 02.2 -2.3**
ABPO pmax pmax
comp=Z,56nm,1.0s
ABPO MLR MLR
comp=Z,3μm,22.0s
K15K Wolf Creek Mou 80.30 27 P **P** **21 25 02.9 -0.6**
K15K IAmb IAmb 21 25 08.6
comp=Z,302nm,1.2s
K15K Wolf Creek Mou 80.30 27 P **P** **21 25 06.5 +3.1**
baz=255
O15K Ungalikthiuk R 80.34 30 P **P** **21 25 01.6 -2.2**
O15K Ungalikthiuk R 80.34 30 P **P** **21 25 05.9 +2.2**
baz=257,SNR=7.3
N15K Kwethluk River 80.44 29 P **P** **21 25 03.7 -0.5**
N15K IAmb IAmb 21 25 09.8
comp=Z,268nm,1.3s
N15K Kwethluk River 80.44 29 P **P** **21 25 07.0 +2.8**
baz=256
AKT Akhty 80.44 312 *e* P **P** **21 25 04.2 -0.6**
AKT *e* 21 25 10.5
AKT *e* 21 28 07.4
AKT *e* S **S** **21 35 08.0 -1.4**
AKT pmax pmax
comp=Z,84nm,1.0s
AKT MLR MLR
comp=Z,4μm,26.0s
C16K Lisburne Hills 80.57 21 P **P** **21 25 04.2 -0.5**
C16K IAmb IAmb 21 25 09.4
comp=Z,288nm,1.2s
C16K Lisburne Hills 80.57 21 P **P** **21 25 07.1 +2.4**
baz=250
H16K Elim 80.63 24 P **P** **21 25 07.4 +2.3**
baz=254,SNR=10
MAK Makhachkala 80.78 313 *c i* P **P** **21 25 02.9 -3.5**
MAK *e* 21 28 04.8
MAK *e* PPP PPP 21 30 04.5
MAK *e* S **S** **21 35 06.1 -6.4**
MAK *e* SS **SS** **21 40 22.1 -4.1**
MAK *e* SSS SSS 21 43 51.7
MAK pmax pmax
comp=Z,523nm,1.8s
G16K Koyuk River 80.80 24 P **P** **21 25 05.2 -0.9**
G16K IAmb IAmb 21 25 12.5
comp=Z,126nm,1.1s
G16K Koyuk River 80.80 24 P **P** **21 25 09.0 +2.9**
baz=254
VOI Vohitsoka 80.96 248 P **P** **21 25 06.8 -1.1**
VOI IAmb IAmb 21 25 19.0
comp=Z,162nm,1.3s
J16K Anvik River 80.97 26 P **P** **21 25 06.7 -0.3**
J16K IAmb IAmb 21 25 11.7
comp=Z,200nm,1.0s
J16K Anvik River 80.97 26 P **P** **21 25 09.6 +2.6**
baz=255
RAYN Ar Rayn 81.01 293 P **P** **21 25 07.1 -1.0**
RAYN IAmb IAmb 21 25 13.1
comp=Z,115nm,1.0s
RAYN Ar Rayn 81.01 293 IAMs_20 IAMs_20 22 04 28.0
comp=Z,3μm,20.0s
RAYN Ar Rayn 81.01 293 P **P** **21 25 08.3 +0.2**
RAYN Ar Rayn 81.01 293 P **P** **21 25 07.1 -1.0**
RAYN pmax pmax
comp=Z,115nm,1.0s
RAYN MLR MLR
comp=Z,3μm,20.0s
I17K Unalakleet 81.08 25 P **P** **21 25 06.2 -1.3**
I17K IAmb IAmb 21 25 12.3
comp=Z,238nm,1.1s
I17K Unalakleet 81.08 25 P **P** **21 25 10.2 +2.7**
baz=255,SNR=6.2
L16K Owhat River 81.09 28 P **P** **21 25 07.5 -0.2**
L16K IAmb IAmb 21 25 11.9
comp=Z,199nm,1.2s
L16K Owhat River 81.09 28 P **P** **21 25 10.2 +2.5**
baz=257,SNR=25
N16K Nishlik Lake 81.15 29 P **P** **21 25 10.6 +2.5**
baz=258
R16K Pilot Point 81.16 32 P **P** **21 25 06.6 -1.5**
R16K Pilot Point 81.16 32 P **P** **21 25 09.7 +1.6**
baz=259
M16K Timber Creek 81.18 28 P **P** **21 25 07.8 -0.4**
M16K IAmb IAmb 21 25 12.4
comp=Z,153nm,1.1s
M16K Timber Creek 81.18 28 P **P** **21 25 10.0 +1.8**
baz=257
D17K Noatak River 81.19 21 P **P** **21 25 11.1 +3.0**
baz=252,SNR=36
P16K Nushagak River 81.23 30 P **P** **21 25 07.1 -1.3**
P16K IAMs_20 IAMs_20 21 57 24.2
comp=Z,3μm,22.0s
P16K Nushagak River 81.23 30 P **P** **21 25 10.4 +1.9**
baz=256,SNR=6.9
O16K Kokwok River B 81.30 30 P **P** **21 25 08.3 -0.5**
O16K IAmb IAmb 21 25 13.5
comp=Z,200nm,1.2s
O16K Kokwok River B 81.30 30 P **P** **21 25 10.6 +1.8**
baz=258
RDOG Red Dog Mine 81.37 21 P **P** **21 25 08.5 -0.6**
RDOG IAmb IAmb 21 25 15.6
comp=Z,272nm,1.2s
RDOG Red Dog Mine 81.37 21 P **P** **21 25 11.6 +2.5**
baz=253,SNR=24
VNDA Vanda 81.38 173 P **P** **21 25 09.2 +0.3**
comp=Z,21nm,0.5s,baz=314,slow=6.1,SNR=54
VNDA S **S** **21 35 16.5 -1.0**
comp=Z,0.6nm,0.8s,baz=274,slow=13,SNR=1.6
VNDA LR LR 22 01 18.9
comp=Z,2μm,21.9s,baz=335,slow=36
comp=Z,21nm,0.5s
VNDA Vanda 81.38 173 P **P** **21 25 08.5 -0.4**
VNDA Vanda 81.38 173 P **P** **21 25 08.5 -0.4**
VNDA pmax pmax

comp=Z,48nm,0.9s
C17K DeLong Mountai 81.40 21 P P 21 25 11.4 +2.2
baz=252,SNR=9.1
E17K Hotham Inlet 81.48 22 P P 21 25 12.5 +2.9
baz=254,SNR=20
G17K Kiwalik Mounta 81.51 24 P P 21 25 11.9 +2.1
baz=255
F17K Baldwin Pennin 81.52 23 P P 21 25 10.4 +0.5
F17K IAmb IAmb 21 25 14.3
comp=Z,383nm,1.7s
F17K Baldwin Pennin 81.52 23 P P 21 25 12.2 +2.4
baz=254
J17K VABM Dome 81.66 26 P P 21 25 11.4 +0.7
J17K IAmb IAmb 21 25 15.4
comp=Z,292nm,1.3s
J17K VABM Dome 81.66 26 P P 21 25 13.5 +2.8
baz=257
MAW Mawson 81.67 200 P P 21 25 11.7 +1.1
comp=Z,19nm,0.6s,baz=60,slow=6.4,SNR=33
MAW LR LR 21 58 18.1
comp=Z,986nm,21.8s,baz=60,slow=33
comp=Z,19nm,0.6s
H17K Granite Mounta 81.67 24 P P 21 25 10.6 -0.1
H17K Granite Mounta 81.67 24 P P 21 25 13.3 +2.6
baz=256,SNR=13
L17K Donlin 81.73 27 P P 21 25 14.3 +3.2
baz=258
R17L Mt. Peulik Vol 81.82 32 P P 21 25 14.0 +2.4
baz=260
PLK4 Peulik 4 81.82 32 P P 21 25 11.7 0.0
PLK4 IAmb IAmb 21 25 17.6
comp=Z,199nm,1.1s
PLK4 IAMs_20 IAMs_20 21 56 46.7
comp=Z,4µm,22.0s
O17K Koliganek Bris 81.83 30 P P 21 25 14.2 +2.6
baz=259,SNR=19
Q16K King Salmon 81.85 31 P P 21 25 13.6 +1.9
baz=260
KIRV Kirov 81.85 329 LR LR 22 04 55.0
comp=Z,2µm,20.9s,baz=96,slow=38
KIRV Kirov 81.85 329 *i* P **P 21 25 13.1 +1.4**
K17K Iditarod 81.85 27 P P 21 25 11.5 -0.2
K17K Iditarod 81.85 27 P P 21 25 14.1 +2.3
baz=258
BELG Belogornoye 81.88 323 LR LR 22 04 47.6
comp=Z,2µm,20.2s,baz=86,slow=38
BELG Belogornoye 81.88 323 *i* P **P 21 25 12.5 +0.5**
BELG pmax pmax
comp=Z,84nm,1.2s
CHIR Chirikof Islan 81.92 34 P P 21 25 14.4 +2.2
CHIR Chirikof Islan 81.92 34 P P 21 25 14.3 +2.2
baz=261
N17K Nushagak Hills 81.93 29 P P 21 25 12.5 +0.3
N17K IAmb IAmb 21 25 16.8
comp=Z,172nm,1.4s
N17K Nushagak Hills 81.93 29 P P 21 25 14.9 +2.7
baz=259,SNR=14
M17K Holitna River 81.98 28 P P 21 25 11.4 -1.0
M17K IAmb IAmb 21 25 18.0
comp=Z,185nm,1.2s
M17K Holitna River 81.98 28 P P 21 25 15.5 +3.1
baz=258,SNR=22
E18K Tukpahlearik C 82.03 22 P P 21 25 12.5 0.0
E18K IAmb IAmb 21 25 17.1
comp=Z,236nm,1.1s
E18K Tukpahlearik C 82.03 22 P P 21 25 15.1 +2.6
baz=255
P17K Kvichak River 82.05 30 P P 21 25 14.7 +1.9
baz=260
B18K Kokolik River 82.14 20 P P 21 25 15.9 +2.9
baz=253
C18K Utukok River 82.15 21 P P 21 25 12.7 -0.5
C18K IAmb IAmb 21 25 17.3
comp=Z,154nm,1.1s
C18K Utukok River 82.15 21 P P 21 25 15.5 +2.3
baz=254,SNR=12
Q17K Contact Creek 82.17 31 P P 21 25 15.0 +1.4
baz=260
F18K Selawik 82.18 23 P P 21 25 15.9 +2.6
baz=256,SNR=12
SBA Scott Base 82.30 172 P P 21 25 12.9 -0.8
SBA IAmb IAmb 21 25 38.5
comp=Z,197nm,1.6s
SBA Scott Base 82.30 172 P P 21 25 12.9 -0.8
SBA pmax pmax
comp=Z,197nm,1.6s
SBA MLR MLR
comp=Z,2µm,21.0s
H18K Honhosa River 82.36 24 P P 21 25 13.8 -0.6
H18K Honhosa River 82.36 24 P P 21 25 16.7 +2.4
baz=257
G18K Tagagawik 82.41 24 P P 21 25 15.6 +1.0
G18K IAmb IAmb 21 25 19.3
comp=Z,218nm,1.2s
G18K Tagagawik 82.41 24 P P 21 25 16.9 +2.3
baz=257
ACHA Angle Creek He 82.46 32 P P 21 25 14.5 -0.6
L18K Granite Mounta 82.49 27 P P 21 25 15.6 +0.5
L18K Granite Mounta 82.49 27 P P 21 25 18.0 +3.0
baz=259
GNI Garni 82.58 310 P P 21 25 16.2 0.0
GNI IAmb IAmb 21 25 34.3
comp=Z,108nm,0.9s
GNI Garni 82.58 310 P **P 21 25 17.8 +1.6**
GNI Garni 82.58 310 *i* P **P 21 25 18.1 +1.9**
GNI pmax pmax
comp=Z,146nm,1.1s
N18K Kilae Creek 82.59 29 P P 21 25 15.6 0.0
N18K IAmb IAmb 21 25 20.9
comp=Z,270nm,1.4s
N18K Kilae Creek 82.59 29 P P 21 25 18.4 +2.8
baz=260
A19K Wainwright 82.62 19 P P 21 25 18.2 +2.7
baz=254
Q18K Katmai Hardscr 82.69 31 P P 21 25 17.5 +1.1
baz=261,SNR=11
P18K Big Mountain, 82.70 30 P P 21 25 15.9 -0.3
P18K IAMs_20 IAMs_20 21 58 18.9
comp=Z,3µm,22.0s
P18K Big Mountain, 82.70 30 P P 21 25 17.8 +1.6
baz=261,SNR=8.2
J18K Innoko River 82.71 26 P P 21 25 16.0 -0.2
J18K Innoko River 82.71 26 P P 21 25 18.2 +2.0
baz=259
M18K Stony River 82.76 28 P P 21 25 18.6 +2.2
baz=260,SNR=63
O18K Koktuh Hills 82.78 30 IAMs_20 IAMs_20 21 58 02.1
comp=Z,4µm,22.0s
O18K Koktuh Hills 82.78 30 P P 21 25 19.1 +2.4
baz=261,SNR=18
SII Sitkinak Islan 82.82 33 P P 21 25 16.6 -0.4
SII Sitkinak Islan 82.82 33 P P 21 25 19.3 +2.3
baz=262
C19K Lookout Ridge 82.83 20 P P 21 25 17.6 +0.9
C19K Lookout Ridge 82.83 20 P P 21 25 19.5 +2.7
baz=256
GCSA Galena City Sc 82.89 25 P P 21 25 19.7 +2.6
baz=259,SNR=46
F19K Shaleruckik Mo 82.96 23 P P 21 25 19.6 +2.2
baz=258
G19K Purcell Mounta 83.09 23 P P 21 25 20.6 +2.5
baz=258
D19K Kuna River 83.20 21 P P 21 25 19.3 +0.6
D19K Kuna River 83.20 21 P P 21 25 21.1 +2.4
baz=257
H19K Roundabout Mou 83.22 24 P P 21 25 19.4 +0.6
H19K Roundabout Mou 83.22 24 P P 21 25 21.4 +2.6
baz=259
J19K Poorman 83.29 26 P P 21 25 19.4 +0.3
J19K Poorman 83.29 26 P P 21 25 21.9 +2.8
baz=260
N19K Bonanza Creek 83.29 29 P P 21 25 20.6 +1.3
N19K Bonanza Creek 83.29 29 P P 21 25 21.7 +2.3
baz=261
E19K Redstone River 83.30 22 P P 21 25 19.7 +0.5
E19K Redstone River 83.30 22 P P 21 25 21.4 +2.2
baz=258
L19K White Mountain 83.33 28 P P 21 25 21.1 +1.7
L19K White Mountain 83.33 28 P P 21 25 21.9 +2.4
baz=261
ATD Arta Tunnel 83.36 281 LR LR 22 01 33.6
comp=Z,30nm,21.1s,baz=80,slow=35
ATD Arta Tunnel 83.36 281 P **P 21 25 20.3 -0.3**
ATD IAmb IAmb 21 25 29.0
comp=Z,109nm,1.0s
ATD Arta Tunnel 83.36 281 P **P 21 25 22.7 +2.0**
SNR=12

OHAK Old Harbor 83.40 33 P P 21 25 20.2 +0.4
OHAK Old Harbor 83.40 33 P P 21 25 21.6 +1.8
OHAK Old Harbor 83.40 33 P P 21 25 21.9 +2.0
baz=263,SNR=7.7
Q19K Cape Douglas, 83.44 31 P P 21 25 20.7 +0.6
Q19K IAMs_20 IAMs_20 21 58 56.4
comp=Z,3µm,22.0s
M19K Big River Lodg 83.50 28 P P 21 25 22.8 +2.4
baz=261
NCK Nalchik 83.67 313 *i* P **P 21 25 23.4 +1.8**
NCK pmax pmax
comp=Z,102nm,0.8s
P19K Oil Pt 83.74 30 P P 21 25 21.3 -0.3
P19K IAmb IAmb 21 25 25.3
comp=Z,166nm,1.3s
P19K Oil Pt 83.74 30 P P 21 25 22.8 +1.2
baz=262
D20K Etivluk River 83.79 21 P P 21 25 21.9 +0.2
D20K Etivluk River 83.79 21 P P 21 25 24.2 +2.5
baz=258
F20K Avaraart Lake 83.80 23 P P 21 25 24.0 +2.3
baz=259
L20K Farewell, AK 83.82 27 P P 21 25 22.2 +0.2
L20K Farewell, AK 83.82 27 P P 21 25 24.1 +2.1
baz=262
ILSW Iliamna Southw 83.83 30 P P 21 25 21.8 -0.4
ILSW IAmb IAmb 21 25 24.6
comp=Z,132nm,1.2s
KDAK Kodiak Island 83.85 32 LR LR 22 00 25.9
comp=Z,2µm,19.6s,baz=244,slow=34
KDAK Kodiak Island 83.85 32 P P 21 25 22.1 0.0
KDAK Kodiak Island 83.85 32 IAMs_20 IAMs_20 22 02 26.3
comp=Z,3µm,21.0s
KDAK Kodiak Island 83.85 32 P P 21 25 22.1 0.0
KDAK pmax pmax
comp=Z,285nm,1.3s
KDAK MLR MLR
comp=Z,3µm,21.0s
KDAK Kodiak Island 83.85 32 P P 21 25 24.3 +2.1
baz=263
E20K Nigu River 83.85 21 P P 21 25 24.6 +2.5
baz=259
H20K Anotleneega Mo 83.86 24 P P 21 25 24.3 +2.2
baz=260
B20K Meade River 83.87 20 P P 21 25 24.6 +2.6
baz=258
K20K Telida 83.87 26 P P 21 25 23.7 +1.5
K20K Telida 83.87 26 P P 21 25 24.4 +2.2
baz=261
I20K Naaghedeneel 83.91 25 P P 21 25 23.5 +1.2
I20K Naaghedeneel 83.91 25 P P 21 25 25.2 +2.9
baz=261
J20K Nowinta River 83.96 26 P P 21 25 24.1 +1.5
J20K Nowinta River 83.96 26 P P 21 25 25.2 +2.6
baz=261
Q20K Shuyak Island 84.04 31 P P 21 25 24.7 +1.6
baz=263,SNR=9.2
SYI Shuyak Island 84.04 31 P P 21 25 23.3 +0.2
M20K Styx River 84.09 28 P P 21 25 25.5 +2.1
baz=262
O20K Slope Mountain 84.10 30 P P 21 25 24.8 +1.3
baz=263
GOF Gofitskoye 84.16 315 *ce* P **P 21 25 22.3 -1.8**
KBZ Khabaz 84.19 314 P P 21 25 25.4 +1.2
comp=Z,40nm,0.8s,baz=103,slow=4.3,SNR=40
KBZ S **SKSac 21 35 45.5 -0.1**
comp=Z,1.4nm,0.9s,baz=332,slow=17,SNR=4.9
KBZ LR LR 22 09 55.9
comp=Z,1µm,18.8s,baz=72,slow=41
comp=Z,40nm,0.8s
KBZ Khabaz 84.19 314 *i* P **P 21 25 24.8 +0.6**
KBZ pmax pmax
comp=Z,93nm,1.1s
NEUR Neytrino 84.31 313 *i* P **P 21 25 26.9 +1.8**
NEUR pmax pmax
comp=Z,37nm,1.2s
A21K Barrow 84.32 18 P P 21 25 26.3 +2.1
baz=258,SNR=6.6
KVAR Kislovodsk Arr 84.35 314 LR LR 22 08 12.0
comp=Z,890nm,20.8s,baz=218,slow=39
KIV Kislovodsk 84.35 314 P P 21 25 25.9 +0.7
KIV IAmb IAmb 21 25 33.3
comp=Z,101nm,0.7s
KIV Kislovodsk 84.35 314 P P 21 25 27.2 +2.1
KIV Kislovodsk 84.35 314 ⇑P **P 21 25 27.1 +1.9**
KIV Kislovodsk 84.35 314 *e*P **P 21 25 25.2 0.0**
KIV *e* 21 28 38.9
KIV *e*PPP PPP 21 30 30.9
KIV *e* 21 35 45.3
KIV *e*SS SS 21 41 14.4 -5.2
KIV pmax pmax
comp=Z,107nm,1.1s
KIV pmax pmax
comp=Z,112nm,3.3s
KIV MLR MLR
comp=Z,1µm,20.0s
KIV Kislovodsk 84.35 314 P P 21 25 27.1 +1.9
comp=Z,2µmcomp=Z,94nm,0.9s
N20K Mount Spurr 84.44 29 P P 21 25 26.4 +1.2
baz=263,SNR=58
SPCR Spurr Chakacha 84.44 29 P P 21 25 26.3 +1.1
baz=263,SNR=41
SPU Mount Spurr 84.51 29 P P 21 25 25.7 +0.1
SPU IAmb IAmb 21 25 28.9
comp=Z,156nm,1.2s
C21K Knifeblade Rid 84.52 21 P P 21 25 27.8 +2.4
baz=260
HOM Homer 84.55 30 P P 21 25 24.4 -1.2
HOM Homer 84.55 30 P P 21 25 27.0 +1.3
baz=264
G21K Allakaket 84.58 23 P P 21 25 25.6 -0.1
G21K IAmb IAmb 21 25 29.8
comp=Z,109nm,1.1s
G21K Allakaket 84.58 23 P P 21 25 27.7 +2.0
baz=262,SNR=23
GURO Guroymak-BITLI 84.59 308 P P 21 25 26.3 -0.3
PPLA Purkeypile 84.65 27 P P 21 25 26.4 +0.1
PPLA Purkeypile 84.65 27 P P 21 25 28.3 +1.9
baz=263,SNR=7.6
STLK Strandline Lak 84.65 28 P P 21 25 26.1 -0.2
STLK IAmb IAmb 21 25 29.5
comp=Z,102nm,1.3s
B21K Ikpikpuk River 84.66 20 P P 21 25 27.0 +1.0
B21K Ikpikpuk River 84.66 20 P P 21 25 28.5 +2.4
baz=260
F21K Alatna River 84.69 23 P P 21 25 27.0 +0.7
F21K Alatna River 84.69 23 P P 21 25 28.6 +2.3
baz=262
E21K Killik River 84.69 21 P P 21 25 28.5 +2.2
baz=261
CHUM Lake Minchumin 84.72 26 P P 21 25 28.6 +2.2
baz=263,SNR=14
CNPM China Poot 84.74 30 P P 21 25 27.1 +0.4
H21K Melozitna Rive 84.74 24 P P 21 25 27.3 +0.7
H21K IAmb IAmb 21 27 18.6
comp=Z,134nm,1.2s
H21K Melozitna Rive 84.74 24 P P 21 25 28.3 +1.7
baz=262
A22K Sinclair Lake 84.78 19 P P 21 25 29.5 +2.9
baz=260
PPT Papeete 84.78 108 LR LR 22 01 41.1
comp=Z,1µm,20.3s,baz=262,slow=34
SKT Skwentna 84.85 28 P P 21 25 26.8 -0.4
SKT IAmb IAmb 21 25 30.3
comp=Z,115nm,1.0s
SKT Skwentna 84.85 28 P P 21 25 27.8 +0.6
baz=264,SNR=40
BRLK Bradley Lake 84.94 30 P P 21 25 27.6 -0.1
BRSE Bradley Lake S 85.01 30 P P 21 25 29.1 +1.1
baz=265,SNR=33
I21K Tanana 85.02 25 P P 21 25 28.3 +0.3
I21K Tanana 85.02 25 P P 21 25 29.8 +1.8
baz=263,SNR=9.6
SUA Susitna One 85.17 29 P P 21 25 29.8 +0.9
SUA Susitna One 85.17 29 P P 21 25 29.1 +0.2
baz=264,SNR=33
B22K Teshekpuk Lake 85.18 20 P P 21 25 28.7 +0.1
B22K Teshekpuk Lake 85.18 20 P P 21 25 30.5 +1.9
baz=261,SNR=19
D22K Ayikyak River 85.23 21 P P 21 25 29.1 +0.1
D22K IAmb IAmb 21 26 02.0
comp=Z,170nm,1.5s
D22K Ayikyak River 85.23 21 P P 21 25 31.3 +2.3
baz=262
F22K John River 85.23 22 P P 21 25 31.3 +2.3
baz=263

L22K Petersville 85.26 28 P P 21 25 28.9 -0.4
KTH Kantishna Hill 85.30 26 P P 21 25 28.9 -0.5
BPAW Bear Paw Mtn. 85.32 26 P P 21 25 28.8 -0.7
BPAW IAmb IAmb 21 26 07.7
comp=Z,194nm,1.8s
BPAW Bear Paw Mtn. 85.32 26 P P 21 25 30.8 +1.3
baz=264
SLKM Skilak Lake 85.34 30 P P 21 25 29.9 +0.3
H22K Ishtalitna Cre 85.35 24 P P 21 25 29.9 +0.3
H22K IAmb IAmb 21 26 07.2
comp=Z,244nm,1.9s
H22K Ishtalitna Cre 85.35 24 P P 21 25 32.0 +2.4
baz=264
VRH Novokhopyorsk 85.41 321 *e*P **P 21 25 29.0 -1.2**
VRH *e* 21 25 30.7
VRH *e*S **SKSac 21 35 44.8 -8.3**
VRH pmax pmax
comp=Z,610nm,1.1s
VRH pmax pmax
comp=Z,970nm,1.6s
VRH smax smax
comp=E,3µm,14.8s
G22K Bettles 85.42 23 P P 21 25 31.2 +1.3
baz=263,SNR=16
E22K Anaktuvuk Pass 85.45 22 P P 21 25 29.3 -0.8
E22K IAmb IAmb 21 25 37.2
comp=Z,123nm,1.2s
E22K Anaktuvuk Pass 85.45 22 P P 21 25 32.4 +2.3
baz=263,SNR=47
CUT Chulitna 85.48 28 P P 21 25 29.9 -0.4
CUT Chulitna 85.48 28 P P 21 25 31.0 +0.8
baz=265,SNR=7.6
M22K Willow 85.49 28 P P 21 25 30.7 +0.4
M22K Willow 85.49 28 P P 21 25 31.1 +0.7
baz=265,SNR=21
MLY Manley 85.53 25 P P 21 25 30.9 +0.4
MLY Manley 85.53 25 P P 21 25 32.2 +1.6
baz=264
MARD Mardin 85.54 307 P P 21 25 29.9 -1.4
MARD IAmb IAmb 21 25 36.1
comp=Z,80nm,0.9s
TRF Thorofare Moun 85.57 27 P P 21 25 31.8 +0.9
TRF Thorofare Moun 85.57 27 P P 21 25 31.3 +0.4
baz=265
O22K Cooper Landing 85.58 30 P P 21 25 31.0 +0.2
O22K Cooper Landing 85.58 30 P P 21 25 31.6 +0.8
baz=265,SNR=15
RC01 Rabbit Creek A 85.62 29 P P 21 25 31.2 +0.2
RC01 IAmb IAmb 21 25 34.5
comp=Z,172nm,1.1s
RC01 Rabbit Creek A 85.62 29 P P 21 25 31.8 +0.8
baz=265,SNR=30
SEW Seward 85.69 30 P P 21 25 32.1 +0.8
SEW IAMs_20 IAMs_20 22 07 17.9
comp=Z,4µm,22.0s
SEW Seward 85.69 30 P P 21 25 32.6 +1.2
baz=266
LABN Labinsk 85.79 314 *e*P **P 21 25 33.3 +1.0**
LABN *e**PP **sP 21 25 42.8 -2.2**
LABN *e*S **SKSac 21 35 56.3 +0.4**
LABN pmax pmax
comp=Z,174nm,1.0s
LABN MLR MLR
comp=Z,3µm,23.0s
LABN MLR MLR
comp=N,729nm,15.0s
LABN MLR MLR
comp=E,5µm,24.0s
KOPT Kop Dagi 85.83 310 P P 21 25 32.5 -0.4
PMR Palmer 85.95 29 P P 21 25 33.4 +0.8
PMR IAmb IAmb 21 25 36.1
comp=Z,149nm,1.1s
PMR Palmer 85.95 29 P P 21 25 33.4 +0.8
PMR pmax pmax
comp=Z,149nm,1.1s
PMR Palmer 85.95 29 P P 21 25 33.6 +0.9
baz=266,SNR=23
D23K Nanushuk River 85.95 21 P P 21 25 32.0 -0.6
D23K Nanushuk River 85.95 21 P P 21 25 34.9 +2.3
baz=264
COLD Coldfoot 85.96 23 P P 21 25 33.2 +0.6
COLD IAmb IAmb 21 25 39.6
comp=Z,65nm,0.9s
COLD Coldfoot 85.96 23 P P 21 25 34.8 +2.2
baz=264,SNR=35
G23K Bananza Creek 85.98 23 P P 21 25 33.0 +0.3
G23K IAmb IAmb 21 25 38.9
comp=Z,204nm,1.6s
G23K Bananza Creek 85.98 23 P P 21 25 34.6 +1.9
baz=265
BWN Browne 85.99 26 IAMs_20 IAMs_20 22 01 46.9
comp=Z,2µm,20.0s
ERBR Yeremizino-Bor 86.00 316 *e*P **P 21 25 33.4 +0.2**
ERBR *e**PP **sP 21 25 43.3 -2.7**
ERBR *e*S **SKSac 21 35 56.1 -1.0**
ERBR pmax pmax
comp=Z,451nm,1.0s
ERBR MLR MLR
comp=Z,3µm,21.0s
GHO Glory Hole Cre 86.06 28 P P 21 25 30.9 -2.4
GHO IAmb IAmb 21 25 47.6
comp=Z,78nm,1.0s
C23K Itkillik River 86.07 20 P P 21 25 33.4 +0.3
C23K IAmb IAmb 21 25 40.2
comp=Z,82nm,0.8s
C23K Itkillik River 86.07 20 P P 21 25 35.0 +1.9
baz=264
H23K Yukon River 86.10 24 P P 21 25 34.2 +0.8
H23K Yukon River 86.10 24 P P 21 25 35.0 +1.6
baz=265
I23K Minto, Yukon-K 86.12 25 P P 21 25 33.6 +0.2
I23K IAmb IAmb 21 25 36.7
comp=Z,84nm,1.1s
I23K Minto, Yukon-K 86.12 25 P P 21 25 35.1 +1.7
baz=265
MCK McKinley 86.19 26 P P 21 25 33.3 -0.6
MCK McKinley 86.19 26 P P 21 25 33.3 -0.6
MCK pmax pmax
comp=Z,59nm,1.1s
MCK McKinley 86.19 26 P P 21 25 34.6 +0.8
baz=266
NEA2 Nenana 86.20 25 P P 21 25 34.2 +0.4
NEA2 Nenana 86.20 25 P P 21 25 34.9 +1.1
baz=266,SNR=7.3
RND Reindeer 86.21 27 P P 21 25 33.7 -0.3
RND Reindeer 86.21 27 P P 21 25 33.7 -0.3
RND pmax pmax
comp=Z,38nm,0.8s
RND MLR MLR
comp=Z,2µm,22.0s
E23K Chandalar 86.26 22 P P 21 25 35.0 +0.8
E23K IAmb IAmb 21 25 41.7
comp=Z,105nm,0.9s
E23K Chandalar 86.26 22 P P 21 25 35.8 +1.6
baz=265
VSLR Vesyoloye 86.26 313 *i* P **P 21 25 35.1 +0.5**
KNK Knik Glacier 86.26 29 P P 21 25 33.9 -0.4
KNK IAMs_20 IAMs_20 22 08 55.1
comp=Z,3µm,21.0s
KNK Knik Glacier 86.26 29 P P 21 25 35.6 +1.4
baz=266,SNR=27
PWL Port Wells 86.29 29 P P 21 25 33.1 -1.2
PWL IAMs_20 IAMs_20 22 03 28.8
comp=Z,3µm,21.0s
PWL Port Wells 86.29 29 P P 21 25 35.9 +1.5
baz=267,SNR=23
WAT1 Susitna Watana 86.31 27 P P 21 25 35.1 +0.6
baz=266
TOLK Toolik Lake Re 86.33 21 P P 21 25 33.7 -0.8
TOLK IAmb IAmb 21 25 41.8
comp=Z,82nm,1.0s
TOLK Toolik Lake Re 86.33 21 P P 21 25 36.5 +2.0
baz=265,SNR=35
SML Sawmill 86.34 28 P P 21 25 34.1 -0.6
SML IAmb IAmb 21 25 40.9
comp=Z,116nm,0.9s
SML Sawmill 86.34 28 P P 21 25 35.8 +1.1
baz=267,SNR=26
SOC Sochi 86.49 313 *e*P **P 21 25 34.1 -1.6**
SOC *e* 21 28 55.3
SOC *e*PPP PPP 21 30 55.1
SOC *e*S **SKAc 21 35 57.0 -3.2**
SOC *e*SS **SS 21 41 56.6 +5.8**
SOC *e*SSS SSS 21 45 23.7
SOC pmax pmax
comp=Z,185nm,0.9s

SOC MLR MLR
comp=Z,2µm,22.0s
WRH **Wood River Hil** **86.61** **26** P **P** **21 25 35.5 -0.4**
M23K **Glacier View** **86.63** **28** P **P** **21 25 37.1 +1.1**
baz=267,SNR=16
D24K **Happy Valley** **86.64** **21** P **P** **21 25 35.3 -0.6**
D24K IAmb IAmb 21 25 43.3
comp=Z,81nm,0.7s
D24K **Happy Valley** **86.64** **21** P **P** **21 25 37.6 +1.8**
baz=266
WAT6 **Susitna Watana** **86.67** **28** P **P** **21 25 37.5 +1.1**
baz=267,SNR=17
E24K **Your Creek** **86.68** **22** P **P** **21 25 37.7 +1.5**
baz=266
C24K **Franklin Bluff** **86.72** **20** P **P** **21 25 36.9 +0.6**
C24K IAmb IAmb 21 25 39.7
comp=Z,66nm,0.9s
C24K **Franklin Bluff** **86.72** **20** P **P** **21 25 37.6 +1.3**
baz=266
COLA **College** **86.74** **25** P **P** **21 25 37.4 +1.0**
baz=267
CCB **Clear Creek Bu** **86.75** **25** P **P** **21 25 36.6 +0.2**
CCB IAMs_20 IAMs_20 22 04 43.8
comp=Z,2µm,20.0s
H24K **Noodor Dome** **86.78** **24** P **P** **21 25 37.0 +0.2**
H24K IAmb IAmb 21 25 42.5
comp=Z,125nm,1.5s
H24K **Noodor Dome** **86.78** **24** P **P** **21 25 38.4 +1.7**
baz=267
SCM **Sheep Creek Mo** **86.82** **28** P **P** **21 25 36.9 -0.2**
SCM IAmb IAmb 21 26 13.8
comp=Z,105nm,1.1s
SCM **Sheep Creek Mo** **86.82** **28** P **P** **21 25 36.9 -0.2**
SCM pmax pmax
comp=Z,105nm,1.1s
SCM **Sheep Creek Mo** **86.82** **28** P **P** **21 25 38.6 +1.5**
baz=267,SNR=10
DHY **Denali Highway** **86.86** **27** P **P** **21 25 37.7 +0.4**
DHY **Denali Highway** **86.86** **27** P **P** **21 25 38.1 +0.8**
baz=267,SNR=13
F24K **Squaw Lake** **86.88** **23** P **P** **21 25 36.8 -0.4**
F24K IAmb IAmb 21 25 43.3
comp=Z,82nm,1.1s
F24K **Squaw Lake** **86.88** **23** P **P** **21 25 39.2 +2.1**
baz=267,SNR=44
GLI **Glacier Island** **86.89** **29** IAMs_20 IAMs_20 22 03 17.8
comp=Z,3µm,21.0s
GLI **Glacier Island** **86.89** **29** P **P** **21 25 38.5 +1.2**
baz=268
POKR **Poker Plat Res** **86.93** **25** P **P** **21 25 38.9 +1.5**
baz=267
VORD **Divnogorie** **86.93** **321** *e*P **P** **21 25 36.5 -1.2**
VORD *e* 21 25 38.0
VORD *e*S **SKSac** **21 35 58.1 -4.5**
VORD pmax pmax
comp=Z,310nm,1.0s
VORD pmax pmax
comp=Z,380nm,1.1s
VORD smax smax
comp=N,20nm,2.4s
G24K **Hadweenzic Riv** **86.99** **23** P **P** **21 25 37.7 0.0**
G24K **Hadweenzic Riv** **86.99** **23** P **P** **21 25 39.0 +1.3**
baz=267,SNR=6.1
VORR **Voronezh** **87.00** **321** *e*P **P** **21 25 36.8 -1.2**
VORR *e* 21 25 39.1
VORR *e*S **SKSac** **21 35 58.1 -4.9**
VORR pmax pmax
comp=Z,600nm,1.0s
VORR pmax pmax
comp=Z,710nm,1.2s
VORR smax smax
comp=N,40nm,2.5s
VSR **Storozhevoye** **87.02** **321** *e*P **P** **21 25 36.3 -1.8**
VSR *e* 21 25 38.3
VSR *e*S **SKSac** **21 36 00.0 -3.1**
VSR pmax pmax
comp=Z,220nm,1.0s
VSR pmax pmax
comp=Z,300nm,1.2s
VSR smax smax
comp=E,3µm,16.6s
KLMR **Klimovskoe** **87.08** **331** *c i*P **P** **21 25 37.5 -0.7**
KLMR S **SKSac** **21 36 01.1 -2.0**
KLMR pmax pmax
comp=Z,448nm,1.6s
KLMR MLR MLR
comp=Z,3µm,18.0s
HDA **Harding Lake** **87.10** **26** P **P** **21 25 37.3 -1.0**
HDA **Harding Lake** **87.10** **26** P **P** **21 25 38.5 +0.2**
baz=268,SNR=20
IL31 **87.15** **25** P **P** **21 25 38.5 +0.1**
ILAR **Eielson Array** **87.15** **25** P **P** **21 25 38.2 -0.3**
comp=Z,15nm,0.9s,baz=262,slow=3.8,SNR=38
ILAR PP **PP** **21 28 58.4 -3.8**
comp=Z,5.9nm,1.2s,baz=274,slow=5.5,SNR=4.4
ILAR PKKPbc **PKKPbc** **21 43 31.6 -1.3**
comp=Z,0.9nm,0.8s,baz=64,slow=2.1,SNR=5.4
comp=Z,15nm,0.9s
LPSR **Galich'ya Gora** **87.19** **322** *e*P **P** **21 25 37.8 -1.1**
LPSR *e* 21 25 39.6
LPSR *e*S **SKSac** **21 35 59.0 -5.1**
LPSR pmax pmax
comp=Z,400nm,1.1s
LPSR pmax pmax
comp=Z,490nm,1.3s
LPSR smax smax
comp=E,3µm,13.2s
FID **Port Fidalgo** **87.19** **29** IAMs_20 IAMs_20 22 08 05.1
comp=Z,3µm,21.0s
Q23K **Middleton Isla** **87.22** **31** P **P** **21 25 39.7 +0.9**
baz=268
M24K **Tolsona, Glenn** **87.38** **28** P **P** **21 25 37.7 -2.0**
M24K **Tolsona, Glenn** **87.38** **28** P **P** **21 25 40.9 +1.2**
baz=268,SNR=16
KLU **Klutina** **87.48** **29** P **P** **21 25 39.1 -1.2**
KLU IAMs_20 IAMs_20 22 04 19.3
comp=Z,3µm,21.0s
KLU **Klutina** **87.48** **29** P **P** **21 25 41.8 +1.5**
baz=269,SNR=11
ARPR **Arapgir-MALATY** **87.49** **309** P **P** **21 25 41.5 +0.7**
D25K **Kavik River** **87.52** **21** P **P** **21 25 40.4 +0.2**
D25K **Kavik River** **87.52** **21** P **P** **21 25 42.1 +1.9**
baz=268
G25K **Bearman Lake** **87.54** **23** P **P** **21 25 41.3 +1.0**
baz=268
EYAK **Cordova Ski Ar** **87.55** **30** IAMs_20 IAMs_20 22 06 44.9
comp=Z,3µm,22.0s
EYAK **Cordova Ski Ar** **87.55** **30** P **P** **21 25 42.1 +1.6**
baz=269
DIV **Divide** **87.55** **29** P **P** **21 25 40.9 +0.4**
DIV IAMs_20 IAMs_20 22 10 08.0
comp=Z,3µm,19.0s
K24K **Donnelly Dome** **87.60** **26** P **P** **21 25 40.8 +0.1**
K24K IAmb IAmb 21 25 44.6
comp=Z,105nm,1.2s
K24K **Donnelly Dome** **87.60** **26** P **P** **21 25 41.3 +0.6**
baz=269
H25L **Birch Creek** **87.64** **24** P **P** **21 25 42.5 +1.8**
baz=269,SNR=9.8
PAX **Paxson** **87.72** **27** P **P** **21 25 41.8 +0.4**
PAX **Paxson** **87.72** **27** P **P** **21 25 41.8 +0.4**
PAX pmax pmax
comp=Z,66nm,1.2s
PAX **Paxson** **87.72** **27** P **P** **21 25 42.7 +1.3**
baz=269,SNR=26
F25K **Christian Rive** **87.74** **23** P **P** **21 25 41.6 +0.3**
F25K **Christian Rive** **87.74** **23** P **P** **21 25 43.3 +1.9**
baz=269
E25K **Arctic Village** **87.78** **22** P **P** **21 25 42.4 +0.9**
E25K IAmb IAmb 21 25 46.9
comp=Z,113nm,1.1s
E25K **Arctic Village** **87.78** **22** P **P** **21 25 43.5 +2.0**
baz=269,SNR=87
J25K **Salcha River,** **87.79** **26** P **P** **21 25 41.1 -0.6**
J25K **Salcha River,** **87.79** **26** P **P** **21 25 42.6 +0.9**
baz=269
HARP **HAARP** **87.86** **28** P **P** **21 25 43.0 +1.0**
baz=269,SNR=14
MOS **Moscow** **87.99** **326** *e*P **P** **21 25 41.9 -0.7**
MOS *e* 21 29 09.8
MOS *e* 21 36 07.5
MOS *e*S **S** **21 36 24.6 +0.6**
MOS pmax pmax
comp=Z,1µm,2.4s
MOS pmax pmax
comp=Z,504nm,2.0s
MOS MLR MLR
comp=E,3µm,23.0s
MOS MLR MLR
comp=Z,4µm,23.0s
RIDG **Independent Ri** **88.01** **26** P **P** **21 25 42.2 -0.6**
RIDG IAmb IAmb 21 25 48.0
comp=Z,127nm,1.1s
RIDG **Independent Ri** **88.01** **26** P **P** **21 25 43.8 +1.1**
baz=270
C26K **Camden Bay** **88.05** **20** P **P** **21 25 44.7 +2.1**
baz=269
RAGM **Ragged Mountai** **88.08** **30** P **P** **21 25 42.9 -0.2**
RAGM IAmb IAmb 21 27 22.2
comp=Z,53nm,0.8s
BMRM **Bremner River** **88.11** **29** P **P** **21 25 43.2 0.0**
BMRM IAmb IAmb 21 25 47.3
comp=Z,71nm,1.2s
BMRM IAMs_20 IAMs_20 22 08 46.0
comp=Z,3µm,22.0s
BMRM **Bremner River** **88.11** **29** P **P** **21 25 44.6 +1.4**
baz=270,SNR=7.9
N25K **Chitina, Valde** **88.12** **29** P **P** **21 25 42.6 -0.7**
N25K IAmb IAmb 21 25 48.9
comp=Z,75nm,1.1s
N25K IAMs_20 IAMs_20 22 00 48.1
comp=Z,3µm,22.0s
N25K **Chitina, Valde** **88.12** **29** P **P** **21 25 45.0 +1.7**
baz=270,SNR=13
ANN **Anapa** **88.14** **315** *e*P **P** **21 25 43.2 -0.4**
ANN *e* 21 29 08.6
ANN *e*S **SKSac** **21 36 08.7 -1.5**
ANN pmax pmax
comp=Z,202nm,1.0s
ANN MLR MLR
comp=Z,3µm,22.0s
ANN MLR MLR
comp=N,2µm,23.0s
ANN MLR MLR
comp=E,3µm,23.0s
KAIM **Kayak Island** **88.20** **30** P **P** **21 25 45.3 +1.7**
baz=270
F26K **Sheenjek River** **88.31** **22** P **P** **21 25 44.2 +0.2**
F26K **Sheenjek River** **88.31** **22** P **P** **21 25 45.6 +1.6**
baz=270
DOT **Dot Lake** **88.36** **27** P **P** **21 25 43.7 -0.6**
DOT IAMs_20 IAMs_20 22 06 18.5
comp=Z,3µm,22.0s
GAZ **Gaziantep** **88.39** **307** P **P** **21 25 46.0 +0.9**
SCRK **Sand Creek** **88.39** **26** P **P** **21 25 44.6 0.0**
SCRK **Sand Creek** **88.39** **26** P **P** **21 25 45.6 +1.0**
baz=270
KIBK **Kibwezi** **88.42** **268** P **P** **21 25 46.3 +0.5**
KIBK **Kibwezi** **88.42** **268** P **P** **21 25 45.8 0.0**
KIBK IAmb IAmb 21 25 54.0
comp=Z,164nm,1.3s
G26K **Porcupine Rive** **88.46** **23** P **P** **21 25 44.3 -0.3**
G26K IAmb IAmb 21 25 49.0
comp=Z,71nm,1.1s
G26K **Porcupine Rive** **88.46** **23** P **P** **21 25 46.1 +1.4**
baz=270
C27K **Jago River** **88.46** **21** P **P** **21 25 44.4 -0.3**
C27K IAmb IAmb 21 25 48.3
comp=Z,90nm,1.1s
C27K **Jago River** **88.46** **21** P **P** **21 25 46.6 +1.9**
baz=270
GLB **Gilahina Butte** **88.50** **29** P **P** **21 25 44.8 -0.3**
GLB IAmb IAmb 21 25 49.8
comp=Z,80nm,1.2s
MENT **Mentasta** **88.52** **27** P **P** **21 25 43.5 -1.6**
BERG **Berg Lake** **88.56** **30** P **P** **21 25 44.8 -0.5**
BERG IAmb IAmb 21 25 50.4
comp=Z,138nm,1.3s
J26L **Joseph Creek** **88.57** **26** P **P** **21 25 45.3 -0.1**
J26L IAmb IAmb 21 25 50.7
comp=Z,54nm,0.8s
J26L IAMs_20 IAMs_20 22 05 42.1
comp=Z,2µm,20.0s
J26L **Joseph Creek** **88.57** **26** P **P** **21 25 46.1 +0.7**
baz=271
OBN **Obninsk** **88.59** **325** LR LR 22 06 12.1
comp=Z,2µm,21.4s,baz=28,slow=36
OBN **Obninsk** **88.59** **325** P **P** **21 25 44.5 -1.1**
OBN IAMs_20 IAMs_20 22 09 49.9
comp=Z,2µm,21.0s
OBN **Obninsk** **88.59** **325** ⇑P **P** **21 25 46.0 +0.4**
OBN **Obninsk** **88.59** **325** *d i*P **P** **21 25 45.9 +0.4**
OBN *e* 21 29 14.0
OBN *i* PPP PPP 21 31 12.6
OBN *i* S **SKSac** **21 36 09.6 -2.9**
OBN *e*SS **SS** **21 42 23.9 +3.1**
OBN pmax pmax
comp=Z,219nm,1.2s
OBN MLR MLR
comp=Z,4µm,23.0s
OBN **Obninsk** **88.59** **325** P **P** **21 25 45.7 +0.2**
comp=Z,3µmcomp=Z,214nm,1.2s
VRDI **Verde Repeater** **88.67** **29** P **P** **21 25 44.9 -1.2**
VRDI IAMs_20 IAMs_20 22 04 22.7
comp=Z,3µm,20.0s
L26K **Log Cabin Wild** **88.69** **27** P **P** **21 25 45.8 -0.1**
L26K **Log Cabin Wild** **88.69** **27** P **P** **21 25 46.9 +1.0**
baz=271
ASF **Jabal al Asfar** **88.73** **302** LR LR 22 09 37.2
comp=Z,2µm,21.7s,baz=77,slow=38
I26K **Coal Creek Min** **88.73** **25** P **P** **21 25 46.4 +0.4**
baz=271
BGLC **Bering Glacier** **88.77** **30** P **P** **21 25 46.9 +0.7**
baz=271
CRQM **Cirque** **88.83** **29** P **P** **21 25 47.1 +0.3**
CRQM IAmb IAmb 21 26 19.3
comp=Z,83nm,1.1s
CRQM IAMs_20 IAMs_20 22 08 57.7
comp=Z,3µm,22.0s
CRQE **Cirque** **88.86** **29** P **P** **21 25 48.3 +1.5**
baz=271
M26K **Nabesna, AK** **88.86** **28** P **P** **21 25 46.2 -0.5**
M26K IAMs_20 IAMs_20 22 04 24.9
comp=Z,2µm,21.0s
M26K **Nabesna, AK** **88.86** **28** P **P** **21 25 48.2 +1.4**
baz=271
MCARA **McCarthy VSAT** **88.87** **29** P **P** **21 25 46.1 -0.6**
MCARA IAmb IAmb 21 25 57.2
comp=Z,86nm,1.2s
MCARA **McCarthy VSAT** **88.87** **29** P **P** **21 25 47.9 +1.1**
baz=271
KHAM **Kharkiv** **88.88** **320** P **P** **21 25 48.6 +1.5**
TOKA **Tokat** **88.91** **310** P **P** **21 25 47.3 -0.1**
TOKA IAmb IAmb 21 25 54.9
comp=Z,125nm,1.3s
TGL **Tana Glacier** **88.98** **29** P **P** **21 25 45.7 -1.7**
TGL IAmb IAmb 21 25 50.6
comp=Z,72nm,1.2s
TGL IAMs_20 IAMs_20 22 09 12.1
comp=Z,3µm,22.0s
FKH **Fakeheh** **89.09** **304** *e*P **P** **21 25 49.7 +1.1**
KMBO **Kilima Mbogo** **89.18** **269** P **P** **21 25 51.0 +1.5**
comp=Z,34nm,0.9s,baz=70,slow=5.5,SNR=44
KMBO S **SKSac** **21 36 20.6 +2.4**
comp=Z,0.6nm,0.3s,baz=201,slow=18,SNR=1.5
KMBO LR LR 22 04 04.2
comp=Z,2µm,20.0s,baz=98,slow=34
comp=Z,34nm,0.9s
KMBO **Kilima Mbogo** **89.18** **269** *i* P **P** **21 25 49.9 +0.4**
KMBO pmax pmax
comp=Z,31nm,1.1s
LVZ **Lovozero** **89.18** **338** P **P** **21 25 46.7 -1.4**
LVZ IAMs_20 IAMs_20 22 12 58.5
comp=Z,3µm,18.0s
LVZ **Lovozero** **89.18** **338** ⇑P **P** **21 25 48.6 +0.5**
LVZ **Lovozero** **89.18** **338** P **P** **21 25 48.2 +0.1**
comp=Z,61nm,1.1s
ISLE **Juniper Island** **89.23** **30** P **P** **21 25 47.5 -1.1**
ISLE IAmb IAmb 21 25 57.0
comp=Z,76nm,1.2s
ISLE IAMs_20 IAMs_20 22 09 20.4
comp=Z,2µm,21.0s
K27K **Chicken** **89.23** **26** P **P** **21 25 48.9 +0.5**
K27K IAmb IAmb 21 25 52.9
comp=Z,134nm,1.1s
K27K **Chicken** **89.23** **26** P **P** **21 25 50.2 +1.9**
baz=272
E27K **Coleen River** **89.26** **22** P **P** **21 25 49.0 +0.5**
E27K IAmb IAmb 21 25 51.9
comp=Z,70nm,1.1s
E27K **Coleen River** **89.26** **22** P **P** **21 25 50.5 +2.0**
baz=272
BEIL **Beino** **89.27** **304** *e*P **P** **21 25 50.5 +1.2**
G27K **Doyon Strip** **89.30** **23** P **P** **21 25 49.0 +0.3**
G27K **Doyon Strip** **89.30** **23** P **P** **21 25 50.6 +1.9**
baz=272
I27K **Kandik River** **89.37** **25** P **P** **21 25 49.9 +0.8**
I27K IAmb IAmb 21 25 52.5
comp=Z,71nm,1.0s
I27K **Kandik River** **89.37** **25** P **P** **21 25 51.0 +1.9**
baz=272
H27K **Steamboat Moun** **89.38** **24** P **P** **21 25 48.6 -0.4**
H27K IAmb IAmb 21 25 52.9
comp=Z,202nm,1.9s
H27K **Steamboat Moun** **89.38** **24** P **P** **21 25 50.6 +1.5**
baz=272
L27K **Beaver Creek,** **89.38** **27** P **P** **21 25 48.9 -0.2**
L27K **Beaver Creek,** **89.38** **27** P **P** **21 25 51.0 +1.9**
baz=272
M27K **Edge Creek, AK** **89.39** **28** P **P** **21 25 49.8 +0.4**
M27K IAMs_20 IAMs_20 22 08 21.7
comp=Z,2µm,21.0s
M27K **Edge Creek, AK** **89.39** **28** P **P** **21 25 50.9 +1.6**
baz=272
BNN **Bunyan** **89.43** **309** P **P** **21 25 49.9 -0.2**
BNN IAmb IAmb 21 25 53.9
comp=Z,86nm,1.3s
MESA **MESA** **89.44** **30** P **P** **21 25 50.8 +1.1**
baz=272
D27M **Malcolm River** **89.44** **21** P **P** **21 25 49.8 +0.4**
D27M **Malcolm River** **89.44** **21** P **P** **21 25 50.8 +1.4**
baz=273
HWQ **Hawqa** **89.48** **304** *e*P **P** **21 25 50.5 +0.2**
GRNC **Granite Creek** **89.51** **29** P **P** **21 25 49.0 -1.1**
GRNC IAMs_20 IAMs_20 22 09 29.0
comp=Z,2µm,19.0s
YAH **Yahtse** **89.53** **30** P **P** **21 25 49.6 -0.6**
YAH IAmb IAmb 21 25 53.9
comp=Z,73nm,1.1s
BARN **Barnard Glacie** **89.55** **29** P **P** **21 25 49.5 -0.6**
BARN IAmb IAmb 21 25 56.6
comp=Z,102nm,1.1s
RCY **Rachaya** **89.59** **303** *e*P **P** **21 25 52.9 +2.0**
APA **Apatity** **89.67** **337** ⇓*i*P **P** **21 25 49.8 -0.5**
APA MLR MLR
comp=Z,5µm,28.3s
SHBL **Chebaa** **89.67** **303** *e*P **P** **21 25 52.6 +1.3**
CTG **Chitna Glacier** **89.70** **29** P **P** **21 25 52.2 +1.3**
baz=273,SNR=9.8
CTGM **Chitina Glacie** **89.71** **29** P **P** **21 25 50.7 -0.2**
CTGM IAmb IAmb 21 25 55.2
comp=Z,118nm,1.2s
CTGM IAMs_20 IAMs_20 22 00 20.1
comp=Z,3µm,22.0s
BHL **Bhannes** **89.73** **304** *e*P **P** **21 25 52.9 +1.4**
BALJ **Balqa** **89.80** **302** P **P** **21 25 50.9 -0.9**
DQRL **Deir Qamar** **89.81** **304** *e*P **P** **21 25 53.0 +1.1**
TABL **Table Mountain** **89.83** **30** P **P** **21 25 48.6 -2.9**
BVCY **Beaver Creek** **89.86** **28** P **P** **21 25 53.1 +1.7**
baz=273,SNR=14
LOGN **Logan Glacier** **89.88** **29** P **P** **21 25 51.5 -0.2**
GHAJ **Ghor Haditha** **89.89** **301** P **P** **21 25 51.2 -1.0**
F28M **Old Crow** **89.95** **22** P **P** **21 25 50.6 -1.1**
F28M IAMs_20 IAMs_20 22 12 57.5
comp=Z,3µm,20.0s
F28M **Old Crow** **89.95** **22** P **P** **21 25 53.2 +1.5**
baz=274
MMAI **Mount Meron Ar** **89.97** **303** P **P** **21 25 54.3 +1.7**
comp=Z,57nm,0.8s,baz=87,slow=5.9,SNR=49
MMAI LR LR 22 15 11.8
comp=Z,853nm,18.6s,baz=82,slow=42
comp=Z,57nm,0.8s
E28M **Babbage River** **90.00** **21** P **P** **21 25 52.5 +0.6**
E28M IAmb IAmb 21 25 55.2
comp=Z,76nm,1.1s
E28M IAMs_20 IAMs_20 22 09 39.8
comp=Z,3µm,21.0s
E28M **Babbage River** **90.00** **21** P **P** **21 25 53.5 +1.6**
baz=274
I28M **Miner Creek** **90.08** **25** P **P** **21 25 53.1 +0.7**
I28M **Miner Creek** **90.08** **25** P **P** **21 25 53.7 +1.3**
baz=274
YUK3 **Moose Creek** **90.08** **28** P **P** **21 25 54.4 +1.7**
baz=274,SNR=8.9
D28M **Stokes Point** **90.23** **21** P **P** **21 25 54.3 +1.4**
baz=275
O28M **Mount Upton** **90.28** **29** P **P** **21 25 53.5 -0.3**
O28M **Mount Upton** **90.28** **29** P **P** **21 25 55.4 +1.7**
baz=274,SNR=8.3
PINM **Pinnacle** **90.29** **30** P **P** **21 25 55.1 +1.6**
baz=274
SYO **Syowa Base** **90.34** **201** ⇑*e*P **P** **21 25 51.8 -1.6**
SYO **Syowa Base** **90.34** **201** ⇑*i*PcP **PcP** **21 25 54.0 -0.6**
SYO **Syowa Base** **90.34** **201** ⇓*ep*P pP 21 26 02.0 -0.9
DAWY **Dawson** **90.41** **26** P **P** **21 25 54.2 +0.3**
DAWY **Dawson** **90.41** **26** P **P** **21 25 55.1 +1.2**
baz=274
YUK8 **Steele Glacier** **90.45** **29** P **P** **21 25 55.4 +0.9**
baz=274,SNR=10.0
EIL **Elat** **90.47** **300** LR LR 22 10 45.1
comp=Z,1µm,21.9s,baz=75,slow=38
SIM **Simferopol'** **90.49** **315** *e*P **P** **21 25 55.0 +0.3**
SIM *e*S **SKSac** **21 36 24.6 +0.5**
SIM pmax pmax
comp=Z,105nm,0.8s
SIM MLR MLR
comp=Z,5µm,27.0s
E29M **Blow River** **90.62** **22** P **P** **21 25 55.3 +0.5**
E29M **Blow River** **90.62** **22** P **P** **21 25 56.0 +1.2**
baz=276
H29M **Whitestone** **90.66** **24** P **P** **21 25 55.4 +0.4**
H29M IAmb IAmb 21 25 58.7
comp=Z,93nm,1.6s
H29M **Whitestone** **90.66** **24** P **P** **21 25 56.6 +1.6**
baz=275
BZK **Bozkurt** **90.72** **312** P **P** **21 25 54.8 -1.0**
BZK IAmb IAmb 21 26 01.1
comp=Z,98nm,1.0s
G29M **Pine Creek** **90.72** **23** P **P** **21 25 56.5 +1.2**
G29M IAmb IAmb 21 25 58.4
comp=Z,111nm,1.1s
G29M **Pine Creek** **90.72** **23** P **P** **21 25 56.8 +1.5**
baz=276
PNL **Peninsula** **90.75** **30** P **P** **21 25 57.0 +1.4**
baz=274
VADS **Vadso** **90.90** **340** *e*P **P** **21 25 57.0 +1.0**
KIRS **Kirsehir-Merke** **90.92** **309** ⇑P **P** **21 25 57.9 +0.9**
LODK **Lodwar** **90.94** **273** P **P** **21 25 56.9 -0.7**
LODK IAmb IAmb 21 26 04.6
comp=Z,107nm,1.8s
LODK **Lodwar** **90.94** **273** P **P** **21 25 58.0 +0.5**
SNR=21
M29M **Somme Creek** **90.97** **28** P **P** **21 25 57.0 +0.3**
M29M **Somme Creek** **90.97** **28** P **P** **21 25 58.2 +1.5**
baz=275
ILGA **Ilgaz** **90.98** **311** P **P** **21 25 56.4 -1.0**
ILGA IAmb IAmb 21 26 00.8
comp=Z,67nm,1.1s
YUK4 **Talbot Arm** **90.98** **29** P **P** **21 25 58.5 +1.6**
baz=275,SNR=7.7
L29M **L29M** **91.06** **27** P **P** **21 25 57.1 +0.1**
L29M IAmb IAmb 21 26 00.9
comp=Z,116nm,1.1s
L29M **L29M** **91.06** **27** P **P** **21 25 59.1 +2.1**
baz=276
BR104 **Keskin Array S** **91.11** **310** P **P** **21 25 57.7 -0.2**
comp=Z,175nmcomp=Z,23nm,1.2s
BR131 **Keskin Array S** **91.11** **310** *i* P **P** **21 25 57.5 -0.4**
BRTR **Keskin Array B** **91.11** **310** P **P** **21 25 57.4 -0.5**
comp=Z,15nm,0.9s,baz=120,slow=4.0,SNR=30
BRTR PP PP 21 29 26.9 -7.8
comp=Z,1.3nm,0.8s,baz=97,slow=4.6,SNR=2.0
BRTR S **SKSac** **21 36 21.7 -6.6**
comp=Z,0.1nm,0.3s,baz=35,slow=5.3,SNR=1.1
BRTR LR LR 22 11 34.6
comp=Z,556nm,21.6s,baz=76,slow=39
comp=Z,15nm,0.9s
O29M **Mount Kennedy** **91.11** **30** P **P** **21 25 57.2 -0.2**
O29M IAmb IAmb 21 26 04.1
comp=Z,102nm,1.4s
O29M **Mount Kennedy** **91.11** **30** P **P** **21 25 59.3 +1.9**
baz=275
BR106 **Keskin Array S** **91.12** **310** P **P** **21 25 57.6 -0.3**
comp=Z,184nmcomp=Z,21nm,0.9s
BR105 **Keskin Array S** **91.12** **310** P **P** **21 25 58.2 +0.2**
comp=Z,228nmcomp=Z,28nm,1.1s
YUK6 **Outpost Mounta** **91.16** **29** P **P** **21 25 58.9 +1.2**
baz=275

K29M	**Barlow Dome**	**91.25**	**26**	P	**P**	**21 25 57.6**	**-0.4**
K29M	**Barlow Dome**	**91.25**	**26**	P	**P**	**21 26 00.1**	**+2.1**
	baz=276						
EPYK	**Eagle Plains**	**91.30**	**24**	P	**P**	**21 25 57.8**	**-0.2**
EPYK				IAmb	IAmb	21 26 01.4	
	comp=Z,124nm,1.2s						
EPYK	**Eagle Plains**	**91.30**	**24**	P	**P**	**21 25 59.1**	**+1.1**
	baz=277						
G30M	**tAoh Zraii Nji**	**91.42**	**23**	P	**P**	**21 25 59.2**	**+0.6**
G30M				IAmb	IAmb	21 26 01.6	
	comp=Z,107nm,1.4s						
G30M				IAMs_20	IAMs_20	22 12 03.4	
	comp=Z,2µm,21.0s						
G30M	**tAoh Zraii Nji**	**91.42**	**23**	P	**P**	**21 25 59.9**	**+1.3**
	baz=277						
F30M	**Barrier River**	**91.50**	**22**	P	**P**	**21 25 58.1**	**-0.8**
F30M				IAmb	IAmb	21 26 01.8	
	comp=Z,97nm,1.1s						
F30M	**Barrier River**	**91.50**	**22**	P	**P**	**21 25 59.9**	**+0.9**
	baz=278						
QSPA	**South Pole Qui**	**91.53**	**180**	P	**P**	**21 26 02.8**	**+3.6**
	comp=Z,13nm,1.0s,baz=326,slow=1.3,SNR=25						
QSPA				S	**SKSac**	21 36 30.2	**+0.8**
	comp=Z,1.1nm,0.5s,baz=35,slow=22,SNR=5.6						
QSPA	**South Pole Qui**	**91.53**	**180**	P	**P**	**21 26 03.6**	**+4.4**
QSPA				IAmb	IAmb	21 26 04.8	
	comp=Z,190nm,1.9s						
QSPA	**South Pole Qui**	**91.53**	**180**	IAMs_20	IAMs_20	22 13 24.8	
	comp=Z,3µm,19.0s						
I30M	**Mount Dempster**	**91.58**	**25**	P	**P**	**21 25 59.6**	**+0.1**
I30M	**Mount Dempster**	**91.58**	**25**	P	**P**	**21 26 01.0**	**+1.5**
	baz=277						
HYT	**Haines Junctio**	**91.58**	**29**	P	**P**	**21 25 57.4**	**-2.2**
HYT	**Haines Junctio**	**91.58**	**29**	P	**P**	**21 26 01.0**	**+1.4**
	baz=276,SNR=12						
P29M	**Windy Craggy**	**91.59**	**30**	P	**P**	**21 25 59.3**	**-0.2**
P29M	**Windy Craggy**	**91.59**	**30**	P	**P**	**21 26 01.3**	**+1.7**
	baz=276,SNR=12						
CSS	**Mathiatis**	**91.61**	**305**	P	**P**	**21 25 59.1**	**-1.0**
CSS	**Mathiatis**	**91.61**	**305**	P	**P**	**21 26 01.2**	**+1.1**
	comp=Z,2µmcomp=Z,133nm,0.8s						
J30M	**Hart River**	**91.69**	**25**	P	**P**	**21 26 00.6**	**+0.6**
J30M				IAmb	IAmb	21 26 04.0	
	comp=Z,78nm,1.4s						
J30M				IAMs_20	IAMs_20	22 10 37.4	
	comp=Z,3µm,18.0s						
J30M	**Hart River**	**91.69**	**25**	P	**P**	**21 26 01.8**	**+1.8**
	baz=277						
N30M	**Aishikik Lake**	**91.72**	**29**	P	**P**	**21 25 59.6**	**-0.5**
N30M				IAmb	IAmb	21 26 03.8	
	comp=Z,70nm,1.2s						
N30M				IAMs_20	IAMs_20	22 06 41.3	
	comp=Z,3µm,22.0s						
N30M	**Aishikik Lake**	**91.72**	**29**	P	**P**	**21 26 01.9**	**+1.8**
	baz=276						
M30M	**Minto, Yukon**	**91.72**	**27**	P	**P**	**21 26 00.7**	**+0.6**
M30M				IAmb	IAmb	21 26 03.8	
	comp=Z,111nm,1.3s						
M30M	**Minto, Yukon**	**91.72**	**27**	P	**P**	**21 26 01.5**	**+1.4**
	baz=277						
ANTO	**Ankara**	**91.75**	**310**	P	**P**	**21 25 57.9**	**-2.9**
ANTO	**Ankara**	**91.75**	**310**	P	**P**	**21 26 02.0**	**+1.2**
ANTO	**Ankara**	**91.75**	**310**	⇓P	**P**	**21 26 02.4**	**+1.6**
ANTO	**Ankara**	**91.75**	**310**	⇓P	**P**	**21 26 02.4**	**+1.6**
KEV	**Kevo**	**91.75**	**340**	P	**P**	**21 25 58.5**	**-1.5**
KEV				IAmb	IAmb	21 26 01.7	
	comp=Z,61nm,1.1s						
KEV				IAMs_20	IAMs_20	22 15 44.4	
	comp=Z,4µm,20.0s						
KEV	**Kevo**	**91.75**	**340**	P	**P**	**21 25 58.5**	**-1.5**
KEV				pmax	pmax		
	comp=Z,61nm,1.1s						
KEV				MLR	MLR		
	comp=Z,4µm,20.0s						
P30M	**Million Dollar**	**91.93**	**30**	P	**P**	**21 26 03.0**	**+1.9**
	baz=276						
G31M	**Satah River**	**92.19**	**23**	P	**P**	**21 26 02.2**	**+0.2**
G31M				IAmb	IAmb	21 26 04.5	
	comp=Z,99nm,1.1s						
G31M	**Satah River**	**92.19**	**23**	P	**P**	**21 26 03.1**	**+1.1**
	baz=279						
INK	**Inuvik**	**92.24**	**21**	LR	LR	22 09 24.2	
	comp=Z,1µm,20.5s,baz=286,slow=37						
INK	**Inuvik**	**92.24**	**21**	P	**P**	**21 26 01.9**	**-0.3**
INK				IAmb	IAmb	21 26 05.4	
	comp=Z,107nm,1.3s						
INK	**Inuvik**	**92.24**	**21**	P	**P**	**21 26 01.9**	**-0.3**
INK				pmax	pmax		
	comp=Z,107nm,1.3s						
INK	**Inuvik**	**92.24**	**21**	P	**P**	**21 26 03.4**	**+1.1**
	baz=280						
O30N	**Mendenhall**	**92.28**	**29**	P	**P**	**21 26 03.0**	**+0.3**
O30N				IAmb	IAmb	21 26 06.3	
	comp=Z,56nm,1.2s						
O30N	**Mendenhall**	**92.28**	**29**	P	**P**	**21 26 04.5**	**+1.8**
	baz=277,SNR=7.5						
F31M	**Tsiigehtchic**	**92.31**	**22**	P	**P**	**21 26 03.1**	**+0.5**
F31M	**Tsiigehtchic**	**92.31**	**22**	P	**P**	**21 26 03.9**	**+1.3**
	baz=280						
ARA0	**ARCESS Array S**	**92.31**	**340**	*e*P	**P**	**21 26 02.1**	**-0.5**
ARCES	**ARCESS Array B**	**92.31**	**340**	P	**P**	**21 26 02.8**	**+0.2**
	comp=Z,75nm,1.0s,baz=73,slow=4.2,SNR=63						
ARCES				PKKP	**PKKPdf**	**21 43 17.6**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=257,slow=2.7,SNR=11						
ARCES				LR	LR	22 11 25.8	
	comp=Z,3µm,21.4s,baz=82,slow=38						
	comp=Z,75nm,1.0s						
PLBC	**Pleasant Camp**	**92.31**	**30**	P	**P**	**21 26 04.4**	**+1.6**
	baz=277						
N31M	**Braeburn, Yuko**	**92.34**	**28**	P	**P**	**21 26 00.6**	**-2.3**
N31M	**Braeburn, Yuko**	**92.34**	**28**	P	**P**	**21 26 04.8**	**+1.9**
	baz=278,SNR=26						
H31M	**Peel River**	**92.34**	**24**	P	**P**	**21 26 02.4**	**-0.5**
H31M				IAmb	IAmb	21 26 08.4	
	comp=Z,61nm,1.2s						
H31M	**Peel River**	**92.34**	**24**	P	**P**	**21 26 04.3**	**+1.4**
	baz=279						
SPB2	**Spitsbergen Ar**	**92.48**	**349**	P	**P**	**21 26 02.8**	**-0.5**
SPB2				IAmb	IAmb	21 26 16.9	
	comp=Z,98nm,1.1s						
SPA0	**Spitsbergen Ar**	**92.48**	**349**	*e*P	**P**	**21 26 03.9**	**+0.6**
SPITS	**Spitsbergen Ar**	**92.48**	**349**	P	**P**	**21 26 03.8**	**+0.5**
	comp=Z,56nm,0.9s,baz=93,slow=9.2,SNR=20						
SPITS				LR	LR	22 13 05.9	
	comp=Z,2µm,20.4s,baz=56,slow=39						
	comp=Z,56nm,0.9s						
S31K	**Pelican**	**92.56**	**32**	P	**P**	**21 26 05.5**	**+1.5**
	baz=277						
HAMF	**Hammerfest**	**92.69**	**341**	*e*P	**P**	**21 26 03.8**	**-0.5**
SKAG	**Skagway**	**92.83**	**30**	P	**P**	**21 26 05.4**	**+0.3**
SKAG				IAmb	IAmb	21 26 09.5	
	comp=Z,62nm,1.1s						
SKAG	**Skagway**	**92.83**	**30**	P	**P**	**21 26 07.5**	**+2.3**
	baz=278,SNR=8.4						
WHY	**Whitehorse**	**92.88**	**29**	P	**P**	**21 26 06.6**	**+1.1**
WHY	**Whitehorse**	**92.88**	**29**	P	**P**	**21 26 07.3**	**+1.7**
	baz=278,SNR=32						
M31M	**Drury Creek, Y**	**92.89**	**28**	P	**P**	**21 26 04.3**	**-1.1**
M31M				IAmb	IAmb	21 26 09.3	
	comp=Z,83nm,1.3s						
M31M	**Drury Creek, Y**	**92.89**	**28**	P	**P**	**21 26 07.3**	**+1.9**
	baz=279						
MDUB	**Mudurnu**	**92.93**	**310**	P	**P**	**21 26 06.0**	**-0.3**
MDUB				IAmb	IAmb	21 26 10.6	
	comp=Z,100nm,1.3s						
KBS	**Kingsbay**	**93.02**	**350**	P	**P**	**21 26 04.6**	**-1.1**
KBS				IAMs_20	IAMs_20	22 16 32.3	
	comp=Z,3µm,20.0s						
KBS	**Kingsbay**	**93.02**	**350**	*e*P	**P**	**21 26 05.7**	**0.0**
KBS	**Kingsbay**	**93.02**	**350**	P	**P**	**21 26 04.6**	**-1.1**
KBS				pmax	pmax		
	comp=Z,31nm,1.1s						
KBS				MLR	MLR		
	comp=Z,3µm,20.0s						
KBS	**Kingsbay**	**93.02**	**350**	*i* P	**P**	**21 26 05.8**	**0.0**
SAHE	**Sakarya_HENDEK**	**93.16**	**311**	⇓P	**P**	**21 26 07.5**	**+0.3**
SIT	**Sitka**	**93.17**	**33**	P	**P**	**21 26 06.9**	**+0.2**
SIT	**Sitka**	**93.17**	**33**	P	**P**	**21 26 06.9**	**+0.2**
SIT				pmax	pmax		
	comp=Z,139nm,1.2s						
SIT	**Sitka**	**93.17**	**33**	P	**P**	**21 26 08.4**	**+1.7**
	baz=278						
BESE	**Bessie Mountai**	**93.20**	**31**	P	**P**	**21 26 07.2**	**+0.2**
KTK1	**Kautokeino**	**93.21**	**339**	*e*P	**P**	**21 26 06.6**	**-0.1**
AK08	**Malin Array Si**	**93.30**	**321**	P	**P**	**21 26 07.8**	**+0.3**
AKASG	**Malin Array Be**	**93.32**	**321**	P	**P**	**21 26 07.0**	**-0.6**
	comp=Z,111nm,0.8s,baz=71,slow=4.4,SNR=31						
AKASG				LR	LR	22 11 54.9	
	comp=Z,2µm,21.6s,baz=78,slow=38						
	comp=Z,11nm,0.8s						
AKASG	**Malin Array Be**	**93.32**	**321**	*i* P	**P**	**21 26 07.9**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,13nm,0.8s						
AKBB	**Malin Array Si**	**93.32**	**321**	P	**P**	**21 26 07.1**	**-0.5**
AKBB				IAmb	IAmb	21 26 14.0	
	comp=Z,122nm,1.6s						
AKBB	**Malin Array Si**	**93.32**	**321**	P	**P**	**21 26 07.1**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,122nm,1.6s						
AKBB	**Malin Array Si**	**93.32**	**321**	P	**P**	**21 26 07.8**	**+0.2**
KIEV	**Kiev**	**93.33**	**321**	P	**P**	**21 26 05.4**	**-2.2**
KIEV				IAmb	IAmb	21 26 14.0	
	comp=Z,110nm,1.6s						
KIEV	**Kiev**	**93.33**	**321**	⇑P	**P**	**21 26 08.3**	**+0.7**
KIEV	**Kiev**	**93.33**	**321**	⇑P	**P**	**21 26 08.3**	**+0.7**
PURM	**Purcari**	**93.34**	**317**	⇑P	**P**	**21 26 08.9**	**+1.1**
R32K	**Eaglecrest**	**93.42**	**32**	P	**P**	**21 26 07.4**	**-0.5**
R32K				IAmb	IAmb	21 26 12.3	
	comp=Z,71nm,1.2s						
R32K	**Eaglecrest**	**93.42**	**32**	P	**P**	**21 26 09.7**	**+1.8**
	baz=279,SNR=6.8						
S32K	**Killisnoo**	**93.51**	**32**	P	**P**	**21 26 08.1**	**-0.2**
S32K				IAmb	IAmb	21 26 20.9	
	comp=Z,86nm,1.4s						
S32K	**Killisnoo**	**93.51**	**32**	P	**P**	**21 26 09.7**	**+1.4**
	baz=278						
FIA1	**FINESS Array S**	**93.53**	**332**	P	**P**	**21 26 07.9**	**-0.4**
FINES	**FINESS Array B**	**93.53**	**332**	P	**P**	**21 26 08.9**	**+0.5**
	comp=Z,10nm,0.7s,baz=66,slow=4.8,SNR=28						
FINES				PKKPbc	**PKKPbc**	**21 43 17.0**	**+0.4**
	comp=Z,4.8nm,1.0s,baz=204,slow=4.2,SNR=4.5						
FINES				LR	LR	22 11 12.8	
	comp=Z,4µm,21.8s,baz=79,slow=37						
	comp=Z,10nm,0.7s						
BORA	**Eskisehir**	**93.55**	**310**	P	**P**	**21 26 08.1**	**-0.9**
BORA				IAmb	IAmb	21 26 12.4	
	comp=Z,56nm,1.3s						
P32M	**Atlin**	**93.63**	**30**	P	**P**	**21 26 08.5**	**-0.4**
P32M				IAmb	IAmb	21 26 12.4	
	comp=Z,55nm,1.2s						
P32M	**Atlin**	**93.63**	**30**	P	**P**	**21 26 10.7**	**+1.7**
	baz=279						
MNK	**Minsk**	**93.65**	**325**	*i* P	**P**	**21 26 08.9**	**-0.2**
MNK				*i*		21 29 54.3	
MNK				*i* PPP	PPP	21 32 00.9	
MNK				*i* S	**SKSac**	**21 36 40.5**	**-0.9**
MNK				*i* SS	**SS**	**21 43 35.3**	**+1.6**
MNK				*i* SSS	SSS	21 47 17.5	
MNK				pmax	pmax		
	comp=Z,80nm,1.0s						
MNK				pmax	pmax		
	comp=N,43nm,1.2s						
MNK				pmax	pmax		
	comp=E,16nm,1.0s						
MNK				MLR	MLR		
	comp=N,3µm,23.0s						
MNK				MLR	MLR		
	comp=Z,4µm,22.0s						
MNK				MLR	MLR		
	comp=E,2µm,21.0s						
ISP	**Isparta**	**93.67**	**308**	P	**P**	**21 26 09.1**	**-0.6**
ISP				IAmb	IAmb	21 26 12.6	
	comp=Z,37nm,0.8s						
ISP				IAMs_20	IAMs_20	22 15 03.7	
	comp=Z,2µm,21.0s						
ISP	**Isparta**	**93.67**	**308**	P	**P**	**21 26 09.1**	**-0.6**
ISP				pmax	pmax		
	comp=Z,37nm,0.8s						
ISP				MLR	MLR		
	comp=Z,2µm,21.0s						
N32M	**Quiet Lake**	**93.67**	**29**	P	**P**	**21 26 09.9**	**+0.7**
N32M	**Quiet Lake**	**93.67**	**29**	P	**P**	**21 26 10.7**	**+1.5**
	baz=280						
P33M	**Teslin, Yukon**	**93.97**	**29**	P	**P**	**21 26 10.1**	**-0.4**
P33M				IAmb	IAmb	21 26 13.8	
	comp=Z,57nm,1.2s						
P33M	**Teslin, Yukon**	**93.97**	**29**	P	**P**	**21 26 11.9**	**+1.4**
	baz=280,SNR=12						
KIS	**Kishinev**	**94.01**	**317**	*e*P	**P**	**21 26 10.0**	**-0.9**
	comp=Z,150nm,3.0s						
KIS	**Kishinev**	**94.01**	**317**	*e*PP	**PP**	**21 30 04.0**	**+6.9**
KIS				*e*SKS	**SKSac**	**21 36 35.0**	**-8.7**
KIS				*e*L	L	22 07 50.0	
KIS				LRM	MLR	22 09 50.0	
	comp=Z,700nm,24.0s						
MILM	**Milestii Mici**	**94.02**	**317**	⇑P	**P**	**21 26 10.4**	**-0.6**
MILM	**Milestii Mici**	**94.02**	**317**	⇑P	**P**	**21 26 10.4**	**-0.6**
MILM	**Milestii Mici**	**94.02**	**317**	*i* P	**P**	**21 26 09.8**	**-1.1**
	comp=Z,250nm,2.1s						
MILM	**Milestii Mici**	**94.02**	**317**	*e*PP	PP	21 30 07.0	+10
MILM				*e*SKS	**SKSac**	**21 36 37.0**	**-6.8**
MILM				*e*S	**S**	**21 37 18.0**	**-1.5**
MILM	**Milestii Mici**	**94.02**	**317**	*e*PS	PS	21 38 40.0	+2.4
MILM				*e*L	L	22 03 06.0	
MILM				LRM	MLR	22 09 41.0	
	comp=Z,2µm,24.0s						
JETT	**Jettan, Norway**	**94.05**	**340**	*e*P	**P**	**21 26 10.6**	**-0.1**
A36M	**Sachs Harbour**	**94.09**	**17**	P	**P**	**21 26 10.6**	**-0.1**
A36M	**Sachs Harbour**	**94.09**	**17**	P	**P**	**21 26 11.9**	**+1.2**
	baz=288						
SORM	**Soroca**	**94.19**	**318**	⇑P	**P**	**21 26 12.5**	**+0.8**
SORM	**Soroca**	**94.19**	**318**	⇑P	**P**	**21 26 12.5**	**+0.8**
TLCR		**94.22**	**315**	⇑P	**P**	**21 26 12.8**	**+0.9**
TLCR		**94.22**	**315**	⇑P	**P**	**21 26 12.8**	**+0.9**
ELL	**Elmali**	**94.25**	**307**	P	**P**	**21 26 09.9**	**-2.5**
ELL				IAmb	IAmb	21 26 36.7	
	comp=Z,95nm,1.4s						
ELL	**Elmali**	**94.25**	**307**	P	**P**	**21 26 09.9**	**-2.5**
ELL				pmax	pmax		
	comp=Z,95nm,1.4s						
LUBAR	**Lubar, Ukraine**	**94.34**	**320**	P	**P**	**21 26 12.3**	**-0.1**
Q32M	**Nakina River**	**94.47**	**31**	P	**P**	**21 26 11.6**	**-1.4**
Q32M				IAmb	IAmb	21 26 16.7	
	comp=Z,95nm,1.5s						
Q32M	**Nakina River**	**94.47**	**31**	P	**P**	**21 26 14.5**	**+1.5**
	baz=280						
KLYT	**Kilyos**	**94.48**	**311**	⇓P	**P**	**21 26 15.3**	**+2.1**
U33K	**Whale Pass**	**94.51**	**34**	P	**P**	**21 26 13.3**	**+0.3**
U33K				IAmb	IAmb	21 26 18.5	
	comp=Z,95nm,1.4s						
U33K	**Whale Pass**	**94.51**	**34**	P	**P**	**21 26 14.9**	**+2.0**
	baz=280						
TRO	**Tromso**	**94.53**	**340**	*e*P	**P**	**21 26 11.8**	**-1.0**
TIRR	**Tirgusor**	**94.59**	**315**	IAMs_20	IAMs_20	22 16 06.2	
	comp=Z,2µm,22.0s						
CRAG	**Craig**	**94.62**	**34**	P	**P**	**21 26 15.3**	**+1.8**
	baz=280						
VLDR	**Vladesti**	**94.65**	**316**	⇓P	**P**	**21 26 15.1**	**+1.2**
CFR	**Carcaliu**	**94.70**	**315**	⇑P	**P**	**21 26 15.0**	**+0.9**
CFR	**Carcaliu**	**94.70**	**315**	⇑P	**P**	**21 26 15.0**	**+0.9**
VASR	**Vaslui**	**94.75**	**317**	⇑P	**P**	**21 26 15.7**	**+1.4**
WRAK	**Wrangell Islan**	**94.89**	**33**	P	**P**	**21 26 13.6**	**-1.1**
WRAK				IAmb	IAmb	21 26 21.5	
	comp=Z,94nm,1.0s						
WRAK	**Wrangell Islan**	**94.89**	**33**	P	**P**	**21 26 16.6**	**+2.0**
	baz=280						
CTYL	**Yalikoy Yolu**	**95.02**	**312**	⇑P	**P**	**21 26 17.3**	**+1.7**
R33M	**Jennings River**	**95.04**	**30**	P	**P**	**21 26 15.3**	**-0.2**
R33M				IAmb	IAmb	21 26 19.3	
	comp=Z,54nm,1.1s						
R33M				IAMs_20	IAMs_20	22 05 29.2	
	comp=Z,3µm,20.0s						
R33M	**Jennings River**	**95.04**	**30**	P	**P**	**21 26 17.1**	**+1.6**
	baz=282						
ICOR	**Ion Corvin**	**95.06**	**314**	⇓P	**P**	**21 26 19.0**	**+3.2**
MANT	**Manisa**	**95.15**	**309**	P	**P**	**21 26 15.9**	**-0.8**
MANT				IAmb	IAmb	21 26 22.9	
	comp=Z,68nm,1.3s						
NOR	**Nord**	**95.16**	**355**	*i* P	**P**	**21 26 15.3**	**-0.2**
NOR				IAmb	IAmb	21 26 18.0	
	comp=Z,107nm,1.3s						
S34M	**Telegraph Cree**	**95.25**	**32**	P	**P**	**21 26 16.5**	**+0.2**
S34M				IAmb	IAmb	21 26 20.7	
	comp=Z,65nm,1.2s						
S34M				IAMs_20	IAMs_20	22 03 58.9	
	comp=Z,4µm,22.0s						
S34M	**Telegraph Cree**	**95.25**	**32**	P	**P**	**21 26 18.6**	**+2.3**
	baz=281,SNR=10						
BAND	**Balkesir-Ban**	**95.29**	**311**	⇑P	**P**	**21 26 17.5**	**+0.5**
RNPP9	**Sopachiv**	**95.30**	**322**	P	**P**	**21 26 17.5**	**+0.8**
HORU	**Horodok**	**95.30**	**320**	P	**P**	**21 26 17.7**	**+0.9**
C36M	**Paulatuk**	**95.30**	**20**	P	**P**	**21 26 15.1**	**-1.2**
C36M				IAmb	IAmb	21 26 18.7	
	comp=Z,80nm,1.1s						
C36M	**Paulatuk**	**95.30**	**20**	P	**P**	**21 26 18.4**	**+2.1**
	baz=289						
ODBI	**Odobesti**	**95.37**	**316**	⇓P	**P**	**21 26 20.4**	**+3.2**
KMPD	**K-Podol'skiy**	**95.38**	**319**	P	**P**	**21 26 17.0**	**-0.1**
PRD	**Provadia**	**95.47**	**313**	P	**P**	**21 26 19.2**	**+1.6**
V35K	**Ketchikan**	**95.49**	**34**	P	**P**	**21 26 19.1**	**+1.7**
	baz=281						
TESR	**Tescani**	**95.55**	**317**	⇓P	**P**	**21 26 19.0**	**+1.0**
TESR	**Tescani**	**95.55**	**317**	P	**P**	**21 26 18.5**	**+0.5**
	comp=Z,80nm,0.9s						
VRI	**Vrincioaia**	**95.59**	**316**	⇑P	**P**	**21 26 20.0**	**+1.8**
VRI	**Vrincioaia**	**95.59**	**316**	⇑P	**P**	**21 26 20.0**	**+1.8**
VRI	**Vrincioaia**	**95.59**	**316**	P	**P**	**21 26 19.7**	**+1.5**
	comp=Z,1µmcomp=Z,73nm,1.4s						
PLOR	**Plostina**	**95.64**	**316**	⇑P	**P**	**21 26 20.0**	**+1.5**
PLOR	**Plostina**	**95.64**	**316**	⇑P	**P**	**21 26 20.0**	**+1.5**
MBAR	**Mbarara**	**95.67**	**270**	LR	LR	22 08 33.5	
	comp=Z,886nm,20.0s,baz=70,slow=35						
PABE	**Paberze**	**95.71**	**326**	P	**P**	**21 26 17.6**	**-0.8**
PABE				IAMs_20	IAMs_20	22 10 46.0	
	comp=Z,4µm,22.0s						
DLBC	**Dease Lake**	**95.72**	**31**	LR	LR	22 05 27.1	
	comp=Z,2µm,21.8s,baz=272,slow=33						
DLBC	**Dease Lake**	**95.72**	**31**	P	**P**	**21 26 20.5**	**+1.9**
	baz=282,SNR=7.1						
ONER	**Baraj Valea Uz**	**95.75**	**317**	⇑P	**P**	**21 26 19.9**	**+1.0**
T35M	**Bob Quinn**	**95.91**	**32**	P	**P**	**21 26 18.8**	**-0.6**
T35M	**Bob Quinn**	**95.91**	**32**	P	**P**	**21 26 21.4**	**+1.9**
	baz=282,SNR=5.6						
NEHR	**Nehoiu**	**95.95**	**316**	⇓P	**P**	**21 26 21.2**	**+1.3**
COVR	**Voineasa-Covas**	**95.95**	**316**	⇓P	**P**	**21 26 21.3**	**+1.4**
WTLY	**Watson Lake, Y**	**95.95**	**29**	P	**P**	**21 26 19.2**	**-0.4**
WTLY	**Watson Lake, Y**	**95.95**	**29**	P	**P**	**21 26 21.9**	**+2.3**
	baz=284						
TURR	**Turia**	**96.05**	**316**	⇑P	**P**	**21 26 22.3**	**+1.9**
RAZG	**Razgrad**	**96.06**	**314**	⇑P	**P**	**21 26 22.6**	**+2.2**
MLR	**Muntele Rosu**	**96.18**	**316**	LR	LR	22 16 25.9	
	comp=Z,2µm,21.4s,baz=68,slow=40						
MLR	**Muntele Rosu**	**96.18**	**316**	P	**P**	**21 26 20.5**	**-0.6**
MLR				IAmb	IAmb	21 26 36.0	
	comp=Z,50nm,1.2s						
MLR	**Muntele Rosu**	**96.18**	**316**	⇓P	**P**	**21 26 22.0**	**+0.9**
MLR	**Muntele Rosu**	**96.18**	**316**	P	**P**	**21 26 20.5**	**-0.6**
MLR				pmax	pmax		
	comp=Z,50nm,1.2s						
MLR				MLR	MLR		
	comp=Z,800nm,22.0s						
MLR	**Muntele Rosu**	**96.18**	**316**	P	**P**	**21 26 21.7**	**+0.6**
	comp=Z,58nm,1.6s						
JMB	**Yambol**	**96.20**	**313**	P	**P**	**21 26 22.7**	**+1.7**
OZUR		**96.20**	**317**	⇓P	P	21 26 26.5	+5.5
U35K	**Hyder**	**96.26**	**33**	P	**P**	**21 26 21.9**	**+1.0**
	baz=282						
KSV	**Kosov**	**96.33**	**319**	P	**P**	**21 26 22.4**	**+0.9**
BLCB	**Balcova**	**96.34**	**309**	P	**P**	**21 26 22.5**	**+0.8**
STEI	**Steigen**	**96.34**	**339**	*e*P	**P**	**21 26 20.6**	**-0.5**
BUR08	**Bucovina Ar. S**	**96.36**	**318**	P	**P**	**21 26 21.4**	**-0.4**
BUR08				IAmb	IAmb	21 26 28.3	
	comp=Z,87nm,1.1s						
SUW	**Suwalki**	**96.45**	**325**	*e*P	**P**	**21 26 22.3**	**+0.5**
SUW	**Suwalki**	**96.45**	**325**	P	**P**	**21 26 21.0**	**-0.9**
SUW	**Suwalki**	**96.45**	**325**	P	**P**	**21 26 21.0**	**-0.9**
SUW				MLR	MLR		
	comp=Z,4µm,22.0s						
DOPR	**Dopca**	**96.50**	**316**	⇑P	**P**	**21 26 25.1**	**+2.7**
KARP	**Karpathos**	**96.59**	**306**	P	**P**	**21 26 21.7**	**-1.3**
KARP				IAmb	IAmb	21 26 37.3	
	comp=Z,53nm,0.8s						
KARP	**Karpathos**	**96.59**	**306**	P	**P**	**21 26 24.7**	**+1.7**
	comp=Z,84nm,0.9s						
SMG	**Samos**	**96.59**	**308**	P	**P**	**21 26 23.4**	**+0.5**
ELND	**Elena**	**96.61**	**313**	⇑P	**P**	**21 26 23.9**	**+1.0**
STNU	**Starunia**	**96.64**	**319**	P	**P**	**21 26 23.4**	**+0.5**
EZN	**Ezine**	**96.71**	**310**	⇑P	**P**	**21 26 24.0**	**+0.6**
EZN	**Ezine**	**96.71**	**310**	⇑P	**P**	**21 26 24.0**	**+0.6**
VOIR		**96.81**	**316**	⇑P	**P**	**21 26 24.3**	**+0.4**
VOIR		**96.81**	**316**	⇑P	**P**	**21 26 24.3**	**+0.4**
PRK	**Paraskevi**	**96.83**	**310**	P	**P**	**21 26 24.4**	**+0.5**
LOF	**Lofoten**	**96.87**	**340**	*e*P	**P**	**21 26 24.2**	**+0.8**
COPA	**Copaceanca**	**96.90**	**315**	⇑P	**P**	**21 26 26.3**	**+2.1**
MORS	**Morshin**	**96.96**	**320**	P		21 26 25.7	
DIM	**Dimitrovgrad**	**96.96**	**313**	P		21 26 25.6	
HUMR	**Humele**	**97.01**	**315**	⇓P	**P**	**21 26 24.9**	**+0.2**
PVL	**Pavlikeni**	**97.09**	**314**	P	Pdif	21 26 30.2	+5.0
CHOS	**Chios island**	**97.11**	**309**	P	**P**	**21 26 25.8**	**+0.5**
ARR	**Arges**	**97.12**	**316**	⇑P	Pdif	21 26 26.6	+1.3
RDO	**Rodhopi**	**97.12**	**312**	P	**P**	**21 26 22.9**	**-2.3**
SIGR	**SIGRI**	**97.15**	**

NEO	**Neokhori**	**99.16**	**310**		P	**Pdif**	**21**	**26**	**33.8 -0.7**
MDVR	**Moldovita**	**99.26**	**316**	⇑	P	**Pdif**	**21**	**26**	**36.1 +1.3**
DAG	**Danmarks Havn**	**99.30**	**352**	*i*	P	**Pdif**	**21**	**26**	**33.6 -0.6**
DAG					IAmb	IAmb	21	26	36.0
	comp=Z,123nm,1.5s								
VAY	**Valandovo**	**99.30**	**312**	*i*	P	**Pdif**	**21**	**26**	**34.7 -0.3**
OJC	**Ojcow**	**99.33**	**321**		P	**Pdif**	**21**	**26**	**31.3 -3.7**
OJC	**Ojcow**	**99.33**	**321**		P	**Pdif**	**21**	**26**	**31.3 -3.7**
NVL	**N'lazarevskaya**	**99.44**	**198**	*eP*		**Pdif**	**21**	**26**	**35.9 +0.9**
NVL				*e*			21	30	39.6
NVL				*ePPP*		PPP	21	32	46.2
NVL				*eSS*		**SKSac**	**21**	**37**	**11.9 +0.9**
NVL				*eSSS*		SSS	**21**	**44**	**58.3 +3.5**
NVL				*eSSS*		SSS	21	48	47.6
NVL					pmax	pmax			
	comp=Z,8.0nm,0.6s								
NVL					smax	smax			
	comp=E,320nm,12.2s								
NVL					MLR	MLR			
	comp=Z,139nm,21.0s								
BOVS	**Bovan**	**99.49**	**315**	⇑	P	**Pdif**	**21**	**26**	**37.2 +1.4**
LTK	**Loutraki**	**99.57**	**309**		P	**Pdif**	**21**	**26**	**35.7 -0.6**
LIT	**Litokhoron**	**99.58**	**311**		Pdif	**Pdif**	**21**	**26**	**35.7 -0.6**
LIT					IAmb	IAmb	21	26	40.6
	comp=Z,55nm,1.1s								
LIT	**Litokhoron**	**99.58**	**311**		P	**Pdif**	**21**	**26**	**35.7 -0.6**
LIT					pmax	pmax			
	comp=Z,55nm,1.1s								
HFS	**Hagfors**	**99.72**	**332**		P	**Pdif**	**21**	**26**	**36.6 +0.1**
	comp=Z,9.5nm,0.8s,baz=116,slow=3.4,SNR=21								
HFS					LR	LR	22	15	15.7
	comp=Z,6μm,21.9s,baz=65,slow=38								
	comp=Z,9.5nm,0.8s								
LANS	**Liptovska Anna**	**99.79**	**320**	*i*	P	**Pdif**	**21**	**26**	**39.9 +2.8**
LANS	**Liptovska Anna**	**99.79**	**320**	*e*	PDIFF	**Pdif**	**21**	**26**	**39.9 +2.8**
PSZ	**Piszkesteto**	**99.81**	**319**		Pdif	**Pdif**	**21**	**26**	**38.0 +0.8**
PSZ					IAMs_20	IAMs_20	22	13	31.0
	comp=Z,3μm,22.0s								
PSZ	**Piszkesteto**	**99.81**	**319**	⇑	P	**Pdif**	**21**	**26**	**38.8 +1.5**
PSZ	**Piszkesteto**	**99.81**	**319**	⇑	P	**Pdif**	**21**	**26**	**38.8 +1.5**
AGG	**Agios Georgios**	**99.89**	**310**		P	**Pdif**	**21**	**26**	**38.5 +0.7**
RES	**Resolute Bay**	**99.94**	**10**		Pdif	**Pdif**	**21**	**26**	**37.2 +0.1**
RES	**Resolute Bay**	**99.94**	**10**		P	**Pdif**	**21**	**26**	**37.2 +0.1**
GUR	**Goura**	**100.07**	**309**		P	**Pdif**	**21**	**26**	**38.6 -0.1**
KLV	**Kalavryta, Ach**	**100.20**	**309**		P	**Pdif**	**21**	**26**	**38.8 -0.4**
SERG	**Sergoula**	**100.21**	**309**		P	**Pdif**	**21**	**26**	**39.6 +0.5**
NC405	**NORSAR Array S**	**100.27**	**333**		Pdif	**Pdif**	**21**	**26**	**37.3 -1.6**
ANX	**Ano Chora**	**100.28**	**310**		P	**Pdif**	**21**	**26**	**40.2 +0.6**
LPHEP	**Lephephe**	**100.31**	**247**		Pdif	**Pdif**	**21**	**26**	**39.4 -0.6**
NC303	**NORSAR Array S**	**100.38**	**334**		Pdif	**Pdif**	**21**	**26**	**37.9 -1.4**
NC303	**NORSAR Array S**	**100.38**	**334**	*eP*		**Pdif**	**21**	**26**	**41.6 +2.2**
CBB	**Campbell River**	**100.39**	**39**		Pdif	**Pdif**	**21**	**26**	**39.2 -0.5**
OKC	**Ostrava-Krasne**	**100.45**	**321**		AMS	AMS	22	23	10.0
	comp=Z,2μm,21.9s								
NB2	**NORSAR Subarra**	**100.52**	**333**		P	**Pdif**	**21**	**26**	**39.3 -0.8**
	comp=Z,25nm,1.1s,baz=72,slow=4.6								
NB2					PKKP	**PKKPbc**	**21**	**42**	**55.7 -1.9**
	comp=Z,7.1nm,1.2s,baz=253,slow=2.3								
NOA	**NORSAR Array B**	**100.52**	**333**		P	**Pdif**	**21**	**26**	**39.6 -0.5**
	comp=Z,10nm,1.0s,baz=69,slow=4.5,SNR=18								
NOA					PKKPbc	**PKKPbc**	**21**	**42**	**56.1 -1.4**
	comp=Z,1.3nm,0.8s,baz=71,slow=3.1,SNR=5.5								
BOSA	**Boshof**	**100.55**	**241**		P	**Pdif**	**21**	**26**	**41.2 +0.2**
	comp=Z,4.9nm,1.0s,baz=109,slow=13,SNR=4.0								
OHR	**Ohrid**	**100.65**	**312**	*i*	P	**Pdif**	**21**	**26**	**41.5 +0.4**
STEB	**Steborice**	**100.66**	**321**	*e*	PDIFF	**Pdif**	**21**	**26**	**43.1 +2.2**
BSD	**Bornholm Skovb**	**100.81**	**327**	*i*	P	**Pdif**	**21**	**26**	**43.0 +1.6**
BSD					IAmb	IAmb	21	26	45.5
	comp=Z,34nm,1.1s								
MORC	**Moravsky Berou**	**100.85**	**321**	⇑	P	**Pdif**	**21**	**26**	**43.7 +1.9**
MORC	**Moravsky Berou**	**100.85**	**321**	*e*	PDIFF	**Pdif**	**21**	**26**	**43.0 +1.2**
MORC	**Moravsky Berou**	**100.85**	**321**	⇑	P	**Pdif**	**21**	**26**	**43.7 +1.9**
DEL	**Delary**	**100.91**	**329**	*i*	P	**Pdif**	**21**	**26**	**43.0 +1.2**
JAVC	**Velka Javorina**	**101.01**	**320**	*e*	PDIFF	**Pdif**	**21**	**26**	**44.8 +2.3**
NEEM	**North Greenlan**	**101.02**	**359**	*i*	P	**Pdif**	**21**	**26**	**43.4 +1.0**
NEEM					IAmb	IAmb	21	26	45.1
	comp=Z,31nm,1.0s								
KRLC	**Kraliky**	**101.24**	**322**		AMS	AMS	22	14	00.0
	comp=Z,3μm,23.0s								
FABU	**Falkenberg**	**101.32**	**329**	*i*	P	**Pdif**	**21**	**26**	**48.5 +4.9**
DPC	**Dobruska-Polom**	**101.44**	**322**	*eP*		**Pdif**	**21**	**26**	**46.8 +2.4**
DPC					MLR	MLR			
	comp=Z,3μm,21.3s								
DPC	**Dobruska-Polom**	**101.44**	**322**	*e*	PDIFF	**Pdif**	**21**	**26**	**46.8 +2.4**
DPC					AMS	AMS	22	16	00.0
	comp=Z,3μm,21.3s								
OSTC	**Ostas**	**101.45**	**322**	*eP*		**Pdif**	**21**	**26**	**51.4 +7.0**
OSTC					MLR	MLR			
	comp=Z,4μm,24.8s								
OSTC	**Ostas**	**101.45**	**322**	*e*	PDIFF	**Pdif**	**21**	**26**	**51.4 +7.0**
OSTC					AMS	AMS	22	16	00.0
	comp=Z,4μm,24.8s								
TROLL	**Troll, Antarti**	**101.52**	**195**	⇑	Pdiff	**Pdif**	**21**	**26**	**46.9 +2.5**
	comp=Z,170nm,0.7s								
CHVC	**Chvalec**	**101.54**	**322**	*eP*		**Pdif**	**21**	**26**	**51.6 +6.8**
CHVC					MLR	MLR			
	comp=Z,3μm,19.9s								
CHVC	**Chvalec**	**101.54**	**322**	*e*	PDIFF	**Pdif**	**21**	**26**	**51.6 +6.8**
CHVC					AMS	AMS	22	16	10.0
	comp=Z,3μm,19.9s								
YKA	**Yellowknife Ar**	**101.55**	**24**		P	**Pdif**	**21**	**26**	**46.2 +1.7**
	comp=Z,9.2nm,1.1s,baz=292,slow=5.3,SNR=13								
YKA					PKiKP	**PKiKP**	**21**	**31**	**10.0 +1.8**
	comp=Z,0.8nm,0.6s,baz=286,slow=2.4,SNR=6.0								
YKA					PKKPbc	**PKKPbc**	**21**	**42**	**52.3 -2.2**
	comp=Z,1.5nm,0.8s,baz=116,slow=1.8,SNR=4.7								
ZST	**Bratislava**	**101.55**	**320**	*i*	P	**Pdif**	**21**	**26**	**42.5 -2.4**
ZST	**Bratislava**	**101.55**	**320**	*e*	PDIFF	**Pdif**	**21**	**26**	**42.5 -2.4**
DBG	**Daneborg**	**101.55**	**351**	*i*	P	**Pdif**	**21**	**26**	**44.7 +0.4**
DBG					IAmb	IAmb	21	26	49.0
	comp=Z,23nm,1.1s								
VRAC	**Vranov**	**101.57**	**321**	⇑	P	**Pdif**	**21**	**26**	**47.3 +2.3**
VRAC	**Vranov**	**101.57**	**321**	*e*	PDIFF	**Pdif**	**21**	**26**	**46.7 +1.7**
VRAC	**Vranov**	**101.57**	**321**	⇑	P	**Pdif**	**21**	**26**	**47.3 +2.3**
UPC	**Upice**	**101.59**	**322**	*eP*		**Pdif**	**21**	**26**	**50.6 +5.6**
UPC					MLR	MLR			
	comp=Z,4μm,22.6s								
UPC	**Upice**	**101.59**	**322**	*e*	PDIFF	**Pdif**	**21**	**26**	**50.6 +5.6**
UPC					AMS	AMS	22	16	10.0
	comp=Z,4μm,22.6s								
KRUC	**Moravsky**	**101.76**	**321**	*e*	PDIFF	**Pdif**	**21**	**26**	**47.4 +1.6**
NLWA	**Neilton Lookou**	**102.05**	**41**		IAMs_20	IAMs_20	22	08	12.0
	comp=Z,2μm,21.0s								
RONA	**Rosalia, Austr**	**102.21**	**320**	*e*	Pdiff	**Pdif**	**21**	**26**	**49.2 +1.3**
	comp=Z,8.8nm,1.2s								
CONA	**Conrad Observa**	**102.43**	**320**	*ep*	Pdiff	**Pdif**	**21**	**26**	**50.8 +1.9**
	comp=Z,15nm,1.8s								
PVCC	**Panska Ves**	**102.46**	**323**		AMS	AMS	22	15	10.0
	comp=Z,4μm,22.6s								
PRU	**Pruhonice**	**102.64**	**322**	*eP*		**Pdif**	**21**	**26**	**56.3 +6.6**
PRU					MLR	MLR			
	comp=Z,4μm,23.5s								
PRU	**Pruhonice**	**102.64**	**322**	*e*	PDIFF	**Pdif**	**21**	**26**	**56.3 +6.6**
PRU					AMS	AMS	22	16	50.0
	comp=Z,4μm,23.5s								
PRA	**Prague**	**102.68**	**322**		AMS	AMS	22	16	50.0
	comp=Z,4μm,22.0s								
ARSA	**Arzberg**	**102.84**	**319**	*e*	Pdiff	**Pdif**	**21**	**26**	**52.3 +1.6**
	comp=Z,6.3nm,1.3s								
ZVC	**Zvikov**	**103.03**	**322**		AMS	AMS	22	17	00.0
	comp=Z,4μm,22.9s								
SNAA	**Sanae**	**103.09**	**195**	⇑	PKKPbc	**PKKPbc**	**21**	**42**	**47.6 -2.8**
	comp=Z,99nm,0.8s								
SNAA				⇑	Pdiff	**Pdif**	**21**	**26**	**52.6 +1.3**
	comp=Z,38nm,0.6s								
SNAA	**Sanae**	**103.09**	**195**		Pdiff	**Pdif**	**21**	**26**	**52.6 +1.3**
	comp=Z,2.9nm,1.0s,baz=187,slow=5.9,SNR=9.8								
SNAA					PKKPbc	**PKKPbc**	**21**	**42**	**48.5 -1.9**
	comp=Z,5.0nm,0.9s,baz=325,slow=2.9,SNR=12								
SNAA	**Sanae**	**103.09**	**195**		IAMs_20	IAMs_20	22	09	25.2
	comp=Z,3μm,21.0s								
HSKC	**Hora Svate Kat**	**103.12**	**323**		AMS	AMS	22	15	40.0
	comp=Z,4μm,22.7s								
CLL	**Collm**	**103.14**	**324**	*i*	P	**Pdif**	**21**	**26**	**55.6 +3.7**
CLL					pmax	pmax			
	comp=Z,58nm,2.0s								
CLL					MLR	MLR			
	comp=Z,5μm,21.5s								
CKRC	**Cesky Krumlov**	**103.15**	**321**	*eP*		**Pdif**	**21**	**26**	**54.4 +2.4**
CKRC				*e*			21	37	30.0
CKRC					MLR	MLR			
	comp=Z,3μm,23.3s								
CKRC	**Cesky Krumlov**	**103.15**	**321**	*e*	PDIFF	**Pdif**	**21**	**26**	**54.4 +2.4**
CKRC				*e*	SKS	**SKSac**	**21**	**37**	**30.0 +0.2**
CKRC				*ex*		x	21	40	46.0
CKRC					AMS	AMS	22	16	40.0
	comp=Z,3μm,23.3s								
KBO	**Bosley Butte**	**103.16**	**46**		IAMs_20	IAMs_20	22	13	40.5
	comp=Z,2μm,21.0s								
COR	**Corvallis**	**103.19**	**44**		IAMs_20	IAMs_20	22	08	36.3
	comp=Z,3μm,22.0s								
SOKA	**Soboth**	**103.33**	**319**	*e*	Pdiff	**Pdif**	**21**	**26**	**53.9 +1.0**
	comp=Z,7.7nm,1.5s								
MOA	**Molln**	**103.47**	**320**	*ep*	Pdiff	**Pdif**	**21**	**26**	**55.4 +1.9**
	comp=Z,19nm,1.2s								
KSXB	**Camp Six Broad**	**103.51**	**46**		IAMs_20	IAMs_20	22	16	56.7
	comp=Z,2μm,20.0s								
KHC	**Kasperske Hory**	**103.51**	**321**	*eP**		**Pdif**	**21**	**26**	**57.1 +3.5**
KHC					MLR	MLR			
	comp=Z,3μm,21.4s								
KHC	**Kasperske Hory**	**103.51**	**321**	*e*	PDIFF	**Pdif**	**21**	**26**	**57.1 +3.5**
KHC				*e*	SKS		21	37	17.1
KHC					AMS	AMS	22	17	10.0
	comp=Z,3μm,21.4s								
GERES	**GERESS Array B**	**103.52**	**321**		Pdiff	**Pdif**	**21**	**26**	**55.0 +1.3**
	comp=Z,1.9nm,0.8s,baz=48,slow=6.3,SNR=9.6								
GERES					PKiKP	**PKiKP**	**21**	**31**	**13.5 +1.1**
	comp=Z,0.8nm,0.7s,baz=50,slow=3.1,SNR=4.2								
GERES					PKKPbc	**PKKPbc**	**21**	**42**	**47.3 -1.1**
	comp=Z,0.4nm,0.6s,baz=242,slow=2.1,SNR=4.0								
KRPM	**Rodgers**	**103.57**	**47**		IAMs_20	IAMs_20	22	04	44.5
	comp=Z,3μm,22.0s								
JCC	**Jacoby Creek,**	**103.65**	**47**		IAMs_20	IAMs_20	22	04	45.7
	comp=Z,3μm,20.0s								
KMPM	**Mount Pierce**	**103.68**	**48**		IAMs_20	IAMs_20	22	16	08.5
	comp=Z,3μm,21.0s								
KHMM	**Horse Mountain**	**103.85**	**47**		IAMs_20	IAMs_20	22	16	29.1
	comp=Z,3μm,19.0s								
SUR	**Sutherland**	**104.02**	**237**		IAMs_20	IAMs_20	22	08	34.3
	comp=Z,2μm,20.0s								
TIP	**Timpagrande**	**104.10**	**311**		IAMs_20	IAMs_20	22	22	13.3
	comp=Z,2μm,22.0s								
PNT	**Penticton**	**104.17**	**38**		P	**Pdif**	**21**	**27**	**11.3 +15**
KCPM	**Cahto Peak**	**104.26**	**48**		IAMs_20	IAMs_20	22	15	22.1
	comp=Z,3μm,21.0s								
KHBM	**Hayfork Bally**	**104.28**	**47**		IAMs_20	IAMs_20	22	16	41.5
	comp=Z,3μm,21.0s								
M02C	**Callahan**	**104.36**	**47**		IAMs_20	IAMs_20	22	14	54.4
	comp=Z,2μm,20.0s								
YBH	**Yreka Blue Hor**	**104.38**	**46**		Pdiff	**Pdif**	**21**	**26**	**57.8 0.0**
	baz=215,slow=2.3,SNR=5.2								
N02D	**Trinity Center**	**104.58**	**47**		IAMs_20	IAMs_20	22	17	07.3
	comp=Z,2μm,20.0s								
VNA2	**Neumayer--Watz**	**104.70**	**194**	⇑	PKKPbc	**PKKPbc**	**21**	**42**	**42.8 -2.7**
	comp=Z,2.6nm,0.6s,baz=326,slow=5.2								
VNA2				⇑	Pdiff	**Pdif**	**21**	**27**	**02.3 +3.9**
	comp=Z,1.2nm,0.5s,baz=137,slow=4.6								
VNA3	**Neumayer Olymp**	**105.03**	**193**	⇑	PKKPbc	**PKKPbc**	**21**	**42**	**42.2 -2.3**
	comp=Z,1.7nm,0.6s								
VNA3				⇑	Pdiff	**Pdif**	**21**	**27**	**00.8 +0.9**
	comp=Z,1.0nm,0.6s								
VNA1	**Neumayer--Stat**	**105.10**	**194**	⇑	PKKPbc	**PKKPbc**	**21**	**42**	**42.1 -2.1**
	comp=Z,5.6nm,0.8s								
VNA1				⇑	Pdiff	**Pdif**	**21**	**27**	**03.9 +3.7**
	comp=Z,3.7nm,1.1s								
MCCM	**Marconi Confer**	**105.17**	**50**		IAMs_20	IAMs_20	22	19	28.3
	comp=Z,2μm,18.0s								
SUMG	**Summit**	**105.31**	**355**		PKP	**PKiKP**	**21**	**31**	**17.6 +2.2**
WTTA	**Wattenberg**	**105.35**	**320**	*e*	Pdiff	**Pdif**	**21**	**27**	**03.2 +1.2**
	comp=Z,14nm,1.4s								
O03E	**Pines Creek**	**105.42**	**47**		IAMs_20	IAMs_20	22	19	41.6
	comp=Z,2μm,21.0s								
CVS	**Carmenet Viney**	**105.44**	**50**		IAMs_20	IAMs_20	22	20	25.5
	comp=Z,2μm,20.0s								
HATC	**Hat Creek Radi**	**105.53**	**47**		IAMs_20	IAMs_20	22	18	41.4
	comp=Z,2μm,19.0s								
SQTA	**Sankt Quirin**	**105.64**	**320**	*e*	Pdiff	**Pdif**	**21**	**27**	**04.4 +1.2**
	comp=Z,19nm,1.6s								
MOTA	**Moosalm**	**105.66**	**320**	*ep*	Pdiff	pDif	21	27	09.1 -3.7
	comp=Z,26nm,1.9s								
ORV	**Oroville**	**105.84**	**48**		IAMs_20	IAMs_20	22	13	25.9
	comp=Z,2μm,22.0s								
JRSC	**Jasper Ridge**	**105.85**	**50**		IAMs_20	IAMs_20	22	21	57.3
	comp=Z,2μm,18.0s								
NEW	**Newport**	**106.08**	**38**		Pdiff	**Pdif**	**21**	**27**	**07.6 +2.5**
	comp=Z,2.0nm,0.6s,baz=256,slow=6.8,SNR=4.5								
MHC	**Mount Hamilton**	**106.32**	**50**		IAMs_20	IAMs_20	22	16	40.8
	comp=Z,2μm,20.0s								
FORD	**Fort Ord Natur**	**106.38**	**51**		IAMs_20	IAMs_20	22	13	05.5
	comp=Z,3μm,18.0s								
FUORN	**Ofenpass-Fuorn**	**106.45**	**320**		IAMs_20	IAMs_20	22	22	24.5
	comp=Z,2μm,19.0s								
MPK	**Martis Peak**	**107.01**	**48**		Pdif	**Pdif**	**21**	**27**	**08.5 -1.3**
WVOR	**Wild Horse Val**	**107.07**	**45**		Pdif	**Pdif**	**21**	**27**	**09.4 -0.3**
WVOR					IAMs_20	IAMs_20	22	13	27.0
	comp=Z,2μm,20.0s								
WVOR	**Wild Horse Val**	**107.07**	**45**		P	**Pdif**	**21**	**27**	**09.4 -0.3**
WVOR					MLR	MLR			
	comp=Z,2μm,20.0s								
CMB	**Columbia Colle**	**107.10**	**49**		Pdif	**Pdif**	**21**	**27**	**09.5 -0.4**
CMB					IAMs_20	IAMs_20	22	23	29.3
	comp=Z,2μm,18.0s								
CMB	**Columbia Colle**	**107.10**	**49**		P	**Pdif**	**21**	**27**	**09.5 -0.4**
CMB					MLR	MLR			
	comp=Z,2μm,18.0s								
BMO	**Blue Mountains**	**107.18**	**42**		IAMs_20	IAMs_20	22	06	38.7
	comp=Z,2μm,22.0s								
PNTR	**Pine Nut**	**107.39**	**48**		Pdif	**Pdif**	**21**	**27**	**11.3 -0.1**
PLID	**Pearl Lake**	**107.96**	**41**		IAMs_20	IAMs_20	22	08	28.4
	comp=Z,2μm,21.0s								
TSUM	**Tsumeb**	**108.29**	**250**		IAMs_20	IAMs_20	22	15	35.0
	comp=Z,3μm,21.0s								
NVAR	**Mina Array Bea**	**108.55**	**49**		Pdiff	**Pdif**	**21**	**27**	**18.9 +2.4**
	comp=Z,1.5nm,0.9s,baz=266,slow=5.5,SNR=6.2								
NVAR					PKiKP	**PKiKP**	**21**	**31**	**23.1 +1.0**
	comp=Z,1.1nm,0.7s,baz=325,slow=2.9,SNR=5.4								
NVAR					PKKPbc	**PKKPbc**	**21**	**42**	**33.8 +1.0**
	comp=Z,0.5nm,0.5s,baz=152,slow=2.1,SNR=4.6								
NVAR					PKKPab	**PKKPab**	**21**	**42**	**44.3 -1.1**
	comp=Z,5.4nm,1.0s,baz=79,slow=3.0,SNR=12								
MFID	**Camas Ranch**	**108.68**	**43**		IAMs_20	IAMs_20	22	20	38.5
	comp=Z,2μm,18.0s								
TIN	**Tinemaha, Big**	**109.02**	**50**		IAMs_20	IAMs_20	22	18	16.2
	comp=Z,2μm,20.0s								
BNI	**Bardonecchia**	**109.36**	**319**		IAMs_20	IAMs_20	22	24	49.9
	comp=Z,3μm,22.0s								
HLID	**Hailey**	**109.58**	**42**		IAMs_20	IAMs_20	22	13	03.3
	comp=Z,2μm,20.0s								
LRMC	**Laurel Mtn Rad**	**109.91**	**51**		IAMs_20	IAMs_20	22	11	42.7
	comp=Z,3μm,20.0s								
EKA	**Eskdalemuir Ar**	**109.93**	**332**		PKKPbc	PKKPbc	21	42	28.2 -0.5
	comp=Z,1.5nm,0.5s,baz=226,slow=2.9,SNR=7.9								
ELK	**Elko**	**110.04**	**45**		IAMs_20	IAMs_20	22	26	53.5
	comp=Z,2μm,20.0s								
DLMT	**Dillon**	**110.07**	**40**		IAMs_20	IAMs_20	22	13	06.2
	comp=Z,2μm,19.0s								
TPNV	**Topopah Spring**	**110.56**	**49**		IAMs_20	IAMs_20	22	15	38.0
	comp=Z,2μm,19.0s								
BOZ	**Bozeman (W)**	**110.59**	**40**		IAMs_20	IAMs_20	22	13	43.9
	comp=Z,2μm,20.0s								
SHOC	**Shoshone, Teco**	**110.87**	**51**		IAMs_20	IAMs_20	22	14	22.2
	comp=Z,3μm,20.0s								
PFO	**Pinyon Flats O**	**111.42**	**53**		PKiKP	**PKiKP**	**21**	**31**	**29.2 +1.6**
	comp=Z,7.1nm,1.0s,baz=213,slow=1.8,SNR=5.6								
FXWY	**Fox Creek**	**111.81**	**41**		IAMs_20	IAMs_20	22	12	06.2
	comp=Z,3μm,22.0s								
FLWY	**Flagg Ranch**	**111.83**	**41**		IAMs_20	IAMs_20	22	13	44.9
	comp=Z,2μm,20.0s								
DUG	**Dugway, Tooele**	**111.96**	**45**		IAMs_20	IAMs_20	22	15	33.4
	comp=Z,2μm,22.0s								
LOHW	**Long Hollow**	**112.10**	**41**		IAMs_20	IAMs_20	22	12	14.8
	comp=Z,3μm,22.0s								
BC3	**Big Chuckawall**	**112.20**	**53**		IAMs_20	IAMs_20	22	14	57.7
	comp=Z,3μm,20.0s								
HWUT	**Hardware Ranch**	**112.28**	**43**		IAMs_20	IAMs_20	22	19	45.8
	comp=Z,2μm,20.0s								
BW06	**Boulder Array**	**113.15**	**42**		IAMs_20	IAMs_20	22	12	47.8
	comp=Z,2μm,22.0s								
PDAR	**Pinedale Array**	**113.15**	**42**		PKiKP	**PKiKP**	**21**	**31**	**31.6 +0.9**
	comp=Z,2.2nm,0.8s,baz=243,slow=1.7,SNR=9.7								
PDAR					PKKPbc	**PKKPbc**	**21**	**42**	**16.8 -1.2**
	comp=Z,1.4nm,0.6s,baz=89,slow=2.2,SNR=9.9								
LAO	**LASA Array**	**113.42**	**37**		IAMs_20	IAMs_20	22	16	01.7
	comp=Z,2μm,21.0s								
Q16A	**Castle Valley**	**113.62**	**46**		Pdif	**Pdif**	**21**	**27**	**38.9 -0.1**
WUAZ	**Wupatki**	**114.75**	**49**		Pdif	**Pdif**	**21**	**27**	**43.2 -0.9**
WUAZ					IAMs_20	IAMs_20	22	21	38.0
	comp=Z,2μm,19.0s								
214A	**Organ Pipe Nat**	**114.85**	**54**		Pdif	**Pdif**	**21**	**27**	**44.5 0.0**
O20A	**White River Ci**	**115.19**	**44**		IAMs_20	IAMs_20	22	15	51.7
	comp=Z,2μm,20.0s								
K22A	**Casper**	**115.20**	**41**		IAMs_20	IAMs_20	22	16	24.8
	comp=Z,3μm,21.0s								
PV21	**Cone Mtn., Par**	**115.34**	**46**		PKPdf	**PKiKP**	**21**	**31**	**33.4 -1.6**
PV23	**Carpenter Ridg**	**115.36**	**46**		PKiKP	**PKiKP**	**21**	**31**	**35.4 +0.3**
PV10	**Paradox Valley**	**115.37**	**46**			**PKiKP**	**21**	**31**	**33.9 -1.3**
PV14	**Lion Creek, Pa**	**115.38**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.1 -1.0**
PV20	**West Nyswonger**	**115.43**	**46**		PKPdf	**PKiKP**	**21**	**31**	**35.0 -0.2**
PV19	**Morning Glory**	**115.44**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.5 -0.8**
PV05	**Paradox Valley**	**115.45**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.6 -0.6**
PV04	**Paradox Valley**	**115.46**	**46**		PKPdf	**PKiKP**	**21**	**31**	**35.1 -0.1**
PV17	**East Wray Mesa**	**115.47**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.7 -0.6**
PV22	**Blue Mesa, Par**	**115.48**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.1 -1.2**
PV16	**Nyswonger Mesa**	**115.48**	**46**		PKPdf	**PKiKP**	**21**	**31**	**35.3 0.0**
PV18	**Skein Mesa, Pa**	**115.52**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.6 -0.8**
PV11	**David Mesa, Pa**	**115.52**	**46**		PKiKP	**PKiKP**	**21**	**31**	**34.8 -0.6**
PV03	**Paradox Valley**	**115.56**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.4 -1.1**
PV12	**Saucer Basin,**	**115.56**	**46**		PKPdf	**PKiKP**	**21**	**31**	**35.5 0.0**
PV13	**Radium Mtn., P**	**115.61**	**46**		PKPdf	**PKiKP**	**21**	**31**	**35.4 -0.2**
PV07	**Paradox Valley**	**115.62**	**46**		PKPdf	**PKiKP**	**21**	**31**	**34.5 -1.0**
PV02	**Paradox Valley**	**115.65**	**46**		PKPdf	**PKiKP**	**21**	**31**	**35.1 -0.6**
HAYD	**Hayden**	**115.69**	**43**		P

DRIO Del Rio 125.51 52 PKPdf **PKPdf** 21 31 55.0 +0.4
HOPE Hope Point 125.65 192 PKPdf **PKPdf** 21 31 54.0 0.0
HOPE Hope Point 125.65 192 PKIKP **PKPdf** 21 31 54.0 0.0
PLPT Palo Pinto 125.67 47 PKPdf **PKPdf** 21 31 55.3 +0.5
JCT Junction City 125.67 50 PKPdf **PKiKP** 21 31 55.6 +0.3
JCT Junction City 125.67 50 PKIKP **PKiKP** 21 31 55.6 +0.3
JCT MLR MLR
comp=Z,3μm,20.0s
L42A Oliver, Polo 125.70 33 PKPdf **PKPdf** 21 31 54.9 +0.3
L42A IAMs_20 IAMs_20 22 21 21.4
comp=Z,2μm,21.0s
TUL3 Leonard 125.80 42 PKPdf **PKPdf** 21 31 55.1 +0.2
BRDY Brady 125.91 49 PKPdf **PKPdf** 21 31 55.3 0.0
K43A Burlington 125.92 31 PKPdf **PKPdf** 21 31 54.7 -0.2
N41A Harden Midland 125.92 35 PKPdf **PKiKP** 21 31 55.4 +0.4
P40A Paris 126.00 36 PKPdf **PKPdf** 21 31 55.7 +0.5
FW06 Azle 126.14 46 PKPdf **PKiKP** 21 31 56.5 +0.4
RLO Rose Lookout 126.17 42 **PKPdf** 21 31 54.4 -1.2
Z35A Perchaven, San 126.17 46 PKPdf **PKiKP** 21 31 56.7 +0.5
ACRG Accra 126.19 278 PKPdf **PKPdf** 21 31 56.6 +0.3
VLDQ Val d'Or 126.30 20 PKPdf **PKPdf** 21 31 54.7 -0.7
U38A Gravette 126.43 41 PKPdf **PKPdf** 21 31 56.5 +0.3
HNDO Hondo 126.51 51 PKPdf **PKiKP** 21 31 57.7 +0.8
ZAIG Zacatecas 126.51 60 PKPdf **PKiKP** 21 31 58.1 +0.6
L44A Lake County Fo 126.52 31 PKPdf **PKiKP** 21 31 57.4 +0.8
FW13 Cleburne 126.55 47 PKPdf **PKiKP** 21 31 57.2 +0.3
R40A Maddies Statio 126.65 38 PKPdf **PKPdf** 21 31 56.5 0.0
WHTX Lake Whitney, 126.71 47 PKPdf **PKiKP** 21 31 58.3 +1.1
WHTX IAMs_20 IAMs_20 22 29 55.2
comp=Z,2μm,20.0s
HHAR Hobbs 126.81 41 PKPdf **PKPdf** 21 31 56.6 -0.3
HQIL Hanson Quary C 126.81 32 PKPdf **PKPdf** 21 31 57.2 +0.5
M44A Midewin, Midew 127.01 32 PKPdf **PKPdf** 21 31 57.6 +0.5
435B Jarrell 127.21 49 PKPdf **PKiKP** 21 31 58.7 +0.4
J47A Sunmer 127.28 28 PKPdf **PKiKP** 21 31 58.8 +0.7
MGMO Mountain Grove 127.36 39 PKPdf **PKPdf** 21 31 57.4 -0.5
CCM Cathedral Cave 127.42 37 PKPdf **PKPdf** 21 31 58.1 +0.1
CCM Cathedral Cave 127.42 37 IAMs_20 IAMs_20 22 29 31.2
comp=Z,2μm,21.0s
CCM Cathedral Cave 127.42 37 PKIKP **PKPdf** 21 31 58.1 +0.1
CCM MLR MLR
comp=Z,2μm,21.0s
L46A Eue Claire 127.47 30 PKPdf **PKPdf** 21 31 57.1 -0.9
MG05 Puerto Natales 127.64 165 PKPdf **PKPdf** 21 31 58.0 0.0
SLM Saint Louis 127.65 36 PKPdf **PKiKP** 21 31 58.6 +0.3
SLM Saint Louis 127.65 36 PKIKP **PKPdf** 21 31 58.7 +0.3
I49A Point Hope 127.65 26 PKPdf **PKPdf** 21 31 57.6 -0.6
EF04 Eagle Ford 04 127.81 50 PKPdf **PKiKP** 21 32 01.4 +1.9
Z38A Mt. Pleasant 127.82 45 PKPdf **PKiKP** 21 32 00.5 +1.0
237A Washetta, Mont 127.91 46 PKPdf **PKPdf** 21 31 59.5 +0.5
735A Kenedy 127.96 51 PKPdf **PKiKP** 21 32 01.1 +1.3
FVM French Village 127.96 37 PKPdf **PKPdf** 21 31 58.5 -0.4
FVM French Village 127.96 37 PKIKP **PKPdf** 21 31 58.6 -0.4
GO09 Cerro Castillo 128.05 165 PKPdf **PKiKP** 21 32 00.5 +1.2
MIAR Mount Ida 128.06 42 PKPdf **PKiKP** 21 32 00.4 +0.5
MIAR Mount Ida 128.06 42 PKIKP **PKiKP** 21 32 00.4 +0.5
MIAR MLR MLR
comp=Z,3μm,20.0s
MLDN Muldoon 128.09 49 PKPdf **PKiKP** 21 32 01.2 +1.2
HBVL Hebbronville 128.09 53 **PKiKP** 21 32 01.6 +1.5
Q44A Meyer Farm, Va 128.18 35 PKPdf **PKiKP** 21 32 00.2 +0.2
FCAR Ozark Folk Cen 128.22 40 PKPdf **PKPdf** 21 31 58.9 -0.7
SFIN Lafayette 128.23 32 PKPdf **PKPdf** 21 31 58.5 -0.9
LDAQ Lac Daran 128.28 15 PKPdf **PKPdf** 21 31 59.4 0.0
SADO Sadowa 128.52 23 PKP **PKiKP** 21 32 00.8 +0.3
comp=Z,36nm,1.1s,baz=8.2,slow=1.3,SNR=7.1
SADO Sadowa 128.52 23 PKPdf **PKPdf** 21 31 59.7 -0.2
N47A Urbana 128.60 31 PKPdf **PKiKP** 21 32 00.9 +0.1
P46A Rosedale 128.71 33 PKPdf **PKiKP** 21 32 01.6 +0.6
LCAR Lake Charles 128.73 39 PKPdf **PKiKP** 21 32 01.7 +0.5
PBMO Poplar Bluff 128.74 38 PKPdf **PKiKP** 21 32 01.4 +0.2
UALR University of 128.75 41 PKPdf **PKPdf** 21 32 00.5 -0.1
OLIL Olney 128.82 35 PKPdf **PKiKP** 21 32 01.4 +0.2
S44A Carbondale 128.85 36 PKPdf **PKPdf** 21 32 01.4 +0.7
NATX Nacogdoches 128.86 46 PKPdf **PKiKP** 21 32 01.6 0.0
SIUC Southern Illin 128.86 36 PKPdf **PKiKP** 21 32 01.8 +0.4
CGM3 Cape Girardeau 128.87 37 PKPdf **PKPdf** 21 32 00.3 -0.5
WLAR White Oak Lake 128.87 43 PKPdf **PKiKP** 21 32 01.9 +0.4
TRQ Mont Tremblant 128.90 19 PKPdf **PKPdf** 21 32 01.1 +0.4
PARMO Parma 129.23 38 PKPdf **PKiKP** 21 32 03.4 +1.3
DELO Deloro Mine 129.32 22 PKPdf **PKPdf** 21 32 01.0 -0.4
Z41A Richland Creek 129.33 43 PKPdf **PKiKP** 21 32 02.6 +0.2
N49A Columbus Grove 129.34 30 **PKPdf** 21 32 02.0 +0.5
O48B Farmland 129.34 31 **PKPdf** 21 32 02.0 +0.4
O48B IAMs_20 IAMs_20 22 23 47.5
comp=Z,2μm,20.0s
BLO Bloomington 129.40 33 **PKiKP** 21 32 02.5 +0.1
BLO Bloomington 129.40 33 PKIKP **PKiKP** 21 32 02.5 +0.1
GNAR Gosnell 129.51 39 PKPdf **PKiKP** 21 32 04.0 +1.2
M50A Fremont 129.53 29 PKPdf **PKPdf** 21 32 01.7 -0.2
USIN University of 129.60 35 PKPdf **PKPdf** 21 32 02.2 +0.1
HICK Hickman 129.63 38 PKPdf **PKiKP** 21 32 03.8 +0.8
D62A Allapoint, All 129.65 14 PKPdf **PKPdf** 21 32 02.0 0.0
WBO Williamsburg 129.75 20 PKPdf **PKPdf** 21 32 02.7 +0.5
GLAT Glass 129.77 38 PKPdf **PKPdf** 21 32 03.2 +0.7
P48A Milroy 129.78 32 PKPdf **PKiKP** 21 32 03.2 +0.1
O49A Covington 129.81 31 PKPdf **PKPdf** 21 32 03.0 +0.6
MNTQ Montreal, Queb 129.84 18 PKPdf **PKiKP** 21 32 03.4 +0.3
E62A Clayton Lake 129.97 14 PKPdf **PKPdf** 21 32 02.7 +0.1
HALT Halls 129.97 38 PKPdf **PKiKP** 21 32 04.1 +0.5
EFI East Falkland 129.97 176 PKPdf **PKPdf** 21 32 02.6 +0.2
EFI East Falkland 129.97 176 PKIKP **PKPdf** 21 32 02.6 +0.2
EFI MLR MLR
comp=Z,1μm,22.0s
PECO Prince Edward 130.05 22 PKPdf **PKPdf** 21 32 02.7 -0.1
MEDO Medina 130.14 24 PKPdf **PKPdf** 21 32 02.6 -0.4
WCI Wyandotte Cave 130.19 34 PKPdf **PKPdf** 21 32 03.8 +0.5
WCI Wyandotte Cave 130.19 34 PKIKP **PKPdf** 21 32 03.8 +0.5
M52A Chesterland 130.21 27 PKPdf **PKiKP** 21 32 04.1 +0.1
N51A Ashland 130.22 29 PKPdf **PKPdf** 21 32 03.3 0.0
J55A Hilton 130.31 23 PKPdf **PKPdf** 21 32 03.9 +0.6
FRNY Flat Rock 130.45 19 PKPdf **PKiKP** 21 32 04.4 +0.1
ACSO Alum Creek Sta 130.46 30 PKPdf **PKiKP** 21 32 04.7 +0.1
143A Socs Landing, 130.61 43 PKPdf **PKiKP** 21 32 05.7 +0.6
DBIC Dimbokro 130.66 280 PKP **PKiKP** 21 32 06.0 +0.4
comp=Z,59nm,1.1s,baz=131,slow=1.4,SNR=20
DBIC SKPab **SKPab** 21 35 28.3 +1.7
comp=Z,20nm,0.9s,baz=77,slow=5.3,SNR=14
MMNY Mt. Morris Dam 130.72 24 PKPdf **PKPdf** 21 32 04.7 +0.6
WVT Waverly 130.74 37 PKPdf **PKiKP** 21 32 05.2 +0.1
WVT Waverly 130.74 37 PKIKP **PKiKP** 21 32 05.3 +0.1
WVT MLR MLR
comp=Z,3μm,19.0s
R49A Shelbyville 130.76 33 PKPdf **PKiKP** 21 32 05.6 +0.4
OXF Oxford 130.82 40 PKPdf **PKPdf** 21 32 04.7 +0.2
OXF Oxford 130.82 40 PKIKP **PKPdf** 21 32 04.7 +0.2
OXF MLR MLR
comp=Z,3μm,21.0s
J57A Williamstown 130.87 22 PKPdf **PKPdf** 21 32 03.8 -0.6
PAOC Oil Creek Stat 130.98 26 PKPdf **PKPdf** 21 32 04.4 -0.3
P51A Williamsport 130.99 30 PKPdf **PKPdf** 21 32 05.2 +0.5
NCB Newcomb 131.01 20 PKPdf **PKPdf** 21 32 05.1 +0.5
O52A Adamsville 131.10 29 PKPdf **PKPdf** 21 32 04.8 -0.1
Y45A Yeager Farm, C 131.14 40 PKPdf **PKPdf** 21 32 05.6 +0.4
VT1 Waterbury 131.16 18 PKPdf **PKiKP** 21 32 06.8 +1.0
Q51A Peebles 131.19 31 PKPdf **PKPdf** 21 32 05.8 +0.7
R50A Paris 131.22 32 PKPdf **PKPdf** 21 32 05.6 +0.4
PAMR Moraine State 131.26 27 PKPdf **PKiKP** 21 32 06.1 0.0
K57A Scipio Center 131.26 22 PKPdf **PKPdf** 21 32 03.9 -1.2
O53A New Philadelph 131.30 28 PKPdf **PKPdf** 21 32 05.2 -0.1
P52A Corning 131.33 29 PKPdf **PKPdf** 21 32 04.7 -0.6
PLAL Pickwick Lake 131.35 38 PKPdf **PKPdf** 21 32 05.4 -0.1
J59A Piesco 131.36 20 PKPdf **PKPdf** 21 32 05.8 +0.4
L56A Greenwood 131.36 24 PKPdf **PKPdf** 21 32 05.6 +0.2
V48A Smith Brothers 131.61 37 PKPdf **PKPdf** 21 32 06.8 +0.7
CLTN Cedars of Leba 131.66 36 PKPdf **PKPdf** 21 32 06.6 +0.5
U49A Red Boiling Sp 131.69 35 PKPdf **PKPdf** 21 32 06.6 +0.5
O54A Avella 131.74 28 PKPdf **PKPdf** 21 32 06.2 +0.1
Q52A Bidwell 131.78 30 PKPdf **PKPdf** 21 32 06.4 +0.2
TLIG Tiapa 131.78 65 PKPdf **PKPdf** 21 32 07.1 +0.2
P53A Whipple 131.81 29 PKPdf **PKPdf** 21 32 06.9 +0.6
T50A Nancy 131.86 34 PKPdf **PKPdf** 21 32 06.7 +0.2
T50A IAMs_20 IAMs_20 22 36 02.4
comp=Z,2μm,20.0s
HNH Hanover 131.87 18 PKPdf **PKiKP** 21 32 07.5 +0.2
BINY Binghamton 131.92 22 PKPdf **PKPdf** 21 32 06.8 +0.4
S51A Beattyville 132.09 32 PKPdf **PKPdf** 21 32 07.5 +0.7
M57A Sunshine Farm, 132.20 24 PKPdf **PKPdf** 21 32 07.5 +0.5
146A Union 132.22 41 PKPdf **PKiKP** 21 32 09.1 +0.8
TRY Troy 132.29 20 PKPdf **PKPdf** 21 32 07.7 +0.6
X48A Hartselle 132.34 38 PKPdf **PKPdf** 21 32 08.0 +0.6
X48A IAMs_20 IAMs_20 22 32 46.4
comp=Z,2μm,21.0s
Q54A Coxs Mills 132.47 29 PKPdf **PKPdf** 21 32 08.3 +0.7
SSPA Standing Stone 132.47 25 PKPdf **PKPdf** 21 32 08.3 +0.8
SWET Sewanee 132.50 36 PKPdf **PKPdf** 21 32 07.5 -0.3
KSPA Keystone Colle 132.56 23 PKPdf **PKPdf** 21 32 08.3 +0.7
GBN Guysborough 132.66 8 PKPdf **PKiKP** 21 32 09.2 +0.5
N58A Sunbury 132.79 24 PKPdf **PKPdf** 21 32 09.0 +1.0
W50A Signal Mountai 132.87 36 PKPdf **PKPdf** 21 32 09.4 +1.0
W50A IAMs_20 IAMs_20 22 29 14.4
comp=Z,2μm,20.0s
TZTN Tazewell 132.92 33 PKPdf **PKiKP** 21 32 10.2 +0.6
FPAL Fort Paine 133.15 37 PKPdf **PKPdf** 21 32 08.4 -0.6
CPCT Cooper Cave 133.16 35 PKPdf **PKiKP** 21 32 10.4 +0.2
HRV Adam Dziewonsk 133.19 18 PKPdf **PKPdf** 21 32 09.4 +0.6
HRV Adam Dziewonsk 133.19 18 PKIKP **PKPdf** 21 32 09.4 +0.6
Q56A Snyder Ridge, 133.20 27 PKPdf **PKPdf** 21 32 09.4 +0.4
COYC Coyhaique 133.30 162 PKPdf **PKPdf** 21 32 09.3 +0.4
COYC Coyhaique 133.30 162 IAMs_20 IAMs_20 22 26 16.2
comp=Z,2μm,21.0s
LRAL Lakeview Retre 133.30 39 PKPdf **PKPdf** 21 32 09.5 +0.3
PAGS Pennsylvania G 133.30 24 PKPdf **PKPdf** 21 32 10.0 +0.9
R55A Marlinton 133.37 29 PKPdf **PKPdf** 21 32 10.0 +0.6
P57A Homestead Farm 133.37 26 PKPdf **PKPdf** 21 32 08.7 -0.5
TKL Tuckaleechee C 133.44 34 PKP **PKiKP** 21 32 10.9 +0.2
comp=Z,45nm,0.8s,baz=103,slow=1.6,SNR=20
TKL SKPbc **SKPab** 21 35 38.4 +0.5
comp=Z,14nm,1.0s,baz=175,slow=4.9,SNR=6.9
TKL Tuckaleechee C 133.44 34 PKPdf **PKiKP** 21 32 10.8 +0.1
X51A Calhoun 133.58 36 PKPdf **PKPdf** 21 32 09.8 0.0
MVL Millersville 133.65 24 PKPdf **PKPdf** 21 32 09.5 -0.2
W52A Murphy 133.75 35 PKPdf **PKPdf** 21 32 10.4 +0.3
V53A Saluda 133.96 34 PKPdf **PKPdf** 21 32 09.4 -1.1
BLA Blacksburg 134.06 30 PKPdf **PKPdf** 21 32 11.4 +0.8
BLA Blacksburg 134.06 30 PKIKP **PKPdf** 21 32 11.4 +0.8
PSUB Penn St. - Bra 134.07 23 PKPdf **PKPdf** 21 32 11.3 +0.8
AY01 Puyuhuapi 134.15 161 PKPdf **PKPdf** 21 32 10.8 +0.3
AY01 IAMs_20 IAMs_20 22 27 35.8
comp=Z,1μm,20.0s
S57A Dark Hollow, R 134.34 28 PKPdf **PKiKP** 21 32 12.6 +0.2
BG3 Lake Jocassee 134.39 34 PKPdf **PKPdf** 21 32 12.0 +0.7
250A Grady 134.46 40 PKPdf **PKPdf** 21 32 11.2 -0.3
BRAL Brewton 134.47 41 PKPdf **PKPdf** 21 32 11.6 +0.1
Y52A Lilburn 134.54 36 PKPdf **PKPdf** 21 32 11.9 +0.3
P61A Hammonton 134.55 23 IAMs_20 IAMs_20 22 43 12.0
comp=Z,2μm,21.0s
CMIG Matias Romero 135.25 64 PKP **PKiKP** 21 32 15.0 +0.2
comp=Z,7.8nm,0.8s,baz=351,slow=2.4,SNR=9.4
LL02 Futaleuf 135.51 161 IAMs_20 IAMs_20 22 28 16.8
comp=Z,2μm,22.0s
V58A Windy Hill, Pi 135.82 30 IAMs_20 IAMs_20 22 39 08.9
comp=Z,2μm,18.0s
LL01 San Ignacio de 136.04 160 IAMs_20 IAMs_20 22 28 18.9
comp=Z,2μm,22.0s
TIGA Tifton 136.51 38 IAMs_20 IAMs_20 22 23 30.9
comp=Z,2μm,22.0s
W59A Clinton 136.65 30 IAMs_20 IAMs_20 22 42 24.9
comp=Z,2μm,19.0s
Y60A Bolivia 137.68 31 IAMs_20 IAMs_20 22 43 04.2
comp=Z,2μm,20.0s
PLCA Paso Flores 138.14 161 PKhKP PKPpre 21 32 09.9
comp=Z,4.1nm,0.8s,baz=193,slow=6.8,SNR=5.1
PLCA PKP **PKiKP** 21 32 19.9 -0.4
comp=Z,24nm,1.0s,baz=205,slow=2.6,SNR=18
LR03 Panguipulli 138.48 158 IAMs_20 IAMs_20 22 30 35.6
comp=Z,2μm,22.0s
TEIG Tepich 139.68 56 IAMs_20 IAMs_20 22 23 53.5
comp=Z,2μm,22.0s
APG El Apazote 139.96 64 PKP **PKPdf** 21 32 22.7 +0.4
comp=Z,0.5nm,0.6s,baz=192,slow=12,SNR=4.9
BI02 San Fabin de 141.48 157 IAMs_20 IAMs_20 22 39 18.2
comp=Z,1μm,19.0s
TRQA Tornquist 142.92 169 PKPpre 21 32 19.2
TRQA IAMs_20 IAMs_20 22 38 42.6
comp=Z,2μm,22.0s
TRQA Tornquist 142.92 169 PKHKP PKPpre 21 32 19.2
TRQA MLR MLR
comp=Z,2μm,22.0s
TGUH Tegucigalpa,Un 143.18 64 IAMs_20 IAMs_20 22 30 21.1
comp=Z,1μm,21.0s
PAYG Puerto Ayora 143.31 89 IAMs_20 IAMs_20 22 23 22.7
comp=Z,1μm,21.0s
BO01 Tunca 143.53 155 PKPbc 21 32 26.0 +0.8
BO01 IAMs_20 IAMs_20 22 37 27.4
comp=Z,1μm,22.0s
BO04 La Punta 144.07 156 IAMs_20 IAMs_20 22 36 09.8
comp=Z,1μm,22.0s
LMEL Las Melosas 144.36 156 IAMs_20 IAMs_20 22 37 56.4
comp=Z,1μm,19.0s
VA01 Torpederas 144.45 153 IAMs_20 IAMs_20 22 32 37.2
comp=Z,1μm,22.0s
PEL Peldehue 144.77 155 IAMs_20 IAMs_20 22 39 13.5
comp=Z,986nm,20.0s
MT08 Bocatoma Ro 144.79 156 IAMs_20 IAMs_20 22 31 01.4
comp=Z,1μm,22.0s
VA03 San Esteban 145.15 155 IAMs_20 IAMs_20 22 33 30.5
comp=Z,1μm,21.0s
JTS Las Juntas de 146.63 69 PKPbc **PKPbc** 21 32 35.7 +0.3
comp=Z,104nm,1.1s,baz=312,slow=3.0,SNR=24
CO03 El Pedregal 146.73 153 IAMs_20 IAMs_20 22 32 35.4
comp=Z,2μm,22.0s
CO05 La Serena 147.24 151 IAMs_20 IAMs_20 22 29 54.0
comp=Z,1μm,21.0s
HDC Heredia 147.50 69 *eP* **PKPdf** 21 32 33.1 -2.4
LCO Las Campanas 148.25 151 IAMs_20 IAMs_20 22 34 36.8
comp=Z,1μm,20.0s
AC05 El Transito 148.60 151 IAMs_20 IAMs_20 22 48 47.1
comp=Z,1μm,20.0s
PRVC Isla de Provid 148.70 61 **PKPbc** 21 32 39.8 -1.1
MTDJ Mount Denham 149.28 49 IAMs_20 IAMs_20 22 47 59.5
comp=Z,1μm,22.0s
MTDJ Mount Denham 149.28 49 *i* P **PKPdf** 21 32 37.3 -0.9
GO03 Copiapo 149.65 150 IAMs_20 IAMs_20 22 42 59.0
comp=Z,1μm,20.0s
AC06 Mina Casimiro 149.78 149 IAMs_20 IAMs_20 22 37 23.5
comp=Z,1μm,20.0s
STH Stony Hill 149.92 48 ⇑ *iP* **PKiKP** 21 32 45.6 +0.6
GTBY Guantanamo Bay 149.94 44 IAMs_20 IAMs_20 22 37 44.1
comp=Z,1μm,22.0s
GWJ Greenwich 149.98 48 *i* P **PKiKP** 21 32 45.3 +0.1
PLTB Pedras Altas 150.01 180 *eP* **PKPdf** 21 32 37.2 -1.8
AC01 Pan de Azucar 150.63 148 IAMs_20 IAMs_20 22 34 57.2
comp=Z,1μm,21.0s
AC02 Maricunga 150.82 151 IAMs_20 IAMs_20 22 45 21.0
comp=Z,1μm,21.0s
CPSB Cacapava Do Su 151.36 180 *eP* **PKPdf** 21 32 40.8 -0.3
PB14 IPOC Station P 151.94 146 PKP **PKPdf** 21 32 43.3 +0.9
PB14 IPOC Station P 151.94 146 IAMs_20 IAMs_20 22 32 15.2
comp=Z,2μm,22.0s
GO02 Mina Guanaco 151.96 148 IAMs_20 IAMs_20 22 46 17.4
comp=Z,1μm,21.0s
SDDR Presa de Saban 153.15 40 IAMs_20 IAMs_20 22 47 38.6
comp=Z,2μm,21.0s
PB05 IPOC Station P 153.44 144 IAMs_20 IAMs_20 22 31 40.0
comp=Z,1μm,21.0s
PB06 IPOC Station P 153.92 145 IAMs_20 IAMs_20 22 32 30.6
comp=Z,1μm,21.0s
PB03 IPOC Station P 154.32 143 IAMs_20 IAMs_20 22 33 29.4
comp=Z,2μm,22.0s
DR12 Loma Pena Alta 154.47 37 **PKPdf** 21 32 48.2 +2.3
DR12 PKPab **PKPab** 21 33 10.3 +1.7
PB07 IPOC Station P 154.48 143 IAMs_20 IAMs_20 22 39 56.8
comp=Z,2μm,22.0s
ATAH Atahualpa 154.69 103 PKP **PKPdf** 21 32 49.5 +2.7
comp=Z,13nm,0.8s,baz=266,slow=2.6,SNR=19
ATAH PKPbc **sPKPdf** 21 32 58.5 -1.3
comp=Z,21nm,0.8s,baz=170,slow=6.2,SNR=13
NNA Nana 154.75 115 PKP **PKPdf** 21 32 48.7 +2.3
comp=Z,23nm,0.9s,baz=337,slow=2.2,SNR=3.2
PB02 IPOC Station P 154.78 142 **PKPdf** 21 32 50.0 +3.6
PB02 IAMs_20 IAMs_20 22 43 04.8
comp=Z,1μm,21.0s
PB09 IPOC Station P 154.81 144 IAMs_20 IAMs_20 22 40 44.4
comp=Z,1μm,20.0s
PATCX Punta Patache 154.99 141 IAMs_20 IAMs_20 22 41 02.6
comp=Z,1μm,20.0s
OTAV Otavalo 155.09 86 **PKPdf** 21 32 49.6 +2.1
OTAV Otavalo 155.09 86 PKIKP **PKPdf** 21 32 49.6 +2.1
OTAV MLR MLR
comp=Z,2μm,20.0s
OTAV Otavalo 155.09 86 *eP* **PKPdf** 21 32 46.4 -1.1
TA01 Diego Aracena 155.16 140 PKPdf **PKPdf** 21 32 48.2 +1.4
CPUP Villa Florida 155.16 172 PKP **PKPdf** 21 32 48.3 +1.7
comp=Z,4.7nm,1.1s,baz=200,slow=2.2,SNR=9.3
PB01 IPOC Station P 155.24 142 IAMs_20 IAMs_20 22 34 07.9
comp=Z,1μm,22.0s
PB11 IPOC Station P 156.08 140 IAMs_20 IAMs_20 22 33 08.6
comp=Z,1μm,22.0s
PB08 IPOC Station P 156.12 142 PKP **PKPdf** 21 32 46.8 -1.7
PB08 IPOC Station P 156.12 142 IAMs_20 IAMs_20 22 39 44.4
comp=Z,1μm,20.0s
GO01 Chusmiza 156.44 141 IAMs_20 IAMs_20 22 37 08.1
comp=Z,1μm,22.0s
AP01 Chacalluta 156.61 136 IAMs_20 IAMs_20 22 32 41.0
comp=Z,1μm,22.0s
SJG San Juan 156.83 32 PKP **PKPdf** 21 32 49.7 +0.7
comp=Z,4.8nm,0.3s,baz=347,slow=3.8,SNR=6.0
SJG PKPab **PKPab** 21 33 20.5 +2.0
comp=Z,31nm,0.8s,baz=325,slow=5.8,SNR=5.7
SJG San Juan 156.83 32 IAMs_20 IAMs_20 22 49 04.6
comp=Z,1μm,22.0s
PB16 IPOC Station P 157.20 138 IAMs_20 IAMs_20 22 33 03.5
comp=Z,1μm,22.0s
SPB Sao Paulo 157.35 195 IAMs_20 IAMs_20 22 59 49.4
comp=Z,2μm,22.0s
PB18 Visviri 157.74 136 IAMs_20 IAMs_20 22 41 03.9
comp=Z,2μm,22.0s
ROSC El Rosal 158.33 73 PKP **PKPdf** 21 32 53.0 +1.5
comp=Z,21nm,0.7s,baz=73,slow=4.2,SNR=16
SABA Saba 158.66 26 IAMs_20 IAMs_20 22 47 31.6
comp=Z,1μm,22.0s
SEUS St. Eustatius 158.88 26 IAMs_20 IAMs_20 22 47 57.5
comp=Z,2μm,22.0s
SJMB Sao Joao De Ma 159.10 215 *eP* **PKPdf** 21 32 49.2 -2.6
LPAZ La Paz 159.57 136 PKP **PKPdf** 21 32 54.7 +1.6
comp=Z,15nm,0.9s,baz=226,slow=1.3,SNR=32
LPAZ PKKP 21 41 12.7
comp=Z,0.8nm,0.4s,baz=206,slow=3.9,SNR=4.7
LPAZ La Paz 159.57 136 *eP* **PKPdf** 21 32 52.0 -1.2
MURT Porto Murtinho 159.69 169 *eP* **PKPdf** 21 32 52.2 -0.2
GUA01 Guaratinga, BA 159.85 222 *eP* **PKPdf** 21 32 51.8 -0.9
SDV Santo Domingo 160.08 58 PKP **PKPdf** 21 32 53.8 +0.5
comp=Z,38nm,0.9s,baz=294,slow=0.8,SNR=38
SDV PKPab **PKPab** 21 33 35.3 +2.2
comp=Z,26nm,1.0s,baz=323,slow=5.1,SNR=7.2
SDV Santo Domingo 160.08 58 *eP* **PKPdf** 21 32 52.4 -0.9
CMC01 Camacan, BA 160.51 225 *eP* **PKPdf** 21 32 53.2 -0.3
DIAM Diamantina, MG 160.77 210 *eP* **PKPdf** 21 32 52.6 -1.3
NBAN Anadia - AL 161.00 244 *eP* **PKPdf** 21 32 53.4 -0.7
AQDB Aquidauana 161.14 174 *eP* **PKPdf** 21 32 53.8 -0.3
ITRB Iturama 161.74 190 *eP* **PKPdf** 21 32 54.8 +0.1
IPMB Ipameri, GO 162.89 198 *eP* **PKPdf** 21 32 54.6 -1.4
PP1B Ponte de Pedra 164.06 176 *eP* **PKPdf** 21 32 57.2 +0.2
BDFB Brasilia 165.01 201 PKP **PKPdf** 21 32 59.1 +1.1
comp=Z,19nm,1.0s,baz=78,slow=1.6,SNR=11
BDFB PKPab **PKPab** 21 33 55.5 +1.2
comp=Z,32nm,1.3s,baz=157,slow=2.3,SNR=5.1
PTLB Pontes e Lacer 165.21 159 *eP* **PKPdf** 21 32 57.4 -0.6
SALV Santo Antonio 165.65 172 *eP* **PKPdf** 21 32 59.0 +0.6
ARAG Araguaiana, MT 165.88 187 *eP* **PKPdf** 21 32 58.2 -0.4
SDBA SAO DESIDERIO 166.24 218 *eP* **PKPdf** 21 32 58.6 -0.4
VILB Vilhena 166.97 150 *eP* **PKPdf** 21 32 59.0 -0.5
TEFE Tefe 168.82 100 *eP* **PKPdf** 21 33 00.8 0.0
SNDB Serra Nova Dou 169.45 192 *eP* **PKPdf** 21 33 00.8 -0.4
PDRB Porto dos Gac 169.59 163 *eP* **PKPdf** 21 32 58.7 -2.5
SMTB Santa Maria do 170.64 220 *eP* **PKPdf** 21 33 01.6 -0.3
BOAV Boa Vista 172.02 60 *eP* **PKPdf** 21 33 00.1 -2.5
MDP Montagnes des 173.26 352 PKPab **PKPab** 21 34 32.7 +2.1
comp=Z,82nm,1.2s,baz=11,slow=3.9,SNR=12
PRPB Parauapebas 174.10 220 *eP* **PKPdf** 21 33 00.9 -2.6
NPGB Novo Progresso 174.32 162 *eP* **PKPdf** 21 33 01.0 -2.5
TMAB Tom-Au,PA,Br 174.45 262 *eP* **PKPdf** 21 33 01.8 -1.7
ITTB Itaituba 176.53 142 *eP* **PKPdf** 21 33 01.4 -2.7

IDC 14 21:21:01.7±1.7, 1.62N×126.42E, h0km, mb4.0/4, mbtmp4.0/5, ML3.9/1, Error ellipse: s-maj=123.4km s-min=20.6km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.61	182	P	P	21 25 31.9	0.0
	0.3nm,0.3s,baz=342,slow=9.6,SNR=1.2						
	5.8nm,0.9s						
WRA	Warramunga Arr	22.80	160	P	P	21 26 06.0	-0.3
	1.9nm,0.4s,baz=339,slow=11,SNR=6.8						
	1.9nm,0.4s						
ASAR	Alice Springs	26.17	164	P	P	21 26 38.3	+0.2
	1.2nm,0.6s,baz=347,slow=12,SNR=1.6						
	1.2nm,0.6s						
MKAR	Makanchi Array	59.11	326	P	P	21 31 04.0	-0.1
	2.4nm,1.0s,baz=121,slow=7.3,SNR=8.5						
	2.4nm,1.0s						
KURBB	Kurchatov Arra	63.34	328	P	P	21 31 32.7	0.0
	1.2nm,0.6s,baz=129,slow=5.9,SNR=6.2						
	1.2nm,0.6s						

IDC 14 21:21:46.2±2.1, 2.17N×127.24E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=186.3km s-min=24.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.05	163	P	P	21 26 52.1	-1.3
	3.9nm,0.8s,baz=342,slow=11,SNR=3.1						
	3.9nm,0.8s						
ASAR	Alice Springs	26.49	166	P	P	21 27 26.6	+1.1
	1.4nm,0.6s,baz=342,slow=8.7,SNR=1.9						
	1.4nm,0.6s						
MKAR	Makanchi Array	59.12	326	P	P	21 31 48.5	-0.2
	0.9nm,0.7s,baz=129,slow=7.4,SNR=1.3						
	0.9nm,0.7s						
KURBB	Kurchatov Arra	63.32	328	P	P	21 32 17.2	+0.1
	0.9nm,0.6s,baz=127,slow=6.1,SNR=1.9						
	0.9nm,0.6s						

IDC 14 21:22:11.5±1.9, 1.62N×126.54E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=179.3km s-min=24.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.75	161	P	P	21 27 15.4	-0.2
	3.6nm,0.6s,baz=339,slow=11,SNR=4.7						
	3.6nm,0.6s						
ASAR	Alice Springs	26.14	165	P	P	21 27 47.7	+0.2
	1.5nm,0.6s,baz=348,slow=13,SNR=2.7						
	1.5nm,0.6s						
MKAR	Makanchi Array	59.18	326	P	P	21 32 14.3	-0.1
	0.4nm,0.4s,baz=118,slow=6.8,SNR=1.3						
	0.4nm,0.4s						
KURBB	Kurchatov Arra	63.41	328	P	P	21 32 42.9	0.0
	0.7nm,0.5s,baz=131,slow=6.3,SNR=2.2						
	0.7nm,0.5s						

IDC 14 21:23:43.9±1.6, 1.61N×126.43E, h0km, mb3.9/4, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=120.6km s-min=20.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.60	182	P	P	21 28 13.8	0.0
	0.2nm,0.3s,baz=7.9,slow=13

ENIJ				Sn	Sn	21 25 22.5	-3.0	
ENIJ	**Nijar**	**2.07 318**		P	Pn	**21 25 01.0**	**+1.2**	
ENIJ			⇑*i*VIvmb_VC			21 25 02.7		
	672nm,SNR=2.3							
GOG	**Mont Gurugu**	**2.07 265**		P	Pn	**21 24 59.5**	**-0.4**	
CART	**Cartagena**	**2.18 349**		Sn	Sn	**21 25 24.5**	**-3.6**	
EMUR	**La Murta**	**2.47 346**		Pn	Pn	**21 25 06.7**	**+1.3**	
EMUR				Sn	Sn	**21 25 32.0**	**-3.5**	
EMUR	**La Murta**	**2.47 346**		P	Pn	**21 25 05.6**	**+0.2**	
EMUR			⇑*i*VIvmb_VC			21 25 06.9		
	308nm,SNR=1.3							
EMUR				S	Sn	**21 25 35.2**	**-0.2**	
ELGU	**Los Guajares,**	**2.92 300**		Sn	Sn	**21 25 44.3**	**-2.2**	
ELGU				Pn	Pn	**21 25 11.2**	**-0.4**	
ELGU	**Los Guajares,**	**2.92 300**		P	Pn	**21 25 12.4**	**+0.8**	
ELGU			⇑*i*VIvmb_VC			21 25 18.3		
	390nm,SNR=1.6							
ELGU				S	Sn	**21 25 47.5**	**+1.0**	
AKLM	**AKL**	**2.93 253**		P	Pn	21 24 59.2	-13	
AKLM	**AKL**	**2.93 253**		S	Pn	**21 25 13.6**	**+1.8**	
EQUE	**Quentar**	**2.97 307**		P	Pn	**21 25 13.9**	**+1.6**	
EQUE			⇑*i*VIvmb_VC			21 25 17.2		
	235nm,SNR=1.8							
EQUE				S	Sn	**21 25 48.8**	**+1.0**	
EQTA	**Presa de Quent**	**2.98 307**		Pn	Pn	**21 25 14.2**	**+1.8**	
EQES	**Quesada**	**3.15 319**		P	Pn	**21 25 17.3**	**+2.5**	
EQES			⇑*i*VIvmb_VC			21 25 21.1		
	310nm,SNR=1.7							
EQES				S	Sn	**21 25 52.7**	**+0.5**	
ETOB	**Tobarra**	**3.31 345**		Pn	Pn	**21 25 19.3**	**+2.4**	
ETOB	**Tobarra**	**3.31 345**		P	Pn	**21 25 17.8**	**+0.9**	
ETOB			⇑*i*VIvmb_VC			21 25 24.7		
	584nm,SNR=2.0							
ETOB				S	Sn	**21 25 55.4**	**-0.7**	
FIGM	**Figuig**	**3.36 191**		P	Pn	**21 25 18.4**	**+0.6**	
EGOR	**Sierra Gorda,**	**3.38 301**		P	Pn	**21 25 19.0**	**+1.1**	
EGOR			⇑*i*VIvmb_VC			21 25 26.6		
	227nm,SNR=1.4							
E0803	**Jimena (Jaen)**	**3.39 316**		P	Pn	**21 25 20.0**	**+1.9**	
E0803				S	Sn	**21 25 58.2**	**+0.1**	
EMIJ	**Mijas**	**3.66 289**		Pn	Pn	**21 25 21.4**	**-0.3**	
EMIJ	**Mijas**	**3.66 289**		P	Pn	**21 25 21.0**	**-0.7**	
EMIJ			⇑*i*VIvmb_VC			21 25 22.2		
	222nm,SNR=1.0							
LCRM	**LCR**	**4.02 245**		P	Pn	21 25 10.1	-17	
LCRM	**LCR**	**4.02 245**		S	Pn	21 25 33.4	+6.6	
EADA	**Adamuz**	**4.27 311**		P	Pn	**21 25 32.1**	**+2.0**	
EADA			⇑*i*VIvmb_VC			21 25 35.5		
	176nm,SNR=0.9							
EADA				S	Sn	**21 26 19.8**	**+0.1**	
PSIM	**Granatula de C**	**4.27 323**		P	Pn	**21 25 31.5**	**+1.4**	
MD31	**MD31**	**4.38 235**		P	Pn	21 25 12.9	-19	
MD31	**MD31**	**4.38 235**		S	Pn	21 25 39.2	+7.5	
ECAB	**El Cabril**	**4.76 305**		P	Pn	**21 25 37.3**	**+0.5**	
ECAB			⇑*i*VIvmb_VC			21 25 45.8		
	162nm,SNR=1.4							
ECAB				S	Sn	**21 26 30.7**	**-1.1**	
ESDC	**Sonseca Array**	**5.05 328**		P	Pn	**21 25 42.7**	**+1.8**	
ESDC			⇑*i*VIvmb_VC			21 25 46.5		
	165nm,SNR=1.2							
PAB	**San Pablo**	**5.12 324**		P	Pn	**21 25 43.2**	**+1.3**	
PAB			⇑*i*VIvmb_VC			21 25 52.6		
	158nm,SNR=0.9							
PAB				S	Sn	**21 26 38.2**	**-2.7**	

*IDC **14** 21:25:21.4±1.7, 1°.32N×125°.46E, h0km, mb3.7/4, mbtmp3.8/4, Error ellipse: s-maj=179.8km s-min=23.6km az=65.0*
*NEIC **14** 21:25:28.1±0.8, 1°.5N±0°.1×126°.0E±0°.1, h35km±2km, mb4.3/9, Error ellipse: s-maj=19.8km s-min=16.9km az=52.0*
ISC 14 21:25:27.1±0.9,**1°.5N**±0°.1×**126°.0E**±0°.2,**h35**km,**n19,** σ0s**.97/19,mb4.1/9,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.56**	**118**	Pn		**Pn**	**21 25 52.0**	**-0.3**
SOEI	**Soe**	**11.31**	**189**	Pn		**Pn**	**21 28 06.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.48**	**181**	P		**P**	**21 29 50.7**	**-0.4**
WB0	**Warramunga Arr**	**22.69**	**159**	P		**P**	**21 30 26.9**	**+1.0**
WRAB	**Tennant Creek**	**22.82**	**159**	P		**P**	**21 30 27.9**	**+0.6**
WRAB				IAmb		IAmb	21 30 29.8	
	comp=Z,3.4nm,0.3s							
WRA	**Warramunga Arr**	**22.83**	**159**	P		**P**	**21 30 25.9**	**-1.5**
	comp=Z,2.7nm,0.7s,baz=336,slow=11,SNR=4.6							
	comp=Z,2.7nm,0.7s							
WB2	**Warramunga Arr**	**22.83**	**159**	P		**P**	**21 30 27.5**	**+0.1**
WB2				IAmb		IAmb	21 30 36.4	
	comp=Z,7.2nm,1.0s							
WR8	**Warramunga Arr**	**22.90**	**159**	P		**P**	**21 30 28.8**	**+0.7**
WR0	**Warramunga Arr**	**22.92**	**159**	P		**P**	**21 30 28.3**	**+0.1**
COEN	**Coen**	**22.93**	**133**	P		**P**	**21 30 28.8**	**+0.3**
NACB	**Ninganchiao**	**22.94**	**350**	P		**P**	**21 30 29.7**	**+1.3**
NACB				IAmb		IAmb	21 30 40.7	
	comp=Z,4.8nm,0.4s							
YOJ	**Yonaguni jima**	**23.01**	**353**	P		**P**	**21 30 29.2**	**+0.1**
ASAR	**Alice Springs**	**26.17**	**163**	P		**P**	**21 30 58.5**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=338,slow=8.2,SNR=2.0							
	comp=Z,0.5nm,0.5s							
MK31	**Makanchi Array**	**58.97**	**326**	P		**P**	**21 35 23.7**	**+0.4**
MK31				IAmb		IAmb	21 35 40.4	
	comp=Z,3.0nm,1.1s							
MKAR	**Makanchi Array**	**58.97**	**326**	P		**P**	**21 35 23.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=117,slow=7.6,SNR=5.5							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**58.97**	**326**	P		**P**	**21 35 23.6**	**+0.3**
MAKZ	**Makanchi**	**59.16**	**326**	P		**P**	**21 35 24.8**	**+0.3**
KURBB	**Kurchatov Arra**	**63.22**	**328**	P		**P**	**21 35 49.0**	**-2.9**
	comp=Z,0.5nm,0.5s,baz=127,slow=5.8,SNR=2.0							
	comp=Z,0.5nm,0.5s							
KURK	**Kurchatov**	**63.23**	**328**	P		**P**	**21 35 51.7**	**-0.2**
KURK				IAmb		IAmb	21 35 54.0	
	comp=Z,0.8nm,0.4s							

*IDC **14** 21:25:54.4±1.4, 1°.43N×125°.84E, h0km, mb3.9/6, mbtmp3.9/7, ML3.7/1, Error ellipse: s-maj=120.3km s-min=18.4km az=69.0*
*NEIC **14** 21:26:00.1±1.0, 1°.54N±0°.09×126°.21E±0°.07, h35km±2km, mb4.2/5, Error ellipse: s-maj=15.9km s-min=11.4km az=208.0*
ISC 14 21:25:59.2±1.0,**1°.50N**±0°.08×**126°.23E**±0°.08,**h35**km,**n17,** σ0s**.80/16,mb4.0/9,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.35**	**122**	Pn		**Pn**	**21 26 22.0**	**+0.4**
LUWI	**Luwuk**	**4.28**	**234**	Pn		**Pn**	**21 27 01.8**	**-0.2**
TOLI2	**Tolitoli**	**5.46**	**266**	Pn		**Pn**	**21 27 19.3**	**+1.1**
DAV	**Davao City (W)**	**5.57**	**353**	Pn		**Pn**	**21 27 19.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**19.48**	**182**	P		**P**	**21 30 21.6**	**-1.8**
	0.2nm,0.3s,baz=0.0,slow=11,SNR=2.1							
	4.5nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.48**	**182**	P		**P**	**21 30 23.3**	**0.0**
WB0	**Warramunga Arr**	**22.60**	**160**	P		**P**	**21 30 57.7**	**+0.7**
WB0				IAmb		IAmb	21 31 01.6	
	comp=Z,4.6nm,0.8s							
WRA	**Warramunga Arr**	**22.75**	**160**	P		**P**	**21 30 59.3**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=338,slow=10,SNR=5.4							
	comp=Z,1.6nm,0.5s							
WR8	**Warramunga Arr**	**22.82**	**160**	P		**P**	**21 30 59.7**	**+0.4**
WR8				IAmb		IAmb	21 31 02.9	
	comp=Z,8.6nm,1.0s							
ASAR	**Alice Springs**	**26.11**	**164**	P		**P**	**21 31 30.8**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=348,slow=7.7,SNR=6.9							
	comp=Z,1.2nm,0.5s							
MKAR	**Makanchi Array**	**59.10**	**326**	P		**P**	**21 35 56.1**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=118,slow=6.3,SNR=5.1							
	comp=Z,1.3nm,0.6s							
MAKZ	**Makanchi**	**59.29**	**326**	P		**P**	**21 35 57.3**	**-0.2**
MAKZ				IAmb		IAmb	21 36 07.0	
	comp=Z,3.6nm,1.1s							
ZALV	**Zalesovo Beam**	**62.34**	**334**	P		**P**	**21 36 18.1**	**0.0**
	comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.4							
	comp=Z,0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**63.34**	**328**	P		**P**	**21 36 24.6**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=128,slow=6.1,SNR=7.5							
	comp=Z,1.4nm,0.6s							
KURK	**Kurchatov**	**63.35**	**328**	P		**P**	**21 36 24.6**	**-0.2**
KURK	**Kurchatov**	**63.35**	**328**	IAmb		IAmb	21 36 25.1	
	comp=Z,2.3nm,0.7s							
BVAR	**Borovoye Array**	**68.91**	**328**	P		**P**	**21 36 59.2**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=134,slow=10,SNR=2.6							
	comp=Z,0.8nm,0.7s							

IDC 14 21:27:45.0±1.8,**1°.77N**×**126°.74E, h0**km,**mb3.6**/4, **mbtmp3.6**/5,**ML3.7/1,Error ellipse: s-maj=125.7km s-min=21.4km az=69.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.77**	**183**	P		P	21 32 16.3	-0.6
	0.2nm,0.3s,baz=354,slow=9.2,SNR=1.2							
	1.6nm,0.8s							
WRA	**Warramunga Arr**	**22.83**	**161**	P		P	21 32 49.8	-0.1
	1.9nm,0.7s,baz=341,slow=11,SNR=4.7							
	1.9nm,0.7s							
ASAR	**Alice Springs**	**26.23**	**165**	P		P	21 33 22.3	+0.4
	0.7nm,0.6s,baz=346,slow=9.5,SNR=5.6							
	0.7nm,0.6s							
MKAR	**Makanchi Array**	**59.16**	**326**	P		P	21 37 47.0	-0.7
	0.4nm,0.5s,baz=121,slow=7.3,SNR=5.9							
	0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**63.38**	**328**	P		P	21 38 17.0	+0.8
	0.3nm,0.5s,baz=123,slow=7.0,SNR=1.9							
	0.3nm,0.5s							

IDC 14 21:29:24.1±2.0,**1°.61N**×**126°.61E, h0**km,**mb3.4**/4, **mbtmp3.5**/4,**Error ellipse: s-maj=187.4km s-min=24.4km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.72**	**161**	P		P	21 34 28.4	+0.6
	1.8nm,0.9s,baz=340,slow=11,SNR=4.8							
	1.8nm,0.9s							
ASAR	**Alice Springs**	**26.11**	**165**	P		P	21 34 59.2	-0.6
	0.3nm,0.5s,baz=346,slow=12,SNR=1.2							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**59.23**	**326**	P		P	21 39 26.8	-0.4
	0.3nm,0.6s,baz=114,slow=8.0,SNR=1.6							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**63.45**	**328**	P		P	21 39 56.2	+0.4
	0.4nm,0.6s,baz=125,slow=5.8,SNR=1.9							
	0.4nm,0.6s							

*IDC **14** 21:30:51.1±2.5, 17°.54S×178°.90W, h528km±27km, mb3.9/19, mbtmp4.8/20, Error ellipse: s-maj=14.4km s-min=11.5km az=101.0*
*NEIC **14** 21:30:51.3±2.0, 17°.65S±0°.09×178°.8W±0°.1, h543km±6km, mb4.6/91, Error ellipse: s-maj=15.6km s-min=12.1km az=117.0*
*NOU **14** 21:30:51.4, 17°.75S×178°.66W, h546km, mb5.0/80, Fiji Islands Region*
ISC 14 21:30:51.4±0.3,**17°.67S**±0°.06×**178°.74W**±0°.05,**h547**km, **n313,**σ1s**52/312,mb4.7/87,9C-5D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.06**	**268**	P		**P**	**21 32 08.4**	**+1.7**
MSVF				S		**S**	**21 33 11.5**	**+3.5**
MSVF	**Nonsavu**	**3.06**	**268**	P		**P**	**21 32 08.4**	**+1.7**
AFI	**Afiamalu**	**7.67**	**62**			**P**	**21 32 43.9**	**-2.0**
AFI	**Afiamalu**	**7.67**	**62**	P		**P**	**21 32 44.7**	**-1.2**
NIUE	**Niue**	**8.48**	**101**	P		**P**	**21 32 55.6**	**+1.8**
	comp=Z,254nm,1.3s							
NIUE	**Niue**	**8.48**	**101**			**P**	**21 32 54.5**	**+0.7**
NIUE	**Niue**	**8.48**	**101**	P		**P**	**21 32 54.9**	**+1.0**
NIUE				S		**S**	**21 34 39.5**	**+5.2**
FUNA	**Funafuti**	**9.31**	**347**			**P**	**21 33 01.6**	**-0.7**
FUNA	**Funafuti**	**9.31**	**347**	P		**P**	**21 33 03.1**	**+0.8**
MARNC	**Mare, Loyalty**	**13.04**	**251**			**P**	**21 33 38.7**	**-2.0**
MARNC	**Mare, Loyalty**	**13.04**	**251**	P		**P**	**21 33 39.5**	**-1.2**
SANVU	**Saraoutou**	**13.66**	**277**			**P**	**21 33 45.9**	**-1.3**
SANVU	**Saraoutou**	**13.66**	**277**	P		**P**	**21 33 48.2**	**+1.0**
SANVU	**Saraoutou**	**13.66**	**277**	S		**S**	**21 36 14.2**	**+2.3**
PINNC	**Pines Island,**	**13.88**	**247**			**P**	**21 33 48.4**	**-1.0**
PINNC	**Pines Island,**	**13.88**	**247**	P		**P**	**21 33 48.7**	**-0.6**
YATNC	**Mamie plateau,**	**14.21**	**250**	P		**P**	**21 33 51.6**	**-1.2**
OUENC	**Ouen Island, N**	**14.35**	**248**	P		**P**	**21 33 53.3**	**-0.9**
DZM	**Mont Dzumac**	**14.61**	**250**	P		**P**	**21 33 55.5**	**-1.5**
	comp=Z,101nm,1.0s,baz=85,slow=14,SNR=32							
DZM				S		**S**	**21 36 32.3**	**+2.3**
	comp=Z,42nm,1.1s,baz=25,slow=13,SNR=4.1							
ONTNC	**Ouen Toro**	**14.66**	**249**			**P**	**21 33 55.5**	**-2.0**
ONTNC	**Ouen Toro**	**14.66**	**249**	P		**P**	**21 33 56.5**	**-1.0**
KOUNC	**Koumac, New Ca**	**16.30**	**257**	P		**P**	**21 34 14.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**16.30**	**257**	S		**S**	**21 37 02.0**	**+2.8**
NFK	**Norfolk Island**	**16.65**	**225**	P		**P**	**21 34 19.5**	**+2.4**
	comp=Z,320nm,1.7s							
OUZ	**Omahuta**	**18.77**	**200**	P		**P**	**21 34 38.5**	**+2.2**
WCZ	**Waipu Caves**	**19.21**	**197**	P		**P**	**21 34 42.5**	**+2.3**
GRZ	**Great Barrier**	**19.21**	**194**	P		**P**	**21 34 41.7**	**+1.4**
HAZ	**Te Kaha**	**20.25**	**188**	P		**P**	**21 34 48.9**	**-0.8**
HAZ				S		**S**	**21 37 54.6**	**-8.1**
TARA	**Tarawa**	**20.61**	**336**	P		**P**	**21 34 53.1**	**-0.2**
TARA	**Tarawa**	**20.61**	**336**	P		**P**	**21 34 53.8**	**+0.5**
TOZ	**Tahuroa Road**	**20.62**	**193**	P		**P**	**21 34 51.2**	**-1.8**
URZ	**Urewera**	**20.84**	**189**	P		**P**	**21 34 52.1**	**-2.9**
	comp=Z,17nm,0.7s,baz=349,slow=1.0,SNR=13							
URZ				S		**S**	**21 38 05.1**	**-7.0**
	comp=Z,10nm,0.8s,baz=103,slow=18,SNR=2.2							
URZ	**Urewera**	**20.84**	**189**	P		**P**	**21 34 51.8**	**-3.1**
MWZ	**Matawai**	**20.85**	**188**	P		**P**	**21 34 53.5**	**-1.7**
MWZ				S		**S**	**21 38 06.8**	**-5.6**
HIZ	**Hauiti**	**21.51**	**194**	P		**P**	**21 35 01.1**	**0.0**
HNR	**Honiara**	**22.27**	**289**	P		**P**	**21 35 04.5**	**-3.7**
SAVO	**Savo Central**	**22.50**	**289**	P		**P**	**21 35 11.9**	**+1.6**
BFZ	**Birch Farm**	**23.34**	**190**	P		**P**	**21 35 16.6**	**-0.8**
BFZ				IAmb		IAmb	21 35 30.5	
	comp=Z,85nm,1.4s							
MRZ	**Mangatainoka R**	**23.43**	**191**	P		**P**	**21 35 16.2**	**-2.0**
OGWZ	**Otaki Gorge**	**23.66**	**192**	P		**P**	**21 35 20.2**	**0.0**
HOWZ	**Holdsworth Sta**	**23.67**	**191**	P		**P**	**21 35 19.4**	**-1.0**
DUWZ	**D'Urville Isla**	**23.91**	**194**	P		**P**	**21 35 22.0**	**-0.5**
PAWZ	**Paruwai Farm**	**24.16**	**191**	P		**P**	**21 35 23.4**	**-1.3**
TCW	**Tory Channel**	**24.22**	**193**	P		**P**	**21 35 24.7**	**-0.5**
QRZ	**Quartz Range**	**24.27**	**196**	P		**P**	**21 35 25.9**	**+0.2**
QRZ	**Quartz Range**	**24.27**	**196**	P		**P**	**21 35 26.0**	**+0.3**
TKNZ	**Takaka Hill**	**24.36**	**195**	P		**P**	**21 35 26.1**	**-0.4**
PLWZ	**Palliser**	**24.37**	**191**	P		**P**	**21 35 25.0**	**-1.6**
NNZ	**Nelson**	**24.43**	**194**	P		**P**	**21 35 26.4**	**-0.6**
MRNZ	**Matariki Terra**	**24.75**	**195**	P		**P**	**21 35 29.0**	**-0.9**
KHZ	**Kahutara**	**25.53**	**193**	P		**P**	**21 35 35.0**	**-1.8**
KHZ	**Kahutara**	**25.53**	**193**	S		**S**	**21 39 24.4**	**-1.5**
OXZ	**Oxford**	**26.75**	**195**	P		**P**	**21 35 46.1**	**-1.4**
OXZ				IAmb		IAmb	21 35 47.6	
	comp=Z,64nm,1.2s							
GC1S	**Gold Coast 1 S**	**27.55**	**243**	P		**P**	**21 35 55.6**	**+0.8**
AUWSH	**Wavell State H**	**27.75**	**245**	P		**P**	**21 35 56.6**	**+0.1**
JCZ	**Jackson Bay**	**28.35**	**199**	P		**P**	**21 36 00.9**	**-0.7**
TW1H	**Toowoomba 1 Ha**	**28.71**	**245**	P		**P**	**21 36 05.5**	**+0.5**
GD1S	**Gladstone Soft**	**28.77**	**253**	P		**P**	**21 36 06.2**	**+0.8**
WKZ	**Wanaka**	**28.96**	**198**	P		**P**	**21 36 05.4**	**-1.4**
EIDS	**Eidsvold**	**29.06**	**249**	P		**P**	**21 36 06.9**	**-1.1**
	comp=Z,103nm,1.0s							
EIDS	**Eidsvold**	**29.06**	**249**			**P**	**21 36 07.2**	**-0.7**
EIDS	**Eidsvold**	**29.06**	**249**	P		**P**	**21 36 07.5**	**-0.5**
AUNRC	**North Rockhamp**	**29.30**	**254**	P		**P**	**21 36 09.9**	**-0.2**
MLZ	**Mavora Lakes**	**29.72**	**199**			**P**	**21 36 13.4**	**-0.1**
MLZ				IAmb		IAmb	21 36 14.6	
	comp=Z,45nm,0.8s							
WHZ	**Wether Hill Ro**	**30.25**	**199**			**P**	**21 36 17.9**	**-0.1**
AUPHS	**Peel High Scho**	**30.61**	**238**	P		**P**	**21 36 21.9**	**+0.6**
AUKHS	**Kincumber High**	**31.06**	**234**	P		**P**	**21 36 25.1**	**0.0**
MGCD	**Mangrove Creek**	**31.18**	**234**	P		**P**	**21 36 26.6**	**+0.4**
	comp=Z,122nm,0.9s							
MGCD	**Mangrove Creek**	**31.18**	**234**	P		**P**	**21 36 27.0**	**+0.9**
RIV	**Riverview**	**31.38**	**233**	P		**P**	**21 36 28.8**	**+1.0**
	comp=Z,116nm,1.3s							
RIV	**Riverview**	**31.38**	**233**	P		**P**	**21 36 28.4**	**+0.6**
SYDH	**Sydney Hard Ro**	**31.67**	**234**	P		**P**	**21 36 30.8**	**+0.5**
AUUHS	**Ulladulla High**	**32.52**	**231**	P		**P**	**21 36 38.0**	**+0.5**
AULRC	**Lightning Ridg**	**32.57**	**243**	P		**P**	**21 36 38.0**	**0.0**
TV1H	**Townsville Har**	**32.70**	**262**	P		**P**	**21 36 39.0**	**-0.3**
AUDCS	**Dubbo College**	**32.80**	**238**	P		**P**	**21 36 40.8**	**+0.9**
CTA	**Charters Tower**	**33.18**	**260**	P		**P**	**21 36 43.5**	**+0.2**
CTAO	**Charters Tower**	**33.18**	**260**			**P**	**21 36 42.8**	**-0.5**
CTAO	**Charters Tower**	**33.18**	**260**	P		**P**	**21 36 43.3**	**0.0**
CNB	**Canberra Magne**	**33.33**	**232**	P		**P**	**21 36 44.7**	**+0.3**
	comp=Z,176nm,1.3s							
CNB	**Canberra Magne**	**33.33**	**232**	P		**P**	**21 36 45.0**	**+0.6**
AUSIS	**Research Schoo**	**33.50**	**232**	P		**P**	**21 36 46.4**	**+0.5**
AUMTS	**Mt Stromlo**	**33.60**	**232**	P		**P**	**21 36 47.0**	**+0.3**
CAN	**Canberra**	**33.60**	**232**	P		**P**	**21 36 47.3**	**+0.5**
	comp=Z,71nm,1.3s							
CAN	**Canberra**	**33.60**	**232**			**P**	**21 36 46.2**	**-0.5**
CAN	**Canberra**	**33.60**	**232**	P		**P**	**21 36 46.9**	**+0.2**
YNG	**Young**	**33.68**	**234**	P		**P**	**21 36 47.8**	**+0.4**
	comp=Z,51nm,1.4s							
PMG	**Port Moresby**	**34.11**	**279**	P		**P**	**21 36 50.8**	**-0.4**
PMG	**Port Moresby**	**34.11**	**279**	P		**P**	**21 36 51.5**	**+0.3**
PMG	**Port Moresby**	**34.11**	**279**	P		**P**	**21 36 52.0**	**+0.8**
MILA	**Mila**	**34.20**	**229**	P		**P**	**21 36 52.0**	**+0.3**
	comp=Z,31nm,1.6s							
CMSA	**Cobar Meteorol**	**35.00**	**240**	P		**P**	**21 36 58.1**	**-0.3**
	comp=Z,161nm,1.2s							
CMSA	**Cobar Meteorol**	**35.00**	**240**	P		**P**	**21 36 58.5**	**+0.1**
MTSU	**Mount Surprise**	**35.12**	**263**	P		**P**	**21 36 58.6**	**-1.1**
	comp=Z,36nm,1.0s							
MTSU	**Mount Surprise**	**35.12**	**263**	P		**P**	**21 36 59.2**	**-0.5**
QLP	**Quilpie**	**35.33**	**249**	P		**P**	**21 37 00.3**	**-1.0**
	comp=Z,349nm,1.1s							
QLP	**Quilpie**	**35.33**	**249**	P		**P**	**21 37 00.6**	**-0.6**
COEN	**Coen**	**36.79**	**270**	P		**P**	**21 37 13.7**	**+0.2**
	comp=Z,71nm,1.0s							
COEN	**Coen**	**36.79**	**270**	P		**P**	**21 37 13.6**	**+0.2**
TOO	**Toolangi**	**37.08**	**230**	P		**P**	**21 37 15.8**	**+0.3**
	comp=Z,80nm,1.1s							
TOO	**Toolangi**	**37.08**	**230**	P		**P**	**21 37 15.5**	**-0.1**
CORO	**Coronation Par**	**37.60**	**224**	P		**P**	**21 37 20.6**	**+0.9**
BRAT	**Ballarat**	**38.23**	**231**	P		**P**	**21 37 25.5**	**+0.7**
AUMTC	**Mt Clear Colle**	**38.28**	**231**	P		**P**	**21 37 25.8**	**+0.5**
STKA	**Stephens Creek**	**38.47**	**241**	P		**P**	**21 37 27.0**	**0.0**
	comp=Z,678nm,1.3s							
STKA	**Stephens Creek**	**38.47**	**241**	P		**P**	**21 37 27.3**	**+0.4**
	comp=Z,50nm,0.5s,baz=80,slow=8.5,SNR=92							
	comp=Z,50nm,0.5s							
STKA	**Stephens Creek**	**38.47**	**241**	P		**P**	**21 37 27.3**	**+0.4**
INKA	**Innaminka**	**38.55**	**248**			**P**	**21 37 27.6**	**0.0**
QIS	**Mount Isa**	**39.39**	**259**	P		**P**	**21 37 33.1**	**-1.5**
	comp=Z,17nm,1.0s							
QIS	**Mount Isa**	**39.39**	**259**	P		**P**	**21 37 33.7**	**-0.9**
ARPS	**Mount Arapiles**	**39.54**	**233**	P		**P**	**21 37 35.1**	**-0.4**
	comp=Z,61nm,1.2s							
HTT	**Hallett**	**41.00**	**239**	P		**P**	**21 37 47.3**	**+0.1**
	comp=Z,59nm,1.3s							
HTT	**Hallett**	**41.00**	**239**	P		**P**	**21 37 47.6**	**+0.3**
AUMBR	**Murray Bridge**	**41.09**	**237**	P		**P**	**21 37 48.2**	**+0.4**
AUJCS	**Jamestown Cent**	**41.21**	**240**	P		**P**	**21 37 49.6**	**+0.7**
AUMAR	**Marden Senior**	**41.54**	**237**	P		**P**	**21 37 52.0**	**+0.6**
WHYH	**Whyalla**	**42.03**	**240**	P		**P**	**21 37 55.4**	**+0.1**
JAY	**Jayapura**	**42.54**	**286**	P		**P**	**21 37 59.4**	**-0.2**
	comp=Z,30nm,0.9s,baz=164,slow=7.8,SNR=9.9							
	comp=Z,30nm,0.9s							
JAY	**Jayapura**	**42.54**	**286**	P		**P**	**21 38 00.6**	**+0.9**
	comp=Z,45nm,1.1s							
GENI	**Genyem**	**43.00**	**286**	P		**P**	**21 38 05.2**	**+2.0**
GENI	**Genyem**	**43.00**	**286**	P		**P**	**21 38 05.3**	**+2.0**
	comp=Z,141nm,1.1s							
BBOO	**Buckleboo**	**43.25**	**241**	P		**P**	**21 38 04.5**	**-0.3**
	comp=Z,169nm,1.7s							
BBOO	**Buckleboo**	**43.25**	**241**	P		**P**	**21 38 04.6**	**-0.3**
BBOO	**Buckleboo**	**43.25**	**241**	P		**P**	**21 38 04.7**	**-0.

MDSI	**Maura Dua**	**76.36**	**270**	P		**P**	**21 41 44.9**	**-0.3**
NJ2	**Nanjing**	**77.55**	**310**	*e*P		**P**	**21 41 50.8**	**-0.5**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
CLC	**China Lake**	**78.56**	**47**	P		**P**	**21 41 56.5**	**-0.2**
PNTR	**Pine Nut**	**78.98**	**43**	P		**P**	**21 41 58.6**	**-0.5**
DSP	**Deep Springs**	**79.13**	**45**	P		**P**	**21 41 59.6**	**+0.1**
NVAR	**Mina Array Bea**	**79.47**	**44**	P		**P**	**21 42 03.4**	**+1.7**
	comp=Z,1.8nm,0.7s,baz=225,slow=8.3,SNR=13							
	comp=Z,1.8nm,0.7s							
ILSW	**Iiamna Southw**	**80.12**	**13**	P		**P**	**21 42 04.1**	**-0.4**
HSIG		**80.21**	**55**	P		**P**	**21 42 04.9**	**-0.6**
HSIG				IAmb	IAmb		21 42 05.6	
	comp=Z,18nm,1.3s							
J05D	**Fort Rock, OR**	**80.33**	**39**			**P**	**21 42 07.2**	**+1.2**
BRLK	**Bradley Lake**	**80.42**	**14**	P		**P**	**21 42 04.6**	**-1.3**
BRLK				IAmb	IAmb		21 42 38.4	
	comp=Z,35nm,1.4s							
H04A	**Detroit Lake**	**80.59**	**37**	P		**P**	**21 42 06.5**	**-0.7**
PINE	**Pine Mountain**	**80.80**	**38**			**P**	**21 42 08.6**	**+0.2**
E03A	**Lebam**	**80.94**	**35**	P		**P**	**21 42 08.8**	**0.0**
E03A				IAmb	IAmb		21 42 11.3	
	comp=Z,38nm,1.4s							
TUC	**Tucson**	**81.80**	**52**	P		**P**	**21 42 12.0**	**-1.7**
I07A	**Izee**	**81.81**	**39**			**P**	**21 42 14.0**	**+0.4**
IPM	**Ipoh**	**82.08**	**277**	P		**P**	**21 42 14.9**	**-0.6**
IPM	**Ipoh**	**82.08**	**277**	P		**P**	**21 42 16.4**	**+0.9**
LCMT	**Little Creek M**	**82.20**	**47**	P		**P**	**21 42 16.0**	**+0.3**
LCMT				IAmb	IAmb		21 42 29.6	
	comp=Z,20nm,1.3s							
X16A	**Lo Mia Camp, P**	**82.27**	**50**	IAmb	IAmb		21 42 19.5	
	comp=Z,19nm,1.3s							
CCUT	**Cedar City**	**82.37**	**47**	P		**P**	**21 42 18.0**	**+1.3**
CCUT				IAmb	IAmb		21 42 30.7	
	comp=Z,13nm,1.1s							
BELA	**Belgrano 2**	**82.44**	**173**	P		**P**	**21 42 16.2**	**+0.1**
KNB	**Kanab**	**82.50**	**47**	P		**P**	**21 42 18.1**	**+0.8**
KNB				IAmb	IAmb		21 42 28.4	
	comp=Z,15nm,1.3s							
PSUT	**Pine Spring**	**82.52**	**46**	P		**P**	**21 42 17.7**	**+0.3**
PSUT				IAmb	IAmb		21 42 33.4	
	comp=Z,18nm,1.2s							
U15A	**North Rim**	**82.59**	**48**	P		**P**	**21 42 17.2**	**-0.7**
U15A				IAmb	IAmb		21 42 26.1	
	comp=Z,31nm,1.3s							
GHO	**Glory Hole Cre**	**82.65**	**14**	P		**P**	**21 42 16.5**	**-0.9**
GHO				IAmb	IAmb		21 42 19.9	
	comp=Z,21nm,1.2s							
ELK	**Elko**	**82.70**	**43**	P		**P**	**21 42 20.6**	**+2.3**
	comp=Z,1.2nm,0.6s,baz=259,slow=8.0,SNR=4.5							
	comp=Z,1.2nm,0.6s							
ELK	**Elko**	**82.70**	**43**	P		**P**	**21 42 18.2**	**-0.1**
ELK				IAmb	IAmb		21 42 40.9	
	comp=Z,15nm,1.2s							
G08A	**Pilot Rock**	**82.81**	**38**			**P**	**21 42 18.9**	**+0.3**
CUT	**Chulitna**	**82.92**	**13**	P		**P**	**21 42 19.1**	**+0.6**
K20K	**Telida**	**83.03**	**11**	P		**P**	**21 42 18.6**	**-0.5**
K20K				IAmb	IAmb		21 42 20.4	
	comp=Z,22nm,1.3s							
PKCU	**Pink Cliffs**	**83.06**	**47**	P		**P**	**21 42 18.8**	**-1.5**
PKCU				IAmb	IAmb		21 42 26.3	
	comp=Z,18nm,1.1s							
PSI	**Prapat**	**83.55**	**275**	P		**P**	**21 42 23.3**	**+0.3**
N25K	**Chitina, Valde**	**83.56**	**16**	P		**P**	**21 42 22.3**	**+0.4**
N25K				IAmb	IAmb		21 42 23.2	
	comp=Z,15nm,0.5s							
TRF	**Thorofare Moun**	**83.84**	**12**	P		**P**	**21 42 22.9**	**-0.4**
TRF				IAmb	IAmb		21 42 25.6	
	comp=Z,25nm,1.1s							
MAW	**Mawson**	**83.98**	**200**	P		**P**	**21 42 24.8**	**+0.9**
	comp=Z,3.2nm,0.5s,baz=150,slow=4.1,SNR=17							
	comp=Z,3.2nm,0.5s							
DUG	**Dugway, Tooele**	**84.03**	**45**	IAmb	IAmb		21 42 33.0	
	comp=Z,32nm,1.2s							
DHY	**Denali Highway**	**84.14**	**14**	IAmb	IAmb		21 43 01.2	
	comp=Z,14nm,1.4s							
BGU	**Big Grassy Mou**	**84.24**	**44**	IAmb	IAmb		21 42 33.7	
	comp=Z,12nm,1.3s							
HLID	**Hailey**	**84.65**	**41**	P		**P**	**21 42 29.1**	**+1.3**
HLID				IAmb	IAmb		21 42 42.9	
	comp=Z,16nm,1.3s							
MPU	**Maple Canyon**	**84.74**	**45**	P		**P**	**21 42 27.4**	**-1.0**
MPU				IAmb	IAmb		21 42 28.9	
	comp=Z,27nm,1.3s							
HVU	**Hansel Valley**	**84.82**	**43**	P		**P**	**21 42 28.8**	**+0.1**
HVU				IAmb	IAmb		21 42 33.7	
	comp=Z,11nm,1.2s							
CTU	**Camp Tracy**	**84.98**	**45**	P		**P**	**21 42 28.7**	**-0.8**
CTU				IAmb	IAmb		21 42 29.5	
	comp=Z,12nm,1.0s							
K24K	**Donnelly Dome**	**85.14**	**14**	IAmb	IAmb		21 42 30.9	
	comp=Z,19nm,1.1s							
HDA	**Harding Lake**	**85.40**	**13**	IAmb	IAmb		21 42 32.4	
	comp=Z,16nm,1.2s							
TCUT	**Toone Canyon**	**85.41**	**44**	IAmb	IAmb		21 42 30.3	
	comp=Z,18nm,1.0s							
CCB	**Clear Creek Bu**	**85.42**	**13**	P		**P**	**21 42 30.2**	**-0.6**
CCB				IAmb	IAmb		21 42 31.8	
	comp=Z,12nm,1.2s							
IL31		**85.72**	**13**	P		**P**	**21 42 32.1**	**-0.1**
ILAR	**Eielson Array**	**85.72**	**13**	P		**P**	**21 42 31.9**	**-0.3**
	comp=Z,2.8nm,0.3s,baz=224,slow=5.3,SNR=61							
	comp=Z,2.8nm,0.3s							
XAN	**Xi'an**	**85.87**	**308**	P		**P**	**21 42 34.5**	**+0.8**
XAN				pmax	pmax			
	comp=Z,22nm,1.2s							
XAN				pmax	pmax			
	comp=Z,4μm,10.1s							
J25K	**Salcha River,**	**85.92**	**14**	P		**P**	**21 42 32.4**	**-0.9**
J25K				IAmb	IAmb		21 42 34.3	
	comp=Z,18nm,1.4s							
TXAR	**Lajitas Array**	**86.13**	**58**	P		**P**	**21 42 37.6**	**+2.5**
	comp=Z,1.3nm,0.6s,baz=217,slow=5.9,SNR=8.0							
	comp=Z,1.3nm,0.6s							
J26L	**Joseph Creek**	**86.25**	**14**	P		**P**	**21 42 35.8**	**+0.9**
J26L				IAmb	IAmb		21 42 36.1	
	comp=Z,12nm,1.3s							
MCMT	**McKenzie Canyo**	**86.26**	**41**	P		**P**	**21 42 36.0**	**+0.4**
M30M	**Minto, Yukon**	**86.50**	**18**	P		**P**	**21 42 35.3**	**-0.8**
L29M	**L29M**	**86.53**	**17**	P		**P**	**21 42 36.7**	**+0.5**
L29M				IAmb	IAmb		21 42 38.1	
	comp=Z,14nm,1.4s							
DLMT	**Dillon**	**86.68**	**40**	P		**P**	**21 42 38.7**	**+1.2**
DLMT				IAmb	IAmb		21 42 41.3	
	comp=Z,52nm,1.4s							
BPMT	**Black Pine Rid**	**86.69**	**39**	P		**P**	**21 42 38.6**	**+1.0**
HHC	**Hu-ho-hao-te**	**86.88**	**315**	*e*P		**P**	**21 42 40.4**	**+1.9**
HHC				pmax	pmax			
	comp=Z,13nm,0.7s							
HHC				pmax	pmax			
	comp=Z,860nm,5.0s							
OVMT	**Ovando**	**87.27**	**39**	P		**P**	**21 42 41.4**	**+1.2**
PDAR	**Pinedale Array**	**87.39**	**44**	P		**P**	**21 42 41.9**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=202,slow=2.8,SNR=12							
	comp=Z,2.3nm,0.5s							
J30M	**Hart River**	**88.18**	**17**	P		**P**	**21 42 44.4**	**+0.4**
BMAR	**Burnt Mountain**	**88.49**	**13**	P		**P**	**21 42 45.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**88.51**	**290**	P		**P**	**21 42 47.1**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=112,slow=2.9,SNR=13							
	comp=Z,2.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**88.51**	**290**			**P**	**21 42 46.4**	**0.0**
PZH	**PanZhiHua**	**88.77**	**298**	P		**P**	**21 42 47.3**	**-0.3**
LZH	**Lanzhou**	**90.50**	**308**	*e*P		**P**	**21 42 55.1**	**-0.4**
LZH				pmax	pmax			
	comp=Z,11nm,1.0s							
TROLL	**Troll, Antarti**	**90.54**	**180**	⇑P		P	21 42 44.4	-11
	comp=Z,63nm,0.2s							
TROLL	**Troll, Antarti**	**90.54**	**180**	⇓P		**P**	**21 42 53.9**	**-1.1**
	comp=Z,192nm,0.3s							
D27M	**Malcolm River**	**90.75**	**13**	P		**P**	**21 42 55.9**	**+0.1**
D27M				IAmb	IAmb		21 42 59.0	
	comp=Z,6.5nm,1.2s							
SNAA	**Sanae**	**90.84**	**179**	⇑P		**P**	**21 42 56.2**	**-0.1**
SNAA	**Sanae**	**90.84**	**179**	P		**P**	**21 42 56.5**	**+0.2**
	comp=Z,2.3nm,0.4s,baz=203,slow=8.1,SNR=49							
	comp=Z,2.3nm,0.4s							
VNA3	**Neumayer Olymp**	**91.00**	**176**	P		**P**	**21 42 56.6**	**-0.4**
F31M	**Tsiigehtchic**	**91.04**	**16**			**P**	**21 42 56.8**	**-0.2**
F31M				IAmb	IAmb		21 42 59.5	
	comp=Z,16nm,1.2s							
VNA2	**Neumayer--Watz**	**91.43**	**177**	P		**P**	**21 42 59.2**	**+0.2**
	baz=178,slow=4.2							
BLOK	**Blackwell**	**93.83**	**53**	P		**P**	**21 43 06.6**	**-4.0**
ARCES	**ARCESS Array B**	**126.03**	**350**	PKP		**PKPdf**	**21 48 50.8**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=112,slow=1.3,SNR=9.0							
FABU	**Falkenberg**	**139.80**	**350**	*i* P		**PKPdf**	**21 49 09.6**	**-7.4**
DEL	**Delary**	**140.11**	**349**	*i* P		**PKPdf**	**21 49 10.5**	**-7.1**
BJUU	**Bjuv**	**140.64**	**350**	*i* P		**PKPdf**	**21 49 13.2**	**-5.4**
MUD	**Monsted U'grnd**	**140.82**	**353**	*i* P		**PKPdf**	**21 49 15.9**	**-2.9**
MUD				IAmb	IAmb		21 49 18.1	
	comp=Z,8.2nm,0.5s							
LUNU	**Lund**	**140.98**	**349**	*i* P		**PKPdf**	**21 49 14.2**	**-4.9**
EKA	**Eskdalemuir Ar**	**142.25**	**4**	PKhKP	PKPpre		21 49 17.8	
	comp=Z,2.2nm,0.7s,baz=343,slow=2.0,SNR=6.4							
BNN	**Bunyan**	**143.26**	**312**			**PKPdf**	**21 49 23.9**	**-0.1**
LODK	**Lodwar**	**143.71**	**251**			**PKPdf**	**21 49 25.2**	**-0.2**
BURAR	**Bucovina Array**	**144.26**	**332**	⇑P		**PKPab**	**21 49 26.7**	**+1.2**
GHRR		**144.34**	**328**	⇓P		**PKiKP**	**21 49 28.4**	**-0.9**
BRTR	**Keskin Array B**	**144.39**	**315**	PKP		**PKPab**	**21 49 26.6**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=98,slow=3.1,SNR=8.4							
BRTR	**Keskin Array B**	**144.39**	**315**			**PKPab**	**21 49 26.3**	**0.0**
TESR	**Tescani**	**144.40**	**329**	⇑P		**PKPab**	**21 49 27.1**	**+1.2**
STHS	**Stebnicka Huta**	**144.45**	**337**	*e*PKP		PKPbc	21 49 25.8	+0.2
ASF	**Jabal al Asfar**	**144.79**	**301**	PKP		**PKPab**	**21 49 28.2**	**+0.2**
	comp=Z,5.6nm,0.9s,baz=118,slow=2.9,SNR=8.8							
TURR	**Turia**	**145.03**	**329**	⇓P		**PKiKP**	**21 49 31.4**	**+0.6**
OSTC	**Ostas**	**145.07**	**343**	*e*PKP		**PKPab**	**21 49 28.5**	**+0.1**
CLL	**Collm**	**145.16**	**347**			**PKPbc**	**21 49 28.1**	**+0.5**
CLL	**Collm**	**145.16**	**347**	*i* PKPbc		**PKPab**	**21 49 28.6**	**0.0**
	comp=Z,21nm,1.0s							
STEB	**Steborice**	**145.18**	**341**	*e*PKP		**PKPab**	**21 49 28.4**	**-0.4**
DPC	**Dobruska-Polom**	**145.23**	**343**	*e*PKP		**PKPab**	**21 49 29.2**	**+0.2**
DPC				*ex*		x	21 49 38.2	
LANS	**Liptovska Anna**	**145.31**	**339**	*e*PKP		**PKPab**	**21 49 29.8**	**+0.4**
MLR	**Muntele Rosu**	**145.47**	**329**	⇑P		**PKiKP**	**21 49 31.6**	**-0.2**
PVCC	**Panska Ves**	**145.53**	**345**	*e*PKP		**PKiKP**	**21 49 32.8**	**+1.2**
MAUC	**Maruska**	**145.66**	**341**	*e*PKP		**PKPab**	**21 49 30.1**	**-0.6**
MMAI	**Mount Meron Ar**	**145.75**	**303**	PKPbc		**PKPab**	**21 49 31.2**	**-0.5**
	comp=Z,4.1nm,0.6s,baz=77,slow=3.8,SNR=9.0							
MARR	**Marisel-Cluj**	**145.90**	**333**	⇓P		**PKiKP**	**21 49 34.4**	**+1.8**
DRGR		**145.99**	**333**	⇑P		**PKPbc**	**21 49 31.0**	**+0.7**
PRU	**Pruhonice**	**146.03**	**345**	*e*PKP		**PKPab**	**21 49 31.9**	**-0.2**
ARR	**Arges**	**146.19**	**330**	⇑P		**PKPbc**	**21 49 30.7**	**-0.1**
BORA	**Eskisehir**	**146.42**	**317**			**PKiKP**	**21 49 32.9**	**-1.1**
ZVC	**Zvikov**	**146.63**	**345**	*e*PKP		**PKPab**	**21 49 35.5**	**+1.0**
MODS	**Modra-Piesok**	**146.71**	**340**	*e*PKP		**PKiKP**	**21 49 34.3**	**+0.2**
SIRR	**Siria**	**146.85**	**334**	⇑P		**PKiKP**	**21 49 34.7**	**+0.2**
KHC	**Kasperske Hory**	**147.07**	**345**	PKPdf		**PKPdf**	**21 49 30.3**	**+0.3**
KHC						**PKiKP**	**21 49 35.5**	**+0.7**
KHC	**Kasperske Hory**	**147.07**	**345**	*e*PKP		**PKPbc**	**21 49 33.9**	**+0.8**
CKRC	**Cesky Krumlov**	**147.17**	**344**	*e*PKP		**PKPbc**	**21 49 33.9**	**+0.6**
GERES	**GERESS Array B**	**147.30**	**345**	PKPbc		**PKPbc**	**21 49 34.3**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=28,slow=3.3,SNR=14							
BZS	**Buzias**	**147.38**	**333**	⇓P		**PKiKP**	**21 49 35.1**	**-0.5**
CONA	**Conrad Observa**	**147.54**	**342**	*e*PKiKP		**PKiKP**	**21 49 35.5**	**-0.5**
	comp=Z,1.0nm,0.4s							
HERR	**Herculane**	**147.60**	**331**	⇑P		**PKiKP**	**21 49 36.0**	**0.0**
RONA	**Rosalia, Austr**	**147.61**	**341**	*i* PKiKP		**PKPbc**	**21 49 34.8**	**+0.2**
	comp=Z,1.5nm,0.4s							
LESA	**Schwarzleotal**	**148.88**	**345**	*e*PKiKP		**PKPbc**	**21 49 38.3**	**+0.5**
	comp=Z,3.8nm,0.3s							
KBA	**Koelnbreinsper**	**149.03**	**344**	*i* PKiKP		**PKPbc**	**21 49 38.0**	**-0.2**
	comp=Z,2.1nm,0.3s							
RETA	**Reutte**	**149.25**	**347**	*i* PKiKP		**PKPbc**	**21 49 39.1**	**+0.4**
	comp=Z,2.2nm,0.4s							
WTTA	**Wattenberg**	**149.27**	**346**	*i* PKiKP		**PKiKP**	**21 49 39.4**	**-0.3**
	comp=Z,7.1nm,0.4s							
MOTA	**Mosalm**	**149.32**	**347**	*i* PKiKP		**PKPbc**	**21 49 39.2**	**+0.3**
	comp=Z,2.1nm,0.3s							
MYKA	**Terra Mystica**	**149.36**	**343**	*e*PKiKP		**PKPbc**	**21 49 38.7**	**-0.2**
	comp=Z,2.9nm,0.3s							
SQTA	**Sankt Quirin**	**149.41**	**347**	*i* PKiKP		**PKiKP**	**21 49 39.6**	**-0.3**
	comp=Z,2.1nm,0.3s							
ABTA	**Abfaltersbach**	**149.55**	**345**	*i* PKiKP		**PKPbc**	**21 49 39.3**	**-0.1**
	comp=Z,1.7nm,0.4s							
DAVA	**Damuels**	**149.62**	**348**	*i* PKiKP		**PKiKP**	**21 49 40.5**	**+0.1**
	comp=Z,1.2nm,0.3s							
FETA	**Feichten**	**149.70**	**347**	*i* PKiKP		**PKiKP**	**21 49 40.5**	**-0.1**
	comp=Z,0.9nm,0.5s							
DAVOX	**Davos/Dischmat**	**150.11**	**348**	PKPbc		**PKiKP**	**21 49 41.7**	**+0.3**
	comp=Z,5.5nm,0.4s,baz=241,slow=4.2,SNR=13							
ESDC	**Sonseca Array**	**157.61**	**11**	PKPab		**PKPab**	**21 50 21.8**	**+0.6**
	comp=Z,2.6nm,1.2s,baz=344,slow=4.8,SNR=3.2							

*IDC **14** 21:31:51.1±1.1, 1.73N×126.80E, h0km, mb4.0/6, mbtmp4.0/8, ML3.5/2, Error ellipse: s-maj=54.1km s-min=16.9km az=73.0*
*DJA **14** 21:31:54.6±0.2, 2.7N±3.3×12.76E±1.1, h10km, M4.5/14, mb4.4/10, MLv4.5/14*

ISC 14 21:31:56.4±1.0, **1.61N**±0.09×**126.6E**±0.1, **h35**km, **n23,** σ1ŝ**28**/23, **mb4.0/6, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.13**	**138**	P		**Pn**	**21 32 14.8**	**-0.9**
SGSI	**Sangihe**	**2.32**	**333**	P		**Pn**	**21 32 31.9**	**-0.2**
KMSI	**Cibinong**	**2.82**	**249**	P		**Pn**	**21 32 37.3**	**-1.6**
SANI	**Sanana**	**3.69**	**190**	P		**Pn**	**21 32 50.4**	**-0.5**
LUWI	**Luwuk**	**4.65**	**235**	P		**Pn**	**21 33 03.6**	**-0.5**
MRSI	**Marisa**	**4.80**	**256**	P		**Pn**	**21 33 05.3**	**-0.8**
APSI	**Ampana**	**5.55**	**243**	P		**Pn**	**21 33 16.8**	**+0.3**
MPSI	**Mapaga**	**6.82**	**259**	P		**Pn**	**21 33 34.5**	**+0.5**
	0.3nm22nm,1.2s							
PCI	**Palu**	**7.21**	**250**	P		**Pn**	**21 33 37.2**	**-2.2**
	0.4nm32nm,1.1s							
TTSI	**Tana Toraja**	**8.21**	**236**	P		**Pn**	**21 33 51.2**	**-1.9**
	24nm,0.8s							
SPSI	**Sidrap Palu**	**8.79**	**231**	P		**Pn**	**21 34 00.0**	**-1.1**
	23nm,1.1s							
BNSI	**Bone**	**8.82**	**227**	P		**Pn**	**21 33 59.9**	**-1.6**
	18nm,0.7s							
BKSI	**Bulukumba**	**9.45**	**223**	P		**Pn**	**21 34 09.3**	**-0.8**
	8.9nm,0.8s							
KAPI	**Kappang**	**9.50**	**226**	Pn		**Pn**	**21 34 13.0**	**+2.3**
	0.1nm,0.3s,baz=33,slow=8.0,SNR=4.0							
	4.8nm,0.4s							
EDFI	**Ende, Flores**	**11.40**	**205**	P		**Pn**	**21 34 36.1**	**-0.8**
SOEI	**Soe**	**11.53**	**192**	P		**Pn**	**21 34 40.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P		**P**	**21 36 22.9**	**+1.1**
	0.2nm,0.3s,baz=358,slow=9.0,SNR=2.6							
	1.5nm,0.5s							
WRA	**Warrumunga Arr**	**22.73**	**161**	P		**P**	**21 36 55.0**	**-0.5**
	2.9nm,0.5s,baz=339,slow=11,SNR=20							
	2.9nm,0.5s							
ASAR	**Alice Springs**	**26.11**	**165**	P		**P**	**21 37 27.4**	**+0.2**
	0.8nm,0.3s,baz=344,slow=7.2,SNR=12							
	0.8nm,0.3s							
SONM	**Songino Array**	**49.26**	**342**	P		**P**	**21 40 41.4**	**-0.3**
	1.4nm,1.0s,baz=171,slow=10,SNR=5.4							
	1.4nm,1.0s							
MKAR	**Makanchi Array**	**59.22**	**326**	P		**P**	**21 41 53.1**	**-1.1**
	1.1nm,0.5s,baz=122,slow=8.0,SNR=14							
	1.1nm,0.5s							
KURBB	**Kurchatov Arra**	**63.45**	**328**	P		**P**	**21 42 22.5**	**-0.2**
	1.2nm,0.5s,baz=125,slow=6.5,SNR=6.5							
	1.2nm,0.5s							
BVAR	**Borovoye Array**	**69.02**	**327**	P		**P**	**21 43 00.1**	**+1.8**
	0.5nm,0.4s,baz=134,slow=4.2,SNR=4.6							
	0.5nm,0.4s							

*IDC **14** 21:33:12.0±13.0, 27.88N×130.38E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=422.8km s-min=123.2km az=11.0*
*JMA **14** 21:33:24.4±0.1, 29.2N±0.5×130.5E±0.7, h33km, MV3.1/26, NEAR AMAMI-OSHIMA ISLAND*

ISC 14 21:33:22.8±1.6, **29.17N**±0.06×**130.60E**±0.10, **h32**km±11km, **n16,** σ1ŝ**28**/21, **mb4.2/5, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNN	**Nakanoshima**	**0.92**	**317**	P		**Pn**	**21 33 39.5**	**0.0**
JNN				S		**Sn**	**21 33 50.9**	**-0.8**
JYAK	**Yakushimahirau**	**1.06**	**356**	*i* P		**Pb**	**21 33 42.6**	**0.0**
JYAK				S		**Sn**	**21 33 57.0**	**+1.8**
JAM	**Amami Oshima**	**1.16**	**229**	P		**Pb**	**21 33 44.7**	**+0.4**
JAM				*e*S		**Sn**	**21 33 59.9**	**+2.3**
JTAJ	**Takarajima**	**1.22**	**269**	P		**Pb**	**21 33 45.6**	**+0.2**
JMTN	**Minamitane**	**1.25**	**12**	P		**Pb**	**21 33 45.7**	**-0.1**
JMTN				*e*S		**Sb**	**21 34 02.2**	**+0.7**
JKC	**Kuchinoerabu**	**1.33**	**345**	P		**Pb**	**21 33 46.1**	**-1.0**
JTN	**Tanegashima 3**	**1.51**	**12**	P		**Pb**	**21 33 49.5**	**-0.8**
JAMN	**Amaminishikomi**	**1.56**	**234**	*e*P		**Pb**	**21 33 50.2**	**-0.8**
JTSR	**Tashiro 2**	**2.00**	**8**	P		**Pb**	**21 33 56.5**	**-2.2**
JTSR				*e*S		**Sn**	**21 34 20.1**	**+1.6**
JTK	**Tokunoshima**	**2.01**	**227**	P		**Pb**	**21 33 56.5**	**-2.1**
JSU	**Suzuyama**	**2.33**	**357**	P		**Pn**	**21 34 00.1**	**+1.2**
MKAR	**Makanchi Array**	**41.24**	**309**	P		**P**	**21 41 03.6**	**-1.2**
	0.6nm,0.7s,baz=89,slow=9.2,SNR=5.8							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**44.25**	**314**	P		**P**	**21 41 29.1**	**0.0**
	1.8nm,0.5s,baz=98,slow=8.9,SNR=11							
	1.8nm,0.5s							
BVAR	**Borovoye Array**	**49.54**	**316**	P		**P**	**21 42 10.9**	**+0.4**
	1.3nm,0.6s,baz=92,slow=11,SNR=6.3							
	1.3nm,0.6s							
FINES	**FINESS Array B**	**71.34**	**331**	P		**P**	**21 44 39.4**	**+0.2**
	2.1nm,0.9s,baz=121,slow=7.1,SNR=3.8							
	2.1nm,0.9s							
AKASG	**Malin Array Be**	**74.66**	**320**	P		**P**	**21 44 58.2**	**-0.8**
	0.4nm,0.4s,baz=64,slow=6.2,SNR=2.6							
	0.4nm,0.4s							

*IDC **14** 21:33:48.4±0.3, 1.66N±0.04×126.47E±0.05, **h35**km, **n147,** σ1ŝ**79**/145, **mb4.8**/62, **1D, Northern Molucca Sea***

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**134**	Pn		**Pn**	**21 34 09.3**	**-0.3**
TNTI	**Ternate**	**1.26**	**134**	P		**Pn**	**21 34 09.5**	**-0.1**
TNTI				S		**Sn**	**21 34 25.5**	**+0.1**
SGSI	**Sangihe**	**2.22**	**335**	P		**Pn**	**21 34 26.1**	**+3.3**
KMSI	**Cibinong**	**2.71**	**247**	P		**Pn**	**21 34 32.4**	**+2.9**
SANI	**Sanana**	**3.72**	**187**	P		**Pn**	**21 34 45.1**	**+1.7**
SANI				S		**Sn**	**21 35 26.4**	**+0.4**
LUWI	**Luwuk**	**4.57**	**234**	Pn		**Pn**	**21 34 54.2**	**-0.8**
LUWI	**Luwuk**	**4.57**	**234**	P		Pn	21 34 58.9	+3.8
MRSI	**Marisa**	**4.67**	**255**	P		**Pn**	**21 35 00.3**	**+3.7**
NLAI	**Namlea**	**4.91**	**173**	P		**Pn**	**21 35 02.4**	**+2.6**
NLAI				S		**Sn**	**21 35 55.5**	**+0.1**
SWI	**Sorong**	**5.41**	**118**	P		**Pn**	**21 35 07.6**	**+0.9**
APSI	**Ampana**	**5.45**	**242**	P		**Pn**	**21 35 10.3**	**+3.0**
	6μm344nm,1.0s							
MSAI	**Masohi**	**5.55**	**154**	P		**Pn**	**21 35 11.0**	**+2.4**
AAI	**Ambon**	**5.59**	**162**	P		**Pn**	**21 35 10.1**	**+1.0**
	0.8nm114nm,0.6s							
TOLI2	**Tolitoli**	**5.71**	**265**			**Pn**	**21 35 08.6**	**-2.2**
MPSI	**Mapaga**	**6.70**	**259**	P		Pn	21 35 28.2	+3.8
	0.3nm80nm,0.8s							
PCI	**Palu**	**7.10**	**249**	P		Pn	21 35 34.5	+4.5
	0.4nm147nm,1.1s							
FAKI	**Fak Fak**	**7.36**	**128**			**Pn**	**21 35 31.5**	**-2.0**
FAKI	**Fak Fak**	**7.36**	**128**	P		**Pn**	**21 35 34.3**	**+0.8**
	0.4nm103nm,1.3s							
BBSI	**Bau Bau**	**8.10**	**209**	P		Pn	21 35 47.6	+4.0
	112nm,0.7s							
TTSI	**Tana Toraja**	**8.12**	**235**	P		**Pn**	**21 35 46.6**	**+2.6**
	80nm,0.5s							
MYLDM	**Lahad Datu**	**8.68**	**294**			**Pn**	**21 35 50.5**	**-1.2**
SPSI	**Sidrap Pal

TNCH	**TengChong**	**35.59**	**313**	P	**P**	**21 40 43.0**	**-0.1**
TNCH				pmax	pmax		
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**35.64**	**2**	P	**P**	**21 40 45.8**	**+2.7**
	comp=Z,2.6nm,0.7s,baz=184,slow=9.3,SNR=6.7						
	comp=Z,2.6nm,0.7s						
XAN	**Xi'an**	**36.15**	**335**	P	**P**	**21 40 47.0**	**-0.6**
XAN				pP	pP	21 40 55.0	-2.3
XAN				pmax	pmax		
	comp=Z,16nm,0.7s						
XAN				pmax	pmax		
	comp=Z,5μm,11.3s						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**21 40 49.5**	**+0.6**
	comp=Z,10nm,0.6s,baz=326,slow=10,SNR=6.3						
STKA				PcP	**PcP**	**21 43 14.1**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=326,slow=3.6,SNR=3.2						
	comp=Z,10nm,0.6s						
MJAR	**Matsushiro Arr**	**36.37**	**16**	P	**P**	**21 40 50.7**	**+1.3**
	comp=Z,5.9nm,0.8s,baz=185,slow=9.2,SNR=9.2						
	comp=Z,5.9nm,0.8s						
HNS	**HongShan**	**37.18**	**344**	⇓P	**P**	**21 40 58.0**	**+1.8**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI	**Beijing**	**39.33**	**348**	P	**P**	**21 41 15.5**	**+1.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	**Lanzhou**	**40.16**	**331**	*e*P	**P**	**21 41 23.4**	**+1.9**
LZH				pP	pP	21 41 27.3	-4.0
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
SHL	**Shillong**	**40.91**	**308**	P	**P**	**21 41 26.5**	**-1.4**
SHL				IAmb	IAmb	21 41 30.4	
	comp=Z,15nm,0.6s						
HHC	**Hu-ho-hao-te**	**41.27**	**343**	*e*P	**P**	**21 41 32.1**	**+1.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				AMB	AMB		
	comp=Z,550nm,5.3s						
LSA	**Lhasa**	**43.63**	**313**		**P**	**21 41 48.6**	**-1.7**
GTA	**Gaotai**	**44.74**	**330**	*e*P	**P**	**21 41 59.8**	**+1.2**
GTA				pP	pwP	21 42 09.8	+1.3
GTA				PcP	**PP**	**21 43 42.8**	**-0.8**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
EVN	**Everest**	**46.03**	**308**	P	**P**	**21 42 07.7**	**-1.9**
EVN				IAmb	IAmb	21 42 19.0	
	comp=Z,7.7nm,0.6s						
HILR	**Hailar Array B**	**48.06**	**354**	P	**P**	**21 42 27.1**	**+2.7**
	comp=Z,4.6nm,0.6s,baz=177,slow=8.9,SNR=5.4						
	comp=Z,4.6nm,0.6s						
ULN	**Ulaanbaatar**	**49.00**	**343**	P	**P**	**21 42 30.1**	**-1.7**
ULN				IAmb	IAmb	21 43 16.5	
	comp=Z,19nm,1.6s						
SONM	**Songino Array**	**49.17**	**342**	P	**P**	**21 42 34.4**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=154,slow=9.2,SNR=16						
	comp=Z,3.3nm,0.7s						
WMQ	**Urumqi**	**54.27**	**326**	*e*P	**P**	**21 43 12.8**	**+1.6**
PETK	**Petropavlovsk-**	**57.43**	**22**	P	**P**	**21 43 36.0**	**+2.4**
	comp=Z,3.2nm,0.5s,baz=194,slow=4.6,SNR=7.7						
	comp=Z,3.2nm,0.5s						
PRZ	**Przheval'sk**	**59.10**	**320**	P	**P**	**21 43 43.0**	**-2.7**
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**21 43 46.0**	**+0.5**
	comp=Z,6.6nm,0.5s,baz=120,slow=8.4,SNR=86						
	comp=Z,6.6nm,0.5s						
MKAR	**Makanchi Array**	**59.10**	**326**		**P**	**21 43 45.1**	**-0.4**
TARG	**Taragay, Kyrgy**	**59.12**	**319**	P	**P**	**21 43 42.8**	**-3.3**
TARG				IAmb	IAmb	21 43 54.0	
	comp=Z,8.0nm,0.7s						
MAKZ	**Makanchi**	**59.29**	**326**	P	**P**	**21 43 43.5**	**-3.2**
MAKZ	**Makanchi**	**59.29**	**326**	pP	pP	21 43 57.3	+0.5
MAKZ	**Makanchi**	**59.29**	**326**	P	**P**	**21 43 47.2**	**+0.5**
KSH	**Kashi**	**59.33**	**316**	P	**P**	**21 43 50.6**	**+3.4**
KSH				pP	pP	21 43 57.8	+0.4
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KDJ	**Kajisay**	**59.72**	**319**	P	**P**	**21 43 47.5**	**-2.5**
KDJ				IAmb	IAmb	21 43 57.2	
	comp=Z,8.9nm,0.6s						
AAK	**Ala-Archa**	**61.72**	**319**	P	**P**	**21 44 03.7**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=91,slow=6.5,SNR=8.4						
	comp=Z,2.0nm,0.6s						
AAK	**Ala-Archa**	**61.72**	**319**		**P**	**21 44 00.1**	**-3.4**
AAK	**Ala-Archa**	**61.72**	**319**	P	**P**	**21 44 05.9**	**+2.4**
ZALV	**Zalesovo Beam**	**62.30**	**334**	P	**P**	**21 44 07.0**	**0.0**
	comp=Z,2.2nm,0.4s,baz=127,slow=5.8,SNR=10						
	comp=Z,2.2nm,0.4s						
ZALV	**Zalesovo Beam**	**62.30**	**334**		**P**	**21 44 05.4**	**-1.6**
KBL	**Kabul**	**62.58**	**308**		**P**	**21 44 06.1**	**-3.4**
KBL				IAmb	IAmb	21 44 12.6	
	comp=Z,9.5nm,0.7s						
GAR	**Garm**	**63.13**	**313**	P	**P**	**21 44 10.1**	**-3.0**
GAR				IAmb	IAmb	21 44 16.4	
	comp=Z,14nm,0.9s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**21 44 14.7**	**+0.8**
	comp=Z,11nm,0.6s,baz=129,slow=6.2,SNR=55						
	comp=Z,11nm,0.6s						
KURK	**Kurchatov**	**63.34**	**328**	P	**P**	**21 44 11.1**	**-2.9**
KURK	**Kurchatov**	**63.34**	**328**	pP	pP	21 44 23.4	-0.8
KURK	**Kurchatov**	**63.34**	**328**	P	**P**	**21 44 14.3**	**+0.3**
KK31	**Karatay Array**	**64.56**	**318**		**P**	**21 44 22.1**	**-0.1**
KK31				IAmb	IAmb	21 44 25.9	
	comp=Z,13nm,1.6s						
KKAR	**Karatay Array**	**64.56**	**318**		**P**	**21 44 22.3**	**0.0**
CASY	**Casey**	**68.75**	**187**		**P**	**21 44 48.0**	**-0.4**
BVAR	**Borovoye Array**	**68.90**	**328**	P	**P**	**21 44 50.5**	**+0.7**
	comp=Z,5.3nm,0.7s,baz=146,slow=9.6,SNR=20						
	comp=Z,5.3nm,0.7s						
TIXI	**Tiksi**	**69.90**	**1**	P	**P**	**21 44 55.6**	**+0.1**
TIXI				IAmb	IAmb	21 44 58.5	
	comp=Z,8.0nm,1.1s						
AB31	**Akbulak array**	**73.58**	**321**	P	**P**	**21 45 15.0**	**-3.0**
ABKAR	**Akbulak array**	**73.58**	**321**	P	**P**	**21 45 15.7**	**-2.3**
AKTO	**Aktyubinsk**	**75.11**	**322**	P	**P**	**21 45 27.5**	**+0.5**
	comp=Z,4.5nm,0.5s,baz=110,slow=7.2,SNR=13						
	comp=Z,4.5nm,0.5s						
ARTI	**Arti**	**76.62**	**328**	P	**P**	**21 45 34.7**	**-0.7**
ARTI				IAmb	IAmb	21 45 36.6	
	comp=Z,11nm,0.6s						
ARTI	**Arti**	**76.62**	**328**	P	**P**	**21 45 35.5**	**+0.1**
CCD	**Concordia, Ant**	**76.69**	**181**	pP	pP	21 45 50.1	+3.7
CCD	**Concordia, Ant**	**76.69**	**181**	P	**P**	**21 45 38.1**	**+2.2**
RAYN	**Ar Rayn**	**81.05**	**293**	P	**P**	**21 46 02.0**	**+1.4**
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**21 46 02.0**	**+0.7**
	comp=Z,6.8nm,0.6s,baz=316,slow=7.6,SNR=28						
	comp=Z,6.8nm,0.6s						
VNDA	**Vanda**	**81.42**	**173**		**P**	**21 45 59.9**	**-1.4**
VNDA				IAmb	IAmb	21 46 07.1	
	comp=Z,7.1nm,0.7s						
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**21 46 01.9**	**+0.7**
MAW	**Mawson**	**81.74**	**200**	P	**P**	**21 46 04.1**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=70,slow=4.6,SNR=7.2						
	comp=Z,2.0nm,0.6s						
KIRV	**Kirov**	**81.84**	**329**	P	**P**	**21 46 05.5**	**+1.6**
	comp=Z,8.8nm,0.7s,baz=63,slow=2.2,SNR=6.9						
	comp=Z,8.8nm,0.7s						
BELG	**Belogornoye**	**81.88**	**323**	P	**P**	**21 46 04.2**	**+0.1**
	comp=Z,16nm,0.8s,baz=34,slow=5.4,SNR=8.8						
	comp=Z,16nm,0.8s						
KBZ	**Khabaz**	**84.20**	**314**	P	**P**	**21 46 17.4**	**+1.0**
	comp=Z,3.6nm,0.8s,baz=153,slow=6.6,SNR=7.2						
	comp=Z,3.6nm,0.8s						
ILAR	**Eielson Array**	**87.07**	**25**	P	**P**	**21 46 31.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=262,slow=5.4,SNR=4.8						
	comp=Z,0.3nm,0.5s						
ASF	**Jabal al Asfar**	**88.76**	**302**	P	**P**	**21 46 41.5**	**+2.3**
	comp=Z,11nm,1.0s,baz=144,slow=2.3,SNR=11						
	comp=Z,11nm,1.0s						
KMBO	**Kilima Mbogo**	**89.25**	**269**	P	**P**	**21 46 44.4**	**+2.4**
	comp=Z,1.6nm,0.5s,baz=73,slow=5.0,SNR=6.0						
	comp=Z,1.6nm,0.5s						
BRTR	**Keskin Array B**	**91.13**	**310**	P	**P**	**21 46 49.3**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=101,slow=5.1,SNR=4.2						
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**92.28**	**340**	P	**P**	**21 46 55.8**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=20,slow=3.9,SNR=6.9						
	comp=Z,1.7nm,0.6s						
SPITS	**Spitsbergen Ar**	**92.44**	**349**	P	**P**	**21 46 57.6**	**+2.3**
	comp=Z,10nm,1.0s,baz=30,slow=6.7,SNR=1.6						
	comp=Z,10nm,1.0s						
AKASG	**Malin Array Be**	**93.32**	**321**	P	**P**	**21 46 59.7**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=74,slow=4.0,SNR=2.3						
	comp=Z,0.7nm,0.6s						
FINES	**FINESS Array B**	**93.52**	**332**	P	**P**	**21 47 00.1**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=90,slow=3.8,SNR=7.7						
	comp=Z,1.0nm,0.4s						
BUR08	**Bucovina Ar. S**	**96.36**	**318**		**P**	**21 47 13.2**	**-0.7**
MREMI	**Moremi**	**98.97**	**248**		**P**	**21 47 23.3**	**-2.9**
NOA	**NORSAR Array B**	**100.51**	**333**	P	**Pdif**	**21 47 31.5**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=60,slow=4.5,SNR=1.3						
TXAR	**Lajitas Array**	**123.05**	**53**	PKP	**PKiKP**	**21 52 43.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=336,slow=3.3,SNR=4.1						
R49A	**Shelbyville**	**130.68**	**33**	PKPpre		21 52 44.4	
KSCT	**Kent School, K**	**133.18**	**21**	PKPdf	**PKPdf**	**21 52 57.4**	**-3.5**
TKL	**Tuckaleechee C**	**133.36**	**34**	PKPdf	**PKPdf**	**21 52 59.2**	**-2.3**
PAL	**Palisades**	**133.66**	**21**	PKPdf	**PKPdf**	**21 53 00.3**	**-1.5**
LL06	**Loncomilla**	**135.78**	**159**	PKPdf	**PKPdf**	**21 53 03.8**	**-2.0**

IDC 14 21:36:30.5±2.1, 1.14N×125.72E, h0km, mb4.0/4, mbtmp4.1/4, Error ellipse: s-maj=255.7km s-min=24.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.59**	**158**	P	P	21 41 32.2	-0.6
	3.2nm,0.6s,baz=336,slow=10,SNR=4.4						
	3.2nm,0.6s						
ASAR	**Alice Springs**	**25.91**	**163**	P	P	21 42 04.9	+0.4
	1.4nm,0.5s,baz=346,slow=9.3,SNR=1.6						
	1.4nm,0.5s						
MLSI	**Meulaboh, Aceh**	**29.45**	**277**	P	P	21 42 38.6	+2.2
MKAR	**Makanchi Array**	**59.13**	**327**	P	P	21 46 33.1	+0.1
	0.4nm,0.4s,baz=122,slow=8.8,SNR=2.1						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	P	21 47 01.7	-0.1
	1.1nm,0.2s,baz=126,slow=6.2,SNR=2.8						
	1.1nm,0.2s						

*IDC **14** 21:37:22.8±0.4, 1.44N×126.30E, h0km, mb5.0/39, mbtmp5.0/40, ML5.0/1, MS4.8/5, Error ellipse: s-maj=18.8km s-min=8.9km az=74.0*

*MOS **14** 21:37:25.0±1.0, 1.53N×126.42E, h28km, mb5.4/53, Error ellipse: s-maj=10.4km s-min=4.9km az=118.4*

*NEIC **14** 21:37:26.7, 1.06N×125.80E, h24km, Moment Tensor Solution. Duration: 2s5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.55; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$-0.77; $M_{r\theta}$-0.29; $M_{\theta\phi}$-0.55; $M_{r\phi}$-1.05; Fault plane solution: $M_0$1.81000×10^{17} NP1: ϕ_s54.73000°, δ29.05000°, λ112.84000°. NP2: ϕ_s209.01000°, δ63.42000°, λ77.84000°. Principal axes: T 1.9521, Plg69.0000°, Azm94.0000°; N -0.3247, Plg11.0000°, Azm215.0000°; P -1.6273, Plg18.0000°, Azm308.0000°;*

*DJA **14** 21:37:26.4±0.2, 1.1E±2.1×12.6E±1.1, h10km, M5.3/20, mB5.7/8, mb5.5/13, MLv5.3/20, Mw(mB)5.2/8*

*NEIC **14** 21:37:26.7, 1.46N×126.40E, h24km*

*NEIC **14** 21:37:27.1±1.4, 1.46N±0.06×126.39E±0.06, h24km±3km, mb5.3/175, Mww5.4/6, Error ellipse: s-maj=9.1km s-min=8.5km az=48.0*

*GCMT **14** 21:37:31.5±0.3, 1.72N±0.02×126.21E±0.03, h33km, MW5.7/105, Moment Tensor Solution. s26,c27; s105,c146; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}4.62±.28; $M_{\theta\theta}$-1.83±.15; $M_{\phi\phi}$-2.79±.16; $M_{r\theta}$-0.54±.17; $M_{\theta\phi}$-1.43±.06; $M_{r\phi}$-1.05±.17; Best double couple: $M_0$4.38000×10^{17} NP1:ϕ_s37.00000°, δ37.00000°, λ93.00000°. NP2:ϕ_s214.00000°, δ53.00000°, λ88.00000°. Principal axes: T 4.7840, Plg82.0000°, Azm113.0000°; N -0.8070, Plg2.0000°, Azm215.0000°; P -3.9770, Plg8.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 21:37:26.5±0.6, 1.52N±0.03×126.40E±0.04, h23km±4km, n532, σ1$32/529, mb5.2/211, MS5.0/8, 14C-12D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**127**		**Pn**	**21 37 47.0**	**-1.1**
TNTI	**Ternate**	**1.22**	**127**	P	**Pb**	**21 37 51.7**	**+2.9**
TNTI	**Ternate**	**1.22**	**127**	P	**Pn**	**21 37 47.4**	**-0.7**
SGSI	**Sangihe**	**2.33**	**338**	P	**Pn**	**21 38 04.6**	**+1.2**
SGSI				S	**Sb**	**21 38 34.7**	**-1.4**
KMSI	**Cibinong**	**2.59**	**249**	P	**Pn**	**21 38 08.0**	**+0.9**
KMSI				S	**Sn**	**21 38 39.6**	**+1.7**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**21 38 21.8**	**+1.4**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**21 38 20.6**	**+0.2**
LUWI	**Luwuk**	**4.43**	**235**	Pn	**Pn**	**21 38 32.5**	**+0.2**
LUWI	**Luwuk**	**4.43**	**235**	P	**Pn**	**21 38 36.6**	**+4.3**
LUWI	**Luwuk**	**4.43**	**235**	P	**Pn**	**21 38 32.9**	**+0.6**
LUWI				S	**Sn**	**21 39 25.4**	**+2.2**
MRSI	**Marisa**	**4.58**	**257**	P	**Pn**	**21 38 35.8**	**+1.4**
NLAI	**Namlea**	**4.77**	**172**	P	**Pn**	**21 38 38.0**	**+0.9**
APSI	**Ampana**	**5.33**	**243**	P	**Pn**	**21 38 47.3**	**+2.6**
SWI	**Sorong**	**5.40**	**116**	P	**Pn**	**21 38 46.4**	**+0.7**
MSAI	**Masohi**	**5.45**	**152**	P	**Pn**	**21 38 49.5**	**+3.1**
	1.7nm8μm380nm,0.7s						
AAI	**Ambon**	**5.47**	**161**	P	**Pn**	**21 38 47.2**	**+0.6**
	1.1nm4μm306nm,0.7s						
DAV	**Davao City (W)**	**5.58**	**352**	Pn	Pb	21 38 57.2	-6.0
	52nm,0.3s,baz=271,slow=17,SNR=4.1						
DAV	**Davao City (W)**	**5.58**	**352**		**Pn**	**21 38 49.0**	**+0.8**
DAV	**Davao City (W)**	**5.58**	**352**	P	Pn	21 38 54.5	+6.3
TOLI2	**Tolitoli**	**5.63**	**266**		**Pn**	**21 38 48.5**	**-0.4**
TOLI2	**Tolitoli**	**5.63**	**266**	P	**Pn**	**21 38 49.0**	**+0.1**
MPSI	**Mapaga**	**6.61**	**260**	P	**Pn**	**21 39 04.1**	**+1.8**
BNDI	**Bandanaira**	**6.94**	**150**	P	Pb	21 39 17.5	-9.0
PCI	**Palu**	**6.99**	**250**	P	**Pn**	**21 39 09.0**	**+1.4**
	1.6nm5μm292nm,1.0s						
FAKI	**Fak Fak**	**7.32**	**127**		**Pn**	**21 39 11.5**	**-0.6**
FAKI	**Fak Fak**	**7.32**	**127**	P	**Pn**	**21 39 13.2**	**+1.1**
	0.9nm285nm,1.1s						
BBSI	**Bau Bau**	**7.94**	**209**	P	**Pn**	**21 39 24.5**	**+3.9**
	1.2nm4μm319nm,0.9s						
TTSI	**Tana Toraja**	**7.99**	**235**	P	**Pn**	**21 39 22.4**	**+1.1**
	1.0nm3μm256nm,0.7s						
SPSI	**Sidrap Palu**	**8.58**	**231**	P	**Pn**	**21 39 30.1**	**+0.8**
	4μm245nm,0.5s						
BNSI	**Bone**	**8.61**	**227**	P	**Pn**	**21 39 30.5**	**+0.7**
MYLDM	**Lahad Datu**	**8.69**	**295**		**Pn**	**21 39 32.9**	**+2.0**
MYLDM	**Lahad Datu**	**8.69**	**295**	P	**Pn**	**21 39 34.2**	**+3.4**
KMPI	**Kaimana, Papua**	**8.93**	**125**	P	Pn	21 39 50.4	+16
KAPI	**Kappang**	**9.28**	**226**	Pn	**Pn**	**21 39 42.0**	**+3.0**
	6.3nm,0.3s,baz=340,slow=7.3,SNR=15						
KAPI				Sn	**Sn**	**21 41 22.7**	**-0.1**
	4.1nm,0.3s,baz=204,slow=19,SNR=1.2						
KAPI	**Kappang**	**9.28**	**226**		**Pn**	**21 39 38.1**	**-0.9**
KAPI	**Kappang**	**9.28**	**226**	P	**Pn**	**21 39 42.2**	**+3.2**
KAPI	**Kappang**	**9.28**	**226**	*i* P	**Pn**	**21 39 41.2**	**+2.2**
BKB	**Balikpapan**	**9.89**	**254**	P	**Pn**	**21 39 49.3**	**+1.9**
SOEI	**Soe**	**11.39**	**191**	P	**Pn**	**21 40 10.9**	**+2.8**
BATI	**Baumata**	**11.96**	**193**	Pn	Pn	21 40 22.0	+6.3
	3.3nm,0.3s,baz=37,slow=10,SNR=4.6						
PLAI	**Plampang**	**13.39**	**220**	P	**Pn**	**21 40 38.4**	**+3.1**
TGY	**Tagaytay City**	**13.62**	**337**	LR	LR	21 46 10.9	
	comp=Z,7μm,21.9s,baz=162,slow=39						
SBUM	**Sibu**	**14.20**	**274**		**Pn**	**21 40 47.2**	**+0.9**
SBUM	**Sibu**	**14.20**	**274**	P	**P**	**21 40 51.0**	**-2.6**
GENI	**Genyem**	**14.36**	**106**	P	**P**	**21 40 52.6**	**-2.7**
AUDHS	**Darwin High Sc**	**14.54**	**163**	P	**Pn**	**21 40 50.6**	**-0.4**
DRS	**Darwin Rock St**	**14.56**	**162**	P	**Pn**	**21 40 51.5**	**+0.3**
JAY	**Jayapura**	**14.85**	**106**	Pn	**P**	**21 40 58.8**	**-2.0**
	0.9nm,0.3s,baz=128,slow=16,SNR=6.5						
MTN	**Manton Dam**	**15.02**	**162**	P	**Pn**	**21 40 56.5**	**-0.9**
	comp=Z,77nm,1.0s						
MTN	**Manton Dam**	**15.02**	**162**		**Pn**	**21 40 56.0**	**-1.4**
KDU	**Kakadu**	**15.34**	**157**	P	**Pn**	**21 41 03.3**	**+1.6**
	comp=Z,117nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.73**	**231**	P	**P**	**21 41 11.4**	**+0.8**
JAGI	**Jajag, Banyuwa**	**15.73**	**231**	P	**P**	**21 41 09.8**	**-0.8**
KNRA	**Kununurra**	**17.24**	**172**	P	**Pn**	**21 41 25.4**	**-0.5**
	comp=Z,241nm,1.4s						
KNRA	**Kununurra**	**17.24**	**172**	P	**Pn**	**21 41 25.9**	**0.0**
KNRA				IAmb	IAmb	21 41 29.8	
	comp=Z,634nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**21 41 51.9**	**-0.4**
	comp=Z,12nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**21 41 51.0**	**-1.3**
	comp=Z,3.3nm,0.3s,baz=23,slow=8.3,SNR=8.5						
	comp=Z,17nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**21 41 50.9**	**-1.3**
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**21 41 51.8**	**-0.4**
DLV	**Lat**	**20.57**	**301**	P	**P**	**21 42 05.0**	**+0.9**
DLV				IAmb	IAmb	21 42 14.6	
	comp=Z,144nm,1.1s						
DLV	**Lat**	**20.57**	**301**	P	Pn	21 42 07.7	+1.3
BBJI	**Bungbulang**	**20.72**	**244**	P	**P**	**21 42 05.3**	**-0.4**
MANU	**Manus Island**	**21.26**	**100**	P	**P**	**21 42 11.2**	**-0.1**
MANU				IAmb	IAmb	21 42 28.9	
	comp=Z,125nm,1.5s						
TWGBT	**Beinan**	**21.80**	**347**	P	**P**	**21 42 18.9**	**+1.9**
GUMO	**Guam**	**21.86**	**56**	P	**P**	**21 42 20.4**	**+2.6**
YULB	**Yu-li**	**22.30**	**348**	P	**P**	**21 42 19.5**	**-3.0**
YULB				IAmb	IAmb	21 42 28.1	
	comp=Z,43nm,0.6s						
YULB	**Yu-li**	**22.30**	**348**	P	**P**	**21 42 22.1**	**-0.4**
TPUB	**Ta-pu**	**22.37**	**346**	P	**P**	**21 42 21.5**	**-1.7**
TPUB				IAmb	IAmb	21 42 30.6	
	comp=Z,97nm,0.7s						
TPUB	**Ta-pu**	**22.37**	**346**	P	**P**	**21 42 23.9**	**+0.7**
WB0	**Warramunga Arr**	**22.56**	**160**	P	**P**	**21 42 24.0**	**-1.3**
WB0				IAmb	IAmb	21 42 37.3	
	comp=Z,104nm,0.7s						
WB9	**Warramunga Arr**	**22.58**	**160**	P	**P**	**21 42 23.7**	**-1.8**
	comp=Z,186nm,1.1s						
BTDF	**Bukit Timah Da**	**22.62**	**270**	P	**P**	**21 42 26.6**	**+0.6**
COEN	**Coen**	**22.64**	**133**	P	**P**	**21 42 25.1**	**-1.1**
COEN	**Coen**	**22.64**	**133**	P	**P**	**21 42 26.1**	**-0.1**
WRAB	**Tennant Creek**	**22.70**	**160**	P	**P**	**21 42 25.7**	**-1.1**
WRAB	**Tennant Creek**	**22.70**	**160**	P	**P**	**21 42 26.0**	**-0.7**
WRAB	**Tennant Creek**	**22.70**	**160**	*i* P	**P**	**21 42 26.2**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,165nm,0.9s						
WR1	**Warramunga Arr**	**22.70**	**160**	P	**P**	**21 42 25.3**	**-1.5**
	comp=Z,240nm,0.8s						
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**21 42 25.6**	**-1.2**
	comp=Z,91nm,0.7s,baz=338,slow=10,SNR=31						
WRA				S	**S**	**21 46 30.4**	**-3.7**
	comp=Z,5.5nm,1.0s,baz=331,slow=11,SNR=6.8						
	comp=Z,91nm,0.7s						
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**21 42 24.0**	**-2.8**
WB2	**Warramunga Arr**	**22.71**	**160**	P	**P**	**21 42 24.3**	**-2.5**
WB1	**Warramunga Ar.**	**22.72**	**160**	P	**P**	**21 42 26.3**	**-0.7**
SSLB	**Suanglung**	**22.76**	**347**	P	**P**	**21 42 25.9**	**-1.4**
SSLB				IAmb	IAmb	21 42 38.2	
	comp=Z,46nm,0.7s						
SSLB	**Suanglung**	**22.76**	**347**	P	**P**	**21 42 27.2**	**-0.2**
WR8	**Warramunga Arr**	**22.77**	**160**	P	**P**	**21 42 26.7**	**-0.8**
WR8				IAmb	IAmb	21 42 32.3	
	comp=Z,104nm,0.8s						
WR0	**Warramunga Arr**	**22.79**	**160**	P	**P**	**21 42 26.0**	**-1.6**
	comp=Z,115nm,0.9s						
PMG	**Port Moresby**	**23.35**	**118**	P	**P**	**21 42 33.7**	**+0.2**
	comp=Z,30nm,0.7s,baz=299,slow=4.8,SNR=8.8						
	comp=Z,30nm,0.7s						
PMG	**Port Moresby**	**23.35**	**118**	P	**P**	**21 42 32.6**	**-0.9**
PMG	**Port Moresby**	**23.35**	**118**	P	**P**	**21 42 33.5**	**0.0**
PMG	**Port Moresby**	**23.35**	**118**	P	**P**	**21 42 32.6**	**-0.9**
PMG				pmax	pmax		
	comp=Z,62nm,1.1s						
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**21 42 32.7**	**-1.7**
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**21 42 33.2**	**-1.2**
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**21 42 32.8**	**-1.7**
YHNB	**Yeheng**	**23.53**	**348**	P	**P**	**21 42 34.9**	**-0.3**
YHNB				IAmb	IAmb	21 42 50.3	
	comp=Z,212nm,1.8s						
PSAC1	**Pilbara Seismi**	**23.80**	**195**	P	**P**	**21 42 36.7**	**-1.1**
	comp=Z,54nm,0.7s						
QIZ	**Qiongzhong**	**23.80**	**318**	P	**P**	**21 42 37.6**	**-0.2**
QIZ				IAmb	IAmb	21 43 01.6	
	comp=Z,230nm,1.6s						
PSAC2	**Pilbara Seismi**	**23.80**	**195**	P	**P**	**21 42 38.0**	**+0.3**
	comp=Z,94nm,0.7s						
PSA00	**Pilbara Seismi**	**23.82**	**195**	P	**P**	**21 42 37.0**	**-1.0**
	comp=Z,72nm,0.7s						
PSA00	**Pilbara Seismi**	**23.82**	**195**		**P**	**21 42 37.2**	**-0.8**
PSA00				IAmb	IAmb	21 42 42.1	
	comp=Z,44nm,0.7s						
PSA00	**Pilbara Seismi**	**23.82

MORW IAmb IAmb 21 43 53.1
comp=Z,86nm,1.6s
MORW Morawa 31.99 197 P **P** **21 43 51.0 -0.1**
FORT Forrest 32.15 177 **P** **21 43 52.1 -0.4**
FORT IAmb IAmb 21 44 00.1
comp=Z,25nm,0.8s
INKA Innaminka 32.19 156 P **P** **21 43 52.4 -0.5**
KMI Kunming 32.74 318 P **P** **21 43 59.3 +1.2**
KMI pP pP 21 44 00.8 -3.7
KMI PcP **PcP** **21 46 47.6 +4.2**
KMI pmax pmax
comp=Z,16nm,0.8s
ENH Enshi 32.80 332 IAmb IAmb 21 44 03.6
comp=Z,31nm,0.8s
ENH Enshi 32.80 332 P **P** **21 43 58.2 0.0**
KMBL Kambalda 32.98 187 P **P** **21 43 59.9 +0.2**
comp=Z,14nm,0.6s
BLDU Ballidu 33.26 195 P **P** **21 44 01.2 -1.0**
comp=Z,32nm,0.7s
BLDU Ballidu 33.26 195 P **P** **21 44 02.0 -0.2**
KLBR Kellerberrin 33.93 193 P **P** **21 44 07.5 -0.6**
comp=Z,113nm,0.7s
KLBR Kellerberrin 33.93 193 P **P** **21 44 07.7 -0.4**
MUN Mundaring 34.68 195 P **P** **21 44 14.1 -0.5**
comp=Z,34nm,0.7s
GD1S Gladstone Soft 34.86 138 P **P** **21 44 16.6 +0.4**
INU Inuyama 35.08 15 P **P** **21 44 17.7 -0.2**
INU IAmb IAmb 21 44 48.1
comp=Z,51nm,1.1s
INU Inuyama 35.08 15 P **P** **21 44 18.6 +0.6**
HNR Honiara 35.14 109 P **P** **21 44 17.7 -1.1**
HNR Honiara 35.14 109 P **P** **21 44 17.7 -1.1**
HNR pmax pmax
comp=Z,62nm,0.9s
NWAO Narrogin (SRO) 35.33 193 P **P** **21 44 19.7 -0.6**
comp=Z,47nm,0.8s
NWAO Narrogin (SRO) 35.33 193 P **P** **21 44 19.6 -0.6**
NWAO IAmb IAmb 21 44 22.0
comp=Z,29nm,0.7s
NWAO Narrogin (SRO) 35.33 193 P **P** **21 44 20.5 +0.3**
NWAO Narrogin (SRO) 35.33 193 P **P** **21 44 19.6 -0.6**
NWAO pmax pmax
comp=Z,29nm,0.7s
BBOO Buckleboo 35.34 166 P **P** **21 44 19.8 -0.4**
comp=Z,30nm,0.7s
BBOO Buckleboo 35.34 166 **P** **21 44 19.1 -1.2**
BBOO IAmb IAmb 21 44 24.4
comp=Z,26nm,0.8s
BBOO Buckleboo 35.34 166 P **P** **21 44 20.2 0.0**
LYN LuoYang 35.35 340 P P 21 44 26.3 +6.0
LYN pmax pmax
comp=Z,33nm,0.7s
LYN LR LR
comp=N,1μm,19.2s
LYN LR LR
comp=E,2μm,17.9s
LYN LR LR
comp=Z,4μm,24.0s
JGF Kuroka 35.41 16 P **P** **21 44 21.0 +0.1**
JGF IAmb IAmb 21 44 50.0
comp=Z,36nm,1.1s
TNCH TengChong 35.65 313 ⇓ *i* P **P** **21 44 23.3 +0.1**
TNCH pmax pmax
comp=Z,30nm,1.9s
KSAR Wonju Array Be 35.78 2 P **P** **21 44 25.3 +1.4**
KSAR Wonju Array Be 35.78 2 P **P** **21 44 25.3 +1.4**
KSRS Korea Array 35.79 2 P **P** **21 44 25.4 +1.3**
comp=Z,3.4nm,0.6s,baz=180,slow=9.8,SNR=14
KSRS PcP **PcP** **21 46 52.5 +1.0**
comp=Z,3.9nm,1.0s,baz=209,slow=3.1,SNR=4.7
comp=Z,3.4nm,0.6s
KSRS Korea Array 35.79 2 *eP* **P** **21 44 27.5 +3.5**
KSRS pmax pmax
comp=Z,4.0nm,0.6s
KS19 Wonju Array Si 35.84 2 P **P** **21 44 24.0 -0.4**
EIDS Eidsvold 35.85 140 P **P** **21 44 25.0 +0.3**
comp=Z,30nm,1.2s
EIDS Eidsvold 35.85 140 P **P** **21 44 23.3 -1.4**
EIDS IAmb IAmb 21 44 27.7
comp=Z,36nm,1.1s
EIDS Eidsvold 35.85 140 P **P** **21 44 23.9 -0.8**
WHYH Whyalla 35.95 164 P **P** **21 44 26.2 +0.8**
STKA Stephens Creek 36.20 158 P **P** **21 44 26.6 -1.0**
comp=Z,230nm,0.8s
STKA Stephens Creek 36.20 158 P **P** **21 44 27.2 -0.4**
comp=Z,20nm,0.7s,baz=328,slow=8.6,SNR=20
comp=Z,20nm,0.7s
STKA Stephens Creek 36.20 158 P **P** **21 44 27.5 -0.1**
STKA Stephens Creek 36.20 158 *i* P **P** **21 44 27.1 -0.5**
XAN Xi'an 36.25 335 ⇑ P **P** **21 44 26.9 -1.2**
XAN pmax pmax
comp=Z,49nm,0.6s
CD2 Chengdu 36.26 326 P **P** **21 44 28.6 +0.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
AUJCS Jamestown Cent 36.40 163 P **P** **21 44 30.7 +1.4**
MAJO Matsushiro 36.53 16 P **P** **21 44 29.5 -0.9**
MAJO IAmb IAmb 21 44 32.1
comp=Z,36nm,1.0s
MAJO Matsushiro 36.53 16 P **P** **21 44 29.9 -0.5**
MAJO Matsushiro 36.53 16 *i* P **P** **21 44 29.2 -1.2**
MAJO pmax pmax
comp=Z,21nm,0.8s
MJAR Matsushiro Arr 36.53 16 P **P** **21 44 30.1 -0.2**
comp=Z,16nm,0.8s,baz=182,slow=9.5,SNR=29
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 36.53 16 P **P** **21 44 29.7 -0.7**
MJB9 Matsu-Tunnel 36.53 16 **P** **21 44 30.0 -0.4**
MJB9 IAmb IAmb 21 44 33.1
comp=Z,37nm,1.0s
MJA0 Matsu Arr-Jizo 36.54 16 *eP* **P** **21 44 29.9 -0.6**
MJA0 pmax pmax
comp=Z,19nm,0.7s
HTT Hallett 36.71 162 P **P** **21 44 32.0 0.0**
comp=Z,11nm,1.3s
HTT Hallett 36.71 162 P **P** **21 44 33.6 +1.6**
RKGY Rocky Gully 37.01 193 P **P** **21 44 35.0 +0.6**
comp=Z,191nm,0.6s
AULRC Lightning Ridg 37.05 148 P **P** **21 44 34.9 0.0**
HNS HongShan 37.30 345 ⇓ P **P** **21 44 37.4 +0.5**
HNS pmax pmax
comp=Z,9.0nm,1.0s
DL2 Dalian 37.47 354 P **P** **21 44 40.6 +2.3**
DL2 pmax pmax
comp=Z,100nm,0.9s
CMSA Cobar Meteorol 37.63 152 P **P** **21 44 40.2 +0.4**
comp=Z,27nm,1.9s
CMSA Cobar Meteorol 37.63 152 P **P** **21 44 40.7 +0.9**
JMM Marumori 38.52 18 P **P** **21 44 47.4 +0.2**
JMM Marumori 38.52 18 P **P** **21 44 48.1 +0.9**
IMP Imphal 38.98 309 *eP* **P** **21 44 50.5 -0.8**
IMP IAmb IAmb 21 44 57.5
comp=Z,14nm,0.8s
KOHI KOHIMA 39.32 310 *eP* **P** **21 44 51.8 -2.5**
KOHI IAmb IAmb 21 45 06.0
comp=Z,22nm,0.7s
MOKO MOKOCHONG 39.34 312 *eP* **P** **21 44 54.5 +0.1**
BJT Baijiatuan 39.44 348 P **P** **21 44 55.2 +0.3**
BJT Baijiatuan 39.44 348 P **P** **21 44 56.6 +1.7**
BJT Baijiatuan 39.44 348 P **P** **21 44 55.2 +0.3**
BJT pmax pmax
comp=Z,15nm,0.9s
BJI Beijing 39.46 348 P **P** **21 44 55.6 +0.6**
BJI pP **pP** **21 45 00.1 -1.5**
BJI sP **sP** **21 45 02.8 -1.5**
BJI pmax pmax
comp=Z,7.0nm,0.9s
AUDCS Dubbo College 39.62 150 P **P** **21 44 57.2 +0.7**
JORH JORHAT 39.77 312 *eP* **P** **21 44 57.4 -0.5**
SNY Shenyang 40.21 357 ⇓ P **P** **21 45 01.9 +0.6**
SNY pmax pmax
comp=Z,36nm,1.6s
LZDM Lanzhou Array 40.22 331 P **P** **21 45 02.7 +0.9**
comp=Z,0.8nm,0.3s,baz=129,slow=11,SNR=1.4
LZDM LR LR 22 03 21.7
comp=Z,1μm,18.9s,baz=105,slow=39
comp=Z,0.8nm,0.3s
LZH Lanzhou 40.26 331 *eP* **P** **21 45 02.5 +0.6**
LZH sP pP 21 45 09.3 +0.8
LZH PcP **PcP** **21 47 05.8 +0.2**
LZH pmax pmax
comp=Z,46nm,1.3s
ZIRO ZIRO 40.50 313 *eP* **P** **21 45 03.6 -0.6**
ARPS Mount Arapiles 40.70 161 P **P** **21 45 06.0 +0.6**
comp=Z,39nm,0.7s

TEZP TEZPUR 40.79 311 *eP* **P** **21 45 06.0 -0.3**
SHL Shillong 40.96 309 P **P** **21 45 07.0 -0.8**
SHL Shillong 40.96 309 P **P** **21 45 07.1 -0.8**
SHL pmax pmax
comp=Z,24nm,0.7s
MSHR Mys Shultsa 41.11 5 *i* P **P** **21 45 09.3 +0.7**
MSHR pmax pmax
comp=Z,10.0nm,0.7s
YNG Young 41.18 152 P **P** **21 45 10.4 +1.0**
comp=Z,29nm,1.0s
HHC Hu-ho-hao-te 41.40 343 *eP* **P** **21 45 15.5 +4.3**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,500nm,5.6s
BTO Baotou 41.65 341 *eP* **P** **21 45 17.0 +3.7**
BTO PP **PnPn** **21 46 54.9 +0.2**
BTO S **S** **21 51 34.9 +6.2**
BTO pmax pmax
comp=Z,14nm,0.6s
BTO pmax pmax
comp=Z,710nm,3.7s
BTO LR LR
comp=N,3μm,14.7s
BTO LR LR
comp=E,3μm,17.6s
BTO LR LR
comp=Z,4μm,17.6s
TAWA Tawang 42.01 311 *eP* **P** **21 45 18.2 +1.4**
TAWA IAmb IAmb 21 45 33.3
comp=Z,71nm,1.5s
BRAT Ballarat 42.12 159 P **P** **21 45 18.7 +1.7**
AUMTS Mt Stromlo 42.30 152 P **P** **21 45 19.9 +1.3**
CAN Canberra 42.30 152 P **P** **21 45 18.7 0.0**
comp=Z,44nm,1.5s
CAN Canberra 42.30 152 P **P** **21 45 18.0 -0.6**
CAN Canberra 42.30 152 P **P** **21 45 19.4 +0.8**
CAN Canberra 42.30 152 P **P** **21 45 18.0 -0.6**
CAN pmax pmax
comp=Z,29nm,0.8s
AUSIS Research Schoo 42.32 152 P **P** **21 45 16.7 -2.1**
USRK Ussuriysk Ar. 42.79 6 P **P** **21 45 23.8 +1.4**
comp=Z,16nm,0.8s,baz=185,slow=5.9,SNR=13
comp=Z,16nm,0.8s
MDJ Mudanjiang 43.01 3 P **P** **21 45 24.2 0.0**
MDJ Mudanjiang 43.01 3 P **P** **21 45 25.3 +1.1**
MDJ pmax pmax
comp=Z,28nm,0.8s
MDJ Mudanjiang 43.01 3 P **P** **21 45 25.5 +1.3**
LSA Lhasa 43.68 313 P **P** **21 45 30.1 -0.3**
LSA Lhasa 43.68 313 P **P** **21 45 30.1 -0.3**
LSA pmax pmax
comp=Z,25nm,1.1s
SANVU Saraoutou 43.72 114 P **P** **21 45 28.7 -1.6**
SANVU IAmb IAmb 21 45 40.1
comp=Z,46nm,0.9s
BNX BinXian 44.05 1 ⇓ P **P** **21 45 32.3 -0.2**
BNX pmax pmax
comp=Z,12nm,0.9s
GTA Gaotai 44.83 331 P **P** **21 45 39.8 +0.7**
GTA sP sP 21 45 58.3 +10
GTA PcP **PcP** **21 47 22.0 +1.2**
GTA ScS ScS 21 55 32.9 -2.7
GTA pmax pmax
comp=Z,7.0nm,1.0s
ONTNC Ouen Toro 45.68 124 P **P** **21 45 44.7 -1.1**
ONTNC IAmb IAmb 21 45 49.1
comp=Z,38nm,1.1s
PALK Pallekele 45.90 279 P **P** **21 45 48.2 +0.4**
PALK Pallekele 45.90 279 P **P** **21 45 48.2 +0.4**
PALK pmax pmax
comp=Z,22nm,1.1s
YATNC Mamie plateau, 45.94 123 P **P** **21 45 49.2 +1.3**
EVN Everest 46.07 308 P **P** **21 45 49.1 -0.6**
EVN IAmb IAmb 21 45 56.9
comp=Z,90nm,1.6s
PINNC Pines Island, 46.64 123 P **P** **21 45 52.7 -0.7**
PINNC IAmb IAmb 21 46 00.3
comp=Z,60nm,1.2s
PINNC Pines Island, 46.64 123 P **P** **21 45 55.6 +2.2**
YSS Yuzhno-Sakhali 47.45 15 *eP* **P** **21 46 02.2 +2.8**
YSS pmax pmax
comp=Z,50nm,1.2s
HIA Hailar 47.91 354 P **P** **21 46 03.2 +0.2**
HIA Hailar 47.91 354 P **P** **21 46 03.2 +0.2**
HIA Hailar 47.91 354 P **P** **21 46 03.2 +0.2**
HIA pmax pmax
comp=Z,90nm,1.8s
HILR Hailar Array B 48.20 354 P **P** **21 46 06.5 +1.3**
comp=Z,8.6nm,0.4s,baz=181,slow=8.0,SNR=16
comp=Z,8.6nm,0.4s
HEH HeiHe 48.57 1 *eP* **P** **21 46 07.6 -0.4**
HEH pmax pmax
comp=Z,33nm,1.1s
SALM Salem 48.85 284 *eP* **P** **21 46 11.1 +0.4**
ULN Ulaanbaatar 49.12 343 P **P** **21 46 12.4 -0.1**
ULN IAmb IAmb 21 46 44.8
comp=Z,27nm,1.1s
ULN Ulaanbaatar 49.12 343 *i* P **P** **21 46 12.1 -0.3**
ULN pmax pmax
comp=Z,6.0nm,0.5s
SONM Songino Array 49.29 342 P **P** **21 46 14.2 +0.4**
comp=Z,3.6nm,0.5s,baz=157,slow=8.4,SNR=13
SONM PcP **PcP** **21 47 37.2 +0.8**
comp=Z,4.1nm,0.9s,baz=162,slow=5.2,SNR=2.1
SONM LR LR 22 08 46.3
comp=Z,1μm,19.6s,baz=156,slow=38
comp=Z,3.6nm,0.5s
SONM Songino Array 49.29 342 *eP* **P** **21 46 15.0 +1.3**
SONM pmax pmax
comp=Z,7.0nm,0.6s
KOD Kodaikanal 49.38 282 *eP* **P** **21 46 12.9 -2.3**
KOD IAmb IAmb 21 46 19.2
comp=Z,22nm,0.8s
HYBB Hyderabad (bro 49.59 292 *eP* **P** **21 46 15.1 -1.3**
HYBB *ep*P **pP** **21 46 23.6 +0.5**
GRNR Gornyy 49.81 8 *i* P **P** **21 46 18.3 +0.8**
GRNR pmax pmax
comp=Z,20nm,1.1s
CIT Chita 51.47 350 *eP* **P** **21 46 31.2 +1.1**
CIT *e* 21 46 36.6
CIT *e* 21 46 43.2
CIT pmax pmax
comp=Z,219nm,2.3s
AKL Akola 51.80 295 *eP* **P** **21 46 31.2 -1.8**
LGTI Lohaghat 51.92 307 *eP* **P** **21 46 32.5 -1.2**
LGTI IAmb IAmb 21 46 41.0
comp=Z,11nm,0.6s
ZEA Zeya 52.05 1 *eP* **P** **21 46 34.4 +0.1**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
BHPL Bhopal 52.13 298 *eP* **P** **21 46 33.8 -1.8**
BHPL IAmb IAmb 21 46 39.5
comp=Z,24nm,0.5s
NRDN NARMADA NAGAR 52.21 298 *eP* **P** **21 46 38.0 +2.0**
NRDN IAmb IAmb 21 46 42.0
comp=Z,41nm,1.3s
ZAK Zakamensk 52.50 342 *eP* **P** **21 46 35.5 -2.3**
ZAK pmax pmax
comp=Z,14nm,1.9s
GUNA GUNA 52.64 300 *eP* **P** **21 46 37.1 -2.1**
GUNA IAmb IAmb 21 46 43.1
comp=Z,71nm,0.9s
JOSI Joshimath 52.91 308 *eP* **P** **21 46 42.4 +1.0**
JOSI IAmb IAmb 21 46 48.6
comp=Z,28nm,0.6s
FUNA Funafuti 53.56 102 P **P** **21 46 45.6 -0.5**
FUNA Funafuti 53.56 102 P **P** **21 46 48.3 +2.2**
MSVF Nonsavu 54.32 113 P **P** **21 46 50.1 -1.6**
MSVF IAmb IAmb 21 46 57.5
comp=Z,46nm,1.1s
MSVF Nonsavu 54.32 113 P **P** **21 46 53.7 +2.0**
MSVF Nonsavu 54.32 113 P **P** **21 46 50.1 -1.6**
MSVF pmax pmax
comp=Z,46nm,1.2s
WMQ Urumqi 54.35 326 *eP* P 21 46 57.4 +5.9
WMQ pmax pmax
comp=Z,27nm,1.1s
KUDL Kundal 54.49 304 *eP* **P** **21 46 50.4 -2.3**
KUDL IAmb IAmb 21 46 56.0
comp=Z,21nm,0.6s
SMLA Simla 55.02 308 IAmb IAmb 21 47 06.8
comp=Z,87nm,1.1s
UDPR Udaipur 55.77 299 *eP* **P** **21 47 00.8 -1.3**
UDPR IAmb IAmb 21 47 07.3
comp=Z,56nm,0.9s
ALCI Alchi Leh 56.23 311 *eP* **P** **21 47 04.2 -1.5**
ALCI IAmb IAmb 21 47 10.3
comp=Z,23nm,0.5s
TSSA Tissa 56.48 309 *eP* **P** **21 47 05.6 -1.6**
PETK Petropavlovsk- 57.59 22 P **P** **21 47 15.1 +0.6**
comp=Z,11nm,0.8s,baz=185,slow=5.7,SNR=16
comp=Z,11nm,0.8s
ZSN Zaisan 58.19 328 *eP* **P** **21 47 18.4 -0.4**
ZSN Zaisan 58.19 328 *eP* **P** **21 47 18.4 -0.4**
DGZ Jazzator, Alta 58.36 331 *i* P **P** **21 47 20.6 +0.5**
DGZ pmax pmax
comp=Z,22nm,1.8s
SHLS Shalkode 58.84 321 *eP* **P** **21 47 21.4 -2.2**
comp=Z,20nm,1.4s
SHLS Shalkode 58.84 321 *eP* **P** **21 47 21.3 -2.2**
SHLS pmax pmax
comp=Z,20nm,1.4s
PRZ Przheval'sk 59.17 320 P **P** **21 47 25.6 -0.3**
PRZ Przheval'sk 59.17 320 P **P** **21 47 25.6 -0.3**
PRZ pmax pmax
comp=Z,67nm,1.4s
TARG Taragay, Kyrgy 59.18 319 **P** **21 47 27.0 +0.7**
TARG Taragay, Kyrgy 59.18 319 P **P** **21 47 27.0 +0.7**
TARG pmax pmax
comp=Z,12nm,0.8s
MK31 Makanchi Array 59.19 326 *i* P **P** **21 47 25.5 -0.3**
MKAR Makanchi Array 59.19 326 P **P** **21 47 24.9 -0.9**
comp=Z,9.5nm,0.5s,baz=119,slow=7.7,SNR=33
comp=Z,9.5nm,0.5s
MKAR Makanchi Array 59.19 326 **P** **21 47 24.8 -1.0**
MAKZ Makanchi 59.37 326 P **P** **21 47 26.6 -0.4**
MAKZ IAmb IAmb 21 47 45.0
comp=Z,31nm,1.2s
MAKZ Makanchi 59.37 326 P **P** **21 47 26.6 -0.4**
MAKZ pmax pmax
comp=Z,31nm,1.3s
SATY Saty 59.46 321 *eP* **P** **21 47 27.4 -0.5**
comp=Z,14nm,1.0s
SATY Saty 59.46 321 *eP* **P** **21 47 27.3 -0.5**
SATY pmax pmax
comp=Z,14nm,1.0s
KDJ Kajisay 59.79 319 P **P** **21 47 29.6 -0.6**
KDJ IAmb IAmb 21 47 47.9
comp=Z,29nm,1.2s
KDJ Kajisay 59.79 319 P **P** **21 47 29.6 -0.6**
KDJ pmax pmax
comp=Z,29nm,1.2s
MRNZ Matariki Terra 59.88 141 P **P** **21 47 31.6 +1.0**
LBZ Lake Benmore 60.06 145 P **P** **21 47 30.8 -1.0**
TNSS Tian-Shan 60.38 320 *eP* **P** **21 47 33.7 -0.8**
TNSS Tian-Shan 60.38 320 *eP* **P** **21 47 33.7 -0.8**
YAK Yakutsk 60.42 2 P **P** **21 47 33.0 -0.9**
YAK Yakutsk 60.42 2 *eP* **P** **21 47 33.7 -0.1**
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=Z,47nm,0.9s
YAK pmax pmax
comp=N,16nm,1.2s
TDK Taldyqorghan 60.45 323 *eP* **P** **21 47 34.3 -0.2**
comp=N,13nm,0.7s
TDK Taldyqorghan 60.45 323 *eP* **P** **21 47 34.3 -0.2**
TDK pmax pmax
comp=Z,13nm,0.7s
TUWZ Tuamarina 60.65 140 P **P** **21 47 35.0 -0.9**
BOOM Boomskoye usch 60.77 319 **P** **21 47 36.7 -0.2**
BOOM Boomskoye usch 60.77 319 P **P** **21 47 36.7 -0.2**
BOOM pmax pmax
comp=Z,17nm,1.2s
RTZ Ruatahuna 61.25 136 P **P** **21 47 39.2 -0.9**
AAK Ala-Archa 61.78 319 P **P** **21 47 43.8 0.0**
comp=Z,1.8nm,0.5s,baz=164,slow=3.7,SNR=6.8
comp=Z,1.8nm,0.5s
AAK Ala-Archa 61.78 319 P **P** **21 47 43.7 -0.1**
AAK IAmb IAmb 21 47 53.1
comp=Z,41nm,1.9s
AAK Ala-Archa 61.78 319 *i* P **P** **21 47 44.4 +0.6**
AAK pmax pmax
comp=Z,26nm,2.1s
SGDS Sogindy 62.06 320 *eP* **P** **21 47 44.9 -0.6**
ARSB Arslanbob 62.23 317 **P** **21 47 46.7 0.0**
ARSB IAmb IAmb 21 47 51.0
comp=Z,16nm,0.9s
ARSB Arslanbob 62.23 317 P **P** **21 47 46.7 0.0**
ARSB pmax pmax
comp=Z,16nm,0.9s
DRK Karamyk 62.30 315 IAmb IAmb 21 48 00.7
comp=Z,19nm,0.6s
ZAA0 Zalesovo Array 62.41 334 **P** **21 47 47.0 -0.5**
ZALV Zalesovo Beam 62.41 334 P **P** **21 47 46.6 -0.9**
comp=Z,6.4nm,0.4s,baz=130,slow=6.0,SNR=20
comp=Z,6.4nm,0.4s
ZALV Zalesovo Beam 62.41 334 P **P** **21 47 46.0 -1.5**
KBL Kabul 62.62 308 P **P** **21 47 47.9 -1.7**
KBL IAmb IAmb 21 47 54.3
comp=Z,19nm,0.6s
KBL Kabul 62.62 308 P **P** **21 47 47.9 -1.7**
KBL pmax pmax
comp=Z,19nm,0.6s
BTLS Baital 63.17 321 *eP* **P** **21 47 52.3 -0.5**
comp=Z,16nm,1.8s
BTLS Baital 63.17 321 *eP* **P** **21 47 52.2 -0.5**
BTLS pmax pmax
comp=Z,16nm,1.8s
KURBB Kurchatov Arra 63.42 328 P **P** **21 47 54.0 -0.4**
comp=Z,22nm,0.6s,baz=128,slow=6.0,SNR=29
KURBB PKP2bc **P'P'bc** **22 16 55.5 -3.1**
comp=Z,0.6nm,0.7s,baz=287,slow=3.6,SNR=4.2
comp=Z,22nm,0.6s
KURK Kurchatov 63.43 328 P **P** **21 47 53.1 -1.2**
KURK Kurchatov 63.43 328 *i* P **P** **21 47 53.3 -1.0**
KURK pmax pmax
comp=Z,40nm,0.6s
DZA Taraz 63.99 318 *eP* **P** **21 47 57.8 -0.6**
DZA Taraz 63.99 318 *eP* **P** **21 47 57.7 -0.6**
SEY Seymchan 64.25 13 *eP* P 21 47 49.9 -10
SEY pmax pmax
comp=Z,28nm,1.3s
IUG Iuzhnay 64.58 317 *eP* **P** **21 48 01.8 -0.4**
comp=Z,9.2nm,0.6s
IUG Iuzhnay 64.58 317 *eP* **P** **21 48 01.8 -0.4**
IUG pmax pmax
comp=Z,9.0nm,0.6s
KKAR Karatay Array 64.63 318 P **P** **21 48 01.4 -1.0**
KKAR Karatay Array 64.63 318 P **P** **21 48 01.4 -1.0**
CHM Chimkent 64.94 317 *eP* **P** **21 48 04.2 -0.4**
CHM Chimkent 64.94 317 *eP* **P** **21 48 04.1 -0.4**
BRLS Boroldav 65.06 318 *eP* **P** **21 48 04.7 -0.5**
BRLS Boroldav 65.06 318 *eP* **P** **21 48 04.7 -0.5**
BRZS Berezniki 66.30 325 *eP* **P** **21 48 12.9 -0.2**
BRZS Berezniki 66.30 325 *eP* **P** **21 48 12.9 -0.2**
CASY Casey 68.59 187 P **P** **21 48 26.3 -1.0**
BVAR Borovoye Array 68.99 328 P **P** **21 48 29.0 -1.0**
comp=Z,7.4nm,0.6s,baz=121,slow=6.4,SNR=24
comp=Z,7.4nm,0.6s
BORK Borovoye 69.04 328 *i* P **P** **21 48 29.1 -1.2**
BORK pmax pmax
comp=Z,16nm,0.7s
BORK Borovoye 69.04 328 P **P** **21 48 30.3 0.0**
TIXI Tiksi 70.05 1 P **P** **21 48 35.4 -0.7**
TIXI IAmb IAmb 21 48 52.5
comp=Z,36nm,1.2s
TIXI Tiksi 70.05 1 *i* P **P** **21 48 34.8 -1.3**
TIXI pmax pmax
comp=Z,15nm,0.8s
ABKAR Akbulak array 73.65 321 P **P** **21 48 56.9 -1.3**
AKTO Aktyubinsk 75.19 322 P **P** **21 49 06.8 -0.3**
comp=Z,7.1nm,0.5s,baz=99,slow=6.5,SNR=16
comp=Z,7.1nm,0.5s
SVE Sverdlovsk 75.67 329 *cePP* **P** **21 49 09.8 0.0**
SVE pmax pmax
comp=Z,41nm,0.7s
ARTI Arti 76.71 328 P **P** **21 49 14.2 -1.5**
ARTI Arti 76.71 328 *c iP* **P** **21 49 15.5 -0.2**
ARTI 21 52 04.7
ARTI PPP PPP 21 53 55.2
ARTI S **S** **21 59 00.5 -0.7**
ARTI SS **SS** **22 03 53.1 -4.0**
ARTI pmax pmax
comp=Z,22nm,0.7s
AKT Akhty 80.51 312 *eP* **P** **21 49 37.4 +0.2**
AKT *e* 21 49 43.8
AKT *e* 21 52 43.8
AKT pmax pmax

comp=Z,28nm,1.2s
RAYN Ar Rayn 81.05 293 P P 21 49 38.6 -1.8
RAYN Ar Rayn 81.05 293 ⇑P P 21 49 41.3 +1.0
VNDA Vanda 81.28 173 P P 21 49 40.4 -0.1
comp=Z,13nm,0.8s,baz=307,slow=6.1,SNR=28
comp=Z,13nm,0.8s
VNDA Vanda 81.28 173 P P 21 49 40.3 -0.1
VNDA Vanda 81.28 173 P P 21 49 40.3 -0.1
VNDA pmax pmax
comp=Z,15nm,0.9s
MAW Mawson 81.58 200 P P 21 49 41.9 -0.2
comp=Z,8.1nm,0.8s,baz=74,slow=4.9,SNR=20
comp=Z,8.1nm,0.8s
J17K VABM Dome 81.75 26 P P 21 49 43.5 +0.4
J17K IAmb IAmb 21 50 11.6
comp=Z,76nm,1.6s
KIRV Kirov 81.94 329 P P 21 49 44.6 +0.5
comp=Z,22nm,0.6s,baz=181,slow=0.9,SNR=14
comp=Z,22nm,0.6s
KIRV Kirov 81.94 329 *i* **P P 21 49 43.7 -0.5**
K17K Iditarod 81.94 27 P P 21 49 44.9 +0.7
K17K IAmb IAmb 21 50 03.6
comp=Z,47nm,1.1s
BELG Belogornoye 81.95 323 P P 21 49 44.5 +0.1
comp=Z,75nm,0.8s,baz=324,slow=2.4,SNR=21
comp=Z,75nm,0.8s
BELG Belogornoye 81.95 323 *i* **P P 21 49 44.1 -0.3**
BELG pmax pmax
comp=Z,11nm,0.8s
E18K Tukpahlearik C 82.12 22 P P 21 49 45.0 0.0
E18K IAmb IAmb 21 49 56.0
comp=Z,21nm,0.9s
SBA Scott Base 82.20 172 P P 21 49 45.0 -0.2
SBA Scott Base 82.20 172 P P 21 49 45.0 -0.2
SBA pmax pmax
comp=Z,15nm,1.1s
L18K Granite Mounta 82.57 27 P P 21 49 48.1 +0.6
L18K IAmb IAmb 21 49 58.6
comp=Z,18nm,0.8s
GNI Garni 82.64 310 P P 21 49 49.5 +0.9
comp=Z,10nm,1.1s,baz=217,slow=1.1,SNR=8.2
comp=Z,10nm,1.1s
GNI Garni 82.64 310 P P 21 49 48.5 0.0
GNI IAmb IAmb 21 50 21.6
comp=Z,46nm,1.2s
GNI Garni 82.64 310 P P 21 49 48.5 0.0
GNI pmax pmax
comp=Z,46nm,1.3s
J18K Innoko River 82.80 26 P P 21 49 48.7 0.0
J18K IAmb IAmb 21 50 00.7
comp=Z,22nm,0.9s
C19K Lookout Ridge 82.92 20 P P 21 49 50.3 +1.1
F19K Shaleruckik Mo 83.05 23 P P 21 49 51.0 +1.1
F19K IAmb IAmb 21 50 08.6
comp=Z,60nm,1.8s
D19K Kuna River 83.29 21 P 21 49 51.3 +0.1
N19K Bonanza Creek 83.37 29 P P 21 49 52.3 +0.6
J19K Poorman 83.38 26 P P 21 49 52.6 +1.0
J19K IAmb IAmb 21 50 10.7
comp=Z,42nm,1.2s
ATD Arta Tunnel 83.38 281 P P 21 49 51.5 -1.3
ATD IAmb IAmb 21 50 05.2
comp=Z,23nm,1.0s
E19K Redstone River 83.39 22 P 21 49 52.3 +0.7
L19K White Mountain 83.41 28 P P 21 49 53.1 +1.2
L19K IAmb IAmb 21 50 02.8
comp=Z,38nm,1.4s
M19K Big River Lodg 83.58 28 P P 21 49 53.7 +0.9
M19K IAmb IAmb 21 50 05.3
comp=Z,38nm,1.3s
D20K Etivluk River 83.88 21 P P 21 49 54.5 +0.4
F20K Avaraart Lake 83.89 23 P P 21 49 54.8 +0.7
F20K IAmb IAmb 21 50 12.7
comp=Z,24nm,1.1s
L20K Farewell, AK 83.91 27 P P 21 49 55.6 +1.2
L20K IAmb IAmb 21 49 59.4
comp=Z,29nm,1.2s
ILSW Iliamna Southw 83.91 30 P P 21 49 53.5 -1.0
ILSW IAmb IAmb 21 50 05.1
comp=Z,31nm,1.3s
KDAK Kodiak Island 83.93 32 P P 21 49 56.4 +1.9
KDAK Kodiak Island 83.93 32 P P 21 49 56.4 +1.9
KDAK pmax pmax
comp=Z,66nm,1.3s
K20K Telida 83.95 26 P P 21 49 55.4 +0.8
K20K IAmb IAmb 21 50 56.8
comp=Z,38nm,1.4s
B20K Meade River 83.96 20 P P 21 49 55.3 +0.9
J20K Nowinta River 84.05 26 P P 21 49 56.2 +1.2
J20K IAmb IAmb 21 50 14.2
comp=Z,45nm,1.4s
M20K Styx River 84.17 28 P P 21 49 56.5 +0.7
M20K IAmb IAmb 21 50 18.5
comp=Z,42nm,1.4s
GOF Gofitskoye 84.23 315 *ce* **P P 21 49 58.3 +1.9**
KBZ Khabaz 84.26 314 P P 21 49 56.1 -0.4
comp=Z,12nm,0.9s,baz=101,slow=2.8,SNR=15
comp=Z,12nm,0.9s
KBZ Khabaz 84.26 314 *e* **P P 21 49 56.5 0.0**
KBZ pmax pmax
comp=Z,20nm,1.0s
KIV Kislovodsk 84.42 314 P P 21 49 57.4 -0.1
KIV Kislovodsk 84.42 314 ⇓P P 21 50 00.3 +2.8
KIV Kislovodsk 84.42 314 *e* **P P 21 49 56.4 -1.1**
KIV pmax pmax
comp=Z,19nm,1.1s
KIV Kislovodsk 84.42 314 P P 21 49 59.2 +1.7
comp=Z,453nmcomp=Z,21nm,0.9s
SHA1 Shidzhatmaz 84.43 314 *i* **P P 21 49 57.9 +0.2**
IMAR Indian Mountai 84.49 24 P P 21 49 57.9 +0.7
SPU Mount Spurr 84.60 29 P P 21 49 59.1 +1.1
SPU IAmb IAmb 21 50 01.4
comp=Z,22nm,1.4s
GURO Guroymak-BITLI 84.65 308 P 21 49 59.1 +0.3
STLK Strandline Lak 84.74 28 P P 21 49 58.6 -0.1
STLK IAmb IAmb 21 50 46.2
comp=Z,38nm,1.9s
B21K Ikpikpuk River 84.75 20 P P 21 49 59.1 +0.6
B21K IAmb IAmb 21 50 33.9
comp=Z,30nm,1.1s
E21K Killik River 84.78 21 P P 21 49 59.4 +0.6
SKT Skwentna 84.94 28 P P 21 49 58.5 -1.2
SKT IAmb IAmb 21 50 15.6
comp=Z,14nm,1.0s
BRLK Bradley Lake 85.02 30 P P 21 50 00.0 0.0
SLKM Skilak Lake 85.42 30 P 21 50 02.5 +0.5
VRH Novokhopyorsk 85.48 321 *eP* **P 21 50 01.6 -0.9**
VRH pmax pmax
comp=Z,89nm,0.8s
E22K Anaktuvuk Pass 85.53 22 P P 21 50 03.6 +1.0
E22K IAmb IAmb 21 50 46.2
comp=Z,12nm,0.9s
MARD Mardin 85.60 307 P 21 50 03.3 -0.3
O22K Cooper Landing 85.66 30 P P 21 50 05.0 +1.8
KOPT Kop Dagi 85.89 310 P 21 50 06.5 +1.3
COLD Coldfoot 86.05 23 P 21 50 05.4 +0.3
C23K Itkillik River 86.16 20 P P 21 50 05.8 +0.3
C23K IAmb IAmb 21 50 31.8
comp=Z,15nm,0.8s
E23K Chandalar 86.35 22 P P 21 50 07.0 +0.4
E23K IAmb IAmb 21 50 25.9
comp=Z,21nm,1.1s
SML Sawmill 86.43 28 P P 21 50 07.2 +0.1
SML IAmb IAmb 21 50 25.2
comp=Z,36nm,1.2s
SOC Sochi 86.56 313 *eP* **P 21 50 08.2 +0.2**
SOC *e* 21 53 27.2
SOC *e*PPP PPP 21 55 25.8
SOC *e*S **SKSac 22 00 32.0 -1.5**
SOC *e*SS **SS 22 06 22.7 -1.6**
SOC pmax pmax
comp=Z,36nm,0.8s
D24K Happy Valley 86.73 21 P P 21 50 09.1 +0.8
D24K IAmb IAmb 21 50 34.5
comp=Z,17nm,0.8s
E24K Your Creek 86.77 22 P P 21 50 10.3 +1.7
C24K Franklin Bluff 86.81 20 P P 21 50 09.5 +0.8
C24K IAmb IAmb 21 51 06.5
comp=Z,23nm,1.3s
F24K Squaw Lake 86.96 23 P P 21 50 10.5 +0.9
F24K IAmb IAmb 21 50 27.4
comp=Z,17nm,1.4s
VORD Divnogorie 87.01 321 *eP* **P 21 50 08.5 -1.5**
VORD pmax pmax
comp=Z,30nm,0.7s
VORR Voronezh 87.08 321 *eP* **P 21 50 09.9 -0.4**
VORR pmax pmax
comp=Z,73nm,0.9s
VSR Storozhevoye 87.09 321 *eP* **P 21 50 08.7 -1.7**
VSR pmax pmax
comp=Z,40nm,0.9s
KLMR Klimovskoe 87.16 331 *eP* **P 21 50 07.9 -2.7**
KLMR pmax pmax
comp=Z,29nm,0.8s
ILAR Eielson Array 87.23 25 P P 21 50 10.7 -0.2
comp=Z,1.1nm,0.5s,baz=252,slow=4.8,SNR=9.2
comp=Z,1.1nm,0.5s
ILAR Eielson Array 87.23 25 *eP* **P 21 50 13.2 +2.3**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
LPSR Galich'ya Gora 87.27 322 *eP* **P 21 50 11.3 0.0**
LPSR pmax pmax
comp=Z,56nm,0.9s
D25K Kavik River 87.61 21 P P 21 50 12.6 -0.1
E25K Arctic Village 87.87 22 P 21 50 14.0 +0.1
MOS Moscow 88.07 326 *eP* **P 21 50 12.1 -2.9**
MOS pmax pmax
comp=Z,70nm,1.4s
MOS pmax pmax
comp=Z,300nm,2.4s
BMAR Burnt Mountain 88.23 23 P P 21 50 16.4 +0.7
KIBK Kibwezi 88.42 268 P P 21 50 17.1 -0.6
KIBK IAmb IAmb 21 50 36.0
comp=Z,22nm,1.3s
C27K Jago River 88.55 21 P P 21 50 17.4 +0.3
C27K IAmb IAmb 21 50 27.2
comp=Z,7.7nm,0.7s
MENT Mentasta 88.61 27 P P 21 50 16.9 -0.6
MENT IAmb IAmb 21 50 34.2
comp=Z,12nm,0.7s
J26L Joseph Creek 88.66 26 P P 21 50 17.3 -0.5
OBN Obninsk 88.67 325 P P 21 50 16.8 -1.1
comp=Z,13nm,0.6s,baz=93,slow=10,SNR=4.0
comp=Z,13nm,0.6s
OBN Obninsk 88.67 325 P P 21 50 16.6 -1.2
OBN Obninsk 88.67 325 *d* **P P 21 50 16.5 -1.4**
OBN *e* 21 53 50.2
OBN *e*PPP PPP 21 55 47.9
OBN pmax pmax
comp=Z,20nm,0.4s
OBN MLR MLR
comp=Z,765nm,19.0s
ASF Jabal al Asfar 88.78 302 P P 21 50 19.6 +0.5
comp=Z,42nm,0.9s,baz=116,slow=2.5,SNR=24
comp=Z,42nm,0.9s
KMBO Kilima Mbogo 89.18 269 P P 21 50 22.1 +0.5
comp=Z,5.4nm,0.7s,baz=118,slow=4.3,SNR=14
KMBO PKKP **PKKPdf 22 07 53.8 -0.2**
comp=Z,0.7nm,0.3s,baz=140,slow=3.2,SNR=3.0
comp=Z,5.4nm,0.7s
I27K Kandik River 89.45 25 IAmb IAmb 21 50 31.9
comp=Z,40nm,1.8s
L27K Beaver Creek, 89.47 27 P P 21 50 22.2 +0.7
L27K IAmb IAmb 21 50 32.7
comp=Z,36nm,1.9s
BNN Bunyan 89.49 309 P P 21 50 21.7 -0.6
BNN IAmb IAmb 21 50 25.4
comp=Z,17nm,1.2s
GHAJ Ghor Haditha 89.94 301 P 21 50 24.9 +0.5
MMAI Mount Meron Ar 90.02 303 P P 21 50 25.6 +0.7
comp=Z,8.1nm,0.8s,baz=72,slow=11,SNR=9.6
comp=Z,8.1nm,0.8s
F28M Old Crow 90.04 22 IAmb IAmb 21 51 40.6
comp=Z,34nm,1.9s
I28M Miner Creek 90.16 25 IAmb IAmb 21 51 07.7
comp=Z,41nm,1.9s
SYO Syowa Base 90.25 201 ⇓ *e*PcP **PcP 21 50 28.0 +1.8**
SYO Syowa Base 90.25 201 ⇑ *e*pP pP 21 50 32.8 +0.6
EIL Elat 90.52 300 P P 21 50 26.3 -0.9
comp=Z,7.4nm,0.7s,baz=36,slow=2.0,SNR=7.5
comp=Z,7.4nm,0.7s
KIRS Kirsehir-Merke 90.98 309 ⇓P P 21 50 29.0 -0.2
ILGA Ilgaz 91.04 311 P P 21 50 28.6 -1.0
ILGA IAmb IAmb 21 50 34.5
comp=Z,18nm,1.1s
L29M L29M 91.14 27 P P 21 50 30.2 +0.8
L29M IAmb IAmb 21 50 48.0
comp=Z,14nm,1.0s
BRTR Keskin Array B 91.17 310 P P 21 50 28.6 -1.5
comp=Z,4.7nm,0.9s,baz=115,slow=4.7,SNR=12
comp=Z,4.7nm,0.9s
BRTR Keskin Array B 91.17 310 P 21 50 29.9 -0.3
BR106 Keskin Array S 91.19 310 P P 21 50 30.0 -0.2
comp=Z,6.0nm,0.9s
BR105 Keskin Array S 91.19 310 P P 21 50 30.3 +0.1
comp=Z,7.6nm,0.9s
QSPA South Pole Qui 91.44 180 P P 21 50 33.8 +3.1
comp=Z,3.9nm,0.8s,baz=315,slow=3.5,SNR=8.8
QSPA South Pole Qui 91.44 180 P P 21 50 30.6 -0.2
QSPA IAmb IAmb 21 52 22.8
comp=Z,34nm,1.9s
CSS Mathiatis 91.66 305 P 21 50 32.5 +0.2
CSS Mathiatis 91.66 305 P P 21 50 33.7 +1.3
ARCES ARCESS Array B 92.40 340 P P 21 50 33.8 -1.2
comp=Z,7.0nm,0.7s,baz=59,slow=4.5,SNR=15
ARCES PKKP **PKKPdf 22 07 48.5 -0.7**
comp=Z,0.7nm,0.6s,baz=256,slow=3.6,SNR=6.1
comp=Z,7.0nm,0.7s
ARCES ARCESS Array B 92.40 340 P 21 50 34.2 -0.9
ARCES IAmb IAmb 21 50 48.9
comp=Z,16nm,1.1s
SPITS Spitsbergen Ar 92.57 349 P P 21 50 34.7 -1.0
comp=Z,5.2nm,0.7s,baz=31,slow=6.7,SNR=6.2
comp=Z,5.2nm,0.7s
AKASG Malin Array Be 93.39 321 P P 21 50 40.2 +0.2
comp=Z,2.3nm,0.7s,baz=71,slow=4.0,SNR=6.2
comp=Z,2.3nm,0.7s
AKASG Malin Array Be 93.39 321 IAmb IAmb 21 50 40.4
comp=Z,10nm,1.6s
AKASG Malin Array Be 93.39 321 IAmb IAmb 21 50 46.0
comp=Z,9.8nm,1.3s
AKASG Malin Array Be 93.39 321 *eP* **P 21 50 41.4 +1.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AK05 Malin Array Si 93.41 321 P P 21 50 41.6 +1.5
AK06 Malin Array Si 93.42 321 P P 21 50 41.7 +1.6
BORA Eskisehir 93.61 310 IAmb IAmb 21 50 43.1
comp=Z,12nm,1.1s
FINES FINESS Array B 93.61 332 P P 21 50 39.0 -1.7
comp=Z,2.4nm,0.8s,baz=101,slow=4.9,SNR=5.7
comp=Z,2.4nm,0.8s
FINES FINESS Array B 93.61 332 *eP* **P 21 50 39.3 -1.4**
FINES pmax pmax
comp=Z,3.0nm,0.9s
SORM Soroca 94.26 318 ⇑P P 21 50 46.0 +2.0
SORM Soroca 94.26 318 ⇑P P 21 50 46.0 +2.0
NACGM Naroch 94.30 325 *eP* **P 21 50 46.4 +2.4**
comp=Z,15nm,1.0s,baz=81
C36M Paulatuk 95.39 20 IAmb IAmb 21 50 50.4
comp=Z,28nm,1.5s
TESR Tescani 95.62 317 ⇓P P 21 50 50.4 +0.1
VRI Vrincioaia 95.66 316 ⇑P P 21 50 43.0 -7.5
VRI Vrincioaia 95.66 316 ⇑P P 21 50 43.0 -7.5
PABE Paberze 95.79 326 P P 21 50 52.2 +1.4
WTLY Watson Lake, Y 96.04 29 P P 21 50 52.6 +0.6
MLR Muntele Rosu 96.25 316 P P 21 50 51.3 -2.0
comp=Z,5.7nm,0.9s,baz=88,slow=6.7,SNR=6.7
comp=Z,5.7nm,0.9s
MLR Muntele Rosu 96.25 316 P 21 50 53.1 -0.3
MLR IAmb IAmb 21 51 00.9
comp=Z,14nm,1.1s
MLR Muntele Rosu 96.25 316 ⇓P P 21 50 55.7 +2.3
MLR Muntele Rosu 96.25 316 ⇓P P 21 50 55.7 +2.3
BURAR Bucovina Array 96.42 318 P 21 50 53.5 -0.6
BURAR IAmb IAmb 21 51 02.8
comp=Z,11nm,0.8s
BURAR Bucovina Array 96.42 318 ⇑P P 21 50 53.6 -0.4
BURAR Bucovina Array 96.42 318 ⇑P P 21 50 53.6 -0.4
BUR08 Bucovina Ar. S 96.43 318 IAmb IAmb 21 51 05.1
comp=Z,11nm,0.9s
SUW Suwalki 96.53 325 P P 21 50 54.7 +0.5
SUW Suwalki 96.53 325 P P 21 50 54.7 +0.5
LOT Lotru 97.77 316 ⇓P P 21 50 58.3 -1.9
MATP Matopo 97.93 250 LR LR 22 34 16.8
comp=Z,547nm,18.7s,baz=70,slow=35
LIT Litokhoron 99.64 311 Pdif **Pdif 21 51 08.7 +0.1**
LIT Litokhoron 99.64 311 P Pdif 21 51 08.7 +0.1
LIT pmax pmax
comp=Z,20nm,1.2s
HFS Hagfors 99.81 332 P Pdif 21 51 07.0 -1.8
comp=Z,2.2nm,0.8s,baz=99,slow=4.5,SNR=2.3
comp=Z,2.2nm,0.8s
PSZ Piszkesteto 99.88 319 Pdif **Pdif 21 51 11.2 +1.6**
PSZ IAmb IAmb 21 51 30.2
comp=Z,7.7nm,1.2s
PSZ Piszkesteto 99.88 319 P Pdif 21 51 11.2 +1.6
PSZ pmax pmax
comp=Z,8.0nm,1.2s
NB2 NORSAR Subarra100.61 333 P Pdif 21 51 09.1 -3.3
comp=Z,4.3nm,1.0s,baz=70,slow=4.4
NOA NORSAR Array B100.61 333 P Pdif 21 51 11.5 -1.0
comp=Z,1.0nm,0.8s,baz=67,slow=4.5,SNR=3.5
SNAA Sanae 103.00 195 P Pdif 21 51 21.9 -1.0
comp=Z,1.5nm,1.1s,baz=143,slow=10,SNR=2.2
PDAR Pinedale Array 113.22 42 PKKPbc PKKPbc 22 06 47.7 -2.1
comp=Z,0.2nm,0.6s,baz=161,slow=2.0,SNR=2.6
PV20 West Nyswonger 115.50 46 PKPdf 21 56 08.4 +1.1
MNTX Cornudas Mount 120.89 51 PKiKP 21 56 18.0 +0.2
TXAR Lajitas Array 123.19 53 PKP **PKiKP 21 56 22.6 +0.1**
comp=Z,0.7nm,0.6s,baz=348,slow=1.2,SNR=6.7
TORD Torodi Ar. Bea 123.27 287 PKP **PKiKP 21 56 23.3 +0.4**
comp=Z,4.0nm,0.5s,baz=44,slow=3.9,SNR=4.1
TORD Torodi Ar. Bea 123.27 287 PKiKP 21 56 24.5 +1.7
R40A Maddies Statio 126.72 38 PKPdf 21 56 28.6 0.0
DBIC Dimbokro 130.68 280 PKP **PKiKP 21 56 37.8 +0.1**
comp=Z,3.4nm,0.7s,baz=141,slow=3.1,SNR=6.7
DBIC SKPab **SKPbc 21 59 59.4 -0.1**
comp=Z,5.6nm,0.9s,baz=134,slow=7.2,SNR=5.7
PLCA Paso Flores 138.05 161 PKP **PKPdf 21 56 50.1 +0.1**
comp=Z,3.5nm,0.9s,baz=192,slow=5.5,SNR=3.9
LCO Las Campanas 148.16 151 PKPbc 21 57 12.4 +0.8
LCO Las Campanas 148.16 151 PKP2 **PKPbc 21 57 12.4 +0.8**
AC05 El Transito 148.51 151 PKiKP 21 57 13.4 -0.5
CHIV Chivirico 149.07 45 PKiKP 21 57 16.3 +1.2
PLTB Pedras Altas 149.91 180 PKiKP 21 57 16.5 -0.1
CPUP Villa Florida 155.07 172 PKPbc PKPbc 21 57 29.2
comp=Z,2.9nm,1.3s,baz=48,slow=4.5,SNR=2.8
LPAZ La Paz 159.50 137 PKP **PKPdf 21 57 26.1 +1.0**
comp=Z,3.1nm,1.0s,baz=263,slow=2.1,SNR=5.8
SDV Santo Domingo 160.13 58 *eP* **PKPdf 21 57 24.6 -0.8**
TEFE Tefe 168.80 100 *eP* **PKPdf 21 57 32.5 -0.4**

JSN ***14*** *21:39:17.3±0.7, 18°.15N×75°.88W, h0km±20km, MD3.5*
SSNC ***14*** *21:39:20.9±1.6, 18°.41N×75°.91W, h7km±14km, MD2.9*
ISC 14 21:39:17.9±1.7, 18°.41N±0°.08×75°.97W±0°.09, h10km, n10, σ0s89/15, 3C, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**0.80**	**245**	⇑*i*P	**Pg**	**21 39 32.5**	**-0.8**
STH	**Stony Hill**	**0.86**	**247**	⇑*i*P	**Pg**	**21 39 33.8**	**-0.7**
MTDJ	**Mount Denham**	**1.50**	**263**	⇑*i*P	**Pn**	**21 39 45.1**	**+0.2**
MTDJ	**Mount Denham**	**1.50**	**263**	*e*P	**Pn**	**21 39 45.3**	**+0.4**
MTDJ				*e*S	**Sn**	**21 40 05.9**	**+1.2**
CHIV	**Chivirico**	**1.61**	**345**	*e*P	**Pn**	**21 39 46.3**	**-0.1**
CHIV				*e*S	**Sn**	**21 40 06.0**	**-1.2**
CHIV				*e*Sg	**Sb**	**21 40 08.3**	**+0.2**
GTBY	**Guantanamo Bay**	**1.71**	**28**	*e*P	**Pn**	**21 39 48.3**	**+0.5**
LMGC	**Las Mercedes**	**1.91**	**329**	*e*P	**Pn**	**21 39 52.3**	**+1.8**
LMGC				*e*S	**Sn**	**21 40 14.4**	**-0.3**
PINC	**Pinares de May**	**2.07**	**5**	*e*P	**Pn**	**21 39 52.9**	**+0.2**
PINC				*e*S	**Sn**	**21 40 18.2**	**-0.4**
QMBU	**Quimbuelo**	**2.08**	**31**	*e*P	**Pn**	**21 39 53.6**	**+0.6**
NMDO	**Nuevo Mundo**	**2.33**	**23**	*e*P	**Pn**	**21 39 57.3**	**+1.0**

IDC ***14*** *21:39:48.8±1.8, 1°.46N×125°.64E, h0km, mb4.3/4, mbtmp4.4/5, ML4.2/1, MS4.7/2, Error ellipse: s-maj=149.6km s-min=21.5km az=68.0*
NEIC ***14*** *21:39:55.1±1.4, 1°.12N±0°.09×125°.14E±0°.10, h35km±2km, mb4.6/18, Error ellipse: s-maj=19.1km s-min=10.4km az=309.0*
ISC 14 21:39:54.6±0.7, 1°.16N±0°.10×125°.3E±0°.2, h35km, n27, σ0s87/25, mb4.6/14, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNRA	**Kununurra**	**17.08**	**169**	Pn	**Pn**	**21 43 49.3**	**-1.5**
FITZ	**Fitzroy Crossi**	**19.14**	**179**	P	**Pn**	**21 44 16.6**	**+0.6**
	0.5nm,0.3s,baz=356,slow=13,SNR=1.0						
	7.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.14**	**179**	P	**P**	**21 44 15.4**	**+0.5**
TPUB	**Ta-pu**	**22.47**	**349**	P	**P**	**21 44 50.9**	**0.0**
WB0	**Warramunga Arr**	**22.64**	**157**	P	**P**	**21 44 51.7**	**-1.1**
WB0				IAmb	IAmb	21 44 54.1	
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**22.77**	**157**	P	**P**	**21 44 53.1**	**-1.0**
WRAB				IAmb	IAmb	21 44 57.1	
	comp=Z,29nm,1.1s						
WRA	**Warramunga Arr**	**22.78**	**158**	P	**P**	**21 44 53.2**	**-1.0**
	comp=Z,10nm,0.7s,baz=336,slow=9.7,SNR=3.4						
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**22.78**	**158**	P	**P**	**21 44 52.7**	**-1.6**
WR8	**Warramunga Arr**	**22.85**	**157**	P	**P**	**21 44 53.9**	**-1.1**
WR8				IAmb	IAmb	21 44 58.0	
	comp=Z,16nm,0.8s						
SSLB	**Suanglung**	**22.88**	**350**	P	**P**	**21 44 54.7**	**-0.6**
SSLB				IAmb	IAmb	21 45 12.8	
	comp=Z,13nm,1.0s						
JOW	**Kunigami**	**25.69**	**6**	P	**P**	**21 45 21.9**	**+0.4**
JOW				IAmb	IAmb	21 45 30.8	
	comp=Z,36nm,1.1s						
AS31	**Alice Springs**	**26.06**	**162**	P	**P**	**21 45 24.3**	**-0.7**
ASAR	**Alice Springs**	**26.06**	**162**	P	**P**	**21 45 26.0**	**+1.0**
	comp=Z,6.1nm,0.7s,baz=346,slow=12,SNR=4.2						
	comp=Z,6.1nm,0.7s						
ASAR	**Alice Springs**	**26.06**	**162**	P	**P**	**21 45 25.7**	**+0.7**
CRAI	**Chiangrai**	**30.85**	**310**	P	**P**	**21 46 07.5**	**-0.3**
CRAI				IAmb	IAmb	21 46 14.0	
	comp=Z,5.2nm,0.8s						
FORT	**Forrest**	**31.87**	**175**	P	**P**	**21 46 16.8**	**+0.2**
FORT				IAmb	IAmb	21 46 21.3	
	comp=Z,6.5nm,0.7s						
BBOO	**Buckleboo**	**35.29**	**164**	P	**P**	**21 46 47.8**	**+1.5**
BBOO				IAmb	IAmb	21 46 51.8	
	comp=Z,14nm,1.1s						
KSAR	**Wonju Array Be**	**36.18**	**4**	P	**P**	**21 46 54.2**	**+0.3**
STKA	**Stephens Creek**	**36.31**	**156**	LR	LR	22 03 15.8	
	comp=Z,gum,19.4s,baz=346,slow=39						
MKAR	**Makanchi Array**	**58.86**	**327**	P	**P**	**21 49 49.4**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=119,slow=7.4,SNR=5.8						
	comp=Z,1.0nm,0.5s						
MAKZ	**Makanchi**	**59.04**	**327**	P	**P**	**21 49 50.4**	**-0.8**
KDJ	**Kajisay**	**59.33**	**320**	P	**P**	**21 49 53.2**	**-0.2**
KDJ				IAmb	IAmb	21 50 12.4	
	comp=Z,5.3nm,1.0s						
KURBB	**Kurchatov Array**	**63.14**	**329**	P	**P**	**21 50 18.2**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=125,slow=6.2,SNR=3.6						
	comp=Z,2.2nm,0.5s						
KURK	**Kurchatov**	**63.14**	**329**	P	**P**	**21 50 18.5**	**-0.4**
KURK				IAmb	IAmb	21 50 20.7	
	comp=Z,4.0nm,0.6s						
KKAR	**Karatay Array**	**64.14**	**318**	P	**P**	**21 50 25.5**	**-0.1**
KDAK	**Kodiak Island**	**84.82**	**32**	LR	LR	22 27 05.8	
	comp=Z,244nm,19.3s,baz=247,slow=34						
I21K	**Tanana**	**85.90**	**25**	P	**P**	**21 52 31.3**	**+0.7**

IDC 14 21:42:59.9±1.8, 1°.81N×126°.54E, h0km, mb3.8/4, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=125.8km s-min=22.3km az=69.0, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.81**	**183**	P	P	21 47 31.6	-0.5
	0.3nm,0.3s,baz=339,slow=10,SNR=1.3						
	3.2nm,0.7s						
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	21 48 05.2	-0.6
	2.5nm,0.7s,baz=340,slow=11,SNR=3.2						
	2.5nm,0.7s						
ASAR	**Alice Springs**	**26.32**	**165**	P	P	21 48 38.4	+0.8
	0.6nm,0.5s,baz=348,slow=12,SNR=1.6						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	21 53 01.7	+0.1
	2.8nm,1.1s,baz=119,slow=7.9,SNR=4.7						
	2.8nm,1.1s						
KURBB	**Kurchatov Arra**	**63.25**	**328**	P	P	21 53 30.0	-0.1
	0.5nm,0.5s,baz=120,slow=6.9,SNR=1.6						
	0.5nm,0.5s						

IDC ***14*** *21:43:36.4±0.7, 1°.61N×126°.42E, h0km, mb4.3/17, mbtmp4.3/18, ML3.6/1, Error ellipse: s-maj=34.0km s-min=14.0km az=75.0*

*DJA **14** 21:43:40.2±0.2,2°N±2°×12°6E±°, h10km, M4.6/19, mb4.6/15, MLv4.5/19*

ISC 14 21:43:41.8±0.6, 1°56N±0°05×126°57E±0°08, h35km, n39, σ1§18/41, mb4.2/18, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**134**	P	**Pn**	**21 44 00.9**	**-0.1**
SGSI	**Sangihe**	**2.35**	**334**	P	**Pn**	**21 44 18.6**	**+0.6**
SGSI				S	**Sn**	**21 44 48.0**	**+2.3**
KMSI	**Cibinong**	**2.76**	**249**	P	**Pn**	**21 44 23.5**	**-0.1**
SANI	**Sanana**	**3.63**	**189**	P	**Pn**	**21 44 35.5**	**-0.1**
SANI				S	**Sn**	**21 45 17.1**	**-0.1**
LUWI	**Luwuk**	**4.59**	**236**	P	**Pn**	**21 44 49.7**	**+0.9**
MRSI	**Marisa**	**4.75**	**257**	P	**Pn**	**21 44 50.5**	**-0.4**
NLAI	**Namlea**	**4.80**	**174**	P	**Pn**	**21 44 51.6**	**0.0**
AAI	**Ambon** 0.3nm43nm,0.8s	**5.46**	**163**	P	**Pn**	**21 45 01.7**	**+1.0**
APSI	**Ampana**	**5.50**	**244**	P	**Pn**	**21 45 01.3**	**+0.1**
MPSI	**Mapaga** 0.2nm33nm,0.9s	**6.78**	**260**	P	**Pn**	**21 45 20.0**	**+1.2**
PCI	**Palu** 62nm,0.7s	**7.16**	**250**	P	**Pn**	**21 45 23.6**	**-0.5**
FAKI	**Fak Fak** 0.2nm38nm,1.2s	**7.22**	**128**	P	**Pn**	**21 45 26.8**	**+1.9**
BBSI	**Bau Bau** 0.2nm41nm,1.0s	**8.06**	**210**	P	**Pn**	**21 45 35.6**	**-0.8**
TTSI	**Tana Toraja** 46nm,0.6s	**8.15**	**236**	P	**Pn**	**21 45 37.6**	**-0.1**
SPSI	**Sidrap Palu**	**8.73**	**231**	P	**Pn**	**21 45 46.5**	**+0.8**
BNSI	**Bone** 31nm,0.8s	**8.76**	**227**	P	**Pn**	**21 45 46.2**	**+0.2**
BKSI	**Bulukumba** 20nm,0.7s	**9.39**	**223**	P	**Pn**	**21 45 56.2**	**+1.5**
KAPI	**Kappang** 0.5nm,0.3s,baz=90,slow=16,SNR=1.5 4.2nm,0.4s	**9.43**	**226**	Pn	**Pn**	**21 45 52.9**	**-2.4**
BSSI	**Bau Bau, Buton** 24nm,0.5s	**9.76**	**218**	P	**Pn**	**21 46 02.0**	**+2.1**
EDFI	**Ende, Flores**	**11.34**	**205**	P	**Pn**	**21 46 23.4**	**+1.9**
TWSI	**Taliwang, Sumb**	**14.06**	**223**	P	**Pn**	**21 47 00.4**	**+1.7**
WRA	**Warramunga Arr** 6.8nm,0.8s,baz=335,slow=10,SNR=12 6.8nm,0.8s	**22.69**	**161**	P	**P**	**21 48 39.9**	**-0.6**
ASAR	**Alice Springs** 2.6nm,0.4s,baz=348,slow=13,SNR=12 2.6nm,0.4s	**26.07**	**165**	P	**P**	**21 49 13.9**	**+1.6**
STKA	**Stephens Creek** 1.2nm,0.3s,baz=319,slow=7.5,SNR=3.0 1.2nm,0.3s	**36.18**	**158**	P	**P**	**21 50 40.7**	**-0.5**
MJAR	**Matsushiro Arr** 2.6nm,0.8s,baz=194,slow=9.2,SNR=4.7 2.6nm,0.8s	**36.44**	**16**	P	**P**	**21 50 42.4**	**-0.9**
USRK	**Ussuriysk Ar.** 2.1nm,0.7s,baz=150,slow=6.0,SNR=2.5 2.1nm,0.7s	**42.73**	**6**	P	**P**	**21 51 34.0**	**-1.6**
HILR	**Hailar Array B** 2.1nm,0.5s,baz=170,slow=9.0,SNR=4.3	**48.17**	**354**	P	**P**	**21 52 20.9**	**+2.2**
SONM	**Songino Array** 1.0nm,0.5s,baz=157,slow=9.1,SNR=5.2 1.0nm,0.5s	**49.29**	**342**	P	**P**	**21 52 27.3**	**-0.2**
PETK	**Petropavlovsk-** 3.9nm,0.9s,baz=218,slow=6.9,SNR=1.6 3.9nm,0.9s	**57.49**	**22**	P	**P**	**21 53 28.4**	**+1.0**
MKAR	**Makanchi Array** 2.0nm,0.4s,baz=121,slow=7.6,SNR=21 2.0nm,0.4s	**59.24**	**326**	P	**P**	**21 53 38.9**	**-0.9**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,baz=131,slow=4.0,SNR=1.8 0.7nm,0.4s	**62.44**	**334**	P	**P**	**21 54 00.2**	**-1.1**
KURBB	**Kurchatov Arra** 3.3nm,0.5s,baz=128,slow=6.1,SNR=22 3.3nm,0.5s	**63.47**	**328**	P	**P**	**21 54 07.4**	**-0.9**
BVAR	**Borovoye Array** 1.1nm,0.5s,baz=116,slow=6.8,SNR=6.9 1.1nm,0.5s	**69.04**	**327**	P	**P**	**21 54 43.4**	**-0.6**
AKTO	**Aktyubinsk** 1.1nm,0.3s,baz=122,slow=4.4,SNR=5.8 1.1nm,0.3s	**75.25**	**322**	P	**P**	**21 55 20.1**	**-1.0**
VNDA	**Vanda** 1.4nm,0.7s,baz=306,slow=4.8,SNR=6.2 1.4nm,0.7s	**81.31**	**173**	P	**P**	**21 55 54.8**	**+0.7**
KIRV	**Kirov** 2.6nm,0.5s,baz=90,slow=5.1,SNR=4.1 2.6nm,0.5s	**81.98**	**329**	P	**P**	**21 55 58.0**	**+0.1**
BELG	**Belogornoye** 4.8nm,0.7s,baz=337,slow=7.2,SNR=4.5 4.8nm,0.7s	**82.02**	**323**	P	**P**	**21 55 57.5**	**-0.8**
KBZ	**Khabaz** 1.1nm,0.7s,baz=90,slow=12,SNR=2.0 1.1nm,0.7s	**84.34**	**314**	P	**P**	**21 56 09.7**	**-0.8**
ARCES	**ARCESS Array B** 1.3nm,0.9s,baz=66,slow=5.0,SNR=1.3 1.3nm,0.9s	**92.42**	**340**	P	**P**	**21 56 47.8**	**-0.8**

*IDC **14** 21:49:18.8±2.1, 1°96N×126°76E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=193.1km s-min=24.4km az=67.0*

*DJA **14** 21:49:22.0±0.3, 1°N±3°×12°6E±°, h10km, M3.7/7, MLv3.7/7*

ISC 14 21:49:23.4±1.7, 1°9N±0°2×127°5E±0°3, h35km, n6, σ2§35/7, mb3.4/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.15**	**184**	P	**Pn**	**21 49 42.7**	**-0.3**
SGSI	**Sangihe**	**2.60**	**312**	P	**Pn**	**21 50 04.7**	**+1.7**
SGSI				S	**Sn**	**21 50 32.7**	**-0.8**
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=340,slow=10,SNR=2.9 0.6nm,0.5s	**22.75**	**163**	P	**P**	**21 54 24.2**	**+1.4**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=345,slow=9.0,SNR=4.3 0.4nm,0.6s	**26.20**	**167**	P	**P**	**21 54 58.0**	**+2.9**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=113,slow=6.1,SNR=2.0 0.2nm,0.5s	**59.45**	**326**	P	**P**	**21 59 20.8**	**-2.0**
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=128,slow=7.2,SNR=1.8 0.2nm,0.3s	**63.64**	**328**	P	**P**	**21 59 48.9**	**-2.1**

IDC 14 21:51:07.5±2.4, 1°54N×126°21E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=217.8km s-min=29.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.8nm,0.7s,baz=338,slow=10,SNR=2.9 0.8nm,0.7s	**22.79**	**160**	P	P	21 56 10.7	-1.3
ASAR	**Alice Springs** 0.3nm,0.4s,baz=348,slow=9.3,SNR=1.8 0.3nm,0.4s	**26.15**	**164**	P	P	21 56 44.6	+0.9
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=132,slow=6.8,SNR=1.7 0.4nm,0.6s	**59.06**	**326**	P	P	22 01 09.6	0.0

*IDC **14** 21:56:00.8±0.9, 1°67N×126°57E, h0km, mb4.0/8, mbtmp4.0/10, ML3.7/2, Error ellipse: s-maj=55.2km s-min=15.2km az=71.0*

*DJA **14** 21:56:04.9±1.1, 2°N±3°×12°6E±°, h17km±10km, M4.3/12, mb4.2/2, MLv4.3/12*

*NEIC **14** 21:56:06.4±2.1, 1°62N±0°06×126°43E±0°04, h35km±2km, mb4.4/17, Error ellipse: s-maj=11.1km s-min=6.6km az=158.0*

ISC 14 21:56:06.3±0.5, 1°58N±0°06×126°44E±0°08, h35km, n47, σ1§31/49, mb4.3/17, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**131**		**Pn**	**21 56 28.0**	**+0.9**
TNTI	**Ternate**	**1.23**	**131**	P	**Pn**	**21 56 27.2**	**+0.1**
TNTI				S	**Sn**	**21 56 44.6**	**+2.1**
SGSI	**Sangihe**	**2.28**	**337**	P	**Pn**	**21 56 43.3**	**+1.8**
SGSI				S	**Sn**	**21 57 08.9**	**+0.6**
KMSI	**Cibinong**	**2.65**	**248**	P	**Pn**	**21 56 46.2**	**-0.4**
SANI	**Sanana**	**3.64**	**187**	P	**Pn**	**21 57 03.5**	**+3.3**
LUWI	**Luwuk**	**4.50**	**235**	Pn	**Pn**	**21 57 12.7**	**+0.7**
LUWI	**Luwuk**	**4.50**	**235**	P	**Pn**	**21 57 11.4**	**-0.6**
LUWI				S	Sn	21 57 27.7	-35
TOLI2	**Tolitoli**	**5.67**	**265**	Pn	**Pn**	**21 57 26.9**	**-1.3**
MYLDM	**Lahad Datu**	**8.69**	**294**	Pn	**Pn**	**21 58 10.9**	**+1.3**
KAPI	**Kappang** 0.5nm,0.3s,baz=105,slow=19,SNR=3.0 4.9nm,0.5s	**9.36**	**226**	Pn	**Pn**	**21 58 20.2**	**+1.5**
KAPI	**Kappang**	**9.36**	**226**	Pn	**Pn**	**21 58 20.6**	**+1.9**
SOEI	**Soe**	**11.47**	**191**	Pn	**Pn**	**21 58 49.9**	**+2.1**
SBUM	**Sibu**	**14.23**	**274**		**Pn**	**21 59 24.8**	**-0.7**
MTN	**Manton Dam**	**15.07**	**162**	Pn	**Pn**	**21 59 38.0**	**+1.1**
KNRA	**Kununurra**	**17.30**	**172**		**Pn**	**22 00 05.2**	**-0.1**
KNRA	comp=Z,39nm,1.4s			IAmb	IAmb	22 00 10.6	
FITZ	**Fitzroy Crossi** comp=Z,0.2nm,0.3s,baz=14,slow=8.7,SNR=5.4 comp=Z,1.8nm,0.7s	**19.57**	**182**	P	**P**	**22 00 30.8**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**P**	**22 00 30.6**	**-0.8**
WB0	**Warramunga Arr**	**22.61**	**160**	P	**P**	**22 01 02.8**	**-1.4**
WB0	comp=Z,10.0nm,0.6s			IAmb	IAmb	22 01 28.7	
COEN	**Coen**		**22.66**	**133**	P	**P**	**22 01 04.9**	**+0.1**
COEN	comp=Z,23nm,1.4s			IAmb	IAmb	22 01 09.5	
WRA	**Warramunga Arr** comp=Z,6.0nm,0.5s,baz=340,slow=11,SNR=32 comp=Z,6.0nm,0.5s	**22.75**	**160**	P	**P**	**22 01 05.0**	**-0.7**
WRA	**Warramunga Arr**	**22.75**	**160**	P	**P**	**22 01 04.5**	**-1.3**
WR8	**Warramunga Arr**	**22.82**	**160**	P	**P**	**22 01 05.1**	**-1.3**
WR8	comp=Z,25nm,1.4s			IAmb	IAmb	22 01 44.9	
PSA00	**Pilbara Seismi**	**23.90**	**195**	P	**P**	**22 01 16.4**	**-0.6**
PSA00	comp=Z,29nm,1.4s			IAmb	IAmb	22 01 50.7	
AS31	**Alice Springs**	**26.13**	**164**	P	**P**	**22 01 37.2**	**-0.1**
ASAR	**Alice Springs** comp=Z,1.7nm,0.5s,baz=345,slow=8.1,SNR=37 comp=Z,1.7nm,0.5s	**26.13**	**164**	P	**P**	**22 01 37.3**	**0.0**
ASAR	**Alice Springs**	**26.13**	**164**	P	**P**	**22 01 36.5**	**-0.8**
PZH	**PanZhiHua**	**34.31**	**318**	P	**P**	**22 02 51.3**	**+1.5**
BBOO	**Buckleboo**	**35.40**	**166**	P	**P**	**22 02 58.4**	**-0.5**
BBOO	comp=Z,16nm,1.2s			IAmb	IAmb	22 03 28.5	
STKA	**Stephens Creek** comp=Z,2.0nm,0.6s,baz=328,slow=9.5,SNR=4.6 comp=Z,2.0nm,0.6s	**36.25**	**158**	P	**P**	**22 03 06.2**	**-0.1**
HHC	**Hu-ho-hao-te**		**41.34**	**343**	*e*P	**P**	**22 03 51.3**	**+2.3**
HHC	comp=Z,8.0nm,0.7s				pmax	pmax		
HHC	comp=Z,370nm,5.6s				pmax	pmax		
EVN	**Everest**		**46.06**	**308**	P	**P**	**22 04 28.1**	**+0.4**
EVN	comp=Z,4.3nm,1.1s				IAmb	IAmb	22 05 01.4	
SONM	**Songino Array** comp=Z,0.4nm,0.6s,baz=152,slow=6.4,SNR=2.3 comp=Z,0.4nm,0.6s	**49.23**	**342**	P	**P**	**22 04 52.0**	**+0.5**
WMQ	**Urumqi**		**54.32**	**326**	*e*P	**P**	**22 05 27.8**	**-1.6**
WMQ	comp=Z,20nm,0.7s				pmax	pmax		
MKAR	**Makanchi Array** comp=Z,1.7nm,0.6s,baz=118,slow=7.9,SNR=23 comp=Z,1.7nm,0.6s	**59.15**	**326**	P	**P**	**22 06 03.1**	**-0.6**
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**22 06 02.8**	**-0.9**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.4s,baz=148,slow=8.6,SNR=2.2 comp=Z,0.4nm,0.4s	**62.36**	**334**	P	**P**	**22 06 25.0**	**-0.3**
KURBB	**Kurchatov Arra** comp=Z,0.9nm,0.5s,baz=125,slow=6.5,SNR=6.6 comp=Z,0.9nm,0.5s	**63.38**	**328**	P	**P**	**22 06 31.6**	**-0.5**
KURK	**Kurchatov**	**63.39**	**328**	P	**P**	**22 06 31.2**	**-1.0**
KKAR	**Karatay Array**	**64.60**	**318**	P	**P**	**22 06 40.1**	**-0.3**
AB31	**Akbulak array**	**73.62**	**321**	P	**P**	**22 07 34.9**	**-1.3**
AB31	comp=Z,3.0nm,1.4s			IAmb	IAmb	22 07 47.6	
ABKAR	**Akbulak array**		**73.62**	**321**	P	**P**	**22 07 34.5**	**-1.7**
VNDA	**Vanda** comp=Z,0.7nm,0.6s,baz=318,slow=7.8,SNR=7.3 comp=Z,0.7nm,0.6s		**81.35**	**173**	P	**P**	**22 08 19.2**	**+0.4**
VNDA	**Vanda**		**81.35**	**173**	P	**P**	**22 08 19.2**	**+0.4**
VNDA	comp=Z,2.7nm,1.2s				IAmb	IAmb	22 08 26.8	
Q19K	**Cape Douglas,**	**83.44**	**31**	P	**P**	**22 08 30.9**	**+0.8**
E22K	**Anaktuvuk Pass**	**85.46**	**22**	P	**P**	**22 08 41.5**	**+1.3**
PWL	**Port Wells**	**86.29**	**29**	P	**P**	**22 08 42.0**	**-2.4**
KUQ	**Kuujjuuaa**	**119.32**	**9**	PKPdf	**PKPdf**	**22 14 48.9**	**-2.8**

IDC 14 21:57:49.3±1.9, 1°44N×126°11E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=197.4km s-min=23.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 2.3nm,0.5s,baz=338,slow=10,SNR=3.3 2.3nm,0.5s	**22.74**	**160**	P	P	22 02 52.4	-0.8
ASAR	**Alice Springs** 1.0nm,0.4s,baz=341,slow=9.0,SNR=1.4 1.0nm,0.4s	**26.09**	**164**	P	P	22 03 25.0	+0.1
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=122,slow=8.2,SNR=2.4 0.5nm,0.5s	**59.08**	**326**	P	P	22 07 51.2	-0.3
KURBB	**Kurchatov Arra** 1.7nm,0.7s,baz=128,slow=6.1,SNR=5.2 1.7nm,0.7s	**63.33**	**328**	P	P	22 08 20.3	+0.1
VNDA	**Vanda** 0.4nm,0.6s,baz=341,slow=7.0,SNR=1.8 0.4nm,0.6s	**81.25**	**173**	P	P	22 10 07.3	+0.5

IDC 14 21:59:58.9±2.2, 1°75N×126°30E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=186.5km s-min=27.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.4s,baz=338,slow=10,SNR=3.7 0.7nm,0.4s	**22.96**	**160**	P	P	22 05 03.7	-1.4
ASAR	**Alice Springs** 0.4nm,0.4s,baz=348,slow=13,SNR=2.6 0.4nm,0.4s	**26.33**	**164**	P	P	22 05 37.8	+1.1
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=121,slow=6.9,SNR=4.4 0.2nm,0.3s	**58.93**	**326**	P	P	22 10 00.1	0.0

*IDC **14** 22:00:29.2±0.4, 1°45N×126°27E, h0km, mb4.7/30, mbtmp4.7/32, ML4.4/2, Error ellipse: s-maj=21.2km s-min=9.1km az=77.0*

*BJI **14** 22:00:29.8, 0°85N×126°67E, h47km, mB5.5/10, mb4.8/55, Ms4.8/3, Ms7 4.7/3*

*MOS **14** 22:00:30.9±1.0, 1°52N×126°23E, h21km, mb5.1/39, Error ellipse: s-maj=10.6km s-min=5.9km az=114.4*

*NEIC **14** 22:00:32.6±1.9, 1°49N±0°05×126°45E±0°04, h18km±3km, mb5.1/91, Error ellipse: s-maj=7.1km s-min=5.8km az=170.0*

*DJA **14** 22:00:33.5±0.2, 2°N±2°×12°6E±°, h10km, M4.8/22, mB5.2/8, mb5.0/15, MLv4.8/22, Mw(mB)4.6/8*

ISC 14 22:00:34.7±0.3, 1°48N±0°03×126°43E±0°04, h35km, n309, σ1§32/328, mb5.0/123, 3C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.17**	**127**		**Pn**	**22 00 54.6**	**-0.1**
TNTI					**Sn**	**22 01 07.7**	**-1.7**
TNTI	**Ternate**	**1.17**	**127**	P	**Pn**	**22 00 55.3**	**+0.6**
TNTI				S	**Sn**	**22 01 10.9**	**+1.5**
SGSI	**Sangihe**	**2.37**	**338**	P	**Pn**	**22 01 11.2**	**+0.1**
SGSI				S	**Sn**	**22 01 40.7**	**+1.7**
KMSI	**Cibinong**	**2.61**	**250**	P	**Pn**	**22 01 14.6**	**+0.2**
KMSI				S	**Sn**	**22 01 47.0**	**+2.1**
SANI	**Sanana**	**3.53**	**187**	P	**Pn**	**22 01 28.2**	**+1.0**
SANI	**Sanana**	**3.53**	**187**	P	**Pn**	**22 01 27.9**	**+0.7**
SANI				S	**Sn**	**22 02 07.8**	**0.0**
LUWI	**Luwuk**	**4.43**	**236**	Pn	**Pn**	**22 01 40.2**	**+0.6**
LUWI	**Luwuk**	**4.43**	**236**	P	**Pn**	**22 01 41.1**	**+1.6**
LUWI	**Luwuk**	**4.43**	**236**	P	**Pn**	**22 01 41.5**	**+2.0**
MRSI	**Marisa**	**4.60**	**258**	P	**Pn**	**22 01 43.1**	**+1.3**
NLAI	**Namlea**	**4.74**	**172**	P	**Pn**	**22 01 45.4**	**+1.7**
NLAI				S	**Sn**	**22 02 40.7**	**+3.3**
APSI	**Ampana**	**5.34**	**244**	P	**Pn**	**22 01 53.4**	**+1.4**
SWI	**Sorong**	**5.36**	**116**	P	**Pn**	**22 01 55.3**	**+3.0**
MSAI	**Masohi** 0.5nm3µm171nm,0.7s	**5.41**	**152**	P	Pn	22 01 57.9	+5.0
AAI	**Ambon**	**5.43**	**161**	P	Pn	22 01 59.6	+6.4
DAV	**Davao City (W)**	**5.62**	**351**	Pn	**Pn**	**22 01 55.0**	**-0.9**
TOLI2	**Tolitoli**	**5.66**	**266**	Pn	**Pn**	**22 01 55.4**	**-1.0**
TOLI2	**Tolitoli**	**5.66**	**266**	P	**Pn**	**22 01 56.0**	**-0.4**
KDI	**Kendari**	**6.61**	**215**	P	**Pn**	**22 02 10.9**	**+1.4**
MPSI	**Mapaga** 0.4nm2µm102nm,0.8s	**6.63**	**260**	P	**Pn**	**22 02 11.9**	**+2.2**
PCI	**Palu**	**7.00**	**250**	P	**Pn**	**22 02 15.5**	**+0.6**
FAKI	**Fak Fak**	**7.28**	**127**	Pn	**Pn**	**22 02 20.0**	**+1.3**
FAKI	**Fak Fak** 0.2nm74nm,1.1s	**7.28**	**127**	P	**Pn**	**22 02 21.2**	**+2.6**
BBSI	**Bau Bau** 0.4nm1µm137nm,1.0s	**7.92**	**209**	P	**Pn**	**22 02 28.9**	**+1.4**
TTSI	**Tana Toraja** 0.4nm2µm131nm,0.8s	**7.99**	**236**	P	**Pn**	**22 02 29.4**	**+0.9**
SPSI	**Sidrap Palu** 1µm98nm,0.6s	**8.58**	**231**	P	**Pn**	**22 02 37.6**	**+1.1**
MYLDM	**Lahad Datu**	**8.73**	**295**	Pn	**Pn**	**22 02 40.6**	**+2.0**
MYLDM	**Lahad Datu**	**8.73**	**295**	P	**Pn**	**22 02 40.9**	**+2.4**
BKSI	**Bulukumba** 60nm,0.6s	**9.24**	**223**	P	**Pn**	**22 02 46.2**	**+0.6**
KAPI	**Kappang** 3.3nm,0.3s,baz=11,slow=6.7,SNR=11	**9.28**	**226**	Pn	**Pn**	**22 02 47.4**	**+1.3**
KAPI	**Kappang**	**9.28**	**226**	Pn	**Pn**	**22 02 46.9**	**+0.7**
KAPI	**Kappang**	**9.28**	**226**	P	**Pn**	**22 02 47.3**	**+1.2**
KAPI	**Kappang**	**9.28**	**226**	S	**Sn**	**22 04 30.9**	**+1.5**
KAPI	**Kappang**	**9.28**	**226**	*i* P	**Pn**	**22 02 46.7**	**+0.6**
BSSI	**Bau Bau, Buton**	**9.62**	**218**	P	**Pn**	**22 02 51.9**	**+1.1**
BATI	**Baumata** 2.7nm,0.3s,baz=269,slow=3.8,SNR=7.9	**11.93**	**193**	Pn	Pn	22 03 29.9	+7.4
SBUM	**Sibu**	**14.23**	**274**	Pn	**Pn**	**22 03 54.9**	**+0.9**
SBUM	**Sibu**	**14.23**	**274**	P	**Pn**	**22 03 55.7**	**+1.8**
DRS	**Darwin Rock St**	**14.52**	**162**	P	**Pn**	**22 03 57.5**	**-0.3**
JAY	**Jayapura** 0.8nm,0.3s,baz=234,slow=6.1,SNR=5.3 8.0nm,0.8s	**14.81**	**106**	Pn	**Pn**	**22 04 04.2**	**+2.3**
MTN	**Manton Dam**	**14.98**	**162**	Pn	**Pn**	**22 04 03.1**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.73**	**231**	P	**P**	**22 04 18.2**	**+0.7**
JAGI	comp=Z,73nm,0.9s			IAmb	IAmb	22 04 20.7	
JAGI	**Jajag, Banyuwa**	**15.73**	**231**	P	**Pn**	**22 04 14.9**	**+1.0**
KNRA	**Kununurra** comp=Z,73nm,1.5s	**17.20**	**172**	P	**Pn**	**22 04 32.1**	**-0.4**
KNRA	**Kununurra**	**17.20**	**172**	Pn	**Pn**	**22 04 31.5**	**-0.9**
KNRA	comp=Z,125nm,1.1s			IAmb	IAmb	22 04 34.1	
FITZ	**Fitzroy Crossi** comp=Z,1.3nm,0.3s,baz=7.2,slow=7.3,SNR=19 comp=Z,6.9nm,0.5s	**19.47**	**182**	P	**P**	**22 04 58.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.47**	**182**	P	**P**	**22 04 58.3**	**-0.4**
BBJI	**Bungbulang**	**20.73**	**244**	P	**P**	**22 05 13.2**	**+0.6**
YULB	**Yu-li**	**22.34**	**348**	P	**P**	**22 05 28.5**	**-1.2**
TPUB	**Ta-pu**	**22.41**	**346**	P	**P**	**22 05 28.6**	**-1.9**
TPUB	comp=Z,71nm,0.9s			IAmb	IAmb	22 05 36.2	
TPUB	**Ta-pu**	**22.41**	**346**	P	**P**	**22 05 29.1**	**-1.3**
WB0	**Warramunga Arr**	**22.52**	**160**	P	**P**	**22 05 30.6**	**-1.1**
WB0	comp=Z,92nm,0.9s			IAmb	IAmb	22 05 34.0	
COEN	**Coen**		**22.60**	**133**	P	**P**	**22 05 30.6**	**-2.0**
COEN	**Coen**		**22.60**	**133**	P	**P**	**22 05 30.8**	**-1.7**
COEN	comp=Z,60nm,1.6s			IAmb	IAmb	22 05 53.1	
COEN	**Coen**		**22.60**	**133**	P	**P**	**22 05 32.1**	**-0.4**
WRAB	**Tennant Creek**		**22.66**	**160**	P	**P**	**22 05 32.2**	**-0.9**
WRAB	**Tennant Creek**		**22.66**	**160**	*i* P	**P**	**22 05 32.7**	**-0.4**
WRAB	comp=Z,84nm,0.9s				pmax	pmax		
WRA	**Warramunga Arr** comp=Z,60nm,0.8s,baz=339,slow=10,SNR=41 comp=Z,60nm,0.8s	**22.66**	**160**	P	**P**	**22 05 32.4**	**-0.8**
WRA	comp=Z,3.4nm,1.0s,baz=344,slow=16,SNR=6.9 comp=Z,60nm,0.8s			S	**S**	**22 09 38.9**	**-0.3**
WRA	**Warramunga Arr**	**22.66**	**160**	P	**P**	**22 05 31.2**	**-2.0**
WRA	**Warramunga Arr**	**22.66**	**160**	*e*P	**P**	**22 05 31.9**	**-1.3**
WRA	comp=Z,61nm,0.8s				pmax	pmax		
WR8	**Warramunga Arr**	**22.73**	**160**	P	**P**	**22 05 32.7**	**-1.2**
WR8	comp=Z,60nm,0.9s				IAmb	IAmb	22 05 36.6	
SSLB	**Suanglung**		**22.80**	**347**	P	**P**	**22 05 33.9**	**-0.7**
SSLB	**Suanglung**		**22.80**	**347**	P	**P**	**22 05 35.1**	**+0.5**
JMJ	**Miyako jima 2**		**23.22**	**357**	P	**P**	**22 05 39.5**	**+0.7**
MBWA	**Marble Bar** comp=Z,33nm,0.9s		**23.44**	**196**	P	**P**	**22 05 39.8**	**-1.2**
MBWA	**Marble Bar**		**23.44**	**196**	P	**P**	**22 05 39.6**	**-1.4**
MBWA	**Marble Bar**		**23.44**	**196**	P	**P**	**22 05 40.4**	**-0.6**
YHNB	**Yeheng**		**23.57**	**348**	P	**P**	**22 05 42.8**	**+0.5**
PSAC2	**Pilbara Seismi** comp=Z,34nm,0.7s		**23.77**	**195**	P	**P**	**22 05 43.6**	**-0.7**
PSA00	**Pilbara Seismi**		**23.80**	**195**	P	**P**	**22 05 39.2**	**-5.2**
PSA00	**Pilbara Seismi**		**23.80**	**195**	P	**P**	**22 05 43.9**	**-0.5**
PSA00	**Pilbara Seismi**		**23.80**	**195**	P	**P**	**22 05 43.6**	**-0.9**
PSA00	comp=Z,7.8nm,0.7s				IAmb	IAmb	22 05 47.8	
PSA00	**Pilbara Seismi**		**23.80**	**195**	P	**P**	**22 05 44.9**	**+0.4**
PSAB3	**Pilbara Seismi** comp=Z,34nm,0.7s		**23.82**	**195**	P	**P**	**22 05 42.8**	**-1.9**
QIS	**Mount Isa** comp=Z,30nm,1.0s		**25.42**	**150**	P	**P**	**22 05 58.6**	**-0.7**
QIS	**Mount Isa**		**25.42**	**150**	P	**P**	**22 05 59.2**	**-0.1**
IPM	**Ipoh**		**25.54**	**277**	P	**P**	**22 05 59.0**	**-1.5**
AS31	**Alice Springs**		**26.03**	**164**	P	**P**	**22 06 04.4**	**-0.4**
ASAR	**Alice Springs** comp=Z,7.7nm,0.4s,baz=345,slow=11,SNR=39		**26.03**	**164**	P	**P**	**22 06 05.3**	**+0.4**
ASAR	comp=Z,3.1nm,0.5s,baz=345,slow=2.2,SNR=8.2				PcP	**PcP**	**22 09 32.6**	**+0.1**
ASAR	comp=Z,3.4nm,0.7s,baz=348,slow=16,SNR=9.3 comp=Z,7.7nm,0.4s				S	**S**	**22 10 36.7**	**+3.0**
ASAR	**Alice Springs**		**26.03**	**164**		**P**	**22 06 03.9**	**-1.0**
MTSU	**Mount Surprise** comp=Z,15nm,0.8s		**26.27**	**139**	P	**P**	**22 06 06.5**	**-0.5**
WRKA	**Warakurna** comp=Z,14nm,1.3s		**26.42**	**176**	P	**P**	**22 06 08.8**	**+0.4**
RPSI	**Rantau Prapat**		**27.51**	**273**	P	**P**	**22 06 16.2**	**-2.1**
PSI	**Prapat**		**27.52**	**273**	P	**P**	**22 06 16.2**	**-2.3**
PSI	comp=Z,18nm,1.1s				pmax	pmax		
MEEK	**Meekatharra**		**28.95**	**195**	P	**P**	**22 06 30.7**	**-0.3**
NJ2	**Nanjing**		**31.24**	**348**	*e*P	**P**	**22 06 52.8**	**+1.7**
NJ2	comp=Z,11nm,0.5s				pmax	pmax		
GYA	**Guiyang**		**31.27**	**324**	⇑P	**P**	**22 06 55.0**	**+3.4**
GYA	comp=Z,17nm,0.8s				pmax	pmax		
JNU	**Nakatsue**	

NWAO pmax pmax
comp=Z,40nm,1.4s
LYN LuoYang 35.39 340 *e*P **P 22 07 28.5 +1.2**
LYN pmax pmax
comp=Z,30nm,0.4s
JGF Kuroka 35.44 15 P **P 22 07 28.5 +0.8**
TNCH TengChong 35.69 313 P **P 22 07 32.3 +2.1**
TNCH pmax pmax
comp=Z,13nm,0.5s
KSRS Korea Array 35.82 2 P **P 22 07 31.6 +0.6**
comp=Z,2.8nm,0.7s,baz=178,slow=9.7,SNR=7.7
KSRS pmax pmax
comp=Z,2.8nm,0.7s
KSRS Korea Array 35.82 2 *e*P **P 22 07 32.9 +2.0**
KSRS pmax pmax
comp=Z,3.0nm,0.6s
STKA Stephens Creek 36.16 158 P **P 22 07 33.3 -0.6**
comp=Z,15nm,0.9s,baz=333,slow=8.3,SNR=15
comp=Z,15nm,0.9s
STKA Stephens Creek 36.16 158 P **P 22 07 33.9 0.0**
STKA Stephens Creek 36.16 158 *e*P **P 22 07 34.4 +0.5**
STKA pmax pmax
comp=Z,15nm,0.9s
XAN Xi'an 36.30 335 P **P 22 07 35.4 +0.3**
XAN pP pP 22 07 44.3 -0.6
XAN pmax pmax
comp=Z,37nm,0.8s
XAN pmax pmax
comp=Z,940nm,10.2s
MAJO Matsushiro 36.55 16 P **P 22 07 36.7 -0.5**
MAJO IAmb IAmb 22 07 39.5
comp=Z,16nm,0.8s
MAJO Matsushiro 36.55 16 *i*P **P 22 07 36.3 -0.9**
MAJO pmax pmax
comp=Z,16nm,0.9s
MJAR Matsushiro Arr 36.55 16 P **P 22 07 36.3 -0.9**
comp=Z,14nm,1.0s,baz=183,slow=9.2,SNR=20
comp=Z,14nm,1.0s
MJAR Matsushiro Arr 36.55 16 P **P 22 07 36.9 -0.3**
MJAR Matsushiro Arr 36.55 16 P **P 22 07 36.9 -0.3**
MJAR pmax pmax
comp=Z,9.0nm,1.1s
MJB9 Matsu-Tunnel 36.55 16 P **P 22 07 37.4 +0.2**
MJB9 IAmb IAmb 22 07 40.4
comp=Z,16nm,0.8s
MJA0 Matsu Arr-Jizo 36.56 16 *e*P **P 22 07 37.2 -0.2**
MJA0 pmax pmax
comp=Z,14nm,1.0s
HTT Hallett 36.67 162 P **P 22 07 39.0 +0.7**
DL2 Dalian 37.51 354 P **P 22 07 46.1 +0.9**
DL2 pmax pmax
comp=Z,84nm,1.1s
CMSA Cobar Meteorol 37.59 152 P **P 22 07 46.9 +0.8**
JMM Marumori 38.54 18 P **P 22 07 54.4 +0.4**
JMM IAmb IAmb 22 07 58.3
comp=Z,50nm,0.9s
JMM Marumori 38.54 18 P **P 22 07 54.9 +0.9**
BJT Baijiatuan 39.48 348 P **P 22 08 01.6 -0.2**
BJT Baijiatuan 39.48 348 P **P 22 08 01.6 -0.2**
BJT pmax pmax
comp=Z,33nm,1.7s
BJI Beijing 39.50 348 P **P 22 08 02.4 +0.4**
BJI pmax pmax
comp=Z,5.0nm,0.7s
SNY Shenyang 40.25 357 ⇓P **P 22 08 08.5 +0.3**
SNY pmax pmax
comp=Z,17nm,0.7s
LZDM Lanzhou Array 40.27 331 P **P 22 08 08.4 -0.4**
comp=Z,0.8nm,0.3s,baz=151,slow=9.4,SNR=4.2
LZDM PcP **PcP 22 10 12.9 +0.6**
comp=Z,1.4nm,0.4s,baz=157,slow=4.5,SNR=4.3
comp=Z,0.8nm,0.3s
LZH Lanzhou 40.30 331 *e*P **P 22 08 10.8 +1.9**
LZH pP pP 22 08 19.3 +0.5
LZH PcP **PcP 22 10 13.8 +1.6**
LZH pmax pmax
comp=Z,24nm,1.1s
LZH LR LR
comp=Z,220nm,14.9s
LZH LR LR
comp=Z,560nm,16.5s
LZH LR LR
comp=Z,820nm,16.8s
SHL Shillong 41.00 309 P **P 22 08 12.8 -2.1**
SHL IAmb IAmb 22 08 18.4
comp=Z,19nm,0.6s
SHL Shillong 41.00 309 P **P 22 08 12.8 -2.1**
SHL pmax pmax
comp=Z,19nm,0.6s
JTM Tenmabayashi 41.31 17 P **P 22 08 15.6 -1.4**
HHC Hu-ho-hao-te 41.44 343 *e*P **P 22 08 20.6 +2.4**
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,160nm,4.5s
BTO Baotou 41.69 341 *e*P **P 22 08 24.4 +4.2**
BTO PP **PnPn 22 10 05.3 +3.2**
BTO S **S 22 14 42.4 +7.5**
BTO pmax pmax
comp=Z,7.0nm,0.6s
BTO pmax pmax
comp=Z,250nm,4.5s
BTO LR LR
comp=Z,600nm,5.4s
BTO LR LR
comp=Z,390nm,8.6s
BTO LR LR
comp=Z,940nm,15.9s
USRK Ussuriysk Ar. 42.82 6 P **P 22 08 30.0 +0.7**
comp=Z,7.1nm,0.7s,baz=177,slow=6.4,SNR=14
comp=Z,7.1nm,0.7s
USRK Ussuriysk Ar. 42.82 6 P **P 22 08 30.0 +0.7**
MDJ Mudanjiang 43.05 3 P **P 22 08 31.2 +0.2**
MDJ IAmb IAmb 22 08 32.8
comp=Z,21nm,1.0s
MDJ Mudanjiang 43.05 3 P **P 22 08 32.6 +1.5**
MDJ pmax pmax
comp=Z,27nm,0.9s
LSA Lhasa 43.72 313 P **P 22 08 36.3 -1.1**
LSA Lhasa 43.72 313 P **P 22 08 36.3 -1.1**
LSA pmax pmax
comp=Z,8.0nm,0.8s
BNX BinXian 44.09 1 ⇑P **P 22 08 39.8 +0.4**
BNX pmax pmax
comp=Z,10.0nm,0.9s
ASAJ Asahikawa 44.82 17 P **P 22 08 46.5 +1.2**
comp=Z,34nm,1.0s,baz=114,slow=32,SNR=5.9
comp=Z,34nm,1.0s
GTA Gaotai 44.88 331 *e*P **P 22 08 46.1 0.0**
GTA PcP **PcP 22 10 28.8 +1.4**
GTA pmax pmax
comp=Z,4.0nm,1.0s
EVN Everest 46.12 309 P **P 22 08 54.6 -2.0**
EVN IAmb IAmb 22 09 04.7
comp=Z,12nm,0.8s
HILR Hailar Array B 48.24 354 P **P 22 09 13.7 +1.6**
comp=Z,4.6nm,0.5s,baz=189,slow=8.2,SNR=7.1
comp=Z,4.6nm,0.5s
HEH HeiHe 48.60 1 *e*P **P 22 09 14.8 0.0**
HEH pmax pmax
comp=Z,24nm,0.9s
ULN Ulaanbaatar 49.16 343 P **P 22 09 19.1 -0.2**
ULN Ulaanbaatar 49.16 343 *i*P **P 22 09 18.8 -0.6**
ULN pmax pmax
comp=Z,5.0nm,0.7s
SONM Songino Array 49.33 342 P **P 22 09 20.7 +0.1**
comp=Z,6.2nm,0.8s,baz=157,slow=8.4,SNR=18
SONM PcP **PcP 22 10 42.1 -0.9**
comp=Z,3.1nm,0.9s,baz=170,slow=3.6,SNR=4.3
comp=Z,6.2nm,0.8s
HYBB Hyderabad (bro 49.63 292 *e*P **P 22 09 23.6 +0.3**
CIT Chita 51.51 350 *e*P **P 22 09 37.8 +0.9**
CIT *e* 22 12 29.6
WMQ Urumqi 54.40 326 *e*P **P 22 09 59.1 +0.7**
WMQ pP pP 22 10 09.8 +1.3
WMQ pmax pmax
comp=Z,38nm,0.9s
PEA0B Petropavlovsk- 57.61 22 P **P 22 10 22.4 +1.2**
PEA0B Petropavlovsk- 57.61 22 P **P 22 10 22.4 +1.2**
PEA0B pmax pmax
comp=Z,203nm,1.7s
PETK Petropavlovsk- 57.61 22 P **P 22 10 21.6 +0.5**
comp=Z,5.9nm,0.5s,baz=186,slow=5.7,SNR=31
comp=Z,5.9nm,0.5s
PETK Petropavlovsk- 57.61 22 P **P 22 10 21.4 +0.2**
PETK Petropavlovsk- 57.61 22 P **P 22 10 21.4 +0.2**
DGZ Jazzator, Alta 58.40 331 *i*P **P 22 10 28.1 +1.1**
DGZ pmax pmax
comp=Z,10.0nm,1.1s
PRZ Przheval'sk 59.22 320 **P 22 10 32.8 0.0**
PRZ IAmb IAmb 22 10 37.6
comp=Z,12nm,0.8s
PRZ Przheval'sk 59.22 320 P **P 22 10 32.8 0.0**
PRZ pmax pmax
comp=Z,12nm,0.8s
TARG Taragay, Kyrgy 59.23 319 P **P 22 10 31.4 -1.8**
TARG Taragay, Kyrgy 59.23 319 P **P 22 10 31.4 -1.8**
TARG pmax pmax
comp=Z,6.0nm,0.8s
MK31 Makanchi Array 59.23 326 *i*P **P 22 10 31.9 -0.7**
MKAR Makanchi Array 59.23 326 P **P 22 10 31.6 -1.0**
comp=Z,5.5nm,0.4s,baz=119,slow=7.0,SNR=54
MKAR PcP **PcP 22 11 20.4 -0.3**
comp=Z,4.9nm,0.8s,baz=123,slow=5.1,SNR=3.9
comp=Z,5.5nm,0.4s
MKAR Makanchi Array 59.23 326 P **P 22 10 31.4 -1.2**
MAKZ Makanchi 59.41 326 P **P 22 10 32.7 -1.2**
MAKZ IAmb IAmb 22 10 38.1
comp=Z,9.3nm,0.6s
MAKZ Makanchi 59.41 326 P **P 22 10 32.7 -1.2**
MAKZ pmax pmax
comp=Z,9.0nm,0.6s
KSH Kashi 59.43 316 P **P 22 10 37.4 +3.1**
KSH pmax pmax
comp=Z,4.0nm,0.7s
KDJ Kajisay 59.83 319 **P 22 10 35.8 -1.2**
KDJ IAmb IAmb 22 10 40.8
comp=Z,11nm,0.9s
KDJ Kajisay 59.83 319 P **P 22 10 35.8 -1.2**
KDJ pmax pmax
comp=Z,11nm,0.9s
LBZ Lake Benmore 60.01 145 P **P 22 10 37.6 -0.5**
YAK Yakutsk 60.45 2 P **P 22 10 41.1 +0.4**
comp=Z,41nm,0.8s,baz=301,slow=0.7,SNR=9.8
comp=Z,41nm,0.8s
YAK Yakutsk 60.45 2 P **P 22 10 39.9 -0.8**
YAK Yakutsk 60.45 2 *e*P **P 22 10 39.8 -0.8**
YAK pmax pmax
comp=Z,39nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,13nm,2.0s
AAK Ala-Archa 61.83 319 P **P 22 10 50.5 -0.1**
AAK Ala-Archa 61.83 319 *i*P **P 22 10 52.1 +1.5**
AAK pmax pmax
comp=Z,12nm,2.2s
DRK Karamyk 62.35 315 P **P 22 10 53.8 -0.5**
DRK IAmb IAmb 22 10 57.9
comp=Z,15nm,1.0s
DRK Karamyk 62.35 315 P **P 22 10 53.8 -0.5**
DRK pmax pmax
comp=Z,15nm,1.0s
ZAA0 Zalesovo Array 62.45 334 **P 22 10 53.6 -0.7**
ZALV Zalesovo Beam 62.45 334 P **P 22 10 52.6 -1.7**
comp=Z,3.1nm,0.6s,baz=114,slow=6.1,SNR=11
comp=Z,3.1nm,0.6s
ZALV Zalesovo Beam 62.45 334 P **P 22 10 52.0 -2.3**
ZALV Zalesovo Beam 62.45 334 *e*P **P 22 10 54.3 0.0**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
KBL Kabul 62.66 308 P **P 22 10 54.9 -1.5**
KBL IAmb IAmb 22 10 59.2
comp=Z,10nm,0.7s
KBL Kabul 62.66 308 P **P 22 10 54.9 -1.5**
KBL pmax pmax
comp=Z,10.0nm,0.7s
AFI Afiamalu 63.08 106 P **P 22 10 57.9 -1.5**
AFI Afiamalu 63.08 106 P **P 22 10 57.9 -1.5**
AFI pmax pmax
comp=Z,85nm,1.5s
GAR Garm 63.23 314 P **P 22 10 58.8 -1.2**
KURBB Kurchatov Arra 63.47 328 P **P 22 10 59.8 -1.3**
comp=Z,9.3nm,0.5s,baz=126,slow=6.1,SNR=54
comp=Z,9.3nm,0.5s
KURK Kurchatov 63.47 328 P **P 22 10 60.0 -1.2**
KURK Kurchatov 63.47 328 *i*P **P 22 11 00.3 -0.9**
KURK pmax pmax
comp=Z,31nm,0.9s
CHGR Chuyangaron 63.95 313 **P 22 11 03.5 -1.2**
CHGR IAmb IAmb 22 11 09.3
comp=Z,24nm,1.0s
CHGR Chuyangaron 63.95 313 P **P 22 11 03.5 -1.2**
CHGR pmax pmax
comp=Z,24nm,1.0s
SEY Seymchan 64.28 13 P **P 22 11 07.5 +1.3**
comp=Z,5.1nm,0.8s,baz=188,slow=7.4,SNR=5.0
comp=Z,5.1nm,0.8s
KK31 Karatay Array 64.67 318 **P 22 11 07.6 -1.7**
KK31 Karatay Array 64.67 318 P **P 22 11 07.6 -1.7**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 64.67 318 P **P 22 11 07.4 -1.9**
KKAR Karatay Array 64.67 318 P **P 22 11 07.4 -1.9**
BVAR Borovoye Array 69.04 328 P **P 22 11 35.6 -1.2**
comp=Z,4.6nm,0.6s,baz=126,slow=5.1,SNR=18
comp=Z,4.6nm,0.6s
BORK Borovoye 69.08 328 *i*P **P 22 11 35.5 -1.6**
BORK pmax pmax
comp=Z,6.0nm,0.5s
TIXI Tiksi 70.08 1 P **P 22 11 41.7 -1.2**
TIXI IAmb IAmb 22 11 43.9
comp=Z,11nm,0.9s
TIXI Tiksi 70.08 1 *i*P **P 22 11 41.7 -1.2**
TIXI pmax pmax
comp=Z,4.0nm,0.4s
AB31 Akbulak array 73.70 321 **P 22 12 03.8 -1.2**
ABKAR Akbulak array 73.70 321 P **P 22 12 03.7 -1.4**
SVE Sverdlovsk 75.71 329 *e*P **P 22 12 16.0 -0.6**
SVE pmax pmax
comp=Z,27nm,1.0s
ARTI Arti 76.75 328 P **P 22 12 20.5 -1.9**
ARTI IAmb IAmb 22 12 24.7
comp=Z,18nm,0.6s
ARTI Arti 76.75 328 *c i*P **P 22 12 21.3 -1.2**
ARTI 22 15 12.9
ARTI S **S 22 22 07.1 0.0**
ARTI SS **SS 22 27 02.2 -1.2**
ARTI pmax pmax
comp=Z,8.0nm,0.8s
AKT Akhty 80.55 312 *e*P **P 22 12 44.1 +0.2**
AKT *e* 22 12 51.5
AKT pmax pmax
comp=Z,17nm,1.2s
RAYN Ar Rayn 81.09 293 P **P 22 12 46.4 -0.7**
RAYN IAmb IAmb 22 12 48.6
comp=Z,9.6nm,0.8s
RAYN Ar Rayn 81.09 293 P **P 22 12 46.4 -0.7**
RAYN pmax pmax
comp=Z,10.0nm,0.8s
VNDA Vanda 81.25 173 P **P 22 12 46.9 +0.2**
comp=Z,3.4nm,0.7s,baz=319,slow=6.8,SNR=20
comp=Z,3.4nm,0.7s
VNDA Vanda 81.25 173 P **P 22 12 46.4 -0.3**
VNDA Vanda 81.25 173 P **P 22 12 46.4 -0.3**
VNDA pmax pmax
comp=Z,4.0nm,0.8s
MAW Mawson 81.56 200 P **P 22 12 49.0 +0.5**
comp=Z,2.2nm,0.6s,baz=52,slow=6.6,SNR=7.5
comp=Z,2.2nm,0.6s
MAW Mawson 81.56 200 P **P 22 12 49.0 +0.5**
KIRV Kirov 81.98 329 *i*P **P 22 12 50.8 -0.1**
BELG Belogornoye 82.00 323 *i*P **P 22 12 49.6 -1.5**
BELG pmax pmax
comp=Z,7.0nm,0.9s
L18K Granite Mounta 82.59 27 P **P 22 12 54.5 +0.4**
L18K IAmb IAmb 22 12 57.0
comp=Z,22nm,1.2s
D19K Kuna River 83.31 21 P **P 22 12 58.2 +0.5**
H19K Roundabout Mou 83.33 24 P **P 22 12 58.5 +0.8**
N19K Bonanza Creek 83.39 29 P **P 22 12 58.8 +0.5**
N19K IAmb IAmb 22 13 01.0
comp=Z,19nm,1.0s
J19K Poorman 83.39 26 P **P 22 12 57.9 -0.3**
E19K Redstone River 83.41 22 P **P 22 12 59.6 +1.4**
L19K White Mountain 83.43 28 P **P 22 12 58.8 +0.3**
L19K IAmb IAmb 22 13 01.1
comp=Z,19nm,1.2s
D20K Etivluk River 83.90 21 **P 22 13 01.4 +0.7**
D20K IAmb IAmb 22 13 03.3
comp=Z,21nm,1.1s
F20K Avaraart Lake 83.91 23 P **P 22 13 01.2 +0.5**
F20K IAmb IAmb 22 13 03.5
comp=Z,14nm,1.1s
KBZ Khabaz 84.30 314 P **P 22 13 02.8 -0.4**
comp=Z,7.3nm,0.8s,baz=121,slow=5.4,SNR=15
comp=Z,7.3nm,0.8s
KBZ Khabaz 84.30 314 *e*P **P 22 13 02.6 -0.6**
KBZ pmax pmax
comp=Z,9.0nm,0.8s
KIV Kislovodsk 84.47 314 P **P 22 13 04.5 +0.3**
KIV Kislovodsk 84.47 314 *e*P **P 22 13 04.2 0.0**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV Kislovodsk 84.47 314 P **P 22 13 05.0 +0.8**
comp=Z,16nm,0.8s
SHA1 Shidzhatmaz 84.47 314 *i*P **P 22 13 06.0 +1.6**
GURO Guroymak-BITLI 84.69 308 **P 22 13 05.5 -0.1**
B21K Ikpikpuk River 84.77 20 P **P 22 13 05.0 0.0**
VRH Novokhopyorsk 85.53 321 *e*P **P 22 13 07.7 -1.5**
VRH pmax pmax
comp=Z,30nm,1.0s
MARD Mardin 85.64 307 P **P 22 13 09.0 -1.3**
MARD IAmb IAmb 22 13 13.6
comp=Z,15nm,0.8s
KOPT Kop Dagi 85.93 310 **P 22 13 12.2 +0.3**
COLD Coldfoot 86.07 23 P **P 22 13 11.6 0.0**
COLD IAmb IAmb 22 14 53.9
comp=Z,39nm,1.8s
C23K Itkillik River 86.18 20 P **P 22 13 12.5 +0.4**
E23K Chandalar 86.37 22 P **P 22 13 13.8 +0.6**
E23K IAmb IAmb 22 13 16.2
comp=Z,10nm,1.0s
VORD Divnogorie 87.05 321 *e*P **P 22 13 16.4 -0.3**
VORD pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 87.12 321 *e*P **P 22 13 15.2 -1.8**
VORR pmax pmax
comp=Z,30nm,0.9s
VSR Storozhevoye 87.14 321 *e*P **P 22 13 15.5 -1.6**
VSR pmax pmax
comp=Z,10.0nm,0.9s
KLMR Klimovskoe 87.21 331 *e*P **P 22 13 14.5 -2.8**
KLMR pmax pmax
comp=Z,11nm,0.6s
ILAR Eielson Array 87.25 25 P **P 22 13 16.1 -1.3**
comp=Z,0.6nm,0.5s,baz=248,slow=4.6,SNR=7.2
comp=Z,0.6nm,0.5s
ILAR Eielson Array 87.25 25 *e*P **P 22 13 19.9 +2.5**
ILAR pmax pmax
comp=Z,1.0nm,0.4s
LPSR Galich'ya Gora 87.31 322 *e*P **P 22 13 16.6 -1.3**
LPSR pmax pmax
comp=Z,20nm,1.0s
E25K Arctic Village 87.89 22 P **P 22 13 20.7 +0.2**
E25K IAmb IAmb 22 16 06.1
comp=Z,24nm,1.9s
BMAR Burnt Mountain 88.25 23 P **P 22 13 22.2 0.0**
KIBK Kibwezi 88.44 268 **P 22 13 24.1 -0.2**
KIBK IAmb IAmb 22 13 28.5
comp=Z,4.3nm,0.7s
GAZ Gaziantep 88.49 307 **P 22 13 24.6 +0.5**
C27K Jago River 88.57 21 P **P 22 13 23.5 -0.2**
C27K IAmb IAmb 22 13 25.5
comp=Z,6.5nm,0.8s
OBN Obninsk 88.72 325 *e*P **P 22 13 23.8 -0.7**
OBN *e* 22 16 53.4
OBN pmax pmax
comp=Z,11nm,1.0s
KMBO Kilima Mbogo 89.21 269 P **P 22 13 27.9 -0.2**
comp=Z,0.9nm,0.4s,baz=82,slow=7.1,SNR=4.0
comp=Z,0.9nm,0.4s
K27K Chicken 89.34 26 P **P 22 13 27.9 +0.6**
K27K IAmb IAmb 22 13 29.1
comp=Z,26nm,1.6s
E27K Coleen River 89.37 22 P **P 22 13 27.9 +0.4**
E27K IAmb IAmb 22 14 58.3
comp=Z,13nm,1.6s
BNN Bunyan 89.54 309 P **P 22 13 29.8 +0.8**
BNN IAmb IAmb 22 13 31.6
comp=Z,12nm,1.2s
D27M Malcolm River 89.55 21 P **P 22 13 28.5 +0.1**
D27M IAmb IAmb 22 13 51.4
comp=Z,20nm,1.9s
BALJ Balqa 89.89 302 **P 22 13 30.6 -0.1**
BALJ IAmb IAmb 22 13 34.8
comp=Z,18nm,0.9s
GHAJ Ghor Haditha 89.98 301 **P 22 13 30.9 -0.1**
MMAI Mount Meron Ar 90.06 303 P **P 22 13 31.7 +0.2**
comp=Z,6.2nm,0.8s,baz=90,slow=5.0,SNR=7.7
comp=Z,6.2nm,0.8s
L29M L29M 91.16 27 P **P 22 13 36.0 0.0**
L29M IAmb IAmb 22 13 45.3
comp=Z,12nm,1.3s
BR104 Keskin Array S 91.21 310 P **P 22 13 36.0 -0.8**
comp=Z,4.9nm,0.9s
BR131 Keskin Array S 91.21 310 P **P 22 13 35.9 -0.9**
BR131 IAmb IAmb 22 13 39.7
comp=Z,3.9nm,0.8s
BR131 Keskin Array S 91.21 310 P **P 22 13 35.9 -0.9**
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 91.22 310 P **P 22 13 36.0 -0.8**
comp=Z,2.9nm,0.8s,baz=132,slow=4.6,SNR=15
comp=Z,2.9nm,0.8s
BRTR Keskin Array B 91.22 310 P **P 22 13 35.6 -1.2**
BRTR Keskin Array B 91.22 310 *e*P **P 22 13 37.6 +0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BR105 Keskin Array S 91.23 310 P **P 22 13 37.0 +0.1**
QSPA South Pole Qui 91.40 180 P **P 22 13 39.5 +2.5**
comp=Z,0.8nm,0.3s,baz=312,slow=4.5,SNR=5.2
ARCES ARCESS Array B 92.44 340 P **P 22 13 40.8 -0.9**
comp=Z,7.1nm,0.8s,baz=83,slow=6.5,SNR=17
comp=Z,7.1nm,0.8s
ARCES ARCESS Array B 92.44 340 P **P 22 13 40.0 -1.7**
ARCES ARCESS Array B 92.44 340 *e*P **P 22 13 40.5 -1.2**
ARCES pmax pmax
comp=Z,7.0nm,0.9s
SPITS Spitsbergen Ar 92.61 349 P **P 22 13 41.7 -0.6**
comp=Z,7.1nm,0.9s,baz=61,slow=12,SNR=2.3
comp=Z,7.1nm,0.9s
AKASG Malin Array Be 93.44 321 P **P 22 13 45.6 -1.0**
comp=Z,0.6nm,0.5s,baz=68,slow=4.8,SNR=5.5
comp=Z,0.6nm,0.5s
FINES FINESS Array B 93.66 332 P **P 22 13 46.1 -1.3**
comp=Z,2.1nm,0.7s,baz=83,slow=4.9,SNR=7.2
comp=Z,2.1nm,0.7s
NACGM Naroch 94.35 325 *e*P **P 22 13 47.4 -3.3**
comp=Z,8.0nm,0.7s,baz=81
BURAR Bucovina Array 96.47 318 **P 22 14 00.1 -0.7**
BURAR IAmb IAmb 22 14 08.2
comp=Z,6.9nm,0.8s
BUR08 Bucovina Ar. S 96.47 318 P **P 22 13 59.7 -1.1**
BUR08 IAmb IAmb 22 14 08.8
comp=Z,9.1nm,1.1s
RDO Rodhopi 97.23 312 P **P 22 14 04.8 +0.6**
HFS Hagfors 99.85 332 P **Pdif 22 14 14.0 -1.5**
comp=Z,2.9nm,0.9s,baz=108,slow=4.8,SNR=4.6
comp=Z,2.9nm,0.9s
HFS Hagfors 99.85 332 P **Pdif 22 14 14.0 -1.5**
NB2 NORSAR Subarra 100.65 333 P **Pdif 22 14 16.6 -2.5**
comp=Z,0.7nm,0.8s,baz=70,slow=4.3
PDAR Pinedale Array 113.23 42 PKKPab PKKPab 22 30 01.1 -2.0
comp=Z,0.4nm,0.7s,baz=107,slow=4.2,SNR=3.8
TXAR Lajitas Array 123.19 53 PKP **PKPdf 22 19 28.8 +0.1**
comp=Z,0.4nm,0.6s,baz=276,slow=1.1,SNR=5.1
TXAR PKKPab **PKKPab 22 29 16.6 -2.9**
comp=Z,0.1nm,0.4s,baz=106,slow=9.2,SNR=3.5
DBIC Dimbokro 130.71 280 SKPbc **SKPbc 22 23 05.2 +0.5**
comp=Z,10nm,1.1s,baz=123,slow=4.7,SNR=4.8
MT13 San Alfonso 144.29 156 **PKPab 22 20 06.6 +0.8**
ROC1 El Roble 144.64 154 *e*P **PKPab 22 20 07.9 +0.6**
VA03 San Esteban 145.02 155 *e*P **PKPbc 22 20 09.2 +0.6**
AAGR Agrelo 145.45 157 *e*P **PKPab 22 20 11.6 +1.5**
ARCO CERRO ARCO 145.62 157 *e*P **PKPab 22 20 11.6 +0.8**
ASAL Salagasta 145.88 157 *e*P **PKPbc 22 20 12.1 +0.9**
AUSP Uspallata 145.98 156 *e*P **PKPdf 22 20 12.1 +1.0**
CO02 Combarbal 146.15 153 PKPdf **PKPdf 22 20 11.3 +0.1**
RTLS Leoncito 146.39 155 *e*P **PKPbc 22 20 13.8 +0.7**
CO03 El Pedregal 146.60 153 PKPbc **PKPdf 22 20 12.2 +0.3**
ACAN Cantantal 146.79 159 *e*P **PKPbc 22 20 14.2 +0.3**
ACAN *e*P **PKPab 22 20 15.6 +0.5**
ACAN *e*P **PKiKP 22 20 17.3 +0.7**
ZON Zonda 146.86 156 *e*P **PKPbc 22 20 14.5 +0.4**
ZON *e*P **PKPab 22 20 15.2 -0.2**
CO01 Juntas del Tor 147.60 153 **PKPdf 22 20 15.3 +1.5**
LCO Las Campanas 148.12 151 **PKPdf 22 20 15.4 +0.7**

LCO	Las Campanas	148.12 151	PKIKP	PKPdf	22 20 15.4	+0.7
AC05	El Transito	148.47 151		PKPbc	22 20 18.6	-0.1
LPAZ	La Paz	159.45 137	PKP	PKPdf	22 20 31.9	+0.4
	comp=Z,1.0nm,0.6s,baz=223,slow=4.9,SNR=5.1					

IDC ***14*** *22:04:58.8±1.8, 1°.34N×125°.76E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=187.0km s-min=24.7km az=66.0*
NEIC ***14*** *22:05:03.2±1.6, 1°.62N±0°.10×126°.52E±0°.09, h35km±2km, mb4.2/7, Error ellipse: s-maj=21.7km s-min=6.9km az=222.0*

ISC 14 22:05:03.0±0.8, 1°.6N±0°.1×126°.49E±0°.09, h35km, n18, σ1§06/18, mb4.2/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.22 134			Pn	Pn	22 05 23.0	-0.6
LUWI	Luwuk	4.56 235		Pn	Pn	Pn	22 06 09.8	+0.2
TOLI2	Tolitoli	5.72 265		Pn	Pn	Pn	22 06 24.5	-1.1
MYLDM	Lahad Datu	8.72 294		Pn	Pn	Pn	22 07 07.1	+0.4
WB0	Warramunga Arr	22.63 160		P	P	P	22 10 00.1	-1.0
WB0	comp=Z,11nm,1.1s				IAmb	IAmb	22 10 01.9	
WRAB	Tennant Creek	22.77 161		P	P	P	22 10 00.7	-1.9
WRAB	comp=Z,12nm,0.8s				IAmb	IAmb	22 10 04.9	
WRA	Warramunga Arr	22.77 161		P	P	P	22 10 03.2	+0.6
	comp=Z,5.6nm,0.7s,baz=337,slow=10,SNR=4.9							
	comp=Z,5.6nm,0.7s							
WRA	Warramunga Arr	22.77 161		P	P	P	22 10 01.9	-0.7
WR8	Warramunga Arr	22.84 160		P	P	P	22 10 04.5	+1.2
WR8	comp=Z,7.6nm,0.9s				IAmb	IAmb	22 10 09.4	
AS31	Alice Springs	26.15 164		P	P	P	22 10 36.0	+1.8
ASAR	Alice Springs	26.15 164		P	P	P	22 10 36.1	+1.9
MKAR	Makanchi Array	59.15 326		P	P	P	22 15 01.1	+0.7
	comp=Z,0.4nm,0.4s,baz=119,slow=7.7,SNR=7.9							
	comp=Z,0.4nm,0.4s							
MKAR	Makanchi Array	59.15 326		P	P	P	22 15 00.7	+0.4
KURBB	Kurchatov Arra	63.38 328		P	P	P	22 15 28.4	-0.4
	comp=Z,0.7nm,0.4s,baz=128,slow=6.1,SNR=6.0							
	comp=Z,0.7nm,0.4s							
KURK	Kurchatov	63.38 328		P	P	P	22 15 29.3	+0.4
KURK	comp=Z,2.2nm,0.7s				IAmb	IAmb	22 15 34.5	
L16K	Owhat River	81.05 28		P	P	P	22 17 13.6	-0.6
VNDA	Vanda	81.38 173		P	P	P	22 17 15.7	0.0
	comp=Z,0.7nm,0.8s,baz=306,slow=6.0,SNR=2.3							
	comp=Z,0.7nm,0.8s							
VNDA	Vanda	81.38 173		P	P	P	22 17 15.5	-0.2
VNDA	comp=Z,2.0nm,1.1s				IAmb	IAmb	22 17 24.7	

IDC 14 22:06:01.9±2.0, 1°.89N×126°.92E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=177.9km s-min=23.7km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.89 162		P	P	P	22 11 08.0	+0.6
	2.3nm,0.6s,baz=341,slow=12,SNR=4.8							
	2.3nm,0.6s							
ASAR	Alice Springs	26.30 165		P	P	P	22 11 39.1	-0.3
	0.8nm,0.5s,baz=344,slow=8.4,SNR=5.6							
	0.8nm,0.5s							
MKAR	Makanchi Array	59.17 326		P	P	P	22 16 04.5	-0.2
	0.6nm,0.7s,baz=118,slow=7.6,SNR=1.5							
	0.6nm,0.7s							
KURBB	Kurchatov Arra	63.38 328		P	P	P	22 16 33.1	0.0
	0.3nm,0.3s,baz=128,slow=6.4,SNR=2.2							
	0.3nm,0.3s							

IDC ***14*** *22:10:38.1±1.2, 1°.63N×126°.29E, h0km, mb3.9/6, mbtmp3.9/7, ML3.3/1, Error ellipse: s-maj=102.6km s-min=17.3km az=70.0*
DJA ***14*** *22:10:43.4±1.5, 2°N±4°×12°.7E±°, h34km±25km, M3.8/5, MLv3.8/5*

ISC 14 22:10:43.1±1.0, 1°.6N±0°.2×126°.4E±0°.2, h35km, n8, σ1§09/9, mb3.8/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.27 133		P	P	Pn	22 11 03.9	-0.5
TNTI				S	S	Sn	22 11 20.5	+0.3
FITZ	Fitzroy Crossi	19.63 182		P	P	P	22 15 07.9	-0.9
	0.1nm,0.3s,baz=9.4,slow=10,SNR=3.0							
	2.6nm,0.9s							
WRA	Warramunga Arr	22.80 160		P	P	P	22 15 41.7	-1.3
	2.5nm,0.5s,baz=340,slow=11,SNR=18							
	2.5nm,0.5s							
ASAR	Alice Springs	26.18 164		P	P	P	22 16 16.6	+2.0
	0.8nm,0.4s,baz=350,slow=15,SNR=14							
	0.8nm,0.4s							
SONM	Songino Array	49.18 342		P	P	P	22 19 28.2	+0.3
	0.4nm,0.7s,baz=156,slow=7.4,SNR=2.9							
	0.4nm,0.7s							
MKAR	Makanchi Array	59.11 326		P	P	P	22 20 39.7	-0.4
	0.5nm,0.4s,baz=119,slow=8.2,SNR=14							
	0.5nm,0.4s							
KURBB	Kurchatov Arra	63.34 328		P	P	P	22 21 08.5	-0.2
	1.4nm,0.2s,baz=130,slow=6.3,SNR=6.4							
	1.4nm,0.2s							
VNDA	Vanda	81.40 173		P	P	P	22 22 56.2	+0.3
	0.3nm,0.5s,baz=340,slow=4.0,SNR=2.2							
	0.3nm,0.5s							

IDC ***14*** *22:11:46.9±1.0, 1°.64N×126°.48E, h0km, mb3.9/8, mbtmp4.0/10, ML3.9/2, Error ellipse: s-maj=54.6km s-min=15.6km az=71.0*
DJA ***14*** *22:11:50.4±0.4, 2°N±5°×12°.6E±°, h10km, M4.3/9, mB5.0/3, mb4.6/7, MLv4.2/9, Mw(mB)4.3/3*

ISC 14 22:11:52.4±0.9, 1°.6N±0°.1×126°.5E±0°.1, h35km, n16, σ1§04/16, mb4.0/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.21 132		P	Pn	Pn	22 12 13.7	+0.9
MRSI	Marisa	4.66 256		P	Pn	Pn	22 13 01.0	+0.8
APSI	Ampana	5.42 243		P	Pn	Pn	22 13 11.7	+1.0
MPSI	Mapaga	6.68 259		P	Pn	Pn	22 13 27.6	-0.5
	0.1nm40nm,0.8s							
TTSI	Tana Toraja	8.08 235		P	Pn	Pn	22 13 47.3	0.0
	23nm,0.8s							
SPSI	Sidrap Palu	8.67 231		P	Pn	Pn	22 13 55.4	0.0
KAPI	Kappang	9.38 226		Pn	Pn	Pn	22 14 05.8	+0.6
	1.5nm,0.3s,baz=48,slow=5.6,SNR=4.9							
	6.3nm,0.4s							
FITZ	Fitzroy Crossi	19.57 182		P	P	P	22 16 16.4	-1.0
	0.2nm,0.3s,baz=359,slow=11,SNR=2.7							
	2.4nm,0.6s							
WRA	Warramunga Arr	22.74 161		P	P	P	22 16 51.0	-0.6
	2.6nm,0.5s,baz=333,slow=12,SNR=9.9							
	2.6nm,0.5s							
ASAR	Alice Springs	26.12 164		P	P	P	22 17 23.7	+0.4
	1.1nm,0.4s,baz=348,slow=13,SNR=9.7							
	1.1nm,0.4s							
STKA	Stephens Creek	36.24 158		P	P	P	22 18 53.0	+0.8
	2.0nm,0.7s,baz=10,slow=6.5,SNR=3.4							
	2.0nm,0.7s							
SONM	Songino Array	49.24 342		P	P	P	22 20 38.6	+1.0
	0.4nm,0.6s,baz=158,slow=7.4,SNR=3.7							
	0.4nm,0.6s							
MKAR	Makanchi Array	59.17 326		P	P	P	22 21 48.2	-1.6
	1.0nm,0.4s,baz=119,slow=7.0,SNR=12							
	1.0nm,0.4s							
KURBB	Kurchatov Arra	63.40 328		P	P	P	22 22 16.9	-1.4
	1.4nm,0.5s,baz=131,slow=6.1,SNR=10.0							
	1.4nm,0.5s							
BVAR	Borovoye Array	68.97 328		P	P	P	22 22 55.7	+1.6
	0.6nm,0.4s,baz=92,slow=7.2,SNR=2.5							
	0.6nm,0.4s							
VNDA	Vanda	81.34 173		P	P	P	22 24 04.0	-0.9
	0.5nm,0.6s,baz=327,slow=6.1,SNR=2.0							
	0.5nm,0.6s							

IDC ***14*** *22:12:04.1±1.4, 1°.51N×126°.18E, h0km, mb4.0/7, mbtmp4.1/7, Error ellipse: s-maj=195.5km s-min=17.6km az=67.0*

ISC 14 22:12:09.1±1.2, 1°.6N±0°.5×12°.7E±°, h35km, n7, σ1§21/7, mb4.2/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.74 161		P	P	P	22 17 07.7	-0.7
	6.9nm,0.7s,baz=337,slow=11,SNR=8.0							
	6.9nm,0.7s							
ASAR	Alice Springs	26.12 164		P	P	P	22 17 41.1	+1.1
	1.6nm,0.5s,baz=340,slow=6.7,SNR=7.9							
	1.6nm,0.5s							
STKA	Stephens Creek	36.23 158		P	P	P	22 19 08.3	-0.6
	3.5nm,0.8s,baz=339,slow=10,SNR=4.4							
	3.5nm,0.8s							
SONM	Songino Array	49.24 342		P	P	P	22 20 55.2	+0.9
	0.5nm,0.6s,baz=157,slow=7.8,SNR=3.6							
	0.5nm,0.6s							
MKAR	Makanchi Array	59.18 326		P	P	P	22 22 06.5	-0.1
	0.9nm,0.4s,baz=120,slow=7.5,SNR=7.1							
	0.9nm,0.4s							
KURBB	Kurchatov Arra	63.41 328		P	P	P	22 22 33.5	-1.6
	0.8nm,0.3s,baz=125,slow=6.2,SNR=5.8							
	0.8nm,0.3s							
VNDA	Vanda	81.35 173		P	P	P	22 24 22.3	+0.7
	0.8nm,0.8s,baz=314,slow=3.7,SNR=4.0							
	0.8nm,0.8s							

MOS ***14*** *22:15:05.3±1.0, 1°.66N×126°.40E, h12km, mb5.5/64, Error ellipse: s-maj=8.8km s-min=4.5km az=115.6*
IDC ***14*** *22:15:05.6±0.4, 1°.65N×126°.41E, h0km, mb5.1/29, mbtmp5.0/30, ML4.7/1, MS4.1/4, Error ellipse: s-maj=19.6km s-min=9.4km az=75.0*
BJI ***14*** *22:15:08.6, 1°.37N×126°.35E, h50km, mB5.5/14, mb5.2/79, Ms4.7/20, Ms7 4.5/23*
NEIC ***14*** *22:15:09.1±1.6, 1°.62N±0°.05×126°.47E±0°.05, h20km±3km, mb5.4/212, Error ellipse: s-maj=8.3km s-min=7.3km az=212.0*
DJA ***14*** *22:15:10.2±0.2, 2°N±2°×12°.7E±°, h10km, M5.2/24, mB5.6/18, mb5.5/19, MLv5.4/24, Mw(mB)5.1/18*
GCMT ***14*** *22:15:15.1±0.5, 1°.78N±0°.04×126°.44E±0°.04, h30km, MW5.4/55, Moment Tensor Solution. s37,c43; s55,c77; Duration: 1§2 Moment tensor: Scale 10¹⁷Nm; Mrr 1.86±. 12; Mθθ -0.52±.06; Mϕϕ -1.34±.08; Mrθ 0.00±.10; Mrϕ -0.26±.04; Mθϕ 0.09±.10; Best double couple: M₀1.64200×10¹⁷ NP1:ϕs197.00000°, δ43.00000°, λ91.00000°. NP2:ϕs16.00000°, δ47.00000°, λ89.00000°. Principal axes: T 1.8630, Plg88.0000°, Azm264.0000°; N -0.4460, Plg1.0000°, Azm16.0000°; P -1.4200, Plg2.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 22:15:10.7±0.2, 1°.57N±0°.03×126°.44E±0°.04, h35km, n894, σ1§27/890, mb5.4/243, MS4.4/15, 31C-30D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.22 130				Pn	22 15 31.6	+0.4
TNTI						Sn	22 15 47.3	+0.8
TNTI	Ternate	1.22 130		P		Pn	22 15 31.9	+0.6
TNTI	Ternate	1.22 130		P		Pn	22 15 31.9	+0.6
SGSI	Sangihe	2.29 337		P		Pn	22 15 46.3	+0.2
SGSI				S		Sn	22 15 13.2	0.0
KMSI	Cibinong	2.65 248		P		Pn	22 15 54.2	+3.2
SANI	Sanana	3.62 187		P		Pn	22 16 05.7	+1.3
SANI	Sanana	3.62 187		P		Pn	22 16 05.6	+1.2
LUWI	Luwuk	4.49 235				Pn	22 16 18.3	+2.0
LUWI	Luwuk	4.49 235		P		Pn	22 16 19.7	+3.4
LUWI	Luwuk	4.49 235		P		Pn	22 16 20.9	+4.6
MRSI	Marisa	4.63 257		P		Pn	22 16 22.0	+3.8
NLAI	Namlea	4.82 172		P		Pn	22 16 23.7	+2.9
	2.1nm5μm336nm,0.8s							
APSI	Ampana	5.39 243		P		Pn	22 16 34.1	+5.4
SWI	Sorong	5.39 117		P		Pn	22 16 30.8	+2.1
	248nm,0.9s							
MSAI	Masohi	5.48 153		P		Pn	22 16 35.2	+5.3
	2.0nm8μm522nm,0.8s							
AAI	Ambon	5.50 161		P		Pn	22 16 34.1	+3.8
	1.8nm6μm548nm,1.1s							
DAV	Davao City (W)	5.53 351		Pn		Pn	22 16 31.7	+1.0
	46nm,0.3s,baz=86,slow=9.1,SNR=6.0							
DAV	Davao City (W)	5.53 351				Pn	22 16 30.6	-0.1
DAV	Davao City (W)	5.53 351		P		Pn	22 16 35.1	+4.4
DAV				S		Sn	22 17 39.0	+5.9
TOLI2	Tolitoli	5.68 266				Pn	22 16 34.2	+1.6
TOLI2	Tolitoli	5.68 266		P		Pn	22 16 33.1	+0.5
MPSI	Mapaga	6.66 259		P		Pn	22 16 53.2	+7.1
	1.0nm3μm313nm,1.0s							
BNDI	Bandaira	6.97 150		P		Pn	22 16 56.7	+6.3
	1.5nm324nm,1.1s							
PCI	Palu	7.05 250		P		Pn	22 16 58.6	+7.1
	1.4nm4μm432nm,1.1s							
FAKI	Fak Fak	7.32 128				Pn	22 16 56.7	+1.5
FAKI	Fak Fak	7.32 128		P		Pn	22 16 56.8	+1.5
FAKI	Fak Fak	7.32 128		P		Pn	22 16 59.4	+4.2
	0.9nm2μm343nm,1.1s							
BBSI	Bau Bau	8.00 209		P		Pn	22 17 10.8	+6.2
	4μm521nm,1.0s							
TTSI	Tana Toraja	8.05 235		P		Pn	22 17 09.0	+3.7
	2μm308nm,1.0s							
RKPI	Ransiki, Papua	8.32 112		P		Pn	22 17 23.0	+14
SPSI	Sidrap Palu	8.64 230		P		Pn	22 17 17.8	+4.4
	0.6nm2μm150nm,0.6s							
BNSI	Bone	8.67 227		P		Pn	22 17 17.4	+3.6
	0.9nm2μm314nm,0.7s							
MYLDM	Lahad Datu	8.70 295				Pn	22 17 15.9	+1.7
KMPI	Kaimana, Papua	8.93 126		P		Pn	22 17 25.9	+8.6
BKSI	Bulukumba	9.31 223		P		Pn	22 17 26.3	+3.8
	1μm149nm,1.0s							
KAPI	Kapanu	9.35 226		Pn		Pn	22 17 26.7	+3.6
	8.8nm,0.3s,baz=29,slow=9.7,SNR=24							
KAPI				Sn		Sn	22 19 05.9	-1.1
	3.8nm,0.3s,baz=45,slow=17,SNR=1.0							
KAPI	Kappang	9.35 226				Pn	22 17 26.3	+3.3
KAPI	Kappang	9.35 226		P		Pn	22 17 27.5	+4.4
KAPI				S		Sn	22 19 09.7	+2.6
KAPI	Kappang	9.35 226		P		Pn	22 17 24.0	+0.9
KAPI	Kappang	9.35 226		*i* P		Pn	22 17 26.1	+3.0
BSSI	Bau Bau, Buton	9.69 218		P		Pn	22 17 31.9	+4.1
	2μm168nm,0.7s							
BKB	Balikpapan	9.95 254		Pn		Pn	22 17 33.3	+2.0
BAKI	Biak	10.04 106		P		Pn	22 17 38.5	+5.9
MMRI	Maumere	10.97 202				Pn	22 17 46.8	+1.5
SOEI	Soe	11.45 191				Pn	22 17 55.4	+3.3
SOEI	Soe	11.45 191		P		Pn	22 17 53.9	+1.9
BATI	Baumata	12.02 193		Pn		Pn	22 18 04.8	+5.1
	3.8nm,0.3s,baz=345,slow=1.5,SNR=8.7							
PLAI	Plampang	13.46 220		P		Pn	22 18 20.2	+0.8
TGY	Tagaytay City	13.59 337		LR		LR	22 23 41.8	
	comp=Z,1μm,19.9s,baz=150,slow=38							
SBUM	Sibu	14.24 274				Pn	22 18 32.2	+2.2
SBUM	Sibu	14.24 274		P		Pn	22 18 29.7	-0.3
DRS	Darwin Rock St	14.59 162		P		Pn	22 18 36.2	+1.4
JAY	Jayapura	14.82 106		Pn		Pn	22 18 40.5	+2.4
	1.6nm,0.3s,baz=298,slow=3.8,SNR=15							
MTN	Manton Dam	15.05 162		P		Pn	22 18 39.7	-1.3
MTN	Manton Dam	15.05 162				Pn	22 18 39.8	-1.2
KDU	Kakadu	15.38 157		P		Pn	22 18 44.2	-1.0
	comp=Z,100nm,0.9s							
JAGI	Jajag, Banyuwa	15.80 231				P	22 18 53.4	-0.8
JAGI	Jajag, Banyuwa	15.80 231		P		Pn	22 18 51.0	+0.3
KNRA	Kununurra	17.29 172		P		Pn	22 19 09.0	-0.4
	comp=Z,136nm,0.9s							
KNRA	Kununurra	17.29 172		P		Pn	22 19 10.1	+0.6
UGM	Wanagama	18.46 239		P		P	22 19 24.2	+0.5
FITZ	Fitzroy Crossi	19.56 182		P		P	22 19 34.1	-1.5
	comp=Z,14nm,0.8s							
FITZ	Fitzroy Crossi	19.56 182		P		P	22 19 36.2	+0.6
	comp=Z,1.7nm,0.3s,baz=18,slow=11,SNR=27							
	comp=Z,22nm,0.8s							
FITZ	Fitzroy Crossi	19.56 182		P		P	22 19 35.5	-0.2
FITZ	Fitzroy Crossi	19.56 182		P		P	22 19 36.0	+0.4
DLV	Lat	20.57 301		P		P	22 19 46.7	-0.3
BBJI	Bungbulang	20.78 244		P		P	22 19 49.4	+0.3
MANU	Manus Island	21.23 100		P		P	22 19 51.0	-2.9
TWGBT	Beinan	21.76 347		P		P	22 19 59.5	+0.1
YULB	Yu-li	22.26 347				P	22 20 01.0	-3.9
YULB	comp=Z,97nm,0.8s					IAmb	IAmb	22 20 10.5
YULB	Yu-li	22.26 347		P		P	22 20 01.7	-3.2
TPUB	Ta-pu	22.33 346		P		P	22 20 02.8	-2.8
TPUB	Ta-pu	22.33 346		P		P	22 20 03.6	-2.0
WB0	Warramunga Arr	22.59 160				P	22 20 07.5	-0.9
COEN	Coen	22.65 133		P		P	22 20 04.3	-4.8
COEN	Coen	22.65 133				P	22 20 07.4	-1.6
COEN	Coen	22.65 133		P		P	22 20 10.0	+0.9
SSLB	Suanglung	22.72 347		P		P	22 20 06.8	-2.9
SSLB				IAmb		IAmb	22 20 15.7	
	comp=Z,91nm,0.8s							
SSLB	Suanglung	22.72 347		P		P	22 20 08.4	-1.4
WRAB	Tennant Creek	22.73 160		P		P	22 20 09.1	-0.8
WRAB	Tennant Creek	22.73 160		P		P	22 20 09.7	-0.2
WRAB	Tennant Creek	22.73 160	*ce*	P		P	22 20 10.0	+0.1
WRAB				pmax		pmax		
	comp=Z,458nm,1.0s							
WRA	Warramunga Arr	22.74 160		P		P	22 20 09.4	-0.5
	comp=Z,387nm,0.9s,baz=340,slow=10,SNR=89							
WRA				S		S	22 24 16.1	-0.3
	comp=Z,13nm,1.1s,baz=342,slow=18,SNR=9.5							
WRA	Warramunga Arr	22.74 160		P		P	22 20 08.7	-1.3
NACB	Ninganchiao	22.96 349		P		P	22 20 12.2	0.0
JMJ	Miyako jima 2	23.14 357		P		P	22 20 14.4	+0.4
PMG	Port Moresby	23.34 118		P		P	22 20 16.2	+0.1
	comp=Z,20nm,0.7s,baz=336,slow=10,SNR=7.6							
PMG				LR		LR	22 30 54.4	
	comp=Z,606nm,19.6s,baz=330,slow=40							
	comp=Z,20nm,0.7s							
PMG	Port Moresby	23.34 118		P		P	22 20 14.7	-1.4
PMG	Port Moresby	23.34 118	*ce*	P		P	22 20 17.2	+1.1
PMG				pmax		pmax		
	comp=Z,73nm,1.7s							
YHNB	Yeheng	23.48 348		P		P	22 20 15.8	-1.7
YHNB				IAmb		IAmb	22 20 23.1	
	comp=Z,80nm,0.7s							
YHNB	Yeheng	23.48 348		P		P	22 20 16.7	-0.8
MBWA	Marble Bar	23.52 196		P		P	22 20 16.2	-1.6
	comp=Z,49nm,0.7s							
MBWA	Marble Bar	23.52 196		P		P	22 20 17.5	-0.3
MBWA	Marble Bar	23.52 196		P		P	22 20 17.5	-0.3
MBWA				S		S	22 24 26.4	-3.0
MBWA	Marble Bar	23.52 196		P		P	22 20 17.7	-0.1
QIZ	Qiongzhong	23.78 318		P		P	22 20 19.0	-1.4
QIZ				IAmb		IAmb	22 20 20.5	
	comp=Z,112nm,1.3s							
QIZ	Qiongzhong	23.78 318		P		P	22 20 18.8	-1.6
QIZ				S		S	22 24 32.3	-1.5
QIZ				pmax		pmax		
	comp=Z,66nm,1.5s							
QIZ				LR		LR		
	comp=Z,640nm,13.1s							
QIZ				LR		LR		
	comp=Z,690nm,16.1s							
QIZ				LR		LR		
	comp=Z,1μm,18.8s							
QIZ	Qiongzhong	23.78 318		P		P	22 20 19.9	-0.5
PSAC1	Pilbara Seismi	23.86 195		P		P	22 20 19.9	-1.1
	comp=Z,35nm,0.7s							
PSAC2	Pilbara Seismi	23.86 195		P		P	22 20 19.7	-1.4
	comp=Z,60nm,0.8s							
PSA00	Pilbara Seismi	23.88 195		P		P	22 20 20.4	-0.8
	comp=Z,51nm,0.8s							
PSA00	Pilbara Seismi	23.88 195		P		P	22 20 20.9	-0.3
PSA00	Pilbara Seismi	23.88 195		P		P	22 20 21.0	-0.3
PSA00				IAmb		IAmb	22 20 27.2	
	comp=Z,29nm,1.1s							
PSA00	Pilbara Seismi	23.88 195		P		P	22 20 21.8	+0.5
PSAB3	Pilbara Seismi	23.90 195		P		P	22 20 20.4	-1.1
	comp=Z,41nm,0.7s							
MNAI	Manna	24.20 256		P		P	22 20 22.5	-1.8
MNAI	Manna	24.20 256		P		P	22 20 24.8	+0.5
QZH	Quanzhou	24.45 343	*e*	P		P	22 20 26.3	-0.1
JOW	Kunigami	25.18 4		P		P	22 20 32.0	-1.1
JOW	Kunigami	25.18 4		P		P	22 20 33.8	+0.7
BKNI	Bangkinang	25.43 267		P		P	22 20 35.6	+0.2
QIS	Mount Isa	25.49 150		P		P	22 20 35.0	-1.0
	comp=Z,97nm,0.6s							
QIS	Mount Isa	25.49 150		P		P	22 20 37.5	+1.5
IPM	Ipoh	25.54 277				P	22 20 35.4	-1.1
IPM	Ipoh	25.54 277		P		P	22 20 37.2	+0.7
KULM	Kulim	26.00 279		P		P	22 20 39.6	-1.1
AS31	Alice Springs	26.11 164				P	22 20 41.8	+0.2
ASAR	Alice Springs	26.11 164		P		P	22 20 42.0	+0.5
	comp=Z,157nm,0.9s,baz=341,slow=5.2,SNR=96							
ASAR				S		S	22 25 21.6	+11
	comp=Z,18nm,0.8s,baz=343,slow=19,SNR=11							
	comp=Z,157nm,0.9s							
ASAR	Alice Springs	26.11 164				P	22 20 40.9	-0.7
RABL	Rabaul	26.33 103		P		P	22 20 43.7	0.0
RABL				IAmb		IAmb	22 20 49.4	
	comp=Z,60nm,0.5s							
WRKA	Warakurna	26.51 176		P		P	22 20 45.1	0.0
	comp=Z,40nm,0.9s							
TV1H	Townsville Har	28.78 137		P		P	22 21 07.7	+2.2
GSI	Gunungsitoli	28.86 270				P	22 21 05.4	-1.0
GSI				IAmb		IAmb	22 21 08.0	
	comp=Z,99nm,1.3s							
CTA	Charters Tower	28.99 139		P		P	22 21 09.1	+1.7
CTAO	Charters Tower	28.99 139		P		P	22 21 07.2	-0.2
CTAO				IAmb		IAmb	22 21 14.6	
	comp=Z,72nm,1.2s							
CTAO	Charters Tower	28.99 139		P		P	22 21 09.1	+1.7
CTAO	Charters Tower	28.99 139		P		P	22 21 07.2	-0.2
CTAO				pmax		pmax		
	comp=Z,72nm,1.3s							
MEEK	Meekatharra	29.04 195		P		P	22 21 09.1	+1.3
SLVN	Son La	29.47 313				P	22 21 11.0	-0.7
WHN	Wuhan	31.02 339		P		P	22 21 24.8	-0.4
WHN				pmax		pmax		
	comp=Z,24nm,1.1s							
NJ2	Nanjing	31.16 347	*e*	P		P	22 21 26.4	0.0
NJ2				pmax		pmax		
	comp=Z,39nm,0.7s							
GYA	Guiyang	31.21 324	⇓	P		P	22 21 26.9	-0.2
GYA				pmax		pmax		
	comp=Z,46nm,1.0s							
JNU	Nakatsue	31.66 7		LR		LR	22 36 15.3	
	comp=Z,187nm,19.2s,baz=159,slow=40							
JNU	Nakatsue	31.66 7		P		P	22 21 29.3	-1.6
JNU				IAmb		IAmb	22 21 34.3	
	comp=Z,53nm,0.9s							
JNU	Nakatsue	31.66 7		P		P	22 21 31.1	+0.2
CMA

comp=Z,30nm,1.2s
PZH LR LR
comp=Z,370nm,21.6s
PZH LR LR
comp=Z,550nm,21.6s
PZH LR LR
comp=Z,560nm,22.1s
MUN Mundaring 34.74 195 P **P** **22 21 59.1 +1.4**
INU Inuyama 35.02 15 P **P** **22 21 59.3 -0.8**
INU IAmb IAmb 22 22 10.1
comp=Z,57nm,0.9s
LYN LuoYang 35.31 340 P **P** **22 22 04.4 +1.8**
LYN pmax pmax
comp=Z,66nm,0.6s
JGF Kuroka 35.35 15 P **P** **22 22 02.7 -0.3**
JGF IAmb IAmb 22 22 04.8
comp=Z,179nm,1.9s
JGF Kuroka 35.35 15 P **P** **22 22 03.6 +0.6**
BBOO Buckleboo 35.38 166 P **P** **22 22 03.5 +0.2**
BBOO IAmb IAmb 22 22 04.6
comp=Z,60nm,0.9s
BBOO Buckleboo 35.38 166 P **P** **22 22 03.9 +0.7**
NWAO Narrogin (SRO) 35.39 193 P **P** **22 22 04.6 +1.2**
comp=Z,19nm,0.9s,baz=11,slow=6.9,SNR=9.4
NWAO PcP **PcP** **22 24 33.4 +0.5**
comp=Z,5.6nm,0.7s,baz=70,slow=4.3,SNR=4.2
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 35.39 193 P **P** **22 22 03.3 0.0**
NWAO IAmb IAmb 22 22 07.7
comp=Z,40nm,1.1s
NWAO Narrogin (SRO) 35.39 193 P **P** **22 22 03.1 -0.2**
NWAO Narrogin (SRO) 35.39 193 P **P** **22 22 04.9 +1.6**
NWAO Narrogin (SRO) 35.39 193 P **P** **22 22 03.3 0.0**
NWAO pmax pmax
comp=Z,40nm,1.1s
TIA Tai'an 35.54 347 P **P** **22 22 03.3 -1.2**
TIA pmax pmax
comp=Z,36nm,1.0s
TIA LR LR
comp=Z,930nm,20.8s
TIA LR LR
comp=Z,990nm,18.5s
TIA LR LR
comp=Z,1μm,22.6s
TNCH TengChong 35.64 313⇑ *i*P **P** **22 22 05.1 -0.7**
TNCH S **S** **22 27 38.5 -1.7**
TNCH pmax pmax
comp=Z,36nm,0.7s
TNCH LR LR
comp=Z,660nm,19.3s
KSAR Wonju Array Be 35.73 2 P **P** **22 22 05.0 -1.1**
KSAR Wonju Array Be 35.73 2 P **P** **22 22 05.0 -1.1**
KSRS Korea Array 35.74 2 P **P** **22 22 06.2 0.0**
comp=Z,9.6nm,0.6s,baz=181,slow=10,SNR=22
KSRS PcP **PcP** **22 24 34.6 +0.8**
comp=Z,2.3nm,0.6s,baz=183,slow=2.7,SNR=4.6
comp=Z,9.6nm,0.6s
KS19 Wonju Array Si 35.78 2 P **P** **22 22 06.3 -0.3**
EIDS Eidsvold 35.86 140 P **P** **22 22 06.7 -0.8**
EIDS IAmb IAmb 22 22 09.1
comp=Z,52nm,1.1s
EIDS Eidsvold 35.86 140 P **P** **22 22 07.5 0.0**
XAN Xi'an 36.22 335⇑ P **P** **22 22 08.9 -1.6**
XAN pmax pmax
comp=Z,74nm,1.3s
XAN pmax pmax
comp=Z,550nm,10.7s
STKA Stephens Creek 36.23 158 P **P** **22 22 10.9 +0.4**
comp=Z,56nm,0.9s,baz=334,slow=8.2,SNR=64
comp=Z,56nm,0.9s
STKA Stephens Creek 36.23 158 P **P** **22 22 11.0 +0.4**
STKA Stephens Creek 36.23 158 *i* P **P** **22 22 09.5 -1.1**
CD2 Chengdu 36.23 326 P **P** **22 22 10.3 -0.4**
CD2 S **S** **22 27 49.6 +0.7**
CD2 pmax pmax
comp=Z,140nm,0.8s
MAJO Matsushiro 36.47 16 P **P** **22 22 10.8 -1.8**
MAJO IAmb IAmb 22 22 21.0
comp=Z,45nm,0.8s
MAJO Matsushiro 36.47 16 *i* P **P** **22 22 10.7 -1.8**
MAJO pmax pmax
comp=Z,19nm,0.6s
MJAR Matsushiro Arr 36.47 16 P **P** **22 22 11.7 -0.8**
comp=Z,17nm,0.7s,baz=183,slow=9.5,SNR=24
MJAR PcP **PcP** **22 24 36.5 +0.4**
comp=Z,4.2nm,0.8s,baz=182,slow=2.8,SNR=4.8
comp=Z,17nm,0.7s
MJAR Matsushiro Arr 36.47 16 P **P** **22 22 10.8 -1.7**
MJAR Matsushiro Arr 36.47 16 P **P** **22 22 10.8 -1.7**
MJAR pmax pmax
comp=Z,29nm,1.0s
MJB9 Matsu-Tunnel 36.47 16 P **P** **22 22 11.3 -1.2**
MJB9 IAmb IAmb 22 22 22.0
comp=Z,44nm,0.8s
HTT Hallett 36.75 162 P **P** **22 22 16.4 +1.4**
HNS HongShan 37.26 344⇓ P **P** **22 22 18.6 -0.6**
HNS PcP **PcP** **22 24 39.6 +1.2**
HNS pmax pmax
comp=Z,46nm,1.0s
DL2 Dalian 37.42 354 P **P** **22 22 21.3 +0.8**
DL2 pmax pmax
comp=Z,190nm,0.9s
CMSA Cobar Meteorol 37.66 153 P **P** **22 22 23.6 +0.9**
TIY Taiyuan 38.21 342 *eP* **P** **22 22 26.3 -1.0**
TIY pmax pmax
comp=Z,20nm,0.5s
JMM Marumori 38.46 18 P **P** **22 22 28.5 -0.8**
JMM IAmb IAmb 22 22 37.6
comp=Z,81nm,0.8s
JMM Marumori 38.46 18 P **P** **22 22 30.0 +0.7**
LKP Lekhapani 38.93 314 *eP* P 22 22 24.4 -9.1
LKP IAmb IAmb 22 22 26.6
comp=Z,126nm,0.4s
IMP Imphal 38.98 309 *eP* **P** **22 22 31.8 -2.1**
IMP IAmb IAmb 22 22 33.9
comp=Z,54nm,1.1s
KOHI KOHIMA 39.32 310 *eP* **P** **22 22 34.7 -2.2**
KOHI IAmb IAmb 22 22 36.9
comp=Z,74nm,1.5s
MOKO MOKOCHONG 39.34 312 *eP* **P** **22 22 34.7 -2.3**
MOKO IAmb IAmb 22 22 50.7
comp=Z,46nm,1.5s
BJT Baijiatuau 39.40 348 P **P** **22 22 36.3 -0.8**
BJT Baijiatuau 39.40 348 P **P** **22 22 37.6 +0.4**
BJT Baijiatuau 39.40 348 P **P** **22 22 36.3 -0.8**
BJT pmax pmax
comp=Z,36nm,0.8s
BJI Beijing 39.42 348 P **P** **22 22 36.9 -0.4**
BJI pP **pP** **22 22 46.4 -0.7**
BJI sP **sP** **22 22 51.3 +0.2**
BJI pmax pmax
comp=Z,23nm,0.7s
JORH JORHAT 39.77 312 *eP* **P** **22 22 38.8 -1.7**
SNY Shenyang 40.16 357⇓ P **P** **22 22 43.8 +0.3**
SNY pmax pmax
comp=Z,60nm,0.7s
LZDM Lanzhou Array 40.20 331 P **P** **22 22 44.0 -0.3**
comp=Z,20nm,0.8s,baz=146,slow=11,SNR=16
comp=Z,20nm,0.8s
LZH Lanzhou 40.23 331 *eP* **P** **22 22 44.1 -0.3**
LZH sP sP 22 22 56.9 -1.3
LZH pmax pmax
comp=Z,76nm,1.2s
LZH LR LR
comp=Z,680nm,14.8s
LZH LR LR
comp=Z,180nm,15.3s
LZH LR LR
comp=Z,790nm,17.4s
ITAN ITANAGAR 40.38 312 *eP* **P** **22 22 46.0 +0.5**
ITAN IAmb IAmb 22 22 56.0
comp=Z,104nm,0.8s
ZIRO ZIRO 40.50 313 *eP* **P** **22 22 45.5 -1.2**
TEZP TEZPUR 40.79 311 *eP* **P** **22 22 47.9 -1.0**
SHL Shillong 40.96 309 P **P** **22 22 49.5 -1.1**
SHL IAmb IAmb 22 22 54.7
comp=Z,65nm,0.7s
SHL PcP **PcP** **22 24 51.1 +0.6**
SHL Shillong 40.96 309 P **P** **22 22 50.1 -0.4**
SNR=20
SHL Shillong 40.96 309 *eP* **P** **22 22 49.1 -1.4**
SHL IAmb IAmb 22 22 54.8
comp=Z,51nm,0.7s
SHL Shillong 40.96 309 P **P** **22 22 49.5 -1.1**
SHL 22 24 51.2
SHL pmax pmax
comp=Z,65nm,0.7s
MSHR Mys Shultsa 41.05 5*ceP* **P** **22 22 51.4 +0.6**
MSHR pmax pmax
comp=Z,32nm,1.1s
JTM Tenmabayashi 41.23 17 P **P** **22 22 52.0 -0.3**
JTM Tenmabayashi 41.23 17 P **P** **22 22 53.2 +0.9**
HHC Hu-ho-hao-te 41.36 343 *eP* **P** **22 22 53.4 -0.1**
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,170nm,3.9s
HHC LR LR
comp=Z,560nm,22.7s
HHC LR LR
comp=Z,280nm,14.3s
HHC LR LR
comp=Z,810nm,23.6s
GUWA GUWAHATI 41.42 309 *eP* **P** **22 22 53.6 -0.5**
GUWA IAmb IAmb 22 23 01.4
comp=Z,22nm,1.1s
BTO Baotou 41.61 341 *eP* **P** **22 22 57.0 +1.4**
BTO PP **PnPn** **22 24 40.3 +3.1**
BTO S **S** **22 29 12.6 +2.9**
BTO pmax pmax
comp=Z,15nm,0.6s
BTO pmax pmax
comp=Z,290nm,4.0s
BTO LR LR
comp=Z,450nm,9.6s
BTO LR LR
comp=Z,810nm,16.8s
BTO LR LR
comp=Z,990nm,17.6s
TAWA Tawang 42.01 311 *eP* **P** **22 22 60.0 +0.6**
TAWA IAmb IAmb 22 23 13.1
comp=Z,43nm,1.1s
CN2 Changchun 42.06 359 P **P** **22 23 01.3 +2.2**
CAN Canberra 42.33 152 P **P** **22 23 01.5 0.0**
CAN Canberra 42.33 152 P **P** **22 23 01.5 0.0**
CAN pmax pmax
comp=Z,45nm,0.9s
USRK Ussuriysk Ar. 42.74 6 P **P** **22 23 04.7 +0.1**
comp=Z,12nm,0.7s,baz=185,slow=7.0,SNR=33
comp=Z,12nm,0.7s
H11S3 WAKE ISLAND Hy 42.89 64 T T 23 09 01.2
baz=252,slow=75,SNR=21
H11S2 WAKE ISLAND Hy 42.91 64 T T 23 09 01.7
baz=252,slow=75,SNR=16
H11S1 WAKE ISLAND Hy 42.91 64 T T 23 08 59.5
baz=252,slow=75,SNR=5.7
MDJ Mudanjiang 42.96 3 P **P** **22 23 05.8 -0.5**
MDJ Mudanjiang 42.96 3 P **P** **22 23 07.0 +0.6**
MDJ pmax pmax
comp=Z,39nm,1.2s
XLT XiLinHaoTe 43.15 349 *eP* **P** **22 23 08.3 +0.3**
XLT pmax pmax
comp=Z,59nm,1.2s
XLT pmax pmax
comp=Z,380nm,4.8s
LSA Lhasa 43.67 313 P **P** **22 23 12.7 -0.3**
LSA Lhasa 43.67 313 P P 22 23 08.8 -4.2
LSA pmax pmax
comp=Z,30nm,1.0s
LSA Lhasa 43.67 313 P **P** **22 23 12.7 -0.3**
LSA pmax pmax
comp=Z,37nm,0.9s
SANVU Saraoutou 43.70 114 P **P** **22 23 12.6 -0.2**
SANVU IAmb IAmb 22 23 16.5
comp=Z,55nm,0.9s
BNX BinXian 44.00 1⇓ P **P** **22 23 14.3 -0.4**
BNX pmax pmax
comp=Z,16nm,1.0s
SHBG Sahibganj 44.16 305 *eP* **P** **22 23 16.4 0.0**
SHBG IAmb IAmb 22 23 25.1
comp=Z,33nm,0.7s
TEY Ternei 44.21 10 *eP* **P** **22 23 19.4 +3.0**
ASAJ Asahikawa 44.73 17 P **P** **22 23 20.9 +0.3**
ASAJ pmax pmax
comp=Z,89nm,1.1s
JKA Kamikawa-asahi 44.73 17 P **P** **22 23 20.9 +0.3**
JKA IAmb IAmb 22 23 34.2
comp=Z,89nm,1.1s
GTA Gaotai 44.81 330 P **P** **22 23 21.3 -0.2**
GTA PcP **PcP** **22 25 04.6 +1.5**
GTA pmax pmax
comp=Z,16nm,1.0s
GTA LR LR
comp=Z,340nm,18.9s
GTA LR LR
comp=Z,250nm,18.2s
GTA LR LR
comp=Z,420nm,21.1s
GOMU GeErMu 45.22 323 P **P** **22 23 24.8 -0.3**
GOMU pmax pmax
comp=Z,18nm,1.3s
RAGD RAYAGADA 45.59 296 *eP* **P** **22 23 27.5 -0.3**
PALK Pallekele 45.93 279 P **P** **22 23 29.6 -1.1**
PALK Pallekele 45.93 279 P **P** **22 23 30.3 -0.4**
PALK Pallekele 45.93 279 P **P** **22 23 29.6 -1.1**
PALK pmax pmax
comp=Z,16nm,0.9s
GAYA Gaya 45.99 304 *eP* **P** **22 23 30.3 -0.6**
GAYA IAmb IAmb 22 23 31.9
comp=Z,29nm,1.1s
EVN Everest 46.07 308 **P** **22 23 31.0 -1.2**
EVN IAmb IAmb 22 23 43.5
comp=Z,67nm,1.2s
PINNC Pines Island, 46.63 123 P **P** **22 23 34.7 -1.3**
PINNC IAmb IAmb 22 24 53.5
comp=Z,69nm,1.2s
MARNC Mare, Loyalty 46.65 122 P **P** **22 23 34.7 -1.5**
YSS Yuzhno-Sakhali 47.39 15 P **P** **22 23 39.4 -2.1**
YSS Yuzhno-Sakhali 47.39 15 *eP* **P** **22 23 41.0 -0.5**
YSS pmax pmax
comp=Z,40nm,1.2s
BLSP Bilaspur 47.67 299 *eP* **P** **22 23 42.0 -2.2**
HIA Hailar 47.87 354 P **P** **22 23 45.8 +0.6**
HIA IAmb IAmb 22 23 50.9
comp=Z,46nm,1.0s
HIA Hailar 47.87 354 P **P** **22 23 45.8 +0.6**
HIA pmax pmax
comp=Z,46nm,1.0s
HILR Hailar Array B 48.15 354 P **P** **22 23 47.7 +0.3**
comp=Z,19nm,0.7s,baz=188,slow=9.0,SNR=20
comp=Z,19nm,0.7s
HEH HeiHe 48.52 1 *eP* **P** **22 23 49.3 -0.8**
HEH pmax pmax
comp=Z,36nm,1.2s
ULN Ulaanbaatar 49.08 343 P **P** **22 23 53.7 -1.1**
ULN IAmb IAmb 22 24 03.3
comp=Z,31nm,1.0s
ULN Ulaanbaatar 49.08 343 P **P** **22 23 54.9 +0.2**
ULN Ulaanbaatar 49.08 343*ceP* **P** **22 23 53.7 -1.1**
ULN pmax pmax
comp=Z,20nm,0.6s
UGL Uglegorsk 49.20 14 *eP* P 22 24 07.3 +12
UGL pmax pmax
comp=Z,500nm,1.5s
SONM Songino Array 49.25 342 P **P** **22 23 55.9 -0.2**
comp=Z,8.6nm,0.7s,baz=156,slow=9.1,SNR=44
comp=Z,8.6nm,0.7s
KOD Kodaikanal 49.41 282 *eP* **P** **22 23 56.1 -1.9**
KOD IAmb IAmb 22 23 59.9
comp=Z,25nm,1.1s
HYBB Hyderabad (bro 49.61 292 *eP* **P** **22 23 58.6 -0.5**
HYBB *epP* **pP** **22 24 05.7 -3.4**
TRD Trivandrum 49.73 280 *eP* **P** **22 23 59.7 -0.4**
GRNR Gornyy 49.75 8 *eP* **P** **22 23 58.1 -1.5**
TYV Tymovskoe 51.00 13 *eP* **P** **22 24 06.6 -2.5**
TYV pmax pmax
comp=Z,35nm,1.3s
TYV pmax pmax
comp=Z,700nm,2.1s
CIT Chita 51.43 350 *eP* **P** **22 24 13.2 +0.9**
CIT *e* 22 24 16.0
CIT *e* 22 24 19.2
CIT *e* 22 26 11.0
CIT *e* 22 31 29.0
CIT pmax pmax
comp=Z,236nm,1.1s
AKL Akola 51.81 295 *eP* **P** **22 24 14.0 -1.7**
AKL IAmb IAmb 22 24 26.7
comp=Z,43nm,0.8s
JHNI Jhansi 51.87 301 *eP* **P** **22 24 13.4 -2.7**
LGTI Lohaghat 51.92 307 *eP* **P** **22 24 15.7 -0.6**
LGTI IAmb IAmb 22 24 21.4
comp=Z,17nm,0.6s
ZEA Zeya 52.00 1 *eP* **P** **22 24 18.4 +1.9**
ZEA pmax pmax
comp=Z,20nm,1.4s
BHPL Bhopal 52.14 298 *eP* **P** **22 24 16.6 -1.6**
BHPL IAmb IAmb 22 24 22.4
comp=Z,23nm,0.6s
NRDN NARMADA NAGAR 52.22 298 *eP* **P** **22 24 20.4 +1.7**
NRDN IAmb IAmb 22 24 33.4
comp=Z,34nm,0.9s
ZAK Zakamensk 52.47 341 *eP* **P** **22 24 18.8 -1.3**
ZAK pmax pmax
comp=Z,14nm,1.5s
GUNA GUNA 52.65 300 *eP* **P** **22 24 20.2 -1.7**
GUNA IAmb IAmb 22 24 23.3
comp=Z,72nm,0.6s
JOSI Joshimath 52.91 308 *eP* **P** **22 24 22.8 -1.1**
JOSI IAmb IAmb 22 24 33.5
comp=Z,28nm,0.7s
TLY Talaya 53.49 343 P **P** **22 24 27.3 -0.2**
TLY Talaya 53.49 343 *i* P **P** **22 24 27.6 0.0**
TLY pmax pmax
comp=Z,17nm,0.8s
FUNA Funafuti 53.53 102 P **P** **22 24 27.2 -1.3**
AYAN Aya Nagar 54.09 304 *eP* **P** **22 24 30.9 -1.4**
AYAN IAmb IAmb 22 24 41.5
comp=Z,29nm,0.9s
NPLP NPLP New Delhi 54.11 305 *eP* **P** **22 24 30.7 -1.8**
NPLP IAmb IAmb 22 24 36.8
comp=Z,31nm,0.6s
MSVF Nonsavu 54.31 113 P **P** **22 24 33.8 -0.4**
MSVF IAmb IAmb 22 24 40.5
comp=Z,33nm,1.0s
MSVF Nonsavu 54.31 113 P **P** **22 24 35.1 +0.9**
MSVF Nonsavu 54.31 113 P **P** **22 24 33.8 -0.4**
MSVF pmax pmax
comp=Z,33nm,1.0s
MOY Mondy 54.31 341 *eP* **P** **22 24 34.0 +0.3**
MOY pmax pmax
comp=Z,52nm,1.6s
WMQ Urumqi 54.33 326 *eP* **P** **22 24 33.8 -0.2**
WMQ pP pP 22 24 43.4 -0.7
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ LR LR
comp=Z,430nm,24.1s
KUDL Kundal 54.50 304 *eP* **P** **22 24 33.0 -2.3**
SMLA Simla 55.02 308 *eP* **P** **22 24 37.9 -1.2**
SMLA IAmb IAmb 22 24 45.8
comp=Z,61nm,0.7s
UDPR Udaipur 55.78 299 *eP* **P** **22 24 42.8 -1.9**
UDPR IAmb IAmb 22 24 54.0
comp=Z,54nm,0.7s
ALCI Alchi Leh 56.23 311 *eP* **P** **22 24 46.9 -1.3**
ALCI IAmb IAmb 22 24 51.9
comp=Z,40nm,0.5s
TSSA Tissa 56.47 309 *eP* **P** **22 24 48.1 -1.6**
TSSA IAmb IAmb 22 25 00.5
comp=Z,106nm,1.3s
PETK Petropavlovsk- 57.53 22 P **P** **22 24 56.4 -0.2**
comp=Z,10nm,0.7s,baz=185,slow=4.8,SNR=23
comp=Z,10nm,0.7s
ZSN Zaisan 58.16 328 *eP* **P** **22 25 00.3 -0.9**
ZSN Zaisan 58.16 328 *eP* **P** **22 25 00.3 -0.9**
DGZ Jazzator, Alta 58.33 331 *i* P **P** **22 25 01.5 -1.0**
DGZ pmax pmax
comp=Z,15nm,0.9s
SHLS Shalkode 58.83 321 *eP* **P** **22 25 03.3 -2.7**
comp=Z,21nm,0.8s
SHLS Shalkode 58.83 321 *eP* **P** **22 25 03.3 -2.7**
SHLS pmax pmax
comp=Z,21nm,0.8s
PRZ Przheval'sk 59.16 320 **P** **22 25 08.4 +0.1**
PRZ Przheval'sk 59.16 320 P **P** **22 25 08.5 +0.1**
PRZ pmax pmax
comp=Z,68nm,0.7s
MK31 Makanchi Array 59.17 326*ceP* **P** **22 25 07.4 -0.8**
MKAR Makanchi Array 59.17 326 P **P** **22 25 07.3 -0.8**
comp=Z,31nm,0.6s,baz=121,slow=7.5,SNR=246
comp=Z,31nm,0.6s
TARG Taragay, Kyrgy 59.17 319 P **P** **22 25 07.2 -1.6**
TARG IAmb IAmb 22 25 14.3
comp=Z,31nm,0.8s
TARG Taragay, Kyrgy 59.17 319 P **P** **22 25 07.2 -1.6**
TARG pmax pmax
comp=Z,31nm,0.8s
KSH Kashi 59.38 316 P **P** **22 25 10.5 +0.6**
KSH pmax pmax
comp=Z,25nm,1.1s
SATY Saty 59.44 321 *eP* **P** **22 25 09.4 -1.0**
comp=Z,29nm,0.7s
SATY Saty 59.44 321 *eP* **P** **22 25 09.3 -1.0**
SATY pmax pmax
comp=Z,29nm,0.7s
KDJ Kajisay 59.77 319 **P** **22 25 12.2 -0.5**
KDJ IAmb IAmb 22 25 18.4
comp=Z,40nm,0.8s
KDJ Kajisay 59.77 319 P **P** **22 25 12.2 -0.5**
KDJ pmax pmax
comp=Z,40nm,0.8s
LBZ Lake Benmore 60.08 145 **P** **22 25 14.3 -0.1**
LBZ IAmb IAmb 22 25 24.1
comp=Z,58nm,1.2s
TNSS Tian-Shan 60.36 320 *eP* **P** **22 25 15.7 -1.3**
TNSS Tian-Shan 60.36 320 *eP* **P** **22 25 15.6 -1.3**
YAK Yakutsk 60.37 2 P **P** **22 25 15.3 -0.7**
YAK Yakutsk 60.37 2 *eP* **P** **22 25 14.9 -1.1**
YAK pmax pmax
comp=Z,56nm,1.1s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.2s
TDK Taldyqorghan 60.44 323 *eP* **P** **22 25 16.2 -0.8**
comp=E,41nm,0.8s
TDK Taldyqorghan 60.44 323 *eP* **P** **22 25 16.1 -0.8**
TDK pmax pmax
comp=Z,41nm,0.8s
ULHL Ulahol 60.44 319 P **P** **22 25 17.8 +0.5**
SNR=12
OXZ Oxford 60.54 143 P **P** **22 25 18.8 +1.2**
TUWZ Tuamarina 60.66 141 P **P** **22 25 17.8 -0.7**
BOOM Boomskoye usch 60.75 319 **P** **22 25 19.2 -0.2**
BOOM IAmb IAmb 22 25 21.5
comp=Z,37nm,1.2s
BOOM Boomskoye usch 60.75 319 P **P** **22 25 19.2 -0.2**
BOOM pmax pmax
comp=Z,37nm,1.2s
TCW Tory Channel 60.76 140 P **P** **22 25 18.6 -0.5**
MA2 Magadan 60.86 14 P **P** **22 25 20.3 +0.8**
MA2 Magadan 60.86 14*ceP* **P** **22 25 21.2 +1.7**
MA2 pmax pmax
comp=Z,172nm,2.5s
KHZ Kahutara 60.94 142 P **P** **22 25 19.8 -0.5**
TKM2 Tokmak 2 61.18 319 P **P** **22 25 22.1 -0.2**
SNR=40
BKZ Black Stump Fm 61.19 137 **P** **22 25 22.2 0.0**
BKZ IAmb IAmb 22 25 33.2
comp=Z,23nm,0.9s
BKZ Black Stump Fm 61.19 137 P **P** **22 25 22.0 -0.2**
RTZ Ruatahuna 61.26 136 P **P** **22 25 22.3 -0.5**
RTZ IAmb IAmb 22 25 41.6
comp=Z,46nm,0.9s
KBK Karagaybulak 61.48 319 P **P** **22 25 24.4 +0.1**
SNR=13
UCH Uchtor 61.58 318 P **P** **22 25 25.2 -0.1**
SNR=53
AAK Ala-Archa 61.77 319 P **P** **22 25 25.6 -0.6**
comp=Z,11nm,0.8s,baz=152,slow=5.6,SNR=12
comp=Z,11nm,0.8s
AAK Ala-Archa 61.77 319 **P** **22 25 26.8 +0.6**
AAK IAmb IAmb 22 25 28.6
comp=Z,25nm,1.2s
AAK Ala-Archa 61.77 319 P **P** **22 25 26.9 +0.6**
SNR=7.8
AAK Ala-Archa 61.77 319*ceP* **P** **22 25 26.7 +0.5**
AAK pmax pmax
comp=Z,24nm,1.3s
SGDS Sogindy 62.05 320 *eP* **P** **22 25 26.9 -1.1**
USP Ospenovka 62.05 319 P **P** **22 25 26.9 -1.1**
SNR=48
ARSB Arslanbob 62.22 317 IAmb IAmb 22 25 31.2
comp=Z,65nm,1.3s

EKS2 Erkin-Say 62.26 318 P **P** 22 25 29.6 +0.1
SNR=34
DRK Karamyk 62.30 315 P **P** 22 25 29.6 -0.4
DRK IAmb IAmb 22 25 35.2
comp=Z,42nm,1.0s
DRK Karamyk 62.30 315 P **P** 22 25 29.6 -0.4
DRK pmax pmax
comp=Z,42nm,1.0s
ZAA0 Zalesovo Array 62.38 334 P **P** 22 25 27.9 -2.0
ZALV Zalesovo Beam 62.38 334 P **P** 22 25 28.3 -1.5
comp=Z,6.3nm,0.4s,baz=128,slow=6.9,SNR=29
comp=Z,6.3nm,0.4s
ZALV Zalesovo Beam 62.38 334 *i* P **P** 22 25 28.7 -1.1
ZALV pmax pmax
comp=Z,6.0nm,0.4s
KBL Kabul 62.62 308 P **P** 22 25 30.8 -1.3
KBL IAmb IAmb 22 25 36.4
comp=Z,25nm,0.7s
KBL Kabul 62.62 308 P **P** 22 25 30.8 -1.3
KBL pmax pmax
comp=Z,25nm,0.7s
BTLS Baital 63.15 321 *e*P **P** 22 25 34.2 -1.0
BTLS Baital 63.15 321 *e*P **P** 22 25 34.2 -1.0
GAR Garm 63.18 314 P **P** 22 25 34.5 -1.2
KURBB Kurchatov Arra 63.40 328 P **P** 22 25 35.9 -0.8
comp=Z,45nm,0.6s,baz=129,slow=6.4,SNR=66
comp=Z,45nm,0.6s
KURK Kurchatov 63.41 328 P **P** 22 25 35.9 -0.8
KURK Kurchatov 63.41 328 P **P** 22 25 36.3 -0.4
KURK Kurchatov 63.41 328 *ce*P **P** 22 25 36.1 -0.6
KURK pmax pmax
comp=Z,53nm,0.6s
CHGR Chuyangaron 63.90 313 P **P** 22 25 39.1 -1.3
CHGR Chuyangaron 63.90 313 P **P** 22 25 39.1 -1.3
CHGR pmax pmax
comp=Z,111nm,1.2s
DZA Taraz 63.98 318 *e*P **P** 22 25 40.0 -0.8
DZA Taraz 63.98 318 *e*P **P** 22 25 40.0 -0.8
SEY Seymchan 64.19 13 *ce*P **P** 22 25 43.2 +1.5
SEY pmax pmax
comp=Z,39nm,1.3s
SMY Shemya 64.47 30 P **P** 22 25 41.3 -2.3
SMY Shemya 64.47 30 P **P** 22 25 41.3 -2.3
SMY pmax pmax
comp=Z,218nm,1.5s
IUG Iuzhnay 64.57 317 *e*P **P** 22 25 43.9 -0.9
comp=Z,20nm,0.9s
IUG Iuzhnay 64.57 317 *e*P **P** 22 25 43.8 -0.9
IUG pmax pmax
comp=Z,20nm,0.9s
KKAR Karatay Array 64.62 318 P **P** 22 25 43.5 -1.4
KKAR Karatay Array 64.62 318 P **P** 22 25 43.5 -1.4
CHM Chimkent 64.93 317 *e*P **P** 22 25 46.2 -0.8
CHM Chimkent 64.93 317 *e*P **P** 22 25 46.1 -0.8
HRA Herat 67.97 307 P **P** 22 26 04.0 -2.8
JLN Jalan Bani Buh 68.17 293 P **P** 22 26 07.4 -0.6
CASY Casey 68.65 187 P **P** 22 26 10.0 -0.1
BVAR Borovoye Array 68.97 328 P **P** 22 26 11.6 -0.9
comp=Z,22nm,0.7s,baz=132,slow=8.2,SNR=39
comp=Z,22nm,0.7s
BORK Borovoye 69.02 328 *ce*P **P** 22 26 12.4 -0.3
BORK pmax pmax
comp=Z,65nm,1.3s
WSAR Wadi Sarin 69.03 294 P **P** 22 26 12.7 -0.7
MHTO MHTO 69.36 292 P **P** 22 26 14.6 -0.8
JMDO Jabal Madar 69.40 293 P **P** 22 26 15.4 -0.3
SMDO Samad 69.53 294 P **P** 22 26 16.0 -0.7
TIXI Tiksi 70.00 1 P **P** 22 26 17.0 -1.4
TIXI IAmb IAmb 22 26 27.3
comp=Z,27nm,0.9s
TIXI Tiksi 70.00 1 *ce*P **P** 22 26 17.5 -0.8
TIXI pmax pmax
comp=Z,34nm,1.3s
BSY Bisya 70.28 294 P **P** 22 26 20.2 -0.9
ARQ Araqi 70.96 294 P **P** 22 26 24.9 -0.3
SOHO SOHO 71.05 295 P **P** 22 26 25.6 -0.2
SHAO Shalim 71.28 288 P **P** 22 26 27.2 0.0
BANOM Banah 71.48 297 P **P** 22 26 28.2 -0.2
HATD Hatta, Dubai 71.50 296 P **P** 22 26 27.9 -0.5
MASF Masafi 71.54 296 P **P** 22 26 29.1 +0.4
ASHO Ashiyiah 71.54 295 P **P** 22 26 28.8 +0.1
SHME Shamm 71.64 297 P **P** 22 26 30.1 +0.9
ALNE Al Ain 71.75 295 P **P** 22 26 29.9 -0.1
DMTO DMTO 71.90 288 P **P** 22 26 31.4 +0.4
UMZA Um Al Zommool 72.14 293 P **P** 22 26 31.3 -1.0
ASUD Al Ashush, Dub 72.20 295 P **P** 22 26 32.5 -0.1
AJN Ajban 72.50 295 P **P** 22 26 33.6 -0.9
DOK Doka 72.75 289 P **P** 22 26 35.1 -0.9
SNR=11
WHFO Wadi Hawf 73.03 288 P **P** 22 26 36.8 -1.0
SNR=7.1
MZWR Madinat Zayed 73.42 294 P **P** 22 26 38.9 -1.0
ABTO Aybut 73.45 288 P **P** 22 26 39.2 -1.0
SNR=8.1
AB31 Akbulak array 73.64 321 IAmb IAmb 22 26 43.7
comp=Z,70nm,1.6s
ABKAR Akbulak array 73.64 321 **P** 22 26 39.8 -0.9
MZR Muzera 73.71 293 P **P** 22 26 40.1 -1.6
NIKH Nikolski High 73.74 35 P **P** 22 26 40.4 -0.9
baz=250
GHWR Ruwais 74.36 294 P **P** 22 26 44.5 -0.8
JRN Qarnain Island 74.47 295 P **P** 22 26 45.4 -0.7
SLWR Sila 75.44 294 P **P** 22 26 51.0 -0.7
SVE Sverdlovsk 75.65 329 *de*P **P** 22 26 52.0 -0.2
SVE pmax pmax
comp=Z,97nm,1.2s
SHMA Al-Shehemyia 76.25 296 P **P** 22 26 56.4 +0.2
SMRA Abu-Samra 76.29 295 P **P** 22 26 55.8 -0.7
GAMB Gambell 76.48 24 P **P** 22 26 56.1 -0.6
baz=245
ARTI Arti 76.68 328 P **P** 22 26 57.2 -0.9
ARTI Arti 76.68 328 *c i*P **P** 22 26 57.0 -1.1
ARTI S **S** 22 36 41.7 -0.6
ARTI SS **SS** 22 41 33.5 -4.9
ARTI pmax pmax
comp=Z,91nm,1.3s
FALS False Pass 77.38 34 P **P** 22 27 01.9 -0.1
baz=254
M11K Mekoryuk 77.60 28 P **P** 22 27 02.5 -0.6
baz=251
MLH Mauna Loa 78.33 71 P **P** 22 27 07.7 -0.6
MLH IAmb IAmb 22 27 18.3
comp=Z,54nm,0.9s
S12K Black Hills 78.35 33 P **P** 22 27 06.8 -0.6
baz=255
TNA Tin City 78.68 23 P **P** 22 27 09.0 0.0
baz=248
K13K Kusilvak Mount 78.81 27 P **P** 22 27 09.7 -0.1
baz=252
M13K Dall Lake 78.96 28 P **P** 22 27 10.9 +0.3
baz=253
SDPT Sand Point 79.14 34 P **P** 22 27 12.7 +1.0
SDPT Sand Point 79.14 34 P **P** 22 27 11.3 -0.5
baz=257
F14K Arctic Creek 79.27 23 P **P** 22 27 12.0 -0.2
baz=250
ANM Nome 79.34 24 P **P** 22 27 12.8 +0.1
baz=251
KBD Kabd 79.41 299 P **P** 22 27 12.8 -1.0
CHNA Chernabura Isl 79.52 34 P **P** 22 27 13.8 0.0
baz=258
L14K Kuka Creek 79.53 28 IAmb IAmb 22 27 17.9
comp=Z,47nm,1.2s
L14K Kuka Creek 79.53 28 P **P** 22 27 13.3 -0.4
baz=254
J14K Nanvaranak Lak 79.55 26 P **P** 22 27 13.7 0.0
baz=253
N14K Kuskokwak Cree 79.62 29 P **P** 22 27 13.8 -0.5
baz=255
O14K Tigyukauivet M 79.66 30 P **P** 22 27 14.3 -0.1
baz=255
M14K Bethel 79.71 28 P **P** 22 27 14.8 +0.1
baz=255
S14K Fog Glacier 79.86 33 P **P** 22 27 15.9 +0.2
baz=257
F15K North Star Dit 80.01 23 P **P** 22 27 16.4 +0.1
baz=251
G15K Niukluk 80.02 24 P **P** 22 27 16.4 +0.1
baz=252
L15K Ungalak Mounta 80.18 27 P **P** 22 27 17.4 +0.1
baz=255
M15K Kasigluk River 80.30 28 P **P** 22 27 18.0 +0.1
baz=256
ABPO Ambohimpanom 80.32 251 **P** 22 27 18.5 -0.6
ABPO Ambohimpanom 80.32 251 P **P** 22 27 18.5 -0.6
ABPO pmax pmax
comp=Z,23nm,1.0s
K15K Wolf Creek Mou 80.32 27 P **P** 22 27 18.3 +0.3
baz=255
O15K Ungalikthiuk R 80.36 30 P **P** 22 27 18.4 +0.1
baz=257
N15K Kwethluk River 80.46 29 P **P** 22 27 19.1 +0.3
baz=256
AKT Akhty 80.51 312 *e*P **P** 22 27 18.4 -1.2
AKT pmax pmax
comp=Z,31nm,0.8s
C16K Lisburne Hills 80.60 21 P **P** 22 27 19.6 +0.3
baz=250
H16K Elim 80.65 24 P **P** 22 27 19.9 +0.2
baz=254
G16K Koyuk River 80.82 24 P **P** 22 27 20.7 +0.1
baz=253
VOI Vohitsoka 80.98 248 P **P** 22 27 21.9 -0.7
J16K Anvik River 80.99 26 P **P** 22 27 22.0 +0.4
J16K IAmb IAmb 22 27 25.0
comp=Z,25nm,0.8s
J16K Anvik River 80.99 26 P **P** 22 27 21.5 -0.1
baz=255
RAYN Ar Rayn 81.07 293 **P** 22 27 22.5 -0.5
RAYN IAmb IAmb 22 27 26.3
comp=Z,23nm,0.8s
RAYN Ar Rayn 81.07 293 P **P** 22 27 22.4 -0.5
RAYN Ar Rayn 81.07 293 ⇓P **P** 22 27 22.6 -0.3
I17K Unalakleet 81.10 25 P **P** 22 27 22.4 +0.3
baz=255
L16K Owhat River 81.11 28 **P** 22 27 20.9 -1.3
L16K IAmb IAmb 22 27 25.6
comp=Z,62nm,1.4s
L16K Owhat River 81.11 28 P **P** 22 27 22.5 +0.2
baz=257
N16K Nishlik Lake 81.17 29 P **P** 22 27 22.6 0.0
baz=257
R16K Pilot Point 81.18 32 P **P** 22 27 22.4 -0.2
baz=259
M16K Timber Creek 81.20 28 P **P** 22 27 22.9 +0.1
baz=257
D17K Noatak River 81.22 21 P **P** 22 27 22.0 -0.7
baz=252
P16K Nushagak River 81.25 30 P **P** 22 27 22.0 -1.0
baz=258
O16K Kokwok River B 81.32 30 P **P** 22 27 23.1 -0.3
baz=258
VNDA Vanda 81.33 173 P **P** 22 27 23.8 +0.7
comp=Z,25nm,0.8s,baz=317,slow=6.1,SNR=114
comp=Z,25nm,0.8s
VNDA Vanda 81.33 173 **P** 22 27 23.8 +0.7
VNDA IAmb IAmb 22 27 25.1
comp=Z,24nm,0.8s
RDOG Red Dog Mine 81.39 21 P **P** 22 27 23.5 -0.2
baz=252
C17K DeLong Mountai 81.42 21 P **P** 22 27 23.7 -0.2
baz=252
E17K Hothtam Inlet 81.51 22 P **P** 22 27 23.6 -0.6
baz=254
G17K Kiwalik Mounta 81.54 24 P **P** 22 27 23.9 -0.6
baz=255
F17K Baldwin Pennin 81.55 23 P **P** 22 27 23.9 -0.6
baz=254
MAW Mawson 81.64 200 P **P** 22 27 25.2 +0.3
comp=Z,16nm,1.0s,baz=71,slow=4.8,SNR=21
comp=Z,16nm,1.0s
J17K VABM Dome 81.68 26 P **P** 22 27 25.1 -0.1
baz=257
H17K Granite Mounta 81.69 24 P **P** 22 27 25.1 -0.2
baz=256
L17K Donlin 81.75 27 P **P** 22 27 25.5 -0.2
baz=258,SNR=6.2
R17L Mt. Peulik Vol 81.83 32 P **P** 22 27 25.9 -0.3
baz=260
O17K Koliganek Bris 81.85 30 P **P** 22 27 25.7 -0.4
baz=259
Q16K King Salmon 81.87 31 P **P** 22 27 25.9 -0.3
baz=260
K17K Iditarod 81.88 27 **P** 22 27 26.6 +0.3
K17K IAmb IAmb 22 27 33.9
comp=Z,46nm,1.1s
K17K Iditarod 81.88 27 P **P** 22 27 25.9 -0.4
baz=258
KIRV Kirov 81.91 329 *ce*P **P** 22 27 26.6 +0.1
CHIR Chirikof Islan 81.93 34 P **P** 22 27 26.7 0.0
baz=261
BELG Belogornoye 81.94 323 *i* P **P** 22 27 26.2 -0.6
BELG pmax pmax
comp=Z,24nm,1.1s
M17K Holitna River 82.00 28 P **P** 22 27 26.3 -0.7
baz=258
E18K Tukpahlearik C 82.06 22 **P** 22 27 27.1 -0.1
E18K IAmb IAmb 22 27 55.2
comp=Z,33nm,1.1s
E18K Tukpahlearik C 82.06 22 P **P** 22 27 26.5 -0.6
baz=255
P17K Kvichak River 82.07 30 P **P** 22 27 26.6 -0.8
baz=260
B18K Kokolik River 82.17 20 P **P** 22 27 27.5 -0.1
baz=253
C18K Utukok River 82.17 21 P **P** 22 27 28.0 +0.2
baz=254
Q17K Contact Creek 82.19 31 P **P** 22 27 28.0 -0.2
baz=260
F18K Selawik 82.21 23 P **P** 22 27 27.5 -0.4
baz=256
SBA Scott Base 82.25 172 P **P** 22 27 28.2 +0.2
SBA IAmb IAmb 22 27 49.6
comp=Z,29nm,1.1s
SBA Scott Base 82.25 172 P **P** 22 27 28.2 +0.2
SBA pmax pmax
comp=Z,29nm,1.1s
H18K Honhosa River 82.38 24 P **P** 22 27 28.1 -0.9
H18K Honhosa River 82.38 24 P **P** 22 27 28.4 -0.5
baz=257
G18K Tagagawik 82.43 24 P **P** 22 27 29.4 +0.2
G18K IAmb IAmb 22 28 00.6
comp=Z,40nm,1.4s
G18K Tagagawik 82.43 24 P **P** 22 27 28.5 -0.7
baz=257
ACHA Angle Creek He 82.47 32 P **P** 22 27 30.1 +0.4
L18K Granite Mounta 82.51 27 P **P** 22 27 30.4 +0.8
L18K Granite Mounta 82.51 27 P **P** 22 27 30.1 +0.5
baz=259
N18K Kilae Creek 82.61 29 P **P** 22 27 30.4 +0.3
N18K IAmb IAmb 22 27 44.5
comp=Z,42nm,1.5s
N18K Kilae Creek 82.61 29 P **P** 22 27 30.0 -0.2
baz=260
GNI Garni 82.64 310 P **P** 22 27 30.9 -0.1
GNI IAmb IAmb 22 27 52.4
comp=Z,43nm,0.9s
GNI Garni 82.64 310 P **P** 22 27 30.5 -0.5
GNI Garni 82.64 310 *ce*P **P** 22 27 32.1 +1.1
GNI pmax pmax
comp=Z,35nm,1.7s
GNI Garni 82.64 310 P **P** 22 27 31.8 +0.8
comp=Z,50nm,1.0s
A19K Wainwright 82.64 19 P **P** 22 27 30.0 -0.1
baz=254
Q18K Katmai Hardscr 82.71 31 P **P** 22 27 30.4 -0.4
baz=261
P18K Big Mountain, 82.72 30 P **P** 22 27 29.8 -1.0
P18K IAmb IAmb 22 27 38.8
comp=Z,48nm,1.4s
P18K Big Mountain, 82.72 30 P **P** 22 27 30.5 -0.3
baz=261
J18K Innoko River 82.73 26 P **P** 22 27 31.0 +0.2
J18K IAmb IAmb 22 27 36.9
comp=Z,97nm,1.7s
J18K Innoko River 82.73 26 P **P** 22 27 30.6 -0.2
baz=259
M18K Stony River 82.78 28 P **P** 22 27 31.0 0.0
baz=260
O18K Koktuh Hills 82.80 30 P **P** 22 27 31.0 -0.2
baz=261
SII Sitkinak Islan 82.84 33 P **P** 22 27 31.0 -0.5
baz=262
C19K Lookout Ridge 82.86 20 P **P** 22 27 31.8 +0.4
C19K Lookout Ridge 82.86 20 P **P** 22 27 31.7 +0.4
baz=256,SNR=7.7
GCSA Galena City Sc 82.92 25 P **P** 22 27 31.9 +0.2
baz=259,SNR=5.2
F19K Shaleruckik Mo 82.99 23 P **P** 22 27 32.0 0.0
F19K IAmb IAmb 22 28 02.5
comp=Z,90nm,1.9s
F19K Shaleruckik Mo 82.99 23 P **P** 22 27 32.3 +0.3
baz=258
G19K Purcell Mounta 83.11 23 P **P** 22 27 33.3 +0.6
baz=258,SNR=8.9
D19K Kuna River 83.23 21 **P** 22 27 33.2 -0.1
D19K IAmb IAmb 22 27 40.3
comp=Z,48nm,0.9s
D19K Kuna River 83.23 21 P **P** 22 27 34.0 +0.6
baz=257,SNR=9.7
H19K Roundabout Mou 83.25 24 P **P** 22 27 33.8 +0.5
H19K Roundabout Mou 83.25 24 P **P** 22 27 34.1 +0.8
baz=259,SNR=14
N19K Bonanza Creek 83.31 29 **P** 22 27 34.8 +0.9
N19K IAmb IAmb 22 27 35.8
comp=Z,43nm,1.2s
N19K Bonanza Creek 83.31 29 P **P** 22 27 34.6 +0.6
baz=261
J19K Poorman 83.31 26 P **P** 22 27 34.7 +1.0
J19K IAmb IAmb 22 28 10.0
comp=Z,27nm,1.0s
J19K Poorman 83.31 26 P **P** 22 27 35.0 +1.2
baz=260
E19K Redstone River 83.33 22 **P** 22 27 34.3 +0.5
E19K Redstone River 83.33 22 P **P** 22 27 34.9 +1.1
baz=258
L19K White Mountain 83.35 28 P **P** 22 27 33.7 -0.4
L19K IAmb IAmb 22 27 41.2
comp=Z,38nm,1.2s
L19K White Mountain 83.35 28 P **P** 22 27 35.1 +1.1
baz=261
ATD Arta Tunnel 83.41 281 **P** 22 27 35.7 +0.3
ATD IAmb IAmb 22 27 38.5
comp=Z,28nm,0.9s
OHAK Old Harbor 83.42 33 P **P** 22 27 35.9 +1.5
OHAK Old Harbor 83.42 33 P **P** 22 27 33.8 -0.5
baz=263
M19K Big River Lodg 83.52 28 P **P** 22 27 35.9 +1.0
M19K IAmb IAmb 22 27 42.2
comp=Z,30nm,1.2s
M19K Big River Lodg 83.52 28 P **P** 22 27 35.0 +0.1
baz=261
NCK Nalchik 83.73 313 *i* P **P** 22 27 36.1 -0.3
NCK pmax pmax
comp=Z,33nm,1.1s
P19K Oil Pt 83.76 30 P **P** 22 27 36.6 +0.4
baz=262
D20K Etivluk River 83.82 21 **P** 22 27 36.5 +0.2
D20K Etivluk River 83.82 21 P **P** 22 27 36.5 +0.2
baz=258,SNR=15
F20K Avaraart Lake 83.82 23 P **P** 22 27 37.1 +0.8
F20K Avaraart Lake 83.82 23 P **P** 22 27 36.7 +0.5
baz=259
L20K Farewell, AK 83.84 27 P **P** 22 27 36.9 +0.3
L20K IAmb IAmb 22 28 07.6
comp=Z,37nm,1.2s
L20K Farewell, AK 83.84 27 P **P** 22 27 36.3 -0.3
baz=262,SNR=5.8
KDAK Kodiak Island 83.86 32 P **P** 22 27 36.6 -0.1
baz=263
E20K Nigu River 83.88 21 P **P** 22 27 36.8 +0.1
baz=259,SNR=16
H20K Anotleneega Mo 83.88 24 P **P** 22 27 36.0 -0.7
baz=260
K20K Telida 83.89 26 P **P** 22 27 37.4 +0.7
K20K IAmb IAmb 22 28 12.5
comp=Z,54nm,1.4s
K20K Telida 83.89 26 P **P** 22 27 36.5 -0.3
baz=261
B20K Meade River 83.89 20 P **P** 22 27 37.6 +1.0
B20K Meade River 83.89 20 P **P** 22 27 37.0 +0.4
baz=258
J20K Nowinta River 83.98 26 **P** 22 27 37.9 +0.7
J20K Nowinta River 83.98 26 P **P** 22 27 37.2 0.0
baz=261,SNR=5.4
Q20K Shuyak Island 84.06 31 P **P** 22 27 37.0 -0.7
baz=263
M20K Styx River 84.11 28 P **P** 22 27 38.4 +0.4
M20K Styx River 84.11 28 P **P** 22 27 37.4 -0.6
baz=262
GOF Gofitskoye 84.23 315 *ce*P **P** 22 27 39.1 +0.3
KBZ Khabaz 84.25 314 P **P** 22 27 38.8 -0.1
comp=Z,10nm,0.8s,baz=118,slow=4.6,SNR=20
comp=Z,10nm,0.8s
KBZ Khabaz 84.25 314 *ce*P **P** 22 27 39.3 +0.4
NEUR Neytrino 84.37 313 *i* P **P** 22 27 40.4 +0.6
NEUR pmax pmax
comp=Z,9.0nm,0.9s
KIV Kislovodsk 84.42 314 **P** 22 27 40.2 +0.2
KIV Kislovodsk 84.42 314 P **P** 22 27 40.1 +0.2
KIV Kislovodsk 84.42 314 ⇓P **P** 22 27 41.0 +1.1
KIV Kislovodsk 84.42 314 *eP* **P** 22 27 39.4 -0.6
KIV pmax pmax
comp=Z,30nm,1.0s
KIV Kislovodsk 84.42 314 P **P** 22 27 40.5 +0.5
comp=Z,390nmcomp=Z,35nm,0.9s
IMAR Indian Mountai 84.42 24 P **P** 22 27 39.9 +0.5
SHA1 Shidzhatmaz 84.42 314 *i* P **P** 22 27 39.5 -0.7
N20K Mount Spurr 84.46 29 P **P** 22 27 39.1 -0.6
baz=263
SPCR Spurr Chakacha 84.46 29 P **P** 22 27 39.3 -0.5
baz=263
SPU Mount Spurr 84.53 29 P **P** 22 27 39.4 -0.7
SPU IAmb IAmb 22 28 06.5
comp=Z,24nm,1.3s
C21K Knifeblade Rid 84.55 21 P **P** 22 27 40.1 +0.1
baz=260
G21K Allakaket 84.60 23 IAmb IAmb 22 28 21.8
comp=Z,17nm,1.1s
G21K Allakaket 84.60 23 P **P** 22 27 39.4 -0.9
baz=262
PPLA Purkeypile 84.67 27 P **P** 22 27 39.5 -1.4
baz=263
B21K Ikpikpuk River 84.69 20 P **P** 22 27 41.4 +0.7
B21K Ikpikpuk River 84.69 20 P **P** 22 27 40.5 -0.1
baz=260
F21K Alatna River 84.72 23 P **P** 22 27 41.0 +0.1
baz=261
E21K Killik River 84.72 21 P **P** 22 27 41.8 +0.9
E21K IAmb IAmb 22 27 44.1
comp=Z,77nm,1.7s
E21K Killik River 84.72 21 P **P** 22 27 40.9 0.0
baz=261
CHUM Lake Minchumin 84.74 26 P **P** 22 27 41.0 0.0
baz=263
H21K Melozitna Rive 84.76 24 P **P** 22 27 41.0 -0.1
baz=262
SKT Skwentna 84.87 28 **P** 22 27 41.4 -0.3
SKT IAmb IAmb 22 28 16.2
comp=Z,26nm,1.2s
SKT Skwentna 84.87 28 P **P** 22 27 41.2 -0.6
baz=264
CAPN Captain Cook N 84.92 29 P **P** 22 27 41.9 0.0
baz=264
BRLK Bradley Lake 84.95 30 P **P** 22 27 41.8 -0.5
BRSE Bradley Lake S 85.03 30 P **P** 22 27 42.4 -0.2
baz=265
I21K Tanana 85.04 25 P **P** 22 27 42.7 +0.2
I21K Tanana 85.04 25 P **P** 22 27 42.4 -0.1
baz=263
SUA Susitna One 85.19 29 P **P** 22 27 42.7 -0.7
SUA IAmb IAmb 22 27 45.5
comp=Z,28nm,1.0s
SUA Susitna One 85.19 29 P **P** 22 27 43.0 -0.5
baz=264
B22K Teshekpuk Lake 85.21 20 P **P** 22 27 43.4 +0.2
B22K Teshekpuk Lake 85.21 20 P **P** 22 27 43.0 -0.2
baz=261
D22K Ayikyak River 85.25 21 P **P** 22 27 44.0 +0.5
D22K IAmb IAmb 22 28 12.4
comp=Z,57nm,1.7s
D22K Ayikyak River 85.25 21 P **P** 22 27 43.0 -0.5
baz=262
F22K John River 85.26 22 P **P** 22 27 42.9 -0.7
baz=263
KTH Kantishna Hill 85.32 26 P **P** 22 27 44.2 +0.2
KTH IAmb IAmb 22 28 27.0
comp=Z,62nm,2.0s
BPAW Bear Paw Mtn. 85.34 26 P **P** 22 27 43.5 -0.6
baz=264
SLKM Skilak Lake 85.36 30 **P** 22 27 43.4 -0.8
H22K Ishtalitna Cre 85.38 24 P **P** 22 27 44.4 +0.2
H22K IAmb IAmb 22 28 21.2
comp=Z,58nm,1.8s
H22K Ishtalitna Cre 85.38 24 P **P** 22 27 43.7 -0.5
baz=264
G22K Bettles 85.44 23 P **P** 22 27 44.3 -0.2
baz=263

VRH **Novokhopyorsk** 85.47 321 *e*P P 22 27 44.0 -0.9
VRH pmax pmax
comp=Z,139nm,1.2s
E22K **Anaktuvuk Pass** 85.47 22 P 22 27 44.9 +0.2
E22K IAmb IAmb 22 28 08.9
comp=Z,27nm,1.1s
E22K **Anaktuvuk Pass** 85.47 22 P P 22 27 44.2 -0.5
baz=263
M22K **Willow** 85.51 28 P P 22 27 44.8 -0.1
M22K **Willow** 85.51 28 P P 22 27 44.1 -0.8
baz=265
MLY **Manley** 85.55 25 P P 22 27 44.3 -0.8
baz=264
TRF **Thorofare Moun** 85.59 27 P P 22 27 44.9 -0.6
baz=265
MARD **Mardin** 85.60 307 P 22 27 46.1 0.0
RC01 **Rabbit Creek A** 85.64 29 P P 22 27 45.3 -0.3
RC01 IAmb IAmb 22 27 53.8
comp=Z,64nm,1.5s
RC01 **Rabbit Creek A** 85.64 29 P P 22 27 44.9 -0.7
baz=265
SEW **Seward** 85.70 30 P P 22 27 45.6 -0.3
baz=266
LABN **Labinsk** 85.85 314 *e*P P 22 27 45.0 -2.0
LABN pmax pmax
comp=Z,62nm,1.2s
KOPT **Kop Dagi** 85.89 310 P 22 27 48.6 +1.0
PMR **Palmer** 85.97 28 P P 22 27 46.4 -0.7
baz=266
D23K **Nanushuk River** 85.98 21 P 22 27 47.8 +0.7
D23K IAmb IAmb 22 28 00.9
comp=Z,76nm,1.9s
D23K **Nanushuk River** 85.98 21 P P 22 27 47.6 +0.5
baz=264
COLD **Coldfoot** 85.98 23 P P 22 27 47.3 +0.1
baz=264
G23K **Bananza Creek** 86.00 23 P P 22 27 48.1 +0.7
G23K IAmb IAmb 22 27 51.9
comp=Z,25nm,1.4s
G23K **Bananza Creek** 86.00 23 P P 22 27 46.9 -0.4
baz=265
ERBR **Yeremizino-Bor** 86.06 316 *e*P P 22 27 46.2 -1.8
ERBR pmax pmax
comp=Z,113nm,1.1s
GHO **Glory Hole Cre** 86.08 28 P P 22 27 47.2 -0.7
GHO IAmb IAmb 22 28 31.7
comp=Z,49nm,1.4s
C23K **Itkillik River** 86.10 20 P P 22 27 48.3 +0.6
C23K IAmb IAmb 22 28 16.0
comp=Z,30nm,0.9s
C23K **Itkillik River** 86.10 20 P P 22 27 47.9 +0.2
baz=264
H23K **Yukon River** 86.12 24 P P 22 27 48.8 +0.8
H23K **Yukon River** 86.12 24 P P 22 27 47.7 -0.2
baz=265
I23K **Minto, Yukon-K** 86.14 25 P P 22 27 48.0 +0.1
I23K IAmb IAmb 22 27 56.3
comp=Z,62nm,1.9s
I23K **Minto, Yukon-K** 86.14 25 P P 22 27 47.8 -0.1
baz=265
MCK **McKinley** 86.22 26 P P 22 27 48.1 -0.3
MCK IAmb IAmb 22 28 18.1
comp=Z,65nm,2.0s
MCK **McKinley** 86.22 26 P P 22 27 48.1 -0.3
MCK pmax pmax
comp=Z,65nm,2.0s
MCK **McKinley** 86.22 26 P P 22 27 48.4 0.0
baz=266
KNK **Knik Glacier** 86.28 29 P P 22 27 48.6 -0.2
KNK IAmb IAmb 22 27 50.4
comp=Z,22nm,0.8s
KNK **Knik Glacier** 86.28 29 P P 22 27 48.6 -0.2
baz=266
E23K **Chandalar** 86.28 22 P P 22 27 49.2 +0.4
E23K IAmb IAmb 22 27 51.1
comp=Z,14nm,0.8s
E23K **Chandalar** 86.28 22 P P 22 27 48.8 0.0
baz=265
PWL **Port Wells** 86.31 29 P P 22 27 47.9 -1.0
PWL IAmb IAmb 22 27 53.5
comp=Z,57nm,1.3s
PWL **Port Wells** 86.31 29 P P 22 27 48.6 -0.3
baz=267
VSLR **Vesyoloye** 86.32 313 *i* P P 22 27 49.3 -0.1
WAT1 **Susitna Watana** 86.33 27 P P 22 27 48.7 -0.3
baz=266
TOLK **Toolik Lake Re** 86.35 21 P 22 27 49.5 +0.5
TOLK IAmb IAmb 22 28 24.8
comp=Z,39nm,1.6s
TOLK **Toolik Lake Re** 86.35 21 P P 22 27 49.0 0.0
baz=265
SML **Sawmill** 86.36 28 P 22 27 49.0 -0.2
SML **Sawmill** 86.36 28 P P 22 27 49.2 -0.1
baz=266
SOC **Sochi** 86.55 313 *e*P P 22 27 48.7 -1.8
SOC *e* 22 31 09.7
SOC *i* PPP PPP 22 33 03.7
SOC *e*S **SKSac** 22 38 11.5 -3.1
SOC *e*SS **SS** 22 44 09.2 +3.4
SOC *e*SSS SSS 22 47 36.0
SOC pmax pmax
comp=Z,51nm,1.1s
SOC MLR MLR
comp=Z,164nm,18.0s
M23K **Glacier View** 86.65 28 P P 22 27 50.8 +0.2
baz=267
D24K **Happy Valley** 86.66 21 P P 22 27 50.9 +0.4
D24K IAmb IAmb 22 28 18.6
comp=Z,18nm,0.8s
D24K **Happy Valley** 86.66 21 P P 22 27 50.4 -0.1
baz=266
WAT6 **Susitna Watana** 86.69 28 P P 22 27 49.7 -1.2
baz=267
E24K **Your Creek** 86.71 22 P P 22 27 51.5 +0.7
E24K **Your Creek** 86.71 22 P P 22 27 50.6 -0.2
baz=266
C24K **Franklin Bluff** 86.75 20 P P 22 27 50.9 0.0
C24K IAmb IAmb 22 27 55.0
comp=Z,16nm,0.9s
C24K **Franklin Bluff** 86.75 20 P P 22 27 50.8 0.0
baz=266
H24K **Noodor Dome** 86.81 24 P P 22 27 51.2 -0.1
baz=267
SCM **Sheep Creek Mo** 86.84 28 P P 22 27 51.1 -0.5
baz=267
DHY **Denali Highway** 86.88 27 P P 22 27 50.7 -1.1
baz=267
F24K **Squaw Lake** 86.90 23 IAmb IAmb 22 27 56.3
comp=Z,28nm,1.5s
F24K **Squaw Lake** 86.90 23 P P 22 27 51.5 -0.2
baz=267
GLI **Glacier Island** 86.91 29 P P 22 27 50.9 -1.0
baz=268
VORD **Divnogorie** 86.99 321 *e*P P 22 27 49.8 -2.6
VORD pmax pmax
comp=Z,40nm,1.0s
G24K **Hadweenzic Riv** 87.02 23 P P 22 27 50.5 -1.7
G24K **Hadweenzic Riv** 87.02 23 P P 22 27 51.3 -1.0
baz=267
VORR **Voronezh** 87.06 321 *e*P P 22 27 50.5 -2.2
VORR pmax pmax
comp=Z,100nm,1.0s
VSR **Storozhevoye** 87.08 321 *e*P P 22 27 50.7 -2.1
VSR pmax pmax
comp=Z,30nm,1.0s
HDA **Harding Lake** 87.13 26 P P 22 27 52.5 -0.3
baz=268
KLMR **Klimovskoe** 87.14 331 *e*P P 22 27 51.5 -1.4
KLMR *e* 22 31 14.7
KLMR pmax pmax
comp=Z,89nm,1.5s
ILAR **Eielson Array** 87.17 25 P P 22 27 52.0 -1.1
comp=Z,1.0nm,0.6s,baz=238,slow=5.2,SNR=14
comp=Z,1.0nm,0.6s
Q23K **Middleton Isla** 87.24 31 P P 22 27 53.1 -0.3
baz=268
LPSR **Galich'ya Gora** 87.25 322 *e*P P 22 27 52.3 -1.3
LPSR pmax pmax
comp=Z,80nm,1.1s
M24K **Tolsona, Glenn** 87.40 28 P P 22 27 53.6 -0.7
baz=268
KLU **Klutina** 87.50 29 P P 22 27 54.8 0.0
baz=269
D25K **Kavik River** 87.55 21 P P 22 27 55.0 +0.2
baz=268
G25K **Bearman Lake** 87.56 23 P P 22 27 54.3 -0.6
baz=268
EYAK **Cordova Ski Ar** 87.56 30 P P 22 27 54.7 -0.3
baz=269
K24K **Donnelly Dome** 87.62 26 P P 22 27 55.2 -0.1
baz=269
H25L **Birch Creek** 87.66 24 P P 22 27 55.5 +0.2
baz=269
PAX **Paxson** 87.74 27 P P 22 27 54.9 -1.1
PAX IAmb IAmb 22 29 37.0
comp=Z,34nm,1.8s
PAX **Paxson** 87.74 27 P P 22 27 54.9 -1.1
PAX pmax pmax
comp=Z,34nm,1.8s
PAX **Paxson** 87.74 27 P P 22 27 55.8 -0.2
baz=269
F25K **Christian Rive** 87.76 23 P P 22 27 55.8 -0.1
baz=269
E25K **Arctic Village** 87.80 22 P P 22 27 57.0 +0.9
baz=269
J25K **Salcha River,** 87.81 26 P P 22 27 56.0 -0.2
baz=269
HARP **HAARP** 87.88 28 P P 22 27 57.0 +0.5
baz=269
RIDG **Independent Ri** 88.03 26 P P 22 27 57.2 -0.1
baz=270
MOS **Moscow** 88.05 326 *e*P P 22 27 55.3 -2.1
MOS pmax pmax
comp=Z,100nm,0.8s
MOS pmax pmax
comp=Z,65nm,0.8s
C26K **Camden Bay** 88.07 20 P P 22 27 57.9 +0.7
baz=269
BMRM **Bremner River** 88.13 29 P P 22 27 58.5 +0.7
baz=270
N25K **Chitina, Valde** 88.14 29 P P 22 27 58.5 +0.6
baz=270
BMAR **Burnt Mountain** 88.17 23 P 22 27 57.8 0.0
KAIM **Kayak Island** 88.22 30 P P 22 27 58.7 +0.6
baz=270
F26K **Sheenjek River** 88.34 22 P P 22 27 59.1 +0.5
F26K IAmb IAmb 22 28 27.9
comp=Z,44nm,1.9s
F26K **Sheenjek River** 88.34 22 P P 22 27 59.3 +0.7
baz=270
SCRK **Sand Creek** 88.42 26 P P 22 27 59.8 +0.6
baz=270
GAZ **Gaziantep** 88.45 307 P 22 27 59.6 -0.3
KIBK **Kibwezi** 88.46 268 P 22 28 00.6 +0.1
KIBK IAmb IAmb 22 28 07.9
comp=Z,19nm,1.1s
KIBK **Kibwezi** 88.46 268 P P 22 28 00.5 +0.1
SNR=11
G26K **Porcupine Rive** 88.48 23 P P 22 28 00.1 +0.8
baz=270
C27K **Jago River** 88.49 21 IAmb IAmb 22 28 01.0
comp=Z,14nm,0.7s
C27K **Jago River** 88.49 21 P P 22 27 60.0 +0.7
baz=270
J26L **Joseph Creek** 88.59 26 P P 22 28 00.3 +0.3
baz=271
OBN **Obninsk** 88.65 325 P P 22 27 59.6 -0.6
OBN **Obninsk** 88.65 325 ⇓P P 22 27 59.6 -0.6
OBN **Obninsk** 88.65 325 *de*P P 22 27 59.5 -0.8
OBN *e* 22 31 30.0
OBN *e*PPP PPP 22 33 24.0
OBN pmax pmax
comp=Z,77nm,1.3s
OBN MLR MLR
comp=Z,183nm,20.0s
OBN **Obninsk** 88.65 325 P P 22 27 59.1 -1.2
comp=Z,55nm,1.2s
L26K **Log Cabin Wild** 88.71 27 P P 22 28 00.6 +0.1
baz=271
I26K **Coal Creek Min** 88.76 25 P P 22 28 00.6 0.0
baz=271
BGLC **Bering Glacier** 88.79 30 P P 22 28 01.1 +0.3
baz=271
CRQE **Cirque** 88.87 29 P P 22 28 01.3 -0.1
baz=271
M26K **Nabesna, AK** 88.89 28 P P 22 28 00.4 -1.0
baz=271
MCARA **McCarthy VSAT** 88.89 29 P P 22 28 02.1 +0.8
baz=271
KHAM **Kharkiv** 88.94 320 P P 22 28 02.0 +0.2
KMBO **Kilima Mbogo** 89.22 269 P P 22 28 05.2 +1.0
comp=Z,9.8nm,0.9s,baz=94,slow=5.3,SNR=17
comp=Z,9.8nm,0.9s
K27K **Chicken** 89.26 26 P P 22 28 03.6 +0.6
baz=272
E27K **Coleen River** 89.29 22 P P 22 28 03.5 +0.4
baz=272
G27K **Doyon Strip** 89.33 23 P P 22 28 03.8 +0.5
baz=272
I27K **Kandik River** 89.39 25 P P 22 28 03.6 0.0
I27K **Kandik River** 89.39 25 P P 22 28 04.1 +0.5
baz=272
H27K **Steamboat Moun** 89.40 24 P P 22 28 04.1 +0.5
baz=272
L27K **Beaver Creek,** 89.40 27 P P 22 28 04.2 +0.5
L27K IAmb IAmb 22 28 08.8
comp=Z,42nm,1.9s
L27K **Beaver Creek,** 89.40 27 P P 22 28 04.4 +0.7
baz=272
M27K **Edge Creek, AK** 89.41 28 P P 22 28 04.5 +0.6
baz=272
BCAR **Beaver Creek A** 89.42 27 P 22 28 03.8 -0.1
MESA **MESA** 89.46 30 P P 22 28 04.7 +0.5
baz=272
D27M **Malcolm River** 89.47 21 IAmb IAmb 22 28 06.5
comp=Z,25nm,1.4s
D27M **Malcolm River** 89.47 21 P P 22 28 04.4 +0.4
baz=273
BNN **Bunyan** 89.49 309 P 22 28 04.7 -0.1
BNN IAmb IAmb 22 28 05.8
comp=Z,20nm,1.3s
CTG **Chitna Glacier** 89.72 29 P P 22 28 05.3 -0.1
baz=273
APA **Apatity** 89.73 337 ⇓*i*P P 22 28 04.4 -0.7
APA MLR MLR
comp=Z,537nm,5.1s
BVCY **Beaver Creek** 89.88 28 P P 22 28 06.4 +0.4
baz=273
GHAJ **Ghor Haditha** 89.94 301 IAmb IAmb 22 28 16.5
comp=Z,46nm,1.1s
F28M **Old Crow** 89.97 22 P P 22 28 06.8 +0.5
E28M **Babbage River** 90.03 21 P P 22 28 06.8 +0.3
baz=274
MMAI **Mount Meron Ar** 90.03 303 P P 22 28 08.4 +1.1
comp=Z,20nm,0.9s,baz=76,slow=7.0,SNR=16
comp=Z,20nm,0.9s
I28M **Miner Creek** 90.10 25 P P 22 28 07.5 +0.5
baz=274
YUK3 **Moose Creek** 90.10 28 P P 22 28 06.3 -1.0
baz=274
D28M **Stokes Point** 90.25 21 P P 22 28 08.1 +0.6
baz=275
O28M **Mount Upton** 90.30 29 P P 22 28 08.0 -0.3
baz=274
PINM **Pinnacle** 90.31 30 P P 22 28 07.8 -0.3
baz=274
SYO **Syowa Base** 90.32 201 ⇑*e*P P 22 28 08.4 +0.7
DAWY **Dawson** 90.43 26 P P 22 28 09.0 +0.5
baz=274
YUK8 **Steele Glacier** 90.47 29 P P 22 28 08.6 -0.4
baz=274
SIM **Simferopol'** 90.56 315 *e*P P 22 28 07.8 -1.6
SIM pmax pmax
comp=Z,19nm,0.8s
E29M **Blow River** 90.65 22 P P 22 28 09.5 +0.1
baz=276
H29M **Whitestone** 90.68 24 P P 22 28 09.8 +0.3
baz=275
G29M **Pine Creek** 90.75 23 IAmb IAmb 22 28 22.9
comp=Z,55nm,1.8s
G29M **Pine Creek** 90.75 23 P P 22 28 09.8 -0.1
baz=276
KIRS **Kirsehir-Merke** 90.98 309 ⇑P P 22 28 14.2 +2.5
LODK **Lodwar** 90.98 273 P P 22 28 12.4 +0.2
M29M **Somme Creek** 90.99 28 P P 22 28 10.4 -0.8
M29M IAmb IAmb 22 28 21.1
comp=Z,26nm,1.6s
M29M **Somme Creek** 90.99 28 P P 22 28 11.8 +0.6
baz=275
YUK4 **Talbot Arm** 91.00 29 P P 22 28 11.5 +0.1
baz=275
ILGA **Ilgaz** 91.04 311 IAmb IAmb 22 28 21.8
comp=Z,16nm,0.9s
L29M **L29M** 91.08 27 P P 22 28 12.2 +0.6
L29M IAmb IAmb 22 28 13.6
comp=Z,11nm,0.8s
L29M **L29M** 91.08 27 P P 22 28 12.5 +0.9
baz=276
O29M **Mount Kennedy** 91.13 30 P P 22 28 12.0 +0.1
baz=275
BR104 **Keskin Array S** 91.17 310 P P 22 28 11.5 -1.1
comp=Z,54nmcomp=Z,6.9nm,1.0s
BR131 **Keskin Array S** 91.17 310 P P 22 28 12.1 -0.5
BRTR **Keskin Array B** 91.17 310 P P 22 28 11.3 -1.3
comp=Z,3.4nm,1.0s,baz=121,slow=5.9,SNR=14
comp=Z,3.4nm,1.0s
BRTR **Keskin Array B** 91.17 310 *i* P P 22 28 11.8 -0.8
BRTR pmax pmax
comp=Z,4.0nm,1.0s
YUK6 **Outpost Mounta** 91.17 29 P P 22 28 11.2 -1.1
baz=275
BR106 **Keskin Array S** 91.19 310 P P 22 28 11.9 -0.8
comp=Z,56nmcomp=Z,8.1nm,0.9s
K29M **Barlow Dome** 91.28 26 P P 22 28 12.8 +0.3
baz=276
EPYK **Eagle Plains** 91.33 24 P P 22 28 12.7 +0.1
baz=277
G30M **tAoh Zraii Nji** 91.45 23 P P 22 28 12.9 -0.2
baz=277
QSPA **South Pole Qui** 91.49 180 P P 22 28 16.9 +3.5
comp=Z,5.7nm,0.8s,baz=314,slow=1.3,SNR=17
F30M **Barrier River** 91.53 22 P P 22 28 13.4 -0.1
baz=278
HYT **Haines Junctio** 91.60 29 P P 22 28 13.8 -0.4
baz=276
I30M **Mount Dempster** 91.61 25 P P 22 28 13.8 -0.3
baz=277
P29M **Windy Craggy** 91.61 30 P P 22 28 14.0 0.0
baz=276
CSS **Mathiatis** 91.67 305 P P 22 28 14.8 -0.1
comp=Z,48nm,0.9s
J30M **Hart River** 91.71 25 P P 22 28 15.0 +0.5
baz=277
N30M **Aishikik Lake** 91.73 29 P P 22 28 14.7 +0.1
baz=276
M30M **Minto, Yukon** 91.75 27 P P 22 28 14.9 +0.2
baz=277
P30M **Million Dollar** 91.95 30 P P 22 28 15.8 +0.1
baz=276
G31M **Satah River** 92.22 23 P P 22 28 16.1 -0.5
baz=279
INK **Inuvik** 92.27 21 P P 22 28 16.3 -0.5
baz=280
O30N **Mendenhall** 92.30 29 P P 22 28 16.8 -0.4
baz=277
PLBC **Pleasant Camp** 92.33 30 P P 22 28 17.0 -0.3
baz=277
F31M **Tsiigehtchic** 92.33 22 IAmb IAmb 22 28 47.2
comp=Z,50nm,1.8s
F31M **Tsiigehtchic** 92.33 22 P P 22 28 17.1 0.0
baz=280
N31M **Braeburn, Yuko** 92.36 28 P P 22 28 17.3 -0.1
baz=278
H31M **Peel River** 92.36 24 P P 22 28 17.5 +0.1
baz=279
ARCES **ARCESS Array B** 92.37 340 P P 22 28 15.9 -1.3
comp=Z,13nm,0.9s,baz=79,slow=5.9,SNR=21
ARCES PKKP **PKKPdf** 22 45 31.6 +0.1
comp=Z,2.7nm,1.2s,baz=265,slow=3.3,SNR=1.2
comp=Z,13nm,0.9s
ARCES **ARCESS Array B** 92.37 340 P 22 28 16.4 -0.9
ARCES IAmb IAmb 22 28 24.7
comp=Z,19nm,1.0s
ARCES **ARCESS Array B** 92.37 340 P P 22 28 16.0 -1.3
SPITS **Spitsbergen Ar** 92.53 349 P P 22 28 18.4 +0.4
comp=Z,7.4nm,0.8s,baz=99,slow=10,SNR=5.8
comp=Z,7.4nm,0.8s
S31K **Pelican** 92.58 32 P P 22 28 18.1 -0.3
baz=277
WHY **Whitehorse** 92.90 29 P P 22 28 19.9 -0.2
baz=278
M31M **Drury Creek, Y** 92.91 28 P P 22 28 19.7 -0.3
baz=279
AK03 **Malin Array Si** 93.38 321 P P 22 28 21.1 -1.2
AKASG **Malin Array Be** 93.38 321 P P 22 28 21.1 -1.3
comp=Z,3.6nm,0.7s,baz=70,slow=4.6,SNR=9.0
comp=Z,3.6nm,0.7s
AKASG **Malin Array Be** 93.38 321 *i* P P 22 28 21.2 -1.1
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB **Malin Array Si** 93.38 321 *ce*P P 22 28 21.4 -0.9
KIEV **Kiev** 93.39 321 ⇓P P 22 28 23.0 +0.6
KIEV **Kiev** 93.39 321 ⇓P P 22 28 23.0 +0.6
AK18 **Malin Array Si** 93.47 321 P P 22 28 21.2 -1.6
FINES **FINESS Array B** 93.59 332 P P 22 28 21.9 -1.2
comp=Z,3.4nm,0.6s,baz=56,slow=5.3,SNR=12
comp=Z,3.4nm,0.6s
FINES **FINESS Array B** 93.59 332 *i* P P 22 28 22.1 -1.0
FINES pmax pmax
comp=Z,3.0nm,0.6s
BORA **Eskisehir** 93.61 310 IAmb IAmb 22 28 23.7
comp=Z,20nm,1.3s
MNK **Minsk** 93.71 325 *i* P P 22 28 22.6 -1.2
MNK *i* 22 32 11.6
MNK *i* PPP PPP 22 34 08.9
MNK *i* S **SKSac** 22 38 56.9 +1.1
MNK *i* SS **SS** 22 45 51.3 +2.6
MNK *i* SSS SSS 22 49 30.5
MNK pmax pmax
comp=Z,15nm,0.9s
MNK MLR MLR
comp=E,456nm,23.0s
MNK MLR MLR
comp=Z,174nm,17.0s
SORM **Soroca** 94.25 318 ⇓P P 22 28 25.3 -1.1
SORM **Soroca** 94.25 318 ⇓P P 22 28 25.3 -1.1
NACGM **Naroch** 94.28 325 *e*P P 22 28 26.9 +0.4
comp=Z,15nm,1.0s,baz=81
LUBAR **Lubar, Ukraine** 94.41 320 P P 22 28 26.4 -0.7
U33K **Whale Pass** 94.53 34 P P 22 28 27.1 -0.3
baz=280
CRAG **Craig** 94.63 34 P P 22 28 27.5 -0.5
baz=280
VLDR **Vladesti** 94.71 316 ⇑P P 22 28 28.9 +0.3
R33M **Jennings River** 95.06 30 P P 22 28 29.4 -0.7
baz=282
NOR **Nord** 95.20 355 *i* P P 22 28 29.1 -1.1
MANT **Manisa** 95.21 309 IAmb IAmb 22 28 40.0
comp=Z,12nm,1.0s
S34M **Telegraph Cree** 95.27 32 P P 22 28 30.7 -0.2
baz=281
C36M **Paulatuk** 95.33 20 IAmb IAmb 22 28 56.4
comp=Z,17nm,1.1s
C36M **Paulatuk** 95.33 20 P P 22 28 30.6 -0.3
baz=289
KMPD **K-Podol'skiy** 95.44 319 P P 22 28 30.6 -1.3
V35K **Ketchikan** 95.50 34 P P 22 28 31.2 -0.7
baz=281
TESR **Tescani** 95.61 317 ⇓P P 22 28 32.5 -0.3
TESR **Tescani** 95.61 317 P P 22 28 32.3 -0.4
comp=Z,31nm,0.7s
VRI **Vrincioaia** 95.65 316 ⇑P P 22 28 33.4 +0.5
VRI **Vrincioaia** 95.65 316 ⇑P P 22 28 33.4 +0.5
VRI **Vrincioaia** 95.65 316 P P 22 28 32.7 -0.2
comp=Z,21nm,1.1s
MBAR **Mbarara** 95.72 270 P P 22 28 33.3 -0.8
MBAR **Mbarara** 95.72 270 P P 22 28 33.3 -0.8
MBAR pmax pmax
comp=Z,4.0nm,0.8s
DLBC **Dease Lake** 95.73 31 P P 22 28 32.0 -1.1
baz=282
PABE **Paberze** 95.77 326 P 22 28 33.3 +0.1
PABE IAmb IAmb 22 28 47.9
comp=Z,22nm,0.9s
ONER **Baraj Valea Uz** 95.81 317 ⇓P P 22 28 33.8 +0.2
NEHR **Nehoiu** 96.01 316 ⇓P P 22 28 34.8 +0.2
TURR **Turia** 96.11 316 ⇓P P 22 28 35.0 -0.1
MLR **Muntele Rosu** 96.25 316 IAmb IAmb 22 28 36.3
comp=Z,12nm,1.0s
MLR **Muntele Rosu** 96.25 316 ⇑P P 22 28 35.9 +0.1
MLR **Muntele Rosu** 96.25 316 ⇑P P 22 28 35.9 +0.1
MLR **Muntele Rosu** 96.25 316 P P 22 28 35.5 -0.3
comp=Z,12nm,0.9s
KSV **Kosov** 96.39 319 P P 22 28 35.2 -1.1
BURAR **Bucovina Array** 96.41 318 P 22 28 36.2 -0.3
BURAR IAmb IAmb 22 28 42.2
comp=Z,13nm,0.8s
BURAR **Bucovina Array** 96.41 318 ⇓P P 22 28 36.5 0.0
BURAR **Bucovina Array** 96.41 318 ⇓P P 22 28 36.5 0.0

BUR08	**Bucovina Ar. S**	**96.42**	**318**	IAmb	IAmb	22 28 44.6		
	comp=Z,13nm,0.8s							
SUW	**Suwalki**	**96.51**	**325**	*e*P	**P**	**22 28 35.8**	**-0.8**	
ELND	**Elena**	**96.67**	**313**	⇑P	**P**	**22 28 38.9**	**+1.2**	
STNU	**Starunia**	**96.70**	**319**	P	**P**	**22 28 36.5**	**-1.1**	
EZN	**Ezine**	**96.77**	**310**	⇑P	**P**	**22 28 37.7**	**-0.4**	
EZN	**Ezine**	**96.77**	**310**	⇑P	**P**	**22 28 37.7**	**-0.4**	
PLVB	**Pleven**	**97.51**	**314**	⇓P	Pdif	22 28 44.0	+2.6	
KWP	**Kalwaria Pacla**	**97.68**	**320**	P	**P**	**22 28 41.3**	**-0.8**	
LOT	**Lotru**	**97.76**	**316**	⇑P	**P**	**22 28 43.0**	**+0.4**	
MARR	**Marisel-Cluj**	**97.98**	**317**	⇓P	Pdif	22 28 45.6	+2.0	
DRGR		**98.24**	**318**	⇓P	**P**	**22 28 44.3**	**-0.4**	
DRGR		**98.24**	**318**	⇓P	**P**	**22 28 44.3**	**-0.4**	
HERR	**Herculane**	**98.81**	**316**	⇓P	**P**	**22 28 46.8**	**-0.4**	
BLKB	**Belogradchik**	**98.86**	**314**	⇑P	Pdif	22 28 49.3	+1.7	
SIRR	**Siria**	**99.05**	**317**	⇓P	**Pdif**	**22 28 48.2**	**-0.1**	
BZS	**Buzias**	**99.22**	**317**	⇓P	**Pdif**	**22 28 48.5**	**-0.5**	
BZS	**Buzias**	**99.22**	**317**	⇓P	**Pdif**	**22 28 48.5**	**-0.5**	
DAG	**Danmarks Havn**	**99.34**	**352**	*i* P	**Pdif**	**22 28 47.0**	**-1.9**	
BOVS	**Bovan**	**99.55**	**315**	⇓P	**Pdif**	**22 28 50.9**	**+0.4**	
HFS	**Hagfors**	**99.78**	**332**	P	**Pdif**	**22 28 50.1**	**-1.0**	
	comp=Z,2.0nm,0.7s,baz=132,slow=2.2,SNR=11							
	comp=Z,2.0nm,0.7s							
NB2	**NORSAR Subarra1**	**00.58**	**333**	P	**Pdif**	**22 28 52.9**	**-1.9**	
	comp=Z,3.5nm,0.9s,baz=70,slow=4.4							
NOA	**NORSAR Array B**	**100.58**	**333**	P	**Pdif**	**22 28 52.7**	**-2.1**	
	comp=Z,1.5nm,0.8s,baz=66,slow=4.5,SNR=4.7							
STEB	**Steborice**	**100.72**	**321**	*e*PDIFF	**Pdif**	**22 28 59.6**	**+4.0**	
MAUC	**Maruska**	**100.84**	**321**	*e*PDIFF	**Pdif**	**22 29 00.6**	**+4.4**	
NEEM	**North Greenlan**	**101.07**	**359**	*i* P	**Pdif**	**22 28 56.8**	**-0.2**	
NEEM				IAmb	IAmb	22 28 58.7		
	comp=Z,5.4nm,0.7s							
DPC	**Dobruska-Polom**	**101.50**	**322**	*e*P	**Pdif**	**22 29 02.9**	**+3.8**	
DPC	**Dobruska-Polom**	**101.50**	**322**	*e*PDIFF	**Pdif**	**22 29 02.9**	**+3.8**	
DBG	**Daneborg**	**101.61**	**351**	*i* P	**Pdif**	**22 28 57.7**	**-1.3**	
SNAA	**Sanae**	**103.06**	**195**	Pdiff	**Pdif**	**22 29 07.4**	**+1.8**	
	comp=Z,1.5nm,0.9s,baz=154,slow=6.6,SNR=5.9							
SNAA				PKKPbc	**PKKPbc**	**22 45 01.3**	**-3.7**	
	comp=Z,1.4nm,0.9s,baz=37,slow=3.1,SNR=5.3							
HSKC	**Hora Svate Kat**	**103.18**	**323**	*e*PDIFF	**Pdif**	**22 29 10.5**	**+3.9**	
KHC	**Kasperske Hory**	**103.57**	**321**	*e*P	**Pdif**	**22 29 13.7**	**+5.3**	
KHC	**Kasperske Hory**	**103.57**	**321**	*e*PDIFF	**Pdif**	**22 29 13.7**	**+5.3**	
GERES	**GERESS Array B**	**103.58**	**321**	Pdiff	**Pdif**	**22 29 10.4**	**+2.0**	
	comp=Z,0.3nm,0.5s,baz=93,slow=7.2,SNR=3.8							
MOTA	**Moosalm**	**105.72**	**320**	*e*pPKiKP	PKiKP	22 33 43.3	+12	
	comp=Z,2.4nm,0.7s							
RETA	**Reutte**	**105.89**	**321**	*i* pPKiKP	PKiKP	22 33 43.9	+13	
	comp=Z,3.2nm,0.8s							
NVAR	**Mina Array Bea**	**108.55**	**49**	PP	**PP**	**22 34 01.9**	**+0.1**	
	comp=Z,1.3nm,0.9s,baz=296,slow=4.0,SNR=4.3							
NVAR				PKKPbc	**PKKPbc**	**22 44 49.8**	**+2.5**	
	comp=Z,0.2nm,0.3s,baz=272,slow=1.7,SNR=3.7							
PDAR	**Pinedale Array**	**113.16**	**42**	PKKPbc	PKKPbc	22 44 28.4	-4.0	
	comp=Z,0.5nm,0.5s,baz=18,slow=4.4,SNR=5.1							
PV10	**Paradox Valley**	**115.37**	**46**		**PKiKP**	**22 33 47.8**	**-1.8**	
ULM	**Lac du Bonnet**	**116.98**	**29**	PKP	**PKPdf**	**22 33 51.8**	**-0.2**	
	comp=Z,4.8nm,0.7s,baz=338,slow=2.2,SNR=3.2							
ECSD	**EROS Data Cent**	**120.72**	**35**		**PKPdf**	**22 33 59.1**	**-0.3**	
SCHQ	**Schefferville**	**122.73**	**9**	PKP	**PKPdf**	**22 34 03.3**	**+0.4**	
	comp=Z,7.6nm,0.8s,baz=41,slow=2.8,SNR=12							
TXAR	**Lajitas Array**	**123.13**	**53**	PKP	**PKPdf**	**22 34 04.9**	**+0.3**	
	comp=Z,1.9nm,0.7s,baz=223,slow=1.1,SNR=21							
TXAR				PKKPab	**PKKPbc**	**22 43 56.7**	**+0.9**	
	comp=Z,1.6nm,1.1s,baz=131,slow=8.5,SNR=6.3							
JFWS	**Jewell Farm**	**124.78**	**32**		**PKPdf**	**22 34 06.7**	**-0.5**	
JFWS	**Jewell Farm**	**124.78**	**32**	PKIKP	**PKPdf**	**22 34 06.7**	**-0.5**	
L40A	**Anamosa**	**124.83**	**34**		**PKPdf**	**22 34 07.2**	**-0.1**	
DBIC	**Dimbokro**	**130.77**	**280**	PKP	**PKPdf**	**22 34 20.1**	**+0.8**	
	comp=Z,6.3nm,1.0s,baz=162,slow=5.2,SNR=4.1							
SSPA	**Standing Stone**	**132.50**	**25**		**PKPdf**	**22 34 22.9**	**+0.9**	
PLCA	**Paso Flores**	**138.08**	**161**	PKhKP	PKPpre	22 34 26.4		
	comp=Z,2.5nm,0.9s,baz=222,slow=4.2,SNR=3.2							
PLCA				PKP	**PKPdf**	**22 34 34.0**	**+1.5**	
	comp=Z,5.1nm,0.9s,baz=222,slow=2.0,SNR=4.6							
PLCA	**Paso Flores**	**138.08**	**161**	PKIKP	**PKPdf**	**22 34 34.0**	**+1.5**	
TRQA	**Tornquist**	**142.87**	**169**		**PKPdf**	**22 34 38.3**	**-2.8**	
TRQA	**Tornquist**	**142.87**	**169**	PKIKP	**PKPdf**	**22 34 38.3**	**-2.8**	
CNGN	**Cerro Negro**	**144.25**	**66**		**PKPab**	**22 34 42.6**	**+0.5**	
LCO	**Las Campanas**	**148.19**	**151**		**PKPbc**	**22 34 55.4**	**+1.3**	
LCO	**Las Campanas**	**148.19**	**151**	PKP2	**PKPbc**	**22 34 55.4**	**+1.3**	
PB06	**IPOC Station P**	**153.85**	**145**	PKPab	**PKPab**	**22 35 22.1**	**+1.7**	
CPUP	**Villa Florida**	**155.11**	**172**	PKP	**PKPdf**	**22 35 02.4**	**+1.4**	
	comp=Z,0.9nm,0.8s,baz=247,slow=3.3,SNR=4.7							
CPUP				PKPab	**PKPab**	**22 35 26.9**	**+1.5**	
	comp=Z,4.4nm,0.9s,baz=38,slow=4.5,SNR=9.1							
CPUP	**Villa Florida**	**155.11**	**172**	PKPab	**PKPab**	**22 35 27.0**	**+1.6**	
LPAZ	**La Paz**	**159.50**	**136**	PKP	**PKPdf**	**22 35 09.1**	**+1.6**	
	comp=Z,5.2nm,0.9s,baz=38,slow=1.3,SNR=15							
LPAZ				PKPab	**PKPab**	**22 35 45.7**	**+0.3**	
	comp=Z,4.9nm,1.0s,baz=50,slow=1.3,SNR=4.1							
LPAZ	**La Paz**	**159.50**	**136**	*e*P	**PKPdf**	**22 35 05.1**	**-2.4**	
SDV	**Santo Domingo**	**160.07**	**58**	*e*P	**PKPdf**	**22 35 05.9**	**-1.8**	
BDFB	**Brasilia**	**164.98**	**201**	PKP	**PKPdf**	**22 35 13.4**	**+1.0**	
	comp=Z,7.0nm,1.0s,baz=48,slow=2.5,SNR=5.7							
BDFB				PKPab	**PKPab**	**22 36 09.2**	**+0.5**	
	comp=Z,3.6nm,0.7s,baz=150,slow=4.0,SNR=3.6							
VILB	**Vilhena**	**166.91**	**150**	*e*P	**PKPdf**	**22 35 13.3**	**-0.5**	
TEFE	**Tefe**	**168.77**	**100**	*e*P	**PKPdf**	**22 35 14.6**	**-0.7**	
BOAV	**Boa Vista**	**172.00**	**61**	*e*P	**PKPdf**	**22 35 17.0**	**0.0**	
ITTB	**Itaituba**	**176.47**	**142**	*e*P	**PKPdf**	**22 35 18.6**	**+0.1**	

NNC 14 22:16:12.2±7.2, 36.97N×70.44E, h150km±203km, mb2.9, mpv3.5,1C-1D, Error ellipse: s-maj=250.8km s-min=59.7km az=81.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.12**	**0**	⇑P	Pn	22 17 40.4	-0.1
	1.8nm,0.3s,baz=184,slow=12,SNR=72						
KK31				S	Sn	22 18 50.1	+0.5
	13nm,0.6s,baz=187,slow=18,SNR=17						
AB31	**Akbulak array**	**14.45**	**331**	P	P	22 19 30.9	-1.2
	0.5nm,0.5s,baz=139,slow=13,SNR=17						
AKTO	**Aktyubinsk**	**16.15**	**330**	⇓P	Pn	22 19 49.3	-1.2
	2.6nm,0.9s						

*IDC **14** 22:18:30.2±1.3, 1°.27N×125°.57E, h0km, mb4.5/8, mbtmp4.5/8, Error ellipse: s-maj=188.1km s-min=18.1km az=68.0*
*NEIC **14** 22:18:35.2±1.9, 1°.7N±0°.1×126°.48E±0°.07, h35km±2km, mb4.7/13, Error ellipse: s-maj=22.5km s-min=3.7km az=210.0*

ISC 14 22:18:34.9±0.7, 1°.62N±0°.10×126°.47E±0°.09, h35km, n25, σ1s03/26, mb4.7/15, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**133**	Pn	**Pn**	**22 18 55.8**	**+0.2**
TNTI				Sn	**Sn**	**22 19 11.9**	**+1.0**
TOLI2	**Tolitoli**	**5.71**	**265**	Pn	**Pn**	**22 19 57.4**	**+0.2**
MYLDM	**Lahad Datu**	**8.71**	**294**	Pn	**Pn**	**22 20 40.5**	**+2.1**
FITZ	**Fitzroy Crossi**	**19.61**	**182**	P	**P**	**22 22 59.4**	**-0.9**
YULB	**Yu-li**	**22.22**	**347**	P	**P**	**22 23 25.9**	**-2.6**
YULB				IAmb	IAmb	22 23 28.9	
	comp=Z,30nm,1.0s						
TPUB	**Ta-pu**	**22.29**	**346**	P	**P**	**22 23 28.5**	**-0.8**
WB0	**Warramunga Arr**	**22.63**	**160**	P	**P**	**22 23 33.3**	**+0.4**
WB0				IAmb	IAmb	22 23 34.9	
	comp=Z,38nm,0.9s						
COEN	**Coen**	**22.66**	**134**	P	**P**	**22 23 34.0**	**+0.7**
SSLB	**Suanglung**	**22.68**	**347**	P	**P**	**22 23 32.7**	**-0.8**
SSLB				IAmb	IAmb	22 23 34.3	
	comp=Z,33nm,1.1s						
WRAB	**Tennant Creek**	**22.77**	**161**	P	**P**	**22 23 35.1**	**+0.7**
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**22 23 33.9**	**-0.6**
	comp=Z,36nm,0.9s,baz=338,slow=11,SNR=7.9						
	comp=Z,36nm,0.9s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**22 23 34.2**	**-0.3**
WR8	**Warramunga Arr**	**22.84**	**160**	P	**P**	**22 23 35.6**	**+0.4**
WR8				IAmb	IAmb	22 23 37.1	
	comp=Z,33nm,0.9s						
YHNB	**Yeheng**	**23.44**	**348**	P	**P**	**22 23 40.7**	**-0.5**
YHNB				IAmb	IAmb	22 23 46.2	
	comp=Z,31nm,1.1s						
MBWA	**Marble Bar**	**23.58**	**196**	P	**P**	**22 23 41.2**	**-1.3**
MBWA				IAmb	IAmb	22 23 56.9	
	comp=Z,13nm,1.0s						
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**22 24 06.4**	**+0.3**
	comp=Z,7.5nm,0.7s,baz=346,slow=5.3,SNR=4.5						
	comp=Z,7.5nm,0.7s						
GIRL	**Giralia**	**26.91**	**206**	P	**P**	**22 24 11.2**	**-1.6**
SONM	**Songino Array**	**49.21**	**342**	P	**P**	**22 27 21.1**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=164,slow=7.3,SNR=5.7						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**22 28 31.4**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=118,slow=7.4,SNR=8.8						
	comp=Z,5.7nm,0.8s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**22 28 31.8**	**-0.3**
MAKZ	**Makanchi**	**59.33**	**326**	P	**P**	**22 28 32.6**	**-0.8**
MAKZ				IAmb	IAmb	22 28 34.7	
	comp=Z,6.2nm,0.8s						
ZALV	**Zalesovo Beam**	**62.35**	**334**	P	**P**	**22 28 53.0**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=137,slow=6.5,SNR=2.0						
	comp=Z,0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	**P**	**22 29 00.3**	**-0.4**
	comp=Z,2.7nm,0.3s,baz=127,slow=6.2,SNR=4.7						
	comp=Z,2.7nm,0.3s						
BVAR	**Borovoye Array**	**68.94**	**328**	P	**P**	**22 29 36.0**	**-0.4**
	comp=Z,5.0nm,1.0s,baz=131,slow=4.0,SNR=4.2						
	comp=Z,5.0nm,1.0s						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**22 30 46.9**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=312,slow=5.8,SNR=2.0						
	comp=Z,2.0nm,0.6s						

*IDC **14** 22:25:45.5±0.5, 1°.48N×126°.40E, h0km, mb4.6/26, mbtmp4.6/27, ML4.6/1, Error ellipse: s-maj=25.8km s-min=10.9km az=76.0*
*MOS **14** 22:25:48.2±1.0, 1°.47N×126°.23E, h30km, mb5.2/36, Error ellipse: s-maj=12.9km s-min=5.7km az=116.3*
*DJA **14** 22:25:49.3±0.2, 2°N±2°×12°6E±°, h10km, M4.9/10, MLv4.9/10*
*BJI **14** 22:25:50.1, 1°.56N×126°.11E, h26km, mB5.0/10, mb4.8/54, Ms5.0/14, Ms7 4.7/13*
*NEIC **14** 22:25:51.0±1.8, 1°.56N±0°.04×126°.44E±0°.03, h35km±5km, mb5.1/81, Error ellipse: s-maj=7.0km s-min=2.3km az=140.0*

ISC 14 22:25:50.9±0.3, 1°.52N±0°.03×126°.40E±0°.04, h35km, n299, σ1s35/315, mb5.0/143, MS4.5/4, 2C-3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**127**	Pn	**Pn**	**22 26 11.4**	**0.0**
TNTI				Sn	**Sn**	**22 26 26.4**	**-0.2**
TNTI	**Ternate**	**1.21**	**127**	P	**Pn**	**22 26 11.7**	**+0.3**
TNTI	**Ternate**	**1.21**	**127**	S	**Sn**	**22 26 27.9**	**+1.3**
TNTI	**Ternate**	**1.21**	**127**	P	**Pn**	**22 26 11.4**	**0.0**
TNTI				S	**Sn**	**22 26 28.1**	**+1.5**
SGSI	**Sangihe**	**2.33**	**338**	P	**Pn**	**22 26 26.9**	**+0.2**
SGSI				S	**Sn**	**22 26 56.7**	**+2.6**
KMSI	**Cibinong**	**2.60**	**249**	P	**Pn**	**22 26 31.2**	**+0.8**
KMSI				S	**Sn**	**22 27 02.4**	**+1.6**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**22 26 44.7**	**+1.0**
SANI	**Sanana**	**3.56**	**187**	S	**Sn**	**22 27 24.8**	**+0.1**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**22 26 44.5**	**+0.8**
SANI				S	**Sn**	**22 27 28.0**	**+3.3**
LUWI	**Luwuk**	**4.43**	**235**	Pn	**Pn**	**22 26 58.0**	**+2.4**
LUWI	**Luwuk**	**4.43**	**235**	P	**Pn**	**22 26 57.6**	**+1.9**
LUWI	**Luwuk**	**4.43**	**235**	P	**Pn**	**22 26 58.0**	**+2.4**
MRSI	**Marisa**	**4.58**	**257**	P	**Pn**	**22 27 00.9**	**+3.2**
DAV	**Davao City (W)**	**5.58**	**352**	Pn	**Pn**	**22 27 10.7**	**-0.7**
TOLI2	**Tolitoli**	**5.63**	**266**	Pn	**Pn**	**22 27 11.8**	**-0.5**
FAKI	**Fak Fak**	**7.32**	**127**	Pn	**Pn**	**22 27 36.9**	**+1.6**
FAKI	**Fak Fak**	**7.32**	**127**	P	**Pn**	**22 27 37.9**	**+2.5**
MYLDM	**Lahad Datu**	**8.69**	**295**	Pn	**Pn**	**22 27 55.1**	**+0.9**
MYLDM	**Lahad Datu**	**8.69**	**295**	P	**Pn**	**22 27 55.1**	**+0.9**
KAPI	**Kappang**	**9.29**	**226**	Pn	**Pn**	**22 28 05.9**	**+3.5**
	3.9nm,0.3s,baz=19,slow=12,SNR=9.1						
KAPI				Sn	**Sn**	**22 29 47.1**	**+1.5**
	0.8nm,0.3s,baz=198,slow=20,SNR=1.5						
KAPI	**Kappang**	**9.29**	**226**	Pn	**Pn**	**22 28 02.7**	**+0.3**
KAPI	**Kappang**	**9.29**	**226**	*i* P	**Pn**	**22 28 00.3**	**-2.1**
MMRI	**Maumere**	**10.90**	**202**	Pn	**Pn**	**22 28 23.0**	**-1.5**
SOEI	**Soe**	**11.40**	**191**	Pn	**Pn**	**22 28 31.8**	**+0.4**
BATI	**Baumata**	**11.96**	**193**	Pn	Pn	22 28 45.3	+6.2
	5.7nm,0.3s,baz=281,slow=1.2,SNR=14						
SBUM	**Sibu**	**14.21**	**274**		**Pn**	**22 29 10.3**	**+0.6**
JAY	**Jayapura**	**14.85**	**106**	Pn	**Pn**	**22 29 20.7**	**+2.2**
	0.2nm,0.3s,baz=127,slow=20,SNR=2.4						
MTN	**Manton Dam**	**15.02**	**162**	P	**Pn**	**22 29 20.9**	**+0.3**
	comp=Z,57nm,0.9s						
MTN	**Manton Dam**	**15.02**	**162**	Pn	**Pn**	**22 29 19.7**	**-1.0**
KDU	**Kakadu**	**15.34**	**157**	P	**Pn**	**22 29 26.9**	**+2.0**
	comp=Z,131nm,0.8s						
JAGI	**Jajag, Banyuwa**	**15.73**	**231**	P	**P**	**22 29 34.3**	**+0.7**
KNRA	**Kunumurra**	**17.24**	**172**	P	**Pn**	**22 29 49.6**	**+0.6**
	comp=Z,165nm,1.2s						
KNRA	**Kunumurra**	**17.24**	**172**	Pn	**Pn**	**22 29 48.6**	**-0.4**
KNRA				IAmb	IAmb	22 29 51.0	
	comp=Z,113nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**22 30 14.2**	**-1.0**
	comp=Z,6.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**22 30 14.8**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=12,slow=7.3,SNR=27						
	comp=Z,14nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**22 30 14.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**22 30 14.4**	**-0.8**
TWG	**Pinlang**	**21.80**	**347**	P	**P**	**22 30 37.0**	**-3.1**
YULB	**Yu-li**	**22.30**	**348**	P	**P**	**22 30 41.7**	**-3.8**
YULB				IAmb	IAmb	22 30 56.3	
	comp=Z,134nm,1.8s						
TPUB	**Ta-pu**	**22.37**	**346**	P	**P**	**22 30 43.4**	**-2.7**
WB0	**Warramunga Arr**	**22.56**	**160**	P	**P**	**22 30 46.8**	**-1.4**
WB0				IAmb	IAmb	22 30 49.8	
	comp=Z,61nm,0.8s						
COEN	**Coen**	**22.64**	**133**	P	**P**	**22 30 48.5**	**-0.6**
	comp=Z,20nm,0.7s						
COEN	**Coen**	**22.64**	**133**	P	**P**	**22 30 49.9**	**+0.7**
COEN				IAmb	IAmb	22 31 04.8	
	comp=Z,66nm,1.8s						
COEN	**Coen**	**22.64**	**133**	P	**P**	**22 30 49.8**	**+0.7**
WRAB	**Tennant Creek**	**22.70**	**160**	P	**P**	**22 30 48.9**	**-0.8**
WRAB	**Tennant Creek**	**22.70**	**160**	*i* P	**P**	**22 30 48.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,59nm,0.6s						
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**22 30 48.6**	**-1.1**
	comp=Z,53nm,0.7s,baz=342,slow=10,SNR=90						
WRA				S	**S**	**22 34 55.1**	**-0.9**
	comp=Z,4.2nm,0.8s,baz=328,slow=19,SNR=2.7						
	comp=Z,53nm,0.7s						
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**22 30 48.0**	**-1.8**
WRA	**Warramunga Arr**	**22.70**	**160**	*e*P	**P**	**22 30 48.6**	**-1.1**
WRA				pmax	pmax		
	comp=Z,63nm,0.9s						
SSLB	**Suanglung**	**22.76**	**347**	P	**P**	**22 30 48.7**	**-1.6**
SSLB				IAmb	IAmb	22 30 57.9	
	comp=Z,35nm,0.8s						
SSLB	**Suanglung**	**22.76**	**347**	P	**P**	**22 30 50.4**	**0.0**
WR8	**Warramunga Arr**	**22.77**	**160**	P	**P**	**22 30 49.4**	**-1.0**
WR8				IAmb	IAmb	22 30 55.3	
	comp=Z,52nm,0.8s						
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**22 30 55.9**	**-1.4**
	comp=Z,38nm,0.7s						
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**22 30 55.8**	**-1.6**
MBWA				IAmb	IAmb	22 31 00.6	
	comp=Z,27nm,0.6s						
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**22 30 56.7**	**-0.7**
YHNB	**Yeheng**	**23.53**	**348**	P	**P**	**22 31 00.1**	**+2.0**
PSAC1	**Pilbara Seismi**	**23.80**	**195**	P	**P**	**22 31 00.2**	**-0.4**
	comp=Z,30nm,0.7s						
PSAC2	**Pilbara Seismi**	**23.80**	**195**	P	**P**	**22 30 59.7**	**-0.9**
	comp=Z,68nm,0.8s						
PSA00	**Pilbara Seismi**	**23.82**	**195**	P	**P**	**22 31 00.1**	**-0.8**
	comp=Z,47nm,0.7s						
PSA00	**Pilbara Seismi**	**23.82**	**195**	P	**P**	**22 30 59.9**	**-1.0**
PSA00				IAmb	IAmb	22 31 05.0	
	comp=Z,26nm,0.7s						
PSA00	**Pilbara Seismi**	**23.82**	**195**	P	**P**	**22 31 00.6**	**-0.2**
PSAB3	**Pilbara Seismi**	**23.84**	**195**	P	**P**	**22 30 59.3**	**-1.7**
	comp=Z,50nm,0.7s						
JOW	**Kunigami**	**25.24**	**4**	P	**P**	**22 31 16.3**	**+2.6**
QIS	**Mount Isa**	**25.46**	**150**	P	**P**	**22 31 16.1**	**+0.2**
	comp=Z,23nm,0.8s						
QIS	**Mount Isa**	**25.46**	**150**	P	**P**	**22 31 16.9**	**+1.0**
IPM	**Ipoh**	**25.51**	**277**	P	**P**	**22 31 16.7**	**+0.3**
AS31	**Alice Springs**	**26.07**	**164**	P	**P**	**22 31 21.3**	**-0.1**
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**22 31 21.2**	**-0.1**
	comp=Z,15nm,0.5s,baz=346,slow=7.5,SNR=118						
	comp=Z,15nm,0.5s						
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**22 31 20.7**	**-0.6**
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**22 31 20.7**	**-0.6**
MTSU	**Mount Surprise**	**26.31**	**139**	P	**P**	**22 31 23.8**	**+0.3**
	comp=Z,14nm,0.7s						
WRKA	**Warakurna**	**26.46**	**176**	P	**P**	**22 31 25.3**	**+0.5**
	comp=Z,18nm,0.8s						
GIRL	**Giralia**	**26.78**	**206**	P	**P**	**22 31 28.7**	**+1.0**
GIRL				IAmb	IAmb	22 31 31.8	
	comp=Z,44nm,1.0s						
GSI	**Gunungsitoli**	**28.82**	**270**	P	**P**	**22 31 46.6**	**+0.4**
GSI				IAmb	IAmb	22 31 47.6	
	comp=Z,25nm,0.8s						
CTAO	**Charters Tower**	**28.98**	**139**	P	**P**	**22 31 47.6**	**+0.1**
CTAO	**Charters Tower**	**28.98**	**139**	P	**P**	**22 31 47.6**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,37nm,1.7s						
MEEK	**Meekatharra**	**28.98**	**195**	P	**P**	**22 31 47.4**	**0.0**
	comp=Z,25nm,1.1s						
MEEK	**Meekatharra**	**28.98**	**195**	P	**P**	**22 31 47.9**	**+0.5**
SLVN	**Son La**	**29.48**	**314**	P	**P**	**22 31 51.6**	**-0.3**
NJ2	**Nanjing**	**31.20**	**348**	*e*P	**P**	**22 32 07.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JNU	**Nakatsue**	**31.72**	**7**	P	**P**	**22 32 11.5**	**0.0**
CMAR	**Chiang Mai Arr**	**31.77**	**304**	P	**P**	**22 32 13.0**	**+0.9**
	comp=Z,1.3nm,0.3s,baz=124,slow=7.4,SNR=14						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.77**	**304**	P	**P**	**22 32 14.2**	**+2.1**
CMAR	**Chiang Mai Arr**	**31.77**	**304**	*e*P	**P**	**22 32 15.1**	**+3.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MORW	**Morawa**	**31.99**	**197**	P	**P**	**22 32 13.3**	**-0.6**
	comp=Z,19nm,1.1s						
MORW	**Morawa**	**31.99**	**197**	P	**P**	**22 32 13.5**	**-0.4**
MORW				IAmb	IAmb	22 32 14.9	
	comp=Z,29nm,1.3s						
FORT	**Forrest**	**32.15**	**177**	P	**P**	**22 32 14.8**	**-0.5**
	comp=Z,26nm,0.8s						
FORT	**Forrest**	**32.15**	**177**	P	**P**	**22 32 15.3**	**0.0**
FORT				IAmb	IAmb	22 32 20.5	
	comp=Z,17nm,0.8s						
KMI	**Kunming**	**32.75**	**318**	P	**P**	**22 32 23.4**	**+2.5**
KMI				sP	sP	22 32 36.3	+1.7
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI				LR	LR		
	comp=Z,610nm,20.3s						
KMI				LR	LR		
	comp=Z,630nm,27.3s						
KMI				LR	LR		
	comp=Z,650nm,29.4s						
ENH	**Enshi**	**32.80**	**332**	P	**P**	**22 32 19.4**	**-1.7**
ENH				IAmb	IAmb	22 32 24.4	
	comp=Z,36nm,0.9s						
KMBL	**Kambalda**	**32.98**	**187**	P	**P**	**22 32 23.1**	**+0.5**
	comp=Z,11nm,0.9s						
BLDU	**Ballidu**	**33.26**	**195**	P	**P**	**22 32 24.6**	**-0.4**
	comp=Z,21nm,0.9s						
KLBR	**Kellerberrin**	**33.93**	**193**	P	**P**	**22 32 29.9**	**-1.0**
	comp=Z,74nm,0.7s

USRK Ussuriysk Ar. 42.79 6 P **P** **22 33 46.5 +1.4**
comp=Z,4.0nm,0.7s,baz=192,slow=8.7,SNR=9.3
comp=Z,4.0nm,0.7s
BNX BinXian 44.05 1 ⇓P **P** **22 33 56.3 +1.0**
BNX pmax pmax
comp=Z,6.0nm,1.3s
GTA Gaotai 44.84 331 *e*P **P** **22 34 02.9 +1.0**
GTA PcP **PcP** **22 35 44.8 +1.4**
GTA pmax pmax
comp=Z,8.0nm,1.7s
EVN Everest 46.07 308 P **P** **22 34 11.5 -1.0**
EVN lAmb lAmb 22 34 16.9
comp=Z,16nm,0.8s
YSS Yuzhno-Sakhali 47.45 15 *e*P P 22 34 12.6 -10
YSS pmax pmax
comp=Z,30nm,0.9s
HILR Hailar Array B 48.20 354 P **P** **22 34 29.1 +1.1**
comp=Z,6.1nm,0.6s,baz=182,slow=10,SNR=9.2
comp=Z,6.1nm,0.6s
HEH HeiHe 48.57 1 *e*P **P** **22 34 31.4 +0.7**
HEH pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 49.12 343 P **P** **22 34 35.9 +0.7**
ULN Ulaanbaatar 49.12 343 *i*P **P** **22 34 35.5 +0.3**
ULN pmax pmax
comp=Z,8.0nm,1.1s
SONM Songino Array 49.29 342 P **P** **22 34 36.7 +0.3**
comp=Z,6.7nm,0.8s,baz=166,slow=8.1,SNR=20
comp=Z,6.7nm,0.8s
SONM Songino Array 49.29 342 *e*P **P** **22 34 38.4 +1.9**
SONM pmax pmax
comp=Z,8.0nm,0.9s
KOD Kodaikanal 49.38 282 *e*P **P** **22 34 35.6 -2.3**
KOD lAmb lAmb 22 34 41.3
comp=Z,20nm,1.2s
HYBB Hyderabad (bro 49.59 292 *e*P **P** **22 34 38.8 -0.4**
HYBB *e*S **S** **22 41 45.1 -0.3**
CIT Chita 51.47 350 *e*P **P** **22 34 53.8 +1.0**
CIT *e* 22 35 01.2
CIT *e* 22 35 10.4
CIT *e* 22 36 05.8
CIT *e* 22 42 14.0
CIT pmax pmax
comp=Z,84nm,1.2s
AKL Akola 51.80 295 *e*P **P** **22 34 54.6 -1.1**
AKL lAmb lAmb 22 34 59.0
comp=Z,16nm,0.6s
BHPL Bhopal 52.14 298 *e*P **P** **22 34 59.1 +0.9**
BHPL lAmb lAmb 22 35 01.5
comp=Z,18nm,0.9s
NRDN NARMADA NAGAR 52.21 298 *e*P **P** **22 35 00.6 +1.8**
NRDN lAmb lAmb 22 35 04.8
comp=Z,8.5nm,0.9s
GUNA GUNA 52.64 300 *e*P **P** **22 35 00.2 -1.8**
GUNA lAmb lAmb 22 35 05.2
comp=Z,42nm,0.7s
WMQ Urumqi 54.36 326 *e*P **P** **22 35 18.6 +4.3**
WMQ S S 22 42 41.8 -8.4
WMQ pmax pmax
comp=Z,29nm,0.9s
WMQ LR LR
comp=Z,900nm,21.7s
WMQ LR LR
comp=Z,1μm,15.1s
WMQ LR LR
comp=Z,1μm,22.5s
KUDL Kundal 54.50 304 *e*P **P** **22 35 13.1 -2.4**
KUDL lAmb lAmb 22 35 18.1
comp=Z,19nm,0.8s
SMLA Simla 55.02 308 *e*P **P** **22 35 18.3 -0.9**
SMLA lAmb lAmb 22 35 23.5
comp=Z,46nm,1.0s
UDPR Udaipur 55.77 299 *e*P **P** **22 35 23.1 -1.7**
UDPR lAmb lAmb 22 35 28.6
comp=Z,26nm,0.8s
ALCI Alchi Leh 56.23 311 *e*P **P** **22 35 27.4 -0.9**
ALCI lAmb lAmb 22 35 31.2
comp=Z,13nm,0.7s
TSSA Tissa 56.48 309 *e*P **P** **22 35 28.4 -1.5**
TSSA lAmb lAmb 22 35 37.9
comp=Z,24nm,0.8s
PETK Petropavlovsk- 57.59 22 P **P** **22 35 38.7 +1.5**
comp=Z,4.9nm,0.8s,baz=214,slow=6.7,SNR=5.3
comp=Z,4.9nm,0.8s
ZSN Zaisan 58.19 328 *e*P **P** **22 35 41.4 -0.2**
ZSN Zaisan 58.19 328 *e*P **P** **22 35 41.3 -0.2**
DGZ Jazzator, Alta 58.36 331 *i*P **P** **22 35 41.6 -1.2**
DGZ pmax pmax
comp=Z,6.0nm,0.9s
SHLS Shalkode 58.85 321 *e*P **P** **22 35 43.8 -2.5**
comp=Z,10nm,0.9s
SHLS Shalkode 58.85 321 *e*P **P** **22 35 43.8 -2.5**
SHLS pmax pmax
comp=Z,11nm,0.9s
PRZ Przheval'sk 59.17 320 **P** **22 35 48.8 +0.1**
PRZ Przheval'sk 59.17 320 P **P** **22 35 48.8 +0.1**
PRZ pmax pmax
comp=Z,25nm,0.9s
TARG Taragay, Kyrgy 59.19 319 P **P** **22 35 48.1 -0.9**
TARG lAmb lAmb 22 36 01.8
comp=Z,10nm,0.8s
TARG Taragay, Kyrgy 59.19 319 P **P** **22 35 48.1 -0.9**
TARG pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 59.19 326 *i*P **P** **22 35 47.4 -1.1**
MKAR Makanchi Array 59.19 326 P **P** **22 35 47.7 -0.8**
comp=Z,6.2nm,0.4s,baz=120,slow=7.3,SNR=42
comp=Z,6.2nm,0.4s
MKAR Makanchi Array 59.19 326 P **P** **22 35 46.8 -1.7**
MKAR Makanchi Array 59.19 326 *e*P **P** **22 35 47.5 -1.0**
MKAR pmax pmax
comp=Z,6.0nm,0.4s
MAKZ Makanchi 59.37 326 P **P** **22 35 49.1 -0.6**
KSH Kashi 59.39 316 P **P** **22 35 52.8 +2.7**
KSH pmax pmax
comp=Z,12nm,1.0s
SATY Saty 59.46 321 *e*P **P** **22 35 49.8 -0.8**
comp=Z,14nm,0.9s
SATY Saty 59.46 321 *e*P **P** **22 35 49.7 -0.8**
SATY pmax pmax
comp=Z,14nm,0.9s
KDJ Kajisay 59.79 319 **P** **22 35 51.4 -1.5**
KDJ lAmb lAmb 22 35 57.5
comp=Z,18nm,1.0s
KDJ Kajisay 59.79 319 P **P** **22 35 51.4 -1.5**
KDJ pmax pmax
comp=Z,18nm,1.0s
MDOK Medeo 60.37 320 *e*P **P** **22 35 56.2 -0.7**
MDOK Medeo 60.37 320 *e*P **P** **22 35 56.2 -0.7**
TNSS Tian-Shan 60.38 320 *e*P **P** **22 35 56.2 -1.1**
TNSS Tian-Shan 60.38 320 *e*P **P** **22 35 56.1 -1.1**
YAK Yakutsk 60.42 2 P **P** **22 35 57.0 +0.5**
YAK Yakutsk 60.42 2 *e*P **P** **22 35 57.4 +0.9**
YAK pmax pmax
comp=Z,26nm,1.0s
YAK pmax pmax
comp=E,14nm,1.6s
YAK pmax pmax
comp=N,17nm,1.5s
TDK Taldyqorghan 60.46 323 *e*P **P** **22 35 56.8 -0.5**
comp=N,17nm,1.4s
TDK Taldyqorghan 60.46 323 *e*P **P** **22 35 56.7 -0.5**
TDK pmax pmax
comp=Z,17nm,1.4s
TUWZ Tuamarina 60.65 140 P **P** **22 35 56.9 -1.6**
AAK Ala-Archa 61.78 319 *i*P **P** **22 36 05.6 -0.9**
AAK pmax pmax
comp=Z,8.0nm,0.9s
SGDS Sogindy 62.07 320 *e*P **P** **22 36 07.7 -0.5**
ARSB Arslanbob 62.23 317 **P** **22 36 08.9 -0.5**
ARSB lAmb lAmb 22 36 13.4
comp=Z,14nm,1.0s
ARSB Arslanbob 62.23 317 P **P** **22 36 09.0 -0.5**
ARSB pmax pmax
comp=Z,14nm,1.0s
DRK Karamyk 62.30 315 P **P** **22 36 09.6 -0.6**
DRK Karamyk 62.30 315 P **P** **22 36 09.6 -0.6**
DRK pmax pmax
comp=Z,42nm,0.3s
ZAA0 Zalesovo Array 62.41 334 **P** **22 36 09.1 -1.1**
ZALV Zalesovo Beam 62.41 334 P **P** **22 36 09.2 -0.9**
comp=Z,2.5nm,0.4s,baz=116,slow=6.8,SNR=12
comp=Z,2.5nm,0.4s
ZALV Zalesovo Beam 62.41 334 P **P** **22 36 08.6 -1.6**
ZALV Zalesovo Beam 62.41 334 *e*P **P** **22 36 12.1 +1.9**
ZALV pmax pmax
comp=Z,4.0nm,0.6s
KBL Kabul 62.62 308 P **P** **22 36 11.6 -0.7**
KBL lAmb lAmb 22 36 16.2
comp=Z,17nm,0.8s
KBL Kabul 62.62 308 P **P** **22 36 11.6 -0.7**
KBL pmax pmax
comp=Z,17nm,0.8s
BTLS Baital 63.17 321 *e*P **P** **22 36 14.8 -0.7**
comp=Z,5.8nm,1.0s
BTLS Baital 63.17 321 *e*P **P** **22 36 14.7 -0.7**
BTLS pmax pmax
comp=Z,6.0nm,1.0s
GAR Garm 63.19 314 P **P** **22 36 15.3 -0.6**
KURBB Kurchatov Arra 63.43 328 P **P** **22 36 16.1 -0.9**
comp=Z,15nm,0.7s,baz=128,slow=6.4,SNR=30
comp=Z,15nm,0.7s
KURK Kurchatov 63.43 328 P **P** **22 36 14.9 -2.1**
KURK Kurchatov 63.43 328 *i*P **P** **22 36 16.1 -0.9**
KURK pmax pmax
comp=Z,33nm,0.8s
KURK Kurchatov 63.43 328 P **P** **22 36 16.4 -0.7**
KURK pP **pP** **22 36 26.9 -0.4**
CHGR Chuyangaron 63.91 313 **P** **22 36 19.0 -1.6**
CHGR Chuyangaron 63.91 313 P **P** **22 36 19.0 -1.6**
CHGR pmax pmax
comp=Z,49nm,1.0s
SEY Seymchan 64.25 13 *e*P **P** **22 36 21.8 -0.4**
SEY pmax pmax
comp=Z,18nm,1.6s
IUG Iuzhnay 64.58 317 *e*P **P** **22 36 24.0 -0.9**
comp=Z,8.6nm,0.9s
IUG Iuzhnay 64.58 317 *e*P **P** **22 36 24.0 -0.9**
IUG pmax pmax
comp=Z,9.0nm,0.9s
KK31 Karatay Array 64.63 318 P **P** **22 36 24.0 -1.2**
KK31 lAmb lAmb 22 36 28.1
comp=Z,9.7nm,0.9s
KK31 Karatay Array 64.63 318 P **P** **22 36 24.0 -1.2**
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 64.63 318 P **P** **22 36 24.2 -0.9**
KKAR Karatay Array 64.63 318 P **P** **22 36 24.3 -0.9**
BRLS Borolday 65.06 318 *e*P **P** **22 36 27.5 -0.5**
BRLS Borolday 65.06 318 *e*P **P** **22 36 27.4 -0.5**
HRA Herat 67.97 307 P **P** **22 36 46.1 -0.9**
BVAR Borovoye Array 69.00 328 P **P** **22 36 52.0 -0.7**
comp=Z,2.0nm,0.4s,baz=103,slow=6.7,SNR=10.0
comp=Z,2.0nm,0.4s
BORK Borovoye 69.04 328 *i*P **P** **22 36 53.9 +0.9**
BORK pmax pmax
comp=Z,10.0nm,0.9s
TIXI Tiksi 70.05 1 P **P** **22 36 58.2 -0.6**
TIXI lAmb lAmb 22 37 00.6
comp=Z,31nm,1.5s
TIXI Tiksi 70.05 1 *i*P **P** **22 36 58.0 -0.8**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
TIXI Tiksi 70.05 1 P **P** **22 36 59.0 +0.2**
AB31 Akbulak array 73.66 321 **P** **22 37 19.6 -1.4**
ABKAR Akbulak array 73.66 321 P **P** **22 37 19.4 -1.5**
SVE Sverdlovsk 75.67 329 *e*P **P** **22 37 32.0 -0.5**
SVE pmax pmax
comp=Z,30nm,0.9s
CCD Concordia, Ant 76.54 181 P **P** **22 37 38.9 +1.4**
CCD pP **PcP** **22 37 50.6 +1.5**
ARTI Arti 76.71 328 P **P** **22 37 37.2 -1.2**
ARTI lAmb lAmb 22 37 40.5
comp=Z,17nm,0.6s
ARTI Arti 76.71 328 *c i*P **P** **22 37 37.5 -0.9**
ARTI 22 40 24.9
ARTI S **S** **22 47 23.1 +0.4**
ARTI pmax pmax
comp=Z,14nm,0.7s
ARTI Arti 76.71 328 P **P** **22 37 37.1 -1.2**
AKT Akhty 80.51 312 *e*P **P** **22 37 57.0 -2.8**
AKT *e* 22 38 03.3
AKT pmax pmax
comp=Z,17nm,1.7s
RAYN Ar Rayn 81.05 293 P **P** **22 38 02.4 -0.6**
RAYN Ar Rayn 81.05 293 P **P** **22 38 02.4 -0.6**
RAYN pmax pmax
comp=Z,8.0nm,0.8s
VNDA Vanda 81.28 173 P **P** **22 38 03.2 +0.1**
comp=Z,3.7nm,0.8s,baz=308,slow=5.8,SNR=22
comp=Z,3.7nm,0.8s
VNDA Vanda 81.28 173 P **P** **22 38 02.7 -0.3**
VNDA Vanda 81.28 173 P **P** **22 38 02.7 -0.3**
VNDA pmax pmax
comp=Z,6.0nm,1.1s
VNDA Vanda 81.28 173 P **P** **22 38 03.1 +0.1**
MAW Mawson 81.58 200 P **P** **22 38 05.0 +0.3**
comp=Z,2.5nm,0.7s,baz=40,slow=6.2,SNR=7.0
comp=Z,2.5nm,0.7s
KIRV Kirov 81.94 329 *i*P **P** **22 38 08.0 +1.2**
BELG Belogornoye 81.95 323 *i*P **P** **22 38 06.3 -0.7**
BELG pmax pmax
comp=Z,8.0nm,0.9s
SBA Scott Base 82.20 172 P **P** **22 38 08.1 +0.2**
SBA Scott Base 82.20 172 P **P** **22 38 08.1 +0.2**
SBA pmax pmax
comp=Z,11nm,1.4s
D19K Kuna River 83.29 21 P **P** **22 38 13.9 +0.1**
D19K lAmb lAmb 22 38 16.5
comp=Z,13nm,0.8s
H19K Roundabout Mou 83.31 24 P **P** **22 38 12.8 -1.1**
J19K Poorman 83.37 26 P **P** **22 38 12.4 -1.8**
J19K lAmb lAmb 22 38 17.1
comp=Z,14nm,1.0s
E19K Redstone River 83.39 22 **P** **22 38 13.1 -1.2**
E19K lAmb lAmb 22 38 17.2
comp=Z,26nm,1.0s
D20K Etivluk River 83.88 21 P **P** **22 38 16.9 +0.2**
D20K lAmb lAmb 22 38 19.4
comp=Z,28nm,1.1s
F20K Avaraart Lake 83.89 23 P **P** **22 38 16.7 -0.1**
F20K lAmb lAmb 22 38 38.1
comp=Z,40nm,1.8s
M20K Styx River 84.17 28 P **P** **22 38 18.9 +0.5**
KBZ Khabaz 84.26 314 P **P** **22 38 19.7 +0.6**
comp=Z,5.4nm,0.8s,baz=110,slow=5.7,SNR=9.4
comp=Z,5.4nm,0.8s
KBZ Khabaz 84.26 314 *e*P **P** **22 38 20.7 +1.6**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 84.42 314 *e*P **P** **22 38 21.7 +1.6**
KIV pmax pmax
comp=Z,11nm,1.1s
SHA1 Shidzhatmaz 84.43 314 *i*P **P** **22 38 19.1 -1.3**
IMAR Indian Mountai 84.49 24 P **P** **22 38 20.1 +0.2**
GURO Guroymak-BITLI 84.65 308 P **P** **22 38 21.1 -0.4**
B21K Ikpikpuk River 84.75 20 P **P** **22 38 21.7 +0.6**
B21K lAmb lAmb 22 38 23.9
comp=Z,24nm,1.1s
VRH Novokhopyorsk 85.49 321 *e*P **P** **22 38 24.0 -1.2**
VRH pmax pmax
comp=Z,50nm,1.0s
MARD Mardin 85.60 307 P **P** **22 38 25.1 -1.1**
MARD lAmb lAmb 22 38 30.2
comp=Z,15nm,0.8s
E23K Chandalar 86.35 22 P **P** **22 38 28.9 -0.3**
E23K lAmb lAmb 22 38 37.2
comp=Z,5.6nm,0.8s
SML Sawmill 86.43 28 P **P** **22 38 29.1 -0.6**
SOC Sochi 86.56 313 *e*P **P** **22 38 29.5 -1.2**
SOC *e* 22 41 52.1
SOC *e*PPP PPP 22 43 45.2
SOC *e*S **SKSac** **22 48 53.0 -1.8**
SOC *e*SS **SS** **22 54 44.3 -1.8**
SOC *e*SSS SSS 22 58 15.3
SOC pmax pmax
comp=Z,28nm,0.8s
VORD Divnogorie 87.01 321 *e*P **P** **22 38 32.7 0.0**
VORD pmax pmax
comp=Z,30nm,0.9s
VORR Voronezh 87.08 321 *e*P **P** **22 38 32.9 -0.1**
VORR pmax pmax
comp=Z,60nm,0.9s
VSR Storozhevoye 87.09 321 *e*P **P** **22 38 32.9 -0.2**
VSR pmax pmax
comp=Z,20nm,0.9s
KLMR Klimovskoe 87.16 331 *e*P **P** **22 38 31.0 -2.2**
KLMR pmax pmax
comp=Z,16nm,1.0s
ILAR Eielson Array 87.23 25 P **P** **22 38 33.3 -0.2**
comp=Z,0.5nm,0.6s,baz=245,slow=4.3,SNR=4.2
comp=Z,0.5nm,0.6s
LPSR Galich'ya Gora 87.27 322 *e*P **P** **22 38 34.1 +0.2**
LPSR pmax pmax
comp=Z,50nm,1.0s
MOS Moscow 88.07 326 *e*P **P** **22 38 38.2 +0.6**
MOS pmax pmax
comp=Z,28nm,0.6s
MOS Moscow 88.07 326 *e*S **P** **22 38 38.1 +0.5**
KIBK Kibwezi 88.42 268 P **P** **22 38 39.6 -0.7**
KIBK lAmb lAmb 22 38 46.1
comp=Z,6.4nm,0.9s
GAZ Gaziantep 88.45 307 **P** **22 38 39.7 -0.3**
GAZ lAmb lAmb 22 38 44.4
comp=Z,15nm,0.8s
C27K Jago River 88.55 21 P **P** **22 38 39.9 +0.2**
OBN Obninsk 88.67 325 P **P** **22 38 39.2 -1.2**
OBN Obninsk 88.67 325 *e*P **P** **22 38 39.8 -0.7**
OBN *e* 22 42 08.8
OBN *e*PPP PPP 22 44 05.9
OBN pmax pmax
comp=Z,18nm,1.2s
KMBO Kilima Mbogo 89.18 269 P **P** **22 38 44.6 +0.5**
comp=Z,1.3nm,0.5s,baz=123,slow=5.2,SNR=7.5
comp=Z,1.3nm,0.5s
K27K Chicken 89.32 26 P **P** **22 38 43.7 +0.3**
K27K lAmb lAmb 22 39 05.0
comp=Z,11nm,1.3s
BNN Bunyan 89.50 309 P **P** **22 38 43.9 -1.1**
BNN lAmb lAmb 22 38 51.8
comp=Z,8.7nm,1.1s
D27M Malcolm River 89.53 21 P **P** **22 38 44.1 -0.3**
D27M lAmb lAmb 22 38 49.1
comp=Z,20nm,1.9s
BALJ Balqa 89.85 302 **P** **22 38 46.3 -0.3**
GHAJ Ghor Haditha 89.94 301 **P** **22 38 47.3 +0.3**
MMAI Mount Meron Ar 90.03 303 P **P** **22 38 48.8 +1.3**
comp=Z,15nm,1.0s,baz=92,slow=6.9,SNR=11
comp=Z,15nm,1.0s
F28M Old Crow 90.04 22 P **P** **22 38 46.5 -0.2**
F28M lAmb lAmb 22 41 19.9
comp=Z,30nm,2.0s
SIM Simferopol' 90.56 315 *e*P **P** **22 38 47.6 -2.0**
SIM pmax pmax
comp=Z,23nm,0.8s
BRTR Keskin Array B 91.17 310 P **P** **22 38 53.7 +0.9**
comp=Z,3.4nm,0.9s,baz=107,slow=4.8,SNR=9.4
comp=Z,3.4nm,0.9s
BRTR Keskin Array B 91.17 310 P **P** **22 38 51.8 -1.0**
BRTR Keskin Array B 91.17 310 P **P** **22 38 51.8 -1.0**
QSPA South Pole Qui 91.44 180 P **P** **22 38 53.5 +0.2**
comp=Z,2.3nm,0.8s,baz=134,slow=2.3,SNR=8.3
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 92.40 340 P **P** **22 38 56.9 -0.7**
comp=Z,3.2nm,0.8s,baz=74,slow=5.7,SNR=11
comp=Z,3.2nm,0.8s
ARCES ARCESS Array B 92.40 340 *e*P **P** **22 38 57.5 -0.1**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
SPITS Spitsbergen Ar 92.58 349 P **P** **22 38 57.9 -0.5**
comp=Z,16nm,1.1s,baz=106,slow=8.8,SNR=5.8
comp=Z,16nm,1.1s
AKASG Malin Array Be 93.39 321 P **P** **22 39 03.4 +0.8**
comp=Z,0.4nm,0.4s,baz=66,slow=5.0,SNR=2.6
comp=Z,0.4nm,0.4s
FINES FINESS Array B 93.62 332 P **P** **22 39 04.0 +0.6**
comp=Z,4.4nm,0.9s,baz=71,slow=4.7,SNR=10
comp=Z,4.4nm,0.9s
FINES FINESS Array B 93.62 332 P **P** **22 39 04.0 +0.6**
BURAR Bucovina Array 96.42 318 P **P** **22 39 15.7 -1.0**
BURAR lAmb lAmb 22 39 24.8
comp=Z,4.8nm,0.8s
BUR08 Bucovina Ar. S 96.43 318 **P** **22 39 16.1 -0.6**
BUR08 lAmb lAmb 22 39 26.6
comp=Z,5.1nm,0.9s
SUW Suwalki 96.53 325 P **P** **22 39 16.1 -0.8**
SUW Suwalki 96.53 325 P **P** **22 39 16.1 -0.8**
NOA NORSAR Array B 100.61 333 P **Pdif** **22 39 35.5 +0.5**
comp=Z,0.3nm,0.5s,baz=67,slow=4.6,SNR=2.0
I37A Lemond, Waseca 122.41 33 **PKPdf** **22 44 40.0 -2.8**
TXAR Lajitas Array 123.19 53 PKP **PKPdf** **22 44 44.2 -0.6**
comp=Z,0.7nm,0.8s,baz=193,slow=1.2,SNR=4.9
GLAT Glass 129.84 38 PKPpre 22 44 50.2
PLCA Paso Flores 138.05 161 PKP **PKPdf** **22 45 13.8 +1.2**
comp=Z,1.6nm,0.7s,baz=296,slow=3.2,SNR=3.1
CO01 Juntas del Tor 147.64 153 **PKPbc** **22 45 34.0 +1.3**
AC05 El Transito 148.51 151 **PKPbc** **22 45 36.2 +1.3**
PLTB Pedras Altas 149.91 180 **PKPbc** **22 45 37.3 -0.9**

IDC ***14*** *22:28:16.7±0.6, 1°.45N×126°.27E, h0km, mb4.4/19, mbtmp4.4/20, ML4.4/1, Error ellipse: s-maj=31.9km s-min=12.3km az=76.0*
NEIC ***14*** *22:28:20.2±1.5, 1°.66N±0°.03×126°.44E±0°.05, h25km±5km, mb5.0/54, Error ellipse: s-maj=7.3km s-min=4.7km az=107.0*
DJA ***14*** *22:28:20.6±0.2, 2°N±2°×12°6E±°, h10km, M4.8/19, mB5.2/2, mb5.0/14, MLv4.7/19, Mw(mB)4.6/2*
BJI ***14*** *22:28:21.0, 1°.76N×126°.18E, h17km, mB5.2/4, mb4.6/32, Ms5.0/5, Ms7 5.0/5*

ISC 14 22:28:21.6±0.3, 1°.55N±0°.04×126°.43E±0°.05, h35km, n120, σ1ᵎ48/124, mb4.7/54, 3C, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**129**	Pn	**Pn**	**22 28 42.4**	**+0.3**
TNTI				Sn	**Sn**	**22 28 58.8**	**+1.4**
TNTI	**Ternate**	**1.22**	**129**	P	**Pn**	**22 28 42.0**	**-0.1**
TNTI				S	**Sn**	**22 28 59.2**	**+1.8**
SGSI	**Sangihe**	**2.30**	**337**	P	**Pn**	**22 28 57.8**	**+0.7**
SGSI				S	**Sn**	**22 29 27.5**	**+3.3**
KMSI	**Cibinong**	**2.63**	**248**	P	**Pn**	**22 29 02.2**	**+0.6**
KMSI				S	**Sn**	**22 29 33.9**	**+1.6**
SANI	**Sanana**	**3.60**	**187**	P	**Pn**	**22 29 15.4**	**+0.4**
LUWI	**Luwuk**	**4.47**	**235**	Pn	**Pn**	**22 29 29.8**	**+2.9**
LUWI	**Luwuk**	**4.47**	**235**	P	**Pn**	**22 29 29.0**	**+2.1**
MRSI	**Marisa**	**4.61**	**257**	P	**Pn**	**22 29 30.2**	**+1.4**
NLAI	**Namlea**	**4.80**	**172**	P	**Pn**	**22 29 32.6**	**+1.1**
MSAI	**Masohi** 0.5nm163nm,0.8s	**5.47**	**153**	P	**Pn**	**22 29 44.1**	**+3.5**
TOLI2	**Tolitoli**	**5.66**	**266**	Pn	**Pn**	**22 29 43.1**	**-0.2**
MPSI	**Mapaga** 0.4nm119nm,0.9s	**6.64**	**260**	P	**Pn**	**22 29 57.8**	**+1.1**
FAKI	**Fak Fak**	**7.32**	**127**		**Pn**	**22 30 07.3**	**+1.2**
FAKI	**Fak Fak** 0.3nm128nm,0.8s	**7.32**	**127**	P	**Pn**	**22 30 09.6**	**+3.5**
BBSI	**Bau Bau** 0.4nm1μm105nm,0.9s	**7.98**	**209**	P	**Pn**	**22 30 17.7**	**+2.5**
TTSI	**Tana Toraja** 0.4nm136nm,0.9s	**8.03**	**235**	P	**Pn**	**22 30 16.9**	**+1.1**
SPSI	**Sidrap Palu** 52nm,0.5s	**8.62**	**231**	P	**Pn**	**22 30 24.1**	**+0.2**
BNSI	**Bone** 59nm,0.7s	**8.65**	**227**	P	**Pn**	**22 30 25.2**	**+0.9**
MYLDM	**Lahad Datu**	**8.70**	**295**	Pn	**Pn**	**22 30 24.5**	**-0.5**
BKSI	**Bulukumba** 41nm,0.6s	**9.29**	**223**	P	**Pn**	**22 30 34.0**	**+0.9**
KAPI	**Kappang** 2.8nm,0.3s,baz=18,slow=13,SNR=1.8	**9.33**	**226**	Pn	**Pn**	**22 30 35.3**	**+1.7**
KAPI	**Kappang**	**9.33**	**226**	Pn	**Pn**	**22 30 34.1**	**+0.5**
EDFI	**Ende, Flores**	**11.27**	**205**	P	**Pn**	**22 31 01.9**	**+1.6**
SOEI	**Soe**	**11.44**	**191**		**Pn**	**22 31 03.5**	**+0.9**
TWSI	**Taliwang, Sumb** 75nm,1.0s	**13.96**	**223**	P	**Pn**	**22 31 39.9**	**+2.8**
SBUM	**Sibu**	**14.23**	**274**		**Pn**	**22 31 38.6**	**-2.1**
MTN	**Manton Dam**	**15.04**	**162**		**Pn**	**22 31 50.0**	**-1.7**
KMMI	**Kalianget**	**15.09**	**235**	P	**P**	**22 31 58.4**	**+1.3**
JAGI	**Jajag, Banyuwa**	**15.77**	**231**		**Pn**	**22 32 01.8**	**+0.5**
JAGI	**Jajag, Banyuwa**	**15.77**	**231**	P	**P**	**22 32 03.9**	**-0.9**
KNRA	**Kununurra**	**17.27**	**172**		**Pn**	**22 32 19.7**	**-0.4**
KNRA				IAmb	IAmb	22 32 21.3	
FITZ	**Fitzroy Crossi** comp=Z,93nm,1.1s	**19.54**	**182**	P	**P**	**22 32 45.3**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=21,slow=9.5,SNR=6.2						
	comp=Z,12nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.54**	**182**	P	**P**	**22 32 45.2**	**-1.0**
YULB	**Yu-li**	**22.27**	**347**	P	**P**	**22 33 11.8**	**-4.0**
YULB				IAmb	IAmb	22 33 22.8	
	comp=Z,124nm,1.8s						
TPUB	**Ta-pu**	**22.34**	**346**	P	**P**	**22 33 14.0**	**-2.6**
TPUB				IAmb	IAmb	22 33 23.0	
	comp=Z,58nm,0.8s						
WB0	**Warramunga Arr**	**22.58**	**160**		**P**	**22 33 17.8**	**-1.3**
WB0				IAmb	IAmb	22 33 24.8	

comp=Z,68nm,0.9s
COEN Coen 22.65 133 P P 22 33 19.9 -0.1
COEN IAmb IAmb 22 33 26.4
comp=Z,46nm,1.6s
WRA Warramunga Arr 22.73 160 P P 22 33 20.0 -0.7
comp=Z,32nm,0.7s,baz=338,slow=11,SNR=15
comp=Z,32nm,0.7s
WRA Warramunga Arr 22.73 160 P P 22 33 19.2 -1.5
MBWA Marble Bar 23.50 196 P 22 33 27.4 -1.1
MBWA IAmb IAmb 22 33 31.7
comp=Z,16nm,0.7s
PSA00 Pilbara Seismi 23.86 195 P 22 33 31.2 -0.8
PSA00 IAmb IAmb 22 33 37.1
comp=Z,18nm,0.7s
PSA00 Pilbara Seismi 23.86 195 P P 22 33 30.2 -1.7
PSA00 IAmb IAmb 22 33 35.5
comp=Z,27nm,1.7s
IPM Ipoh 25.53 277 P P 22 33 46.4 -0.8
AS31 Alice Springs 26.10 164 P P 22 33 52.1 -0.2
ASAR Alice Springs 26.10 164 P P 22 33 52.6 +0.3
comp=Z,5.6nm,0.5s,baz=343,slow=7.4,SNR=11
comp=Z,5.6nm,0.5s
ASAR Alice Springs 26.10 164 P P 22 33 52.4 +0.1
GIRL Giralia 26.83 206 P P 22 33 59.3 +0.5
GIRL IAmb IAmb 22 34 05.1
comp=Z,67nm,1.1s
GSI Gunungsitoli 28.84 270 P P 22 34 15.7 -1.3
GSI IAmb IAmb 22 34 57.8
comp=Z,21nm,1.0s
JNU Nakatsue 31.68 7 P P 22 34 40.9 -1.0
CMAR Chiang Mai Arr 31.76 304 P P 22 34 44.1 +1.3
comp=Z,0.9nm,0.5s,baz=122,slow=7.5,SNR=5.2
comp=Z,0.9nm,0.5s
MORW Morawa 32.03 197 P P 22 34 45.2 +0.3
MORW IAmb IAmb 22 35 52.7
comp=Z,59nm,1.8s
FORT Forrest 32.19 177 P P 22 34 46.4 +0.1
FORT IAmb IAmb 22 34 53.4
comp=Z,8.3nm,0.7s
ENH Enshi 32.78 332 P P 22 34 50.4 -1.2
ENH IAmb IAmb 22 34 55.7
comp=Z,22nm,1.0s
PZH PanZhiHua 34.33 318 P P 22 35 07.6 +2.4
PZH pmax pmax
comp=Z,10.0nm,0.8s
BBOO Buckleboo 35.37 166 P P 22 35 13.6 -0.4
NWAO Narrogin (SRO) 35.38 193 P P 22 35 14.2 +0.2
KSRS Korea Array 35.76 2 P P 22 35 19.4 +2.2
comp=Z,2.3nm,0.8s,baz=180,slow=11,SNR=4.4
comp=Z,2.3nm,0.8s
EIDS Eidsvold 35.86 140 P P 22 35 18.5 +0.3
STKA Stephens Creek 36.23 158 P P 22 35 20.1 -1.2
comp=Z,9.9nm,0.7s,baz=333,slow=8.6,SNR=5.2
comp=Z,9.9nm,0.7s
XAN Xi'an 36.23 335 ⇑P P 22 35 23.6 +2.2
XAN pmax pmax
comp=Z,9.0nm,1.0s
MJAR Matsushiro Arr 36.48 16 P P 22 35 24.7 +1.2
comp=Z,2.7nm,0.8s,baz=181,slow=10,SNR=3.7
comp=Z,2.7nm,0.8s
HNS HongShan 37.27 345 ⇑P P 22 35 33.6 +3.5
HNS pmax pmax
comp=Z,9.0nm,1.0s
JMM Marumori 38.48 18 P P 22 35 38.8 -1.6
LZH Lanzhou 40.24 331 eP P 22 35 56.6 +1.3
LZH pP pP 22 36 04.5 -0.6
LZH pmax pmax
comp=Z,17nm,1.0s
LZH LR LR
comp=Z,1μm,18.4s
LZH LR LR
comp=Z,850nm,17.2s
LZH LR LR
comp=Z,2μm,22.0s
HHC Hu-ho-hao-te 41.37 343 eP P 22 36 05.6 +1.1
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,150nm,5.1s
CAN Canberra 42.32 152 P P 22 36 12.7 +0.4
CAN IAmb IAmb 22 37 38.0
comp=Z,73nm,1.9s
USRK Ussuriysk Ar. 42.75 6 P P 22 36 18.1 +2.6
comp=Z,5.3nm,0.9s,baz=199,slow=10,SNR=4.9
comp=Z,5.3nm,0.9s
BNX BinXian 44.02 1 ⇑P P 22 36 28.3 +2.6
BNX pmax pmax
comp=Z,8.0nm,1.0s
GTA Gaotai 44.82 331 eP P 22 36 33.8 +1.4
GTA PcP PP 22 38 17.5 0.0
GTA pmax pmax
comp=Z,2.0nm,0.8s
HILR Hailar Array B 48.17 354 P P 22 37 03.8 +5.4
comp=Z,4.0nm,0.5s,baz=180,slow=12,SNR=4.9
HEH HeiHe 48.53 1 eP P 22 37 02.3 +1.2
HEH pmax pmax
comp=Z,10.0nm,1.0s
SONM Songino Array 49.26 342 P P 22 37 08.0 +1.1
comp=Z,2.8nm,0.8s,baz=157,slow=6.9,SNR=4.9
comp=Z,2.8nm,0.8s
WMQ Urumqi 54.34 326 eP P 22 37 45.3 +0.5
WMQ LR LR
comp=Z,870nm,22.3s
WMQ LR LR
comp=Z,1μm,16.1s
WMQ LR LR
comp=Z,1μm,20.3s
PETK Petropavlovsk- 57.55 22 P P 22 38 08.4 +0.8
comp=Z,1.8nm,0.5s,baz=191,slow=8.1,SNR=4.2
comp=Z,1.8nm,0.5s
DCZ Deep Cove 59.07 148 P P 22 38 19.6 +1.3
PRZ Przheval'sk 59.16 320 P P 22 38 17.9 -1.3
PRZ IAmb IAmb 22 38 25.9
comp=Z,12nm,0.8s
MKAR Makanchi Array 59.17 326 P P 22 38 18.4 -0.6
comp=Z,4.5nm,0.6s,baz=119,slow=6.7,SNR=11
comp=Z,4.5nm,0.6s
MKAR Makanchi Array 59.17 326 P P 22 38 18.2 -0.9
TARG Taragay, Kyrgy 59.17 319 P P 22 38 18.4 -1.2
TARG IAmb IAmb 22 38 26.8
comp=Z,6.5nm,0.9s
MAKZ Makanchi 59.36 326 P P 22 38 18.9 -1.4
MAKZ IAmb IAmb 22 38 24.4
comp=Z,15nm,1.1s
KSH Kashi 59.38 316 P P 22 38 24.1 +3.3
KSH pmax pmax
comp=Z,5.0nm,0.9s
KDJ Kajisay 59.78 319 P P 22 38 21.9 -1.6
KDJ IAmb IAmb 22 38 29.0
comp=Z,9.8nm,0.9s
LBZ Lake Benmore 60.07 145 P P 22 38 25.3 +0.1
LTZ Lake Taylor 60.36 143 P P 22 38 25.2 -2.2
YAK Yakutsk 60.38 2 P P 22 38 27.0 0.0
TUWZ Tuamarina 60.66 140 P P 22 38 28.4 -0.9
BOOM Boomskoye usch 60.76 319 P P 22 38 29.7 -0.5
BOOM IAmb IAmb 22 38 35.6
comp=Z,7.4nm,1.1s
ARSB Arslanbob 62.22 317 P P 22 38 38.9 -1.2
DRK Karamyk 62.30 315 P P 22 38 39.4 -1.4
DRK IAmb IAmb 22 38 45.9
comp=Z,14nm,1.0s
ZAA0 Zalesovo Array 62.39 334 P P 22 38 39.3 -1.4
ZALV Zalesovo Beam 62.39 334 P P 22 38 40.3 -0.4
comp=Z,1.9nm,0.6s,baz=149,slow=5.5,SNR=3.9
comp=Z,1.9nm,0.6s
ZALV Zalesovo Beam 62.39 334 P P 22 38 40.0 -0.8
KBL Kabul 62.62 308 P P 22 38 41.0 -1.9
KBL IAmb IAmb 22 38 47.2
comp=Z,9.1nm,0.8s
GAR Garm 63.18 314 P P 22 38 45.4 -1.1
KURBB Kurchatov Arra 63.41 328 P P 22 38 47.7 +0.1
comp=Z,5.1nm,0.5s,baz=128,slow=6.4,SNR=8.2
comp=Z,5.1nm,0.5s
KURK Kurchatov 63.41 328 P P 22 38 45.5 -2.1
KURK IAmb IAmb 22 38 51.1
comp=Z,14nm,0.7s
CHGR Chuyangaron 63.90 313 P P 22 38 50.0 -1.3
CHGR IAmb IAmb 22 38 55.8
comp=Z,24nm,1.0s
KK31 Karatay Array 64.62 318 P P 22 38 55.2 -0.6
KK31 IAmb IAmb 22 38 59.0
comp=Z,5.5nm,1.1s
KKAR Karatay Array 64.62 318 P P 22 38 55.7 -0.1
HRA Herat 67.97 307 P P 22 39 16.8 -0.8
BVAR Borovoye Array 68.98 328 P P 22 39 23.1 -0.2
comp=Z,1.9nm,0.6s,baz=141,slow=9.6,SNR=4.3
comp=Z,1.9nm,0.6s
TIXI Tiksi 70.01 1 P P 22 39 28.9 -0.3
TIXI IAmb IAmb 22 39 32.4
comp=Z,14nm,1.4s
AB31 Akbulak array 73.64 321 P P 22 39 50.2 -1.4
ABKAR Akbulak array 73.64 321 P 22 39 49.9 -1.6
ARTI Arti 76.69 328 P 22 40 07.0 -2.0
ARTI IAmb IAmb 22 40 12.2
comp=Z,31nm,1.5s
KPA Kalaupapa 76.94 69 P P 22 40 10.2 -0.8
RAYN Ar Rayn 81.06 293 P P 22 40 32.3 -1.4
VNDA Vanda 81.32 173 P P 22 40 34.5 +0.6
comp=Z,3.5nm,0.7s,baz=304,slow=7.0,SNR=7.8
comp=Z,3.5nm,0.7s
VNDA Vanda 81.32 173 P P 22 40 34.0 +0.1
MAW Mawson 81.62 200 P P 22 40 35.1 -0.5
comp=Z,1.8nm,0.7s,baz=110,slow=4.5,SNR=4.5
comp=Z,1.8nm,0.7s
KBZ Khabaz 84.25 314 P P 22 40 52.1 +2.3
comp=Z,5.5nm,1.0s,baz=157,slow=6.4,SNR=4.0
comp=Z,5.5nm,1.0s
GURO Guroymak-BITLI 84.65 308 P 22 40 52.7 +0.6
ARPR Arapgir-MALATY 87.55 309 P P 22 41 05.9 -0.6
DOT Dot Lake 88.40 27 P P 22 41 08.7 -1.2
KIBK Kibwezi 88.44 268 P P 22 41 10.0 -1.1
KIBK IAmb IAmb 22 41 15.3
comp=Z,12nm,1.7s
SUCK Suckling Hills 88.56 30 P P 22 41 10.4 -0.2
BRTR Keskin Array B 91.17 310 P P 22 41 22.2 -1.3
comp=Z,0.9nm,0.8s,baz=127,slow=4.3,SNR=3.6
comp=Z,0.9nm,0.8s
QSPA South Pole Qui 91.47 180 P P 22 41 25.9 +1.7
comp=Z,1.0nm,0.6s,baz=226,slow=1.3,SNR=3.7
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 92.38 340 P P 22 41 28.2 0.0
comp=Z,2.4nm,0.8s,baz=67,slow=3.2,SNR=4.0
comp=Z,2.4nm,0.8s
TXAR Lajitas Array 123.15 53 PKP PKPdf 22 47 16.5 +1.1
comp=Z,0.5nm,0.7s,baz=322,slow=2.3,SNR=4.0

*IDC **14** 22:32:48.8±0.6, 1.56N×126.21E, h0km, mb4.3/23, mbtmp4.3/24, ML4.5/1, Error ellipse: s-maj=31.7km s-min=12.4km az=75.0*
*NEIC **14** 22:32:53.0±1.9, 1.52N±0.07×126.26E±0.06, h22km±5km, mb4.6/58, Error ellipse: s-maj=10.7km s-min=8.0km az=216.0*
*DJA **14** 22:32:52.8±0.2, 2.7N±2.7×12.6E±.7, h10km, M5.0/19, mB5.4/4, mb4.7/13, MLv5.2/19, Mw(mB)4.8/4*

ISC 14 22:32:54.1±0.4, 1.58N±0.05×126.34E±0.08, h35km, n115, σ1§46/115, mb4.5/51, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.30**	**128**			**Pn**	**22 33 16.1**	**+0.3**
TNTI	**Ternate**	**1.30**	**128**	P		**Pn**	**22 33 15.5**	**-0.3**
SGSI	**Sangihe**	**2.25**	**339**	P		**Pn**	**22 33 29.1**	**+0.2**
SGSI				S		**Sn**	**22 33 57.1**	**+1.7**
KMSI	**Cibinong**	**2.56**	**247**	P		**Pn**	**22 33 34.3**	**+1.1**
SANI	**Sanana**	**3.62**	**186**	P		**Pn**	**22 33 49.2**	**+1.5**
LUWI	**Luwuk**	**4.42**	**234**			**Pn**	**22 33 57.2**	**-1.5**
LUWI	**Luwuk**	**4.42**	**234**	P		**Pn**	**22 34 01.0**	**+2.3**
MRSI	**Marisa**	**4.53**	**256**	P		**Pn**	**22 34 02.0**	**+1.7**
NLAI	**Namlea**	**4.84**	**171**	P		**Pn**	**22 34 07.0**	**+2.4**
APSI	**Ampana**	**5.30**	**242**	P		**Pn**	**22 34 15.1**	**+4.2**
DAV	**Davao City (W)**	**5.51**	**352**	Pn		**Pn**	**22 34 14.9**	**+1.1**
MSAI	**Masohi** 1.9nm6μm60nm,0.6s	**5.53**	**152**	P		**Pn**	**22 34 15.4**	**+1.4**
TOLI2	**Tolitoli**	**5.58**	**265**			**Pn**	**22 34 13.9**	**-0.8**
MPSI	**Mapaga** 1.3nm40nm,0.7s	**6.56**	**259**	P		**Pn**	**22 34 31.9**	**+3.7**
PCI	**Palu** 1.9nm3μm55nm,0.8s	**6.96**	**249**	P		**Pn**	**22 34 34.3**	**+0.7**
FAKI	**Fak Fak**	**7.40**	**127**	Pn		**Pn**	**22 34 39.5**	**-0.3**
FAKI	**Fak Fak** 0.8nm29nm,0.7s	**7.40**	**127**	P		**Pn**	**22 34 42.9**	**+3.1**
TTSI	**Tana Toraja** 43nm,0.9s	**7.97**	**235**	P		**Pn**	**22 34 49.8**	**+2.2**
SPSI	**Sidrap Palu** 1μm35nm,0.5s	**8.57**	**230**	P		**Pn**	**22 34 57.9**	**+2.1**
BNSI	**Bone** 42nm,0.7s	**8.61**	**226**	P		**Pn**	**22 34 58.6**	**+2.3**
BKSI	**Bulukumba** 23nm,0.5s	**9.25**	**222**	P		**Pn**	**22 35 07.1**	**+2.0**
KAPI	**Kappang** 3.2nm,0.3s,baz=45,slow=3.8,SNR=7.3	**9.28**	**225**	Pn		**Pn**	**22 35 08.3**	**+2.7**
BSSI	**Bau Bau, Buton** 27nm,0.5s	**9.64**	**217**	P		**Pn**	**22 35 12.8**	**+2.3**
BKB	**Balikpapan**	**9.86**	**253**	Pn		**Pn**	**22 35 10.3**	**-3.2**
EDFI	**Ende, Flores**	**11.26**	**204**	P		**Pn**	**22 35 34.9**	**+2.2**
MTN	**Manton Dam**	**15.09**	**162**			**Pn**	**22 36 24.6**	**-0.3**
KNRA	**Kununurra**	**17.31**	**172**	Pn		**Pn**	**22 36 51.9**	**-1.2**
FITZ	**Fitzroy Crossi** 1.1nm,0.3s,baz=11,slow=8.2,SNR=10 4.4nm,0.4s	**19.56**	**182**	P		**P**	**22 37 19.1**	**0.0**
FITZ	**Fitzroy Crossi**	**19.56**	**182**			**P**	**22 37 18.9**	**-0.1**
TWG	**Pinlang**	**21.73**	**347**	P		**P**	**22 37 41.3**	**-1.2**
TWG				IAmb	IAmb		22 37 44.1	
	comp=Z,13nm,0.8s							
YULB	**Yu-li**	**22.23**	**348**	P		**P**	**22 37 45.9**	**-2.0**
YULB				IAmb	IAmb		22 37 55.3	
	comp=Z,15nm,0.8s							
TPUB	**Ta-pu**	**22.30**	**346**	P		**P**	**22 37 46.6**	**-2.0**
WB0	**Warramunga Arr**	**22.63**	**160**			**P**	**22 37 51.4**	**-0.9**
WB0				IAmb	IAmb		22 37 54.2	
	comp=Z,22nm,0.8s							
SSLB	**Suanglung**	**22.69**	**347**	P		**P**	**22 37 50.7**	**-2.1**
SSLB				IAmb	IAmb		22 38 03.7	
	comp=Z,24nm,0.9s							
COEN	**Coen**	**22.73**	**133**	P		**P**	**22 37 52.9**	**-0.4**
WRAB	**Tennant Creek**	**22.77**	**160**	P		**P**	**22 37 52.1**	**-1.6**
WRAB				IAmb	IAmb		22 37 56.0	
	comp=Z,16nm,0.6s							
WRA	**Warramunga Arr**	**22.78**	**160**	P		**P**	**22 37 53.7**	**-0.1**
	comp=Z,11nm,0.5s,baz=340,slow=11,SNR=19 comp=Z,11nm,0.5s							
WRA	**Warramunga Arr**	**22.78**	**160**	P		**P**	**22 37 52.2**	**-1.6**
WR8	**Warramunga Arr**	**22.85**	**160**			**P**	**22 37 53.6**	**-0.9**
WR8				IAmb	IAmb		22 37 58.2	
	comp=Z,20nm,0.8s							
MBWA	**Marble Bar**	**23.50**	**196**	P		**P**	**22 38 00.4**	**-0.7**
MBWA				IAmb	IAmb		22 38 08.1	
	comp=Z,12nm,0.9s							
PSA00	**Pilbara Seismi**	**23.87**	**195**	P		**P**	**22 38 05.4**	**+0.9**
ASAR	**Alice Springs**	**26.15**	**164**	P		**P**	**22 38 25.9**	**+0.7**
	comp=Z,4.3nm,0.5s,baz=341,slow=7.3,SNR=15 comp=Z,4.3nm,0.5s							
KSRS	**Korea Array**	**35.73**	**2**	P		**P**	**22 39 50.5**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=182,slow=10.0,SNR=6.1 comp=Z,1.4nm,0.6s							
STKA	**Stephens Creek**	**36.28**	**158**	P		**P**	**22 39 52.9**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=327,slow=9.0,SNR=5.2 comp=Z,2.5nm,0.6s							
MJAR	**Matsushiro Arr**	**36.48**	**16**	P		**P**	**22 39 55.5**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=180,slow=11,SNR=5.3 comp=Z,1.9nm,0.8s							
MJAR	**Matsushiro Arr**	**36.48**	**16**	IAmb	IAmb		22 39 56.0	
	comp=Z,0.9nm,0.9s							
USRK	**Ussuriysk Ar.**	**42.74**	**6**	P		**P**	**22 40 48.6**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=186,slow=6.7,SNR=2.8 comp=Z,1.4nm,0.5s							
EVN	**Everest**	**45.99**	**308**	P		**P**	**22 41 15.6**	**+0.5**
EVN				IAmb	IAmb		22 41 24.6	
	comp=Z,3.2nm,0.7s							
HILR	**Hailar Array B**	**48.13**	**354**	P		**P**	**22 41 32.1**	**+1.4**
	comp=Z,2.1nm,0.5s,baz=184,slow=8.4,SNR=3.6 comp=Z,2.1nm,0.5s							
SONM	**Songino Array**	**49.21**	**342**	P		**P**	**22 41 39.2**	**0.0**
	comp=Z,2.7nm,1.1s,baz=165,slow=8.9,SNR=6.0 comp=Z,2.7nm,1.1s							
PETK	**Petropavlovsk-**	**57.56**	**22**	P		**P**	**22 42 40.6**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=219,slow=7.4,SNR=0.9 comp=Z,1.7nm,0.7s							
MKAR	**Makanchi Array**	**59.10**	**326**	P		**P**	**22 42 50.6**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=120,slow=7.2,SNR=26 comp=Z,2.0nm,0.4s							
MKAR	**Makanchi Array**	**59.10**	**326**	P		**P**	**22 42 50.4**	**-0.7**
ZALV	**Zalesovo Beam**	**62.33**	**334**	P		**P**	**22 43 12.1**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=138,slow=7.2,SNR=6.3 comp=Z,1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**63.34**	**328**	P		**P**	**22 43 19.5**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=127,slow=6.3,SNR=19 comp=Z,5.5nm,0.6s							
KURK	**Kurchatov**	**63.35**	**328**			**P**	**22 43 19.0**	**-0.8**
BVAR	**Borovoye Array**	**68.91**	**328**	P		**P**	**22 43 55.2**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=141,slow=10.0,SNR=7.3 comp=Z,1.5nm,0.7s							
TIXI	**Tiksi**	**69.99**	**1**	P		**P**	**22 44 01.7**	**0.0**
TIXI				IAmb	IAmb		22 44 02.5	
	comp=Z,3.7nm,0.8s							
MSEY	**Mahe Island**	**71.07**	**265**	P		**P**	**22 44 08.3**	**-1.2**
MSEY				IAmb	IAmb		22 44 26.4	
	comp=Z,10nm,1.1s							
AKTO	**Aktyubinsk**	**75.10**	**322**	P		**P**	**22 44 32.6**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=126,slow=6.8,SNR=6.7 comp=Z,2.8nm,0.7s							
ARTI	**Arti**	**76.62**	**328**	P		**P**	**22 44 39.8**	**-1.4**
	comp=Z,3.6nm,0.6s,baz=115,slow=3.4,SNR=8.3 comp=Z,3.6nm,0.6s							
ARTI	**Arti**	**76.62**	**328**	P		**P**	**22 44 40.4**	**-0.7**
ARTI				IAmb	IAmb		22 44 42.3	
	comp=Z,5.6nm,0.6s							
RAYN	**Ar Rayn**	**80.97**	**293**	P		**P**	**22 45 04.4**	**-1.4**
VNDA	**Vanda**	**81.35**	**173**	P		**P**	**22 45 07.0**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=310,slow=6.1,SNR=8.0 comp=Z,1.7nm,0.6s							
VNDA	**Vanda**	**81.35**	**173**	P		**P**	**22 45 07.2**	**+0.6**
BELG	**Belogornoye**	**81.87**	**323**	P		**P**	**22 45 09.8**	**-0.1**
	comp=Z,10nm,0.8s,baz=108,slow=2.4,SNR=4.1 comp=Z,10nm,0.8s							
N19K	**Bonanza Creek**	**83.35**	**29**	P		**P**	**22 45 19.1**	**+1.6**
E19K	**Redstone River**	**83.36**	**22**	P		**P**	**22 45 19.0**	**+1.7**
L19K	**White Mountain**	**83.39**	**28**	P		**P**	**22 45 18.6**	**+1.0**
L19K				IAmb	IAmb		22 45 23.0	
	comp=Z,4.1nm,1.0s							
OHAK	**Old Harbor**	**83.46**	**33**	P		**P**	**22 45 17.8**	**-0.2**
M19K	**Big River Lodg**	**83.56**	**28**	P		**P**	**22 45 19.5**	**+1.1**
M19K				IAmb	IAmb		22 45 24.6	
	comp=Z,9.4nm,1.2s							
KBZ	**Khabaz**	**84.17**	**314**	P		**P**	**22 45 22.4**	**+0.4**
	comp=Z,3.7nm,1.0s,baz=61,slow=23,SNR=4.3 comp=Z,3.7nm,1.0s							
SLKM	**Skilak Lake**	**85.40**	**30**	P		**P**	**22 45 27.9**	**+0.1**
H22K	**Ishtalitna Cre**	**85.41**	**24**	P		**P**	**22 45 26.9**	**-0.9**
E22K	**Anaktuvuk Pass**	**85.50**	**22**	P		**P**	**22 45 29.6**	**+1.4**
E22K				IAmb	IAmb		22 45 32.0	
	comp=Z,4.0nm,1.1s							
MARD	**Mardin**	**85.52**	**307**	P		**P**	**22 45 29.6**	**+0.5**
RC01	**Rabbit Creek A**	**85.68**	**29**	P		**P**	**22 45 30.0**	**+0.8**
SEW	**Seward**	**85.75**	**30**	P		**P**	**22 45 30.6**	**+1.1**
D23K	**Nanushuk River**	**86.01**	**21**	P		**P**	**22 45 32.7**	**+2.0**
C23K	**Itkillik River**	**86.12**	**20**	P		**P**	**22 45 32.1**	**+0.9**
C23K				IAmb	IAmb		22 45 50.2	
	comp=Z,5.1nm,0.9s							
KNK	**Knik Glacier**	**86.32**	**29**	P		**P**	**22 45 33.9**	**+1.5**
KNK				IAmb	IAmb		22 45 34.8	
	comp=Z,5.7nm,0.8s							
TOLK	**Toolik Lake Re**	**86.38**	**21**	P		**P**	**22 45 34.3**	**+1.7**
TOLK				IAmb	IAmb		22 45 35.6	
	comp=Z,2.6nm,0.8s							
SML	**Sawmill**	**86.40**	**28**	P		**P**	**22 45 34.1**	**+1.3**
D24K	**Happy Valley**	**86.69**	**21**	P		**P**	**22 45 36.9**	**+2.9**
D24K				IAmb	IAmb		22 45 38.1	
	comp=Z,4.1nm,0.7s							
E24K	**Your Creek**	**86.74**	**22**	P		**P**	**22 45 37.2**	**+2.8**
E24K				IAmb	IAmb		22 45 47.4	
	comp=Z,2.0nm,0.9s							
C24K	**Franklin Bluff**	**86.78**	**20**	P		**P**	**22 45 36.6**	**+2.2**
C24K				IAmb	IAmb		22 45 44.3	
	comp=Z,2.6nm,0.8s							
SCM	**Sheep Creek Mo**	**86.88**	**28**	P		**P**	**22 45 37.0**	**+1.8**
F24K	**Squaw Lake**	**86.93**	**23**	P		**P**	**22 45 37.5**	**+2.3**
ILAR	**Eielson Array**	**87.20**	**25**	P		**P**	**22 45 36.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=236,slow=4.8,SNR=6.7 comp=Z,0.4nm,0.6s							
ILAR	**Eielson Array**	**87.20**	**25**	P		**P**	**22 45 34.5**	**-2.1**
BMAR	**Burnt Mountain**	**88.20**	**23**	P		**P**	**22 45 42.6**	**+1.2**
C27K	**Jago River**	**88.52**	**21**	P		**P**	**22 45 43.8**	**+1.0**
C27K				IAmb	IAmb		22 45 45.0	
	comp=Z,3.4nm,0.6s							
J26L	**Joseph Creek**	**88.63**	**26**	P		**P**	**22 45 43.5**	**0.0**
E27K	**Coleen River**	**89.32**	**22**	P		**P**	**22 45 47.6**	**+1.0**
I27K	**Kandik River**	**89.42**	**25**	P		**P**	**22 45 48.2**	**+1.1**
I27K				IAmb	IAmb		22 45 49.5	
	comp=Z,2.3nm,0.7s							
L27K	**Beaver Creek,**	**89.44**	**27**	P		**P**	**22 45 48.6**	**+1.3**
L27K				IAmb	IAmb		22 45 52.2	
	comp=Z,1.7nm,0.8s							
D27M	**Malcolm River**	**89.50**	**21**	P		**P**	**22 45 49.0**	**+1.5**
BALJ	**Balqa**	**89.77**	**302**	P		**P**	**22 45 49.9**	**+0.4**
BALJ				IAmb	IAmb		22 45 58.8	
	comp=Z,5.8nm,1.0s							
MMAI	**Mount Meron Ar**	**89.94**	**303**	P		**P**	**22 45 51.0**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=66,slow=7.1,SNR=2.4 comp=Z,1.0nm,0.5s							
I28M	**Miner Creek**	**90.13**	**25**	P		**P**	**22 45 51.8**	**+1.3**
I28M				IAmb	IAmb		22 45 52.4	
	comp=Z,1.9nm,0.8s							
M29M	**Somme Creek**	**91.03**	**28**	P		**P**	**22 45 55.6**	**+0.8**
M29M				IAmb	IAmb		22 46 08.5	
	comp=Z,1.9nm,1.0s							
BRTR	**Keskin Array B**	**91.09**	**310**	P		**P**	**22 45 54.4**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=134,slow=4.5,SNR=4.2 comp=Z,0.6nm,0.7s							
L29M	**L29M**	**91.11**	**27**	P		**P**	**22 45 56.0**	**+0.9**
L29M				IAmb	IAmb		22 46 04.0	
	comp=Z,2.3nm,0.9s							
O29M	**Mount Kennedy**	**91.17**	**30**	P		**P**	**22 45 56.0**	**+0.4**
J30M	**Hart River**	**91.74**	**25**	P		**P**	**22 45 59.4**	**+1.3**
J30M				IAmb	IAmb		22 46 05.9	
	comp=Z,1.3nm,0.8s							
M30M	**Minto, Yukon**	**91.78**	**27**	P		**P**	**22 45 59.3**	**+1.1**
G31M	**Satah River**	**92.25**	**23**	P		**P**	**22 46 00.1**	**-0.1**
ARCES	**ARCESS Array B**	**92.32**	**340**	P		**P**	**22 45 58.7**	**-1.8**
	comp=Z,2.1nm,0.8s,baz=76,slow=6.6,SNR=5.5 comp=Z,2.1nm,0.8s							
ARCES	**ARCESS Array B**	**92.32**	**340**	P		**P**	**22 45 59.2**	**-1.3**
ARCES				IAmb	IAmb		22 46 00.1	
	comp=Z,3.1nm,0.9s							
SPB2	**Spitsbergen Ar**	**92.50**	**349**	P		**P**	**22 46 01.5**	**+0.3**
FINES	**FINESS Array B**	**93.53**	**332**	P		**P**	**22 46 07.4**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=108,slow=6.2,SNR=5.7 comp=Z,2.2nm,0.7s							
FINES	**FINESS Array B**	**93.53**	**332**	P		**P**	**22 46 07.0**	**+0.8**
BURAR	**Bucovina Array**	**96.34**	**318**	P		**P**	**22 46 20.0**	**+0.5**
BURAR				IAmb	IAmb		22 46 21.4	
	comp=Z,1.9nm,0.8s							
BUR08	**Bucovina Ar. S**	**96.34**	**318**	P		**P**	**22 46 19.0**	**-0.6**
TXAR	**Lajitas Array**	**123.20**	**53**	PKP		**PKPdf**	**22 51 49.1**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=345,slow=2.1,SNR=4.2							

*IDC **14** 22:33:52.7±0.8, 1.56N×126.27E, h0km, mb4.4/11, mbtmp4.4/13, ML4.5/2, Error ellipse: s-maj=45.3km s-min=14.2km az=73.0*
*NEIC **14** 22:33:58.9±1.5, 1.50N±0.09×126.22E±0.07, h35km±1km, mb4.6/23, Error ellipse: s-maj=15.9km s-min=9.5km az=27.0*

ISC 14 22:33:58.3±0.5, 1.49N±0.07×126.22E±0.09, h35km, n43, σ1§16/41, mb4.4/23, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.35**	**122**		Pn	**Pn**	**22 34 21.5**	**+0.8**
LUWI	**Luwuk**	**4.26**	**234**		Pn	**Pn**	**22 35 00.5**	**-0.3**
TOLI2	**Tolitoli**	**5.45**	**266**		Pn	**Pn**	**22 35 18.5**	**+1.5**
FAKI	**Fak Fak**	**7.45**	**126**		Pn	**Pn**	**22 35 45.9**	**+1.3**
KAPI	**Kappang** 3.8nm,0.3s,baz=267,slow=3.9,SNR=3.6 8.6nm,0.4s	**9.13**	**225**		Pn	**Pn**	**22 36 08.6**	**+0.9**
BKB	**Balikpapan**	**9.71**	**254**		Pn	**Pn**	**22 36 15.7**	**+0.1**
MTN	**Manton Dam**	**15.05**

WRA	**Warramunga Arr**	**22.74**	**160**	P	**P**	**22 38 56.0**	**-1.5**
SSLB	**Suanglung**	**22.75**	**347**	P	**P**	**22 38 55.3**	**-2.3**
SSLB				IAmb	IAmb	22 39 10.8	
	comp=Z,18nm,1.0s						
COEN	**Coen**	**22.76**	**133**	P	**P**	**22 38 56.9**	**-0.8**
WR8	**Warramunga Arr**	**22.81**	**160**	P	**P**	**22 38 57.6**	**-0.6**
WR8				IAmb	IAmb	22 39 10.4	
	comp=Z,12nm,0.8s						
MBWA	**Marble Bar**	**23.39**	**195**	P	**P**	**22 39 03.8**	**-0.2**
MBWA				IAmb	IAmb	22 39 19.6	
	comp=Z,11nm,1.0s						
YHNB	**Yeheng**	**23.51**	**349**	P	**P**	**22 39 05.3**	**0.0**
YHNB				IAmb	IAmb	22 39 17.2	
	comp=Z,19nm,1.0s						
ASAR	**Alice Springs**	**26.10**	**164**	P	**P**	**22 39 29.0**	**0.0**
	comp=Z,6.2nm,0.6s,baz=342,slow=6.9,SNR=6.4						
	comp=Z,6.2nm,0.6s						
STKA	**Stephens Creek**	**36.25**	**158**	P	**P**	**22 40 57.9**	**-0.3**
	comp=Z,7.5nm,0.7s,baz=339,slow=8.5,SNR=6.3						
	comp=Z,7.5nm,0.7s						
MJAR	**Matsushiro Arr**	**36.60**	**16**	P	**P**	**22 41 02.6**	**+1.4**
	comp=Z,3.0nm,0.9s,baz=187,slow=8.3,SNR=4.3						
SHL	**Shillong**	**40.83**	**309**	P	**P**	**22 41 36.8**	**-0.2**
SHL				IAmb	IAmb	22 41 37.2	
	comp=Z,8.9nm,0.6s						
USRK	**Ussuriysk Ar.**	**42.84**	**6**	P	**P**	**22 41 53.1**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=199,slow=1.4,SNR=4.3						
	comp=Z,1.6nm,0.6s						
LSA	**Lhasa**	**43.56**	**314**	P	**P**	**22 42 03.3**	**+3.7**
LSA				IAmb	IAmb	22 42 03.8	
	comp=Z,4.2nm,0.6s						
SONM	**Songino Array**	**49.25**	**342**	P	**P**	**22 42 44.2**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=148,slow=9.2,SNR=4.8						
	comp=Z,2.5nm,1.0s						
NIL	**Nilore**	**58.90**	**309**	P	**P**	**22 43 52.3**	**-1.9**
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**22 43 54.9**	**-0.4**
	comp=Z,9.2nm,0.9s,baz=126,slow=8.9,SNR=8.3						
	comp=Z,9.2nm,0.9s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**22 43 54.8**	**-0.5**
MAKZ	**Makanchi**	**59.29**	**326**	P	**P**	**22 43 55.9**	**-0.6**
MAKZ				IAmb	IAmb	22 43 59.9	
	comp=Z,8.5nm,0.9s						
LBZ	**Lake Benmore**	**60.14**	**145**	P	**P**	**22 44 01.8**	**-0.6**
KHZ	**Kahutara**	**61.02**	**142**	P	**P**	**22 44 07.2**	**-1.2**
ZALV	**Zalesovo Beam**	**62.35**	**334**	P	**P**	**22 44 15.5**	**-1.6**
	comp=Z,1.6nm,0.6s,baz=126,slow=7.5,SNR=4.0						
	comp=Z,1.6nm,0.6s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**22 44 22.6**	**-1.2**
	comp=Z,5.3nm,0.6s,baz=131,slow=6.3,SNR=7.0						
	comp=Z,5.3nm,0.6s						
ARTI	**Arti**	**76.63**	**328**	P	**P**	**22 45 43.8**	**-1.5**
	comp=Z,1.9nm,0.5s,baz=142,slow=5.1,SNR=4.2						
	comp=Z,1.9nm,0.5s						
ARTI	**Arti**	**76.63**	**328**	IAmb	IAmb	22 45 44.4	
	comp=Z,4.7nm,0.9s						
VNDA	**Vanda**	**81.28**	**173**	P	**P**	**22 46 11.1**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=320,slow=6.5,SNR=5.7						
	comp=Z,1.4nm,0.5s						
VNDA	**Vanda**	**81.28**	**173**	IAmb	IAmb	22 46 11.7	
	comp=Z,2.8nm,0.9s						
GURO	**Guroymak-BITLI**	**84.52**	**308**	P	**P**	**22 46 28.4**	**+0.2**
GURO				IAmb	IAmb	22 46 36.2	
	comp=Z,6.7nm,0.9s						
BRTR	**Keskin Array B**	**91.04**	**310**	P	**P**	**22 47 00.9**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=114,slow=6.0,SNR=4.5						
	comp=Z,0.8nm,0.8s						
INK	**Inuvik**	**92.42**	**21**	P	**P**	**22 47 06.0**	**+0.9**
PLCA	**Paso Flores**	**138.09**	**161**	PKP	**PKPdf**	**22 53 18.4**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=200,slow=7.5,SNR=4.4						

*IDC **14** 22:34:17.8±0.3, 1°.54N×126°.23E, h0km, mb5.1/36, mbtmp5.0/38, ML5.0/2, MS4.5/10, Error ellipse: s-maj=19.3km s-min=7.5km az=75.0*

*BJI **14** 22:34:18.0, 1°.37N×126°.46E, h23km, mB5.4/25, mb5.1/71, Ms5.0/55, Ms7 4.9/55*

*MOS **14** 22:34:18.1±1.1, 1°.68N×126°.27E, h14km, mb5.6/57, MS4.8/4, Error ellipse: s-maj=9.9km s-min=5.2km az=116.5*

*NEIC **14** 22:34:21.4±2.3, 1°.71N±0°.05×126°.38E±0°.05, h15km±3km, mb5.5/236, Mww5.3/8, Error ellipse: s-maj=8.6km s-min=7.2km az=220.0*

*NEIC **14** 22:34:21, 1°.69N×126°.38E, h20km*

*NEIC **14** 22:34:21, 1°.69N×126°.38E, h20km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17^Nm; Mrr0.59; Mθθ0.29; Mϕϕ -0.89; Mrθ-0.38; Mrϕ-0.42; Mθϕ0.45; Fault plane solution: M0 1.07000×10^17^ NP1: ϕs230.72000°, δ46.51000°, λ146.09000°. NP2: ϕs345.54000°, δ66.13000°, λ48.82000°. Principal axes: T 1.0444, Plg51.0000°, Azm208.0000°; N 0.0408, Plg37.0000°, Azm5.0000°; P -1.0852, Plg12.0000°, Azm104.0000°;*

*DJA **14** 22:34:25.4±0.2, 2°N±2°×12°6E±°, h46km±2km, M5.2/98, mb5.3/98, mB5.7/71, MLv5.3/20, Mw(mB)5.2/71, MwMwp5.8/1, Mwp5.9/1*

*GCMT **14** 22:34:27.5±0.2, 1°.78N±0°.01×126°.26E±0°.01, h29km, MW5.5/109, Moment Tensor Solution. s80, c107; s109, c176; Duration: 1s4 Moment tensor: Scale 10^17^ Nm; Mrr2.12±.09; Mθθ-0.24±.05; Mϕϕ-1.88±.06; Mrθ-1.12±.10; Mrϕ-1.05±.04; Mθϕ0.54±.09; Best double couple: M0 2.56900×10^17^ NP1: ϕs2.00000°, δ51.00000°, λ55.00000°. NP2: ϕs230.00000°, δ51.00000°, λ125.00000°. Principal axes: T 2.7460, Plg63.0000°, Azm206.0000°; N -0.3520, Plg27.0000°, Azm26.0000°; P -2.3920, Plg0.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 22:34:22.8±0.5, 1°.65N±0°.03×126°.36E±0°.04, h29km±3km, h29km: pP-P, n927, σ1§50/879, mb5.4/274, MS4.8/34, 8C-6D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**131**			**Pn**	**22 34 45.2**	**-0.4**
TNTI	**Ternate**	**1.33**	**131**	P		**Pb**	**22 34 46.4**	**-0.9**
TNTI	**Ternate**	**1.33**	**131**	P		**Pn**	**22 34 45.2**	**-0.4**
SGSI	**Sangihe**	**2.18**	**338**	P		**Pn**	**22 34 58.2**	**+1.0**
SANI	**Sanana**	**3.69**	**186**	P		**Pn**	**22 35 19.7**	**+1.7**
SANI	**Sanana**	**3.69**	**186**	P		**Pn**	**22 35 18.4**	**+0.4**
LUWI	**Luwuk**	**4.47**	**233**	Pn		**Pn**	**22 35 28.6**	**-0.1**
LUWI	**Luwuk**	**4.47**	**233**	P		**Pn**	**22 35 32.9**	**+4.2**
MRSI	**Marisa**	**4.57**	**255**	P		**Pn**	**22 35 32.2**	**+2.2**
NLAI	**Namlea**	**4.91**	**171**	P		**Pn**	**22 35 37.5**	**+2.7**
APSI	**Ampana**	**5.35**	**242**	P		**Pn**	**22 35 44.3**	**+3.5**
DAV	**Davao City (W)**	**5.44**	**352**	Pn		**Pn**	**22 35 43.7**	**+1.7**
	37nm,0.3s,baz=48,slow=22,SNR=3.7							
DAV				Sn		**Sn**	**22 36 48.9**	**+5.2**
	60nm,0.3s,baz=30,slow=12,SNR=3.6							
	271nm,0.5s							
DAV	**Davao City (W)**	**5.44**	**352**	Pn		**Pn**	**22 35 39.5**	**-2.5**
DAV	**Davao City (W)**	**5.44**	**352**	P		**Pn**	**22 35 45.0**	**+2.9**
DAV				S		**Sn**	**22 36 48.9**	**+5.2**
DAV	**Davao City (W)**	**5.44**	**352**	P		**Pn**	**22 35 43.2**	**+1.2**
SWI	**Sorong**	**5.50**	**117**	P		**Pn**	**22 35 45.0**	**+2.1**
	3µm184nm,0.8s							
MSAI	**Masohi**	**5.59**	**153**	P		Pn	22 35 48.5	+4.4
	1.9nm14µm380nm,0.9s							
TOLI2	**Tolitoli**	**5.60**	**265**	Pn		**Pn**	**22 35 44.0**	**-0.2**
TOLI2	**Tolitoli**	**5.60**	**265**	P		**Pn**	**22 35 47.1**	**+2.9**
AAI	**Ambon**	**5.61**	**161**	P		**Pn**	**22 35 46.8**	**+2.4**
	1.5nm5µm321nm,0.5s							
MPSI	**Mapaga**	**6.59**	**259**	P		Pn	22 36 02.1	+4.3
	1.3nm5µm352nm,0.8s							
KDI	**Kendari**	**6.71**	**214**	P		**Pn**	**22 36 01.9**	**+2.4**
PCI	**Palu**	**7.00**	**249**	P		**Pn**	**22 36 07.4**	**+3.9**
BNDI	**Bandanaira**	**7.08**	**150**	P		**Pn**	**22 36 06.8**	**+2.2**
BNDI	**Bandanaira**	**7.08**	**150**	P		**Pn**	**22 36 05.7**	**+1.1**
	1.5nm8µm319nm,1.0s							
FAKI	**Fak Fak**	**7.44**	**128**	Pn		**Pn**	**22 36 10.8**	**+1.3**
FAKI	**Fak Fak**	**7.44**	**128**	P		**Pn**	**22 36 10.9**	**+1.3**
FAKI	**Fak Fak**	**7.44**	**128**	P		**Pn**	**22 36 12.4**	**+2.9**
	0.8nm5µm192nm,0.9s							
TTSI	**Tana Toraja**	**8.03**	**234**	P		**Pn**	**22 36 19.9**	**+2.3**
	5µm355nm,1.0s							
BBSI	**Bau Bau**	**8.04**	**208**	P		**Pn**	**22 36 21.8**	**+4.1**
	4µm409nm,0.9s							
RKPI	**Ransiki, Papua**	**8.43**	**112**	P		Pn	22 36 27.7	+4.6
	7µm150nm,1.0s							
MYLDM	**Lahad Datu**	**8.59**	**294**	Pn		**Pn**	**22 36 25.1**	**-0.2**
MYLDM	**Lahad Datu**	**8.59**	**294**	P		**Pn**	**22 36 29.0**	**+3.7**
SPSI	**Sidrap Palu**	**8.63**	**230**	P		**Pn**	**22 36 29.3**	**+3.4**
	3µm254nm,0.9s							
BNSI	**Bone**	**8.67**	**226**	P		**Pn**	**22 36 28.9**	**+2.5**
	3µm248nm,0.6s							
KMPI	**Kaimana, Papua**	**9.04**	**126**	P		Pn	22 36 36.2	+4.7
	7µm339nm,1.2s							
BKSI	**Bulukumba**	**9.31**	**222**	P		**Pn**	**22 36 38.0**	**+2.7**
	2µm153nm,0.6s							
KAPI	**Kappang**	**9.35**	**225**	Pn		**Pn**	**22 36 37.8**	**+2.1**
	14nm,0.3s,baz=40,slow=5.3,SNR=16							
KAPI	**Kappang**	**9.35**	**225**	Pn		**Pn**	**22 36 37.7**	**+1.9**
KAPI	**Kappang**	**9.35**	**225**	P		**Pn**	**22 36 37.5**	**+1.8**
KAPI				S		**Sn**	**22 38 22.3**	**+2.3**
KAPI	**Kappang**	**9.35**	**225**	P		**Pn**	**22 36 38.0**	**+2.3**
KAPI	**Kappang**	**9.35**	**225**	*i* P		**Pn**	**22 36 37.2**	**+1.5**
BSSI	**Bau Bau, Buton**	**9.71**	**217**	P		**Pn**	**22 36 43.6**	**+2.9**
BKB	**Balikpapan**	**9.89**	**253**			**Pn**	**22 36 44.0**	**+0.9**
BKB	**Balikpapan**	**9.89**	**253**	P		**Pn**	**22 36 47.1**	**+3.9**
BKB	**Balikpapan**	**9.89**	**253**	P		**Pn**	**22 36 46.7**	**+3.5**
	3µm198nm,0.9s							
BAKI	**Biak**	**10.15**	**106**	P		**Pn**	**22 36 47.1**	**+0.4**
	452nm,1.1s							
MMRI	**Maumere**	**11.01**	**202**	Pn		**Pn**	**22 36 59.2**	**+0.6**
MMRI	**Maumere**	**11.01**	**202**	P		**Pn**	**22 37 02.4**	**+3.8**
MMRI	**Maumere**	**11.01**	**202**	P		**Pn**	**22 37 00.6**	**+2.0**
EDFI	**Ende, Flores**	**11.33**	**204**	P		**Pn**	**22 37 05.3**	**+2.3**
	105nm,0.9s							
SOEI	**Soe**	**11.52**	**190**	Pn		**Pn**	**22 37 07.0**	**+1.3**
SOEI	**Soe**	**11.52**	**190**	P		**Pn**	**22 37 08.7**	**+3.1**
SOEI	**Soe**	**11.52**	**190**	P		Pn	22 37 11.7	+6.1
	5µm443nm,1.3s							
MTKI	**Muara Teweh, K**	**11.74**	**257**	P		**Pn**	**22 37 11.9**	**+3.3**
BATI	**Baumata**	**12.08**	**193**	Pn		P	22 37 20.1	-5.6
	9.9nm,0.3s,baz=360,slow=0.8,SNR=11							
BBKI	**Banjar Baru**	**12.58**	**246**	P		**Pn**	**22 37 23.7**	**+3.7**
	75nm,1.3s							
WSI	**Waingapu**	**12.76**	**208**	P		**Pn**	**22 37 26.4**	**+3.9**
	156nm,0.8s							
SMPI	**Sarmi**	**12.87**	**106**	P		**Pn**	**22 37 28.1**	**+4.1**
	188nm,2.2s							
BASI	**Baing, Sumba**	**13.12**	**206**	P		**Pn**	**22 37 29.5**	**+2.1**
	4µm238nm,1.6s							
WBSI	**Waikabubak, Su**	**13.19**	**212**	P		**Pn**	**22 37 32.1**	**+3.7**
	2µm154nm,0.8s							
PLAI	**Plampang**	**13.47**	**219**	P		**Pn**	**22 37 36.3**	**+4.1**
PLAI	**Plampang**	**13.47**	**219**	P		**P**	**22 37 38.1**	**-3.0**
	3µm253nm,1.0s							
TGY	**Tagaytay City**	**13.48**	**337**	LR		LR	22 43 14.9	
	comp=Z,3µm,20.8s,baz=159,slow=40							
TWSI	**Taliwang, Sumb**	**13.99**	**222**	P		**P**	**22 37 45.0**	**-1.9**
	2µm340nm,0.9s							
SBUM	**Sibu**	**14.15**	**273**			**Pn**	**22 37 44.4**	**+3.0**
SBUM	**Sibu**	**14.15**	**273**	P		**P**	**22 37 45.4**	**-3.3**
GENI	**Genyem**	**14.44**	**107**	P		**Pn**	**22 37 45.7**	**+0.3**
GENI	**Genyem**	**14.44**	**107**	P		**P**	**22 37 49.0**	**-2.9**
	5µm224nm,1.4s							
DRS	**Darwin Rock St**	**14.70**	**162**	P		**Pn**	**22 37 49.4**	**+0.5**
SRBI	**Singaraja**	**14.73**	**229**	P		**P**	**22 37 53.4**	**-1.7**
	2µm144nm,1.1s							
JAY	**Jayapura**	**14.93**	**106**	Pn		**P**	**22 37 59.1**	**+1.7**
	2.5nm,0.3s,baz=245,slow=2.0,SNR=12							
JAY	**Jayapura**	**14.93**	**106**	P		**Pn**	**22 37 54.0**	**+1.9**
	2µm65nm,0.7s							
KMMI	**Kalanget**	**15.09**	**235**	P		**P**	**22 38 00.4**	**+1.3**
	206nm,0.8s							
DNP	**Denpasar**	**15.12**	**227**	P		**P**	**22 38 00.0**	**+0.5**
MTN	**Manton Dam**	**15.16**	**162**	P		**Pn**	**22 37 54.1**	**-1.0**
MTN	**Manton Dam**	**15.16**	**162**			**Pn**	**22 37 54.4**	**-0.8**
KDU	**Kakadu**	**15.48**	**157**	P		**P**	**22 38 04.6**	**+1.1**
JAGI	**Jajag, Banyuwa**	**15.78**	**230**			**P**	**22 38 08.3**	**+1.5**
JAGI	**Jajag, Banyuwa**	**15.78**	**230**	P		**P**	**22 38 07.5**	**+0.6**
JAGI	**Jajag, Banyuwa**	**15.78**	**230**	P		**P**	**22 38 08.0**	**+1.1**
	3µm209nm,1.1s							
BLJI	**Banyuglugur**	**15.79**	**234**	P		**P**	**22 38 08.3**	**+1.5**
	3µm198nm,0.7s							
NGJI	**Ngawi**	**17.35**	**239**	P		**P**	**22 38 27.8**	**+3.6**
	84nm,1.4s							
KNRA	**Kununurra**	**17.38**	**172**	P		**Pn**	**22 38 22.8**	**-0.6**
	comp=Z,222nm,0.9s							
KNRA	**Kununurra**	**17.38**	**172**	P		**Pn**	**22 38 23.3**	**-0.1**
PCJI	**Pacitan**	**18.02**	**237**	P		**P**	**22 38 33.1**	**+1.5**
	comp=Z,125nm,0.6s							
UGM	**Wanagama**	**18.43**	**239**	P		**Pn**	**22 38 40.9**	**+4.5**
TPI	**Tanjungpandan**	**19.20**	**257**	P		**Pn**	**22 38 45.5**	**-0.2**
KPJI	**Karang Pucung**	**19.54**	**243**	P		**Pn**	**22 38 49.7**	**-0.1**
	comp=Z,2µmcomp=Z,122nm,0.9s							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**22 38 48.3**	**-1.1**
	comp=Z,11nm,0.9s							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**22 38 48.8**	**-0.5**
	comp=Z,4.1nm,0.3s,baz=20,slow=11,SNR=12							
	comp=Z,20nm,0.6s							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**22 38 49.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**22 38 49.3**	**0.0**
DLV	**Lat**	**20.46**	**301**	P		Pn	22 39 00.5	-0.3
DLV	**Lat**	**20.46**	**301**	P		Pn	22 39 01.6	+0.8
BBJI	**Bungbulang**	**20.74**	**244**	P		Pn	22 39 05.0	+1.0
CNJI	**Cibinong**	**21.15**	**245**	P		**P**	**22 39 09.4**	**+3.6**
MANU	**Manus Island**	**21.32**	**100**	P		**P**	**22 39 07.0**	**-0.8**
TWGBT	**Beinan**	**21.66**	**347**	P		**P**	**22 39 12.7**	**+1.6**
TWG	**Pinlang**	**21.66**	**347**	P		**P**	**22 39 08.7**	**-2.5**
GUMO	**Guam**	**21.82**	**56**	LR		LR	22 47 57.6	
	comp=Z,804nm,18.4s,baz=230,slow=37							
GUMO	**Guam**	**21.82**	**56**	P		**P**	**22 39 13.3**	**+0.3**
TPRI	**Tanjung Pinang**	**21.84**	**268**	P		**P**	**22 39 16.4**	**+3.2**
	comp=Z,2µmcomp=Z,58nm,1.1s							
DSRI	**Dabo**	**21.88**	**265**	P		**P**	**22 39 15.9**	**+2.2**
	comp=Z,3µmcomp=Z,84nm,1.3s							
YULB	**Yu-li**	**22.16**	**348**	P		**P**	**22 39 16.0**	**-0.6**
TPUB	**Ta-pu**	**22.23**	**346**	P		**P**	**22 39 15.1**	**-2.2**
TPUB				IAmb		IAmb	22 39 20.6	
	comp=Z,329nm,1.3s							
TPUB	**Ta-pu**	**22.23**	**346**	P		**P**	**22 39 18.3**	**+1.0**
BTDF	**Bukit Timah Da**	**22.58**	**270**	P		**P**	**22 39 22.1**	**+0.9**
SSLB	**Suanglung**	**22.62**	**347**	P		**P**	**22 39 20.0**	**-1.5**
SSLB				IAmb		IAmb	22 39 29.1	
	comp=Z,100nm,0.7s							
SSLB	**Suanglung**	**22.62**	**347**	P		**P**	**22 39 21.0**	**-0.5**
WB0	**Warramunga Arr**	**22.70**	**160**	IAmb		IAmb	22 39 27.0	
	comp=Z,154nm,0.6s							
COEN	**Coen**	**22.77**	**133**	P		**P**	**22 39 22.6**	**-0.5**
	comp=Z,48nm,0.8s							
COEN	**Coen**	**22.77**	**133**	P		**P**	**22 39 22.2**	**-0.9**
COEN	**Coen**	**22.77**	**133**	P		**P**	**22 39 24.1**	**+0.9**
WRAB	**Tennant Creek**	**22.84**	**160**	P		**P**	**22 39 22.5**	**-1.3**
WRAB				IAmb		IAmb	22 39 31.7	
	comp=Z,139nm,0.9s							
WRAB	**Tennant Creek**	**22.84**	**160**	P		**P**	**22 39 22.8**	**-1.1**
WRAB	**Tennant Creek**	**22.84**	**160**	*i* P		**P**	**22 39 22.0**	**-1.9**
WRAB				pmax		pmax		
	comp=Z,130nm,0.8s							
WRA	**Warramunga Arr**	**22.84**	**160**	P		**P**	**22 39 22.2**	**-1.7**
	comp=Z,85nm,0.8s,baz=338,slow=10,SNR=23							
WRA				PcP		**PcP**	**22 43 14.6**	**0.0**
	comp=Z,5.6nm,0.6s,baz=318,slow=2.4,SNR=5.1							
WRA				S		**S**	**22 43 30.9**	**-0.8**
	comp=Z,13nm,1.0s,baz=342,slow=19,SNR=13							
	comp=Z,85nm,0.8s							
WRA	**Warramunga Arr**	**22.84**	**160**	P		**P**	**22 39 21.7**	**-2.2**
WR8	**Warramunga Arr**	**22.91**	**160**	IAmb		IAmb	22 39 34.0	
	comp=Z,127nm,0.7s							
KASI	**Kota Agung**	**22.97**	**252**	P		**P**	**22 39 27.5**	**+2.3**
	comp=Z,70nm,0.9s							
MDSI	**Maura Dua**	**22.98**	**255**	P		**P**	**22 39 26.2**	**+0.8**
	comp=Z,57nm,0.7s							
LWLI	**Liwa**	**23.24**	**253**	P		**P**	**22 39 29.4**	**+1.3**
YHNB	**Yeheng**	**23.38**	**349**	IAmb		IAmb	22 39 42.2	
	comp=Z,88nm,0.8s							
YHNB	**Yeheng**	**23.38**	**349**	P		**P**	**22 39 29.2**	**-0.2**
PMG	**Port Moresby**	**23.45**	**118**	P		**P**	**22 39 30.0**	**-0.1**
PMG	**Port Moresby**	**23.45**	**118**	P		**P**	**22 39 30.9**	**+0.8**
PMG	**Port Moresby**	**23.45**	**118**	P		**P**	**22 39 30.7**	**+0.6**
PMG	**Port Moresby**	**23.45**	**118**	P		**P**	**22 39 30.0**	**-0.1**
PMG				pmax		pmax		
	comp=Z,66nm,1.3s							
LHSI	**Lahat**	**23.46**	**257**	P		**P**	**22 39 31.0**	**+0.8**
	comp=Z,77nm,0.9s							
MBWA	**Marble Bar**	**23.58**	**196**	P		**P**	**22 39 29.5**	**-1.7**
	comp=Z,61nm,0.8s							
MBWA	**Marble Bar**	**23.58**	**196**	P		**P**	**22 39 29.7**	**-1.5**
MBWA	**Marble Bar**	**23.58**	**196**	P		**P**	**22 39 29.9**	**-1.3**
MBWA				S		**S**	**22 43 42.3**	**-1.5**
MBWA	**Marble Bar**	**23.58**	**196**	P		**P**	**22 39 32.2**	**+1.0**
QIZ	**Qiongzhong**	**23.66**	**318**	IAmb		IAmb	22 39 37.2	
	comp=Z,168nm,1.4s							
QIZ	**Qiongzhong**	**23.66**	**318**	P		**P**	**22 39 32.8**	**+0.7**
QIZ				S		**S**	**22 43 47.1**	**+1.8**
QIZ				pmax		pmax		
	comp=Z,99nm,1.9s							
QIZ				LR		LR		
	comp=Z,2µm,17.0s							
QIZ				LR		LR		
	comp=Z,2µm,21.1s							
QIZ				LR		LR		
	comp=Z,4µm,23.4s							
QIZ	**Qiongzhong**	**23.66**	**318**	P		**P**	**22 39 33.1**	**+1.0**
PSAC1	**Pilbara Seismi**	**23.91**	**195**	P		**P**	**22 39 32.4**	**-2.0**
PSAC2	**Pilbara Seismi**	**23.92**	**195**	P		**P**	**22 39 32.8**	**-1.7**
PSA00	**Pilbara Seismi**	**23.94**	**195**	P		**P**	**22 39 33.1**	**-1.6**
	comp=Z,65nm,1.0s							
PSA00	**Pilbara Seismi**	**23.94**	**195**	P		**P**	**22 39 33.3**	**-1.4**
PSA00				IAmb		IAmb	22 39 35.4	
	comp=Z,342nm,1.9s							
PSA00	**Pilbara Seismi**	**23.94**	**195**	P		**P**	**22 39 33.7**	**-1.0**
PSA00				IAmb		IAmb	22 39 35.4	
	comp=Z,193nm,1.9s							
PSA00	**Pilbara Seismi**	**23.94**	**195**	P		**P**	**22 39 33.7**	**-1.0**
PSAB3	**Pilbara Seismi**	**23.96**	**195**	P		**P**	**22 39 33.2**	**-1.7**
	comp=Z,75nm,0.9s							
KSI	**Kapahiang**	**24.33**	**257**	P		**P**	**22 39 39.7**	**+1.2**
MASI	**Maura Aman, Be**	**24.57**	**259**	P		**P**	**22 39 41.3**	**+0.6**
JOW	**Kunigami**	**25.11**	**4**	P		**P**	**22 39 46.1**	**+0.9**
JOW	**Kunigami**	**25.11**	**4**	P		**P**	**22 39 46.9**	**+1.7**
KRJI	**Kerinci**	**25.17**	**262**	P		**P**	**22 39 49.3**	**+3.2**
BKNI	**Bangkinang**	**25.35**	**267**	P		**P**	**22 39 50.9**	**+3.3**
BKNI	**Bangkinang**	**25.35**	**267**	P		**P**	**22 39 49.5**	**+1.9**
IPM	**Ipoh**	**25.45**	**277**	P		**P**	**22 39 49.5**	**+0.9**
IPM				IAmb		IAmb	22 39 58.0	
	comp=Z,77nm,1.0s							
IPM	**Ipoh**	**25.45**	**277**	P		**P**	**22 39 49.1**	**+0.5**
QIS	**Mount Isa**	**25.61**	**150**	P		**P**	**22 39 48.8**	**-1.1**
	comp=Z,61nm,1.1s							
QIS	**Mount Isa**	**25.61**	**150**	P		**P**	**22 39 50.5**	**+0.6**
KULM	**Kulim**	**25.91**	**279**	P		**P**	**22 39 52.0**	**-0.8**
KULM	**Kulim**	**25.91**	**279**	P		**P**	**22 39 53.9**	**+1.2**
PDSI	**Padang**	**26.02**	**265**	P		**P**	**22 39 54.9**	**+1.2**
	comp=Z,3µmcomp=Z,28nm,0.8s							
PPI	**Padang Panjang**	**26.04**	**266**	P		**P**	**22 39 55.5**	**+1.6**
	comp=Z,1µmcomp=Z,35nm,1.0s							
ASAR	**Alice Springs**	**26.21**	**164**	P		**P**	**22 39 54.7**	**-0.7**
	comp=Z,25nm,0.6s,baz=333,slow=6.0,SNR=31							
ASAR				PcP		**PcP**	**22 43 21.6**	**-0.4**
	comp=Z,9.7nm,0.6s,baz=350,slow=2.1,SNR=11							
ASAR				S		**S**	**22 44 25.9**	**0.0**
	comp=Z,5.3nm,0.9s,baz=343,slow=18,SNR=4.4							
	comp=Z,25nm,0.6s							
ASAR	**Alice Springs**	**26.21**	**164**	P		**P**	**22 39 55.5**	**+0.1**
ASAR						**PcP**	**22 43 21.7**	**-0.3**
AUALC	**St Philip's Co**	**26.23**	**164**	P		**P**	**22 39 55.4**	**-0.2**
MTSU	**Mount Surprise**	**26.44**	**139**	P		**P**	**22 39 58.3**	**+0.7**
	comp=Z,31nm,0.9s							
MTSU	**Mount Surprise**	**26.44**	**139**	P		**P**	**22 39 58.2**	**+0.7**
WRKA	**Warakurna**	**26.60**	**176**	P		**P**	**22 39 58.5**	**-0.3**
	comp=Z,50nm,1.1s							
PPSI	**Pulau Pagai**	**26.70**	**261**	P		**P**	**22 40 01.6**	**+1.7**
	comp=Z,178nm,1.3s							
MNSI	**Mandailing Nat**	**26.78**	**269**	P		**P**	**22 40 02.8**	**+2.2**
	comp=Z,2µmcomp=Z,35nm,1.3s							

QLP **Quilpie** 32.95 150 P **P** **22 40 56.3 +1.2**
KMBL **Kambalda** 33.11 187 P **P** **22 40 55.6 -0.9**
comp=Z,16nm,0.9s
BLDU **Ballidu** 33.38 195 P **P** **22 40 58.2 -0.6**
comp=Z,55nm,0.9s
BLDU **Ballidu** 33.38 195 P **P** **22 40 58.3 -0.5**
KLBR **Kellerberrin** 34.05 193 P **P** **22 41 03.7 -1.0**
comp=Z,139nm,0.7s
KLBR **Kellerberrin** 34.05 193 P **P** **22 41 05.0 +0.3**
PZH **PanZhiHua** 34.20 318 P **P** **22 41 06.8 +0.6**
PZH S **S** **22 46 37.9 +6.6**
PZH pmax pmax
comp=Z,30nm,1.1s
PZH LR LR
comp=Z,1µm,22.8s
PZH LR LR
comp=Z,2µm,21.8s
PZH LR LR
comp=Z,2µm,22.4s
MUN **Mundaring** 34.80 195 P **P** **22 41 10.5 -0.7**
comp=Z,56nm,1.2s
INU **Inuyama** 34.96 15 IAmb IAmb 22 41 19.2
comp=Z,95nm,1.1s
INU **Inuyama** 34.96 15 P **P** **22 41 13.1 +0.6**
LYN **LuoYang** 35.20 340 P **P** **22 41 15.5 +0.9**
LYN PcP **PcP** **22 43 46.8 +1.5**
LYN pmax pmax
comp=Z,32nm,0.6s
LYN LR LR
comp=Z,2µm,21.6s
LYN LR LR
comp=Z,780nm,15.1s
LYN LR LR
comp=Z,2µm,24.4s
NWAO **Narrogin (SRO)** 35.46 193 P **P** **22 41 16.3 -0.5**
comp=Z,42nm,1.8s
NWAO **Narrogin (SRO)** 35.46 193 P **P** **22 41 16.2 -0.5**
NWAO IAmb IAmb 22 41 18.1
comp=Z,79nm,1.4s
NWAO **Narrogin (SRO)** 35.46 193 P **P** **22 41 15.6 -1.2**
NWAO **Narrogin (SRO)** 35.46 193 P **P** **22 41 17.2 +0.4**
NWAO **Narrogin (SRO)** 35.46 193 P **P** **22 41 16.2 -0.5**
NWAO pmax pmax
comp=Z,79nm,1.4s
BBOO **Buckleboo** 35.48 166 P **P** **22 41 15.2 -1.8**
comp=Z,91nm,1.0s
BBOO **Buckleboo** 35.48 166 IAmb IAmb 22 41 19.2
comp=Z,53nm,0.8s
BBOO **Buckleboo** 35.48 166 P **P** **22 41 16.8 -0.2**
TNCH **TengChong** 35.52 313 P **P** **22 41 18.3 +0.6**
TNCH S **S** **22 46 54.9 +3.2**
TNCH pmax pmax
comp=Z,59nm,1.1s
TNCH LR LR
comp=Z,750nm,16.8s
TNCH LR LR
comp=Z,830nm,21.4s
TNCH LR LR
comp=Z,2µm,23.8s
KSAR **Wonju Array Be** 35.64 2 P **P** **22 41 18.4 +0.1**
KSAR **Wonju Array Be** 35.64 2 P **P** **22 41 18.4 +0.1**
KSRS **Korea Array** 35.66 2 P **P** **22 41 19.4 +1.0**
comp=Z,8.1nm,0.6s,baz=180,slow=9.9,SNR=14
comp=Z,8.1nm,0.6s
KS19 **Wonju Array Si** 35.70 2 IAmb IAmb 22 41 33.7
comp=Z,49nm,1.1s
EIDS **Eidsvold** 35.98 140 P **P** **22 41 19.9 -1.5**
comp=Z,32nm,1.0s
EIDS **Eidsvold** 35.98 140 P **P** **22 41 20.4 -1.0**
EIDS **Eidsvold** 35.98 140 P **P** **22 41 21.3 -0.1**
WHYH **Whyalla** 36.09 164 P **P** **22 41 23.4 +1.2**
XAN **Xi'an** 36.11 335 ⇓P **P** **22 41 20.8 -1.7**
XAN S **S** **22 46 53.3 -7.0**
XAN pmax pmax
comp=Z,65nm,1.1s
XAN pmax pmax
comp=Z,520nm,11.6s
XAN LR LR
comp=Z,670nm,14.4s
XAN LR LR
comp=Z,1µm,22.0s
XAN LR LR
comp=Z,2µm,24.0s
CD2 **Chengdu** 36.12 326 P **P** **22 41 23.5 +0.9**
CD2 S S 22 47 11.6 +11
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 LR LR
comp=Z,3µm,23.5s
CD2 LR LR
comp=Z,2µm,22.1s
STKA **Stephens Creek** 36.34 158 P **P** **22 41 23.0 -1.4**
comp=Z,207nm,0.8s
STKA **Stephens Creek** 36.34 158 P **P** **22 41 23.5 -0.9**
comp=Z,35nm,0.8s,baz=333,slow=8.5,SNR=13
STKA PcP **PcP** **22 43 48.9 +0.1**
comp=Z,8.3nm,0.6s,baz=346,slow=4.2,SNR=3.0
comp=Z,35nm,0.8s
STKA **Stephens Creek** 36.34 158 P **P** **22 41 24.6 +0.2**
STKA **Stephens Creek** 36.34 158 *i* P **P** **22 41 23.1 -1.3**
MJAR **Matsushiro Arr** 36.41 16 P **P** **22 41 23.7 -1.2**
comp=Z,30nm,1.1s,baz=187,slow=8.9,SNR=20
comp=Z,30nm,1.1s
MJAR **Matsushiro Arr** 36.41 16 P **P** **22 41 24.0 -0.9**
MJAR **Matsushiro Arr** 36.41 16 P **P** **22 41 24.0 -0.9**
MJAR pmax pmax
comp=Z,58nm,1.5s
MAJO **Matsushiro** 36.41 16 P **P** **22 41 24.1 -0.8**
MAJO IAmb IAmb 22 41 25.4
comp=Z,95nm,1.4s
MAJO **Matsushiro** 36.41 16 P **P** **22 41 24.4 -0.5**
MAJO **Matsushiro** 36.41 16 *i* P **P** **22 41 21.4 -3.5**
MAJO pmax pmax
comp=Z,19nm,0.9s
MJB9 **Matsu-Tunnel** 36.41 16 IAmb IAmb 22 41 26.3
comp=Z,89nm,1.3s
AUJCS **Jamestown Cent** 36.54 163 P **P** **22 41 26.7 +0.6**
HTT **Hallett** 36.85 162 P **P** **22 41 28.3 -0.5**
comp=Z,10.0nm,0.8s
HTT **Hallett** 36.85 162 P **P** **22 41 29.8 +1.0**
RKGY **Rocky Gully** 37.13 193 P **P** **22 41 31.4 +0.3**
comp=Z,119nm,1.5s
HNS **HongShan** 37.16 345 ⇓P **P** **22 41 30.9 -0.3**
HNS pmax pmax
comp=Z,40nm,1.0s
HNS LR LR
comp=Z,1µm,21.4s
HNS LR LR
comp=Z,750nm,19.8s
HNS LR LR
comp=Z,2µm,24.3s
AULRC **Lightning Ridg** 37.19 148 P **P** **22 41 31.7 +0.1**
DL2 **Dalian** 37.33 354 P **P** **22 41 33.8 +1.1**
DL2 S **S** **22 47 20.8 +2.2**
DL2 pmax pmax
comp=Z,210nm,1.8s
DL2 pmax pmax
comp=Z,680nm,11.8s
DL2 LR LR
comp=Z,2µm,19.0s
DL2 LR LR
comp=Z,1µm,18.7s
DL2 LR LR
comp=Z,2µm,19.9s
CMSA **Cobar Meteorol** 37.77 153 P **P** **22 41 35.9 -0.7**
comp=Z,22nm,1.4s
CMSA **Cobar Meteorol** 37.77 153 P **P** **22 41 36.7 +0.2**
JSD **Sado** 37.83 15 P **P** **22 41 37.7 +0.8**
TW1H **Toowoomba 1 Ha** 38.08 142 P **P** **22 41 41.3 +2.0**
JMM **Marumori** 38.41 19 IAmb IAmb 22 41 44.5
comp=Z,132nm,1.1s
JMM **Marumori** 38.41 19 P **P** **22 41 42.8 +1.0**
LKP **Lekhapani** 38.81 314 *e*P P 22 41 36.7 -8.7
LKP IAmb IAmb 22 41 43.6
comp=Z,179nm,1.0s
IMP **Imphal** 38.86 309 *e*P **P** **22 41 43.8 -2.0**
IMP IAmb IAmb 22 41 51.0
comp=Z,71nm,1.4s
KOHI **KOHIMA** 39.20 310 *e*P **P** **22 41 47.0 -1.8**
KOHI IAmb IAmb 22 41 55.4
comp=Z,66nm,0.9s
MOKO **MOKOCHONG** 39.22 312 *e*P **P** **22 41 47.3 -1.7**
MOKO IAmb IAmb 22 41 57.8
comp=Z,65nm,1.0s
BJT **Baijiatuau** 39.30 348 P **P** **22 41 49.6 +0.4**
BJI **Beijing** 39.32 348 P **P** **22 41 49.0 -0.4**

BJI pP **pP** **22 41 54.1 -3.4**
BJI PP **PnPn** **22 43 22.4 -0.4**
BJI PcP **PcP** **22 43 58.9 +1.2**
BJI S **S** **22 47 49.3 +0.7**
BJI pmax pmax
comp=Z,21nm,1.0s
BJI pmax pmax
comp=Z,150nm,4.4s
BJI LR LR
comp=Z,220nm,21.6s
BJI LR LR
comp=Z,360nm,22.0s
BJI LR LR
comp=Z,460nm,26.4s
BRDH **Bariadhala** 39.66 304 LR LR 22 59 32.2
comp=Z,1µm,21.5s,baz=108,slow=38
SNY **Shenyang** 40.08 357 ⇓P **P** **22 41 56.3 +0.6**
SNY S **S** **22 48 01.3 +1.4**
SNY pmax pmax
comp=Z,79nm,1.1s
SNY pmax pmax
comp=Z,300nm,3.1s
SNY LR LR
comp=Z,1µm,20.8s
SNY LR LR
comp=Z,890nm,19.4s
SNY LR LR
comp=Z,1µm,23.7s
BELO **BELONIA** 40.08 305 *e*P **P** **22 41 58.6 +2.6**
LZDM **Lanzhou Array** 40.08 331 P **P** **22 41 55.6 -0.6**
comp=Z,1.8nm,0.3s,baz=176,slow=11,SNR=9.7
LZDM PcP **PcP** **22 44 01.4 +0.6**
comp=Z,4.4nm,0.4s,baz=141,slow=5.0,SNR=5.3
comp=Z,1.8nm,0.3s
LZH **Lanzhou** 40.11 331 *e*P **P** **22 41 56.0 -0.3**
LZH sP sP 22 42 06.3 -1.4
LZH PcP **PcP** **22 44 02.1 +1.5**
LZH ScP **ScP** **22 47 49.3 +1.4**
LZH S **S** **22 47 57.0 -4.1**
LZH pmax pmax
comp=Z,89nm,1.1s
LZH pmax pmax
comp=Z,640nm,5.2s
LZH LR LR
comp=Z,1µm,19.8s
LZH LR LR
comp=Z,1µm,20.3s
LZH LR LR
comp=Z,2µm,19.2s
ZIRO **ZIRO** 40.38 313 *e*P **P** **22 41 57.5 -1.1**
ZIRO IAmb IAmb 22 42 04.9
comp=Z,93nm,1.0s
AGT **Agartala** 40.53 306 *e*P **P** **22 42 01.4 +1.7**
TEZP **TEZPUR** 40.67 311 *e*P **P** **22 42 00.2 -0.7**
TEZP IAmb IAmb 22 42 04.8
comp=Z,146nm,1.8s
SHL **Shillong** 40.84 309 P **P** **22 42 01.5 -1.0**
SHL IAmb IAmb 22 42 08.7
comp=Z,100nm,1.2s
SHL **Shillong** 40.84 309 P **P** **22 42 02.5 +0.1**
SNR=19
SHL **Shillong** 40.84 309 *e*P **P** **22 42 01.1 -1.4**
SHL IAmb IAmb 22 42 08.5
comp=Z,47nm,0.9s
SHL **Shillong** 40.84 309 P **P** **22 42 01.5 -1.0**
SHL pmax pmax
comp=Z,100nm,1.2s
ARPS **Mount Arapiles** 40.85 161 P **P** **22 42 01.9 -0.2**
comp=Z,68nm,1.1s
MSHR **Mys Shultsa** 40.98 5 *i* P **P** **22 42 02.4 -0.7**
MSHR pmax pmax
comp=Z,40nm,1.4s
JTM **Tenmabayashi** 41.17 17 P **P** **22 42 05.3 +0.5**
JTM IAmb IAmb 22 42 06.7
comp=Z,232nm,1.3s
HHC **Hu-ho-hao-te** 41.25 343 *e*P **P** **22 42 08.8 +3.2**
HHC S **S** **22 48 21.1 +3.3**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,110nm,5.4s
HHC LR LR
comp=Z,1µm,20.2s
HHC LR LR
comp=Z,600nm,21.9s
HHC LR LR
comp=Z,2µm,22.7s
YNG **Young** 41.32 152 P **P** **22 42 05.6 -0.5**
comp=Z,33nm,1.1s
BTO **Baotou** 41.51 341 *e*P P 22 42 13.0 +5.3
BTO S **S** **22 48 29.3 +7.7**
BTO pmax pmax
comp=Z,16nm,0.6s
BTO pmax pmax
comp=Z,220nm,3.9s
BTO LR LR
comp=Z,3µm,18.8s
BTO LR LR
comp=Z,1µm,12.4s
BTO LR LR
comp=Z,4µm,20.8s
VLA **Vladivostok** 41.58 6 *i* P **P** **22 42 04.6 -3.5**
TAWA **Tawang** 41.89 311 *e*P **P** **22 42 11.1 -0.2**
TAWA IAmb IAmb 22 42 18.6
comp=Z,95nm,1.3s
CN2 **Changchun** 41.98 359 P **P** **22 42 12.4 +1.1**
CN2 LR LR
comp=Z,850nm,19.0s
CN2 LR LR
comp=Z,970nm,19.0s
CN2 LR LR
comp=Z,1µm,21.0s
BRAT **Ballarat** 42.27 159 P **P** **22 42 15.2 +1.5**
AUMTS **Mt Stromlo** 42.44 152 P **P** **22 42 16.7 +1.4**
CAN **Canberra** 42.44 152 P **P** **22 42 16.0 +0.6**
comp=Z,50nm,1.3s
CAN **Canberra** 42.44 152 P **P** **22 42 15.9 +0.6**
CAN **Canberra** 42.44 152 P **P** **22 42 16.8 +1.5**
CAN **Canberra** 42.44 152 P **P** **22 42 15.9 +0.6**
CAN pmax pmax
comp=Z,39nm,0.9s
AUSIS **Research Schoo** 42.46 152 P **P** **22 42 15.8 +0.3**
CNB **Canberra Magne** 42.61 152 P **P** **22 42 17.4 +0.7**
comp=Z,40nm,2.1s
CNB **Canberra Magne** 42.61 152 P **P** **22 42 19.0 +2.3**
USRK **Ussuriysk Ar.** 42.66 6 P **P** **22 42 17.8 +1.0**
comp=Z,72nm,1.2s,baz=189,slow=7.6,SNR=20
comp=Z,72nm,1.2s
TOO **Toolangi** 42.86 157 P **P** **22 42 19.6 +0.9**
comp=Z,12nm,2.3s
MDJ **Mudanjiang** 42.88 3 P **P** **22 42 19.6 +0.9**
MDJ **Mudanjiang** 42.88 3 P **P** **22 42 19.4 +0.8**
MDJ pmax pmax
comp=Z,28nm,1.2s
MDJ **Mudanjiang** 42.88 3 P **P** **22 42 20.0 +1.4**
XLT **XiLinHaoTe** 43.05 349 *e*P **P** **22 42 20.5 +0.3**
XLT pmax pmax
comp=Z,33nm,1.7s
XLT pmax pmax
comp=Z,280nm,3.7s
XLT LR LR
comp=Z,70nm,22.7s
XLT LR LR
comp=Z,620nm,20.5s
XLT LR LR
comp=Z,1µm,20.8s
COBR **COOCHBEHAR** 43.09 308 *e*P **P** **22 42 19.1 -1.5**
BNX **BinXian** 43.92 1 ⇓P **P** **22 42 26.6 -0.4**
BNX pmax pmax
comp=Z,16nm,1.4s
SHBG **Sahibganj** 44.04 305⇑ *e*P **P** **22 42 28.5 +0.1**
SHBG IAmb IAmb 22 42 34.4
comp=Z,40nm,0.9s
TEY **Ternei** 44.14 10 *e*P **P** **22 42 30.4 +1.6**
TEY *e* 22 44 54.6
ASAJ **Asahikawa** 44.68 17 P **P** **22 42 35.1 +2.0**
comp=Z,23nm,0.8s,baz=268,slow=5.4,SNR=3.9
comp=Z,23nm,0.8s
JKA **Kamikawa-asahi** 44.68 17 P **P** **22 42 33.5 +0.4**
GTA **Gaotai** 44.69 331 P **P** **22 42 33.3 -0.2**
GTA PcP **PcP** **22 44 16.6 +0.9**
GTA pmax pmax
comp=Z,13nm,0.7s
GTA LR LR
comp=Z,1µm,20.7s
GTA LR LR

comp=Z,670nm,21.4s
GTA LR LR
RAGD **RAYAGADA** 45.48 296 *e*P **P** **22 42 40.1 +0.2**
RAGD IAmb IAmb 22 42 46.8
comp=Z,68nm,1.3s
PALK **Pallekele** 45.83 278 P **P** **22 42 41.8 -1.1**
PALK IAmb IAmb 22 42 45.9
comp=Z,158nm,1.9s
PALK **Pallekele** 45.83 278 P **P** **22 42 41.8 -1.1**
PALK pmax pmax
comp=Z,158nm,1.9s
GAYA **Gaya** 45.87 304 *e*P **P** **22 42 41.6 -1.3**
GAYA IAmb IAmb 22 42 49.2
comp=Z,109nm,1.6s
EVN **Everest** 45.95 308 P **P** **22 42 43.5 -0.8**
EVN IAmb IAmb 22 42 50.7
comp=Z,98nm,1.2s
YATNC **Mamie plateau,** 46.05 123 P **P** **22 42 45.8 +1.4**
YSS **Yuzhno-Sakhali** 47.33 15 *e*P **P** **22 42 53.1 -0.9**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,1µm,18.0s
BLSP **Bilaspur** 47.55 299 *e*P **P** **22 42 55.0 -1.1**
BLSP IAmb IAmb 22 43 02.0
comp=Z,41nm,1.0s
HIA **Hailar** 47.77 354 P **P** **22 42 58.5 +1.1**
HILR **Hailar Array B** 48.06 354 P **P** **22 43 00.4 +0.7**
comp=Z,20nm,0.6s,baz=178,slow=10,SNR=16
HILR PcP **PcP** **22 44 28.7 +1.5**
comp=Z,8.7nm,0.7s,baz=147,slow=5.7,SNR=3.8
HILR LR LR 23 06 46.4
comp=Z,494nm,19.4s,baz=105,slow=40
comp=Z,20nm,0.6s
HEH **HeiHe** 48.43 1 *e*P **P** **22 43 01.3 -1.1**
HEH pmax pmax
comp=Z,63nm,1.4s
HEH LR LR
comp=Z,1µm,17.8s
HEH LR LR
comp=Z,1µm,19.4s
HEH LR LR
comp=Z,2µm,21.3s
SALM **Salem** 48.78 284 *e*P **P** **22 43 07.3 +1.6**
SALM IAmb IAmb 22 43 12.4
comp=Z,58nm,1.4s
ULN **Ulaanbaatar** 48.97 343 P **P** **22 43 06.3 -0.5**
ULN **Ulaanbaatar** 48.97 343 P **P** **22 43 07.4 +0.6**
ULN **Ulaanbaatar** 48.97 343 *i* P **P** **22 43 06.0 -0.9**
ULN pmax pmax
comp=Z,28nm,1.0s
SONM **Songino Array** 49.14 342 P **P** **22 43 08.0 -0.1**
comp=Z,8.5nm,0.6s,baz=163,slow=8.2,SNR=12
SONM PcP **PcP** **22 44 31.2 -0.1**
comp=Z,5.8nm,0.7s,baz=170,slow=4.0,SNR=4.1
comp=Z,8.5nm,0.6s
KOD **Kodaikanal** 49.31 282⇑ *e*P **P** **22 43 08.9 -1.2**
KOD IAmb IAmb 22 43 16.1
comp=Z,37nm,1.0s
HYBB **Hyderabad (bro** 49.50 292 *e*P **P** **22 43 11.7 +0.5**
HYBB IVmB_BB 22 43 13.3
comp=Z,694nm,2.2s
HYBB *e*PcP **PcP** **22 44 32.4 -0.7**
HYBB *e*PP **PP** **22 45 05.1 -0.6**
HYBB *e*ScP **ScP** **22 48 27.4 +0.7**
HYBB *e*ScS **ScS** **22 53 02.2 +0.6**
HYBB IVMs_BB IVMs_BB 23 03 14.6
comp=Z,364nm,21.9s
TRD **Trivandrum** 49.63 280 *e*P **P** **22 43 13.5 +1.2**
GRNR **Gornyy** 49.68 8⇓ *i*P **P** **22 43 13.2 +1.2**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
BRCI **Bahraich** 49.98 305 *e*P **P** **22 43 14.1 -0.6**
CIT **Chita** 51.33 350 *e*P **P** **22 43 25.6 +1.1**
CIT *e* 22 43 33.4
CIT *e* 22 44 38.8
CIT *e* 22 50 52.4
CIT pmax pmax
comp=Z,388nm,1.9s
AKL **Akola** 51.70 295 *e*P **P** **22 43 26.9 -0.9**
AKL IAmb IAmb 22 43 34.9
comp=Z,47nm,0.6s
JHNI **Jhansi** 51.76 301 *e*P **P** **22 43 26.2 -2.0**
LGTI **Lohaghat** 51.80 307 *e*P **P** **22 43 27.6 -0.7**
LGTI IAmb IAmb 22 43 34.3
comp=Z,28nm,1.0s
ZEA **Zeya** 51.92 1 *e*P P 22 43 35.2 +6.4
ZEA MLR MLR
comp=N,500nm,19.0s
ZEA MLR MLR
comp=Z,700nm,16.0s
BHPL **Bhopal** 52.03 298 *e*P **P** **22 43 29.4 -0.8**
BHPL IAmb IAmb 22 43 33.2
comp=Z,32nm,0.6s
NRDN **NARMADA NAGAR** 52.11 298 *e*P **P** **22 43 32.9 +2.1**
NRDN IAmb IAmb 22 43 40.6
comp=Z,112nm,1.4s
MNGI **Mangalore** 52.22 285 *e*P **P** **22 43 32.4 +0.7**
MNGI IAmb IAmb 22 43 34.8
comp=Z,20nm,1.1s
GUNA **GUNA** 52.53 300 *e*P **P** **22 43 32.8 -1.2**
GUNA IAmb IAmb 22 43 36.8
comp=Z,85nm,0.6s
JOSI **Joshimath** 52.79 308 *e*P **P** **22 43 35.2 -0.8**
JOSI IAmb IAmb 22 43 42.0
comp=Z,34nm,0.7s
KAD **Karad** 53.55 290 *e*P **P** **22 43 39.3 -2.3**
KAD IAmb IAmb 22 43 46.9
comp=Z,16nm,0.7s
IRK **Irkutsk** 53.69 343 *e*P **P** **22 43 44.4 +2.4**
IRK pmax pmax
comp=Z,87nm,1.8s
JMIU **JAMIA UNIVERSI** 53.87 305 *e*P **P** **22 43 42.0 -1.7**
NDI **New Delhi** 53.97 305 *e*P **P** **22 43 42.5 -1.9**
NDI IAmb IAmb 22 43 45.4
comp=Z,42nm,0.9s
AYAN **Aya Nagar** 53.97 304 *e*P **P** **22 43 42.4 -2.1**
NPLP **NPLP New Delhi** 53.99 305 *e*P **P** **22 43 43.0 -1.6**
NPLP IAmb IAmb 22 43 46.3
comp=Z,40nm,0.7s
MOY **Mondy** 54.20 341 *e*P **P** **22 43 48.6 +2.7**
MOY pmax pmax
comp=Z,64nm,3.3s
WMQ **Urumqi** 54.22 326 *e*P **P** **22 43 49.1 +3.0**
WMQ pP pP 22 43 52.8 -1.6
WMQ pmax pmax
comp=Z,50nm,1.1s
WMQ LR LR
comp=Z,670nm,24.5s
WMQ LR LR
comp=Z,1µm,21.5s
WMQ LR LR
comp=Z,1µm,18.5s
KUDL **Kundal** 54.38 304 *e*P **P** **22 43 45.6 -1.8**
KUDL IAmb IAmb 22 43 52.3
comp=Z,95nm,1.1s
MSVF **Nonsavu** 54.42 113 P **P** **22 43 48.4 +0.5**
MSVF IAmb IAmb 22 43 59.1
comp=Z,59nm,1.2s
MSVF **Nonsavu** 54.42 113 P **P** **22 43 49.6 +1.6**
MSVF **Nonsavu** 54.42 113 P **P** **22 43 48.4 +0.5**
MSVF pmax pmax
comp=Z,59nm,1.3s
SMLA **Simla** 54.90 308 *e*P **P** **22 43 50.7 -0.5**
SMLA IAmb IAmb 22 44 01.7
comp=Z,81nm,1.0s
CGRH **CHANDIGARH** 55.06 307 *e*P **P** **22 43 50.6 -1.7**
BHK **Bhakra** 55.61 308 *e*P **P** **22 43 56.3 0.0**
BHK IAmb IAmb 22 44 03.0
comp=Z,88nm,1.1s
UDPR **Udaipur** 55.66 299 *e*P **P** **22 43 55.8 -1.0**
UDPR IAmb IAmb 22 44 03.2
comp=Z,172nm,1.2s
ALCI **Alchi Leh** 56.11 311 *e*P P 22 43 55.4 -4.8
ALCI IAmb IAmb 22 44 01.9
comp=Z,22nm,0.6s
TSSA **Tissa** 56.35 309 *e*P **P** **22 44 00.7 -1.1**
TSSA IAmb IAmb 22 44 06.7
comp=Z,59nm,0.5s
JMU **Jammu** 57.28 308⇑ *e*P **P** **22 44 09.8 +1.7**
PETK **Petropavlovsk-** 57.48 22 P **P** **22 44 10.1 +0.9**
comp=Z,11nm,0.6s,baz=185,slow=3.6,SNR=13
PETK LR LR 23 08 44.2
comp=Z,273nm,20.9s,baz=224,slow=36

comp=Z,11nm,0.6s
ZSN Zaisan 58.05 328 *e*P **P 22 44 12.0 -1.4**
ZSN Zaisan 58.05 328 *e*P **P 22 44 11.9 -1.4**
DGZ Jazzator, Alta 58.22 331 *i* P **P 22 44 13.5 -1.1**
DGZ pmax pmax
comp=Z,41nm,1.7s
SHLS Shalkode 58.71 321 *e*P **P 22 44 14.7 -3.4**
comp=Z,22nm,1.0s
SHLS Shalkode 58.71 321 *e*P **P 22 44 14.7 -3.4**
SHLS pmax pmax
comp=Z,22nm,1.0s
PRZ Przheval'sk 59.04 320 P **P 22 44 21.5 +1.0**
PRZ lAmb lAmb 22 44 28.4
comp=Z,59nm,1.0s
PRZ Przheval'sk 59.04 320 P **P 22 44 21.5 +1.0**
PRZ pmax pmax
comp=Z,59nm,1.0s
MK31 Makanchi Array 59.05 326 *i* P **P 22 44 17.7 -2.6**
MKAR Makanchi Array 59.05 326 P **P 22 44 19.2 -1.1**
comp=Z,6.8nm,0.3s,baz=119,slow=7.0,SNR=21
comp=Z,6.8nm,0.3s
SATY Saty 59.33 321 *e*P **P 22 44 20.8 -1.6**
comp=Z,25nm,0.8s
SATY Saty 59.33 321 *e*P **P 22 44 20.8 -1.6**
SATY pmax pmax
comp=Z,25nm,0.8s
KDJ Kajisay 59.65 319 P **P 22 44 24.8 0.0**
KDJ lAmb lAmb 22 44 32.0
comp=Z,57nm,1.2s
KDJ Kajisay 59.65 319 P **P 22 44 24.8 0.0**
KDJ pmax pmax
comp=Z,57nm,1.2s
LBZ Lake Benmore 60.19 145 P **P 22 44 27.6 -0.6**
MDOK Medeo 60.24 320 *e*P **P 22 44 27.1 -1.6**
MDOK Medeo 60.24 320 *e*P **P 22 44 27.1 -1.6**
TNSS Tian-Shan 60.24 320 *e*P **P 22 44 27.1 -2.0**
TNSS Tian-Shan 60.24 320 *e*P **P 22 44 27.1 -2.0**
YAK Yakutsk 60.28 2 P **P 22 44 29.3 +0.9**
comp=Z,71nm,0.7s,baz=227,slow=0.7,SNR=15
comp=Z,71nm,0.7s
YAK Yakutsk 60.28 2 P **P 22 44 28.6 +0.1**
YAK Yakutsk 60.28 2 *i* P **P 22 44 25.3 -3.1**
YAK pmax pmax
comp=Z,65nm,0.6s
TDK Taldyqorghan 60.32 323 *e*P **P 22 44 27.9 -1.2**
comp=Z,49nm,1.6s
TDK Taldyqorghan 60.32 323 *e*P **P 22 44 27.9 -1.2**
TDK pmax pmax
comp=Z,49nm,1.6s
MA2 Magadan 60.80 14 P **P 22 44 32.0 -0.1**
comp=Z,17nm,0.5s,baz=66,slow=19,SNR=3.9
comp=Z,17nm,0.5s
MA2 Magadan 60.80 14 lAmb lAmb 22 44 40.3
comp=Z,64nm,1.0s
MA2 Magadan 60.80 14 *i* P **P 22 44 31.8 -0.2**
MA2 pmax pmax
comp=Z,60nm,0.9s
URZ Urewera 61.30 136 LR LR 23 12 21.9
comp=Z,448nm,19.3s,baz=302,slow=37
BKZ Black Stump Fm 61.31 137 P **P 22 44 35.1 -0.9**
BKZ lAmb lAmb 22 44 54.2
comp=Z,102nm,1.8s
RTZ Ruatahuna 61.38 136 P **P 22 44 34.7 -1.8**
RTZ lAmb lAmb 22 44 48.0
comp=Z,94nm,1.3s
AAK Ala-Archa 61.65 319 *i* P **P 22 44 34.9 -3.5**
AAK pmax pmax
comp=Z,32nm,0.8s
SGDS Sogindy 61.93 320 *e*P **P 22 44 38.5 -1.6**
ZAA0 Zalesovo Array 62.27 334 P **P 22 44 41.2 -0.8**
ZAA0 lAmb lAmb 22 44 44.5
comp=Z,75nm,1.9s
ZALV Zalesovo Beam 62.27 334 P **P 22 44 40.2 -1.8**
comp=Z,6.2nm,0.4s,baz=128,slow=6.8,SNR=31
ZALV PKP2bc **P'P'bc 23 13 55.5 -1.2**
comp=Z,0.9nm,0.6s,baz=316,slow=6.0,SNR=4.4
comp=Z,6.2nm,0.4s
ZALV Zalesovo Beam 62.27 334 P **P 22 44 40.4 -1.6**
ZALV Zalesovo Beam 62.27 334 P **P 22 44 40.4 -1.6**
KBL Kabul 62.50 308 P **P 22 44 42.6 -1.7**
KBL lAmb lAmb 22 45 07.2
comp=Z,48nm,0.8s
KBL Kabul 62.50 308 P **P 22 44 43.9 -0.4**
KBL Kabul 62.50 308 P **P 22 44 42.6 -1.7**
KBL pmax pmax
comp=Z,48nm,0.8s
BTLS Baital 63.03 321 *e*P **P 22 44 46.1 -1.3**
comp=Z,36nm,1.8s
BTLS Baital 63.03 321 *e*P **P 22 44 46.0 -1.3**
BTLS pmax pmax
comp=Z,36nm,1.8s
KURBB Kurchatov Arra 63.29 328 P **P 22 44 48.2 -0.7**
comp=Z,20nm,0.6s,baz=130,slow=6.3,SNR=18
KURBB PKPPKP **P'P'df 23 13 46.1 -1.4**
comp=Z,0.5nm,0.6s,baz=288,slow=3.2,SNR=4.4
comp=Z,20nm,0.6s
KURK Kurchatov 63.29 328 P **P 22 44 48.2 -0.7**
KURK Kurchatov 63.29 328 P **P 22 44 48.2 -0.7**
KURK Kurchatov 63.29 328 *i* P **P 22 44 48.1 -0.8**
KURK pmax pmax
comp=Z,66nm,1.0s
SEY Seymchan 64.13 13 P **P 22 44 54.7 +0.5**
comp=Z,36nm,1.1s,baz=205,slow=7.1,SNR=9.7
comp=Z,36nm,1.1s
SEY Seymchan 64.13 13 *i* P **P 22 44 54.2 0.0**
SEY pmax pmax
comp=Z,24nm,1.0s
IUG Iuzhnay 64.45 317 *e*P **P 22 44 55.5 -1.5**
comp=Z,61nm,1.3s
IUG Iuzhnay 64.45 317 *e*P **P 22 44 55.4 -1.5**
IUG pmax pmax
comp=Z,61nm,1.3s
BRLS Borolday 64.92 318 *e*P **P 22 44 58.7 -1.2**
comp=Z,19nm,1.1s
BRLS Borolday 64.92 318 *e*P **P 22 44 58.7 -1.2**
BRLS pmax pmax
comp=Z,19nm,1.1s
BRZS Berezniki 66.17 325 *e*P **P 22 45 06.4 -1.4**
BRZS Berezniki 66.17 325 *e*P **P 22 45 06.3 -1.4**
HRA Herat 67.85 307 P **P 22 45 18.1 -1.0**
JLN Jalan Bani Buh 68.06 293 P **P 22 45 19.0 -1.3**
WBK Wadi Bani Khal 68.52 294 P **P 22 45 21.7 -1.5**
CASY Casey 68.72 187 P **P 22 45 23.0 -0.5**
BVAR Borovoye Array 68.86 328 P **P 22 45 23.8 -0.9**
comp=Z,20nm,0.8s,baz=136,slow=9.2,SNR=25
comp=Z,20nm,0.8s
BORK Borovoye 68.90 328 *i* P **P 22 45 23.6 -1.3**
BORK pmax pmax
comp=Z,32nm,0.8s
WSAR Wadi Sarin 68.92 294 P **P 22 45 24.6 -1.1**
MHTO MHTO 69.25 292 P **P 22 45 27.1 -0.6**
JMDO Jabal Madar 69.29 293 P **P 22 45 27.7 -0.3**
SMDO Samad 69.42 294 P **P 22 45 27.1 -1.8**
TIXI Tiksi 69.91 1 P **P 22 45 30.0 -0.8**
TIXI Tiksi 69.91 1 *i* P **P 22 45 29.5 -1.3**
TIXI pmax pmax
comp=Z,37nm,0.9s
HOQ Hoqain 70.16 294 P **P 22 45 33.8 +0.4**
BSY Bisya 70.16 293 P **P 22 45 32.5 -0.9**
ARQ Araqi 70.85 294 P **P 22 45 36.3 -1.3**
SOHO SOHO 70.94 295 P **P 22 45 37.2 -0.8**
MDH Madha 71.29 296 P **P 22 45 38.6 -1.6**
UOSS Minazif 71.33 296 P **P 22 45 40.0 -0.4**
UOSS Minazif 71.33 296 P **P 22 45 39.6 -0.8**
BANOM Banah 71.37 297 P **P 22 45 40.0 -0.7**
HATD Hatta, Dubai 71.38 296 P **P 22 45 39.9 -0.9**
SNR=5.6
MASF Masafi 71.42 296 P **P 22 45 40.5 -0.5**
ASHO Ashiyiah 71.43 295 P **P 22 45 40.7 -0.4**
SHME Shamm 71.53 297 P **P 22 45 41.5 0.0**
ALNE Al Ain 71.64 295 P **P 22 45 41.2 -1.1**
SNR=10
BILL Bilibino 71.64 15 P **P 22 45 41.9 +0.5**
BILL lAmb lAmb 22 45 42.9
comp=Z,46nm,1.6s
BILL Bilibino 71.64 15 *i* P **P 22 45 41.8 +0.4**
BILL pmax pmax
comp=Z,10.0nm,1.2s
UMZA Um Al Zommool 72.03 293 P **P 22 45 42.8 -1.9**
AJN Ajban 72.39 295 P **P 22 45 45.9 -0.8**
SNR=6.5
DOK Doka 72.64 289 P **P 22 45 47.2 -1.2**
WHFO Wadi Hawf 72.93 288 P **P 22 45 48.3 -1.9**
MZWR Madinat Zayed 73.31 294 P **P 22 45 51.2 -1.1**
ABTO Aybut 73.34 288 P **P 22 45 50.8 -1.8**

AB31 Akbulak array 73.52 321 lAmb lAmb 22 45 57.5
comp=Z,65nm,1.8s
ABKAR Akbulak array 73.52 321 P **P 22 45 51.7 -1.2**
MZR Muzera 73.60 293 P **P 22 45 53.4 -0.6**
SNR=10.0
NIKH Nikolski High 73.72 35 P **P 22 45 54.1 0.0**
baz=250
GHWR Ruwais 74.24 294 P **P 22 45 56.9 -0.8**
JRN Qarnain Island 74.36 295 P **P 22 45 57.4 -1.0**
SPIA Saint Paul Isl 74.47 30 P **P 22 45 58.6 +0.3**
baz=248
AKTO Aktyubinsk 75.05 322 P **P 22 46 01.4 -0.5**
comp=Z,14nm,0.6s,baz=85,slow=7.4,SNR=13
comp=Z,14nm,0.6s
UNV Unalaska Valle 75.33 34 P **P 22 46 03.7 +0.3**
baz=252
SVE Sverdlovsk 75.53 329 *e*P **P 22 46 04.0 -0.5**
SVE pmax pmax
comp=Z,123nm,1.5s
TRNA Turayna 75.82 295 P **P 22 46 05.8 -1.0**
SHMA Al-Shehemyia 76.14 296 P **P 22 46 07.6 -1.0**
SMRA Abu-Samra 76.17 295 P **P 22 46 07.8 -1.0**
GAMB Gambell 76.44 24 P **P 22 46 09.5 0.0**
baz=245
ARTI Arti 76.57 328 P **P 22 46 09.2 -1.2**
comp=Z,22nm,0.7s,baz=139,slow=3.4,SNR=23
comp=Z,22nm,0.7s
ARTI Arti 76.57 328 *c i* P **P 22 46 08.6 -1.8**
ARTI 22 49 01.6
ARTI PPP PPP 22 50 45.8
ARTI S **S 22 55 54.1 -0.5**
ARTI SS **SS 23 00 46.1 -3.9**
ARTI pmax pmax
comp=Z,37nm,0.8s
FALS False Pass 77.36 34 P **P 22 46 14.4 -0.4**
baz=254
M11K Mekoryuk 77.57 28 P **P 22 46 15.3 -0.6**
baz=251
HUH Hualalai 77.97 70 P **P 22 46 18.9 -0.5**
HUH lAmb lAmb 22 47 50.1
comp=Z,72nm,1.2s
S12K Black Hills 78.33 33 P **P 22 46 19.9 -0.4**
baz=256
MLH Mauna Loa 78.38 71 P **P 22 46 20.6 -1.0**
MLH lAmb lAmb 22 46 24.0
comp=Z,86nm,1.1s
UWE Uwekahuna 78.47 71 P **P 22 46 21.0 -1.0**
RSD Rainshed 78.48 71 P **P 22 46 20.1 -1.9**
PUH Pauahi 78.54 71 P **P 22 46 20.5 -1.8**
PUH lAmb lAmb 22 46 41.5
comp=Z,79nm,1.2s
KNHH Kane Nui o Ham 78.58 71 P **P 22 46 22.6 0.0**
TNA Tiny City 78.64 23 P **P 22 46 21.9 +0.2**
baz=248
K13K Kusilvak Mount 78.77 27 P **P 22 46 22.5 -0.1**
K13K lAmb lAmb 22 46 25.9
comp=Z,59nm,1.1s
K13K Kusilvak Mount 78.77 27 P **P 22 46 23.1 +0.5**
baz=252
M13K Dall Lake 78.92 28 P **P 22 46 23.8 +0.4**
baz=254
SDPT Sand Point 79.12 34 P **P 22 46 24.6 0.0**
baz=257
F14K Arctic Creek 79.23 23 P **P 22 46 25.4 +0.4**
baz=250
KBD Kabd 79.30 299 P **P 22 46 25.3 -0.9**
ANM Nome 79.30 24 P **P 22 46 24.7 -0.7**
baz=251
L14K Kuka Creek 79.50 28 P **P 22 46 26.6 +0.1**
L14K lAmb lAmb 22 46 30.0
comp=Z,109nm,1.2s
L14K Kuka Creek 79.50 28 P **P 22 46 27.1 +0.6**
baz=254
CHNA Chernabura Isl 79.50 34 P **P 22 46 26.5 -0.1**
baz=258
J14K Nanvaranak Lak 79.51 26 P **P 22 46 26.4 -0.1**
baz=253
N14K Kuskokwak Cree 79.59 29 P **P 22 46 27.2 +0.1**
baz=255
O14K Tigyukauivet M 79.63 30 P **P 22 46 27.6 +0.3**
baz=256
M14K Bethel 79.68 28 P **P 22 46 27.4 -0.1**
M14K Bethel 79.68 28 P **P 22 46 27.0 -0.5**
baz=255
S14K Fog Glacier 79.83 33 P **P 22 46 28.1 -0.5**
baz=258
F15K North Star Dit 79.96 23 P **P 22 46 29.1 +0.1**
baz=251
G15K Niukluk 79.98 24 P **P 22 46 29.8 +0.7**
baz=252
L15K Ungalakk Mounta 80.14 27 P **P 22 46 30.0 0.0**
baz=255
ABPO Ambohimpanom 80.27 251 P **P 22 46 31.5 -0.3**
ABPO Ambohimpanom 80.27 251 P **P 22 46 31.5 -0.3**
ABPO pmax pmax
comp=Z,19nm,0.9s
M15K Kasigluk River 80.27 29 P **P 22 46 30.9 +0.2**
baz=256
K15K Wolf Creek Mou 80.28 27 P **P 22 46 30.9 +0.1**
K15K lAmb lAmb 22 46 33.8
comp=Z,127nm,1.4s
K15K Wolf Creek Mou 80.28 27 P **P 22 46 31.4 +0.6**
baz=255
O15K Ungalikthiuk R 80.33 30 P **P 22 46 31.3 +0.1**
baz=257
AKT Akhty 80.39 312 *e*P **P 22 46 31.9 -0.1**
AKT *e* 22 46 38.8
AKT *e*S **S 22 56 39.9 +3.5**
AKT pmax pmax
comp=Z,66nm,2.2s
N15K Kwethluk River 80.43 29 **P 22 46 31.9 +0.3**
N15K lAmb lAmb 22 46 34.9
comp=Z,57nm,1.1s
N15K Kwethluk River 80.43 29 P **P 22 46 32.0 +0.3**
baz=256,SNR=5.2
C16K Lisburne Hills 80.55 21 P **P 22 46 32.8 +0.7**
baz=250
H16K Elim 80.61 24 P **P 22 46 32.9 +0.4**
baz=254
G16K Koyuk River 80.78 24 P **P 22 46 33.7 +0.3**
baz=254
VOI Vohitsoka 80.94 248 P **P 22 46 35.5 +0.1**
VOI Vohitsoka 80.94 248 P **P 22 46 34.3 -1.0**
J16K Anvik River 80.95 26 **P 22 46 34.2 -0.2**
J16K lAmb lAmb 22 46 37.4
comp=Z,69nm,1.1s
J16K Anvik River 80.95 26 P **P 22 46 34.8 +0.5**
baz=256
RAYN Ar Rayn 80.95 293 P **P 22 46 34.5 -0.8**
RAYN Ar Rayn 80.95 293 P **P 22 46 34.2 -1.1**
RAYN Ar Rayn 80.95 293 P **P 22 46 34.5 -0.8**
RAYN pmax pmax
comp=Z,24nm,0.9s
I17K Unalakleet 81.06 25 P **P 22 46 35.0 +0.1**
I17K lAmb lAmb 22 46 38.1
comp=Z,131nm,1.4s
I17K Unalakleet 81.06 25 P **P 22 46 34.4 -0.5**
baz=255
L16K Owhat River 81.08 28 P **P 22 46 35.0 -0.1**
L16K lAmb lAmb 22 46 37.7
comp=Z,97nm,1.5s
L16K Owhat River 81.08 28 P **P 22 46 34.8 -0.3**
baz=257,SNR=7.6
N16K Nishlik Lake 81.14 29 P **P 22 46 35.5 0.0**
baz=256
M16K Timber Creek 81.17 28 lAmb lAmb 22 46 38.2
comp=Z,74nm,1.4s
M16K Timber Creek 81.17 28 P **P 22 46 35.6 0.0**
baz=257
D17K Noatak River 81.17 21 P **P 22 46 35.8 +0.4**
baz=252
P16K Nushagak River 81.22 30 P **P 22 46 36.0 +0.1**
baz=258
O16K Kokwok River B 81.28 30 P **P 22 46 36.0 -0.3**
O16K lAmb lAmb 22 46 38.6
comp=Z,70nm,1.3s
O16K Kokwok River B 81.28 30 P **P 22 46 36.2 0.0**
baz=258
RDOG Red Dog Mine 81.34 21 P **P 22 46 37.2 +0.8**
baz=253
C17K DeLong Mountai 81.38 21 P **P 22 46 37.9 +1.3**
baz=252
VNDA Vanda 81.43 173 P **P 22 46 37.0 +0.4**
comp=Z,14nm,0.6s,baz=319,slow=5.4,SNR=23
comp=Z,14nm,0.6s
VNDA Vanda 81.43 173 P **P 22 46 36.5 -0.1**

VNDA Vanda 81.43 173 P **P 22 46 36.5 -0.1**
VNDA pmax pmax
comp=Z,14nm,0.6s
E17K Hotham Inlet 81.46 22 P **P 22 46 38.2 +1.2**
baz=254,SNR=6.2
G17K Kiwalik Mounta 81.49 24 P **P 22 46 37.5 +0.3**
baz=255
F17K Baldwin Pennin 81.50 23 P **P 22 46 37.7 +0.4**
baz=254
J17K VABM Dome 81.64 26 **P 22 46 38.3 +0.2**
J17K lAmb lAmb 22 46 41.0
comp=Z,108nm,1.4s
J17K VABM Dome 81.64 26 P **P 22 46 38.8 +0.8**
baz=257,SNR=6.0
H17K Granite Mounta 81.65 24 P **P 22 46 37.9 -0.1**
H17K Granite Mounta 81.65 24 P **P 22 46 38.5 +0.5**
baz=256
MAW Mawson 81.69 200 P **P 22 46 38.8 +0.7**
comp=Z,8.3nm,0.6s,baz=77,slow=4.8,SNR=28
comp=Z,8.3nm,0.6s
L17K Donlin 81.72 27 P **P 22 46 39.0 +0.5**
baz=258
KIRV Kirov 81.80 329 P **P 22 46 38.8 -0.1**
comp=Z,31nm,0.5s,baz=100,slow=1.4,SNR=16
KIRV LR LR 23 26 31.1
comp=Z,379nm,20.2s,baz=85,slow=38
comp=Z,31nm,0.5s
KIRV Kirov 81.80 329 *i* P **P 22 46 36.6 -2.3**
R17L Mt. Peulik Vol 81.81 32 P **P 22 46 39.5 +0.5**
baz=260
O17K Koliganek Bris 81.82 30 P **P 22 46 39.3 +0.2**
baz=259,SNR=6.0
BELG Belogornoye 81.82 323 P **P 22 46 38.4 -0.8**
comp=Z,30nm,0.6s,baz=237,slow=1.7,SNR=9.9
comp=Z,30nm,0.6s
BELG Belogornoye 81.82 323 *i* P **P 22 46 38.5 -0.6**
BELG pmax pmax
comp=Z,23nm,1.1s
K17K Iditarod 81.84 27 P **P 22 46 39.7 +0.6**
K17K Iditarod 81.84 27 P **P 22 46 39.5 +0.4**
baz=258
CHIR Chirikof Islan 81.91 34 P **P 22 46 39.5 -0.1**
baz=261
N17K Nushagak Hills 81.92 29 lAmb lAmb 22 46 42.7
comp=Z,64nm,1.6s
N17K Nushagak Hills 81.92 29 P **P 22 46 39.5 0.0**
baz=259
M17K Holitna River 81.97 28 lAmb lAmb 22 46 43.1
comp=Z,60nm,1.4s
M17K Holitna River 81.97 28 P **P 22 46 40.3 +0.5**
baz=259
E18K Tukpahlearik C 82.01 22 P **P 22 46 40.6 +0.8**
baz=255,SNR=7.7
P17K Kvichak River 82.04 30 P **P 22 46 40.2 0.0**
baz=260
B18K Kokolik River 82.11 20 P **P 22 46 40.9 +0.5**
baz=254
C18K Utukok River 82.12 21 P **P 22 46 41.0 +0.5**
baz=254
F18K Selawik 82.16 23 P **P 22 46 41.0 +0.3**
baz=256
Q17K Contact Creek 82.16 31 P **P 22 46 41.4 +0.4**
baz=260
SBA Scott Base 82.34 172 P **P 22 46 42.2 +0.8**
SBA lAmb lAmb 22 47 13.6
comp=Z,78nm,1.9s
SBA Scott Base 82.34 172 P **P 22 46 42.2 +0.8**
SBA pmax pmax
comp=Z,78nm,1.9s
H18K Honhosa River 82.34 24 lAmb lAmb 22 46 44.3
comp=Z,85nm,1.4s
H18K Honhosa River 82.34 24 P **P 22 46 42.0 +0.3**
baz=257
G18K Tagagawik 82.39 24 lAmb lAmb 22 46 44.4
comp=Z,54nm,1.3s
G18K Tagagawik 82.39 24 P **P 22 46 42.2 +0.2**
baz=257,SNR=6.6
ACHA Angle Creek He 82.45 32 lAmb lAmb 22 46 46.0
comp=Z,46nm,1.5s
L18K Granite Mounta 82.47 27 lAmb lAmb 22 46 45.4
comp=Z,94nm,1.3s
L18K Granite Mounta 82.47 27 P **P 22 46 42.3 -0.1**
baz=259,SNR=13
GNI Garni 82.52 310 P **P 22 46 45.5 +2.1**
comp=Z,8.5nm,0.8s,baz=189,slow=6.9,SNR=8.1
GNI Garni 82.52 310 P **P 22 46 44.2 +0.8**
GNI lAmb lAmb 22 47 00.2
comp=Z,28nm,0.9s
GNI Garni 82.52 310 P **P 22 46 44.0 +0.6**
GNI Garni 82.52 310 P **P 22 46 44.2 +0.8**
GNI pmax pmax
comp=Z,28nm,0.9s
N18K Kilae Creek 82.57 29 lAmb lAmb 22 46 46.9
comp=Z,78nm,1.4s
N18K Kilae Creek 82.57 29 P **P 22 46 43.4 +0.4**
baz=260,SNR=8.4
Q18K Katmai Hardscr 82.68 31 P **P 22 46 43.3 -0.4**
baz=261
P18K Big Mountain, 82.69 30 P **P 22 46 43.7 0.0**
baz=261
J18K Innoko River 82.70 26 P **P 22 46 44.2 +0.6**
baz=259
M18K Stony River 82.74 28 P **P 22 46 44.1 +0.2**
baz=260
O18K Koktuh Hills 82.77 30 P **P 22 46 44.2 +0.2**
baz=261,SNR=7.0
C19K Lookout Ridge 82.81 20 P **P 22 46 44.8 +0.7**
baz=256,SNR=9.6
SII Sitkinak Islan 82.81 33 P **P 22 46 44.8 +0.4**
baz=262
GCSA Galena City Sc 82.88 25 P **P 22 46 44.4 0.0**
baz=259,SNR=13
F19K Shaleruckik Mo 82.94 23 lAmb lAmb 22 46 47.1
comp=Z,72nm,1.4s
F19K Shaleruckik Mo 82.94 23 P **P 22 46 44.5 -0.3**
baz=258
G19K Purcell Mounta 83.07 23 P **P 22 46 46.6 +1.1**
baz=258
D19K Kuna River 83.18 21 P **P 22 46 46.8 +0.8**
baz=257
H19K Roundabout Mou 83.20 24 P **P 22 46 47.2 +1.0**
baz=259
J19K Poorman 83.27 26 P **P 22 46 47.3 +0.7**
baz=260,SNR=17
N19K Bonanza Creek 83.28 29 P **P 22 46 48.1 +1.3**
baz=261,SNR=19
E19K Redstone River 83.28 22 P **P 22 46 47.8 +1.3**
baz=258,SNR=23
L19K White Mountain 83.31 28 P **P 22 46 48.1 +1.3**
baz=261,SNR=20
OHAK Old Harbor 83.39 33 P **P 22 46 47.6 +0.4**
baz=263
M19K Big River Lodg 83.48 28 lAmb lAmb 22 46 50.6
comp=Z,87nm,1.4s
M19K Big River Lodg 83.48 28 P **P 22 46 48.3 +0.6**
baz=261
P19K Oil Pt 83.73 30 P **P 22 46 49.2 +0.2**
baz=262
D20K Etivluk River 83.77 21 P **P 22 46 49.5 +0.4**
baz=258
F20K Avaraart Lake 83.78 23 P **P 22 46 50.0 +0.9**
baz=259
L20K Farewell, AK 83.81 27 P **P 22 46 49.7 +0.3**
baz=262,SNR=14
ILSW Iliamna Southw 83.82 30 lAmb lAmb 22 46 50.4
comp=Z,64nm,1.4s
E20K Nigu River 83.83 21 P **P 22 46 49.5 0.0**
baz=259
KDAK Kodiak Island 83.83 32 P **P 22 46 49.5 0.0**
baz=263
H20K Anotleneega Mo 83.84 24 P **P 22 46 49.6 +0.2**
baz=260
B20K Meade River 83.84 20 P **P 22 46 49.9 +0.5**
baz=258
K20K Telida 83.85 26 P **P 22 46 50.1 +0.5**
baz=261
J20K Nowinta River 83.94 26 P **P 22 46 50.2 +0.3**
baz=261,SNR=12
Q20K Shuyak Island 84.03 31 P **P 22 46 50.5 0.0**
baz=263
M20K Styx River 84.07 28 P **P 22 46 50.9 +0.1**
baz=262
GOF Gofitskoye 84.11 315 *ce*P **P 22 46 50.2 -1.0**
KBZ Khabaz 84.13 314 P **P 22 46 50.6 -0.7**
comp=Z,15nm,1.1s,baz=96,slow=0.7,SNR=13
comp=Z,15nm,1.1s
KBZ Khabaz 84.13 314 *i* P **P 22 46 49.8 -1.5**
KBZ pmax pmax

	comp=Z,37nm,1.1s							
KVAR	**Kislovodsk Arr**	84.29	314	P		**P**	22 46 52.5	+0.2
	comp=Z,1.2nm,0.4s,baz=308,slow=19,SNR=1.4							
	comp=Z,1.2nm,0.4s							
A21K	**Barrow**	84.30	18	P		**P**	22 46 51.9	+0.3
	baz=258							
KIV	**Kislovodsk**	84.30	314	P		**P**	22 46 51.2	-1.1
KIV	**Kislovodsk**	84.30	314	*e*P		**P**	22 46 51.4	-0.9
KIV				*e*			22 50 04.1	
KIV				*e*			22 57 11.1	
KIV					pmax	pmax		
	comp=Z,25nm,1.0s							
KIV					MLR	MLR		
	comp=Z,240nm,20.0s							
KIV	**Kislovodsk**	84.30	314	P		**P**	22 46 52.5	+0.2
	comp=Z,480nmcomp=Z,36nm,0.9s							
SHA1	**Shidzhatmaz**	84.31	314	*i* P		**P**	22 46 51.7	-0.9
IMAR	**Indian Mountai**	84.38	24	P		**P**	22 46 52.4	+0.2
N20K	**Mount Spurr**	84.43	29	P		**P**	22 46 52.3	-0.3
	baz=263,SNR=14							
SPCR	**Spurr Chakacha**	84.43	29	P		**P**	22 46 52.2	-0.4
	baz=263,SNR=10							
SPU	**Mount Spurr**	84.50	29	IAmb		IAmb	22 46 54.8	
	comp=Z,53nm,1.3s							
C21K	**Knifeblade Rid**	84.50	21	P		**P**	22 46 53.5	+0.8
	baz=260							
G21K	**Allakaket**	84.56	23	IAmb		IAmb	22 46 55.6	
	comp=Z,60nm,1.4s							
G21K	**Allakaket**	84.56	23	P		**P**	22 46 53.3	+0.3
	baz=262							
PPLA	**Purkeypile**	84.64	27	P		**P**	22 46 53.6	-0.1
	baz=263							
B21K	**Ikpikpuk River**	84.64	20	P		**P**	22 46 53.4	+0.1
	baz=260							
F21K	**Alatna River**	84.67	23	P		**P**	22 46 53.8	+0.1
	baz=262							
E21K	**Killik River**	84.67	21	P		**P**	22 46 53.8	+0.2
	baz=261							
CHUM	**Lake Minchumin**	84.70	26	P		**P**	22 46 54.4	+0.6
	baz=263							
H21K	**Melozitna Rive**	84.72	24	P		**P**	22 46 54.5	+0.6
	baz=262							
A22K	**Sinclair Lake**	84.76	19	P		**P**	22 46 54.7	+0.8
	baz=260							
SKT	**Skwentna**	84.83	28	P		**P**	22 46 54.3	-0.3
	baz=264,SNR=9.6							
CAPN	**Captain Cook N**	84.89	29	P		**P**	22 46 55.0	+0.2
	baz=264							
BRSE	**Bradley Lake S**	85.00	30	P		**P**	22 46 55.7	+0.3
	baz=265							
SUA	**Susitna One**	85.16	29	IAmb		IAmb	22 46 57.4	
	comp=Z,63nm,1.2s							
SUA	**Susitna One**	85.16	29	P		**P**	22 46 55.8	-0.5
	baz=264,SNR=6.3							
B22K	**Teshekpuk Lake**	85.16	20	P		**P**	22 46 56.1	+0.2
	baz=261							
D22K	**Ayikyak River**	85.20	21	IAmb		IAmb	22 46 59.3	
	comp=Z,91nm,1.7s							
D22K	**Ayikyak River**	85.20	21	P		**P**	22 46 56.0	-0.3
	baz=262							
F22K	**John River**	85.21	22	P		**P**	22 46 56.0	-0.3
	baz=263							
BPAW	**Bear Paw Mtn.**	85.31	26	P		**P**	22 46 56.7	-0.2
	baz=264							
H22K	**Ishtalitna Cre**	85.33	24	IAmb		IAmb	22 47 04.4	
	comp=Z,32nm,1.4s							
H22K	**Ishtalitna Cre**	85.33	24	P		**P**	22 46 56.6	-0.4
	baz=264,SNR=5.7							
VRH	**Novokhopyorsk**	85.35	321	*e*P		**P**	22 46 56.3	-1.0
VRH				pmax		pmax		
	comp=Z,108nm,1.5s							
G22K	**Bettles**	85.40	23	P		**P**	22 46 57.2	0.0
	baz=263							
E22K	**Anaktuvuk Pass**	85.43	22	IAmb		IAmb	22 47 00.0	
	comp=Z,91nm,1.7s							
E22K	**Anaktuvuk Pass**	85.43	22	P		**P**	22 46 57.2	-0.2
	baz=263,SNR=12							
CUT	**Chulitna**	85.47	28	P		**P**	22 46 57.2	-0.5
	baz=265							
M22K	**Willow**	85.48	28	P		**P**	22 46 57.3	-0.4
	baz=265,SNR=5.1							
MARD	**Mardin**	85.48	307	IAmb		IAmb	22 47 03.2	
	comp=Z,24nm,0.7s							
MLY	**Manley**	85.51	25	P		**P**	22 46 58.2	+0.3
	baz=264							
TRF	**Thorofare Moun**	85.55	27	P		**P**	22 46 57.9	-0.4
	baz=265							
O22K	**Cooper Landing**	85.57	30	P		**P**	22 46 57.8	-0.4
	baz=266							
RC01	**Rabbit Creek A**	85.61	29	IAmb		IAmb	22 46 59.7	
	comp=Z,37nm,1.0s							
RC01	**Rabbit Creek A**	85.61	29	P		**P**	22 46 58.0	-0.5
	baz=265,SNR=7.0							
SEW	**Seward**	85.67	30	P		**P**	22 46 58.2	-0.5
	baz=266							
LABN	**Labinsk**	85.73	314	*e*P		**P**	22 46 57.6	-1.8
LABN				*e*S		**SKSac**	22 57 20.0	-3.2
LABN					pmax	pmax		
	comp=Z,29nm,1.0s							
D23K	**Nanushuk River**	85.93	21	IAmb		IAmb	22 47 17.0	
	comp=Z,101nm,1.9s							
D23K	**Nanushuk River**	85.93	21	P		**P**	22 46 59.2	-0.7
	baz=264							
PMR	**Palmer**	85.94	29	IAmb		IAmb	22 47 02.5	
	comp=Z,33nm,1.1s							
PMR	**Palmer**	85.94	29	P		**P**	22 46 59.7	-0.3
	baz=266,SNR=6.1							
ERBR	**Yeremizino-Bor**	85.94	316	*e*P		**P**	22 46 57.9	-2.5
ERBR				*e**PP		**pwP**	22 47 08.5	-2.8
ERBR				*e*S		**SKSac**	22 57 20.5	-3.9
ERBR					pmax	pmax		
	comp=Z,114nm,1.4s							
COLD	**Coldfoot**	85.94	23	IAmb		IAmb	22 47 57.3	
	comp=Z,72nm,1.5s							
COLD	**Coldfoot**	85.94	23	P		**P**	22 46 59.5	-0.4
	baz=265							
G23K	**Bananza Creek**	85.96	23	IAmb		IAmb	22 47 25.5	
	comp=Z,33nm,1.2s							
G23K	**Bananza Creek**	85.96	23	P		**P**	22 46 59.7	-0.4
	baz=265							
C23K	**Itkillik River**	86.05	20	IAmb		IAmb	22 47 27.3	
	comp=Z,36nm,1.1s							
C23K	**Itkillik River**	86.05	20	P		**P**	22 47 00.5	+0.1
	baz=264,SNR=8.6							
H23K	**Yukon River**	86.08	24	P		**P**	22 47 00.2	-0.5
	baz=265							
I23K	**Minto, Yukon-K**	86.10	25	P		**P**	22 47 00.5	-0.2
	baz=266							
MCK	**McKinley**	86.18	26	IAmb		IAmb	22 47 02.2	
	comp=Z,105nm,2.0s							
MCK	**McKinley**	86.18	26	P		**P**	22 47 00.9	-0.3
	baz=266							
NEA2	**Nenana**	86.18	25	P		**P**	22 47 00.9	-0.3
	baz=266							
VSLR	**Vesyoloye**	86.20	313	*i* P		**P**	22 47 00.4	-1.4
VSLR					pmax	pmax		
	comp=Z,163nm,1.1s							
E23K	**Chandalar**	86.24	22	IAmb		IAmb	22 47 05.3	
	comp=Z,28nm,0.9s							
E23K	**Chandalar**	86.24	22	P		**P**	22 47 01.2	-0.3
	baz=265							
KNK	**Knik Glacier**	86.25	29	P		**P**	22 47 01.5	-0.2
	baz=266,SNR=7.7							
PWL	**Port Wells**	86.27	29	P		**P**	22 47 01.5	-0.3
	baz=267							
WAT1	**Susitna Watana**	86.29	27	P		**P**	22 47 01.9	+0.1
	baz=266							
TOLK	**Toolik Lake Re**	86.30	21	P		**P**	22 47 01.5	-0.2
	baz=265							
SML	**Sawmill**	86.33	28	P		**P**	22 47 01.7	-0.4
	baz=267							
SOC	**Sochi**	86.43	313	*e*P		**P**	22 46 59.1	-3.8
SOC				*e*PPP		PPP	22 52 14.3	
SOC				*e*S		**SKSac**	22 57 22.1	-5.4
SOC				*e*SS		**SS**	23 03 10.6	-6.9
SOC				*e*SSS		SSS	23 06 50.2	
SOC					pmax	pmax		
	comp=Z,26nm,0.7s							
D24K	**Happy Valley**	86.62	21	IAmb		IAmb	22 47 20.4	
	comp=Z,19nm,0.8s							
D24K	**Happy Valley**	86.62	21	P		**P**	22 47 03.1	-0.2
	baz=266							
M23K	**Glacier View**	86.62	28	P		**P**	22 47 03.7	+0.3
	baz=267							
WAT6	**Susitna Watana**	86.65	28	P		**P**	22 47 03.1	-0.7
	baz=267							
E24K	**Your Creek**	86.66	22	P		**P**	22 47 02.9	-0.6
	baz=266							
C24K	**Franklin Bluff**	86.70	20	IAmb		IAmb	22 47 07.0	
	comp=Z,25nm,1.1s							
C24K	**Franklin Bluff**	86.70	20	P		**P**	22 47 03.1	-0.5
	baz=266							
H24K	**Noodor Dome**	86.76	24	P		**P**	22 47 03.3	-0.8
	baz=267							
SCM	**Sheep Creek Mo**	86.81	28	P		**P**	22 47 03.5	-0.9
	baz=268							
DHY	**Denali Highway**	86.84	27	P		**P**	22 47 04.0	-0.6
	baz=267							
F24K	**Squaw Lake**	86.86	23	P		**P**	22 47 03.4	-1.1
	baz=267							
VORD	**Divnogorie**	86.87	321	*e*P		**P**	22 47 02.7	-2.1
VORD					pmax	pmax		
	comp=Z,30nm,0.9s							
GLI	**Glacier Island**	86.88	29	P		**P**	22 47 03.8	-1.0
	baz=268							
VORR	**Voronezh**	86.94	321	*e*P		**P**	22 47 04.4	-0.8
VORR					pmax	pmax		
	comp=Z,79nm,0.8s							
VSR	**Storozhevoye**	86.96	321	*e*P		**P**	22 47 02.3	-3.0
VSR					pmax	pmax		
	comp=Z,20nm,0.9s							
G24K	**Hadweenzic Riv**	86.97	23	P		**P**	22 47 04.7	-0.4
	baz=267							
KLMR	**Klimovskoe**	87.02	331	*e*P		**P**	22 47 02.3	-3.1
KLMR				*e**PP		**pP**	22 47 12.6	-1.6
KLMR					pmax	pmax		
	comp=Z,92nm,1.5s							
HDA	**Harding Lake**	87.09	26	P		**P**	22 47 05.0	-0.7
	baz=268							
ILAR	**Eielson Array**	87.13	25	P		**P**	22 47 04.8	-1.0
	comp=Z,2.6nm,0.7s,baz=276,slow=4.4,SNR=14							
	comp=Z,2.6nm,0.7s							
LPSR	**Galich'ya Gora**	87.13	322	*e*P		**P**	22 47 05.2	-0.9
LPSR					pmax	pmax		
	comp=Z,48nm,0.9s							
Q23K	**Middleton Isla**	87.21	31	P		**P**	22 47 05.8	-0.5
	baz=268							
M24K	**Tolsona, Glenn**	87.36	28	P		**P**	22 47 06.2	-0.9
	baz=268							
KLU	**Klutina**	87.47	29	P		**P**	22 47 07.2	-0.5
	baz=269							
D25K	**Kavik River**	87.50	21	P		**P**	22 47 06.9	-0.7
	baz=268							
G25K	**Bearman Lake**	87.52	23	P		**P**	22 47 07.0	-0.7
	baz=268							
EYAK	**Cordova Ski Ar**	87.53	30	P		**P**	22 47 06.8	-1.0
	baz=269							
K24K	**Donnelly Dome**	87.58	26	P		**P**	22 47 07.1	-1.0
	baz=269							
H25L	**Birch Creek**	87.62	24	P		**P**	22 47 07.9	-0.2
	baz=269							
PAX	**Paxson**	87.71	27	P		**P**	22 47 08.1	-0.7
	baz=269,SNR=6.9							
F25K	**Christian Rive**	87.72	23	IAmb		IAmb	22 48 32.6	
	comp=Z,23nm,1.2s							
F25K	**Christian Rive**	87.72	23	P		**P**	22 47 08.4	-0.3
	baz=269							
E25K	**Arctic Village**	87.76	22	IAmb		IAmb	22 47 12.1	
	comp=Z,21nm,1.1s							
E25K	**Arctic Village**	87.76	22	P		**P**	22 47 08.3	-0.5
	baz=269							
J25K	**Salcha River,**	87.78	26	P		**P**	22 47 08.4	-0.6
	baz=269							
HARP	**HARP**	87.84	28	P		**P**	22 47 08.8	-0.5
	baz=269							
MOS	**Moscow**	87.93	326	*e*P		**P**	22 47 05.9	-3.9
MOS				*e*			22 50 32.1	
MOS				*e*S		**S**	22 57 46.1	-5.0
MOS					pmax	pmax		
	comp=Z,300nm,2.0s							
MOS					pmax	pmax		
	comp=Z,98nm,1.4s							
MOS					MLR	MLR		
	comp=Z,700nm,21.0s							
RIDG	**Independent Ri**	88.00	26	IAmb		IAmb	22 47 12.5	
	comp=Z,31nm,1.2s							
RIDG	**Independent Ri**	88.00	26	P		**P**	22 47 10.1	0.0
	baz=270,SNR=6.8							
C26K	**Camden Bay**	88.02	20	P		**P**	22 47 09.8	-0.2
	baz=269,SNR=9.7							
ANN	**Anapa**	88.08	315	*e*P		**P**	22 47 09.0	-1.8
ANN				*e**PP		**pwP**	22 47 19.7	-2.0
ANN				*e*S		**SKSac**	22 57 34.6	-2.9
ANN					pmax	pmax		
	comp=Z,42nm,0.7s							
BMRM	**Bremner River**	88.10	29	P		**P**	22 47 09.7	-1.0
	baz=270							
N25K	**Chitina, Valde**	88.10	29	IAmb		IAmb	22 47 14.1	
	comp=Z,55nm,1.6s							
N25K	**Chitina, Valde**	88.10	29	P		**P**	22 47 10.2	-0.5
	baz=270							
BMAR	**Burnt Mountain**	88.12	23	P		**P**	22 47 11.7	+1.0
KAIM	**Kayak Island**	88.19	30	P		**P**	22 47 10.6	-0.4
	baz=270							
F26K	**Shenjek River**	88.29	22	P		**P**	22 47 11.1	-0.3
	baz=270							
DOT	**Dot Lake**	88.34	27	IAmb		IAmb	22 49 58.2	
	comp=Z,35nm,1.6s							
SCRK	**Sand Creek**	88.38	26	P		**P**	22 47 11.1	-0.9
	baz=270							
KIBK	**Kibwezi**	88.38	268	P		**P**	22 47 13.5	+0.5
KIBK	**Kibwezi**	88.38	268	P		**P**	22 47 13.0	0.0
	SNR=17							
G26K	**Porcupine Rive**	88.44	23	P		**P**	22 47 11.6	-0.4
	baz=270							
C27K	**Jago River**	88.44	21	IAmb		IAmb	22 47 14.0	
	comp=Z,49nm,1.6s							
C27K	**Jago River**	88.44	21	P		**P**	22 47 11.5	-0.5
	baz=270							
GLB	**Gilahina Butte**	88.48	29	IAmb		IAmb	22 47 15.1	
	comp=Z,22nm,1.1s							
OBN	**Obninsk**	88.54	325	P		**P**	22 47 11.3	-1.4
OBN	**Obninsk**	88.54	325	*e*P		**P**	22 47 11.0	-1.7
OBN				*e*			22 50 41.1	
OBN				*e*PPP		PPP	22 52 36.4	
OBN					pmax	pmax		
	comp=Z,26nm,0.8s							
OBN	**Obninsk**	88.54	325	P		**P**	22 47 12.5	-0.2
	comp=Z,1μmcomp=Z,61nm,1.1s							
J26L	**Joseph Creek**	88.56	26	IAmb		IAmb	22 47 14.4	
	comp=Z,35nm,1.6s							
J26L	**Joseph Creek**	88.56	26	P		**P**	22 47 12.4	-0.4
	baz=271							
L26K	**Log Cabin Wild**	88.67	27	P		**P**	22 47 12.6	-0.7
	baz=271							
I26K	**Coal Creek Min**	88.72	25	P		**P**	22 47 13.1	-0.3
	baz=271							
CRQE	**Cirque**	88.84	29	P		**P**	22 47 13.6	-0.6
	baz=271							
M26K	**Nabesna, AK**	88.85	28	P		**P**	22 47 13.9	-0.3
	baz=271							
KMBO	**Kilima Mbogo**	89.14	269	P		**P**	22 47 16.6	-0.1
	comp=Z,6.7nm,0.9s,baz=73,slow=4.2,SNR=14							
	comp=Z,6.7nm,0.9s							
KMBO	**Kilima Mbogo**	89.14	269	*i* P		**P**	22 47 17.2	+0.4
KMBO					pmax	pmax		
	comp=Z,7.0nm,0.9s							
K27K	**Chicken**	89.22	26	IAmb		IAmb	22 47 18.8	
	comp=Z,36nm,1.2s							
K27K	**Chicken**	89.22	26	P		**P**	22 47 15.3	-0.5
	baz=272							
E27K	**Coleen River**	89.24	22	IAmb		IAmb	22 47 17.7	
	comp=Z,30nm,1.4s							
E27K	**Coleen River**	89.24	22	P		**P**	22 47 16.0	+0.1
	baz=272							
G27K	**Doyon Strip**	89.28	23	P		**P**	22 47 15.6	-0.5
	baz=272							
I27K	**Kandik River**	89.35	25	P		**P**	22 47 16.1	-0.3
	baz=272							
H27K	**Steamboat Moun**	89.36	24	P		**P**	22 47 16.2	-0.3
	baz=273							
L27K	**Beaver Creek,**	89.37	27	P		**P**	22 47 16.5	0.0
	baz=272							
M27K	**Edge Creek, AK**	89.37	28	P		**P**	22 47 16.2	-0.5
	baz=272							
BNN	**Bunyan**	89.37	309	IAmb		IAmb	22 47 22.7	
	comp=Z,69nm,1.8s							
BCAR	**Beaver Creek A**	89.39	27	P		**P**	22 47 16.6	-0.1
D27M	**Malcolm River**	89.42	21	IAmb		IAmb	22 47 18.6	
	comp=Z,40nm,1.8s							
D27M	**Malcolm River**	89.42	21	P		**P**	22 47 16.4	-0.4
	baz=273							
MESA	**MESA**	89.42	30	P		**P**	22 47 16.1	-1.0
	baz=272							
BARN	**Barnard Glacie**	89.53	29	IAmb		IAmb	22 49 41.9	
	comp=Z,16nm,0.5s							
CTG	**Chitna Glacier**	89.69	29	P		**P**	22 47 17.5	-0.8
	baz=273							
BVCY	**Beaver Creek**	89.84	28	P		**P**	22 47 18.2	-0.6
	baz=273							
MMAI	**Mount Meron Ar**	89.91	303	P		**P**	22 47 19.8	0.0
	comp=Z,12nm,0.9s,baz=242,slow=1.8,SNR=9.9							
	comp=Z,12nm,0.9s							
F28M	**Old Crow**	89.93	22	P		**P**	22 47 18.7	-0.4
	baz=274,SNR=8.8							
E28M	**Babbage River**	89.98	21	IAmb		IAmb	22 47 20.9	
	comp=Z,46nm,1.5s							
E28M	**Babbage River**	89.98	21	P		**P**	22 47 18.7	-0.6
	baz=274,SNR=14							
I28M	**Miner Creek**	90.06	25	IAmb		IAmb	22 47 21.6	
	comp=Z,73nm,1.8s							
I28M	**Miner Creek**	90.06	25	P		**P**	22 47 19.2	-0.6
	baz=274,SNR=6.3							
YUK3	**Moose Creek**	90.07	28	P		**P**	22 47 19.5	-0.6
	baz=274							
D28M	**Stokes Point**	90.21	21	P		**P**	22 47 20.8	+0.5
	baz=275							
O28M	**Mount Upton**	90.26	29	P		**P**	22 47 19.7	-1.4
	baz=274							
PINM	**Pinnacle**	90.28	30	P		**P**	22 47 20.1	-0.8
	baz=274							
SYO	**Syowa Base**	90.36	201⇑	*i* P		**P**	22 47 20.8	-0.2
SYO	**Syowa Base**	90.36	201⇑	*e*pP		pP	22 47 27.2	-2.6
DAWY	**Dawson**	90.39	26	P		**P**	22 47 20.6	-0.7
	baz=274,SNR=6.5							
SIM	**Simferopol'**	90.44	315	*e*P		**P**	22 47 21.0	-0.9
SIM					pmax	pmax		
	comp=Z,21nm,0.8s							
YUK8	**Steele Glacier**	90.44	29	P		**P**	22 47 21.4	-0.5
	baz=274							
E29M	**Blow River**	90.60	22	P		**P**	22 47 22.6	+0.5
	baz=276							
H29M	**Whitestone**	90.64	24	IAmb		IAmb	22 47 45.9	
	comp=Z,105nm,2.0s							
H29M	**Whitestone**	90.64	24	P		**P**	22 47 22.2	-0.2
	baz=276							
G29M	**Pine Creek**	90.70	23	IAmb		IAmb	22 47 24.2	
	comp=Z,42nm,1.4s							
G29M	**Pine Creek**	90.70	23	P		**P**	22 47 22.5	-0.2
	baz=276							
PNL	**Peninsula**	90.74	30	P		**P**	22 47 22.9	-0.1
	baz=274							
LODK	**Lodwar**	90.89	273	P		**P**	22 47 24.3	-0.5
M29M	**Somme Creek**	90.95	28	IAmb		IAmb	22 47 26.1	
	comp=Z,42nm,1.6s							
M29M	**Somme Creek**	90.95	28	P		**P**	22 47 23.8	-0.3
	baz=275							
YUK4	**Talbot Arm**	90.97	29	P		**P**	22 47 23.6	-0.7
	baz=275							
L29M	**L29M**	91.04	27	IAmb		IAmb	22 47 26.7	
	comp=Z,28nm,1.1s							
L29M	**L29M**	91.04	27	P		**P**	22 47 24.5	+0.1
	baz=276							
BR104	**Keskin Array S**	91.05	310	P		**P**	22 47 23.6	-1.4
	comp=Z,50nmcomp=Z,6.1nm,0.9s							
BR131	**Keskin Array S**	91.05	310	IAmb		IAmb	22 47 28.7	
	comp=Z,30nm,1.8s							
BR131	**Keskin Array S**	91.05	310	P		**P**	22 47 23.2	-1.8
BR131	**Keskin Array S**	91.05	310	*i* P		**P**	22 47 23.8	-1.3
BRTR	**Keskin Array B**	91.05	310	P		**P**	22 47 23.5	-1.6
	comp=Z,2.5nm,0.7s,baz=112,slow=5.0,SNR=12							
BRTR					LR	LR	23 34 47.1	
	comp=Z,148nm,21.1s,baz=88,slow=40							
	comp=Z,2.5nm,0.7s							
BRTR	**Keskin Array B**	91.05	310	P		**P**	22 47 22.9	-2.1
BR106	**Keskin Array S**	91.07	310	P		**P**	22 47 23.8	-1.3
	comp=Z,51nmcomp=Z,6.3nm,0.8s							
BR105	**Keskin Array S**	91.07	310	P		**P**	22 47 24.1	-1.0
O29M	**Mount Kennedy**	91.10	30	P		**P**	22 47 24.6	-0.2
	baz=275							
YUK6	**Outpost Mounta**	91.14	29	P		**P**	22 47 24.6	-0.5
	baz=275							
K29M	**Barlow Dome**	91.24	26	IAmb		IAmb	22 47 27.2	
	comp=Z,29nm,1.6s							
K29M	**Barlow Dome**	91.24	26	P		**P**	22 47 25.5	+0.2
	baz=276							
EPYK	**Eagle Plains**	91.28	24	IAmb		IAmb	22 47 26.5	
	comp=Z,34nm,1.2s							
EPYK	**Eagle Plains**	91.28	24	P		**P**	22 47 25.2	-0.2
	baz=277							
G30M	**tAoh Zraii Nji**	91.40	23	P		**P**	22 47 25.6	-0.3
	baz=277							
F30M	**Barrier River**	91.48	22	IAmb		IAmb	22 47 27.6	
	comp=Z,48nm,1.4s							
F30M	**Barrier River**	91.48	22	P		**P**	22 47 26.2	0.0
	baz=278							
CSS	**Mathiatis**	91.55	305	IAmb		IAmb	22 47 34.9	
	comp=Z,9nm,1.0s							
I30M	**Mount Dempster**	91.57	25	P		**P**	22 47 26.8	0.0
	baz=277							
HYT	**Haines Junctio**	91.57	29	P		**P**	22 47 26.7	-0.3
	baz=276							
QSPA	**South Pole Qui**	91.57	180	P		**P**	22 47 29.8	+3.0
	comp=Z,4.9nm,0.6s,baz=154,slow=1.4,SNR=15							
QSPA	**South Pole Qui**	91.57	180	P		**P**	22 47 29.8	+3.0
QSPA				IAmb		IAmb	22 47 42.4	
	comp=Z,59nm,1.9s							
P29M	**Windy Craggy**	91.58	30	P		**P**	22 47 26.8	-0.1
	baz=276							
J30M	**Hart River**	91.67	25	IAmb		IAmb	22 47 29.3	
	comp=Z,26nm,1.6s							
J30M	**Hart River**	91.67	25	P		**P**	22 47 26.7	-0.6
	baz=277							
N30M	**Aishikik Lake**	91.70	29	P		**P**	22 47 27.1	-0.4
	baz=276							
M30M	**Minto, Yukon**	91.71	27	IAmb		IAmb	22 47 29.6	
	comp=Z,58nm,1.6s							
M30M	**Minto, Yukon**	91.71	27	P		**P**	22 47 27.0	-0.4
	baz=277							
G31M	**Satah River**	92.17	23	IAmb		IAmb	22 47 30.2	
	comp=Z,29nm,1.4s							
G31M	**Satah River**	92.17	23	P		**P**	22 47 28.4	-1.1
	baz=279,SNR=6.7							
INK	**Inuvik**	92.22	21	IAmb		IAmb	22 47 30.6	
	comp=Z,36nm,1.4s							
INK	**Inuvik**	92.22	21	P		**P**	22 47 29.1	-0.5
	baz=280,SNR=7.6							
ARCES	**ARCESS Array B**	92.26	340	P		**P**	22 47 28.5	-1.3
	comp=Z,6.2nm,0.7s,baz=83,slow=4.8,SNR=15							
ARCES					PKKP	**PKKPdf**	23 04 44.4	-0.4
	comp=Z,1.2nm,0.6s,baz=268,slow=3.2,SNR=8.6			

KIEV	**Kiev**	**93.27**	**321**	P	**P**	**22 47 33.8**	**-1.1**
KIEV				pmax	pmax			
	comp=Z,37nm,1.9s							
AK05	**Malin Array Si**	**93.28**	**321**	P	**P**	**22 47 33.9**	**-1.0**
R32K	**Eaglecrest**	**93.41**	**32**	P	**P**	**22 47 34.8**	**-0.5**
	baz=279							
FINES	**FINESS Array B**	**93.47**	**332**	P	**P**	**22 47 34.0**	**-1.6**
	comp=Z,1.9nm,0.4s,baz=69,slow=4.2,SNR=16							
	comp=Z,1.9nm,0.4s							
FINES	**FINESS Array B**	**93.47**	**332**	P	**P**	**22 47 34.0**	**-1.6**
BORA	**Eskisehir**	**93.49**	**310**	IAmb	IAmb	22 47 38.4		
	comp=Z,46nm,1.7s							
S32K	**Killisnoo**	**93.50**	**32**	P	**P**	**22 47 35.6**	**-0.2**
	baz=278							
P32M	**Atlin**	**93.61**	**30**	P	**P**	**22 47 36.2**	**-0.1**
	baz=279							
N32M	**Quiet Lake**	**93.66**	**29**	P	**P**	**22 47 35.7**	**-0.8**
	baz=280							
P33M	**Teslin, Yukon**	**93.95**	**29**	P	**P**	**22 47 37.2**	**-0.7**
	baz=280							
NACGM	**Naroch**	**94.17**	**325**	*e*P	**P**	**22 47 38.5**	**-0.4**
	comp=Z,16nm,0.9s,baz=81							
Q32M	**Nakina River**	**94.45**	**31**	P	**P**	**22 47 39.5**	**-0.9**
	baz=281							
U33K	**Whale Pass**	**94.50**	**34**	P	**P**	**22 47 39.6**	**-0.8**
	baz=280							
CRAG	**Craig**	**94.61**	**34**	P	**P**	**22 47 40.2**	**-0.7**
	baz=280							
WRAK	**Wrangell Islan**	**94.88**	**33**	P	**P**	**22 47 41.3**	**-0.8**
	baz=280							
R33M	**Jennings River**	**95.03**	**30**	P	**P**	**22 47 41.7**	**-1.2**
	baz=282							
NOR	**Nord**	**95.11**	**355**	*i* P	**P**	**22 47 42.5**	**-0.2**
NOR				IAmb	IAmb	22 47 43.5		
	comp=Z,22nm,1.1s							
S34M	**Telegraph Cree**	**95.24**	**32**	P	**P**	**22 47 42.8**	**-0.9**
	baz=282							
C36M	**Paulatuk**	**95.28**	**20**	IAmb	IAmb	22 47 44.7		
	comp=Z,37nm,1.6s							
C36M	**Paulatuk**	**95.28**	**20**	P	**P**	**22 47 43.0**	**-0.7**
	baz=289							
DLBC	**Dease Lake**	**95.71**	**31**	P	**P**	**22 47 45.2**	**-0.7**
	baz=282							
T35M	**Bob Quinn**	**95.90**	**32**	P	**P**	**22 47 46.6**	**-0.3**
	baz=282							
WTLY	**Watson Lake, Y**	**95.94**	**29**	P	**P**	**22 47 47.0**	**0.0**
	baz=284							
MLR	**Muntele Rosu**	**96.13**	**316**	IAmb	IAmb	22 47 52.5		
	comp=Z,44nm,1.5s							
BUR08	**Bucovina Ar. S**	**96.30**	**318**	IAmb	IAmb	22 48 10.5		
	comp=Z,12nm,0.9s							
SUW	**Suwalki**	**96.39**	**325**	*e*P	**P**	**22 47 51.1**	**+2.0**
LIRD	**Liard River Hi**	**97.44**	**29**	P	**P**	**22 47 53.5**	**-0.3**
	baz=286							
TOAD	**Toad River Com**	**98.03**	**30**	P	**P**	**22 47 56.5**	**+0.1**
	baz=287							
KOTAN	**Kotaneelee Air**	**98.22**	**28**	P	**P**	**22 47 57.3**	**+0.1**
	baz=288							
STHS	**Stebnicka Huta**	**98.54**	**320**	*i* P	Pdif	22 48 02.2	+3.2
STHS	**Stebnicka Huta**	**98.54**	**320**	*e*PDIFF	Pdif	22 48 02.2	+3.2
DAG	**Danmarks Havn**	**99.25**	**352**	*i* P	**Pdif**	**22 48 00.2**	**-1.3**
HFS	**Hagfors**	**99.67**	**332**	P	**Pdif**	**22 48 01.9**	**-1.8**
	comp=Z,0.7nm,0.4s,baz=108,slow=4.8,SNR=9.5							
	comp=Z,0.7nm,0.4s							
NB2	**NORSAR Subarra1**	**100.47**	**333**	P	**Pdif**	**22 48 04.9**	**-2.4**
	comp=Z,8nm,1.2s,baz=66,slow=4.8							
NOA	**NORSAR Array B**	**100.47**	**333**	P	**Pdif**	**22 48 05.6**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=65,slow=4.4,SNR=2.9							
STEB	**Steborice**	**100.60**	**321**	*e*PDIFF	**Pdif**	**22 48 11.7**	**+3.6**
MAUC	**Maruska**	**100.72**	**321**	*e*PDIFF	**Pdif**	**22 48 12.2**	**+3.5**
DPC	**Dobruska-Polom**	**101.39**	**322**	*e*P	**Pdif**	**22 48 15.5**	**+3.9**
DPC	**Dobruska-Polom**	**101.39**	**322**	*e*PDIFF	**Pdif**	**22 48 15.5**	**+3.9**
DBG	**Daneborg**	**101.51**	**351**	*i* P	**Pdif**	**22 48 10.9**	**-0.7**
YKA	**Yellowknife Ar**	**101.53**	**24**	P	**Pdif**	**22 48 12.8**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=294,slow=4.9,SNR=3.2							
YKA				PKIKP	**PKiKP**	**22 52 35.7**	**0.0**	
	comp=Z,0.6nm,0.6s,baz=275,slow=2.3,SNR=4.5							
SNAA	**Sanae**	**103.12**	**195**	Pdiff	**Pdif**	**22 48 19.3**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=168,slow=5.5,SNR=2.1							
NVAR	**Mina Array Bea**	**108.56**	**48**	PKKPbc	PKKPbc	23 04 12.2	+12	
	comp=Z,0.7nm,0.6s,baz=105,slow=4.6,SNR=4.7							
PDAR	**Pinedale Array**	**113.15**	**42**	PKKPbc	PKKPbc	23 03 44.5	-0.9	
	comp=Z,0.7nm,0.6s,baz=130,slow=2.9,SNR=4.9							
PDAR				PKKPab	PKKPab	23 03 50.6	-1.8	
	comp=Z,2.1nm,0.8s,baz=351,slow=3.3,SNR=10							
PV02	**Paradox Valley**	**115.66**	**46**		**PKPdf**	**22 53 04.6**	**+1.5**
ANMO	**Albuquerque**	**118.69**	**48**	PKP	**PKiKP**	**22 53 09.5**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=64,slow=5.1,SNR=3.6							
ANMO	**Albuquerque**	**118.69**	**48**		**PKiKP**	**22 53 09.9**	**+0.9**
ECSD	**EROS Data Cent**	**120.69**	**35**		**PKPdf**	**22 53 12.5**	**+0.1**
VHRN	**Van Horn**	**121.52**	**52**		**PKiKP**	**22 53 15.1**	**+0.4**
SCHQ	**Schefferville**	**122.67**	**9**	PKP	**PKPdf**	**22 53 15.8**	**0.0**
	comp=Z,3.0nm,0.4s,baz=268,slow=6.9,SNR=6.1							
TXAR	**Lajitas Array**	**123.15**	**53**	PKP	**PKPdf**	**22 53 17.9**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=279,slow=0.7,SNR=9.3							
TORD	**Torodi Ar. Bea**	**123.18**	**287**	PKP	**PKPdf**	**22 53 18.1**	**+0.1**
	comp=Z,5.0nm,0.6s,baz=45,slow=4.2,SNR=4.8							
TORD	**Torodi Ar. Bea**	**123.18**	**287**		**PKPdf**	**22 53 17.9**	**0.0**
L40A	**Anamosa**	**124.81**	**34**		**PKPdf**	**22 53 20.5**	**+0.2**
CCM	**Cathedral Cave**	**127.42**	**37**		**PKiKP**	**22 53 26.0**	**+0.1**
CCM	**Cathedral Cave**	**127.42**	**37**	PKIKP	**PKiKP**	**22 53 26.0**	**+0.1**
DBIC	**Dimbokro**	**130.61**	**280**	PKP	**PKPdf**	**22 53 32.6**	**+0.5**
	comp=Z,7.9nm,0.7s,baz=118,slow=2.1,SNR=17							
TKL	**Tuckaleechee C**	**133.43**	**34**	PKP	**PKPdf**	**22 53 37.7**	**+0.8**
	comp=Z,5.8nm,0.6s,baz=140,slow=7.3,SNR=8.4							
PLCA	**Paso Flores**	**138.19**	**161**	PKP	**PKPdf**	**22 53 46.7**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=254,slow=2.6,SNR=7.5							
PLCA	**Paso Flores**	**138.19**	**161**		**PKiKP**	**22 53 47.6**	**-0.2**
TRQA	**Tornquist**	**142.97**	**169**		**PKPdf**	**22 53 51.0**	**-3.4**
TRQA	**Tornquist**	**142.97**	**169**	PKIKP	**PKPdf**	**22 53 51.0**	**-3.4**
BO01	**Tunca**	**143.58**	**155**		PKPbc	22 53 53.5	+0.6	
CNGN	**Cerro Negro**	**144.30**	**66**		PKPbc	22 53 56.2	+0.6	
PEL	**Peldehue**	**144.82**	**155**		PKPbc	22 53 57.4	+0.6	
PEL	**Peldehue**	**144.82**	**155**	PKIKP	PKPbc	22 53 57.4	+0.6	
AAGR	**Agrelo**	**145.63**	**157**	*e*P	**PKPab**	**22 54 00.3**	**+0.5**
ARCO	**CERRO ARCO**	**145.81**	**157**	*e*P	**PKPbc**	**22 54 00.3**	**+0.2**
ASAL	**Salagasta**	**146.07**	**157**	*e*P	**PKPab**	**22 54 01.6**	**+0.2**
AUSP	**Uspallata**	**146.16**	**156**	*e*P	**PKPab**	**22 54 02.9**	**+0.9**
ACAN	**Cantantal**	**146.97**	**159**	*e*P	**PKPdf**	**22 54 02.6**	**+1.1**
MRA	**San Martin**	**147.35**	**161**	*e*P	**PKPab**	**22 54 05.8**	**-0.5**
ACCO	**Cerro Coronel**	**147.72**	**155**	*e*P	**PKPdf**	**22 54 02.6**	**-0.6**
AROD	**Rodeo**	**147.90**	**154**	*e*P	**PKPbc**	**22 54 06.8**	**+0.4**
ACDV	**Cuesta del Vie**	**148.06**	**154**	*e*P	**PKPbc**	**22 54 07.1**	**+0.5**
LCO	**Las Campanas**	**148.30**	**151**		**PKPbc**	**22 54 07.8**	**+0.4**
LCO	**Las Campanas**	**148.30**	**151**	PKP2	**PKPbc**	**22 54 07.8**	**+0.4**
AGUA	**GUANDACOL**	**148.92**	**154**	*e*P	**PKPbc**	**22 54 09.4**	**+0.6**
NMDO	**Nuevo Mundo**	**149.60**	**42**		**PKiKP**	**22 54 11.7**	**+0.1**
GTBY	**Guantanamo Bay**	**149.89**	**43**		**PKiKP**	**22 54 12.7**	**+0.3**
CYA	**Choya**	**150.94**	**158**	*e*P	**PKPbc**	**22 54 13.0**	**-0.7**
FSA	**Cafayete**	**152.94**	**155**	*e*P	**PKiKP**	**22 54 18.8**	**+0.2**
AZAP	**Zapla**	**154.99**	**155**	*e*P	**PKPdf**	**22 54 14.3**	**0.0**
OTAV	**Otavalo**	**155.12**	**86**	*e*P	**PKPdf**	**22 54 11.4**	**-3.6**
CPUP	**Villa Florida**	**155.21**	**172**	PKP	**PKPdf**	**22 54 13.8**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=23,slow=2.7,SNR=3.2							
CPUP				PKPbc	PKPbc	22 54 24.1		
	comp=Z,2.2nm,0.9s,baz=21,slow=2.7,SNR=6.7							
CPUP				PKPab	**PKPab**	**22 54 36.0**	**-2.8**	
	comp=Z,1.8nm,0.7s,baz=31,slow=2.9,SNR=3.3							
CPUP	**Villa Florida**	**155.21**	**172**	PKPbc	PKPbc	22 54 22.8		
LPAZ	**La Paz**	**159.62**	**136**	PKP	**PKPdf**	**22 54 20.8**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=72,slow=1.7,SNR=10							
LPAZ				PKPab	**PKPab**	**22 54 59.6**	**+0.7**	
	comp=Z,3.1nm,0.8s,baz=203,slow=2.6,SNR=4.0							
LPAZ	**La Paz**	**159.62**	**136**	*e*P	**PKPdf**	**22 54 18.0**	**-2.7**
SDV	**Santo Domingo**	**160.09**	**58**	*e*P	**PKPdf**	**22 54 18.1**	**-2.7**

IDC ***14*** *22:42:19.1±0.3, 1.°57N×126.°20E, h0km, mb5.0/41, mbtmp4.9/43, ML4.7/2, Error ellipse: s-maj=16.7km s-min=9.5km az=71.0*

BJI ***14*** *22:42:20.0, 1.°13N×126.°43E, h48km, mB5.5/11, mb5.1/66, Ms4.8/16, Ms7 4.7/16*

NEIC ***14*** *22:42:22.6±1.7, 1.°59N±0.°06×126.°40E±0.°06, h21km±3km, mb5.4/252, Mww5.2/7, Error ellipse: s-maj=9.4km s-min=7.2km az=217.0*

MOS ***14*** *22:42:22.7±0.8, 1.°60N×126.°25E, h42km, mb5.4/63, Error ellipse: s-maj=9.0km s-min=4.9km az=116.0*

DJA ***14*** *22:42:25.7±0.2, 2.°N±2.°×12.°6E±.°, h43km±2km, M5.2/89, mb5.3/89, mB5.7/35, MLv5.3/23, Mw(mB)5.2/35*

GCMT ***14*** *22:42:29.2±0.3, 1.°73N±0.°03×126.°23E±0.°03, h30km, MW5.5/78, Moment Tensor Solution. s28,c35; s78,c96; Duration: 1ŝ3 Moment tensor: Scale 10^17Nm; Mrr2.02±.14; Mθθ-0.67±.08; Mφφ-1.36±.08; Mrθ-0.51±.11;*

Mrφ-0.57±.04; Mθφ0.17±.09; Best double couple: Mo1.90900×10^17 NP1:φ18.00000°, δ45.00000°, λ73.00000°. NP2:φ221.00000°, δ48.00000°, λ106.00000°. Principal axes: T 2.1350, Plg78.0000°, Azm202.0000°; N -0.4580, Plg12.0000°, Azm30.0000°; P -1.6830, Plg2.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 22:42:23.6±0.6, 1.°60N±0.°03×126.°38E±0.°04, h30km±4km, n944, σ1ŝ29/958, mb5.3/276, MS4.7/10, 13C-12D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**130**			**Pb**	**22 42 46.2**	**-1.0**
TNTI	**Ternate**	**1.29**	**130**	P		**Pb**	**22 42 46.3**	**-1.0**
TNTI	**Ternate**	**1.29**	**130**	P		**Pb**	**22 42 46.0**	**-1.3**
SGSI	**Sangihe**	**2.24**	**338**	P		**Pn**	**22 42 58.7**	**+0.1**
KMSI	**Cibinong**	**2.60**	**247**	P		**Pn**	**22 43 05.5**	**+1.8**
SANI	**Sanana**	**3.65**	**186**	P		**Pn**	**22 43 19.2**	**+1.1**
SANI	**Sanana**	**3.65**	**186**	S		**Sn**	**22 44 02.1**	**+2.0**
SANI	**Sanana**	**3.65**	**186**	P		**Pn**	**22 43 18.9**	**+0.8**
LUWI	**Luwuk**	**4.46**	**234**	Pn		**Pn**	**22 43 31.3**	**+2.1**
LUWI	**Luwuk**	**4.46**	**234**	P		**Pn**	**22 43 32.7**	**+3.5**
LUWI	**Luwuk**	**4.46**	**234**	P		**Pn**	**22 43 32.0**	**+2.8**
MRSI	**Marisa**	**4.57**	**256**	P		**Pn**	**22 43 33.1**	**+2.3**
NLAI	**Namlea**	**4.86**	**171**	P		**Pn**	**22 43 36.5**	**+1.7**
APSI	**Ampana**	**5.34**	**242**	P		**Pn**	**22 43 44.4**	**+3.0**
SWI	**Sorong**	**5.46**	**117**	P		**Pn**	**22 43 45.5**	**+2.5**
	148nm,0.8s							
DAV	**Davao City (W)**	**5.49**	**352**	Pn		**Pn**	**22 43 46.3**	**+2.9**
	80nm,0.3s,baz=264,slow=6.2,SNR=5.9							
DAV				Sn		**Sn**	**22 44 52.0**	**+6.4**
	29nm,0.3s,baz=37,slow=22,SNR=3.7							
DAV	**Davao City (W)**	**5.49**	**352**	Pn		**Pn**	**22 43 44.0**	**+0.5**
DAV	**Davao City (W)**	**5.49**	**352**	P		**Pn**	**22 43 45.9**	**+2.5**
MSAI	**Masohi**	**5.54**	**153**	P		**Pn**	**22 43 46.8**	**+2.7**
	1.5nm7μm405nm,0.9s							
AAI	**Ambon**	**5.56**	**161**	P		**Pn**	**22 43 47.4**	**+3.0**
	1.0nm279nm,0.9s							
TOLI2	**Tolitoli**	**5.61**	**265**	Pn		**Pn**	**22 43 44.9**	**-0.2**
TOLI2	**Tolitoli**	**5.61**	**265**	P		**Pn**	**22 43 45.3**	**+0.2**
MPSI	**Mapaga**	**6.60**	**259**	P		**Pn**	**22 44 01.9**	**+3.3**
	0.9nm261nm,0.7s							
KDI	**Kendari**	**6.68**	**214**	P		**Pn**	**22 44 02.0**	**+2.3**
PCI	**Palu**	**7.00**	**249**	P		**Pn**	**22 44 06.7**	**+2.6**
	1.6nm6μm511nm,0.9s							
BNDI	**Bandanaira**	**7.03**	**150**	P		**Pn**	**22 44 06.6**	**+2.0**
BNDI	**Bandanaira**	**7.03**	**150**	P		**Pn**	**22 44 08.1**	**+3.5**
	1.0nm7μm238nm,0.9s							
FAKI	**Fak Fak**	**7.39**	**127**	Pn		**Pn**	**22 44 10.5**	**+1.0**
FAKI	**Fak Fak**	**7.39**	**127**	P		**Pn**	**22 44 11.3**	**+1.7**
FAKI	**Fak Fak**	**7.39**	**127**	P		**Pn**	**22 44 12.2**	**+2.6**
	0.6nm3μm211nm,1.2s							
BBSI	**Bau Bau**	**8.00**	**208**	P		**Pn**	**22 44 21.4**	**+3.5**
	4μm379nm,1.1s							
TTSI	**Tana Toraja**	**8.02**	**235**	P		**Pn**	**22 44 20.2**	**+2.1**
	4μm445nm,1.1s							
RKPI	**Ransiki, Papua**	**8.39**	**112**	P		**Pn**	**22 44 25.9**	**+2.6**
	125nm,0.9s							
SPSI	**Sidrap Palu**	**8.61**	**230**	P		**Pn**	**22 44 28.5**	**+2.2**
	3μm207nm,0.6s							
MYLDM	**Lahad Datu**	**8.63**	**295**			**Pn**	**22 44 29.6**	**+3.1**
MYLDM	**Lahad Datu**	**8.63**	**295**	P		**Pn**	**22 44 28.5**	**+2.0**
BNSI	**Bone**	**8.65**	**226**	P		**Pn**	**22 44 29.1**	**+2.3**
BKSI	**Bukukumba**	**9.29**	**222**	P		**Pn**	**22 44 38.0**	**+2.4**
	2μm237nm,0.7s							
KAPI	**Kappang**	**9.33**	**225**	Pn		**Pn**	**22 44 38.6**	**+2.5**
	13nm,0.3s,baz=64,slow=3.3,SNR=39							
KAPI				Sn		**Sn**	**22 46 20.5**	**+0.4**
	1.5nm,0.3s,baz=345,slow=20,SNR=1.2							
KAPI	**Kappang**	**9.33**	**225**	P		**Pn**	**22 44 37.5**	**+1.4**
KAPI	**Kappang**	**9.33**	**225**	*i* P		**Pn**	**22 44 38.0**	**+1.9**
BSSI	**Bau Bau, Buton**	**9.68**	**217**	P		**Pn**	**22 44 43.2**	**+2.2**
BKB	**Balikpapan**	**9.89**	**253**	Pn		**Pn**	**22 44 44.8**	**+0.9**
BKB	**Balikpapan**	**9.89**	**253**	P		**Pn**	**22 44 42.7**	**-1.2**
BKB	**Balikpapan**	**9.89**	**253**	P		**Pn**	**22 44 45.7**	**+1.8**
	224nm,1.5s							
BAKI	**Biak**	**10.12**	**106**	P		**Pn**	**22 44 50.3**	**+3.3**
	5μm316nm,1.2s							
MMRI	**Maumere**	**10.97**	**202**			**Pn**	**22 45 00.1**	**+1.4**
MMRI	**Maumere**	**10.97**	**202**	P		**Pn**	**22 45 01.6**	**+2.9**
MMRI	**Maumere**	**10.97**	**202**	P		**Pn**	**22 45 01.8**	**+3.1**
	83nm,1.1s							
EDFI	**Ende, Flores**	**11.29**	**204**	P		**Pn**	**22 45 05.6**	**+2.4**
	59nm,0.6s							
SOEI	**Soe**	**11.48**	**190**			**Pn**	**22 45 08.4**	**+2.6**
SOEI	**Soe**	**11.48**	**190**	P		**Pn**	**22 45 08.3**	**+2.6**
SOEI	**Soe**	**11.48**	**190**	S		**Sn**	**22 47 14.2**	**+1.2**
SOEI	**Soe**	**11.48**	**190**	P		**Pn**	**22 45 09.3**	**+3.6**
MTKI	**Muara Teweh, K**	**11.75**	**258**	P		**Pn**	**22 45 11.9**	**+2.5**
	76nm,0.8s							
BATI	**Baumata**	**12.04**	**193**	Pn		P	22 45 20.1	-5.7
	7.4nm,0.3s,baz=61,slow=1.6,SNR=16							
BATI	**Baumata**	**12.04**	**193**	P		Pn	22 45 17.6	+4.3
	180nm,1.0s							
BBKI	**Banjar Baru**	**12.58**	**246**	P		**Pn**	**22 45 23.2**	**+2.5**
WSI	**Waingapu**	**12.73**	**208**	P		**Pn**	**22 45 26.5**	**+3.8**
	4μm129nm,0.9s							
SMPI	**Sarmi**	**12.84**	**106**	P		**Pn**	**22 45 27.5**	**+3.3**
	122nm,1.4s							
BASI	**Baing, Sumba**	**13.08**	**206**	P		**Pn**	**22 45 30.6**	**+3.0**
	2μm207nm,1.6s							
WBSI	**Waikabubak, Su**	**13.16**	**212**	P		**Pn**	**22 45 31.9**	**+3.3**
	2μm162nm,0.8s							
PLAI	**Plampang**	**13.45**	**219**	P		**Pn**	**22 45 34.8**	**+2.3**
PLAI	**Plampang**	**13.45**	**219**	P		**Pn**	**22 45 35.8**	**+3.3**
	3μm239nm,0.9s							
TWSI	**Taliwang, Sumb**	**13.96**	**222**	P		**Pn**	**22 45 43.3**	**+3.7**
	209nm,0.8s							
SBUM	**Sibu**	**14.17**	**274**	Pn		**Pn**	**22 45 41.9**	**-0.5**
GENI	**Genyem**	**14.40**	**107**	P		**Pn**	**22 45 47.6**	**+2.0**
GENI	**Genyem**	**14.40**	**107**	P		**P**	**22 45 49.0**	**-3.2**
	6μm125nm,0.8s							
DRS	**Darwin Rock St**	**14.65**	**162**	P		**Pn**	**22 45 49.2**	**+0.3**
SRBI	**Singaraja**	**14.71**	**229**	P		**P**	**22 45 53.6**	**-2.0**
	118nm,0.9s							
JAY	**Jayapura**	**14.90**	**106**	Pn		**P**	**22 45 54.8**	**-3.0**
	0.8nm,0.3s,baz=275,slow=11,SNR=4.8							
	6.5nm,0.6s							
JAY	**Jayapura**	**14.90**	**106**	P		**P**	**22 45 54.7**	**-3.0**
	53nm,0.9s							
KMMI	**Kalianget**	**15.07**	**235**	P		**P**	**22 45 59.2**	**-0.4**
	178nm,0.7s							
DNP	**Denpasar**	**15.10**	**227**	P		**P**	**22 45 59.3**	**-0.6**
MTN	**Manton Dam**	**15.11**	**162**	P		**Pn**	**22 45 53.7**	**-1.4**
MTN	**Manton Dam**	**15.11**	**162**	Pn		**Pn**	**22 45 53.5**	**-1.6**
PBKI	**Pangkalan Bun**	**15.31**	**254**	P		**P**	**22 46 01.3**	**-1.0**
KDU	**Kakadu**	**15.43**	**157**	P		**Pn**	**22 45 58.1**	**-1.2**
JAGI	**Jajag, Banyuwa**	**15.77**	**230**	P		**P**	**22 46 08.6**	**-0.7**
JAGI	**Jajag, Banyuwa**	**15.77**	**230**	P		**Pn**	**22 46 05.3**	**+1.6**
JAGI	**Jajag, Banyuwa**	**15.77**	**230**	P		**P**	**22 46 09.0**	**+1.7**
	2μm154nm,0.8s							
BLJI	**Banyuglugur**	**15.77**	**234**	P		**P**	**22 46 07.7**	**+0.4**
	3μm194nm,0.6s							
KNRA	**Kununurra**	**17.33**	**172**	P		**Pn**	**22 46 23.3**	**-0.1**
	comp=Z,150nm,1.5s							
KNRA	**Kununurra**	**17.33**	**172**			**Pn**	**22 46 23.0**	**-0.5**
PCJI	**Pacitan**	**18.01**	**237**	P		**P**	**22 46 34.0**	**+1.8**
	comp=Z,200nm,0.5s							
UGM	**Wanagama**	**18.42**	**239**	P		**Pn**	**22 46 38.4**	**+1.5**
UGM	**Wanagama**	**18.42**	**239**	P		**Pn**	**22 46 39.6**	**+2.7**
TPI	**Tanjungpandan**	**19.21**	**257**	P		**Pn**	**22 46 47.7**	**+1.2**
KPJI	**Karang Pucung**	**19.54**	**243**	P		**P**	**22 46 49.4**	**+0.5**
	comp=Z,2μmcomp=Z,91nm,0.8s							
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P		**P**	**22 46 48.0**	**-1.4**
	comp=Z,9.3nm,0.8s							
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P		**P**	**22 46 48.7**	**-0.8**
	comp=Z,4.2nm,0.3s,baz=12,slow=9.4,SNR=41							
	comp=Z,14nm,0.5s							
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P		**P**	**22 46 49.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P		**P**	**22 46 48.2**	**-1.3**
MANU	**Manus Island**	**21.30**	**100**	P		**P**	**22 47 07.4**	**-0.7**
TWGBT	**Beinan**	**21.71**	**347**	P		**P**	**22 47 13.5**	**+1.1**
PMBI	**Palembang**	**22.06**	**258**	P		**P**	**22 47 17.1**	**+0.8**
YULB	**Yu-li**	**22.21**	**348**	P		**P**	**22 47 15.2**	**-2.6**
YULB	**Yu-li**	**22.21**	**348**	P		**P**	**22 47 18.2**	**+0.4**
TPUB	**Ta-pu**	**22.28**	**346**	P		**P**	**22 47 16.3**	**-2.3**
TPUB				IAmb	IAmb	22 47 24.3		
	comp=Z,134nm,0.6s							
TPUB	**Ta-pu**	**22.28**	**346**	P		**P**	**22 47 17.4**	**-1.1**
BTDF	**Bukit Timah Da**	**22.60**	**270**	P		**P**	**22 47 24.0**	**+2.0**
WB0	**Warramunga Arr**	**22.65**	**160**	P		**P**	**22 47 21.1**	**-1.4**
WB0				IAmb	IAmb	22 47 23.6		
	comp=Z,110nm,0.7s							
SSLB	**Suanglung**	**22.67**	**347**	P		**P**	**22 47 20.7**	**-2.0**
SSLB				IAmb	IAmb	22 47 37.5		
	comp=Z,63nm,0.7s							
SSLB	**Suanglung**	**22.67**	**347**	P		**P**	**22 47 21.5**	**-1.2**
COEN	**Coen**	**22.72**	**133**	P		**P**	**22 47 23.2**	**-0.1**
	comp=Z,39nm,0.8s							
COEN	**Coen**	**22.72**	**133**	P		**P**	**22 47 22.1**	**-1.2**
WRAB	**Tennant Creek**	**22.79**	**160**	P		**P**	**22 47 21.4**	**-2.5**
WRAB				IAmb	IAmb	22 47 30.1		
	comp=Z,108nm,0.7s							
WRAB	**Tennant Creek**	**22.79**	**160**	P		**P**	**22 47 22.7**	**-1.3**
WRAB	**Tennant Creek**	**22.79**	**160**	*i* P		**P**	**22 47 22.3**	**-1.7**
WRAB				pmax	pmax			
	comp=Z,72nm,0.5s							
WRA	**Warramunga Arr**	**22.79**	**160**	P		**P**	**22 47 22.7**	**-1.3**
	comp=Z,80nm,0.6s,baz=340,slow=11,SNR=98							
WRA				PcP	**PcP**	**22 51 15.1**	**0.0**	
	comp=Z,7.6nm,0.6s,baz=316,slow=2.5,SNR=8.2							
WRA				S	**S**	**22 51 32.5**	**+1.1**	
	comp=Z,12nm,1.0s,baz=341,slow=18,SNR=5.9							
	comp=Z,80nm,0.6s							
WRA	**Warramunga Arr**	**22.79**	**160**	P		**P**	**22 47 22.6**	**-1.4**
WRA	**Warramunga Arr**	**22.79**	**160**	*e*P		**P**	**22 47 22.7**	**-1.3**
WRA				pmax	pmax			
	comp=Z,88nm,0.6s							
WR8	**Warramunga Arr**	**22.86**	**160**	P		**P**	**22 47 23.3**	**-1.4**
WR8				IAmb	IAmb	22 47 28.7		
	comp=Z,100nm,0.7s							
KASI	**Kota Agung**	**22.97**	**252**	P		**P**	**22 47 27.9**	**+2.0**
	comp=Z,65nm,0.6s							
MDSI	**Maura Dua**	**22.99**	**255**	P		**P**	**22 47 27.8**	**+1.7**
	comp=Z,40nm,0.7s							
LWLI	**Liwa**	**23.24**	**253**	P		**P**	**22 47 30.4**	**+1.6**
	comp=Z,137nm,0.6s							
PMG	**Port Moresby**	**23.41**	**118**	P		**P**	**22 47 30.4**	**0.0**
	comp=Z,12nm,0.7s,baz=330,slow=8.6,SNR=11							
	comp=Z,12nm,0.7s							
PMG	**Port Moresby**	**23.41**	**118**	P		**P**	**22 47 29.6**	**-0.8**
PMG	**Port Moresby**	**23.41**	**118**	P		**P**	**22 47 30.7**	**+0.3**
PMG	**Port Moresby**	**23.41**	**118**	P		**P**	**22 47 29.6**	**-0.8**
PMG				pmax	pmax			
	comp=Z,73nm,1.3s							
YHNB	**Yeheng**	**23.44**	**349**	P		**P**	**22 47 29.2**	**-1.4**
YHNB				IAmb	IAmb	22 47 33.0		
	comp=Z,249nm,1.7s							
YHNB	**Yeheng**	**23.44**	**349**	P		**P**	**22 47 29.9**	**-0.6**
LHSI	**Lahat**	**23.47**	**257**	P		**P**	**22 47 32.8**	**+1.9**
	comp=Z,2μmcomp=Z,54nm,0.6s							
MBWA	**Marble Bar**	**23.54**	**196**	P		**P**	**22 47 29.4**	**-2.1**

comp=Z,26nm,0.8s
MORW Morawa 32.06 197 P P 22 48 47.9 0.0
FORT Forrest 32.24 177 P P 22 48 48.4 -1.1
comp=Z,30nm,0.8s
FORT Forrest 32.24 177 P P 22 48 48.4 -1.1
KMI Kunming 32.66 318 P P 22 48 53.0 -0.6
KMI sP sP 22 49 07.5 +2.2
KMI PcP **PcP 22 51 40.8 +1.6**
KMI pmax pmax
comp=Z,18nm,1.3s
KMI LR LR
comp=Z,800nm,22.3s
KMI LR LR
comp=Z,640nm,18.5s
KMI LR LR
comp=Z,540nm,18.8s
ENH Enshi 32.71 332 P P 22 48 53.4 -0.3
JMN Monobe 32.72 12 P P 22 48 53.2 -0.5
JMN IAmb IAmb 22 48 14.0
comp=Z,38nm,0.9s
KMBL Kambalda 33.06 187 P P 22 48 56.4 -0.3
comp=Z,24nm,1.1s
BLDU Ballidu 33.34 195 P P 22 48 58.6 -0.5
comp=Z,59nm,1.2s
BLDU Ballidu 33.34 195 P P 22 48 59.0 -0.1
KLBR Kellerberrin 34.01 193 P P 22 49 04.3 -0.6
comp=Z,234nm,0.6s
KLBR Kellerberrin 34.01 193 P P 22 49 04.6 -0.3
PZH PanZhiHua 34.25 318 P P 22 49 06.6 -0.7
PZH pmax pmax
comp=Z,10.0nm,0.9s
MUN Mundaring 34.76 195 P P 22 49 10.8 -0.7
comp=Z,61nm,0.6s
MUN Mundaring 34.76 195 P P 22 49 11.3 -0.1
AUMAZ Mazenod Senior 34.84 195 P P 22 49 12.4 +0.3
INU Inuyama 35.01 15 P P 22 49 12.7 -0.8
INU IAmb IAmb 22 49 19.7
comp=Z,96nm,1.4s
INU Inuyama 35.01 15 P P 22 49 14.1 +0.6
LYN LuoYang 35.26 340 P P 22 49 16.0 +0.3
LYN pP sP 22 49 29.6 +2.1
LYN pmax pmax
comp=Z,31nm,0.5s
JGF Kuroka 35.33 16 P P 22 49 15.7 -0.7
JGF IAmb IAmb 22 49 39.6
comp=Z,122nm,1.8s
NWAO Narrogin (SRO) 35.41 193 P P 22 49 16.4 -0.6
comp=Z,96nm,0.8s
NWAO Narrogin (SRO) 35.41 193 P P 22 49 16.6 -0.4
comp=Z,60nm,0.6s
NWAO Narrogin (SRO) 35.41 193 P P 22 49 16.9 -0.1
NWAO IAmb IAmb 22 49 18.4
comp=Z,41nm,0.7s
NWAO Narrogin (SRO) 35.41 193 P P 22 49 17.2 +0.2
NWAO Narrogin (SRO) 35.41 193 P P 22 49 16.9 -0.1
NWAO pmax pmax
comp=Z,41nm,0.7s
BBOO Buckleboo 35.43 166 P P 22 49 16.4 -0.8
comp=Z,39nm,0.9s
BBOO Buckleboo 35.43 166 P P 22 49 16.6 -0.6
BBOO IAmb IAmb 22 49 22.3
comp=Z,82nm,1.3s
BBOO Buckleboo 35.43 166 P P 22 49 16.8 -0.4
TNCH TengChong 35.57 313 P P 22 49 18.8 +0.1
TNCH S S **22 54 50.5 -2.5**
TNCH pmax pmax
comp=Z,18nm,0.6s
TNCH LR LR
comp=Z,480nm,15.1s
TNCH LR LR
comp=Z,560nm,18.4s
TNCH LR LR
comp=Z,790nm,19.6s
KSAR Wonju Array Be 35.69 2 P P 22 49 19.2 -0.1
KSAR Wonju Array Be 35.69 2 P P 22 49 19.2 -0.1
KSRS Korea Array 35.71 2 P P 22 49 20.4 +1.0
comp=Z,5.5nm,0.6s,baz=183,slow=10,SNR=14
comp=Z,5.5nm,0.6s
KSRS Korea Array 35.71 2 *e*P P 22 49 23.7 +4.2
KSRS pmax pmax
comp=Z,11nm,0.9s
EIDS Eidsvold 35.93 140 P P 22 49 20.5 -1.1
comp=Z,33nm,1.6s
EIDS Eidsvold 35.93 140 P P 22 49 20.3 -1.3
EIDS IAmb IAmb 22 49 26.6
comp=Z,46nm,1.2s
EIDS Eidsvold 35.93 140 P P 22 49 21.0 -0.6
WHYH Whyalla 36.04 164 P P 22 49 22.5 +0.1
XAN Xi'an 36.16 335 ⇓P P **22 49 22.6 -0.9**
XAN pP sP 22 49 33.3 -2.0
XAN S S **22 55 04.6 +2.9**
XAN pmax pmax
comp=Z,58nm,0.9s
XAN pmax pmax
comp=Z,560nm,3.9s
XAN LR LR
comp=Z,790nm,21.3s
XAN LR LR
comp=Z,800nm,17.9s
XAN LR LR
comp=Z,2μm,23.4s
CD2 Chengdu 36.17 326 P P 22 49 23.3 -0.3
CD2 pmax pmax
comp=Z,60nm,0.6s
STKA Stephens Creek 36.29 158 P P 22 49 23.3 -1.3
comp=Z,155nm,1.1s
STKA Stephens Creek 36.29 158 P P 22 49 24.2 -0.4
comp=Z,31nm,0.8s,baz=330,slow=8.3,SNR=31
comp=Z,31nm,0.8s
STKA Stephens Creek 36.29 158 P P 22 49 24.4 -0.1
STKA Stephens Creek 36.29 158 *e*P **P 22 49 24.5 -0.1**
STKA pmax pmax
comp=Z,31nm,0.8s
MJAR Matsushiro Arr 36.45 16 P P 22 49 25.6 -0.4
comp=Z,14nm,0.9s,baz=180,slow=9.7,SNR=14
comp=Z,14nm,0.9s
MJAR Matsushiro Arr 36.45 16 P P 22 49 24.8 -1.1
MAJO Matsushiro 36.45 16 P P 22 49 24.7 -1.2
MAJO IAmb IAmb 22 49 57.7
comp=Z,44nm,1.2s
MAJO Matsushiro 36.45 16 P P 22 49 25.8 -0.1
MAJO Matsushiro 36.45 16 *i* P **P 22 49 25.0 -0.9**
MAJO pmax pmax
comp=Z,28nm,1.5s
MJB9 Matsu-Tunnel 36.45 16 P P 22 49 25.0 -1.0
MJA0 Matsu Arr-Jizo 36.46 16 *e*P **P 22 49 25.5 -0.5**
MJA0 pmax pmax
comp=Z,16nm,0.9s
AUJCS Jamestown Cent 36.49 163 P P 22 49 26.7 +0.4
HTT Hallett 36.80 162 P P 22 49 28.3 -0.7
comp=Z,11nm,1.0s
HTT Hallett 36.80 162 P P 22 49 29.5 +0.5
AULRC Lightning Ridg 37.14 148 P P 22 49 32.6 +0.8
HNS HongShan 37.21 345 ⇓P **P 22 49 32.0 -0.3**
HNS pmax pmax
comp=Z,19nm,1.1s
DL2 Dalian 37.38 354 P P 22 49 34.6 +0.9
DL2 pmax pmax
comp=Z,130nm,0.9s
CMSA Cobar Meteorol 37.72 153 P P 22 49 36.5 -0.2
comp=Z,23nm,1.4s
CMSA Cobar Meteorol 37.72 153 P P 22 49 37.0 +0.3
JMM Marumori 38.45 18 P P 22 49 42.5 -0.3
JMM IAmb IAmb 22 49 48.3
comp=Z,100nm,1.2s
JMM Marumori 38.45 18 P P 22 49 43.5 +0.7
AUMBR Murray Bridge 38.49 163 P P 22 49 43.7 +0.5
IMP Imphal 38.90 309 *e*P **P 22 49 45.1 -1.8**
IMP IAmb IAmb 22 49 56.5
comp=Z,45nm,1.6s
KOHI KOHIMA 39.24 310 *e*P **P 22 49 48.1 -1.8**
KOHI IAmb IAmb 22 50 02.4
comp=Z,50nm,1.1s
MOKO MOKOCHONG 39.26 312 *e*P **P 22 49 49.2 -0.8**
MOKO IAmb IAmb 22 50 04.7
comp=Z,81nm,1.3s
BJT Baijiatuau 39.35 348 P P 22 49 50.2 -0.1
BJT Baijiatuau 39.35 348 P P 22 49 50.6 +0.3
BJT Baijiatuau 39.35 348 P P 22 49 50.2 -0.1
BJT pmax pmax
comp=Z,26nm,0.8s
BJI Beijing 39.37 348 P P 22 49 50.4 0.0
BJI pP **sP 22 50 00.0 -2.4**
BJI sP **pP 22 50 03.8 +4.9**
BJI PcP **PcP 22 52 00.1 +1.6**
BJI S **S 22 55 50.3 +0.4**
BJI pmax pmax
comp=Z,14nm,0.9s
BJI pmax pmax
comp=Z,110nm,3.9s
LZDM Lanzhou Array 40.13 331 P P 22 49 57.4 +0.1
comp=Z,4.8nm,0.6s,baz=146,slow=11,SNR=9.0
LZDM PcP **PcP 22 52 02.4 +0.9**
comp=Z,6.7nm,0.6s,baz=157,slow=4.8,SNR=6.3
comp=Z,4.8nm,0.6s
LZH Lanzhou 40.17 331 *e*P **P 22 49 57.8 +0.4**
LZH PcP **PcP 22 52 02.8 +1.4**
LZH pmax pmax
comp=Z,49nm,1.1s
LZH LR LR
comp=Z,720nm,17.5s
LZH LR LR
comp=Z,460nm,17.9s
LZH LR LR
comp=Z,1μm,21.5s
ITAN ITANAGAR 40.31 312 *e*P **P 22 49 58.1 -0.4**
ITAN IAmb IAmb 22 50 11.0
comp=Z,57nm,0.8s
ZIRO ZIRO 40.42 313 *e*P **P 22 49 58.6 -1.1**
ZIRO IAmb IAmb 22 50 05.5
comp=Z,28nm,0.6s
TEZP TEZPUR 40.72 311 *e*P **P 22 50 00.5 -1.3**
TEZP IAmb IAmb 22 50 19.6
comp=Z,12nm,0.8s
ARPS Mount Arapiles 40.80 161 P P 22 50 03.0 +0.6
comp=Z,61nm,1.2s
SHL Shillong 40.88 309 P P 22 50 02.2 -1.3
SHL Shillong 40.88 309 *e*P **P 22 50 01.9 -1.6**
SHL Shillong 40.88 309 P P 22 50 02.2 -1.3
SHL pmax pmax
comp=Z,30nm,0.8s
MSHR Mys Shultsa 41.02 5 *i* P **P 22 50 04.6 +0.5**
MSHR pmax pmax
comp=Z,22nm,1.1s
JTM Tenmabayashi 41.21 17 P P 22 50 05.9 +0.1
JTM IAmb IAmb 22 50 14.7
comp=Z,193nm,1.5s
AUMAG Moama Anglican 41.24 157 P P 22 50 06.6 +0.6
YNG Young 41.27 152 P P 22 50 06.5 +0.2
comp=Z,23nm,2.1s
HHC Hu-ho-hao-te 41.30 343 *e*P **P 22 50 09.3 +2.7**
HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,210nm,5.0s
BTO Baotou 41.56 341 *e*P **P 22 50 12.4 +3.7**
BTO S **S 22 56 28.4 +5.5**
BTO pmax pmax
comp=Z,15nm,0.7s
BTO pmax pmax
comp=Z,200nm,5.2s
BTO LR LR
comp=Z,940nm,11.6s
BTO LR LR
comp=Z,1μm,12.7s
BTO LR LR
comp=Z,930nm,18.8s
TAWA Tawang 41.94 311 *e*P **P 22 50 12.3 -0.1**
TAWA IAmb IAmb 22 50 27.9
comp=Z,48nm,1.1s
BRAT Ballarat 42.22 159 P P 22 50 14.7 +0.8
AUMTS Mt Stromlo 42.39 152 P P 22 50 16.7 +1.2
CAN Canberra 42.39 152 P P 22 50 15.7 +0.1
CAN Canberra 42.39 152 P P 22 50 15.5 0.0
CAN IAmb IAmb 22 50 21.3
comp=Z,97nm,1.6s
CAN Canberra 42.39 152 P P 22 50 16.5 +1.0
CAN Canberra 42.39 152 P P 22 50 15.5 0.0
CAN pmax pmax
comp=Z,97nm,1.6s
USRK Ussuriysk Ar. 42.71 6 P P 22 50 18.7 +0.8
comp=Z,7.8nm,0.6s,baz=187,slow=5.6,SNR=12
comp=Z,7.8nm,0.6s
MDJ Mudanjiang 42.93 3 P P 22 50 20.0 +0.4
MDJ Mudanjiang 42.93 3 P P 22 50 21.0 +1.3
H11S3 WAKE ISLAND Hy 42.94 64 T T 23 37 27.1
baz=252,slow=75,SNR=2.4
H11S2 WAKE ISLAND Hy 42.95 64 T T 23 37 24.3
baz=252,slow=75,SNR=5.1
H11S1 WAKE ISLAND Hy 42.95 64 T T 23 37 24.2
baz=252,slow=75,SNR=3.1
XLT XiLinHaoTe 43.10 349 *e*P **P 22 50 21.6 +0.4**
XLT pP sP 22 50 34.0 +0.8
XLT pmax pmax
comp=Z,28nm,0.8s
XLT pmax pmax
comp=Z,250nm,3.7s
LSA Lhasa 43.60 313 P P 22 50 25.2 -0.7
LSA IAmb IAmb 22 50 31.8
comp=Z,163nm,2.0s
LSA Lhasa 43.60 313 P P 22 50 25.2 -0.7
LSA pmax pmax
comp=Z,163nm,2.0s
SANVU Saraoutou 43.78 114 P P 22 50 25.6 -1.3
SANVU IAmb IAmb 22 50 38.7
comp=Z,56nm,0.9s
BNX BinXian 43.97 1 ⇑P **P 22 50 28.5 +0.5**
BNX pmax pmax
comp=Z,12nm,1.1s
ASAJ Asahikawa 44.72 17 P P 22 50 35.4 +1.3
comp=Z,14nm,0.7s,baz=228,slow=15,SNR=2.4
comp=Z,14nm,0.7s
JKA Kamikawa-asahi 44.72 17 P P 22 50 35.4 +1.3
JKA Kamikawa-asahi 44.72 17 IAmb IAmb 22 50 50.5
comp=Z,69nm,1.1s
GTA Gaotai 44.75 331 P P 22 50 34.8 +0.2
GTA pP sP 22 50 45.1 -1.4
GTA PcP **PcP 22 52 17.9 +1.4**
GTA pmax pmax
comp=Z,26nm,0.7s
GTA LR LR
comp=Z,420nm,17.1s
GTA LR LR
comp=Z,510nm,15.6s
GTA LR LR
comp=Z,710nm,18.9s
RAGD RAYAGADA 45.51 296 *e*P **P 22 50 40.2 -0.6**
RAGD IAmb IAmb 22 50 45.3
comp=Z,22nm,0.9s
PALK Pallekele 45.86 279 P P 22 50 41.3 -2.4
PALK IAmb IAmb 22 50 48.2
comp=Z,48nm,1.5s
PALK Pallekele 45.86 279 P P 22 50 41.3 -2.4
PALK pmax pmax
comp=Z,48nm,1.5s
EVN Everest 46.00 308 P 22 50 44.1 -1.1
EVN IAmb IAmb 22 50 56.5
comp=Z,38nm,1.0s
YATNC Mamie plateau, 46.01 123 P P 22 50 46.1 +1.5
HIA Hailar 47.83 354 P P 22 50 59.3 +0.9
HIA Hailar 47.83 354 P P 22 50 59.9 +1.4
HIA Hailar 47.83 354 P P 22 50 59.3 +0.9
HIA pmax pmax
comp=Z,98nm,1.4s
HILR Hailar Array B 48.11 354 P P 22 51 01.4 +0.8
comp=Z,12nm,0.5s,baz=187,slow=10,SNR=15
comp=Z,12nm,0.5s
HEH HeiHe 48.48 1 *e*P **P 22 51 02.9 -0.5**
HEH pmax pmax
comp=Z,37nm,1.2s
SALM Salem 48.80 284 *e*P **P 22 51 06.2 -0.3**
SALM IAmb IAmb 22 51 11.3
comp=Z,21nm,0.6s
ULN Ulaanbaatar 49.03 343 P P 22 51 07.5 -0.5
ULN Ulaanbaatar 49.03 343 *i* P **P 22 51 07.4 -0.5**
ULN pmax pmax
comp=Z,13nm,0.7s
SONM Songino Array 49.20 342 P P 22 51 09.6 +0.4
comp=Z,18nm,0.9s,baz=158,slow=7.6,SNR=50
SONM PcP **PcP 22 52 32.7 +0.6**
comp=Z,6.0nm,0.7s,baz=167,slow=4.7,SNR=4.9
comp=Z,18nm,0.9s
KOD Kodaikanal 49.34 282 *e*P **P 22 51 09.3 -1.7**
KOD IAmb IAmb 22 51 14.9
comp=Z,38nm,1.2s
HYBB Hyderabad (bro 49.53 292 *e*P **P 22 51 12.9 +0.8**
HYBB *e*PcP **PcP 22 52 33.3 -0.5**
HYBB *e*S **S 22 58 19.3 +0.8**
TRD Trivandrum 49.66 280 *e*P **P 22 51 11.1 -2.1**
GRNR Gornyy 49.72 8 *e*P **P 22 51 09.5 -3.5**
CIT Chita 51.38 350 *e*P **P 22 51 26.0 +0.5**
CIT *e* 22 51 38.4
CIT *e* 22 52 38.0
CIT *e* 22 53 22.0
CIT pmax pmax
comp=Z,138nm,1.3s
AKL Akola 51.74 295 *e*P **P 22 51 26.9 -1.7**
AKL IAmb IAmb 22 51 33.9
comp=Z,26nm,0.8s
JHNI Jhansi 51.80 302 *e*P **P 22 51 26.1 -3.0**
LGTI Lohaghat 51.84 307 *e*P **P 22 51 27.8 -1.5**
LGTI IAmb IAmb 22 51 32.9
comp=Z,16nm,0.7s
ZEA Zeya 51.97 1 *e*P **P 22 51 30.8 +1.0**
BHPL Bhopal 52.07 298 *e*P **P 22 51 29.4 -1.8**
BHPL IAmb IAmb 22 51 31.4
comp=Z,27nm,0.5s
NRDN NARMADA NAGAR 52.15 298 *e*P **P 22 51 33.3 +1.6**
NRDN IAmb IAmb 22 51 40.6
comp=Z,21nm,0.8s
GUNA GUNA 52.57 300 *e*P **P 22 51 32.7 -2.2**
GUNA IAmb IAmb 22 51 38.1
comp=Z,84nm,0.4s
JOSI Joshimath 52.83 308 *e*P **P 22 51 36.1 -0.8**
JOSI IAmb IAmb 22 51 47.3
comp=Z,34nm,1.0s
KAAM Kaadhehdhoo 53.38 269 P P 22 51 40.4 -0.5
TLY Talaya 53.43 343 P P 22 51 41.1 +0.4
TLY Talaya 53.43 343 *i* P **P 22 51 43.0 +2.3**
TLY pmax pmax
comp=Z,9.0nm,0.6s
KAD Karad 53.59 290 *e*P **P 22 51 40.5 -2.0**
KAD IAmb IAmb 22 51 41.9
comp=Z,13nm,0.9s
AYAN Aya Nagar 54.01 304 *e*P **P 22 51 43.8 -1.6**
AYAN IAmb IAmb 22 51 48.5
comp=Z,27nm,0.7s
MOY Mondy 54.25 341 *e*P **P 22 51 47.1 +0.2**
MOY pmax pmax
comp=Z,46nm,3.9s
WMQ Urumqi 54.27 326 *e*P **P 22 51 47.5 +0.4**
WMQ pmax pmax
comp=Z,23nm,1.1s
WMQ LR LR
comp=Z,740nm,17.3s
WMQ LR LR
comp=Z,650nm,20.1s
WMQ LR LR
comp=Z,560nm,18.7s
MSVF Nonsavu 54.38 113 P P 22 51 48.4 +0.1
KUDL Kundal 54.42 304 *e*P **P 22 51 46.2 -2.1**
KUDL IAmb IAmb 22 51 52.6
comp=Z,32nm,0.7s
SMLA Simla 54.95 308 *e*P **P 22 51 51.0 -1.1**
SMLA IAmb IAmb 22 52 12.2
comp=Z,52nm,0.8s
UDPR Udaipur 55.70 299 *e*P **P 22 51 56.2 -1.5**
UDPR IAmb IAmb 22 52 03.3
comp=Z,80nm,1.0s
ALCI Alchi Leh 56.16 311 *e*P **P 22 51 59.6 -1.7**
ALCI IAmb IAmb 22 52 05.3
comp=Z,15nm,0.7s
TSSA Tissa 56.40 309 *e*P **P 22 52 00.8 -2.0**
TSSA IAmb IAmb 22 52 11.9
comp=Z,40nm,0.8s
JMU Jammu 57.33 308 *e*P **P 22 52 09.2 0.0**
JMU IAmb IAmb 22 52 10.6
comp=Z,72nm,0.4s
PEA0B Petropavlovsk- 57.52 22 P P 22 52 10.3 +0.2
PEA0B Petropavlovsk- 57.52 22 P P 22 52 10.3 +0.2
PEA0B pmax pmax
comp=Z,248nm,1.8s
PETK Petropavlovsk- 57.52 22 P P **22 52 11.2 +1.1**
comp=Z,11nm,0.6s,baz=185,slow=5.1,SNR=22
comp=Z,11nm,0.6s
PETK Petropavlovsk- 57.52 22 P P 22 52 10.2 +0.1
PETK Petropavlovsk- 57.52 22 P P 22 52 10.2 +0.1
ZSN Zaisan 58.10 328 *e*P **P 22 52 13.4 -1.0**
ZSN Zaisan 58.10 328 *e*P **P 22 52 13.3 -1.0**
DGZ Jazzator, Alta 58.27 331 *i* P **P 22 52 14.7 -0.9**
DGZ pmax pmax
comp=Z,11nm,0.6s
SHLS Shalkode 58.76 321 *e*P **P 22 52 16.1 -3.1**
comp=Z,7.4nm,0.9s
SHLS Shalkode 58.76 321 *e*P **P 22 52 16.0 -3.1**
SHLS pmax pmax
comp=Z,7.0nm,0.9s
PRZ Przheval'sk 59.09 320 P P 22 52 21.5 0.0
PRZ IAmb IAmb 22 52 27.2
comp=Z,21nm,0.8s
PRZ Przheval'sk 59.09 320 P P 22 52 21.5 0.0
PRZ pmax pmax
comp=Z,21nm,0.8s
MK31 Makanchi Array 59.10 326 *i* P **P 22 52 20.7 -0.6**
MKAR Makanchi Array 59.10 326 P P 22 52 20.7 -0.7
comp=Z,19nm,0.6s,baz=121,slow=8.5,SNR=67
comp=Z,19nm,0.6s
MKAR Makanchi Array 59.10 326 P P 22 52 20.5 -0.8
MKAR Makanchi Array 59.10 326 *e*P **P 22 52 20.6 -0.7**
MKAR pmax pmax
comp=Z,20nm,0.6s
TARG Taragay, Kyrgy 59.10 319 P P 22 52 21.4 -0.5
TARG Taragay, Kyrgy 59.10 319 P P 22 52 21.4 -0.5
TARG pmax pmax
comp=Z,13nm,0.7s
KSH Kashi 59.31 316 P P 22 52 23.1 +0.1
KSH pmax pmax
comp=Z,6.0nm,1.0s
SATY Saty 59.37 321 *e*P **P 22 52 22.1 -1.3**
comp=Z,9.0nm,0.7s
SATY Saty 59.37 321 *e*P **P 22 52 22.1 -1.3**
SATY pmax pmax
comp=Z,9.0nm,0.7s
QRZ Quartz Range 59.51 141 P P 22 52 24.3 +0.1
KDJ Kajisay 59.70 319 P P 22 52 25.1 -0.7
KDJ Kajisay 59.70 319 P P 22 52 25.1 -0.7
KDJ pmax pmax
comp=Z,17nm,0.9s
LBZ Lake Benmore 60.14 145 P P 22 52 28.1 -0.4
LBZ IAmb IAmb 22 52 39.0
comp=Z,35nm,1.1s
MDOK Medeo 60.29 320 *e*P **P 22 52 28.6 -1.1**
MDOK Medeo 60.29 320 *e*P **P 22 52 28.6 -1.1**
TNSS Tian-Shan 60.29 320 *e*P **P 22 52 28.7 -1.4**
TNSS Tian-Shan 60.29 320 *e*P **P 22 52 28.6 -1.5**
YAK Yakutsk 60.33 2 P P 22 52 29.8 +0.4
comp=Z,76nm,0.6s,baz=348,slow=1.3,SNR=16
comp=Z,76nm,0.6s
YAK Yakutsk 60.33 2 P P 22 52 29.1 -0.2
YAK Yakutsk 60.33 2 *i* P **P 22 52 29.2 -0.2**
YAK pmax pmax
comp=Z,78nm,0.6s
TDK Taldyqorghan 60.37 323 *e*P **P 22 52 29.1 -1.0**
comp=Z,14nm,0.7s
TDK Taldyqorghan 60.37 323 *e*P **P 22 52 29.0 -1.0**
TDK pmax pmax
comp=Z,14nm,0.7s
BOOM Boomskoye usch 60.68 319 P 22 52 31.4 -1.1
BOOM Boomskoye usch 60.68 319 P P 22 52 31.4 -1.1
BOOM pmax pmax
comp=Z,19nm,1.3s
MA2 Magadan 60.84 14 P P 22 52 34.1 +1.2
comp=Z,30nm,0.7s,baz=135,slow=8.6,SNR=2.9
comp=Z,30nm,0.7s
MA2 Magadan 60.84 14 *i* P **P 22 52 33.6 +0.7**
MA2 pmax pmax
comp=Z,34nm,0.8s
BKZ Black Stump Fm 61.26 137 P P 22 52 35.5 -0.8
BKZ IAmb IAmb 22 53 10.9
comp=Z,58nm,1.5s
BHW Baring Head 61.32 140 P P 22 52 34.7 -1.8
BHW IAmb IAmb 22 53 39.3
comp=Z,47nm,1.3s
RTZ Ruatahuna 61.33 136 P 22 52 35.8 -1.0
RTZ IAmb IAmb 22 53 10.2
comp=Z,62nm,1.2s
AAK Ala-Archa 61.70 319 P P 22 52 37.8 -1.5
comp=Z,7.0nm,0.9s,baz=62,slow=22,SNR=5.3
comp=Z,7.0nm,0.9s
AAK Ala-Archa 61.70 319 P P 22 52 38.7 -0.7
AAK Ala-Archa 61.70 319 *i* P **P 22 52 38.8 -0.5**
AAK pmax pmax
comp=Z,16nm,1.6s
SGDS Sogindy 61.98 320 *e*P **P 22 52 39.9 -1.2**
ARSB Arslanbob 62.15 317 P 22 52 41.2 -1.1
ARSB IAmb IAmb 22 52 54.0

comp=Z,77nm,1.8s
ARSB Arslanbob 62.15 317 P P 22 52 41.3 -1.1
ARSB pmax pmax
comp=Z,77nm,1.8s
DRK Karamyk 62.22 315 P P 22 52 42.5 -0.6
DRK IAmb IAmb 22 52 50.0
comp=Z,16nm,0.6s
DRK Karamyk 62.22 315 P P 22 52 42.5 -0.6
DRK pmax pmax
comp=Z,17nm,0.6s
ZALV Zalesovo Beam 62.32 334 P P 22 52 41.5 -1.5
comp=Z,8.2nm,0.7s,baz=128,slow=5.5,SNR=21
ZALV PKP2bc **P'P'bc 23 21 56.2 -1.0**
comp=Z,1.7nm,0.9s,baz=276,slow=7.2,SNR=5.3
comp=Z,8.2nm,0.7s
KBL Kabul 62.54 308 P P 22 52 43.7 -1.5
KBL IAmb IAmb 22 52 50.7
comp=Z,20nm,0.7s
KBL Kabul 62.54 308 P P 22 52 43.7 -1.5
KBL pmax pmax
comp=Z,20nm,0.7s
BTLS Baital 63.08 321 *e*P **P 22 52 46.9 -1.4**
BTLS Baital 63.08 321 *e*P **P 22 52 46.9 -1.4**
KURBB Kurchatov Arra 63.34 328 P P 22 52 49.2 -0.6
comp=Z,26nm,0.7s,baz=129,slow=6.2,SNR=60
comp=Z,26nm,0.7s
KURK Kurchatov 63.34 328 P 22 52 49.1 -0.8
KURK Kurchatov 63.34 328 *i* P **P 22 52 48.9 -1.0**
KURK pmax pmax
comp=Z,58nm,0.7s
CHGR Chuyangaron 63.83 313 P 22 52 51.6 -1.9
CHGR IAmb IAmb 22 52 54.5
comp=Z,45nm,1.1s
CHGR Chuyangaron 63.83 313 P P 22 52 51.6 -1.9
CHGR pmax pmax
comp=Z,45nm,1.1s
SEY Seymchan 64.17 13 P P 22 52 56.7 +1.6
comp=Z,22nm,1.0s,baz=206,slow=5.0,SNR=7.7
comp=Z,22nm,1.0s
SEY Seymchan 64.17 13 *e*P **P 22 52 55.7 +0.6**
SEY pmax pmax
comp=Z,62nm,1.7s
IUG luzhnay 64.50 317 *e*P **P 22 52 56.8 -1.1**
comp=Z,12nm,0.7s
IUG luzhnay 64.50 317 *e*P **P 22 52 56.7 -1.1**
IUG pmax pmax
comp=Z,12nm,0.7s
KK31 Karatay Array 64.55 318 P 22 52 57.1 -0.9
KK31 Karatay Array 64.55 318 P P 22 52 57.2 -0.9
KK31 pmax pmax
comp=Z,16nm,1.1s
KKAR Karatay Array 64.55 318 P 22 52 56.9 -1.1
KKAR Karatay Array 64.55 318 P P 22 52 56.9 -1.1
CHM Chimkent 64.86 317 *e*P **P 22 52 59.0 -1.1**
CHM Chimkent 64.86 317 *e*P **P 22 52 58.9 -1.1**
BRLS Boroldav 64.97 318 *e*P **P 22 52 59.5 -1.4**
BRLS Boroldav 64.97 318 *e*P **P 22 52 59.4 -1.4**
BRZS Berezniki 66.22 325 *e*P **P 22 53 07.9 -0.9**
BRZS Berezniki 66.22 325 *e*P **P 22 53 07.8 -0.9**
HRA Herat 67.89 307 P 22 53 18.9 -1.0
CASY Casey 68.68 187 P 22 53 23.7 -0.1
BVAR Borovoye Array 68.91 328 P P 22 53 25.0 -0.6
comp=Z,17nm,0.8s,baz=135,slow=8.3,SNR=22
comp=Z,17nm,0.8s
BVAR Borovoye Array 68.91 328 P P 22 53 25.0 -0.6
ADK Adak 68.91 34 P P 22 53 24.9 -0.7
ADK Adak 68.91 34 P P 22 53 24.9 -0.7
ADK pmax pmax
comp=Z,157nm,1.6s
BORK Borovoye 68.95 328 *i* P **P 22 53 24.5 -1.4**
BORK pmax pmax
comp=Z,11nm,0.6s
TIXI Tiksi 69.96 1 P 22 53 30.6 -1.1
TIXI IAmb IAmb 22 53 33.2
comp=Z,66nm,1.4s
TIXI Tiksi 69.96 1 *i* P **P 22 53 30.6 -1.1**
TIXI pmax pmax
comp=Z,52nm,1.4s
ATKA Atka Island 70.44 34 P P 22 53 35.8 +0.8
ABKAR Akbulak array 73.57 321 P 22 53 52.8 -1.1
NIKH Nikolski High 73.75 35 P P 22 53 55.2 +0.4
baz=250
SPIA Saint Paul Isl 74.50 30 P P 22 53 60.0 +0.9
baz=248
AKTO Aktyubinsk 75.10 322 P P 22 54 01.8 -1.0
comp=Z,11nm,0.7s,baz=100,slow=5.7,SNR=22
comp=Z,11nm,0.7s
UNV Unalaska Valle 75.36 34 P P 22 54 05.0 +0.8
baz=252
SVE Sverdlovsk 75.58 329 *e*P **P 22 54 04.9 -0.5**
SVE pmax pmax
comp=Z,36nm,0.8s
GAMB Gambell 76.47 24 P P 22 54 11.3 +1.0
baz=245
ARTI Arti 76.62 328 P P 22 54 10.2 -1.2
comp=Z,24nm,0.9s,baz=115,slow=2.9,SNR=20
comp=Z,24nm,0.9s
ARTI Arti 76.62 328 P 22 54 09.3 -2.1
ARTI IAmb IAmb 22 54 16.8
comp=Z,25nm,0.7s
ARTI Arti 76.62 328*c i*P **P 22 54 10.1 -1.2**
ARTI 22 57 03.3
ARTI S **S 23 03 55.1 -0.6**
ARTI pmax pmax
comp=Z,30nm,0.9s
FALS False Pass 77.39 34 P P 22 54 16.2 +0.6
baz=254
M11K Mekoryuk 77.60 28 P P 22 54 17.3 +0.6
baz=251
S12K Black Hills 78.36 33 P P 22 54 21.5 +0.4
baz=256
MLH Mauna Loa 78.38 71 P P 22 54 22.7 +0.5
TNA Tin City 78.67 23 P P 22 54 23.4 +0.8
baz=248
K13K Kusilvak Mount 78.81 27 P P 22 54 24.4 +1.1
baz=252
M13K Dall Lake 78.96 28 P P 22 54 25.6 +1.4
baz=253
SDPT Sand Point 79.15 34 P P 22 54 26.0 +0.7
baz=257
F14K Arctic Creek 79.26 23 P P 22 54 26.3 +0.4
baz=250
ANM Nome 79.34 24 P P 22 54 27.2 +1.0
baz=251
CHNA Chernabura Isl 79.53 34 P P 22 54 28.1 +0.6
baz=258
L14K Kuka Creek 79.53 28 P P 22 54 27.5 +0.2
L14K IAmb IAmb 22 54 32.4
comp=Z,94nm,1.4s
L14K Kuka Creek 79.53 28 P P 22 54 27.7 +0.4
baz=254
J14K Nanvaranak Lak 79.54 26 P P 22 54 27.9 +0.5
baz=253
N14K Kuskokwak Cree 79.63 29 P P 22 54 27.2 -0.7
N14K Kuskokwak Cree 79.63 29 P P 22 54 28.4 +0.6
baz=255
O14K Tigyukauivet M 79.66 30 P P 22 54 28.2 +0.1
baz=256
M14K Bethel 79.71 28 P P 22 54 28.4 +0.1
M14K IAmb IAmb 22 55 07.1
comp=Z,49nm,1.1s
M14K Bethel 79.71 28 P P 22 54 28.4 +0.1
baz=255
S14K Fog Glacier 79.86 33 P P 22 54 29.1 -0.3
baz=258
F15K North Star Dit 80.00 23 P P 22 54 30.3 +0.4
baz=251
G15K Niukluk 80.02 24 P P 22 54 30.5 +0.5
baz=252
L15K Ungalak Mounta 80.18 27 P P 22 54 31.4 +0.5
baz=255
ABPO Ambohimpanom 80.27 251 P P 22 54 31.8 -0.7
ABPO Ambohimpanom 80.27 251 P P 22 54 31.8 -0.7
ABPO pmax pmax
comp=Z,14nm,0.9s
M15K Kasigluk River 80.30 28 P P 22 54 31.8 +0.3
baz=256
K15K Wolf Creek Mou 80.32 27 P P 22 54 31.8 +0.2
baz=255
O15K Ungalikthiuk R 80.36 30 P P 22 54 32.2 +0.2
O15K Ungalikthiuk R 80.36 30 P P 22 54 32.6 +0.7
baz=257
AKT Akhty 80.43 312 *e*P **P 22 54 32.3 -0.5**
AKT *e* 22 54 41.4
AKT *e* 22 57 37.3
AKT pmax pmax
comp=Z,18nm,0.9s
N15K Kwethluk River 80.46 29 P P 22 54 32.4 0.0
N15K Kwethluk River 80.46 29 P P 22 54 33.2 +0.8
baz=256
C16K Lisburne Hills 80.59 21 P P 22 54 33.6 +0.7
baz=250
H16K Elim 80.65 24 P P 22 54 33.7 +0.4
baz=254
G16K Koyuk River 80.82 24 P P 22 54 34.7 +0.5
baz=254
VOI Vohitsoka 80.93 248 P 22 54 35.6 -0.3
VOI IAmb IAmb 22 54 45.4
comp=Z,26nm,0.6s
J16K Anvik River 80.98 26 P 22 54 35.1 -0.1
J16K IAmb IAmb 22 54 39.8
comp=Z,33nm,1.1s
J16K Anvik River 80.98 26 P P 22 54 35.8 +0.7
baz=255
RAYN Ar Rayn 80.99 293 P 22 54 35.1 -1.0
RAYN Ar Rayn 80.99 293 P P 22 54 35.1 -1.0
RAYN pmax pmax
comp=Z,15nm,0.8s
L16K Owhat River 81.11 28 P 22 54 35.8 -0.1
L16K Owhat River 81.11 28 P P 22 54 37.0 +1.1
baz=257,SNR=6.4
N16K Nishlik Lake 81.17 29 P P 22 54 36.6 +0.3
baz=258
R16K Pilot Point 81.19 32 P P 22 54 36.9 +0.5
baz=259
M16K Timber Creek 81.20 28 P P 22 54 35.7 -0.7
M16K Timber Creek 81.20 28 P P 22 54 36.6 +0.2
baz=257
D17K Noatak River 81.21 21 P P 22 54 36.6 +0.3
baz=252
P16K Nushagak River 81.26 30 P P 22 54 36.4 -0.2
baz=258
O16K Kokwok River B 81.32 30 P 22 54 36.4 -0.6
O16K IAmb IAmb 22 54 39.6
comp=Z,91nm,1.8s
O16K Kokwok River B 81.32 30 P P 22 54 37.5 +0.5
baz=258
VNDA Vanda 81.38 173 P P 22 54 37.0 +0.1
comp=Z,6.0nm,0.6s,baz=314,slow=6.5,SNR=30
comp=Z,6.0nm,0.6s
VNDA Vanda 81.38 173 P 22 54 36.9 -0.1
VNDA Vanda 81.38 173 P P 22 54 36.9 -0.1
VNDA pmax pmax
comp=Z,9.0nm,0.8s
RDOG Red Dog Mine 81.38 21 P P 22 54 36.9 -0.3
RDOG IAmb IAmb 22 54 40.6
comp=Z,56nm,1.3s
RDOG Red Dog Mine 81.38 21 P P 22 54 37.5 +0.3
baz=253
C17K DeLong Mountai 81.42 21 P P 22 54 38.0 +0.6
baz=252
E17K Hotham Inlet 81.50 22 P P 22 54 38.3 +0.5
baz=254
G17K Kiwalik Mounta 81.53 24 P P 22 54 38.4 +0.3
baz=255
F17K Baldwin Pennin 81.54 23 P P 22 54 38.9 +0.9
F17K IAmb IAmb 22 54 41.3
comp=Z,21nm,0.7s
F17K Baldwin Pennin 81.54 23 P P 22 54 38.9 +0.9
baz=254
MAW Mawson 81.65 200 P P 22 54 39.6 +1.1
comp=Z,2.2nm,1.8s
MAW Mawson 81.65 200 P P 22 54 38.5 0.0
comp=Z,9.7nm,0.9s,baz=85,slow=4.0,SNR=20
comp=Z,9.7nm,0.9s
J17K VABM Dome 81.68 26 P 22 54 40.8 +2.0
J17K VABM Dome 81.68 26 P P 22 54 39.6 +0.7
baz=257
H17K Granite Mounta 81.69 24 P P 22 54 39.6 +0.8
H17K Granite Mounta 81.69 24 P P 22 54 39.9 +1.0
baz=256,SNR=5.0
L17K Donlin 81.75 27 P P 22 54 40.5 +1.3
baz=258
R17L Mt. Peulik Vol 81.84 32 P P 22 54 40.0 +0.1
baz=260
KIRV Kirov 81.85 329 P P 22 54 39.3 -0.5
comp=Z,23nm,0.6s,baz=117,slow=6.3,SNR=9.5
comp=Z,23nm,0.6s
KIRV Kirov 81.85 329 *i* P **P 22 54 38.9 -0.9**
O17K Koliganek Bris 81.85 30 P P 22 54 40.0 +0.2
baz=259,SNR=5.5
BELG Belogornoye 81.87 323 P P 22 54 39.4 -0.7
comp=Z,48nm,0.8s,baz=315,slow=3.2,SNR=12
comp=Z,48nm,0.8s
BELG Belogornoye 81.87 323 *i* P **P 22 54 38.8 -1.2**
BELG pmax pmax
comp=Z,7.0nm,0.6s
Q16K King Salmon 81.87 31 P P 22 54 40.2 +0.3
baz=260
K17K Iditarod 81.87 27 P P 22 54 40.5 +0.6
K17K IAmb IAmb 22 54 42.6
comp=Z,38nm,0.9s
K17K Iditarod 81.87 27 P P 22 54 40.4 +0.5
baz=258
CHIR Chirikof Islan 81.94 34 P P 22 54 40.8 +0.4
baz=261
N17K Nushagak Hills 81.95 29 P P 22 54 41.3 +1.0
N17K IAmb IAmb 22 54 45.8
comp=Z,73nm,1.7s
N17K Nushagak Hills 81.95 29 P P 22 54 40.7 +0.3
baz=259
M17K Holitna River 82.00 28 P P 22 54 41.7 +1.1
M17K IAmb IAmb 22 54 49.3
comp=Z,108nm,1.8s
M17K Holitna River 82.00 28 P P 22 54 41.3 +0.7
baz=259
E18K Tukpahlearik C 82.05 22 P 22 54 42.1 +1.4
E18K IAmb IAmb 22 54 43.7
comp=Z,22nm,0.8s
E18K Tukpahlearik C 82.05 22 P P 22 54 40.2 -0.5
baz=255
P17K Kvichak River 82.07 30 P P 22 54 40.9 0.0
baz=252
B18K Kokolik River 82.15 20 P P 22 54 42.0 +0.8
baz=253
C18K Utukok River 82.16 21 P P 22 54 41.0 -0.3
C18K IAmb IAmb 22 56 45.8
comp=Z,57nm,1.5s
C18K Utukok River 82.16 21 P P 22 54 41.9 +0.5
baz=254
Q17K Contact Creek 82.20 31 P P 22 54 42.7 +0.9
baz=260
F18K Selawik 82.20 23 P P 22 54 41.5 +0.1
baz=256
SBA Scott Base 82.29 172 P P 22 54 42.6 +0.8
SBA IAmb IAmb 22 55 10.4
comp=Z,57nm,1.9s
SBA Scott Base 82.29 172 P P 22 54 42.6 +0.8
SBA pmax pmax
comp=Z,57nm,1.9s
H18K Honhosa River 82.38 24 P P 22 54 42.9 +0.3
H18K Honhosa River 82.38 24 P P 22 54 42.6 0.0
baz=257
G18K Tagagawik 82.43 24 P P 22 54 42.4 -0.3
G18K IAmb IAmb 22 54 45.3
comp=Z,30nm,1.2s
G18K Tagagawik 82.43 24 P P 22 54 43.3 +0.5
baz=257
L18K Granite Mounta 82.51 27 P 22 54 43.3 +0.1
L18K Granite Mounta 82.51 27 P P 22 54 43.7 +0.5
baz=259,SNR=12
GNI Garni 82.57 310 P P 22 54 45.6 +1.3
comp=Z,2.6nm,0.6s,baz=213,slow=9.7,SNR=4.2
comp=Z,2.6nm,0.6s
GNI Garni 82.57 310 P P 22 54 43.6 -0.7
GNI IAmb IAmb 22 55 46.3
comp=Z,22nm,1.1s
GNI Garni 82.57 310 P P 22 54 43.6 -0.7
GNI pmax pmax
comp=Z,22nm,1.1s
N18K Kilae Creek 82.61 29 P 22 54 42.2 -1.6
N18K IAmb IAmb 22 55 02.3
comp=Z,86nm,1.8s
N18K Kilae Creek 82.61 29 P P 22 54 44.4 +0.6
baz=260
Q18K Katmai Hardscr 82.71 31 P P 22 54 45.0 +0.4
baz=261
P18K Big Mountain, 82.72 30 P P 22 54 44.4 0.0
baz=261
J18K Innoko River 82.73 26 P P 22 54 44.1 -0.3
J18K Innoko River 82.73 26 P P 22 54 44.8 +0.4
baz=259
M18K Stony River 82.78 28 P P 22 54 45.4 +0.8
baz=260,SNR=7.6
O18K Koktuh Hills 82.80 30 P P 22 54 45.6 +0.8
baz=261
C19K Lookout Ridge 82.85 20 P P 22 54 46.1 +1.1
C19K Lookout Ridge 82.85 20 P P 22 54 46.0 +1.1
baz=256,SNR=7.8
SII Sitkinak Islan 82.85 33 P P 22 54 46.1 +1.0
baz=262
GCSA Galena City Sc 82.91 25 P P 22 54 46.5 +1.2
baz=259,SNR=12
F19K Shaleruckik Mo 82.98 23 P P 22 54 45.8 +0.2
F19K Shaleruckik Mo 82.98 23 P P 22 54 46.5 +0.9
baz=258
G19K Purcell Mounta 83.11 23 P P 22 54 47.9 +1.7
baz=258
D19K Kuna River 83.22 21 P P 22 54 47.9 +1.0
D19K Kuna River 83.22 21 P P 22 54 48.4 +1.5
baz=257
H19K Roundabout Mou 83.24 24 P P 22 54 47.0 +0.1
H19K Roundabout Mou 83.24 24 P P 22 54 48.4 +1.5
baz=259
J19K Poorman 83.31 26 P 22 54 48.2 +0.8
J19K IAmb IAmb 22 54 50.2
comp=Z,31nm,0.8s
J19K Poorman 83.31 26 P P 22 54 49.1 +1.7
baz=260,SNR=10
N19K Bonanza Creek 83.31 29 P 22 54 48.6 +1.0
N19K Bonanza Creek 83.31 29 P P 22 54 48.8 +1.3
baz=261,SNR=12
E19K Redstone River 83.32 22 P P 22 54 48.8 +1.4
baz=258
ATD Arta Tunnel 83.34 281 P P 22 54 50.1 +1.5
comp=Z,0.4nm,0.7s,baz=315,slow=16,SNR=2.7
ATD Arta Tunnel 83.34 281 P P 22 54 49.0 +0.4
ATD IAmb IAmb 22 54 58.1
comp=Z,26nm,1.0s
L19K White Mountain 83.35 28 P P 22 54 48.8 +1.2
L19K White Mountain 83.35 28 P P 22 54 49.1 +1.5
baz=261,SNR=12
OHAK Old Harbor 83.42 33 P P 22 54 48.3 +0.3
OHAK Old Harbor 83.42 33 P P 22 54 49.2 +1.1
baz=263
M19K Big River Lodg 83.52 28 P P 22 54 48.3 -0.2
M19K IAmb IAmb 22 54 51.0
comp=Z,21nm,0.7s
M19K Big River Lodg 83.52 28 P P 22 54 50.0 +1.5
baz=261
P19K Oil Pt 83.76 30 P P 22 54 50.8 +1.0
baz=262
D20K Etivluk River 83.81 21 P 22 54 50.0 +0.2
D20K Etivluk River 83.81 21 P P 22 54 51.3 +1.4
baz=258
F20K Avaraart Lake 83.82 23 P P 22 54 49.7 -0.2
F20K Avaraart Lake 83.82 23 P P 22 54 51.7 +1.8
baz=259
L20K Farewell, AK 83.84 27 P P 22 54 49.8 -0.3
L20K IAmb IAmb 22 54 52.5
comp=Z,18nm,0.8s
L20K Farewell, AK 83.84 27 P P 22 54 51.7 +1.5
baz=262,SNR=7.5
ILSW Iliamna Southw 83.85 30 P P 22 54 48.6 -1.8
ILSW IAmb IAmb 22 54 51.3
comp=Z,34nm,1.4s
KDAK Kodiak Island 83.87 32 P P 22 54 51.7 +1.3
baz=263
E20K Nigu River 83.87 21 P P 22 54 51.9 +1.7
baz=259
H20K Anotleneega Mo 83.88 24 P P 22 54 52.0 +1.7
baz=260
B20K Meade River 83.88 20 P P 22 54 50.6 +0.4
B20K Meade River 83.88 20 P P 22 54 52.4 +2.2
baz=258
K20K Telida 83.89 26 P P 22 54 50.6 +0.2
K20K IAmb IAmb 22 54 54.3
comp=Z,36nm,1.2s
K20K Telida 83.89 26 P P 22 54 52.5 +2.1
baz=261
J20K Nowinta River 83.98 26 P 22 54 51.8 +1.0
J20K IAmb IAmb 22 54 54.7
comp=Z,28nm,1.0s
J20K Nowinta River 83.98 26 P P 22 54 52.5 +1.7
baz=261,SNR=12
Q20K Shuyak Island 84.06 31 P P 22 54 52.6 +1.4
baz=263
RED Redoubt Volcan 84.09 30 P P 22 54 51.2 -0.3
RED IAmb IAmb 22 54 52.6
comp=Z,28nm,0.8s
M20K Styx River 84.11 28 P P 22 54 51.7 +0.1
M20K Styx River 84.11 28 P P 22 54 53.2 +1.6
baz=262
KBZ Khabaz 84.18 314 P P 22 54 51.5 -0.7
comp=Z,5.5nm,0.8s,baz=114,slow=6.1,SNR=11
comp=Z,5.5nm,0.8s
KBZ Khabaz 84.18 314 *e*P **P 22 54 51.8 -0.4**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
A21K Barrow 84.34 18 P P 22 54 53.8 +1.4
baz=258
KVAR Kislovodsk Arr 84.34 314 P P 22 54 53.2 +0.1
comp=Z,2.7nm,0.6s,baz=270,slow=19,SNR=1.8
comp=Z,2.7nm,0.6s
KIV Kislovodsk 84.34 314 P 22 54 53.0 -0.2
KIV IAmb IAmb 22 55 21.8
comp=Z,22nm,0.7s
KIV Kislovodsk 84.34 314 *e*P **P 22 54 50.5 -2.7**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 84.34 314 P P 22 54 54.0 +0.8
comp=Z,21nm,0.9s
IMAR Indian Mountai 84.42 24 P P 22 54 53.4 +0.4
N20K Mount Spurr 84.46 29 P P 22 54 54.2 +0.8
baz=263,SNR=6.0
SPCR Spurr Chakacha 84.46 29 P P 22 54 54.1 +0.7
baz=263
SPU Mount Spurr 84.53 29 P P 22 54 53.3 -0.4
SPU IAmb IAmb 22 54 55.1
comp=Z,17nm,1.1s
C21K Knifeblade Rid 84.54 21 P P 22 54 54.7 +1.2
baz=260
HOM Homer 84.56 30 P P 22 54 54.7 +0.9
baz=264
GURO Guroymak-BITLI 84.58 308 P 22 54 54.3 -0.3
G21K Allakaket 84.60 23 P P 22 54 54.6 +0.7
G21K Allakaket 84.60 23 P P 22 54 54.8 +0.9
baz=262,SNR=6.2
PPLA Purkeypile 84.67 27 P P 22 54 55.8 +1.3
baz=263
STLK Strandline Lak 84.67 28 P P 22 54 53.9 -0.6
B21K Ikpikpuk River 84.68 20 P P 22 54 55.4 +1.3
B21K Ikpikpuk River 84.68 20 P P 22 54 55.7 +1.5
baz=260
E21K Killik River 84.71 21 P P 22 54 55.6 +1.1
E21K IAmb IAmb 22 54 57.9
comp=Z,23nm,1.0s
E21K Killik River 84.71 21 P P 22 54 55.9 +1.5
baz=261
CHUM Lake Minchumin 84.74 26 P P 22 54 55.5 +0.9
baz=263
CNPM China Poot 84.76 30 P 22 54 54.9 0.0
A22K Sinclair Lake 84.80 19 P P 22 54 56.2 +1.4
baz=260
SKT Skwentna 84.87 28 P 22 54 55.2 -0.2
SKT IAmb IAmb 22 54 56.4
comp=Z,53nm,1.5s
SKT Skwentna 84.87 28 P P 22 54 55.9 +0.6
baz=264,SNR=8.0
BRLK Bradley Lake 84.96 30 P P 22 54 55.8 0.0
BRSE Bradley Lake S 85.03 30 P P 22 54 56.7 +0.5
baz=265
SUA Susitna One 85.19 29 P P 22 54 57.5 +0.3
SUA IAmb IAmb 22 54 58.4
comp=Z,29nm,0.8s
SUA Susitna One 85.19 29 P P 22 54 57.9 +0.8
baz=264,SNR=9.4
B22K Teshekpuk Lake 85.20 20 P 22 54 57.6 +0.9
B22K Teshekpuk Lake 85.20 20 P P 22 54 58.0 +1.3
baz=261,SNR=7.4
D22K Ayikyak River 85.24 21 P P 22 54 58.1 +1.0
baz=262
F22K John River 85.25 22 P P 22 54 58.5 +1.3
baz=263
BPAW Bear Paw Mtn. 85.34 26 P P 22 54 58.6 +0.9
baz=264
SLKM Skilak Lake 85.36 30 P 22 54 57.7 -0.1
H22K Ishtalitna Cre 85.37 24 P P 22 54 58.4 +0.6
H22K IAmb IAmb 22 55 36.5
comp=Z,58nm,1.9s

H22K Ishtalitna Cre 85.37 24 P P 22 54 58.9 +1.1
baz=264
VRH Novokhopyorsk 85.40 321 eP P 22 54 55.6 -2.6
VRH pmax pmax
comp=Z,60nm,1.0s
G22K Bettles 85.44 23 P P 22 54 59.7 +1.6
baz=263
E22K Anaktuvuk Pass 85.46 22 P 22 54 59.4 +1.1
E22K IAmb IAmb 22 55 01.0
comp=Z,22nm,1.2s
E22K Anaktuvuk Pass 85.46 22 P P 22 54 59.6 +1.3
baz=263,SNR=6.4
CUT Chulitna 85.50 28 P P 22 54 58.3 -0.1
M22K Willow 85.51 28 P P 22 54 58.1 -0.4
M22K Willow 85.51 28 P P 22 54 58.9 +0.4
baz=265
MARD Mardin 85.53 307 P 22 54 59.0 -0.4
MARD IAmb IAmb 22 55 04.4
comp=Z,18nm,0.7s
MLY Manley 85.54 25 P P 22 54 59.8 +1.1
baz=264
TRF Thorofare Moun 85.59 27 P P 22 54 59.5 +0.4
baz=265
O22K Cooper Landing 85.60 30 P P 22 54 59.5 +0.5
O22K Cooper Landing 85.60 30 P P 22 54 59.5 +0.5
baz=266
RC01 Rabbit Creek A 85.64 29 P P 22 54 59.5 +0.3
RC01 IAmb IAmb 22 55 00.6
comp=Z,23nm,0.6s
RC01 Rabbit Creek A 85.64 29 P P 22 54 59.7 +0.5
baz=265,SNR=5.5
SEW Seward 85.71 30 P P 22 55 00.3 +0.8
baz=266
KOPT Kop Dagi 85.81 310 P 22 55 00.8 -0.1
PMR Palmer 85.97 29 P P 22 55 00.2 -0.6
PMR IAmb IAmb 22 55 29.0
comp=Z,24nm,1.2s
PMR Palmer 85.97 29 P P 22 55 00.2 -0.6
PMR pmax pmax
comp=Z,24nm,1.2s
PMR Palmer 85.97 29 P P 22 55 01.4 +0.6
baz=266
D23K Nanushuk River 85.97 21 IAmb IAmb 22 55 19.7
comp=Z,79nm,1.9s
D23K Nanushuk River 85.97 21 P P 22 55 01.7 +1.0
baz=264
COLD Coldfoot 85.98 23 P 22 55 01.5 +0.7
COLD IAmb IAmb 22 55 03.0
comp=Z,14nm,0.7s
COLD Coldfoot 85.98 23 P P 22 55 02.0 +1.2
baz=264,SNR=8.3
G23K Bananza Creek 86.00 23 P 22 55 00.8 -0.1
G23K Bananza Creek 86.00 23 P P 22 55 01.5 +0.6
baz=265
GHO Glory Hole Cre 86.08 28 P P 22 55 01.6 +0.1
C23K Itkillik River 86.09 20 P 22 55 02.1 +0.8
C23K IAmb IAmb 22 55 04.0
comp=Z,22nm,0.7s
C23K Itkillik River 86.09 20 P P 22 55 02.3 +1.1
baz=264,SNR=10
H23K Yukon River 86.11 24 P P 22 55 02.3 +0.8
H23K IAmb IAmb 22 55 03.7
comp=Z,10nm,0.6s
H23K Yukon River 86.11 24 P P 22 55 02.3 +0.8
baz=265
I23K Minto, Yukon-K 86.14 25 P P 22 55 01.8 +0.2
I23K IAmb IAmb 22 55 03.3
comp=Z,11nm,0.6s
I23K Minto, Yukon-K 86.14 25 P P 22 55 02.5 +1.0
baz=265,SNR=5.1
MCK McKinley 86.21 26 P P 22 55 02.7 +0.6
baz=266
NEA2 Nenana 86.22 25 P P 22 55 02.4 +0.4
baz=266
RND Reindeer 86.23 27 P P 22 55 01.5 -0.7
RND IAmb IAmb 22 55 03.3
comp=Z,11nm,0.6s
RND Reindeer 86.23 27 P P 22 55 01.5 -0.7
RND pmax pmax
comp=Z,11nm,0.6s
VSLR Vesyoloye 86.25 313 *i* P P 22 55 02.2 -0.4
E23K Chandalar 86.28 22 P P 22 55 03.1 +0.8
E23K IAmb IAmb 22 55 04.6
comp=Z,17nm,0.7s
E23K Chandalar 86.28 22 P P 22 55 03.3 +1.0
baz=265
KNK Knik Glacier 86.28 29 P P 22 55 03.3 +0.9
KNK IAmb IAmb 22 55 04.4
comp=Z,25nm,0.7s
KNK Knik Glacier 86.28 29 P P 22 55 03.7 +1.3
baz=266,SNR=5.9
PWL Port Wells 86.31 29 P P 22 55 03.1 +0.6
PWL Port Wells 86.31 29 P P 22 55 03.3 +0.7
baz=267
WAT1 Susitna Watana 86.33 27 P P 22 55 03.2 +0.6
baz=266
TOLK Toolik Lake Re 86.34 21 P 22 55 02.9 +0.3
TOLK IAmb IAmb 22 55 05.1
comp=Z,12nm,0.7s
TOLK Toolik Lake Re 86.34 21 P P 22 55 03.8 +1.2
baz=265,SNR=5.8
SML Sawmill 86.36 28 IAmb IAmb 22 55 04.7
comp=Z,22nm,0.8s
SML Sawmill 86.36 28 P P 22 55 03.9 +1.0
baz=267
SOC Sochi 86.48 313 eP P 22 55 01.1 -2.6
SOC e 22 58 23.7
SOC ePPP PPP 23 00 18.0
SOC eS SKSac 23 05 24.3 -4.0
SOC eSS SS 23 11 17.8 -0.9
SOC eSSS SSS 23 14 48.3
SOC pmax pmax
comp=Z,25nm,0.8s
SOC MLR MLR
comp=Z,238nm,17.0s
M23K Glacier View 86.65 28 P P 22 55 05.4 +1.2
baz=267,SNR=5.9
D24K Happy Valley 86.66 21 IAmb IAmb 22 55 07.4
comp=Z,24nm,0.7s
D24K Happy Valley 86.66 21 P P 22 55 05.1 +1.0
baz=266
WAT6 Susitna Watana 86.69 28 P P 22 55 05.2 +0.7
baz=267,SNR=5.3
E24K Your Creek 86.70 22 P P 22 55 04.0 -0.4
E24K Your Creek 86.70 22 P P 22 55 05.5 +1.1
baz=266
C24K Franklin Bluff 86.74 20 P P 22 55 05.4 +1.0
C24K IAmb IAmb 22 55 36.5
comp=Z,32nm,1.4s
C24K Franklin Bluff 86.74 20 P P 22 55 05.5 +1.0
baz=266
CCB Clear Creek Bu 86.77 25 P P 22 55 04.3 -0.4
H24K Noodor Dome 86.80 24 P 22 55 05.4 +0.5
H24K Noodor Dome 86.80 24 P P 22 55 06.0 +1.1
baz=267
SCM Sheep Creek Mo 86.84 28 P P 22 55 06.1 +0.9
baz=268
DHY Denali Highway 86.88 27 P P 22 55 05.5 0.0
DHY IAmb IAmb 22 55 25.4
comp=Z,24nm,1.6s
DHY Denali Highway 86.88 27 P P 22 55 06.4 +0.9
baz=267
F24K Squaw Lake 86.89 23 P P 22 55 05.2 -0.1
F24K Squaw Lake 86.89 23 P P 22 55 06.0 +0.7
baz=267
GLI Glacier Island 86.92 29 P P 22 55 05.9 +0.4
baz=268
VORD Divnogorie 86.92 321 eP P 22 55 03.4 -2.3
VORD pmax pmax
comp=Z,50nm,1.0s
VORR Voronezh 86.99 321 eP P 22 55 04.5 -1.5
VORR pmax pmax
comp=Z,80nm,1.0s
VSR Storozhevoye 87.01 321 eP P 22 55 02.3 -3.8
VSR pmax pmax
comp=Z,30nm,1.0s
G24K Hadweenzic Riv 87.01 23 P P 22 55 06.6 +0.7
baz=267
KLMR Klimovskoe 87.07 331 eP P 22 55 03.6 -2.6
KLMR pmax pmax
comp=Z,68nm,1.4s
HDA Harding Lake 87.12 26 P P 22 55 05.3 -1.1
HDA Harding Lake 87.12 26 P P 22 55 06.9 +0.4
baz=268
ILAR Eielson Array 87.17 25 P P 22 55 05.4 -1.2
comp=Z,2.2nm,0.5s,baz=245,slow=5.0,SNR=34
comp=Z,2.2nm,0.5s
ILAR Eielson Array 87.17 25 P P 22 55 04.2 -2.5
LPSR Galich'ya Gora 87.18 322 eP P 22 55 05.7 -1.2
LPSR pmax pmax
comp=Z,50nm,1.0s
Q23K Middleton Isla 87.24 31 P P 22 55 07.8 +0.7
baz=268
M24K Tolsona, Glenn 87.40 28 P P 22 55 08.3 +0.4
baz=268
KLU Klutina 87.50 29 P P 22 55 08.9 +0.5
baz=269
D25K Kavik River 87.54 21 P P 22 55 07.3 -1.1
D25K Kavik River 87.54 21 P P 22 55 09.3 +0.9
baz=268
G25K Bearman Lake 87.56 23 P P 22 55 09.5 +1.1
baz=268
EYAK Cordova Ski Ar 87.57 30 P P 22 55 08.9 +0.3
baz=269
K24K Donnelly Dome 87.62 26 P P 22 55 07.9 -1.0
K24K IAmb IAmb 22 56 29.0
comp=Z,32nm,1.4s
K24K Donnelly Dome 87.62 26 P P 22 55 09.6 +0.7
baz=269
H25L Birch Creek 87.66 24 P P 22 55 09.9 +1.0
baz=269
PAX Paxson 87.74 27 P 22 55 09.3 -0.3
PAX IAmb IAmb 22 55 11.9
comp=Z,39nm,1.8s
PAX Paxson 87.74 27 P P 22 55 09.3 -0.3
PAX pmax pmax
comp=Z,39nm,1.8s
PAX Paxson 87.74 27 P P 22 55 10.4 +0.8
baz=269
F25K Christian Rive 87.76 23 P P 22 55 10.2 +0.7
baz=269
E25K Arctic Village 87.80 22 P 22 55 09.7 0.0
E25K IAmb IAmb 22 55 11.8
comp=Z,11nm,0.8s
E25K Arctic Village 87.80 22 P P 22 55 10.8 +1.1
baz=269,SNR=7.1
J25K Salcha River, 87.81 26 P P 22 55 08.9 -0.9
J25K Salcha River, 87.81 26 P P 22 55 09.8 0.0
baz=269
HARP HAARP 87.88 28 P P 22 55 10.6 +0.4
baz=269
MOS Moscow 87.98 326 eP P 22 55 07.3 -3.4
MOS e 23 05 35.6
MOS pmax pmax
comp=Z,40nm,1.0s
RIDG Independent Ri 88.03 26 P P 22 55 10.4 -0.5
RIDG IAmb IAmb 22 55 11.7
comp=Z,13nm,0.7s
RIDG Independent Ri 88.03 26 P P 22 55 11.2 +0.3
baz=270
C26K Camden Bay 88.06 20 P P 22 55 11.5 +0.7
baz=269
ANN Anapa 88.13 315 eP P 22 55 08.7 -2.9
ANN e*PP pP 22 55 19.2 -1.6
ANN eS SKSac 23 05 34.0 -4.3
ANN pmax pmax
comp=Z,33nm,1.0s
BMRM Bremner River 88.13 29 P P 22 55 11.9 +0.5
baz=270
N25K Chitina, Valde 88.14 29 P P 22 55 11.8 +0.3
baz=270
BMAR Burnt Mountain 88.16 23 P 22 55 12.2 +0.8
KAIM Kayak Island 88.23 30 P P 22 55 12.4 +0.6
baz=270
F26K Sheenjek River 88.33 22 P P 22 55 12.9 +0.7
F26K IAmb IAmb 22 55 17.3
comp=Z,18nm,1.5s
F26K Sheenjek River 88.33 22 P P 22 55 13.3 +1.1
baz=270
GAZ Gaziantep 88.38 307 P 22 55 12.0 -1.2
KIBK Kibwezi 88.40 268 P 22 55 13.5 -0.2
KIBK IAmb IAmb 22 55 20.5
comp=Z,32nm,1.2s
SCRK Sand Creek 88.41 26 P P 22 55 13.2 +0.4
baz=270
G26K Porcupine Rive 88.47 23 P P 22 55 13.6 +0.8
baz=270
C27K Jago River 88.48 21 P P 22 55 12.8 0.0
C27K IAmb IAmb 22 55 14.9
comp=Z,18nm,0.6s
C27K Jago River 88.48 21 P P 22 55 13.9 +1.1
baz=270
MENT Mentasta 88.54 27 P P 22 55 13.1 -0.2
OBN Obninsk 88.59 325 P P 22 55 12.8 -0.7
OBN Obninsk 88.59 325 *d* iP P 22 55 12.8 -0.7
OBN e 22 58 41.4
OBN ePPP PPP 23 00 37.7
OBN pmax pmax
comp=Z,27nm,1.0s
OBN MLR MLR
comp=Z,294nm,19.0s
OBN Obninsk 88.59 325 P P 22 55 12.8 -0.7
comp=Z,36nm,0.7s
J26L Joseph Creek 88.59 26 P 22 55 13.2 -0.4
J26L IAmb IAmb 22 55 14.5
comp=Z,10nm,0.7s
J26L Joseph Creek 88.59 26 P P 22 55 13.8 +0.3
baz=271
L26K Log Cabin Wild 88.71 27 P P 22 55 14.7 +0.6
baz=271
I26K Coal Creek Min 88.75 25 IAmb IAmb 22 55 15.2
comp=Z,26nm,1.6s
I26K Coal Creek Min 88.75 25 P P 22 55 14.8 +0.6
baz=271
CRQE Cirque 88.88 29 P P 22 55 15.5 +0.5
baz=271
M26K Nabesna, AK 88.89 28 P P 22 55 14.0 -0.9
M26K IAmb IAmb 22 56 21.1
comp=Z,57nm,2.0s
M26K Nabesna, AK 88.89 28 P P 22 55 15.3 +0.4
baz=271
MCARA McCarthy VSAT 88.89 29 P P 22 55 15.9 +1.0
baz=271
TOKA Tokat 88.89 310 P P 22 55 15.1 -0.4
TOKA IAmb IAmb 22 55 20.0
comp=Z,12nm,0.6s
KMBO Kilima Mbogo 89.15 269 P P 22 55 18.0 +0.5
comp=Z,4.5nm,0.7s,baz=86,slow=5.8,SNR=15
comp=Z,4.5nm,0.7s
KMBO Kilima Mbogo 89.15 269 eP P 22 55 18.5 +1.0
KMBO pmax pmax
comp=Z,5.0nm,0.7s
K27K Chicken 89.25 26 P P 22 55 17.2 +0.7
K27K IAmb IAmb 22 55 19.0
comp=Z,13nm,0.9s
K27K Chicken 89.25 26 P P 22 55 17.8 +1.3
baz=272
E27K Coleen River 89.28 22 P P 22 55 16.1 -0.5
E27K Coleen River 89.28 22 P P 22 55 17.3 +0.6
baz=272
G27K Doyon Strip 89.32 23 P P 22 55 17.7 +0.8
baz=272
I27K Kandik River 89.39 25 P P 22 55 17.5 +0.2
I27K Kandik River 89.39 25 P P 22 55 18.3 +1.1
baz=272
H27K Steamboat Moun 89.40 24 P P 22 55 16.8 -0.4
H27K IAmb IAmb 22 55 55.1
comp=Z,22nm,1.5s
H27K Steamboat Moun 89.40 24 P P 22 55 18.3 +1.0
baz=273
L27K Beaver Creek, 89.40 27 P P 22 55 18.1 +0.8
L27K IAmb IAmb 22 55 19.2
comp=Z,8.2nm,0.6s
L27K Beaver Creek, 89.40 27 P P 22 55 17.8 +0.5
baz=272
M27K Edge Creek, AK 89.41 28 P P 22 55 18.2 +0.7
baz=272
BNN Bunyan 89.42 309 P 22 55 17.1 -0.9
BCAR Beaver Creek A 89.42 27 P 22 55 17.5 +0.1
MESA MESA 89.46 30 P P 22 55 18.4 +0.6
baz=272
D27M Malcolm River 89.46 21 P P 22 55 18.0 +0.4
D27M Malcolm River 89.46 21 P P 22 55 18.3 +0.8
baz=273
BALJ Balqa 89.78 302 P 22 55 19.5 -0.2
GHAJ Ghor Haditha 89.87 301 P 22 55 19.2 -0.9
GHAJ IAmb IAmb 22 55 26.0
comp=Z,30nm,0.9s
BVCY Beaver Creek 89.88 28 P P 22 55 20.5 +0.9
baz=273
MMAI Mount Meron Ar 89.95 303 P P 22 55 21.1 +0.5
comp=Z,5.0nm,0.5s,baz=86,slow=4.6,SNR=14
comp=Z,5.0nm,0.5s
F28M Old Crow 89.97 22 P 22 55 20.3 +0.5
F28M Old Crow 89.97 22 P P 22 55 20.8 +0.9
baz=274
E28M Babbage River 90.02 21 P P 22 55 20.6 +0.5
E28M Babbage River 90.02 21 P P 22 55 21.2 +1.1
baz=274
I28M Miner Creek 90.09 25 P 22 55 21.2 +0.6
I28M IAmb IAmb 22 55 22.4
comp=Z,10nm,0.7s
I28M Miner Creek 90.09 25 P P 22 55 21.3 +0.6
baz=274
YUK3 Moose Creek 90.10 28 P P 22 55 21.3 +0.4
baz=274
D28M Stokes Point 90.25 21 P P 22 55 21.3 +0.3
baz=275
O28M Mount Upton 90.30 29 P P 22 55 21.9 0.0
baz=274
PINM Pinnacle 90.31 30 P P 22 55 22.4 +0.7
baz=274
SYO Syowa Base 90.33 201 ‖ *e*P P 22 55 21.9 +0.5
DAWY Dawson 90.43 26 P 22 55 21.6 -0.5
DAWY IAmb IAmb 22 56 17.7
comp=Z,41nm,1.9s
DAWY Dawson 90.43 26 P P 22 55 22.9 +0.8
baz=274
YUK8 Steele Glacier 90.47 29 P P 22 55 23.0 +0.4
baz=274
SIM Simferopol' 90.48 315 eP P 22 55 21.2 -1.5
SIM pmax pmax
comp=Z,24nm,1.2s
E29M Blow River 90.64 22 P P 22 55 23.8 +0.9
baz=276
H29M Whitestone 90.67 24 P P 22 55 24.0 +0.8
baz=275
G29M Pine Creek 90.74 23 IAmb IAmb 22 55 24.6
comp=Z,12nm,0.9s
G29M Pine Creek 90.74 23 P P 22 55 24.5 +1.0
baz=276
KIRS Kirsehir-Merke 90.91 309 ⇑P P 22 55 24.5 -0.4
LODK Lodwar 90.92 273 P P 22 55 23.2 -2.3
ILGA Ilgaz 90.97 311 P P 22 55 23.9 -1.4
ILGA IAmb IAmb 22 55 50.6
comp=Z,44nm,1.6s
M29M Somme Creek 90.99 28 P P 22 55 24.8 -0.1
M29M Somme Creek 90.99 28 P P 22 55 26.1 +1.2
baz=275
YUK4 Talbot Arm 91.00 29 P P 22 55 26.3 +1.3
baz=275
L29M L29M 91.08 27 P 22 55 25.3 +0.2
L29M IAmb IAmb 22 55 27.5
comp=Z,13nm,0.7s
L29M L29M 91.08 27 P P 22 55 26.2 +1.0
baz=276
BR104 Keskin Array S 91.09 310 P P 22 55 24.5 -1.4
comp=Z,51nmcomp=Z,7.6nm,0.9s
BRTR Keskin Array B 91.10 310 P P 22 55 24.2 -1.7
comp=Z,4.3nm,0.8s,baz=117,slow=4.5,SNR=14
comp=Z,4.3nm,0.8s
BRTR Keskin Array B 91.10 310 P 22 55 24.4 -1.5
BRTR Keskin Array B 91.10 310 *e*P P 22 55 24.7 -1.2
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BR106 Keskin Array S 91.11 310 P P 22 55 24.6 -1.4
comp=Z,59nmcomp=Z,7.7nm,0.9s
BR105 Keskin Array S 91.11 310 P P 22 55 24.6 -1.4
comp=Z,69nmcomp=Z,9.5nm,0.9s
O29M Mount Kennedy 91.13 30 P P 22 55 26.2 +0.6
baz=275
K29M Barlow Dome 91.27 26 P P 22 55 26.4 +0.2
K29M IAmb IAmb 22 55 27.6
comp=Z,37nm,1.8s
K29M Barlow Dome 91.27 26 P P 22 55 26.9 +0.8
baz=276
EPYK Eagle Plains 91.32 24 P P 22 55 26.8 +0.6
baz=277
G30M tAoh Zraii Nji 91.44 23 P P 22 55 27.1 +0.4
baz=277
QSPA South Pole Qui 91.52 180 P P 22 55 30.6 +3.4
comp=Z,6.5nm,0.9s,baz=308,slow=2.6,SNR=12
QSPA PKP2ab 23 19 23.9
comp=Z,0.3nm,0.2s,baz=184,slow=0.6,SNR=6.0
QSPA South Pole Qui 91.52 180 P P 22 55 27.9 +0.7
F30M Barrier River 91.52 22 P P 22 55 26.7 -0.4
F30M IAmb IAmb 22 58 52.9
comp=Z,45nm,1.6s
F30M Barrier River 91.52 22 P P 22 55 27.6 +0.6
baz=276
CSS Mathiatis 91.59 305 P P 22 55 26.9 -1.2
comp=Z,36nm,0.9s
I30M Mount Dempster 91.60 25 P P 22 55 28.0 +0.4
baz=277
HYT Haines Junctio 91.61 29 P P 22 55 28.4 +0.6
baz=276
P29M Windy Craggy 91.61 30 P P 22 55 28.5 +0.8
baz=276
J30M Hart River 91.70 25 P 22 55 27.7 -0.4
J30M IAmb IAmb 22 55 30.0
comp=Z,24nm,1.6s
J30M Hart River 91.70 25 P P 22 55 29.4 +1.2
baz=277
N30M Aishikik Lake 91.74 29 P P 22 55 27.7 -0.6
N30M IAmb IAmb 22 58 55.5
comp=Z,21nm,1.3s
N30M Aishikik Lake 91.74 29 P P 22 55 29.4 +1.1
baz=276
M30M Minto, Yukon 91.74 27 P 22 55 28.3 0.0
M30M IAmb IAmb 22 55 30.4
comp=Z,35nm,1.8s
M30M Minto, Yukon 91.74 27 P P 22 55 29.3 +1.1
baz=277
P30M Million Dollar 91.95 30 P P 22 55 29.8 +0.6
baz=277
G31M Satah River 92.21 23 P 22 55 29.8 -0.4
G31M Satah River 92.21 23 P P 22 55 30.2 0.0
baz=279
INK Inuvik 92.26 21 P 22 55 29.8 -0.6
INK IAmb IAmb 22 55 31.4
comp=Z,29nm,1.5s
INK Inuvik 92.26 21 P P 22 55 29.8 -0.6
INK pmax pmax
comp=Z,29nm,1.5s
INK Inuvik 92.26 21 P P 22 55 30.3 -0.1
baz=280
O30N Mendenhall 92.30 29 P P 22 55 31.2 +0.3
baz=277
ARCES ARCESS Array B 92.31 340 P P 22 55 29.8 -0.9
comp=Z,13nm,1.0s,baz=70,slow=5.9,SNR=17
ARCES PKKP **PKKPdf** 23 12 44.9 -0.5
comp=Z,10nm,1.4s,baz=242,slow=2.6,SNR=5.1
comp=Z,13nm,1.0s
ARCES ARCESS Array B 92.31 340 P 22 55 29.6 -1.1
ARCES IAmb IAmb 22 55 30.6
comp=Z,28nm,1.2s
F31M Tsiigehtchic 92.33 22 P 22 55 30.2 -0.5
F31M IAmb IAmb 22 55 33.7
comp=Z,37nm,1.5s
F31M Tsiigehtchic 92.33 22 P P 22 55 31.1 +0.4
baz=280
N31M Braeburn, Yuko 92.36 28 P P 22 55 31.0 -0.1
baz=278
H31M Peel River 92.36 24 P P 22 55 31.2 +0.2
baz=279
SPITS Spitsbergen Ar 92.48 349 P P 22 55 31.1 -0.2
comp=Z,5.6nm,0.6s,baz=87,slow=5.3,SNR=4.6
comp=Z,5.6nm,0.6s
M31M Drury Creek, Y 92.91 28 P P 22 55 32.1 -1.5
M31M IAmb IAmb 22 55 54.3
comp=Z,39nm,1.9s
M31M Drury Creek, Y 92.91 28 P P 22 55 33.8 +0.1
baz=279
WHY Whitehorse 92.91 29 P 22 55 34.1 +0.3
WHY Whitehorse 92.91 29 P P 22 55 34.7 +0.9
baz=278
MDUB Mudurnu 92.92 310 P P 22 55 34.3 +0.1
MDUB IAmb IAmb 22 55 42.0
comp=Z,18nm,1.0s
KBS Kingsbay 93.02 350 *i* P P 22 55 33.4 -0.4
AK08 Malin Array Si 93.30 321 P P 22 55 35.5 -0.1
AK03 Malin Array Si 93.31 321 P P 22 55 35.6 0.0
AKASG Malin Array Be 93.31 321 P P 22 55 34.8 -0.9
comp=Z,1.8nm,0.6s,baz=72,slow=4.1,SNR=7.9
comp=Z,1.8nm,0.6s
AKASG Malin Array Be 93.31 321 P P 22 55 34.5 -1.1
AKASG IAmb IAmb 22 55 49.8
comp=Z,24nm,1.6s
AKASG Malin Array Be 93.31 321 eP P 22 55 35.2 -0.4

AKASG					pmax		pmax			
	comp=Z,1.0nm,0.4s									
AKBB	**Malin Array Si**	**93.31**	**321**		P		**P**		**22 55 34.8**	**-0.9**
AKBB					IAmb		IAmb		22 55 59.0	
	comp=Z,44nm,1.8s									
AKBB	**Malin Array Si**	**93.31**	**321**		P		**P**		**22 55 34.8**	**-0.9**
AKBB					pmax		pmax			
	comp=Z,44nm,1.8s									
KIEV	**Kiev**	**93.32**	**321**		P		**P**		**22 55 35.2**	**-0.5**
KIEV					IAmb		IAmb		22 55 59.0	
	comp=Z,39nm,1.8s									
KIEV	**Kiev**	**93.32**	**321**		P		**P**		**22 55 35.2**	**-0.5**
KIEV					pmax		pmax			
	comp=Z,39nm,1.8s									
AK12	**Malin Array Si**	**93.36**	**321**		P		**P**		**22 55 36.0**	**+0.1**
BAL3X	**Bal3x, Balta**	**93.37**	**318**		P		**P**		**22 55 35.1**	**-0.9**
AK14	**Malin Array Si**	**93.39**	**321**		P		**P**		**22 55 35.3**	**-0.7**
FINES	**FINESS Array B**	**93.53**	**332**		P		**P**		**22 55 35.2**	**-1.2**
	comp=Z,2.7nm,0.6s,baz=50,slow=6.0,SNR=15									
	comp=Z,2.7nm,0.6s									
FINES	**FINESS Array B**	**93.53**	**332**		P		**P**		**22 55 35.8**	**-0.6**
FINES	**FINESS Array B**	**93.53**	**332**		*e*P		**P**		**22 55 36.9**	**+0.5**
FINES					pmax		pmax			
	comp=Z,3.0nm,0.6s									
BORA	**Eskisehir**	**93.53**	**310**		P		**P**		**22 55 34.4**	**-2.7**
BORA					IAmb		IAmb		22 55 51.4	
	comp=Z,20nm,1.5s									
P32M	**Atlin**	**93.65**	**30**		P		**P**		**22 55 37.7**	**+0.6**
	baz=279									
N32M	**Quiet Lake**	**93.69**	**29**		P		**P**		**22 55 38.2**	**+0.9**
N32M	**Quiet Lake**	**93.69**	**29**		P		**P**		**22 55 38.2**	**+0.9**
	baz=280									
P33M	**Teslin, Yukon**	**93.99**	**29**		P		**P**		**22 55 38.6**	**-0.1**
P33M	**Teslin, Yukon**	**93.99**	**29**		P		**P**		**22 55 39.3**	**+0.6**
	baz=280									
SORM	**Soroca**	**94.18**	**318**	⇓	P		**P**		**22 55 38.6**	**-1.1**
Q32M	**Nakina River**	**94.49**	**31**		P		**P**		**22 55 41.2**	**0.0**
	baz=281									
R33M	**Jennings River**	**95.06**	**30**		P		**P**		**22 55 43.1**	**-0.6**
R33M					IAmb		IAmb		22 55 47.0	
	comp=Z,19nm,1.3s									
R33M	**Jennings River**	**95.06**	**30**		P		**P**		**22 55 44.6**	**+0.9**
	baz=282									
MANT	**Manisa**	**95.13**	**309**		P		**P**		**22 55 42.6**	**-2.0**
MANT					IAmb		IAmb		22 55 49.2	
	comp=Z,9.1nm,0.9s									
NOR	**Nord**	**95.16**	**355**	*i*	P		**P**		**22 55 43.4**	**-0.2**
NOR					IAmb		IAmb		22 55 45.4	
	comp=Z,13nm,1.1s									
C36M	**Paulatuk**	**95.32**	**20**				**P**		**22 55 44.3**	**-0.1**
C36M					IAmb		IAmb		22 55 44.8	
	comp=Z,9.2nm,0.7s									
C36M	**Paulatuk**	**95.32**	**20**		P		**P**		**22 55 45.1**	**+0.6**
	baz=289									
V35K	**Ketchikan**	**95.51**	**34**		P		**P**		**22 55 46.4**	**+0.8**
	baz=281									
TESR	**Tescani**	**95.54**	**317**	⇑	P		**P**		**22 55 45.3**	**-0.7**
TESR	**Tescani**	**95.54**	**317**		P		**P**		**22 55 45.3**	**-0.7**
	comp=Z,20nm,0.8s									
VRI	**Vrincioaia**	**95.58**	**316**	⇑	P		**P**		**22 55 46.6**	**+0.4**
VRI	**Vrincioaia**	**95.58**	**316**		P		**P**		**22 55 45.5**	**-0.7**
	comp=Z,18nm,1.9s									
MBAR	**Mbarara**	**95.65**	**270**		P		**P**		**22 55 46.9**	**-0.6**
	comp=Z,2.2nm,0.2s,baz=139,slow=19,SNR=1.8									
	comp=Z,2.2nm,0.2s									
MBAR	**Mbarara**	**95.65**	**270**		P		**P**		**22 55 46.9**	**-0.6**
MBAR					IAmb		IAmb		22 55 56.9	
	comp=Z,17nm,1.7s									
DLBC	**Dease Lake**	**95.74**	**31**		P		**P**		**22 55 47.2**	**+0.5**
	comp=Z,4.2nm,1.0s,baz=17,slow=14,SNR=3.2									
	comp=Z,4.2nm,1.0s									
DLBC	**Dease Lake**	**95.74**	**31**		P		**P**		**22 55 47.2**	**+0.5**
	baz=282									
WTLY	**Watson Lake, Y**	**95.97**	**29**		P		**P**		**22 55 47.7**	**0.0**
WTLY	**Watson Lake, Y**	**95.97**	**29**		P		**P**		**22 55 48.9**	**+1.2**
	baz=284									
TURR	**Turia**	**96.04**	**316**	⇑	P		**P**		**22 55 48.9**	**+0.6**
MLR	**Muntele Rosu**	**96.17**	**316**				**P**		**22 55 48.4**	**-0.7**
MLR					IAmb		IAmb		22 55 55.5	
	comp=Z,11nm,0.9s									
MLR	**Muntele Rosu**	**96.17**	**316**	⇓	P		**P**		**22 55 49.7**	**+0.6**
MLR	**Muntele Rosu**	**96.17**	**316**		P		**P**		**22 55 48.4**	**-0.7**
MLR					pmax		pmax			
	comp=Z,11nm,0.9s									
MLR	**Muntele Rosu**	**96.17**	**316**		P		**P**		**22 55 49.3**	**+0.2**
	comp=Z,13nm,1.8s									
BURAR	**Bucovina Array**	**96.34**	**318**	⇓	P		**P**		**22 55 49.6**	**-0.2**
BUR08	**Bucovina Ar. S**	**96.35**	**318**				**P**		**22 55 49.2**	**-0.6**
BUR08					IAmb		IAmb		22 55 58.9	
	comp=Z,12nm,0.8s									
SUW	**Suwalki**	**96.44**	**325**		P		**P**		**22 55 48.7**	**-1.2**
SUW	**Suwalki**	**96.44**	**325**		P		**P**		**22 55 48.7**	**-1.2**
KARP	**Karpathos**	**96.57**	**306**		P		**P**		**22 55 49.4**	**-1.6**
EZN	**Ezine**	**96.70**	**310**	⇑	P		**P**		**22 55 50.7**	**-0.7**
ARCR	**ARCALIA**	**97.01**	**318**	⇑	P		Pdif		22 55 55.8	+3.0
KWP	**Kalwaria Pacla**	**97.61**	**320**		P		**P**		**22 55 55.1**	**-0.3**
	comp=Z,17nm,1.0s									
LOT	**Lotru**	**97.69**	**316**	⇑	P		**P**		**22 55 56.0**	**+0.1**
MUKU	**Mukachevo**	**97.86**	**319**		P		**P**		**22 55 56.4**	**0.0**
MARR	**Marisel-Cluj**	**97.91**	**317**	⇓	P		Pdif		22 55 58.6	+1.7
TOAD	**Toad River Com**	**98.06**	**30**		P		**P**		**22 55 57.4**	**+0.2**
	baz=287									
DRGR		**98.17**	**318**	⇓	P		**P**		**22 55 57.5**	**-0.5**
KOTAN	**Kotaneelee Air**	**98.25**	**28**		P		Pdif		22 55 58.4	+0.4
	baz=288									
SURR	**Surduc**	**98.77**	**317**	⇓	P		P		22 55 53.0	-7.6
SIRR	**Siria**	**98.98**	**317**	⇓	P		**Pdif**		**22 56 01.4**	**-0.2**
DAG	**Danmarks Havn**	**99.30**	**352**	*i*	P		**Pdif**		**22 56 01.5**	**-0.8**
OJC	**Ojcow**	**99.32**	**321**		P		**Pdif**		**22 56 02.9**	**-0.1**
OJC	**Ojcow**	**99.32**	**321**		P		**Pdif**		**22 56 02.9**	**-0.1**
LIT	**Litokhoron**	**99.57**	**311**		P		**Pdif**		**22 56 02.3**	**-2.0**
LIT					IAmb		IAmb		22 56 17.9	
	comp=Z,15nm,1.1s									
LIT	**Litokhoron**	**99.57**	**311**		P		**Pdif**		**22 56 02.3**	**-2.0**
LIT					pmax		pmax			
	comp=Z,15nm,1.1s									
HFS	**Hagfors**	**99.72**	**332**		P		**Pdif**		**22 56 04.4**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=100,slow=1.8,SNR=6.3									
	comp=Z,1.1nm,0.6s									
PSZ	**Piszkesteto**	**99.80**	**319**	⇑	P		**Pdif**		**22 56 05.2**	**-0.1**
NB2	**NORSAR Subarra**	**100.52**	**333**		P		**Pdif**		**22 56 06.2**	**-1.9**
	comp=Z,1.9nm,0.9s,baz=68,slow=4.6									
NOA	**NORSAR Array B**	**100.52**	**333**		P		**Pdif**		**22 56 06.7**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=70,slow=4.5,SNR=5.5									
MORH	**Mrgy, Hungar**	**101.03**	**318**	⇓	P		**Pdif**		**22 56 10.3**	**-0.4**
DBG	**Daneborg**	**101.56**	**351**	*i*	P		**Pdif**		**22 56 12.1**	**-0.4**
YKA	**Yellowknife Ar**	**101.57**	**24**		P		**Pdif**		**22 56 13.2**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=298,slow=4.7,SNR=5.7									
SNAA	**Sanae**	**103.08**	**195**	⇑	P		**Pdif**		**22 56 22.0**	**+2.7**
	comp=Z,18nm,0.7s									
SNAA	**Sanae**	**103.08**	**195**		PKKPbc		PKKPbc		23 12 14.7	-3.8
	comp=Z,1.0nm,1.0s,baz=262,slow=4.7,SNR=7.8									
VNA3	**Neumayer Olymp**	**105.01**	**193**	⇑	P		**Pdif**		**22 56 28.1**	**+0.3**
	comp=E,0.9nm,0.7s									
PDAR	**Pinedale Array**	**113.18**	**42**		PKiKP		**PKiKP**		**23 00 59.2**	**+0.3**
	comp=E,0.6nm,0.6s,baz=256,slow=4.1,SNR=6.3									
PDAR					PKKPab		**PKKPab**		**23 11 51.8**	**-1.3**
	comp=E,0.4nm,0.5s,baz=126,slow=4.9,SNR=3.7									
PV13	**Radium Mtn., P**	**115.64**	**46**				**PKPdf**		**23 01 04.9**	**+1.1**
PV07	**Paradox Valley**	**115.65**	**46**		PKPdf		**PKiKP**		**23 01 04.1**	**+0.3**
PV02	**Paradox Valley**	**115.68**	**46**		PKiKP		**PKiKP**		**23 01 04.1**	**+0.3**
PV01	**Paradox Valley**	**115.83**	**46**		PKiKP		**PKiKP**		**23 01 04.4**	**+0.3**
RSSD	**Black Hills**	**116.07**	**38**				**PKiKP**		**23 01 04.3**	**0.0**
RSSD	**Black Hills**	**116.07**	**38**		PKIKP		**PKiKP**		**23 01 04.4**	**0.0**
ULM	**Lac du Bonnet**	**116.98**	**29**		PKP		**PKPdf**		**23 01 05.2**	**-0.4**
	comp=E,4.0nm,0.6s,baz=306,slow=4.5,SNR=3.6									
ANMO	**Albuquerque**	**118.70**	**48**		PKP		**PKPdf**		**23 01 09.1**	**-0.6**
	comp=E,1.4nm,0.5s,baz=290,slow=2.4,SNR=4.2									
ANMO	**Albuquerque**	**118.70**	**48**				**PKiKP**		**23 01 11.0**	**+1.3**
SCHQ	**Schefferville**	**122.71**	**9**		PKP		**PKPdf**		**23 01 16.9**	**+0.3**
	comp=E,4.7nm,0.4s,baz=322,slow=1.4,SNR=6.8									
TXAR	**Lajitas Array**	**123.16**	**53**		PKP		**PKiKP**		**23 01 18.9**	**+0.4**
	comp=E,2.2nm,0.7s,baz=249,slow=1.0,SNR=27									
TXAR					PKKPab		**PKKPbc**		**23 11 09.8**	**+0.5**
	comp=E,0.4nm,0.8s,baz=122,slow=4.7,SNR=4.7									
TORD	**Torodi Ar. Bea**	**123.22**	**287**		PKP		**PKPdf**		**23 01 19.0**	**+0.4**
	comp=E,7.5nm,0.9s,baz=48,slow=3.2,SNR=5.8									
TORD	**Torodi Ar. Bea**	**123.22**	**287**				**PKiKP**		**23 01 19.2**	**+0.4**
CCM	**Cathedral Cave**	**127.44**	**37**				**PKiKP**		**23 01 26.8**	**+0.2**
CCM	**Cathedral Cave**	**127.44**	**37**		PKIKP		**PKiKP**		**23 01 26.8**	**+0.2**
DBIC	**Dimbokro**	**130.63**	**280**		PKP		**PKiKP**		**23 01 34.3**	**+0.6**
	comp=E,9.2nm,0.9s,baz=101,slow=3.5,SNR=8.1									
WVT	**Waverly**	**130.77**	**37**				**PKPdf**		**23 01 32.2**	**-0.2**
WVT	**Waverly**	**130.77**	**37**		PKIKP		**PKPdf**		**23 01 32.2**	**-0.2**
SSPA	**Standing Stone**	**132.50**	**25**				**PKPdf**		**23 01 36.1**	**+0.5**
TKL	**Tuckaleechee C**	**133.46**	**34**		PKP		**PKPdf**		**23 01 38.3**	**+0.8**
	comp=E,9.4nm,0.6s,baz=146,slow=6.5,SNR=15									
PLCA	**Paso Flores**	**138.14**	**161**		PKP		**PKPdf**		**23 01 46.5**	**+0.3**
	comp=E,5.4nm,0.7s,baz=289,slow=0.9,SNR=12									
PLCA	**Paso Flores**	**138.14**	**161**				**PKiKP**		**23 01 47.8**	**-0.4**
TRQA	**Tornquist**	**142.92**	**169**				**PKPdf**		**23 01 51.5**	**-3.4**
TRQA	**Tornquist**	**142.92**	**169**		PKIKP		**PKPdf**		**23 01 51.5**	**-3.4**
CNGN	**Cerro Negro**	**144.30**	**66**				PKPbc		23 01 56.5	+0.3
LCO	**Las Campanas**	**148.25**	**151**				**PKPbc**		**23 02 08.6**	**+0.7**
LCO	**Las Campanas**	**148.25**	**151**		PKP2		**PKPbc**		**23 02 08.6**	**+0.7**
NMDO	**Nuevo Mundo**	**149.62**	**42**				**PKPbc**		**23 02 11.1**	**-0.1**
PLTB	**Pedras Altas**	**150.00**	**180**				**PKPbc**		**23 02 12.3**	**+0.4**
CPUP	**Villa Florida**	**155.16**	**172**		PKPbc		PKPbc		23 02 24.3	
	comp=E,1.7nm,0.8s,baz=38,slow=1.9,SNR=8.8									
ROSC	**El Rosal**	**158.36**	**73**		PKPab		**PKPab**		**23 02 55.4**	**+1.3**
	comp=E,7.5nm,0.4s,baz=0.1,slow=11,SNR=4.9									
LPAZ	**La Paz**	**159.58**	**136**		PKP		**PKPdf**		**23 02 22.3**	**+1.1**
	comp=E,3.3nm,0.7s,baz=233,slow=2.2,SNR=14									
LPAZ					PKPab		**PKPab**		**23 03 01.9**	**+2.6**
	comp=E,4.4nm,0.7s,baz=314,slow=0.7,SNR=5.8									

SOME ***14*** *22:42:40.6, 39.°15N×72.°58E, h10km*
IDC ***14*** *22:42:42.5±8.3, 38.°42N×73.°66E, h136km±54km, mb3.6/4, mbtmp4.0/6, MS3.5/1, Error ellipse: s-maj=80.7km s-min=63.1km az=130.0*
ISC 14 22:42:37.1±1.7, 39.°04N±0.°10×72.°55E±0.°07, h10km, n13, σ2§18/18, mb3.9/4, 1C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°		Phase	ID	Op	ISC	Time	Res
MRKS	**Merke**	**3.73**	**8**		*eP*			**Pb**	**22 43 46.2**	**+3.0**
	33nm,0.3s									
MRKS					*eS*			**Sg**	**22 44 33.4**	**-3.6**
	53nm,0.4s									
AAK	**Ala-Archa**	**3.88**	**22**		P			**Pb**	**22 43 46.1**	**+0.4**
	6.4nm,0.5s,baz=156,slow=6.1,SNR=14									
AAK					S			**Sb**	**22 44 35.8**	**+2.9**
	22nm,0.7s,baz=349,slow=14,SNR=12									
KK31	**Karatay Array**	**4.34**	**340**	⇓	P			**Pb**	**22 43 57.1**	**+3.7**
	14nm,0.5s,baz=142,slow=12,SNR=194									
KK31				⇑	S			**Sg**	**22 44 52.6**	**-3.8**
	37nm,0.6s,baz=154,slow=24,SNR=18									
BRLS	**Borolday**	**4.48**	**334**		*eP*			**Pb**	**22 43 56.9**	**+1.1**
	23nm,0.3s									
BRLS					*eS*			**Sb**	**22 44 52.1**	**+2.1**
	11nm,0.2s									
KST	**Kastek**	**4.76**	**32**		*eP*			**Pg**	**22 44 07.6**	**-0.6**
	5.6nm,0.3s									
KST					*eS*			**Sg**	**22 45 10.1**	**+0.2**
	19nm,0.6s									
TNSS	**Tian-Shan**	**5.19**	**38**		*eP*			**Pg**	**22 44 15.3**	**-1.3**
	1.8nm,0.3s									
TNSS					*eS*			**Sg**	**22 45 23.1**	**-0.8**
	3.8nm,0.5s									
ZALV	**Zalesovo Beam**	**17.10**	**25**		P			**Pn**	**22 46 35.0**	**-1.0**
	2.7nm,0.4s,baz=211,slow=12,SNR=5.6									
GNI	**Garni**	**21.43**	**282**		LR			LR	22 57 12.6	
	comp=Z,128nm,20.2s,baz=20,slow=39									
FINES	**FINESS Array B**	**36.11**	**324**		P			**P**	**22 49 39.7**	**+0.9**
	1.3nm,0.7s,baz=102,slow=13,SNR=1.0									
	1.3nm,0.7s									
ARCES	**ARCESS Array B**	**39.29**	**336**		P			**P**	**22 50 05.7**	**0.0**
	1.5nm,0.5s,baz=103,slow=8.5,SNR=8.5									
	1.5nm,0.5s									
HFS	**Hagfors**	**41.87**	**320**		P			**P**	**22 50 27.2**	**+0.2**
	1.9nm,0.5s,baz=102,slow=12,SNR=5.6									
	1.9nm,0.5s									
NB2	**NORSAR Subarra**	**43.13**	**321**		P			**P**	**22 50 36.7**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=91,slow=7.9									
NOA	**NORSAR Array B**	**43.13**	**321**		P			**P**	**22 50 36.2**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=90,slow=7.8,SNR=7.4									
	comp=Z,1.2nm,0.6s									

SNET ***14*** *22:44:19.6±3.3, 13.°65N×91.°00W, h108km, ML3.3*
CATAC ***14*** *22:44:21.0±0.5, 14.°N±3.°×9.°1W±.°, h11km±2km, M3.4/15, MLv3.4/15, Error ellipse: s-maj=6.3km s-min=2.5km az=25.6, confirmed*
GCG ***14*** *22:44:22.6±1.3, 13.°68N×91.°06W, h44km±68km, MD3.6, ML3.7, MW3.0*
ISC 14 22:44:20.7±1.7, 13.°62N±0.°07×90.°97W±0.°05, h9km±10km, n47, σ1§03/52, Near coast of Guatemala

Code	Station Name	Δ°	AZ°		Phase	ID	Op	ISC	Time	Res
ESSG	**Sabana Grande**	**0.77**	**10**		*eP*			**Pn**	**22 44 37.0**	**-0.9**
FG16	**Alotenango, Sa**	**0.79**	**35**		*i* P			**Pn**	**22 44 38.4**	**+0.2**
FG16					*i* S			**Sn**	**22 44 50.0**	**-0.3**
FG16					IAML				22 44 50.3	
	comp=N,6μm,0.2s									
STG8	**El Palmar, Qui**	**0.90**	**336**		*eP*			Pn	22 44 43.5	+3.6
STG8					*i* S			**Sn**	**22 44 58.5**	**+5.3**
STG8					IAML				22 44 59.9	
	comp=E,1μm,0.2s									
FAME	**Alcaldia de Sa**	**0.96**	**76**		P			**Pg**	**22 44 40.1**	**+1.0**
FAME	**Alcaldia de Sa**	**0.96**	**76**		S			**Sn**	**22 44 53.2**	**-0.9**
RTAL	**Retalhuleu**	**1.14**	**322**		S			**Sg**	**22 44 56.6**	**-0.8**
RTAL	**Retalhuleu**	**1.14**	**322**		P			**Pg**	**22 44 42.2**	**+0.5**
NUBE	**Las Nubes**	**1.19**	**76**		*eP*			**Pb**	**22 44 43.4**	**-0.2**
NUBE	**Las Nubes**	**1.19**	**76**		*i* P			**Pb**	**22 44 43.6**	**+0.1**
NUBE	**Las Nubes**	**1.19**	**76**		P			**Pb**	**22 44 43.7**	**+0.1**
NUBE	**Las Nubes**	**1.19**	**76**		S			**Sn**	**22 44 59.6**	**-0.5**
LOAL	**Lomas de Alarc**	**1.22**	**72**		S			**Sg**	**22 45 00.7**	**+0.8**
LOAL	**Lomas de Alarc**	**1.22**	**72**		P			**Pg**	**22 44 44.6**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.22**	**71**		*eP*			**Pn**	**22 44 42.6**	**-1.5**
SLOZ	**Alcaldia de Sa**	**1.22**	**71**		S			**Sn**	**22 44 59.9**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.22**	**71**		P			**Pn**	**22 44 42.3**	**-1.7**
SOKI	**Kika Raxquin**	**1.27**	**341**		*eP*			**Pb**	**22 44 44.3**	**-0.7**
CEVE	**Cerro Verde**	**1.33**	**81**		*eP*			**Pb**	**22 44 46.0**	**+0.1**
CEVE					*eS*			**Sg**	**22 45 04.0**	**+0.5**
CEVE	**Cerro Verde**	**1.33**	**81**		S			**Sg**	**22 45 04.3**	**+0.9**
CEVE	**Cerro Verde**	**1.33**	**81**		P			**Pb**	**22 44 45.9**	**0.0**
SBLS	**San Blas**	**1.33**	**80**		*eP*			**Pb**	**22 44 45.9**	**-0.1**
SBLS					*eS*			**Sb**	**22 45 03.2**	**0.0**
RBDL	**Robledal**	**1.34**	**68**		*i* P			**Pb**	**22 44 46.4**	**+0.3**
RBDL					*e*S			**Sg**	**22 45 04.4**	**+0.5**
SNJE	**San Jose**	**1.35**	**79**		*eP*			**Pb**	**22 44 46.2**	**-0.1**
SNJE					*eP*				22 44 46.4	
SNJE					*eS*			**Sb**	**22 45 03.9**	**+0.1**
UNIC	**Universidad Ca**	**1.43**	**75**		S			**Sb**	**22 45 06.0**	**0.0**
UNIC	**Universidad Ca**	**1.43**	**75**		P			**Pb**	**22 44 47.5**	**-0.1**
APG	**El Apazote**	**1.46**	**20**		*i* P			**Pb**	**22 44 47.8**	**-0.5**
JAYA	**Jayaque - finc**	**1.48**	**89**		*eP*			**Pn**	**22 44 47.8**	**+0.1**
JAYA	**Jayaque - finc**	**1.48**	**89**		*eP*			**Pn**	**22 44 47.7**	**+0.1**
JAYA	**Jayaque - finc**	**1.48**	**89**		P			**Pn**	**22 44 47.8**	**+0.1**
JAYA	**Jayaque - finc**	**1.48**	**89**		S			**Sb**	**22 45 07.7**	**+0.2**
LALI	**Alcalda de L**	**1.61**	**94**		S			**Sb**	**22 45 10.7**	**-0.4**
LALI	**Alcalda de L**	**1.61**	**94**		P			**Pn**	**22 44 49.8**	**+0.5**
PMON	**Piamonte**	**1.61**	**87**		P			**Pb**	**22 44 50.7**	**-0.1**
PMON	**Piamonte**	**1.61**	**87**		S			**Sb**	**22 45 11.3**	**0.0**
BOQS	**Boqueron**	**1.65**	**86**		*eP*			**Pb**	**22 44 50.7**	**-0.7**
PANCS	**Alcalda de**	**1.74**	**90**		S			**Sb**	**22 45 14.7**	**-0.3**
PANCS	**Alcalda de**	**1.74**	**90**		P			**Pn**	**22 44 51.5**	**+0.3**
MTO3	**Montecristo**	**1.75**	**63**		*eP*			**Pb**	**22 44 52.2**	**-0.8**
MTO3	**Montecristo**	**1.75**	**63**		S			**Sg**	**22 45 16.2**	**-0.7**
MTO3	**Montecristo**	**1.75**	**63**		P			**Pn**	**22 44 51.6**	**+0.2**
LOMA	**Loma Larga**	**1.75**	**89**		S			**Sb**	**22 45 15.0**	**-0.3**
LOMA	**Loma Larga**	**1.75**	**89**		P			**Pb**	**22 44 52.2**	**-0.9**
ESQI	**Esquipulas**	**1.84**	**59**		S			**Sb**	**22 45 17.9**	**+0.1**
LFRS	**El Faro**	**1.86**	**90**		*eP*			**Pb**	**22 44 53.9**	**-1.0**
TECO	**Alcaldia de Te**	**2.13**	**92**		S			**Sn**	**22 45 24.0**	**+0.8**
PACA	**Pacayal**	**2.58**	**93**		S			**Sb**	**22 45 36.9**	**-2.2**
PACA	**Pacayal**	**2.58**	**93**		P			**Pn**	**22 45 03.2**	**+0.4**

DJA ***14*** *22:50:40.4±0.4, 1.°N±3.°×12.°7E±.°, h10km, M3.8/6, MLv3.8/6*
IDC ***14*** *22:50:42.5±1.6, 1.°67N×126.°40E, h0km, mb3.9/4, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=117.8km s-min=20.7km az=69.0*
ISC 14 22:50:47.7±1.2, 1.°55N±0.°07×126.°5E±0.°1, h35km, n9, σ1§36/10, mb3.9/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TNTI	**Ternate**	**1.16**	**132**	P			Pn	22 50 58.2	-9.3
SGSI	**Sangihe**	**2.33**	**336**	P			**Pn**	**22 51 23.4**	**-0.2**
SGSI				S			**Sn**	**22 51 51.7**	**+0.7**
KMSI	**Cibinong**	**2.69**	**249**	P			**Pn**	**22 51 29.1**	**+0.6**
KMSI				S			**Sn**	**22 52 01.3**	**+1.4**
LUWI	**Luwuk**	**4.53**	**235**	P			**Pn**	**22 51 51.4**	**-2.4**
FITZ	**Fitzroy Crossi**	**19.54**	**182**	P			**P**	**22 55 13.2**	**+0.8**
	0.1nm,0.3s,baz=346,slow=8.0,SNR=1.1								
	2.7nm,0.9s								
WRA	**Warramunga Arr**	**22.70**	**161**	P			**P**	**22 55 47.2**	**+0.7**
	2.8nm,0.6s,baz=339,slow=11,SNR=8.0								
	2.8nm,0.6s								
ASAR	**Alice Springs**	**26.08**	**164**	P			**P**	**22 56 19.6**	**+1.3**
	1.0nm,0.6s,baz=344,slow=7.5,SNR=6.9								
	1.0nm,0.6s								
MKAR	**Makanchi Array**	**59.21**	**326**	P			**P**	**23 00 44.5**	**-1.0**
	0.4nm,0.4s,baz=121,slow=8.0,SNR=7.4								
	0.4nm,0.4s								
KURBB	**Kurchatov Arra**	**63.45**	**328**	P			**P**	**23 01 12.9**	**-1.0**
	0.7nm,0.3s,baz=116,slow=6.4,SNR=1.5								
	0.7nm,0.3s								

IDC 14 22:51:42.5±1.7, 1.°65N×126.°48E, h0km, mb3.9/4, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=120.5km s-min=21.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P			P	22 56 12.4	-0.5
	0.3nm,0.3s,baz=7.0,slow=14,SNR=1.7								
	1.3nm,0.6s								
WRA	**Warramunga Arr**	**22.80**	**161**	P			P	22 56 47.3	+0.3
	1.7nm,0.4s,baz=340,slow=11,SNR=5.4								
	1.7nm,0.4s								
ASAR	**Alice Springs**	**26.18**	**164**	P			P	22 57 19.0	+0.1
	0.7nm,0.4s,baz=343,slow=8.4,SNR=4.7								
	0.7nm,0.4s								
MKAR	**Makanchi Array**	**59.12**	**326**	P			P	23 01 44.7	-0.3
	0.6nm,0.6s,baz=120,slow=8.3,SNR=5.7								
	0.6nm,0.6s								
KURBB	**Kurchatov Arra**	**63.35**	**328**	P			P	23 02 13.7	+0.2
	1

MT03				IAML		23 08 29.0		
	comp=Z,958nm,1.1s							
PEL	**Peldehue**	**1.65**	**255**	*eP*	**Pb**	**23 08 03.4**	**-0.2**
PEL				*eS*	**Sb**	**23 08 24.7**	**+0.6**
PEL				IAML		23 08 25.3		
	comp=Z,643nm,0.9s							
MT05	**Renca**	**1.77**	**248**	*eP*	**Pb**	**23 08 05.5**	**-0.1**
MT05				*eS*	**Sb**	**23 08 29.1**	**+1.6**
MT05				IAML		23 08 34.5		
	comp=Z,453nm,0.2s							
ROC1	**El Roble**	**1.90**	**262**	*eP*	**Pb**	**23 08 07.6**	**-0.3**
ROC1				*eS*	**Sb**	**23 08 32.3**	**+1.0**
RFA	**San Rafael**	**2.05**	**173**	*eP*	**Pb**	**23 08 09.7**	**-0.7**
RFA				*eS*	**Sb**	**23 08 39.0**	**+3.5**
RFA				IAML		23 08 42.2		
	comp=Z,1μm,0.7s							
ACCO	**Cerro Coronel**	**2.15**	**353**	*eP*	**Pb**	**23 08 13.1**	**+0.8**
ACDV	**Cuesta del Vie**	**2.57**	**353**	*eP*	**Pb**	**23 08 20.8**	**+1.4**
MRA	**San Martin**	**2.60**	**84**	*eP*	**Pb**	**23 08 21.4**	**+1.6**
AROD	**Rodeo**	**2.63**	**347**	*eP*	**Pb**	**23 08 21.2**	**+0.8**
PLCA	**Paso Flores**	**8.11**	**190**	P	Pb	23 10 03.8	+10
	comp=Z,0.9nm,0.6s,baz=7.0,slow=12,SNR=7.6							
PLCA				S	Sb	23 11 43.4	+14	
	comp=Z,5.1nm,0.6s,baz=316,slow=21,SNR=4.4							
CPUP	**Villa Florida**	**11.83**	**60**	P	**Pn**	**23 10 16.6**	**-4.2**	
	comp=Z,0.2nm,0.4s,baz=252,slow=9.6,SNR=3.6							
LPAZ	**La Paz**	**16.39**	**2**	P	**Pn**	**23 11 22.5**	**-0.1**	
	comp=Z,0.6nm,0.6s,baz=174,slow=9.2,SNR=1.7							
SNAA	**Sanae**	**51.74**	**158**	P	**P**	**23 16 38.3**	**-0.2**	
	comp=Z,0.7nm,0.7s,baz=288,slow=8.3,SNR=6.9							
	comp=Z,0.7nm,0.7s							
QSPA	**South Pole Qui**	**57.50**	**180**	P	**P**	**23 17 23.6**	**+3.2**	
	comp=Z,0.7nm,0.5s,baz=166,slow=4.2,SNR=5.8							
	comp=Z,0.7nm,0.5s							
KURBB	**Kurchatov Arra**	**150.08**	**44**	PKPbc	**PKPdf**	**23 27 13.6**	**-3.0**	
	comp=Z,0.4nm,0.8s,baz=304,slow=2.9,SNR=6.2							
ZALV	**Zalesovo Beam**	**151.68**	**34**	PKPbc	**PKPdf**	**23 27 16.4**	**-2.5**	
	comp=Z,1.3nm,0.6s,baz=329,slow=2.5,SNR=6.5							

IDC 14 23:08:36.9±1.9, 1°39.9'N×126°02.2'E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=186.0km s-min=24.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.71**	**159**	P	P	23 13 40.1	-0.5
	0.3nm,0.4s,baz=338,slow=11,SNR=4.6						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**26.06**	**163**	P	P	23 14 12.6	+0.3
	0.2nm,0.5s,baz=343,slow=8.0,SNR=4.3						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	23 18 37.9	-1.2
	0.5nm,0.9s,baz=110,slow=8.8,SNR=1.8						
	0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	P	23 19 08.9	+1.1
	0.2nm,0.5s,baz=122,slow=7.1,SNR=2.3						
	0.2nm,0.5s						

IDC 14 23:10:23.4±1.9, 1°61.1'N×126°15.5'E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=200.4km s-min=24.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.87**	**160**	P	P	23 15 28.5	-0.2
	0.2nm,0.4s,baz=338,slow=11,SNR=1.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**26.23**	**164**	P	P	23 16 00.4	+0.1
	0.2nm,0.6s,baz=348,slow=6.7,SNR=1.5						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.97**	**326**	P	P	23 20 25.3	+0.5
	0.2nm,0.6s,baz=122,slow=6.6,SNR=2.0						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**63.22**	**328**	P	P	23 20 53.0	-0.5
	0.3nm,0.6s,baz=120,slow=5.6,SNR=4.0						
	0.3nm,0.6s						

GRAL 14 23:11:31.8±0.3, 33°.40'N×35°.60'E, h9km±3km, MD2.5
GII 14 23:11:31.9±0.0, 33°.367'N±0°.003'×35°.651'E±0°.001, h8km, Mws1.6, confirmed

ISC 14 23:11:31.1±0.9, 33°.43'N±0°.03'×35°.67'E±0°.04, h15km±7km, n23, σ0s31/26, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHBL	**Chebaa**	**0.10**	**141**	*eP*	**Pg**	**23 11 34.7**	**+0.1**
QRWL	**Qaraoun**	**0.12**	**5**	*eP*	**Pb**	**23 11 35.2**	**-0.1**
QRWL				*eS*	**Sb**	**23 11 37.7**	**-0.4**
RCY	**Rachaya**	**0.16**	**63**	*eP*	**Pb**	**23 11 36.2**	**+0.3**
RCY				*eS*	**Sb**	**23 11 39.3**	**+0.2**
NATI	**Neve Ativ**	**0.17**	**161**	P	**Pg**	**23 11 35.2**	**-0.1**
NATI	**Neve Ativ**	**0.17**	**161**	S	**Sg**	**23 11 37.8**	**-0.2**
GEM	**Giv'at Ha'Em**	**0.21**	**181**	P	**Pg**	**23 11 35.8**	**-0.2**
GEM	**Giv'at Ha'Em**	**0.21**	**181**	S	**Sg**	**23 11 39.0**	**-0.2**
DQRL	**Deir Qamar**	**0.29**	**343**	*eP*	**Pb**	**23 11 37.7**	**-0.5**
DQRL				*eS*	**Sg**	**23 11 42.0**	**+0.4**
MMC7	**Mount Meron ar**	**0.46**	**210**	P	**Pg**	**23 11 40.4**	**0.0**
MMC7	**Mount Meron ar**	**0.46**	**210**	S	**Sg**	**23 11 47.2**	**+0.5**
MMA0B	**Mount Meron ar**	**0.47**	**209**	P	**Pg**	**23 11 40.6**	**+0.2**
MMA0B	**Mount Meron ar**	**0.47**	**209**	S	**Sg**	**23 11 47.2**	**+0.4**
ZAHL	**Zahle**	**0.47**	**23**	*eP*	**Pb**	**23 11 41.2**	**0.0**
HNTI	**Hanita**	**0.54**	**231**	P	**Pg**	**23 11 42.1**	**+0.3**
HNTI	**Hanita**	**0.54**	**231**	S	**Sg**	**23 11 49.2**	**+0.2**
OFRI	**`Ofer**	**0.99**	**216**	P	**Pb**	**23 11 50.1**	**+0.1**
OFRI	**`Ofer**	**0.99**	**216**	S	**Sb**	**23 12 02.9**	**0.0**
MMLI	**Mount Malkishu**	**1.01**	**192**	P	**Pb**	**23 11 50.1**	**-0.2**
MMLI	**Mount Malkishu**	**1.01**	**192**	S	**Sb**	**23 12 02.8**	**-0.6**
HMDT	**Nahal Hemdat**	**1.18**	**186**	P	**Pb**	**23 11 53.1**	**-0.1**
HMDT	**Nahal Hemdat**	**1.18**	**186**	S	**Sn**	**23 12 08.5**	**-0.3**
SALP	**Salfit**	**1.41**	**197**	P	**Pn**	**23 11 56.5**	**+0.1**
SALP	**Salfit**	**1.41**	**197**	S	**Sb**	**23 12 15.4**	**+0.4**

IDC 14 23:11:52.3±1.1, 1°.75'N×126°.44'E, h0km, mb3.8/9, mbtmp3.8/10, ML3.6/1, Error ellipse: s-maj=122.1km s-min=15.0km az=69.0
DJA 14 23:11:56.6±0.3, 2°N±3'×12°.6'E±°, h10km, M3.9/8, MLv3.9/8
NEIC 14 23:11:58.0±1.0, 1°.7'N±0°.1'×126°.45'E±0°.09, h35km±2km, mb4.2/5, Error ellipse: s-maj=22.8km s-min=11.6km az=31.0

ISC 14 23:11:57.7±0.8, 1°.70'N±0°.07'×126°.46'E±0°.07, h35km, n24, σ1s04/25, mb3.9/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**136**		**Pn**	**23 12 20.7**	**+1.4**
TNTI	**Ternate**	**1.29**	**136**	P	**Pn**	**23 12 20.8**	**+1.4**
SGSI	**Sangihe**	**2.18**	**335**	P	**Pn**	**23 12 32.8**	**+1.2**
SGSI				S	**Sn**	**23 12 58.3**	**+1.0**
KMSI	**Cibinong**	**2.72**	**246**	P	**Pn**	**23 12 39.5**	**+0.5**
LUWI	**Luwuk**	**4.59**	**234**	Pn	**Pn**	**23 13 05.2**	**+0.5**
LUWI	**Luwuk**	**4.59**	**234**	P	**Pn**	**23 13 06.8**	**+2.1**
TOLI2	**Tolitoli**	**5.71**	**264**	Pn	**Pn**	**23 13 21.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	**P**	**23 16 23.1**	**-1.1**
	0.1nm,0.3s,baz=23,slow=13,SNR=1.9						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**22.86**	**161**	P	**P**	**23 16 57.6**	**-0.6**
	2.0nm,0.7s,baz=339,slow=10,SNR=12						
	2.0nm,0.7s						
WR8	**Warramunga Arr**	**22.92**	**160**	P	**P**	**23 16 58.6**	**-0.3**
ASAR	**Alice Springs**	**26.23**	**164**	P	**P**	**23 17 30.2**	**+0.5**
	1.2nm,0.6s,baz=343,slow=11,SNR=16						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**26.23**	**164**	P	**P**	**23 17 29.9**	**+0.2**
STKA	**Stephens Creek**	**36.35**	**158**	P	**P**	**23 18 58.0**	**-0.5**
	1.0nm,0.2s,baz=326,slow=7.3,SNR=2.0						
	1.0nm,0.2s						
SONM	**Songino Array**	**49.13**	**342**	P	**P**	**23 20 41.8**	**-0.3**
	0.3nm,0.6s,baz=147,slow=8.6,SNR=2.2						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**23 21 54.5**	**0.0**
	1.4nm,0.8s,baz=131,slow=6.7,SNR=12						
	1.4nm,0.8s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**23 21 53.9**	**-0.6**
MAKZ	**Makanchi**	**59.25**	**326**	P	**P**	**23 21 54.7**	**-1.0**
ZALV	**Zalesovo Beam**	**62.27**	**334**	P	**P**	**23 22 14.4**	**-1.7**
	0.3nm,0.3s,baz=141,slow=7.4,SNR=1.6						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**23 22 22.5**	**-0.5**
	0.8nm,0.7s,baz=129,slow=6.3,SNR=8.4						
	0.8nm,0.7s						
KURK	**Kurchatov**	**63.30**	**328**	P	**P**	**23 22 22.3**	**-0.7**
KURK				IAmb	IAmb	23 22 28.2		
	comp=Z,2.3nm,0.9s							
BVAR	**Borovoye Array**	**68.87**	**327**	P	**P**	**23 22 58.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=144,slow=5.2,SNR=4.1							
	comp=Z,0.5nm,0.5s							
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**23 24 11.8**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=3.7,slow=6.4,SNR=3.9							
	comp=Z,0.5nm,0.5s							
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**23 24 11.3**	**+0.5**
VNDA				IAmb	IAmb	23 24 19.3		
	comp=Z,1.6nm,0.8s							
SBA	**Scott Base**	**82.38**	**172**	P	**P**	**23 24 14.9**	**-0.7**
SBA				IAmb	IAmb	23 24 15.5		
	comp=Z,3.9nm,1.1s							

IDC 14 23:17:16.5±0.3, 1°.59'N×126°.16'E, h0km, mb5.3/41, mbtmp5.3/42, ML5.2/1, MS4.7/49, Error ellipse: s-maj=15.1km s-min=8.7km az=78.0
BJI 14 23:17:18.5, 1°.23'N×126°.26'E, h46km, mB5.4/27, mb5.2/73, Ms5.1/68, Ms7 5.0/67
NEIC 14 23:17:20.9, 1°.60'N×126°.25'E, h24km, Moment Tensor Solution. Duration: 3s1 Moment tensor: Scale 10^17Nm; Mrr1.96; Mθθ0.13; Mφφ-2.09; Mrθ-0.44; Mθφ-0.39; Mφr0.09; Fault plane solution: Mo2.11000×10^17 NP1: φs202.82000°, δ46.37000°, λ108.74000°. NP2: φs356.63000°, δ46.73000°, λ71.38000°. Principal axes: T 2.0633, Plg77.0000°, Azm190.0000°; N 0.0923, Plg13.0000°, Azm10.0000°; P -2.1557, Plg0.0000°, Azm100.0000°;
MOS 14 23:17:20.2±1.1, 1°.57'N×126°.23'E, h42km, mb5.8/81, MS4.8/19 Error ellipse: s-maj=8.0km s-min=4.2km az=115.1
NEIC 14 23:17:20.2±1.5, 1°.58'N±0°.05'×126°.33'E±0°.06, h25km±3km, mb5.6/317, Ms_20 5.0/72, Mwb5.4/21, Mww5.5/16, Error ellipse: s-maj=9.1km s-min=7.0km az=55.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.45; Mθθ-0.16; Mφφ-1.30; Mrθ-0.02; Mθφ-0.54; Mφr0.45; Fault plane solution: Mo1.55000×10^17 NP1: φs14.71000°, δ53.10000°, λ81.40000°. NP2: φs208.85000°, δ37.75000°, λ101.26000°. Principal axes: T 1.5297, Plg80.0000°, Azm249.0000°; N 0.0370, Plg7.0000°, Azm20.0000°; P -1.5668, Plg8.0000°, Azm111.0000°;
NEIC 14 23:17:20.9, 1°.60'N×126°.35'E, h24km
NEIC 14 23:17:20.1, 1°.58'N×126°.32'E, h24km
DJA 14 23:17:22.1±0.2, 2°N±2'×12°.6'E±°, h35km±2km, M5.4/91, mb5.5/91, mB5.8/73, MLv5.6/24, Mw(mB)5.4/73, MwMwp5.5/16, Mwp5.6/16
GCMT 14 23:17:26.2±0.2, 1°.74'N±0°.01'×126°.29'E±0°.01, h28km, MW5.6/129, Moment Tensor Solution. s83,c125; s129,c206; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr2.70±.09; Mθθ-0.22±.06; Mφφ-2.49±.06; Mrθ-0.57±.13; Mθφ-1.22±.04; Mφr0.56±.10; Best double couple: Mo2.98200×10^17 NP1: φs219.00000°, δ44.00000°, λ113.00000°. NP2: φs8.00000°, δ50.00000°, λ69.00000°. Principal axes: T 2.9280, Plg74.0000°, Azm213.0000°; N 0.1010, Plg16.0000°, Azm22.0000°; P -3.0360, Plg3.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 14 23:17:20.8±0.5, 1°.61'N±0°.03'×126°.31'E±0°.03, h30km±2km, h30km:pP-P, n1370, σ1s50/1395, mb5.5/318, MS4.9/124, 47C-40D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**128**		**Pn**	**23 17 43.5**	**-0.1**
TNTI	**Ternate**	**1.35**	**128**	P	**Pb**	**23 17 44.7**	**-0.8**
TNTI	**Ternate**	**1.35**	**128**	P	**Pb**	**23 17 43.8**	**-1.7**
SGSI	**Sangihe**	**2.20**	**339**	P	**Pn**	**23 17 54.9**	**-0.5**
LBMI	**Labuha**	**2.53**	**152**	P	**Pn**	**23 18 01.4**	**+1.5**
KMSI	**Cibinong**	**2.54**	**246**	P	**Pn**	**23 18 01.8**	**+1.7**
SANI	**Sanana**	**3.65**	**185**	P	**Pn**	**23 18 16.1**	**+0.8**
SANI	**Sanana**	**3.65**	**185**	P	**Pn**	**23 18 15.5**	**+0.2**
LUWI	**Luwuk**	**4.41**	**233**		**Pn**	**23 18 28.6**	**+2.9**
LUWI	**Luwuk**	**4.41**	**233**	P	**Pn**	**23 18 28.2**	**+2.5**
LUWI	**Luwuk**	**4.41**	**233**	P	**Pn**	**23 18 28.0**	**+2.3**
MRSI	**Marisa**	**4.51**	**256**	P	**Pn**	**23 18 29.1**	**+2.0**
NLAI	**Namlea**	**4.88**	**171**	P	**Pn**	**23 18 33.4**	**+1.2**
APSI	**Ampana**	**5.29**	**242**	P	**Pn**	**23 18 41.3**	**+3.5**
DAV	**Davao City (W)**	**5.47**	**352**	Pn	**Pn**	**23 18 43.9**	**+3.5**
	41nm,0.3s,baz=163,slow=1.9,SNR=9.9						
DAV				Sn	**Sn**	**23 19 44.5**	**+2.2**
	38nm,0.3s,baz=6.9,slow=23,SNR=3.6						
DAV	**Davao City (W)**	**5.47**	**352**		**Pn**	**23 18 41.6**	**+1.2**
DAV	**Davao City (W)**	**5.47**	**352**	P	**Pn**	**23 18 44.8**	**+4.4**
DAV				S	**Sn**	**23 19 49.3**	**+6.9**
DAV	**Davao City (W)**	**5.47**	**352**	P	**Pn**	**23 18 44.6**	**+4.2**
SWI	**Sorong**	**5.53**	**116**	P	**Pn**	**23 18 42.2**	**+1.1**
	27μm5μm331nm,0.8s						
TOLI2	**Tolitoli**	**5.55**	**265**		**Pn**	**23 18 41.8**	**+0.4**
TOLI2	**Tolitoli**	**5.55**	**265**	P	**Pn**	**23 18 42.8**	**+1.4**
MSAI	**Masohi**	**5.58**	**152**	P	**Pn**	**23 18 44.7**	**+2.9**
	3.7nm25μm11μm874nm,0.9s						
AAI	**Ambon**	**5.59**	**160**	P	**Pn**	**23 18 44.6**	**+2.6**
	2.2nm17μm6μm704nm,0.8s						
MPSI	**Mapaga**	**6.53**	**259**	P	**Pn**	**23 18 58.5**	**+3.6**
	1.8nm7μm584nm,1.4s						
KDI	**Kendari**	**6.65**	**214**	P	**Pn**	**23 18 58.6**	**+2.1**
PCI	**Palu**	**6.94**	**249**	P	**Pn**	**23 19 03.8**	**+3.3**
	3.3nm26μm8μm700nm,0.9s						
BNDI	**Bandanaira**	**7.07**	**149**	P	**Pn**	**23 19 04.7**	**+2.3**
BNDI	**Bandanaira**	**7.07**	**149**	P	**Pn**	**23 19 03.8**	**+1.4**
	2.7nm16μm11μm437nm,1.1s						
FAKI	**Fak Fak**	**7.45**	**127**		**Pn**	**23 19 09.0**	**+1.4**
FAKI	**Fak Fak**	**7.45**	**127**	P	**Pn**	**23 19 10.0**	**+2.4**
FAKI	**Fak Fak**	**7.45**	**127**	P	**Pn**	**23 19 09.9**	**+2.4**
	1.8nm20μm6μm522nm,1.1s						
TTSI	**Tana Toraja**	**7.97**	**235**	P	**Pn**	**23 19 18.2**	**+3.6**
BBSI	**Bau Bau**	**7.98**	**208**	P	**Pn**	**23 19 18.1**	**+3.3**
	8μm95nm,1.0s						
RKPI	**Ransiki, Papua**	**8.46**	**111**	P	**Pn**	**23 19 23.5**	**+2.1**
	21μm11μm266nm,0.9s						
MYLDM	**Lahad Datu**	**8.56**	**295**		**Pn**	**23 19 25.9**	**+3.2**
MYLDM	**Lahad Datu**	**8.56**	**295**	P	**Pn**	**23 19 27.1**	**+4.3**
SPSI	**Sidrap Palu**	**8.57**	**230**	P	**Pn**	**23 19 26.5**	**+3.6**
	4μm468nm,0.6s						
BNSI	**Bone**	**8.61**	**226**	P	**Pn**	**23 19 25.7**	**+2.3**
	5μm440nm,0.7s						
KMPI	**Kaimana, Papua**	**9.06**	**125**	P	**Pn**	**23 19 33.0**	**+3.3**
	7μm664nm,0.9s						
BKSI	**Bulukumba**	**9.25**	**222**	P	**Pn**	**23 19 33.9**	**+1.6**
	3μm321nm,0.8s						
KAPI	**Kappang**	**9.28**	**225**	Pn	**Pn**	**23 19 35.6**	**+2.9**
	12nm,0.3s,baz=32,slow=8.3,SNR=57						
KAPI				Sn	**Sn**	**23 21 14.6**	**-1.6**
	1.0nm,0.3s,baz=124,slow=17,SNR=1.2						
KAPI	**Kappang**	**9.28**	**225**		**Pn**	**23 19 34.5**	**+1.8**
KAPI	**Kappang**	**9.28**	**225**	P	**Pn**	**23 19 36.8**	**+4.0**
KAPI				S	**Sn**	**23 21 22.2**	**+6.0**
KAPI	**Kappang**	**9.28**	**225**	P	**Pn**	**23 19 36.5**	**+3.8**
KAPI	**Kappang**	**9.28**	**225**	*i* P	**Pn**	**23 19 34.1**	**+1.4**
BSSI	**Bau Bau, Buton**	**9.65**	**217**	P	**Pn**	**23 19 39.3**	**+1.6**
BKB	**Balikpapan**	**9.83**	**253**		**Pn**	**23 19 42.3**	**+2.1**
BKB	**Balikpapan**	**9.83**	**253**	P	**Pn**	**23 19 42.6**	**+2.4**
BKB	**Balikpapan**	**9.83**	**253**	P	**Pn**	**23 19 41.9**	**+1.7**
	19μm4μm407nm,0.9s						
BAKI	**Biak**	**10.19**	**106**	P	**Pn**	**23 19 47.5**	**+2.4**
	808nm,1.2s						
SAUI	**Saumlaki**	**10.75**	**152**	P	**Pn**	**23 19 54.6**	**+1.7**
	325nm,1.0s						
MMRI	**Maumere**	**10.96**	**202**		**Pn**	**23 19 57.9**	**+2.2**
MMRI	**Maumere**	**10.96**	**202**	P	**Pn**	**23 19 56.6**	**+0.9**
MMRI	**Maumere**	**10.96**	**202**	P	**Pn**	**23 19 57.7**	**+2.0**
	5μm150nm,1.0s						
EDFI	**Ende, Flores**	**11.27**	**204**	P	**Pn**	**23 20 02.4**	**+2.3**
	2μm106nm,0.9s						
SOEI	**Soe**	**11.47**	**190**		**Pn**	**23 20 03.2**	**+0.4**
SOEI	**Soe**	**11.47**	**190**	P	**Pn**	**23 20 04.5**	**+1.7**
SOEI	**Soe**	**11.47**	**190**	P	Pn	23 20 07.5	+4.7
MTKI	**Muara Teweh, K**	**11.69**	**258**	P	**Pn**	**23 20 08.7**	**+3.0**
BATI	**Baumata**	**12.03**	**193**	Pn	**Pn**	**23 20 14.3**	**+3.9**
	3.4nm,0.3s,baz=167,slow=0.7,SNR=30						
BATI	**Baumata**	**12.03**	**193**	P	**Pn**	**23 20 14.7**	**+4.3**
	3μm351nm,0.9s						
BBKI	**Banjar Baru**	**12.52**	**246**	P	**Pn**	**23 20 19.5**	**+2.4**
	6μm150nm,1.0s						
WSI	**Waingapu**	**12.70**	**208**	P	**Pn**	**23 20 22.6**	**+3.0**
	6μm299nm,1.8s						
SMPI	**Sarmi**	**12.91**	**106**	P	**Pn**	**23 20 24.6**	**+2.3**
	6μm228nm,1.3s						
BASI	**Baing, Sumba**	**13.06**	**206**	P	**Pn**	**23 20 27.4**	**+2.9**
	5μm440nm,1.6s						
WBSI	**Waikabubak, Su**	**13.13**	**212**	P	**Pn**	**23 20 29.7**	**+4.3**
	3μm239nm,0.8s						
PLAI	**Plampang**	**13.41**	**219**	P	**Pn**	**23 20 31.3**	**+2.1**
PLAI	**Plampang**	**13.41**	**219**	P	**Pn**	**23 20 32.0**	**+2.8**
	4μm457nm,1.2s						
TGY	**Tagaytay City**	**13.50**	**337**	Pn	**Pn**	**23 20 34.9**	**+4.4**
	baz=266,slow=2.6						
TGY				LR	LR	23 26 12.4	
	comp=Z,4μm,19.1s,baz=157,slow=40						
TWSI	**Taliwang, Sumb**	**13.93**	**222**	P	**Pn**	**23 20 39.3**	**+3.0**
	4μm508nm,1.1s						
SBUM	**Sibu**	**14.10**	**274**	Pn	**Pn**	**23 20 40.9**	**+2.2**
SBUM	**Sibu**	**14.10**	**274**	P	**P**	**23 20 42.7**	**-3.3**
GENI	**Genyem**	**14.47**	**107**	P	**P**	**23 20 47.7**	**-2.4**
GENI	**Genyem**	**14.47**	**107**	P	**Pn**	**23 20 45.2**	**+1.5**
	15μm8μm320nm,1.5s						
SRBI	**Singaraja**	**14.67**	**229**	P	**Pn**	**23 20 48.7**	**+2.3**
	3μm225nm,1.0s						
DRS	**Darwin Rock St**	**14.68**	**162**	P	**Pn**	**23 20 47.7**	**+1.2**
JAY	**Jayapura**	**14.97**	**106**	Pn	**P**	**23 20 54.5**	**-1.2**
	1.5nm,0.3s,baz=324,slow=7.0,SNR=12						
JAY				LR	LR	23 26 31.7	
	comp=Z,6μm,19.4s,baz=322,slow=37						
JAY	**Jayapura**	**14.97**	**106**	P	**Pn**	**23 20 52.4**	**+1.9**
	2μm109nm,0.9s						
KMMI	**Kalianget**	**15.02**	**235**	P	**P**	**23 20 57.9**	**+1.7**
	429nm,1.1s						
DNP	**Denpasar**	**15.06**	**227**	P	**P**	**23 20 58.0**	**+1.4**
MTN	**Manton Dam**	**15.14**	**162**	P	**Pn**	**23 20 52.2**	**-0.5**
	comp=Z,167nm,0.9s						
MTN	**Manton Dam**	**15.14**	**162**		**Pn**	**23 20 53.4**	**+0.7**
ABJI	**Asem Bagus**	**15.24**	**232**	P	**Pn**	**23 20 55.6**	**+1.6**
	comp=Z,3μmcomp=Z,195nm,1.0s						
KDU	**Kakadu**	**15.47**	**157**	P	**Pn**	**23 20 55.6**	**-1.3**
	comp=Z,377nm,1.0s						
JAGI	**Jajag, Banyuwa**	**15.72**	**230**		**P**	**23 21 02.4**	**-1.6**
JAGI	**Jajag, Banyuwa**	**15.72**	**230**	P	**Pn**	**23 21 02.0**	**+1.7**
JAGI	**Jajag, Banyuwa**	**15.72**	**230**	P	**P**	**23 21 03.9**	**-0.1**
	comp=Z,4μmcomp=Z,344nm,1.2s						
BLJI	**Banyuglugur**	**15.72**	**234**	P	**P**	**23 21 04.0**	**0.0**
	comp=Z,304nm,1.0s						
NGJI	**Ngawi**	**17.29**	**239**	P	**P**	**23 21 22.5**	**+1.1**
	comp=Z,5μmcomp=Z,215nm,1.0s						
KNRA	**Kununurra**	**17.35**	**172**	P	**Pn**	**23 21 20.6**	**-0.3**
	comp=Z,375nm,0.9s						
KNRA	**Kununurra**	**17.35**	**172**		**Pn**	**23 21 20.7**	**-0.1**
KNRA				IAmb	IAmb	23 21 27.0		
	comp=Z,255nm,0.8s						
PCJI	**Pacitan**	**17.96**	**237**	P	**P**	**23 21 30.6**	**+1.8**
	comp=Z,5μmcomp=Z,289nm,1.1s						
SMRI	**Semarang**	**18.02**	**241**		**Pn**	**23 21 29.4**	**+0.1**
SMRI	**Semarang**	**18.02**	**241**	P	**P**	**23 21 31.1**	**+1.6**
SMRI	**Semarang**	**18.02**	**241**	P	**P**	**23 21 31.0**	**+1.6**
	comp=Z,112nm,0.9s						
UGM	**Wanagama**	**18.37**	**239**	P	**Pn**	**23 21 35.2**	**+1.8**
UGM	**Wanagama**	**18.37**	**239**	P	**Pn**	**23 21 35.6**	**+2.1**
UGM	**Wanagama**	**18.37**	**239**	P	**Pn**	**23 21 36.4**	**+2.9**
	comp=Z,114nm,0.7s						
YOGI	**Yogyakarta**	**18.51**	**239**	P	**Pn**	**23 21 36.5**	**+1.2**
	comp=Z,3μmcomp=Z,193nm,0.8s						
TPI	**Tanjungpandan**	**19.15**	**257**	P	**Pn**	**23 21 44.7**	**+1.8**
KPJI	**Karang Pucung**	**19.48**	**243**	P	**P**	**23 21 45.1**	**-0.4**
	comp=Z,2μmcomp=Z,221nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**23 21 45.3**	**-1.4**
	comp=Z,22nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**23 21 46.0**	**-0.7**
	comp=Z,4.9nm,0.3s,baz=13,slow=11,SNR=100						
	comp=Z,33nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**23 21 46.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**23 21 46.2**	**-0.5**
DLV	**Lat**	**20.44**	**301**	P	Pn	23 21 57.9	-0.5
DLV				IAmb	IAmb

PMG	**Port Moresby**	**23.48**	**118**	P	**P**	**23**	**22**	**26.5**	**-1.7**
PMG				pmax	pmax				
	comp=Z,61nm,1.0s								
MBWA	**Marble Bar**	**23.53**	**196**	P	**P**	**23**	**22**	**27.2**	**-1.4**
	comp=Z,143nm,0.8s								
MBWA	**Marble Bar**	**23.53**	**196**	P	**P**	**23**	**22**	**26.7**	**-1.9**
MBWA				IAmb	IAmb	23	22	31.6	
	comp=Z,88nm,0.7s								
MBWA	**Marble Bar**	**23.53**	**196**		**P**	**23**	**22**	**27.3**	**-1.4**
MBWA	**Marble Bar**	**23.53**	**196**	P	**P**	**23**	**22**	**27.4**	**-1.2**
MBWA				S	**S**	**23**	**26**	**38.9**	**-1.8**
MBWA	**Marble Bar**	**23.53**	**196**	P	**P**	**23**	**22**	**28.5**	**-0.1**
QIZ	**Qiongzhong**	**23.66**	**318**	IAMs_20	IAMs_20	23	30	20.7	
	comp=Z,6μm,22.0s								
QIZ	**Qiongzhong**	**23.66**	**318**	P	**P**	**23**	**22**	**30.8**	**+0.9**
QIZ				S	**S**	**23**	**26**	**39.8**	**-3.2**
QIZ				pmax	pmax				
	comp=Z,54nm,1.6s								
QIZ				LR	LR				
	comp=Z,3μm,21.1s								
QIZ				LR	LR				
	comp=Z,2μm,21.2s								
QIZ				LR	LR				
	comp=Z,5μm,21.3s								
QIZ	**Qiongzhong**	**23.66**	**318**	P	**P**	**23**	**22**	**32.6**	**+2.7**
TATO	**Taipei**	**23.69**	**349**	P	**P**	**23**	**22**	**29.4**	**-0.6**
TATO				IAmb	IAmb	23	22	39.4	
	comp=Z,218nm,1.2s								
TATO	**Taipei**	**23.69**	**349**	IAMs_20	IAMs_20	23	33	12.0	
	comp=Z,5μm,21.0s								
HKPS	**Hong Kong Po S**	**23.71**	**331**	P	**P**	**23**	**22**	**29.9**	**-0.4**
HKPS				IAmb	IAmb	23	22	37.3	
	comp=Z,247nm,1.2s								
HKPS				IAMs_20	IAMs_20	23	30	35.0	
	comp=Z,4μm,21.0s								
HKPS	**Hong Kong Po S**	**23.71**	**331**	P	**P**	**23**	**22**	**32.6**	**+2.3**
XMI	**Christmas Isla**	**23.76**	**239**	P	**P**	**23**	**22**	**32.7**	**+1.8**
PSAC1	**Pilbara Seismi**	**23.86**	**195**	P	**P**	**23**	**22**	**31.0**	**-0.8**
	comp=Z,106nm,1.4s								
PSAC2	**Pilbara Seismi**	**23.87**	**195**	P	**P**	**23**	**22**	**30.9**	**-1.0**
	comp=Z,133nm,1.6s								
PSA00	**Pilbara Seismi**	**23.89**	**195**	P	**P**	**23**	**22**	**32.1**	**+0.1**
	comp=Z,117nm,1.6s								
PSA00	**Pilbara Seismi**	**23.89**	**195**	P	**P**	**23**	**22**	**31.1**	**-1.0**
PSA00	**Pilbara Seismi**	**23.89**	**195**	P	**P**	**23**	**22**	**32.2**	**+0.1**
PSAB3	**Pilbara Seismi**	**23.91**	**195**	P	**P**	**23**	**22**	**31.4**	**-0.8**
	comp=Z,130nm,1.7s								
KNMB	**Chin-men Tao**	**23.97**	**342**	P	**P**	**23**	**22**	**31.9**	**-0.9**
KNMB				IAmb	IAmb	23	22	51.2	
	comp=Z,315nm,1.6s								
MNAI	**Manna**	**24.08**	**256**		**P**	**23**	**22**	**33.1**	**-0.8**
MNAI				IAmb	IAmb	23	22	57.6	
	comp=Z,271nm,1.1s								
MNAI				IAMs_20	IAMs_20	23	32	51.4	
	comp=Z,4μm,21.0s								
KSI	**Kapahiang**	**24.27**	**258**	P	**P**	**23**	**22**	**37.9**	**+2.1**
QZH	**Quanzhou**	**24.36**	**343**	P	**P**	**23**	**22**	**38.3**	**+2.0**
QZH				S	**S**	**23**	**26**	**51.1**	**-2.9**
QZH				LR	LR				
	comp=Z,3μm,23.0s								
QZH				LR	LR				
	comp=Z,2μm,22.0s								
QZH				LR	LR				
	comp=Z,4μm,21.3s								
MASI	**Maura Aman, Be**	**24.52**	**259**	P	**P**	**23**	**22**	**39.3**	**+1.3**
MASI				pP	**pwP**	**23**	**22**	**46.5**	**-2.3**
JMZ	**Minamidaito 2**	**24.53**	**11**	P	**P**	**23**	**22**	**37.4**	**-0.5**
JMZ	**Minamidaito 2**	**24.53**	**11**	P	**P**	**23**	**22**	**40.1**	**+2.2**
UBPT	**Khong Chiam**	**24.64**	**305**	P	**P**	**23**	**22**	**42.0**	**+3.0**
KRJI	**Kerinci**	**25.11**	**262**	P	**P**	**23**	**22**	**45.1**	**+1.7**
JOW	**Kunigami**	**25.15**	**4**	P	**P**	**23**	**22**	**44.6**	**+1.1**
	comp=Z,163nm,0.6s,baz=200,slow=8.7,SNR=15								
	comp=Z,163nm,0.6s								
JOW	**Kunigami**	**25.15**	**4**	P	**P**	**23**	**22**	**43.0**	**-0.5**
JOW	**Kunigami**	**25.15**	**4**	P	**P**	**23**	**22**	**45.3**	**+1.8**
BKNI	**Bangkinang**	**25.30**	**267**	P	**P**	**23**	**22**	**46.2**	**+1.2**
BKNI				IAMs_20	IAMs_20	23	33	53.2	
	comp=Z,4μm,20.0s								
BKNI	**Bangkinang**	**25.30**	**267**	P	**P**	**23**	**22**	**46.6**	**+1.6**
BKNI	**Bangkinang**	**25.30**	**267**	P	**P**	**23**	**22**	**47.8**	**+2.8**
	comp=Z,2μmcomp=Z,172nm,1.0s								
IPM	**Ipoh**	**25.40**	**277**	P	**P**	**23**	**22**	**44.1**	**-1.9**
IPM				IAmb	IAmb	23	22	56.9	
	comp=Z,120nm,1.1s								
IPM				IAMs_20	IAMs_20	23	34	36.1	
	comp=Z,3μm,19.0s								
IPM	**Ipoh**	**25.40**	**277**	P	**P**	**23**	**22**	**46.3**	**+0.3**
QIS	**Mount Isa**	**25.60**	**150**	P	**P**	**23**	**22**	**47.9**	**+0.3**
KULM	**Kulim**	**25.86**	**279**	P	**P**	**23**	**22**	**49.1**	**-1.1**
KULM				IAMs_20	IAMs_20	23	34	51.2	
	comp=Z,3μm,22.0s								
KULM	**Kulim**	**25.86**	**279**	P	**P**	**23**	**22**	**51.5**	**+1.3**
PDSI	**Padang**	**25.96**	**265**	P	**P**	**23**	**22**	**51.1**	**0.0**
PPI	**Padang Panjang**	**25.99**	**266**	P	**P**	**23**	**22**	**51.5**	**+0.2**
	comp=Z,2μmcomp=Z,87nm,1.2s								
AS31	**Alice Springs**	**26.19**	**164**	P	**P**	**23**	**22**	**51.5**	**-1.5**
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**23**	**22**	**52.2**	**-0.8**
	comp=Z,91nm,0.8s,baz=336,slow=6.5,SNR=189								
ASAR				PcP	**PcP**	**23**	**26**	**19.6**	**-0.1**
	comp=Z,19nm,0.5s,baz=350,slow=2.3,SNR=11								
ASAR				S	**S**	**23**	**27**	**23.6**	**+0.3**
	comp=Z,15nm,1.0s,baz=348,slow=20,SNR=6.4								
	comp=Z,91nm,0.8s								
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**23**	**22**	**52.0**	**-1.0**
AUALC	**St Philip's Co**	**26.21**	**164**	P	**P**	**23**	**22**	**54.3**	**+1.1**
MTSU	**Mount Surprise**	**26.45**	**139**	P	**P**	**23**	**22**	**55.4**	**0.0**
WRKA	**Warakurna**	**26.56**	**176**	P	**P**	**23**	**22**	**56.0**	**-0.4**
	comp=Z,75nm,1.1s								
PPSI	**Pulau Pagai**	**26.65**	**261**	P	**P**	**23**	**22**	**58.5**	**+1.3**
	comp=Z,204nm,1.0s								
MNSI	**Mandailing Nat**	**26.73**	**269**	P	**P**	**23**	**22**	**59.0**	**+1.0**
	comp=Z,4μmcomp=Z,85nm,1.1s								
GIRL	**Giralia**	**26.83**	**205**	P	**P**	**23**	**22**	**58.3**	**-0.4**
GIRL				IAmb	IAmb	23	23	01.8	
	comp=Z,203nm,0.9s								
SISI	**Saibi**	**27.37**	**264**	P	**P**	**23**	**23**	**04.8**	**+1.1**
	comp=Z,1μmcomp=Z,62nm,0.8s								
RPSI	**Rantau Prapat**	**27.38**	**273**	P	**P**	**23**	**23**	**02.7**	**-1.2**
PSI	**Prapat**	**27.39**	**273**	LR	LR	23	35	09.8	
	comp=Z,3μm,21.7s,baz=89,slow=39								
PSI	**Prapat**	**27.39**	**273**	P	**P**	**23**	**23**	**04.1**	**+0.1**
PSI	**Prapat**	**27.39**	**273**	P	**P**	**23**	**23**	**02.7**	**-1.3**
PSI				pmax	pmax				
	comp=Z,111nm,1.3s								
KCSI	**Kotacane, Aceh**	**28.57**	**274**	P	**P**	**23**	**23**	**13.7**	**-0.8**
GSI	**Gunungsitoli**	**28.72**	**270**	P	**P**	**23**	**23**	**14.4**	**-1.4**
GSI				IAmb	IAmb	23	23	20.7	
	comp=Z,119nm,1.0s								
GSI	**Gunungsitoli**	**28.72**	**270**	P	**P**	**23**	**23**	**16.7**	**+0.9**
GSI	**Gunungsitoli**	**28.72**	**270**	P	**P**	**23**	**23**	**15.9**	**+0.1**
TV1H	**Townsville Har**	**28.90**	**137**	P	**P**	**23**	**23**	**18.8**	**+1.5**
MEEK	**Meekatharra**	**29.05**	**194**	P	**P**	**23**	**23**	**18.6**	**0.0**
CTA	**Charters Tower**	**29.12**	**139**	LR	LR	23	37	05.2	
	comp=Z,48nm,18.6s,baz=306,slow=41								
CTA	**Charters Tower**	**29.12**	**139**	P	**P**	**23**	**23**	**20.3**	**+1.1**
CTAO	**Charters Tower**	**29.12**	**139**	P	**P**	**23**	**23**	**18.5**	**-0.7**
CTAO				IAmb	IAmb	23	23	29.6	
	comp=Z,66nm,0.8s								
CTAO	**Charters Tower**	**29.12**	**139**	P	**P**	**23**	**23**	**20.3**	**+1.1**
CTAO	**Charters Tower**	**29.12**	**139**	P	**P**	**23**	**23**	**18.5**	**-0.7**
CTAO				pmax	pmax				
	comp=Z,66nm,0.9s								
CTAO				MLR	MLR				
	comp=Z,2μm,19.0s								
SLVN	**Son La**	**29.34**	**314**	P	**P**	**23**	**23**	**21.2**	**-0.1**
SLVN				IAMs_20	IAMs_20	23	34	27.7	
	comp=Z,3μm,20.0s								
SLVN	**Son La**	**29.34**	**314**	P	**P**	**23**	**23**	**23.0**	**+1.7**
LHMI	**Lhok Sumawe**	**29.52**	**278**	P	**P**	**23**	**23**	**22.2**	**-0.7**
LHMI	**Lhok Sumawe**	**29.52**	**278**	P	**P**	**23**	**23**	**25.7**	**+2.8**
JCJ	**Chichijima**	**29.57**	**30**	LR	LR	23	33	51.6	
	comp=Z,1μm,21.9s,baz=224,slow=34								
JCJ	**Chichijima**	**29.57**	**30**	P	**P**	**23**	**23**	**22.4**	**-0.8**
SSE	**Sheshan**	**29.72**	**351**	P	**P**	**23**	**23**	**24.0**	**-0.4**
SSE				S	**S**	**23**	**28**	**20.5**	**+1.8**
SSE				pmax	pmax				
	comp=Z,7.0nm,0.3s								
SSE				pmax	pmax				
	comp=Z,120nm,3.5s								
SSE				LR	LR				
	comp=Z,640nm,21.0s								
SSE				LR	LR				
	comp=Z,520nm,21.1s								
WHN	**Wuhan**	**30.93**	**340**	P	**P**	**23**	**23**	**35.3**	**+0.2**
WHN				pP	**pP**	**23**	**23**	**43.3**	**-0.1**
WHN				S	**S**	**23**	**28**	**33.8**	**-3.9**
WHN				pmax	pmax				
	comp=Z,70nm,0.9s								
WHN				LR	LR				
	comp=Z,4μm,15.3s								
WHN				LR	LR				
	comp=Z,4μm,19.1s								
WHN				LR	LR				
	comp=Z,10μm,23.0s								
NJ2	**Nanjing**	**31.08**	**348**	⇑P	**P**	**23**	**23**	**37.6**	**+1.1**
NJ2				S	**S**	**23**	**28**	**41.6**	**+1.6**
NJ2				pmax	pmax				
	comp=Z,41nm,0.9s								
NJ2				LR	LR				
	comp=Z,830nm,19.4s								
NJ2				LR	LR				
	comp=Z,1μm,17.5s								
NJ2				LR	LR				
	comp=Z,2μm,23.3s								
GYA	**Guiyang**	**31.09**	**324**	⇓P	**P**	**23**	**23**	**38.1**	**+1.3**
GYA				S	**S**	**23**	**28**	**39.9**	**-0.7**
GYA				pmax	pmax				
	comp=Z,28nm,1.4s								
GYA				pmax	pmax				
	comp=Z,280nm,4.4s								
GYA				LR	LR				
	comp=Z,1μm,19.4s								
GYA				LR	LR				
	comp=Z,1μm,19.2s								
GYA				LR	LR				
	comp=Z,2μm,17.1s								
CM31	**Chiang Mai Arr**	**31.63**	**304**	P	**P**	**23**	**23**	**41.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**31.63**	**304**	P	**P**	**23**	**23**	**42.5**	**+1.0**
	comp=Z,7.8nm,0.8s,baz=119,slow=6.8,SNR=31								
CMAR				PcP	**PcP**	**23**	**26**	**34.2**	**+0.8**
	comp=Z,5.3nm,0.9s,baz=148,slow=1.3,SNR=6.1								
CMAR				ScP	**ScP**	**23**	**30**	**18.3**	**+3.5**
	comp=Z,0.5nm,0.3s,baz=162,slow=2.2,SNR=5.1								
CMAR				LR	LR	23	37	26.8	
	comp=Z,1μm,19.2s,baz=115,slow=38								
	comp=Z,7.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**31.63**	**304**	P	**P**	**23**	**23**	**40.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**31.63**	**304**	P	**P**	**23**	**23**	**40.9**	**-0.6**
JNU	**Nakatsue**	**31.64**	**7**	P	**P**	**23**	**23**	**41.9**	**+0.4**
	comp=Z,65nm,0.9s,baz=159,slow=6.0,SNR=11								
JNU				LR	LR	23	35	20.6	
	comp=Z,774nm,20.6s,baz=184,slow=34								
	comp=Z,65nm,0.9s								
JNU	**Nakatsue**	**31.64**	**7**	P	**P**	**23**	**23**	**40.3**	**-1.1**
JNU				IAmb	IAmb	23	23	46.1	
	comp=Z,104nm,1.1s								
JNU	**Nakatsue**	**31.64**	**7**	P	**P**	**23**	**23**	**42.1**	**+0.7**
CHTO	**Chiang Mai**	**31.80**	**304**	P	**P**	**23**	**23**	**42.5**	**-0.5**
CHTO				IAmb	IAmb	23	23	52.0	
	comp=Z,141nm,1.9s								
CHTO	**Chiang Mai**	**31.80**	**304**	P	**P**	**23**	**23**	**43.2**	**+0.2**
CHTO				S	**S**	**23**	**28**	**50.8**	**-0.9**
CHTO	**Chiang Mai**	**31.80**	**304**	P	**P**	**23**	**23**	**43.2**	**+0.2**
CHTO	**Chiang Mai**	**31.80**	**304**	P	**P**	**23**	**23**	**42.5**	**-0.5**
CHTO				pmax	pmax				
	comp=Z,141nm,1.9s								
CHTO				MLR	MLR				
	comp=Z,2μm,21.0s								
MORW	**Morawa**	**32.05**	**197**	P	**P**	**23**	**23**	**45.2**	**+0.1**
MORW				IAmb	IAmb	23	23	47.0	
	comp=Z,119nm,1.1s								
MORW	**Morawa**	**32.05**	**197**	P	**P**	**23**	**23**	**45.8**	**+0.8**
FORT	**Forrest**	**32.25**	**177**	P	**P**	**23**	**23**	**45.8**	**-0.9**
FORT				IAmb	IAmb	23	23	51.0	
	comp=Z,54nm,0.9s								
INKA	**Innaminka**	**32.32**	**156**	P	**P**	**23**	**23**	**47.0**	**-0.4**
COCO	**West Island**	**32.33**	**244**	IAMs_20	IAMs_20	23	38	31.7	
	comp=Z,3μm,20.0s								
KMI	**Kunming**	**32.61**	**318**	⇓P	**P**	**23**	**23**	**51.4**	**+1.1**
KMI				PP	**PP**	**23**	**25**	**02.3**	**-2.0**
KMI				PcP	**PcP**	**23**	**26**	**38.0**	**+1.7**
KMI				S	**S**	**23**	**29**	**06.6**	**+2.0**
KMI				SS	**SnSn**	**23**	**31**	**04.3**	**+3.9**
KMI				pmax	pmax				
	comp=Z,72nm,1.4s								
KMI				LR	LR				
	comp=Z,2μm,22.0s								
KMI				LR	LR				
	comp=Z,3μm,22.9s								
KMI				LR	LR				
	comp=Z,5μm,22.1s								
ENH	**Enshi**	**32.67**	**332**	IAMs_20	IAMs_20	23	38	12.0	
	comp=Z,3μm,21.0s								
ENH	**Enshi**	**32.67**	**332**	P	**P**	**23**	**23**	**50.5**	**0.0**
JMN	**Monobe**	**32.73**	**12**	P	**P**	**23**	**23**	**50.5**	**-0.4**
JMN				IAmb	IAmb	23	24	04.2	
	comp=Z,72nm,1.1s								
JMN	**Monobe**	**32.73**	**12**	P	**P**	**23**	**23**	**52.3**	**+1.3**
QLP	**Quilpie**	**32.94**	**150**	P	**P**	**23**	**23**	**53.0**	**+0.1**
BLDU	**Ballidu**	**33.33**	**195**	P	**P**	**23**	**23**	**56.6**	**+0.4**
JHJ	**Hachijo jima 2**	**33.80**	**21**	LR	LR	23	38	50.3	
	comp=Z,972nm,19.6s,baz=222,slow=38								
KLBR	**Kellerberrin**	**34.01**	**193**	P	**P**	**23**	**24**	**02.1**	**0.0**
PZH	**PanZhiHua**	**34.20**	**318**	P	**P**	**23**	**24**	**03.3**	**-0.7**
PZH				S	**S**	**23**	**29**	**33.0**	**+4.0**
PZH				sS	sS	23	29	49.1	+6.3
PZH				pmax	pmax				
	comp=Z,30nm,1.5s								
PZH				pmax	pmax				
	comp=Z,200nm,3.5s								
PZH				LR	LR				
	comp=Z,2μm,22.9s								
PZH				LR	LR				
	comp=Z,2μm,21.8s								
PZH				LR	LR				
	comp=Z,4μm,23.9s								
MUN	**Mundaring**	**34.75**	**195**	P	**P**	**23**	**24**	**08.0**	**-0.5**
AUMAZ	**Mazenod Senior**	**34.83**	**195**	P	**P**	**23**	**24**	**10.2**	**+1.0**
GD1S	**Gladstone Soft**	**34.99**	**138**	P	**P**	**23**	**24**	**12.8**	**+2.1**
INU	**Inuyama**	**35.01**	**15**	P	**P**	**23**	**24**	**10.0**	**-0.8**
INU				IAmb	IAmb	23	24	16.6	
	comp=Z,128nm,1.1s								
INU				IAMs_20	IAMs_20	23	37	30.8	
	comp=Z,2μm,22.0s								
INU	**Inuyama**	**35.01**	**15**	P	**P**	**23**	**24**	**11.9**	**+1.1**
SAVO	**Savo Central**	**35.05**	**108**	P	**P**	**23**	**24**	**13.6**	**+2.2**
LYN	**LuoYang**	**35.23**	**340**	P	**P**	**23**	**24**	**13.0**	**+0.4**
LYN				pP	sP	23	24	27.0	+2.6
LYN				PcP	**PcP**	**23**	**26**	**44.5**	**+1.3**
LYN				S	**S**	**23**	**29**	**41.5**	**-2.8**
LYN				pmax	pmax				
	comp=Z,68nm,0.8s								
LYN				pmax	pmax				
	comp=Z,510nm,6.0s								
LYN				LR	LR				
	comp=Z,2μm,22.6s								
LYN				LR	LR				
	comp=Z,1μm,17.6s								
LYN				LR	LR				
	comp=Z,3μm,23.4s								
HNR	**Honiara**	**35.26**	**109**	LR	LR	23	38	11.9	
	comp=Z,1μm,21.6s,baz=286,slow=36								
JGF	**Kuroka**	**35.34**	**16**	P	**P**	**23**	**24**	**13.2**	**-0.4**
JGF				IAmb	IAmb	23	24	18.0	
	comp=Z,95nm,1.4s								
JGF	**Kuroka**	**35.34**	**16**	P	**P**	**23**	**24**	**13.7**	**0.0**
NWAO	**Narrogin (SRO)**	**35.41**	**193**	LR	LR	23	40	02.7	
	comp=Z,875nm,21.4s,baz=6.5,slow=39								
NWAO	**Narrogin (SRO)**	**35.41**	**193**	P	**P**	**23**	**24**	**13.3**	**-0.9**
NWAO	**Narrogin (SRO)**	**35.41**	**193**	P	**P**	**23**	**24**	**14.2**	**0.0**
NWAO	**Narrogin (SRO)**	**35.41**	**193**	P	**P**	**23**	**24**	**15.1**	**+0.9**
NWAO	**Narrogin (SRO)**	**35.41**	**193**	P	**P**	**23**	**24**	**15.0**	**+0.9**
NWAO	**Narrogin (SRO)**	**35.41**	**193**	P	**P**	**23**	**24**	**13.3**	**-0.9**
NWAO				pmax	pmax				
	comp=Z,197nm,1.5s								
BBOO	**Buckleboo**	**35.46**	**166**	P	**P**	**23**	**24**	**13.8**	**-0.8**
BBOO	**Buckleboo**	**35.46**	**166**	P	**P**	**23**	**24**	**14.2**	**-0.4**
TIA	**Tai'an**	**35.46**	**347**	P	**P**	**23**	**24**	**13.8**	**-0.8**
TIA				S	**S**	**23**	**29**	**44.8**	**-3.2**
TIA				pmax	pmax				
	comp=Z,27nm,1.2s								
TIA				pmax	pmax				
	comp=Z,590nm,6.8s								
TIA				LR	LR				
	comp=Z,1μm,20.6s								
TIA				LR	LR				
	comp=Z,980nm,24.0s								
TIA				LR	LR				
	comp=Z,2μm,22.1s								
TNCH	**TengChong**	**35.51**	**313**	P	**P**	**23**	**24**	**15.9**	**+0.5**
TNCH				S	**S**	**23**	**29**	**44.1**	**-5.3**
TNCH				pmax	pmax				
	comp=Z,60nm,0.9s								
TNCH				LR	LR				
	comp=Z,1μm,18.4s								
TNCH				LR	LR				
	comp=Z,1μm,18.5s								
TNCH				LR	LR				
	comp=Z,3μm,21.1s								
KSAR	**Wonju Array Be**	**35.69**	**2**	P	**P**	**23**	**24**	**16.2**	**-0.3**
KSAR	**Wonju Array Be**	**35.69**	**2**	P	**P**	**23**	**24**	**16.2**	**-0.3**
KSRS	**Korea Array**	**35.70**	**2**	P	**P**	**23**	**24**	**17.6**	**+1.1**
	comp=Z,12nm,0.7s,baz=180,slow=9.9,SNR=22								
	comp=Z,12nm,0.7s								
KS19	**Wonju Array Si**	**35.74**	**2**	P	**P**	**23**	**24**	**16.1**	**-0.9**
KS19				IAmb	IAmb	23	24	32.5	
	comp=Z,101nm,1.3s								
AUHAR	**St Anne's Scho**	**35.89**	**195**	P	**P**	**23**	**24**	**20.1**	**+1.8**
EIDS	**Eidsvold**	**35.98**	**140**	P	**P**	**23**	**24**	**18.4**	**-0.8**
EIDS				IAmb	IAmb	23	24	26.8	
	comp=Z,50nm,0.9s								
EIDS	**Eidsvold**	**35.98**	**140**	P	**P**	**23**	**24**	**19.3**	**+0.1**
WHYH	**Whyalla**	**36.06**	**164**	P	**P**	**23**	**24**	**19.7**	**-0.1**
CD2	**Chengdu**	**36.12**	**326**	P	**P**	**23**	**24**	**20.0**	**-0.4**
CD2				S	**S**	**23**	**29**	**59.1**	**+0.8**
CD2				pmax	pmax				
	comp=Z,270nm,0.9s								
CD2				LR	LR				
	comp=Z,2μm,19.1s								
CD2				LR	LR				
	comp=Z,3μm,23.0s								
CD2				LR	LR				
	comp=Z,3μm,19.1s								
XAN	**Xi'an**	**36.13**	**335**	⇓P	**P**	**23**	**24**	**19.3**	**-1.1**
XAN				S	**S**	**23**	**29**	**53.8**	**-4.5**
XAN				pmax	pmax				
	comp=Z,150nm,0.9s								
XAN				pmax	pmax				
	comp=Z,810nm,4.2s								
XAN				LR	LR				
	comp=Z,1μm,19.9s								
XAN				LR	LR				
	comp=Z,1μm,21.3s								
XAN				LR	LR				
	comp=Z,2μm,20.6s								
STKA	**Stephens Creek**	**36.33**	**158**	P	**P**	**23**	**24**	**21.6**	**-0.4**
	comp=Z,51nm,0.7s,baz=329,slow=8.7,SNR=74								
STKA				PP	**PP**	**23**	**25**	**45.7**	**+0.6**
	comp=Z,18nm,0.7s,baz=328,slow=14,SNR=2.9								
	comp=Z,51nm,0.7s								
STKA	**Stephens Creek**	**36.33**	**158**	P	**P**	**23**	**24**	**21.8**	**-0.3**
STKA	**Stephens Creek**	**36.33**	**158**	*i* P	**P**	**23**	**24**	**21.3**	**-0.8**
MJAR	**Matsushiro Arr**	**36.46**	**16**	P	**P**	**23**	**24**	**23.0**	**-0.2**
	comp=Z,17nm,0.7s,baz=180,slow=9.5,SNR=28								
MJAR				LR	LR	23	38	37.4	
	comp=Z,2μm,21.8s,baz=218,slow=35								
	comp=Z,17nm,0.7s								
MJAR	**Matsushiro Arr**	**36.46**	**16**	P	**P**	**23**	**24**	**21.7**	**-1.5**
MJAR	**Matsushiro Arr**	**36.46**	**16**	P	**P**	**23**	**24**	**23.0**	**-0.2**
MAJO	**Matsushiro**	**36.46**	**16**	P	**P**	**23**	**24**	**22.9**	**-0.3**
MAJO	**Matsushiro**	**36.46**	**16**	IAMs_20	IAMs_20	23	38	35.1	
	comp=Z,2μm,20.0s								
MAJO	**Matsushiro**	**36.46**	**16**	P	**P**	**23**	**24**	**23.2**	**0.0**
MAJO	**Matsushiro**	**36.46**	**16**	*i* P	**P**	**23**	**24**	**22.1**	**-1.1**
MAJO				pmax	pmax				
	comp=Z,23nm,0.5s								
MJB9	**Matsu-Tunnel**	**36.46**	**16**	P	**P**	**23**	**24**	**22.4**	**-0.8**
AUJCS	**Jamestown Cent**	**36.52**	**163**	P	**P**	**23**	**24**	**24.5**	**+0.8**
HTT	**Hallett**	**36.83**	**162**	P	**P**	**23**	**24**	**27.5**	**+1.1**
HNS	**HongShan**	**37.18**	**345**	⇓P	**P**	**23**	**24**	**29.3**	**0.0**
HNS				PcP	**PcP**	**23**	**26**	**50.9**	**+1.9**
HNS				S	**S**	**23**	**30**	**18.0**	**+3.8**
HNS				pmax	pmax				
	comp=Z,40nm,1.2s								
HNS				LR	LR				
	comp=Z,2μm,23.9s								
HNS				LR	LR				
	comp=Z,670nm,22.6s								
HNS				LR	LR				
	comp=Z,2μm,23.0s								
DL2	**Dalian**	**37.36**	**354**	P	**P**	**23**	**24**	**31.6**	**+0.8**
DL2				S	**S**	**23**	**30**	**17.8**	**+0.9**
DL2				pmax	pmax				
	comp=Z,190nm,1.7s								
DL2				pmax	pmax				
	comp=Z,540nm,11.4s								
DL2				LR	LR				
	comp=Z,2μm,17.6s								
DL2				LR	LR				
	comp=Z,2μm,18.0s								
DL2				LR	LR				
	comp=Z,3μm,19.0s								
CMSA	**Cobar Meteorol**	**37.76**	**152**	P	**P**	**23**	**24**	**35.0**	**+0.7**
JSD	**Sado**

SHL	**Shillong**	**40.82**	**309**	P	**P**	**23**	**24**	**58.4**	**-1.8**
SHL	**Shillong**	**40.82**	**309**	P	**P**	**23**	**24**	**59.7**	**-0.5**
	SNR=53								
SHL	**Shillong**	**40.82**	**309**	*e*P	**P**	**23**	**24**	**59.2**	**-1.0**
SHL				IAmb	IAmb	23	25	07.7	
	comp=Z,101nm,1.1s								
SHL				IAMs_20	IAMs_20	23	45	45.6	
	comp=Z,2µm,19.9s								
SHL	**Shillong**	**40.82**	**309**	P	**P**	**23**	**24**	**58.4**	**-1.8**
SHL				pmax	pmax				
	comp=Z,344nm,1.6s								
MSHR	**Mys Shultsa**	**41.02**	**5***c**e*P		**P**	**23**	**25**	**03.6**	**+2.3**
MSHR				pmax	pmax				
	comp=Z,38nm,1.3s								
JTM	**Tenmabayashi**	**41.22**	**17**	P	**P**	**23**	**25**	**02.2**	**-0.8**
JTM				IAmb	IAmb	23	25	30.4	
	comp=Z,221nm,1.4s								
GUWA	**GUWAHATI**	**41.29**	**309**	*e*P	**P**	**23**	**25**	**02.9**	**-0.9**
GUWA				IAmb	IAmb	23	25	11.1	
	comp=Z,58nm,1.3s								
BTO	**Baotou**	**41.53**	**341**	*e*P	**P**	**23**	**25**	**08.6**	**+2.9**
BTO				S	**S**	**23**	**31**	**22.9**	**+3.3**
BTO				pmax	pmax				
	comp=Z,17nm,0.9s								
BTO				pmax	pmax				
	comp=Z,220nm,4.5s								
BTO				LR	LR				
	comp=Z,3µm,20.0s								
BTO				LR	LR				
	comp=Z,2µm,17.3s								
BTO				LR	LR				
	comp=Z,5µm,19.5s								
VLA	**Vladivostok**	**41.63**	**6**	*i* P	**P**	**23**	**25**	**06.9**	**+0.6**
VLA				pmax	pmax				
	comp=Z,100nm,1.5s								
MGCD	**Mangrove Creek**	**41.80**	**148**	P	**P**	**23**	**25**	**09.5**	**+1.6**
TAWA	**Tawang**	**41.88**	**311**	*e*P	**P**	**23**	**25**	**09.1**	**+0.1**
TAWA				IAmb	IAmb	23	25	17.6	
	comp=Z,498nm,1.5s								
CN2	**Changchun**	**42.02**	**359**	P	**P**	**23**	**25**	**13.3**	**+3.8**
CN2				pP	sP	23	25	26.5	+5.2
CN2				S	**S**	**23**	**31**	**28.8**	**+2.3**
CN2				LR	LR				
	comp=Z,790nm,20.0s								
CN2				LR	LR				
	comp=Z,1µm,20.0s								
CN2				LR	LR				
	comp=Z,2µm,20.0s								
SYDH	**Sydney Hard Ro**	**42.04**	**149**	P	**P**	**23**	**25**	**11.3**	**+1.5**
BRAT	**Ballarat**	**42.25**	**159**	P	**P**	**23**	**25**	**13.0**	**+1.6**
AUMTS	**Mt Stromlo**	**42.43**	**152**	P	**P**	**23**	**25**	**14.2**	**+1.1**
CAN	**Canberra**	**42.43**	**152**	P	**P**	**23**	**25**	**13.1**	**0.0**
CAN	**Canberra**	**42.43**	**152**	P	**P**	**23**	**25**	**14.2**	**+1.1**
CAN	**Canberra**	**42.43**	**152**	P	**P**	**23**	**25**	**13.1**	**0.0**
CAN				pmax	pmax				
	comp=Z,62nm,0.9s								
AUSIS	**Research Schoo**	**42.45**	**152**	P	**P**	**23**	**25**	**15.1**	**+1.9**
CNB	**Canberra Magne**	**42.60**	**152**	P	**P**	**23**	**25**	**15.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**42.71**	**6**	P	**P**	**23**	**25**	**16.0**	**+0.9**
	comp=Z,23nm,0.7s,baz=193,slow=7.4,SNR=18								
	comp=Z,23nm,0.7s								
TOO	**Toolangi**	**42.85**	**157**	P	**P**	**23**	**25**	**15.9**	**-0.5**
TOO	**Toolangi**	**42.85**	**157**	P	**P**	**23**	**25**	**15.9**	**-0.5**
TOO				pmax	pmax				
	comp=Z,104nm,2.0s								
MDJ	**Mudanjiang**	**42.92**	**3**	IAMs_20	IAMs_20	23	45	22.5	
	comp=Z,2µm,20.0s								
MDJ	**Mudanjiang**	**42.92**	**3**	P	**P**	**23**	**25**	**19.0**	**+2.2**
MDJ				S	**S**	**23**	**31**	**41.4**	**+1.5**
MDJ				pmax	pmax				
	comp=Z,26nm,0.9s								
MDJ				LR	LR				
	comp=Z,1µm,22.5s								
MDJ				LR	LR				
	comp=Z,860nm,22.7s								
MDJ				LR	LR				
	comp=Z,3µm,21.8s								
MDJ	**Mudanjiang**	**42.92**	**3**	P	**P**	**23**	**25**	**19.2**	**+2.4**
H11S3	**WAKE ISLAND Hy**	**42.99**	**64**	T	T	00	12	33.4	
	baz=253,slow=75								
H11S2	**WAKE ISLAND Hy**	**43.01**	**64**	T	T	00	12	40.7	
	baz=253,slow=75								
H11S1	**WAKE ISLAND Hy**	**43.01**	**64**	T	T	00	12	42.5	
	baz=253,slow=75								
XLT	**XiLinHaoTe**	**43.08**	**349**	*e*P	**P**	**23**	**25**	**19.4**	**+1.2**
XLT				sP	sP	23	25	41.8	+12
XLT				S	**S**	**23**	**31**	**42.8**	**+0.4**
XLT				pmax	pmax				
	comp=Z,29nm,0.8s								
XLT				LR	LR				
	comp=Z,92nm,22.7s								
XLT				LR	LR				
	comp=Z,780nm,19.8s								
XLT				LR	LR				
	comp=Z,1µm,23.3s								
AUUHS	**Ulladulla High**	**43.17**	**151**	P	**P**	**23**	**25**	**20.7**	**+1.8**
LSA	**Lhasa**	**43.55**	**313**	P	**P**	**23**	**25**	**18.9**	**-3.8**
LSA				LR	LR				
	comp=Z,630nm,25.0s								
LSA				LR	LR				
	comp=Z,600nm,20.1s								
H11N1	**WAKE ISLAND Hy**	**43.57**	**63**	T	T	00	13	22.9	
	baz=251,slow=75								
H11N2	**WAKE ISLAND Hy**	**43.58**	**63**	T	T	00	13	34.6	
	baz=251								
H11N3	**WAKE ISLAND Hy**	**43.59**	**63**	T	T	00	13	38.5	
	baz=251,slow=75								
SANVU	**Saraoutou**	**43.84**	**114**	P	**P**	**23**	**25**	**23.5**	**-1.2**
SANVU				IAmb	IAmb	23	25	34.0	
	comp=Z,61nm,0.7s								
SANVU				IAMs_20	IAMs_20	23	43	29.6	
	comp=Z,2µm,21.0s								
SANVU	**Saraoutou**	**43.84**	**114**	P	**P**	**23**	**25**	**27.0**	**+2.3**
MILA	**Mila**	**43.93**	**153**	P	**P**	**23**	**25**	**28.3**	**+3.2**
BNX	**BinXian**	**43.96**	**1**	⇓P	**P**	**23**	**25**	**25.3**	**+0.2**
BNX				pmax	pmax				
	comp=Z,31nm,1.0s								
SHBG	**Sahibganj**	**44.02**	**306**	*e*P	**P**	**23**	**25**	**26.3**	**+0.3**
SHBG				IAmb	IAmb	23	25	30.4	
	comp=Z,216nm,1.5s								
TEY	**Ternei**	**44.19**	**10**⇑	*e*P	**P**	**23**	**25**	**28.1**	**+1.1**
TEY				pmax	pmax				
	comp=N,20nm,1.6s								
TEY				pmax	pmax				
	comp=Z,30nm,1.6s								
TEY				pmax	pmax				
	comp=E,20nm,1.6s								
GTA	**Gaotai**	**44.70**	**331**	P	**P**	**23**	**25**	**31.4**	**0.0**
GTA				PcP	**PP**	**23**	**27**	**15.3**	**-0.9**
GTA				pmax	pmax				
	comp=E,27nm,1.5s								
GTA				LR	LR				
	comp=E,1µm,20.4s								
GTA				LR	LR				
	comp=E,2µm,20.7s								
GTA				LR	LR				
	comp=E,2µm,23.3s								
ASAJ	**Asahikawa**	**44.73**	**17**	P	**P**	**23**	**25**	**32.8**	**+1.4**
	comp=E,16nm,0.7s,baz=198,slow=14,SNR=5.8								
ASAJ				LR	LR	23	44	10.6	
	comp=E,2µm,21.0s,baz=182,slow=36								
	comp=E,16nm,0.7s								
BOK	**Bokaro**	**44.91**	**303**	*e*P	**P**	**23**	**25**	**32.7**	**-0.5**
BOK				IAmb	IAmb	23	25	41.3	
	comp=Z,58nm,1.2s								
RAGD	**RAYAGADA**	**45.45**	**296**	*e*P	**P**	**23**	**25**	**37.3**	**-0.2**
RAGD				IAmb	IAmb	23	25	45.6	
	comp=Z,44nm,0.9s								
DZM	**Mont Dzumac**	**45.70**	**123**	LR	LR	23	45	19.5	
	comp=Z,929nm,21.2s,baz=356,slow=37								
PALK	**Pallekele**	**45.79**	**279**	P	**P**	**23**	**25**	**41.2**	**+0.9**
	comp=Z,20nm,1.1s,baz=84,slow=10,SNR=5.7								
PALK				LR	LR	23	47	19.3	
	comp=Z,894nm,19.4s,baz=106,slow=40								
	comp=Z,20nm,1.1s								
PALK	**Pallekele**	**45.79**	**279**	P	**P**	**23**	**25**	**40.3**	**0.0**
PALK	**Pallekele**	**45.79**	**279**	P	**P**	**23**	**25**	**40.6**	**+0.3**
PALK	**Pallekele**	**45.79**	**279**	P	**P**	**23**	**25**	**40.3**	**0.0**
PALK				pmax	pmax				
	comp=Z,26nm,0.9s								
PALK				MLR	MLR				
	comp=Z,1µm,20.0s								
ONTNC	**Ouen Toro**	**45.81**	**124**	P	**P**	**23**	**25**	**39.4**	**-0.9**
ONTNC				IAmb	IAmb	23	25	45.0	
	comp=Z,63nm,1.0s								
ONTNC	**Ouen Toro**	**45.81**	**124**	P	**P**	**23**	**25**	**42.4**	**+2.1**
GAYA	**Gaya**	**45.85**	**304**	*e*P	**P**	**23**	**25**	**39.4**	**-1.2**
GAYA				IAmb	IAmb	23	25	49.6	
	comp=Z,141nm,1.4s								
EVN	**Everest**	**45.94**	**308**	P	**P**	**23**	**25**	**40.8**	**-1.2**
EVN				IAmb	IAmb	23	25	47.4	
	comp=Z,93nm,0.8s								
YATNC	**Mamie plateau,**	**46.07**	**123**	P	**P**	**23**	**25**	**43.9**	**+1.6**
OUENC	**Ouen Island, N**	**46.18**	**124**	P	**P**	**23**	**25**	**44.1**	**+0.9**
PINNC	**Pines Island,**	**46.77**	**123**	P	**P**	**23**	**25**	**47.6**	**-0.2**
PINNC				IAmb	IAmb	23	25	53.4	
	comp=Z,61nm,0.9s								
MARNC	**Mare, Loyalty**	**46.79**	**122**	P	**P**	**23**	**25**	**46.6**	**-1.4**
MARNC	**Mare, Loyalty**	**46.79**	**122**	P	**P**	**23**	**25**	**48.9**	**+0.9**
VJD	**Vijayawada**	**47.30**	**291**	IAMs_20	IAMs_20	23	45	14.1	
	comp=Z,2µm,20.1s								
YSS	**Yuzhno-Sakhali**	**47.38**	**15**	*e*P	**P**	**23**	**25**	**53.1**	**+0.9**
YSS				*e*		23	26	09.5	
YSS				*e*S	**S**	**23**	**32**	**40.8**	**-3.5**
YSS				pmax	pmax				
	comp=Z,50nm,1.0s								
YSS				MLR	MLR				
	comp=Z,1µm,15.0s								
BLSP	**Bilaspur**	**47.53**	**299**	*e*P	**P**	**23**	**25**	**52.1**	**-1.7**
BLSP				IAmb	IAmb	23	26	01.1	
	comp=Z,114nm,1.4s								
HIA	**Hailar**	**47.81**	**354**	P	**P**	**23**	**25**	**55.6**	**+0.1**
HIA	**Hailar**	**47.81**	**354**	IAMs_20	IAMs_20	23	48	55.1	
	comp=Z,1µm,20.0s								
HIA	**Hailar**	**47.81**	**354**	P	**P**	**23**	**25**	**56.0**	**+0.5**
HIA	**Hailar**	**47.81**	**354**	P	**P**	**23**	**25**	**55.6**	**+0.1**
HIA				pmax	pmax				
	comp=Z,134nm,1.3s								
HIA				MLR	MLR				
	comp=Z,1µm,20.0s								
HILR	**Hailar Array B**	**48.09**	**354**	P	**P**	**23**	**25**	**59.0**	**+1.2**
	comp=Z,13nm,0.5s,baz=171,slow=10,SNR=27								
HILR				PcP	**PcP**	**23**	**27**	**26.8**	**+1.7**
	comp=Z,9.9nm,0.7s,baz=159,slow=3.9,SNR=3.6								
HILR				LR	LR	23	49	44.9	
	comp=Z,673nm,19.1s,baz=135,slow=40								
	comp=Z,13nm,0.5s								
HEH	**HeiHe**	**48.47**	**1**	*e*P	**P**	**23**	**26**	**00.1**	**-0.5**
HEH				pmax	pmax				
	comp=Z,73nm,0.8s								
HEH				LR	LR				
	comp=Z,1µm,20.6s								
HEH				LR	LR				
	comp=Z,870nm,21.8s								
HEH				LR	LR				
	comp=Z,2µm,23.8s								
SALM	**Salem**	**48.74**	**284**	*e*P	**P**	**23**	**26**	**03.4**	**+0.2**
SALM				IAmb	IAmb	23	26	11.1	
	comp=Z,47nm,0.9s								
ULN	**Ulaanbaatar**	**49.00**	**343**	P	**P**	**23**	**26**	**04.5**	**-0.4**
ULN				IAmb	IAmb	23	26	10.8	
	comp=Z,35nm,0.9s								
ULN	**Ulaanbaatar**	**49.00**	**343**	IAMs_20	IAMs_20	23	48	09.7	
	comp=Z,1µm,21.0s								
ULN	**Ulaanbaatar**	**49.00**	**343**	P	**P**	**23**	**26**	**05.4**	**+0.5**
ULN	**Ulaanbaatar**	**49.00**	**343***c**e*P		**P**	**23**	**26**	**05.0**	**+0.1**
ULN				pmax	pmax				
	comp=Z,54nm,1.3s								
SONM	**Songino Array**	**49.17**	**342**	P	**P**	**23**	**26**	**06.2**	**0.0**
	comp=Z,38nm,1.1s,baz=151,slow=3.4,SNR=42								
SONM				PcP	**PcP**	**23**	**27**	**30.1**	**+0.9**
	comp=Z,10nm,0.9s,baz=166,slow=3.7,SNR=1.7								
SONM				LR	LR	23	47	45.2	
	comp=Z,2µm,21.7s,baz=155,slow=37								
	comp=Z,38nm,1.1s								
KOD	**Kodaikanal**	**49.27**	**282**	*e*P	**P**	**23**	**26**	**07.0**	**-0.7**
KOD				IAmb	IAmb	23	26	14.0	
	comp=Z,55nm,0.8s								
KOD				IAMs_20	IAMs_20	23	46	09.1	
	comp=Z,2µm,20.1s								
HYBB	**Hyderabad (bro**	**49.47**	**292**	*e*P	**P**	**23**	**26**	**09.6**	**+0.7**
HYBB				IVmB_BB		23	26	15.1	
	comp=Z,668nm,1.1s								
HYBB				*e*sP	**sP**	**23**	**26**	**19.2**	**-1.5**
HYBB				*e*PcP	**PcP**	**23**	**27**	**31.2**	**+0.4**
HYBB				*e*PP	**PP**	**23**	**28**	**03.2**	**-0.1**
HYBB				*e*ScS	ScS	23	35	59.3	+0.1
HYBB				IVMs_BB	IVMs_BB	23	46	13.5	
	comp=Z,414nm,23.7s								
TRD	**Trivandrum**	**49.59**	**280**	*e*P	**P**	**23**	**26**	**10.3**	**+0.5**
GRNR	**Gornyy**	**49.73**	**8**⇑	*i* P	**P**	**23**	**26**	**11.4**	**+1.2**
GRNR				pmax	pmax				
	comp=Z,10.0nm,0.9s								
GRNR				MLR	MLR				
	comp=E,1µm,18.0s								
GRNR				MLR	MLR				
	comp=N,680nm,13.0s								
GRNR				MLR	MLR				
	comp=Z,1µm,18.0s								
CIT	**Chita**	**51.36**	**350**	*e*P	**P**	**23**	**26**	**24.0**	**+1.4**
CIT				*e*		23	26	33.2	
CIT				*e*		23	26	43.8	
CIT				*e*		23	27	39.1	
CIT				*e*		23	28	24.7	
CIT				pmax	pmax				
	comp=Z,324nm,1.5s								
AKL	**Akola**	**51.67**	**295**	*e*P	**P**	**23**	**26**	**25.1**	**-0.3**
AKL				IAmb	IAmb	23	26	30.1	
	comp=Z,86nm,0.7s								
JHNI	**Jhansi**	**51.73**	**302**	*e*P	**P**	**23**	**26**	**23.6**	**-2.3**
JHNI				IAmb	IAmb	23	26	29.0	
	comp=Z,114nm,1.4s								
LGTI	**Lohaghat**	**51.78**	**307**	*e*P	**P**	**23**	**26**	**25.1**	**-1.0**
LGTI				IAmb	IAmb	23	26	31.7	
	comp=Z,38nm,0.8s								
ZEA	**Zeya**	**51.96**	**1**	*e*P	**P**	**23**	**26**	**30.8**	**+3.9**
ZEA				pmax	pmax				
	comp=Z,30nm,1.0s								
ZEA				MLR	MLR				
	comp=N,600nm,15.0s								
ZEA				MLR	MLR				
	comp=Z,1µm,15.0s								
BHPL	**Bhopal**	**52.01**	**298**	*e*P	**P**	**23**	**26**	**27.1**	**-0.8**
BHPL				IAmb	IAmb	23	26	33.5	
	comp=Z,59nm,0.7s								
NRDN	**NARMADA NAGAR**	**52.08**	**298**	*e*P	**P**	**23**	**26**	**31.2**	**+2.8**
NRDN				IAmb	IAmb	23	26	36.6	
	comp=Z,78nm,0.9s								
NRDN				IAMs_20	IAMs_20	23	45	55.3	
	comp=Z,2µm,21.8s								
ZAK	**Zakamensk**	**52.38**	**342**	*e*P	**P**	**23**	**26**	**29.1**	**-1.2**
ZAK				pmax	pmax				
	comp=Z,26nm,2.5s								
GUNA	**GUNA**	**52.51**	**300**	*e*P	**P**	**23**	**26**	**29.6**	**-2.0**
GUNA				IAmb	IAmb	23	26	37.2	
	comp=Z,132nm,0.6s								
JOSI	**Joshimath**	**52.77**	**308**	*e*P	**P**	**23**	**26**	**32.6**	**-1.1**
JOSI				IAmb	IAmb	23	26	38.1	
	comp=Z,133nm,1.1s								
TLY	**Talaya**	**53.40**	**343**	P	**P**	**23**	**26**	**38.0**	**+0.3**
TLY				IAmb	IAmb	23	26	48.0	
	comp=Z,97nm,1.5s								
TLY	**Talaya**	**53.40**	**343**	P	**P**	**23**	**26**	**38.4**	**+0.7**
TLY	**Talaya**	**53.40**	**343**	*i* P	**P**	**23**	**26**	**37.4**	**-0.3**
TLY				pmax	pmax				
	comp=Z,20nm,0.7s								
KAD	**Karad**	**53.52**	**290**	*e*P	**P**	**23**	**26**	**38.1**	**-1.1**
KAD				IAmb	IAmb	23	26	45.1	
	comp=Z,21nm,0.8s								
FUNA	**Funafuti**	**53.67**	**102**	P	**P**	**23**	**26**	**39.4**	**-0.9**
FUNA	**Funafuti**	**53.67**	**102**	P	**P**	**23**	**26**	**41.8**	**+1.5**
IRK	**Irkutsk**	**53.72**	**343**	*e*P	**P**	**23**	**26**	**42.5**	**+2.5**
IRK				pmax	pmax				
	comp=Z,103nm,1.6s								
AYAN	**Aya Nagar**	**53.95**	**305**	*e*P	**P**	**23**	**26**	**40.4**	**-1.7**
AYAN				IAmb	IAmb	23	26	46.1	
	comp=Z,226nm,1.2s								
NPLP	**NPLP New Delhi**	**53.97**	**305**	*e*P	**P**	**23**	**26**	**40.1**	**-2.1**
NPLP				IAmb	IAmb	23	26	46.7	
	comp=Z,39nm,0.5s								
POO	**Poona**	**54.07**	**292**	*e*P	**P**	**23**	**26**	**41.9**	**-1.4**
POO				IAmb	IAmb	23	26	49.4	
	comp=Z,31nm,0.9s								
WMQ	**Urumqi**	**54.22**	**326**	*e*P	**P**	**23**	**26**	**44.6**	**+0.7**
WMQ				S	**S**	**23**	**34**	**26.4**	**+7.0**
WMQ				pmax	pmax				
	comp=Z,23nm,1.9s								
WMQ				LR	LR				
	comp=Z,1µm,14.9s								
WMQ				LR	LR				
	comp=Z,2µm,19.9s								
WMQ				LR	LR				
	comp=Z,2µm,21.1s								
MOY	**Mondy**	**54.22**	**341**	*e*P	**P**	**23**	**26**	**45.2**	**+1.4**
MOY				pmax	pmax				
	comp=Z,67nm,1.7s								
KUDL	**Kundal**	**54.36**	**304**	*e*P	**P**	**23**	**26**	**43.0**	**-2.1**
KUDL				IAmb	IAmb	23	26	48.6	
	comp=Z,192nm,1.3s								
MSVF	**Nonsavu**	**54.45**	**113**	P	**P**	**23**	**26**	**44.4**	**-1.6**
MSVF				IAmb	IAmb	23	26	49.5	
	comp=Z,108nm,1.2s								
MSVF	**Nonsavu**	**54.45**	**113**	P	**P**	**23**	**26**	**44.4**	**-1.6**
MSVF				pmax	pmax				
	comp=Z,108nm,1.2s								
KNGR	**Kungurtug, Tuv**	**54.57**	**338**	*i* P	**P**	**23**	**26**	**46.3**	**-0.1**
KNGR				pmax	pmax				
	comp=Z,37nm,1.0s								
SMLA	**Simla**	**54.89**	**308**	*e*P	**P**	**23**	**26**	**48.0**	**-0.9**
SMLA				IAmb	IAmb	23	26	53.9	
	comp=Z,159nm,1.0s								
BHK	**Bhakra**	**55.59**	**308**	*e*P	**P**	**23**	**26**	**54.4**	**+0.4**
BHK				IAmb	IAmb	23	27	00.3	
	comp=Z,146nm,1.0s								
UDPR	**Udaipur**	**55.64**	**299**	*e*P	**P**	**23**	**26**	**54.5**	**0.0**
UDPR				IAmb	IAmb	23	27	00.5	
	comp=Z,287nm,1.2s								
ALCI	**Alchi Leh**	**56.10**	**311**	*e*P	**P**	**23**	**26**	**57.3**	**-0.8**
ALCI				IAmb	IAmb	23	27	02.4	
	comp=Z,52nm,0.8s								
TSSA	**Tissa**	**56.34**	**309**	*e*P	**P**	**23**	**26**	**57.6**	**-2.0**
TSSA				IAmb	IAmb	23	27	05.0	
	comp=Z,217nm,1.2s								
BOD	**Bodaibo**	**56.89**	**352**	*e*P	**P**	**23**	**27**	**02.9**	**+0.2**
BOD				pmax	pmax				
	comp=Z,176nm,1.6s								
SRGN	**SRI GANGA NAGA**	**57.10**	**305**	*e*P	**P**	**23**	**27**	**05.6**	**+0.8**
JMU	**Jammu**	**57.27**	**308**	*e*P	**P**	**23**	**27**	**07.4**	**+1.6**
JMU				IAmb	IAmb	23	27	14.5	
	comp=Z,254nm,1.2s								
PETK	**Petropavlovsk-**	**57.54**	**22**	P	**P**	**23**	**27**	**07.8**	**+0.3**
	comp=Z,18nm,0.7s,baz=194,slow=6.0,SNR=24								
PETK				LR	LR	23	51	33.0	
	comp=Z,417nm,20.3s,baz=219,slow=36								
	comp=Z,18nm,0.7s								
PETK	**Petropavlovsk-**	**57.54**	**22**	P	**P**	**23**	**27**	**07.6**	**+0.2**
PETK	**Petropavlovsk-**	**57.54**	**22**	P	**P**	**23**	**27**	**07.6**	**+0.2**
PET	**Petropavlovsk**	**57.83**	**22**	P	**P**	**23**	**27**	**10.4**	**+0.9**
PET				IAmb	IAmb	23	27	20.7	
	comp=Z,104nm,1.2s								
PET	**Petropavlovsk**	**57.83**	**22**	*e*P	P	23	27	19.6	+10
PET				pmax	pmax				
	comp=Z,82nm,1.1s								
PET				MLR	MLR				
	comp=Z,800nm,20.0s								
ZSN	**Zaisan**	**58.06**	**328**	*e*P	**P**	**23**	**27**	**11.0**	**-0.2**
ZSN				*e*S	**S**	**23**	**35**	**10.2**	**0.0**
ZSN	**Zaisan**	**58.06**	**328**	*e*P	**P**	**23**	**27**	**11.0**	**-0.2**
ZSN				*e*S	**S**	**23**	**35**	**10.1**	**0.0**
DGZ	**Jazzator, Alta**	**58.23**	**331**	*i* P	**P**	**23**	**27**	**11.3**	**-1.2**
DGZ				pmax	pmax				
	comp=Z,35nm,0.9s								
SHLS	**Shalkode**	**58.71**	**321**	*e*P	**P**	**23**	**27**	**13.9**	**-2.2**
	comp=Z,52nm,1.0s								
SHLS	**Shalkode**	**58.71**	**321**	*e*P	**P**	**23**	**27**	**13.8**	**-2.2**
SHLS				pmax	pmax				
	comp=Z,52nm,1.0s								
PRZ	**Przheval'sk**	**59.04**	**320**	P	**P**	**23**	**27**	**18.5**	**+0.1**
PRZ	**Przheval'sk**	**59.04**	**320**	P	**P**	**23**	**27**	**18.5**	**+0.1**
PRZ				pmax	pmax				
	comp=Z,115nm,0.9s								
TARG	**Taragay, Kyrgy**	**59.05**	**319**	P	**P**	**23**	**27**	**18.1**	**-0.6**
TARG				IAmb	IAmb	23	27	26.6	
	comp=Z,48nm,0.9s								
TARG	**Taragay, Kyrgy**	**59.05**	**319**	P	**P**	**23**	**27**	**18.2**	**-0.6**
TARG				pmax	pmax				
	comp=Z,48nm,0.9s								
MK31	**Makanchi Array**	**59.06**	**326***c**e*P		**P**	**23**	**27**	**18.1**	**-0.1**
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**23**	**27**	**18.4**	**+0.2**
	comp=Z,65nm,0.7s,baz=120,slow=7.3,SNR=134								
MKAR				LR	LR	23	53	21.2	
	comp=Z,3µm,21.3s,baz=112,slow=37								
MKAR				PKPPKP	**P'P'df**	**23**	**56**	**52.5**	**+0.3**
	comp=Z,2.0nm,1.0s,baz=318,slow=1.6,SNR=3.8								
MKAR				PKP2ab	**P'P'ab**	**23**	**57**	**17.4**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=336,slow=2.7,SNR=4.1								
	comp=Z,65nm,0.7s								
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**23**	**27**	**17.2**	**-1.1**
MKAR	**Makanchi Array**	**59.06**	**326**	*i* P	**P**	**23**	**27**	**17.1**	**-1.1**
MKAR				pmax	pmax				
	comp=Z,32nm,0.5s								
JCZ	**Jackson Bay**	**59.20**	**145**	P	**P**	**23**	**27**	**20.7**	**+1.4**
JCZ	**Jackson Bay**	**59.20**	**145**	P	**P**	**23**	**27**	**20.7**	**+1.4**
KSH	**Kashi**	**59.25**	**316**	P	**P**	**23**	**27**	**22.8**	**+3.0**
KSH				S	**S**	**23**	**35**	**23.3**	**-2.9**
KSH				sS	sS	23	35	52.0	+11
KSH				pmax	pmax				
	comp=Z,42nm,4.2s								
KSH				LR	LR				
	comp=Z,680nm,19.2s								
KSH				LR	LR				
	comp=Z,740nm,20.8s								
KSH				LR	LR				
	comp=Z,1µm,22.0s								
SATY	**Saty**	**59.32**	**321**	*e*P	**P**	**23**	**27**	**20.1**	**-0.2**
	comp=Z,35nm,

MA2 LR LR 23 54 34.1
comp=Z,343nm,20.6s,baz=173,slow=37
comp=Z,24nm,0.6s
MA2 Magadan 60.85 14 P **P** **23 27 30.4 +0.2**
MA2 Magadan 60.85 14 *ce*P **P** **23 27 30.4 +0.2**
MA2 pmax pmax
comp=Z,44nm,0.7s
TCW Tory Channel 60.88 140 P **P** **23 27 29.9 -0.9**
GVZ Greta Valley S 61.05 142 P **P** **23 27 31.5 -0.4**
GVZ Greta Valley S 61.05 142 P **P** **23 27 32.3 +0.4**
TKM2 Tokmak 2 61.06 319 P **P** **23 27 31.8 -0.4**
SNR=56
KHZ Kahutara 61.06 142 P **P** **23 27 30.6 -1.4**
KHZ IAmb IAmb 23 27 36.4
comp=Z,33nm,0.7s
KHZ Kahutara 61.06 142 P **P** **23 27 31.9 0.0**
KHZ Kahutara 61.06 142 P **P** **23 27 31.4 -0.6**
CMWZ Cape Campbell 61.13 141 P **P** **23 27 32.1 -0.3**
SNZO South Karori 61.21 140 IAMs_20 IAMs_20 23 57 54.4
comp=Z,1µm,18.0s
MQZ McQueen's Vall 61.24 143 P **P** **23 27 33.4 +0.3**
MQZ IAmb IAmb 23 27 36.9
comp=Z,111nm,1.5s
URZ Urewera 61.31 136 LR LR 23 55 20.3
comp=Z,875nm,19.4s,baz=304,slow=37
URZ Urewera 61.31 136 P **P** **23 27 33.4 -0.3**
BKZ Black Stump Fm 61.31 137 P **P** **23 27 32.7 -1.2**
BKZ IAmb IAmb 23 27 37.7
comp=Z,38nm,0.6s
BKZ Black Stump Fm 61.31 137 P **P** **23 27 34.0 +0.2**
BKZ Black Stump Fm 61.31 137 P **P** **23 27 33.6 -0.3**
KBK Karagaybulak 61.36 319 P **P** **23 27 34.3 +0.1**
SNR=22
BHW Baring Head 61.37 140 P **P** **23 27 32.5 -1.6**
BHW IAmb IAmb 23 27 34.0
comp=Z,31nm,0.7s
RTZ Ruatahuna 61.39 136 P **P** **23 27 33.3 -1.1**
MTHZ Maungataniwha 61.40 137 P **P** **23 27 34.5 +0.1**
MRZ Mangatainoka R 61.44 139 P **P** **23 27 32.1 -2.5**
UCH Uchtor 61.45 318 P **P** **23 27 35.5 +0.2**
SNR=67
KRHZ Kereru 61.46 138 P **P** **23 27 33.6 -1.2**
RAO Raoul Island 61.46 125 LR LR 23 54 47.9
comp=Z,354nm,19.8s,baz=316,slow=37
NMHZ Naumai 61.50 137 P **P** **23 27 36.0 +0.9**
RUGZ Raukumara Rang 61.57 135 P **P** **23 27 37.1 +1.5**
MCHZ McNeill Hill 61.59 137 P **P** **23 27 35.5 -0.1**
MSWZ Moikau Station 61.61 140 P **P** **23 27 33.1 -2.7**
RAGZ Rawiri 61.63 136 P **P** **23 27 35.8 -0.2**
MWZ Matawai 61.63 136 P **P** **23 27 35.7 -0.3**
FRU1 Bishkek 61.64 319 P **P** **23 27 36.6 +0.6**
FRU1 IAmb IAmb 23 27 40.9
comp=Z,34nm,0.9s
FRU1 Bishkek 61.64 319 P **P** **23 27 36.6 +0.6**
FRU1 pmax pmax
comp=Z,34nm,0.9s
AAK Ala-Archa 61.65 319 P **P** **23 27 37.1 +1.0**
comp=Z,344nm,1.0s,baz=159,slow=5.7,SNR=19
comp=Z,34nm,1.0s
AAK Ala-Archa 61.65 319 P **P** **23 27 36.2 +0.1**
AAK IAmb IAmb 23 27 48.6
comp=Z,67nm,1.3s
AAK Ala-Archa 61.65 319 IAMs_20 IAMs_20 23 54 51.6
comp=Z,1µm,22.0s
AAK Ala-Archa 61.65 319 P **P** **23 27 38.6 +2.5**
SNR=13
AAK Ala-Archa 61.65 319 *i*P **P** **23 27 35.0 -1.2**
AAK pmax pmax
comp=Z,67nm,1.4s
PLWZ Palliser 61.70 140 P **P** **23 27 34.3 -2.0**
ARHZ Aropaoanui 61.70 137 P **P** **23 27 36.8 +0.5**
SNGZ Shannon Statio 61.71 136 P **P** **23 27 37.0 +0.5**
KAHZ Kahuranaki 61.88 138 P **P** **23 27 37.9 +0.3**
SGDS Sogindy 61.93 320 *e*P **P** **23 27 37.9 -0.1**
SGDS *e*S **S** **23 35 59.8 -0.5**
USP Ospenovka 61.93 319 P **P** **23 27 37.7 -0.2**
SNR=44
RIGZ Rimuhau 61.97 136 P **P** **23 27 38.4 +0.2**
WMGZ Waiomatatini S 62.02 135 P **P** **23 27 38.4 -0.1**
EKS2 Erkin-Say 62.13 319 P **P** **23 27 39.7 +0.3**
SNR=45
DRK Karamyk 62.17 315 P **P** **23 27 39.1 -0.8**
DRK IAmb IAmb 23 27 44.9
comp=Z,59nm,0.9s
DRK Karamyk 62.17 315 P **P** **23 27 39.1 -0.8**
DRK pmax pmax
comp=Z,59nm,0.9s
CNGZ Carnagh Statio 62.18 136 P **P** **23 27 39.7 +0.2**
MHGZ Mahia Peninsul 62.28 136 P **P** **23 27 39.9 -0.3**
ZALV Zalesovo Beam 62.28 334 P **P** **23 27 39.3 -0.6**
comp=Z,6.6nm,0.4s,baz=127,slow=6.8,SNR=4.3
ZALV LR LR 23 56 23.1
comp=Z,806nm,20.4s,baz=133,slow=38
ZALV PKPPKP **P'P'df** **23 56 47.1 +0.5**
comp=Z,3.7nm,0.9s,baz=276,slow=1.3,SNR=9.1
comp=Z,6.6nm,0.4s
ZALV Zalesovo Beam 62.28 334 P **P** **23 27 38.4 -1.5**
KBL Kabul 62.48 308 P **P** **23 27 41.8 -0.2**
KBL Kabul 62.48 308 P **P** **23 27 42.1 +0.1**
SNR=45
KBL Kabul 62.48 308 P **P** **23 27 41.8 -0.2**
KBL pmax pmax
comp=Z,65nm,0.8s
BTLS Baital 63.03 321 *e*P **P** **23 27 45.1 -0.1**
BTLS Baital 63.03 321 *e*P **P** **23 27 45.0 -0.1**
GAR Garm 63.05 314 P **P** **23 27 45.5 -0.1**
AFI Afiamalu 63.24 106 P **P** **23 27 45.0 -2.2**
AFI IAmb IAmb 23 27 56.6
comp=Z,66nm,1.1s
AFI Afiamalu 63.24 106 P **P** **23 27 45.0 -2.2**
AFI pmax pmax
comp=Z,66nm,1.1s
KURBB Kurchatov Arra 63.29 328 P **P** **23 27 46.0 -0.8**
comp=Z,28nm,0.5s,baz=129,slow=6.1,SNR=107
KURBB PKPPKP **P'P'df** **23 56 45.4 +0.1**
comp=Z,1.9nm,0.9s,baz=282,slow=3.2,SNR=7.3
KURBB LR LR 23 57 06.5
comp=Z,382nm,18.5s,baz=165,slow=38
comp=Z,28nm,0.5s
KURK Kurchatov 63.30 328 P **P** **23 27 45.7 -1.1**
KURK Kurchatov 63.30 328 *ce*P **P** **23 27 46.3 -0.5**
KURK pmax pmax
comp=Z,70nm,0.7s
DZA Taraz 63.86 318 *e*P **P** **23 27 50.4 -0.4**
DZA Taraz 63.86 318 *e*P **P** **23 27 50.3 -0.4**
SEY Seymchan 64.18 13 P **P** **23 27 53.4 +1.0**
comp=Z,24nm,1.0s,baz=218,slow=6.1,SNR=10
SEY LR LR 23 55 28.8
comp=Z,237nm,21.9s,baz=205,slow=36
comp=Z,24nm,1.0s
SEY Seymchan 64.18 13 *ce*P **P** **23 27 54.7 +2.3**
SEY pmax pmax
comp=Z,40nm,1.0s
IUG Iuzhnay 64.44 317 *e*P **P** **23 27 54.3 -0.5**
comp=Z,38nm,1.0s
IUG Iuzhnay 64.44 317 *e*P **P** **23 27 54.2 -0.5**
IUG pmax pmax
comp=Z,38nm,1.0s
KK31 Karatay Array 64.50 318 IAmb IAmb 23 28 00.1
comp=Z,72nm,1.4s
KKAR Karatay Array 64.50 318 P **P** **23 27 53.6 -1.3**
KKAR Karatay Array 64.50 318 P **P** **23 27 53.6 -1.3**
CHM Chimkent 64.80 317 *e*P **P** **23 27 56.7 -0.2**
CHM Chimkent 64.80 317 *e*P **P** **23 27 56.7 -0.2**
BRLS Borolday 64.92 318 *e*P **P** **23 27 57.4 -0.4**
BRLS Borolday 64.92 318 *e*P **P** **23 27 57.3 -0.4**
HRA Herat 67.83 307 P **P** **23 28 15.4 -1.4**
HRA IAmb IAmb 23 28 26.2
comp=Z,110nm,2.0s
JLN Jalan Bani Buh 68.03 293 P **P** **23 28 18.1 +0.2**
WBK Wadi Bani Khal 68.50 294 P **P** **23 28 21.2 +0.3**
KIWB Kanaga Island 68.67 34 P **P** **23 28 20.2 -1.1**
CASY Casey 68.68 187 P **P** **23 28 19.8 -1.2**
BVAR Borovoye Array 68.86 328 P **P** **23 28 22.1 -0.4**
comp=Z,8.4nm,0.6s,baz=116,slow=10,SNR=22
BVAR LR LR 23 59 15.2
comp=Z,1µm,21.4s,baz=135,slow=37
comp=Z,8.4nm,0.6s
WSAR Wadi Sarin 68.89 294 LR LR 23 58 45.1
comp=Z,5.4nm,22.0s,baz=112,slow=36
WSAR Wadi Sarin 68.89 294 P **P** **23 28 23.0 -0.3**
BORK Borovoye 68.91 328 *ce*P **P** **23 28 22.4 -0.4**
BORK pmax pmax
comp=Z,67nm,1.7s
MHTO MHTO 69.22 292 P **P** **23 28 25.2 -0.2**
SNR=17
JMDO Jabal Madar 69.26 293 P **P** **23 28 25.5 -0.1**
SNR=5.1
SMDO Samad 69.39 294 P **P** **23 28 25.5 -1.0**
TIXI Tiksi 69.95 1 P **P** **23 28 28.3 -0.6**
comp=Z,28nm,0.6s,baz=203,slow=3.2,SNR=31
TIXI LR LR 23 57 51.9
comp=Z,618nm,21.6s,baz=197,slow=35
comp=Z,28nm,0.6s
TIXI Tiksi 69.95 1 P **P** **23 28 27.6 -1.2**
TIXI IAmb IAmb 23 28 29.8
comp=Z,76nm,1.2s
TIXI IAMs_20 IAMs_20 23 58 02.2
comp=Z,1µm,21.0s
TIXI Tiksi 69.95 1 *ce*P **P** **23 28 28.8 -0.1**
TIXI pmax pmax
comp=Z,79nm,1.3s
HOQ Hoqain 70.13 294 P **P** **23 28 30.7 -0.3**
BSY Bisya 70.13 294 P **P** **23 28 31.2 +0.2**
ARQ Araqi 70.82 294 P **P** **23 28 35.1 -0.1**
SNR=10
SOHO SOHO 70.91 295 P **P** **23 28 36.7 +1.1**
MDH Madha 71.26 296 P **P** **23 28 35.7 -2.1**
UOSS Minazif 71.30 296 P **P** **23 28 36.6 -1.5**
UOSS IAMs_20 IAMs_20 23 59 33.4
comp=Z,574nm,21.0s
UOSS Minazif 71.30 296 P **P** **23 28 37.9 -0.2**
BANOM Banah 71.34 297 P **P** **23 28 38.4 +0.1**
HATD Hatta, Dubai 71.35 296 P **P** **23 28 38.9 +0.5**
MASF Masafi 71.40 296 P **P** **23 28 39.2 +0.6**
SNR=6.0
ASHO Ashiyiah 71.40 295 P **P** **23 28 38.4 -0.3**
SHME Shamm 71.50 297 P **P** **23 28 39.7 +0.5**
BILL Bilibino 71.70 15 P **P** **23 28 38.8 -0.8**
BILL Bilibino 71.70 15 IAMs_20 IAMs_20 00 00 16.9
comp=Z,796nm,21.0s
FAQ Al Faqa, Dubai 71.83 295 P **P** **23 28 41.3 +0.1**
SNR=6.0
UMZA Um Al Zommool 72.00 293 P **P** **23 28 41.9 -0.4**
ASUD Al Ashush, Dub 72.06 295 P **P** **23 28 42.5 -0.1**
AJN Ajban 72.36 295 P **P** **23 28 44.1 -0.3**
SNR=6.8
DOK Doka 72.60 289 P **P** **23 28 45.3 -0.6**
MZWR Madinat Zayed 73.28 294 P **P** **23 28 49.2 -0.6**
ABTO Aybut 73.31 288 P **P** **23 28 49.4 -0.9**
ABKAR Akbulak array 73.52 321 P **P** **23 28 49.9 -0.8**
MZR Muzera 73.57 293 P **P** **23 28 50.9 -0.8**
SNR=13
NIKH Nikolski High 73.78 35 P **P** **23 28 52.6 +0.4**
baz=250
JRN Qarnain Island 74.33 295 P **P** **23 28 55.7 -0.3**
SNR=5.3
SPIA Saint Paul Isl 74.53 30 P **P** **23 28 57.8 +1.3**
baz=248
AKTO Aktyubinsk 75.05 322 P **P** **23 28 59.2 -0.5**
comp=Z,15nm,0.7s,baz=98,slow=5.4,SNR=31
AKTO LR LR 00 03 33.2
comp=Z,1µm,21.2s,baz=68,slow=37
comp=Z,15nm,0.7s
UNV Unalaska Valle 75.40 34 P **P** **23 29 03.1 +1.5**
baz=252
SVE Sverdlovsk 75.54 329 *de*P **P** **23 29 02.2 -0.1**
SVE pmax pmax
comp=Z,111nm,1.1s
RAR Rarotonga 75.62 112 LR LR 00 01 06.7
comp=Z,184nm,20.9s,baz=272,slow=35
TRNA Turayna 75.79 295 P **P** **23 29 04.0 -0.5**
SMRA Abu-Samra 76.14 295 P **P** **23 29 06.0 -0.4**
SNR=7.5
GAMB Gambell 76.49 24 P **P** **23 29 09.4 +1.8**
baz=245
ARTI Arti 76.58 328 P **P** **23 29 07.3 -1.0**
comp=Z,47nm,0.8s,baz=105,slow=2.9,SNR=34
ARTI LR LR 00 04 07.9
comp=Z,750nm,21.5s,baz=117,slow=37
comp=Z,47nm,0.8s
ARTI Arti 76.58 328 P **P** **23 29 07.2 -1.0**
ARTI Arti 76.58 328 *c i*P **P** **23 29 07.5 -0.8**
ARTI PPP PPP 23 33 49.1
ARTI S **S** **23 38 52.0 -0.4**
ARTI SS **SS** **23 43 43.2 -4.7**
ARTI pmax pmax
comp=Z,89nm,1.4s
ARTI MLR MLR
comp=Z,769nm,20.0s
SBV Sambava 77.15 256 P **P** **23 29 11.2 -1.1**
FALS False Pass 77.42 34 P **P** **23 29 14.0 +1.0**
baz=254
M11K Mekoryuk 77.62 28 P **P** **23 29 15.1 +1.1**
baz=251
S12K Black Hills 78.39 33 P **P** **23 29 19.3 +0.8**
baz=256
MLH Mauna Loa 78.44 71 P **P** **23 29 17.0 -2.8**
HLP Hilina Pali 78.51 71 P **P** **23 29 17.3 -2.6**
RSD Rainshed 78.54 71 P **P** **23 29 20.0 -0.2**
HATHI Halema'uma'u T 78.56 71 P **P** **23 29 19.1 -1.2**
HATHI IAmb IAmb 23 29 25.5
comp=Z,58nm,0.9s
KNHH Kane Nui o Ham 78.64 71 P **P** **23 29 18.2 -2.5**
TNA Tin City 78.69 23 P **P** **23 29 21.0 +1.2**
baz=248
K13K Kusilvak Mount 78.83 27 P **P** **23 29 21.1 +0.4**
K13K IAmb IAmb 23 29 54.0
comp=Z,67nm,1.2s
K13K Kusilvak Mount 78.83 27 P **P** **23 29 21.8 +1.1**
baz=252
M13K Dall Lake 78.98 28 P **P** **23 29 21.6 0.0**
M13K IAmb IAmb 23 29 52.9
comp=Z,78nm,1.1s
M13K Dall Lake 78.98 28 P **P** **23 29 23.3 +1.7**
baz=254
SDPT Sand Point 79.18 34 P **P** **23 29 21.1 -1.6**
SDPT Sand Point 79.18 34 P **P** **23 29 24.2 +1.4**
baz=257
F14K Arctic Creek 79.28 23 P **P** **23 29 24.6 +1.5**
baz=250
ANM Nome 79.36 24 P **P** **23 29 25.3 +1.8**
baz=251
L14K Kuka Creek 79.56 28 P **P** **23 29 26.4 +1.7**
baz=254
CHNA Chernabura Isl 79.56 34 P **P** **23 29 26.1 +1.3**
baz=258
J14K Nanvaranak Lak 79.56 26 P **P** **23 29 26.3 +1.7**
baz=253
N14K Kuskokwak Cree 79.65 29 P **P** **23 29 24.6 -0.6**
N14K IAmb IAmb 23 29 28.1
comp=Z,61nm,0.9s
N14K Kuskokwak Cree 79.65 29 P **P** **23 29 26.5 +1.3**
baz=255
O14K Tigyukauivet M 79.69 30 P **P** **23 29 25.7 +0.3**
O14K Tigyukauivet M 79.69 30 P **P** **23 29 26.7 +1.3**
baz=256
M14K Bethel 79.73 28 P **P** **23 29 24.9 -0.8**
M14K IAmb IAmb 23 29 29.3
comp=Z,68nm,1.0s
M14K Bethel 79.73 28 P **P** **23 29 27.1 +1.5**
baz=255
S14K Fog Glacier 79.89 33 P **P** **23 29 27.6 +0.8**
baz=258
F15K North Star Dit 80.02 23 P **P** **23 29 28.5 +1.3**
baz=251
G15K Niukluk 80.04 24 P **P** **23 29 28.2 +1.0**
baz=252
L15K Ungalak Mounta 80.20 27 P **P** **23 29 29.2 +1.0**
baz=255
ABPO Ambohimpanom 80.20 251 P **P** **23 29 27.8 -1.5**
ABPO IAmb IAmb 23 30 03.3
comp=Z,59nm,1.2s
ABPO Ambohimpanom 80.20 251 P **P** **23 29 27.8 -1.5**
ABPO pmax pmax
comp=Z,59nm,1.2s
M15K Kasigluk River 80.33 29 P **P** **23 29 29.9 +1.1**
baz=256
K15K Wolf Creek Mou 80.34 27 P **P** **23 29 28.1 -0.8**
K15K IAmb IAmb 23 29 32.9
comp=Z,53nm,1.0s
K15K Wolf Creek Mou 80.34 27 P **P** **23 29 30.3 +1.3**
baz=255
AKT Akhty 80.38 312 *e*P **P** **23 29 28.7 -1.0**
AKT pmax pmax
comp=Z,27nm,0.6s
O15K Ungalikthiuk R 80.39 30 P **P** **23 29 28.2 -1.0**
O15K IAmb IAmb 23 29 54.5
comp=Z,119nm,1.6s
O15K Ungalikthiuk R 80.39 30 P **P** **23 29 29.8 +0.6**
baz=257
N15K Kwethluk River 80.49 29 P **P** **23 29 28.4 -1.3**
N15K IAmb IAmb 23 29 32.9
comp=Z,64nm,1.2s
N15K Kwethluk River 80.49 29 P **P** **23 29 30.8 +1.0**
baz=256
C16K Lisburne Hills 80.61 21 P **P** **23 29 31.7 +1.5**
baz=250
H16K Elim 80.67 24 P **P** **23 29 31.7 +1.1**
baz=254
MAK Makhachkala 80.71 313 *c i*P **P** **23 29 28.9 -2.4**
MAK *e*S **S** **23 39 34.1 -3.0**
MAK pmax pmax
comp=Z,388nm,1.4s
MAK MLR MLR
comp=Z,737nm,19.0s
G16K Koyuk River 80.83 24 P **P** **23 29 32.5 +1.0**
baz=254
VOI Vohitsoka 80.88 248 P **P** **23 29 32.3 -0.5**
VOI IAmb IAmb 23 29 45.8
comp=Z,41nm,0.9s
VOI Vohitsoka 80.88 248 P **P** **23 29 32.0 -0.8**
RAYN Ar Rayn 80.92 293 P **P** **23 29 31.6 -1.3**
RAYN IAmb IAmb 23 29 40.0
comp=Z,38nm,0.8s
RAYN Ar Rayn 80.92 293 IAMs_20 IAMs_20 00 07 36.7
comp=Z,816nm,20.0s
RAYN Ar Rayn 80.92 293 P **P** **23 29 31.6 -1.3**
RAYN pmax pmax
comp=Z,38nm,0.8s
RAYN MLR MLR
comp=Z,800nm,20.0s
J16K Anvik River 81.01 26 P **P** **23 29 32.4 -0.1**
J16K IAmb IAmb 23 29 37.0
comp=Z,52nm,0.9s
J16K Anvik River 81.01 26 P **P** **23 29 33.6 +1.1**
baz=256
I17K Unalakleet 81.12 25 P **P** **23 29 34.6 +1.6**
baz=255
L16K Owhat River 81.14 28 P **P** **23 29 32.6 -0.6**
L16K Owhat River 81.14 28 P **P** **23 29 34.0 +0.8**
baz=257,SNR=8.7
N16K Nishlik Lake 81.20 29 P **P** **23 29 35.0 +1.4**
baz=258
R16K Pilot Point 81.21 32 P **P** **23 29 35.3 +1.7**
baz=259
M16K Timber Creek 81.22 28 P **P** **23 29 34.9 +1.2**
baz=257
D17K Noatak River 81.23 21 P **P** **23 29 34.9 +1.3**
baz=252
P16K Nushagak River 81.28 30 P **P** **23 29 35.4 +1.4**
baz=258
O16K Kokwok River B 81.34 30 P **P** **23 29 35.1 +0.8**
baz=258
VNDA Vanda 81.39 173 P **P** **23 29 34.1 -0.2**
comp=Z,19nm,0.6s,baz=313,slow=6.4,SNR=80
VNDA PKKPbc **PKKPbc** **23 48 09.6 -2.6**
comp=Z,0.6nm,0.7s,baz=309,slow=5.9,SNR=3.7
comp=Z,19nm,0.6s
VNDA Vanda 81.39 173 P **P** **23 29 33.9 -0.4**
VNDA IAmb IAmb 23 29 40.0
comp=Z,43nm,0.8s
VNDA Vanda 81.39 173 P **P** **23 29 33.9 -0.4**
VNDA pmax pmax
comp=Z,43nm,0.8s
RDOG Red Dog Mine 81.40 21 P **P** **23 29 34.5 0.0**
RDOG IAmb IAmb 23 29 41.5
comp=Z,63nm,1.2s
RDOG Red Dog Mine 81.40 21 P **P** **23 29 36.0 +1.5**
baz=253
C17K DeLong Mountai 81.43 21 P **P** **23 29 36.1 +1.4**
baz=252
E17K Hotham Inlet 81.52 22 P **P** **23 29 36.5 +1.4**
baz=254
G17K Kiwalik Mounta 81.55 24 P **P** **23 29 36.9 +1.6**
baz=255
F17K Baldwin Pennin 81.56 23 P **P** **23 29 34.7 -0.6**
F17K IAmb IAmb 23 29 55.7
comp=Z,79nm,1.5s
F17K Baldwin Pennin 81.56 23 P **P** **23 29 36.6 +1.3**
baz=254
MAW Mawson 81.63 200 P **P** **23 29 35.4 -0.3**
comp=Z,17nm,0.8s,baz=64,slow=4.6,SNR=33
MAW LR LR 00 02 00.9
comp=Z,350nm,21.3s,baz=36,slow=33
comp=Z,17nm,0.8s
J17K VABM Dome 81.70 26 P **P** **23 29 36.4 +0.2**
J17K IAmb IAmb 23 29 39.8
comp=Z,39nm,1.0s
J17K VABM Dome 81.70 26 P **P** **23 29 37.8 +1.6**
baz=257
H17K Granite Mounta 81.71 24 P **P** **23 29 36.0 -0.2**
H17K IAmb IAmb 23 29 44.8
comp=Z,136nm,1.6s
H17K Granite Mounta 81.71 24 P **P** **23 29 37.9 +1.7**
baz=256
L17K Donlin 81.77 27 P **P** **23 29 38.4 +1.8**
baz=258
KIRV Kirov 81.81 329 P **P** **23 29 36.5 -0.2**
comp=Z,47nm,0.8s,baz=103,slow=4.0,SNR=30
KIRV LR LR 00 07 59.1
comp=Z,405nm,20.1s,baz=95,slow=37
comp=Z,47nm,0.8s
KIRV Kirov 81.81 329 *ce*P **P** **23 29 36.8 0.0**
BELG Belogornoye 81.82 323 P **P** **23 29 36.6 -0.4**
comp=Z,111nm,0.8s,baz=82,slow=0.9,SNR=17
comp=Z,111nm,0.8s
BELG Belogornoye 81.82 323 *i*P **P** **23 29 36.5 -0.4**
BELG pmax pmax
comp=Z,24nm,0.9s
R17L Mt. Peulik Vol 81.87 32 P **P** **23 29 38.8 +1.6**
baz=260
PLK4 Peulik 4 81.87 32 P **P** **23 29 36.5 -0.8**
O17K Koliganek Bris 81.88 30 P **P** **23 29 38.7 +1.6**
baz=259,SNR=5.1
K17K Iditarod 81.90 27 P **P** **23 29 37.5 +0.3**
K17K IAmb IAmb 23 29 41.4
comp=Z,84nm,1.0s
K17K Iditarod 81.90 27 P **P** **23 29 38.9 +1.7**
baz=258
Q16K King Salmon 81.90 31 P **P** **23 29 38.3 +1.1**
baz=260
CHIR Chirikof Islan 81.97 34 P **P** **23 29 39.3 +1.6**
baz=261
N17K Nushagak Hills 81.97 29 P **P** **23 29 38.2 +0.5**
N17K Nushagak Hills 81.97 29 P **P** **23 29 39.0 +1.3**
baz=259
M17K Holitna River 82.02 28 P **P** **23 29 38.2 +0.3**
M17K IAmb IAmb 23 30 04.3
comp=Z,112nm,1.7s
M17K Holitna River 82.02 28 P **P** **23 29 39.4 +1.5**
baz=259
E18K Tukpahlearik C 82.07 22 P **P** **23 29 38.4 +0.4**
E18K IAmb IAmb 23 29 42.5
comp=Z,35nm,0.8s
E18K Tukpahlearik C 82.07 22 P **P** **23 29 39.5 +1.5**
baz=255
P17K Kvichak River 82.10 30 P **P** **23 29 39.5 +1.2**
baz=260
B18K Kokolik River 82.17 20 P **P** **23 29 39.8 +1.3**
baz=254
C18K Utukok River 82.18 21 P **P** **23 29 38.3 -0.3**
C18K Utukok River 82.18 21 P **P** **23 29 39.8 +1.1**
baz=254
F18K Selawik 82.22 23 P **P** **23 29 40.2 +1.4**
baz=256
Q17K Contact Creek 82.22 31 P **P** **23 29 39.9 +0.8**
baz=260
SBA Scott Base 82.31 172 P **P** **23 29 39.5 +0.4**
SBA IAmb IAmb 23 29 46.0
comp=Z,62nm,1.1s
SBA Scott Base 82.31 172 P **P** **23 29 39.5 +0.4**
SBA pmax pmax
comp=Z,62nm,1.2s
H18K Honhosa River 82.40 24 P **P** **23 29 40.2 +0.3**
H18K Honhosa River 82.40 24 P **P** **23 29 41.0 +1.2**
baz=257
G18K Tagagawik 82.45 24 P **P** **23 29 39.5 -0.6**
G18K IAmb IAmb 23 30 02.4
comp=Z,136nm,1.9s
G18K Tagagawik 82.45 24 P **P** **23 29 41.1 +1.1**
baz=257,SNR=9.6
ACHA Angle Creek He 82.51 32 P **P** **23 29 39.4 -1.2**
GNI Garni 82.51 310 P **P** **23 29 40.9 -0.2**
GNI Garni 82.51 310 P **P** **23 29 40.9 -0.2**
GNI pmax pmax
comp=Z,221nm,1.7s
GNI Garni 82.51 310 P **P** **23 29 40.4 -0.8**

comp=Z,924nmcomp=Z,58nm,1.0s
GNI pP **pP** **23 29 48.5 -1.6**
comp=Z,924nmcomp=Z,58nm,1.0s
L18K Granite Mounta 82.53 27 P **P** **23 29 41.0 +0.4**
L18K IAmb IAmb 23 29 44.6
comp=Z,52nm,1.0s
L18K Granite Mounta 82.53 27 P **P** **23 29 41.9 +1.4**
baz=259
N18K Kilae Creek 82.63 29 P **P** **23 29 40.8 -0.3**
N18K IAmb IAmb 23 30 14.2
comp=Z,54nm,1.4s
N18K Kilae Creek 82.63 29 P **P** **23 29 42.3 +1.2**
baz=260
A19K Wainwright 82.65 19 P **P** **23 29 42.4 +1.5**
baz=254
Q18K Katmai Hardscr 82.74 31 P **P** **23 29 42.4 +0.5**
baz=261
P18K Big Mountain, 82.75 30 P **P** **23 29 41.1 -0.7**
P18K IAmb IAmb 23 29 47.9
comp=Z,58nm,1.4s
J18K Innoko River 82.75 26 P **P** **23 29 41.7 0.0**
J18K IAmb IAmb 23 29 45.2
comp=Z,56nm,1.0s
J18K Innoko River 82.75 26 P **P** **23 29 43.1 +1.3**
baz=259
M18K Stony River 82.80 28 P **P** **23 29 43.4 +1.4**
baz=260
O18K Koktuh Hills 82.83 30 P **P** **23 29 43.6 +1.5**
baz=261
C19K Lookout Ridge 82.86 20 P **P** **23 29 41.1 -1.1**
C19K Lookout Ridge 82.86 20 P **P** **23 29 43.6 +1.4**
baz=256
R18K Karluk 82.87 32 P **P** **23 29 43.8 +1.5**
baz=262
SII Sitkinak Islan 82.88 33 P **P** **23 29 43.4 +0.9**
baz=262
GCSA Galena City Sc 82.93 25 P **P** **23 29 43.9 +1.3**
baz=259,SNR=16
F19K Shaleruckik Mo 83.00 23 P **P** **23 29 44.1 +1.3**
baz=258
G19K Purcell Mounta 83.12 23 P **P** **23 29 45.1 +1.5**
baz=258
D19K Kuna River 83.24 21 P **P** **23 29 44.7 +0.6**
D19K Kuna River 83.24 21 P **P** **23 29 45.6 +1.4**
baz=257
H19K Roundabout Mou 83.26 24 P **P** **23 29 44.6 +0.3**
H19K Roundabout Mou 83.26 24 P **P** **23 29 46.1 +1.9**
baz=259,SNR=28
ATD Arta Tunnel 83.27 281 LR LR 00 08 44.0
comp=Z,7,6nm,18.0s,baz=92,slow=37
ATD Arta Tunnel 83.27 281 P **P** **23 29 44.9 -0.6**
ATD IAmb IAmb 23 29 54.5
comp=Z,41nm,0.9s
ATD Arta Tunnel 83.27 281 P **P** **23 29 44.8 -0.6**
J19K Poorman 83.33 26 P **P** **23 29 45.5 +0.8**
J19K IAmb IAmb 23 29 48.5
comp=Z,68nm,1.0s
J19K Poorman 83.33 26 P **P** **23 29 46.0 +1.4**
baz=260
N19K Bonanza Creek 83.33 29 P **P** **23 29 45.5 +0.7**
N19K Bonanza Creek 83.33 29 P **P** **23 29 45.6 +0.7**
baz=261
E19K Redstone River 83.34 22 P **P** **23 29 44.7 +0.1**
E19K Redstone River 83.34 22 P **P** **23 29 45.6 +0.9**
baz=258
L19K White Mountain 83.37 28 P **P** **23 29 44.3 -0.6**
L19K IAmb IAmb 23 29 48.8
comp=Z,52nm,1.0s
L19K White Mountain 83.37 28 P **P** **23 29 45.8 +0.8**
baz=261
OHAK Old Harbor 83.45 33 P **P** **23 29 45.1 -0.3**
OHAK IAmb IAmb 23 29 48.0
comp=Z,27nm,0.8s
OHAK Old Harbor 83.45 33 P **P** **23 29 48.1 +2.7**
OHAK Old Harbor 83.45 33 P **P** **23 29 46.5 +1.1**
baz=263
Q19K Cape Douglas, 83.48 31 P **P** **23 29 43.8 -1.8**
M19K Big River Lodg 83.54 28 P **P** **23 29 46.9 +1.0**
baz=261
P19K Oil Pt 83.79 30 P **P** **23 29 48.2 +1.1**
baz=262
D20K Etivluk River 83.82 21 P **P** **23 29 47.2 +0.1**
D20K Etivluk River 83.82 21 P **P** **23 29 48.3 +1.2**
baz=258
F20K Avaraart Lake 83.83 23 P **P** **23 29 48.4 +1.2**
baz=260
L20K Farewell, AK 83.87 27 P **P** **23 29 47.0 -0.5**
L20K IAmb IAmb 23 29 54.3
comp=Z,43nm,1.0s
L20K Farewell, AK 83.87 27 P **P** **23 29 48.5 +1.0**
baz=262
ILSW Iliamna Southw 83.88 30 P **P** **23 29 46.4 -1.3**
ILSW IAmb IAmb 23 30 20.6
comp=Z,36nm,1.2s
E20K Nigu River 83.89 21 P **P** **23 29 48.6 +1.1**
baz=259
KDAK Kodiak Island 83.89 32 LR LR 00 02 51.5
comp=Z,470nm,19.9s,baz=245,slow=33
KDAK Kodiak Island 83.89 32 P **P** **23 29 45.9 -1.7**
KDAK IAmb IAmb 23 29 53.3
comp=Z,65nm,1.2s
KDAK Kodiak Island 83.89 32 P **P** **23 29 45.9 -1.7**
KDAK pmax pmax
comp=Z,65nm,1.2s
KDAK Kodiak Island 83.89 32 P **P** **23 29 48.6 +1.0**
baz=263
B20K Meade River 83.90 20 P **P** **23 29 48.8 +1.4**
baz=258
H20K Anotleneega Mo 83.90 24 P **P** **23 29 48.7 +1.1**
baz=260,SNR=7.1
K20K Telida 83.91 26 P **P** **23 29 46.8 -0.9**
K20K IAmb IAmb 23 30 11.5
comp=Z,50nm,1.2s
K20K Telida 83.91 26 P **P** **23 29 49.0 +1.3**
baz=261
I20K Naaghedeneel 83.95 25 P **P** **23 29 48.7 +0.9**
I20K Naaghedeneel 83.95 25 P **P** **23 29 49.1 +1.3**
baz=261
J20K Nowinta River 84.00 26 P **P** **23 29 48.6 +0.6**
J20K Nowinta River 84.00 26 P **P** **23 29 49.2 +1.1**
baz=261
Q20K Shuyak Island 84.09 31 P **P** **23 29 49.6 +1.0**
baz=263
SYI Shuyak Island 84.09 31 P **P** **23 29 47.3 -1.3**
GOF Gofitskoye 84.10 315 *ce*P **P** **23 29 51.9 +2.9**
RED Redoubt Volcan 84.12 30 P **P** **23 29 48.4 -0.5**
RED IAmb IAmb 23 29 51.4
comp=Z,56nm,1.0s
KBZ Khabaz 84.12 314 P **P** **23 29 48.7 -0.4**
comp=Z,22nm,1.0s,baz=129,slow=2.7,SNR=13
comp=Z,22nm,1.0s
KBZ Khabaz 84.12 314 *ce*P **P** **23 29 49.5 +0.4**
KBZ pmax pmax
comp=Z,65nm,1.5s
M20K Styx River 84.13 28 P **P** **23 29 50.0 +1.0**
baz=262
O20K Slope Mountain 84.15 30 P **P** **23 29 50.1 +1.1**
baz=263
KIV Kislovodsk 84.29 314 P **P** **23 29 49.1 -1.0**
KIV Kislovodsk 84.29 314 P **P** **23 29 50.0 -0.1**
KIV Kislovodsk 84.29 314 JJP **P** **23 29 51.8 +1.6**
KIV Kislovodsk 84.29 314 *e*P **P** **23 29 49.4 -0.7**
KIV *e* 23 40 09.5
KIV pmax pmax
comp=Z,42nm,1.0s
KIV pmax pmax
comp=Z,22nm,3.8s
KIV MLR MLR
comp=Z,349nm,20.0s
KIV Kislovodsk 84.29 314 P **P** **23 29 49.7 -0.4**
comp=Z,630nmcomp=Z,43nm,1.9s
KIV pP **pP** **23 29 57.3 -2.0**
comp=Z,630nmcomp=Z,43nm,1.9s
SHA1 Shidzhatmaz 84.30 314 *i*P **P** **23 29 49.1 -1.2**
IMAR Indian Mountai 84.44 24 P **P** **23 29 49.6 -0.7**
N20K Mount Spurr 84.48 29 P **P** **23 29 51.3 +0.6**
baz=263,SNR=11
SPCR Spurr Chakacha 84.48 29 P **P** **23 29 51.3 +0.6**
baz=263,SNR=8.4
GURO Guroymak-BITLI 84.52 308 P **P** **23 29 51.3 -0.2**
C21K Knifeblade Rid 84.55 21 P **P** **23 29 52.1 +1.3**
baz=260
SPU Mount Spurr 84.56 29 P **P** **23 29 49.4 -1.7**
SPU IAmb IAmb 23 29 56.9
comp=Z,32nm,1.2s
HOM Homer 84.59 30 P **P** **23 29 51.9 +0.7**
baz=264
G21K Allakaket 84.61 23 P **P** **23 29 51.5 +0.3**
G21K IAmb IAmb 23 30 25.3
comp=Z,56nm,1.4s
G21K Allakaket 84.61 23 P **P** **23 29 52.3 +1.1**
baz=262
B21K Ikpikpuk River 84.69 20 P **P** **23 29 51.6 +0.2**
B21K Ikpikpuk River 84.69 20 P **P** **23 29 53.2 +1.7**
baz=260
PPLA Purkeypile 84.69 27 P **P** **23 29 51.9 +0.1**
PPLA IAmb IAmb 23 30 48.7
comp=Z,81nm,1.6s
PPLA Purkeypile 84.69 27 P **P** **23 29 52.6 +0.7**
baz=263
STLK Strandline Lak 84.70 28 P **P** **23 29 51.1 -0.7**
F21K Alatna River 84.73 23 P **P** **23 29 51.0 -0.8**
F21K Alatna River 84.73 23 P **P** **23 29 53.0 +1.2**
baz=262
E21K Killik River 84.73 21 P **P** **23 29 53.0 +1.2**
baz=261
CHUM Lake Minchumin 84.76 26 P **P** **23 29 53.1 +1.2**
baz=263
CNPM China Poot 84.78 30 P **P** **23 29 52.2 0.0**
A22K Sinclair Lake 84.81 19 P **P** **23 29 53.4 +1.4**
baz=260
PPT Papeete 84.87 108 LR LR 00 05 54.1
comp=Z,201nm,20.8s,baz=244,slow=34
SKT Skwentna 84.89 28 P **P** **23 29 52.3 -0.4**
SKT IAmb IAmb 23 29 57.0
comp=Z,47nm,1.3s
SKT Skwentna 84.89 28 P **P** **23 29 53.0 +0.3**
baz=264,SNR=9.7
CAPN Captain Cook N 84.95 29 P **P** **23 29 53.9 +1.0**
baz=264
BRLK Bradley Lake 84.98 30 P **P** **23 29 52.2 -1.0**
BRSE Bradley Lake S 85.06 30 P **P** **23 29 54.3 +0.8**
baz=265,SNR=9.5
I21K Tanana 85.06 25 P **P** **23 29 54.4 +1.0**
baz=263
SUA Susitna One 85.21 29 P **P** **23 29 53.9 -0.5**
SUA Susitna One 85.21 29 P **P** **23 29 54.7 +0.3**
baz=264,SNR=15
B22K Teshekpuk Lake 85.21 20 P **P** **23 29 55.0 +0.9**
baz=261
D22K Ayikyak River 85.26 21 P **P** **23 29 54.9 +0.5**
D22K IAmb IAmb 23 30 17.1
comp=Z,76nm,1.6s
D22K Ayikyak River 85.26 21 P **P** **23 29 56.0 +1.6**
baz=262
F22K John River 85.27 22 P **P** **23 29 55.7 +1.2**
baz=263
VRH Novokhopyorsk 85.35 321 *e*P **P** **23 29 54.1 -1.0**
VRH pmax pmax
comp=Z,126nm,0.8s
BPAW Bear Paw Mtn. 85.36 26 P **P** **23 29 55.7 +0.7**
baz=264
SLKM Skilak Lake 85.38 30 P **P** **23 29 54.1 -1.1**
H22K Ishtalitna Cre 85.39 24 P **P** **23 29 55.4 +0.3**
H22K IAmb IAmb 23 30 18.9
comp=Z,64nm,1.6s
H22K Ishtalitna Cre 85.39 24 P **P** **23 29 56.2 +1.1**
baz=264
G22K Bettles 85.45 23 P **P** **23 29 56.5 +1.1**
baz=263
MARD Mardin 85.47 307 P **P** **23 29 55.7 -0.6**
MARD IAmb IAmb 23 30 13.3
comp=Z,34nm,0.9s
E22K Anaktuvuk Pass 85.48 22 P **P** **23 29 56.5 +1.0**
E22K IAmb IAmb 23 30 29.7
comp=Z,42nm,1.2s
E22K Anaktuvuk Pass 85.48 22 P **P** **23 29 56.5 +1.0**
baz=263,SNR=8.5
CUT Chulitna 85.53 28 P **P** **23 29 56.3 +0.5**
baz=265,SNR=6.9
M22K Willow 85.54 28 P **P** **23 29 55.0 -0.8**
M22K Willow 85.54 28 P **P** **23 29 56.1 +0.2**
baz=265,SNR=7.9
MLY Manley 85.56 25 P **P** **23 29 55.7 -0.3**
MLY Manley 85.56 25 P **P** **23 29 56.5 +0.5**
baz=264
TRF Thorofare Moun 85.61 27 P **P** **23 29 56.3 -0.1**
TRF IAmb IAmb 23 30 51.2
comp=Z,39nm,1.5s
TRF Thorofare Moun 85.61 27 P **P** **23 29 56.8 +0.3**
baz=265
O22K Cooper Landing 85.62 30 P **P** **23 29 56.4 +0.1**
O22K Cooper Landing 85.62 30 P **P** **23 29 56.8 +0.5**
baz=266
RC01 Rabbit Creek A 85.67 29 P **P** **23 29 56.6 +0.1**
RC01 IAmb IAmb 23 30 29.8
comp=Z,48nm,1.0s
RC01 Rabbit Creek A 85.67 29 P **P** **23 29 57.2 +0.6**
baz=265,SNR=10
LABN Labinsk 85.73 314 *e*P **P** **23 29 56.4 -0.8**
LABN *e**PP **pwP** **23 30 06.5 +0.1**
LABN *e*S **SKSac** **23 40 19.2 -1.6**
LABN pmax pmax
comp=Z,47nm,1.0s
SEW Seward 85.73 30 P **P** **23 29 57.1 +0.2**
SEW Seward 85.73 30 P **P** **23 29 57.6 +0.8**
baz=266
KOPT Kop Dagi 85.76 310 P **P** **23 29 58.4 +0.6**
ERBR Yeremizino-Bor 85.93 316 *e*P **P** **23 29 56.6 -1.6**
ERBR *e**PP **pP** **23 30 06.7 -0.7**
ERBR *e*S **SKSac** **23 40 19.2 -2.9**
ERBR pmax pmax
comp=Z,97nm,0.9s
D23K Nanushuk River 85.99 21 P **P** **23 29 59.3 +1.4**
D23K IAmb IAmb 23 30 20.9
comp=Z,50nm,1.4s
D23K Nanushuk River 85.99 21 P **P** **23 29 59.4 +1.4**
baz=264
COLD Coldfoot 86.00 23 P **P** **23 29 56.5 -1.6**
COLD IAmb IAmb 23 30 02.1
comp=Z,29nm,1.0s
COLD Coldfoot 86.00 23 P **P** **23 29 59.3 +1.2**
baz=265
PMR Palmer 86.00 29 P **P** **23 29 57.8 -0.3**
PMR IAmb IAmb 23 30 00.5
comp=Z,44nm,1.2s
PMR Palmer 86.00 29 P **P** **23 29 58.8 +0.7**
PMR Palmer 86.00 29 P **P** **23 29 57.8 -0.3**
PMR pmax pmax
comp=Z,44nm,1.2s
PMR Palmer 86.00 29 P **P** **23 29 58.9 +0.7**
baz=266
G23K Bananza Creek 86.02 23 P **P** **23 29 58.7 +0.5**
G23K Bananza Creek 86.02 23 P **P** **23 29 59.1 +0.9**
baz=265
C23K Itkillik River 86.10 20 P **P** **23 29 59.3 +0.8**
C23K IAmb IAmb 23 30 02.4
comp=Z,28nm,0.8s
C23K Itkillik River 86.10 20 P **P** **23 29 59.7 +1.2**
baz=264
GHO Glory Hole Cre 86.11 28 P **P** **23 29 59.8 +1.0**
GHO IAmb IAmb 23 30 34.4
comp=Z,42nm,1.1s
H23K Yukon River 86.14 24 P **P** **23 29 59.8 +1.0**
baz=265
I23K Minto, Yukon-K 86.16 25 P **P** **23 29 59.0 +0.2**
I23K IAmb IAmb 23 30 21.9
comp=Z,69nm,1.7s
I23K Minto, Yukon-K 86.16 25 P **P** **23 30 00.4 +1.5**
baz=266
VSLR Vesyoloye 86.19 313 *i*P **P** **23 29 58.6 -0.9**
VSLR pmax pmax
comp=Z,261nm,1.1s
MCK McKinley 86.24 26 P **P** **23 29 59.8 +0.4**
MCK IAmb IAmb 23 30 43.0
comp=Z,33nm,1.2s
MCK McKinley 86.24 26 P **P** **23 29 59.8 +0.4**
MCK pmax pmax
comp=Z,33nm,1.2s
MCK McKinley 86.24 26 P **P** **23 30 00.9 +1.5**
baz=266
NEA2 Nenana 86.24 25 P **P** **23 29 59.2 -0.1**
NEA2 IAmb IAmb 23 30 28.9
comp=Z,68nm,2.0s
NEA2 Nenana 86.24 25 P **P** **23 30 00.9 +1.6**
baz=266
RND Reindeer 86.25 27 P **P** **23 29 59.7 +0.2**
RND Reindeer 86.25 27 P **P** **23 29 59.7 +0.2**
RND pmax pmax
comp=Z,17nm,0.8s
E23K Chandalar 86.29 22 P **P** **23 29 58.6 -1.0**
E23K IAmb IAmb 23 30 06.9
comp=Z,39nm,0.9s
E23K Chandalar 86.29 22 P **P** **23 30 01.0 +1.3**
baz=265
KNK Knik Glacier 86.31 29 P **P** **23 30 00.2 +0.5**
KNK IAmb IAmb 23 30 06.2
comp=Z,40nm,0.8s
KNK Knik Glacier 86.31 29 P **P** **23 30 01.3 +1.6**
baz=266,SNR=7.9
PWL Port Wells 86.33 29 P **P** **23 29 59.5 -0.4**
PWL IAmb IAmb 23 30 25.6
comp=Z,61nm,1.0s
PWL Port Wells 86.33 29 P **P** **23 30 01.2 +1.4**
baz=267,SNR=6.0
WAT1 Susitna Watana 86.35 27 P **P** **23 30 01.4 +1.5**
baz=266
TOLK Toolik Lake Re 86.36 21 P **P** **23 30 00.8 +0.9**
TOLK Toolik Lake Re 86.36 21 P **P** **23 30 01.6 +1.7**
baz=265,SNR=10
SML Sawmill 86.39 28 P **P** **23 29 58.9 -1.2**
SML IAmb IAmb 23 30 06.5
comp=Z,38nm,0.9s
SML Sawmill 86.39 28 P **P** **23 30 01.3 +1.1**
baz=267,SNR=5.9
SOC Sochi 86.42 313 *e*P **P** **23 29 58.5 -2.1**
SOC *e*PPP PPP 23 35 13.2
SOC *e*S **SKSac** **23 40 21.6 -3.6**
SOC *e*SS **SS** **23 46 11.9 -3.2**
SOC *e*SSS SSS 23 49 46.0
SOC pmax pmax
comp=Z,51nm,0.8s
D24K Happy Valley 86.67 21 P **P** **23 30 01.9 +0.5**
D24K IAmb IAmb 23 30 08.9
comp=Z,29nm,0.7s
D24K Happy Valley 86.67 21 P **P** **23 30 03.4 +2.0**
baz=266
M23K Glacier View 86.68 28 P **P** **23 30 02.9 +1.4**
baz=267,SNR=5.8
WAT6 Susitna Watana 86.71 28 P **P** **23 30 02.7 +0.9**
baz=267,SNR=7.9
E24K Your Creek 86.72 22 P **P** **23 30 03.2 +1.6**
baz=266
C24K Franklin Bluff 86.75 20 P **P** **23 30 02.3 +0.6**
C24K IAmb IAmb 23 30 05.0
comp=Z,23nm,0.9s
C24K Franklin Bluff 86.75 20 P **P** **23 30 03.1 +1.4**
baz=266
CCB Clear Creek Bu 86.79 25 P **P** **23 30 01.3 -0.7**
H24K Noodor Dome 86.82 24 P **P** **23 30 03.0 +0.8**
H24K Noodor Dome 86.82 24 P **P** **23 30 03.4 +1.2**
baz=267
SCM Sheep Creek Mo 86.87 28 P **P** **23 30 01.8 -0.7**
SCM IAmb IAmb 23 30 56.6
comp=Z,73nm,1.3s
SCM Sheep Creek Mo 86.87 28 P **P** **23 30 01.8 -0.7**
SCM pmax pmax
comp=Z,73nm,1.3s
SCM Sheep Creek Mo 86.87 28 P **P** **23 30 03.4 +0.8**
baz=268
VORD Divnogorie 86.87 321 *e*P **P** **23 30 00.3 -2.4**
VORD pmax pmax
comp=Z,120nm,0.9s
DHY Denali Highway 86.90 27 P **P** **23 30 02.4 -0.4**
DHY Denali Highway 86.90 27 P **P** **23 30 03.4 +0.6**
baz=267
F24K Squaw Lake 86.91 23 P **P** **23 30 03.3 +0.7**
F24K Squaw Lake 86.91 23 P **P** **23 30 03.7 +1.1**
baz=267
GLI Glacier Island 86.94 29 P **P** **23 30 03.6 +0.8**
baz=268
VORR Voronezh 86.94 321 *e*P **P** **23 30 00.1 -2.9**
VORR pmax pmax
comp=Z,250nm,1.0s
VSR Storozhevoye 86.96 321 *e*P **P** **23 29 59.7 -3.4**
VSR pmax pmax
comp=Z,160nm,1.2s
G24K Hadweenzic Riv 87.03 23 P **P** **23 30 03.8 +0.7**
baz=267
KLMR Klimovskoe 87.03 331 *e*P **P** **23 30 00.9 -2.3**
KLMR pmax pmax
comp=Z,143nm,1.3s
KLMR MLR MLR
comp=Z,746nm,17.0s
LPSR Galich'ya Gora 87.13 322 *e*P **P** **23 30 01.6 -2.3**
LPSR pmax pmax
comp=Z,200nm,0.9s
HDA Harding Lake 87.14 26 P **P** **23 30 02.3 -1.4**
HDA Harding Lake 87.14 26 P **P** **23 30 03.9 +0.2**
baz=268
IL31 87.19 25 P **P** **23 30 02.0 -1.9**
ILAR Eielson Array 87.19 25 P **P** **23 30 03.6 -0.3**
comp=Z,9.8nm,1.1s,baz=246,slow=5.0,SNR=27
comp=Z,9.8nm,1.1s
ILAR Eielson Array 87.19 25 P **P** **23 30 02.0 -1.9**
ILAR Eielson Array 87.19 25 P **P** **23 30 02.0 -1.9**
Q23K Middleton Isla 87.27 31 P **P** **23 30 04.6 +0.3**
baz=268
M24K Tolsona, Glenn 87.42 28 P **P** **23 30 05.2 0.0**
M24K Tolsona, Glenn 87.42 28 P **P** **23 30 05.6 +0.4**
baz=268
KLU Klutina 87.53 29 P **P** **23 30 06.3 +0.6**
baz=269
D25K Kavik River 87.55 21 P **P** **23 30 05.4 -0.2**
D25K Kavik River 87.55 21 P **P** **23 30 06.0 +0.3**
baz=268
G25K Bearman Lake 87.58 23 P **P** **23 30 06.2 +0.5**
baz=268
DIV Divide 87.59 29 P **P** **23 30 07.1 +1.1**
DIV IAmb IAmb 23 30 09.8
comp=Z,32nm,0.9s
K24K Donnelly Dome 87.64 26 P **P** **23 30 05.4 -0.8**
K24K IAmb IAmb 23 30 09.3
comp=Z,22nm,0.8s
K24K Donnelly Dome 87.64 26 P **P** **23 30 06.3 +0.1**
baz=269,SNR=6.2
H25L Birch Creek 87.68 24 P **P** **23 30 06.6 +0.4**
baz=269
PAX Paxson 87.76 27 P **P** **23 30 07.1 +0.2**
PAX Paxson 87.76 27 P **P** **23 30 07.1 +0.2**
PAX pmax pmax
comp=Z,15nm,1.0s
PAX Paxson 87.76 27 P **P** **23 30 07.3 +0.5**
baz=269,SNR=6.2
F25K Christian Rive 87.77 23 P **P** **23 30 06.5 -0.3**
F25K Christian Rive 87.77 23 P **P** **23 30 07.3 +0.5**
baz=269
E25K Arctic Village 87.81 22 P **P** **23 30 07.4 +0.5**
E25K IAmb IAmb 23 30 13.2
comp=Z,28nm,1.0s
E25K Arctic Village 87.81 22 P **P** **23 30 07.6 +0.7**
baz=269,SNR=24
J25K Salcha River, 87.83 26 P **P** **23 30 07.2 +0.1**
J25K IAmb IAmb 23 33 08.7
comp=Z,41nm,1.8s
J25K Salcha River, 87.83 26 P **P** **23 30 07.8 +0.6**
baz=269
HARP HAARP 87.90 28 P **P** **23 30 07.9 +0.4**
baz=269
MOS Moscow 87.93 326 *e*P **P** **23 30 05.2 -2.5**
MOS *e* 23 33 33.2
MOS *e*S **S** **23 40 45.3 -3.6**
MOS pmax pmax
comp=Z,200nm,1.8s
MOS pmax pmax
comp=Z,81nm,1.1s
MOS MLR MLR
comp=Z,900nm,21.0s
RIDG Independent Ri 88.05 26 P **P** **23 30 07.4 -0.8**
RIDG IAmb IAmb 23 30 13.7
comp=Z,24nm,1.0s
RIDG Independent Ri 88.05 26 P **P** **23 30 08.7 +0.6**
baz=270,SNR=7.9
ANN Anapa 88.07 315 *e*P **P** **23 30 06.6 -2.0**
ANN *e**PP **pP** **23 30 16.2 -1.6**
ANN *e*S **SKSac** **23 40 31.7 -3.5**
ANN pmax pmax
comp=Z,76nm,1.1s
C26K Camden Bay 88.08 20 P **P** **23 30 09.5 +1.4**
baz=269
BMRM Bremner River 88.16 29 P **P** **23 30 09.2 +0.4**
baz=270
N25K Chitina, Valde 88.16 29 P **P** **23 30 09.0 +0.3**
N25K Chitina, Valde 88.16 29 P **P** **23 30 09.1 +0.3**
baz=270
BMAR Burnt Mountain 88.18 23 P **P** **23 30 08.6 -0.1**
KAIM Kayak Island 88.25 30 P **P** **23 30 09.3 +0.2**
baz=270

GAZ Gaziantep 88.31 307 P **P** 23 30 10.0 0.0
KIBK Kibwezi 88.33 268 P **P** 23 30 10.1 -0.5
KIBK Kibwezi 88.33 268 P **P** 23 30 11.0 +0.4
SNR=34
F26K Sheenjek River 88.35 22 P **P** 23 30 09.5 0.0
F26K Sheenjek River 88.35 22 P **P** 23 30 09.8 +0.3
baz=270
DOT Dot Lake 88.40 27 P **P** 23 30 09.7 -0.2
SCRK Sand Creek 88.43 26 P **P** 23 30 09.8 -0.3
SCRK Sand Creek 88.43 26 P **P** 23 30 10.4 +0.3
baz=270
G26K Porcupine Rive 88.49 23 P **P** 23 30 09.9 -0.2
G26K Porcupine Rive 88.49 23 P **P** 23 30 10.9 +0.8
baz=270
C27K Jago River 88.49 21 P **P** 23 30 10.2 +0.1
C27K IAmb IAmb 23 30 16.3
comp=Z,18nm,0.8s
C27K Jago River 88.49 21 P **P** 23 30 10.9 +0.8
baz=270
OBN Obninsk 88.54 325 LR LR 00 13 43.4
comp=Z,383nm,18.5s,baz=15,slow=38
OBN Obninsk 88.54 325 P **P** 23 30 10.1 -0.5
OBN Obninsk 88.54 325 ⇑P **P** 23 30 10.7 +0.2
OBN Obninsk 88.54 325 *de*P **P** 23 30 10.2 -0.3
OBN *e* 23 33 37.6
OBN *e*PPP PPP 23 35 34.2
OBN pmax pmax
comp=Z,103nm,1.5s
OBN MLR MLR
comp=Z,944nm,21.0s
OBN Obninsk 88.54 325 P **P** 23 30 09.7 -0.8
comp=Z,69nm,0.8s
GLB Gilahina Butte 88.54 29 P **P** 23 30 10.5 0.0
GLB IAmb IAmb 23 30 16.6
comp=Z,37nm,1.3s
MENT Mentasta 88.56 27 P **P** 23 30 10.8 +0.2
MENT Mentasta 88.56 27 P **P** 23 30 12.5 +1.9
J26L Joseph Creek 88.61 26 P **P** 23 30 10.5 -0.4
J26L Joseph Creek 88.61 26 P **P** 23 30 11.3 +0.5
baz=271
ASF Jabal al Asfar 88.65 302 LR LR 00 14 05.0
comp=Z,537nm,21.6s,baz=80,slow=38
VRDI Verde Repeater 88.72 29 P **P** 23 30 11.9 +0.4
VRDI IAmb IAmb 23 30 17.6
comp=Z,26nm,1.3s
L26K Log Cabin Wild 88.73 27 P **P** 23 30 11.3 -0.1
L26K Log Cabin Wild 88.73 27 P **P** 23 30 11.9 +0.5
baz=271
I26K Coal Creek Min 88.77 25 P **P** 23 30 12.5 +1.1
baz=271
KHAM Kharkiv 88.81 320 P **P** 23 30 11.8 -0.3
BGLC Bering Glacier 88.82 30 P **P** 23 30 12.5 +0.8
baz=271
TOKA Tokat 88.84 310 P **P** 23 30 12.6 +0.2
TOKA IAmb IAmb 23 30 22.9
comp=Z,22nm,0.8s
CRQE Cirque 88.90 29 P **P** 23 30 12.8 +0.4
baz=271
M26K Nabesna, AK 88.91 28 P **P** 23 30 12.4 +0.2
M26K Nabesna, AK 88.91 28 P **P** 23 30 12.8 +0.6
baz=271
MCARA McCarthy VSAT 88.92 29 P **P** 23 30 12.7 +0.5
baz=271
KMBO Kilima Mbogo 89.09 269 P **P** 23 30 14.6 +0.2
comp=Z,9.2nm,0.9s,baz=92,slow=5.3,SNR=33
KMBO LR LR 00 07 50.4
comp=Z,605nm,20.4s,baz=98,slow=34
comp=Z,9.2nm,0.9s
LVZ Lovozero 89.14 338 P **P** 23 30 14.2 +1.1
LVZ IAmb IAmb 23 30 19.6
comp=Z,28nm,1.1s
LVZ Lovozero 89.14 338 P **P** 23 30 14.3 +1.1
LVZ pmax pmax
comp=Z,28nm,1.1s
K27K Chicken 89.28 26 P **P** 23 30 14.3 +0.4
K27K IAmb IAmb 23 30 20.8
comp=Z,32nm,1.1s
K27K Chicken 89.28 26 P **P** 23 30 14.3 +0.4
baz=272
E27K Coleen River 89.30 22 P **P** 23 30 14.4 +0.5
baz=272,SNR=20
G27K Doyon Strip 89.34 23 P **P** 23 30 14.2 0.0
G27K Doyon Strip 89.34 23 P **P** 23 30 14.6 +0.4
baz=272
BNN Bunyan 89.36 309 P **P** 23 30 14.2 -0.8
BNN IAmb IAmb 23 30 19.6
comp=Z,31nm,1.1s
I27K Kandik River 89.41 25 P **P** 23 30 15.0 +0.5
I27K IAmb IAmb 23 30 21.0
comp=Z,19nm,0.8s
I27K Kandik River 89.41 25 P **P** 23 30 15.1 +0.6
baz=272
H27K Steamboat Moun 89.42 24 P **P** 23 30 14.5 0.0
H27K Steamboat Moun 89.42 24 P **P** 23 30 15.1 +0.5
baz=273
L27K Beaver Creek, 89.42 27 P **P** 23 30 15.4 +0.7
L27K Beaver Creek, 89.42 27 P **P** 23 30 15.0 +0.4
baz=272
M27K Edge Creek, AK 89.43 28 P **P** 23 30 14.9 0.0
M27K IAmb IAmb 23 31 45.2
comp=Z,38nm,1.6s
M27K Edge Creek, AK 89.43 28 P **P** 23 30 14.6 -0.3
baz=272
BCAR Beaver Creek A 89.44 27 P **P** 23 30 15.0 +0.2
D27M Malcolm River 89.48 21 P **P** 23 30 15.4 +0.6
D27M Malcolm River 89.48 21 P **P** 23 30 15.1 +0.3
baz=273
BARN Barnard Glacie 89.59 29 P **P** 23 30 15.7 +0.1
BARN IAmb IAmb 23 30 41.8
comp=Z,37nm,1.2s
APA Apatity 89.64 337 ⇓ *i*P **P** 23 30 19.8 +4.4
APA MLR MLR
comp=Z,1μm,28.6s
BALJ Balqa 89.72 302 P **P** 23 30 16.1 -0.6
CTG Chitna Glacier 89.75 29 P **P** 23 30 16.8 +0.5
baz=273
CTGM Chitina Glacie 89.75 29 P **P** 23 30 16.9 +0.5
CTGM IAmb IAmb 23 30 26.6
comp=Z,28nm,0.9s
GHAJ Ghor Haditha 89.81 301 P **P** 23 30 16.7 -0.3
MMAI Mount Meron Ar 89.89 303 P **P** 23 30 17.8 +0.2
comp=Z,31nm,1.0s,baz=90,slow=5.2,SNR=25
MMAI LR LR 00 14 42.3
comp=Z,359nm,21.9s,baz=88,slow=38
comp=Z,31nm,1.0s
BVCY Beaver Creek 89.90 28 P **P** 23 30 17.3 +0.4
baz=273
LOGN Logan Glacier 89.92 29 P **P** 23 30 16.6 -0.6
LOGN IAmb IAmb 23 31 04.5
comp=Z,34nm,1.2s
F28M Old Crow 89.98 22 P **P** 23 30 16.8 -0.4
F28M Old Crow 89.98 22 P **P** 23 30 17.9 +0.7
baz=274,SNR=11
E28M Babbage River 90.03 21 P **P** 23 30 17.3 -0.1
E28M Babbage River 90.03 21 P **P** 23 30 17.9 +0.5
baz=274,SNR=19
I28M Miner Creek 90.11 25 P **P** 23 30 18.2 +0.3
I28M IAmb IAmb 23 30 26.2
comp=Z,99nm,1.9s
I28M Miner Creek 90.11 25 P **P** 23 30 18.9 +1.0
baz=274,SNR=14
YUK3 Moose Creek 90.13 28 P **P** 23 30 18.8 +0.6
baz=274
D28M Stokes Point 90.26 21 P **P** 23 30 19.6 +1.3
baz=275
SYO Syowa Base 90.31 201 ⇑ *i*P **P** 23 30 19.3 +0.8
O28M Mount Upton 90.32 29 P **P** 23 30 19.6 +0.4
baz=274
EIL Elat 90.39 300 LR LR 00 15 16.3
comp=Z,242nm,20.7s,baz=24,slow=38
SIM Simferopol' 90.43 315 *e*P **P** 23 30 17.3 -2.4
SIM pmax pmax
comp=Z,35nm,0.8s
DAWY Dawson 90.45 26 P **P** 23 30 19.1 -0.4
DAWY Dawson 90.45 26 P **P** 23 30 20.8 +1.4
baz=274,SNR=7.6
YUK8 Steele Glacier 90.49 29 P **P** 23 30 20.7 +0.8
baz=274
BZK Bozkurt 90.65 312 P **P** 23 30 21.3 +0.6
E29M Blow River 90.66 22 P **P** 23 30 20.2 0.0
E29M IAmb IAmb 23 30 31.2
comp=Z,37nm,1.8s
E29M Blow River 90.66 22 P **P** 23 30 21.4 +1.2
baz=276
H29M Whitestone 90.69 24 P **P** 23 30 21.6 +1.1
baz=276

G29M Pine Creek 90.76 23 P **P** 23 30 21.4 +0.6
G29M IAmb IAmb 23 30 45.2
comp=Z,63nm,1.6s
G29M Pine Creek 90.76 23 P **P** 23 30 21.9 +1.1
baz=276
PNL Peninsula 90.80 30 P **P** 23 30 22.0 +0.9
baz=274
LODK Lodwar 90.85 273 P **P** 23 30 22.3 -0.1
KIRS Kirsehir-Merke 90.85 309 ⇑P **P** 23 30 22.0 +0.1
ILGA Ilgaz 90.91 311 P **P** 23 30 21.4 -0.9
ILGA IAmb IAmb 23 30 26.5
comp=Z,35nm,1.1s
M29M Somme Creek 91.01 28 P **P** 23 30 22.6 +0.5
M29M IAmb IAmb 23 30 48.3
comp=Z,67nm,1.9s
M29M Somme Creek 91.01 28 P **P** 23 30 23.1 +1.0
baz=275
YUK4 Talbot Arm 91.03 29 P **P** 23 30 23.3 +0.9
baz=275
BR104 Keskin Array S 91.04 310 P **P** 23 30 21.4 -1.4
comp=Z,108nmcomp=Z,14nm,1.0s
BR131 Keskin Array S 91.04 310 P **P** 23 30 21.2 -1.6
BR131 Keskin Array S 91.04 310 P **P** 23 30 21.8 -1.1
SNR=9.2
BR131 Keskin Array S 91.04 310 P **P** 23 30 21.2 -1.6
BR131 pmax pmax
comp=Z,14nm,1.0s
BRTR Keskin Array B 91.04 310 P **P** 23 30 21.7 -1.1
comp=Z,9.2nm,0.9s,baz=124,slow=3.8,SNR=15
BRTR PP **PP** 23 33 57.0 -2.4
comp=Z,2.3nm,1.0s,baz=90,slow=6.2,SNR=4.1
BRTR LR LR 00 19 08.0
comp=Z,129nm,18.8s,baz=90,slow=41
comp=Z,9.2nm,0.9s
BRTR Keskin Array B 91.04 310 P **P** 23 30 21.2 -1.6
BRTR Keskin Array B 91.04 310 P **P** 23 30 21.2 -1.6
BR106 Keskin Array S 91.05 310 P **P** 23 30 21.5 -1.4
comp=Z,111nmcomp=Z,15nm,0.9s
BR105 Keskin Array S 91.05 310 P **P** 23 30 21.5 -1.4
comp=Z,130nmcomp=Z,18nm,0.9s
L29M L29M 91.10 27 P **P** 23 30 22.8 +0.3
L29M IAmb IAmb 23 30 29.4
comp=Z,23nm,0.8s
L29M L29M 91.10 27 P **P** 23 30 23.4 +1.0
baz=276
O29M Mount Kennedy 91.16 30 P **P** 23 30 23.7 +0.8
baz=275
YUK6 Outpost Mounta 91.20 29 P **P** 23 30 24.0 +0.8
baz=275
K29M Barlow Dome 91.30 26 P **P** 23 30 23.7 +0.2
K29M Barlow Dome 91.30 26 P **P** 23 30 24.3 +0.9
baz=276
EPYK Eagle Plains 91.34 24 P **P** 23 30 23.2 -0.3
EPYK IAmb IAmb 23 30 25.8
comp=Z,28nm,1.2s
EPYK Eagle Plains 91.34 24 P **P** 23 30 23.7 +0.2
baz=277,SNR=5.7
G30M tAoh Zraii Nji 91.46 23 P **P** 23 30 24.2 +0.1
baz=278
CSS Mathiatis 91.53 305 P **P** 23 30 24.7 -0.3
QSPA South Pole Qui 91.53 180 P **P** 23 30 27.2 +2.7
comp=Z,11nm,0.8s,baz=325,slow=2.0,SNR=30
QSPA South Pole Qui 91.53 180 IAMs_20 IAMs_20 00 19 49.6
comp=Z,545nm,20.0s
QSPA South Pole Qui 91.53 180 IAmb IAmb 23 30 34.4
comp=Z,70nm,1.8s
F30M Barrier River 91.54 22 P **P** 23 30 25.0 +0.6
F30M IAmb IAmb 23 30 50.5
comp=Z,43nm,1.5s
F30M Barrier River 91.54 22 P **P** 23 30 25.4 +1.0
baz=278
I30M Mount Dempster 91.62 25 P **P** 23 30 25.9 +0.9
I30M Mount Dempster 91.62 25 P **P** 23 30 25.7 +0.8
baz=277
HYT Haines Junctio 91.63 29 P **P** 23 30 24.9 -0.1
HYT IAmb IAmb 23 30 51.3
comp=Z,63nm,1.8s
HYT Haines Junctio 91.63 29 P **P** 23 30 25.7 +0.7
baz=276
P29M Windy Craggy 91.64 30 P **P** 23 30 25.7 +0.7
baz=276
ANTO Ankara 91.68 310 P **P** 23 30 25.0 -0.7
ANTO IAmb IAmb 23 30 29.6
comp=Z,38nm,1.5s
ANTO Ankara 91.68 310 P **P** 23 30 25.0 -0.7
ANTO pmax pmax
comp=Z,38nm,1.5s
J30M Hart River 91.72 25 P **P** 23 30 26.1 +0.7
J30M Hart River 91.72 25 P **P** 23 30 25.9 +0.4
baz=277
N30M Aishikik Lake 91.76 29 P **P** 23 30 26.1 +0.5
baz=276
M30M Minto, Yukon 91.77 27 P **P** 23 30 26.3 +0.7
M30M Minto, Yukon 91.77 27 P **P** 23 30 26.5 +0.9
baz=277,SNR=6.2
P30M Million Dollar 91.98 30 P **P** 23 30 27.3 +0.7
baz=277
G31M Satah River 92.23 23 IAmb IAmb 23 30 50.4
comp=Z,35nm,1.4s
G31M Satah River 92.23 23 P **P** 23 30 27.6 +0.1
baz=279,SNR=6.3
INK Inuvik 92.27 21 P **P** 23 30 27.4 -0.3
INK IAmb IAmb 23 30 32.7
comp=Z,18nm,1.1s
INK Inuvik 92.27 21 P **P** 23 30 27.4 -0.3
INK pmax pmax
comp=Z,17nm,1.1s
INK Inuvik 92.27 21 P **P** 23 30 27.8 +0.1
baz=280,SNR=10
ARA0 ARCESS Array S 92.28 340 *e*P **P** 23 30 27.1 -0.6
ARCES ARCESS Array B 92.28 340 P **P** 23 30 26.6 -1.1
comp=Z,4.4nm,0.5s,baz=80,slow=5.3,SNR=28
ARCES PKKP **PKKPdf** 23 47 42.8 +0.2
comp=Z,0.9nm,0.5s,baz=247,slow=3.4,SNR=15
ARCES LR LR 00 15 50.7
comp=Z,470nm,21.9s,baz=88,slow=38
comp=Z,4.4nm,0.5s
ARCES ARCESS Array B 92.28 340 P **P** 23 30 27.0 -0.8
O30N Mendenhall 92.33 29 P **P** 23 30 27.1 -1.1
O30N IAmb IAmb 23 30 54.3
comp=Z,46nm,1.8s
O30N Mendenhall 92.33 29 P **P** 23 30 29.2 +1.0
baz=277
F31M Tsiigehtchic 92.34 22 P **P** 23 30 27.7 -0.4
F31M IAmb IAmb 23 30 33.0
comp=Z,17nm,0.9s
F31M Tsiigehtchic 92.34 22 P **P** 23 30 29.2 +1.2
baz=280,SNR=9.2
PLBC Pleasant Camp 92.36 30 P **P** 23 30 29.1 +0.8
baz=277
H31M Peel River 92.38 24 P **P** 23 30 29.1 +0.8
baz=279
N31M Braeburn, Yuko 92.38 28 P **P** 23 30 27.8 -0.6
N31M IAmb IAmb 23 31 02.8
comp=Z,38nm,1.2s
N31M Braeburn, Yuko 92.38 28 P **P** 23 30 29.4 +1.0
baz=278,SNR=6.3
SPA0 Spitsbergen Ar 92.46 349 *e*P **P** 23 30 27.8 -0.6
SPITS Spitsbergen Ar 92.46 349 P **P** 23 30 28.2 -0.3
comp=Z,3.2nm,0.5s,baz=92,slow=6.9,SNR=14
SPITS LR LR 00 17 30.1
comp=Z,233nm,19.9s,baz=60,slow=39
comp=Z,3.2nm,0.5s
SPITS Spitsbergen Ar 92.46 349 P **P** 23 30 27.6 -0.9
SPITS pmax pmax
comp=Z,63nm,1.3s
S31K Pelican 92.61 32 P **P** 23 30 30.6 +1.2
baz=277
HAMF Hammerfest 92.67 341 *e*P **P** 23 30 29.0 -0.4
MDUB Mudurnu 92.86 310 P **P** 23 30 31.4 +0.2
MDUB IAmb IAmb 23 30 36.9
comp=Z,43nm,1.2s
SKAG Skagway 92.88 30 P **P** 23 30 31.9 +1.3
baz=278
M31M Drury Creek, Y 92.93 28 P **P** 23 30 31.4 +0.5
M31M Drury Creek, Y 92.93 28 P **P** 23 30 31.9 +1.0
baz=279
WHY Whitehorse 92.93 29 P **P** 23 30 30.4 -0.7
WHY Whitehorse 92.93 29 P **P** 23 30 31.8 +0.8
baz=276
KBS Kingsbay 93.00 350 P **P** 23 30 31.3 +0.4
KBS IAmb IAmb 23 32 49.8
comp=Z,40nm,1.5s
KBS Kingsbay 93.00 350 P **P** 23 30 31.3 +0.4
KBS pmax pmax
comp=Z,40nm,1.5s
KBS Kingsbay 93.00 350 *i* P **P** 23 30 30.9 0.0

KTK1 Kautokeino 93.17 339 *e*P **P** 23 30 31.6 -0.2
SIT Sitka 93.22 33 P **P** 23 30 32.4 +0.2
baz=278
BESE Bessie Mountai 93.25 31 P **P** 23 30 33.9 +1.4
AK10 Malin Array Si 93.25 321 P **P** 23 30 32.5 -0.1
AK03 Malin Array Si 93.26 321 P **P** 23 30 32.4 -0.2
AKASG Malin Array Be 93.26 321 P **P** 23 30 31.8 -0.8
comp=Z,3.2nm,0.6s,baz=74,slow=4.1,SNR=14
AKASG PP **PP** 23 34 15.1 -1.3
comp=Z,1.6nm,0.8s,baz=74,slow=6.5,SNR=4.1
AKASG LR LR 00 16 09.4
comp=Z,911nm,21.9s,baz=75,slow=38
comp=Z,3.2nm,0.6s
AKASG Malin Array Be 93.26 321 P **P** 23 30 31.8 -0.8
AKASG IAmb IAmb 23 30 37.4
comp=Z,30nm,1.5s
AKASG Malin Array Be 93.26 321 *i* P **P** 23 30 31.7 -0.9
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 93.26 321 P **P** 23 30 31.4 -1.1
AKBB IAmb IAmb 23 30 49.6
comp=Z,26nm,1.1s
AKBB Malin Array Si 93.26 321 P **P** 23 30 31.5 -1.1
AKBB pmax pmax
comp=Z,26nm,1.2s
KIEV Kiev 93.27 321 P **P** 23 30 31.7 -0.9
KIEV IAmb IAmb 23 30 49.5
comp=Z,23nm,1.1s
KIEV Kiev 93.27 321 IAMs_20 IAMs_20 00 16 52.8
comp=Z,834nm,20.0s
KIEV Kiev 93.27 321 ⇓P **P** 23 30 33.0 +0.3
KIEV Kiev 93.27 321 ⇓P **P** 23 30 33.0 +0.3
KIEV Kiev 93.27 321 P **P** 23 30 32.2 -0.5
AK06 Malin Array Si 93.29 321 P **P** 23 30 32.3 -0.5
AK04 Malin Array Si 93.29 321 P **P** 23 30 32.1 -0.7
BAL3X Bal3x, Balta 93.31 318 P **P** 23 30 32.8 -0.1
AK21 Malin Array Si 93.36 321 P **P** 23 30 32.7 -0.4
AK19 Malin Array Si 93.39 321 P **P** 23 30 32.8 -0.4
BORA Eskisehir 93.47 310 IAmb IAmb 23 30 37.3
comp=Z,19nm,1.1s
FINES FINESS Array B 93.49 332 P **P** 23 30 32.5 -1.0
comp=Z,3.4nm,0.6s,baz=48,slow=4.9,SNR=17
FINES LR LR 00 15 37.4
comp=Z,541nm,21.1s,baz=74,slow=38
comp=Z,3.4nm,0.6s
S32K Killisnoo 93.56 32 P **P** 23 30 34.8 +1.0
baz=278
MNK Minsk 93.60 325 *i* P **P** 23 30 32.4 -1.7
MNK *i* 23 34 16.5
MNK *i* PPP PPP 23 36 21.4
MNK *i* S **SKSac** 23 41 04.2 -2.3
MNK *i* SS **SS** 23 47 58.3 0.0
MNK *i* SSS SSS 23 51 40.2
MNK pmax pmax
comp=Z,27nm,0.9s
MNK MLR MLR
comp=N,747nm,22.0s
MNK MLR MLR
comp=Z,926nm,20.0s
MNK MLR MLR
comp=E,406nm,19.0s
P32M Atlin 93.67 30 P **P** 23 30 34.8 +0.3
baz=279
N32M Quiet Lake 93.72 29 P **P** 23 30 35.7 +1.1
baz=280
MILM Milestii Mici 93.96 317 ⇓P **P** 23 30 33.7 -2.2
MILM Milestii Mici 93.96 317 ⇓P **P** 23 30 33.7 -2.2
P33M Teslin, Yukon 94.01 29 P **P** 23 30 36.6 +0.6
P33M IAmb IAmb 23 31 12.5
comp=Z,47nm,1.8s
P33M Teslin, Yukon 94.01 29 P **P** 23 30 36.1 +0.1
baz=280
JETT Jettan, Norway 94.02 340 *e*P **P** 23 30 35.3 -0.5
A36M Sachs Harbour 94.12 17 P **P** 23 30 37.6 +1.5
baz=288
SORM Soroca 94.12 318 ⇑P **P** 23 30 36.8 +0.1
SORM Soroca 94.12 318 ⇑P **P** 23 30 36.8 +0.1
NACGM Naroch 94.17 325 LQ LQ 00 06 13.1
ELL Elmali 94.18 307 P **P** 23 30 36.0 -1.4
ELL IAmb IAmb 23 30 40.1
comp=Z,38nm,1.4s
ELL Elmali 94.18 307 P **P** 23 30 36.0 -1.4
ELL pmax pmax
comp=Z,38nm,1.4s
LUBAR Lubar, Ukraine 94.29 320 P **P** 23 30 36.2 -1.2
TRO Tromso 94.49 340 *e*P **P** 23 30 34.6 -3.2
U33K Whale Pass 94.56 34 P **P** 23 30 38.8 +0.3
baz=280
VLDR Vladesti 94.59 316 ⇓P **P** 23 30 42.3 +3.5
CFR Carcaliu 94.63 315 ⇑P **P** 23 30 36.3 -2.7
CFR Carcaliu 94.63 315 ⇑P **P** 23 30 36.3 -2.7
CRAG Craig 94.67 34 P **P** 23 30 39.5 +0.5
baz=280
WRAK Wrangell Islan 94.94 33 P **P** 23 30 40.7 +0.6
baz=280
MANT Manisa 95.08 309 P **P** 23 30 40.6 -0.9
MANT IAmb IAmb 23 30 45.1
comp=Z,23nm,1.3s
R33M Jennings River 95.09 30 P **P** 23 30 41.1 +0.1
R33M IAmb IAmb 23 31 28.4
comp=Z,27nm,1.4s
R33M Jennings River 95.09 30 P **P** 23 30 41.9 +0.8
baz=282
NOR Nord 95.15 355 *i* P **P** 23 30 40.1 -0.7
RNPP5 Staryi Chortor 95.28 322 P **P** 23 30 41.5 -0.4
S34M Telegraph Cree 95.30 32 P **P** 23 30 42.5 +0.7
baz=282
KMPD K-Podol'skiy 95.32 319 P **P** 23 30 40.6 -1.5
C36M Paulatuk 95.33 20 IAmb IAmb 23 30 46.8
comp=Z,25nm,0.9s
C36M Paulatuk 95.33 20 P **P** 23 30 42.3 +0.6
baz=289,SNR=12
TESR Tescani 95.49 317 ⇓P **P** 23 30 42.7 -0.3
VRI Vrincioaia 95.52 316 ⇓P **P** 23 30 44.2 +1.0
VRI Vrincioaia 95.52 316 ⇓P **P** 23 30 44.2 +1.0
V35K Ketchikan 95.54 34 P **P** 23 30 43.2 +0.3
baz=281
PLOR Plostina 95.58 316 ⇑P **P** 23 30 45.5 +2.0
PLOR Plostina 95.58 316 ⇑P **P** 23 30 45.5 +2.0
MBAR Mbarara 95.58 270 LR LR 00 12 01.8
comp=Z,332nm,19.8s,baz=72,slow=34
MBAR Mbarara 95.58 270 P **P** 23 30 43.3 -1.0
MBAR Mbarara 95.58 270 P **P** 23 30 43.3 -1.0
MBAR pmax pmax
comp=Z,6.0nm,0.8s
PABE Paberze 95.66 326 P **P** 23 30 43.1 -0.4
PABE IAMs_20 IAMs_20 00 17 12.7
comp=Z,733nm,18.0s
ONER Baraj Valea Uz 95.69 317 ⇓P **P** 23 30 44.2 +0.3
DLBC Dease Lake 95.77 31 P **P** 23 30 44.6 +0.5
baz=282
NEHR Nehoiu 95.89 316 ⇑P **P** 23 30 48.2 +3.3
COVR Voineasa-Covas 95.89 316 ⇑P **P** 23 30 44.7 -0.2
T35M Bob Quinn 95.96 32 P **P** 23 30 45.7 +0.8
baz=282
LOZB Loznitsa 95.96 314 ⇓P **P** 23 30 49.2 +4.0
TURR Turia 95.99 316 ⇓P **P** 23 30 46.6 +1.3
WTLY Watson Lake, Y 96.00 29 P **P** 23 30 45.4 +0.4
WTLY IAmb IAmb 23 31 19.9
comp=Z,43nm,1.2s
WTLY Watson Lake, Y 96.00 29 P **P** 23 30 45.8 +0.7
baz=284
MLR Muntele Rosu 96.12 316 LR LR 00 18 42.9
comp=Z,549nm,22.0s,baz=78,slow=38
MLR Muntele Rosu 96.12 316 IAmb IAmb 23 30 50.3
comp=Z,44nm,1.4s
MLR Muntele Rosu 96.12 316 ⇑P **P** 23 30 45.5 -0.5
BURAR Bucovina Array 96.29 318 P **P** 23 30 46.6 -0.1
BURAR Bucovina Array 96.29 318 ⇑P **P** 23 30 47.4 +0.6
BURAR Bucovina Array 96.29 318 ⇑P **P** 23 30 47.4 +0.6
STEI Steigen 96.31 339 *e*P **P** 23 30 44.0 -2.1
SUW Suwalki 96.40 325 *e*P **P** 23 30 45.8 -1.2
SUW Suwalki 96.40 325 P **P** 23 30 46.2 -0.7
SUW Suwalki 96.40 325 P **P** 23 30 46.2 -0.7
DOPR Dopca 96.43 316 ⇓P **P** 23 30 48.7 +1.4
FAUS Fauske 96.48 339 *e*P **P** 23 30 45.6 -1.3
EZN Ezine 96.64 310 ⇓P **P** 23 30 45.9 -2.4
EZN Ezine 96.64 310 ⇓P **P** 23 30 45.9 -2.4
VOIR 96.75 316 ⇑P **P** 23 30 48.8 -0.1
VOIR 96.75 316 ⇑P **P** 23 30 48.8 -0.1
COPA Copaceanca 96.84 315 ⇓P **P** 23 30 53.3 +4.2
ARCR ARCALIA 96.95 318 ⇓P **P** 23 30 51.4 +1.8
RDO Rodhopi 97.05 312 P **P** 23 30 49.0 -1.1
RDO IAmb IAmb 23 30 55.5

comp=Z,13nm,1.0s
ARR Arges 97.05 316 ⇓P P 23 30 49.8 -0.4
RAUS Rausandaksla 97.28 338 eP P 23 30 50.6 0.0
PLVB Pleven 97.38 314 ⇓P Pdif 23 30 52.6 +0.9
LIRD Liard River Hi 97.50 29 P Pdif 23 30 52.1 +0.3
baz=286
CJR Cluj-Napoca 97.53 317 ⇓P Pdif 23 30 57.6 +5.2
CJR Cluj-Napoca 97.53 317 ⇓P Pdif 23 30 57.6 +5.2
KWP Kalwaria Pacla 97.56 320 eP P 23 30 51.6 -0.7
LOT Lotru 97.64 316 ⇑P P 23 30 53.3 +0.4
LEIR Leirfjorden 97.75 336 eP P 23 30 50.4 -2.3
MARR Marisel-Cluj 97.86 317 ⇑P Pdif 23 30 54.7 +0.8
MATP Matopo 97.88 250 LR LR 00 11 45.1
comp=Z,475nm,21.6s,baz=84,slow=33
MESR Meseseni 97.89 318 ⇓P Pdif 23 30 59.5 +5.6
TOAD Toad River Com 98.09 30 P Pdif 23 30 55.0 +0.4
baz=287
DRGR 98.11 318 ⇑P P 23 30 55.3 +0.4
DRGR 98.11 318 ⇑P P 23 30 55.3 +0.4
DEV Deva 98.16 317 ⇑P Pdif 23 30 55.9 +0.8
DEV Deva 98.16 317 ⇑P Pdif 23 30 55.9 +0.8
KOTAN Kotaneelee Air 98.28 28 P Pdif 23 30 55.9 +0.6
baz=288
GZR Gura Zlata 98.33 316 ⇓P Pdif 23 30 56.9 +0.9
GZR Gura Zlata 98.33 316 ⇓P Pdif 23 30 56.9 +0.9
STHS Stebnicka Huta 98.54 320 i P Pdif 23 31 01.1 +4.3
STHS Stebnicka Huta 98.54 320 ePDIFF Pdif 23 31 01.1 +4.3
HERR Herculane 98.68 316 ⇓P P 23 30 57.3 -0.2
SURR Surduc 98.72 317 ⇑P P 23 30 48.6 -9.0
NSS Namsos 98.80 337 eP P 23 30 54.9 -2.6
SIRR Siria 98.93 317 ⇓P P 23 30 58.5 0.0
BZS Buzias 99.09 317 ⇓P Pdif 23 30 58.9 -0.4
BZS Buzias 99.09 317 ⇓P Pdif 23 30 58.9 -0.4
MDVR Moldovita 99.19 316 ⇑P Pdif 23 31 00.2 +0.3
VAY Valandovo 99.23 312 i P Pdif 23 30 58.7 -1.3
OJC Ojcow 99.27 321 P Pdif 23 30 58.1 -1.8
OJC Ojcow 99.27 321 P Pdif 23 30 58.1 -1.8
DAG Danmarks Havn 99.28 352 i P Pdif 23 30 58.0 -1.4
NVL N'lazarevskaya 99.42 198 eP Pdif 23 31 04.5 +4.4
NVL e 23 35 08.9
NVL ePPP PPP 23 30 16.9
NVL eSS SS 23 49 26.6 +6.9
NVL pmax pmax
comp=Z,7.0nm,0.7s
NVL MLR MLR
comp=Z,133nm,20.0s
BOVS Bovan 99.42 315 ⇑P Pdif 23 31 00.9 +0.1
HFS Hagfors 99.68 332 P Pdif 23 31 00.8 -0.8
comp=Z,14nm,1.1s,baz=73,slow=5.1,SNR=7.6
HFS LR LR 00 19 39.9
comp=Z,871nm,21.1s,baz=68,slow=38
comp=Z,14nm,1.1s
LANS Liptovska Anna 99.73 320 i P Pdif 23 31 05.4 +3.3
LANS Liptovska Anna 99.73 320 ePDIFF Pdif 23 31 05.4 +3.3
PSZ Piszkesteto 99.75 319 Pdif Pdif 23 31 01.5 -0.7
PSZ IAmb IAmb 23 31 14.0
comp=Z,20nm,1.2s
PSZ IAMs_20 IAMs_20 00 17 57.7
comp=Z,703nm,22.0s
PSZ Piszkesteto 99.75 319 ⇓P Pdif 23 31 03.5 +1.3
PSZ Piszkesteto 99.75 319 ⇓P Pdif 23 31 03.5 +1.3
NB2 NORSAR Subarra100.48 333 P Pdif 23 31 03.5 -1.7
comp=Z,12nm,1.2s,baz=68,slow=4.6
NB2 PKKP PKKPbc 23 47 22.1 -0.9
comp=Z,0.5nm,0.6s,baz=232,slow=2.3
NOA NORSAR Array B100.48 333 P Pdif 23 31 04.5 -0.7
comp=Z,2.8nm,0.9s,baz=69,slow=4.5,SNR=7.8
NOA PKKPbc PKKPbc 23 47 21.8 -1.2
comp=Z,0.9nm,0.8s,baz=68,slow=2.6,SNR=5.0
STEB Steborice 100.60 321 ePDIFF Pdif 23 31 10.4 +4.5
MAUC Maruska 100.72 321 ePDIFF Pdif 23 31 10.7 +4.2
MORC Moravsky Berou 100.79 321 Pdif Pdif 23 31 06.3 -0.5
MORC Moravsky Berou 100.79 321 ePDIFF Pdif 23 31 08.4 +1.6
MORC Moravsky Berou 100.79 321 P Pdif 23 31 06.3 -0.5
JAVC Velka Javorina 100.95 320 ePDIFF Pdif 23 31 09.6 +2.0
MORH Mrgy, Hungar 100.98 318 ⇑P Pdif 23 31 08.0 +0.4
NEEM North Greenlan 101.02 359 i P Pdif 23 31 08.3 +0.7
DPC Dobruska-Polom 101.39 322 eP Pdif 23 31 13.5 +4.1
DPC Dobruska-Polom 101.39 322 ePDIFF Pdif 23 31 13.5 +4.1
PDG Podgorica 101.43 314 IAMs_20 IAMs_20 00 25 00.8
comp=Z,371nm,21.0s
TROLL Troll, Antarti 101.49 195 ⇑P Pdif 23 31 12.8 +3.3
comp=Z,80nm,0.7s
VRAC Vranov 101.51 321 ⇓P Pdif 23 31 13.8 +3.8
VRAC Vranov 101.51 321 ePDIFF Pdif 23 31 11.8 +1.8
VRAC Vranov 101.51 321 ⇓P Pdif 23 31 13.8 +3.8
DBG Daneborg 101.54 351 i P Pdif 23 31 08.7 -0.9
YKA Yellowknife Ar 101.59 24 P Pdif 23 31 11.3 +1.3
comp=Z,2.9nm,1.0s,baz=303,slow=5.2,SNR=5.1
KRUC Moravsky 101.71 321 ePDIFF Pdif 23 31 12.6 +1.8
ZVC Zvikov 102.97 322 ePDIFF Pdif 23 31 21.7 +5.2
HSKC Hora Svate Kat 103.06 323 ePDIFF Pdif 23 31 24.8 +7.9
SNAA Sanae 103.07 195 ⇑P Pdif 23 31 17.5 +1.0
comp=Z,25nm,0.6s
SNAA Sanae 103.07 195 Pdiff Pdif 23 31 18.3 +1.8
comp=Z,1.4nm,0.7s,baz=160,slow=7.5,SNR=13
SNAA PKKPbc PKKPbc 23 47 12.4 -3.3
comp=Z,1.0nm,1.0s,baz=281,slow=7.3,SNR=7.4
CKRC Cesky Krumlov 103.09 321 eP Pdif 23 31 24.0 +7.0
CKRC Cesky Krumlov 103.09 321 ePDIFF Pdif 23 31 24.0 +7.0
KHC Kasperske Hory 103.45 321 eP Pdif 23 31 25.3 +6.7
KHC Kasperske Hory 103.45 321 ePDIFF Pdif 23 31 25.3 +6.7
GERES GERESS Array B 103.47 321 Pdiff Pdif 23 31 21.4 +2.6
comp=Z,3.4nm,1.0s,baz=69,slow=7.3,SNR=14
GERES PP PP 23 35 34.5 -0.1
comp=Z,1.0nm,0.9s,baz=58,slow=9.3,SNR=3.8
VNA2 Neumayer--Watz 104.68 194 ⇑P Pdif 23 31 26.2 +2.6
comp=Z,2.6nm,0.6s,baz=324,slow=39
NVAR Mina Array Bea 106.82 48 Pdiff Pdif 23 31 44.9 +2.8
comp=Z,0.4nm,0.6s,baz=299,slow=4.2,SNR=2.5
NVAR PP PP 23 36 15.6 +2.5
comp=Z,0.7nm,0.7s,baz=278,slow=10,SNR=4.2
NVAR PKKPbc PKKPbc 23 46 57.0 -0.9
comp=Z,0.8nm,1.0s,baz=110,slow=0.9,SNR=4.7
NVAR PKKP PKKPab 23 47 11.5 +1.1
comp=Z,1.1nm,0.7s,baz=95,slow=3.9,SNR=7.3
ELK Elko 110.10 45 PKiKP PKiKP 23 35 51.4 +1.1
comp=Z,0.7nm,0.4s,baz=252,slow=2.5,SNR=4.8
PDAR Pinedale Array 113.21 42 PKiKP PKiKP 23 35 57.3 +1.2
comp=Z,0.5nm,0.5s,baz=164,slow=2.6,SNR=4.0
PDAR PKKPbc PKKPbc 23 46 41.8 -1.3
comp=Z,0.6nm,0.5s,baz=108,slow=6.2,SNR=6.8
ESDC Sonseca Array 118.75 318 PP PP 23 37 25.3 +0.8
comp=Z,3.6nm,1.0s,baz=73,slow=5.4,SNR=6.3
ESDC PKKPbc PKKPbc 23 46 23.3 -0.1
comp=Z,1.2nm,0.9s,baz=239,slow=3.5,SNR=4.4
ANMO Albuquerque 118.75 48 PKP PKiKP 23 36 07.9 +0.9
comp=Z,6.8nm,1.0s,baz=310,slow=2.5,SNR=8.3
ECSD EROS Data Cent 120.75 35 PKPdf 23 36 10.2 -0.1
SCHQ Schefferville 122.71 9 PKP PKiKP 23 36 14.6 +0.6
comp=Z,4.7nm,0.5s,baz=250,slow=7.0,SNR=9.0
TORD Torodi Ar. Bea 123.15 287 PKP PKiKP 23 36 16.4 +0.5
comp=Z,13nm,1.0s,baz=30,slow=4.9,SNR=8.1
TXAR Lajitas Array 123.21 53 PKP PKiKP 23 36 15.9 +0.2
comp=Z,3.1nm,0.8s,baz=235,slow=1.2,SNR=26
TXAR PKKPbc PKKPab 23 46 05.9 -0.4
comp=Z,1.9nm,1.1s,baz=133,slow=7.0,SNR=7.8
TXAR Lajitas Array 123.21 53 PKiKP PKiKP 23 36 16.0 +0.2
OZNA Ozona 124.53 50 PKPdf PKPdf 23 36 17.5 -0.5
JFWS Jewell Farm 124.82 32 PKPdf 23 36 18.2 +0.1
JFWS Jewell Farm 124.82 32 PKiKP PKPdf 23 36 18.2 +0.1
OK051 E0350 and S346 124.83 42 PKPdf PKPdf 23 36 18.5 +0.1
ABTX Abilene, Hawle 124.86 48 PKPdf PKiKP 23 36 19.2 +0.3
QUOK Quay 125.10 42 PKPdf PKPdf 23 36 17.8 -1.1
P38A Dawn 125.10 37 PKPdf PKPdf 23 36 18.6 -0.2
FNO Franklin 125.12 44 PKPdf PKPdf 23 36 18.9 -0.1
OK052 Battle Ridge R 125.13 43 PKPdf PKPdf 23 36 18.8 -0.1
WTFS Witchita Falls 125.15 46 PKPdf PKPdf 23 36 19.2 +0.2
DEOK Depew 125.42 43 PKPdf PKPdf 23 36 19.9 +0.4
DRIO Del Rio 125.59 52 PKPdf PKPdf 23 36 19.4 -0.6
PLPT Palo Pinto 125.74 47 PKPdf PKPdf 23 36 19.8 -0.4
JCT Junction City 125.75 50 PKPdf PKPdf 23 36 20.4 +0.1
JCT Junction City 125.75 50 PKiKP PKPdf 23 36 20.4 +0.1
L42A Oliver, Polo 125.75 33 PKPdf PKPdf 23 36 19.6 -0.4
BRDY Brady 125.98 49 PKPdf PKPdf 23 36 20.9 +0.2
P40A Paris 126.05 36 PKPdf PKiKP 23 36 21.2 +0.2
ACRG Accra 126.10 278 PKPdf PKPdf 23 36 19.4 -2.0
RLO Rose Lookout 126.23 41 PKPdf PKPdf 23 36 20.2 -0.8
Z35A Perchaven, San 126.24 46 PKPdf PKiKP 23 36 22.3 +0.7
U38A Gravette 126.49 41 PKPdf PKPdf 23 36 20.7 -0.8
WHTX Lake Whitney, 126.78 47 PKPdf PKPdf 23 36 21.1 -1.1
HHAR Hobbs 126.87 41 PKPdf PKPdf 23 36 22.1 -0.2
M44A Midewin, Midew 127.06 32 PKPdf PKPdf 23 36 22.1 -0.4
MGMO Mountain Grove 127.41 39 PKPdf PKPdf 23 36 23.0 -0.3
P43A Skaggs, Pawnee 127.45 35 PKPdf PKiKP 23 36 23.8 0.0
CCM Cathedral Cave 127.48 37 PKPdf PKPdf 23 36 23.4 +0.1
CCM Cathedral Cave 127.48 37 PKIKP PKPdf 23 36 23.4 +0.1
L46A Eue Claire 127.51 30 PKPdf PKPdf 23 36 21.3 -2.0
I49A Point Hope 127.69 26 PKPdf PKiKP 23 36 24.2 +0.1
DBIC Dimbokro 130.57 280 PKP PKPdf 23 36 30.5 +0.7
comp=Z,22nm,1.1s,baz=60,slow=2.2,SNR=7.6
DBIC SKPbc SKPab 23 39 52.8 +1.2
comp=Z,8.4nm,0.9s,baz=130,slow=6.3,SNR=5.7
Q52A Bidwell 131.83 30 PKPdf 23 36 30.4 -1.2
TKL Tuckaleechee C 133.49 34 PKP PKiKP 23 36 36.4 +0.3
comp=Z,10nm,0.6s,baz=148,slow=4.6,SNR=17
TKL SKPbc SKPbc 23 40 01.4 0.0
comp=Z,7.2nm,1.0s,baz=281,slow=6.6,SNR=5.1
LL01 San Ignacio de 136.07 160 IAMs_20 IAMs_20 00 26 29.6
comp=Z,318nm,20.0s
PLCA Paso Flores 138.17 161 PKhKP PKPpre 23 36 34.2
comp=Z,3.5nm,0.9s,baz=188,slow=5.2,SNR=7.7
PLCA PKP PKiKP 23 36 45.0 -0.5
comp=Z,12nm,0.9s,baz=255,slow=1.0,SNR=15
PLCA SKPbc SKPbc 23 40 16.4 +0.6
comp=Z,3.3nm,0.9s,baz=168,slow=2.6,SNR=3.5
PLCA Paso Flores 138.17 161 PKPpre 23 36 34.7
PLCA PKPdf PKPdf 23 36 43.5 0.0
PLCA Paso Flores 138.17 161 eP PKPdf 23 36 43.0 -0.5
TRQA Tornquist 142.94 169 PKPdf 23 36 48.4 -3.8
TRQA Tornquist 142.94 169 PKIKP PKPdf 23 36 48.4 -3.8
EDS3 Malargue 143.02 159 eP PKPdf 23 36 49.7 -2.8
BO01 Tunca 143.57 155 PKPbc 23 36 51.2 +0.7
RFA San Rafael 144.25 159 eP PKPdf 23 36 54.1 -0.5
MT13 San Alfonso 144.46 156 eP PKPbc 23 36 53.6 +0.1
VA01 Torpederas 144.49 154 IAMs_20 IAMs_20 00 26 40.0
comp=Z,421nm,21.0s
ROC1 El Roble 144.81 154 eP PKPdf 23 36 56.9 +1.0
MT04 Ro Olivares 144.81 156 eP PKPdf 23 36 57.1 +1.3
MT08 Bocatoma Ro 144.83 156 eP PKPdf 23 36 55.9 +0.1
VA03 San Esteban 145.19 155 eP PKPdf 23 36 56.5 +0.2
AVIZ Vizcacheras 145.39 158 eP PKPdf 23 36 58.2 +1.6
AAGR Agrelo 145.62 157 eP PKPab 23 36 58.0 +0.4
ARCO CERRO ARCO 145.79 157 eP PKPab 23 36 58.9 +0.7
ASAL Salagasta 146.05 157 i P PKiKP 23 37 01.0 -0.9
CO02 Combarbal 146.32 153 i P PKPab 23 36 60.0 -0.3
RTLS Leoncito 146.56 155 i P PKPab 23 37 01.7 +0.3
CO03 El Pedregal 146.77 153 i P PKPbc 23 37 01.2 +0.4
ACAN Cantantal 146.96 159 i P PKPbc 23 37 01.4 +0.2
ZON Zonda 147.03 156 eP PKPbc 23 37 02.1 +0.7
CFA Coronel Fontan 147.16 157 PKPbc PKPbc 23 37 01.4 -0.4
comp=Z,40nm,0.6s,baz=225,slow=3.5,SNR=104
CFA Coronel Fontan 147.16 157 i P PKPbc 23 37 01.7 -0.1
GO04 Tololo Observa 147.28 152 eP PKiKP 23 37 06.2 +1.4
MRA San Martin 147.33 161 i P PKPab 23 37 03.9 -0.2
HDC Heredia 147.59 69 eP PKPdf 23 36 58.5 -2.4
ACCO Cerro Coronel 147.71 155 eP PKPdf 23 37 01.7 +0.7
AROD Rodeo 147.89 154 i P PKPbc 23 37 05.0 +0.8
ACDV Cuesta del Vie 148.04 154 eP PKiKP 23 37 06.5 +0.3
LCO Las Campanas 148.29 151 PKPbc 23 37 04.2 -1.0
LCO Las Campanas 148.29 151 PKP2 PKPbc 23 37 04.2 -1.0
TCA Tanti 148.69 162 i P PKiKP 23 37 07.4 -0.1
VCA Vinchina 149.68 154 eP PKiKP 23 37 09.9 +0.2
VCA i P pPKPdf 23 37 10.9 -2.5
GO03 Copiapo 149.69 150 PKiKP 23 37 09.9 +0.3
PSAL Palomas, Salto 150.46 173 eP PKPdf 23 37 04.4 -0.5
AC01 Pan de Azucar 150.68 148 PKPbc 23 37 10.5 -0.4
NNA Nana 154.84 115 PKP PKPdf 23 37 13.4 +1.6
comp=Z,8.3nm,0.4s,baz=316,slow=1.0,SNR=4.6
NNA PKPab PKPab 23 37 37.3 +1.6
comp=Z,13nm,0.8s,baz=238,slow=11,SNR=4.1
CPUP Villa Florida 155.18 172 PKP PKPdf 23 37 13.2 +1.3
comp=Z,1.8nm,1.0s,baz=72,slow=2.1,SNR=5.5
CPUP PKPab PKPab 23 37 38.2 +1.8
comp=Z,5.7nm,0.9s,baz=5.6,slow=3.8,SNR=7.2
OTAV Otavalo 155.18 86 eP PKPdf 23 37 11.7 -1.1
ROSC El Rosal 158.42 73 PKP PKPdf 23 37 18.0 +1.1
comp=Z,8.4nm,0.6s,baz=232,slow=4.3,SNR=5.9
ROSC PKPab PKPab 23 37 53.5 +2.0
comp=Z,21nm,0.8s,baz=107,slow=8.4,SNR=5.5
ROSC El Rosal 158.42 73 PKPab 23 37 54.8 +3.3
LPAZ La Paz 159.63 137 PKP PKPdf 23 37 20.6 +2.1
comp=Z,6.2nm,0.7s,baz=229,slow=2.8,SNR=19
LPAZ PKPab PKPab 23 37 58.6 +1.8
comp=Z,4.8nm,0.6s,baz=218,slow=1.3,SNR=4.0
LPAZ La Paz 159.63 137 eP PKPdf 23 37 16.6 -1.9
SDV Santo Domingo 160.16 58 eP PKPdf 23 37 16.2 -2.5
SIV San Ignacio 163.97 153 PKP PKPdf 23 37 23.7 +1.4
comp=Z,4.4nm,0.7s,baz=169,slow=1.2,SNR=26
SIV PKPab PKPab 23 38 16.5 +1.5
comp=Z,14nm,0.8s,baz=220,slow=3.9,SNR=19
BDFB Brasilia 164.98 202 PKP PKPdf 23 37 24.1 +0.9
comp=Z,1.8nm,0.5s,baz=274,slow=5.5,SNR=3.2
BDFB PKPab PKPab 23 38 19.9 +0.5
comp=Z,14nm,1.1s,baz=144,slow=7.8,SNR=4.8
PTLB Pontes e Lacer 165.24 159 eP PKPdf 23 37 22.9 -0.5
VILB Vilhena 167.02 151 eP PKPdf 23 37 25.6 +0.8
TEFE Tefe 168.91 100 eP PKPdf 23 37 24.8 -1.4
BOAV Boa Vista 172.10 60 eP PKPdf 23 37 28.1 +0.1
MDP Montagnes des 173.25 351 PKP PKPdf 23 37 28.8 +0.5
comp=Z,8.0nm,1.1s,baz=190,slow=0.6,SNR=4.6
MDP PKPab PKPab 23 38 56.3 +0.5
comp=Z,9.5nm,1.0s,baz=9.0,slow=6.6,SNR=4.6
ITTB Itaituba 176.59 143 eP PKPdf 23 37 27.2 -2.2

*IDC **14** 23:23:35.6±2.2, 1°.59N×126°.02E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=258.4km s-min=23.6km az=66.0*
*NEIC **14** 23:23:39.6±0.9, 1°.7N±0°.1×126°.2E±0°.2, h28km±3km, mb4.4/15, Error ellipse: s-maj=28.9km s-min=13.7km az=54.0*
ISC 14 23:23:40.1±0.9, 1°.7N±0°.1×126°.2E±0°.2, h35km, n21, σ0:99/21, mb4.1/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.46	127	Pn	Pn	23 24 03.3	-0.7
FITZ	Fitzroy Crossi	19.64	182	P	P	23 28 05.3	-0.5
WB0	Warramunga Arr	22.76	160	P	P	23 28 39.0	-0.5
NACB	Ninganchiao	22.82	349	P	P	23 28 39.5	-0.6
YOJ	Yonaguni jima	22.88	353	P	P	23 28 40.2	-0.5
WRAB	Tennant Creek	22.90	160		P	23 28 40.6	-0.4
WRAB				IAmb	IAmb	23 28 54.4	
comp=Z,12nm,0.7s							
WRA	Warramunga Arr	22.90	160	P	P	23 28 40.7	-0.3
comp=Z,2.4nm,0.5s,baz=338,slow=10,SNR=2.1							
comp=Z,2.4nm,0.5s							
WB2	Warramunga Arr	22.91	160	P	P	23 28 40.9	-0.2
WB2				IAmb	IAmb	23 28 51.7	
comp=Z,4.9nm,0.7s							
WR8	Warramunga Arr	22.97	160	P	P	23 28 42.0	+0.3
WR8				IAmb	IAmb	23 28 51.1	
comp=Z,4.2nm,0.7s							
WR0	Warramunga Arr	22.99	160	P	P	23 28 44.2	+2.3
WR0				IAmb	IAmb	23 28 47.0	
comp=Z,6.2nm,0.6s							
YHNB	Yeheng	23.35	349	P	P	23 28 43.7	-1.8
YHNB				IAmb	IAmb	23 28 47.3	
comp=Z,6.7nm,0.4s							
ASAR	Alice Springs	26.27	164	P	P	23 29 12.9	+0.7
comp=Z,1.7nm,1.0s,baz=335,slow=8.4,SNR=1.0							
comp=Z,1.7nm,1.0s							
INCN	Inchon	35.65	1	P	P	23 30 34.4	-0.4
MAJO	Matsushiro	36.45	16	P	P	23 30 41.6	-0.1
MAJO				IAmb	IAmb	23 30 44.5	
comp=Z,10nm,0.5s							
MJB9	Matsu-Tunnel	36.45	16	P	P	23 30 42.5	+0.8
MJB9				IAmb	IAmb	23 30 45.5	
comp=Z,11nm,0.4s							
MKAR	Makanchi Array	58.96	326	P	P	23 33 36.9	+0.8
comp=Z,0.7nm,0.5s,baz=120,slow=8.0,SNR=4.9							
comp=Z,0.7nm,0.5s							
MKAR	Makanchi Array	58.96	326	P	P	23 33 35.7	-0.3
KURBB	Kurchatov Arra	63.20	328	P	P	23 34 05.1	+0.5
comp=Z,1.0nm,0.6s,baz=131,slow=6.0,SNR=6.5							
comp=Z,1.0nm,0.6s							
KURK	Kurchatov	63.20	328	P	P	23 34 05.1	+0.4
KURK				IAmb	IAmb	23 34 06.6	
comp=Z,1.6nm,0.6s							
G31M	Satah River	92.22	23	P	P	23 36 45.5	-0.5
G31M				IAmb	IAmb	23 37 00.8	
comp=Z,0.2nm,0.3s							
BESE	Bessie Mountai	93.26	31	P	P	23 36 53.2	+2.1

*IDC **14** 23:26:59.5±0.5, 1°.53N×126°.38E, h0km, mb4.2/16, mbtmp4.2/18, ML4.1/2, Error ellipse: s-maj=27.2km s-min=10.6km az=79.0*
*DJA **14** 23:27:03.5±0.2, 2°.N±3°.×12°.6E±°., h10km, M4.6/18, mB5.6/2, mb4.7/16, MLv4.5/18, Mw(mB)5.0/2*
*NEIC **14** 23:27:04.6±1.9, 1°.54N±0°.08×126°.55E±0°.07, h24km±5km, mb4.6/32, Error ellipse: s-maj=12.4km s-min=7.8km az=213.0*
ISC 14 23:27:05.2±0.4, 1°.53N±0°.05×126°.50E±0°.06, h35km, n82, σ1§10/87, mb4.5/31, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.15	131		Pn	23 27 24.1	-0.6
TNTI	Ternate	1.15	131	P	Pn	23 27 24.5	-0.2
SGSI	Sangihe	2.35	336	P	Pn	23 27 42.0	+0.6
KMSI	Cibinong	2.69	249	P	Pn	23 27 46.1	0.0
SANI	Sanana	3.59	188	P	Pn	23 27 58.5	+0.1
LUWI	Luwuk	4.52	236		Pn	23 28 12.2	+1.0
LUWI	Luwuk	4.52	236	P	Pn	23 28 12.4	+1.2
MRSI	Marisa	4.68	257	P	Pn	23 28 14.6	+1.2
NLAI	Namlea	4.77	173	P	Pn	23 28 15.1	+0.4
MSAI	Masohi	5.42	153	P	Pn	23 28 25.1	+1.6
0.4nm93nm,0.7s							
APSI	Ampana	5.42	244	P	Pn	23 28 25.2	+1.6
AAI	Ambon	5.45	162	P	Pn	23 28 25.4	+1.4
0.8nm6μm76nm,0.6s							
TOLI2	Tolitoli	5.73	266		Pn	23 28 26.8	-1.1
KDI	Kendari	6.69	215	P	Pn	23 28 41.9	+0.9
MPSI	Mapaga	6.71	260	P	Pn	23 28 42.2	+0.9
0.2nm44nm,0.8s							
FAKI	Fak Fak	7.25	128		Pn	23 28 48.2	-0.5
FAKI	Fak Fak	7.25	128	P	Pn	23 28 49.8	+1.1
0.2nm48nm,1.2s							
BBSI	Bau Bau	8.00	209	P	Pn	23 28 59.9	+0.9
0.2nm46nm,1.1s							
TTSI	Tana Toraja	8.08	236	P	Pn	23 29 00.3	+0.2
3μm49nm,0.6s							
SPSI	Sidrap Palu	8.66	231	P	Pn	23 29 09.1	+1.0
39nm,0.7s							
BNSI	Bone	8.69	227	P	Pn	23 29 09.4	+0.9
25nm,1.0s							
MYLDM	Lahad Datu	8.77	295	Pn	Pn	23 29 10.9	+1.3
BKSI	Bulukumba	9.32	223	P	Pn	23 29 17.6	+0.4
16nm,0.6s							
KAPI	Kappang	9.37	226	Pn	Pn	23 29 16.3	-1.5
2.3nm,0.3s,baz=46,slow=5.3,SNR=13							
KAPI				Sn	Sn	23 30 60.0	-2.0
0.8nm,0.3s,baz=204,slow=21,SNR=1.1							
11nm,0.5s							
KAPI	Kappang	9.37	226		Pn	23 29 19.5	+1.7
BSSI	Bau Bau, Buton	9.70	218	P	Pn	23 29 23.6	+1.2
24nm,0.6s							
BAKI	Biak	9.98	106	P	Pn	23 29 26.9	+0.7
55nm,1.3s							
MMRI	Maumere	10.96	203	P	Pn	23 29 39.5	-0.1
EDFI	Ende, Flores	11.28	205	P	Pn	23 29 46.5	+2.4
SBUM	Sibu	14.30	274	P	P	23 30 33.6	+1.6
KNRA	Kununurra	17.24	173		Pn	23 31 03.6	+0.2
FITZ	Fitzroy Crossi	19.52	182	P	P	23 31 29.2	-0.5
0.5nm,0.3s,baz=346,slow=4.3,SNR=8.3							
2.2nm,0.5s							
FITZ	Fitzroy Crossi	19.52	182	P	P	23 31 29.2	-0.5
YULB	Yu-li	22.31	347	P	P	23 32 01.0	+1.2
YULB				IAmb	IAmb	23 32 03.7	
comp=Z,32nm,1.1s							
TPUB	Ta-pu	22.38	346	P	P	23 31 59.8	-0.8
WB0	Warramunga Arr	22.54	160		P	23 32 01.8	-0.5
WB0				IAmb	IAmb	23 32 12.6	
comp=Z,17nm,0.6s							
WRAB	Tennant Creek	22.68	161	P	P	23 32 03.2	-0.5
WRAB				IAmb	IAmb	23 32 12.3	
comp=Z,13nm,0.7s							
WRA	Warramunga Arr	22.68	161	P	P	23 32 03.0	-0.9
comp=Z,13nm,0.6s,baz=339,slow=11,SNR=34							
WRA				PcP	PcP	23 35 55.8	+0.1
comp=Z,0.5nm,0.6s,baz=317,slow=2.8,SNR=2.8							
WRA				S	S	23 36 08.6	-1.4
comp=Z,0.7nm,0.8s,baz=342,slow=17,SNR=2.8							
comp=Z,13nm,0.6s							
WRA	Warramunga Arr	22.68	161		P	23 32 02.3	-1.5
WR8	Warramunga Arr	22.75	160		P	23 32 03.6	-1.0
WR8				IAmb	IAmb	23 32 04.5	
comp=Z,9.9nm,0.6s							
SSLB	Suanglung	22.77	347	P	P	23 32 05.1	+0.3
SSLB				IAmb	IAmb	23 32 13.3	
comp=Z,12nm,0.9s							
MBWA	Marble Bar	23.50	196	P	P	23 32 11.2	-0.9
AS31	Alice Springs	26.06	164		P	23 32 35.9	+0.4
ASAR	Alice Springs	26.06	164	P	P	23 32 35.1	-0.4
comp=Z,2.6nm,0.4s,baz=347,slow=12,SNR=36							
ASAR				PcP	PcP	23 36 01.8	-1.2
comp=Z,0.4nm,0.4s,baz=338,slow=2.3,SNR=2.8							
ASAR				S	S	23 37 09.9	+5.3
comp=Z,1.0nm,0.7s,baz=343,slow=18,SNR=5.1							
comp=Z,2.6nm,0.4s							
ASAR	Alice Springs	26.06	164	P	P	23 32 35.6	+0.1
MORW	Morawa	32.03	197	P	P	23 33 27.5	-1.1
MORW				IAmb	IAmb	23 33 29.8	
comp=Z,5.5nm,0.9s							
FORT	Forrest	32.16	177	P	P	23 33 28.9	-0.9
FORT				IAmb	IAmb	23 33 30.4	
comp=Z,6.9nm,0.9s							
JMN	Monobe	32.77	11	P	P	23 33 35.1	+0.1
BBOO	Buckleboo	35.33	166	P	P	23 33 56.8	-0.4
BBOO				IAmb	IAmb	23 34 12.2	
comp=Z,6.0nm,0.6s							
JGF	Kuroka	35.37	15	P	P	23 33 57.2	-0.4
JGF				IAmb	IAmb	23 33 59.0	
comp=Z,9.2nm,1.0s							
NWAO	Narrogin (SRO)	35.37	194	P	P	23 33 57.8	+0.2
NWAO				IAmb	IAmb	23 34 05.1	
comp=Z,9.9nm,1.1s							
KSRS	Korea Array	35.77	2	P	P	23 34 01.6	+0.6
comp=Z,0.9nm,0.6s,baz=193,slow=11,SNR=1.8							
comp=Z,0.9nm,0.6s							
EIDS	Eidsvold	35.79	140	P	P	23 34 01.9	+0.5
STKA	Stephens Creek	36.18	158	P	P	23 34 03.1	-1.4
comp=Z,2.4nm,0.6s,baz=344,slow=8.6,SNR=5.2							
comp=Z,2.4nm,0.6s							
MJAR	Matsushiro Arr	36.48	16	P	P	23 34 06.0	-1.1
comp=Z,2.7nm,0.7s,baz=182,slow=10,SNR=6.4							
comp=Z,2.7nm,0.7s							
JMM	Marumori	38.48	18	P	P	23 34 24.2	+0.3
ARMA	Armidale	39.78	145	P	P	23 34 35.5	+0.4
JTM	Tenmabayashi	41.25	17	P	P	23 34 47.4	+0.5
USRK	Ussuriysk Ar.	42.77	6	P	P	23 34 59.5	+0.3
comp=Z,4.8

KBZ Khabaz 84.32 314 P **P** **23 39 34.1 +0.3**
comp=Z,1.7nm,0.7s,baz=97,slow=8.1,SNR=3.1
comp=Z,1.7nm,0.7s
SKT Skwentna 84.88 28 P **P** **23 39 37.2 +1.0**
SKT IAmb IAmb 23 39 44.9
comp=Z,2.8nm,0.9s
BRLK Bradley Lake 84.96 30 P **P** **23 39 37.4 +0.7**
BRTR Keskin Array B 91.24 310 P **P** **23 40 07.2 -0.2**
comp=Z,0.4nm,0.7s,baz=90,slow=4.3,SNR=1.9
comp=Z,0.4nm,0.7s
BRTR Keskin Array B 91.24 310 P **P** **23 40 07.3 -0.1**
ARCES ARCESS Array B 92.42 340 P **P** **23 40 10.8 -1.2**
comp=Z,1.8nm,1.0s,baz=65,slow=5.8,SNR=4.0
comp=Z,1.8nm,1.0s
ARCES ARCESS Array B 92.42 340 P **P** **23 40 10.7 -1.4**
ARCES IAmb IAmb 23 40 25.3
comp=Z,3.8nm,1.1s
CFA Coronel Fontan 147.00 157 PKPbc **PKPdf** **23 46 43.9 +0.9**
comp=Z,1.7nm,0.6s,baz=200,slow=4.8,SNR=6.1

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*DJA **14** 23:33:05.7±0.9, 1.1°N±6.1°×12.7°E±.1°, h234km±8km, M4.0/7, mb3.5/1, MLv4.2/7*
IDC 14 23:33:11.8±1.9, 1.87N×126.38E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=186.8km s-min=22.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.47**	**138**	P	Pn	23 33 37.5	-2.0
TNTI				S	Sn	23 34 01.4	+2.0
SGSI	**Sangihe**	**2.00**	**335**	P	Pg	23 34 02.6	+12
KMSI	**Cibinong**	**2.72**	**242**	P	Pb	23 33 59.4	-2.0
LUWI	**Luwuk**	**4.62**	**231**	P	Pn	23 34 16.9	-6.0
NLAI	**Namlea**	**5.12**	**172**	P	Pn	23 34 06.3	-23
WRA	**Warramunga Arr**	**23.04**	**161**	P	P	23 38 17.2	-1.5
	0.7nm,0.4s,baz=339,slow=11,SNR=6.5						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.41**	**164**	P	P	23 38 52.0	+1.7
	0.3nm,0.6s,baz=348,slow=8.7,SNR=2.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	23 43 12.8	+0.2
	0.2nm,0.3s,baz=124,slow=8.0,SNR=6.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.12**	**328**	P	P	23 43 40.8	-0.4
	0.4nm,0.5s,baz=124,slow=6.2,SNR=4.1						
	0.4nm,0.5s						

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*IDC **14** 23:33:49.2±1.1, 1.70N×126.76E, h0km, mb3.9/6, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=55.4km s-min=17.0km az=74.0*
*NEIC **14** 23:33:53.0±2.5, 1.69N±0.09×126.82E±0.10, h35km±2km, mb4.4/13, Error ellipse: s-maj=19.6km s-min=10.3km az=232.0*
ISC 14 23:33:52.5±0.7, 1.67N±0.08×126.8E±0.1, h35km, n27, σ1938/27, mb4.2/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.05**	**148**		**Pn**	**23 34 09.7**	**-1.1**
LUWI	**Luwuk**	**4.86**	**236**		**Pn**	**23 35 03.2**	**0.0**
TOLI2	**Tolitoli**	**6.06**	**265**	Pn	**Pn**	**23 35 17.3**	**-2.4**
MYLDM	**Lahad Datu**	**9.00**	**293**	Pn	**Pn**	**23 35 58.9**	**-1.2**
KAPI	**Kappang**	**9.69**	**227**	Pn	**Pn**	**23 36 09.6**	**0.0**
	1.0nm,0.3s,baz=61,slow=13,SNR=2.0						
	2.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	P	**23 38 20.1**	**+1.3**
	0.1nm,0.3s,baz=2.9,slow=12,SNR=1.6						
	1.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	P	**23 38 19.0**	**+0.2**
COEN	**Coen**	**22.45**	**134**	P	P	**23 38 47.5**	**-1.3**
COEN				IAmb	IAmb	23 39 20.1	
	comp=Z,19nm,1.5s						
WB0	**Warramunga Arr**	**22.57**	**161**	P	P	**23 38 51.2**	**+1.3**
WB0				IAmb	IAmb	23 38 54.9	
	comp=Z,5.2nm,0.6s						
WRA	**Warramunga Arr**	**22.71**	**161**	P	P	**23 38 53.0**	**+1.5**
	comp=Z,4.3nm,0.6s,baz=340,slow=11,SNR=15						
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**22.71**	**161**	P	P	**23 38 51.2**	**-0.4**
WR8	**Warramunga Arr**	**22.78**	**161**	P	P	**23 38 53.3**	**+1.1**
WR8				IAmb	IAmb	23 39 06.0	
	comp=Z,6.4nm,1.0s						
PSA00	**Pilbara Seismi**	**24.09**	**196**	P	P	**23 39 04.9**	**0.0**
ASAR	**Alice Springs**	**26.11**	**165**	P	P	**23 39 25.9**	**+2.5**
	comp=Z,0.9nm,0.5s,baz=345,slow=9.6,SNR=9.9						
	comp=Z,0.9nm,0.5s						
ASAR	**Alice Springs**	**26.11**	**165**	P	P	**23 39 23.3**	**-0.1**
KULM	**Kulim**	**26.36**	**278**	P	P	**23 39 26.2**	**+0.5**
KULM				IAmb	IAmb	23 40 07.4	
	comp=Z,34nm,1.5s						
GIRL	**Giralia**	**27.11**	**206**	P	P	**23 39 31.9**	**-0.4**
JNU	**Nakatsue**	**31.52**	**7**	P	P	**23 40 09.9**	**-1.5**
FORT	**Forrest**	**32.29**	**178**	P	P	**23 40 16.6**	**-1.6**
FORT				IAmb	IAmb	23 40 54.2	
	comp=Z,6.0nm,1.0s						
BBOO	**Buckleboo**	**35.39**	**166**	P	P	**23 40 45.1**	**0.0**
SONM	**Songino Array**	**49.26**	**342**	P	P	**23 42 37.7**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=156,slow=8.6,SNR=2.2						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.29**	**326**	P	P	**23 43 52.5**	**+1.7**
	comp=Z,0.6nm,0.4s,baz=120,slow=8.1,SNR=9.8						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**59.29**	**326**	P	P	**23 43 52.3**	**+1.5**
ZALV	**Zalesovo Beam**	**62.45**	**334**	P	P	**23 44 14.1**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=124,slow=7.2,SNR=1.8						
	comp=Z,0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	P	**23 44 21.5**	**+2.3**
	comp=Z,1.3nm,0.5s,baz=127,slow=6.2,SNR=14						
	comp=Z,1.3nm,0.5s						
KURK	**Kurchatov**	**63.51**	**328**	P	P	**23 44 20.8**	**+1.6**
KURK				IAmb	IAmb	23 44 23.9	
	comp=Z,3.5nm,0.8s						
ARTI	**Arti**	**76.79**	**328**	P	P	**23 45 41.3**	**+0.8**
ARTI				IAmb	IAmb	23 46 18.8	
	comp=Z,2.8nm,0.6s						

IDC 14 23:34:40.2±1.9, 1.74N×126.34E, h0km, mb3.6/4, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=133.9km s-min=22.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	P	23 39 11.3	-0.2
	0.2nm,0.3s,baz=2.0,slow=9.5,SNR=1.5						
	2.1nm,0.9s						
WRA	**Warramunga Arr**	**22.93**	**160**	P	P	23 39 46.6	+0.5
	0.7nm,0.4s,baz=340,slow=10,SNR=1.2						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.30**	**164**	P	P	23 40 17.3	-0.5
	0.7nm,0.6s,baz=344,slow=10.0,SNR=1.6						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**58.97**	**326**	P	P	23 44 41.5	-0.1
	0.4nm,0.4s,baz=119,slow=5.1,SNR=1.6						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.21**	**328**	P	P	23 45 10.5	+0.2
	0.3nm,0.4s,baz=132,slow=6.3,SNR=1.5						
	0.3nm,0.4s						

IDC 14 23:37:17.0±1.8, 1.78N×126.30E, h0km, mb3.4/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=126.5km s-min=22.0km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.76**	**182**	P	Pn	23 41 49.7	-0.5
	0.1nm,0.3s,baz=0.0,slow=8.1,SNR=2.4						
	3.9nm,1.1s						
WRA	**Warramunga Arr**	**22.98**	**160**	P	P	23 42 22.8	-0.7
	1.3nm,0.7s,baz=338,slow=11,SNR=5.0						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**26.35**	**164**	P	P	23 42 55.0	0.0
	0.4nm,0.6s,baz=344,slow=8.3,SNR=3.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**58.92**	**326**	P	P	23 47 17.5	-0.5
	0.2nm,0.4s,baz=119,slow=7.8,SNR=4.6						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.15**	**328**	P	P	23 47 47.3	+0.6
	0.2nm,0.4s,baz=122,slow=6.9,SNR=1.7						
	0.2nm,0.4s						

IDC 14 23:41:07.8±1.8, 1.62N×126.34E, h0km, mb3.4/4, mbtmp3.5/4, Error ellipse: s-maj=168.1km s-min=22.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.81**	**160**	P	P	23 46 12.3	-0.2
	1.1nm,0.5s,baz=339,slow=11,SNR=7.9						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.18**	**164**	P	P	23 46 44.5	+0.2
	0.3nm,0.6s,baz=351,slow=15,SNR=5.7						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	23 51 09.9	-0.1
	0.2nm,0.5s,baz=115,slow=8.1,SNR=4.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	P	23 51 38.5	0.0
	0.4nm,0.6s,baz=129,slow=6.3,SNR=4.1						
	0.4nm,0.6s						

IDC 14 23:45:47.0±1.7, 1.79N×126.60E, h0km, mb3.5/4, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=130.0km s-min=20.7km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.79**	**183**	P	P	23 50 18.9	-0.1
	baz=0.0,slow=8.1,SNR=2.1						
	2.3nm,1.1s						
WRA	**Warramunga Arr**	**22.90**	**161**	P	P	23 50 52.1	-0.5
	0.9nm,0.5s,baz=340,slow=10,SNR=7.8						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**26.29**	**165**	P	P	23 51 24.8	+0.4
	0.5nm,0.4s,baz=346,slow=10,SNR=7.4						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	23 55 48.8	-0.3
	0.2nm,0.4s,baz=130,slow=6.9,SNR=5.4						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	P	23 56 18.0	+0.4
	0.3nm,0.6s,baz=132,slow=6.6,SNR=4.1						
	0.3nm,0.6s						

IDC 14 23:51:14.6±1.7, 1.57N×126.24E, h0km, mb3.5/4, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=123.1km s-min=22.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P	P	23 55 44.2	+0.1
	baz=5.2,slow=11,SNR=1.9						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**22.81**	**160**	P	P	23 56 19.0	-0.3
	1.0nm,0.5s,baz=338,slow=11,SNR=6.5						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.17**	**164**	P	P	23 56 51.2	+0.2
	0.2nm,0.4s,baz=344,slow=11,SNR=4.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	P	00 01 17.7	+1.1
	0.7nm,0.8s,baz=110,slow=7.8,SNR=2.4						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	P	00 01 44.1	-1.1
	0.3nm,0.5s,baz=128,slow=7.3,SNR=2.2						
	0.3nm,0.5s						

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*NEIC **14** 23:51:31.6±1.3, 25.39N±0.08×124.58E±0.07, h112km±6km, mb4.5/123, Error ellipse: s-maj=12.5km s-min=8.7km az=151.0*
*JMA **14** 23:51:31.8±0.2, 25.2°N±0.2°×124.5E±0.0°, h110km±3km, MD4.0/14, MV4.3/14, NW OFF MIYAKOJIMA ISLAND*
*IDC **14** 23:51:31.8±2.4, 25.43N×124.57E, h122km±23km, mb3.8/21, mbtmp4.1/25, MS4.1/1, Error ellipse: s-maj=18.5km s-min=10.9km az=70.0*
ISC 14 23:51:31.1±0.6, 25.37N±0.05×124.56E±0.03, h115km±6km, n193, σ0987/209, mb4.5/83, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTJ	**Tarama**	**0.74**	**170**	*i* P	**Pn**	**23 51 50.3**	**0.0**
JTJ				S	**Sn**	**23 52 04.4**	**-0.3**
JIKM	**Ikemajima**	**0.77**	**126**	*i* P	**Pn**	**23 51 51.0**	**+0.5**
JIKM				S	**Sn**	**23 52 05.3**	**+0.2**
JIRB	**Irabujima**	**0.78**	**134**	*i* P	**Pn**	**23 51 50.6**	**0.0**
JIRB				S	**Sn**	**23 52 04.7**	**-0.5**
JISG	**Ishigakijimahi**	**0.81**	**196**	*i* P	**Pn**	**23 51 50.8**	**-0.1**
JISG				S	**Sn**	**23 52 05.0**	**-0.8**
JISG	**Ishigakijimahi**	**0.81**	**196**	A	A	23 51 50.8	
	comp=N,17nm,0.5s,comp=E,12nm,0.6s						
JMJ	**Miyako jima 2**	**0.87**	**130**	P	**Pn**	**23 51 52.5**	**+1.1**
JMJ	**Miyako jima 2**	**0.87**	**130**	S	**Sn**	**23 52 08.3**	**+1.6**
JMJ2	**Miyako jima3**	**0.94**	**132**	*i* P	**Pn**	**23 51 52.6**	**+0.5**
JMJ2				S	**Sn**	**23 52 08.1**	**+0.2**
JOGS	**Gusukube**	**0.98**	**128**	*i* P	**Pn**	**23 51 53.1**	**+0.7**
JOGS				S	**Sn**	**23 52 09.0**	**+0.4**
JIJ	**Ishigaki jima**	**1.07**	**201**	*i* P	**Pn**	**23 51 52.9**	**-0.6**
JIJ				S	**Sn**	**23 52 08.7**	**-1.7**
JKRS	**Kuro-shima**	**1.24**	**204**	*i* P	**Pn**	**23 51 54.9**	**-0.3**
JKRS				S	**Sn**	**23 52 12.6**	**-0.8**
IRIF	**Iriomote-Funau**	**1.28**	**216**	*i* P	**Pn**	**23 51 55.3**	**-0.4**
IRIF				S	**Sn**	**23 52 13.1**	**-1.2**
IRIF	**Iriomote-Funau**	**1.28**	**216**	A	A	23 51 55.3	
	comp=N,9.0nm,1.3s,comp=E,6.0nm,0.5s						
HATJ	**Hateruma jima**	**1.48**	**208**	P	**Pn**	**23 51 57.6**	**-0.3**
HATJ				S	**Sn**	**23 52 17.7**	**-0.7**
YOJ	**Yonaguni jima**	**1.67**	**237**		**Pn**	**23 52 00.5**	**+0.2**
YOJ				Sn	**Sn**	**23 52 23.4**	**+1.0**
YOJ	**Yonaguni jima**	**1.67**	**237**	P	**Pn**	**23 52 00.8**	**+0.5**
YOJ	**Yonaguni jima**	**1.67**	**237**	P	**Pn**	**23 52 00.6**	**+0.3**
YOJ				S	**Sn**	**23 52 21.9**	**-0.6**
JYNG	**Yonagunijimaku**	**1.73**	**238**	P	**Pn**	**23 52 01.3**	**+0.4**
JYNG				*e*S	**Sn**	**23 52 23.0**	**-0.7**
JKE	**Kume jima 2**	**2.22**	**64**	P	**Pn**	**23 52 07.5**	**+0.4**
JKE				*e*S	**Sn**	**23 52 34.4**	**-0.2**
TATO	**Taipei**	**2.81**	**263**	Pn	**Pn**	**23 52 15.9**	**+1.2**
TATO	**Taipei**	**2.81**	**263**	P	**Pn**	**23 52 16.7**	**+2.0**
NACB	**Ninganchiao**	**2.95**	**247**		**Pn**	**23 52 16.4**	**-0.1**
NACB				Sn	**Sn**	**23 52 50.1**	**-1.4**
NACB	**Ninganchiao**	**2.95**	**247**	P	**Pn**	**23 52 16.4**	**-0.1**
YHNB	**Yeheng**	**2.97**	**257**		**Pn**	**23 52 18.6**	**+1.6**
YHNB	**Yeheng**	**2.97**	**257**	P	**Pn**	**23 52 18.7**	**+1.8**
YULB	**Yu-li**	**3.57**	**237**		**Pn**	**23 52 23.5**	**-1.3**
YULB	**Yu-li**	**3.57**	**237**	P	**Pn**	**23 52 23.2**	**-1.6**
JOW	**Kunigami**	**3.64**	**66**	P	**Pn**	**23 52 25.4**	**-0.3**
	comp=E,59nm,0.3s,baz=246,slow=10.0,SNR=36						
JOW				S	**Sn**	**23 53 04.5**	**-3.6**
	comp=E,53nm,0.3s,baz=100,slow=23,SNR=6.2						
JOW	**Kunigami**	**3.64**	**66**		**Pn**	**23 52 25.3**	**-0.5**
JOW	**Kunigami**	**3.64**	**66**	P	**Pn**	**23 52 25.3**	**-0.5**
SSLB	**Suanglung**	**3.64**	**245**		**Pn**	**23 52 25.8**	**-0.1**
SSLB				Sn	**Sn**	**23 53 07.3**	**-0.9**
SSLB	**Suanglung**	**3.64**	**245**	P	**Pn**	**23 52 25.6**	**-0.2**
TWG	**Pinlang**	**4.08**	**232**	Pn	**Pn**	**23 52 30.1**	**-1.5**
TPUB	**Ta-pu**	**4.14**	**241**		**Pn**	**23 52 33.3**	**+0.9**
TPUB				Sn	**Sn**	**23 53 19.9**	**-0.1**
KNMB	**Chin-men Tao**	**5.68**	**262**	Pn	**Pn**	**23 52 53.7**	**+0.6**
JMZ	**Minamidaito 2**	**6.03**	**84**	Pn	**Pn**	**23 52 56.3**	**-1.6**
KSRS	**Korea Array**	**12.38**	**13**	P	**Pn**	**23 54 24.3**	**+1.0**
	comp=E,8.2nm,1.0s,baz=191,slow=12,SNR=21						
MJAR	**Matsushiro Arr**	**16.14**	**43**	P	**Pn**	**23 55 12.1**	**+0.8**
	comp=E,2.4nm,0.6s,baz=242,slow=11,SNR=6.9						
USRK	**Ussuriysk Ar.**	**19.73**	**16**	P	**P**	**23 55 50.2**	**-1.4**
	comp=E,1.5nm,0.6s,baz=184,slow=8.7,SNR=1.4						
LZDM	**Lanzhou Array**	**20.78**	**305**	P	**P**	**23 56 04.4**	**+1.1**
	comp=E,1.1nm,0.3s,baz=150,slow=12,SNR=5.9						
	comp=E,1.1nm,0.3s						
HILR	**Hailar Array B**	**24.43**	**352**	P	**P**	**23 56 38.0**	**-0.9**
	comp=E,0.8nm,0.3s,baz=165,slow=11,SNR=4.7						
	comp=E,0.8nm,0.3s						
SONM	**Songino Array**	**26.61**	**332**	P	**P**	**23 56 57.8**	**-1.0**
	comp=E,0.8nm,0.6s,baz=153,slow=9.2,SNR=5.2						
	comp=E,0.8nm,0.6s						
PETK	**Petropavlovsk-**	**37.18**	**33**	P	**P**	**23 58 29.8**	**-1.1**
	comp=E,3.5nm,0.8s,baz=252,slow=8.9,SNR=1.4						
	comp=E,3.5nm,0.8s						
PETK	**Petropavlovsk-**	**37.18**	**33**	P	**P**	**23 58 29.9**	**-0.9**
MKAR	**Makanchi Array**	**39.68**	**314**	P	**P**	**23 58 51.6**	**-0.4**
	comp=E,4.0nm,0.5s,baz=99,slow=10,SNR=37						
	comp=E,4.0nm,0.5s						
MAKZ	**Makanchi**	**39.89**	**314**	P	**P**	**23 58 54.1**	**+0.4**
MAKZ				IAmb	IAmb	23 58 54.5	
	comp=Z,10.0nm,1.1s						
ZALV	**Zalesovo Beam**	**40.98**	**325**	P	**P**	**23 59 01.4**	**-1.0**
	comp=Z,3.4nm,0.4s,baz=116,slow=8.6,SNR=18						
	comp=Z,3.4nm,0.4s						
KDJ	**Kajisay**	**42.23**	**305**	P	**P**	**23 59 14.0**	**+0.9**
KDJ				IAmb	IAmb	23 59 14.7	
	comp=Z,5.5nm,0.8s						
COEN	**Coen**	**43.10**	**153**	P	**P**	**23 59 20.8**	**+0.7**
KURK	**Kurchatov**	**43.20**	**318**	P	**P**	**23 59 20.6**	**0.0**
KURK				IAmb	IAmb	23 59 20.8	
	comp=Z,4.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**43.22**	**178**	P	**P**	**23 59 20.7**	**-0.3**
	comp=Z,7.3nm,0.7s,baz=9.2,slow=6.8,SNR=19						
	comp=Z,7.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**43.22**	**178**	P	**P**	**23 59 20.9**	**-0.1**
KURBB	**Kurchatov Arra**	**43.23**	**318**	P	**P**	**23 59 20.6**	**-0.1**
	comp=Z,3.7nm,0.7s,baz=109,slow=9.0,SNR=22						
	comp=Z,3.7nm,0.7s						
ARSB	**Arslanbob**	**45.27**	**304**	P	**P**	**23 59 38.1**	**+0.8**
ARSB				IAmb	IAmb	23 59 38.3	
	comp=Z,5.7nm,1.1s						
WB0	**Warramunga Arr**	**45.88**	**167**	P	**P**	**23 59 42.3**	**+0.2**
WB0				IAmb	IAmb	23 59 42.6	
	comp=Z,4.3nm,0.6s						
WRA	**Warramunga Arr**	**46.04**	**167**	P	**P**	**23 59 43.6**	**+0.2**
	comp=Z,6.4nm,0.7s,baz=349,slow=8.6,SNR=40						
	comp=Z,6.4nm,0.7s						
WRA	**Warramunga Arr**	**46.04**	**167**	P	**P**	**23 59 43.3**	**0.0**
WR8	**Warramunga Arr**	**46.08**	**167**	P	**P**	**23 59 44.0**	**+0.3**
MBWA	**Marble Bar**	**46.49**	**186**	P	**P**	**23 59 45.6**	**-1.2**
MBWA				IAmb	IAmb	23 59 51.2	
	comp=Z,7.3nm,0.9s						
PSA00	**Pilbara Seismi**	**46.89**	**186**	P	**P**	**23 59 48.9**	**-1.1**
PSA00				IAmb	IAmb	23 59 51.4	
	comp=Z,18nm,1.1s						
KK31	**Karatay Array**	**47.22**	**306**		**P**	**23 59 52.3**	**-0.2**
KKAR	**Karatay Array**	**47.22**	**306**	P	**P**	**23 59 53.0**	**+0.5**
CHGR	**Chuyangaron**	**48.14**	**300**		**P**	**23 59 59.8**	**+0.1**
KBL	**Kabul**	**48.45**	**295**		**P**	**00 00 02.3**	**0.0**
KBL				IAmb	IAmb	00 00 04.3	
	comp=Z,8.7nm,1.0s						
BVAR	**Borovoye Array**	**48.74**	**319**	P	**P**	**00 00 03.9**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=100,slow=8.6,SNR=12						
BVAR				PcP	**PcP**	**00 01 27.1**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=120,slow=5.2,SNR=9.4						
	comp=Z,1.5nm,0.3s						
AS31	**Alice Springs**	**49.58**	**169**	P	**P**	**00 00 11.4**	**+0.7**
ASAR	**Alice Springs**	**49.58**	**169**	P	**P**	**00 00 11.4**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=343,slow=8.2,SNR=46						
ASAR				LR	LR	00 19 58.6	
	comp=Z,194nm,21.4s,baz=146,slow=34						
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**49.58**	**169**	P	**P**	**00 00 11.3**	**+0.6**
AB31	**Akbulak array**	**54.83**	**314**		**P**	**00 00 49.5**	**+0.3**
ABKAR	**Akbulak array**	**54.83**	**314**		**P**	**00 00 49.3**	**+0.1**
FORT	**Forrest**	**55.94**	**176**	P	**P**	**00 00 57.6**	**+0.4**
FORT				IAmb	IAmb	00 01 10.6	
	comp=Z,6.7nm,1.1s						
ARTI	**Arti**	**56.12**	**322**	P	**P**	**00 00 58.1**	**-0.2**
ARTI				IAmb	IAmb	00 00 58.7	
	comp=Z,4.4nm,0.7s						
BBOO	**Buckleboo**	**58.89**	**169**	P	**P**	**00 01 17.9**	**0.0**
BBOO				IAmb	IAmb	00 01 18.5	
	comp=Z,3.3nm,0.6s						
N15K	**Kwethluk River**	**61.09**	**34**	P	**P**	**00 01 33.8**	**+1.1**
O15K	**Ungalikthiuk R**	**61.25**	**35**	P	**P**	**00 01 34.5**	**+0.7**
J17K	**VABM Dome**	**61.54**	**30**	P	**P**	**00 01 36.0**	**+0.3**
M16K	**Timber Creek**	**61.63**	**33**		**P**	**00 01 37.0**	**+0.6**
M16K				IAmb	IAmb	00 01 45.0	
	comp=Z,7.5nm,1.1s						
K17K	**Iditarod**	**61.90**	**31**	P	**P**	**00 01 39.2**	**+1.1**
K17K				IAmb	IAmb	00 01 40.3	
	comp=Z,4.9nm,0.8s						
D19K	**Kuna River**	**62.01**	**24**	P	**P**	**00 01 39.1**	**+0.3**
D19K				IAmb	IAmb	00 01 41.1	
	comp=Z,6.7nm,1.1s						
E19K	**Redstone River**	**62.32**	**25**	P	**P**	**00 01 40.3**	**-0.6**
E19K				IAmb	IAmb	00 01 47.2	
	comp=Z,4.3nm,1.0s						
M17K	**Holitna River**	**62.35**	**32**	P	**P**	**00 01 42.3**	**+1.1**
M17K				IAmb	IAmb	00 01 54.4	
	comp=Z,9.3nm,1.1s						
N17K	**Nushagak Hills**	**62.52**	**33**	P	**P**	**00 01 43.1**	**+0.8**
D20K	**Etivluk River**	**62.56**	**24**	P	**P**	**00 01 42.3**	**-0.2**
D20K				IAmb	IAmb	00 01 51.2	
	comp=Z,2.8nm,0.9s						
L18K	**Granite Mounta**	**62.67**	**31**	P	**P**	**00 01 44.5**	**+1.3**
J19K	**Poorman**	**63.06**	**29**	P	**P**	**00 01 46.6**	**+0.8**
J19K				IAmb	IAmb	00 01 47.8	
	comp=Z,3.1nm,0.8s						
B21K	**Ikpikpuk River**	**63.28**	**23**	P	**P**	**00 01 47.4**	**+0.2**
B21K				IAmb	IAmb	00 01 50.1	
	comp=Z,8.7nm,1.1s						
L19K	**White Mountain**	**63.53**	**31**	P	**P**	**00 01 49.3**	**+0.4**
L19K				IAmb	IAmb	00 01 50.7	
	comp=Z,10nm,1.0s						
ACHA	**Angle Creek He**	**63.65**	**36**	P	**P**	**00 01 49.6**	**-0.4**
ACHA				IAmb	IAmb	00 01 52.8	
	comp=Z,3.7nm,0.8s						
B22K	**Teshekpuk Lake**	**63.67**	**22**	P	**P**	**00 01 50.9**	**+1.2**
J20K	**Nowinta River**	**63.70**	**29**	P	**P**	**00 01 51.1**	**+1.1**
J20K				IAmb	IAmb	00 01 52.1	
	comp=Z,4.8nm,0.7s						
CHIR	**Chirikof Islan**	**63.76**	**38**	P	**P**	**00 01 50.3**	**

KLU Klutina 67.82 31 P P 00 02 16.8 +0.2
KLU IAmb IAmb 00 02 34.8
comp=Z,6.4nm,1.2s

RIDG Independent Ri 67.82 29 P P 00 02 16.7 +0.2
RIDG IAmb IAmb 00 02 31.8
comp=Z,3.1nm,0.8s

DIV Divide 67.97 32 P P 00 02 18.5 +1.0
D27M Malcolm River 68.10 23 P P 00 02 18.9 +0.7
E27K Coleen River 68.12 24 P P 00 02 18.8 +0.4
J26L Joseph Creek 68.20 28 P P 00 02 19.1 +0.1
J26L IAmb IAmb 00 02 20.1
comp=Z,4.8nm,0.8s

I27K Kandik River 68.74 26 P P 00 02 23.1 +0.8
I27K IAmb IAmb 00 02 24.7
comp=Z,5.1nm,0.8s

E28M Babbage River 68.76 23 P P 00 02 23.0 +0.8
GLB Gilahina Butte 68.81 31 P P 00 02 23.5 +0.7
GLB IAmb IAmb 00 02 36.4
comp=Z,10nm,1.2s

K27K Chicken 68.94 28 P P 00 02 24.5 +1.0
M26K Nabesna, AK 68.95 30 P P 00 02 24.7 +1.1
M26K IAmb IAmb 00 02 25.8
comp=Z,8.6nm,1.2s

VRDI Verde Repeater 69.03 31 P P 00 02 25.2 +0.9
VRDI IAmb IAmb 00 02 42.8
comp=Z,8.5nm,1.2s

MCARA McCarthy VSAT 69.20 31 P P 00 02 25.1 0.0
L27K Beaver Creek, 69.30 29 P P 00 02 27.4 +1.7
BCAR Beaver Creek A 69.32 29 P P 00 02 27.6 +1.7
TGL Tana Glacier 69.45 32 P P 00 02 27.1 +0.4
TGL IAmb IAmb 00 02 38.4
comp=Z,10nm,1.1s

I28M Miner Creek 69.46 26 P P 00 02 27.9 +1.2
M27K Edge Creek, AK 69.47 30 P P 00 02 27.7 +0.8
M27K IAmb IAmb 00 02 29.0
comp=Z,6.9nm,1.1s

WAX Waxell Ridge 69.52 32 P P 00 02 28.3 +1.2
ARCES ARCESS Array B 69.58 338 P P 00 02 26.7 -0.6
comp=Z,2.4nm,1.0s,baz=39,slow=7.9,SNR=3.9
comp=Z,2.4nm,1.0s

ARCES ARCESS Array B 69.58 338 P P 00 02 26.8 -0.6
ISLE Juniper Island 69.72 32 P P 00 02 28.7 +0.2
G29M Pine Creek 69.78 25 P P 00 02 28.9 +0.3
H29M Whitestone 69.86 25 P P 00 02 30.1 +1.0
BARN Barnard Glacie 69.92 31 P P 00 02 30.2 +0.4
BARN IAmb IAmb 00 02 46.1
comp=Z,5.9nm,0.7s

DAWY Dawson 70.07 28 P P 00 02 31.1 +0.6
CTGM Chitina Glacie 70.10 31 P P 00 02 31.5 +0.7
CTGM IAmb IAmb 00 02 31.6
comp=Z,6.9nm,1.1s

LOGN Logan Glacier 70.29 31 P P 00 02 32.3 +0.3
LOGN IAmb IAmb 00 02 41.0
comp=Z,9.4nm,0.8s

F30M Barrier River 70.39 24 P P 00 02 33.4 +1.1
MARD Mardin 70.41 303 P P 00 02 33.6 +0.5
MARD IAmb IAmb 00 02 34.2
comp=Z,5.5nm,0.5s

EPYK Eagle Plains 70.44 25 P P 00 02 34.0 +1.3
O28M Mount Upton 70.69 31 P P 00 02 35.8 +1.2
O28M IAmb IAmb 00 02 40.9
comp=Z,12nm,0.8s

L29M L29M 70.90 29 P P 00 02 36.6 +1.1
L29M IAmb IAmb 00 02 38.3
comp=Z,6.5nm,0.7s

K29M Barlow Dome 70.93 28 P P 00 02 36.6 +0.8
K29M IAmb IAmb 00 02 38.0
comp=Z,3.8nm,0.8s

RAYN Ar Rayn 70.93 288 P P 00 02 35.7 -0.7
I30M Mount Dempster 70.95 26 P P 00 02 36.6 +0.7
INK Inuvik 70.96 23 P P 00 02 36.5 +0.8
M29M Somme Creek 70.96 29 P P 00 02 36.4 +0.4
M29M IAmb IAmb 00 02 38.5
comp=Z,4.9nm,0.7s

J30M Hart River 71.18 27 P P 00 02 37.5 +0.2
G31M Satah River 71.18 24 P P 00 02 37.2 +0.2
H31M Peel River 71.55 25 P P 00 02 40.1 +0.8
H31M IAmb IAmb 00 02 40.8
comp=Z,4.7nm,0.8s

M30M Minto, Yukon 71.65 29 P P 00 02 41.3 +1.2
FINES FINESS Array B 71.96 330 P P 00 02 41.1 -0.7
comp=Z,1.5nm,0.6s,baz=48,slow=5.7,SNR=7.2
comp=Z,1.5nm,0.6s

FINES FINESS Array B 71.96 330 P P 00 02 41.4 -0.4
P29M Windy Craggy 72.21 32 P P 00 02 45.1 +1.7
N31M Braeburn, Yuko 72.48 30 P P 00 02 45.4 +0.5
N31M IAmb IAmb 00 02 48.7
comp=Z,9.0nm,1.1s

AKASG Malin Array Be 74.01 319 P P 00 02 52.7 -1.4
comp=Z,0.2nm,0.3s,baz=65,slow=6.6,SNR=2.4
comp=Z,0.2nm,0.3s

AKASG Malin Array Be 74.01 319 IAmb IAmb 00 02 57.9
comp=Z,2.8nm,1.1s

BR131 Keskin Array S 74.93 307 P P 00 02 59.8 -0.1
BRTR Keskin Array B 74.93 307 P P 00 03 00.1 +0.2
comp=Z,0.9nm,0.6s,baz=71,slow=3.6,SNR=6.4
comp=Z,0.9nm,0.6s

BRTR Keskin Array B 74.93 307 P P 00 02 60.0 +0.2
ANTO Ankara 75.48 307 P P 00 03 02.2 -0.8
ANTO IAmb IAmb 00 03 04.4
comp=Z,4.4nm,0.7s

R33M Jennings River 75.49 31 P P 00 03 04.2 +1.5
R33M IAmb IAmb 00 03 05.4
comp=Z,4.3nm,0.8s

BURAR Bucovina Array 77.62 317 P P 00 03 14.9 +0.1
HFS Hagfors 78.01 331 P P 00 03 15.0 -1.7
comp=Z,1.2nm,0.6s,baz=97,slow=7.6,SNR=4.5
comp=Z,1.2nm,0.6s

MLR Muntele Rosu 78.02 315 P P 00 03 17.0 -0.1
NC405 NORSAR Array S 78.34 333 P P 00 03 18.4 -0.1
NC405 IAmb IAmb 00 03 20.2
comp=Z,6.3nm,1.0s

NB201 NORSAR Array S 78.55 333 P P 00 03 19.5 -0.1
NB201 IAmb IAmb 00 03 19.5
comp=Z,8.9nm,1.1s

NB2 NORSAR Subarra 78.59 333 P P 00 03 18.9 -1.0
comp=Z,0.8nm,0.6s,baz=56,slow=5.6

NOA NORSAR Array B 78.59 333 P P 00 03 18.2 -1.6
comp=Z,0.7nm,0.6s,baz=58,slow=5.4,SNR=5.7
comp=Z,0.7nm,0.6s

NC204 NORSAR Array S 78.65 333 P P 00 03 19.6 -0.6
ELL Elmali 78.76 305 P P 00 03 21.1 -0.3
ELL IAmb IAmb 00 03 21.6
comp=Z,6.9nm,0.6s

YKAW3 Yellowknife Wh 80.62 24 P P 00 03 31.3 +0.6
YKAW3 IAmb IAmb 00 03 40.8
comp=Z,9.9nm,1.1s

YKA Yellowknife Ar 80.67 24 P P 00 03 31.3 +0.3
comp=Z,2.3nm,0.6s,baz=303,slow=5.9,SNR=18
comp=Z,2.3nm,0.6s

YKA Yellowknife Ar 80.67 24 P P 00 03 31.1 +0.1
YKAW1 Yellowknife Wh 80.72 24 P P 00 03 31.5 +0.3
YKAW1 IAmb IAmb 00 03 32.5
comp=Z,5.3nm,0.8s

LTZ Lake Taylor 80.81 147 P P 00 03 33.9 +2.0
GERES GERESS Array B 83.85 322 P P 00 03 48.2 +0.2
comp=Z,0.4nm,0.6s,baz=17,slow=5.7,SNR=2.5
comp=Z,0.4nm,0.6s

P17A Butcher Ranch, 97.40 40 P 00 04 52.8 +0.7

IDC 14 23:57:27.0±1.8,1.66N×126.55E,h0km,mb3.3/4, mbtmp3.3/5,ML3.2/1,Error ellipse: s-maj=125.5km s-min=22.8km az=69.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.66**	**183**	P	P	00 01 56.8	-0.9
	baz=11,slow=10,SNR=0.9						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**22.79**	**161**	P	P	00 02 31.8	+0.4
	0.8nm,0.6s,baz=341,slow=11,SNR=3.8						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**26.17**	**165**	P	P	00 03 03.4	0.0
	0.2nm,0.4s,baz=340,slow=7.2,SNR=1.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	P	00 07 29.2	-0.5
	0.1nm,0.4s,baz=121,slow=7.5,SNR=1.8						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	P	00 07 58.8	+0.6
	0.2nm,0.4s,baz=134,slow=5.5,SNR=2.1						
	0.2nm,0.4s						

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*IDC **14** 23:59:39.3±0.4, 1.52N×126.42E, h0km, mb4.5/29,*

mbtmp4.5/31,ML4.8/2,MS3.9/6,Error ellipse: s-maj=25.2km s-min=9.2km az=77.0

*MOS **14** 23:59:41.1±1.1, 1.64N×126.44E, h21km, mb5.0/26,Error ellipse: s-maj=14.9km s-min=6.5km az=114.5*

*NEIC **14** 23:59:44.0±1.7, 1.68N±0.07×126.43E±0.05, h35km±1km, mb4.8/60,Error ellipse: s-maj=12.2km s-min=8.5km az=14.0*

*DJA **14** 23:59:44.0±0.2,2.7°N±3.1°×12.6°E±0.9°, h10km,M4.7/18,mB5.1/8, mb5.0/8,MLv4.9/18,Mw(mB)4.5/8*

ISC 14 23:59:44.1±0.3,1.57N±0.04×126.42E±0.06,h35km,n209, σ1.9 63/214,mb4.8/79,MS4.1/8,7C-2D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**130**		**Pn**	**00 00 06.7**	**+1.8**
TNTI	**Ternate**	**1.23**	**130**	P	**Pn**	**00 00 07.2**	**+2.3**
TNTI	**Ternate**	**1.23**	**130**	P	**Pn**	**00 00 06.4**	**+1.5**
SGSI	**Sangihe**	**2.28**	**337**	P	**Pn**	**00 00 18.7**	**-0.6**
KMSI	**Cibinong**	**2.63**	**248**	P	**Pn**	**00 00 26.2**	**+2.0**
SANI	**Sanana**	**3.62**	**187**	P	**Pn**	**00 00 38.3**	**+0.5**
SANI	**Sanana**	**3.62**	**187**	P	**Pn**	**00 00 39.6**	**+1.8**
LUWI	**Luwuk**	**4.48**	**235**	Pn	**Pn**	**00 00 52.3**	**+2.7**
LUWI	**Luwuk**	**4.48**	**235**	P	**Pn**	**00 00 52.0**	**+2.4**
LUWI	**Luwuk**	**4.48**	**235**	P	**Pn**	**00 00 52.6**	**+3.0**
MRSI	**Marisa**	**4.61**	**256**	P	**Pn**	**00 00 53.6**	**+2.2**
NLAI	**Namlea**	**4.83**	**172**	P	**Pn**	**00 00 58.1**	**+3.8**
APSI	**Ampana**	**5.37**	**243**	P	**Pn**	**00 01 06.5**	**+4.7**
SWI	**Sorong**	**5.41**	**117**	P	**Pn**	**00 01 05.7**	**+3.3**
DAV	**Davao City (W)**	**5.53**	**351**	Pn	**Pn**	**00 01 04.9**	**+0.9**
	36nm,0.3s,baz=246,slow=20,SNR=1.3						
DAV				Sn	**Sn**	**00 02 10.9**	**+4.5**
	39nm,0.3s,baz=49,slow=22,SNR=1.3						
	121nm,0.3s						
TOLI2	**Tolitoli**	**5.66**	**265**		**Pn**	**00 01 06.0**	**+0.2**
MPSI	**Mapaga**	**6.64**	**259**	P	**Pn**	**00 01 23.5**	**+4.3**
	0.5nm1μm111nm,1.1s						
PCI	**Palu**	**7.03**	**250**	P	Pn	00 01 34.4	+10
FAKI	**Fak Fak**	**7.34**	**127**	Pn	**Pn**	**00 01 29.4**	**+0.5**
FAKI	**Fak Fak**	**7.34**	**127**	P	Pn	00 01 36.9	+8.0
BBSI	**Bau Bau**	**8.00**	**209**	P	Pn	00 01 48.5	+11
TTSI	**Tana Toraja**	**8.04**	**235**	P	Pn	00 01 43.7	+5.2
	0.5nm2μm89nm,0.7s						
SPSI	**Sidrap Palu**	**8.63**	**230**	P	Pn	00 01 52.0	+5.4
	0.3nm1μm72nm,1.3s						
BNSI	**Bone**	**8.66**	**227**	P	**Pn**	**00 01 50.9**	**+3.9**
	0.2nm809nm52nm,0.5s						
MYLDM	**Lahad Datu**	**8.68**	**295**		**Pn**	**00 01 47.2**	**-0.1**
BKSI	**Bulukumba**	**9.30**	**223**	P	**Pn**	**00 02 00.1**	**+4.3**
KAPI	**Kappang**	**9.34**	**225**	Pn	**Pn**	**00 01 57.6**	**+1.3**
	6.4nm,0.3s,baz=39,slow=9.7,SNR=8.0						
KAPI	**Kappang**	**9.34**	**225**		**Pn**	**00 01 58.0**	**+1.7**
KAPI	**Kappang**	**9.34**	**225**	*i* P	**Pn**	**00 02 00.4**	**+4.1**
MMRI	**Maumere**	**10.96**	**202**	Pn	**Pn**	**00 02 19.9**	**+1.2**
SOEI	**Soe**	**11.46**	**191**	Pn	**Pn**	**00 02 26.2**	**+0.7**
BATI	**Baumata**	**12.02**	**193**	Pn	**Pn**	**00 02 37.3**	**+4.2**
	3.6nm,0.3s,baz=30,slow=0.8,SNR=10						
PLAI	**Plampang**	**13.45**	**220**	P	**Pn**	**00 02 53.8**	**+1.1**
SBUM	**Sibu**	**14.22**	**274**		**Pn**	**00 03 04.8**	**+1.6**
JAY	**Jayapura**	**14.85**	**106**	Pn	**P**	**00 03 14.9**	**-2.2**
	1.0nm,0.3s,baz=290,slow=15,SNR=5.2						
JAY				LR	LR	00 08 36.4	
	comp=Z,446nm,20.6s,baz=352,slow=36						
MTN	**Manton Dam**	**15.07**	**162**		**Pn**	**00 03 14.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**15.78**	**231**		**Pn**	**00 03 24.5**	**+0.5**
JAGI	**Jajag, Banyuwa**	**15.78**	**231**	P	**Pn**	**00 03 26.4**	**+2.5**
KNRA	**Kununurra**	**17.29**	**172**		**Pn**	**00 03 42.0**	**-1.0**
KNRA				IAmb	IAmb	00 03 49.5	
	comp=Z,58nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	**P**	**00 04 09.8**	**+0.8**
	comp=Z,2.1nm,0.3s,baz=15,slow=8.7,SNR=69						
	comp=Z,4.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	**P**	**00 04 08.7**	**-0.4**
YULB	**Yu-li**	**22.25**	**347**	P	P	00 04 44.3	+6.1
WB0	**Warramunga Arr**	**22.60**	**160**	P	**P**	**00 04 41.4**	**-0.6**
WB0				IAmb	IAmb	00 04 44.1	
	comp=Z,34nm,0.9s						
COEN	**Coen**	**22.67**	**133**	P	**P**	**00 04 44.8**	**+2.1**
WRAB	**Tennant Creek**	**22.74**	**160**	P	**P**	**00 04 42.2**	**-1.2**
WRAB				IAmb	IAmb	00 04 46.1	
	comp=Z,29nm,0.8s						
WRAB	**Tennant Creek**	**22.74**	**160**	P	**P**	**00 04 43.9**	**+0.5**
WRAB	**Tennant Creek**	**22.74**	**160**	*ce*P	**P**	**00 04 43.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,28nm,0.7s						
WRA	**Warramunga Arr**	**22.75**	**160**	P	**P**	**00 04 43.4**	**-0.1**
	comp=Z,24nm,0.7s,baz=338,slow=10,SNR=47						
WRA				PcP	**PcP**	**00 08 35.6**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=342,slow=2.1,SNR=4.9						
WRA				S	**S**	**00 08 49.2**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=348,slow=20,SNR=8.4						
	comp=Z,24nm,0.7s						
WRA	**Warramunga Arr**	**22.75**	**160**	P	**P**	**00 04 41.4**	**-2.0**
WRA	**Warramunga Arr**	**22.75**	**160**	*i* P	**P**	**00 04 43.4**	**-0.1**
WRA				pmax	pmax		
	comp=Z,13nm,0.5s						
WR8	**Warramunga Arr**	**22.82**	**160**	P	**P**	**00 04 44.2**	**+0.1**
WR8				IAmb	IAmb	00 04 53.8	
	comp=Z,42nm,1.1s						
PMG	**Port Moresby**	**23.36**	**118**	P	**P**	**00 04 47.5**	**-2.3**
YHNB	**Yeheng**	**23.48**	**348**	P	**P**	**00 04 48.3**	**-2.5**
YHNB				IAmb	IAmb	00 04 57.7	
	comp=Z,17nm,0.8s						
MBWA	**Marble Bar**	**23.52**	**196**	P	**P**	**00 04 52.7**	**+1.5**
QIZ	**Qiongzhong**	**23.77**	**318**	P	**P**	**00 04 52.3**	**-1.3**
QIZ				S	**S**	**00 09 06.8**	**-0.1**
QIZ				LR	LR		
	comp=N,520nm,19.3s						
QIZ				LR	LR		
	comp=E,430nm,16.9s						
QIZ				LR	LR		
	comp=Z,640nm,19.5s						
PSA00	**Pilbara Seismi**	**23.88**	**195**	P	**P**	**00 04 53.6**	**-1.1**
PSA00	**Pilbara Seismi**	**23.88**	**195**	P	**P**	**00 04 55.4**	**+0.7**
JOW	**Kunigami**	**25.18**	**4**	P	**P**	**00 05 08.3**	**+1.9**
	1.0nm,0.3s,baz=156,slow=2.7,SNR=3.8						
	comp=Z,14nm,0.6s,baz=156,slow=2.7,SNR=3.8						
	comp=Z,14nm,0.6s						
JOW	**Kunigami**	**25.18**	**4**	P	**P**	**00 05 03.0**	**-3.5**
QIS	**Mount Isa**	**25.51**	**150**	P	**P**	**00 05 11.9**	**+2.4**
AS31	**Alice Springs**	**26.12**	**164**	P	**P**	**00 05 14.0**	**-1.0**
ASAR	**Alice Springs**	**26.12**	**164**	P	**P**	**00 05 15.9**	**+0.9**
	comp=Z,6.5nm,0.4s,baz=348,slow=13,SNR=54						
ASAR				PcP	**PcP**	**00 08 43.5**	**+1.4**
	comp=Z,2.2nm,0.6s,baz=352,slow=2.2,SNR=8.2						
ASAR				S	**S**	**00 09 46.6**	**+2.1**
	comp=Z,1.8nm,0.9s,baz=348,slow=19,SNR=5.8						
	comp=Z,6.5nm,0.4s						
ASAR	**Alice Springs**	**26.12**	**164**		**P**	**00 05 14.8**	**-0.3**
RPSI	**Rantau Prapat**	**27.50**	**273**	P	**P**	**00 05 25.4**	**-2.2**
RPSI				IAmb	IAmb	00 05 31.3	
	comp=Z,13nm,1.0s						
GSI	**Gunungsitoli**	**28.84**	**270**	P	**P**	**00 05 37.8**	**-1.8**
GSI				IAmb	IAmb	00 05 42.7	
	comp=Z,15nm,0.7s						
CTAO	**Charters Tower**	**29.01**	**139**	P	**P**	**00 05 39.2**	**-1.8**
MEEK	**Meekatharra**	**29.04**	**195**	P	**P**	**00 05 42.9**	**+1.7**
NJ2	**Nanjing**	**31.15**	**348**	*e*P	**P**	**00 06 00.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	**31.66**	**7**	P	**P**	**00 06 05.4**	**+1.1**
	comp=Z,13nm,0.9s,baz=92,slow=3.1,SNR=5.7						
	comp=Z,13nm,0.9s						
JNU	**Nakatsue**	**31.66**	**7**	P	**P**	**00 06 01.9**	**-2.3**
JNU				IAmb	IAmb	00 06 08.8	
	comp=Z,24nm,1.1s						
CMAR	**Chiang Mai Arr**	**31.75**	**304**	P	**P**	**00 06 07.2**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=111,slow=7.1,SNR=5.0						
CMAR				LR	LR	00 18 17.6	
	comp=Z,98nm,21.4s,baz=110,slow=35						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.75**	**304**	P	**P**	**00 06 03.5**	**-1.7**
CMAR	**Chiang Mai Arr**	**31.75**	**304**	*i* P	**P**	**00 06 08.6**	**+3.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MORW	**Morawa**	**32.05**	**197**	P	**P**	**00 06 05.5**	**-2.2**
MORW				IAmb	IAmb	00 06 16.5	
	comp=Z,20nm,1.1s						
MORW	**Morawa**	**32.05**	**197**	P	**P**	**00 06 09.1**	**+1.4**
FORT	**Forrest**	**32.21**	**177**	P	**P**	**00 06 07.2**	**-1.8**
FORT				IAmb	IAmb	00 06 17.9	
	comp=Z,8.3nm,0.7s						
INKA	**Innaminka**	**32.24**	**156**	P	**P**	**00 06 06.2**	**-3.1**
BLDU	**Ballidu**	**33.32**	**195**	P	**P**	**00 06 20.2**	**+1.4**
KLBR	**Kellerberrin**	**33.99**	**193**	P	**P**	**00 06 26.4**	**+1.8**
PZH	**PanZhiHua**	**34.30**	**318**	P	**P**	**00 06 28.0**	**+0.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MUN	**Mundaring**	**34.74**	**195**	P	**P**	**00 06 33.2**	**+2.1**
BBOO	**Buckleboo**	**35.39**	**166**	P	**P**	**00 06 37.0**	**+0.3**
BBOO				IAmb	IAmb	00 06 38.3	
	comp=Z,17nm,1.0s						
BBOO	**Buckleboo**	**35.39**	**166**	P	**P**	**00 06 37.8**	**+1.1**
NWAO	**Narrogin (SRO)**	**35.39**	**193**	P	**P**	**00 06 37.2**	**+0.5**
NWAO				IAmb	IAmb	00 06 38.9	
	comp=Z,18nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.39**	**193**	P	**P**	**00 06 38.5**	**+1.8**
KSRS	**Korea Array**	**35.73**	**2**	P	**P**	**00 06 41.4**	**+1.8**
	comp=Z,3.2nm,0.8s,baz=180,slow=10,SNR=6.9						
	comp=Z,3.2nm,0.8s						
STKA	**Stephens Creek**	**36.25**	**158**	P	**P**	**00 06 42.8**	**-1.2**
	comp=Z,4.7nm,0.7s,baz=325,slow=7.3,SNR=10						
	comp=Z,4.7nm,0.7s						
STKA	**Stephens Creek**	**36.25**	**158**	P	**P**	**00 06 46.4**	**+2.3**
STKA	**Stephens Creek**	**36.25**	**158**	*i* P	**P**	**00 06 44.2**	**+0.1**
MJAR	**Matsushiro Arr**	**36.47**	**16**	P	**P**	**00 06 45.3**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=188,slow=10,SNR=5.4						
MJAR				LR	LR	00 21 09.9	
	comp=Z,195nm,21.6s,baz=196,slow=35						
	comp=Z,2.0nm,0.7s						
HTT	**Hallett**	**36.76**	**162**	P	**P**	**00 06 50.5**	**+2.0**
LZDM	**Lanzhou Array**	**40.18**	**331**	P	**P**	**00 07 17.6**	**0.0**
	comp=Z,1.3nm,0.3s,baz=138,slow=9.5,SNR=1.5						
	comp=Z,1.3nm,0.3s						
LZH	**Lanzhou**	**40.22**	**331**	*e*P	**P**	**00 07 18.1**	**+0.5**
LZH				pP	pP	00 07 25.4	-2.1
LZH				PcP	PcP	00 09 32.8	+11
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
MSHR	**Mys Shultsa**	**41.05**	**5**	*i* P	**P**	**00 07 25.7**	**+1.5**
MSHR				pmax	pmax		
	comp=Z,21nm,1.2s						
USRK	**Ussuriysk Ar.**	**42.73**	**6**	P	**P**	**00 07 40.2**	**+2.3**
	comp=Z,2.1nm,0.4s,baz=208,slow=8.1,SNR=3.1						
	comp=Z,2.1nm,0.4s						
GTA	**Gaotai**	**44.80**	**330**	*e*P	**P**	**00 07 55.3**	**+0.5**
GTA				pP	pP	00 07 59.0	-5.7
GTA				PcP	**PP**	**00 09 38.4**	**-1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PALK	**Pallekele**	**45.91**	**279**	LR	LR	00 28 52.2	
	comp=Z,102nm,20.1s,baz=116,slow=38						
EVN	**Everest**	**46.05**	**308**	P	**P**	**00 08 04.4**	**-1.1**
EVN				IAmb	IAmb	00 08 10.1	
	comp=Z,9.8nm,0.8s						
HILR	**Hailar Array B**	**48.15**	**354**	P	**P**	**00 08 22.1**	**+1.4**
	comp=Z,5.0nm,0.6s,baz=167,slow=9.1,SNR=8.3						
	comp=Z,5.0nm,0.6s						
HEH	**HeiHe**	**48.51**	**1**	*e*P	**P**	**00 08 24.4**	**+0.9**
HEH				pmax	pmax		
	comp=Z,13nm,0.9s						
ULN	**Ulaanbaatar**	**49.07**	**343**	P	**P**	**00 08 25.9**	**-2.1**
ULN				IAmb	IAmb	00 08 30.2	
	comp=Z,10.0nm,1.1s						
ULN	**Ulaanbaatar**	**49.07**	**343**	*ce*P	**P**	**00 08 28.8**	**+0.7**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SONM	**Songino Array**	**49.24**	**342**	P	**P**	**00 08 29.6**	**+0.2**
	comp=Z,5.0nm,0.9s,baz=162,slow=8.1,SNR=18						
SONM				LR	LR	00 30 49.7	
	comp=Z,194nm,20.4s,baz=168,slow=38						
	comp=Z,5.0nm,0.9s						
WMQ	**Urumqi**	**54.32**	**326**	*e*P	**P**	**00 09 09.3**	**+2.0**
WMQ				pP	sP	00 09 20.6	-0.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,220nm,24.1s						
PETK	**Petropavlovsk-**	**57.53**	**22**	P	**P**	**00 09 30.4**	**+0.4**
	comp=Z,8.1nm,0.9s,baz=200,slow=5.4,SNR=4.1						
	comp=Z,8.1nm,0.9s						
ZSN	**Zaisan**	**58.15**	**328**	*e*P	**P**	**00 09 34.7**	**+0.2**
ZSN	**Zaisan**	**58.15**	**328**	*e*P	**P**	**00 09 34.6**	**+0.2**
DGZ	**Jazzator, Alta**	**58.32**	**331**	*i* P	**P**	**00 09 35.8**	**0.0**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHLS	**Shalkode**	**58.81**	**321**	*e*P	**P**	**00 09 37.9**	**-1.5**
	comp=Z,11nm,1.0s						
SHLS	**Shalkode**	**58.81**	**321**	*e*P	**P**	**00 09 37.8**	**-1.5**
SHLS				pmax	pmax		
	comp=Z,11nm,1.0s						
PRZ	**Przheval'sk**	**59.14**	**320**	P	**P**	**00 09 41.2**	**-0.5**
MK31	**Makanchi Array**	**59.15**	**326**	*ce*P	**P**	**00 09 42.2**	**+0.7**
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**00 09 41.5**	**0.0**
	comp=Z,5.9nm,0.7s,baz=121,slow=8.7,SNR=26						
	comp=Z,5.9nm,0.7s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**00 09 40.2**	**-1.2**
TARG	**Taragay, Kyrgy**	**59.15**	**319**	P	**P**	**00 09 40.9**	**-1.2**
TARG				IAmb	IAmb	00 09 48.4	
	comp=Z,7.1nm,1.0s						
KSH	**Kashi**	**59.36**	**316**	P	**P**	**00 09 44.0**	**+0.8**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SATY	**Saty**	**59.43**	**321**	*e*P	**P**	**00 09 43.9**	**+0.3**
	comp=Z,9.0nm,1.0s						
SATY	**Saty**	**59.43**	**321**	*e*P	**P**	**00 09 43.9**	**+0.3**
SATY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KDJ	**Kajisay**	**59.76**	**319**	P	**P**	**00 09 43.9**	**-2.0**
KDJ				IAmb	IAmb	00 09 50.5	
	comp=Z,8.1nm,0.8s						
MDOK	**Medeo**	**60.34**	**320**	*e*P	**P**	**00 09 50.2**	**+0.3**
MDOK	**Medeo**	**60.34**	**320**	*e*P	**P**	**00 09 50.2**	**+0.3**
TNSS	**Tian-Shan**	**60.34**	**320**	*e*P	**P**	**00 09 50.3**	**0.0**
TNSS	**Tian-Shan**	**60.34**	**320**	*e*P	**P**	**00 09 50.2**	**0.0**
YAK	**Yakutsk**	**60.36**	**2**	*e*P	**P**	**00 09 50.3**	**+0.9**
YAK				*e**PP	**pP**	**00 10 00.4**	**+0.8**
YAK				*e*		00 12 02.8	
YAK				*e*PPP	PPP	00 13 25.4	
YAK				*e*S	**S**	**00 18 02.5**	**+1.0**
YAK				*e**SS	**sS**	**00 18 19.9**	**+1.7**
YAK				*e*SS	**SS**	**00 22 04.7**	**+5.1**
YAK				pmax	pmax		
	comp=Z,32nm,1.3s						
YAK				pmax	pmax		
	comp=N,20nm,1.5s						
YAK				pmax	pmax		
	comp=E,15nm,1.5s						
YAK				pmax	pmax		
	comp=N,828nm,4.3s						
YAK				pmax	pmax		
	comp=Z,382nm,4.4s						
YA

GAR	**Garm**	**63.16**	**314**	P		**P**	**00**	**10**	**07.2 -1.7**
KURBB	**Kurchatov Arra**	**63.39**	**328**	P		**P**	**00**	**10**	**09.1 -0.9**
	comp=Z,8.0nm,0.7s,baz=126,slow=6.3,SNR=32								
	comp=Z,8.0nm,0.7s								
KURK	**Kurchatov**	**63.39**	**328**	P		**P**	**00**	**10**	**09.1 -1.0**
KURK	**Kurchatov**	**63.39**	**328**	*ce*	P	**P**	**00**	**10**	**10.4 +0.4**
KURK					pmax	pmax			
	comp=Z,19nm,0.9s								
CHGR	**Chuyangaron**	**63.88**	**313**	P		**P**	**00**	**10**	**12.4 -1.3**
IUG	**luzhnay**	**64.55**	**317**	*e*	P	**P**	**00**	**10**	**18.2 +0.1**
	comp=Z,13nm,1.1s								
IUG	**luzhnay**	**64.55**	**317**	*e*	P	**P**	**00**	**10**	**18.1 +0.1**
IUG					pmax	pmax			
	comp=Z,13nm,1.1s								
KK31	**Karatay Array**	**64.60**	**318**			**P**	**00**	**10**	**17.6 -0.6**
KKAR	**Karatay Array**	**64.60**	**318**	P		**P**	**00**	**10**	**17.5 -0.7**
CHM	**Chimkent**	**64.91**	**317**	*e*	P	**P**	**00**	**10**	**20.5 +0.3**
CHM	**Chimkent**	**64.91**	**317**	*e*	P	**P**	**00**	**10**	**20.5 +0.3**
BRLS	**Boroldav**	**65.03**	**318**	*e*	P	**P**	**00**	**10**	**21.1 +0.1**
BRLS	**Boroldav**	**65.03**	**318**	*e*	P	**P**	**00**	**10**	**21.1 +0.1**
BRZS	**Berezniki**	**66.27**	**325**	*e*	P	**P**	**00**	**10**	**29.5 +0.7**
BRZS	**Berezniki**	**66.27**	**325**	*e*	P	**P**	**00**	**10**	**29.5 +0.7**
HRA	**Herat**	**67.95**	**307**	P		**P**	**00**	**10**	**39.5 -0.6**
BVAR	**Borovoye Array**	**68.96**	**328**	P		**P**	**00**	**10**	**46.1 +0.4**
	comp=Z,3.8nm,0.7s,baz=144,slow=13,SNR=11								
	comp=Z,3.8nm,0.7s								
BORK	**Borovoye**	**69.00**	**328**	*ce*	P	**P**	**00**	**10**	**46.9 +0.9**
BORK					pmax	pmax			
	comp=Z,4.0nm,0.6s								
TIXI	**Tiksi**	**69.99**	**1**	P		**P**	**00**	**10**	**51.0 -0.7**
TIXI				IAmb		IAmb	00	11	07.5
	comp=Z,12nm,1.1s								
TIXI	**Tiksi**	**69.99**	**1**	*ce*	P	**P**	**00**	**10**	**52.4 +0.7**
TIXI					pmax	pmax			
	comp=Z,14nm,1.3s								
AB31	**Akbulak array**	**73.62**	**321**	P		**P**	**00**	**11**	**13.0 -1.0**
ABKAR	**Akbulak array**	**73.62**	**321**	P		**P**	**00**	**11**	**13.2 -0.8**
SVE	**Sverdlovsk**	**75.63**	**329**	*e*	P	**P**	**00**	**11**	**25.6 +0.1**
SVE					pmax	pmax			
	comp=Z,20nm,1.4s								
ARTI	**Arti**	**76.67**	**328**	P		**P**	**00**	**11**	**30.4 -1.0**
ARTI				IAmb		IAmb	00	11	39.0
	comp=Z,8.5nm,1.1s								
ARTI	**Arti**	**76.67**	**328**	*d*	*i* P	P	**00**	**11**	**32.2 +0.8**
ARTI							00	14	19.0
ARTI				S		**S**	**00**	**21**	**18.0 +2.4**
ARTI					pmax	pmax			
	comp=Z,19nm,1.8s								
RAYN	**Ar Rayn**	**81.05**	**293**	P		**P**	**00**	**11**	**55.2 -1.0**
RAYN				IAmb		IAmb	00	12	01.6
	comp=Z,6.3nm,0.8s								
VNDA	**Vanda**	**81.34**	**173**	P		**P**	**00**	**11**	**58.0 +1.5**
	comp=Z,1.9nm,0.5s,baz=307,slow=4.9,SNR=12								
	comp=Z,1.9nm,0.5s								
VNDA	**Vanda**	**81.34**	**173**	P		**P**	**00**	**11**	**57.2 +0.7**
MAW	**Mawson**	**81.64**	**200**	P		**P**	**00**	**11**	**58.1 -0.1**
	comp=Z,2.5nm,0.8s,baz=30,slow=1.9,SNR=4.5								
	comp=Z,2.5nm,0.8s								
KIRV	**Kirov**	**81.90**	**329**	*ce*	P	**P**	**00**	**11**	**59.9 +0.1**
BELG	**Belogornoye**	**81.92**	**323**	*i* P		**P**	**00**	**12**	**00.5 +0.4**
BELG					pmax	pmax			
	comp=Z,7.0nm,1.1s								
GNI	**Garni**	**82.62**	**310**	P		**P**	**00**	**12**	**02.4 -2.0**
GNI				IAmb		IAmb	00	12	19.4
	comp=Z,4.3nm,0.8s								
N19K	**Bonanza Creek**	**83.31**	**29**			**P**	**00**	**12**	**07.2 -0.2**
N19K				IAmb		IAmb	00	12	10.8
	comp=Z,12nm,1.0s								
E19K	**Redstone River**	**83.33**	**22**			**P**	**00**	**12**	**06.8 -0.4**
ATD	**Arta Tunnel**	**83.39**	**281**	P		**P**	**00**	**12**	**06.0 -2.6**
ATD				IAmb		IAmb	00	12	17.4
	comp=Z,13nm,1.1s								
RED	**Redoubt Volcan**	**84.09**	**29**	P		**P**	**00**	**12**	**09.3 -2.1**
KBZ	**Khabaz**	**84.23**	**314**	P		**P**	**00**	**12**	**13.3 +1.1**
	comp=Z,0.7nm,0.5s,baz=172,slow=3.0,SNR=4.5								
	comp=Z,0.7nm,0.5s								
KBZ	**Khabaz**	**84.23**	**314**	*i* P		**P**	**00**	**12**	**13.5 +1.2**
KBZ					pmax	pmax			
	comp=Z,11nm,1.4s								
KIV	**Kislovodsk**	**84.40**	**314**	*e*	P	**P**	**00**	**12**	**14.6 +1.3**
KIV					pmax	pmax			
	comp=Z,8.0nm,1.0s								
GURO	**Guroymak-BITLI**	**84.63**	**308**	P		**P**	**00**	**12**	**13.6 -1.0**
MLY	**Manley**	**85.55**	**25**	P		**P**	**00**	**12**	**16.7 -1.8**
MARD	**Mardin**	**85.58**	**307**	P		**P**	**00**	**12**	**19.2 -0.2**
MARD				IAmb		IAmb	00	12	24.6
	comp=Z,8.7nm,1.1s								
KOPT	**Kop Dagi**	**85.87**	**310**	P		**P**	**00**	**12**	**18.9 -2.1**
TOLK	**Toolik Lake Re**	**86.35**	**21**	P		**P**	**00**	**12**	**20.4 -2.0**
SOC	**Sochi**	**86.53**	**313**	*e*	P	**P**	**00**	**12**	**22.7 -1.1**
SOC				*e*			00	15	44.0
SOC				*e*	PPP	PPP	00	17	39.6
SOC				*e*	S	**SKSac**	**00**	**22**	**45.9 -2.0**
SOC				*e*	SS	**SS**	**00**	**28**	**38.0 -0.9**
SOC				*e*	SSS	SSS	00	32	14.9
SOC					pmax	pmax			
	comp=Z,17nm,1.0s								
KLMR	**Klimovskoe**	**87.12**	**331**	*e*	P	**P**	**00**	**12**	**24.5 -1.7**
KLMR					pmax	pmax			
	comp=Z,31nm,1.6s								
ILAR	**Eielson Array**	**87.17**	**25**	P		**P**	**00**	**12**	**26.4 -0.1**
	comp=Z,0.5nm,0.9s,baz=248,slow=6.0,SNR=2.8								
	comp=Z,0.5nm,0.9s								
MOS	**Moscow**	**88.03**	**326**	*e*	P	**P**	**00**	**12**	**31.4 +0.7**
MOS					pmax	pmax			
	comp=Z,24nm,1.0s								
KIBK	**Kibwezi**	**88.44**	**268**			**P**	**00**	**12**	**32.6 -1.1**
KIBK				IAmb		IAmb	00	12	42.9
	comp=Z,4.0nm,0.9s								
OBN	**Obninsk**	**88.64**	**325**	P		**P**	**00**	**12**	**32.3 -1.2**
OBN	**Obninsk**	**88.64**	**325**	*e*	P	**P**	**00**	**12**	**32.9 -0.7**
OBN				*e*			00	15	58.5
OBN					pmax	pmax			
	comp=Z,21nm,1.6s								
OBN					MLR	MLR			
	comp=Z,144nm,16.0s								
KMBO	**Kilima Mbogo**	**89.20**	**269**	P		**P**	**00**	**12**	**39.1 +1.7**
	comp=Z,0.9nm,0.3s,baz=103,slow=10,SNR=6.4								
	comp=Z,0.9nm,0.3s								
BALJ	**Balqa**	**89.84**	**302**			**P**	**00**	**12**	**39.5 -0.3**
GHAJ	**Ghor Haditha**	**89.92**	**301**			**P**	**00**	**12**	**38.0 -2.1**
MMAI	**Mount Meron Ar**	**90.01**	**303**	P		**P**	**00**	**12**	**42.5 +1.9**
	comp=Z,0.7nm,0.4s,baz=78,slow=6.1,SNR=6.2								
	comp=Z,0.7nm,0.4s								
BRTR	**Keskin Array B**	**91.15**	**310**	P		**P**	**00**	**12**	**46.2 +0.3**
	comp=Z,1.3nm,0.8s,baz=141,slow=3.5,SNR=8.0								
	comp=Z,1.3nm,0.8s								
BRTR	**Keskin Array B**	**91.15**	**310**	*i* P		**P**	**00**	**12**	**48.0 +2.1**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.9s								
ARCES	**ARCESS Array B**	**92.35**	**340**	P		**P**	**00**	**12**	**51.5 +0.8**
	comp=Z,1.7nm,0.6s,baz=88,slow=5.0,SNR=11								
	comp=Z,1.7nm,0.6s								
SPITS	**Spitsbergen Ar**	**92.52**	**349**	P		**P**	**00**	**12**	**51.6 +0.3**
	comp=Z,3.4nm,0.8s,baz=66,slow=8.2,SNR=5.0								
	comp=Z,3.4nm,0.8s								
AKASG	**Malin Array Be**	**93.36**	**321**	P		**P**	**00**	**12**	**56.8 +1.2**
	comp=Z,0.8nm,0.5s,baz=74,slow=4.9,SNR=2.7								
	comp=Z,0.8nm,0.5s								
FINES	**FINESS Array B**	**93.58**	**332**	P		**P**	**00**	**12**	**58.4 +1.9**
	comp=Z,1.8nm,0.6s,baz=64,slow=6.6,SNR=15								
	comp=Z,1.8nm,0.6s								
MBAR	**Mbarara**	**95.70**	**270**	LR		LR	00	52	40.0
	comp=Z,83nm,21.5s,baz=331,slow=33								
BURAR	**Bucovina Array**	**96.39**	**318**	P		**P**	**00**	**13**	**08.2 -1.6**
BURAR				IAmb		IAmb	00	13	16.9
	comp=Z,3.9nm,0.8s								
BUR08	**Bucovina Ar. S**	**96.40**	**318**	P		**P**	**00**	**13**	**08.6 -1.2**
STHS	**Stebnicka Huta**	**98.64**	**320**	*e*	P	Pdif	00	13	19.8 0.0
HFS	**Hagfors**	**99.77**	**332**	P		**Pdif**	**00**	**13**	**25.5 +1.0**
	comp=Z,2.9nm,1.0s,baz=66,slow=3.6,SNR=5.0								
	comp=Z,2.9nm,1.0s								
LANS	**Liptovska Anna**	**99.84**	**320**	*e*	P	**Pdif**	**00**	**13**	**26.2 +1.1**
NOA	**NORSAR Array B**	**100.57**	**333**	P		**Pdif**	**00**	**13**	**28.9 +0.8**
	comp=Z,0.7nm,0.9s,baz=68,slow=4.5,SNR=2.5								
MODS	**Modra-Piesok**	**101.44**	**320**	*e*	P	**Pdif**	**00**	**13**	**30.9 -1.3**
TXAR	**Lajitas Array**	**123.14**	**53**	PKP		**PKiKP**	**00**	**18**	**38.9 +0.7**
	comp=Z,0.8nm,0.9s,baz=241,slow=1.3,SNR=7.6								
PLCA	**Paso Flores**	**138.10**	**161**	PKP		**PKPdf**	**00**	**19**	**06.5 +0.5**
	comp=Z,1.8nm,1.0s,baz=270,slow=3.0,SNR=3.0								

*NNC **15** 00:04:33.4±0.3,42.˚68N×70.˚32E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=1.6km s-min=1.5km az=147.0*
*SOME **15** 00:04:34.5,42.˚67N×70.˚40E,h10km*

*KRNET **15** 00:04:34.1±0.1,42.˚50N×70.˚23E,mb2.9*
ISC 15 00:04:31.8±1.1,**42.˚76N**±0.˚03×**70.˚40E**±0.˚02,**h6**km±10km, **n42,σ1°46/72,19C-15D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.36**	**14**	⇓P	**Pn**	**00 04 42.4**	**-1.2**
	5.8nm,0.2s,baz=198,slow=17,SNR=1786						
KK31				⇑S	**Sb**	**00 04 48.7**	**+2.1**
	68nm,0.2s,baz=200,slow=31,SNR=7.7						
BRLS	**Boroldav**	**0.49**	**304**	P	**Pb**	**00 04 42.9**	**-0.1**
	73nm,0.2s						
BRLS				S	**Sb**	**00 04 49.5**	**-0.9**
	174nm,0.2s						
BRLS	**Boroldav**	**0.49**	**304**	*e*P	**Pb**	**00 04 42.9**	**-0.1**
	73nm,0.2s						
BRLS				*e*S	**Sb**	**00 04 49.5**	**-0.9**
	174nm,0.2s						
IUG	**luzhnay**	**0.67**	**204**	P	**Pg**	**00 04 44.5**	**-0.2**
	57nm,0.1s						
IUG				S	**Sg**	**00 04 52.8**	**-0.5**
	206nm,0.2s						
DZA	**Taraz**	**0.70**	**79**	P	**Pn**	**00 04 48.1**	**-0.2**
	17nm,0.2s						
DZA				S	**Sn**	**00 04 58.5**	**-1.1**
	111nm,0.2s						
DZA	**Taraz**	**0.70**	**79**	*e*P	**Pn**	**00 04 48.1**	**-0.2**
	17nm,0.2s						
DZA				*e*S	**Sn**	**00 04 58.5**	**-1.1**
	111nm,0.2s						
CHM	**Chimkent**	**0.73**	**233**	*e*P	**Pg**	**00 04 46.2**	**+0.4**
	36nm,0.1s						
CHM				*e*S	**Sg**	**00 04 55.3**	**0.0**
	95nm,0.2s						
TRKS	**Terek-Say**	**1.35**	**155**	⇓*i*P	**Pg**	**00 04 58.1**	**+0.5**
TRKS				⇓*i*S	**Sn**	**00 05 15.3**	**-0.4**
ARK	**Arkit**	**1.51**	**129**	⇓*i*P	**Pg**	**00 05 01.6**	**+0.9**
ARK				⇓*i*S	**Sg**	**00 05 21.9**	**+1.7**
MRKS	**Merke**	**2.08**	**89**	Pg	**Pg**	**00 05 12.4**	**+0.7**
	4.4nm,0.4s						
MRKS				Lg	Lg	00 05 40.3	
	25nm,0.3s						
MRKS	**Merke**	**2.08**	**89**	*e*P	**Pg**	**00 05 12.4**	**+0.7**
	4.4nm,0.4s						
MRKS				*e*S	**Sg**	**00 05 40.3**	**+1.6**
	25nm,0.3s						
ARSB	**Arslanbob**	**2.40**	**126**	⇓*i*P	**Pb**	**00 05 16.2**	**+0.7**
ARSB				⇓*i*S	**Sg**	**00 05 47.0**	**-1.9**
EKS2	**Erkin-Say**	**2.49**	**91**	⇑*i*P	**Pg**	**00 05 19.6**	**0.0**
EKS2				⇑*i*S	**Sg**	**00 05 53.2**	**+1.3**
OHH	**Osh**	**2.86**	**140**	⇑*e*P	**Pb**	**00 05 21.2**	**-2.2**
OHH				⇑*e*S	**Sb**	**00 05 56.1**	**-2.6**
AAK	**Ala-Archa**	**3.02**	**91**	⇑Pg	**Pg**	**00 05 29.5**	**-0.3**
	1.2nm,0.6s						
AAK				⇑Lg	Lg	00 06 09.3	
	2.4nm,0.5s						
AAK	**Ala-Archa**	**3.02**	**91**	⇑*i*P	**Pb**	**00 05 27.1**	**+0.9**
AAK				⇑*i*S	**Sb**	**00 06 05.8**	**+2.4**
ARLS	**Aral**	**3.05**	**106**	⇑*i*P	**Pb**	**00 05 26.7**	**+0.1**
ARLS				⇑*i*S	**Sb**	**00 06 04.9**	**+0.8**
USP	**Ospenovka**	**3.05**	**79**	⇑*i*P	**Pb**	**00 05 28.2**	**+1.6**
USP				⇑*i*S	**Sg**	**00 06 07.5**	**-2.4**
UCH	**Uchtor**	**3.09**	**98**	⇓*i*P	**Pb**	**00 05 27.9**	**+0.4**
UCH				⇓*i*S	**Sb**	**00 06 06.8**	**+1.1**
SALK	**Salom-Alik**	**3.17**	**125**	⇓*i*P	**Pb**	**00 05 26.9**	**-1.8**
SALK				⇓*i*S	**Sb**	**00 06 05.5**	**-2.2**
SGDS	**Sogindy**	**3.18**	**76**	Pg	**Pg**	**00 05 32.1**	**-0.6**
	1.2nm,0.3s						
SGDS				Lg	Lg	00 06 13.2	
	4.7nm,0.6s						
KBK	**Karagaybulak**	**3.36**	**90**	⇑*i*P	**Pb**	**00 05 31.9**	**0.0**
KBK				⇑*i*S	**Sb**	**00 06 13.8**	**+0.8**
DRK	**Karamyk**	**3.44**	**162**	⇓*e*P	**Pn**	**00 05 28.5**	**+2.2**
DRK				⇓*e*S	**Sn**	**00 06 07.9**	**+0.3**
BTLS	**Baital**	**3.49**	**48**	Pg	**Pg**	**00 05 39.8**	**+1.2**
	1.7nm,0.2s						
BTLS				Lg	Lg	00 06 26.0	
	3.3nm,0.4s						
BTLS	**Baital**	**3.49**	**48**	*e*P	**Pg**	**00 05 39.8**	**+1.2**
	1.7nm,0.2s						
BTLS				*e*S	**Sg**	**00 06 26.1**	**+2.2**
	3.3nm,0.4s						
SFK	**Sufi-Kurgan**	**3.60**	**139**	⇑*i*P	**Pn**	**00 05 31.9**	**+3.4**
SFK				⇑*i*S	**Sn**	**00 06 14.1**	**+2.6**
GAR	**Garm**	**3.75**	**181**	⇑*i*P	**Pn**	**00 05 31.7**	**+1.3**
GAR				⇑*i*S	**Sn**	**00 06 13.9**	**-1.1**
KRBS	**Karabastau**	**3.97**	**75**	Pg	**Pg**	**00 05 47.6**	**-0.3**
	1.7nm,0.3s						
KRBS				Lg	Lg	00 06 39.1	
	1.8nm,0.3s						
KRBS	**Karabastau**	**3.97**	**75**	*e*P	**Pg**	**00 05 47.6**	**-0.3**
KRBS				*e*S	**Sg**	**00 06 39.1**	**-0.2**
DGS	**Degeres**	**3.97**	**81**	Pg	**Pg**	**00 05 47.5**	**-0.5**
	1.8nm,0.3s						
DGS				Lg	Lg	00 06 39.1	
	6.7nm,0.7s						
DGS	**Degeres**	**3.97**	**81**	*e*P	**Pg**	**00 05 47.5**	**-0.5**
	1.8nm,0.3s						
DGS				*e*S	**Sg**	**00 06 39.1**	**-0.3**
	6.7nm,0.7s						
BOOM	**Boomskoye usch**	**4.10**	**92**	⇓*e*P	**Pb**	**00 05 41.9**	**-2.6**
BOOM				⇓*e*S	**Sb**	**00 06 31.1**	**-3.3**
KST	**Kastek**	**4.10**	**84**	Pg	**Pg**	**00 05 49.2**	**-1.1**
	2.5nm,0.3s						
KST				Lg	Lg	00 06 42.2	
	8.7nm,0.4s						
KST	**Kastek**	**4.10**	**84**	*e*P	**Pg**	**00 05 49.2**	**-1.1**
	2.5nm,0.3s						
KST				*e*S	**Sg**	**00 06 42.2**	**-1.2**
	8.7nm,0.4s						
KTBS	**Karatobe**	**4.69**	**76**	Pg	**Pg**	**00 06 01.0**	**-0.7**
	1.3nm,0.3s						
KTBS				Lg	Lg	00 07 02.7	
	4.0nm,0.6s						
TNSS	**Tian-Shan**	**4.82**	**84**	Pg	**Pg**	**00 06 02.8**	**-1.3**
	0.4nm,0.2s						
TNSS				Lg	Lg	00 07 05.8	
	2.0nm,0.6s						
TNSS	**Tian-Shan**	**4.82**	**84**	*e*P	**Pg**	**00 06 02.8**	**-1.3**
	0.4nm,0.2s						
TNSS				*e*S	**Sg**	**00 07 05.8**	**-0.8**
	2.0nm,0.6s						
MDOK	**Medeo**	**4.90**	**83**	Pg	**Pg**	**00 06 03.5**	**-2.1**
	0.9nm,0.4s						
MDOK				Lg	Lg	00 07 07.0	
	1.9nm,0.6s						
KOTS	**Kotyrbulak**	**4.95**	**82**	Pg	**Pg**	**00 06 06.8**	**+0.1**
	1.7nm,0.3s						
KOTS				Lg	Lg	00 07 12.9	
	5.2nm,0.6s						
KOTS	**Kotyrbulak**	**4.95**	**82**	*e*P	**Pg**	**00 06 06.8**	**+0.1**
	1.7nm,0.3s						
KOTS				*e*S	**Sg**	**00 07 12.9**	**+2.2**
	5.2nm,0.6s						
ARXS	**Arharly**	**5.60**	**72**	Pg	**Pg**	**00 06 15.9**	**-3.1**
	1.2nm,0.5s						
ARXS				Lg	Lg	00 07 29.2	
	3.6nm,0.6s						
ARXS	**Arharly**	**5.60**	**72**	*e*P	**Pg**	**00 06 17.2**	**-1.8**
	1.2nm,0.6s						
ARXS				*e*S	**Sg**	**00 07 30.9**	**-0.7**
	3.6nm,0.6s						

*IDC **15** 00:05:26.7±3.9,15.˚86S×167.˚82E,h153km±28km,mb4.0/5, mbtmp4.4/6,Error ellipse: s-maj=33.9km s-min=24.7km az=36.0*
*NEIC **15** 00:05:31.1±0.8,16.˚26S±0.˚07×167.˚9E±0.˚1,h179km±9km, mb4.3/12,Error ellipse: s-maj=17.1km s-min=9.1km az=76.0*
ISC 15 00:05:29.6±0.9,**16.˚21S**±0.˚07×**168.˚0E**±0.˚1,**h177**km,**n31, σ1°39/34,mb4.4/11,4C,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.05**	**316**	Pn	**Pn**	**00 05 58.6**	**+1.2**
MARNC	**Mare, Loyalty**	**5.25**	**179**	Pn	**Pn**	**00 06 46.9**	**+0.2**
MARNC				Sn	**Sn**	**00 07 45.4**	**-1.9**
MARNC	**Mare, Loyalty**	**5.25**	**179**	P	**Pn**	**00 06 46.2**	**-0.5**
	0.6nm,0.6s						
YATNC	**Mamie plateau,**	**5.91**	**190**	P	**Pn**	**00 06 58.2**	**+2.8**
	21nm,0.6s						
DZM	**Mont Dzumac**	**6.01**	**194**	P	**Pn**	**00 06 56.9**	**+0.2**
	5.7nm,0.4s,baz=357,slow=20,SNR=14						
DZM				S	**Sn**	**00 08 07.8**	**+2.4**
	5.4nm,0.7s,baz=281,slow=24,SNR=3.1						

ONTNC	**Ouen Toro**	**6.24**	**193**	P		Pn	00	06	52.5 -7.1
	44nm,1.1s								
OUENC	**Ouen Island, N**	**6.27**	**190**	P		Pn	00	07	06.5 +6.4
	16nm,1.1s								
PINNC	**Pines Island,**	**6.39**	**184**	Pn		**Pn**	**00**	**07**	**01.9 +0.3**
EIDS	**Eidsvold**	**18.21**	**237**	Pn		**P**	**00**	**09**	**30.9 +1.6**
CTAO	**Charters Tower**	**20.98**	**256**	P		**P**	**00**	**09**	**59.0 -0.2**
CTAO				IAmb		IAmb	00	09	59.3
	comp=Z,10nm,1.4s								
COEN	**Coen**	**24.04**	**272**	P		**P**	**00**	**10**	**28.1 -0.4**
COEN				IAmb		IAmb	00	10	31.2
	comp=Z,9.8nm,0.9s								
STKA	**Stephens Creek**	**28.59**	**232**	P		**P**	**00**	**11**	**08.4 -0.8**
	comp=Z,1.0nm,0.3s,baz=125,slow=23,SNR=3.1								
	comp=Z,1.0nm,0.3s								
TOO	**Toolangi**	**29.09**	**219**	P		**P**	**00**	**11**	**13.5 -0.2**
WR8	**Warramunga Arr**	**32.00**	**258**	P		**P**	**00**	**11**	**37.8 -1.6**
WR8				IAmb		IAmb	00	12	18.9
	comp=Z,11nm,1.4s								
WB0	**Warramunga Arr**	**32.09**	**259**	P		**P**	**00**	**11**	**38.9 -1.4**
WB0				IAmb		IAmb	00	11	40.2
	comp=Z,5.6nm,1.0s								
WRA	**Warramunga Arr**	**32.15**	**258**	P		**P**	**00**	**11**	**39.2 -1.5**
	comp=Z,1.0nm,0.7s,baz=84,slow=8.6,SNR=6.2								
WRA				PcP		**PcP**	**00**	**14**	**24.5 -1.1**
	comp=Z,0.5nm,1.0s,baz=89,slow=3.3,SNR=2.2								
	comp=Z,1.0nm,0.7s								
AS31	**Alice Springs**	**32.80**	**251**	P		**P**	**00**	**11**	**45.9 -0.5**
AS31				IAmb		IAmb	00	11	46.5
	comp=Z,3.0nm,0.5s								
ASAR	**Alice Springs**	**32.81**	**251**	P		**P**	**00**	**11**	**45.9 -0.6**
	comp=Z,4.3nm,0.5s,baz=77,slow=8.8,SNR=65								
ASAR				PcP		**PcP**	**00**	**14**	**26.3 -1.0**
	comp=Z,0.2nm,0.5s,baz=84,slow=3.1,SNR=1.9								
ASAR				ScP		**ScP**	**00**	**17**	**54.3 -0.5**
	comp=Z,0.4nm,0.8s,baz=77,slow=2.8,SNR=3.2								
	comp=Z,4.3nm,0.5s								
BBOO	**Buckleboo**	**33.23**	**234**	P		**P**	**00**	**11**	**49.7 -0.3**
FITZ	**Fitzroy Crossi**	**40.42**	**261**	P		**P**	**00**	**12**	**50.4 -0.5**
	comp=Z,7.9nm,0.7s,baz=78,slow=8.4,SNR=22								
	comp=Z,7.9nm,0.7s								
FITZ	**Fitzroy Crossi**	**40.42**	**261**	P		**P**	**00**	**12**	**50.6 -0.2**
VNDA	**Vanda**	**61.41**	**182**	P		**P**	**00**	**15**	**26.9 +0.4**
QSPA	**South Pole Qui**	**73.83**	**180**	P		**P**	**00**	**16**	**47.5 +2.9**
	comp=Z,3.8nm,0.6s,baz=22,slow=6.0,SNR=11								
	comp=Z,3.8nm,0.6s								
QSPA	**South Pole Qui**	**73.83**	**180**	P		**P**	**00**	**16**	**46.6 +2.0**
QSPA				IAmb		IAmb	00	16	50.4
	comp=Z,6.7nm,0.8s								
FALS	**False Pass**	**74.85**	**17**	P		**P**	**00**	**16**	**52.0 +1.7**
TROLL	**Troll, Antarti**	**91.45**	**184**	⇑P		**P**	**00**	**18**	**14.5 -0.9**
	comp=Z,103nm,0.6s								
SNAA	**Sanae**	**92.12**	**183**	⇑P		**P**	**00**	**18**	**17.2 -1.3**
	comp=Z,32nm,0.6s								
VNA3	**Neumayer Olymp**	**92.76**	**181**	⇑P		**P**	**00**	**18**	**19.9 -1.5**
	comp=Z,3.5nm,0.8s								
VNA2	**Neumayer--Watz**	**93.03**	**182**	⇑P		**P**	**00**	**18**	**21.2 -1.4**
	comp=Z,2.8nm,0.6s,baz=182,slow=3.2								
ARCES	**ARCESS Array B**	**121.84**	**345**	PKP		**PKPdf**	**00**	**24**	**00.7 -1.3**
	comp=Z,1.0nm,0.6s,baz=49,slow=1.7,SNR=14								
FINES	**FINESS Array B**	**127.33**	**338**	PKP		**PKPdf**	**00**	**24**	**11.2 -1.5**
	comp=Z,3.2nm,1.0s,baz=28,slow=3.3,SNR=2.1								

*IDC **15** 00:06:12.4±1.6,8.˚63N×103.˚40W,h0km,mb3.8/5, mbtmp3.8/7,ML3.3/2,MS3.9/2,Error ellipse: s-maj=49.3km s-min=21.9km az=60.0*
*NEIC **15** 00:06:15.7±1.8,8.˚7N±0.˚1×103.˚25W±0.˚08,h10km±2km, mb4.3/31,Error ellipse: s-maj=24.8km s-min=5.4km az=211.0*
ISC 15 00:06:14.8±1.1,**8.˚7N**±0.˚1×**103.˚3W**±0.˚1,**h10**km,**n49, σ1°06/42,mb4.3/18,Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op

H03N2	**Juan Fernandez**	**47.89**	**152**	T	T	01 05 58.9		
	baz=328,slow=77,SNR=23							
H03N1	**Juan Fernandez**	**47.90**	**152**	T	T	01 06 02.4		
	baz=328,slow=77,SNR=34							
H03N3	**Juan Fernandez**	**47.91**	**152**	T	T	01 06 01.5		
	baz=328,slow=77,SNR=35							
PPT	**Papeete**		**52.68**	**240**	LR	LR	00 32 25.4	
	comp=Z,104nm,21.1s,baz=76,slow=30							
CPUP	**Villa Florida**		**56.60**	**129**	P	**P**	**00 15 59.4**	**+1.2**
	comp=Z,1.3nm,1.0s,baz=264,slow=9.2,SNR=4.1							
	comp=Z,1.3nm,1.0s							
ILAR	**Eielson Array**		**63.71**	**341**	P	P	00 16 44.4	-1.9
	comp=Z,1.0nm,0.8s,baz=148,slow=4.7,SNR=8.6							
	comp=Z,1.0nm,0.8s							
ILAR	**Eielson Array**		**63.71**	**341**	P	**P**	**00 16 45.4**	**-1.0**

IDC 15 00:17:30.3±2.0, 1.87N×127.21E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=180.3km s-min=22.8km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.78**	**162**	P	P	00 22 34.5	-0.2
	1.3nm,0.7s,baz=342,slow=10,SNR=6.7						
	1.3nm,0.7s						
ASAR	**Alice Springs**		**26.21**	**166**	P	P	00 23 06.7	-0.3
	0.5nm,0.5s,baz=345,slow=8.0,SNR=7.0						
	0.5nm,0.5s						
MKAR	**Makanchi Array**		**59.35**	**326**	P	P	00 27 34.0	-0.3
	0.3nm,0.4s,baz=134,slow=6.9,SNR=2.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**		**63.55**	**328**	P	P	00 28 03.1	+0.5
	0.5nm,0.6s,baz=130,slow=5.9,SNR=4.7						
	0.5nm,0.6s						

*MDD **15** 00:19:25.5±1.4, 36.70N×11.30W, h8km±11km, Mb4.2/10, M_mb3.6/10, Error ellipse: s-maj=11.9km s-min=5.7km az=85.0*

*CNRM **15** 00:19:36.1, 36.31N×10.37W, h30km*

ISC 15 00:19:32.6±2.1, 36.45N±0.05×10.3W±0.1, h10km, n29, σ1§86/32, 9C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVAQ	**Vaqueiros**	**2.28**	**65**	P	**Pb**	**00 20 13.7**	**-0.2**
PVAQ	**Vaqueiros**	**2.28**	**65**	S	**Sb**	**00 20 41.8**	**-0.3**
EGRO	**El Granado**	**2.50**	**64**	Pn	**Pn**	**00 20 10.7**	**-2.6**
EGRO				⇑*i*Vmb_VC		00 20 14.4	
	216nm,SNR=1.0						
EGRO				Sn	**Sg**	**00 20 51.3**	**-1.7**
EMIN	**Mina Concepcio**	**3.19**	**65**	⇑*i*IVmb_VC		00 20 23.0	
	205nm,SNR=1.4						
EMIN				Sn	**Sb**	**00 21 07.1**	**-1.1**
EBAD	**Badajoz**	**3.48**	**48**	⇑*i*IVmb_VC		00 20 24.4	
	256nm,SNR=1.2						
EBAD				Pn	**Pn**	**00 20 25.4**	**-1.4**
EBAD				Sn	**Sn**	**00 21 09.4**	**+1.3**
ESPR	**Espera**	**3.60**	**82**	⇑*i*IVmb_VC		00 20 40.2	
	215nm,SNR=1.1						
ESPR				Sn	**Sb**	**00 21 19.3**	**-0.7**
ECAB	**El Cabril**	**4.22**	**66**	Pn	**Pn**	**00 20 37.9**	**+0.9**
ECAB				⇑*i*IVmb_VC		00 20 45.1	
	167nm,SNR=1.0						
ECAB				Sn	**Sn**	**00 21 31.0**	**+4.6**
SRHM	**Skhour des Reh**	**4.44**	**153**	P	**Pn**	**00 20 42.2**	**+2.2**
SRHM	**Skhour des Reh**	**4.44**	**153**	S	**Sn**	**00 21 34.5**	**+2.8**
EADA	**Adamuz**	**4.88**	**68**	Pn	**Pn**	**00 20 47.5**	**+1.5**
EADA				⇑*i*IVmb_VC		00 20 49.4	
	213nm,SNR=1.2						
EADA				Sn	**Sn**	**00 21 46.9**	**+4.4**
EPLA	**Plasencia**	**4.91**	**41**	⇑*i*IVmb_VC		00 20 47.6	
	250nm,SNR=1.2						
EPLA				Sn	**Sn**	**00 21 41.6**	**-1.7**
AKLM	**AKL**	**5.60**	**108**	P	**Pn**	**00 20 55.7**	**-0.3**
AKLM	**AKL**	**5.60**	**108**	S	**Sn**	**00 21 58.1**	**-2.3**
OUK	**Oukaimeden**	**5.61**	**158**	P	**Pn**	**00 20 55.7**	**-0.6**
OUK	**Oukaimeden**	**5.61**	**158**	S	**Sn**	**00 21 59.0**	**-2.0**
PAB	**San Pablo**	**5.63**	**55**	⇑*i*IVmb_VC		00 20 59.8	
	115nm,SNR=0.7						
PAB				Sn	**Sn**	**00 22 01.8**	**+0.7**
ELOB	**Lobios**	**5.69**	**17**	⇑*i*IVmb_VC		00 20 57.0	
	366nm,SNR=0.9						
ELOB				Sn	Sn	00 21 51.6	-11
TISM	**Timmit**	**5.70**	**145**	P	**Pn**	**00 20 57.4**	**+0.1**
TISM	**Timmit**	**5.70**	**145**	S	**Sn**	**00 22 01.9**	**-0.9**
PSIM	**Granatula de C**	**5.71**	**64**	Sn	**Sn**	**00 22 06.0**	**+2.9**
MD31	**MD31**	**5.80**	**126**	P	**Pn**	**00 20 59.3**	**+0.6**
MD31	**MD31**	**5.80**	**126**	S	**Sn**	**00 22 05.3**	**0.0**
MDT	**Midelt**	**5.93**	**126**	P	**Pn**	**00 21 01.2**	**+0.6**
MDT	**Midelt**	**5.93**	**126**	S	**Sn**	**00 22 09.9**	**+1.3**
TIO	**Tiouine**	**6.06**	**154**	P	**Pn**	**00 21 02.6**	**+0.2**
TIO	**Tiouine**	**6.06**	**154**	S	**Sn**	**00 22 12.2**	**+0.3**
OUZM	**OUZ**	**6.26**	**151**	P	**Pn**	**00 21 06.7**	**+1.5**
OUZM	**OUZ**	**6.26**	**151**	S	**Sn**	**00 22 16.3**	**-0.6**
TAF	**Taforalt**	**6.63**	**102**	P	**Pn**	**00 21 11.5**	**+1.4**

*IDC **15** 00:20:28.7±0.9, 1.55N×126.52E, h0km, mb3.9/8, mbtmp4.0/10, ML3.9/2, Error ellipse: s-maj=54.1km s-min=15.1km az=71.0*

*NEIC **15** 00:20:32.5±2.7, 1.46N±0.09×126.45E±0.07, h22km±7km, mb4.3/6, Error ellipse: s-maj=14.7km s-min=7.6km az=211.0*

ISC 15 00:20:33.7±0.8, 1.5N±0.1×126.42E±0.10, h35km, n24, σ1§01/26, mb4.2/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**		**1.17**	**126**	**Pn**	**00 20 53.0**	**-0.6**
TNTI					**Sn**	**00 21 07.3**	**-1.0**
LUWI	**Luwuk**		**4.42**	**236**	Pn	**Pn**	**00 21 38.7**	**+0.3**
TOLI2	**Tolitoli**		**5.65**	**266**		**Pn**	**00 21 54.8**	**-0.5**
MYLDM	**Lahad Datu**		**8.72**	**295**	Pn	**Pn**	**00 22 36.5**	**-0.9**
KAPI	**Kappang**		**9.27**	**226**	Pn	**Pn**	**00 22 46.5**	**+1.5**
	1.9nm,0.3s,baz=260,slow=4.8,SNR=3.6							
	5.2nm,0.5s							
KAPI	**Kappang**		**9.27**	**226**		**Pn**	**00 22 43.1**	**-1.9**
FITZ	**Fitzroy Crossi**		**19.46**	**182**	P	**P**	**00 24 57.2**	**-0.3**
	0.2nm,0.3s,baz=16,slow=10,SNR=6.5							
	2.3nm,0.7s							
FITZ	**Fitzroy Crossi**		**19.46**	**182**	P	**P**	**00 24 57.3**	**-0.3**
WB0	**Warramunga Arr**		**22.51**	**160**		**P**	**00 25 30.8**	**+0.3**
WB0					IAmb	IAmb	00 25 33.0	
	comp=Z,12nm,0.8s							
WRA	**Warramunga Arr**		**22.66**	**160**	P	**P**	**00 25 31.4**	**-0.7**
	comp=Z,11nm,0.7s,baz=338,slow=10,SNR=36							
	comp=Z,11nm,0.7s							
WR8	**Warramunga Arr**		**22.72**	**160**		**P**	**00 25 33.0**	**+0.2**
WR8					IAmb	IAmb	00 25 36.1	
	comp=Z,9.7nm,0.9s							
PSA00	**Pilbara Seismi**		**23.79**	**195**	P	**P**	**00 25 44.1**	**+0.8**
PSA00					IAmb	IAmb	00 26 08.4	
	comp=Z,19nm,1.4s							
AS31	**Alice Springs**		**26.02**	**164**		**P**	**00 26 04.2**	**+0.5**
AS31					IAmb	IAmb	00 26 14.3	
	comp=Z,2.8nm,1.4s							
ASAR	**Alice Springs**		**26.03**	**164**	P	**P**	**00 26 04.6**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=344,slow=11,SNR=20							
ASAR					PcP	**PcP**	**00 29 32.2**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=334,slow=1.7,SNR=1.7							
	comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**		**26.03**	**164**	P	**P**	**00 26 01.5**	**-2.3**
STKA	**Stephens Creek**		**36.15**	**158**	P	**P**	**00 27 33.4**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=343,slow=11,SNR=3.4							
	comp=Z,2.2nm,0.6s							
SONM	**Songino Array**		**49.33**	**342**	P	**P**	**00 29 19.9**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=157,slow=7.8,SNR=2.2							
	comp=Z,0.3nm,0.7s							
MKAR	**Makanchi Array**		**59.24**	**326**	P	**P**	**00 30 30.9**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=120,slow=8.5,SNR=11							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**		**59.24**	**326**	P	**P**	**00 30 29.9**	**-1.7**
ZALV	**Zalesovo Beam**		**62.46**	**334**	P	**P**	**00 30 54.7**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=134,slow=6.4,SNR=2.2							
	comp=Z,0.4nm,0.5s							
ZALV	**Zalesovo Beam**		**62.46**	**334**	P	**P**	**00 30 53.5**	**+0.2**
KURBB	**Kurchatov Arra**		**63.47**	**328**	P	**P**	**00 30 59.8**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=129,slow=6.1,SNR=11							
	comp=Z,1.7nm,0.6s							
KURK	**Kurchatov**		**63.48**	**328**	P	**P**	**00 31 00.2**	**+0.1**
BVAR	**Borovoye Array**		**69.04**	**328**	P	**P**	**00 31 36.6**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=119,slow=8.9,SNR=3.3							
	comp=Z,0.4nm,0.4s							

*DJA **15** 00:22:47.0±0.5, 2.7N±9.9×12.6E±°, h10km, M3.5/5, MLv3.5/5*

IDC 15 00:22:43.8±1.9, 1.70N×126.36E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=178.8km s-min=24.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.89**	**160**	P	P	00 27 48.9	-0.4
	1.2nm,0.5s,baz=339,slow=11,SNR=5.4						
	1.2nm,0.5s						
ASAR	**Alice Springs**		**26.26**	**164**	P	P	00 28 21.5	+0.4
	0.3nm,0.5s,baz=348,slow=9.0,SNR=2.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**		**59.01**	**326**	P	P	00 32 45.7	+0.2
	0.2nm,0.5s,baz=121,slow=7.3,SNR=1.9						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**		**63.24**	**328**	P	P	00 33 13.9	-0.3
	0.3nm,0.4s,baz=130,slow=6.2,SNR=2.1						
	0.3nm,0.4s						

*ISK **15** 00:22:50.1, 35.98N×32.14E, h9km, ML2.5/24*

*NIC **15** 00:22:53.8, 35.90N×32.37E, h35km±20km, MI1.8/7*

ISC 15 00:22:50.6±1.2, 35.94N±0.03×32.16E±0.04, h18km±4km, n32, σ1§13/42, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.32**	**23**	Pg	**Pg**	**00 22 57.2**	**-0.3**
GAZI				Sg	**Sg**	**00 23 00.9**	**-1.3**
ALAN	**Alanya-ANTALYA**	**0.62**	**350**	Pg	**Pg**	**00 23 01.4**	**-1.6**
BOZY	**Bozyazi-Mersin**	**0.68**	**76**	Pg	**Pb**	**00 23 04.2**	**+0.4**
TEKE	**Tekeli-Mersin**	**0.80**	**75**	Pg	**Pb**	**00 23 06.0**	**+0.1**
TEKE				Sg	**Sg**	**00 23 17.8**	**+1.0**
ALFC	**Alefka**	**0.86**	**156**	P	**Pn**	**00 23 08.2**	**+0.4**
ALFC				S	**Sg**	**00 23 19.6**	**+0.8**
ALFC				AML	AML	00 23 22.1	
	0.2nm,0.1s						
ALFC				AML	AML	00 23 23.8	
	0.2nm,0.1s						
AKMS	**Akamas**	**0.93**	**171**	P	**Pn**	**00 23 09.5**	**+0.7**
AKMS				AML	AML	00 23 21.4	
	0.1nm,0.4s						
AKMS				S	**Sn**	**00 23 22.0**	**+0.3**
AKMS				AML	AML	00 23 22.4	
	0.3nm,0.4s						
BERE	**Bereket-Mersin**	**0.95**	**64**	Pg	**Pb**	**00 23 08.8**	**+0.2**
BERE				Sg	**Sg**	**00 23 22.5**	**+0.9**
YORU	**Yoruktepe-Mers**	**1.03**	**78**	Pg	**Pb**	**00 23 10.4**	**+0.5**
HDMB	**Hadim**	**1.05**	**14**	Pg	**Pb**	**00 23 09.9**	**-0.5**
TEVE	**Tevekalti-Mers**	**1.15**	**64**	Pn	**Pn**	**00 23 12.4**	**+0.6**
TROD	**Troodos**	**1.15**	**150**	P	**Pb**	**00 23 12.9**	**+0.9**
TROD				S	**Sb**	**00 23 26.0**	**-0.6**
TROD				AML	AML	00 23 27.0	
	0.1nm,0.4s						
TROD				AML	AML	00 23 31.1	
XYLS	**Xyliatos**	**1.17**	**142**	P	**Pn**	**00 23 12.2**	**0.0**
XYLS				S	**Sb**	**00 23 26.6**	**-0.7**
XYLS				AML	AML	00 23 28.2	
	0.1nm,0.1s						
XYLS				AML	AML	00 23 31.3	
	0.1nm,0.1s						
ATHAL	**Athalassa**	**1.28**	**128**	S	**Sn**	**00 23 29.9**	**-0.4**
LFK	**Lefkose**	**1.30**	**120**	Pn	**Pg**	**00 23 15.7**	**0.0**
KEBE	**Keben-Mersin**	**1.35**	**68**	Pn	**Pn**	**00 23 15.7**	**+1.1**
KEBE				Sn	**Sg**	**00 23 34.7**	**+0.3**
CSS	**Mathiatis**	**1.36**	**135**	Pn	**Pb**	**00 23 16.2**	**+0.6**
CSS	**Mathiatis**	**1.36**	**135**	P	**Pn**	**00 23 14.8**	**0.0**
CSS				S	**Sn**	**00 23 30.3**	**-2.1**
CSS				AML	AML	00 23 32.9	
CSS				AML	AML	00 23 33.0	
ASGA	**Asgata**	**1.45**	**142**	S	**Sn**	**00 23 33.4**	**-1.1**
ASGA				AML	AML	00 23 37.7	
ASGA				AML	AML	00 23 38.8	
SEYD	**Seydisehir-KON**	**1.48**	**350**	Pn	**Pn**	**00 23 17.0**	**+0.5**
MVOU	**Mavrovouni**	**1.51**	**127**	P	**Pn**	**00 23 16.5**	**-0.3**
MVOU				S	**Sn**	**00 23 33.9**	**-2.1**
MVOU				AML	AML	00 23 34.6	
	0.1nm,0.1s						
MVOU				AML	AML	00 23 34.7	
	0.1nm,0.2s						
KRMN	**Karaman**	**1.52**	**35**	Pn	**Pn**	**00 23 17.8**	**+0.9**
KIZK	**Mersin**	**1.69**	**71**	Pn	**Pn**	**00 23 20.6**	**+1.4**
KORT	**Korkueli**	**1.80**	**306**	Pn	**Pn**	**00 23 21.7**	**+0.8**
ELL	**Elmali**	**1.99**	**294**	Pn	**Pn**	**00 23 24.5**	**+1.0**
KONT	**Konya--Tatoy**	**2.01**	**4**	Pn	**Pn**	**00 23 24.9**	**+1.3**
YESY	**Yesilyurt**	**2.23**	**34**	Pn	**Pn**	**00 23 27.6**	**+0.8**
LADK	**Ladik-KONYA**	**2.26**	**4**	Pn	**Pn**	**00 23 28.4**	**+1.2**
SULT	**Sultanhani-AKS**	**2.50**	**25**	Pn	**Pn**	**00 23 31.9**	**+1.5**
KARA	**Karaisali**	**2.67**	**60**	Pn	**Pn**	**00 23 31.6**	**-1.1**
CHBY	**Cihanbeyli**	**2.70**	**12**	Pn	**Pn**	**00 23 34.7**	**+1.5**
CMRD	**Camardi-Nigde**	**2.84**	**52**	Pn	**Pn**	**00 23 37.4**	**+2.2**
KIZT	**Kizilcal**	**2.94**	**356**	Pn	**Pn**	**00 23 39.1**	**+2.6**

*TAP **15** 00:28:00.0, 21.43N×121.11E, h19km, ML3.5, D*

ISC 15 00:27:57.8±2.7, 21.3N±0.1×121.07E±0.06, h13km±9km, n57, σ1§31/80, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.62**	**346**	*i* P	**Pb**	**00 28 11.2**	**+0.6**
TSEB				*i* S	**Sb**	**00 28 19.5**	**+0.3**
TWKBT	**Hengchun**	**0.69**	**340**	*i* P	**Pg**	**00 28 11.8**	**+0.6**
TWKBT				*i* S	**Sg**	**00 28 20.5**	**+0.3**
TWK1	**Hengchun**	**0.69**	**339**	*i* P	**Pg**	**00 28 11.9**	**+0.7**
TWK1				*i* S	**Sg**	**00 28 20.6**	**+0.2**
SMST	**Manzhou Townsh**	**0.75**	**344**	P	**Pg**	**00 28 12.8**	**+0.4**
SMST				eS	**Sg**	**00 28 22.8**	**+0.4**
HEN	**Hengchun**	**0.77**	**337**	P	**Pg**	**00 28 13.7**	**+0.9**
HEN				S	**Sg**	**00 28 22.6**	**-0.3**
LYUB	**Lan-yu**	**0.85**	**34**	P	**Pg**	**00 28 14.3**	**0.0**
LYUB				S	**Sg**	**00 28 24.4**	**-1.1**
SLIU	**Shizi**	**0.95**	**345**	P	**Pg**	**00 28 15.6**	**-0.6**
TAWH	**Dawu Township**	**1.05**	**351**	P	**Pg**	**00 28 16.3**	**-1.9**
TAWH				S	**Sg**	**00 28 31.1**	**-0.8**
TAW	**Tawu**	**1.07**	**352**	eP	**Pg**	**00 28 16.6**	**-1.8**
EAST	**Anshuo**	**1.10**	**349**	P	**Pg**	**00 28 17.2**	**-1.8**
EAST				S	**Sg**	**00 28 32.7**	**-0.8**
SCZT	**Fangliau**	**1.15**	**339**	eP	**Pb**	**00 28 19.8**	**+0.2**
SCZT				eS	**Sg**	**00 28 32.9**	**-2.1**
MASBT	**Mashibuluo**	**1.37**	**343**	eP	**Pn**	**00 28 22.2**	**-0.5**
MASBT				eS	**Sb**	**00 28 40.6**	**-0.2**
TSMG	**Majia**	**1.46**	**345**	eP	**Pb**	**00 28 26.1**	**+1.3**
TSMG				eS	**Sb**	**00 28 44.2**	**+0.9**
SSD	**Sandimen**	**1.50**	**344**	eP	**Pb**	**00 28 26.3**	**+0.7**
SSD				eS	**Sb**	**00 28 45.5**	**+1.0**
TWGBT	**Beinan**	**1.52**	**0**	P	**Pg**	**00 28 29.2**	**+2.2**
TWGBT	**Beinan**	**1.52**	**0**	eP	**Pn**	**00 28 24.5**	**-0.2**
LONT	**Longtian**	**1.61**	**2**	eP	**Pn**	**00 28 24.1**	**-1.8**
SCST	**Cishan**	**1.67**	**342**	eP	**Pg**	**00 28 30.5**	**+0.6**
EDH	**Donghe**	**1.69**	**7**	eP	**Pn**	**00 28 27.3**	**+0.3**
EDH				eS	**Sn**	**00 28 47.4**	**-1.0**
CHKT	**Chengkung**	**1.82**	**9**	P	**Pn**	**00 28 29.4**	**+0.6**
CHKT				S	**Sn**	**00 28 50.2**	**-1.5**
EHD	**Haiduan**	**1.85**	**4**	eP	**Pn**	**00 28 27.0**	**-2.3**
EHD				eS	**Sn**	**00 28 49.5**	**-3.1**
ELDTW	**Lidau**	**1.89**	**359**	eP	**Pn**	**00 28 29.2**	**-0.7**
STYH	**Taoyuan**	**1.89**	**352**	eP	**Pb**	**00 28 32.2**	**0.0**
FULB	**Fuli**	**1.91**	**6**	eP	**Pn**	**00 28 29.9**	**-0.2**
FULB				eS	**Sn**	**00 28 53.7**	**-0.3**
CHKH	**Chenggong**	**1.91**	**9**	eP	**Pn**	**00 28 30.6**	**+0.4**
CHKH				eS	**Sn**	**00 28 52.9**	**-1.1**
CHN1	**Nanshi**	**1.95**	**345**	eP	**Pb**	**00 28 33.2**	**0.0**
WTP	**Ta-pu**	**1.99**	**348**	eP	**Pn**	**00 28 33.0**	**+1.8**
TWK	**Hsinying**	**2.04**	**345**	eP	**Pb**	**00 28 34.5**	**-0.2**
TPUB	**Ta-pu**	**2.04**	**349**	eP	**Pb**	**00 28 34.7**	**0.0**
TWF1	**Yuli**	**2.06**	**6**	eP	**Pn**	**00 28 32.6**	**+0.4**
YULB	**Yu-li**	**2.10**	**6**	P	**Pb**	**00 28 35.9**	**+0.1**
YULB	**Yu-li**	**2.10**	**6**	eP	**Pn**	**00 28 31.5**	**-1.2**
YUS	**Yu-Shan**	**2.19**	**357**	eP	**Pn**	**00 28 35.4**	**+1.1**
EHYH	**Wanrong**	**2.21**	**7**	eP	**Pn**	**00 28 35.6**	**+1.5**
HGSD	**Ruisui**	**2.21**	**9**	eP	**Pn**	**00 28 35.7**	**+1.5**
HGSD				eS	**Sn**	**00 29 01.2**	**-0.3**
EHY	**Hungye**	**2.21**	**6**	eP	**Pn**	**00 28 35.2**	**+0.9**
ALS	**Alishan**	**2.22**	**354**	eP	**Pn**	**00 28 37.0**	**+2.4**
CHN5	**Tsauling**	**2.32**	**351**	eP	**Pn**	**00 28 38.5**	**+2.7**
WDGT	**Dungji**	**2.35**	**327**	P	**Pn**	**00 28 34.7**	**-1.4**
WHYT	**Xinyi Township**	**2.40**	**355**	eP	**Pn**	**00 28 39.2**	**+2.4**
WARBT	**Fenglin Townsh**	**2.43**	**7**	eP	**Pn**	**00 28 37.2**	**-0.1**
VCHM	**Qimei**	**2.44**	**322**	P	**Pn**	**00 28 35.6**	**-1.7**
VWDT	**VWDT**	**2.45**	**2**	eP	**Pn**	**00 28 39.0**	**+1.5**
SSLB	**Suanglung**	**2.48**	**358**	P	**Pb**	**00 28 41.5**	**-0.8**
SSLB	**Suanglung**	**2.48**	**358**	eP	**Pn**	**00 28 39.4**	**+1.4**
SSLB				eS	**Sn**	**00 29 10.5**	**+2.2**
SMLT	**Sun Moon Lake**	**2.58**	**357**	eP	**Pn**	**00 28 41.1**	**+1.7**
SMLT				eS	**Sn**	**00 29 11.3**	**+0.6**
OWD	**Renai**	**2.65**	**2**	eP	**Pn**	**00 28 41.9**	**+1.5**
OWD				eS	**Sn**	**00 29 11.5**	**-1.0**
WUSB	**Renai**	**2.69**	**1**	eP	**Pn**	**00 28 41.1**	**+0.2**
WUSB				eS	**Sn**	**00 29 12.7**	**-0.7**
LXIB	**Xiulin Townshi**	**2.73**	**7**	eP	**Pn**	**00 28 41.6**	**+0.1**
WHF	**Hehuan Shan**	**2.84**	**4**	eP	**Pn**	**00 28 44.6**	**+1.3**
NACB	**Ninganchiao**	**2.91**	**10**	eP	**Pn**	**00 28 43.9**	**+0.1**
NACB				eS	**Sn**	**00 29 16.7**	**-2.0**
ETLH	**Xiulin Townshi**	**2.92**	**7**	eP	**Pn**	**00 28 43.6**	**-0.6**
WHP	**Taichung City**	**2.97**	**358**	eP	**Pn**	**00 28 45.0**	**+0.2**
YHNB	**Yeheng**	**3.37**	**5**	P	**Pn**	**00 28 52.6**	**+2.3**
YHNB	**Yeheng**	**3.37**	**5**	eP	**Pn**	**00 28 52.1**	**+1.8**
NSK	**Sanguang**	**3.38**	**5**	P	**Pn**	**00 28 52.2**	**+1.8**
FUSB	**Fushanzhiwuyua**	**3.48**	**8**	eP	**Pn**	**00 28 54.4**	**+2.6**

*IDC **15** 00:32:44.6±1.6, 1.73N×126.49E, h0km, mb3.5/4, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=122.2km s-min=20.3km az=69.0*

*DJA **15** 00:32:48.6±0.4, 2.7N±6.2×12.6E±°, h10km, M3.8/7, MLv3.8/7*

ISC 15 00:32:50.1±1.8, 1.6N±0.3×126.6E±0.7, h35km, n7, σ1§67/6, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**		**1.16**	**137**	P	Pn	00 33 13.9	+4.1
SGSI	**Sangihe**		**2.30**	**333**	P	**Pn**	**00 33 26.5**	**+0.9**
FITZ	**Fitzroy Crossi**		**19.62**	**183**	P	**P**	**00 37 15.0**	**-0.7**
	0.1nm,0.3s,baz=1.2,slow=12,SNR=2.1							
	1.5nm,0.8s							
WRA	**Warramunga Arr**		**22.75**	**161**	P	**P**	**00 37 49.0**	**-0.4**
	0.9nm,0.5s,baz=340,slow=11,SNR=9.1							
	0.9nm,0.5s							
ASAR	**Alice Springs**		**26.13**	**165**	P	**P**	**00 38 22.9**	**+1.8**
	0.4nm,0.4s,baz=346,slow=11,SNR=9.5							
	0.4nm,0.4s							
MKAR	**Makanchi Array**		**59.20**	**326**	P	**P**	**00 42 47.4**	**-0.3**
	0.2nm,0.3s,baz=118,slow=8.2,SNR=4.5							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**		**63.43**	**328**	P	**P**	**00 43 14.4**	**-1.8**
	0.3nm,0.4s,baz=131,slow=6.1,SNR=6.3							
	0.3nm,0.4s							

*IDC **15** 00:39:08.5±0.5, 1.60N×126.29E, h0km, mb4.4/28, mbtmp4.4/31, ML4.7/3, MS3.8/14, Error ellipse: s-maj=22.8km s-min=10.1km az=82.0*

*NEIC **15** 00:39:08.4±2.5, 2.24N±0.08×126.65E±0.04, h35km±2km, mb4.8/40, Error ellipse: s-maj=14.7km s-min=3.0km az=22.0*

*DJA **15** 00:39:12.1±0.3, 2.7N±3.2×12.6E±°, h10km, M5.0/19, mB5.4/9, mb5.1/11, MLv5.0/19, Mw(mB)4.8/9, MwMwp5.0/1, Mwp5.3/1*

ISC 15 00:39:13.3±0.3, 1.71N±0.05×126.42E±0.06, h35km, n213, σ1§84/174, mb4.7/69, MS3.8/16, 6C-4D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**		**1.33**	**135**		**Pn**	**00 39 35.2**	**-0.3**
TNTI	**Ternate**		**1.33**	**135**	P	**Pn**	**00 39 35.8**	**+0.4**
TNTI	**Ternate**		**1.33**	**135**	P	**Pn**	**00 39 35.3**	**-0.1**
SGSI	**Sangihe**		**2.15**	**336**	P	**Pn**	**00 39 47.7**	**+0.9**
KMSI	**Cibinong**		**2.69**	**245**	P	**Pn**	**00 39 55.1**	**+0.9**
SANI	**Sanana**		**3.76**	**187**	P	**Pn**	**00 40 09.5**	**+0.6**
SANI	**Sanana**		**3.76**	**187**	P	**Pn**	**00 40 08.8**	**-0.1**
LUWI	**Luwuk**		**4.56**	**233**		**Pn**	**00 40 22.2**	**+2.3**
LUWI	**Luwuk**		**4.56**	**233**	P	**Pn**	**00 40 22.3**	**+2.4**
LUWI	**Luwuk**		**4.56**	**233**	P	**Pn**	**00 40 21.1**	**+1.2**
MRSI	**Marisa**		**4.65**	**255**	P	**Pn**	**00 40 24.3**	**+3.2**
NLAI	**Namlea**		**4.97**	**172**	P	**Pn**	**00 40 26.9**	**+1.4**
DAV

comp=Z,5.2nm,0.9s,baz=337,slow=17,SNR=9.6
comp=Z,10nm,0.5s
WRA Warramunga Arr 22.88 161 P **P** **00 44 12.2 -1.9**
WB1 Warramunga Ar. 22.90 161 P **P** **00 44 13.0 -1.3**
WR8 Warramunga Arr 22.95 160 P **P** **00 44 13.7 -1.1**
PMG Port Moresby 23.43 119 P **P** **00 44 13.1 -6.5**
MBWA Marble Bar 23.66 196 P **P** **00 44 19.7 -2.1**
comp=Z,38nm,0.7s
MBWA Marble Bar 23.66 196 P **P** **00 44 20.2 -1.6**
MBWA IAmb IAmb 00 44 28.8
comp=Z,32nm,0.8s
MBWA Marble Bar 23.66 196 P **P** **00 44 20.4 -1.3**
QIZ Qiongzhong 23.66 318 P **P** **00 44 15.5 -6.3**
QIZ S **S** **00 48 27.5 -6.9**
QIZ LR LR
comp=N,490nm,19.4s
QIZ LR LR
comp=E,440nm,13.3s
QIZ LR LR
comp=Z,740nm,24.0s
PSA00 Pilbara Seismi 24.02 195 P **P** **00 44 23.8 -1.3**
comp=Z,33nm,0.7s
PSA00 Pilbara Seismi 24.02 195 P **P** **00 44 24.7 -0.4**
PSA00 Pilbara Seismi 24.02 195 P **P** **00 44 23.9 -1.3**
PSA00 IAmb IAmb 00 44 32.4
comp=Z,20nm,0.7s
PSA00 Pilbara Seismi 24.02 195 P **P** **00 44 24.0 -1.1**
PSAB3 Pilbara Seismi 24.04 195 P **P** **00 44 23.2 -2.1**
comp=Z,46nm,0.8s
JOW Kunigami 25.04 4 P **P** **00 44 36.4 +2.0**
comp=Z,13nm,0.5s,baz=193,slow=12,SNR=4.9
comp=Z,13nm,0.5s
IPM Ipoh 25.50 277 P **P** **00 44 34.9 -3.9**
IPM IAmb IAmb 00 44 45.3
comp=Z,14nm,0.8s
QIS Mount Isa 25.63 150 P **P** **00 44 40.6 +0.8**
comp=Z,24nm,1.1s
QIS Mount Isa 25.63 150 P **P** **00 44 39.7 -0.1**
AS31 Alice Springs 26.26 164 P **P** **00 44 44.4 -1.1**
ASAR Alice Springs 26.26 164 P **P** **00 44 45.1 -0.4**
comp=Z,6.1nm,0.7s,baz=345,slow=7.7,SNR=43
ASAR PcP **PcP** **00 48 11.9 +0.2**
comp=Z,3.3nm,0.5s,baz=341,slow=2.0,SNR=6.4
comp=Z,6.1nm,0.7s
MTSU Mount Surprise 26.45 139 P **P** **00 44 49.1 +1.9**
comp=Z,14nm,1.0s
WRKA Warakurna 26.66 176 P **P** **00 44 49.0 -0.1**
comp=Z,10nm,0.8s
GIRL Giralia 26.97 205 P **P** **00 44 52.4 +0.5**
comp=Z,66nm,0.9s
GIRL Giralia 26.97 205 P **P** **00 44 51.4 -0.4**
PSI Prapat 27.50 273 LR LR 00 57 17.6
comp=Z,304nm,21.1s,baz=98,slow=40
GSI Gunungsitoli 28.84 270 P P 00 45 04.4 -4.3
GSI IAmb IAmb 00 45 20.7
comp=Z,15nm,0.9s
CTAO Charters Tower 29.12 139 P **P** **00 45 06.4 -4.7**
MEEK Meekatharra 29.18 194 P **P** **00 45 10.3 -1.3**
comp=Z,29nm,0.9s
MEEK Meekatharra 29.18 194 P **P** **00 45 10.8 -0.8**
JCJ Chichijima 29.42 30 LR LR 00 55 36.7
comp=Z,85nm,20.1s,baz=142,slow=33
NJ2 Nanjing 31.01 347 *eP* P 00 45 20.3 -7.4
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
JNU Nakatsue 31.52 7 P **P** **00 45 34.7 +2.4**
comp=Z,6.8nm,0.9s,baz=190,slow=4.9,SNR=5.2
JNU LR LR 00 57 38.7
comp=Z,102nm,21.3s,baz=154,slow=35
comp=Z,6.8nm,0.9s
CMAR Chiang Mai Arr 31.67 303 P **P** **00 45 33.8 +0.1**
comp=Z,1.2nm,0.3s,baz=133,slow=7.8,SNR=6.2
CMAR PcP **PcP** **00 48 25.9 +0.6**
comp=Z,1.2nm,0.3s,baz=120,slow=3.5,SNR=7.8
CMAR LR LR 00 57 33.0
comp=Z,184nm,21.6s,baz=100,slow=35
comp=Z,1.2nm,0.3s
CHTO Chiang Mai 31.84 304 P P 00 45 30.9 -4.3
MORW Morawa 32.18 197 P **P** **00 45 37.8 -0.3**
comp=Z,20nm,0.9s
MORW Morawa 32.18 197 P **P** **00 45 38.9 +0.8**
MORW IAmb IAmb 00 45 46.7
comp=Z,13nm,0.8s
FORT Forrest 32.35 177 P **P** **00 45 41.1 +1.6**
comp=Z,21nm,0.6s
FORT Forrest 32.35 177 P **P** **00 45 37.7 -1.8**
ENH Enshi 32.63 332 P P 00 45 36.3 -5.8
BLDU Ballidu 33.45 195 P **P** **00 45 48.8 -0.4**
comp=Z,32nm,0.9s
JHJ Hachijo jima 2 33.66 20 LR LR 01 00 38.3
comp=Z,101nm,19.1s,baz=115,slow=38
KLBR Kellerberrin 34.13 193 P **P** **00 45 54.6 -0.5**
comp=Z,110nm,0.7s
PZH PanZhiHua 34.20 318 P P 00 45 50.5 -5.4
HNR Honiara 35.18 109 LR LR 00 59 57.8
comp=Z,109nm,21.5s,baz=299,slow=35
BBOO Buckleboo 35.53 166 P **P** **00 46 06.5 -0.6**
comp=Z,34nm,1.4s
BBOO Buckleboo 35.53 166 P **P** **00 46 04.7 -2.4**
BBOO IAmb IAmb 00 46 13.6
comp=Z,20nm,0.9s
NWAO Narrogin (SRO) 35.53 193 P **P** **00 46 06.9 -0.2**
comp=Z,36nm,0.8s
NWAO Narrogin (SRO) 35.53 193 P **P** **00 46 07.4 +0.3**
comp=Z,7.8nm,0.6s,baz=4.9,slow=9.8,SNR=8.8
comp=Z,7.8nm,0.6s
KSRS Korea Array 35.59 2 P **P** **00 46 09.5 +2.0**
comp=Z,1.0nm,0.7s,baz=180,slow=9.3,SNR=6.4
comp=Z,1.0nm,0.7s
EIDS Eidsvold 35.99 140 P **P** **00 46 13.6 +2.4**
comp=Z,13nm,1.7s
EIDS Eidsvold 35.99 140 P **P** **00 46 07.4 -3.7**
EIDS IAmb IAmb 00 46 27.0
comp=Z,10nm,0.9s
XAN Xi'an 36.08 335 ⇑P P 00 46 17.6 +5.7
XAN pmax pmax
comp=Z,22nm,0.9s
MJAR Matsushiro Arr 36.33 16 P **P** **00 46 15.0 +1.1**
comp=Z,1.4nm,0.5s,baz=183,slow=9.7,SNR=7.4
MJAR LR LR 01 00 23.7
comp=Z,255nm,21.5s,baz=218,slow=35
comp=Z,1.4nm,0.5s
MAJO Matsushiro 36.33 16 P P 00 46 01.4 -13
MAJO IAmb IAmb 00 46 16.4
comp=Z,5.1nm,0.8s
MJB9 Matsu-Tunnel 36.33 16 P P 00 46 02.5 -12
MJB9 IAmb IAmb 00 46 17.4
comp=Z,5.0nm,0.8s
STKA Stephens Creek 36.38 158 P **P** **00 46 14.2 -0.2**
comp=Z,136nm,0.8s
STKA Stephens Creek 36.38 158 P **P** **00 46 14.2 -0.2**
comp=Z,11nm,0.8s,baz=341,slow=7.8,SNR=13
comp=Z,11nm,0.8s
JYT Yasato 36.63 19 P P 00 46 04.4 -12
RKGY Rocky Gully 37.20 193 P **P** **00 46 21.8 +0.4**
comp=Z,126nm,0.9s
BJT Baijiatuan 39.25 348 P P 00 46 31.0 -7.6
BJI Beijing 39.27 348 P P 00 46 30.4 -8.3
BJI sP pP 00 46 45.8 -2.6
BJI pmax pmax
comp=Z,4.0nm,0.7s
LZDM Lanzhou Array 40.06 331 P **P** **00 46 47.0 +1.3**
comp=Z,0.7nm,0.3s,baz=139,slow=11,SNR=4.6
comp=Z,0.7nm,0.3s
LZH Lanzhou 40.09 331 *eP* **P** **00 46 41.8 -4.0**
LZH sP pP 00 46 52.9 -2.6
LZH PcP PcP 00 48 58.3 +8.2
LZH pmax pmax
comp=Z,24nm,1.1s
LZH LR LR
comp=N,300nm,18.2s
LZH LR LR
comp=E,300nm,19.5s
LZH LR LR
comp=Z,370nm,20.8s
ARPS Mount Arapiles 40.88 161 P **P** **00 46 53.1 +1.0**
comp=Z,25nm,1.0s
HHC Hu-ho-hao-te 41.21 343 *eP* P 00 46 49.8 -5.1
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,130nm,5.0s
HHC LR LR
comp=N,170nm,14.5s
HHC LR LR
comp=E,210nm,14.3s
HHC LR LR

comp=Z,330nm,15.1s
CAN Canberra 42.47 152 P **P** **00 47 05.7 +0.5**
comp=Z,29nm,1.4s
USRK Ussuriysk Ar. 42.59 6 P **P** **00 47 05.6 -0.4**
comp=Z,1.8nm,0.7s,baz=197,slow=7.2,SNR=8.6
comp=Z,1.8nm,0.7s
H11S3 WAKE ISLAND Hy 42.85 64 T T 01 34 33.2
baz=253
H11S2 WAKE ISLAND Hy 42.86 64 T T 01 34 32.9
baz=253
H11S1 WAKE ISLAND Hy 42.86 64 T T 01 34 34.8
baz=253
XLT XiLinHaoTe 43.00 349 *eP* **P** **00 47 07.4 -2.0**
XLT pP pP 00 47 16.8 -2.4
XLT sP pwP 00 47 21.1 -0.4
XLT pmax pmax
comp=Z,9.0nm,0.7s
XLT pmax pmax
comp=Z,130nm,3.6s
H11N1 WAKE ISLAND Hy 43.42 63 T T 01 35 17.0
baz=251
H11N2 WAKE ISLAND Hy 43.43 63 T T 01 35 17.0
baz=251
H11N3 WAKE ISLAND Hy 43.44 63 T T 01 35 24.1
baz=251
BNX BinXian 43.85 1 ⇓P P 00 47 23.5 +7.3
BNX pmax pmax
comp=Z,9.0nm,0.9s
ASAJ Asahikawa 44.60 17 LR LR 01 05 56.9
comp=Z,170nm,19.2s,baz=141,slow=36
GTA Gaotai 44.67 330 *eP* P 00 47 30.3 +7.3
GTA pP pP 00 47 34.4 +1.6
GTA PcP **PP** **00 49 13.3 +5.5**
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA LR LR
comp=N,270nm,17.5s
GTA LR LR
comp=E,250nm,17.8s
GTA LR LR
comp=Z,320nm,24.0s
GOMU GeErMu 45.09 323 P P 00 47 34.3 +7.6
GOMU pmax pmax
comp=Z,5.0nm,0.9s
DZM Mont Dzumac 45.66 123 LR LR 01 06 41.7
comp=Z,106nm,21.6s,baz=359,slow=36
PALK Pallekele 45.89 278 LR LR 01 09 06.1
comp=Z,82nm,19.6s,baz=101,slow=39
EVN Everest 45.97 308 **P** **00 47 34.1 0.0**
EVN IAmb IAmb 00 47 52.1
comp=Z,14nm,0.8s
HIA Hailar 47.72 354 P **P** **00 47 41.6 -5.1**
HIA IAmb IAmb 00 47 56.5
comp=Z,16nm,1.0s
HILR Hailar Array B 48.00 354 P **P** **00 47 51.3 +2.4**
comp=Z,1.8nm,0.5s,baz=164,slow=12,SNR=4.3
comp=Z,1.8nm,0.5s
HEH HeiHe 48.37 1 *eP* P 00 47 56.9 +5.3
HEH pmax pmax
comp=Z,23nm,0.9s
ULN Ulaanbaatar 48.93 343 P **P** 00 47 50.3 -5.9
ULN IAmb IAmb 00 48 05.1
comp=Z,15nm,1.1s
SONM Songino Array 49.10 342 P **P** **00 47 57.7 +0.2**
comp=Z,2.2nm,0.7s,baz=166,slow=7.3,SNR=7.2
SONM PcP **PcP** **00 49 22.2 +1.5**
comp=Z,4.0nm,0.8s,baz=155,slow=3.6,SNR=6.2
comp=Z,2.2nm,0.7s
WMQ Urumqi 54.20 326 *eP* **P** **00 48 31.8 -3.8**
WMQ pmax pmax
comp=Z,14nm,1.3s
WMQ LR LR
comp=Z,170nm,18.9s
PETK Petropavlovsk- 57.40 22 P **P** **00 49 00.4 +2.1**
comp=Z,2.9nm,0.8s,baz=176,slow=4.2,SNR=1.7
comp=Z,2.9nm,0.8s
MKAR Makanchi Array 59.03 326 P **P** **00 49 09.8 -0.1**
comp=Z,2.5nm,0.5s,baz=120,slow=6.8,SNR=18
comp=Z,2.5nm,0.5s
KSH Kashi 59.26 316 P P 00 49 18.3 +6.6
KSH pP sP 00 49 35.3 +10
KSH pmax pmax
comp=Z,6.0nm,1.0s
ZALV Zalesovo Beam 62.24 334 P **P** **00 49 30.9 -0.7**
comp=Z,1.4nm,0.6s,baz=121,slow=6.8,SNR=6.2
ZALV PKP2ab **P'P'ab** **01 18 51.4 -2.9**
comp=Z,0.7nm,0.5s,baz=247,slow=3.1,SNR=4.9
comp=Z,1.4nm,0.6s
KURBB Kurchatov Arra 63.27 328 P **P** **00 49 38.2 -0.2**
comp=Z,4.2nm,0.7s,baz=130,slow=6.1,SNR=30
KURBB PKPPKP **P'P'df** **01 18 37.3 +0.2**
comp=Z,0.5nm,1.0s,baz=292,slow=3.4,SNR=2.8
comp=Z,4.2nm,0.7s
KURK Kurchatov 63.27 328 P **P** **00 49 38.4 -0.1**
KKAR Karatay Array 64.50 318 **P** **00 49 46.5 -0.2**
BVAR Borovoye Array 68.84 328 P **P** **00 50 14.3 +0.1**
comp=Z,1.7nm,0.6s,baz=134,slow=8.5,SNR=7.4
comp=Z,1.7nm,0.6s
ABKAR Akbulak array 73.51 321 **P** **00 50 42.2 -0.4**
ARTI Arti 76.55 328 **P** **00 51 00.0 +0.1**
ARTI IAmb IAmb 00 51 06.6
comp=Z,18nm,1.1s
CCD Concordia, Ant 76.74 181 P **P** **00 51 03.0 +1.8**
RAYN Ar Rayn 80.99 293 **P** **00 51 24.9 -0.2**
RAYN IAmb IAmb 00 51 33.6
comp=Z,9.6nm,1.0s
RAYN Ar Rayn 80.99 293 P **P** **00 51 24.5 -0.6**
VNDA Vanda 81.48 173 P **P** **00 51 26.0 -0.5**
comp=Z,2.6nm,0.8s,baz=306,slow=6.6,SNR=7.7
comp=Z,2.6nm,0.8s
VNDA Vanda 81.48 173 P **P** **00 51 24.9 -1.6**
VNDA IAmb IAmb 00 51 37.6
comp=Z,7.0nm,0.9s
VNDA Vanda 81.48 173 P **P** **00 51 27.1 +0.6**
MAW Mawson 81.77 200 P **P** **00 51 28.1 -0.1**
comp=Z,1.4nm,0.6s,baz=96,slow=9.3,SNR=4.9
comp=Z,1.4nm,0.6s
KBZ Khabaz 84.14 314 P **P** **00 51 42.1 +1.1**
comp=Z,2.4nm,1.0s,baz=95,slow=11,SNR=6.2
comp=Z,2.4nm,1.0s
KIV Kislovodsk 84.30 314 ⇓P P **00 51 44.8 +2.8**
ILAR Eielson Array 87.04 25 P **P** **00 51 57.4 +2.4**
comp=Z,0.5nm,0.6s,baz=238,slow=5.0,SNR=6.7
comp=Z,0.5nm,0.6s
KIBK Kibwezi 88.45 268 **P** **00 52 04.4 +1.4**
KIBK IAmb IAmb 00 52 17.6
comp=Z,7.6nm,1.0s
KMBO Kilima Mbogo 89.20 269 P **P** **00 52 08.5 +1.8**
comp=Z,1.8nm,0.6s,baz=225,slow=2.8,SNR=5.4
comp=Z,1.8nm,0.6s
BALJ Balqa 89.76 302 **P** **00 52 09.7 +1.0**
MMAI Mount Meron Ar 89.93 303 P **P** **00 52 10.1 +0.6**
comp=Z,0.6nm,0.4s,baz=88,slow=7.7,SNR=7.8
comp=Z,0.6nm,0.4s
BCPM Bancas Point 90.51 30 P P 00 52 00.6 -11
BRTR Keskin Array B 91.06 310 P **P** **00 52 13.8 -0.9**
comp=Z,0.9nm,0.8s,baz=130,slow=5.5,SNR=5.5
comp=Z,0.9nm,0.8s
ARCES ARCESS Array B 92.22 340 P **P** **00 52 19.2 0.0**
comp=Z,6.1nm,1.0s,baz=69,slow=6.6,SNR=9.2
comp=Z,6.1nm,1.0s
FINES FINESS Array B 93.45 332 P **P** **00 52 26.1 +1.1**
comp=Z,3.7nm,0.9s,baz=66,slow=4.8,SNR=6.5
comp=Z,3.7nm,0.9s
SORM Soroca 94.12 318 ⇑P **P** **00 52 29.0 +0.6**
NOR Nord 95.06 355 *i* P **P** **00 52 30.6 -1.5**
TESR Tescani 95.49 317 ⇑P **P** **00 52 33.0 -1.8**
VRI Vrincioaia 95.53 316 ⇓P **P** **00 52 39.7 +4.7**
NEHR Nehoiu 95.89 316 ⇑P **P** 00 52 42.8 +6.1
MLR Muntele Rosu 96.13 316 ⇑P **P** 00 52 43.6 +5.7
BUR08 Bucovina Ar. S 96.30 318 **P** 00 52 32.2 -6.4
SUW Suwalki 96.38 325 P P 00 52 31.1 -7.6
MARR Marisel-Cluj 97.86 317 ⇓P Pdif 00 52 49.6 +3.9
DRGR 98.12 318 ⇑P Pdif 00 52 52.7 +5.9
DAG Danmarks Havn 99.20 352 *i* P **Pdif** **00 52 50.5 -0.4**
HFS Hagfors 99.65 332 P **Pdif** **00 52 55.4 +2.2**
comp=Z,2.4nm,1.0s,baz=38,slow=7.3,SNR=1.3
comp=Z,2.4nm,1.0s
NOA NORSAR Array B 100.44 333 P **Pdif** **00 52 56.2 -0.6**
comp=Z,0.3nm,0.9s,baz=62,slow=1.9,SNR=2.1
DBG Daneborg 101.46 351 *i* P **Pdif** **00 53 00.0 -0.9**
PDAR Pinedale Array 113.06 42 PKKPab PKKPab 01 08 41.5 -1.1
comp=Z,0.9nm,0.9s,baz=116,slow=6.8,SNR=5.1
TXAR Lajitas Array 123.06 53 PKP **PKiKP** **00 58 07.3 +0.1**
comp=Z,0.6nm,0.9s,baz=234,slow=0.2,SNR=5.1
PLCA Paso Flores 138.23 161 PKP **PKiKP** **00 58 37.7 +0.3**
comp=Z,1.4nm,0.7s,baz=317,slow=11,SNR=2.9

PEL Peldehue 144.85 155 *eP* **PKPdf** **00 58 48.1 +0.7**
ROC1 El Roble 144.85 154 *eP* **PKPdf** **00 58 47.9 +0.2**
VA03 San Esteban 145.24 154 *eP* **PKPdf** **00 58 48.8 +0.6**
AAGR Agrelo 145.66 157 *eP* **PKiKP** **00 58 51.5 -1.4**
ARCO CERRO ARCO 145.84 157 *eP* **PKPab** **00 58 51.5 +1.3**
ASAL Salagasta 146.10 157 *eP* **PKPab** **00 58 51.3 +0.2**
AUSP Uspallata 146.19 155 *eP* **PKPab** **00 58 52.7 +1.0**
RTLS Leoncito 146.60 155 *eP* **PKPab** **00 58 54.1 +0.8**
ACAN Cantantal 147.01 159 *eP* **PKPbc** **00 58 53.8 +0.7**
ZON Zonda 147.08 156 **PKPab** **00 58 54.7 -0.1**
ZON Zonda 147.08 156 *eP* **PKPbc** **00 58 52.5 -0.9**
ZON *eP* **PKPab** **00 58 54.1 -0.8**
ZON *eP* **PKiKP** **00 58 54.5 -1.3**
LCO Las Campanas 148.32 151 **PKiKP** **00 58 58.4 -0.4**
AGUA GUANDACOL 148.95 154 *eP* **PKiKP** **00 59 00.3 +0.5**
VCA Vinchina 149.72 154 *eP* **PKiKP** **00 59 02.3 +0.8**
GO03 Copiapo 149.72 150 *eP* **PKPdf** **00 58 54.3 -1.4**
TINO Tinogasta 150.58 154 *eP* **PKiKP** **00 59 04.2 +0.9**
AC02 Maricunga 150.90 150 **PKiKP** **00 59 05.5 +1.1**
AC02 Maricunga 150.90 150 *eP* **PKiKP** **00 59 06.0 +1.6**
CYA Choya 150.97 157 *eP* **PKiKP** **00 59 05.1 +1.2**
AHML Horco Molle 152.63 157 *eP* **PKPbc** **00 59 05.8 -1.4**
FSA Cafayete 152.97 155 *eP* **PKiKP** **00 59 09.4 +1.1**

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*JMA **15** 00:39:34.6±0.1,36.0°N±0.0°,3×140.1°E±0.4,h62km,MV3.7/40, SOUTHERN IBARAKI PREF*
JMA Felt II J1 at SOUTHERN IBARAKI PREF .
*NIED **15** 00:39:34.6,36.02°N×140.08°E,h62km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.84; $M_{\theta\theta}$2.59; $M_{\phi\phi}$-7.43; $M_{r\theta}$-1.63; $M_{\theta\phi}$-1.69; $M_{r\phi}$6.47; Fault plane solution: $M_0$9.35000×10^{14} NP1: ϕ_s218.00000°,δ29.00000°,λ137.00000°. NP2: ϕ_s348.00000°,δ71.00000°,λ68.00000°.*
*IDC **15** 00:39:35.2±1.9,35.97N×140.17E,h86km±16km,mb3.7/17, mbtmp4.1/20 Error ellipse: s-maj=22.7km s-min=12.7km az=64.0*

ISC 15 00:39:33.8±0.7,36.00N±0.03×140.16E±0.04,h71km±6km, n57,σ1.334/58,mb4.1/17,10D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.23**	**8**	*i* P	**Pn**	**00 39 44.5**	**-0.2**
JYT				S	**Sn**	**00 39 51.8**	**-0.8**
JIHU	**Itakohorinouch**	**0.30**	**97**	*i* P	**Pn**	**00 39 45.8**	**+0.8**
JIHU				S	**Sn**	**00 39 55.1**	**+1.7**
JAG	**Ashikaga**	**0.71**	**307**	⇓*i* P	**Pn**	**00 39 48.7**	**-0.2**
JAG				⇓S	**Sn**	**00 39 59.0**	**-1.0**
JRY	**Ryogami san**	**1.02**	**271**	⇓*i* P	**Pn**	**00 39 52.5**	**-0.1**
JRY				⇓S	**Sn**	**00 40 06.0**	**-0.6**
JKT	**Katashina**	**1.06**	**316**	*i* P	**Pn**	**00 39 53.0**	**-0.1**
JKT				S	**Sn**	**00 40 07.2**	**-0.3**
JOD2	**Odawara 2**	**1.14**	**230**	⇓*i* P	**Pn**	**00 39 54.0**	**-0.2**
JOD2				⇓S	**Sn**	**00 40 07.8**	**-1.6**
BSO3	**Boso 3**	**1.23**	**166**	P	**Pn**	**00 39 55.4**	**+0.4**
BSO3				*e*S	**Sn**	**00 40 13.4**	**+2.4**
JYN	**Shimob**	**1.40**	**249**	⇓*i* P	**Pn**	**00 39 58.0**	**+0.4**
JYN				⇓S	**Sn**	**00 40 15.5**	**0.0**
JIM2	**Oshima 3**	**1.41**	**205**	P	**Pn**	**00 39 57.1**	**-0.5**
JIM2				S	**Sn**	**00 40 14.1**	**-1.5**
JFY	**Yanaizu**	**1.45**	**346**	⇓*i* P	**Pn**	**00 39 58.6**	**+0.5**
JFY				⇓S	**Sn**	**00 40 17.3**	**+0.9**
JFK	**Kawauchi**	**1.48**	**23**	P	**Pn**	**00 39 59.1**	**+0.6**
JUON	**Uonuma**	**1.49**	**324**	P	**Pn**	**00 39 58.9**	**+0.2**
MJAR	**Matsushiro Arr**	**1.66**	**289**	P	**Pn**	**00 40 01.0**	**0.0**
	264nm,0.4s,baz=90,slow=11,SNR=552						
MJAR				S	**Sn**	**00 40 24.3**	**+2.8**
	65nm,0.5s,baz=38,slow=32,SNR=2.6						
MAJO	**Matsushiro**	**1.66**	**289**	P	**Pn**	**00 40 01.5**	**+0.5**
JMM	**Marumori**	**1.93**	**15**	P	**Pn**	**00 40 05.5**	**+1.0**
JSG	**Sagara**	**2.09**	**231**	P	**Pn**	**00 40 07.8**	**+1.2**
JSG	**Sagara**	**2.09**	**231**	S	**Sn**	**00 40 35.1**	**+3.5**
JGF	**Kuroka**	**2.31**	**261**	P	**Pn**	**00 40 11.1**	**+1.4**
JGF	**Kuroka**	**2.31**	**261**	S	**Sn**	**00 40 39.2**	**+2.1**
JSD	**Sado**	**2.53**	**324**	P	**Pn**	**00 40 13.2**	**+0.5**
INU	**Inuyama**	**2.64**	**257**	P	**Pn**	**00 40 14.9**	**+0.8**
JHJ	**Hachijo jima 2**	**2.89**	**186**	P	**Pn**	**00 40 18.5**	**+1.0**
	168nm,0.3s,baz=286,slow=22,SNR=19						
JHJ				S	**Sn**	**00 40 47.4**	**-3.8**
	212nm,0.3s,baz=250,slow=23,SNR=8.6						
JHJ2	**Mitsune**	**2.90**	**186**	P	**Pn**	**00 40 19.4**	**+1.8**
JTM	**Tenmabayashi**	**4.83**	**8**	P	**Pn**	**00 40 46.5**	**+2.6**
JMN	**Monobe**	**5.64**	**248**	P	**Pn**	**00 40 56.3**	**+1.3**
JNU	**Nakatsue**	**8.17**	**252**	P	**Pn**	**00 41 31.9**	**+2.1**
	11nm,0.8s,baz=14,slow=6.8,SNR=5.4						
JCJ	**Chichijima**	**9.05**	**168**	P	Pn	00 41 28.8	-13
	132nm,1.1s,baz=342,slow=20,SNR=1.6						
JCJ				S	Sn	00 43 07.0	-15
	31nm,0.3s,baz=283,slow=22,SNR=5.0						
KSRS	**Korea Array**	**9.93**	**282**	P	**Pn**	**00 41 56.5**	**+2.9**
	2.4nm,0.6s,baz=97,slow=15,SNR=5.1						
HILR	**Hailar Array B**	**20.11**	**319**	P	**P**	**00 44 00.0**	**-1.7**
	1.0nm,0.4s,baz=121,slow=14,SNR=3.7						
SSLB	**Suanglung**	**20.58**	**239**	P	Pn	00 44 08.8	-1.0
SONM	**Songino Array**	**27.54**	**306**	P	**P**	**00 45 12.9**	**-1.0**
	1.9nm,0.6s,baz=106,slow=8.5,SNR=12						
	1.9nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.53**	**117**	T	T	01 15 26.4	
	baz=308,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.54**	**117**	T	T	01 15 26.3	
	baz=308,slow=75,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**28.55**	**117**	T	T	01 15 25.8	
	baz=308,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.19**	**120**	T	T	01 15 34.5	
	baz=311						
H11S3	**WAKE ISLAND Hy**	**29.19**	**120**	T	T	01 15 34.5	
	baz=311						
H11S2	**WAKE ISLAND Hy**	**29.21**	**120**	T	T	01 15 34.5	
	baz=311						
ZALV	**Zalesovo Beam**	**41.87**	**313**	P	**P**	**00 47 16.9**	**+0.2**
	3.0nm,0.7s,baz=100,slow=7.2,SNR=18						
	3.0nm,0.7s						
MKAR	**Makanchi Array**	**43.82**	**303**	P	**P**	**00 47 32.8**	**+0.2**
	3.2nm,0.7s,baz=90,slow=9.8,SNR=21						
	3.2nm,0.7s						
KURBB	**Kurchatov Arra**	**45.84**	**309**	P	**P**	**00 47 48.7**	**+0.1**
	6.3nm,0.7s,baz=85,slow=8.2,SNR=57						
	6.3nm,0.7s						
BVAR	**Borovoye Array**	**50.52**	**313**	P	**P**	**00 48 25.0**	**+0.4**
	1.5nm,0.5s,baz=77,slow=8.5,SNR=7.6						
	1.5nm,0.5s						
ILAR	**Eielson Array**	**50.90**	**32**	P	**P**	**00 48 28.1**	**+0.8**
	0.9nm,0.7s,baz=278,slow=6.2,SNR=8.3						
	0.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**55.53**	**197**	P	**P**	**00 49 01.7**	**0.0**
	1.3nm,0.5s,baz=1.7,slow=6.8,SNR=1.3						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**55.91**	**187**	P	**P**	**00 49 04.0**	**-0.5**
	1.3nm,0.5s,baz=1.8,slow=7.6,SNR=5.5						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**59.64**	**187**	P	**P**	**00 49 30.1**	**-0.5**
	1.8nm,1.0s,baz=348,slow=8.0,SNR=5.4						
	1.8nm,1.0s						
ARCES	**ARCESS Array B**	**64.60**	**339**	P	**P**	**00 50 02.6**	**-0.6**
	2.2nm,0.9s,baz=60,slow=8.5,SNR=6.4						
	2.2nm,0.9s						
FINES	**FINESS Array B**	**69.25**	**332**	P	**P**	**00 50 32.2**	**-0.6**
	4.7nm,1.0s,baz=44,slow=5.4,SNR=5.2						
	4.7nm,1.0s						
AKASG	**Malin Array Be**	**74.49**	**322**	P	**P**	**00 51 03.6**	**-0.7**
	1.2nm,0.6s,baz=52,slow=5.5,SNR=4.8						
	1.2nm,0.6s						
HFS	**Hagfors**	**74.60**	**335**	P	**P**	**00 51 05.6**	**+0.8**
	1.2nm,0.7s,baz=71,slow=5.3,SNR=4.3						
	1.2nm,0.7s						
NB2	**NORSAR Subarra**	**74.74**	**337**	P	**P**	**00 51 05.7**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**74.74**	**337**	P	**P**	**00 51 05.8**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=40,slow=5.9,SNR=7.5						
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**78.77**	**311**	P	**P**	**00 51 29.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=142,slow=1.8,SNR=2.3						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**79.11**	**45**	P	**P**	**00 51 29.7**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=317,slow=8.3,SNR=1.7						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**91.55**	**52**	P	**P**	**00 52 33.6**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=326,slow=4.2,SNR=2.7						
	comp=Z,0.3nm,0.8s						
H03N2	**Juan Fernandez**	**147.91**	**97**	T	T	03 43 06.5	
	baz=288,slow=76,SNR=3.5						
H03N3	**Juan Fernandez**	**147.93**	**97**	T	T	03 42 52.5	
	baz=288,SNR=4.0						

H03N1	**Juan Fernandez**	**147.93**	**97**	T	T	03 43 35.8	
	baz=288,slow=76,SNR=3.6						

*IDC **15** 00:40:37.9±1.3, 32.85N×137.75E, h357km±7km, mb3.4/12, mbtmp4.0/14, Error ellipse: s-maj=26.3km s-min=15.7km az=11.0*
*NEIC **15** 00:40:38.5±1.6, 32.8N±0.1×137.7E±0.1, h356km±9km, mb4.0/31, Error ellipse: s-maj=20.3km s-min=13.4km az=167.0*
ISC 15 00:40:37.3±0.9, 32.7N±0.1×137.73E±0.08, h350km, n57, σ1ᵍ08/59, mb3.9/30, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.77**	**77**	P	**Pn**	**00 41 28.6**	**+1.6**
	182nm,0.5s,baz=313,slow=18,SNR=1.2						
JHJ				S	**S**	**00 42 08.6**	**+1.6**
	109nm,0.4s,baz=261,slow=18,SNR=1.3						
JSG	**Sagara**	**1.97**	**11**	Pn	**Pn**	**00 41 29.4**	**+1.1**
JMN	**Monobe**	**3.37**	**288**	Pn	**Pn**	**00 41 40.6**	**+0.5**
MJAR	**Matsushiro Arr**	**3.82**	**6**	P	**Pn**	**00 41 44.3**	**0.0**
	14nm,0.6s,baz=177,slow=10,SNR=1.3						
MJAR				S	**S**	**00 42 38.1**	**-0.4**
	2.7nm,0.4s,baz=303,slow=6.2,SNR=1.9						
MAJO	**Matsushiro**	**3.82**	**6**	Pn	**Pn**	**00 41 44.4**	**+0.1**
JNU	**Nakatsue**	**5.77**	**276**	Pn	**Pn**	**00 42 06.5**	**+0.9**
KSRS	**Korea Array**	**9.31**	**303**	P	**Pn**	**00 42 48.0**	**+1.2**
	3.4nm,0.7s,baz=122,slow=10,SNR=7.2						
JKA	**Kamikawa-asahi**	**11.98**	**17**	P	**Pn**	**00 43 19.4**	**+0.7**
SONM	**Songino Array**	**28.02**	**312**	P	**P**	**00 46 02.5**	**+5.1**
	0.7nm,0.5s,baz=120,slow=8.9,SNR=2.8						
MKAR	**Makanchi Array**	**43.98**	**305**	P	**P**	**00 48 10.2**	**-0.8**
	0.8nm,0.5s,baz=89,slow=8.6,SNR=5.6						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**43.98**	**305**	P	**P**	**00 48 10.4**	**-0.7**
KURBB	**Kurchatov Arra**	**46.38**	**311**	P	**P**	**00 48 28.9**	**-0.8**
	1.1nm,0.7s,baz=90,slow=7.3,SNR=1.6						
	1.1nm,0.7s						
F15K	**North Star Dit**	**47.41**	**28**	P	**P**	**00 48 38.1**	**+0.8**
N15K	**Kwethluk River**	**48.49**	**36**	P	**P**	**00 48 44.2**	**-1.3**
O15K	**Ungalikthiuk R**	**48.54**	**38**	P	**P**	**00 48 46.4**	**+0.5**
O15K				IAmb	IAmb	00 48 47.0	
	comp=Z,10.0nm,0.8s						
F17K	**Baldwin Pennin**	**48.93**	**28**	P	**P**	**00 48 49.5**	**+0.8**
L16K	**Owhat River**	**48.95**	**34**	P	**P**	**00 48 49.1**	**+0.2**
L16K				IAmb	IAmb	00 49 06.6	
	comp=Z,6.7nm,1.1s						
M16K	**Timber Creek**	**49.12**	**35**	P	**P**	**00 48 50.6**	**+0.3**
M16K				IAmb	IAmb	00 48 55.4	
	comp=Z,11nm,1.1s						
J17K	**VABM Dome**	**49.33**	**32**	P	**P**	**00 48 52.4**	**+0.6**
K17K	**Iditarod**	**49.60**	**33**	P	**P**	**00 48 54.0**	**+0.1**
K17K				IAmb	IAmb	00 48 58.1	
	comp=Z,8.6nm,1.1s						
N17K	**Nushagak Hills**	**49.96**	**36**	P	**P**	**00 48 57.2**	**+0.7**
N17K				IAmb	IAmb	00 49 06.1	
	comp=Z,7.1nm,1.1s						
C19K	**Lookout Ridge**	**50.12**	**25**	P	**P**	**00 48 58.9**	**+1.2**
C19K				IAmb	IAmb	00 49 02.7	
	comp=Z,4.8nm,0.9s						
D19K	**Kuna River**	**50.52**	**25**	P	**P**	**00 49 01.2**	**+0.5**
D19K				IAmb	IAmb	00 49 07.0	
	comp=Z,6.1nm,0.9s						
E19K	**Redstone River**	**50.67**	**27**	P	**P**	**00 49 02.5**	**+0.8**
E19K				IAmb	IAmb	00 49 03.3	
	comp=Z,7.2nm,0.7s						
H19K	**Roundabout Mou**	**50.72**	**29**	P	**P**	**00 49 03.6**	**+1.5**
H19K				IAmb	IAmb	00 49 06.2	
	comp=Z,7.0nm,0.8s						
ACHA	**Angle Creek He**	**50.85**	**39**	P	**P**	**00 49 01.7**	**-1.6**
J19K	**Poorman**	**50.92**	**31**	P	**P**	**00 49 04.2**	**+0.5**
J19K				IAmb	IAmb	00 49 04.5	
	comp=Z,4.8nm,0.8s						
D20K	**Etivluk River**	**51.10**	**25**	P	**P**	**00 49 05.6**	**+0.7**
D20K				IAmb	IAmb	00 49 06.0	
	comp=Z,5.9nm,0.8s						
B20K	**Meade River**	**51.14**	**24**	P	**P**	**00 49 05.7**	**+0.5**
B20K				IAmb	IAmb	00 49 19.6	
	comp=Z,13nm,1.1s						
F20K	**Avaraart Lake**	**51.20**	**27**	P	**P**	**00 49 05.3**	**-0.2**
N19K	**Bonanza Creek**	**51.30**	**36**	P	**P**	**00 49 06.2**	**-0.4**
BVAR	**Borovoye Array**	**51.31**	**314**	P	**P**	**00 49 06.0**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=95,slow=7.8,SNR=4.0						
	comp=Z,0.9nm,0.6s						
J20K	**Nowinta River**	**51.58**	**31**	P	**P**	**00 49 09.0**	**+0.5**
J20K				IAmb	IAmb	00 49 10.2	
	comp=Z,5.7nm,0.8s						
B21K	**Ikpikpuk River**	**51.95**	**24**	P	**P**	**00 49 11.9**	**+0.9**
G21K	**Allakaket**	**52.02**	**28**	P	**P**	**00 49 12.0**	**+0.4**
G21K				IAmb	IAmb	00 49 13.2	
	comp=Z,6.2nm,0.9s						
KDAK	**Kodiak Island**	**52.32**	**39**	P	**P**	**00 49 13.3**	**-0.6**
	comp=Z,8.1nm,0.8s,baz=303,slow=1.4,SNR=11						
	comp=Z,8.1nm,0.8s						
KDAK	**Kodiak Island**	**52.32**	**39**	P	**P**	**00 49 13.4**	**-0.6**
PPLA	**Purkeypile**	**52.41**	**33**	P	**P**	**00 49 15.6**	**+0.8**
PPLA				IAmb	IAmb	00 49 16.4	
	comp=Z,12nm,1.1s						
B22K	**Teshekpuk Lake**	**52.46**	**23**	P	**P**	**00 49 15.2**	**+0.4**
B22K				IAmb	IAmb	00 49 31.4	
	comp=Z,11nm,1.1s						
DHY	**Denali Highway**	**54.61**	**33**	P	**P**	**00 49 30.4**	**-0.1**
SCM	**Sheep Creek Mo**	**54.72**	**34**	P	**P**	**00 49 31.5**	**+0.3**
IL31		**54.73**	**31**	P	**P**	**00 49 29.9**	**-1.2**
ILAR	**Eielson Array**	**54.73**	**31**	P	**P**	**00 49 30.4**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=266,slow=5.5,SNR=11						
	comp=Z,1.4nm,0.7s						
D25K	**Kavik River**	**54.83**	**25**	P	**P**	**00 49 31.9**	**0.0**
KBL	**Kabul**	**56.17**	**292**	P	**P**	**00 49 40.4**	**-1.7**
J26L	**Joseph Creek**	**56.18**	**31**	P	**P**	**00 49 41.2**	**-0.3**
ARCES	**ARCESS Array B**	**66.94**	**339**	P	**P**	**00 50 52.0**	**-0.5**
	comp=Z,5.8nm,1.2s,baz=51,slow=6.1,SNR=7.6						
	comp=Z,5.8nm,1.2s						
FINES	**FINESS Array B**	**71.18**	**332**	P	**P**	**00 51 17.7**	**-0.8**
	comp=Z,2.5nm,1.0s,baz=87,slow=7.2,SNR=1.2						
	comp=Z,2.5nm,1.0s						
HFS	**Hagfors**	**76.71**	**335**	P	**P**	**00 51 49.0**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=29,slow=3.3,SNR=6.4						
	comp=Z,0.5nm,0.4s						
NOA	**NORSAR Array B**	**76.93**	**336**	P	**P**	**00 51 50.5**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=53,slow=7.8,SNR=1.1						
	comp=Z,0.6nm,0.7s						
MMAI	**Mount Meron Ar**	**81.91**	**304**	P	**P**	**00 52 19.3**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=66,slow=5.2,SNR=5.0						
	comp=Z,1.1nm,0.5s						
PDAR	**Pinedale Array**	**82.85**	**43**	P	**P**	**00 52 23.1**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=290,slow=7.3,SNR=5.0						
	comp=Z,0.6nm,0.7s						
KNB	**Kanab**	**84.38**	**49**	P	**P**	**00 52 31.7**	**+0.3**
KNB				IAmb	IAmb	00 52 41.4	
	comp=Z,1.7nm,1.1s						
P18A	**Preston Nutter**	**84.39**	**46**	P	**P**	**00 52 32.0**	**+0.5**
TXAR	**Lajitas Array**	**95.17**	**50**	P	**P**	**00 53 20.9**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=291,slow=3.9,SNR=5.0						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**95.17**	**50**	P	**P**	**00 53 21.7**	**-0.2**
BUKO	**Buck Lake**	**95.21**	**25**	P	**P**	**00 53 20.6**	**-1.1**

*IDC **15** 00:47:29.7±1.4, 1.75N×126.59E, h0km, mb3.8/6, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=115.4km s-min=17.4km az=69.0*
*DJA **15** 00:47:33.9±0.4, 2.7N±5.5×12.6E±°, h10km, M4.1/6, MLv4.1/6*
ISC 15 00:47:35.3±1.1, 1.69N±0.09×126.5E±0.1, h35km, n10, σ0ᵍ81/10, mb3.9/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**138**	P	**Pn**	**00 47 56.8**	**+0.8**
SGSI	**Sangihe**	**2.23**	**333**	P	**Pn**	**00 48 10.5**	**+0.8**
KMSI	**Cibinong**	**2.79**	**247**	P	**Pn**	**00 48 18.2**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	**P**	**00 52 00.9**	**-0.6**
	0.2nm,0.3s,baz=4.1,slow=11,SNR=1.5						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**00 52 34.5**	**-0.9**
	2.1nm,0.6s,baz=340,slow=11,SNR=14						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**26.20**	**165**	P	**P**	**00 53 07.2**	**+0.3**
	0.7nm,0.4s,baz=346,slow=7.4,SNR=12						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**00 57 31.6**	**-0.9**
	0.6nm,0.5s,baz=116,slow=7.4,SNR=10						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**62.31**	**334**	P	**P**	**00 57 53.4**	**-0.5**
	0.4nm,0.3s,baz=131,slow=6.1,SNR=1.9						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**00 58 00.3**	**-0.6**
	0.4nm,0.4s,baz=130,slow=6.4,SNR=11						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**68.92**	**327**	P	**P**	**00 58 37.2**	**+0.5**
	0.4nm,0.5s,baz=98,slow=8.9,SNR=3.0						
	0.4nm,0.5s						

IDC 15 00:48:47.0±1.8, 1.66N×126.31E, h0km, mb3.6/4, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=131.7km s-min=22.3km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	P	00 53 17.9	+0.4
	0.1nm,0.3s,baz=12,slow=11,SNR=2.4						
	2.7nm,0.9s						
WRA	**Warramunga Arr**	**22.87**	**160**	P	P	00 53 52.2	-0.1
	1.1nm,0.4s,baz=338,slow=10,SNR=3.4						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**26.23**	**164**	P	P	00 54 23.6	-0.4
	0.7nm,0.7s,baz=341,slow=8.2,SNR=2.4						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	00 58 48.6	-0.2
	0.5nm,0.5s,baz=123,slow=8.1,SNR=4.6						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.26**	**328**	P	P	00 59 17.8	+0.3
	0.3nm,0.5s,baz=126,slow=6.4,SNR=1.9						
	0.3nm,0.5s						

IDC 15 00:49:09.6±17.0, 47.32N×151.43E, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=399.0km s-min=197.2km az=144.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**30.27**	**150**	T	T	01 26 24.2	
	baz=340,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**30.28**	**150**	T	T	01 26 20.4	
	baz=340,slow=76,SNR=9.1						
H11N3	**WAKE ISLAND Hy**	**30.29**	**150**	T	T	01 26 26.8	
	baz=340,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**31.34**	**151**	T	T	01 27 53.7	
	baz=341,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**31.35**	**151**	T	T	01 27 57.3	
	baz=341,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**31.36**	**151**	T	T	01 27 52.7	
	baz=341,slow=76,SNR=18						
ARCES	**ARCESS Array B**	**56.93**	**340**	P	P	00 58 56.5	+0.6
	2.6nm,1.0s,baz=18,slow=6.9,SNR=1.6						
	2.6nm,1.0s						
FINES	**FINESS Array B**	**63.03**	**334**	P	P	00 59 38.0	+0.1
	1.2nm,0.8s,baz=35,slow=7.0,SNR=6.2						
	1.2nm,0.8s						
NB2	**NORSAR Subarra**	**67.31**	**340**	P	P	01 00 05.7	-0.1
	comp=Z,0.3nm,0.5s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**67.31**	**340**	P	P	01 00 05.7	0.0
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5,SNR=4.9						
	comp=Z,0.4nm,0.5s						
HFS	**Hagfors**	**67.52**	**339**	P	P	01 00 06.8	-0.2
	comp=Z,1.9nm,0.6s,baz=36,slow=7.5,SNR=11						
	comp=Z,1.9nm,0.6s						
AKASG	**Malin Array Be**	**70.43**	**325**	P	P	01 00 24.9	-0.3
	comp=Z,0.4nm,0.4s,baz=38,slow=6.1,SNR=2.2						
	comp=Z,0.4nm,0.4s						

*IDC **15** 00:51:33.0±1.3, 1.65N×126.34E, h0km, mb4.0/8, mbtmp4.0/9, ML3.1/1, Error ellipse: s-maj=131.0km s-min=15.7km az=70.0*
*DJA **15** 00:51:37.2±0.3, 2.7N±5.5×12.6E±°, h10km, M4.2/7, MLv4.2/7*
*NEIC **15** 00:51:38.5±0.8, 1.62N±0.08×126.45E±0.04, h35km±2km, mb4.3/12, Error ellipse: s-maj=12.7km s-min=7.0km az=175.0*
ISC 15 00:51:38.0±0.7, 1.58N±0.07×126.44E±0.10, h35km, n30, σ1ᵍ23/30, mb4.3/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**131**	Pn	**Pn**	**00 51 59.1**	**+0.4**
TNTI	**Ternate**	**1.23**	**131**	P	**Pn**	**00 51 58.8**	**+0.1**
SGSI	**Sangihe**	**2.28**	**336**	P	**Pn**	**00 52 16.2**	**+3.0**
KMSI	**Cibinong**	**2.66**	**248**	P	**Pn**	**00 52 21.0**	**+2.7**
LUWI	**Luwuk**	**4.50**	**235**	Pn	**Pn**	**00 52 44.2**	**+0.5**
TOLI2	**Tolitoli**	**5.68**	**265**	Pn	**Pn**	**00 53 00.9**	**+1.0**
MYLDM	**Lahad Datu**	**8.69**	**294**	Pn	**Pn**	**00 53 41.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**P**	**00 56 03.6**	**+0.5**
	baz=26,slow=12,SNR=1.4						
	1.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**Pn**	**00 56 04.5**	**-0.1**
TPUB	**Ta-pu**	**22.31**	**346**	P	**P**	**00 56 29.6**	**-3.0**
WB0	**Warramunga Arr**	**22.61**	**160**	P	**P**	**00 56 35.9**	**+0.1**
WB0				IAmb	IAmb	00 56 40.3	
	comp=Z,15nm,1.0s						
WRAB	**Tennant Creek**	**22.75**	**160**	P	**P**	**00 56 37.4**	**+0.1**
WRAB				IAmb	IAmb	00 56 41.8	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**22.75**	**160**	P	**P**	**00 56 37.3**	**-0.1**
	comp=Z,9.5nm,0.7s,baz=338,slow=10,SNR=19						
	comp=Z,9.5nm,0.7s						
WRA	**Warramunga Arr**	**22.75**	**160**	P	**P**	**00 56 36.2**	**-1.2**
WR8	**Warramunga Arr**	**22.82**	**160**		**P**	**00 56 36.8**	**-1.2**
WR8				IAmb	IAmb	00 56 42.4	
	comp=Z,14nm,1.0s						
AS31	**Alice Springs**	**26.12**	**164**	P	**P**	**00 57 09.1**	**+0.1**
ASAR	**Alice Springs**	**26.13**	**164**	P	**P**	**00 57 10.4**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=352,slow=16,SNR=25						
	comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**26.13**	**164**	P	**P**	**00 57 09.1**	**+0.1**
SONM	**Songino Array**	**49.23**	**342**	P	**P**	**01 00 23.8**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=147,slow=6.2,SNR=3.8						
	comp=Z,1.0nm,0.9s						
NIL	**Nilore**	**59.02**	**309**	P	**P**	**01 01 33.9**	**-0.8**
NIL				IAmb	IAmb	01 01 46.5	
	comp=Z,3.2nm,0.8s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**01 01 35.4**	**0.0**
	comp=Z,1.5nm,0.5s,baz=119,slow=7.1,SNR=14						
	comp=Z,1.5nm,0.5s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**01 01 34.6**	**-0.8**
ZALV	**Zalesovo Beam**	**62.37**	**334**	P	**P**	**01 01 54.9**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=123,slow=5.3,SNR=2.7						
	comp=Z,0.3nm,0.3s						
KBL	**Kabul**	**62.61**	**308**	P	**P**	**01 01 58.8**	**-0.5**
KBL				IAmb	IAmb	01 02 00.2	
	comp=Z,1.8nm,0.7s						
GAR	**Garm**	**63.17**	**314**	P	**P**	**01 02 02.1**	**-0.8**
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	**P**	**01 02 03.2**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=129,slow=6.2,SNR=14						
	comp=Z,2.9nm,0.8s						
KURK	**Kurchatov**	**63.39**	**328**	P	**P**	**01 02 04.1**	**+0.2**
BVAR	**Borovoye Array**	**68.96**	**328**	P	**P**	**01 02 39.5**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=120,slow=9.8,SNR=4.3						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**81.35**	**173**	P	**P**	**01 03 51.5**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=316,slow=6.0,SNR=5.0						
	comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**81.35**	**173**	P	**P**	**01 03 51.2**	**+0.7**
VNDA				IAmb	IAmb	01 04 00.3	
	comp=Z,2.0nm,1.1s						

IDC 15 00:55:02.7±1.7, 1.89N×126.70E, h0km, mb3.7/4, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=121.7km s-min=20.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.89**	**183**	P	Pn	00 59 36.8	-0.7
	0.1nm,0.3s,baz=7.1,slow=8.5,SNR=1.4						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.96**	**161**	P	P	01 00 07.9	-1.1
	1.9nm,0.5s,baz=339,slow=11,SNR=6.1						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**26.36**	**165**	P	P	01 00 41.3	+0.5
	0.9nm,0.6s,baz=349,slow=10.0,SNR=4.4						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**59.04**	**326**	P	P	01 05 04.5	-0.2
	0.3nm,0.4s,baz=120,slow=6.9,SNR=6.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	P	01 05 33.3	+0.1
	0.5nm,0.6s,baz=130,slow=6.2,SNR=10.0						
	0.5nm,0.6s						

IDC 15 00:58:01.5±1.8, 1.70N×126.70E, h0km, mb3.4/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=124.5km s-min=22.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.70**	**183**	P	P	01 02 32.5	0.0
	0.1nm,0.3s,baz=0.0,slow=10,SNR=2.1						
	2.4nm,1.0s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	P	01 03 05.8	+0.1
	0.5nm,0.3s,baz=340,slow=11,SNR=5.3						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.17**	**165**	P	P	01 03 37.9	0.0
	0.2nm,0.5s,baz=342,slow=8.9,SNR=4.4						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.20**	**326**	P	P	01 08 05.1	+0.6
	0.2nm,0.3s,baz=143,slow=6.0,SNR=2.1						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.43**	**328**	P	P	01 08 32.4	-0.6
	0.2nm,0.5s,baz=123,slow=6.8,SNR=2.9						
	0.2nm,0.5s						

*IDC **15** 01:03:17.8±0.9, 1.62N×126.19E, h0km, mb4.0/10, mbtmp4.0/11, ML4.2/1, Error ellipse: s-maj=80.9km s-min=14.3km az=71.0*
*DJA **15** 01:03:21.3±0.4, 2.7N±7.3×12.6E±°, h10km, M4.2/5, mB4.9/2, mb4.4/3, MLv4.0/5, Mw(mB)4.2/2*
*NEIC **15** 01:03:22.9±2.4, 1.68N±0.09×126.43E±0.08, h35km±2km, mb4.3/11, Error ellipse: s-maj=19.1km s-min=4.6km az=219.0*
ISC 15 01:03:22.8±0.7, 1.68N±0.09×126.52E±0.07, h35km, n33, σ1ᵍ04/34, mb4.1/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.24**	**137**		**Pn**	**01 03 43.2**	**-0.4**
TNTI	**Ternate**	**1.24**	**137**	P	**Pn**	**01 03 43.8**	**+0.2**
LUWI	**Luwuk**	**4.62**	**234**		**Pn**	**01 04 29.3**	**-0.9**
LUWI	**Luwuk**	**4.62**	**234**	P	**Pn**	**01 04 30.7**	**+0.5**
MRSI	**Marisa**	**4.73**	**255**	P	**Pn**	**01 04 33.4**	**+1.7**
APSI	**Ampana**	**5.51**	**242**	P	**Pn**	**01 04 43.9**	**+1.5**
	1um104nm,0.9s						
TOLI2	**Tolitoli**	**5.77**	**264**		**Pn**	**01 04 43.7**	**-2.2**
MPSI	**Mapaga**	**6.76**	**259**	P	**Pn**	**01 05 00.1**	**+0.6**
MTN	**Manton Dam**	**15.14**	**163**	Pn	**Pn**	**01 06 54.3**	**+0.1**
MTN				IAmb	IAmb	01 07 02.6	
	comp=Z,10nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.68**	**182**	Pn	**P**	**01 07 48.2**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=16,slow=12,SNR=16						
	comp=Z,1.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P	**P**	**01 07 48.3**	**-0.7**
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**01 08 22.7**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=340,slow=11,SNR=26						
	comp=Z,2.1nm,0.4s						
WRA	**Warramunga Arr**	**22.82**	**161**		**P**	**01 08 21.4**	**-1.5**
WR8	**Warramunga Arr**	**22.89**	**160**		**P**	**01 08 22.4**	**-1.2**
WR8				IAmb	IAmb	01 08 32.8	
	comp=Z,7.2nm,1.1s						
MBWA	**Marble Bar**	**23.66**	**196**	P	**P**	**01 08 29.8**	**-1.3**
MBWA				IAmb	IAmb	01 08 48.1	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	**26.20**	**165**	P	**P**	**01 08 55.4**	**+1.0**
AS31				IAmb	IAmb	01 09 00.5	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**26.20**	**165**	P	**P**	**01 08 54.3**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=348,slow=16,SNR=17						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	**26.20**	**165**	P	**P**	**01 08 55.2**	**+0.8**
MORW	**Morawa**	**32.18**	**197**	P	**P**	**01 09 47.0**	**-0.5**
FORT	**Forrest**	**32.31**	**178**	P	**P**	**01 09 49.1**	**+0.5**
FORT				IAmb	IAmb	01 10 00.0	
	comp=Z,6.6nm,1.1s						
BBOO	**Buckleboo**	**35.47**	**166**	P	**P**	**01 10 15.5**	**-0.6**
BBOO				IAmb	IAmb	01 10 16.8	
	comp=Z,20nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.52**	**194**	P	**P**	**01 10 16.4**	**-0.1**
	comp=Z,7.8nm,1.0s,baz=37,slow=10,SNR=2.2						
	comp=Z,7.8nm,1.0s						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**01 10 23.9**	**+0.7**
	comp=Z,3.5nm,0.8s,baz=342,slow=16,SNR=5.6						
	comp=Z,3.5nm,0.8s						
SONM	**Songino Array**	**49.16**	**342**	P	**P**	**01 12 08.0**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=138,slow=13,SNR=2.3						
SONM				PcP	**PcP**	**01 13 30.8**	**+0.4**
	comp=Z,1.3nm,1.1s,baz=132,slow=2.1,SNR=3.0						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**01 13 18.6**	**-1.3**
	comp=Z,1.6nm,0.7s,baz=120,slow=7.6,SNR=9.2						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**62.31**	**334**	P	**P**	**01 13 43.1**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=102,slow=6.2,SNR=2.7						
	comp=Z,0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**01 13 47.4**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=129,slow=6.4,SNR=15

SNET ***15*** *01:10:10.9±2.3, 12.64N×88.84W, h22km, ML3.3*
CATAC ***15*** *01:10:10.5±0.4, 13.3°N×8.9°W±°, h10km, M3.2/19, MLv3.2/19, Error ellipse: s-maj=6.1km s-min=2.5km az=30.6, confirmed*
ISC 15 01:10:10.0±1.7, 12.66N±0.07×88.83W±0.04, h12km±10km, n55, σ0.56/65, 1C-9D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.87**	**3**	***eP***	**Pn**	**01 10 28.0**	**-0.2**
TECA	**Tecapa**	**0.89**	**21**	***eP***	**Pn**	**01 10 28.5**	**-0.1**
LCY	**Lacayo**	**0.92**	**35**	***eP***	**Pn**	**01 10 29.1**	**+0.2**
RANC	**El Ranchito**	**0.93**	**34**	***i*** P	**Pn**	**01 10 29.2**	**+0.1**
RANC				*eS*	**Sn**	**01 10 41.9**	**-0.7**
VSM	**San Miguel**	**0.94**	**35**	***i*** P	**Pn**	**01 10 29.6**	**+0.3**
PACA	**Pacayal**	**0.94**	**32**	***i*** P	**Pn**	**01 10 29.4**	**+0.2**
PACA				***i*** P	**Pn**	**01 10 29.5**	**+0.2**
PACA	**Pacayal**	**0.94**	**32**	S	**Sb**	**01 10 41.3**	**+0.3**
PACA	**Pacayal**	**0.94**	**32**	⇓P	**Pn**	**01 10 29.5**	**+0.2**
BLLM	**Bellamira**	**0.97**	**37**	***i*** P	**Pn**	**01 10 29.8**	**+0.2**
UESV	**Universidad de**	**0.97**	**3**	S	**Sb**	**01 10 42.4**	**+0.7**
UESV	**Universidad de**	**0.97**	**3**	⇓P	**Pn**	**01 10 29.8**	**+0.2**
LOMA	**Loma Larga**	**1.03**	**341**	P	**Pn**	**01 10 30.7**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.04**	**6**	***eP***	**Pn**	**01 10 30.8**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.04**	**6**	S	**Sb**	**01 10 44.2**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.04**	**6**	⇓P	**Pn**	**01 10 31.0**	**+0.5**
PAVA	**Las Pavas**	**1.05**	**354**	*eS*	**Sb**	**01 10 44.1**	**0.0**
PAVA	**Las Pavas**	**1.05**	**354**	P	**Pn**	**01 10 30.9**	**+0.2**
PAVA	**Las Pavas**	**1.05**	**354**	S	**Sb**	**01 10 44.3**	**+0.2**
LCND	**La Caada**	**1.12**	**55**	***eP***	**Pn**	**01 10 31.8**	**+0.2**
LCND				***eP***	**Pb**	**01 10 32.0**	**+0.7**
LCND	**La Caada**	**1.12**	**55**	P	**Pn**	**01 10 31.7**	**+0.2**
UEES	**Universidad Ev**	**1.12**	**339**	P	**Pb**	**01 10 31.5**	**0.0**
UEES	**Universidad Ev**	**1.12**	**339**	S	**Sg**	**01 10 45.7**	**-0.6**
PMON	**Piamonte**	**1.15**	**336**	S	**Sg**	**01 10 46.3**	**-0.8**
PMON	**Piamonte**	**1.15**	**336**	⇓P	**Pb**	**01 10 32.0**	**+0.2**
CNCH	**Conchagua**	**1.15**	**58**	***eP***	**Pn**	**01 10 32.9**	**+0.9**
CNCH	**Conchagua**	**1.15**	**58**	S	**Sb**	**01 10 47.1**	**+0.2**
CNCH	**Conchagua**	**1.15**	**58**	⇓P	**Pn**	**01 10 32.3**	**+0.3**
BOQS	**Boqueron**	**1.15**	**338**	***eP***	**Pg**	**01 10 32.6**	**+0.3**
PIC2	**El Picacho**	**1.15**	**339**	***eP***	**Pn**	**01 10 32.8**	**+0.5**
PIC2				*eS*	**Sg**	**01 10 47.1**	**-0.2**
JAYA	**Jayaque - finc**	**1.16**	**329**	***eP***	**Pb**	**01 10 32.2**	**+0.1**
JAYA				*eS*	**Sg**	**01 10 46.4**	**-1.0**
JAYA	**Jayaque - finc**	**1.16**	**329**	⇓P	**Pb**	**01 10 32.2**	**+0.1**
CSGN	**Cosiguina Volc**	**1.28**	**76**	⇓P	**Pb**	**01 10 34.3**	**+0.2**
CSGN				S	**Sg**	**01 10 50.6**	**-0.7**
POTN	**Potosi Cosigui**	**1.33**	**75**	S	**Sb**	**01 10 51.1**	**-1.0**
SBLS	**San Blas**	**1.40**	**327**	***eP***	**Pn**	**01 10 36.4**	**+0.7**
SNJE	**San Jose**	**1.42**	**328**	***eP***	**Pn**	**01 10 36.3**	**+0.4**
SNJE				*eS*	**Sn**	**01 10 53.8**	**-0.8**
RTR	**El Retiro**	**1.46**	**327**	***eP***	**Pb**	**01 10 37.5**	**+0.2**
UNIC	**Universidad Ca**	**1.49**	**332**	P	**Pn**	**01 10 37.5**	**+0.8**
UNIC	**Universidad Ca**	**1.49**	**332**	S	**Sn**	**01 10 55.8**	**-0.3**
NUBE	**Las Nubes**	**1.54**	**323**	***eP***	**Pn**	**01 10 37.6**	**+0.1**
NUBE				*eS*	**Sn**	**01 10 56.2**	**-1.4**
NUBE	**Las Nubes**	**1.54**	**323**	⇓P	**Pn**	**01 10 37.8**	**+0.3**
FAME	**Alcaldia de Sa**	**1.65**	**316**	P	**Pn**	**01 10 39.0**	**+0.2**
RBDL	**Robledal**	**1.67**	**330**	***eP***	**Pn**	**01 10 39.9**	**+0.7**
CRIN	**San Cristobal**	**1.74**	**89**	P	**Pn**	**01 10 40.7**	**+0.6**
CRIN	**San Cristobal**	**1.74**	**89**	S	**Sn**	**01 11 02.9**	**+0.5**
MTO3	**Montecristo**	**1.80**	**343**	P	**Pn**	**01 10 42.6**	**+1.4**
PKGN	**Cerro Pekin**	**1.81**	**90**	P	**Pn**	**01 10 41.8**	**+0.8**
PKGN				S	**Sn**	**01 11 02.8**	**-1.2**
ESQI	**Esquipulas**	**1.95**	**345**	S	**Sn**	**01 11 07.6**	**0.0**
ESQI	**Esquipulas**	**1.95**	**345**	P	**Pn**	**01 10 43.4**	**+0.3**
POLN	**Al Sur del Vol**	**1.97**	**90**	⇓P	**Pn**	**01 10 43.3**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.06**	**47**	P	**Pn**	**01 10 45.0**	**+0.5**
CNGA	**Al SSO del Vol**	**2.08**	**94**	P	**Pn**	**01 10 45.4**	**+0.5**
CNGA				S	**Sn**	**01 11 10.6**	**-0.3**
CNGN	**Cerro Negro**	**2.09**	**94**	P	**Pn**	**01 10 45.3**	**+0.3**
CNGN	**Cerro Negro**	**2.09**	**94**	S	**Sn**	**01 11 09.8**	**-1.2**
YUSH	**Yuscaran**	**2.32**	**56**	S	**Sn**	**01 11 16.5**	**-0.3**
YUSH	**Yuscaran**	**2.32**	**56**	⇑P	**Pn**	**01 10 48.7**	**+0.4**

ISK ***15*** *01:12:07.9, 35.57N×32.38E, h20km, ML2.7/17*
NIC ***15*** *01:12:09.6, 35.72N×32.48E, h44km±8km, Ml1.8/8*
ISC 15 01:12:10.8±1.1, 35.65N±0.02×32.45E±0.05, h30km±11km, n26, σ0.90/40, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALFC	**Alefka**	**0.51**	**166**	P	**Pb**	**01 12 21.2**	**-0.2**
ALFC				S	**Sn**	**01 12 30.9**	**+1.1**
ALFC				AML	AML	01 12 33.2	
	0.2nm,0.2s						
ALFC				AML	AML	01 12 34.8	
	0.2nm,0.2s						
GAZI	**Gazipasa**	**0.59**	**349**	Pg	**Pb**	**01 12 21.6**	**-1.2**
GAZI				Sg	**Sb**	**01 12 31.6**	**+0.7**
BOZY	**Bozyazi-Mersin**	**0.62**	**43**	Pg	**Pb**	**01 12 22.2**	**-1.1**
AKMS	**Akamas**	**0.64**	**188**	P	**Pb**	**01 12 23.3**	**-0.3**
AKMS				S	**Sn**	**01 12 34.2**	**+1.2**
AKMS				AML	AML	01 12 35.0	
	0.1nm,0.2s						
AKMS				AML	AML	01 12 38.9	
	0.2nm,0.4s						
TEKE	**Tekeli-Mersin**	**0.73**	**48**	Pg	**Pn**	**01 12 24.9**	**-0.2**
TEKE				Sg	**Sn**	**01 12 36.5**	**+1.2**
TROD	**Troodos**	**0.78**	**154**	S	**Sb**	**01 12 37.3**	**+0.9**
TROD				AML	AML	01 12 42.0	
TROD				AML	AML	01 12 42.2	
	0.1nm,0.3s						
XYLS	**Xyliatos**	**0.80**	**142**	P	**Pn**	**01 12 25.1**	**-1.1**
XYLS				S	**Sn**	**01 12 36.8**	**-0.3**
XYLS				AML	AML	01 12 38.8	
	0.1nm,0.2s						
XYLS				AML	AML	01 12 39.2	
	0.1nm,0.2s						
NATA	**Nata**	**0.88**	**174**	P	**Pn**	**01 12 27.6**	**+0.4**
NATA				S	**Sn**	**01 12 39.3**	**+0.3**
NATA				AML	AML	01 12 47.9	
	0.3nm,0.6s						
NATA				AML	AML	01 12 48.1	
	0.2nm,0.7s						
ATHAL	**Athalassa**	**0.93**	**123**	S	**Sb**	**01 12 41.2**	**+0.9**
BERE	**Bereket-Mersin**	**0.94**	**42**	Pg	**Pn**	**01 12 27.8**	**-0.3**
BERE				Sg	**Sb**	**01 12 42.5**	**+1.8**
LFK	**Lefkose**	**0.96**	**112**	Pg	**Pn**	**01 12 27.1**	**-1.2**
LFK				Sg	**Sn**	**01 12 41.4**	**+0.4**
ALAN	**Alanya-ANTALYA**	**0.96**	**340**	Pg	**Pn**	**01 12 26.6**	**-1.8**
CSS	**Mathiatis**	**1.00**	**133**	Pg	**Pn**	**01 12 27.5**	**-1.3**
CSS	**Mathiatis**	**1.00**	**133**	P	**Pn**	**01 12 27.9**	**-1.0**
CSS				S	**Sn**	**01 12 42.3**	**+0.4**
CSS				AML	AML	01 12 46.3	
CSS				AML	AML	01 12 48.4	
AKK1	**Akkuyu-Mersin**	**1.01**	**61**	Pn	**Pn**	**01 12 28.3**	**-0.7**
AKK2	**Akkuyu-Mersin**	**1.02**	**61**	Pn	**Pn**	**01 12 28.7**	**-0.4**
ASGA	**Asgata**	**1.08**	**143**	P	**Pn**	**01 12 29.5**	**-0.5**
ASGA				S	**Sn**	**01 12 44.3**	**+0.3**
ASGA				AML	AML	01 12 48.5	
ASGA				AML	AML	01 12 50.6	
	0.1nm,0.5s						
YESI	**Yesilovacik-Me**	**1.11**	**60**	Pn	**Pn**	**01 12 29.9**	**-0.5**
TISA	**Tisan-Mersin**	**1.12**	**63**	Pn	**Pn**	**01 12 30.1**	**-0.4**
TEVE	**Tevekalti-Mers**	**1.12**	**46**	Pn	**Pn**	**01 12 30.3**	**-0.3**
TEVE				Sn	**Sb**	**01 12 46.8**	**+0.8**
MVOU	**Mavrovouni**	**1.16**	**123**	P	**Pn**	**01 12 29.6**	**-1.4**
MVOU				S	**Sn**	**01 12 44.9**	**-0.9**
MVOU				AML	AML	01 12 45.8	
MVOU				AML	AML	01 12 47.3	
KARG	**Kargicak-Mersi**	**1.16**	**61**	Pn	**Pn**	**01 12 30.7**	**-0.4**
KEBE	**Keben-Mersin**	**1.30**	**52**	Pn	**Pn**	**01 12 30.2**	**+0.2**
KEBE				Sn	**Sb**	**01 12 51.4**	**+0.5**
HDMB	**Hadim**	**1.31**	**1**	Pn	**Pn**	**01 12 32.9**	**-0.5**
HDMB				Sn	**Sn**	**01 12 51.4**	**+1.4**
KIZK	**Mersin**	**1.60**	**58**	Pn	**Pn**	**01 12 37.1**	**0.0**
KRMN	**Karaman**	**1.66**	**23**	Pn	**Pn**	**01 12 38.3**	**+0.3**

IDC ***15*** *01:17:14.8±2.8, 4.07N×126.14E, h0km, mb4.3/12, mbtmp4.3/12, MS5.0/11, Error ellipse: s-maj=99.5km s-min=67.3km az=65.0*
NEIC ***15*** *01:17:36.1±1.9, 5.1N±0.1×126.0E±0.2, h117km±9km, mb4.4/14, Error ellipse: s-maj=23.5km s-min=15.2km az=87.0*
ISC 15 01:17:31.2±1.0, 4.7N±0.1×126.0E±0.2, h100km, n50, σ1.9/39/39, mb4.3/12, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.42**	**350**	Sn	**Sn**	**01 18 41.0**	**+2.5**
	110nm,0.3s,baz=226,slow=12,SNR=2.0						
DAV	**Davao City (W)**	**2.42**	**350**	Sn	**Sn**	**01 18 36.2**	**-2.3**
DAV	**Davao City (W)**	**2.42**	**350**	Pn	**Pn**	**01 18 08.3**	**-1.0**
KAPI	**Kappang**	**11.47**	**213**	LR	LR	01 24 56.7	
	comp=Z,8μm,18.1s,baz=58,slow=42						
TPUB	**Ta-pu**	**19.24**	**345**		**P**	**01 21 45.2**	**-2.4**
SSLB	**Suanglung**	**19.62**	**346**		**P**	**01 21 50.0**	**-1.9**
ASAR	**Alice Springs**	**29.20**	**165**	LR	LR	01 36 37.4	
	comp=Z,4μm,20.9s,baz=339,slow=41						
CTA	**Charters Tower**	**31.64**	**142**	LR	LR	01 38 26.3	
	comp=Z,184nm,19.1s,baz=310,slow=41						
EVN	**Everest**	**43.86**	**306**	P	**P**	**01 25 30.2**	**+1.7**
HILR	**Hailar Array B**	**45.04**	**354**	P	**P**	**01 25 37.2**	**+0.2**
	2.5nm,0.6s,baz=171,slow=10,SNR=3.6 2.5nm,0.6s						
HILR	**Hailar Array B**	**45.04**	**354**	P	**P**	**01 25 37.2**	**+0.2**
SONM	**Songino Array**	**46.18**	**342**	P	**P**	**01 25 47.1**	**+1.0**
	0.5nm,0.5s,baz=157,slow=7.8,SNR=3.5 0.5nm,0.5s						
SONM	**Songino Array**	**46.18**	**342**	P	**P**	**01 25 47.1**	**+1.0**
PETK	**Petropavlovsk-**	**54.84**	**23**	P	**P**	**01 26 52.5**	**+1.5**
MK31	**Makanchi Array**	**56.38**	**325**	P	**P**	**01 27 01.7**	**-0.5**
MKAR	**Makanchi Array**	**56.38**	**325**	P	**P**	**01 27 02.4**	**+0.2**
	2.0nm,0.5s,baz=125,slow=7.8,SNR=16 2.0nm,0.5s						
MKAR	**Makanchi Array**	**56.38**	**325**	P	**P**	**01 27 02.2**	**0.0**
MAKZ	**Makanchi**	**56.56**	**325**	P	**P**	**01 27 03.3**	**-0.2**
ZALV	**Zalesovo Beam**	**59.43**	**333**	P	**P**	**01 27 22.1**	**-1.1**
	0.7nm,0.6s,baz=144,slow=6.1,SNR=4.2 0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**60.56**	**327**	P	**P**	**01 27 30.9**	**-0.2**
	2.4nm,0.8s,baz=127,slow=6.2,SNR=29 2.4nm,0.8s						
KURK	**Kurchatov**	**60.56**	**328**	P	**P**	**01 27 30.6**	**-0.5**
RAO	**Raoul Island**	**63.46**	**126**	LR	LR	01 54 53.9	
	comp=Z,911nm,20.4s,baz=306,slow=36						
BVAR	**Borovoye Array**	**66.14**	**327**	P	**P**	**01 28 07.6**	**-0.2**
	1.4nm,0.5s,baz=134,slow=8.4,SNR=9.6 1.4nm,0.5s						
BVAR	**Borovoye Array**	**66.14**	**327**	P	**P**	**01 28 07.6**	**-0.2**
ABKAR	**Akbulak array**	**70.97**	**321**	P	**P**	**01 28 39.0**	**+1.1**
ARTI	**Arti**	**73.84**	**328**	P	**P**	**01 28 54.4**	**-0.4**
	1.3nm,0.4s,baz=142,slow=11,SNR=3.2 1.3nm,0.4s						
ARTI	**Arti**	**73.84**	**328**	P	**P**	**01 28 55.3**	**+0.4**
RAYN	**Ar Rayn**	**79.45**	**293**	P	**P**	**01 29 27.6**	**+0.4**
KVAR	**Kislovodsk Arr**	**81.97**	**314**	LR	LR	02 12 42.0	
	comp=Z,505nm,19.3s,baz=241,slow=40						
E22K	**Anaktuvuk Pass**	**82.77**	**22**	P	**P**	**01 29 44.4**	**+0.5**
I27K	**Kandik River**	**86.77**	**25**	P	**P**	**01 30 06.3**	**+2.3**
I28M	**Miner Creek**	**87.48**	**25**	P	**P**	**01 30 07.4**	**-0.1**
ARCES	**ARCESS Array B**	**89.32**	**340**	P	**P**	**01 30 15.0**	**-1.0**
	1.5nm,0.7s,baz=105,slow=4.8,SNR=8.2 1.5nm,0.7s						
ARCES	**ARCESS Array B**	**89.32**	**340**	P	**P**	**01 30 15.5**	**-0.5**
SPITS	**Spitsbergen Ar**	**89.42**	**349**	P	**P**	**01 30 15.6**	**-0.8**
	8.0nm,0.9s,baz=86,slow=10,SNR=3.6 8.0nm,0.9s						
INK	**Inuvik**	**89.56**	**21**	P	**P**	**01 30 20.5**	**+3.4**
FINES	**FINESS Array B**	**90.67**	**332**	P	**P**	**01 30 22.2**	**-0.2**
	1.7nm,0.6s,baz=55,slow=6.8,SNR=9.2 1.7nm,0.6s						
FINES	**FINESS Array B**	**90.67**	**332**	P	**P**	**01 30 22.4**	**0.0**
DLBC	**Dease Lake**	**93.31**	**31**	LR	LR	02 09 33.7	
	comp=Z,1μm,21.8s,baz=270,slow=34						
QSPA	**South Pole Qui**	**94.57**	**180**	LR	LR	02 13 31.0	
	comp=Z,1μm,20.7s,baz=353,slow=36						
MBAR	**Mbarara**	**95.30**	**270**	LR	LR	02 10 57.3	
	comp=Z,811nm,21.5s,baz=76,slow=34						
HFS	**Hagfors**	**96.86**	**332**	P	**P**	**01 30 50.4**	**-0.5**
	0.9nm,0.7s,baz=2.9,slow=2.9,SNR=1.4 0.9nm,0.7s						
HFS	**Hagfors**	**96.86**	**332**	P	**P**	**01 30 50.4**	**-0.5**
RES	**Resolute Bay**	**97.02**	**10**	LR	LR	02 17 17.4	
	comp=Z,318nm,20.6s,baz=334,slow=37						
NOA	**NORSAR Array B**	**97.63**	**334**	P	**P**	**01 30 53.5**	**-1.0**
	1.0nm,0.8s,baz=65,slow=4.4,SNR=4.5						
NOA				LR	LR	02 19 40.8	
	comp=Z,2μm,21.7s,baz=65,slow=38 1.0nm,0.8s						
NOA	**NORSAR Array B**	**97.63**	**334**	P	**P**	**01 30 53.5**	**-1.0**
JMIC	**Jan Mayen**	**98.78**	**346**	LR	LR	02 23 17.3	
	comp=Z,257nm,18.8s,baz=48,slow=40						
YKA	**Yellowknife Ar**	**98.93**	**24**	LR	LR	02 19 16.4	
	comp=Z,411nm,20.5s,baz=280,slow=37						
PLCA	**Paso Flores**	**141.13**	**160**	PKP	**PKPdf**	**01 36 47.7**	**-2.7**
	4.4nm,0.9s,baz=210,slow=3.7,SNR=8.8						
PLCA	**Paso Flores**	**141.13**	**160**	PKHKP	**PKPdf**	**01 36 47.7**	**-2.7**

MOS ***15*** *01:17:34.0±1.0, 1.64N×126.19E, h23km, mb6.1/66, MS5.3/30, Error ellipse: s-maj=7.4km s-min=4.0km az=116.1*
IDC ***15*** *01:17:34.2±1.9, 1.58N×126.22E, h15km±11km, mb5.7/48, mbtmp5.8/49, ML5.0/2, MS5.1/13, Error ellipse: s-maj=14.0km s-min=8.9km az=80.0*
BJI ***15*** *01:17:36.2, 1.60N×126.15E, h43km, mB5.7/63, mb5.5/92, Ms5.5/99, Ms7 5.4/94*
NEIC ***15*** *01:17:38.3, 1.53N×126.25E, h30km, Moment Tensor Solution. Duration: 5s1 Moment tensor: Scale 10^18^Nm; Mrr0.89; Mθθ-0.05; Mφφ-0.84; Mrθ-0.14; Mθφ-0.57; Mφr-0.08; Fault plane solution: M0 1.05000×10^18^ NP1: φs20.16000°, δ41.63000°, λ79.10000°. NP2:φs214.61000°, δ49.28000°, λ99.54000°. Principal axes: T 0.9090, Plg82.0000°, Azm180.0000°; N 0.2399, Plg7.0000°, Azm28.0000°; P -1.1489, Plg4.0000°, Azm298.0000°;*
NEIC ***15*** *01:17:38.3, 1.63N×126.35E, h30km*
DJA ***15*** *01:17:38.5±0.1, 2°N±1°×12°6E±°, h49km±2km, M5.8/119, mB6.2/106, mb5.9/119, MLv6.1/21, Mw5.9/119, Mw(mB)5.8/106, MwMwp5.7/67, Mwp5.8/67*
NEIC ***15*** *01:17:38.3±2.7, 1.62N±0.07×126.35E±0.05, h35km±1km, mb5.9/401, Ms_20 5.4/191, Mww5.9/36, Error ellipse: s-maj=11.4km s-min=8.8km az=197.0*
GCMT ***15*** *01:17:42.3±0.1, 1.69N±0.01×126.25E±0.01, h29km, MW6.0/156, Moment Tensor Solution. s154,c315; s156,c386; Duration: 2s4 Moment tensor: Scale 10^18^ Nm; Mrr0.67±.01; Mθθ0.18±.01; Mφφ-0.84±.01; Mrθ-0.54±.02; Mrφ-0.71±.01; Mθφ0.10±.02; Best double couple: M0 1.18400×10^18^ NP1:φs353.00000°, δ53.00000°, λ36.00000°. NP2:φs240.00000°, δ62.00000°, λ137.00000°. Principal axes: T 1.1420, Plg49.0000°, Azm203.0000°; N 0.0840, Plg41.0000°, Azm33.0000°; P -1.2260, Plg5.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 15 01:17:38.7±0.3, 1.60N±0.02×126.27E±0.03, h48km±2km, h49km:pP-P, n1561, σ1.48/1488, mb5.8/481, MS5.4/189, 80C-64D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.37**	**127**		**Pn**	**01 17 58.8**	**-2.7**
TNTI	**Ternate**	**1.37**	**127**	P	**Pn**	**01 17 59.7**	**-1.7**
TNTI	**Ternate**	**1.37**	**127**	S	**Sn**	**01 18 18.7**	**+0.3**
TNTI	**Ternate**	**1.37**	**127**	P	**Pn**	**01 17 58.5**	**-2.9**
SGSI	**Sangihe**	**2.20**	**340**	P	**Pn**	**01 18 11.4**	**-1.5**
KMSI	**Cibinong**	**2.51**	**246**	P	**Pn**	**01 18 18.7**	**+1.7**
SANI	**Sanana**	**3.64**	**185**	P	**Pn**	**01 18 32.1**	**-0.5**
SANI				S	**Sn**	**01 19 17.8**	**+3.6**
SANI	**Sanana**	**3.64**	**185**	P	**Pn**	**01 18 32.1**	**-0.5**
SANI	**Sanana**	**3.64**	**185**	S	**Sn**	**01 19 15.3**	**+1.1**
SANI	**Sanana**	**3.64**	**185**	P	**Pn**	**01 18 31.8**	**-0.7**
LUWI	**Luwuk**	**4.38**	**233**	P	**Pn**	**01 18 44.7**	**+2.0**
LUWI				S	**Sn**	**01 19 39.5**	**+7.0**
LUWI	**Luwuk**	**4.38**	**233**		**Pn**	**01 18 43.9**	**+1.2**
LUWI	**Luwuk**	**4.38**	**233**	P	**Pn**	**01 18 45.0**	**+2.3**
LUWI	**Luwuk**	**4.38**	**233**	S	**Sn**	**01 19 33.8**	**+1.4**
LUWI	**Luwuk**	**4.38**	**233**	P	**Pn**	**01 18 44.2**	**+1.5**
MRSI	**Marisa**	**4.47**	**256**	P	**Pn**	**01 18 46.2**	**+2.2**
NLAI	**Namlea**	**4.88**	**170**	P	**Pn**	**01 18 49.5**	**-0.1**
APSI	**Ampana**	**5.25**	**242**	P	**Pn**	**01 18 57.5**	**+2.8**
DAV	**Davao City (W)**	**5.48**	**353**	Pn	**Pn**	**01 18 58.2**	**+0.4**
	219nm,0.3s,baz=292,slow=22,SNR=7.1						
DAV				Sn	**Sn**	**01 20 03.1**	**+3.5**
	131nm,0.3s,baz=177,slow=23,SNR=4.4						
DAV	**Davao City (W)**	**5.48**	**353**		Pn	01 18 51.6	-6.3
DAV	**Davao City (W)**	**5.48**	**353**	P	**Pn**	**01 18 59.0**	**+1.1**
DAV				S	**Sn**	**01 19 59.5**	**-0.1**
DAV	**Davao City (W)**	**5.48**	**353**	P	**Pn**	**01 18 54.4**	**-3.4**
	4μm,0.8s						
TOLI2	**Tolitoli**	**5.51**	**265**		**Pn**	**01 18 59.0**	**+0.7**
TOLI2	**Tolitoli**	**5.51**	**265**	P	**Pn**	**01 18 59.7**	**+1.4**
	2μm,0.8s						
SWI	**Sorong**	**5.55**	**116**	P	**Pn**	**01 18 57.7**	**-1.2**
	12μm890nm,1.0s						
MSAI	**Masohi**	**5.58**	**152**	P	**Pn**	**01 19 00.9**	**+1.6**
	8.4nm82μm29μm2μm,1.2s						
AAI	**Ambon**	**5.59**	**160**	P	**Pn**	**01 18 59.4**	**0.0**
	6.9nm49μm16μm1μm,0.8s						
MPSI	**Mapaga**	**6.50**	**259**	P	**Pn**	**01 19 14.7**	**+2.9**
	6.8nm18μm2μm,0.9s						
PCI	**Palu**	**6.90**	**249**	P	**Pn**	**01 19 20.5**	**+3.1**
BNDI	**Bandanaira**	**7.08**	**149**	P	**Pn**	**01 19 23.2**	**+3.4**
	2μm,1.7s						
BNDI	**Bandanaira**	**7.08**	**149**	P	**Pn**	**01 19 21.5**	**+1.7**
	7.6nm55μm24μm2μm,1.7s						
FAKI	**Fak Fak**	**7.47**	**127**		**Pn**	**01 19 25.1**	**-0.1**
FAKI	**Fak Fak**	**7.47**	**127**	P	**Pn**	**01 19 24.6**	**-0.6**
	1μm,1.4s						
FAKI	**Fak Fak**	**7.47**	**127**	P	**Pn**	**01 19 25.1**	**-0.1**
	3.7nm68μm13μm1μm,1.4s						
TTSI	**Tana Toraja**	**7.93**	**234**	P	**Pn**	**01 19 32.0**	**+0.5**
	25μm14μm2μm,0.9s						
BBSI	**Bau Bau**	**7.95**	**208**	P	**Pn**	**01 19 35.3**	**+3.5**
RKPI	**Ransiki, Papua**	**8.48**	**111**	P	**Pn**	**01 19 39.2**	**+0.1**
	63μm639nm,0.9s						
SPSI	**Sidrap Palu**	**8.53**	**230**	P	**Pn**	**01 19 42.3**	**+2.6**
	23μm12μm1μm,0.6s						
MYLDM	**Lahad Datu**	**8.54**	**295**		Pn	01 19 26.0	-14
BNSI	**Bone**	**8.57**	**226**	P	**Pn**	**01 19 42.1**	**+1.8**
KMPI	**Kaimana, Papua**	**9.08**	**125**	P	**Pn**	**01 19 49.7**	**+2.4**
	14μm1μm,1.6s						
BKSI	**Bulukumba**	**9.22**	**222**	P	**Pn**	**01 19 50.2**	**+1.0**
	9μm948nm,0.7s						
KAPI	**Kappang**	**9.25**	**225**	Pn	**Pn**	**01 19 51.2**	**+1.6**
	42nm,0.3s,baz=12,slow=7.1,SNR=130						
KAPI				Sn	**Sn**	**01 21 30.7**	**-1.7**
	4.5nm,0.3s,baz=201,slow=20,SNR=2.3						
KAPI	**Kappang**	**9.25**	**225**	P	**Pn**	**01 19 51.3**	**+1.7**
KAPI				S	**Sn**	**01 21 36.6**	**+4.2**
KAPI	**Kappang**	**9.25**	**225**	P	**Pn**	**01 19 52.3**	**+2.7**
	305nm,0.8s						
KAPI	**Kappang**	**9.25**	**225**	***i*** P	**Pn**	**01 19 49.7**	**+0.1**
BSSI	**Bau Bau, Buton**	**9.62**	**217**	P	**Pn**	**01 19 54.6**	**0.0**
BKB	**Balikpapan**	**9.80**	**253**		**Pn**	**01 19 57.2**	**+0.1**
BKB	**Balikpapan**	**9.80**	**253**	P	**Pn**	**01 19 59.2**	**+2.1**
	898nm,1.1s						
BKB	**Balikpapan**	**9.80**	**253**	P	**Pn**	**01 19 57.8**	**+0.7**
BAKI	**Biak**	**10.22**	**106**	P	**Pn**	**01 20 03.2**	**+0.4**
SAUI	**Saumlaki**	**10.76**	**152**		**Pn**	**01 20 10.1**	**-0.2**
SAUI	**Saumlaki**	**10.76**	**152**	P	**Pn**	**01 20 11.0**	**+0.7**
	532nm,0.8s						
SAUI	**Saumlaki**	**10.76**	**152**	P	**Pn**	**01 20 10.9**	**+0.7**
	30μm9μm528nm,0.9s						
MMRI	**Maumere**	**10.94**	**202**		**Pn**	**01 20 14.1**	**+1.5**
MMRI	**Maumere**	**10.94**	**202**	P	**Pn**	**01 20 15.0**	**+2.3**
	683nm,1.2s						
MMRI	**Maumere**	**10.94**	**202**	P	**Pn**	**01 20 14.7**	**+2.0**
	8μm686nm,1.2s						
EDFI	**Ende, Flores**	**11.25**	**204**	P	**Pn**	**01 20 18.4**	**+1.3**
	5μm245nm,0.8s						
SOEI	**Soe**	**11.46**	**190**	P	**Pn**	**01 20 23.2**	**+3.3**
SOEI	**Soe**	**11.46**	**190**		**Pn**	**01 20 23.6**	**+3.8**
SOEI	**Soe**	**11.46**	**190**	P	**Pn**	**01 20 21.2**	**+1.3**
SOEI	**Soe**	**11.46**	**190**	P	**Pn**	**01 20 24.3**	**+4.4**
MTKI	**Muara Teweh, K**	**11.65**	**258**	P	**Pn**	**01 20 24.5

comp=Z,171nm,0.8s
CNJI Cibinong 21.05 245 P **P** **01 22 20.0 +1.1**
DBJI Dramaga 21.11 247 P **P** **01 22 20.2 +0.7**
MANU Manus Island 21.40 100 P **P** **01 22 20.1 -2.5**
SKJI Sukabumi 21.45 246 P **P** **01 22 25.4 +2.2**
comp=Z,11µcomp=Z,7µmcomp=Z,423nm,0.7s
SBJI Serang 21.52 249 P **P** **01 22 26.6 +2.7**
TWGBT Beinan 21.69 347 P **P** **01 22 22.2 -3.4**
comp=Z,224nm,0.8s
TPRI Tanjung Pinang 21.75 268 P **P** **01 22 28.1 +1.7**
comp=Z,5µmcomp=Z,301nm,1.2s
DSRI Dabo 21.79 265 P **P** **01 22 28.1 +1.3**
comp=Z,16µmcomp=Z,8µmcomp=Z,417nm,1.8s
GUMO Guam 21.92 56 P **P** **01 22 27.6 -0.5**
comp=Z,106nm,0.5s,baz=207,slow=7.5,SNR=11
comp=Z,106nm,0.5s
GUMO Guam 21.92 56 P **P** **01 22 30.7 +2.6**
comp=Z,205nm,1.0s
PMBI Palembang 21.96 258 IAMs_20 IAMs_20 01 31 51.6
comp=Z,17µm,21.0s
PMBI Palembang 21.96 258 P **P** **01 22 30.9 +2.3**
comp=Z,661nm,1.0s
YULB Yu-li 22.19 348 IAMs_20 IAMs_20 01 32 13.6
comp=Z,13µm,21.0s
YULB Yu-li 22.19 348 P **P** **01 22 27.5 -3.6**
TPUB Ta-pu 22.26 346 IAmb IAmb 01 21 58.8
comp=Z,27nm,1.1s
TPUB Ta-pu 22.26 346 IAMs_20 IAMs_20 01 31 47.3
comp=Z,16µm,22.0s
TPUB Ta-pu 22.26 346 P **P** **01 22 28.5 -3.2**
comp=Z,837nm,0.9s
KLI Kotabumi 22.34 253 P **P** **01 22 32.7 0.0**
comp=Z,7µmcomp=Z,542nm,0.8s
BTDF Bukit Timah Da 22.49 270 P **P** **01 22 35.8 +1.4**
comp=Z,227nm,1.4s
SSLB Suanglung 22.65 347 IAmb IAmb 01 22 04.8
comp=Z,17nm,1.1s
SSLB Suanglung 22.65 347 IAmb IAmb 01 22 39.2
comp=Z,465nm,0.9s
SSLB Suanglung 22.65 347 P **P** **01 22 33.3 -2.7**
comp=Z,513nm,1.1s
COEN Coen 22.79 133 P **P** **01 22 33.9 -3.6**
COEN Coen 22.79 133 P **P** **01 22 34.2 -3.3**
COEN Coen 22.79 133 P **P** **01 22 34.6 -2.9**
comp=Z,209nm,0.8s
WRAB Tennant Creek 22.82 160 P **P** **01 22 35.9 -1.8**
WRAB IAmb IAmb 01 22 40.1
comp=Z,640nm,1.0s
WRAB Tennant Creek 22.82 160 P **P** **01 22 35.4 -2.3**
comp=Z,444nm,1.1s
WRAB Tennant Creek 22.82 160*ce*P **P** **01 22 35.5 -2.3**
WRAB pmax pmax
comp=Z,688nm,1.0s
WRA Warramunga Arr 22.82 160 P **P** **01 22 35.5 -2.2**
comp=Z,742nm,0.9s,baz=340,slow=10,SNR=146
WRA PcP **PcP** **01 26 28.0 +0.2**
comp=Z,24nm,0.8s,baz=317,slow=2.8,SNR=0.7
WRA S **S** **01 26 41.5 -2.3**
comp=Z,101nm,1.1s,baz=330,slow=17,SNR=13
WRA P3KPbc 01 56 06.8
comp=Z,3.8nm,0.9s,baz=156,slow=3.9,SNR=15
comp=Z,742nm,0.9s
WRA Warramunga Arr 22.82 160 IAmb IAmb 01 22 40.1
comp=Z,68nm,0.7s
KASI Kota Agung 22.87 252 P **P** **01 22 37.5 -0.8**
comp=Z,9µmcomp=Z,222nm,0.9s
MDSI Maura Dua 22.89 255 P **P** **01 22 37.0 -1.5**
comp=Z,4µmcomp=Z,248nm,1.2s
NACB Ninganchiao 22.89 349 P **P** **01 22 36.9 -1.5**
comp=Z,153nm,1.0s
YOJ Yonaguni jima 22.95 352 IAmb IAmb 01 22 54.1
comp=Z,537nm,1.0s
YOJ Yonaguni jima 22.95 352 P **P** **01 22 38.7 -0.3**
comp=Z,590nm,1.2s
JMJ Miyako jima 2 23.10 358 P **P** **01 22 40.9 +0.4**
comp=Z,8µm,0.8s
LWLI Liwa 23.15 253 P **P** **01 22 40.5 -0.7**
comp=Z,11µmcomp=Z,12µmcomp=Z,529nm,0.6s
LHSI Lahat 23.37 257 P **P** **01 22 42.7 -0.6**
comp=Z,14µmcomp=Z,8µmcomp=Z,241nm,1.2s
YHNB Yeheng 23.42 349 IAmb IAmb 01 22 47.5
comp=Z,341nm,1.1s
YHNB IAMs_20 IAMs_20 01 32 55.7
comp=Z,16µm,22.0s
YHNB Yeheng 23.42 349 P **P** **01 22 41.5 -2.2**
comp=Z,318nm,1.1s
PMG Port Moresby 23.50 118 P **P** **01 22 41.5 -3.1**
PMG Port Moresby 23.50 118 P **P** **01 22 43.7 -0.8**
comp=Z,212nm,1.0s
PMG Port Moresby 23.50 118*ce*P **P** **01 22 44.8 +0.3**
PMG pmax pmax
comp=Z,470nm,2.5s
MBWA Marble Bar 23.51 195 P **P** **01 22 41.6 -2.9**
comp=Z,423nm,0.8s,comp=Z,0.0nm
MBWA Marble Bar 23.51 195 P **P** **01 22 43.6 -0.9**
MBWA IAmb IAmb 01 22 45.6
comp=Z,304nm,0.7s
MBWA Marble Bar 23.51 195 P **P** **01 22 43.8 -0.7**
MBWA S **S** **01 26 55.6 +0.6**
MBWA Marble Bar 23.51 195 P **P** **01 22 43.0 -1.5**
comp=Z,243nm,0.8s
QIZ Qiongzhong 23.65 318 IAMs_20 IAMs_20 01 30 25.6
comp=Z,14µm,22.0s
QIZ Qiongzhong 23.65 318 P **P** **01 22 45.5 -0.4**
QIZ S **S** **01 27 00.5 +3.2**
QIZ pmax pmax
comp=Z,130nm,0.8s
QIZ pmax pmax
comp=Z,1µm,3.6s
QIZ LR LR
comp=Z,8µm,15.9s
QIZ LR LR
comp=Z,6µm,24.9s
QIZ LR LR
comp=Z,14µm,22.2s
QIZ Qiongzhong 23.65 318 P **P** **01 22 45.3 -0.6**
comp=Z,154nm,0.9s
TATO Taipei 23.69 349 P **P** **01 22 45.3 -0.8**
TATO Taipei 23.69 349 IAMs_20 IAMs_20 01 33 06.2
comp=Z,12µm,21.0s
TATO Taipei 23.69 349 P **P** **01 22 46.4 +0.2**
comp=Z,359nm,1.0s
HKPS Hong Kong Po S 23.70 331 P **P** **01 22 46.7 +0.4**
HKPS Hong Kong Po S 23.70 331 P **P** **01 22 46.2 -0.1**
comp=Z,185nm,1.3s
XMI Christmas Isla 23.73 239 P **P** **01 22 45.1 -1.6**
comp=Z,466nm,1.0s
PSAC1 Pilbara Seismi 23.84 195 P **P** **01 22 46.7 -1.0**
comp=Z,265nm,0.8s
PSAC2 Pilbara Seismi 23.85 195 P **P** **01 22 46.5 -1.2**
comp=Z,315nm,0.7s
PSA00 Pilbara Seismi 23.87 195 P **P** **01 22 46.9 -1.0**
comp=Z,274nm,0.7s
PSA00 Pilbara Seismi 23.87 195 P **P** **01 22 46.9 -1.0**
PSA00 Pilbara Seismi 23.87 195 IAmb IAmb 01 22 53.2
comp=Z,190nm,0.8s
PSA00 Pilbara Seismi 23.87 195 P **P** **01 22 46.9 -1.0**
comp=Z,274nm,0.7s
PSAB3 Pilbara Seismi 23.89 195 P **P** **01 22 47.0 -1.0**
comp=Z,282nm,0.7s
KNMB Chin-men Tao 23.98 342 P **P** **01 22 46.4 -2.4**
MNAI Manna 24.04 256 IAMs_20 IAMs_20 01 33 08.0
comp=Z,11µm,22.0s
MNAI Manna 24.04 256 P **P** **01 22 51.4 +1.8**
comp=Z,646nm,1.2s
MNAI Manna 24.04 256 P **P** **01 22 49.9 +0.3**
comp=Z,12µmcomp=Z,8µmcomp=Z,652nm,1.2s
KSI Kapahiang 24.24 258 P **P** **01 22 52.2 +0.8**
comp=Z,14µmcomp=Z,507nm,0.9s
QZH Quanzhou 24.36 343 P **P** **01 22 51.1 -1.2**
QZH S **S** **01 27 05.5 -3.1**
QZH pmax pmax
comp=Z,320nm,1.1s
QZH pmax pmax
comp=Z,1µm,3.9s
QZH LR LR
comp=Z,9µm,21.3s
QZH LR LR
comp=Z,6µm,18.5s
QZH LR LR
comp=Z,9µm,20.6s
MASI Maura Aman, Be 24.48 259 P **P** **01 22 54.1 +0.5**
JMZ Minamidaito 2 24.55 11 P **P** **01 22 55.0 +1.0**
comp=Z,888nm,1.0s
UBPT Khong Chiam 24.62 305 P **P** **01 22 54.6 -0.2**
comp=Z,145nm,1.2s
GZH Guangzhou 24.77 331 P **P** **01 22 58.6 +2.5**
GZH pmax pmax
comp=Z,230nm,0.9s
GZH LR LR
comp=Z,6µm,23.1s
GZH LR LR
comp=Z,6µm,24.1s
GZH LR LR
comp=Z,10µm,21.9s
KRJI Kerinci 25.08 262 P **P** **01 23 00.2 +1.1**
JOW Kunigami 25.16 4 P **P** **01 23 00.1 +0.6**
comp=Z,404nm,0.9s,baz=202,slow=7.6,SNR=37
JOW S **S** **01 27 20.7 -0.7**
comp=Z,12nm,0.7s,baz=238,slow=16,SNR=4.6
comp=Z,404nm,0.9s
JOW Kunigami 25.16 4 P **P** **01 23 00.4 +0.9**
JOW Kunigami 25.16 4 P **P** **01 23 00.5 +0.9**
comp=Z,826nm,1.0s
BKNI Bangkinang 25.26 267 P **P** **01 22 59.5 -1.2**
BKNI Bangkinang 25.26 267 P **P** **01 23 01.7 +1.1**
BKNI IAMs_20 IAMs_20 01 33 59.6
comp=Z,12µm,21.0s
BKNI Bangkinang 25.26 267 P **P** **01 23 01.4 +0.7**
BKNI Bangkinang 25.26 267 P **P** **01 23 01.3 +0.6**
comp=Z,12µmcomp=Z,8µmcomp=Z,568nm,1.0s
IPM Ipoh 25.37 277 IAmb IAmb 01 23 25.4
comp=Z,284nm,1.0s
IPM Ipoh 25.37 277 P **P** **01 23 01.7 0.0**
comp=Z,306nm,1.0s
QIS Mount Isa 25.60 150 P **P** **01 23 00.8 -2.9**
comp=Z,197nm,1.0s
QIS Mount Isa 25.60 150 P **P** **01 23 02.8 -0.9**
comp=Z,197nm,1.0s
KULM Kulim 25.83 279 P **P** **01 23 05.1 -0.8**
KULM IAmb IAmb 01 23 40.8
comp=Z,300nm,1.2s
KULM IAMs_20 IAMs_20 01 35 06.8
comp=Z,11µm,21.0s
KULM Kulim 25.83 279 P **P** **01 23 06.4 +0.5**
comp=Z,188nm,1.2s
PDSI Padang 25.93 265 P **P** **01 23 06.1 -0.7**
PPI Padang Panjang 25.95 266 P **P** **01 23 06.7 -0.3**
comp=Z,12µmcomp=Z,3µmcomp=Z,170nm,0.9s
AS31 Alice Springs 26.19 164 P **P** **01 23 07.8 -1.2**
ASAR Alice Springs 26.19 164 P **P** **01 23 07.6 -1.4**
comp=Z,116nm,0.5s,baz=339,slow=6.2,SNR=281
ASAR PcP **PcP** **01 26 35.1 -0.1**
comp=Z,55nm,1.1s,baz=330,slow=2.3,SNR=5.5
ASAR S **S** **01 27 36.9 -0.9**
comp=Z,15nm,0.8s,baz=340,slow=18,SNR=4.3
ASAR P3KPbc 01 55 50.5
comp=Z,1.1nm,0.9s,baz=162,slow=4.7,SNR=4.8
comp=Z,116nm,0.5s
MTSU Mount Surprise 26.46 139 P **P** **01 23 09.4 -2.1**
comp=Z,170nm,1.0s
MTSU Mount Surprise 26.46 139 P **P** **01 23 10.2 -1.3**
comp=Z,170nm,1.0s
WRKA Warakurna 26.55 176 P **P** **01 23 11.8 -0.5**
comp=Z,120nm,1.0s,comp=Z,0.0nm
PPSI Pulau Pagai 26.61 261 P **P** **01 23 13.5 +0.6**
comp=Z,7µmcomp=Z,379nm,1.0s
MNSI Mandailing Nat 26.70 269 P **P** **01 23 14.3 +0.6**
comp=Z,9µmcomp=Z,227nm,1.1s
GIRL Giralia 26.80 205 P **P** **01 23 15.4 +0.9**
comp=Z,621nm,1.0s,comp=Z,0.0nm
GIRL Giralia 26.80 205 P **P** **01 23 15.3 +0.8**
SISI Saibi 27.34 264 P **P** **01 23 17.8 -1.6**
comp=Z,3µmcomp=Z,240nm,1.0s
RPSI Rantau Prapat 27.35 273 IAmb IAmb 01 23 27.6
comp=Z,210nm,1.0s
PSI Prapat 27.36 273 P **P** **01 23 19.7 0.0**
comp=Z,237nm,1.6s
GULI GuiLin 28.11 328 P **P** **01 23 21.8 -4.4**
GULI S **S** **01 28 08.6 +0.6**
GULI pmax pmax
comp=Z,41nm,1.0s
GULI LR LR
comp=Z,6µm,20.0s
GULI LR LR
comp=Z,4µm,22.0s
GULI LR LR
comp=Z,12µm,22.5s
KCSI Kotacane, Aceh 28.54 274 P **P** **01 23 29.5 -0.7**
GSI Gunungsitoli 28.69 270 P **P** **01 23 30.4 -1.1**
GSI IAmb IAmb 01 23 38.4
comp=Z,368nm,1.1s
GSI Gunungsitoli 28.69 270 P **P** **01 23 30.7 -0.8**
comp=Z,278nm,0.9s
GSI Gunungsitoli 28.69 270 P **P** **01 23 31.1 -0.4**
comp=Z,282nm,0.9s
TV1H Townsville Har 28.92 137 P **P** **01 23 33.4 0.0**
comp=Z,169nm,0.8s
MEEK Meekatharra 29.03 194 P **P** **01 23 33.8 -0.6**
comp=Z,254nm,1.0s
MEEK Meekatharra 29.03 194 P **P** **01 23 33.6 -0.8**
comp=Z,254nm,1.0s
CTA Charters Tower 29.13 139 P **P** **01 23 34.8 -0.5**
comp=Z,3.3nm,0.9s
CTAO Charters Tower 29.13 139 P **P** **01 23 34.6 -0.7**
CTAO Charters Tower 29.13 139 P **P** **01 23 35.0 -0.3**
comp=Z,40nm,1.1s
CTAO Charters Tower 29.13 139 P **P** **01 23 34.6 -0.7**
CTAO pmax pmax
comp=Z,100nm,1.0s
CTAO MLR MLR
comp=Z,5µm,20.0s
SLVN Son La 29.33 314 IAMs_20 IAMs_20 01 34 44.0
comp=Z,7µm,20.0s
SLVN Son La 29.33 314 P **P** **01 23 37.5 +0.4**
comp=Z,67nm,1.2s
CNSH ChangSha 29.35 335 P **P** **01 23 36.8 -0.4**
CNSH S **S** **01 28 24.5 -2.9**
CNSH pmax pmax
comp=Z,37nm,1.0s
CNSH LR LR
comp=Z,6µm,21.2s
CNSH LR LR
comp=Z,8µm,21.8s
CNSH LR LR
comp=Z,10µm,23.5s
LHMI Lhok Sumawe 29.49 278 IAMs_20 IAMs_20 01 36 32.6
comp=Z,8µm,22.0s
LHMI Lhok Sumawe 29.49 278 P **P** **01 23 39.1 +0.5**
comp=Z,133nm,1.3s
LHMI Lhok Sumawe 29.49 278 P **P** **01 23 39.1 +0.5**
comp=Z,2µmcomp=Z,134nm,1.3s
JCJ Chichijima 29.59 30 P P 01 23 30.8 -8.6
comp=Z,190nm,0.6s,baz=225,slow=3.9,SNR=16
JCJ LR LR 01 33 55.7
comp=Z,2µm,20.1s,baz=210,slow=33
JCJ Chichijima 29.59 30 P **P** **01 23 38.3 -1.0**
comp=Z,538nm,0.8s
SSE Sheshan 29.73 351 P **P** **01 23 42.0 +1.5**
SSE sP **sP** **01 23 59.0 +0.7**
SSE S **S** **01 28 33.1 -0.2**
SSE SS **SnSn** **01 30 09.4 +2.8**
SSE pmax pmax
comp=Z,30nm,0.8s
SSE pmax pmax
comp=Z,280nm,3.6s
SSE LR LR
comp=Z,1µm,20.4s
SNSI Sinabang, Aceh 29.94 272 P **P** **01 23 43.0 +0.4**
comp=Z,137nm,0.8s
MLSI Meulaboh, Aceh 29.95 276 P **P** **01 23 41.4 -1.2**
comp=Z,2µmcomp=Z,152nm,0.9s
WHN Wuhan 30.93 340 P **P** **01 23 51.3 +0.2**
WHN S **S** **01 28 53.5 +1.4**
WHN pmax pmax
comp=Z,120nm,0.9s
WHN LR LR
comp=Z,28µm,23.6s
WHN LR LR
comp=Z,7µm,13.1s
WHN LR LR
comp=Z,34µm,25.4s
GYA Guiyang 31.08 324 ⇑P **P** **01 23 52.8 +0.1**
GYA S **S** **01 28 54.1 -0.9**
GYA pmax pmax
comp=Z,61nm,1.1s
GYA pmax pmax
comp=Z,480nm,3.1s
GYA LR LR
comp=Z,7µm,20.2s
GYA LR LR
comp=Z,4µm,18.3s
GYA LR LR
comp=Z,8µm,22.6s
NJ2 Nanjing 31.09 348 ⇑P **P** **01 23 53.0 +0.5**
NJ2 pP **pP** **01 24 07.0 +2.3**
NJ2 sP **sP** **01 24 10.9 +0.6**
NJ2 pmax pmax
comp=Z,56nm,0.9s
NJ2 LR LR
comp=Z,3µm,22.7s
NJ2 LR LR
comp=Z,5µm,21.8s
NJ2 LR LR
comp=Z,5µm,21.8s
CMAR Chiang Mai Arr 31.61 304 P **P** **01 23 56.9 -0.4**
comp=Z,16nm,0.7s,baz=122,slow=8.7,SNR=44
CMAR PcP **PcP** **01 26 50.5 +1.6**
comp=Z,30nm,0.9s,baz=120,slow=2.9,SNR=12
CMAR ScP **ScP** **01 30 31.9 +3.5**
comp=Z,1.5nm,0.3s,baz=131,slow=2.9,SNR=1.5
CMAR PKIKP **PKiKP** **01 34 17.5 -0.7**
comp=Z,1.0nm,0.3s,baz=79,slow=0.8,SNR=4.3
comp=Z,16nm,0.7s
CMAR Chiang Mai Arr 31.61 304 P **P** **01 23 57.6 +0.3**
JNU Nakatsue 31.65 7 P **P** **01 23 56.9 -0.6**
comp=Z,181nm,0.9s,baz=185,slow=3.8,SNR=71
comp=Z,181nm,0.9s
JNU Nakatsue 31.65 7 IAmb IAmb 01 24 02.1
comp=Z,254nm,1.0s
JNU Nakatsue 31.65 7 P **P** **01 23 57.3 -0.2**
comp=Z,261nm,0.9s
CHTO Chiang Mai 31.78 304 P **P** **01 23 58.5 -0.2**
CHTO IAMs_20 IAMs_20 01 36 31.3
comp=Z,7µm,22.0s
CHTO Chiang Mai 31.78 304 P **P** **01 23 57.1 -1.7**
CHTO S **S** **01 29 03.9 -1.9**
CHTO Chiang Mai 31.78 304 P **P** **01 23 58.6 -0.2**
comp=Z,33nm,0.8s
CHTO Chiang Mai 31.78 304 P **P** **01 23 58.5 -0.2**
CHTO pmax pmax
comp=Z,36nm,0.7s
CHTO MLR MLR
comp=Z,7µm,22.0s
CHTO Chiang Mai 31.78 304 P **P** **01 23 58.7 -0.1**
MORW Morawa 32.03 197 P **P** **01 24 00.5 -0.3**
comp=Z,154nm,0.9s
MORW Morawa 32.03 197 IAmb IAmb 01 24 05.0
comp=Z,111nm,0.7s
MORW Morawa 32.03 197 P **P** **01 24 00.5 -0.3**
comp=Z,154nm,0.9s
FORT Forrest 32.24 177 P **P** **01 24 01.7 -0.9**
comp=Z,127nm,0.8s
FORT Forrest 32.24 177 IAmb IAmb 01 24 19.7
comp=Z,92nm,0.7s
KMI Kunming 32.60 318 ⇓P **P** **01 24 06.6 +0.5**
KMI sP sP 01 24 26.9 +2.9
KMI PP **PP** **01 25 18.8 -1.7**
KMI PcP **PcP** **01 26 53.9 +2.2**
KMI S **S** **01 29 11.1 -7.7**
KMI sS sS 01 29 42.1 +2.7
KMI pmax pmax
comp=Z,55nm,1.4s
KMI pmax pmax
comp=Z,320nm,4.6s
KMI LR LR
comp=Z,5µm,24.7s
KMI LR LR
comp=Z,9µm,23.7s
KMI LR LR
comp=Z,13µm,22.3s
ENH Enshi 32.66 332 IAMs_20 IAMs_20 01 39 03.9
comp=Z,7µm,21.0s
ENH Enshi 32.66 332 P **P** **01 24 05.6 -0.8**
comp=Z,422nm,0.9s
ENH Enshi 32.66 332 P **P** **01 24 05.8 -0.6**
CMBY CAMPBELL BAY 32.69 280 *e*P **P** **01 24 05.2 -1.6**
JMN Monobe 32.75 12 IAmb IAmb 01 24 26.6
comp=Z,224nm,1.2s
JMN Monobe 32.75 12 P **P** **01 24 07.8 +0.7**
comp=Z,139nm,0.9s
JTU Tsushima 32.88 5 P **P** **01 24 09.8 +1.6**
comp=Z,159nm,1.1s
QLP Quilpie 32.95 149 P **P** **01 24 07.2 -1.6**
comp=Z,112nm,0.8s
QLP Quilpie 32.95 149 P **P** **01 24 07.1 -1.8**
comp=Z,112nm,0.8s
KMBL Kambalda 33.05 187 P **P** **01 24 09.4 -0.3**
comp=Z,80nm,0.8s
BLDU Ballidu 33.31 195 P **P** **01 24 11.0 -0.9**
comp=Z,205nm,1.1s
BLDU Ballidu 33.31 195 P **P** **01 24 11.1 -0.9**
comp=Z,205nm,1.1s
JHJ Hachijo jima 2 33.82 21 P **P** **01 24 16.0 -0.5**
comp=Z,117nm,0.7s,baz=201,slow=8.6,SNR=1.8
JHJ LR LR 01 39 17.4
comp=Z,2µm,19.1s,baz=238,slow=38
comp=Z,117nm,0.7s
KLBR Kellerberrin 33.99 193 P **P** **01 24 17.5 -0.4**
comp=Z,504nm,0.7s
KLBR Kellerberrin 33.99 193 P **P** **01 24 17.5 -0.4**
comp=Z,504nm,0.7s
PZH PanZhiHua 34.19 319 P **P** **01 24 19.6 -0.2**
PZH PP **PP** **01 25 38.9 +0.9**
PZH S **S** **01 29 38.9 -4.4**
PZH sS **sS** **01 30 05.6 +1.7**
PZH SS **SnSn** **01 31 55.6 +0.4**
PZH pmax pmax
comp=Z,50nm,1.0s
PZH pmax pmax
comp=Z,230nm,3.5s
PZH LR LR
comp=Z,5µm,21.6s
PZH LR LR
comp=Z,6µm,20.6s
PZH LR LR
comp=Z,10µm,22.6s
TJN Taejon 34.62 2 P **P** **01 24 24.4 +1.1**
comp=Z,616nm,1.2s
TJN Taejon 34.62 2 *i*P **P** **01 24 24.4 +1.1**
TJN pmax pmax
comp=Z,3.0nm,0.9s
PBA Port Blair 34.73 288 IAmb IAmb 01 24 41.3
comp=Z,149nm,1.0s
PBA Port Blair 34.73 288 P **P** **01 24 22.9 -1.6**
PBA Port Blair 34.73 288 *e*P **P** **01 24 27.3 +2.8**
JSG Sagara 34.73 17 P **P** **01 24 25.9 +1.6**
comp=Z,639nm,1.3s
MUN Mundaring 34.73 195 P **P** **01 24 24.2 -0.2**
comp=Z,133nm,0.9s
MUN Mundaring 34.73 195 P **P** **01 24 24.1 -0.2**
comp=Z,133nm,0.9s
MTKN Mount Kenneth 34.80 196 P **P** **01 24 26.4 +1.5**
comp=Z,264nm,0.9s
AUMAZ Mazenod Senior 34.81 195 P **P** **01 24 25.2 +0.2**
comp=Z,156nm,0.8s
GD1S Gladstone Soft 35.00 138 P **P** **01 24 26.7 -0.1**
comp=Z,156nm,0.5s
INU Inuyama 35.03 15 IAmb IAmb 01 24 29.0
comp=Z,196nm,1.0s
INU IAMs_20 IAMs_20 01 37 45.2
comp=Z,6µm,22.0s
INU Inuyama 35.03 15 P **P** **01 24 27.1 +0.2**
comp=Z,202nm,1.1s
SAVO Savo Central 35.08 108 P **P** **01 24 25.9 -1.7**
comp=Z,50nm,0.9s
LYN LuoYang 35.22 340 P **P** **01 24 28.6 +0.1**
LYN pP sP 01 24 44.5 -1.9
LYN S **S** **01 29 55.5 -3.3**
LYN pmax pmax
comp=Z,81nm,0.9s
LYN pmax pmax
comp=Z,600nm,3.6s
LYN LR LR
comp=Z,3µm,17.5s
LYN LR LR
comp=Z,4µm,17.9s
LYN LR LR
comp=Z,11µm,25.8s
JGF Kuroka 35.36 16 IAmb IAmb 01 24 58.3
comp=Z,132nm,1.1s
JGF Kuroka 35.36 16 P **P** **01 24 29.7 -0.1**
comp=Z,124nm,1.2s
NWAO Narrogin (SRO) 35.39 193 P **P** **01 24 29.9 -0.1**
comp=Z,363nm,0.8s
NWAO Narrogin (SRO) 35.39 193 P **P** **01 24 29.6 -0.4**
NWAO Narrogin (SRO) 35.39 193 P **P** **01 24 30.0 +0.1**
NWAO Narrogin (SRO) 35.39 193 P **P** **01 24 30.3 +0.4**
NWAO Narrogin (SRO) 35.39 193 P **P** **01 24 29.9 -0.1**
NWAO Narrogin (SRO) 35.39 193 P **P** **01 24 29.6 -0.4**
NWAO pmax pmax

comp=Z,756nm,1.8s
NWAO MLR MLR
comp=Z,3µm,22.0s
BBOO Buckleboo 35.45 166 P **P** **01 24 29.4 -1.1**
comp=Z,241nm,1.1s
BBOO Buckleboo 35.45 166 IAmb IAmb 01 24 39.4
comp=Z,176nm,0.9s
BBOO Buckleboo 35.45 166 P **P** **01 24 29.5 -1.1**
comp=Z,241nm,1.1s
TIA Tai'an 35.47 347 P **P** **01 24 30.0 -0.6**
TIA PP **PP** **01 25 51.6 -0.3**
TIA S **S** **01 29 56.4 -6.1**
TIA pmax pmax
comp=Z,68nm,0.8s
TIA pmax pmax
comp=Z,800nm,4.5s
TIA LR LR
comp=Z,2µm,21.4s
TIA LR LR
comp=Z,5µm,22.2s
TIA LR LR
comp=Z,5µm,24.1s
TNCH TengChong 35.49 313 P **P** **01 24 31.9 +0.7**
TNCH PP **PP** **01 25 54.5 +2.0**
TNCH S **S** **01 29 59.3 -4.3**
TNCH pmax pmax
comp=Z,110nm,0.7s
TNCH LR LR
comp=Z,3µm,22.1s
TNCH LR LR
comp=Z,3µm,21.2s
TNCH LR LR
comp=Z,10µm,22.5s
KSAR Wonju Array Be 35.70 2 P **P** **01 24 32.7 +0.2**
KSAR Wonju Array Be 35.70 2 P **P** **01 24 32.7 +0.2**
INCN Inchon 35.71 0 P **P** **01 24 33.2 +0.5**
INCN Inchon 35.71 0 P **P** **01 24 33.2 +0.5**
comp=Z,87nm,1.2s
INCN Inchon 35.71 0 P **P** **01 24 33.2 +0.5**
INCN pmax pmax
comp=Z,78nm,1.0s
INCN MLR MLR
comp=Z,3µm,22.0s
KSRS Korea Array 35.71 2 P **P** **01 24 33.0 +0.3**
comp=Z,29nm,0.7s,baz=182,slow=9.8,SNR=50
KSRS PcP **PcP** **01 27 01.1 +1.0**
comp=Z,8.4nm,0.8s,baz=186,slow=2.2,SNR=4.2
KSRS S **S** **01 30 13.5 +7.4**
comp=Z,1.3nm,0.7s,baz=192,slow=17,SNR=4.1
comp=Z,29nm,0.7s
KS19 Wonju Array Si 35.76 2 IAmb IAmb 01 24 55.4
comp=Z,163nm,1.2s
AUHAR St Anne's Scho 35.87 195 P **P** **01 24 35.6 +1.6**
comp=Z,413nm,1.1s
EIDS Eidsvold 36.00 140 P **P** **01 24 33.5 -1.8**
comp=Z,137nm,1.3s
EIDS Eidsvold 36.00 140 P **P** **01 24 34.6 -0.7**
EIDS IAmb IAmb 01 24 56.9
comp=Z,363nm,1.6s
EIDS Eidsvold 36.00 140 P **P** **01 24 33.7 -1.6**
comp=Z,137nm,1.3s
WHYH Whyalla 36.06 164 P **P** **01 24 35.1 -0.6**
comp=Z,237nm,0.6s
CD2 Chengdu 36.11 326 P **P** **01 24 35.5 -0.8**
CD2 pP pP 01 24 48.3 -0.3
CD2 PP **PP** **01 25 56.3 -2.9**
CD2 S **S** **01 30 09.6 -3.0**
CD2 pmax pmax
comp=Z,210nm,0.9s
CD2 pmax pmax
comp=Z,730nm,5.0s
CD2 LR LR
comp=Z,10µm,20.6s
CD2 LR LR
comp=Z,13µm,22.0s
CD2 LR LR
comp=Z,10µm,24.1s
XAN Xi'an 36.12 335 ⇓P **P** **01 24 34.5 -1.8**
XAN pP pP 01 24 47.4 -1.3
XAN S **S** **01 30 09.8 -2.9**
XAN SS **SnSn** **01 32 35.1 -6.7**
XAN pmax pmax
comp=Z,160nm,0.9s
XAN pmax pmax
comp=Z,530nm,3.8s
XAN LR LR
comp=Z,5µm,24.7s
XAN LR LR
comp=Z,2µm,23.4s
XAN LR LR
comp=Z,5µm,24.0s
STKA Stephens Creek 36.33 158 P **P** **01 24 36.6 -1.4**
comp=Z,948nm,0.9s
STKA Stephens Creek 36.33 158 P **P** **01 24 36.9 -1.1**
comp=Z,179nm,0.9s,baz=330,slow=8.6,SNR=149
STKA PP **PP** **01 25 57.0 -4.4**
comp=Z,44nm,0.6s,baz=336,slow=12,SNR=1.1
comp=Z,179nm,0.9s
STKA Stephens Creek 36.33 158 P **P** **01 24 36.7 -1.4**
comp=Z,47nm,0.9s
STKA Stephens Creek 36.33 158 *i* P **P** **01 24 36.3 -1.7**
MAJO Matsushiro 36.48 16 P **P** **01 24 38.6 -0.7**
MAJO IAmb IAmb 01 24 56.9
comp=Z,117nm,0.8s
MAJO Matsushiro 36.48 16 P **P** **01 24 38.3 -0.9**
comp=Z,148nm,0.9s
MAJO Matsushiro 36.48 16 *i* P **P** **01 24 37.7 -1.6**
MAJO pmax pmax
comp=Z,94nm,0.8s
MAJO Matsushiro 36.48 16 P **P** **01 24 38.4 -0.9**
MJAR Matsushiro Arr 36.48 16 P **P** **01 24 38.4 -0.9**
comp=Z,87nm,1.0s,baz=186,slow=9.2,SNR=63
MJAR PcP **PcP** **01 27 03.4 +0.9**
comp=Z,23nm,0.9s,baz=182,slow=3.2,SNR=4.7
MJAR ScP **ScP** **01 30 46.7 +1.4**
comp=Z,6.9nm,1.0s,baz=207,slow=3.7,SNR=5.2
MJAR LR LR 01 39 03.8
comp=Z,4µm,21.6s,baz=208,slow=35
comp=Z,87nm,1.0s
MJAR Matsushiro Arr 36.48 16 P **P** **01 24 37.9 -1.4**
MJAR IAmb IAmb 01 24 45.2
comp=Z,122nm,1.0s
MJB9 Matsu-Tunnel 36.48 16 IAmb IAmb 01 24 57.9
comp=Z,115nm,0.8s
AUJCS Jamestown Cent 36.52 162 P **P** **01 24 39.6 -0.1**
comp=Z,129nm,1.0s
AUBUS Georgiana Moll 36.54 195 P **P** **01 24 41.6 +1.8**
comp=Z,426nm,0.8s
HTT Hallett 36.83 162 P **P** **01 24 41.8 -0.5**
comp=Z,49nm,1.2s
HTT Hallett 36.83 162 P **P** **01 24 42.2 -0.1**
comp=Z,121nm,1.2s
RKGY Rocky Gully 37.06 193 P **P** **01 24 45.0 +0.8**
comp=Z,472nm,0.9s
HNS HongShan 37.19 345 ⇑P **P** **01 24 44.8 -0.4**
HNS PcP **PcP** **01 27 06.3 +1.8**
HNS S **S** **01 30 24.1 -4.5**
HNS pmax pmax
comp=Z,95nm,1.0s
HNS LR LR
comp=Z,6µm,22.1s
HNS LR LR
comp=Z,2µm,22.1s
HNS LR LR
comp=Z,8µm,22.7s
AULRC Lightning Ridg 37.19 148 P **P** **01 24 44.0 -1.4**
comp=Z,209nm,1.5s
DL2 Dalian 37.37 354 P **P** **01 24 47.3 +0.5**
DL2 S **S** **01 30 32.3 +0.9**
DL2 pmax pmax
comp=Z,960nm,6.3s
DL2 LR LR
comp=Z,6µm,21.8s
DL2 LR LR
comp=Z,3µm,17.9s
DL2 LR LR
comp=Z,9µm,21.8s
CMSA Cobar Meteorol 37.76 152 P **P** **01 24 49.2 -1.0**
comp=Z,72nm,1.2s
CMSA Cobar Meteorol 37.76 152 P **P** **01 24 49.4 -0.8**
comp=Z,72nm,1.2s
JSD Sado 37.90 15 IAmb IAmb 01 24 55.8
comp=Z,213nm,1.1s
JSD Sado 37.90 15 P **P** **01 24 51.0 -0.2**
comp=Z,189nm,1.1s
H01W3 Cape Leeuwin H 38.03 196 P **P** **01 24 52.9 +0.7**
baz=35,slow=7.0,SNR=4.5
H01W1 Cape Leeuwin H 38.04 196 P **P** 01 24 44.2 -8.0
baz=35,slow=7.0,SNR=5.0
H01W2 Cape Leeuwin H 38.05 196 P **P** 01 24 57.6 +5.3
baz=35,slow=7.0,SNR=5.9
TW1H Toowoomba 1 Ha 38.09 141 P **P** **01 24 53.8 +0.7**
comp=Z,101nm,1.1s
TIY Taiyuan 38.13 342 P **P** **01 24 53.4 +0.1**
TIY S **S** **01 30 43.4 +0.3**
TIY pmax pmax
comp=Z,57nm,0.7s
TIY pmax pmax
comp=Z,330nm,4.8s
TIY LR LR
comp=Z,4µm,19.2s
TIY LR LR
comp=Z,2µm,22.4s
TIY LR LR
comp=Z,6µm,28.6s
JMM Marumori 38.48 19 P **P** **01 24 56.5 +0.4**
comp=Z,416nm,1.1s
AUMBR Murray Bridge 38.52 163 P **P** **01 24 57.0 +0.5**
comp=Z,112nm,0.9s
AUWSH Wavell State H 38.66 140 P **P** **01 24 59.3 +1.4**
comp=Z,89nm,1.1s
LKP Lekhapani 38.79 314 IAmb IAmb 01 24 54.9
comp=Z,362nm,0.5s
LKP IAMs_20 IAMs_20 01 43 03.5
comp=Z,5µm,21.5s
IMP Imphal 38.82 309 *e*P **P** **01 24 58.4 -0.9**
IMP IAmb IAmb 01 25 02.3
comp=Z,107nm,0.9s
IMP IAMs_20 IAMs_20 01 44 14.2
comp=Z,5µm,21.3s
KOHI KOHIMA 39.17 311 *e*P **P** **01 25 01.0 -1.3**
KOHI IAmb IAmb 01 25 05.4
comp=Z,240nm,1.0s
KOHI IAMs_20 IAMs_20 01 40 10.2
comp=Z,8µm,20.2s
MOKO MOKOCHONG 39.19 312 *e*P **P** **01 25 01.0 -1.5**
MOKO IAmb IAmb 01 25 20.1
comp=Z,212nm,1.0s
BJT Baijiatuan 39.33 348 IAmb IAmb 01 25 04.5
comp=Z,119nm,0.8s
BJT Baijiatuan 39.33 348 P **P** **01 25 02.9 -0.3**
comp=Z,164nm,0.8s
BJI Beijing 39.35 348 P **P** **01 25 03.1 -0.3**
BJI sP **pP** **01 25 16.8 +1.0**
BJI PcP **PcP** **01 27 13.5 +2.3**
BJI S **S** **01 30 58.6 -2.7**
BJI pmax pmax
comp=Z,80nm,0.8s
BJI pmax pmax
comp=Z,220nm,4.3s
BJI LR LR
comp=Z,950nm,23.0s
BJI LR LR
comp=Z,1µm,22.6s
BJI LR LR
comp=Z,1µm,24.6s
GC1S Gold Coast 1 S 39.49 141 P **P** **01 25 05.1 +0.3**
BRDH Bariadhala 39.62 305 P **P** **01 25 05.0 -0.9**
comp=Z,144nm,0.3s,baz=78,slow=7.7,SNR=17
comp=Z,144nm,0.3s
JORH JORHAT 39.62 312 *e*P **P** **01 25 05.3 -0.6**
AUDCS Dubbo College 39.75 150 P **P** **01 25 06.1 -0.8**
comp=Z,231nm,0.9s
ARMA Armidale 39.97 145 IAmb IAmb 01 25 19.9
comp=Z,139nm,0.9s
AUPHS Peel High Scho 40.07 146 P **P** **01 25 10.5 +0.9**
comp=Z,104nm,0.8s
LZDM Lanzhou Array 40.09 331 P **P** **01 25 09.6 -0.5**
comp=Z,52nm,0.9s,baz=163,slow=12,SNR=26
LZDM PcP **PcP** **01 27 15.1 +1.0**
comp=Z,64nm,0.8s,baz=172,slow=4.5,SNR=8.8
LZDM ScP **ScP** **01 31 01.7 +2.4**
comp=Z,1.1nm,0.3s,baz=160,slow=4.6,SNR=3.7
comp=Z,52nm,0.9s
LZH Lanzhou 40.12 331 ⇓P **P** **01 25 09.9 -0.2**
LZH sP pP 01 25 22.9 +0.3
LZH PcP **PcP** **01 27 15.8 +1.8**
LZH S **S** **01 31 12.5 -0.8**
LZH pmax pmax
comp=Z,260nm,1.1s
LZH pmax pmax
comp=Z,570nm,4.6s
LZH LR LR
comp=Z,6µm,17.0s
LZH LR LR
comp=Z,5µm,16.8s
LZH LR LR
comp=Z,9µm,21.6s
SNY Shenyang 40.12 357 ⇓P **P** **01 25 09.5 -0.3**
SNY S **S** **01 31 15.3 +2.5**
SNY pmax pmax
comp=Z,170nm,0.6s
SNY pmax pmax
comp=Z,950nm,5.5s
SNY LR LR
comp=Z,3µm,23.1s
SNY LR LR
comp=Z,3µm,19.4s
SNY LR LR
comp=Z,5µm,24.5s
ITAN ITANAGAR 40.23 312 *e*P **P** **01 25 10.8 -0.2**
ITAN IAmb IAmb 01 25 15.1
comp=Z,481nm,1.1s
ITAN IAMs_20 IAMs_20 01 42 16.3
comp=Z,4µm,18.1s
ZIRO ZIRO 40.35 313 *e*P **P** **01 25 11.4 -0.8**
TEZP TEZPUR 40.64 311 *e*P **P** **01 25 13.3 -1.0**
TEZP IAmb IAmb 01 25 32.4
comp=Z,82nm,1.1s
SHL Shillong 40.80 309 P **P** **01 25 15.3 -0.7**
SHL IAmb IAmb 01 25 30.3
comp=Z,222nm,1.0s
SHL Shillong 40.80 309 P **P** **01 25 14.9 -1.0**
SNR=51
SHL Shillong 40.80 309 *e*P **P** **01 25 15.2 -0.7**
SHL IAmb IAmb 01 25 26.2
comp=Z,106nm,0.7s
SHL IAMs_20 IAMs_20 01 44 29.8
comp=Z,3µm,21.8s
SHL Shillong 40.80 309 P **P** **01 25 15.3 -0.7**
SHL pmax pmax
comp=Z,222nm,1.0s
ARPS Mount Arapiles 40.83 161 P **P** **01 25 15.2 -0.5**
comp=Z,140nm,1.2s
MSHR Mys Shultsa 41.03 5 *ce*P **P** **01 25 18.9 +1.6**
MSHR pmax pmax
comp=Z,133nm,1.2s
PSTR Posyet 41.07 5 *i* P **P** **01 25 18.4 +0.8**
JTM Tenmabayashi 41.24 17 P **P** **01 25 19.6 +0.5**
JTM IAmb IAmb 01 25 25.2
comp=Z,243nm,0.9s
JTM Tenmabayashi 41.24 17 P **P** **01 25 20.0 +0.9**
comp=Z,291nm,1.1s
GUWA GUWAHATI 41.27 309 *e*P **P** **01 25 18.3 -1.2**
GUWA IAmb IAmb 01 25 22.9
comp=Z,73nm,1.1s
AUMAG Moama Anglican 41.27 157 P **P** **01 25 20.9 +1.5**
comp=Z,235nm,0.9s
HHC Hu-ho-hao-te 41.28 343 *e*P **P** **01 25 19.5 0.0**
HHC pP pP 01 25 31.8 -0.2
HHC sP sP 01 25 38.1 +0.6
HHC PP **PnPn** **01 27 01.9 +1.5**
HHC S **S** **01 31 31.0 +0.7**
HHC sS sS 01 31 50.6 -0.7
HHC ScS **ScS** **01 35 14.0 -5.6**
HHC pmax pmax
comp=Z,61nm,0.9s
HHC pmax pmax
comp=Z,390nm,4.9s
HHC LR LR
comp=Z,3µm,17.7s
HHC LR LR
comp=Z,2µm,16.2s
HHC LR LR
comp=Z,4µm,17.7s
YNG Young 41.32 152 P **P** **01 25 19.6 -0.2**
comp=Z,121nm,1.0s
BTO Baotou 41.53 341 *e*P **P** **01 25 21.8 +0.3**
BTO PP **PP** **01 26 58.8 +0.5**
BTO S **S** **01 31 37.6 +3.6**
BTO pmax pmax
comp=Z,32nm,0.8s
BTO pmax pmax
comp=Z,920nm,4.7s
BTO LR LR
comp=Z,10µm,21.0s
BTO LR LR
comp=Z,6µm,19.4s
BTO LR LR
comp=Z,14µm,19.4s
VLA Vladivostok 41.64 6 *i* P **P** **01 25 22.8 +0.5**
VLA pmax pmax
comp=Z,169nm,1.1s
MGCD Mangrove Creek 41.81 148 P **P** **01 25 23.4 -0.4**
comp=Z,82nm,0.8s
MGCD Mangrove Creek 41.81 148 P **P** **01 25 24.2 +0.4**
comp=Z,83nm,0.8s
TAWA Tawang 41.86 311 *e*P **P** **01 25 25.1 +0.3**
TAWA IAmb IAmb 01 25 41.0
comp=Z,196nm,0.8s
CN2 Changchun 42.03 359 *e*P **P** **01 25 26.6 +1.2**
CN2 *e*pP pwP 01 25 39.6 -0.5
CN2 *e*S **S** **01 31 43.3 +2.2**
CN2 pmax pmax
comp=Z,30nm,0.6s
CN2 pmax pmax
comp=Z,600nm,4.0s
CN2 LR LR
comp=Z,900nm,18.0s
CN2 LR LR
comp=Z,700nm,18.0s
CN2 LR LR
comp=Z,1µm,18.0s
SYDH Sydney Hard Ro 42.05 149 P **P** **01 25 26.3 +0.6**
comp=Z,59nm,0.8s
AUKHS Kincumber High 42.14 148 P **P** **01 25 27.1 +0.6**
comp=Z,149nm,1.2s
BRAT Ballarat 42.25 159 P **P** **01 25 28.0 +0.7**
comp=Z,55nm,0.8s
AUMTC Mt Clear Colle 42.28 159 P **P** **01 25 28.4 +0.8**
comp=Z,56nm,0.9s
RIV Riverview 42.31 149 P **P** **01 25 28.1 +0.3**
comp=Z,113nm,1.2s
RIV Riverview 42.31 149 P **P** **01 25 29.3 +1.4**
comp=Z,113nm,1.2s
AUMTS Mt Stromlo 42.44 152 P **P** **01 25 29.1 +0.1**
comp=Z,152nm,1.1s
CAN Canberra 42.44 152 P **P** **01 25 28.7 -0.3**
comp=Z,142nm,1.2s
CAN Canberra 42.44 152 P **P** **01 25 29.4 +0.4**
CAN Canberra 42.44 152 P **P** **01 25 29.0 0.0**
comp=Z,218nm,1.2s
CAN Canberra 42.44 152 P **P** **01 25 29.4 +0.4**
CAN pmax pmax
comp=Z,106nm,0.9s
AUSIS Research Schoo 42.46 152 P **P** **01 25 30.4 +1.3**
comp=Z,105nm,1.1s
CNB Canberra Magne 42.60 152 P **P** **01 25 29.6 -0.8**
comp=Z,73nm,1.0s
CNB Canberra Magne 42.60 152 P **P** **01 25 30.9 +0.5**
comp=Z,73nm,1.0s
WOLH Wollongong Har 42.62 149 P **P** **01 25 31.6 +1.2**
comp=Z,101nm,1.0s
USRK Ussuriysk Ar. 42.72 6 P **P** **01 25 31.1 0.0**
comp=Z,104nm,0.9s,baz=188,slow=6.6,SNR=69
USRK PP **PP** **01 27 11.0 0.0**
comp=Z,9.6nm,0.8s,baz=187,slow=10,SNR=0.8
comp=Z,104nm,0.9s
MLBS Spotswood, Mel 42.85 158 P **P** **01 25 34.0 +1.8**
comp=Z,195nm,0.9s
TOO Toolangi 42.85 157 P **P** **01 25 31.8 -0.5**
comp=Z,29nm,1.3s
TOO Toolangi 42.85 157 P **P** **01 25 33.3 +1.0**
TOO Toolangi 42.85 157 P **P** **01 25 33.3 +1.0**
TOO pmax pmax
comp=Z,25nm,1.1s
MDJ Mudanjiang 42.94 3 IAMs_20 IAMs_20 01 45 06.4
comp=Z,5µm,22.0s
MDJ Mudanjiang 42.94 3 P **P** **01 25 33.8 +1.0**
MDJ S **S** **01 32 00.0 +5.6**
MDJ sS sS 01 32 16.9 +1.4
MDJ pmax pmax
comp=Z,140nm,0.9s
MDJ pmax pmax
comp=Z,570nm,5.6s
MDJ LR LR
comp=Z,2µm,24.1s
MDJ LR LR
comp=Z,2µm,20.6s
MDJ LR LR
comp=Z,3µm,24.7s
MDJ Mudanjiang 42.94 3 P **P** **01 25 33.5 +0.7**
comp=Z,131nm,1.0s
MDJ Mudanjiang 42.94 3 P **P** **01 25 33.3 +0.5**
H11S3 WAKE ISLAND Hy 43.03 64 T T 02 13 13.0
baz=252,slow=75,SNR=426
H11S2 WAKE ISLAND Hy 43.04 64 T T 02 12 50.9
baz=252,slow=75,SNR=402
H11S1 WAKE ISLAND Hy 43.05 64 T T 02 12 52.0
baz=252,slow=75,SNR=241
XLT XiLinHaoTe 43.08 349 *e*P **P** **01 25 34.3 +0.2**
XLT pP pP 01 25 45.3 -1.4
XLT sP sP 01 25 49.3 -2.9
XLT PcS **PcS** **01 31 11.8 -4.0**
XLT S **S** **01 31 55.6 -1.2**
XLT pmax pmax
comp=Z,120nm,0.8s
XLT pmax pmax
comp=Z,680nm,6.0s
XLT LR LR
comp=Z,260nm,24.7s
XLT LR LR
comp=Z,2µm,21.2s
XLT LR LR
comp=Z,4µm,24.5s
LSA Lhasa 43.53 313 P **P** **01 25 35.3 -3.1**
LSA S **S** **01 31 57.3 -7.2**
LSA LR LR
comp=Z,2µm,24.8s
LSA LR LR
comp=Z,1µm,24.3s
LSA LR LR
comp=Z,4µm,27.5s
H11N1 WAKE ISLAND Hy 43.60 63 T T 02 13 58.6
baz=251,slow=75,SNR=25
H11N2 WAKE ISLAND Hy 43.61 63 T T 02 13 57.7
baz=251,slow=75,SNR=8.8
H11N3 WAKE ISLAND Hy 43.62 63 T T 02 13 51.7
baz=251,slow=75,SNR=24
BWNR Bhubaneshwar 43.66 298 *e*P **P** **01 25 38.3 -0.7**
BWNR IAmb IAmb 01 25 53.0
comp=Z,55nm,0.9s
BWNR IAMs_20 IAMs_20 01 45 26.8
comp=Z,4µm,20.9s
SANVU Saraoutou 43.87 114 P **P** **01 25 40.9 +0.1**
SANVU IAmb IAmb 01 25 54.1
comp=Z,394nm,1.3s
SANVU IAMs_20 IAMs_20 01 43 46.7
comp=Z,4µm,20.0s
SANVU Saraoutou 43.87 114 P **P** **01 25 41.3 +0.6**
comp=Z,195nm,0.8s
SANVU Saraoutou 43.87 114 P **P** **01 25 40.7 0.0**
SANVU pP **pP** **01 25 51.8 -1.8**
MILA Mila 43.94 153 P **P** **01 25 40.6 -0.5**
comp=Z,32nm,1.1s
BNX BinXian 43.97 1 ⇓P **P** **01 25 41.4 +0.3**
BNX sP **sP** **01 25 57.6 -1.5**
BNX PP **PP** **01 27 25.1 +0.8**
BNX S **S** **01 32 13.6 +4.1**
BNX sS **sS** **01 32 33.6 +3.0**
BNX pmax pmax
comp=Z,71nm,0.9s
BNX pmax pmax
comp=Z,1µm,8.4s
BNX LR LR
comp=Z,3µm,20.6s
BNX LR LR
comp=Z,2µm,24.4s
BNX LR LR
comp=Z,5µm,24.9s
SHBG Sahibganj 44.00 306 *e*P **P** **01 25 42.0 +0.2**
SHBG IAmb IAmb 01 25 57.6
comp=Z,139nm,0.7s
TEY Ternei 44.21 11 ⇑*e*P **P** **01 25 44.0 +1.0**
TEY *e* 01 27 27.4
TEY pmax pmax
comp=N,100nm,0.8s
TEY pmax pmax
comp=Z,170nm,0.8s
GTA Gaotai 44.70 331 P **P** **01 25 47.4 +0.2**

GTA pP pP 01 25 57.4 -2.5
GTA PcP **PP** **01 27 31.0 -1.3**
GTA PcS **PcS** **01 31 22.6 -0.1**
GTA S **S** **01 32 20.3 -0.3**
GTA ScS **SS** **01 35 41.9 -0.7**
GTA pmax pmax
comp=Z,53nm,0.9s
GTA LR LR
comp=Z,4μm,24.5s
GTA LR LR
comp=Z,3μm,21.4s
GTA LR LR
comp=Z,7μm,24.0s
ASAJ **Asahikawa** **44.75 17** P **P** **01 25 47.8 +0.4**
comp=Z,118nm,0.8s,baz=226,slow=9.9,SNR=22
ASAJ LR LR 01 44 05.2
comp=Z,4μm,21.6s,baz=204,slow=36
comp=Z,118nm,0.8s
ASAJ **Asahikawa** **44.75 17** P **P** **01 25 47.6 +0.2**
ASAJ pmax pmax
comp=Z,160nm,0.9s
JKA **Kamikawa-asahi** **44.75 17** P **P** **01 25 47.6 +0.3**
JKA IAmb IAmb 01 25 49.7
comp=Z,160nm,0.9s
BOK **Bokaro** **44.88 303** *e*P **P** **01 25 48.5 -0.3**
BOK IAmb IAmb 01 26 04.4
comp=Z,60nm,0.6s
BOK IAMs_20 IAMs_20 01 45 29.8
comp=Z,2μm,18.1s
GOMU **GeErMu** **45.09 323** P **P** **01 25 51.3 +0.6**
GOMU pP pP 01 26 04.6 +1.3
GOMU PcP **PcP** **01 27 32.3 +1.5**
GOMU S **S** **01 32 31.0 +4.2**
GOMU pmax pmax
comp=Z,53nm,1.1s
GOMU LR LR
comp=Z,2μm,19.4s
GOMU LR LR
comp=Z,2μm,18.2s
VIS **Vishakhapatnam** **45.10 294** *e*P **P** **01 25 50.6 0.0**
VIS IAmb IAmb 01 26 07.0
comp=Z,101nm,1.2s
VIS IAMs_20 IAMs_20 01 44 16.6
comp=Z,6μm,20.7s
RAGD **RAYAGADA** **45.42 296** *e*P **P** **01 25 52.8 -0.4**
RAGD IAmb IAmb 01 26 09.7
comp=Z,120nm,1.0s
RAGD IAMs_20 IAMs_20 01 44 25.3
comp=Z,6μm,19.8s
PALK **Pallekele** **45.76 279** P **P** **01 25 55.6 -0.3**
PALK IAmb IAmb 01 26 02.9
comp=Z,324nm,1.9s
PALK **Pallekele** **45.76 279** IAMs_20 IAMs_20 01 48 51.5
comp=Z,4μm,20.0s
PALK **Pallekele** **45.76 279** P **P** **01 25 55.9 0.0**
PALK S **S** **01 32 32.2 -4.3**
PALK **Pallekele** **45.76 279** *i* P **P** **01 25 54.3 -1.6**
PALK pmax pmax
comp=Z,40nm,1.0s
ONTNC **Ouen Toro** **45.83 124** IAmb IAmb 01 26 11.3
comp=Z,125nm,1.1s
ONTNC **Ouen Toro** **45.83 124** P **P** **01 25 56.1 -0.2**
comp=Z,102nm,0.9s
GAYA **Gaya** **45.83 304** *e*P **P** **01 25 55.5 -0.8**
GAYA IAmb IAmb 01 26 11.2
comp=Z,295nm,1.6s
GAYA IAMs_20 IAMs_20 01 42 47.6
comp=Z,2μm,22.7s
EVN **Everest** **45.92 309** IAmb IAmb 01 25 44.1
comp=Z,4.1nm,0.7s
JHSG **JHARSUGUGA** **45.95 299** *e*P **P** **01 25 56.1 -1.1**
JHSG IAmb IAmb 01 26 18.9
comp=Z,152nm,0.9s
AUBRN **Burnie High Sc** **46.04 159** P **P** **01 25 59.1 +1.5**
comp=Z,203nm,1.1s
YATNC **Mamie plateau,** **46.09 123** P **P** **01 25 59.2 +0.8**
comp=Z,123nm,0.9s
OUENC **Ouen Island, N** **46.20 124** P **P** **01 26 00.6 +1.4**
comp=Z,70nm,1.4s
TARA **Tarawa** **46.63 90** IAMs_20 IAMs_20 01 43 20.6
comp=Z,5μm,22.0s
GLAD **Gladstone** **46.78 157** P **P** **01 26 04.5 +1.1**
comp=Z,88nm,1.1s
PINNC **Pines Island,** **46.79 123** P **P** **01 26 04.0 +0.2**
PINNC IAmb IAmb 01 26 19.7
comp=Z,221nm,1.2s
PINNC **Pines Island,** **46.79 123** P **P** **01 26 04.9 +1.1**
comp=Z,168nm,1.4s
MARNC **Mare, Loyalty** **46.81 122** P **P** **01 26 01.4 -2.6**
MARNC **Mare, Loyalty** **46.81 122** P **P** **01 26 04.6 +0.6**
comp=Z,1.3nm,1.0s
CORO **Coronation Par** **46.86 158** P **P** **01 26 05.8 +1.8**
comp=Z,82nm,0.9s
VJD **Vijayawada** **47.28 291** *e*P P 01 26 13.2 +5.5
VJD IAmb IAmb 01 26 30.2
comp=Z,96nm,1.1s
YSS **Yuzhno-Sakhali** **47.40 15** P **P** **01 26 08.7 +0.5**
YSS **Yuzhno-Sakhali** **47.40 15** P **P** **01 26 08.9 +0.7**
comp=Z,186nm,1.2s
YSS **Yuzhno-Sakhali** **47.40 15**⇑ *e*P **P** **01 26 08.6 +0.4**
YSS *e**PP **pP** **01 26 22.4 +1.4**
YSS *e* 01 27 59.2
YSS *e*S **S** **01 32 57.9 -1.0**
YSS *e*SS **SS** **01 36 26.1 -1.1**
YSS pmax pmax
comp=Z,900nm,4.0s
YSS pmax pmax
comp=Z,140nm,1.0s
YSS MLR MLR
comp=Z,3μm,19.0s
YSS MLR MLR
comp=E,2μm,18.0s
BLSP **Bilaspur** **47.51 299** *e*P **P** **01 26 08.0 -1.5**
BLSP IAmb IAmb 01 26 24.0
comp=Z,136nm,1.1s
BLSP IAMs_20 IAMs_20 01 45 43.5
comp=Z,4μm,18.8s
MOO **Moorlands** **47.74 159** P **P** **01 26 14.6 +3.7**
MOO **Moorlands** **47.74 159** P **P** **01 26 12.6 +1.7**
comp=Z,133nm,1.0s
HIA **Hailar** **47.82 354** P **P** **01 26 12.4 +1.0**
comp=Z,242nm,1.1s
HILR **Hailar Array B** **48.10 354** P **P** **01 26 14.0 +0.4**
comp=Z,73nm,0.6s,baz=173,slow=10,SNR=87
HILR PcP **PcP** **01 27 42.2 +1.5**
comp=Z,15nm,0.6s,baz=168,slow=3.4,SNR=4.2
HILR LR LR 01 49 42.9
comp=Z,2μm,20.0s,baz=120,slow=40
comp=Z,73nm,0.6s
HEH **HeiHe** **48.48 1** *e*P **P** **01 26 16.1 -0.4**
HEH sP **pP** **01 26 28.8 -0.5**
HEH S **S** **01 33 16.8 +2.7**
HEH sS **sS** **01 33 30.6 -4.8**
HEH pmax pmax
comp=Z,190nm,1.1s
HEH pmax pmax
comp=Z,1μm,4.6s
HEH LR LR
comp=Z,3μm,21.7s
HEH LR LR
comp=Z,2μm,24.5s
HEH LR LR
comp=Z,6μm,24.5s
SALM **Salem** **48.71 284** *e*P **P** **01 26 18.2 -0.6**
SALM IAmb IAmb 01 26 25.7
comp=Z,185nm,1.3s
SALM IAMs_20 IAMs_20 01 44 53.2
comp=Z,4μm,20.2s
ULN **Ulaanbaatar** **49.00 343** P **P** **01 26 21.0 +0.3**
ULN IAmb IAmb 01 26 22.6
comp=Z,86nm,0.8s
ULN **Ulaanbaatar** **49.00 343** P **P** **01 26 20.1 -0.6**
ULN **Ulaanbaatar** **49.00 343** *ce*P **P** **01 26 20.6 -0.1**
ULN pmax pmax
comp=Z,99nm,0.9s
ULN **Ulaanbaatar** **49.00 343** P **P** **01 26 20.8 +0.1**
ULN PcP **PcP** **01 27 45.8 +1.6**
SONM **Songino Array** **49.17 342** P **P** **01 26 21.7 -0.3**
comp=Z,71nm,0.9s,baz=159,slow=7.1,SNR=143
SONM PcP **PcP** **01 27 45.5 +0.8**
comp=Z,40nm,0.8s,baz=164,slow=2.1,SNR=6.6
SONM LR LR 01 48 01.1
comp=Z,4μm,21.4s,baz=157,slow=37
comp=Z,71nm,0.9s
KOD **Kodaikanal** **49.24 282** *e*P **P** **01 26 21.6 -1.7**
KOD IAmb IAmb 01 26 37.9
comp=Z,88nm,0.8s
HYBB **Hyderabad (bro** **49.44 292** *e*P **P** **01 26 24.7 +0.3**
HYBB IVmB_BB 01 26 25.0
comp=Z,1μm,2.4s
HYBB *es*P **pwP** **01 26 40.1 +0.9**
HYBB *e*PcP **PcP** **01 27 46.9 +0.7**
HYBB *e*PP **PP** **01 28 19.7 +0.7**
HYBB *e*S **S** **01 33 31.0 +2.4**
HYBB *e*ScS **ScS** **01 36 14.6 +1.8**
HYBB IVMs_BB IVMs_BB 01 46 20.1
comp=Z,1μm,20.5s
TRD **Trivandrum** **49.56 280** *e*P **P** **01 26 25.0 -0.3**
TRD IAmb IAmb 01 26 37.0
comp=Z,120nm,0.7s
TRD IAMs_20 IAMs_20 01 46 07.8
comp=Z,4μm,20.0s
GRNR **Gornyy** **49.74 8**⇓ *i*P **P** **01 26 27.0 +0.9**
GRNR pmax pmax
comp=N,40nm,0.9s
GRNR pmax pmax
comp=Z,100nm,1.0s
GRNR MLR MLR
comp=E,1μm,20.0s
GRNR MLR MLR
comp=N,2μm,22.0s
GRNR MLR MLR
comp=Z,1μm,17.0s
NGP **Nagpur** **49.94 296** *e*P **P** **01 26 27.0 -1.2**
NGP IAmb IAmb 01 26 36.2
comp=Z,94nm,1.1s
BRCI **Bahraich** **49.94 305** *e*P **P** **01 26 28.6 +0.6**
TYV **Tymovskoe** **51.01 13** *e*P P 01 26 40.5 +4.8
TYV *e*S S 01 33 59.7 +10
TYV pmax pmax
comp=Z,53nm,1.1s
TYV pmax pmax
comp=Z,2μm,5.6s
TYV smax smax
comp=N,2μm,6.8s
TYV smax smax
comp=E,900nm,6.8s
TYV MLR MLR
comp=Z,3μm,15.0s
CIT **Chita** **51.37 350** *e*P **P** **01 26 39.8 +1.4**
CIT *e* 01 26 44.4
CIT *e* 01 26 54.4
CIT *e* 01 27 54.6
CIT pmax pmax
comp=Z,578nm,1.0s
AKL **Akola** **51.65 295** *e*P **P** **01 26 39.8 -1.2**
AKL IAmb IAmb 01 26 45.9
comp=Z,137nm,0.8s
JHNI **Jhansi** **51.71 302** *e*P **P** **01 26 39.0 -2.5**
JHNI IAmb IAmb 01 26 56.0
comp=Z,151nm,1.2s
LGTI **Lohaghat** **51.76 307** *e*P **P** **01 26 40.7 -1.0**
LGTI IAmb IAmb 01 26 50.5
comp=Z,52nm,0.8s
ZEA **Zeya** **51.97 1** *e*P **P** **01 26 42.6 -0.2**
ZEA *e* 01 28 48.4
ZEA *e*S **S** **01 34 06.8 +4.3**
ZEA pmax pmax
comp=N,300nm,4.7s
ZEA pmax pmax
comp=Z,400nm,5.7s
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=N,40nm,0.8s
ZEA pmax pmax
comp=Z,80nm,0.9s
ZEA pmax pmax
comp=E,200nm,4.2s
ZEA pmax pmax
comp=N,400nm,6.6s
ZEA pmax pmax
comp=Z,600nm,6.9s
ZEA smax smax
comp=E,300nm,8.0s
ZEA MLR MLR
comp=E,700nm,15.0s
ZEA MLR MLR
comp=N,1μm,24.0s
ZEA MLR MLR
comp=Z,2μm,20.0s
BHPL **Bhopal** **51.98 298** *e*P **P** **01 26 42.7 -0.9**
BHPL IAmb IAmb 01 26 58.2
comp=Z,131nm,0.7s
BHPL IAMs_20 IAMs_20 01 44 16.6
comp=Z,2μm,20.8s
NRDN **NARMADA NAGAR** **52.06 298** *e*P **P** **01 26 46.1 +2.1**
NRDN IAmb IAmb 01 27 02.5
comp=Z,239nm,1.2s
NRDN IAMs_20 IAMs_20 01 46 12.7
comp=Z,2μm,21.8s
ZAK **Zakamensk** **52.38 342** *e*P **P** **01 26 45.0 -1.1**
ZAK pmax pmax
comp=Z,32nm,1.1s
GUNA **GUNA** **52.49 300** *e*P **P** **01 26 45.9 -1.3**
GUNA IAmb IAmb 01 26 55.0
comp=Z,330nm,0.9s
GUNA IAMs_20 IAMs_20 01 45 45.1
comp=Z,2μm,20.5s
JOSI **Joshimath** **52.75 308** *e*P **P** **01 26 49.2 -0.1**
JOSI IAmb IAmb 01 27 04.0
comp=Z,198nm,0.9s
KAAM **Kaadhehdhoo** **53.28 269** P **P** **01 26 53.6 +0.4**
TLY **Talaya** **53.41 343** P **P** **01 26 54.2 +0.7**
TLY **Talaya** **53.41 343** P **P** **01 26 53.1 -0.4**
TLY S **S** **01 34 21.3 -0.9**
TLY **Talaya** **53.41 343** *ce*P **P** **01 26 54.2 +0.7**
TLY pmax pmax
comp=Z,30nm,0.8s
KAD **Karad** **53.49 290** *e*P **P** **01 26 52.6 -2.2**
KAD IAmb IAmb 01 27 09.9
comp=Z,58nm,1.0s
GOA **Goa** **53.51 288** *e*P **P** **01 26 53.5 -1.3**
FUNA **Funafuti** **53.70 102** P **P** **01 26 56.1 -0.2**
FUNA **Funafuti** **53.70 102** P **P** **01 26 57.4 +1.1**
comp=Z,210nm,1.3s
IRK **Irkutsk** **53.72 343** *e*P **P** **01 26 55.9 +0.1**
IRK *e*S S 01 34 41.3 +15
IRK pmax pmax
comp=Z,133nm,2.1s
DDI **Dehra Dun** **53.85 307** *e*P **P** **01 26 56.8 -0.5**
DDI IAmb IAmb 01 27 29.8
comp=Z,235nm,0.6s
NDI **New Delhi** **53.93 305** *e*P **P** **01 26 54.9 -2.9**
NDI IAmb IAmb 01 27 04.5
comp=Z,98nm,1.1s
AYAN **Aya Nagar** **53.93 305** *e*P **P** **01 26 56.0 -1.7**
AYAN IAmb IAmb 01 27 13.2
comp=Z,475nm,1.3s
NPLP **NPLP New Delhi** **53.95 305** *e*P **P** **01 26 55.7 -2.2**
POO **Poona** **54.05 292** *e*P **P** **01 26 57.0 -1.8**
POO IAmb IAmb 01 27 12.8
comp=Z,101nm,1.2s
WMQ **Urumqi** **54.21 326** *e*P **P** **01 27 00.3 +0.7**
WMQ PcP **PcP** **01 28 05.4 +1.8**
WMQ S **S** **01 34 31.8 -1.7**
WMQ pmax pmax
comp=Z,89nm,1.3s
WMQ pmax pmax
comp=Z,280nm,3.7s
WMQ LR LR
comp=Z,4μm,21.1s
WMQ LR LR
comp=Z,5μm,24.3s
WMQ LR LR
comp=Z,6μm,24.1s
MOY **Mondy** **54.22 341** *e*P **P** **01 27 00.3 +0.7**
MOY pmax pmax
comp=Z,84nm,1.0s
KUDL **Kundal** **54.34 304** *e*P **P** **01 26 58.4 -2.3**
KUDL IAmb IAmb 01 27 14.5
comp=Z,249nm,1.1s
DGAR **Diego Garcia** **54.43 260** IAMs_20 IAMs_20 01 53 10.2
comp=Z,3μm,20.0s
DGAR **Diego Garcia** **54.43 260** P **P** **01 27 01.0 -0.6**
MSVF **Nonsavu** **54.47 113** P **P** **01 27 03.3 +1.3**
MSVF **Nonsavu** **54.47 113** IAMs_20 IAMs_20 01 51 11.7
comp=Z,4μm,21.0s
MSVF **Nonsavu** **54.47 113** P **P** **01 27 03.8 +1.8**
comp=Z,144nm,1.0s
MSVF **Nonsavu** **54.47 113** P **P** **01 27 03.3 +1.3**
MSVF pmax pmax
comp=Z,290nm,1.5s
MSVF MLR MLR
comp=Z,4μm,21.0s
MSVF **Nonsavu** **54.47 113** P **P** **01 27 02.8 +0.8**
KNGR **Kungurtug, Tuv** **54.56 338** *i* P **P** **01 27 02.0 -0.1**
KNGR pmax pmax
comp=Z,78nm,0.9s
SMLA **Simla** **54.87 308** *e*P **P** **01 27 03.5 -1.0**
SMLA IAmb IAmb 01 27 25.6
comp=Z,295nm,0.7s
SMLA IAMs_20 IAMs_20 01 41 33.7
comp=Z,3μm,20.7s
BHK **Bhakra** **55.57 308** *e*P **P** **01 27 09.2 -0.5**
BHK IAmb IAmb 01 27 30.7
comp=Z,235nm,0.9s
UDPR **Udaipur** **55.62 299** *e*P **P** **01 27 08.9 -1.2**
UDPR IAmb IAmb 01 27 27.5
comp=Z,304nm,0.9s
ALCI **Alchi Leh** **56.08 311** *e*P **P** **01 27 12.3 -1.4**
ALCI IAmb IAmb 01 27 24.1
comp=Z,63nm,0.7s
ALCI IAMs_20 IAMs_20 01 42 04.2
comp=Z,3μm,19.4s
TLWR **Talawar** **56.14 308** *e*P **P** **01 27 12.2 -1.5**
TLWR IAmb IAmb 01 27 28.6
comp=Z,418nm,1.4s
TSSA **Tissa** **56.32 309** *e*P **P** **01 27 13.4 -1.8**
TSSA IAmb IAmb 01 27 34.3
comp=Z,255nm,0.9s
JMU **Jammu** **57.25 308** *e*P **P** **01 27 22.2 +0.7**
JMU IAmb IAmb 01 27 28.1
comp=Z,213nm,0.7s
PEA0B **Petropavlovsk-** **57.56 22** IAmb IAmb 01 27 25.6
comp=Z,104nm,0.9s
PEA0B **Petropavlovsk-** **57.56 22** *ce*P **P** **01 27 24.6 +1.3**
PETK **Petropavlovsk-** **57.56 22** P **P** **01 27 23.1 -0.3**
comp=Z,53nm,0.8s,baz=208,slow=6.1,SNR=28
comp=Z,53nm,0.8s
PETK **Petropavlovsk-** **57.56 22** P **P** **01 27 23.4 0.0**
PET **Petropavlovsk** **57.86 22** P **P** **01 27 26.9 +1.5**
comp=Z,507nm,1.4s
PET **Petropavlovsk** **57.86 22** *e*P **P** **01 27 26.1 +0.7**
PET *e**PP **pP** **01 27 40.0 +1.6**
PET *e* 01 28 16.3
PET *e*S **S** **01 35 22.5 +1.1**
PET pmax pmax
comp=Z,135nm,1.4s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,2μm,15.0s
PET **Petropavlovsk** **57.86 22** P **P** **01 27 25.7 +0.3**
comp=Z,125nm,1.4s
ZSN **Zaisan** **58.05 328**⇓ *i*P **P** **01 27 26.8 -0.1**
ZSN *e*S **S** **01 35 25.9 +1.7**
ZSN **Zaisan** **58.05 328** *d*iP **P** **01 27 26.8 -0.1**
ZSN *e*S **S** **01 35 25.9 +1.7**
DGZ **Jazzator, Alta** **58.22 331** *i* P **P** **01 27 27.8 -0.4**
DGZ pmax pmax
comp=Z,78nm,0.9s
SHLS **Shalkode** **58.70 321**⇓ *i*P **P** **01 27 29.5 -2.2**
comp=Z,81nm,1.1s
SHLS *e*S **S** **01 35 30.9 -2.2**
SHLS **Shalkode** **58.70 321** *d*iP **P** **01 27 29.5 -2.2**
SHLS *e*S **S** **01 35 30.9 -2.2**
SHLS pmax pmax
comp=Z,81nm,1.1s
NIL **Nilore** **58.88 309** P **P** **01 27 32.3 -0.7**
NIL IAmb IAmb 01 27 55.3
comp=Z,82nm,0.9s
NIL **Nilore** **58.88 309** P **P** **01 27 32.3 -0.7**
NIL pmax pmax
comp=Z,82nm,0.9s
NIL MLR MLR
comp=Z,2μm,22.0s
BHUJ **Bhuj** **58.89 296** *e*P **P** **01 27 33.5 +0.3**
TARG **Taragay, Kyrgy** **59.04 319** P **P** **01 27 34.5 +0.1**
TARG IAmb IAmb 01 27 46.9
comp=Z,140nm,1.0s
TARG **Taragay, Kyrgy** **59.04 319** P **P** **01 27 34.5 +0.1**
TARG pmax pmax
comp=Z,140nm,1.0s
MK31 **Makanchi Array** **59.05 326** IAmb IAmb 01 27 09.2
comp=Z,4.2nm,1.2s
MK31 **Makanchi Array** **59.05 326** *ce*P **P** **01 27 33.5 -0.4**
MKAR **Makanchi Array** **59.05 326** P **P** **01 27 33.3 -0.6**
comp=Z,105nm,0.7s,baz=120,slow=7.1,SNR=151
MKAR PKPPKP P'P'df 01 56 54.6 -13
comp=Z,3.5nm,1.0s,baz=289,slow=4.4,SNR=7.4
MKAR P4KPbc 02 04 41.3
comp=Z,1.0nm,0.8s,baz=123,slow=3.7,SNR=4.5
comp=Z,105nm,0.7s
MKAR **Makanchi Array** **59.05 326** P **P** **01 27 33.5 -0.4**
MKAR **Makanchi Array** **59.05 326** P **P** **01 27 33.5 -0.4**
JCZ **Jackson Bay** **59.21 145** P **P** **01 27 36.4 +1.3**
comp=Z,122nm,1.0s
MAKZ **Makanchi** **59.23 326** IAmb IAmb 01 27 07.0
comp=Z,3.8nm,1.1s
MAKZ **Makanchi** **59.23 326** P **P** **01 27 34.6 -0.5**
KSH **Kashi** **59.24 316** P **P** **01 27 36.3 +0.8**
KSH pP pP 01 27 49.4 +0.9
KSH sP sP 01 27 55.1 +1.3
KSH PcP **PcP** **01 28 24.6 +1.2**
KSH S **S** **01 35 39.3 -0.9**
KSH pmax pmax
comp=Z,52nm,1.1s
KSH LR LR
comp=Z,3μm,24.0s
KSH LR LR
comp=Z,2μm,23.3s
KSH LR LR
comp=Z,2μm,24.7s
SATY **Saty** **59.31 321**⇓ *i*P **P** **01 27 35.6 -0.4**
SATY *e*S **S** **01 35 42.2 +1.2**
SATY **Saty** **59.31 321** *d*iP **P** **01 27 35.5 -0.4**
SATY *e*S **S** **01 35 42.2 +1.2**
AIS **Amsterdam Isla** **59.62 224** P **P** **01 27 40.3 +2.4**
KDJ **Kajisay** **59.64 319** P **P** **01 27 38.1 -0.2**
KDJ IAmb IAmb 01 27 46.8
comp=Z,104nm,0.8s
KDJ **Kajisay** **59.64 319** P **P** **01 27 38.1 -0.2**
KDJ pmax pmax
comp=Z,104nm,0.8s
WHZ **Wether Hill Ro** **59.89 148** IAmb IAmb 01 27 56.1
comp=Z,96nm,1.3s
TOZ **Tahuroa Road** **59.95 136** IAMs_20 IAMs_20 01 52 06.9
comp=Z,3μm,22.0s
INZ **Inchbonnie** **59.96 143** IAMs_20 IAMs_20 01 55 37.2
comp=Z,3μm,21.0s
LBZ **Lake Benmore** **60.20 145** IAmb IAmb 01 27 45.5
comp=Z,124nm,0.9s
TNSS **Tian-Shan** **60.23 320** *e*P **P** **01 27 41.9 -0.7**
TNSS **Tian-Shan** **60.23 320** *e*P **P** **01 27 41.8 -0.7**
ARXS **Arharly** **60.26 322** *e*P **P** **01 27 41.2 -1.1**
RPZ **Rata Peaks** **60.30 144** P **P** **01 27 41.9 -0.7**
RPZ IAMs_20 IAMs_20 01 55 46.2
comp=Z,3μm,19.0s
ULHL **Ulahol** **60.31 319** P **P** **01 27 42.5 -0.4**
SNR=31
TDK **Taldyqorghan** **60.31 323**⇓ *i*P **P** **01 27 42.3 -0.4**
comp=Z,153nm,1.2s
TDK **Taldyqorghan** **60.31 323** *d*iP **P** **01 27 42.2 -0.4**
TDK pmax pmax
comp=Z,153nm,1.2s
THZ **Tophouse** **60.32 141** P **P** **01 27 42.0 -0.8**
THZ IAmb IAmb 01 28 10.8
comp=Z,54nm,0.8s
NNZ **Nelson** **60.33 140** IAMs_20 IAMs_20 01 55 50.7
comp=Z,3μm,20.0s
YAK **Yakutsk** **60.34 2** P **P** **01 27 42.7 +0.3**
comp=Z,391nm,0.8s,baz=18,slow=1.5,SNR=47
YAK S **S** **01 35 54.0 +0.8**
comp=Z,8.7nm,0.4s,baz=314,slow=22,SNR=7.1
comp=Z,391nm,0.8s
YAK **Yakutsk** **60.34 2** P **P** **01 27 42.7 +0.3**
YAK **Yakutsk** **60.34 2** IAMs_20 IAMs_20 01 55 40.7
comp=Z,3μm,22.0s
YAK **Yakutsk** **60.34 2** *e*P **P** **01 27 42.5 +0.1**
YAK *e**PP **pP** **01 27 55.1 -0.4**
YAK *e* 01 28 26.3
YAK *e* 01 29 51.9
YAK *e*PPP PPP 01 31 18.6
YAK *e*S **S** **01 35 53.5 +0.3**
YAK *e**SS **sS** **01 36 16.9 +1.7**
YAK *e* 01 37 25.8

YAK eSS SS 01 39 49.8 -1.7
YAK pmax pmax
comp=Z,356nm,0.9s
YAK pmax pmax
comp=N,202nm,1.5s
YAK pmax pmax
comp=E,89nm,1.3s
YAK pmax pmax
comp=N,763nm,3.6s
YAK pmax pmax
comp=Z,733nm,4.0s
YAK pmax pmax
comp=E,480nm,3.3s
YAK smax smax
comp=N,1μm,2.7s
YAK smax smax
comp=E,1μm,2.7s
YAK MLR MLR
comp=Z,5μm,28.0s
YAK MLR MLR
comp=N,2μm,25.0s
YAK MLR MLR
comp=E,1μm,23.0s
LTZ Lake Taylor 60.50 143 P P 01 27 43.6 -0.3
LTZ IAmb IAmb 01 28 05.5
comp=Z,179nm,1.6s
BOOM Boomskoye usch 60.62 319 IAmb IAmb 01 27 47.6
comp=Z,86nm,1.1s
OXZ Oxford 60.66 143 P P 01 27 44.3 -0.7
MA2 Magadan 60.87 14 P P 01 27 47.1 +1.0
comp=Z,210nm,1.1s,baz=181,slow=5.4,SNR=18
MA2 LR LR 01 54 09.1
comp=Z,1μm,21.2s,baz=198,slow=36
comp=Z,210nm,1.1s
MA2 Magadan 60.87 14 P P 01 27 47.4 +1.3
MA2 IAMs_20 IAMs_20 01 55 39.5
comp=Z,3μm,21.0s
MA2 Magadan 60.87 14 P P 01 27 47.5 +1.4
comp=Z,247nm,0.9s
MA2 Magadan 60.87 14 *ce*P P 01 27 46.0 -0.1
MA2 pmax pmax
comp=Z,249nm,1.1s
MA2 Magadan 60.87 14 P P 01 27 46.5 +0.4
comp=Z,244nm,0.9s
MA2 Magadan 60.87 14 P P 01 27 47.1 +1.0
KUU Kurty 61.03 321 *e*P P 01 27 47.3 -0.3
comp=Z,173nm,1.0s
KUU Kurty 61.03 321 *e*P P 01 27 47.2 -0.3
KUU pmax pmax
comp=Z,173nm,1.0s
TKM2 Tokmak 2 61.04 320 P P 01 27 47.4 -0.5
SNR=87
KHZ Kahutara 61.07 142 IAmb IAmb 01 28 00.5
comp=Z,102nm,1.2s
MQZ McQueen's Vall 61.25 143 P P 01 27 49.1 +0.2
MQZ IAmb IAmb 01 28 02.6
comp=Z,207nm,1.8s
BKZ Black Stump Fm 61.33 137 IAmb IAmb 01 28 03.6
comp=Z,64nm,0.8s
BKZ IAMs_20 IAMs_20 01 57 25.4
comp=Z,2μm,20.0s
BKZ Black Stump Fm 61.33 137 P P 01 27 48.0 -1.7
comp=Z,88nm,1.0s
KBK Karagaybulak 61.35 319 P P 01 27 49.6 -0.3
SNR=38
BHW Baring Head 61.38 140 IAmb IAmb 01 28 37.2
comp=Z,159nm,1.5s
BHW IAMs_20 IAMs_20 01 57 32.7
comp=Z,2μm,18.0s
RTZ Ruatahuna 61.40 136 IAMs_20 IAMs_20 01 52 55.2
comp=Z,3μm,22.0s
UCH Uchtor 61.44 318 P P 01 27 51.0 +0.2
SNR=104
MRZ Mangatainoka R 61.46 139 IAmb IAmb 01 27 52.8
comp=Z,59nm,0.9s
MRZ IAMs_20 IAMs_20 01 53 39.7
comp=Z,3μm,22.0s
MSWZ Moikau Station 61.63 140 P P 01 27 49.6 -2.0
CHMS Chumysh 61.63 319 P P 01 27 51.3 -0.3
SNR=14
AAK Ala-Archa 61.63 319 P P 01 27 51.3 -0.5
comp=Z,48nm,0.9s,baz=162,slow=4.9,SNR=27
comp=Z,48nm,0.9s
AAK Ala-Archa 61.63 319 P P 01 27 51.6 -0.2
AAK IAmb IAmb 01 28 02.4
comp=Z,72nm,1.1s
AAK Ala-Archa 61.63 319 IAMs_20 IAMs_20 01 55 19.5
comp=Z,4μm,22.0s
AAK Ala-Archa 61.63 319 P P 01 27 52.1 +0.2
SNR=22
AAK Ala-Archa 61.63 319 *ce*P P 01 27 52.3 +0.5
AAK pmax pmax
comp=Z,62nm,1.0s
MXZ Matakaoa Point 61.84 135 IAMs_20 IAMs_20 01 55 60.0
comp=Z,3μm,22.0s
BFZ Birch Farm 61.91 139 IAMs_20 IAMs_20 01 58 46.6
comp=Z,3μm,21.0s
SGDS Sogindy 61.92 320 *e*P P 01 27 52.8 -0.8
USP Ospenovka 61.92 319 P P 01 27 53.1 -0.4
SNR=139
EKS2 Erkin-Say 62.12 319 P P 01 27 55.1 +0.1
SNR=84
DRK Karamyk 62.15 315 IAmb IAmb 01 27 57.6
comp=Z,136nm,1.1s
ZAA0 Zalesovo Array 62.28 334 P P 01 27 54.3 -1.3
ZALV Zalesovo Beam 62.28 334 P P 01 27 54.5 -1.2
comp=Z,18nm,0.4s,baz=134,slow=6.9,SNR=61
ZALV S S 01 36 18.2 +0.1
comp=Z,2.7nm,0.8s,baz=122,slow=7.0,SNR=3.7
ZALV PKPPKP P'P'df 01 56 56.7 -5.4
comp=Z,1.7nm,0.8s,baz=321,slow=2.0,SNR=5.3
comp=Z,18nm,0.4s
ZALV Zalesovo Beam 62.28 334 P P 01 27 54.4 -1.3
KBU Kabul Universi 62.38 308 P P 01 27 55.5 -1.6
KBL Kabul 62.47 308 P P 01 27 56.9 -0.7
KBL IAmb IAmb 01 27 59.4
comp=Z,124nm,1.0s
KBL Kabul 62.47 308 P P 01 27 56.6 -1.0
SNR=74
KBL S S 01 36 16.7 -5.0
KBL Kabul 62.47 308 P P 01 27 56.9 -0.7
KBL pmax pmax
comp=Z,124nm,1.0s
BTLS Baital 63.02 321 *e*P P 01 27 60.0 -0.9
BTLS *e*S S 01 36 28.6 +0.7
BTLS Baital 63.02 321 *e*P P 01 27 59.9 -0.9
BTLS *e*S S 01 36 28.6 +0.7
AFI Afiamalu 63.27 106 P P 01 28 04.4 +1.3
comp=Z,22nm,0.6s
KURBB Kurchatov Arra 63.28 328 P P 01 28 01.9 -0.6
comp=Z,110nm,0.7s,baz=128,slow=6.1,SNR=336
KURBB S S 01 36 29.1 -1.8
comp=Z,1.0nm,0.5s,baz=131,slow=6.1,SNR=0.9
KURBB PKPPKP 01 56 47.7
comp=Z,0.8nm,0.2s,baz=273,slow=3.3,SNR=4.4
comp=Z,110nm,0.7s
KURK Kurchatov 63.29 328 S 01 36 29.1 -1.9
KURK Kurchatov 63.29 328 P P 01 28 02.1 -0.4
KURK Kurchatov 63.29 328 P P 01 28 02.1 -0.4
KURK S S 01 36 29.0 -1.9
KURK Kurchatov 63.29 328 *ce*P P 01 28 01.9 -0.6
KURK pmax pmax
comp=Z,243nm,0.8s
DZA Taraz 63.85 318 *e*P P 01 28 05.7 -0.7
DZA Taraz 63.85 318 *e*P P 01 28 05.7 -0.7
SEY Seymchan 64.20 13 P P 01 28 09.2 +0.9
comp=Z,108nm,1.1s,baz=205,slow=6.0,SNR=29
comp=Z,108nm,1.1s
SEY Seymchan 64.20 13 *ce*P P 01 28 09.1 +0.9
SEY pmax pmax
comp=Z,182nm,1.0s
IUG Iuzhnay 64.43 317 ⇓ *i*P P 01 28 09.9 -0.4
comp=Z,81nm,1.1s
IUG *e*S S 01 36 46.8 +1.1
IUG Iuzhnay 64.43 317 *d i*P P 01 28 09.9 -0.4
IUG *e*S S 01 36 46.8 +1.1
IUG pmax pmax
comp=Z,81nm,1.1s
KK31 Karatay Array 64.48 318 IAmb IAmb 01 28 17.2
comp=Z,69nm,0.9s
KKAR Karatay Array 64.48 318 P P 01 28 09.8 -0.7
KKAR Karatay Array 64.48 318 P P 01 28 09.8 -0.7
SHEM Shemya Is, Ala 64.52 30 LR LR 01 51 28.0
comp=Z,1μm,21.8s,baz=248,slow=32
SMY Shemya 64.52 30 P P 01 28 11.1 +0.6
SMY Shemya 64.52 30 P P 01 28 11.8 +1.3
comp=Z,214nm,1.2s

SMY Shemya 64.52 30 P P 01 28 11.1 +0.6
SMY pmax pmax
comp=Z,214nm,1.1s
CHM Chimkent 64.79 317 *e*P P 01 28 12.0 -0.5
CHM Chimkent 64.79 317 *e*P P 01 28 12.0 -0.5
BRLS Borolday 64.91 318 *e*P P 01 28 12.6 -0.8
BRLS *e*S S 01 36 52.3 +0.9
BRLS Borolday 64.91 318 *e*P P 01 28 12.5 -0.8
BRLS *e*S S 01 36 52.3 +0.9
ROCAM Rodrigues Isla 65.20 247 P P 01 28 16.9 +1.3
NIUE Niue 65.90 112 P P 01 28 21.3 +1.2
comp=Z,313nm,2.4s
BRZS Berezniki 66.16 325 *e*P P 01 28 20.7 -0.6
BRZS Berezniki 66.16 325 *e*P P 01 28 20.6 -0.6
JLN Jalan Bani Buh 68.00 293 P P 01 28 32.1 -1.4
WBK Wadi Bani Khal 68.47 294 P P 01 28 36.8 +0.4
CASY Casey 68.66 187 P P 01 28 37.2 +0.6
CASY Casey 68.66 187 P P 01 28 37.0 +0.3
CASY pP pP 01 28 49.3 -0.8
KIWB Kanaga Island 68.70 34 IAmb IAmb 01 28 39.2
comp=Z,146nm,1.1s
BVAR Borovoye Array 68.85 328 P P 01 28 37.7 -0.5
comp=Z,35nm,0.6s,baz=136,slow=9.7,SNR=89
comp=Z,35nm,0.6s
WSAR Wadi Sarin 68.86 294 P P 01 28 37.4 -1.5
SNR=7.3
BORK Borovoye 68.90 328 *ce*P P 01 28 38.0 -0.5
BORK pmax pmax
comp=Z,113nm,1.3s
ADK Adak 68.97 34 P P 01 28 39.1 +0.2
ADK IAmb IAmb 01 28 51.3
comp=Z,114nm,1.0s
ADK Adak 68.97 34 P P 01 28 40.1 +1.2
comp=Z,66nm,1.2s
ADK Adak 68.97 34 P P 01 28 39.1 +0.2
ADK pmax pmax
comp=Z,114nm,1.0s
MHTO MHTO 69.20 292 P P 01 28 39.4 -1.5
SNR=14
JMDO Jabal Madar 69.23 293 P P 01 28 40.0 -1.1
SNR=9.2
SMDO Samad 69.37 294 P P 01 28 40.8 -1.3
SNR=5.5
TIXI Tiksi 69.96 1 P P 01 28 44.2 -0.4
comp=Z,153nm,1.1s,baz=190,slow=3.2,SNR=110
TIXI S S 01 37 49.0 -1.9
comp=Z,2.8nm,0.5s,baz=354,slow=19,SNR=7.1
TIXI LR LR 02 00 49.9
comp=Z,2μm,21.6s,baz=200,slow=37
comp=Z,153nm,1.1s
TIXI Tiksi 69.96 1 P P 01 28 44.6 0.0
TIXI IAmb IAmb 01 28 46.3
comp=Z,139nm,0.9s
TIXI Tiksi 69.96 1 *ce*P P 01 28 44.7 0.0
TIXI pmax pmax
comp=Z,206nm,1.3s
BSY Bisya 70.11 294 P P 01 28 45.4 -1.1
HOQ Hoqain 70.11 294 P P 01 28 47.1 +0.5
SNR=9.0
ATKA Atka Island 70.50 34 P P 01 28 49.2 +0.9
comp=Z,222nm,0.9s
ARQ Araqi 70.80 294 P P 01 28 49.9 -0.8
SNR=9.9
SOHO SOHO 70.88 295 P P 01 28 50.8 -0.3
MSEY Mahe Island 71.00 265 IAMs_20 IAMs_20 01 56 53.3
comp=Z,3μm,22.0s
MSEY Mahe Island 71.00 265 P P 01 28 53.9 +1.7
SHAO Shalim 71.11 288 P P 01 28 53.3 +0.6
MDH Madha 71.24 296 P P 01 28 53.3 0.0
UOSS Minazif 71.28 296 P P 01 28 52.2 -1.5
UOSS Minazif 71.28 296 P P 01 28 53.3 -0.3
UOSS Minazif 71.28 296 P P 01 28 53.4 -0.3
UOSS pP pP 01 29 05.3 -1.7
BANOM Banah 71.32 297 P P 01 28 54.7 +0.8
HATD Hatta, Dubai 71.33 296 P P 01 28 53.4 -0.6
HATD P P 01 28 57.1 +3.1
SNR=8.6
HATD Hatta, Dubai 71.33 296 P P 01 28 52.7 -1.2
MSFE Esma-Masafi 71.37 296 P P 01 28 53.7 -0.5
MASF Masafi 71.37 296 P P 01 28 54.0 -0.3
SNR=8.6
ASHO Ashiyiah 71.38 295 P P 01 28 53.3 -0.9
SNR=8.9
SHME Shamm 71.47 297 P P 01 28 54.1 -0.7
SNR=10
SHME Shamm 71.47 297 P P 01 28 53.5 -1.2
ALNE Al Ain 71.58 295 P P 01 28 55.0 -0.5
SNR=37
ALNE Al Ain 71.58 295 P P 01 28 54.6 -0.9
BILL Bilibino 71.72 15 P P 01 28 55.4 +0.1
BILL Bilibino 71.72 15 IAMs_20 IAMs_20 02 01 01.0
comp=Z,2μm,21.0s
BILL Bilibino 71.72 15 *ce*P P 01 28 56.1 +0.7
BILL pmax pmax
comp=Z,89nm,2.5s
DMTO DMTO 71.73 288 P P 01 28 57.8 +1.4
NAZ Nazwa, Dubai 71.77 296 P P 01 28 56.2 -0.4
SNR=6.9
NAZ Nazwa, Dubai 71.77 296 P P 01 28 55.6 -1.0
FAQ Al Faqa, Dubai 71.81 295 P P 01 28 55.7 -1.1
SNR=10
FAQ Al Faqa, Dubai 71.81 295 P P 01 28 55.3 -1.5
UMQ Umm Al-Quwin 71.84 296 P P 01 28 59.5 +2.5
UMZA Um Al Zommool 71.97 293 P P 01 28 57.2 -0.7
ASUD Al Ashush, Dub 72.03 295 P P 01 28 58.7 +0.6
SNR=12
ASUD Al Ashush, Dub 72.03 295 P P 01 28 56.6 -1.5
AJN Ajban 72.33 295 P P 01 28 59.5 -0.4
SNR=13
AJN Ajban 72.33 295 P P 01 28 58.2 -1.7
RBK Rakkut 72.42 288 P P 01 29 00.9 +0.2
DOK Doka 72.58 289 P P 01 28 59.9 -1.5
SNR=15
WHFO Wadi Hawf 72.86 288 P P 01 29 03.3 0.0
MZWR Madinat Zayed 73.25 294 P P 01 29 04.5 -0.9
ABTO Aybut 73.28 288 P P 01 29 06.1 +0.3
SNR=5.7
ABKAR Akbulak array 73.51 321 P P 01 29 05.9 -0.5
MZR Muzera 73.55 293 P P 01 29 06.9 -0.3
SNR=18
MZR Muzera 73.55 293 P P 01 29 05.7 -1.5
NIKH Nikolski High 73.81 35 P P 01 29 08.6 +0.5
baz=250
JRN Qarnain Island 74.31 295 P P 01 29 11.3 -0.3
SNR=7.3
SPIA Saint Paul Isl 74.55 30 P P 01 29 13.0 +0.7
baz=248
AKTO Aktyubinsk 75.04 322 P P 01 29 14.9 -0.4
comp=Z,59nm,0.8s,baz=90,slow=5.4,SNR=47
AKTO S S 01 38 48.7 -1.1
comp=Z,1.7nm,0.8s,baz=302,slow=18,SNR=3.5
comp=Z,59nm,0.8s
UNV Unalaska Valle 75.42 34 P P 01 29 16.2 -1.2
UNV Unalaska Valle 75.42 34 P P 01 29 18.0 +0.6
baz=252
SVE Sverdlovsk 75.53 329 *d i*P P 01 29 17.7 -0.3
SVE *e*S S 01 38 55.6 +0.7
SVE pmax pmax
comp=Z,268nm,1.0s
SVE MLR MLR
comp=Z,2μm,24.0s
TRNA Turayna 75.77 295 P P 01 29 18.7 -1.3
SNR=9.5
AKUT Akutan 75.92 34 P P 01 29 21.8 +1.6
comp=Z,278nm,1.0s
SHMA Al-Shehemyia 76.09 296 P P 01 29 20.8 -1.0
SNR=6.4
KIP Kipapa 76.12 68 P P 01 29 24.0 +2.0
SMRA Abu-Samra 76.12 295 P P 01 29 21.2 -0.8
SNR=12
GAMB Gambell 76.52 24 P P 01 29 24.5 +1.1
baz=245
ARTI Arti 76.57 328 P P 01 29 23.2 -0.7
comp=Z,130nm,0.9s,baz=117,slow=2.8,SNR=130
ARTI S S 01 39 00.7 -5.6
comp=Z,4.9nm,1.0s,baz=234,slow=20,SNR=1.9
comp=Z,130nm,0.9s
ARTI Arti 76.57 328 IAmb IAmb 01 28 56.6
comp=Z,8.4nm,1.3s
ARTI Arti 76.57 328 P P 01 29 23.2 -0.7
ARTI IAmb IAmb 01 29 24.0
comp=Z,124nm,0.7s
ARTI IAMs_20 IAMs_20 02 04 11.8
comp=Z,2μm,20.0s
ARTI Arti 76.57 328 *c i*P P 01 29 23.1 -0.8

ARTI 01 32 16.7
ARTI S S 01 39 06.2 -0.1
ARTI pmax pmax
comp=Z,225nm,1.3s
ARTI MLR MLR
comp=Z,2μm,20.0s
ARTI Arti 76.57 328 P P 01 29 23.0 -0.9
SBV Sambava 77.11 256 P P 01 29 28.9 +1.1
SNR=8.6
FALS False Pass 77.44 34 P P 01 29 29.5 +0.7
baz=254
M11K Mekoryuk 77.65 28 P P 01 29 30.5 +0.7
baz=251
MWH Mokuaweoweo 78.28 71 IAmb IAmb 01 29 37.0
comp=Z,168nm,1.2s
POHA Pohakuloa 78.35 70 P P 01 29 36.2 +1.3
comp=Z,77nm,1.2s
HMH Humu'ula Sheep 78.39 70 P P 01 29 36.2 +1.0
S12K Black Hills 78.41 33 P P 01 29 34.7 +0.5
baz=256
MLH Mauna Loa 78.48 71 P P 01 29 36.9 +1.3
BYL Byron's Ledge 78.59 71 IAmb IAmb 01 29 57.2
comp=Z,269nm,1.5s
HATHI Halema'uma'u T 78.59 71 IAmb IAmb 01 29 57.2
comp=Z,149nm,1.1s
PUH Pauahi 78.63 71 IAmb IAmb 01 29 57.2
comp=Z,156nm,1.0s
TNA Tin City 78.72 23 P P 01 29 36.5 +0.9
baz=248
STCH Steam Cracks 78.72 71 IAmb IAmb 01 29 38.9
comp=Z,117nm,1.2s
K13K Kusilvak Mount 78.85 27 IAmb IAmb 01 29 39.5
comp=Z,156nm,1.1s
K13K Kusilvak Mount 78.85 27 P P 01 29 37.9 +1.4
baz=252
M13K Dall Lake 79.01 28 IAmb IAmb 01 29 58.3
comp=Z,126nm,1.0s
M13K Dall Lake 79.01 28 P P 01 29 38.4 +1.0
baz=254
SDPT Sand Point 79.20 34 P P 01 29 39.5 +1.0
comp=Z,437nm,1.1s
SDPT Sand Point 79.20 34 P P 01 29 39.3 +0.8
baz=257
KBD Kabd 79.25 299 P P 01 29 38.5 -0.8
F14K Arctic Creek 79.31 23 P P 01 29 40.7 +1.8
baz=250
ANM Nome 79.38 24 P P 01 29 41.1 +1.7
baz=251
L14K Kuka Creek 79.58 28 IAmb IAmb 01 29 43.6
comp=Z,207nm,1.1s
L14K Kuka Creek 79.58 28 P P 01 29 42.2 +1.8
baz=254,SNR=24
CNBA Chernabura Isl 79.59 34 IAmb IAmb 01 29 42.6
comp=Z,143nm,1.2s
CHNA Chernabura Isl 79.59 34 P P 01 29 41.9 +1.3
comp=Z,138nm,1.7s
CHNA Chernabura Isl 79.59 34 P P 01 29 41.3 +0.7
baz=258
J14K Nanvaranak Lak 79.59 26 IAmb IAmb 01 29 43.5
comp=Z,120nm,1.3s
J14K Nanvaranak Lak 79.59 26 P P 01 29 42.0 +1.6
baz=253
N14K Kuskokwak Cree 79.68 29 IAmb IAmb 01 30 03.5
comp=Z,150nm,1.1s
N14K Kuskokwak Cree 79.68 29 P P 01 29 42.5 +1.5
baz=255
O14K Tigyukauivet M 79.72 30 IAmb IAmb 01 29 46.8
comp=Z,157nm,1.1s
O14K Tigyukauivet M 79.72 30 P P 01 29 42.8 +1.6
baz=256
M14K Bethel 79.76 28 IAmb IAmb 01 29 44.3
comp=Z,241nm,1.2s
M14K Bethel 79.76 28 P P 01 29 43.0 +1.6
baz=255,SNR=18
S14K Fog Glacier 79.92 33 P P 01 29 43.6 +1.0
baz=258
F15K North Star Dit 80.04 23 P P 01 29 44.6 +1.7
baz=251
G15K Niukluk 80.06 24 P P 01 29 44.3 +1.3
baz=252
ABPO Ambohimpanom 80.17 251 P P 01 29 45.4 +0.7
ABPO IAmb IAmb 01 29 47.0
comp=Z,85nm,0.9s
ABPO Ambohimpanom 80.17 251 IAMs_20 IAMs_20 01 59 60.0
comp=Z,2μm,22.0s
ABPO Ambohimpanom 80.17 251 P P 01 29 45.4 +0.7
ABPO pmax pmax
comp=Z,85nm,1.0s
L15K Ungalak Mounta 80.22 27 P P 01 29 45.4 +1.5
baz=255
M15K Kasigluk River 80.35 29 P P 01 29 45.9 +1.3
baz=256,SNR=13
AKT Akhty 80.36 312 *e*P P 01 29 45.2 -0.1
AKT *e* 01 29 52.2
AKT *e*PPP PPP 01 34 37.5
AKT *e*S S 01 39 45.9 -1.9
AKT pmax pmax
comp=Z,59nm,1.1s
K15K Wolf Creek Mou 80.36 27 IAmb IAmb 01 29 52.6
comp=Z,145nm,1.0s
K15K Wolf Creek Mou 80.36 27 P P 01 29 45.9 +1.2
baz=255
O15K Ungalikthiuk R 80.42 30 IAMs_20 IAMs_20 02 03 46.2
comp=Z,1μm,19.0s
O15K Ungalikthiuk R 80.42 30 P P 01 29 46.6 +1.6
baz=257
CRZF Crozet Islands 80.46 222 IAMs_20 IAMs_20 02 01 34.3
comp=Z,2μm,22.0s
N15K Kwethluk River 80.51 29 IAmb IAmb 01 29 50.4
comp=Z,166nm,1.0s
N15K Kwethluk River 80.51 29 P P 01 29 47.2 +1.7
baz=256
C16K Lisburne Hills 80.63 21 IAmb IAmb 01 29 52.3
comp=Z,162nm,1.1s
C16K Lisburne Hills 80.63 21 P P 01 29 47.5 +1.6
baz=250
MAK Makhachkala 80.69 313 *d i*P P 01 29 46.3 -0.5
MAK *e* 01 32 46.9
MAK *e*S S 01 39 50.9 0.0
MAK *e*SS SS 01 45 11.2 +6.5
MAK pmax pmax
comp=Z,569nm,1.7s
H16K Elim 80.69 24 P P 01 29 47.5 +1.1
baz=254
VOI Vohitsoka 80.84 248 P P 01 29 48.9 +0.6
VOI IAmb IAmb 01 29 55.3
comp=Z,128nm,0.9s
VOI Vohitsoka 80.84 248 P P 01 29 48.8 +0.6
G16K Koyuk River 80.86 24 IAmb IAmb 01 29 52.0
comp=Z,123nm,1.1s
G16K Koyuk River 80.86 24 P P 01 29 48.8 +1.5
baz=254
RAYN Ar Rayn 80.90 293 P P 01 29 48.0 -0.5
RAYN IAmb IAmb 01 29 51.5
comp=Z,92nm,0.9s
RAYN Ar Rayn 80.90 293 IAMs_20 IAMs_20 02 07 55.4
comp=Z,2μm,22.0s
RAYN Ar Rayn 80.90 293 P P 01 29 48.1 -0.3
RAYN Ar Rayn 80.90 293 ⇑P P 01 29 49.0 +0.5
RAYN Ar Rayn 80.90 293 P P 01 29 47.8 -0.6
J16K Anvik River 81.03 26 IAmb IAmb 01 29 54.0
comp=Z,144nm,0.9s
J16K Anvik River 81.03 26 P P 01 29 49.8 +1.5
baz=256
I17K Unalakleet 81.14 25 IAmb IAmb 01 29 55.3
comp=Z,136nm,1.1s
I17K Unalakleet 81.14 25 P P 01 29 50.7 +1.9
baz=255
L16K Owhat River 81.16 28 IAmb IAmb 01 29 51.8
comp=Z,121nm,1.1s
L16K Owhat River 81.16 28 P P 01 29 50.7 +1.7
baz=257,SNR=25
N16K Nishlik Lake 81.22 29 P P 01 29 51.2 +1.8
baz=258,SNR=26
M16K Timber Creek 81.25 28 IAmb IAmb 01 29 52.4
comp=Z,82nm,0.9s
M16K Timber Creek 81.25 28 P P 01 29 51.2 +1.8
baz=257,SNR=14
D17K Noatak River 81.25 21 P P 01 29 51.3 +2.0
baz=252,SNR=32
P16K Nushagak River 81.31 30 IAMs_20 IAMs_20 02 01 04.0
comp=Z,2μm,20.0s
P16K Nushagak River 81.31 30 P P 01 29 51.2 +1.5
baz=258,SNR=7.1
O16K Kokwok River B 81.37 30 IAmb IAmb 01 29 56.3
comp=Z,109nm,1.0s
O16K Kokwok River B 81.37 30 P P 01 29 51.7 +1.6

baz=258,SNR=23
VNDA Vanda 81.39 173 P **P** **01 29 49.8 -0.1**
comp=Z,31nm,0.6s,baz=317,slow=6.2,SNR=94
VNDA S **S** **01 39 50.4 -6.5**
comp=Z,0.4nm,0.4s,baz=167,slow=5.6,SNR=1.6
comp=Z,31nm,0.6s
VNDA Vanda 81.39 173 P **P** **01 29 50.1 +0.3**
RDOG Red Dog Mine 81.42 21 IAmb IAmb 01 29 55.7
comp=Z,224nm,1.3s
RDOG Red Dog Mine 81.42 21 P **P** **01 29 52.3 +2.0**
baz=253,SNR=15
C17K DeLong Mountai 81.45 21 P **P** **01 29 52.1 +1.7**
baz=252
E17K Hotham Inlet 81.54 22 P **P** **01 29 52.7 +1.9**
baz=254,SNR=17
G17K Kiwalik Mounta 81.57 24 P **P** **01 29 52.7 +1.7**
baz=255
F17K Baldwin Pennin 81.58 23 P **P** **01 29 52.8 +1.7**
baz=254
MAW Mawson 81.61 200 P **P** **01 29 51.9 +0.7**
comp=Z,66nm,1.0s,baz=58,slow=6.2,SNR=70
comp=Z,66nm,1.0s
J17K VABM Dome 81.73 26 IAmb IAmb 01 30 00.0
comp=Z,142nm,1.1s
J17K VABM Dome 81.73 26 P **P** **01 29 53.8 +1.8**
baz=257,SNR=23
H17K Granite Mounta 81.73 24 IAmb IAmb 01 30 17.4
comp=Z,286nm,1.6s
H17K Granite Mounta 81.73 24 P **P** **01 29 53.6 +1.7**
baz=256
KIRV Kirov 81.80 329 P **P** **01 29 52.5 +0.1**
comp=Z,150nm,0.7s,baz=102,slow=1.8,SNR=68
KIRV S **S** **01 39 56.9 -4.9**
comp=Z,5.0nm,0.6s,baz=177,slow=23,SNR=9.4
comp=Z,150nm,0.7s
KIRV Kirov 81.80 329 *ce*P **P** **01 29 52.3 0.0**
L17K Donlin 81.80 27 P **P** **01 29 54.0 +1.6**
baz=258,SNR=18
BELG Belogornoye 81.81 323 P **P** **01 29 52.0 -0.6**
comp=Z,319nm,0.8s,baz=225,slow=1.4,SNR=55
BELG LR LR 02 09 21.1
comp=Z,1µm,21.4s,baz=91,slow=38
comp=Z,319nm,0.8s
BELG Belogornoye 81.81 323 *i*P **P** **01 29 52.2 -0.3**
BELG pmax pmax
comp=Z,82nm,1.0s
R17L Mt. Peulik Vol 81.89 32 P **P** **01 29 53.6 +0.7**
baz=260,SNR=12
PLK4 Peulik 4 81.90 32 IAmb IAmb 01 29 57.7
comp=Z,127nm,1.0s
O17K Koliganek Bris 81.90 30 P **P** **01 29 54.3 +1.4**
baz=259,SNR=18
K17K Iditarod 81.92 27 P **P** **01 29 54.5 +1.5**
baz=258,SNR=36
Q16K King Salmon 81.92 31 P **P** **01 29 54.4 +1.4**
baz=260
CHIR Chirikof Islan 82.00 34 P **P** **01 29 54.8 +1.3**
baz=261
N17K Nushagak Hills 82.00 29 IAmb IAmb 01 29 56.9
comp=Z,190nm,1.7s
N17K Nushagak Hills 82.00 29 P **P** **01 29 54.9 +1.4**
baz=259
M17K Holitna River 82.05 28 IAmb IAmb 01 30 01.9
comp=Z,153nm,1.3s
M17K Holitna River 82.05 28 P **P** **01 29 55.5 +1.8**
baz=259
E18K Tukpahlearik C 82.09 22 IAmb IAmb 01 29 57.1
comp=Z,151nm,1.1s
E18K Tukpahlearik C 82.09 22 P **P** **01 29 55.0 +1.3**
baz=255
P17K Kvichak River 82.13 30 P **P** **01 29 55.0 +1.0**
baz=260
B18K Kokolik River 82.19 20 P **P** **01 29 55.7 +1.4**
baz=254
C18K Utukok River 82.20 21 IAmb IAmb 01 30 20.5
comp=Z,92nm,1.0s
C18K Utukok River 82.20 21 P **P** **01 29 55.5 +1.1**
baz=254
F18K Selawik 82.24 23 P **P** **01 29 56.0 +1.5**
baz=256,SNR=18
Q17K Contact Creek 82.25 31 P **P** **01 29 55.1 +0.2**
baz=260
SBA Scott Base 82.30 172 P **P** **01 29 56.1 +1.5**
SBA Scott Base 82.30 172 P **P** **01 29 56.1 +1.5**
SBA pmax pmax
comp=Z,78nm,1.1s
SBA MLR MLR
comp=Z,1µm,21.0s
H18K Honhosa River 82.42 24 P **P** **01 29 56.8 +1.2**
baz=257
G18K Tagagawik 82.47 24 IAmb IAmb 01 30 01.0
comp=Z,159nm,1.2s
G18K Tagagawik 82.47 24 P **P** **01 29 57.2 +1.4**
baz=257
GNI Garni 82.49 310 P **P** **01 29 57.8 +1.1**
comp=Z,17nm,1.0s,baz=196,slow=1.3,SNR=20
GNI S **S** **01 40 10.3 +0.2**
comp=Z,1.3nm,0.5s,baz=247,slow=20,SNR=1.2
comp=Z,17nm,1.0s
GNI Garni 82.49 310 P **P** **01 29 58.1 +1.4**
GNI IAmb IAmb 01 30 58.8
comp=Z,159nm,1.2s
GNI Garni 82.49 310 P **P** **01 29 57.7 +1.1**
comp=Z,1µmcomp=Z,119nm,1.2s
L18K Granite Mounta 82.56 27 IAmb IAmb 01 29 59.6
comp=Z,165nm,1.0s
L18K Granite Mounta 82.56 27 P **P** **01 29 57.9 +1.6**
baz=259,SNR=44
N18K Kilae Creek 82.66 29 IAmb IAmb 01 30 01.0
comp=Z,152nm,1.4s
N18K Kilae Creek 82.66 29 P **P** **01 29 58.3 +1.4**
baz=260,SNR=14
A19K Wainwright 82.67 19 P **P** **01 29 58.5 +1.8**
baz=254
Q18K Katmai Hardscr 82.77 31 P **P** **01 29 57.8 +0.2**
baz=261,SNR=11
P18K Big Mountain, 82.77 30 IAMs_20 IAMs_20 02 02 56.7
comp=Z,1µm,22.0s
P18K Big Mountain, 82.77 30 P **P** **01 29 58.2 +0.7**
baz=261
J18K Innoko River 82.78 26 IAmb IAmb 01 30 03.3
comp=Z,131nm,0.9s
J18K Innoko River 82.78 26 P **P** **01 29 58.4 +0.9**
baz=259,SNR=51
M18K Stony River 82.83 28 P **P** **01 29 58.8 +1.1**
baz=260
O18K Koktuh Hills 82.86 30 P **P** **01 29 59.1 +1.2**
baz=261,SNR=13
C19K Lookout Ridge 82.88 20 P **P** **01 29 59.3 +1.4**
baz=256
SII Sitkinak Islan 82.90 33 IAmb IAmb 01 30 05.9
comp=Z,132nm,0.9s
SII Sitkinak Islan 82.90 33 P **P** **01 30 00.5 +2.3**
comp=Z,173nm,0.8s
SII Sitkinak Islan 82.90 33 P **P** **01 29 59.7 +1.4**
baz=262
GCSA Galena City Sc 82.96 25 P **P** **01 29 59.4 +1.1**
baz=259,SNR=66
F19K Shaleruckik Mo 83.02 23 IAmb IAmb 01 30 01.2
comp=Z,72nm,0.9s
F19K Shaleruckik Mo 83.02 23 P **P** **01 29 59.9 +1.3**
baz=258
G19K Purcell Mounta 83.15 23 P **P** **01 30 00.6 +1.3**
baz=258,SNR=115
ATD Arta Tunnel 83.24 281 IAmb IAmb 01 30 20.1
comp=Z,120nm,1.1s
ATD Arta Tunnel 83.24 281 P **P** **01 30 00.7 -0.2**
SNR=10
ATD Arta Tunnel 83.24 281 P **P** **01 30 02.6 +1.7**
ATD pP **pP** **01 30 14.5 0.0**
D19K Kuna River 83.26 21 P **P** **01 30 01.0 +1.1**
baz=257,SNR=62
H19K Roundabout Mou 83.29 24 P **P** **01 30 01.6 +1.6**
baz=259
J19K Poorman 83.36 26 P **P** **01 30 01.6 +1.2**
baz=260,SNR=70
N19K Bonanza Creek 83.36 29 P **P** **01 30 01.7 +1.1**
baz=261,SNR=69
E19K Redstone River 83.36 22 P **P** **01 30 01.9 +1.5**
baz=258
L19K White Mountain 83.40 28 P **P** **01 30 02.0 +1.3**
baz=261,SNR=61
OHAK Old Harbor 83.48 33 P **P** **01 30 02.2 +1.1**
comp=Z,104nm,1.3s
OHAK Old Harbor 83.48 33 P **P** **01 30 02.0 +0.9**
baz=263
Q19K Cape Douglas, 83.51 31 IAmb IAmb 01 30 06.2
comp=Z,127nm,0.9s

M19K Big River Lodg 83.57 28 IAmb IAmb 01 30 04.8
comp=Z,118nm,0.9s
M19K Big River Lodg 83.57 28 P **P** **01 30 03.0 +1.4**
baz=261
NCK Nalchik 83.58 313 *i*P **P** **01 30 02.1 0.0**
NCK pmax pmax
comp=Z,124nm,1.0s
P19K Oil Pt 83.82 30 IAmb IAmb 01 30 14.8
comp=Z,241nm,1.7s
P19K Oil Pt 83.82 30 P **P** **01 30 03.9 +1.0**
baz=262
D20K Etivluk River 83.84 21 P **P** **01 30 04.2 +1.3**
baz=258,SNR=97
F20K Avaraart Lake 83.86 23 P **P** **01 30 04.6 +1.7**
baz=260
L20K Farewell, AK 83.89 27 IAmb IAmb 01 30 06.3
comp=Z,121nm,1.0s
L20K Farewell, AK 83.89 27 P **P** **01 30 05.0 +1.8**
baz=262,SNR=33
ILSW Iliamna Southw 83.90 30 IAmb IAmb 01 30 08.7
comp=Z,97nm,1.1s
E20K Nigu River 83.91 21 P **P** **01 30 05.2 +2.0**
baz=259
B20K Meade River 83.92 20 IAMs_20 IAMs_20 02 10 57.7
comp=Z,1µm,19.0s
B20K Meade River 83.92 20 P **P** **01 30 05.2 +2.1**
baz=258
H20K Anotleneega Mo 83.92 24 P **P** **01 30 05.2 +1.9**
baz=260
KDAK Kodiak Island 83.92 32 P **P** **01 30 04.9 +1.5**
KDAK Kodiak Island 83.92 32 P **P** **01 30 04.9 +1.5**
KDAK pmax pmax
comp=Z,242nm,1.4s
KDAK Kodiak Island 83.92 32 P **P** **01 30 04.8 +1.4**
baz=263
K20K Telida 83.93 26 P **P** **01 30 05.0 +1.6**
baz=261
I20K Naaghedeneel 83.98 25 P **P** **01 30 05.6 +2.1**
baz=261
J20K Nowinta River 84.02 26 P **P** **01 30 05.7 +1.9**
baz=261,SNR=38
GOF Gofitskoye 84.08 315 *ce*P **P** **01 30 04.9 +0.4**
GOF *e*S **SKSac** **01 40 26.8 +2.8**
KBZ Khabaz 84.11 314 P **P** **01 30 04.6 0.0**
comp=Z,55nm,0.9s,baz=112,slow=0.8,SNR=38
KBZ S **SKSac** **01 40 22.3 -1.9**
comp=Z,1.8nm,0.9s,baz=304,slow=13,SNR=4.4
comp=Z,55nm,0.9s
KBZ Khabaz 84.11 314 *ce*P **P** **01 30 05.2 +0.6**
KBZ pmax pmax
comp=Z,85nm,1.0s
Q20K Shuyak Island 84.12 31 P **P** **01 30 05.5 +1.2**
baz=263
M20K Styx River 84.16 28 P **P** **01 30 06.1 +1.4**
baz=262
O20K Slope Mountain 84.17 30 P **P** **01 30 05.5 +0.7**
baz=263
NEUR Neytrino 84.22 313 *i*P **P** **01 30 05.7 +0.2**
NEUR pmax pmax
comp=Z,31nm,0.9s
KIV Kislovodsk 84.27 314 P **P** **01 30 06.5 +0.9**
KIV IAmb IAmb 01 30 10.3
comp=Z,80nm,0.7s
KIV Kislovodsk 84.27 314 ⇓P **P** **01 30 05.8 +0.2**
KIV Kislovodsk 84.27 314 *e*P **P** **01 30 03.5 -2.1**
KIV *e* 01 33 17.5
KIV *e* 01 40 23.0
KIV pmax pmax
comp=Z,69nm,1.0s
KIV pmax pmax
comp=Z,15nm,3.5s
KIV Kislovodsk 84.27 314 P **P** **01 30 05.8 +0.2**
comp=Z,1µmcomp=Z,69nm,0.8s
SHA1 Shidzhatmaz 84.28 314 *i*P **P** **01 30 04.6 -1.3**
A21K Barrow 84.37 18 P **P** **01 30 07.0 +1.6**
baz=258
IMAR Indian Mountai 84.46 24 P **P** **01 30 07.2 +1.2**
N20K Mount Spurr 84.51 29 P **P** **01 30 07.2 +0.8**
baz=263,SNR=39
SPCR Spurr Chakacha 84.51 29 P **P** **01 30 07.3 +0.8**
baz=263
C21K Knifeblade Rid 84.58 21 P **P** **01 30 08.5 +2.0**
baz=260,SNR=18
SPU Mount Spurr 84.58 29 IAmb IAmb 01 30 11.9
comp=Z,101nm,1.0s
HOM Homer 84.62 30 P **P** **01 30 07.9 +1.0**
baz=264,SNR=5.0
G21K Allakaket 84.64 23 IAmb IAmb 01 30 13.4
comp=Z,87nm,1.0s
G21K Allakaket 84.64 23 P **P** **01 30 08.4 +1.5**
baz=262
B21K Ikpikpuk River 84.72 20 P **P** **01 30 09.1 +1.9**
baz=260,SNR=73
PPLA Purkeypile 84.72 27 IAmb IAmb 01 30 35.6
comp=Z,113nm,1.2s
PPLA Purkeypile 84.72 27 P **P** **01 30 08.5 +0.9**
baz=263,SNR=6.6
F21K Alatna River 84.75 23 P **P** **01 30 08.8 +1.3**
baz=262
E21K Killik River 84.75 21 P **P** **01 30 09.0 +1.5**
baz=261
CHUM Lake Minchumin 84.78 26 P **P** **01 30 09.1 +1.5**
baz=263,SNR=8.4
H21K Melozitna Rive 84.80 24 IAmb IAmb 01 30 10.8
comp=Z,75nm,1.0s
H21K Melozitna Rive 84.80 24 P **P** **01 30 09.4 +1.7**
baz=262
A22K Sinclair Lake 84.83 19 P **P** **01 30 09.8 +2.1**
baz=260,SNR=8.4
PPT Papeete 84.90 108 LR LR 02 05 59.5
comp=Z,497nm,21.8s,baz=258,slow=34
SKT Skwentna 84.92 28 IAmb IAmb 01 30 09.7
comp=Z,68nm,0.9s
SKT IAMs_20 IAMs_20 02 03 32.3
comp=Z,2µm,22.0s
SKT Skwentna 84.92 28 P **P** **01 30 08.5 0.0**
baz=264,SNR=26
BRSE Bradley Lake S 85.08 30 P **P** **01 30 10.0 +0.8**
baz=265,SNR=28
I21K Tanana 85.08 25 P **P** **01 30 10.4 +1.3**
baz=263,SNR=8.2
B22K Teshekpuk Lake 85.24 20 P **P** **01 30 11.1 +1.4**
baz=261
SUA Susitna One 85.24 29 P **P** **01 30 10.4 +0.3**
baz=264,SNR=32
D22K Ayikyak River 85.28 21 IAmb IAmb 01 31 21.7
comp=Z,86nm,1.2s
D22K Ayikyak River 85.28 21 P **P** **01 30 11.4 +1.3**
baz=262
F22K John River 85.29 22 P **P** **01 30 11.6 +1.4**
baz=263
L22K Petersville 85.33 28 IAmb IAmb 01 30 14.3
comp=Z,72nm,0.9s
VRH Novokhopyorsk 85.34 321 *e*P **P** **01 30 08.8 -1.9**
VRH pmax pmax
comp=Z,420nm,1.0s
BPAW Bear Paw Mtn. 85.39 26 IAmb IAmb 01 30 15.3
comp=Z,104nm,1.7s
BPAW Bear Paw Mtn. 85.39 26 P **P** **01 30 11.9 +1.2**
baz=264
H22K Ishtalitna Cre 85.41 24 P **P** **01 30 12.2 +1.3**
baz=264
G22K Bettles 85.48 23 P **P** **01 30 11.9 +0.9**
baz=263
E22K Anaktuvuk Pass 85.50 22 IAmb IAmb 01 29 50.9
comp=Z,12nm,1.5s
E22K Anaktuvuk Pass 85.50 22 IAmb IAmb 01 30 17.3
comp=Z,112nm,1.1s
E22K Anaktuvuk Pass 85.50 22 P **P** **01 30 12.3 +1.0**
baz=263,SNR=47
CUT Chulitna 85.55 28 P **P** **01 30 12.2 +0.7**
baz=265
M22K Willow 85.56 28 P **P** **01 30 12.2 +0.7**
baz=265,SNR=31
MLY Manley 85.59 25 P **P** **01 30 12.5 +0.7**
baz=264
TRF Thorofare Moun 85.64 27 P **P** **01 30 12.8 +0.6**
baz=265,SNR=6.1
O22K Cooper Landing 85.65 30 P **P** **01 30 12.7 +0.7**
baz=266,SNR=11
RC01 Rabbit Creek A 85.69 29 IAMs_20 IAMs_20 02 07 20.7
comp=Z,2µm,18.0s
RC01 Rabbit Creek A 85.69 29 P **P** **01 30 12.7 +0.4**
baz=265,SNR=22
LABN Labinsk 85.71 314 *e*P **P** **01 30 13.1 +0.4**
LABN *e**PP **pP** **01 30 21.7 -4.7**
LABN *e*S **SKSac** **01 40 33.8 -0.6**

LABN pmax pmax
comp=Z,206nm,1.0s
SEW Seward 85.76 30 P **P** **01 30 13.6 +1.0**
baz=266,SNR=18
ERBR Yeremizino-Bor 85.92 316 *e*P **P** **01 30 13.7 0.0**
ERBR *e**PP **pP** **01 30 22.3 -5.1**
ERBR pmax pmax
ERBR comp=Z,346nm,1.0s MLR MLR
comp=Z,2µm,22.0s
D23K Nanushuk River 86.01 21 IAmb IAmb 01 30 35.5
comp=Z,57nm,1.0s
D23K Nanushuk River 86.01 21 P **P** **01 30 15.4 +1.7**
baz=264,SNR=12
COLD Coldfoot 86.02 23 IAmb IAmb 01 30 16.3
comp=Z,65nm,0.8s
COLD Coldfoot 86.02 23 P **P** **01 30 14.7 +0.9**
baz=265,SNR=45
PMR Palmer 86.02 29 IAmb IAmb 01 30 19.1
comp=Z,91nm,1.0s
PMR Palmer 86.02 29 P **P** **01 30 14.3 +0.5**
comp=Z,103nm,1.1s
PMR Palmer 86.02 29 P **P** **01 30 14.1 +0.3**
baz=266,SNR=15
G23K Bananza Creek 86.04 23 IAmb IAmb 01 30 21.0
comp=Z,79nm,1.1s
G23K Bananza Creek 86.04 23 P **P** **01 30 15.4 +1.5**
baz=265,SNR=23
C23K Itkillik River 86.12 20 IAmb IAmb 01 30 17.4
comp=Z,79nm,0.8s
C23K Itkillik River 86.12 20 P **P** **01 30 14.8 +0.5**
baz=264
GHO Glory Hole Cre 86.13 28 IAmb IAmb 01 30 40.0
comp=Z,68nm,1.0s
GHO IAMs_20 IAMs_20 02 08 11.3
comp=Z,1µm,20.0s
H23K Yukon River 86.16 24 P **P** **01 30 15.3 +0.8**
baz=265
VSLR Vesyoloye 86.17 313 *i*P **P** **01 30 15.1 0.0**
I23K Minto, Yukon-K 86.18 25 IAmb IAmb 01 30 16.6
comp=Z,45nm,0.8s
I23K Minto, Yukon-K 86.18 25 P **P** **01 30 15.0 +0.5**
baz=266,SNR=17
MCK McKinley 86.26 26 P **P** **01 30 15.1 +0.1**
baz=266,SNR=9.3
NEA2 Nenana 86.26 25 P **P** **01 30 15.3 +0.3**
baz=266
E23K Chandalar 86.32 22 P **P** **01 30 16.3 +0.9**
baz=265,SNR=67
KNK Knik Glacier 86.33 29 IAmb IAmb 01 30 17.7
comp=Z,95nm,0.8s
KNK Knik Glacier 86.33 29 P **P** **01 30 16.0 +0.5**
baz=266,SNR=20
PWL Port Wells 86.36 29 P **P** **01 30 16.1 +0.5**
baz=267,SNR=17
WAT1 Susitna Watana 86.38 27 P **P** **01 30 16.0 +0.4**
baz=266
TOLK Toolik Lake Re 86.38 21 IAmb IAmb 01 30 21.9
comp=Z,75nm,1.0s
TOLK Toolik Lake Re 86.38 21 P **P** **01 30 16.5 +0.9**
baz=265,SNR=33
SOC Sochi 86.41 313 *e*P **P** **01 30 13.8 -2.4**
SOC *e* 01 33 39.7
SOC *e*PPP PPP 01 35 31.9
SOC *e*S **SKSac** **01 40 36.7 -2.1**
SOC *e*SSS SSS 01 49 59.2
SOC pmax pmax
comp=Z,185nm,0.8s
SML Sawmill 86.42 28 IAmb IAmb 01 30 22.7
comp=Z,92nm,1.0s
SML IAMs_20 IAMs_20 02 06 24.3
comp=Z,1µm,21.0s
SML Sawmill 86.42 28 P **P** **01 30 16.2 +0.3**
baz=267,SNR=21
WRH Wood River Hil 86.68 26 IAMs_20 IAMs_20 02 00 05.7
comp=Z,2µm,19.0s
D24K Happy Valley 86.69 21 IAmb IAmb 01 30 20.0
comp=Z,80nm,0.8s
D24K Happy Valley 86.69 21 P **P** **01 30 18.5 +1.4**
baz=266
M23K Glacier View 86.70 28 P **P** **01 30 17.6 +0.4**
baz=267,SNR=18
WAT6 Susitna Watana 86.73 28 P **P** **01 30 17.9 +0.3**
baz=267,SNR=17
E24K Your Creek 86.74 22 IAMs_20 IAMs_20 02 12 53.2
comp=Z,1µm,20.0s
E24K Your Creek 86.74 22 P **P** **01 30 18.3 +0.9**
baz=266
C24K Franklin Bluff 86.78 20 IAmb IAmb 01 30 23.6
comp=Z,78nm,0.9s
C24K Franklin Bluff 86.78 20 P **P** **01 30 18.4 +1.0**
baz=266
COLA College 86.80 25 P **P** **01 30 17.5 -0.2**
comp=Z,11nm,0.8s
COLA College 86.80 25 ⇓P **P** **01 30 17.4 -0.2**
H24K Noodor Dome 86.84 24 P **P** **01 30 18.9 +1.0**
baz=267,SNR=17
VORD Divnogorie 86.86 321 *e*P **P** **01 30 17.1 -1.1**
VORD pmax pmax
comp=Z,290nm,1.0s
SCM Sheep Creek Mo 86.89 28 IAmb IAmb 01 30 24.4
comp=Z,88nm,1.0s
SCM Sheep Creek Mo 86.89 28 P **P** **01 30 18.9 +0.6**
baz=268,SNR=15
DHY Denali Highway 86.92 27 P **P** **01 30 18.7 +0.2**
baz=267,SNR=7.0
VORR Voronezh 86.93 321 *e*P **P** **01 30 17.5 -1.0**
VORR pmax pmax
comp=Z,490nm,1.0s
F24K Squaw Lake 86.93 23 IAmb IAmb 01 30 24.9
comp=Z,69nm,1.0s
F24K Squaw Lake 86.93 23 P **P** **01 30 19.4 +1.1**
baz=267
VSR Storozhevoye 86.94 321 *e*P **P** **01 30 16.9 -1.7**
VSR pmax pmax
comp=Z,190nm,0.9s
GLI Glacier Island 86.97 29 P **P** **01 30 18.7 +0.2**
baz=268
POKR Poker Plat Res 86.99 25 P **P** **01 30 19.1 +0.5**
baz=267
KLMR Klimovskoe 87.03 331 *c i*P **P** **01 30 17.1 -1.7**
KLMR S **SKSac** **01 40 40.1 -1.8**
KLMR SSS SSS 01 50 08.2
KLMR pmax pmax
comp=Z,252nm,1.2s
KLMR MLR MLR
comp=Z,2µm,21.0s
G24K Hadweenzic Riv 87.05 23 IAmb IAmb 01 30 23.7
comp=Z,68nm,1.1s
G24K Hadweenzic Riv 87.05 23 P **P** **01 30 19.0 +0.1**
baz=267
LPSR Galich'ya Gora 87.12 322 *e*P **P** **01 30 18.5 -0.9**
LPSR pmax pmax
comp=Z,370nm,1.0s
HDA Harding Lake 87.17 26 IAMs_20 IAMs_20 02 09 35.7
comp=Z,1µm,22.0s
HDA Harding Lake 87.17 26 P **P** **01 30 18.8 -0.7**
baz=268,SNR=16
ILAR Eielson Array 87.21 25 P **P** **01 30 17.9 -1.7**
comp=Z,21nm,1.1s,baz=234,slow=4.5,SNR=40
ILAR PP **PP** **01 33 47.5 +3.7**
comp=Z,6.7nm,1.1s,baz=274,slow=8.6,SNR=5.0
ILAR PKKPbc **PKKPbc** **01 48 11.4 -2.1**
comp=Z,1.4nm,0.8s,baz=75,slow=1.0,SNR=6.1
comp=Z,21nm,1.1s
ILAR Eielson Array 87.21 25 P **P** **01 30 17.8 -1.9**
M24K Tolsona, Glenn 87.45 28 P **P** **01 30 21.5 +0.6**
baz=268
KLU Klutina 87.55 29 P **P** **01 30 21.6 +0.1**
baz=269,SNR=9.3
D25K Kavik River 87.57 21 IAmb IAmb 01 30 26.8
comp=Z,75nm,1.1s
D25K IAMs_20 IAMs_20 02 15 05.2
comp=Z,1µm,20.0s
D25K Kavik River 87.57 21 P **P** **01 30 21.8 +0.4**
baz=268
G25K Bearman Lake 87.60 23 P **P** **01 30 22.1 +0.7**
baz=268
DIV Divide 87.62 29 IAmb IAmb 01 30 27.3
comp=Z,108nm,1.0s
EYAK Cordova Ski Ar 87.62 30 P **P** **01 30 22.4 +0.7**
baz=269
K24K Donnelly Dome 87.67 26 IAmb IAmb 01 30 27.4
comp=Z,76nm,0.9s
K24K Donnelly Dome 87.67 26 P **P** **01 30 22.1 +0.1**
baz=269,SNR=17
H25L Birch Creek 87.70 24 P **P** **01 30 23.0 +1.1**
baz=269,SNR=11

PAX	Paxson	87.79	27	P		P	01 30 23.3	+0.7	
	baz=269,SNR=10								
F25K	Christian Rive	87.80	23	P		P	01 30 23.4	+0.9	
	baz=269								
E25K	Arctic Village	87.84	22	IAMs_20		IAMs_20	02 14 21.2		
	comp=Z,2µm,22.0s								
E25K	Arctic Village	87.84	22	P		P	01 30 23.5	+0.9	
	baz=269,SNR=79								
J25K	Salcha River,	87.86	26	P		P	01 30 22.4	-0.5	
	baz=269								
MOS	Moscow	87.92	326	*e*P		P	01 30 20.9	-2.3	
MOS				*e*			01 33 51.0		
MOS				*e*			01 40 45.8		
MOS				*e*S		S	01 40 59.9	-2.8	
MOS				pmax		pmax			
	comp=Z,212nm,0.9s								
MOS				pmax		pmax			
	comp=Z,500nm,2.0s								
MOS				smax		smax			
	comp=N,3µm,4.2s								
MOS				smax		smax			
	comp=E,2µm,4.6s								
MOS				MLR		MLR			
	comp=E,2µm,22.0s								
MOS				MLR		MLR			
	comp=Z,2µm,22.0s								
HARP	HAARP	87.93	28	P		P	01 30 23.5	+0.4	
	baz=269								
ANN	Anapa	88.06	315	*e*P		P	01 30 23.0	-1.1	
ANN				*e**PP		pP	01 30 33.1	-4.8	
ANN				*e*S		SKSac	01 40 50.0	+1.2	
ANN				pmax		pmax			
	comp=Z,269nm,1.1s								
RIDG	Independent Ri	88.08	26	IAmb		IAmb	01 30 28.1		
	comp=Z,104nm,1.1s								
RIDG				IAMs_20		IAMs_20	02 12 55.8		
	comp=Z,1µm,20.0s								
RIDG	Independent Ri	88.08	26	P		P	01 30 24.1	+0.2	
	baz=270,SNR=14								
C26K	Camden Bay	88.10	20	P		P	01 30 25.2	+1.4	
	baz=269								
BMRM	Bremner River	88.18	29	IAmb		IAmb	01 31 19.1		
	comp=Z,45nm,1.0s								
BMRM	Bremner River	88.18	29	P		P	01 30 25.1	+0.7	
	baz=270								
N25K	Chitina, Valde	88.19	29	P		P	01 30 24.8	+0.3	
	baz=270,SNR=9.3								
BMAR	Burnt Mountain	88.20	23	P		P	01 30 25.7	+1.3	
KAIM	Kayak Island	88.28	30	P		P	01 30 25.5	+0.7	
	baz=270								
KIBK	Kibwezi	88.29	268	P		P	01 30 26.9	+0.9	
KIBK	Kibwezi	88.29	268	P		P	01 30 27.4	+1.3	
KIBK				IAMs_20		IAMs_20	02 06 44.5		
	comp=Z,2µm,22.0s								
KIBK	Kibwezi	88.29	268	P		P	01 30 26.1	0.0	
	SNR=62								
F26K	Sheenjek River	88.37	22	P		P	01 30 26.2	+1.0	
	baz=270								
DOT	Dot Lake	88.43	27	IAmb		IAmb	01 30 29.9		
	comp=Z,41nm,0.8s								
SCRK	Sand Creek	88.46	26	P		P	01 30 26.1	+0.3	
	baz=270,SNR=11								
G26K	Porcupine Rive	88.52	23	P		P	01 30 26.9	+1.1	
	baz=270								
C27K	Jago River	88.52	21	IAmb		IAmb	01 30 28.2		
	comp=Z,67nm,0.8s								
C27K	Jago River	88.52	21	P		P	01 30 26.4	+0.6	
	baz=270,SNR=65								
OBN	Obninsk	88.53	325	P		P	01 30 24.8	-1.2	
	comp=Z,148nm,1.0s,baz=312,slow=1.2,SNR=25								
OBN				S		SKSac	01 40 51.8	+0.7	
	comp=Z,7.2nm,0.4s,baz=241,slow=23,SNR=2.2								
	comp=Z,148nm,1.0s								
OBN	Obninsk	88.53	325	P		P	01 30 25.7	-0.4	
OBN	Obninsk	88.53	325	⇑P		P	01 30 25.2	-0.9	
OBN	Obninsk	88.53	325	*c* *i*P		P	01 30 25.5	-0.6	
OBN				*e*			01 33 54.6		
OBN				*i* S		SKSac	01 40 55.8	+4.7	
OBN				*e*SS		SS	01 47 01.7	+2.1	
OBN				pmax		pmax			
	comp=Z,157nm,0.9s								
OBN				MLR		MLR			
	comp=Z,3µm,22.0s								
OBN	Obninsk	88.53	325	P		P	01 30 25.1	-0.9	
	comp=Z,2µmcomp=Z,150nm,1.0s								
OBN	Obninsk	88.53	325	P		P	01 30 25.2	-0.9	
OBN				pP		pP	01 30 36.9	-2.9	
MENT	Mentasta	88.59	27	P		P	01 30 26.8	+0.5	
	comp=Z,41nm,0.8s								
ASF	Jabal al Asfar	88.63	302	P		P	01 30 27.7	+0.5	
	comp=Z,185nm,0.9s,baz=93,slow=2.4,SNR=225								
	comp=Z,185nm,0.9s								
BERG	Berg Lake	88.63	30	IAmb		IAmb	01 30 30.4		
	comp=Z,129nm,1.4s								
J26L	Joseph Creek	88.64	26	IAmb		IAmb	01 30 27.8		
	comp=Z,33nm,0.8s								
J26L	Joseph Creek	88.64	26	P		P	01 30 26.4	-0.2	
	baz=271,SNR=27								
VRDI	Verde Repeater	88.74	29	IAMs_20		IAMs_20	02 07 42.3		
	comp=Z,2µm,22.0s								
L26K	Log Cabin Wild	88.76	27	P		P	01 30 28.0	+0.9	
	baz=271,SNR=12								
I26K	Coal Creek Min	88.80	25	P		P	01 30 27.9	+0.7	
	baz=271								
KHAM	Kharkiv	88.80	320	P		P	01 30 26.9	-0.7	
CRQM	Cirque	88.90	29	IAmb		IAmb	01 30 46.1		
	comp=Z,54nm,1.0s								
CRQE	Cirque	88.93	29	P		P	01 30 28.9	+0.8	
	baz=271								
M26K	Nabesna, AK	88.93	28	IAMs_20		IAMs_20	02 08 52.4		
	comp=Z,2µm,20.0s								
M26K	Nabesna, AK	88.93	28	P		P	01 30 28.8	+0.8	
	baz=271,SNR=7.1								
MCARA	McCarthy VSAT	88.94	29	IAmb		IAmb	01 30 40.1		
	comp=Z,79nm,1.1s								
MCARA				IAMs_20		IAMs_20	02 05 07.7		
	comp=Z,1µm,20.0s								
MCARA	McCarthy VSAT	88.94	29	P		P	01 30 28.9	+1.0	
	baz=271,SNR=15								
KMBO	Kilima Mbogo	89.05	269	P		P	01 30 30.3	+0.5	
	comp=Z,22nm,0.8s,baz=84,slow=4.6,SNR=70								
	comp=Z,22nm,0.8s								
WAX	Waxell Ridge	89.05	30	IAmb		IAmb	01 30 33.2		
	comp=Z,72nm,1.2s								
TGL	Tana Glacier	89.06	29	IAMs_20		IAMs_20	02 02 18.7		
	comp=Z,2µm,21.0s								
LVZ	Lovozero	89.14	338	P		P	01 30 28.1	-0.7	
LVZ				IAmb		IAmb	01 30 33.3		
	comp=Z,50nm,0.9s								
LVZ				IAMs_20		IAMs_20	02 18 07.2		
	comp=Z,1µm,20.0s								
LVZ	Lovozero	89.14	338	*c**e*P		P	01 30 28.6	-0.2	
LVZ				pmax		pmax			
	comp=Z,58nm,0.8s								
LVZ	Lovozero	89.14	338	P		P	01 30 27.7	-1.1	
	comp=Z,73nm,0.9s								
BEIL	Beino	89.18	304	*e*P		P	01 30 30.0	+0.3	
K27K	Chicken	89.30	26	IAmb		IAmb	01 30 35.4		
	comp=Z,86nm,1.0s								
K27K	Chicken	89.30	26	P		P	01 30 30.8	+1.2	
	baz=272								
ISLE	Juniper Island	89.30	30	IAmb		IAmb	01 30 34.4		
	comp=Z,48nm,1.0s								
E27K	Coleen River	89.32	22	IAmb		IAmb	01 30 31.8		
	comp=Z,45nm,0.9s								
E27K	Coleen River	89.32	22	P		P	01 30 30.8	+1.2	
	baz=272								
BNN	Bunyan	89.34	309	IAmb		IAmb	01 30 32.2		
	comp=Z,66nm,1.1s								
G27K	Doyon Strip	89.36	23	P		P	01 30 31.2	+1.3	
	baz=272								
HWQ	Hawqa	89.38	304	*e*P		P	01 30 30.7	-0.1	
I27K	Kandik River	89.43	25	IAmb		IAmb	01 30 15.0		
	comp=Z,7.1nm,1.4s								
I27K	Kandik River	89.43	25	IAmb		IAmb	01 30 32.5		
	comp=Z,52nm,0.8s								
I27K	Kandik River	89.43	25	P		P	01 30 31.1	+0.9	
	baz=272,SNR=30								
H27K	Steamboat Moun	89.44	24	P		P	01 30 31.2	+0.9	
	baz=273								
ZAHL	Zahle	89.44	304	*e*P		P	01 30 32.0	+0.9	
L27K	Beaver Creek,	89.45	27	IAmb		IAmb	01 30 32.6		
	comp=Z,36nm,0.8s								
L27K	Beaver Creek,	89.45	27	P		P	01 30 31.0	+0.7	
	baz=272,SNR=24								
M27K	Edge Creek, AK	89.46	28	P		P	01 30 31.1	+0.6	
	baz=272,SNR=12								
BCAR	Beaver Creek A	89.47	27	P		P	01 30 31.2	+0.8	
RCY	Rachaya	89.49	303	*e*P		P	01 30 32.0	+0.7	
D27M	Malcolm River	89.50	21	IAmb		IAmb	01 30 32.7		
	comp=Z,34nm,0.8s								
D27M	Malcolm River	89.50	21	P		P	01 30 31.4	+0.9	
	baz=273,SNR=31								
MESA	MESA	89.51	30	P		P	01 30 31.4	+0.5	
	baz=272								
SHBL	Chehaa	89.57	303	*e*P		P	01 30 32.6	+0.9	
GRNC	Granite Creek	89.58	29	IAmb		IAmb	01 31 20.1		
	comp=Z,56nm,1.2s								
YAH	Yahtse	89.61	30	IAmb		IAmb	01 30 36.4		
	comp=Z,68nm,1.2s								
BARN	Barnard Glacie	89.62	29	IAmb		IAmb	01 30 38.4		
	comp=Z,101nm,1.2s								
APA	Apatity	89.63	337	⇓*i*P		P	01 30 28.7	-2.3	
APA				*i*			01 34 05.2		
APA				MLR		MLR			
	comp=Z,4µm,28.9s								
BHL	Bhannes	89.63	304	*e*P		P	01 30 32.1	+0.2	
CTG	Chitna Glacier	89.78	29	P		P	01 30 33.0	+1.0	
	baz=273,SNR=12								
CTGM	Chitina Glacie	89.78	29	IAmb		IAmb	01 30 37.6		
	comp=Z,70nm,0.9s								
GHAJ	Ghor Haditha	89.78	301	IAMs_20		IAMs_20	02 14 43.9		
	comp=Z,1µm,22.0s								
MMAI	Mount Meron Ar	89.87	303	P		P	01 30 33.4	+0.4	
	comp=Z,75nm,0.9s,baz=100,slow=3.7,SNR=59								
	comp=Z,75nm,0.9s								
TABL	Table Mountain	89.90	30	IAmb		IAmb	01 31 10.9		
	comp=Z,54nm,1.0s								
BVCY	Beaver Creek	89.93	28	P		P	01 30 33.5	+0.9	
	baz=273,SNR=19								
F28M	Old Crow	90.01	22	IAmb		IAmb	01 30 37.8		
	comp=Z,49nm,1.1s								
F28M	Old Crow	90.01	22	P		P	01 30 33.5	+0.6	
	baz=274,SNR=34								
E28M	Babbage River	90.06	21	IAmb		IAmb	01 30 35.2		
	comp=Z,46nm,0.9s								
E28M	Babbage River	90.06	21	P		P	01 30 33.9	+0.9	
	baz=274								
I28M	Miner Creek	90.14	25	IAmb		IAmb	01 30 35.7		
	comp=Z,40nm,0.8s								
I28M	Miner Creek	90.14	25	P		P	01 30 34.4	+0.8	
	baz=274								
YUK3	Moose Creek	90.15	28	P		P	01 30 34.5	+0.6	
	baz=274,SNR=11								
D28M	Stokes Point	90.28	21	P		P	01 30 35.2	+1.2	
	baz=275								
SYO	Syowa Base	90.29	201	⇑*i*PcP		PcP	01 30 38.6	+3.4	
SYO	Syowa Base	90.29	201	⇑*i*pP		pP	01 30 48.4	+0.7	
O28M	Mount Upton	90.35	29	IAmb		IAmb	01 30 59.1		
	comp=Z,52nm,1.1s								
O28M	Mount Upton	90.35	29	P		P	01 30 35.7	+0.7	
	baz=274								
PCA	Pinnacle	90.36	30	IAmb		IAmb	01 30 42.4		
	comp=Z,79nm,1.0s								
PINM	Pinnacle	90.36	30	P		P	01 30 35.4	+0.7	
	baz=274								
EIL	Elat	90.37	300	P		P	01 30 35.5	+0.2	
	comp=Z,80nm,1.0s,baz=48,slow=1.1,SNR=58								
EIL				S		SKSac	01 41 05.2	+2.1	
	comp=Z,2.5nm,0.9s,baz=7.4,slow=11,SNR=1.8								
	comp=Z,80nm,1.0s								
SIM	Simferopol'	90.41	315	*d**i*P		P	01 30 35.0	-0.2	
SIM				S		SKSac	01 41 02.0	-0.7	
SIM				pmax		pmax			
	comp=Z,95nm,0.9s								
SIM				pmax		pmax			
	comp=Z,200nm,11.0s								
SIM				smax		smax			
	comp=E,740nm,7.5s								
SIM				MLR		MLR			
	comp=Z,900nm,21.0s								
DAWY	Dawson	90.48	26	P		P	01 30 35.9	+0.8	
	baz=274,SNR=24								
YUK8	Steele Glacier	90.52	29	P		P	01 30 35.9	+0.2	
	baz=274,SNR=6.5								
E29M	Blow River	90.68	22	P		P	01 30 36.7	+0.8	
	baz=276								
H29M	Whitestone	90.72	24	IAmb		IAmb	01 31 15.2		
	comp=Z,100nm,1.6s								
H29M	Whitestone	90.72	24	P		P	01 30 37.0	+0.9	
	baz=276,SNR=8.8								
G29M	Pine Creek	90.78	23	IAmb		IAmb	01 30 38.3		
	comp=Z,58nm,0.9s								
G29M	Pine Creek	90.78	23	P		P	01 30 37.2	+0.8	
	baz=276,SNR=26								
LODK	Lodwar	90.82	273	IAmb		IAmb	01 30 57.6		
	comp=Z,44nm,1.2s								
LODK				IAMs_20		IAMs_20	02 10 45.1		
	comp=Z,1µm,22.0s								
LODK	Lodwar	90.82	273	P		P	01 30 37.5	-0.3	
	SNR=11								
PNL	Peninsula	90.83	30	P		P	01 30 38.1	+1.3	
	baz=274								
KIRS	Kirsehir-Merke	90.83	309	⇓P		P	01 30 37.0	-0.4	
VADS	Vadso	90.86	340	*e*P		P	01 30 36.1	-0.6	
ILGA	Ilgaz	90.89	311	IAmb		IAmb	01 30 44.0		
	comp=Z,73nm,1.0s								
BR104	Keskin Array S	91.02	310	P		P	01 30 37.3	-1.0	
	comp=Z,281nmcomp=Z,36nm,1.0s								
BR131	Keskin Array S	91.02	310	IAmb		IAmb	01 30 38.9		
	comp=Z,37nm,0.9s								
BR131	Keskin Array S	91.02	310	P		P	01 30 37.7	-0.6	
	SNR=13								
BR131	Keskin Array S	91.02	310	*i*P		P	01 30 37.3	-1.0	
BRTR	Keskin Array B	91.02	310	P		P	01 30 37.5	-0.8	
	comp=Z,23nm,0.8s,baz=126,slow=5.4,SNR=118								
BRTR				PKKPbc		PKKPbc	01 48 04.7	+1.4	
	comp=Z,0.9nm,0.8s,baz=344,slow=3.6,SNR=3.9								
	comp=Z,23nm,0.8s								
BRTR	Keskin Array B	91.02	310	*i*P		P	01 30 37.5	-0.8	
BRTR				pmax		pmax			
	comp=Z,24nm,0.8s								
BR106	Keskin Array S	91.03	310	P		P	01 30 37.2	-1.2	
	comp=Z,248nmcomp=Z,32nm,1.0s								
BR105	Keskin Array S	91.04	310	P		P	01 30 37.2	-1.2	
	comp=Z,300nmcomp=Z,39nm,0.9s								
M29M	Somme Creek	91.04	28	IAmb		IAmb	01 30 40.4		
	comp=Z,37nm,0.8s								
M29M	Somme Creek	91.04	28	P		P	01 30 38.9	+1.1	
	baz=275								
YUK4	Talbot Arm	91.05	29	P		P	01 30 39.3	+1.3	
	baz=275,SNR=7.3								
L29M	L29M	91.12	27	P		P	01 30 39.2	+1.0	
	baz=276								
O29M	Mount Kennedy	91.18	30	P		P	01 30 39.6	+1.0	
	baz=275								
YUK6	Outpost Mounta	91.23	29	P		P	01 30 39.8	+0.9	
	baz=275								
K29M	Barlow Dome	91.32	26	P		P	01 30 39.6	+0.5	
	baz=276,SNR=23								
EPYK	Eagle Plains	91.36	24	IAmb		IAmb	01 30 44.8		
	comp=Z,52nm,1.0s								
EPYK	Eagle Plains	91.36	24	P		P	01 30 39.8	+0.6	
	baz=277,SNR=19								
G30M	tAoh Zraii Nji	91.48	23	IAmb		IAmb	01 30 45.0		
	comp=Z,41nm,1.1s								
G30M	tAoh Zraii Nji	91.48	23	P		P	01 30 40.0	+0.2	
	baz=278,SNR=14								
CSS	Maliatis	91.51	305	P		P	01 30 40.3	-0.2	
	comp=Z,2µmcomp=Z,161nm,1.0s								
QSPA	South Pole Qui	91.52	180	P		P	01 30 43.2	+3.2	
	comp=Z,24nm,1.0s,baz=321,slow=2.4,SNR=44								
QSPA				S		SKSac	01 41 05.4	-2.9	
	comp=Z,3.9nm,1.0s,baz=195,slow=23,SNR=6.7								
QSPA	South Pole Qui	91.52	180	P		P	01 30 43.4	+3.4	
QSPA				IAmb		IAmb	01 30 57.9		
	comp=Z,52nm,1.2s								
F30M	Barrier River	91.56	22	IAmb		IAmb	01 30 41.8		
	comp=Z,50nm,1.0s								
F30M	Barrier River	91.56	22	P		P	01 30 40.5	+0.4	
	baz=278,SNR=15								
I30M	Mount Dempster	91.65	25	P		P	01 30 41.3	+0.7	
	baz=277								
HYT	Haines Junctio	91.66	29	P		P	01 30 41.4	+0.7	
	baz=276,SNR=13								
ANTO	Ankara	91.66	310	P		P	01 30 41.1	-0.1	
ANTO				IAmb		IAmb	01 30 42.1		
	comp=Z,98nm,1.6s								
ANTO	Ankara	91.66	310	P		P	01 30 40.5	-0.6	
ANTO	Ankara	91.66	310	⇑P		P	01 30 40.6	-0.6	
ANTO	Ankara	91.66	310	⇑P		P	01 30 40.6	-0.6	
ANTO	Ankara	91.66	310	P		P	01 30 40.3	-0.9	
	comp=Z,18nm,1.2s								
P29M	Windy Craggy	91.67	30	IAmb		IAmb	01 30 43.4		
	comp=Z,48nm,1.1s								
P29M	Windy Craggy	91.67	30	P		P	01 30 41.7	+1.0	
	baz=276								
KEV	Kevo	91.72	340	P		P	01 30 38.9	-1.8	
KEV				IAmb		IAmb	01 30 41.1		
	comp=Z,50nm,1.0s								
KEV				IAMs_20		IAMs_20	02 19 52.2		
	comp=Z,2µm,22.0s								
KEV	Kevo	91.72	340	P		P	01 30 38.9	-1.8	
KEV				pmax		pmax			
	comp=Z,50nm,1.0s								
J30M	Hart River	91.75	25	P		P	01 30 41.8	+0.6	
	baz=277								
N30M	Aishikik Lake	91.79	29	IAmb		IAmb	01 30 43.9		
	comp=Z,38nm,1.0s								
N30M	Aishikik Lake	91.79	29	P		P	01 30 42.4	+1.1	
	baz=276								
M30M	Minto, Yukon	91.79	27	P		P	01 30 42.4	+1.1	
	baz=277								
P30M	Million Dollar	92.00	30	P		P	01 30 43.1	+0.8	
	baz=277								
MAYO	Mayo, Yukon	92.07	26	P		P	01 30 43.3	+0.8	
	baz=278								
G31M	Satah River	92.25	23	IAmb		IAmb	01 30 44.4		
	comp=Z,50nm,0.9s								
G31M	Satah River	92.25	23	P		P	01 30 43.0	-0.2	
	baz=279,SNR=22								
ARA0	ARCESS Array S	92.28	340	*e*P		P	01 30 42.5	-0.8	
ARCES	ARCESS Array B	92.28	340	P		P	01 30 41.7	-1.6	
	comp=Z,67nm,0.8s,baz=77,slow=5.4,SNR=89								
ARCES				PKKPbc		PKKPdf	01 47 58.3	+0.2	
	comp=Z,0.5nm,0.4s,baz=246,slow=3.1,SNR=14								
ARCES				LR		LR	02 17 07.0		
	comp=Z,415nm,21.6s,baz=84,slow=39								
	comp=Z,67nm,0.8s								
ARCES	ARCESS Array B	92.28	340	P		P	01 30 42.6	-0.7	
INK	Inuvik	92.30	21	IAmb		IAmb	01 30 47.8		
	comp=Z,46nm,1.1s								
INK	Inuvik	92.30	21	P		P	01 30 43.3	0.0	
	baz=280,SNR=31								
O30N	Mendenhall	92.35	29	IAmb		IAmb	01 31 08.1		
	comp=Z,39nm,1.2s								
O30N	Mendenhall	92.35	29	P		P	01 30 44.6	+0.7	
	baz=277,SNR=6.6								
F31M	Tsiigehtchic	92.37	22	IAmb		IAmb	01 30 44.9		
	comp=Z,48nm,1.0s								
F31M	Tsiigehtchic	92.37	22	P		P	01 30 43.8	+0.1	
	baz=280,SNR=21								
PLBC	Pleasant Camp	92.38	30	P		P	01 30 44.8	+0.8	
	baz=277								
H31M	Peel River	92.40	24	P		P	01 30 44.3	+0.3	
	baz=279,SNR=12								
N31M	Braeburn, Yuko	92.41	28	P		P	01 30 45.1	+1.0	
	baz=278,SNR=22								
SPA0	Spitsbergen Ar	92.47	349	*e*P		P	01 30 43.2	-0.8	
SPITS	Spitsbergen Ar	92.47	349	P		P	01 30 43.3	-0.8	
	comp=Z,47nm,0.8s,baz=119,slow=14,SNR=18								
	comp=Z,47nm,0.8s								
S31K	Pelican	92.64	32	P		P	01 30 46.0	+0.9	
	baz=277								
HAMF	Hammerfest	92.67	341	*e*P		P	01 30 43.5	-1.5	
SKAG	Skagway	92.91	30	IAmb		IAmb	01 30 48.9		
	comp=Z,30nm,0.9s								
SKAG	Skagway	92.91	30	P		P	01 30 47.7	+1.3	
	comp=Z,41nm,0.9s								
SKAG	Skagway	92.91	30	P		P	01 30 47.3	+0.9	
	baz=278								
M31M	Drury Creek, Y	92.95	28	IAmb		IAmb	01 30 58.6		
	comp=Z,40nm,1.1s								
M31M	Drury Creek, Y	92.95	28	P		P	01 30 47.8	+1.2	
	baz=279								
WHY	Whitehorse	92.96	29	P		P	01 30 47.9	+1.1	
	baz=278,SNR=18								
KBS	Kingsbay	93.00	350	P		P	01 30 46.1	-0.4	
KBS	Kingsbay	93.00	350	*c**e*P		P	01 30 46.9	+0.4	
KBS				pmax		pmax			
	comp=Z,23nm,0.8s								
KBS	Kingsbay	93.00	350	*i*P		P	01 30 45.6	-0.9	
SAHE	Sakarya_HENDEK	93.07	311	⇓P		P	01 30 46.8	-0.8	
KTK1	Kautokeino	93.17	339	*e*P		P	01 30 46.1	-1.4	
AK09	Malin Array Si	93.22	321	P		P	01 30 47.4	-0.6	
SIT	Sitka	93.24	33	P		P	01 30 49.8	+1.8	
	comp=Z,85nm,1.8s								
SIT	Sitka	93.24	33	P		P	01 30 48.9	+1.0	
	baz=278								
AKASG	Malin Array Be	93.25	321	P		P	01 30 47.1	-1.0	
	comp=Z,4.8nm,0.6s,baz=74,slow=4.2,SNR=25								
	comp=Z,4.8nm,0.6s								
AKASG	Malin Array Be	93.25	321	P		P	01 30 46.8	-1.3	
AKASG				IAmb		IAmb	01 31 04.6		
	comp=Z,40nm,1.2s								
AKASG	Malin Array Be	93.25	321	*i*P		P	01 30 47.0	-1.1	
AKASG				pmax		pmax			
	comp=Z,6.0nm,0.6s								
AKBB	Malin Array Si	93.25	321	IAmb		IAmb	01 31 04.2		
	comp=Z,49nm,1.1s								
AKBB	Malin Array Si	93.25	321	*c**e*P		P	01 30 47.4	-0.7	
AKBB				pmax		pmax			
	comp=Z,55nm,1.8s								
KIEV	Kiev	93.26	321	⇑P		P	01 30 47.7	-0.5	
KIEV	Kiev	93.26	321	⇑P		P	01 30 47.7	-0.5	
KIEV	Kiev	93.26	321	P		P	01 30 47.2	-1.0	
	comp=Z,126nm,0.9s								
PURM	Purcari	93.26	317	⇑P		P	01 30 47.5	-0.8	
AK02	Malin Array Si	93.26	321	P		P	01 30 47.4	-0.8	
BESE	Bessie Mountai	93.28	31	IAmb		IAmb	01 30 59.4		
	comp=Z,84nm,1.2s								
AK12	Malin Array Si	93.30	321	P		P	01 30 47.1	-1.3	
BAL3X	Bal3x, Balta	93.30	318	P		P	01 30 47.8	-0.7	
BORA	Eskisehir	93.46	310	IAmb		IAmb	01 30 50.0		
	comp=Z,43nm,1.0s								
FINES	FINESS Array B	93.48	332	P		P	01 30 47.5	-1.5	
	comp=Z,14nm,0.8s,baz=63,slow=4.3,SNR=23								
	comp=Z,14nm,0.8s								
R32K	Eaglecrest	93

SORM	Soroca	94.11	318	⇑P		P		01 30 51.7	-0.5
SORM	Soroca	94.11	318	⇑P		P		01 30 51.7	-0.5
TLCR		94.14	315	⇓P		P		01 30 52.4	0.0
TLCR		94.14	315	⇓P		P		01 30 52.4	0.0
A36M	Sachs Harbour comp=Z,36nm,0.9s	94.14	17	IAmb		IAmb		01 31 24.3	
A36M	Sachs Harbour baz=288,SNR=14	94.14	17	P		P		01 30 52.1	+0.3
JURR	Jurilovca	94.14	315	⇑P		P		01 30 52.1	-0.3
ELL	Elmali comp=Z,42nm,1.0s	94.16	307	IAmb		IAmb		01 31 17.4	
LUBAR	Lubar, Ukraine	94.27	320	P		P		01 30 51.5	-1.4
TPGR	Topolog	94.45	315	⇓P		P		01 30 53.4	-0.5
TRO	Tromso	94.49	340	*e*P		P		01 30 51.9	-1.5
Q32M	Nakina River baz=281	94.54	31	P		P		01 30 54.4	+0.2
VLDR	Vladesti	94.57	316	⇓P		P		01 30 53.8	-0.6
U33K	Whale Pass baz=280	94.59	34	P		P		01 30 54.5	+0.3
CFR	Carcaliu	94.62	315	⇑P		P		01 30 54.3	-0.3
CFR	Carcaliu	94.62	315	⇑P		P		01 30 54.3	-0.3
VASR	Vaslui	94.67	317	⇓P		P		01 30 54.5	-0.3
CRAG	Craig baz=280	94.70	34	P		P		01 30 55.0	+0.3
POGA	Pongola comp=Z,41nm,1.0s	94.79	243	IAmb		IAmb		01 31 12.2	
BIR	Birlad	94.83	317	⇓P		P		01 30 55.5	-0.1
BIR	Birlad	94.83	317	⇓P		P		01 30 55.5	-0.1
CTYL	Yalikoy Yolu	94.94	312	⇑P		P		01 30 55.6	-0.5
WRAK	Wrangell Islan comp=Z,75nm,1.1s	94.97	33	IAmb		IAmb		01 31 00.6	
WRAK	Wrangell Islan baz=280	94.97	33	P		P		01 30 56.8	+0.9
ICOR	Ion Corvin	94.98	314	⇑P		P		01 30 56.6	+0.4
GHRR		95.01	316	⇓P		P		01 30 56.3	-0.1
MANT	Manisa comp=Z,50nm,1.0s	95.06	309	IAmb		IAmb		01 30 57.8	
R33M	Jennings River comp=Z,33nm,0.9s	95.11	30	IAmb		IAmb		01 30 59.3	
R33M	Jennings River baz=282	95.11	30	P		P		01 30 57.4	+0.6
NOR	Nord	95.16	355	*i* P		P		01 30 55.6	-0.7
NOR	comp=Z,72nm,1.2s			IAmb		IAmb		01 30 57.9	
BAND	Balkesir-Ban	95.20	311	⇑P		P		01 30 56.6	-0.8
PANC	Panciu	95.22	316	⇑P		P		01 30 56.7	-0.6
HORU	Horodok	95.23	320	P		P		01 30 56.8	-0.5
RNPP9	Sopachiv	95.23	322	P		P		01 30 56.5	-0.7
RNPP5	Staryi Chortor	95.27	322	P		P		01 30 56.7	-0.7
RNPP8	Varash	95.27	322	P		P		01 30 56.6	-0.8
KMPD	K-Podol'skiy	95.31	319	P		P		01 30 55.9	-1.7
S34M	Telegraph Cree comp=Z,38nm,1.1s	95.33	32	IAmb		IAmb		01 31 03.2	
S34M	Telegraph Cree baz=282,SNR=10	95.33	32	P		P		01 30 58.5	+1.0
C36M	Paulatuk comp=Z,58nm,0.9s	95.36	20	IAmb		IAmb		01 31 02.6	
C36M	Paulatuk baz=289,SNR=33	95.36	20	P		P		01 30 57.5	+0.1
TESR	Tescani	95.47	317	⇑P		P		01 30 58.7	+0.2
TESR	Tescani comp=Z,1μmcomp=Z,94nm,0.8s	95.47	317	P		P		01 30 58.0	-0.5
PHSR	Pinarhisar	95.49	312	⇓P		P		01 30 58.0	-0.7
VRI	Vrincioaia	95.51	316	⇓P		P		01 30 58.6	-0.1
VRI	Vrincioaia	95.51	316	⇓P		P		01 30 58.6	-0.1
VRI	Vrincioaia comp=Z,35nm,0.9s	95.51	316	P		P		01 30 58.4	-0.3
MBAR	Mbarara	95.55	270	P		P		01 30 59.9	+0.1
MBAR	Mbarara	95.55	270	P		P		01 30 59.3	-0.5
MBAR	Mbarara	95.55	270	P		P		01 30 59.9	+0.1
MBAR	comp=Z,17nm,1.0s			pmax		pmax			
MBAR	comp=Z,1μm,22.0s			MLR		MLR			
PLOR	Plostina	95.56	316	⇑P		P		01 30 58.3	-0.7
PLOR	Plostina	95.56	316	⇑P		P		01 30 58.3	-0.7
V35K	Ketchikan baz=281	95.57	34	P		P		01 30 59.3	+0.6
ONER	Baraj Valea Uz	95.67	317	⇓P		P		01 30 58.5	-0.9
DLBC	Dease Lake baz=282,SNR=6.5	95.79	31	P		P		01 31 00.6	+0.8
NEHR	Nehoiu	95.87	316	⇑P		P		01 31 00.4	0.0
COVR	Voineasa-Covas	95.87	316	⇓P		P		01 30 59.9	-0.5
LOZB	Loznitsa	95.95	314	⇓P		P		01 31 00.1	-0.6
TURR	Turia	95.97	316	⇑P		P		01 31 00.5	-0.3
RAZG	Razgrad	95.98	314	⇓P		P		01 31 00.5	-0.4
T35M	Bob Quinn comp=Z,42nm,1.3s	95.99	32	IAmb		IAmb		01 31 03.8	
T35M	Bob Quinn baz=282	95.99	32	P		P		01 31 01.7	+1.1
WTLY	Watson Lake, Y baz=284	96.03	29	P		P		01 31 01.8	+1.1
MLR	Muntele Rosu comp=Z,18nm,0.7s,baz=71,slow=3.0,SNR=23	96.11	316	P		P		01 31 01.2	-0.4
MLR	comp=Z,1.8nm,0.8s,baz=284,slow=8.3,SNR=3.0			PKKPbc		PKKPbc		01 47 49.8	-0.4
MLR	comp=Z,18nm,0.7s comp=Z,45nm,0.8s	96.11	316	IAmb		IAmb		01 31 18.8	
MLR	comp=Z,1μm,21.0s			IAMs_20		IAMs_20		02 16 57.7	
MLR	Muntele Rosu	96.11	316	⇑P		P		01 31 01.9	+0.3
MLR	Muntele Rosu	96.11	316	P		P		01 31 01.0	-0.6
OZUR		96.12	317	⇓P		P		01 31 01.4	-0.1
BOSR	Bodos	96.21	317	⇑P		P		01 31 01.9	0.0
BURAR	Bucovina Array	96.27	318	P		P		01 31 02.1	-0.1
BURAR	Bucovina Array	96.27	318	⇑P		P		01 31 02.2	-0.1
BURAR	Bucovina Array	96.27	318	⇑P		P		01 31 02.2	-0.1
STEI	Steigen	96.31	339	*e*P		P		01 30 60.0	-1.8
SUW	Suwalki	96.39	325	*e*P		P		01 31 01.8	-0.7
DOPR	Dopca	96.42	316	⇓P		P		01 31 01.7	-1.1
FAUS	Fauske	96.48	339	*e*P		P		01 31 01.3	-1.2
ELND	Elena	96.53	313	⇑P		P		01 31 03.2	-0.2
EZN	Ezine	96.62	310	⇑P		P		01 31 03.5	-0.3
EZN	Ezine	96.62	310	⇑P		P		01 31 03.5	-0.3
VOIR		96.74	316	⇓P		P		01 31 04.0	-0.4
VOIR		96.74	316	⇓P		P		01 31 04.0	-0.4
HUMR	Humele	96.93	315	⇓P		P		01 31 04.4	-0.7
RDO	Rodhopi comp=Z,26nm,1.0s	97.03	312	IAmb		IAmb		01 31 06.0	
ARR	Arges	97.04	316	⇑P		P		01 31 05.6	-0.1
MDB	Medias	97.08	317	⇑P		P		01 31 05.6	-0.2
MDB	Medias	97.08	317	⇑P		P		01 31 05.6	-0.2
MOR8	Moi Rana	97.22	338	*e*P		P		01 31 03.8	-2.2
RAUS	Rausandaksla	97.28	338	*e*P		P		01 31 04.8	-1.4
PLVB	Pleven	97.37	314	⇓P		P		01 31 06.3	-0.9
VLAD	Vladila	97.42	315	⇓P		P		01 31 07.1	-0.2
CJR	Cluj-Napoca	97.52	317	⇓P		P		01 31 07.6	-0.2
CJR	Cluj-Napoca	97.52	317	⇓P		P		01 31 07.6	-0.2
LIRD	Liard River Hi baz=286,SNR=7.3	97.53	29	P		Pdif		01 31 08.5	+0.9
CBBR	Cluj-Babes-Bol	97.54	317	⇑P		P		01 31 07.8	-0.1
KWP	Kalwaria Pacla	97.55	320	*e*P		Pdif		01 31 08.1	+0.1
WRGLY	Wrigley comp=Z,64nm,1.4s	97.59	25	IAmb		IAmb		01 31 19.8	
WRGLY	Wrigley baz=289	97.59	25	P		Pdif		01 31 08.5	+0.8
APE	Apeiranthos	97.61	308	⇓P		P		01 31 07.6	-0.9
APE	Apeiranthos	97.61	308	⇓P		P		01 31 07.6	-0.9
LOT	Lotru	97.62	316	⇑P		P		01 31 07.5	-1.0
STOK	Stokkvaagen	97.70	338	*e*P		Pdif		01 31 08.2	+0.1
LEIR	Leirfjorden	97.75	338	*e*P		P		01 31 07.6	-0.7
MARR	Marisel-Cluj	97.85	317	⇑P		Pdif		01 31 09.6	+0.2
DRGR		98.10	318	⇓P		P		01 31 10.5	0.0
DRGR		98.10	318	⇓P		P		01 31 10.5	0.0
TOAD	Toad River Com baz=287	98.11	30	P		Pdif		01 31 10.4	+0.2
DEV	Deva	98.14	317	⇓P		P		01 31 10.6	0.0
DEV	Deva	98.14	317	⇓P		P		01 31 10.6	0.0
BEL	Belsk	98.27	323	*e*P		P		01 31 10.8	-0.1
KOTAN	Kotaneelee Air baz=288,SNR=5.5	98.31	28	P		Pdif		01 31 11.8	+0.8
GZR	Gura Zlata	98.32	316	⇓P		P		01 31 10.8	-0.7
GZR	Gura Zlata	98.32	316	⇓P		P		01 31 10.8	-0.7
IDI	Anoyia	98.36	306	P		P		01 31 11.4	-0.5
IDI	Anoyia comp=Z,28nm,0.9s,baz=69,slow=5.0,SNR=15 comp=Z,28nm,0.9s	98.36	306	P		P		01 31 11.3	-0.6
IDI	Anoyia comp=Z,40nm,1.1s	98.36	306	IAmb		IAmb		01 31 16.5	
STHS	Stebnicka Huta	98.53	320	*e*P		P		01 31 12.1	-0.2
STHS	Stebnicka Huta	98.53	320	*e*PDIFF		P		01 31 12.1	-0.2
HERR	Herculane	98.67	316	⇓P		Pdif		01 31 13.4	+0.4
BLKB	Belogradchik	98.72	314	⇓P		P		01 31 13.0	-0.2
NSS	Namsos	98.80	336	*e*P		P		01 31 12.2	-0.9
SIRR	Siria	98.92	317	⇑P		P		01 31 13.9	-0.2
BZS	Buzias	99.08	317	⇑P		Pdif		01 31 13.9	-0.9
BZS	Buzias	99.08	317	⇑P		Pdif		01 31 13.9	-0.9
NIE	Niedzica	99.13	321	*e*P		Pdif		01 31 15.7	+0.7
MDVR	Moldovita	99.18	316	⇓P		Pdif		01 31 15.1	-0.2
VAY	Valandovo	99.21	312	*i* P		Pdif		01 31 14.0	-1.5
OJC	Ojcow	99.26	321	*e*P		Pdif		01 31 15.2	-0.3
DAG	Danmarks Havn	99.29	352	*i* P		Pdif		01 31 14.0	-1.0
DAG	comp=Z,63nm,1.2s			IAmb		IAmb		01 31 15.4	
NVL	N'lazarevskaya	99.39	198	*e*P		Pdif		01 31 16.3	+0.7
NVL				*e*				01 35 21.3	
NVL				*e*PPP		PPP		01 37 26.8	
NVL				*e*S		SKSac		01 41 50.7	+1.0
NVL				*e*SSS		SSS		01 53 20.5	
NVL	comp=Z,10.0nm,0.7s			pmax		pmax			
NVL	comp=E,250nm,11.1s			smax		smax			
NVL	comp=Z,123nm,19.0s			MLR		MLR			
BOVS	Bovan	99.41	315	⇑P		Pdif		01 31 16.1	-0.2
HFS	Hagfors comp=Z,11nm,0.9s,baz=104,slow=4.9,SNR=14 comp=Z,11nm,0.9s	99.68	332	P		Pdif		01 31 15.9	-1.2
LANS	Liptovska Anna	99.72	320	*e*P		Pdif		01 31 19.0	+1.4
PSZ	Piszkesteto comp=Z,27nm,1.0s	99.73	319	IAmb		IAmb		01 31 34.8	
PSZ	comp=Z,1μm,21.0s			IAMs_20		IAMs_20		02 23 09.4	
PSZ	Piszkesteto	99.73	319	⇑P		Pdif		01 31 17.6	-0.2
PSZ	Piszkesteto	99.73	319	⇑P		Pdif		01 31 17.6	-0.2
RES	Resolute Bay comp=Z,44nm,1.4s	99.97	10	IAmb		IAmb		01 31 22.4	
GKP	Gorka Klasztor	100.00	325	*e*P		Pdif		01 31 18.9	+0.2
BOSA	Boshof comp=Z,8.3nm,0.9s,baz=109,slow=5.1,SNR=6.4	100.44	241	P		Pdif		01 31 20.3	-1.1
NC602	NORSAR Array S	100.45	333	*e*P		Pdif		01 31 20.7	+0.2
NB2	NORSAR Subarra comp=Z,28nm,1.1s,baz=68,slow=4.4	100.48	333	P		Pdif		01 31 19.0	-1.7
NB2	comp=Z,1.0nm,0.8s,baz=235,slow=2.4			PKKP		PKKPbc		01 47 36.0	-2.5
NOA	NORSAR Array B comp=Z,8.3nm,0.8s,baz=69,slow=4.4,SNR=31	100.48	333	P		Pdif		01 31 18.9	-1.8
NOA	comp=Z,2.0nm,0.9s,baz=251,slow=2.3,SNR=7.7			PKKPbc		PKKPbc		01 47 36.1	-2.5
OHR	Ohrid	100.57	312	*i* P		Pdif		01 31 20.4	-1.2
STEB	Steborice	100.59	321	*e*PDIFF		Pdif		01 31 21.4	0.0
MAUC	Maruska	100.71	321	*e*PDIFF		Pdif		01 31 22.3	+0.3
MORC	Moravsky Berou	100.78	321	⇓P		Pdif		01 31 21.7	-0.6
MORC	Moravsky Berou	100.78	321	*e*PDIFF		Pdif		01 31 22.6	+0.3
MORC	Moravsky Berou	100.78	321	⇓P		Pdif		01 31 21.7	-0.6
DEL	Delary	100.86	329	*i* P		Pdif		01 31 20.7	-1.7
JAVC	Velka Javorina	100.94	320	*e*PDIFF		Pdif		01 31 23.1	0.0
MORH	Mrgy, Hungar	100.97	318	⇓P		Pdif		01 31 23.5	+0.4
DOMB	Dombas	101.01	335	*e*P		Pdif		01 31 21.9	-1.1
BORU	Boraas	101.01	330	*i* P		Pdif		01 31 21.7	-1.4
NEEM	North Greenlan	101.03	359	*i* P		Pdif		01 31 22.9	-0.4
NEEM	comp=Z,29nm,0.9s			IAmb		IAmb		01 31 29.2	
KRLC	Kraliky comp=Z,2μm,23.0s	101.17	322	AMS		AMS		02 18 50.0	
KSP	Ksiaz	101.25	323	*e*P		Pdif		01 31 24.3	0.0
MODS	Modra-Piesok	101.32	320	*e*P		Pdif		01 31 26.2	+1.5
MODS	Modra-Piesok	101.32	320	*e*PDIFF		Pdif		01 31 26.2	+1.5
DPC	Dobruska-Polom	101.37	322	*e*P		Pdif		01 31 23.4	-1.6
DPC	comp=Z,2μm,22.4s			MLR		MLR			
DPC	Dobruska-Polom	101.37	322	*e*PDIFF		Pdif		01 31 23.4	-1.6
DPC	comp=Z,2μm,22.4s			AMS		AMS		02 19 00.0	
OSTC	Ostas	101.38	322	*e*P		Pdif		01 31 26.1	+1.2
OSTC	comp=Z,2μm,20.7s			MLR		MLR			
OSTC	Ostas	101.38	322	*e*PDIFF		Pdif		01 31 26.1	+1.2
OSTC	comp=Z,2μm,20.7s			AMS		AMS		02 19 00.0	
PDG	Podgorica	101.42	314	⇓P		Pdif		01 31 25.2	0.0
BJUU	Bjuv	101.44	328	*i* P		Pdif		01 31 24.1	-0.8
TROLL	Troll, Antarti comp=Z,246nm,0.7s	101.47	195	⇑P		Pdif		01 31 26.1	+1.1
VRAC	Vranov	101.50	321	P		Pdif		01 31 25.5	0.0
VRAC	Vranov comp=Z,6.3nm,0.9s,baz=83,slow=5.7,SNR=6.2	101.50	321	⇑P		Pdif		01 31 26.3	+0.8
VRAC	Vranov	101.50	321	*e*PDIFF		Pdif		01 31 25.9	+0.4
VRAC	Vranov	101.50	321	⇑P		Pdif		01 31 26.3	+0.8
UPC	Upice comp=Z,3μm,23.8s	101.52	322	AMS		AMS		02 19 00.0	
DBG	Daneborg	101.55	351	*i* P		Pdif		01 31 24.9	-0.2
DBG	comp=Z,15nm,0.9s			IAmb		IAmb		01 31 26.6	
YKA	Yellowknife Ar comp=Z,7.3nm,1.0s,baz=297,slow=5.2,SNR=8.3	101.61	24	P		Pdif		01 31 25.8	+0.1
YKA	comp=Z,7.5nm,1.1s,baz=297,slow=8.0,SNR=5.5			PP		PP		01 35 37.2	+1.3
YKA	comp=Z,2.6nm,0.9s,baz=284,slow=3.5,SNR=6.3			PKiKP		PKiKP		01 35 50.1	+1.0
YKA	comp=Z,2.8nm,0.8s,baz=126,slow=1.8,SNR=6.7			PKKPbc		PKKPbc		01 47 31.2	-4.0
YKA	Yellowknife Ar comp=Z,7.0nm,1.0s	101.61	24	*i* P		Pdif		01 31 26.2	+0.6
YKA	comp=Z,7.0nm,0.9s			pmax		pmax			
KRUC	Moravsky	101.69	321	*e*PDIFF		Pdif		01 31 26.7	+0.4
RONA	Rosalia, Austr comp=Z,9.1nm,1.6s	102.14	320	*e*Pdiff		Pdif		01 31 29.1	+0.7
RONA	comp=Z,7.0nm,0.9s			*ep*Pdiff		pPdif		01 31 41.4	-0.8
RONA	comp=Z,10nm,1.3s			*e*PKiKP		PKiKP		01 35 50.8	+0.2
TREC	Trest comp=Z,2μm,21.8s	102.20	321	AMS		AMS		02 19 20.0	
CONA	Conrad Observa comp=Z,3.3nm,1.2s	102.35	320	*e*Pdiff		Pdif		01 31 30.3	+0.9
PVCC	Panska Ves comp=Z,2μm,18.7s	102.39	323	AMS		AMS		02 19 40.0	
PRU	Pruhonice	102.58	322	*e*P		Pdif		01 31 31.1	+0.9
PRU	comp=Z,2μm,23.1s			MLR		MLR			
PRU	Pruhonice comp=Z,2μm,23.1s	102.58	322	*e*PDIFF		Pdif		01 31 31.1	+0.9
PRU	comp=Z,2μm,22.1s			AMS		AMS		02 19 30.0	
PRA	Prague comp=Z,2μm,22.1s	102.62	322	AMS		AMS		02 19 50.0	
ARSA	Arzberg comp=Z,4.4nm,0.8s	102.77	319	*e*Pdiff		Pdif		01 31 32.2	+1.1
ARSA	comp=Z,7.8nm,1.1s			*ep*Pdiff		pPdif		01 31 41.4	-3.6
ZVC	Zvikov comp=Z,2μm,20.9s	102.96	322	*e*PDIFF		Pdif		01 31 34.1	+2.1
ZVC				AMS		AMS		02 20 00.0	
SNAA	Sanae comp=Z,61nm,0.6s	103.05	195	⇑P		Pdif		01 31 32.7	+0.7
SNAA	Sanae comp=Z,2.6nm,0.7s,baz=192,slow=6.0,SNR=10	103.05	195	Pdiff		Pdif		01 31 32.6	+0.6
SNAA	comp=Z,3.8nm,0.8s,baz=248,slow=2.9,SNR=15			PKKPbc		PKKPbc		01 47 27.9	-3.4
SNAA	Sanae comp=Z,2μm,22.0s	103.05	195	IAMs_20		IAMs_20		02 16 05.4	
HSKC	Hora Svate Kat comp=Z,2μm,22.0s	103.05	323	AMS		AMS		02 20 20.0	
CKRC	Cesky Krumlov	103.08	321	*e*P		Pdif		01 31 32.4	-0.1
CKRC	comp=Z,2μm,21.0s			MLR		MLR			
CKRC	Cesky Krumlov comp=Z,2μm,21.0s	103.08	321	*e*PDIFF		Pdif		01 31 32.4	-0.1
CKRC				AMS		AMS		02 23 10.0	
CLL	Collm	103.08	324	*i* P		Pdif		01 31 33.0	+0.6
CLL				*e*S		Sdif		01 43 14.0	-1.4
CLL	comp=Z,37nm,1.8s			pmax		pmax			
CLL	comp=Z,2μm,24.3s			MLR		MLR			
SOKA	Soboth comp=Z,4.4nm,1.1s	103.25	319	*e*Pdiff		Pdif		01 31 33.2	-0.2
SOKA	comp=Z,10nm,1.3s			*e*PKiKP		PKiKP		01 35 51.5	-1.2
MOA	Molln comp=Z,6.8nm,1.0s	103.40	320	*e*Pdiff		Pdif		01 31 33.2	-0.8
MOA	comp=Z,13nm,0.9s			*ep*Pdiff		pPdif		01 31 46.3	-1.5
MOA	comp=Z,11nm,1.3s			*e*PP		PP		01 35 49.8	0.0
KHC	Kasperske Hory	103.44	321	*e*P		Pdif		01 31 37.7	+3.5
KHC				MLR		MLR			
KHC	comp=Z,2μm,22.6s			*e*PDIFF		Pdif		01 31 37.7	+3.5
KHC				*ex*		x		01 31 47.5	
KHC	comp=Z,2μm,22.6s			AMS		AMS		02 20 20.0	
GERES	GERESS Array B comp=Z,5.4nm,1.0s,baz=56,slow=5.6,SNR=11	103.45	321	Pdiff		Pdif		01 31 33.9	-0.4
GERES	comp=Z,0.7nm,0.8s,baz=266,slow=2.9,SNR=4.1			PKKPbc		PKKPbc		01 47 27.1	-2.4
OBKA	Obir comp=Z,5.8nm,0.9s	103.62	319	*ep*Pdiff		pPdif		01 31 47.5	-1.5
BIOA	Bad Ischl, Aus comp=Z,5.0nm,1.1s	103.86	320	*ep*Pdiff		pPdif		01 31 48.0	-1.9
KULLO	Kullorsuaq	103.90	1	*i* P		Pdif		01 31 36.7	+1.1
TIP	Timpagrande	104.01	311	⇑P		Pdif		01 31 36.7	-0.3
KBA	Koelnbreinsper comp=Z,7.1nm,1.1s	104.24	320	*e*Pdiff		Pdif		01 31 38.2	+0.3
CUC	Castrocucco comp=Z,1μm,21.0s	104.52	312	IAMs_20		IAMs_20		02 22 32.8	
LESA	Schwarzleotal comp=Z,6.9nm,1.1s	104.56	320	*e*Pdiff		Pdif		01 31 41.1	+1.8
LESA	comp=Z,13nm,1.3s			*i* pPdiff		pPdif		01 31 51.8	-1.3
LESA	comp=Z,8.5nm,0.9s			*e*PP		PP		01 35 56.9	-1.6
VNA2	Neumayer--Watz comp=Z,1.3nm,0.6s,baz=122,slow=4.8	104.66	194	⇑P		Pdif		01 31 37.6	-1.5
ABTA	Abfaltersbach comp=Z,11nm,1.4s	104.88	319	*e*Pdiff		Pdif		01 31 40.8	+0.1
ABTA	comp=Z,6.1nm,1.0s			*i* pPdiff		pPdif		01 31 52.4	-2.1
ABTA	comp=Z,12nm,1.2s			*e*PKiKP		PKiKP		01 35 56.9	+1.3
VNA3	Neumayer Olymp comp=Z,2.0nm,0.7s	104.99	193	⇑P		Pdif		01 31 40.6	+0.1
SCO	Scoresbysund	105.04	349	*i* P		Pdif		01 31 41.5	+0.7
VNA1	Neumayer--Stat	105.06	194	P		Pdif		01 31 41.5	+0.7
WTTA	Wattenberg comp=Z,1nm,1.1s	105.28	320	*e*Pdiff		Pdif		01 31 42.6	0.0
WATA	Walderalm comp=Z,7.5nm,1.0s	105.29	320	*e*Pdiff		Pdif		01 31 44.5	+1.9
O03E	Paynes Creek comp=Z,1μm,20.0s	105.52	47	IAMs_20		IAMs_20		02 17 40.3	
SQTA	Sankt Quirin comp=Z,14nm,1.1s	105.57	320	*i* Pdiff		Pdif		01 31 44.5	+0.7
MOTA	Moosalm comp=Z,20nm,1.2s	105.59	320	*e*Pdiff		Pdif		01 31 44.5	+0.6
SUTB	Sutter Butte comp=Z,856nm,18.0s	105.82	48	IAMs_20		IAMs_20		02 12 45.3	
FETA	Feichten comp=Z,12nm,1.2s	105.94	320	*i* Pdiff		Pdif		01 31 45.4	-0.1
ORV	Oroville comp=Z,1μm,20.0s	105.95	48	IAMs_20		IAMs_20		02 14 06.6	
WELL	Weller Preserv comp=Z,1μm,20.0s	106.83	49	IAMs_20		IAMs_20		02 12 52.1	
CMB	Columbia Colle comp=Z,1μm,22.0s	107.20	49	IAMs_20		IAMs_20		02 11 06.9	
NVAR	Mina Array Bea comp=Z,0.4nm,0.7s,baz=304,slow=5.2,SNR=4.2	108.66	48	Pdiff		Pdif		01 31 59.3	+1.4
NVAR	comp=Z,1.7nm,0.7s,baz=309,slow=2.4,SNR=7.1			PKiKP		PKiKP		01 36 03.9	+0.8
NVAR	comp=Z,6.6nm,1.1s,baz=297,slow=7.1,SNR=6.7			PP		PP		01 36 29.1	0.0
NVAR	comp=Z,1.5nm,0.8s,baz=120,slow=2.3,SNR=6.8			PKKPbc		PKKPbc		01 47 12.2	-1.1
NVAR	comp=Z,6.9nm,0.8s,baz=102,slow=3.1,SNR=24			PKKP		PKKPab		01 47 26.1	+0.2
BNI	Bardonecchia comp=Z,1μm,20.0s	109.29	319	IAMs_20		IAMs_20		02 07 28.2	
EKA	Eskdalemuir Ar comp=Z,1.2nm,0.7s,baz=246,slow=3.0,SNR=1.9	109.88	332	PKKPbc		PKKPbc		01 47 07.7	-1.9
WSHM	Spangler Hills comp=Z,1μm,18.0s	110.12	51	IAMs_20		IAMs_20		02 16 46.4	
ELK	Elko comp=Z,1μm,20.0s	110.13	45	IAMs_20		IAMs_20		02 17 45.2	
FXWY	Fox Creek comp=Z,1μm,19.0s	111.90	41	IAMs_20		IAMs_20		02 20 56.6	
DUG	Dugway, Tooele comp=Z,968nm,19.0s	112.06	45	IAMs_20		IAMs_20		02 14 15.1	
PDAR	Pinedale Array comp=Z,1.6nm,0.7s,baz=263,slow=2.7,SNR=8.7	113.25	42	PKiKP		PKiKP		01 36 12.1	+0.4
PDAR	comp=Z,1.6nm,0.6s,baz=98,slow=2.2,SNR=12			PKKPbc		PKKPbc		01 46 55.0	-3.5
RSSD	Black Hills	116.14	38			PKPdf		01 36 17.0	-0.2
RSSD	Black Hills	116.14	38	PKiKP		PKPdf		01 36 17.0	-0.2
ULM	Lac du Bonnet comp=Z,14nm,0.8s,baz=322,slow=3.2,SNR=9.0	117.03	29	PKP		PKPdf		01 36 17.5	-0.9
ULM	comp=Z,4.4nm,0.7s,baz=140,slow=5.5,SNR=4.3			PKKPbc		PKKPbc		01 46 46.7	+1.4
TAM	Tamanrasset comp=Z,831nm,22.0s	117.45	297	IAMs_20		IAMs_20		02 34 14.2	
SDCO	Great Sand Dun comp=Z,1μm,21.0s	118.26	45	IAMs_20		IAMs_20		02 18 43.1	
ESDC	Sonseca Array comp=Z,1.9nm,0.9s,baz=120,slow=1.4,SNR=4.6	118.73	318	PKP		PKPdf		01 36 21.9	-0.2
ESDC	comp=Z,7.7nm,1.1s,baz=65,slow=6.7,SNR=6.0			PP		PP

ACAN	Cantantal	146.96	159	*i* P		PKPbc	01 37 16.8	+0.1
CFA	Coronel Fontan	147.16	157	PKPbc		PKPdf	01 37 15.8	+0.7
	comp=Z,41nm,0.7s,baz=244,slow=1.6,SNR=60							
CFA	Coronel Fontan	147.16	157	*i* P		PKPbc	01 37 17.2	-0.1
GO04	Tololo Observa	147.28	152	IAMs_20	IAMs_20		02 48 23.8	
	comp=Z,577nm,20.0s							
MRA	San Martin	147.33	161	*i* P		PKPab	01 37 18.9	-0.8
ACCO	Cerro Coronel	147.71	155	*i* P		PKiKP	01 37 20.4	-0.8
AROD	Rodeo	147.89	154	*i* P		PKPbc	01 37 19.3	-0.4
TCA	Tanti	148.69	162	*i* P		PKiKP	01 37 22.6	-0.4
AGUA	GUANDACOL	148.91	155	*i* P		PKiKP	01 37 23.6	+0.1
MTDJ	Mount Denham	149.39	49	IAMs_20	IAMs_20		02 53 41.2	
	comp=Z,816nm,22.0s							
MTDJ	Mount Denham	149.39	49	*i* P		PKiKP	01 37 24.9	+0.2
VCA	Vinchina	149.68	154	*i* P		PKiKP	01 37 26.5	+1.3
STH	Stony Hill	150.02	48	*i* P		PKPbc	01 37 25.2	+0.2
GTBY	Guantanamo Bay	150.04	43	IAMs_20	IAMs_20		02 42 12.8	
	comp=Z,699nm,20.0s							
GWJ	Greenwich	150.08	48⇓	*i* P		PKPbc	01 37 25.7	+0.4
PSAL	Palomas, Salto	150.45	173	*e*P		PKPdf	01 37 23.0	0.0
AC02	Maricunga	150.87	151	IAMs_20	IAMs_20		02 41 26.6	
	comp=Z,683nm,20.0s							
CPSB	Cacapava Do Su	151.35	181	*e*P		PKPdf	01 37 21.8	0.0
PB14	IPOC Station P	152.00	146	PKP		PKPdf	01 37 21.9	-1.4
GO02	Mina Guanaco	152.02	148	IAMs_20	IAMs_20		02 48 20.1	
	comp=Z,753nm,22.0s							
CPUP	Villa Florida	155.17	172	PKP		PKPdf	01 37 28.0	+0.6
	comp=Z,3.5nm,1.1s,baz=120,slow=1.8,SNR=9.9							
CPUP	Villa Florida	155.17	172			PKPdf	01 37 28.1	+0.8
OTAV	Otavalo	155.21	86	*e*P		PKPdf	01 37 26.1	-2.3
TA01	Diego Aracena	155.23	141	IAMs_20	IAMs_20		02 40 06.9	
	comp=Z,768nm,21.0s							
PB11	IPOC Station P	156.15	140	IAMs_20	IAMs_20		02 38 39.4	
	comp=Z,573nm,21.0s							
GO01	Chusmiza	156.51	141	IAMs_20	IAMs_20		02 44 18.9	
	comp=Z,545nm,19.0s							
PB12	IPOC Station P	156.53	137	IAMs_20	IAMs_20		02 34 45.6	
	comp=Z,550nm,20.0s							
AP01	Chacalluta	156.69	137	IAMs_20	IAMs_20		03 04 12.9	
	comp=Z,521nm,21.0s							
SJG	San Juan	156.91	31	IAMs_20	IAMs_20		03 00 01.5	
	comp=Z,668nm,22.0s							
HUMP	Col San Antoni	157.04	31			PKPdf	01 37 31.1	+1.1
ROSC	El Rosal	158.45	73	PKP		PKPdf	01 37 32.8	+0.3
	comp=Z,35nm,0.8s,baz=129,slow=6.5,SNR=16							
SJMB	Sao Joao De Ma	159.02	215	*e*P		PKPdf	01 37 31.9	-0.6
LPAZ	La Paz	159.64	137	PKP		PKPdf	01 37 34.4	+0.4
	comp=Z,19nm,0.8s,baz=183,slow=1.4,SNR=44							
LPAZ	La Paz	159.64	137	*e*P		PKPdf	01 37 32.9	-1.1
SDV	Santo Domingo	160.19	58	PP		PP	01 42 00.9	+4.5
	comp=Z,1.5nm,0.3s,baz=322,slow=5.0,SNR=4.0							
SDV	Santo Domingo	160.19	58	*e*P		PKPdf	01 37 32.7	-1.5
CMC01	Camacan, BA	160.42	225	*e*P		PKPdf	01 37 33.0	-1.1
ITRB	Iturama	161.71	190	*e*P		PKPdf	01 37 34.3	-1.1
MPOM	Morne Mois Mar	162.56	24			PKPab	01 38 24.3	0.0
IPMB	Ipameri, GO	162.84	198	*e*P		PKPdf	01 37 35.5	-1.1
PP1B	Ponte de Pedra	164.06	176	*e*P		PKPdf	01 37 36.7	-1.0
BDFB	Brasilia	164.95	202	PKP		PKPdf	01 37 38.9	+0.1
	comp=Z,14nm,0.9s,baz=159,slow=2.7,SNR=12							
BDFB				PKPab		PKPab	01 38 35.8	+0.9
	comp=Z,21nm,0.9s,baz=159,slow=4.8,SNR=9.3							
BDFB				PP		PP	01 42 22.2	+2.2
	comp=Z,11nm,1.1s,baz=166,slow=4.2,SNR=3.7							
PTLB	Pontes e Lacer	165.24	159	*e*P		PKPdf	01 37 37.0	-1.8
SALV	Santo Antonio	165.66	172	*e*P		PKPdf	01 37 38.3	-0.8
ARAG	Araguaiana, MT	165.86	188	*e*P		PKPdf	01 37 38.4	-0.9
SDBA	SAO DESIDERIO	166.15	219	*e*P		PKPdf	01 37 38.5	-1.1
VILB	Vilhena	167.03	151	*e*P		PKPdf	01 37 41.2	+0.9
TEFE	Tefe	168.94	100	*e*P		PKPdf	01 37 41.9	+0.3
SNDB	Serra Nova Dou	169.41	193	*e*P		PKPdf	01 37 40.9	-1.0
PDRB	Porto dos Gac	169.62	163	*e*P		PKPdf	01 37 41.0	-1.0
SMTB	Santa Maria do	170.55	220	*e*P		PKPdf	01 37 41.8	-0.8
CLDB	Colider	170.56	168	*e*P		PKPdf	01 37 42.4	-0.2
BOAV	Boa Vista	172.13	60	*e*P		PKPdf	01 37 42.3	-1.1
MDP	Montagnes des	173.26	351	PKPab		PKPab	01 39 12.1	+0.6
	comp=Z,40nm,1.0s,baz=327,slow=3.8,SNR=10							
MDP				PP		PP	01 43 04.5	+3.0
	comp=Z,12nm,1.0s,baz=52,slow=7.3,SNR=4.9							
PRPB	Parauapebas	174.01	221	*e*P		PKPdf	01 37 41.3	-2.8
TMAB	Tom-Au,PA,Br	174.32	262	*e*P		PKPdf	01 37 42.0	-2.2
NPGB	Novo Progresso	174.35	163	*e*P		PKPdf	01 37 41.9	-2.4
ITTB	Itaituba	176.60	144	*e*P		PKPdf	01 37 43.9	-0.9

SOME ***15*** *01:18:47.9,41.°33N×81.°87E,h15km*
KRNET ***15*** *01:19:24.5±0.1,41.°99N×80.°67E,mb2.8*

ISC 15 01:19:26.0±4.6, 42.°1N±0.°1×80.°8E±0.°2, h10km, n7, σ0ˢ44/13, 10C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	1.81	284⇓	*i* P	Pn	01 19 57.2	-0.2
PRZ			⇓	*i* S	Sn	01 20 28.8	+0.4
TARG	Taragay, Kyrgy	2.23	263⇑	*i* P	Pn	01 20 03.3	-0.1
TARG			⇑	*i* S	Sn	01 20 31.8	+0.5
KDJ	Kajisay	2.67	273⇑	*i* P	Pn	01 20 09.3	+0.1
KDJ			⇑	*i* S	Sn	01 20 41.9	+0.2
ARXS	Arharly	3.04	316	*e*P	Pn	01 20 02.9	-11
ARXS				*e*S	Sb	01 20 57.0	-0.6
ULHL	Ulahol	3.37	275⇑	*i* P	Pn	01 20 19.3	+0.4
ULHL			⇑	*i* S	Sn	01 20 59.0	0.0
BOOM	Boomskoye usch	3.61	279⇑	*i* P	Pn	01 20 22.6	+0.5
BOOM			⇑	*i* S	Sn	01 21 05.1	+0.3
JNKS	Jany-Kuch	3.96	257⇑	*e*P	Pn	01 20 27.0	-0.1
JNKS			⇑	*e*S	Sn	01 21 13.0	-0.7

IDC ***15*** *01:22:09.7±1.2,1.°81N×126.°65E,h0km,mb4.5/6, mbtmp4.6/7,ML4.5/1, Error ellipse: s-maj=59.2km s-min=20.0km az=71.0*
NEIC ***15*** *01:22:15.8±1.3,1.°67N±0.°09×126.°43E±0.°07,h35km±2km, mb5.4/7, Error ellipse: s-maj=17.3km s-min=10.4km az=207.0*

ISC 15 01:22:15.3±0.7, 1.°70N±0.°09×126.°51E±0.°08, h35km, n25, σ0ˢ99/26, mb5.2/11, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.26	137	Pn	Pn	01 22 37.2	+0.7
LUWI	Luwuk	4.62	234	Pn	Pn	01 23 22.9	+0.2
LUWI				Sn	Sn	01 24 16.8	+1.5
TOLI2	Tolitoli	5.75	264	Pn	Pn	01 23 36.9	-1.4
FAKI	Fak Fak	7.35	129	Pn	Pn	01 23 58.8	-1.4
MYLDM	Lahad Datu	8.71	294	Pn	Pn	01 24 19.1	+0.3
KAPI	Kappang	9.49	225	Pn	Pn	01 24 30.2	+0.7
	4.1nm,0.3s,baz=58,slow=9.1,SNR=1.4 14nm,0.5s						
KAPI	Kappang	9.49	225		Pn	01 24 28.1	-1.5
WB0	Warramunga Arr	22.69	160	P	P	01 27 13.6	-0.4
WB0				IAmb	IAmb	01 27 17.8	
	comp=Z,154nm,1.0s						
WRA	Warramunga Arr	22.84	161	P	P	01 27 14.5	-1.1
	comp=Z,17nm,0.6s,baz=340,slow=11,SNR=4.8 comp=Z,17nm,0.6s						
WR8	Warramunga Arr	22.91	160	P	P	01 27 15.4	-0.9
WR8				IAmb	IAmb	01 27 16.0	
	comp=Z,133nm,1.1s						
AS31	Alice Springs	26.22	165	P	P	01 27 47.8	+0.7
AS31				IAmb	IAmb	01 27 50.4	
	comp=Z,180nm,1.9s						
ASAR	Alice Springs	26.22	165	P	P	01 27 47.6	+0.5
	comp=Z,75nm,1.2s,baz=345,slow=11,SNR=10 comp=Z,75nm,1.2s						
ASAR	Alice Springs	26.22	165	P	P	01 27 47.5	+0.4
HYBB	Hyderabad (bro	49.62	291	*e*P	P	01 31 03.5	-0.3
HYBB				*e*PP	PP	01 32 58.3	-0.2
MKAR	Makanchi Array	59.09	326	P	P	01 32 11.7	-0.5
	comp=Z,1.3nm,0.4s,baz=118,slow=8.5,SNR=2.2 comp=Z,1.3nm,0.4s						
MKAR	Makanchi Array	59.09	326	P	P	01 32 11.8	-0.4
ZALV	Zalesovo Beam	62.29	334	P	P	01 32 33.1	-0.7
	comp=Z,1.0nm,0.4s,baz=123,slow=7.6,SNR=1.6 comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	63.32	328	P	P	01 32 39.9	-0.8
	comp=Z,2.4nm,0.6s,baz=123,slow=6.1,SNR=3.0 comp=Z,2.4nm,0.6s						
KURK	Kurchatov	63.33	328	P	P	01 32 39.2	-1.5
BVAR	Borovoye Array	68.89	327	P	P	01 33 16.7	+0.2
	comp=Z,3.5nm,0.9s,baz=122,slow=7.0,SNR=1.5 comp=Z,3.5nm,0.9s						
ABKAR	Akbulak array	73.58	321	P	P	01 33 44.5	-0.4
KEKH	Kekaha	74.33	68	P	P	01 33 50.1	+0.3
KEKH				IAmb	IAmb	01 36 11.1	
	comp=Z,285nm,1.8s						

SPIA	Saint Paul Isl	74.35	30	P		P	01 33 49.4	+0.2
D19K	Kuna River	83.08	21	P		P	01 34 39.5	+2.4
D19K				IAmb		IAmb	01 36 54.8	
	comp=Z,48nm,1.7s							
SYO	Syowa Base	90.47	201⇑	*e*pP		pP	01 35 25.6	+2.0

IDC ***15*** *01:24:30.3±0.8,1.°81N×126.°63E,h0km,mb4.2/9, mbtmp4.3/11,ML4.1/2, Error ellipse: s-maj=48.1km s-min=16.4km az=74.0*
NEIC ***15*** *01:24:36.3±2.0,1.°73N±0.°10×126.°47E±0.°09,h35km±2km, mb5.0/14, Error ellipse: s-maj=18.0km s-min=13.7km az=41.0*

ISC 15 01:24:35.7±0.6, 1.°74N±0.°08×126.°4E±0.°1, h35km, n36, σ0ˢ94/40, mb4.7/17, 4C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.33	136		Pn	01 24 58.7	+0.9
KAPI	Kappang	9.47	225	Pn	Pn	01 26 51.0	+1.3
	2.3nm,0.3s,baz=2.5,slow=3.8,SNR=2.7 9.7nm,0.5s						
KAPI	Kappang	9.47	225		Pn	01 26 51.5	+1.7
FITZ	Fitzroy Crossi	19.73	182	P	P	01 29 02.4	-0.1
	0.3nm,0.3s,baz=267,slow=18,SNR=1.2 6.8nm,0.7s						
TPUB	Ta-pu	22.16	346	P	P	01 29 29.4	+0.6
TPUB				IAmb	IAmb	01 29 35.0	
	comp=Z,201nm,2.0s						
WB0	Warramunga Arr	22.75	160	P	P	01 29 34.4	-0.8
WB0				IAmb	IAmb	01 29 40.3	
	comp=Z,222nm,2.0s						
WRA	Warramunga Arr	22.90	161	P	P	01 29 35.8	-0.8
	comp=Z,8.4nm,0.9s,baz=339,slow=11,SNR=5.7 comp=Z,8.4nm,0.9s						
WR8	Warramunga Arr	22.97	160	P	P	01 29 36.1	-1.2
WR8				IAmb	IAmb	01 29 43.7	
	comp=Z,62nm,1.4s						
MBWA	Marble Bar	23.69	196	P	P	01 29 42.7	-1.7
PSA00	Pilbara Seismi	24.05	195	P	P	01 29 46.5	-1.3
MNAI	Manna	24.24	255	P	P	01 29 46.9	-2.8
ASAR	Alice Springs	26.28	164	P	P	01 30 08.6	+0.6
	comp=Z,2.7nm,0.5s,baz=345,slow=11,SNR=5.4						
ASAR				PcP	PcP	01 33 33.9	-0.2
	comp=Z,0.8nm,0.5s,baz=348,slow=2.3,SNR=1.8 comp=Z,2.7nm,0.5s						
ASAR	Alice Springs	26.28	164	P	P	01 30 07.8	-0.3
GIRL	Giralia	27.00	205	P	P	01 30 12.9	-1.7
MORW	Morawa	32.22	197	P	P	01 31 00.2	-0.6
MORW				IAmb	IAmb	01 31 07.6	
	comp=Z,17nm,1.1s						
BBOO	Buckleboo	35.55	166	P	P	01 31 29.0	-0.6
KSRS	Korea Array	35.56	2	P	P	01 31 29.4	-0.2
	comp=Z,1.2nm,0.6s,baz=180,slow=7.8,SNR=1.3 comp=Z,1.2nm,0.6s						
HYBB	Hyderabad (bro	49.55	291	*e*P	P	01 33 23.7	0.0
HYBB				*e*PcP	PcP	01 34 45.1	-0.1
HYBB				*e*PP	PP	01 35 18.1	-0.1
HYBB				*e*S	S	01 40 29.4	-0.1
MK31	Makanchi Array	59.02	326	⇑Pg	P	01 34 32.1	0.0
	comp=Z,4.0nm,0.8s,baz=122,slow=7.9,SNR=8.8						
MK31				⇑Lg	Lg	01 35 29.6	
	comp=Z,13nm,1.3s,baz=115,slow=7.9,SNR=13						
MKAR	Makanchi Array	59.02	326	P	P	01 34 32.4	+0.2
	comp=Z,2.7nm,0.7s,baz=122,slow=8.0,SNR=5.5 comp=Z,2.7nm,0.7s						
MKAR	Makanchi Array	59.02	326	P	P	01 34 32.2	0.0
TARG	Taragay, Kyrgy	59.04	319	P	P	01 34 33.7	+0.8
TARG				IAmb	IAmb	01 36 04.3	
	comp=Z,8.6nm,1.2s						
ZALV	Zalesovo Beam	62.22	334	P	P	01 34 53.9	+0.1
	comp=Z,0.8nm,0.3s,baz=125,slow=7.6,SNR=2.3 comp=Z,0.8nm,0.3s						
ZALV	Zalesovo Beam	62.22	334	P	P	01 34 54.0	+0.2
GAR	Garm	63.06	313	P	P	01 34 59.0	-0.9
GAR				IAmb	IAmb	01 36 52.2	
	comp=Z,18nm,1.1s						
KURBB	Kurchatov Arra	63.26	328	P	P	01 35 00.3	-0.4
	comp=Z,4.2nm,0.8s,baz=129,slow=5.9,SNR=6.1 comp=Z,4.2nm,0.8s						
KURBB	Kurchatov Arra	63.26	328	⇑Pg	P	01 34 59.7	-1.0
	comp=Z,9.0nm,1.0s						
KURBB				⇑Lg	Lg	01 36 12.3	
	comp=Z,4.1nm,0.7s						
KURK	Kurchatov	63.26	328	P	P	01 35 00.5	-0.2
CASY	Casey	68.82	187	P	P	01 35 37.1	+0.9
CASY				IAmb	IAmb	01 37 56.8	
	comp=Z,7.6nm,1.1s						
BVAR	Borovoye Array	68.83	327	P	P	01 35 36.7	+0.2
	comp=Z,1.8nm,0.7s,baz=128,slow=9.3,SNR=2.2 comp=Z,1.8nm,0.7s						
ABKAR	Akbulak array	73.50	321	P	P	01 36 05.1	+0.2
VNDA	Vanda	81.50	173	P	P	01 36 49.0	0.0
	comp=Z,1.6nm,0.9s,baz=320,slow=7.9,SNR=2.5 comp=Z,1.6nm,0.9s						
VNDA	Vanda	81.50	173	P	P	01 36 49.5	+0.5
ASF	Jabal al Asfar	88.70	302	P	P	01 37 27.9	+1.8
	comp=Z,3.3nm,0.8s,baz=71,slow=2.8,SNR=4.3 comp=Z,3.3nm,0.8s						
TORD	Torodi Ar. Bea	123.24	287	PKP	PKPdf	01 43 29.5	-0.4
	comp=Z,1.1nm,0.7s,baz=37,slow=4.9,SNR=1.2						
CFA	Coronel Fontan	147.22	156	PKPbc	PKPbc	01 44 15.2	-0.9
	comp=Z,1.0nm,0.4s,baz=228,slow=3.6,SNR=4.8						

IDC ***15*** *01:25:28.0±0.8,1.°83N×126.°57E,h0km,mb4.5/12, mbtmp4.5/14,ML4.5/2, Error ellipse: s-maj=45.5km s-min=14.4km az=72.0*
NEIC ***15*** *01:25:33.8±1.4,1.°74N±0.°10×126.°47E±0.°08,h35km±2km, mb4.7/14, Error ellipse: s-maj=18.6km s-min=11.2km az=31.0*

ISC 15 01:25:33.0±0.6, 1.°79N±0.°09×126.°46E±0.°09, h35km, n37, σ1ˢ07/38, mb4.6/19, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.36	138		Pn	01 25 55.6	+0.2
LUWI	Luwuk	4.64	233	Pn	Pn	01 26 41.5	+0.9
TOLI2	Tolitoli	5.72	263	Pn	Pn	01 26 54.4	-1.1
KAPI	Kappang	9.52	225	Pn	Pn	01 27 47.7	+0.1
	3.2nm,0.3s,baz=46,slow=5.5,SNR=5.0 14nm,0.5s						
KAPI	Kappang	9.52	225		Pn	01 27 47.5	-0.2
FITZ	Fitzroy Crossi	19.78	182	P	P	01 29 59.6	-0.7
	1.2nm,0.3s,baz=36,slow=10,SNR=1.7 4.0nm,0.4s						
FITZ	Fitzroy Crossi	19.78	182	P	P	01 29 59.6	-0.7
WB0	Warramunga Arr	22.79	160	P	P	01 30 31.9	-0.9
WB0				IAmb	IAmb	01 30 40.5	
	comp=Z,73nm,1.4s						
WRA	Warramunga Arr	22.94	161	P	P	01 30 34.3	0.0
	comp=Z,12nm,0.5s,baz=339,slow=11,SNR=8.6 comp=Z,12nm,0.5s						
WRA	Warramunga Arr	22.94	161	P	P	01 30 31.7	-2.6
PSA00	Pilbara Seismi	24.11	195	P	P	01 30 44.5	-1.1
PSA00				IAmb	IAmb	01 31 23.2	
	comp=Z,16nm,1.0s						
ASAR	Alice Springs	26.32	164	P	P	01 31 05.5	-0.2
	comp=Z,4.2nm,0.4s,baz=343,slow=9.3,SNR=8.7						
ASAR				PcP	PcP	01 34 32.4	+1.0
	comp=Z,1.2nm,0.6s,baz=2.9,slow=1.9,SNR=2.6 comp=Z,4.2nm,0.4s						
MORW	Morawa	32.27	197	P	P	01 31 56.9	-1.5
BBOO	Buckleboo	35.59	166	P	P	01 32 27.0	-0.3
STKA	Stephens Creek	36.43	158	P	P	01 32 34.2	-0.3
	comp=Z,7.1nm,0.6s,baz=336,slow=7.0,SNR=3.7 comp=Z,7.1nm,0.6s						
TOO	Toolangi	42.95	158	P	P	01 33 29.0	+0.3
TOO				IAmb	IAmb	01 33 49.3	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	59.00	326	P	P	01 35 29.4	+0.2
	comp=Z,2.0nm,0.4s,baz=119,slow=7.8,SNR=11 comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	59.00	326	P	P	01 35 28.9	-0.3
MAKZ	Makanchi	59.18	326	P	P	01 35 30.5	-0.1
KDJ	Kajisay	59.62	319	P	P	01 35 34.2	+0.3
KDJ				IAmb	IAmb	01 35 48.1	
	comp=Z,4.9nm,0.8s						
ZALV	Zalesovo Beam	62.19	334	P	P	01 35 52.8	+2.0
	comp=Z,0.9nm,0.4s,baz=133,slow=5.1,SNR=2.2 comp=Z,0.9nm,0.4s						
ZALV	Zalesovo Beam	62.19	334	P	P	01 35 54.3	+3.5
KURBB	Kurchatov Arra	63.23	328	P	P	01 35 58.0	+0.3
	comp=Z,3.7nm,0.7s,baz=128,slow=6.2,SNR=5.8 comp=Z,3.7nm,0.7s						

KURK	Kurchatov	63.23	328	P		P	01 35 58.4	+0.6
KURK				IAmb		IAmb	01 36 04.4	
	comp=Z,8.2nm,0.6s							
BVAR	Borovoye Array	68.80	327	P		P	01 36 33.9	+0.3
	comp=Z,2.1nm,0.6s,baz=134,slow=10,SNR=3.6 comp=Z,2.1nm,0.6s							
TIXI	Tiksi	69.77	1	P		P	01 36 38.1	-1.2
	comp=Z,2.2nm,0.3s,baz=166,slow=8.3,SNR=2.0 comp=Z,2.2nm,0.3s							
AB31	Akbulak array	73.48	321	P		P	01 37 02.0	0.0
AB31				IAmb		IAmb	01 37 14.9	
	comp=Z,4.0nm,1.1s							
ABKAR	Akbulak array	73.48	321	P		P	01 37 02.4	+0.4
AKTO	Aktyubinsk	75.01	322	P		P	01 37 11.7	+0.8
	comp=Z,1.8nm,0.6s,baz=105,slow=7.0,SNR=2.0 comp=Z,1.8nm,0.6s							
RAYN	Ar Rayn	81.00	293	P		P	01 37 45.0	+0.2
VNDA	Vanda	81.55	173	P		P	01 37 47.2	+0.7
	comp=Z,2.0nm,0.6s,baz=320,slow=5.5,SNR=7.1 comp=Z,2.0nm,0.6s							
VNDA	Vanda	81.55	173	P		P	01 37 47.2	+0.7
VNDA				IAmb		IAmb	01 37 49.4	
	comp=Z,5.2nm,1.3s							
MAW	Mawson	81.86	200	P		P	01 37 49.4	+1.2
	comp=Z,3.1nm,0.9s,baz=344,slow=5.8,SNR=3.3 comp=Z,3.1nm,0.9s							
F25K	Christian Rive	87.55	23	P		P	01 38 15.9	-1.2
F25K				IAmb		IAmb	01 38 35.7	
	comp=Z,7.1nm,0.8s							
ASF	Jabal al Asfar	88.69	302	P		P	01 38 24.4	+1.0
	comp=Z,2.7nm,0.8s,baz=124,slow=1.8,SNR=4.3 comp=Z,2.7nm,0.8s							
TORD	Torodi Ar. Bea	123.25	287	PKP		PKiKP	01 44 27.9	+0.4
	comp=Z,2.0nm,0.6s,baz=37,slow=4.3,SNR=2.2							
CFA	Coronel Fontan	147.26	156	PKPbc		PKPab	01 45 14.7	-0.4
	comp=Z,2.1nm,0.4s,baz=192,slow=4.8,SNR=6.1							

GUC 15 01:27:40.2±0.6, 22.°89S×67.°17W, h252km±8km, ML3.6, 7C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	2.21	299⇑	*e*P	Pn	01 28 25.2	+0.2
PB09				*e*S	S	01 28 59.3	-1.1
PB06	IPOC Station P	2.23	274⇓	*e*P	Pn	01 28 25.2	+0.1
PB06				*e*S	S	01 28 59.1	-1.5
PB06				IAML		01 29 02.4	
	comp=N,80nm,0.1s						
PB03	IPOC Station P	2.54	289⇑	*e*P	Pn	01 28 28.2	+0.1
PB03				*e*S	S	01 29 04.9	-1.1
PB03				IAML		01 29 07.8	
	comp=E,133nm,0.1s						
PB07	IPOC Station P	2.77	294⇑	*e*P	Pn	01 28 30.9	+0.3
PB07				*e*S	S	01 29 08.8	-1.6
PB07				IAML		01 29 10.5	
	comp=N,104nm,0.3s						
PB05	IPOC Station P	2.80	270⇑	*i* P	Pn	01 28 31.4	+0.5
PB05				*i* S	S	01 29 09.4	-1.4
PB05				IAML		01 29 12.4	
	comp=N,42nm,0.3s						
PB02	IPOC Station P	2.98	301⇑	*e*P	Pn	01 28 32.7	0.0
PB02				*e*S	S	01 29 12.4	-1.8
GO02	Mina Guanaco	3.16	224⇑	*e*P	Pn	01 28 35.1	+0.2
GO02				*e*S	S	01 29 17.6	-0.7
PB10	IPOC Station P	3.18	258	*e*P	Pn	01 28 35.5	+0.8
PB10				*e*S	S	01 29 16.8	-1.1
PB08	IPOC Station P	3.31	326	*e*P	Pn	01 28 37.0	+0.3
PB08				*e*S	S	01 29 21.0	-0.3
PB14	IPOC Station P	3.43	239	*i* P	Pn	01 28 38.4	+0.5
PB14				*i* S	S	01 29 22.4	-1.1
GO01	Chusmiza	3.73	329⇑	*e*P	Pn	01 28 41.6	+0.1
GO01				*e*S	S	01 29 28.8	-1.3
PB11	IPOC Station P	3.89	323	*i* P	Pn	01 28 42.2	-0.8
PB11				*i* S	S	01 29 30.2	-2.6
PB16	IPOC Station P	5.04	334	*i* P	Pn	01 28 57.2	0.0
PB12	IPOC Station P	5.18	325	*i* S	S	01 29 57.4	-3.6

STR 15 01:28:56.0±0.0, 48.°6N±0.°2×7.°8E±0.°1, h4km, Md0.4/4, LOCSAT earthModelID haslach_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STR	Strasbourg	0.03	220	Pg	Pg	01 28 57.1	+0.3
STR				Sg	Sg	01 28 58.7	+1.2
HOHE	HOHENGOEFT	0.21	284	Pg	Pg	01 29 00.0	-0.1
HOHE				Sg	Sg	01 29 03.2	+0.3
OPP	Oppenau	0.28	114	Pg	Pg	01 29 01.2	-0.2
OPP				Sg	Sg	01 29 05

GTA	**Gaotai**	**40.44**	**327**	P	**P**	**01 43 50.3**	**+1.4**
GTA				pmax	pmax		
	comp=Z,14nm,0.6s						
HILR	**Hailar Array B**	**42.99**	**353**	PcP	**PcP**	**01 45 56.3**	**0.0**
	comp=Z,2.2nm,0.4s,baz=180,slow=4.0,SNR=2.7						
EVN	**Everest**	**43.15**	**304**	P	**P**	**01 44 12.0**	**+0.4**
EVN				IAmb	IAmb	01 44 12.7	
	comp=Z,4.7nm,0.5s						
SONM	**Songino Array**	**44.37**	**341**	P	**P**	**01 44 20.0**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=153,slow=9.1,SNR=2.8						
SONM				PcP	**PcP**	**01 46 01.1**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=149,slow=3.1,SNR=2.4						
	comp=Z,0.6nm,0.4s						
PETK	**Petropavlovsk-**	**52.63**	**23**	P	**P**	**01 45 23.4**	**+0.1**
	comp=Z,4.9nm,1.0s,baz=234,slow=7.5,SNR=1.9						
	comp=Z,4.9nm,1.0s						
PETK	**Petropavlovsk-**	**52.63**	**23**	P	**P**	**01 45 23.6**	**+0.3**
MKAR	**Makanchi Array**	**55.00**	**324**	P	**P**	**01 45 41.0**	**+0.3**
	comp=Z,4.5nm,0.5s,baz=116,slow=7.3,SNR=35						
MKAR				PcP	**PcP**	**01 46 39.6**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=104,slow=4.7,SNR=5.3						
	comp=Z,4.5nm,0.5s						
MKAR	**Makanchi Array**	**55.00**	**324**		**P**	**01 45 41.0**	**+0.3**
ZAA0	**Zalesovo Array**	**57.82**	**332**		**P**	**01 45 59.6**	**-0.8**
ZAA0				IAmb	IAmb	01 46 00.5	
	comp=Z,6.1nm,1.0s						
ZALV	**Zalesovo Beam**	**57.82**	**332**	P	**P**	**01 45 59.8**	**-0.6**
	comp=Z,4.3nm,0.4s,baz=122,slow=6.8,SNR=22						
	comp=Z,4.3nm,0.4s						
KURK	**Kurchatov**	**59.12**	**327**		**P**	**01 46 09.8**	**+0.3**
KURK				IAmb	IAmb	01 46 10.3	
	comp=Z,10nm,0.7s						
KURBB	**Kurchatov Arra**	**59.12**	**326**	P	**P**	**01 46 09.5**	**+0.1**
	comp=Z,9.5nm,0.8s,baz=124,slow=6.1,SNR=83						
	comp=Z,9.5nm,0.8s						
GAR	**Garm**	**59.80**	**311**	P	**P**	**01 46 14.6**	**0.0**
GAR				IAmb	IAmb	01 46 15.1	
	comp=Z,8.8nm,0.6s						
CHGR	**Chuyangaron**	**60.57**	**311**	P	**P**	**01 46 19.5**	**-0.2**
CHGR				IAmb	IAmb	01 46 20.5	
	comp=Z,6.7nm,0.7s						
KKAR	**Karatay Array**	**60.95**	**316**		**P**	**01 46 21.9**	**-0.2**
BVAR	**Borovoye Array**	**64.71**	**326**	P	**P**	**01 46 46.6**	**-0.1**
	comp=Z,5.8nm,0.5s,baz=124,slow=8.1,SNR=38						
	comp=Z,5.8nm,0.5s						
AB31	**Akbulak array**	**69.73**	**320**	P	**P**	**01 47 18.4**	**0.0**
AB31				IAmb	IAmb	01 47 19.0	
	comp=Z,4.4nm,0.7s						
ABKAR	**Akbulak array**	**69.73**	**320**	P	**P**	**01 47 18.3**	**0.0**
ARTI	**Arti**	**72.39**	**327**	P	**P**	**01 47 33.8**	**-0.4**
RAYN	**Ar Rayn**	**79.21**	**293**	P	**P**	**01 48 13.1**	**-0.5**
KDAK	**Kodiak Island**	**79.34**	**33**	P	**P**	**01 48 13.4**	**-0.1**
SKT	**Skwentna**	**80.17**	**28**	P	**P**	**01 48 16.0**	**-1.9**
SKT				IAmb	IAmb	01 48 28.6	
	comp=Z,15nm,1.3s						
L22K	**Petersville**	**80.56**	**28**	IAmb	IAmb	01 48 17.8	
	comp=Z,7.9nm,0.9s						
ILAR	**Eielson Array**	**82.37**	**26**	P	**P**	**01 48 27.5**	**-1.9**
	comp=Z,0.7nm,0.6s,baz=248,slow=5.2,SNR=7.3						
	comp=Z,0.7nm,0.6s						
TGL	**Tana Glacier**	**84.36**	**30**	P	**P**	**01 48 38.6**	**-1.2**
I27K	**Kandik River**	**84.56**	**25**	IAmb	IAmb	01 48 43.0	
	comp=Z,11nm,1.0s						
VNDA	**Vanda**	**86.48**	**173**	P	**P**	**01 48 49.9**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=330,slow=6.4,SNR=5.6						
	comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**86.48**	**173**	P	**P**	**01 48 50.3**	**+0.5**
ARCES	**ARCESS Array B**	**87.54**	**340**	P	**P**	**01 48 53.9**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=90,slow=5.4,SNR=21						
	comp=Z,1.7nm,0.4s						
BRTR	**Keskin Array B**	**88.00**	**310**	P	**P**	**01 48 55.7**	**-2.4**
	comp=Z,0.5nm,0.7s,baz=118,slow=4.6,SNR=1.6						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**89.09**	**332**	P	**P**	**01 49 01.1**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=73,slow=3.6,SNR=14						
	comp=Z,1.2nm,0.5s						
FINES	**FINESS Array B**	**89.09**	**332**	P	**P**	**01 49 01.5**	**-1.0**
AKASG	**Malin Array Be**	**89.46**	**321**	P	**P**	**01 49 03.3**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=69,slow=4.6,SNR=3.4						
	comp=Z,0.3nm,0.3s						
MLR	**Muntele Rosu**	**92.63**	**316**	P	**P**	**01 49 18.8**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=101,slow=5.2,SNR=4.9						
	comp=Z,2.8nm,0.8s						
HFS	**Hagfors**	**95.26**	**332**	P	**P**	**01 49 29.2**	**-1.8**
	comp=Z,0.8nm,0.5s,baz=90,slow=4.4,SNR=7.6						
	comp=Z,0.8nm,0.5s						
NOA	**NORSAR Array B**	**96.00**	**334**	P	**P**	**01 49 32.3**	**-2.2**
	comp=Z,0.9nm,0.8s,baz=63,slow=4.8,SNR=3.8						
	comp=Z,0.9nm,0.8s						

IDC ***15*** *01:41:09.3±1.1, 1°.74N×125°.93E, h0km, mb3.7/7, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=123.5km s-min=17.4km az=69.0*
DJA ***15*** *01:41:13.6±1.4, 2°.1N±3°×12°.6E±°, h18km±14km, M3.7/9, MLv3.7/9*

ISC 15 01:41:14.9±0.8, 1°.70N±0°.07×126°.34E±0°.10, h35km, n12, σ1§57/14, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.38**	**132**	P		**P**	**Pn**	**01 41 38.0**	**+0.4**
SGSI	**Sangihe**	**2.14**	**338**	P		**P**	**Pn**	**01 41 49.0**	**+0.9**
SGSI				S		S	**Sn**	**01 42 15.5**	**+2.0**
KMSI	**Cibinong**	**2.61**	**245**	P		P	**Pn**	**01 41 55.3**	**+0.7**
SANI	**Sanana**	**3.74**	**185**	P		P	**Pn**	**01 42 10.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P		**P**		**01 45 40.1**	**-1.0**
	0.1nm,0.3s,baz=13,slow=8.4,SNR=2.0								
	1.2nm,0.5s								
WRA	**Warramunga Arr**	**22.89**	**160**	P		**P**		**01 46 15.2**	**-0.6**
	1.7nm,0.5s,baz=340,slow=9.1,SNR=11								
	1.7nm,0.5s								
ASAR	**Alice Springs**	**26.26**	**164**	P		**P**		**01 46 48.1**	**+1.0**
	0.9nm,0.6s,baz=346,slow=10,SNR=11								
ASAR				PcP		**PcP**		**01 50 14.3**	**+1.1**
	0.4nm,0.8s,baz=7.6,slow=2.8,SNR=2.6								
	0.9nm,0.6s								
STKA	**Stephens Creek**	**36.39**	**158**	P		**P**		**01 48 17.5**	**+1.4**
	2.9nm,1.0s,baz=340,slow=15,SNR=3.0								
	2.9nm,1.0s								
SONM	**Songino Array**	**49.10**	**342**	P		**P**		**01 49 57.0**	**-2.0**
	0.2nm,0.5s,baz=157,slow=9.6,SNR=1.6								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**59.01**	**326**	P		**P**		**01 51 08.8**	**-2.4**
	0.3nm,0.4s,baz=113,slow=8.9,SNR=5.0								
	0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**63.24**	**328**	P		**P**		**01 51 37.8**	**-2.0**
	0.3nm,0.3s,baz=124,slow=6.4,SNR=4.5								
	0.3nm,0.3s								
VNDA	**Vanda**	**81.47**	**173**	P		**P**		**01 53 29.6**	**+1.5**
	0.2nm,0.4s,baz=302,slow=2.0,SNR=1.7								
	0.2nm,0.4s								

NERS ***15*** *01:48:34.2, 65°.00N×167°.88E, h0km, FELT I=V MSK at Chuvanskoe*
IDC ***15*** *01:48:34.8±1.3, 65°.13N×167°.81E, h0km, mb3.9/9, mbtmp3.8/10, ML2.9/1, MS4.5/1, Error ellipse: s-maj=39.6km s-min=19.5km az=5.0*
MOS ***15*** *01:48:36.8±2.3, 65°.32N×167°.77E, h10km, mb4.4/4, Error ellipse: s-maj=23.4km s-min=13.5km az=95.6*
MOS Felt (V) at Chuvanskoye.
NEIC ***15*** *01:48:36.8±1.0, 65°.20N±0°.07×167°.7E±0°.3, h10km±1km, mb4.0/7, Error ellipse: s-maj=18.2km s-min=12.1km az=106.0*

ISC 15 01:48:37.3±0.6, 65°.26N±0°.06×168°.25E±0°.04, h10km, n40, σ1§59/45, mb4.1/16, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BILL	**Bilibino**	**2.90**	**345**				**Pn**	**01 49 25.1**	**+1.7**
BILL	**Bilibino**	**2.90**	**345**	*eP*		**Pn**		**01 49 25.4**	**+2.0**
BILL				*eP*g		**Pg**		**01 49 32.5**	**-0.3**
BILL				Pgmax				01 49 35.2	
	80nm,0.7s								
BILL				*eS*		**Sb**		**01 50 03.0**	**-1.5**
BILL				*eS*g		**Sg**		**01 50 11.8**	**+1.5**
BILL				Sgmax				01 50 19.1	
	630nm,0.4s								
BILL				Sgmax				01 50 19.1	
	480nm,0.5s								
BILL	**Bilibino**	**2.90**	**345**	*eP*		**Pn**		**01 49 25.4**	**+2.0**
BILL				*e*				01 50 03.0	
BILL				pmax	pmax				
	comp=Z,80nm,0.7s								
BILL				smax	smax				
	comp=E,630nm,0.4s								
ANDR	**Anadyr'**	**3.96**	**93**	*eP*g		**Pb**		**01 49 46.8**	**-0.2**
ANDR				*eS*g		**Sg**		**01 50 44.9**	**+0.6**
ANDR				Sgmax				01 50 51.7	
	comp=E,510nm,0.6s								
ANDR	**Anadyr'**	**3.96**	**93**	*eP*		**Pb**		**01 49 46.8**	**-0.2**
SEY	**Seymchan**	**7.33**	**259**	*eP*		**Pn**		**01 50 24.4**	**+0.2**
SEY				*eS*g		**Sb**		**01 52 17.3**	**+5.5**
SEY				Sgmax				01 52 30.1	
	comp=E,80nm,0.8s								
SEY	**Seymchan**	**7.33**	**259**	*eP*		**Pn**		**01 50 24.4**	**+0.2**
PVDR	**Provideniya**	**7.94**	**88**	*eS*		Sb		01 52 19.3	-10
PVDR				Sgmax				01 52 25.5	
	comp=E,90nm,0.6s								
TLAR	**Talaya**	**8.27**	**247**	*eS*		Sb		01 52 48.4	+10
TLAR				Sgmax				01 52 51.3	
	comp=E,70nm,0.6s								
SUUS	**Susuman**	**9.15**	**263**	*eP*		**Pn**		**01 50 50.1**	**+0.9**
SUUS				*eS*g		Sn		01 53 15.6	+44
SUUS				Sgmax				01 53 24.6	
	comp=E,40nm,0.8s								
SUUS	**Susuman**	**9.15**	**263**	*eP*		**Pn**		**01 50 50.1**	**+0.9**
B21K	**Ikpikpuk River**	**14.72**	**56**	Pn		**Pn**		**01 52 07.3**	**+2.2**
TIXI	**Tiksi**	**15.54**	**311**	*i* P		**Pn**		**01 52 16.6**	**+0.6**
TIXI				pmax		pmax			
	comp=Z,2.0nm,0.8s								
E22K	**Anaktuvuk Pass**	**15.85**	**62**	Pn		**P**		**01 52 23.3**	**-0.7**
YAK	**Yakutsk**	**17.23**	**277**	*i* P		**Pn**		**01 52 36.9**	**-0.8**
YAK				pmax		pmax			
	comp=Z,11nm,0.9s								
ILAR	**Eielson Array**	**18.66**	**71**	P		**Pn**		**01 52 55.2**	**0.0**
	baz=283,slow=11,SNR=10								
	comp=Z,0.3nm,0.8s								
J30M	**Hart River**	**22.87**	**66**	P		**P**		**01 53 42.6**	**+2.0**
J30M				IAmb		IAmb		01 53 54.2	
	comp=Z,2.6nm,1.1s								
YSS	**Yuzhno-Sakhali**	**22.92**	**229**	*eP*		**P**		**01 53 38.7**	**-2.3**
YSS				pmax		pmax			
	comp=Z,20nm,1.3s								
ZEA	**Zeya**	**23.31**	**260**	*i* P		**P**		**01 53 44.0**	**-1.0**
SONM	**Songino Array**	**36.48**	**272**	P		**P**		**01 55 39.7**	**-2.6**
	comp=Z,0.3nm,0.6s,baz=44,slow=6.2,SNR=1.9								
SONM				PcP		**PcP**		**01 58 04.0**	**-1.8**
	comp=Z,0.8nm,0.4s,baz=47,slow=0.9,SNR=5.9								
	comp=Z,0.3nm,0.6s								
MXC	**Moxie City**	**41.49**	**81**	P		**P**		**01 56 25.7**	**+1.7**
MXC				IAmb		IAmb		01 56 26.3	
	comp=Z,2.8nm,0.8s								
ARCES	**ARCESS Array B**	**43.00**	**342**	P		**P**		**01 56 35.7**	**-0.4**
	comp=Z,4.6nm,1.1s,baz=29,slow=2.8,SNR=4.3								
	comp=Z,4.6nm,1.1s								
ARCES	**ARCESS Array B**	**43.00**	**342**	P		**P**		**01 56 35.2**	**-0.8**
ARCES				IAmb		IAmb		01 57 11.7	
	comp=Z,14nm,1.4s								
BMO	**Blue Mountains**	**44.12**	**80**	P		**P**		**01 56 47.0**	**+1.5**
BMO				IAmb		IAmb		01 57 07.7	
	comp=Z,1.7nm,1.4s								
BMO	**Blue Mountains**	**44.12**	**80**	P		**P**		**01 56 47.0**	**+1.5**
BMO				pmax		pmax			
	comp=Z,2.0nm,1.4s								
KURK	**Kurchatov**	**45.41**	**297**	*i* P		**P**		**01 56 56.4**	**+0.8**
KURK				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KURBB	**Kurchatov Arra**	**45.52**	**297**	P		**P**		**01 56 55.0**	**-1.4**
	comp=Z,3.9nm,1.0s,baz=38,slow=7.9,SNR=16								
	comp=Z,3.9nm,1.0s								
BVAR	**Borovoye Array**	**46.51**	**304**	P		**P**		**01 57 02.1**	**-2.1**
	comp=Z,1.0nm,0.4s,baz=30,slow=8.2,SNR=5.8								
BVAR				PcP		**PcP**		**01 58 36.4**	**-2.0**
	comp=Z,1.1nm,0.4s,baz=356,slow=1.8,SNR=5.5								
	comp=Z,1.0nm,0.4s								
BORK	**Borovoye**	**46.52**	**305**	*i* P		**P**		**01 57 06.5**	**+2.2**
BORK				pmax		pmax			
	comp=Z,4.0nm,1.0s								
PDAR	**Pinedale Array**	**49.02**	**75**	P		**P**		**01 57 25.2**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=1.2,slow=3.5,SNR=4.6								
PDAR				LR		LR		02 18 34.2	
	comp=Z,597nm,21.7s,baz=294,slow=36								
	comp=Z,0.4nm,0.6s								
PDAR	**Pinedale Array**	**49.02**	**75**	P		**P**		**01 57 25.1**	**+1.0**
NVAR	**Mina Array Bea**	**49.03**	**86**	P		**P**		**01 57 24.9**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=302,slow=6.6,SNR=4.8								
	comp=Z,0.6nm,0.8s								
FINES	**FINESS Array B**	**50.52**	**338**	P		**P**		**01 57 34.0**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=28,slow=6.5,SNR=1.7								
	comp=Z,1.8nm,0.8s								
FINES	**FINESS Array B**	**50.52**	**338**	P		**P**		**01 57 33.7**	**-1.3**
NB201	**NORSAR Array S**	**52.83**	**346**	P		**P**		**01 57 51.7**	**-0.6**
NB2	**NORSAR Subarra**	**52.85**	**346**	P		**P**		**01 57 52.4**	**0.0**
	comp=Z,7.0nm,0.6s,baz=8.0,slow=7.4								
NOA	**NORSAR Array B**	**52.85**	**346**	P		**P**		**01 57 52.1**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=13,slow=7.4,SNR=5.1								
	comp=Z,1.7nm,0.8s								
AB31	**Akbulak array**	**53.22**	**309**	P		**P**		**01 57 54.3**	**-0.9**
AB31				IAmb		IAmb		01 58 12.2	
	comp=Z,3.9nm,1.3s								
ABKAR	**Akbulak array**	**53.22**	**309**	P		**P**		**01 57 54.3**	**-1.0**
EKA	**Eskdalemuir Ar**	**59.55**	**354**	P		**P**		**01 58 40.2**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=6.9,slow=6.2,SNR=6.7								
	comp=Z,1.0nm,0.5s								

IDC ***15*** *01:51:11.3±2.1, 1°.62N×126°.17E, h0km, mb3.7/3, mbtmp3.7/4, ML3.1/1, Error ellipse: s-maj=124.9km s-min=26.9km az=68.0*
DJA ***15*** *01:51:12.4±1.6, 2°.1N±5°×12°.6E±°, h16km±16km, M3.6/6, MLv3.6/6*

ISC 15 01:51:15.0±1.3, 1°.8N±0°.2×126°.6E±0°.4, h35km, n6, σ1§83/6, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**143**	P		P	**Pn**	**01 51 36.0**	**-0.7**
SGSI	**Sangihe**	**2.13**	**330**	P		P	**Pn**	**01 51 46.9**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.82**	**183**	P		**P**		**01 55 41.5**	**-1.2**
	baz=358,slow=9.4,SNR=1.9								
	2.0nm,1.0s								
WRA	**Warramunga Arr**	**22.93**	**161**	P		**P**		**01 56 14.9**	**-1.3**
	1.8nm,0.6s,baz=337,slow=10,SNR=7.2								
	1.8nm,0.6s								
ASAR	**Alice Springs**	**26.32**	**165**	P		**P**		**01 56 49.5**	**+1.9**
	0.4nm,0.5s,baz=348,slow=13,SNR=9.8								
	0.4nm,0.5s								
MKAR	**Makanchi Array**	**59.03**	**326**	P		**P**		**02 01 12.8**	**+1.3**
	0.4nm,0.3s,baz=123,slow=8.4,SNR=1.9								
	0.4nm,0.3s								

OMAN ***15*** *01:51:15.0±0.7, 27°.27N×58°.22E, h10km, mb4.9/8, ml4.1/22, ms4.1/3, Error ellipse: s-maj=5.8km s-min=4.1km az=34.0*
IDC ***15*** *01:51:16.9±1.3, 27°.32N×57°.86E, h0km, mb4.0/19, mbtmp4.0/20, ML4.3/1, Error ellipse: s-maj=26.4km s-min=15.4km az=163.0*
THR ***15*** *01:51:17.5±0.0, 27°.17N×57°.91E, h10km±383km, ML4.3*
NEIC ***15*** *01:51:18.6±2.1, 27°.10N±0°.06×57°.8E±0°.1, h10km±1km, mb4.5/25, Error ellipse: s-maj=17.9km s-min=8.6km az=107.0*
TEH ***15*** *01:51:20.0, 27°.07N×57°.93E, h60km*
DSN ***15*** *01:51:20.1±1.8, 26°.88N×58°.15E, h10km, ML3.8/8, Error ellipse: s-maj=24.8km s-min=14.4km az=152.0*

ISC 15 01:51:16.4±1.5, 27°.15N±0°.03×57°.94E±0°.04, h2km±9km, n156, σ1§62/175, mb4.2/39, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.28**	**284**	Pg		**Pg**		**01 51 42.7**	**+1.8**
GENO	**Geno**	**1.59**	**279**	Pg		**Pg**		**01 51 47.5**	**+0.5**
BANOM	**Banah**	**1.91**	**231**	P		**Pb**		**01 51 51.5**	**-0.5**
BANOM				S		**Sg**		**01 52 18.8**	**+1.0**
SHME	**Shamm**	**1.95**	**236**	P		**Pb**		**01 51 52.9**	**+0.3**
	SNR=17								
SHME				S		**Sg**		**01 52 19.6**	**+0.7**
SHME	**Shamm**	**1.95**	**236**	P		**Pb**		**01 51 52.9**	**+0.3**
SHME				S		**Sg**		**01 52 19.2**	**+0.3**
MDH	**Madha**	**2.36**	**219**	P		**Pn**		**01 51 56.6**	**+0.4**
	SNR=19								
MASF	**Masafi**	**2.38**	**222**	P		**Pb**		**01 51 58.7**	**-1.5**
	SNR=13								
MASF				S		**Sg**		**01 52 32.6**	**-0.5**
MSFE	**Esma-Masafi**	**2.39**	**222**	P		**Pn**		**01 51 58.7**	**+2.0**
MSFE				S		**Sb**		**01 52 29.5**	**-0.8**
UMQ	**Umm Al-Quwin**	**2.60**	**232**	P		**Pb**		**01 52 02.3**	**-1.6**
UOSS	**Minazif**	**2.69**	**216**				**Pn**	**01 52 00.7**	**-0.1**
UOSS	**Minazif**	**2.69**	**216**	P		**Pn**		**01 52 01.2**	**+0.3**
NGRK	**Negar Kerman**	**2.70**	**337**	Pn		**Pn**		**01 52 03.1**	**+1.8**
CHMN	**Cheshme madani**	**2.73**	**353**	Pn		**Pn**		**01 52 03.6**	**+2.0**
CHBR	**Chabahar**	**2.76**	**124**	Pn		**Pn**		**01 52 02.9**	**+1.2**
CHBR	**Chabahar**	**2.76**	**124**	*e*Pn		**Pn**		**01 52 04.1**	**+2.4**
CHBR				IAML				01 53 18.8	
	comp=Z,240nm,1.0s								
HATD	**Hatta, Dubai**	**2.83**	**215**	P		**Pn**		**01 52 03.0**	**+0.3**
HATD				S		**Sb**		**01 52 42.3**	**-0.5**
HATD	**Hatta, Dubai**	**2.83**	**215**	P		**Pn**		**01 52 02.2**	**-0.5**
HATD				S		**Sn**		**01 52 37.2**	**-0.2**
NAZ	**Nazwa, Dubai**	**2.97**	**224**	P		**Pb**		**01 52 07.7**	**-2.4**
	SNR=22								
NAZ	**Nazwa, Dubai**	**2.97**	**224**	P		**Pn**		**01 52 07.6**	**+2.9**
ASHO	**Ashiyiah**	**2.98**	**215**	P		**Pn**		**01 52 07.1**	**+2.3**
	SNR=32								
ASHO				S		**Sb**		**01 52 45.9**	**-1.4**
KRBR	**Kerman**	**3.01**	**340**	Pn		**Pb**		**01 52 08.2**	**-2.7**
KRBR	**Kerman**	**3.01**	**340**	*e*Pn		**Pb**		**01 52 09.0**	**-1.9**
KRBR				IAML				01 53 00.6	
	comp=Z,850nm,1.0s								
FAQ	**Al Faqa, Dubai**	**3.19**	**222**	P		**Pn**		**01 52 09.8**	**+2.1**
FAQ				S		**Sb**		**01 52 51.2**	**-2.1**
LAR1	**LAR**	**3.21**	**280**	Pn		**Pn**		**01 52 09.4**	**+1.4**
SOHO	**SOHO**	**3.26**	**203**	P		**Pn**		**01 52 08.1**	**-0.5**
NGCH	**Negor - Chabah**	**3.38**	**121**	Pn		**Pn**		**01 52 11.7**	**+1.4**
KRM1	**Kerman Provinc**	**3.39**	**350**	Pn		**Pn**		**01 52 13.2**	**+2.5**
ASUD	**Al Ashush, Dub**	**3.44**	**224**	P		**Pn**		**01 52 14.2**	**+3.1**
	SNR=20								
ASUD				S		**Sb**		**01 52 56.7**	**-3.7**
ASUD	**Al Ashush, Dub**	**3.44**	**224**	P		**Pn**		**01 52 14.4**	**+3.3**
KHGB	**Koh Gabri**	**3.46**	**339**	Pn		**Pn**		**01 52 14.4**	**+2.8**
HOQ	**Hoqain**	**3.60**	**189**	Pn		**Pn**		**01 52 13.1**	**-0.2**
HOQ	**Hoqain**	**3.60**	**189**	P		**Pn**		**01 52 13.0**	**-0.2**
	SNR=119								
ALNE	**Al Ain**	**3.66**	**213**	P		**Pn**		**01 52 16.1**	**+1.9**
	SNR=27								
ALNE	**Al Ain**	**3.66**	**213**	P		**Pn**		**01 52 17.0**	**+2.9**
AJN	**Ajban**	**3.70**	**227**	P		**Pn**		**01 52 16.4**	**+1.7**
AJN				S		**Sn**		**01 53 02.6**	**+3.7**
WSAR	**Wadi Sarin**	**3.94**	**171**	P		**Pn**		**01 52 18.7**	**+0.7**
WSAR				S		**Sn**		**01 53 05.0**	**+0.1**
SRVN	**Saravan**	**3.98**	**85**	Pn		**Pn**		**01 52 19.8**	**+1.1**
SRVN	**Saravan**	**3.98**	**85**	*e*Pn		**Pn**		**01 52 20.9**	**+2.3**
SRVN				IAML				01 53 53.6	
	comp=Z,63nm,1.0s								
ARQ	**Araqi**	**4.01**	**199**	P		**Pn**		**01 52 20.7**	**+1.8**
	SNR=25								
ARQ				S		**Sn**		**01 53 09.4**	**+2.9**
SMDO	**Samad**	**4.07**	**179**	P		**Pn**		**01 52 20.5**	**+0.5**
	SNR=48								
SMDO				S		**Sn**		**01 53 09.2**	**+0.9**
JHRM	**Jahrom**	**4.09**	**290**	Pn		**Pn**		**01 52 22.4**	**+2.2**
LMD1	**Lamerd**	**4.25**	**274**	Pn		**Pn**		**01 52 24.0**	**+1.6**
LMD1	**Lamerd**	**4.25**	**274**	*e*Pn		**Pn**		**01 52 24.0**	**+1.6**
LMD1				IAML				01 54 09.2	
	comp=Z,300nm,1.0s								
BSY	**Bisya**	**4.44**	**189**	P		**Pn**		**01 52 25.9**	**+1.1**
	SNR=25								
NHDN	**Nehbandan**	**4.61**	**23**	Pn		**Pn**		**01 52 29.4**	**+2.0**
WBK	**Wadi Bani Khal**	**4.62**	**168**	Pn		**Pn**		**01 52 27.6**	**+0.4**
WBK	**Wadi Bani Khal**	**4.62**	**168**	P		**Pn**		**01 52 27.7**	**+0.4**
	SNR=49								
WBK				S		**Sn**		**01 53 21.0**	**-0.6**
JMDO	**Jabal Madar**	**4.76**	**178**	P		**Pn**		**01 52 30.3**	**+1.0**
IBAF	**Bafgh**	**4.89**	**336**	Pn		**Pn**		**01 52 34.0**	**+2.9**
BSRN	**Basiran**	**4.91**	**12**	*e*Pn		**Pn**		**01 52 32.8**	**+1.3**
BSRN				IAML				01 54 05.2	
	comp=Z,120nm,1.0s								
UMZA	**Um Al Zommool**	**5.08**	**210**	P		**Pn**		**01 52 34.8**	**+1.1**
IMEH	**Mehriz**	**5.13**	**326**	Pn		**Pn**		**01 52 37.0**	**+2.4**
JLN	**Jalan Bani Buh**	**5.15**	**165**	P		**Pn**		**01 52 34.6**	**-0.1**
	SNR=59								
JLN				S		**Sn**		**01 53 34.4**	**-0.4**
ITEG	**Tejag**	**5.77**	**7**	Pn		**Pn**		**01 52 44.8**	**+1.5**
MZR	**Muzera**	**5.78**

	comp=Z,1.0nm,0.7s							
IDI	**Anoyia**	**29.30**	**294**	P		**P**	**01 57 20.8**	**+0.3**
AKASG	**Malin Array Be**	**32.09**	**325**	P		**P**	**01 57 43.0**	**-1.8**
	comp=Z,1.2nm,0.5s,baz=130,slow=8.4,SNR=6.3							
	comp=Z,1.2nm,0.5s							
BURAR	**Bucovina Array**	**32.71**	**317**	P		**P**	**01 57 48.8**	**-1.7**
ZALV	**Zalesovo Beam**	**33.29**	**29**	P		**P**	**01 57 56.0**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=244,slow=9.5,SNR=4.1							
	comp=Z,3.3nm,0.7s							
STHS	**Stebnicka Huta**	**35.87**	**318**	*e*P		**P**	**01 58 19.2**	**+1.4**
GTA	**Gaotai**	**36.77**	**60**	*e*P		**P**	**01 58 28.8**	**+3.1**
GTA				sP		sP	01 58 37.6	+11
GTA				pmax		pmax		
	comp=Z,5.0nm,1.3s							
GTA				LR		LR		
	comp=N,570nm,16.0s							
GTA				LR		LR		
	comp=E,600nm,14.5s							
GTA				LR		LR		
	comp=Z,910nm,18.2s							
CUC	**Castrocucco**	**37.03**	**301**	P		**P**	**01 58 27.5**	**-0.3**
CUC				IAmb		IAmb	01 58 32.2	
	comp=Z,16nm,1.1s							
MODS	**Modra-Piesok**	**37.91**	**315**	*e*P		**P**	**01 58 36.2**	**+1.1**
RONA	**Rosalia, Austr**	**38.33**	**314**	*e*P		**P**	**01 58 37.6**	**-1.0**
	comp=Z,2.9nm,0.5s							
NRCA	**Norcia**	**39.43**	**305**	P		**P**	**01 58 49.4**	**+1.3**
NRCA				IAmb		IAmb	01 58 52.6	
	comp=Z,8.9nm,0.8s							
FDMO	**Fiordimonte**	**39.48**	**306**	P		**P**	**01 58 49.6**	**+1.1**
FDMO				IAmb		IAmb	01 58 49.8	
	comp=Z,16nm,1.1s							
MOA	**Molln**	**39.68**	**313**	*e*P		**P**	**01 58 49.8**	**-0.3**
	comp=Z,1.9nm,0.5s							
CKRC	**Cesky Krumlov**	**39.92**	**315**	*e*P		**P**	**01 58 51.3**	**-0.7**
BIOA	**Bad Ischl, Aus**	**40.05**	**313**	*i* P		**P**	**01 58 52.8**	**-0.3**
	comp=Z,3.1nm,0.5s							
KBA	**Koelnbreinsper**	**40.09**	**312**	*i* P		**P**	**01 58 53.0**	**-0.6**
	comp=Z,2.3nm,0.7s							
ZVC	**Zvikov**	**40.18**	**316**	*e*P		**P**	**01 58 54.0**	**-0.1**
GEC2	**GERESS Array S**	**40.32**	**315**	P		**P**	**01 58 55.1**	**-0.2**
GEC2				IAmb		IAmb	01 58 58.5	
	comp=Z,13nm,1.4s							
GERES	**GERESS Array B**	**40.32**	**315**	P		**P**	**01 58 54.6**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=105,slow=8.4,SNR=9.6							
	comp=Z,1.3nm,0.6s							
FINES	**FINESS Array B**	**40.39**	**337**	P		**P**	**01 58 55.4**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=127,slow=8.2,SNR=20							
	comp=Z,1.8nm,0.4s							
KHC	**Kasperske Hory**	**40.48**	**315**	P		**P**	**01 58 55.7**	**-0.9**
KHC				IAmb		IAmb	01 58 59.3	
	comp=Z,8.0nm,1.0s							
KHC	**Kasperske Hory**	**40.48**	**315**	*e*P		**P**	**01 58 55.4**	**-1.1**
KHC	**Kasperske Hory**	**40.48**	**315**	*e*P		**P**	**01 58 55.5**	**-1.1**
ABTA	**Abfaltersbach**	**40.57**	**311**	*i* P		**P**	**01 58 57.3**	**-0.2**
	comp=Z,1.5nm,0.5s							
LESA	**Schwarzleotal**	**40.62**	**312**	*e*P		**P**	**01 58 57.2**	**-0.6**
	comp=Z,1.7nm,0.4s							
WTTA	**Wattenberg**	**41.27**	**312**	*e*P		**P**	**01 59 02.5**	**-0.9**
	comp=Z,2.9nm,0.5s							
CLL	**Collm**	**41.47**	**318**	*i* P		**P**	**01 59 06.8**	**+2.1**
	comp=Z,11nm,1.4s							
SQTA	**Sankt Quirin**	**41.55**	**312**	*i* P		**P**	**01 59 04.6**	**-1.0**
	comp=Z,2.7nm,0.4s							
MOTA	**Moosalm**	**41.64**	**312**	*i* P		**P**	**01 59 05.4**	**-0.9**
	comp=Z,2.2nm,0.6s							
FETA	**Feichten**	**41.83**	**311**	*i* P		**P**	**01 59 06.6**	**-1.3**
	comp=Z,1.8nm,0.4s							
RETA	**Reute**	**41.90**	**312**	*i* P		**P**	**01 59 07.6**	**-0.8**
	comp=Z,1.2nm,0.5s							
FUORN	**Ofenpass-Fuorn**	**42.06**	**310**	P		**P**	**01 59 10.6**	**+0.6**
FUORN				IAmb		IAmb	01 59 13.1	
	comp=Z,5.0nm,0.6s							
DAVA	**Damuels**	**42.45**	**311**	*e*P		**P**	**01 59 11.6**	**-1.4**
	comp=Z,4.3nm,0.6s							
TUE	**Stuetta**	**42.66**	**310**	P		**P**	**01 59 15.0**	**+0.2**
TUE				IAmb		IAmb	01 59 17.8	
	comp=Z,5.7nm,0.8s							
SENIN	**Lac Senin/Sane**	**44.05**	**310**	P		**P**	**01 59 26.3**	**+0.3**
SENIN				IAmb		IAmb	02 00 01.5	
	comp=Z,13nm,1.4s							
BNI	**Bardonecchia**	**44.32**	**308**	P		**P**	**01 59 27.6**	**-0.5**
HFS	**Hagfors**	**44.57**	**330**	P		**P**	**01 59 28.3**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=128,slow=9.6,SNR=13							
	comp=Z,1.2nm,0.4s							
SSB	**Saint Sauveur**	**45.85**	**308**	P		**P**	**01 59 39.7**	**-0.5**
NB2	**NORSAR Subarra**	**46.07**	**331**	P		**P**	**01 59 42.1**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=114,slow=7.9							
NOA	**NORSAR Array B**	**46.07**	**331**	P		**P**	**01 59 40.0**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=115,slow=7.7,SNR=5.8							
	comp=Z,1.3nm,0.9s							
ARCES	**ARCESS Array B**	**46.42**	**345**	P		**P**	**01 59 43.5**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=143,slow=9.1,SNR=9.6							
	comp=Z,0.6nm,0.4s							
ARCES	**ARCESS Array B**	**46.42**	**345**	P		**P**	**01 59 43.6**	**-0.6**
EKA	**Eskdalemuir Ar**	**51.79**	**320**	P		**P**	**02 00 25.7**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=96,slow=7.6,SNR=2.4							
	comp=Z,0.8nm,0.5s							
ESDC	**Sonseca Array**	**52.23**	**301**	P		**P**	**02 00 29.1**	**-0.1**
	comp=Z,4.2nm,1.1s,baz=66,slow=7.7,SNR=10							
	comp=Z,4.2nm,1.1s							
PAB	**San Pablo**	**52.54**	**300**	P		**P**	**02 00 31.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**54.20**	**267**	P		**P**	**02 00 43.2**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=50,slow=10,SNR=5.8							
	comp=Z,3.1nm,0.6s							
SPITS	**Spitsbergen Ar**	**54.44**	**350**	P		**P**	**02 00 44.3**	**-0.5**
	comp=Z,5.8nm,0.9s,baz=148,slow=8.5,SNR=1.9							
	comp=Z,5.8nm,0.9s							
BOSA	**Boshof**	**63.69**	**212**	P		**P**	**02 01 51.1**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=63,slow=8.2,SNR=3.6							
	comp=Z,2.6nm,0.9s							
BOSA	**Boshof**	**63.69**	**212**	P		**P**	**02 01 49.3**	**-0.4**
A36M	**Sachs Harbour**	**81.11**	**1**	P		**P**	**02 03 33.9**	**+1.0**
A36M				IAmb		IAmb	02 03 34.7	
	comp=Z,3.3nm,0.7s							
D25K	**Kavik River**	**82.19**	**8**	P		**P**	**02 03 40.0**	**+1.2**
D25K				IAmb		IAmb	02 03 41.8	
	comp=Z,4.2nm,0.9s							
ILAR	**Eielson Array**	**86.36**	**10**	P		**P**	**02 04 00.2**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=339,slow=6.1,SNR=3.3							
	comp=Z,0.5nm,0.8s							
J26L	**Joseph Creek**	**87.12**	**9**	P		**P**	**02 04 04.3**	**+0.5**
J26L				IAmb		IAmb	02 04 08.1	
	comp=Z,2.9nm,0.9s							

*BJI **15** 01:57:25.1, 13˚.23N×119˚.86E, h40km, mB5.2/5, mb4.6/38, Ms4.6/6, Ms? 4.4/6*
*DJA **15** 01:57:25.8±2.8, 14˚N±3˚×12˚0E±˚, h18km±21km, M4.7/18, mb4.6/18, mB5.5/3, Mw(mB)5.0/3*
*NEIC **15** 01:57:26.9±1.9, 13˚.19N±0˚.07×119˚.92E±0˚.08, h47km±6km, mb4.8/39, Error ellipse: s-maj=12.6km s-min=8.8km az=117.0*
*IDC **15** 01:57:27.5±1.9, 13˚.20N×119˚.94E, h58km±17km, mb4.1/29, mbtmp4.4/30, Error ellipse: s-maj=17.3km s-min=9.5km az=74.0*
ISC 15 01:57:27.5±1.0, 13˚.30N±0˚.05×119˚.87E±0˚.06, h51km±9km, n123, σ1§84/122, mb4.6/59, MS4.4/3, 9C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.30**	**52**	P	**Pn**	**01 57 48.8**	**-0.6**
	4µm,0.4s,baz=270,slow=5.1,SNR=42						
TGY				S	**Sn**	**01 58 06.7**	**+0.8**
	15µm,0.6s,baz=267,slow=12,SNR=8.7						
MYLDM	**Lahad Datu**	**8.19**	**190**		**Pn**	**01 59 20.3**	**-3.5**
QIZ	**Qiongzhong**	**11.19**	**302**	P	**Pn**	**02 00 04.6**	**-0.2**
QIZ				S	**Sn**	**02 02 06.1**	**-2.4**
QIZ				LR	LR		
	comp=N,720nm,9.0s						
QIZ				LR	LR		
	comp=E,850nm,13.6s						
QIZ				LR	LR		
	comp=Z,860nm,15.5s						
APSI	**Ampana**	**14.23**	**173**	P	**P**	**02 00 52.5**	**+0.1**
SPSI	**Sidrap Palu**	**17.16**	**180**	P	**P**	**02 01 30.1**	**+5.3**
	20nm,1.3s						
SLVN	**Son La**	**17.20**	**300**		**Pn**	**02 01 23.3**	**-1.1**
BBKI	**Banjar Baru**	**17.39**	**197**	P	**P**	**02 01 33.3**	**+5.9**
	11µm57nm,0.8s						
GYA	**Guiyang**	**18.02**	**319**	‖P	**Pn**	**02 01 35.8**	**+1.3**
GYA				pmax	pmax		
	comp=Z,28nm,0.8s						
KAPI	**Kappang**	**18.20**	**180**	P	**Pn**	**02 01 36.6**	**0.0**
	11nm,0.4s,baz=5.0,slow=9.8,SNR=6.5						

BKSI	**Bulukumba**	**18.51**	**179**	P		**Pn**	**02 01 46.6**	**+6.3**
NJ2	**Nanjing**	**18.68**	**357**	*e*P		**Pn**	**02 01 42.8**	**+0.5**
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
BSSI	**Bau Bau, Buton**	**19.33**	**178**	P		**Pn**	**02 01 55.4**	**+5.2**
	38nm,1.4s							
KULM	**Kulim**	**20.56**	**249**			**P**	**02 02 03.0**	**+0.9**
KULM				IAmb		IAmb	02 02 03.9	
	comp=Z,40nm,1.2s							
IPM	**Ipoh**	**20.56**	**246**			**P**	**02 02 02.2**	**-0.1**
IPM				IAmb		IAmb	02 02 03.1	
	comp=Z,41nm,1.3s							
CMAR	**Chiang Mai Arr**	**20.76**	**287**	P		**P**	**02 02 05.4**	**+1.0**
	comp=Z,14nm,0.9s,baz=98,slow=9.0,SNR=57							
	comp=Z,14nm,0.9s							
CMAR	**Chiang Mai Arr**	**20.76**	**287**			**P**	**02 02 04.7**	**+0.3**
CHTO	**Chiang Mai**	**20.84**	**288**	P		**P**	**02 02 04.8**	**-0.4**
PZH	**PanZhiHua**	**21.48**	**310**	P		**P**	**02 02 13.5**	**+1.4**
PZH				pmax		pmax		
	comp=Z,20nm,1.2s							
KMPI	**Kaimana, Papua**	**21.74**	**140**	P		**P**	**02 02 20.4**	**+5.6**
PLAI	**Plampang**	**22.09**	**186**	P		**P**	**02 02 25.3**	**+6.8**
LYN	**LuoYang**	**22.19**	**344**	P		**P**	**02 02 21.4**	**+1.9**
LYN				pmax		pmax		
	comp=Z,53nm,1.1s							
LYN				LR		LR		
	comp=Z,890nm,12.7s							
LYN				LR		LR		
	comp=Z,610nm,12.4s							
LYN				LR		LR		
	comp=Z,870nm,13.7s							
XAN	**Xi'an**	**22.91**	**336**	⇑P		**P**	**02 02 26.8**	**-0.5**
XAN				pmax		pmax		
	comp=Z,22nm,0.8s							
TIA	**Tai'an**	**22.94**	**354**	P		**P**	**02 02 28.4**	**+0.9**
TIA				pmax		pmax		
	comp=Z,13nm,1.1s							
RPSI	**Rantau Prapat**	**23.24**	**245**	P		**P**	**02 02 28.9**	**-1.7**
BATI	**Baumata**	**23.66**	**171**	P		**P**	**02 02 32.1**	**-2.5**
	comp=Z,28nm,0.4s,baz=46,slow=1.8,SNR=9.4							
	comp=Z,28nm,0.4s							
KCSI	**Kotacane, Aceh**	**23.90**	**248**	P		**P**	**02 02 42.4**	**+5.6**
	comp=Z,11nm,1.2s							
KSRS	**Korea Array**	**25.10**	**15**	P		**P**	**02 02 47.7**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=199,slow=10,SNR=4.8							
	comp=Z,2.6nm,0.9s							
DL2	**Dalian**	**25.55**	**3**	P		**P**	**02 02 53.3**	**+1.8**
DL2				pmax		pmax		
	comp=Z,46nm,0.8s							
GENI	**Genyem**	**25.60**	**127**	P		**P**	**02 02 55.4**	**+3.2**
LZDM	**Lanzhou Array**	**26.84**	**330**	P		**P**	**02 03 03.3**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=130,slow=13,SNR=1.2							
	comp=Z,1.0nm,0.3s							
LZH	**Lanzhou**	**26.88**	**330**	*e*P		**P**	**02 03 01.8**	**-2.0**
LZH				pmax		pmax		
	comp=Z,9.0nm,1.1s							
LZH				LR		LR		
	comp=Z,640nm,13.4s							
LZH				LR		LR		
	comp=Z,600nm,14.1s							
LZH				LR		LR		
	comp=Z,840nm,17.0s							
HHC	**Hu-ho-hao-te**	**28.39**	**347**	*e*P		**P**	**02 03 20.0**	**+2.8**
HHC				pmax		pmax		
	comp=Z,11nm,0.7s							
HHC				pmax		pmax		
	comp=Z,270nm,6.0s							
SHL	**Shillong**	**29.00**	**299**	P		**P**	**02 03 22.1**	**-0.8**
SHL				IAmb		IAmb	02 03 22.8	
	comp=Z,17nm,1.0s							
XLT	**XiLinHaoTe**	**30.66**	**355**	*e*P		**P**	**02 03 38.0**	**+0.7**
XLT				pmax		pmax		
	comp=Z,11nm,1.0s							
XLT				pmax		pmax		
	comp=Z,470nm,10.9s							
GTA	**Gaotai**	**31.46**	**329**	*e*P		**P**	**02 03 45.8**	**+1.4**
GTA				PcP		**PcP**	**02 06 38.1**	**+1.4**
GTA				pmax		pmax		
	comp=Z,6.0nm,1.2s							
GTA				LR		LR		
	comp=Z,570nm,16.4s							
GTA				LR		LR		
	comp=Z,600nm,14.5s							
GTA				LR		LR		
	comp=Z,910nm,17.8s							
FITZ	**Fitzroy Crossi**	**31.72**	**170**	P		**P**	**02 03 44.5**	**-2.2**
	comp=Z,4.5nm,0.8s,baz=348,slow=9.3,SNR=5.6							
	comp=Z,4.5nm,0.8s							
USRK	**Ussuriysk Ar.**	**32.49**	**16**	P		**P**	**02 03 52.9**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=188,slow=8.2,SNR=5.2							
	comp=Z,3.3nm,0.7s							
EVN	**Everest**	**34.06**	**301**	P		**P**	**02 04 07.3**	**-0.7**
EVN				IAmb		IAmb	02 04 19.6	
	comp=Z,14nm,1.3s							
WB0	**Warramunga Arr**	**35.84**	**156**			**P**	**02 04 19.4**	**-3.1**
WB0				IAmb		IAmb	02 04 35.7	
	comp=Z,10nm,0.9s							
WRAB	**Tennant Creek**	**35.97**	**156**	P		**P**	**02 04 21.1**	**-2.5**
WRAB				IAmb		IAmb	02 04 37.1	
	comp=Z,12nm,0.8s							
WRA	**Warramunga Arr**	**35.98**	**156**	P		**P**	**02 04 20.7**	**-3.0**
	comp=Z,4.5nm,0.7s,baz=336,slow=9.5,SNR=16							
WRA				PcP		**PcP**	**02 06 47.3**	**-2.3**
	comp=Z,0.8nm,0.8s,baz=319,slow=3.4,SNR=2.3							
	comp=Z,4.5nm,0.7s							
SONM	**Songino Array**	**36.21**	**345**	P		**P**	**02 04 25.8**	**+0.2**
	comp=Z,5.1nm,0.9s,baz=167,slow=9.5,SNR=22							
SONM				PcP		**PcP**	**02 06 50.3**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=163,slow=2.9,SNR=4.1							
	comp=Z,5.1nm,0.9s							
HEH	**HeiHe**	**37.36**	**8**	*e*P		**P**	**02 04 35.3**	**+0.2**
HEH				pmax		pmax		
	comp=Z,13nm,1.3s							
AS31	**Alice Springs**	**39.22**	**159**			**P**	**02 04 49.2**	**-2.0**
ASAR	**Alice Springs**	**39.22**	**159**	P		**P**	**02 04 49.4**	**-1.8**
	comp=Z,4.5nm,0.6s,baz=338,slow=7.0,SNR=20							
ASAR				PcP		**PcP**	**02 06 58.9**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=340,slow=2.8,SNR=4.6							
	comp=Z,4.5nm,0.6s							
ASAR	**Alice Springs**	**39.22**	**159**			**P**	**02 04 49.1**	**-2.0**
WMQ	**Urumqi**	**41.04**	**324**	*e*P		**P**	**02 05 07.6**	**+1.5**
CTAO	**Charters Tower**	**42.13**	**141**			**P**	**02 05 14.0**	**-1.1**
CTAO	**Charters Tower**	**42.13**	**141**	P		**P**	**02 05 14.5**	**-0.6**
ZSN	**Zaisan**	**44.84**	**326**	*e*P		**P**	**02 05 37.2**	**+0.6**
SHLS	**Shalkode**	**45.71**	**318**	*e*P		**P**	**02 05 42.1**	**-1.7**
	comp=Z,13nm,0.9s							
MKAR	**Makanchi Array**	**45.88**	**324**	P		**P**	**02 05 45.6**	**+0.7**
	comp=Z,13nm,0.9s,baz=133,slow=8.4,SNR=29							
MKAR				PcP		**PcP**	**02 07 21.8**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=123,slow=5.0,SNR=3.4							
	comp=Z,13nm,0.9s							
MAKZ	**Makanchi**	**46.06**	**324**	P		**P**	**02 05 47.3**	**+0.9**
TARG	**Taragay, Kyrgy**	**46.16**	**316**	P		**P**	**02 05 48.7**	**+1.0**
SATY	**Saty**	**46.35**	**318**	*e*P		**P**	**02 05 49.3**	**+0.4**
KSH	**Kashi**	**46.56**	**312**	P		**P**	**02 05 52.4**	**+1.9**
KSH				pmax		pmax		
	comp=Z,5.0nm,1.1s							
NIL	**Nilore**	**46.85**	**304**	P		**P**	**02 05 52.7**	**-0.1**
TDK	**Taldyqorghan**	**47.26**	**320**	*e*P		**P**	**02 05 56.4**	**+0.6**
	comp=Z,8.5nm,0.6s							
MDOK	**Medeo**	**47.29**	**317**	*e*P		**P**	**02 05 56.6**	**+0.4**
TNSS	**Tian-Shan**	**47.30**	**317**	*e*P		**P**	**02 05 56.7**	**+0.1**
BOOM	**Boomskoye usch**	**47.74**	**316**	P		**P**	**02 06 00.4**	**+0.7**
BOOM				IAmb		IAmb	02 06 01.8	
	comp=Z,9.4nm,1.3s							
KUU	**Kurty**	**48.07**	**318**	*e*P		**P**	**02 06 02.8**	**+0.7**
	comp=Z,12nm,0.9s							
AAK	**Ala-Archa**	**48.78**	**316**	P		**P**	**02 06 08.3**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=88,slow=9.1,SNR=5.6							
	comp=Z,3.5nm,0.8s							
AAK	**Ala-Archa**	**48.78**	**316**	IAmb		IAmb	02 06 10.0	
	comp=Z,6.6nm,0.9s							
ZALV	**Zalesovo Beam**	**49.04**	**333**	P		**P**	**02 06 09.2**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=131,slow=6.8,SNR=18							
	comp=Z,4.8nm,0.8s							
ZALV	**Zalesovo Beam**	**49.04**	**333**			**P**	**02 06 08.6**	**-0.7**
ARSB	**Arslanbob**	**49.34**	**314**	IAmb		IAmb	02 06 13.6	
	comp=Z,5.8nm,0.8s							
STKA	**Stephens Creek**	**49.52**	**156**	P		**P**	**02 06 10.6**	**-2.6**
	comp=Z,1.3nm,0.5s,baz=283,slow=6.0,SNR=2.9							
	comp=Z,1.3nm,0.5s							
BTLS	**Baital**	**50.04**	**318**	*e*P		**P**	**02 06 17.3**	**+0.2**
KURBB	**Kurchatov Arra**	**50.07**	**327**	P		**P**	**02 06 17.5**	**+0.3**
	comp=Z,18nm,0.9s,baz=122,slow=8.2,SNR=60							
	comp=Z,18nm,0.9s							
KURK	**Kurchatov**	**50.07**	**327**			**P**	**02 06 17.7**	**+0.5**
KURK	**Kurchatov**	**50.07**	**327**	P		**P**	**02 06 17.9**	**+0.7**

GAR	**Garm**	**50.55**	**310**	P		**P**	**02 06 21.1**	**-0.1**
GAR				IAmb		IAmb	02 06 24.1	
	comp=Z,14nm,1.0s							
IUG	**Iuzhnay**	**51.70**	**314**	*e*P		**P**	**02 06 30.3**	**+0.5**
	comp=Z,12nm,1.0s							
BRLS	**Borolday**	**52.12**	**315**	*e*P		**P**	**02 06 33.1**	**+0.3**
BRZS	**Berezniki**	**53.01**	**324**	*e*P		**P**	**02 06 39.7**	**+0.5**
BVAR	**Borovoye Array**	**55.65**	**326**	P		**P**	**02 06 58.6**	**+0.3**
	comp=Z,6.4nm,0.8s,baz=124,slow=9.5,SNR=19							
	comp=Z,6.4nm,0.8s							
BORK	**Borovoye**	**55.70**	**326**	P		**P**	**02 06 59.4**	**+0.8**
TIXI	**Tiksi**	**58.57**	**3**			**P**	**02 07 17.3**	**-1.3**
ARTI	**Arti**	**63.35**	**327**			**P**	**02 07 50.4**	**-0.9**
ARTI				IAmb		IAmb	02 07 51.7	
	comp=Z,6.5nm,0.7s							
ARTI	**Arti**	**63.35**	**327**	P		**P**	**02 07 50.9**	**-0.5**
GNI	**Garni**	**70.22**	**308**			**P**	**02 08 36.9**	**+1.3**
RAYN	**Ar Rayn**	**70.64**	**290**			**P**	**02 08 38.3**	**0.0**
RAYN				IAmb		IAmb	02 08 39.3	
	comp=Z,16nm,0.9s							
RAYN	**Ar Rayn**	**70.64**	**290**	P		**P**	**02 08 38.3**	**0.0**
KBZ	**Khabaz**	**71.54**	**312**	P		**P**	**02 08 43.4**	**+0.1**
	comp=Z,11nm,1.0s,baz=137,slow=2.2,SNR=14							
	comp=Z,11nm,1.0s							
KIV	**Kislovodsk**	**71.69**	**312**			**P**	**02 08 44.8**	**+0.5**
KIV	**Kislovodsk**	**71.69**	**312**	⇑P		**P**	**02 08 45.1**	**+0.7**
KIV	**Kislovodsk**	**71.69**	**312**	P		**P**	**02 08 45.1**	**+0.7**
GAZ	**Gaziantep**	**76.30**	**305**	IAmb		IAmb	02 09 13.3	
	comp=Z,24nm,1.2s							
MMAI	**Mount Meron Ar**	**78.30**	**301**	P		**P**	**02 09 23.2**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=108,slow=8.0,SNR=3.5							
	comp=Z,2.1nm,0.6s							
BR131	**Keskin Array S**	**78.76**	**308**	IAmb		IAmb	02 11 55.5	
	comp=Z,18nm,1.9s							
BRTR	**Keskin Array B**	**78.76**	**308**	P		**P**	**02 09 24.7**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=124,slow=5.0,SNR=11							
	comp=Z,1.8nm,0.8s							
ARCES	**ARCESS Array B**	**79.16**	**339**	P		**P**	**02 09 26.2**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=67,slow=6.7,SNR=19							
	comp=Z,2.0nm,0.5s							
ILAR	**Eielson Array**	**79.46**	**26**	P		**P**	**02 09 27.6**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=277,slow=3.4,SNR=4.5							
	comp=Z,0.6nm,0.8s							
SPITS	**Spitsbergen Ar**	**79.81**	**348**	P		**P**	**02 09 29.6**	**-0.5**
	comp=Z,15nm,0.9s,baz=92,slow=7.1,SNR=5.3							
	comp=Z,15nm,0.9s							
FINES	**FINESS Array B**	**80.24**	**331**	P		**P**	**02 09 31.5**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=55,slow=7.2,SNR=7.5							
	comp=Z,2.8nm,0.7s							
AKASG	**Malin Array Be**	**80.24**	**320**	P		**P**	**02 09 31.1**	**-1.7**
	comp=Z,2.4nm,0.9s,baz=75,slow=3.9,SNR=6.2							
	comp=Z,2.4nm,0.9s							
AKASG	**Malin Array Be**	**80.24**	**320**	IAmb		IAmb	02 09 33.2	
	comp=Z,7.1nm,1.3s							
I26K	**Coal Creek Min**	**80.92**	**25**			**P**	**02 09 36.0**	**-0.1**
I26K				IAmb		IAmb	02 09 40.6	
	comp=Z,7.1nm,1.0s							
I28M	**Miner Creek**	**82.20**	**25**	IAmb		IAmb	02 09 45.7	
	comp=Z,32nm,1.9s							
VRI	**Vrincioaia**	**82.75**	**315**	⇑P		**P**	**02 09 46.6**	**+0.4**
KMBO	**Kilima Mbogo**	**83.07**	**267**	P		**P**	**02 09 49.5**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=47,slow=6.2,SNR=9.0							
	comp=Z,4.4nm,0.7s							
TURR	**Turia**	**83.19**	**316**	⇑P		**P**	**02 09 48.8**	**+0.3**
MLR	**Muntele Rosu**	**83.36**	**315**	⇑P		**P**	**02 09 49.6**	**+0.1**
BURAR	**Bucovina Array**	**83.40**	**317**	P		**P**	**02 09 48.6**	**-1.0**
BURAR				IAmb		IAmb	02 09 51.1	
	comp=Z,7.2nm,1.3s							
BURAR	**Bucovina Array**	**83.40**	**317**	⇑P		**P**	**02 09 50.1**	**+0.5**
BUR08	**Bucovina Ar. S**	**83.40**	**317**	IAmb		IAmb	02 10 01.0	
	comp=Z,11nm,1.3s							
K29M	**Barlow Dome**	**83.64**	**26**			**P**	**02 09 51.2**	**+0.6**
K29M				IAmb		IAmb	02 12 10.4	
	comp=Z,23nm,1.9s							
I30M	**Mount Dempster**	**83.69**	**24**	P		**P**	**02 09 50.3**	**-0.6**
ARR	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.30**	**131**	Pn	**Pn**	**02 00 48.0**	**+0.7**
TNTI	**Ternate**	**1.30**	**131**	P	**Pn**	**02 00 47.6**	**+0.3**
SGSI	**Sangihe**	**2.21**	**337**	P	**Pn**	**02 01 00.3**	**+0.5**
KMSI	**Cibinong**	**2.63**	**246**	P	**Pn**	**02 01 06.0**	**+0.4**
SANI	**Sanana**	**3.68**	**186**	P	**Pn**	**02 01 20.5**	**+0.4**
WRA	**Warramunga Arr**	**22.82**	**160**	P	**P**	**02 05 24.7**	**-1.0**
	2.2nm,0.6s,baz=338,slow=10,SNR=0.9 2.2nm,0.6s						
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**02 05 57.4**	**+0.2**
	0.7nm,0.5s,baz=343,slow=9.1,SNR=0.6 0.7nm,0.5s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	**P**	**02 10 22.9**	**+0.5**
	0.3nm,0.4s,baz=122,slow=7.6,SNR=4.6 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.32**	**328**	P	**P**	**02 10 49.9**	**-1.1**
	0.6nm,0.4s,baz=129,slow=6.8,SNR=2.4 0.6nm,0.4s						

IDC ***15*** *02:04:45.1±1.7,1°.66N×126°.43E,h0km,mb3.7/4, mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=114.8km s-min=21.7km az=69.0*
DJA ***15*** *02:04:50.0±2.0,2°N±3°×12°6E±°,h16km±20km,M4.0/9, MLv4.0/9*
ISC 15 02:04:50.7±1.1,1°.63N±0°.08×126°.4E±0°.1,h35km,n9,
σ1°11/9,mb3.8/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**131**	P	**Pn**	**02 05 13.7**	**+1.1**
SGSI	**Sangihe**	**2.21**	**338**	P	**Pn**	**02 05 25.9**	**+0.9**
SANI	**Sanana**	**3.67**	**186**	P	**Pn**	**02 05 46.0**	**+0.9**
LUWI	**Luwuk**	**4.47**	**234**	P	**Pn**	**02 05 57.2**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**02 09 15.1**	**-1.2**
	0.2nm,0.3s,baz=357,slow=17,SNR=1.5 0.7nm,0.5s						
WRA	**Warramunga Arr**	**22.82**	**160**	P	**P**	**02 09 50.5**	**-0.4**
	1.7nm,0.5s,baz=340,slow=11,SNR=13 1.7nm,0.5s						
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**02 10 21.6**	**-0.7**
	0.5nm,0.4s,baz=345,slow=7.8,SNR=6.9 0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	**P**	**02 14 46.6**	**-1.0**
	0.3nm,0.5s,baz=110,slow=8.4,SNR=2.8 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	**P**	**02 15 16.5**	**+0.4**
	0.3nm,0.3s,baz=128,slow=6.1,SNR=1.4 0.3nm,0.3s						

IDC ***15*** *02:06:22.5±0.5,1°.54N×126°.53E,h0km,mb4.2/20, mbtmp4.2/22,ML4.0/2,MS3.8/1,Error ellipse: s-maj=27.3km s-min=10.0km az=80.0*
DJA ***15*** *02:06:28.7±1.0,2°N±2°×12°6E±°,h29km±10km,M4.6/13, mB5.2/2, mb4.7/2,MLv4.5/13,Mw(mB)4.6/2*
NEIC ***15*** *02:06:29.4±2.1,1°.63N±0°.04×126°.45E±0°.04,h35km±2km, mb4.5/23,Error ellipse: s-maj=9.9km s-min=3.0km az=133.0*
ISC 15 02:06:28.9±0.4,1°.55N±0°.04×126°.48E±0°.06,h35km,n66,
σ1°39/66,mb4.4/35,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**131**		**Pn**	**02 06 49.0**	**+0.2**
TNTI	**Ternate**	**1.18**	**131**	P	**Pn**	**02 06 48.8**	**-0.1**
TNTI				S	**Sn**	**02 07 03.2**	**-0.5**
SGSI	**Sangihe**	**2.32**	**336**	P	**Pn**	**02 07 05.8**	**+1.1**
SGSI				S	**Sn**	**02 07 34.4**	**+2.4**
KMSI	**Cibinong**	**2.68**	**249**	P	**Pn**	**02 07 08.9**	**-0.7**
SANI	**Sanana**	**3.61**	**188**	P	**Pn**	**02 07 22.4**	**0.0**
SANI				S	**Sn**	**02 08 04.1**	**+0.2**
LUWI	**Luwuk**	**4.52**	**235**	Pn	**Pn**	**02 07 36.0**	**+1.1**
LUWI	**Luwuk**	**4.52**	**235**	P	**Pn**	**02 07 35.2**	**+0.3**
MRSI	**Marisa**	**4.67**	**257**	P	**Pn**	**02 07 36.6**	**-0.3**
NLAI	**Namlea**	**4.80**	**173**	P	**Pn**	**02 07 39.2**	**+0.5**
TOLI2	**Tolitoli**	**5.72**	**266**		**Pn**	**02 07 51.2**	**-0.1**
FAKI	**Fak Fak**	**7.28**	**128**		**Pn**	**02 08 16.3**	**+3.5**
MYLDM	**Lahad Datu**	**8.74**	**295**		**Pn**	**02 08 33.9**	**+1.0**
KAPI	**Kappang**	**9.37**	**226**	Pn	**Pn**	**02 08 39.9**	**-1.6**
	1.6nm,0.3s,baz=82,slow=7.5,SNR=4.4						
KAPI				Sn	**Sn**	**02 10 26.2**	**+0.5**
	0.6nm,0.3s,baz=26,slow=19,SNR=1.0 4.4nm,0.3s						
KAPI	**Kappang**	**9.37**	**226**	Pn	**Pn**	**02 08 42.7**	**+1.2**
SBUM	**Sibu**	**14.28**	**274**		**Pn**	**02 09 48.9**	**+0.2**
KNRA	**Kununurra**	**17.27**	**173**		**P**	**02 10 31.5**	**+2.9**
KNRA				IAmb	IAmb	02 10 36.8	
	comp=Z,17nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P	**P**	**02 10 53.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=5.2,slow=8.6,SNR=7.0 comp=Z,2.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P	**Pn**	**02 10 54.9**	**-0.2**
COEN	**Coen**	**22.61**	**134**	P	**P**	**02 11 27.8**	**+1.0**
COEN				IAmb	IAmb	02 12 02.2	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**22.71**	**161**	P	**P**	**02 11 27.2**	**-0.6**
	comp=Z,6.7nm,0.6s,baz=338,slow=11,SNR=24						
WRA				S	**S**	**02 15 30.0**	**-4.2**
	comp=Z,1.3nm,0.7s,baz=341,slow=18,SNR=4.6						
WRA				LR	LR	02 19 31.2	
	comp=Z,249nm,20.1s,baz=24,slow=35 comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	**22.71**	**161**		**P**	**02 11 27.7**	**-0.1**
WR8	**Warramunga Arr**	**22.78**	**160**		**P**	**02 11 28.4**	**-0.1**
WR8				IAmb	IAmb	02 11 43.2	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	**23.88**	**195**	P	**P**	**02 11 40.2**	**+0.8**
PSA00	**Pilbara Seismi**	**23.88**	**195**	P	**P**	**02 11 39.9**	**+0.5**
PSA00				IAmb	IAmb	02 11 58.0	
	comp=Z,30nm,1.5s						
AS31	**Alice Springs**	**26.09**	**164**		**P**	**02 11 59.2**	**-0.3**
AS31				IAmb	IAmb	02 12 07.8	
	comp=Z,3.7nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**02 11 59.2**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=346,slow=11,SNR=12						
ASAR				S	**S**	**02 16 27.9**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=351,slow=18,SNR=7.5 comp=Z,1.4nm,0.5s						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**02 11 59.0**	**-0.5**
NJ2	**Nanjing**	**31.18**	**347**	*e*P	**P**	**02 12 48.0**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JNU	**Nakatsue**	**31.67**	**7**	P	**P**	**02 12 48.3**	**-0.9**
	comp=Z,4.6nm,0.8s,baz=198,slow=9.6,SNR=1.8 comp=Z,4.6nm,0.8s						
JNU	**Nakatsue**	**31.67**	**7**	IAmb	IAmb	02 12 50.0	
	comp=Z,36nm,1.4s						
FORT	**Forrest**	**32.19**	**177**	P	**P**	**02 12 53.9**	**+0.3**
FORT				IAmb	IAmb	02 13 05.4	
	comp=Z,6.8nm,0.8s						
BBOO	**Buckleboo**	**35.36**	**166**	P	**P**	**02 13 21.2**	**0.0**
KSRS	**Korea Array**	**35.75**	**2**	P	**P**	**02 13 24.2**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=178,slow=9.7,SNR=3.0 comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**02 13 27.1**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=324,slow=7.3,SNR=5.1 comp=Z,2.1nm,0.6s						
XAN	**Xi'an**	**36.25**	**335**	P	P	02 13 17.8	-11
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	**Matsushiro Arr**	**36.47**	**16**	P	**P**	**02 13 28.6**	**-2.1**
	comp=Z,1.5nm,0.4s,baz=181,slow=10,SNR=5.4 comp=Z,1.5nm,0.4s						
MJAR	**Matsushiro Arr**	**36.47**	**16**	IAmb	IAmb	02 13 44.8	
	comp=Z,3.3nm,1.0s						
JTM	**Tenmabayashi**	**41.23**	**17**	P	**P**	**02 14 12.5**	**+2.0**
HHC	**Hu-ho-hao-te**	**41.38**	**343**	*e*P	**P**	**02 14 13.1**	**+1.2**
HHC				pmax	pmax		
	comp=Z,14nm,0.5s						
HHC				pmax	pmax		
	comp=Z,260nm,5.3s						
HHC				LR	LR		
	comp=N,210nm,16.6s						
HHC				LR	LR		
	comp=E,340nm,17.5s						
HHC				LR	LR		
	comp=Z,230nm,16.5s						
USRK	**Ussuriysk Ar.**	**42.74**	**6**	P	**P**	**02 14 21.8**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=218,slow=9.0,SNR=5.1 comp=Z,3.2nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**42.86**	**64**	T	T	03 00 29.1	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**42.88**	**64**	T	T	03 00 28.2	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**42.88**	**64**	T	T	03 00 26.7	
	baz=252						
GTA	**Gaotai**	**44.84**	**330**	*e*P	**P**	**02 14 42.0**	**+2.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EVN	**Everest**	**46.11**	**308**	P	**P**	**02 14 48.9**	**-1.8**
EVN				IAmb	IAmb	02 15 03.5	
	comp=Z,3.6nm,0.7s						
HILR	**Hailar Array B**	**48.17**	**354**	P	**P**	**02 15 04.5**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=165,slow=7.4,SNR=2.4 comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**49.27**	**342**	P	**P**	**02 15 12.8**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=160,slow=7.6,SNR=8.4 comp=Z,1.0nm,0.6s						
PETK	**Petropavlovsk-**	**57.53**	**22**	P	**P**	**02 16 13.8**	**-0.9**
	comp=Z,3.0nm,0.5s,baz=212,slow=6.8,SNR=4.7 comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**02 16 25.5**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=121,slow=8.1,SNR=17 comp=Z,1.9nm,0.4s						
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	**02 16 47.3**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=127,slow=6.5,SNR=2.7 comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	**02 16 46.8**	**-1.4**
KURBB	**Kurchatov Arra**	**63.44**	**328**	P	**P**	**02 16 54.1**	**-0.9**
	comp=Z,4.9nm,0.7s,baz=127,slow=6.2,SNR=21 comp=Z,4.9nm,0.7s						
KURK	**Kurchatov**	**63.44**	**328**	P	**P**	**02 16 54.5**	**-0.6**
KURK				IAmb	IAmb	02 16 55.8	
	comp=Z,6.3nm,0.6s						
BVAR	**Borovoye Array**	**69.00**	**328**	P	**P**	**02 17 30.6**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=123,slow=7.1,SNR=14 comp=Z,1.7nm,0.3s						
ARTI	**Arti**	**76.72**	**328**	P	**P**	**02 18 15.6**	**-0.9**
ARTI				IAmb	IAmb	02 18 16.3	
	comp=Z,5.9nm,0.5s						
RAYN	**Ar Rayn**	**81.11**	**293**	P	**P**	**02 18 41.0**	**-0.3**
RAYN				IAmb	IAmb	02 18 46.1	
	comp=Z,3.1nm,0.9s						
VNDA	**Vanda**	**81.31**	**173**	P	**P**	**02 18 41.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=329,slow=4.8,SNR=9.5 comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**81.31**	**173**	P	**P**	**02 18 42.4**	**+1.2**
MAW	**Mawson**	**81.64**	**200**	P	**P**	**02 18 43.6**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=30,slow=2.0,SNR=2.2 comp=Z,1.2nm,0.6s						
F20K	**Avaraart Lake**	**83.82**	**23**	P	**P**	**02 18 56.4**	**+2.0**
KBZ	**Khabaz**	**84.29**	**314**	P	**P**	**02 18 55.6**	**-1.7**
	comp=Z,1.5nm,0.9s,baz=108,slow=6.4,SNR=2.2 comp=Z,1.5nm,0.9s						
GURO	**Guroymak-BITLI**	**84.69**	**308**	P	**P**	**02 18 58.0**	**-1.7**
GURO				IAmb	IAmb	02 19 01.7	
	comp=Z,8.0nm,1.1s						
BRTR	**Keskin Array B**	**91.21**	**310**	P	**P**	**02 19 29.7**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=128,slow=5.5,SNR=3.7 comp=Z,0.7nm,0.8s						
ARCES	**ARCESS Array B**	**92.39**	**340**	P	**P**	**02 19 33.3**	**-2.3**
	comp=Z,2.0nm,0.9s,baz=70,slow=6.3,SNR=4.2 comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**93.62**	**332**	P	**P**	**02 19 39.7**	**-1.7**
	comp=Z,1.9nm,0.9s,baz=70,slow=6.3,SNR=3.8 comp=Z,1.9nm,0.9s						
BUR08	**Bucovina Ar. S**	**96.45**	**318**	P	**P**	**02 19 55.1**	**+0.2**
BUR08				IAmb	IAmb	02 20 20.1	
	comp=Z,3.8nm,1.1s						

IDC ***15*** *02:15:08.0±1.5,1°.41N×126°.00E,h0km,mb3.8/5, mbtmp3.7/6,ML3.2/1,Error ellipse: s-maj=119.0km s-min=19.6km az=67.0*
DJA ***15*** *02:15:13.7±0.3,2°N±2°×12°6E±°,h10km,M3.8/11,mB6.0/1, MLv3.8/11,Mw(mB)5.6/1*
ISC 15 02:15:13.4±0.9,1°.68N±0°.07×126°.49E±0°.09,h35km,n11,
σ2°56/12,mb3.9/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**136**	P	**Pn**	**02 15 37.8**	**+3.3**
SGSI	**Sangihe**	**2.21**	**334**	P	**Pn**	**02 15 49.5**	**+1.8**
SGSI				S	**Sn**	**02 16 16.3**	**+2.4**
KMSI	**Cibinong**	**2.73**	**246**	P	**Pn**	**02 15 56.9**	**+2.0**
SANI	**Sanana**	**3.73**	**188**	P	**Pn**	**02 16 12.5**	**+3.9**
LUWI	**Luwuk**	**4.59**	**234**	P	**Pn**	**02 16 22.6**	**+2.1**
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P	**P**	**02 19 37.4**	**-2.1**
	0.1nm,0.3s,baz=11,slow=13,SNR=1.5 1.4nm,1.0s						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**02 20 12.1**	**-1.5**
	1.0nm,0.4s,baz=335,slow=11,SNR=12 1.0nm,0.4s						
ASAR	**Alice Springs**	**26.20**	**164**	P	**P**	**02 20 43.7**	**-1.4**
	0.2nm,0.4s,baz=344,slow=8.7,SNR=8.3 0.2nm,0.4s						
STKA	**Stephens Creek**	**36.32**	**158**	P	**P**	**02 22 11.4**	**-2.6**
	0.9nm,0.5s,baz=346,slow=12,SNR=1.5 0.9nm,0.5s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**02 25 10.2**	**-0.3**
	0.4nm,0.4s,baz=122,slow=7.6,SNR=6.4 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**02 25 38.5**	**-0.5**
	1.0nm,0.2s,baz=124,slow=6.8,SNR=2.2 1.0nm,0.2s						

SCB 15 02:18:33.7±0.7,17°.97S×63°.62W,h6km±5km,ML2.3/1,
Error ellipse: s-maj=3.5km s-min=3.1km az=1.0,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOEA	**Aiquile**	**1.55**	**262**	Pg	Pn	02 19 02.3	+0.2
AOEA	**Aiquile**	**1.55**	**262**	Pg	Pb	02 19 03.0	0.0
AOEA				Sg	Sg	02 19 25.3	+1.8
SOET	**ToroToro**	**2.09**	**266**	Pg	Pg	02 19 13.1	-0.7
SOET				Sg	Sg	02 19 41.4	+0.5
SOET				IAML		02 19 50.2	
	22nm,0.3s						
SOET	**ToroToro**	**2.09**	**266**	Pg	Pg	02 19 13.8	0.0
SOET				Sg	Sg	02 19 42.0	+1.1
SOET				IAML		02 19 53.1	
	42nm,0.6s						
SIV	**San Ignacio**	**3.14**	**51**	Pn	Pb	02 19 29.0	-0.9
SIV	**San Ignacio**	**3.14**	**51**	Pn	Pb	02 19 29.2	-0.7
MOCB	**Mochara**	**3.77**	**210**	Pn	Pb	02 19 38.2	-2.9
MOCB	**Mochara**	**3.77**	**210**	Pn	Pb	02 19 38.3	-2.8
SOEO	**Opoqueri**	**4.09**	**261**	Pn	Pb	02 19 42.5	-4.0
BBOE	**La Paz, Chanca**	**4.32**	**285**	Pn	Pb	02 19 45.8	-4.6
BBOE	**La Paz, Chanca**	**4.32**	**285**	Pn	Pb	02 19 46.7	-3.7
BBOJ	**La Paz, Jacaqu**	**4.47**	**282**	Pn	Pb	02 19 48.1	-4.9
BBOJ	**La Paz, Jacaqu**	**4.47**	**282**	Pn	Pb	02 19 48.9	-4.1
YJA	**Yavi**	**4.54**	**203**	Pn	Pb	02 19 48.9	-5.3
YJA	**Yavi**	**4.54**	**203**	Pn	Pn	02 19 48.8	+5.3
LPAZ	**La Paz**	**4.62**	**291**	Pn	Pb	02 19 50.3	-5.4
LPAZ	**La Paz**	**4.62**	**291**	Pn	Pb	02 19 50.7	-5.0
BBOB	**La Paz, Bander**	**4.68**	**292**	Pn	Pb	02 19 51.6	-5.0
BBOD	**La Paz, Gloria**	**4.94**	**285**	Pn	Pn	02 19 54.0	+5.0
BBOD	**La Paz, Gloria**	**4.94**	**285**	Pn	Pb	02 19 55.1	-5.8

IDC ***15*** *02:18:44.8±1.5,1°.02N×126°.48E,h0km,mb3.7/4, mbtmp3.7/5,ML3.4/1,Error ellipse: s-maj=109.9km s-min=20.8km az=67.0*
ISC 15 02:18:50.0±1.5,1°.0N±0°.3×126°.4E±0°.6,h35km,n6,σ1°12/6,
mb3.7/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.95**	**182**	P	**P**	**02 23 08.4**	**+0.1**
	0.1nm,0.3s,baz=355,slow=11,SNR=1.3 1.1nm,0.8s						
WRA	**Warramunga Arr**	**22.17**	**160**	P	**P**	**02 23 43.4**	**+0.2**
	1.1nm,0.5s,baz=339,slow=11,SNR=10 1.1nm,0.5s						
ASAR	**Alice Springs**	**25.53**	**164**	P	**P**	**02 24 16.0**	**+0.5**
	0.5nm,0.5s,baz=344,slow=8.1,SNR=8.6 0.5nm,0.5s						
STKA	**Stephens Creek**	**35.67**	**158**	P	**P**	**02 25 44.5**	**-0.5**
	0.6nm,0.2s,baz=0.0,slow=15,SNR=1.7 0.6nm,0.2s						
MKAR	**Makanchi Array**	**59.67**	**326**	P	**P**	**02 28 49.7**	**-1.2**
	0.5nm,0.8s,baz=128,slow=8.2,SNR=2.8 0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**63.91**	**328**	P	**P**	**02 29 20.6**	**+1.3**
	0.4nm,0.2s,baz=120,slow=6.1,SNR=2.1						

IDC ***15*** *02:19:20.1±1.5,1°.60N×126°.15E,h0km,mb4.0/5, mbtmp4.0/6,ML4.0/1,Error ellipse: s-maj=121.4km s-min=19.0km az=67.0*
NEIC ***15*** *02:19:25.3±1.6,1°.7N±0°.1×126°.64E±0°.08,h35km±2km, mb4.4/8,Error ellipse: s-maj=21.3km s-min=8.8km az=210.0*
ISC 15 02:19:24.3±0.9,1°.8N±0°.1×126°.58E±0°.09,h35km,n17,
σ0°92/17,mb4.1/9,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**141**	Pn	**Pn**	**02 19 45.0**	**-0.4**
LUWI	**Luwuk**	**4.71**	**234**	Pn	**Pn**	**02 20 33.3**	**+0.3**
TOLI2	**Tolitoli**	**5.83**	**264**		**Pn**	**02 20 47.5**	**-0.8**
MTN	**Manton Dam**	**15.19**	**163**	P	**P**	**02 23 00.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.75**	**183**	P	**P**	**02 23 49.7**	**-1.6**
	0.3nm,0.3s,baz=0.1,slow=7.6,SNR=6.1 1.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.75**	**183**	P	**P**	**02 23 50.2**	**-1.1**
WB0	**Warramunga Arr**	**22.72**	**161**	P	**P**	**02 24 23.6**	**+0.2**
WB0				IAmb	IAmb	02 24 24.5	
	comp=Z,6.1nm,0.8s						
WRA	**Warramunga Arr**	**22.87**	**161**	P	**P**	**02 24 24.4**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=337,slow=9.5,SNR=9.5 comp=Z,2.5nm,0.5s						
WR8	**Warramunga Arr**	**22.94**	**161**	P	**P**	**02 24 25.2**	**-0.4**
WR8				IAmb	IAmb	02 24 32.4	
	comp=Z,4.9nm,0.8s						
ASAR	**Alice Springs**	**26.26**	**165**	P	**P**	**02 24 56.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=344,slow=7.6,SNR=12 comp=Z,1.0nm,0.5s						
BBOO	**Buckleboo**	**35.53**	**166**	P	**P**	**02 26 17.9**	**-0.1**
BBOO				IAmb	IAmb	02 26 29.3	
	comp=Z,19nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.61**	**194**	P	**P**	**02 26 19.1**	**+0.3**
STKA	**Stephens Creek**	**36.36**	**158**	P	**P**	**02 26 26.5**	**+1.3**
	comp=Z,1.4nm,0.4s,baz=345,slow=12,SNR=3.7 comp=Z,1.4nm,0.4s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**02 29 21.8**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=123,slow=7.7,SNR=5.9 comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	**P**	**02 29 50.5**	**+0.8**
	comp=Z,1.2nm,0.2s,baz=128,slow=6.7,SNR=4.5 comp=Z,1.2nm,0.2s						
KURK	**Kurchatov**	**63.32**	**328**	P	**P**	**02 29 51.1**	**+1.4**
KURK				IAmb	IAmb	02 29 56.5	
	comp=Z,3.1nm,0.8s						
K13K	**Kusilvak Mount**	**78.58**	**27**	P	**P**	**02 31 20.9**	**-1.1**

IDC ***15*** *02:49:18.9±0.9,1°.67N×126°.29E,h0km,mb4.0/8, mbtmp4.0/9,ML3.7/1,Error ellipse: s-maj=60.2km s-min=16.2km az=74.0*
DJA ***15*** *02:49:22.5±0.3,2°N±3°×12°6E±°,h10km,M4.0/12,mB5.1/1, mb4.1/3,MLv4.0/12,Mw(mB)4.4/1*
NEIC ***15*** *02:49:24.3±2.8,1°.74N±0°.10×126°.57E±0°.09,h35km±2km, mb4.0/6,Error ellipse: s-maj=20.3km s-min=8.0km az=220.0*
ISC 15 02:49:24.4±0.7,1°.61N±0°.07×126°.43E±0°.06,h35km,n25,
σ1°18/26,mb4.1/12,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**132**		**Pn**	**02 49 44.4**	**-1.0**
TNTI	**Ternate**	**1.25**	**132**	P	**Pn**	**02 49 45.0**	**-0.4**
TNTI				S	**Sn**	**02 50 01.6**	**+0.6**
SGSI	**Sangihe**	**2.25**	**336**	P	**Pn**	**02 50 00.3**	**+1.1**
KMSI	**Cibinong**	**2.66**	**247**	P	**Pn**	**02 50 02.4**	**-2.4**
LUWI	**Luwuk**	**4.51**	**234**	Pn	**Pn**	**02 50 32.5**	**+2.2**
LUWI	**Luwuk**	**4.51**	**234**	P	**Pn**	**02 50 30.0**	**-0.2**
APSI	**Ampana**	**5.40**	**242**	P	**Pn**	**02 50 41.8**	**-0.7**
	0.2nm2µm51nm,0.7s						
TOLI2	**Tolitoli**	**5.67**	**265**		**Pn**	**02 50 46.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**02 53 49.1**	**-0.6**
	0.2nm,0.3s,baz=231,slow=10,SNR=2.0 0.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**02 53 49.5**	**-0.2**
WB0	**Warramunga Arr**	**22.63**	**160**	P	**P**	**02 54 22.5**	**-0.1**
WB0				IAmb	IAmb	02 54 26.2	
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**22.78**	**160**	P	**P**	**02 54 23.4**	**-0.6**
	comp=Z,4.6nm,0.7s,baz=340,slow=11,SNR=21 comp=Z,4.6nm,0.7s						
WR8	**Warramunga Arr**	**22.85**	**160**	P	**P**	**02 54 23.7**	**-1.0**
WR8				IAmb	IAmb	02 54 29.9	
	comp=Z,8.8nm,1.3s						
PSA00	**Pilbara Seismi**	**23.92**	**195**	P	**P**	**02 54 36.3**	**+1.0**
PSA00				IAmb	IAmb	02 54 40.9	
	comp=Z,11nm,1.0s						
AS31	**Alice Springs**	**26.15**	**164**	P	**P**	**02 54 57.4**	**+1.8**
AS31				IAmb	IAmb	02 55 03.8	
	comp=Z,1.1nm,0.7s						
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**02 54 56.4**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=348,slow=11,SNR=26 comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**02 54 58.0**	**+2.3**
BBOO	**Buckleboo**	**35.42**	**166**	P	**P**	**02 56 17.3**	**0.0**
STKA	**Stephens Creek**	**36.28**	**158**	P	**P**	**02 56 25.3**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=336,slow=12,SNR=3.4 comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**49.21**	**342**	P	**P**	**02 58 08.1**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=157,slow=7.8,SNR=2.7 comp=Z,0.4nm,0.5s						
PETK	**Petropavlovsk-**	**57.49**	**22**	P	**P**	**02 59 09.8**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=223,slow=7.4,SNR=4.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**127**	P	**Pn**	**02 52 22.1**	**-0.2**
TNTI				S	**Sn**	**02 52 39.7**	**+0.9**
SGSI	**Sangihe**	**2.22**	**340**	P	**Pn**	**02 52 34.8**	**+0.3**
SGSI				S	**Sn**	**02 53 02.9**	**+2.1**
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**P**	**02 56 26.2**	**+1.0**
	0.1nm,0.3s,baz=12,slow=12,SNR=2.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**22.80**	**160**	P	**P**	**02 56 59.8**	**-0.3**
	1.1nm,0.5s,baz=340,slow=10,SNR=7.0						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.17**	**164**	P	**P**	**02 57 31.9**	**+0.5**
	0.4nm,0.5s,baz=347,slow=8.0,SNR=4.6						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**02 59 01.4**	**+0.9**
	0.5nm,0.3s,baz=340,slow=12,SNR=1.6						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**03 01 54.4**	**-2.6**
	0.2nm,0.3s,baz=125,slow=6.8,SNR=2.1						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	**P**	**03 02 23.6**	**-1.9**
	0.4nm,0.3s,baz=129,slow=6.8,SNR=1.6						
	0.4nm,0.3s						

IDC 15 02:52:51.9±2.2, 1°37N×125°99E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=197.9km s-min=28.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.71**	**159**	P	P	02 57 54.8	-0.6
	1.0nm,0.5s,baz=338,slow=11,SNR=3.3						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.05**	**163**	P	P	02 58 27.6	+0.4
	0.3nm,0.4s,baz=346,slow=12,SNR=2.5						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	03 02 54.0	0.0
	0.3nm,0.4s,baz=120,slow=8.0,SNR=4.2						
	0.3nm,0.4s						

IDC 15 02:54:16.2±1.8, 1°47N×125°80E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=179.1km s-min=23.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.87**	**159**	P	P	02 59 21.2	-0.4
	1.0nm,0.5s,baz=337,slow=11,SNR=6.4						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.20**	**163**	P	P	02 59 53.1	+0.3
	0.2nm,0.3s,baz=348,slow=8.5,SNR=4.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	03 04 17.4	+0.4
	0.3nm,0.4s,baz=120,slow=8.1,SNR=2.5						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.14**	**328**	P	P	03 04 45.4	-0.4
	0.4nm,0.6s,baz=130,slow=6.4,SNR=1.6						
	0.4nm,0.6s						

*UPA **15** 02:55:57.5±0.7, 9°41N×84°22W, h12km±5km, MW3.8*
*CATAC **15** 02:55:57.4±0.4, 9°N±2°×8°4W±°, h17km±2km, M3.7/14, MLv3.7/14, Error ellipse: s-maj=5.7km s-min=2.4km az=47.1, confirmed*
*UCR **15** 02:55:58.0±1.2, 9°39N×84°22W, h28km±2km, MW3.7*

ISC 15 02:55:58.4±0.9, 9°40N±0°02×84°22W±0°02, h30km±5km, n120, σ0§65/147, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVQ2	**Quepos**	**0.06**	**59**	*eP*	**Pb**	**02 56 02.8**	**-0.6**
QUEP	**Quepos**	**0.06**	**61**	P	**Pb**	**02 56 02.9**	**-0.6**
QUEP				S	**Sb**	**02 56 06.4**	**-0.5**
QUEP	**Quepos**	**0.06**	**61**	*eP*	**Pb**	**02 56 02.9**	**-0.6**
LLNJ	**Naranjito**	**0.13**	**58**	*eP*	**Pb**	**02 56 03.5**	**-0.4**
LLNJ				*eS*	**Sb**	**02 56 08.3**	**+0.6**
PICV	**PH. Pirrs**	**0.22**	**5**	*eP*	**Pb**	**02 56 04.5**	**-0.4**
RAZU	**San Marcos de**	**0.32**	**37**	*eP*	**Pb**	**02 56 05.8**	**-0.4**
PITB	**Pirrs, San**	**0.32**	**36**	*eP*	**Pb**	**02 56 05.9**	**-0.4**
PIEC	**Cerro El Cedra**	**0.34**	**49**	*eP*	**Pb**	**02 56 06.3**	**-0.3**
ACOS	**Acosta**	**0.39**	**7**	*eP*	**Pb**	**02 56 06.6**	**-0.7**
ACOS				*eS*	**Sb**	**02 56 13.2**	**-0.1**
LCR2	**La Lucha 2**	**0.40**	**32**	S	**Sb**	**02 56 12.8**	**-0.7**
LCR2	**La Lucha 2**	**0.40**	**32**	*eS*	**Sb**	**02 56 13.3**	**-0.1**
BITO	**Garabito Jaco**	**0.45**	**298**	*eP*	**Pb**	**02 56 07.3**	**-0.7**
BUS1	**Rivas**	**0.49**	**72**	*eP*	**Pb**	**02 56 08.0**	**-0.9**
BUS1				*eS*	**Sb**	**02 56 16.3**	**+0.2**
AMPA	**Desamparados**	**0.51**	**17**	*eP*	**Pb**	**02 56 08.3**	**-0.9**
AMPA				*eS*	**Sb**	**02 56 16.2**	**-0.2**
SANTA	**Santa Ana**	**0.53**	**3**	*eP*	**Pb**	**02 56 08.3**	**-1.1**
LUJA	**Lujan**	**0.54**	**15**	*eP*	**Pb**	**02 56 08.7**	**-0.8**
CENT	**San Jose**	**0.54**	**14**	*eP*	**Pb**	**02 56 09.8**	**+0.2**
PAVB	**Pavas, San Jos**	**0.54**	**10**	*eP*	**Pb**	**02 56 08.6**	**-1.0**
PAVB				*eS*	**Sb**	**02 56 17.1**	**-0.2**
TAGO	**Cartago**	**0.54**	**32**	*eP*	**Pb**	**02 56 09.0**	**-0.7**
TRIO	**Tres Rios**	**0.55**	**24**	*eP*	**Pb**	**02 56 08.6**	**-1.1**
ECI	**Escuela Centro**	**0.56**	**17**	*eP*	**Pb**	**02 56 09.1**	**-0.7**
ECI				*eS*	**Sb**	**02 56 18.0**	**+0.3**
SJS	**Escuela Geolog**	**0.56**	**17**	*eP*	**Pb**	**02 56 09.1**	**-0.7**
SJS3	**Mercedes San J**	**0.56**	**17**	*eP*	**Pb**	**02 56 09.1**	**-0.7**
LUPE	**Guadalupe**	**0.56**	**16**	*eP*	**Pb**	**02 56 09.2**	**-0.8**
BELE	**Belen**	**0.57**	**3**	*eP*	**Pb**	**02 56 09.2**	**-0.9**
BELE				*eS*	**Sb**	**02 56 17.9**	**-0.1**
DOMI	**Santo Domingo**	**0.59**	**12**	*eP*	**Pb**	**02 56 09.8**	**-0.6**
OROT	**Orotina**	**0.59**	**329**	*eS*	**Sb**	**02 56 18.1**	**-0.3**
HEME	**Heredia, Merce**	**0.59**	**7**	*eP*	**Pb**	**02 56 10.9**	**+0.4**
HEME				*eS*	**Sn**	**02 56 22.2**	**+0.5**
ATEO	**Atenas**	**0.59**	**344**	*eP*	**Pb**	**02 56 09.7**	**-0.7**
ATEO				*eS*	**Sb**	**02 56 18.9**	**+0.2**
HDC	**Heredia**	**0.60**	**10**	*eP*	**Pb**	**02 56 10.0**	**-0.6**
HDC				*eS*	**Sb**	**02 56 19.4**	**+0.5**
CORON	**Coronado**	**0.60**	**20**	*eP*	**Pb**	**02 56 10.2**	**-0.5**
OCHAL	**Ojochal**	**0.64**	**118**	P	**Pb**	**02 56 09.9**	**-1.2**
OCHAL	**Ojochal**	**0.64**	**118**	S	**Sb**	**02 56 19.8**	**+0.1**
TCS1	**Tacares**	**0.64**	**353**	P	**Pb**	**02 56 10.7**	**-0.6**
TCS1	**Tacares**	**0.64**	**353**	*eP*	**Pb**	**02 56 10.6**	**-0.6**
PCAYA	**Pacayas**	**0.65**	**38**	*eP*	**Pb**	**02 56 10.6**	**-0.8**
POAS	**San Pedro de P**	**0.67**	**358**	*eP*	**Pb**	**02 56 11.3**	**-0.5**
POAS				*eS*	**Sn**	**02 56 21.8**	**+0.2**
CVIMO	**Finca Echandi**	**0.67**	**23**	*eP*	**Pb**	**02 56 11.2**	**-0.7**
VINA	**Juan Vinas**	**0.67**	**43**	*eP*	**Pb**	**02 56 10.9**	**-0.9**
EDPE	**Pejibaye, P**	**0.68**	**111**	*eP*	**Pb**	**02 56 10.7**	**-1.1**
PALD	**Palmares**	**0.68**	**342**	*eS*	**Sb**	**02 56 21.1**	**0.0**
VICA	**Volcano Irazu**	**0.68**	**32**	*eP*	**Pb**	**02 56 11.3**	**-0.8**
SAJE	**San Jernim**	**0.70**	**95**	*eP*	**Pb**	**02 56 11.1**	**-1.2**
TURIB	**Turrialba**	**0.72**	**46**	*eP*	**Pb**	**02 56 11.4**	**-1.2**
TURIB				*eS*	**Sb**	**02 56 21.7**	**-0.5**
RAMO	**San Ramon**	**0.72**	**340**	*eS*	**Sb**	**02 56 22.5**	**+0.2**
SRA1	**San Ramn**	**0.73**	**339**	*eS*	**Sb**	**02 56 22.5**	**+0.1**
ARZA	**Esparza**	**0.73**	**323**	*eS*	**Sb**	**02 56 22.5**	**0.0**
CVTQ	**Turrialba Volc**	**0.74**	**36**	*eP*	**Pb**	**02 56 12.3**	**-0.8**
VERB	**Verbena**	**0.74**	**44**	*eP*	**Pb**	**02 56 12.0**	**-0.9**
CVTV	**Tajo**	**0.75**	**38**	*eP*	**Pb**	**02 56 12.6**	**-0.7**
CVTV				*eS*	**Sb**	**02 56 23.6**	**+0.2**
VTR0	**Volcan Turrial**	**0.76**	**36**	*eP*	**Pb**	**02 56 12.6**	**-0.8**
CVTR	**Volcan Turrial**	**0.76**	**36**	*eP*	**Pb**	**02 56 12.5**	**-0.9**
VTUN	**Crater Central**	**0.76**	**36**	*eP*	**Pb**	**02 56 12.3**	**-1.1**
ROBF	**Roble, Puntare**	**0.77**	**318**	*eP*	**Pb**	**02 56 12.1**	**-1.2**
VPS8	**V Poas**	**0.77**	**358**	*eP*	**Pb**	**02 56 12.8**	**-0.8**
VPS8				*eS*	**Sb**	**02 56 24.3**	**+0.4**
ABRB	**Las Abras (San**	**0.78**	**39**	*eP*	**Pb**	**02 56 12.8**	**-0.7**
ENAS	**Puntarenas**	**0.84**	**313**	*eS*	**Sn**	**02 56 25.8**	**+0.3**
RESJ	**San Isidro (Tu**	**0.84**	**42**	*eP*	**Pb**	**02 56 13.7**	**-0.6**
VPL 1	**V. Platanar**	**0.86**	**350**	*eP*	**Pn**	**02 56 13.5**	**-1.3**
PANP	**Palmar Norte**	**0.87**	**120**	*eP*	**Pn**	**02 56 14.0**	**-0.6**
BURE	**Buenos Aires**	**0.90**	**105**	*eP*	**Pn**	**02 56 14.2**	**-0.8**
BURE				*eS*	**Sn**	**02 56 27.5**	**+0.5**
PILE	**Guapiles**	**0.91**	**27**	*eP*	**Pn**	**02 56 14.8**	**-0.4**
VPL2	**V. Platanar**	**0.91**	**350**	*eP*	**Pn**	**02 56 14.6**	**-0.8**
ARTO	**Ro Cuarto**	**0.93**	**360**	*eP*	**Pn**	**02 56 15.0**	**-0.6**
LCOCO	**El Coco**	**0.94**	**44**	*eP*	**Pn**	**02 56 14.9**	**-0.7**
FIMO	**Fila Mora**	**0.94**	**116**	*eP*	**Pn**	**02 56 15.5**	**-0.3**
DRK0	**Durika**	**0.97**	**98**	S	**Sb**	**02 56 29.4**	**+0.1**
DRK0	**Durika**	**0.97**	**98**	P	**Pn**	**02 56 15.6**	**-0.6**
DRK0	**Durika**	**0.97**	**98**	*eP*	**Pn**	**02 56 15.5**	**-0.6**
IRES	**Siquirres**	**0.98**	**45**	*eP*	**Pn**	**02 56 15.6**	**-0.6**
EGUB	**Earth Gu¡pi**	**1.01**	**37**	*eP*	**Pn**	**02 56 16.4**	**-0.2**
SOCE	**Pocosol**	**1.05**	**338**	P	**Pn**	**02 56 17.2**	**0.0**
SOCE	**Pocosol**	**1.05**	**338**	*eP*	**Pn**	**02 56 17.0**	**-0.2**
SOCE				*eS*	**Sb**	**02 56 32.2**	**+0.7**
CARI	**Cariari**	**1.06**	**26**	*eP*	**Pn**	**02 56 17.0**	**-0.3**
EDP2	**Potrero Grande**	**1.09**	**110**	*eP*	**Pn**	**02 56 17.8**	**0.0**
VERH	**Veragua Rainfo**	**1.14**	**63**	*eP*	**Pn**	**02 56 18.3**	**0.0**
JUNT	**Juntas**	**1.14**	**320**	*eP*	**Pn**	**02 56 17.3**	**-1.1**
JTS	**Las Juntas de**	**1.14**	**321**	*eP*	**Pn**	**02 56 18.0**	**-0.5**
JTS				*eS*	**Sn**	**02 56 33.5**	**+0.4**
JTS	**Las Juntas de**	**1.14**	**321**	P	**Pn**	**02 56 18.1**	**-0.3**
JTS				S	**Sn**	**02 56 33.6**	**+0.5**
JTS	**Las Juntas de**	**1.14**	**321**	*eP*	**Pn**	**02 56 17.7**	**-0.7**
JTS				*eS*	**Sn**	**02 56 33.3**	**+0.2**
CASO	**Castillo**	**1.15**	**334**	*eP*	**Pn**	**02 56 18.5**	**0.0**
CASO				*eS*	**Sb**	**02 56 35.0**	**+0.8**
FORC	**Fortuna**	**1.15**	**337**	*eP*	**Pn**	**02 56 18.6**	**+0.2**
FORC				*eS*	**Sb**	**02 56 34.9**	**+0.7**
CEDE	**Laguna Cedeo**	**1.18**	**336**	*eP*	**Pn**	**02 56 19.2**	**+0.2**
LAES	**El Progreso Va**	**1.21**	**73**	*eP*	**Pn**	**02 56 19.5**	**+0.3**
PTJ1	**Puerto Jimnez**	**1.25**	**134**	*eP*	**Pn**	**02 56 19.6**	**-0.2**
PTJ1				*eS*	**Sb**	**02 56 36.4**	**-0.6**
PTJ1	**Puerto Jimnez**	**1.25**	**134**	P	**Pb**	**02 56 21.2**	**-0.2**
EDAD	**Golfito**	**1.28**	**126**	*eP*	**Pn**	**02 56 19.3**	**-1.0**
PIRO	**Carate, Puerto**	**1.32**	**139**	*eP*	**Pn**	**02 56 21.1**	**+0.3**
PIRO				*eS*	**Sb**	**02 56 38.6**	**-0.5**
PIRO	**Carate, Puerto**	**1.32**	**139**	P	**Pn**	**02 56 21.3**	**+0.4**
PIRO	**Carate, Puerto**	**1.32**	**139**	S	**Sb**	**02 56 39.5**	**+0.4**
COVE	**Coope Vega, Sa**	**1.32**	**352**	P	**Pn**	**02 56 20.9**	**+0.1**
COVE	**Coope Vega, Sa**	**1.32**	**352**	S	**Sb**	**02 56 39.5**	**+0.3**
CMARA	**Lajas Hojancha**	**1.34**	**297**	P	**Pn**	**02 56 21.1**	**-0.1**
CMARA	**Lajas Hojancha**	**1.34**	**297**	S	**Sb**	**02 56 38.8**	**-1.0**
QUEB	**Quebradon, Cot**	**1.39**	**331**	*eP*	**Pn**	**02 56 22.3**	**+0.6**
ALCO	**Alturas Coton,**	**1.44**	**108**	*eP*	**Pn**	**02 56 22.1**	**-0.5**
CUI	**Cuipilapa**	**1.56**	**323**	*eP*	**Pn**	**02 56 24.4**	**+0.2**
CDITO	**Canoas**	**1.56**	**122**	S	**Sb**	**02 56 45.4**	**-0.6**
CDITO	**Canoas**	**1.56**	**122**	P	**Pn**	**02 56 23.6**	**-0.5**
RGM0	**Gandoca**	**1.60**	**83**	*eP*	**Pn**	**02 56 25.6**	**+0.9**
RGM0				*eS*	**Sn**	**02 56 45.5**	**+1.2**
BRU2	**Volcan**	**1.62**	**112**	*eP*	**Pn**	**02 56 25.0**	**-0.1**
BRU2				*eS*	**Sn**	**02 56 46.2**	**+1.1**
BRU2	**Volcan**	**1.62**	**112**	P	**Pn**	**02 56 25.2**	**0.0**
BRU2	**Volcan**	**1.62**	**112**	S	**Sb**	**02 56 47.4**	**-0.6**
BRU2	**Volcan**	**1.62**	**112**	*eP*	**Pn**	**02 56 24.8**	**-0.3**
MESS	**Mesas**	**1.64**	**324**	*eP*	**Pn**	**02 56 25.5**	**+0.1**
VMAR	**Armenia, Volca**	**1.66**	**328**	*eP*	**Pn**	**02 56 26.0**	**+0.5**
UPAL	**Upala**	**1.68**	**332**	S	**Sb**	**02 56 48.5**	**-1.0**
LESP3	**La Esperanza,**	**1.72**	**125**	*eP*	**Pn**	**02 56 26.4**	**0.0**
VRLE	**La Escondida,**	**1.78**	**321**	*eP*	**Pn**	**02 56 27.7**	**+0.4**
ELI1	**Hacienda Flor**	**1.81**	**313**	S	**Sn**	**02 56 50.9**	**+1.4**
LAPC	**Finca la Perla**	**1.81**	**319**	*eP*	**Pn**	**02 56 28.3**	**+0.7**
LNBQ3	**Los Naranjos,**	**1.85**	**109**	*eP*	**Pn**	**02 56 28.8**	**+0.5**
PSOM3	**Paja de Sombre**	**2.00**	**111**	*eP*	**Pn**	**02 56 30.3**	**0.0**
LOCO3	**Loma Colorada,**	**2.03**	**119**	*eP*	**Pn**	**02 56 30.4**	**-0.2**
PEDE3	**Pedregal, Chir**	**2.04**	**120**	*eP*	**Pn**	**02 56 31.2**	**+0.5**
CHGR2	**Aguacate**	**2.10**	**103**	*eP*	**Pn**	**02 56 31.9**	**+0.4**
CHGR2				*eS*	**Sn**	**02 56 58.0**	**+1.3**
RBALA	**Bur**	**2.10**	**104**	*eP*	**Pn**	**02 56 31.3**	**-0.3**
ESPN	**Las Esperanzas**	**2.78**	**358**	P	**Pn**	**02 56 41.3**	**+0.5**
CACAO	**El Cacao, Vera**	**3.90**	**121**	*eP*	**Pn**	**02 56 57.8**	**+1.5**
BCIP	**Isla Barro Col**	**4.33**	**93**	*eP*	**Pn**	**02 57 02.8**	**+0.6**

IDC 15 02:57:23.0±17.0, 21°65S×179°08E, h522km±204km, mb2.8/4, mbtmp3.7/4, Error ellipse: s-maj=262.4km s-min=60.1km az=168.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.61**	**258**	P	P	03 04 24.1	-1.5
	0.3nm,0.4s,baz=94,slow=7.2,SNR=5.5						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**41.76**	**264**	P	P	03 04 26.7	0.0
	0.5nm,0.3s,baz=97,slow=8.4,SNR=15						
	0.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**50.19**	**264**	P	P	03 05 31.6	+0.7
	0.5nm,0.5s,baz=124,slow=5.7,SNR=9.2						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**89.97**	**58**	P	P	03 09 27.2	+0.1
	0.6nm,0.8s,baz=241,slow=4.9,SNR=5.7						
	0.6nm,0.8s						
ARCES	**ARCESS Array B**	**129.53**	**348**	PKP	PKPdf	03 15 30.9	-0.9
	2.0nm,0.9s,baz=25,slow=3.1,SNR=4.2						
HFS	**Hagfors**	**140.19**	**349**	PKP	PKPdf	03 15 48.8	-3.0
	1.4nm,0.4s,baz=54,slow=2.3,SNR=22						

*IDC **15** 03:02:25.7±1.5, 1°54N×126°21E, h0km, mb3.7/5, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=115.5km s-min=19.5km az=68.0*
*DJA **15** 03:02:28.8±0.3, 2°N±4°×12°6E±°, h10km, M3.8/8, MLv3.8/8*
*NEIC **15** 03:02:31.0±0.9, 1°6N±0°1×126°50E±0°06, h35km±2km, mb4.0/7, Error ellipse: s-maj=22.1km s-min=7.0km az=202.0*

ISC 15 03:02:30.9±0.8, 1°57N±0°07×126°47E±0°07, h35km, n20, σ0§72/22, mb3.8/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**131**		**Pn**	**03 02 51.1**	**0.0**
TNTI				Sn	**Sn**	**03 03 06.5**	**+0.3**
TNTI	**Ternate**	**1.20**	**131**	P	**Pn**	**03 02 51.2**	**-0.0**
TNTI				S	**Sn**	**03 03 07.7**	**+1.6**
SGSI	**Sangihe**	**2.31**	**336**	P	**Pn**	**03 03 07.4**	**+1.0**
KMSI	**Cibinong**	**2.67**	**248**	P	**Pn**	**03 03 11.9**	**+0.5**
SANI	**Sanana**	**3.62**	**188**	P	**Pn**	**03 03 25.6**	**+1.1**
LUWI	**Luwuk**	**4.51**	**235**	Pn	**Pn**	**03 03 36.8**	**0.0**
TOLI2	**Tolitoli**	**5.70**	**266**		**Pn**	**03 03 53.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	**P**	**03 06 54.7**	**-1.1**
	0.1nm,0.3s,baz=350,slow=8.5,SNR=2.1						
	2.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	**P**	**03 06 55.0**	**-0.7**
WB0	**Warramunga Arr**	**22.58**	**160**	P	**P**	**03 07 28.4**	**-0.1**
WB0				IAmb	IAmb	03 07 38.5	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**03 07 29.9**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=339,slow=11,SNR=17						
	comp=Z,2.3nm,0.5s						
WR8	**Warramunga Arr**	**22.79**	**160**	P	**P**	**03 07 30.2**	**-0.4**
WR8				IAmb	IAmb	03 07 33.1	
	comp=Z,3.9nm,0.8s						
AS31	**Alice Springs**	**26.10**	**164**	P	**P**	**03 08 02.1**	**+0.5**
AS31				IAmb	IAmb	03 08 06.2	
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**26.10**	**164**	P	**P**	**03 08 02.2**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=351,slow=15,SNR=17						
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**59.18**	**326**	P	**P**	**03 12 27.6**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=123,slow=7.8,SNR=4.5						
	comp=Z,0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.42**	**328**	P	**P**	**03 12 56.5**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=127,slow=6.1,SNR=7.2						
	comp=Z,0.5nm,0.6s						
KURK	**Kurchatov**	**63.42**	**328**	P	**P**	**03 12 56.0**	**-0.9**
KURK				IAmb	IAmb	03 13 10.9	
	comp=Z,1.4nm,0.8s						
NIUE	**Niue**	**65.70**	**112**	P	**P**	**03 13 12.0**	**-0.4**
VNDA	**Vanda**	**81.33**	**173**	P	**P**	**03 14 43.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=347,slow=7.8,SNR=1.7						
	comp=Z,0.2nm,0.5s						
VNDA	**Vanda**	**81.33**	**173**	P	**P**	**03 14 43.6**	**+0.3**
VNDA				IAmb	IAmb	03 15 19.1	
	comp=Z,2.1nm,1.2s						

*IDC **15** 03:07:35.6±1.7, 1°68N×126°10E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=184.3km s-min=22.5km az=65.0*
*DJA **15** 03:07:39.2±1.4, 2°N±3°×12°6E±°, h13km±13km, M3.8/8, MLv3.8/8*

ISC 15 03:07:41.0±1.0, 1°67N±0°08×126°51E±0°10, h35km, n9, σ1§43/10, mb3.6/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**136**	P	**Pn**	**03 08 01.3**	**-0.5**
TNTI				S	**Sn**	**03 08 18.4**	**+1.1**
SGSI	**Sangihe**	**2.23**	**334**	P	**Pn**	**03 08 16.4**	**+0.9**
KMSI	**Cibinong**	**2.76**	**247**	P	**Pn**	**03 08 22.8**	**+0.1**
SANI	**Sanana**	**3.74**	**188**	P	**Pn**	**03 08 36.3**	**+0.1**
WRA	**Warramunga Arr**	**22.81**	**161**	P	**P**	**03 12 40.2**	**-0.8**
	0.4nm,0.6s,baz=337,slow=10,SNR=2.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**26.20**	**165**	P	**P**	**03 13 14.9**	**+2.3**
	0.1nm,0.3s,baz=348,slow=13,SNR=1.8						
	0.1nm,0.3s						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**03 14 42.1**	**+0.7**
	2.1nm,0.8s,baz=345,slow=12,SNR=3.0						
	2.1nm,0.8s						
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**03 17 36.6**	**-1.5**
	0.2nm,0.4s,baz=128,slow=8.0,SNR=2.0						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**03 18 04.9**	**-1.8**
	0.2nm,0.4s,baz=129,slow=7.0,SNR=2.2						
	0.2nm,0.4s						

*IDC **15** 03:08:10.5±1.1, 1°63N×126°22E, h0km, mb3.7/6, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=99.4km s-min=17.6km az=69.0*

ISC 15 03:08:15.7±1.1, 1°6N±0°2×126°2E±0°6, h35km, n7, σ0§95/8, mb3.8/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**03 12 40.9**	**-0.5**
	0.2nm,0.3s,baz=3.7,slow=9.8,SNR=6.0						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**22.87**	**160**	P	**P**	**03 13 15.0**	**-1.4**
	2.0nm,0.6s,baz=339,slow=11,SNR=9.4						
	2.0nm,0.6s						
ASAR	**Alice Springs**	**26.23**	**164**	P	**P**	**03 13 47.0**	**-0.7**
	0.6nm,0.5s,baz=343,slow=8.1,SNR=7.8						
ASAR				PcP	**PcP**	**03 17 14.5**	**+0.5**
	0.3nm,0.6s,baz=338,slow=2.4,SNR=5.0						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**36.38**	**158**	P	**P**	**03 15 17.8**	**+1.1**
	1.4nm,0.7s,baz=305,slow=12,SNR=2.9						
	1.4nm,0.7s						
SONM	**Songino Array**	**49.12**	**342**	P	**P**	**03 16 59.5**	**-0.5**
	0.3nm,0.4s,baz=148,slow=8.4,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**03 18 12.5**	**+0.5**
	0.2nm,0.3s,baz=128,slow=8.1,SNR=1.9						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.24**	**328**	P	**P**	**03 18 40.5**	**-0.1**
	0.7nm,0.6s,baz=125,slow=6.6,SNR=6.8						
	0.7nm,0.6s						

*IDC **15** 03:12:54.0±0.4, 1°55N×126°44E, h0km, mb4.7/31, mbtmp4.7/32, ML4.9/1, MS4.0/18, Error ellipse: s-maj=20.6km s-min=7.7km az=72.0*
*BJI **15** 03:12:55.6, 1°34N×126°56E, h34km, mB5.2/11, mb4.9/62, Ms4.5/11, Ms7 4.2/12*
*MOS **15** 03:12:57.6±0.9, 1°71N×126°40E, h30km, mb5.3/55, Error ellipse: s-maj=10.7km s-min=5.1km az=122.7*
*NEIC **15** 03:13:00.4±2.2, 1°62N±0°05×126°52E±0°05, h35km±1km, mb5.2/101, Mww5.1/10, Error ellipse: s-maj=9.8km s-min=8.5km az=54.0*
*NEIC **15** 03:13:00.5, 1°40N×126°63E, h30km, Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10^{16}Nm; M_{rr}5.39; $M_{\theta\theta}$-0.94; $M_{\phi\phi}$-4.45; $M_{r\theta}$1.66; $M_{\theta\phi}$0.36; $M_{\phi r}$1.01; Fault plane solution: $M_0$5.36000×10^{16} NP1: ϕ_s161.64000°, δ51.61000°, λ68.48000°. NP2:ϕ_p9.44000°, δ51.85000°, λ108.04000° Principal axes: T 5.9070, Plg75.0000°, Azm337.0000°; N -1.3404, Plg14.0000°, Azm178.0000°; P -4.5666, Plg5.0000°, Azm87.0000°;*
*NEIC **15** 03:13:00.5, 1°60N×126°53E, h30km*
*DJA **15** 03:13:01.5±0.2, 2°N±2°×12°7E±°, h47km±2km, M4.8/76, mb5.1/76, mB5.4/38, MLv5.1/23,

JAY Jayapura 14.80 106 Pn **Pn** 03 16 27.9 +1.0
1.4nm,0.3s,baz=32,slow=0.7,SNR=7.1
JAY LR LR 03 21 37.3
comp=Z,861nm,21.9s,baz=336,slow=35
JAY Jayapura 14.80 106 P **Pn** 03 16 27.9 +1.0
SRBI Singaraja 14.84 229 P **P** 03 16 32.1 -0.7
100nm,1.1s
STKI Sintang 15.09 264 P **P** 03 16 34.1 -1.6
MTN Manton Dam 15.12 162 P **Pn** 03 16 30.4 -0.7
comp=Z,54nm,1.2s
MTN Manton Dam 15.12 162 **Pn** 03 16 30.8 -0.3
KMMI Kalianget 15.20 235 P **P** 03 16 38.6 +1.8
DNP Denpasar 15.22 227 P **Pn** 03 16 34.5 +2.1
KDU Kakadu 15.44 158 P **Pn** 03 16 33.5 -1.7
comp=Z,126nm,1.5s
JAGI Jajag, Banyuwa 15.89 231 **P** 03 16 44.5 0.0
JAGI IAmb IAmb 03 16 51.0
comp=Z,84nm,0.8s
JAGI Jajag, Banyuwa 15.89 231 P **P** 03 16 44.7 +0.2
comp=Z,2µmcomp=Z,108nm,0.8s
BLJI Banyuglugur 15.89 234 P **P** 03 16 46.2 +1.7
comp=Z,2µmcomp=Z,105nm,0.7s
KNRA Kununurra 17.37 173 P **Pn** 03 16 59.7 0.0
comp=Z,155nm,1.4s
KNRA Kununurra 17.37 173 **Pn** 03 16 59.9 +0.1
KNRA IAmb IAmb 03 17 01.7
comp=Z,346nm,1.4s
NGJI Ngawi 17.47 239 P **P** 03 17 03.9 +1.9
comp=Z,53nm,0.9s
PCJI Pacitan 18.14 237 P **P** 03 17 11.9 +2.5
comp=Z,103nm,1.1s
UGM Wanagama 18.55 239 P **Pn** 03 17 15.8 +1.5
comp=Z,95nm,1.6s
TPI Tanjungpandan 19.33 257 P **P** 03 17 23.2 +0.6
FITZ Fitzroy Crossi 19.65 182 P **P** 03 17 24.9 -1.0
FITZ Fitzroy Crossi 19.65 182 P **P** 03 17 25.3 -0.6
comp=Z,2.4nm,0.3s,baz=13,slow=8.5,SNR=81
comp=Z,28nm,0.7s
FITZ Fitzroy Crossi 19.65 182 P **P** 03 17 25.1 -0.9
KPJI Karang Pucung 19.66 243 P **P** 03 17 26.2 0.0
comp=Z,73nm,0.8s
CNJI Cibinong 21.27 245 P **P** 03 17 45.1 +1.5
GUMO Guam 21.71 56 LR LR 03 25 22.9
comp=Z,272nm,21.7s,baz=234,slow=34
DSRI Dabo 22.01 265 P **P** 03 17 53.6 +2.0
comp=Z,28nm,0.7s
YULB Yu-li 22.19 347 P **P** 03 17 50.8 -2.6
TPUB Ta-pu 22.25 346 P **P** 03 17 52.8 -1.4
TPUB IAmb IAmb 03 17 59.3
comp=Z,93nm,0.8s
SSLB Suanglung 22.65 347 P **P** 03 17 58.1 -0.2
COEN Coen 22.67 134 P **P** 03 17 57.0 -1.7
comp=Z,21nm,0.6s
COEN Coen 22.67 134 P **P** 03 17 58.3 -0.3
WRAB Tennant Creek 22.80 161*ce*P **P** 03 17 58.9 -1.0
WRAB pmax pmax
comp=Z,163nm,1.0s
WRA Warramunga Arr 22.80 161 P **P** 03 17 59.0 -1.0
comp=Z,50nm,0.4s,baz=338,slow=11,SNR=139
WRA S **S** 03 22 03.5 -4.0
comp=Z,9.3nm,0.8s,baz=345,slow=18,SNR=8.5
comp=Z,50nm,0.4s
WRA Warramunga Arr 22.80 161 P **P** 03 17 59.2 -0.7
WR8 Warramunga Arr 22.87 160 P **P** 03 17 60.0 -0.7
WR8 IAmb IAmb 03 18 01.9
comp=Z,128nm,0.9s
KASI Kota Agung 23.09 252 P **P** 03 18 01.9 -1.1
comp=Z,36nm,0.9s
MDSI Maura Dua 23.11 255 P **P** 03 18 03.5 +0.3
comp=Z,18nm,0.7s
PMG Port Moresby 23.34 118 P **P** 03 18 05.7 +0.3
comp=Z,14nm,0.8s,baz=323,slow=5.2,SNR=7.4
comp=Z,14nm,0.8s
PMG Port Moresby 23.34 118 IAmb IAmb 03 18 07.3
comp=Z,93nm,1.6s
PMG Port Moresby 23.34 118*ce*P **P** 03 18 06.8 +1.3
PMG pmax pmax
comp=Z,44nm,1.7s
LHSI Lahat 23.59 257 P **P** 03 18 09.5 +1.6
comp=Z,29nm,0.9s
MBWA Marble Bar 23.62 196 P **P** 03 18 06.9 -1.1
comp=Z,25nm,0.8s
MBWA Marble Bar 23.62 196 P **P** 03 18 07.0 -1.1
QIZ Qiongzhong 23.75 318 P **P** 03 18 10.8 +1.4
QIZ S **S** 03 22 24.6 +1.5
QIZ LR LR
comp=Z,590nm,19.4s
QIZ LR LR
comp=Z,430nm,18.2s
QIZ LR LR
comp=Z,560nm,17.0s
PSAD1 Pilbara Seismi 23.87 195 P **P** 03 18 09.0 -1.5
comp=Z,31nm,2.1s
PSAC1 Pilbara Seismi 23.95 195 P **P** 03 18 09.9 -1.4
comp=Z,43nm,1.4s
PSAC2 Pilbara Seismi 23.96 195 P **P** 03 18 10.4 -0.9
comp=Z,36nm,0.9s
PSA00 Pilbara Seismi 23.98 195 P **P** 03 18 10.8 -0.8
PSA00 Pilbara Seismi 23.98 195 P **P** 03 18 10.9 -0.6
PSA00 IAmb IAmb 03 18 13.3
comp=Z,30nm,1.4s
JOW Kunigami 25.09 4 P **P** 03 18 21.3 -0.3
comp=Z,34nm,0.8s,baz=182,slow=10,SNR=4.7
comp=Z,34nm,0.8s
JOW Kunigami 25.09 4 P **P** 03 18 22.7 +1.1
JOW IAmb IAmb 03 18 28.9
comp=Z,79nm,1.0s
QIS Mount Isa 25.54 150 P **P** 03 18 25.3 -0.5
comp=Z,75nm,1.2s
ASAR Alice Springs 26.18 164 P **P** 03 18 31.3 -0.3
comp=Z,42nm,0.7s,baz=341,slow=6.0,SNR=115
ASAR PcP **PcP** 03 21 58.5 +0.2
comp=Z,2.4nm,0.4s,baz=353,slow=2.3,SNR=4.6
ASAR S **S** 03 23 02.2 +0.2
comp=Z,12nm,0.9s,baz=348,slow=22,SNR=13
comp=Z,42nm,0.7s
ASAR Alice Springs 26.18 164 P **P** 03 18 31.0 -0.6
MTSU Mount Surprise 26.36 139 P **P** 03 18 33.4 +0.1
comp=Z,29nm,1.2s
WRKA Warakurna 26.59 176 P **P** 03 18 34.7 -0.6
comp=Z,45nm,1.2s
GIRL Giralia 26.95 206 P **P** 03 18 38.4 0.0
comp=Z,36nm,1.2s
RPSI Rantau Prapat 27.56 273 P **P** 03 18 42.3 -1.8
PSI Prapat 27.57 273 P **P** 03 18 42.3 -2.0
PSI pmax pmax
comp=Z,20nm,1.0s
KCSI Kotacane, Aceh 28.75 274 P **P** 03 18 54.9 +0.2
comp=Z,14nm,0.9s
GSI Gunungsitoli 28.91 270 P **P** 03 18 54.9 -1.2
GSI IAmb IAmb 03 18 59.9
comp=Z,56nm,1.3s
GSI Gunungsitoli 28.91 270 P **P** 03 18 56.6 +0.5
comp=Z,34nm,0.9s
CTA Charters Tower 29.03 139 P **P** 03 18 56.9 -0.2
comp=Z,0.9nm,1.3s
CTA Charters Tower 29.03 139 LR LR 03 32 30.4
comp=Z,8.0nm,18.5s,baz=331,slow=41
CTAO Charters Tower 29.03 139 P **P** 03 18 57.6 +0.6
CTAO IAmb IAmb 03 18 59.5
comp=Z,53nm,1.3s
CTAO Charters Tower 29.03 139 P **P** 03 18 57.7 +0.6
CTAO pmax pmax
comp=Z,53nm,1.3s
MEEK Meekatharra 29.14 195 P **P** 03 18 57.2 -0.8
comp=Z,21nm,0.9s
JCJ Chichijima 29.44 29 LR LR 03 29 26.5
comp=Z,178nm,21.2s,baz=102,slow=34
NJ2 Nanjing 31.08 347 ⇑P **P** 03 19 17.9 +2.8
NJ2 pmax pmax
comp=Z,18nm,0.5s
GYA Guiyang 31.16 324 ⇓P **P** 03 19 19.9 +3.8
GYA pmax pmax
comp=Z,21nm,0.9s
JNU Nakatsue 31.57 7 LR LR 03 32 55.9
comp=Z,71nm,20.9s,baz=179,slow=38
JNU Nakatsue 31.57 7 IAmb IAmb 03 20 01.6
comp=Z,25nm,1.1s
CMAR Chiang Mai Arr 31.76 303 P **P** 03 19 20.6 -0.7
comp=Z,4.9nm,0.8s,baz=114,slow=6.9,SNR=20
CMAR PcP **PcP** 03 22 13.4 +0.9
comp=Z,0.8nm,0.3s,baz=143,slow=1.8,SNR=5.0
comp=Z,4.9nm,0.8s
CHTO Chiang Mai 31.93 304 P **P** 03 19 23.3 +0.5
CHTO Chiang Mai 31.93 304 P **P** 03 19 23.3 +0.5
CHTO pmax pmax
comp=Z,13nm,1.0s
CHTO Chiang Mai 31.93 304 P **P** 03 19 22.1 -0.7
CHTO pP **pwP** 03 19 31.9 +1.1
CHTO PcP **PcP** 03 22 11.7 -1.2
MORW Morawa 32.15 197 P **P** 03 19 24.0 -0.6
comp=Z,18nm,1.4s
FORT Forrest 32.29 177 P **P** 03 19 24.8 -0.9
comp=Z,52nm,0.6s
KMI Kunming 32.70 317 P **P** 03 19 30.4 +0.7
KMI pmax pmax
comp=Z,15nm,1.1s
KMI LR LR
comp=Z,370nm,15.6s
KMI LR LR
comp=Z,320nm,22.6s
KMI LR LR
comp=Z,560nm,23.7s
ENH Enshi 32.72 332 IAmb IAmb 03 19 36.0
comp=Z,50nm,1.0s
ENH Enshi 32.72 332 P **P** 03 19 29.2 -0.4
QLP Quilpie 32.88 150 P **P** 03 19 30.1 -1.0
comp=Z,44nm,1.5s
KMBL Kambalda 33.13 187 P **P** 03 19 32.1 -1.0
comp=Z,21nm,0.9s
BLDU Ballidu 33.42 195 P **P** 03 19 34.7 -1.0
comp=Z,27nm,1.1s
PZH PanZhiHua 34.29 318 P **P** 03 19 43.0 -0.4
PZH pmax pmax
comp=Z,20nm,0.5s
MUN Mundaring 34.84 195 P **P** 03 19 46.7 -1.3
comp=Z,30nm,1.6s
LYN LuoYang 35.25 340 *e*P **P** 03 19 47.3 -4.1
LYN pmax pmax
comp=Z,12nm,0.9s
BBOO Buckleboo 35.45 166 P **P** 03 19 52.7 -0.6
comp=Z,41nm,1.6s
TNCH TengChong 35.61 313 P **P** 03 19 56.3 +1.3
TNCH S **S** 03 25 30.0 +0.3
TNCH pmax pmax
comp=Z,120nm,1.3s
TNCH LR LR
comp=Z,270nm,17.0s
KSRS Korea Array 35.65 2 P **P** 03 19 54.4 -0.4
comp=Z,3.4nm,0.6s,baz=183,slow=11,SNR=11
comp=Z,3.4nm,0.6s
EIDS Eidsvold 35.90 140 P **P** 03 19 56.7 -0.5
comp=Z,42nm,1.2s
EIDS Eidsvold 35.90 140 P **P** 03 19 56.7 -0.5
EIDS IAmb IAmb 03 19 58.4
comp=Z,49nm,1.1s
XAN Xi'an 36.16 335 ⇑P **P** 03 19 57.5 -1.9
XAN pmax pmax
comp=Z,20nm,1.3s
XAN Xi'an 36.16 335 P **P** 03 19 57.9 -1.5
XAN PcP **PcP** 03 22 24.6 -0.1
CD2 Chengdu 36.19 326 P **P** 03 19 59.4 -0.3
CD2 pmax pmax
comp=Z,30nm,0.4s
STKA Stephens Creek 36.30 158 P **P** 03 19 59.8 -0.6
comp=Z,139nm,0.7s
STKA Stephens Creek 36.30 158 P **P** 03 19 59.9 -0.6
comp=Z,24nm,0.7s,baz=335,slow=9.1,SNR=27
comp=Z,24nm,0.7s
STKA Stephens Creek 36.30 158 *i* P **P** 03 19 59.3 -1.2
MAJO Matsushiro 36.37 16 P **P** 03 20 00.9 -0.2
MAJO IAmb IAmb 03 20 02.7
comp=Z,33nm,1.1s
MAJO Matsushiro 36.37 16 *i* P **P** 03 20 01.5 +0.4
MAJO pmax pmax
comp=Z,9.0nm,0.7s
MJAR Matsushiro Arr 36.37 16 P **P** 03 20 00.6 -0.5
comp=Z,7.6nm,0.9s,baz=185,slow=9.7,SNR=13
MJAR LR LR 03 34 03.4
comp=Z,173nm,21.7s,baz=204,slow=35
comp=Z,7.6nm,0.9s
MJAR Matsushiro Arr 36.37 16 P **P** 03 20 00.1 -0.9
MJAR Matsushiro Arr 36.37 16 P **P** 03 20 00.1 -0.9
MJAR pmax pmax
comp=Z,30nm,1.7s
MJB9 Matsu-Tunnel 36.37 16 IAmb IAmb 03 20 03.6
comp=Z,32nm,1.1s
HTT Hallett 36.82 163 P **P** 03 20 04.2 -0.7
comp=Z,9.3nm,2.0s
RKGY Rocky Gully 37.16 193 P **P** 03 20 08.3 +0.4
comp=Z,57nm,1.2s
HNS HongShan 37.19 344 ⇓P **P** 03 20 09.4 +1.4
HNS pmax pmax
comp=Z,13nm,0.7s
DL2 Dalian 37.34 354 P **P** 03 20 10.4 +1.2
DL2 pmax pmax
comp=Z,71nm,1.1s
CMSA Cobar Meteorol 37.71 153 P **P** 03 20 12.3 -0.2
comp=Z,27nm,1.3s
JMM Marumori 38.36 18 IAmb IAmb 03 20 20.6
comp=Z,64nm,1.1s
BJI Beijing 39.34 347 P **P** 03 20 27.6 +1.5
BJI pmax pmax
comp=Z,8.0nm,0.9s
BRDH Bariadhala 39.76 304 LR LR 03 38 09.9
comp=Z,258nm,20.2s,baz=153,slow=38
ARMA Armidale 39.90 145 IAmb IAmb 03 20 33.4
comp=Z,50nm,1.0s
LZDM Lanzhou Array 40.14 331 P **P** 03 20 32.5 -0.8
comp=Z,1.3nm,0.4s,baz=155,slow=7.2,SNR=3.7
comp=Z,1.3nm,0.4s
LZH Lanzhou 40.17 331 *e*P **P** 03 20 34.4 +1.1
LZH pP sP 03 20 45.3 +0.4
LZH pmax pmax
comp=Z,33nm,1.0s
LZH LR LR
comp=Z,250nm,18.9s
LZH LR LR
comp=Z,250nm,18.9s
LZH LR LR
comp=Z,340nm,21.3s
ARPS Mount Arapiles 40.81 161 P **P** 03 20 38.0 -0.3
comp=Z,34nm,0.8s
SHL Shillong 40.94 308 P **P** 03 20 38.6 -1.2
SHL IAmb IAmb 03 20 41.4
comp=Z,26nm,0.7s
SHL Shillong 40.94 308 P **P** 03 20 38.6 -1.2
SHL pmax pmax
comp=Z,26nm,0.7s
MSHR Mys Shultsa 40.96 5*ce*P P 03 20 34.4 -5.0
MSHR pmax pmax
comp=Z,33nm,1.3s
HHC Hu-ho-hao-te 41.29 343 *e*P **P** 03 20 44.6 +2.3
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.0s
HHC LR LR
comp=Z,180nm,16.7s
HHC LR LR
comp=Z,150nm,17.6s
HHC LR LR
comp=Z,280nm,16.2s
MGCD Mangrove Creek 41.74 148 P **P** 03 20 45.3 -0.7
comp=Z,37nm,0.9s
CAN Canberra 42.39 152 P **P** 03 20 51.2 -0.1
comp=Z,29nm,1.6s
CAN Canberra 42.39 152 P **P** 03 20 51.1 -0.2
CAN Canberra 42.39 152 P **P** 03 20 51.1 -0.2
CAN pmax pmax
comp=Z,20nm,0.8s
CAN Canberra 42.39 152 P **P** 03 20 52.1 +0.8
CAN PcP **PcP** 03 22 45.3 +0.9
USRK Ussuriysk Ar. 42.64 6 P **P** 03 20 52.1 -1.1
comp=Z,7.2nm,0.8s,baz=187,slow=7.8,SNR=9.7
comp=Z,7.2nm,0.8s
TOO Toolamgi 42.82 158 P **P** 03 20 54.6 -0.2
comp=Z,9.9nm,1.7s
MDJ Mudanjiang 42.87 3 P **P** 03 20 54.3 -0.7
MDJ pmax pmax
comp=Z,22nm,2.4s
XLT XiLinHaoTe 43.07 349 *e*P **P** 03 20 57.3 +0.5
XLT pP pP 03 21 04.0 -1.1
XLT sP sP 03 21 09.8 +1.4
XLT pmax pmax
comp=Z,21nm,0.9s
XLT pmax pmax
comp=Z,220nm,5.7s
LSA Lhasa 43.65 313 P **P** 03 21 02.1 -0.1
LSA sP sP 03 21 16.3 +2.6
BNX BinXian 43.91 1 ⇓P **P** 03 21 03.5 +0.1
BNX pmax pmax
comp=Z,11nm,0.9s
ASAJ Asahikawa 44.63 17 LR LR 03 38 32.5
comp=Z,150nm,20.9s,baz=187,slow=34
GTA Gaotai 44.76 330 *e*P **P** 03 21 10.8 +0.3
GTA sP sP 03 21 27.3 +5.2
GTA PcP **PcP** 03 22 53.9 +1.5
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA LR LR
comp=Z,220nm,13.8s
GTA LR LR
comp=Z,310nm,13.8s
GTA LR LR
comp=Z,410nm,16.4s
GOMU GeErMu 45.17 323 P **P** 03 21 15.3 +1.1
GOMU pP sP 03 21 24.6 -1.1
GOMU PcP **PcP** 03 22 53.3 -0.9
GOMU S **S** 03 27 55.6 +3.1
GOMU pmax pmax
comp=Z,9.0nm,1.4s
DZM Mont Dzumac 45.57 123 P **P** 03 21 17.1 -0.1
comp=Z,9.1nm,1.0s,baz=5.5,slow=10,SNR=3.8
comp=Z,9.1nm,1.0s
EVN Everest 46.05 308 P **P** 03 21 19.6 -1.9
EVN IAmb IAmb 03 21 27.5
comp=Z,22nm,0.8s
HILR Hailar Array B 48.07 354 P **P** 03 21 35.7 -0.5
comp=Z,2.4nm,0.5s,baz=179,slow=10,SNR=7.9
comp=Z,2.4nm,0.5s
HEH HeiHe 48.43 1 *e*P **P** 03 21 38.3 -0.6
HEH pmax pmax
comp=Z,21nm,1.1s
ULN Ulaanbaatar 49.01 343 P **P** 03 21 43.5 -0.1
ULN IAmb IAmb 03 21 50.4
comp=Z,13nm,0.9s
ULN Ulaanbaatar 49.01 343*ce*P **P** 03 21 43.3 -0.3
ULN pmax pmax
comp=Z,15nm,0.9s
ULN Ulaanbaatar 49.01 343 P **P** 03 21 43.3 -0.3
SONM Songino Array 49.18 342 P **P** 03 21 44.0 -0.9
comp=Z,12nm,0.9s,baz=343,slow=20,SNR=3.5
comp=Z,12nm,0.9s
HYBB Hyderabad (bro 49.62 291 *e*P **P** 03 21 48.3 -0.4
CIT Chita 51.35 350 *e*P **P** 03 22 01.9 +0.7
CIT *e* 03 22 09.8
CIT *e* 03 23 59.4
CIT pmax pmax
comp=Z,109nm,2.5s
ZEA Zeya 51.91 1 *e*P P 03 22 11.0 +5.7
ZEA pmax pmax
comp=Z,10.0nm,1.2s
TLY Talaya 53.42 342 *i* P **P** 03 22 17.5 +1.0
TLY pmax pmax
comp=Z,13nm,0.9s
MOY Mondy 54.24 341 *e*P **P** 03 22 23.2 +0.6
MOY pmax pmax
comp=Z,31nm,2.4s
WMQ Urumqi 54.29 326 *e*P **P** 03 22 24.3 +1.2
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ LR LR
comp=Z,150nm,23.7s
PETK Petropavlovsk- 57.43 22 P **P** 03 22 45.4 0.0
comp=Z,4.5nm,0.8s,baz=192,slow=6.1,SNR=13
comp=Z,4.5nm,0.8s
ZSN Zaisan 58.12 328 *e*P **P** 03 22 50.4 +0.1
ZSN Zaisan 58.12 328 *e*P **P** 03 22 50.4 +0.1
DGZ Jazzator, Alta 58.28 331 *i* P **P** 03 22 50.8 -0.7
DGZ pmax pmax
comp=Z,11nm,1.1s
SHLS Shalkode 58.79 321 *e*P **P** 03 22 53.1 -2.1
comp=Z,17nm,1.1s
SHLS Shalkode 58.79 321 *e*P **P** 03 22 53.1 -2.1
SHLS pmax pmax
comp=Z,17nm,1.1s
NIL Nilore 59.01 309 P **P** 03 22 56.7 -0.1
NIL IAmb IAmb 03 22 59.2
comp=Z,26nm,1.1s
NIL Nilore 59.01 309 P **P** 03 22 56.7 -0.1
NIL pmax pmax
comp=Z,26nm,1.2s
MK31 Makanchi Array 59.12 326*ce*P **P** 03 22 56.9 -0.4
MKAR Makanchi Array 59.12 326 P **P** 03 22 56.8 -0.5
comp=Z,11nm,0.4s,baz=120,slow=8.3,SNR=164
comp=Z,11nm,0.4s
PRZ Przheval'sk 59.12 320 **P** 03 22 57.4 -0.2
PRZ Przheval'sk 59.12 320 P **P** 03 22 57.4 -0.2
PRZ pmax pmax
comp=Z,25nm,0.7s
TARG Taragay, Kyrgy 59.14 319 P **P** 03 22 58.4 +0.4
TARG IAmb IAmb 03 23 07.2
comp=Z,15nm,0.8s
TARG Taragay, Kyrgy 59.14 319 P **P** 03 22 58.4 +0.4
TARG pmax pmax
comp=Z,15nm,0.8s
MAKZ Makanchi 59.30 326 P **P** 03 22 58.1 -0.4
SATY Saty 59.41 321 ⇓*i* P **P** 03 22 59.2 -0.3
comp=Z,15nm,0.8s
SATY Saty 59.41 321*d* *i* P **P** 03 22 59.1 -0.3
SATY pmax pmax
comp=Z,15nm,0.8s
KDJ Kajisay 59.74 319 IAmb IAmb 03 23 04.0
comp=Z,27nm,1.1s
YAK Yakutsk 60.27 2 *e*P **P** 03 23 05.5 +0.6
YAK *e**PP **sP** 03 23 16.3 -0.4
YAK *e* 03 23 46.3
YAK *e* 03 25 18.6
YAK *e*PPP PPP 03 26 41.4
YAK *e*S **S** 03 31 17.7 +0.7
YAK *e**SS sS 03 31 34.4 +3.5
YAK *e* 03 32 51.2
YAK *e*SS **SS** 03 35 16.2 +1.4
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=Z,40nm,1.0s
YAK pmax pmax
comp=E,18nm,1.5s
YAK pmax pmax
comp=Z,324nm,3.8s
YAK pmax pmax
comp=N,333nm,3.5s
YAK pmax pmax
comp=E,635nm,3.8s
YAK smax smax
comp=N,682nm,6.4s
YAK smax smax
comp=E,565nm,4.8s
MDOK Medeo 60.32 320 *e*P **P** 03 23 05.5 -0.4
MDOK Medeo 60.32 320 *e*P **P** 03 23 05.4 -0.4
TNSS Tian-Shan 60.33 320 *e*P **P** 03 23 05.4 -0.7
TNSS Tian-Shan 60.33 320 *e*P **P** 03 23 05.4 -0.7
TDK Taldyqorghan 60.40 323 *e*P **P** 03 23 06.0 -0.2
comp=E,12nm,0.7s
TDK Taldyqorghan 60.40 323 *e*P **P** 03 23 05.9 -0.2
TDK pmax pmax
comp=Z,13nm,0.7s
AAA Alma-Ata 60.43 320 *e*P **P** 03 23 06.3 -0.2
AAA Alma-Ata 60.43 320 *e*P **P** 03 23 06.2 -0.2
MA2 Magadan 60.76 14 P **P** 03 23 10.0 +1.7
comp=Z,61nm,2.1s
RTZ Ruatahuna 61.29 136 P **P** 03 23 11.9 -0.4
AAK Ala-Archa 61.74 319*ce*P **P** 03 23 16.8 +1.4
AAK pmax pmax
comp=Z,20nm,1.7s
SGDS Sogindy 62.02 320 *e*P **P** 03 23 17.0 -0.1
ARSB Arslanbob 62.18 317 IAmb IAmb 03 23 24.2
comp=Z,28nm,1.3s
ZAA0 Zalesovo Array 62.32 334 P **P** 03 23 16.7 -2.2
ZAA0 IAmb IAmb 03 23 23.9
comp=Z,23nm,1.4s
ZALV Zalesovo Beam 62.32 334 P **P** 03 23 17.9 -0.9
comp=Z,1.9nm,0.3s,baz=118,slow=6.5,SNR=14
ZALV LR LR 03 52 24.6
comp=Z,87nm,19.5s,baz=246,slow=38
comp=Z,1.9nm,0.3s
ZALV Zalesovo Beam 62.32 334 P **P** 03 23 17.8 -1.1
ZALV Zalesovo Beam 62.32 334 *i* P **P** 03 23 18.0 -0.9
ZALV pmax pmax
comp=Z,3.0nm,0.4s
KBL Kabul 62.60 308 P **P** 03 23 21.0 -0.4
KBL IAmb IAmb 03 23 22.4
comp=Z,11nm,0.8s
KBL Kabul 62.60 308 P **P** 03 23 21.0 -0.4
KBL pmax pmax
comp=Z,11nm,0.8s

KURBB **Kurchatov Arra** 63.35 328 P **P** 03 23 24.9 -1.0
comp=Z,14nm,0.5s,baz=128,slow=6.6,SNR=98
comp=Z,14nm,0.5s
KURK **Kurchatov** 63.36 328 P **P** 03 23 25.1 -0.7
KURK **Kurchatov** 63.36 328 *ce*P **P** 03 23 25.0 -0.8
KURK pmax pmax
comp=Z,40nm,0.8s
KURK **Kurchatov** 63.36 328 P **P** 03 23 25.5 -0.4
KURK pP **sP** 03 23 36.5 -1.1
CHGR **Chuyangaron** 63.88 313 P **P** 03 23 28.0 -1.7
CHGR IAmb IAmb 03 23 44.9
comp=Z,31nm,1.0s
CHGR **Chuyangaron** 63.88 313 P **P** 03 23 28.0 -1.7
CHGR pmax pmax
comp=Z,31nm,1.0s
DZA **Taraz** 63.95 318 *e*P **P** 03 23 29.8 -0.2
DZA **Taraz** 63.95 318 *e*P **P** 03 23 29.8 -0.2
SEY **Seymchan** 64.09 13 *ce*P **P** 03 23 31.1 +0.6
SEY pmax pmax
comp=Z,7.0nm,0.9s
IUG **Iuzhnay** 64.54 317 *e*P **P** 03 23 33.6 -0.4
comp=Z,11nm,0.8s
IUG **Iuzhnay** 64.54 317 *e*P **P** 03 23 33.5 -0.4
IUG pmax pmax
comp=Z,11nm,0.8s
KK31 **Karatay Array** 64.59 318 P **P** 03 23 32.8 -1.3
KK31 **Karatay Array** 64.59 318 P **P** 03 23 32.8 -1.3
KK31 pmax pmax
comp=Z,10.0nm,1.0s
KKAR **Karatay Array** 64.59 318 P **P** 03 23 32.9 -1.3
KKAR **Karatay Array** 64.59 318 P **P** 03 23 32.9 -1.3
BRLS **Borolday** 65.01 317 *e*P **P** 03 23 37.0 0.0
BRLS **Borolday** 65.01 317 *e*P **P** 03 23 36.9 0.0
BRZS **Berezniki** 66.24 325 *e*P **P** 03 23 44.9 +0.1
BRZS **Berezniki** 66.24 325 *e*P **P** 03 23 44.8 +0.1
CASY **Casey** 68.74 187 P **P** 03 24 00.0 -0.1
CASY **Casey** 68.74 187 P **P** 03 24 01.2 +1.1
DRV **Dumont d'Urvil** 68.85 174 P **P** 03 24 00.6 -0.1
DRV PcP **PcP** 03 24 23.4 -1.7
BVAR **Borovoye Array** 68.92 327 P **P** 03 24 01.2 -0.4
comp=Z,5.2nm,0.4s,baz=78,slow=4.0,SNR=38
BVAR LR LR 03 54 56.3
comp=Z,111nm,21.9s,baz=295,slow=37
comp=Z,5.2nm,0.4s
BORK **Borovoye** 68.97 327 *ce*P **P** 03 24 01.5 -0.4
BORK pmax pmax
comp=Z,20nm,1.3s
BORK **Borovoye** 68.97 327 P **P** 03 24 01.7 -0.2
BORK pP **sP** 03 24 12.2 -1.6
BORK PcP **PcP** 03 24 26.0 0.0
TIXI **Tiksi** 69.91 1 LR LR 03 58 22.0
comp=Z,47nm,18.1s,baz=184,slow=39
TIXI **Tiksi** 69.91 1 P **P** 03 24 07.1 -0.1
TIXI IAmb IAmb 03 24 12.2
comp=Z,24nm,1.4s
TIXI **Tiksi** 69.91 1 *ce*P **P** 03 24 07.4 +0.2
TIXI pmax pmax
comp=Z,41nm,2.5s
AB31 **Akbulak array** 73.60 321 **P** 03 24 29.5 -0.5
ABKAR **Akbulak array** 73.60 321 **P** 03 24 29.4 -0.5
SVE **Sverdlovsk** 75.59 329 *e*P **P** 03 24 41.3 0.0
SVE pmax pmax
comp=Z,61nm,1.3s
KIP **Kipapa** 75.90 68 *ce*P P 03 24 33.1 -11
KIP pmax pmax
comp=Z,138nm,2.5s
ARTI **Arti** 76.64 328 P **P** 03 24 45.9 -1.4
ARTI **Arti** 76.64 328 *c iP* **P** 03 24 46.6 -0.7
ARTI 03 27 33.0
ARTI S **S** 03 34 32.7 +0.9
ARTI pmax pmax
comp=Z,38nm,1.3s
ARTI **Arti** 76.64 328 P **P** 03 24 46.8 -0.5
CCD **Concordia, Ant** 76.68 181 P **P** 03 24 48.4 +0.8
AKT **Akhty** 80.48 312 *e*P **P** 03 25 09.4 +0.4
AKT pmax pmax
comp=Z,15nm,1.0s
RAYN **Ar Rayn** 81.08 293 P **P** 03 25 12.0 -0.4
RAYN IAmb IAmb 03 25 14.8
comp=Z,13nm,0.8s
RAYN **Ar Rayn** 81.08 293 ⇑P **P** 03 25 12.3 -0.1
RAYN **Ar Rayn** 81.08 293 P **P** 03 25 12.0 -0.4
VNDA **Vanda** 81.41 173 P **P** 03 25 13.2 +0.1
comp=Z,14nm,0.9s,baz=318,slow=5.9,SNR=78
comp=Z,14nm,0.9s
VNDA **Vanda** 81.41 173 IAmb IAmb 03 25 14.2
comp=Z,12nm,0.7s
VNDA **Vanda** 81.41 173 P **P** 03 25 13.3 +0.3
MAW **Mawson** 81.74 200 P **P** 03 25 14.5 -0.4
comp=Z,5.2nm,0.7s,baz=55,slow=6.1,SNR=14
comp=Z,5.2nm,0.7s
KIRV **Kirov** 81.86 329 *ce*P **P** 03 25 15.4 -0.3
BELG **Belogornoye** 81.90 323 LR LR 04 05 45.5
comp=Z,359nm,19.5s,baz=96,slow=39
BELG **Belogornoye** 81.90 323 *i* P **P** 03 25 15.7 -0.3
BELG pmax pmax
comp=Z,11nm,1.1s
SBA **Scott Base** 82.33 172 P **P** 03 25 19.1 +1.3
SBA **Scott Base** 82.33 172 P **P** 03 25 19.1 +1.3
SBA pmax pmax
comp=Z,8.0nm,0.9s
SBA **Scott Base** 82.33 172 P **P** 03 25 19.1 +1.3
SBA PcP **pP** 03 25 25.8 -0.6
GNI **Garni** 82.62 310 P **P** 03 25 20.9 +0.6
GNI IAmb IAmb 03 25 43.0
comp=Z,17nm,0.8s
GNI **Garni** 82.62 310 P **P** 03 25 21.0 +0.6
GNI pmax pmax
comp=Z,17nm,0.9s
GNI **Garni** 82.62 310 P **P** 03 25 21.6 +1.2
comp=Z,21nm,0.8s
D19K **Kuna River** 83.13 21 IAmb IAmb 03 25 46.7
comp=Z,28nm,1.1s
J19K **Poorman** 83.21 26 IAmb IAmb 03 25 33.5
comp=Z,18nm,1.0s
L19K **White Mountain** 83.25 28 IAmb IAmb 03 25 52.4
comp=Z,36nm,1.3s
F20K **Avaraart Lake** 83.72 23 IAmb IAmb 03 25 49.9
comp=Z,19nm,1.1s
J20K **Nowinta River** 83.88 26 IAmb IAmb 03 25 30.1
comp=Z,46nm,1.7s
M20K **Styx River** 84.01 28 IAmb IAmb 03 25 37.0
comp=Z,28nm,1.2s
KBZ **Khabaz** 84.22 314 P **P** 03 25 27.9 -0.4
comp=Z,10nm,1.0s,baz=152,slow=6.4,SNR=12
comp=Z,10nm,1.0s
KBZ **Khabaz** 84.22 314 *ce*P **P** 03 25 27.6 -0.7
KBZ pmax pmax
comp=Z,22nm,1.5s
IMAR **Indian Mountai** 84.32 24 P **P** 03 25 28.9 +0.5
KIV **Kislovodsk** 84.39 314 P **P** 03 25 29.6 +0.3
KIV IAmb IAmb 03 25 36.3
comp=Z,14nm,0.6s
KIV **Kislovodsk** 84.39 314 *e*P **P** 03 25 28.5 -0.8
KIV pmax pmax
comp=Z,11nm,1.0s
KIV **Kislovodsk** 84.39 314 P **P** 03 25 30.2 +0.9
comp=Z,14nm,0.9s
SHA1 **Shidzhatmaz** 84.40 314 *i* P **P** 03 25 30.6 +1.1
SKT **Skwentna** 84.77 28 P **P** 03 25 31.0 +0.2
SKT IAmb IAmb 03 25 39.6
comp=Z,9.9nm,0.9s
VRH **Novokhopyorsk** 85.43 321 *e*P **P** 03 25 31.6 -2.6
VRH pmax pmax
comp=Z,30nm,1.0s
MARD **Mardin** 85.59 307 IAmb IAmb 03 25 37.9
comp=Z,22nm,1.0s
LABN **Labinsk** 85.83 314 *e*P **P** 03 25 32.2 -4.2
LABN *e**PP **PcP** 03 25 39.7 +0.6
LABN pmax pmax
comp=Z,11nm,0.5s
COLD **Coldfoot** 85.89 23 IAmb IAmb 03 25 45.4
comp=Z,8.9nm,1.0s
ERBR **Yeremizino-Bor** 86.03 316 *e*P **P** 03 25 36.0 -1.3
ERBR *e**PP **PcP** 03 25 42.1 +2.1
ERBR pmax pmax
comp=Z,30nm,0.9s
SOC **Sochi** 86.53 313 *e*P **P** 03 25 38.3 -1.5
SOC *e* 03 28 58.8
SOC *e*PPP PPP 03 30 53.8
SOC *e*S **SKSac** 03 36 01.3 -3.3
SOC *e*SS **SS** 03 41 54.7 -0.7
SOC *e*SSS SSS 03 45 28.8
SOC pmax pmax
comp=Z,20nm,0.9s

D24K **Happy Valley** 86.56 21 IAmb IAmb 03 25 49.0
comp=Z,7.7nm,0.8s
VORD **Divnogorie** 86.95 321 *e*P **P** 03 25 40.5 -1.2
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORR **Voronezh** 87.02 321 *e*P **P** 03 25 40.7 -1.3
VORR pmax pmax
comp=Z,30nm,0.9s
VSR **Storozhevoye** 87.04 321 *e*P **P** 03 25 40.5 -1.6
VSR pmax pmax
comp=Z,10.0nm,0.9s
ILAR **Eielson Array** 87.07 25 P **P** 03 25 41.1 -0.9
comp=Z,3.2nm,1.3s,baz=256,slow=4.5,SNR=5.6
comp=Z,3.2nm,1.3s
KLMR **Klimovskoe** 87.08 331 *e*P **P** 03 25 40.6 -1.5
KLMR *e* 03 29 02.3
KLMR pmax pmax
comp=Z,31nm,1.2s
LPSR **Galich'ya Gora** 87.21 322 *e*P **P** 03 25 42.4 -0.5
LPSR pmax pmax
comp=Z,20nm,1.0s
E25K **Arctic Village** 87.70 22 IAmb IAmb 03 26 03.1
comp=Z,9.8nm,1.2s
MOS **Moscow** 88.00 326 *e*P **P** 03 25 44.9 -1.8
MOS *e*S **S** 03 36 24.8 -3.5
MOS pmax pmax
comp=Z,35nm,0.8s
ANN **Anapa** 88.17 315 *e*P **P** 03 25 46.7 -1.0
ANN *e**PP **pP** 03 25 55.7 -0.9
ANN *e*S **SKSac** 03 36 13.2 -1.3
ANN pmax pmax
comp=Z,48nm,1.0s
C27K **Jago River** 88.39 21 IAmb IAmb 03 26 13.2
comp=Z,33nm,1.9s
J26L **Joseph Creek** 88.50 26 IAmb IAmb 03 27 60.0
comp=Z,18nm,1.7s
KIBK **Kibwezi** 88.51 268 P **P** 03 25 49.3 -0.8
KIBK IAmb IAmb 03 26 00.3
comp=Z,11nm,1.0s
OBN **Obninsk** 88.61 325 ⇓*e*P **P** 03 25 48.6 -0.9
OBN *e* 03 29 24.5
OBN pmax pmax
comp=Z,49nm,1.7s
OBN MLR MLR
comp=Z,87nm,16.0s
K27K **Chicken** 89.16 26 IAmb IAmb 03 26 03.5
comp=Z,10.0nm,1.1s
E27K **Coleen River** 89.19 22 IAmb IAmb 03 26 39.5
comp=Z,16nm,1.6s
KMBO **Kilima Mbogo** 89.27 269 P **P** 03 25 52.7 -1.2
comp=Z,1.2nm,0.4s,baz=99,slow=6.3,SNR=8.8
comp=Z,1.2nm,0.4s
APA **Apatity** 89.66 337 *e*P **P** 03 25 53.7 -0.5
APA *e* 03 29 26.3
APA MLR MLR
comp=Z,483nm,6.0s
MMAI **Mount Meron Ar** 90.02 303 P **P** 03 25 55.2 -1.6
comp=Z,3.1nm,0.8s,baz=78,slow=7.5,SNR=3.3
comp=Z,3.1nm,0.8s
SYO **Syowa Base** 90.42 201 ⇓*e*P **P** 03 25 58.2 +0.5
SYO **Syowa Base** 90.42 201 ⇑*e*sP sP 03 26 12.8 +3.0
L29M **L29M** 90.98 27 IAmb IAmb 03 26 35.2
comp=Z,16nm,1.3s
BR104 **Keskin Array S** 91.15 310 P **P** 03 26 01.4 -0.6
comp=Z,4.4nm,1.0s
BRTR **Keskin Array B** 91.15 310 P **P** 03 26 00.9 -1.1
comp=Z,2.3nm,0.9s,baz=131,slow=5.5,SNR=10
comp=Z,2.3nm,0.9s
BRTR **Keskin Array B** 91.15 310 P **P** 03 25 59.3 -2.7
BRTR **Keskin Array B** 91.15 310 *ce*P **P** 03 26 04.4 +2.4
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BR106 **Keskin Array S** 91.17 310 P **P** 03 26 01.1 -1.0
comp=Z,3.7nm,0.9s
BR105 **Keskin Array S** 91.17 310 P **P** 03 26 01.1 -1.0
comp=Z,56nmcomp=Z,5.4nm,0.9s
QSPA **South Pole Qui** 91.58 180 P **P** 03 26 03.0 -0.3
comp=Z,3.3nm,0.9s,baz=358,slow=5.9,SNR=4.1
comp=Z,3.3nm,0.9s
QSPA **South Pole Qui** 91.58 180 IAmb IAmb 03 26 09.0
comp=Z,30nm,1.9s
CSS **Mathiatis** 91.65 305 P **P** 03 26 03.5 -0.8
comp=Z,31nm,1.9s
ARCES **ARCESS Array B** 92.30 340 P **P** 03 26 06.0 -0.5
comp=Z,3.3nm,0.7s,baz=27,slow=4.1,SNR=10
ARCES LR LR 04 11 18.2
comp=Z,67nm,21.0s,baz=85,slow=38
comp=Z,3.3nm,0.7s
SPITS **Spitsbergen Ar** 92.45 349 P **P** 03 26 06.6 -0.5
comp=Z,4.8nm,0.8s,baz=155,slow=6.2,SNR=1.9
comp=Z,4.8nm,0.8s
AKASG **Malin Array Be** 93.34 321 P **P** 03 26 10.4 -1.2
comp=Z,1.8nm,0.8s,baz=72,slow=3.7,SNR=4.4
AKASG LR LR 04 12 10.6
comp=Z,116nm,19.9s,baz=78,slow=38
comp=Z,1.8nm,0.8s
AKASG **Malin Array Be** 93.34 321 *ce*P **P** 03 26 10.3 -1.4
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AK17 **Malin Array Si** 93.45 321 P **P** 03 26 12.3 +0.2
FINES **FINESS Array B** 93.53 332 P **P** 03 26 10.2 -2.1
comp=Z,1.6nm,0.6s,baz=64,slow=4.8,SNR=14
comp=Z,1.6nm,0.6s
MNK **Minsk** 93.67 325 *i* P **P** 03 26 11.7 -1.4
MNK *i* 03 29 56.6
MNK *i* PPP PPP 03 31 57.3
MNK *i* S **SKSac** 03 36 43.3 -2.3
MNK *i* PS **PS** 03 38 36.7 -0.6
MNK *i* SS **SS** 03 43 37.7 -0.3
MNK *i* SSS SSS 03 47 18.8
MNK pmax pmax
comp=N,5.0nm,0.7s
MNK pmax pmax
comp=Z,5.0nm,0.5s
MNK pmax pmax
comp=E,6.0nm,0.7s
MNK MLR MLR
comp=Z,105nm,17.0s
MNK MLR MLR
comp=E,95nm,17.0s
MNK MLR MLR
comp=N,121nm,17.0s
SORM **Soroca** 94.21 318 ⇓P **P** 03 26 15.3 -0.4
SORM **Soroca** 94.21 318 ⇓P **P** 03 26 15.3 -0.4
TESR **Tescani** 95.58 317 ⇑P **P** 03 26 22.0 -0.1
TESR **Tescani** 95.58 317 P **P** 03 26 22.1 0.0
comp=N,19nm,1.5s
DLBC **Dease Lake** 95.64 31 LR LR 04 03 35.4
comp=Z,103nm,20.2s,baz=79,slow=32
MLR **Muntele Rosu** 96.22 316 P **P** 03 26 25.6 +0.4
BURAR **Bucovina Array** 96.38 318 P **P** 03 26 25.0 -0.8
BURAR IAmb IAmb 03 26 28.1
comp=Z,6.5nm,0.8s
BURAR **Bucovina Array** 96.38 318 ⇓P **P** 03 26 26.3 +0.5
BURAR **Bucovina Array** 96.38 318 ⇓P **P** 03 26 26.3 +0.5
BUR08 **Bucovina Ar. S** 96.38 318 IAmb IAmb 03 26 31.1
comp=Z,11nm,1.2s
STNU **Starunia** 96.66 319 P **P** 03 26 26.6 -0.3
EZN **Ezine** 96.75 310 ⇑P **P** 03 26 26.8 -0.7
EZN **Ezine** 96.75 310 ⇑P **P** 03 26 26.8 -0.7
MORS **Morshin** 96.98 320 P **P** 03 26 27.3 -1.0
SIRR **Siria** 99.02 317 ⇑P **Pdif** 03 26 37.5 -0.2
NVL **N'lazarevskaya** 99.51 198 *e*P **Pdif** 03 26 41.0 +1.8
NVL *e* 03 30 43.4
NVL *e*PPP PPP 03 32 51.7
NVL *e*S **SKSac** 03 37 17.0 +1.6
NVL *e*SS **SS** 03 45 04.3 +4.5
NVL *e*SSS SSS 03 48 53.7
NVL pmax pmax
comp=Z,5.0nm,0.6s
NVL smax smax
comp=E,184nm,11.6s
NVL MLR MLR
comp=Z,99nm,17.0s
HFS **Hagfors** 99.73 332 P **Pdif** 03 26 39.1 -1.4
comp=Z,0.6nm,0.5s,baz=104,slow=6.3,SNR=6.0
HFS LR LR 04 15 17.2
comp=Z,106nm,18.6s,baz=76,slow=38
comp=Z,0.6nm,0.5s
NB2 **NORSAR Subarra** 100.52 333 P **Pdif** 03 26 42.2 -1.8
comp=Z,10nm,1.7s,baz=68,slow=4.8
NOA **NORSAR Array B** 100.52 333 P **Pdif** 03 26 42.6 -1.4
comp=Z,0.7nm,0.7s,baz=68,slow=4.5,SNR=3.4
TORD **Torodi Ar. Bea** 123.31 287 PKhKP PKPpre 03 31 48.5
comp=Z,1.0nm,0.9s,baz=101,slow=2.9,SNR=6.5
DBIC **Dimbokro** 130.74 280 PKP **PKPdf** 03 32 08.2 -0.7
comp=Z,5.2nm,1.1s,baz=117,slow=2.3,SNR=1.9
PLCA **Paso Flores** 138.15 161 PKP **PKPdf** 03 32 20.3 -1.9
comp=Z,3.3nm,0.8s,baz=189,slow=5.8,SNR=5.5
MT16 **CCHEN** 144.60 155 PKPbc 03 32 33.4 +0.8
AAGR **Agrelo** 145.59 157 *e*P **PKPab** 03 32 36.6 +0.5
ARCO **CERRO ARCO** 145.76 157 ⇓*e*P **PKPdf** 03 32 36.6 +0.5
ASAL **Salagasta** 146.02 156 *e*P **PKPbc** 03 32 37.4 +0.2
AUSP **Uspallata** 146.11 155 *e*P **PKPdf** 03 32 37.8 +0.9
RTLS **Leoncito** 146.52 155 *e*P **PKPbc** 03 32 39.3 +0.4
ACAN **Cantantal** 146.93 158 *e*P **PKPdf** 03 32 38.7 +0.7
ACCO **Cerro Coronel** 147.67 154 *e*P **PKPbc** 03 32 41.7 -0.5
AROD **Rodeo** 147.85 153 *e*P **PKPbc** 03 32 43.3 +0.6
ACDV **Cuesta del Vie** 148.00 154 *e*P **PKPdf** 03 32 41.3 +1.4
LCO **Las Campanas** 148.24 151 **PKPbc** 03 32 44.5 +0.7
LCO **Las Campanas** 148.24 151 PKP2 **PKPbc** 03 32 44.5 +0.7
AC04 **Llanos de Chal** 148.71 149 **PKPbc** 03 32 45.5 +0.9
AGUA **GUANDACOL** 148.87 154 *e*P **PKPbc** 03 32 45.3 +0.1
VCA **Vinchina** 149.64 154 *e*P **PKPbc** 03 32 47.7 +0.5
TINO **Tinogasta** 150.50 154 ⇓*e*P **PKPbc** 03 32 49.6 +0.4
CYA **Choya** 150.89 157 *e*P **PKPbc** 03 32 50.0 0.0
FSA **Cafayete** 152.89 155 *e*P **PKiKP** 03 32 55.6 +0.6
CPUP **Villa Florida** 155.19 172 PKP **PKPdf** 03 32 50.8 +0.2
comp=Z,0.5nm,0.8s,baz=42,slow=2.2,SNR=3.5
LPAZ **La Paz** 159.54 136 PKP **PKPdf** 03 32 57.1 +0.1
comp=Z,1.7nm,0.9s,baz=122,slow=2.6,SNR=4.4

UPA ***15*** *03:13:37.1±0.9, 9°.53N×84°.13W, h10km±6km, MW3.7*
CATAC ***15*** *03:13:37.2±0.5, 9°N±2°×8°4W±°, h20km±2km, M3.7/11, MLv3.7/11, Error ellipse: s-maj=7.7km s-min=2.9km az=57.4, confirmed*
UCR ***15*** *03:13:37.4±1.2, 9°.40N×84°.24W, h30km±2km, MW3.7*
ISC 15 03:13:37.6±0.9, **9°.40N**±0°.02×**84°.22W**±0°.03, **h30**km±5km, **n106**, **s0°80**/139, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
QUEP	**Quepos**	**0.07**	**61**	P		**Pb**	**03 13 42.3**	**-0.5**
QUEP				S		**Sb**	**03 13 46.2**	**-0.1**
LLNJ	**Naranjito**	**0.14**	**58**	*e*P		**Pb**	**03 13 43.0**	**-0.3**
LLNJ				*e*S		**Sn**	**03 13 47.6**	**+0.1**
PICV	**PH. Pirrs**	**0.23**	**7**	*e*P		**Pb**	**03 13 43.9**	**-0.3**
RAZU	**San Marcos de**	**0.33**	**37**	*e*P		**Pb**	**03 13 45.2**	**-0.4**
RAZU				*e*S		**Sb**	**03 13 51.6**	**+0.6**
PITB	**Pirrs, San**	**0.33**	**37**	*e*P		**Pb**	**03 13 45.2**	**-0.4**
PITB				*e*S		**Sb**	**03 13 51.5**	**+0.4**
PIEC	**Cerro El Cedra**	**0.34**	**50**	*e*P		**Pb**	**03 13 45.6**	**-0.3**
PIEC				*e*S		**Sb**	**03 13 52.3**	**+0.7**
ACOS	**Acosta**	**0.40**	**8**	*e*P		**Pb**	**03 13 46.0**	**-0.7**
ACOS				*e*S		**Sb**	**03 13 52.8**	**0.0**
LCR2	**La Lucha 2**	**0.40**	**32**	S		**Sb**	**03 13 52.8**	**-0.2**
LCR2	**La Lucha 2**	**0.40**	**32**	*e*S		**Sb**	**03 13 52.7**	**-0.2**
BUS1	**Rivas**	**0.49**	**72**	*e*P		**Pb**	**03 13 47.3**	**-1.0**
BUS1				*e*S		**Sb**	**03 13 55.5**	**-0.1**
AMPA	**Desamparados**	**0.52**	**18**	*e*P		**Pb**	**03 13 47.6**	**-0.9**
SANTA	**Santa Ana**	**0.53**	**4**	*e*P		**Pb**	**03 13 47.7**	**-1.0**
LUJA	**Lujan**	**0.55**	**16**	*e*P		**Pb**	**03 13 48.1**	**-0.8**
TAGO	**Cartago**	**0.55**	**32**	*e*P		**Pb**	**03 13 48.4**	**-0.6**
TAGO				*e*S		**Sb**	**03 13 57.0**	**+0.2**
REPA	**Paraso**	**0.55**	**39**	*e*P		**Pb**	**03 13 48.2**	**-0.8**
REPA				*e*S		**Sb**	**03 13 56.7**	**-0.1**
TRIO	**Tres Rios**	**0.55**	**24**	*e*P		**Pb**	**03 13 48.1**	**-0.9**
ECI	**Escuela Centro**	**0.56**	**17**	*e*P		**Pb**	**03 13 48.5**	**-0.7**
ECI				*e*S		**Sb**	**03 13 57.3**	**+0.2**
SJS3	**Mercedes San J**	**0.56**	**17**	*e*P		**Pb**	**03 13 48.7**	**-0.5**
SJS	**Escuela Geolog**	**0.56**	**17**	*e*P		**Pb**	**03 13 48.4**	**-0.8**
SJS				*e*S		**Sb**	**03 13 57.4**	**+0.3**
LUPE	**Guadalupe**	**0.57**	**17**	*e*P		**Pb**	**03 13 48.7**	**-0.6**
LUPE				*e*S		**Sb**	**03 13 57.8**	**+0.5**
BELE	**Belen**	**0.57**	**3**	*e*P		**Pb**	**03 13 48.6**	**-0.8**
BELE				*e*S		**Sb**	**03 13 57.5**	**+0.1**
ATEO	**Atenas**	**0.60**	**345**	*e*P		**Pb**	**03 13 49.0**	**-0.7**
HEME	**Heredia, Merce**	**0.60**	**8**	*e*P		**Pn**	**03 13 50.3**	**+0.1**
HEME				*e*S		**Sn**	**03 13 59.6**	**+0.6**
CORON	**Coronado**	**0.61**	**21**	*e*P		**Pb**	**03 13 49.5**	**-0.4**
OCHAL	**Ojochal**	**0.64**	**118**	P		**Pb**	**03 13 49.3**	**-1.1**
OCHAL	**Ojochal**	**0.64**	**118**	S		**Sb**	**03 13 59.1**	**-0.1**
TCS1	**Tacares**	**0.64**	**353**	P		**Pb**	**03 13 50.2**	**-0.3**
TCS1	**Tacares**	**0.64**	**353**	*e*P		**Pb**	**03 13 50.0**	**-0.5**
PCAYA	**Pacayas**	**0.66**	**38**	*e*P		**Pb**	**03 13 49.9**	**-0.9**
PCAYA				*e*S		**Sb**	**03 13 59.7**	**0.0**
POAS	**San Pedro de P**	**0.67**	**358**	*e*P		**Pb**	**03 13 50.6**	**-0.4**
POAS				*e*S		**Sn**	**03 14 01.2**	**+0.4**
CVIMO	**Finca Echandi**	**0.68**	**24**	*e*P		**Pb**	**03 13 50.6**	**-0.5**
PALD	**Palmares**	**0.68**	**342**	*e*P		**Pb**	**03 13 49.2**	**-2.0**
EDPE	**Pejibaye, P**	**0.69**	**110**	*e*P		**Pb**	**03 13 50.1**	**-1.0**
VICA	**Volcano Irazu**	**0.69**	**33**	*e*P		**Pb**	**03 13 50.7**	**-0.8**
SAJE	**San Jernim**	**0.71**	**94**	*e*P		**Pb**	**03 13 50.2**	**-1.4**
RAMO	**San Ramon**	**0.72**	**341**	*e*S		**Sn**	**03 14 02.1**	**0.0**
SRA1	**San Ramn**	**0.73**	**340**	*e*P		**Pb**	**03 13 51.1**	**-0.8**
TURIB	**Turrialba**	**0.73**	**46**	*e*S		**Sb**	**03 14 01.0**	**-0.7**
ARZA	**Esparza**	**0.73**	**323**	*e*S		**Sn**	**03 14 02.0**	**-0.1**
CVTQ	**Turrialba Volc**	**0.75**	**37**	*e*P		**Pb**	**03 13 51.7**	**-0.8**
VERB	**Verbena**	**0.75**	**44**	*e*P		**Pn**	**03 13 51.3**	**-1.0**
VERB				*e*S		**Sb**	**03 14 02.3**	**0.0**
CVTV	**Tajo**	**0.76**	**38**	*e*P		**Pn**	**03 13 52.0**	**-0.7**
CVTV				*e*S		**Sb**	**03 14 02.8**	**0.0**
VTR0	**Volcan Turrial**	**0.77**	**37**	*e*P		**Pb**	**03 13 52.0**	**-0.8**
CVTR	**Volcan Turrial**	**0.77**	**36**	*e*P		**Pn**	**03 13 51.9**	**-0.9**
VPS8	**V Poas**	**0.78**	**359**	*e*P		**Pn**	**03 13 52.2**	**-0.6**
ABRB	**Las Abras (San**	**0.78**	**40**	*e*P		**Pn**	**03 13 52.2**	**-0.6**
ABRB				*e*S		**Sb**	**03 14 03.6**	**+0.3**
VPS5	**V. Poas**	**0.79**	**359**	*e*P		**Pn**	**03 13 52.1**	**-0.8**
ENAS	**Puntarenas**	**0.83**	**314**	*e*P		**Pn**	**03 13 52.6**	**-0.7**
RESJ	**San Isidro (Tu**	**0.85**	**42**	*e*P		**Pn**	**03 13 53.1**	**-0.5**
CVTG	**V. Turrialba,**	**0.86**	**31**	*e*P		**Pn**	**03 13 53.5**	**-0.3**
CVTG				*e*S		**Sb**	**03 14 06.3**	**+0.9**
BURE	**Buenos Aires**	**0.90**	**104**	*e*P		**Pn**	**03 13 53.7**	**-0.6**
VPL2	**V. Platanar**	**0.92**	**350**	*e*P		**Pn**	**03 13 53.9**	**-0.7**
PILE	**Guapiles**	**0.92**	**28**	*e*P		**Pn**	**03 13 54.1**	**-0.4**
PILE				*e*S		**Sb**	**03 14 07.8**	**+0.9**
ARTO	**Ro Cuarto**	**0.94**	**0**	*e*P		**Pn**	**03 13 54.4**	**-0.4**
RVLA	**Villa Bonita**	**0.94**	**42**	*e*P		**Pn**	**03 13 54.4**	**-0.4**
LCOCO	**El Coco**	**0.95**	**44**	*e*P		**Pn**	**03 13 54.3**	**-0.6**
DRK0	**Durika**	**0.97**	**98**	P		**Pn**	**03 13 54.9**	**-0.5**
DRK0	**Durika**	**0.97**	**98**	S		**Sn**	**03 14 08.5**	**+0.3**
DRK0	**Durika**	**0.97**	**98**	*e*P		**Pn**	**03 13 54.8**	**-0.6**
JCR1	**Jicaral**	**0.98**	**297**	*e*P		**Pn**	**03 13 54.2**	**-1.2**
SOCE	**Pocosol**	**1.05**	**338**	P		**Pn**	**03 13 56.6**	**+0.2**
SOCE	**Pocosol**	**1.05**	**338**	S		**Sb**	**03 14 11.7**	**+0.9**
SOCE	**Pocosol**	**1.05**	**338**	*e*P		**Pn**	**03 13 56.3**	**0.0**
EDP2	**Potrero Grande**	**1.10**	**110**	*e*P		**Pn**	**03 13 57.0**	**0.0**
EDP2				*e*S		**Sb**	**03 14 13.3**	**+1.2**
JUNT	**Juntas**	**1.14**	**321**	*e*P		**Pn**	**03 13 57.4**	**-0.1**
JTS	**Las Juntas de**	**1.14**	**321**	*e*P		**Pn**	**03 13 57.4**	**-0.1**
JTS				*e*S		**Sn**	**03 14 12.6**	**+0.4**
JTS	**Las Juntas de**	**1.14**	**321**	*e*P		**Pn**	**03 13 57.3**	**-0.2**
CASO	**Castillo**	**1.15**	**334**	*e*P		**Pn**	**03 13 58.0**	**-0.4**
CASO				*e*S		**Sb**	**03 14 14.6**	**+1.1**
VERH	**Veragua Rainfo**	**1.15**	**63**	*e*P		**Pn**	**03 13 57.1**	**0.0**
FORC	**Fortuna**	**1.15**	**338**	*e*P		**Pb**	**03 13 58.4**	**-0.5**
FORC				*e*S		**Sb**	**03 14 14.6**	**+1.1**
VACR	**Volcan Arenal**	**1.16**	**337**	*e*P		**Pn**	**03 13 58.3**	**+0.5**
CEDE	**Laguna Cedeo**	**1.18**	**336**	*e*P		**Pn**	**03 13 58.6**	**+0.5**
LAES	**El Progreso Va**	**1.21**	**73**	*e*P		**Pn**	**03 13 58.7**	**+0.2**
REZ	**Monterrey de S**	**1.22**	**337**	*e*P		**Pn**	**03 13 59.2**	**+0.6**
TABAC	**Tabacon**	**1.22**	**334**	*e*P		**Pb**	**03 13 59.7**	**-0.4**
CHIK	**Chiripa**	**1.24**	**327**	*e*P		**Pn**	**03 13 58.9**	**-0.1**
PTJ1	**Puerto Jimnez**	**1.25**	**133**	*e*P		**Pb**	**03 14 00.0**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.25**	**133**	P		**Pb**	**03 14 00.1**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.25**	**133**	S		**Sb**	**03 14 16.6**	**+0.3**
CEUA	**Cerro Uatsi, L**	**1.28**	**80**	*e*P		**Pb**	**03 14 01.0**	**-0.2**
PIRO	**Carate, Puerto**	**1.32**	**138**	*e*P		**Pn**	**03 14 00.8**	**+0.8**
PIRO				*e*S		**Sb**	**03 14 19.5**	**+1.1**
PIRO	**Carate, Puerto**	**1.32**	**138**	P		**Pn**	**03 14 01.0**	**+1.0**
PIRO	**Carate, Puerto**	**1.32**	**138**	S		**Sb**	**03 14 19.0**	**+0.6**
COVE	**Coope Vega, Sa**	**1.32**	**352**	S		**Sb**	**03 14 19.0**	**+0.5**
COVE	**Coope Vega, Sa**	**1.32**	**352**	P		**Pn**	**03 14 00.6**	**+0.6**
CMAR	**Lajas Hojancha**	**1.33**	**298**	*e*P		**Pn**	**03 13 58.8**	**-1.5**
INVE	**Universidad In**	**1.35**	**322**	*e*P		**Pn**	**03 14 01.1**	**+0.6**
QUEB	**Quebradon, Cot**	**1.39**	**332**	*e*P		**Pn**	**03 14 01.6**	**+0.7**
TIMP	**Tierras Morena**	**1.41**	**326**	*e*P		**Pn**	**03 14 01.8**	**+0.4**

BRU2	Volcan	1.63	112	S		Sb	03 14 26.2	-1.1	
BRU2	Volcan	1.63	112	P		Pn	03 14 05.0	+0.7	
VMAR	Armenia, Volca	1.66	328	*eP*		Pn	03 14 05.1	+0.4	
BC3P	Paso Ancho	1.69	110	*eP*		Pn	03 14 05.8	+0.5	
BC3P				*eS*		Sn	03 14 27.7	+1.6	
LESP3	La Esperanza,	1.73	125	*eP*		Pn	03 14 04.0	-1.6	
LESP3				*eS*		Sb	03 14 28.8	-1.2	
PTAR3	Potrerillos Ar	1.84	112	*eP*		Pn	03 14 07.4	+0.1	
LNBQ3	Los Naranjos,	1.86	109	*eP*		Pn	03 14 08.0	+0.5	
LNBQ3				*eS*		Sn	03 14 31.4	+1.3	
BQSF3	Alto Boquete,	1.88	110	*eP*		Pn	03 14 09.5	+1.7	
BQSF3				*eS*		Sn	03 14 31.6	+0.9	
PSOM3	Paja de Sombre	2.01	111	*eP*		Pn	03 14 05.3	-4.1	
CHGR2	Aguacate	2.10	102	*eP*		Pn	03 14 11.4	+0.6	
CHGR2				*eS*		Sn	03 14 37.0	+1.0	
RBALA	Bur	2.11	104	*eP*		Pn	03 14 10.8	0.0	

MDD ***15*** *03:16:02.9±1.0,36°.50N×11°.24W,h12km±11km,Mb4.2/10, M_mb3.5/11,Error ellipse: s-maj=12.3km s-min=5.7km az=86.0*
IGIL ***15*** *03:16:05.1,36°.52N×11°.16W,h14km,ML2.0*
INMG ***15*** *03:16:05.6±1.1,36°.50N×11°.23W,h24km,ML2.2,Error ellipse: s-maj=4.4km s-min=3.2km az=87.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
CNRM ***15*** *03:16:08.0,36°.30N×10°.96W,h49km*

ISC 15 03:16:03.4±5.8,36°.48N±0°.04×11°.2W±0°.1,h36km±7km,n65, σ1º55/101,9C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.03**	**70**	Pn		**Pn**	**03 16 36.3**	**+1.3**
PFVI				Sn		**Sn**	**03 16 58.7**	**-0.3**
PFVI	**Vila Bisbo**	**2.03**	**70**	*eP*		**Pn**	**03 16 36.3**	**+1.3**
PFVI				*eS*		**Sn**	**03 16 58.8**	**-0.3**
PFVI				*i* IAML			03 17 00.1	
PFVI				*i* IAML			03 17 00.1	
PFVI				*i* IAML			03 17 00.4	
PFVI	**Vila Bisbo**	**2.03**	**70**	P		**Pn**	**03 16 37.1**	**+2.1**
PFVI	**Vila Bisbo**	**2.03**	**70**	S		**Sn**	**03 17 01.2**	**+2.1**
MORF	**Marmelete**	**2.22**	**67**	*eP*		**Pn**	**03 16 39.0**	**+1.3**
MORF				*eS*		**Sn**	**03 17 03.8**	**-0.1**
MORF				IAML			03 17 05.5	
	comp=E,20nm,0.2s							
MORF	**Marmelete**	**2.22**	**67**	*eP*		**Pn**	**03 16 39.1**	**+1.5**
MORF				*eS*		**Sn**	**03 17 04.5**	**+0.7**
MORF				*i* IAML			03 17 05.0	
MORF				*i* IAML			03 17 05.6	
MORF				*i* IAML			03 17 09.4	
PTEO	**Sao Teotonio**	**2.27**	**61**	*eP*		**Pn**	**03 16 40.1**	**+1.9**
PTEO				*eS*		**Sn**	**03 17 05.1**	**+0.2**
PTEO				*i* IAML			03 17 09.7	
PTEO				*i* IAML			03 17 10.5	
PTEO				*i* IAML			03 17 15.4	
PBDV	**Barranco-do-Ve**	**2.75**	**73**	Sn		**Sn**	**03 17 16.4**	**-0.4**
PBDV	**Barranco-do-Ve**	**2.75**	**73**	*eP*		**Pn**	**03 16 46.7**	**+1.8**
PBDV				*eS*		**Sn**	**03 17 17.1**	**+0.2**
PBDV				*i* IAML			03 17 21.7	
PBDV				*i* IAML			03 17 25.6	
MESJ	**Messejana**	**2.76**	**60**	*eP*		**Pn**	**03 16 46.2**	**+1.2**
MESJ				*eS*		**Sn**	**03 17 16.5**	**-0.5**
MESJ				IAML			03 17 17.8	
	comp=E,2.7nm,0.1s							
MESJ	**Messejana**	**2.76**	**60**	*eP*		**Pn**	**03 16 46.5**	**+1.4**
MESJ				*eS*		**Sn**	**03 17 16.7**	**-0.4**
MESJ				*i* IAML			03 17 18.1	
MESJ				*i* IAML			03 17 28.7	
PCVE	**Castro Verde**	**2.79**	**65**	Pn		**Pn**	**03 16 47.1**	**+1.6**
PCVE				Sn		**Sn**	**03 17 17.2**	**-0.8**
PCVE	**Castro Verde**	**2.79**	**65**	*eP*		**Pn**	**03 16 47.2**	**+1.6**
PCVE				*eS*		**Sn**	**03 17 17.9**	**0.0**
PCVE				*i* IAML			03 17 20.4	
PCVE				*i* IAML			03 17 21.5	
PCVE				*i* IAML			03 17 24.6	
PMAFR	**Mafra**	**2.91**	**31**	*eP*		**Pn**	**03 16 47.8**	**+0.6**
PMAFR				*eS*		**Sn**	**03 17 20.2**	**-0.7**
PMAFR				*i* IAML			03 17 22.4	
PVAQ	**Vaqueiros**	**2.96**	**71**	*eP*		**Pn**	**03 16 49.5**	**+1.8**
PVAQ				*eS*		**Sn**	**03 17 21.7**	**-0.3**
PVAQ				*i* IAML			03 17 24.0	
PVAQ				*i* IAML			03 17 24.4	
PVAQ				*i* IAML			03 17 28.6	
PVAQ	**Vaqueiros**	**2.96**	**71**	P		**Pn**	**03 16 49.5**	**+1.8**
PVAQ	**Vaqueiros**	**2.96**	**71**	S		**Sn**	**03 17 25.0**	**+3.1**
MOE	**Montemor**	**3.06**	**47**	*eP*		**Pn**	**03 16 50.4**	**+1.2**
MOE				*eS*		**Sn**	**03 17 24.1**	**-0.5**
MOE				*i* IAML			03 17 26.4	
MOE				*i* IAML			03 17 27.2	
MOE				*i* IAML			03 17 28.3	
PBEJ	**Beja**	**3.09**	**59**	*eP*		**Pn**	**03 16 51.5**	**+1.9**
PBEJ				*eS*		**Sn**	**03 17 24.8**	**-0.5**
PBEJ				*i* IAML			03 17 25.6	
PBEJ				*i* IAML			03 17 28.3	
PBEJ				*i* IAML			03 17 29.6	
EGRO	**El Granado**	**3.17**	**69**	Pn		**Pn**	**03 16 51.2**	**+0.5**
EGRO					*i*IVmb_VC		03 16 55.3	
	comp=E,301nm,SNR=1.5							
EGRO				Sn		**Sn**	**03 17 27.3**	**0.0**
PARRA	**Arraiolos**	**3.44**	**46**	*eP*		Pn	03 16 55.6	+8.5
PARRA				*eS*		Sn	03 17 33.1	+12
PARRA				*i* IAML			03 17 34.5	
PARRA				*i* IAML			03 17 35.2	
PARRA				*i* IAML			03 17 35.3	
PMTG	**Montargil**	**3.51**	**42**	*eP*		**Pn**	**03 16 56.5**	**+1.1**
PMTG				*eS*		**Sn**	**03 17 35.5**	**-0.2**
PMTG				*i* IAML			03 17 37.8	
PMTG				*i* IAML			03 17 40.7	
PMTG				*i* IAML			03 17 42.0	
PSBE	**So Bento**	**3.59**	**32**	*eP*		**Pn**	**03 16 57.6**	**+1.1**
PSBE				*eS*		**Sn**	**03 17 37.1**	**-0.5**
PBAR	**Barrancos**	**3.74**	**62**	Pn		**Pn**	**03 17 00.2**	**+1.7**
PBAR				Sn		**Sn**	**03 17 39.4**	**-1.9**
PBAR	**Barrancos**	**3.74**	**62**	*eP*		**Pn**	**03 17 00.9**	**+2.4**
PBAR				*eS*		**Sn**	**03 17 40.2**	**-1.1**
PBAR				*i* IAML			03 17 42.9	
PBAR				*i* IAML			03 17 43.1	
PBAR				*i* IAML			03 17 45.8	
PESTR	**Estremoz**	**3.74**	**49**	*eS*		**Sn**	**03 17 41.3**	**-0.1**
PESTR				*i* IAML			03 17 44.7	
EMIN	**Mina Concepcio**	**3.86**	**69**	Pn		**Pn**	**03 17 01.1**	**+1.0**
EMIN					*i*IVmb_VC		03 17 04.1	
	comp=E,113nm,SNR=0.6							
EMIN				Sn		**Sn**	**03 17 43.3**	**-0.9**
PSARD	**Sardoal**	**3.94**	**37**	*eP*		**Pn**	**03 17 02.8**	**+1.5**
PSARD				*eS*		**Sn**	**03 17 45.8**	**-0.5**
PSARD				*i* IAML			03 17 46.9	
PSARD				*i* IAML			03 17 49.1	
PSARD				*i* IAML			03 17 49.2	
EBAD	**Badajoz**	**4.04**	**54**	Pn		**Pn**	**03 17 04.2**	**+1.5**
EBAD				Sn		**Sn**	**03 17 46.4**	**-2.3**
EBAD	**Badajoz**	**4.04**	**54**	Pn		**Pn**	**03 17 03.8**	**+1.2**
EBAD					*i*IVmb_VC		03 17 06.9	
	comp=E,230nm,SNR=1.0							
EBAD				Sn		**Sn**	**03 17 47.8**	**-0.9**
PCAS	**Casmilo, Conde**	**4.16**	**30**	*eP*		**Pn**	**03 17 05.4**	**+1.0**
PCAS				*eS*		**Sn**	**03 17 51.2**	**-0.6**
ESPR	**Espera**	**4.33**	**83**	Sn		**Sn**	**03 17 54.6**	**-1.3**
ESPR	**Espera**	**4.33**	**83**	Pn		**Pn**	**03 17 07.9**	**+1.3**
ESPR					*i*IVmb_VC		03 17 12.1	
	comp=E,227nm,SNR=1.2							
ESPR				Sn		**Sn**	**03 17 55.5**	**-0.3**
PCBR	**Castelo Branco**	**4.47**	**40**	*eP*		**Pn**	**03 17 09.7**	**+1.2**
PCBR				*eS*		**Sn**	**03 17 57.7**	**-1.6**
PCBR				*i* IAML			03 17 58.3	
ZHG	**ZHG**	**4.82**	**127**	P		**Pn**	**03 17 14.8**	**+1.2**
ZHG	**ZHG**	**4.82**	**127**	S		**Sn**	**03 18 07.4**	**-0.8**
ECAB	**El Cabril**	**4.89**	**69**	Pn		**Pn**	**03 17 16.0**	**+1.5**
ECAB				Sn		**Sn**	**03 18 07.5**	**-2.3**
ECAB	**El Cabril**	**4.89**	**69**	Pn		**Pn**	**03 17 15.0**	**+0.5**
ECAB					*i*IVmb_VC		03 17 21.1	
	comp=E,212nm,SNR=1.6							
ECAB				Sn		**Sn**	**03 18 08.0**	**-1.8**
PVIS	**Viseu**	**4.97**	**31**	*eP*		**Pn**	**03 17 16.2**	**+0.7**
PVIS				*eS*		**Sn**	**03 18 09.8**	**-1.9**
EPLA	**Plasencia**	**5.40**	**47**	Pn		**Pn**	**03 17 22.2**	**+0.8**
EPLA					*i*IVmb_VC		03 17 23.7	
	comp=E,203nm,SNR=1.0							
EPLA				Sn		**Sn**	**03 18 20.0**	**-2.3**
EADA	**Adamuz**	**5.56**	**70**	Sn		**Sn**	**03 18 23.9**	**-2.2**
EADA				Pn		**Pn**	**03 17 25.3**	**+1.8**
EADA	**Adamuz**	**5.56**	**70**	Pn		**Pn**	**03 17 24.6**	**+1.0**
EADA					*i*IVmb_VC		03 17 32.0	
	comp=E,131nm,SNR=0.8							
EADA				Sn		**Sn**	**03 18 24.3**	**-1.9**
POLO	**Lamas de Olo**	**5.57**	**28**	*eS*		**Sn**	**03 18 24.2**	**-2.4**
MVO	**Moncorvo**	**5.71**	**34**	*eP*		**Pn**	**03 17 26.4**	**+0.8**
MVO				*eS*		**Sn**	**03 18 27.6**	**-2.4**
MVO				*i* IAML			03 18 30.2	
LCRM	**LCR**	**5.91**	**116**	P		**Pn**	**03 17 29.1**	**+0.6**
LCRM	**LCR**	**5.91**	**116**	S		**Sn**	**03 18 33.1**	**-2.1**
ELOB	**Lobios**	**5.92**	**24**	Pn		**Pn**	**03 17 28.5**	**0.0**
ELOB				Sn		**Sn**	**03 18 32.2**	**-2.8**
PGAV	**Gavieira, Arco**	**5.94**	**22**	*eS*		**Sn**	**03 18 32.4**	**-3.3**
OUK	**Oukaimeden**	**5.95**	**151**	P		**Pn**	**03 17 30.7**	**+1.4**
OUK	**Oukaimeden**	**5.95**	**151**	S		**Sn**	**03 18 34.7**	**-1.7**
TISM	**Timmit**	**6.18**	**139**	P		**Pn**	**03 17 32.7**	**+0.6**
TISM	**Timmit**	**6.18**	**139**	S		**Sn**	**03 18 40.0**	**-1.5**
PAB	**San Pablo**	**6.23**	**58**	Pn		**Pn**	**03 17 33.8**	**+0.9**
PAB					*i*IVmb_VC		03 17 41.4	
	comp=E,147nm,SNR=1.1							
PAB				Sn		**Sn**	**03 18 40.3**	**-2.5**
PSIM	**Granatula de C**	**6.37**	**66**	Pn		**Pn**	**03 17 35.6**	**+0.9**
PSIM				Sn		**Sn**	**03 18 43.8**	**-2.4**
MD31	**MD31**	**6.43**	**122**	P		**Pn**	**03 17 36.6**	**+1.1**
MD31	**MD31**	**6.43**	**122**	S		**Sn**	**03 18 46.2**	**-1.5**
TIO	**Tiouine**	**6.44**	**148**	Pn		**Pn**	**03 17 37.7**	**+1.8**
TIO				Sn		**Sn**	**03 18 43.7**	**-4.5**
TIO	**Tiouine**	**6.44**	**148**	P		**Pn**	**03 17 37.6**	**+1.6**
TIO	**Tiouine**	**6.44**	**148**	S		**Sn**	**03 18 47.6**	**-0.6**
MDT	**Midelt**	**6.56**	**122**	P		**Pn**	**03 17 38.6**	**+1.2**
MDT	**Midelt**	**6.56**	**122**	S		**Sn**	**03 18 49.3**	**-1.7**
EQES	**Quesada**	**6.64**	**76**		*i*IVmb_VC		03 17 40.6	
	comp=E,203nm,SNR=1.2							
EQES				Sn		**Sn**	**03 18 50.2**	**-2.8**
OUZM	**OUZ**	**6.68**	**145**	P		**Pn**	**03 17 40.5**	**+1.4**
OUZM	**OUZ**	**6.68**	**145**	S		**Sn**	**03 18 52.8**	**-1.2**
TZRR	**Tazzarine**	**7.38**	**139**	P		**Pn**	**03 17 49.7**	**+1.1**

IDC ***15*** *03:20:55.5±1.4,1°.75N×126°.54E,h0km,mb4.1/6, mbtmp4.0/7,ML3.5/1,Error ellipse: s-maj=117.8km s-min=17.3km az=69.0*
DJA ***15*** *03:20:59.7±1.4,2°.N±3°×12°.6E±°,h19km±12km,M3.8/7, MLv3.8/7*

ISC 15 03:21:01.0±0.9,1°.71N±0°.09×126°.5E±0°.1,h35km,n10, σ0º83/12,mb4.1/6,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.27**	**137**	P		**Pn**	**03 21 22.0**	**-0.3**
TNTI				S		**Sn**	**03 21 39.4**	**+1.3**
SGSI	**Sangihe**	**2.19**	**334**	P		**Pn**	**03 21 34.4**	**-0.5**
SGSI				S		**Sn**	**03 22 02.5**	**+1.7**
SANI	**Sanana**	**3.77**	**188**	P		**Pn**	**03 21 56.7**	**0.0**
FITZ	**Fitzroy Crossi**	**19.70**	**182**	P		**P**	**03 25 27.2**	**-0.2**
	0.1nm,0.3s,baz=351,slow=13,SNR=1.2							
	1.0nm,0.6s							
WRA	**Warramunga Arr**	**22.85**	**161**	P		**P**	**03 26 00.4**	**-1.0**
	7.2nm,0.6s,baz=339,slow=10,SNR=17							
	7.2nm,0.6s							
ASAR	**Alice Springs**	**26.23**	**164**	P		**P**	**03 26 33.1**	**+0.2**
	3.4nm,0.9s,baz=348,slow=12,SNR=16							
	3.4nm,0.9s							
MKAR	**Makanchi Array**	**59.08**	**326**	P		**P**	**03 30 57.5**	**-0.3**
	0.9nm,0.5s,baz=120,slow=7.7,SNR=14							
	0.9nm,0.5s							
KURBB	**Kurchatov Arra**	**63.31**	**328**	P		**P**	**03 31 26.3**	**-0.1**
	1.8nm,0.2s,baz=127,slow=6.1,SNR=9.6							
	1.8nm,0.2s							
BVAR	**Borovoye Array**	**68.88**	**327**	P		**P**	**03 32 01.8**	**-0.3**
	0.4nm,0.4s,baz=134,slow=8.3,SNR=2.7							
	0.4nm,0.4s							
VNDA	**Vanda**	**81.47**	**173**	P		**P**	**03 33 13.8**	**-0.2**
	0.4nm,0.5s,baz=321,slow=7.1,SNR=3.3							
	0.4nm,0.5s							

SOME ***15*** *03:23:48.5,42°.87N×75°.73E,h15km*
KRNET ***15*** *03:23:48.5±0.1,42°.90N×75°.74E,h25km,mb2.8*
NNC ***15*** *03:23:49.0±0.5,42°.93N×75°.78E,h7km±3km,mb3.5, mpv3.1,Error ellipse: s-maj=5.0km s-min=2.4km az=19.0*
KNET ***15*** *03:23:48.3±0.4,42°.87N×75°.73E,h20km±2km,ml1.5,Error ellipse: s-maj=4.5km s-min=1.8km az=32.0*

ISC 15 03:23:48.8±0.8,42°.89N±0°.02×75°.75E±0°.01,h18km±4km, n52,σ0º50/100,28C-16D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TKM2	**Tokmak 2**	**0.12**	**287**		⇑P	**Pg**	**03 23 53.0**	**+0.1**
	75nm,0.1s							
TKM2					⇑S	**Sg**	**03 23 55.7**	**+0.1**
	157nm,0.1s							
TKM2	**Tokmak 2**	**0.12**	**287**		⇑*i*P	**Pg**	**03 23 52.8**	**-0.1**
TKM2					⇑*i*S	**Sg**	**03 23 55.8**	**+0.1**
KST	**Kastek**	**0.22**	**45**	P		**Pg**	**03 23 54.1**	**-0.1**
	12nm,0.2s							
KST				S		**Sg**	**03 23 58.0**	**+0.1**
	196nm,0.2s							
KST	**Kastek**	**0.22**	**45**	*eP*		**Pg**	**03 23 54.2**	**-0.1**
KST				*eS*		**Sg**	**03 23 58.0**	**+0.1**
KST	**Kastek**	**0.22**	**45**	*eP*		**Pg**	**03 23 54.1**	**-0.1**
	12nm,0.2s							
KST				*eS*		**Sg**	**03 23 58.0**	**+0.1**
	196nm,0.2s							
DGS	**Degeres**	**0.36**	**3**	P		**Pg**	**03 23 56.2**	**-0.2**
	15nm,0.1s							
DGS				S		**Sg**	**03 24 01.2**	**-0.3**
	30nm,0.1s							
DGS	**Degeres**	**0.36**	**3**	*eP*		**Pg**	**03 23 56.2**	**-0.2**
DGS				*eS*		**Sg**	**03 24 01.2**	**-0.3**
DGS	**Degeres**	**0.36**	**3**	*eP*		**Pg**	**03 23 56.2**	**-0.2**
	15nm,0.1s							
DGS				*eS*		**Sg**	**03 24 01.2**	**-0.3**
	30nm,0.1s							
BOOM	**Boomskoye usch**	**0.42**	**160**		⇑*i*P	**Pg**	**03 23 57.5**	**0.0**
BOOM					⇑*i*S	**Sg**	**03 24 03.5**	**+0.1**
MTBS	**Maitube**	**0.56**	**64**	P		**Pg**	**03 23 59.6**	**-0.4**
	5.5nm,0.1s							
MTBS				S		**Sg**	**03 24 07.4**	**0.0**
	32nm,0.2s							
MTBS	**Maitube**	**0.56**	**64**	*eP*		**Pg**	**03 23 59.6**	**-0.4**
MTBS				*eS*		**Sg**	**03 24 07.5**	**0.0**
MTBS	**Maitube**	**0.56**	**64**	*eP*		**Pg**	**03 23 59.6**	**-0.4**
	5.5nm,0.1s							
MTBS				*eS*		**Sg**	**03 24 07.4**	**0.0**
	32nm,0.2s							
KBK	**Karagaybulak**	**0.63**	**249**		⇓P	**Pb**	**03 24 01.2**	**-0.3**
	12nm,0.1s							
KBK					⇑S	**Sg**	**03 24 10.4**	**+0.5**
	65nm,0.4s							
KBK	**Karagaybulak**	**0.63**	**249**		⇓*i*P	**Pb**	**03 24 00.9**	**-0.5**
KBK					⇓*i*S	**Sb**	**03 24 09.8**	**-0.2**
IZV	**Izvestkoviy**	**0.65**	**77**	P		**Pb**	**03 24 00.9**	**-0.9**
	27nm,0.1s							
IZV				S		**Sb**	**03 24 10.4**	**-0.2**
	19nm,0.1s							
IZV	**Izvestkoviy**	**0.65**	**77**	*eP*		**Pb**	**03 24 00.9**	**-0.9**
IZV				*eS*		**Sb**	**03 24 10.4**	**-0.2**
IZV	**Izvestkoviy**	**0.65**	**77**	*eP*		**Pb**	**03 24 00.9**	**-0.9**
	27nm,0.1s							
IZV				*eS*		**Sb**	**03 24 10.4**	**-0.2**
	19nm,0.1s							
ULHL	**Ulahol**	**0.74**	**150**		⇓P	**Pb**	**03 24 03.1**	**-0.2**
	12nm,0.2s							
ULHL					⇑S	**Sg**	**03 24 13.4**	**+0.2**
	31nm,0.3s							
ULHL	**Ulahol**	**0.74**	**150**		⇓*i*P	**Pb**	**03 24 02.7**	**-0.6**
ULHL					⇓*i*S	**Sb**	**03 24 13.0**	**-0.1**
CHMS	**Chumysh**	**0.74**	**279**		⇑P	**Pb**	**03 24 02.7**	**-0.5**
	19nm,0.2s							
CHMS					⇓S	**Sb**	**03 24 12.8**	**-0.2**
	19nm,0.2s							
CHMS	**Chumysh**	**0.74**	**279**		⇓*i*P	**Pb**	**03 24 02.5**	**-0.7**
CHMS					⇓*i*S	**Sb**	**03 24 12.6**	**-0.4**
KRBS	**Karabastau**	**0.81**	**356**	P		**Pb**	**03 24 04.0**	**-0.5**
	16nm,0.1s							
KRBS				S		**Sb**	**03 24 14.8**	**-0.3**
	2.3nm,0.1s							
KRBS	**Karabastau**	**0.81**	**356**	*eP*		**Pb**	**03 24 04.0**	**-0.5**
KRBS				*eS*		**Sb**	**03 24 14.8**	**-0.3**
KRBS	**Karabastau**	**0.81**	**356**	*eP*		**Pb**	**03 24 04.0**	**-0.5**
KRBS				*eS*		**Sb**	**03 24 14.8**	**-0.3**
TNSS	**Tian-Shan**	**0.89**	**80**	P		**Pb**	**03 24 05.7**	**-0.4**
	2.7nm,0.2s							
TNSS					S	**Sg**	**03 24 18.0**	**-0.3**
	2.2nm,0.2s							
TNSS	**Tian-Shan**	**0.89**	**80**	*eP*		**Pb**	**03 24 05.7**	**-0.4**
TNSS				*eS*		**Sg**	**03 24 17.9**	**-0.3**
TNSS	**Tian-Shan**	**0.89**	**80**	*eP*		**Pb**	**03 24 05.7**	**-0.4**
	2.7nm,0.2s							
TNSS				*eS*		**Sg**	**03 24 17.9**	**-0.3**
	2.2nm,0.2s							
AAK	**Ala-Archa**	**0.95**	**255**		⇑P	**Pb**	**03 24 06.8**	**-0.1**
	3.3nm,0.2s							
AAK					⇓S	**Sg**	**03 24 19.9**	**-0.1**
	10nm,0.2s							
AAK	**Ala-Archa**	**0.95**	**255**		⇑*i*P	**Pb**	**03 24 06.5**	**-0.5**
AAK					⇑*i*S	**Sb**	**03 24 19.4**	**+0.1**
USP	**Ospenovka**	**0.99**	**293**		⇑P	**Pb**	**03 24 07.0**	**-0.5**
	2.4nm,0.1s							
USP					⇑S	**Sb**	**03 24 20.0**	**-0.2**
	13nm,0.1s							
USP	**Ospenovka**	**0.99**	**293**		⇑*i*P	**Pb**	**03 24 06.7**	**-0.8**
USP					⇑*i*S	**Sb**	**03 24 19.9**	**-0.3**
MDOK	**Medeo**	**0.99**	**73**	Pg		**Pb**	**03 24 07.6**	**0.0**
	3.7nm,0.1s							
MDOK				Lg		Lg	03 24 21.3	
	10nm,0.1s							
MDOK	**Medeo**	**0.99**	**73**	*eP*		**Pb**	**03 24 07.6**	**0.0**
MDOK				*eS*		**Sg**	**03 24 21.3**	**+0.1**
KOTS	**Kotyrbulak**	**1.06**	**70**	P		**Pg**	**03 24 09.1**	**-0.3**
	5.2nm,0.1s							
KOTS				S		**Sg**	**03 24 23.8**	**+0.5**
	22nm,0.3s							
KOTS	**Kotyrbulak**	**1.06**	**70**	*eP*		**Pg**	**03 24 09.1**	**-0.3**
	5.2nm,0.1s							
KOTS				*eS*		**Sg**	**03 24 23.8**	**+0.5**
	22nm,0.3s							
KTBS	**Karatobe**	**1.07**	**39**	P		**Pb**	**03 24 08.5**	**-0.4**
	3.4nm,0.2s							
KTBS				S		**Sb**	**03 24 22.8**	**+0.2**
	10.0nm,0.2s							
KTBS	**Karatobe**	**1.07**	**39**	*eP*		**Pb**	**03 24 08.5**	**-0.4**
KTBS				*eS*		**Sb**	**03 24 22.8**	**+0.2**
UCH	**Uchtor**	**1.12**	**235**		⇓P	**Pn**	**03 24 10.1**	**0.0**
	1.3nm,0.2s							
UCH					⇓S	**Sn**	**03 24 25.1**	**-0.3**
	5.7nm,0.1s							
UCH	**Uchtor**	**1.12**	**235**		⇑*i*P	**Pb**	**03 24 09.6**	**-0.4**
UCH					⇑*i*S	**Sb**	**03 24 24.8**	**+0.3**
KDJ	**Kajisay**	**1.30**	**125**		⇑*i*P	**Pn**	**03 24 12.4**	**+0.1**
KDJ					⇑*i*S	**Sg**	**03 24 30.2**	**-0.8**
EKS2	**Erkin-Say**	**1.47**	**262**		⇑P	**Pb**	**03 24 15.9**	**+0.2**
	2.6nm,0.1s							
EKS2					⇑S	**Sg**	**03 24 35.6**	**-0.7**
	4.1nm,0.1s							
EKS2	**Erkin-Say**	**1.47**	**262**		⇑*i*P	**Pb**	**03 24 15.2**	**-0.5**
EKS2					⇑*i*S	**Sb**	**03 24 34.7**	**+0.6**
ARLS	**Aral**	**1.47**	**226**		⇓*i*P	**Pb**	**03 24 15.3**	**-0.5**
ARLS					⇓*i*S	**Sb**	**03 24 35.1**	**+0.9**
JNKS	**Jany-Kuch**	**1.83**	**182**		⇑*i*P	**Pb**	**03 24 21.1**	**-0.8**
JNKS					⇑*i*S	**Sb**	**03 24 44.8**	**+0.2**
MRKS	**Merke**	**1.86**	**266**	P		**Pb**	**03 24 22.3**	**0.0**
	3.3nm,0.2s							
MRKS				S		**Sb**	**03 24 46.5**	**+1.2**
	10.0nm,0.3s							
MRKS	**Merke**	**1.86**	**266**	*eP*		**Pb**	**03 24 22.3**	**0.0**
	3.3nm,0.2s							
MRKS				*eS*		**Sb**	**03 24 46.5**	**+1.2**
	10.0nm,0.3s							
TARG	**Taragay, Kyrgy**	**1.92**	**126**		⇓*e*P	**Pb**	**03 24 22.2**	**-1.3**
TARG					⇓*i*S	**Sb**	**03 24 46.7**	**-0.5**
SATY	**Saty**	**1.96**	**84**	Pg		**Pb**	**03 24 25.0**	**+0.9**
	4.7nm,0.2s							
SATY				Lg		Lg	03 24 51.0	
	12nm,0.2s							
PRZ	**Przheval'sk**	**2.00**	**101**		⇑*e*P	**Pn**	**03 24 22.6**	**+0.7**
PRZ					⇑*e*S	**Sn**	**03 24 47.6**	**+1.1**
ARXS	**Arharly**	**2.01**	**48**	Pg		**Pb**	**03 24 24.8**	**-0.1**
	1.5nm,0.2s							
ARXS				Lg		Lg	03 24 51.5	
	11nm,0.3s							
ARXS	**Arharly**	**2.01**	**48**	*eP*		**Pb**	**03 24 24.8**	**-0.1**
	1.5nm,0.2s							
ARXS				*eS*		**Sb**	**03 24 51.5**	**+1.8**
	11nm,0.3s							
BLB	**Baldybast

WHYT	**Xinyi Township**	**2.17**	**356**	*eP*		**Pb**	**03 26 04.2**	**-0.4**
WARBT	**Fenglin Townsh**	**2.21**	**9**	*eP*		**Pn**	**03 26 01.6**	**+0.5**
VWDT	**VWDT**	**2.22**	**3**	*eP*		**Pn**	**03 26 01.4**	**+0.2**
VCHM	**Qimei**	**2.23**	**319**	*eP*		**Pn**	**03 25 60.0**	**-1.4**
SSLB	**Suanglung**	**2.25**	**358**	*eP*		**Pb**	**03 26 03.9**	**-2.2**
SSLB				*eS*		**Sb**	**03 26 31.4**	**-2.1**
SHUL	**Shoufeng**	**2.31**	**12**	*eP*		**Pn**	**03 26 03.6**	**+1.2**
ESL	**Shilin**	**2.31**	**9**	*eP*		**Pn**	**03 26 04.4**	**+1.9**
SMLT	**Sun Moon Lake**	**2.35**	**357**	*eP*		**Pb**	**03 26 05.5**	**-2.2**
TYC	**Yuchr**	**2.37**	**356**	*eP*		**Pn**	**03 26 05.4**	**+2.1**
PHUB	**P'eng-hu**	**2.39**	**326**	*eP*		**Pn**	**03 26 02.6**	**-1.0**
PHUB				*eS*		**Sn**	**03 26 30.5**	**-1.5**
OWD	**Renai**	**2.42**	**3**	*eP*		**Pn**	**03 26 06.1**	**+2.0**
PNG	**Penghu**	**2.44**	**327**	*eP*		**Pn**	**03 26 03.9**	**-0.4**
WUSB	**Renai**	**2.46**	**2**	P		**Pn**	**03 26 05.9**	**+1.3**
WUSB				*eS*		**Sb**	**03 26 37.3**	**-2.2**
LXIB	**Xiulin Townshi**	**2.51**	**8**	*eP*		**Pn**	**03 26 04.3**	**-1.1**
WCS	**Beigang Elemen**	**2.52**	**358**	*eP*		**Pn**	**03 26 06.5**	**+1.1**
WHF	**Hehuan Shan**	**2.62**	**5**	*eP*		**Pn**	**03 26 07.8**	**+0.8**
WHF				*eS*		**Sb**	**03 26 40.8**	**-3.6**
NACB	**Ninganchiao**	**2.69**	**11**	*eP*		**Pn**	**03 26 08.0**	**+0.3**
NACB				*eS*		**Sn**	**03 26 39.6**	**+0.2**
ETLH	**Xiulin Townshi**	**2.70**	**9**	*eP*		**Pn**	**03 26 08.9**	**+0.9**
TDCB	**Techi**	**2.72**	**3**	*eP*		**Pn**	**03 26 10.1**	**+1.9**
TWT	**Tachien**	**2.72**	**3**	*eP*		**Pn**	**03 26 09.6**	**+1.4**
WHP	**Taichung City**	**2.74**	**359**	*eP*		**Pn**	**03 26 09.8**	**+1.4**
TWQ1	**Liyutan**	**2.82**	**355**	*eP*		**Pn**	**03 26 11.6**	**+2.1**
ENA	**Nanau**	**2.96**	**13**	*eP*		**Pn**	**03 26 12.7**	**+1.2**
LATG	**Datong**	**3.03**	**9**	*eP*		**Pn**	**03 26 14.1**	**+1.6**
ENTT	**Nioudou**	**3.14**	**9**	*eP*		**Pn**	**03 26 16.4**	**+2.5**
YHNB	**Yeheng**	**3.15**	**6**	*eP*		**Pn**	**03 26 16.2**	**+2.1**
NSK	**Sanguang**	**3.15**	**6**	*eP*		**Pn**	**03 26 15.4**	**+1.3**
TWC	**Suao**	**3.16**	**14**	*eP*		**Pn**	**03 26 16.3**	**+2.1**
FUSB	**Fushanzhiwuyua**	**3.26**	**9**	*eP*		**Pn**	**03 26 17.8**	**+2.2**
NWLT	**Wulai**	**3.27**	**8**	*eP*		**Pn**	**03 26 18.3**	**+2.6**
TIPB	**Shuangxi**	**3.51**	**12**	*eP*		**Pn**	**03 26 21.2**	**+2.2**
HATJ	**Hateruma jima**	**3.60**	**45**	*eP*		**Pn**	**03 26 22.1**	**+2.0**
IRIF	**Iriomote-Funau**	**3.75**	**41**	*eP*		**Pn**	**03 26 23.1**	**+0.9**
JKRS	**Kuro-shima**	**3.86**	**45**	P		**Pn**	**03 26 25.5**	**+1.8**
JIJ	**Ishigaki jima**	**4.03**	**45**	P		**Pn**	**03 26 27.2**	**+1.0**
JISG	**Ishigakijimahi**	**4.30**	**44**	P		**Pn**	**03 26 30.3**	**+0.5**
JTJ	**Tarama**	**4.59**	**47**	*eP*		**Pn**	**03 26 34.4**	**+0.5**

IDC ***15*** *03:31:29.9±1.8, 1°.73N×126°.78E, h0km, mb3.5/4, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=127.9km s-min=21.8km az=69.0*
DJA ***15*** *03:31:34.5±0.3, 2°.1N±4°×12°6E±°, h10km, M3.4/6, MLv3.4/6*
ISC 15 03:31:35.9±1.1, 1°.65N±0°.09×126°.5E±0°.2, h35km, n8, σ1§50/8, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**135**	P		**Pn**	**03 31 57.8**	**+1.2**
SGSI	**Sangihe**	**2.24**	**334**	P		**Pn**	**03 32 11.5**	**+0.9**
SANI	**Sanana**	**3.71**	**188**	P		**Pn**	**03 32 32.1**	**+1.3**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**03 36 00.5**	**-1.3**
	baz=3.8,slow=15,SNR=2.3							
	1.3nm,0.8s							
WRA	**Warramunga Arr**	**22.80**	**161**	P		**P**	**03 36 33.4**	**-2.3**
	1.5nm,0.7s,baz=340,slow=10,SNR=8.0							
	1.5nm,0.7s							
ASAR	**Alice Springs**	**26.18**	**164**	P		**P**	**03 37 07.2**	**-0.1**
	0.3nm,0.5s,baz=351,slow=14,SNR=8.4							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**59.13**	**326**	P		**P**	**03 41 33.3**	**+0.1**
	0.2nm,0.4s,baz=106,slow=9.0,SNR=2.1							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**63.36**	**328**	P		**P**	**03 42 01.3**	**-0.3**
	0.2nm,0.5s,baz=132,slow=5.9,SNR=2.1							
	0.2nm,0.5s							

RSNC 15 03:51:01.0±0.0, 6°N±1°×7°4W±°, h94km±2km, M1.9, mb3.6, ML1.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRJC	**Barrancabermej**	**0.49**	**1**	P		Pn	03 51 15.8	-0.3
BRJC				S		Sn	03 51 27.9	+0.5
BARC	**Barichara**	**0.57**	**79**	P		Pn	03 51 16.9	-0.1
BARC				S		Sn	03 51 29.2	+0.2
PTBC	**PUERTO BERRIO,**	**0.70**	**275**	P		Pn	03 51 16.6	-1.3
PTBC				S		Sn	03 51 29.5	-1.1
RUSC	**La Rusia**	**0.88**	**131**	P		Pn	03 51 19.4	-0.8
RUSC				S		Sn	03 51 34.5	-0.1
SPBC	**San Pablo de B**	**0.88**	**201**	P		Pn	03 51 19.2	-0.6
SPBC				S		Sn	03 51 33.6	-0.3
PAMC	**Pamplona, Colo**	**1.35**	**51**	P		Pn	03 51 25.2	-0.4
PAMC				S		Sn	03 51 44.3	+0.3
NORC	**Norcasia**	**1.44**	**231**	P		Pn	03 51 25.7	-0.5
NORC				S		Sn	03 51 45.5	+0.2
HELC	**Santa Helena**	**1.79**	**261**	P		Pn	03 51 30.9	-0.1
HELC				S		Sn	03 51 54.5	+0.7
OCAC	**Ocana**	**1.80**	**14**	P		Pn	03 51 30.4	-0.5
OCAC				S		Sn	03 51 54.0	+0.4
GUY2C	**Guyana, Caldas**	**2.03**	**232**	P		Pn	03 51 34.2	-0.1
GUY2C				S		Sn	03 52 01.9	+2.3
UREC	**San Jos de Ur**	**2.17**	**306**	P		Pn	03 51 34.0	-1.7
UREC				S		Sn	03 52 00.6	-1.6
CBOC	**Ciudad Bolivar**	**2.33**	**255**	P		Pn	03 51 38.0	+0.1
CBOC				S		Sn	03 52 07.1	+1.0
PRAC	**Prado**	**2.97**	**202**	P		Pn	03 51 45.6	-0.7
PRAC				S		Sn	03 52 21.8	+0.6
MACC	**Macarena, Meta**	**4.31**	**181**	P		Pn	03 52 02.9	-1.4
MACC				S		Sn	03 52 50.7	-2.8
URIC	**Uribia, Colomb**	**5.47**	**18**	P		Pn	03 52 18.9	-1.2
URIC				S		Sn	03 53 20.6	-1.1

IDC ***15*** *03:55:32.1±1.7, 1°.64N×126°.48E, h0km, mb3.6/4, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=121.7km s-min=20.7km az=69.0*
DJA ***15*** *03:55:36.0±2.0, 2°N±4°×12°6E±°, h14km±19km, M3.6/7, MLv3.6/7*
ISC 15 03:55:37.8±1.2, 1°.57N±0°.08×126°.4E±0°.2, h35km, n8, σ0§83/8, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**2.27**	**338**	P		**Pn**	**03 56 13.6**	**+0.7**
KMSI	**Cibinong**	**2.60**	**248**	P		**Pn**	**03 56 17.8**	**+0.4**
SANI	**Sanana**	**3.62**	**186**	P		**Pn**	**03 56 32.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P		**P**	**04 00 02.3**	**-0.4**
	0.1nm,0.3s,baz=10.0,slow=11,SNR=2.1							
	1.9nm,0.9s							
WRA	**Warramunga Arr**	**22.75**	**160**	P		**P**	**04 00 36.4**	**-0.8**
	0.8nm,0.5s,baz=340,slow=11,SNR=9.4							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**26.12**	**164**	P		**P**	**04 01 08.7**	**-0.1**
	0.5nm,0.4s,baz=342,slow=8.8,SNR=10							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**59.14**	**326**	P		**P**	**04 05 34.0**	**-1.1**
	0.3nm,0.4s,baz=114,slow=7.9,SNR=6.4							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**63.38**	**328**	P		**P**	**04 06 04.1**	**+0.5**
	0.3nm,0.3s,baz=128,slow=6.4,SNR=2.0							
	0.3nm,0.3s							

IDC ***15*** *03:58:45.4±0.5, 1°.65N×126°.34E, h0km, mb4.4/20, mbtmp4.4/23, ML3.8/3, MS3.7/3, Error ellipse: s-maj=25.9km s-min=11.7km az=74.0*
DJA ***15*** *03:58:49.8±0.2, 2°N±2°×12°6E±°, h10km, M4.4/18, mB5.0/6, mb4.5/6, MLv4.4/18, Mw(mB)4.4/6*
NEIC ***15*** *03:58:51.7±2.0, 1°.71N±0°.08×126°.45E±0°.07, h35km±2km, mb4.9/33, Error ellipse: s-maj=15.1km s-min=10.4km az=209.0*
ISC 15 03:58:51.4±0.4, 1°.68N±0°.05×126°.38E±0°.07, h35km, n82, σ1§55/77, mb4.7/41, MS3.9/3, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**133**			**Pn**	**03 59 13.5**	**0.0**
TNTI	**Ternate**	**1.33**	**133**	P		**Pn**	**03 59 14.1**	**+0.6**
TNTI				S		**Sn**	**03 59 35.2**	**+5.1**
SGSI	**Sangihe**	**2.17**	**337**	P		**Pn**	**03 59 24.8**	**-0.2**
SGSI				S		**Sn**	**03 59 52.2**	**+1.5**
KMSI	**Cibinong**	**2.64**	**245**	P		**Pn**	**03 59 32.8**	**+1.3**
SANI	**Sanana**	**3.73**	**186**	P		**Pn**	**03 59 47.1**	**+0.6**
LUWI	**Luwuk**	**4.51**	**233**	Pn		**Pn**	**03 59 59.0**	**+1.7**
LUWI	**Luwuk**	**4.51**	**233**	P		**Pn**	**03 59 59.0**	**+1.7**
MRSI	**Marisa**	**4.60**	**255**	P		**Pn**	**03 59 59.8**	**+1.3**
NLAI	**Namlea**	**4.94**	**172**	P		**Pn**	**04 00 05.6**	**+2.5**
	0.3nm42nm,0.8s							
APSI	**Ampana**	**5.39**	**242**	P		**Pn**	**04 00 09.8**	**+0.5**
MSAI	**Masohi**	**5.60**	**153**	P		**Pn**	**04 00 14.7**	**+2.4**
	0.3nm47nm,0.7s							
TOLI2	**Tolitoli**	**5.63**	**264**			**Pn**	**04 00 12.1**	**-0.6**
MPSI	**Mapaga**	**6.62**	**258**	P		**Pn**	**04 00 28.4**	**+2.1**
	0.2nm709nm55nm,1.0s							
FAKI	**Fak Fak**	**7.43**	**128**	P		**Pn**	**04 00 40.0**	**+2.6**
MYLDM	**Lahad Datu**	**8.60**	**294**			**Pn**	**04 00 56.7**	**+3.2**
KAPI	**Kappang**	**9.39**	**225**	Pn		**Pn**	**04 01 02.4**	**-1.9**
	1.4nm,0.3s,baz=119,slow=7.5,SNR=4.6							
	4.3nm,0.3s							
KAPI	**Kappang**	**9.39**	**225**	Pn		**Pn**	**04 01 05.4**	**+1.1**
SBUM	**Sibu**	**14.18**	**273**			**P**	**04 02 15.9**	**-0.9**
JAY	**Jayapura**	**14.91**	**106**	Pn		**Pn**	**04 02 16.8**	**-3.0**
	0.2nm,0.3s,baz=181,slow=7.3,SNR=2.5							
	10nm,0.9s							
KNRA	**Kununurra**	**17.41**	**172**			**Pn**	**04 02 50.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P		**P**	**04 03 14.8**	**-2.7**
	0.2nm,0.3s,baz=356,slow=6.4,SNR=13							
	3.9nm,0.7s							
FITZ	**Fitzroy Crossi**	**19.67**	**182**			**P**	**04 03 15.8**	**-1.7**
SSLB	**Suanglung**	**22.60**	**347**	P		**P**	**04 03 47.1**	**-2.1**
SSLB				IAmb		IAmb	04 04 08.8	
	comp=Z,100nm,1.7s							
WB0	**Warramunga Arr**	**22.72**	**160**			**P**	**04 03 49.1**	**-1.3**
WRA	**Warramunga Arr**	**22.86**	**160**	P		**P**	**04 03 50.7**	**-1.2**
	comp=Z,10.0nm,0.8s,baz=338,slow=11,SNR=40							
	comp=Z,10.0nm,0.8s							
WR8	**Warramunga Arr**	**22.93**	**160**			**P**	**04 03 51.1**	**-1.5**
WR8				IAmb		IAmb	04 03 57.8	
	comp=Z,13nm,0.6s							
PSA00	**Pilbara Seismi**	**23.98**	**195**	P		**P**	**04 04 02.5**	**-0.3**
PSA00				IAmb		IAmb	04 04 04.0	
	comp=Z,62nm,1.9s							
PSA00	**Pilbara Seismi**	**23.98**	**195**	P		**P**	**04 04 03.0**	**+0.2**
PSA00				IAmb		IAmb	04 04 22.5	
	comp=Z,12nm,1.6s							
AS31	**Alice Springs**	**26.23**	**164**			**P**	**04 04 23.0**	**-0.4**
ASAR	**Alice Springs**	**26.23**	**164**	P		**P**	**04 04 23.4**	**0.0**
	comp=Z,5.0nm,0.7s,baz=342,slow=8.2,SNR=31							
ASAR				PcP		**PcP**	**04 07 49.9**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=356,slow=2.2,SNR=6.8							
	comp=Z,5.0nm,0.7s							
ASAR	**Alice Springs**	**26.23**	**164**	P		**P**	**04 04 23.2**	**-0.1**
NJ2	**Nanjing**	**31.03**	**348**	*eP*		**P**	**04 05 08.3**	**+2.4**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**31.66**	**304**	P		**P**	**04 05 11.9**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=114,slow=7.1,SNR=6.3							
	comp=Z,1.8nm,0.3s							
MORW	**Morawa**	**32.14**	**197**	P		**P**	**04 05 14.7**	**-1.0**
MORW				IAmb		IAmb	04 05 20.2	
	comp=Z,42nm,1.8s							
FORT	**Forrest**	**32.32**	**177**	P		**P**	**04 05 18.1**	**+0.9**
FORT				IAmb		IAmb	04 05 29.7	
	comp=Z,7.2nm,0.8s							
PZH	**PanZhiHua**	**34.20**	**318**	P		**P**	**04 05 36.3**	**+2.4**
BBOO	**Buckleboo**	**35.50**	**166**	P		**P**	**04 05 45.1**	**+0.2**
KSRS	**Korea Array**	**35.63**	**2**	P		**P**	**04 05 46.1**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=188,slow=11,SNR=5.0							
	comp=Z,2.7nm,0.9s							
XAN	**Xi'an**	**36.10**	**335**	⇓P		**P**	**04 05 52.0**	**+1.9**
XAN				pmax		pmax		
	comp=Z,10.0nm,0.9s							
STKA	**Stephens Creek**	**36.36**	**158**	P		**P**	**04 05 50.4**	**-1.9**
	comp=Z,4.3nm,0.7s,baz=334,slow=7.8,SNR=6.8							
	comp=Z,4.3nm,0.7s							
MJAR	**Matsushiro Arr**	**36.37**	**16**	P		**P**	**04 05 52.0**	**-0.4**
	comp=Z,6.7nm,0.9s,baz=182,slow=9.3,SNR=11							
	comp=Z,6.7nm,0.9s							
MJAR	**Matsushiro Arr**	**36.37**	**16**	IAmb		IAmb	04 06 02.7	
	comp=Z,26nm,2.0s							
BJI	**Beijing**	**39.30**	**348**	P		**P**	**04 06 16.9**	**0.0**
BJI				pmax		pmax		
	comp=Z,5.0nm,0.8s							
ARMA	**Armidale**	**39.98**	**145**	P		**P**	**04 06 22.8**	**-0.1**
LZH	**Lanzhou**	**40.10**	**331**	*eP*		**P**	**04 06 28.4**	**+4.4**
LZH				pP		sP	04 06 38.6	+0.8
LZH				pmax		pmax		
	comp=Z,15nm,1.1s							
HHC	**Hu-ho-hao-te**	**41.23**	**343**	*eP*		**P**	**04 06 35.1**	**+1.9**
HHC				pmax		pmax		
	comp=Z,11nm,0.5s							
HHC				pmax		pmax		
	comp=Z,120nm,5.1s							
PALK	**Pallekele**	**45.86**	**278**	LR		LR	04 28 51.6	
	comp=Z,53nm,19.7s,baz=75,slow=39							
HILR	**Hailar Array B**	**48.03**	**354**	P		**P**	**04 07 27.1**	**-0.1**
	comp=Z,6.7nm,1.0s,baz=203,slow=9.7,SNR=4.0							
	comp=Z,6.7nm,1.0s							
SONM	**Songino Array**	**49.12**	**342**	P		**P**	**04 07 35.6**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=164,slow=9.0,SNR=7.7							
SONM				PcP		**PcP**	**04 08 59.6**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=159,slow=4.6,SNR=4.3							
	comp=Z,2.5nm,0.8s							
WMQ	**Urumqi**	**54.21**	**326**	*eP*		**P**	**04 08 12.5**	**-1.2**
WMQ				pP		sP	04 08 26.6	-1.1
WMQ				pmax		pmax		
	comp=Z,27nm,1.5s							
MKAR	**Makanchi Array**	**59.04**	**326**	P		**P**	**04 08 47.0**	**-1.0**
	comp=Z,7.1nm,0.7s,baz=119,slow=7.9,SNR=26							
MKAR				LR		LR	04 36 51.7	
	comp=Z,73nm,18.1s,baz=33,slow=39							
	comp=Z,7.1nm,0.7s							
MKAR	**Makanchi Array**	**59.04**	**326**	P		**P**	**04 08 47.1**	**-0.8**
ZALV	**Zalesovo Beam**	**62.25**	**334**	P		**P**	**04 09 08.1**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=155,slow=4.6,SNR=6.5							
	comp=Z,1.4nm,0.6s							
KURBB	**Kurchatov Arra**	**63.28**	**328**	P		**P**	**04 09 15.2**	**-1.4**
	comp=Z,5.9nm,0.8s,baz=125,slow=6.1,SNR=25							
	comp=Z,5.9nm,0.8s							
KURK	**Kurchatov**	**63.28**	**328**	P		**P**	**04 09 15.9**	**-0.7**
KURK				IAmb		IAmb	04 09 20.9	
	comp=Z,11nm,0.7s							
BVAR	**Borovoye Array**	**68.85**	**328**	P		**P**	**04 09 51.1**	**-1.2**
	comp=Z,4.6nm,0.8s,baz=120,slow=8.8,SNR=9.0							
	comp=Z,4.6nm,0.8s							
TIXI	**Tiksi**	**69.88**	**1**	P		**P**	**04 09 58.2**	**-0.1**
TIXI				IAmb		IAmb	04 09 58.9	
	comp=Z,8.4nm,1.1s							
AB31	**Akbulak array**	**73.52**	**321**			**P**	**04 10 19.6**	**-1.0**
ABKAR	**Akbulak array**	**73.52**	**321**			**P**	**04 10 19.9**	**-0.7**
VNDA	**Vanda**	**81.45**	**173**	P		**P**	**04 11 03.5**	**-0.9**
	comp=Z,2.6nm,0.7s,baz=316,slow=6.4,SNR=22							
	comp=Z,2.6nm,0.7s							
VNDA	**Vanda**	**81.45**	**173**	P		**P**	**04 11 04.8**	**+0.4**
K17K	**Iditarod**	**81.80**	**27**	IAmb		IAmb	04 11 10.0	
	comp=Z,19nm,0.9s							
H19K	**Roundabout Mou**	**83.17**	**24**	P		**P**	**04 11 15.3**	**+1.7**
J19K	**Poorman**	**83.23**	**26**	P		**P**	**04 11 16.1**	**+2.1**
J19K				IAmb		IAmb	04 11 17.5	
	comp=Z,9.4nm,0.8s							
L19K	**White Mountain**	**83.28**	**28**	P		**P**	**04 11 15.6**	**+1.3**
L19K				IAmb		IAmb	04 11 17.8	
	comp=Z,18nm,1.2s							
D20K	**Etivluk River**	**83.73**	**21**	IAmb		IAmb	04 11 19.0	
	comp=Z,14nm,0.8s							
F20K	**Avaraart Lake**	**83.74**	**23**	IAmb		IAmb	04 11 19.2	
	comp=Z,7.0nm,0.9s							
GURO	**Guroymak-BITLI**	**84.54**	**308**			**P**	**04 11 21.7**	**+0.3**
GURO				IAmb		IAmb	04 11 27.3	
	comp=Z,7.5nm,1.0s							
COLD	**Coldfoot**	**85.90**	**23**	IAmb		IAmb	04 11 30.7	
	comp=Z,7.5nm,0.8s							
E23K	**Chandalar**	**86.20**	**22**	IAmb		IAmb	04 11 31.9	
	comp=Z,6.9nm,0.8s							
ILAR	**Eielson Array**	**87.09**	**25**	P		**P**	**04 11 32.5**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=211,slow=4.8,SNR=5.2							
	comp=Z,0.5nm,0.7s							
KMBO	**Kilima Mbogo**	**89.17**	**269**	P		**P**	**04 11 44.0**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=74,slow=3.4,SNR=4.4							
	comp=Z,1.7nm,0.4s							
MMAI	**Mount Meron Ar**	**89.92**	**303**	P		**P**	**04 11 47.0**	**-0.5**
	comp=Z,14nm,1.2s,baz=77,slow=9.0,SNR=4.3							
	comp=Z,14nm,1.2s							
SYO	**Syowa Base**	**90.40**	**201**	⇑*e*	PcP	**PcP**	**04 11 51.0**	**+1.1**
BRTR	**Keskin Array B**	**91.05**	**310**	P		**P**	**04 11 51.6**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=130,slow=5.5,SNR=4.0							
	comp=Z,0.7nm,0.7s							
QSPA	**South Pole Qui**	**91.60**	**180**	P		**P**	**04 11 53.8**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=84,slow=6.1,SNR=1.4							
	comp=Z,0.4nm,0.5s							
AKASG	**Malin Array Be**	**93.25**	**321**	P		**P**	**04 12 01.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=69,slow=5.1,SNR=2.3							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**93.25**	**321**	IAmb		IAmb	04 13 17.4	
	comp=Z,4.5nm,1.2s							
FINES	**FINESS Array B**	**93.46**	**332**	P		**P**	**04 12 02.9**	**-0.2**
	comp=Z,2.3nm,1.1s,baz=46,slow=4.0,SNR=4.7							
	comp=Z,2.3nm,1.1s							
MLR	**Muntele Rosu**	**96.12**	**316**	LR		LR	05 00 09.4	
	comp=Z,43nm,20.8s,baz=292,slow=38							
BUR08	**Bucovina Ar. S**	**96.30**	**318**	P		**P**	**04 12 16.0**	**-0.6**
TXAR	**Lajitas Array**	**123.11**	**53**	PKP		**PKiKP**	**04 17 45.8**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=344,slow=2.6,SNR=3.6							

IDC ***15*** *04:07:09.9±2.2, 1°.47N×126°.22E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=186.5km s-min=28.0km az=65.0*
DJA ***15*** *04:07:14.9±1.6, 2°N±3°×12°6E±°, h31km±24km, M3.5/6, MLv3.5/6*
ISC 15 04:07:15.1±1.1, 1°.61N±0°.08×126°.3E±0°.2, h35km, n6, σ1§28/7, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**128**	P		**Pn**	**04 07 38.1**	**+0.7**
SGSI	**Sangihe**	**2.21**	**339**	P		**Pn**	**04 07 49.5**	**+0.3**
SGSI				S		**Sn**	**04 08 15.2**	**-0.1**
SANI	**Sanana**	**3.65**	**185**	P		**Pn**	**04 08 09.8**	**+0.7**
WRA	**Warramunga Arr**	**22.82**	**160**	P		**P**	**04 12 13.0**	**-2.2**
	0.3nm,0.2s,baz=339,slow=11,SNR=11							
	0.3nm,0.2s							
ASAR	**Alice Springs**	**26.19**	**164**	P		**P**	**04 12 46.1**	**-0.5**
	0.2nm,0.4s,baz=337,slow=9.0,SNR=6.1							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**59.06**	**326**	P		**P**	**04 17 12.3**	**+0.6**
	0.2nm,0.6s,baz=145,slow=7.8,SNR=2.0							
	0.2nm,0.6s							

IDC ***15*** *04:14:38.4±1.8, 1°.72N×126°.39E, h0km, mb3.6/4, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=133.0km s-min=21.0km az=69.0*
DJA ***15*** *04:14:44.2±0.3, 2°N±2°×12°6E±°, h10km, M3.8/10, MLv3.8/10*
ISC 15 04:14:45.2±1.0, 1°.66N±0°.07×126°.38E±0°.10, h35km, n11, σ2§34/12, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**132**	P		**Pn**	**04 15 08.8**	**+1.5**
SGSI	**Sangihe**	**2.18**	**337**	P		**Pn**	**04 15 20.1**	**+1.1**
SGSI				S		**Sn**	**04 15 47.7**	**+2.9**
LBMI	**Labuha**	**2.55**	**154**	P		**Pn**	**04 15 27.1**	**+3.0**
KMSI	**Cibinong**	**2.63**	**246**	P		**Pn**	**04 15 27.1**	**+1.9**
SANI	**Sanana**	**3.71**	**186**	P		**Pn**	**04 15 41.1**	**+1.0**
NLAI	**Namlea**	**4.92**	**172**	P		**Pn**	**04 15 58.9**	**+2.1**
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P		**P**	**04 19 08.9**	**-2.2**
	0.2nm,0.3s,baz=17,slow=12,SNR=2.4							
	0.7nm,0.4s							
WRA	**Warramunga Arr**	**22.85**	**160**	P		**P**	**04 19 42.5**	**-3.2**
	1.1nm,0.5s,baz=339,slow=10.0,SNR=10							
	1.1nm,0.5s							
ASAR	**Alice Springs**	**26.22**	**164**	P		**P**	**04 20 16.6**	**-0.5**
	0.4nm,0.3s,baz=346,slow=11,SNR=9.4							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**59.05**	**326**	P		**P**	**04 24 40.4**	**-1.5**
	0.5nm,0.6s,baz=127,slow=7.5,SNR=4.5							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**63.29**

ICQ				SN	Sn	04 16 05.3	+1.4
ICQ				LG	Lg	04 16 16.4	
ICQ				Trac		04 16 21.9	
	comp=Z,34nm,0.1s						
F64A	Sherman	3.00	141	Pn	Pn	04 15 34.9	+0.9
G62A	West of Eustis	3.04	173	Pn	Pn	04 15 35.7	+1.2
G62A				IAmb_Lg		04 16 26.6	
	comp=Z,55nm,0.8s						
MOQ	Mont Orford	3.04	197	PN	Pn	04 15 35.6	+1.0
MOQ				SN	Sn	04 16 10.6	+0.4
MOQ				Trac		04 16 30.0	
	comp=Z,39nm,0.2s						
TRQ	Mont Tremblant	3.14	231	Pn	Pn	04 15 36.7	+0.8
TRQ	Mont Tremblant	3.14	231	PN	Pn	04 15 37.0	+1.1
TRQ				SN	Sn	04 16 13.8	+1.3
TRQ				LG	Lg	04 16 26.7	
TRQ				Trac		04 16 28.7	
	comp=Z,22nm,0.1s						
PKME	Peaks-Kenny Pk	3.20	157	Pn	Pn	04 15 37.3	+0.6
PKME				IAmb_Lg		04 16 36.1	
	comp=Z,54nm,1.1s						
MNTQ	Montreal, Queb	3.27	214	Pn	Pn	04 15 39.5	+1.9
MNTQ				IAmb_Lg		04 16 38.2	
	comp=Z,42nm,1.0s						
MNTQ	Montreal, Queb	3.27	214	PN	Pn	04 15 40.1	+2.5
MNTQ				SN	Sn	04 16 16.4	+0.9
MNTQ				LG	Lg	04 16 29.9	
MNTQ				Trac		04 16 33.2	
	comp=Z,74nm,0.2s						
SMQ	Clarke City	3.46	53	PN	Pn	04 15 40.3	0.0
SMQ				SN	Sn	04 16 20.7	+0.3
SMQ				Trac		04 16 48.0	
	comp=Z,28nm,0.1s						
BATG	Bathurst New B	3.49	104	Pn	Pn	04 15 40.6	-0.1
BATG				IAmb_Lg		04 16 45.0	
	comp=Z,34nm,0.8s						
HSNB	Heath Steele M	3.49	104	PN	Pn	04 15 40.9	+0.2
HSNB				SN	Sn	04 16 20.2	-0.8
HSNB				Trac		04 16 43.2	
	comp=Z,23nm,0.2s						
RIGQ	Rigaud	3.56	220	PN	Pn	04 15 43.3	+1.6
RIGQ				SN	Sn	04 16 23.4	+0.5
GRQ	Grand Remous	3.66	245	PN	Pn	04 15 44.0	+0.9
GRQ				SN	Sn	04 16 23.7	-1.7
GRQ				LG	Lg	04 16 43.8	
GRQ				Trac		04 16 51.7	
	comp=Z,66nm,0.3s						
H62A	Milan	3.66	181	Pn	Pn	04 15 44.0	+0.9
MCNB	McAdam	3.67	135	PN	Pn	04 15 43.6	+0.5
MCNB				SN	Sn	04 16 24.5	-0.9
MCNB				Trac		04 16 46.8	
	comp=Z,6.8nm,0.1s						
WVL	Waterville	3.79	165	Pn	Pn	04 15 46.0	+1.1
FRNY	Flat Rock	3.83	208	Pn	Pn	04 15 45.6	+0.2
FRNY	Flat Rock	3.83	208	PN	Pn	04 15 46.6	+1.2
FRNY				SN	Sn	04 16 29.0	-0.6
FRNY				LG	Lg	04 16 46.0	
FRNY				Trac		04 16 53.8	
	comp=Z,48nm,0.3s						
G65A	Princeton	3.86	141	Pn	Pn	04 15 45.9	+0.1
GAC	Glen Almond	3.96	232	PN	Pn	04 15 47.9	+0.7
GAC				SN	Sn	04 16 32.8	0.0
GAC				LG	Lg	04 16 50.7	
GAC				Trac		04 16 58.0	
	comp=Z,28nm,0.1s						
LBNH	Lisbon	4.05	189	Pn	Pn	04 15 49.0	+0.7
LBNH				IAmb_Lg		04 17 01.2	
	comp=Z,36nm,0.9s						
ORIO	Orleans, Innes	4.15	229	PN	Pn	04 15 51.5	+1.7
ORIO				SN	Sn	04 16 37.5	+0.1
ORIO				LG	Lg	04 16 57.9	
ORIO				Trac		04 17 06.2	
	comp=Z,30nm,0.1s						
I63A	Otisfield	4.20	176	Pn	Pn	04 15 51.1	+0.7
GGN	Saint George	4.25	136	Pn	Pn	04 15 51.3	+0.3
GGN	Saint George	4.25	136	PN	Pn	04 15 51.8	+0.7
GGN				SN	Sn	04 16 38.6	-1.1
GGN				Trac		04 17 08.4	
	comp=Z,15nm,0.2s						
OTT	Ottawa	4.29	230	PN	Pn	04 15 53.4	+1.6
OTT				SN	Sn	04 16 41.9	+1.0
OTT				LG	Lg	04 17 00.7	
OTT				Trac		04 17 06.2	
	comp=Z,18nm,0.1s						
VLDQ	Val d'Or	4.30	271	Pn	Pn	04 15 53.6	+1.8
VLDQ				IAmb_Lg		04 17 22.9	
	comp=Z,24nm,0.7s						
EMMW	East Machias	4.31	144	Pn	Pn	04 15 52.1	+0.2
WBO	Williamsburg	4.36	224	Pn	Pn	04 15 53.2	+0.5
WBO				IAmb_Lg		04 17 07.9	
	comp=Z,25nm,0.7s						
WBO	Williamsburg	4.36	224	PN	Pn	04 15 53.7	+1.0
WBO				SN	Sn	04 16 41.9	-0.8
WBO				LG	Lg	04 17 02.3	
WBO				Trac		04 17 08.4	
	comp=Z,34nm,0.2s						
I62A	Tamworth	4.37	183	Pn	Pn	04 15 53.5	+0.7
I62A				IAmb_Lg		04 17 10.3	
	comp=Z,25nm,0.7s						
LONY	Lake Ozonia	4.37	216	Pn	Pn	04 15 53.3	+0.5
NCB	Newcomb	4.81	209	Pn	Pn	04 15 59.4	+0.5
NCB				IAmb_Lg		04 17 19.2	
	comp=Z,35nm,0.8s						
LMN	Caledonia Moun	4.88	117	Pn	Pn	04 15 59.4	-0.4
J61A	Chester	5.01	193	Pn	Pn	04 16 02.6	+1.0
J59A	Piesco	5.35	208	Pn	Pn	04 16 06.8	+0.4
K62A	Royalston	5.64	189	IAmb_Lg		04 17 49.1	
	comp=Z,31nm,1.1s						
HRV	Adam Dziewonsk	5.74	184	Pn	Pn	04 16 11.8	+0.1
WES	Weston	5.86	182	Pn	Pn	04 16 13.2	+0.1
J57A	Williamstown	5.95	218	Pn	Pn	04 16 14.7	+0.3
BUKO	Buck Lake	6.39	247	Pn	Pn	04 16 19.2	-1.3
K57A	Scipio Center	6.72	217	Pn	Pn	04 16 25.5	+0.4
SCHQ	Schefferville	7.10	20	Pn	Pn	04 16 29.6	-0.7
KSPA	Keystone Colle	7.48	208	Pn	Pn	04 16 36.0	+0.5
M57A	Sunshine Farm,	8.15	214	Pn	Pn	04 16 45.0	+0.3
DRLN	Deer Lake	9.00	78	Pn	Pn	04 16 55.5	-0.8
SSPA	Standing Stone	9.04	215	Pn	Pn	04 16 56.1	-0.9
PAOC	Oil Creek Stat	9.10	226	Pn	Pn	04 16 56.0	-1.7
KUQ	Kuujjuuaa	10.01	8	Pn	Pn	04 17 08.9	-1.2

NEIC ***15*** *04:15:27.8±1.6, 17°.8N±0°.3×68°.7W±0°.1, h112km±23km, ML2.4/6, Md2.7/4(RSPR), Error ellipse: s-maj=44.4km s-min=7.3km az=197.0*
RSPR ***15*** *04:15:28.6, 18°.12N×68°.65W, h123km±3km, MD2.7/4*
SDD ***15*** *04:15:29.3±0.6, 18°.08N×68°.58W, h124km±11km, MD3.3, ML1.9, MW2.0*

ISC 15 04:15:29.8±3.7, 18°.0N±0°.2×68°.7W±0°.1, h99km±35km, n18, σ0°84/22, 6C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	Loma Pena Alta	1.04	319	Pn	Pn	04 15 50.5	-0.3
DR12				Sn	Sn	04 16 06.7	+0.2
HATOM	Hato Mayor del	1.04	319	⇑ePg	Pn	04 15 50.7	0.0
HATOM				⇑eSg	Sn	04 16 07.2	+0.7
HATOM				IAML		04 16 08.8	
	comp=N,10.0nm,0.9s						
MIDR	Miches	1.05	339	⇑ePg	Pn	04 15 50.5	-0.2
MIDR				⇓eSg	Sn	04 16 06.4	0.0
MIDR				IAML		04 16 18.9	
	comp=N,16nm,1.6s						
MIDR	Miches	1.05	339	⇑eP	Pn	04 15 50.5	-0.2
MIDR	Miches	1.05	339	eS	Sn	04 16 06.2	-0.3
CRPR	Cabo Rojo, PR	1.47	90		Pn	04 15 55.2	-0.4
CRPR					Sn	04 16 16.6	+1.3
CRPR	Cabo Rojo, PR	1.47	90	IAML		04 16 45.5	
	comp=N,21nm,1.9s						
CRPR	Cabo Rojo, PR	1.47	90	⇓ePg	Pn	04 15 55.1	-0.5
CRPR				⇓eSg	Sn	04 16 13.6	-1.7
CRPR				IAML		04 16 45.2	
	comp=N,24nm,1.6s						
CRPR	Cabo Rojo, PR	1.47	90	⇑eP	Pn	04 15 55.2	-0.4
CRPR	Cabo Rojo, PR	1.47	90	eS	Sn	04 16 16.6	+1.3
AOPR	Arecibo Observ	1.84	79		Sn	04 16 24.0	+0.3
AOPR	Arecibo Observ	1.84	79	Pn	Pn	04 15 59.5	-0.8
AOPR				IAML		04 16 31.8	
	comp=E,35nm,0.4s						
AOPR	Arecibo Observ	1.84	79	eS	Sn	04 16 24.0	+0.3
UUPR	Utuado, UPR, P	1.86	82		Sn	04 16 24.9	+0.9
UUPR	Utuado, UPR, P	1.86	82	eS	Sn	04 16 24.9	+0.9
ECPR	Experimental S	2.20	81	⇑eP	Pn	04 16 03.8	-1.2
ECPR	Experimental S	2.20	81	eS	Sn	04 16 32.1	+0.1
GCPR	Guaynabo City	2.46	82	Pn	Pn	04 16 09.3	+0.8
GCPR				IAML		04 16 45.8	
	comp=E,14nm,4.5s						
GCPR				IAML		04 17 37.3	
	comp=N,11nm,2.1s						

IDC ***15*** *04:24:12.2±1.6, 1°.67N×126°.47E, h0km, mb3.7/5, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=120.5km s-min=19.9km az=68.0*
DJA ***15*** *04:24:16.1±0.3, 2°.N±3°×12°6E±°, h10km, M3.9/11, MLv3.9/11*

ISC 15 04:24:17.7±0.9, 1°.67N±0°.07×126°.55E±0°.09, h35km, n12, σ1°97/13, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.21	138	P	Pn	04 24 39.2	+1.0
SGSI	Sangihe	2.25	333	P	Pn	04 24 52.9	+0.5
SGSI				S	Sn	04 25 20.5	+1.6
KMSI	Cibinong	2.79	247	P	Pn	04 25 00.8	+0.9
SANI	Sanana	3.74	189	P	Pn	04 25 14.4	+1.4
LUWI	Luwuk	4.64	235	P	Pn	04 25 26.1	+0.7
MRSI	Marisa	4.76	256	P	Pn	04 25 27.2	+0.2
FITZ	Fitzroy Crossi	19.67	183	P	P	04 28 42.6	-1.2
	0.1nm,0.3s,baz=0.0,slow=9.1,SNR=1.9 1.3nm,0.8s						
WRA	Warramunga Arr	22.80	161	P	P	04 29 16.8	-0.8
	2.4nm,0.7s,baz=340,slow=11,SNR=16 2.4nm,0.7s						
ASAR	Alice Springs	26.18	165	P	P	04 29 49.9	+0.7
	0.5nm,0.3s,baz=344,slow=12,SNR=12 0.5nm,0.3s						
MKAR	Makanchi Array	59.14	326	P	P	04 34 14.5	-0.5
	0.5nm,0.4s,baz=120,slow=7.2,SNR=8.0 0.5nm,0.4s						
KURBB	Kurchatov Arra	63.37	328	P	P	04 34 43.4	-0.1
	0.4nm,0.5s,baz=126,slow=6.9,SNR=2.4 0.4nm,0.5s						
VNDA	Vanda	81.42	173	P	P	04 36 29.4	-1.3
	0.3nm,0.7s,baz=319,slow=5.1,SNR=1.7 0.3nm,0.7s						

IDC ***15*** *04:24:40.3±1.5, 2°.1N×127°.50E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=116.8km s-min=17.3km az=64.0*

ISC 15 04:24:45.5±1.5, 2°.1N±0°.3×127°.5E±0°.6, h35km, n8, σ0°63/8, mb3.9/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.91	163	P	P	04 29 45.8	-0.8
	2.7nm,0.6s,baz=337,slow=11,SNR=7.9 2.7nm,0.6s						
ASAR	Alice Springs	26.36	167	P	P	04 30 18.4	-0.2
	0.8nm,0.5s,baz=351,slow=14,SNR=7.2 0.8nm,0.5s						
CMAR	Chiang Mai Arr	32.34	302	P	P	04 31 11.8	0.0
	2.4nm,0.2s,baz=116,slow=9.4,SNR=2.0 2.4nm,0.2s						
STKA	Stephens Creek	36.35	159	P	P	04 31 46.5	+0.2
	1.6nm,0.6s,baz=329,slow=12,SNR=3.2 1.6nm,0.6s						
MKAR	Makanchi Array	59.31	325	P	P	04 34 44.3	+0.4
	0.5nm,0.5s,baz=123,slow=7.8,SNR=6.3 0.5nm,0.5s						
KURBB	Kurchatov Arra	63.50	328	P	P	04 35 12.6	+0.4
	0.9nm,0.6s,baz=127,slow=6.2,SNR=7.1 0.9nm,0.6s						
BVAR	Borovoye Array	69.08	327	P	P	04 35 47.1	-0.8
	0.4nm,0.4s,baz=123,slow=10,SNR=2.7 0.4nm,0.4s						
VNDA	Vanda	81.72	173	P	P	04 37 00.5	+0.5
	0.2nm,0.5s,baz=313,slow=7.0,SNR=1.7 0.2nm,0.5s						

IDC 15 04:26:47.3±1.6, 1°.41N×125°.79E, h0km, mb3.6/4, mbtmp3.6/5, ML2.9/1, MS3.2/2, Error ellipse: s-maj=123.3km s-min=21.7km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	5.63	358	LR	LR	04 30 50.2	
	comp=Z,153nm,19.7s,baz=334,slow=43						
FITZ	Fitzroy Crossi	19.38	180	P	P	04 31 14.2	-0.6
	baz=354,slow=10,SNR=1.8 1.4nm,0.8s						
WRA	Warramunga Arr	22.81	159	P	P	04 31 52.4	+0.4
	2.5nm,0.7s,baz=338,slow=11,SNR=6.5 2.5nm,0.7s						
ASAR	Alice Springs	26.14	163	P	P	04 32 23.2	-0.2
	0.5nm,0.6s,baz=343,slow=8.7,SNR=3.0 0.5nm,0.6s						
HILR	Hailar Array B	48.25	355	LR	LR	04 58 59.0	
	comp=Z,33nm,18.0s,baz=240,slow=40						
MKAR	Makanchi Array	58.94	326	P	P	04 36 48.4	-0.1
	0.2nm,0.3s,baz=117,slow=8.3,SNR=2.2 0.2nm,0.3s						
KURBB	Kurchatov Arra	63.20	328	P	P	04 37 17.4	+0.2
	0.8nm,0.7s,baz=128,slow=6.4,SNR=5.3 0.8nm,0.7s						

IDC ***15*** *04:35:29.6±1.3, 1°.74N×126°.81E, h0km, mb3.9/7, mbtmp3.8/8, ML3.3/1, Error ellipse: s-maj=84.7km s-min=17.2km az=67.0*
DJA ***15*** *04:35:34.4±1.1, 2°.N±3°×12°7E±°, h15km±10km, M3.8/9, mb3.9/1, MLv3.8/9*
NEIC ***15*** *04:35:37.4±1.2, 1°.81N±0°.09×127°.0E±0°.1, h58km±10km, mb4.0/6, Error ellipse: s-maj=20.9km s-min=11.1km az=70.0*

ISC 15 04:35:35.2±0.8, 1°.64N±0°.06×126°.73E±0°.09, h35km, n20, σ1°65/22, mb3.9/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.07	144		Pn	04 35 56.2	+2.4
TNTI	Ternate	1.07	144	P	Pn	04 35 56.2	+2.4
SGSI	Sangihe	2.36	329	P	Pn	04 36 10.6	-0.9
SGSI				S	Sn	04 36 38.6	-0.6
KMSI	Cibinong	2.94	249	P	Pn	04 36 19.5	0.0
KMSI				S	Sn	04 36 53.1	-0.6
SANI	Sanana	3.74	191	P	Pn	04 36 31.5	+1.0
MYLDM	Lahad Datu	8.93	293	Pn	Pn	04 37 46.0	+4.2
FITZ	Fitzroy Crossi	19.64	183	P	P	04 39 60.0	-1.1
	0.1nm,0.3s,baz=346,slow=12,SNR=1.6 1.8nm,1.0s						
FITZ	Fitzroy Crossi	19.64	183	P	Pn	04 40 02.0	-0.6
WB0	Warramunga Arr	22.57	161	P	P	04 40 33.4	+0.8
WB0				IAmb	IAmb	04 40 38.7	
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	22.71	161	P	P	04 40 34.6	+0.4
	comp=Z,1.8nm,0.5s,baz=339,slow=11,SNR=15 comp=Z,1.8nm,0.5s						
WR8	Warramunga Arr	22.78	161	P	P	04 40 35.1	+0.3
WR8				IAmb	IAmb	04 40 36.2	
	comp=Z,4.4nm,1.1s						
ASAR	Alice Springs	26.11	165	P	P	04 41 06.9	+0.9
	comp=Z,0.4nm,0.6s,baz=342,slow=9.1,SNR=4.3 comp=Z,0.4nm,0.6s						
CMAR	Chiang Mai Arr	31.97	303	P	P	04 41 59.3	+1.1
	comp=Z,1.6nm,0.3s,baz=111,slow=9.0,SNR=2.1 comp=Z,1.6nm,0.3s						
FORT	Forrest	32.27	178	P	P	04 42 01.7	+1.1
FORT				IAmb	IAmb	04 42 15.1	
	comp=Z,5.9nm,1.1s						
MKAR	Makanchi Array	59.27	326	P	P	04 45 32.4	-1.0
	comp=Z,0.8nm,0.4s,baz=120,slow=8.4,SNR=18 comp=Z,0.8nm,0.4s						
KURBB	Kurchatov Arra	63.49	328	P	P	04 46 01.1	-0.7
	comp=Z,1.2nm,0.6s,baz=128,slow=6.3,SNR=12 comp=Z,1.2nm,0.6s						
KURK	Kurchatov	63.49	328	P	P	04 46 00.9	-0.9
BVAR	Borovoye Array	69.06	327	P	P	04 46 36.8	-0.6
	comp=Z,0.4nm,0.5s,baz=118,slow=8.3,SNR=2.7 comp=Z,0.4nm,0.5s						
VNDA	Vanda	81.37	173	P	P	04 47 46.8	-1.0
	comp=Z,0.4nm,0.5s,baz=297,slow=3.8,SNR=2.2 comp=Z,0.4nm,0.5s						
VNDA	Vanda	81.37	173	P	P	04 47 44.6	-3.2
VNDA				IAmb	IAmb	04 48 09.0	
	comp=Z,3.1nm,1.5s						

DJA 15 04:41:06.2±0.3, 2°.N±3°×12°6E±°, h10km, M4.5/8, MLv4.5/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.35	134	P	Pn	04 41 30.1	-1.0
SGSI	Sangihe	2.14	336	P	Pn	04 41 42.3	+0.2
SGSI				S	Sn	04 42 09.8	+1.1
KMSI	Cibinong	2.66	245	P	Pn	04 41 50.1	+0.9
SANI	Sanana	3.76	186	P	Pn	04 42 04.0	-0.2

IDC 15 04:41:40.9±1.2, 1°.89S×127°.51E, h0km, mb4.2/3, mbtmp4.0/5, ML3.8/2, MS3.6/9, Error ellipse: s-maj=75.3km s-min=20.8km az=76.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	16.21	186	Pn	Pn	04 45 30.6	+0.3
	0.2nm,0.3s,baz=6.9,slow=13,SNR=5.7 0.6nm,0.4s						
WRA	Warramunga Arr	19.14	160	P	P	04 46 05.9	0.0
	0.3nm,0.3s,baz=338,slow=10,SNR=10 0.6nm,0.5s						
ASAR	Alice Springs	22.52	165	P	P	04 46 42.0	-0.4
	0.6nm,0.4s,baz=346,slow=11,SNR=6.5 0.6nm,0.4s						
GUMO	Guam	23.08	48	LR	LR	04 55 32.9	
	comp=Z,83nm,21.3s,baz=238,slow=36						
MJAR	Matsushiro Arr	39.51	14	LR	LR	05 08 30.4	
	comp=Z,27nm,18.1s,baz=204,slow=41						
USRK	Usuriysk Ar.	46.06	4	P	P	04 50 06.3	-0.2
	6.1nm,0.8s,baz=195,slow=8.5,SNR=6.7 6.1nm,0.8s						
ASAJ	Asahikawa	47.75	15	LR	LR	05 11 25.1	
	comp=Z,43nm,18.8s,baz=16,slow=37						
MKAR	Makanchi Array	62.62	327	P	P	04 52 07.3	+0.1
	5.5nm,0.6s,baz=121,slow=7.8,SNR=25						
MKAR				LR	LR	05 22 10.5	
	comp=Z,59nm,18.8s,baz=101,slow=39 5.5nm,0.6s						
BVAR	Borovoye Array	72.45	328	LR	LR	05 26 52.7	
	comp=Z,49nm,18.0s,baz=127,slow=37						
AKTO	Aktyubinsk	78.54	322	LR	LR	05 30 27.5	
	comp=Z,50nm,20.2s,baz=248,slow=37						
PPT	Papeete	82.67	107	LR	LR	05 33 18.6	
	comp=Z,17nm,18.2s,baz=337,slow=38						
KDAK	Kodiak Island	86.20	32	LR	LR	05 34 20.8	
	comp=Z,51nm,18.9s,baz=236,slow=37						
BOSA	Boshof	99.84	241	LR	LR	05 34 27.4	
	comp=Z,34nm,21.9s,baz=28,slow=32						

IDC ***15*** *04:42:05.3±0.5, 1°.55N×126°.55E, h0km, mb4.4/22, mbtmp4.4/24, ML4.4/2, MS3.8/8, Error ellipse: s-maj=26.6km s-min=8.8km az=74.0*
BJI ***15*** *04:42:07.6, 1°.02N×126°.23E, h33km, mB5.4/6, mb4.7/39, Ms4.4/2, Ms7.3 9/3*
DJA ***15*** *04:42:09.3±0.2, 2°.N±3°×12°6E±°, h10km, M4.7/19, mB5.2/8, mb5.0/10, MLv4.7/19, Mw(mB)4.5/8*
NEIC ***15*** *04:42:11.7±2.7, 1°.53N±0°.07×126°.36E±0°.04, h35km±2km, mb4.9/23, Error ellipse: s-maj=13.1km s-min=3.8km az=202.0*

ISC 15 04:42:11.6±0.3, 1°.51N±0°.05×126°.33E±0°.06, h35km, n106, σ1°43/103, mb4.7/46, MS3.9/10, 2C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.27	125		Pn	04 42 32.5	-0.4
TNTI	Ternate	1.27	125	P	Pn	04 42 32.4	-0.4
TNTI				S	Sn	04 42 51.0	+2.3
SGSI	Sangihe	2.31	340	P	Pn	04 42 46.9	-0.3
KMSI	Cibinong	2.52	249	P	Pn	04 42 50.2	+0.2
SANI	Sanana	3.55	185	P	Pn	04 43 04.3	+0.1
LUWI	Luwuk	4.36	235		Pn	04 43 13.0	-2.4
MRSI	Marisa	4.50	257	P	Pn	04 43 16.8	-0.5
NLAI	Namlea	4.78	171	P	Pn	04 43 22.2	+1.1
APSI	Ampana	5.25	243	P	Pn	04 43 27.9	+0.2
MSAI	Masohi	5.48	152	P	Pn	04 43 31.7	+1.0
	0.8nm105nm,0.7s						
TOLI2	Tolitoli	5.56	266		Pn	04 43 30.6	-1.2
MPSI	Mapaga	6.53	260	P	Pn	04 43 45.6	+0.4
	0.3nm3µm71nm,0.8s						
PCI	Palu	6.92	250	P	Pn	04 43 50.7	+0.2
	0.3nm3µm95nm,0.7s						
FAKI	Fak Fak	7.37	127		Pn	04 43 58.9	+2.0
FAKI	Fak Fak	7.37	127	P	Pn	04 43 58.5	+1.7
	0.2nm780nm64nm,0.9s						
TTSI	Tana Toraja	7.92	235	P	Pn	04 44 05.0	+0.7
	1µm80nm,0.6s						
SPSI	Sidrap Palu	8.51	230	P	Pn	04 44 13.0	+0.6
	1µm76nm,0.6s						
BNSI	Bone	8.54	227	P	Pn	04 44 13.5	+0.6
	712nm69nm,0.6s						
MYLDM	Lahad Datu	8.62	295		Pn	04 44 15.7	+1.8
KAPI	Kappang	9.22	225	Pn	Pn	04 44 22.4	+0.2
	2.5nm,0.3s,baz=47,slow=4.8,SNR=16						
KAPI				Sn	Sn	04 46 04.9	+0.1
	1.0nm,0.3s,baz=229,slow=21,SNR=1.3 14nm,0.5s						
KAPI	Kappang	9.22	225		Pn	04 44 23.9	+1.7
TGY	Tagaytay City	13.60	337	LR	LR	04 51 37.4	
	comp=Z,225nm,21.4s,baz=244,slow=42						
SBUM	Sibu	14.13	274		P	04 45 34.6	-1.9
MTN	Manton Dam	15.03	162		Pn	04 45 39.4	-2.1
JAGI	Jajag, Banyuwa	15.67	231	P	P	04 45 53.4	-0.2
JAGI				IAmb	IAmb	04 45 56.0	
	comp=Z,22nm,0.7s						
KNRA	Kununurra	17.24	172		Pn	04 46 08.7	-1.1
FITZ	Fitzroy Crossi	19.49	182	P	P	04 46 34.6	-1.2
	comp=Z,1.1nm,0.3s,baz=10,slow=8.9,SNR=25 comp=Z,1.1nm,0.6s						
FITZ	Fitzroy Crossi	19.49	182	P	P	04 46 34.9	-0.9
TPUB	Ta-pu	22.36	346	P	P	04 47 03.5	-3.3
TPUB				IAmb	IAmb	04 47 11.6	
	comp=Z,69nm,0.7s						
COEN	Coen	22.69	133	P	P	04 47 08.8	-1.6
WRAB	Tennant Creek	22.71	160	P	P	04 47 10.0	-0.5
WRAB				IAmb	IAmb	04 47 11.7	
	comp=Z,44nm,0.8s						
WRA	Warramunga Arr	22.72	160	P	P	04 47 09.1	-1.5
	comp=Z,52nm,0.7s,baz=338,slow=11,SNR=75						
WRA				S	S	04 51 15.7	-1.3
	comp=Z,3.6nm,1.0s,baz=334,slow=19,SNR=6.1 comp=Z,52nm,0.7s						
PMG	Port Moresby	23.41	118	LR	LR	04 58 19.9	
	comp=Z,149nm,19.8s,baz=289,slow=42						
QIZ	Qiongzhong	23.75	318	P	P	04 47 23.5	+2.6
QIZ				S	S	04 51 36.8	+2.7
QIZ				LR	LR		
	comp=Z,510nm,17.5s						
QIZ				LR	LR		
	comp=Z,460nm,19.7s						
ASAR	Alice Springs	26.08	164	P	P	04 47 41.7	-0.5
	comp=Z,8.7nm,0.5s,baz=346,slow=6.9,SNR=59						
ASAR				PcP	PcP	04 51 09.3	-0.1
	comp=Z,2.0nm,0.6s,baz=351,slow=2.2,SNR=7.3						
ASAR				S	S	04 52 13.4	+2.1
	comp=Z,1.7nm,0.7s,baz=348

	comp=Z,17nm,0.6s							
KSRS	**Korea Array**	**35.80**	**2**	P		**P**	**04 49 06.2**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=186,slow=10,SNR=1.4							
	comp=Z,0.8nm,0.5s							
STKA	**Stephens Creek**	**36.22**	**158**	P		**P**	**04 49 11.4**	**+0.1**
	comp=Z,13nm,0.6s,baz=332,slow=8.4,SNR=27							
	comp=Z,13nm,0.6s							
XAN	**Xi'an**	**36.23**	**335**	⇑P		**P**	**04 49 13.6**	**+2.2**
XAN				pmax		pmax		
	comp=Z,14nm,0.8s							
MJAR	**Matsushiro Arr**	**36.56**	**16**	P		**P**	**04 49 12.1**	**-2.0**
	comp=Z,1.2nm,0.3s,baz=183,slow=8.7,SNR=1.8							
	comp=Z,1.2nm,0.3s							
HNS	**HongShan**	**37.29**	**345**	⇓P		**P**	**04 49 22.5**	**+2.2**
HNS				pmax		pmax		
	comp=Z,8.0nm,0.7s							
BJI	**Beijing**	**39.45**	**348**	P		**P**	**04 49 40.6**	**+2.2**
BJI				pmax		pmax		
	comp=Z,4.0nm,1.0s							
ARMA	**Armidale**	**39.87**	**145**	IAmb		IAmb	04 50 27.4	
	comp=Z,32nm,1.6s							
LZH	**Lanzhou**	**40.23**	**331**	*e*P		**P**	**04 49 47.3**	**+2.1**
LZH				pP		sP	04 49 57.8	-1.0
LZH				pmax		pmax		
	comp=Z,16nm,1.1s							
HHC	**Hu-ho-hao-te**	**41.38**	**343**	*e*P		**P**	**04 49 57.3**	**+2.7**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,160nm,4.0s							
HHC				LR		LR		
	comp=Z,200nm,10.6s							
HHC				LR		LR		
	comp=Z,200nm,10.8s							
HHC				LR		LR		
	comp=Z,81nm,10.3s							
BNX	**BinXian**	**44.06**	**1**	⇑P		**P**	**04 50 20.1**	**+4.0**
BNX				pmax		pmax		
	comp=Z,7.0nm,1.0s							
GTA	**Gaotai**	**44.80**	**331**	*e*P		**P**	**04 50 22.6**	**+0.3**
GTA				pP		pP	04 50 33.8	+1.7
GTA				PcP		**PcP**	**04 52 05.1**	**+1.1**
GTA				pmax		pmax		
	comp=Z,4.0nm,0.6s							
EVN	**Everest**	**46.02**	**309**	P		**P**	**04 50 31.7**	**-1.1**
EVN				IAmb		IAmb	04 50 36.2	
	comp=Z,11nm,0.9s							
HILR	**Hailar Array B**	**48.20**	**354**	P		**P**	**04 50 46.7**	**-1.9**
	comp=Z,2.0nm,0.4s,baz=171,slow=10,SNR=7.3							
	comp=Z,2.0nm,0.4s							
HEH	**HeiHe**	**48.58**	**1**	*e*P		**P**	**04 50 51.8**	**+0.3**
HEH				pmax		pmax		
	comp=Z,11nm,1.0s							
SONM	**Songino Array**	**49.27**	**342**	P		**P**	**04 50 55.1**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=164,slow=9.3,SNR=9.4							
	comp=Z,0.8nm,0.6s							
WMQ	**Urumqi**	**54.32**	**326**	*e*P		**P**	**04 51 37.0**	**+2.3**
WMQ				sP		sP	04 51 54.0	+5.4
WMQ				LR		LR		
	comp=Z,110nm,24.7s							
PETK	**Petropavlovsk-**	**57.63**	**22**	P		**P**	**04 51 55.8**	**-2.3**
	comp=Z,2.2nm,0.5s,baz=183,slow=5.4,SNR=11							
	comp=Z,2.2nm,0.5s							
ZSN	**Zaisan**	**58.16**	**328**	*e*P		**P**	**04 52 02.3**	**+0.3**
SHLS	**Shalkode**	**58.80**	**321**	*e*P		**P**	**04 52 04.4**	**-2.3**
	comp=Z,10.0nm,1.0s							
SATY	**Saty**	**59.42**	**321**	*e*P		**P**	**04 52 10.7**	**-0.3**
	comp=Z,8.0nm,0.8s							
MDOK	**Medeo**	**60.33**	**320**	*e*P		**P**	**04 52 17.1**	**-0.2**
TNSS	**Tian-Shan**	**60.33**	**320**	*e*P		**P**	**04 52 16.7**	**-0.9**
TDK	**Taldyqorghan**	**60.42**	**323**	*e*P		**P**	**04 52 17.2**	**-0.4**
AAA	**Alma-Ata**	**60.44**	**320**	*e*P		**P**	**04 52 17.5**	**-0.4**
KUU	**Kurty**	**61.14**	**321**	*e*P		**P**	**04 52 22.2**	**-0.4**
ZALV	**Zalesovo Beam**	**62.38**	**334**	P		**P**	**04 52 29.4**	**-1.3**
	comp=Z,1.6nm,0.4s,baz=122,slow=5.8,SNR=13							
	comp=Z,1.6nm,0.4s							
GAR	**Garm**	**63.14**	**314**	P		**P**	**04 52 35.7**	**-0.6**
KURBB	**Kurchatov Arra**	**63.39**	**328**	P		**P**	**04 52 36.0**	**-1.5**
	comp=Z,11nm,0.7s,baz=130,slow=6.1,SNR=36							
	comp=Z,11nm,0.7s							
KURK	**Kurchatov**	**63.40**	**328**	P		**P**	**04 52 36.0**	**-1.5**
KURK	**Kurchatov**	**63.40**	**328**	P		**P**	**04 52 36.0**	**-1.5**
CHGR	**Chuyangaron**	**63.86**	**313**	P		**P**	**04 52 40.5**	**-0.4**
IUG	**Iuzhnay**	**64.53**	**317**	*e*P		**P**	**04 52 44.9**	**-0.4**
	comp=Z,5.1nm,0.6s							
CHM	**Chimkent**	**64.89**	**317**	*e*P		**P**	**04 52 47.4**	**-0.1**
BRLS	**Borolday**	**65.01**	**318**	*e*P		**P**	**04 52 48.1**	**-0.2**
BRZS	**Berezniki**	**66.27**	**325**	*e*P		**P**	**04 52 56.1**	**-0.2**
BVAR	**Borovoye Array**	**68.96**	**328**	P		**P**	**04 53 12.1**	**-1.1**
	comp=Z,4.2nm,0.8s,baz=131,slow=10,SNR=14							
	comp=Z,4.2nm,0.8s							
TIXI	**Tiksi**	**70.06**	**1**	LR		LR	05 24 19.9	
	comp=Z,44nm,21.7s,baz=192,slow=36							
TIXI	**Tiksi**	**70.06**	**1**	P		**P**	**04 53 19.7**	**+0.1**
TIXI				IAmb		IAmb	04 54 33.3	
	comp=Z,6.8nm,0.8s							
TIXI	**Tiksi**	**70.06**	**1**	P		**P**	**04 53 19.7**	**+0.1**
ARTI	**Arti**	**76.67**	**328**	P		**P**	**04 54 00.5**	**+1.6**
ARTI				IAmb		IAmb	04 54 01.1	
	comp=Z,12nm,0.6s							
ARTI	**Arti**	**76.67**	**328**	P		**P**	**04 54 00.3**	**+1.4**
RAYN	**Ar Rayn**	**80.98**	**293**	P		**P**	**04 54 23.0**	**-0.3**
RAYN				IAmb		IAmb	04 54 26.2	
	comp=Z,2.5nm,0.6s							
VNDA	**Vanda**	**81.28**	**173**	P		**P**	**04 54 23.9**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=320,slow=6.9,SNR=13							
	comp=Z,1.9nm,0.6s							
VNDA	**Vanda**	**81.28**	**173**	IAmb		IAmb	04 54 27.7	
	comp=Z,2.3nm,0.7s							
H19K	**Roundabout Mou**	**83.35**	**24**	P		**P**	**04 54 35.5**	**+0.7**
KDAK	**Kodiak Island**	**83.98**	**32**	LR		LR	05 25 45.8	
	comp=Z,118nm,21.6s,baz=237,slow=31							
KBZ	**Khabaz**	**84.21**	**314**	P		**P**	**04 54 39.5**	**0.0**
	comp=Z,3.7nm,0.8s,baz=225,slow=2.6,SNR=5.7							
	comp=Z,3.7nm,0.8s							
ILAR	**Eielson Array**	**87.27**	**25**	P		**P**	**04 54 52.6**	**-1.8**
	comp=Z,0.3nm,0.6s,baz=252,slow=4.7,SNR=2.4							
	comp=Z,0.3nm,0.6s							
KIBK	**Kibwezi**	**88.34**	**268**	P		**P**	**04 55 01.6**	**+1.0**
KIBK				IAmb		IAmb	04 55 05.9	
	comp=Z,5.5nm,1.1s							
MMAI	**Mount Meron Ar**	**89.96**	**303**	P		**P**	**04 55 08.6**	**+0.7**
	comp=Z,4.0nm,0.6s,baz=226,slow=4.4,SNR=5.1							
	comp=Z,4.0nm,0.6s							
BRTR	**Keskin Array B**	**91.12**	**310**	P		**P**	**04 55 13.7**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=127,slow=6.3,SNR=9.1							
	comp=Z,1.6nm,0.7s							
QSPA	**South Pole Qui**	**91.43**	**180**	P		**P**	**04 55 15.2**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=286,slow=2.7,SNR=3.6							
	comp=Z,0.6nm,0.7s							
QSPA	**South Pole Qui**	**91.43**	**180**	IAmb		IAmb	04 55 17.9	
	comp=Z,16nm,1.9s							
ARCES	**ARCESS Array B**	**92.38**	**340**	P		**P**	**04 55 18.7**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=80,slow=5.9,SNR=6.8							
	comp=Z,1.4nm,0.7s							
SPITS	**Spitsbergen Ar**	**92.57**	**349**	P		**P**	**04 55 19.0**	**0.0**
	comp=Z,8.8nm,1.0s,baz=68,slow=9.4,SNR=5.3							
	comp=Z,8.8nm,1.0s							
AKASG	**Malin Array Be**	**93.35**	**321**	P		**P**	**04 55 22.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=73,slow=3.2,SNR=1.7							
	comp=Z,0.3nm,0.3s							
FINES	**FINESS Array B**	**93.59**	**332**	P		**P**	**04 55 24.1**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=50,slow=5.0,SNR=8.6							
	comp=Z,1.7nm,0.8s							
DLBC	**Dease Lake**	**95.85**	**31**	LR		LR	05 32 25.7	
	comp=Z,50nm,20.3s,baz=274,slow=32							
BBB	**Bella Bella**	**98.31**	**37**	LR		LR	05 43 07.5	
	comp=Z,33nm,18.5s,baz=226,slow=37							
HFS	**Hagfors**	**99.78**	**332**	LR		LR	05 43 39.3	
	comp=Z,84nm,19.2s,baz=59,slow=37							
TXAR	**Lajitas Array**	**123.26**	**53**	PKP		**PKiKP**	**05 01 05.6**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=304,slow=2.3,SNR=5.3							
DBIC	**Dimbokro**	**130.60**	**280**	PKP		**PKPdf**	**05 01 19.9**	**0.0**
	comp=Z,1.6nm,0.6s,baz=93,slow=4.9,SNR=1.4							
PLCA	**Paso Flores**	**138.06**	**161**	PKP		**PKPdf**	**05 01 33.6**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=180,slow=4.0,SNR=4.1							

*SNET **15** 04:45:27.6±2.1, 13.72N×89.22W, h7km, ML2.8*
*CATAC **15** 04:45:27.8±0.3, 14.1°×89.2W±0.9, h5km±2km, M3.0/17, MLv3.0/17, Error ellipse: s-maj=3.0km s-min=1.9km az=9.6, confirmed*
*GCG **15** 04:45:28.3±1.2, 13.72N×89.23W, h6km±10km, MD3.5*
ISC 15 04:45:26.9±0.8, **13.76N**±0.03×**89.22W**±0.02, **h10**km±4km, **n73,** σ1s**02**/86, **1C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIC2	**El Picacho**	**0.04**	**253**	*e*P	**Pg**	**04 45 30.2**	**+1.1**
UEES	**Universidad Ev**	**0.04**	**207**	*e*S	**Sg**	**04 45 30.5**	**+0.1**
UEES	**Universidad Ev**	**0.04**	**207**	P	**Pg**	**04 45 27.7**	**-1.3**
UEES	**Universidad Ev**	**0.04**	**207**	S	**Sg**	**04 45 30.5**	**+0.1**
UTEC	**Universidad Te**	**0.06**	**162**	S	**Sg**	**04 45 30.9**	**+0.3**
BOQS	**Boqueron**	**0.06**	**251**	*e*P	**Pg**	**04 45 26.9**	**-2.3**
IGN	**Direccin Gen**	**0.06**	**131**	*e*S	**Sg**	**04 45 31.7**	**+1.0**
IGN				*e*S		04 45 31.8	
IGN	**Direccin Gen**	**0.06**	**131**	S	**Sg**	**04 45 31.7**	**+1.0**
IGN	**Direccin Gen**	**0.06**	**131**	P	**Pg**	**04 45 27.2**	**-1.9**
UDBS	**Universidad Do**	**0.07**	**123**	S	**Sg**	**04 45 32.2**	**+1.3**
UDBS	**Universidad Do**	**0.07**	**123**	P	**Pg**	**04 45 30.0**	**+0.7**
QUEZ	**Alcaldia de Qu**	**0.09**	**327**	*e*P	**Pg**	**04 45 31.3**	**+1.9**
QUEZ				*e*S	**Sg**	**04 45 34.0**	**+2.7**
MAGS	**Ministerio de**	**0.10**	**223**	*e*P	**Pg**	**04 45 30.3**	**+0.7**
PMON	**Piamonte**	**0.10**	**245**	*e*P	**Pg**	**04 45 30.7**	**+1.1**
PMON				*e*S	**Sg**	**04 45 32.5**	**+0.9**
PMON	**Piamonte**	**0.10**	**245**	P	**Pg**	**04 45 27.5**	**-2.2**
LFU	**La Fuente**	**0.10**	**94**	*e*P	**Pg**	**04 45 31.1**	**+1.5**
LOMA	**Loma Larga**	**0.12**	**157**	*e*P	**Pg**	**04 45 30.3**	**+0.4**
LOMA	**Loma Larga**	**0.12**	**157**	S	**Sg**	**04 45 32.3**	**+0.3**
LOMA	**Loma Larga**	**0.12**	**157**	P	**Pg**	**04 45 30.4**	**+0.5**
PANCS	**Alcalda de**	**0.15**	**165**	S	**Sg**	**04 45 32.6**	**0.0**
PANCS	**Alcalda de**	**0.15**	**165**	P	**Pg**	**04 45 30.6**	**+0.4**
LBRS	**Las Brisas**	**0.17**	**96**	*e*P	**Pb**	**04 45 32.4**	**+0.2**
CEDA	**San Andres**	**0.18**	**285**	*i* P	**Pb**	**04 45 32.0**	**-0.3**
LFRS	**El Faro**	**0.20**	**131**	*e*P	**Pb**	**04 45 32.3**	**-0.4**
JAYA	**Jayaque - finc**	**0.24**	**246**	*i* P	**Pg**	**04 45 33.0**	**+1.0**
JAYA				*e*S	**Sg**	**04 45 36.6**	**+1.2**
JAYA	**Jayaque - finc**	**0.24**	**246**	*i* P	**Pg**	**04 45 33.0**	**+1.0**
JAYA				*i* S	**Sg**	**04 45 36.6**	**+1.2**
JAYA	**Jayaque - finc**	**0.24**	**246**	P	**Pg**	**04 45 33.0**	**+1.0**
PAVA	**Las Pavas**	**0.28**	**99**	*e*P	**Pb**	**04 45 34.4**	**+0.4**
PAVA				*e*S	**Sg**	**04 45 39.0**	**+2.6**
PAVA	**Las Pavas**	**0.28**	**99**	P	**Pb**	**04 45 34.4**	**+0.4**
LALI	**Alcalda de L**	**0.28**	**200**	⇑*i* P	**Pg**	**04 45 33.5**	**+0.9**
LALI				*e*S	**Sg**	**04 45 37.4**	**+1.0**
LALI				*e*S		04 45 37.6	
LALI	**Alcalda de L**	**0.28**	**200**	*i* P	**Pg**	**04 45 33.5**	**+0.9**
LALI				*i* S	**Sg**	**04 45 37.6**	**+1.2**
LALI	**Alcalda de L**	**0.28**	**200**	P	**Pg**	**04 45 33.6**	**+0.9**
UNIC	**Universidad Ca**	**0.39**	**305**	*e*P	**Pb**	**04 45 36.3**	**+0.3**
UNIC	**Universidad Ca**	**0.39**	**305**	P	**Pb**	**04 45 36.1**	**+0.2**
UNIC	**Universidad Ca**	**0.39**	**305**	S	**Sb**	**04 45 41.5**	**-0.6**
SNJE	**San Jose**	**0.39**	**287**	*e*P	**Pb**	**04 45 36.3**	**+0.3**
SNJE				*e*P	**Pb**	**04 45 36.3**	**+0.3**
SNVI	**San Vicente**	**0.40**	**111**	*e*P	**Pb**	**04 45 36.4**	**+0.3**
CEVE	**Cerro Verde**	**0.40**	**280**	*e*P	**Pb**	**04 45 36.9**	**+0.7**
CEVE	**Cerro Verde**	**0.40**	**280**	P	**Pb**	**04 45 36.9**	**+0.7**
SBLS	**San Blas**	**0.40**	**282**	*e*P	**Pb**	**04 45 36.6**	**+0.4**
SBLS				*e*S	**Sb**	**04 45 43.1**	**+0.6**
UESV	**Universidad de**	**0.44**	**106**	P	**Pb**	**04 45 37.2**	**+0.5**
UESV	**Universidad de**	**0.44**	**106**	S	**Sb**	**04 45 42.4**	**-0.9**
RTR	**El Retiro**	**0.44**	**289**	*e*P	**Pb**	**04 45 37.5**	**+0.7**
TECO	**Alcaldia de Te**	**0.48**	**117**	*e*P	**Pb**	**04 45 37.3**	**-0.1**
TECO				*e*S	**Sb**	**04 45 43.9**	**-0.7**
TECO	**Alcaldia de Te**	**0.48**	**117**	P	**Pb**	**04 45 37.3**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.48**	**96**	*e*P	**Pn**	**04 45 38.0**	**-1.9**
SCLA				*e*S	**Sb**	**04 45 45.5**	**+0.9**
SCLA	**Alcaldia de Sa**	**0.48**	**96**	P	**Pn**	**04 45 38.1**	**-1.7**
LLGN	**La Laguna**	**0.48**	**33**	*e*P	**Pn**	**04 45 38.3**	**-1.7**
LLGN				*e*S	**Sb**	**04 45 45.8**	**+1.0**
LLGN	**La Laguna**	**0.48**	**33**	P	**Pn**	**04 45 38.2**	**-1.7**
LLGN	**La Laguna**	**0.48**	**33**	S	**Sb**	**04 45 44.9**	**+0.1**
NUBE	**Las Nubes**	**0.56**	**285**	*e*P	**Pb**	**04 45 39.3**	**+0.4**
NUBE	**Las Nubes**	**0.56**	**285**	*e*P	**Pb**	**04 45 39.3**	**+0.4**
NUBE	**Las Nubes**	**0.56**	**285**	P	**Pb**	**04 45 39.3**	**+0.4**
NUBE	**Las Nubes**	**0.56**	**285**	S	**Sb**	**04 45 47.3**	**+0.2**
RBDL	**Robledal**	**0.58**	**308**	*i* P	**Pb**	**04 45 39.6**	**+0.4**
SLOZ	**Alcaldia de Sa**	**0.61**	**296**	*e*P	**Pg**	**04 45 38.0**	**-0.7**
MTO3	**Montecristo**	**0.65**	**348**	*e*P	**Pn**	**04 45 41.2**	**-1.2**
MTO3				*e*S	**Sn**	**04 45 50.9**	**-2.0**
MTO3	**Montecristo**	**0.65**	**348**	*i* P	**Pn**	**04 45 41.3**	**-1.2**
MTO3	**Montecristo**	**0.65**	**348**	P	**Pn**	**04 45 41.2**	**-1.2**
TECA	**Tecapa**	**0.74**	**110**	*e*P	**Pn**	**04 45 42.8**	**-0.8**
FAME	**Alcaldia de Sa**	**0.78**	**276**	P	**Pb**	**04 45 42.7**	**+0.2**
ESQI	**Esquipulas**	**0.81**	**352**	*e*P	**Pn**	**04 45 44.2**	**-0.2**
ESQI				*e*S	**Sn**	**04 45 55.9**	**-0.7**
ESQI	**Esquipulas**	**0.81**	**352**	P	**Pn**	**04 45 44.3**	**-0.1**
ZAFR2	**Estanzuela, Za**	**0.83**	**351**	*i* P	Pn	04 45 52.0	+7.4
ZAFR2				*e*S	Sn	04 46 09.8	+13
PACA	**Pacayal**	**0.92**	**108**	*e*P	**Pn**	**04 45 46.3**	**+0.3**
PACA	**Pacayal**	**0.92**	**108**	P	**Pn**	**04 45 46.3**	**+0.3**
LCY	**Lacayo**	**0.96**	**110**	*e*P	**Pn**	**04 45 46.8**	**+0.3**
RANC	**El Ranchito**	**0.96**	**109**	*e*P	**Pn**	**04 45 46.6**	**+0.1**
BLLM	**Bellamira**	**1.00**	**108**	*e*P	**Pn**	**04 45 47.3**	**+0.2**
LCND	**La Caada**	**1.37**	**109**	*e*P	**Pg**	**04 45 53.4**	**+0.2**
LCND	**La Caada**	**1.37**	**109**	P	**Pg**	**04 45 53.2**	**+0.1**
CNCH	**Conchagua**	**1.43**	**109**	*e*P	**Pg**	**04 45 54.3**	**-0.1**
APG	**El Apazote**	**1.73**	**316**	*i* P	**Pg**	**04 45 59.9**	**-0.3**

RSNC 15 04:46:00.6±0.0, **5.7N**±1.1°×**7.4W**±1.1°, **h146**km±2km, **M3.0, mB4.6, mb3.8, ML2.8, Mw(mB)3.8, Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.50**	**318**	P	Pn	04 46 21.5	-0.1
SPBC				S	Sn	04 46 37.5	-0.1
CHIC	**Chingaza**	**0.65**	**179**	P	Pn	04 46 22.4	-0.5
CHIC				S	Sn	04 46 39.1	-0.7
ROSC	**El Rosal**	**0.72**	**233**	P	Pn	04 46 24.1	+0.8
ROSC				S	Sn	04 46 41.9	+1.4
CVER	**Cruz Verde, Cu**	**0.82**	**204**	P	Pn	04 46 24.5	+0.3
CVER				S	Sn	04 46 41.8	-0.2
RUSC	**La Rusia**	**0.89**	**47**	P	Pn	04 46 24.9	+0.2
RUSC				S	Sn	04 46 43.1	+0.1
NORC	**Norcasia**	**1.16**	**284**	P	Pn	04 46 26.1	-0.4
NORC				S	Sn	04 46 46.0	-0.2
VILC	**Villavicencio,**	**1.16**	**178**	P	Pn	04 46 25.9	-0.7
VILC				S	Sn	04 46 45.7	-0.8
BARC	**Barichara**	**1.42**	**23**	P	Pn	04 46 28.8	-0.5
BARC				S	Sn	04 46 50.6	-0.6
PTBC	**PUERTO BERRIO,**	**1.44**	**330**	P	Pn	04 46 28.1	-1.2
PTBC				S	Sn	04 46 50.4	-0.8
GUY2C	**Guyana, Caldas**	**1.62**	**268**	P	Pn	04 46 31.1	-0.5
GUY2C				S	Sn	04 46 54.2	-1.1
BRJC	**Barrancabermej**	**1.68**	**360**	P	Pn	04 46 31.7	-0.2
BRJC				S	Sn	04 46 56.3	+0.4
NIZA	**Niza - Manizal**	**1.74**	**263**	P	Pn	04 46 32.0	-0.8
NIZA				S	Sn	04 46 56.9	-0.4
PRAC	**Prado**	**1.93**	**216**	P	Pn	04 46 34.2	-0.6
PRAC				S	Sn	04 47 00.1	-0.8
HELC	**Santa Helena**	**2.00**	**297**	P	Pn	04 46 35.1	-0.7
HELC				S	Sn	04 47 01.9	-0.9
ORTC	**Ortega, Tolima**	**2.03**	**228**	P	Pn	04 46 35.2	-0.7
ORTC				S	Sn	04 47 01.9	-1.0
URMC	**La Uribe, Meta**	**2.12**	**198**	P	Pn	04 46 36.9	-0.1
URMC				S	Sn	04 47 05.0	0.0
PAMC	**Pamplona, Colo**	**2.29**	**27**	P	Pn	04 46 39.6	+0.1
PAMC				S	Sn	04 47 09.4	0.0
CBOC	**Ciudad Bolivar**	**2.33**	**284**	P	Pn	04 46 39.5	-0.2
CBOC				S	Sn	04 47 09.3	-0.4
YOTC	**Yotoco, Valle**	**2.90**	**244**	P	Pn	04 46 46.2	-0.5
YOTC				S	Sn	04 47 21.5	-0.7
OCAC	**Ocana**	**2.97**	**8**	P	Pn	04 46 47.1	-0.5
OCAC				S	Sn	04 47 23.4	-0.5
DBBC	**Dabeiba**	**3.00**	**305**	P	Pn	04 46 47.7	-0.2
DBBC				S	Sn	04 47 24.2	-0.3
UREC	**San Jos de Ur**	**3.03**	**324**	P	Pn	04 46 45.6	-2.7
UREC				S	Sn	04 47 22.2	-3.0
MACC	**Macarena, Meta**	**3.12**	**182**	P	Pn	04 46 47.3	-2.1
MACC				S	Sn	04 47 23.2	-3.9
GARC	**Garzon, Huila**	**3.54**	**210**	S	Pn	04 46 53.6	-1.4
GARC				S	Sn	04 47 35.1	-2.0
JAMC	**Jamundi, Valle**	**3.57**	**235**	P	Pn	04 46 55.9	+0.5
JAMC				S	Sn	04 47 38.9	+1.0
POPC	**Popayan, Colom**	**4.00**	**227**	P	Pn	04 47 01.0	0.0
FLOC	**Florencia**	**4.14**	**208**	P	Pn	04 47 02.1	-0.6
LCBC	**Los crdobas,**	**4.41**	**324**	P	Pn	04 47 03.7	-2.4
LCBC				S	Sn	04 47 55.2	-2.0
ARGC	**Ariguani, Magd**	**4.58**	**354**	P	Pn	04 47 06.9	-1.5
ARGC				S	Sn	04 47 58.9	-2.3
SDV	**Santo Domingo**	**4.73**	**41**	P	Pn	04 47 09.7	-0.8
SDV				S	Sn	04 48 02.8	-2.2
SJCC	**San Jacinto, C**	**4.80**	**343**	P	Pn	04 47 08.0	-3.4
SJCC				S	Sn	04 48 00.7	-5.9
CAPC	**Capurgana**	**4.89**	**313**	P	Pn	04 47 09.6	-3.0
CAPC				S	Sn	04 48 04.2	-4.5
CRJC	**Cerrejon, Guaj**	**5.77**	**8**	P	Pn	04 47 21.3	-3.0
	664nm15nm,0.8s						
CRJC				S	Sn	04 48 23.7	-6.0
	664nm15nm,0.8s						
URIC	**Uribia, Colomb**	**6.61**	**15**	P	Pn	04 47 32.4	-3.1
	11nm,1.6s						
URIC				S	Sn	04 48 44.6	-5.2
	11nm,1.6s						
SGC2	**Sao Gabriel da**	**8.64**	**128**	P	Pn	04 47 58.1	-4.6

PGC 15 04:47:19.2±0.1, **43.64N×127.40W, h10**km, **MLSn3.4**/1, **Mw4.0/1, 349km west of Eugene, Oregon, Usa Off Coast Of Oregon, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
E03A	**Lebam**	**3.98**	**42**	Pn	Pn	04 48 19.1	-1.1
E03A				Sn	Sn	04 49 04.1	-2.8
WISH	**Wishkah**	**4.32**	**35**	Pn	Pn	04 48 24.9	0.0
CPW	**Capitol Peak**	**4.49**	**41**	Pn	Pn	04 48 26.4	-1.0
LON	**Longmire**	**5.03**	**50**	Pn	Pn	04 48 34.7	-0.1
LON				Sn	Sn	04 49 31.7	-1.3
HDW	**Hoodsport**	**5.04**	**36**	Pn	Pn	04 48 34.6	-0.3
GNW	**Green Mountain**	**5.07**	**38**	Pn	Pn	04 48 34.7	-0.6
GNW				Sn	Sn	04 49 32.3	-1.6
D05A	**Enumclaw**	**5.21**	**45**	Pn	Pn	04 48 37.5	+0.3
FMW	**Mount Fremont**	**5.21**	**49**	Pn	Pn	04 48 37.3	-0.2
PTRF	**Port Renfrew**	**5.33**	**22**	Sn	Sn	04 49 37.9	-2.3
B928	**Bamfield**	**5.43**	**16**	Sn	Sn	04 49 41.3	-1.3
BFSB	**Bamfield**	**5.43**	**16**	Sn	Sn	04 49 40.5	-2.2
SYMB	**Survey Mountai**	**5.52**	**26**	Pn	Pn	04 48 41.1	-0.5
SYMB				Sn	Sn	04 49 42.1	-3.0
VGZ	**Gonzales**	**5.56**	**29**	Pn	Pn	04 48 40.8	-1.2
VGZ				Sn	Sn	04 49 44.3	-1.5
B926	**Mesachie Lake**	**5.66**	**22**	Sn	Sn	04 49 45.8	-2.5
CLRS	**Cowichan Lake**	**5.66**	**22**	Sn	Sn	04 49 45.7	-2.6
MGRB	**Mount Grey**	**5.68**	**18**	Sn	Sn	04 49 47.1	-2.0
B009	**North Saanich**	**5.71**	**27**	Pn	Pn	04 48 43.9	-0.2
B009				Sn	Sn	04 49 48.1	-1.5
B010	**North Saanich**	**5.72**	**27**	Pn	Pn	04 48 44.0	-0.1
B010				Sn	Sn	04 49 47.2	-2.5
B011	**North Saanich**	**5.72**	**27**	Pn	Pn	04 48 43.9	-0.2
B011				Sn	Sn	04 49 48.4	-1.3
PGC	**Sidney**	**5.72**	**27**	Pn	Pn	04 48 44.1	0.0
PGC				Sn	Sn	04 49 47.0	-2.7
SNB	**Saturna Island**	**5.92**	**28**	Pn	Pn	04 48 47.5	+0.6
SNB				Sn	Sn	04 49 53.1	-1.7
JCW	**Jim Creek**	**5.94**	**38**	Pn	Pn	04 48 47.3	0.0
LTY	**Liberty**	**5.96**	**50**	Pn	Pn	04 48 47.4	-0.2
MYRA	**Myra Falls**	**6.05**	**11**	Sn	Sn	04 49 55.3	-2.7
NLLB

0.1nm,0.3s,baz=42,slow=14,SNR=3.1
KURBB Lg Lg 05 03 42.1
baz=40,slow=25
0.3nm,0.3s
MKAR Makanchi Array 9.13 198 Pn Pn 05 02 18.9 +1.1
0.1nm,0.3s,baz=12,slow=14,SNR=2.1
0.5nm,0.8s

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*IDC **15** 05:05:59.1±0.9,0.°88N×123.°11E,h0km,mb3.9/7, mbtmp4.0/9,ML4.3/2,MS2.8/2,Error ellipse: s-maj=42.9km s-min=15.8km az=75.0*
*DJA **15** 05:06:07.4±0.4,1.°1N±4.°×12.°3E±.°,h87km±7km,M4.4/15, mB4.7/1,mb4.5/4,MLv4.4/15,Mw(mB)4.0/1*
*NEIC **15** 05:06:10.1±2.0,0.°67N±0.°05×122.°6E±0.°1,h94km±9km, mb4.2/11,Error ellipse: s-maj=14.9km s-min=6.7km az=78.0*
ISC 15 05:06:09.3±0.6,**0.°72N**±0.°06×**122.°77E**±0.°05,**h100**km,**n42,** σ1§**48**/**42**,**mb4.1**/**12**,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.86**	**254**	P	**Pn**	**05 06 26.6**	**-1.7**
MRSI				S	**Sn**	**05 06 39.5**	**-3.0**
KMSI	**Cibinong**	**1.22**	**97**	P	**Pn**	**05 06 30.7**	**-1.5**
KMSI				S	**Sn**	**05 06 47.5**	**-2.0**
LUWI	**Luwuk**	**1.75**	**180**		**Pn**	**05 06 38.5**	**-0.2**
LUWI	**Luwuk**	**1.75**	**180**	P	**Pn**	**05 06 38.2**	**-0.5**
LUWI	**Luwuk**	**1.75**	**180**	P	**Pn**	**05 06 38.5**	**-0.2**
APSI	**Ampana**	**1.96**	**215**	P	**Pn**	**05 06 42.1**	**+0.6**
TOLI2	**Tolitoli**	**2.02**	**281**		**Pn**	**05 06 39.5**	**-2.7**
TOLI2	**Tolitoli**	**2.02**	**281**	P	**Pn**	**05 06 40.3**	**-1.9**
MPSI	**Mapaga**	**2.89**	**263**	P	**Pn**	**05 06 53.1**	**-0.6**
PCI	**Palu**	**3.34**	**241**	P	**Pn**	**05 06 59.3**	**-0.4**
SGSI	**Sangihe**	**4.04**	**43**	P	Pn	05 07 03.1	-6.0
SANI	**Sanana**	**4.23**	**130**	P	**Pn**	**05 07 09.3**	**-2.4**
18nm,0.9s							
SANI	**Sanana**	**4.23**	**130**	P	**Pn**	**05 07 09.9**	**-1.8**
KDI	**Kendari**	**4.64**	**182**	P	**Pn**	**05 07 17.4**	**+0.1**
TTSI	**Tana Toraja**	**4.76**	**218**	P	**Pn**	**05 07 18.8**	**0.0**
SPSI	**Sidrap Palu**	**5.53**	**213**	P	**Pn**	**05 07 29.4**	**+0.1**
0.2nm827nm25nm,0.5s							
BNSI	**Bone**	**5.74**	**208**	P	**Pn**	**05 07 31.3**	**-0.8**
0.1nm38nm,0.7s							
NLAI	**Namlea**	**5.85**	**132**	P	**Pn**	**05 07 32.6**	**-1.0**
MYLDM	**Lahad Datu**	**6.15**	**316**		**Pn**	**05 07 37.6**	**-0.1**
KAPI	**Kappang**	**6.44**	**208**	Pn	**Pn**	**05 07 40.8**	**-0.8**
3.6nm,0.3s,baz=28,slow=1.5,SNR=7.6							
KAPI				Sn	**Sn**	**05 08 49.1**	**-4.6**
1.2nm,0.3s,baz=195,slow=21,SNR=1.2							
8.9nm,0.4s							
KAPI	**Kappang**	**6.44**	**208**		**Pn**	**05 07 41.0**	**-0.7**
BATI	**Baumata**	**10.89**	**175**	LR	LR	05 12 15.6	
comp=Z,49nm,21.9s,baz=29,slow=34							
TGY	**Tagaytay City**	**13.42**	**352**	LR	LR	05 13 39.0	
comp=Z,59nm,21.2s,baz=204,slow=35							
MTN	**Manton Dam**	**15.82**	**149**	Pn	**P**	**05 09 47.1**	**-1.2**
MTN				IAmb	IAmb	05 10 04.3	
comp=Z,9.0nm,1.2s							
KNRA	**Kununurra**	**17.33**	**160**		**P**	**05 10 04.4**	**-0.6**
KNRA				IAmb	IAmb	05 10 24.7	
comp=Z,11nm,1.3s							
FITZ	**Fitzroy Crossi**	**18.91**	**172**	P	**Pn**	**05 10 23.2**	**-0.8**
comp=Z,0.9nm,0.3s,baz=8.4,slow=9.3,SNR=26							
comp=Z,3.0nm,0.3s							
FITZ	**Fitzroy Crossi**	**18.91**	**172**	P	**Pn**	**05 10 22.7**	**-1.3**
MBWA	**Marble Bar**	**21.94**	**188**	P	**P**	**05 10 53.4**	**-1.5**
MBWA				IAmb	IAmb	05 11 01.5	
comp=Z,22nm,1.2s							
WB0	**Warramunga Arr**	**23.33**	**151**	P	**P**	**05 11 09.0**	**+0.1**
WB0				IAmb	IAmb	05 11 10.7	
comp=Z,9.5nm,1.1s							
WRA	**Warramunga Arr**	**23.45**	**152**	P	**P**	**05 11 10.2**	**+0.2**
comp=Z,3.1nm,0.5s,baz=329,slow=10,SNR=36							
comp=Z,3.1nm,0.5s							
GIRL	**Giralia**	**24.66**	**199**	P	**P**	**05 11 21.4**	**+0.5**
GSI	**Gunungsitoli**	**25.20**	**272**	P	**P**	**05 11 25.6**	**-0.3**
GSI				IAmb	IAmb	05 11 27.7	
comp=Z,15nm,0.5s							
ASAR	**Alice Springs**	**26.54**	**157**	P	**P**	**05 11 38.6**	**+0.7**
comp=Z,0.3nm,0.6s,baz=336,slow=7.3,SNR=4.5							
comp=Z,0.3nm,0.6s							
MORW	**Morawa**	**30.31**	**192**	P	**P**	**05 12 11.2**	**-0.2**
MORW				IAmb	IAmb	05 12 33.3	
comp=Z,20nm,1.5s							
STKA	**Stephens Creek**	**37.00**	**153**	P	**P**	**05 13 10.1**	**+0.8**
comp=Z,3.4nm,0.7s,baz=322,slow=7.8,SNR=5.1							
comp=Z,3.4nm,0.7s							
MJAR	**Matsushiro Arr**	**38.41**	**20**	P	**P**	**05 13 20.7**	**-0.5**
comp=Z,2.0nm,0.5s,baz=184,slow=8.4,SNR=5.7							
comp=Z,2.0nm,0.5s							
CAN	**Canberra**	**43.42**	**148**	P	**P**	**05 14 04.0**	**+1.6**
SONM	**Songino Array**	**49.04**	**345**	P	**P**	**05 14 47.6**	**+1.4**
comp=Z,0.9nm,0.5s,baz=169,slow=9.2,SNR=4.2							
comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**57.89**	**328**	P	**P**	**05 15 53.1**	**+2.2**
comp=Z,0.5nm,0.4s,baz=128,slow=7.7,SNR=5.9							
comp=Z,0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**62.23**	**330**	P	**P**	**05 16 21.9**	**+1.5**
comp=Z,0.7nm,0.7s,baz=120,slow=5.5,SNR=4.6							
comp=Z,0.7nm,0.7s							
CASY	**Casey**	**67.42**	**185**	P	**P**	**05 16 55.1**	**+1.4**
CASY				IAmb	IAmb	05 17 01.6	
comp=Z,3.9nm,1.2s							
VNDA	**Vanda**	**80.98**	**172**	P	**P**	**05 18 13.1**	**+0.7**

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*RHSSO **15** 05:10:15.0±0.6,43.°12N×17.°84E,h7km,ML2.5/4*
*BEO **15** 05:10:15.5±0.5,43.°18N×17.°81E,h4km±4km,ML2.2/10*
ISC 15 05:10:14.8±1.1,**43.°16N**±0.°03×**17.°84E**±0.°02,**h1**km±10**km,**n34,** σ0§**78**/59,**2C**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.30**	**200**	*i* Pg	**Pg**	**05 10 20.2**	**-0.3**
STON				Sg	**Sg**	**05 10 24.8**	**+0.4**
DBRK	**Dubrovnik**	**0.54**	**155**	*e*Pg	**Pg**	**05 10 24.7**	**-0.3**
DBRK				Sg	**Sg**	**05 10 33.0**	**+1.1**
KLINJ	**Klinje**	**0.55**	**88**	*e*Pg	**Pg**	**05 10 24.9**	**-0.3**
KLINJ				*e*Sg	**Sg**	**05 10 32.9**	**+0.6**
TREB	**Trebinje**	**0.58**	**139**	i *i*Pg	**Pg**	**05 10 24.8**	**-1.0**
TREB				*e*Sg	**Sg**	**05 10 33.5**	**+0.2**
MAKA	**Makarska**	**0.61**	**283**	*e*Pg	**Pg**	**05 10 26.4**	**-0.2**
MAKA				Sg	**Sg**	**05 10 35.7**	**+1.2**
RICI	**Ricice**	**0.62**	**304**	*i* Pg	**Pg**	**05 10 26.9**	**+0.3**
LSTV	**Lastovo**	**0.80**	**241**	*e*Pg	**Pg**	**05 10 28.7**	**-1.3**
LSTV				Sg	**Sg**	**05 10 40.4**	**+0.1**
HVAR	**Hvar**	**1.02**	**272**	*e*Pg	**Pg**	**05 10 33.7**	**-0.5**
HVAR				Sg	**Sg**	**05 10 48.1**	**+0.7**
RUDO	**Rudo**	**1.21**	**67**	*e*Pg	**Pg**	**05 10 36.8**	**-1.1**
RUDO				*e*Sg	**Sg**	**05 10 54.3**	**+0.7**
PDG	**Podgorica**	**1.27**	**124**	*e*Pg	**Pg**	**05 10 39.9**	**+0.8**
PDG				*e*Sg	**Sn**	**05 10 56.9**	**-0.3**
BBLS	**Lazi&#263i**	**1.34**	**58**	*e*Pg	**Pn**	**05 10 40.2**	**-0.5**
BBLS				*e*Sg	**Sn**	**05 10 59.2**	**0.0**
KIJV	**Kijevo**	**1.34**	**310**	*e*Pg	**Pg**	**05 10 40.9**	**+0.4**
KIJV				Sg	**Sn**	**05 11 00.0**	**+0.9**
SJES	**Sjenica**	**1.56**	**85**	*e*Pn	**Pb**	**05 10 44.4**	**-0.1**
BLY	**Banja Luka**	**1.66**	**344**	i *i*Pn	**Pn**	**05 10 45.5**	**+0.5**
BLY				*e*Sn	**Sn**	**05 11 06.8**	**-0.1**
BLY	**Banja Luka**	**1.66**	**344**	*e*Pg	**Pb**	**05 10 46.0**	**-0.1**
BLY				*e*Sg	**Sg**	**05 11 08.3**	**+0.1**
ZIRJ	**Zirje**	**1.68**	**288**	*e*Pn	**Pn**	**05 10 44.8**	**-0.3**
ZIRJ				Sn	**Sb**	**05 11 07.6**	**-0.3**
MORI	**Morici**	**1.71**	**295**	*e*Pn	**Pn**	**05 10 46.2**	**+0.6**
MORI				Sn	**Sg**	**05 11 09.3**	**-0.3**
IVAS	**Ivanjica**	**1.74**	**75**	*e*Pg	**Pn**	**05 10 46.3**	**+0.2**
IVAS				*e*Sg	**Sg**	**05 11 10.9**	**+0.3**
DIVS	**Divibare**	**1.83**	**58**	*e*Pg	**Pn**	**05 10 47.3**	**0.0**
DIVS				*e*Sg	**Sb**	**05 11 13.0**	**+0.7**
TEKS	**Tekeris**	**1.85**	**41**	*e*Pn	**Pn**	**05 10 47.0**	**-0.7**
TEKS				*e*Sg	**Sg**	**05 11 14.8**	**+0.5**
UDBI	**Udbina**	**2.03**	**313**	*e*Pn	**Pb**	**05 10 51.5**	**-1.1**
UDBI				Sn	**Sb**	**05 11 17.4**	**-0.9**
TRUS	**Trudelj**	**2.15**	**59**	*e*Pg	**Pn**	**05 10 52.7**	**+1.0**
TRUS				*e*Sg	**Sg**	**05 11 24.3**	**+0.6**
DUGI	**Dugi Otok**	**2.19**	**293**	*e*Pn	**Pn**	**05 10 53.2**	**+1.0**
DUGI				Sn	**Sb**	**05 11 22.0**	**-0.7**
GRUS	**Gruza**	**2.22**	**70**	*e*Pn	**Pn**	**05 10 52.9**	**+0.3**
GOCS	**Kraljevo Serbi**	**2.25**	**79**	*e*Pn	**Pn**	**05 10 53.4**	**+0.2**
VIRC	**Vir**	**2.32**	**300**	*e*Pn	**Pn**	**05 10 55.5**	**+1.5**
VIRC				Sn	**Sb**	**05 11 24.7**	**-1.7**
PLIT	**Plitvice**	**2.35**	**318**	*i* Pn	**Pn**	**05 10 55.8**	**+1.3**
PLIT				Sn	**Sb**	**05 11 26.3**	**-1.1**
NVLJ	**Novalja**	**2.57**	**304**	*e*Pn	**Pn**	**05 10 58.7**	**+1.3**
NVLJ				Sn	**Sn**	**05 11 30.3**	**+1.1**
BOVS	**Bovan**	**2.86**	**79**	*e*Pn	**Pn**	**05 11 02.1**	**+0.7**
MORH	**Mrgy, Hungar**	**3.11**	**10**	*e*Pn	**Pn**	**05 11 05.5**	**+0.6**
MORH				*e*Sn	**Sn**	**05 11 41.9**	**-0.8**
KALN	**Kalnik**	**3.13**	**342**	*e*Pn	**Pn**	**05 11 05.6**	**+0.3**
LOBO	**Lobor**	**3.25**	**338**	*i* Pn	**Pn**	**05 11 07.8**	**+0.9**
ZAGS	**Zajecar**	**3.27**	**77**	*e*Pn	**Pn**	**05 11 08.2**	**+1.2**
ZAPS	**Zavoj**	**3.51**	**86**	*e*Pn	**Pn**	**05 11 11.2**	**+0.8**

DJA 15 05:16:45.6±0.3,**2.°N**±4.°×**12.°6E**±.°,**h10**km,**M4.1**/9,**mB5.8**/1, **mb5.0**/1,**MLv3.6**/9,**Mw(mB)5.4**/1,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**132**	P	Pn	05 17 07.4	-1.4
SGSI	**Sangihe**	**2.28**	**336**	P	Pn	05 17 23.0	-0.3

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*IDC **15** 05:17:10.2±1.0,3.°54S×131.°16E,h0km,mb4.0/8, mbtmp4.0/9,ML4.2/1,MS3.1/2,Error ellipse: s-maj=69.7km s-min=18.6km az=74.0*
*NEIC **15** 05:17:13.7±0.7,3.°83S±0.°06×131.°35E±0.°09,h10km±1km, mb4.4/10,Error ellipse: s-maj=16.6km s-min=9.6km az=289.0*
*DJA **15** 05:17:16.3±0.7,3.°5S±3.°×13.°1E±.°,h25km±7km,M4.4/13, mB5.2/3,mb4.8/3,MLv4.2/13,Mw(mB)4.5/3*
ISC 15 05:17:15.5±0.7,**3.77S**±0.°06×**131.°23E**±0.°07,**h35**km,**n41,** σ2§**37**/39,**mb4.0**/10,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.33**	**50**		**Pn**	**05 17 37.6**	**+0.1**
FAKI	**Fak Fak**	**1.33**	**50**	P	**Pn**	**05 17 37.5**	**0.0**
BNDI	**Bandanaira**	**1.52**	**240**	P	**Pn**	**05 17 42.9**	**+2.8**
MSAI	**Masohi**	**2.33**	**280**	P	**Pn**	**05 17 52.2**	**+0.8**
KMPI	**Kaimana, Papua**	**2.48**	**88**	P	**Pn**	**05 17 56.3**	**+3.0**
SWI	**Sorong**	**2.89**	**1**	P	Pn	05 17 54.4	-4.6
AAI	**Ambon**	**3.03**	**271**	P	**Pn**	**05 18 03.6**	**+2.7**
RKPI	**Ransiki, Papua**	**3.71**	**53**	P	**Pn**	**05 18 10.5**	**+0.2**
NLAI	**Namlea**	**4.15**	**277**	P	**Pn**	**05 18 16.8**	**+0.4**
SAUI	**Saumlaki**	**4.18**	**179**	Pn	**Pn**	**05 18 17.0**	**+0.1**
SAUI	**Saumlaki**	**4.18**	**179**	P	Pn	05 18 25.4	+8.5
SANI	**Sanana**	**5.50**	**288**	P	**Pn**	**05 18 32.7**	**-2.3**
0.2nm20nm,0.7s							
BAKI	**Biak**	**5.51**	**62**	P	**Pn**	**05 18 36.3**	**+1.2**
3µm204nm,0.4s							
TNTI	**Ternate**	**5.94**	**319**	Pn	**Pn**	**05 18 42.9**	**+2.0**
LUWI	**Luwuk**	**8.87**	**288**	Pn	Pn	05 19 26.6	+5.3
MTN	**Manton Dam**	**9.02**	**181**		**Pn**	**05 19 26.0**	**+2.8**
SOEI	**Soe**	**9.11**	**229**		**Pn**	**05 19 29.4**	**+4.6**
JAY	**Jayapura**	**9.55**	**83**	LR	LR	05 24 24.7	
comp=Z,67nm,20.2s,baz=306,slow=45							
BATI	**Baumata**	**9.86**	**229**	LR	LR	05 23 55.2	
comp=Z,164nm,18.9s,baz=40,slow=41							
APSI	**Ampana**	**9.98**	**286**	P	**Pn**	**05 19 35.2**	**-1.3**
KNRA	**Kununurra**	**12.08**	**191**		**Pn**	**05 20 05.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**15.25**	**201**	Pn	**Pn**	**05 20 47.5**	**-0.8**
0.8nm,0.3s,baz=26,slow=11,SNR=24							
FITZ				Sn	**Sn**	**05 23 29.2**	**-7.0**
0.6nm,0.3s,baz=176,slow=22,SNR=6.6							
2.6nm,0.2s							
FITZ	**Fitzroy Crossi**	**15.25**	**201**	Pn	**Pn**	**05 20 47.3**	**-1.1**
WB0	**Warramunga Arr**	**16.20**	**169**	Pn	**Pn**	**05 20 58.5**	**-2.0**
WRA	**Warramunga Arr**	**16.36**	**170**	Pn	**Pn**	**05 21 01.3**	**-1.3**
0.7nm,0.3s,baz=351,slow=14,SNR=12							
WRA				Sn	**Sn**	**05 23 57.7**	**-5.4**
1.7nm,0.3s,baz=357,slow=23,SNR=13							
ASAR	**Alice Springs**	**19.95**	**173**	P	**Pn**	**05 21 48.2**	**+1.7**
8.7nm,0.6s,baz=350,slow=11,SNR=75							
ASAR				S	**S**	**05 25 22.6**	**-4.8**
1.3nm,0.5s,baz=360,slow=29,SNR=7.7							
8.7nm,0.6s							
MBWA	**Marble Bar**	**20.58**	**212**	P	**P**	**05 21 52.4**	**+0.8**
MBWA				IAmb	IAmb	05 22 22.0	
comp=Z,14nm,1.1s							
PSA00	**Pilbara Seismi**	**20.86**	**211**	P	**P**	**05 21 55.1**	**+0.5**
PSA00				IAmb	IAmb	05 21 57.6	
comp=Z,24nm,1.0s							
GIRL	**Giralia**	**24.96**	**220**	P	**P**	**05 22 36.8**	**+1.0**
FORT	**Forrest**	**27.03**	**186**	P	**P**	**05 22 56.0**	**+1.5**
FORT				IAmb	IAmb	05 22 58.0	
comp=Z,6.9nm,0.8s							
BBOO	**Buckleboo**	**29.24**	**172**	P	**P**	**05 23 13.5**	**-0.7**
BBOO				IAmb	IAmb	05 23 40.1	
comp=Z,12nm,1.1s							
STKA	**Stephens Creek**	**29.61**	**162**	P	**P**	**05 23 18.2**	**+0.8**
comp=Z,0.9nm,0.3s,baz=322,slow=11,SNR=3.7							
comp=Z,0.9nm,0.3s							
ONTNC	**Ouen Toro**	**38.78**	**121**	P	**P**	**05 24 36.6**	**-0.5**
MKAR	**Makanchi Array**	**66.24**	**326**	P	**P**	**05 27 58.7**	**-1.3**
comp=Z,0.8nm,0.6s,baz=114,slow=8.0,SNR=6.7							
comp=Z,0.8nm,0.6s							
ZALV	**Zalesovo Beam**	**69.27**	**333**	P	**P**	**05 28 17.2**	**-1.7**
comp=Z,0.3nm,0.3s,baz=92,slow=7.2,SNR=1.8							
comp=Z,0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**70.44**	**327**	P	**P**	**05 28 24.9**	**-1.3**
comp=Z,1.0nm,0.6s,baz=125,slow=5.7,SNR=12							
comp=Z,1.0nm,0.6s							
VNDA	**Vanda**	**75.49**	**173**	P	**P**	**05 28 57.5**	**+1.9**
comp=Z,0.8nm,0.6s,baz=326,slow=8.0,SNR=6.9							
comp=Z,0.8nm,0.6s							
VNDA	**Vanda**	**75.49**	**173**	P	**P**	**05 28 57.2**	**+1.6**
VNDA				IAmb	IAmb	05 29 07.3	
comp=Z,2.5nm,1.1s							
BVAR	**Borovoye Array**	**76.02**	**327**	P	**P**	**05 28 58.9**	**-0.2**
comp=Z,0.9nm,0.6s,baz=120,slow=5.3,SNR=3.8							
comp=Z,0.9nm,0.6s							
QSPA	**South Pole Qui**	**86.18**	**180**	P	**P**	**05 29 55.4**	**+2.3**
QSPA				IAmb	IAmb	05 30 07.5	
comp=Z,3.0nm,1.1s							
ILAR	**Eielson Array**	**89.92**	**25**	P	**P**	**05 30 10.0**	**-0.7**
comp=Z,0.4nm,0.8s,baz=256,slow=3.6,SNR=2.1							
comp=Z,0.4nm,0.8s							

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*IDC **15** 05:27:47.6±0.4,1.°67N×126.°39E,h0km,mb4.6/28, mbtmp4.6/32,ML4.5/4,MS3.4/2,Error ellipse: s-maj=19.8km s-min=10.0km az=77.0*
*MOS **15** 05:27:50.4±1.0,1.°69N×126.°37E,h34km,mb5.1/31,Error ellipse: s-maj=11.7km s-min=6.5km az=117.8*
*DJA **15** 05:27:51.9±0.2,2.°1N±2.°×12.°6E±.°,h10km,M4.8/23, mB5.3/14,mb5.0/23,MLv4.9/22,Mw(mB)4.8/14*
*BJI **15** 05:27:52.0,1.°52N×126.°32E,h42km,mB5.2/10,mb4.8/41, Ms4.4/2,Ms7 4.2/4*
*NEIC **15** 05:27:53.5±1.1,1.°57N±0.°06×126.°34E±0.°06,h35km±2km, mb5.0/51,Error ellipse: s-maj=11.8km s-min=8.0km az=221.0*
ISC 15 05:27:52.1±0.6,**1.°65N**±0.°04×**126.°37E**±0.°05,**h29**km±4km, **n192,** σ1§**52**/208,**mb4.8**/83,**MS4.1**/4,**10C-7D**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.32**	**131**		**Pn**	**05 28 15.2**	**+0.5**
TNTI				Sn	**Sb**	**05 28 32.9**	**-0.1**
TNTI	**Ternate**	**1.32**	**131**	P	**Pn**	**05 28 15.1**	**+0.5**
SGSI	**Sangihe**	**2.19**	**337**	P	**Pn**	**05 28 26.8**	**+0.3**
KMSI	**Cibinong**	**2.62**	**246**	P	**Pn**	**05 28 34.4**	**+1.9**
SANI	**Sanana**	**3.70**	**186**	P	**Pn**	**05 28 48.6**	**+1.3**
LUWI	**Luwuk**	**4.49**	**233**		**Pn**	**05 28 58.1**	**0.0**
LUWI	**Luwuk**	**4.49**	**233**	P	**Pn**	**05 29 01.5**	**+3.3**
MRSI	**Marisa**	**4.58**	**255**	P	**Pn**	**05 29 00.6**	**+1.1**
NLAI	**Namlea**	**4.92**	**171**	P	**Pn**	**05 29 06.1**	**+2.1**
0.7nm2µm143nm,0.6s							
APSI	**Ampana**	**5.37**	**242**	P	**Pn**	**05 29 12.8**	**+2.5**
DAV	**Davao City (W)**	**5.44**	**352**	Pn	**Pn**	**05 29 11.5**	**+0.2**
73nm,0.3s,baz=44,slow=16,SNR=1.4							
193nm,0.3s							
DAV	**Davao City (W)**	**5.44**	**352**	Pn	**Pn**	**05 29 13.7**	**+2.5**
SWI	**Sorong**	**5.49**	**117**	P	**Pn**	**05 29 15.7**	**+3.8**
0.2nm2µm63nm,0.7s							
MSAI	**Masohi**	**5.58**	**153**	P	**Pn**	**05 29 16.5**	**+3.2**
0.6nm128nm,0.6s							
TOLI2	**Tolitoli**	**5.62**	**265**		**Pn**	**05 29 13.9**	**+0.2**
MPSI	**Mapaga**	**6.60**	**259**	P	**Pn**	**05 29 30.6**	**+3.3**
0.4nm2µm127nm,0.7s							
KDI	**Kendari**	**6.72**	**214**	P	**Pn**	**05 29 31.7**	**+2.8**
PCI	**Palu**	**7.01**	**249**	P	**Pn**	**05 29 34.0**	**+1.1**
0.8nm7µm72nm,0.5s							
BNDI	**Bandanaira**	**7.08**	**150**	P	**Pn**	**05 29 36.5**	**+2.7**
0.7nm74nm,0.8s							
FAKI	**Fak Fak**	**7.43**	**128**		**Pn**	**05 29 38.6**	**0.0**
FAKI	**Fak Fak**	**7.43**	**128**	P	**Pn**	**05 29 42.1**	**+3.5**
0.2nm64nm,1.0s							
TTSI	**Tana Toraja**	**8.04**	**235**	P	**Pn**	**05 29 48.8**	**+1.7**
1µm100nm,0.8s							
MYLDM	**Lahad Datu**	**8.60**	**294**		**Pn**	**05 29 56.2**	**+1.5**
SPSI	**Sidrap Palu**	**8.64**	**230**	P	**Pn**	**05 29 58.0**	**+2.7**
58nm,0.6s							
BNSI	**Bone**	**8.68**	**226**	P	**Pn**	**05 29 57.7**	**+1.9**
841nm86nm,0.7s							
BKSI	**Bulukumba**	**9.33**	**222**	P	**Pn**	**05 30 06.8**	**+2.1**
628nm48nm,0.7s							
KAPI	**Kappang**	**9.36**	**225**	Pn	**Pn**	**05 30 05.5**	**+0.3**
3.6nm,0.3s,baz=18,slow=13,SNR=12							
KAPI				Sn	**Sn**	**05 31 49.8**	**+0.3**
1.8nm,0.3s,baz=144,slow=14,SNR=1.4							
18nm,0.5s							
KAPI	**Kappang**	**9.36**	**225**		**Pn**	**05 30 03.6**	**-1.6**
KAPI	**Kappang**	**9.36**	**225**	*c i*P	**Pn**	**05 30 06.6**	**+1.5**
BSSI	**Bau Bau, Buton**	**9.72**	**217**	P	**Pn**	**05 30 13.4**	**+3.3**
856nm73nm,0.6s							
BAKI	**Biak**	**10.13**	**106**	P	**Pn**	**05 30 19.0**	**+3.2**
EDFI	**Ende, Flores**	**11.34**	**204**	P	**Pn**	**05 30 35.0**	**+2.6**
SOEI	**Soe**	**11.53**	**190**		**Pn**	**05 30 34.7**	**-0.2**
BATI	**Baumata**	**12.09**	**193**	LR	LR	05 35 57.9	
comp=Z,142nm,20.8s,baz=39,slow=40							
BATI	**Baumata**	**12.09**	**193**	P	**Pn**	**05 30 45.4**	**+2.9**
80nm,1.2s							
SMPI	**Sarmi**	**12.86**	**106**	P	**Pn**	**05 30 57.3**	**+4.3**
TGY	**Tagaytay City**	**13.48**	**337**	LR	LR	05 36 44.4	
comp=Z,246nm,21.8s,baz=211,slow=40							
SBUM	**Sibu**	**14.17**	**273**		**Pn**	**05 31 11.5**	**+0.6**
GENI	**Genyem**	**14.42**	**107**	P	**P**	**05 31 19.2**	**-1.7**
67nm,0.8s							
JAY	**Jayapura**	**14.91**	**106**	Pn	**Pn**	**05 31 20.4**	**-0.7**
0.5nm,0.3s,baz=270,slow=11,SNR=1.9							
7.9nm,0.7s							
MTN	**Manton Dam**	**15.16**	**162**		**Pn**	**05 31 23.4**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.80**	**230**		**Pn**	**05 31 32.0**	**-0.7**
KNRA	**Kununurra**	**17.38**	**172**		**Pn**	**05 31 51.4**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	**P**	**05 32 17.1**	**-1.5**
1.4nm,0.3s,baz=16,slow=7.7,SNR=43							
8.2nm,0.5s							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	**P**	**05 32 17.1**	**-1.5**
TWG	**Pinlang**	**21.66**	**347**	P	**P**	**05 32 40.1**	**-0.3**
TPUB	**Ta-pu**	**22.23**	**346**	P	**P**	**05 32 44.5**	**-2.0**
TPUB				IAmb	IAmb	05 32 51.8	
comp=Z,83nm,0.9s							
COEN	**Coen**	**22.76**	**133**	P	**P**	**05 32 51.7**	**-0.6**
WRAB	**Tennant Creek**	**22.84**	**160**	P	**P**	**05 32 52.0**	**-1.0**
WRAB				IAmb	IAmb	05 33 00.7	
comp=Z,50nm,0.9s							
WRAB	**Tennant Creek**	**22.84**	**160**	*c i*P	**P**	**05 32 52.0**	**-1.0**
WRAB				pmax	pmax		
comp=Z,47nm,1.0s							
WRA	**Warramunga Arr**	**22.84**	**160**	P	**P**	**05 32 52.0**	**-1.1**
comp=Z,27nm,0.7s,baz=338,slow=11,SNR=73							
comp=Z,27nm,0.7s							
WRA	**Warramunga Arr**	**22.84**	**160**	*i* P	**P**	**05 32 52.0**	**-1.1**
WRA				pmax	pmax		
comp=Z,26nm,0.7s							
YHNB	**Yeheng**	**23.39**	**348**	P	**P**	**05 32 57.2**	**-1.4**
YHNB				IAmb	IAmb	05 33 14.5	
comp=Z,108nm,1.6s							
PMG	**Port Moresby**	**23.44**	**118**	P	**P**	**05 32 57.4**	**-1.8**
comp=Z,3.8nm,0.3s,baz=292,slow=11,SNR=1.7							
comp=Z,3.8nm,0.3s							
MBWA	**Marble Bar**

HHC pmax pmax
comp=Z,8.0nm,0.6s
HHC pmax pmax
comp=Z,100nm,4.3s
USRK Ussuriysk Ar. 42.66 6 P **P** **05 35 46.7 +0.7**
comp=Z,2.9nm,0.6s,baz=205,slow=7.6,SNR=4.1
comp=Z,2.9nm,0.6s
H11S3 WAKE ISLAND Hy 42.92 64 T T 06 21 53.8
baz=252,slow=74
H11S2 WAKE ISLAND Hy 42.93 64 T T 06 21 50.3
baz=252,slow=74
H11S1 WAKE ISLAND Hy 42.93 64 T T 06 21 51.7
baz=252
GTA Gaotai 44.70 330 *e*P **P** **05 36 03.3 +0.5**
GTA PcP **PcP** **05 37 46.4 +1.4**
GTA pmax pmax
comp=Z,4.0nm,0.9s
EVN Everest 45.96 308 P **P** **05 36 12.3 -1.2**
EVN IAmb IAmb 05 36 17.7
comp=Z,11nm,0.6s
HILR Hailar Array B 48.06 354 P **P** **05 36 28.6 -0.3**
comp=Z,2.8nm,0.5s,baz=182,slow=9.9,SNR=5.9
HILR PcP **PcP** **05 37 57.5 +1.1**
comp=Z,6.5nm,0.7s,baz=144,slow=5.3,SNR=5.7
comp=Z,2.8nm,0.5s
HEH HeiHe 48.43 1 *e*P **P** **05 36 31.8 +0.2**
HEH pmax pmax
comp=Z,16nm,0.6s
ULN Ulaanbaatar 48.98 343 **P** **05 36 36.2 +0.1**
ULN IAmb IAmb 05 36 40.9
comp=Z,7.1nm,0.8s
ULN Ulaanbaatar 48.98 343 ⇓*i*P **P** **05 36 36.6 +0.5**
ULN pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 48.98 343 P **P** **05 36 36.6 +0.5**
ULN PcP **PcP** **05 38 01.0 +1.0**
SONM Songino Array 49.15 342 P **P** **05 36 37.7 +0.3**
comp=Z,7.2nm,0.9s,baz=162,slow=7.2,SNR=11
SONM PcP **PcP** **05 38 01.4 +0.9**
comp=Z,3.1nm,0.8s,baz=173,slow=4.6,SNR=5.2
comp=Z,7.2nm,0.9s
HYBB Hyderabad (bro 49.51 292 *e*P **P** **05 36 40.9 +0.4**
ZEA Zeya 51.92 1 *e*P **P** **05 36 55.5 -2.5**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
WMQ Urumqi 54.22 326 *e*P **P** **05 37 19.0 +3.7**
WMQ LR LR
comp=Z,120nm,21.5s
PETK Petropavlovsk- 57.48 22 P **P** **05 37 38.6 +0.2**
comp=Z,4.7nm,0.7s,baz=194,slow=6.7,SNR=5.8
comp=Z,4.7nm,0.7s
MK31 Makanchi Array 59.06 326*c* *i*P **P** **05 37 49.0 -0.6**
MKAR Makanchi Array 59.06 326 P **P** **05 37 48.8 -0.8**
comp=Z,16nm,0.8s,baz=121,slow=7.6,SNR=29
MKAR PP **PP** **05 39 56.9 -3.4**
comp=Z,1.8nm,0.6s,baz=120,slow=8.3,SNR=5.3
comp=Z,16nm,0.8s
TARG Taragay, Kyrgy 59.06 319 P **P** **05 37 50.3 +0.1**
TARG IAmb IAmb 05 38 11.7
comp=Z,7.2nm,0.9s
TARG Taragay, Kyrgy 59.06 319 P **P** **05 37 50.3 +0.1**
TARG pmax pmax
comp=Z,7.0nm,0.9s
KDJ Kajisay 59.66 319 **P** **05 37 54.7 +0.6**
KDJ IAmb IAmb 05 37 59.6
comp=Z,11nm,0.7s
KDJ Kajisay 59.66 319 P **P** **05 37 54.7 +0.6**
KDJ pmax pmax
comp=Z,11nm,0.7s
LBZ Lake Benmore 60.19 145 P **P** **05 37 55.4 -2.0**
YAK Yakutsk 60.28 2 *e*P **P** **05 37 57.4 -0.2**
YAK *e**PP **pP** **05 38 06.8 +0.6**
YAK *e* 05 38 43.1
YAK *e* 05 40 10.2
YAK *e*PPP PPP 05 41 34.1
YAK *e*S **S** **05 46 09.5 -0.2**
YAK *e**SS sS 05 46 30.9 +7.1
YAK *e* 05 47 44.0
YAK *e*SS **SS** **05 50 09.0 +1.5**
YAK pmax pmax
comp=Z,36nm,1.0s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,15nm,1.4s
YAK pmax pmax
comp=Z,752nm,5.7s
YAK pmax pmax
comp=N,788nm,3.5s
YAK pmax pmax
comp=E,697nm,5.8s
YAK smax smax
comp=N,549nm,3.1s
YAK smax smax
comp=E,852nm,3.6s
TCW Tory Channel 60.87 140 P **P** **05 38 01.6 -0.5**
AAK Ala-Archa 61.66 319 P **P** **05 38 08.1 +0.4**
AAK IAmb IAmb 05 38 12.3
comp=Z,9.3nm,1.4s
AAK Ala-Archa 61.66 319 P **P** **05 38 08.1 +0.4**
AAK pmax pmax
comp=Z,9.0nm,1.4s
ZALV Zalesovo Beam 62.27 334 P **P** **05 38 10.2 -1.1**
comp=Z,2.8nm,0.5s,baz=116,slow=6.3,SNR=14
comp=Z,2.8nm,0.5s
ZALV Zalesovo Beam 62.27 334 *i*P **P** **05 38 10.8 -0.5**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
GAR Garm 63.07 314 P **P** **05 38 16.5 -0.6**
KURBB Kurchatov Arra 63.29 328 P **P** **05 38 17.3 -0.8**
comp=Z,12nm,0.7s,baz=126,slow=6.3,SNR=36
comp=Z,12nm,0.7s
KURK Kurchatov 63.30 328 P **P** **05 38 17.3 -0.8**
KURK Kurchatov 63.30 328*d* *i*P **P** **05 38 17.1 -1.1**
KURK pmax pmax
comp=Z,18nm,0.8s
KURK Kurchatov 63.30 328 P **P** **05 38 17.1 -1.1**
CHGR Chuyangaron 63.79 313 P **P** **05 38 21.5 -0.3**
CHGR Chuyangaron 63.79 313 P **P** **05 38 21.5 -0.3**
CHGR pmax pmax
comp=Z,38nm,1.3s
CASY Casey 68.73 187 P **P** **05 38 52.8 0.0**
CASY IAmb IAmb 05 38 54.1
comp=Z,6.0nm,0.7s
BVAR Borovoye Array 68.86 328 P **P** **05 38 53.0 -0.9**
comp=Z,4.8nm,0.7s,baz=128,slow=9.6,SNR=17
comp=Z,4.8nm,0.7s
BORK Borovoye 68.91 328 ⇑*i*P **P** **05 38 53.5 -0.6**
BORK pmax pmax
comp=Z,7.0nm,0.7s
BORK Borovoye 68.91 328 P **P** **05 38 53.6 -0.6**
BORK pP **pwP** **05 39 04.4 -0.7**
BORK PcP **PcP** **05 39 16.8 -1.7**
TIXI Tiksi 69.91 1 P **P** **05 38 58.9 -1.0**
TIXI IAmb IAmb 05 39 00.7
comp=Z,11nm,0.8s
TIXI Tiksi 69.91 1 ⇑*i*P **P** **05 38 58.8 -1.2**
TIXI pmax pmax
comp=Z,10.0nm,0.9s
TIXI Tiksi 69.91 1 P **P** **05 38 59.9 -0.1**
TIXI pP **sP** **05 39 10.7 -1.4**
TIXI sP pP 05 39 14.7 +6.0
TIXI PcP **PcP** **05 39 23.0 +0.7**
ATKA Atka Island 70.40 34 P **P** **05 39 02.8 -0.6**
SVE Sverdlovsk 75.54 329 *e*P **P** **05 39 33.8 +0.1**
ARTI Arti 76.57 328*d* *i*P **P** **05 39 38.6 -1.1**
ARTI 05 42 26.1
ARTI S **S** **05 49 21.6 -2.2**
ARTI pmax pmax
comp=Z,12nm,1.0s
ARTI Arti 76.57 328 P **P** **05 39 38.7 -0.9**
ARTI pP **pwP** **05 39 49.7 -0.9**
CCD Concordia, Ant 76.68 181 P **P** **05 39 41.6 +1.3**
L14K Kuka Creek 79.49 28 P **P** **05 39 56.8 +1.1**
J16K Anvik River 80.94 26 **P** **05 40 05.3 +1.8**
RAYN Ar Rayn 80.97 293 **P** **05 40 04.2 -0.4**
RAYN IAmb IAmb 05 40 09.2
comp=Z,13nm,0.8s
RAYN Ar Rayn 80.97 293 P **P** **05 40 04.2 -0.4**
RAYN pmax pmax
comp=Z,13nm,0.9s
L16K Owhat River 81.07 28 P **P** **05 40 04.8 +0.6**
L16K IAmb IAmb 05 40 06.3
comp=Z,18nm,1.1s
VNDA Vanda 81.43 173 P **P** **05 40 05.9 +0.1**
comp=Z,5.8nm,0.7s,baz=314,slow=6.3,SNR=53
comp=Z,5.8nm,0.7s
VNDA Vanda 81.43 173 P **P** **05 40 06.3 +0.5**
VNDA Vanda 81.43 173 P **P** **05 40 06.3 +0.5**
MAW Mawson 81.70 200 P **P** **05 40 07.7 +0.3**
comp=Z,4.0nm,0.7s,baz=39,slow=4.6,SNR=12
comp=Z,4.0nm,0.7s
KIRV Kirov 81.80 329 ⇑*i*P **P** **05 40 08.1 0.0**
BELG Belogornoye 81.83 323 ⇑*i*P **P** **05 40 06.5 -1.9**
BELG pmax pmax
comp=Z,3.0nm,0.8s
K17K Iditarod 81.83 27 **P** **05 40 09.9 +1.7**
K17K IAmb IAmb 05 40 11.7
comp=Z,32nm,1.0s
SBA Scott Base 82.34 172 P **P** **05 40 11.9 +1.3**
N19K Bonanza Creek 83.27 29 **P** **05 40 17.1 +1.2**
E19K Redstone River 83.27 22 P **P** **05 40 16.9 +1.2**
KBZ Khabaz 84.14 314 P **P** **05 40 21.4 +0.9**
comp=Z,3.6nm,1.0s,baz=121,slow=6.1,SNR=3.9
comp=Z,3.6nm,1.0s
KBZ Khabaz 84.14 314 ⇑*i*P **P** **05 40 18.4 -2.2**
KBZ pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 84.31 314 *e*P **P** **05 40 21.2 -0.4**
KIV pmax pmax
comp=Z,7.0nm,1.1s
GURO Guroymak-BITLI 84.54 308 P **P** **05 40 22.6 -0.3**
SUA Susitna One 85.14 29 P **P** **05 40 25.7 +0.2**
VRH Novokhopyorsk 85.36 321 *e*P **P** **05 40 24.2 -2.4**
VRH pmax pmax
comp=Z,20nm,1.1s
KOPT Kop Dagi 85.78 310 P **P** **05 40 29.1 -0.2**
C23K Itkillik River 86.04 20 **P** **05 40 30.6 +1.0**
C23K IAmb IAmb 05 40 31.9
comp=Z,13nm,1.0s
VORD Divnogorie 86.88 321 *e*P **P** **05 40 31.4 -2.7**
VORD pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 86.95 321 *e*P **P** **05 40 33.2 -1.2**
VORR pmax pmax
comp=Z,50nm,0.9s
VSR Storozhevoye 86.97 321 *e*P **P** **05 40 30.9 -3.6**
VSR pmax pmax
comp=Z,20nm,0.9s
KLMR Klimovskoe 87.03 331 *e*P **P** **05 40 32.1 -2.5**
KLMR pmax pmax
comp=Z,33nm,1.5s
ILAR Eielson Array 87.12 25 P **P** **05 40 34.0 -1.0**
comp=Z,0.8nm,0.6s,baz=242,slow=5.0,SNR=10
comp=Z,0.8nm,0.6s
LPSR Galich'ya Gora 87.14 322 *e*P **P** **05 40 32.8 -2.5**
LPSR pmax pmax
comp=Z,30nm,1.0s
MOS Moscow 87.94 326 *e*P **P** **05 40 37.4 -1.7**
ANN Anapa 88.09 315 *e*P **P** **05 40 37.9 -2.1**
ANN pmax pmax
comp=Z,24nm,0.8s
C27K Jago River 88.43 21 P **P** **05 40 42.1 +0.9**
C27K IAmb IAmb 05 40 43.5
comp=Z,6.3nm,0.8s
OBN Obninsk 88.54 325 ⇑*e*P **P** **05 40 41.6 -0.3**
OBN *e* 05 44 14.8
OBN *e*PPP PPP 05 46 03.7
OBN pmax pmax
comp=Z,9.0nm,0.7s
OBN MLR MLR
comp=Z,79nm,15.0s
KMBO Kilima Mbogo 89.15 269 P **P** **05 40 46.4 +0.3**
comp=Z,4.3nm,0.6s,baz=71,slow=8.1,SNR=4.3
comp=Z,4.3nm,0.6s
KMBO Kilima Mbogo 89.15 269 *i*P **P** **05 40 47.5 +1.4**
KMBO pmax pmax
comp=Z,4.0nm,0.6s
L27K Beaver Creek, 89.36 27 P **P** **05 40 46.3 +0.6**
L27K IAmb IAmb 05 40 48.4
comp=Z,8.2nm,1.1s
MMAI Mount Meron Ar 89.92 303 P **P** **05 40 49.7 +0.6**
comp=Z,3.7nm,0.6s,baz=97,slow=6.8,SNR=4.5
comp=Z,3.7nm,0.6s
E28M Babbage River 89.97 21 **P** **05 40 48.5 +0.1**
E28M IAmb IAmb 05 40 50.6
comp=Z,5.0nm,1.0s
SYO Syowa Base 90.37 201 ⇓*e*P **P** **05 40 50.0 -0.2**
BRTR Keskin Array B 91.06 310 P **P** **05 40 52.1 -2.2**
comp=Z,2.0nm,0.7s,baz=105,slow=4.2,SNR=7.8
BRTR Keskin Array B 91.06 310 *i*P **P** **05 40 56.0 +1.7**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
QSPA South Pole Qui 91.57 180 P **P** **05 40 57.6 +1.5**
comp=Z,1.3nm,0.5s,baz=320,slow=1.2,SNR=14
comp=Z,1.3nm,0.5s
ARCES ARCESS Array B 92.26 340 P **P** **05 40 58.1 -1.0**
comp=Z,5.9nm,0.8s,baz=56,slow=4.5,SNR=8.8
comp=Z,5.9nm,0.8s
SPITS Spitsbergen Ar 92.43 349 P **P** **05 40 58.5 -1.2**
comp=Z,6.0nm,0.7s,baz=102,slow=7.8,SNR=4.0
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 93.27 321 P **P** **05 41 03.5 -0.6**
comp=Z,0.2nm,0.3s,baz=71,slow=4.4,SNR=5.6
comp=Z,0.2nm,0.3s
FINES FINESS Array B 93.48 332 P **P** **05 41 03.5 -1.2**
comp=Z,2.0nm,0.8s,baz=56,slow=4.8,SNR=7.8
comp=Z,2.0nm,0.8s
FINES FINESS Array B 93.48 332 *i*P **P** **05 41 07.1 +2.3**
FINES pmax pmax
comp=Z,3.0nm,0.6s
MNK Minsk 93.60 325 *i*P **P** **05 41 03.8 -1.7**
MNK *i* 05 44 48.7
MNK *i*PPP PPP 05 46 49.4
MNK *i*S **SKSac** **05 51 35.3 -2.7**
MNK *i*SS **SS** **05 58 29.9 +0.1**
MNK *i*SSS SSS 06 02 11.1
MNK pmax pmax
comp=N,9.0nm,0.9s
MNK pmax pmax
comp=E,18nm,0.8s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK MLR MLR
comp=N,133nm,18.0s
MNK MLR MLR
comp=Z,113nm,18.0s
MNK MLR MLR
comp=E,76nm,14.0s
HFS Hagfors 99.67 332 P **Pdif** **05 41 31.4 -1.5**
comp=E,1.1nm,0.7s,baz=110,slow=8.3,SNR=1.6
comp=E,1.1nm,0.7s
NB2 NORSAR Subarra100.47 333 P **Pdif** **05 41 34.8 -1.7**
comp=Z,7.nm,0.9s,baz=70,slow=4.4
NOA NORSAR Array B 100.47 333 P **Pdif** **05 41 35.1 -1.4**
comp=Z,0.5nm,0.7s,baz=68,slow=4.6,SNR=3.7
TXAR Lajitas Array 123.13 53 PKhKP PKPpre 05 46 41.6
comp=Z,0.6nm,0.7s,baz=300,slow=3.9,SNR=6.6
TORD Torodi Ar. Bea 123.20 287 PKP **PKPdf** **05 46 46.8 -0.3**
comp=Z,1.6nm,0.3s,baz=38,slow=4.9,SNR=2.3
DBIC Dimbokro 130.62 280 PKP **PKPdf** **05 47 00.8 -0.5**
comp=Z,2.6nm,0.5s,baz=29,slow=1.6,SNR=4.2
PLCA Paso Flores 138.19 161 PKP **PKPdf** **05 47 14.9 0.0**
comp=Z,3.7nm,1.0s,baz=192,slow=4.8,SNR=4.7
CPUP Villa Florida 155.21 172 PKP **PKPdf** **05 47 44.2 +0.9**
comp=Z,1.0nm,0.8s,baz=345,slow=2.3,SNR=5.6
LPAZ La Paz 159.62 136 PKP **PKPdf** **05 47 50.3 +0.4**
comp=Z,0.5nm,0.5s,baz=34,slow=3.6,SNR=4.2

IDC ***15*** *05:33:45.0±0.9, 1.°63N×126.°50E, h0km, mb3.8/7, mbtmp3.8/8, ML3.3/1, Error ellipse: s-maj=55.3km s-min=17.1km az=72.0*

ISC 15 05:33:50.2±0.9, 1.°6N±0.°1×126.°5E±0.°3, h35km, n8, σ0s59/8, mb3.9/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**P**	**P**	**05 38 14.4**	**-0.8**
	0.1nm,0.3s,baz=355,slow=12,SNR=1.3							
	1.1nm,0.7s							
WRA	**Warramunga Arr**	**22.74**	**161**	P		**P**	**05 38 49.3**	**-0.2**
	1.0nm,0.4s,baz=340,slow=11,SNR=9.2							
	1.0nm,0.4s							
ASAR	**Alice Springs**	**26.12**	**164**	P		**P**	**05 39 21.6**	**+0.5**
	0.4nm,0.4s,baz=347,slow=12,SNR=6.4							
	0.4nm,0.4s							
STKA	**Stephens Creek**	**36.24**	**158**	P		**P**	**05 40 50.4**	**+0.3**
	1.7nm,0.7s,baz=323,slow=15,SNR=2.8							
	1.7nm,0.7s							
PETK	**Petropavlovsk-**	**57.50**	**22**	P		**P**	**05 43 35.5**	**-0.4**
	1.7nm,0.5s,baz=219,slow=6.8,SNR=4.8							
	1.7nm,0.5s							
MKAR	**Makanchi Array**	**59.17**	**326**	P		**P**	**05 43 47.2**	**-0.4**
	0.4nm,0.4s,baz=120,slow=7.9,SNR=6.1							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**63.41**	**328**	P		**P**	**05 44 16.3**	**+0.1**
	0.9nm,0.6s,baz=126,slow=6.1,SNR=6.2							
	0.9nm,0.6s							
BVAR	**Borovoye Array**	**68.98**	**328**	P		**P**	**05 44 52.5**	**+0.6**
	0.2nm,0.3s,baz=124,slow=7.7,SNR=1.6							
	0.2nm,0.3s							

IDC ***15*** *05:34:42.1±0.4, 1.°65N×126.°46E, h0km, mb4.4/27, mbtmp4.5/31, ML4.6/4, MS3.7/3, Error ellipse: s-maj=20.8km s-min=8.1km az=73.0*
DJA ***15*** *05:34:47.6±0.2, 2.°N±2.°×12.°6E±.°, h10km, M4.7/17, mB5.2/10, mb5.0/12, MLv4.8/17, Mw(mB)4.5/10*
NEIC ***15*** *05:34:48.5±1.3, 1.°65N±0.°07×126.°34E±0.°06, h35km±2km, mb5.0/46, Error ellipse: s-maj=12.8km s-min=8.9km az=221.0*
BJI ***15*** *05:34:48.1, 1.°57N×126.°57E, h40km, mB5.0/7, mb4.7/35, Ms4.4/4, Ms7.4 2/6*
GCMT ***15*** *05:34:49.5±0.4, 1.°72N±0.°03×126.°08E±0.°03, h32km±1km, MW5.1/57, Moment Tensor Solution. s34,c38; s57,c65; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 4.53±.31; Mθθ 0.00±.18; Mϕϕ -4.54±.21; Mrθ -1.80±.30; Mrϕ -0.29±.14; Mθϕ -0.16±.25; Best double couple: M 4.86 300×10^16 NP1: ϕs 346.00000°, δ 46.00000°, λ 63.00000°. NP2: ϕs 202.00000°, δ 50.00000°, λ 115.00000°. Principal axes: T 5.1590, Plg 71.0000°, Azm 179.0000°; N -0.5980, Plg 19.0000°, Azm 5.0000°; P -4.5680, Plg 2.0000°, Azm 274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 05:34:48.2±0.3, 1.°66N±0.°04×126.°42E±0.°06, h35km, n127, σ1s63/130, mb4.8/57, MS3.8/6, 1C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**133**	Pn		**Pn**	**05 35 10.6**	**+0.9**
TNTI	**Ternate**	**1.29**	**133**	P		**Pn**	**05 35 11.2**	**+1.4**
SGSI	**Sangihe**	**2.20**	**336**	P		**Pn**	**05 35 23.2**	**+0.9**
SGSI				S		**Sn**	**05 35 49.5**	**+1.1**
KMSI	**Cibinong**	**2.66**	**246**	P		**Pn**	**05 35 30.3**	**+1.7**
SANI	**Sanana**	**3.71**	**187**	P		**Pn**	**05 35 44.7**	**+1.7**
LUWI	**Luwuk**	**4.53**	**234**	Pn		**Pn**	**05 35 51.5**	**-2.7**
LUWI	**Luwuk**	**4.53**	**234**	P		**Pn**	**05 35 56.9**	**+2.6**
MRSI	**Marisa**	**4.63**	**255**	P		**Pn**	**05 35 57.4**	**+1.7**
NLAI	**Namlea**	**4.91**	**172**	P		**Pn**	**05 36 02.9**	**+3.4**
APSI	**Ampana**	**5.41**	**242**	P		**Pn**	**05 36 07.3**	**+0.9**
DAV	**Davao City (W)**	**5.44**	**351**	Pn		**Pn**	**05 36 05.3**	**-1.6**
	73nm,0.3s,baz=111,slow=0.8,SNR=1.6							
DAV				Sn		**Sn**	**05 37 07.0**	**-1.3**
	52nm,0.3s,baz=68,slow=11,SNR=3.7							
	203nm,0.3s							
DAV	**Davao City (W)**	**5.44**	**351**			**Pn**	**05 36 04.7**	**-2.2**
TOLI2	**Tolitoli**	**5.66**	**265**			**Pn**	**05 36 08.0**	**-1.9**
MPSI	**Mapaga**	**6.65**	**259**	P		**Pn**	**05 36 25.6**	**+2.1**
	0.4nm1μm132nm,1.0s							
FAKI	**Fak Fak**	**7.39**	**128**			**Pn**	**05 36 33.9**	**+0.3**
FAKI	**Fak Fak**	**7.39**	**128**	P		Pn	05 36 38.3	+4.6
	0.3nm1μm62nm,1.0s							
TTSI	**Tana Toraja**	**8.08**	**235**	P		**Pn**	**05 36 44.7**	**+1.6**
	1μm91nm,0.6s							
MYLDM	**Lahad Datu**	**8.64**	**294**			**Pn**	**05 36 52.5**	**+1.6**
SPSI	**Sidrap Palu**	**8.68**	**230**	P		**Pn**	**05 36 53.4**	**+2.1**
	3μm70nm,0.9s							
BNSI	**Bone**	**8.72**	**226**	P		**Pn**	**05 36 53.7**	**+1.9**
	890nm55nm,0.6s							
BKSI	**Bulukumba**	**9.36**	**222**	P		**Pn**	**05 37 03.5**	**+2.8**
	608nm32nm,0.5s							
KAPI	**Kappang**	**9.39**	**225**	Pn		**Pn**	**05 37 00.7**	**-0.4**
	7.8nm,0.3s,baz=81,slow=4.6,SNR=7.5							
KAPI				Sn		**Sn**	**05 38 42.1**	**-3.5**
	2.0nm,0.3s,baz=191,slow=18,SNR=1.6							
	9.0nm,0.5s							
KAPI	**Kappang**	**9.39**	**225**			**Pn**	**05 37 00.3**	**-0.9**
BSSI	**Bau Bau, Buton**	**9.75**	**217**	P		**Pn**	**05 37 09.1**	**+3.1**
EDFI	**Ende, Flores**	**11.36**	**204**	P		**Pn**	**05 37 31.5**	**+3.3**
SOEI	**Soe**	**11.54**	**191**	Pn		**Pn**	**05 37 30.0**	**-0.7**
SBUM	**Sibu**	**14.21**	**273**			**Pn**	**05 38 07.2**	**+0.2**
JAY	**Jayapura**	**14.87**	**106**	Pn		**Pn**	**05 38 14.9**	**-1.1**
	0.7nm,0.3s,baz=335,slow=18,SNR=2.0							
JAY				LR		LR	05 43 49.7	
	comp=Z,412nm,18.5s,baz=350,slow=37							
	7.7nm,0.7s							
MTN	**Manton Dam**	**15.15**	**162**			**Pn**	**05 38 18.6**	**-1.0**
JAGI	**Jajag, Banyuwa**	**15.84**	**230**	Pn		**Pn**	**05 38 27.5**	**-1.2**
KNRA	**Kununurra**	**17.38**	**172**	P		**Pn**	**05 38 47.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**05 39 13.5**	**-0.5**
	1.0nm,0.3s,baz=12,slow=7.9,SNR=13							
	5.6nm,0.6s							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**05 39 13.9**	**-0.1**
GUMO	**Guam**	**21.77**	**56**	LR		LR	05 47 45.4	
	comp=Z,123nm,18.9s,baz=234,slow=36							
TPUB	**Ta-pu**	**22.24**	**346**	P		**P**	**05 39 41.6**	**-0.4**
TPUB				IAmb		IAmb	05 39 47.9	
	comp=Z,53nm,1.0s							
WB0	**Warramunga Arr**	**22.68**	**160**	P		**P**	**05 39 46.0**	**-0.9**
WB0				IAmb		IAmb	05 39 52.9	
	comp=Z,32nm,0.8s							
WRAB	**Tennant Creek**	**22.82**	**160**	P		**P**	**05 39 47.1**	**-1.2**
WRAB				IAmb		IAmb	05 39 54.8	
	comp=Z,31nm,0.7s							
WRA	**Warramunga Arr**	**22.83**	**160**	P		**P**	**05 39 47.2**	**-1.1**
	comp=Z,21nm,0.7s,baz=340,slow=11,SNR=31							
WRA				S		**S**	**05 43 53.2**	**-2.3**
	comp=Z,5.8nm,1.0s,baz=339,slow=18,SNR=8.9							
	comp=Z,21nm,0.7s							
PMG	**Port Moresby**	**23.40**	**118**	P		**P**	**05 39 54.2**	**0.0**
	comp=Z,4.5nm,0.4s,baz=326,slow=11,SNR=4.3							
	comp=Z,4.5nm,0.4s							
PMG	**Port Moresby**	**23.40**	**118**	P		**P**	**05 39 54.8**	**+0.6**
PMG				IAmb		IAmb	05 39 56.5	
	comp=Z,49nm,1.6s							
QIZ	**Qiongzhong**	**23.70**	**318**	P		**P**	**05 39 59.9**	**+2.9**
QIZ				LR		LR		
	comp=Z,400nm,13.7s							
QIZ				LR		LR		
	comp=Z,540nm,14.5s							
QIZ				LR		LR		
	comp=Z,540nm,20.2s							
PSA00	**Pilbara Seismi**	**23.96**	**195**	P		**P**	**05 39 58.0**	**-1.4**
KULM	**Kulim**	**25.97**	**279**	P		**P**	**05 40 16.6**	**-1.2**
KULM				IAmb		IAmb	05 40 24.1	
	comp=Z,52nm,1.7s							
AS31	**Alice Springs**	**26.20**	**164**	P		**P**	**05 40 19.5**	**-0.4**
ASAR	**Alice Springs**	**26.20**	**164**	P		**P**	**05 40 19.9**	**+0.1**
	comp=Z,7.2nm,0.5s,baz=345,slow=7.4,SNR=24							
ASAR				PcP		**PcP**	**05 43 46.8**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=347,slow=2.2,SNR=7.2							
ASAR				S		**S**	**05 44 55.1**	**+5.3**
	comp=Z,1.4nm,0.9s,baz=347,slow=20,SNR=5.5							
	comp=Z,7.2nm,0.5s							
RPSI	**Rantau Prapat**	**27.49**	**273**	P		**P**	**05 40 28.8**	**-2.8**
GSI	**Gunungsitoli**	**28.84**	**270**	P		**P**	**05 40 41.4**	**-2.1**
GSI				IAmb		IAmb	05 40 50.6	
	comp=Z,28nm,1.1s							
CTA	**Charters Tower**	**29.08**	**139**	LR		LR	05 54 31.9	
	comp=Z,5.4nm,19.2s,baz=283,slow=41							
GYA	**Guiyang**	**31.12**	**324**	⇓P		**P**	**05 41 08.1**	**+4.3**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**31.70**	**304**	P		**P**	**05 41 08.0**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=127,slow=6.8,SNR=5.1							
	comp=Z,0.8nm,0.3s							
MORW	**Morawa**	**32.13**	**197**	P		**P**	**05 41 12.0**	**-0.4**
MORW				IAmb		IAmb	05 41 13.4	
	comp=Z,26nm,1.1s							
FORT	**Forrest**	**32.29**	**177**	P		**P**	**05 41 13.5**	**-0.3**
FORT				IAmb		IAmb	05 41 22.1	
	comp=Z,8.0nm,0.7s							
JHJ	**Hachijo jima 2**	**33.72**	**20**	LR		LR	05 54 37.0	
	comp=Z,94nm,19.3s,baz=96,slow=35							
PZH	**PanZhiHua**	**34.24**	**318**	P		**P**	**05 41 35.1**	**+4.0**
BBOO	**Buckleboo**	**35.47**	**166**	P		**P**	**05 41 41.3**	**-0.2**
KSRS	**Korea Array**	**35.65**	**2**	P		**P**	**05 41 41.4**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=195,slow=11,SNR=4.6							
	comp=Z,0.7nm,0.4s							
EIDS	**Eidsvold**	**35.95**	**140**	P		**P**	**05 41 45.8**	**+0.1**
EIDS				IAmb		IAmb	05 41 50.5	
	comp=Z,35nm,1.8s							

XAN	**Xi'an**	**36.13**	**335**	⇑P		**P**		**05 41 49.5**	**+2.3**
XAN	comp=Z,15nm,1.2s			pmax		pmax			
STKA	**Stephens Creek**	**36.33**	**158**	P		**P**		**05 41 47.1**	**-1.7**
	comp=Z,4.3nm,0.7s,baz=321,slow=9.8,SNR=7.9								
	comp=Z,4.3nm,0.7s								
MJAR	**Matsushiro Arr**	**36.39**	**16**	P		**P**		**05 41 47.7**	**-1.6**
	comp=Z,4.5nm,0.8s,baz=187,slow=9.3,SNR=8.5								
	comp=Z,4.5nm,0.8s								
BJI	**Beijing**	**39.33**	**348**	P		**P**		**05 42 17.4**	**+3.4**
BJI				sP		**sP**		**05 42 31.1**	**+3.3**
BJI				pmax		pmax			
	comp=Z,7.0nm,1.3s								
ARMA	**Armidale**	**39.94**	**145**	P		**P**		**05 42 18.4**	**-1.0**
ARMA				IAmb		IAmb		05 42 30.6	
	comp=Z,20nm,1.3s								
LZDM	**Lanzhou Array**	**40.11**	**331**	P		**P**		**05 42 20.3**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=113,slow=11,SNR=1.4								
	comp=Z,1.0nm,0.3s								
LZH	**Lanzhou**	**40.14**	**331**	*e*P		**P**		**05 42 23.3**	**+2.2**
LZH				sP		sP		05 42 36.4	+1.5
LZH				pmax		pmax			
	comp=Z,32nm,1.5s								
SHL	**Shillong**	**40.88**	**309**	P		**P**		**05 42 26.3**	**-1.1**
SHL				IAmb		IAmb		05 42 31.4	
	comp=Z,12nm,0.5s								
HHC	**Hu-ho-hao-te**	**41.27**	**343**	*e*P		**P**		**05 42 33.3**	**+3.1**
HHC				pmax		pmax			
	comp=Z,18nm,0.6s								
HHC				pmax		pmax			
	comp=Z,64nm,3.7s								
HHC				LR		LR			
	comp=Z,240nm,13.3s								
HHC				LR		LR			
	comp=Z,210nm,13.3s								
HHC				LR		LR			
	comp=Z,240nm,13.3s								
CN2	**Changchun**	**41.97**	**359**	*e*P		P		05 42 40.3	+4.5
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
USRK	**Ussuriysk Ar.**	**42.65**	**6**	P		**P**		**05 42 40.0**	**-1.3**
	comp=Z,5.1nm,0.8s,baz=167,slow=9.6,SNR=4.4								
	comp=Z,5.1nm,0.8s								
MDJ	**Mudanjiang**	**42.87**	**3**	P		**P**		**05 42 42.3**	**-0.8**
MDJ				pmax		pmax			
	comp=Z,14nm,2.1s								
H11S3	**WAKE ISLAND Hy**	**42.87**	**64**	T		T		06 29 22.2	
	baz=253								
H11S2	**WAKE ISLAND Hy**	**42.89**	**64**	T		T		06 29 22.1	
	baz=253								
H11S1	**WAKE ISLAND Hy**	**42.89**	**64**	T		T		06 29 07.3	
	baz=253								
GTA	**Gaotai**	**44.72**	**330**	*e*P		**P**		**05 43 01.3**	**+3.1**
GTA				pP		sP		05 43 12.8	+0.6
GTA				PcP		**PP**		**05 44 41.9**	**-1.2**
GTA				pmax		pmax			
	comp=Z,8.0nm,1.5s								
GOMU	**GeErMu**	**45.13**	**323**	P		**P**		**05 43 04.0**	**+2.2**
EVN	**Everest**	**46.00**	**308**	P		**P**		**05 43 07.9**	**-1.3**
EVN				IAmb		IAmb		05 43 15.4	
	comp=Z,19nm,1.1s								
HILR	**Hailar Array B**	**48.06**	**354**	P		**P**		**05 43 23.3**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=156,slow=11,SNR=6.5								
	comp=Z,0.8nm,0.4s								
HEH	**HeiHe**	**48.43**	**1**	*e*P		**P**		**05 43 27.0**	**+0.1**
HEH				pmax		pmax			
	comp=Z,11nm,0.8s								
ULN	**Ulaanbaatar**	**48.99**	**343**	P		**P**		**05 43 31.1**	**-0.4**
SONM	**Songino Array**	**49.16**	**342**	P		**P**		**05 43 31.9**	**-0.9**
	comp=Z,3.2nm,0.9s,baz=159,slow=9.6,SNR=9.8								
SONM				PcP		**PcP**		**05 44 56.5**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=161,slow=4.2,SNR=4.1								
	comp=Z,3.2nm,0.9s								
HYBB	**Hyderabad (bro**	**49.55**	**292**	*e*P		**P**		**05 43 35.5**	**-0.7**
HYBB				*es*P		**sP**		**05 43 50.4**	**+0.3**
HYBB				*e*S		**S**		**05 50 41.5**	**-0.6**
WMQ	**Urumqi**	**54.25**	**326**	*e*P		**P**		**05 44 15.1**	**+4.3**
WMQ				LR		LR			
	comp=Z,190nm,21.7s								
PETK	**Petropavlovsk-**	**57.46**	**22**	P		**P**		**05 44 32.7**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=200,slow=6.3,SNR=6.6								
	comp=Z,2.5nm,0.6s								
MKAR	**Makanchi Array**	**59.08**	**326**	P		**P**		**05 44 44.3**	**-0.8**
	comp=Z,7.7nm,0.7s,baz=120,slow=8.6,SNR=18								
	comp=Z,7.7nm,0.7s								
RTZ	**Ruatahuna**	**61.34**	**136**	P		**P**		**05 45 00.9**	**+0.2**
AAK	**Ala-Archa**	**61.69**	**319**	P		**P**		**05 45 02.9**	**-0.2**
AAK				IAmb		IAmb		05 45 07.8	
	comp=Z,22nm,1.9s								
DRK	**Karamyk**	**62.22**	**315**	P		**P**		**05 45 05.8**	**-1.0**
DRK				IAmb		IAmb		05 45 14.4	
	comp=Z,12nm,1.0s								
ZALV	**Zalesovo Beam**	**62.29**	**334**	P		**P**		**05 45 05.7**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=134,slow=7.1,SNR=7.6								
	comp=Z,1.3nm,0.4s								
GAR	**Garm**	**63.10**	**314**	P		**P**		**05 45 11.8**	**-0.8**
KURBB	**Kurchatov Arra**	**63.31**	**328**	P		**P**		**05 45 12.6**	**-1.0**
	comp=Z,3.4nm,0.5s,baz=128,slow=6.2,SNR=23								
	comp=Z,3.4nm,0.5s								
KURK	**Kurchatov**	**63.32**	**328**			**P**		**05 45 12.4**	**-1.2**
KURK	**Kurchatov**	**63.32**	**328**	P		**P**		**05 45 13.1**	**-0.5**
CHGR	**Chuyangaron**	**63.83**	**313**			**P**		**05 45 16.8**	**-0.5**
CHGR				IAmb		IAmb		05 45 23.1	
	comp=Z,20nm,1.0s								
BVAR	**Borovoye Array**	**68.88**	**328**	P		**P**		**05 45 48.6**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=124,slow=7.4,SNR=8.4								
	comp=Z,2.4nm,0.6s								
TIXI	**Tiksi**	**69.91**	**1**			**P**		**05 45 54.8**	**-0.4**
TIXI				IAmb		IAmb		05 45 56.4	
	comp=Z,9.0nm,0.9s								
ARTI	**Arti**	**76.60**	**328**	P		**P**		**05 46 35.9**	**+0.8**
ARTI				IAmb		IAmb		05 46 42.9	
	comp=Z,48nm,1.8s								
L14K	**Kuka Creek**	**79.47**	**28**	P		**P**		**05 46 51.2**	**+0.4**
RAYN	**Ar Rayn**	**81.01**	**293**			**P**		**05 46 59.4**	**-0.6**
L16K	**Owhat River**	**81.05**	**28**	P		**P**		**05 46 59.9**	**+0.6**
VNDA	**Vanda**	**81.42**	**173**	P		**P**		**05 47 00.5**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=312,slow=6.6,SNR=19								
	comp=Z,2.3nm,0.5s								
VNDA	**Vanda**	**81.42**	**173**	P		**P**		**05 47 00.9**	**-0.2**
VNDA	**Vanda**	**81.42**	**173**	P		**P**		**05 47 01.3**	**+0.3**
MAW	**Mawson**	**81.72**	**200**	P		**P**		**05 47 02.0**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=79,slow=5.9,SNR=7.3								
	comp=Z,1.9nm,0.5s								
SBA	**Scott Base**	**82.34**	**172**			**P**		**05 47 06.9**	**+1.0**
SBA				IAmb		IAmb		05 47 36.8	
	comp=Z,16nm,1.6s								
SBA	**Scott Base**	**82.34**	**172**	P		**P**		**05 47 07.5**	**+1.7**
J18K	**Innoko River**	**82.67**	**26**	P		**P**		**05 47 08.4**	**+0.6**
J18K				IAmb		IAmb		05 47 11.1	
	comp=Z,32nm,1.3s								
D19K	**Kuna River**	**83.16**	**21**	P		**P**		**05 47 11.4**	**+1.0**
J19K	**Poorman**	**83.24**	**26**	P		**P**		**05 47 12.2**	**+1.4**
J19K				IAmb		IAmb		05 47 14.4	
	comp=Z,24nm,1.1s								
N19K	**Bonanza Creek**	**83.24**	**29**			**P**		**05 47 11.2**	**+0.1**
L19K	**White Mountain**	**83.28**	**28**	P		**P**		**05 47 12.1**	**+0.9**
L19K				IAmb		IAmb		05 47 14.1	
	comp=Z,20nm,1.1s								
KBZ	**Khabaz**	**84.17**	**314**	P		**P**		**05 47 15.7**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=12,slow=4.8,SNR=5.7								
	comp=Z,3.3nm,0.9s								
STLK	**Strandline Lak**	**84.61**	**28**	P		**P**		**05 47 17.8**	**-0.1**
STLK				IAmb		IAmb		05 48 13.7	
	comp=Z,30nm,1.8s								
SKT	**Skwentna**	**84.80**	**28**	P		**P**		**05 47 18.7**	**-0.2**
SKT				IAmb		IAmb		05 47 20.0	
	comp=Z,19nm,1.3s								
BRLK	**Bradley Lake**	**84.89**	**30**	P		**P**		**05 47 19.5**	**+0.1**
SLKM	**Skilak Lake**	**85.29**	**30**	P		**P**		**05 47 22.2**	**+0.8**
ILAR	**Eielson Array**	**87.10**	**25**	P		**P**		**05 47 29.6**	**-0.5**
	comp=Z,9.2nm,1.4s,baz=229,slow=7.6,SNR=5.6								
	comp=Z,9.2nm,1.4s								
KMBO	**Kilima Mbogo**	**89.20**	**269**	P		**P**		**05 47 41.3**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=77,slow=3.7,SNR=8.2								
	comp=Z,1.0nm,0.3s								
MMAI	**Mount Meron Ar**	**89.96**	**303**	P		**P**		**05 47 44.3**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=100,slow=6.0,SNR=1.7								
	comp=Z,0.7nm,0.3s								
SYO	**Syowa Base**	**90.39**	**201‖**	*e*PcP		**PcP**		**05 47 48.0**	**+1.3**
BRTR	**Keskin Array B**	**91.09**	**310**	P		**P**		**05 47 49.2**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=140,slow=3.3,SNR=6.9								
	comp=Z,1.2nm,0.9s								
QSPA	**South Pole Qui**	**91.58**	**180**	P		**P**		**05 47 51.1**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=258,slow=2.8,SNR=4.0								
	comp=Z,0.8nm,0.5s								
ARCES	**ARCESS Array B**	**92.27**	**340**	P		**P**		**05 47 53.7**	**-0.6**
	comp=Z,3.8nm,0.9s,baz=82,slow=8.7,SNR=5.2								
	comp=Z,3.8nm,0.9s								
FINES	**FINESS Array B**	**93.50**	**332**	P		**P**		**05 47 58.2**	**-1.9**
	comp=Z,1.4nm,0.8s,baz=51,slow=6.5,SNR=4.1								
	comp=Z,1.4nm,0.8s								
HFS	**Hagfors**	**99.69**	**332**	P		**Pdif**		**05 48 26.5**	**-1.7**
	comp=Z,3.9nm,1.1s,baz=113,slow=3.9,SNR=4.3								
	comp=Z,3.9nm,1.1s								
TXAR	**Lajitas Array**	**123.10**	**53**	PKP		**PKiKP**		**05 53 42.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=236,slow=1.4,SNR=4.6								
PLCA	**Paso Flores**	**138.18**	**161**	PKP		**PKPdf**		**05 54 09.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=284,slow=4.2,SNR=3.3								
CPUP	**Villa Florida**	**155.20**	**172**	PKP		**PKPdf**		**05 54 39.6**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=243,slow=2.3,SNR=3.7								
LPAZ	**La Paz**	**159.59**	**136**	PKP		**PKPdf**		**05 54 45.4**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=245,slow=4.4,SNR=3.8								

*IDC **15** 05:47:13.3±0.4, 1.66N×126.27E, h0km, mb4.5/29, mbtmp4.5/31, ML4.3/2, MS3.5/10, Error ellipse: s-maj=22.2km s-min=10.4km az=74.0*
*NEIC **15** 05:47:19.0±1.7, 1.69N±0.06×126.43E±0.06, h35km±1km, mb4.9/44, Error ellipse: s-maj=12.5km s-min=8.8km az=44.0*
*DJA **15** 05:47:18.1±0.9, 2.N±2.×12.6E±.°, h15km±7km, M4.6/19, mB5.1/8, mb4.8/19, MLv4.7/19, Mw(mB)4.4/8*
*BJI **15** 05:47:20.1, 1.86N×126.13E, h39km, mB5.2/6, mb4.6/31*
ISC 15 05:47:19.2±0.9, 1.68N±0.04×126.39E±0.05, h40km±9km, n144, σ1§28/145, mb4.7/55, MS3.5/7, 2C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
TNTI	**Ternate**	**1.33**	**133**			**Pn**	**05**	**47**	**40.9 -0.4**
TNTI	**Ternate**	**1.33**	**133**	P		**Pn**	**05**	**47**	**40.5 -0.8**
TNTI	**Ternate**	**1.33**	**133**	P		**Pn**	**05**	**47**	**41.3 0.0**
SGSI	**Sangihe**	**2.17**	**337**	P		**Pn**	**05**	**47**	**52.9 +0.1**
SGSI				S		**Sn**	**05**	**48**	**18.9 +0.4**
KMSI	**Cibinong**	**2.65**	**246**	P		**Pn**	**05**	**48**	**00.1 +0.7**
KMSI				S		**Sn**	**05**	**48**	**31.5 +1.3**
SANI	**Sanana**	**3.73**	**186**	P		**Pn**	**05**	**48**	**14.4 +0.2**
SANI	**Sanana**	**3.73**	**186**	P		**Pn**	**05**	**48**	**14.1 -0.1**
LUWI	**Luwuk**	**4.51**	**233**			**Pn**	**05**	**48**	**26.6 +1.5**
LUWI	**Luwuk**	**4.51**	**233**	P		**Pn**	**05**	**48**	**27.3 +2.2**
MRSI	**Marisa**	**4.60**	**255**	P		**Pn**	**05**	**48**	**27.9 +1.6**
NLAI	**Namlea**	**4.94**	**172**	P		**Pn**	**05**	**48**	**33.3 +2.4**
	0.3nm2µm70nm,0.9s								
APSI	**Ampana**	**5.39**	**242**	P		**Pn**	**05**	**48**	**39.0 +1.9**
DAV	**Davao City (W)**	**5.42**	**351**	Pn		**Pn**	**05**	**48**	**37.9 +0.4**
	156nm,0.3s,baz=72,slow=7.0,SNR=1.9								
DAV						**Sn**	**05**	**49**	**37.4 -1.1**
	baz=74,slow=18								
DAV	**Davao City (W)**	**5.42**	**351**			**Pn**	**05**	**48**	**38.2 +0.7**
MSAI	**Masohi**	**5.60**	**153**	P		**Pn**	**05**	**48**	**42.4 +2.4**
	0.4nm3µm83nm,0.7s								
TOLI2	**Tolitoli**	**5.63**	**264**			**Pn**	**05**	**48**	**39.3 -1.1**
TOLI2	**Tolitoli**	**5.63**	**264**	P		**Pn**	**05**	**48**	**39.6 -0.9**
MPSI	**Mapaga**	**6.62**	**258**	P		**Pn**	**05**	**48**	**55.8 +1.7**
	0.4nm2µm113nm,0.9s								
KDI	**Kendari**	**6.75**	**214**	P		**Pn**	**05**	**48**	**57.8 +2.0**
PCI	**Palu**	**7.04**	**249**	P		**Pn**	**05**	**49**	**01.9 +2.2**
	97nm,0.7s								
BNDI	**Bandanaira**	**7.09**	**150**	P		**Pn**	**05**	**49**	**02.6 +2.1**
	0.7nm87nm,0.9s								
FAKI	**Fak Fak**	**7.43**	**128**			**Pn**	**05**	**49**	**03.3 -1.8**
FAKI	**Fak Fak**	**7.43**	**128**	P		**Pn**	**05**	**49**	**06.2 +1.0**
	0.1nm41nm,1.0s								
TTSI	**Tana Toraja**	**8.07**	**234**	P		**Pn**	**05**	**49**	**14.7 +0.8**
	1µm66nm,0.9s								
BBSI	**Bau Bau**	**8.08**	**208**	P		**Pn**	**05**	**49**	**16.8 +2.8**
MYLDM	**Lahad Datu**	**8.61**	**294**			**Pn**	**05**	**49**	**22.2 +1.0**
SPSI	**Sidrap Palu**	**8.67**	**230**	P		**Pn**	**05**	**49**	**24.2 +2.0**
	53nm,0.9s								
BNSI	**Bone**	**8.71**	**226**	P		**Pn**	**05**	**49**	**22.7 0.0**
	41nm,0.5s								
BKSI	**Bulukumba**	**9.36**	**222**	P		**Pn**	**05**	**49**	**31.7 +0.1**
	374nm30nm,1.0s								
KAPI	**Kappang**	**9.39**	**225**	Pn		**Pn**	**05**	**49**	**33.4 +1.3**
	4.2nm,0.3s,baz=18,slow=6.4,SNR=6.1								
KAPI						**Sn**	**05**	**51**	**13.8 -2.6**
	4.0nm,0.3s,baz=125,slow=17,SNR=5.9								
KAPI					LR	LR	05	53	05.1
	comp=Z,229nm,20.7s,baz=55,slow=38								
KAPI	**Kappang**	**9.39**	**225**	Pn		**Pn**	**05**	**49**	**33.2 +1.1**
BSSI	**Bau Bau, Buton**	**9.75**	**217**	P		**Pn**	**05**	**49**	**38.2 +1.2**
BAKI	**Biak**	**10.13**	**106**	P		**Pn**	**05**	**49**	**45.1 +2.9**
	72nm,1.2s								
EDFI	**Ende, Flores**	**11.37**	**204**	P		**Pn**	**05**	**50**	**01.7 +2.5**
SOEI	**Soe**	**11.55**	**190**	Pn		**Pn**	**05**	**50**	**04.8 +3.0**
SOEI	**Soe**	**11.55**	**190**	P		**Pn**	**05**	**50**	**03.6 +1.8**
TGY	**Tagaytay City**	**13.47**	**337**	LR		LR	05	57	04.1
	comp=Z,434nm,19.4s,baz=190,slow=44								
SBUM	**Sibu**	**14.18**	**273**	Pn		**Pn**	**05**	**50**	**37.7 +0.2**
JAY	**Jayapura**	**14.91**	**106**	Pn		**Pn**	**05**	**50**	**46.8 -0.6**
	0.5nm,0.3s,baz=29,slow=18,SNR=3.6								
JAY					LR	LR	05	56	20.6
	comp=Z,154nm,18.5s,baz=198,slow=36								
	4.9nm,0.6s								
MTN	**Manton Dam**	**15.18**	**162**			**Pn**	**05**	**50**	**49.8 -1.1**
JAGI	**Jajag, Banyuwa**	**15.83**	**230**	Pn		**Pn**	**05**	**50**	**58.7 -0.6**
KNRA	**Kununurra**	**17.41**	**172**	P		**Pn**	**05**	**51**	**18.9 -0.2**
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P		**P**	**05**	**51**	**44.2 -0.7**
	1.1nm,0.3s,baz=12,slow=6.4,SNR=43								
	11nm,0.7s								
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P		**P**	**05**	**51**	**43.9 -1.0**
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P		**P**	**05**	**51**	**44.0 -0.9**
GUMO	**Guam**	**21.78**	**56**	LR		LR	05	58	42.9
	comp=Z,61nm,21.3s,baz=232,slow=32								
TPUB	**Ta-pu**	**22.21**	**346**	P		**P**	**05**	**52**	**06.7 -5.6**
SSLB	**Suanglung**	**22.60**	**347**	P		**P**	**05**	**52**	**15.4 -1.1**
SSLB					IAmb	IAmb	05	52	37.8
	comp=Z,189nm,2.0s								
COEN	**Coen**	**22.76**	**134**	P		**P**	**05**	**52**	**18.2 -0.1**
WRAB	**Tennant Creek**	**22.86**	**160**	P		**P**	**05**	**52**	**18.1 -1.1**
WRAB					IAmb	IAmb	05	52	21.9
	comp=Z,22nm,0.8s								
WRAB	**Tennant Creek**	**22.86**	**160**	P		**P**	**05**	**52**	**18.1 -1.1**
WRA	**Warramunga Arr**	**22.86**	**160**	P		**P**	**05**	**52**	**18.4 -0.9**
	comp=Z,26nm,0.8s,baz=339,slow=10,SNR=67								
	comp=Z,26nm,0.8s								
YHNB	**Yeheng**	**23.36**	**348**	P		**P**	**05**	**52**	**24.0 -0.3**
YHNB					IAmb	IAmb	05	52	27.1
	comp=Z,44nm,1.2s								
PMG	**Port Moresby**	**23.44**	**118**	P		**P**	**05**	**52**	**26.2 +1.1**
	comp=Z,4.5nm,0.4s,baz=293,slow=15,SNR=1.6								
PMG					LR	LR	06	04	23.9
	comp=Z,155nm,18.1s,baz=332,slow=44								
	comp=Z,4.5nm,0.4s								
PMG	**Port Moresby**	**23.44**	**118**	P		**P**	**05**	**52**	**24.6 -0.5**
MBWA	**Marble Bar**	**23.61**	**196**	P		**P**	**05**	**52**	**25.8 -0.9**
MBWA					IAmb	IAmb	05	52	28.5
	comp=Z,17nm,0.7s								
MBWA	**Marble Bar**	**23.61**	**196**	P		**P**	**05**	**52**	**26.9 +0.2**
QIZ	**Qiongzhong**	**23.66**	**318**	P		**P**	**05**	**52**	**26.3 -0.9**
PSA00	**Pilbara Seismi**	**23.98**	**195**	P		**P**	**05**	**52**	**29.1 -1.0**
PSA00					IAmb	IAmb	05	52	42.4
	comp=Z,22nm,1.1s								
JOW	**Kunigami**	**25.07**	**4**	P		**P**	**05**	**52**	**40.0 -0.1**
QIS	**Mount Isa**	**25.62**	**150**	P		**P**	**05**	**52**	**44.4 -0.7**
ASAR	**Alice Springs**	**26.23**	**164**	P		**P**	**05**	**52**	**50.4 -0.2**
	comp=Z,9.3nm,0.6s,baz=342,slow=6.3,SNR=57								
ASAR					PcP	**PcP**	**05**	**56**	**17.4 +0.7**
	comp=Z,2.0nm,0.6s,baz=352,slow=2.2,SNR=7.9								
ASAR					LR	LR	06	03	57.9
	comp=Z,110nm,19.6s,baz=329,slow=38								
	comp=Z,9.3nm,0.6s								
GIRL	**Giralia**	**26.93**	**205**	P		**P**	**05**	**52**	**56.5 -0.3**
GIRL					IAmb	IAmb	05	52	59.2
	comp=Z,28nm,0.8s								
RPSI	**Rantau Prapat**	**27.46**	**273**	P		**P**	**05**	**53**	**00.5 -1.3**
PSI	**Prapat**	**27.46**	**273**	LR		LR	06	05	15.5
	comp=Z,160nm,20.3s,baz=84,slow=40								
MEEK	**Meekatharra**	**29.14**	**194**	P		**P**	**05**	**53**	**16.4 -0.2**
NJ2	**Nanjing**	**31.04**	**348**	*e*P		**P**	**05**	**53**	**34.4 +1.2**
NJ2					pmax	pmax			
	comp=Z,11nm,0.5s								
CMAR	**Chiang Mai Arr**	**31.66**	**304**	P		**P**	**05**	**53**	**38.8 -0.2**
	comp=Z,0.9nm,0.3s,baz=117,slow=7.1,SNR=5.6								
CMAR					LR	LR	06	05	52.4
	comp=Z,119nm,21.4s,baz=115,slow=35								
	comp=Z,0.9nm,0.3s								
FORT	**Forrest**	**32.32**	**177**	P		**P**	**05**	**53**	**45.6 +1.0**
FORT					IAmb	IAmb	05	54	07.4
	comp=Z,12nm,1.1s								
PZH	**PanZhiHua**	**34.20**	**318**	P		**P**	**05**	**54**	**04.1 +2.8**
HNR	**Honiara**	**35.20**	**109**	LR		LR	06	07	52.4
	comp=Z,62nm,20.7s,baz=272,slow=35								
NWAO	**Narrogin (SRO)**	**35.49**	**193**	P		**P**	**05**	**54**	**11.7 -0.4**
NWAO					IAmb	IAmb	05	54	13.2
	comp=Z,22nm,1.1s								
BBOO	**Buckleboo**	**35.50**	**166**	P		**P**	**05**	**54**	**11.6 -0.6**
BBOO					IAmb	IAmb	05	54	55.7
	comp=Z,59nm,1.9s								
KSRS	**Korea Array**	**35.63**	**2**	P		**P**	**05**	**54**	**13.1 -0.1**
	comp=Z,2.0nm,0.7s,baz=191,slow=11,SNR=5.8								
	comp=Z,2.0nm,0.7s								
XAN	**Xi'an**	**36.10**	**335**	⇑P		**P**	**05**	**54**	**16.1 -1.3**
XAN				pmax		pmax			
	comp=Z,9.0nm,0.9s								
STKA	**Stephens Creek**	**36.36**	**158**	P		**P**	**05**	**54**	**19.1 -0.5**
	comp=Z,8.1nm,0.7s,baz=332,slow=7.9,SNR=16								
	comp=Z,8.1nm,0.7s								
MJAR	**Matsushiro Arr**	**36.37**	**16**	P		**P**	**05**	**54**	**19.3 -0.3**
	comp=Z,3.2nm,0.5s,baz=186,slow=9.3,SNR=8.7								
MJAR					LR	LR	06	08	43.4
	comp=Z,108nm,21.7s,baz=202,slow=35								
	comp=Z,3.2nm,0.5s								
HNS	**HongShan**	**37.14**	**345**	⇑P		**P**	**05**	**54**	**27.8 +1.7**
HNS				pmax		pmax			
	comp=Z,7.0nm,1.6s								
ARMA	**Armidale**	**39.97**	**145**	P		**P**	**05**	**54**	**50.6 +0.4**
ARMA				IAmb		IAmb	05	54	54.3
	comp=Z,10nm,0.9s								
LZDM	**Lanzhou Array**	**40.07**	**331**	P		**P**	**05**	**54**	**50.5 -0.6**
	comp=Z,0.9nm,0.3s,baz=134,slow=12,SNR=1.4								
LZDM					PcP	**PcP**	**05**	**56**	**57.1 +1.6**
	comp=Z,1.2nm,0.3s,baz=138,slow=5.2,SNR=1.7								
	comp=Z,0.9nm,0.3s								
LZH	**Lanzhou**	**40.10**	**331**	*e*P		**P**	**05**	**54**	**52.3 +1.0**
LZH				sP		pwP	05	55	04.9 +0.8
LZH				PcP		**PcP**	**05**	**56**	**57.1 +1.7**
LZH				pmax		pmax			
	comp=Z,19nm,1.1s								
SHL	**Shillong**	**40.84**	**309**	P		**P**	**05**	**54**	**56.5 -1.0**
SHL				IAmb		IAmb	05	55	02.0
	comp=Z,10nm,0.5s								
HHC	**Hu-ho-hao-te**	**41.23**	**343**	*e*P		**P**	**05**	**55**	**02.3 +1.9**
HHC				pmax		pmax			
	comp=Z,11nm,0.6s								
HHC				pmax		pmax			
	comp=Z,51nm,4.2s								
USRK	**Ussuriysk Ar.**	**42.63**	**6**	P		**P**	**05**	**55**	**12.1 +0.5**
	comp=Z,5.1nm,0.9s,baz=183,slow=9.5,SNR=4.0								
	comp=Z,5.1nm,0.9s								
H11S3	**WAKE ISLAND Hy**	**42.89**	**64**	T		T	06	41	11.4
	baz=253								
H11S2	**WAKE ISLAND Hy**	**42.91**	**64**	T		T	06	41	17.0
	baz=253								
H11S1	**WAKE ISLAND Hy**	**42.91**	**64**	T		T	06	41	25.7
	baz=253								
GTA	**Gaotai**	**44.69**	**330**	*e*P		**P**	**05**	**55**	**28.5 +0.1**
GTA				pP		pP	05	55	39.1 -0.2
GTA				PcP		**P

comp=Z,1.0nm,0.7s,baz=116,slow=5.6,SNR=4.5
comp=Z,1.0nm,0.7s
QSPA South Pole Qui 91.60 180 P **P** **06 00 22.0 +0.2**
comp=Z,1.6nm,0.8s,baz=54,slow=0.3,SNR=8.2
comp=Z,1.6nm,0.8s
ARCES ARCESS Array B 92.24 340 P **P** **06 00 23.7 -0.9**
comp=Z,2.8nm,0.8s,baz=79,slow=6.3,SNR=4.9
comp=Z,2.8nm,0.8s
AKASG Malin Array Be 93.26 321 P **P** **06 00 29.2 -0.4**
comp=Z,0.3nm,0.3s,baz=71,slow=4.4,SNR=2.1
comp=Z,0.3nm,0.3s
FINES FINESS Array B 93.47 332 P **P** **06 00 29.4 -0.9**
comp=Z,2.3nm,0.9s,baz=57,slow=7.0,SNR=5.8
comp=Z,2.3nm,0.9s
TXAR Lajitas Array 123.11 53 PKP **PKPdf** **06 06 11.7 -0.7**
comp=Z,0.3nm,0.7s,baz=346,slow=1.5,SNR=3.6
DBIC Dimbokro 130.63 280 PKP **PKPdf** **06 06 26.6 -0.3**
comp=Z,4.2nm,0.9s,baz=132,slow=3.4,SNR=4.3

*SDD **15** 05:51:05.8±1.7, 19°.73N×70°.58W, h23km±13km, MD3.3, ML2.9, MW3.2*
ISC 15 05:51:02.6±1.5, 19°.86N±0°.06×70°.53W±0°.04, h8km±11km, n16, σ1°16/25, 5C-13D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUDR	**Luperon**	**0.40**	**275**	↓*e*Pg	**Pn**	**05 51 14.8**	**+0.1**
SC01	**Santiago de lo**	**0.47**	**204**	↓*e*Pg	**Pg**	**05 51 11.7**	**0.0**
SC01				↑*e*Sg	**Sg**	**05 51 18.0**	**+0.2**
SC01				IAML		05 51 19.3	
	comp=N,653nm,0.5s						
SFDR	**San Fco. de Ma**	**0.63**	**154**	↓*e*Pg	**Pb**	**05 51 15.7**	**-0.2**
SFDR				↓*e*Sg	**Sg**	**05 51 23.7**	**+0.8**
SFDR				IAML		05 51 26.7	
	comp=N,579nm,0.4s						
DR08	**Loma La Naviza**	**1.01**	**152**	↓*e*Pg	**Pg**	**05 51 21.2**	**-0.9**
DR08				↑*e*Sg	**Sg**	**05 51 33.9**	**-1.2**
DR08				IAML		05 51 36.0	
	comp=N,2μm,0.1s						
REDR	**Restauracion**	**1.06**	**230**	↑*e*Pg	**Pn**	**05 51 25.6**	**+1.8**
REDR				↓*e*Sg	**Sn**	**05 51 40.9**	**+2.0**
REDR				IAML		05 51 42.8	
	comp=N,346nm,0.2s						
SMDR	**Samana, DR**	**1.39**	**114**	↓*e*Pg	**Pg**	**05 51 30.2**	**+1.0**
SMDR				↓*e*Sg	**Sg**	**05 51 48.0**	**+0.8**
SMDR				IAML		05 51 54.2	
	comp=N,108nm,0.8s						
BANI	**BANI**	**1.46**	**174**	↓*e*Pg	**Pn**	**05 51 28.5**	**-1.0**
BANI				↓*e*Sg	**Sn**	**05 51 47.2**	**-1.8**
BANI				IAML		05 51 49.9	
	comp=N,284nm,0.2s						
HATOM	**Hato Mayor del**	**1.52**	**134**	↓*e*Pg	**Pn**	**05 51 30.6**	**+0.4**
HATOM				↓*e*Sg	**Sb**	**05 51 50.9**	**+0.4**
HATOM				IAML		05 51 51.3	
	comp=N,142nm,0.3s						
MIDR	**Miches**	**1.64**	**122**	↓*e*Pg	**Pg**	**05 51 34.1**	**0.0**
MIDR				IAML		05 51 56.5	
	comp=N,47nm,0.5s						
JIDR	**Jimani**	**1.84**	**223**	↑*e*Pg	**Pn**	**05 51 35.6**	**+1.1**
JIDR				↓*e*Sg	**Sn**	**05 51 57.6**	**-0.5**
JIDR				IAML		05 51 59.9	
	comp=N,92nm,0.6s						
MASC	**Masc**	**3.50**	**276**	*e*P	**Pn**	**05 51 57.5**	**+0.2**
MASC				*e*S	**Sn**	**05 52 40.2**	**+1.4**
MASC				IAML		05 52 52.5	
	comp=E,14nm,0.6s						
MASC				IAML		05 52 53.4	
	comp=N,16nm,0.5s						
QMBU	**Quimbuelo**	**4.04**	**276**	*e*P	**Pn**	**05 52 04.4**	**-0.5**
MOAC	**Moa**	**4.24**	**282**	*e*P	**Pn**	**05 52 06.6**	**-0.9**
NMDO	**Nuevo Mundo**	**4.24**	**280**	*e*P	**Pn**	**05 52 06.3**	**-1.2**
PINC	**Pinares de May**	**4.98**	**278**	*e*P	**Pn**	**05 52 15.7**	**-2.0**
MARVS	**Santiago de Cu**	**5.05**	**273**	*e*P	**Pn**	**05 52 17.4**	**-1.4**

*TRN **15** 05:52:13.4, 10°.77N×62°.34W, h64km, MD3.9, North of the Paria peninsula.*
*FUNV **15** 05:52:14.2, 10°.76N×62°.29W, h60km, MW4.4*
ISC 15 05:52:11.9±1.9, 10°.74N±0°.08×62°.36W±0°.08, h82km±27km, n29, σ1°40/54, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.79**	**93**	*e*P	**Pn**	**05 52 29.4**	**+0.7**
DMDM				*e*S	**Sn**	**05 52 40.3**	**-0.9**
PSKH	**Kent House, Po**	**0.82**	**94**	*e*P	**Pn**	**05 52 29.7**	**+0.7**
PSKH				*e*S	**Sn**	**05 52 41.0**	**-0.8**
PSQC	**Port of Spain**	**0.82**	**95**	*e*P	**Pn**	**05 52 29.7**	**+0.7**
PSQC				*e*S	**Sn**	**05 52 40.8**	**-1.0**
PSNL	**Port of Spain**	**0.83**	**96**	*e*P	**Pn**	**05 52 29.9**	**+0.8**
PSNL				*e*S	**Sn**	**05 52 41.1**	**-0.9**
PSGH	**Port of Spain**	**0.84**	**95**	*e*P	**Pn**	**05 52 30.0**	**+0.9**
PSGH				*e*S	**Sn**	**05 52 41.0**	**-1.1**
TRN	**Trinidad (W)**	**0.94**	**95**	*e*P	**Pn**	**05 52 31.1**	**+0.8**
TRN				*e*S	**Sn**	**05 52 43.2**	**-0.9**
GRFF	**Grenada Fort F**	**1.44**	**25**	*e*P	**Pn**	**05 52 36.6**	**+0.1**
GRFF				*e*S	**Sn**	**05 52 54.3**	**-0.7**
GRGR	**Grenville**	**1.54**	**26**	*e*P	**Pn**	**05 52 38.2**	**+0.3**
GRGR				*e*S	**Sn**	**05 52 57.8**	**+0.2**
GRW	**Mount Saint Ca**	**1.57**	**26**	*e*P	**Pn**	**05 52 39.5**	**+1.3**
GRW				*e*S	**Sn**	**05 52 57.6**	**-0.6**
GRHS	**Sauteurs**	**1.63**	**25**	*e*P	**Pn**	**05 52 39.2**	**+0.2**
GRHS				*e*S	**Sn**	**05 52 58.7**	**-0.9**
GRSS	**Sisters**	**1.71**	**25**	*e*P	**Pn**	**05 52 40.7**	**+0.7**
GRSS				*e*S	**Sn**	**05 53 00.0**	**-1.4**
GCMP	**Grenada, Carri**	**1.96**	**28**	*e*P	**Pn**	**05 52 43.8**	**+0.5**
GCMP				*e*S	**Sn**	**05 53 07.2**	**0.0**
PCRV	**Puerto La Cruz**	**2.31**	**256**	*e*P	**Pn**	**05 52 49.8**	**+1.7**
PCRV				*e*S	**Sn**	**05 53 15.4**	**-0.3**
PCRV	**Puerto La Cruz**	**2.31**	**256**	*e*P	**Pn**	**05 52 50.0**	**+2.0**
PCRV				*e*S	**Sn**	**05 53 17.0**	**+1.3**
SVB	**Belmont**	**2.74**	**23**	*e*P	**Pn**	**05 52 55.6**	**+1.9**
SVB				*e*S	**Sn**	**05 53 25.6**	**-0.4**
MCLT	**Moule a Chique**	**3.26**	**25**	*e*P	**Pn**	**05 53 01.6**	**+0.8**
MCLT				*e*S	**Sn**	**05 53 37.6**	**-0.9**
SLAC	**Saint Lucia, A**	**3.45**	**24**	*e*P	**Pn**	**05 53 05.1**	**+1.7**
SLBI	**Saint Lucia, B**	**3.53**	**22**	*e*P	**Pn**	**05 53 05.3**	**+0.8**
SLBI				*e*S	**Sn**	**05 53 44.3**	**-0.8**
FUNV	**FUNVISIS**	**4.39**	**267**	*e*P	**Pn**	**05 53 18.0**	**+1.8**
FUNV				*e*S	**Sn**	**05 54 04.9**	**-1.3**
TACV	**Tcata**	**4.63**	**263**	*e*P	**Pn**	**05 53 21.3**	**+1.8**
TACV				*e*S	**Sn**	**05 54 11.0**	**-1.2**
DSLB	**Salisbury**	**4.76**	**11**	*e*P	**Pn**	**05 53 22.3**	**+1.2**
DSLB				*e*S	**Sn**	**05 54 13.6**	**-1.5**
CACV	**CAICARA DEL OR**	**5.20**	**233**	*e*P	Pn	05 53 23.4	-3.8
CACV				*e*S	Sn	05 54 14.6	-11
BENV	**Beln**	**5.22**	**262**	*e*P	**Pn**	**05 53 29.3**	**+1.8**
TURV	**Turiamo**	**5.40**	**267**	*e*P	**Pn**	**05 53 31.8**	**+1.8**
TURV				*e*S	**Sn**	**05 54 29.3**	**-1.5**
BAUV	**El Baul**	**5.88**	**253**	*e*P	**Pn**	**05 53 37.2**	**+0.8**
BAUV				*e*S	**Sn**	**05 54 39.6**	**-2.9**
BAUV	**El Baul**	**5.88**	**253**	*e*P	**Pn**	**05 53 37.3**	**+0.8**
BAUV				*e*S	**Sn**	**05 54 41.2**	**-1.4**
MAPV	**Macapo**	**6.07**	**262**	*e*P	**Pn**	**05 53 40.1**	**+0.9**
MAPV				*e*S	**Sn**	**05 54 44.1**	**-3.1**
JACV	**Jacura**	**6.37**	**274**	*e*P	**Pn**	**05 53 43.9**	**+0.7**
JACV				*e*S	**Sn**	**05 54 51.6**	**-2.9**
TEPV	**Terepaima**	**6.77**	**264**	*e*P	**Pn**	**05 53 49.8**	**+1.1**
TEPV				*e*S	**Sn**	**05 55 01.1**	**-3.3**

*IDC **15** 05:53:04.9±0.6, 6°.84S×130°.66E, h0km, mb4.3/12, mbtmp4.3/15, ML5.0/4, Error ellipse: s-maj=32.2km s-min=14.1km az=77.0*
*DJA **15** 05:53:16.9±0.2, 7°.5±2°×13°.0E±°, h118km±5km, M4.7/18, mb4.7/18, mB5.2/8, MLv4.8/15, Mw(mB)4.6/8*
*NEIC **15** 05:53:17.3±1.7, 6°.92S±0°.06×130°.42E±0°.09, h100km±6km, mb4.5/21, Error ellipse: s-maj=12.9km s-min=8.5km az=71.0*
ISC 15 05:53:16.8±0.4, 7°.04S±0°.04×130°.29E±0°.05, h100km, n74, σ1°80/73, mb4.5/25, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.37**	**133**		**Pn**	**05 53 41.8**	**+0.2**
SAUI	**Saumlaki**	**1.37**	**133**	P	**Pn**	**05 53 42.7**	**+1.2**
SAUI	**Saumlaki**	**1.37**	**133**	S	**Sn**	**05 54 04.4**	**+4.1**
SAUI	**Saumlaki**	**1.37**	**133**	P	Pn	**05 53 42.6**	**+1.1**
SAUI				S	**Sn**	**05 54 01.9**	**+1.6**
BNDI	**Bandanaira**	**2.53**	**351**	P	**Pn**	**05 53 56.7**	**+0.3**
BNDI	**Bandanaira**	**2.53**	**351**	S	**Sn**	**05 54 29.4**	**+2.7**
BNDI	**Bandanaira**	**2.53**	**351**	P	**Pn**	**05 53 57.6**	**+1.2**
MSAI	**Masohi**	**3.91**	**340**	P	**Pn**	**05 54 16.5**	**+1.6**
FAKI	**Fak Fak**	**4.54**	**26**		**Pn**	**05 54 20.9**	**-2.5**
FAKI	**Fak Fak**	**4.54**	**26**	P	**Pn**	**05 54 21.2**	**-2.2**
FAKI	**Fak Fak**	**4.54**	**26**	P	**Pn**	**05 54 20.8**	**-2.5**
KMPI	**Kaimana, Papua**	**4.78**	**46**	P	**Pn**	**05 54 25.2**	**-1.4**
NLAI	**Namlea**	**4.93**	**320**	P	**Pn**	**05 54 30.3**	**+1.6**
	47nm,0.6s						
DRS	**Darwin Rock St**	**5.39**	**174**	P	**Pn**	**05 54 34.2**	**-0.6**
MTN	**Manton Dam**	**5.82**	**172**		**Pn**	**05 54 41.1**	**+0.3**
SWI	**Sorong**	**6.22**	**9**	P	**Pn**	**05 54 43.6**	**-2.5**
SOEI	**Soe**	**6.54**	**245**		**Pn**	**05 54 51.8**	**+1.2**
SOEI	**Soe**	**6.54**	**245**	P	**Pn**	**05 54 52.5**	**+2.0**
SOEI	**Soe**	**6.54**	**245**	P	**Pn**	**05 54 51.9**	**+1.4**
	0.8nm1μm138nm,0.8s						
RKPI	**Ransiki, Papua**	**6.73**	**35**	P	**Pn**	**05 54 51.0**	**-2.1**
BATI	**Baumata**	**7.26**	**244**	Pn	**Pn**	**05 54 59.1**	**-1.2**
	32nm,0.3s,baz=295,slow=2.3,SNR=7.6						
BATI				Sn	**Sn**	**05 56 17.8**	**-3.5**
	28nm,0.3s,baz=100,slow=22,SNR=6.5						
	60nm,0.4s						
BATI	**Baumata**	**7.26**	**244**	P	**Pn**	**05 55 02.2**	**+1.9**
	0.6nm2μm154nm,0.6s						
BAKI	**Biak**	**8.21**	**45**	P	**Pn**	**05 55 12.3**	**-1.0**
	1μm143nm,0.8s						
EDFI	**Ende, Flores**	**8.68**	**258**	P	**Pn**	**05 55 22.7**	**+3.0**
	17nm,0.9s						
KNRA	**Kununurra**	**8.71**	**190**		**Pn**	**05 55 18.7**	**-1.3**
BASI	**Baing, Sumba**	**10.10**	**251**	P	**Pn**	**05 55 40.2**	**+1.2**
	80nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.88**	**202**	Pn	**Pn**	**05 55 59.7**	**-3.3**
	14nm,0.3s,baz=36,slow=12,SNR=11.5						
FITZ				Sn	Sn	05 58 01.5	-12
	5.3nm,0.3s,baz=209,slow=13,SNR=6.8						
PLAI	**Plampang**	**12.52**	**261**	P	**Pn**	**05 56 11.0**	**-0.4**
	34nm,0.9s						
WRAB	**Tennant Creek**	**13.41**	**163**		**Pn**	**05 56 18.7**	**-4.4**
WRA	**Warramunga Arr**	**13.41**	**163**	Pn	**Pn**	**05 56 19.3**	**-3.9**
	4.9nm,0.3s,baz=345,slow=13,SNR=32						
WRA				Sn	Sn	05 58 37.5	-13
	7.0nm,0.3s,baz=344,slow=22,SNR=14						
	8.8nm,0.5s						
COEN	**Coen**	**14.41**	**120**	Pn	**Pn**	**05 56 34.0**	**-2.2**
ASAR	**Alice Springs**	**16.89**	**169**	P	**Pn**	**05 57 05.7**	**-1.5**
	3.0nm,0.3s,baz=16,slow=15,SNR=43						
ASAR				S	Sn	05 59 59.3	-16
	8.1nm,0.9s,baz=356,slow=26,SNR=9.8						
	9.8nm,0.7s						
MBWA	**Marble Bar**	**17.35**	**215**	P	**P**	**05 57 11.5**	**-1.2**
MBWA				lAmb	lAmb	05 57 14.0	
	comp=Z,18nm,0.7s						
PSA00	**Pilbara Seismi**	**17.62**	**214**		**P**	**05 57 14.8**	**-0.8**
PSA00				lAmb	lAmb	05 57 21.9	
	comp=Z,20nm,0.6s						
PSA00	**Pilbara Seismi**	**17.62**	**214**	P	**P**	**05 57 14.1**	**-1.5**
PSA00				lAmb	lAmb	05 57 20.1	
	comp=Z,25nm,1.4s						
SBUM	**Sibu**	**20.35**	**297**	P	Pn	05 57 47.8	-0.6
KSM	**Kuching**	**21.66**	**292**	P	**P**	**05 58 01.6**	**+2.1**
GIRL	**Giralia**	**21.90**	**223**	P	**P**	**05 58 03.0**	**+1.0**
GIRL				lAmb	lAmb	05 58 06.4	
	comp=Z,37nm,1.3s						
FORT	**Forrest**	**23.71**	**185**	P	**P**	**05 58 19.8**	**+0.1**
MORW	**Morawa**	**25.70**	**210**	P	**P**	**05 58 39.2**	**+1.5**
MORW				lAmb	lAmb	05 59 18.4	
	comp=Z,13nm,1.1s						
BBOO	**Buckleboo**	**26.20**	**169**	P	**P**	**05 58 43.2**	**+1.0**
BBOO				lAmb	lAmb	05 58 45.6	
	comp=Z,23nm,1.4s						
STKA	**Stephens Creek**	**26.87**	**158**	P	**P**	**05 58 47.5**	**-0.8**
	comp=Z,2.5nm,0.4s,baz=331,slow=6.1,SNR=5.9						
	comp=Z,2.5nm,0.4s						
NACB	**Ninganchiao**	**32.16**	**345**	P	**P**	**05 59 32.3**	**-2.9**
JCJ	**Chichijima**	**35.84**	**18**	P	**P**	**06 00 05.4**	**-1.6**
CMAR	**Chiang Mai Arr**	**39.98**	**310**	P	**P**	**06 00 43.4**	**+1.4**
	comp=Z,1.6nm,0.3s,baz=139,slow=7.9,SNR=6.0						
	comp=Z,1.6nm,0.3s						
NJ2	**Nanjing**	**40.38**	**345**	*e*P	**P**	**06 00 45.3**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PZH	**PanZhiHua**	**43.34**	**321**	P	**P**	**06 01 10.5**	**+1.1**
MJAR	**Matsushiro Arr**	**43.99**	**9**	P	**P**	**06 01 13.5**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=195,slow=10,SNR=1.5						
	comp=Z,1.3nm,0.4s						
LYN	**LuoYang**	**44.67**	**339**	*e*P	P	06 01 27.3	+7.6
LYN				pmax	pmax		
	comp=Z,13nm,0.8s						
LZH	**Lanzhou**	**49.58**	**332**	*e*P	P	06 02 06.3	+8.2
LZH				sP	sP	06 02 37.5	+6.1
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.67**	**342**	*e*P	**P**	**06 02 09.5**	**+3.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,59nm,6.1s						
TUWZ	**Tuamarina**	**51.66**	**139**	P	**P**	**06 02 14.2**	**+0.6**
TCW	**Tory Channel**	**51.78**	**138**	P	**P**	**06 02 12.5**	**-1.8**
EVN	**Everest**	**54.52**	**312**	P	**P**	**06 02 34.5**	**-0.9**
AFI	**Afiamalu**	**57.27**	**102**	P	**P**	**06 02 53.6**	**-1.0**
SONM	**Songino Array**	**58.57**	**341**	P	**P**	**06 03 03.9**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=152,slow=7.8,SNR=3.7						
	comp=Z,0.6nm,0.4s						
CASY	**Casey**	**60.70**	**189**	P	**P**	**06 03 18.7**	**+1.3**
CASY				lAmb	lAmb	06 03 43.5	
	comp=Z,4.7nm,1.2s						
MKAR	**Makanchi Array**	**68.42**	**327**	P	**P**	**06 04 08.8**	**+0.9**
	comp=Z,4.1nm,0.5s,baz=122,slow=7.9,SNR=34						
	comp=Z,4.1nm,0.5s						
KDJ	**Kajisay**	**68.79**	**320**	P	**P**	**06 04 10.8**	**+0.3**
KDJ				lAmb	lAmb	06 04 25.9	
	comp=Z,14nm,1.0s						
ARSB	**Arslanbob**	**71.11**	**318**	P	**P**	**06 04 25.6**	**+0.8**
ARSB				lAmb	lAmb	06 04 26.8	
	comp=Z,7.4nm,0.7s						
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**06 04 28.0**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=151,slow=5.4,SNR=3.0						
	comp=Z,0.8nm,0.5s						
SEY	**Seymchan**	**71.80**	**10**	P	**P**	**06 04 27.9**	**-0.2**
	comp=Z,6.0nm,0.8s,baz=204,slow=6.1,SNR=4.5						
	comp=Z,6.0nm,0.8s						
GAR	**Garm**	**71.90**	**315**	P	**P**	**06 04 29.1**	**-0.4**
VNDA	**Vanda**	**72.37**	**173**	P	**P**	**06 04 32.7**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=320,slow=6.3,SNR=11						
	comp=Z,0.9nm,0.5s						
CHGR	**Chuyangaron**	**72.57**	**314**	P	**P**	**06 04 33.5**	**0.0**
CHGR				lAmb	lAmb	06 04 35.0	
	comp=Z,7.9nm,0.7s						
KURBB	**Kurchatov Arra**	**72.69**	**328**	P	**P**	**06 04 33.9**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=131,slow=5.2,SNR=4.3						
	comp=Z,0.9nm,0.6s						
BVAR	**Borovoye Array**	**78.25**	**328**	P	**P**	**06 05 05.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=111,slow=11,SNR=2.5						
	comp=Z,0.8nm,0.7s						
TIXI	**Tiksi**	**78.54**	**360**	P	**P**	**06 05 06.4**	**-0.2**
	comp=Z,2.5nm,0.3s,baz=170,slow=2.3,SNR=5.9						
	comp=Z,2.5nm,0.3s						
VOI	**Vohitsoka**	**81.39**	**249**	P	**P**	**06 05 24.6**	**+1.2**
QSPA	**South Pole Qui**	**82.93**	**180**	P	**P**	**06 05 34.4**	**+3.9**
	comp=Z,1.5nm,0.6s,baz=252,slow=1.0,SNR=12						
	comp=Z,1.5nm,0.6s						
BELA	**Belgrano 2**	**94.79**	**183**	P	**P**	**06 06 27.5**	**+0.7**
BELA				lAmb	lAmb	06 06 28.7	
	comp=Z,1.9nm,1.1s						
SNAA	**Sanae**	**95.69**	**193**	P	**P**	**06 06 32.0**	**+1.0**
SNAA				lAmb	lAmb	06 06 33.2	
	comp=Z,3.0nm,1.2s						
CPUP	**Villa Florida**	**146.01**	**168**	PKPbc	**PKPab**	**06 12 46.6**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=76,slow=2.6,SNR=5.0						
LPAZ	**La Paz**	**150.51**	**142**	PKPbc	**PKiKP**	**06 12 59.1**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=188,slow=7.1,SNR=8.1						

*DJA **15** 06:08:34.0±0.3, 2°.N±2°×12°.6E±°, h10km, M4.4/15, mB5.0/5, mb4.6/6, MLv4.4/15, Mw(mB)4.3/5*
*NEIC **15** 06:08:35.3±1.6, 1°.56N±0°.08×126°.42E±0°.04, h35km±2km, mb4.5/25, Error ellipse: s-maj=14.6km s-min=3.6km az=199.0*
*IDC **15** 06:08:37.5±4.2, 1°.51N×126°.26E, h61km±39km, mb3.9/14, mbtmp4.2/16, ML4.2/2, MS3.4/5, Error ellipse: s-maj=36.9km s-min=14.3km az=70.0*
ISC 15 06:08:35.2±0.4, 1°.54N±0°.05×126°.45E±0°.07, h35km, n73, σ1°25/68, mb4.3/28, MS3.3/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.19**	**130**		**Pn**	**06 08 55.8**	**+0.4**
TNTI	**Ternate**	**1.19**	**130**	P	**Pn**	**06 08 56.8**	**+1.4**
SGSI	**Sangihe**	**2.32**	**337**	P	**Pn**	**06 09 11.1**	**+0.1**
SGSI				S	**Sn**	**06 09 38.9**	**+0.6**
KMSI	**Cibinong**	**2.65**	**249**	P	**Pn**	**06 09 15.9**	**+0.4**
KMSI				S	**Sn**	**06 09 47.5**	**+1.1**
SANI	**Sanana**	**3.60**	**187**	P	**Pn**	**06 09 30.0**	**+1.5**
LUWI	**Luwuk**	**4.49**	**235**		**Pn**	**06 09 39.8**	**-0.9**
LUWI	**Luwuk**	**4.49**	**235**	P	**Pn**	**06 09 40.5**	**-0.2**
MRSI	**Marisa**	**4.63**	**257**	P	**Pn**	**06 09 43.7**	**+0.9**
NLAI	**Namlea**	**4.79**	**172**	P	**Pn**	**06 09 48.2**	**+3.2**
APSI	**Ampana**	**5.38**	**243**	P	**Pn**	**06 09 54.3**	**+1.2**
TOLI2	**Tolitoli**	**5.69**	**266**		**Pn**	**06 09 55.6**	**-1.6**
MPSI	**Mapaga**	**6.66**	**260**	P	**Pn**	**06 10 12.3**	**+1.6**
	0.2nm34nm,0.7s						
TTSI	**Tana Toraja**	**8.04**	**236**	P	**Pn**	**06 10 30.5**	**+0.8**
	0.2nm39nm,0.6s						
SPSI	**Sidrap Palu**	**8.63**	**231**	P	**Pn**	**06 10 39.9**	**+2.2**
	32nm,0.7s						
BNSI	**Bone**	**8.66**	**227**	P	**Pn**	**06 10 39.6**	**+1.5**
MYLDM	**Lahad Datu**	**8.72**	**295**		**Pn**	**06 10 39.0**	**+0.1**
KAPI	**Kappang**	**9.34**	**226**	P	**Pn**	**06 10 48.1**	**+0.7**
	2.3nm,0.3s,baz=76,slow=5.5,SNR=7.1						
	9.4nm,0.5s						
SBUM	**Sibu**	**14.25**	**274**	Pn	**Pn**	**06 11 54.0**	**-0.7**
MTN	**Manton Dam**	**15.03**	**162**	Pn	**Pn**	**06 12 05.1**	**0.0**
KNRA	**Kununurra**	**17.26**	**172**		**Pn**	**06 12 32.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.53**	**182**	P	**P**	**06 12 59.5**	**-0.4**
	0.6nm,0.3s,baz=18,slow=7.8,SNR=17						
	3.1nm,0.6s						
TWG	**Pinlang**	**21.79**	**347**	P	**P**	**06 13 22.0**	**-2.2**
TWG				lAmb	lAmb	06 13 48.4	
	comp=Z,15nm,1.0s						
WB0	**Warramunga Arr**	**22.57**	**160**		**P**	**06 13 32.2**	**-0.4**
WB0				lAmb	lAmb	06 13 34.9	
	comp=Z,13nm,1.0s						
COEN	**Coen**	**22.62**	**133**	P	**P**	**06 13 32.9**	**-0.4**
COEN				lAmb	lAmb	06 13 45.8	
	comp=Z,13nm,1.4s						
WRAB	**Tennant Creek**	**22.70**	**160**	P	**P**	**06 13 32.9**	**-1.2**
WRAB				lAmb	lAmb	06 13 37.5	
	comp=Z,9.3nm,0.8s						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**06 13 33.8**	**-0.4**
	comp=Z,3.9nm,0.4s,baz=339,slow=10,SNR=37						
	comp=Z,3.9nm,0.4s						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**06 13 31.9**	**-2.2**
WR8	**Warramunga Arr**	**22.78**	**160**		**P**	**06 13 34.2**	**-0.7**
WR8				lAmb	lAmb	06 13 41.8	
	comp=Z,6.9nm,0.7s						
PMG	**Port Moresby**	**23.32**	**118**	LR	LR	06 25 21.1	
	comp=Z,114nm,19.5s,baz=150,slow=43						
PSA00	**Pilbara Seismi**	**23.86**	**195**	P	**P**	**06 13 44.5**	**-1.1**
PSA00				lAmb	lAmb	06 13 49.5	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**23.86**	**195**	P	**P**	**06 13 45.3**	**-0.2**
PSA00				lAmb	lAmb	06 13 46.4	
	comp=Z,6.0nm,1.2s						
AS31	**Alice Springs**	**26.08**	**164**		**P**	**06 14 05.2**	**-0.6**
ASAR	**Alice Springs**	**26.08**	**164**	P	**P**	**06 14 06.3**	**+0.5**
	comp=Z,2.4nm,0.4s,baz=345,slow=8.2,SNR=48						
ASAR				PcP	**PcP**	**06 17 31.1**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=344,slow=2.5,SNR=1.2						
	comp=Z,2.4nm,0.4s						
ASAR	**Alice Springs**	**26.08**	**164**	P	**P**	**06 14 05.4**	**-0.4**
GIRL	**Giralia**	**26.83**	**206**	P	**P**	**06 14 13.4**	**+0.9**
NJ2	**Nanjing**	**31.18**	**347**	*e*P	**P**	**06 14 52.5**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PZH	**PanZhiHua**	**34.35**	**318**	P	**P**	**06 15 20.9**	**+1.9**
BBOO	**Buckleboo**	**35.35**	**166**	P	**P**	**06 15 27.4**	**-0.1**
BBOO				lAmb	lAmb	06 15 58.4	
	comp=Z,22nm,1.5s						
NWAO	**Narrogin (SRO)**	**35.37**	**193**	P	**P**	**06 15 28.4**	**+0.8**
KSRS	**Korea Array**	**35.76**	**2**	P	**P**	**06 15 31.7**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=181,slow=9.9,SNR=2.0						
	comp=Z,0.9nm,0.6s						
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**06 15

1.7nm,0.3s,baz=45,slow=5.1,SNR=5.5
12nm,0.6s
FITZ Fitzroy Crossi 19.63 183 P **P** **06 14 37.5 -0.5**
0.3nm,0.3s,baz=358,slow=9.3,SNR=3.0
2.6nm,0.7s
WRA Warramunga Arr 22.76 161 P **P** **06 15 11.6 -0.3**
6.7nm,0.7s,baz=338,slow=10,SNR=9.6
6.7nm,0.7s
ASAR Alice Springs 26.15 165 P **P** **06 15 43.8 +0.3**
1.8nm,0.8s,baz=344,slow=7.4,SNR=5.5
1.8nm,0.8s
JNU Nakatsue 31.58 7 LR LR 06 31 39.8
comp=Z,17nm,19.6s,baz=125,slow=41
STKA Stephens Creek 36.26 158 P **P** **06 17 12.4 +0.1**
2.6nm,0.8s,baz=326,slow=13,SNR=3.6
2.6nm,0.8s
H11S3 WAKE ISLAND Hy 42.75 64 T T 07 05 18.6
baz=253
H11S2 WAKE ISLAND Hy 42.77 64 T T 07 05 19.6
baz=253
H11S1 WAKE ISLAND Hy 42.77 64 T T 07 05 18.3
baz=253
HILR Hailar Array B 48.09 354 P **P** **06 18 49.2 +0.6**
0.8nm,0.4s,baz=159,slow=12,SNR=2.2
0.8nm,0.4s
MKAR Makanchi Array 59.17 326 P **P** **06 20 09.2 -0.6**
0.8nm,0.5s,baz=114,slow=8.0,SNR=5.1
0.8nm,0.5s
ZALV Zalesovo Beam 62.37 334 P **P** **06 20 30.9 -0.4**
0.7nm,0.3s,baz=137,slow=7.1,SNR=2.4
0.7nm,0.3s
KURBB Kurchatov Arra 63.41 328 P **P** **06 20 37.9 -0.4**
0.8nm,0.6s,baz=128,slow=6.4,SNR=5.2
0.8nm,0.6s
BVAR Borovoye Array 68.97 327 P **P** **06 21 13.9 -0.1**
0.3nm,0.4s,baz=124,slow=7.8,SNR=1.7
0.3nm,0.4s
VNDA Vanda 81.39 173 P **P** **06 22 24.9 0.0**
0.8nm,0.7s,baz=323,slow=5.3,SNR=5.8
0.8nm,0.7s

IDC 15 06:13:16.7±1.6, 1°69'N×126°58'E, h0km, mb3.8/4, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=119.1km s-min=20.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	P	06 17 46.7	-0.9
	0.1nm,0.3s,baz=5.7,slow=10,SNR=1.5						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**22.80**	**161**	P	P	06 18 21.2	-0.1
	2.0nm,0.5s,baz=341,slow=11,SNR=10						
	2.0nm,0.5s						
ASAR	**Alice Springs**	**26.19**	**165**	P	P	06 18 53.9	+0.6
	0.7nm,0.4s,baz=342,slow=9.3,SNR=6.9						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	P	06 23 19.4	0.0
	0.4nm,0.4s,baz=129,slow=7.0,SNR=4.7						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	P	06 23 47.7	-0.2
	0.8nm,0.5s,baz=127,slow=6.3,SNR=5.4						
	0.8nm,0.5s						

*IDC **15** 06:18:40.6±1.2, 1°57'N×126°40'E, h0km, mb3.7/5, mbtmp3.8/8, ML3.6/3, Error ellipse: s-maj=44.3km s-min=19.8km az=68.0*
ISC 15 06:18:45.6±1.1, 1°5'N±0°2'×126°4'E±0°1, h35km, n8, σ0s55/8, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.28**	**226**	Pn	**Pn**	**06 20 56.5**	**-0.5**
	0.7nm,0.3s,baz=45,slow=19,SNR=1.6						
	2.7nm,0.4s						
JAY	**Jayapura**	**14.86**	**106**	Pn	**Pn**	**06 22 12.9**	**-0.5**
	0.6nm,0.3s,baz=7.6,slow=10,SNR=2.2						
	11nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**06 23 09.8**	**-0.1**
	0.1nm,0.3s,baz=6.6,slow=14,SNR=1.5						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**06 23 44.4**	**-0.1**
	2.2nm,0.5s,baz=340,slow=11,SNR=15						
	2.2nm,0.5s						
ASAR	**Alice Springs**	**26.08**	**164**	P	**P**	**06 24 16.6**	**+0.5**
	0.6nm,0.5s,baz=345,slow=9.8,SNR=14						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**59.18**	**326**	P	**P**	**06 28 43.2**	**+0.1**
	0.3nm,0.3s,baz=117,slow=8.3,SNR=5.0						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.42**	**328**	P	**P**	**06 29 11.5**	**-0.2**
	0.6nm,0.5s,baz=127,slow=6.4,SNR=4.3						
	0.6nm,0.5s						
VNDA	**Vanda**	**81.29**	**173**	P	**P**	**06 30 58.7**	**+0.9**
	0.1nm,0.3s,baz=342,slow=11,SNR=1.6						
	0.1nm,0.3s						

*IDC **15** 06:20:47.9±1.1, 1°78'N×126°60'E, h0km, mb3.7/5, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=54.5km s-min=19.3km az=70.0*
ISC 15 06:20:53.1±1.2, 1°8'N±0°2'×126°6'E±0°2, h35km, n7, σ0s63/9, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.62**	**226**	Pn	**Pn**	**06 23 09.3**	**+0.2**
	0.9nm,0.3s,baz=37,slow=20,SNR=1.8						
	3.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.75**	**183**	P	**P**	**06 25 19.3**	**-0.8**
	0.1nm,0.3s,baz=358,slow=11,SNR=1.1						
	1.1nm,0.7s						
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**06 25 52.9**	**-0.6**
	1.9nm,0.5s,baz=336,slow=11,SNR=10						
WRA				PcP	**PcP**	**06 29 44.2**	**+0.2**
	0.3nm,0.8s,baz=340,slow=3.8,SNR=1.6						
	1.9nm,0.5s						
ASAR	**Alice Springs**	**26.24**	**165**	P	**P**	**06 26 24.9**	**-0.2**
	0.7nm,0.5s,baz=345,slow=7.9,SNR=13						
ASAR				PcP	**PcP**	**06 29 52.2**	**+0.9**
	0.2nm,0.5s,baz=347,slow=2.3,SNR=4.5						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**06 30 49.9**	**-0.4**
	0.5nm,0.4s,baz=123,slow=7.0,SNR=9.2						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**06 31 18.4**	**-0.3**
	0.5nm,0.5s,baz=129,slow=6.1,SNR=4.5						
	0.5nm,0.5s						
VNDA	**Vanda**	**81.49**	**173**	P	**P**	**06 33 06.9**	**+0.5**
	0.3nm,0.5s,baz=305,slow=4.0,SNR=1.6						
	0.3nm,0.5s						

IDC 15 06:26:57.2±1.7, 1°51'N×126°26'E, h0km, mb3.5/4, mbtmp3.5/5, ML3.4/1, MS3.3/3, Error ellipse: s-maj=122.4km s-min=21.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**14.98**	**105**	LR	LR	06 36 43.6	
	comp=Z,144nm,20.3s,baz=350,slow=39						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	P	06 31 25.9	-0.1
	0.1nm,0.3s,baz=0.0,slow=12,SNR=1.9						
	2.1nm,1.1s						
WRA	**Warramunga Arr**	**22.75**	**160**	P	P	06 32 01.2	+0.1
	0.7nm,0.5s,baz=339,slow=11,SNR=8.8						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.11**	**164**	P	P	06 32 33.0	0.0
	0.2nm,0.4s,baz=343,slow=7.0,SNR=7.8						
	0.2nm,0.4s						
MJAR	**Matsushiro Arr**	**36.57**	**16**	LR	LR	06 50 38.5	
	comp=Z,33nm,18.2s,baz=204,slow=39						
PALK	**Pallekele**	**45.76**	**279**	LR	LR	06 58 01.2	
	comp=Z,27nm,18.8s,baz=95,slow=41						
MKAR	**Makanchi Array**	**59.12**	**326**	P	P	06 37 00.2	+0.6
	0.2nm,0.4s,baz=116,slow=8.7,SNR=2.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	P	06 37 27.6	-0.6
	0.3nm,0.5s,baz=118,slow=7.7,SNR=3.7						
	0.3nm,0.5s						

*IDC **15** 06:27:49.1±0.9, 1°35'N×125°90'E, h0km, mb4.0/9, mbtmp4.0/10, ML3.9/1, MS3.2/4, Error ellipse: s-maj=112.0km s-min=14.6km az=68.0*
*NEIC **15** 06:27:52.6±2.6, 1°88'N±0°09'×126°85'E±0°09, h35km±2km, mb4.3/13, Error ellipse: s-maj=21.1km s-min=6.2km az=223.0*
*DJA **15** 06:27:53.9±1.4, 1°N±3'×12°6'E±°, h19km±12km, M4.2/12, MLv4.2/12*
ISC 15 06:27:53.8±0.6, 1°54'N±0°06'×126°57'E±0°09, h35km, n43, σ1s37/35, mb4.3/14, MS3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.10**	**134**		**Pn**	**06 28 12.9**	**+0.1**
TNTI	**Ternate**	**1.10**	**134**	P	**Pn**	**06 28 14.5**	**+1.7**
SGSI	**Sangihe**	**2.37**	**334**	P	**Pn**	**06 28 31.8**	**+1.6**
SGSI				S	**Sn**	**06 29 00.4**	**+2.3**
KMSI	**Cibinong**	**2.76**	**250**	P	**Pn**	**06 28 35.4**	**-0.1**
SANI	**Sanana**	**3.61**	**189**	P	**Pn**	**06 28 47.8**	**+0.5**
LUWI	**Luwuk**	**4.58**	**236**	Pn	Pn	06 29 05.3	+4.7
LUWI	**Luwuk**	**4.58**	**236**	P	**Pn**	**06 29 00.1**	**-0.5**
MRSI	**Marisa**	**4.75**	**257**	P	**Pn**	**06 29 03.0**	**+0.1**
NLAI	**Namlea**	**4.78**	**174**	P	**Pn**	**06 29 05.3**	**+2.0**
MYLDM	**Lahad Datu**	**8.83**	**294**	Pn	**Pn**	**06 29 59.5**	**+0.5**
KAPI	**Kappang**	**9.42**	**226**	Pn	Pn	06 30 11.8	+4.7
SOEI	**Soe**	**11.45**	**191**	Pn	**Pn**	**06 30 37.8**	**+2.7**
BATI	**Baumata**	**12.02**	**194**	LR	LR	06 35 51.9	
	comp=Z,151nm,21.9s,baz=36,slow=41						
KNRA	**Kununurra**	**17.24**	**173**	P	**P**	**06 31 53.0**	**-0.3**
KNRA				IAmb	IAmb	06 32 05.4	
	comp=Z,17nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.54**	**183**	P	**P**	**06 32 15.7**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=9.2,slow=15,SNR=5.5						
	comp=Z,1.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.54**	**183**	P	**P**	**06 32 18.2**	**-0.2**
GUMO	**Guam**	**21.71**	**56**	LR	LR	06 41 30.5	
	comp=Z,33nm,18.4s,baz=226,slow=37						
WB0	**Warramunga Arr**	**22.52**	**160**		**P**	**06 32 50.5**	**-0.3**
WB0				IAmb	IAmb	06 33 01.1	
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**22.67**	**161**	P	**P**	**06 32 52.7**	**+0.4**
	comp=Z,6.0nm,0.6s,baz=339,slow=11,SNR=31						
WRA				PcP	**PcP**	**06 36 44.3**	**0.0**
	comp=Z,0.3nm,0.5s,baz=346,slow=2.2,SNR=1.6						
	comp=Z,6.0nm,0.6s						
WRA	**Warramunga Arr**	**22.67**	**161**		**P**	**06 32 50.4**	**-1.9**
WR8	**Warramunga Arr**	**22.73**	**160**		**P**	**06 32 52.4**	**-0.6**
WR8				IAmb	IAmb	06 33 02.8	
	comp=Z,20nm,1.5s						
AS31	**Alice Springs**	**26.05**	**165**	P	**P**	**06 33 24.5**	**+0.4**
ASAR	**Alice Springs**	**26.05**	**165**	P	**P**	**06 33 24.6**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=346,slow=12,SNR=19						
ASAR				PcP	**PcP**	**06 36 51.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=348,slow=3.0,SNR=4.9						
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	**26.05**	**165**	P	**P**	**06 33 25.2**	**+1.1**
STKA	**Stephens Creek**	**36.16**	**158**	P	**P**	**06 34 54.7**	**+1.7**
	comp=Z,2.7nm,0.7s,baz=342,slow=10,SNR=4.8						
	comp=Z,2.7nm,0.7s						
BRDH	**Bariadhala**	**39.90**	**304**	LR	LR	06 54 24.1	
	comp=Z,36nm,19.3s,baz=210,slow=40						
H11S3	**WAKE ISLAND Hy**	**42.79**	**64**	T	T	07 22 58.9	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**42.80**	**64**	T	T	07 23 00.1	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**42.81**	**64**	T	T	07 23 23.7	
	baz=252						
SONM	**Songino Array**	**49.31**	**342**	P	**P**	**06 36 40.3**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=134,slow=12,SNR=2.1						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**06 37 51.3**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=121,slow=7.9,SNR=13						
	comp=Z,1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**62.46**	**334**	P	**P**	**06 38 12.5**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=131,slow=6.7,SNR=2.7						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**63.49**	**328**	P	**P**	**06 38 20.0**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=128,slow=6.3,SNR=28						
	comp=Z,2.4nm,0.5s						
BVAR	**Borovoye Array**	**69.06**	**327**	P	**P**	**06 38 55.3**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=151,slow=6.6,SNR=2.7						
	comp=Z,0.8nm,0.4s						
AB31	**Akbulak array**	**73.74**	**321**	P	**P**	**06 39 23.8**	**-0.6**
AB31				IAmb	IAmb	06 39 34.8	
	comp=Z,2.4nm,1.1s						
ABKAR	**Akbulak array**	**73.74**	**321**	P	**P**	**06 39 23.8**	**-0.6**
ARTI	**Arti**	**76.78**	**328**	P	**P**	**06 39 41.4**	**-0.2**
ARTI				IAmb	IAmb	06 39 42.4	
	comp=Z,4.7nm,0.8s						
M13K	**Dall Lake**	**78.92**	**28**	P	P	06 39 47.7	-5.7
O15K	**Ungalikthiuk R**	**80.32**	**30**	P	P	**06 39 57.0**	**-4.2**
L16K	**Owhat River**	**81.08**	**28**	P	P	06 39 59.7	-5.4
VNDA	**Vanda**	**81.29**	**173**	P	**P**	**06 40 06.6**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=316,slow=4.8,SNR=3.7						
VNDA				LR	LR	07 16 15.8	
	comp=Z,20nm,18.9s,baz=341,slow=36						
	comp=Z,0.3nm,0.4s						
VNDA	**Vanda**	**81.29**	**173**	P	**P**	**06 40 06.4**	**+0.4**
VNDA				IAmb	IAmb	06 40 12.4	
	comp=Z,3.3nm,1.4s						
L18K	**Granite Mounta**	**82.47**	**27**	P	P	06 40 07.4	-5.1
L18K				IAmb	IAmb	06 40 39.6	
	comp=Z,18nm,1.4s						

*IDC **15** 06:33:42.8±2.1, 52°70'N×159°59'E, h0km, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=64.8km s-min=19.8km az=7.0*
*KRSC **15** 06:33:50.3±0.6, 52°78'N×159°08'E, h81km±5km, Ml3.7*
ISC 15 06:33:51.7±1.0, 52°76'N±0°05'×159°08'E±0°06, h76km±7km, n33, σ0s74/42, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALK	**Dalny**	**0.34**	**323**	eP	**Pn**	**06 34 03.4**	**-0.3**
DALK				eS	**Sn**	**06 34 12.8**	**+0.3**
PET	**Petropavlovsk**	**0.37**	**315**	eP	**Pn**	**06 34 03.7**	**-0.2**
PET				eS	**Sn**	**06 34 13.0**	**+0.1**
NLC	**Nalytchevo**	**0.44**	**21**	eP	**Pn**	**06 34 04.5**	**+0.1**
NLC				eS	**Sn**	**06 34 14.3**	**+0.5**
UGLR	**Uglovaya**	**0.47**	**341**	eP	**Pn**	**06 34 05.2**	**+0.2**
RUS	**Russkaya**	**0.48**	**227**	eP	**Pn**	**06 34 04.9**	**+0.1**
RUS				eS	**Sn**	**06 34 15.2**	**+0.7**
SMAR	**Somma**	**0.53**	**341**	eP	**Pn**	**06 34 05.3**	**-0.2**
SDLR	**Sedlovina**	**0.53**	**347**	eP	**Pn**	**06 34 05.2**	**-0.2**
SDLR				eS	**Sn**	**06 34 16.0**	**+0.4**
AVH	**Avacha**	**0.55**	**338**	eP	**Pn**	**06 34 05.7**	**+0.2**
AVH				eS	**Sn**	**06 34 17.1**	**+1.3**
KRER	**Koryakskii**	**0.58**	**340**	eP	**Pn**	**06 34 06.2**	**+0.2**
KRER				eS	**Sn**	**06 34 17.3**	**+0.8**
KRMR	**Karymshinskiy**	**0.58**	**277**	eP	**Pn**	**06 34 05.2**	**-0.6**
KRMR				eS	**Sn**	**06 34 16.0**	**-0.2**
KOK	**Koryaka**	**0.59**	**333**	eP	**Pn**	**06 34 06.0**	**0.0**
MTVR	**Mutnovka**	**0.62**	**243**	eP	**Pn**	**06 34 06.6**	**+0.3**
MTVR				eS	**Sn**	**06 34 18.3**	**+1.2**
GRL	**Gorelyy**	**0.65**	**251**	eP	**Pn**	**06 34 07.1**	**+0.5**
KRX	**Arik**	**0.65**	**336**	eP	**Pn**	**06 34 06.5**	**-0.2**
KRX				eS	**Sn**	**06 34 17.5**	**-0.3**
ASAK	**Asacha**	**0.82**	**243**	eP	**Pn**	**06 34 08.8**	**+0.4**
PETK	**Petropavlovsk-**	**0.91**	**293**	Pn	**Pn**	**06 34 07.8**	**-1.5**
	20nm,0.3s,baz=109,slow=16,SNR=676						
PETK				Sn	**Sn**	**06 34 23.2**	**+0.7**
	28nm,0.3s,baz=171,slow=28,SNR=12						
KDTR	**Khodutka, Kamc**	**1.14**	**213**	eP	**Pn**	**06 34 12.4**	**+0.3**
KDTR				eS	**Sn**	**06 34 27.9**	**+0.5**
APC	**Apacha**	**1.18**	**279**	eP	**Pn**	**06 34 12.6**	**-0.1**
APC				eS	**Sn**	**06 34 28.5**	**+0.1**
KII	**Karymskiy**	**1.29**	**10**	eP	**Pn**	**06 34 14.6**	**+0.4**
MIPR	**Malaya Ipel'ka**	**1.50**	**252**	eP	**Pn**	**06 34 17.5**	**+0.7**
MIPR				eS	**Sn**	**06 34 37.3**	**+1.5**
MKZ	**Mys Kozlova**	**2.39**	**40**	eP	**Pn**	**06 34 28.0**	**-0.5**
KZV	**Kizimen**	**2.46**	**16**	eP	**Pn**	**06 34 31.7**	**+1.9**
TUMD	**Tumrok D**	**2.57**	**17**	eP	**Pn**	**06 34 31.5**	**+0.5**
TUMD				eS	**Sn**	**06 35 02.1**	**+0.9**
SMKR	**Semkarok**	**4.07**	**19**	eP	**Pn**	**06 34 53.0**	**+1.5**
BKI	**Bering**	**4.74**	**56**	eP	**Pn**	**06 35 00.3**	**-0.3**
H11N2	**WAKE ISLAND Hy**	**33.52**	**167**	T	T	07 16 19.4	
	baz=351						
H11N3	**WAKE ISLAND Hy**	**33.54**	**167**	T	T	07 16 18.2	
	baz=351						
H11N1	**WAKE ISLAND Hy**	**33.54**	**167**	T	T	07 16 24.2	
	baz=351						
H11S1	**WAKE ISLAND Hy**	**34.70**	**167**	T	T	07 17 41.8	
	baz=349						
H11S3	**WAKE ISLAND Hy**	**34.71**	**167**	T	T	07 17 42.2	
	baz=349						
H11S2	**WAKE ISLAND Hy**	**34.72**	**167**	T	T	07 17 45.3	
	baz=349						
PDAR	**Pinedale Array**	**58.22**	**60**	P	**P**	**06 43 37.7**	**-0.3**
	0.2nm,0.6s,baz=310,slow=8.3,SNR=2.3						
	0.2nm,0.6s						
TXAR	**Lajitas Array**	**71.33**	**66**	P	**P**	**06 45 02.1**	**-1.1**
	0.1nm,0.4s,baz=297,slow=5.8,SNR=5.2						
	0.1nm,0.4s						

*IGQ **15** 06:37:16.9±0.2, 1°S±1°×8°0'W±°, h3km±2km, MLv3.6/31*
*RSNC **15** 06:37:16.8±0.5, 1°S±9°×8°0'W±°, h0km, M3.3, mb3.8, ML2.8*
ISC 15 06:37:17.2±1.1, 1°27S±0°02×80°33W±0°03, h11km±11km, n84, σ1s42/90, 8C-16D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APO2	**Ecuador-Portov**	**0.24**	**328**	⇓P	**Pg**	**06 37 23.1**	**+0.9**
JIPI	**JIPIJAPA**	**0.25**	**248**	S	**Sb**	**06 37 28.4**	**+2.6**
JIPI				⇓P	**Pb**	**06 37 24.6**	**+0.9**
AMNT	**Manta-Manabi**	**0.52**	**309**	⇓P	**Pg**	**06 37 26.6**	**-0.8**
PPLP	**Puerto Lpez**	**0.52**	**238**	P	**Pg**	**06 37 27.3**	**-0.1**
PPLP	**Puerto Lpez**	**0.52**	**238**	P	**Pg**	**06 37 27.6**	**+0.2**
PECV	**Mancha de Ca P**	**0.56**	**30**	⇓P	**Pg**	**06 37 27.0**	**-1.1**
ABH2	**Ecuador-Univer**	**0.61**	**354**	P	**Pg**	**06 37 27.9**	**-1.1**
ISPT	**Isla de la Pla**	**0.74**	**270**	P	**Pg**	**06 37 30.4**	**-1.2**
ISPT				S	**Sg**	**06 37 40.8**	**-0.5**
AGUAY	**Guayaquil**	**0.87**	**154**	P	**Pg**	**06 37 33.3**	**-0.6**
CAB1	**Cabo Pasado-Ma**	**0.88**	**354**	⇑P	**Pg**	**06 37 32.5**	**-1.7**
CAB1				S	**Sb**	**06 37 46.5**	**+0.2**
AC07	**Ecuador-Guayaq**	**0.94**	**159**	P	**Pg**	**06 37 34.7**	**-0.7**
ABAB	**Ecuador-Univer**	**0.97**	**123**	⇓P	**Pg**	**06 37 35.7**	**-0.2**
ABAB				S	**Sb**	**06 37 49.3**	**+0.4**
FLF1	**Flavio Alfaro-**	**1.03**	**28**	P	**Pg**	**06 37 35.3**	**-1.7**
ALIBE	**La Libertad**	**1.10**	**208**	P	**Pg**	**06 37 37.2**	**-1.1**
SALI	**Salinas**	**1.13**	**216**	⇑P	**Pg**	**06 37 38.0**	**-0.8**
SALI				S	**Sg**	**06 37 53.2**	**-0.3**
MILO	**Milagro-Astudi**	**1.27**	**142**	⇓P	**Pg**	**06 37 39.1**	**-2.5**
MORR	**Playas El Morr**	**1.36**	**180**	P	**Pn**	**06 37 41.4**	**-0.7**
JSCH	**Cashca Tororas**	**1.42**	**108**	⇓P	**Pg**	**06 37 42.6**	**-1.9**
CHSH	**Refugio Sur-Vo**	**1.48**	**99**	P	**Pn**	**06 37 44.3**	**+0.1**
TAMH	**Tambohuasha Ch**	**1.57**	**100**	⇓P	**Pn**	**06 37 45.4**	**0.0**
ARIO	**Riobamba**	**1.68**	**103**	P	**Pn**	**06 37 47.9**	**+1.1**
ILLI	**Illinizas Sur**	**1.69**	**71**	⇑P	**Pn**	**06 37 45.9**	**-1.2**
IGUA	**Igualata**	**1.70**	**97**	⇑P	**Pn**	**06 37 47.7**	**+0.4**
AAM2	**Ambato 2 (Merc**	**1.72**	**90**	P	**Pg**	**06 37 50.3**	**+0.1**
BV15	**Puerto Quito-O**	**1.80**	**38**	P	**Pn**	**06 37 46.6**	**-1.5**
BMAS	**Trigal station**	**1.86**	**97**	P	**Pn**	**06 37 48.3**	**-1.0**
BPAT	**Tungurahua Vol**	**1.91**	**97**	P	**Pn**	**06 37 50.5**	**+0.4**
SLOR	**San Lorenzo -**	**1.91**	**74**	⇓P	**Pn**	**06 37 50.2**	**+0.1**
BULB	**Ulba Tungurahu**	**1.93**	**95**	P	**Pn**	**06 37 46.2**	**-4.0**
SUCR	**Mariscal Sucre**	**1.94**	**71**	P	**Pn**	**06 37 50.5**	**0.0**
BMOR	**Cotopaxi Volca**	**1.94**	**74**	⇓P	**Pn**	**06 37 50.7**	**0.0**
PIS1	**Pisayambo**	**1.95**	**84**	⇓P	**Pn**	**06 37 51.5**	**+0.8**
BREF	**Cotopaxi Volca**	**1.98**	**73**	⇓P	**Pn**	**06 37 51.7**	**+0.5**
VCES	**Cotopaxi**	**1.99**	**76**	P	**Pn**	**06 37 52.3**	**+1.1**
BVC2	**Cotopaxi Volca**	**2.01**	**72**	P	**Pn**	**06 37 52.0**	**+0.4**
JUA2	**San Juan 2**	**2.02**	**59**	⇑P	**Pn**	**06 37 50.8**	**-0.8**
BTAM	**Cotopaxi Volca**	**2.02**	**73**	⇑P	**Pn**	**06 37 52.1**	**+0.4**
PITA	**Cotopaxi Volc**	**2.02**	**70**	⇓P	**Pn**	**06 37 52.2**	**+0.6**
TERV	**Terraza Guagua**	**2.04**	**58**	P	**Pn**	**06 37 51.1**	**-0.9**
TAMB	**Tambo**	**2.04**	**74**	P	**Pn**	**06 37 51.8**	**-0.2**
GGPC	**Guagua Pichinc**	**2.04**	**58**	⇓P	**Pn**	**06 37 51.6**	**-0.4**
TOMA	**Boca Toma-Volc**	**2.04**	**68**	P	**Pn**	**06 37 52.1**	**+0.2**
PINO	**Pino**	**2.04**	**57**	P	**Pn**	**06 37 50.8**	**-1.3**
PIAT	**Ana Tenorio**	**2.08**	**83**	⇓P	**Pn**	**06 37 53.5**	**+1.1**
PIAT	**Ana Tenorio**	**2.08**	**83**	P	**Pn**	**06 37 53.0**	**+0.6**
PIAT				S	**Sn**	**06 38 18.3**	**-0.3**
PCRA	**Pucara 2**	**2.10**	**157**	⇑P	**Pn**	**06 37 52.0**	**-0.6**
YANA	**Yana**	**2.10**	**57**	P	**Pn**	**06 37 51.6**	**-1.1**
PAC1	**Pacto, Paraso**	**2.17**	**45**	P	**Pn**	**06 37 51.5**	**-1.8**
PAC1	**Pacto, Paraso**	**2.17**	**45**	P	**Pn**	**06 37 51.4**	**-1.9**
ANTG	**Antisana-Guama**	**2.21**	**70**	P	**Pn**	**06 37 55.3**	**+1.0**
PULU	**Pululahua**	**2.23**	**55**	P	**Pn**	**06 37 54.4**	**-0.1**
ARNL	**Arenillas**	**2.28**	**173**	P	**Pn**	**06 37 55.2**	**+0.5**
ANTS	**Antisana-Sarah**	**2.29**	**70**	P	**Pn**	**06 37 57.2**	**+1.8**
ANTI	**Antisana**	**2.32**	**69**	P	**Pn**	**06 37 56.7**	**+0.9**
OTAV	**Otavalo**	**2.40**	**51**	P	**Pn**	**06 37 56.0**	**-0.9**
OTAV	**Otavalo**	**2.40**	**51**	P	**Pn**	**06 37 55.5**	**-1.3**
CUSE	**Cuicocha Este**	**2.48**	**51**	P	**Pn**	**06 37 57.6**	**-0.4**
CUSE	**Cuicocha Este**	**2.48**	**51**	P	**Pn**	**06 37 57.7**	**-0.3**
CUSW	**Cuicocha Oeste**	**2.51**	**52**	P	**Pg**	**06 38 05.9**	**+0.6**
CUIC	**Cuicocha-Domo**	**2.51**	**52**	P	**Pn**	**06 37 58.1**	**-0.2**
COTA	**Cotacachi**	**2.55**	**51**	P	**Pn**	**06 37 58.8**	**-0.2**
IMBA	**Imbabura, San**	**2.62**	**54**	P	**Pn**	**06 38 01.9**	**+2.0**
**C

ISC 15 06:48:42.5±1.0, 1°48N±0.10×126°6E±0.1, h35km, n12, σ2§16/12, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.06	131	P	Pn	06 49 03.8	+2.9
LBMI	Labuha	2.30	156	P	Pn	06 49 15.8	-2.1
SGSI	Sangihe	2.43	335	P	Pn	06 49 23.0	+3.3
KMSI	Cibinong	2.74	251	P	Pn	06 49 23.2	-0.8
KAPI	Kappang	9.38	227	Pn	Pn	06 50 56.3	+1.0
	2.0nm,0.3s,baz=51,slow=12,SNR=2.1						
	5.0nm,0.4s						
FITZ	Fitzroy Crossi	19.47	183	P	P	06 53 07.0	+0.6
	0.2nm,0.3s,baz=2.6,slow=9.3,SNR=2.5						
	1.0nm,0.5s						
GUMO	Guam	21.74	56	LR	LR	07 00 40.6	
	comp=Z,16nm,21.1s,baz=286,slow=34						
WRA	Warramunga Arr	22.61	161	P	P	06 53 41.1	+0.8
	2.8nm,0.6s,baz=338,slow=11,SNR=26						
	2.8nm,0.6s						
ASAR	Alice Springs	25.99	165	P	P	06 54 13.4	+1.2
	0.5nm,0.4s,baz=345,slow=7.9,SNR=12						
ASAR				PcP	PcP	06 57 40.5	+0.3
	0.2nm,0.5s,baz=0.5,slow=1.8,SNR=1.9						
	0.5nm,0.4s						
MKAR	Makanchi Array	59.31	326	P	P	06 58 38.1	-2.9
	0.6nm,0.4s,baz=113,slow=7.6,SNR=12						
	0.6nm,0.4s						
KURBB	Kurchatov Arra	63.55	328	P	P	06 59 07.2	-2.2
	0.3nm,0.4s,baz=129,slow=6.5,SNR=5.9						
	0.3nm,0.4s						
VNDA	Vanda	81.23	173	P	P	07 00 55.4	+1.0
	0.3nm,0.5s,baz=338,slow=5.5,SNR=1.8						
	0.3nm,0.5s						

IDC 15 06:49:17.9±1.8, 1.72N×126.60E, h0km, mb3.7/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=123.5km s-min=22.3km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.72	183	P	P	06 53 48.4	-0.7
	0.1nm,0.3s,baz=0.0,slow=11,SNR=2.3						
	1.3nm,0.7s						
WRA	Warramunga Arr	22.83	161	P	P	06 54 23.2	+0.5
	1.4nm,0.5s,baz=341,slow=11,SNR=4.7						
	1.4nm,0.5s						
ASAR	Alice Springs	26.22	165	P	P	06 54 54.6	0.0
	0.6nm,0.5s,baz=345,slow=8.7,SNR=5.0						
	0.6nm,0.5s						
MKAR	Makanchi Array	59.13	326	P	P	06 59 20.2	-0.2
	0.3nm,0.5s,baz=126,slow=7.5,SNR=1.9						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.36	328	P	P	06 59 49.0	+0.1
	0.5nm,0.5s,baz=125,slow=6.0,SNR=1.9						
	0.5nm,0.5s						

IDC 15 06:51:09.1±2.0, 1.82N×126.42E, h0km, mb3.5/4, mbtmp3.6/4, MS3.3/1, Error ellipse: s-maj=194.4km s-min=23.5km az=66.0

DJA 15 06:51:15.3±0.4, 2°N±6°×12°6E±°, h10km, M3.5/7, MLv3.5/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.26	131	P	Pn	06 51 38.4	-0.6
SGSI	Sangihe	2.25	337	P	Pn	06 51 52.7	+0.1
WRA	Warramunga Arr	22.78	160	P	P	06 56 14.5	-3.7
	0.9nm,0.4s,baz=339,slow=10,SNR=5.5						
	0.9nm,0.4s						
ASAR	Alice Springs	26.15	164	P	P	06 56 47.8	-2.2
	0.6nm,0.7s,baz=346,slow=11,SNR=6.1						
	0.6nm,0.7s						
STKA	Stephens Creek	36.28	158	LR	LR	07 16 01.0	
	comp=Z,45nm,20.5s,baz=205,slow=41						
MKAR	Makanchi Array	59.12	326	P	P	07 01 08.6	-7.6
	0.2nm,0.3s,baz=114,slow=6.5,SNR=2.2						
	0.2nm,0.3s						
KURBB	Kurchatov Arra	63.36	328	P	P	07 01 40.6	-4.1
	0.3nm,0.4s,baz=124,slow=6.1,SNR=2.4						
	0.3nm,0.4s						

IDC 15 06:58:18.1±2.0, 1.63N×126.65E, h0km, mb3.7/3, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=113.6km s-min=25.5km az=69.0

DJA 15 06:58:20.9±0.3, 2°N±5°×12°6E±°, h10km, M3.8/6, MLv3.8/6

ISC 15 06:58:22.7±1.2, 1.58N±0.09×126.5E±0.1, h35km, n7, σ0§81/7, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.16	134	P	Pn	06 58 41.8	-0.7
SGSI	Sangihe	2.32	334	P	Pn	06 58 57.7	-0.8
KMSI	Cibinong	2.75	249	P	Pn	06 59 03.8	-0.5
FITZ	Fitzroy Crossi	19.58	183	P	P	07 02 47.4	-0.5
	0.2nm,0.3s,baz=2.5,slow=11,SNR=6.0						
	1.0nm,0.5s						
WRA	Warramunga Arr	22.72	161	P	P	07 03 22.1	+0.3
	1.8nm,0.6s,baz=341,slow=11,SNR=15						
	1.8nm,0.6s						
ASAR	Alice Springs	26.10	165	P	P	07 03 54.1	+0.6
	0.4nm,0.4s,baz=345,slow=7.4,SNR=10						
	0.4nm,0.4s						
MKAR	Makanchi Array	59.21	326	P	P	07 08 21.2	+0.8
	0.4nm,0.4s,baz=121,slow=6.9,SNR=4.0						
	0.4nm,0.4s						

GCG 15 07:02:14.2±0.8, 14°43N×91°88W, h65km±6km, MD3.6, ML3.3, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCA	Catarina	0.47	336	eP	Pn	07 02 26.4	+0.1
SMCA				eS	Sn	07 02 35.8	+0.6
SMCA				IAML		07 02 37.0	
	comp=N,1μm,0.2s						
STG2	El Palmar, Qui	0.49	89	eP	Pn	07 02 26.0	-0.7
STG2				i S	Sn	07 02 35.6	-0.1
STG8	El Palmar, Qui	0.51	87	eP	Pn	07 02 26.3	-0.7
STG8				i S	Sn	07 02 36.4	+0.1
STG8				IAML		07 02 37.0	
	comp=N,1μm,0.2s						
QUEO	Labor Ovalle	0.56	38	eP	Pn	07 02 28.6	+1.0
SOKI	Kika Raxquin	0.60	49	eP	Pn	07 02 28.7	+0.5
FG16	Alotenango, Sa	1.33	96	eP	Pn	07 02 32.9	-4.1
FG16				IAML		07 02 50.8	
	comp=N,1μm,0.2s						
PCG5	San Vicente Pa	1.47	98	eP	Pn	07 02 36.3	-2.5
APG	El Apazote	1.48	67	i P	Pn	07 02 39.5	+0.5
CCIG	Comitan	1.86	352	eP	Pn	07 02 45.4	+1.3

DJA 15 07:06:54.5±0.2, 4°S±2°×10°2E±°, h63km±3km, M5.1/37, mb5.0/37, mB5.6/21, MLv5.1/29, Mw(mB)5.1/21

NEIC 15 07:06:54.2±2.0, 4.45S±0.07×101.78E±0.05, h48km±5km, mb4.8/42, Error ellipse: s-maj=9.6km s-min=7.4km az=179.0

IDC 15 07:06:55.4±0.5, 4.23S×101.97E, h58km±3km, mb4.3/29, mbtmp4.6/30, MS3.3/15, Error ellipse: s-maj=15.3km s-min=9.2km az=63.0

ISC 15 07:06:54.9±0.4, 4°40S±0.05×101°88E±0.05, h58km±4km, n211, σ1§46/211, mb4.7/63, MS3.4/15, 3C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	1.03	44	P	Pn	07 07 14.0	+0.6
MNAI	Manna	1.08	88		Pn	07 07 14.2	+0.3
MNAI	Manna	1.08	88	P	Pn	07 07 14.6	+0.7
MNAI	Manna	1.08	88	P	Pn	07 07 14.5	+0.7
MASI	Maura Aman, Be	1.30	16	P	Pn	07 07 17.7	+0.7
LHSI	Lahat	1.74	71	P	Pn	07 07 24.3	+1.5
LWLI	Liwa	2.26	106	P	Pn	07 07 31.1	+1.1
MDSI	Maura Dua	2.29	92	P	Pn	07 07 31.7	+1.3
KRJI	Kerinci	2.33	350	P	Pn	07 07 32.4	+1.4
PPSI	Pulau Pagai	2.48	311	P	Pn	07 07 34.4	+1.5
KASI	Kota Agung	2.84	113	P	Pn	07 07 38.7	+0.9
KLI	Kotabumi	3.00	99	P	Pn	07 07 39.6	-0.5
PMBI	Palembang	3.24	63	Pn	Pn	07 07 43.5	+0.1
BLSI	Bandar Lampung	3.49	106	P	Pn	07 07 47.9	+1.1
PDSI	Padang	3.75	338	P	Pn	07 07 50.7	+0.4
SISI	Saibi	4.13	318	P	Pn	07 07 56.3	+0.7
PPI	Padang Panjang	4.19	339	P	Pn	07 07 56.8	+0.4
SBJI	Serang	4.56	112	P	Pn	07 08 02.3	+0.8
DSRI	Dabo	4.74	35	P	Pn	07 08 05.8	+1.9
BKNI	Bangkinang	4.77	350		Pn	07 08 04.3	0.0
BKNI	Bangkinang	4.77	350	P	Pn	07 08 05.2	+0.9
BKNI	Bangkinang	4.77	350	P	Pn	07 08 04.7	+0.4
DBJI	Dramaga	5.30	114	P	Pn	07 08 11.2	-0.4
	1.2nm8μm355nm,0.7s						
SKJI	Sukabumi	5.33	119	P	Pn	07 08 12.5	+0.6
PBSI	Pulau Batu	5.62	320	P	Pn	07 08 16.3	+0.3
	1.5nm5μm399nm,0.6s						
MNSI	Madaling Nat	5.65	336	P	Pn	07 08 16.7	+0.3
	1.7nm9μm247nm,0.6s						
CNJI	Cibinong	5.97	119	P	Pn	07 08 20.6	-0.1
	0.9nm7μm178nm,0.7s						
TPI	Tanjungpandan	5.99	74	P	Pn	07 08 21.8	+0.7
BTDF	Bukit Timah Da	6.03	18	P	Pn	07 08 24.4	+2.8
BBJI	Bungbulang	6.50	118	P	Pn	07 08 27.9	-0.1
XMI	Christmas Isla	7.10	148	P	Pn	07 08 31.6	-4.6
GSI	Gunungsitoli	7.11	323		Pn	07 08 35.3	-1.2
GSI	Gunungsitoli	7.11	323	P	Pn	07 08 35.9	-0.5
GSI	Gunungsitoli	7.11	323	P	Pn	07 08 36.0	-0.5
CMJI	Cimerak	7.35	118	P	Pn	07 08 39.4	-0.2
	7μm334nm,0.6s						
KPJI	Karang Pucung	7.60	113	P	Pn	07 08 43.9	+0.8
	0.9nm2μm230nm,0.8s						
RPSI	Rantau Prapat	7.64	337		Pn	07 08 42.6	-1.1
PSI	Prapat	7.74	338	P	Pn	07 08 41.9	-3.3
	21nm,0.3s,baz=183,slow=8.0,SNR=28						
PSI	Prapat	7.74	338	P	Pn	07 08 42.9	-2.3
SNSI	Sinabang, Aceh	8.75	321	P	Pn	07 08 58.7	-0.2
	5μm357nm,1.1s						
IPM	Ipoh	8.86	354		Pn	07 09 02.0	+1.5
IPM	Ipoh	8.86	354	P	Pn	07 09 02.2	+1.7
KCSI	Kotacane, Aceh	8.88	332	P	Pn	07 08 59.5	-1.1
	37nm,0.9s						
COCO	West Island	9.21	212	Pn	Pn	07 09 02.3	-2.7
UGM	Wanagama	9.28	112		Pn	07 09 05.1	-1.0
UGM	Wanagama	9.28	112	P	Pn	07 09 05.9	-0.2
UGM	Wanagama	9.28	112	P	Pn	07 09 05.8	-0.3
	80nm,0.7s						
KULM	Kulim	9.71	353		Pn	07 09 10.9	-1.0
KULM	Kulim	9.71	353	P	Pn	07 09 12.2	+0.2
PCJI	Pacitan	9.98	113	P	Pn	07 09 15.2	-0.5
	92nm,0.4s						
MLSI	Meulaboh, Aceh	10.20	328	P	Pn	07 09 17.1	-1.6
LHMI	Lhok Sumawe	10.76	333	Pn	Pn	07 09 24.8	-1.6
LHMI	Lhok Sumawe	10.76	333	P	Pn	07 09 25.2	-1.2
	2μm85nm,0.8s						
SBUM	Sibu	12.38	57		Pn	07 09 49.0	+0.6
SBUM	Sibu	12.38	57	P	Pn	07 09 52.1	+3.7
ABJI	Asem Bagus	12.74	106	P	Pn	07 09 55.9	+2.5
	134nm,0.9s						
JAGI	Jajag, Banyuwa	12.85	109		Pn	07 09 54.1	-0.8
JAGI	Jajag, Banyuwa	12.85	109	P	Pn	07 09 55.6	+0.7
JAGI	Jajag, Banyuwa	12.85	109	P	Pn	07 09 54.1	-0.8
	3μm63nm,0.7s						
SRBI	Singaraja	13.75	106	P	Pn	07 10 06.3	-0.9
PLAI	Plampang	16.39	106	P	Pn	07 10 38.8	-2.6
	48nm,0.6s						
KAPI	Kappang	17.82	93	LR	LR	07 18 13.1	
	comp=Z,62nm,18.2s,baz=272,slow=38						
WBSI	Waikabubak, Su	18.14	108	P	P	07 11 01.0	-1.7
	45nm,1.1s						
MPSI	Mapaga	18.61	76	P	Pn	07 11 09.3	+0.7
	912nm20nm,0.7s						
MYLDM	Lahad Datu	19.14	60	P	P	07 11 13.3	-0.3
MYLDM	Lahad Datu	19.14	60	P	Pn	07 11 18.2	+3.2
TOLI2	Tolitoli	19.67	74	P	P	07 11 19.9	+0.5
TOLI2				IAmb	IAmb	07 11 20.9	
	comp=Z,21nm,0.7s						
EDFI	Ende, Flores	20.15	103	P	P	07 11 25.5	+0.8
SOEI	Soe	22.84	105	P	P	07 11 52.9	-0.8
SOEI				IAmb	IAmb	07 12 10.7	
	comp=Z,25nm,1.0s						
SOEI	Soe	22.84	105	P	P	07 11 53.5	-0.1
	comp=Z,22nm,0.9s						
CMAR	Chiang Mai Arr	22.90	353	P	P	07 11 52.1	-2.0
	comp=Z,1.5nm,0.3s,baz=184,slow=10,SNR=7.0						
CMAR				PcP	PcP	07 15 43.5	+0.4
	comp=Z,1.4nm,0.3s,baz=165,slow=2.4,SNR=4.6						
CMAR				LR	LR	07 21 21.7	
	comp=Z,33nm,18.7s,baz=175,slow=38						
	comp=Z,1.5nm,0.3s						
CMAR	Chiang Mai Arr	22.90	353	P	P	07 11 51.5	-2.5
PALK	Pallekele	24.11	299	LR	LR	07 20 37.8	
	comp=Z,50nm,19.6s,baz=124,slow=34						
PSA00	Pilbara Seismi	24.40	136	P	P	07 12 09.1	+1.0
	comp=Z,16nm,1.7s						
PSA00	Pilbara Seismi	24.40	136		P	07 12 08.6	+0.5
PSA00				IAmb	IAmb	07 12 32.2	
	comp=Z,48nm,1.6s						
SLVN	Son La	25.65	4		P	07 12 20.4	+0.8
SLVN	Son La	25.65	4	P	P	07 12 22.8	+3.3
FITZ	Fitzroy Crossi	26.94	122	P	P	07 12 31.1	0.0
FITZ	Fitzroy Crossi	26.94	122	P	P	07 12 30.9	-0.2
	comp=Z,4.9nm,0.8s,baz=295,slow=2.3,SNR=7.1						
FITZ				PcP	PcP	07 15 52.7	+0.6
	comp=Z,2.5nm,0.6s,baz=270,slow=2.0,SNR=3.0						
FITZ				LR	LR	07 24 29.0	
	comp=Z,60nm,21.3s,baz=356,slow=39						
	comp=Z,4.9nm,0.8s						
KNRA	Kununurra	28.70	115	P	P	07 12 46.7	-0.2
	comp=Z,8.2nm,0.7s						
H08S2	Diego Garcia H	29.39	262	T	T	07 43 15.0	
	baz=85,slow=76,SNR=860						
H08S3	Diego Garcia H	29.40	262	T	T	07 42 57.8	
	baz=85,slow=76,SNR=501						
H08S1	Diego Garcia H	29.41	262	T	T	07 43 05.4	
	baz=85,slow=76,SNR=894						
AUDHS	Darwin High Sc	29.71	107	P	P	07 12 55.2	-0.6
MTN	Manton Dam	30.09	108	P	P	07 12 57.6	-1.6
	comp=Z,9.0nm,1.0s						
MTN	Manton Dam	30.09	108	P	P	07 12 58.1	-1.1
PZH	PanZhiHua	30.72	360	P	P	07 13 07.9	+3.1
KDU	Kakadu	31.32	107	P	P	07 13 07.7	-2.4
	comp=Z,5.9nm,1.2s						
NWAO	Narrogin (SRO)	31.80	155	P	P	07 13 13.7	-0.4
H01W3	Cape Leeuwin H	32.39	161	T	T	07 47 22.9	
	baz=339,slow=76,SNR=33						
H01W2	Cape Leeuwin H	32.40	161	T	T	07 47 32.7	
	baz=339,slow=76,SNR=40						
H01W1	Cape Leeuwin H	32.40	161	T	T	07 47 23.2	
	baz=339,slow=76,SNR=29						
TWG	Pinlang	32.92	34	P	P	07 13 25.9	+1.9
NACB	Ninganchiao	34.29	33	P	P	07 13 36.8	+0.9
NACB				IAmb	IAmb	07 13 45.0	
	comp=Z,27nm,1.1s						
WB0	Warramunga Arr	35.17	118	P	P	07 13 43.3	-0.3
WB0				IAmb	IAmb	07 14 16.2	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	35.18	119	P	P	07 13 43.6	-0.2
	comp=Z,3.1nm,0.9s,baz=302,slow=9.2,SNR=22						
WRA				PcP	PcP	07 16 14.6	+0.5
	comp=Z,2.2nm,0.6s,baz=299,slow=2.4,SNR=8.3						
WRA				S	S	07 19 06.4	-6.8
	comp=Z,0.2nm,0.4s,baz=286,slow=16,SNR=1.3						
	comp=Z,3.1nm,0.9s						
WRA	Warramunga Arr	35.18	119	P	P	07 13 43.4	-0.3
WRAB	Tennant Creek	35.19	119	P	P	07 13 42.9	-0.9
WRAB				IAmb	IAmb	07 14 02.0	
	comp=Z,8.3nm,0.6s						
WRAB	Tennant Creek	35.19	119	P	P	07 13 43.9	+0.1
WRAB	Tennant Creek	35.19	119	P	P	07 13 43.7	-0.1
WRAB	Tennant Creek	35.19	119	pP	pP	07 13 56.7	-1.5
WC2	Warramunga Arr	35.20	119	P	P	07 13 43.5	-0.3
EVN	Everest	35.30	337	P	P	07 13 45.4	+0.1
EVN				IAmb	IAmb	07 13 54.2	
	comp=Z,6.0nm,0.7s						
WR8	Warramunga Arr	35.33	119	P	P	07 13 44.6	-0.4
WR8				IAmb	IAmb	07 14 00.9	
	comp=Z,8.9nm,0.7s						
WR0	Warramunga Arr	35.37	119	P	P	07 13 45.0	-0.3
ASAR	Alice Springs	36.34	125	P	P	07 13 54.2	+0.5
	comp=Z,3.8nm,0.8s,baz=294,slow=7.9,SNR=40						
ASAR				PcP	PcP	07 16 18.4	+0.9
	comp=Z,2.9nm,0.4s,baz=312,slow=2.5,SNR=14						
ASAR				S	S	07 19 24.8	-6.1
	comp=Z,0.8nm,1.0s,baz=298,slow=15,SNR=2.6						
ASAR				LR	LR	07 30 23.3	
	comp=Z,40nm,19.7s,baz=288,slow=39						
	comp=Z,3.8nm,0.8s						
ASAR	Alice Springs	36.34	125	P	P	07 13 53.6	0.0
AS31	Alice Springs	36.34	125	P	P	07 13 53.9	+0.2
XAN	Xi'an	38.81	9	||P	P	07 14 12.8	-1.5
XAN				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2	Nanjing	39.69	23	eP	P	07 14 24.8	+3.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LYN	LuoYang	40.01	14	P	P	07 14 24.6	+0.3
LYN				pmax	pmax		
	comp=Z,34nm,0.5s						
QIS	Mount Isa	40.04	117	P	P	07 14 25.1	+0.3
	comp=Z,8.8nm,1.2s						
LZDM	Lanzhou Array	40.18	2	P	P	07 14 25.0	-1.0
	comp=Z,0.9nm,0.3s,baz=198,slow=9.1,SNR=1.6						
	comp=Z,0.9nm,0.3s						
COEN	Coen	41.79	106	P	P	07 14 37.8	-1.5
COEN				IAmb	IAmb	07 15 10.9	
	comp=Z,34nm,1.8s						
BBOO	Buckleboo	42.63	136	P	P	07 14 46.2	+0.4
BBOO				IAmb	IAmb	07 16 06.4	
	comp=Z,39nm,1.6s						
MTSU	Mount Surprise	43.67	112	P	P	07 14 54.6	+0.1
	comp=Z,8.1nm,0.9s						
MTSU	Mount Surprise	43.67	112	P	P	07 14 54.9	+0.4
HTT	Hallett	44.98	135	P	P	07 15 05.6	+0.8
	comp=Z,7.2nm,1.9s						
PMG	Port Moresby	45.20	99	P	P	07 15 06.0	-0.7
	comp=Z,13nm,0.7s,baz=268,slow=6.8,SNR=4.1						
PMG				LR	LR	07 36 03.8	
	comp=Z,30nm,21.9s,baz=296,slow=39						
	comp=Z,13nm,0.7s						
PMG	Port Moresby	45.20	99	P	P	07 15 05.7	-1.0
PMG				IAmb	IAmb	07 15 07.0	
	comp=Z,12nm,0.8s						
HHC	Hu-ho-hao-te	45.90	10	eP	P	07 15 16.3	+4.4
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,34nm,4.5s						
CTA	Charters Tower	45.90	114	P	P	07 15 12.4	+0.1
CTA	Charters Tower	45.90	114	P	P	07 15 13.2	+1.0
CTAO	Charters Tower	45.90	114	P	P	07 15 12.6	+0.3
CTAO				IAmb	IAmb	07 15 29.3	
	comp=Z,10nm,0.9s						
CTAO	Charters Tower	45.90	114	P	P	07 15 12.9	+0.7
CTAO	Charters Tower	45.90	114	P	P	07 15 12.5	+0.3
CTAO	Charters Tower	45.90	114	pP	pP	07 15 25.7	-1.1
QLP	Quilpie	46.07	123	P	P	07 15 14.2	+0.7
	comp=Z,30nm,1.1s						
QLP	Quilpie	46.07	123	P	P	07 15 14.8	+1.3
STKA	Stephens Creek	46.16	131	P	P	07 15 15.0	+0.9
	comp=Z,95nm,0.7s						
STKA	Stephens Creek	46.16	131	P	P	07 15 15.3	+1.2
	comp=Z,15nm,0.5s,baz=307,slow=7.8,SNR=34						
STKA				PcP	PcP	07 16 50.3	+1.0
	comp=Z,5.1nm,0.6s,baz=3.4,slow=4.7,SNR=3.5						
STKA				LR	LR	07 36 41.3	
	comp=Z,59nm,18.9s,baz=345,slow=39						
	comp=Z,15nm,0.5s						
STKA	Stephens Creek	46.16	131	P	P	07 15 15.0	+0.9
NIL	Nilore	46.53	327	P	P	07 15 16.7	-0.2
NIL				IAmb	IAmb	07 15 41.2	
	comp=Z,9.8nm,0.7s						
KSRS	Korea Array	48.19	28	P	P	07 15 28.1	-1.6
	comp=Z,3.4nm,0.6s,baz=220,slow=7.4,SNR=9.3						
	comp=Z,3.4nm,0.6s						
JMN	Monobe	48.51	36	P	P	07 15 31.6	-0.7
CMSA	Cobar Meteorol	49.15	129	P	P	07 15 38.6	+1.3
	comp=Z,36nm,1.7s						
CMSA	Cobar Meteorol	49.15	129	P	P	07 15 37.7	+0.4
WMQ	Urumqi	49.68	347	eP	P	07 15 42.8	+1.7
WMQ				sP	sP	07 15 59.4	-3.0
WMQ				PcP	PcP	07 17 03.8	+2.2
WMQ				LR	LR		
	comp=Z,180nm,24.3s						
SONM	Songino Array	52.17	4	P	P	07 16 00.1	+0.3
	comp=Z,11nm,0.6s,baz=185,slow=9.4,SNR=71						
SONM				pP	pP	07 16 14.4	-0.4
	comp=Z,3.1nm,0.6s,baz=186,slow=9.3,SNR=6.2						
SONM				PcP	PcP	07 17 10.9	0.0
	comp=Z,3.2nm,0.4s,baz=187,slow=4.5,SNR=10						
	comp=Z,11nm,0.6s						
ULN	Ulaanbaatar	52.25	4		P	07 15 60.0	-0.5
ULN				IAmb	IAmb	07 16 01.8	
	comp=Z,7.3nm,0.8s						
ULN	Ulaanbaatar	52.25	4	P	P	07 16 00.8	+0.4
ULN	Ulaanbaatar	52.25	4	sP	sP	07 16 19.6	-2.2
ARSB	Arslanbob	52.60	333	P	P	07 16 03.2	0.0
ARSB				IAmb	IAmb	07 16 50.3	
	comp=Z,6.4nm,0.7s						
AAK	Ala-Archa	53.00	335	LR	LR	07 40 51.9	
	comp=Z,22nm,20.2s,baz=174,slow=38						
MJAR	Matsushiro Arr	53.01	37	P	P	07 16 04.0	-2.1
	comp=Z,6.6nm,0.7s,baz=217,slow=7.3,SNR=13						
	comp=Z,6.6nm,0.7s						
CAN	Canberra	53.22	132	P	P	07 16 09.2	+1.4
MKAR	Makanchi Array	53.84	343	P	P	07 16 11.8	-0.2
	comp=Z,4.9nm,0.5s,baz=150,slow=9.4,SNR=55						
MKAR				pP	pP	07 16 26.4	-0.6
	comp=Z,3.5nm,0.5s,baz=152,slow=9.0,SNR=7.5						
MKAR				LR	LR	07 43 02.1	
	comp=Z,33nm,18.3s,baz=194,slow=40						
	comp=Z,4.9nm,0.5s						
BNX	BinXian	54.85	22	||P	P	07 16 19.3	0.0
BNX				pmax	pmax		
	comp=Z,28nm,0.7s						
KK31	Karatay Array	55.14	332	P	P	07 16 20.8	-0.7
KKAR	Karatay Array	55.14	332	P	P	07 16 20.4	-1.1
JMM	Marumori	55.43	37	P	P	07 16 22.2	-1.4
USRK	Ussuriysk Ar.	55.43	26	P	P	07 16 23.4	-0.2
	comp=Z,21nm,0.7s,baz=222,slow=5.9,SNR=31						
USRK				pP	pP	07 16 38.5	-0.2
	comp=Z,3.4nm,0.5s,baz=208,slow=6.1,SNR=2.7						
	comp=Z,21nm,0.7s						
TLY	Talaya	55.89	1	P	P	07 16 26.2	-0.5
TLY				IAmb	IAmb	07 16 53.8	
	comp=Z,5.5nm,0.6s						
HILR	Hailar Array B	55.94	14	P	P	07 16 26.4

	comp=Z,8.6nm,0.6s							
ARTI	**Arti**	**70.19**	**336**	P		**P**	07 18 02.3	**+0.8**
MARD	**Mardin**	**70.23**	**312**	P		**P**	07 18 02.8	**+0.5**
MBAR	**Mbarara**	**71.15**	**271**	LR		LR	07 46 22.0	
	comp=Z,23nm,19.4s,baz=334,slow=33							
KBZ	**Khabaz**	**71.34**	**319**	P		**P**	07 18 08.4	**-0.2**
	comp=Z,3.8nm,0.8s,baz=124,slow=7.0,SNR=6.7							
KBZ				pP		**PcP**	07 18 26.5	**-1.7**
	comp=Z,3.8nm,0.9s,baz=118,slow=5.2,SNR=4.5							
	comp=Z,3.8nm,0.8s							
MATP	**Matopo**	**72.91**	**250**	LR		LR	07 45 33.8	
	comp=Z,24nm,20.0s,baz=232,slow=32							
PETK	**Petropavlovsk-**	**73.93**	**31**	P		**P**	07 18 22.4	**-1.6**
	comp=Z,5.8nm,0.7s,baz=307,slow=1.2,SNR=10							
	comp=Z,5.8nm,0.7s							
BKZ	**Black Stump Fm**	**75.31**	**129**	P		**P**	07 18 32.5	**+0.1**
URZ	**Urewera**	**75.69**	**128**	P		**P**	07 18 34.8	**+0.3**
	comp=Z,6.2nm,0.7s,baz=297,slow=4.5,SNR=3.4							
URZ				LR		LR	07 55 06.9	
	comp=Z,27nm,18.6s,baz=260,slow=38							
	comp=Z,6.2nm,0.7s							
LBTB	**Lobatse**	**75.72**	**245**	LR		LR	07 46 10.7	
	comp=Z,23nm,19.2s,baz=48,slow=31							
BOSA	**Boshof**	**76.16**	**242**	P		**P**	07 18 38.0	**+0.4**
	comp=Z,2.9nm,0.7s,baz=113,slow=4.0,SNR=8.5							
BOSA				LR		LR	07 46 07.4	
	comp=Z,18nm,21.0s,baz=24,slow=31							
	comp=Z,2.9nm,0.7s							
BRTR	**Keskin Array B**	**76.32**	**313**	P		**P**	07 18 37.3	**-0.8**
	comp=Z,2.3nm,0.6s,baz=143,slow=7.4,SNR=12							
BRTR				pP		**pP**	07 18 55.0	**+1.2**
	comp=Z,3.4nm,0.9s,baz=132,slow=7.3,SNR=6.4							
	comp=Z,2.3nm,0.6s							
TIXI	**Tiksi**	**77.93**	**8**			**P**	07 18 44.5	**-1.8**
TIXI				IAmb		IAmb	07 18 45.5	
	comp=Z,19nm,1.4s							
VNDA	**Vanda**	**79.46**	**169**	P		**P**	07 18 56.0	**+1.3**
	comp=Z,2.4nm,0.9s,baz=308,slow=4.8,SNR=13							
	comp=Z,2.4nm,0.9s							
VNDA	**Vanda**	**79.46**	**169**	P		**P**	07 18 55.4	**+0.7**
VNDA	**Vanda**	**79.46**	**169**	P		**P**	07 18 56.3	**+1.6**
VNDA	**Vanda**	**79.46**	**169**	PcP		**PcP**	07 19 04.1	**+1.5**
SBA	**Scott Base**	**80.55**	**169**			**P**	07 19 02.0	**+1.4**
SBA	**Scott Base**	**80.55**	**169**	P		**P**	07 19 03.1	**+2.5**
BUR08	**Bucovina Ar. S**	**84.31**	**319**			**P**	07 19 21.6	**+0.8**
QSPA	**South Pole Qui**	**85.57**	**180**	P		**P**	07 19 31.1	**+4.2**
	comp=Z,2.1nm,0.6s,baz=310,slow=3.4,SNR=19							
FINES	**FINESS Array B**	**87.10**	**332**	P		**P**	07 19 34.8	**+0.6**
	comp=Z,1.4nm,0.4s,baz=109,slow=5.6,SNR=17							
FINES				pP		**pP**	07 19 48.9	**-1.2**
	comp=Z,2.8nm,1.0s,baz=183,slow=3.2,SNR=2.0							
	comp=Z,1.4nm,0.4s							
TROLL	**Troll, Antarti**	**88.73**	**198**	⇑P		**P**	07 19 45.0	**+2.9**
	comp=Z,96nm,1.0s							
ARCES	**ARCESS Array B**	**89.36**	**340**	P		**P**	07 19 44.3	**-0.6**
	comp=Z,3.9nm,0.9s,baz=99,slow=5.9,SNR=12							
ARCES				pP		**pP**	07 20 00.1	**-0.6**
	comp=Z,2.8nm,0.9s,baz=98,slow=5.1,SNR=2.2							
	comp=Z,3.9nm,0.9s							
SNAA	**Sanae**	**90.45**	**198**	⇑P		**P**	07 19 52.5	**+2.5**
	comp=Z,40nm,0.7s							
SNAA	**Sanae**	**90.45**	**198**	P		**P**	07 19 52.3	**+2.3**
	comp=Z,1.8nm,0.8s,baz=129,slow=5.4,SNR=16							
SNAA				pP		**pwP**	07 20 08.4	**+0.2**
	comp=Z,1.1nm,0.8s,baz=192,slow=4.6,SNR=3.2							
	comp=Z,1.8nm,0.8s							
VNA2	**Neumayer--Watz**	**92.07**	**198**	⇑P		**P**	07 19 59.3	**+1.8**
	comp=Z,2.2nm,0.6s,baz=95,slow=4.7							
GERES	**GERESS Array B**	**92.08**	**319**	P		**P**	07 19 58.8	**+0.7**
	comp=Z,0.8nm,0.6s,baz=80,slow=1.5,SNR=4.0							
	comp=Z,0.8nm,0.6s							
HFS	**Hagfors**	**92.88**	**330**	P		**P**	07 20 01.1	**-0.3**
	comp=Z,2.1nm,0.7s,baz=149,slow=6.7,SNR=2.5							
	comp=Z,2.1nm,0.7s							
SPITS	**Spitsbergen Ar**	**93.36**	**348**	P		**P**	07 20 01.7	**-1.6**
	comp=Z,3.9nm,0.7s,baz=134,slow=4.2,SNR=1.3							
	comp=Z,3.9nm,0.7s							
PDAR	**Pinedale Array**	**132.69**	**32**	PKP		**PKiKP**	07 26 04.6	**-0.5**
	comp=Z,0.2nm,0.5s,baz=354,slow=5.2,SNR=1.8							
PDAR				pPKP		**pPKPdf**	07 26 20.5	**0.0**
	comp=Z,0.2nm,0.5s,baz=304,slow=2.7,SNR=2.4							
CPUP	**Villa Florida**	**143.41**	**212**	PKP		**PKPdf**	07 26 22.3	**-1.5**
	comp=Z,0.7nm,0.9s,baz=180,slow=3.0,SNR=3.5							
CPUP				pPKP		**pPKPdf**	07 26 41.0	**+0.7**
	comp=Z,0.7nm,0.9s,baz=135,slow=1.4,SNR=3.5							
BDFB	**Brasilia**	**144.15**	**236**	PKP		**PKPdf**	07 26 25.2	**-0.3**
	comp=Z,4.7nm,0.4s,baz=126,slow=3.1,SNR=14							
BDFB				pPKP		**pPKPdf**	07 26 42.4	**+0.4**
	comp=Z,5.5nm,0.7s,baz=165,slow=7.3,SNR=5.7							
TXAR	**Lajitas Array**	**145.36**	**41**	PKPbc		**PKPab**	07 26 27.7	**+0.4**
	comp=Z,15nm,0.4s,baz=294,slow=0.7,SNR=360							
TXAR				pPKPbc		pPKPbc	07 26 42.4	-1.4
	comp=Z,1.4nm,0.4s,baz=312,slow=1.0,SNR=2.5							
LPAZ	**La Paz**	**157.19**	**205**	PKPab		**PKPab**	07 27 17.5	**+0.7**
	comp=Z,0.8nm,0.7s,baz=162,slow=3.2,SNR=3.7							

IDC 15 07:30:17.5±2.4, 1°91N×126°78E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=199.1km s-min=27.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.95**	**161**	P	P	07 35 22.8	-0.8
	0.4nm,0.5s,baz=340,slow=10,SNR=6.4						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.35**	**165**	P	P	07 35 56.0	+0.5
	0.1nm,0.3s,baz=340,slow=9.8,SNR=5.2						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	07 40 19.7	+0.1
	0.2nm,0.4s,baz=114,slow=7.3,SNR=3.8						
	0.2nm,0.4s						

*HEL **15** 07:32:23.4±0.3, 61°92N×31°33E, h0km, ML1.5, Suspected explosion*
*IDC **15** 07:32:24.5±3.6, 61°91N×31°17E, h0km, mbtmp3.0/2, ML1.7/2, Error ellipse: s-maj=37.2km s-min=13.9km az=118.0*
ISC 15 07:32:20.6±1.8, 61°95N±0°06×31°33E±0°09, h0km, n15, σ1§24/22, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOF	**Joensuu**	**0.97**	**359**	PG	**Pn**	**07 32 41.8**	**+0.3**
	baz=175						
JOF				SG	**Sb**	**07 32 54.3**	**+0.7**
RUF	**Ruokolahti**	**1.25**	**246**	PG	**Pn**	**07 32 45.8**	**+0.5**
	baz=65						
RUF				smax	smax	07 33 01.0	
	comp=Z,4.1nm,0.2s						
RUF				SB	**Sn**	**07 33 02.5**	**-0.3**
NIF	**Nilsia**	**2.17**	**313**	PG	**Pg**	**07 33 03.0**	**+0.8**
	baz=132						
NIF				smax	smax	07 33 28.4	
	comp=Z,4.3nm,0.2s						
VJF	**Virojoki**	**2.31**	**234**	smax	smax	07 33 31.3	
	comp=Z,2.0nm,0.2s						
VJF				SG	**Sg**	**07 33 34.2**	**-0.5**
RMF	**Romuvaara**	**2.37**	**345**	PB	**Pb**	**07 33 04.2**	**+0.2**
RMF				smax	smax	07 33 34.1	
	comp=Z,1.2nm,0.2s						
RMF				SG	**Sg**	**07 33 37.0**	**+0.6**
KAF	**Kangasniemi**	**2.37**	**276**	PG	**Pg**	**07 33 05.4**	**-0.6**
	baz=90						
KAF				smax	smax	07 33 33.6	
	comp=Z,1.8nm,0.2s						
KAF				SG	**Sg**	**07 33 36.2**	**-0.5**
SUF	**Sumiainen**	**2.54**	**290**	PG	**Pg**	**07 33 08.6**	**-0.6**
SUF				smax	smax	07 33 38.8	
	comp=Z,1.3nm,0.2s						
SUF				SG	**Sg**	**07 33 42.4**	**+0.4**
FIA0	**FINESS Array S**	**2.55**	**261**	PB	**Pb**	**07 33 06.8**	**-0.4**
	baz=79						
FIA0				smax	smax	07 33 38.8	
	comp=Z,1.9nm,0.2s						
FIA0				SG	**Sg**	**07 33 41.5**	**-1.0**
FINES	**FINESS Array B**	**2.55**	**261**	Pn	**Pb**	**07 33 07.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=81,slow=15,SNR=9.4						
FINES				Sn	**Sb**	**07 33 39.2**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=73,slow=28,SNR=12						
	comp=Z,0.7nm,0.3s						
KEF	**Keuruu**	**3.05**	**277**	smax	smax	07 33 53.3	
	comp=Z,1.1nm,0.2s						
KEF				SG	**Sb**	**07 33 55.4**	**+2.1**
HEL1	**Helsinki**	**3.60**	**243**	SG	**Sb**	**07 34 12.0**	**+2.8**
ARBE	**Arbavere**	**3.64**	**229**	SN	**Sn**	**07 34 00.3**	**-1.4**
RANF	**Ranua**	**4.54**	**336**	SG	**Sg**	**07 34 44.7**	**-1.7**
I43RU	**DUBNA INFRASON**	**6.04**	**148**	I	I	08 08 30.0	
	baz=336,slow=322,SNR=3.3						
ARCES	**ARCESS Array B**	**7.98**	**345**	Pn	**Pn**	**07 34 19.0**	**+1.3**
	baz=157,slow=12,SNR=2.3						
ARCES				Sn	**Sn**	**07 35 46.0**	**-2.5**
	baz=162,slow=26,SNR=1.3						
ARCES				Lg	Lg	07 36 35.2	
	baz=180,slow=27,SNR=1.1						
	comp=Z,2.6nm,1.0s						

*NNC **15** 07:39:30.7±0.8, 44°94N×78°47E, h0km, mb3.6, mpv3.0, Error ellipse: s-maj=8.0km s-min=3.6km az=132.0*
*SOME **15** 07:39:31.0, 44°88N×78°48E, h10km*
ISC 15 07:39:30.0±1.8, 45°03N±0°07×78°42E±0°06, h9km±13km, n9, σ0§54/16, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**0.71**	**68**	P	**Pb**	**07 39 44.7**	**+0.1**
	6.0nm,0.0s						
KAPS				S	**Sb**	**07 39 54.6**	**0.0**
	56nm,0.1s						
ARXS	**Arharly**	**0.92**	**208**	P	**Pg**	**07 39 47.8**	**+0.1**
	1.0nm,0.1s						
ARXS				S	**Sg**	**07 39 59.3**	**-0.3**
	11nm,0.1s						
ARXS	**Arharly**	**0.92**	**208**	*e*P	**Pg**	**07 39 47.8**	**+0.1**
ARXS				*e*S	**Sg**	**07 39 59.3**	**-0.3**
BLB	**Baldybastay**	**0.93**	**177**	P	**Pg**	**07 39 47.7**	**-0.2**
	9.4nm,0.1s						
BLB				S	**Sg**	**07 39 59.2**	**-0.8**
	16nm,0.3s						
KPKS	**Kokpek**	**1.57**	**173**	P	**Pn**	**07 39 58.2**	**0.0**
	0.5nm,0.2s						
KPKS				S	**Sn**	**07 40 18.0**	**-0.7**
	4.3nm,0.2s						
KTBS	**Karatobe**	**1.81**	**224**	P	**Pb**	**07 40 03.2**	**-0.1**
	0.9nm,0.2s						
KTBS				S	**Sb**	**07 40 26.9**	**+0.8**
	4.4nm,0.3s						
SATY	**Saty**	**1.97**	**180**	Pg	**Pb**	**07 40 06.3**	**+0.3**
	3.2nm,0.1s						
SATY				Lg	Lg	07 40 32.1	
	4.5nm,0.1s						
SHLS	**Shalkode**	**2.02**	**158**	Pg	**Pg**	**07 40 08.6**	**-0.1**
	4.1nm,0.2s						
SHLS				Lg	Lg	07 40 35.9	
	8.7nm,0.5s						
SHLS	**Shalkode**	**2.02**	**158**	*e*P	**Pg**	**07 40 08.6**	**-0.1**
	4.1nm,0.2s						
SHLS				*e*S	**Sg**	**07 40 35.9**	**+1.1**
	8.7nm,0.5s						

*NAO **15** 07:49:39.5, 39°91N×19°97E, h10km, MB3.6*
*TIR **15** 07:49:57.6, 41°46N×20°70E, h119km±2km, Ml4.0/6*
*PRU **15** 07:50:00.4, 41°35N×20°35E, h10km, M4.4*
*PDG **15** 07:50:00.9±0.5, 41°42N×20°65E, h100km±1km, MD3.9/9, ML3.8/11, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*ATH **15** 07:50:01.8, 41°44N×20°70E, h92km±4km, ML3.7/30, Manual Solution by A.Andreou First location: 2019/11/15 07:51:23, This location: 2019/11/15 10:29:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*NEIC **15** 07:50:01.9±1.6, 41°48N±0°02×20°69E±0°07, h96km±9km, mb4.4/13, Error ellipse: s-maj=7.4km s-min=2.1km az=82.0*
*MOS **15** 07:50:01.0±0.8, 41°47N×20°59E, h103km, mb4.3/7, Error ellipse: s-maj=9.8km s-min=5.1km az=77.9*
*IDC **15** 07:50:01.5±1.7, 41°53N×20°67E, h87km±17km, mb3.9/16, mbtmp4.1/24, MS2.5/2, Error ellipse: s-maj=15.3km s-min=9.9km az=138.0*
*SKO **15** 07:50:02.8, 41°44N×20°91E, h21km, ML3.5*
*THE **15** 07:50:02.4, 41°N±3°×2°1E±°, h90km±4km, M3.5/41, MLh3.5/41*
*BEO **15** 07:50:06.9±0.4, 42°05N×20°77E, h7km±2km, ML3.4/18*
ISC 15 07:50:01.3±0.6, 41°49N±0°03×20°74E±0°03, h96km±5km, n328, σ1§64/444, mb4.2/21, 24C-29D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.30**	**311**	⇑Pg	**Pn**	**07 50 15.7**	**+0.2**
PHP				Sg	**Sn**	**07 50 27.5**	**+1.3**
PHP				AML	AML	07 50 28.0	
	15nm,0.3s						
PHP	**Peshkopia**	**0.30**	**311**	P	**Pn**	**07 50 15.5**	**-0.1**
PHP				S	**Sn**	**07 50 25.5**	**-0.6**
OHR	**Ohrid**	**0.38**	**173**	⇑Pg	**Pn**	**07 50 15.4**	**+0.5**
OHR				*i* Sg	**Sn**	**07 50 26.9**	**0.0**
OHR				*e*Lg	Lg	07 50 27.4	
	comp=E,12μm,0.8s						
OHR				*e*Lg	Lg	07 50 27.4	
	comp=N,5μm,0.4s						
TIR	**Tirane**	**0.67**	**258**	P	**Pn**	**07 50 18.5**	**+0.4**
TIR				S	**Sn**	**07 50 30.7**	**0.0**
TIR				AML	AML	07 50 31.1	
	comp=N,9.1nm,0.4s						
TIR	**Tirane**	**0.67**	**258**	⇑*i* Pg	**Pn**	**07 50 18.5**	**+0.4**
TIR				*i* Sg	**Sn**	**07 50 30.9**	**+0.2**
SKO	**Skopje**	**0.71**	**47**	⇓*i* Pg	**Pn**	**07 50 19.1**	**+0.6**
SKO				*i* Sg	**Sn**	**07 50 31.5**	**+0.1**
KBN	**Korca**	**0.86**	**178**	Pg	**Pn**	**07 50 20.5**	**+0.3**
KBN				Sg	**Sn**	**07 50 34.1**	**-0.1**
KBN	**Korca**	**0.86**	**178**	P	**Pn**	**07 50 20.4**	**+0.3**
KBN				S	**Sn**	**07 50 34.1**	**-0.1**
NEST	**Nestorio**	**1.10**	**168**	⇑Pg	**Pn**	**07 50 22.9**	**+0.2**
NEST				Sg	**Sn**	**07 50 39.2**	**+0.5**
NEST				AML	AML	07 50 39.4	
	comp=N,3.5nm,0.2s						
NEST	**Nestorio**	**1.10**	**168**	P	**Pn**	**07 50 22.8**	**+0.1**
NEST				S	**Sn**	**07 50 38.7**	**-0.1**
NEST	**Nestorio**	**1.10**	**168**	P	**Pn**	**07 50 22.7**	**+0.1**
NEST				S	**Sn**	**07 50 38.5**	**-0.2**
ULC	**Ulcinj**	**1.22**	**293**	*e*Pg	**Pn**	**07 50 24.5**	**+0.6**
ULC				*i* Sg	**Sn**	**07 50 41.5**	**+0.5**
PVY	**Plav**	**1.25**	**333**	*e*Pg	**Pn**	**07 50 25.6**	**+1.2**
PVY				*e*Sg	**Sn**	**07 50 43.4**	**+1.5**
PENT	**Pentalofos**	**1.33**	**167**	P	**Pn**	**07 50 25.9**	**+0.5**
PENT				S	**Sn**	**07 50 44.1**	**+0.6**
PENT	**Pentalofos**	**1.33**	**167**	P	**Pn**	**07 50 25.8**	**+0.5**
PENT				S	**Sn**	**07 50 43.9**	**+0.4**
DRME	**Dracevica, Mon**	**1.35**	**302**	⇓*i* Pg	**Pn**	**07 50 26.6**	**+1.0**
DRME				*e*Sg	**Sn**	**07 50 44.3**	**+0.4**
VLO	**Vlora**	**1.39**	**223**	Pn	**Pn**	**07 50 25.9**	**-0.1**
VLO				Sn	**Sn**	**07 50 43.7**	**-0.8**
VLO				AML	AML	07 50 46.2	
	comp=N,10nm,2.2s						
VLO	**Vlora**	**1.39**	**223**	P	**Pn**	**07 50 26.3**	**+0.3**
VLO				S	**Sn**	**07 50 45.0**	**+0.5**
VAY	**Valandovo**	**1.39**	**96**	⇓*i* Pg	**Pn**	**07 50 26.5**	**+0.5**
VAY				*i* Sg	**Sn**	**07 50 44.4**	**-0.2**
VAY				*e*Lg	Lg	07 50 44.6	
	comp=N,692nm,0.9s						
VAY				*e*Lg	Lg	07 50 44.8	
	comp=E,818nm,0.6s						
KZN	**Kozani**	**1.42**	**146**	P	**Pn**	**07 50 26.8**	**+0.4**
KZN				S	**Sn**	**07 50 45.1**	**-0.3**
KZN	**Kozani**	**1.42**	**146**	P	**Pn**	**07 50 26.8**	**+0.4**
KZN				S	**Sn**	**07 50 44.9**	**-0.5**
PDG	**Podgorica**	**1.45**	**311**	Pn	**Pn**	**07 50 27.9**	**+1.2**
PDG				Sn	**Sn**	**07 50 47.1**	**+1.1**
PDG	**Podgorica**	**1.45**	**311**		**Pn**	**07 50 27.4**	**+0.7**
PDG				Sn	**Sn**	**07 50 46.6**	**+0.7**
PDG	**Podgorica**	**1.45**	**311**	⇑P	**Pn**	**07 50 27.7**	**+0.9**
PDG				⇓S	**Sn**	**07 50 46.5**	**+0.5**
PDG	**Podgorica**	**1.45**	**311**	*e*Pg	**Pn**	**07 50 27.6**	**+0.9**
PDG				*e*Sg	**Sn**	**07 50 46.3**	**+0.3**
PDG	**Podgorica**	**1.45**	**311**	⇓*i* Pg	**Pn**	**07 50 27.8**	**+1.1**
PDG				*e*Sg	**Sn**	**07 50 47.1**	**+1.1**
IVA	**Berane**	**1.52**	**336**	⇑*i* Pg	**Pn**	**07 50 29.3**	**+1.6**
IVA				*e*Sg	**Sn**	**07 50 49.2**	**+1.6**
BARS	**Barje**	**1.55**	**31**	⇓*i* Pn	**Pn**	**07 50 29.0**	**+1.0**
BARS				*i* Sn	**Sn**	**07 50 48.5**	**+0.3**
BARS	**Barje**	**1.55**	**31**	*e*Pg	**Pn**	**07 50 28.9**	**+1.0**
BARS				*e*Sg	**Sn**	**07 50 42.6**	**-5.6**
BUM	**Brajici-Budva**	**1.60**	**301**	*e*Pn	**Pn**	**07 50 28.9**	**+0.3**
BUM				*i* Sn	**Sn**	**07 50 50.1**	**+0.7**
KOME	**Kolasin**	**1.64**	**327**	*e*Pn	**Pn**	**07 50 30.7**	**+1.5**
KOME				*i* Sn	**Sn**	**07 50 51.1**	**+0.8**
BOSS	**Bosilegrad**	**1.64**	**52**	*e*Pg	**Pn**	**07 50 30.3**	**+1.2**
BOSS				*e*Sg	**Sn**	**07 50 50.2**	**-0.1**
KNT	**Kendrikon**	**1.66**	**101**	P	**Pn**	**07 50 29.9**	**+0.6**
KNT				S	**Sn**	**07 50 50.4**	**-0.3**
KNT	**Kendrikon**	**1.66**	**101**	⇓*i* Pn	**Pn**	**07 50 29.9**	**+0.6**
KNT				*i* Sn	**Sn**	**07 50 50.1**	**-0.5**
KNT	**Kendrikon**	**1.66**	**101**	P	**Pn**	**07 50 29.9**	**+0.6**
KNT				S	**Sn**	**07 50 50.5**	**-0.2**
KKB	**Krupnik**	**1.82**	**78**	P	**Pn**	**07 50 33.0**	**+1.5**
KKB				S	**Sn**	**07 50 55.5**	**+1.0**
KKB	**Krupnik**	**1.82**	**78**	P	**Pn**	**07 50 33.0**	**+1.5**
KKB				S	**Sn**	**07 50 55.7**	**+1.2**
KKB	**Krupnik**	**1.82**	**78**	⇓*i* Pn	**Pn**	**07 50 33.0**	**+1.5**
KKB				*i* Sn	**Sn**	**07 50 55.3**	**+0.8**
JAN	**Janina**	**1.83**	**177**	P	**Pn**	**07 50 32.7**	**+1.1**
JAN				S	**Sn**	**07 50 54.9**	**+0.2**
JAN	**Janina**	**1.83**	**177**	P	**Pn**	**07 50 32.7**	**+1.1**
NKME	**Niksic**	**1.84**	**314**	⇑*i* Pn	**Pn**	**07 50 32.7**	**+1.0**
NKME				*i* Sn	**Sn**	**07 50 55.6**	**+0.7**
SJES	**Sjenica**	**1.86**	**343**	*e*Pg	**Pn**	**07 50 33.4**	**+1.4**
SJES				*e*Sg	**Sn**	**07 50 51.2**	**-4.2**
THE	**Thessaloniki**	**1.89**	**116**	⇑Pn	**Pn**	**07 50 32.8**	**+0.5**
THE				Sn	**Sn**	**07 50 56.7**	**+0.8**
THE				AML	AML	07 50 57.4	
	comp=E,2.7nm,0.7s						
THE	**Thessaloniki**	**1.89**	**116**	P	**Pn**	**07 50 32.7**	**+0.4**
THE				S	**Sn**	**07 50 55.6**	**-0.3**
THE	**Thessaloniki**	**1.89**	**116**	*i* Pn	**Pn**	**07 50 32.6**	**+0.4**
THE				*i* Sn	**Sn**	**07 50 55.7**	**-0.1**
THE	**Thessaloniki**	**1.89**	**116**	P	**Pn**	**07 50 32.7**	**+0.4**
KEK	**Kerkira**	**1.91**	**202**	Pn	**Pn**	**07 50 36.8**	**+4.2**
KEK				Pn	**Pn**	**07 50 36.8**	**+4.2**
KEK				Sn	**Sn**	**07 50 57.2**	**+0.7**
KEK	**Kerkira**	**1.91**	**202**		**Pn**	**07 50 36.7**	**+4.2**
KEK				Sn	**Sn**	**07 50 58.9**	**+2.5**
LIT	**Litokhoron**	**1.92**	**136**		**Pn**	**07 50 32.2**	**-0.5**
LIT				Sn	**Sn**	**07 50 55.5**	**-1.2**
LIT	**Litokhoron**	**1.92**	**136**	P	**Pn**	**07 50 32.9**	**+0.2**
LIT				S	**Sn**	**07 50 55.9**	**-0.8**
LIT	**Litokhoron**	**1.92**	**136**	⇑*i* Pn	**Pn**	**07 50 32.9**	**+0.2**
LIT				*i* Sn	**Sn**	**07 50 56.1**	**-0.6**
LIT	**Litokhoron**	**1.92**	**136**	P	**Pn**	**07 50 32.9**	**+0.2**
LIT				S	**Sn**	**07 50 55.6**	**-1.1**
TRAN	**Tran**	**1.96**	**46**	P	**Pn**	**07 50 34.6**	**+1.4**
TRAN				S	**Sn**	**07 50 58.1**	**+0.6**
PRMD	**Pramanda**	**1.98**	**172**	P	**Pn**	**07 50 35.0**	**+1.5**
PRMD				S	**Sn**	**07 50 58.9**	**+0.9**
IGT	**Igoumenitsa**	**1.98**	**189**	Pn	**Pn**	**07 50 34.0**	**+0.5**
IGT				Sn	**Sn**	**07 50 57.6**	**-0.4**
IGT	**Igoumenitsa**	**1.98**	**189**	P	**Pn**	**07 50 33.6**	**+0.1**
IGT				S	**Sn**	**07 50 57.6**	**-0.4**
IGT	**Igoumenitsa**	**1.98**	**189**	P	**Pn**	**07 50 33.6**	**+0.1**
IGT				S	**Sn**	**07 50 57.1**	**-0.8**
HORT	**Hortiatis**	**2.00**	**116**	P	**Pn**	**07 50 33.9**	**+0.2**
HORT				S	**Sn**	**07 50 58.4**	**0.0**
HORT	**Hortiatis**	**2.00**	**116**	P	**Pn**	**07 50 34.0**	**+0.2**
GOCS	**Kraljevo Serbi**	**2.08**	**3**	*e*Pg	**Pn**	**07 50 35.7**	**+0.9**
GOCS				*e*Sg	**Sn**	**07 50 55.3**	**-5.0**
SOH	**Sokhos**	**2.08**	**108**	P	**Pn**	**07 50 35.5**	**+0.6**
SOH				S	**Sn**	**07 51 00.6**	**+0.1**
SOH	**Sokhos**	**2.08**	**108**	⇓*i* Pn	**Pn**	**07 50 35.6**	**+0.8**
SOH				*i* Sn	**Sn**	**07 51 00.6**	**+0.1**
SOH	**Sokhos**	**2.08**	**108**	P	**Pn**	**07 50 35.6**	**+0.8**
SOH				S	**Sn**	**07 51 00.5**	**+0.3**
PLE	**Pljevlja**	**2.09**	**332**	⇑*i* Pn	**Pn**	**07 50 36.8**	**+1.8**
PLE				*e*Sn	**Sn**	**07 51 01.8**	**+1.0**
LFKM	**Lefkimmi**	**2.10**	**194**	P	**Pn**	**07 50 35.4**	**+0.4**
LFKM				S	**Sn**	**07 51 00.3**	**-0.6**
IVAS	**Ivanjica**	**2.13**	**348**	*e*Pg	**Pn**	**07 50 36.0**	**+0.5**
IVAS				*e*Sg	**Sn**	**07 50 57.9**	**-3.7**
THL	**Klokotos Trika**	**2.15**	**153**	P	**Pn**	**07 50 35.5**	**-0.2**
THL				S	**Sn**	**07 51 01.2**	**-0.8**
THL	**Klokotos Trika**	**2.15**	**153**	P	**Pn**	**07 50 35.8**	**+0.1**
THL				S	**Sn**	**07 51 01.6**	**-0.4**
BRY	**Bratogost**	**2.16**	**312**	⇓*i* Pn	**Pn**	**07 50 37.0**	**+1.1**
BRY				*i* Sn	**Sn**	**07 51 02.6**	**+0.2**
TREB	**Trebinje**	**2.16**	**305**	*e*Pn	**Pn**	**07 50 35.6**	**-0.2**
VTS	**Vitosha**	**2.17**	**58**	P	**Pn**	**07 50 37.5**	**+1.4**
VTS	**Vitosha**	**2.17**	**58**	P	**Pn**	**07 50 37.6**	**+1.4**
VTS				S	**Sn**	**07 51 03.1**	**+0.3**
TETR	**Tetrakomo, Epi**	**2.18**	**169**	P	**Pn**	**07 50 37.4**	**+1.2**
TETR				S	**Sn**	**07 51 03.4

TEKS eSn **Sn** 07 51 24.0 -2.5
AVAS Avala Beograd 3.21 357 ePn **Pn** 07 50 50.8 +1.1
AVAS eSn **Sn** 07 51 23.2 -3.9
SERG Sergoula 3.23 161 P **Pn** 07 50 50.0 -0.1
DMLN Damoulianata-K 3.26 185 P **Pn** 07 50 49.1 -1.3
KALE Kalithea 3.28 160 P **Pn** 07 50 51.0 +0.3
KALE Kalithea 3.28 160 P **Pn** 07 50 51.2 +0.5
ATAL Atalanti 3.30 147 P **Pn** 07 50 51.2 +0.2
ATAL Atalanti 3.30 147 P **Pn** 07 50 51.4 +0.5
VLS Valsamata 3.31 182 P **Pn** 07 50 49.7 -1.4
VLS Valsamata 3.31 182 P **Pn** 07 50 49.8 -1.4
LKR Lokris 3.32 148 P **Pn** 07 50 52.1 +0.8
LKR Lokris 3.32 148 P **Pn** 07 50 52.0 +0.8
AXS Araxos 3.33 171 P **Pn** 07 50 51.1 -0.2
AXS Araxos 3.33 171 P **Pn** 07 50 50.9 -0.4
AOS Alonnisos 3.34 133 P **Pn** 07 50 51.2 -0.2
MDVR Moldovita 3.37 12 ⇓P **Pn** 07 50 53.4 +1.5
RTZL Ratzakli, Kefa 3.41 180 P **Pn** 07 50 51.6 -0.9
PLVB Pleven 3.44 55 ⇓P **Pn** 07 50 54.9 +2.0
MRVN Minervino Murg 3.45 264 Pn **Pn** 07 50 52.8 -0.2
KDZ Kurdzhali 3.46 86 P **Pn** 07 50 54.5 +1.5
RLS Riolos of Patr 3.47 170 P **Pn** 07 50 53.2 -0.1
HERR Herculane 3.61 19 ⇓P **Pn** 07 50 56.2 +1.1
KLV Kalavryta, Ach 3.61 162 Pn **Pn** 07 50 55.3 +0.1
KLV Kalavryta, Ach 3.61 162 P **Pn** 07 50 55.3 +0.1
KLV Kalavryta, Ach 3.61 162 P **Pn** 07 50 55.1 -0.1
DRO Drossia 3.61 168 P **Pn** 07 50 55.1 0.0
DRO Drossia 3.61 168 P **Pn** 07 50 55.0 -0.2
RDO Rodhopi 3.63 94 Pn **Pn** 07 50 56.2 +0.9
RDO Rodhopi 3.63 94 **Pn** 07 50 56.2 +0.9
RDO Rodhopi 3.63 94 P **Pn** 07 50 56.6 +1.2
RDO Rodhopi 3.63 94 P **Pn** 07 50 56.5 +1.1
ORTH Orthonies,Zaky 3.63 181 P **Pn** 07 50 55.3 -0.2
ORTH Orthonies,Zaky 3.63 181 P **Pn** 07 50 55.2 -0.3
SRE Strehaia 3.65 29 ⇓P **Pn** 07 50 57.1 +1.5
VRSS Vrsac 3.66 7 ePn **Pn** 07 50 56.0 +0.2
VRSS eSn **Sn** 07 51 33.9 -4.0
DIM Dimitrovgrad 3.66 80 P **Pn** 07 50 56.5 +0.7
ACER Acerenza 3.69 261 **Pn** 07 50 55.8 -0.4
ACER Sn **Sn** 07 51 35.2 -3.6
CAPA Cerignola FG 3.72 267 P **Pn** 07 50 56.5 -0.1
FRGS Fruska Gora 3.73 350 ePn **Pn** 07 50 57.1 +0.4
FRGS eSn **Sn** 07 51 33.5 -6.2
SGRT San Giovanni R 3.75 276 Pn **Pn** 07 50 56.6 -0.5
SGRT San Giovanni R 3.75 276 **Pn** 07 50 56.3 -0.9
GUR Goura 3.76 160 P **Pn** 07 50 56.5 -0.7
SMTH Samothraki Isl 3.77 104 P **Pn** 07 50 58.0 +0.7
SMTH Samothraki Isl 3.77 104 P **Pn** 07 50 57.9 +0.7
LTHK Lithakia 3.77 179 P **Pn** 07 50 56.6 -0.8
LTHK Lithakia 3.77 179 P **Pn** 07 50 56.6 -0.8
VIL2 Platees 3.81 148 P **Pn** 07 50 59.2 +1.4
TIP Timpagrande 3.82 234 **Pn** 07 50 57.0 -1.1
TIP Timpagrande 3.82 234 ⇓P **Pn** 07 50 57.3 -0.7
LTK Loutraki 3.86 153 P **Pn** 07 50 58.7 +0.1
SKY Skiros Island 3.91 131 P **Pn** 07 51 00.1 +0.9
STFN Stefani 3.95 146 P **Pn** 07 51 00.3 +0.6
CUC Castrocucco 4.03 250 **Pn** 07 51 00.5 -0.3
ALN Alexandroupoli 4.05 97 Pn **Pn** 07 51 02.1 +1.1
ALN Alexandroupoli 4.05 97 P **Pn** 07 51 02.4 +1.4
ALN Alexandroupoli 4.05 97 P **Pn** 07 51 02.1 +1.1
ELND Elena 4.08 68 ⇓P **Pn** 07 51 03.6 +2.2
BLY Banja Luka 4.17 323 Pn **Pn** 07 51 03.9 +1.2
BLY Banja Luka 4.17 323 ePn **Pn** 07 51 03.3 +0.7
BLY Banja Luka 4.17 323 ⇓P **Pn** 07 51 03.4 +0.7
BZS Buzias 4.17 8 Pn **Pn** 07 51 03.2 +0.5
BZS Buzias 4.17 8 ⇑P **Pn** 07 51 03.8 +1.0
BZS Buzias 4.17 8 P **Pn** 07 51 03.7 +1.0
GZR Gura Zlata 4.17 20 ⇑P **Pn** 07 51 04.2 +1.3
GZR Gura Zlata 4.17 20 P **Pn** 07 51 04.1 +1.3
DION Dionisos Attik 4.20 143 P **Pn** 07 51 04.9 +1.7
DION Dionisos Attik 4.20 143 P **Pn** 07 51 04.2 +1.0
VLY Voula,Athens 4.33 146 P **Pn** 07 51 06.0 +1.1
MET4 Agioi Theodoro 4.37 151 P **Pn** 07 51 05.1 -0.4
ITM Ithomi 4.40 168 Pn **Pn** 07 51 06.0 +0.2
ITM Ithomi 4.40 168 **Pn** 07 51 05.8 0.0
ITM Ithomi 4.40 168 P **Pn** 07 51 05.8 0.0
ITM Ithomi 4.40 168 P **Pn** 07 51 05.7 -0.2
KARY Karystos 4.48 139 P **Pn** 07 51 07.6 +0.7
LOT Lotru 4.53 28 ⇓P **Pn** 07 51 10.2 +2.6
PAOL Paolisi 4.67 266 Pn **Pn** 07 51 10.2 +0.7
ARR Arges 4.80 35 ⇑P **Pn** 07 51 13.4 +2.1
SIRR Siria 4.82 8 ⇑P **Pn** 07 51 14.0 +2.4
CEL Celeste 4.93 231 **Pn** 07 51 12.3 -0.7
MORH Mrgy, Hungar 4.96 343 ePn **Pn** 07 51 13.4 0.0
MORH Mrgy, Hungar 4.96 343 ⇓P **Pn** 07 51 14.6 +1.3
VOIR 5.04 37 ⇑P **Pn** 07 51 17.0 +2.4
VOIR 5.04 37 P **Pn** 07 51 16.9 +2.4
MARR Marisel-Cluj 5.46 17 ⇑P **Pn** 07 51 22.9 +2.6
DRGR 5.49 14 ⇓P **Pn** 07 51 22.8 +2.1
DRGR 5.49 14 P **Pn** 07 51 22.7 +2.1
MLR Muntele Rosu 5.51 42 P **Pn** 07 51 22.8 +1.8
comp=E,10nm,0.5s,baz=258,slow=8.1,SNR=19
MLR S **Sn** 07 52 22.5 -0.4
comp=E,6.9nm,0.5s,baz=207,slow=14,SNR=3.6
MLR LR LR 07 54 09.8
comp=E,23nm,18.5s,baz=283,slow=45
MLR Muntele Rosu 5.51 42 ⇓P **Pn** 07 51 23.8 +2.9
AQU L'Aquila 5.54 281 ePn **Pn** 07 51 23.4 +2.1
CAMP Campotosto 5.56 283 Pn **Pn** 07 51 21.4 -0.2
ISR Istrita 5.58 47 ⇓P **Pn** 07 51 24.9 +3.1
ISR Istrita 5.58 47 P **Pn** 07 51 24.8 +3.1
BOJS Bojanci 5.66 317 *i* Pn **Pn** 07 51 23.5 +0.7
BOJS *i* Sn **Sn** 07 52 23.4 -3.1
GUMA Gualdo di Mace 5.71 288 Pn **Pn** 07 51 23.9 +0.2
NRCA Norcia 5.82 286 **Pn** 07 51 25.1 -0.1
FDMO Fiordimonte 5.88 288 **Pn** 07 51 25.3 -0.7
VRI Vrincioaia 6.16 43 ⇓P **Pn** 07 51 32.8 +3.0
VRI Vrincioaia 6.16 43 P **Pn** 07 51 32.7 +3.0
CESX Cesi 6.18 283 Pn **Pn** 07 51 29.4 -0.5
VAE Valguarnera 6.32 233 P **Pn** 07 51 33.6 +1.6
comp=E,14nm,0.5s,baz=28,slow=14,SNR=1.5
VAE S **Sn** 07 52 43.2 +0.5
comp=E,46nm,0.7s,baz=148,slow=19,SNR=5.5
MURB Monte Urbino 6.34 289 **Pn** 07 51 31.5 -0.6
PSZ Piszkesteto 6.46 355 **Pn** 07 51 34.5 +0.7
PSZ Piszkesteto 6.46 355 ⇑P **Pn** 07 51 35.6 +1.8
PSZ Piszkesteto 6.46 355 P **Pn** 07 51 35.5 +1.8
RAFF Raffo Rosso 6.52 231 Pn **Pn** 07 51 32.7 -1.9
TRI Trieste 6.59 312 Pn **Pn** 07 51 35.4 -0.1
TRI Trieste 6.59 312 P **Pn** 07 51 35.4 -0.1
SOKA Soboth 6.62 324 ePn **Pn** 07 51 36.5 +0.6
comp=E,2.7nm,0.4s,SNR=7.3
SOKA eSn **Sn** 07 52 46.2 -3.7
comp=E,6.0nm,0.6s
OBKA Obir 6.71 320 ePn **Pn** 07 51 38.3 +1.1
comp=E,7.3nm,1.0s
OBKA eSn **Sn** 07 52 51.4 -0.8
comp=E,39nm,1.4s
SABO M.te Sabotino 6.85 313 Pn **Pn** 07 51 40.2 +1.2
ARSA Arzberg 6.87 329 eSn **Sn** 07 52 52.8 -3.0
comp=E,1.2nm,0.3s
BURAR Bucovina Array 6.91 26 Pn **Pn** 07 51 42.0 +2.1
BURAR Bucovina Array 6.91 26 ⇓P **Pn** 07 51 43.0 +3.0
BURAR Bucovina Array 6.91 26 P **Pn** 07 51 42.9 +3.0
BUR08 Bucovina Ar. S 6.93 26 Pn **Pn** 07 51 42.2 +2.0
RONA Rosalia, Austr 6.97 334 eSn **Sn** 07 52 55.9 -2.6
comp=E,2.6nm,0.5s
IDI Anoyia 7.00 151 P **Pn** 07 51 38.1 -3.0
comp=E,1.0nm,0.3s,baz=311,slow=11,SNR=0.9
IDI S Sn 07 52 49.0 -10
comp=E,7.6nm,0.5s,baz=314,slow=16,SNR=11
KECS Kecovo 7.00 359 eP **Pn** 07 51 44.9 +3.9
KECS eS **Sn** 07 52 56.9 -2.1
KECS Kecovo 7.00 359 eP **Pn** 07 51 44.9 +3.9
KECS eS **Sn** 07 52 56.9 -2.1
MYKA Terra Mystica 7.25 318 eSn **Sn** 07 53 03.2 -2.0
comp=E,11nm,0.8s
OSSC Osservatorio P 7.30 289 Pn **Pn** 07 51 45.2 0.0
MODS Modra-Piesok 7.31 342 eP **Pn** 07 51 47.4 +2.1
MODS eS **Sn** 07 53 03.7 -2.9
MODS Modra-Piesok 7.31 342 eP **Pn** 07 51 47.4 +2.1
MODS eS **Sn** 07 53 03.7 -2.9
CONA Conrad Observa 7.31 333 Sn **Sn** 07 53 05.9 -1.0
comp=E,2.9nm,0.5s
JAVC Velka Javorina 7.68 345 eSN **Sn** 07 53 16.9 +1.2
MOA Molln 7.85 326 ePn **Pn** 07 51 53.2 +0.4
comp=E,1.3nm,0.2s
MOA eSn **Sn** 07 53 19.9 0.0
comp=E,8.8nm,0.6s
ABTA Abfaltersbach 7.91 314 ePn **Pn** 07 51 54.0 +0.5
comp=E,4.2nm,1.1s
ABTA eSn **Sn** 07 53 17.1 -4.4
comp=E,10.0nm,0.8s
STHS Stebnicka Huta 7.94 2 eP **Pn** 07 51 56.8 +3.0
STHS eS **Sn** 07 53 21.2 -0.7
STHS Stebnicka Huta 7.94 2 eP **Pn** 07 51 56.8 +3.0
STHS eS **Sn** 07 53 21.2 -0.7
KRUC Moravsky 8.17 339 eSN **Sn** 07 53 28.6 +1.1
LESA Schwarzleotal 8.27 319 ePn **Pn** 07 51 59.0 +0.6
comp=E,2.4nm,0.5s
LESA eSn **Sn** 07 53 28.0 -2.2
comp=E,5.4nm,0.5s
VRAC Vranov 8.34 341 P **Pn** 07 51 59.4 +0.1
comp=E,1.8nm,0.3s,baz=152,slow=17,SNR=2.4
VRAC S **Sn** 07 53 29.6 -2.2
comp=E,3.4nm,0.4s,baz=203,slow=9.3,SNR=2.2
VRAC Vranov 8.34 341 eSN **Sn** 07 53 32.6 +0.8
MORC Moravsky Berou 8.59 346 eSN **Sn** 07 53 37.6 -0.1
CKRC Cesky Krumlov 8.62 330 eSN **Sn** 07 53 37.7 -0.9
WTTA Wattenberg 8.70 315 *i* Pn **Pn** 07 52 05.2 +0.8
comp=E,0.9nm,0.2s
WTTA eSn **Sn** 07 53 37.6 -3.3
comp=E,14nm,0.7s
WATA Walderalm 8.78 315 *i* Pn **Pn** 07 52 06.0 +0.5
comp=E,1.6nm,0.2s
WATA eSn **Sn** 07 53 39.9 -2.8
comp=E,18nm,0.9s
GERES GERESS Array B 8.87 328 P **Pn** 07 52 05.8 -0.9
comp=E,0.4nm,0.3s,baz=146,slow=14,SNR=2.4
GERES S **Sn** 07 53 42.5 -2.4
comp=E,1.0nm,0.5s,baz=141,slow=26,SNR=4.5
SQTA Sankt Quirin 8.91 313 ePn **Pn** 07 52 08.6 +1.4
comp=E,4.6nm,0.6s
SQTA eSn **Sn** 07 53 43.3 -2.4
comp=E,4.8nm,0.6s
MOTA Moosalm 9.04 314 ePn **Pn** 07 52 10.0 +1.0
comp=E,5.5nm,0.8s
MOTA eSn **Sn** 07 53 44.4 -4.6
comp=E,17nm,1.0s
FETA Feichten 9.06 311 eSn **Sn** 07 53 46.8 -2.7
comp=E,13nm,0.6s
FUORN Ofenpass-Fuorn 9.12 308 Pn **Pn** 07 52 11.0 +0.9
KHC Kasperske Hory 9.15 329 eSN **Sn** 07 53 47.8 -3.7
DAVOX Davos/Dischmat 9.43 308 P **Pn** 07 52 13.5 -0.8
comp=E,1.7nm,0.3s,baz=128,slow=18,SNR=3.0
DAVOX S **Sn** 07 53 52.7 -5.8
comp=E,13nm,0.7s,baz=48,slow=21,SNR=6.8
DAVA Damuels 9.69 310 eSn **Sn** 07 54 02.1 -2.7
comp=E,5.9nm,0.5s
MNK Minsk 13.86 18 *i* P **Pn** 07 53 10.1 -3.3
comp=E,20nm,0.7s
MNK *i* P **Pn** 07 53 10.1 -3.3
comp=N,20nm,0.7s
MNK *i* P **Pn** 07 53 10.1 -3.3
comp=Z,7.0nm,0.5s,baz=203
MNK *i* sP P 07 53 36.6 +18
MNK *i* S **Sn** 07 55 41.3 -4.3
MNK *i* LQ LQ 07 57 19.3
MNK *i* LR LR 07 58 18.9
MNK *i* LRM MLR 07 59 27.6
comp=E,155nm,18.9s
MNK *i* LRM MLR 07 59 28.3
comp=N,137nm,16.7s
MNK *i* LRM MLR 07 59 52.7
comp=Z,79nm,13.9s
MNK Minsk 13.86 18 *i* P **Pn** 07 53 10.0 -3.3
MNK *i* S **Sn** 07 55 41.3 -4.3
MNK pmax pmax
comp=E,20nm,0.7s
MNK pmax pmax
comp=N,20nm,0.7s
MNK pmax pmax
comp=Z,7.0nm,0.5s
MNK MLR MLR
comp=E,155nm,19.0s
MNK MLR MLR
comp=N,137nm,17.0s
MNK MLR MLR
comp=Z,79nm,14.0s
NACGM Naroch 14.01 15 ⇓ *i* P **P** 07 53 21.3 +1.3
comp=Z,25nm,0.8s,baz=199
KBZ Khabaz 16.46 75 ⇑ *i* P **P** 07 53 48.8 +1.5
KBZ pmax pmax
comp=Z,2.0nm,0.9s
OBN Obninsk 17.17 32 ⇑ *e*P **P** 07 53 55.4 +0.4
OBN *e*S **Sn** 07 56 57.0 -8.4
OBN pmax pmax
comp=Z,15nm,1.0s
GNI Garni 18.21 86 P **P** 07 54 07.3 +0.6
comp=Z,7.1nm,0.4s,baz=235,slow=6.6,SNR=3.8
GNI Garni 18.21 86 *i* P **Pn** 07 54 09.2 +1.4
ESDC Sonseca Array 18.84 273 P **P** 07 54 14.3 +0.8
comp=Z,0.7nm,0.8s,baz=78,slow=9.6,SNR=10
HFS Hagfors 19.17 349 P **Pn** 07 54 18.0 -0.8
comp=Z,3.2nm,0.4s,baz=163,slow=12,SNR=20
FINES FINESS Array B 20.25 7 P **P** 07 54 29.4 +0.9
comp=Z,3.3nm,0.4s,baz=171,slow=12,SNR=31
comp=Z,3.3nm,0.4s
FINES FINESS Array B 20.25 7 P **P** 07 54 28.8 +0.3
FIA1 FINESS Array S 20.25 7 P **P** 07 54 28.8 +0.3
NAO01 NORSAR Array S 20.30 346 P **P** 07 54 29.8 +0.7
NB2 NORSAR Subarra 20.42 347 P **P** 07 54 31.4 +0.9
comp=Z,1.2nm,0.4s,baz=162,slow=11
NOA NORSAR Array B 20.42 347 P **P** 07 54 31.6 +1.0
comp=Z,2.0nm,0.8s,baz=162,slow=10,SNR=8.3
NOA LR LR 08 04 48.5
comp=Z,20nm,18.5s,baz=345,slow=44
comp=Z,2.0nm,0.8s
NC303 NORSAR Array S 20.57 347 **P** 07 54 32.5 +0.4
NC303 IAmb IAmb 07 54 34.3
comp=Z,18nm,1.1s
EKA Eskdalemuir Ar 20.92 320 P **P** 07 54 36.3 +0.5
comp=Z,1.4nm,0.5s,baz=125,slow=10,SNR=3.6
comp=Z,1.4nm,0.5s
BELG Belogornoye 21.23 50 P **P** 07 54 40.3 +1.2
comp=Z,17nm,0.5s,baz=266,slow=2.7,SNR=7.6
comp=Z,17nm,0.5s
KLMR Klimovskoe 22.53 24 *e*P **P** 07 54 51.1 -1.7
KLMR pmax pmax
comp=Z,12nm,1.1s
AKTO Aktyubinsk 27.17 58 P **P** 07 55 36.6 +1.2
comp=Z,1.7nm,0.6s,baz=266,slow=5.2,SNR=4.4
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 28.22 4 P **P** 07 55 45.0 +0.4
comp=Z,0.6nm,0.4s,baz=188,slow=9.8,SNR=9.9
comp=Z,0.6nm,0.4s
ARCES ARCESS Array B 28.22 4 P **P** 07 55 44.6 0.0
ARCES IAmb IAmb 07 56 01.6
comp=Z,16nm,1.4s
ARTI Arti 28.44 46 P **P** 07 55 46.8 +0.2
ARTI Arti 28.44 46 P **P** 07 55 47.3 +0.6
ARTI 07 56 42.7
ARTI S **S** 08 00 29.4 +2.7
ARTI SS **SnSn** 08 01 58.8 +3.5
TORD Torodi Ar. Bea 32.76 216 P **P** 07 56 26.3 +1.2
comp=Z,8.1nm,0.4s,baz=23,slow=9.7,SNR=3.8
comp=Z,8.1nm,0.4s
UOSS Minazif 33.67 108 P **P** 07 56 33.6 +0.7
UOSS IAmb IAmb 07 57 07.2
comp=Z,6.0nm,1.1s
BORK Borovoye 34.89 53 ⇑ *i*P **P** 07 56 45.6 +2.4
BORK pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 34.94 54 P **P** 07 56 45.5 +1.8
comp=Z,1.4nm,0.3s,baz=287,slow=10,SNR=10
comp=Z,1.4nm,0.3s
SPITS Spitsbergen Ar 36.84 358 P **P** 07 57 00.5 +0.9
comp=Z,1.2nm,0.4s,baz=165,slow=6.0,SNR=5.3
comp=Z,1.2nm,0.4s
KURBB Kurchatov Arra 40.20 57 P **P** 07 57 29.7 +1.8
comp=Z,1.6nm,0.4s,baz=291,slow=9.3,SNR=7.3
comp=Z,1.6nm,0.4s
KURK Kurchatov 40.24 56 P **P** 07 57 29.5 +1.3
KURK Kurchatov 40.24 56 ⇓ *i*P **P** 07 57 30.1 +1.8
KURK pmax pmax
comp=Z,7.0nm,2.0s
DBIC Dimbokro 41.48 220 P **P** 07 57 40.0 +1.2
comp=Z,2.1nm,0.6s,baz=44,slow=9.3,SNR=4.3
comp=Z,2.1nm,0.6s
DBIC Dimbokro 41.48 220 P **P** 07 57 38.7 -0.1
ZAA0 Zalesovo Array 43.41 51 P **P** 07 57 55.2 +1.2
ZAA0 IAmb IAmb 07 57 57.1
comp=Z,4.2nm,0.7s
ZALV Zalesovo Beam 43.41 51 P **P** 07 57 55.5 +1.4
comp=Z,3.9nm,0.5s,baz=275,slow=9.3,SNR=11
comp=Z,3.9nm,0.5s
ZALV Zalesovo Beam 43.41 51 P **P** 07 57 55.0 +0.9
ZALV Zalesovo Beam 43.41 51 *i* P **P** 07 57 56.0 +1.9
ZALV pmax pmax
comp=Z,4.0nm,0.5s
MK31 Makanchi Array 43.50 61 ⇑ *i*P **P** 07 57 56.3 +1.4
MKAR Makanchi Array 43.50 61 P **P** 07 57 56.5 +1.6
comp=Z,1.5nm,0.5s,baz=282,slow=7.8,SNR=19
comp=Z,1.5nm,0.5s
EVN Everest 54.74 82 P **P** 07 59 20.8 -0.9
SONM Songino Array 58.26 52 P **P** 07 59 46.9 +1.2
comp=Z,1.9nm,0.8s,baz=287,slow=7.9,SNR=6.8
comp=Z,1.9nm,0.8s
ULN Ulaanbaatar 58.64 52 ⇓ *i*P **P** 07 59 50.3 +1.9
ULN pmax pmax
comp=Z,3.0nm,1.0s
A36M Sachs Harbour 64.31 349 P **P** 08 00 27.3 +1.4
A36M IAmb IAmb 08 00 49.5
comp=Z,11nm,1.5s
C36M Paulatuk 66.47 347 P **P** 08 00 41.4 +1.5
C36M IAmb IAmb 08 00 41.6
comp=Z,7.7nm,1.4s
CMAR Chiang Mai Arr 69.30 83 P **P** 08 00 59.0 +0.6
comp=Z,1.1nm,0.3s,baz=310,slow=6.7,SNR=6.0
comp=Z,1.1nm,0.3s
F31M Tsiigehtchic 69.68 350 P **P** 08 01 01.0 +1.1
F31M IAmb IAmb 08 01 37.8
comp=Z,6.8nm,1.2s
KSRS Korea Array 77.11 51 P **P** 08 01 44.9 +0.8
comp=Z,1.2nm,0.6s,baz=340,slow=5.0,SNR=4.4
comp=Z,1.2nm,0.6s
NVL N'lazarevskaya 112.13 183 *e*PKIKP **PKiKP** 08 08 17.1 -7.0
NVL pmax pmax
comp=Z,12nm,0.8s

*IDC **15** 07:50:27.6±1.6, 1°.64N×126°.47E, h0km, mb3.9/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=118.6km s-min=20.7km az=69.0*
*DJA **15** 07:50:31.0±0.3, 2°N±4°×12°6E±°, h10km, M3.6/7, MLv3.6/7*
ISC 15 07:50:33.3±1.1, 1°.5N±0°.2×126°.4E±0°.2, h35km, n7, σ0s83/8, mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.22**	**126**	P	**Pn**		**07 50 54.0**	**+0.2**
TNTI				S	**Sn**		**07 51 09.4**	**+0.3**
SGSI	**Sangihe**	**2.34**	**339**	P	**Pn**		**07 51 10.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.48**	**182**	P	**P**		**07 54 57.5**	**+0.2**
	0.1nm,0.3s,baz=0.0,slow=8.1,SNR=2.4							
	1.4nm,0.7s							
WRA	**Warramunga Arr**	**22.69**	**160**	P	**P**		**07 55 31.6**	**-0.4**
	3.0nm,0.9s,baz=340,slow=11,SNR=9.7							
	3.0nm,0.9s							
ASAR	**Alice Springs**	**26.05**	**164**	P	**P**		**07 56 04.5**	**+0.8**
	0.6nm,0.4s,baz=350,slow=16,SNR=13							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**		**08 00 30.2**	**-0.7**
	0.4nm,0.4s,baz=114,slow=7.2,SNR=5.8							
	0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**63.44**	**328**	P	**P**		**08 00 58.3**	**-1.2**
	0.8nm,0.2s,baz=127,slow=6.3,SNR=1.7							
	0.8nm,0.2s							

ASRS 15 07:55:11.0±1.4, 53°.64N×87°.82E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 15 07:55:29.0±1.0, 53°.64N×87°.90E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

IDC 15 07:58:31.9±2.2, 1°.39N×126°.11E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=188.0km s-min=28.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.69**	**160**	P	P		08 03 35.4	+0.1
	0.3nm,0.4s,baz=338,slow=11,SNR=6.0							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**26.04**	**164**	P	P		08 04 06.9	-0.1
	0.2nm,0.5s,baz=339,slow=9.3,SNR=5.9							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**59.13**	**326**	P	P		08 08 34.4	0.0
	0.2nm,0.4s,baz=137,slow=6.9,SNR=1.9							
	0.2nm,0.4s							

*IDC **15** 08:00:05.7±15.0, 22°.81S×179°.22W, h466km±116km, mb3.1/6, mbtmp4.0/7, Error ellipse: s-maj=168.4km s-min=28.5km az=39.0*
ISC 15 08:00:04.7±3.2, 22°.7S±0°.4×179°.3W±0°.3, h450km±, n9, σ1s31/8, mb3.6/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
URZ	**Urewera**	**15.84**	**190**	P	**P**		**08 03 24.5**	**-0.1**
	7.5nm,0.6s,baz=32,slow=14,SNR=1.8							
URZ				S	S		08 05 53.5	-16
	5.4nm,0.7s,baz=10,slow=19,SNR=1.2							
STKA	**Stephens Creek**	**35.79**	**247**	P	**P**		**08 06 24.0**	**-0.5**
	1.7nm,0.6s,baz=107,slow=11,SNR=4.8							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**42.88**	**259**	P	**P**		**08 07 22.4**	**+0.1**
	1.9nm,0.7s,baz=98,slow=7.8,SNR=20							
	1.9nm,0.7s							
WRA	**Warramunga Arr**	**43.15**	**265**	P	**P**		**08 07 24.3**	**-0.1**
	1.9nm,0.7s,baz=102,slow=8.0,SNR=14							
	1.9nm,0.7s							
FITZ	**Fitzroy Crossi**	**51.58**	**264**	P	**P**		**08 08 29.1**	**+0.8**
	1.5nm,0.8s,baz=130,slow=7.9,SNR=1.3							
	1.5nm,0.8s							
QSPA	**South Pole Qui**	**67.41**	**180**	P	**P**		**08 10 16.1**	**+2.1**
	0.9nm,0.6s,baz=357,slow=5.4,SNR=8.6							
MAW	**Mawson**	**79.12**	**200**	P	**P**		**08 11 20.2**	**-0.9**
	1.7nm,1.0s,baz=119,slow=13,SNR=1.4							
	1.7nm,1.0s							
SNAA	**Sanae**	**85.88**	**179**	P	**P**		**08 11 54.0**	**-1.5**
	0.5nm,0.9s,baz=200,slow=12,SNR=7.7							
	0.5nm,0.9s							
HFS	**Hagfors**	**141.46**	**350**	PKhKP	PKPpre		08 18 42.4	
	0.5nm,0.3s,baz=45,slow=4.3,SNR=5.3							

*BJI **15** 08:08:45.8, 1°.05N×126°.39E, h45km, mB5.1/9, mb4.8/43*
*MOS **15** 08:08:47.4±1.0, 1°.62N×126°.35E, h35km, mb5.1/29, Error ellipse: s-maj=12.2km s-min=6.4km az=109.2*
*DJA **15** 08:08:47.0±0.2, 2°N±2°×12°7E±°, h10km, M4.7/17, mB5.2/7, mb4.9/9, MLv4.8/17, Mw(mB)4.6/7*
*NEIC **15** 08:08:49.6±1.9, 1°.56N±0°.06×126°.52E±0°.07, h35km±2km, mb5.0/45, Error ellipse: s-maj=12.6km s-min=9.1km az=226.0*
*IDC **15** 08:08:49.4±2.2, 1°.57N×126°.38E, h41km±19km, mb4.3/25, mbtmp4.5/28, ML4.6/3, MS3.6/17, Error ellipse: s-maj=20.0km s-min=9.1km az=84.0*
ISC 15 08:08:50.2±0.8, 1°.58N±0°.04×126°.55E±0°.05, h47km±7km, n201, σ1s33/204, mb4.8/77, MS3.6/18, 9C-4D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**135**		**Pn**		**08 09 08.1**	**-1.6**
TNTI	**Ternate**	**1.14**	**135**	P	**Pn**		**08 09 08.6**	**-1.1**
TNTI	**Ternate**	**1.14**	**135**	S	**Sn**		**08 09 23.8**	**-0.4**
TNTI	**Ternate**	**1.14**	**135**	P	**Pn**		**08 09 08.4**	**-1.3**
TNTI				S	**Sn**		**08 09 23.6**	**-0.6**
SGSI	**Sangihe**	**2.33**	**334**	P	**Pn**		**08 09 24.8**	**-1.3**
KMSI	**Cibinong**	**2.76**	**249**	P	**Pn**		**08 09 30.8**	**-1.1**
KMSI				S	**Sn**		**08 10 05.7**	**+1.7**
SANI	**Sanana**	**3.65**	**189**	P	**Pn**		**08 09 44.0**	**-0.1**
SANI	**Sanana**	**3.65**	**189**	P	**Pn**		**08 09 42.8**	**-1.3**
SANI				S	**Sn**		**08 10 25.3**	**-0.6**
LUWI	**Luwuk**	**4.59**	**236**		**Pn**		**08 09 57.1**	**0.0**
LUWI	**Luwuk**	**4.59**	**236**	P	**Pn**		**08 09 58.5**	**+1.4**
LUWI	**Luwuk**	**4.59**	**236**	P	**Pn**		**08 09 57.6**	**+0.5**
MRSI	**Marisa**	**4.74**	**257**	P	**Pn**		**08 09 58.8**	**-0.4**
NLAI	**Namlea**	**4.81**	**173**	P	**Pn**		**08 09 59.6**	**-0.6**
MSAI	**Masohi**	**5.43**	**154**	P	**Pn**		08 10 21.8	+13
APSI	**Ampana**	**5.49**	**243**	P	**Pn**		**08 10 09.8**	**+0.3**
DAV	**Davao City (W)**	**5.54**	**350**	P	**Pn**		**08 10 09.5**	**-0.7**
	92nm,0.3s,baz=11,slow=4.6,SNR=2.2							
DAV				S	**Sn**		**08 11 11.1**	**-1.6**

192nm,0.3s,baz=112,slow=13,SNR=1.8
218nm,0.3s
DAV Davao City (W) 5.54 350 Pn Pn 08 10 08.5 -1.7
TOLI2 Tolitoli 5.79 265 Pn 08 10 12.3 -1.3
TOLI2 Tolitoli 5.79 265 P Pn 08 10 14.9 +1.3
MPSI Mapaga 6.77 260 P Pn 08 10 27.1 +0.1
0.2nm2µm59nm,0.7s
FAKI Fak Fak 7.24 128 Pn Pn 08 10 33.7 +0.3
FAKI Fak Fak 7.24 128 P Pn 08 10 33.5 +0.1
0.2nm55nm,1.0s
TTSI Tana Toraja 8.15 236 P Pn 08 10 44.9 -1.1
105nm,0.8s
SPSI Sidrap Palu 8.73 231 P Pn 08 10 55.4 +1.4
0.3nm72nm,0.8s
BNSI Bone 8.76 227 P Pn 08 10 53.6 -0.8
924nm75nm,0.6s
MYLDM Lahad Datu 8.80 294 Pn 08 10 55.6 +0.7
MYLDM Lahad Datu 8.80 294 P Pn 08 10 56.8 +1.9
BKSI Bulukumba 9.39 223 P Pn 08 11 05.4 +2.4
KAPI Kappang 9.44 226 P Pn 08 11 01.7 -1.9
4.8nm,0.3s,baz=29,slow=5.6,SNR=12
KAPI S Sn 08 12 46.4 -2.0
4.6nm,0.3s,baz=61,slow=18,SNR=1.2
9.7nm,0.3s
KAPI Kappang 9.44 226 Pn 08 11 01.3 -2.3
BAKI Biak 9.94 106 P Pn 08 11 21.9 +11
EDFI Ende, Flores 11.35 205 P Pn 08 11 32.6 +2.8
SOEI Soe 11.48 191 Pn Pn 08 11 31.5 -0.2
MTKI Muara Teweh, K 11.92 258 P Pn 08 11 26.2 -11
BATI Baumata 12.05 194 LR LR 08 17 38.0
comp=Z,144nm,18.2s,baz=14,slow=44
PLAI Plampang 13.54 220 P Pn 08 12 01.8 +2.0
SBUM Sibu 14.35 274 Pn Pn 08 12 09.3 -1.5
DRS Darwin Rock St 14.57 163 P Pn 08 12 13.6 0.0
MTN Manton Dam 15.03 163 Pn Pn 08 12 17.4 -2.3
JAGI Jajag, Banyuwa 15.89 231 Pn 08 12 31.6 +0.8
KNRA Kununurra 17.28 173 Pn 08 12 47.0 -1.2
FITZ Fitzroy Crossi 19.57 183 P P 08 13 13.0 -1.4
0.6nm,0.3s,baz=356,slow=6.2,SNR=18
6.4nm,0.7s
FITZ Fitzroy Crossi 19.57 183 P P 08 13 14.0 -0.4
TPUB Ta-pu 22.35 346 P P 08 13 43.5 -0.9
TPUB IAmb IAmb 08 13 46.6
comp=Z,62nm,0.8s
WB0 Warramunga Arr 22.56 160 P P 08 13 45.3 -1.3
WB0 IAmb IAmb 08 13 52.3
comp=Z,34nm,0.5s
COEN Coen 22.57 134 P P 08 13 46.9 +0.1
COEN IAmb IAmb 08 14 05.3
comp=Z,51nm,1.8s
COEN Coen 22.57 134 P P 08 13 46.7 -0.1
WRAB Tennant Creek 22.70 161 P P 08 13 47.3 -0.8
WRAB IAmb IAmb 08 13 52.9
comp=Z,31nm,0.7s
WRAB Tennant Creek 22.70 161 *ce*P P 08 13 50.4 +2.3
WRAB pmax pmax
comp=Z,34nm,0.7s
WRA Warramunga Arr 22.71 161 P P 08 13 47.7 -0.5
comp=Z,32nm,0.8s,baz=338,slow=11,SNR=101
WRA PcP PcP 08 17 39.3 -0.1
comp=Z,0.7nm,0.6s,baz=340,slow=1.8,SNR=2.7
WRA S S 08 17 51.9 -1.7
comp=Z,4.8nm,1.1s,baz=334,slow=17,SNR=6.7
comp=Z,32nm,0.8s
WRA Warramunga Arr 22.71 161 P P 08 13 46.0 -2.2
WRA Warramunga Arr 22.71 161 *i* P P 08 13 47.7 -0.5
WRA pmax pmax
comp=Z,30nm,0.7s
PMG Port Moresby 23.25 118 LR LR 08 26 51.2
comp=Z,213nm,18.5s,baz=329,slow=46
MBWA Marble Bar 23.56 196 P P 08 13 58.8 +2.2
QIZ Qiongzhong 23.85 318 P P 08 14 00.9 +1.5
QIZ S S 08 18 16.1 +3.8
PSA00 Pilbara Seismi 23.92 196 P P 08 13 59.4 -0.6
JOW Kunigami 25.17 4 P P 08 14 12.2 +1.0
QIS Mount Isa 25.44 150 P P 08 14 15.2 +1.3
AS31 Alice Springs 26.09 165 P P 08 14 19.3 -0.4
ASAR Alice Springs 26.09 165 P P 08 14 19.7 0.0
comp=Z,4.7nm,0.5s,baz=344,slow=7.6,SNR=57
ASAR PcP PcP 08 17 46.0 -0.7
comp=Z,0.7nm,0.4s,baz=353,slow=2.1,SNR=4.7
ASAR S S 08 18 47.6 -0.4
comp=Z,1.4nm,1.0s,baz=344,slow=19,SNR=4.1
comp=Z,4.7nm,0.5s
ASAR Alice Springs 26.09 165 P 08 14 19.1 -0.7
GIRL Giralia 26.91 206 P P 08 14 27.5 +0.5
GIRL IAmb IAmb 08 14 45.7
comp=Z,84nm,1.4s
PSI Prapat 27.64 273 LR LR 08 27 14.7
comp=Z,164nm,19.9s,baz=86,slow=40
MEEK Meekatharra 29.08 195 P P 08 14 48.7 +2.3
NJ2 Nanjing 31.17 347 ⇓P P 08 15 07.1 +2.3
NJ2 pmax pmax
comp=Z,16nm,0.5s
CMAR Chiang Mai Arr 31.86 304 P P 08 15 09.4 -1.7
comp=Z,1.3nm,0.3s,baz=122,slow=8.0,SNR=7.0
CMAR LR LR 08 29 52.4
comp=Z,35nm,19.9s,baz=110,slow=40
comp=Z,1.3nm,0.3s
CMAR Chiang Mai Arr 31.86 304 *i* P P 08 15 10.5 -0.6
CMAR pmax pmax
comp=Z,2.0nm,0.3s
JMN Monobe 32.71 11 P P 08 15 19.2 +0.7
BLDU Ballidu 33.36 196 P P 08 15 25.3 +1.2
JHJ Hachijo jima 2 33.75 20 LR LR 08 28 53.5
comp=Z,58nm,19.6s,baz=248,slow=36
PZH PanZhiHua 34.39 318 P P 08 15 32.5 -0.7
PZH pmax pmax
comp=Z,10.0nm,0.8s
BBOO Buckleboo 35.36 166 P P 08 15 43.2 +1.8
NWAO Narrogin (SRO) 35.43 194 P P 08 15 42.0 +0.1
NWAO IAmb IAmb 08 16 38.7
comp=Z,32nm,1.3s
NWAO Narrogin (SRO) 35.43 194 P P 08 15 42.0 +0.1
NWAO pmax pmax
comp=Z,32nm,1.3s
KSAR Wonju Array Be 35.71 2 P P 08 15 45.0 +0.7
KSAR Wonju Array Be 35.71 2 P P 08 15 45.0 +0.7
KSRS Korea Array 35.73 2 P P 08 15 45.2 +0.8
comp=Z,1.6nm,0.6s,baz=70,slow=33,SNR=6.4
comp=Z,1.6nm,0.6s
STKA Stephens Creek 36.20 158 P P 08 15 48.6 +0.1
comp=Z,6.7nm,0.7s,baz=344,slow=8.5,SNR=10
comp=Z,6.7nm,0.7s
STKA Stephens Creek 36.20 158 *i* P P 08 15 49.2 +0.6
XAN Xi'an 36.26 335 ⇓P P 08 15 48.1 -1.0
XAN pmax pmax
comp=Z,19nm,1.3s
MAJO Matsushiro 36.42 16 P P 08 15 50.7 +0.2
MAJO IAmb IAmb 08 15 54.9
comp=Z,43nm,1.5s
MAJO Matsushiro 36.42 16 P P 08 15 50.7 +0.2
MAJO pmax pmax
comp=Z,43nm,1.5s
MJAR Matsushiro Arr 36.42 16 P P 08 15 50.4 -0.1
comp=Z,7.2nm,0.9s,baz=185,slow=9.1,SNR=12
MJAR LR LR 08 30 50.1
comp=Z,61nm,20.5s,baz=194,slow=36
comp=Z,7.2nm,0.9s
MJB9 Matsu-Tunnel 36.43 16 P P 08 15 50.5 +0.1
MJB9 IAmb IAmb 08 15 55.9
comp=Z,42nm,1.5s
HTT Hallett 36.72 163 P P 08 15 54.8 +1.7
DL2 Dalian 37.42 354 P P 08 16 02.8 +3.9
DL2 pmax pmax
comp=Z,20nm,0.5s
JMM Marumori 38.41 18 P P 08 16 07.9 +0.7
LZH Lanzhou 40.27 331 *eP* P 08 16 24.3 +1.3
LZH pP pP 08 16 32.4 -2.8
LZH pmax pmax
comp=Z,26nm,1.0s
SHL Shillong 41.04 309 P P 08 16 27.6 -1.9
SHL IAmb IAmb 08 16 29.5
comp=Z,14nm,0.7s
SHL Shillong 41.04 309 P P 08 16 27.6 -1.9
SHL pmax pmax
comp=Z,14nm,0.7s
HHC Hu-ho-hao-te 41.38 343 *eP* P 08 16 35.4 +3.4
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,220nm,5.1s
CN2 Changchun 42.05 359 *eP* P 08 16 41.1 +3.8
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Ar. 42.72 6 P P 08 16 42.5 -0.2
comp=Z,6.1nm,0.7s,baz=200,slow=8.2,SNR=7.2
comp=Z,6.1nm,0.7s
H11S3 WAKE ISLAND Hy 42.79 64 T T 09 03 27.3
baz=251
H11S2 WAKE ISLAND Hy 42.80 64 T T 09 04 04.0
baz=251
H11S1 WAKE ISLAND Hy 42.80 64 T T 09 04 07.6
baz=251
XLT XiLinHaoTe 43.16 349 *eP* P 08 16 47.3 +0.9
XLT pmax pmax
comp=Z,21nm,0.7s
XLT pmax pmax
comp=Z,150nm,5.9s
ASAJ Asahikawa 44.69 16 P P 08 16 59.6 +1.0
ASAJ pmax pmax
comp=Z,109nm,1.4s
JKA Kamikawa-asahi 44.69 16 P P 08 16 59.6 +1.0
GTA Gaotai 44.86 330 *eP* P 08 17 00.3 +0.2
GTA pP pP 08 17 10.4 -2.0
GTA PcP PcP 08 18 43.1 +1.8
GTA pmax pmax
comp=Z,6.0nm,0.7s
PALK Pallekele 46.04 279 LR LR 08 38 35.6
comp=Z,107nm,20.6s,baz=99,slow=39
EVN Everest 46.15 308 P P 08 17 10.2 -1.0
EVN IAmb IAmb 08 17 11.9
comp=Z,10nm,0.8s
HILR Hailar Array B 48.15 354 P P 08 17 25.9 +0.2
comp=Z,2.4nm,0.4s,baz=167,slow=7.1,SNR=5.2
HILR PcP PcP 08 18 52.1 -0.5
comp=Z,1.6nm,0.4s,baz=157,slow=9.4,SNR=2.4
comp=Z,2.4nm,0.4s
HEH HeiHe 48.50 1 *eP* P 08 17 28.8 +0.5
HEH pmax pmax
comp=Z,9.0nm,0.9s
ULN Ulaanbaatar 49.10 343 P P 08 17 33.3 +0.1
ULN IAmb IAmb 08 17 35.7
comp=Z,6.8nm,0.8s
ULN Ulaanbaatar 49.10 343 *ce*P P 08 17 34.1 +0.9
ULN pmax pmax
comp=Z,9.0nm,1.0s
SONM Songino Array 49.27 342 P P 08 17 33.9 -0.5
comp=Z,4.7nm,0.7s,baz=152,slow=8.3,SNR=16
SONM LR LR 08 39 22.0
comp=Z,144nm,20.8s,baz=126,slow=37
comp=Z,4.7nm,0.7s
HYBB Hyderabad (bro 49.71 292 *eP* P 08 17 38.1 -0.1
TLY Talaya 53.51 342 P P 08 18 06.9 +0.9
WMQ Urumqi 54.39 326 *eP* P 08 18 14.4 +1.8
WMQ pmax pmax
comp=Z,30nm,1.1s
PEA0B Petropavlovsk- 57.48 22 P P 08 18 35.0 +0.6
PEA0B Petropavlovsk- 57.48 22 P P 08 18 35.0 +0.6
PEA0B pmax pmax
comp=Z,112nm,1.5s
PETK Petropavlovsk- 57.48 22 P P 08 18 35.3 +0.9
comp=Z,3.6nm,0.5s,baz=189,slow=6.2,SNR=16
comp=Z,3.6nm,0.5s
PETK Petropavlovsk- 57.48 22 P P 08 18 35.8 +1.4
PETK Petropavlovsk- 57.48 22 P P 08 18 35.8 +1.4
DGZ Jazzator, Alta 58.38 331 *i* P P 08 18 41.0 0.0
DGZ pmax pmax
comp=Z,6.0nm,1.3s
NIL Nilore 59.11 309 P P 08 18 45.5 -0.7
NIL IAmb IAmb 08 18 47.2
comp=Z,6.7nm,0.7s
NIL Nilore 59.11 309 P P 08 18 45.5 -0.7
NIL pmax pmax
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 59.22 326 *ce*P P 08 18 46.6 -0.2
MKAR Makanchi Array 59.22 326 P P 08 18 46.1 -0.6
comp=Z,6.5nm,0.5s,baz=120,slow=7.6,SNR=43
MKAR PcP PcP 08 19 33.7 -1.0
comp=Z,3.6nm,0.8s,baz=117,slow=6.9,SNR=4.2
comp=Z,6.5nm,0.5s
MKAR Makanchi Array 59.22 326 *i* P P 08 18 46.0 -0.8
MKAR pmax pmax
comp=Z,7.0nm,0.5s
TARG Taragay, Kyrgy 59.24 319 P P 08 18 47.9 +0.5
TARG IAmb IAmb 08 18 59.9
comp=Z,7.4nm,0.8s
TARG Taragay, Kyrgy 59.24 319 P P 08 18 47.9 +0.5
TARG pmax pmax
comp=Z,7.0nm,0.8s
MAKZ Makanchi 59.41 326 P P 08 18 47.0 -1.0
YAK Yakutsk 60.35 2 LR LR 08 45 24.5
comp=Z,33nm,22.0s,baz=146,slow=36
YAK Yakutsk 60.35 2 *eP* P 08 18 55.1 +1.0
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.0s
AAK Ala-Archa 61.84 319 *i* P P 08 19 05.1 +0.3
AAK pmax pmax
comp=Z,3.0nm,0.9s
ARSB Arslanbob 62.29 317 P P 08 19 06.7 -1.2
ARSB IAmb IAmb 08 20 10.2
comp=Z,5.5nm,0.8s
ARSB Arslanbob 62.29 317 P P 08 19 06.7 -1.2
ARSB pmax pmax
comp=Z,6.0nm,0.8s
ZALV Zalesovo Beam 62.42 334 P P 08 19 06.2 -2.0
comp=Z,1.7nm,0.6s,baz=136,slow=6.8,SNR=5.3
comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam 62.42 334 P P 08 19 07.6 -0.7
ZALV Zalesovo Beam 62.42 334 P P 08 19 07.6 -0.7
KBL Kabul 62.70 308 P P 08 19 09.9 -0.9
KBL IAmb IAmb 08 19 11.2
comp=Z,12nm,0.7s
KBL Kabul 62.70 308 P P 08 19 10.0 -0.9
KBL pmax pmax
comp=Z,13nm,0.7s
GAR Garm 63.26 313 P P 08 19 13.0 -1.3
KURBB Kurchatov Arra 63.45 328 P P 08 19 14.7 -0.6
comp=Z,10nm,0.8s,baz=126,slow=6.2,SNR=44
comp=Z,10nm,0.8s
KURK Kurchatov 63.46 328 P P 08 19 14.8 -0.4
KURK Kurchatov 63.46 328 *ce*P P 08 19 14.8 -0.4
KURK pmax pmax
comp=Z,27nm,0.8s
KURK Kurchatov 63.46 328 P P 08 19 14.7 -0.6
CHGR Chuyangaron 63.98 313 P P 08 19 18.5 -0.6
CHGR IAmb IAmb 08 19 20.3
comp=Z,25nm,1.1s
CHGR Chuyangaron 63.98 313 P P 08 19 18.5 -0.6
CHGR pmax pmax
comp=Z,25nm,1.1s
BVAR Borovoye Array 69.02 327 P P 08 19 50.4 -0.5
comp=Z,2.7nm,0.4s,baz=145,slow=10,SNR=17
comp=Z,2.7nm,0.4s
BORK Borovoye 69.07 327 *ce*P P 08 19 51.0 -0.2
BORK pmax pmax
comp=Z,17nm,1.7s
BORK Borovoye 69.07 327 P P 08 19 51.9 +0.8
TIXI Tiksi 69.98 1 LR LR 08 51 50.7
comp=Z,38nm,21.9s,baz=192,slow=37
TIXI Tiksi 69.98 1 P P 08 19 56.6 +0.2
TIXI IAmb IAmb 08 20 03.9
comp=Z,36nm,1.9s
TIXI Tiksi 69.98 1 *ce*P P 08 19 57.1 +0.7
TIXI pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 69.98 1 P P 08 19 56.8 +0.4
BILL Bilibino 71.67 15 *i* P P 08 20 05.9 -0.8
BILL pmax pmax
comp=Z,6.0nm,1.6s
AB31 Akbulak array 73.70 321 P 08 20 18.4 -0.8
SVE Sverdlovsk 75.70 329 *eP* P 08 20 30.6 0.0
ARTI Arti 76.73 328 *c* iP P 08 20 35.6 -0.9
ARTI 08 23 24.4
ARTI S S 08 30 21.4 +1.4
ARTI SS SS 08 35 15.5 -1.0
ARTI pmax pmax
comp=Z,26nm,1.5s
ARTI Arti 76.73 328 P P 08 20 36.0 -0.5
RAYN Ar Rayn 81.17 293 P P 08 21 00.6 -0.9
RAYN IAmb IAmb 08 21 03.4
comp=Z,6.7nm,0.8s
RAYN Ar Rayn 81.17 293 P P 08 21 00.6 -0.9
RAYN pmax pmax
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 81.17 293 P P 08 20 59.5 -2.1
VNDA Vanda 81.33 173 P P 08 21 01.9 +0.7
comp=Z,2.6nm,0.7s,baz=320,slow=7.3,SNR=13
comp=Z,2.6nm,0.7s
VNDA Vanda 81.33 173 P P 08 21 01.9 +0.7
VNDA Vanda 81.33 173 P P 08 21 02.2 +1.0
MAW Mawson 81.69 200 P P 08 21 02.4 -0.8
comp=Z,3.5nm,1.2s,baz=90,slow=12,SNR=1.7
MAW LR LR 08 55 19.6
comp=Z,17nm,19.1s,baz=70,slow=34
comp=Z,3.5nm,1.2s
KIRV Kirov 81.96 329 *ce*P P 08 21 05.4 +0.5
BELG Belogornoye 82.00 323 *i* P P 08 21 05.1 -0.1
BELG pmax pmax
comp=Z,5.0nm,0.9s
SBA Scott Base 82.24 172 P P 08 21 08.7 +2.7
SBA Scott Base 82.24 172 P P 08 21 08.7 +2.7
SBA pmax pmax
comp=Z,3.0nm,1.0s
L18K Granite Mounta 82.45 27 P P 08 21 08.2 +0.8
E19K Redstone River 83.28 22 P P 08 21 12.9 +1.3
E19K IAmb IAmb 08 21 15.2
comp=Z,18nm,0.9s
OHAK Old Harbor 83.35 33 P P 08 21 14.2 +2.1
Q19K Cape Douglas, 83.39 31 P P 08 21 14.5 +2.2
KBZ Khabaz 84.33 314 P P 08 21 16.6 -0.8
comp=Z,2.9nm,0.7s,baz=121,slow=7.8,SNR=5.8
comp=Z,2.9nm,0.7s
KBZ Khabaz 84.33 314 *ce*P P 08 21 18.0 +0.6
KBZ pmax pmax
comp=Z,6.0nm,1.4s
KIV Kislovodsk 84.49 314 *eP* P 08 21 18.2 -0.2
KIV pmax pmax
comp=Z,10.0nm,1.0s
SHA1 Shidzhatmaz 84.50 314 *i* P P 08 21 18.5 -0.2
STLK Strandline Lak 84.61 28 P P 08 21 19.4 +0.8
STLK IAmb IAmb 08 22 40.3
comp=Z,28nm,1.6s
GURO Guroymak-BITLI 84.73 308 P P 08 21 20.0 +0.1
VRH Novokhopyorsk 85.53 321 *eP* P 08 21 18.7 -4.6
VRH pmax pmax
comp=Z,20nm,0.9s
E23K Chandalar 86.23 22 P P 08 21 26.6 0.0
E23K IAmb IAmb 08 21 29.8
comp=Z,6.1nm,0.9s
SOC Sochi 86.63 313 *eP* P 08 21 26.3 -2.6
SOC *e* 08 24 47.6
SOC *eS* SKSac 08 31 49.1 -2.9
SOC *eSS* SS 08 37 42.4 -1.9
SOC *eSSS* SSS 08 41 07.5
SOC pmax pmax
comp=Z,38nm,0.9s
VORD Divnogorie 87.06 321 *eP* P 08 21 28.5 -2.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
ILAR Eielson Array 87.11 25 P P 08 21 30.3 -0.5
comp=Z,0.3nm,0.5s,baz=245,slow=5.2,SNR=5.2
comp=Z,0.3nm,0.5s
VSR Storozhevoye 87.14 321 *eP* P 08 21 28.2 -3.0
VSR pmax pmax
comp=Z,10.0nm,0.9s
KLMR Klimovskoe 87.18 331 *eP* P 08 21 29.0 -2.2
KLMR pmax pmax
comp=Z,21nm,1.4s
LPSR Galich'ya Gora 87.31 322 *eP* P 08 21 31.4 -0.6
LPSR pmax pmax
comp=Z,20nm,1.0s
KIBK Kibwezi 88.57 268 P P 08 21 39.2 +0.2
KIBK IAmb IAmb 08 21 59.3
comp=Z,9.4nm,1.2s
OBN Obninsk 88.71 325 ⇓*eP* P 08 21 38.9 +0.3
OBN *e* 08 25 08.1
OBN pmax pmax
comp=Z,11nm,0.5s
OBN MLR MLR
comp=Z,62nm,12.0s
ASF Jabal al Asfar 88.88 302 LR LR 09 05 57.0
comp=Z,16nm,21.9s,baz=155,slow=39
KMBO Kilima Mbogo 89.33 269 P P 08 21 42.4 -0.4
comp=Z,2.3nm,0.4s,baz=108,slow=12,SNR=1.6
comp=Z,2.3nm,0.4s
BCAR Beaver Creek A 89.36 27 P P 08 21 41.1 -0.5
MMAI Mount Meron Ar 90.12 303 P P 08 21 45.6 -0.3
comp=Z,2.6nm,0.6s,baz=144,slow=5.4,SNR=4.8
comp=Z,2.6nm,0.6s
SYO Syowa Base 90.37 201 ⇓*eP* P 08 21 47.5 +1.5
EIL Elat 90.62 300 LR LR 09 06 44.4
comp=Z,41nm,20.6s,baz=166,slow=38
BRTR Keskin Array B 91.25 310 P P 08 21 49.0 -2.1
comp=Z,1.1nm,0.7s,baz=110,slow=4.8,SNR=5.3
BRTR LR LR 09 09 39.0
comp=Z,18nm,18.3s,baz=98,slow=40
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 91.25 310 *i* P P 08 21 51.9 +0.8
BRTR pmax pmax
comp=Z,1.0nm,0.8s
QSPA South Pole Qui 91.50 180 P P 08 21 51.8 +0.2
comp=Z,0.8nm,1.0s,baz=260,slow=1.3,SNR=8.0
comp=Z,0.8nm,1.0s
SPITS Spitsbergen Ar 92.54 349 P P 08 21 55.8 -0.3
comp=Z,6.2nm,0.9s,baz=46,slow=4.2,SNR=6.0
comp=Z,6.2nm,0.9s
AKASG Malin Array Be 93.44 321 P P 08 21 59.7 -1.0
comp=Z,0.6nm,0.5s,baz=75,slow=4.7,SNR=2.5
AKASG LR LR 09 08 34.0
comp=Z,50nm,18.3s,baz=340,slow=38
comp=Z,0.6nm,0.5s
FINES FINESS Array B 93.63 332 P P 08 21 59.8 -1.6
comp=Z,1.1nm,0.8s,baz=58,slow=5.0,SNR=6.2
comp=Z,1.1nm,0.8s
FINES FINESS Array B 93.63 332 *i* P P 08 22 02.2 +0.8
FINES pmax pmax
comp=Z,2.0nm,0.6s
MNK Minsk 93.77 325 *i* P P 08 22 00.3 -1.8
MNK *i* PPP PPP 08 27 46.3
MNK *i* S SKSac 08 32 31.9 -1.1
MNK *i* PS PS 08 34 25.8 -1.9
MNK *i* SS SS 08 39 27.1 +0.3
MNK *i* SSS SSS 08 43 08.4
MNK pmax pmax
comp=N,11nm,0.6s
MNK pmax pmax
comp=E,15nm,1.0s
MNK pmax pmax
comp=Z,11nm,0.9s
MNK MLR MLR
comp=N,145nm,19.0s
MNK MLR MLR
comp=Z,89nm,16.0s
MNK MLR MLR
comp=E,146nm,19.0s
DLBC Dease Lake 95.67 31 LR LR 09 01 10.5
comp=E,72nm,21.3s,baz=274,slow=33
MBAR Mbarara 95.83 270 LR LR 09 04 22.6
comp=E,23nm,18.4s,baz=83,slow=35
TXAR Lajitas Array 123.03 53 PKP PKPdf 08 27 42.3 -0.1
comp=E,0.5nm,0.9s,baz=329,slow=4.2,SNR=2.9

GCG **15** *08:11:21.9±1.2, 13.71N×89.25W, h13km±427km, MD3.8, ML3.0*
SNET **15** *08:11:21.2±1.3, 13.71N×89.23W, h8km, ML2.9*
CATAC **15** *08:11:21.5±0.4, 14.1N±1.1°×89.2W±0.3°, h7km±2km, M3.0/17, MLv3.0/17, Error ellipse: s-maj=3.2km s-min=1.8km az=11.4, confirmed*
ISC 15 08:11:21.8±0.9, 13.72N±0.02°×89.22W±0.02°, h9km±4km, n62, σ0.60/64, 5C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UEES	Universidad Ev	0.02	252	P	Pg	08 11 23.4	0.0
UEES	Universidad Ev	0.02	252	S	Sg	08 11 24.7	+0.1
UESS	Universidad de	0.02	94	⇑*i*P	Pg	08 11 23.5	+0.1
UTEC	Universidad Te	0.03	135	P	Pg	08 11 23.4	-0.1
UTEC	Universidad Te	0.03	135	S	Sg	08 11 24.6	0.0
PIC2	El Picacho	0.04	305	*eP*	Pg	08 11 24.0	+0.2
PIC2				*eS*	Sg	08 11 26.0	+0.9
IGN	Direccin Gen	0.05	99	*eP*	Pg	08 11 23.8	+0.1
IGN	Direccin Gen	0.05	99	P	Pg	08 11 23.7	+0.1
IGN	Direccin Gen	0.05	99	S	Sg	08 11 25.4	+0.4
BOQS	Boqueron	0.06	283	*eP*	Pg	08 11 24.0	+0.1
UDBS	Universidad Do	0.07	96	⇑*i*P	Pg	08 11 24.0	+0.2
UDBS	Universidad Do	0.07	96	P	Pg	08 11 24.1	+0.2
UDBS	Universidad Do	0.07	96	S	Sg	08 11 25.8	+0.5
PMON	Piamonte	0.09	264	S	Sg	08 11 26.3	+0.4
PMON	Piamonte	0.09	264	P	Pg	08 11 24.4	+0.3
LOMA	Loma Larga	0.09	147	⇓*i*P	Pg	08 11 24.0	-0.2

LOMA	Loma Larga	0.09	147	S	Sg	08 11 26.1	+0.2
LOMA	Loma Larga	0.09	147	P	Pg	08 11 24.1	-0.2
LFU	La Fuente	0.11	76	⇑*i*P	Pg	08 11 24.8	+0.4
PANCS	Alcalda de	0.12	159	*i*P	Pg	08 11 24.2	-0.3
PANCS	Alcalda de	0.12	159	S	Sg	08 11 26.4	-0.1
PANCS	Alcalda de	0.12	159	P	Pg	08 11 24.3	-0.3
LFRS	El Faro	0.18	122	*i*P	Pg	08 11 25.8	+0.2
JAYA	Jayaque - finc	0.23	253	⇑*i*P	Pg	08 11 26.6	+0.1
JAYA	Jayaque - finc	0.23	253	*i*P	Pg	08 11 26.6	+0.1
JAYA	Jayaque - finc	0.23	253	P	Pg	08 11 26.6	+0.1
JAYA	Jayaque - finc	0.23	253	S	Sg	08 11 30.5	+0.8
LALI	Alcalda de L	0.25	202	*e*P	Pg	08 11 27.1	+0.3
LALI				*e*S	Sg	08 11 31.0	+0.8
LALI	Alcalda de L	0.25	202	*i*P	Pg	08 11 27.1	+0.3
LALI	comp=E,5µm,0.4s			IAML		08 11 31.5	
LALI	Alcalda de L	0.25	202	S	Sg	08 11 31.3	+1.1
LALI	Alcalda de L	0.25	202	P	Pg	08 11 27.1	+0.3
PAVA	Las Pavas	0.28	92	S	Sb	08 11 32.5	-1.4
PAVA	Las Pavas	0.28	92	P	Pg	08 11 28.0	+0.6
SNJE	San Jose	0.40	291	*e*P	Pg	08 11 30.2	+0.5
CEVE	Cerro Verde	0.40	285	*e*P	Pg	08 11 30.4	+0.7
CEVE	Cerro Verde	0.40	285	S	Sb	08 11 36.6	-1.0
CEVE	Cerro Verde	0.40	285	P	Pg	08 11 30.5	+0.7
SBLS	San Blas	0.41	287	*i*P	Pg	08 11 30.1	+0.3
SBLS				*e*S	Sb	08 11 36.9	-0.9
UNIC	Universidad Ca	0.41	309	P	Pg	08 11 30.0	+0.2
UNIC	Universidad Ca	0.41	309	S	Sg	08 11 36.2	+1.0
UESV	Universidad de	0.43	101	P	Pg	08 11 30.6	+0.4
UESV	Universidad de	0.43	101	S	Sb	08 11 32.1	-1.1
TECO	Alcaldia de Te	0.47	113	P	Pg	08 11 30.9	+0.1
TECO	Alcaldia de Te	0.47	113	S	Sg	08 11 37.6	+0.6
SCLA	Alcaldia de Sa	0.48	92	P	Pg	08 11 31.6	+0.5
SCLA	Alcaldia de Sa	0.48	92	S	Sg	08 11 38.3	+0.9
LLGN	La Laguna	0.52	32	P	Pg	08 11 32.0	+0.2
LLGN	La Laguna	0.52	32	S	Sb	08 11 39.5	-1.3
NUBE	Las Nubes	0.57	288	⇑*i*P	Pg	08 11 33.0	+0.1
NUBE	Las Nubes	0.57	288	*i*P	Pg	08 11 32.9	+0.1
NUBE	Las Nubes	0.57	288	P	Pg	08 11 33.0	+0.1
SLOZ	Alcaldia de Sa	0.62	299	*e*P	Pg	08 11 31.6	-2.3
MTO3	Montecristo	0.69	349	*e*P	Pg	08 11 35.1	0.0
MTO3	Montecristo	0.69	349	*i*P	Pg	08 11 35.0	-0.1
MTO3	Montecristo	0.69	349	P	Pg	08 11 34.9	-0.1
MTO3	Montecristo	0.69	349	S	Sg	08 11 44.7	+0.6
FAME	Alcaldia de Sa	0.78	279	P	Pg	08 11 36.4	-0.4
FAME	Alcaldia de Sa	0.78	279	S	Sb	08 11 47.8	-0.5
ESQI	Esquipulas	0.84	352	P	Pg	08 11 37.9	-0.1
ESQI	Esquipulas	0.84	352	S	Sb	08 11 50.0	-0.2
ZAFR2	Estanzuela, Za	0.86	352	*e*P	Pn	08 11 45.6	+5.5
PACA	Pacayal	0.91	106	P	Pb	08 11 40.1	+0.3

IDC ***15*** *08:23:34.6±18.0, 39.54N×23.01E, h0km, mb3.8/2, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=373.5km s-min=26.0km az=27.0*
THE ***15*** *08:23:35.6, 40.0N±0.6×22.6E±0.7, h4km±1km, M3.1/29, MLh3.1/29*
ATH ***15*** *08:23:35.6, 40.01N×22.60E, h10km±1km, ML3.2/36, Manual Solution by A.Andreou First location: 2019/11/15 08:24:42, This location: 2019/11/15 11:40:30 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
BEO ***15*** *08:23:41.2±1.1, 40.34N×22.12E, h0km, ML3.0/2*

ISC 15 08:23:35.8±0.9, 40.00N±0.01×22.63E±0.02, h7km±7km, n112, σ0.83/146, 4C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	Litokhoron	0.14	312	P	Pg	08 23 38.5	-0.3
LIT				S	Sg	08 23 41.1	+0.2
LIT	Litokhoron	0.14	312	P	Pg	08 23 38.5	-0.3
LIT				S	Sg	08 23 41.2	+0.3
LRSO	Larissa Observ	0.38	209	P	Pg	08 23 43.1	0.0
LRSO				S	Sg	08 23 48.9	+0.8
LRSO	Larissa Observ	0.38	209	P	Pg	08 23 42.7	-0.4
LRSO				S	Sg	08 23 49.2	+1.1
THL	Klokotos Trika	0.65	227	P	Pg	08 23 47.5	-0.7
THL				S	Sg	08 23 56.7	+0.1
THL	Klokotos Trika	0.65	227	P	Pg	08 23 47.5	-0.7
THE	Thessaloniki	0.68	22	P	Pg	08 23 49.2	+0.3
THE				S	Sg	08 23 58.4	+0.8
THE	Thessaloniki	0.68	22	P	Pg	08 23 49.1	+0.3
THE				S	Sb	08 23 58.7	-0.8
HORT	Hortiatis	0.69	31	P	Pg	08 23 49.6	+0.5
HORT				S	Sb	08 23 59.2	-0.9
HORT	Hortiatis	0.69	31	P	Pb	08 23 49.8	-0.4
HORT				S	Sb	08 23 59.3	-0.8
KZN	Kozani	0.72	295	P	Pg	08 23 48.6	-1.1
KZN				S	Sb	08 24 00.0	-0.9
KZN	Kozani	0.72	295	P	Pg	08 23 48.6	-1.1
PLG	Polygyros	0.73	59	P	Pg	08 23 50.2	+0.4
PLG				S	Sg	08 23 60.0	+0.8
PLG	Polygyros	0.73	59	P	Pg	08 23 50.1	+0.4
PLG				S	Sb	08 24 00.6	-0.4
NEO	Neokhori	0.83	146	P	Pg	08 23 51.2	-0.5
NEO				S	Sg	08 24 03.4	+0.8
NEO	Neokhori	0.83	146	P	Pb	08 23 52.8	+0.2
NEO				S	Sb	08 24 03.6	-0.4
SOH	Sokhos	0.99	34	P	Pg	08 23 54.4	-0.3
SOH				S	Sb	08 24 08.9	+0.4
SOH	Sokhos	0.99	34	P	Pg	08 23 54.7	0.0
SOH				S	Sb	08 24 08.2	-0.3
AGG	Agios Georgios	1.01	193	P	Pg	08 23 54.7	-0.4
AGG				S	Sb	08 24 08.8	-0.2
AGG	Agios Georgios	1.01	193	P	Pg	08 23 54.9	-0.2
MAKR	Makrakomi, Fth	1.06	201	P	Pg	08 23 55.8	-0.3
MAKR				S	Sb	08 24 10.5	-0.1
MAKR	Makrakomi, Fth	1.06	201	P	Pg	08 23 56.0	-0.1
OUR	Ouranopolis	1.09	72	P	Pg	08 23 56.4	-0.2
OUR				S	Sb	08 24 11.7	+0.4
OUR	Ouranopolis	1.09	72	P	Pg	08 23 56.4	-0.2
OUR				S	Sb	08 24 11.7	+0.4
PENT	Pentalofos	1.16	280	P	Pg	08 23 57.1	-1.0
PENT				S	Sn	08 24 14.3	-0.4
PENT	Pentalofos	1.16	280	P	Pg	08 23 57.4	-0.7
KNT	Kendrikon	1.18	10	P	Pg	08 23 57.3	-1.0
KNT				S	Sb	08 24 14.5	+0.6
KNT	Kendrikon	1.18	10	P	Pg	08 23 57.4	-1.0
AXAR	Agios Charalam	1.24	179	P	Pg	08 23 58.3	-1.1
AXAR				S	Sg	08 24 15.5	0.0
AXAR	Agios Charalam	1.24	179	P	Pg	08 23 59.3	-0.2
TETR	Tetrakomo, Epi	1.24	238	P	Pg	08 23 58.8	-0.7
TETR				S	Sb	08 24 16.2	+0.6
TETR	Tetrakomo, Epi	1.24	238	P	Pg	08 23 59.0	-0.5
EVR	Evrytania	1.26	211	P	Pg	08 23 59.4	-0.5
EVR				S	Sb	08 24 16.6	+0.3
EVR	Evrytania	1.26	211	P	Pg	08 23 59.6	-0.3
PRMD	Pramanda	1.27	249	P	Pg	08 23 59.3	-0.9
PRMD				S	Sb	08 24 17.0	+0.3
AOS	Alonnisos	1.27	130	P	Pg	08 23 58.6	-1.6
AOS				S	Sb	08 24 17.6	+0.9
NEST	Nestorio	1.28	289	P	Pg	08 23 59.4	-0.9
NEST				S	Sn	08 24 17.4	-0.2
NEST	Nestorio	1.28	289	P	Pg	08 23 59.6	-0.7
VAY	Valandovo	1.32	358	*i*Pn	Pn	08 24 00.2	-0.4
VAY				*i*Sn	Sn	08 24 19.3	+0.9
SRS	Serrai	1.33	33	P	Pn	08 24 00.5	-0.4
SRS				S	Sn	08 24 19.5	+0.7
SRS	Serrai	1.33	33	P	Pn	08 24 00.4	-0.4
ATAL	Atalanti	1.34	167	P	Pn	08 24 00.0	-0.9
ATAL				S	Sb	08 24 19.3	+0.6
ATAL	Atalanti	1.34	167	P	Pn	08 24 00.1	-0.9
ATAL				S	Sg	08 24 18.7	-0.2
LKR	Lokris	1.38	168	P	Pn	08 24 00.8	-0.7
LKR				S	Sn	08 24 20.8	+0.8
LKR	Lokris	1.38	168	P	Pn	08 24 00.8	-0.7
JAN	Janina	1.41	256	P	Pg	08 24 02.5	-0.3
ANX	Ano Chora	1.51	202	P	Pn	08 24 03.1	-0.2
ANX	Ano Chora	1.51	202	P	Pn	08 24 03.3	-0.1
AMPL	Ampelaki	1.54	226	P	Pn	08 24 03.6	0.0
AMPL				S	Sn	08 24 23.4	-0.4
KBN	Korca	1.54	294	P	Pb	08 24 04.4	-0.3
PVO	Paravola	1.63	212	P	Pn	08 24 05.4	+0.5
PVO	Paravola	1.63	212	P	Pn	08 24 05.4	+0.5
SERG	Sergoula	1.65	196	P	Pn	08 24 05.0	-0.2
KALE	Kalithea	1.66	193	P	Pn	08 24 05.1	-0.2
KALE	Kalithea	1.66	193	P	Pn	08 24 05.3	+0.1
TRIZ	Trizonia	1.69	195	P	Pn	08 24 05.5	-0.2
KAVA	Kavala	1.75	55	P	Pn	08 24 05.9	-0.6
KAVA	Kavala	1.75	55	P	Pn	08 24 06.1	-0.3
MMB	Musomishta	1.76	29	P	Pn	08 24 06.9	+0.2
KYMI	Kymi, Euboea I	1.78	140	P	Pn	08 24 06.1	-0.9
KYMI	Kymi, Euboea I	1.78	140	P	Pn	08 24 06.0	-1.0
OHR	Ohrid	1.78	309	*i*Pn	Pb	08 24 08.2	-0.6
OHR				*i*Sn	Sg	08 24 31.9	-1.1
IGT	Igoumenitsa	1.83	256	P	Pn	08 24 08.2	+0.5
VIL2	Platees	1.86	164	P	Pn	08 24 08.1	+0.1
SKY	Skiros Island	1.86	126	P	Pn	08 24 07.5	-0.6
SKY	Skiros Island	1.86	126	P	Pn	08 24 07.6	-0.6
KKB	Krupnik	1.88	11	P	Pn	08 24 08.5	+0.2
AST1	Astakos	1.89	220	P	Pn	08 24 09.0	+0.6
VILL	Villia	1.91	164	P	Pn	08 24 08.2	-0.6
LIA	Limnos Island	1.97	92	P	Pn	08 24 09.0	-0.4
LIA	Limnos Island	1.97	92	P	Pn	08 24 09.1	-0.4
KLV	Kalavryta, Ach	1.99	191	P	Pn	08 24 09.6	-0.3
LTK	Loutraki	2.00	172	P	Pn	08 24 09.9	-0.1
LOUT	Loutraki	2.03	172	P	Pn	08 24 10.6	+0.2
MAGU	Magoula	2.04	160	P	Pn	08 24 10.4	-0.2
GUR	Goura	2.08	186	P	Pn	08 24 11.1	0.0
DION	Dionisos Attik	2.17	152	P	Pn	08 24 12.1	-0.3
PTL	Penteli	2.18	153	P	Pn	08 24 12.2	-0.2
ATHU	Athens Univers	2.22	156	P	Pn	08 24 12.8	-0.3
SMTH	Samothraki Isl	2.27	77	P	Pn	08 24 13.5	-0.2
VLY	Voula,Athens	2.33	157	P	Pn	08 24 14.4	-0.1
VLS	Valsamata	2.42	222	P	Pn	08 24 16.5	+0.7
KARY	Karystos	2.42	144	P	Pn	08 24 15.4	-0.4
MET5	Makryloggos,Me	2.44	166	P	Pn	08 24 16.1	-0.1
MET2	Kameni Chora,	2.45	167	P	Pn	08 24 15.9	-0.2
MET4	Agioi Theodoro	2.45	166	P	Pn	08 24 15.6	-0.6
BOSS	Bosilegrad	2.49	357	*e*Pn	Pn	08 24 17.3	+0.5
ALN	Alexandroupoli	2.75	70	P	Pn	08 24 20.2	-0.2
EZN	Ezine	2.85	92	⇓P	Pn	08 24 22.5	+0.9
ITM	Ithomi	2.87	191	P	Pn	08 24 22.7	+0.7
BARS	Barje	2.88	348	*e*Pn	Pn	08 24 22.6	+0.6
CHOS	Chios island	3.11	120	P	Pn	08 24 25.5	+0.1
ZAPS	Zavoj	3.27	0	*e*Pn	Pn	08 24 28.5	+1.0
VLI	Veliai	3.29	176	P	Pn	08 24 28.2	+0.5
PDG	Podgorica	3.52	315	⇑P	Pn	08 24 32.5	+1.7
PDG	Podgorica	3.52	315	*e*Pg	Pn	08 24 34.4	+3.6
PDG				*e*Sg	Sn	08 25 14.9	+2.3
BLKB	Belogradchik	3.62	1	⇑P	Pn	08 24 32.1	-0.1
BOVS	Bovan	3.69	350	⇓P	Pn	08 24 33.0	-0.2
BOVS	Bovan	3.69	350	*e*Pn	Pn	08 24 33.7	+0.4
PLVB	Pleven	3.69	23	⇑P	Pn	08 24 35.3	+2.1
GOCS	Kraljevo Serbi	3.79	340	*e*Pn	Pn	08 24 35.7	+1.0
ELND	Elena	3.81	39	⇓P	Pn	08 24 34.0	-0.8
ZAGS	Zajecar	3.82	356	*e*Pn	Pn	08 24 35.6	+0.6
ZAGS				*e*Sn	Sn	08 25 18.2	-1.9
DIVS	Divibare	4.54	335	*e*Pn	Pn	08 24 45.2	+0.2
BBLS	Lazi&#263i	4.55	329	*e*Pn	Pn	08 24 46.0	+0.9
MATE	Matera	4.58	280	⇓P	Pn	08 24 33.2	-12
HERR	Herculane	4.88	358	⇓P	Pn	08 24 46.6	-2.9
GZR	Gura Zlata	5.39	1	⇑P	Pn	08 24 42.2	-14
BRTR	Keskin Array B 0.2nm,0.3s,baz=267,slow=14,SNR=4.4 0.2nm,0.3s	8.47	88	Pn	Pn	08 25 35.4	-3.6
GERES	GERESS Array B baz=165,slow=13,SNR=2.0 0.3nm,0.4s	10.90	327	Pn	Pn	08 26 19.4	+7.3
MKAR	Makanchi Array 0.6nm,0.5s,baz=284,slow=6.7,SNR=5.7 0.6nm,0.5s	42.96	60	P	P	08 31 35.4	+0.1
ZALV	Zalesovo Beam 0.9nm,0.5s,baz=270,slow=8.6,SNR=2.1 0.9nm,0.5s	43.26	50	P	P	08 31 38.2	+0.6

HEL 15 08:30:15.6±0.1, 65.18N×25.66E, h0km, ML1.5, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUL	Oulu	0.14	135	PG	Pg	08 30 17.6	-0.7
OUL				SG	Sg	08 30 19.7	-0.3
OBF4	Vikkela, Lumij baz=34	0.44	213	PG	Pg	08 30 23.7	-0.3
OBF4				SG	Sg	08 30 29.8	+0.1
OUF	Merijarvi baz=25	0.91	206	PG	Pg	08 30 32.2	-0.8
OUF	comp=Z,2.0nm,0.2s			smax	smax	08 30 43.6	
OUF				SG	Sg	08 30 44.4	-0.5
RANF	Ranua baz=208	0.96	29	PG	Pg	08 30 33.0	-0.9
RANF				SB	Sg	08 30 46.1	-0.2
TOF	Tornio	1.06	329	PG	Pg	08 30 34.4	-1.5
TOF				SG	Sg	08 30 47.5	-2.0
TOF	comp=Z,2.1nm,0.2s			smax	smax	08 30 47.8	
KALU	Kalix	1.18	306	PG	Pg	08 30 36.9	-1.2
KALU				SB	Sg	08 30 51.6	-1.7
KU2	Taivalkoski baz=247	1.20	63	PG	Pg	08 30 37.4	-1.1
RNF	Rovaniemi baz=184	1.44	6	PG	Pn	08 30 41.8	-1.1
RNF				SG	Sg	08 31 00.6	-1.2
MSF	Maaselka	1.58	61	PG	Pn	08 30 44.4	-0.5
MSF				SN	Sg	08 31 05.3	+0.5
KU1	Kurvinen	1.68	75	PG	Pn	08 30 45.8	-0.4
KU1				SN	Sn	08 31 08.1	-0.2
OLKF	Oulanka, Finla	1.92	52	PG	Pn	08 30 49.8	+0.3
OLKF	comp=Z,2.7nm,0.2s			smax	smax	08 31 12.6	
OLKF				SG	Sb	08 31 15.3	-0.6
BURU	Burvik baz=72	1.93	254	PG	Pn	08 30 50.0	+0.4
BURU				SG	Sb	08 31 15.4	-0.6
KU6	Riekki	1.95	62	PG	Pn	08 30 50.3	+0.4
KU6	comp=Z,2.5nm,0.2s			smax	smax	08 31 13.7	
KU6				SG	Sn	08 31 15.8	+0.8
ERTU	Ertsjaerv baz=136	1.98	316	PG	Pn	08 30 51.0	+0.6
ERTU				SG	Sb	08 31 17.0	-0.7
NIF	Nilsia	2.03	152	PG	Pn	08 30 51.5	+0.5
NIF	comp=Z,1.9nm,0.2s			smax	smax	08 31 16.0	
NIF				SG	Sn	08 31 18.0	+1.0
RMF	Romuvaara	2.08	116	PG	Pn	08 30 52.2	+0.6
RMF	comp=Z,1.9nm,0.2s			smax	smax	08 31 17.3	
RMF				SG	Sn	08 31 19.0	+0.8
PAJU	Pajala	2.12	332	PG	Pn	08 30 53.0	+0.7
PAJU				SG	Sn	08 31 20.1	+0.8
SUF	Sumiainen comp=Z,1.0nm,0.2s	2.48	175	smax	smax	08 31 28.9	
SUF				SG	Sb	08 31 31.6	-0.5
UMAU	Umeaa	2.52	241	SG	Sb	08 31 32.4	-0.6
VAF	Ylistaro comp=Z,1.2nm,0.2s	2.52	213	smax	smax	08 31 30.0	
VAF				SG	Sb	08 31 32.2	-0.9
VRF	Varrio	3.02	30	SN	Sn	08 31 40.7	-0.8
VRF	comp=Z,0.8nm,0.2s			smax	smax	08 31 44.5	
KEF	Keuruu comp=Z,1.1nm,0.2s	3.05	187	smax	smax	08 31 45.2	
KEF				SG	Sb	08 31 47.0	-1.3
KAF	Kangasniemi comp=Z,20nm,0.2s	3.10	174	smax	smax	08 31 46.5	
KAF				SG	Sb	08 31 48.3	-1.4
HEF	Hetta	3.33	347	SG	Sb	08 31 55.6	-0.9
HEMU	Hemsoen	4.20	237	SN	Sn	08 32 09.8	-0.7
ARA0	ARCESS Array S	4.37	359	SG	Sb	08 32 30.0	+3.6
KEV	Kevo	4.62	6	SG	Sb	08 32 36.4	+2.9

NNC ***15*** *08:30:33.1±7.0, 37.77N×70.37E, h182km±90km, mb2.6, mpv3.4, Error ellipse: s-maj=66.5km s-min=34.8km az=19.0*
KRNET ***15*** *08:30:39.9±0.1, 39.05N×70.30E, mb3.5*

ISC 15 08:30:40.4±0.9, 39.02N±0.06×70.28E±0.05, h12km±6km, n11, σ1.936/19, 16C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	0.03	116	⇑*i*P	Pg	08 30 42.9	+0.1
GAR				⇑*i*S	Sg	08 30 44.8	+0.3
CHGR	Chuyangaron	0.94	248	⇑*i*P	Pb	08 30 58.3	-0.5
CHGR				⇑*i*S	Sb	08 31 10.9	-0.4
DRK	Karamyk	1.27	68	⇓*i*P	Pn	08 31 03.0	-1.3
DRK				⇓*i*S	Sb	08 31 19.8	-1.1
OHH	Osh	2.45	51	⇑*e*P	Pn	08 31 21.2	+0.9
OHH				⇑*e*S	Sn	08 31 51.2	+1.0
TRKS	Terek-Say	2.60	14	⇓*i*P	Pn	08 31 22.4	0.0
TRKS				⇓*i*S	Sn	08 31 53.0	-1.0
SFK	Sufi-Kurgan	2.69	67	⇑*i*P	Pn	08 31 24.5	+0.8
SFK				⇑*i*S	Sn	08 31 56.8	+0.5
KK31	Karatay Array 1.6nm,0.3s,baz=173,slow=12,SNR=13	4.09	2	⇑P	Pb	08 31 49.4	-2.9
KK31	3.4nm,0.3s,baz=181,slow=29,SNR=7.0			⇑S	Sg	08 32 53.7	+2.0
ARLS	Aral	4.20	46	⇑*i*P	Pn	08 31 45.5	+1.1
ARLS				⇑*i*S	Sn	08 32 33.0	-0.4
AAK	Ala-Archa 4.2nm,0.8s	4.83	40	⇓P	Pn	08 31 58.6	+5.5
AAK	11nm,1.0s			⇑S	Sb	08 33 05.0	+1.8
AB31	Akbulak array 0.3nm,0.4s,baz=280,slow=7.3,SNR=16	12.63	327	P	Pn	08 33 41.5	+1.8
AB31	3.1nm,0.8s,baz=153,slow=23,SNR=8.4			⇑S	Sn	08 36 11.1	+11
AKTO	Aktyubinsk 1.5nm,0.7s	14.34	327	⇑P	Pn	08 34 02.3	-0.9
AKTO	3.2nm,1.2s			⇑S	S	08 36 52.3	-10

UPP ***15*** *08:31:19.3±2.4, 63.69N×27.88E, h0km, ML1.8, Presumed earthquake*
HEL ***15*** *08:31:19.2±0.1, 63.96N×28.09E, h0km, ML2.2, Suspected explosion*
IDC ***15*** *08:31:20.5±1.3, 63.91N×28.32E, h0km, mbtmp3.2/5, ML2.5/5, Error ellipse: s-maj=17.2km s-min=7.8km az=105.0*

ISC 15 08:31:18.4±0.7, 63.96N±0.02×28.07E±0.03, h0km, n52, σ1.968/80, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIF	Nilsia	0.59	192	PG	Pg	08 31 30.0	+0.4
NIF	comp=Z,31nm,0.2s			smax	smax	08 31 37.9	
NIF				SG	Sb	08 31 38.5	-1.8
RMF	Romuvaara	0.86	72	PG	Pg	08 31 34.7	-0.1
RMF	comp=Z,31nm,0.2s			smax	smax	08 31 45.4	
OUL	Oulu	1.47	321	PG	Pn	08 31 46.0	-0.1
OUL				SN	Sn	08 32 07.8	+1.8
OUF	Merijarvi	1.52	287	PG	Pn	08 31 46.7	-0.1
OUF	comp=Z,17nm,0.2s			smax	smax	08 32 05.1	
OUF				SN	Sg	08 32 08.5	+1.4
SUF	Sumiainen	1.52	216	PN	Pn	08 31 46.9	+0.1
SUF	comp=Z,8.1nm,0.2s			smax	smax	08 32 04.8	
OBF4	Vikkela, Lumij	1.55	305	PG	Pn	08 31 47.3	+0.1
OBF4	comp=Z,14nm,0.2s			smax	smax	08 32 05.9	
KU1	Kurvinen	1.73	21	PG	Pn	08 31 50.2	+0.5
KU1				SN	Sg	08 32 14.8	+0.9
KU2	Taivalkoski	1.76	2	PG	Pn	08 31 50.7	+0.6
OBF0	Syolatti, Pyha	1.76	290	PG	Pn	08 31 50.9	+0.8
OBF0	comp=Z,24nm,0.2s			smax	smax	08 32 12.1	
OBF0				SG	Sg	08 32 16.0	+1.1
JOF	Joensuu	1.79	124	*e*P	Pb	08 31 51.6	-0.5
JOF	Joensuu	1.79	124	SN	Pb	08 31 51.0	-1.1
JOF	Joensuu baz=312	1.79	124	PG	Pb	08 31 51.0	-1.1
JOF				SN	Sg	08 32 16.2	+0.2
MSF	Maaselka baz=197	2.00	11	PG	Pn	08 31 54.5	+1.0
MSF				SG	Sb	08 32 21.3	+0.2
KAF	Kangasniemi baz=27	2.02	204	PG	Pb	08 31 55.3	-0.7
KAF	comp=Z,24nm,0.2s			smax	smax	08 32 19.3	
KAF				SG	Sg	08 32 24.2	+0.9
OBF8	Ulkokalla	2.06	282	PG	Pb	08 31 56.3	-0.3
OBF8	comp=Z,9.9nm,0.2s			smax	smax	08 32 20.6	
RANF	Ranua baz=165	2.13	346	PG	Pb	08 31 57.5	-0.4
RANF				SG	Sb	08 32 25.0	+0.2
KU6	Riekki	2.21	20	PG	Pb	08 31 59.5	+0.3
KU6	comp=Z,8.8nm,0.2s			smax	smax	08 32 24.8	
KU6				SG	Sb	08 32 26.9	-0.2
KEF	Keuruu	2.32	220	*e*P	Pb	08 32 00.4	-0.5
KEF	Keuruu	2.32	220	PG	Pb	08 32 00.5	-0.5
KEF	comp=Z,19nm,0.2s			smax	smax	08 32 27.9	
KEF				SG	Sg	08 32 32.4	-0.3
OLKF	Oulanka, Finla	2.44	13	PG	Pb	08 32 02.8	-0.2
OLKF	comp=Z,15nm,0.2s			smax	smax	08 32 31.2	
OLKF				SG	Sb	08 32 34.0	+0.5
RUF	Ruokolahti	2.58	171	SN	Pn	08 32 04.6	+3.3
RUF	Ruokolahti baz=349	2.58	171	PG	Pn	08 32 04.6	+3.3
RUF	comp=Z,14nm,0.2s			smax	smax	08 32 35.1	
RUF				SG	Sg	08 32 39.5	-1.7
VAF	Ylistaro	2.59	252	*e*P	Pb	08 32 05.8	+0.2
VAF	Ylistaro	2.59	252	PG	Pb	08 32 04.7	-1.0
VAF	comp=Z,8.6nm,0.2s			smax	smax	08 32 35.9	
VAF				SG	Sb	08 32 39.6	+1.6
TOF	Tornio	2.66	325	PB	Pn	08 32 04.7	+2.3
TOF				SB	Sn	08 32 37.4	+2.2
TOF	comp=Z,7.2nm,0.2s			smax	smax	08 32 37.7	
FIA0	FINESS Array S	2.69	201	SB	Pb	08 32 05.5	-1.8
FIA0	FINESS Array S baz=17	2.69	201	PB	Pb	08 32 05.5	-1.8
FIA0	comp=Z,8.4nm,0.2s			smax	smax	08 32 38.5	
FIA0				SG	Sb	08 32 41.8	+1.0
FINES	FINESS Array B comp=Z,1.6nm,0.3s,baz=22,slow=16,SNR=42	2.69	201	Pn	Pb	08 32

	comp=Z,0.2nm,0.3s,baz=59,slow=14,SNR=6.8						
HFS				Sn	Sn	08 34 39.5	-1.5
	comp=Z,0.2nm,0.3s,baz=53,slow=20,SNR=1.2						
	comp=Z,0.6nm,0.3s						
NOA	**NORSAR Array B**	**8.33**	**257**	Pn	**Pn**	**08 33 20.1**	**-0.2**
	baz=62,slow=13,SNR=2.3						
NOA				Sn	**Sn**	**08 34 53.4**	**-1.5**
	baz=60,slow=16,SNR=1.7						
NOA				Lg	Lg	08 35 43.8	
	baz=54,slow=24,SNR=1.6						
	comp=Z,0.1nm,0.3s						
I43RU	**DUBNA INFRASON**	**8.55**	**144**	I	I	09 24 30.0	
	baz=336,slow=335,SNR=0.9						
SPITS	**Spitsbergen Ar**	**14.72**	**351**	Pn	**Pn**	**08 34 46.5**	**-1.1**
	baz=148,slow=14						
	comp=Z,2.4nm,0.8s						

IDC 15 08:31:37.8±1.8, 1°46'N×126°49'E, h0km, mb3.4/4, mbtmp3.4/5, ML3.0/1, MS3.1/1, Error ellipse: s-maj=126.8km s-min=22.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	P	08 36 05.5	-0.6
	baz=349,slow=10,SNR=1.3						
	2.1nm,1.1s						
WRA	**Warramunga Arr**	**22.62**	**160**	P	P	08 36 40.2	-0.2
	0.7nm,0.5s,baz=340,slow=11,SNR=5.0						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**25.99**	**164**	P	P	08 37 13.0	+0.4
	0.2nm,0.4s,baz=341,slow=11,SNR=7.4						
	0.2nm,0.4s						
JNU	**Nakatsue**	**31.77**	**7**	LR	LR	08 53 24.1	
	comp=Z,31nm,19.3s,baz=20,slow=41						
MKAR	**Makanchi Array**	**59.28**	**326**	P	P	08 41 41.8	+0.4
	0.2nm,0.4s,baz=121,slow=7.6,SNR=1.9						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.52**	**328**	P	P	08 42 09.6	-0.4
	0.2nm,0.4s,baz=116,slow=6.3,SNR=1.8						
	0.2nm,0.4s						

IDC 15 08:39:01.2±7.8, 18°03'S×178°52'W, h604km, 89km, mb2.9/5, mbtmp3.8/5, Error ellipse: s-maj=43.1km s-min=37.3km az=7.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.51**	**260**	P	P	08 46 20.3	-0.6
	0.3nm,0.7s,baz=95,slow=6.9,SNR=4.6						
WRA				PcP	PcP	08 47 50.7	0.0
	0.2nm,0.5s,baz=93,slow=3.2,SNR=1.5						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**44.66**	**254**	P	P	08 46 22.1	+0.1
	1.4nm,0.6s,baz=88,slow=8.4,SNR=32						
ASAR				PcP	PcP	08 47 51.1	-0.1
	0.3nm,0.5s,baz=94,slow=3.2,SNR=7.0						
	1.4nm,0.6s						
QSPA	**South Pole Qui**	**72.03**	**180**	P	P	08 49 25.8	+0.8
	1.3nm,0.8s,baz=36,slow=2.0,SNR=4.3						
	1.3nm,0.8s						
TXAR	**Lajitas Array**	**86.14**	**58**	P	P	08 50 40.0	0.0
	0.4nm,0.7s,baz=226,slow=6.5,SNR=4.6						
	0.4nm,0.7s						
SNAA	**Sanae**	**90.48**	**179**	P	P	08 50 57.7	-1.6
	1.1nm,1.1s,baz=222,slow=12,SNR=1.9						
	1.1nm,1.1s						

IDC 15 08:45:12.7±1.3, 1°51'N×126°13'E, h0km, mb3.9/5, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=107.4km s-min=18.5km az=67.0
DJA 15 08:45:16.3±0.4, 2°N±5°×12°6'E±°, h10km, M3.8/6, MLv3.8/6
ISC 15 08:45:17.8±0.9, 1°5'N±0°2'×126°3'E±0°2, h35km, n8, σ1s0°63/9, mb4.0/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**124**	P	**Pn**	**08 45 39.0**	**-0.1**
SGSI	**Sangihe**	**2.31**	**340**	P	**Pn**	**08 45 53.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.48**	**182**	P	**P**	**08 49 41.2**	**-0.7**
	0.1nm,0.3s,baz=13,slow=13,SNR=3.1						
	2.9nm,1.1s						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**08 50 16.7**	**-0.1**
	3.1nm,0.6s,baz=338,slow=11,SNR=21						
	3.1nm,0.6s						
ASAR	**Alice Springs**	**26.08**	**164**	P	**P**	**08 50 49.1**	**+0.7**
	0.9nm,0.4s,baz=345,slow=7.5,SNR=26						
ASAR				PcP	**PcP**	**08 54 15.6**	**-0.1**
	0.3nm,0.7s,baz=343,slow=2.2,SNR=2.8						
	0.9nm,0.4s						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**08 52 18.2**	**+0.8**
	1.5nm,0.7s,baz=310,slow=6.4,SNR=5.0						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**08 55 14.5**	**-0.7**
	0.5nm,0.4s,baz=121,slow=8.1,SNR=4.7						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.40**	**328**	P	**P**	**08 55 43.3**	**-0.5**
	0.9nm,0.6s,baz=127,slow=6.7,SNR=7.5						
	0.9nm,0.6s						

ECX 15 08:46:42.6±0.3, 25°10N×112°60W, h10km±5km, ML3.5
MEX 15 08:46:47.8±0.3, 25°09N×112°42W, h15km, MD4.1
ISC 15 08:46:44.9±2.8, 25°08N±0°06×112°46W±0°08, h26km±20km, n15, σ1s51/26, 6C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UAGRB	**Rancho Ultima**	**1.19**	**66↑**	*eP*	**Pn**	**08 47 05.1**	**-0.8**
UAGRB				*eS*	**Sn**	**08 47 22.6**	**+1.5**
NE77	**Loreto B.C.S**	**1.36**	**47**	*eP*	**Pn**	**08 47 07.3**	**-0.9**
NE77				*eS*	**Sb**	**08 47 26.4**	**-0.2**
NE77				IAML		08 47 31.0	
	comp=N,416nm,0.3s						
NE77				IAML		08 47 35.9	
	comp=E,649nm,0.4s						
EVAR0	**San Evaristo**	**1.59**	**96↑**	*eP*	**Pn**	**08 47 11.6**	**+0.1**
EVAR0				*eS*	**Sb**	**08 47 34.7**	**+1.2**
EVAR0				*↑e*		08 47 36.2	
EVAR0				IAML		08 47 36.2	
	comp=N,346nm,0.5s						
SNIRB	**San Nicol¡s**	**1.67**	**29**	*eP*	**Pn**	**08 47 12.0**	**-0.4**
SNIRB				*eS*	**Sb**	**08 47 34.6**	**-1.0**
SNIRB				*↑e*		08 47 37.2	
SNIRB				IAML		08 47 37.2	
	comp=E,635nm,0.6s						
SNIRB				IAML		08 47 43.3	
	comp=N,894nm,0.7s						
SNIRB				*↑e*		08 47 43.3	
LPIG	**La Paz**	**2.19**	**116**	*eP*	**Pn**	**08 47 20.2**	**+0.6**
LPIG				*eS*	**Sn**	**08 47 45.4**	**-0.5**
SRIG	**Santa Rosalia**	**2.23**	**5**	*eP*	**Pn**	**08 47 19.3**	**-0.9**
SRIG				*eS*	**Sn**	**08 47 48.6**	**+1.6**
SRIG				*↓e*		08 47 52.1	
SRIG				IAML		08 47 52.1	
	comp=E,282nm,0.5s						
SRIG				IAML		08 47 55.2	
	comp=N,203nm,0.6s						
SRIG				*↓e*		08 47 55.2	
SRIG	**Santa Rosalia**	**2.23**	**5**	*eP*	**Pn**	**08 47 21.0**	**+0.7**
SRIG				*eS*	**Sn**	**08 47 47.0**	**0.0**
SLBS	**Sierra La Lagu**	**2.68**	**121↓**	*eP*	**Pn**	**08 47 27.2**	**+0.7**
SLBS	**Sierra La Lagu**	**2.68**	**121**	*eP*	**Pn**	**08 47 27.3**	**+0.7**
SLBS				*i* S	**Sn**	**08 47 57.0**	**-1.2**
CDOB	**Cd. Obregon**	**3.12**	**41**	*eP*	**Pn**	**08 47 33.2**	**+0.8**
CDOB				*eS*	**Sn**	**08 48 11.9**	**+3.0**
CDOB				*↑e*		08 48 15.9	
CDOB				IAML		08 48 15.9	
	comp=E,47nm,0.5s						
TSIG	**Topolobambo**	**3.14**	**80**	*eP*	**Pn**	**08 47 33.0**	**+0.3**
TSIG				*eS*	**Sn**	**08 48 04.3**	**-4.9**
SFQB	**San Francisqui**	**3.33**	**354**	*eP*	**Pn**	**08 47 34.2**	**-1.0**
NE80	**Navojoa**	**3.43**	**57**	*eP*	**Pn**	**08 47 37.3**	**+0.6**
BAHB	**Baha de los**	**3.97**	**346**	*eP*	**Pn**	**08 47 43.1**	**-1.0**
BAHB	**Baha de los**	**3.97**	**346**	*eP*	**Pn**	**08 47 43.9**	**-0.2**
BAHB				*eS*	**Sn**	**08 48 30.6**	**+0.9**

CATAC 15 08:49:46.7±0.7, 13°N±4°×8°9W±°, h30km±5km, M2.8/13, MLv2.8/13, Error ellipse: s-maj=8.5km s-min=2.7km az=23.6, confirmed
SNET 15 08:49:46.8±0.9, 12°83N×88°71W, h31km, ML2.9
ISC 15 08:49:46.4±1.6, 12°81N±0°07×88°74W±0°04, h29km±12km, n41, σ0s28/49, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECA	**Tecapa**	**0.72**	**18**	*eP*	**Pn**	**08 50 00.9**	**0.0**
TECO	**Alcaldia de Te**	**0.73**	**357**	*eP*	**Pn**	**08 50 00.7**	**-0.1**
TECO				*eS*	**Sb**	**08 50 10.3**	**0.0**
TECO	**Alcaldia de Te**	**0.73**	**357**	P	**Pn**	**08 50 00.7**	**-0.1**
TECO	**Alcaldia de Te**	**0.73**	**357**	S	**Sn**	**08 50 11.2**	**+0.2**
PACA	**Pacayal**	**0.77**	**31**	*eP*	**Pn**	**08 50 01.5**	**0.0**
PACA				*eS*	**Sn**	**08 50 12.0**	**-0.2**
PACA	**Pacayal**	**0.77**	**31**	P	**Pn**	**08 50 01.4**	**-0.1**
PACA	**Pacayal**	**0.77**	**31**	S	**Sn**	**08 50 12.4**	**+0.1**
UESV	**Universidad de**	**0.83**	**357**	*eP*	**Pn**	**08 50 02.0**	**-0.1**
UESV				*eS*	**Sn**	**08 50 13.7**	**+0.3**
UESV	**Universidad de**	**0.83**	**357**	P	**Pb**	**08 50 02.2**	**-0.1**
CNRM	**Centro Naciona**	**0.86**	**40**	S	**Sn**	**08 50 14.7**	**+0.4**
LALI	**Alcalda de L**	**0.89**	**320**	S	**Sb**	**08 50 15.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.89**	**0**	*eP*	**Pb**	**08 50 03.3**	**-0.1**
SCLA				*eS*	**Sn**	**08 50 15.4**	**+0.4**
SCLA	**Alcaldia de Sa**	**0.89**	**0**	P	**Pb**	**08 50 03.4**	**-0.1**
PANCS	**Alcalda de**	**0.91**	**332**	S	**Sn**	**08 50 15.2**	**-0.3**
PAVA	**Las Pavas**	**0.92**	**348**	*eP*	**Pb**	**08 50 03.8**	**-0.2**
PAVA				*eS*	**Sb**	**08 50 16.4**	**+0.5**
PAVA	**Las Pavas**	**0.92**	**348**	P	**Pb**	**08 50 03.8**	**-0.2**
LOMA	**Loma Larga**	**0.93**	**333**	*eP*	**Pn**	**08 50 03.7**	**-0.1**
LOMA	**Loma Larga**	**0.93**	**333**	S	**Sb**	**08 50 16.7**	**+0.5**
LOMA	**Loma Larga**	**0.93**	**333**	P	**Pn**	**08 50 03.5**	**-0.2**
LCND	**La Caada**	**0.96**	**59**	*eP*	**Pn**	**08 50 03.7**	**-0.3**
LCND	**La Caada**	**0.96**	**59**	P	**Pn**	**08 50 03.7**	**-0.3**
LBRS	**Las Brisas**	**0.97**	**342**	*eP*	**Pb**	**08 50 05.0**	**+0.2**
UDBS	**Universidad Do**	**0.99**	**336**	S	**Sb**	**08 50 17.7**	**-0.1**
CNCH	**Conchagua**	**0.99**	**62**	S	**Sb**	**08 50 18.0**	**0.0**
CNCH	**Conchagua**	**0.99**	**62**	P	**Pn**	**08 50 04.2**	**-0.4**
IGN	**Direccin Gen**	**0.99**	**335**	S	**Sb**	**08 50 18.2**	**+0.2**
UTEC	**Universidad Te**	**1.00**	**333**	S	**Sb**	**08 50 17.8**	**+0.2**
UEES	**Universidad Ev**	**1.03**	**332**	S	**Sb**	**08 50 18.7**	**-0.2**
PMON	**Piamonte**	**1.06**	**328**	S	**Sn**	**08 50 19.2**	**-0.1**
PMON	**Piamonte**	**1.06**	**328**	P	**Pn**	**08 50 05.6**	**+0.1**
JAYA	**Jayaque - finc**	**1.09**	**321**	S	**Sn**	**08 50 19.6**	**-0.5**
JAYA	**Jayaque - finc**	**1.09**	**321**	P	**Pn**	**08 50 06.0**	**+0.1**
CSGN	**Cosiguina Volc**	**1.16**	**82**	P	**Pn**	**08 50 06.9**	**+0.1**
CSGN				S	**Sb**	**08 50 22.6**	**-0.1**
POTN	**Potosi Cosigui**	**1.21**	**81**	P	**Pn**	**08 50 07.4**	**0.0**
POTN				S	**Sn**	**08 50 22.9**	**0.0**
CEVE	**Cerro Verde**	**1.33**	**320**	S	**Sb**	**08 50 27.1**	**-0.7**
UNIC	**Universidad Ca**	**1.41**	**326**	S	**Sn**	**08 50 28.4**	**+0.5**
NUBE	**Las Nubes**	**1.49**	**317**	P	**Pn**	**08 50 11.5**	**+0.1**
NUBE	**Las Nubes**	**1.49**	**317**	S	**Sn**	**08 50 29.6**	**-0.4**
FAME	**Alcaldia de Sa**	**1.61**	**310**	P	**Pn**	**08 50 13.0**	**-0.1**
FAME	**Alcaldia de Sa**	**1.61**	**310**	S	**Sn**	**08 50 33.2**	**+0.3**
PKGN	**Cerro Pekin**	**1.72**	**94**	P	**Pn**	**08 50 14.8**	**+0.3**
PKGN				S	**Sn**	**08 50 35.5**	**0.0**

EST 15 08:50:15.9±0.1, 59°19N×27°90E, h0km, ML1.7(HEL), Explosion
LVSN 15 08:50:16.5±2.5, 59°16N×27°96E, h0km±30km, ML2.4
HEL 15 08:50:16.2±0.4, 59°21N×27°89E, h0km, ML1.8, Suspected explosion
IDC 15 08:50:17.4±3.7, 59°39N×28°10E, h0km, mbtmp3.1/3, ML1.6/3, Error ellipse: s-maj=35.9km s-min=19.2km az=143.0
ISC 15 08:50:14.9±1.1, 59°17N±0°03×27°83E±0°05, h0km, n35, σ1s00/53, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.21**	**6**	*eP*	**Pg**	**08 50 18.8**	**0.0**
EE04				*eS*	**Sg**	**08 50 21.4**	**-0.2**
EE03	**Tooma soojaam,**	**0.86**	**250**	*eP*	**Pb**	**08 50 31.8**	**-0.8**
EE03				*eS*	**Sb**	**08 50 43.6**	**-1.1**
VSU	**Vasula**	**0.91**	**219**	*eP*	**Pg**	**08 50 32.4**	**+0.1**
VSU				*eS*	**Sb**	**08 50 45.9**	**-0.3**
VSU				AML	AML	08 50 54.8	
	comp=N,38nm,0.5s						
VSU				AML	AML	08 51 27.2	
	comp=E,58nm,0.8s						
VSU				AML	AML	08 51 30.1	
	comp=Z,19nm,0.9s						
VSU	**Vasula**	**0.91**	**219**	*eP*	**Pg**	**08 50 32.0**	**-0.3**
VSU				*eS*	**Sb**	**08 50 45.0**	**-1.1**
ARBE	**Arbavere**	**0.98**	**287**	*eP*	**Pb**	**08 50 34.1**	**-0.7**
ARBE				*eS*	**Sb**	**08 50 48.1**	**-0.2**
ARBE				AML	AML	08 51 07.3	
	comp=E,166nm,0.7s						
ARBE				AML	AML	08 51 10.0	
	comp=Z,101nm,0.7s						
ARBE				AML	AML	08 51 31.9	
	comp=N,181nm,0.7s						
ARBE	**Arbavere**	**0.98**	**287**	*eS*	**Sb**	**08 50 46.9**	**-1.5**
VJF	**Virojoki**	**1.38**	**354**	*eP*	**Pg**	**08 50 40.2**	**-1.2**
VJF				smax	smax	08 50 56.6	
	comp=Z,6.4nm,0.2s						
VJF				*eSB*	**Sg**	**08 50 58.0**	**-1.2**
EE08	**Sarghaua, Vand**	**1.44**	**250**	*eP*	**Pb**	**08 50 42.4**	**-0.2**
EE08				*eSB*	**Sn**	**08 51 02.1**	**+0.4**
EE02	**Kiisa, Saku**	**1.61**	**272**	*ePG*	**Pg**	**08 50 45.3**	**-0.5**
EE02				*eSN*	**Sg**	**08 51 07.8**	**+1.1**
PVF	**Pernaja**	**1.70**	**325**	*ePG*	**Pn**	**08 50 46.4**	**+0.6**
PVF				smax	smax	08 51 06.5	
	comp=Z,4.5nm,0.2s						
PVF				*eS*	**Sn**	**08 51 07.6**	**-0.7**
HEL1	**Helsinki**	**1.81**	**305**	*ePG*	**Pb**	**08 50 48.6**	**-0.2**
HEL1				*eS*	**Sb**	**08 51 11.4**	**-0.6**
HEL1				smax	smax	08 51 14.0	
	comp=Z,5.8nm,0.1s						
HEL5	**Espoo, Suvisaa**	**1.84**	**303**	*ePG*	**Pb**	**08 50 49.1**	**-0.2**
HEL5				*eS*	**Sb**	**08 51 12.4**	**-0.4**
HEL5				smax	smax	08 51 15.2	
	comp=Z,6.1nm,0.1s						
MEF	**Metsahovi**	**2.04**	**303**	*eP*	**Pb**	**08 50 52.4**	**-0.3**
MEF	**Metsahovi**	**2.04**	**303**	*eP*	**Pb**	**08 50 52.9**	**+0.2**
MEF				*eS*	**Sb**	**08 51 18.0**	**-0.5**
MEF	**Metsahovi**	**2.04**	**303**	*ePG*	**Pb**	**08 50 52.5**	**-0.2**
MEF				*eSB*	**Sb**	**08 51 18.2**	**-0.3**
MEF				smax	smax	08 51 20.4	
	comp=Z,3.3nm,0.1s						
NUR	**Nurmijarvi**	**2.10**	**311**	*ePG*	**Pb**	**08 50 53.3**	**-0.4**
NUR				smax	smax	08 51 18.1	
	comp=Z,5.2nm,0.2s						
NUR				*eSG*	**Sb**	**08 51 20.5**	**+0.2**
EE01	**Perakula, Nova**	**2.17**	**273**	*ePB*	**Pb**	**08 50 54.2**	**-0.7**
EE01				*eSG*	**Sg**	**08 51 4.3**	**-1.0**
RUF	**Ruokolahti**	**2.33**	**13**	*eP*	**Pn**	**08 50 55.2**	**+0.7**
RUF				smax	smax	08 51 23.8	
	comp=Z,5.0nm,0.2s						
RUF				*eSG*	**Sb**	**08 51 27.1**	**+0.1**
TVF	**Tvarminne**	**2.43**	**288**	*ePB*	**Pb**	**08 50 58.8**	**-0.6**
TVF				smax	smax	08 51 28.5	
	comp=Z,1.7nm,0.2s						
TVF				*eSB*	**Sb**	**08 51 30.2**	**+0.3**
FIA0	**FINESS Array S**	**2.44**	**340**	*eP*	**Pn**	**08 50 56.4**	**+0.4**
FIA0				smax	smax	08 51 27.5	
	comp=Z,3.1nm,0.2s						
FIA0				*eSB*	**Sb**	**08 51 29.6**	**-0.7**
FINES	**FINESS Array B**	**2.44**	**340**	Pn	**Pn**	**08 50 57.7**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=156,slow=18,SNR=8.7						
FINES				Sn	**Sn**	**08 51 27.5**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=152,slow=25,SNR=6.6						
	comp=Z,3.3nm,0.9s						
FIA1	**FINESS Array S**	**2.44**	**340**	*eP*	**Pn**	**08 50 56.6**	**+0.6**
FIA1				*eSG*	**Sb**	**08 51 30.0**	**-0.3**
FIA1				smax	smax	08 51 33.5	
	comp=Z,2.0nm,0.1s						
EE06	**Soera, Palade,**	**2.58**	**268**	*eSB*	**Sb**	**08 51 34.9**	**+0.7**
KAF	**Kangasniemi**	**3.05**	**346**	smax	smax	08 51 44.8	
	comp=Z,1.7nm,0.2s						
KAF				*eSG*	**Sb**	**08 51 49.5**	**+1.8**
SLIT	**Slitere, Latvi**	**3.30**	**244**	AML	AML	08 52 06.1	
	comp=N,84nm,0.5s						
SLIT				AML	AML	08 52 06.4	
	comp=E,92nm,0.7s						
SLIT				AML	AML	08 52 09.7	
	comp=Z,50nm,0.8s						
KEF	**Keuruu**	**3.34**	**335**	*eP*	**Pn**	**08 51 10.5**	**+2.2**
RAF	**Rauma**	**3.56**	**304**	*eP*	**Pn**	**08 51 13.4**	**+2.0**
RAF	**Rauma**	**3.56**	**304**	*eP*	**Pn**	**08 51 13.4**	**+2.0**
KPF	**Kankaanpaa**	**3.91**	**316**	*eP*	**Pn**	**08 51 17.8**	**+1.8**
AAL	**Aland**	**4.10**	**288**	*eP*	**Pn**	**08 51 21.1**	**+2.4**
JOF	**Joensuu**	**4.13**	**23**	*eP*	**Pn**	**08 51 20.0**	**+0.9**
JOF	**Joensuu**	**4.13**	**23**	*eP*	**Pn**	**08 51 20.0**	**+0.9**

I43RU	**DUBNA INFRASON**	**5.57**	**112**	I	I	09 22 50.0	
	baz=306,slow=312,SNR=1.6						
HFS	**Hagfors**	**7.23**	**284**	Pn	**Pn**	**08 52 02.6**	**+0.9**
	baz=89,slow=13,SNR=1.2						
HFS				Sn	**Sn**	**08 53 23.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=186,slow=40,SNR=2.1						
	comp=Z,0.9nm,0.6s						
ARCES	**ARCESS Array B**	**10.46**	**355**	Pn	Pn	08 52 41.5	-4.4
	baz=170,slow=11,SNR=2.0						
	comp=Z,2.0nm,0.9s						

IDC 15 08:57:02.0±1.9, 1°58N×126°30E, h0km, mb3.4/4, mbtmp3.4/4, MS3.1/1, Error ellipse: s-maj=181.2km s-min=23.1km az=66.0
DJA 15 08:57:06.7±0.5, 1°N±7°×12°5E±°, h10km, M4.0/4, MLv4.0/4
ISC 15 08:57:08.4±1.1, 1°13N±0°09×125°05E±0°08, h35km, n8, σ1s47/7, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.20**	**243**	P	**Pn**	**08 57 29.1**	**+0.4**
TNTI	**Ternate**	**2.35**	**99**	P	**Pn**	**08 57 45.4**	**+0.9**
SGSI	**Sangihe**	**2.58**	**11**	P	**Pn**	**08 57 47.3**	**-0.5**
WRA	**Warramunga Arr**	**22.84**	**157**	P	**P**	**09 02 06.6**	**-2.1**
	0.5nm,0.5s,baz=339,slow=11,SNR=7.3						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**26.11**	**161**	P	**P**	**09 02 38.1**	**-1.1**
	0.2nm,0.5s,baz=343,slow=7.7,SNR=7.6						
	0.2nm,0.5s						
NWAO	**Narrogin (SRO)**	**34.67**	**192**	LR	LR	09 21 36.0	
	comp=Z,26nm,18.8s,baz=278,slow=42						
MKAR	**Makanchi Array**	**58.76**	**327**	P	**P**	**09 07 03.9**	**+0.9**
	0.2nm,0.3s,baz=131,slow=8.6,SNR=1.9						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.04**	**329**	P	**P**	**09 07 33.0**	**+1.0**
	0.5nm,0.7s,baz=128,slow=6.2,SNR=2.4						
	0.5nm,0.7s						

IDC 15 08:57:33.4±1.8, 1°37N×126°39E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=175.7km s-min=22.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.57**	**160**	P	P	09 02 35.8	+0.2
	2.1nm,0.6s,baz=339,slow=11,SNR=12						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**25.94**	**164**	P	P	09 03 07.5	-0.2
	0.7nm,0.5s,baz=345,slow=10,SNR=9.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**59.30**	**326**	P	P	09 07 37.4	+0.3
	0.3nm,0.5s,baz=115,slow=7.4,SNR=2.8						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.54**	**328**	P	P	09 08 05.4	-0.3
	0.4nm,0.5s,baz=120,slow=6.1,SNR=2.4						
	0.4nm,0.5s						

IDC 15 09:10:11.8±2.1, 1°86N×126°82E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=196.3km s-min=23.4km az=67.0
DJA 15 09:10:16.5±0.5, 2°N±8°×12°6E±°, h10km, M3.4/5, MLv3.4/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.25**	**337**	P	Pn	09 10 54.8	+0.9
WRA	**Warramunga Arr**	**22.77**	**160**	P	P	09 15 16.9	-2.5
	0.7nm,0.8s,baz=340,slow=11,SNR=6.6						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**26.15**	**164**	P	P	09 15 49.6	-1.5
	0.2nm,0.5s,baz=345,slow=8.5,SNR=6.1						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	P	09 20 14.0	-3.4
	0.3nm,0.4s,baz=125,slow=7.6,SNR=1.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	P	09 20 43.0	-3.0
	0.3nm,0.5s,baz=118,slow=7.1,SNR=1.9						
	0.3nm,0.5s						

ASRS 15 09:21:24.0±0.9, 54°69N×83°70E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.
IDC 15 09:21:25.1±1.5, 54°60N×83°71E, h0km, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=14.2km s-min=8.8km az=9.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**135**	I	I	09 27 00.0	
	0.1nm,0.7s,baz=314,slow=342,SNR=16						
ZALV	**Zalesovo Beam**	**0.92**	**135**	Pg	Pg	09 21 42.2	-0.6
	2.5nm,0.3s,baz=318,slow=19,SNR=15						
ZALV				Lg	Lg	09 21 55.8	
	7.8nm,0.3s,baz=315,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**5.08**	**220**	Pn	Pn	09 22 43.3	+0.8
	0.1nm,0.3s,baz=41,slow=13,SNR=5.1						
KURBB				Lg	Lg	09 24 07.7	
	0.2nm,0.3s,baz=40,slow=30,SNR=5.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**7.87**	**187**	Pn	Pn	09 23 20.9	+0.2
	0.1nm,0.3s,baz=13,slow=13,SNR=1.8						
MKAR				Lg	Lg	09 25 35.5	
	0.1nm,0.3s,baz=12,slow=28,SNR=1.8						
	0.8nm,0.8s						
BVAR	**Borovoye Array**	**8.04**	**264**	Pn	Pn	09 23 22.4	-0.7
	baz=68,slow=16,SNR=3.9						
BVAR				Sn	Sn	09 24 50.0	-4.7
	0.1nm,0.3s,baz=62,slow=21,SNR=2.5						

LCRM	LCR	1.11	130	S	Sn	09 30 47.4	+0.7
ZHG	ZHG	1.14	214	P	Pn	09 30 33.8	+0.9
ZHG	ZHG	1.14	214	S	Sb	09 30 49.7	+0.9
MD31	MD31	1.79	148	P	Pn	09 30 41.6	-0.2
MD31	MD31	1.79	148	S	Sn	09 31 05.3	+1.8
MDT	Midelt	1.90	146	P	Pn	09 30 43.3	-0.1
MDT	Midelt	1.90	146	S	Sn	09 31 08.2	+1.9
EJIF	Jimena Fronter	2.08	9	Sn	Sn	09 31 12.1	+1.8
SRHM	Skhour des Reh	2.56	222	P	Pb	09 30 56.4	-1.9
SRHM	Skhour des Reh	2.56	222	S	Sb	09 31 30.7	+1.4
TISM	Timmit	2.71	190	P	Pn	09 30 54.5	+0.1
TISM	Timmit	2.71	190	S	Sn	09 31 27.2	+1.1
PBDV	Barranco-do-Ve	3.29	330	Pn	Pn	09 31 04.9	+2.5
PBDV				Sn	Sn	09 31 39.2	-1.3
PBDV	Barranco-do-Ve	3.29	330	*eP*	Pn	09 31 02.9	+0.5
PBDV				*eS*	Sn	09 31 39.6	-0.8
PVAQ	Vaqueiros	3.35	334	*eS*	Sn	09 31 41.1	-0.7
PVAQ				*i* IAML		09 31 41.6	
PVAQ				*i* IAML		09 31 43.0	
EGRO	El Granado	3.39	338	Pn	Pn	09 31 05.2	+1.6
EGRO				Sn	Sn	09 31 42.9	+0.1
EGRO				*i* IVmb_Lg		09 31 45.7	
EMIN	Mina Concepcio	3.42	349	Pn	Pn	09 31 05.4	+1.2
EMIN				Sn	Sn	09 31 45.6	+2.0
EMIN				*i* IVmb_Lg		09 31 47.5	
OUK	Oukaimeden	3.59	208	P	Pn	09 31 06.5	-0.3
OUK	Oukaimeden	3.59	208	S	Sn	09 31 49.1	+0.7
TZRR	Tazzarine	3.61	176	P	Pn	09 31 07.7	+0.8
TZRR	Tazzarine	3.61	176	S	Sn	09 31 49.8	+1.3
ECAB	El Cabril	3.69	6	Sn	Sn	09 31 48.4	-1.8
ECAB				Pn	Pn	09 31 08.8	+1.0
ECAB	El Cabril	3.69	6	Pn	Pn	09 31 08.8	+1.9
ECAB				Sn	Sn	09 31 50.4	+0.2
ECAB				*i* IVmb_Lg		09 31 55.8	
PBAR	Barrancos	3.88	346	Pn	Pn	09 31 10.9	+0.5
PBAR				Sn	Sn	09 31 53.0	-2.0
PBAR	Barrancos	3.88	346	*eP*	Pn	09 31 11.5	+1.1
PBAR				*eS*	Sn	09 31 53.0	-2.0
PBAR				*i* IAML		09 31 56.6	
PBAR				*i* IAML		09 31 57.0	
PBAR				*i* IAML		09 31 58.4	
EADA	Adamuz	3.91	15	Pn	Pn	09 31 10.8	0.0
EADA				Sn	Sn	09 31 53.4	-2.2
EADA	Adamuz	3.91	15	Pn	Pn	09 31 11.3	+0.5
EADA				Sn	Sn	09 31 54.4	-1.2
EADA				*i* IVmb_Lg		09 31 59.7	
MESJ	Messejana	3.92	332	*eP*	Pn	09 31 11.4	+0.4
MESJ				*eS*	Sn	09 31 55.1	-0.8
MESJ				*i* IAML		09 31 57.4	
MESJ				*i* IAML		09 31 58.5	
MESJ				*i* IAML		09 31 58.8	
ZGR	Zagora	4.27	177	P	Pn	09 31 16.4	+0.4
ZGR	Zagora	4.27	177	S	Sn	09 32 06.1	+1.3
TTIG	Tnine Tigouga,	4.41	210	P	Pn	09 31 17.4	-0.4
TTIG	Tnine Tigouga,	4.41	210	S	Sn	09 32 09.1	+1.0
EBAD	Badajoz	4.44	348	Pn	Pn	09 31 19.7	+1.5
EBAD				Sn	Sn	09 32 06.9	-1.8
EBAD	Badajoz	4.44	348	Pn	Pn	09 31 20.0	+1.9
EBAD				Sn	Sn	09 32 07.9	-0.8
EBAD				*i* IVmb_Lg		09 32 10.1	
PSIM	Granatula de C	4.73	21	Pn	Pn	09 31 24.8	+2.6
PSIM				Sn	Sn	09 32 14.1	-1.9
PARRA	Arraiolos	4.74	339	*eP*	Pn	09 31 24.2	-2.8
PARRA				*eS*	Sn	09 32 14.2	-10
PMTG	Montargil	5.03	339	*eP*	Pn	09 31 27.4	+1.2
PMTG				*eS*	Sn	09 32 22.4	-0.8
PAB	San Pablo	5.28	13	Sn	Sn	09 32 28.8	-2.8
PAB				*i* IVmb_Lg		09 32 31.9	
PCBR	Castelo Branco	5.58	347	*eP*	Pn	09 31 35.4	+1.6

*THE **15** 09:30:17.6,36°N±2°×2°2E±°, h11km±4km, M2.6/11, MLh2.6/11*
*ATH **15** 09:30:20.5,36°.47N×22°.31E, h6km±1km, ML2.7/13, Manual Solution by A.Andreou First location: 2019/11/15 09:31:28, This location: 2019/11/15 11:25:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*

ISC 15 09:30:17.9±1.3, 36°31N±0°.04×22°26E±0°.04, h8km±10km, n46, σ1§01/57, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHA	Kythira Island	0.65	95	P	Pg	09 30 30.4	0.0
NPS1	Neapolis Lacon	0.68	72	P	Pg	09 30 32.0	+1.1
NPS1				S	Sg	09 30 40.5	+0.7
VLI	Veliai	0.68	53	P	Pg	09 30 31.3	+0.3
VLI				S	Sb	09 30 42.3	+0.8
VLI	Veliai	0.68	53	P	Pg	09 30 31.6	+0.6
VLI				S	Sg	09 30 38.9	-0.9
MTHA	Methoni	0.68	319	P	Pb	09 30 32.4	+0.4
MTHA				S	Sg	09 30 39.8	-0.1
MNVA	Monemvasia	0.73	59	P	Pg	09 30 32.6	+0.6
MNVA				S	Sg	09 30 41.4	0.0
PYL1	Pylos	0.76	323	P	Pg	09 30 33.1	+0.6
ITM	Ithomi	0.91	343	P	Pg	09 30 35.4	0.0
ITM				S	Sn	09 30 48.9	-1.4
ITM	Ithomi	0.91	343	P	Pg	09 30 35.4	0.0
ITM				S	Sg	09 30 45.3	-2.0
ANKY	Antikythira Is	0.95	117	P	Pg	09 30 35.2	-0.9
ANKY				S	Sg	09 30 48.7	+0.3
VLX	Vlachokerasia	1.06	5	P	Pg	09 30 38.3	-0.1
VLX				S	Sn	09 30 54.5	+0.2
VLX	Vlachokerasia	1.06	5	P	Pg	09 30 38.2	-0.1
VLX				S	Sg	09 30 49.2	-2.9
AMT	Artemida-Makis	1.30	340	P	Pb	09 30 42.8	+0.2
RODP	Rodopos	1.42	121	P	Pn	09 30 42.7	-1.3
RODP				S	Sn	09 31 02.4	-0.6
MET5	Makryloggos,Me	1.57	33	P	Pn	09 30 46.1	0.0
MET4	Agioi Theodoro	1.59	34	P	Pn	09 30 47.2	+0.8
GUR	Goura	1.62	2	P	Pb	09 30 48.1	-0.1
DRO	Drossia	1.70	345	P	Pn	09 30 46.9	-0.9
DRO	Drossia	1.70	345	P	Pn	09 30 48.1	+0.3
KLV	Kalavryta, Ach	1.73	357	P	Pn	09 30 48.5	+0.1
KLV	Kalavryta, Ach	1.73	357	P	Pb	09 30 49.9	-0.2
LTK	Loutraki	1.80	18	P	Pn	09 30 47.8	-1.5
YRMI	Loutra Irminis	1.93	338	P	Pn	09 30 52.4	+1.3
VLY	Voula,Athens	1.97	38	P	Pn	09 30 50.8	-0.7
VLY	Voula,Athens	1.97	38	P	Pn	09 30 52.2	+0.7
AXS	Araxos	2.01	340	P	Pn	09 30 53.2	+1.0
VILL	Villia	2.03	24	P	Pn	09 30 50.2	-2.3
ATHU	Athens Univers	2.05	36	P	Pn	09 30 53.2	+0.5
TRIZ	Trizonia	2.06	356	P	Pn	09 30 54.0	+1.2
VIL2	Platees	2.06	23	P	Pn	09 30 52.7	-0.2
KALE	Kalithea	2.08	357	P	Pn	09 30 54.3	+1.2
GVD	Gavdhos	2.09	134	P	Pb	09 30 56.8	+0.7
SERG	Sergoula	2.11	356	P	Pn	09 30 55.1	+1.6
VLS	Valsamata	2.29	325	P	Pn	09 30 54.7	-1.3
ANX	Ano Chora	2.29	353	P	Pn	09 30 57.4	+1.2
ANX	Ano Chora	2.29	353	P	Pn	09 30 57.3	+1.2
DMLN	Damoulianata-K	2.44	322	P	Pn	09 30 59.8	+1.6
EVGI	Lefkada island	2.64	331	P	Pn	09 31 01.7	+0.9
MAKR	Makrakomi, Fth	2.70	358	P	Pn	09 31 02.8	+1.1
NYDR	Nydri-Lefkada	2.70	333	P	Pn	09 31 02.4	+0.7
AGG	Agios Georgios	2.71	1	P	Pn	09 31 02.1	+0.3
AMPL	Ampelaki	2.74	343	P	Pn	09 31 02.5	+0.4
KYMI	Kymi, Euboea I	2.74	32	P	Pn	09 31 02.6	+0.5
LKD2	Lefkada island	2.78	333	P	Pn	09 31 03.7	+0.9
NEO	Neokhori	3.09	14	P	Pn	09 31 07.6	+0.7
AOS2	Alonissos-2	3.10	23	P	Pn	09 31 07.9	+0.9

IDC 15 09:32:43.7±1.7, 54°66N×83°76E, h0km, mbtmp2.7/3, ML2.1/3, Error ellipse: s-maj=15.6km s-min=10.2km az=6.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.94	138	I	I	09 38 22.4	
	baz=316,slow=341						
ZALV	Zalesovo Beam	0.94	138	Pg	Pg	09 33 01.2	-0.5
	1.0nm,0.3s,baz=323,slow=18,SNR=18						
ZALV				Lg	Lg	09 33 15.2	
	3.6nm,0.3s,baz=321,slow=28,SNR=18						
KURBB	Kurchatov Arra	5.14	220	Pn	Pn	09 34 01.9	0.0
	baz=38,slow=13,SNR=1.4						
KURBB				Lg	Lg	09 35 28.6	
	baz=41,slow=32,SNR=4.3						
	0.2nm,0.3s						
MKAR	Makanchi Array	7.93	187	Pn	Pn	09 34 40.5	+0.4
	0.1nm,0.3s,baz=12,slow=12,SNR=1.6						
	0.3nm,0.5s						
BVAR	Borovoye Array	8.08	264	Pn	Pn	09 34 41.1	-1.1
	baz=64,slow=14,SNR=2.7						
	0.5nm,0.4s						

*IDC **15** 09:36:21.5±3.2, 1°.48N×126°.29E, h22km±20km, mb4.6/33, mbtmp4.7/35, ML4.3/2, MS3.8/32, Error ellipse: s-maj=20.2km s-min=9.5km az=70.0*
*MOS **15** 09:36:21.5±0.9, 1°.50N×126°.27E, h37km, mb5.2/44, Error ellipse: s-maj=10.2km s-min=5.3km az=116.8*
*DJA **15** 09:36:22.2±0.2, 2°N±2°×12°6E±°, h10km, M5.0/20, mB5.4/6, mb5.3/9, MLv5.1/20, Mw(mB)4.8/6, MwMwp4.7/3, Mwp5.1/3*
*NEIC **15** 09:36:23.3±1.2, 1°.54N±0°.07×126°.41E±0°.06, h35km±1km, mb5.1/131, Error ellipse: s-maj=12.9km s-min=8.8km az=26.0*
*BJI **15** 09:36:23.3, 1°.49N×126°.37E, h52km, mB5.1/9, mb4.9/62, Ms4.3/9, Ms7 4.2/10*
*GCMT **15** 09:36:28.3±0.3, 1°.65N±0°.02×126°.26E±0°.02, h34km±1km, MW5.0/79, Moment Tensor Solution. s33,c40; s79,c100; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.68±.25; Mθθ1.27±.16; Mϕϕ-2.95±.16; Mrθ0.31±.17; Mrϕ-2.72±.12; Mθϕ-0.92±.18; Best double couple: Ms3.67100×10¹⁶ NP1:ϕs68.00000°, δ65.00000°, λ.163.00000°. NP2: ϕs166.00000°, δ75.00000°, λ.26.00000°. Principal axes: T 2.9810, Plg29.0000°, Azm29.0000°; N 1.3800, Plg60.0000°, Azm194.0000°; P -4.3610, Plg7.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 09:36:22.7±0.4, 1°.58N±0°.04×126°.46E±0°.04, h30km±2km, h30km:pP-P, n427, σ1§42/412, mb5.0/160, MS3.9/37, 9C-14D, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.21	132		Pn	09 36 43.1	-0.6
TNTI	Ternate	1.21	132	P	Pn	09 36 44.0	+0.3
TNTI	Ternate	1.21	132	S	Sn	09 36 59.0	-0.1
TNTI	Ternate	1.21	132	P	Pn	09 36 43.9	+0.3
SGSI	Sangihe	2.29	336	P	Pn	09 37 00.8	+2.3
SGSI				S	Sb	09 37 30.0	-1.3
KMSI	Cibinong	2.67	248	P	Pn	09 37 05.1	+1.3
SANI	Sanana	3.64	187	P	Pn	09 37 17.6	+0.5
SANI	Sanana	3.64	187	S	Sn	09 37 58.2	-0.8
SANI	Sanana	3.64	187	P	Pn	09 37 17.4	+0.3
LUWI	Luwuk	4.52	235		Pn	09 37 30.5	+1.3
LUWI	Luwuk	4.52	235	P	Pn	09 37 32.0	+2.8
LUWI	Luwuk	4.52	235	P	Pn	09 37 31.3	+2.1
MRSI	Marisa	4.65	256	P	Pn	09 37 33.3	+2.3
NLAI	Namlea	4.83	172	P	Pn	09 37 32.8	-0.7
SWI	Sorong	5.38	117	P	Pn	09 37 41.7	+0.7
APSI	Ampana	5.41	243	P	Pn	09 37 43.6	+2.1
MSAI	Masohi	5.48	153	P	Pn	09 37 42.8	+0.3
	1.0nm9µm256nm,0.8s						
AAI	Ambon	5.51	162	P	Pn	09 37 45.3	+2.4
	0.6nm2µm146nm,0.9s						
DAV	Davao City (W)	5.52	351	LR	LR	09 40 06.4	
	comp=Z,971nm,18.8s,baz=120,slow=40						
TOLI2	Tolitoli	5.70	265		Pn	09 37 45.1	-0.3
TOLI2	Tolitoli	5.70	265	P	Pn	09 37 45.7	+0.3
TOLI2	Tolitoli	5.70	265	S	Sn	09 38 52.3	+2.4
MPSI	Mapaga	6.68	259	P	Pn	09 38 01.7	+2.8
	0.8nm5µm2µm251nm,0.9s						
BNDI	Bandanaira	6.97	150	P	Pn	09 38 03.3	+0.4
	0.9nm169nm,1.0s						
PCI	Palu	7.07	250	P	Pb	09 38 17.9	-6.9
FAKI	Fak Fak	7.31	128		Pn	09 38 10.5	+2.9
FAKI	Fak Fak	7.31	128	P	Pn	09 38 09.5	+1.9
FAKI	Fak Fak	7.31	128	P	Pn	09 38 12.0	+4.4
	0.6nm2µm196nm,0.9s						
TTSI	Tana Toraja	8.07	235	P	Pn	09 38 18.9	+0.8
MYLDM	Lahad Datu	8.71	294		Pn	09 38 27.9	+1.0
MYLDM	Lahad Datu	8.71	294	P	Pn	09 38 29.9	+3.1
KAPI	Kappang	9.37	226	Pn	Pn	09 38 36.8	+0.9
	5.5nm,0.3s,baz=34,slow=6.1,SNR=12						
KAPI	Kappang	9.37	226		Pn	09 38 37.1	+1.3
KAPI	Kappang	9.37	226	P	Pn	09 38 37.8	+1.9
KAPI	Kappang	9.37	226	*i* P		09 38 36.7	+0.8
SOEI	Soe	11.47	191		Pn	09 39 06.4	+1.6
BATI	Baumata	12.04	193	Pn	Pn	09 39 14.6	+2.1
	4.9nm,0.3s,baz=158,slow=2.0,SNR=5.4						
PLAI	Plampang	13.48	220	P	Pn	09 39 33.9	+1.7
SBUM	Sibu	14.26	274		Pn	09 39 42.6	-0.2
SBUM	Sibu	14.26	274	P	Pn	09 39 45.8	+3.0
GENI	Genyem	14.32	107	P	Pn	09 39 45.1	+1.5
AUDHS	Darwin High Sc	14.59	163	P	Pn	09 39 47.5	+0.2
DRS	Darwin Rock St	14.60	163	P	Pn	09 39 48.2	+0.8
JAY	Jayapura	14.81	106	Pn	Pn	09 39 53.1	+2.8
	0.9nm,0.3s,baz=338,slow=8.6,SNR=5.2						
JAY				LR	LR	09 45 13.7	
	comp=Z,632nm,20.4s,baz=16,slow=36						
	10nm,0.8s						
MTN	Manton Dam	15.06	162	P	Pn	09 39 53.7	0.0
	comp=Z,33nm,0.8s						
MTN	Manton Dam	15.06	162		Pn	09 39 51.9	-1.8
KDU	Kakadu	15.38	157	P	Pn	09 39 59.1	+1.3
	comp=Z,51nm,1.0s						
JAGI	Jajag, Banyuwa	15.82	231		Pn	09 40 03.4	-0.1
JAGI	Jajag, Banyuwa	15.82	231	P	Pn	09 40 05.0	+1.5
KNRA	Kununurra	17.30	173	P	Pn	09 40 21.8	-0.5
	comp=Z,58nm,1.2s						
KNRA	Kununurra	17.30	173		Pn	09 40 19.9	-2.3
FITZ	Fitzroy Crossi	19.57	182	P	P	09 40 47.0	-1.5
	comp=Z,6,8nm,0.8s						
FITZ	Fitzroy Crossi	19.57	182	P	P	09 40 46.5	-2.0
	comp=Z,0.9nm,0.3s,baz=13,slow=11,SNR=22						
	comp=Z,11nm,0.7s						
FITZ	Fitzroy Crossi	19.57	182		P	09 40 47.1	-1.3
FITZ	Fitzroy Crossi	19.57	182	P	P	09 40 47.0	-1.5
MANU	Manus Island	21.21	100	P	P	09 41 06.2	-0.1
TWG	Pinlang	21.75	346	P	P	09 41 10.6	-1.4
YULB	Yu-li	22.25	347	P	P	09 41 14.3	-3.1
TPUB	Ta-pu	22.32	346	P	P	09 41 16.4	-1.7
TPUB				IAmb	IAmb	09 41 21.5	
	comp=Z,83nm,0.9s						
WB0	Warramunga Arr	22.60	160		P	09 41 19.4	-1.8
WB0				IAmb	IAmb	09 41 26.8	
	comp=Z,52nm,0.8s						
COEN	Coen	22.64	134	P	P	09 41 22.0	+0.3
	comp=Z,29nm,1.6s						
COEN	Coen	22.64	134		P	09 41 20.8	-0.9
COEN	Coen	22.64	134	P	P	09 41 21.3	-0.4
BTDF	Bukit Timah Da	22.68	270	P	P	09 41 24.1	+2.0
SSLB	Suanglung	22.71	347	P	P	09 41 22.0	-0.3
SSLB				IAmb	IAmb	09 41 27.3	
	comp=Z,42nm,0.8s						
SSLB	Suanglung	22.71	347	P	P	09 41 23.7	+1.4
WRAB	Tennant Creek	22.74	160	P	P	09 41 21.6	-1.1
WRAB				IAmb	IAmb	09 41 29.1	
	comp=Z,73nm,0.8s						
WRAB	Tennant Creek	22.74	160	P	P	09 41 21.2	-1.4
WRAB	Tennant Creek	22.74	160	*i* P	P	09 41 21.1	-1.5
WRAB				pmax	pmax		
	comp=Z,57nm,0.8s						
WRA	Warramunga Arr	22.74	161	P	P	09 41 20.9	-1.9
	comp=Z,56nm,0.8s,baz=340,slow=11,SNR=253						
WRA				PcP	PcP	09 45 13.3	-0.9
	comp=Z,0.9nm,0.6s,baz=331,slow=1.9,SNR=2.0						
WRA				S	S	09 45 23.8	-5.9
	comp=Z,3.0nm,0.9s,baz=345,slow=19,SNR=5.9						
WRA				ScP	ScP	09 48 51.0	+1.0
	comp=Z,0.7nm,0.8s,baz=342,slow=2.7,SNR=2.7						
	comp=Z,56nm,0.8s						
WRA	Warramunga Arr	22.74	161		P	09 41 20.6	-2.1
WRA	Warramunga Arr	22.74	161	*i* P	P	09 41 20.8	-1.9
WRA				pmax	pmax		
	comp=Z,54nm,0.8s						
WR8	Warramunga Arr	22.81	160		P	09 41 22.1	-1.2
WR8				IAmb	IAmb	09 41 28.2	
	comp=Z,58nm,0.7s						
YOJ	Yonaguni jima	22.99	352	P	P	09 41 24.6	-0.5
YOJ	Yonaguni jima	22.99	352	P	P	09 41 24.6	-0.5
YOJ				pmax	pmax		
	comp=Z,157nm,1.0s						
PMG	Port Moresby	23.33	118	LR	LR	09 53 05.2	
	comp=Z,500nm,18.8s,baz=332,slow=43						
PMG	Port Moresby	23.33	118	P	P	09 41 28.4	-0.3
PMG	Port Moresby	23.33	118	P	P	09 41 29.6	+0.9
PMG	Port Moresby	23.33	118	P	P	09 41 29.8	+1.1
PMG	Port Moresby	23.33	118	*i* P	P	09 41 29.1	+0.4
PMG				pmax	pmax		
	comp=Z,22nm,0.9s						
YHNB	Yeheng	23.47	348	P	P	09 41 29.9	-0.2
YHNB				IAmb	IAmb	09 41 32.2	
	comp=Z,43nm,0.9s						
YHNB	Yeheng	23.47	348	P	P	09 41 30.7	+0.6
MBWA	Marble Bar	23.54	196	P	P	09 41 28.7	-1.9
	comp=Z,5,9nm,0.8s						
MBWA	Marble Bar	23.54	196		P	09 41 29.4	-1.3
MBWA	Marble Bar	23.54	196	P	P	09 41 29.0	-1.7
MBWA				IAmb	IAmb	09 41 33.6	
	comp=Z,35nm,0.7s						
MBWA	Marble Bar	23.54	196	P	P	09 41 31.6	+0.9
QIZ	Qiongzhong	23.79	318	P	P	09 41 30.4	-2.6
QIZ				IAmb	IAmb	09 41 51.8	
	comp=Z,54nm,1.3s						
QIZ	Qiongzhong	23.79	318	P	P	09 41 34.1	+1.0
QIZ				S	S	09 45 49.5	+2.5
QIZ				LR	LR		
	comp=Z,430nm,16.1s						
QIZ				LR	LR		
	comp=Z,440nm,12.9s						
QIZ				LR	LR		
	comp=Z,520nm,16.8s						
PSAD1	Pilbara Seismi	23.80	195	P	P	09 41 34.1	+1.0
	comp=Z,36nm,0.9s						
PSA00	Pilbara Seismi	23.90	195		P	09 41 32.7	-1.4
PSA00	Pilbara Seismi	23.90	195		P	09 41 32.2	-2.0
PSA00				IAmb	IAmb	09 41 43.6	
	comp=Z,12nm,0.9s						
PSA00	Pilbara Seismi	23.90	195	P	P	09 41 35.3	+1.2
JOW	Kunigami	25.17	4	P	P	09 41 45.0	-0.7
JOW				IAmb	IAmb	09 41 49.2	
	comp=Z,74nm,0.9s						
JOW	Kunigami	25.17	4	P	P	09 41 48.0	+2.4
QIS	Mount Isa	25.50	150	P	P	09 41 48.3	-0.4
	comp=Z,25nm,0.8s						
QIS	Mount Isa	25.50	150	P	P	09 41 48.8	+0.1
IPM	Ipoh	25.56	277	P	P	09 41 48.4	-0.9
IPM	Ipoh	25.56	277	P	P	09 41 51.0	+1.6
AS31	Alice Springs	26.12	164		P	09 41 53.6	-0.8
ASAR	Alice Springs	26.12	164	P	P	09 41 53.6	-0.8
	comp=Z,12nm,0.5s,baz=344,slow=7.4,SNR=131						
ASAR				PcP	PcP	09 45 20.7	-0.9
	comp=Z,1.2nm,0.6s,baz=344,slow=3.4,SNR=3.0						
ASAR				S	S	09 46 20.2	-4.0
	comp=Z,5.0nm,0.8s,baz=349,slow=18,SNR=4.3						
ASAR				ScP	ScP	09 48 58.4	-1.0
	comp=Z,0.4nm,0.7s,baz=336,slow=3.0,SNR=2.4						
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	26.12	164		P	09 41 52.9	-1.4
AUALC	St Philip's Co	26.14	164	P	P	09 41 54.0	-0.5
RABL	Rabaul	26.32	103	P	P	09 41 55.4	-0.9
RABL				IAmb	IAmb	09 42 00.0	
	comp=Z,42nm,0.6s						
MTSU	Mount Surprise	26.32	139	P	P	09 41 56.2	-0.1
	comp=Z,14nm,0.8s						
MTSU	Mount Surprise	26.32	139	P	P	09 41 56.1	-0.1
WRKA	Warakurna	26.52	176	P	P	09 41 58.4	+0.4
	comp=Z,17nm,0.8s						
GIRL	Giralia	26.87	206	P	P	09 41 59.3	-1.8
GIRL				IAmb	IAmb	09 42 01.4	
	comp=Z,124nm,1.6s						
RPSI	Rantau Prapat	27.54	273	P	P	09 42 04.8	-2.4
PSI	Prapat	27.54	273	P	P	09 42 09.8	+2.4
PSI	Prapat	27.54	273	P	P	09 42 04.8	-2.6
PSI				pmax	pmax		
	comp=Z,34nm,1.2s						
TV1H	Townsville Har	28.78	137	P	P	09 42 19.3	+1.1
GSI	Gunungsitoli	28.88	270		P	09 42 16.8	-2.4
GSI				IAmb	IAmb	09 42 23.3	
	comp=Z,38nm,0.9s						
GSI	Gunungsitoli	28.88	270	P	P	09 42 20.5	+1.3
CTA	Charters Tower	28.99	139	P	P	09 42 20.4	+0.2
	comp=Z,0.4nm,0.9s						
CTA	Charters Tower	28.99	139	LR	LR	09 55 07.7	
	comp=Z,4,8nm,19.9s,baz=0.5,slow=39						
CTA	Charters Tower	28.99	139	P	P	09 42 21.0	+0.9
CTAO	Charters Tower	28.99	139	P	P	09 42 19.1	-1.0
CTAO	Charters Tower	28.99	139	P	P	09 42 21.1	+0.9
CTAO	Charters Tower	28.99	139	P	P	09 42 19.1	-1.0
CTAO				pmax	pmax		
	comp=Z,17nm,1.1s						
MEEK	Meekatharra	29.06	195	P	P	09 42 19.3	-1.3
	comp=Z,21nm,0.9s						
MEEK	Meekatharra	29.06	195	P	P	09 42 19.6	-1.0
SLVN	Son La	29.47	313	P	P	09 42 23.5	-0.9
SLVN	Son La	29.47	313	P	P	09 42 25.6	+1.2
NJ2	Nanjing	31.14	347	*eP*	P	09 42 40.5	+1.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
JNU	Nakatsue	31.65	7	LR	LR	09 57 39.1	
	comp=Z,101nm,18.8s,baz=208,slow=40						
JNU	Nakatsue	31.65	7		P	09 42 43.5	+0.1
JNU				IAmb	IAmb	09 42 45.9	
	comp=Z,28nm,0.9s						
JNU	Nakatsue	31.65	7	P	P	09 42 44.6	+1.1
CMAR	Chiang Mai Arr	31.77	304	P	P	09 42 44.3	-0.5
	comp=Z,0.7nm,0.3s,baz=136,slow=9.1,SNR=5.7						
	comp=Z,0.7nm,0.3s						
CMAR	Chiang Mai Arr	31.77	304	P	P	09 42 43.6	-1.2
CMAR	Chiang Mai Arr	31.77	304	*i* P	P	09 42 46.5

BBOO Buckleboo 35.39 166 P **P** 09 43 15.2 -0.9
comp=Z,34nm,1.0s
BBOO Buckleboo 35.39 166 IAmb IAmb 09 43 31.7
comp=Z,22nm,0.8s
BBOO Buckleboo 35.39 166 P **P** **09 43 15.5 -0.5**
NWAO Narrogin (SRO) 35.41 193 P **P** **09 43 17.2 +1.0**
comp=Z,38nm,0.9s
NWAO Narrogin (SRO) 35.41 193 P **P** **09 43 14.7 -1.5**
NWAO IAmb IAmb 09 43 25.4
comp=Z,17nm,0.7s
NWAO Narrogin (SRO) 35.41 193 P **P** **09 43 14.7 -1.5**
NWAO pmax pmax
comp=Z,17nm,0.7s
KSRS Korea Array 35.72 2 P **P** **09 43 20.2 +1.4**
comp=Z,4.4nm,0.7s,baz=176,slow=9.3,SNR=15
comp=Z,4.4nm,0.7s
EIDS Eidsvold 35.86 140 P **P** **09 43 19.8 -0.4**
comp=Z,19nm,1.4s
EIDS Eidsvold 35.86 140 **P** **09 43 19.3 -0.9**
EIDS IAmb IAmb 09 43 20.9
comp=Z,24nm,1.2s
EIDS Eidsvold 35.86 140 P **P** **09 43 19.8 -0.4**
AUHAR St Anne's Scho 35.90 195 P **P** **09 43 21.0 +0.6**
WHYH Whyalla 35.99 164 P **P** **09 43 22.7 +1.5**
XAN Xi'an 36.22 335 ⇑P **P** **09 43 22.1 -1.1**
XAN pmax pmax
comp=Z,21nm,1.3s
CD2 Chengdu 36.23 326 P **P** **09 43 23.3 -0.1**
CD2 pmax pmax
comp=Z,30nm,0.6s
STKA Stephens Creek 36.24 158 P **P** **09 43 22.4 -0.9**
comp=Z,106nm,0.9s
STKA Stephens Creek 36.24 158 P **P** **09 43 22.2 -1.1**
comp=Z,17nm,0.8s,baz=334,slow=8.0,SNR=18
comp=Z,17nm,0.8s
STKA Stephens Creek 36.24 158 P **P** **09 43 22.5 -0.9**
STKA Stephens Creek 36.24 158 ⇓*i*P **P** **09 43 22.6 -0.7**
AUJCS Jamestown Cent 36.45 163 P **P** **09 43 25.6 +0.5**
MAJO Matsushiro 36.45 16 P **P** **09 43 24.2 -0.9**
MAJO IAmb IAmb 09 43 27.4
comp=Z,48nm,1.2s
MAJO Matsushiro 36.45 16 P **P** **09 43 25.5 +0.5**
MAJO Matsushiro 36.45 16*c i*P **P** **09 43 25.7 +0.7**
MAJO pmax pmax
comp=Z,22nm,0.9s
MAJO Matsushiro 36.45 16 P **P** **09 43 25.3 +0.2**
MJAR Matsushiro Arr 36.45 16 P **P** **09 43 24.9 -0.1**
comp=Z,17nm,0.9s,baz=183,slow=9.6,SNR=23
comp=Z,17nm,0.9s
MJAR Matsushiro Arr 36.45 16 P **P** **09 43 24.8 -0.3**
MJAR Matsushiro Arr 36.45 16 P **P** **09 43 25.0 -0.1**
MJB9 Matsu-Tunnel 36.45 16 P **P** **09 43 23.8 -1.3**
MJB9 IAmb IAmb 09 43 28.4
comp=Z,46nm,1.2s
JYT Yasato 36.75 19 P **P** **09 43 27.9 +0.3**
HTT Hallett 36.76 162 P **P** **09 43 28.1 +0.4**
comp=Z,6.1nm,1.5s
AULRC Lightning Ridg 37.08 148 P **P** **09 43 30.0 -0.5**
RKGY Rocky Gully 37.09 193 P **P** **09 43 32.1 +1.6**
comp=Z,101nm,0.9s
HNS HongShan 37.25 344 ⇓P **P** **09 43 32.1 +0.3**
HNS pmax pmax
comp=Z,14nm,0.9s
DL2 Dalian 37.41 354 P **P** **09 43 34.5 +1.4**
DL2 pmax pmax
comp=Z,77nm,0.7s
CMSA Cobar Meteorol 37.66 153 P **P** **09 43 35.3 -0.1**
comp=Z,19nm,2.0s
CMSA Cobar Meteorol 37.66 153 P **P** **09 43 35.1 -0.3**
JMM Marumori 38.44 18 P **P** **09 43 41.2 -0.6**
JMM Marumori 38.44 18 P **P** **09 43 43.5 +1.6**
BJT Baijiatuau 39.39 348 P **P** **09 43 49.0 -0.8**
BJT Baijiatuau 39.39 348 P **P** **09 43 50.7 +0.9**
BJT Baijiatuau 39.39 348 P **P** **09 43 49.0 -0.8**
BJT pmax pmax
comp=Z,21nm,1.2s
BJI Beijing 39.41 348 P **P** **09 43 50.6 +0.7**
BJI pmax pmax
comp=Z,8.0nm,0.6s
AUDCS Dubbo College 39.64 150 P **P** **09 43 52.2 +0.1**
ARMA Armidale 39.85 145 P **P** **09 43 53.4 -0.6**
ARMA IAmb IAmb 09 43 56.3
comp=Z,25nm,0.9s
LZDM Lanzhou Array 40.19 331 P **P** **09 43 56.3 -0.7**
comp=Z,3.6nm,0.4s,baz=128,slow=9.6,SNR=3.8
comp=Z,3.6nm,0.4s
LZH Lanzhou 40.23 331 *e*P **P** **09 43 57.8 +0.8**
LZH PcP **PcP** **09 46 03.0 +2.2**
LZH pmax pmax
comp=Z,26nm,1.0s
LZH LR LR
comp=Z,300nm,14.8s
LZH LR LR
comp=Z,260nm,13.9s
LZH LR LR
comp=Z,480nm,17.0s
ARPS Mount Arapiles 40.75 161 P **P** **09 44 01.4 +0.3**
comp=Z,16nm,0.8s
SHL Shillong 40.96 309 **P** **09 44 01.2 -2.1**
SHL IAmb IAmb 09 44 05.4
comp=Z,60nm,1.6s
SHL Shillong 40.96 309 P **P** **09 44 01.2 -2.1**
SHL pmax pmax
comp=Z,60nm,1.6s
YNG Young 41.21 152 P **P** **09 44 05.6 +0.6**
comp=Z,15nm,1.3s
HHC Hu-ho-hao-te 41.35 343 *e*P **P** **09 44 09.1 +2.9**
HHC pP sP 09 44 17.8 -0.2
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,160nm,6.8s
CN2 Changchun 42.05 359 *e*P **P** **09 44 15.3 +3.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Ar. 42.72 6 P **P** **09 44 18.6 +1.4**
comp=Z,16nm,0.8s,baz=190,slow=7.5,SNR=15
comp=Z,16nm,0.8s
MDJ Mudanjiang 42.94 3 P **P** **09 44 18.8 -0.1**
MDJ IAmb IAmb 09 44 24.6
comp=Z,26nm,0.9s
MDJ Mudanjiang 42.94 3 P **P** **09 44 20.8 +1.8**
MDJ pmax pmax
comp=Z,34nm,0.9s
MDJ Mudanjiang 42.94 3 P **P** **09 44 20.7 +1.8**
MDJ Mudanjiang 42.94 3 P **P** **09 44 20.9 +1.8**
XLT XiLinHaoTe 43.14 349 *e*P **P** **09 44 21.8 +1.1**
XLT pP sP 09 44 34.9 +2.4
XLT pmax pmax
comp=Z,17nm,0.9s
XLT pmax pmax
comp=Z,180nm,5.5s
LSA Lhasa 43.68 313 P **P** **09 44 23.9 -1.8**
LSA IAmb IAmb 09 45 55.3
comp=Z,15nm,0.5s
LSA Lhasa 43.68 313 P **P** **09 44 23.9 -1.8**
LSA pmax pmax
comp=Z,15nm,0.5s
BNX BinXian 43.98 1 ⇓P **P** **09 44 28.0 +0.7**
BNX pmax pmax
comp=Z,14nm,0.9s
GTA Gaotai 44.81 330 *e*P **P** **09 44 35.0 +0.8**
GTA PcP **PcP** **09 46 17.6 +1.7**
GTA pmax pmax
comp=Z,8.0nm,0.7s
GOMU GeErMu 45.22 323 P **P** **09 44 38.9 +1.1**
GOMU S **S** **09 51 16.4 +0.1**
GOMU pmax pmax
comp=Z,6.0nm,1.2s
DZM Mont Dzumac 45.55 123 P **P** **09 44 41.4 +1.0**
comp=Z,16nm,1.0s,baz=356,slow=12,SNR=5.0
comp=Z,16nm,1.0s
PALK Pallekele 45.95 279 LR LR 10 06 18.7
comp=Z,132nm,20.8s,baz=96,slow=39
EVN Everest 46.08 308 **P** **09 44 43.6 -1.4**
EVN IAmb IAmb 09 44 51.1
comp=Z,18nm,0.6s
HIA Hailar 47.85 354 P **P** **09 44 58.5 +0.6**
HIA IAmb IAmb 09 45 01.0
comp=Z,20nm,1.1s
HIA Hailar 47.85 354 P **P** **09 44 59.8 +1.9**
HIA Hailar 47.85 354 P **P** **09 44 58.5 +0.6**
HIA pmax pmax
comp=Z,20nm,1.1s
HILR Hailar Array B 48.14 354 P **P** **09 45 02.1 +2.1**
comp=Z,7.8nm,0.5s,baz=177,slow=11,SNR=11
comp=Z,7.8nm,0.5s
HEH HeiHe 48.50 1 *e*P **P** **09 45 03.0 +0.2**
HEH pmax pmax
comp=Z,32nm,0.9s
ULN Ulaanbaatar 49.07 343 P **P** **09 45 07.1 -0.3**
ULN IAmb IAmb 09 45 20.1
comp=Z,12nm,0.8s
ULN Ulaanbaatar 49.07 343 ⇓*i*P **P** **09 45 08.1 +0.7**
ULN pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 49.07 343 P **P** **09 45 08.2 +0.7**
ULN pP **sP** **09 45 18.7 -0.6**
SONM Songino Array 49.24 342 P **P** **09 45 08.6 -0.1**
comp=Z,5.2nm,0.7s,baz=154,slow=8.9,SNR=16
SONM LR LR 10 07 39.4
comp=Z,145nm,21.5s,baz=134,slow=38
comp=Z,5.2nm,0.7s
HYBB Hyderabad (bro 49.62 292 *e*P **P** **09 45 11.5 -0.5**
HYBB esP **sP** **09 45 25.8 +1.9**
GRNR Gornyy 49.73 8 ⇑*i*P **P** **09 45 13.9 +1.7**
GRNR pmax pmax
comp=Z,20nm,0.9s
CIT Chita 51.42 350 *e*P **P** **09 45 25.8 +0.8**
CIT *e* 09 45 37.6
CIT *e* 09 47 18.4
CIT *e* 09 48 22.6
CIT pmax pmax
comp=Z,116nm,1.4s
ZEA Zeya 51.99 1 *e*P **P** **09 45 30.1 +1.0**
MSVF Nonsavu 54.30 113 P **P** **09 45 47.0 +0.2**
MSVF IAmb IAmb 09 45 49.3
comp=Z,43nm,1.2s
MSVF Nonsavu 54.30 113 P **P** **09 45 47.0 +0.2**
MSVF pmax pmax
comp=Z,43nm,1.3s
WMQ Urumqi 54.33 326 *e*P **P** **09 45 48.0 +1.3**
WMQ LR LR
comp=Z,180nm,23.8s
PEA0B Petropavlovsk- 57.51 22 P **P** **09 46 11.1 +1.9**
PEA0B Petropavlovsk- 57.51 22 ⇑*i*P **P** **09 46 10.6 +1.4**
PETK Petropavlovsk- 57.51 22 P **P** **09 46 10.2 +1.0**
comp=Z,11nm,0.5s,baz=186,slow=5.4,SNR=52
PETK LR LR 10 11 46.0
comp=Z,50nm,19.6s,baz=217,slow=37
comp=Z,11nm,0.5s
PETK Petropavlovsk- 57.51 22 P **P** **09 46 08.9 -0.3**
ZSN Zaisan 58.16 328 *e*P **P** **09 46 14.0 0.0**
ZSN Zaisan 58.16 328 *e*P **P** **09 46 13.9 0.0**
SHLS Shalkode 58.83 321 *e*P **P** **09 46 16.1 -2.7**
comp=Z,14nm,1.1s
SHLS Shalkode 58.83 321 *e*P **P** **09 46 16.9 -1.9**
SHLS pmax pmax
comp=Z,13nm,1.1s
NIL Nilore 59.04 309 P **P** **09 46 19.7 -0.6**
NIL IAmb IAmb 09 46 41.3
comp=Z,20nm,1.0s
NIL Nilore 59.04 309 P **P** **09 46 19.7 -0.6**
NIL pmax pmax
comp=Z,20nm,1.0s
MK31 Makanchi Array 59.17 326 P **P** **09 46 20.3 -0.6**
MK31 Makanchi Array 59.17 326*d i*P **P** **09 46 20.7 -0.2**
MKAR Makanchi Array 59.17 326 P **P** **09 46 20.8 -0.2**
comp=Z,5.4nm,0.4s,baz=120,slow=8.0,SNR=42
comp=Z,5.4nm,0.4s
MKAR Makanchi Array 59.17 326 *i* P **P** **09 46 20.7 -0.2**
MKAR pmax pmax
comp=Z,6.0nm,0.4s
TARG Taragay, Kyrgy 59.17 319 **P** **09 46 20.4 -1.2**
TARG IAmb IAmb 09 46 35.4
comp=Z,12nm,0.9s
TARG Taragay, Kyrgy 59.17 319 P **P** **09 46 20.4 -1.2**
TARG pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 59.35 326 P **P** **09 46 21.9 -0.3**
MAKZ IAmb IAmb 09 46 31.1
comp=Z,18nm,1.1s
MAKZ Makanchi 59.35 326 P **P** **09 46 21.9 -0.3**
MAKZ pmax pmax
comp=Z,18nm,1.2s
MAKZ Makanchi 59.35 326 P **P** **09 46 21.9 -0.3**
SATY Saty 59.44 321 *e*P **P** **09 46 23.1 0.0**
comp=Z,9.5nm,0.8s
SATY Saty 59.44 321 *e*P **P** **09 46 23.0 0.0**
SATY pmax pmax
comp=Z,10.0nm,0.8s
LBZ Lake Benmore 60.08 145 P **P** **09 46 26.7 -0.5**
YAK Yakutsk 60.35 2 P **P** **09 46 27.9 -0.7**
YAK Yakutsk 60.35 2 *e*P **P** **09 46 29.6 +0.9**
YAK *e**PP **pP** **09 46 37.4 0.0**
YAK *e* 09 47 14.2
YAK *e* 09 48 42.5
YAK *e*PPP PPP 09 50 06.1
YAK *e*S **S** **09 54 42.5 +1.3**
YAK *e**SS sS 09 54 57.6 +2.3
YAK *e*SS **SS** **09 58 41.0 +1.8**
YAK pmax pmax
comp=Z,68nm,1.0s
YAK pmax pmax
comp=N,36nm,1.4s
YAK pmax pmax
comp=E,17nm,1.4s
YAK pmax pmax
comp=Z,595nm,6.3s
YAK pmax pmax
comp=N,842nm,5.3s
YAK pmax pmax
comp=E,878nm,5.5s
YAK smax smax
comp=E,559nm,4.8s
YAK smax smax
comp=N,489nm,4.0s
MDOK Medeo 60.36 320 *e*P **P** **09 46 29.3 -0.1**
MDOK Medeo 60.36 320 *e*P **P** **09 46 29.3 -0.1**
TNSS Tian-Shan 60.36 320 *e*P **P** **09 46 29.3 -0.4**
TNSS Tian-Shan 60.36 320 *e*P **P** **09 46 29.3 -0.4**
TDK Taldyqorghan 60.44 323 *e*P **P** **09 46 29.6 -0.1**
TDK Taldyqorghan 60.44 323 *e*P **P** **09 46 29.6 -0.1**
AAA Alma-Ata 60.47 320 *e*P **P** **09 46 29.9 -0.1**
AAA Alma-Ata 60.47 320 *e*P **P** **09 46 29.9 -0.1**
MA2 Magadan 60.84 14 LR LR 10 12 32.4
comp=N,44nm,21.9s,baz=123,slow=36
MA2 Magadan 60.84 14 ⇓*i*P **P** **09 46 34.3 +2.2**
MA2 pmax pmax
comp=Z,63nm,1.0s
MA2 Magadan 60.84 14 P **P** **09 46 30.8 -1.3**
comp=Z,92nm,2.2s
URZ Urewera 61.18 136 P **P** **09 46 36.2 +1.4**
comp=Z,7.8nm,0.9s,baz=286,slow=1.9,SNR=1.4
comp=Z,7.8nm,0.9s
RTZ Ruatahuna 61.26 136 P **P** **09 46 34.4 -1.1**
RTZ IAmb IAmb 09 46 36.4
comp=Z,22nm,0.9s
AAK Ala-Archa 61.77 319 P **P** **09 46 39.0 +0.1**
comp=Z,2.8nm,0.7s,baz=153,slow=6.8,SNR=5.8
comp=Z,2.8nm,0.7s
AAK Ala-Archa 61.77 319 P **P** **09 46 39.6 +0.6**
AAK Ala-Archa 61.77 319 ⇓*i*P **P** **09 46 40.0 +1.0**
AAK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 61.77 319 P **P** **09 46 38.1 -0.9**
AAK sP **sP** **09 46 53.3 +2.2**
SGDS Sogindy 62.05 320 *e*P **P** **09 46 40.9 +0.1**
ARSB Arslanbob 62.22 317 IAmb IAmb 09 46 48.3
comp=Z,18nm,1.2s
ZAA0 Zalesovo Array 62.38 334 **P** **09 46 42.1 -0.4**
ZAA0 IAmb IAmb 09 46 44.5
comp=Z,28nm,1.7s
ZALV Zalesovo Beam 62.38 334 P **P** **09 46 41.9 -0.7**
comp=Z,2.0nm,0.4s,baz=116,slow=6.8,SNR=8.1
ZALV LR LR 10 16 06.2
comp=Z,47nm,19.1s,baz=83,slow=38
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 62.38 334 **P** **09 46 41.8 -0.8**
KBL Kabul 62.62 308 P **P** **09 46 43.8 -1.1**
KBL IAmb IAmb 09 46 47.9
comp=Z,13nm,0.8s
KBL Kabul 62.62 308 P **P** **09 46 43.8 -1.1**
KBL pmax pmax
comp=Z,13nm,0.8s
GAR Garm 63.19 314 P **P** **09 46 47.4 -1.1**
KURBB Kurchatov Arra 63.40 328 P **P** **09 46 49.3 -0.2**
comp=Z,17nm,0.6s,baz=127,slow=6.2,SNR=59
comp=Z,17nm,0.6s
KURK Kurchatov 63.40 328 P **P** **09 46 48.9 -0.6**
KURK Kurchatov 63.40 328*d i*P **P** **09 46 49.3 -0.2**
KURK pmax pmax
comp=Z,32nm,0.8s
KURK Kurchatov 63.40 328 P **P** **09 46 49.1 -0.3**
CHGR Chuyangaron 63.91 313 P **P** **09 46 51.6 -1.6**
CHGR Chuyangaron 63.91 313 P **P** **09 46 51.6 -1.6**
CHGR pmax pmax
comp=Z,44nm,1.2s
SEY Seymchan 64.17 13 LR LR 10 14 30.9
comp=Z,34nm,21.9s,baz=173,slow=36
SHEM Shemya Is, Ala 64.44 30 LR LR 10 09 02.1
comp=Z,93nm,21.9s,baz=272,slow=30
IUG luzhnay 64.57 317 *e*P **P** **09 46 57.2 -0.3**
comp=Z,7.3nm,0.6s
IUG luzhnay 64.57 317 *e*P **P** **09 46 57.2 -0.3**
IUG pmax pmax
comp=Z,7.0nm,0.6s
KK31 Karatay Array 64.62 318 P **P** **09 46 56.4 -1.3**
KK31 Karatay Array 64.62 318 P **P** **09 46 56.4 -1.3**
KK31 pmax pmax
comp=Z,9.0nm,1.1s
BRZS Berezniki 66.28 325 *e*P **P** **09 47 08.7 +0.4**
BRZS Berezniki 66.28 325 *e*P **P** **09 47 08.7 +0.4**
CASY Casey 68.67 187 P **P** **09 47 22.4 -0.6**
BVAR Borovoye Array 68.97 328 P **P** **09 47 25.0 -0.2**
comp=Z,7.3nm,0.7s,baz=82,slow=5.0,SNR=16
BVAR LR LR 10 20 54.2
comp=Z,68nm,18.5s,baz=117,slow=39
comp=Z,7.3nm,0.7s
BVAR Borovoye Array 68.97 328 P **P** **09 47 25.0 -0.2**
BORK Borovoye 69.02 328*c i*P **P** **09 47 24.9 -0.6**
BORK pmax pmax
comp=Z,19nm,1.1s
BORK Borovoye 69.02 328 P **P** **09 47 24.7 -0.7**
TIXI Tiksi 69.98 1 LR LR 10 22 48.3
comp=Z,57nm,18.0s,baz=193,slow=40
TIXI Tiksi 69.98 1 **P** **09 47 31.0 0.0**
TIXI IAmb IAmb 09 47 32.7
comp=Z,30nm,1.4s
TIXI Tiksi 69.98 1 ⇓*i*P **P** **09 47 31.2 +0.2**
TIXI pmax pmax
comp=Z,23nm,1.3s
TIXI Tiksi 69.98 1 P **P** **09 47 31.1 0.0**
TIXI pP **sP** **09 47 42.1 -1.1**
TIXI sP pP 09 47 46.1 +6.2
AB31 Akbulak array 73.64 321 P **P** **09 47 52.6 -0.8**
AKTO Aktyubinsk 75.17 322 P **P** **09 48 01.9 -0.4**
comp=Z,7.6nm,0.6s,baz=123,slow=6.7,SNR=22
AKTO LR LR 10 22 48.8
comp=Z,121nm,20.7s,baz=48,slow=37
comp=Z,7.6nm,0.6s
AKTO Aktyubinsk 75.17 322 P **P** **09 48 02.0 -0.4**
RAR Rarotonga 75.47 112 LR LR 10 19 21.7
comp=Z,35nm,21.2s,baz=318,slow=34
SVE Sverdlovsk 75.64 329 *e*P **P** **09 48 05.2 +0.3**
SVE pmax pmax
comp=Z,28nm,0.8s
ARTI Arti 76.68 328 P **P** **09 48 10.3 -0.5**
comp=Z,12nm,0.7s,baz=106,slow=3.5,SNR=15
comp=Z,12nm,0.7s
ARTI Arti 76.68 328 **P** **09 48 09.9 -1.0**
ARTI IAmb IAmb 09 48 11.0
comp=Z,18nm,0.6s
ARTI Arti 76.68 328*c i*P **P** **09 48 10.1 -0.8**
ARTI 09 51 00.1
ARTI S **S** **09 57 55.2 -0.4**
ARTI SS **SS** **10 02 48.3 -3.2**
ARTI pmax pmax
comp=Z,18nm,0.9s
ARTI Arti 76.68 328 P **P** **09 48 10.0 -0.8**
ARTI pP **sP** **09 48 21.5 -1.6**
L14K Kuka Creek 79.51 28 IAmb IAmb 09 48 30.4
comp=Z,46nm,1.2s
AKT Akhty 80.51 312 *e*P **P** **09 48 30.3 -2.1**
AKT *e* 09 48 36.3
AKT pmax pmax
comp=Z,8.0nm,0.7s
RAYN Ar Rayn 81.08 293 P **P** **09 48 34.6 -1.2**
RAYN Ar Rayn 81.08 293 P **P** **09 48 34.6 -1.2**
RAYN pmax pmax
comp=Z,7.0nm,0.8s
RAYN Ar Rayn 81.08 293 P **P** **09 48 34.8 -1.0**
L16K Owhat River 81.09 28 IAmb IAmb 09 48 38.0
comp=Z,48nm,1.4s
VNDA Vanda 81.34 173 P **P** **09 48 35.2 -0.7**
comp=Z,3.7nm,0.6s,baz=309,slow=5.9,SNR=31
VNDA LR LR 10 25 44.5
comp=Z,28nm,19.6s,baz=340,slow=36
comp=Z,3.7nm,0.6s
VNDA Vanda 81.34 173 P **P** **09 48 35.3 -0.7**
VNDA Vanda 81.34 173 P **P** **09 48 35.3 -0.7**
VNDA pmax pmax
comp=Z,8.0nm,0.8s
VNDA Vanda 81.34 173 P **P** **09 48 35.8 -0.2**
MAW Mawson 81.66 200 P **P** **09 48 37.2 -0.6**
comp=Z,3.0nm,0.7s,baz=42,slow=6.0,SNR=8.8
MAW LR LR 10 22 32.6
comp=Z,20nm,18.3s,baz=52,slow=34
comp=Z,3.0nm,0.7s
K17K Iditarod 81.85 27 IAmb IAmb 09 48 42.6
comp=Z,38nm,1.1s
KIRV Kirov 81.91 329 P **P** **09 48 38.8 -0.5**
comp=Z,7.4nm,0.5s,baz=29,slow=3.3,SNR=7.1
comp=Z,7.4nm,0.5s
KIRV Kirov 81.91 329*c i*P **P** **09 48 39.0 -0.3**
E18K Tukpahlearik C 82.04 22 IAmb IAmb 09 48 43.3
comp=Z,27nm,1.1s
SBA Scott Base 82.26 172 P **P** **09 48 41.2 +0.4**
SBA Scott Base 82.26 172 P **P** **09 48 41.2 +0.4**
SBA pmax pmax
comp=Z,9.0nm,1.1s
GNI Garni 82.65 310*c i*P **P** **09 48 43.4 -0.4**
GNI pmax pmax
comp=Z,4.0nm,1.0s
GNI Garni 82.65 310 P **P** **09 48 42.4 -1.4**
comp=Z,20nm,1.4s
J18K Innoko River 82.71 26 IAmb IAmb 09 48 47.1
comp=Z,46nm,1.4s
F19K Shaleruckik Mo 82.97 23 IAmb IAmb 09 48 47.6
comp=Z,34nm,1.6s
L20K Farewell, AK 83.82 27 IAmb IAmb 09 48 53.1
comp=Z,24nm,1.3s
KDAK Kodiak Island 83.84 32 LR LR 10 20 11.2
comp=Z,129nm,21.6s,baz=230,slow=31
J20K Nowinta River 83.96 26 IAmb IAmb 09 48 56.4
comp=Z,24nm,1.2s
KBZ Khabaz 84.25 314 P **P** **09 48 51.0 -0.8**
comp=Z,4.4nm,0.8s,baz=107,slow=8.0,SNR=7.2
KBZ LR LR 10 31 09.4
comp=Z,13nm,20.4s,baz=65,slow=39
comp=Z,4.4nm,0.8s
KBZ Khabaz 84.25 314 ⇓*i*P **P** **09 48 52.1 +0.3**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
IMAR Indian Mountai 84.40 24 P **P** **09 48 52.0 0.0**
KIV Kislovodsk 84.42 314 *e*P **P** **09 48 53.3 +0.5**
KIV pmax pmax
comp=Z,17nm,1.0s
GURO Guroymak-BITLI 84.66 308 P **P** **09 48 54.5 +0.4**
E21K Killik River 84.70 21 IAmb IAmb 09 49 22.9
comp=Z,15nm,1.1s
L22K Petersville 85.26 27 P **P** **09 48 56.0 -0.5**
L22K IAmb IAmb 09 50 48.2
comp=Z,45nm,1.8s
SLKM Skilak Lake 85.33 30 P **P** **09 48 56.3 -0.6**
E22K Anaktuvuk Pass 85.45 22 IAmb IAmb 09 49 00.5
comp=Z,27nm,1.6s
VRH Novokhopyorsk 85.47 321 *e*P **P** **09 48 55.3 -2.4**
VRH pmax pmax
comp=Z,40nm,0.9s
KOPT Kop Dagi 85.89 310 P **P** **09 48 59.5 -1.0**
D23K Nanushuk River 85.96 21 IAmb IAmb 09 49 04.6
comp=Z,36nm,1.8s
C23K Itkillik River 86.08 20 IAmb IAmb 09 49 33.5
comp=Z,29nm,1.5s
E23K Chandalar 86.26 22 IAmb IAmb 09 49 09.3
comp=Z,11nm,0.9s
F24K Squaw Lake 86.88 23 IAmb IAmb 09 49 28.9
comp=Z,26nm,1.9s
VORD Divnogorie 86.99 321 *e*P **P** **09 49 01.6 -3.6**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 87.06 321 *e*P **P** **09 49 04.5 -1.0**
VORR pmax pmax
comp=Z,30nm,0.9s
VSR Storozhevoye 87.08 321 *e*P **P** **09 49 02.4 -3.2**
VSR pmax pmax

	comp=Z,9.0nm,0.9s								
KLMR	**Klimovskoe**	**87.13**	**331**	*e*P		**P**		**09 49 03.3**	**-2.4**
KLMR					pmax	pmax			
	comp=Z,46nm,1.5s								
ILAR	**Eielson Array**	**87.15**	**25**	P		**P**		**09 49 05.0**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=257,slow=5.0,SNR=8.8								
	comp=Z,0.9nm,0.5s								
ILAR	**Eielson Array**	**87.15**	**25**	P		**P**		**09 49 05.5**	**-0.2**
ILAR	**Eielson Array**	**87.15**	**25**	P		**P**		**09 49 05.5**	**-0.2**
LPSR	**Galich'ya Gora**	**87.25**	**322**	*e*P		**P**		**09 49 05.0**	**-1.4**
LPSR					pmax	pmax			
	comp=Z,20nm,0.9s								
D25K	**Kavik River**	**87.52**	**21**	IAmb		IAmb		09 49 10.4	
	comp=Z,15nm,1.5s								
BMAR	**Burnt Mountain**	**88.15**	**23**	P		**P**		**09 49 11.5**	**+1.0**
ANN	**Anapa**	**88.20**	**315**	*e*P		**P**		**09 49 09.9**	**-1.3**
ANN				*e**PP		**pP**		**09 49 18.0**	**-2.2**
ANN				*e*S		**SKSac**		**09 59 34.2**	**-3.8**
ANN					pmax	pmax			
	comp=Z,35nm,0.8s								
C27K	**Jago River**	**88.47**	**21**	IAmb		IAmb		09 49 19.1	
	comp=Z,8.7nm,0.9s								
KIBK	**Kibwezi**	**88.48**	**268**	P		**P**		**09 49 11.3**	**-2.0**
KIBK				IAmb		IAmb		09 49 23.8	
	comp=Z,6.6nm,0.9s								
OBN	**Obninsk**	**88.65**	**325**‖	*e*P		**P**		**09 49 12.4**	**-0.6**
OBN				*e*				09 52 41.5	
OBN				*e*S		S		09 59 49.9	-7.8
OBN					pmax	pmax			
	comp=Z,17nm,1.1s								
OBN					MLR	MLR			
	comp=Z,89nm,16.0s								
ASF	**Jabal al Asfar**	**88.80**	**302**	LR		LR		10 33 17.6	
	comp=Z,52nm,21.6s,baz=92,slow=38								
K27K	**Chicken**	**89.23**	**26**	IAmb		IAmb		09 49 25.1	
	comp=Z,12nm,1.1s								
KMBO	**Kilima Mbogo**	**89.24**	**269**	P		**P**		**09 49 17.7**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=89,slow=8.3,SNR=6.5								
KMBO				LR		LR		10 26 29.8	
	comp=Z,56nm,19.5s,baz=98,slow=34								
	comp=Z,1.2nm,0.3s								
I27K	**Kandik River**	**89.37**	**25**	IAmb		IAmb		09 49 22.9	
	comp=Z,7.1nm,0.9s								
F28M	**Old Crow**	**89.95**	**22**	P		**P**		**09 49 17.0**	**-1.9**
E28M	**Babbage River**	**90.01**	**21**	IAmb		IAmb		09 50 05.1	
	comp=Z,34nm,1.9s								
MMAI	**Mount Meron Ar**	**90.04**	**303**	P		**P**		**09 49 21.3**	**+1.1**
	comp=Z,6.0nm,0.8s,baz=99,slow=5.3,SNR=4.2								
MMAI				LR		LR		10 35 09.0	
	comp=Z,33nm,21.4s,baz=90,slow=39								
	comp=Z,6.0nm,0.8s								
I28M	**Miner Creek**	**90.08**	**25**	IAmb		IAmb		09 49 28.5	
	comp=Z,34nm,1.8s								
SYO	**Syowa Base**	**90.34**	**201**⇑	*e*P		**P**		**09 49 21.5**	**+0.9**
BR104	**Keskin Array S**	**91.17**	**310**	P		**P**		**09 49 23.8**	**-1.6**
	comp=Z,2.6nm,1.1s								
BRTR	**Keskin Array B**	**91.17**	**310**	P		**P**		**09 49 24.4**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=127,slow=5.9,SNR=7.6								
	comp=Z,1.6nm,0.9s								
BRTR	**Keskin Array B**	**91.17**	**310**	P		**P**		**09 49 23.6**	**-1.8**
BR106	**Keskin Array S**	**91.19**	**310**	P		**P**		**09 49 23.9**	**-1.6**
	comp=Z,2.8nm,0.9s								
QSPA	**South Pole Qui**	**91.50**	**180**	P		**P**		**09 49 29.2**	**+2.9**
	comp=Z,1.0nm,0.5s,baz=18,slow=3.4,SNR=20								
QSPA	**South Pole Qui**	**91.50**	**180**			**P**		**09 49 29.5**	**+3.2**
QSPA				IAmb		IAmb		09 49 38.9	
	comp=Z,25nm,1.9s								
G31M	**Satah River**	**92.19**	**23**	P		**P**		**09 49 29.8**	**+0.4**
ARCES	**ARCESS Array B**	**92.36**	**340**	P		**P**		**09 49 29.0**	**-1.1**
	comp=Z,4.7nm,0.8s,baz=70,slow=5.7,SNR=8.7								
ARCES				LR		LR		10 35 14.9	
	comp=Z,37nm,19.9s,baz=122,slow=38								
	comp=Z,4.7nm,0.8s								
ARCES	**ARCESS Array B**	**92.36**	**340**	P		**P**		**09 49 29.3**	**-0.8**
ARCES	**ARCESS Array B**	**92.36**	**340**	P		**P**		**09 49 29.3**	**-0.8**
ARCES					pmax	pmax			
	comp=Z,85nm,1.9s								
SPITS	**Spitsbergen Ar**	**92.52**	**349**	P		**P**		**09 49 30.0**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=95,slow=10,SNR=5.8								
SPITS				LR		LR		10 36 53.1	
	comp=Z,49nm,18.4s,baz=67,slow=39								
	comp=Z,3.9nm,0.7s								
AK08	**Malin Array Si**	**93.37**	**321**	P		**P**		**09 49 33.7**	**-1.4**
AKASG	**Malin Array Be**	**93.38**	**321**	P		**P**		**09 49 34.0**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=74,slow=4.1,SNR=4.7								
AKASG				LR		LR		10 35 43.1	
	comp=Z,44nm,18.2s,baz=57,slow=38								
	comp=Z,0.4nm,0.3s								
AKASG	**Malin Array Be**	**93.38**	**321**	*i* P		**P**		**09 49 36.5**	**+1.4**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.5s								
AKBB	**Malin Array Si**	**93.38**	**321**	P		**P**		**09 49 33.7**	**-1.4**
KIEV	**Kiev**	**93.39**	**321**	P		**P**		**09 49 33.7**	**-1.5**
AK06	**Malin Array Si**	**93.41**	**321**	P		**P**		**09 49 33.8**	**-1.5**
R32K	**Eaglecrest**	**93.41**	**32**	P		**P**		**09 49 35.4**	**+0.2**
FINES	**FINESS Array B**	**93.58**	**332**	P		**P**		**09 49 33.8**	**-2.1**
	comp=Z,1.8nm,0.8s,baz=72,slow=6.2,SNR=6.8								
FINES				LR		LR		10 34 26.7	
	comp=Z,100nm,19.5s,baz=66,slow=37								
	comp=Z,1.8nm,0.8s								
FINES	**FINESS Array B**	**93.58**	**332**	P		**P**		**09 49 34.6**	**-1.3**
FINES	**FINESS Array B**	**93.58**	**332**	P		**P**		**09 49 34.6**	**-1.3**
LUBAR	**Lubar, Ukraine**	**94.41**	**320**	P		**P**		**09 49 38.4**	**-1.5**
RNPP9	**Sopachiv**	**95.36**	**322**	P		**P**		**09 49 43.0**	**-1.2**
HORU	**Horodok**	**95.37**	**320**	P		**P**		**09 49 43.0**	**-1.3**
KMPD	**K-Podol'skiy**	**95.44**	**319**	P		**P**		**09 49 43.2**	**-1.5**
DLBC	**Dease Lake**	**95.71**	**31**	LR		LR		10 27 54.4	
	comp=Z,90nm,20.6s,baz=266,slow=32								
MBAR	**Mbarara**	**95.74**	**270**	LR		LR		10 30 51.9	
	comp=Z,35nm,19.7s,baz=69,slow=34								
BURAR	**Bucovina Array**	**96.41**	**318**			**P**		**09 49 48.1**	**-1.1**
BURAR				IAmb		IAmb		09 49 50.8	
	comp=Z,6.2nm,0.8s								
BUR08	**Bucovina Ar. S**	**96.42**	**318**	P		**P**		**09 49 47.4**	**-1.9**
BUR08				IAmb		IAmb		09 49 52.5	
	comp=Z,6.8nm,0.9s								
MATP	**Matopo**	**98.01**	**250**	LR		LR		10 32 04.5	
	comp=Z,74nm,18.3s,baz=66,slow=34								
BBB	**Bella Bella**	**98.17**	**37**	LR		LR		10 25 54.0	
	comp=Z,70nm,19.8s,baz=252,slow=30								
NVL	**N'lazarevskaya**	**99.43**	**198**	*e*P		**Pdif**		**09 50 06.2**	**+4.0**
NVL				*e*				09 54 09.3	
NVL				*e*PPP		PPP		09 56 16.3	
NVL				*e*S		**SKSac**		**10 00 42.1**	**+3.8**
NVL				*e*SS		**SS**		**10 08 28.5**	**+6.5**
NVL					pmax	pmax			
	comp=Z,9.0nm,1.0s								
NVL					smax	smax			
	comp=N,261nm,20.1s								
NVL					MLR	MLR			
	comp=Z,147nm,19.0s								
HFS	**Hagfors**	**99.78**	**332**	P		**Pdif**		**09 50 02.2**	**-1.7**
	comp=Z,2.8nm,0.8s,baz=64,slow=6.9,SNR=2.8								
HFS				LR		LR		10 39 06.8	
	comp=Z,82nm,19.1s,baz=68,slow=38								
	comp=Z,2.8nm,0.8s								
NB2	**NORSAR Subarra**	**100.58**	**333**	P		**Pdif**		**09 50 05.8**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=67,slow=4.4								
NOA	**NORSAR Array B**	**100.58**	**333**	P		**Pdif**		**09 50 05.7**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=67,slow=4.6,SNR=3.9								
NVAR	**Mina Array Bea**	**108.53**	**49**	PP		**PP**		**09 55 15.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=333,slow=8.0,SNR=3.6								
PDAR	**Pinedale Array**	**113.13**	**42**	PKKP				10 06 03.4	
	comp=Z,0.3nm,0.7s,baz=93,slow=5.8,SNR=3.6								
SCHQ	**Schefferville**	**122.72**	**9**	PKP		**PKPdf**		**09 55 15.8**	**0.0**
	comp=Z,2.6nm,0.6s,baz=69,slow=3.1,SNR=7.1								
TXAR	**Lajitas Array**	**123.11**	**53**	PKP		**PKPdf**		**09 55 17.6**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=245,slow=1.0,SNR=10								
TORD	**Torodi Ar. Bea**	**123.30**	**287**	PKP		**PKPdf**		**09 55 17.4**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=45,slow=4.3,SNR=1.8								
CO01	**Juntas del Tor**	**147.67**	**152**			**PKPbc**		**09 56 06.8**	**+1.3**
LCO	**Las Campanas**	**148.19**	**151**			**PKiKP**		**09 56 09.1**	**+0.4**
LCO	**Las Campanas**	**148.19**	**151**	PKP2		**PKiKP**		**09 56 09.1**	**+0.4**
CPUP	**Villa Florida**	**155.12**	**172**	PKP		**PKPdf**		**09 56 14.9**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=210,slow=11,SNR=2.8								
CPUP	**Villa Florida**	**155.12**	**172**	PKIKP		**PKPdf**		**09 56 15.0**	**+1.2**
LPAZ	**La Paz**	**159.50**	**136**	PKP		**PKPdf**		**09 56 20.4**	**0.0**
	comp=Z,1.1nm,0.8s,baz=218,slow=3.8,SNR=4.3								

GCG 15 09:45:26.0±0.4, 14°61N×91°28W, h113km±25km, MD3.6, MW2.4, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**0.18**	**204**	*e*P	Pn	09 45 43.1	+1.1
SMCA	**Catarina**	**0.81**	**288**	*e*P	Pn	09 45 45.7	+0.1
FG16	**Alotenango, Sa**	**0.82**	**114**	*i* P	Pn	09 45 43.5	-2.4
APG	**El Apazote**	**0.88**	**64**	*i* P	Pn	09 45 47.1	+0.7

*NEIC **15** 09:47:07.3±0.6, 20.74S±0.10×170.0E±0.1, h78km±9km, mb4.2/13, Error ellipse: s-maj=16.0km s-min=14.1km az=105.0*
*NOU **15** 09:47:09.0, 20.80S×169.58E, h0km, MLv4.5/13, Vanuatu Islands*
*IDC **15** 09:47:09.3±4.6, 20.57S×169.76E, h84km±37km, mb3.9/9, mbtmp4.2/10, MS3.4/3, Error ellipse: s-maj=29.9km s-min=25.2km az=53.0*

ISC 15 09:47:09.9±0.6, 20.75S±0.07×169.81E±0.07, h100km, n48, σ1s51/50, mb4.3/17, 4C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.81**	**246**		**Pn**	**09 47 38.3**	**-1.8**
MARNC				Sn	**Sn**	**09 47 59.8**	**-3.2**
MARNC	**Mare, Loyalty**	**1.81**	**246**	P	**Pn**	**09 47 38.6**	**-1.4**
MARNC	**Mare, Loyalty**	**1.81**	**246**	S	**Sn**	**09 48 00.2**	**-2.8**
PINNC	**Pines Island,**	**2.88**	**229**		**Pn**	**09 47 53.1**	**-0.9**
PINNC				Sn	**Sn**	**09 48 25.9**	**-2.1**
PINNC	**Pines Island,**	**2.88**	**229**	P	**Pn**	**09 47 53.1**	**-0.9**
PINNC	**Pines Island,**	**2.88**	**229**	S	**Sn**	**09 48 26.5**	**-1.4**
YATNC	**Mamie plateau,**	**3.01**	**244**	P	**Pn**	**09 47 54.3**	**-1.5**
YATNC	**Mamie plateau,**	**3.01**	**244**	S	**Sn**	**09 48 29.9**	**-1.4**
OUENC	**Ouen Island, N**	**3.22**	**238**	P	**Pn**	**09 47 58.2**	**-0.4**
OUENC	**Ouen Island, N**	**3.22**	**238**	S	**Sn**	**09 48 35.0**	**-1.2**
DZM	**Mont Dzumac**	**3.40**	**247**	P	**Pn**	**09 48 00.8**	**-0.3**
	44nm,0.3s,baz=111,slow=13,SNR=647						
DZM				S	**Sn**	**09 48 36.8**	**-3.8**
	92nm,0.5s,baz=47,slow=19,SNR=3.1						
DZM				LR	LR	09 48 55.8	
	comp=Z,86nm,18.1s,baz=4.5,slow=31						
ONTNC	**Ouen Toro**	**3.48**	**243**		**Pn**	**09 48 02.1**	**0.0**
ONTNC	**Ouen Toro**	**3.48**	**243**	P	**Pn**	**09 48 02.1**	**0.0**
ONTNC	**Ouen Toro**	**3.48**	**243**	S	**Sn**	**09 48 41.3**	**-1.3**
KOUNC	**Koumac, New Ca**	**5.17**	**271**	P	**Pn**	**09 48 25.7**	**+0.7**
KOUNC	**Koumac, New Ca**	**5.17**	**271**	S	**Sn**	**09 49 23.0**	**-0.4**
SANVU	**Saraoutou**	**5.82**	**334**		**Pn**	**09 48 31.8**	**-2.0**
ARMA	**Armidale**	**18.99**	**236**	P	**P**	**09 51 23.8**	**0.0**
NIUE	**Niue**	**19.13**	**89**	P	**P**	**09 51 21.4**	**-3.9**
CTAO	**Charters Tower**	**22.08**	**268**	P	**P**	**09 51 57.3**	**+0.3**
CTAO				IAmb	IAmb	09 52 09.6	
	comp=Z,5.1nm,1.1s						
PMG	**Port Moresby**	**24.56**	**294**	P	**P**	**09 52 21.5**	**+0.8**
PMG				IAmb	IAmb	09 52 34.6	
	comp=Z,13nm,1.0s						
STKA	**Stephens Creek**	**27.53**	**240**	P	**P**	**09 52 48.3**	**+1.0**
	comp=Z,2.5nm,0.7s,baz=118,slow=4.6,SNR=4.7						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**33.22**	**265**	P	**P**	**09 53 37.1**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=95,slow=8.5,SNR=4.5						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**33.22**	**265**	P	**P**	**09 53 37.8**	**+0.2**
AS31	**Alice Springs**	**33.31**	**258**	P	**P**	**09 53 38.2**	**-0.2**
ASAR	**Alice Springs**	**33.31**	**258**	P	**P**	**09 53 38.5**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=84,slow=8.8,SNR=15						
	comp=Z,1.4nm,0.7s						
MTN	**Manton Dam**	**37.77**	**276**	P	**P**	**09 54 17.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**41.64**	**266**	P	**P**	**09 54 51.2**	**+2.6**
	comp=Z,3.0nm,0.5s,baz=144,slow=8.7,SNR=2.0						
	comp=Z,3.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**41.64**	**266**	P	**P**	**09 54 49.0**	**+0.3**
VNDA	**Vanda**	**56.95**	**182**	P	**P**	**09 56 45.0**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=11,slow=5.2,SNR=3.7						
	comp=Z,0.8nm,0.9s						
VNDA	**Vanda**	**56.95**	**182**	P	**P**	**09 56 44.3**	**0.0**
VNDA				IAmb	IAmb	09 56 47.3	
	comp=Z,1.3nm,1.1s						
SBA	**Scott Base**	**57.17**	**181**	P	**P**	**09 56 45.7**	**-0.1**
SBA				IAmb	IAmb	09 56 48.6	
	comp=Z,3.8nm,0.9s						
CASY	**Casey**	**58.97**	**204**	P	**P**	**09 56 58.3**	**-0.2**
CASY				IAmb	IAmb	09 56 59.2	
	comp=Z,2.7nm,0.8s						
QSPA	**South Pole Qui**	**69.32**	**180**	P	**P**	**09 58 10.0**	**+3.6**
	comp=Z,5.4nm,0.9s,baz=339,slow=0.9,SNR=22						
	comp=Z,5.4nm,0.9s						
QSPA	**South Pole Qui**	**69.32**	**180**	P	**P**	**09 58 06.5**	**+0.1**
MAW	**Mawson**	**77.25**	**202**	P	**P**	**09 58 54.2**	**+1.5**
	comp=Z,3.6nm,0.8s,baz=140,slow=7.0,SNR=5.4						
	comp=Z,3.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**79.60**	**294**	P	**P**	**09 59 08.7**	**+2.1**
	comp=Z,2.0nm,0.3s,baz=117,slow=5.7,SNR=4.1						
	comp=Z,2.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**79.60**	**294**	P	**P**	**09 59 06.7**	**+0.1**
BELA	**Belgrano 2**	**80.56**	**175**	P	**P**	**09 59 10.5**	**-0.2**
BELA				IAmb	IAmb	09 59 10.8	
	comp=Z,4.1nm,0.6s						
TROLL	**Troll, Antarti**	**87.08**	**184**	⇑P	**P**	**09 59 44.2**	**0.0**
	comp=Z,174nm,0.8s						
SNAA	**Sanae**	**87.69**	**182**	⇑P	**P**	**09 59 46.5**	**-0.6**
	comp=Z,24nm,0.5s						
SNAA	**Sanae**	**87.69**	**182**	P	**P**	**09 59 46.4**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=194,slow=10,SNR=8.1						
SNAA				LR	LR	10 35 03.4	
	comp=Z,45nm,22.0s,baz=189,slow=33						
SNAA	**Sanae**	**87.69**	**182**	IAmb	IAmb	09 59 52.0	
	comp=Z,1.0nm,0.9s						
VNA3	**Neumayer Olymp**	**88.26**	**180**	⇑P	**P**	**09 59 49.2**	**-0.5**
	comp=Z,3.8nm,0.6s						
VNA2	**Neumayer--Watz**	**88.56**	**181**	⇑P	**P**	**09 59 51.1**	**0.0**
	comp=Z,4.0nm,0.5s,baz=173,slow=5.6						
NVAR	**Mina Array Bea**	**89.40**	**48**	P	**P**	**09 59 56.7**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=225,slow=8.3,SNR=11						
NVAR				LR	LR	10 31 48.8	
	comp=Z,40nm,19.6s,baz=284,slow=30						
	comp=Z,1.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**145.06**	**353**	PKP	**PKPbc**	**10 06 34.0**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=352,slow=2.3,SNR=8.5						
GERES	**GERESS Array B**	**146.06**	**331**	PKPbc	**PKPdf**	**10 06 37.5**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=31,slow=3.6,SNR=5.6						

*IDC **15** 09:48:43.9±0.7, 1.57N×126.16E, h0km, mb4.2/12, mbtmp4.1/13, ML3.8/1, Error ellipse: s-maj=45.2km s-min=13.9km az=75.0*
*DJA **15** 09:48:48.7±0.3, 2.7N±3.3°×12.7°6E±.1°, h10km, M4.5/11, mB5.0/1, mb4.8/1, MLv4.3/11, Mw(mB)4.3/1*
*NEIC **15** 09:48:49.4±1.3, 1.62N±0.04×126.47E±0.08, h35km±1km, mb4.3/14, Error ellipse: s-maj=13.9km s-min=5.0km az=69.0*

ISC 15 09:48:49.2±0.6, 1.61N±0.06×126.47E±0.07, h35km, n40, σ1s08/41, mb4.3/19, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**133**		**Pn**	**09 49 10.3**	**+0.5**
TNTI	**Ternate**	**1.23**	**133**	P	**Pn**	**09 49 11.6**	**+1.8**
TNTI				S	**Sn**	**09 49 26.9**	**+1.7**
SGSI	**Sangihe**	**2.26**	**336**	P	**Pn**	**09 49 25.2**	**+1.1**
SGSI				S	**Sn**	**09 49 52.4**	**+1.6**
KMSI	**Cibinong**	**2.69**	**248**	P	**Pn**	**09 49 32.5**	**+2.5**
SANI	**Sanana**	**3.67**	**187**	P	**Pn**	**09 49 45.8**	**+2.4**
LUWI	**Luwuk**	**4.54**	**235**	Pn	**Pn**	**09 49 56.4**	**+1.0**
LUWI	**Luwuk**	**4.54**	**235**	P	Pn	09 50 01.6	+6.2
APSI	**Ampana**	**5.43**	**243**	P	Pn	09 50 12.6	+4.9
TOLI2	**Tolitoli**	**5.70**	**265**	Pn	**Pn**	**09 50 11.1**	**-0.4**
MYLDM	**Lahad Datu**	**8.71**	**294**	Pn	**Pn**	**09 50 52.5**	**-0.2**
SOEI	**Soe**	**11.50**	**191**	Pn	**Pn**	**09 51 30.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**09 53 12.9**	**-1.7**
	0.2nm,0.3s,baz=12,slow=9.3,SNR=1.7						
	1.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.60**	**182**	P	**P**	**09 53 13.2**	**-1.4**
WB0	**Warramunga Arr**	**22.62**	**160**		**P**	**09 53 45.9**	**-1.3**
WB0				IAmb	IAmb	09 53 52.3	
	comp=Z,13nm,1.1s						
COEN	**Coen**	**22.66**	**134**	P	**P**	**09 53 46.9**	**-0.7**
COEN				IAmb	IAmb	09 53 56.1	
	comp=Z,5.5nm,1.1s						
WRAB	**Tennant Creek**	**22.77**	**161**	P	**P**	**09 53 48.1**	**-0.6**
WRAB				IAmb	IAmb	09 53 54.2	
	comp=Z,8.0nm,0.7s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**09 53 48.3**	**-0.4**
	comp=Z,4.3nm,0.5s,baz=342,slow=11,SNR=23						
	comp=Z,4.3nm,0.5s						
WR8	**Warramunga Arr**	**22.84**	**160**		**P**	**09 53 49.2**	**-0.2**
MBWA	**Marble Bar**	**23.57**	**196**	P	**P**	**09 53 55.7**	**-1.0**
MBWA				IAmb	IAmb	09 53 58.2	
	comp=Z,11nm,0.9s						
PSA00	**Pilbara Seismi**	**23.93**	**195**	P	**P**	**09 54 00.3**	**+0.1**
AS31	**Alice Springs**	**26.15**	**164**	P	**P**	**09 54 20.7**	**+0.3**
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**09 54 20.7**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=346,slow=7.2,SNR=20						
ASAR				PcP	**PcP**	**09 57 46.9**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=344,slow=2.6,SNR=3.0						
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**09 54 20.2**	**-0.1**
FORT	**Forrest**	**32.25**	**177**	P	**P**	**09 55 14.3**	**-0.1**
BBOO	**Buckleboo**	**35.42**	**166**	P	**P**	**09 55 42.2**	**+0.3**
BBOO				IAmb	IAmb	09 55 45.6	
	comp=Z,6.0nm,1.0s						
EIDS	**Eidsvold**	**35.88**	**140**	P	**P**	**09 55 44.3**	**-1.7**
EIDS				IAmb	IAmb	09 55 48.7	
	comp=Z,4.0nm,1.1s						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**09 55 49.9**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=10,slow=11,SNR=3.1						
	comp=Z,2.1nm,0.8s						
MJAR	**Matsushiro Arr**	**36.42**	**16**	P	**P**	**09 55 51.0**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=170,slow=9.0,SNR=4.3						
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**49.22**	**342**	P	**P**	**09 57 33.6**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=149,slow=8.6,SNR=4.4						
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**57.48**	**22**	P	**P**	**09 58 36.0**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=214,slow=7.4,SNR=5.9						
	comp=Z,2.4nm,0.7s						
PETK	**Petropavlovsk-**	**57.48**	**22**	P	**P**	**09 58 34.8**	**+0.1**
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**09 58 45.4**	**-1.0**
	comp=Z,2.0nm,0.4s,baz=117,slow=7.6,SNR=23						
	comp=Z,2.0nm,0.4s						
MAKZ	**Makanchi**	**59.33**	**326**	P	**P**	**09 58 47.4**	**-0.3**
MAKZ				IAmb	IAmb	09 58 52.6	
	comp=Z,3.5nm,0.9s						
ZALV	**Zalesovo Beam**	**62.35**	**334**	P	**P**	**09 59 07.4**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=128,slow=7.5,SNR=2.1						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	**P**	**09 59 14.2**	**-0.8**
	comp=Z,3.5nm,0.6s,baz=128,slow=6.3,SNR=18						
	comp=Z,3.5nm,0.6s						
KURK	**Kurchatov**	**63.38**	**328**	P	**P**	**09 59 14.3**	**-0.7**
VNDA	**Vanda**	**81.37**	**173**	P	**P**	**10 01 02.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=318,slow=8.5,SNR=7.2						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**81.37**	**173**	P	**P**	**10 01 01.7**	**0.0**
VNDA				IAmb	IAmb	10 01 20.1	
	comp=Z,1.2nm,1.0s						
ARCES	**ARCESS Array B**	**92.33**	**340**	P	**P**	**10 01 54.3**	**-1.3**
	comp=Z,2.7nm,0.8s,baz=58,slow=5.6,SNR=3.6						
	comp=Z,2.7nm,0.8s						
FINES	**FINESS Array B**	**93.56**	**332**	P	**P**	**10 02 02.9**	**+1.5**
	comp=Z,1.7nm,0.9s,baz=62,slow=5.5,SNR=3.6						
	comp=Z,1.7nm,0.9s						

*IDC **15** 09:50:37.0±1.6, 1.70N×126.38E, h0km, mb4.0/5, mbtmp4.1/5, Error ellipse: s-maj=165.2km s-min=21.3km az=66.0*
*NEIC **15** 09:50:41.3±1.2, 1.77N±0.10×126.57E±0.09, h35km±2km, mb4.4/12, Error ellipse: s-maj=17.9km s-min=12.5km az=213.0*
*DJA **15** 09:50:44.5±1.8, 2°N±3°×12°6E±.1°, h30km±25km, M4.1/7, MLv4.1/7*

ISC 15 09:50:41.1±0.8, 1.82N±0.10×126.60E±0.09, h35km, n24, σ0s91/24, mb4.2/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**144**		**Pn**	**09 51 02.5**	**-0.2**
TNTI	**Tern

DURS				S	Sg	09 52 32.6	+1.3	
DURS				*i* IAML		09 52 35.0		
	comp=N,103nm,0.9s							
DURS				*i* IAML		09 52 35.0		
	comp=E,117nm,0.7s							
BLKS	**Balkesir-Sus**	**0.25**	**313**	P	Pg	09 52 27.7	-1.0	
BLKS				S	Sb	09 52 40.8	+5.5	
BLKS	**Balkesir-Sus**	**0.25**	**313**	P	Pg	09 52 28.5	-0.2	
BLKS				S	Sb	09 52 38.3	+3.1	
BLKS				*i* IAML		09 52 41.0		
	comp=N,17nm,0.8s							
BLKS				*i* IAML		09 52 41.0		
	comp=E,16nm,0.8s							
ULDT	**Uludag**	**0.84**	**58**	P	Pg	09 52 35.9	-3.9	
ULDT				S	Sb	09 52 52.2	0.0	

SNET ***15*** *09:52:36.5±2.8, 13°.78N×90°.89W, h4km, ML3.1*
CATAC ***15*** *09:52:36.3±0.8, 14°.N±4°×9°.1W±°, h18km±5km, M2.9/7, MLv2.9/7, Error ellipse: s-maj=9.1km s-min=3.0km az=25.1, confirmed*
GCG ***15*** *09:52:37.2±1.0, 13°.69N×90°.97W, h42km±77km, MD3.6, ML3.2, MW2.8*

ISC 15 09:52:35.9±2.2, 13°.63N±0°.09×90°.95W±0°.05, h13km±13km, n28, σ1°.19/36, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.76**	**8**	*i* P	**Pg**	**09 52 50.9**	**+0.2**
FG16	**Alotenango, Sa**	**0.77**	**33**	*e*P	**Pn**	**09 52 52.5**	**-0.2**
FG16				*i* S	**Sn**	**09 53 03.5**	**-0.8**
PCG5	**San Vicente Pa**	**0.81**	**43**	*e*P	**Pb**	**09 52 51.7**	**-0.2**
STG8	**El Palmar, Qui**	**0.91**	**334**	*e*P	**Pn**	**09 52 57.4**	**+2.8**
STG8				*e*S	**Sn**	**09 53 12.2**	**+4.4**
STG8				IAML		09 53 16.3	
	comp=E,431nm,0.1s						
FAME	**Alcaldia de Sa**	**0.93**	**77**	S	**Sb**	**09 53 06.8**	**+0.6**
FAME	**Alcaldia de Sa**	**0.93**	**77**	P	**Pb**	**09 52 54.1**	**+0.2**
RTAL	**Retalhuleu**	**1.15**	**321**	P	**Pb**	**09 52 56.0**	**-1.7**
RTAL	**Retalhuleu**	**1.15**	**321**	S	**Sb**	**09 53 10.4**	**-2.2**
NUBE	**Las Nubes**	**1.17**	**76**	*e*P	**Pn**	**09 52 58.3**	**+0.2**
NUBE				*e*S	**Sb**	**09 53 13.3**	**+0.2**
NUBE	**Las Nubes**	**1.17**	**76**	*e*P	**Pn**	**09 52 57.8**	**-0.3**
NUBE				*i* S	**Sb**	**09 53 13.1**	**0.0**
NUBE	**Las Nubes**	**1.17**	**76**	P	**Pn**	**09 52 57.8**	**-0.3**
LOAL	**Lomas de Alarc**	**1.19**	**72**	S	**Sn**	**09 53 14.7**	**+0.2**
LOAL	**Lomas de Alarc**	**1.19**	**72**	P	**Pb**	**09 52 58.9**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.20**	**70**	S	**Sb**	**09 53 12.9**	**-1.0**
SOKI	**Kika Raxquin**	**1.27**	**340**	*e*P	**Pn**	**09 52 58.6**	**-1.1**
RTR	**El Retiro**	**1.29**	**78**	*e*P	**Pb**	**09 53 00.5**	**+0.3**
CEVE	**Cerro Verde**	**1.30**	**81**	*e*P	**Pb**	**09 53 01.0**	**+0.6**
CEVE				*e*S	**Sb**	**09 53 17.5**	**+0.4**
SNJE	**San Jose**	**1.32**	**79**	*e*S	**Sn**	**09 53 16.7**	**-1.3**
UNIC	**Universidad Ca**	**1.40**	**75**	S	**Sn**	**09 53 19.8**	**0.0**
UNIC	**Universidad Ca**	**1.40**	**75**	P	**Pn**	**09 53 01.5**	**+0.2**
APG	**El Apazote**	**1.45**	**19**	*i* P	**Pn**	**09 53 01.8**	**-0.3**
JAYA	**Jayaque - finc**	**1.46**	**89**	*e*P	**Pn**	**09 53 02.2**	**+0.1**
JAYA				*e*S	**Sn**	**09 53 20.6**	**-0.6**
JAYA	**Jayaque - finc**	**1.46**	**89**	*e*P	**Pn**	**09 53 01.9**	**-0.1**
JAYA				*e*S	**Sn**	**09 53 19.9**	**-1.3**
JAYA	**Jayaque - finc**	**1.46**	**89**	P	**Pn**	**09 53 02.0**	**-0.1**
PMON	**Piamonte**	**1.59**	**87**	*e*P	**Pn**	**09 53 04.5**	**+0.7**
PMON				*e*S	**Sn**	**09 53 23.9**	**-0.4**
MTO3	**Montecristo**	**1.72**	**63**	P	**Pn**	**09 53 05.4**	**-0.4**
MTO3	**Montecristo**	**1.72**	**63**	S	**Sn**	**09 53 28.0**	**+0.2**
LOMA	**Loma Larga**	**1.73**	**89**	S	**Sn**	**09 53 28.7**	**+0.9**

ASRS ***15*** *09:54:41.0±1.7, 54°.62N×83°.67E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 15 09:54:44.0±2.2, 54°.61N×83°.78E, h0km, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=17.8km s-min=10.6km az=170.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.90**	**137**	I	I	10 00 05.0	
	baz=316,slow=342						
ZALV	**Zalesovo Beam**	**0.90**	**137**	Pg	Pg	09 55 00.1	-1.1
	2.1nm,0.3s,baz=320,slow=16,SNR=13						
ZALV				Lg	Lg	09 55 14.8	
	5.4nm,0.3s,baz=315,slow=30,SNR=21						
KURBB	**Kurchatov Arra**	**5.11**	**221**	Pn	Pn	09 56 01.6	-0.1
	0.2nm,0.3s,baz=41,slow=14,SNR=7.3						
KURBB				Lg	Lg	09 57 28.6	
	0.2nm,0.3s,baz=42,slow=29,SNR=7.8						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.88**	**187**	Pn	Pn	09 56 40.3	+0.5
	0.1nm,0.3s,baz=9.6,slow=16,SNR=2.0						
	0.3nm,0.5s						

IDC ***15*** *10:00:40.2±1.7, 1°.68N×126°.46E, h0km, mb3.5/4, mbtmp3.6/5, ML3.7/1, MS3.1/3, Error ellipse: s-maj=121.3km s-min=21.0km az=69.0*
DJA ***15*** *10:00:43.2±0.4, 2°.N±5°×12°.6E±°, h10km, M3.5/6, MLv3.5/6*

ISC 15 10:00:45.0±1.1, 1°.7N±0°.2×126°.5E±0°.3, h35km, n9, σ0°.60/7, mb3.6/4, MS2.9/3, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**137**	P	**Pn**	**10 01 05.6**	**-0.4**
SGSI	**Sangihe**	**2.21**	**333**	P	**Pn**	**10 01 18.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	**P**	**10 05 10.8**	**-0.5**
	0.2nm,0.3s,baz=4.8,slow=13,SNR=1.9						
	3.5nm,1.1s						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**10 05 45.1**	**-0.1**
	0.8nm,0.5s,baz=340,slow=11,SNR=12						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.22**	**165**	P	**P**	**10 06 17.2**	**+0.5**
	0.3nm,0.4s,baz=341,slow=8.2,SNR=12						
ASAR				LR	LR	10 16 03.3	
	comp=Z,34nm,20.2s,baz=0.0,slow=35						
	0.3nm,0.4s						
JCJ	**Chichijima**	**29.39**	**29**	LR	LR	10 17 26.2	
	comp=Z,76nm,19.6s,baz=105,slow=34						
JHJ	**Hachijo jima 2**	**33.65**	**20**	LR	LR	10 19 12.9	
	comp=Z,20nm,21.6s,baz=40,slow=33						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**10 10 42.2**	**+0.3**
	0.3nm,0.4s,baz=130,slow=6.2,SNR=4.5						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**10 11 11.1**	**+0.7**
	0.4nm,0.6s,baz=126,slow=5.9,SNR=2.7						
	0.4nm,0.6s						

IDC ***15*** *10:04:08.5±0.8, 1°.49N×126°.28E, h0km, mb4.1/9, mbtmp4.1/10, ML3.5/1, MS3.0/2, Error ellipse: s-maj=52.8km s-min=15.5km az=73.0*
DJA ***15*** *10:04:11.9±0.3, 2°.N±3°×12°.6E±°, h10km, M4.0/7, MLv4.0/7*
NEIC ***15*** *10:04:14.1±1.5, 1°.52N±0°.08×126°.47E±0°.07, h35km±2km, mb4.2/18, Error ellipse: s-maj=16.6km s-min=4.5km az=220.0*

ISC 15 10:04:13.7±0.5, 1°.50N±0°.05×126°.51E±0°.07, h35km, n44, σ1°.04/44, mb4.1/17, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**130**		**Pn**	**10 04 33.8**	**+0.9**
TNTI	**Ternate**	**1.12**	**130**	P	**Pn**	**10 04 33.6**	**+0.8**
TNTI				S	**Sn**	**10 04 48.6**	**+1.6**
SGSI	**Sangihe**	**2.39**	**336**	P	**Pn**	**10 04 51.3**	**+1.0**
SGSI				S	**Sn**	**10 05 20.4**	**+2.0**
SANI	**Sanana**	**3.56**	**188**	P	**Pn**	**10 05 08.8**	**+2.3**
LUWI	**Luwuk**	**4.51**	**236**	Pn	**Pn**	**10 05 19.0**	**-0.5**
TOLI2	**Tolitoli**	**5.74**	**266**	Pn	**Pn**	**10 05 35.8**	**-0.7**
FAKI	**Fak Fak**	**7.22**	**127**	Pn	**Pn**	**10 05 55.7**	**-1.1**
MYLDM	**Lahad Datu**	**8.79**	**295**		**Pn**	**10 06 18.0**	**-0.4**
KAPI	**Kappang**	**9.35**	**226**	LR	LR	10 10 04.0	
	comp=Z,88nm,19.4s,baz=53,slow=39						
BATI	**Baumata**	**11.97**	**194**	LR	LR	10 12 53.7	
	comp=Z,74nm,19.1s,baz=13,slow=44						
MTN	**Manton Dam**	**14.97**	**162**	Pn	**Pn**	**10 07 43.1**	**+0.4**
MTN				IAmb	IAmb	10 07 55.0	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**17.21**	**173**	P	**Pn**	**10 08 12.0**	**+0.5**
KNRA				IAmb	IAmb	10 08 18.5	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.49**	**182**	P	**P**	**10 08 37.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=16,slow=13,SNR=1.8						
	comp=Z,1.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.49**	**182**	P	**P**	**10 08 37.8**	**0.0**

TPUB	**Ta-pu**	**22.41**	**346**	P	**P**	**10 09 07.4**	**-2.0**	
TPUB				IAmb	IAmb	10 09 11.1		
	comp=Z,24nm,0.9s							
WB0	**Warramunga Arr**	**22.50**	**160**	P	**P**	**10 09 10.4**	**0.0**	
WB0				IAmb	IAmb	10 09 15.9		
	comp=Z,8.8nm,1.1s							
COEN	**Coen**	**22.55**	**133**	P	**P**	**10 09 08.8**	**-2.1**	
WRAB	**Tennant Creek**	**22.64**	**161**	P	**P**	**10 09 12.2**	**+0.3**	
WRAB				IAmb	IAmb	10 09 21.0		
	comp=Z,5.5nm,0.8s							
WRA	**Warramunga Arr**	**22.65**	**161**	P	**P**	**10 09 11.3**	**-0.7**	
	comp=Z,2.6nm,0.5s,baz=339,slow=11,SNR=34							
	comp=Z,2.6nm,0.5s							
WRA	**Warramunga Arr**	**22.65**	**161**	P	**P**	**10 09 11.5**	**-0.5**	
WR8	**Warramunga Arr**	**22.71**	**160**	P	**P**	**10 09 12.4**	**-0.3**	
WR8				IAmb	IAmb	10 09 17.7		
	comp=Z,5.1nm,0.8s							
AS31	**Alice Springs**	**26.02**	**164**	P	**P**	**10 09 43.0**	**-0.7**	
AS31				IAmb	IAmb	10 09 47.6		
	comp=Z,1.5nm,0.5s							
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**10 09 43.5**	**-0.3**	
	comp=Z,1.6nm,0.4s,baz=343,slow=11,SNR=37							
ASAR				PcP	**PcP**	**10 13 11.2**	**-0.3**	
	comp=Z,0.2nm,0.4s,baz=356,slow=2.5,SNR=2.4							
	comp=Z,1.6nm,0.4s							
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**10 09 44.0**	**+0.2**	
BBOO	**Buckleboo**	**35.30**	**166**	P	**P**	**10 11 05.8**	**+0.3**	
BBOO				IAmb	IAmb	10 11 06.6		
	comp=Z,6.8nm,1.1s							
NWAO	**Narrogin (SRO)**	**35.34**	**194**	P	**P**	**10 11 07.1**	**+1.2**	
JGF	**Kuroka**	**35.40**	**15**	P	**P**	**10 11 05.9**	**-0.5**	
JGF				IAmb	IAmb	10 11 32.4		
	comp=Z,5.6nm,1.0s							
EIDS	**Eidsvold**	**35.76**	**140**	P	**P**	**10 11 08.5**	**-1.1**	
EIDS				IAmb	IAmb	10 11 12.7		
	comp=Z,4.4nm,0.9s							
STKA	**Stephens Creek**	**36.14**	**158**	P	**P**	**10 11 13.3**	**+0.6**	
	comp=Z,1.0nm,0.5s,baz=355,slow=11,SNR=1.6							
	comp=Z,1.0nm,0.5s							
MJAR	**Matsushiro Arr**	**36.51**	**16**	P	**P**	**10 11 15.9**	**+0.1**	
JMM	**Mammoth**	**38.50**	**18**	P	**P**	**10 11 33.9**	**+1.3**	
PETK	**Petropavlovsk-**	**57.57**	**22**	P	**P**	**10 14 01.3**	**+1.5**	
	comp=Z,2.5nm,0.6s,baz=213,slow=7.3,SNR=5.1							
	comp=Z,2.5nm,0.6s							
PETK	**Petropavlovsk-**	**57.57**	**22**	P	**P**	**10 14 00.4**	**+0.6**	
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**10 14 11.2**	**-0.7**	
	comp=Z,1.3nm,0.3s,baz=119,slow=7.7,SNR=24							
	comp=Z,1.3nm,0.3s							
ZALV	**Zalesovo Beam**	**62.47**	**334**	P	**P**	**10 14 31.9**	**-1.5**	
	comp=Z,0.6nm,0.4s,baz=130,slow=7.0,SNR=1.6							
	comp=Z,0.6nm,0.4s							
ZALV	**Zalesovo Beam**	**62.47**	**334**	P	**P**	**10 14 32.0**	**-1.4**	
GAR	**Garm**	**63.28**	**314**	P	**P**	**10 14 38.7**	**-0.6**	
KURBB	**Kurchatov Arra**	**63.50**	**328**	P	**P**	**10 14 39.4**	**-0.9**	
	comp=Z,2.2nm,0.6s,baz=121,slow=6.0,SNR=9.2							
	comp=Z,2.2nm,0.6s							
KURK	**Kurchatov**	**63.50**	**328**	P	**P**	**10 14 39.4**	**-0.9**	
KURK	**Kurchatov**	**63.50**	**328**	IAmb	IAmb	10 14 41.2		
	comp=Z,5.9nm,0.9s							
VNDA	**Vanda**	**81.25**	**173**	P	**P**	**10 16 26.8**	**+1.1**	
	comp=Z,0.7nm,1.0s,baz=348,slow=3.4,SNR=3.7							
	comp=Z,0.7nm,1.0s							
VNDA	**Vanda**	**81.25**	**173**	P	**P**	**10 16 26.0**	**+0.4**	
MAW	**Mawson**	**81.60**	**200**	P	**P**	**10 16 28.7**	**+1.1**	
	comp=Z,4.4nm,1.2s,baz=56,slow=3.6,SNR=1.9							
	comp=Z,4.4nm,1.2s							
QSPA	**South Pole Qui**	**91.42**	**180**	P	**P**	**10 17 15.8**	**-0.3**	

IDC ***15*** *10:09:14.9±2.8, 3°.13S×78°.16W, h0km, mb4.1/4, mbtmp4.1/4, MS3.4/4, Error ellipse: s-maj=127.8km s-min=37.5km az=24.0*
IGQ ***15*** *10:09:23.2±0.3, 2°.S±2°×7°.8W±°, h5km±2km, MLv4.1/18*
RSNC ***15*** *10:09:24.3±0.4, 2°.S±3°×7°.8W±°, h0km, M3.9, mB4.9, mb4.5, ML3.5, Mw(mB)4.2*
NEIC ***15*** *10:09:24.1±2.1, 1°.75S±0°.09×77°.72W±0°.08, h22km±7km, mb4.1/12, Error ellipse: s-maj=14.4km s-min=10.0km az=218.0*

ISC 15 10:09:22.7±0.6, 1°.77S±0°.03×77°.80W±0°.03, h22km±4km, n108, σ1°.76/110, mb4.1/5, MS3.6/3, 5C-30D, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKYU	**Pakayacu**	**0.24**	**60**	S	**Sb**	**10 09 34.0**	**+1.2**
PKYU				⇑P	**Pb**	**10 09 29.1**	**+0.3**
PUYO	**Puyo, Santa Ro**	**0.35**	**321**	⇓P	**Pb**	**10 09 30.6**	**+0.1**
PUYO				S	**Sb**	**10 09 35.1**	**-0.7**
APUY	**Puyo**	**0.36**	**328**	⇓P	**Pb**	**10 09 30.2**	**-0.4**
APUY				S	**Sb**	**10 09 35.0**	**-1.0**
TAIS	**Taisha**	**0.68**	**153**	⇓P	**Pb**	**10 09 36.2**	**+0.3**
BPAT	**Tungurahua Vol**	**0.68**	**293**	⇓P	**Pb**	**10 09 36.1**	**-0.2**
BPAT				S	**Sb**	**10 09 45.2**	**-0.3**
BULB	**Ulba Tungurahu**	**0.69**	**299**	S	**Sb**	**10 09 40.3**	**-5.3**
BULB				⇓P	**Pb**	**10 09 30.2**	**-6.1**
BMAS	**Trigal station**	**0.73**	**292**	⇓P	**Pb**	**10 09 34.6**	**-2.3**
BMAS				S	**Sb**	**10 09 44.3**	**-2.3**
BBIL	**Ulba Tungurahu**	**0.75**	**295**	⇓P	**Pb**	**10 09 37.1**	**-0.3**
BIL2	**Estacion Bilba**	**0.77**	**294**	⇑P	**Pb**	**10 09 37.3**	**-0.2**
ARDO	**Archidona, Ten**	**0.77**	**0**	⇑P	**Pb**	**10 09 37.2**	**-0.3**
IGUA	**Igualata**	**0.88**	**288**	⇓P	**Pb**	**10 09 40.0**	**+0.4**
PIAT	**Ana Tenorio**	**0.90**	**329**	P	**Pb**	**10 09 39.3**	**-0.5**
PIAT	**Ana Tenorio**	**0.90**	**329**	P	**Pb**	**10 09 39.4**	**-0.4**
PIAT				S	**Sb**	**10 09 51.3**	**-0.2**
ARIO	**Riobamba**	**0.90**	**277**	⇓P	**Pb**	**10 09 40.2**	**+0.3**
PIS1	**Pisayambo**	**0.92**	**321**	⇓P	**Pb**	**10 09 40.1**	**-0.1**
AAM2	**Ambato 2 (Merc**	**0.95**	**302**	⇓P	**Pb**	**10 09 40.8**	**+0.1**
TAMH	**Tambohuasha Ch**	**1.00**	**283**	⇓P	**Pb**	**10 09 42.1**	**+0.4**
PORT	**Chimborazo Vol**	**1.02**	**287**	⇓P	**Pn**	**10 09 42.2**	**+0.1**
ASLC	**Ecuador-Salced**	**1.07**	**313**	⇓P	**Pb**	**10 09 43.0**	**+0.3**
CHSH	**Refugio Sur-Vo**	**1.10**	**284**	⇓P	**Pn**	**10 09 43.0**	**-0.3**
VCES	**Cotopaxi**	**1.13**	**329**	⇓P	**Pn**	**10 09 43.6**	**-0.1**
JSCH	**Casha Tororas**	**1.18**	**273**	⇓P	**Pb**	**10 09 44.7**	**+0.2**
TAMB	**Tambo**	**1.21**	**332**	⇓P	**Pb**	**10 09 45.1**	**-0.2**
BMOR	**Cotopaxi Volca**	**1.22**	**328**	⇓P	**Pb**	**10 09 45.3**	**-0.2**
BTAM	**Cotopaxi Volca**	**1.24**	**331**	⇓P	**Pb**	**10 09 45.6**	**-0.2**
SLOR	**San Lorenzo -**	**1.25**	**326**		**Pb**	**10 09 46.0**	**+0.2**
SLOR				Sn	**Sb**	**10 10 03.5**	**+1.9**
SLOR	**San Lorenzo -**	**1.25**	**326**	⇓P	**Pb**	**10 09 45.7**	**-0.1**
BVC2	**Cotopaxi Volca**	**1.26**	**331**	⇓P	**Pb**	**10 09 46.0**	**-0.2**
BREF	**Cotopaxi Volca**	**1.27**	**330**	⇓P	**Pb**	**10 09 46.3**	**0.0**
SRAM	**San Ramn-Vol**	**1.27**	**323**	P	**Pb**	**10 09 46.2**	**0.0**
VC1	**Cotopaxi 1**	**1.27**	**332**	P	**Pb**	**10 09 46.4**	**0.0**
CAMI	**Rancho Maria**	**1.29**	**327**	⇓P	**Pb**	**10 09 46.7**	**+0.1**
ANTM	**Antisana-La Mi**	**1.30**	**341**	P	**Pn**	**10 09 46.1**	**+0.1**
ANTS	**Antisana-Sarah**	**1.32**	**344**	⇓P	**Pn**	**10 09 46.6**	**+0.2**
SUCR	**Mariscal Sucre**	**1.32**	**328**	⇓P	**Pb**	**10 09 47.1**	**+0.1**
ANTG	**Antisana-Guama**	**1.34**	**340**	⇓P	**Pn**	**10 09 46.9**	**+0.3**
PITA	**Cotopaxi Volc**	**1.36**	**332**	⇓P	**Pb**	**10 09 47.7**	**0.0**
ANTI	**Antisana**	**1.36**	**345**	⇓P	**Pn**	**10 09 47.0**	**+0.1**
ILLI	**Illinizas Sur**	**1.40**	**319**	⇓P	**Pb**	**10 09 48.6**	**+0.1**
TOMA	**Boca Toma-Volc**	**1.41**	**333**	P	**Pb**	**10 09 48.5**	**-0.1**
AZOG	**Ecuador-Azogue**	**1.43**	**227**	P	**Pn**	**10 09 49.0**	**+1.5**
BOSC	**San Juan Bosco**	**1.54**	**207**	⇑P	**Pn**	**10 09 50.2**	**+1.3**
AV05	**Acelerografo,**	**1.56**	**4**	P	**Pb**	**10 09 50.8**	**-0.3**
TING	**Casa Alexandra**	**1.61**	**336**	P	**Pb**	**10 09 53.0**	**+1.0**
REVS	**Reventador Sur**	**1.67**	**6**	P	**Pb**	**10 09 52.1**	**-0.8**
REVN	**San Rafael**	**1.69**	**6**	P	**Pn**	**10 09 52.3**	**+1.1**
GGPT	**Toaza - Volcan**	**1.74**	**332**	P	**Pb**	**10 09 54.5**	**+0.3**
JUA2	**San Juan 2**	**1.74**	**333**	P	**Pb**	**10 09 54.5**	**+0.2**
GGPC	**Guagua Pichinc**	**1.77**	**333**	P	**Pb**	**10 09 55.1**	**+0.2**
TERV	**Terraza Guagua**	**1.78**	**333**	P	**Pb**	**10 09 55.3**	**+0.4**
CAYR	**Refugio Cayamb**	**1.79**	**353**	P	**Pb**	**10 09 54.8**	**-0.3**
PINO	**Pino**	**1.79**	**333**	P	**Pb**	**10 09 55.4**	**+0.1**
YANA	**Yana**	**1.81**	**335**	P	**Pb**	**10 09 55.9**	**+0.4**
ANGU	**Angureal**	**1.82**	**354**	P	**Pb**	**10 09 55.1**	**-0.6**
MILO	**Milagro-Astudi**	**1.82**	**254**	⇑P	**Pb**	**10 09 55.6**	**+0.3**
PULU	**Pululahua**	**1.91**	**339**	P	**Pb**	**10 09 57.4**	**+0.2**
OTAV	**Otavalo**	**2.10**	**342**		**Pb**	**10 10 00.2**	**-0.2**
OTAV				Sn	**Sb**	**10 10 24.7**	**-1.5**
OTAV	**Otavalo**	**2.10**	**342**	P	**Pb**	**10 10 00.2**	**-0.2**
OTAV				S	**Sb**	**10 10 27.9**	**+1.7**
CUSE	**Cuicocha Este**	**2.15**	**344**	P	**Pb**	**10 10 01.1**	**-0.1**
CUSE				S	**Sb**	**10 10 28.5**	**+0.9**
BONI	**La Bonita**	**2.23**	**7**	P	**Pn**	**10 10 00.3**	**+1.8**
BONI				S	**Sb**	**10 10 31.1**	**+1.4**
PAC1	**Pacto, Paraso**	**2.25**	**334**	P	**Pb**	**10 10 03.1**	**+0.3**
TULM	**Tulcn-Chalpat**	**2.47**	**0**	P	**Pb**	**10 10 05.9**	**-0.8**
FLF1	**Flavio Alfaro-**	**2.48**	**305**	P	**Pb**	**10 10 04.8**	**-1.8**
CMBC	**Cumbal**	**2.69**	**360**	P	**Pb**	**10 10 13.2**	**+2.7**
PPLP	**Puerto Lpez**	**2.98**	**274**	P	**Pn**	**10 10 10.9**	**+2.2**
GCUF	**Volcan Galeras**	**3.01**	**9**	P	**Pb**	**10 10 14.2**	**-1.8**
MCRA	**Macar, Loja**	**3.36**	**220**	P	**Pn**	**10 10 15.7**	**+1.8**

CRUC	**La Cruz**	**3.42**	**14**	P	**Pb**	**10 10 20.4**	**-2.5**	
PTLC	**Puerto Leguiza**	**3.57**	**57**	P	**Pn**	**10 10 15.1**	**-1.7**	
TUMC	**Tumaco**	**3.69**	**346**	Pn	**Pn**	**10 10 20.2**	**+1.8**	
FLOC	**Florencia**	**3.96**	**33**		**Pn**	**10 10 22.5**	**+0.3**	
POPC	**Popayan, Colom**	**4.43**	**15**	P	Pn	10 10 34.6	+5.8	
GARC	**Garzon, Huila**	**4.56**	**30**	P	**Pn**	**10 10 30.0**	**-0.6**	
BETC	**Betania**	**5.01**	**28**	P	**Pb**	**10 10 46.1**	**-3.8**	
JAMC	**Jamundi, Valle**	**5.08**	**13**	P	**Pb**	**10 10 47.1**	**-4.0**	
	22nm,1.6s							
MACC	**Macarena, Meta**	**5.55**	**45**	P	**Pn**	**10 10 44.4**	**+0.4**	
	2um152nm,0.6s							
YOTC	**Yotoco, Valle**	**5.90**	**14**	P	**Pn**	**10 10 50.9**	**+2.0**	
	11nm,0.9s							
URMC	**La Uribe, Meta**	**6.05**	**34**	P	**Pn**	**10 10 55.3**	**+4.4**	
	966nm66nm,0.8s							
PRAC	**Prado**	**6.18**	**28**	P	Pb	10 11 04.9	-4.8	
	28nm,0.8s							
ORTC	**Ortega, Tolima**	**6.19**	**24**	P	Pb	10 11 02.4	-7.6	
	64nm,1.0s							
VILC	**Villavicencio,**	**7.14**	**35**	P	Pn	10 11 13.2	+7.2	
ROSC	**El Rosal**	**7.43**	**28**	Sn	**Sb**	**10 13 07.6**	**+7.9**	
	0.9nm,0.3s,baz=66,slow=22,SNR=1.2							
ROSC	**El Rosal**	**7.43**	**28**	Pn	**Pn**	**10 11 10.6**	**+0.3**	
RUSC	**La Rusia**	**8.95**	**32**	Pn	**Pn**	**10 11 30.4**	**-0.8**	
BAUV	**El Baul**	**14.42**	**42**	Pn	**Pn**	**10 12 44.6**	**-1.1**	
MACA	**Manacapuru-AM**	**17.16**	**95**	P	**Pn**	**10 13 16.4**	**-4.8**	
MACA				IAmb	IAmb	10 13 31.4		
	comp=Z,11nm,0.6s							
LPAZ	**La Paz**	**17.29**	**147**	Lg	Lg	10 17 52.2		
	comp=Z,0.1nm,0.3s,baz=323,slow=25,SNR=1.8							
LPAZ				LR	LR	10 20 57.1		
	comp=Z,49nm,20.0s,baz=320,slow=43							
LPAZ	**La Paz**	**17.29**	**147**	P	**Pn**	**10 13 18.9**	**-4.5**	
BOAV	**Boa Vista**	**17.77**	**77**		**Pn**	**10 13 28.5**	**-0.3**	
PB12	**IPOC Station P**	**18.27**	**157**		**P**	**10 13 35.8**	**+0.7**	
PB12				IAmb	IAmb	10 14 14.0		
	comp=Z,10nm,1.2s							
PB11	**IPOC Station P**	**19.58**	**157**	P	**P**	**10 13 50.0**	**+0.5**	
PB11				IAmb	IAmb	10 13 58.5		
	comp=Z,7.3nm,0.9s							
GO01	**Chusmiza**	**19.68**	**155**	P	**P**	**10 13 52.0**	**+1.0**	
PB02	**IPOC Station P**	**20.90**	**159**	P	**P**	**10 14 05.1**	**+1.3**	
PB02				IAmb	IAmb	10 14 06.8		
	comp=Z,7.7nm,0.7s							
PB09	**IPOC Station P**	**21.58**	**158**	P	**P**	**10 14 13.5**	**+2.3**	
SIV	**San Ignacio**	**21.71**	**132**	LR	LR	10 23 21.3		
	comp=Z,75nm,19.1s,baz=265,slow=40							
PTLB	**Pontes e Lacer**	**22.88**	**127**	P	**P**	**10 14 24.1**	**-0.9**	
PTLB				IAmb	IAmb	10 14 25.3		
	comp=Z,4.2nm,0.7s			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.82**	**161**	P	P	10 23 50.0	-1.2
	0.9nm,0.7s,baz=338,slow=10,SNR=3.0 0.9nm,0.7s						
PMG	**Port Moresby**	**23.36**	**118**	LR	LR	10 34 39.7	
	comp=Z,38nm,19.5s,baz=304,slow=41						
ASAR	**Alice Springs**	**26.20**	**164**	P	P	10 24 23.9	+0.8
	0.2nm,0.4s,baz=346,slow=11,SNR=4.3 0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	P	10 28 49.3	+0.5
	0.2nm,0.4s,baz=113,slow=8.0,SNR=4.0 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	P	10 29 16.8	-0.5
	0.4nm,0.3s,baz=131,slow=6.4,SNR=4.1 0.4nm,0.3s						

IDC ***15*** *10:27:05.0±1.7,1˚.76N×126˚.62E,h0km,mb3.6/4, mbtmp3.6/5,ML3.0/1,Error ellipse: s-maj=119.9km s-min=20.4km az=69.0*
DJA ***15*** *10:27:09.7±0.3,2˚N±3˚×12˚6E±˚,h10km,M3.5/6,MLv3.5/6*
ISC 15 10:27:11.5±1.1,1˚.79N±0˚.09×126˚.7E±0˚.1,h35km,n8, σ2§63/9,mb3.6/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**147**	P	**Pn**	**10 27 34.8**	**+2.8**
TNTI				S	**Sn**	**10 27 48.6**	**+1.4**
SGSI	**Sangihe**	**2.21**	**328**	P	**Pn**	**10 27 48.6**	**+2.8**
KMSI	**Cibinong**	**2.97**	**246**	P	**Pn**	**10 27 58.8**	**+2.6**
FITZ	**Fitzroy Crossi**	**19.79**	**183**	P	**P**	**10 31 36.2**	**-2.8**
	baz=0.0,slow=9.1,SNR=1.7 1.9nm,1.0s						
WRA	**Warramunga Arr**	**22.86**	**161**	P	**P**	**10 32 09.9**	**-2.2**
	0.9nm,0.5s,baz=340,slow=11,SNR=5.4 0.9nm,0.5s						
ASAR	**Alice Springs**	**26.26**	**165**	P	**P**	**10 32 42.6**	**-1.0**
	0.4nm,0.5s,baz=344,slow=8.5,SNR=14 0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**10 37 07.5**	**-1.2**
	0.6nm,0.7s,baz=120,slow=8.4,SNR=6.5 0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**10 37 35.5**	**-1.6**
	0.4nm,0.5s,baz=130,slow=5.8,SNR=4.3 0.4nm,0.5s						

NEIC ***15*** *10:28:52.3±0.4,4˚.6S±0˚.1×152˚.7E±0˚.1,h70km±8km, mb4.2/11,Error ellipse: s-maj=23.2km s-min=9.3km az=58.0*
IDC ***15*** *10:28:57.0±6.5,4˚.52S×152˚.32E,h108km±50km,mb3.9/10, mbtmp4.3/11,MS3.0/5,Error ellipse: s-maj=53.3km s-min=22.6km az=91.0*
ISC 15 10:28:49.1±1.1,4˚.6S±0˚.1×153˚.0E±0˚.2,h55km,n34, σ1§24/30,mb4.2/17,MS3.2/3,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.89**	**298**		**Pn**	**10 29 07.2**	**+1.6**
PMG	**Port Moresby**	**7.46**	**230**	P	**Pn**	**10 30 37.1**	**+1.6**
	7.3nm,0.4s,baz=32,slow=16,SNR=6.6						
PMG				S	**Sn**	**10 31 59.6**	**+0.9**
	13nm,0.5s,baz=162,slow=20,SNR=5.1						
PMG	**Port Moresby**	**7.46**	**230**		**Pn**	**10 30 35.2**	**-0.2**
HNR	**Honiara**	**8.44**	**125**	LR	LR	10 35 20.9	
	comp=Z,36nm,18.1s,baz=288,slow=43						
GUMO	**Guam**	**19.78**	**336**	LR	LR	10 41 50.6	
	comp=Z,20nm,18.0s,baz=136,slow=40						
MTN	**Manton Dam**	**23.05**	**248**	P	**P**	**10 33 49.2**	**-0.7**
MTN				IAmb	IAmb	10 33 51.4	
	comp=Z,9.1nm,0.9s						
WB0	**Warramunga Arr**	**23.53**	**229**	P	**P**	**10 33 54.0**	**-0.6**
WB0				IAmb	IAmb	10 33 55.7	
	comp=Z,10nm,1.1s						
WR8	**Warramunga Arr**	**23.57**	**228**	P	**P**	**10 33 54.4**	**-0.6**
WRAB	**Tennant Creek**	**23.67**	**228**	P	**P**	**10 33 55.2**	**-0.6**
WRAB				IAmb	IAmb	10 33 56.9	
	comp=Z,6.7nm,0.8s						
WRA	**Warramunga Arr**	**23.68**	**228**	P	**P**	**10 33 54.9**	**-1.1**
	comp=Z,4.3nm,0.4s,baz=50,slow=9.9,SNR=27 comp=Z,4.3nm,0.4s						
ASAR	**Alice Springs**	**26.39**	**222**	P	**P**	**10 34 19.1**	**-1.6**
	comp=Z,1.1nm,0.5s,baz=54,slow=8.9,SNR=14 comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**26.39**	**222**	P	**P**	**10 34 20.0**	**-0.6**
STKA	**Stephens Creek**	**29.14**	**200**	LR	LR	10 45 20.7	
	comp=Z,32nm,18.4s,baz=25,slow=34						
FITZ	**Fitzroy Crossi**	**29.88**	**241**	P	**P**	**10 34 50.5**	**-1.3**
	comp=Z,10nm,0.7s,baz=52,slow=7.1,SNR=31 comp=Z,10nm,0.7s						
FITZ	**Fitzroy Crossi**	**29.88**	**241**	P	**P**	**10 34 50.8**	**-0.9**
FORT	**Forrest**	**35.03**	**219**	P	**P**	**10 35 36.1**	**-0.5**
FORT				IAmb	IAmb	10 35 38.4	
	comp=Z,6.4nm,0.9s						
MBWA	**Marble Bar**	**36.19**	**240**	P	**P**	**10 35 45.8**	**-1.0**
PSA00	**Pilbara Seismi**	**36.25**	**239**	P	**P**	**10 35 45.9**	**-1.4**
PSA00				IAmb	IAmb	10 35 51.7	
	comp=Z,2.1nm,0.9s						
JNU	**Nakatsue**	**42.96**	**332**	LR	LR	10 51 37.9	
	comp=Z,71nm,18.6s,baz=33,slow=32						
MJAR	**Matsushiro Arr**	**43.20**	**343**	LR	LR	10 51 45.0	
	comp=Z,28nm,20.2s,baz=104,slow=32						
CMAR	**Chiang Mai Arr**	**57.93**	**295**	P	**P**	**10 38 36.9**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=120,slow=5.7,SNR=6.1						
CMAR	**Chiang Mai Arr**	**57.93**	**295**	P	**P**	**10 38 35.1**	**-1.1**
SONM	**Songino Array**	**66.24**	**328**	P	**P**	**10 39 31.9**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=145,slow=7.4,SNR=2.5 comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**80.28**	**319**	P	**P**	**10 40 54.2**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=94,slow=7.3,SNR=5.2 comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**81.08**	**326**	P	**P**	**10 40 57.2**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=114,slow=4.9,SNR=4.1 comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**81.08**	**326**	P	**P**	**10 40 56.7**	**-1.6**
KURK	**Kurchatov**	**83.71**	**322**	P	**P**	**10 41 12.1**	**0.0**
KURK				IAmb	IAmb	10 41 34.6	
	comp=Z,3.4nm,0.9s						
KURBB	**Kurchatov Arra**	**83.74**	**322**	P	**P**	**10 41 11.4**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=104,slow=4.0,SNR=6.6 comp=Z,1.1nm,0.7s						
AAK	**Ala-Archa**	**84.64**	**313**	P	**P**	**10 41 17.8**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=114,slow=5.3,SNR=9.4 comp=Z,3.3nm,0.6s						
AAK	**Ala-Archa**	**84.64**	**313**	P	**P**	**10 41 17.7**	**+0.5**
QSPA	**South Pole Qui**	**85.35**	**180**	P	**P**	**10 41 23.7**	**+3.4**
	comp=Z,1.3nm,0.7s,baz=105,slow=9.9,SNR=12 comp=Z,1.3nm,0.7s						
QSPA	**South Pole Qui**	**85.35**	**180**	P	**P**	**10 41 21.6**	**+1.4**
QSPA				IAmb	IAmb	10 41 37.0	
	comp=Z,1.5nm,0.9s						
BVAR	**Borovoye Array**	**89.18**	**323**	P	**P**	**10 41 37.4**	**-1.4**
	comp=Z,6.5nm,0.6s,baz=104,slow=5.9,SNR=36 comp=Z,6.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.39**	**289**	PKPbc	**PKPbc**	**10 48 34.1**	**-1.4**
	comp=Z,3.7nm,0.7s,baz=67,slow=3.9,SNR=3.4						

KRSC ***15*** *10:32:41.4±1.6,55˚.38N×166˚.62E,h40km±8km,Ml4.3,Felt [II] at Nikolskoe.*
IDC ***15*** *10:32:41.2±0.6,55˚.54N×166˚.52E,h0km,mb3.9/13, mbtmp4.0/15,ML3.9/2,Error ellipse: s-maj=25.8km s-min=13.5km az=162.0*
MOS ***15*** *10:32:44.6±0.9,55˚.40N×166˚.50E,h37km,mb4.0/1,Error ellipse: s-maj=10.0km s-min=6.0km az=156.2*
ISC 15 10:32:44.7±0.7,55˚.63N±0˚.04×166˚.36E±0˚.05,h20km,n90, σ1§88/99,mb4.0/13,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.48**	**208**	PN	**Pb**	**10 32 52.1**	**-2.2**
BKI				S	**Sb**	**10 32 58.4**	**-2.5**
BKI	**Bering**	**0.48**	**208**	*eP*	**Pb**	**10 32 52.1**	**-2.2**
BKI				*eS*	**Sb**	**10 32 58.4**	**-2.5**
KBTR	**Krutoberegovo**	**2.08**	**288**	PN	**Pn**	**10 33 18.3**	**-0.1**
KBTR				S	**Sb**	**10 33 46.2**	**-0.8**
KBTR	**Krutoberegovo**	**2.08**	**288**	*eP*	**Pn**	**10 33 18.3**	**-0.1**
KBTR				*eS*	**Sb**	**10 33 46.2**	**-0.8**
KBG	**Krutoberegovo**	**2.15**	**289**	PN	**Pn**	**10 33 19.5**	**+0.2**
KBG	**Krutoberegovo**	**2.15**	**289**	*eP*	**Pn**	**10 33 19.5**	**+0.2**
MKZ	**Mys Kozlova**	**2.87**	**250**	PN	**Pn**	**10 33 28.9**	**-0.3**
MKZ	**Mys Kozlova**	**2.87**	**250**	*eP*	**Pn**	**10 33 28.9**	**-0.3**
SMKR	**Semkarok**	**2.91**	**291**	PN	**Pb**	**10 33 31.4**	**-4.3**
SMKR	**Semkarok**	**2.91**	**291**	*eP*	**Pb**	**10 33 31.5**	**-4.3**
SRKR	**Sorokina**	**3.08**	**292**	PN	**Pb**	**10 33 34.3**	**-4.5**
SRKR				S	**Sb**	**10 34 14.0**	**-2.0**
SRKR	**Sorokina**	**3.08**	**292**	*eP*	**Pb**	**10 33 34.3**	**-4.5**
SRKR				*eS*	**Sb**	**10 34 14.1**	**-2.0**
ZLN	**Zelenaya**	**3.16**	**279**	PN	**Pb**	**10 33 35.5**	**-4.6**
ZLN	**Zelenaya**	**3.16**	**279**	*eP*	**Pb**	**10 33 35.6**	**-4.6**
BZGR	**Bezymyannyi-Gr**	**3.22**	**278**	PN	**Pb**	**10 33 36.3**	**-4.8**
BZGR	**Bezymyannyi-Gr**	**3.22**	**278**	*eP*	**Pb**	**10 33 36.3**	**-4.8**
KLY	**Klyuchi**	**3.28**	**284**	PN	**Pn**	**10 33 35.1**	**+0.2**
KLY	**Klyuchi**	**3.28**	**284**	*eP*	**Pn**	**10 33 35.1**	**+0.2**
BZMR	**Bezymyannaya**	**3.33**	**278**	PN	**Pn**	**10 33 37.4**	**+1.7**
BZMR	**Bezymyannaya**	**3.33**	**278**	*eP*	**Pn**	**10 33 37.5**	**+1.7**
KIRR	**Kirishev**	**3.42**	**278**	PN	**Pn**	**10 33 37.9**	**+1.1**
KIRR	**Kirishev**	**3.42**	**278**	*eP*	**Pn**	**10 33 38.0**	**+1.1**
TUMD	**Tumrok D**	**3.43**	**265**	PN	**Pn**	**10 33 38.5**	**+1.6**
TUMD				S	**Sn**	**10 34 19.3**	**+2.5**
TUMD	**Tumrok D**	**3.43**	**265**	*eP*	**Pn**	**10 33 38.5**	**+1.6**
TUMD				*eS*	**Sn**	**10 34 19.4**	**+2.5**
KMNR	**Kamenistaya**	**3.47**	**275**	PN	**Pb**	**10 33 40.7**	**-4.7**
KMNR	**Kamenistaya**	**3.47**	**275**	*eP*	**Pb**	**10 33 40.7**	**-4.7**
KOZ	**Kozyrevsk**	**3.69**	**279**	PN	Pb	10 33 43.5	-5.5
KOZ	**Kozyrevsk**	**3.69**	**279**	*eP*	Pb	10 33 43.5	-5.5
SRDR	**Sredinnyy**	**3.80**	**283**	PN	**Pn**	**10 33 44.5**	**+2.5**
SRDR	**Sredinnyy**	**3.80**	**283**	*eP*	**Pn**	**10 33 44.5**	**+2.5**
KII	**Karymskiy**	**4.30**	**251**	PN	**Pn**	**10 33 49.9**	**+0.9**
KII	**Karymskiy**	**4.30**	**251**	*eP*	**Pn**	**10 33 50.0**	**+0.9**
ESO	**Esso**	**4.34**	**277**	PN	**Pn**	**10 33 52.4**	**+3.0**
ESO	**Esso**	**4.34**	**277**	*eP*	**Pn**	**10 33 52.5**	**+3.0**
NLC	**Nalytchevo**	**4.78**	**242**	PN	**Pn**	**10 33 55.0**	**-0.4**
NLC	**Nalytchevo**	**4.78**	**242**	*eP*	**Pn**	**10 33 55.0**	**-0.4**
SDLR	**Sedlovina**	**4.96**	**245**	PN	**Pn**	**10 33 58.5**	**+0.5**
SDLR	**Sedlovina**	**4.96**	**245**	*eP*	**Pn**	**10 33 58.5**	**+0.5**
SMAR	**Somma**	**5.01**	**245**	PN	**Pn**	**10 33 59.7**	**+0.9**
SMAR	**Somma**	**5.01**	**245**	*eP*	**Pn**	**10 33 59.7**	**+0.9**
KRER	**Koryakskii**	**5.01**	**246**	PN	**Pn**	**10 33 59.7**	**+0.9**
KRER	**Koryakskii**	**5.01**	**246**	*eP*	**Pn**	**10 33 59.8**	**+0.9**
UGLR	**Uglovaya**	**5.02**	**244**	PN	**Pn**	**10 33 59.8**	**+0.9**
UGLR	**Uglovaya**	**5.02**	**244**	*eP*	**Pn**	**10 33 59.9**	**+0.9**
KRX	**Arik**	**5.04**	**246**	PN	**Pn**	**10 33 59.8**	**+0.7**
KRX	**Arik**	**5.04**	**246**	*eP*	**Pn**	**10 33 59.8**	**+0.7**
AVH	**Avacha**	**5.04**	**245**	PN	**Pn**	**10 34 00.1**	**+1.0**
AVH	**Avacha**	**5.04**	**245**	*eP*	**Pn**	**10 34 00.2**	**+1.0**
KOK	**Koryaka**	**5.08**	**246**	PN	**Pn**	**10 34 00.7**	**+1.1**
KOK	**Koryaka**	**5.08**	**246**	*eP*	**Pn**	**10 34 00.8**	**+1.1**
DALK	**Dalny**	**5.16**	**243**	PN	**Pn**	**10 34 00.3**	**-0.3**
DALK	**Dalny**	**5.16**	**243**	*eP*	**Pn**	**10 34 00.3**	**-0.3**
PET	**Petropavlovsk**	**5.21**	**243**	*eP*N	**Pn**	**10 34 01.4**	**0.0**
PET				pmax	pmax		
	comp=Z,83nm,0.5s						
PET	**Petropavlovsk**	**5.21**	**243**	*eP*	**Pn**	**10 34 01.3**	**0.0**
KRMR	**Karymshinskiy**	**5.58**	**243**	PN	**Pn**	**10 34 06.6**	**+0.2**
KRMR	**Karymshinskiy**	**5.58**	**243**	*eP*	**Pn**	**10 34 06.6**	**+0.2**
KRMR				*eS*	**Sn**	**10 35 10.4**	**+0.5**
RUS	**Russkaya**	**5.62**	**239**	PN	**Pn**	**10 34 06.3**	**-0.7**
RUS	**Russkaya**	**5.62**	**239**	*eP*	**Pn**	**10 34 06.4**	**-0.7**
PEA0B	**Petropavlovsk-**	**5.66**	**247**	PN	**Pn**	**10 34 08.4**	**+0.9**
PETK	**Petropavlovsk-**	**5.66**	**247**	Pn	**Pn**	**10 34 07.8**	**+0.3**
	comp=Z,16nm,0.3s,baz=71,slow=17,SNR=121						
PETK				Sn	**Sn**	**10 35 12.1**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=90,slow=23,SNR=1.4 comp=Z,47nm,0.5s						
MTVR	**Mutnovka**	**5.75**	**240**	PN	**Pn**	**10 34 08.8**	**-0.1**
MTVR	**Mutnovka**	**5.75**	**240**	*eP*	**Pn**	**10 34 08.9**	**-0.1**
GRL	**Gorelyy**	**5.77**	**241**	PN	**Pn**	**10 34 09.6**	**+0.5**
GRL	**Gorelyy**	**5.77**	**241**	*eP*	**Pn**	**10 34 09.6**	**+0.5**
ASAK	**Asacha**	**5.95**	**240**	PN	**Pn**	**10 34 11.9**	**+0.3**
ASAK	**Asacha**	**5.95**	**240**	*eP*	**Pn**	**10 34 12.0**	**+0.3**
APC	**Apacha**	**6.03**	**247**	PN	**Pn**	**10 34 13.8**	**+1.2**
APC	**Apacha**	**6.03**	**247**	*eP*	**Pn**	**10 34 13.8**	**+1.2**
KDTR	**Khodutka, Kamc**	**6.23**	**236**	PN	**Pn**	**10 34 13.8**	**-1.5**
KDTR	**Khodutka, Kamc**	**6.23**	**236**	*eP*	**Pn**	**10 34 13.8**	**-1.5**
MIPR	**Malaya Ipel'ka**	**6.59**	**243**	PN	**Pn**	**10 34 21.4**	**+1.1**
MIPR	**Malaya Ipel'ka**	**6.59**	**243**	*eP*	**Pn**	**10 34 21.4**	**+1.1**
ASAJ	**Asahikawa**	**19.05**	**243**	P	**Pn**	**10 37 07.2**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=21,slow=17,SNR=5.1 comp=Z,23nm,1.0s						
ILAR	**Eielson Array**	**24.40**	**49**	P	**P**	**10 38 01.6**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=257,slow=8.7,SNR=24 comp=Z,2.7nm,0.8s						
MJAR	**Matsushiro Arr**	**27.00**	**237**	P	**P**	**10 38 25.4**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=34,slow=7.7,SNR=5.3 comp=Z,2.4nm,0.7s						
KSRS	**Korea Array**	**31.54**	**251**	P	**P**	**10 39 06.5**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=46,slow=9.1,SNR=3.3 comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**36.88**	**284**	P	**P**	**10 39 53.5**	**+1.8**
	comp=Z,0.6nm,0.5s,baz=57,slow=8.5,SNR=3.8 comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**44.47**	**303**	PcP	**PcP**	**10 42 37.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=90,slow=1.4,SNR=3.5						
KURK	**Kurchatov**	**49.46**	**303**	P	**P**	**10 41 34.0**	**+1.0**
KURK						10 42 55.2	
KURBB	**Kurchatov Arra**	**49.57**	**303**	P	**P**	**10 41 34.0**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=54,slow=7.7,SNR=11						
KURBB				PcP	**PcP**	**10 42 55.2**	**0.0**
	comp=Z,0.3nm,0.4s,baz=46,slow=3.9,SNR=1.8 comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**50.31**	**297**	P	**P**	**10 41 39.4**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=63,slow=8.7,SNR=4.2 comp=Z,1.1nm,0.7s						
NVAR	**Mina Array Bea**	**51.49**	**76**	P	**P**	**10 41 47.3**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=280,slow=8.9,SNR=4.1 comp=Z,0.4nm,0.7s						
BVAR	**Borovoye Array**	**51.63**	**310**	P	**P**	**10 41 48.9**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=60,slow=8.5,SNR=4.8						
BVAR				PcP	**PcP**	**10 43 02.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=29,slow=3.3,SNR=1.7 comp=Z,1.7nm,0.7s						
PDAR	**Pinedale Array**	**53.11**	**66**	P	**P**	**10 41 59.8**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=317,slow=6.4,SNR=6.8 comp=Z,0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**62.23**	**262**	P	**P**	**10 43 05.2**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=36,slow=6.9,SNR=6.4 comp=Z,0.8nm,0.3s						
TXAR	**Lajitas Array**	**66.32**	**72**	P	**P**	**10 43 31.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=300,slow=4.5,SNR=13 comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**80.03**	**210**	P	**P**	**10 44 50.7**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=22,slow=5.6,SNR=4.7 comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**83.68**	**210**	P	**P**	**10 45 10.3**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=18,slow=5.8,SNR=11 comp=Z,1.1nm,0.8s						
MAW	**Mawson**	**144.24**	**220**	PKP	PKPbc	10 52 14.8	-0.9
	comp=Z,4nm,0.8s,baz=337,slow=5.2,SNR=4.5						
QSPA	**South Pole Qui**	**145.38**	**180**	PKPbc	**PKPab**	**10 52 19.6**	**-0.1**
	comp=Z,5.0nm,0.6s,baz=303,slow=0.7,SNR=58						

IDC 15 10:34:54.7±2.2,1˚.43N×126˚.17E,h0km,mb3.2/3, mbtmp3.3/3,Error ellipse: s-maj=183.5km s-min=29.0km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.70**	**160**	P	P	10 39 57.7	-0.5
	0.7nm,0.8s,baz=338,slow=11,SNR=4.9 0.7nm,0.8s						
ASAR	**Alice Springs**	**26.05**	**164**	P	P	10 40 30.3	+0.3
	0.1nm,0.6s,baz=344,slow=12,SNR=1.6 0.1nm,0.6s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	P	10 44 57.3	0.0
	0.5nm,0.7s,baz=114,slow=6.5,SNR=2.2 0.5nm,0.7s						

IDC ***15*** *10:38:29.3±2.2,1˚.42N×126˚.52E,h0km,mb3.4/3, mbtmp3.5/3,Error ellipse: s-maj=172.5km s-min=27.6km az=66.0*
DJA 15 10:38:32.0±2.0,1˚N±5˚×12˚6E±˚,h21km±18km,M3.6/5, MLv3.6/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.39**	**338**	P	Pn	10 39 10.8	+0.9
KMSI	**Cibinong**	**2.58**	**250**	P	Pn	10 39 11.6	-1.0
WRA	**Warramunga Arr**	**22.64**	**160**	P	P	10 43 31.6	-0.2
	0.7nm,0.4s,baz=339,slow=11,SNR=22 0.7nm,0.4s						
ASAR	**Alice Springs**	**26.01**	**164**	P	P	10 44 03.5	-0.2
	0.3nm,0.4s,baz=347,slow=11,SNR=13 0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.25**	**326**	P	P	10 48 33.1	+1.2
	0.2nm,0.5s,baz=124,slow=7.4,SNR=2.0 0.2nm,0.5s						

JMA 15 10:46:51.7±0.2,30˚N±1˚×14˚2E±˚,h67km,MV4.2/35, NEAR TORISHIMA IS,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.70**	**324**	*eP*	Pn	10 47 34.2	+1.3
JHCJ	**Hachijojimakas**	**3.19**	**331**	*eS*	Sn	10 48 15.4	-1.0
CBIJ	**Chichi jima**	**3.22**	**172**	P	Pn	10 47 40.8	+1.0
JHJ2	**Mitsune**	**3.22**	**331**	P	Pn	10 47 41.1	+1.3
JHJ2				*eS*	Sn	10 48 16.5	-0.5
JMYK	**Miyake Tsubota**	**4.16**	**335**	*eP*	Pn	10 47 53.4	+0.7
JMYK				*eS*	Sn	10 48 40.0	0.0
BSO1	**Boso 1**	**4.39**	**353**	*eP*	Pn	10 47 58.4	+3.1
BSO1				*eS*	Sn	10 48 47.5	+2.7
BSO3	**Boso 3**	**4.60**	**348**	P	Pn	10 48 00.8	+2.3
BSO4	**Boso 4**	**4.82**	**347**	P	Pn	10 48 04.5	+3.0
JOD2	**Odawara 2**	**5.41**	**337**	*eP*	Pn	10 48 11.5	+1.7
JYT	**Yasato**	**6.05**	**349**	*eS*	Sn	10 49 28.1	+1.9
JRY	**Ryogami san**	**6.16**	**339**	P	Pn	10 48 21.9	+1.9
JRY				*eS*	Sn	10 49 30.2	+1.1
JHO	**Hitachi**	**6.37**	**352**	P	Pn	10 48 24.5	+1.6
JHO				*eS*	Sn	10 49 33.0	-1.1
JAG	**Ashikaga**	**6.39**	**344**	*eP*	Pn	10 48 24.1	+1.0
JFK	**Kawauchi**	**7.09**	**355**	P	Pn	10 48 34.2	+1.5
JFK				S	Sn	10 49 48.6	-3.2
JMK	**Ichinoseki**	**8.65**	**358**	P	Pn	10 48 56.2	+2.2
JMK				S	Sn	10 50 26.5	-3.4

IDC ***15*** *10:48:58.3±1.4,1˚.57N×126˚.04E,h0km,mb3.7/4, mbtmp3.7/5,ML3.5/1,Error ellipse: s-maj=115.0km s-min=19.8km az=68.0*
DJA ***15*** *10:49:04.8±2.1,2˚N±7˚×12˚6E±˚,h17km±21km,M3.7/4, MLv3.7/4*
ISC 15 10:49:04.8±0.9,1˚.49N±0˚.07×126˚.06E±0˚.08,h35km,n10, σ2§20/11,mb3.8/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.48**	**119**	P	**Pn**	**10 49 30.7**	**+1.7**
TNTI	**Ternate**	**1.48**	**119**	P	**Pn**	**10 49 32.1**	**+3.1**
SGSI	**Sangihe**	**2.25**	**346**	S	**Sn**	**10 50 08.2**	**+2.1**
SGSI	**Sangihe**	**2.25**	**346**	P	**Pn**	**10 49 40.4**	**+0.9**
KMSI	**Cibinong**	**2.27**	**246**	P	**Pn**	**10 49 42.5**	**+2.7**
FITZ	**Fitzroy Crossi**	**19.47**	**181**	P	**P**	**10 53 26.8**	**-1.9**
	0.1nm,0.3s,baz=5.7,slow=11,SNR=2.3 1.5nm,0.6s						
WRA	**Warramunga Arr**	**22.79**	**160**	P	**P**	**10 54 02.2**	**-2.4**
	2.8nm,0.8s,baz=339,slow=9.8,SNR=17 2.8nm,0.8s						
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**10 54 34.5**	**-1.5**
	0.4nm,0.5s,baz=348,slow=10,SNR=9.3						
ASAR				PcP	**PcP**	**10 58 02.6**	**-0.2**
	0.3nm,0.6s,baz=340,slow=2.2,SNR=5.3 0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**10 58 59.7**	**-1.5**
	0.3nm,0.4s,baz=125,slow=8.5,SNR=2.0 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	**P**	**10 59 29.3**	**-0.6**
	1.5nm,0.8s,baz=131,slow=5.4,SNR=7.5 1.5nm,0.8s						

SOME ***15*** *10:51:47.9,40˚.78N×79˚.88E,h5km*
KRNET ***15*** *10:51:49.3±0.1,40˚.76N×80˚.03E,mb3.2*
NNC ***15*** *10:51:49.1±4.8,40˚.68N×79˚.78E,h0km,mb3.4,mpv2.9, Error ellipse: s-maj=53.6km s-min=31.6km az=78.0*
ISC 15 10:51:52.6±3.2,40˚.9N±0˚.1×79˚.9E±0˚.1,h10km,n8, σ1§62/13,6C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.81**	**299**	⇑*iP*	**Pb**	**10 52 25.2**	**-0.8**
TARG				⇑*iS*	**Sg**	**10 52 51.3**	**+0.6**
PRZ	**Przheval'sk**	**1.97**	**326**	⇑*iP*	**Pb**	**10 52 27.6**	**-1.2**
PRZ				⇑*iS*	**Sg**	**10 52 55.7**	**-0.4**
SHLS	**Shalkode**	**2.31**	**352**	Pg	**Pb**	**10 52 33.8**	**-0.8**

KURBB	**Kurchatov Arra**	**63.51**	**328**	P		**P**		**11 25 12.7**		**-1.1**
	0.4nm,0.5s,baz=125,slow=6.1,SNR=1.5 0.4nm,0.5s									

*IDC **15** 11:21:10.9±1.8, 1°.45N×126°.23E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=176.4km s-min=22.1km az=66.0*
*DJA **15** 11:21:15.4±1.7, 1°N±11'×12°6E±°, **h24**km±16km, **M3.4**/5,*
MLv3.4/5, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
TNTI	**Ternate**	**1.14**	**127**	P	Pn	11 21 35.9		0.0
KMSI	**Cibinong**	**2.63**	**250**	P	Pb	11 22 06.9		+5.0
WRA	**Warramunga Arr**	**22.64**	**160**	P	P	11 26 14.3		-0.6
	1.3nm,0.6s,baz=338,slow=11,SNR=12 1.3nm,0.6s							
ASAR	**Alice Springs**	**26.01**	**164**	P	P	11 26 46.3		-0.5
	0.4nm,0.5s,baz=346,slow=11,SNR=10 0.4nm,0.5s							
MKAR	**Makanchi Array**	**59.26**	**326**	P	P	11 31 13.5		-1.5
	0.3nm,0.6s,baz=119,slow=7.6,SNR=1.7 0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**63.49**	**328**	P	P	11 31 42.2		-1.3
	0.3nm,0.5s,baz=128,slow=6.3,SNR=4.5 0.3nm,0.5s							

IDC 15 11:27:33.4±3.0, 53°.17N×62°.84E, h0km, mb3.1/1, mbtmp3.2/2, ML2.1/1, 3C-3D, Error ellipse: s-maj=79.1km s-min=18.3km az=11.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AKTO	**Aktyubinsk**	**4.06**	**229**	⇓Pg	Pg	11 28 55.5		+4.4
	1.0nm,0.8s							
AKTO				⇓Sn	Sg	11 29 49.3		+5.6
	2.9nm,0.8s							
AKTO				⇓Lg	Lg	11 30 18.1		
	3.2nm,0.6s							
I31KZ	**AKTYUBINSK INF**	**4.07**	**229**	I	I	11 51 40.0		
	0.1nm,4.7s,baz=45,slow=320,SNR=8.7							
AB31	**Akbulak array**	**4.32**	**206**	⇑Pn	Pn	11 28 44.3		+3.9
	0.3nm,0.6s,baz=25,slow=14,SNR=8.3							
AB31				⇑Sn	Sg	11 29 59.8		+7.6
	2.4nm,0.5s,baz=14,slow=24,SNR=7.8							
AB31				⇑Lg	Lg	11 30 32.1		
	7.2nm,0.8s,baz=18,slow=30,SNR=4.1							
BVAR	**Borovoye Array**	**4.55**	**89**	Pn	Pn	11 28 44.2		+0.8
	0.1nm,0.3s,baz=284,slow=12,SNR=12							
BVAR				Sn	Sn	11 29 37.1		+0.2
	0.1nm,0.3s,baz=283,slow=22,SNR=2.6							
BVAR				Lg	Lg	11 29 55.9		
	0.2nm,0.3s,baz=276,slow=30,SNR=5.3 1.0nm,0.3s							
I46RU	**ZALESOVO INFRA**	**13.08**	**78**	I	I	12 46 40.0		
	baz=272,slow=305,SNR=1.7							
FINES	**FINESS Array B**	**21.25**	**307**	P	P	11 32 20.3		-0.4
	0.8nm,0.8s,baz=80,slow=11,SNR=1.4 0.8nm,0.8s							

*IDC **15** 11:30:44.4±1.3, 1°.69N×126°.57E, h0km, mb3.7/7, mbtmp3.7/8, ML3.1/1, Error ellipse: s-maj=86.1km s-min=17.3km az=68.0*
*DJA **15** 11:30:49.3±1.3, 2°N±3°×12°6E±°, h20km±11km, M4.0/6, MLv4.0/6*
ISC 15 11:30:50.5±0.8, 1°.66N±0°.08×126°.37E±0°.09, h35km, n12, σ1§38/12, mb3.6/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
TNTI	**Ternate**	**1.33**	**131**	P	**Pn**	**11 31 13.5**		**+0.9**
TNTI				S	**Sn**	**11 31 30.4**		**+1.3**
SGSI	**Sangihe**	**2.18**	**337**	P	**Pn**	**11 31 24.8**		**+0.5**
KMSI	**Cibinong**	**2.62**	**246**	P	**Pn**	**11 31 31.3**		**+1.0**
APSI	**Ampana**	**5.36**	**242**	P	Pn	11 32 17.1		+9.0
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**11 35 14.6**		**-1.7**
	baz=353,slow=8.1,SNR=2.0 1.3nm,0.8s							
WRA	**Warramunga Arr**	**22.85**	**160**	P	**P**	**11 35 48.5**		**-2.4**
	1.5nm,0.6s,baz=340,slow=11,SNR=14 1.5nm,0.6s							
ASAR	**Alice Springs**	**26.22**	**164**	P	**P**	**11 36 21.1**		**-1.2**
	1.0nm,0.7s,baz=348,slow=12,SNR=11 1.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**31.65**	**304**	P	**P**	**11 37 11.7**		**+1.0**
	0.3nm,0.3s,baz=108,slow=9.7,SNR=1.7 0.3nm,0.3s							
SONM	**Songino Array**	**49.14**	**342**	P	**P**	**11 39 35.2**		**+0.3**
	0.3nm,0.5s,baz=148,slow=8.5,SNR=2.0 0.3nm,0.5s							
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**11 40 46.4**		**-0.7**
	0.9nm,0.8s,baz=111,slow=7.9,SNR=3.9 0.9nm,0.8s							
KURBB	**Kurchatov Arra**	**63.28**	**328**	P	**P**	**11 41 14.5**		**-1.1**
	0.7nm,0.6s,baz=128,slow=6.0,SNR=6.7 0.7nm,0.6s							
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**11 43 04.0**		**+0.6**
	0.6nm,0.9s,baz=346,slow=3.1,SNR=2.5 0.6nm,0.9s							

*IDC **15** 11:34:04.0±2.3, 1°.80N×126°.86E, h0km, mb3.6/3, mbtmp3.6/3, MS2.5/1, Error ellipse: s-maj=176.8km s-min=27.6km az=66.0*
*DJA **15** 11:34:07.2±0.3, 2°N±3°×12°7E±°, h10km, M3.3/7, MLv3.3/7*
ISC 15 11:34:10.0±1.2, 1°.79N±0°.10×126°.8E±0°.1, h35km, n7, σ1§75/7, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
TNTI	**Ternate**	**1.18**	**149**	P	**Pn**	**11 34 30.5**		**+0.5**
TNTI				S	**Sn**	**11 34 46.5**		**+1.7**
SGSI	**Sangihe**	**2.25**	**327**	P	**Pn**	**11 34 45.6**		**+0.8**
KMSI	**Cibinong**	**3.02**	**247**	P	**Pn**	**11 34 56.0**		**+0.6**
DAV	**Davao City (W)**	**5.38**	**347**	LR	LR	11 37 55.2		
	comp=Z,53nm,20.1s,baz=200,slow=43							
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**11 39 07.5**		**-2.8**
	1.2nm,0.5s,baz=340,slow=11,SNR=13 1.2nm,0.5s							
ASAR	**Alice Springs**	**26.24**	**165**	P	**P**	**11 39 41.9**		**-0.1**
	0.4nm,0.4s,baz=342,slow=8.8,SNR=15 0.4nm,0.4s							
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**11 44 07.0**		**-0.4**
	0.4nm,0.7s,baz=131,slow=8.9,SNR=1.7 0.4nm,0.7s							

*SOME **15** 11:37:07.1, 39°.35N×74°.77E, h5km*
*NNC **15** 11:37:09.4±0.6, 39°.38N×74°.80E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=22.5km s-min=4.2km az=103.0*
*KRNET **15** 11:37:17.4±0.1, 39°.62N×75°.06E, h16km, mb2.6*
ISC 15 11:37:15.3±3.3, 39°.6N±0°.1×75°.17E±0°.06, h14km±19km,
n12, σ0§98/21, 10C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
SFK	**Sufi-Kurgan**	**1.36**	**290**	⇓*eP*	**Pb**	**11 37 41.4**		**+0.7**
SFK				⇓*iS*	**Sg**	**11 37 58.6**		**-0.7**
JNKS	**Jany-Kuch**	**1.55**	**14**	⇓*iP*	**Pb**	**11 37 45.5**		**+1.6**
JNKS				⇓*iS*	**Sg**	**11 38 06.3**		**+1.0**
SALK	**Salom-Alik**	**1.68**	**323**	⇑*iP*	**Pb**	**11 37 46.9**		**+0.8**
SALK				⇑*iS*	**Sg**	**11 38 08.4**		**-1.1**
ARLS	**Aral**	**2.39**	**345**	⇑*iP*	**Pb**	**11 37 58.5**		**+0.2**
ARLS				⇑*iS*	**Sb**	**11 38 28.5**		**+0.8**
ARSB	**Arslanbob**	**2.43**	**317**	⇑*iP*	**Pb**	**11 37 58.9**		**0.0**
ARSB				⇑*iS*	**Sb**	**11 38 29.0**		**+0.2**
UCH	**Uchtor**	**2.72**	**350**	⇑*iP*	**Pb**	**11 38 03.3**		**-0.7**
UCH				⇑*iS*	**Sb**	**11 38 36.8**		**-0.5**
BOOM	**Boomskoye usch**	**2.99**	**11**	⇓*eP*	**Pb**	**11 38 07.1**		**-1.4**
BOOM				⇓*eS*	**Sb**	**11 38 43.8**		**-1.2**
KDJ	**Kajisay**	**2.99**	**30**	⇑*eP*	**Pb**	**11 38 07.5**		**-1.0**
KDJ				⇑*eS*	**Sb**	**11 38 44.2**		**-0.8**
KST	**Kastek**	**3.54**	**9**	Pg	**Pb**	**11 38 18.1**		**+0.4**
	1.2nm,0.2s							
KST				Lg	Lg	11 39 09.2		
	10nm,0.6s							
KST	**Kastek**	**3.54**	**9**	*eP*	**Pb**	**11 38 18.1**		**+0.4**
	1.2nm,0.2s							
KST				*eS*	**Sg**	**11 39 09.2**		**+0.2**
	10nm,0.6s							
DGS	**Degeres**	**3.71**	**7**	Pg	**Pb**	**11 38 21.1**		**+0.4**
	4.5nm,0.4s							
DGS				Lg	Lg	11 39 14.6		
	6.0nm,0.5s							
KTBS	**Karatobe**	**4.31**	**15**	Pg	**Pb**	**11 38 32.6**		**+1.8**
	0.6nm,0.3s							
KTBS				Lg	Lg	11 39 34.2		
	4.3nm,0.6s							

*IDC **15** 11:40:28.7±0.9, 8°.26S×115°.99E, h0km, mb4.1/9, mbtmp4.2/12, ML4.1/3, MS2.9/3, Error ellipse: s-maj=25.0km s-min=15.1km az=47.0*
*NEIC **15** 11:40:30.4±1.6, 8°.39S±0°.06×116°.09E±0°.05, h10km±1km, mb4.3/17, Error ellipse: s-maj=13.7km s-min=3.2km az=322.0*
*DJA **15** 11:40:31.9±0.2, 8°S±5'×11°6E±°, h10km, M4.4/18, mB5.2/1, mb4.5/4, MLv4.3/18, Mw(mB)4.5/1*
ISC 15 11:40:30.2±0.4, 8°.34S±0°.05×116°.08E±0°.03, h10km, n66, σ1§74/73, mb4.3/16, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
TWSI	**Taliwang, Sumb**	**0.88**	**117**	P	**Pb**	**11 40 48.0**		**+0.4**
TWSI				S	**Sn**	**11 41 02.6**		**+1.0**
SRBI	**Singaraja**	**0.90**	**286**	P	**Pg**	**11 40 46.6**		**-0.9**
SRBI				S	**Sg**	**11 40 58.8**		**-0.5**
DNP	**Denpasar**	**0.93**	**249**	P	**Pb**	**11 40 48.5**		**+0.1**
DNP				S	**Sn**	**11 41 04.6**		**+1.9**
PLAI	**Plampang**	**1.74**	**106**	P	**Pb**	**11 41 02.8**		**+0.5**
PLAI	**Plampang**	**1.74**	**106**	P	**Pb**	**11 41 02.4**		**+0.1**
PLAI				S	**Sg**	**11 41 26.0**		**-0.3**
ABJI	**Asem Bagus**	**1.91**	**286**	P	**Pb**	**11 41 05.4**		**+0.3**
JAGI	**Jajag, Banyuwa**	**1.92**	**266**		**Pn**	**11 41 02.4**		**-0.6**
JAGI	**Jajag, Banyuwa**	**1.92**	**266**	P	**Pn**	**11 41 02.0**		**-0.9**
JAGI	**Jajag, Banyuwa**	**1.92**	**266**	P	**Pn**	**11 41 01.2**		**-1.7**
KMMI	**Kalianget**	**2.46**	**301**	P	**Pb**	**11 41 13.9**		**-0.6**
BLJI	**Banyuglugur**	**2.54**	**283**	P	**Pn**	**11 41 12.7**		**+1.3**
WBSI	**Waikabubak, Su**	**3.51**	**112**	P	**Pn**	**11 41 26.7**		**+1.8**
BASI	**Baing, Sumba**	**4.81**	**113**	P	**Pn**	**11 41 45.7**		**+2.9**
PCJI	**Pacitan**	**4.86**	**271**	P	**Pn**	**11 41 44.0**		**+0.6**
KAPI	**Kappang**	**4.92**	**48**	Pn	**Pn**	**11 41 44.4**		**+0.2**
	9.7nm,0.3s,baz=208,slow=8.7,SNR=13							
KAPI				Sn	**Sn**	**11 42 37.6**		**-3.6**
	7.0nm,0.3s,baz=306,slow=19,SNR=8.5							
KAPI				LR	LR	11 43 59.3		
	comp=Z,84nm,20.8s,baz=206,slow=43 27nm,0.4s							
KAPI	**Kappang**	**4.92**	**48**		**Pn**	**11 41 44.6**		**+0.4**
KAPI	**Kappang**	**4.92**	**48**	P	**Pn**	**11 41 45.3**		**+1.1**
UGM	**Wanagama**	**5.52**	**274**		**Pn**	**11 41 52.3**		**-0.2**
UGM	**Wanagama**	**5.52**	**274**	P	**Pn**	**11 41 53.3**		**+0.7**
UGM	**Wanagama**	**5.52**	**274**	P	**Pn**	**11 41 53.5**		**+0.9**
	78nm,0.6s							
MMRI	**Maumere**	**6.09**	**93**		**Pn**	**11 41 59.3**		**-1.1**
MMRI	**Maumere**	**6.09**	**93**	P	**Pn**	**11 42 04.6**		**+4.2**
	0.3nm2µm52nm,1.1s							
KPJI	**Karang Pucung**	**7.16**	**278**	P	**Pn**	**11 42 17.5**		**+2.5**
BATI	**Baumata**	**7.71**	**105**	Pn	**Pn**	**11 42 24.3**		**+1.7**
	4.8nm,0.3s,baz=293,slow=7.7,SNR=1.7							
BATI				Sn	**Sn**	**11 43 53.5**		**+3.4**
	baz=270,slow=20 12nm,0.3s							
SOEI	**Soe**	**8.20**	**100**	Pn	**Pn**	**11 42 27.7**		**-1.8**
BBJI	**Bungbulang**	**8.40**	**275**	P	**Pn**	**11 42 33.3**		**+1.1**
MBWA	**Marble Bar**	**13.22**	**165**	Pn	**Pn**	**11 43 36.4**		**-1.7**
MBWA	**Marble Bar**	**13.22**	**165**	P	**Pn**	**11 43 36.8**		**-1.3**
FITZ	**Fitzroy Crossi**	**13.43**	**137**	Pn	**Pn**	**11 43 40.4**		**-0.6**
	0.4nm,0.3s,baz=338,slow=10,SNR=14							
FITZ				Sn	**Sn**	**11 46 06.6**		**-3.9**
	0.6nm,0.3s,baz=185,slow=20,SNR=5.6 2.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**13.43**	**137**		**Pn**	**11 43 40.5**		**-0.5**
PSA00	**Pilbara Seismi**	**13.65**	**165**	Pn	**Pn**	**11 43 42.5**		**-1.4**
PSA00	**Pilbara Seismi**	**13.65**	**165**	Pn	**Pn**	**11 43 42.8**		**-1.1**
GIRL	**Giralia**	**14.33**	**187**	Pn	**Pn**	**11 43 52.0**		**-1.3**
KNRA	**Kununurra**	**14.38**	**122**	Pn	**Pn**	**11 43 53.7**		**-0.3**
MTN	**Manton Dam**	**15.45**	**108**	Pn	**Pn**	**11 44 07.0**		**-1.4**
MTN				IAmb	IAmb	11 44 25.1		
	comp=Z,10nm,0.9s							
DAV	**Davao City (W)**	**18.00**	**32**	LR	LR	11 52 52.3		
	comp=Z,56nm,20.4s,baz=215,slow=41							
MORW	**Morawa**	**20.62**	**180**	P	**P**	**11 45 07.5**		**-2.3**
WB0	**Warramunga Arr**	**21.06**	**125**		**P**	**11 45 14.1**		**-0.6**
WB0				IAmb	IAmb	11 45 19.1		
	comp=Z,8.4nm,0.6s							
WRA	**Warramunga Arr**	**21.10**	**125**	P	**P**	**11 45 15.1**		**0.0**
	comp=Z,5.1nm,0.7s,baz=302,slow=12,SNR=64							
WRA				S	**S**	**11 49 04.4**		**-5.7**
	comp=Z,0.4nm,0.7s,baz=301,slow=23,SNR=1.7 comp=Z,5.1nm,0.7s							
WR8	**Warramunga Arr**	**21.24**	**125**		**P**	**11 45 17.3**		**+0.7**
WR8				IAmb	IAmb	11 45 21.3		
	comp=Z,10nm,0.6s							
AS31	**Alice Springs**	**22.88**	**134**		**P**	**11 45 34.4**		**+0.1**
ASAR	**Alice Springs**	**22.88**	**134**	P	**P**	**11 45 34.4**		**+0.2**
	comp=Z,4.2nm,0.5s,baz=308,slow=9.9,SNR=124							
ASAR				S	**S**	**11 49 50.1**		**+5.9**
	comp=Z,1.5nm,1.0s,baz=308,slow=22,SNR=4.2 comp=Z,4.2nm,0.5s							
ASAR	**Alice Springs**	**22.88**	**134**	P	**P**	**11 45 34.2**		**0.0**
NWAO	**Narrogin (SRO)**	**24.49**	**178**	P	**P**	**11 45 48.9**		**-0.8**
COEN	**Coen**	**27.14**	**104**	P	**P**	**11 46 15.0**		**+1.1**
COEN				IAmb	IAmb	11 46 15.3		
	comp=Z,6.5nm,0.7s							
INKA	**Innaminka**	**30.25**	**133**	P	**P**	**11 46 42.7**		**+1.2**
BBOO	**Buckleboo**	**30.58**	**146**	P	**P**	**11 46 44.1**		**-0.2**
BBOO				IAmb	IAmb	11 47 11.7		
	comp=Z,5.8nm,1.1s							
CMAR	**Chiang Mai Arr**	**31.55**	**328**	LR	LR	12 00 21.3		
	comp=Z,28nm,18.6s,baz=135,slow=38							
STKA	**Stephens Creek**	**33.33**	**138**	P	**P**	**11 47 09.8**		**+1.3**
	comp=Z,1.6nm,0.5s,baz=295,slow=11,SNR=2.9 comp=Z,1.6nm,0.5s							
PZH	**PanZhiHua**	**37.33**	**339**	P	**P**	**11 47 45.3**		**+2.2**
EIDS	**Eidsvold**	**37.37**	**121**	P	**P**	**11 47 42.9**		**-0.5**
EIDS				IAmb	IAmb	11 47 56.1		
	comp=Z,5.4nm,1.1s							
KSAR	**Wonju Array Be**	**46.86**	**13**	P	**P**	**11 49 00.2**		**-0.4**
KS19	**Wonju Array Si**	**46.92**	**13**	P	**P**	**11 49 00.7**		**-0.3**
HHC	**Hu-ho-hao-te**	**49.12**	**355**	*eP*	**P**	**11 49 21.5**		**+3.4**
HHC				pmax	pmax			
	comp=Z,7.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,180nm,5.2s							
SONM	**Songino Array**	**56.58**	**352**	P	**P**	**11 50 12.7**		**-0.5**
	comp=Z,2.0nm,0.7s,baz=170,slow=9.0,SNR=9.3 comp=Z,2.0nm,0.7s							
CASY	**Casey**	**57.98**	**183**	P	**P**	**11 50 22.1**		**-0.6**
CASY				IAmb	IAmb	11 50 23.4		
	comp=Z,3.2nm,0.8s							
MKAR	**Makanchi Array**	**62.59**	**335**	P	**P**	**11 50 54.1**		**-0.5**
	comp=Z,0.8nm,0.9s,baz=145,slow=8.8,SNR=2.7 comp=Z,0.8nm,0.9s							
MAW	**Mawson**	**68.89**	**199**	P	**P**	**11 51 35.8**		**+0.9**
	comp=Z,2.0nm,0.7s,baz=54,slow=4.2,SNR=5.3 comp=Z,2.0nm,0.7s							
VNDA	**Vanda**	**73.09**	**171**	P	**P**	**11 52 00.8**		**+0.5**
	comp=Z,0.9nm,0.8s,baz=292,slow=6.8,SNR=6.2 comp=Z,0.9nm,0.8s							
VNDA	**Vanda**	**73.09**	**171**	P	**P**	**11 52 00.1**		**-0.1**
VNDA				IAmb	IAmb	11 52 01.9		
	comp=Z,3.0nm,1.4s							
SBA	**Scott Base**	**74.12**	**170**	P	**P**	**11 52 05.6**		**-0.6**
BOSA	**Boshof**	**86.78**	**242**	P	**P**	**11 53 14.9**		**-0.5**
	comp=Z,3.3nm,0.7s,baz=127,slow=5.1,SNR=4.2 comp=Z,3.3nm,0.7s							
BOSA	**Boshof**	**86.78**	**242**	P	**P**	**11 53 15.2**		**-0.3**
KDWAN	**Kaudwane**	**88.04**	**247**	P	**P**	**11 53 20.8**		**-0.7**
SNAA	**Sanae**	**90.84**	**196**	P	**P**	**11 53 34.2**		**+0.5**
	comp=Z,0.5nm,0.5s,baz=180,slow=8.1,SNR=1.9 comp=Z,0.5nm,0.5s							
SNAA	**Sanae**	**90.84**	**196**	P	**P**	**11 53 34.1**		**+0.4**
SNAA				IAmb	IAmb	11 53 51.7		
	comp=Z,2.1nm,1.1s							

*ISN **15** 11:47:36.9±0.6, 29°.83N×47°.58E, h10km±273km, ML3.6*
*IDC **15** 11:47:37.5±2.8, 29°.82N×47°.64E, h0km, mb4.0/6, mbtmp4.0/6, MS3.1/5, Error ellipse: s-maj=58.8km s-min=31.8km az=151.0*
*NEIC **15** 11:47:38.6±1.0, 29°.84N±0°.06×47°.7E±0°.1, h10km±1km, mb4.1/12, Error ellipse: s-maj=17.4km s-min=7.3km az=65.0*
*THR **15** 11:47:38.7±0.0, 29°.80N×47°.63E, h14km±3km, ML4.0*
*TEH **15** 11:47:43.6, 29°.98N×47°.87E, h28km±51km*
ISC 15 11:47:38.3±0.7, 29°.80N±0°.06×47°.64E±0°.05, h10km, n58, σ1§38/60, mb3.9/9, MS3.1/3, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AHWZ	**Ahwaz**	**1.76**	**29**	Pg	**Pg**	**11 48 11.6**		**-0.3**
AHWZ				Sg	**Sb**	**11 48 31.4**		**-1.3**
RAFI	**Al-Rafai**	**2.33**	**326**	*e*Pn	**Pn**	**11 48 17.5**		**+0.9**
RAFI				*e*Sn	**Sn**	**11 48 47.0**		**+1.7**
RAFI				AML	AML	11 49 00.4		
	comp=E,492nm,0.3s							
RAFI				AML	AML	11 49 10.4		
	comp=N,399nm,0.5s							
GTMR	**Gotvand**	**2.95**	**25**	*e*Pn	**Pn**	**11 48 26.5**		**+1.3**
GTMR				IAML		11 49 22.2		
	comp=Z,290nm,1.0s							
DSBU	**Dashti - Bushe**	**3.47**	**113**	Pn	**Pn**	**11 48 35.5**		**+3.0**
JHBN	**Jahan bin**	**3.55**	**46**	Pn	**Pn**	**11 48 35.1**		**+1.3**
ZNGN	**Zangian**	**3.60**	**49**	Pn	**Pn**	**11 48 36.0**		**+1.6**
IBDR	**Badra**	**3.61**	**337**	*e*Pn	**Pn**	**11 48 35.5**		**+1.2**
IBDR				*e*Sn	**Sn**	**11 49 18.0**		**+0.9**
IBDR				AML	AML	11 49 43.4		
	comp=E,126nm,0.5s							
IBDR				AML	AML	11 49 50.5		
	comp=N,123nm,0.4s							
KLNJ	**Kolanjah**	**3.62**	**69**	Pn	**Pn**	**11 48 36.2**		**+1.5**
KLNJ	**Kolanjah**	**3.62**	**69**	*e*Pn	**Pn**	**11 48 36.3**		**+1.5**
KLNJ				IAML		11 49 45.1		
	comp=Z,160nm,1.0s							
IBRJ	**Brojen**	**3.75**	**55**	Pn	**Pn**	**11 48 37.3**		**+0.8**
IPIR	**Pirpir**	**4.00**	**43**	Pn	**Pn**	**11 48 41.5**		**+1.5**
BDRS	**Dareh Seyedi**	**4.28**	**14**	Pn	**Pn**	**11 48 45.6**		**+1.8**
KHMZ	**Khomeyn**	**4.40**	**26**	*e*Pn	**Pn**	**11 48 47.9**		**+2.6**
KHMZ				IAML		11 50 12.8		
	comp=Z,45nm,1.0s							
BHD	**Baghdad**	**4.45**	**322**	*e*Pn	**Pn**	**11 48 47.0**		**+1.3**
BHD				*e*Sn	**Sn**	**11 49 38.0**		**+0.5**
BHD				AML	AML	11 50 11.3		
	comp=E,248nm,0.4s							
IRAM	**Ramesheh**	**4.54**	**63**	Pn	**Pn**	**11 48 49.0**		**+1.7**
IGAR	**Gharneh**	**4.58**	**54**	Pn	**Pn**	**11 48 49.3**		**+1.5**
IGHG	**Ghaleghazi**	**4.61**	**349**	Pn	**Pn**	**11 48 50.7**		**+2.5**
IKLH	**Kolahrood**	**4.86**	**43**	Pn	**Pn**	**11 48 53.2**		**+1.5**
IDHR	**Dehrash**	**5.00**	**348**	Pn	**Pn**	**11 48 55.5**		**+1.8**
SNQR	**Sonqor, Kerman**	**5.05**	**360**	Pn	**Pn**	**11 48 56.7**		**+2.4**
IZEF	**Zefreh**	**5.06**	**51**	Pn	**Pn**	**11 48 55.8**		**+1.3**
ASAO	**Ashtian**	**5.15**	**22**	*e*Pn	**Pn**	**11 48 58.2**		**+2.5**
ASAO				IAML_BB		11 49 20.9		
	comp=Z,410nm,1.0s							
SNGE	**Sanandaj**	**5.29**	**357**	*e*Pn	**Pn**	**11 48 59.2**		**+1.7**
SNGE				IAML		11 50 54.6		
	comp=Z,83nm,1.0s							
NASN	**Na'in**	**5.34**	**55**	*e*Pn	**Pn**	**11 48 59.6**		**+1.3**
NASN				IAML		11 50 03.1		
	comp=Z,19nm,1.0s							
GHVR	**GHOM**	**5.60**	**33**	*e*Pn	**Pn**	**11 49 03.5**		**+1.7**
GHVR				IAML		11 50 55.7		
	comp=Z,59nm,1.0s							
QABG	**Abgarm-Qazvin**	**6.12**	**15**	Pn	**Pn**	**11 49 11.0**		**+2.0**
ANAR	**Anarak**	**6.20**	**55**	Pn	**Pn**	**11 49 11.4**		**+1.4**
IKRK	**Kirkuk**	**6.25**	**334**	*e*Pn	**Pn**	**11 49 12.0**		**+1.5**
IKRK				*e*Sn	**Sn**	**11 50 21.5**		**-0.4**
IKRK				AML	AML	11 50 25.7		
	comp=N,54nm,0.5s							
RAYN	**Ar Rayn**	**6.53**	**198**		**Pn**	**11 49 15.4**		**+0.9**
SRSL	**SARDASHT**	**6.66**	**344**	*i* P	**Pn**	**11 49 18.4**		**+2.0**
SRSL				IAML		11 50 08.8		
	comp=Z,23nm,1.0s							
MSL	**Mosul**	**7.61**	**331**	*e*Pn	**Pn**	**11 49 30.0**		**+0.8**
MSL				*e*Sn	**Sn**	**11 50 53.0**		**-2.4**
UOSS	**Minazif**	**9.01**	**120**	Pn	**Pn**	**11 49 48.2**		**-0.3**
MARD	**Mardin**	**9.43**	**324**	Pn	**Pn**	**11 49 53.6**		**-0.7**
ASF	**Jabal al Asfar**	**9.52**	**287**	LR	LR	11 54 23.0		
	comp=Z,31nm,20.1s,baz=129,slow=43							
GNI	**Garni**	**10.60**	**348**	Pn	**Pn**	**11 50 09.5**		**-0.9**
EIL	**Elat**	**11.04**	**272**	LR	LR	11 55 09.2		
	comp=Z,59nm,19.5s,baz=351,slow=41							
ILGA	**Ilgaz**	**15.95**	**319**	Pn	**Pn**	**11 51 22.2**		**-0.7**
ILGA				IAmb	IAmb	11 51 23.0		
	comp=Z,17nm,1.5s							
GAR	**Garm**	**20.80**	**58**	P	**P**	**11 52 19.8**		**0.0**
GAR				IAmb	IAmb	11 52 28.1		
	comp=Z,9.9nm,0.4s							
AB31	**Akbulak array**	**21.57**	**22**	P	**P**	**11 52 27.9**		**-0.1**
NIL	**Nilore**	**22.10**	**73**	P	**P**	**11 52 32.9**		**-0.9**
NIL				IAmb	IAmb	11 52 38.3		
	comp=Z,4.1nm,0.9s							
KK31	**Karatay Array**	**22.60**	**48**	P	**P**	**11 52 38.4**		**-0.

WRA	**Warramunga Arr**	**22.79**	**160**	P		**P**	**12 02 15.7**	**-0.7**
	0.5nm,0.5s,baz=338,slow=10,SNR=7.8							
	0.5nm,0.5s							
ASAR	**Alice Springs**	**26.16**	**164**	P		**P**	**12 02 48.2**	**+0.4**
	0.2nm,0.5s,baz=345,slow=7.0,SNR=7.7							
	0.2nm,0.5s							
JCJ	**Chichijima**	**29.52**	**29**	LR		LR	12 13 11.1	
	comp=Z,75nm,20.8s,baz=102,slow=32							
MKAR	**Makanchi Array**	**59.11**	**326**	P		**P**	**12 07 12.6**	**-1.1**
	0.3nm,0.5s,baz=123,slow=7.0,SNR=2.1							
	0.3nm,0.5s							

ISU ***15*** *12:06:15,42°.31N×70°.88E, h8km*
NNC ***15*** *12:06:16.6±0.5, 42°.26N×70°.91E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=3.3km s-min=2.5km az=2.0*
SOME ***15*** *12:06:16.8, 42°.25N×70°.97E, h10km*
KRNET ***15*** *12:06:16.7±0.1, 42°.12N×70°.87E, h23km, mb2.6*

ISC 15 12:06:15.9±1.3, 42°.27N±0°.03×70°.82E±0°.02, h2km±11km, n28, σ1°.24/49, 12C-12D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSK	**Pskem**	**0.48**	**224**	P	**Pg**	**12 06 25.2**	**+0.2**
PSK				S	**Sg**	**12 06 32.7**	**+1.5**
IUG	**Iuzhnay**	**0.60**	**258**	P	**Pb**	**12 06 29.4**	**+0.3**
	31nm,0.2s						
IUG				S	**Sb**	**12 06 38.6**	**+0.5**
	173nm,0.3s						
TRKS	**Terek-Say**	**0.78**	**162**	⇓*i*P	**Pg**	**12 06 30.2**	**-0.5**
TRKS				⇓*i*S	**Sg**	**12 06 39.7**	**-1.1**
KK31	**Karatay Array**	**0.86**	**345**	⇑P	**Pn**	**12 06 33.9**	**-1.2**
	2.5nm,0.2s,baz=164,slow=17,SNR=71						
KK31				⇑S	**Sn**	**12 06 46.5**	**-1.9**
	3.8nm,0.2s,baz=158,slow=34,SNR=12						
CHRV	**Charvak**	**0.90**	**226**	S	**Sg**	**12 06 46.0**	**+1.2**
CHMG	**Chimgan**	**0.94**	**220**	P	**Pg**	**12 06 33.0**	**-0.9**
CHMG				S	**Sg**	**12 06 46.7**	**+0.7**
ARK	**Arkit**	**0.97**	**119**	⇓*i*P	**Pg**	**12 06 33.0**	**-1.5**
ARK				⇓*i*S	**Sg**	**12 06 45.3**	**-1.8**
BRLS	**Borolday**	**1.05**	**317**	P	**Pb**	**12 06 36.6**	**-0.3**
	8.6nm,0.1s						
BRLS				S	**Sb**	**12 06 51.0**	**-0.1**
	32nm,0.2s						
BRLS	**Borolday**	**1.05**	**317**	*e*P	**Pb**	**12 06 36.6**	**-0.3**
	8.6nm,0.1s						
BRLS				*e*S	**Sb**	**12 06 51.0**	**-0.1**
	32nm,0.2s						
TVKS	**Tavaksay**	**1.11**	**232**	P	**Pb**	**12 06 38.6**	**+0.7**
TVKS				S	**Sn**	**12 06 54.6**	**0.0**
MRKS	**Merke**	**1.84**	**74**	P	**Pb**	**12 06 49.9**	**-0.5**
	1.9nm,0.1s						
MRKS				S	**Sb**	**12 07 13.4**	**-0.5**
	26nm,0.3s						
MRKS	**Merke**	**1.84**	**74**	*e*P	**Pb**	**12 06 49.9**	**-0.5**
	1.9nm,0.1s						
MRKS				*e*S	**Sb**	**12 07 13.4**	**-0.5**
	26nm,0.3s						
ARSB	**Arslanbob**	**1.87**	**120**	⇓*e*P	**Pn**	**12 06 48.2**	**-0.9**
ARSB				⇓*e*S	**Sn**	**12 07 11.6**	**-1.8**
FRG	**Fergana**	**2.03**	**159**	S	**Sb**	**12 07 20.2**	**+1.0**
CHMI	**Chimion**	**2.07**	**165**	S	**Sb**	**12 07 21.6**	**+1.3**
EKS2	**Erkin-Say**	**2.22**	**79**	⇑*i*P	**Pn**	**12 06 54.9**	**+1.0**
EKS2				⇑*i*S	**Sn**	**12 07 22.7**	**+0.7**
ARLS	**Aral**	**2.64**	**98**	⇓*i*P	**Pn**	**12 07 00.1**	**+0.4**
ARLS				⇓*i*S	**Sn**	**12 07 31.8**	**-0.6**
SALK	**Salom-Alik**	**2.64**	**121**	*e*P	**Pn**	**12 06 59.4**	**-0.3**
SALK				⇑*i*S	**Sn**	**12 07 30.4**	**-2.0**
UCH	**Uchtor**	**2.74**	**90**	⇓*e*P	**Pn**	**12 07 02.1**	**+0.8**
UCH				⇓*i*S	**Sn**	**12 07 35.0**	**-0.3**
AAK	**Ala-Archa**	**2.74**	**81**	⇑Pg	**Pb**	**12 07 05.5**	**-0.2**
	2.0nm,0.8s						
AAK				⇑Lg	Lg	12 07 40.7	
	1.9nm,0.6s						
USP	**Ospenovka**	**2.89**	**69**	⇑*e*P	**Pn**	**12 07 04.3**	**+1.3**
USP				⇑*i*S	**Sn**	**12 07 38.9**	**+0.6**
SFK	**Sufi-Kurgan**	**3.03**	**137**	⇑*i*P	**Pn**	**12 07 04.5**	**-0.6**
SFK				⇑*i*S	**Sn**	**12 07 39.3**	**-2.8**
TKM2	**Tokmak 2**	**3.59**	**78**	⇓*e*P	**Pn**	**12 07 13.8**	**+1.1**
TKM2				⇓*i*S	**Sn**	**12 07 55.6**	**-0.2**
DGS	**Degeres**	**3.77**	**73**	Pg	**Pb**	**12 07 24.2**	**+1.0**
	1.4nm,0.4s						
DGS				Lg	Lg	12 08 12.3	
	7.1nm,0.5s						
DGS	**Degeres**	**3.77**	**73**	*e*P	**Pb**	**12 07 24.2**	**+1.0**
	1.4nm,0.4s						
DGS				*e*S	**Sb**	**12 08 12.3**	**+2.8**
	7.1nm,0.5s						
KST	**Kastek**	**3.87**	**77**	Pg	**Pb**	**12 07 26.1**	**+1.1**
	1.9nm,0.5s						
KST				Lg	Lg	12 08 15.5	
	5.3nm,0.6s						
KST	**Kastek**	**3.87**	**77**	*e*P	**Pb**	**12 07 26.1**	**+1.1**
	1.9nm,0.5s						
KST				*e*S	**Sb**	**12 08 15.5**	**+3.2**
	5.3nm,0.6s						
KTBS	**Karatobe**	**4.54**	**69**	Pg	**Pb**	**12 07 38.0**	**+1.8**
	0.5nm,0.3s						
KTBS				Lg	Lg	12 08 35.8	
	3.6nm,0.5s						

IDC ***15*** *12:08:24.4±0.6, 1°.63N×126°.32E, h0km, mb4.2/16, mbtmp4.1/17, ML3.9/1, MS2.8/2, Error ellipse: s-maj=33.9km s-min=12.5km az=75.0*
DJA ***15*** *12:08:28.7±1.2, 2°N±4°×12°6E±°, h11km±12km, M4.4/7, MLv4.4/7*
NEIC ***15*** *12:08:29.8±1.6, 1°.75N±0°.07×126°.60E±0°.08, h35km±2km, mb4.4/19, Error ellipse: s-maj=14.9km s-min=9.3km az=55.0*

ISC 15 12:08:29.8±0.4, 1°.71N±0°.05×126°.56E±0°.06, h35km, n66, σ1°.01/71, mb4.3/27, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**139**		**Pn**	**12 08 50.8**	**+0.2**
TNTI	**Ternate**	**1.23**	**139**	P	**Pn**	**12 08 51.9**	**+1.3**
TNTI	**Ternate**	**1.23**	**139**	S	**Sn**	**12 09 07.7**	**+1.7**
TNTI	**Ternate**	**1.23**	**139**	P	**Pn**	**12 08 51.4**	**+0.8**
TNTI				S	**Sn**	**12 09 07.6**	**+1.6**
SGSI	**Sangihe**	**2.21**	**332**	P	**Pn**	**12 09 04.5**	**+0.4**
KMSI	**Cibinong**	**2.81**	**246**	P	**Pn**	**12 09 13.5**	**+1.2**
KMSI				S	**Sn**	**12 09 46.7**	**+1.7**
SANI	**Sanana**	**3.78**	**189**	P	**Pn**	**12 09 25.5**	**-0.1**
LUWI	**Luwuk**	**4.67**	**234**		**Pn**	**12 09 38.6**	**+0.8**
DAV	**Davao City (W)**	**5.41**	**350**	Pn	**Pn**	**12 09 47.3**	**-0.8**
TOLI2	**Tolitoli**	**5.80**	**264**		**Pn**	**12 09 53.4**	**-0.1**
TOLI2	**Tolitoli**	**5.80**	**264**	P	**Pn**	**12 09 53.1**	**-0.4**
MYLDM	**Lahad Datu**	**8.75**	**293**		**Pn**	**12 10 34.6**	**+0.6**
MYLDM	**Lahad Datu**	**8.75**	**293**	P	**Pn**	**12 10 35.6**	**+1.7**
KAPI	**Kappang**	**9.53**	**225**	Pn	**Pn**	**12 10 44.7**	**0.0**
	2.0nm,0.3s,baz=117,slow=13,SNR=4.3						
KAPI				Sn	**Sn**	**12 12 30.3**	**-0.4**
	2.3nm,0.3s,baz=35,slow=16,SNR=2.8						
KAPI	**Kappang**	**9.53**	**225**	Pn	**Pn**	**12 10 45.6**	**+0.9**
SOEI	**Soe**	**11.62**	**191**	Pn	**Pn**	**12 11 12.6**	**-0.7**
PLAI	**Plampang**	**13.64**	**220**	P	**Pn**	**12 11 41.6**	**+0.6**
SBUM	**Sibu**	**14.35**	**273**		**Pn**	**12 11 51.8**	**+1.2**
MTN	**Manton Dam**	**15.16**	**163**	Pn	**Pn**	**12 11 59.9**	**-1.5**
MTN				IAmb	IAmb	12 12 25.0	
	comp=Z,20nm,1.4s						
KNRA	**Kununurra**	**17.41**	**173**		**Pn**	**12 12 28.9**	**-1.3**
KNRA				IAmb	IAmb	12 12 30.7	
	comp=Z,36nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.70**	**183**	P	**P**	**12 12 54.8**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=40,slow=9.0,SNR=11						
	comp=Z,2.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.70**	**183**	IAmb	IAmb	12 12 58.4	
	comp=Z,1.1nm,1.1s						
YULB	**Yu-li**	**22.15**	**347**	P	**P**	**12 13 24.3**	**+1.6**
TPUB	**Ta-pu**	**22.22**	**345**	P	**P**	**12 13 22.9**	**-0.6**
TPUB	**Ta-pu**	**22.22**	**345**	P	**P**	**12 13 24.2**	**+0.7**
COEN	**Coen**	**22.66**	**134**	P	**P**	**12 13 26.4**	**-1.9**
COEN				IAmb	IAmb	12 13 52.9	
	comp=Z,12nm,1.3s						
COEN	**Coen**	**22.66**	**134**	P	**P**	**12 13 28.7**	**+0.4**
WB0	**Warramunga Arr**	**22.69**	**161**		**P**	**12 13 27.9**	**-0.6**
WRAB	**Tennant Creek**	**22.83**	**161**	P	**P**	**12 13 29.6**	**-0.4**
WRAB				IAmb	IAmb	12 13 32.8	
	comp=Z,16nm,1.0s						
WRAB	**Tennant Creek**	**22.83**	**161**	P	**P**	**12 13 28.9**	**-1.1**
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**12 13 28.8**	**-1.2**
	comp=Z,14nm,0.8s,baz=342,slow=11,SNR=64						
WRA				PcP	**PcP**	**12 17 20.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=319,slow=2.8,SNR=3.4						
WRA				S	**S**	**12 17 36.9**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=333,slow=18,SNR=6.5						
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**12 13 28.4**	**-1.6**
WR8	**Warramunga Arr**	**22.90**	**160**	P	**P**	**12 13 29.7**	**-1.0**
WR8				IAmb	IAmb	12 13 33.5	
	comp=Z,14nm,0.7s						
MBWA	**Marble Bar**	**23.69**	**196**	P	**P**	**12 13 37.0**	**-1.5**
MBWA				IAmb	IAmb	12 14 15.4	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**24.05**	**195**	P	**P**	**12 13 42.3**	**+0.4**
PSA00				IAmb	IAmb	12 14 10.9	
	comp=Z,13nm,1.1s						
QIS	**Mount Isa**	**25.56**	**151**	P	**P**	**12 13 56.6**	**+1.0**
AS31	**Alice Springs**	**26.22**	**165**	P	**P**	**12 14 01.0**	**-0.6**
ASAR	**Alice Springs**	**26.22**	**165**	P	**P**	**12 14 01.6**	**0.0**
	comp=Z,5.3nm,0.6s,baz=348,slow=13,SNR=76						
ASAR				PcP	**PcP**	**12 17 27.9**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=350,slow=2.2,SNR=6.6						
	comp=Z,5.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.79**	**303**	P	**P**	**12 14 50.4**	**-0.8**
	comp=Z,0.6nm,0.2s,baz=96,slow=6.2,SNR=5.8						
CMAR				LR	LR	12 28 01.9	
	comp=Z,17nm,21.7s,baz=110,slow=37						
	comp=Z,0.6nm,0.2s						
CMAR	**Chiang Mai Arr**	**31.79**	**303**	P	**P**	**12 14 50.0**	**-1.2**
MORW	**Morawa**	**32.22**	**197**	P	**P**	**12 14 54.2**	**-0.6**
MORW				IAmb	IAmb	12 14 59.6	
	comp=Z,10nm,1.2s						
PZH	**PanZhiHua**	**34.29**	**318**	P	**P**	**12 15 14.6**	**+1.4**
KSRS	**Korea Array**	**35.59**	**2**	P	**P**	**12 15 24.9**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=184,slow=8.4,SNR=4.4						
	comp=Z,1.2nm,0.7s						
MJAR	**Matsushiro Arr**	**36.30**	**16**	P	**P**	**12 15 31.0**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=188,slow=9.7,SNR=3.0						
MJAR				LR	LR	12 30 16.8	
	comp=Z,13nm,20.1s,baz=198,slow=36						
	comp=Z,1.7nm,0.8s						
STKA	**Stephens Creek**	**36.32**	**158**	P	**P**	**12 15 30.0**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=312,slow=7.1,SNR=4.4						
	comp=Z,2.7nm,0.6s						
HNS	**HongShan**	**37.16**	**344**	⇓P	**P**	**12 15 37.9**	**+0.5**
HNS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**41.26**	**343**	*e*P	**P**	**12 16 13.8**	**+2.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,56nm,5.8s						
EVN	**Everest**	**46.07**	**308**	P	**P**	**12 16 49.9**	**-1.5**
EVN				IAmb	IAmb	12 16 54.0	
	comp=Z,7.2nm,1.4s						
SONM	**Songino Array**	**49.15**	**342**	P	**P**	**12 17 14.0**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=159,slow=9.1,SNR=4.0						
	comp=Z,0.6nm,0.4s						
PETK	**Petropavlovsk-**	**57.35**	**22**	P	**P**	**12 18 15.5**	**+1.0**
	comp=Z,5.1nm,0.9s,baz=225,slow=6.5,SNR=2.1						
	comp=Z,5.1nm,0.9s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**12 18 26.7**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=121,slow=8.2,SNR=24						
	comp=Z,1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**62.30**	**334**	P	**P**	**12 18 47.5**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=122,slow=5.6,SNR=4.2						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**62.30**	**334**	P	**P**	**12 18 47.2**	**-1.2**
KBL	**Kabul**	**62.62**	**308**	P	**P**	**12 18 50.2**	**-1.0**
KBL				IAmb	IAmb	12 18 51.8	
	comp=Z,4.3nm,0.8s						
GAR	**Garm**	**63.17**	**313**	P	**P**	**12 18 53.9**	**-0.8**
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**12 18 54.6**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=129,slow=6.1,SNR=34						
	comp=Z,3.9nm,0.6s						
KURK	**Kurchatov**	**63.35**	**328**	P	**P**	**12 18 54.5**	**-0.9**
CASY	**Casey**	**68.81**	**187**	P	**P**	**12 19 30.8**	**+0.6**
CASY				IAmb	IAmb	12 19 36.7	
	comp=Z,3.5nm,1.1s						
BVAR	**Borovoye Array**	**68.91**	**327**	P	**P**	**12 19 29.5**	**-1.6**
	comp=Z,1.6nm,0.5s,baz=152,slow=10,SNR=5.2						
	comp=Z,1.6nm,0.5s						
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**12 20 42.2**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=330,slow=7.5,SNR=10						
	comp=Z,0.6nm,0.4s						
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**12 20 43.0**	**+0.1**
MAW	**Mawson**	**81.81**	**200**	P	**P**	**12 20 44.4**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=360,slow=5.7,SNR=1.9						
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**86.99**	**25**	P	**P**	**12 21 12.5**	**+1.2**
	comp=Z,0.1nm,0.5s,baz=253,slow=4.8,SNR=4.2						
	comp=Z,0.1nm,0.5s						
ILAR	**Eielson Array**	**86.99**	**25**	P	**P**	**12 21 11.3**	**0.0**
FINES	**FINESS Array B**	**93.52**	**332**	P	**P**	**12 21 42.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=72,slow=6.2,SNR=4.7						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**93.52**	**332**	P	**P**	**12 21 41.3**	**-0.6**

IDC ***15*** *12:21:04.2±0.9, 1°.54N×126°.20E, h0km, mb4.1/11, mbtmp4.0/12, ML3.6/1, MS2.8/1, Error ellipse: s-maj=74.1km s-min=13.9km az=67.0*
DJA ***15*** *12:21:08.4±1.4, 2°N±3°×12°6E±°, h18km±12km, M4.0/6, MLv4.0/6*
NEIC ***15*** *12:21:09.4±1.7, 1°.75N±0°.06×126°.7E±0°.1, h35km±2km, mb4.1/16, Error ellipse: s-maj=20.1km s-min=3.5km az=241.0*

ISC 15 12:21:09.3±0.6, 1°.68N±0°.08×126°.6E±0°.1, h35km, n39, σ1°.19/41, mb4.2/18, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.20**	**139**		**Pn**	**12 21 29.9**	**+0.2**
TNTI	**Ternate**	**1.20**	**139**	P	**Pn**	**12 21 30.4**	**+0.8**
TNTI				S	**Sn**	**12 21 46.7**	**+2.0**
SGSI	**Sangihe**	**2.25**	**332**	S	**Sn**	**12 22 12.6**	**+2.0**
LUWI	**Luwuk**	**4.67**	**235**	Pn	**Pn**	**12 22 19.5**	**+2.2**
DAV	**Davao City (W)**	**5.44**	**350**	LR	LR	12 24 49.5	
	comp=Z,93nm,19.8s,baz=176,slow=41						
TOLI2	**Tolitoli**	**5.82**	**264**	Pn	**Pn**	**12 22 32.9**	**-0.4**
MYLDM	**Lahad Datu**	**8.78**	**294**		**Pn**	**12 23 16.1**	**+2.2**
SBUM	**Sibu**	**14.37**	**273**		**Pn**	**12 24 31.6**	**+1.2**
MTN	**Manton Dam**	**15.12**	**163**	Pn	**Pn**	**12 24 40.6**	**+0.1**
KNRA	**Kununurra**	**17.38**	**173**	P	**Pn**	**12 25 07.9**	**-1.4**
KNRA				IAmb	IAmb	12 25 22.0	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	**P**	**12 25 33.9**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=322,slow=16,SNR=3.0						
	comp=Z,0.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P	**P**	**12 25 35.1**	**-0.4**
YULB	**Yu-li**	**22.18**	**347**	P	**P**	**12 26 00.4**	**-2.2**
TPUB	**Ta-pu**	**22.25**	**345**	P	**P**	**12 26 03.1**	**-0.3**
COEN	**Coen**	**22.63**	**134**	P	**P**	**12 26 05.7**	**-1.8**
COEN				IAmb	IAmb	12 26 15.8	
	comp=Z,5.3nm,1.1s						
SSLB	**Suanglung**	**22.64**	**347**	P	**P**	**12 26 07.3**	**-0.2**
WB0	**Warramunga Arr**	**22.65**	**161**		**P**	**12 26 07.0**	**-0.7**
WB0				IAmb	IAmb	12 26 09.8	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**22.80**	**161**	P	**P**	**12 26 08.5**	**-0.6**
WRAB				IAmb	IAmb	12 26 11.1	
	comp=Z,8.8nm,0.9s						
WRA	**Warramunga Arr**	**22.80**	**161**	P	**P**	**12 26 07.8**	**-1.5**
	comp=Z,4.5nm,0.4s,baz=342,slow=10,SNR=50						
WRA				PcP	**PcP**	**12 30 00.5**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=322,slow=2.9,SNR=2.0						
	comp=Z,4.5nm,0.4s						
WRA	**Warramunga Arr**	**22.80**	**161**		**P**	**12 26 08.3**	**-0.9**
WR8	**Warramunga Arr**	**22.86**	**161**		**P**	**12 26 09.2**	**-0.7**
WR8				IAmb	IAmb	12 26 11.8	
	comp=Z,8.4nm,0.8s						
AS31	**Alice Springs**	**26.18**	**165**		**P**	**12 26 41.2**	**+0.3**
AS31				IAmb	IAmb	12 26 46.4	
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**26.18**	**165**	P	**P**	**12 26 41.3**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=348,slow=12,SNR=53						
ASAR				PcP	**PcP**	**12 30 08.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=354,slow=2.2,SNR=6.6						
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**26.18**	**165**	P	**P**	**12 26 41.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**31.82**	**303**	P	**P**	**12 27 28.8**	**-2.2**
	comp=Z,0.5nm,0.6s,baz=106,slow=6.6,SNR=5.0						
	comp=Z,0.5nm,0.6s						
STKA	**Stephens Creek**	**36.29**	**158**	P	**P**	**12 28 08.6**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=332,slow=12,SNR=2.9						
	comp=Z,1.7nm,0.6s						
EVN	**Everest**	**46.11**	**308**	P	**P**	**12 29 31.3**	**+0.2**
EVN				IAmb	IAmb	12 29 32.5	
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**49.18**	**342**	P	**P**	**12 29 55.2**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=165,slow=7.9,SNR=3.8						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**12 31 06.0**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=120,slow=8.1,SNR=25						
	comp=Z,1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**12 31 26.8**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=150,slow=12,SNR=2.4						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**12 31 27.4**	**-0.7**
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	**P**	**12 31 33.6**	**-1.5**
	comp=Z,1.8nm,0.4s,baz=125,slow=6.2,SNR=14						
	comp=Z,1.8nm,0.4s						
KURK	**Kurchatov**	**63.38**	**328**	P	**P**	**12 31 34.9**	**-0.3**
BVAR	**Borovoye Array**	**68.95**	**327**	P	**P**	**12 32 11.8**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=85,slow=6.4,SNR=4.5						
	comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**12 33 21.9**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=299,slow=4.2,SNR=6.7						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**12 33 22.2**	**0.0**
QSPA	**South Pole Qui**	**91.60**	**180**	P	**P**	**12 34 12.7**	**+0.2**
QSPA				IAmb	IAmb	12 34 32.4	
	comp=Z,1.2nm,1.1s						
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**12 34 22.9**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=91,slow=5.6,SNR=3.6						
	comp=Z,1.2nm,0.9s						
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**12 34 20.6**	**-0.9**

IDC 15 12:34:38.6±1.4, 29°.25S×178°.89W, h373km±19km, mb3.1/2, mbtmp4.0/3, Error ellipse: s-maj=50.8km s-min=28.2km az=112.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.85**	**91**	P	Pn	12 35 26.3	+0.1
	229nm,0.3s,baz=134,slow=21,SNR=7.8						
RAO				S	S	12 35 57.0	-7.5
	102nm,0.2s,baz=65,slow=22,SNR=1.3						
URZ	**Urewera**	**9.58**	**199**	P	P	12 36 52.0	-0.3
	3.6nm,0.3s,baz=258,slow=4.3,SNR=7.4						
URZ				S	S	12 38 39.6	-0.9
	4.6nm,0.4s,baz=258,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**42.41**	**266**	P	P	12 41 58.1	-0.2
	0.7nm,0.5s,baz=106,slow=7.7,SNR=9.9						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**43.29**	**271**	P	P	12 42 05.3	-0.1
	1.4nm,0.6s,baz=109,slow=7.6,SNR=8.0						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**143.80**	**340**	PKP	PKPbc	12 53 28.4	+0.6
	0.9nm,0.6s,baz=38,slow=2.5,SNR=6.5						

IDC ***15*** *12:36:16.1±1.7, 1°.58N×125°.93E, h0km, mb3.5/4, mbtmp3.5/5, ML2.8/1, Error ellipse: s-maj=122.9km s-min=21.7km az=68.0*
DJA ***15*** *12:36:23.4±0.6, 1°N±5°×12°6E±°, h10km, M3.6/4, MLv3.6/4*

ISC 15 12:36:21.0±1.3, 1°.6N±0°.2×126°.1E±0°.2, h35km, n6, σ0°.51/6, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.52**	**123**	P	**Pn**	**12 36 45.7**	**0.0**
FITZ	**Fitzroy Crossi**	**19.59**	**181**	P	**P**	**12 40 46.0**	**-0.2**
	baz=4.4,slow=13,SNR=1.9						
	1.9nm,0.9s						
WRA	**Warramunga Arr**	**22.89**	**160**	P	**P**	**12 41 21.4**	**-0.4**
	0.8nm,0.5s,baz=337,slow=10,SNR=22						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.25**	**164**	P	**P**	**12 41 53.6**	**+0.5**
	0.3nm,0.5s,baz=341,slow=9.3,SNR=5.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.94**	**326**	P	**P**	**12 46 17.2**	**+0.3**
	0.5nm,0.8s,baz=122,slow=7.5,SNR=1.2						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**63.19**	**328**	P	**P**	**12 46 45.1**	**-0.4**
	0.3nm,0.5s,baz=127,slow=6.2,SNR=1.7						
	0.3nm,0.5s						

IDC 15 12:38:58.6±1.3, 51°.11N×73°.87E, h0km, mbtmp2.9/4, ML2.2/3, Error ellipse: s-maj=32.4km s-min=8.9km az=31.0, Central Kazakhstan

| Code | Station Name | Δ° | AZ° | Phase

WRAB	**Tennant Creek**	**22.60**	**160**	P	**P**	**12**	**46**	**31.4**	**-0.6**
WRAB	**Tennant Creek**	**22.60**	**160**	S	**S**	**12**	**50**	**38.2**	**+0.7**
WRA	**Warramunga Arr**	**22.60**	**161**	P	**P**	**12**	**46**	**31.4**	**-0.6**
	comp=Z,9.8nm,0.5s,baz=339,slow=11,SNR=68								
WRA				PcP	**PcP**	**12**	**50**	**24.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=322,slow=2.7,SNR=3.3								
WRA				S	**S**	**12**	**50**	**39.4**	**+1.8**
	comp=Z,1.2nm,0.8s,baz=339,slow=16,SNR=5.2								
	comp=Z,9.8nm,0.5s								
WRA	**Warramunga Arr**	**22.60**	**161**	P	**P**	**12**	**46**	**29.6**	**-2.5**
WR8	**Warramunga Arr**	**22.67**	**160**		**P**	**12**	**46**	**32.1**	**-0.6**
WR8				IAmb	IAmb	12	46	38.4	
	comp=Z,15nm,0.6s								
MBWA	**Marble Bar**	**23.42**	**196**	P	**P**	**12**	**46**	**38.8**	**-1.6**
PSA00	**Pilbara Seismi**	**23.79**	**196**	P	**P**	**12**	**46**	**42.6**	**-1.3**
PSA00				IAmb	IAmb	12	46	51.5	
	comp=Z,10nm,0.8s								
QIS	**Mount Isa**	**25.35**	**150**	P	**P**	**12**	**46**	**59.7**	**+1.5**
AS31	**Alice Springs**	**25.98**	**164**	P	**P**	**12**	**47**	**03.6**	**-0.3**
AS31				IAmb	IAmb	12	47	10.0	
	comp=Z,3.9nm,0.4s								
ASAR	**Alice Springs**	**25.98**	**164**	P	**P**	**12**	**47**	**03.4**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=342,slow=9.4,SNR=33								
ASAR				PcP	**PcP**	**12**	**50**	**31.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=359,slow=2.2,SNR=4.8								
	comp=Z,2.8nm,0.5s								
ASAR	**Alice Springs**	**25.98**	**164**		**P**	**12**	**47**	**02.2**	**-1.7**
RPSI	**Rantau Prapat**	**27.59**	**273**	P	**P**	**12**	**47**	**17.2**	**-1.3**
RPSI				IAmb	IAmb	12	47	20.8	
	comp=Z,11nm,1.1s								
GSI	**Gunungsitoli**	**28.93**	**270**		**P**	**12**	**47**	**29.7**	**-0.7**
GSI				IAmb	IAmb	12	47	33.3	
	comp=Z,14nm,0.9s								
GSI	**Gunungsitoli**	**28.93**	**270**	P	**P**	**12**	**47**	**33.4**	**+3.0**
NJ2	**Nanjing**	**31.29**	**347**	*e*P	**P**	**12**	**47**	**54.3**	**+3.3**
NJ2				pmax	pmax				
	comp=Z,9.0nm,0.6s								
MORW	**Morawa**	**31.95**	**197**	P	**P**	**12**	**47**	**55.5**	**-1.4**
JMN	**Monobe**	**32.85**	**11**	P	**P**	**12**	**48**	**05.2**	**+0.5**
JMN				IAmb	IAmb	12	48	32.4	
	comp=Z,14nm,1.1s								
PZH	**PanZhiHua**	**34.46**	**318**	P	**P**	**12**	**48**	**20.6**	**+1.6**
PZH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
BBOO	**Buckleboo**	**35.25**	**166**	P	**P**	**12**	**48**	**25.1**	**-0.5**
BBOO				IAmb	IAmb	12	48	40.4	
	comp=Z,5.3nm,0.8s								
NWAO	**Narrogin (SRO)**	**35.29**	**194**	P	**P**	**12**	**48**	**25.7**	**-0.3**
JGF	**Kuroka**	**35.45**	**15**	P	**P**	**12**	**48**	**28.3**	**+1.0**
JGF				IAmb	IAmb	12	48	29.3	
	comp=Z,8.0nm,0.9s								
EIDS	**Eidsvold**	**35.73**	**140**	P	**P**	**12**	**48**	**29.1**	**-0.7**
EIDS				IAmb	IAmb	12	48	30.7	
	comp=Z,8.9nm,1.1s								
KSRS	**Korea Array**	**35.86**	**2**	P	**P**	**12**	**48**	**31.1**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=179,slow=10.0,SNR=3.3								
	comp=Z,1.0nm,0.7s								
STKA	**Stephens Creek**	**36.10**	**158**	P	**P**	**12**	**48**	**33.0**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=332,slow=9.3,SNR=5.7								
	comp=Z,3.6nm,0.6s								
XAN	**Xi'an**	**36.36**	**335**	P	**P**	**12**	**48**	**35.8**	**+0.6**
XAN				pmax	pmax				
	comp=Z,7.0nm,0.6s								
MJAR	**Matsushiro Arr**	**36.56**	**16**	P	**P**	**12**	**48**	**36.3**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=184,slow=9.0,SNR=8.5								
	comp=Z,4.0nm,0.9s								
JMM	**Marumori**	**38.55**	**18**	P	**P**	**12**	**48**	**53.8**	**+0.2**
HHC	**Hu-ho-hao-te**	**41.49**	**343**	*e*P	**P**	**12**	**49**	**22.4**	**+4.3**
HHC				pmax	pmax				
	comp=Z,12nm,0.8s								
HHC				pmax	pmax				
	comp=Z,200nm,4.9s								
GTA	**Gaotai**	**44.95**	**330**	*e*P	**P**	**12**	**49**	**46.0**	**-0.1**
GTA				sP	sP	12	50	01.4	+1.4
GTA				pmax	pmax				
	comp=Z,3.0nm,1.0s								
EVN	**Everest**	**46.20**	**308**	P	**P**	**12**	**49**	**55.4**	**-1.4**
EVN				IAmb	IAmb	12	50	07.5	
	comp=Z,2.8nm,0.7s								
HILR	**Hailar Array B**	**48.28**	**354**	P	**P**	**12**	**50**	**12.8**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=178,slow=10,SNR=2.4								
	comp=Z,1.1nm,0.4s								
HEH	**HeiHe**	**48.63**	**1**	*e*P	**P**	**12**	**50**	**14.4**	**-0.2**
HEH				pmax	pmax				
	comp=Z,4.0nm,0.6s								
SONM	**Songino Array**	**49.38**	**342**	P	**P**	**12**	**50**	**19.9**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=158,slow=9.9,SNR=6.5								
	comp=Z,1.3nm,0.8s								
PEA0B	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**12**	**51**	**21.9**	**+1.2**
PETK	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**12**	**51**	**21.2**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=188,slow=5.9,SNR=16								
	comp=Z,4.0nm,0.8s								
MKAR	**Makanchi Array**	**59.30**	**326**	P	**P**	**12**	**51**	**31.6**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=120,slow=7.3,SNR=17								
	comp=Z,1.7nm,0.5s								
ZAA0	**Zalesovo Array**	**62.52**	**334**	P	**P**	**12**	**51**	**54.0**	**-0.2**
ZALV	**Zalesovo Beam**	**62.52**	**334**	P	**P**	**12**	**51**	**52.4**	**-1.8**
	comp=Z,2.2nm,0.3s,baz=126,slow=9.1,SNR=4.8								
	comp=Z,2.2nm,0.3s								
ZALV	**Zalesovo Beam**	**62.52**	**334**	P	**P**	**12**	**51**	**53.8**	**-0.4**
KBL	**Kabul**	**62.74**	**308**	P	**P**	**12**	**51**	**55.8**	**-0.6**
KBL				IAmb	IAmb	12	52	07.9	
	comp=Z,3.5nm,0.5s								
GAR	**Garm**	**63.31**	**314**	P	**P**	**12**	**52**	**00.3**	**+0.3**
KURBB	**Kurchatov Arra**	**63.54**	**328**	P	**P**	**12**	**51**	**59.7**	**-1.4**
	comp=Z,4.5nm,0.7s,baz=129,slow=6.3,SNR=34								
	comp=Z,4.5nm,0.7s								
KURK	**Kurchatov**	**63.54**	**328**	P	**P**	**12**	**51**	**59.8**	**-1.4**
BVAR	**Borovoye Array**	**69.11**	**328**	P	**P**	**12**	**52**	**35.4**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=130,slow=8.4,SNR=6.8								
	comp=Z,0.7nm,0.4s								
AB31	**Akbulak array**	**73.77**	**321**	P	**P**	**12**	**53**	**04.2**	**-0.8**
RAYN	**Ar Rayn**	**81.17**	**293**	P	**P**	**12**	**53**	**46.0**	**-1.0**
RAYN				IAmb	IAmb	12	53	47.6	
	comp=Z,2.8nm,0.8s								
L16K	**Owhat River**	**81.19**	**28**	P	**P**	**12**	**53**	**46.3**	**+0.1**
L16K				IAmb	IAmb	12	54	01.1	
	comp=Z,7.5nm,1.1s								
VNDA	**Vanda**	**81.20**	**173**	P	**P**	**12**	**53**	**45.1**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=311,slow=8.7,SNR=6.9								
	comp=Z,0.9nm,0.8s								
VNDA	**Vanda**	**81.20**	**173**	P	**P**	**12**	**53**	**45.8**	**-0.2**
ILAR	**Eielson Array**	**87.25**	**25**	P	**P**	**12**	**54**	**16.6**	**-0.4**
	comp=Z,0.5nm,1.0s,baz=258,slow=4.6,SNR=2.5								
	comp=Z,0.5nm,1.0s								
BRTR	**Keskin Array B**	**91.30**	**310**	P	**P**	**12**	**54**	**34.3**	**-2.4**
	comp=Z,0.6nm,0.8s,baz=96,slow=1.4,SNR=2.6								
	comp=Z,0.6nm,0.8s								
ARCES	**ARCESS Array B**	**92.50**	**340**	P	**P**	**12**	**54**	**39.2**	**-2.2**
	comp=Z,1.6nm,0.8s,baz=76,slow=5.8,SNR=3.6								
	comp=Z,1.6nm,0.8s								
FINES	**FINESS Array B**	**93.73**	**332**	P	**P**	**12**	**54**	**45.8**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=62,slow=5.5,SNR=1.1								
	comp=Z,0.8nm,0.8s								
FINES	**FINESS Array B**	**93.73**	**332**	P	**P**	**12**	**54**	**46.0**	**-1.2**
TXAR	**Lajitas Array**	**123.15**	**53**	PKP	**PKiKP**	**13**	**00**	**29.7**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=305,slow=2.3,SNR=4.9								

IDC 15 12:46:00.5±1.6, 0.85N×124.72E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=191.1km s-min=23.2km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time			Res ISC
				Op			h	m	s	
WRA	**Warramunga Arr**	**22.71**	**156**	P		P	12	51	03.5	-0.6
	0.9nm,0.5s,baz=334,slow=11,SNR=7.8									
	0.9nm,0.5s									
ASAR	**Alice Springs**	**25.95**	**160**	P		P	12	51	35.5	+0.6
	0.3nm,0.4s,baz=335,slow=8.7,SNR=5.7									
	0.3nm,0.4s									
MKAR	**Makanchi Array**	**58.82**	**327**	P		P	12	56	01.1	+0.1
	0.5nm,0.9s,baz=121,slow=7.6,SNR=1.3									
	0.5nm,0.9s									
KURBB	**Kurchatov Arra**	**63.12**	**329**	P		P	12	56	29.6	-0.3
	0.2nm,0.5s,baz=126,slow=6.0,SNR=2.6									
	0.2nm,0.5s									

*BJI **15** 12:52:19.6, 1.25N×126.50E, h44km, mB5.3/16, mb5.0/74, Ms4.5/30, Ms7 4.4/30*
*MOS **15** 12:52:20.8±1.0, 1.67N×126.32E, h31km, mb5.4/47, Error ellipse: s-maj=9.0km s-min=4.8km az=115.7*
*IDC **15** 12:52:21.9±3.2, 1.65N×126.34E, h26km±20km, mb4.9/34, mbtmp5.0/36, ML4.6/2, MS4.0/46, Error ellipse: s-maj=16.0km s-min=8.5km az=81.0*

*NEIC **15** 12:52:23.5, 1.54N×126.53E, h30km, Moment Tensor Solution. Duration: 1s6 Moment tensor: Scale 10^16^Nm; Mrr2.68; Mθθ-0.70; Mφφ-1.98; Mrθ-0.47; Mrφ-2.11; Mθφ-0.31; Fault plane solution: M0 3.25000×10^16^ NP1: φs30.44000°, δ40.51000°, λ81.12000°. NP2:φs222.06000°, δ50.08000°, λ97.51000°. Principal axes: T 2.7452, Plg82.0000°, Azm177.0000°; N 0.8444, Plg6.0000°, Azm37.0000°; P -3.5895, Plg5.0000°, Azm307.0000°;*
*NEIC **15** 12:52:23.5±1.5, 1.64N±0.06×126.43E±0.06, h35km±1km, mb5.3/170, Mww4.9/11 Error ellipse: s-maj=11.8km s-min=8.7km az=221.0*
*NEIC **15** 12:52:23.5, 1.64N×126.43E, h30km*
*DJA **15** 12:52:24.9±0.2, 2.2N±1.1×12.6E±1.1, h46km±2km, M5.0/96, mb5.2/96, mB5.5/54, MLv5.2/23, Mw(mB)5.0/54, MwMwp4.8/12, Mwp5.1/12*
*GCMT **15** 12:52:26.5±0.2, 1.84N±0.01×126.24E±0.01, h30km, MW5.1/95, Moment Tensor Solution. s75,c108; s95,c144; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.51±.17; Mθθ0.28±.11; Mφφ-4.79±.12; Mrθ-0.29±.18; Mrφ-1.88±.08; Mθφ-2.16±.19; Best double couple: Ms5.42300×10^16^ NP1:φ1.24.00000°, δ34.00000°, λ100.00000°. NP2:φ193.00000°, δ57.00000°, λ84.00000°. Principal axes: T 4.9910, Plg77.0000°, Azm83.0000°; N 0.8630, Plg5.0000°, Azm196.0000°; P -5.8540, Plg12.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 12:52:24.8±0.4, 1.67N±0.03×126.39E±0.04, h47km±3km, h48km:pP-P,n838,σ1§21/784,mb5.3/193,MS4.1/60, 29C-9D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time			Res ISC
				Op			h	m	s	
TNTI	**Ternate**	**1.33**	**133**			**Pn**	**12**	**52**	**44.7**	**-2.2**
TNTI	**Ternate**	**1.33**	**133**	P		**Pn**	**12**	**52**	**44.8**	**-2.2**
TNTI	**Ternate**	**1.33**	**133**	S		**Sn**	**12**	**53**	**03.4**	**-0.1**
TNTI	**Ternate**	**1.33**	**133**	P		**Pn**	**12**	**52**	**44.6**	**-2.4**
SGSI	**Sangihe**	**2.17**	**337**	P		**Pn**	**12**	**52**	**57.5**	**-1.1**
KMSI	**Cibinong**	**2.64**	**246**	P		**Pn**	**12**	**53**	**04.9**	**-0.1**
SANI	**Sanana**	**3.72**	**186**	P		**Pn**	**12**	**53**	**19.6**	**-0.2**
SANI	**Sanana**	**3.72**	**186**	P		**Pn**	**12**	**53**	**19.2**	**-0.6**
LUWI	**Luwuk**	**4.51**	**233**			**Pn**	**12**	**53**	**31.7**	**+1.0**
LUWI	**Luwuk**	**4.51**	**233**	P		**Pn**	**12**	**53**	**32.1**	**+1.4**
LUWI	**Luwuk**	**4.51**	**233**	P		**Pn**	**12**	**53**	**31.7**	**+1.0**
MRSI	**Marisa**	**4.60**	**255**	P		**Pn**	**12**	**53**	**32.5**	**+0.6**
NLAI	**Namlea**	**4.93**	**172**	P		**Pn**	**12**	**53**	**36.7**	**+0.3**
APSI	**Ampana**	**5.39**	**242**	P		**Pn**	**12**	**53**	**44.0**	**+1.3**
DAV	**Davao City (W)**	**5.42**	**351**	Pn		**Pn**	**12**	**53**	**45.6**	**+2.4**
	43nm,0.3s,baz=207,slow=6.8,SNR=1.4									
DAV				Sn		**Sn**	**12**	**54**	**47.7**	**+3.4**
	70nm,0.3s,baz=28,slow=20,SNR=4.4									
DAV	**Davao City (W)**	**5.42**	**351**			**Pn**	**12**	**53**	**42.6**	**-0.5**
SWI	**Sorong**	**5.48**	**117**	P		**Pn**	**12**	**53**	**44.6**	**+0.6**
	5μm180nm,0.9s									
MSAI	**Masohi**	**5.60**	**153**	P		**Pn**	**12**	**53**	**48.4**	**+2.8**
	1.1nm4μm6μm366nm,0.7s									
AAI	**Ambon**	**5.62**	**161**	P		**Pn**	**12**	**53**	**47.1**	**+1.2**
	0.9nm2μm162nm,0.6s									
TOLI2	**Tolitoli**	**5.63**	**264**			**Pn**	**12**	**53**	**44.6**	**-1.5**
TOLI2	**Tolitoli**	**5.63**	**264**	P		**Pn**	**12**	**53**	**44.9**	**-1.2**
MPSI	**Mapaga**	**6.62**	**259**	P		**Pn**	**12**	**54**	**00.6**	**+0.9**
	0.8nm3μm287nm,0.9s									
KDI	**Kendari**	**6.74**	**214**	P		**Pn**	**12**	**54**	**01.8**	**+0.5**
PCI	**Palu**	**7.04**	**249**	P		**Pn**	**12**	**54**	**04.9**	**-0.4**
	1.4nm8μm327nm,1.0s									
BNDI	**Bandanaira**	**7.09**	**150**	P		**Pn**	**12**	**54**	**07.2**	**+1.2**
BNDI	**Bandanaira**	**7.09**	**150**	P		**Pn**	**12**	**54**	**07.4**	**+1.4**
	1.1nm3μm239nm,1.2s									
FAKI	**Fak Fak**	**7.42**	**128**			**Pn**	**12**	**54**	**08.8**	**-1.9**
FAKI	**Fak Fak**	**7.42**	**128**	P		**Pn**	**12**	**54**	**12.2**	**+1.5**
FAKI	**Fak Fak**	**7.42**	**128**	P		**Pn**	**12**	**54**	**11.8**	**+1.1**
	0.5nm3μm2μm173nm,1.0s									
TTSI	**Tana Toraja**	**8.07**	**234**	P		**Pn**	**12**	**54**	**19.8**	**+0.3**
	3μm3μm303nm,1.1s									
BBSI	**Bau Bau**	**8.07**	**208**	P		**Pn**	**12**	**54**	**20.1**	**+0.5**
	2μm342nm,1.0s									
RKPI	**Ransiki, Papua**	**8.40**	**112**	P		**Pn**	**12**	**54**	**26.0**	**+1.9**
	3μm127nm,0.9s									
MYLDM	**Lahad Datu**	**8.61**	**294**			**Pn**	**12**	**54**	**28.1**	**+1.1**
MYLDM	**Lahad Datu**	**8.61**	**294**	P		**Pn**	**12**	**54**	**28.8**	**+1.9**
SPSI	**Sidrap Palu**	**8.67**	**230**	P		**Pn**	**12**	**54**	**28.1**	**+0.4**
	4μm159nm,0.8s									
BNSI	**Bone**	**8.71**	**226**	P		**Pn**	**12**	**54**	**28.7**	**+0.4**
	2μm201nm,1.2s									
BKSI	**Bulukumba**	**9.35**	**222**	P		**Pn**	**12**	**54**	**37.4**	**+0.3**
	2μm132nm,0.6s									
KAPI	**Kappang**	**9.39**	**225**	Pn		**Pn**	**12**	**54**	**36.9**	**-0.6**
	7.7nm,0.3s,baz=60,slow=2.5,SNR=36									
KAPI				Sn		**Sn**	**12**	**56**	**19.4**	**-2.4**
	baz=24,slow=20									
	69nm,0.6s									
KAPI	**Kappang**	**9.39**	**225**			**Pn**	**12**	**54**	**36.6**	**-1.0**
KAPI	**Kappang**	**9.39**	**225**	P		**Pn**	**12**	**54**	**38.6**	**+1.0**
KAPI	**Kappang**	**9.39**	**225**	S		**Sn**	**12**	**56**	**23.9**	**+2.1**
KAPI	**Kappang**	**9.39**	**225**	*i* P		**Pn**	**12**	**54**	**35.6**	**-2.0**
BSSI	**Bau Bau, Buton**	**9.75**	**217**	P		**Pn**	**12**	**54**	**43.0**	**+0.5**
BAKI	**Biak**	**10.12**	**106**	P		**Pn**	**12**	**54**	**50.4**	**+2.7**
MMRI	**Maumere**	**11.05**	**202**			**Pn**	**12**	**54**	**58.0**	**-2.3**
MMRI	**Maumere**	**11.05**	**202**	P		**Pn**	**12**	**55**	**02.2**	**+1.9**
EDFI	**Ende, Flores**	**11.37**	**204**	P		**Pn**	**12**	**55**	**05.4**	**+0.6**
	34nm,0.6s									
SOEI	**Soe**	**11.55**	**191**			**Pn**	**12**	**55**	**03.9**	**-3.4**
SOEI	**Soe**	**11.55**	**191**	P		**Pn**	**12**	**55**	**07.1**	**-0.2**
SOEI	**Soe**	**11.55**	**191**	P		**Pn**	**12**	**55**	**08.3**	**+1.0**
MTKI	**Muara Teweh, K**	**11.78**	**257**	P		**Pn**	**12**	**55**	**11.1**	**+0.7**
BATI	**Baumata**	**12.11**	**193**	Pn		**Pn**	**12**	**55**	**16.8**	**+1.9**
	4.1nm,0.3s,baz=306,slow=1.2,SNR=16									
BATI				LR		LR	13	00	58.3	
	comp=Z,375nm,20.3s,baz=6.5,slow=43									
BATI	**Baumata**	**12.11**	**193**	P		**Pn**	**12**	**55**	**17.2**	**+2.3**
	1μm123nm,0.8s									
BBKI	**Banjar Baru**	**12.62**	**246**	P		**Pn**	**12**	**55**	**22.4**	**+0.6**
	81nm,1.7s									
WSI	**Waingapu**	**12.80**	**208**	P		**Pn**	**12**	**55**	**25.8**	**+1.6**
	3μm145nm,1.0s									
SMPI	**Sarmi**	**12.85**	**106**	P		**Pn**	**12**	**55**	**26.5**	**+1.6**
	2μm101nm,1.3s									
WBSI	**Waikabubak, Su**	**13.23**	**212**	P		**Pn**	**12**	**55**	**31.3**	**+1.2**
	906nm76nm,0.8s									
TGY	**Tagaytay City**	**13.47**	**337**	LR		LR	13	00	52.1	
	comp=Z,1μm,21.9s,baz=182,slow=38									
PLAI	**Plampang**	**13.51**	**219**	P		**Pn**	**12**	**55**	**36.0**	**+2.0**
PLAI	**Plampang**	**13.51**	**219**	P		**Pn**	**12**	**55**	**35.3**	**+1.3**
TWSI	**Taliwang, Sumb**	**14.03**	**222**	P		**Pn**	**12**	**55**	**43.5**	**+2.5**
	2μm186nm,0.9s									
SBUM	**Sibu**	**14.18**	**273**			**Pn**	**12**	**55**	**44.3**	**+1.2**
SBUM	**Sibu**	**14.18**	**273**	P		**Pn**	**12**	**55**	**44.0**	**+0.9**
GENI	**Genyem**	**14.41**	**107**	P		**Pn**	**12**	**55**	**45.3**	**-0.9**
GENI	**Genyem**	**14.41**	**107**	P		**Pn**	**12**	**55**	**46.8**	**+0.6**
	3μm3μm199nm,1.0s									
AUDHS	**Darwin High Sc**	**14.70**	**163**	P		**Pn**	**12**	**55**	**48.6**	**-1.4**
DRS	**Darwin Rock St**	**14.71**	**162**	P		**Pn**	**12**	**55**	**50.5**	**+0.4**
SRBI	**Singaraja**	**14.77**	**229**	P		**Pn**	**12**	**55**	**53.2**	**+2.3**
	1μm97nm,1.1s									
JAY	**Jayapura**	**14.90**	**106**	Pn		**Pn**	**12**	**55**	**54.0**	**+1.3**
	1.7nm,0.3s,baz=301,slow=9.8,SNR=14									
JAY				LR		LR	13	01	13.7	
	comp=Z,1μm,20.3s,baz=307,slow=36									
JAY	**Jayapura**	**14.90**	**106**	P		**Pn**	**12**	**55**	**53.3**	**+0.6**
	73nm,0.8s									
KMMI	**Kalianget**	**15.13**	**235**	P		**P**	**12**	**55**	**59.6**	**-0.3**
	122nm,0.7s									
DNP	**Denpasar**	**15.16**	**227**	P		**P**	**12**	**56**	**00.4**	**+0.1**
MTN	**Manton Dam**	**15.17**	**162**	P		**Pn**	**12**	**55**	**54.3**	**-1.8**
	comp=Z,46nm,0.6s									
MTN	**Manton Dam**	**15.17**	**162**			**Pn**	**12**	**55**	**54.1**	**-2.1**
KDU	**Kakadu**	**15.49**	**157**	P		**Pn**	**12**	**56**	**01.5**	**+1.2**
	comp=Z,68nm,0.9s									
JAGI	**Jajag, Banyuwa**	**15.82**	**230**			**Pn**	**12**	**56**	**03.7**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.82**	**230**	P		**P**	**12**	**56**	**06.3**	**-1.4**
JAGI	**Jajag, Banyuwa**	**15.82**	**230**	P		**P**	**12**	**56**	**07.8**	**+0.1**
	comp=Z,2μmcomp=Z,155nm,1.1s									
BLJI	**Banyuglugur**	**15.82**	**234**	P		**P**	**12**	**56**	**07.9**	**+0.2**
	comp=Z,2μmcomp=Z,128nm,0.9s									
NGJI	**Ngawi**	**17.39**	**239**	P		**P**	**12**	**56**	**26.7**	**+1.6**
	comp=Z,3μmcomp=Z,72nm,1.0s									
KNRA	**Kununurra**	**17.40**	**172**	P		**Pn**	**12**	**56**	**24.1**	**-0.3**
	comp=Z,157nm,1.0s									
KNRA	**Kununurra**	**17.40**	**172**	P		**Pn**	**12**	**56**	**22.9**	**-1.4**
PCJI	**Pacitan**	**18.06**	**237**	P		**Pn**	**12**	**56**	**33.4**	**+0.9**
	comp=Z,3μmcomp=Z,126nm,0.7s									
TPI	**Tanjungpandan**	**19.24**	**257**	P		**Pn**	**12**	**56**	**47.8**	**+1.1**
KPJI	**Karang Pucung**	**19.58**	**243**	P		**P**	**12**	**56**	**48.1**	**-1.0**
	comp=Z,1μmcomp=Z,119nm,0.8s									
FITZ	**Fitzroy Crossi**	**19.66**	**182**	P		**P**	**12**	**56**	**47.5**	**-2.5**
FITZ	**Fitzroy Crossi**	**19.66**	**182**	P		**P**	**12**	**56**	**47.9**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=13,slow=7.9,SNR=25									
	comp=Z,12nm,0.6s									
FITZ	**Fitzroy Crossi**	**19.66**	**182**	P		**P**	**12**	**56**	**48.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**19.66**	**182**	P		**P**	**12**	**56**	**48.2**	**-1.7**
DLV	**Lat**	**20.48**	**301**	P		Pn	12	57	02.2	+0.6
PPBI	**Pangkal Pinang**	**20.60**	**259**	P		Pn	12	57	01.8	-1.1
BBJI	**Bungbulang**	**20.78**	**244**	P		Pn	12	57	04.1	-1.0
MANU	**Manus Island**	**21.30**	**100**	P		**P**	**12**	**57**	**07.0**	**-0.7**
TWGBT	**Beinan**	**21.64**	**347**	P		**P**	**12**	**57**	**08.2**	**-3.1**
GUMO	**Guam**	**21.78**	**56**	P		**P**	**12**	**57**	**12.1**	**-0.8**
	comp=Z,29nm,0.5s,baz=240,slow=20,SNR=8.8									
GUMO				LR		LR	13	05	58.7	
	comp=Z,263nm,18.5s,baz=230,slow=37									
	comp=Z,29nm,0.5s									
GUMO	**Guam**	**21.78**	**56**	P		**P**	**12**	**57**	**13.4**	**+0.5**
GUMO				IAmb		IAmb	12	57	20.6	
	comp=Z,97nm,0.7s									
GUMO	**Guam**	**21.78**	**56**	P		**P**	**12**	**57**	**13.4**	**+0.5**
GUMO				pmax		pmax				
	comp=Z,97nm,0.7s									
TPRI	**Tanjung Pinang**	**21.87**	**268**	P		**P**	**12**	**57**	**15.0**	**+1.1**
	comp=Z,37nm,0.9s									
DSRI	**Dabo**	**21.91**	**265**	P		**P**	**12**	**57**	**14.5**	**+0.2**
	comp=Z,41nm,1.0s									
DSRI				pP		**pP**	**12**	**57**	**23.9**	**-1.2**
	comp=Z,41nm,1.0s									
YULB	**Yu-li**	**22.15**	**348**	P		**P**	**12**	**57**	**12.9**	**-3.9**
YULB	**Yu-li**	**22.15**	**348**	P		**P**	**12**	**57**	**13.2**	**-3.6**
TPUB	**Ta-pu**	**22.21**	**346**	P		**P**	**12**	**57**	**14.0**	**-3.4**
TPUB				IAmb		IAmb	12	57	20.9	
	comp=Z,142nm,0.8s									
TPUB	**Ta-pu**	**22.21**	**346**	P		**P**	**12**	**57**	**16.3**	**-1.2**
SSLB	**Suanglung**	**22.61**	**347**	P		**P**	**12**	**57**	**20.2**	**-1.5**
BTDF	**Bukit Timah Da**	**22.61**	**270**	P		**P**	**12**	**57**	**24.6**	**+2.8**
WB0	**Warramunga Arr**	**22.71**	**160**	P		**P**	**12**	**57**	**20.4**	**-2.4**
WB0				IAmb		IAmb	12	57	26.8	
	comp=Z,111nm,0.7s									
COEN	**Coen**	**22.76**	**134**	P		**P**	**12**	**57**	**20.7**	**-2

comp=Z,60nm,0.8s
JNU Nakatsue 31.57 7 P **P** **12 58 42.5 -0.4**
JNU IAmb IAmb 12 58 44.2
comp=Z,72nm,0.9s
JNU Nakatsue 31.57 7 P **P** **12 58 42.9 -0.1**
CMAR Chiang Mai Arr 31.66 304 P **P** **12 58 44.0 0.0**
comp=Z,6.3nm,1.0s,baz=124,slow=7.7,SNR=17
CMAR PcP **PcP** **13 01 36.0 +0.7**
comp=Z,3.3nm,0.8s,baz=152,slow=1.8,SNR=8.9
CMAR LR LR 13 12 37.5
comp=Z,239nm,19.8s,baz=120,slow=38
comp=Z,6.3nm,1.0s
CMAR Chiang Mai Arr 31.66 304 P **P** **12 58 42.6 -1.4**
CHTO Chiang Mai 31.84 304 P **P** **12 58 44.9 -0.6**
CHTO Chiang Mai 31.84 304 P **P** **12 58 45.7 +0.2**
CHTO Chiang Mai 31.84 304 P **P** **12 58 44.9 -0.6**
CHTO pmax pmax
comp=Z,12nm,0.7s
MORW Morawa 32.13 197 P **P** **12 58 47.3 -0.7**
MORW Morawa 32.13 197 P **P** **12 58 47.5 -0.5**
FORT Forrest 32.31 177 P **P** **12 58 48.4 -1.0**
FORT IAmb IAmb 12 58 58.5
comp=Z,31nm,0.8s
INKA Innaminka 32.34 156 P **P** **12 58 48.4 -1.4**
KMI Kunming 32.62 318 P **P** **12 58 53.5 +0.9**
KMI PcP **PcP** **13 01 39.8 +1.7**
KMI S S 13 04 16.0 +10
KMI pmax pmax
comp=Z,22nm,1.2s
KMI LR LR
comp=Z,440nm,21.7s
KMI LR LR
comp=Z,520nm,21.7s
KMI LR LR
comp=Z,820nm,24.0s
JMN Monobe 32.65 12 P **P** **12 58 52.9 +0.4**
JMN IAmb IAmb 12 58 54.2
comp=Z,52nm,0.9s
JMN Monobe 32.65 12 P **P** **12 58 53.3 +0.8**
ENH Enshi 32.65 332 P **P** **12 58 53.7 +1.2**
ENH Enshi 32.65 332 P **P** **12 58 52.3 -0.3**
ENH sP **pwP** **12 59 06.5 -0.2**
QLP Quilpie 32.95 150 P **P** **12 56.9 +1.7**
BLDU Ballidu 33.41 195 P **P** **12 58 58.6 -0.5**
JHJ Hachijo jima 2 33.71 21 LR LR 13 14 01.5
comp=Z,160nm,19.3s,baz=208,slow=38
KLBR Kellerberrin 34.08 193 P **P** **12 59 04.6 -0.4**
PZH PanZhiHua 34.21 318 P **P** **12 59 05.5 -0.8**
PZH S **S** **13 04 28.1 -1.8**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH LR LR
comp=Z,360nm,21.6s
PZH LR LR
comp=Z,400nm,22.4s
PZH LR LR
comp=Z,660nm,24.9s
AUNRC North Rockhamp 34.22 138 P **P** **12 59 07.2 +1.0**
INU Inuyama 34.93 15 P **P** **12 59 10.4 -1.8**
INU Inuyama 34.93 15 P **P** **12 59 12.7 +0.5**
LYN LuoYang 35.20 340 P **P** **12 59 14.6 +0.1**
LYN pmax pmax
comp=Z,26nm,0.7s
LYN pmax pmax
comp=Z,330nm,5.6s
LYN LR LR
comp=Z,460nm,18.2s
LYN LR LR
comp=Z,330nm,18.9s
LYN LR LR
comp=Z,750nm,26.8s
HNR Honiara 35.20 109 LR LR 13 13 03.2
comp=Z,220nm,21.3s,baz=282,slow=35
JGF Kuroka 35.26 16 IAmb IAmb 12 59 17.5
comp=Z,31nm,0.9s
JGF Kuroka 35.26 16 P **P** **12 59 16.4 +1.3**
TIA Tai'an 35.42 347 P **P** **12 59 16.1 -0.3**
TIA pmax pmax
comp=Z,17nm,0.9s
BBOO Buckleboo 35.50 166 P **P** **12 59 16.0 -1.1**
BBOO IAmb IAmb 12 59 26.4
comp=Z,22nm,0.8s
BBOO Buckleboo 35.50 166 P **P** **12 59 17.0 -0.1**
TNCH TengChong 35.53 313 *eP* **P** **12 59 19.9 +2.2**
TNCH S **S** **13 04 52.5 +2.1**
TNCH SS **SnSn** **13 07 12.9 -1.0**
TNCH pmax pmax
comp=Z,29nm,0.4s
TNCH pmax pmax
comp=Z,140nm,4.1s
TNCH LR LR
comp=Z,320nm,18.1s
TNCH LR LR
comp=Z,230nm,20.6s
TNCH LR LR
comp=Z,510nm,21.8s
KSAR Wonju Array Be 35.62 2 P **P** **12 59 18.1 0.0**
KSAR Wonju Array Be 35.62 2 P **P** **12 59 18.1 0.0**
KSRS Korea Array 35.63 2 P **P** **12 59 17.9 -0.2**
comp=Z,12nm,0.8s,baz=178,slow=9.7,SNR=35
KSRS PcP **PcP** **13 01 46.5 +0.4**
comp=Z,3.2nm,0.9s,baz=178,slow=3.2,SNR=4.9
comp=Z,12nm,0.8s
KS19 Wonju Array Si 35.68 2 IAmb IAmb 12 59 55.2
comp=Z,68nm,1.4s
EIDS Eidsvold 35.98 140 P **P** **12 59 20.2 -1.2**
EIDS Eidsvold 35.98 140 P **P** **12 59 21.1 -0.3**
WHYH Whyalla 36.10 164 P **P** **12 59 22.3 0.0**
XAN Xi'an 36.10 335 ⇓P **P** **12 59 20.8 -1.6**
XAN pP pP 12 59 30.8 -3.7
XAN S **S** **13 04 59.8 +1.1**
XAN pmax pmax
comp=Z,37nm,1.1s
XAN pmax pmax
comp=Z,220nm,5.6s
CD2 Chengdu 36.12 326 P **P** **12 59 22.0 -0.6**
CD2 S **S** **13 05 01.8 +2.8**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 LR LR
comp=Z,590nm,18.1s
STKA Stephens Creek 36.35 158 P **P** **12 59 23.3 -1.1**
comp=Z,30nm,0.7s,baz=322,slow=8.4,SNR=18
comp=Z,30nm,0.7s
STKA Stephens Creek 36.35 158 P **P** **12 59 23.5 -1.0**
STKA Stephens Creek 36.35 158 *i* P **P** **12 59 23.2 -1.3**
MJAR Matsushiro Arr 36.38 16 P **P** **12 59 23.5 -1.1**
comp=Z,27nm,0.9s,baz=180,slow=9.8,SNR=42
MJAR PcP **PcP** **13 01 48.6 +0.2**
comp=Z,5.3nm,0.9s,baz=162,slow=2.6,SNR=5.9
MJAR LR LR 13 13 49.6
comp=Z,338nm,20.8s,baz=212,slow=35
comp=Z,27nm,0.9s
MJAR Matsushiro Arr 36.38 16 P **P** **12 59 23.5 -1.1**
MJAR IAmb IAmb 12 59 26.0
comp=Z,40nm,0.9s
MJAR Matsushiro Arr 36.38 16 P **P** **12 59 23.5 -1.1**
MJAR pmax pmax
comp=Z,40nm,0.9s
MAJO Matsushiro 36.38 16 P **P** **12 59 23.3 -1.3**
MAJO IAmb IAmb 12 59 30.5
comp=Z,55nm,0.8s
MAJO Matsushiro 36.38 16 P **P** **12 59 23.4 -1.3**
MAJO Matsushiro 36.38 16 *i* P **P** **12 59 23.6 -1.0**
MAJO pmax pmax
comp=Z,47nm,1.0s
MAJO Matsushiro 36.38 16 P **P** **12 59 23.9 -0.7**
MAJO Matsushiro 36.38 16 pP pP 12 59 33.8 -2.8
MJB9 Matsu-Tunnel 36.38 16 IAmb IAmb 12 59 31.5
comp=Z,54nm,0.8s
HTT Hallett 36.86 162 P **P** **12 59 30.4 +1.5**
HNS HongShan 37.15 345 ⇑P **P** **12 59 30.9 -0.2**
HNS pmax pmax
comp=Z,22nm,1.0s
HNS LR LR
comp=Z,400nm,22.2s
HNS LR LR
comp=Z,570nm,23.5s
AULRC Lightning Ridg 37.19 148 P **P** **12 59 33.5 +1.9**
DL2 Dalian 37.31 354 P **P** **12 59 31.3 -1.2**
DL2 S **S** **13 05 13.1 -3.7**
DL2 pmax pmax
comp=Z,94nm,1.2s
DL2 pmax pmax
comp=Z,480nm,6.9s
DL2 LR LR
comp=Z,360nm,13.2s
DL2 LR LR
comp=Z,810nm,16.2s
DL2 LR LR
comp=Z,680nm,17.8s
CMSA Cobar Meteorol 37.78 153 P **P** **12 59 38.2 +1.6**
JMM Marumori 38.37 18 P **P** **12 59 42.3 +0.8**
BJT Baijiatuan 39.28 348 P **P** **12 59 50.2 +1.1**
BJI Beijing 39.30 348 P **P** **12 59 49.1 -0.1**
BJI pmax pmax
comp=Z,12nm,0.8s
AUDCS Dubbo College 39.76 150 P **P** **12 59 55.2 +2.0**
SNY Shenyang 40.05 357 ⇑P **P** **12 59 55.1 -0.3**
SNY pmax pmax
comp=Z,37nm,1.6s
LZDM Lanzhou Array 40.08 331 P **P** **12 59 55.1 -1.1**
comp=Z,2.2nm,0.3s,baz=153,slow=13,SNR=4.5
LZDM PcP **PcP** **13 02 00.2 -0.1**
comp=Z,2.2nm,0.3s,baz=155,slow=4.8,SNR=3.6
comp=Z,2.2nm,0.3s
LZH Lanzhou 40.11 331 *eP* **P** **12 59 55.5 -0.8**
LZH sP pwP 13 00 10.6 0.0
LZH PcP **PcP** **13 02 01.4 +1.2**
LZH pmax pmax
comp=Z,63nm,1.2s
LZH pmax pmax
comp=Z,290nm,5.0s
LZH LR LR
comp=Z,360nm,16.1s
LZH LR LR
comp=Z,490nm,15.3s
LZH LR LR
comp=Z,590nm,17.5s
SHL Shillong 40.85 309 P **P** **13 00 01.4 -1.1**
SHL IAmb IAmb 13 00 10.0
comp=Z,32nm,0.7s
SHL Shillong 40.85 309 P **P** **13 00 01.4 -1.1**
SHL pmax pmax
comp=Z,32nm,0.7s
MSHR Mys Shultsa 40.95 5 *ceP* **P** **13 00 03.0 +0.2**
MSHR pmax pmax
comp=Z,37nm,1.0s
PSTR Posyet 40.99 5 *i* P **P** **13 00 02.8 -0.3**
JTM Tenmabayashi 41.14 17 P **P** **13 00 05.2 +0.8**
JTM Tenmabayashi 41.14 17 P **P** **13 00 05.4 +1.0**
BTO Baotou 41.49 341 *eP* **P** **13 00 08.3 +0.8**
BTO pmax pmax
comp=Z,11nm,0.6s
BTO pmax pmax
comp=Z,370nm,6.9s
BTO LR LR
comp=Z,940nm,18.7s
BTO LR LR
comp=Z,670nm,19.1s
BTO LR LR
comp=Z,1μm,21.6s
CN2 Changchun 41.95 359 *eP* **P** **13 00 15.3 +4.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
BRAT Ballarat 42.28 159 P **P** **13 00 14.2 +0.4**
USRK Ussuriysk Ar. 42.63 6 P **P** **13 00 16.6 0.0**
comp=Z,42nm,0.8s,baz=190,slow=7.7,SNR=37
comp=Z,42nm,0.8s
MDJ Mudanjiang 42.85 3 P **P** **13 00 19.3 +0.9**
MDJ pmax pmax
comp=Z,56nm,1.0s
MDJ Mudanjiang 42.85 3 P **P** **13 00 19.3 +0.9**
MDJ Mudanjiang 42.85 3 P **P** **13 00 19.4 +1.1**
MDJ pP **pP** **13 00 30.3 -0.4**
XLT XiLinHaoTe 43.03 349 *eP* **P** **13 00 20.3 +0.3**
XLT pP pP 13 00 31.1 -1.1
XLT pmax pmax
comp=Z,33nm,1.0s
XLT pmax pmax
comp=Z,230nm,6.7s
LSA Lhasa 43.56 313 P **P** **13 00 20.6 -4.3**
BNX BinXian 43.89 1 ⇓P **P** **13 00 26.4 -0.3**
BNX pmax pmax
comp=Z,20nm,1.0s
ASAJ Asahikawa 44.65 17 P **P** **13 00 33.6 +0.9**
comp=Z,46nm,0.8s,baz=215,slow=9.7,SNR=17
ASAJ LR LR 13 19 01.6
comp=Z,321nm,21.8s,baz=261,slow=36
comp=Z,46nm,0.8s
JKA Kamikawa-asahi 44.65 17 P **P** **13 00 32.5 -0.3**
JKA IAmb IAmb 13 00 34.7
comp=Z,58nm,0.9s
GTA Gaotai 44.69 330 P **P** **13 00 33.6 +0.2**
GTA sP sP 13 00 52.4 +1.3
GTA PcP **PcP** **13 02 16.5 +1.2**
GTA pmax pmax
comp=Z,16nm,0.9s
GTA LR LR
comp=Z,300nm,20.0s
GTA LR LR
comp=Z,270nm,18.5s
GTA LR LR
comp=Z,490nm,22.5s
GOMU GeErMu 45.10 323 P **P** **13 00 37.4 +0.4**
GOMU pP pP 13 00 47.1 -2.3
GOMU sP sP 13 00 51.1 -3.6
GOMU PcP **PcP** **13 02 17.8 +0.7**
GOMU S **S** **13 07 14.3 +1.0**
GOMU pmax pmax
comp=Z,13nm,1.4s
GOMU LR LR
comp=Z,110nm,12.4s
GOMU LR LR
comp=Z,180nm,12.4s
PALK Pallekele 45.86 278 LR LR 13 22 02.1
comp=Z,157nm,20.4s,baz=108,slow=39
PALK Pallekele 45.86 278 P **P** **13 00 41.4 -1.6**
PALK Pallekele 45.86 278 P **P** **13 00 41.4 -1.6**
PALK pmax pmax
comp=Z,21nm,1.1s
YATNC Mamie plateau, 46.03 123 P **P** **13 00 45.8 +1.6**
YSS Yuzhno-Sakhali 47.30 15 *eP* **P** **13 00 52.3 -1.3**
YSS pmax pmax
comp=Z,30nm,0.7s
HIA Hailar 47.76 354 P **P** **13 00 58.6 +1.4**
HILR Hailar Array B 48.04 354 P **P** **13 00 59.8 +0.4**
comp=Z,10nm,0.5s,baz=172,slow=12,SNR=17
HILR LR LR 13 22 00.9
comp=Z,160nm,21.8s,baz=105,slow=37
comp=Z,10nm,0.5s
HEH HeiHe 48.41 1 *eP* **P** **13 01 01.6 -0.6**
HEH pmax pmax
comp=Z,69nm,0.9s
ULN Ulaanbaatar 48.96 343 P **P** **13 01 06.2 -0.4**
ULN IAmb IAmb 13 01 10.1
comp=Z,18nm,0.8s
ULN Ulaanbaatar 48.96 343 ⇑P **P** **13 01 07.2 +0.5**
SONM Songino Array 49.13 342 P **P** **13 01 07.6 -0.4**
comp=Z,15nm,0.9s,baz=154,slow=8.8,SNR=27
SONM PcP **PcP** **13 02 31.1 +0.2**
comp=Z,7.2nm,0.9s,baz=161,slow=4.5,SNR=5.5
SONM LR LR 13 22 46.2
comp=Z,248nm,20.5s,baz=142,slow=37
comp=Z,15nm,0.9s
CIT Chita 51.31 350 *eP* **P** **13 01 24.8 +0.5**
CIT *e* 13 01 37.4
CIT *e* 13 02 36.2
CIT *e* 13 03 25.0
CIT pmax pmax
comp=Z,198nm,1.5s
ZEA Zeya 51.90 1 *eP* **P** **13 01 28.5 0.0**
ZEA pmax pmax
comp=Z,20nm,0.7s
ZAK Zakamensk 52.35 341 *eP* **P** **13 01 31.9 -0.2**
ZAK pmax pmax
comp=Z,12nm,1.7s
TLY Talaya 53.37 343 P **P** **13 01 39.3 -0.2**
TLY Talaya 53.37 343 *i* P **P** **13 01 39.0 -0.5**
TLY pmax pmax
comp=Z,8.0nm,1.0s
MOY Mondy 54.19 341 *eP* P 13 01 51.2 +5.6
WMQ Urumqi 54.22 326 *eP* **P** **13 01 50.0 +4.1**
WMQ pmax pmax
comp=Z,60nm,0.9s
WMQ LR LR
comp=Z,480nm,18.5s
WMQ LR LR
comp=Z,320nm,19.5s
MSVF Nonsavu 54.40 113 P **P** **13 01 49.3 +1.6**
BOD Bodaibo 56.84 352 *eP* **P** **13 02 04.3 -0.1**
BOD pmax pmax
comp=Z,55nm,1.6s
PETK Petropavlovsk- 57.45 22 P **P** **13 02 08.7 -0.1**
comp=Z,24nm,0.8s,baz=185,slow=4.8,SNR=34
PETK LR LR 13 26 54.5
comp=Z,60nm,20.2s,baz=214,slow=36
comp=Z,24nm,0.8s
PETK Petropavlovsk- 57.45 22 P **P** **13 02 08.8 0.0**
ZSN Zaisan 58.05 328 *eP* **P** **13 02 12.2 -1.0**
ZSN Zaisan 58.05 328 *eP* **P** **13 02 12.1 -1.0**
DGZ Jazzator, Alta 58.21 331 *i* P **P** **13 02 13.4 -1.0**
DGZ pmax pmax
comp=Z,11nm,1.0s
SHLS Shalkode 58.71 321 *eP* **P** **13 02 15.5 -2.6**
comp=Z,20nm,1.1s
SHLS Shalkode 58.71 321 *eP* **P** **13 02 15.4 -2.6**
SHLS pmax pmax
comp=Z,20nm,1.1s
MK31 Makanchi Array 59.05 326 *ceP* **P** **13 02 20.2 +0.1**
MKAR Makanchi Array 59.05 326 P **P** **13 02 18.9 -1.3**
comp=Z,21nm,0.7s,baz=119,slow=7.3,SNR=66
MKAR LR LR 13 28 22.2
comp=Z,466nm,21.6s,baz=114,slow=37
comp=Z,21nm,0.7s
TARG Taragay, Kyrgy 59.06 319 P **P** **13 02 20.2 -0.6**
TARG IAmb IAmb 13 02 28.3
comp=Z,24nm,0.7s
TARG Taragay, Kyrgy 59.06 319 P **P** **13 02 20.2 -0.6**
TARG pmax pmax
comp=Z,24nm,0.7s
MAKZ Makanchi 59.23 326 P **P** **13 02 20.9 -0.5**
SATY Saty 59.33 321 *eP* **P** **13 02 21.6 -0.7**
SATY Saty 59.33 321 *eP* **P** **13 02 21.5 -0.7**
KDJ Kajisay 59.66 319 P **P** **13 02 24.3 -0.3**
KDJ IAmb IAmb 13 02 29.9
comp=Z,30nm,0.8s
KDJ Kajisay 59.66 319 P **P** **13 02 24.3 -0.3**
KDJ pmax pmax
comp=Z,30nm,0.8s
MDOK Medeo 60.24 320 *eP* **P** **13 02 27.9 -0.7**
MDOK Medeo 60.24 320 *eP* **P** **13 02 27.9 -0.7**
TNSS Tian-Shan 60.25 320 *eP* **P** **13 02 27.9 -1.0**
TNSS Tian-Shan 60.25 320 *eP* **P** **13 02 27.9 -1.0**
YAK Yakutsk 60.26 2 P **P** **13 02 27.9 -0.2**
YAK Yakutsk 60.26 2 *eP* **P** **13 02 27.6 -0.5**
YAK *e**PP **pwP** **13 02 43.3 +0.2**
YAK *e* 13 03 10.5
YAK *e* 13 04 39.6
YAK *e*PPP PPP 13 06 03.9
YAK *e*S **S** **13 10 38.1 -0.5**
YAK *e**SS **sS** **13 11 03.2 +3.2**
YAK *e* 13 12 11.1
YAK *e*SS **SS** **13 14 35.1 -1.5**
YAK *e*SSS SSS 13 17 15.9
YAK pmax pmax
comp=Z,144nm,0.9s
YAK pmax pmax
comp=N,43nm,1.0s
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=Z,842nm,4.3s
YAK pmax pmax
comp=N,290nm,3.6s
YAK pmax pmax
comp=E,884nm,4.2s
YAK smax smax
comp=N,571nm,4.3s
YAK smax smax
comp=E,421nm,4.6s
YAK Yakutsk 60.26 2 P **P** **13 02 28.2 +0.1**
YAK Yakutsk 60.26 2 pP **pP** **13 02 38.3 -2.6**
YAK PP **PP** **13 04 41.6 +0.2**
TDK Taldyqorghan 60.32 323 *eP* **P** **13 02 28.4 -0.5**
comp=E,13nm,0.7s
TDK Taldyqorghan 60.32 323 *eP* **P** **13 02 28.4 -0.5**
TDK pmax pmax
comp=Z,13nm,0.7s
AAA Alma-Ata 60.35 320 *eP* **P** **13 02 28.7 -0.6**
AAA Alma-Ata 60.35 320 *eP* **P** **13 02 28.6 -0.6**
MA2 Magadan 60.77 14 P **P** **13 02 32.3 +0.7**
comp=Z,72nm,0.8s,baz=194,slow=8.3,SNR=11
MA2 LR LR 13 29 14.9
comp=Z,52nm,20.6s,baz=123,slow=36
comp=Z,72nm,0.8s
MA2 Magadan 60.77 14 P **P** **13 02 32.7 +1.0**
MA2 Magadan 60.77 14 P **P** **13 02 33.0 +1.4**
MA2 Magadan 60.77 14 *ceP* **P** **13 02 30.4 -1.2**
MA2 pmax pmax
comp=Z,71nm,0.9s
MA2 Magadan 60.77 14 P **P** **13 02 31.1 -0.5**
comp=Z,127nm,0.9s
TUWZ Tuamarina 60.78 141 P **P** **13 02 31.5 -0.6**
URZ Urewera 61.30 136 LR LR 13 30 20.9
comp=Z,115nm,19.5s,baz=299,slow=37
URZ Urewera 61.30 136 P **P** **13 02 37.7 +2.1**
RTZ Ruatahuna 61.37 136 **P** **13 02 36.0 -0.2**
RTZ IAmb IAmb 13 03 20.5
comp=Z,28nm,0.9s
RAO Raoul Island 61.43 125 LR LR 13 29 28.7
comp=Z,76nm,19.5s,baz=173,slow=36
AAK Ala-Archa 61.66 319 P **P** **13 02 37.4 -0.8**
AAK Ala-Archa 61.66 319 *ceP* **P** **13 02 37.8 -0.4**
AAK pmax pmax
comp=Z,8.0nm,1.0s
SGDS Sogindy 61.94 320 *eP* **P** **13 02 39.1 -0.8**
DRK Karamyk 62.18 315 P **P** **13 02 40.9 -1.1**
DRK IAmb IAmb 13 02 47.5
comp=Z,29nm,0.8s
DRK Karamyk 62.18 315 P **P** **13 02 40.9 -1.1**
DRK pmax pmax
comp=Z,29nm,0.8s
ZAA0 Zalesovo Array 62.26 334 P **P** **13 02 40.6 -1.2**
ZALV Zalesovo Beam 62.26 334 P **P** **13 02 40.5 -1.3**
comp=Z,4.8nm,0.5s,baz=129,slow=6.9,SNR=15
ZALV LR LR 13 31 24.7
comp=Z,138nm,20.3s,baz=112,slow=38
ZALV PKP2bc **P'P'bc** **13 31 54.0 -2.4**
comp=Z,3.1nm,1.1s,baz=323,slow=4.7,SNR=6.4
comp=Z,4.8nm,0.5s
ZALV Zalesovo Beam 62.26 334 P **P** **13 02 40.7 -1.1**
ZALV Zalesovo Beam 62.26 334 P **P** **13 02 40.7 -1.1**
KBL Kabul 62.51 308 P **P** **13 02 42.8 -1.4**
KBL IAmb IAmb 13 02 49.3
comp=Z,49nm,1.2s
KBL Kabul 62.51 308 P **P** **13 02 42.8 -1.4**
KBL pmax pmax
comp=Z,49nm,1.2s
GAR Garm 63.07 314 P **P** **13 02 46.8 -0.9**
KURBB Kurchatov Arra 63.28 328 P **P** **13 02 47.6 -1.1**
comp=Z,48nm,0.8s,baz=124,slow=6.3,SNR=122
KURBB PKPPKP **P'P'df** **13 31 46.6 -0.5**
comp=Z,0.8nm,0.9s,baz=296,slow=3.4,SNR=4.7
comp=Z,48nm,0.8s
KURK Kurchatov 63.29 328 **P** **13 02 47.8 -0.9**
KURK Kurchatov 63.29 328 *ceP* **P** **13 02 47.7 -0.9**
KURK pmax pmax
comp=Z,76nm,0.8s
KURK Kurchatov 63.29 328 P **P** **13 02 47.8 -0.9**
CHGR Chuyangaron 63.79 313 P **P** **13 02 51.3 -1.1**
CHGR Chuyangaron 63.79 313 P **P** **13 02 51.3 -1.1**
CHGR pmax pmax
comp=Z,43nm,0.9s
DZA Taraz 63.87 318 *eP* **P** **13 02 51.1 -1.7**
comp=Z,7.2nm,0.6s
DZA Taraz 63.87 318 *eP* **P** **13 02 51.9 -0.9**
DZA pmax pmax
comp=Z,7.0nm,0.6s
SEY Seymchan 64.10 13 P **P** **13 02 54.5 +0.6**
comp=Z,30nm,1.0s,baz=223,slow=5.3,SNR=17
SEY LR LR 13 32 16.5
comp=Z,44nm,20.4s,baz=181,slow=37
comp=Z,30nm,1.0s
SEY Seymchan 64.10 13 *ceP* **P** **13 02 54.8 +1.0**
SEY pmax pmax
comp=Z,25nm,0.9s
SHEM Shemya Is, Ala 64.40 30 LR LR 13 26 35.1
comp=Z,104nm,21.1s,baz=246,slow=32
IUG luzhnay 64.45 317 *eP* **P** **13 02 56.1 -0.7**
comp=Z,12nm,1.0s
IUG luzhnay 64.45 317 *eP* **P** **13 02 56.0 -0.7**
IUG pmax pmax
comp=Z,12nm,1.0s
CHM Chimkent 64.81 317 *eP* **P** **13 02 58.5 -0.5**
CHM Chimkent 64.81 317 *eP* **P** **13 02 58.4 -0.5**

BRLS	**Borolday**	64.93	318	*e*P		**P**		13 02 58.9	-0.9
	comp=Z,13nm,1.3s								
BRLS	**Borolday**	64.93	318	*e*P		**P**		13 02 58.8	-0.9
BRLS				pmax		pmax			
	comp=Z,13nm,1.3s								
BRZS	**Berezniki**	66.17	325	*e*P		**P**		13 03 07.2	-0.3
BRZS	**Berezniki**	66.17	325	*e*P		**P**		13 03 07.2	-0.3
CASY	**Casey**	68.75	187	P		**P**		13 03 23.0	-0.4
BVAR	**Borovoye Array**	68.85	328	P		**P**		13 03 23.6	-0.8
	comp=Z,20nm,0.8s,baz=125,slow=7.4,SNR=59								
	comp=Z,20nm,0.8s								
BORK	**Borovoye**	68.90	328	*ce*P		**P**		13 03 23.9	-0.8
BORK				pmax		pmax			
	comp=Z,28nm,1.0s								
BORK	**Borovoye**	68.90	328	P		**P**		13 03 24.0	-0.7
TIXI	**Tiksi**	69.89	1	LR		LR		13 35 21.3	
	comp=Z,88nm,21.1s,baz=197,slow=37								
TIXI	**Tiksi**	69.89	1	P		**P**		13 03 29.7	-0.7
TIXI				IAmb		IAmb		13 03 31.4	
	comp=Z,36nm,0.9s								
TIXI	**Tiksi**	69.89	1	*ce*P		**P**		13 03 29.4	-1.0
TIXI				pmax		pmax			
	comp=Z,77nm,1.7s								
ATKA	**Atka Island**	70.37	34	P		**P**		13 03 35.5	+1.7
BILL	**Bilibino**	71.61	15	*i* P		**P**		13 03 41.5	+0.5
BILL				pmax		pmax			
	comp=Z,6.0nm,1.1s								
NIKH	**Nikolski High**	73.68	35	P		**P**		13 03 52.8	-0.8
	baz=250								
SPIA	**Saint Paul Isl**	74.43	30	P		**P**		13 03 57.8	0.0
	baz=248								
AKTO	**Aktyubinsk**	75.05	322	LR		LR		13 40 31.5	
	comp=Z,183nm,20.9s,baz=57,slow=38								
UNV	**Unalaska Valle**	75.30	34	P		**P**		13 04 03.0	+0.1
	baz=252								
SVE	**Sverdlovsk**	75.53	329	*e*P		**P**		13 04 04.0	-0.2
SVE				pmax		pmax			
	comp=Z,64nm,1.0s								
RAR	**Rarotonga**	75.57	112	LR		LR		13 35 46.4	
	comp=Z,45nm,21.6s,baz=291,slow=34								
GAMB	**Gambell**	76.40	24	P		**P**		13 04 09.1	+0.1
	baz=245								
ARTI	**Arti**	76.57	328	LR		LR		13 39 09.8	
	comp=Z,114nm,21.4s,baz=106,slow=37								
ARTI	**Arti**	76.57	328			**P**		13 04 08.7	-1.4
ARTI				IAmb		IAmb		13 04 14.8	
	comp=Z,39nm,0.9s								
ARTI	**Arti**	76.57	328	*c i* P		**P**		13 04 09.0	-1.1
ARTI				S		**S**		13 13 53.1	+0.4
ARTI				SS		**SS**		13 18 46.4	-2.1
ARTI				pmax		pmax			
	comp=Z,28nm,0.9s								
CCD	**Concordia, Ant**	76.70	181	P		**P**		13 04 11.5	+0.5
FALS	**False Pass**	77.32	34	P		**P**		13 04 14.7	+0.3
	baz=254								
M11K	**Mekoryuk**	77.53	28	P		**P**		13 04 16.1	+0.7
	baz=251								
S12K	**Black Hills**	78.29	33	P		**P**		13 04 20.4	+0.6
	baz=256								
TNA	**Tin City**	78.60	23	P		**P**		13 04 22.4	+1.1
	baz=248								
K13K	**Kusilvak Mount**	78.74	27	IAmb		IAmb		13 04 25.2	
	comp=Z,43nm,0.9s								
K13K	**Kusilvak Mount**	78.74	27	P		**P**		13 04 23.1	+1.0
	baz=252								
M13K	**Dall Lake**	78.89	28	P		**P**		13 04 24.1	+1.2
	baz=253								
SDPT	**Sand Point**	79.08	34	P		**P**		13 04 25.5	+1.4
SDPT	**Sand Point**	79.08	34	P		**P**		13 04 24.7	+0.6
	baz=257								
F14K	**Arctic Creek**	79.19	23	P		**P**		13 04 25.5	+1.0
	baz=250								
ANM	**Nome**	79.27	24	P		**P**		13 04 25.4	+0.5
	baz=251								
CHNA	**Chernabura Isl**	79.46	34	P		**P**		13 04 27.1	+0.9
	baz=258								
L14K	**Kuka Creek**	79.46	28	P		**P**		13 04 27.0	+1.0
	baz=254								
J14K	**Nanvaranak Lak**	79.47	26	P		**P**		13 04 26.9	+0.8
	baz=253								
N14K	**Kuskokwak Cree**	79.56	29	P		**P**		13 04 27.4	+0.8
	baz=255								
O14K	**Tigyukauivet M**	79.59	30	P		**P**		13 04 28.0	+1.1
	baz=256								
M14K	**Bethel**	79.64	28	P		**P**		13 04 27.8	+0.7
	baz=255,SNR=5.6								
S14K	**Fog Glacier**	79.79	33	P		**P**		13 04 28.6	+0.4
	baz=258								
F15K	**North Star Dit**	79.93	23	P		**P**		13 04 29.1	+0.6
	baz=251								
G15K	**Niukluk**	79.95	24	P		**P**		13 04 29.4	+0.8
	baz=252								
L15K	**Ungalak Mounta**	80.11	27	P		**P**		13 04 30.7	+1.2
	baz=255								
M15K	**Kasigluk River**	80.23	29	P		**P**		13 04 30.9	+0.7
	baz=256								
K15K	**Wolf Creek Mou**	80.25	27	P		**P**		13 04 31.5	+1.2
	baz=255								
O15K	**Ungalikthiuk R**	80.29	30	P		**P**		13 04 31.5	+0.9
	baz=257								
N15K	**Kwethluk River**	80.39	29	IAmb		IAmb		13 04 59.8	
	comp=Z,71nm,1.4s								
N15K	**Kwethluk River**	80.39	29	P		**P**		13 04 31.9	+0.7
	baz=256								
AKT	**Akhty**	80.40	312	*e*P		**P**		13 04 33.4	+1.7
AKT				*e*				13 04 39.6	
AKT				pmax		pmax			
	comp=Z,37nm,1.4s								
C16K	**Lisburne Hills**	80.52	21	P		**P**		13 04 32.7	+1.1
	baz=250								
H16K	**Elim**	80.58	24	P		**P**		13 04 33.0	+1.0
	baz=254								
G16K	**Koyuk River**	80.74	24	P		**P**		13 04 33.8	+0.9
	baz=254								
J16K	**Anvik River**	80.91	26	P		**P**		13 04 35.2	+1.3
	baz=255								
RAYN	**Ar Rayn**	80.98	293	P		**P**		13 04 34.1	-1.0
RAYN	**Ar Rayn**	80.98	293	⇑P		**P**		13 04 34.8	-0.3
I17K	**Unalakleet**	81.03	25	P		**P**		13 04 35.8	+1.3
	baz=255								
L16K	**Owhat River**	81.04	28	IAmb		IAmb		13 04 37.0	
	comp=Z,40nm,1.1s								
L16K	**Owhat River**	81.04	28	P		**P**		13 04 35.7	+1.1
	baz=257								
N16K	**Nishlik Lake**	81.10	29	P		**P**		13 04 35.6	+0.6
	baz=258								
R16K	**Pilot Point**	81.12	32	P		**P**		13 04 35.7	+0.7
	baz=259								
M16K	**Timber Creek**	81.13	28	P		**P**		13 04 35.7	+0.6
	baz=257								
D17K	**Noatak River**	81.14	21	P		**P**		13 04 35.8	+0.8
	baz=252								
P16K	**Nushagak River**	81.19	30	P		**P**		13 04 36.0	+0.6
	baz=258								
O16K	**Kokwok River B**	81.25	30	P		**P**		13 04 36.3	+0.6
	baz=258								
RDOG	**Red Dog Mine**	81.31	21	IAmb		IAmb		13 04 39.1	
	comp=Z,68nm,1.3s								
RDOG	**Red Dog Mine**	81.31	21	P		**P**		13 04 36.6	+0.7
	baz=253								
C17K	**DeLong Mountai**	81.34	21	P		**P**		13 04 37.0	+0.9
	baz=252								
E17K	**Hotham Inlet**	81.43	22	P		**P**		13 04 37.6	+1.1
	baz=254,SNR=6.3								
VNDA	**Vanda**	81.44	173	P		**P**		13 04 35.6	-0.8
	comp=Z,11nm,0.9s,baz=316,slow=6.8,SNR=24								
VNDA				LR		LR		13 40 21.3	
	comp=Z,77nm,21.2s,baz=334,slow=35								
	comp=Z,11nm,0.9s								
VNDA	**Vanda**	81.44	173	P		**P**		13 04 36.1	-0.3
G17K	**Kiwalik Mounta**	81.46	24	P		**P**		13 04 37.4	+0.6
	baz=255								
F17K	**Baldwin Pennin**	81.47	23	P		**P**		13 04 37.5	+0.8
	baz=254								
J17K	**VABM Dome**	81.61	26	IAmb		IAmb		13 04 40.5	
	comp=Z,36nm,1.0s								
J17K	**VABM Dome**	81.61	26	P		**P**		13 04 38.1	+0.6
	baz=257								
H17K	**Granite Mounta**	81.62	24	P		**P**		13 04 39.0	+1.4
	baz=256								
L17K	**Donlin**	81.68	27	P		**P**		13 04 39.9	+1.9
	baz=258								
MAW	**Mawson**	81.72	200	P		**P**		13 04 37.6	-0.4
	comp=Z,5.0nm,0.8s,baz=77,slow=5.4,SNR=11								
MAW				LR		LR		13 39 11.9	
	comp=Z,48nm,19.7s,baz=45,slow=34								
	comp=Z,5.0nm,0.8s								

O17K	**Koliganek Bris**	81.78	30	P		**P**		13 04 39.7	+1.2
	baz=259								
KIRV	**Kirov**	81.79	329	*ce*P		**P**		13 04 38.7	+0.1
K17K	**Iditarod**	81.80	27	P		**P**		13 04 40.0	+1.4
	baz=258								
BELG	**Belogornoye**	81.82	323	*i* P		**P**		13 04 38.9	0.0
BELG				pmax		pmax			
	comp=Z,10.0nm,0.9s								
CHIR	**Chirikof Islan**	81.87	34	P		**P**		13 04 39.8	+0.7
	baz=261								
N17K	**Nushagak Hills**	81.88	29	P		**P**		13 04 39.9	+0.8
	baz=259								
M17K	**Holitna River**	81.93	28	IAmb		IAmb		13 04 41.8	
	comp=Z,66nm,1.4s								
M17K	**Holitna River**	81.93	28	P		**P**		13 04 40.4	+1.1
	baz=259								
E18K	**Tukpahlearik C**	81.98	22	P		**P**		13 04 40.4	+1.0
	baz=255,SNR=8.2								
P17K	**Kvichak River**	82.00	30	P		**P**		13 04 40.9	+1.2
	baz=260								
B18K	**Kokolik River**	82.08	20	P		**P**		13 04 41.0	+1.0
	baz=254								
C18K	**Utukok River**	82.09	21	IAmb		IAmb		13 04 42.3	
	comp=Z,24nm,0.8s								
C18K	**Utukok River**	82.09	21	P		**P**		13 04 41.0	+0.9
	baz=254								
F18K	**Selawik**	82.13	23	P		**P**		13 04 41.2	+1.0
	baz=256								
H18K	**Honhosa River**	82.31	24	P		**P**		13 04 42.2	+1.0
	baz=257								
G18K	**Tagagawik**	82.36	24	P		**P**		13 04 42.4	+0.9
	baz=257								
SBA	**Scott Base**	82.36	172	P		**P**		13 04 41.4	+0.2
SBA	**Scott Base**	82.36	172	P		**P**		13 04 41.4	+0.2
SBA				pmax		pmax			
	comp=Z,13nm,1.0s								
L18K	**Granite Mounta**	82.44	27	P		**P**		13 04 43.6	+1.6
	baz=259								
GNI	**Garni**	82.53	310	*i* P		**P**		13 04 42.6	-0.5
GNI				pmax		pmax			
	comp=Z,16nm,1.6s								
N18K	**Kilae Creek**	82.54	29	IAmb		IAmb		13 04 45.3	
	comp=Z,61nm,1.6s								
N18K	**Kilae Creek**	82.54	29	P		**P**		13 04 43.6	+1.1
	baz=260								
A19K	**Wainwright**	82.56	19	P		**P**		13 04 43.2	+0.8
	baz=254								
Q18K	**Katmai Hardscr**	82.64	31	P		**P**		13 04 43.3	0.0
	baz=261								
P18K	**Big Mountain,**	82.65	30	P		**P**		13 04 43.9	+0.7
	baz=261								
J18K	**Innoko River**	82.66	26	P		**P**		13 04 44.1	+1.0
	baz=259								
M18K	**Stony River**	82.71	28	P		**P**		13 04 44.3	+0.9
	baz=260								
O18K	**Koktuh Hills**	82.73	30	P		**P**		13 04 44.5	+1.0
	baz=261								
C19K	**Lookout Ridge**	82.77	20	P		**P**		13 04 44.8	+1.1
	baz=256								
SII	**Sitkinak Islan**	82.78	33	P		**P**		13 04 45.0	+1.1
	baz=262								
GCSA	**Galena City Sc**	82.84	25	P		**P**		13 04 44.9	+0.9
	baz=259								
F19K	**Shaleruckik Mo**	82.91	23	P		**P**		13 04 45.2	+1.0
	baz=258								
G19K	**Purcell Mounta**	83.03	23	P		**P**		13 04 46.2	+1.2
	baz=258								
D19K	**Kuna River**	83.15	21	P		**P**		13 04 46.9	+1.4
	baz=257,SNR=24								
H19K	**Roundabout Mou**	83.17	24	P		**P**		13 04 47.3	+1.6
	baz=259								
J19K	**Poorman**	83.24	26	P		**P**		13 04 47.5	+1.4
	baz=260								
N19K	**Bonanza Creek**	83.24	29	P		**P**		13 04 47.5	+1.2
	baz=261,SNR=18								
E19K	**Redstone River**	83.25	22	P		**P**		13 04 47.8	+1.8
	baz=258								
L19K	**White Mountain**	83.28	28	P		**P**		13 04 48.0	+1.6
	baz=261								
OHAK	**Old Harbor**	83.35	33	P		**P**		13 04 47.9	+1.2
	baz=263								
M19K	**Big River Lodg**	83.45	28	P		**P**		13 04 48.7	+1.5
	baz=261								
P19K	**Oil Pt**	83.69	30	P		**P**		13 04 50.0	+1.5
	baz=262								
D20K	**Etivluk River**	83.73	21	P		**P**		13 04 50.2	+1.6
	baz=258								
F20K	**Avaraart Lake**	83.74	23	P		**P**		13 04 50.2	+1.6
	baz=259								
L20K	**Farewell, AK**	83.77	27	IAmb		IAmb		13 04 51.5	
	comp=Z,40nm,1.0s								
L20K	**Farewell, AK**	83.77	27	P		**P**		13 04 50.4	+1.5
	baz=262								
E20K	**Nigu River**	83.80	21	P		**P**		13 04 50.6	+1.6
	baz=259								
KDAK	**Kodiak Island**	83.80	32	LR		LR		13 37 08.3	
	comp=Z,142nm,21.2s,baz=239,slow=32								
KDAK	**Kodiak Island**	83.80	32	P		**P**		13 04 49.3	+0.3
KDAK	**Kodiak Island**	83.80	32	*i* P		**P**		13 04 49.0	0.0
KDAK				pmax		pmax			
	comp=Z,51nm,1.1s								
KDAK	**Kodiak Island**	83.80	32	P		**P**		13 04 49.9	+0.9
	baz=263								
H20K	**Anatleneega Mo**	83.81	24	P		**P**		13 04 50.4	+1.4
	baz=260								
B20K	**Meade River**	83.81	20	P		**P**		13 04 50.4	+1.6
	baz=258								
K20K	**Telida**	83.82	26	P		**P**		13 04 50.8	+1.7
	baz=261								
I20K	**Naaghedeneel**	83.86	25	P		**P**		13 04 50.7	+1.5
	baz=261								
J20K	**Nowinta River**	83.91	26	IAmb		IAmb		13 04 52.2	
	comp=Z,47nm,1.2s								
J20K	**Nowinta River**	83.91	26	P		**P**		13 04 50.8	+1.4
	baz=261								
Q20K	**Shuyak Island**	84.00	31	P		**P**		13 04 50.8	+0.8
	baz=263								
M20K	**Styx River**	84.04	28	P		**P**		13 04 51.5	+1.2
	baz=262								
O20K	**Slope Mountain**	84.05	30	P		**P**		13 04 52.0	+1.6
	baz=263								
KBZ	**Khabaz**	84.14	314	P		**P**		13 04 50.8	-0.3
	comp=Z,7.6nm,1.0s,baz=100,slow=6.1,SNR=9.4								
	comp=Z,7.6nm,1.0s								
KBZ	**Khabaz**	84.14	314	*i* P		**P**		13 04 50.5	-0.6
KBZ				pmax		pmax			
	comp=Z,10.0nm,1.0s								
A21K	**Barrow**	84.26	18	P		**P**		13 04 52.4	+1.2
	baz=258								
KIV	**Kislovodsk**	84.30	314	⇑P		**P**		13 04 51.9	-0.2
KIV	**Kislovodsk**	84.30	314	*e*P		**P**		13 04 51.7	-0.4
KIV				pmax		pmax			
	comp=Z,21nm,1.0s								
KIV				MLR		MLR			
	comp=Z,62nm,20.0s								
SHA1	**Shidzhatmaz**	84.31	314	*i* P		**P**		13 04 51.7	-0.6
IMAR	**Indian Mountai**	84.35	24	P		**P**		13 04 51.8	+0.1
N20K	**Mount Spurr**	84.39	29	P		**P**		13 04 52.2	+0.1
	baz=263,SNR=7.0								
SPCR	**Spurr Chakacha**	84.39	29	P		**P**		13 04 52.0	-0.1
	baz=263,SNR=6.3								
SPU	**Mount Spurr**	84.46	29	IAmb		IAmb		13 04 54.1	
	comp=Z,28nm,1.1s								
C21K	**Knifeblade Rid**	84.47	21	P		**P**		13 04 53.3	+1.0
	baz=260								
HOM	**Homer**	84.50	30	P		**P**		13 04 52.8	+0.2
	baz=264								
G21K	**Allakaket**	84.52	23	P		**P**		13 04 53.7	+1.1
	baz=262								
PPLA	**Purkeypile**	84.60	27	P		**P**		13 04 53.7	+0.4
	baz=263								
B21K	**Ikpikpuk River**	84.61	20	P		**P**		13 04 54.4	+1.5
	baz=260								
F21K	**Alatna River**	84.64	23	P		**P**		13 04 54.1	+0.9
	baz=262								
E21K	**Killik River**	84.64	21	P		**P**		13 04 54.1	+1.0
	baz=261								
CHUM	**Lake Minchumin**	84.67	26	P		**P**		13 04 54.4	+1.1
	baz=263								
H21K	**Melozitna Rive**	84.69	24	P		**P**		13 04 54.4	+1.0
	baz=262								
A22K	**Sinclair Lake**	84.73	19	P		**P**		13 04 54.8	+1.3
	baz=260								
SKT	**Skwentna**	84.80	28	IAmb		IAmb		13 04 57.0	
	comp=Z,28nm,1.1s								
SKT	**Skwentna**	84.80	28	P		**P**		13 04 54.0	-0.1
	baz=264,SNR=8.4								
PPT	**Papeete**	84.81	108	LR		LR		13 40 55.6	

	comp=Z,48nm,19.9s,baz=287,slow=34								
BRSE	**Bradley Lake S**	84.96	30	P		**P**		13 04 55.3	+0.4
	baz=265								
I21K	**Tanana**	84.97	25	P		**P**		13 04 55.2	+0.4
	baz=263								
SUA	**Susitna One**	85.12	29	P		**P**		13 04 55.9	+0.1
	baz=264,SNR=6.4								
B22K	**Teshekpuk Lake**	85.13	20	P		**P**		13 04 56.5	+1.0
	baz=261								
D22K	**Ayikyak River**	85.17	21	P		**P**		13 04 57.1	+1.3
	baz=262								
F22K	**John River**	85.18	22	P		**P**		13 04 57.0	+1.2
	baz=263								
L22K	**Petersville**	85.21	28	IAmb		IAmb		13 04 59.3	
	comp=Z,18nm,0.7s								
BPAW	**Bear Paw Mtn.**	85.27	26	P		**P**		13 04 57.3	+0.9
	baz=264								
H22K	**Ishtalitna Cre**	85.30	24	P		**P**		13 04 57.2	+0.6
	baz=264								
VRH	**Novokhopyorsk**	85.35	321	*e*P		**P**		13 04 53.4	-3.6
VRH				pmax		pmax			
	comp=Z,50nm,0.9s								
G22K	**Bettles**	85.36	23	P		**P**		13 04 57.5	+0.7
	baz=263								
E22K	**Anaktuvuk Pass**	85.39	22	IAmb		IAmb		13 05 00.1	
	comp=Z,22nm,1.1s								
E22K	**Anaktuvuk Pass**	85.39	22	P		**P**		13 04 58.2	+1.2
	baz=263								
CUT	**Chulitna**	85.43	28	P		**P**		13 04 58.1	+0.9
	baz=265								
M22K	**Willow**	85.44	28	P		**P**		13 04 57.5	+0.3
	baz=265,SNR=6.8								
MLY	**Manley**	85.47	25	P		**P**		13 04 58.2	+0.8
	baz=264								
MARD	**Mardin**	85.50	307	IAmb		IAmb		13 05 04.3	
	comp=Z,20nm,0.7s								
TRF	**Thorofare Moun**	85.52	27	P		**P**		13 04 58.2	+0.4
	baz=265								
O22K	**Cooper Landing**	85.53	30	P		**P**		13 04 58.2	+0.5
	baz=266								
RC01	**Rabbit Creek A**	85.57	29	P		**P**		13 04 58.8	+0.9
	baz=265								
SEW	**Seward**	85.64	30	P		**P**		13 04 58.6	+0.4
	baz=266								
D23K	**Nanushuk River**	85.90	21	P		**P**		13 05 00.5	+1.0
	baz=264								
PMR	**Palmer**	85.90	29	IAmb		IAmb		13 05 01.2	
	comp=Z,27nm,1.0s								
PMR	**Palmer**	85.90	29	P		**P**		13 05 01.2	+1.7
PMR	**Palmer**	85.90	29	P		**P**		13 05 00.6	+1.0
	baz=266,SNR=5.3								
COLD	**Coldfoot**	85.91	23	IAmb		IAmb		13 05 02.8	
	comp=Z,24nm,0.9s								
COLD	**Coldfoot**	85.91	23	P		**P**		13 04 59.9	+0.5
	baz=265								
G23K	**Bananza Creek**	85.93	23	P		**P**		13 05 00.4	+0.7
	baz=265								
C23K	**Itkillik River**	86.02	20	P		**P**		13 05 00.2	+0.3
	baz=264								
H23K	**Yukon River**	86.04	24	P		**P**		13 05 00.0	-0.2
	baz=265								
I23K	**Minto, Yukon-K**	86.06	25	IAmb		IAmb		13 05 01.9	
	comp=Z,22nm,1.2s								
I23K	**Minto, Yukon-K**	86.06	25	P		**P**		13 05 00.1	-0.1
	baz=266								
MCK	**McKinley**	86.14	26	P		**P**		13 05 00.6	-0.1
	baz=266								
NEA2	**Nenana**	86.15	25	IAmb		IAmb		13 05 43.2	
	comp=Z,16nm,1.3s								
NEA2	**Nenana**	86.15	25	P		**P**		13 05 00.7	-0.1
	baz=266								
E23K	**Chandalar**	86.20	22	P		**P**		13 05 01.3	+0.2
	baz=265,SNR=25								
KNK	**Knik Glacier**	86.21	29	P		**P**		13 05 00.7	-0.4
	baz=266,SNR=7.0								
PWL	**Port Wells**	86.24	29	P		**P**		13 05 00.8	-0.5
	baz=267								
WAT1	**Susitna Watana**	86.26	27	P		**P**		13 05 01.6	+0.3
	baz=266								
TOLK	**Toolik Lake Re**	86.27	21	IAmb		IAmb		13 05 04.1	
	comp=Z,18nm,0.9s								
TOLK	**Toolik Lake Re**	86.27	21	P		**P**		13 05 01.9	+0.6
	baz=265,SNR=14								
SML	**Sawmill**	86.30	28	IAmb		IAmb		13 05 03.8	
	comp=Z,26nm,0.8s								
SML	**Sawmill**	86.30	28	P		**P**		13 05 01.7	+0.1
	baz=267								
SOC	**Sochi**	86.44	313	*e*P		**P**		13 05 00.8	-1.8
SOC				*e*				13 08 22.1	
SOC				*e*PPP		PPP		13 10 15.7	
SOC				*e*S		**SKSac**		13 15 23.9	-1.5
SOC				*e*SS		**SS**		13 21 12.4	-3.7
SOC				*e*SSS		SSS		13 24 41.6	
SOC				pmax		pmax			
	comp=Z,24nm,0.6s								
SOC				MLR		MLR			
	comp=Z,135nm,21.0s								
M23K	**Glacier View**	86.58	28	P		**P**		13 05 03.3	+0.4
	baz=267								
D24K	**Happy Valley**	86.58	21	P		**P**		13 05 03.7	+1.0
	baz=266								
WAT6	**Susitna Watana**	86.61	28	P		**P**		13 05 03.5	+0.3
	baz=267,SNR=6.6								
E24K	**Your Creek**	86.63	22	P		**P**		13 05 03.2	+0.1
	baz=266								
C24K	**Franklin Bluff**	86.67	20	P		**P**		13 05 03.7	+0.5
	baz=266								
COLA	**College**	86.69	25	*i* P		**P**		13 05 03.5	+0.2
COLA				pmax		pmax			
	comp=Z,4.0nm,0.9s								
COLA	**College**	86.69	25	P		**P**		13 05 03.8	+0.5
	baz=267								
H24K	**Noodor Dome**	86.73	24	P		**P**		13 05 04.4	+0.8
	baz=267								
SCM	**Sheep Creek Mo**	86.77	28	P		**P**		13 05 04.8	+0.9
	baz=268								
DHY	**Denali Highway**	86.81	27	P		**P**		13 05 04.6	+0.5
	baz=267								
F24K	**Squaw Lake**	86.82	23	P		**P**	

F25K Christian Rive 87.69 23 P P 13 05 08.9 +0.7
baz=269
E25K Arctic Village 87.72 22 IAmb IAmb 13 05 10.8
comp=Z,18nm,1.0s
E25K Arctic Village 87.72 22 P P 13 05 08.5 +0.1
baz=269,SNR=13
J25K Salcha River, 87.74 26 P P 13 05 08.2 -0.3
baz=269
HARP HAARP 87.81 28 P P 13 05 09.4 +0.6
baz=269
MOS Moscow 87.93 326 *e*P **P 13 05 06.3 -3.2**
RIDG Independent Ri 87.96 26 IAmb IAmb 13 05 10.8
comp=Z,17nm,1.0s
RIDG Independent Ri 87.96 26 P P 13 05 09.7 +0.1
baz=270,SNR=6.9
C26K Camden Bay 87.99 20 P P 13 05 09.7 +0.2
baz=269
BMRM Bremner River 88.06 29 P P 13 05 09.9 -0.3
baz=270
N25K Chitina, Valde 88.07 29 P P 13 05 09.9 -0.3
baz=270
ANN Anapa 88.09 315 *e*P **P 13 05 10.1 -0.4**
ANN *e**PP **PcP 13 05 15.5 +3.3**
ANN pmax pmax
comp=Z,77nm,1.1s
BMAR Burnt Mountain 88.09 23 P P 13 05 10.3 +0.2
KAIM Kayak Island 88.16 30 P P 13 05 10.5 0.0
baz=270
F26K Sheenjek River 88.26 22 P P 13 05 11.2 +0.3
baz=270
DOT Dot Lake 88.31 27 IAmb IAmb 13 05 12.0
comp=Z,15nm,1.2s
SCRK Sand Creek 88.34 26 P P 13 05 11.3 -0.2
baz=270
G26K Porcupine Rive 88.40 23 P P 13 05 11.5 -0.1
baz=270
C27K Jago River 88.41 21 IAmb IAmb 13 05 13.4
comp=Z,22nm,1.0s
C27K Jago River 88.41 21 P P 13 05 11.9 +0.4
baz=270
MENT Mentasta 88.47 27 IAmb IAmb 13 08 08.1
comp=Z,46nm,2.0s
MENT Mentasta 88.47 27 P P 13 05 13.8 +1.8
J26L Joseph Creek 88.52 26 IAmb IAmb 13 05 13.5
comp=Z,16nm,1.2s
J26L Joseph Creek 88.52 26 P P 13 05 11.9 -0.4
baz=271,SNR=7.8
OBN Obninsk 88.54 325 LR LR 13 46 26.2
comp=Z,134nm,21.6s,baz=50,slow=37
OBN Obninsk 88.54 325⇑ *e*P **P 13 05 11.1 -1.3**
OBN *e* 13 08 38.2
OBN pmax pmax
comp=Z,19nm,1.0s
OBN MLR MLR
comp=Z,177nm,21.0s
OBN Obninsk 88.54 325 P P 13 05 11.9 -0.5
comp=Z,44nm,1.4s
L26K Log Cabin Wild 88.64 27 P P 13 05 12.6 -0.2
baz=271
I26K Coal Creek Min 88.68 25 P P 13 05 13.1 +0.2
baz=271
ASF Jabal al Asfar 88.69 302 LR LR 13 49 05.4
comp=Z,88nm,21.6s,baz=108,slow=38
CRQE Cirque 88.81 29 P P 13 05 13.7 -0.1
baz=271
M26K Nabesna, AK 88.81 28 P P 13 05 13.6 -0.1
baz=271
KMBO Kilima Mbogo 89.17 269 P P 13 05 16.8 +0.2
comp=Z,6.3nm,0.7s,baz=74,slow=6.0,SNR=13
KMBO LR LR 13 43 12.7
comp=Z,100nm,19.6s,baz=99,slow=34
comp=Z,6.3nm,0.7s
K27K Chicken 89.18 26 P P 13 05 16.3 +1.0
K27K IAmb IAmb 13 05 18.0
comp=Z,22nm,1.0s
K27K Chicken 89.18 26 P P 13 05 16.1 +0.8
baz=272
E27K Coleen River 89.21 22 IAmb IAmb 13 05 17.1
comp=Z,16nm,1.0s
E27K Coleen River 89.21 22 P P 13 05 15.7 +0.3
baz=272
G27K Doyon Strip 89.25 23 P P 13 05 15.6 0.0
baz=272
I27K Kandik River 89.32 25 IAmb IAmb 13 05 17.7
comp=Z,16nm,1.0s
I27K Kandik River 89.32 25 P P 13 05 15.8 -0.1
baz=272,SNR=11
H27K Steamboat Moun 89.32 24 IAmb IAmb 13 05 18.2
comp=Z,19nm,1.6s
H27K Steamboat Moun 89.32 24 P P 13 05 15.9 -0.1
baz=273
L27K Beaver Creek, 89.33 27 P P 13 05 16.2 +0.2
baz=272
M27K Edge Creek, AK 89.34 28 P P 13 05 15.9 -0.3
baz=272
BCAR Beaver Creek A 89.35 27 P P 13 05 16.6 +0.4
D27M Malcolm River 89.39 21 IAmb IAmb 13 05 20.1
comp=Z,12nm,1.0s
D27M Malcolm River 89.39 21 P P 13 05 16.3 0.0
baz=273,SNR=11
MESA MESA 89.39 30 P P 13 05 16.4 -0.2
baz=272
APA Apatity 89.61 337⇓ *e*P **P 13 05 15.1 -2.1**
APA *e* 13 08 45.5
APA MLR MLR
comp=Z,713nm,3.7s
CTG Chitna Glacier 89.66 29 P P 13 05 17.8 +0.1
baz=273
BVCY Beaver Creek 89.81 28 P P 13 05 18.7 +0.4
baz=273
F28M Old Crow 89.89 22 IAmb IAmb 13 05 20.1
comp=Z,11nm,1.0s
F28M Old Crow 89.89 22 P P 13 05 19.1 +0.5
baz=274,SNR=8.7
MMAI Mount Meron Ar 89.93 303 P P 13 05 19.9 +0.3
comp=Z,9.5nm,0.8s,baz=100,slow=7.5,SNR=7.1
comp=Z,9.5nm,0.8s
E28M Babbage River 89.95 21 IAmb IAmb 13 05 20.4
comp=Z,16nm,1.1s
E28M Babbage River 89.95 21 P P 13 05 19.2 +0.4
baz=274
I28M Miner Creek 90.02 25 IAmb IAmb 13 05 20.9
comp=Z,15nm,1.1s
I28M Miner Creek 90.02 25 P P 13 05 19.2 -0.1
baz=274
YUK3 Moose Creek 90.03 28 P P 13 05 20.3 +0.7
baz=274
D28M Stokes Point 90.17 21 P P 13 05 20.1 +0.4
baz=275
O28M Mount Upton 90.23 29 P P 13 05 20.4 -0.2
baz=274
PINM Pinnacle 90.24 30 P P 13 05 20.0 -0.4
baz=274
DAWY Dawson 90.36 26 IAmb IAmb 13 05 22.2
comp=Z,15nm,1.1s
DAWY Dawson 90.36 26 P P 13 05 20.8 -0.1
baz=274
YUK8 Steele Glacier 90.40 29 P P 13 05 21.0 -0.4
baz=274
EIL Elat 90.43 300 LR LR 13 50 25.6
comp=Z,37nm,21.3s,baz=36,slow=38
E29M Blow River 90.57 22 P P 13 05 21.8 +0.1
baz=276
H29M Whitestone 90.60 24 P P 13 05 22.6 +0.7
baz=276
G29M Pine Creek 90.67 23 P P 13 05 22.7 +0.5
baz=276
PNL Peninsula 90.70 30 P P 13 05 22.5 0.0
baz=274
M29M Somme Creek 90.92 28 IAmb IAmb 13 05 32.3
comp=Z,12nm,1.1s
M29M Somme Creek 90.92 28 P P 13 05 24.0 +0.5
baz=275
ILGA Ilgaz 90.93 311 IAmb IAmb 13 05 30.0
comp=Z,15nm,0.9s
YUK4 Talbot Arm 90.93 29 P P 13 05 23.7 -0.1
baz=275
L29M L29M 91.01 27 P P 13 05 24.3 +0.4
baz=276
BR104 Keskin Array S 91.06 310 P P 13 05 24.2 -0.6
comp=Z,4.5nm,0.9s
BR131 Keskin Array S 91.06 310 P P 13 05 23.9 -0.9
BR131 Keskin Array S 91.06 310 P P 13 05 23.9 -0.9
BR131 pmax pmax
comp=Z,8.0nm,1.0s
BRTR Keskin Array B 91.06 310 P P 13 05 24.1 -0.7
comp=Z,4.7nm,0.9s,baz=110,slow=5.0,SNR=13
BRTR LR LR 13 54 08.1
comp=Z,26nm,18.1s,baz=80,slow=41
comp=Z,4.7nm,0.9s
BRTR Keskin Array B 91.06 310 P P 13 05 23.8 -1.0
O29M Mount Kennedy 91.06 30 P P 13 05 24.5 +0.2
baz=275
BR106 Keskin Array S 91.08 310 P P 13 05 24.2 -0.6
comp=Z,6.3nm,0.9s
BR105 Keskin Array S 91.08 310 P P 13 05 24.2 -0.7
comp=Z,6.7nm,0.9s
K29M Barlow Dome 91.20 26 P P 13 05 24.9 0.0
baz=276
EPYK Eagle Plains 91.25 24 IAmb IAmb 13 05 25.9
comp=Z,23nm,1.2s
EPYK Eagle Plains 91.25 24 P P 13 05 25.5 +0.5
baz=277
G30M tAoh Zraii Nji 91.37 23 P P 13 05 25.3 -0.1
baz=277
F30M Barrier River 91.45 22 P P 13 05 25.9 +0.1
F30M Barrier River 91.45 22 P P 13 05 25.5 -0.3
baz=278
I30M Mount Dempster 91.53 25 P P 13 05 26.4 0.0
I30M Mount Dempster 91.53 25 P P 13 05 26.9 +0.5
baz=277
HYT Haines Junctio 91.54 29 P P 13 05 26.3 -0.2
baz=276
P29M Windy Craggy 91.55 30 P P 13 05 26.6 +0.2
baz=276
QSPA South Pole Qui 91.59 180 P P 13 05 28.3 +1.7
comp=Z,2.0nm,0.8s,baz=328,slow=2.8,SNR=11
comp=Z,2.0nm,0.8s
QSPA South Pole Qui 91.59 180 P 13 05 29.2 +2.7
QSPA IAmb IAmb 13 05 31.1
comp=Z,24nm,1.8s
J30M Hart River 91.63 25 P P 13 05 27.3 +0.5
baz=277
N30M Aishikik Lake 91.67 29 P P 13 05 27.2 +0.3
baz=276
M30M Minto, Yukon 91.67 27 IAmb IAmb 13 05 29.0
comp=Z,16nm,1.1s
M30M Minto, Yukon 91.67 27 P P 13 05 27.2 +0.2
baz=277
MAYO Mayo, Yukon 91.95 26 P P 13 05 28.1 -0.1
baz=278
G31M Satah River 92.14 23 IAmb IAmb 13 05 29.7
comp=Z,13nm,0.9s
G31M Satah River 92.14 23 P P 13 05 28.6 -0.3
baz=279
INK Inuvik 92.19 21 IAmb IAmb 13 05 30.5
comp=Z,16nm,1.1s
INK Inuvik 92.19 21 P P 13 05 29.1 0.0
baz=280
O30N Mendenhall 92.23 29 P P 13 05 29.6 0.0
baz=277
ARCES ARCESS Array B 92.25 340 P P 13 05 28.8 -0.7
comp=Z,14nm,0.9s,baz=69,slow=6.6,SNR=16
ARCES PKKPbc **PKKPdf 13 22 43.7 -0.6**
comp=Z,5.3nm,1.1s,baz=248,slow=0.7,SNR=3.8
ARCES LR LR 13 53 24.8
comp=Z,59nm,19.1s,baz=94,slow=40
comp=Z,14nm,0.9s
ARCES ARCESS Array B 92.25 340 P P 13 05 28.2 -1.2
F31M Tsiigehtchic 92.25 22 IAmb IAmb 13 05 30.1
comp=Z,20nm,1.1s
F31M Tsiigehtchic 92.25 22 P P 13 05 29.2 -0.3
baz=280
PLBC Pleasant Camp 92.26 30 P P 13 05 29.4 -0.2
baz=277
N31M Braeburn, Yuko 92.29 28 IAmb IAmb 13 05 31.9
comp=Z,25nm,1.1s
N31M Braeburn, Yuko 92.29 28 P P 13 05 30.2 +0.4
baz=278
H31M Peel River 92.29 24 P P 13 05 30.6 +0.8
baz=279
SPITS Spitsbergen Ar 92.42 349 P P 13 05 29.5 -0.6
comp=Z,14nm,0.8s,baz=96,slow=6.8,SNR=6.2
SPITS LR LR 13 52 22.2
comp=Z,58nm,18.4s,baz=66,slow=39
comp=Z,14nm,0.8s
SPITS Spitsbergen Ar 92.42 349 P P 13 05 29.5 -0.6
SPITS pmax pmax
comp=Z,160nm,2.0s
M31M Drury Creek, Y 92.83 28 IAmb IAmb 13 05 33.8
comp=Z,9.3nm,1.1s
M31M Drury Creek, Y 92.83 28 P P 13 05 32.7 +0.4
baz=279
WHY Whitehorse 92.83 29 P P 13 05 32.9 +0.4
baz=278
KBS Kingsbay 92.95 350 *i* P P 13 05 25.7 -6.9
AK08 Malin Array Si 93.25 321 P P 13 05 34.0 -0.4
AK10 Malin Array Si 93.26 321 P P 13 05 34.0 -0.5
AKASG Malin Array Be 93.26 321 P P 13 05 33.8 -0.7
comp=Z,0.5nm,0.4s,baz=73,slow=4.0,SNR=7.8
AKASG LR LR 13 51 32.0
comp=Z,138nm,21.1s,baz=70,slow=38
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 93.26 321 P P 13 05 34.0 -0.5
AKASG Malin Array Be 93.26 321 P P 13 05 34.0 -0.5
AKASG pmax pmax
comp=Z,5.0nm,1.1s
AKBB Malin Array Si 93.26 321 IAmb IAmb 13 05 40.2
comp=Z,6.5nm,0.8s
AK01 Malin Array Si 93.27 321 P P 13 05 34.1 -0.4
KIEV Kiev 93.27 321 P P 13 05 33.8 -0.7
KIEV Kiev 93.27 321 P P 13 05 33.8 -0.7
KIEV pmax pmax
comp=Z,6.0nm,0.9s
KIEV Kiev 93.27 321 P P 13 05 34.1 -0.4
comp=Z,40nm,0.8s
AK12 Malin Array Si 93.31 321 P P 13 05 34.3 -0.4
AK14 Malin Array Si 93.34 321 P P 13 05 34.4 -0.5
R32K Eaglecrest 93.37 32 P P 13 05 35.2 +0.4
baz=279
S32K Killisnoo 93.46 32 P P 13 05 35.5 +0.3
baz=280
FINES FINESS Array B 93.47 332 P P 13 05 34.6 -0.6
comp=Z,3.1nm,0.7s,baz=63,slow=5.1,SNR=7.3
FINES LR LR 13 50 50.7
comp=Z,126nm,20.2s,baz=78,slow=38
comp=Z,3.1nm,0.7s
FINES FINESS Array B 93.47 332 P P 13 05 34.5 -0.7
P32M Atlin 93.58 30 P P 13 05 35.7 -0.2
baz=279
N32M Dot Lake 93.62 29 P P 13 05 36.7 +0.7
baz=280
P33M Teslin, Yukon 93.92 29 IAmb IAmb 13 05 39.0
comp=Z,14nm,1.2s
P33M Teslin, Yukon 93.92 29 P P 13 05 37.7 +0.3
baz=280
A36M Sachs Harbour 94.04 17 IAmb IAmb 13 05 38.3
comp=Z,6.8nm,0.9s
A36M Sachs Harbour 94.04 17 P P 13 05 37.6 +0.1
baz=288
LUBAR Lubar, Ukraine 94.29 320 P P 13 05 38.1 -1.1
Q32M Nakina River 94.42 31 P P 13 05 40.3 +0.4
baz=281
U33K Whale Pass 94.47 34 P P 13 05 40.0 +0.1
baz=280
TPGR Topolog 94.48 315⇑P **P 13 05 40.0 -0.2**
TIRR Tirgusor 94.53 315⇑P **P 13 05 40.7 +0.3**
TIRR Tirgusor 94.53 315⇑P **P 13 05 40.7 +0.3**
CRAG Craig 94.57 34 P P 13 05 40.6 +0.2
baz=280
WRAK Wrangell Islan 94.84 33 P P 13 05 41.4 -0.2
baz=280
R33M Jennings River 94.99 30 IAmb IAmb 13 05 44.0
comp=Z,10nm,1.1s
R33M Jennings River 94.99 30 P P 13 05 42.7 +0.2
baz=282
NOR Nord 95.09 355 *i* P **P 13 05 41.9 -0.5**
NOR IAmb IAmb 13 05 43.2
comp=Z,20nm,1.3s
S34M Telegraph Cree 95.21 32 P P 13 05 42.8 -0.4
baz=282
RNPP9 Sopachiv 95.25 322 P P 13 05 43.1 -0.5
C36M Paulatuk 95.25 20 IAmb IAmb 13 05 43.9
comp=Z,14nm,0.8s
C36M Paulatuk 95.25 20 P P 13 05 43.1 0.0
baz=289
RNPP5 Staryi Chortor 95.28 322 P P 13 05 43.2 -0.5
KMPD K-Podol'skiy 95.33 319 P P 13 05 43.3 -0.7
V35K Ketchikan 95.45 34 P P 13 05 43.9 -0.4
baz=281
TESR Tescani 95.50 317 P P 13 05 44.4 -0.5
comp=Z,15nm,0.6s
VRI Vrincioaia 95.53 316⇑P **P 13 05 45.4 +0.3**
VRI Vrincioaia 95.53 316⇑P **P 13 05 45.4 +0.3**
VRI Vrincioaia 95.53 316 P P 13 05 44.6 -0.5
comp=Z,11nm,1.7s
PLOR Plostina 95.59 316⇑P **P 13 05 46.2 +0.9**
PLOR Plostina 95.59 316⇑P **P 13 05 46.2 +0.9**
MBAR Mbarara 95.67 270 LR LR 13 45 20.6
comp=Z,68nm,21.3s,baz=69,slow=33
DLBC Dease Lake 95.67 31 LR LR 13 43 03.4
comp=Z,132nm,20.5s,baz=259,slow=32
DLBC Dease Lake 95.67 31 P P 13 05 45.9 +0.5
baz=282
ONER Baraj Valea Uz 95.70 317⇑P **P 13 05 45.9 +0.1**
T35M Bob Quinn 95.86 32 P P 13 05 46.5 +0.1
baz=282
WTLY Watson Lake, Y 95.91 29 P P 13 05 47.0 +0.5
baz=284
MLR Muntele Rosu 96.13 316 LR LR 13 55 50.9
comp=Z,122nm,20.4s,baz=76,slow=40
MLR Muntele Rosu 96.13 316⇑P **P 13 05 48.2 +0.2**
MLR Muntele Rosu 96.13 316⇑P **P 13 05 48.2 +0.2**
MLR Muntele Rosu 96.13 316 P P 13 05 47.3 -0.7
BURAR Bucovina Array 96.30 318 P P 13 05 48.2 -0.4
BURAR IAmb IAmb 13 05 55.4
comp=Z,12nm,0.8s
BURAR Bucovina Array 96.30 318⇓P **P 13 05 48.6 0.0**
BURAR Bucovina Array 96.30 318⇓P **P 13 05 48.6 0.0**
BUR08 Bucovina Ar. S 96.30 318 IAmb IAmb 13 05 54.8
comp=Z,9.1nm,0.8s
STNU Starunia 96.58 319 P P 13 05 49.3 -0.5
EZN Ezine 96.66 310⇓P **P 13 05 51.4 +1.1**
EZN Ezine 96.66 310⇓P **P 13 05 51.4 +1.1**
SHIU Shidnytsya 97.23 320 P P 13 05 52.2 -0.5
LIRD Liard River Hi 97.41 29 P Pdif 13 05 53.6 +0.3
baz=286
MARR Marisel-Cluj 97.87 317⇑P Pdif 13 05 57.7 +1.9
TOAD Toad River Com 97.99 30 P Pdif 13 05 56.2 +0.3
baz=287
DRGR 98.12 318⇓P Pdif 13 05 58.0 +1.1
DRGR 98.12 318⇓P Pdif 13 05 58.0 +1.1
BBB Bella Bella 98.14 37 LR LR 13 42 26.3
comp=Z,49nm,20.6s,baz=248,slow=31
KOTAN Kotaneelee Air 98.19 28 P Pdif 13 05 56.9 +0.1
baz=288
LSZ Lusaka 98.35 255 LR LR 13 45 05.2
comp=Z,133nm,21.8s,baz=104,slow=32
STHS Stebnicka Huta 98.55 320 *e*PDIFF Pdif 13 06 00.1 +1.5
DAG Danmarks Havn 99.23 352 *i* P **Pdif 13 06 00.0 -1.1**
DAG IAmb IAmb 13 06 01.2
comp=Z,8.9nm,0.9s
NVL N'lazarevskaya 99.50 198 *e*P **Pdif 13 06 06.4 +4.1**
NVL *e* 13 10 12.0
NVL *e*PPP PPP 13 12 16.0
NVL *e*S **SKSac 13 16 41.7 +5.1**
NVL *e*SS **SS 13 24 28.1 +6.6**
NVL *e*SSS SSS 13 28 17.3
NVL pmax pmax
comp=Z,7.0nm,0.6s
NVL smax smax
comp=N,410nm,22.6s
NVL MLR MLR
comp=Z,120nm,18.0s
HFS Hagfors 99.67 332 P Pdif 13 06 03.2 -0.1
comp=Z,1.0nm,0.5s,baz=46,slow=6.2,SNR=4.4
HFS LR LR 13 54 30.1
comp=Z,242nm,20.7s,baz=66,slow=37
comp=Z,1.0nm,0.5s
LANS Liptovska Anna 99.74 320 *e*P **Pdif 13 06 03.5 -0.5**
LANS Liptovska Anna 99.74 320 *e*PDIFF **Pdif 13 06 03.5 -0.5**
NOA NORSAR Array B 100.46 333 P Pdif 13 06 05.7 -1.2
comp=Z,0.2nm,0.4s,baz=68,slow=4.3,SNR=4.9
DBG Daneborg 101.49 351 *i* P **Pdif 13 06 10.9 -0.3**
DBG IAmb IAmb 13 06 11.8
comp=Z,21nm,1.5s
VNA3 Neumayer Olymp 105.09 193⇑P **Pdif 13 06 27.4 +0.1**
comp=Z,2.6nm,0.7s
NVAR Mina Array Bea 108.52 48 Pdiff **Pdif 13 06 43.7 +0.2**
comp=Z,0.5nm,0.7s,baz=285,slow=7.1,SNR=3.9
NVAR PKKPab **PKKPab 13 22 12.3 -0.4**
comp=Z,0.2nm,0.4s,baz=116,slow=3.4,SNR=5.3
PDAR Pinedale Array 113.11 42 PKiKP PKiKP 13 10 57.9 +0.2
comp=Z,0.3nm,0.6s,baz=266,slow=4.0,SNR=3.7
PDAR PKKPab **PKKPab 13 21 50.6 -1.7**
comp=Z,0.8nm,0.8s,baz=101,slow=8.0,SNR=6.8
RSSD Black Hills 116.01 38 PKiKP 13 11 02.9 -0.3
RSSD Black Hills 116.01 38 PKiKP PKiKP 13 11 02.9 -0.3
F33A 5 Mile Ranch, 119.53 33 PKiKP 13 11 09.9 +0.2
ECSD EROS Data Cent 120.66 35 PKPdf 13 11 11.8 -0.1
MNTX Cornudas Mount 120.80 51 PKiKP 13 11 13.4 +0.8
VHRN Van Horn 121.48 52 PKiKP 13 11 14.6 +0.4
HPIG 122.39 56 PKiKP 13 11 16.5 +0.4
SCHQ Schefferville 122.64 9 PKP PKPdf 13 11 14.3 -1.0
comp=Z,5.2nm,0.7s,baz=13,slow=6.5,SNR=4.6
TX31 Lajitas Ar. Si 123.11 53 PKiKP 13 11 17.4 +0.1
TXAR Lajitas Array 123.11 53 PKP PKPdf 13 11 17.1 0.0
comp=Z,2.2nm,0.8s,baz=221,slow=1.3,SNR=28
TORD Torodi Ar. Bea 123.21 287 PKKP 13 21 46.4
comp=Z,11nm,0.6s,baz=253,slow=1.6,SNR=4.1
SGCY Sterling City 123.98 49 PKiKP 13 11 19.5 +0.5
JFWS Jewell Farm 124.72 32 PKPdf 13 11 19.1 -0.5
JFWS Jewell Farm 124.72 32 PKiKP PKPdf 13 11 19.2 -0.5
L40A Anamosa 124.77 34 PKPdf 13 11 19.2 -0.6
P38A Dawn 125.00 37 PKiKP 13 11 20.7 0.0
DRIO Del Rio 125.48 52 PKiKP 13 11 22.2 +0.2
BRDY Brady 125.87 49 PKiKP 13 11 22.6 -0.1
U38A Gravette 126.39 41 PKiKP 13 11 23.5 0.0
CCM Cathedral Cave 127.38 37 PKiKP 13 11 25.3 -0.1
CCM Cathedral Cave 127.38 37 PKIKP PKiKP 13 11 25.3 -0.1
DBIC Dimbokro 130.64 280 PKP PKPdf 13 11 32.0 +0.3
comp=Z,8.3nm,1.0s,baz=108,slow=3.2,SNR=6.3
PLAL Pickwick Lake 131.31 38 PKPdf 13 11 32.5 0.0
PLCA Paso Flores 138.20 161 PKP PKiKP 13 11 46.6 -0.7
comp=Z,5.2nm,1.0s,baz=204,slow=3.8,SNR=5.7
BI02 San Fabin de 141.54 157 PKPdf 13 11 47.8 -3.7
TRQA Tornquist 142.99 169 PKPdf 13 11 50.8 -3.2
TRQA Tornquist 142.99 169 PKIKP PKPdf 13 11 50.8 -3.2
BO02 Sierra Bellavi 143.37 156 PKPbc 13 11 52.5 +0.6
BO01 Tunca 143.59 155 PKPbc 13 11 52.8 +0.3
MT01 Popeta 143.97 155 PKPbc 13 11 54.1 +0.4
HERN Volcan Telica 144.10 66 PKPab 13 11 53.1 -1.0
CNGN Cerro Negro 144.26 66 PKPbc 13 11 55.0 -0.1
PEL Peldehue 144.83 155 PKPdf 13 11 56.9 -0.5
PEL Peldehue 144.83 155 PKIKP PKPdf 13 11 56.9 -0.5
JTS Las Juntas de 146.62 68 PKPbc 13 12 02.4 0.0
JTS Las Juntas de 146.62 68 PKP2 PKPbc 13 12 02.4 0.0
CFA Coronel Fontan 147.18 157 PKPbc PKPbc 13 12 03.5 -0.1
comp=Z,11nm,0.8s,baz=236,slow=3.5,SNR=28
CO01 Juntas del Tor 147.79 152 PKiKP 13 12 06.6 -1.0
LCO Las Campanas 148.31 151 PKiKP 13 12 07.8 -0.9
LCO Las Campanas 148.31 151 PKP2 PKiKP 13 12 07.8 -0.9
AC02 El Transito 148.66 151 PKiKP 13 12 08.3 -0.4
PIRO Carate, Puerto 148.72 71 PKiKP 13 12 10.3 +0.8
AC04 Llanos de Chal 148.78 149 PKiKP 13 12 08.8 -0.5
CHIV Chivirico 148.96 45 PKiKP 13 12 09.2 -0.7
AC06 Mina Casimiro 149.84 149 PKiKP 13 12 11.6 0.0
GTBY Guantanamo Bay 149.90 43 PKiKP 13 12 12.0 +0.2
PLTB Pedras Altas 150.07 180 PKiKP 13 12 11.9 0.0
AC02 Maricunga 150.88 151 PKiKP 13 12 14.7 +0.3
PB14 IPOC Station P 152.00 146 PKPbc 13 12 16.1 0.0
GO02 Mina Guanaco 152.02 148 PKiKP 13 12 16.9 +0.4
DR12 Loma Pena Alta 154.43 37 PKPab 13 12 36.4 +1.0
CPUP Villa Florida 155.23 172 PKPbc PKPdf 13 12 23.1 +9.3
comp=Z,2.2nm,0.8s,baz=50,slow=2.1,SNR=9.3
RUSC La Rusia 159.15 69 PKPdf 13 12 19.5 -0.1
LPAZ La Paz 159.62 136 PKP PKPdf 13 12 20.5 +0.2
comp=Z,4.2nm,0.8s,baz=212,slow=4.9,SNR=16
LPAZ PKPab **PKPab 13 12 59.1 +0.5**
comp=Z,3.5nm,1.0s,baz=230,slow=5.2,SNR=4.1
LPAZ La Paz 159.62 136 PKPdf 13 12 21.4 +1.2
SDV Santo Domingo 160.05 58 PKPdf 13 12 20.4 +0.1
AQDB Aquidauana 161.20 174 PKPdf 13 12 21.7 +0.6
SIV San Ignacio 163.99 153 PKP PKPdf 13 12 24.8 +0.8
comp=Z,2.8nm,0.8s,baz=204,slow=2.7,SNR=13
SIV PKPab **PKPab 13 13 17.0 +0.2**
comp=Z,5.2nm,0.8s,baz=214,slow=3.6,SNR=9.5

*IDC **15** 13:03:53.6±2.0, 1°.85N×126°.73E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=190.4km s-min=23.4km az=66.0*
*DJA **15** 13:03:57.2±0.4, 2°N±4′×12°7E±°, h10km, M3.0/5, MLv3.0/5*
ISC 15 13:03:58.0±1.8, **2°.0N**±0°.2×**127°.3E**±0°.4, **h35**km, **n6**, **n0**°**74/6**, **mb3.4/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**176**	P	**Pn**	**13 04 19.1**	**-0.1**

SGSI	**Sangihe**	**2.40**	**313**	S		**Sn**	**13 05 03.0**	**0.0**
WRA	**Warramunga Arr**	**22.92**	**163**	P		**P**	**13 08 58.5**	**-0.6**
	0.5nm,0.4s,baz=340,slow=11,SNR=7.4							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**26.35**	**166**	P		**P**	**13 09 32.0**	**+1.0**
	0.2nm,0.5s,baz=354,slow=16,SNR=6.0							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**59.25**	**326**	P		**P**	**13 13 55.6**	**-0.4**
	0.5nm,0.8s,baz=132,slow=6.3,SNR=1.8							
	0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**63.45**	**328**	P		**P**	**13 14 24.6**	**+0.2**
	0.3nm,0.7s,baz=129,slow=5.9,SNR=2.0							
	0.3nm,0.7s							

*ISN **15** 13:07:10.2±0.4,34.˚11N×45.˚66E,h8km±11km, ML2.6*
*TEH **15** 13:07:10.6,34.˚10N×45.˚69E,h10km±134km*
ISC 15 13:07:10.9±1.2,34.˚13N±0.˚03×45.˚69E±0.˚03,h4km±13km, n11,σ0°69/19,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLG1	**Gilan-e-Gharb**	**0.18**	**95**	Pg		**Pg**	**13 07 14.4**	**-0.1**
GLG1				Sg		**Sg**	**13 07 17.9**	**+0.9**
IGHG	**Ghaleghazi**	**0.76**	**74**	Pg		**Pb**	**13 07 26.0**	**-0.8**
IDHR	**Dehrash**	**0.81**	**45**	Pg		**Pg**	**13 07 26.7**	**+0.2**
IBDR	**Badra**	**1.04**	**169**	*e*Pg		**Pg**	**13 07 30.0**	**-0.7**
IBDR				*e*Sg		**Sg**	**13 07 44.0**	**-0.2**
IBDR					AML	AML	13 07 48.3	
	comp=N,106nm,0.2s							
IBDR					AML	AML	13 07 48.6	
	comp=E,141nm,0.5s							
IBDR	**Badra**	**1.04**	**169**	*e*Pg		**Pg**	**13 07 30.0**	**-0.7**
IBDR				*e*Sg		**Sg**	**13 07 44.2**	**0.0**
IBDR					AML	AML	13 07 48.3	
	comp=N,119nm,0.3s							
IBDR					AML	AML	13 07 48.5	
	comp=E,129nm,0.3s							
KCHF	**Cheshme Sefid,**	**1.13**	**82**	Pg		**Pb**	**13 07 32.8**	**-0.3**
BHD	**Baghdad**	**1.39**	**232**	*e*Pn		**Pb**	**13 07 37.0**	**-0.3**
BHD				*e*Sn		**Sg**	**13 07 56.0**	**+0.6**
BHD	**Baghdad**	**1.39**	**232**	*e*Pn		**Pb**	**13 07 37.0**	**-0.3**
BHD				*e*Sn		**Sg**	**13 07 57.0**	**+1.6**
IKRK	**Kirkuk**	**1.68**	**319**	*e*Pn		**Pb**	**13 07 42.0**	**-0.5**
IKRK				*e*Sn		**Sg**	**13 08 04.5**	**-0.5**
IKRK					AML	AML	13 08 08.2	
	comp=E,113nm,0.4s							
IKRK					AML	AML	13 08 08.3	
	comp=N,83nm,0.5s							
IKRK	**Kirkuk**	**1.68**	**319**	*e*Pn		**Pb**	**13 07 42.0**	**-0.5**
IKRK				*e*Sn		**Sg**	**13 08 05.0**	**0.0**
IKRK					AML	AML	13 08 08.1	
	comp=E,110nm,0.5s							
IKRK					AML	AML	13 08 08.2	
	comp=N,91nm,0.6s							
RAFI	**Al-Rafai**	**2.43**	**171**	*e*Pn		**Pn**	**13 07 52.0**	**+0.7**
RAFI				*e*Sn		**Sn**	**13 08 21.5**	**0.0**

*IDC **15** 13:16:12.0±2.1,0.˚96N×125.˚16E,h0km,mb3.3/4, mbtmp3.3/4,Error ellipse: s-maj=304.5km s-min=23.1km az=65.0*
*DJA **15** 13:16:13.9±1.2,2.˚N±5.˚×12.˚6E±.˚,h12km±11km,M3.2/7, MLv3.2/7*
ISC 15 13:16:15.7±1.2,1.˚5N±0.˚2×126.˚3E±0.˚3,h35km,n7,σ1°22/7, mb3.5/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**123**	P		**Pn**	**13 16 37.8**	**-0.1**
SGSI	**Sangihe**	**2.28**	**342**	P		**Pn**	**13 16 50.3**	**-0.6**
SGSI				S		**Sn**	**13 17 17.4**	**-0.4**
KMSI	**Cibinong**	**2.45**	**248**	P		Pn	13 17 02.6	+9.4
WRA	**Warramunga Arr**	**22.75**	**160**	P		**P**	**13 21 14.1**	**-1.0**
	0.6nm,0.5s,baz=335,slow=9.6,SNR=6.6							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**26.11**	**164**	P		**P**	**13 21 46.0**	**-0.5**
	0.2nm,0.5s,baz=344,slow=9.6,SNR=7.1							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**59.11**	**326**	P		**P**	**13 26 12.9**	**+0.1**
	0.3nm,0.5s,baz=121,slow=7.8,SNR=3.1							
	0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**63.35**	**328**	P		**P**	**13 26 43.4**	**+2.0**
	0.2nm,0.4s,baz=132,slow=5.6,SNR=2.6							
	0.2nm,0.4s							

*IDC **15** 13:45:56.1±1.7,1.˚63N×126.˚62E,h0km,mb3.4/4, mbtmp3.5/5,ML3.3/1,Error ellipse: s-maj=121.7km s-min=21.7km az=69.0*
*DJA **15** 13:46:00.0±0.3,2.˚N±3.˚×12.˚6E±.˚,h10km,M3.6/7,MLv3.6/7*
ISC 15 13:46:02.0±1.0,1.˚49N±0.˚07×126.˚50E±0.˚08,h35km,n8, σ0°74/10,mb3.6/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**129**	P		**Pn**	**13 46 21.9**	**+0.6**
SGSI	**Sangihe**	**2.39**	**336**	P		**Pn**	**13 46 39.4**	**+0.7**
SGSI				S		**Sn**	**13 47 07.3**	**+0.5**
KMSI	**Cibinong**	**2.67**	**250**	P		**Pn**	**13 46 43.0**	**+0.4**
KMSI				S		**Sn**	**13 47 14.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.48**	**182**	P		**P**	**13 50 26.4**	**+0.4**
	0.1nm,0.3s,baz=4.4,slow=14,SNR=1.7							
	1.3nm,0.8s							
WRA	**Warramunga Arr**	**22.64**	**161**	P		**P**	**13 51 00.6**	**+0.3**
	1.5nm,0.6s,baz=340,slow=11,SNR=14							
	1.5nm,0.6s							
ASAR	**Alice Springs**	**26.02**	**164**	P		**P**	**13 51 31.3**	**-0.7**
	0.2nm,0.6s,baz=338,slow=7.7,SNR=8.1							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**59.27**	**326**	P		**P**	**13 55 59.3**	**-0.9**
	0.3nm,0.4s,baz=133,slow=7.4,SNR=1.2							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**63.50**	**328**	P		**P**	**13 56 27.7**	**-0.9**
	0.2nm,0.5s,baz=131,slow=4.9,SNR=2.6							
	0.2nm,0.5s							

*NEIC **15** 13:47:26.0±0.3,19.˚25N±0.˚06×155.˚44W±0.˚07, h34km±15km,Error ellipse: s-maj=12.5km s-min=3.4km az=134.0*
HVO 15 13:47:26.7±0.7,19.˚22N±0.˚06×155.˚4W±0.˚1,h33km±8km, ML2.4/37,ML2.5/40(NEIC),Error ellipse: s-maj=15.8km s-min=6.5km az=115.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HTC	**Hot Caves**	**0.02**	**39**			Pb	13 47 32.0	-0.3
HLP	**Hilina Pali**	**0.12**	**53**			Pb	13 47 32.3	-0.4
HLP						Sb	13 47 36.5	-0.3
HLP	**Hilina Pali**	**0.12**	**53**	IAML			13 47 36.6	
	comp=E,736nm,0.3s							
HLP				IAML			13 47 38.6	
	comp=N,858nm,0.2s							
AIN	**Ainahou**	**0.15**	**342**			Pn	13 47 32.6	+0.3
AIN	**Ainahou**	**0.15**	**342**			Sb	13 47 36.9	-0.6
HPO	**Honuapo**	**0.19**	**226**			Pn	13 47 32.6	-0.5
KHU	**Kahuku**	**0.20**	**276**			Pn	13 47 32.7	-0.5
KHU						Sn	13 47 37.0	+0.4
SDHHI	**Sand Hill**	**0.20**	**33**			Pn	13 47 32.7	-0.5
SDHHI						Sn	13 47 37.0	+0.5
WRMHI	**West Rim**	**0.21**	**30**			Pn	13 47 32.7	-0.7
WRMHI						Sn	13 47 37.3	+0.3
RIM	**Rim**	**0.21**	**37**			Pn	13 47 32.8	-0.7
KKO	**Keanakako'i**	**0.22**	**38**			Pn	13 47 32.9	-0.7
KKO						Sn	13 47 37.3	0.0
UWE	**Uwekahuna**	**0.22**	**29**			Pn	13 47 32.9	-0.8
UWE						Sn	13 47 37.4	-0.1
UWE	**Uwekahuna**	**0.22**	**29**	IAML			13 47 38.3	
	comp=N,765nm,0.3s							
UWE				IAML			13 47 39.9	
	comp=E,650nm,0.3s							
OBL	**Observatory Le**	**0.23**	**32**			Pn	13 47 32.8	-0.9
OBL						Sn	13 47 37.3	-0.3
BYL	**Byron's Ledge**	**0.23**	**37**			Pb	13 47 32.9	-0.9
BYL						Sn	13 47 37.4	-0.4
BYL	**Byron's Ledge**	**0.23**	**37**	IAML			13 47 37.7	
	comp=N,283nm,0.5s							
BYL				IAML			13 47 41.8	
	comp=E,282nm,0.7s							
UWB	**Uwekahuna Bluf**	**0.23**	**32**			Pb	13 47 32.8	-1.0
PUH	**Pauahi**	**0.23**	**51**			Pb	13 47 32.9	-0.9
PUH						Sn	13 47 37.4	-0.4
PUH	**Pauahi**	**0.23**	**51**	IAML			13 47 37.6	
	comp=N,383nm,0.3s							
PUH				IAML			13 47 37.7	
	comp=E,583nm,0.2s							
SBLHI	**Steaming Bluff**	**0.24**	**33**			Pb	13 47 32.9	-1.0
HATHI	**Halema'uma'u T**	**0.24**	**35**			Pb	13 47 32.9	-1.0
HATHI	**Halema'uma'u T**	**0.24**	**35**	IAML			13 47 37.9	
	comp=E,353nm,0.3s							
HATHI				IAML			13 47 41.6	
	comp=N,278nm,0.6s							
RSD	**Rainshed**	**0.27**	**27**			Pb	13 47 33.2	-1.1
RSD	**Rainshed**	**0.27**	**27**	IAML			13 47 41.2	
	comp=N,235nm,0.8s							
RSD				IAML			13 47 45.0	
	comp=E,211nm,1.1s							
MLH	**Mauna Loa**	**0.27**	**5**			Pb	13 47 33.6	-0.8
MLH				IAML			13 47 38.7	
	comp=E,567nm,0.3s							
MLH				IAML			13 47 40.6	
	comp=N,529nm,0.1s							
MLH	**Mauna Loa**	**0.27**	**5**			Sn	13 47 38.5	-0.8
KNHH	**Kane Nui o Ham**	**0.27**	**56**			Pb	13 47 33.4	-0.9
STCH	**Steam Cracks**	**0.31**	**59**			Pb	13 47 33.7	-1.0
STCH	**Steam Cracks**	**0.31**	**59**	IAML			13 47 39.2	
	comp=N,349nm,0.2s							
STCH				IAML			13 47 39.3	
	comp=E,12nm,0.1s							
MWH	**Mokuaweoweo**	**0.31**	**326**			Pb	13 47 33.9	-1.3
MWH						Sb	13 47 39.2	-1.7
MWH	**Mokuaweoweo**	**0.31**	**326**	IAML			13 47 39.7	
	comp=E,786nm,0.3s							
MWH				IAML			13 47 40.6	
	comp=N,547nm,0.2s							
NPOC	**North of Pu'u**	**0.33**	**59**			Pb	13 47 33.9	-1.0
NPOC						Sb	13 47 39.2	-1.3
JCUZ	**Jacuzzi**	**0.33**	**61**			Pb	13 47 33.9	-1.0
JCUZ						Sb	13 47 39.4	-1.2
HMH	**Humu'ula Sheep**	**0.38**	**349**			Pb	13 47 35.0	-0.9
HMH	**Humu'ula Sheep**	**0.38**	**349**	IAML			13 47 41.2	
	comp=N,210nm,0.9s							
HMH				IAML			13 47 44.9	
	comp=E,197nm,0.8s							
ALEP	**Alea Permanent**	**0.39**	**325**			Pb	13 47 34.5	-1.5
JOKA	**Jonika Flow**	**0.43**	**61**			Pb	13 47 35.1	-1.3
JOKA	**Jonika Flow**	**0.43**	**61**	IAML			13 47 42.0	
	comp=N,238nm,0.5s							
JOKA				IAML			13 47 44.3	
	comp=E,167nm,0.9s							
HPAH	**Hawaii Prepara**	**0.85**	**341**			Pn	13 47 40.2	-2.3
HPAH						Sn	13 47 49.7	-4.0
HPAH	**Hawaii Prepara**	**0.85**	**341**	IAML			13 47 50.3	
	comp=N,162nm,0.2s							
HPAH				IAML			13 47 50.4	
	comp=E,187nm,0.1s							
MHA	**Mahukona**	**1.06**	**334**			Pn	13 47 43.4	-2.0

RSNC 15 13:49:08.3±0.0,10.˚N±1.˚×7.˚3W±.˚,h119km±2km,M2.5, mb3.5,ML2.3,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRJC	**Cerrejon, Guaj**	**0.78**	**17**	P		Pn	13 49 28.3	-0.1
CRJC				S		Sn	13 49 43.2	-0.3
ARGC	**Ariguani, Magd**	**1.18**	**250**	P		Pn	13 49 32.6	+0.5
ARGC				S		Sn	13 49 50.3	+0.1
SMRC	**Santa Marta, M**	**1.40**	**309**	P		Pn	13 49 34.1	-0.4
SMRC				S		Sn	13 49 53.7	-0.8
URIC	**Uribia, Colomb**	**1.80**	**38**	P		Pn	13 49 39.0	-0.3
URIC				S		Sn	13 50 02.4	-0.5
OCAC	**Ocana**	**2.03**	**186**	P		Pn	13 49 41.9	-0.3
OCAC				S		Sn	13 50 06.3	-1.9
SJCC	**San Jacinto, C**	**2.06**	**260**	P		Pn	13 49 42.0	-0.5
SJCC				S		Sn	13 50 07.6	-1.1
SDV	**Santo Domingo**	**2.81**	**119**	P		Pn	13 49 52.4	+0.1
SDV				S		Sn	13 50 25.0	-1.1
PAMC	**Pamplona, Colo**	**2.94**	**172**	P		Pn	13 49 54.2	-0.1
PAMC				S		Sn	13 50 28.8	-0.8
BRJC	**Barrancabermej**	**3.33**	**191**	P		Pn	13 49 58.9	-0.1
BRJC				S		Sn	13 50 38.0	-0.2
UREC	**San Jos de Ur**	**3.46**	**224**	P		Pn	13 49 59.6	-1.0
UREC				S		Sn	13 50 36.7	-4.4
BARC	**Barichara**	**3.66**	**181**	P		Pn	13 50 03.3	-0.2
BARC				S		Sn	13 50 45.9	-0.2
PTBC	**PUERTO BERRIO,**	**3.94**	**200**	P		Pn	13 50 06.9	-0.1
PTBC				S		Sn	13 50 50.8	-1.7
RUSC	**La Rusia**	**4.35**	**180**	P		Pn	13 50 11.4	-1.6
CAPC	**Capurgana**	**4.48**	**249**	P		Pn	13 50 11.4	-2.9
CAPC				S		Sn	13 50 57.5	-8.0
HELC	**Santa Helena**	**4.70**	**211**	P		Pn	13 50 17.1	-0.5
NORC	**Norcasia**	**4.99**	**200**	P		Pn	13 50 20.3	-0.9
GUY2C	**Guyana, Caldas**	**5.49**	**204**	P		Pn	13 50 27.0	-1.3

*DJA **15** 13:56:50.3±0.6,1.˚N±10.˚×12.˚6E±.˚,h10km,M3.0/5, MLv3.0/5*
IDC 15 13:55:59.9±2.1,1.˚07N×126.˚17E,h0km,mb3.2/4, mbtmp3.3/4,Error ellipse: s-maj=232.1km s-min=24.0km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.37**	**159**	P		P	14 00 59.0	-0.9
	0.2nm,0.7s,baz=337,slow=10,SNR=0.7							
	0.2nm,0.7s							
ASAR	**Alice Springs**	**25.71**	**163**	P		P	14 01 32.9	+0.7
	0.1nm,0.3s,baz=344,slow=8.6,SNR=1.1							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**59.43**	**326**	P		P	14 06 05.8	+1.3
	0.6nm,0.6s,baz=111,slow=7.8,SNR=6.6							
	0.6nm,0.6s							
KURBB	**Kurchatov Arra**	**63.68**	**328**	P		P	14 06 31.2	-1.8
	0.4nm,0.7s,baz=114,slow=6.2,SNR=3.3							
	0.4nm,0.7s							

*NEIC **15** 14:07:16.7±1.1,17.˚11S±0.˚05×72.˚35W±0.˚09,h47km±13km, mb4.3/8,Error ellipse: s-maj=14.6km s-min=2.3km az=58.0*
ISC 15 14:07:14.4±1.0,17.˚08S±0.˚07×72.˚29W±0.˚09,h35km,n36, σ2°09/40,mb4.3/4,3C,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AP01	**Chacalluta**	**2.25**	**125**			**Pn**	**14 07 51.9**	**+2.7**
AP01	**Chacalluta**	**2.25**	**125**	*e*P		**Pn**	**14 07 51.3**	**+2.2**
AP01				*i* S		**Sn**	**14 08 16.2**	**+0.4**
AP01					IAML		14 08 24.8	
	comp=E,11μm,0.3s							
PB12	**IPOC Station P**	**2.41**	**130**			**Pn**	**14 07 53.1**	**+1.7**
PB12	**IPOC Station P**	**2.41**	**130**	↑*i*P		**Pn**	**14 07 53.1**	**+1.7**
PB12					IAML		14 08 27.8	
	comp=N,2μm,0.3s							
PB18	**Visviri**	**2.73**	**101**			**Pn**	**14 07 59.5**	**+3.4**
PB16	**IPOC Station P**	**2.93**	**116**			**Pn**	**14 08 00.9**	**+2.0**
PB16	**IPOC Station P**	**2.93**	**116**	↑*i*P		**Pn**	**14 08 00.6**	**+1.7**
PB16				*i* S		**Sn**	**14 08 32.1**	**-1.1**
PB16					IAML		14 08 44.2	
	comp=N,1μm,0.1s							
PB11	**IPOC Station P**	**3.65**	**137**			**Pn**	**14 08 10.3**	**+1.7**
PB11	**IPOC Station P**	**3.65**	**137**	↑*i*P		**Pn**	**14 08 10.2**	**+1.6**
PB11				*i* S		**Sn**	**14 08 48.3**	**-2.3**
PB11					IAML		14 09 08.5	
	comp=N,532nm,0.6s							
GO01	**Chusmiza**	**3.91**	**132**			**Pn**	**14 08 14.6**	**+2.2**
TA01	**Diego Aracena**	**4.00**	**150**			**Pn**	**14 08 15.5**	**+2.3**
TA01	**Diego Aracena**	**4.00**	**150**	*e*P		**Pn**	**14 08 15.5**	**+2.3**
TA01				*i* S		**Sn**	**14 08 55.0**	**-3.8**
LPAZ	**La Paz**	**4.06**	**79**			**Pn**	**14 08 17.7**	**+3.1**
PATCX	**Punta Patache**	**4.23**	**152**			**Pn**	**14 08 18.7**	**+2.2**
PB08	**IPOC Station P**	**4.25**	**136**			**Pn**	**14 08 19.1**	**+2.1**
PB01	**IPOC Station P**	**4.75**	**147**			**Pn**	**14 08 25.3**	**+1.7**
PB02	**IPOC Station P**	**4.78**	**152**	Pn		**Pn**	**14 08 26.7**	**+2.6**
PB07	**IPOC Station P**	**5.15**	**154**	Pn		**Pn**	**14 08 31.6**	**+2.5**
PB03	**IPOC Station P**	**5.49**	**155**	Pn		**Pn**	**14 08 36.2**	**+2.3**
PB09	**IPOC Station P**	**5.50**	**149**			**Pn**	**14 08 36.9**	**+2.9**
PB05	**IPOC Station P**	**6.07**	**161**	Pn		**Pn**	**14 08 43.7**	**+2.0**
PB06	**IPOC Station P**	**6.15**	**156**	Pn		**Pn**	**14 08 44.7**	**+1.8**
PB10	**IPOC Station P**	**6.60**	**166**	Pn		**Pn**	**14 08 51.2**	**+2.2**
PB14	**IPOC Station P**	**7.71**	**167**			**Pn**	**14 09 06.2**	**+1.8**
GO02	**Mina Guanaco**	**8.43**	**163**	Pn		**Pn**	**14 09 17.0**	**+2.7**
AC01	**Pan de Azucar**	**9.16**	**170**	Pn		**Pn**	**14 09 25.7**	**+1.7**
VILB	**Vilhena**	**12.38**	**72**			**Pn**	**14 10 07.2**	**-1.0**
PTLB	**Pontes e Lacer**	**12.73**	**85**			**Pn**	**14 10 11.8**	**-1.2**
MACA	**Manacapuru-AM**	**17.92**	**41**			**Pn**	**14 11 19.7**	**-1.3**
MACA				IAmb		IAmb	14 11 22.2	
	comp=Z,25nm,0.7s							
PLTB	**Pedras Altas**	**22.38**	**134**	P		**P**	**14 12 10.7**	**+1.1**
PLTB				IAmb		IAmb	14 12 49.3	
	comp=Z,20nm,1.4s							
BOAV	**Boa Vista**	**22.57**	**32**	P		**P**	**14 12 10.8**	**-0.9**
RUSC	**La Rusia**	**22.84**	**358**	P		**P**	**14 12 14.9**	**-0.2**
RUSC				IAmb		IAmb	14 12 21.9	
	comp=Z,7.8nm,0.6s							
LL06	**Loncomilla**	**25.08**	**182**	P		**P**	**14 12 34.4**	**-1.1**
SDV	**Santo Domingo**	**25.85**	**4**	P		**P**	**14 12 43.3**	**+0.2**
SDV				IAmb		IAmb	14 12 47.6	
	comp=Z,7.6nm,0.9s							
BAUV	**El Baul**	**26.20**	**10**	P		**P**	**14 12 45.3**	**-0.6**
SNAA	**Sanae**	**67.47**	**161**	P		**P**	**14 18 07.6**	**+1.2**
SNAA				IAmb		IAmb	14 18 17.7	
	comp=Z,4.1nm,1.4s							

*IDC **15** 13:13:58.4±1.2,2.˚15S×134.˚42E,h0km,mb3.9/8, mbtmp3.9/10,ML3.7/2,Error ellipse: s-maj=63.9km s-min=18.8km az=82.0*
*DJA **15** 14:14:01.9±0.8,2.˚S±4.˚×13.˚4E±.˚,h10km±7km,M4.1/11, mb4.1/4,MLv4.0/11*
ISC 15 14:14:03.8±0.8,2.˚14S±0.˚06×134.˚27E±0.˚08,h35km,n18, σ1°04/18,mb3.9/8,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RKPI	**Ransiki, Papua**	**0.64**	**351**	P		**Pn**	**14 14 15.1**	**-1.2**
KMPI	**Kaimana, Papua**	**1.61**	**201**	P		**Pn**	**14 14 30.3**	**+0.6**
BAKI	**Biak**	**2.06**	**63**	P		**Pn**	**14 14 36.6**	**+0.6**
FAKI	**Fak Fak**	**2.16**	**249**	P		**Pn**	**14 14 36.5**	**-0.8**
SWI	**Sorong**	**3.27**	**293**	P		**Pn**	**14 14 54.0**	**+1.5**
SMPI	**Sarmi**	**4.44**	**88**	P		**Pn**	**14 15 10.1**	**+1.5**
BNDI	**Bandanaira**	**4.96**	**241**	P		**Pn**	**14 15 15.4**	**-0.4**
NLAI	**Namlea**	**7.25**	**261**	P		**Pn**	**14 15 47.8**	**+0.6**
	0.1nm27nm,0.6s							
WRA	**Warramunga Arr**	**17.69**	**180**	P		**Pn**	**14 18 06.6**	**-0.9**
	0.3nm,0.3s,baz=0.3,slow=12,SNR=19							
	2.3nm,0.7s							
FITZ	**Fitzroy Crossi**	**17.98**	**208**	P		**Pn**	**14 18 09.0**	**-2.0**
	0.2nm,0.3s,baz=35,slow=13,SNR=8.0							
	3.3nm,0.8s							
ASAR	**Alice Springs**	**21.40**	**181**	P		**P**	**14 18 48.3**	**-0.4**
	4.3nm,0.9s,baz=8.0,slow=11,SNR=33							
	4.3nm,0.9s							
SONM	**Songino Array**	**55.41**	**338**	P		**P**	**14 23 35.3**	**+0.5**
	0.5nm,0.5s,baz=152,slow=9.8,SNR=1.6							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**66.68**	**324**	P		**P**	**14 24 52.4**	**+1.2**
	2.0nm,0.6s,baz=108,slow=8.6,SNR=21							
	2.0nm,0.6s							
ZALV	**Zalesovo Beam**	**69.27**	**331**	P		**P**	**14 25 07.4**	**+0.2**
	0.8nm,0.5s,baz=131,slow=6.3,SNR=3.9							
	0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**70.75**	**326**	P		**P**	**14 25 16.9**	**+0.6**
	0.8nm,0.5s,baz=121,slow=5.1,SNR=10.0							
	0.8nm,0.5s							
BVAR	**Borovoye Array**	**76.34**	**326**	P		**P**	**14 25 49.6**	**+0.3**
	0.7nm,0.5s,baz=110,slow=6.5,SNR=4.9							
	0.7nm,0.5s							
ILAR	**Eielson Array**	**87.17**	**25**	P		**P**	**14 26 45.2**	**-0.8**
	0.2nm,0.7s,baz=273,slow=6.1,SNR=2.1							
	0.2nm,0.7s							
QSPA	**South Pole Qui**	**87.80**	**180**	P		**P**	**14 26 49.8**	**+0.6**
	0.2nm,0.4s,baz=17,slow=1.6,SNR=6.6							
	0.2nm,0.4s							

*IDC **15** 14:16:07.9±1.9,1.˚60N×126.˚29E,h0km,mb3.4/4, mbtmp3.4/4,MS3.0/1,Error ellipse: s-maj=184.6km s-min=23.0km az=66.0*
*DJA **15** 14:16:11.6±1.4,2.˚N±4.˚×12.˚7E±.˚,h22km±13km,M3.2/5, MLv3.2/5*
ISC 15 14:16:12.6±1.3,1.˚7N±0.˚4×126.˚6E±0.˚4,h35km,n6,σ1°71/6, mb3.5/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.21**	**137**	P		**Pn**	**14 16 32.6**	**-0.4**
TNTI				S		**Sn**	**14 16 48.6**	**+0.4**
WRA	**Warramunga Arr**	**22.80**	**161**	P		**P**	**14 21 11.6**	**-0.8**
	0.8nm,0.5s,baz=339,slow=11,SNR=9.7							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**26.18**	**165**	P		**P**	**14 21 45.2**	**+1.2**
	0.4nm,0.8s,baz=344,slow=8.8,SNR=7.1							
	0.4nm,0.8s							
ASAJ	**Asahikawa**	**44.60**	**16**	LR		LR	14 47 06.7	
	comp=Z,15nm,18.0s,baz=134,slow=42							
MKAR	**Makanchi Array**	**59.14**	**326**	P		**P**	**14 26 08.1**	**-1.8**
	0.5nm,0.8s,baz=112,slow=7.3,SNR=1.1							
	0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**63.37**	**328**	P		**P**	**14 26 40.2**	**+1.8**
	0.3nm,0.5s,baz=126,slow=5.7,SNR=1.6							
	0.3nm,0.5s							

*DJA **15** 14:23:51.8±0.2,2.˚N±3.˚×12.˚6E±.˚,h10km,M4.4/9,mB5.0/3, mb4.6/6,MLv4.3/9,Mw(mB)4.4/3*
*NEIC **15** 14:23:53.6±1.9,1.˚65N±0.˚07×126.˚53E±0.˚07,h35km±

WRAB					IAmb	IAmb	14 28 58.2		
	comp=Z,14nm,0.8s								
WRAB	**Tennant Creek**	**22.80**	**161**		P	**P**	**14 28 52.0**	**-0.8**	
WRA	**Warramunga Arr**	**22.80**	**161**		P	**P**	**14 28 52.0**	**-0.9**	
	comp=Z,9.7nm,0.5s,baz=339,slow=9.4,SNR=80								
WRA					PcP	**PcP**	**14 32 43.6**	**-0.1**	
	comp=Z,1.0nm,0.7s,baz=314,slow=2.8,SNR=4.6								
WRA					S	**S**	**14 32 57.2**	**-2.6**	
	comp=Z,0.7nm,0.8s,baz=328,slow=20,SNR=4.1								
	comp=Z,9.7nm,0.5s								
WRA	**Warramunga Arr**	**22.80**	**161**			**P**	**14 28 51.3**	**-1.5**	
WR8	**Warramunga Arr**	**22.87**	**160**			**P**	**14 28 52.7**	**-0.8**	
WR8					IAmb	IAmb	14 28 59.5		
	comp=Z,15nm,0.9s								
MBWA	**Marble Bar**	**23.63**	**196**		P	**P**	**14 28 59.8**	**-1.2**	
QIS	**Mount Isa**	**25.54**	**150**		P	**P**	**14 29 20.0**	**+1.4**	
AS31	**Alice Springs**	**26.18**	**164**		IAmb	IAmb	14 29 30.8		
	comp=Z,4.8nm,0.4s								
ASAR	**Alice Springs**	**26.18**	**164**		P	**P**	**14 29 24.1**	**-0.3**	
	comp=Z,3.2nm,0.6s,baz=347,slow=13,SNR=64								
ASAR					PcP	**PcP**	**14 32 51.2**	**+0.2**	
	comp=Z,1.0nm,0.4s,baz=342,slow=2.5,SNR=6.4								
ASAR					S	**S**	**14 33 50.0**	**-4.2**	
	comp=Z,0.9nm,0.9s,baz=354,slow=20,SNR=5.2								
ASAR					ScP	**ScP**	**14 36 22.8**	**-5.5**	
	comp=Z,0.2nm,0.8s,baz=345,slow=3.9,SNR=1.5								
	comp=Z,3.2nm,0.6s								
ASAR	**Alice Springs**	**26.18**	**164**			**P**	**14 29 24.9**	**+0.5**	
MTSU	**Mount Surprise**	**26.35**	**139**		P	**P**	**14 29 27.5**	**+1.5**	
JNU	**Nakatsue**	**31.56**	**7**		LR	LR	14 44 17.1		
	comp=Z,45nm,20.0s,baz=32,slow=39								
CMAR	**Chiang Mai Arr**	**31.77**	**303**		P	**P**	**14 30 13.7**	**-0.4**	
	comp=Z,0.6nm,0.8s,baz=123,slow=6.7,SNR=5.2								
	comp=Z,0.6nm,0.8s								
ENH	**Enshi**	**32.72**	**332**		P	**P**	**14 30 22.4**	**0.0**	
ENH					IAmb	IAmb	14 30 24.6		
	comp=Z,9.9nm,0.9s								
JGF	**Kuroka**	**35.24**	**15**		P	**P**	**14 30 44.5**	**+0.3**	
BBOO	**Buckleboo**	**35.46**	**166**		P	**P**	**14 30 46.1**	**0.0**	
BBOO					IAmb	IAmb	14 31 27.9		
	comp=Z,28nm,1.4s								
KSRS	**Korea Array**	**35.64**	**2**		P	**P**	**14 30 48.3**	**+0.7**	
	comp=Z,1.7nm,0.7s,baz=178,slow=9.8,SNR=7.7								
	comp=Z,1.7nm,0.7s								
STKA	**Stephens Creek**	**36.30**	**158**		P	**P**	**14 30 52.6**	**-0.6**	
	comp=Z,2.7nm,0.6s,baz=320,slow=9.8,SNR=6.7								
	comp=Z,2.7nm,0.6s								
MJAR	**Matsushiro Arr**	**36.36**	**16**		P	**P**	**14 30 52.5**	**-1.2**	
	comp=Z,1.2nm,0.4s,baz=189,slow=10.0,SNR=7.1								
	comp=Z,1.2nm,0.4s								
JMM	**Marumori**	**38.35**	**18**		P	**P**	**14 31 11.1**	**+0.6**	
JMM					IAmb	IAmb	14 31 13.1		
	comp=Z,19nm,0.8s								
USRK	**Ussuriysk Ar.**	**42.63**	**6**		P	**P**	**14 31 46.5**	**+0.6**	
	comp=Z,6.0nm,0.9s,baz=202,slow=7.3,SNR=5.3								
	comp=Z,6.0nm,0.9s								
JKA	**Kamikawa-asahi**	**44.62**	**17**		P	**P**	**14 32 02.9**	**+1.0**	
EVN	**Everest**	**46.06**	**308**		P	**P**	**14 32 14.0**	**-0.3**	
HILR	**Hailar Array B**	**48.06**	**354**		P	**P**	**14 32 28.2**	**-0.7**	
	comp=Z,1.1nm,0.3s,baz=185,slow=8.8,SNR=4.1								
	comp=Z,1.1nm,0.3s								
HEH	**HeiHe**	**48.42**	**1**	*eP*		**P**	**14 32 31.9**	**+0.3**	
HEH					pmax	pmax			
	comp=Z,12nm,0.7s								
ULN	**Ulaanbaatar**	**49.01**	**343**		P	**P**	**14 32 35.9**	**-0.5**	
ULN					IAmb	IAmb	14 32 38.0		
	comp=Z,3.3nm,0.7s								
SONM	**Songino Array**	**49.18**	**342**		P	**P**	**14 32 37.2**	**-0.5**	
	comp=Z,1.5nm,0.5s,baz=153,slow=9.3,SNR=7.6								
SONM					PcP	**PcP**	**14 34 00.6**	**+0.1**	
	comp=Z,1.0nm,0.7s,baz=170,slow=3.9,SNR=3.2								
SONM					LR	LR	14 54 49.3		
	comp=Z,24nm,18.4s,baz=256,slow=38								
	comp=Z,1.5nm,0.5s								
FUNA	**Funafuti**	**53.49**	**102**		P	**P**	**14 33 10.7**	**+0.3**	
PETK	**Petropavlovsk-**	**57.42**	**22**		P	**P**	**14 33 38.4**	**+0.4**	
	comp=Z,4.2nm,0.8s,baz=215,slow=6.9,SNR=8.4								
	comp=Z,4.2nm,0.8s								
PETK	**Petropavlovsk-**	**57.42**	**22**		P	**P**	**14 33 39.3**	**+1.3**	
MKAR	**Makanchi Array**	**59.12**	**326**		P	**P**	**14 33 48.5**	**-1.6**	
	comp=Z,2.9nm,0.5s,baz=120,slow=7.8,SNR=41								
MKAR					LR	LR	15 00 01.8		
	comp=Z,37nm,19.5s,baz=348,slow=37								
	comp=Z,2.9nm,0.5s								
MAKZ	**Makanchi**	**59.31**	**326**		P	**P**	**14 33 50.8**	**-0.5**	
YAK	**Yakutsk**	**60.27**	**2**		P	**P**	**14 33 58.1**	**+0.6**	
ZALV	**Zalesovo Beam**	**62.32**	**334**		P	**P**	**14 34 09.7**	**-1.9**	
	comp=Z,1.0nm,0.3s,baz=128,slow=6.3,SNR=7.1								
	comp=Z,1.0nm,0.3s								
ZALV	**Zalesovo Beam**	**62.32**	**334**		P	**P**	**14 34 10.2**	**-1.4**	
GAR	**Garm**	**63.16**	**313**		P	**P**	**14 34 16.5**	**-1.2**	
GAR					IAmb	IAmb	14 34 17.8		
	comp=Z,6.7nm,0.8s								
KURBB	**Kurchatov Arra**	**63.35**	**328**		P	**P**	**14 34 17.0**	**-1.5**	
	comp=Z,2.8nm,0.4s,baz=129,slow=6.5,SNR=26								
	comp=Z,2.8nm,0.4s								
KURK	**Kurchatov**	**63.36**	**328**			**P**	**14 34 17.9**	**-0.7**	
CASY	**Casey**	**68.75**	**187**		P	**P**	**14 34 53.3**	**+0.4**	
CASY					IAmb	IAmb	14 34 57.6		
	comp=Z,9.0nm,1.4s								
BVAR	**Borovoye Array**	**68.93**	**327**		P	**P**	**14 34 53.2**	**-1.1**	
	comp=Z,1.7nm,0.4s,baz=104,slow=5.7,SNR=9.8								
	comp=Z,1.7nm,0.4s								
TIXI	**Tiksi**	**69.90**	**1**		P	**P**	**14 35 00.4**	**+0.5**	
TIXI					IAmb	IAmb	14 35 01.4		
	comp=Z,9.0nm,1.4s								
AB31	**Akbulak array**	**73.60**	**321**		P	**P**	**14 35 22.1**	**-0.6**	
VNDA	**Vanda**	**81.42**	**173**		P	**P**	**14 36 05.7**	**-0.1**	
	comp=Z,0.8nm,0.4s,baz=319,slow=7.1,SNR=12								
	comp=Z,0.8nm,0.4s								
VNDA	**Vanda**	**81.42**	**173**		P	**P**	**14 36 06.5**	**+0.7**	
SBA	**Scott Base**	**82.33**	**172**		P	**P**	**14 36 12.3**	**+1.8**	
D19K	**Kuna River**	**83.12**	**21**		P	**P**	**14 36 16.4**	**+1.5**	
B20K	**Meade River**	**83.78**	**20**		P	**P**	**14 36 18.4**	**+0.3**	
B21K	**Ikpikpuk River**	**84.58**	**20**		P	**P**	**14 36 22.6**	**+0.4**	
SKT	**Skwentna**	**84.76**	**28**		P	**P**	**14 36 23.9**	**+0.6**	
SKT					IAmb	IAmb	14 36 42.0		
	comp=Z,9.9nm,1.2s								
L22K	**Petersville**	**85.17**	**27**		P	**P**	**14 36 26.2**	**+0.7**	
L22K					IAmb	IAmb	14 36 26.6		
	comp=Z,12nm,1.3s								
C23K	**Itkillik River**	**85.99**	**20**		P	**P**	**14 36 30.2**	**+0.9**	
C23K					IAmb	IAmb	14 36 59.8		
	comp=Z,5.5nm,1.0s								
TOLK	**Toolik Lake Re**	**86.24**	**21**		P	**P**	**14 36 30.9**	**+0.2**	
TOLK					IAmb	IAmb	14 36 52.9		
	comp=Z,7.4nm,1.4s								
ILAR	**Eielson Array**	**87.05**	**25**		P	**P**	**14 36 33.9**	**-0.7**	
	comp=Z,0.3nm,0.6s,baz=255,slow=5.0,SNR=5.3								
	comp=Z,0.3nm,0.6s								
ILAR	**Eielson Array**	**87.05**	**25**		P	**P**	**14 36 34.3**	**-0.3**	
BMAR	**Burnt Mountain**	**88.06**	**23**		P	**P**	**14 36 39.4**	**-0.1**	
C27K	**Jago River**	**88.38**	**21**		IAmb	IAmb	14 36 43.0		
	comp=Z,2.6nm,0.6s								
QSPA	**South Pole Qui**	**91.58**	**180**			**P**	**14 36 57.3**	**+1.3**	
QSPA					IAmb	IAmb	14 37 28.6		
	comp=Z,5.3nm,1.4s								
ARCES	**ARCESS Array B**	**92.30**	**340**		P	**P**	**14 36 58.3**	**-0.9**	
	comp=Z,6.3nm,1.0s,baz=78,slow=8.4,SNR=4.5								
	comp=Z,6.3nm,1.0s								
FINES	**FINESS Array B**	**93.53**	**332**		P	**P**	**14 37 03.1**	**-1.9**	
	comp=Z,0.8nm,0.7s,baz=90,slow=4.2,SNR=4.6								
	comp=Z,0.8nm,0.7s								
FINES	**FINESS Array B**	**93.53**	**332**		P	**P**	**14 37 04.0**	**-1.0**	
CO03	**El Pedregal**	**146.72**	**152**		PKPab	**PKPbc**	**14 43 32.9**	**+1.0**	
MTDJ	**Mount Denham**	**149.17**	**49**		PKPab	**PKiKP**	**14 43 42.3**	**+2.2**	

*SOME **15** 14:25:49.6, 40°.43N×77°.63E, h5km*
*KRNET **15** 14:25:49.7±0.1, 40°.38N×77°.63E, h21km, mb3.8*
*NNC **15** 14:25:51.9±0.8, 40°.46N×77°.65E, h0km, mb4.4, mpv4.0,*
Error ellipse: s-maj=6.0km s-min=4.4km az=172.0

ISC 15 14:25:51.4±1.3, 40°.38N±0°.05×77°.64E±0°.04, h10km, n63, σ1§61/96, 28C-21D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.35**	**5**	⇓*eP*	**Pn**	**14 26 15.2**	**-1.5**
TARG				⇓*eS*	**Sb**	**14 26 34.0**	**-0.5**
JNKS	**Jany-Kuch**	**1.66**	**295**	⇑*eP*	**Pn**	**14 26 20.2**	**-0.5**
JNKS				⇑*eS*	**Sn**	**14 26 42.6**	**+0.4**
KDJ	**Kajisay**	**1.78**	**349**	⇑*eP*	**Pn**	**14 26 22.6**	**+0.2**
KDJ				⇑*eS*	**Sb**	**14 26 46.6**	**-0.1**
ULHL	**Ulahol**	**2.14**	**331**	P	**Pb**	**14 26 29.4**	**-1.0**
	SNR=16						
ULHL	**Ulahol**	**2.14**	**331**	⇓*eP*	**Pn**	**14 26 28.2**	**+0.8**
ULHL				⇓*eS*	**Sb**	**14 26 56.4**	**-0.7**
PRZ	**Przheval'sk**	**2.17**	**15**	⇑*eP*	**Pb**	**14 26 29.0**	**-1.9**
PRZ				⇑*eS*	**Sb**	**14 26 57.8**	**-0.2**
BOOM	**Boomskoye usch**	**2.46**	**329**	⇓*eP*	**Pn**	**14 26 32.9**	**+1.1**
BOOM				⇑*eS*	**Sn**	**14 27 04.0**	**+2.0**
TNSS	**Tian-Shan**	**2.70**	**349**	Pg	**Pb**	**14 26 40.5**	**+0.4**
	32nm,0.3s						
TNSS				Lg	Lg	14 27 16.7	
	48nm,0.7s						
TNSS	**Tian-Shan**	**2.70**	**349**	*eP*	**Pb**	**14 26 40.5**	**+0.4**
	32nm,0.3s						
TNSS				*eS*	**Sg**	**14 27 16.7**	**-1.5**
	48nm,0.7s						
SATY	**Saty**	**2.73**	**12**	Pg	**Pb**	**14 26 40.4**	**0.0**
	153nm,0.5s						
SATY				Lg	Lg	14 27 16.7	
	94nm,0.6s						
IZV	**Izvestkoviy**	**2.76**	**344**	Pg	**Pb**	**14 26 40.9**	**-0.1**
	162nm,0.4s						
IZV				Lg	Lg	14 27 18.1	
	282nm,0.5s						
IZV	**Izvestkoviy**	**2.76**	**344**	*eP*	**Pb**	**14 26 40.9**	**-0.1**
	162nm,0.4s						
IZV				*eS*	**Sg**	**14 27 18.1**	**-1.9**
	282nm,0.5s						
MDOK	**Medeo**	**2.81**	**351**	Pg	**Pb**	**14 26 41.8**	**0.0**
	119nm,0.3s						
MDOK				Lg	Lg	14 27 19.6	
	176nm,0.6s						
KNDC	**Almaty**	**2.88**	**350**	⇓Pg	**Pb**	**14 26 43.7**	**+0.9**
	107nm,0.5s						
KNDC				⇑Lg	Lg	14 27 23.1	
	402nm,0.5s						
KOTS	**Kotyrbulak**	**2.88**	**352**	Pg	**Pb**	**14 26 43.3**	**+0.4**
	109nm,0.4s						
KOTS				Lg	Lg	14 27 21.9	
	275nm,0.4s						
KOTS	**Kotyrbulak**	**2.88**	**352**	*eP*	**Pb**	**14 26 43.3**	**+0.4**
	109nm,0.4s						
KOTS				*eS*	**Sg**	**14 27 21.9**	**-1.9**
	275nm,0.4s						
MTBS	**Maitube**	**2.89**	**342**	Pg	**Pb**	**14 26 43.2**	**+0.1**
	144nm,0.3s						
MTBS				Lg	Lg	14 27 21.7	
	176nm,0.5s						
MTBS	**Maitube**	**2.89**	**342**	*eP*	**Pb**	**14 26 43.2**	**+0.1**
	144nm,0.3s						
MTBS				*eS*	**Sb**	**14 27 21.7**	**+3.2**
	176nm,0.5s						
ARLS	**Aral**	**2.91**	**302**	⇑*eP*	**Pn**	**14 26 38.8**	**+0.9**
ARLS				⇑*eS*	**Sn**	**14 27 14.7**	**+1.7**
KST	**Kastek**	**2.94**	**335**	Pg	**Pb**	**14 26 43.9**	**-0.1**
	28nm,0.4s						
KST				Lg	Lg	14 27 23.4	
	111nm,0.4s						
KST	**Kastek**	**2.94**	**335**	*eP*	**Pb**	**14 26 43.9**	**-0.1**
	28nm,0.4s						
KST				*eS*	**Sb**	**14 27 23.4**	**+3.4**
	111nm,0.4s						
SALK	**Salom-Alik**	**2.95**	**281**	⇓*eP*	**Pn**	**14 26 39.4**	**+0.9**
SALK				⇓*eS*	**Sn**	**14 27 15.6**	**+1.6**
TKM2	**Tokmak 2**	**2.96**	**330**	P	**Pn**	**14 26 40.9**	**+2.2**
	SNR=13						
TKM2	**Tokmak 2**	**2.96**	**330**	⇑*eP*	**Pn**	**14 26 39.7**	**+1.0**
TKM2				⇑*eS*	**Sn**	**14 27 16.1**	**+1.7**
UCH	**Uchtor**	**2.99**	**309**	P	**Pn**	**14 26 40.6**	**+1.3**
	SNR=16						
UCH	**Uchtor**	**2.99**	**309**	⇓*eP*	**Pn**	**14 26 40.1**	**+0.8**
UCH				⇓*eS*	**Sn**	**14 27 17.0**	**+1.5**
KBK	**Karagaybulak**	**3.04**	**319**	P	**Pb**	**14 26 46.0**	**+0.3**
	SNR=10						
KBK	**Karagaybulak**	**3.04**	**319**	⇑*eP*	**Pn**	**14 26 40.7**	**+1.0**
KBK				⇑*eS*	**Sn**	**14 27 17.9**	**+1.6**
SHLS	**Shalkode**	**3.09**	**26**	Pg	**Pg**	**14 26 48.9**	**-1.6**
	37nm,0.4s						
SHLS				Lg	Lg	14 27 31.9	
	117nm,0.5s						
SHLS	**Shalkode**	**3.09**	**26**	*eP*	**Pg**	**14 26 48.9**	**-1.6**
	37nm,0.4s						
SHLS				*eS*	**Sg**	**14 27 31.9**	**+1.3**
	117nm,0.5s						
KPKS	**Kokpek**	**3.18**	**14**	Pg	**Pb**	**14 26 48.2**	**+0.3**
	0.5nm,0.3s						
KPKS				Lg	Lg	14 27 30.6	
	42nm,0.5s						
DGS	**Degeres**	**3.18**	**335**	Pg	**Pb**	**14 26 48.6**	**+0.5**
	37nm,0.4s						
DGS				Lg	Lg	14 27 30.6	
	69nm,0.6s						
SFK	**Sufi-Kurgan**	**3.19**	**265**	⇓*eP*	**Pn**	**14 26 42.8**	**+1.0**
SFK				⇓*eS*	**Sn**	**14 27 21.5**	**+1.4**
PDGK	**Podgornoye**	**3.25**	**24**	⇑Pn	**Pn**	**14 26 44.0**	**+1.4**
	7.2nm,0.5s						
PDGK				⇑Pg	**Pb**	**14 26 49.0**	**-0.3**
	40nm,0.6s						
PDGK				⇑Lg	Lg	14 27 32.5	
	134nm,0.8s						
AAK	**Ala-Archa**	**3.27**	**315**	P	**Pb**	**14 26 49.7**	**+0.1**
	SNR=7.0						
AAK	**Ala-Archa**	**3.27**	**315**	⇑Pn	**Pn**	**14 26 45.0**	**+2.2**
	0.8nm,0.4s						
AAK				⇑Lg	Lg	14 27 33.5	
	94nm,1.0s						
AAK	**Ala-Archa**	**3.27**	**315**	⇓*eP*	**Pn**	**14 26 43.7**	**+0.9**
AAK				⇓*eS*	**Sn**	**14 27 23.2**	**+1.4**
FRU1	**Bishkek**	**3.31**	**318**	⇑*eP*	**Pn**	**14 26 44.7**	**+1.3**
FRU1				⇑*eS*	**Sn**	**14 27 24.9**	**+2.0**
CHMS	**Chumysh**	**3.39**	**321**	⇓*eP*	**Pn**	**14 26 45.4**	**+1.0**
CHMS				⇓*eS*	**Sn**	**14 27 26.2**	**+1.4**
KTBS	**Karatobe**	**3.40**	**348**	Pg	**Pb**	**14 26 52.3**	**+0.5**
	49nm,0.4s						
KTBS				Lg	Lg	14 27 37.4	
	61nm,0.4s						
KRBS	**Karabastau**	**3.62**	**337**	Pg	**Pb**	**14 26 55.5**	**0.0**
	11nm,0.3s						
KRBS				Lg	Lg	14 27 43.6	
	64nm,0.6s						
KUU	**Kurty**	**3.64**	**345**	Pg	**Pb**	**14 26 56.0**	**+0.2**
	11nm,0.2s						
KUU				Lg	Lg	14 27 43.3	
	41nm,0.7s						
KUU	**Kurty**	**3.64**	**345**	*eP*	**Pb**	**14 26 56.0**	**+0.2**
	11nm,0.2s						
KUU				*eS*	**Sb**	**14 27 43.3**	**+3.3**
	41nm,0.7s						
ARSB	**Arslanbob**	**3.66**	**286**	⇑*eP*	**Pn**	**14 26 49.1**	**+0.9**
ARSB				⇑*eS*	**Sn**	**14 27 32.6**	**+1.1**
KTMS	**Ketmen**	**3.67**	**33**	Pg	**Pb**	**14 26 55.7**	**-0.6**
	5.3nm,0.4s						
KTMS				Lg	Lg	14 27 42.9	
	28nm,0.5s						
KTMS	**Ketmen**	**3.67**	**33**	*eP*	**Pb**	**14 26 55.7**	**-0.6**
	5.3nm,0.4s						
KTMS				*eS*	**Sb**	**14 27 42.9**	**+2.0**
	28nm,0.5s						
EKS2	**Erkin-Say**	**3.69**	**309**	⇑*eP*	**Pn**	**14 26 49.6**	**+1.0**
EKS2				⇑*eS*	**Sn**	**14 27 33.4**	**+1.2**
OHH	**Osh**	**3.71**	**274**	⇓*eP*	**Pn**	**14 26 49.7**	**+0.9**
OHH				⇓*eS*	**Sn**	**14 27 33.6**	**+1.0**
USP	**Ospenovka**	**3.72**	**322**	P	**Pb**	**14 26 57.3**	**+0.2**
	SNR=27						
USP	**Ospenovka**	**3.72**	**322**	⇓*eP*	**Pn**	**14 26 50.0**	**+1.1**
USP				⇓*eS*	**Sn**	**14 27 33.9**	**+1.1**
BLB	**Baldybastay**	**3.76**	**9**	Pg	**Pb**	**14 26 58.8**	**+0.8**
	115nm,0.5s						
BLB				Lg	Lg	14 27 48.4	
	99nm,0.5s						
SGDS	**Sogindy**	**3.80**	**325**	Pg	**Pb**	**14 26 58.9**	**+0.3**
	20nm,0.7s						
SGDS				Lg	Lg	14 27 49.3	
	32nm,0.7s						
ARXS	**Arharly**	**3.83**	**2**	Pg	**Pb**	**14 26 59.9**	**+0.8**
	30nm,0.5s						
ARXS				Lg	Lg	14 27 50.5	
	99nm,0.3s						
ARXS	**Arharly**	**3.83**	**2**	*eP*	**Pb**	**14 26 59.9**	**+0.8**
ARXS				*eS*	**Sg**	**14 27 50.5**	**-3.8**
MRKS	**Merke**	**4.07**	**307**	Pg	**Pb**	**14 27 03.9**	**+0.7**
	4.9nm,0.5s						
MRKS				Lg	Lg	14 27 56.9	
	30nm,0.4s						
MRKS	**Merke**	**4.07**	**307**	*eP*	**Pb**	**14 27 03.9**	**+0.7**
	4.9nm,0.5s						
MRKS				*eS*	**Sb**	**14 27 56.9**	**+4.4**
	30nm,0.4s						
KNOS	**Konyrlen**	**4.13**	**15**	Pg	**Pb**	**14 27 05.9**	**+1.6**
	14nm,0.5s						
KNOS				Lg	Lg	14 28 00.3	
	23nm,0.5s						
DRK	**Karamyk**	**4.58**	**261**	⇑*eP*	**Pn**	**14 27 02.0**	**+1.0**
DRK				⇑*eS*	**Sn**	**14 27 54.8**	**+0.4**
TRKS	**Terek-Say**	**5.06**	**285**	⇓*eP*	**Pn**	**14 27 07.9**	**+0.5**
TRKS				⇓*eS*	**Sn**	**14 28 05.2**	**-0.7**
KAPS	**Kapalarasan**	**5.06**	**14**	Pg	**Pb**	**14 27 23.4**	**+3.4**
	14nm,0.7s						
KAPS				Lg	Lg	14 28 31.2	
	19nm,0.4s						
BTLS	**Baital**	**5.36**	**332**	Pg	**Pb**	**14 27 27.2**	**+2.2**
	9.2nm,0.6s						
BTLS				Lg	Lg	14 28 37.1	
	15nm,0.6s						
BTLS	**Baital**	**5.36**	**332**	*eP*	**Pb**	**14 27 27.2**	**+2.2**
	9.2nm,0.6s						
BTLS				*eS*	**Sg**	**14 28 37.1**	**-6.2**
	15nm,0.6s						
IUG	**Iuzhnay**	**6.00**	**290**	Pg	**Pg**	**14 27 42.4**	**-3.9**
	8.3nm,0.5s						
IUG				Lg	Lg	14 29 02.9	
	25nm,1.1s						

GCG 15 14:32:59.6±1.4, 13°.71N×90°.98W, h50km±42km, MD3.5, ML3.8, MW3.0, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.68**	**12**	*eP*	Pn	14 33 13.7	+0.4
FG16	**Alotenango, Sa**	**0.72**	**39**	*eP*	Pn	14 33 14.9	+1.1
FG16				*i* S	Sn	14 33 26.5	+2.4
FG16				IAML		14 33 28.6	
	comp=E,6μm,0.2s						
STG8	**El Palmar, Qui**	**0.82**	**334**	*eP*	Pn	14 33 20.1	+4.9
STG8				IAML		14 33 37.3	
	comp=E,723nm,0.2s						
NUBE	**Las Nubes**	**1.18**	**81**	*i* S	Sn	14 33 35.0	+0.1
SOKI	**Kika Raxquin**	**1.18**	**339**	*eS*	Sn	14 33 36.5	+1.2
APG	**El Apazote**	**1.38**	**21**	*i* P	Pn	14 33 24.3	+1.6
JAYA	**Jayaque - finc**	**1.48**	**92**	*eP*	Pn	14 33 23.8	-0.2

IDC 15 14:33:07.0±2.5, 4°.43N×123°.79E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=296.1km s-min=28.3km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.34**	**157**	P	P	14 38 45.0	+0.1
	1.2nm,0.9s,baz=337,slow=9.5,SNR=13						
	1.2nm,0.9s						
ASAR	**Alice Springs**	**29.61**	**161**	P	P	14 39 14.1	-0.1
	0.2nm,0.3s,baz=335,slow=7.9,SNR=15						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.34**	**326**	P	P	14 42 42.6	-0.1
	0.3nm,0.4s,baz=116,slow=8.8,SNR=1.7						
	0.3nm,0.4s						

IDC 15 14:35:46.6±2.1, 4°.55N×123°.95E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=295.8km s-min=23.1km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.40**	**158**	P	P	14 41 25.2	+0.2
	0.5nm,0.4s,baz=337,slow=9.5,SNR=8.0						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**29.68**	**161**	P	P	14 41 54.2	-0.2
	0.2nm,0.3s,baz=336,slow=7.8,SNR=11						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.32**	**326**	P	P	14 45 22.8	+0.6
	0.2nm,0.4s,baz=121,slow=8.9,SNR=1.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**59.57**	**328**	P	P	14 45 51.4	-0.7
	0.4nm,0.4s,baz=128,slow=7.5,SNR=3.0						
	0.4nm,0.4s						

*RSNC **15** 14:38:29.9±2.3, 3°.5±20°×7°.8W±°, h157km±11km, M4.2, mB5.1, mb4.6, ML3.6, Mw(mB)4.5*
*IDC **15** 14:38:31.9±1.9, 2°.02S×77°.89W, h119km±17km, mb3.7/8, mbtmp4.2/13, MS3.3/1, Error ellipse: s-maj=27.9km s-min=13.5km az=96.0*
*IGQ **15** 14:38:34.0±0.3, 2°.5±2°×7°.8W±°, h130km±3km, MLv3.9/54*
*NEIC **15** 14:38:35.6±1.1, 2°.11S±0°.08×77°.6W±0°.1, h121km±9km, mb4.3/16, Error ellipse: s-maj=20.3km s-min=9.6km az=67.0*

ISC 15 14:38:34.2±0.6, 2°.16S±0°.04×77°.81W±0°.05, h135km±5km, n172, σ1§36/174, mb4.1/14, 17C-39D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAIS	**Taisha**	**0.38**	**125**	⇓P	**Pn**	**14 38 53.0**	**-0.3**
TAIS				S	**Sn**	**14 39 08.1**

ISPG	Isla Puna-Puer	2.49	251	P		Pn	14 39 13.7	-0.8
CUIC	Cuicocha-Domo	2.51	347	⇓P		Pn	14 39 16.3	+1.0
CUSE	Cuicocha Este	2.52	346	P		Pn	14 39 16.3	+0.9
CUSE	Cuicocha Este	2.52	346	P		Pn	14 39 15.6	+0.2
COTA	Cotacachi	2.54	348	P		Pn	14 39 16.8	+1.1
MORR	Playas El Morr	2.57	259	⇑P		Pn	14 39 13.7	-1.8
GONZ	Gonzanam	2.60	217	P		Pn	14 39 15.0	-1.3
PAC1	Pacto, Paraso	2.60	338	P		Pn	14 39 17.0	+0.9
PAC1	Pacto, Paraso	2.60	338	P		Pn	14 39 17.0	+0.9
BONI	La Bonita	2.61	6	⇑P		Pn	14 39 16.4	0.0
BONI	La Bonita	2.61	6	P		Pn	14 39 16.4	0.0
URCU	Urcuqui	2.62	350	⇑P		Pn	14 39 17.4	+0.8
PECV	Mancha de Ca P	2.63	302	P		Pn	14 39 19.0	+2.7
ARNL	Arenillas	2.64	239	⇑P		Pn	14 39 13.6	-2.9
BV15	Puerto Quito-O	2.71	329	P		Pn	14 39 17.2	0.0
FLF1	Flavio Alfaro-	2.71	311	⇓P		Pn	14 39 16.4	-0.9
JIPI	JIPIJAPA	2.86	286	P		Pn	14 39 17.3	-2.0
TULM	Tulcn-Chalpat	2.86	0	P		Pn	14 39 20.7	+0.9
TULM	Tulcn-Chalpat	2.86	0	P		Pn	14 39 20.0	+0.3
LNGL	El Angel-Carch	2.89	356	⇑P		Pn	14 39 21.4	+1.3
CHL1	Volcn Chiles	2.94	357	⇑P		Pn	14 39 22.0	+1.2
CHL2	Volcn Chiles	2.95	358	⇑P		Pn	14 39 22.2	+1.3
ECEN	Cerro Negro	2.97	357	⇑P		Pn	14 39 22.1	+0.9
LITE1	Lita	2.99	349	P		Pn	14 39 22.0	+0.9
ZUMB	Zumba	3.00	206	⇑P		Pn	14 39 20.0	-1.1
CHMA	Chilma	3.02	355	⇑P		Pn	14 39 22.5	+0.9
PPLP	Puerto Lpez	3.03	282	P		Pn	14 39 22.1	+0.7
AMCR	Ecuador-Macara	3.06	224	P		Pn	14 39 19.2	-2.8
MCRA	Macar, Loja	3.06	224	⇑P		Pn	14 39 18.7	-3.2
CMBC	Cumbal	3.08	360	P		Pn	14 39 24.3	+1.7
CMBC	Cumbal	3.08	360	P		Pn	14 39 23.8	+1.2
CAB1	Cabo Pasado-Ma	3.16	304	P		Pn	14 39 22.6	-0.5
SALI	Salinas	3.18	270	P		Pn	14 39 21.9	-1.4
ISPT	Isla de la Pla	3.38	285	P		Pn	14 39 24.5	-1.5
GCUF	Volcan Galeras	3.40	8	P		Pn	14 39 27.9	+1.2
RVRD	Rio Verde	3.58	334	P		Pn	14 39 29.4	+0.9
ALOR	Ecuador-San Lo	3.59	343	P		Pn	14 39 25.4	-3.3
PTLC	Puerto Leguiza	3.80	52	P		Pn	14 39 28.3	-3.2
CRUC	La Cruz	3.80	13	P		Pn	14 39 32.5	+0.6
TUMC	Tumaco	4.07	347	P		Pn	14 39 31.4	-3.6
FLOC	Florencia	4.30	30	⇑P		Pn	14 39 37.3	-0.9
FLOC	Florencia	4.30	30	P		Pn	14 39 37.1	-1.1
POPC	Popayan, Colom 1µm113nm,1.4s	4.81	14	P		Pn	14 39 45.4	+0.3
GARC	Garzon, Huila 2µm143nm,0.8s	4.90	28	P		Pn	14 39 45.6	-0.8
ATAH	Atahualpa 109nm,0.6s,baz=10,slow=8.4,SNR=69	4.97	187	P		Pn	14 39 47.0	-0.4
ATAH				S		Sn	14 40 44.6	+0.2
	192nm,0.7s,baz=200,slow=21,SNR=15							
BETC	Betania	5.36	26	P		Pn	14 39 53.8	+1.4
JAMC	Jamundi, Valle 45nm,0.9s	5.46	12	P		Pn	14 39 52.8	-1.0
MACC	Macarena, Meta 2µm107nm,0.8s	5.83	43	P		Pn	14 39 58.0	-0.6
YOTC	Yotoco, Valle	6.28	13	P		Pn	14 40 02.5	-2.2
URMC	La Uribe, Meta 2µm295nm,0.8s	6.38	33	P		Pn	14 40 06.1	+0.1
PRAC	Prado 51nm,0.7s	6.53	27	P		Pn	14 40 08.0	0.0
ORTC	Ortega, Tolima 77nm,0.9s	6.55	23	P		Pn	14 40 07.7	-0.6
GUVC	San Jose del G	6.98	48	P		Pn	14 40 13.0	-1.0
VILC	Villavicencio, 727nm76nm,0.8s	7.47	33	P		Pn	14 40 21.7	+1.0
CVER	Cruz Verde, Cu	7.62	29	P		Pn	14 40 25.5	+2.5
GUY2C	Guyana, Caldas	7.73	18	P		Pn	14 40 21.6	-3.0
ROSC	El Rosal 7.3nm,0.6s,baz=229,slow=19,SNR=1.5	7.78	27	P		Pn	14 40 22.7	-2.4
ROSC	El Rosal	7.78	27	P		Pn	14 40 30.9	+5.8
CHIC	Chingaza 80nm,1.2s	7.88	31	P		Pn	14 40 27.6	+1.1
CBOC	Ciudad Bolivar	8.17	13	P		Pn	14 40 26.6	-3.6
NORC	Norcasia 307nm19nm,0.9s	8.22	21	P		Pn	14 40 28.8	-1.9
SPBC	San Pablo de B	8.61	26	P		Pn	14 40 41.1	+5.0
PTAC	Punta Ardita,	9.25	0	P		Pn	14 40 41.9	-2.6
PTBC	PUERTO BERRIO,	9.27	21	P		Pn	14 40 40.3	-4.5
RUSC	La Rusia	9.29	31			Pn	14 40 46.1	+0.6
RUSC	La Rusia 61nm,0.9s	9.29	31	P		Pn	14 40 45.7	+0.2
NNA	Nana 9.2nm,0.3s,baz=350,slow=13,SNR=6.6	9.81	174	P		Pn	14 40 52.8	+0.8
NNA				S		Sn	14 42 31.0	-10
	15nm,0.4s,baz=250,slow=23,SNR=5.9							
NNA	Nana	9.81	174			Pn	14 40 53.6	+1.6
BARC	Barichara	9.85	28	P		Pn	14 40 55.6	+2.9
PAMC	Pamplona, Colo	10.73	28	P		Pn	14 41 06.7	+2.0
SJCC	San Jacinto, C 13nm,1.1s	12.26	12	P		Pn	14 41 23.4	-1.1
SDV	Santo Domingo 4.6nm,0.4s,baz=247,slow=7.8,SNR=9.3	13.10	33	P		Pn	14 41 33.3	-2.2
SDV	Santo Domingo	13.10	33			Pn	14 41 34.7	-0.9
SDV	Santo Domingo	13.10	33	P		Pn	14 41 34.5	-1.0
SOCE	Pocosol	14.19	332	Pn		P	14 41 51.6	-1.0
BAUV	El Baul	14.71	41			Pn	14 41 55.9	0.0
ESPN	Las Esperanzas	15.65	336	Pn		P	14 42 08.8	0.0
ESPN				IAmb	IAmb		14 42 10.6	
	comp=Z,19nm,1.1s							
LPAZ	La Paz comp=Z,2.4nm,0.7s,baz=335,slow=12,SNR=10	16.96	146	P		P	14 42 23.9	0.0
LPAZ	La Paz	16.96	146			Pn	14 42 25.0	+0.8
LPAZ	La Paz	16.96	146	P		P	14 42 24.1	+0.2
MACA	Manacapuru-AM	17.14	94			P	14 42 24.7	-0.5
PB12	IPOC Station P	17.92	156	P		P	14 42 35.0	+1.1
PB12				IAmb	IAmb		14 42 35.5	
	comp=Z,8.8nm,0.7s							
PB11	IPOC Station P	19.22	156			P	14 42 49.0	+0.9
PB11				IAmb	IAmb		14 42 53.9	
	comp=Z,15nm,0.8s							
GO01	Chusmiza	19.33	155	P		P	14 42 51.5	+1.8
GO01				IAmb	IAmb		14 42 58.2	
	comp=Z,20nm,1.0s							
PB01	IPOC Station P	20.44	157	P		Pn	14 43 04.0	-0.8
PB01				IAmb	IAmb		14 43 06.7	
	comp=Z,11nm,0.9s							
PB03	IPOC Station P	21.26	159	P		P	14 43 12.0	+1.9
PB03				IAmb	IAmb		14 43 13.5	
	comp=Z,11nm,0.8s							
SIV	San Ignacio comp=Z,2.4nm,0.7s,baz=288,slow=12,SNR=14 comp=Z,2.4nm,0.7s	21.46	131	P		P	14 43 11.7	-0.5
PTLB	Pontes e Lacer	22.65	127	P		P	14 43 24.7	+0.5
AQDB	Aquidauana	28.23	132	P		P	14 44 15.1	+0.5
AQDB				IAmb	IAmb		14 44 15.5	
	comp=Z,11nm,0.9s							
MT08	Bocatoma Ro	31.96	168	P		P	14 44 50.2	+2.5
PLCA	Paso Flores comp=Z,4.8nm,0.8s,baz=336,slow=9.8,SNR=6.5	38.95	171	P		P	14 45 47.6	+0.5
PLCA				LR	LR		15 01 44.9	
	comp=Z,41nm,20.8s,baz=56,slow=36 comp=Z,4.8nm,0.8s							
TASM	ASL Pad, Albuq	45.65	327	P		P	14 46 44.1	+2.5
TASM				IAmb	IAmb		14 47 15.6	
	comp=Z,3.4nm,0.9s							
NVAR	Mina Array Bea comp=Z,0.4nm,0.4s,baz=60,slow=10,SNR=2.1 comp=Z,0.4nm,0.4s	54.99	321	P		P	14 47 48.5	-3.5
DBIC	Dimbokro	73.34	82	P		P	14 49 52.5	+0.7
ESDC	Sonseca Array comp=Z,0.8nm,0.7s,baz=257,slow=5.9,SNR=2.7 comp=Z,0.8nm,0.7s	79.00	49	P		P	14 50 22.6	-0.9
VNA3	Neumayer Olymp comp=Z,4.7nm,0.8s	81.03	162	⇓P		P	14 50 33.6	-0.1
VNA1	Neumayer--Stat comp=Z,4.6nm,0.9s	81.27	162	⇓P		P	14 50 35.2	+0.3
VNA2	Neumayer--Watz comp=Z,3.1nm,0.8s,baz=310,slow=4.7	81.63	162	⇓P		P	14 50 36.7	-0.2
EKA	Eskdalemuir Ar comp=Z,1.9nm,0.8s,baz=274,slow=4.8,SNR=3.7 comp=Z,1.9nm,0.8s	83.09	34	P		P	14 50 43.4	-1.3
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=98,slow=3.8,SNR=3.1 comp=Z,0.4nm,0.8s	83.16	336	P		P	14 50 44.7	-0.2
SNAA	Sanae comp=Z,35nm,0.7s	83.25	162	⇓P		P	14 50 44.9	-0.4
SNAA	Sanae comp=Z,1.9nm,0.8s,baz=282,slow=6.9,SNR=14 comp=Z,1.9nm,0.8s	83.25	162	P		P	14 50 45.3	0.0
SNAA	Sanae	83.25	162	P		P	14 50 45.3	0.0
TROLL	Troll, Antarti comp=Z,169nm,0.7s	84.97	162	⇓P		P	14 50 53.4	-0.7
QSPA	South Pole Qui comp=Z,7.7nm,0.9s,baz=146,slow=4.3,SNR=28 comp=Z,7.7nm,0.9s	87.90	180	P		P	14 51 10.6	+2.2
QSPA	South Pole Qui	87.90	180	P		P	14 51 12.1	+3.6
ASAR	Alice Springs comp=Z,0.6nm,0.8s,baz=135,slow=3.8,SNR=5.5	139.86	228	PKhKP	PKPpre		14 57 38.9	
ASAR				PKP	PKPdf		14 57 46.3	-1.0
	comp=Z,0.5nm,0.7s,baz=102,slow=2.3,SNR=7.2							
WRA	Warramunga Arr comp=Z,0.5nm,0.8s,baz=121,slow=2.8,SNR=5.9	141.56	234	PKhKP	PKPpre		14 57 43.5	
WRA				PKP	PKPdf		14 57 49.4	-1.1
	comp=Z,0.4nm,0.6s,baz=115,slow=2.1,SNR=2.5							
FITZ	Fitzroy Crossi comp=Z,2.3nm,0.6s,baz=158,slow=7.9,SNR=6.4	149.36	228	PKPbc	PKPbc		14 58 06.6	-1.6

*IDC **15** 14:45:26.9±1.1, 1.°61N×126.°20E, h0km, mb4.0/8, mbtmp3.9/9, ML3.7/1, Error ellipse: s-maj=117.0km s-min=15.4km az=70.0*
*DJA **15** 14:45:31.1±0.2, 2.°N×3.°×12.°6E±.°, h10km, M4.1/13, mB4.8/1, mb4.3/3, MLv4.0/13, Mw(mB)4.1/1*
ISC 15 14:45:32.1±0.8, 1.°63N±0.°07×126.°57E±0.°08, h35km, n17, σ1°15°/19, mb4.0/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.17	137	P		Pn	14 45 53.9	+1.9
SGSI	Sangihe	2.29	333	P		Pn	14 46 08.7	+1.2
KMSI	Cibinong	2.80	248	P		Pn	14 46 14.7	+0.3
SANI	Sanana	3.71	189	P		Pn	14 46 27.1	+0.2
LUWI	Luwuk	4.64	235	P		Pn	14 46 41.8	+2.0
MRSI	Marisa	4.77	256	P		Pn	14 46 42.8	+1.2
NLAI	Namlea	4.87	174	P		Pn	14 46 42.6	-0.3
APSI	Ampana	5.54	243	P		Pn	14 46 53.5	+1.4
FITZ	Fitzroy Crossi 0.2nm,0.3s,baz=359,slow=13,SNR=6.1 0.6nm,0.4s	19.63	183	P		P	14 49 57.0	-0.8
WRA	Warramunga Arr 2.4nm,0.4s,baz=340,slow=11,SNR=32	22.76	161	P		P	14 50 31.4	-0.2
WRA				PcP		PcP	14 54 23.3	+0.5
	0.3nm,0.6s,baz=340,slow=2.0,SNR=1.9 2.4nm,0.4s							
ASAR	Alice Springs 1.3nm,0.4s,baz=348,slow=13,SNR=34	26.14	165	P		P	14 51 03.9	+0.7
ASAR				PcP		PcP	14 54 30.7	+0.5
	0.4nm,0.4s,baz=350,slow=2.2,SNR=8.1 0.5nm,0.4s							
SONM	Songino Array 0.5nm,0.5s,baz=120,slow=8.5,SNR=1.8 0.5nm,0.5s	49.23	342	P		P	14 54 17.1	-0.2
MKAR	Makanchi Array 1.0nm,0.4s,baz=122,slow=8.1,SNR=25 1.0nm,0.4s	59.19	326	P		P	14 55 28.6	-1.1
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=120,slow=8.5,SNR=2.5 0.5nm,0.4s	62.38	334	P		P	14 55 49.7	-1.5
KURBB	Kurchatov Arra 1.4nm,0.5s,baz=126,slow=6.2,SNR=9.6 1.4nm,0.5s	63.41	328	P		P	14 55 57.1	-1.0
BVAR	Borovoye Array 0.6nm,0.5s,baz=99,slow=4.8,SNR=4.4 0.6nm,0.5s	68.99	327	P		P	14 56 32.6	-1.3
VNDA	Vanda 0.4nm,0.4s,baz=314,slow=6.3,SNR=5.8 0.4nm,0.4s	81.38	173	P		P	14 57 45.1	+0.4

*IDC **15** 14:53:21.0±2.9, 19.°40N×145.°74E, h157km±27km, mb3.4/11, mbtmp3.8/13, Error ellipse: s-maj=37.4km s-min=15.4km az=81.0*
ISC 15 14:53:20.2±1.0, 19.°42N±0.°08×145.°8E±0.°3, h147km, n19, σ0°69°/14, mb3.6/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	Guam 19nm,0.3s,baz=11,slow=4.3,SNR=28	5.86	188	P		Pn	14 54 45.2	+0.2
GUMO				S		Sn	14 55 52.2	+0.8
	7.6nm,0.3s,baz=12,slow=16,SNR=1.2							
MJAR	Matsushiro Arr 1.8nm,1.1s,baz=127,slow=24,SNR=4.3	18.29	340	P		P	14 57 23.2	+0.4
H11S3	WAKE ISLAND Hy baz=274,slow=75,SNR=5.9	19.83	89	T		T	15 18 35.5	
H11S1	WAKE ISLAND Hy baz=274,slow=75,SNR=4.1	19.84	89	T		T	15 18 36.9	
H11S2	WAKE ISLAND Hy baz=274,slow=75,SNR=3.9	19.85	89	T		T	15 18 36.3	
H11N1	WAKE ISLAND Hy baz=274	19.93	86	T		T	15 19 08.2	
H11N2	WAKE ISLAND Hy baz=274	19.93	86	T		T	15 18 56.6	
H11N3	WAKE ISLAND Hy baz=274	19.95	86	T		T	15 19 10.2	
KSRS	Korea Array 1.2nm,0.6s,baz=140,slow=8.8,SNR=5.1 1.2nm,0.6s	23.77	323	P		P	14 58 19.8	+0.7
WRA	Warramunga Arr 0.3nm,0.4s,baz=21,slow=8.5,SNR=4.9 0.3nm,0.4s	40.69	197	P		P	15 00 46.6	+0.2
FITZ	Fitzroy Crossi 1.2nm,0.7s,baz=244,slow=14,SNR=1.8 1.2nm,0.7s	42.19	209	P		P	15 00 58.3	-0.3
SONM	Songino Array 0.6nm,0.5s,baz=103,slow=6.4,SNR=3.5 0.6nm,0.5s	42.61	321	P		P	15 01 02.5	+0.6
ASAR	Alice Springs 0.2nm,0.7s,baz=14,slow=7.2,SNR=2.6 0.2nm,0.7s	44.36	196	P		P	15 01 15.2	-0.8
MKAR	Makanchi Array 0.5nm,0.7s,baz=85,slow=8.8,SNR=1.9 0.5nm,0.7s	58.00	314	P		P	15 02 57.9	+0.5
KURBB	Kurchatov Arra 0.9nm,0.4s,baz=91,slow=7.5,SNR=12 0.9nm,0.4s	60.81	318	P		P	15 03 16.1	-0.6
BVAR	Borovoye Array 0.9nm,0.3s,baz=99,slow=7.5,SNR=7.8 0.9nm,0.3s	65.95	320	P		P	15 03 50.2	-0.3
ARCES	ARCESS Array B 2.7nm,0.9s,baz=79,slow=8.9,SNR=4.6 2.7nm,0.9s	81.82	342	P		P	15 05 22.7	+0.3
NVAR	Mina Array Bea 0.5nm,0.6s,baz=269,slow=5.9,SNR=4.1 0.5nm,0.6s	82.66	52	P		P	15 05 28.0	+0.3
FINES	FINESS Array B 0.7nm,0.4s,baz=67,slow=4.4,SNR=14 0.7nm,0.4s	86.25	335	P		P	15 05 43.6	-1.4

*SNET **15** 14:53:39.6±0.6, 13.°70N×89.°23W, h6km, ML2.9*
*GCG **15** 14:53:40.0±0.7, 13.°72N×89.°26W, h14km±29km, MD3.8, ML3.0*
*CATAC **15** 14:53:40.2±0.2, 14.°N±1.°×89.°2W±1.°0, h4km±1km, M3.0/16, MLv3.0/16, Error ellipse: s-maj=2.9km s-min=1.9km az=22.3, confirmed*
ISC 15 14:53:40.1±0.9, 13.°72N±0.°02×89.°23W±0.°02, h6km±4km, n52, σ0°50°/65, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
UEES	Universidad Ev	0.01	227	eP		Pg	14 53 41.3	0.0
UEES				eS		Sg	14 53 42.4	+0.1
UEES				IAML			14 53 45.6	
	comp=Z,6µm,0.3s							
UEES	Universidad Ev	0.01	227	P		Pg	14 53 41.3	0.0
UESS	Universidad de	0.03	94	eP		Pg	14 53 41.4	0.0
UESS				eS		Sg	14 53 42.8	+0.4
PIC2	El Picacho	0.03	314	eP		Pg	14 53 42.0	+0.3
UTEC	Universidad Te	0.04	125	eP		Pg	14 53 41.5	0.0
UTEC				eS		Sg	14 53 42.6	+0.1
UTEC	Universidad Te	0.04	125	P		Pg	14 53 41.4	-0.1
BOQS	Boqueron	0.05	286	eP		Pg	14 53 41.9	+0.2
BOQS				eS		Sg	14 53 43.9	+0.9
IGN	Direccin Gen	0.06	98	eP		Pg	14 53 42.2	+0.4
IGN	Direccin Gen	0.06	98	S		Sg	14 53 43.6	+0.6
IGN	Direccin Gen	0.06	98	P		Pg	14 53 41.9	+0.1
MAGS	Ministerio de	0.06	234	eP		Pg	14 53 42.1	+0.2
MAGS				eS		Sg	14 53 43.5	+0.3
UDBS	Universidad Do	0.08	95	eP		Pg	14 53 42.2	+0.3
UDBS	Universidad Do	0.08	95	P		Pg	14 53 42.3	+0.3
UDBS	Universidad Do	0.08	95	S		Sg	14 53 43.8	+0.4
PMON	Piamonte	0.08	263	eP		Pg	14 53 42.4	+0.3
PMON				eS		Sg	14 53 44.1	+0.6
PMON	Piamonte	0.08	263	P		Pg	14 53 42.4	+0.3
LOMA	Loma Larga	0.10	142	eP		Pg	14 53 42.3	-0.1
LOMA				eS		Sg	14 53 44.4	+0.5
LOMA	Loma Larga	0.10	142	P		Pg	14 53 42.3	-0.1
LFU	La Fuente	0.12	77	eP		Pg	14 53 43.0	+0.3
QUEZ	Alcaldia de Qu	0.12	341	eP		Pg	14 53 43.2	+0.6
PANCS	Alcalda de	0.12	155	eP		Pg	14 53 42.4	-0.3
PANCS				eS		Sg	14 53 44.3	-0.2
PANCS	Alcalda de	0.12	155	P		Pg	14 53 42.5	-0.2
LBRS	Las Brisas	0.18	85	eP		Pg	14 53 44.2	+0.4
LFRS	El Faro	0.19	121	eP		Pg	14 53 44.1	+0.1
JAYA	Jayaque - finc	0.22	252	eP		Pg	14 53 44.8	+0.3
JAYA				eS		Sg	14 53 48.2	+0.7
JAYA				IAML			14 53 49.7	
	comp=Z,5µm,0.2s							
JAYA	Jayaque - finc	0.22	252	*i* P		Pg	14 53 44.8	+0.3
JAYA				*i* S		Sg	14 53 48.4	+0.9
JAYA	Jayaque - finc	0.22	252	P		Pg	14 53 44.8	+0.3
LALI	Alcalda de L	0.25	200	*i* P		Pg	14 53 45.3	+0.4
LALI				*i* S		Sg	14 53 49.5	+1.2
LALI	Alcalda de L	0.25	200	P		Pg	14 53 45.2	+0.2
PAVA	Las Pavas	0.29	92	eP		Pg	14 53 46.1	+0.4
PAVA				eS		Sg	14 53 50.7	+1.1
PAVA	Las Pavas	0.29	92	P		Pg	14 53 46.2	+0.4
UNIC	Universidad Ca	0.40	310	P		Pg	14 53 48.0	+0.1
UNIC	Universidad Ca	0.40	310	S		Sb	14 53 54.6	-1.4
TECO	Alcaldia de Te	0.48	113	eP		Pg	14 53 49.1	-0.3
TECO	Alcaldia de Te	0.48	113	P		Pg	14 53 49.0	-0.3
TECO	Alcaldia de Te	0.48	113	S		Sg	14 53 55.9	+0.3
LLGN	La Laguna	0.52	33	P		Pg	14 53 50.0	-0.2
NUBE	Las Nubes	0.56	289	eP		Pg	14 53 50.8	-0.1
NUBE	Las Nubes	0.56	289	P		Pg	14 53 51.3	+0.3
NUBE	Las Nubes	0.56	289	S		Sg	14 53 59.3	+1.0
MTO3	Montecristo	0.68	350	*i* P		Pg	14 53 53.1	-0.2
MTO3	Montecristo	0.68	350	P		Pg	14 53 52.9	-0.4
MTO3	Montecristo	0.68	350	S		Sg	14 54 02.7	+0.4
FAME	Alcaldia de Sa	0.77	279	P		Pg	14 53 54.5	-0.4
FAME	Alcaldia de Sa	0.77	279	S		Sg	14 54 05.5	+0.6
ESQI	Esquipulas	0.84	353	P		Pg	14 53 56.1	-0.1
ESQI	Esquipulas	0.84	353	S		Sg	14 54 07.7	+0.5
PACA	Pacayal	0.92	106	P		Pb	14 53 58.4	-0.1
CNCH	Conchagua	1.43	108	P		Pn	14 54 06.4	-0.3
CNCH	Conchagua	1.43	108	S		Sg	14 54 27.6	+1.5
CSGN	Cosiguina Volc	1.79	114	P		Pn	14 54 11.0	-0.6
CSGN				S		Sb	14 54 36.3	+0.2
TGUH	Tegucigalpa,Un	1.93	80	S		Sb	14 54 40.5	+0.3

*CATAC **15** 14:57:22.7±0.5, 14.°N±3.°×91.°1W±.°, h15km±3km, M4.0/24, MLv4.0/24, Error ellipse: s-maj=6.3km s-min=2.7km az=28.8, confirmed*
*GCG **15** 14:57:23.8±1.5, 13.°73N×90.°97W, h56km±15km, MD4.1, ML4.3, MW3.4*
*SNET **15** 14:57:24.1±0.9, 13.°71N×90.°96W, h43km, ML3.9*
ISC 15 14:57:21.5±1.8, 13.°69N±0.°06×90.°98W±0.°05, h8km±11km, n65, σ0°77°/77, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ESSJ	San Jos, E	0.48	105	*i* P		Pn	14 57 34.1	-0.6
ESSG	Sabana Grande	0.70	12	eP		Pn	14 57 37.4	-0.4
ESSG				*i* S		Sn	14 57 47.6	-1.3
FG16	Alotenango, Sa	0.73	38	eP		Pn	14 57 38.8	+0.5
FG16				eS		Sn	14 57 50.3	+0.4
FG16				IAML			14 57 51.1	
	comp=E,35µm,0.2s							
PCG5	San Vicente Pa	0.78	48	eP		Pn	14 57 38.2	-0.7
STG8	El Palmar, Qui	0.84	334	eP		Pn	14 57 43.9	+4.1
FAME	Alcaldia de Sa	0.95	81	P		Pb	14 57 40.5	+0.4
RTAL	Retalhuleu	1.08	320	eP		Pn	14 57 42.2	-0.8
RTAL				eS		Sb	14 57 56.2	-0.6
RTAL	Retalhuleu	1.08	320	P		Pn	14 57 42.6	-0.4
NUBE	Las Nubes	1.18	80	eP		Pb	14 57 44.1	-0.1
NUBE				eS		Sg	14 57 59.1	-0.4
NUBE	Las Nubes	1.18	80	eP		Pb	14 57 44.1	-0.1
NUBE				eS		Sg	14 57 59.2	-0.4
NUBE	Las Nubes	1.18	80	P		Pb	14 57 44.3	0.0
SOKI	Kika Raxquin	1.20	340	eP		Pn	14 57 44.9	0.0
LOAL	Lomas de Alarc	1.20	75	eP		Pg	14 57 44.9	+0.4
LOAL				eS		Sb	14 57 59.9	-0.3
LOAL	Lomas de Alarc	1.20	75	P		Pg	14 57 44.9	+0.4
LOAL	Lomas de Alarc	1.20	75	S		Sn	14 58 01.3	+0.1
RTR	El Retiro	1.31	81	eP		Pb	14 57 46.6	+0.1
CEVE	Cerro Verde	1.32	84	S		Sb	14 58 04.3	+0.5
CEVE	Cerro Verde	1.32	84	P		Pn	14 57 46.3	-0.2
RBDL	Robledal	1.32	71	eP		Pb	14 57 46.6	0.0
RBDL				eS		Sb	14 58 03.9	+0.1
SBLS	San Blas	1.32	83	eP		Pn	14 57 46.4	-0.1
SNJE	San Jose	1.34	82	eP		Pn	14 57 46.8	+0.1
SNJE				eS		Sg	14 58 04.5	0.0
APG	El Apazote	1.40	21	*i* P		Pg	14 57 48.4	+0.1
UNIC	Universidad Ca	1.42	78	S		Sn	14 58 06.7	+0.2
UNIC	Universidad Ca	1.42	78	P		Pb	14 57 48.1	-0.1
JAYA	Jayaque - finc	1.48	91	eP		Pn	14 57 48.6	0.0
JAYA				eS		Sn	14 58 06.5	-1.7
JAYA	Jayaque - finc	1.48	91	eP		Pn	14 57

0.2nm,0.7s,baz=344,slow=2.3,SNR=4.7
0.7nm,0.4s
CMAR Chiang Mai Arr 31.77 304 LR LR 15 20 16.7
comp=Z,19nm,21.5s,baz=110,slow=36
STKA Stephens Creek 36.27 158 P **P 15 08 27.5 +0.6**
3.0nm,0.8s,baz=332,slow=10,SNR=3.6
3.0nm,0.8s
SONM Songino Array 49.21 342 P **P 15 10 10.5 -1.3**
0.8nm,1.0s,baz=163,slow=6.0,SNR=2.0
0.8nm,1.0s
MKAR Makanchi Array 59.15 326 P **P 15 11 23.6 -0.5**
0.5nm,0.4s,baz=117,slow=7.7,SNR=7.9
0.5nm,0.4s
KURBB Kurchatov Arra 63.38 328 P **P 15 11 51.2 -1.4**
1.5nm,0.7s,baz=132,slow=6.3,SNR=5.1
1.5nm,0.7s
BVAR Borovoye Array 68.95 328 P **P 15 12 28.1 -0.3**
0.2nm,0.4s,baz=134,slow=4.2,SNR=1.8
0.2nm,0.4s
VNDA Vanda 81.38 173 P **P 15 13 40.5 +1.0**
0.6nm,0.8s,baz=312,slow=6.5,SNR=3.6
0.6nm,0.8s

IDC ***15*** *15:03:43.2±6.8, 6.30N×72.45W, h166km±46km, mbtmp4.0/1, Error ellipse: s-maj=99.9km s-min=81.0km az=143.0*
RSNC ***15*** *15:03:43.6±0.0, 7.1°N±1.7°×7.3°W±.°, h149km±2km, M3.4, mB4.7, mb3.9, ML3.1, MLv3.8, Mw(mB)4.0*
ISC 15 15:03:42.1±1.1, 6.84N±0.03×73.10W±0.04, h155km±6km, n38, σ1§48/72, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**199**	P	**Pn**	**15 04 04.1**	**+0.6**
BARC				S	**Sn**	**15 04 18.9**	**-0.9**
PAMC	**Pamplona, Colo**	**0.63**	**38**	P	**Pn**	**15 04 06.8**	**+1.4**
PAMC				S	**Sn**	**15 04 23.6**	**+0.5**
BRJC	**Barrancabermej**	**0.66**	**282**	P	**Pn**	**15 04 05.7**	**+0.8**
BRJC				S	**Sn**	**15 04 22.5**	**+0.3**
RUSC	**La Rusia**	**0.94**	**179**	P	**Pn**	**15 04 08.1**	**+0.6**
RUSC				S	**Sn**	**15 04 26.3**	**-0.6**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	P	**Pn**	**15 04 10.5**	**-0.4**
PTBC				S	**Sn**	**15 04 31.7**	**-1.2**
OCAC	**Ocana**	**1.41**	**351**	P	**Pn**	**15 04 12.2**	**+0.9**
OCAC				S	**Sn**	**15 04 33.7**	**-0.1**
SPBC	**San Pablo de B**	**1.53**	**219**	P	**Pn**	**15 04 13.1**	**+0.6**
SPBC				S	**Sn**	**15 04 35.1**	**-0.7**
NORC	**Norcasia**	**2.17**	**234**	P	**Pn**	**15 04 20.3**	**+0.7**
NORC				S	**Sn**	**15 04 48.2**	**-0.3**
CHIC	**Chingaza**	**2.29**	**196**	P	**Pn**	**15 04 22.4**	**+1.1**
CHIC				S	**Sn**	**15 04 50.0**	**-1.6**
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**15 04 23.9**	**+2.0**
	60nm,0.3s,baz=54,slow=21,SNR=43						
ROSC				S	**Sn**	**15 04 55.8**	**+3.3**
	241nm,0.5s,baz=0.5,slow=24,SNR=26						
ROSC	**El Rosal**	**2.33**	**212**	P	**Pn**	**15 04 24.1**	**+2.2**
ROSC				S	**Sn**	**15 04 52.4**	**-0.1**
CVER	**Cruz Verde, Cu**	**2.50**	**203**	P	**Pn**	**15 04 25.8**	**+1.8**
CVER				S	**Sn**	**15 04 55.9**	**-0.4**
HELC	**Santa Helena**	**2.50**	**255**	P	**Pn**	**15 04 24.5**	**+0.6**
HELC				S	**Sn**	**15 04 55.0**	**-1.0**
UREC	**San Jos de Ur**	**2.58**	**291**	P	**Pn**	**15 04 24.2**	**-0.3**
UREC				S	**Sn**	**15 04 54.7**	**-2.5**
GUY2C	**Guyana, Caldas**	**2.77**	**235**	P	**Pn**	**15 04 28.6**	**+1.3**
GUY2C				S	**Sn**	**15 04 59.5**	**-2.6**
VILC	**Villavicencio,**	**2.77**	**192**	P	**Pn**	**15 04 27.8**	**+0.8**
VILC				S	**Sn**	**15 04 57.7**	**-4.1**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	P	**Pn**	**15 04 27.5**	**+0.4**
PTGC				S	**Sn**	**15 05 00.3**	**-1.7**
NIZA	**Niza - Manizal**	**2.95**	**233**	P	**Pn**	**15 04 32.3**	**+2.9**
NIZA				S	**Sn**	**15 05 07.3**	**+1.4**
CBOC	**Ciudad Bolivar**	**3.06**	**252**	P	**Pn**	**15 04 32.1**	**+1.5**
CBOC				S	**Sn**	**15 05 08.9**	**+0.9**
DBBC	**Dabeiba**	**3.10**	**273**	P	**Pn**	**15 04 32.3**	**+1.3**
DBBC				S	**Sn**	**15 05 08.5**	**-0.3**
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**15 04 33.7**	**+1.6**
SDV				S	**Sn**	**15 05 10.2**	**-0.6**
ARGC	**Ariguani, Magd**	**3.21**	**339**	P	**Pn**	**15 04 35.2**	**+2.9**
ARGC				S	**Sn**	**15 05 12.6**	**+1.3**
PRAC	**Prado**	**3.58**	**210**	P	**Pn**	**15 04 37.5**	**+0.3**
PRAC				S	**Sn**	**15 05 20.2**	**+0.3**
ORTC	**Ortega, Tolima**	**3.61**	**216**	P	**Pn**	**15 04 38.4**	**+0.8**
ORTC				S	**Sn**	**15 05 19.9**	**-0.8**
SJCC	**San Jacinto, C**	**3.67**	**326**	P	**Pn**	**15 04 38.1**	**-0.2**
SJCC				S	**Sn**	**15 05 19.5**	**-2.5**
URMC	**La Uribe, Meta**	**3.79**	**200**	P	**Pn**	**15 04 41.3**	**+1.4**
URMC				S	**Sn**	**15 05 24.9**	**0.0**
LCBC	**Los crdobas,**	**3.81**	**302**	P	**Pn**	**15 04 40.6**	**+0.5**
LCBC				S	**Sn**	**15 05 24.8**	**-0.3**
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P	**Pn**	**15 04 44.4**	**-0.3**
CRJC				S	**Sn**	**15 05 30.5**	**-2.9**
YOTC	**Yotoco, Valle**	**4.30**	**229**	P	**Pn**	**15 04 47.4**	**+0.8**
YOTC				S	**Sn**	**15 05 37.7**	**+0.9**
SMRC	**Santa Marta, M**	**4.44**	**346**	P	**Pn**	**15 04 49.0**	**+0.7**
SMRC				S	**Sn**	**15 05 37.8**	**-2.1**
PTAC	**Punta Ardita,**	**4.69**	**274**	P	**Pn**	**15 04 51.5**	**0.0**
MACC	**Macarena, Meta**	**4.72**	**189**	P	**Pn**	**15 04 51.7**	**-0.4**
MACC				S	**Sn**	**15 05 43.8**	**-2.8**
URIC	**Uribia, Colomb**	**4.95**	**13**	P	**Pn**	**15 04 54.6**	**-0.4**
URIC				S	**Sn**	**15 05 50.0**	**-2.0**
GARC	**Garzon, Huila**	**5.20**	**207**	P	**Pn**	**15 04 58.7**	**+0.1**
GARC				S	**Sn**	**15 05 55.3**	**-3.0**
POPC	**Popayan, Colom**	**5.56**	**220**	P	**Pn**	**15 05 04.5**	**+1.1**
	6.4nm,0.5s						
POPC				S	**Sn**	**15 06 06.5**	**-0.4**
	6.4nm,0.5s						
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**15 05 07.0**	**+0.5**
ASAR	**Alice Springs**	**149.14**	**234**	PKPbc	**PKPbc**	**15 23 12.9**	**-0.2**
	0.3nm,0.5s,baz=115,slow=3.6,SNR=9.3						
WRA	**Warramunga Arr**	**150.37**	**241**	PKPbc	**PKPbc**	**15 23 16.1**	**0.0**
	0.3nm,0.4s,baz=106,slow=2.6,SNR=6.3						

NOU ***15*** *15:13:09.3, 14.68S×167.80E, h0km, MLv4.2/5, Vanuatu Islands*
IDC ***15*** *15:13:11.1±1.6, 14.55S×167.24E, h0km, mb4.0/5, mbtmp4.0/6, ML3.8/1, MS2.5/1, Error ellipse: s-maj=48.5km s-min=30.6km az=131.0*
ISC 15 15:13:11.9±1.2, 14.67S±0.09×167.4E±0.2, h10km, n11, σ1§51/10, mb3.8/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.79**	**194**	P	**Pg**	**15 13 27.6**	**+0.4**
MARNC	**Mare, Loyalty**	**6.80**	**175**	P	**Pn**	**15 14 49.8**	**-2.0**
YATNC	**Mamie plateau,**	**7.36**	**184**	P	**Pn**	**15 14 58.3**	**-1.3**
DZM	**Mont Dzumac**	**7.41**	**187**	Pn	**Pn**	**15 15 00.3**	**0.0**
	1.4nm,0.3s,baz=0.0,slow=20,SNR=20						
DZM				Sn	**Sn**	**15 16 25.2**	**+0.6**
	0.8nm,0.3s,baz=285,slow=23,SNR=2.6						
	3.6nm,0.3s						
HNR	**Honiara**	**8.96**	**305**	LR	LR	15 19 06.5	
	comp=Z,32nm,18.7s,baz=176,slow=41						
SAVO	**Savo Central**	**9.23**	**306**	P	Pn	15 15 28.1	+2.9
STKA	**Stephens Creek**	**29.12**	**230**	P	**P**	**15 19 14.7**	**+1.5**
	2.6nm,0.5s,baz=44,slow=9.1,SNR=11						
	2.6nm,0.5s						
ASAR	**Alice Springs**	**32.81**	**249**	P	**P**	**15 19 45.2**	**-0.6**
	0.4nm,0.6s,baz=77,slow=9.1,SNR=11						
	0.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.15**	**259**	P	**P**	**15 20 48.5**	**0.0**
	2.0nm,0.8s,baz=98,slow=7.1,SNR=2.4						
	2.0nm,0.8s						
NVAR	**Mina Array Bea**	**87.14**	**49**	P	**P**	**15 26 00.6**	**+1.9**
	0.2nm,0.4s,baz=303,slow=4.5,SNR=2.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**97.25**	**316**	P	**P**	**15 26 43.2**	**-1.9**
	0.5nm,0.6s,baz=104,slow=6.1,SNR=2.2						
	0.5nm,0.6s						

IDC ***15*** *15:19:31.2±1.1, 1.75N×126.76E, h0km, mb3.9/8, mbtmp3.9/9, ML3.8/1, Error ellipse: s-maj=114.3km s-min=15.5km az=69.0*
DJA ***15*** *15:19:36.5±0.3, 2.2°N±3.°×12.6E±.°, h10km, M4.1/14, mb4.2/4, MLv4.0/14*
ISC 15 15:19:37.2±0.8, 1.64N±0.07×126.66E±0.08, h35km, n18, σ1§38/18, mb4.0/9, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.11**	**141**	P	**Pn**	**15 19 57.1**	**+0.7**
SGSI	**Sangihe**	**2.33**	**331**	P	**Pn**	**15 20 13.9**	**+0.9**
KMSI	**Cibinong**	**2.88**	**248**	P	**Pn**	**15 20 20.4**	**-0.3**
SANI	**Sanana**	**3.73**	**190**	P	**Pn**	**15 20 31.9**	**-0.5**
LUWI	**Luwuk**	**4.72**	**236**	P	**Pn**	**15 20 45.9**	**0.0**
MRSI	**Marisa**	**4.86**	**256**	P	**Pn**	**15 20 49.1**	**+1.2**
APSI	**Ampana**	**5.62**	**243**	P	**Pn**	**15 20 59.4**	**+1.1**
	0.2nm42nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.64**	**183**	P	**P**	**15 24 02.6**	**-0.4**
	0.2nm,0.3s,baz=346,slow=7.4,SNR=6.8						
	1.8nm,0.8s						
YULB	**Yu-li**	**22.24**	**347**	P	P	15 24 20.3	-11
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**15 24 35.7**	**-0.7**
	5.1nm,0.6s,baz=338,slow=11,SNR=45						
	5.1nm,0.6s						
ASAR	**Alice Springs**	**26.12**	**165**	P	**P**	**15 25 07.7**	**-0.5**
	1.0nm,0.4s,baz=350,slow=14,SNR=37						
ASAR				PcP	**PcP**	**15 28 35.6**	**+0.3**
	0.2nm,0.5s,baz=350,slow=3.0,SNR=2.0						
	1.0nm,0.4s						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**15 26 35.6**	**-1.3**
	1.8nm,0.8s,baz=336,slow=10.0,SNR=3.1						
	1.8nm,0.8s						
SONM	**Songino Array**	**49.25**	**342**	P	**P**	**15 28 21.0**	**-1.5**
	0.3nm,0.5s,baz=138,slow=7.1,SNR=1.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**15 29 34.2**	**-0.9**
	0.9nm,0.6s,baz=119,slow=8.4,SNR=7.2						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**15 30 02.8**	**-0.8**
	1.1nm,0.5s,baz=128,slow=6.3,SNR=10						
	1.1nm,0.5s						
BVAR	**Borovoye Array**	**69.03**	**327**	P	**P**	**15 30 37.7**	**-1.6**
	0.3nm,0.4s,baz=134,slow=6.2,SNR=1.8						
	0.3nm,0.4s						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**15 31 50.4**	**+0.5**
	0.4nm,0.5s,baz=326,slow=5.7,SNR=6.6						
	0.4nm,0.5s						
QSPA	**South Pole Qui**	**91.56**	**180**	P	**P**	**15 32 44.2**	**+3.9**
	0.6nm,0.9s,baz=322,slow=2.7,SNR=1.4						

IDC ***15*** *15:23:15.2±1.0, 23.78N×123.36E, h0km, mb3.9/9, mbtmp3.8/10, MS3.2/4, Error ellipse: s-maj=44.5km s-min=20.7km az=64.0*
JMA ***15*** *15:23:21.4±0.2, 24.0N±0.8×123.6E±0.5, h31km±1km, MV3.6/9, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
NIED ***15*** *15:23:21.4, 23.95N×123.58E, h31km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr 0.45; Mθθ -0.48; Mφφ 0.03; Mrθ 0.85; Mθφ -0.46; Mφr 0.30; Fault plane solution: M0 1.09000×10¹⁵ NP1: φs 217.00000°, δ 19.00000°, λ 57.00000°. NP2: φs 71.00000°, δ 74.00000°, λ 101.00000°.*
ISC 15 15:23:17.4±1.4, 23.78N±0.06×123.51E±0.03, h17km±9km, n33, σ0§95/38, mb3.8/9, MS3.3/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.39**	**44**	*i* P	**Pn**	**15 23 27.8**	**-0.4**
HATJ				S	**Sb**	**15 23 32.7**	**+1.2**
IRIF	**Iriomote-Funau**	**0.59**	**20**	*i* P	**Pb**	**15 23 30.1**	**+0.8**
IRIF				S	**Sb**	**15 23 36.4**	**-1.0**
JKRS	**Kuro-shima**	**0.65**	**44**	*i* P	**Pb**	**15 23 31.5**	**+1.3**
JKRS				S	**Sg**	**15 23 38.9**	**+0.1**
JIJ	**Ishigaki jima**	**0.82**	**44**	*i* P	**Pg**	**15 23 33.7**	**+0.2**
JIJ				S	**Sg**	**15 23 42.3**	**-2.0**
YOJ	**Yonaguni jima**	**0.82**	**326**	P	**Pn**	**15 23 35.3**	**+1.1**
YOJ	**Yonaguni jima**	**0.82**	**326**	S	**Sn**	**15 23 44.6**	**-1.4**
YOJ	**Yonaguni jima**	**0.82**	**326**	*i* P	**Pn**	**15 23 35.3**	**+1.1**
YOJ				*e*S	**Sn**	**15 23 44.8**	**-1.1**
JYNG	**Yonagunijimaku**	**0.85**	**322**	*i* P	**Pn**	**15 23 35.8**	**+1.3**
JYNG				S	**Sn**	**15 23 46.2**	**-0.4**
JISG	**Ishigakijimahi**	**1.09**	**42**	*i* P	**Pb**	**15 23 37.8**	**0.0**
JISG				S	**Sb**	**15 23 50.1**	**-1.6**
JTJ	**Tarama**	**1.39**	**51**	P	**Pb**	**15 23 43.3**	**+0.4**
JTJ				S	**Sn**	**15 23 59.6**	**-0.3**
NACB	**Ninganchiao**	**1.80**	**283**	P	**Pb**	**15 23 50.5**	**+0.6**
NACB	**Ninganchiao**	**1.80**	**283**	S	**Sb**	**15 24 12.4**	**+0.2**
YULB	**Yu-li**	**2.07**	**260**	P	**Pb**	**15 23 54.8**	**+0.3**
YHNB	**Yeheng**	**2.15**	**295**	P	**Pb**	**15 23 56.3**	**+0.5**
SSLB	**Suanglung**	**2.34**	**271**	P	**Pb**	**15 23 58.5**	**-0.7**
TWGBT	**Beinan**	**2.43**	**247**	P	**Pb**	**15 24 00.5**	**-0.2**
TWGBT	**Beinan**	**2.43**	**247**	S	**Sb**	**15 24 29.6**	**-0.8**
TPUB	**Ta-pu**	**2.69**	**260**	P	**Pb**	**15 24 05.3**	**+0.2**
JOW	**Kunigami**	**5.28**	**54**	Pn	**Pn**	**15 24 37.1**	**+1.7**
	9.5nm,0.8s,baz=299,slow=29,SNR=1.1						
JOW				Sn	**Sn**	**15 25 34.0**	**-1.9**
	1.8nm,0.3s,baz=145,slow=15,SNR=2.1						
DAV	**Davao City (W)**	**16.73**	**173**	LR	LR	15 33 46.1	
	comp=Z,32nm,19.6s,baz=78,slow=38						
GUMO	**Guam**	**22.59**	**113**	LR	LR	15 35 14.5	
	comp=Z,24nm,20.4s,baz=262,slow=32						
SONM	**Songino Array**	**27.61**	**335**	LR	LR	15 40 32.8	
	comp=Z,77nm,19.8s,baz=82,slow=38						
MKAR	**Makanchi Array**	**40.12**	**315**	P	**P**	**15 30 52.7**	**+0.4**
	0.9nm,0.7s,baz=113,slow=7.4,SNR=2.7						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**41.76**	**326**	P	**P**	**15 31 04.7**	**-0.9**
	0.8nm,0.4s,baz=112,slow=9.1,SNR=4.0						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**43.80**	**319**	P	**P**	**15 31 21.0**	**-1.1**
	0.4nm,0.3s,baz=112,slow=9.4,SNR=4.8						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**44.72**	**165**	P	**P**	**15 31 29.9**	**+0.1**
	0.3nm,0.6s,baz=278,slow=36,SNR=2.4						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**48.23**	**167**	P	**P**	**15 31 58.4**	**+1.0**
	0.2nm,0.6s,baz=349,slow=7.8,SNR=5.0						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**49.34**	**320**	P	**P**	**15 32 05.7**	**+0.1**
	0.6nm,0.5s,baz=106,slow=4.8,SNR=3.0						
	0.6nm,0.5s						
ARCES	**ARCESS Array B**	**70.71**	**338**	LR	LR	16 10 55.0	
	comp=Z,56nm,18.1s,baz=134,slow=40						
FINES	**FINESS Array B**	**72.87**	**330**	P	**P**	**15 34 45.1**	**0.0**
	8.9nm,1.3s,baz=50,slow=7.2,SNR=4.5						
	8.9nm,1.3s						
HFS	**Hagfors**	**78.95**	**331**	P	**P**	**15 35 20.3**	**+0.4**
	1.8nm,0.7s,baz=66,slow=3.5,SNR=2.1						
	1.8nm,0.7s						
NB2	**NORSAR Subarra**	**79.57**	**333**	P	**P**	**15 35 23.5**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=54,slow=5.9						
NOA	**NORSAR Array B**	**79.57**	**333**	P	**P**	**15 35 23.6**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=55,slow=5.7,SNR=5.8						
	comp=Z,1.1nm,0.7s						

IDC 15 15:37:44.7±1.4, 1.43N×126.06E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=113.5km s-min=20.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.41**	**181**	P	P	15 42 12.7	+0.1
	0.1nm,0.3s,baz=1.8,slow=11,SNR=1.6						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.74**	**159**	P	P	15 42 48.4	-0.3
	1.6nm,0.7s,baz=339,slow=11,SNR=13						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**26.09**	**163**	P	P	15 43 20.3	0.0
	0.1nm,0.3s,baz=341,slow=8.0,SNR=17						
ASAR				PcP	PcP	15 46 48.3	-0.1
	0.1nm,0.8s,baz=336,slow=2.3,SNR=1.2						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	15 47 46.6	-0.1
	0.5nm,0.7s,baz=127,slow=8.3,SNR=4.2						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	P	15 48 15.5	+0.1
	0.2nm,0.3s,baz=129,slow=6.7,SNR=4.3						
	0.2nm,0.3s						

IDC ***15*** *15:43:17.9±5.1, 18.16S×177.96W, h503km±54km, mb3.3/10, mbtmp4.2/10, Error ellipse: s-maj=28.3km s-min=21.6km az=71.0*
ISC 15 15:43:25.9±0.8, 18.15S±0.1×178.2W±0.2, h590km, n15, σ1§41/18, mb3.7/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.48**	**190**	P	**P**	**15 47 20.6**	**-3.7**
	2.9nm,0.3s,baz=246,slow=4.6,SNR=7.9						
	2.9nm,0.3s						
STKA	**Stephens Creek**	**38.67**	**241**	P	**P**	**15 50 01.0**	**+0.6**
	1.4nm,0.8s,baz=90,slow=10,SNR=1.8						
	1.4nm,0.8s						
JAY	**Jayapura**	**43.11**	**286**	P	**P**	**15 50 35.6**	**-0.2**
	6.7nm,0.7s,baz=60,slow=8.1,SNR=7.0						
	6.7nm,0.7s						
WRA	**Warramunga Arr**	**44.75**	**260**	P	**P**	**15 50 47.5**	**-0.9**
	1.4nm,0.4s,baz=96,slow=7.0,SNR=50						
WRA				PcP	**PcP**	**15 52 18.1**	**+0.5**
	0.2nm,0.6s,baz=96,slow=3.4,SNR=1.4						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**44.89**	**254**	P	**P**	**15 50 49.4**	**0.0**
	9.8nm,0.6s,baz=88,slow=8.9,SNR=340						
ASAR				PcP	**PcP**	**15 52 18.7**	**+0.6**
	0.3nm,0.4s,baz=108,slow=3.4,SNR=4.7						
ASAR				S	**S**	**15 56 45.9**	**+0.5**
	0.6nm,0.8s,baz=89,slow=16,SNR=6.1						
	9.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.15**	**261**	P	**P**	**15 51 50.2**	**0.0**
	0.6nm,0.3s,baz=100,slow=6.1,SNR=7.5						
	0.6nm,0.3s						
MJAR	**Matsushiro Arr**	**68.16**	**323**	P	**P**	**15 53 28.6**	**+0.3**
	1.7nm,0.6s,baz=162,slow=5.7,SNR=5.3						
	1.7nm,0.6s						
QSPA	**South Pole Qui**	**71.94**	**180**	P	**P**	**15 53 53.9**	**+3.5**
	2.5nm,0.8s,baz=3.5,slow=1.6,SNR=16						
PETK	**Petropavlovsk-**	**73.91**	**345**	P	**P**	**15 54 01.9**	**+0.3**
	1.9nm,0.8s,baz=163,slow=6.0,SNR=4.3						
	1.9nm,0.8s						
ILAR	**Eielson Array**	**86.05**	**13**	P	**P**	**15 55 03.9**	**-0.6**
	0.3nm,0.4s,baz=224,slow=4.9,SNR=11						
	0.3nm,0.4s						
SNAA	**Sanae**	**90.39**	**179**	P	**P**	**15 55 24.3**	**-0.6**
	0.7nm,0.8s,baz=194,slow=8.3,SNR=1.8						
	0.7nm,0.8s						
BVAR	**Borovoye Array**	**117.10**	**321**	PKP	**PKiKP**	**16 01 04.3**	**-0.2**
	0.4nm,0.4s,baz=211,slow=0.8,SNR=2.1						
BRTR	**Keskin Array B**	**145.03**	**315**	PKPbc	**PKPab**	**16 01 58.9**	**-0.4**
	0.5nm,0.4s,baz=62,slow=1.9,SNR=4.4						
MMAI	**Mount Meron Ar**	**146.38**	**303**	PKPbc	**PKiKP**	**16 02 03.5**	**-0.8**
	3.6nm,0.9s,baz=66,slow=3.6,SNR=4.2						
GERES	**GERESS Array B**	**147.85**	**345**	PKPbc	**PKiKP**	**16 02 06.5**	**-0.4**
	0.5nm,0.5s,baz=32,slow=3.9,SNR=3.0						

IDC 15 15:52:19.3±2.1, 1.80N×126.77E, h0km, mb3.3/3, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=119.2km s-min=26.8km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.80**	**183**	P	P	15 56 50.5	-1.1
	baz=14,slow=8.3,SNR=1.6						
	2.0nm,1.0s						
WRA	**Warramunga Arr**	**22.85**	**161**	P	P	15 57 24.3	-0.1
	0.8nm,0.7s,baz=341,slow=11,SNR=10						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**26.25**	**165**	P	P	15 57 57.0	+0.6
	0.1nm,0.4s,baz=343,slow=9.1,SNR=13						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	P	16 02 21.8	-0.2
	0.5nm,0.8s,baz=124,slow=7.3,SNR=1.4						
	0.5nm,0.8s						

SOME ***15*** *15:52:30.1, 40.42N×77.63E, h5km*
KRNET ***15*** *15:52:30.3±0.1, 40.40N×77.58E, h19km, mb3.6*
NNC ***15*** *15:52:32.4±0.9, 40.47N×77.68E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=6.5km s-min=4.9km az=177.0*
ISC 15 15:52:32.6±1.4, 40.43N±0.06×77.54E±0.04, h10km, n44, σ1§56/70, 20C-19D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.31**	**9**	⇓*i* P	**Pn**	**15 52 55.6**	**-1.8**
TARG				⇓*i* S	**Sg**	**15 53 14.4**	**-0.5**
JNKS	**Jany-Kuch**	**1.56**	**294**	⇑*i* P	**Pn**	**15 53 00.4**	**-0.3**
JNKS				⇑*i* S	**Sg**	**15 53 22.1**	**-0.9**
KDJ	**Kajisay**	**1.72**	**351**	⇓*i* P	**Pn**	**15 53 02.9**	**+0.1**
KDJ				⇓*i* S	**Sg**	**15 53 26.7**	**-1.2**
ULHL	**Ulahol**	**2.06**	**332**	⇑*i* P	**Pb**	**15 53 08.8**	**-1.4**
ULHL				⇑*i* S	**Sb**	**15 53 36.7**	**+0.7**
PRZ	**Przheval'sk**	**2.15**	**17**	⇓*e* P	**Pn**	**15 53 09.7**	**+1.0**
PRZ				⇓*e* S	**Sb**	**15 53 38.5**	**-0.1**
BOOM	**Boomskoye usch**	**2.38**	**330**	⇓*e* P	**Pn**	**15 53 13.1**	**+1.2**
BOOM				⇓*e* S	**Sb**	**15 53 44.9**	**-0.4**
TNSS	**Tian-Shan**	**2.64**	**351**	Pg	**Pb**	**15 53 20.7**	**+0.5**
	31nm,0.4s						
TNSS				Lg	Lg	15 53 56.8	
	36nm,0.7s						
TNSS	**Tian-Shan**	**2.64**	**351**	*e* P	**Pb**	**15 53 20.7**	**+0.5**
	31nm,0.4s						
TNSS				*e*S	**Sg**	**15 53 56.8**	**-0.7**
	36nm,0.7s						
IZV	**Izvestkoviy**	**2.69**	**345**	Pg	**Pb**	**15 53 20.8**	**-0.2**
	99nm,0.5s						
IZV				Lg	Lg	15 53 57.6	
	200nm,0.6s						
IZV	**Izvestkoviy**	**

AAK				⇑*i*S		**Sn**	**15 54 03.5**	**+2.7**
PDGK	**Podgornoye**	**3.24**	**26**	⇓Pn		**Pn**	**15 53 24.4**	**+0.7**
	3.8nm,0.5s							
PDGK				⇓Pg		**Pb**	**15 53 29.4**	**-1.0**
	26nm,0.6s							
PDGK				⇓Lg		Lg	15 54 12.9	
	93nm,0.9s							
CHMS	**Chumysh**	**3.31**	**322**	⇑*i*P		**Pn**	**15 53 25.9**	**+1.4**
CHMS				⇑S		**Sn**	**15 54 06.3**	**+2.4**
KTBS	**Karatobe**	**3.34**	**349**	Pg		**Pb**	**15 53 33.2**	**+1.3**
	31nm,0.4s							
KTBS				Lg		Lg	15 54 18.2	
	45nm,0.4s							
KRBS	**Karabastau**	**3.55**	**338**	Pg		**Pb**	**15 53 36.5**	**+1.1**
	7.6nm,0.3s							
KRBS				Lg		Lg	15 54 24.6	
	42nm,0.8s							
ARSB	**Arslanbob**	**3.57**	**286**	⇑*e*P		**Pn**	**15 53 29.2**	**+1.0**
ARSB				⇑*e*S		**Sn**	**15 54 13.0**	**+2.5**
KUU	**Kurty**	**3.57**	**346**	Pg		**Pb**	**15 53 37.0**	**+1.1**
	11nm,0.2s							
KUU				Lg		Lg	15 54 24.6	
	30nm,0.7s							
KUU	**Kurty**	**3.57**	**346**	*e*P		**Pb**	**15 53 37.0**	**+1.1**
	11nm,0.2s							
KUU				*e*S		**Sg**	**15 54 24.6**	**-2.7**
	30nm,0.7s							
EKS2	**Erkin-Say**	**3.60**	**310**	⇓*e*P		**Pn**	**15 53 30.0**	**+1.5**
EKS2				⇓*i*S		**Sn**	**15 54 13.5**	**+2.3**
USP	**Ospenovka**	**3.63**	**322**	⇓*e*P		**Pn**	**15 53 30.4**	**+1.5**
USP				⇓*i*S		**Sn**	**15 54 14.3**	**+2.4**
KTMS	**Ketmen**	**3.67**	**34**	Pg		**Pb**	**15 53 36.3**	**-1.3**
	4.5nm,0.3s							
KTMS				Lg		Lg	15 54 23.6	
	21nm,0.4s							
KTMS	**Ketmen**	**3.67**	**34**	*e*P		**Pb**	**15 53 36.3**	**-1.3**
	4.5nm,0.3s							
KTMS				*e*S		**Sb**	**15 54 23.6**	**+1.4**
	21nm,0.4s							
BLB	**Baldybastay**	**3.73**	**10**	Pg		**Pb**	**15 53 39.6**	**+1.0**
	76nm,0.3s							
BLB				Lg		Lg	15 54 29.6	
	74nm,0.5s							
MRKS	**Merke**	**3.98**	**307**	Pg		**Pb**	**15 53 44.5**	**+1.7**
	4.4nm,0.4s							
MRKS				Lg		Lg	15 54 37.6	
	22nm,0.5s							
MRKS	**Merke**	**3.98**	**307**	*e*P		**Pb**	**15 53 44.5**	**+1.7**
	4.4nm,0.4s							
MRKS				*e*S		**Sg**	**15 54 37.6**	**-2.7**
	22nm,0.5s							

IDC 15 15:52:34.3±1.7, 1°93'N×126°43'E, h0km, mb3.8/4, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=122.1km s-min=20.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.92**	**182**	P	P	15 57 08.0	+0.2
	0.1nm,0.3s,baz=11,slow=10,SNR=1.7 2.0nm,1.0s						
WRA	**Warramunga Arr**	**23.09**	**161**	P	P	15 57 40.9	-0.9
	1.4nm,0.6s,baz=339,slow=11,SNR=10 1.4nm,0.6s						
ASAR	**Alice Springs**	**26.46**	**164**	P	P	15 58 14.0	+0.7
	0.5nm,0.5s,baz=344,slow=8.6,SNR=9.1 0.5nm,0.5s						
MKAR	**Makanchi Array**	**58.86**	**326**	P	P	16 02 35.1	+0.2
	0.4nm,0.5s,baz=126,slow=8.7,SNR=4.6 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**63.09**	**328**	P	P	16 03 03.1	-0.4
	1.4nm,0.2s,baz=123,slow=7.6,SNR=3.4 1.4nm,0.2s						

IDC 15 16:02:19.6±1.9, 21°04'N×92°31'E, h0km, mb3.4/3, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=63.4km s-min=27.2km az=52.0, Myanmar-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.76**	**111**	Pn	Pn	16 03 58.5	-1.6
	0.3nm,0.3s,baz=292,slow=12,SNR=12						
CMAR				Sn	Sn	16 05 19.3	+1.5
	0.1nm,0.3s,baz=289,slow=23,SNR=1.1 1.0nm,0.4s						
MKAR	**Makanchi Array**	**26.95**	**345**	P	P	16 08 02.3	-0.4
	1.1nm,0.9s,baz=162,slow=9.7,SNR=2.2 1.1nm,0.9s						
WRA	**Warramunga Arr**	**57.88**	**132**	P	P	16 12 13.3	-0.3
	0.4nm,0.9s,baz=318,slow=7.6,SNR=1.7 0.4nm,0.9s						
ASAR	**Alice Springs**	**60.13**	**135**	P	P	16 12 29.8	+0.6
	0.2nm,0.5s,baz=314,slow=6.8,SNR=8.7 0.2nm,0.5s						

*MDD **15** 16:07:07.0±1.0, 36°.40N×11°.12W, h25km±27km, Mb4.3/12, M_mb3.7/12, Error ellipse: s-maj=25.8km s-min=6.9km az=53.0*
*IGIL **15** 16:07:07.1, 36°.39N×11°.22W, h32km, ML1.8*
*INMG **15** 16:07:07.7±1.3, 36°.34N×11°.17W, h29km, ML2.2, Error ellipse: s-maj=7.3km s-min=4.5km az=80.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*CNRM **15** 16:07:11.4, 36°.07N×10°.24W, h16km, ML3.6*

ISC 15 16:07:03.0±2.0, 36°26'N±0°.05×11°2'W±0°.1, h35km, n59, σ2s38/85, 12C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.11**	**65**	Pn	**Pn**	**16 07 38.3**	**+2.4**
PFVI				Sn	**Sn**	**16 08 00.2**	**-0.7**
PFVI	**Vila Bisbo**	**2.11**	**65**	⇑*i*P	**Pn**	**16 07 38.3**	**+2.4**
PFVI				*e*S	**Sn**	**16 08 00.5**	**-0.4**
PFVI				*i* IAML		16 08 02.1	
PFVI				*i* IAML		16 08 02.8	
PFVI	**Vila Bisbo**	**2.11**	**65**	P	**Pn**	**16 07 38.5**	**+2.6**
PFVI	**Vila Bisbo**	**2.11**	**65**	S	**Sn**	**16 07 59.2**	**-1.7**
MORF	**Marmelete**	**2.31**	**62**	*e*P	**Pn**	**16 07 41.0**	**+2.4**
MORF				*e*S	**Sn**	**16 08 05.7**	**-0.2**
MORF				IAML		16 08 07.2	
	comp=N,6.8nm,0.0s						
MORF	**Marmelete**	**2.31**	**62**	⇑*e*P	**Pn**	**16 07 41.1**	**+2.4**
MORF				*e*S	**Sn**	**16 08 05.7**	**-0.2**
MORF				*i* IAML		16 08 07.9	
MORF				*i* IAML		16 08 08.1	
MORF				*i* IAML		16 08 12.7	
PBDV	**Barranco-do-Ve**	**2.82**	**69**	Pn	**Pn**	**16 07 48.4**	**+2.8**
PBDV				Sn	**Sn**	**16 08 17.1**	**-1.3**
PBDV	**Barranco-do-Ve**	**2.82**	**69**	*e*P	**Pn**	**16 07 48.5**	**+2.8**
PBDV				*e*S	**Sn**	**16 08 18.6**	**+0.2**
PBDV				*i* IAML		16 08 22.2	
PBDV				*i* IAML		16 08 24.0	
PBDV				*i* IAML		16 08 24.3	
MESJ	**Messejana**	**2.87**	**56**	*e*P	**Pn**	**16 07 48.6**	**+2.3**
MESJ				*e*S	**Sn**	**16 08 18.6**	**-1.0**
MESJ				IAML		16 08 21.3	
	comp=E,3.2nm,0.2s						
MESJ	**Messejana**	**2.87**	**56**	*e*P	**Pn**	**16 07 48.6**	**+2.3**
MESJ				*e*S	**Sn**	**16 08 20.8**	**+1.2**
MESJ				*i* IAML		16 08 26.1	
MESJ				*i* IAML		16 08 26.2	
MESJ				*i* IAML		16 08 27.3	
PCVE	**Castro Verde**	**2.89**	**61**	Pn	**Pn**	**16 07 49.1**	**+2.5**
PCVE				Sn	**Sn**	**16 08 21.2**	**+1.0**
PCVE	**Castro Verde**	**2.89**	**61**	*e*P	**Pn**	**16 07 49.2**	**+2.6**
PVAQ	**Vaqueiros**	**3.03**	**67**	*e*P	**Pn**	**16 07 51.3**	**+2.7**
PVAQ				*e*S	**Sn**	**16 08 23.5**	**-0.1**
PVAQ				*i* IAML		16 08 26.2	
PVAQ				*i* IAML		16 08 27.0	
PVAQ				*i* IAML		16 08 30.5	
PVAQ	**Vaqueiros**	**3.03**	**67**	P	**Pn**	**16 07 50.5**	**+2.0**
PVAQ	**Vaqueiros**	**3.03**	**67**	S	**Sn**	**16 08 20.3**	**-3.3**
PMAFR	**Mafra**	**3.10**	**29**	Sn	**Sn**	**16 08 24.1**	**-1.2**
PMAFR	**Mafra**	**3.10**	**29**	*e*P	**Pn**	**16 07 51.4**	**+1.9**
PMAFR				*e*S	**Sn**	**16 08 24.8**	**-0.5**
PMAFR				*i* IAML		16 08 25.3	
PMAFR				*i* IAML		16 08 25.5	
PMAFR				*i* IAML		16 08 26.5	
MOE	**Montemor**	**3.21**	**45**	*e*P	**Pn**	**16 07 53.2**	**+2.2**
MOE				*e*S	**Sn**	**16 08 27.2**	**-0.8**
MOE				*i* IAML		16 08 28.3	
MOE				*i* IAML		16 08 28.5	
MOE				*i* IAML		16 08 29.4	
EGRO	**El Granado**	**3.25**	**66**	Pn	**Pn**	**16 07 54.2**	**+2.6**
EGRO				Sn	**Sn**	**16 08 29.4**	**+0.3**
EGRO	**El Granado**	**3.25**	**66**	Pn	**Pn**	**16 07 54.4**	**+2.8**
EGRO				⇑*i*Vmb_VC		16 07 56.3	
	comp=E,322nm,SNR=1.9						
EGRO				Sn	**Sn**	**16 08 29.0**	**-0.1**
PARRA	**Arraiolos**	**3.59**	**44**	*e*P	Pn	16 07 58.2	+9.0
PARRA				*e*S	Sn	16 08 36.4	+12
PARRA				*i* IAML		16 08 36.8	
PARRA				*i* IAML		16 08 37.0	
PARRA				*i* IAML		16 08 39.5	
PMTG	**Montargil**	**3.67**	**39**	*e*P	**Pn**	**16 07 59.2**	**+1.8**
PMTG				*e*S	**Sn**	**16 08 38.0**	**-1.4**
PMTG				*i* IAML		16 08 40.1	
PMTG				*i* IAML		16 08 41.9	
PMTG				*i* IAML		16 08 42.1	
PSBE	**So Bento**	**3.77**	**30**	*e*S	**Sn**	**16 08 41.3**	**-0.6**
PSBE				*i* IAML		16 08 42.7	
PBAR	**Barrancos**	**3.85**	**59**	Pn	**Pn**	**16 08 02.0**	**+2.3**
PBAR				Sn	**Sn**	**16 08 42.6**	**-1.0**
PBAR	**Barrancos**	**3.85**	**59**	*e*P	**Pn**	**16 08 02.4**	**+2.7**
PBAR				*e*S	**Sn**	**16 08 43.3**	**-0.4**
PBAR				*i* IAML		16 08 45.5	
PBAR				*i* IAML		16 08 46.2	
PBAR				*i* IAML		16 08 47.5	
PESTR	**Estremoz**	**3.88**	**47**	*e*S	**Sn**	**16 08 43.9**	**-0.7**
EMIN	**Mina Concepcio**	**3.94**	**66**	Pn	**Pn**	**16 08 03.2**	**+2.2**
EMIN	**Mina Concepcio**	**3.94**	**66**	Pn	**Pn**	**16 08 02.7**	**+1.7**
EMIN				⇑*i*Vmb_VC		16 08 03.7	
	comp=E,178nm,SNR=1.4						
EMIN				Sn	**Sn**	**16 08 44.3**	**-1.7**
PSARD	**Sardoal**	**4.12**	**35**	*e*P	**Pn**	**16 08 05.5**	**+2.0**
PSARD				*e*S	**Sn**	**16 08 48.9**	**-1.5**
PSARD				*i* IAML		16 08 50.6	
PSARD				*i* IAML		16 08 51.7	
PSARD				*i* IAML		16 08 52.0	
EBAD	**Badajoz**	**4.17**	**52**	Pn	**Pn**	**16 08 05.7**	**+1.5**
EBAD				Sn	**Sn**	**16 08 50.6**	**-1.1**
EBAD	**Badajoz**	**4.17**	**52**	Pn	**Pn**	**16 08 05.6**	**+1.5**
EBAD				⇑*i*Vmb_VC		16 08 09.2	
	comp=E,312nm,SNR=2.1						
EBAD				Sn	**Sn**	**16 08 49.0**	**-2.7**
PCAS	**Casmilo, Conde**	**4.35**	**29**	*e*S	**Sn**	**16 08 55.3**	**-0.9**
PCAS				*i* IAML		16 08 58.7	
PCAS				*i* IAML		16 08 58.9	
PCAS				*i* IAML		16 09 00.6	
ESPR	**Espera**	**4.36**	**80**	Pn	**Pn**	**16 08 09.6**	**+2.8**
ESPR				⇑*i*Vmb_VC		16 08 10.5	
	comp=E,337nm,SNR=2.4						
ESPR				Sn	**Sn**	**16 08 55.3**	**-1.0**
PCBR	**Castelo Branco**	**4.64**	**38**	*e*S	**Sn**	**16 09 01.4**	**-1.7**
ZHG	**ZHG**	**4.70**	**125**	P	**Pn**	**16 08 11.7**	**+0.2**
ZHG	**ZHG**	**4.70**	**125**	S	Sn	16 08 59.1	-5.7
ECAB	**El Cabril**	**4.97**	**67**	Pn	**Pn**	**16 08 17.7**	**+2.4**
ECAB				Sn	**Sn**	**16 09 08.9**	**-2.7**
ECAB	**El Cabril**	**4.97**	**67**	Pn	**Pn**	**16 08 17.4**	**+2.1**
ECAB				⇑*i*Vmb_VC		16 08 18.2	
	comp=E,208nm,SNR=1.8						
ECAB				Sn	**Sn**	**16 09 09.3**	**-2.3**
PVIS	**Viseu**	**5.16**	**29**	*e*P	**Pn**	**16 08 22.1**	**+4.3**
PVIS				*e*S	**Sn**	**16 09 13.8**	**-2.3**
EPLA	**Plasencia**	**5.55**	**45**	⇑*i*Vmb_VC		16 08 26.3	
	comp=E,213nm,SNR=1.0						
EPLA				Sn	**Sn**	**16 09 21.8**	**-3.9**
EADA	**Adamuz**	**5.63**	**68**	Pn	**Pn**	**16 08 27.0**	**+2.7**
EADA				Sn	**Sn**	**16 09 26.4**	**-1.4**
EADA	**Adamuz**	**5.63**	**68**	Pn	**Pn**	**16 08 26.8**	**+2.5**
EADA				⇑*i*Vmb_VC		16 08 28.9	
	comp=E,168nm,SNR=1.1						
EADA				Sn	**Sn**	**16 09 25.0**	**-2.8**
POLO	**Lamas de Olo**	**5.76**	**27**	*e*S	**Sn**	**16 09 27.6**	**-3.5**
POLO				*i* IAML		16 09 28.8	
POLO				*i* IAML		16 09 29.9	
POLO				*i* IAML		16 09 30.1	
OUK	**Oukaimeden**	**5.76**	**150**	P	**Pn**	**16 08 29.5**	**+3.1**
OUK	**Oukaimeden**	**5.76**	**150**	S	**Sn**	**16 09 30.8**	**-0.7**
MVO	**Moncorvo**	**5.89**	**33**	*e*P	**Pn**	**16 08 29.5**	**+1.6**
MVO				*e*S	**Sn**	**16 09 30.8**	**-3.4**
MVO				*i* IAML		16 09 32.3	
MVO				*i* IAML		16 09 33.8	
MVO				*i* IAML		16 09 33.8	
PCAB	**Cabril**	**5.98**	**24**	*e*S	**Sn**	**16 09 34.0**	**-2.3**
TISM	**Timmit**	**6.02**	**137**	P	**Pn**	**16 08 31.0**	**+1.4**
TISM	**Timmit**	**6.02**	**137**	S	**Sn**	**16 09 33.5**	**-3.8**
ELOB	**Lobios**	**6.11**	**23**	⇑*i*Vmb_VC		16 08 33.5	
	comp=E,198nm,SNR=0.5						
ELOB				Sn	**Sn**	**16 09 35.2**	**-4.5**
PGAV	**Gavieira, Arco**	**6.14**	**21**	*e*S	**Sn**	**16 09 36.4**	**-3.9**
PGAV				*i* IAML		16 09 39.9	
PGAV				*i* IAML		16 09 41.5	
TIO	**Tiouine**	**6.26**	**147**	Pn	**Pn**	**16 08 37.4**	**+4.3**
MD31	**MD31**	**6.32**	**121**	P	**Pn**	**16 08 33.3**	**-0.5**
MD31	**MD31**	**6.32**	**121**	S	Sn	16 09 37.2	-7.5
PAB	**San Pablo**	**6.35**	**57**	Pn	**Pn**	**16 08 35.6**	**+1.4**
PAB				⇑*i*Vmb_VC		16 08 36.9	
	comp=E,76nm,SNR=0.7						
PAB				Sn	**Sn**	**16 09 40.6**	**-4.9**
MDT	**Midelt**	**6.45**	**120**	P	**Pn**	**16 08 35.1**	**-0.5**
MDT	**Midelt**	**6.45**	**120**	S	Sn	16 09 41.4	-6.7
PSIM	**Granatula de C**	**6.46**	**64**	Pn	**Pn**	**16 08 37.8**	**+2.1**
PSIM				Sn	**Sn**	**16 09 43.7**	**-4.4**
EAGO	**Agolada(Pontev**	**6.97**	**19**	⇑*i*Vmb_VC		16 08 46.1	
	comp=E,306nm,SNR=0.9						
EAGO				Sn	**Sn**	**16 09 55.5**	**-5.1**

*IDC **15** 16:22:41.6±1.2, 1°.53N×126°.48E, h0km, mb3.7/7, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=105.9km s-min=13.6km az=68.0*
*DJA **15** 16:22:45.9±0.3, 2°.N±4°×12°6E±°, h10km, M4.2/11, mB4.7/1, mb4.2/2, MLv4.2/11, Mw(mB)3.9/1*

ISC 15 16:22:47.4±0.9, 1°.54N±0°.07×126°.51E±0°.08, h35km, n14, σ1s02/16, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**131**	P	**Pn**	**16 23 07.9**	**+0.9**
SGSI	**Sangihe**	**2.35**	**335**	P	**Pn**	**16 23 24.3**	**+0.8**
KMSI	**Cibinong**	**2.70**	**249**	P	**Pn**	**16 23 28.6**	**+0.3**
SANI	**Sanana**	**3.60**	**188**	P	**Pn**	**16 23 40.4**	**-0.3**
LUWI	**Luwuk**	**4.53**	**236**	P	**Pn**	**16 23 54.5**	**+1.0**
APSI	**Ampana**	**5.43**	**243**	P	**Pn**	**16 24 07.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**19.53**	**182**	P	**P**	**16 27 10.8**	**-1.2**
	0.2nm,0.3s,baz=11,slow=11,SNR=5.1 2.5nm,0.8s						
WRA	**Warramunga Arr**	**22.69**	**161**	P	**P**	**16 27 45.1**	**-1.0**
	1.7nm,0.4s,baz=339,slow=11,SNR=59						
WRA				S	**S**	**16 31 53.9**	**+1.6**
	0.4nm,0.8s,baz=340,slow=17,SNR=2.7 1.7nm,0.4s						
ASAR	**Alice Springs**	**26.06**	**164**	P	**P**	**16 28 17.7**	**-0.1**
	0.5nm,0.5s,baz=348,slow=10,SNR=29						
ASAR				PcP	**PcP**	**16 31 45.6**	**+0.3**
	0.2nm,0.5s,baz=343,slow=2.3,SNR=1.7 0.5nm,0.5s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**16 32 44.5**	**-0.8**
	0.5nm,0.4s,baz=119,slow=8.5,SNR=12 0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**62.44**	**334**	P	**P**	**16 33 06.9**	**0.0**
	0.3nm,0.4s,baz=124,slow=7.2,SNR=1.6 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.46**	**328**	P	**P**	**16 33 12.3**	**-1.5**
	0.5nm,0.4s,baz=122,slow=6.0,SNR=1.6 0.5nm,0.4s						
BVAR	**Borovoye Array**	**69.03**	**328**	P	**P**	**16 33 48.6**	**-0.9**
	0.3nm,0.5s,baz=121,slow=7.4,SNR=2.3 0.3nm,0.5s						
VNDA	**Vanda**	**81.29**	**173**	P	**P**	**16 35 00.3**	**+0.7**
	0.4nm,0.6s,baz=319,slow=4.3,SNR=4.0 0.4nm,0.6s						

DJA 15 16:25:07.6±0.3, 1°S±3°×12°7E±°, h10km, M3.8/12, mb4.1/1, MLv3.6/12, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.56**	**26**	P	Pn	16 25 33.6	-1.8
SANI	**Sanana**	**1.57**	**207**	P	Pn	16 25 34.6	-0.9
NLAI	**Namlea**	**2.61**	**171**	P	Pn	16 25 48.7	-1.2
KMSI	**Cibinong**	**2.97**	**294**	P	Pn	16 25 55.9	+1.1
AAI	**Ambon**	**3.38**	**154**	P	Pn	16 25 59.3	-1.2
LUWI	**Luwuk**	**3.94**	**264**	P	Pn	16 26 07.9	-0.3
SWI	**Sorong**	**4.58**	**93**	P	Pn	16 26 16.5	-0.4
APSI	**Ampana**	**5.05**	**267**	P	Pn	16 26 23.9	+0.5

*NEIC **15** 16:27:44.7±1.4, 23°.28S±0°.06×174°.8W±0°.1, h10km±1km, mb4.4/7, Error ellipse: s-maj=24.3km s-min=2.9km az=116.0*
*IDC **15** 16:27:45.4±0.7, 23°.39S×175°.09W, h0km, mb4.2/14, mbtmp4.2/15, ML4.8/2, MS3.4/4, Error ellipse: s-maj=27.6km s-min=18.5km az=136.0*

ISC 15 16:27:50.2±0.6, 23°42S±0°.08×175°2W±0°.1, h29km, n47, σ1s14/39, mb4.2/21, MS3.4/3, 5C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.29**	**202**	Pn	**Pn**	**16 29 20.4**	**-0.7**
	81nm,0.3s,baz=41,slow=20,SNR=2.7						
RAO				Sn	**Sn**	**16 30 29.8**	**-2.1**
	57nm,0.3s,baz=90,slow=20,SNR=7.3						
RAO	**Raoul Island**	**6.29**	**202**		**Pn**	**16 29 21.2**	**+0.1**
NIUE	**Niue**	**6.57**	**50**		Pn	16 29 14.1	-11
AFI	**Afiamalu**	**10.01**	**20**	Pn	Pn	16 30 06.0	-6.2
RAR	**Rarotonga**	**14.47**	**84**	Pn	Pn	16 31 02.2	-11
	1.4nm,0.3s,baz=255,slow=12,SNR=7.8						
RAR				Sn	Sn	16 33 26.5	-26
	1.0nm,0.3s,baz=221,slow=19,SNR=1.4						
RAR				LR	LR	16 36 39.2	
	comp=Z,74nm,19.2s,baz=283,slow=37						
RAR	**Rarotonga**	**14.47**	**84**		Pn	16 31 03.1	-10
URZ	**Urewera**	**16.18**	**202**	Pn	**Pn**	**16 31 35.7**	**+0.3**
	1.1nm,0.3s,baz=122,slow=23,SNR=1.7						
URZ				Sn	Sn	16 34 20.5	-14
	1.2nm,0.3s,baz=26,slow=24,SNR=10 2.9nm,0.3s						
SANVU	**Saraoutou**	**18.36**	**292**	P	**P**	**16 32 01.5**	**-1.2**
OXZ	**Oxford**	**22.47**	**205**	P	**P**	**16 32 45.5**	**-1.6**
OXZ				IAmb	IAmb	16 33 17.4	
	comp=Z,17nm,1.0s						
HNR	**Honiara**	**27.51**	**296**	LR	LR	16 43 45.7	
	comp=Z,46nm,18.4s,baz=207,slow=35						
STKA	**Stephens Creek**	**38.96**	**248**	P	**P**	**16 35 14.5**	**+0.5**
	comp=Z,2.0nm,0.4s,baz=86,slow=11,SNR=9.5 comp=Z,2.0nm,0.4s						
AS31	**Alice Springs**	**46.42**	**259**	P	**P**	**16 36 14.3**	**-0.3**
AS31				IAmb	IAmb	16 36 16.4	
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**46.42**	**259**	P	**P**	**16 36 14.4**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=98,slow=8.0,SNR=57						
ASAR				PcP	**PcP**	**16 37 50.2**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=100,slow=3.4,SNR=7.1 comp=Z,0.7nm,0.3s						
WB0	**Warramunga Arr**	**46.80**	**264**	P	**P**	**16 36 16.9**	**-0.7**
WB0				IAmb	IAmb	16 36 18.7	
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**46.81**	**264**	P	**P**	**16 36 16.7**	**-1.0**
	comp=Z,1.9nm,0.4s,baz=102,slow=8.0,SNR=114						
WRA				PcP	**PcP**	**16 37 51.2**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=101,slow=3.3,SNR=5.4 comp=Z,1.9nm,0.4s						
WRA	**Warramunga Arr**	**46.81**	**264**	P	**P**	**16 36 16.9**	**-0.7**
WRA					**PcP**	**16 37 51.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**55.23**	**264**	P	**P**	**16 37 20.8**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=108,slow=7.0,SNR=12						
FITZ				LR	LR	17 00 00.5	
	comp=Z,31nm,18.3s,baz=360,slow=35 comp=Z,5.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.23**	**264**	P	**P**	**16 37 20.8**	**-0.2**
FITZ				IAmb	IAmb	16 37 22.4	
	comp=Z,1.3nm,0.8s						
QSPA	**South Pole Qui**	**66.66**	**180**	P	**P**	**16 38 41.7**	**+3.6**
	comp=Z,2.0nm,1.0s,baz=34,slow=1.3,SNR=5.7						
MJAR	**Matsushiro Arr**	**74.08**	**323**	P	**P**	**16 39 23.7**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=161,slow=5.9,SNR=1.7 comp=Z,0.6nm,0.5s						
MAW	**Mawson**	**79.69**	**199**	P	**P**	**16 39 56.2**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=153,slow=11,SNR=4.9 comp=Z,2.3nm,0.8s						
KSRS	**Korea Array**	**80.77**	**318**	P	**P**	**16 40 01.8**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=137,slow=6.5,SNR=2.8 comp=Z,1.1nm,0.7s						
NVAR	**Mina Array Bea**	**81.43**	**42**	P	**P**	**16 40 03.3**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=243,slow=4.1,SNR=3.5 comp=Z,0.6nm,0.7s						
H03S2	**Juan Fernandez**	**82.23**	**123**	T	T	18 11 52.8	
	baz=245,slow=75,SNR=27						
H03S1	**Juan Fernandez**	**82.25**	**123**	T	T	18 11 52.1	
	baz=245,slow=75,SNR=29						
H03S3	**Juan Fernandez**	**82.25**	**123**	T	T	18 11 50.8	
	baz=245,slow=75,SNR=32						
H03N2	**Juan Fernandez**	**82.38**	**123**	T	T	18 12 22.3	
	baz=244						
H03N3	**Juan Fernandez**	**82.38**	**123**	T	T	18 12 28.0	
	baz=244						
H03N1	**Juan Fernandez**	**82.40**	**123**	T	T	18 12 22.5	
	baz=244						
USRK	**Ussuriysk Ar.**	**82.82**	**325**	P	**P**	**16 40 13.3**	**+1.6**
	comp=Z,2.2nm,1.0s,baz=125,slow=7.6,SNR=2.2 comp=Z,2.2nm,1.0s						
KDAK	**Kodiak Island**	**83.08**	**12**	LR	LR	17 12 40.0	
	comp=Z,58nm,18.5s,baz=142,slow=32						
TROLL	**Troll, Antarti**	**84.81**	**179**	⇑P	**P**	**16 40 22.2**	**+0.4**
	comp=Z,363nm,0.7s						
SNAA	**Sanae**	**85.02**	**178**	⇑P	**P**	**16 40 22.1**	**-0.6**
	comp=Z,61nm,1.0s						
SNAA	**Sanae**	**85.02**	**178**	P	**P**	**16 40 22.0**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=196,slow=7.4,SNR=8.5 comp=Z,2.6nm,0.9s						
SNAA	**Sanae**	**85.02**	**178**	P	**P**	**16 40 21.8**	**-1.0**
SNAA				IAmb	IAmb	16

TOLI2	**Tolitoli**	5.79	266		Pn	16 45 12.5	-1.3
MPSI	**Mapaga**	6.76	260	P	Pn	16 45 27.9	+0.7
	0.1nm20nm,0.8s						
MYLDM	**Lahad Datu**	8.83	295		Pn	16 45 57.7	+2.2
SBUM	**Sibu**	14.36	274		Pn	16 47 12.1	+0.8
MTN	**Manton Dam**	14.97	162	Pn	Pn	16 47 19.6	+0.1
MTN				IAmb	IAmb	16 47 19.8	
	comp=Z,20nm,1.5s						
KNRA	**Kununurra**	17.22	173	Pn	Pn	16 47 47.8	-0.5
KNRA				IAmb	IAmb	16 47 56.9	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	19.51	183	P	P	16 48 13.4	-1.4
	comp=Z,0.2nm,0.3s,baz=0.4,slow=8.9,SNR=7.0						
	comp=Z,1.6nm,0.8s						
FITZ	**Fitzroy Crossi**	19.51	183	P	P	16 48 14.4	-0.3
TPUB	**Ta-pu**	22.41	346	P	P	16 48 42.0	-4.1
WB0	**Warramunga Arr**	22.50	160		P	16 48 47.2	+0.1
WB0				IAmb	IAmb	16 48 56.8	
	comp=Z,11nm,0.7s						
COEN	**Coen**	22.53	134	P	P	16 48 45.3	-2.2
COEN				IAmb	IAmb	16 48 45.7	
	comp=Z,6.1nm,1.1s						
WRAB	**Tennant Creek**	22.64	161	P	P	16 48 49.1	+0.5
WRAB				IAmb	IAmb	16 48 58.6	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	22.65	161	P	P	16 48 48.2	-0.5
	comp=Z,8.7nm,0.6s,baz=338,slow=11,SNR=84						
WRA				PcP	PcP	16 52 41.6	+0.8
	comp=Z,0.2nm,0.7s,baz=330,slow=2.2,SNR=1.7						
WRA				S	S	16 52 53.8	-0.7
	comp=Z,0.3nm,0.3s,baz=341,slow=18,SNR=4.6						
	comp=Z,8.7nm,0.6s						
WR8	**Warramunga Arr**	22.71	160		P	16 48 49.0	-0.4
WR8				IAmb	IAmb	16 48 59.4	
	comp=Z,10nm,1.0s						
SSLB	**Suanglung**	22.80	347	P	P	16 48 48.5	-1.7
SSLB				IAmb	IAmb	16 49 32.4	
	comp=Z,53nm,1.4s						
AS31	**Alice Springs**	26.03	164		P	16 49 20.8	+0.4
ASAR	**Alice Springs**	26.03	165	P	P	16 49 19.9	-0.6
	comp=Z,1.2nm,0.3s,baz=343,slow=11,SNR=46						
ASAR				PcP	PcP	16 52 48.3	+0.1
	comp=Z,0.3nm,0.4s,baz=346,slow=2.4,SNR=4.6						
	comp=Z,1.2nm,0.3s						
ASAR	**Alice Springs**	26.03	165	P	P	16 49 20.9	+0.5
FORT	**Forrest**	32.14	178	P	P	16 50 15.3	+0.6
FORT				IAmb	IAmb	16 50 22.4	
	comp=Z,4.2nm,0.8s						
PZH	**PanZhiHua**	34.44	318	P	P	16 50 36.4	+1.4
BBOO	**Buckleboo**	35.30	166	P	P	16 50 42.6	+0.4
KSRS	**Korea Array**	35.79	2	P	P	16 50 48.5	+2.2
	comp=Z,0.8nm,0.6s,baz=184,slow=11,SNR=4.7						
	comp=Z,0.8nm,0.6s						
STKA	**Stephens Creek**	36.14	158	P	P	16 50 49.0	-0.4
	comp=Z,1.3nm,0.6s,baz=341,slow=14,SNR=2.9						
	comp=Z,1.3nm,0.6s						
MJAR	**Matsushiro Arr**	36.49	16	P	P	16 50 54.0	+1.7
	comp=Z,1.5nm,0.9s,baz=187,slow=8.6,SNR=3.2						
	comp=Z,1.5nm,0.9s						
HHC	**Hu-ho-hao-te**	41.44	343	*e*P	P	16 51 36.3	+2.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,4.6s						
USRK	**Ussuriysk Ar.**	42.78	6	P	P	16 51 46.0	+1.4
	comp=Z,2.1nm,0.8s,baz=184,slow=5.8,SNR=6.1						
	comp=Z,2.1nm,0.8s						
EVN	**Everest**	46.20	308	P	P	16 52 12.0	-0.9
EVN				IAmb	IAmb	16 52 15.8	
	comp=Z,7.8nm,1.5s						
HILR	**Hailar Array B**	48.22	354	P	P	16 52 29.3	+1.7
	comp=Z,1.5nm,0.5s,baz=178,slow=12,SNR=1.9						
	comp=Z,1.5nm,0.5s						
SONM	**Songino Array**	49.34	342	P	P	16 52 36.5	+0.2
	comp=Z,0.7nm,0.6s,baz=157,slow=9.2,SNR=4.0						
SONM				LR	LR	17 18 02.9	
	comp=Z,30nm,18.1s,baz=262,slow=42						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	59.28	326	P	P	16 53 47.8	-0.7
	comp=Z,1.8nm,0.5s,baz=122,slow=8.6,SNR=24						
MKAR				PcP	PcP	16 54 36.4	-0.2
	comp=Z,0.7nm,0.7s,baz=119,slow=5.1,SNR=1.6						
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	62.48	334	P	P	16 54 08.4	-1.8
	comp=Z,0.5nm,0.4s,baz=132,slow=6.4,SNR=2.9						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	63.51	328	P	P	16 54 16.1	-1.0
	comp=Z,2.2nm,0.6s,baz=128,slow=6.3,SNR=42						
	comp=Z,2.2nm,0.6s						
KURK	**Kurchatov**	63.51	328		P	16 54 16.0	-1.1
BVAR	**Borovoye Array**	69.08	328	P	P	16 54 51.8	-1.0
	comp=Z,1.0nm,0.5s,baz=116,slow=6.6,SNR=5.8						
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	81.26	173	P	P	16 56 02.4	0.0
	comp=Z,0.9nm,0.7s,baz=323,slow=7.0,SNR=7.8						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	81.26	173	P	P	16 56 02.5	0.0
KBZ	**Khabaz**	84.37	314	P	P	16 56 17.1	-2.1
	comp=Z,1.0nm,0.7s,baz=102,slow=9.3,SNR=1.8						
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	92.46	340	P	P	16 56 57.0	-0.4
	comp=Z,2.5nm,0.9s,baz=78,slow=5.8,SNR=1.5						
	comp=Z,2.5nm,0.9s						
FINES	**FINESS Array B**	93.69	332	P	P	16 57 02.3	-0.9
	comp=Z,1.0nm,0.8s,baz=103,slow=6.3,SNR=3.9						
	comp=Z,1.0nm,0.8s						

IDC ***15*** *16:50:23.3±1.1,20˚.10S×66˚.36E,h0km,mb3.7/8, mbtmp3.7/8,MS3.2/6,Error ellipse: s-maj=36.8km s-min=26.1km az=70.0*

ISC 15 16:50:26.0±1.1,20˚.1S±0˚.2×66˚.4E±0˚.3,h16km,n19, σ0§74/8,mb3.9/8,MS3.1/6,Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	13.73	26	T	T	17 07 40.0	
	baz=204,slow=76,SNR=4.6						
H08S2	**Diego Garcia H**	13.74	26	T	T	17 07 44.9	
	baz=204,slow=76,SNR=3.2						
H08S3	**Diego Garcia H**	13.75	26	T	T	17 07 40.5	
	baz=204,slow=76,SNR=4.4						
H04N2	**CROZET ISLANDS**	28.61	201	T	T	17 26 26.9	
	baz=30,slow=75,SNR=227						
H04N1	**CROZET ISLANDS**	28.61	201	T	T	17 26 27.9	
	baz=30,slow=75,SNR=207						
H04N3	**CROZET ISLANDS**	28.62	201	T	T	17 26 26.7	
	baz=30,slow=75,SNR=176						
PALK	**Pallekele**	30.65	29	LR	LR	17 06 40.6	
	comp=Z,38nm,20.7s,baz=164,slow=32						
LSZ	**Lusaka**	36.66	271	LR	LR	17 09 41.1	
	comp=Z,53nm,21.5s,baz=128,slow=32						
LBTB	**Lobatse**	37.89	255	LR	LR	17 10 11.2	
	comp=Z,28nm,20.9s,baz=44,slow=31						
BOSA	**Boshof**	38.26	249	LR	LR	17 10 42.3	
	comp=Z,27nm,19.0s,baz=21,slow=32						
PSI	**Prapat**	39.22	58	LR	LR	17 10 21.3	
	comp=Z,54nm,19.7s,baz=138,slow=31						
CMAR	**Chiang Mai Arr**	49.89	42	P	P	16 59 18.2	-0.8
	0.3nm,0.4s,baz=218,slow=7.5,SNR=6.1						
CMAR				LR	LR	17 17 59.3	
	comp=Z,25nm,19.6s,baz=225,slow=33						
	0.3nm,0.4s						
ASAR	**Alice Springs**	62.22	107	P	P	17 00 47.7	+0.4
	1.0nm,0.8s,baz=257,slow=7.1,SNR=12						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	63.39	103	P	P	17 00 55.7	+0.5
	0.8nm,0.8s,baz=256,slow=6.0,SNR=4.9						
	0.8nm,0.8s						
SNAA	**Sanae**	64.54	199	P	P	17 01 01.5	-0.4
	0.9nm,1.1s,baz=67,slow=7.7,SNR=2.1						
	0.9nm,1.1s						
BRTR	**Keskin Array B**	66.94	333	P	P	17 01 18.5	+0.6
	0.7nm,0.8s,baz=134,slow=8.3,SNR=2.3						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	71.24	8	P	P	17 01 43.4	-0.8
	0.5nm,0.7s,baz=205,slow=6.1,SNR=6.2						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	75.46	11	P	P	17 02 08.7	-0.3
	1.3nm,0.8s,baz=186,slow=5.1,SNR=6.0						
	1.3nm,0.8s						
SONM	**Songino Array**	76.57	26	P	P	17 02 16.3	+0.7
	0.6nm,0.7s,baz=227,slow=5.7,SNR=2.1						
	0.6nm,0.7s						

KRNET ***15*** *17:05:04.5±0.1,39˚.82N×72˚.55E,h21km,mb2.9*
SOME ***15*** *17:05:05.9,39˚.82N×72˚.48E,h10km*

ISU ***15*** *17:05:06,39˚.81N×72˚.48E,h10km*
NNC ***15*** *17:05:07.7±3.0,39˚.89N×72˚.45E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=22.4km s-min=13.5km az=170.0*

ISC 15 17:05:04.7±1.2,39˚.81N±0˚.03×72˚.56E±0˚.03,h5km±10km, n30,σ1§29/51,24C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	0.67	241	⇓*e*P	Pg	17 05 17.3	-0.3
DRK				⇓*e*S	Sb	17 05 26.6	-2.1
OHH	**Osh**	0.74	14	⇑*e*P	Pg	17 05 18.3	-0.6
OHH				⇑*e*S	Sg	17 05 28.5	-0.1
SFK	**Sufi-Kurgan**	0.76	74	⇑*e*P	Pg	17 05 18.9	-0.4
SFK				⇑*e*S	Sg	17 05 29.6	+0.5
TSTA	**Tashata**	0.78	356	P	Pg	17 05 19.5	-0.1
TSTA				S	Sg	17 05 31.1	+1.4
FRG	**Fergana**	0.82	314	P	Pg	17 05 20.2	-0.3
FRG				S	Sb	17 05 32.0	-0.9
CHMI	**Chimion**	0.92	301	P	Pg	17 05 22.0	-0.4
CHMI				S	Sb	17 05 34.9	-0.8
MINT	**Mingtut**	1.38	299	S	Sg	17 05 51.0	+1.9
ARSB	**Arslanbob**	1.55	12	⇓*e*P	Pn	17 05 32.7	-0.5
ARSB				⇑*e*S	Sn	17 05 53.3	-0.4
GAR	**Garm**	1.91	246	⇓*e*P	Pb	17 05 38.9	-1.3
GAR				⇑*e*S	Sb	17 06 03.8	-0.6
TRKS	**Terek-Say**	2.03	328	⇑*e*P	Pn	17 05 39.6	-0.2
TRKS				⇑*e*S	Sn	17 06 04.9	-0.7
ARK	**Arkit**	2.04	347	⇑*e*P	Pn	17 05 40.3	+0.4
ARK				⇑*e*S	Sb	17 06 07.3	-0.8
ARLS	**Aral**	2.45	33	⇑*e*P	Pn	17 05 46.3	+0.8
ARLS				⇑*e*S	Sn	17 06 16.8	+0.8
CHMG	**Chimgan**	2.60	313	P	Pg	17 05 54.0	-0.7
JNKS	**Jany-Kuch**	2.67	61	⇓*e*P	Pn	17 05 49.6	+0.9
JNKS				⇓*e*S	Sn	17 06 22.5	+0.9
PSK	**Pskem**	2.69	323	S	Sg	17 06 30.7	-0.4
CHRV	**Charvak**	2.70	314	S	Sg	17 06 31.1	-0.3
TGS	**TashGRES**	2.82	306	S	Sg	17 06 42.0	+6.7
TVKS	**Tavaksay**	2.83	310	S	Sg	17 06 35.1	-0.5
UCH	**Uchtor**	2.84	31	⇑*e*P	Pn	17 05 51.9	+0.8
UCH				⇑*e*S	Sn	17 06 26.4	+0.5
CHGR	**Chuyangaron**	2.88	248	⇑*e*P	Pn	17 05 52.3	+1.0
CHGR				⇑*e*S	Sn	17 06 27.0	+0.7
MRKS	**Merke**	2.98	10	Pg	Pg	17 06 00.8	-1.1
	8.0nm,0.4s						
MRKS				Lg	Lg	17 06 40.6	
	19nm,0.4s						
MRKS	**Merke**	2.98	10	*e*P	Pg	17 06 00.8	-1.1
	8.0nm,0.4s						
MRKS				*e*S	Sg	17 06 40.6	+0.1
	19nm,0.4s						
EKS2	**Erkin-Say**	3.00	17	⇓*e*P	Pn	17 05 53.9	+0.9
EKS2				⇓*e*S	Sn	17 06 29.8	+0.4
IUG	**luzhnay**	3.02	322	Pg	Pg	17 06 01.0	-1.7
	7.2nm,0.3s						
IUG				Lg	Lg	17 06 40.6	
	20nm,0.7s						
AAK	**Ala-Archa**	3.19	27	⇑*e*P	Pn	17 05 56.5	+0.9
AAK				⇑*e*S	Sn	17 06 34.5	+0.5
KBK	**Karagaybulak**	3.37	32	⇓*e*P	Pn	17 05 59.1	+0.9
KBK				⇓*e*S	Sn	17 06 39.0	+0.3
USP	**Ospenovka**	3.75	22	⇑*e*P	Pn	17 06 04.3	+1.0
USP				⇑*e*S	Sn	17 06 47.9	0.0
BRLS	**Borolday**	3.82	328	Pg	Pb	17 06 12.3	-0.3
	1.6nm,0.3s						
BRLS				Lg	Lg	17 06 59.8	
	2.6nm,0.3s						
BRLS	**Borolday**	3.82	328	*e*P	Pb	17 06 12.3	-0.3
	1.6nm,0.3s						
BRLS				*e*S	Sb	17 06 59.8	+0.7
	2.6nm,0.3s						
TKM2	**Tokmak 2**	3.86	35	⇑*e*P	Pn	17 06 06.1	+1.1
TKM2				⇑*e*S	Sn	17 06 50.9	+0.1

MOS ***15*** *17:16:40.9±1.4,34˚.00S×72˚.15W,h10km,mb5.5/24,Error ellipse: s-maj=11.5km s-min=7.1km az=86.5*
IDC ***15*** *17:16:40.9±0.4,33˚.93S×72˚.10W,h0km,mb4.9/14, mbtmp4.9/17,ML4.8/3,MS4.7/34,Error ellipse: s-maj=16.7km s-min=13.9km az=93.0*
SJA ***15*** *17:16:41.1±1.9,34˚.00S×72˚.35W,h21km,ML5.0,MW5.1*
BJI ***15*** *17:16:42.0,34˚.00S×72˚.30W,h10km,mB5.2/8,Ms5.4/10, Ms7 5.1/13*
VAO ***15*** *17:16:42.4±0.3,33˚.94S×72˚.17W,h10km,mb5.3*
NEIC ***15*** *17:16:42.5±1.4,34˚.00S±0˚.04×72˚.25W±0˚.04,h14km±2km, mb5.3/252,Mwr5.0/61,Mww5.2/17,Mww5.1(GUC),Error ellipse: s-maj=5.8km s-min=4.5km az=153.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.30; Mθθ0.89; Mϕϕ-2.19; Mrθ1.67; Mθϕ-0.21; Mϕr-3.89; Fault plane solution: M₀4.65000×10¹⁶ NP1: ϕs157.80000°,δ80.62000°,λ74.78000°. NP2:ϕs36.87000°, δ17.82000°,λ147.82000°. Principal axes: T 4.4689, Plg52.0000°, Azm50.0000°; N 0.3374, Plg15.0000°, Azm160.0000°; P -4.8063, Plg34.0000°, Azm261.0000°;*
NEIC ***15*** *17:16:42.2,33˚.99S×72˚.13W,h20km,Moment Tensor Solution. Duration: 2§2 Moment tensor: Scale 10¹⁶Nm; Mrr5.43; Mθθ0.77; Mϕϕ-6.20; Mrθ1.00; Mθϕ-1.39; Mϕr-6.72; Fault plane solution: M₀9.07000×10¹⁶ NP1:ϕs28.54000°, δ23.35000°,λ120.61000°. NP2:ϕs175.74000°,δ70.05000°, λ77.60000°. Principal axes: T 8.7795, Plg63.0000°, Azm66.0000°; N 0.5622, Plg12.0000°, Azm180.0000°; P -9.3417, Plg24.0000°, Azm275.0000°;*
NEIC ***15*** *17:16:42.7,34˚.00S×72˚.26W,h16km*
NEIC ***15*** *17:16:42.2,33˚.99S×72˚.26W,h20km*
GUC ***15*** *17:16:43.5±0.7,34˚.06S×72˚.29W,h33km±2km,ML5.0*
GCMT ***15*** *17:16:47.5±0.1,34˚.01S±0˚.01×72˚.33W±0˚.01,h22km, MW5.2/120,Moment Tensor Solution. s82,c123; s120,c191; Duration: 1§0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.63±.02; Mθθ0.02±.01; Mϕϕ-0.64±.01; Mrθ0.14±.02; Mθϕ-0.01±.01; Mϕr-0.65±.03; Best double couple: M₀0.92300×10¹⁷ NP1:ϕs10.00000°,δ23.00000°, λ107.00000°. NP2:ϕs171.00000°,δ68.00000°,λ83.00000°. Principal axes: T 0.9220, Plg66.0000°, Azm69.0000°; N 0.0020, Plg7.0000°, Azm174.0000°; P -0.9240, Plg23.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 17:16:42.1±0.5,34˚.02S±0˚.02×72˚.33W±0˚.03,h15km±2km, h15km:pP-P,n537,σ1§49/498,mb5.2/126,MS4.9/35, 21C-21D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	0.57	147	⇓*i*P	Pb	17 16 53.6	-0.2
BO03				*e*S	Sb	17 17 01.1	-0.6
BO03				IAML		17 17 03.1	
	comp=E,216μm,0.6s						
VA05	**Santo Domingo**	0.70	59		Pb	17 16 55.7	-0.2
VA05				Sg	Sb	17 17 05.2	-0.1
VA05	**Santo Domingo**	0.70	59	⇓*i*P	Pb	17 16 55.8	-0.1
VA05				*i* S	Sb	17 17 05.2	-0.1
MT01	**Popeta**	0.91	81		Pg	17 16 58.7	-1.1
MT01				Sg	Sg	17 17 09.8	-2.0
MT01	**Popeta**	0.91	81	⇓*i*P	Pb	17 16 58.8	-0.8
MT01				*e*S	Sb	17 17 10.5	-1.1
MT01				IAML		17 17 13.2	
	comp=E,46μm,0.4s						
MT01	**Popeta**	0.91	81	*e*P	Pg	17 16 58.7	-1.1
MT01				IAML		17 17 14.8	
	comp=Z,19μm,0.4s						
GO05	**Hualane**	1.05	162	⇓*i*P	Pb	17 17 01.4	-0.6
GO05				IAML		17 17 18.8	
	comp=E,72μm,0.5s						
GO05	**Hualane**	1.05	162	*e*P	Pb	17 17 01.4	-0.6
GO05				IAML		17 17 20.9	
	comp=Z,24μm,0.7s						
BO01	**Tunca**	1.10	110		Pb	17 17 01.0	-1.8
BO01				Sn	Sb	17 17 15.2	-1.8
BO01	**Tunca**	1.10	110	⇓*i*P	Pb	17 17 01.1	-1.8
BO01				*e*S	Sb	17 17 15.2	-1.8
BO01	**Tunca**	1.10	110	*e*P	Pb	17 17 00.9	-2.0
BO01				IAML		17 17 20.7	
	comp=Z,15μm,0.7s						
MT09	**Talagante**	1.14	78		Pb	17 17 02.3	-1.3
MT09	**Talagante**	1.14	78	⇓*i*P	Pb	17 17 02.4	-1.3
MT09				*e*S	Sn	17 17 17.5	-1.6
MT09				IAML		17 17 22.6	
	comp=N,45μm,0.4s						

VA01	**Torpederas**	1.14	30		Pn	17 17 03.2	-0.2
VA01	**Torpederas**	1.14	30	*e*P	Pn	17 17 03.3	-0.2
VA01				*e*S	Sg	17 17 18.0	-1.1
VA01	**Torpederas**	1.14	30	*e*P	Pn	17 17 03.3	-0.2
VA01				*e*S	Sn	17 17 20.4	+1.5
VA01				IAML		17 17 28.5	
	comp=Z,14μm,1.0s						
MT02	**Curacav**	1.25	53		Pn	17 17 04.3	-0.7
MT02	**Curacav**	1.25	53	⇓*i*P	Pn	17 17 04.3	-0.7
MT02				*e*S	Sn	17 17 20.4	-1.2
MT02	**Curacav**	1.25	53	*e*P	Pn	17 17 04.3	-0.7
MT02				*e*S	Sg	17 17 20.7	-1.8
MT02				IAML		17 17 25.9	
	comp=Z,23μm,0.8s						
BO04	**La Punta**	1.43	89		Pn	17 17 06.8	-0.8
BO04	**La Punta**	1.43	89	⇓*i*P	Pn	17 17 07.0	-0.6
MT05	**Renca**	1.47	65		Pn	17 17 07.5	-0.6
MT05	**Renca**	1.47	65	*e*P	Pb	17 17 08.0	-1.1
MT05				*e*S	Sg	17 17 26.8	-2.7
MT05				IAML		17 17 44.4	
	comp=N,27μm,0.4s						
MT05	**Renca**	1.47	65	*e*P	Pn	17 17 07.8	-0.3
MT05				IAML		17 17 45.8	
	comp=Z,19μm,0.9s						
BO02	**Sierra Bellavi**	1.50	122		Pn	17 17 07.7	-0.8
BO02	**Sierra Bellavi**	1.50	122	⇓*e*P	Sg	17 17 07.8	-0.7
BO02				*e*S	Sg	17 17 28.7	-1.8
BO02				IAML		17 17 31.4	
	comp=N,61μm,0.8s						
BO02	**Sierra Bellavi**	1.50	122	*e*P	Pn	17 17 07.9	-0.7
BO02				*e*S	Sg	17 17 30.6	+0.1
BO02				IAML		17 17 32.9	
	comp=Z,29μm,0.7s						
MT12	**Pirque**	1.51	80	⇓*i*P	Pn	17 17 08.2	-0.5
MT12				*e*S	Sg	17 17 28.5	-2.3
MT12				IAML		17 17 48.2	
	comp=N,46μm,0.6s						
ROC1	**El Roble**	1.51	47	*e*P	Pn	17 17 08.7	-0.1
ROC1				*e*S	Sg	17 17 33.5	+2.6
ROCH	**El Roble**	1.52	47	⇓*i*P	Pn	17 17 08.9	0.0
ROCH				*i* P	Pn	17 17 08.9	0.0
ROCH				*e*S	Sg	17 17 28.7	-2.4
ROCH				IAML		17 17 38.0	
	comp=N,64μm,0.5s						
MT15	**Las Vizcachas**	1.58	75	*i* P	Pn	17 17 09.3	-0.3
MT15				IAML		17 17 37.1	
	comp=E,46μm,0.4s						
MT03	**Universidad Ad**	1.60	72		Pn	17 17 09.7	-0.4
MT03	**Universidad Ad**	1.60	72	⇓*i*P	Pn	17 17 09.8	-0.2
MT03				IAML		17 17 43.8	
	comp=E,25μm,0.4s						
MT03	**Universidad Ad**	1.60	72	*e*P	Pb	17 17 10.5	-1.0
MT03				*e*S	Sg	17 17 34.4	+0.5
MT03				IAML		17 17 36.0	
	comp=Z,16μm,0.8s						
MT16	**CCHEN**	1.62	69		Pn	17 17 10.1	0.0
MT16	**CCHEN**	1.62	69	⇓*i*P	Pn	17 17 10.2	0.0
MT16				*e*S	Sb	17 17 30.8	-1.2
MT16				IAML		17 17 48.5	
	comp=N,16μm,0.7s						
MT14	**Cerro Cal¡n**	1.62	68	⇓*i*P	Pn	17 17 10.3	+0.1
MT14				IAML		17 17 44.2	
	comp=E,47μm,0.6s						
PEL	**Peldehue**	1.63	58		Pn	17 17 10.4	+0.1
PEL	**Peldehue**	1.63	58	P	Pn	17 17 10.4	+0.1
PEL	**Peldehue**	1.63	58	⇓*i*P	Pb	17 17 10.7	-1.2
PEL				*e*S	Sb	17 17 31.1	-1.1
PEL				IAML		17 17 39.5	
	comp=N,34μm,0.4s						
PEL	**Peldehue**	1.63	58	*e*P	Pb	17 17 10.6	-1.2
PEL				*e*S	Sg	17 17 38.3	+3.7
PEL				IAML		17 17 40.5	
	comp=Z,21μm,1.0s						
MT10	**Hacienda Santa**	1.67	64	⇓*i*P	Pb	17 17 11.3	-1.3
VA06	**Catapilco**	1.69	31		Pn	17 17 10.7	-0.4
VA06	**Catapilco**	1.69	31	⇑*i*P	Pn	17 17 10.8	-0.2
VA06				*e*S	Sb	17 17 34.0	+0.1
MT13	**San Alfonso**	1.72	82	⇓*i*P	Pn	17 17 11.7	0.0
MT13				IAML		17 17 40.7	
	comp=E,31μm,0.4s						
MT13	**San Alfonso**	1.72	82	*e*P	Pb	17 17 12.1	-1.5
MT13				*e*S	Sg	17 17 36.8	-0.9
MT13				IAML		17 17 40.1	
	comp=Z,20μm,1.4s						
LMEL	**Las Melosas**	1.78	85		Pn	17 17 12.6	+0.2
LMEL	**Las Melosas**	1.78	85	⇓*i*P	Pn	17 17 12.6	+0.2
LMEL				*e*S	Sg	17 17 36.5	-2.9
LMEL				IAML		17 17 44.9	
	comp=N,17μm,0.3s						
LMEL	**Las Melosas**	1.78	85	*e*P	Pb	17 17 12.9	-1.6
LMEL				*e*S	Sg	17 17 38.9	-0.5
LMEL				IAML		17 17 41.9	
	comp=Z,19μm,1.3s						
ML02	**Panimavida**	1.90	157		Pn	17 17 15.2	+1.2
ML02	**Panimavida**	1.90	157	*e*P	Pb	17 17 15.9	-0.6
ML02				*e*S	Sb	17 17 39.9	-0.1
ML02	**Panimavida**	1.90	157	*e*P	Pn	17 17 14.9	+0.9
ML02				*e*S	Sg	17 17 42.6	-0.6
ML02				IAML		17 17 49.9	
	comp=Z,27μm,0.5s						
MT04	**Ro Olivares**	1.93	72	⇓*i*P	Pn	17 17 14.8	+0.2
MT04				*e*S	Sb	17 17 39.4	-1.7
MT04				IAML		17 17 50.0	
	comp=N,12μm,0.5s						
MT04	**Ro Olivares**	1.93	72	*e*P

ZON Zonda 3.94 52 P **Pn** 17 17 43.4 +1.3
GO04 Tololo Observa 4.05 19 **Pn** 17 17 43.7 0.0
GO04 Tololo Observa 4.05 19 *eP* **Pn** 17 17 44.5 +0.8
GO04 Tololo Observa 4.05 19 *eS* **Sg** 17 18 51.4 -0.7
CO05 La Serena 4.19 13 **Pn** 17 17 45.0 -0.5
CFA Coronel Fontan 4.20 56 Pn **Pn** 17 17 47.1 +1.4
comp=Z,9.2nm,0.3s,baz=234,slow=15,SNR=59
CFA Lg Lg 17 18 45.0
comp=Z,55nm,0.3s,baz=246,slow=20,SNR=6.0
CFA LR LR 17 19 43.4
comp=Z,10µm,18.5s,baz=222,slow=46
RTLL Cerro Villicun 4.21 52 *eP* **Pn** 17 17 48.7 +2.8
RTLL IAML 17 19 05.0
comp=Z,3µm,1.2s
CO01 Juntas del Tor 4.45 26 **Pn** 17 17 50.2 +0.9
CO01 Juntas del Tor 4.45 26⇑ *iP* **Pn** 17 17 50.7 +1.4
CO01 Juntas del Tor 4.45 26 *eS* **Sn** 17 18 43.2 +2.2
CO01 IAML 17 19 09.9
comp=Z,2µm,1.3s
LC02 Puerto Saavedr 4.84 190 **Pn** 17 17 54.9 +0.5
LCO Las Campanas 5.18 16 **Pn** 17 17 59.1 -0.2
LCO Las Campanas 5.18 16 P **Pn** 17 17 59.1 -0.2
VA04 Juan Fernndez 5.42 272 **Pn** 17 18 03.6 +1.2
VA04 Juan Fernndez 5.42 272 *eP* **Pn** 17 18 03.9 +1.6
AC05 El Transito 5.45 19 **Pn** 17 18 02.8 -0.2
H03S1 Juan Fernandez 5.47 270 Pn **Pn** 17 18 03.8 +1.1
H03S1 Sn Sn 17 18 57.5 -7.7
H03S1 T T 17 24 06.6
baz=93,slow=74,SNR=5312
H03S3 Juan Fernandez 5.47 270 Pn **Pn** 17 18 04.1 +1.2
H03S3 Sn Sn 17 18 58.0 -7.4
H03S3 T T 17 24 07.7
baz=93,slow=74,SNR=6193
H03S2 Juan Fernandez 5.49 270 Pn **Pn** 17 18 03.9 +0.9
H03S2 Sn Sn 17 18 57.7 -8.0
H03S2 T T 17 23 52.1
baz=93,slow=74,SNR=3852
H03N1 Juan Fernandez 5.51 274 Pn **Pn** 17 18 05.6 +2.3
baz=131,slow=24
H03N1 Sn **Sn** 17 19 00.8 -5.6
H03N1 T T 17 24 08.5
baz=89,slow=73,SNR=50
H03N3 Juan Fernandez 5.52 274 Pn **Pn** 17 18 05.6 +2.0
baz=131,slow=24
H03N3 Sn **Sn** 17 19 00.6 -6.0
H03N3 T T 17 24 21.2
baz=89,slow=73,SNR=18
H03N2 Juan Fernandez 5.53 274 Pn **Pn** 17 18 05.8 +2.2
baz=131,slow=24
H03N2 Sn **Sn** 17 19 01.0 -5.7
H03N2 T T 17 24 18.8
baz=89,slow=73,SNR=52
LR03 Panguipulli 5.61 180 Pn **Pn** 17 18 04.4 -0.6
AC04 Llanos de Chal 5.89 11 **Pn** 17 18 07.6 -1.3
LR04 Corral 5.92 188 Pn **Pn** 17 18 09.3 +0.2
LR05 Currie 6.21 178 **Pn** 17 18 13.7 +0.5
GO03 Copiapo 6.65 16 **Pn** 17 18 18.0 -1.4
AC06 Mina Casimiro 6.85 15 **Pn** 17 18 20.8 -1.3
PLCA Paso Flores 6.85 169 Pn **Pn** 17 18 23.5 +1.4
comp=Z,5.6nm,0.3s,baz=337,slow=12,SNR=60
PLCA Sn **Sn** 17 19 46.8 +6.9
comp=Z,2.5nm,0.3s,baz=330,slow=10,SNR=3.0
PLCA Lg Lg 17 20 08.6
comp=Z,3.1nm,0.3s,baz=280,slow=16,SNR=3.3
PLCA LR LR 17 21 23.8
comp=Z,8µm,18.8s,baz=348,slow=41
comp=Z,25nm,0.5s
PLCA Paso Flores 6.85 169 **Pn** 17 18 22.5 +0.4
PLCA Paso Flores 6.85 169 *eP* **Pn** 17 18 23.8 +1.7
TCA Tanti 7.05 70⇑ *iP* **Pn** 17 18 24.5 -0.4
LL05 Los Muermos 7.43 187 **Pn** 17 18 30.4 +0.5
AC02 Maricunga 7.67 22 **Pn** 17 18 33.0 -0.8
AC01 Pan de Azucar 7.98 11 **Pn** 17 18 34.4 -3.3
LL06 Loncomilla 8.25 187 Pn **Pn** 17 18 39.1 -2.0
LL01 San Ignacio de 8.35 180 Pn **Pn** 17 18 40.6 -2.0
LL07 Hotel Espejo d 8.85 185 Pn **Pn** 17 18 48.1 -1.2
GO02 Mina Guanaco 9.14 16 **Pn** 17 18 50.8 -3.0
GO07 Milladeo Hill, 9.14 186 **Pn** 17 18 51.5 -1.9
LL02 Futaleuf 9.17 178 Pn **Pn** 17 18 51.4 -2.5
TRQA Tornquist 9.30 119 **Pn** 17 18 53.2 -2.5
TRQA Tornquist 9.30 119 P **Pn** 17 18 53.2 -2.5
PB14 IPOC Station P 9.51 11 **Pn** 17 18 54.6 -4.1
AY01 Puyuhuapi 10.39 181 Pn **Pn** 17 19 08.0 -2.5
PB10 IPOC Station P 10.58 9 **Pn** 17 19 10.0 -3.2
PB05 IPOC Station P 11.28 10 **Pn** 17 19 19.2 -3.7
PB06 IPOC Station P 11.53 13 Pn 17 19 21.1 -5.2
COYC Coyhaique 11.54 179 Pn Pn 17 19 21.1 -5.2
AF01 San Pedro de A 11.61 19 Pn **Pn** 17 19 24.4 -3.2
PB07 IPOC Station P 12.43 11 Pn 17 19 34.0 -4.7
PB09 IPOC Station P 12.47 13 **Pn** 17 19 35.1 -4.2
PSAL Palomas, Salto 12.76 81 *eP* **Pn** 17 19 44.5 +1.4
PB02 IPOC Station P 12.83 10 **Pn** 17 19 39.6 -4.5
PB01 IPOC Station P 13.16 12 Pn 17 19 42.6 -6.1
AY03 Cochrane 13.22 181 Pn 17 19 43.2 -6.0
PATCX Punta Patache 13.29 9 Pn 17 19 44.4 -5.9
TA01 Diego Aracena 13.53 9 Pn 17 19 47.4 -6.2
PB11 IPOC Station P 14.40 10 **Pn** 17 20 01.6 -4.0
GO01 Chusmiza 14.56 12 **Pn** 17 20 03.9 -4.2
CPUP Villa Florida 15.06 63 Pn **Pn** 17 20 13.4 -0.9
comp=Z,0.3nm,0.3s,baz=110,slow=12,SNR=10
CPUP Sn **Sn** 17 22 56.1 -4.8
comp=Z,0.1nm,0.3s,baz=214,slow=18,SNR=2.0
CPUP LR LR 17 26 50.6
comp=Z,2µm,18.2s,baz=96,slow=41
comp=Z,4.3nm,0.8s
CPUP Villa Florida 15.06 63 Pn 17 20 09.4 -4.9
CPUP Villa Florida 15.06 63 *eP* **Pn** 17 20 13.5 -0.9
PB12 IPOC Station P 15.44 7 **Pn** 17 20 16.3 -3.3
AP01 Chacalluta 15.68 7 Pn **Pn** 17 20 19.1 -3.4
AP01 IAmb IAmb 17 20 30.2
comp=Z,123nm,0.6s
PLTB Pedras Altas 15.89 87 **Pn** 17 20 21.7 -3.6
PLTB Pedras Altas 15.89 87 *eP* **Pn** 17 20 22.6 -2.7
CPSB Cacapava Do Su 16.39 82 *eP* **Pn** 17 20 31.0 -0.6
PB18 Visviri 16.56 10 **Pn** 17 20 33.4 -0.9
GO09 Cerro Castillo 17.25 180 P **Pn** 17 20 43.1 +0.8
LPAZ La Paz 18.05 13 P **P** 17 20 53.6 +0.1
comp=Z,4.4nm,0.3s,baz=192,slow=8.3,SNR=166
LPAZ S **S** 17 24 17.9 -2.6
comp=Z,4.0nm,1.1s,baz=211,slow=5.9,SNR=1.1
LPAZ PcP **PcP** 17 25 29.4 +1.8
comp=Z,3.1nm,0.8s,baz=262,slow=1.7,SNR=1.8
comp=Z,61nm,0.8s
LPAZ La Paz 18.05 13 **Pn** 17 20 52.8 -0.3
LPAZ La Paz 18.05 13 P **Pn** 17 20 52.8 -0.3
LPAZ S **S** 17 24 17.9 -2.6
LPAZ pmax pmax
comp=Z,88nm,0.9s
LPAZ La Paz 18.05 13 *eP* **P** 17 20 54.0 +0.5
ITAB Concordia 18.64 74 **P** 17 20 57.9 -1.4
ITAB Concordia 18.64 74 *eP* **P** 17 20 58.4 -0.9
AMBA Amambai (Brazi 18.80 59 *eP* **P** 17 21 00.9 -0.2
CNLB Canela 18.87 81 *eP* **P** 17 21 01.5 -0.4
BDQN Bodoquena, MS 19.32 50 *eP* **P** 17 21 06.9 +0.1
PTGB Pitanga 19.92 68 *eP* **P** 17 21 13.4 0.0
AQDB Aquidauana 19.98 52 **P** 17 21 12.8 -1.2
AQDB IAmb IAmb 17 21 20.0
comp=Z,111nm,1.0s
AQDB Aquidauana 19.98 52 *eP* **P** 17 21 13.6 -0.3
EFI East Falkland 20.45 154 *i P* **P** 17 21 19.2 +0.4
EFI pmax pmax
comp=Z,83nm,0.9s
SIV San Ignacio 20.62 32 P **P** 17 21 20.4 -0.5
comp=Z,37nm,0.6s,baz=207,slow=11,SNR=175
SIV PcP **PcP** 17 25 32.8 +1.4
comp=Z,5.3nm,0.6s,baz=217,slow=5.1,SNR=3.5
SIV LR LR 17 30 43.2
comp=Z,6µm,19.1s,baz=228,slow=41
comp=Z,37nm,0.6s
USHA Ushuaia 20.99 174 P Pn 17 21 28.9 +1.6
comp=Z,42nm,0.8s,baz=5.6,slow=6.4,SNR=6.1
MG01 Puerto William 21.17 172 P **P** 17 21 26.0 -0.6
MG01 IAmb IAmb 17 21 36.8
comp=Z,120nm,0.8s
PTLB Pontes e Lacer 21.99 36 **P** 17 21 34.4 -1.2
PTLB IAmb IAmb 17 21 44.0
comp=Z,112nm,1.0s
PTLB Pontes e Lacer 21.99 36 *eP* **P** 17 21 36.0 +0.3
NNA Nana 22.31 348 LR LR 17 28 21.4
comp=Z,713nm,21.5s,baz=166,slow=32
NNA Nana 22.31 348 P **P** 17 21 38.2 -1.0
NNA Nana 22.31 348 *i P* **P** 17 21 40.7 +1.5
NNA pmax pmax
comp=Z,52nm,0.9s

FRTB Fartura 22.58 68 *eP* **P** 17 21 40.5 -1.5
PP1B Ponte de Pedra 22.62 48 *eP* **P** 17 21 41.0 -1.4
C2SB Chapadao do Su 23.08 54 *eP* **P** 17 21 46.7 -0.5
SALV Santo Antonio 23.45 44 *eP* **P** 17 21 49.6 -1.4
VILB Vilhena 23.70 31 P **P** 17 21 52.4 -1.0
VILB Vilhena 23.70 31 *eP* **P** 17 21 53.1 -0.3
PET01 Itanhaem-SP 23.88 73 *eP* **P** 17 21 53.9 -1.3
SPB Sao Paulo 24.11 71 P **P** 17 21 55.7 -1.6
SPB Sao Paulo 24.11 71 *eP* **P** 17 21 57.4 +0.1
ITRB Iturama 24.17 59 *eP* **P** 17 21 57.1 -0.8
RCLB Rio Claro- Sao 24.65 69 *eP* **P** 17 22 01.5 -0.9
BB19B Bebedouro 24.66 65 *eP* **P** 17 22 01.6 -0.9
VAO Valinhos 24.78 70 P **P** 17 22 02.1 -1.4
VAO IAmb IAmb 17 22 05.4
comp=Z,56nm,0.9s
VAO Valinhos 24.78 70 *eP* **P** 17 22 03.7 +0.2
PARB Paraibuna 25.66 73 *eP* **P** 17 22 12.2 +0.7
ARAG Araguaiana, MT 25.97 50 *eP* **P** 17 22 13.7 -0.5
PDRB Porto dos Gac 26.46 36 *eP* **P** 17 22 18.6 -0.1
IPMB Ipameri, GO 26.82 60 *eP* **P** 17 22 20.4 -1.6
CLDB Colider 27.56 37 *eP* **P** 17 22 28.5 -0.1
BSCB Bom Sucesso 27.57 69 *eP* **P** 17 22 28.1 -0.7
PMNB Patos De Minas 27.76 63 *eP* **P** 17 22 30.1 -0.3
BDFB Brasilia 28.55 56 P **P** 17 22 36.5 -1.0
comp=Z,31nm,0.8s,baz=227,slow=7.3,SNR=30
BDFB LR LR 17 35 02.4
comp=Z,5µm,18.4s,baz=227,slow=39
comp=Z,31nm,0.8s
BDFB Brasilia 28.55 56 P **P** 17 22 36.4 -1.1
BDFB IAmb IAmb 17 22 39.9
comp=Z,38nm,0.9s
SNDB Serra Nova Dou 29.14 46 *eP* **P** 17 22 42.1 -0.6
DIAM Diamantina, MG 29.98 66 *eP* **P** 17 22 49.2 -1.0
NPGB Novo Progresso 31.09 34 *eP* **P** 17 22 58.9 -1.0
TEFE Tefe 31.19 15 *eP* **P** 17 23 01.8 +1.0
PMSA Palmer Station 31.20 173 LR LR 17 35 32.6
comp=Z,3µm,18.2s,baz=338,slow=36
SJMB Sao Joao De Ma 31.65 69 *eP* **P** 17 23 04.5 -0.4
BSFB Barra de Sao F 31.84 70 *eP* **P** 17 23 05.4 -1.1
RIB01 Linhares ES 31.92 71 *eP* **P** 17 23 05.4 -1.8
HOPE Hope Point 32.23 140 P **P** 17 23 09.0 -0.6
HOPE Hope Point 32.23 140 P **P** 17 23 09.0 -0.6
HOPE pmax pmax
comp=Z,57nm,0.9s
RPN Rapa Nui 32.46 272 LR LR 17 32 54.0
comp=Z,2µm,18.9s,baz=112,slow=30
MACA Manacapuru-AM 32.56 22 P **P** 17 23 11.4 -1.5
MACA Manacapuru-AM 32.56 22 *eP* **P** 17 23 13.2 +0.4
SDBA SAO DESIDERIO 32.95 56 *eP* **P** 17 23 15.2 -1.1
ITTB Itaituba 33.30 31 *eP* **P** 17 23 19.0 -0.3
SMTB Santa Maria do 33.83 48 *eP* **P** 17 23 23.2 -0.8
GUA01 Guaratinga, BA 33.95 67 *eP* **P** 17 23 23.9 -1.1
SMAI San Martin Ant 34.29 177 **P** 17 23 28.3 +1.0
OTAV Otavalo 34.55 349 P **P** 17 23 29.9 -0.8
OTAV Otavalo 34.55 349 P **P** 17 23 29.9 -0.8
OTAV pmax pmax
comp=Z,12nm,1.1s
OTAV Otavalo 34.55 349 *eP* **P** 17 23 31.2 +0.5
PRPB Parauapebas 34.68 42 *eP* **P** 17 23 30.4 -0.9
CMC01 Camacan, BA 34.91 66 *eP* **P** 17 23 32.6 -0.7
GDU01 Guandu, BA 35.90 64 *eP* **P** 17 23 42.0 +0.2
MAL2 Monte Alegre, 36.07 32 P **P** 17 23 42.8 -0.5
BOAV Boa Vista 37.89 19 P **P** 17 23 57.8 -0.9
BOAV Boa Vista 37.89 19 *eP* **P** 17 23 58.9 +0.2
ROSC El Rosal 38.69 357 P P 17 24 11.0 +5.1
comp=Z,14nm,0.5s,baz=135,slow=20,SNR=6.2
TMAB Tom-Au,PA,Br 38.77 41 *eP* **P** 17 24 06.0 -0.1
ROSB Rosrio 40.62 46 *eP* **P** 17 24 21.9 +0.3
NBAN Anadia - AL 40.98 62 *eP* **P** 17 24 23.6 -1.0
SDV Santo Domingo 42.70 2 P **P** 17 24 37.8 -1.0
SDV Santo Domingo 42.70 2 *eP* **P** 17 24 38.1 -0.6
MDP Montagnes des 43.13 29 LR LR 17 44 29.0
comp=Z,3µm,18.9s,baz=198,slow=39
RCBR Riachuelo 43.86 59 P **P** 17 24 46.4 -1.7
RCBR IAmb IAmb 17 24 49.7
comp=Z,108nm,1.6s
RCBR Riachuelo 43.86 59 P **P** 17 24 46.4 -1.7
RCBR pmax pmax
comp=Z,108nm,1.6s
RCBR Riachuelo 43.86 59 *eP* **P** 17 24 48.3 +0.3
HDC Heredia 45.18 344 *eP* **P** 17 24 58.8 +0.2
JTS Las Juntas de 45.66 343 *i P* **P** 17 25 01.8 -0.5
JTS pmax pmax
comp=Z,9.0nm,0.8s
BELA Belgrano 2 46.91 170 **P** 17 25 12.8 +1.4
BELA IAmb IAmb 17 25 52.0
comp=Z,18nm,1.0s
MPOM Morne Pois Mar 49.41 15 P **P** 17 25 30.8 -0.6
VNA3 Neumayer Olymp 49.44 158⇑ P **P** 17 25 32.2 +1.1
comp=Z,27nm,0.7s
VNA1 Neumayer--Stat 49.76 157⇑ P **P** 17 25 34.7 +1.3
comp=Z,26nm,1.0s
VNA2 Neumayer--Watz 50.09 157⇑ P **P** 17 25 37.5 +1.5
comp=Z,28nm,0.6s,baz=295,slow=9.1
SNAA Sanae 51.66 158⇑ P **P** 17 25 49.5 +1.6
comp=Z,569nm,0.7s
SNAA Sanae 51.66 158 P **P** 17 25 49.5 +1.6
comp=Z,34nm,0.9s,baz=274,slow=7.3,SNR=88
SNAA S **S** 17 33 08.6 +0.3
comp=Z,1.0nm,1.0s,baz=192,slow=20,SNR=1.9
SNAA LR LR 17 47 22.0
comp=Z,543nm,18.7s,baz=308,slow=36
comp=Z,34nm,0.9s
SNAA Sanae 51.66 158 P **P** 17 25 48.0 +0.1
SNAA IAmb IAmb 17 25 50.8
comp=Z,47nm,1.0s
SNAA Sanae 51.66 158 *i P* **P** 17 25 48.9 +1.0
SNAA pmax pmax
comp=Z,57nm,1.1s
CRPR Cabo Rojo, PR 51.97 6 P **P** 17 25 50.0 -0.6
SJG San Juan 52.17 7 P **P** 17 25 51.5 -0.6
SJG IAmb IAmb 17 26 03.5
comp=Z,38nm,0.8s
SJG San Juan 52.17 7 P **P** 17 25 51.5 -0.6
SJG pmax pmax
comp=Z,38nm,0.9s
SDDR Presa de Saban 52.71 1 IAmb IAmb 17 26 09.6
comp=Z,24nm,0.9s
TROLL Troll, Antarti 53.37 158⇑ P **P** 17 26 02.3 +1.7
comp=Z,977nm,0.6s
GTBY Guantanamo Bay 53.71 357 **P** 17 26 05.3 +1.9
TEIG Tepich 56.04 342 P **P** 17 26 20.9 +0.6
QSPA South Pole Qui 56.22 180 P **P** 17 26 26.5 +5.1
comp=Z,23nm,0.9s,baz=140,slow=6.2,SNR=62
QSPA S **S** 17 34 10.8 +0.6
comp=Z,1.0nm,1.1s,baz=176,slow=9.5,SNR=1.3
QSPA LR LR 17 50 23.3
comp=Z,300nm,18.1s,baz=162,slow=36
QSPA PKP2bc P'P'bc 17 56 30.4 -9.1
comp=Z,3.9nm,1.1s,baz=320,slow=1.1,SNR=5.1
QSPA South Pole Qui 56.22 180 P P 17 26 26.5 +5.1
QSPA IAmb IAmb 17 26 38.0
comp=Z,30nm,0.9s
NVL N'lazarevskaya 56.40 157 *eP* **P** 17 26 20.9 -1.5
NVL *e* 17 28 26.5
NVL *eS* **S** 17 34 12.5 +0.3
NVL pmax pmax
comp=Z,26nm,0.6s
NVL smax smax
comp=N,203nm,11.1s
NVL MLR MLR
comp=Z,98nm,19.0s
SOR Soroa 57.40 348 IAmb IAmb 17 26 32.0
comp=Z,34nm,0.9s
SBA Scott Base 63.01 192 **P** 17 27 09.1 +1.3
SBA Scott Base 63.01 192 P **P** 17 27 09.1 +1.3
SBA pmax pmax
comp=Z,8.0nm,1.0s
VNDA Vanda 64.04 191 P **P** 17 27 17.7 +3.1
comp=Z,2.4nm,0.8s,baz=133,slow=6.6,SNR=18
VNDA LR LR 17 53 03.9
comp=Z,209nm,18.2s,baz=132,slow=34
VNDA PKPPKP **P'P'df** 17 56 06.9 -6.7
comp=Z,0.8nm,0.7s,baz=315,slow=1.4,SNR=3.8
comp=Z,2.4nm,0.8s
H06S1 SOCORRO T 64.08 319 T T 18 37 09.5
SNR=5.8
H06E1 SOCORRO T-PHAS 64.09 319 T T 18 37 09.1
SYO Syowa Base 65.94 159⇓ *eP* **P** 17 27 25.2 -1.8
SYO Syowa Base 65.94 159⇓ *es*P sP 17 27 31.8 -1.8
152A Waverly Hall 67.35 349 P **P** 17 27 36.4 0.0
HKT Hockley 67.39 338 *i P* **P** 17 27 38.0 +1.4
HKT pmax pmax
comp=Z,7.0nm,1.0s

LRAL Lakeview Retre 68.11 347 IAmb IAmb 17 27 51.9
comp=Z,19nm,1.0s
HNDO Hondo 68.15 335 IAmb IAmb 17 27 55.1
comp=Z,26nm,0.9s
LPIG La Paz 68.15 323 LR LR 17 50 40.3
comp=Z,83nm,20.8s,baz=78,slow=30
JCT Junction City 69.19 335 IAmb IAmb 17 28 01.8
comp=Z,23nm,0.9s
BG3 Lake Jocassee 69.36 351 IAmb IAmb 17 27 59.0
comp=Z,23nm,1.0s
X48A Hartselle 69.49 347 P **P** 17 27 50.2 +0.5
X48A IAmb IAmb 17 28 00.4
comp=Z,26nm,0.9s
SAND Sanderson 69.58 333 IAmb IAmb 17 28 04.5
comp=Z,13nm,0.8s
TXAR Lajitas Array 69.63 331 P **P** 17 27 53.0 +2.1
comp=Z,2.3nm,0.6s,baz=150,slow=6.1,SNR=29
comp=Z,2.3nm,0.6s
TXAR Lajitas Array 69.63 331 **P** 17 27 51.7 +0.8
TX31 Lajitas Ar. Si 69.63 331 IAmb IAmb 17 28 07.5
comp=Z,46nm,1.8s
BRDY Brady 69.65 336 IAmb IAmb 17 28 04.2
comp=Z,17nm,0.8s
WHTX Lake Whitney, 69.79 337 IAmb IAmb 17 28 05.2
comp=Z,33nm,0.9s
PPT Papeete 70.00 262 LR LR 17 51 36.2
comp=Z,615nm,18.2s,baz=163,slow=30
V53A Saluda 70.01 351 P **P** 17 27 53.4 +0.4
OZNA Ozona 70.07 334 P **P** 17 27 54.1 +0.6
OZNA IAmb IAmb 17 28 07.0
comp=Z,16nm,0.8s
PLAL Pickwick Lake 70.20 346 IAmb IAmb 17 27 56.2
comp=Z,30nm,0.9s
ALPN Alpine 70.54 332 IAmb IAmb 17 28 29.2
comp=Z,28nm,1.6s
PLPT Palo Pinto 70.83 337 P **P** 17 27 58.7 +0.7
PLPT IAmb IAmb 17 28 14.2
comp=Z,25nm,1.1s
CLTN Cedars of Leba 70.96 348 IAmb IAmb 17 28 01.1
comp=Z,14nm,0.9s
MIAR Mount Ida 71.05 342 IAmb IAmb 17 28 17.2
comp=Z,17nm,1.1s
MNHN Monahans 71.06 333 IAmb IAmb 17 28 12.6
comp=Z,16nm,0.9s
ABTX Abilene, Hawle 71.09 336 IAmb IAmb 17 28 13.1
comp=Z,33nm,1.1s
WVT Waverly 71.27 347 P **P** 17 28 01.0 +0.4
WVT Waverly 71.27 347 P **P** 17 28 01.0 +0.4
WVT pmax pmax
comp=Z,73nm,0.9s
U49A Red Boiling Sp 71.28 349 IAmb IAmb 17 28 14.5
comp=Z,40nm,1.4s
WHAR Wooly Hollow 71.43 343 IAmb IAmb 17 28 11.9
comp=Z,18nm,0.9s
WTFS Witchita Falls 71.75 337 IAmb IAmb 17 28 16.9
comp=Z,19nm,0.9s
BBTS Babate 71.83 57 LR LR 17 58 14.7
comp=Z,1µm,20.9s,baz=81,slow=35
APMT Aspermont 71.90 336 IAmb IAmb 17 28 17.9
comp=Z,37nm,1.3s
LCAR Lake Charles 71.91 344 IAmb IAmb 17 28 14.8
comp=Z,29nm,0.8s
SN07 Snyder 07 71.95 335 P **P** 17 28 04.4 -0.5
T47A Sharon Grove 71.97 348 IAmb IAmb 17 28 06.8
comp=Z,26nm,0.8s
R55A Marlinton 72.30 354 IAmb IAmb 17 28 09.5
comp=Z,23nm,0.8s
DKNS Dickens 72.48 335 IAmb IAmb 17 28 19.1
comp=Z,14nm,0.7s
WMOK Wichita Mounta 72.75 337 P **P** 17 28 08.7 -0.9
WMOK IAmb IAmb 17 29 24.9
comp=Z,41nm,1.8s
WMOK Wichita Mounta 72.75 337 P **P** 17 28 08.7 -0.9
WMOK pmax pmax
comp=Z,41nm,1.8s
CGM3 Cape Girardeau 72.76 346 IAmb IAmb 17 28 28.2
comp=Z,49nm,1.7s
R50A Paris 72.79 350 IAmb IAmb 17 28 11.5
comp=Z,25nm,1.0s
R49A Shelbyville 72.92 349 IAmb IAmb 17 28 19.8
comp=Z,26nm,1.2s
TUL3 Leonard 72.94 340 P **P** 17 28 10.5 -0.1
TUL3 IAmb IAmb 17 28 24.0
comp=Z,16nm,0.7s
S44A Carbondale 73.06 346 IAmb IAmb 17 28 12.8
comp=Z,20nm,0.8s
SIUC Southern Illin 73.08 346 IAmb IAmb 17 28 13.5
comp=Z,27nm,1.0s
DEOK Depew 73.08 340 IAmb IAmb 17 28 13.9
comp=Z,28nm,1.1s
Q52A Bidwell 73.19 352 IAmb IAmb 17 28 14.5
comp=Z,21nm,0.9s
MAW Mawson 73.23 164 P **P** 17 28 13.6 +1.5
comp=Z,27nm,0.8s,baz=218,slow=11,SNR=41
MAW LR LR 18 03 11.9
comp=Z,1µm,18.2s,baz=230,slow=38
comp=Z,27nm,0.8s
P57A Homestead Farm 73.32 355 IAmb IAmb 17 28 15.9
comp=Z,21nm,0.9s
Q51A Peebles 73.39 351 P **P** 17 28 13.0 -0.3
Q51A IAmb IAmb 17 28 15.2
comp=Z,26nm,0.8s
FVM French Village 73.58 345 IAmb IAmb 17 28 16.8
comp=Z,35nm,1.2s
CCM Cathedral Cave 73.83 345 P **P** 17 28 15.5 -0.3
CCM IAmb IAmb 17 28 18.2
comp=Z,27nm,0.8s
CCM Cathedral Cave 73.83 345 P **P** 17 28 15.5 -0.3
CCM pmax pmax
comp=Z,27nm,0.9s
P52A Corning 73.84 352 IAmb IAmb 17 28 17.7
comp=Z,27nm,0.8s
PAGS Pennsylvania G 73.99 357 IAmb IAmb 17 28 29.6
comp=Z,45nm,1.1s
T35A Sooner Cattle 74.08 340 IAmb IAmb 17 28 36.6
comp=Z,42nm,1.2s
P48A Milroy 74.11 349 IAmb IAmb 17 28 18.9
comp=Z,43nm,1.1s
121A Cookes Peak, D 74.13 329 IAmb IAmb 17 28 31.0
comp=Z,28nm,1.4s
CROK Carrier 74.13 339 P **P** 17 28 18.1 +0.5
CROK IAmb IAmb 17 28 41.5
comp=Z,23nm,0.9s
O52A Adamsville 74.28 352 IAmb IAmb 17 28 20.3
comp=Z,27nm,0.9s
R40A Maddies Static 74.29 344 IAmb IAmb 17 28 37.4
comp=Z,23nm,0.9s
P46A Rosedale 74.55 348 IAmb IAmb 17 28 29.5
comp=Z,27nm,0.9s
O49A Covington 74.66 350 IAmb IAmb 17 28 22.4
comp=Z,43nm,1.0s
O48B Farmland 74.85 350 IAmb IAmb 17 28 23.1
comp=Z,20nm,0.9s
SUR Sutherland 75.03 119 P **P** 17 28 23.3 -0.2
TUC Tucson 75.25 327 **P** 17 28 23.5 -0.8
TUC Tucson 75.25 327 P **P** 17 28 23.5 -0.8
TUC pmax pmax
comp=Z,30nm,1.8s
DBIC Dimbokro 75.42 71 P **P** 17 28 25.5 -0.1
comp=Z,22nm,0.9s,baz=246,slow=6.9,SNR=20
DBIC LR LR 18 00 03.3
comp=Z,733nm,18.9s,baz=254,slow=35
comp=Z,22nm,0.9s
DBIC Dimbokro 75.42 71 P **P** 17 28 25.3 -0.3
DBIC IAmb IAmb 17 28 26.8
comp=Z,22nm,0.8s
P40A Paris 75.42 344 IAmb IAmb 17 28 44.1
comp=Z,36nm,1.0s
ANMO Albuquerque 75.68 332 LR LR 17 57 37.3
comp=Z,655nm,19.0s,baz=248,slow=32
ANMO Albuquerque 75.68 332 P **P** 17 28 27.6 +0.8
ANMO Albuquerque 75.68 332 *i P* **P** 17 28 28.6 +1.7
ANMO pmax pmax
comp=Z,5.0nm,1.0s
TASM ASL Pad, Albuq 75.68 332 IAmb IAmb 17 28 40.6
comp=Z,9.2nm,1.1s
P38A Dawn 75.85 343 IAmb IAmb 17 28 29.5
comp=Z,18nm,0.9s
L59A Walton 75.88 358 IAmb IAmb 17 28 30.4
comp=Z,22nm,0.9s
N41A Harden Midland 76.29 346 IAmb IAmb 17 28 31.8
comp=Z,33nm,0.9s
RAR Rarotonga 76.41 254 LR LR 17 53 35.1
comp=Z,424nm,18.3s,baz=144,slow=29
HQIL Hanson Quary C 76.78 348 P **P** 17 28 32.5 -0.2
WIN Windhoek 77.29 109 P **P** 17 28 36.0 -0.4
WIN IAmb IAmb 17 28 46.2

comp=Z,32nm,1.0s
WIN Windhoek 77.29 109 P P 17 28 36.1 -0.4
WIN pmax pmax
comp=Z,32nm,1.0s
L42A Oliver, Polo 77.31 347 IAmb IAmb 17 28 37.9
comp=Z,29nm,0.8s
L40A Anamosa 77.67 346 IAmb IAmb 17 28 40.0
comp=Z,32nm,0.9s
LBNH Lisbon 77.89 0 IAmb IAmb 17 28 42.5
comp=Z,23nm,0.8s
JFWS Jewell Farm 78.30 347 IAmb IAmb 17 28 43.3
comp=Z,21nm,0.8s
FRNY Flat Rock 78.49 359 P P 17 28 42.9 +0.7
FRNY IAmb IAmb 17 28 44.8
comp=Z,15nm,0.8s
WBO Williamsburg 78.69 358 IAmb IAmb 17 28 45.7
comp=Z,28nm,0.8s
I42A Draeger Farm, 79.00 348 IAmb IAmb 17 28 47.5
comp=Z,25nm,0.9s
PFO Pinyon Flats O 79.00 324 LR LR 17 56 24.8
comp=Z,314nm,21.1s,baz=151,slow=30
PFO Pinyon Flats O 79.00 324 *i* P **P 17 28 47.6 +2.1**
PFO pmax pmax
comp=Z,10.0nm,1.0s
TSUM Tsumeb 79.44 106 LR LR 17 59 07.9
comp=Z,899nm,20.5s,baz=238,slow=32
TSUM Tsumeb 79.44 106 P **P 17 28 47.5 -0.8**
TSUM IAmb IAmb 17 28 58.0
comp=Z,22nm,1.0s
KOOLE Kule 79.48 111 IAmb IAmb 17 29 05.4
comp=Z,20nm,0.8s
KOOLE Kule 79.48 111 *i* P **P 17 28 49.7 +1.2**
TRQ Mont Tremblant 79.89 358 IAmb IAmb 17 28 52.2
comp=Z,30nm,0.9s
CASY Casey 80.00 181 P **P 17 28 51.2 +0.8**
KNB Kanab 80.11 328 IAmb IAmb 17 29 09.7
comp=Z,29nm,1.3s
PHPEN Phepeng 80.19 114 IAmb IAmb 17 29 00.9
comp=Z,18nm,0.8s
BOSA Boshof 80.28 118 P **P 17 28 53.1 +0.3**
comp=Z,111nm,0.6s,baz=239,slow=4.8,SNR=30
BOSA LR LR 18 00 47.5
comp=Z,257nm,19.1s,baz=232,slow=33
comp=Z,11nm,0.6s
BOSA Boshof 80.28 118 IAmb IAmb 17 29 02.1
comp=Z,42nm,1.0s
ECSD EROS Data Cent 80.49 342 IAmb IAmb 17 31 16.7
comp=Z,34nm,0.9s
D62A Allapoint, All 80.78 2 P P 17 28 55.5 +0.9
D62A IAmb IAmb 17 28 57.4
comp=Z,29nm,0.9s
SPMN Marine on St. 81.03 346 IAmb IAmb 17 28 57.5
comp=Z,17nm,0.7s
GRTLG Ghanzi 81.16 110 IAmb IAmb 17 29 06.9
comp=Z,31nm,1.2s
GRTLG Ghanzi 81.16 110 *i* P **P 17 28 58.5 +1.0**
MAKGR Makgori 81.48 115 *i* P **P 17 29 00.0 +0.8**
QNGWA Qangwa 82.12 108 IAmb IAmb 17 29 04.2
comp=Z,30nm,1.6s
GMN Gold Mountain 82.36 325 IAmb IAmb 17 29 20.9
comp=Z,31nm,2.0s
R11B Troy Canyon, C 82.44 327 P 17 29 04.4 +0.6
R11B IAmb IAmb 17 29 21.1
comp=Z,30nm,1.7s
LBTB Lobatse 82.52 115 LR LR 18 03 51.4
comp=Z,574nm,18.1s,baz=232,slow=34
LBTB Lobatse 82.52 115 IAmb IAmb 17 29 13.9
comp=Z,34nm,1.0s
KDWAN Kaudwane 82.72 113 *i* P **P 17 29 06.9 +1.2**
DUG Dugway, Tooele 82.76 330 IAmb IAmb 17 29 23.2
comp=Z,19nm,1.1s
XAUDM Khaudum 82.79 107 IAmb IAmb 17 29 16.4
comp=Z,37nm,1.6s
HWUT Hardware Ranch 83.45 331 IAmb IAmb 17 29 26.2
comp=Z,17nm,1.1s
URZ Urewera 83.47 228 LR LR 17 58 38.3
comp=Z,583nm,19.1s,baz=125,slow=30
LPHEP Lephephe 83.64 114 *i* P **P 17 29 11.6 +1.1**
PDAR Pinedale Array 83.67 333 P **P 17 29 11.8 +1.6**
comp=Z,2.2nm,0.8s,baz=173,slow=3.0,SNR=12
comp=Z,2.2nm,0.8s
NVAR Mina Array Bea 83.76 325 P **P 17 29 12.6 +1.9**
NVAR LR LR 17 59 23.8
comp=Z,3.1nm,0.8s,baz=142,slow=4.4,SNR=20
comp=Z,201nm,21.7s,baz=136,slow=31
comp=Z,3.1nm,0.8s
KHWEE KHWEE 84.11 112 IAmb IAmb 17 29 14.9
comp=Z,23nm,0.9s
E28A Huff 84.20 341 P 17 29 13.7 +1.2
TORD Torodi Ar. Bea 84.44 70 P **P 17 29 15.1 +0.6**
comp=Z,24nm,0.9s,baz=241,slow=1.5,SNR=12
TORD LR LR 18 06 05.4
comp=Z,590nm,18.6s,baz=238,slow=35
comp=Z,24nm,0.9s
TORD Torodi Ar. Bea 84.44 70 P **P 17 29 11.1 -3.4**
TORD IAmb IAmb 17 29 16.1
comp=Z,25nm,0.9s
AGMN Agassiz Nation 84.61 344 P **P 17 29 15.0 +0.5**
AGMN IAmb IAmb 17 29 16.9
comp=Z,14nm,0.8s
PNTR Pine Nut 84.90 325 IAmb IAmb 17 29 33.9
comp=Z,20nm,1.3s
FLWY Flagg Ranch 85.22 333 IAmb IAmb 17 29 21.1
comp=Z,12nm,0.8s
PAHR Pah Rah Range 85.28 325 IAmb IAmb 17 29 36.5
comp=Z,28nm,1.7s
MREMI Moremi 85.29 114 *i* P **P 17 29 20.1 +1.3**
RAO Raoul Island 85.66 238 LR LR 17 58 12.5
comp=Z,213nm,21.1s,baz=114,slow=29
YMR Madison River 85.82 333 IAmb IAmb 17 29 24.5
comp=Z,15nm,0.8s
BEKR Beckworth 85.87 325 IAmb IAmb 17 29 39.1
comp=Z,21nm,1.4s
BROLN Thalogang 86.04 113 *i* P **P 17 29 23.4 +0.8**
ORV Oroville 86.18 324 IAmb IAmb 17 29 40.6
comp=Z,31nm,1.3s
HLID Hailey 86.23 331 P P 17 29 22.8 -0.1
ULM Lac du Bonnet 86.45 345 P P 17 29 24.3 +0.7
comp=Z,12nm,0.8s,baz=168,slow=4.2,SNR=7.5
comp=Z,12nm,0.8s
ULM Lac du Bonnet 86.45 345 IAmb IAmb 17 29 25.9
comp=Z,13nm,0.9s
ULM Lac du Bonnet 86.45 345 *i* P **P 17 29 24.6 +1.0**
BCYI Bear Canyon 86.45 332 IAmb IAmb 17 29 41.8
comp=Z,18nm,1.2s
Q03E Paynes Creek 86.90 324 P P 17 29 26.7 +0.5
Q03E IAmb IAmb 17 29 47.3
comp=Z,23nm,1.1s
DLMT Dillon 87.02 333 IAmb IAmb 17 29 44.2
comp=Z,24nm,1.4s
MATP Matopo 87.32 113 LR LR 18 04 51.0
comp=Z,606nm,20.4s,baz=234,slow=33
N02D Trinity Center 87.86 324 IAmb IAmb 17 29 48.7
comp=Z,20nm,1.2s
YBH Yreka Blue Hor 88.44 325 IAmb IAmb 17 29 50.8
comp=Z,21nm,1.3s
SCHQ Schefferville 88.61 3 P P 17 29 33.6 -0.3
comp=Z,7.4nm,0.9s,baz=185,slow=15,SNR=8.0
SCHQ LR LR 18 10 02.8
comp=Z,114nm,21.6s,baz=152,slow=36
comp=Z,7.4nm,0.9s
J05D Fort Rock, OR 88.95 327 IAmb IAmb 17 29 44.6
comp=Z,43nm,1.9s
PINE Pine Mountain 89.21 327 IAmb IAmb 17 30 02.9
comp=Z,29nm,1.5s
LSZ Lusaka 90.03 108 LR LR 18 05 59.4
comp=Z,915nm,20.4s,baz=236,slow=33
MDT Midelt 92.02 51 LR LR 18 09 35.1
comp=Z,286nm,21.4s,baz=234,slow=35
ESDC Sonseca Array 96.76 46 P **P 17 30 12.3 +0.3**
comp=Z,1.5nm,0.9s,baz=236,slow=4.0,SNR=4.2
ESDC LR LR 18 12 49.7
comp=Z,332nm,18.7s,baz=223,slow=35
comp=Z,1.5nm,0.9s
ESDC Sonseca Array 96.76 46 IAmb IAmb 17 33 37.8
comp=Z,9.5nm,1.6s
FRB Frobisher Bay 97.48 2 LR LR 18 18 14.1
comp=Z,181nm,19.3s,baz=174,slow=38
BBB Bella Bella 98.70 329 LR LR 18 13 03.7
comp=Z,67nm,18.1s,baz=126,slow=34
GERES GERESS Array B 112.34 45 PKiKP **PKiKP 17 35 16.7 -0.3**
comp=Z,1.2nm,0.6s,baz=251,slow=2.7,SNR=5.9
CLL Collm 113.02 43 *e*PKiKP **PKiKP 17 35 20.0 +1.9**
CLL *e*PS **PS 17 45 47.0 +4.3**
CLL *e*PPS PPS 17 46 54.0
CLL AMS AMS 18 25 00.0
comp=Z,400nm,18.1s
BLS5 Blasjo 113.33 33 *e*P **Pdif 17 31 23.9 -1.3**

ILAR Eielson Array 114.10 333 PKP **PKiKP 17 35 20.9 +1.1**
comp=Z,0.6nm,0.9s,baz=126,slow=1.2,SNR=4.3
ILAR PP **PP 17 36 17.3 +2.2**
comp=Z,0.6nm,0.8s,baz=108,slow=6.5,SNR=4.9
NOA NORSAR Array B 116.17 33 PKP **PKPdf 17 35 24.0 +0.1**
comp=Z,1.9nm,0.9s,baz=246,slow=2.2,SNR=4.4
NOA NORSAR Array B 116.17 33 PKiKP **PKPdf 17 35 24.0 +0.1**
HFS Hagfors 116.95 34 PKP **PKPdf 17 35 25.5 +0.1**
comp=Z,1.7nm,0.8s,baz=245,slow=3.0,SNR=4.6
ASAR Alice Springs 117.44 207 PKP **PKPdf 17 35 27.6 -0.1**
comp=Z,1.6nm,0.8s,baz=128,slow=1.7,SNR=16
ASAR PKKPbc **PKKPbc 17 45 47.8 -2.0**
comp=Z,0.9nm,0.8s,baz=337,slow=3.7,SNR=22
BURAR Bucovina Array 118.94 50 PKPdf 17 35 29.9 +0.1
LOF Lofoten 119.60 25 *e* **PKPdf 17 35 30.7 +0.4**
FAUS Fauske 120.01 27 *e* **PKiKP 17 35 32.7 +1.6**
RNPP5 Staryi Chortor 120.51 46 PKP **PKPdf 17 35 32.3 -0.2**
WRA Warramunga Arr 120.63 209 PKP **PKPdf 17 35 34.1 +0.2**
comp=Z,2.3nm,0.5s,baz=152,slow=1.7,SNR=23
WRA Warramunga Arr 120.63 209 PKPdf 17 35 33.3 -0.6
MMAI Mount Meron Ar 120.97 69 PKP **PKPdf 17 35 34.0 -0.1**
comp=Z,1.1nm,0.5s,baz=243,slow=1.3,SNR=6.7
LUBAR Lubar, Ukraine 121.26 48 PKP **PKPdf 17 35 33.5 -0.5**
TRO Tromso 121.87 24 *e*P **PKPdf 17 35 35.0 +0.5**
BRTR Keskin Array B 122.05 61 PKP **PKPdf 17 35 36.3 +0.2**
comp=Z,4.3nm,0.9s,baz=235,slow=3.3,SNR=22
BRTR Keskin Array B 122.05 61 PKPdf 17 35 35.8 -0.3
BRTR Keskin Array B 122.05 61 PKiKP **PKPdf 17 35 35.8 -0.3**
AK19 Malin Array Si 122.26 47 PKP **PKPdf 17 35 35.4 -0.5**
AK21 Malin Array Si 122.29 47 PKP **PKPdf 17 35 35.4 -0.5**
AK14 Malin Array Si 122.29 48 PKP **PKPdf 17 35 35.4 -0.5**
AK16 Malin Array Si 122.30 48 PKP **PKPdf 17 35 35.5 -0.5**
AK15 Malin Array Si 122.32 48 PKP **PKPdf 17 35 36.0 0.0**
AK07 Malin Array Si 122.33 48 PKP **PKPdf 17 35 35.8 -0.2**
AK05 Malin Array Si 122.35 48 PKP **PKPdf 17 35 35.8 -0.3**
AK04 Malin Array Si 122.35 48 PKP **PKPdf 17 35 35.8 -0.3**
JETT Jettan, Norway 122.36 25 *e*P **PKiKP 17 35 37.1 +1.3**
KIEV Kiev 122.37 48 PKPdf 17 35 35.5 -0.6
KIEV Kiev 122.37 48 PKiKP **PKPdf 17 35 35.5 -0.6**
KIEV Kiev 122.37 48 PKP **PKPdf 17 35 35.8 -0.3**
AK10 Malin Array Si 122.37 48 PKP **PKPdf 17 35 35.8 -0.3**
AK01 Malin Array Si 122.37 48 PKP **PKPdf 17 35 35.8 -0.3**
AKASG Malin Array Be 122.38 48 PKP **PKPdf 17 35 35.9 -0.2**
comp=Z,7.2nm,0.8s,baz=262,slow=2.1,SNR=16
AKASG Malin Array Be 122.38 48 PKPdf 17 35 35.5 -0.6
AKBB Malin Array Si 122.38 48*c* iPKiKP **PKPdf 17 35 36.4 +0.3**
AKBB Malin Array Si 122.38 48 PKP **PKPdf 17 35 35.8 -0.3**
AK03 Malin Array Si 122.39 48 PKP **PKPdf 17 35 35.8 -0.3**
AK02 Malin Array Si 122.40 48 PKP **PKPdf 17 35 35.9 -0.2**
MNK Minsk 122.56 43 *i* PKiKP **PKiKP 17 35 36.9 +0.4**
MNK *i* 17 37 13.1
MNK *i* PPP PPP 17 39 49.0
MNK *i* 17 42 48.5
MNK *i* SS SS 17 53 55.5 +0.5
MNK *i* SSS SSS 17 58 26.7
MNK pmax pmax
comp=Z,32nm,0.9s
MNK pmax pmax
comp=N,11nm,1.0s
MNK pmax pmax
comp=E,15nm,0.8s
MNK MLR MLR
comp=E,269nm,18.0s
MNK MLR MLR
comp=Z,374nm,21.0s
MNK MLR MLR
comp=N,731nm,23.0s
VSU Vasula 122.86 38*c* iPKiKP **PKPdf 17 35 36.9 +0.1**
VSU pmax pmax
comp=Z,48nm,2.5s
FINES FINESS Array B 123.14 35 PKP **PKiKP 17 35 37.9 +0.4**
comp=Z,6.9nm,0.9s,baz=252,slow=2.8,SNR=11
KTK1 Kautokeino 123.26 25 *e*P **PKPdf 17 35 37.8 +0.5**
PSA00 Pilbara Seismi 123.52 194 PKPdf 17 35 38.3 -1.1
ARA0 ARCESS Array S 124.13 25 *e*P **PKiKP 17 35 40.2 +0.9**
ARCES ARCESS Array B 124.13 25 PKP **PKiKP 17 35 40.0 +0.8**
comp=Z,4.5nm,0.7s,baz=256,slow=2.6,SNR=18
FITZ Fitzroy Crossi 125.42 201 PKP **PKiKP 17 35 44.1 +0.7**
comp=Z,6.5nm,0.8s,baz=179,slow=2.4,SNR=10
FITZ Fitzroy Crossi 125.42 201 PKPdf 17 35 42.2 -0.8
VADS Vadso 125.51 24 *e*P **PKiKP 17 35 43.4 +1.4**
H11S2 WAKE ISLAND Hyd 125.53 269 T T 19 54 50.1
baz=118,slow=74,SNR=32
H11S1 WAKE ISLAND Hyd 125.54 269 T T 19 54 50.4
baz=118,slow=74,SNR=16
H11S3 WAKE ISLAND Hyd 125.54 269 T T 19 54 51.4
baz=118,slow=74,SNR=24
LVZ Lovozero 127.39 27*c* iPKiKP **PKPdf 17 35 43.0 -2.3**
LVZ pmax pmax
comp=Z,62nm,1.3s
OBN Obninsk 127.61 43*d* iPKiKP **PKiKP 17 35 46.8 +0.3**
OBN *e*PPP PPP 17 40 33.7
OBN *e*SS SS 17 55 21.9 +24
OBN pmax pmax
comp=Z,14nm,0.9s
VSR Storozhevoye 128.64 49 *e*PKiKP **PKPdf 17 35 46.6 -1.5**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR Galich'ya Gora 128.68 47 *e*PKiKP **PKPdf 17 35 48.0 -0.1**
LPSR pmax pmax
comp=Z,20nm,0.8s
KLMR Klimovskoe 129.56 36 *e*PKiKP **PKPdf 17 35 49.8 +0.3**
KLMR pmax pmax
comp=Z,39nm,1.2s
KIV Kislovodsk 129.71 58 PKPdf 17 35 50.2 -0.3
KIV Kislovodsk 129.71 58 *i* PKiKP **PKiKP 17 35 51.7 +0.4**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,159nm,23.0s
KBZ Khabaz 129.81 59 PKP **PKiKP 17 35 52.2 +0.9**
comp=Z,5.3nm,0.9s,baz=297,slow=0.8,SNR=9.1
KBZ Khabaz 129.81 59*c* iPKiKP **PKiKP 17 35 52.9 +1.6**
VRH Novokhopyorsk 130.23 49 *e*PKiKP **PKPdf 17 35 50.7 -0.4**
VRH pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 130.35 64*c* iPKiKP **PKiKP 17 35 54.4 +1.6**
GNI pmax pmax
comp=Z,13nm,1.7s
BILL Bilibino 132.74 334 *i* PKiKP **PKiKP 17 35 56.9 +0.4**
BILL pmax pmax
comp=Z,6.0nm,1.1s
AKT Akhty 132.85 63 *e*PKiKP **PKPdf 17 35 57.3 +0.7**
AKT pmax pmax
comp=Z,52nm,2.9s
BATI Baumata 133.47 202 PKP **PKiKP 17 36 00.8 +1.0**
comp=Z,12nm,0.6s,baz=191,slow=5.2,SNR=4.2
BELG Belogornoye 133.96 48 *i* PKiKP **PKPdf 17 35 58.9 +0.8**
BELG pmax pmax
comp=Z,5.0nm,0.9s
KIRV Kirov 134.69 39*c* iPKiKP **PKiKP 17 36 00.8 +0.1**
EDFI Ende, Flores 135.44 200 PKP **PKiKP 17 36 04.1 +0.3**
EDFI PKP **PKPdf 17 36 04.5 +2.2**
ARTI Arti 139.83 41 PKPpre 17 36 04.4
ARTI **PKPdf 17 36 09.7 +0.9**
ARTI Arti 139.83 41 *i* PKiKP **PKiKP 17 36 10.6 -0.7**
ARTI 17 39 03.2
ARTI SS SS 17 57 19.7 -6.1
TIXI Tiksi 140.66 350 PKPpre 17 36 03.4
TIXI Tiksi 140.66 350 PKHKP PKPpre 17 36 03.4
PALK Pallekele 143.56 131 PKPbc 17 36 14.8 +0.5
PALK Pallekele 143.56 131 PKiKP PKPbc 17 36 14.8 +0.6
KRJI Kerinci 143.61 170 PKP **PKPdf 17 36 16.8 -0.4**
KRJI PKP PKPbc 17 36 17.1 +2.7
MPSI Mapaga 144.59 201 PKP **PKPab 17 36 17.7 +0.6**
MPSI PKP PKPbc 17 36 17.9 +0.6
PDSI Padang 144.60 167 PKP PKPbc 17 36 18.3 +0.9
PDSI PKP **PKPab 17 36 18.4 +1.2**
PBSI Pulau Batu 144.98 163 PKP **PKPdf 17 36 20.5 +1.1**
PBSI PKP **sPKPdf 17 36 26.9 +0.7**
PPI Padang Panjang 145.04 167 PKP **PKPdf 17 36 20.5 +1.0**
PPI PKP **PKPab 17 36 20.9 +2.1**
TOLI2 Tolitoli 145.04 203 PKPbc 17 36 16.8 -2.0
DSRI Dabo 145.56 175 PKP **PKPab 17 36 21.5 +0.8**
DSRI PKP **PKPab 17 36 21.6 +0.8**
MNSI Mandailing Nat 146.09 165 PKP **PKPbc 17 36 22.8 +0.7**
GSI Gunungsitoli 146.11 162 PKP **PKPbc 17 36 23.0 +0.8**
GSI PKP **PKPab 17 36 23.9 +1.1**
SNSI Sinabang, Aceh 146.82 159 PKP **PKPbc 17 36 25.2 +0.9**
SNSI PKP **pPKPdf 17 36 27.9 +0.3**
TPRI Tanjung Pinang 146.94 174 PKP **PKPbc 17 36 24.7 +0.1**
TPRI PKP **PKPab 17 36 26.3 +0.3**
BORK Borovoye 147.41 43 *i* PKiKP **PKPdf 17 36 22.7 +0.4**

BVAR Borovoye Array 147.46 43 PKPbc **PKPdf 17 36 23.9 +1.6**
comp=Z,24nm,0.6s,baz=276,slow=2.8,SNR=60
BVAR PKPab **PKPab 17 36 26.9 -0.1**
comp=Z,24nm,0.6s,baz=305,slow=3.3,SNR=57
KBL Kabul 148.21 78 PKPdf 17 36 26.5 +2.0
KBL Kabul 148.21 78 PKP2 **PKPdf 17 36 26.5 +2.0**
KCSI Kotacane, Aceh 148.29 161 PKP **PKPbc 17 36 28.5 +0.2**
KCSI PKP **pPKPdf 17 36 28.8 -1.3**
SBUM Sibu 148.31 189 PKPbc 17 36 28.0 -0.4
YAK Yakutsk 148.66 340 PKPdf 17 36 23.1 -0.9
YAK PKPbc **pPKPdf 17 36 28.8 0.0**
YAK Yakutsk 148.66 340 *e*PKIKP **PKPdf 17 36 25.5 +1.5**
YAK *e* 17 36 32.6
YAK *e* 17 39 59.8
YAK pmax pmax
comp=Z,67nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK pmax pmax
comp=Z,331nm,3.7s
YAK pmax pmax
comp=N,446nm,3.9s
YAK pmax pmax
comp=E,293nm,3.6s
HYBB Hyderabad (bro 149.15 115 *e*PKPdf **PKPdf 17 36 25.7 -0.5**
HYBB *e*pPKPdf **PKPbc 17 36 30.3 -0.1**
MYLDM Lahad Datu 149.60 202 PKPdf **PKPdf 17 36 24.2 -2.9**
MYLDM **sPKPdf 17 36 34.6 +1.1**
AAK Ala-Archa 152.73 62 PKP **PKPdf 17 36 32.3 +1.1**
comp=E,20nm,0.8s,baz=326,slow=3.6,SNR=3.8
AAK PKPbc **PKiKP 17 36 39.9 +1.4**
comp=E,20nm,0.8s,baz=315,slow=2.9,SNR=37
AAK Ala-Archa 152.73 62 PKPdf 17 36 30.0 -1.2
AAK PKPbc **PKiKP 17 36 39.4 +0.9**
AAK PKPab **sPKPbc 17 36 45.7 +0.6**
AAK Ala-Archa 152.73 62 PKiKP **PKPdf 17 36 30.0 -1.2**
AAK 17 36 45.7
KURBB Kurchatov Arra 153.05 43 PKP **PKPdf 17 36 32.5 +1.3**
comp=E,3.2nm,0.8s,baz=297,slow=2.0,SNR=19
KURBB PKPbc **PKiKP 17 36 39.9 +1.2**
comp=E,16nm,0.6s,baz=302,slow=2.9,SNR=55
KURBB PKPab **PKPab 17 36 48.4 -1.6**
comp=E,5.0nm,0.6s,baz=298,slow=3.4,SNR=7.5
KURBB PP **PP 17 40 23.3 -0.2**
comp=E,2.0nm,0.9s,baz=287,slow=5.7,SNR=4.4
KURK Kurchatov 153.06 43 PKPdf 17 36 32.8 +1.6
KURK Kurchatov 153.06 43 PKiKP **PKPdf 17 36 32.5 +1.3**
KURK 17 36 39.9
KURK 17 36 48.4
ZALV Zalesovo Beam 154.37 32 PKP **PKPdf 17 36 33.9 +0.9**
comp=E,8.3nm,0.8s,baz=280,slow=2.7,SNR=38
ZALV PKPbc **PKPbc 17 36 41.4 +0.2**
comp=E,38nm,0.6s,baz=306,slow=2.0,SNR=72
ZALV PKPab **PKPab 17 36 56.9 +1.4**
comp=E,17nm,0.7s,baz=303,slow=4.9,SNR=7.1
ZALV Zalesovo Beam 154.37 32 PKPdf 17 36 31.8 -1.1
ZALV PKPbc **PKiKP 17 36 42.5 +1.2**
ZALV PKPab **PKPab 17 36 56.9 +1.4**
ZALV Zalesovo Beam 154.37 32 PKiKP **PKPdf 17 36 31.8 -1.1**
MKAR Makanchi Array 156.96 49 PKP **PKPdf 17 36 37.6 +0.9**
comp=E,3.9nm,0.9s,baz=267,slow=2.3,SNR=11
MKAR PKPbc **sPKPdf 17 36 48.0 +4.5**
comp=E,5.2nm,0.8s,baz=298,slow=2.6,SNR=9.7
MKAR PKPab **PKPab 17 37 07.7 +0.8**
comp=E,2.7nm,0.9s,baz=291,slow=4.2,SNR=3.9
MKAR PP **PP 17 40 43.2 -2.4**
comp=E,2.2nm,1.0s,baz=302,slow=3.2,SNR=3.2
HEH HeiHe 158.25 324 *e*P **PKPab 17 37 13.4 +1.2**
HEH pmax pmax
comp=Z,9.0nm,0.7s
EVN Everest 161.14 103 PKPdf **PKPdf 17 36 40.4 -2.6**
EVN **PKPab 17 37 25.1 -1.3**
WMQ Urumqi 161.67 52 *e*PKP **PKPdf 17 36 42.0 -0.3**
WMQ LR LR
comp=Z,250nm,24.7s
CMAR Chiang Mai Arr 162.66 151 PKP **PKPdf 17 36 45.0 +1.0**
comp=Z,3.0nm,0.9s,baz=209,slow=1.5,SNR=20
CMAR PKPab **PKPab 17 37 32.3 +0.1**
comp=Z,1.1nm,0.8s,baz=200,slow=4.7,SNR=4.7
CMAR Chiang Mai Arr 162.66 151 PKPdf 17 36 45.0 +1.0
CN2 Changchun 163.09 311 *e*PKP **PKPdf 17 36 40.3 -3.3**
KSRS Korea Array 163.20 288 PKP **PKPdf 17 36 44.4 +0.5**
comp=Z,2.1nm,1.0s,baz=93,slow=2.7,SNR=5.8
KSRS PKPab **pPKPab 17 37 37.5 -1.6**
comp=Z,1.1nm,0.9s,baz=84,slow=3.7,SNR=1.5
SONM Songino Array 166.16 4 PKP **PKPdf 17 36 46.6 +0.2**
comp=Z,0.6nm,0.5s,baz=17,slow=1.6,SNR=4.7
SONM PKPab **PKPab 17 37 48.4 +1.4**
comp=Z,5.4nm,0.9s,baz=340,slow=3.8,SNR=12
SONM PP **PP 17 41 33.1 -0.8**
comp=Z,1.0nm,0.8s,baz=358,slow=4.9,SNR=3.7
NJ2 Nanjing 170.41 261 *e*PKP **PKPdf 17 36 50.8 +1.3**
PZH PanZhiHua 170.93 144 PKPdf 17 36 51.0 +0.8
GTA Gaotai 171.71 47 PKP **PKPdf 17 36 51.5 +1.3**
GTA PKPab **PKPab 17 38 13.1 +1.1**
GTA LR LR
comp=Z,280nm,20.0s
GTA LR LR
comp=Z,230nm,18.2s
GTA LR LR
comp=Z,260nm,20.7s
HHC Hu-ho-hao-te 172.51 337 *e*PKP **PKPdf 17 36 47.3 -3.2**
HHC LR LR
comp=Z,240nm,19.6s
HHC LR LR
comp=Z,240nm,19.1s
HHC LR LR
comp=Z,340nm,19.8s
HNS HongShan 173.35 303 ⇑PKP **PKPdf 17 36 52.1 +1.4**
CD2 Chengdu 175.47 132 PKP **PKPdf 17 36 51.0 -0.7**
LZDM Lanzhou Array 176.21 58 PKPab **PKPab 17 38 32.1 -0.3**
comp=Z,3.8nm,0.4s,baz=284,slow=5.8,SNR=1.8
LZH Lanzhou 176.24 56 *e*PKP **PKPdf 17 36 50.5 -1.4**
LZH AMB AMB
comp=Z,220nm,4.8s
LZH LR LR
comp=Z,180nm,16.5s
LZH LR LR
comp=Z,370nm,15.5s
LZH LR LR
comp=Z,340nm,17.9s
XAN Xi'an 178.96 272 PKP **PKPdf 17 36 53.8 +1.6**

IDC ***15*** *17:16:48.7±2.1,1°.75N×126°.50E,h0km,mb3.3/3, mbtmp3.4/4,ML3.0/1,Error ellipse: s-maj=132.7km s-min=26.8km az=68.0*

DJA ***15*** *17:16:53.4±0.3,2°.N×4°×12°.7E±°,h10km,M3.5/9,MLv3.5/9*
ISC 15 17:16:55.0±1.2,1°.59N±0°.08×126°.6E±0°.1,h35km,n8, σ1s54/8,mb3.4/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**136**	P		**Pn**	**17 17 15.5 +1.0**
SGSI	**Sangihe**	**2.33**	**333**	P		**Pn**	**17 17 32.6 +1.8**
KMSI	**Cibinong**	**2.78**	**249**	P		**Pn**	**17 17 37.9 +0.8**
SANI	**Sanana**	**3.67**	**189**	P		**Pn**	**17 17 50.4 +1.1**
FITZ	**Fitzroy Crossi**	**19.59**	**183**	P		**P**	**17 21 20.5 +0.3**
	baz=356,slow=16,SNR=1.9						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.72**	**161**	P		**P**	**17 21 53.2 -0.9**
	0.7nm,0.5s,baz=338,slow=10,SNR=13						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.10**	**165**	P		**P**	**17 22 26.4 +0.6**
	0.3nm,0.7s,baz=343,slow=11,SNR=14						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.22**	**326**	P		**P**	**17 26 50.7 -2.2**
	0.2nm,0.6s,baz=121,slow=7.8,SNR=1.3						
	0.2nm,0.6s						

IDC 15 17:17:03.9±2.1,1°.65N×126°.39E,h0km,mb3.5/3, mbtmp3.6/4,ML3.2/1,Error ellipse: s-maj=133.0km s-min=25.5km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		17 21 34.0	-0.2
	baz=7.1,slow=8.1,SNR=2.4						
	1.9nm,0.8s						
WRA	**Warramunga Arr**	**22.83**	**160**	P		17 22 09.7	+1.0
	0.7nm,0.6s,baz=340,slow=11,SNR=9.0						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**26.20**	**164**	P		17 22 39.7	-0.8

0.4nm,0.6s,baz=349,slow=9.4,SNR=5.5
0.4nm,0.6s
MKAR Makanchi Array 59.08 326 P P 17 27 06.0 0.0
1.5nm,1.0s,baz=119,slow=7.8,SNR=4.6
1.5nm,1.0s

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*IDC **15** 17:19:45.3±1.1,1.°70N×126.°45E,h0km,mb3.9/7, mbtmp3.8/8,ML3.7/1,Error ellipse: s-maj=103.0km s-min=16.6km az=70.0*
*NEIC **15** 17:19:47.9±2.3,1.°60N±0.°06×126.°56E±0.°05,h15km±4km, mb4.2/17,Error ellipse: s-maj=8.6km s-min=6.9km az=211.0*
*DJA **15** 17:19:49.3±0.3,2.°N±3.°×12.°7E±.°,h10km,M3.8/13,mb3.9/2, MLv3.7/13*
ISC 15 17:19:47.0±0.6,1.°71N±0.°06×126.°62E±0.°07,h10km,n37, σ1§37/42,mb4.0/13,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**141**				**Pb**	**17 20 09.9**	**+0.2**
TNTI					Sn		**Sn**	**17 20 25.7**	**-0.2**
TNTI	**Ternate**	**1.19**	**141**	P			**Pn**	**17 20 11.7**	**+2.0**
SGSI	**Sangihe**	**2.25**	**331**	P			**Pn**	**17 20 25.5**	**+1.2**
SANI	**Sanana**	**3.78**	**190**	P			**Pn**	**17 20 47.0**	**+1.6**
LUWI	**Luwuk**	**4.72**	**235**	Pn			**Pn**	**17 20 55.3**	**-3.0**
LUWI				Sn			**Sn**	**17 21 55.0**	**+1.9**
LUWI	**Luwuk**	**4.72**	**235**	P			**Pn**	**17 21 00.1**	**+1.8**
MRSI	**Marisa**	**4.84**	**255**	P			**Pn**	**17 21 02.1**	**+2.2**
NLAI	**Namlea**	**4.94**	**174**	P			**Pn**	**17 21 03.4**	**+2.1**
TOLI2	**Tolitoli**	**5.87**	**264**	Pn			**Pn**	**17 21 12.4**	**-1.7**
FAKI	**Fak Fak**	**7.26**	**129**	Pn			**Pn**	**17 21 32.3**	**-1.0**
MYLDM	**Lahad Datu**	**8.81**	**293**	Pn			**Pn**	**17 21 53.5**	**-1.0**
MTN	**Manton Dam**	**15.13**	**163**				**Pn**	**17 23 22.0**	**+1.0**
MTN				IAmb			IAmb	17 23 30.9	
	comp=Z,9.4nm,1.1s								
KNRA	**Kununurra**	**17.40**	**173**	P			**Pn**	**17 23 49.3**	**-0.8**
KNRA				IAmb			IAmb	17 24 32.7	
	comp=Z,43nm,1.4s								
FITZ	**Fitzroy Crossi**	**19.70**	**183**	P			**P**	**17 24 15.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=10,SNR=3.1								
	comp=Z,1.2nm,0.8s								
FITZ	**Fitzroy Crossi**	**19.70**	**183**	P			**P**	**17 24 15.0**	**-1.7**
SSLB	**Suanglung**	**22.63**	**346**	P			**P**	**17 24 48.1**	**-0.1**
SSLB				IAmb			IAmb	17 25 03.9	
	comp=Z,20nm,1.2s								
WB0	**Warramunga Arr**	**22.66**	**161**				**P**	**17 24 48.0**	**-0.6**
WB0				IAmb			IAmb	17 25 02.3	
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**22.81**	**161**	P			**P**	**17 24 49.5**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=339,slow=11,SNR=22								
WRA				PcP			**PcP**	**17 28 41.8**	**0.0**
	comp=Z,0.3nm,0.9s,baz=341,slow=2.0,SNR=1.3								
	comp=Z,2.4nm,0.6s								
WRA	**Warramunga Arr**	**22.81**	**161**	P			**P**	**17 24 47.5**	**-2.7**
WR8	**Warramunga Arr**	**22.87**	**161**				**P**	**17 24 48.7**	**-2.2**
WR8				IAmb			IAmb	17 25 12.4	
	comp=Z,5.7nm,1.1s								
AS31	**Alice Springs**	**26.20**	**165**	P			**P**	**17 25 22.1**	**+0.1**
ASAR	**Alice Springs**	**26.20**	**165**	P			**P**	**17 25 22.8**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=343,slow=11,SNR=29								
ASAR				PcP			**PcP**	**17 28 47.8**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=340,slow=2.2,SNR=2.4								
	comp=Z,1.3nm,0.7s								
ASAR	**Alice Springs**	**26.20**	**165**	P			**P**	**17 25 21.7**	**-0.4**
ASAR							**PcP**	**17 28 48.2**	**-0.9**
SONM	**Songino Array**	**49.17**	**342**	P			**P**	**17 28 35.0**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=160,slow=9.1,SNR=1.7								
	comp=Z,0.5nm,0.6s								
MK31	**Makanchi Array**	**59.15**	**326**	P			**P**	**17 29 47.4**	**-0.7**
MK31				IAmb			IAmb	17 30 14.6	
	comp=Z,4.9nm,1.2s								
MKAR	**Makanchi Array**	**59.15**	**326**	P			**P**	**17 29 47.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=124,slow=6.9,SNR=13								
	comp=Z,0.6nm,0.5s								
MAKZ	**Makanchi**	**59.34**	**326**				**P**	**17 29 50.5**	**+1.2**
KURBB	**Kurchatov Arra**	**63.38**	**328**	P			**P**	**17 30 16.2**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=129,slow=6.2,SNR=5.3								
	comp=Z,1.8nm,0.3s								
KURK	**Kurchatov**	**63.38**	**328**	P			**P**	**17 30 15.7**	**-0.9**
KURK				IAmb			IAmb	17 30 17.5	
	comp=Z,2.7nm,0.8s								
BVAR	**Borovoye Array**	**68.95**	**327**	P			**P**	**17 30 51.3**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=88,slow=7.7,SNR=2.9								
	comp=Z,0.4nm,0.4s								
AB31	**Akbulak array**	**73.64**	**321**	P			**P**	**17 31 20.0**	**-0.7**
AB31				IAmb			IAmb	17 31 21.5	
	comp=Z,2.1nm,1.4s								
VNDA	**Vanda**	**81.45**	**173**	P			**P**	**17 32 05.3**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=319,slow=4.2,SNR=1.6								
	comp=Z,0.3nm,0.4s								
VNDA	**Vanda**	**81.45**	**173**	P			**P**	**17 32 03.8**	**0.0**
VNDA				IAmb			IAmb	17 32 48.7	
	comp=Z,1.2nm,1.1s								
SBA	**Scott Base**	**82.36**	**172**	P			**P**	**17 32 09.7**	**+1.1**
D20K	**Etivluk River**	**83.62**	**21**	P			**P**	**17 32 17.0**	**+1.6**
B21K	**Ikpikpuk River**	**84.50**	**20**	P			**P**	**17 32 21.4**	**+1.7**
B22K	**Teshekpuk Lake**	**85.02**	**20**	P			**P**	**17 32 22.9**	**+0.5**

GCG 15 17:22:48.1±1.6,13.°71N×90.°94W,h46km±59km,MD3.6, ML3.4,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.68**	**9**	*i* P			Pn	17 23 02.2	+0.7
FG16	**Alotenango, Sa**	**0.70**	**37**	*e*P			Pn	17 23 03.0	+1.1
FG16				*i* S			Sn	17 23 14.3	+2.4
FG16				IAML				17 23 16.6	
	comp=N,3μm,0.2s								
STG8	**El Palmar, Qui**	**0.84**	**332**	*e*P			Pn	17 23 08.2	+4.4
NUBE	**Las Nubes**	**1.15**	**80**	*i* S			Sn	17 23 23.1	+0.6
APG	**El Apazote**	**1.37**	**20**	*e*P			Pn	17 23 12.3	+1.3

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*CATAC **15** 17:23:14.3±0.4,12.°N±2.°×8.°8W±.°,h29km±2km,M3.6/19, MLv3.6/19,Error ellipse: s-maj=6.2km s-min=3.2km az=39.5,confirmed*
*SNET **15** 17:23:16.4±0.6,13.°11N×87.°54W,h94km±9km,ML3.3*
ISC 15 17:23:14.1±1.6,12.°37N±0.°07×87.°74W±0.°05,h46km±24km, n38,σ0§67/49,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.63**	**16**	P			**Pn**	**17 23 27.0**	**+0.1**
CSGN				S			**Sn**	**17 23 35.6**	**-0.5**
POTN	**Potosi Cosigui**	**0.67**	**20**	P			**Pn**	**17 23 27.3**	**-0.1**
POTN				S			**Sn**	**17 23 37.0**	**+0.2**
CRIN	**San Cristobal**	**0.75**	**64**	P			**Pn**	**17 23 29.2**	**+0.7**
CRIN	**San Cristobal**	**0.75**	**64**	S			**Sn**	**17 23 40.0**	**+1.1**
PKGN	**Cerro Pekin**	**0.80**	**68**	P			**Pn**	**17 23 29.4**	**+0.3**
PKGN				S			**Sn**	**17 23 40.8**	**+0.8**
CNCH	**Conchagua**	**0.91**	**354**	*e*P			**Pn**	**17 23 30.6**	**-0.1**
CNCH				*e*S			**Sn**	**17 23 42.2**	**-0.6**
CNCH	**Conchagua**	**0.91**	**354**	P			**Pn**	**17 23 30.7**	**0.0**
CNCH	**Conchagua**	**0.91**	**354**	S			**Sn**	**17 23 43.1**	**+0.3**
POLN	**Al Sur del Vol**	**0.95**	**73**	P			**Pn**	**17 23 29.2**	**-1.9**
POLN				S			**Sn**	**17 23 41.7**	**-1.8**
LCND	**La Caada**	**0.95**	**351**	*e*P			**Pn**	**17 23 31.0**	**-0.1**
LCND				*e*S			**Sn**	**17 23 42.2**	**-1.3**
LCND				IAML				17 23 50.9	
	comp=Z,838nm,0.4s								
LCND	**La Caada**	**0.95**	**351**	P			**Pn**	**17 23 31.1**	**0.0**
CNGA	**Al SSO del Vol**	**1.02**	**83**	P			**Pn**	**17 23 32.0**	**-0.1**
CNGA				S			**Sn**	**17 23 45.4**	**0.0**
CNGN	**Cerro Negro**	**1.03**	**82**	P			**Pn**	**17 23 32.4**	**+0.3**
CNGN	**Cerro Negro**	**1.03**	**82**	S			**Sn**	**17 23 45.5**	**0.0**
COPN	**Copaltepe**	**1.14**	**99**	P			Pn	17 23 33.4	**-0.2**
MOMN	**Momotombo**	**1.17**	**88**	P			Pn	17 23 24.1	-10
BLLM	**Bellamira**	**1.18**	**336**	*e*P			**Pn**	**17 23 33.9**	**-0.4**
LCY	**Lacayo**	**1.18**	**333**	*e*P			**Pn**	**17 23 34.6**	**+0.3**
MOM3	**MOM3**	**1.20**	**83**	P			**Pn**	**17 23 34.6**	**0.0**
MOM3				S			**Sn**	**17 23 50.6**	**+0.9**
MOM2	**El Cardon**	**1.23**	**87**	P			**Pn**	**17 23 35.3**	**+0.4**
PACA	**Pacayal**	**1.23**	**333**	*e*P			**Pn**	**17 23 35.6**	**+0.5**
PACA				*e*S			**Sn**	**17 23 49.6**	**-1.1**
PACA	**Pacayal**	**1.23**	**333**	P			**Pn**	**17 23 35.6**	**+0.5**
PACA	**Pacayal**	**1.23**	**333**	S			**Sn**	**17 23 50.8**	**+0.1**
AMTN	**Mateare**	**1.29**	**96**	P			**Pn**	**17 23 35.6**	**0.0**
AMTN	**Mateare**	**1.29**	**96**	S			**Sn**	**17 23 51.7**	**0.0**
TECA	**Tecapa**	**1.35**	**327**	*e*P			**Pn**	**17 23 37.3**	**+0.6**
TECA				*e*S			**Sn**	**17 23 53.6**	**+0.1**
APYN	**Apoyeque**	**1.36**	**95**	P			**Pn**	**17 23 37.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.74**	**15**	P			**Pn**	**17 23 42.3**	**+0.3**
TGUH				S			**Sn**	**17 24 03.6**	**+0.5**
OCON	**Estacion meteo**	**1.76**	**44**	P			**Pn**	**17 23 42.5**	**+0.3**
NADN	**Granada**	**1.78**	**110**	P			**Pn**	**17 23 42.8**	**+0.3**
NADN				S			**Sn**	**17 24 03.5**	**-0.4**
YUSH	**Yuscaran**	**1.80**	**29**	P			**Pn**	**17 23 43.1**	**+0.2**
YUSH	**Yuscaran**	**1.80**	**29**	S			**Sn**	**17 24 04.7**	**0.0**
MATN	**Matagalpa**	**1.86**	**72**	P			**Pn**	**17 23 42.5**	**-1.1**
MATN	**Matagalpa**	**1.86**	**72**	S			**Sn**	**17 24 04.5**	**-1.4**
RCON	**San Juan de Ri**	**1.90**	**54**	P			**Pn**	**17 23 44.9**	**+0.6**
RCON	**San Juan de Ri**	**1.90**	**54**	S			**Sn**	**17 24 07.3**	**+0.2**
RCVN	**Varillal2**	**1.93**	**51**	P			**Pn**	**17 23 45.2**	**+0.5**
RCVN	**Varillal2**	**1.93**	**51**	S			**Sn**	**17 24 08.2**	**+0.3**

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*IDC **15** 17:23:31.9±2.5,43.°22N×105.°38W,h0km,mbtmp3.3/2, ML3.0/2,Error ellipse: s-maj=57.3km s-min=11.7km az=158.0*
*NEIC **15** 17:23:32.5±2.1,43.°57N±0.°06×105.°5W±0.°1,h0km±1km, ML2.9/39,Error ellipse: s-maj=14.5km s-min=9.6km az=252.0*
ISC 15 17:23:32.8±1.0,43.°53N±0.°06×105.°42W±0.°06,h0km,n35, σ1§44/33,Wyoming

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.16**	**59**				**Pg**	**17 23 54.0**	**-1.0**
K22A	**Casper**	**1.19**	**223**				**Pn**	**17 23 56.3**	**-0.6**
PD31	**Pinedale Array**	**3.12**	**257**				**Pn**	**17 24 23.5**	**0.0**
PDAR	**Pinedale Array**	**3.12**	**257**	Pn			**Pn**	**17 24 26.1**	**+2.6**
	0.9nm,0.3s,baz=69,slow=15,SNR=32								
PDAR				Pg			**Pb**	**17 24 30.9**	**+1.6**
	1.3nm,0.3s,baz=88,slow=18,SNR=12								
PDAR				Lg			Lg	17 25 08.2	
	0.8nm,0.3s,baz=82,slow=31,SNR=3.9								
	0.7nm,0.3s								
PDAR	**Pinedale Array**	**3.12**	**257**				**Pn**	**17 24 24.8**	**+1.3**
BW06	**Boulder Array**	**3.12**	**257**				**Pn**	**17 24 23.2**	**-0.3**
BW06				IAML				17 25 14.6	
	21nm,1.5s								
RLMT	**Red Lodge**	**3.19**	**301**	Pn			**Pn**	**17 24 26.3**	**+1.9**
RLMT				IAML				17 25 36.5	
	32nm,2.6s								
RLMT				IAML				17 26 07.3	
	33nm,1.7s								
LAO	**LASA Array**	**3.21**	**350**	Pn			**Pn**	**17 24 24.9**	**+0.4**
HAYD	**Hayden**	**3.31**	**205**				**Pn**	**17 24 26.4**	**+0.4**
HAYD				IAML				17 25 30.0	
	comp=E,30nm,1.8s								
HAYD				IAML				17 25 33.1	
	comp=N,43nm,2.1s								
YNE	**Yellowstone No**	**3.61**	**296**				**Pn**	**17 24 32.0**	**+1.8**
YNE				IAML				17 25 33.8	
	comp=N,33nm,0.5s								
YNE				IAML				17 25 34.7	
	comp=E,26nm,0.8s								
YMP	**Mirror Lake PI**	**3.62**	**291**				**Pn**	**17 24 31.0**	**+0.7**
ISCO	**Idaho Springs**	**3.73**	**182**				**Pn**	**17 24 34.4**	**+2.5**
ISCO				IAML				17 25 43.6	
	comp=E,13nm,2.1s								
ISCO				IAML				17 26 33.1	
	comp=E,16nm,4.3s								
LOHW	**Long Hollow**	**3.77**	**273**				**Pn**	**17 24 33.5**	**+1.2**
LOHW				IAML				17 25 50.7	
	comp=E,20nm,3.8s								
LOHW				IAML				17 26 00.5	
	comp=E,28nm,3.4s								
H17A	**Grant Village**	**3.82**	**285**				**Pn**	**17 24 33.6**	**+0.6**
H17A				IAML				17 25 39.9	
	comp=E,25nm,2.0s								
FLWY	**Flagg Ranch**	**3.86**	**280**				**Pn**	**17 24 33.1**	**-0.5**
MOOW	**Moose Ponds**	**3.87**	**275**				**Pn**	**17 24 33.5**	**-0.2**
YPP	**Pitchstone Pla**	**3.96**	**283**				**Pn**	**17 24 33.5**	**-1.6**
YPP				IAML				17 25 44.8	
	comp=E,21nm,2.7s								
YPP				IAML				17 25 52.4	
	comp=N,18nm,2.7s								
TPAW	**Teton Pass**	**4.02**	**271**				**Pn**	**17 24 34.3**	**-1.6**
TPAW				IAML				17 25 59.9	
	comp=N,27nm,1.8s								
TPAW				IAML				17 26 08.8	
	comp=N,19nm,2.7s								
FXWY	**Fox Creek**	**4.07**	**273**				**Pn**	**17 24 35.3**	**-1.2**
FXWY				IAML				17 26 01.0	
	comp=N,18nm,2.7s								
FXWY				IAML				17 26 19.2	
	comp=N,10nm,4.6s								
AHID	**Auburn Hatcher**	**4.22**	**262**				**Pn**	**17 24 37.4**	**-1.2**
AHID				IAML				17 25 54.8	
	comp=N,22nm,2.0s								
AHID				IAML				17 26 13.4	
	comp=N,18nm,1.8s								
PV23	**Carpenter Ridg**	**5.75**	**209**				Pn	17 24 54.7	-5.0
PV10	**Paradox Valley**	**5.83**	**209**	Pn			**Pn**	**17 25 02.2**	**+1.5**
PV20	**West Nyswonger**	**5.84**	**209**	Pn			**Pn**	**17 25 00.3**	**-0.5**
PV11	**David Mesa, Pa**	**5.84**	**208**	Pn			**Pn**	**17 24 58.9**	**-1.9**
PV16	**Nyswonger Mesa**	**5.85**	**208**				**Pn**	**17 24 59.5**	**-1.5**
SRU	**San Rafael Swe**	**5.85**	**223**				Pn	17 24 55.5	-5.4
PV19	**Morning Glory**	**5.87**	**209**	Pn			**Pn**	**17 24 58.2**	**-3.0**
PV03	**Paradox Valley**	**5.88**	**207**	Pn			**Pn**	**17 24 58.8**	**-2.5**
PV02	**Paradox Valley**	**5.88**	**206**				**Pn**	**17 25 01.3**	**-0.1**
MDND	**Maddock**	**5.94**	**41**	Pn			**Pn**	**17 25 02.2**	**+0.2**
PV13	**Radium Mtn., P**	**5.95**	**207**	Pn			**Pn**	**17 25 01.6**	**-0.7**
TMUT	**Trail Mountain**	**6.07**	**228**	Pn			**Pn**	**17 25 03.3**	**-0.7**
T25A	**Trinidad**	**6.43**	**173**	Pn			**Pn**	**17 25 09.3**	**+0.4**
I10CA	**LAC DU BONNET**	**9.26**	**41**	I			I	18 17 10.0	
	baz=220,slow=273,SNR=0.7								
ULM	**Lac du Bonnet**	**9.37**	**41**	Pn			**Pn**	**17 25 48.5**	**-0.5**
	comp=N,0.5nm,0.3s,baz=225,slow=11,SNR=1.6								
	comp=N,1.7nm,0.4s								

DJA 15 17:27:26.8±1.4,2.°N±5.°×12.°6E±.°,h11km±14km,M3.7/9, mB4.7/1,mb4.0/1,MLv3.6/9,Mw(mB)4.0/1,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**131**	P			Pn	17 27 49.0	-1.1
KMSI	**Cibinong**	**2.65**	**248**	P			Pn	17 28 09.6	+0.1
SANI	**Sanana**	**3.64**	**187**	P			Pn	17 28 22.2	-1.0
NLAI	**Namlea**	**4.84**	**172**	P			Pn	17 28 40.3	+0.6

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*ISK **15** 17:51:50.9,34.°22N×26.°16E,h102km±2km,ML2.2/6*
*AFAD **15** 17:52:00.0,34.°77N×26.°74E,h49km,ML2.9*
ATH 15 17:51:51.1±0.9,34.°22N×26.°03E,h10km,ML2.2/2, Manual Solution by N.Liadopoulou First location: 2019/11/15 17:53:46, This location: 2019/11/15 18:02:39 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 5 km,Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIT2	**Siteia**	**0.98**	**4**	P			Pb	17 52 10.5	+0.3
SIT2				S			Sb	17 52 23.8	+0.6
NPS	**Neapolis**	**1.09**	**342**	P			Pb	17 52 12.2	+0.1
NPS				S			Sg	17 52 26.1	-0.1
IDI	**Anoyia**	**1.42**	**319**	Pn			Pb	17 52 17.9	+0.2
IDI				Sn			Sg	17 52 37.9	+1.2
IDI	**Anoyia**	**1.42**	**319**	P			Pb	17 52 17.4	-0.2
KARP	**Karpathos**	**1.61**	**35**	Pn			Pn	17 52 19.0	-0.7
KARP				Sn			Sn	17 52 39.4	-1.2
KARP	**Karpathos**	**1.61**	**35**	P			Pn	17 52 19.2	-0.5
GVD	**Gavdhos**	**1.72**	**291**	Pn			Pb	17 52 22.3	-0.4
GVD	**Gavdhos**	**1.72**	**291**	P			Pn	17 52 20.6	-0.4
THERA	**Ancient Thera,**	**2.19**	**348**	P			Pn	17 52 26.6	-0.9
SNT5	**Nea Kammeni, S**	**2.23**	**347**	P			Pn	17 52 28.0	-0.2
THR3	**Thira Island,**	**2.24**	**347**	P			Pn	17 52 28.1	-0.2
TURN	**Turunc**	**3.12**	**35**	P			Pn	17 52 35.6	-4.8
TURN	**Turunc**	**3.12**	**35**	Pn			Pn	17 52 38.7	-1.7
KTHA	**Kythira Island**	**3.16**	**311**	Pn			Pn	17 52 41.3	+0.3
KTHA	**Kythira Island**	**3.16**	**311**	P			Pn	17 52 40.9	-0.1
IZZE	**Mula-Seydike**	**3.42**	**49**	P			Pn	17 52 42.5	-2.0
IZZE				S			Sn	17 53 15.0	-10
IZZE				*i* IAML				17 53 23.0	
	comp=N,38nm,1.6s								
FETY	**Fethiye**	**3.47**	**45**	P			Pn	17 52 35.3	-10
SABU	**Mula-Dalaman**	**3.53**	**42**	P			Pn	17 52 43.9	-2.1
AKAS	**Kas**	**3.55**	**55**	P			Pn	17 52 43.5	-2.8
AKAS	**Kas**	**3.55**	**55**	Pn			Pn	17 52 44.1	-2.3
CAME	**Cameli-Denizli**	**3.81**	**44**	Pn			Pn	17 52 47.8	-2.1
CAME				Sn			Sn	17 53 29.1	-5.7
KNIK	**Mula-Seydike**	**3.90**	**47**	P			Pn	17 52 49.8	-1.4
DNZT	**Denizli-Tavas-**	**3.90**	**38**	P			Pn	17 52 49.6	-1.6
TAVA	**DENIZLI_Tavas**	**3.99**	**35**	P			Pn	17 52 49.4	-3.0
AKUM	**Antalya-Kumluc**	**4.10**	**58**	P			Pn	17 52 52.6	-1.3
AKUM				S			Sn	17 53 31.8	-10
AKUM				*i* IAML				17 53 55.0	
	comp=E,42nm,2.3s								
GOLH	**Golhisar**	**4.16**	**43**	P			Pn	17 52 53.7	-1.0

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*IDC **15** 17:55:40.1±1.4,1.°77N×126.°61E,h0km,mb3.7/5, mbtmp3.7/6,ML3.6/1,MS2.9/2,Error ellipse: s-maj=115.9km s-min=19.3km az=69.0*
*DJA **15** 17:55:45.2±0.3,2.°N±3.°×12.°6E±.°,h10km,M3.8/15,mb3.9/4, MLv3.7/15*
ISC 15 17:55:45.9±1.0,1.°66N±0.°07×126.°53E±0.°08,h35km,n17, σ1§15/16,mb3.7/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**137**	P			**Pn**	**17 56 07.8**	**+1.4**
SGSI	**Sangihe**	**2.25**	**333**	P			**Pn**	**17 56 21.9**	**+1.3**
KMSI	**Cibinong**	**2.77**	**247**	P			**Pn**	**17 56 27.9**	**+0.1**
SANI	**Sanana**	**3.73**	**188**	P			**Pn**	**17 56 41.8**	**+0.8**
LUWI	**Luwuk**	**4.62**	**234**	P			**Pn**	**17 56 54.6**	**+1.3**
MRSI	**Marisa**	**4.74**	**256**	P			**Pn**	**17 56 57.3**	**+2.4**
NLAI	**Namlea**	**4.90**	**173**	P			**Pn**	**17 56 57.9**	**+0.7**
APSI	**Ampana**	**5.51**	**242**	P			**Pn**	**17 57 07.0**	**+1.4**
	0.1nm28nm,0.8s								
MPSI	**Mapaga**	**6.76**	**259**	P			**Pn**	**17 57 22.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.66**	**183**	P			**P**	**18 00 11.0**	**-0.9**
	0.1nm,0.3s,baz=9.4,slow=11,SNR=2.4								
	3.4nm,1.1s								
WRA	**Warramunga Arr**	**22.80**	**161**	P			**P**	**18 00 45.1**	**-0.7**
	1.1nm,0.4s,baz=340,slow=10,SNR=17								
	1.1nm,0.4s								
ASAR	**Alice Springs**	**26.18**	**165**	P			**P**	**18 01 17.6**	**+0.3**
	0.5nm,0.5s,baz=345,slow=10.0,SNR=15								
ASAR				PcP			**PcP**	**18 04 43.9**	**-0.1**
	0.5nm,1.0s,baz=337,slow=2.3,SNR=2.6								
	0.5nm,0.5s								
CTA	**Charters Tower**	**29.01**	**139**	LR			LR	18 14 35.4	
	comp=Z,5.2nm,20.8s,baz=160,slow=39								
PETK	**Petropavlovsk-**	**57.41**	**22**	LR			LR	18 28 08.9	
	comp=Z,60nm,20.6s,baz=57,slow=34								
MKAR	**Makanchi Array**	**59.14**	**326**	P			**P**	**18 05 42.5**	**-0.6**
	1.2nm,1.0s,baz=119,slow=8.1,SNR=1.6								
	1.2nm,1.0s								
KURBB	**Kurchatov Arra**	**63.37**	**328**	P			**P**	**18 06 11.0**	**-0.6**
	0.3nm,0.2s,baz=124,slow=6.7,SNR=3.5								
	0.3nm,0.2s								
BVAR	**Borovoye Array**	**68.94**	**327**	P			**P**	**18 06 46.4**	**-1.0**
	0.4nm,0.7s,baz=111,slow=8.0,SNR=1.7								
	0.4nm,0.7s								

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*SJA **15** 17:56:17.8±0.7,21.°29S×67.°31W,h207km±5km,ML3.8, MW3.5*
*SCB **15** 17:56:19.5±1.4,21.°30S×67.°33W,h183km±13km,MB4.3, ML4.0/3,Error ellipse: s-maj=4.3km s-min=3.7km az=1.0*
ISC 15 17:56:18.0±1.6,21.°32S±0.°04×67.°34W±0.°04, h206km±13km,n46,σ1§18/71,3C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.59**	**88**	Pg			**Pn**	**17 56 53.6**	**0.0**
AF01	**San Pedro de A**	**1.80**	**205**	*e*P			**Pn**	**17 56 53.1**	**-2.3**
PB09	**IPOC Station P**	**1.83**	**255**	⇑*i*P			**Pn**	**17 56 57.0**	**+1.4**
PB09				*i* S			**Sn**	**17 57 25.0**	**+0.3**
PB09				IAML				17 57 28.7	
	comp=N,114nm,0.4s								
PB09	**IPOC Station P**	**1.83**	**255**	Pg			**Pn**	**17 56 56.9**	**+1.4**
PB09	**IPOC Station P**	**1.83**	**255**	*e*P			**Pn**	**17 56 56.4**	**+0.9**
PB09				*e*S			**Sn**	**17 57 26.7**	**+2.1**
YJA	**Yavi**	**1.90**	**117**	Pg			**Pn**	**17 56 57.2**	**+0.8**
YJA	**Yavi**	**1.90**	**117**	*e*P			**Pn**	**17 56 57.2**	**+0.8**
YJA				*e*S			**Sn**	**17 57 26.1**	**-0.2**
PB01	**IPOC Station P**	**2.02

PB12 IAML 17 58 10.4
comp=Z,70nm,0.2s
AP01 Chacalluta 4.08 316 *eP* **Pn 17 57 21.4 +0.4**
AP01 *eS* **Sn 17 58 09.7 -0.8**
AP01 IAML 17 58 13.0
comp=Z,178nm,0.1s
PB14 IPOC Station P 4.33 220 Pg **Pn 17 57 25.4 +0.9**
PB14 IPOC Station P 4.33 220 *eP* **Pn 17 57 25.4 +0.9**
PB14 *eS* **Sn 17 58 15.4 -1.4**
PB14 IAML 17 58 18.9
comp=Z,53nm,0.3s
GO02 Mina Guanaco 4.35 208 Pg **Pn 17 57 26.1 +1.5**
BBOJ La Paz, Jacaqu 4.40 349 Pg **Pn 17 57 26.8 +1.2**
BBOE La Paz, Chanca 4.53 352 Pg **Pn 17 57 28.7 +1.5**
BBOD La Paz, Gloria 4.81 345 Pg **Pn 17 57 32.0 +1.2**
LPAZ La Paz 5.06 351 Pg **Pn 17 57 34.7 +0.6**
LPAZ La Paz 5.06 351 *eP* **Pn 17 57 34.9 +0.8**
BBOB La Paz, Bander 5.21 352 Pg **Pn 17 57 35.8 0.0**

IDC 15 17:56:57.2±1.6, 1°.85N×126°.49E, h0km, mb3.4/4, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=124.1km s-min=22.6km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.84**	**182**	P	P	18 01 29.6	-0.2
	baz=0.0,slow=8.1,SNR=1.3						
	1.1nm,1.0s						
WRA	**Warramunga Arr**	**22.98**	**161**	P	P	18 02 02.4	-1.3
	0.6nm,0.6s,baz=340,slow=10,SNR=2.0						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**26.37**	**165**	P	P	18 02 35.8	+0.4
	0.2nm,0.4s,baz=346,slow=11,SNR=4.5						
ASAR				PcP	PcP	18 06 02.0	+0.5
	0.3nm,0.9s,baz=348,slow=3.0,SNR=2.0						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.96**	**326**	P	P	18 06 57.9	-0.6
	0.5nm,0.8s,baz=117,slow=7.1,SNR=1.4						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**63.19**	**328**	P	P	18 07 27.5	+0.4
	0.3nm,0.4s,baz=125,slow=6.8,SNR=2.6						
	0.3nm,0.4s						

IDC 15 18:05:50.2±0.8, 28°.03N×139°.98E, h500km±28km, mb2.9/5, mbtmp3.8/8, Error ellipse: s-maj=88.5km s-min=15.7km az=76.0
JMA 15 18:05:52.7±0.3, 28°N±2°×14°0E±°, h534km, MV3.4/24, W OFF OGASAWARA
ISC 15 18:05:51.3±0.9, 27°.88N±0°.09×139°.6E±0°.2, h500km, n16, σ2s63/21, mb3.4/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.39**	**108**	*eP*	**P**	**18 07 02.6**	**+4.1**
CBIJ				*eS*	**S**	**18 07 57.4**	**+4.5**
JCJ	**Chichijima**	**2.39**	**108**	P	**P**	**18 06 54.7**	**-3.8**
	22nm,0.3s,baz=285,slow=20,SNR=9.6						
JCJ				S	**S**	**18 07 49.9**	**-3.1**
	46nm,0.7s,baz=299,slow=19,SNR=1.6						
JHJ	**Hachijo jima 2**	**5.23**	**1**	P	**P**	**18 07 19.4**	**-0.7**
	76nm,0.7s,baz=80,slow=11,SNR=1.0						
BSO1	**Boso 1**	**6.85**	**9**	*eP*	**P**	**18 07 38.0**	**+2.8**
BSO1				*eS*	**S**	**18 09 03.3**	**+2.7**
BSO3	**Boso 3**	**6.95**	**6**	*eP*	**P**	**18 07 38.9**	**+2.4**
BSO3				*eS*	**S**	**18 09 03.1**	**+0.4**
JIE	**Ise**	**6.97**	**340**	*eP*	**P**	**18 07 40.7**	**+3.8**
JOD2	**Odawara 2**	**7.38**	**356**	*eP*	**P**	**18 07 41.5**	**+0.4**
JNY	**Yasuok**	**7.61**	**349**	*eP*	**P**	**18 07 45.5**	**+1.9**
JRY	**Ryogami san**	**8.14**	**356**	*eP*	**P**	**18 07 50.2**	**+1.2**
MJAR	**Matsushiro Arr**	**8.73**	**352**	P	**P**	**18 07 54.5**	**-0.6**
	0.9nm,0.3s,baz=168,slow=12,SNR=7.3						
JHO	**Hitachi**	**8.75**	**5**	*eP*	**P**	**18 07 56.9**	**+1.6**
JHO				*eS*	**S**	**18 09 33.2**	**-3.9**
WRA	**Warramunga Arr**	**47.81**	**187**	P	**P**	**18 13 43.5**	**+0.5**
	0.2nm,0.4s,baz=4.7,slow=7.8,SNR=5.7						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**50.88**	**314**	P	**P**	**18 14 04.2**	**-1.1**
	0.9nm,0.3s,baz=92,slow=8.0,SNR=3.1						
	0.9nm,0.3s						
ASAR	**Alice Springs**	**51.54**	**187**	P	**P**	**18 14 11.1**	**+0.7**
	0.2nm,0.6s,baz=20,slow=12,SNR=4.4						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**55.94**	**317**	P	**P**	**18 14 40.5**	**-0.8**
	0.7nm,0.4s,baz=76,slow=7.4,SNR=5.4						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**76.24**	**333**	P	**P**	**18 16 46.2**	**-1.4**
	0.6nm,0.3s,baz=60,slow=3.9,SNR=6.5						
	0.6nm,0.3s						

MOS 15 18:15:11.5±0.9, 37°.15N×23°.80E, h16km, mb4.6/9, Error ellipse: s-maj=8.3km s-min=4.4km az=85.1
ISK 15 18:15:11.7, 37°.23N×23°.92E, h4km, ML3.9/24
IDC 15 18:15:11.2±0.5, 37°.18N×23°.84E, h0km, mb4.2/18, mbtmp4.1/24, ML3.8/5, Error ellipse: s-maj=13.5km s-min=11.8km az=78.0
MCSM 15 18:15:12.8±0.4, 37°N±3°×2°4E±°, h9km±3km, mb4.3, mB3.7, MLv4.2, Mw(mB)2.7
AFAD 15 18:15:12.0, 37°.31N×23°.98E, h15km, MW4.0
NAO 15 18:15:12.1, 37°.18N×23°.84E, h10km, MB4.2
GII 15 18:15:12.0±0.0, 37°.23N×23°.93E, h12km, confirmed
ATH 15 18:15:13.7, 37°.18N×23°.90E, h13km±1km, ML4.1/47, Manual Solution by N.Liadopoulou First location: 2019/11/15 18:16:14, This location: 2020/07/03 09:31:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km
THE 15 18:15:14.7, 37°N±1°×2°4E±°, h12km±2km, M4.1/29, mb3.9/1, MLh4.1/29
NEIC 15 18:15:15.0±1.8, 37°.15N±0°.05×23°.89E±0°.05, h28km±5km, mb4.4/33, Error ellipse: s-maj=8.5km s-min=5.1km az=205.0
HLW 15 18:15:16.6, 37°.06N×23°.85E, h27km±3km, Md3.8, Ml3.7
ISC 15 18:15:13.1±0.7, 37°.16N±0°.02×23°.89E±0°.02, h14km±4km, n474, σ1s30/531, mb4.4/34, 18C-16D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YDRA	**Hydra**	**0.39**	**300**	P	**Pb**	**18 15 21.4**	**-0.3**
YDRA				S	**Sg**	**18 15 26.4**	**+0.3**
LVRA	**Laurium**	**0.57**	**14**	P	**Pb**	**18 15 24.5**	**-0.3**
LVRA				S	**Sb**	**18 15 32.3**	**-0.5**
MET4	**Agioi Theodoro**	**0.60**	**320**	P	**Pg**	**18 15 24.9**	**0.0**
MET4				S	**Sb**	**18 15 34.2**	**+0.4**
MHLO	**Agia Marina, M**	**0.62**	**138**	P	**Pb**	**18 15 26.6**	**+0.9**
MHLO				S	**Sn**	**18 15 36.6**	**-0.6**
MHLO	**Agia Marina, M**	**0.62**	**138**	P	**Pn**	**18 15 26.8**	**-0.7**
MHLO				S	**Sb**	**18 15 35.2**	**+0.9**
MET5	**Makryloggos,Me**	**0.63**	**318**	P	**Pg**	**18 15 25.2**	**-0.2**
MET5				S	**Sb**	**18 15 34.8**	**+0.4**
MET2	**Kameni Chora,**	**0.64**	**316**	P	**Pg**	**18 15 25.1**	**-0.4**
MET2				S	**Sb**	**18 15 35.2**	**+0.6**
VLY	**Voula,Athens**	**0.70**	**354**	P	**Pb**	**18 15 27.1**	**+0.1**
VLY				S	**Sg**	**18 15 35.5**	**-0.4**
VLY	**Voula,Athens**	**0.70**	**354**	P	**Pg**	**18 15 26.6**	**-0.1**
VLY				S	**Sb**	**18 15 36.4**	**-0.1**
ATHU	**Athens Univers**	**0.81**	**354**	P	**Pg**	**18 15 28.8**	**0.0**
ATHU				S	**Sg**	**18 15 39.2**	**-0.3**
ATHU	**Athens Univers**	**0.81**	**354**	P	**Pg**	**18 15 28.4**	**-0.4**
ATHU				S	**Sg**	**18 15 39.4**	**-0.1**
ATH	**Athens Observa**	**0.82**	**351**	P	**Pg**	**18 15 29.0**	**-0.1**
ATH				S	**Sb**	**18 15 40.6**	**+0.5**
ATH	**Athens Observa**	**0.82**	**351**	P	**Pb**	**18 15 29.6**	**+0.4**
ATH5	**Athens Parliam**	**0.82**	**352**	P	**Pg**	**18 15 28.8**	**-0.3**
ATH5				S	**Sg**	**18 15 39.6**	**-0.3**
NOAC	**Athens-Thissio**	**0.82**	**351**	P	**Pb**	**18 15 29.7**	**+0.5**
MNVA	**Monemvasia**	**0.83**	**236**	P	**Pb**	**18 15 29.5**	**+0.3**
MNVA				S	**Sn**	**18 15 41.6**	**-0.6**
ATHP	**Athens-Neo Psi**	**0.85**	**354**	P	**Pb**	**18 15 29.9**	**+0.3**
ATHP				S	**Sb**	**18 15 40.9**	**+0.2**
VLI	**Veliai**	**0.88**	**240**	P	**Pb**	**18 15 29.9**	**-0.2**
VLI				S	**Sb**	**18 15 42.7**	**+0.9**
VLI	**Veliai**	**0.88**	**240**	P	**Pb**	**18 15 30.0**	**-0.1**
VLI				S	**Sb**	**18 15 42.6**	**+0.9**
PTL	**Penteli**	**0.89**	**359**	P	**Pb**	**18 15 30.5**	**+0.3**
PTL				S	**Sg**	**18 15 41.7**	**-0.2**
PTL	**Penteli**	**0.89**	**359**	P	**Pb**	**18 15 30.4**	**+0.1**
PTL				S	**Sb**	**18 15 42.0**	**0.0**
DION	**Dionisos Attik**	**0.92**	**2**	P	**Pg**	**18 15 30.9**	**+0.1**
DION				S	**Sb**	**18 15 42.4**	**-0.5**
DION	**Dionisos Attik**	**0.92**	**2**	P	**Pg**	**18 15 30.8**	**0.0**
DION				S	**Sg**	**18 15 42.9**	**0.0**
ACHAR	**Athens-Acharne**	**0.92**	**353**	P	**Pn**	**18 15 31.4**	**-0.2**
ACHAR				S	**Sg**	**18 15 43.4**	**+0.4**
NPS1	**Neapolis Lacon**	**0.92**	**226**	P	**Pg**	**18 15 31.1**	**+0.1**
NPS1				S	**Sn**	**18 15 45.1**	**+0.5**
ELFA	**Athens-Elefsin**	**0.93**	**343**	P	**Pn**	**18 15 31.4**	**-0.2**
ELFA				S	**Sg**	**18 15 43.4**	**+0.3**
NPLA	**Nafplio**	**0.96**	**295**	P	**Pb**	**18 15 31.4**	**-0.1**
NPLA				S	**Sn**	**18 15 44.8**	**-0.7**
MAGU	**Magoula**	**0.97**	**342**	P	**Pg**	**18 15 31.9**	**+0.1**
MAGU				S	**Sg**	**18 15 44.9**	**+0.5**
KARY	**Karystos**	**0.97**	**26**	P	**Pn**	**18 15 32.1**	**-0.1**
KARY				S	**Sg**	**18 15 44.9**	**+0.2**
KARY	**Karystos**	**0.97**	**26**	P	**Pg**	**18 15 31.9**	**0.0**
KARY				S	**Sb**	**18 15 44.4**	**-0.1**
ARS1	**Argos**	**1.04**	**298**	P	**Pg**	**18 15 33.1**	**0.0**
ARS1				S	**Sn**	**18 15 47.9**	**+0.4**
STFN	**Stefani**	**1.05**	**345**	P	**Pg**	**18 15 33.3**	**-0.1**
STFN				S	**Sg**	**18 15 47.2**	**+0.1**
TNSA	**Tinos**	**1.08**	**69**	P	**Pg**	**18 15 34.1**	**+0.1**
TNSA				S	**Sn**	**18 15 48.4**	**-0.2**
LOUT	**Loutraki**	**1.10**	**319**	P	**Pg**	**18 15 34.2**	**-0.1**
LOUT				S	**Sn**	**18 15 49.0**	**-0.1**
VILL	**Villia**	**1.10**	**336**	P	**Pn**	**18 15 34.1**	**0.0**
VILL				S	**Sn**	**18 15 49.4**	**+0.2**
KTHA	**Kythira Island**	**1.12**	**217**	Pn	**Pn**	**18 15 34.4**	**+0.1**
KTHA	**Kythira Island**	**1.12**	**217**	P	**Pn**	**18 15 34.4**	**+0.1**
LTK	**Loutraki**	**1.13**	**320**	P	**Pb**	**18 15 34.4**	**0.0**
LTK				S	**Sn**	**18 15 50.8**	**+1.0**
LTK	**Loutraki**	**1.13**	**320**	P	**Pb**	**18 15 34.2**	**-0.2**
LTK				S	**Sn**	**18 15 49.9**	**+0.1**
VIL2	**Platees**	**1.16**	**335**	P	**Pb**	**18 15 34.1**	**-0.8**
VIL2				S	**Sb**	**18 15 48.6**	**-1.3**
NAX1	**Naxos Island**	**1.19**	**92**	P	**Pn**	**18 15 35.3**	**+0.1**
APE	**Apeiranthos**	**1.32**	**93**	⇑P	**Pg**	**18 15 39.3**	**+0.9**
APE	**Apeiranthos**	**1.32**	**93**	*i* P	**Pg**	**18 15 38.1**	**-0.3**
APE	**Apeiranthos**	**1.32**	**93**	P	**Pn**	**18 15 35.4**	**-1.6**
ANKY	**Antikythira Is**	**1.37**	**200**	P	**Pn**	**18 15 37.8**	**0.0**
ANKY	**Antikythira Is**	**1.37**	**200**	P	**Pn**	**18 15 37.9**	**0.0**
SAP3	**Santorini-Thir**	**1.38**	**121**	P	**Pb**	**18 15 39.1**	**+0.6**
SAP3	**Santorini-Thir**	**1.38**	**121**	P	**Pb**	**18 15 38.9**	**+0.3**
THR9	**Santorini-Faro**	**1.43**	**124**	P	**Pb**	**18 15 39.8**	**+0.4**
SNT5	**Nea Kammeni, S**	**1.43**	**121**	P	**Pb**	**18 15 39.6**	**+0.2**
THR3	**Thira Island,**	**1.43**	**121**	P	**Pb**	**18 15 39.9**	**+0.4**
THR3	**Thira Island,**	**1.43**	**121**	P	**Pb**	**18 15 39.8**	**+0.4**
THR2	**Thira island,**	**1.43**	**119**	P	**Pg**	**18 15 40.3**	**-0.3**
THR2	**Thira island,**	**1.43**	**119**	P	**Pb**	**18 15 39.6**	**+0.2**
GUR	**Goura**	**1.45**	**303**	P	**Pn**	**18 15 39.1**	**+0.1**
THR6	**Thira Island,**	**1.45**	**123**	P	**Pb**	**18 15 39.9**	**+0.1**
THR8	**Santorini-Mono**	**1.48**	**120**	P	**Pb**	**18 15 40.5**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.48**	**6**	P	**Pn**	**18 15 39.6**	**+0.3**
KYMI				S	**Sb**	**18 15 59.0**	**-0.1**
KYMI	**Kymi, Euboea I**	**1.48**	**6**	P	**Pn**	**18 15 39.5**	**+0.2**
THERA	**Ancient Thera,**	**1.50**	**121**	P	**Pb**	**18 15 40.3**	**-0.4**
THERA	**Ancient Thera,**	**1.50**	**121**	P	**Pb**	**18 15 40.5**	**-0.2**
ITM	**Ithomi**	**1.57**	**271**	Pn	**Pb**	**18 15 42.0**	**+0.2**
ITM				Sn	**Sg**	**18 16 03.4**	**-0.1**
ITM	**Ithomi**	**1.57**	**271**		**Pb**	**18 15 41.5**	**-0.3**
ITM				Sn	**Sn**	**18 16 00.1**	**-0.5**
ITM	**Ithomi**	**1.57**	**271**	P	**Pb**	**18 15 41.8**	**0.0**
ITM	**Ithomi**	**1.57**	**271**	P	**Pb**	**18 15 41.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.64**	**303**	P	**Pn**	**18 15 41.9**	**+0.4**
KLV	**Kalavryta, Ach**	**1.64**	**303**	P	**Pn**	**18 15 41.8**	**+0.2**
CHAN	**Chania**	**1.64**	**176**	P	**Pn**	**18 15 42.3**	**+0.9**
CHAN				S	**Sg**	**18 16 06.5**	**+0.6**
CHAN	**Chania**	**1.64**	**176**	P	**Pn**	**18 15 42.1**	**+0.7**
CH01	**Chania**	**1.64**	**176**	P	**Pb**	**18 15 42.7**	**-0.3**
LKR	**Lokris**	**1.65**	**335**	P	**Pn**	**18 15 42.1**	**+0.5**
CHNB	**Souda**	**1.67**	**175**	P	**Pb**	**18 15 43.1**	**-0.6**
ATAL	**Atalanti**	**1.68**	**336**	P	**Pn**	**18 15 42.1**	**+0.1**
ATAL	**Atalanti**	**1.68**	**336**	P	**Pn**	**18 15 42.3**	**+0.3**
DLFA	**Delphi**	**1.72**	**321**	P	**Pn**	**18 15 42.8**	**+0.2**
PYL1	**Pylos**	**1.77**	**263**	P	**Pb**	**18 15 44.9**	**-0.4**
AMT	**Artemida-Makis**	**1.78**	**283**	P	**Pb**	**18 15 45.0**	**-0.4**
MTHA	**Methoni**	**1.78**	**260**	P	**Pb**	**18 15 45.0**	**-0.4**
SKY	**Skiros Island**	**1.79**	**17**	P	**Pn**	**18 15 44.0**	**+0.4**
SKY	**Skiros Island**	**1.79**	**17**	P	**Pn**	**18 15 43.9**	**+0.3**
KALE	**Kalithea**	**1.85**	**312**	P	**Pn**	**18 15 45.0**	**+0.5**
KALE				S	**Sb**	**18 16 11.0**	**+1.2**
KALE	**Kalithea**	**1.85**	**312**	P	**Pn**	**18 15 44.9**	**+0.5**
AXAR	**Agios Charalam**	**1.88**	**329**	P	**Pn**	**18 15 45.6**	**+0.8**
AXAR	**Agios Charalam**	**1.88**	**329**	P	**Pn**	**18 15 45.3**	**+0.6**
TRIZ	**Trizonia**	**1.88**	**311**	P	**Pn**	**18 15 45.4**	**+0.7**
DRO	**Drossia**	**1.90**	**295**	P	**Pb**	**18 15 46.5**	**-1.1**
DRO	**Drossia**	**1.90**	**295**	P	**Pn**	**18 15 46.1**	**+1.0**
SERG	**Sergoula**	**1.92**	**311**	P	**Pn**	**18 15 45.8**	**+0.5**
SERG	**Sergoula**	**1.92**	**311**	P	**Pn**	**18 15 46.0**	**+0.7**
KNDR	**Palaiochora Ch**	**1.93**	**186**	Pn	**Pb**	**18 15 46.9**	**-1.2**
KNDR	**Palaiochora Ch**	**1.93**	**186**	P	**Pb**	**18 15 47.8**	**-0.2**
KNDR	**Palaiochora Ch**	**1.93**	**186**	P	**Pb**	**18 15 46.8**	**-1.2**
AOS2	**Alonissos-2**	**1.99**	**359**	P	**Pn**	**18 15 46.3**	**+0.1**
AOS	**Alonnisos**	**2.01**	**360**	P	**Pn**	**18 15 46.4**	**-0.2**
UPR	**University Cam**	**2.01**	**305**	P	**Pn**	**18 15 48.4**	**-1.0**
UPR	**University Cam**	**2.01**	**305**	P	**Pn**	**18 15 47.8**	**+1.2**
IDI	**Anoyia**	**2.04**	**156**	Pn	**Pn**	**18 15 48.0**	**+1.0**
	25nm,0.4s,baz=299,slow=7.8,SNR=53						
IDI				Sn	**Sb**	**18 16 14.6**	**-0.4**
	38nm,0.3s,baz=293,slow=20,SNR=5.2						
IDI	**Anoyia**	**2.04**	**156**	Pn	**Pn**	**18 15 48.3**	**+1.3**
IDI	**Anoyia**	**2.04**	**156**		**Pn**	**18 15 47.4**	**+0.5**
IDI				Sn	**Sn**	**18 16 10.5**	**-1.7**
IDI	**Anoyia**	**2.04**	**156**	P	**Pn**	**18 15 47.7**	**+0.7**
IDI	**Anoyia**	**2.04**	**156**	P	**Pn**	**18 15 47.6**	**+0.7**
CHOS	**Chios island**	**2.11**	**54**	Pn	**Pn**	**18 15 48.5**	**+0.5**
CHOS	**Chios island**	**2.11**	**54**	P	**Pn**	**18 15 48.4**	**+0.3**
CHOS	**Chios island**	**2.11**	**54**	P	**Pn**	**18 15 48.3**	**+0.3**
ANX	**Ano Chora**	**2.12**	**313**	P	**Pn**	**18 15 49.0**	**+0.9**
ANX	**Ano Chora**	**2.12**	**313**	P	**Pn**	**18 15 49.0**	**+0.9**
RLS	**Riolos of Patr**	**2.12**	**296**	P	**Pb**	**18 15 49.7**	**-1.6**
RLS	**Riolos of Patr**	**2.12**	**296**	P	**Pb**	**18 15 49.9**	**-1.3**
NEO	**Neokhori**	**2.21**	**346**	P	**Pn**	**18 15 49.9**	**+0.6**
NEO	**Neokhori**	**2.21**	**346**	P	**Pn**	**18 15 49.9**	**+0.6**
AGG	**Agios Georgios**	**2.23**	**327**	P	**Pn**	**18 15 51.2**	**+1.6**
AGG	**Agios Georgios**	**2.23**	**327**	P	**Pn**	**18 15 50.4**	**+1.1**
AGG	**Agios Georgios**	**2.23**	**327**	P	**Pn**	**18 15 50.5**	**+0.9**
CESE	**eme**	**2.24**	**58**	Pn	**Pn**	**18 15 49.9**	**+0.2**
AXS	**Araxos**	**2.25**	**298**	P	**Pn**	**18 15 51.4**	**+1.6**
MAKR	**Makrakomi, Fth**	**2.31**	**324**	P	**Pn**	**18 15 52.1**	**+1.4**
MAKR	**Makrakomi, Fth**	**2.31**	**324**	P	**Pn**	**18 15 52.2**	**+1.4**
GVD	**Gavdhos**	**2.32**	**176**	Pn	**Pb**	**18 15 53.5**	**-1.2**
GVD	**Gavdhos**	**2.32**	**176**	P	**Pb**	**18 15 53.8**	**-0.9**
GVD	**Gavdhos**	**2.32**	**176**	P	**Pb**	**18 15 52.9**	**-1.8**
KRL1	**Karlovasi Samo**	**2.33**	**73**	P	**Pn**	**18 15 51.5**	**+0.6**
ZEYE	**Izmir, Urla-Ze**	**2.34**	**62**	SPECP		18 15 50.0	
ZEYE				P	**Pn**	**18 15 51.0**	**-0.1**
NPS	**Neapolis**	**2.35**	**143**	P	**Pn**	**18 15 53.2**	**+1.9**
PVO	**Paravola**	**2.37**	**309**	P	**Pn**	**18 15 52.7**	**+1.3**
PVO	**Paravola**	**2.37**	**309**	P	**Pn**	**18 15 53.1**	**+1.6**
EVR	**Evrytania**	**2.40**	**318**	P	**Pn**	**18 15 53.2**	**+1.2**
EVR	**Evrytania**	**2.40**	**318**	P	**Pn**	**18 15 53.3**	**+1.3**
SMG	**Samos**	**2.41**	**76**	P	**Pn**	**18 15 52.5**	**+0.4**
SMG	**Samos**	**2.41**	**76**	P	**Pn**	**18 15 52.7**	**+0.6**
LTHK	**Lithakia**	**2.49**	**284**	P	**Pn**	**18 15 54.1**	**+0.9**
LTHK	**Lithakia**	**2.49**	**284**	P	**Pn**	**18 15 54.6**	**+1.5**
KARB	**zmir-Karabur**	**2.50**	**52**	SPECP		18 15 54.0	
KARB				P	**Pn**	**18 15 54.4**	**+1.1**
KARB				S	**Sg**	**18 16 31.6**	**-1.8**
KARB				*i* IAML		18 16 38.0	
	comp=E,367nm,0.3s						
SIGR	**SIGRI**	**2.57**	**37**	Pn	**Pn**	**18 15 54.3**	**+0.1**
SIGR				Sn	**Sn**	**18 16 25.5**	**+0.2**
SIGR	**SIGRI**	**2.57**	**37**	P	**Pn**	**18 15 53.8**	**-0.4**
SIGR	**SIGRI**	**2.57**	**37**	P	**Pn**	**18 15 54.3**	**+0.1**
GMLD	**Gumuldur**	**2.57**	**68**	Pn	**Pn**	**18 15 54.3**	**0.0**
RTZL	**Ratzakli, Kefa**	**2.64**	**291**	P	**Pb**	**18 15 58.3**	**-1.8**
DDIM	**Aydin, Didim**	**2.69**	**83**	P	**Pg**	**18 16 04.2**	**-0.4**
GCAM	**G?zelcaml?**	**2.72**	**78**	SPECP		18 15 58.0	
GCAM				P	**Pn**	**18 15 58.3**	**+2.1**
GCAM	**G?zelcaml?**	**2.72**	**78**	Pn	**Pn**	**18 15 57.5**	**+1.2**
BODT	**Bodrum**	**2.74**	**91**	P	**Pb**	**18 15 59.7**	**-2.1**
AMPL	**Ampelaki**	**2.75**	**311**	P	**Pb**	**18 15 59.5**	**-2.5**
BLCB	**Balcova**	**2.78**	**63**	SPECP		18 15 57.0	
BLCB				P	**Pn**	**18 15 57.3**	**+0.2**
BLCB	**Balcova**	**2.78**	**63**	Pn	**Pn**	**18 15 57.8**	**+0.6**
THL	**Klokotos Trika**	**2.82**	**329**	P	**Pn**	**18 15 58.6**	**+0.9**
LIA	**Limnos Island**	**2.92**	**20**	P	**Pn**	**18 15 58.6**	**-0.5**
KOCA	**Canakkale, Ayv**	**2.93**	**36**	SPECP		18 15 59.0	
KOCA				P	**Pn**	**18 15 59.3**	**0.0**
NYDR	**Nydri-Lefkada**	**2.96**	**303**	P	**Pn**	**18 16 00.8**	**+1.2**
DAT	**Datca**	**2.99**	**97**	Pn	**Pn**	**18 16 00.9**	**+0.8**
TETR	**Tetrakomo, Epi**	**3.00**	**317**	P	**Pn**	**18 16 01.4**	**+1.1**
LKD2	**Lefkada island**	**3.03**	**304**	P	**Pn**	**18 16 02.5**	**+1.9**
DKL	**Dikili**	**3.05**	**50**	P	**Pn**	**18 16 03.7**	**+2.8**
DKL	**Dikili**	**3.05**	**50**	Pn	**Pn**	**18 16 01.9**	**+1.1**
AYVA	**Ayvalik**	**3.08**	**45**	SPECP		18 16 03.0	
AYVA				P	**Pn**	**18 16 03.2**	**+2.0**
KARP	**Karpathos**	**3.09**	**120**		**Pn**	**18 16 02.9**	**+1.4**
KARP	**Karpathos**	**3.09**	**120**	P	**Pn**	**18 16 03.1**	**+1.6**
KARP	**Karpathos**	**3.09**	**120**	P	**Pn**	**18 16 01.9**	**+0.4**
ZEDA	**zmir-Bergama**	**3.10**	**53**	SPECP		18 16 02.0	
ZEDA				P	**Pn**	**18 16 02.2**	**+0.7**
MLSB	**Milas**	**3.11**	**86**	Pn	**Pn**	**18 16 02.8**	**+1.1**
LIT	**Litokhoron**	**3.13**	**340**	SPECP		18 16 03.0	
LIT				P	**Pn**	**18 16 03.2**	**+1.1**
LIT	**Litokhoron**	**3.13**	**340**		**Pn**	**18 16 02.9**	**+0.9**
LIT	**Litokhoron**	**3.13**	**340**	P	**Pn**	**18 16 02.0**	**0.0**
LIT	**Litokhoron**	**3.13**	**340**	P	**Pn**	**18 16 02.9**	**+0.9**
BOZC	**Bozcaada**	**3.17**	**32**	SPECP		18 16 02.0	
BOZC				P	**Pn**	**18 16 02.7**	**+0.2**
BOZC	**Bozcaada**	**3.17**	**32**	Pn	**Pn**	**18 16 02.5**	**0.0**
OUR	**Ouranopolis**	**3.17**	**1**	Pn	**Pn**	**18 16 03.0**	**+0.5**
OUR	**Ouranopolis**	**3.17**	**1**	P	**Pn**	**18 16 02.1**	**-0.4**
PRMD	**Pramanda**	**3.23**	**318**	P	**Pn**	**18 16 05.5**	**+2.1**
PLG	**Polygyros**	**3.23**	**354**	P	**Pn**	**18 16 03.3**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**3.28**	**75**	Pn	**Pn**	**18 16 05.3**	**+1.2**
EZN	**Ezine**	**3.28**	**35**	Pn	**Pn**	**18 16 04.3**	**+0.3**
EZN	**Ezine**	**3.28**	**35**	⇓P	**Pn**	**18 16 05.7**	**+1.7**
EZN	**Ezine**	**3.28**	**35**	P	**Pn**	**18 16 05.7**	**+1.7**
BAYC	**CANAKKALE_Bayr**	**3.32**	**38**	SPECP		18 16 05.0	
BAYC				P	**Pn**	**18 16 05.2**	**+0.6**
GOAD	**anakkale-G¶**	**3.39**	**27**	SPECP		18 16 05.0	
GOAD				P	**Pn**	**18 16 05.7**	**+0.1**
GADA	**Gvkgeada**	**3.41**	**27**	Pn	**Pn**	**18 16 06.5**	**+0.7**
GADA	**Gvkgeada**	**3.41**	**27**	P	**Pn**	**18 16 05.9**	**+0.1**
BUHA	**Balikesir, Bur**	**3.43**	**46**	SPECP		18 16 06.0	
BUHA				P	**Pn**	**18 16 06.6**	**+0.6**
SOMA	**Soma-Manisa**	**3.50**	**54**	Pn	**Pn**	**18 16 08.3**	**+1.3**
YAYO	**Edremit-Balk**	**3.50**	**45**	Pn	**Pn**	**18 16 07.6**	**+0.6**
THAS	**Thassos island**	**3.50**	**10**	P	**Pn**	**18 16 05.8**	**-1.3**
ARG	**Arkhangelos**	**3.53**	**104**		**Pn**	**18 16 09.2**	**+1.7**
ARG	**Arkhangelos**	**3.53**	**104**	P	**Pn**	**18 16 09.2**	**+1.7**
THE	**Thessaloniki**	**3.54**	**349**	P	**Pn**	**18 16 08.3**	**+0.7**
KZN	**Kozani**	**3.55**	**333**	P	**Pn**	**18 16 08.9**	**+1.1**
COMU	**Canakkale**	**3.57**	**34**	Pn	**Pn**	**18 16 09.0**	**+1.0**
SOH	**Sokhos**	**3.68**	**354**	P	**Pn**	**18 16 09.9**	**+0.4**
GELI	**Tayfur-

PLOR	Plostina	8.93	13	P		Pn	18 17 23.2	+1.6
VRI	Vrincioaia	8.96	13	⇓P		Pn	18 17 23.0	+1.0
VRI	Vrincioaia	8.96	13	P		Pn	18 17 22.9	+1.0
VRI	Vrincioaia	8.96	13	P		Pn	18 17 21.9	0.0
	11nm,0.6s							
MDB	Medias	8.98	2	⇑P		Pn	18 17 23.5	+1.1
MDB	Medias	8.98	2	P		Pn	18 17 23.4	+1.1
TURR	Turia	9.03	9	⇑P		Pn	18 17 23.9	+0.9
OZUR		9.04	8	⇓P		Pn	18 17 25.0	+1.9
TESR	Tescani	9.57	12	⇓P		Pn	18 17 31.5	+1.1
TESR	Tescani	9.57	12	P		Pn	18 17 30.3	0.0
	12nm,0.8s							
DRGR		9.67	355	⇑P		Pn	18 17 33.2	+1.5
DRGR		9.67	355	P		Pn	18 17 33.2	+1.5
RYAN	Fayoum	9.67	145	P		Pn	18 17 33.6	+1.9
MORH	Mrgy, Hungar	9.86	338	P		Pn	18 17 34.2	-0.1
	6.3nm,0.7s							
NRCA	Norcia	10.02	308			Pn	18 17 36.1	-0.5
FDMO	Fiordimonte	10.14	309		Pn	Pn	18 17 38.2	0.0
MMAI	Mount Meron Ar	10.30	110		Pn	Pn	18 17 41.6	+1.2
	1.3nm,0.3s,baz=303,slow=13,SNR=11							
MMAI					Sn	Sn	18 19 40.1	+4.4
	0.3nm,0.3s,baz=289,slow=23,SNR=1.5							
	1.2nm,0.4s							
GEM	Giv'at Ha'Em	10.41	109	P		Pn	18 17 41.0	-0.9
GEM	Giv'at Ha'Em	10.41	109	S		Sn	18 19 37.1	-1.2
MILM	Milestii Mici	10.41	19	*e*P		Pn	18 17 44.0	+2.1
	20nm,0.8s							
MILM				*e*L		L	18 28 23.0	
MILM				LRM		MLR	18 32 01.0	
	600nm,9.5s							
NATI	Neve Ativ	10.44	108	P		Pn	18 17 42.2	-0.1
NATI	Neve Ativ	10.44	108	S		Sn	18 19 39.3	+0.2
BURAR	Bucovina Array	10.50	5	Pn		Pn	18 17 43.1	0.0
BURAR	Bucovina Array	10.50	5	⇓P		Pn	18 17 44.6	+1.4
BURAR	Bucovina Array	10.50	5	P		Pn	18 17 44.5	+1.4
BUR08	Bucovina Ar. S	10.52	5			Pn	18 17 43.5	-0.1
MMLI	Mount Malkishu	10.59	113	P		Pn	18 17 44.2	-0.2
MMLI	Mount Malkishu	10.59	113	S		Sn	18 19 42.3	-0.4
KSHT	Keshet	10.62	110	P		Pn	18 17 44.5	-0.4
GAZ	Gaziantep	10.63	86	Pn		Pn	18 17 45.8	+0.7
AMAZ	Amatzia	10.70	118	P		Pn	18 17 44.8	-1.1
AMAZ	Amatzia	10.70	118	S		Sn	18 19 46.0	+0.4
KZIT	Kziot	10.71	123	P		Pn	18 17 45.4	-0.7
KZIT	Kziot	10.71	123	S		Sn	18 19 45.0	-0.8
HMDT	Nahal Hemdat	10.75	114	P		Pn	18 17 45.4	-1.2
HMDT	Nahal Hemdat	10.75	114	S		Sn	18 19 47.0	+0.2
BALJ	Balqa	10.92	114	Pn		Pn	18 17 48.0	-0.9
YTIR	Yattir	10.94	119	P		Pn	18 17 48.9	-0.4
YTIR	Yattir	10.94	119	S		Sn	18 19 51.8	+0.4
TRSU	Trosnyk	10.95	357	P		Pn	18 17 49.4	+0.2
DSI	Dead Sea	11.01	117	P		Pn	18 17 49.9	-0.2
DSI	Dead Sea	11.01	117	S		Sn	18 19 52.3	-0.7
MSBI	Mazada	11.14	118	P		Pn	18 17 51.9	+0.1
MSBI	Mazada	11.14	118	S		Sn	18 19 55.6	-0.5
RMNI	Mount Ramon	11.15	123	P		Pn	18 17 50.9	-1.3
BRIU	Brid	11.19	357	P		Pn	18 17 52.6	+0.1
GHAJ	Ghor Haditha	11.29	118			Pn	18 17 52.9	-1.0
GHAJ	Ghor Haditha	11.29	118	P		Pn	18 17 53.1	-0.8
IDAN	Idan	11.36	120	P		Pn	18 17 54.4	-0.5
IDAN	Idan	11.36	120	S		Sn	18 20 00.3	-1.3
CASP	Castiglione de	11.46	303	Pn		Pn	18 17 52.8	-3.5
ZFRI	Zfri	11.46	122	P		Pn	18 17 56.2	-0.1
ZFRI				P			18 17 56.2	
KMPD	K-Podol'skiy	11.55	9	P		Pn	18 17 57.8	+0.4
HRFI	Mount Harif	11.69	124	P		Pn	18 17 59.8	+0.3
HRFI	Mount Harif	11.69	124	S		Sn	18 20 09.6	-0.2
MBRI	Mt Berech	11.77	125	P		Pn	18 17 59.9	-0.7
MBRI	Mt Berech	11.77	125	S		Sn	18 20 11.3	-0.5
KEST	Kesra	11.80	267	Pn		Pn	18 18 02.5	+1.5
	0.1nm,0.3s,baz=183,slow=21,SNR=1.5							
KEST					Sn	Sn	18 20 09.7	-2.8
	0.1nm,0.3s,baz=80,slow=22,SNR=1.4							
	3.0nm,0.9s							
EIL	Elat	11.88	126	Pn		Pn	18 18 03.4	+1.4
	0.9nm,0.3s,baz=346,slow=7.4,SNR=6.9							
EIL					Sn	Sn	18 20 06.5	-7.8
	0.5nm,0.3s,baz=34,slow=14,SNR=1.9							
	4.3nm,0.6s							
EIL	Elat	11.88	126	P		Pn	18 18 01.7	-0.3
LUBAR	Lubar, Ukraine	13.06	11	P		Pn	18 18 18.9	+0.9
LESA	Schwarzleotal	13.18	325	*e*Pn		Pn	18 18 21.6	+1.8
	2.0nm,0.9s							
MORC	Moravsky Berou	13.42	342			Pn	18 18 19.1	-3.9
MORC	Moravsky Berou	13.42	342	P		Pn	18 18 19.1	-3.9
GEC2	GERESS Array S	13.84	331			Pn	18 18 29.1	+0.3
GERES	GERESS Array B	13.84	331	Pn		P	18 18 38.7	+1.6
	0.1nm,0.3s,baz=141,slow=13,SNR=23							
FUORN	Ofenpass-Fuorn	13.85	317	Pn		Pn	18 18 30.5	+1.4
FETA	Feichten	13.86	319	*e*Pn		Pn	18 18 30.9	+1.8
	2.0nm,0.6s							
MOTA	Moosalm	13.88	321	*i* Pn		Pn	18 18 30.8	+1.4
	1.1nm,0.6s							
AK06	Malin Array Si	13.95	14	P		Pn	18 18 30.5	+0.3
AK14	Malin Array Si	13.98	14	P		Pn	18 18 31.7	+1.1
AK05	Malin Array Si	13.99	14	P		Pn	18 18 31.0	+0.3
AK19	Malin Array Si	14.05	14	P		Pn	18 18 31.7	+0.2
KIEV	Kiev	14.06	14			Pn	18 18 33.4	+1.7
KIEV	Kiev	14.06	14	P		Pn	18 18 33.4	+1.7
AK20	Malin Array Si	14.07	13	P		Pn	18 18 31.9	+0.1
AKASG	Malin Array Be	14.07	14	Pn		P	18 18 42.2	+2.7
	1.6nm,0.3s,baz=210,slow=9.8,SNR=6.7							
AKBB	Malin Array Si	14.07	14	Pn		Pn	18 18 34.9	+3.1
AKBB	Malin Array Si	14.07	14	P		Pn	18 18 34.9	+3.1
AK03	Malin Array Si	14.09	14	P		Pn	18 18 32.2	+0.1
AK21	Malin Array Si	14.11	14	P		Pn	18 18 32.6	+0.3
KHC	Kasperske Hory	14.12	331			Pn	18 18 34.0	+1.5
KHC	Kasperske Hory	14.12	331	*i* P		Pn	18 18 31.3	-1.3
KHC	Kasperske Hory	14.12	331	*e*P		P	18 18 41.7	+1.5
KHC	Kasperske Hory	14.12	331	P		Pn	18 18 32.9	+0.3
	8.0nm,1.5s							
RNPP5	Staryi Chortor	14.14	5	P		Pn	18 18 33.0	+0.2
RETA	Reutte	14.15	321	*e*Pn		P	18 18 41.7	+1.1
	2.7nm,0.6s							
DAVOX	Davos/Dischmat	14.16	317	Pn		P	18 18 43.4	+2.6
	0.4nm,0.3s,baz=184,slow=1.6,SNR=6.9							
DPC	Dobruska-Polom	14.26	340	P		Pn	18 18 34.9	+0.4
	8.1nm,0.6s							
TUE	Stuetta	14.27	315	Pn		Pn	18 18 34.7	-0.1
DAVA	Damuels	14.47	319	*e*Pn		P	18 18 45.4	+1.2
	1.1nm,0.5s							
BNI	Bardonecchia	15.16	307	Pn		Pn	18 18 45.4	-1.4
BNI	Bardonecchia	15.16	307	P		Pn	18 18 45.4	-1.4
BNI				pmax	pmax			
	comp=Z,7.0nm,1.1s							
SENIN	Lac Senin/Sane	15.40	312			Pn	18 18 49.7	-0.2
SENIN				IAmb		IAmb	18 19 01.0	
	comp=Z,11nm,0.7s							
KIV	Kislovodsk	15.80	59	*e*P		Pn	18 18 55.1	-0.1
KIV				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KVAR	Kislovodsk Arr	15.81	59	Pn		P	18 19 07.8	+8.7
	baz=243,slow=14							
KBZ	Khabaz	15.88	60	Pn		P	18 19 05.3	+5.7
	comp=Z,0.2nm,0.3s,baz=265,slow=8.8,SNR=9.9							
BFO	Black Forest	15.94	319	Pn		Pn	18 18 57.0	+0.1
BFO	Black Forest	15.94	319	P		Pn	18 18 57.0	+0.1
BFO				pmax	pmax			
	comp=Z,9.0nm,1.1s							
CLL	Collm	16.13	335	*i* P		P	18 19 03.7	+1.3
CLL				pmax	pmax			
	comp=Z,9.0nm,0.9s							
CLL	Collm	16.13	335	P		Pn	18 18 59.9	+0.7
	comp=Z,13nm,1.1s							
CLL	Collm	16.13	335	*i* Px		Px	18 19 03.7	
	comp=Z,9.0nm,0.9s							
GNI	Garni	16.56	73	*i* P		Pn	18 19 05.0	+0.1
SUW	Suwalki	16.86	359	P		Pn	18 19 08.4	-0.1
SUW	Suwalki	16.86	359	P		Pn	18 19 08.4	-0.1
CORI	Orista	17.50	293	P		Pn	18 19 14.8	-1.8
CORI				IAmb		IAmb	18 19 44.7	
	comp=Z,32nm,1.4s							
MNK	Minsk	17.56	8	*i* P		Pn	18 19 13.0	-4.2
	comp=E,18nm,1.0s							
MNK				*i* P		Pn	18 19 13.0	-4.2
	comp=N,21nm,0.8s							
MNK				*i* P		Pn	18 19 13.0	-4.2
	comp=N,6.0nm,0.7s,baz=191							
MNK				*i* PP		sP	18 19 23.0	-0.7
MNK				*i* PPP		PPP	18 19 30.8	
MNK				*i* S		Sn	18 22 26.6	-5.9
MNK				*i* SS		S	18 22 41.4	+1.2
MNK				*i* SSS		SSS	18 22 54.2	
MNK				*i* LQ		LQ	18 24 21.3	
MNK				*i* LR		LR	18 25 40.1	
MNK				*i* LRM		MLR	18 27 48.0	
	comp=E,269nm,18.2s							
MNK				*i* LRM		MLR	18 28 13.3	
	comp=N,731nm,22.7s							
MNK				*i* LRM		MLR	18 28 22.9	
	comp=Z,377nm,19.7s							
MNK	Minsk	17.56	8	*i* P		Pn	18 19 13.0	-4.2
MNK				*i* S		Sn	18 22 26.6	-5.9
MNK				pmax	pmax			
	comp=Z,6.0nm,0.7s							
MNK				pmax	pmax			
	comp=N,21nm,0.8s							
MNK				pmax	pmax			
	comp=E,18nm,1.0s							
MNK				MLR	MLR			
	comp=E,269nm,18.0s							
MNK				MLR	MLR			
	comp=N,731nm,23.0s							
MNK				MLR	MLR			
	comp=Z,377nm,20.0s							
NACGM	Naroch	17.86	5	*e*P		Pn	18 19 18.8	-2.1
	comp=Z,8.0nm,0.8s,baz=188							
WLF	Walferdange	17.89	320	P		Pn	18 19 20.8	-0.6
WLF				IAmb		IAmb	18 19 21.7	
	comp=Z,31nm,1.5s							
WLF	Walferdange	17.89	320	P		Pn	18 19 20.8	-0.6
WLF				pmax	pmax			
	comp=Z,31nm,1.5s							
PABE	Paberze	18.35	0			Pn	18 19 25.9	-1.1
PABE				IAmb		IAmb	18 19 30.5	
	comp=Z,26nm,0.8s							
BSD	Bornholm Skovb	18.98	344	*i* P		P	18 19 33.2	-0.6
LUNU	Lund	19.79	342	*i* P		P	18 19 43.1	+0.4
OBN	Obninsk	19.93	22⇓	*e*P		P	18 19 45.1	+0.8
OBN				pmax	pmax			
	comp=Z,8.0nm,1.1s							
OBN				MLR	MLR			
	comp=Z,442nm,21.0s							
BJUU	Bjuv	20.29	342	*i* P		P	18 19 49.1	+1.0
DEL	Delary	20.46	344	*i* P		P	18 19 49.5	-0.4
ESDC	Sonseca Array	21.93	285	P		P	18 20 07.3	+1.2
	comp=Z,2.4nm,0.6s,baz=82,slow=9.6,SNR=21							
	comp=Z,2.4nm,0.6s							
ESDC	Sonseca Array	21.93	285	P		P	18 20 03.8	-2.3
PAB	San Pablo	22.24	285	P		P	18 20 07.4	-2.0
PAB				IAmb		IAmb	18 20 38.6	
	comp=Z,18nm,1.3s							
PAB	San Pablo	22.24	285	P		P	18 20 07.4	-2.0
PAB				pmax	pmax			
	comp=Z,18nm,1.3s							
BELG	Belogornoye	22.57	40	*i* P		P	18 20 13.2	+0.6
BELG				pmax	pmax			
	comp=Z,3.0nm,1.0s							
PUL	Pulkovo	23.01	8	*ce*P		P	18 20 18.2	+1.0
PUL				pmax	pmax			
	comp=Z,69nm,0.9s							
SNART	Snartemo	23.84	338	*e*P		P	18 20 25.8	+0.3
HFS	Hagfors	23.90	347	P		P	18 20 25.1	-1.0
	comp=Z,12nm,0.7s,baz=152,slow=9.8,SNR=33							
	comp=Z,12nm,0.7s							
KONO	Kongsberg	24.32	342	P		P	18 20 28.9	-1.1
KONO				IAmb		IAmb	18 20 31.6	
	comp=Z,19nm,1.1s							
KONO	Kongsberg	24.32	342	*e*P		P	18 20 29.2	-0.8
KONO	Kongsberg	24.32	342	P		P	18 20 28.9	-1.1
KONO				pmax	pmax			
	comp=Z,19nm,1.1s							
FINES	FINESS Array B	24.35	3	P		P	18 20 30.2	0.0
	comp=Z,6.6nm,0.5s,baz=161,slow=11,SNR=44							
FINES				PcP		PcP	18 24 09.4	+0.2
	comp=Z,1.9nm,0.9s,baz=232,slow=3.4,SNR=1.4							
	comp=Z,6.6nm,0.5s							
FINES	FINESS Array B	24.35	3	P		P	18 20 29.4	-0.8
FIA1	FINESS Array S	24.35	3	P		P	18 20 29.5	-0.7
NC602	NORSAR Array S	24.86	346			P	18 20 34.3	-0.6
NC602				IAmb		IAmb	18 20 56.9	
	comp=Z,26nm,1.2s							
NC602	NORSAR Array S	24.86	346	*e*P		P	18 20 34.2	-0.7
BLS5	Blasjo	24.96	339	*e*P		P	18 20 36.1	+0.3
PVAQ	Vaqueiros	25.09	280	P		P	18 20 37.3	+0.1
NAO01	NORSAR Array S	25.10	345	P		P	18 20 36.5	-0.6
NAO01				IAmb		IAmb	18 20 40.2	
	comp=Z,15nm,1.1s							
KMY	Karmoy	25.15	337	*e*P		P	18 20 37.8	+0.3
NC405	NORSAR Array S	25.18	346	P		P	18 20 37.1	-0.7
NC405				IAmb		IAmb	18 20 57.4	
	comp=Z,23nm,1.4s							
NB2	NORSAR Subarra	25.21	345	P		P	18 20 37.3	-0.8
	comp=Z,2.1nm,0.5s,baz=156,slow=9.3							
NOA	NORSAR Array B	25.21	345	P		P	18 20 37.6	-0.4
	comp=Z,3.5nm,0.6s,baz=149,slow=9.5,SNR=30							
	comp=Z,3.5nm,0.6s							
NC204	NORSAR Array S	25.52	345	P		P	18 20 40.8	0.0
SKAR	Skarslia	25.54	342	*e*P		P	18 20 41.3	+0.3
KLMR	Klimovskoe	25.70	18	*e*P		P	18 20 40.5	-1.9
KLMR				pmax	pmax			
	comp=Z,10.0nm,1.0s							
EKA	Eskdalemuir Ar	25.82	323	P		P	18 20 43.4	-0.2
	comp=Z,3.6nm,0.4s,baz=122,slow=9.8,SNR=18							
	comp=Z,3.6nm,0.4s							
ESK	Eskdalemuir	25.83	323	P		P	18 20 43.8	+0.1
ESK	Eskdalemuir	25.83	323	P		P	18 20 43.8	+0.1
ESK				pmax	pmax			
	comp=Z,25nm,1.0s							
EKB	Eskdalemuir	25.84	323	P		P	18 20 43.5	-0.3
DOMB	Dombas	26.56	344	*e*P		P	18 20 50.7	+0.4
SUE	Sulen	26.79	339	*e*P		P	18 20 52.4	+0.1
AKN	Aaknes	27.15	343	*e*P		P	18 20 55.6	0.0
NSS	Namsos	28.32	349	*e*P		P	18 21 05.7	-0.3
ARTI	Arti	30.00	39	P		P	18 21 21.3	+0.3
ARTI				IAmb		IAmb	18 21 22.6	
	comp=Z,8.5nm,1.2s							
ARTI	Arti	30.00	39	*d i*P		P	18 21 21.4	+0.4
ARTI							18 22 12.8	
ARTI				S		S	18 26 19.1	+0.8
ARTI				pmax	pmax			
	comp=Z,10.0nm,1.8s							
TORD	Torodi Ar. Bea	31.07	225	P		P	18 21 30.1	-0.7
	comp=Z,0.5nm,0.3s,baz=42,slow=10,SNR=3.2							
	comp=Z,0.5nm,0.3s							
ARA0	ARCESS Array S	32.45	1	*e*P		P	18 21 41.8	-0.6
ARCES	ARCESS Array B	32.45	1	P		P	18 21 42.1	-0.3
	comp=Z,3.9nm,0.8s,baz=185,slow=9.7,SNR=14							
ARCES				PcP		PcP	18 24 29.2	0.0
	comp=Z,3.4nm,1.0s,baz=186,slow=2.7,SNR=1.6							
	comp=Z,3.9nm,0.8s							
ARCES	ARCESS Array B	32.45	1	P		P	18 21 42.3	-0.1
DBIC	Dimbokro	40.08	228	P		P	18 22 48.4	+0.3
	comp=Z,2.8nm,0.3s,baz=76,slow=8.8,SNR=6.3							
	comp=Z,2.8nm,0.3s							
DBIC	Dimbokro	40.08	228	P		P	18 22 48.3	+0.3
DBIC	Dimbokro	40.08	228	P		P	18 22 48.3	+0.2
DBIC				pmax	pmax			
	comp=Z,23nm,1.5s							
KURBB	Kurchatov Arra	40.70	53	P		P	18 22 53.5	+0.6
	comp=Z,0.8nm,0.4s,baz=276,slow=8.7,SNR=12							
KURBB				PcP		PcP	18 24 54.5	+0.2
	comp=Z,0.4nm,0.5s,baz=292,slow=3.5,SNR=1.6							
	comp=Z,0.8nm,0.4s							
KURK	Kurchatov	40.75	53	P		P	18 22 54.2	+0.8
KURK	Kurchatov	40.75	53	P		P	18 22 54.2	+0.8
KURK				pmax	pmax			
	comp=Z,2.0nm,1.0s							
SPITS	Spitsbergen Ar	41.25	358	P		P	18 22 57.8	+0.6
	comp=Z,17nm,1.1s,baz=178,slow=9.5,SNR=2.0							
	comp=Z,17nm,1.1s							
TARG	Taragay, Kyrgy	41.32	66	P		P	18 22 58.2	-0.5
MKAR	Makanchi Array	43.56	58	P		P	18 23 17.0	+0.6
	comp=Z,1.5nm,0.5s,baz=268,slow=7.8,SNR=20							
	comp=Z,1.5nm,0.5s							
ZAA0	Zalesovo Array	44.39	48	P		P	18 23 22.5	-0.4
ZALV	Zalesovo Beam	44.39	48	P		P	18 23 23.2	+0.3
	comp=Z,1.5nm,0.4s,baz=270,slow=8.2,SNR=9.2							
	comp=Z,1.5nm,0.4s							
ZALV	Zalesovo Beam	44.39	48	P		P	18 23 22.6	-0.3
WMQ	Urumqi	47.91	61	*e*P		P	18 23 53.3	+2.4
WMQ				LR		LR		
	comp=Z,200nm,24.2s							
SONM	Songino Array	59.03	51	P		P	18 25 13.0	+0.5
	comp=Z,0.1nm,0.3s,baz=296,slow=4.6,SNR=1.8							
	comp=Z,0.1nm,0.3s							
SONM	Songino Array	59.03	51	P		P	18 25 13.0	+0.5
SONM	Songino Array	59.03	51	P		P	18 25 13.0	+0.5
SCHQ	Schefferville	61.01	319	P		P	18 25 25.7	-0.1
	comp=Z,9.7nm,0.8s,baz=101,slow=10,SNR=4.7							
	comp=Z,9.7nm,0.8s							
SCHQ	Schefferville	61.01	319	P		P	18 25 25.2	-0.6
LZH	Lanzhou	62.25	64	*e*P		P	18 25 27.3	-7.4
LZH				pP		pP	18 25 32.6	-6.4
LZH				pmax	pmax			
	comp=Z,18nm,1.1s							
PZH	PanZhiHua	65.32	75	P		P	18 25 55.6	+0.6
HHC	Hu-ho-hao-te	65.39	56	*e*P		P	18 25 55.3	+0.1
HHC				pmax	pmax			
	comp=Z,9.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,81nm,3.6s							
BOSA	Boshof	65.44	179	P		P	18 25 54.5	-1.0
	comp=Z,3.2nm,1.1s,baz=353,slow=8.1,SNR=1.5							
	comp=Z,3.2nm,1.1s							
BOSA	Boshof	65.44	179	P		P	18 25 56.3	+0.8
CM31	Chiang Mai Arr	67.37	84	P		P	18 26 05.8	-2.3
CM31				IAmb		IAmb	18 26 12.5	
	comp=Z,4.1nm,1.2s							
CMAR	Chiang Mai Arr	67.37	84	P		P	18 26 08.0	-0.1
	comp=Z,0.5nm,0.8s,baz=298,slow=9.4,SNR=4.3							
	comp=Z,0.5nm,0.8s							
CMAR	Chiang Mai Arr	67.37	84	P		P	18 26 08.0	-0.1
E28M	Babbage River	73.83	354	P		P	18 26 47.3	+0.6
E28M				IAmb		IAmb	18 26 58.1	
	comp=Z,2.6nm,1.3s							
F30M	Barrier River	74.42	352	P		P	18 26 50.0	-0.1
F30M				IAmb		IAmb	18 26 54.1	
	comp=Z,9.2nm,1.4s							
G31M	Satah River	74.91	351	P		P	18 26 52.3	-0.6
G31M				IAmb		IAmb	18 27 34.9	
	comp=Z,8.4nm,1.4s							
E19K	Redstone River	75.70	0	P		P	18 26 57.5	0.0
I28M	Miner Creek	76.95	353	P		P	18 27 05.0	+0.2
I28M				IAmb		IAmb	18 27 26.3	
	comp=Z,7.0nm,1.4s							
PDAR	Pinedale Array	89.87	328	P		P	18 28 11.2	-0.7
	comp=Z,0.5nm,0.7s,baz=24,slow=5.2,SNR=5.2							
	comp=Z,0.5nm,0.7s							
PDAR	Pinedale Array	89.87	328	P		P	18 28 10.4	-1.4
TXAR	Lajitas Array	97.59	316	P	Pdif		18 28 48.3	+0.9
	comp=Z,0.4nm,0.8s,baz=38,slow=6.3,SNR=3.8							
	comp=Z,0.4nm,0.8s							
TXAR	Lajitas Array	97.59	316	P		P	18 28 46.2	-1.1
TXAR	Lajitas Array	97.59	316	P		P	18 28 46.2	-1.1
WRA	Warramunga Arr	117.81	95	PKP		PKPdf	18 33 58.9	-0.5
	comp=Z,0.4nm,0.4s,baz=314,slow=1.5,SNR=9.2							
ASAR	Alice Springs	119.39	99	PKP		PKPdf	18 34 02.1	-0.2
	comp=Z,0.8nm,0.3s,baz=308,slow=1.7,SNR=27							
QSPA	South Pole Qui	127.01	180	PKP		PKiKP	18 34 18.2	+2.0
	comp=Z,0.5nm,0.5s,baz=274,slow=1.1,SNR=5.8							

NEIC ***15*** *18:16:03.9±0.7, 47.54N±0.04×92.60W±0.06, h0km±1km, mb_Lg2.9/17, Error ellipse: s-maj=7.4km s-min=6.1km az=75.0*

IDC ***15*** *18:16:05.6±2.9, 47.41N×92.94W, h0km, mbtmp2.9/3, ML1.4/1, Error ellipse: s-maj=35.9km s-min=15.0km az=85.0*

ISC 15 18:16:01.0±0.9, 47.68N±0.05×92.59W±0.05, h0km, n23, σ1s08/19, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EYMN	Ely	0.78	70			Pn	18 16 19.5	+0.2
E38A	The Farm, Brul	1.29	146			Pb	18 16 25.5	+0.6
EPLO	Experimental L	2.13	340			Pb	18 16 40.8	+0.3
AGMN	Agassiz Nation	2.28	287			Pb	18 16 43.0	-0.1
TBO	Thunder Bay	2.34	64			Pb	18 16 43.8	-0.2
TBO				IAmb_Lg			18 17 21.4	
	comp=Z,46nm,0.7s							
SPMN	Marine on St.	2.46	184			Pn	18 16 42.9	+0.5
G40A	Rib Lake	2.92	145			Pn	18 16 49.3	+0.6
F33A	5 Mile Ranch,	3.14	235			Pn	18 16 52.5	+0.7
ULM	Lac du Bonnet	3.36	321	Pn		Pb	18 16 59.5	-1.9
	comp=Z,0.5nm,0.3s,baz=138,slow=9.0,SNR=1.4							
ULM				Pg		Pg	18 17 06.8	+1.4
	comp=Z,0.8nm,0.3s,baz=141,slow=16,SNR=5.6							
ULM				Sn		Sn	18 17 35.1	-0.3
	comp=Z,0.8nm,0.3s,baz=139,slow=10,SNR=4.1							
ULM				Lg		Lg	18 17 51.3	
	comp=Z,1.9nm,0.3s,baz=180,slow=15,SNR=2.9							
	comp=Z,1.7nm,0.4s							
ULM	Lac du Bonnet	3.36	321			Pb	18 16 59.1	-2.3
ULM				IAmb_Lg			18 17 53.7	
	comp=Z,43nm,0.7s							
I10CA	LAC DU

LUWI	**Luwuk**	**4.59**	**234**			**Pn**	**18 30 23.9**	**+1.4**
LUWI	**Luwuk**	**4.59**	**234**	P		**Pn**	**18 30 24.0**	**+1.4**
MRSI	**Marisa**	**4.71**	**256**	P		**Pn**	**18 30 25.9**	**+1.7**
NLAI	**Namlea**	**4.90**	**173**	P		**Pn**	**18 30 29.4**	**+2.6**
APSI	**Ampana**	**5.48**	**242**	P		**Pn**	**18 30 36.4**	**+1.6**
	970nm53nm,1.1s							
TOLI2	**Tolitoli**	**5.75**	**265**			**Pn**	**18 30 37.4**	**-1.0**
MPSI	**Mapaga**	**6.73**	**259**	P		**Pn**	**18 30 53.6**	**+1.6**
	0.0nm13nm,0.9s							
TTSI	**Tana Toraja**	**8.15**	**235**	P		**Pn**	**18 31 13.1**	**+1.6**
MYLDM	**Lahad Datu**	**8.72**	**294**			**Pn**	**18 31 20.2**	**+0.9**
KNRA	**Kununurra**	**17.37**	**173**	Pn		**Pn**	**18 33 14.0**	**-1.3**
KNRA				IAmb		IAmb	18 33 24.7	
	comp=Z,16nm,1.2s							
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P		**P**	**18 33 39.0**	**-2.5**
YULB	**Yu-li**	**22.19**	**347**	P		**P**	**18 34 08.7**	**-0.2**
TPUB	**Ta-pu**	**22.26**	**346**	P		**P**	**18 34 09.4**	**-0.2**
SSLB	**Suanglung**	**22.65**	**347**	P		**P**	**18 34 13.6**	**-0.2**
WB0	**Warramunga Arr**	**22.66**	**160**			**P**	**18 34 12.9**	**-1.1**
WB0				IAmb		IAmb	18 34 24.1	
	comp=Z,6.7nm,1.0s							
WRAB	**Tennant Creek**	**22.80**	**161**	P		**P**	**18 34 14.5**	**-0.9**
WRAB				IAmb		IAmb	18 34 58.6	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**22.80**	**161**	P		**P**	**18 34 14.7**	**-0.8**
	comp=Z,2.4nm,0.4s,baz=338,slow=11,SNR=34							
	comp=Z,2.4nm,0.4s							
WRA	**Warramunga Arr**	**22.80**	**161**	P		**P**	**18 34 13.7**	**-1.8**
WR8	**Warramunga Arr**	**22.87**	**160**			**P**	**18 34 15.7**	**-0.4**
WR8				IAmb		IAmb	18 34 20.4	
	comp=Z,5.7nm,1.1s							
AS31	**Alice Springs**	**26.18**	**164**	P		**P**	**18 34 46.3**	**-0.7**
AS31				IAmb		IAmb	18 34 55.0	
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**26.18**	**164**	P		**P**	**18 34 47.0**	**0.0**
	comp=Z,0.8nm,0.5s,baz=346,slow=8.0,SNR=18							
ASAR				PcP		**PcP**	**18 38 14.4**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=344,slow=2.2,SNR=2.6							
	comp=Z,0.8nm,0.5s							
ASAR	**Alice Springs**	**26.18**	**164**	P		**P**	**18 34 46.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**31.77**	**303**	P		**P**	**18 35 34.6**	**-2.2**
	comp=Z,0.1nm,0.4s,baz=115,slow=8.8,SNR=1.8							
	comp=Z,0.1nm,0.4s							
BBOO	**Buckleboo**	**35.45**	**166**	P		**P**	**18 36 08.3**	**-0.3**
MJAR	**Matsushiro Arr**	**36.36**	**16**	P		**P**	**18 36 17.5**	**+1.1**
MJAR				IAmb		IAmb	18 36 26.0	
	comp=Z,6.5nm,1.5s							
ONTNC	**Ouen Toro**	**45.67**	**124**	P		**P**	**18 37 33.4**	**+0.1**
SONM	**Songino Array**	**49.18**	**342**	P		**P**	**18 38 00.9**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=160,slow=8.9,SNR=3.7							
	comp=Z,0.6nm,0.7s							
PETK	**Petropavlovsk-**	**57.42**	**22**	P		**P**	**18 39 02.8**	**+2.1**
	comp=Z,4.9nm,1.0s,baz=220,slow=7.0,SNR=7.0							
	comp=Z,4.9nm,1.0s							
PETK	**Petropavlovsk-**	**57.42**	**22**	P		**P**	**18 39 01.7**	**+1.1**
MKAR	**Makanchi Array**	**59.13**	**326**	P		**P**	**18 39 12.4**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=122,slow=7.8,SNR=15							
	comp=Z,0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**62.33**	**334**	P		**P**	**18 39 33.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=149,slow=8.1,SNR=2.2							
	comp=Z,0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**63.36**	**328**	P		**P**	**18 39 41.1**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=128,slow=6.4,SNR=8.6							
	comp=Z,1.0nm,0.4s							
KURK	**Kurchatov**	**63.36**	**328**	P		**P**	**18 39 40.8**	**-0.5**
VNDA	**Vanda**	**81.41**	**173**	P		**P**	**18 41 28.8**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=320,slow=5.7,SNR=2.2							
	comp=Z,0.4nm,0.6s							
VNDA	**Vanda**	**81.41**	**173**	IAmb		IAmb	18 41 50.6	
	comp=Z,1.6nm,1.2s							

*SDD **15** 18:49:01.3±2.6, 17°.51N×68°.59W, h23km±352km, MD3.4, ML2.7, MW3.2*
*RSPR **15** 18:49:04.6, 17°.78N×68°.70W, h105km±4km, MD3.0/10*
*NEIC **15** 18:49:05.1±2.6, 17°.7N±0°.2×68°.68W±0°.07, h93km±23km, ML2.5/10, Md3.0/10(RSPR), Error ellipse: s-maj=35.3km s-min=6.8km az=190.0*

ISC 15 18:49:05.0±2.0, 18°.0N±0°.1×68°.60W±0°.04, h124km±21km, n37, σ1°.9 14/49, 11C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIDR	**Miches**	**1.08**	**336**	*e*Pg	**Pn**	**18 49 27.1**	**-1.0**
MIDR				*e*Sg	**Sn**	**18 49 46.5**	**+0.8**
MIDR				IAML		18 49 46.6	
	comp=N,100nm,0.8s						
MIDR				IAML		18 49 46.7	
	comp=N,103nm,0.8s						
MIDR	**Miches**	**1.08**	**336**	*e*P	**Pn**	**18 49 27.4**	**-0.7**
MIDR	**Miches**	**1.08**	**336**	*e*S	**Sn**	**18 49 45.6**	**0.0**
DR12	**Loma Pena Alta**	**1.09**	**317**	Pn	**Pn**	**18 49 26.9**	**-1.4**
DR12				Sn	**Sn**	**18 49 44.8**	**-1.2**
HATOM	**Hato Mayor del**	**1.09**	**317**	*e*Pg	**Pn**	**18 49 27.1**	**-1.1**
HATOM				⇓*e*Sg	**Sn**	**18 49 47.2**	**+1.2**
HATOM				IAML		18 49 48.5	
	comp=E,51nm,0.3s						
HATOM				IAML		18 49 49.3	
	comp=N,45nm,0.2s						
IDE	**Isla Desecheo**	**1.14**	**70**		**Pn**	**18 49 29.8**	**+1.1**
IDE					**Sn**	**18 49 46.8**	**+0.1**
IDE	**Isla Desecheo**	**1.14**	**70**	⇑*e*P	**Pn**	**18 49 29.8**	**+1.1**
IDE	**Isla Desecheo**	**1.14**	**70**	*e*S	**Sn**	**18 49 46.8**	**+0.1**
SMDR	**Samana, DR**	**1.41**	**337**	⇑*e*P	**Pn**	**18 49 31.8**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.41**	**89**		**Pn**	**18 49 28.9**	**-2.8**
CRPR					**Sn**	**18 49 51.0**	**-0.9**
CRPR				IAML		18 49 59.0	
	comp=N,38nm,1.1s						
CRPR	**Cabo Rojo, PR**	**1.41**	**89**	⇑*e*P	**Pn**	**18 49 31.2**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.41**	**89**	*e*S	**Sn**	**18 49 51.9**	**-0.1**
LSP	**Las Mesas**	**1.45**	**82**		**Pn**	**18 49 32.9**	**+0.8**
LSP					**Sn**	**18 49 53.2**	**+0.5**
LSP	**Las Mesas**	**1.45**	**82**	⇑*e*P	**Pn**	**18 49 32.9**	**+0.8**
LSP	**Las Mesas**	**1.45**	**82**	*e*S	**Sn**	**18 49 53.2**	**+0.5**
MLPR	**Magueyes Islan**	**1.48**	**91**	⇑*e*P	**Pn**	**18 49 31.7**	**-0.6**
MLPR	**Magueyes Islan**	**1.48**	**91**	*e*S	**Sn**	**18 49 52.9**	**-0.3**
AGPR	**Aguadilla, PR**	**1.49**	**71**		**Pn**	**18 49 33.2**	**+0.6**
AGPR					**Sn**	**18 49 55.2**	**+1.7**
AGPR	**Aguadilla, PR**	**1.49**	**71**	⇑*e*P	**Pn**	**18 49 33.2**	**+0.6**
AGPR	**Aguadilla, PR**	**1.49**	**71**	*e*S	**Sn**	**18 49 55.2**	**+1.7**
DR08	**Loma La Naviza**	**1.66**	**306**	*e*Pg	**Pn**	**18 49 33.4**	**-1.2**
DR08				IAML		18 50 41.4	
	comp=N,659nm,0.2s						
BANI	**BANI**	**1.72**	**284**		**Pn**	**18 49 34.3**	**-1.1**
BANI	**BANI**	**1.72**	**284**	*e*Pg	**Pn**	**18 49 35.5**	**+0.1**
BANI				*e*Sg	**Sn**	**18 49 59.5**	**+0.9**
BANI				IAML		18 50 03.8	
	comp=N,97nm,0.3s						
BANI				IAML		18 50 05.5	
	comp=E,67nm,0.3s						
AOPR	**Arecibo Observ**	**1.79**	**78**		**Pn**	**18 49 34.3**	**-1.8**
AOPR					**Sn**	**18 49 59.4**	**-0.3**
AOPR	**Arecibo Observ**	**1.79**	**78**	⇑*e*Pg	**Pn**	**18 49 34.6**	**-1.4**
AOPR				⇓*e*Sg	**Sn**	**18 50 00.3**	**+0.6**
AOPR				IAML		18 50 01.4	
	comp=N,145nm,0.3s						
AOPR				IAML		18 50 04.6	
	comp=E,186nm,0.2s						
AOPR	**Arecibo Observ**	**1.79**	**78**	⇑*e*P	**Pn**	**18 49 34.6**	**-1.4**
AOPR	**Arecibo Observ**	**1.79**	**78**	*e*S	**Sn**	**18 50 00.5**	**+0.7**
UUPR	**Utuado, UPR, P**	**1.80**	**81**		**Pn**	**18 49 36.5**	**+0.3**
UUPR					**Sn**	**18 50 01.1**	**+1.0**
UUPR	**Utuado, UPR, P**	**1.80**	**81**	⇑*e*P	**Pn**	**18 49 36.5**	**+0.3**
UUPR	**Utuado, UPR, P**	**1.80**	**81**	*e*S	**Sn**	**18 50 01.1**	**+1.0**
OBIP	**Obispado Ponce**	**1.89**	**88**		**Pn**	**18 49 35.1**	**-2.2**
OBIP					**Sn**	**18 50 01.9**	**-0.1**
OBIP				IAML		18 50 43.4	
	comp=N,18nm,3.7s						
OBIP	**Obispado Ponce**	**1.89**	**88**	⇑*e*P	**Pn**	**18 49 37.0**	**-0.3**
OBIP	**Obispado Ponce**	**1.89**	**88**	*e*S	**Sn**	**18 50 03.0**	**+1.0**
PODR	**Polo**	**2.56**	**274**	*e*Pg	**Pn**	**18 49 46.4**	**+0.5**
PODR				*e*Sg	**Sn**	**18 50 20.1**	**+2.7**
PODR				IAML		18 50 20.1	
	comp=E,93nm,0.3s						
PODR				IAML		18 50 21.9	
	comp=N,65nm,1.2s						
HUMP	**Col San Antoni**	**2.62**	**86**	Pn	**Pn**	**18 49 46.0**	**-0.4**
HUMP				IAML		18 50 21.1	
	comp=E,28nm,0.3s						
HUMP				IAML		18 50 22.4	
	comp=N,22nm,0.2s						
SDDR	**Presa de Saban**	**2.74**	**292**		**Pn**	**18 49 46.4**	**-1.7**
SDDR				IAML		18 50 27.6	
	comp=N,15nm,1.2s						
SDDR				IAML		18 50 29.5	
	comp=N,16nm,0.5s						
SDDR	**Presa de Saban**	**2.74**	**292**	IAML		18 50 28.3	
	comp=N,14nm,1.2s						
SDDR				IAML		18 50 30.1	
	comp=E,12nm,1.1s						

IDC 15 18:52:09.1±1.8, 1°.64N×126°.71E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=157.2km s-min=23.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.72**	**161**	P	P	18 57 13.0	+0.2
	1.8nm,0.8s,baz=340,slow=11,SNR=9.4						
	1.8nm,0.8s						
ASAR	**Alice Springs**	**26.11**	**165**	P	P	18 57 44.8	-0.2
	0.4nm,0.8s,baz=353,slow=16,SNR=7.1						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	P	19 02 12.3	-0.2
	0.2nm,0.4s,baz=119,slow=8.9,SNR=1.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.48**	**328**	P	P	19 02 41.1	+0.1
	0.2nm,0.3s,baz=123,slow=6.7,SNR=2.1						
	0.2nm,0.3s						

IDC 15 18:54:00.2±1.9, 1°.55N×126°.31E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=183.2km s-min=23.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.76**	**160**	P	P	18 59 03.1	-1.3
	0.3nm,0.5s,baz=338,slow=11,SNR=4.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**26.13**	**164**	P	P	18 59 37.1	+0.9
	0.1nm,0.4s,baz=343,slow=11,SNR=7.2						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	P	19 04 03.5	+0.9
	0.9nm,0.9s,baz=117,slow=7.4,SNR=2.3						
	0.9nm,0.9s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	P	19 04 30.3	-0.9
	0.1nm,0.2s,baz=123,slow=6.8,SNR=1.5						
	0.1nm,0.2s						

TAP 15 18:59:55.6, 24°.52N×121°.06E, h6km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSTT	**Nanjuang**	**0.12**	**335**	*i* P	Pg	18 59 59.0	+0.7
NSTT				*i* S	Sg	19 00 01.0	+0.9
NFF	**Wufeng Townshi**	**0.13**	**25**	*i* P	Pg	18 59 59.3	+1.0
NFF				*i* S	Sg	19 00 01.3	+1.2
LIOB	**Emei**	**0.13**	**343**	*i* P	Pg	18 59 59.3	+0.9
LIOB				S	Sg	19 00 01.4	+1.1
NMLH	**Miaoli**	**0.24**	**275**	*i* P	Pg	19 00 01.9	+1.5
NMLH				S	Sg	19 00 05.8	+2.1
WHP	**Taichung City**	**0.26**	**203**	*i* P	Pb	19 00 02.4	-0.4
WHP				*i* S	Sb	19 00 06.2	-1.4
TDCB	**Techi**	**0.28**	**161**	*e*P	Pb	19 00 02.7	-0.5
TDCB				*e*S	Sg	19 00 06.5	+1.7
KSHI	**Guanxi Townshi**	**0.28**	**23**	*i* P	Pb	19 00 02.7	-0.5
KSHI				*i* S	Sb	19 00 07.0	-1.2
SBCB	**Hsinchu**	**0.28**	**346**	*e*P	Pb	19 00 02.7	-0.5
TWT	**Tachien**	**0.28**	**158**	S	Sg	19 00 06.7	+1.7
NSY	**Sanyi**	**0.29**	**250**	*e*P	Pb	19 00 03.2	-0.1
NNS	**Nan Shan**	**0.30**	**105**	P	Pg	19 00 01.3	-0.2
NNS				*e*S	Sb	19 00 07.5	-1.2
NNS	**Nan Shan**	**0.30**	**105**	*i* P	Pg	19 00 01.3	-0.2
TWQ1	**Liyutan**	**0.31**	**237**	*i* P	Pb	19 00 03.3	-0.3
TWQ1				*i* S	Sb	19 00 08.1	-0.9
NSK	**Sanguang**	**0.32**	**60**	*i* P	Pg	19 00 02.5	+0.6
YHNB	**Yeheng**	**0.33**	**62**	*i* P	Pb	19 00 03.1	-0.9
WHF	**Hehuan Shan**	**0.42**	**153**	*e*P	Pb	19 00 07.0	+1.3
NCUH	**Zhongli**	**0.46**	**14**	*e*P	Pg	19 00 05.1	+0.5
NCUH				S	Sb	19 00 13.0	-0.4
ENTT	**Nioudou**	**0.48**	**75**	P	Pb	19 00 06.3	-0.2
NWLT	**Wulai**	**0.48**	**57**	*i* P	Pb	19 00 05.8	-0.8
NWLT				S	Sg	19 00 11.7	+0.5
WUSB	**Renai**	**0.53**	**174**	*i* P	Pb	19 00 07.3	-0.1
WUSB				*e*S	Sg	19 00 13.7	+1.0
FUSB	**Fushanzhiwuyua**	**0.54**	**63**	P	Pb	19 00 06.9	-0.7
FUSB				S	Sg	19 00 14.0	+0.9
OWD	**Renai**	**0.57**	**169**	P	Pb	19 00 08.2	0.0
OWD				S	Sg	19 00 15.2	+1.1
LXIB	**Xiulin Townshi**	**0.59**	**147**	*i* P	Pb	19 00 09.1	+0.6
NACB	**Ninganchiao**	**0.60**	**125**	P	Pb	19 00 09.1	+0.5
NACB				S	Sb	19 00 16.8	-0.5
SSLB	**Suanglung**	**0.73**	**187**	*e*P	Pb	19 00 11.0	+0.1
SSLB				*e*S	Sb	19 00 20.4	-0.8
VWDT	**VWDT**	**0.76**	**174**	*e*P	Pb	19 00 11.7	+0.3
ESL	**Shilin**	**0.78**	**154**	*e*P	Pb	19 00 12.4	+0.7
YM01	**YM01**	**0.78**	**36**	*e*P	Pn	19 00 12.8	-0.5
YM01				*e*S	Sn	19 00 24.4	-1.0
ZUZH	**Zhuzihu**	**0.78**	**34**	*e*P	Pb	19 00 12.3	+0.6
ZUZH				*e*S	Sb	19 00 23.4	+0.9
ANP	**Anpu**	**0.79**	**32**	*e*P	Pb	19 00 12.6	+0.7
TIPB	**Shuangxi**	**0.83**	**57**	P	Pb	19 00 12.6	0.0
TIPB				S	Sn	19 00 25.7	-1.0
WHYT	**Xinyi Township**	**0.84**	**193**	*e*P	Pn	19 00 14.1	0.0
WHYT				*e*S	Sn	19 00 26.6	-0.2
WARBT	**Fenglin Townsh**	**0.85**	**159**	P	Pb	19 00 13.5	+0.6
WARBT				S	Sb	19 00 23.9	-0.7

TAP 15 18:59:58.6, 24°.46N×121°.34E, h10km, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.05**	**130**	*i* P	Pg	19 00 01.1	+0.3
NNSB				*i* S	Sg	19 00 01.9	-0.3
NNSH	**Datong**	**0.05**	**130**	*i* P	Pg	19 00 01.0	+0.3
NNSH				*i* S	Sg	19 00 01.9	-0.4
LATG	**Datong**	**0.19**	**67**	P	Pg	19 00 03.4	+0.7
LATG				S	Sg	19 00 05.7	+0.3
FUSS	**Fushou**	**0.23**	**202**	*i* P	Pg	19 00 03.8	+0.3
NACB	**Ninganchiao**	**0.37**	**141**	P	Pg	19 00 05.3	-0.6

*AEIC **15** 19:01:22.7±1.5, 54°.90N±0°.03×160°.06W±0°.04, h7km±5km, Error ellipse: s-maj=4.6km s-min=2.6km az=155.0*

NEIC 15 19:01:23.1±1.7, 54°.88N±0°.06×160°.01W±0°.07, h16km±6km, ML3.8/44, ML3.6(AEIC), Error ellipse: s-maj=8.8km s-min=4.9km az=152.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.25**	**104**		Sb	19 01 32.9	-0.5
CNBA	**Chernabura Isl**	**0.25**	**104**		Pb	19 01 29.1	-0.2
CNBA				IAML		19 01 33.2	
	comp=E,10μm,0.3s						
CNBA				IAML		19 01 34.1	
	comp=N,9μm,0.5s						
SDPT	**Sand Point**	**0.54**	**330**		Pg	19 01 33.1	-0.7
SDPT					Sg	19 01 39.8	-1.2
SDPT				IAML		19 01 40.2	
	comp=N,7μm,0.5s						
DOL	**Dolgoi Island**	**1.10**	**285**		Pb	19 01 43.0	-0.7
DOL					Pn	19 01 43.2	-0.7
DOL					Sb	19 01 57.3	-0.6
DOL					Sg	19 01 57.7	-1.0
PS1A	**Pavlof South-1**	**1.13**	**299**		Pb	19 01 44.0	-0.3
PS1A					Sb	19 01 58.5	-0.3
PS1A					Sn	19 01 59.1	-0.4
PVV	**Pavlof Volcano**	**1.14**	**296**		Pn	19 01 43.9	-0.5
PS4A	**Pavlof South-4**	**1.16**	**294**		Pn	19 01 44.3	-0.4
PS4A					Sb	19 01 59.5	0.0
PS4A					Sn	19 01 59.8	-0.3
HAG	**Hague Volcano**	**1.17**	**293**		Pn	19 01 44.7	-0.2
VNKR	**Veniaminof 5**	**1.21**	**17**		Pn	19 01 44.3	-1.0
PN7A	**Pavlof North-7**	**1.27**	**297**		Pb	19 01 46.5	-0.1
PN7A					Sb	19 02 02.8	+0.1
DT1	**Dutton Round H**	**1.33**	**281**		Pn	19 01 46.6	-0.4
DT1					Sn	19 02 03.4	-0.9
DT1					Sb	19 02 03.8	-0.6
VNSG	**Veniaminof 6**	**1.35**	**22**		Pn	19 01 47.0	-0.4
VNHG	**Veniaminof 1**	**1.43**	**19**		Pn	19 01 48.4	0.0
VNHG					Pb	19 01 48.6	-0.8
VNFG	**Fog Glacier, M**	**1.43**	**10**		Pb	19 01 49.1	-0.3
VNFG	**Fog Glacier, M**	**1.43**	**10**		Pb	19 01 49.2	-0.3
VNFG	**Fog Glacier, M**	**1.43**	**10**	IAML		19 02 11.5	
	comp=N,2μm,0.7s						
VNFG				IAML		19 02 12.1	
	comp=E,2μm,0.8s						
S12K	**Black Hills**	**1.43**	**306**		Sb	19 02 07.3	-0.1
S12K					Sn	19 02 07.7	+0.7
S12K	**Black Hills**	**1.43**	**306**		Pn	19 01 48.8	+0.4
FALS	**False Pass**	**1.97**	**271**		Pn	19 01 56.4	+0.6
FALS					Sb	19 02 21.7	-1.1
ANPB	**Aniakchak Plen**	**2.16**	**26**		Pn	19 01 58.9	+0.5
ANPK	**Aniakchak Peak**	**2.23**	**28**		Pn	19 02 00.0	+0.5
ANPK					Pb	19 02 00.2	-2.9
ANNE	**Aniakchak Nort**	**2.31**	**28**		Pn	19 02 01.1	+0.5
ANNE					Pb	19 02 01.4	-3.1
CHIR	**Chirikof Islan**	**2.68**	**68**	Pn	Pn	19 02 05.5	0.0
CHIR				IAML		19 03 31.8	
	comp=E,227nm,3.3s						
CHIR				IAML		19 03 50.2	
	comp=N,324nm,3.0s						
WEBT	**Westdahl Beart**	**2.77**	**266**		Pn	19 02 07.1	+0.3
R16K	**Pilot Point**	**3.02**	**26**	Pn	Pn	19 02 11.3	+1.2
PLK4	**Peulik 4**	**3.43**	**35**		Pn	19 02 17.1	+1.2
PLK4				IAML		19 03 05.3	
	comp=N,212nm,0.9s						
PLK4				IAML		19 03 05.7	
	comp=E,228nm,1.3s						
AKUT	**Akutan**	**3.44**	**260**	Pn	Pn	19 02 17.0	+1.0
AKUT				IAML		19 03 17.2	
	comp=N,224nm,3.6s						
AKUT				IAML		19 04 31.9	
	comp=E,167nm,3.0s						
LVA	**Lava Point**	**3.58**	**261**	Pn	Pn	19 02 17.8	-0.2
LVA				IAML		19 04 13.7	
	comp=E,214nm,2.0s						
SII	**Sitkinak Islan**	**3.70**	**61**	Pn	Pn	19 02 19.4	-0.2
SII				IAML		19 02 58.8	
	comp=N,263nm,3.1s						
SII				IAML		19 03 42.1	
	comp=E,218nm,3.5s						
UNV	**Unalaska Valle**	**3.94**	**257**	Pn	Pn	19 02 23.6	+0.7
P16K	**Nushagak River**	**4.30**	**14**	Pn	Pn	19 02 26.4	-1.5
P16K				IAML		19 03 54.8	
	comp=E,164nm,2.1s						
O15K	**Ungalikthiuk R**	**4.31**	**1**	Pn	Pn	19 02 28.2	+0.3
O14K	**Tigyukauivet M**	**4.44**	**352**	Pn	Pn	19 02 30.4	+0.7
O14K				IAML		19 03 52.7	
	comp=N,53nm,2.2s						
OHAK	**Old Harbor**	**4.44**	**55**	Pn	Pn	19 02 28.9	-0.8
O16K	**Kokwok River B**	**4.84**	**12**		Pn	19 02 34.5	-0.7
KDAK	**Kodiak Island**	**5.05**	**52**	Pn	Pn	19 02 37.5	-0.6
KDAK				IAML		19 04 51.2	
	comp=N,67nm,3.6s						
KDAK				IAML		19 04 53.7	
	comp=N,47nm,3.2s						
N14K	**Kuskokwak Cree**	**5.14**	**351**		Pn	19 02 39.0	-0.2
N14K				IAML		19 05 05.6	
	comp=E,92nm,3.2s						
O17K	**Koliganek Bris**	**5.15**	**17**		Pn	19 02 40.0	+0.6
O17K					Pn	19 02 40.5	+1.0
P18K	**Big Mountain,**	**5.22**	**28**	Pn	Pn	19 02 40.3	-0.1
P18K				IAML		19 03 31.3	
	comp=E,32nm,3.4s						
N15K	**Kwethluk River**	**5.30**	**360**		Pn	19 02 41.4	-0.2
N15K				IAML		19 04 15.4	
	comp=E,47nm,2.1s						
N15K				IAML		19 04 38.7	
	comp=N,46nm,2.6s						
Q19K	**Cape Douglas,**	**5.35**	**38**	Pn	Pn	19 02 43.2	+0.9
SYI	**Shuyak Island**	**5.61**	**45**	Pn	Pn	19 02 45.8	0.0
N16K	**Nishlik Lake**	**5.65**	**6**		Pn	19 02 47.0	+0.6
M13K	**Dall Lake**	**5.83**	**343**	Pn	Pn	19 02 49.5	+0.7
M15K	**Kasigluk River**	**5.84**	**357**		Pn	19 02 49.4	+0.5
N17K	**Nushagak Hills**	**5.86**	**14**		Pn	19 02 49.5	+0.3
M14K	**Bethel**	**5.98**	**351**		Pn	19 02 50.9	+0.1
M16K	**Timber Creek**	**6.18**	**5**	Pn	Pn	19 02 54.0	+0.4
N18K	**Kilae Creek**	**6.22**	**19**	Pn	Pn	19 02 55.1	+0.9
ILSW	**Iliamna Southw**	**6.32**	**33**	Pn	Pn	19 02 55.9	+0.4
M11K	**Mekoryuk**	**6.44**	**331**	Pn	Pn	19 02 57.5	+0.3
HOM	**Homer**	**6.59**	**40**	Pn	Pn	19 03 00.4	+1.1
L14K	**Kuka Creek**	**6.63**	**349**	Pn	Pn	19 03 00.2	+0.4
N19K	**Bonanza Creek**	**6.64**	**24**	Pn	Pn	19 03 01.1	+1.2
M17K	**Holitna River**	**6.68**	**11**	Pn	Pn	19 03 00.7	+0.3
L16K	**Owhat River**	**6.86**	**2**	Pn	Pn	19 03 02.2	-0.6
BRLK	**Bradley Lake**	**6.95**	**42**	Pn	Pn	19 03 03.4	-0.8
L17K	**Donlin**	**7.33**	**6**		Pn	19 03 09.0	-0.3
K15K	**Wolf Creek Mou**	**7.48**	**355**	Pn	Pn	19 03 09.0	-2.4
K13K	**Kusilvak Mount**	**7.48**	**343**	Pn	Pn	19 03 10.3	-1.1
**

OGNE	Ogallala	3.78 138		Pn	19 05 07.1	+0.9
H17A	Grant Village	3.78 281		Pn	19 05 07.8	+1.4
H17A			IAML		19 06 14.6	
	comp=N,40nm,1.0s					
LOHW	Long Hollow	3.78 269		Pn	19 05 06.9	+0.5
FLWY	Flagg Ranch	3.84 276		Pn	19 05 08.3	+1.1
FLWY			IAML		19 06 15.7	
	comp=N,67nm,2.5s					
FLWY			IAML		19 06 17.5	
	comp=N,47nm,1.2s					
MOOW	Moose Ponds	3.88 271		Pn	19 05 08.0	+0.3
SNOW	Snow King Moun	3.91 267		Pn	19 05 09.2	+1.1
SNOW			IAML		19 06 26.4	
	comp=N,50nm,1.1s					
SNOW			IAML		19 06 31.6	
	comp=N,59nm,1.2s					
YNR	Norris Junctio	3.91 286		Pn	19 05 10.0	+1.9
YPP	Pitchstone Pla	3.93 279		Pn	19 05 09.3	+0.8
YFT	Old Faithful	3.97 281		Pn	19 05 10.6	+1.6
ISCO	Idaho Springs	3.99 182		Pn	19 05 11.0	+1.7
YHH	Holmes Hill	4.04 286		Pn	19 05 11.6	+1.6
TPAW	Teton Pass	4.04 268		Pn	19 05 11.9	+1.9
TPAW			IAML		19 06 29.6	
	comp=N,41nm,0.9s					
TPAW			IAML		19 06 40.6	
	comp=N,66nm,1.1s					
FXWY	Fox Creek	4.08 270		Pn	19 05 12.1	+1.5
YMR	Madison River	4.10 284	Pn	Pn	19 05 11.3	+0.6
YMR			IAML		19 06 44.1	
	comp=E,71nm,1.1s					
YMR			IAML		19 07 09.7	
	comp=N,63nm,1.1s					
O20A	White River Ci	4.22 211		Pn	19 05 13.8	+1.4
O20A			IAML		19 06 24.7	
	comp=N,51nm,0.7s					
YHB	Horse Butte	4.28 285		Pn	19 05 13.2	+0.1
YHL	Hebgen Lake	4.29 286		Pn	19 05 14.6	+1.2
YHL			IAML		19 06 31.4	
	comp=N,58nm,1.1s					
YHL			IAML		19 06 49.2	
	comp=E,36nm,1.2s					
AHID	Auburn Hatcher	4.29 258		Pn	19 05 12.9	-0.5
AHID			IAML		19 06 35.2	
	comp=E,47nm,1.1s					
AHID			IAML		19 06 41.4	
	comp=E,47nm,1.0s					
K30B	Basset	4.37 103		Pn	19 05 16.6	+2.3
QLMT	Earthquake Lak	4.45 286		Pn	19 05 16.8	+1.2
RDMU	Red Mountain	4.47 225		Pn	19 05 15.8	0.0
RDMU			IAML		19 06 30.8	
	comp=N,38nm,1.2s					
DGMT	Dagmar	4.75 10		Pn	19 05 21.4	+1.8
BOZ	Bozeman (W)	4.80 294		Pn	19 05 21.0	+0.8
BOZ			IAML		19 06 43.9	
	comp=N,27nm,0.9s					
BOZ			IAML		19 06 44.4	
	comp=N,20nm,0.9s					
HWUT	Hardware Ranch	5.04 246		Pn	19 05 23.6	-0.1
BSUT	Blindstream Ca	5.14 233		Pn	19 05 23.7	-1.6
BSUT			IAML		19 07 07.8	
	comp=N,20nm,1.2s					
BSUT			IAML		19 07 12.7	
	comp=E,19nm,2.0s					
TCUT	Toone Canyon	5.19 241		Pn	19 05 24.8	-0.9
KSCO	Kaye Shedlock'	5.21 156		Pn	19 05 27.1	+1.2
DLMT	Dillon	5.38 289		Pn	19 05 26.5	-1.8
DLMT			IAML		19 07 03.3	
	comp=E,27nm,1.1s					
DLMT			IAML		19 08 05.6	
	comp=E,26nm,4.9s					
HRY	Holter Researc	5.40 305	Pn	Pn	19 05 29.6	+1.1
LRM	Limekiln Ridge	5.42 294		Pn	19 05 29.4	+0.6
MCMT	McKenzie Canyo	5.45 284		Pn	19 05 28.4	-0.9
P18A	Preston Nutter	5.52 223		Pn	19 05 30.1	-0.3
MDND	Maddock	5.73 43		Pn	19 05 33.6	+0.6
HVU	Hansel Valley	5.79 252		Pn	19 05 34.8	+0.9
LYMT	Lyon Mountain	5.80 306		Pn	19 05 34.9	+0.8
PV22	Blue Mesa, Par	5.84 207		Pn	19 05 35.2	+0.6
PV07	Paradox Valley	5.88 206		Pn	19 05 35.5	+0.3
P17A	Butcher Ranch,	5.88 225		Pn	19 05 35.6	+0.3
PV15	Paradox Valley	5.92 204		Pn	19 05 36.6	+0.8
PV23	Carpenter Ridg	5.99 208		Pn	19 05 37.1	+0.4
PV04	Paradox Valley	6.01 207		Pn	19 05 37.6	+0.7
PV12	Saucer Basin,	6.04 206		Pn	19 05 37.6	+0.2
SRU	San Rafael Swe	6.06 221		Pn	19 05 37.4	-0.2
PV14	Lion Creek, Pa	6.07 208		Pn	19 05 38.4	+0.6
PV10	Paradox Valley	6.07 208		Pn	19 05 39.5	+1.7
PV20	West Nyswonger	6.08 208		Pn	19 05 38.5	+0.7
PV11	David Mesa, Pa	6.08 207		Pn	19 05 38.5	+0.6
PV16	Nyswonger Mesa	6.09 207		Pn	19 05 38.5	+0.4
PV03	Paradox Valley	6.12 206		Pn	19 05 37.0	-1.5
PV02	Paradox Valley	6.12 205		Pn	19 05 39.2	+0.7
S22A	4UR Ranch, Cre	6.14 191		Pn	19 05 39.1	+0.3
PV01	Paradox Valley	6.14 204		Pn	19 05 40.2	+1.4
PV18	Skein Mesa, Pa	6.14 207		Pn	19 05 39.5	+0.7
PV13	Radium Mtn., P	6.19 206		Pn	19 05 39.4	-0.2
TMUT	Trail Mountain	6.26 226		Pn	19 05 39.9	-0.5
BGU	Big Grassy Mou	6.34 246		Pn	19 05 41.1	-0.3
PV05	Paradox Valley	6.36 207		Pn	19 05 40.6	-1.2
Q16A	Castle Valley	6.53 224		Pn	19 05 43.2	-0.9
CBKS	Cedar Bluff	6.55 137		Pn	19 05 46.8	+2.6
DUG	Dugway, Tooele	6.59 240		Pn	19 05 45.2	+0.3
MVCO	Mesa Verde	6.99 201		Pn	19 05 51.4	+1.0
HMU	Henry Mountain	7.11 217		Pn	19 05 52.3	+0.2
MTPU	Mount Pierson	7.71 224		Pn	19 05 59.4	-1.0
ELK	Elko	7.91 251		Pn	19 06 02.2	-0.9
PSUT	Pine Spring	8.26 233		Pn	19 06 07.8	-0.1
I10CA	LAC DU BONNET	9.06 42	I	I	19 57 10.0	
	baz=218,slow=230,SNR=1.9					
ULM	Lac du Bonnet	9.16 42	Pn	Pn	19 06 18.9	-1.0
	comp=E,1.2nm,0.3s,baz=235,slow=14,SNR=2.8					
ULM			Lg	Lg	19 08 49.9	
	comp=E,0.2nm,0.3s,baz=125,slow=15,SNR=3.8					
	comp=E,2.7nm,0.3s					
NVAR	Mina Array Bea	11.11 246	Pn	Pn	19 06 51.0	+4.1
	comp=E,0.1nm,0.3s,baz=50,slow=16,SNR=2.3					
	comp=E,0.5nm,0.6s					
MKAR	Makanchi Array	89.54 355	P	P	19 17 05.5	-0.3
	comp=E,1.2nm,1.1s,baz=23,slow=6.7,SNR=1.4					
	comp=E,1.2nm,1.1s					

*NNC **15** 19:07:38.5±0.5, 42°.52N×78°.77E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=4.2km s-min=1.9km az=170.0*
*SOME **15** 19:07:38.6, 42°.50N×78°.77E, h10km*
*KRNET **15** 19:07:38.9±0.1, 42°.41N×78°.78E, h19km, mb2.5*
ISC 15 19:07:38.9±1.2, 42°.50N±0°.04×78°.73E±0°.04, h8km±8km, n29, σ°96/54, 8C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	Przheval'sk	0.24	267	⇓*i*P	Pg	19 07 44.9	+1.0
PRZ				⇓*i*S	Sb	19 07 49.3	+2.1
SATY	Saty	0.61	337	P	Pg	19 07 50.2	-0.6
	5.0nm,0.1s						
SATY				S	Sg	19 07 58.4	-0.4
	58nm,0.1s						
SHLS	Shalkode	0.85	39	P	Pn	19 07 58.2	+0.9
	1.2nm,0.1s						
SHLS				S	Sn	19 08 12.4	+2.4
	13nm,0.3s						
SHLS	Shalkode	0.85	39	*e*P	Pn	19 07 58.2	+0.9
	1.2nm,0.1s						
SHLS				*e*S	Sn	19 08 12.4	+2.4
	13nm,0.3s						
KPKS	Kokpek	0.97	358	P	Pg	19 07 56.4	-1.2
	0.3nm,0.2s						
KPKS				S	Sg	19 08 09.3	-0.9
	7.7nm,0.2s						
KPKS	Kokpek	0.97	358	*e*P	Pg	19 07 56.4	-1.2
	0.3nm,0.2s						
KPKS				*e*S	Sg	19 08 09.3	-0.9
	7.7nm,0.2s						
TARG	Taragay, Kyrgy	1.03	222	⇑*i*P	Pg	19 07 57.6	-1.1
TARG				⇑*i*S	Sg	19 08 11.1	-1.0
KDJ	Kajisay	1.21	253	⇓*i*P	Pn	19 08 01.4	-0.8
KDJ				⇓*i*S	Sb	19 08 17.8	0.0
KOTS	Kotyrbulak	1.40	302	P	Pn	19 08 04.8	0.0
	2.9nm,0.1s						
KOTS				S	Sb	19 08 23.8	+0.4
	7.6nm,0.4s						
KOTS	Kotyrbulak	1.40	302	*e*P	Pn	19 08 04.8	0.0
	2.9nm,0.1s						
KOTS				*e*S	Sb	19 08 23.8	+0.4
	7.6nm,0.4s						
MDOK	Medeo	1.40	299	Pg	Pn	19 08 04.7	-0.3
	1.3nm,0.2s						
MDOK				Lg	Lg	19 08 23.3	
	3.9nm,0.4s						
TNSS	Tian-Shan	1.42	293	P	Pn	19 08 05.1	-0.2
	0.5nm,0.1s						
TNSS				S	Sn	19 08 24.1	-0.2
	1.3nm,0.2s						
TNSS	Tian-Shan	1.42	293	*e*P	Pn	19 08 05.1	-0.2
	0.5nm,0.1s						
TNSS				*e*S	Sn	19 08 24.1	-0.2
	1.3nm,0.2s						
BLB	Baldybastay	1.61	354	P	Pb	19 08 08.1	-0.9
	17nm,0.2s						
BLB				S	Sb	19 08 29.4	-0.1
	10.0nm,0.2s						
IZV	Izvestkoviy	1.65	290	P	Pb	19 08 09.1	-0.5
	2.8nm,0.1s						
IZV				S	Sb	19 08 31.2	+0.6
	6.2nm,0.3s						
IZV	Izvestkoviy	1.65	290	*e*P	Pb	19 08 09.1	-0.5
	2.8nm,0.1s						
IZV				*e*S	Sb	19 08 31.2	+0.6
	6.2nm,0.3s						
MTBS	Maitube	1.81	291	P	Pb	19 08 12.0	-0.3
	2.2nm,0.2s						
MTBS				S	Sb	19 08 35.9	+0.8
	5.5nm,0.2s						
MTBS	Maitube	1.81	291	*e*P	Pb	19 08 12.0	-0.3
	2.2nm,0.2s						
MTBS				*e*S	Sb	19 08 35.9	+0.8
	5.5nm,0.2s						
ULHL	Ulahol	1.86	263	⇑*i*P	Pb	19 08 13.0	-0.2
ULHL				⇑*i*S	Sb	19 08 37.8	+1.1
KNOS	Konyrlen	1.89	10	P	Pb	19 08 12.8	-1.0
	1.6nm,0.1s						
KNOS				S	Sb	19 08 37.3	-0.3
	3.1nm,0.3s						
KTBS	Karatobe	1.93	310	P	Pb	19 08 14.3	-0.1
	6.6nm,0.1s						
KTBS				S	Sb	19 08 39.7	+1.2
	2.5nm,0.2s						
BOOM	Boomskoye usch	2.06	271	⇑*e*P	Pb	19 08 16.1	-0.6
BOOM				⇑*e*S	Sb	19 08 43.1	+0.6
KST	Kastek	2.11	286	Pg	Pb	19 08 17.9	+0.5
	0.9nm,0.3s						
KST				Lg	Lg	19 08 46.2	
	4.9nm,0.4s						
KST	Kastek	2.11	286	*e*P	Pb	19 08 17.9	+0.5
	0.9nm,0.3s						
KST				*e*S	Sg	19 08 46.2	-0.4
	4.9nm,0.4s						
DGS	Degeres	2.30	290	Pg	Pb	19 08 20.7	+0.1
	1.6nm,0.2s						
DGS				Lg	Lg	19 08 51.1	
	5.1nm,0.4s						
DGS	Degeres	2.30	290	*e*P	Pb	19 08 20.7	+0.1
	1.6nm,0.2s						
DGS				*e*S	Sb	19 08 51.1	+1.8
	5.1nm,0.4s						
TKM2	Tokmak 2	2.35	281	⇑*i*P	Pb	19 08 20.2	-1.4
TKM2				⇑*i*S	Sb	19 08 50.5	-0.2
KRBS	Karabastau	2.54	299	Pg	Pb	19 08 25.0	+0.3
	0.6nm,0.3s						
KRBS				Lg	Lg	19 08 58.3	
	3.9nm,0.3s						
KRBS	Karabastau	2.54	299	*e*P	Pb	19 08 25.0	+0.3
KRBS				*e*S	Sb	19 08 58.3	+2.2

*NEIC **15** 19:09:39.1±4.0, 35°.13N±0°.02×95°.36W±0°.02, h6km±4km, Error ellipse: s-maj=2.9km s-min=2.1km az=175.0*
NEIC 15 19:09:38.4±2.9, 35°.12N±0°.02×95°.32W±0°.02, h5km±1km, mb_Lg2.9/4, ML2.5/12, ML2.4/5, Error ellipse: s-maj=3.1km s-min=2.7km az=5.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUL3	Leonard	0.88	334		Pg	19 09 55.3	0.0
TUL3					Sg	19 10 06.7	+0.1
RLO	Rose Lookout	1.07	13		Pg	19 09 59.0	+0.1
RLO					Sg	19 10 13.1	+0.3
RLO				IAML		19 10 16.2	
	comp=N,111nm,0.2s						
DEOK	Depew	1.20	307		Pg	19 10 01.0	-0.5
DEOK					Sg	19 10 16.5	-0.5
DEOK				IAML		19 10 16.9	
	comp=N,122nm,0.2s						
DEOK				IAML		19 10 19.4	
	comp=E,111nm,0.2s						
OK052	Battle Ridge R	1.49	306		Pn	19 10 05.5	-0.4
OK052					Sn	19 10 25.5	-0.2
U38A	Gravette	1.52	30		Pn	19 10 06.0	-0.3
U38A					Sg	19 10 27.1	-0.1
QUOK	Quay	1.54	313		Pn	19 10 06.4	-0.2
QUOK					Sb	19 10 27.3	-0.1
MIAR	Mount Ida	1.54	111		Pn	19 10 05.8	-0.9
MIAR					Sn	19 10 26.6	-0.4
HHAR	Hobbs	1.61	44		Pn	19 10 06.7	-0.9
HHAR					Sg	19 10 30.7	+0.4
FNO	Franklin	1.71	275		Pn	19 10 08.2	-0.8
FNO					Sb	19 10 32.5	+0.4
OK048	Pawnee Station	1.85	315		Pn	19 10 10.6	-0.2
OK051	E0350 and S346	1.85	319	Pn	Pn	19 10 10.7	-0.2
OK029	Liberty Lake	1.87	292		Pn	19 10 11.9	+0.8
T35A	Sooner Cattle	2.04	332		Pn	19 10 13.3	-0.1
X34A	Smith Ranch, M	2.13	257	Pn	Pn	19 10 13.4	-1.3
X40A	Basin Creek Fa	2.14	106		Pn	19 10 15.1	+0.3
WHAR	Wooly Hollow	2.49	85		Pn	19 10 18.5	-1.1
CROK	Carrier	2.57	303	Pn	Pn	19 10 18.8	-1.9
FCAR	Ozark Folk Cen	2.72	73		Pn	19 10 20.6	-2.1
FCAR				IAmb_Lg		19 11 11.8	
	comp=Z,17nm,1.3s						
BRDY	Brady	4.91	220		Pn	19 10 51.9	-1.1
VBMS	Vicksburg	4.94	125	IAmb_Lg		19 12 23.8	
	comp=Z,45nm,0.7s						

*BUT **15** 19:17:50.1±1.0, 47°.36N±0°.04×112°.87W±0°.04, h28km±8km, Error ellipse: s-maj=5.8km s-min=4.0km az=201.0*
NEIC 15 19:17:49.1±1.0, 47°.38N±0°.04×112°.84W±0°.01, h32km±7km, ML2.8/48, ML2.9/16(BUT), Error ellipse: s-maj=5.3km s-min=1.4km az=184.0, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OVMT	Ovando	0.34	199		Pn	19 17 57.6	-0.2
SLMT	Seeley Lake	0.47	253		Pb	19 17 59.3	+0.1
SLMT					Sn	19 18 06.7	-0.3
CHMT	Chamberlain Mo	0.55	211		Pn	19 18 00.7	-0.2
LYMT	Lyon Mountain	0.56	138		Pn	19 18 01.1	+0.1
BEMT	Mount Belmont	0.72	151		Pb	19 18 03.7	+0.3
SWMT	Swartz Lake	0.80	280		Pb	19 18 04.5	-0.1
PCMT	Pistol Creek	0.83	259		Pb	19 18 05.0	-0.2
YBMT	Yellow Bay	0.93	302		Pb	19 18 06.9	+0.2
MSO	Missoula	0.94	234		Pb	19 18 06.8	0.0
MSO					Sn	19 18 18.4	-0.1
MSO				IAML		19 18 20.8	
	277nm,0.3s						
HRY	Holter Researc	0.96	134		Pb	19 18 08.3	+1.0
BPMT	Black Pine Rid	1.03	204		Pb	19 18 08.7	+0.1
JTMT	Jette	1.04	291		Pb	19 18 08.8	+0.1
FBMT	Ferry Basin	1.08	272		Pb	19 18 09.0	-0.3
ALMT	Alberton, Mont	1.15	253		Pb	19 18 10.5	0.0
VCMT	Victor	1.32	225		Pn	19 18 12.3	+0.9
NDMT	Ninemile Divid	1.34	266		Pb	19 18 13.4	-0.3
BUT	Butte	1.38	172		Pb	19 18 13.4	-1.0
BSMT	Bassoo Peak	1.40	290		Pb	19 18 14.6	-0.1
BHMT	Big Hole Peak	1.51	278		Pb	19 18 15.7	-0.8
LRM	Limekiln Ridge	1.58	170		Pn	19 18 16.3	+1.1
HBMT	Mount Humbug	1.60	174		Pn	19 18 16.3	+1.0
SXM	Sixmile	1.67	137		Pb	19 18 18.1	-1.1
MKRVA	Milk River, Al	1.90	22		Pb	19 18 21.4	-1.7
BOZ	Bozeman (W)	1.97	155		Pn	19 18 21.6	+1.2
DLMT	Dillon	2.03	175		Pn	19 18 22.3	+1.1
DLMT	Dillon	2.03	175	IAML		19 18 54.9	
	46nm,0.7s						
DLMT				IAML		19 18 56.4	
	45nm,0.4s						
EGMT	Eagleton	2.18	72		Pn	19 18 25.1	+2.0
EGMT	Eagleton	2.18	72	IAML		19 19 03.5	
	81nm,0.4s						
EGMT				IAML		19 19 03.7	
	50nm,0.3s						
BGMT	Barton Gulch	2.22	165		Pn	19 18 25.0	+1.1
BZMT	Bozeman Pass	2.23	140		Pn	19 18 25.8	+1.8
MSMT	Mission Creek	2.45	135		Pn	19 18 28.9	+1.8
MCMT	McKenzie Canyo	2.56	180		Pn	19 18 29.9	+1.4
QLMT	Earthquake Lak	2.73	159		Pn	19 18 32.9	+2.0
TPMT	Tepee Creek	2.78	163		Pn	19 18 33.3	+1.8
YHL	Hebgen Lake	2.78	155		Pn	19 18 33.4	+1.8
YHL	Hebgen Lake	2.78	155	IAML		19 19 22.8	
	comp=E,33nm,1.0s						
YHL				IAML		19 19 24.2	
	comp=N,25nm,0.7s						
MOMT	Monida	2.81	174		Pn	19 18 34.2	+2.2
YHB	Horse Butte	2.87	156		Pn	19 18 34.7	+1.9
YPDC	Denny Creek	2.90	157		Pn	19 18 35.0	+1.8
YMC	Maple Creek	2.92	153		Pn	19 18 35.2	+1.7
YHH	Holmes Hill	2.94	151	Pn	Pn	19 18 35.4	+1.6
CMI	Centennial Mou	2.98	163		Pn	19 18 36.1	+1.7
YMR	Madison River	3.01	154		Pn	19 18 36.8	+2.0
YMR	Madison River	3.01	154	IAML		19 19 26.6	
	comp=E,23nm,4.8s						
YMR				IAML		19 19 56.8	
	comp=N,28nm,3.8s						
NEW	Newport	3.02	289	Pn	Pn	19 18 35.3	+0.6
NEW				IAML		19 19 28.5	
	comp=N,23nm,0.8s						
YPM	Purple Mountai	3.05	153		Pn	19 18 37.5	+2.2
BCYI	Bear Canyon	3.10	188		Pn	19 18 36.5	+0.6
PLID	Pearl Lake	3.18	225	Pn	Pn	19 18 38.0	+1.0
LKWY	Lake	3.29	148		Pn	19 18 38.8	+0.2
LKWY				IAML		19 19 36.6	
	comp=N,34nm,0.3s						
F10A	Beach Ranch, E	3.33	247		Pn	19 18 37.8	-1.3
F10A				IAML		19 19 36.8	
	comp=E,20nm,0.3s						
H17A	Grant Village	3.38	151	Pn	Pn	19 18 39.6	-0.2
C09A	Chrisman Ranch	3.70	278	Pn	Pn	19 18 43.1	-0.9
E09A	Wood Farm, Sta	3.74	258	Pn	Pn	19 18 45.2	+0.7
E09A				IAML		19 19 35.5	
	comp=E,11nm,2.5s						
E09A				IAML		19 19 53.1	
	comp=N,14nm,0.6s						
FXWY	Fox Creek	3.96	161	Pn	Pn	19 18 48.5	+0.8
HLID	Hailey	3.98	197		Pn	19 18 47.5	-0.5
BMO	Blue Mountains	4.01	232	Pn	Pn	19 18 48.6	+0.3
BMO				IAML		19 19 38.0	
	comp=N,8.5nm,4.8s						
BMO				IAML		19 20 26.9	
	comp=N,13nm,4.8s						
LNOR	Lincton Mounta	4.05	250	Pn	Pn	19 18 48.6	-0.2
LNOR				IAML		19 20 29.0	
	comp=E,16nm,5.0s						
LNOR				IAML		19 21 00.6	
	comp=N,17nm,4.4s						
TPAW	Teton Pass	4.11	160	Pn	Pn	19 18 50.0	+0.1
TPAW				IAML		19 20 34.8	
	comp=N,11nm,4.9s						
TPAW				IAML		19 20 46.7	
	comp=N,9.4nm,3.9s						
B08A	Colville Reser	4.48	285	Pn	Pn	19 18 53.9	-0.9
B08A				IAML		19 20 50.2	
	comp=E,12nm,4.2s						
MFID	Camas Ranch	4.49	209	Pn	Pn	19 18 53.5	-1.5
HAWA	Hanford	4.70	260	Pn	Pn	19 18 57.6	-0.1
HAWA				IAML		19 19 35.1	
	comp=E,11nm,4.4s						
HAWA				IAML		19 20 25.1	
	comp=E,9.9nm,1.9s						
G08A	Pilot Rock	4.73	246	Pn	Pn	19 18 56.4	-1.8
G08A				IAML		19 21 08.9	
	comp=E,10.0nm,5.0s						
E07A	Sunnyside	4.88	263	Pn	Pn	19 18 57.9	-2.3

*IDC **15** 19:24:44.4±0.8, 1°.58N×126°.09E, h0km, mb3.9/9, mbtmp3.9/10, ML3.5/1, MS2.7/1, Error ellipse: s-maj=58.8km s-min=15.7km az=73.0*
*NEIC **15** 19:24:48.2±2.8, 1°.57N±0°.09×126°.53E±0°.04, h27km±5km, mb3.9/12, Error ellipse: s-maj=14.2km s-min=2.3km az=200.0*
*DJA **15** 19:24:48.8±0.2, 2°.N±3°×12°.6E±°, h10km, M4.0/17, mB4.7/3, mb4.1/6, MLv3.9/17, Mw(mB)3.9/3*
ISC 15 19:24:48.5±0.6, 1°.61N±0°.06×126°.55E±0°.06, h35km, n41, σ1°94/42, mb3.9/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.16	136		Pn	19 25 10.7	+2.3
TNTI					Sn	19 25 21.3	-1.7
TNTI	Ternate	1.16	136	P	Pn	19 25 11.5	+3.2
SGSI	Sangihe	2.30	334	P	Pn	19 25 24.8	+0.8
KMSI	Cibinong	2.77	248	P	Pn	19 25 31.9	+1.5
SANI	Sanana	3.68	189	P	Pn	19 25 45.5	+2.6
LUWI	Luwuk	4.61	235		Pn	19 25 55.6	-0.1
LUWI					Sn	19 26 47.1	-1.0
LUWI	Luwuk	4.61	235	P	Pn	19 25 58.2	+2.5
MRSI	Marisa	4.75	256	P	Pn	19 26 00.2	+2.5
NLAI	Namlea	4.85	174	P	Pn	19 26 04.2	+5.2
APSI	Ampana	5.51	243	P	Pn	19 26 12.2	+4.1
DAV	Davao City (W)	5.51	350	LR	LR	19 28 39.2	
	comp=Z,79nm,20.5s,baz=4.0,slow=43						
TOLI2	Tolitoli	5.79	265		Pn	19 26 11.4	-0.6
MPSI	Mapaga	6.77	259	P	Pn	19 26 27.1	+1.6
	0.0nm340nm13nm,0.8s						
PCI	Palu	7.17	250	P	Pn	19 26 32.8	+1.9
	0.1nm14nm,1.2s						
FAKI	Fak Fak	7.25	128	Pn	Pn	19 26 30.0	-2.1
TTSI	Tana Toraja	8.17	236	P	Pn	19 26 46.3	+1.6
	17nm,1.0s						
MYLDM	Lahad Datu	8.79	294	Pn	Pn	19 26 53.0	-0.1
SOEI	Soe	11.52	191	Pn	Pn	19 27 29.2	-1.5
MTN	Manton Dam	15.06	163	Pn	Pn	19 28 18.0	-0.9
MTN				IAmb	IAmb	19 29 01.1	
	comp=Z,16nm,1.4s						
KNRA	Kununurra	17.31	173	Pn	Pn	19 28 45.0	-2.6
KNRA				IAmb	IAmb	19 28 56.6	
	comp=Z,10nm,1.1s						
FITZ	Fitzroy Crossi	19.60	183	P	P	19 29 14.4	+0.5
	comp=Z,0.1nm,0.3s,baz=0.8,slow=12,SNR=2.0						
	comp=Z,1.4nm,0.7s						
FITZ	Fitzroy Crossi	19.60	183	P	P	19 29 10.8	-3.1
TPUB	Ta-pu	22.32	346	P	P	19 29 41.7	-1.6
WB0	Warramunga Arr	22.59	160		P	19 29 46.6	+0.3
WB0				IAmb	IAmb	19 29 51.6	
	comp=Z,5.2nm,0.8s						
WRA	Warramunga Arr	22.74	161	P	P	19 29 49.2	+1.4
	comp=Z,2.7nm,0.5s,baz=341,slow=11,SNR=36						
	comp=Z,2.7nm,0.5s						
WRA	Warramunga Arr	22.74	161	P	P	19 29 48.4	+0.6
WR8	Warramunga Arr	22.80	160

comp=Z,0.3nm,0.4s
VNDA Vanda 81.36 173 P P 19 37 01.7 +0.6

*IDC **15** 19:30:24.0±7.6, 4°42S×99°79E, h0km, mb3.6/5, mbtmp3.7/5, Error ellipse: s-maj=191.9km s-min=108.8km az=119.0*
*DJA **15** 19:30:28.6±0.6, 4°S±4°×10°0E±°, h10km, M4.0/13, mb3.9/3, MLv4.1/13*
ISC 15 19:30:33.4±1.4, 3°38S±0°1×99°55E±0°09, h35km, n25, σ1§75/20, mb3.8/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**1.09**	**25**	P	**Pn**	**19 30 50.6**	**-1.7**
SISI	**Saibi**	**2.46**	**349**	P	**Pn**	**19 31 09.1**	**-2.0**
KRJI	**Kerinci**	**2.53**	**49**	S	**Sn**	**19 31 41.7**	**-0.1**
MASI	**Maura Aman, Be**	**2.76**	**77**	P	**Pn**	**19 31 14.2**	**-1.0**
MASI				S	**Sn**	**19 31 47.4**	**+0.1**
PDSI	**Padang**	**2.97**	**18**	P	**Pn**	**19 31 16.7**	**-1.5**
KSI	**Kapahiang**	**3.04**	**88**	P	**Pn**	**19 31 17.4**	**-1.7**
PPI	**Padang Panjang**	**3.39**	**15**	P	**Pn**	**19 31 21.7**	**-2.2**
MNAI	**Manna**	**3.45**	**100**	P	**Pn**	**19 31 22.9**	**-1.8**
PBSI	**Pulau Batu**	**3.89**	**341**	P	**Pn**	**19 31 28.2**	**-2.6**
LHSI	**Lahat**	**3.97**	**91**	P	**Pn**	**19 31 30.3**	**-1.5**
MNSI	**Mandailing Nat**	**4.53**	**0**	P	**Pn**	**19 31 37.7**	**-1.8**
MDSI	**Maura Dua**	**4.68**	**99**	P	**Pn**	**19 31 39.7**	**-1.9**
KASI	**Kota Agung** 0.2nm27nm,2.0s	**5.24**	**110**	P	**Pn**	**19 31 47.0**	**-2.3**
GSI	**Gunungsitoli** 0.1nm8.9nm,0.6s	**5.40**	**339**	P	**Pn**	**19 31 49.9**	**-1.7**
CMAR	**Chiang Mai Arr** 0.8nm,0.6s,baz=169,slow=10,SNR=8.3 0.8nm,0.6s	**22.09**	**358**	P	**P**	**19 35 27.9**	**+2.2**
H01W3	**Cape Leeuwin H** baz=336,slow=76,SNR=2.9	**33.80**	**158**	T	T	20 13 32.3	
H01W2	**Cape Leeuwin H** baz=336,slow=76,SNR=3.4	**33.81**	**158**	T	T	20 13 23.9	
H01W1	**Cape Leeuwin H** baz=336,slow=76,SNR=7.3	**33.81**	**158**	T	T	20 13 33.1	
SONM	**Songino Array** 0.3nm,0.4s,baz=193,slow=5.6,SNR=2.5 0.3nm,0.4s	**51.73**	**6**	P	**P**	**19 39 38.3**	**+0.9**
MKAR	**Makanchi Array** 1.5nm,1.1s,baz=164,slow=7.5,SNR=4.1 1.5nm,1.1s	**52.60**	**345**	P	**P**	**19 39 44.9**	**+1.1**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=181,slow=6.5,SNR=4.1 0.3nm,0.3s	**58.81**	**350**	P	**P**	**19 40 28.8**	**+0.7**
H04N2	**CROZET ISLANDS** baz=60,slow=75,SNR=4.3	**59.12**	**217**	T	T	20 44 36.3	
H04N1	**CROZET ISLANDS** baz=60,slow=75,SNR=3.8	**59.13**	**217**	T	T	20 44 36.9	
H04N3	**CROZET ISLANDS** baz=60,slow=75,SNR=4.7	**59.14**	**217**	T	T	20 44 34.3	
BVAR	**Borovoye Array** 0.5nm,0.6s,baz=142,slow=7.3,SNR=2.7 0.5nm,0.6s	**61.68**	**340**	P	**P**	**19 40 47.7**	**-0.1**

*IDC **15** 19:32:10.3±2.0, 1°66N×126°42E, h0km, mb3.5/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=133.1km s-min=24.1km az=68.0*
*DJA **15** 19:32:13.4±0.4, 2°N±5°×12°6E±°, h10km, M3.5/6, MLv3.5/6*
ISC 15 19:32:15.6±1.2, 1°62N±0°09×126°5E±0°1, h35km, n7, σ1§16/7, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**135**	P	**Pn**	**19 32 36.0**	**+0.3**
SGSI	**Sangihe**	**2.29**	**334**	P	**Pn**	**19 32 51.3**	**+0.5**
KMSI	**Cibinong**	**2.76**	**248**	P	**Pn**	**19 32 57.6**	**+0.3**
FITZ	**Fitzroy Crossi** baz=354,slow=10,SNR=1.6 1.9nm,1.0s	**19.61**	**183**	P	**P**	**19 36 40.4**	**-0.7**
WRA	**Warramunga Arr** 0.8nm,0.7s,baz=339,slow=10,SNR=10 0.8nm,0.7s	**22.76**	**161**	P	**P**	**19 37 13.8**	**-1.2**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=344,slow=8.4,SNR=8.4 0.3nm,0.4s	**26.14**	**165**	P	**P**	**19 37 48.3**	**+1.6**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=122,slow=8.9,SNR=6.7 0.4nm,0.5s	**59.18**	**326**	P	**P**	**19 42 12.4**	**-0.7**

*IDC **15** 19:36:32.2±0.9, 0°97N×121°91E, h0km, mb3.7/7, mbtmp3.7/9, ML3.6/2, Error ellipse: s-maj=63.1km s-min=16.3km az=69.0*
*DJA **15** 19:36:44.6±0.3, 1°N±3°×12°1E±°, h73km±6km, M4.3/24, mB4.8/4, mb4.3/12, MLv4.3/24, Mw(mB)4.1/4*
ISC 15 19:36:43.2±0.8, 0°50N±0°07×121°07E±0°05, h89km, n29, σ1§23/31, mb3.9/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.87**	**92**	P	**Pn**	**19 37 01.9**	**+0.6**
MRSI				S	**Sn**	**19 37 15.5**	**+0.6**
MPSI	**Mapaga**	**1.19**	**262**	P	**Pn**	**19 37 06.2**	**+1.2**
APSI	**Ampana**	**1.52**	**158**	P	**Pn**	**19 37 09.4**	**+0.3**
PCI	**Palu**	**1.87**	**221**	P	**Pn**	**19 37 13.9**	**+0.2**
LUWI	**Luwuk**	**2.29**	**132**	P	**Pn**	**19 37 20.8**	**+1.6**
KMSI	**Cibinong**	**2.91**	**89**	P	**Pn**	**19 37 29.9**	**+2.5**
TTSI	**Tana Toraja**	**3.74**	**200**	P	**Pn**	**19 37 40.6**	**+1.8**
BKB	**Balikpapan**	**4.53**	**247**	P	**Pn**	**19 37 51.0**	**+1.6**
SPSI	**Sidrap Palu**	**4.63**	**196**	P	**Pn**	**19 37 52.3**	**+1.5**
KDI	**Kendari**	**4.69**	**161**	P	**Pn**	**19 37 52.7**	**+1.0**
BNSI	**Bone**	**4.97**	**191**	P	**Pn**	**19 37 57.4**	**+2.0**
SGSI	**Sangihe** 58nm,1.0s	**5.46**	**55**	P	**Pn**	**19 38 01.0**	**-1.1**
SANI	**Sanana** 0.2nm919nm10nm,0.4s	**5.53**	**117**	P	**Pn**	**19 38 01.7**	**-1.3**
KAPI	**Kappang** 2.2nm,0.3s,baz=31,slow=18,SNR=4.2	**5.64**	**194**	Pn	**Pn**	**19 38 04.6**	**+0.1**
KAPI	0.9nm,0.3s,baz=24,slow=20,SNR=1.6 4.3nm,0.4s			Sn	**Sn**	**19 39 06.8**	**-1.2**
BKSI	**Bulukumba** 12nm,0.6s	**5.87**	**189**	P	**Pn**	**19 38 08.9**	**+1.3**
BBSI	**Bau Bau** 0.1nm46nm,0.9s	**6.14**	**166**	P	**Pn**	**19 38 12.6**	**+1.3**
TNTI	**Ternate**	**6.30**	**88**	P	**Pn**	**19 38 14.3**	**+0.8**
BSSI	**Bau Bau, Buton** 0.1nm23nm,1.2s	**6.63**	**185**	P	**Pn**	**19 38 18.7**	**+0.7**
NLAI	**Namlea** 0.2nm878nm24nm,0.5s	**7.08**	**122**	P	**Pn**	**19 38 25.8**	**+1.6**
EDFI	**Ende, Flores**	**9.21**	**176**	P	**Pn**	**19 38 54.4**	**+1.0**
FAKI	**Fak Fak**	**11.68**	**107**	P	**Pn**	**19 39 26.9**	**+0.1**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=296,slow=9.9,SNR=1.5 1.0nm,0.6s	**19.02**	**167**	P	**P**	**19 40 57.0**	**-1.1**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=340,slow=9.1,SNR=10 0.3nm,0.3s	**24.12**	**148**	P	**P**	**19 41 50.0**	**-0.9**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=337,slow=11,SNR=2.0 0.3nm,0.6s	**27.07**	**153**	P	**P**	**19 42 16.7**	**-0.9**
SONM	**Songino Array** 0.3nm,0.4s,baz=156,slow=7.9,SNR=2.8 0.3nm,0.4s	**48.84**	**347**	P	**P**	**19 45 19.0**	**-0.7**
MKAR	**Makanchi Array** 0.8nm,0.4s,baz=124,slow=8.9,SNR=12 0.8nm,0.4s	**57.19**	**329**	P	**P**	**19 46 22.2**	**+1.2**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=106,slow=9.1,SNR=3.6 0.4nm,0.4s	**61.07**	**336**	P	**P**	**19 46 46.9**	**-0.8**
KURBB	**Kurchatov Arra** 0.5nm,0.3s,baz=134,slow=6.2,SNR=5.3 0.5nm,0.3s	**61.58**	**331**	P	**P**	**19 46 50.9**	**-0.1**
BVAR	**Borovoye Array** 1.1nm,0.5s,baz=130,slow=7.8,SNR=7.8 1.1nm,0.5s	**67.07**	**330**	P	**P**	**19 47 27.4**	**+0.5**

CATAC 15 19:53:28.5±0.4, 13°N±2°×8°8W±°, h32km±3km, M3.4/16, MLv3.4/16, Error ellipse: s-maj=5.8km s-min=2.2km az=29.5, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.59**	**46**	P	Pn	19 53 41.1	+0.3
CSGN				S	Sn	19 53 51.1	+1.7
POTN	**Potosi Cosigui**	**0.64**	**48**	P	Pn	19 53 42.0	+0.6
POTN				S	Sn	19 53 51.5	+1.0
CNCH	**Conchagua**	**0.72**	**13**	P	Pb	19 53 43.1	+0.3
CNCH	**Conchagua**	**0.72**	**13**	S	Sn	19 53 53.8	+1.1
LCND	**La Caada**	**0.74**	**8**	S	Pb	19 53 43.1	0.0
CNRM	**Centro Naciona**	**0.92**	**349**	S	Sb	19 53 58.2	+0.4
CRIN	**San Cristobal**	**0.93**	**82**	P	Pb	19 53 46.4	+0.1
CRIN	**San Cristobal**	**0.93**	**82**	S	Sb	19 53 59.8	+1.5
PACA	**Pacayal**	**0.95**	**340**	S	Sb	19 53 58.7	-0.2
PKGN	**Cerro Pekin**	**1.00**	**84**	P	Pb	19 53 46.9	-0.4
PKGN				S	Sb	19 54 00.5	+0.4
POLN	**Al Sur del Vol**	**1.16**	**86**	P	Pn	19 53 38.0	-10
POLN				S	Sn	19 53 53.8	-10
TECO	**Alcaldia de Te**	**1.23**	**322**	S	Sn	19 54 04.3	-0.8
CNGA	**Al SSO del Vol**	**1.27**	**93**	P	Pn	19 53 50.2	+0.1
CNGA				S	Sn	19 54 05.9	-0.1
CNGN	**Cerro Negro**	**1.27**	**93**	P	Pn	19 53 50.0	-0.1
CNGN	**Cerro Negro**	**1.27**	**93**	S	Sb	19 54 07.0	-0.8
UESV	**Universidad de**	**1.31**	**324**	S	Sn	19 54 07.7	+0.5
SCLA	**Alcaldia de Sa**	**1.33**	**328**	S	Sb	19 54 08.9	-0.9
COPN	**Copaltepe**	**1.43**	**106**	P	Pn	19 53 52.3	+0.1
MOMN	**Momotombo**	**1.43**	**96**	P	Pn	19 53 52.5	+0.2
MOM3	**MOM3**	**1.44**	**92**	P	Pn	19 53 52.6	+0.2
MOM3				S	Sn	19 54 11.5	+1.1
PAVA	**Las Pavas**	**1.46**	**321**	S	Sn	19 54 11.2	+0.2
MOM2	**El Cardon**	**1.48**	**95**	P	Pn	19 53 53.3	+0.3
MOM2				S	Sn	19 54 11.5	+0.3
LOMA	**Loma Larga**	**1.57**	**313**	S	Sn	19 54 13.3	-0.3
TGUH	**Tegucigalpa,Un**	**1.64**	**25**	P	Pn	19 53 55.6	+0.3
TGUH				S	Sn	19 54 16.5	+1.1
APYN	**Apoyeque**	**1.64**	**102**	P	Pn	19 53 55.9	+0.7
APQ2	**Apoyeque**	**1.67**	**103**	S	Sn	19 54 16.6	+0.6
PMON	**Piamonte**	**1.71**	**312**	S	Sn	19 54 17.9	+0.7
UNAN	**Cigeo UNAN**	**1.75**	**105**	S	Sn	19 54 17.9	+0.1
YUSH	**Yuscaran**	**1.78**	**39**	P	Pn	19 53 57.4	+0.3
WILN	**Americas 2**	**1.81**	**103**	S	Sn	19 54 18.0	+0.6
MAS3	**Al N del Volca**	**1.86**	**107**	S	Sn	19 54 20.0	-0.6
NANN	**Nandasmo**	**1.94**	**109**	S	Sn	19 54 23.1	+0.5
RCON	**San Juan de Ri**	**2.01**	**63**	S	Sn	19 54 25.2	+0.7
RCON	**San Juan de Ri**	**2.01**	**63**	P	Pn	19 54 00.7	+0.3
RCVN	**Varillal2**	**2.02**	**60**	P	Pn	19 54 01.0	+0.4
RCVN	**Varillal2**	**2.02**	**60**	S	Sn	19 54 25.6	+0.7
MATN	**Matagalpa**	**2.05**	**80**	P	Pn	19 54 00.1	-0.8
MATN	**Matagalpa**	**2.05**	**80**	S	Sn	19 54 24.2	-1.3
RCPN	**Sur Rio San Ju**	**2.08**	**63**	P	Pn	19 54 02.0	+0.6
RCPN	**Sur Rio San Ju**	**2.08**	**63**	S	Sn	19 54 26.9	+0.5
NUBE	**Las Nubes**	**2.19**	**308**	S	Sn	19 54 28.9	0.0
NUBE	**Las Nubes**	**2.19**	**308**	P	Pn	19 54 03.2	+0.4

*NEIC **15** 20:09:06.3±2.3, 2°06N±0°07×126°72E±0°06, h11km±4km, mb4.2/16, Error ellipse: s-maj=11.8km s-min=6.0km az=222.0*
*IDC **15** 20:09:06.4±1.5, 1°83N×126°54E, h0km, mb4.0/5, mbtmp4.0/6, ML3.8/1, MS2.7/1, Error ellipse: s-maj=110.9km s-min=17.5km az=69.0*
*DJA **15** 20:09:10.5±0.3, 2°N±3°×12°6E±°, h10km, M3.9/12, MLv3.9/12*
ISC 15 20:09:09.4±0.6, 1°85N±0°06×126°70E±0°07, h35km, n37, σ1§95/38, mb4.1/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**148**		**Pn**	**20 09 33.4**	**+2.8**
TNTI				Sn	**Sn**	**20 09 50.3**	**+3.9**
TNTI	**Ternate**	**1.26**	**148**	P	**Pn**	**20 09 33.2**	**+2.6**
SGSI	**Sangihe**	**2.17**	**327**	P	**Pn**	**20 09 47.4**	**+4.3**
SGSI				S	**Sn**	**20 10 14.1**	**+5.3**
KMSI	**Cibinong**	**3.00**	**245**	P	**Pn**	**20 09 55.4**	**+0.9**
SANI	**Sanana**	**3.94**	**190**	P	**Pn**	**20 10 07.6**	**+0.2**
LUWI	**Luwuk**	**4.86**	**234**		**Pn**	**20 10 21.2**	**+1.1**
LUWI				Sn	**Sn**	**20 11 17.1**	**+1.8**
LUWI	**Luwuk**	**4.86**	**234**	P	**Pn**	**20 10 22.0**	**+1.8**
MRSI	**Marisa**	**4.95**	**254**	P	**Pn**	**20 10 22.3**	**+1.0**
DAV	**Davao City (W)**	**5.31**	**348**	Pn	Pn	20 10 21.3	-5.0
TOLI2	**Tolitoli**	**5.96**	**263**		**Pn**	**20 10 34.6**	**-0.7**
FAKI	**Fak Fak**	**7.29**	**130**	Pn	**Pn**	**20 10 53.8**	**+0.2**
MYLDM	**Lahad Datu**	**8.83**	**292**		**Pn**	**20 11 13.8**	**-0.9**
KAPI	**Kappang**	**9.73**	**225**	Pn	**Pn**	**20 11 28.8**	**+1.8**
BATI	**Baumata** comp=Z,31nm,19.3s,baz=57,slow=37	**12.35**	**194**	LR	LR	20 16 42.9	
MTN	**Manton Dam**	**15.24**	**163**	Pn	**Pn**	**20 12 42.5**	**+0.3**
MTN				IAmb	IAmb	20 13 11.1	
	comp=Z,22nm,1.4s						
KNRA	**Kununurra**	**17.53**	**173**	Pn	**Pn**	**20 13 10.4**	**-0.8**
KNRA				IAmb	IAmb	20 13 42.2	
	comp=Z,27nm,1.5s						
FITZ	**Fitzroy Crossi** comp=Z,0.2nm,0.3s,baz=6.1,slow=11,SNR=7.4 comp=Z,1.0nm,0.5s	**19.85**	**183**	P	**Pn**	**20 13 39.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.85**	**183**	P	**P**	**20 13 37.1**	**-0.4**
YULB	**Yu-li**	**22.05**	**347**	P	**P**	**20 13 59.9**	**-1.3**
TPUB	**Ta-pu**	**22.12**	**345**	P	**P**	**20 14 00.4**	**-1.7**
WB0	**Warramunga Arr**	**22.77**	**161**	P	**P**	**20 14 09.3**	**+0.3**
WB0				IAmb	IAmb	20 14 15.1	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr** comp=Z,3.7nm,0.8s,baz=338,slow=11,SNR=20 comp=Z,3.7nm,0.8s	**22.92**	**161**	P	**P**	**20 14 11.5**	**+1.0**
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**20 14 11.4**	**+0.8**
WR8	**Warramunga Arr**	**22.98**	**161**	P	**P**	**20 14 12.2**	**+1.0**
WR8				IAmb	IAmb	20 14 16.6	
	comp=Z,4.7nm,1.1s						
AS31	**Alice Springs**	**26.31**	**165**	P	**P**	**20 14 43.2**	**+1.2**
ASAR	**Alice Springs** comp=Z,0.6nm,0.4s,baz=350,slow=7.7,SNR=14 comp=Z,0.6nm,0.4s	**26.31**	**165**	P	**P**	**20 14 44.7**	**+2.6**
ASAR	**Alice Springs**	**26.31**	**165**	P	**P**	**20 14 43.7**	**+1.6**
SANVU	**Sarautou**	**43.58**	**115**	P	**P**	**20 17 09.5**	**-1.0**
EVN	**Everest**	**46.10**	**308**	P	**P**	**20 17 28.4**	**-2.9**
EVN				IAmb	IAmb	20 17 48.4	
	comp=Z,2.2nm,1.1s						
TLY	**Talaya**	**53.30**	**342**	P	**P**	**20 18 23.7**	**-1.2**
MK31	**Makanchi Array**	**59.08**	**326**	P	**P**	**20 19 05.4**	**-0.9**
MK31				IAmb	IAmb	20 19 42.2	
	comp=Z,4.8nm,1.2s						
MKAR	**Makanchi Array** comp=Z,1.3nm,0.5s,baz=121,slow=8.2,SNR=33 comp=Z,1.3nm,0.5s	**59.08**	**326**	P	**P**	**20 19 08.2**	**+1.9**
MAKZ	**Makanchi**	**59.26**	**326**	P	**P**	**20 19 07.4**	**-0.2**
KURBB	**Kurchatov Arra** comp=Z,1.3nm,0.5s,baz=133,slow=6.3,SNR=16 comp=Z,1.3nm,0.5s	**63.30**	**328**	P	**P**	**20 19 36.8**	**+2.0**
KURK	**Kurchatov**	**63.30**	**328**	P	**P**	**20 19 33.5**	**-1.3**
AB31	**Akbulak array**	**73.58**	**321**	P	**P**	**20 20 38.6**	**-0.5**
AB31				IAmb	IAmb	20 21 20.8	
	comp=Z,4.2nm,1.4s						
AKTO	**Aktyubinsk** comp=Z,1.1nm,0.6s,baz=115,slow=7.3,SNR=4.1 comp=Z,1.1nm,0.6s	**75.11**	**322**	P	**P**	**20 20 49.3**	**+1.3**

*DJA **15** 20:24:41.8±0.2, 2°N±3°×12°7E±°, h10km, M3.6/10, mb4.1/1, MLv3.4/10*
*IDC **15** 20:25:11.5±5.0, 1°85S×125°98E, h0km, mb3.6/2, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=222.7km s-min=31.0km az=86.0*
ISC 15 20:24:41.1±1.3, 1°79N±0°06×126°65E±0°08, h10km, n8, σ1§12/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**145**	P	**Pn**	**20 25 04.3**	**-0.1**
SGSI	**Sangihe**	**2.19**	**329**	P	**Pn**	**20 25 18.2**	**+0.6**
SGSI				S	**Sn**	**20 25 44.6**	**-0.3**
KMSI	**Cibinong**	**2.93**	**246**	P	**Pn**	**20 25 28.2**	**+0.4**
LUWI	**Luwuk**	**4.79**	**234**	P	**Pn**	**20 25 55.0**	**+1.6**
LUWI				S	**Sn**	**20 26 48.6**	**-0.4**
MRSI	**Marisa**	**4.89**	**255**	P	**Pn**	**20 25 53.3**	**-1.4**
NLAI	**Namlea**	**5.01**	**175**	P	**Pn**	**20 25 56.9**	**+0.5**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=335,slow=11,SNR=3.6 1.4nm,1.0s	**22.87**	**161**	P	**P**	**20 29 43.6**	**-1.4**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=339,slow=10,SNR=4.4 0.2nm,0.4s	**26.27**	**165**	P	**P**	**20 30 17.9**	**+1.1**

*IDC **15** 20:32:54.6±2.4, 17°97N×102°19W, h0km, mb3.7/3, mbtmp3.5/6, ML3.3/3, MS3.3/5, Error ellipse: s-maj=48.3km s-min=18.6km az=30.0*
*MEX **15** 20:33:00.1±1.2, 18°00N×102°11W, h29km±16km, MD4.8*
ISC 15 20:32:56.1±1.2, 17°94N±0°04×102°14W±0°03, h13km±9km, n99, σ1§98/157, mb3.6/3, MS3.2/4, 1C, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo** baz=305,slow=14	**0.73**	**117**	⇑ *iP*	**Pg**	**20 33 11.6**	**+1.3**
ZIIG				*eS*	**Sg**	**20 33 21.5**	**+1.7**
MMIG	**Aquila**	**1.19**	**287**	*eP*	**Pn**	**20 33 18.8**	**+0.3**
MMIG				*eS*	**Sb**	**20 33 32.9**	**-1.1**
URUA	**Uruapan**	**1.48**	**3**	*eP*	**Pb**	**20 33 23.2**	**-0.3**
URUA				*eS*	**Sb**	**20 33 41.4**	**-0.9**
ARIG	**Puente Sto Nin**	**1.74**	**78**	*eP*	**Pn**	**20 33 26.6**	**+0.5**
ATYC	**Atoyac**	**1.79**	**114**	*eP*	**Pn**	**20 33 26.6**	**0.0**
ATYC				*eS*	**Sn**	**20 33 48.4**	**-0.7**
MOIG	**Morelia**	**1.95**	**27**	*eP*	**Pn**	**20 33 29.3**	**+0.2**
MOIG				*eS*	**Sn**	**20 33 52.8**	**-0.8**
CAIG	**El Cayaco**	**2.00**	**116**	*eP*	**Pn**	**20 33 29.4**	**-0.1**
CAIG				*eS*	**Sn**	**20 33 53.6**	**-0.8**
CDAR	**Ciudad de Arme**	**2.03**	**300**	*eP*	**Pn**	**20 33 31.1**	**+1.1**
CDAR				*eS*	**Sn**	**20 33 54.3**	**-1.0**
COMA	**Comala**	**2.06**	**312**	*eP*	**Pb**	**20 33 32.5**	**-0.9**
COMA				*eS*	**Sn**	**20 33 55.0**	**-1.2**
EZ5V		**2.06**	**318**	*eP*	**Pn**	**20 33 32.0**	**+1.3**
EZ5V				*eS*	**Sg**	**20 34 00.7**	**-1.8**
MNGA	**Volcan de Coli**	**2.07**	**318**	*eP*	**Pb**	**20 33 32.9**	**-0.7**
MNGA				*eS*	**Sn**	**20 33 57.6**	**+1.1**
INCO	**Volcan de Coli**	**2.10**	**319**	*eP*	**Pb**	**20 33 33.4**	**-0.9**
INCO				*eS*	**Sg**	**20 34 02.1**	**-1.6**
SOMAC	**Volcano de Col**	**2.11**	**318**	*eP*	**Pb**	**20 33 33.4**	**-1.2**
SOMAC				*eS*	**Sb**	**20 34 01.2**	**+0.3**
CEGR	**Campo Tres**	**2.17**	**312**	*eP*	**Pb**	**20 33 34.2**	**-1.2**
CEGR				*eS*	**Sb**	**20 34 03.6**	**+1.2**
MEIG	**Mezcala**	**2.40**	**90**	*eP*	**Pn**	**20 33 35.9**	**+0.7**
MEIG				*eS*	**Sn**	**20 34 03.8**	**-0.8**
VNTA	**La Mica**	**2.44**	**114**	*eP*	**Pn**	**20 33 36.3**	**+0.6**
VNTA				*eS*	**Sn**	**20 34 05.4**	**0.0**
DAIG	**Los Arroyos**	**2.55**	**111**	*eP*	**Pn**	**20 33 37.6**	**+0.5**
DAIG				*eS*	**Sb**	**20 34 12.0**	**-1.0**
TOVM	**TOLUCA**	**2.69**	**60**	*eP*	**Pn**	**20 33 39.6**	**+0.1**
TOVM				*eS*	**Sn**	**20 34 11.2**	**-0.9**
MAVM	**Malinalco, Edo**	**2.71**	**68**	*eP*	**Pn**	**20 33 41.6**	**+2.0**
MAVM				*eS*	**Sn**	**20 34 11.7**	**-0.6**
ATVM	**ATLACOMULCO**	**2.84**	**50**	*eP*	**Pn**	**20 33 42.9**	**+1.5**
ATVM				*eS*	**Sb**	**20 34 20.1**	**-1.5**
IGIG	**Irapuato, Guan**	**2.90**	**15**	*eP*	**Pn**	**20 33 39.1**	**-3.2**
IGIG				*eS*	**Sn**	**20 34 17.3**	**+0.2**
INVM	**La Marquesa**	**2.94**	**62**	*eP*	**Pb**	**20 33 47.6**	**-1.1**
INVM				*eS*	**Sn**	**20 34 17.9**	**-0.4**
ACIG	**Acambay**	**2.95**	**46**	*eP*	**Pn**	**20 33 44.8**	**+1.9**
ACIG				*eS*	**Sn**	**20 34 16.6**	**-1.7**
AOVM	**Tlapan**	**2.98**	**63**	*eP*	**Pb**	**20 33 46.9**	**-2.5**
AOVM				*eS*	**Sn**	**20 34 20.9**	**+1.4**
MZVM		**3.03**	**65**	*eP*	**Pn**	**20 33 41.9**	**-1.9**
YAIG	**Yautepec**	**3.06**	**72**	*eP*	**Pn**	**20 33 45.7**	**+1.3**
YAIG				*eS*	**Sn**	**20 34 22.8**	**+1.8**
MCRU	**Las Cruces**	**3.06**	**63**	*eP*	**Pb**	**20 33 48.7**	**-2.0**
MCRU				*eS*	**Sn**	**20 34 23.6**	**+2.3**
TLVM	**San Miguel Top**	**3.10**	**66**	*eP*	**Pn**	**20 33 47.0**	**+1.9**
TLVM				*eS*	**Sn**	**20 34 20.3**	**-2.0**
CRIG	**Cruz Grande**	**3.12**	**112**	*eP*	**Pn**	**20 33 45.4**	**+0.4**
CRIG				*eS*	**Sn**	**20 34 18.8**	**-3.3**
CUP5	**Mexico City**	**3.13**	**63**	*eP*	**Pn**	**20 33 45.8**	**+0.3**
CUP5				*eS*	**Sn**	**20 34 22.9**	**0.0**
UNM	**Universidad Na**	**3.13**	**63**	*i P*	**Pn**	**20 33 46.3**	**+0.8**
UNM				*eS*	**Sn**	**20 34 22.4**	**-0.5**
MHVM	**Bosque de Chap**	**3.14**	**62**	*eP*	**Pn**	**20 33 46.0**	**+0.4**
MHVM				*eS*	**Sn**	**20 34 24.5**	**+1.4**
TACV	**Mexico City**	**3.15**	**62**	*eS*	**Sn**	**20 34 23.3**	**+0.1**
XCVM	**Xochimilco**	**3.15**	**65**	*eP*	**Pb**	**20 33 49.6**	**-2.6**
XCVM				*eS*	**Sn**	**20 34 21.8**	**-1.6**
CJM	**Chamela**	**3.16**	**300**	*eP*	**Pn**	**20 33 46.2**	**+0.7**
CJM				*eS*	**Sn**	**20 34 21.7**	**-1.3**
BJVM	**Benito Juarez**	**3.16**	**63**	*eP*	**Pb**	**20 33 49.4**	**-2.9**
BJVM				*eS*	**Sn**	**20 34 20.1**	**-3.4**
COVM	**Coyoacan**	**3.16**	**63**	*eS*	**Sn**	**20 34 25.4**	**+1.9**
AZVM	**Cuida Lopez Ma**	**3.17**	**58**	*eP*	**Pn**	**20 33 49.1**	**+3.2**
AZVM				*eS*	**Sn**	**20 34 23.3**	**-0.4**
APVM	**Azcapotzalco**	**3.18**	**61**	*eP*	**Pn**	**20 33 43.2**	**-2.9**
APVM				*eS*	**Sn**	**20 34 25.1**	**+1.1**
JRQG	**Juriquilla Cam**	**3.18**	**30**	*eP*	**Pn**	**20 33 47.4**	**+1.3**
JRQG				*eS*	**Sn**	**20 34 22.7**	**-1.4**
CTVM	**Cuauhtemoc**	**3.19**	**62**	*eP*	Pn	20 33 38.7	-7.5
CTVM				*eS*	**Sn**	**20 34 20.1**	**-4.3**
MPVM	**San Francisco**	**3.23**	**67**	*eP*	**Pb**	**20 33 50.5**	**-2.9**
MPVM				*eS*	**Sn**	**20 34 25.2**	**+0.1**
VRVM	**Mexico City**	**3.23**	**62**	*eS*	**Sn**	**20 34 22.3**	**-2.9**
PBVM	**Pinon**	**3.26**	**62**	*eP*	**Pn**	**20 33 44.5**	**-2.4**
PBVM				*eS*	**Sn**	**20 34 21.4**	**-4.2**
THVM	**De Xico**	**3.30**	**65**	*eP*

CCIG	**Comitan**	**9.71**	**98**	*eS*		**Sn**	**20 37 08.4**	**+3.6**
PATR	**El Naranjo**	**9.91**	**105**	*eP*		**Pn**	**20 35 20.8**	**+2.3**
MCIG	**Muzquiz**	**9.91**	**3**	*eP*	Pn	Pn	20 35 25.7	+7.4
MCIG				*eS*		**Sn**	**20 37 09.9**	**+0.4**
PAVE	**Pavencul**	**9.94**	**104**	*eP*		**Pn**	**20 35 21.3**	**+2.4**
CHUJ	**Union Juarez**	**10.03**	**105**	*eP*		**Pn**	**20 35 22.4**	**+2.2**
CSIG	**Choix**	**10.55**	**328**	*eP*		**Pn**	**20 35 25.2**	**-2.0**
TXAR	**Lajitas Array**	**11.43**	**353**		Pn	**Pn**	**20 35 41.0**	**+1.9**
	baz=168,slow=17,SNR=5.1							
TXAR					Lg	Lg	20 38 58.0	
	0.1nm,0.3s,baz=172,slow=22,SNR=2.7							
	0.4nm,0.6s							
APG	**El Apazote**	**11.58**	**103**		Pn	**Pn**	**20 35 44.2**	**+2.9**
	0.1nm,0.3s,baz=56,slow=21,SNR=1.7							
APG					Sn	**Sn**	**20 37 56.4**	**+5.7**
	baz=61,slow=18,SNR=1.4							
APG					Lg	Lg	20 38 59.2	
	baz=237,slow=23,SNR=3.9							
	0.1nm,0.3s							
NVAR	**Mina Array Bea**	**24.82**	**329**		P	**P**	**20 38 19.1**	**+0.8**
	3.0nm,0.8s,baz=148,slow=11,SNR=17							
NVAR					LR	LR	20 46 59.9	
	comp=Z,65nm,18.9s,baz=268,slow=34							
	3.0nm,0.8s							
ELK	**Elko**	**25.37**	**336**		LR	LR	20 49 31.5	
	comp=Z,68nm,18.9s,baz=66,slow=39							
PDAR	**Pinedale Array**	**25.54**	**347**		P	**P**	**20 38 23.7**	**-1.1**
	0.6nm,0.7s,baz=145,slow=10,SNR=6.5							
	0.6nm,0.7s							
SDV	**Santo Domingo**	**31.90**	**102**		LR	LR	20 52 03.4	
	comp=Z,28nm,21.0s,baz=60,slow=36							
SIV	**San Ignacio**	**52.67**	**127**		LR	LR	21 01 45.4	
	comp=Z,75nm,20.2s,baz=90,slow=33							
ILAR	**Eielson Array**	**55.50**	**339**		P	**P**	**20 42 30.1**	**-0.4**
	0.4nm,0.6s,baz=145,slow=5.9,SNR=4.8							
	0.4nm,0.6s							
H03N2	**Juan Fernandez**	**55.69**	**156**		T	T	21 42 38.5	
	baz=333,slow=77							
H03N1	**Juan Fernandez**	**55.70**	**156**		T	T	21 42 38.4	
	baz=333,slow=77							
H03N3	**Juan Fernandez**	**55.71**	**156**		T	T	21 42 37.9	
	baz=333,slow=77							

GII 15 20:35:12.3±0.0,**33°070N**±0.006×**35°402E**±0.002,
h2km, confirmed, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMC7	**Mount Meron ar**	**0.05**	**189**	P	Pg	20 35 13.4	+0.1
MMC7	**Mount Meron ar**	**0.05**	**189**	S	Sg	20 35 14.7	+0.7
MMA0B	**Mount Meron ar**	**0.05**	**179**	P	Pg	20 35 13.8	+0.4
MMA0B				S	Sg	20 35 14.6	+0.4

*IDC **15** 20:49:17.4±15.0, 28°.92N×47°.61E, h0km, mb3.8/7, mbtmp3.8/8, ML2.9/1, MS3.1/8, Error ellipse: s-maj=290.7km s-min=29.5km az=8.0*
*NEIC **15** 20:49:21.0±1.8, 29°.92N±0°.07×47°.80E±0°.10, h10km±2km, mb4.1/10, Error ellipse: s-maj=15.1km s-min=10.7km az=245.0*
*ISN **15** 20:49:23.3±0.8, 29°.77N×47°.70E, h8km±468km, ML3.4*
*TEH **15** 20:49:24.9, 29°.84N×47°.69E, h8km±139km*
*SGS **15** 20:49:26.1, 30°.32N×47°.74E, h32km, Ml4.2*
*OMAN **15** 20:49:31.0±0.9, 29°.63N×48°.09E, h10km, mb4.3/23, Error ellipse: s-maj=8.7km s-min=4.3km az=167.0*
*DSN **15** 20:49:34.9±0.9, 29°.53N×48°.35E, h10km, ML3.5/10, Error ellipse: s-maj=14.7km s-min=6.5km az=7.0*
ISC 15 20:49:24.7±0.5,**29°.88N**±0°.03×**47°.76E**±0°.05,**h10**km,**n111**, σ2s**89**/131,**mb3.8**/11,**MS3.2**/5,**Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBD	**Kabd**	**0.70**	**185**	P	**Pn**	**20 49 41.5**	**+0.8**
KBD				S	**Sn**	**20 49 52.5**	**+0.8**
KFJS2	**Khafji**	**1.62**	**160**	S	**Sg**	**20 50 20.7**	**+3.7**
KFJS2				P	**Pg**	**20 49 57.6**	**+1.7**
AHWZ	**Ahwaz**	**1.64**	**28**	Pg	**Pg**	**20 49 57.0**	**+0.9**
KFJS1	**Al Wafrah**	**1.69**	**175**	P	**Pg**	**20 49 58.5**	**+1.3**
KFJS1	**Al Wafrah**	**1.69**	**175**	S	**Sg**	**20 50 23.3**	**+4.0**
RAFI	**Al-Rafai**	**2.32**	**323**	*e*Pn	**Pb**	**20 50 05.0**	**-1.6**
RAFI				*e*Sn	**Sb**	**20 50 36.0**	**+0.7**
RAFI				AML	AML	20 50 56.5	
	comp=E,202nm,0.4s						
RAFI				AML	AML	20 51 02.5	
	comp=N,277nm,0.6s						
RQBS	**RQBS**	**2.98**	**212**	P	**Pb**	**20 50 15.3**	**-2.7**
WANAN	**Al Wanan**	**3.04**	**168**	P	**Pb**	**20 50 16.7**	**-2.2**
KAZ2	**Kazeron-Fars-I**	**3.41**	**94**	Pn	**Pn**	**20 50 21.7**	**+3.7**
DSBU	**Dashti - Bushe**	**3.42**	**115**	Pn	**Pn**	**20 50 22.0**	**+3.9**
JHBN	**Jahan bin**	**3.42**	**46**	Pn	**Pn**	**20 50 22.8**	**+4.4**
ZNGN	**Zangian**	**3.47**	**49**	Pn	**Pn**	**20 50 23.1**	**+4.0**
KLNJ	**Kolanjah**	**3.50**	**70**	Pn	**Pn**	**20 50 23.7**	**+4.2**
IBDR	**Badra**	**3.58**	**335**	*e*Pn	**Pn**	**20 50 23.5**	**+3.2**
IBDR				*e*Sn	**Sn**	**20 51 07.0**	**+4.4**
IBRJ	**Brojen**	**3.63**	**55**	Pn	**Pn**	**20 50 25.5**	**+4.3**
SMAN	**Sihmah**	**3.70**	**176**	P	**Sn**	**20 50 58.2**	**-7.4**
ARIRA	**AirJ**	**3.77**	**164**	S	**Sn**	**20 51 09.5**	**+2.1**
ARIRA				P	**Pn**	**20 50 26.4**	**+3.5**
IPIR	**Pirpir**	**3.87**	**43**	Pn	**Pn**	**20 50 29.0**	**+4.4**
SHI	**Shiraz**	**4.14**	**92**	Pn	**Pn**	**20 50 31.6**	**+3.3**
BHD	**Baghdad**	**4.44**	**320**	*e*Pn	**Pn**	**20 50 35.0**	**+2.8**
BHD				*e*Sn	**Sn**	**20 51 27.5**	**+3.6**
BHD				AML	AML	20 52 14.5	
	comp=E,170nm,0.5s						
IGAR	**Gharneh**	**4.45**	**54**	Pn	**Pn**	**20 50 36.7**	**+4.2**
GLG1	**Gilan-e-Gharb**	**4.50**	**340**	Pn	**Pn**	**20 50 36.3**	**+3.2**
IGHG	**Ghaleghazi**	**4.55**	**347**	Pn	**Pn**	**20 50 37.2**	**+3.4**
IKLH	**Kolahrood**	**4.73**	**43**	Pn	**Pn**	**20 50 40.7**	**+4.3**
SHMA	**Al-Shehemyia**	**4.91**	**144**	P	**Pn**	**20 50 40.9**	**+2.3**
SHMA				S	**Sn**	**20 51 37.2**	**+1.7**
IZEF	**Zefreh**	**4.93**	**51**	Pn	**Pn**	**20 50 42.9**	**+3.8**
QAMS	**Qamsar**	**4.94**	**38**	Pn	**Pn**	**20 50 43.8**	**+4.6**
SNQR	**Sonqor, Kerman**	**4.96**	**359**	Pn	**Pn**	**20 50 43.4**	**+3.8**
NHRD	**Haradh**	**5.26**	**167**	P	**Pn**	**20 50 47.2**	**+3.8**
SMRA	**Abu-Samra**	**5.80**	**151**	P	**Pn**	**20 50 52.6**	**+1.8**
SMRA				S	**Sn**	**20 51 57.1**	**-0.2**
TRNA	**Turayna**	**5.97**	**148**	P	**Pn**	**20 50 55.6**	**+2.4**
TRNA				S	**Sn**	**20 52 01.0**	**-0.8**
QABG	**Abgarm-Qazvin**	**6.01**	**14**	Pn	**Pn**	**20 50 58.4**	**+4.5**
ANAR	**Anarak**	**6.07**	**56**	Pn	**Pn**	**20 50 59.1**	**+4.4**
IMEH	**Mehriz**	**6.10**	**74**	Pn	**Pn**	**20 50 58.9**	**+3.7**
ICHK	**Chekchek**	**6.17**	**66**	Pn	**Pn**	**20 51 00.6**	**+4.4**
IKRK	**Kirkuk**	**6.21**	**333**	*e*Pn	**Pn**	**20 51 00.0**	**+3.5**
IKRK				*e*Sn	**Sn**	**20 52 10.0**	**+2.4**
IKRK				AML	AML	20 53 19.0	
	comp=N,30nm,0.5s						
IKRK				AML	AML	20 53 27.9	
	comp=E,32nm,0.9s						
RAYN	**Ar Rayn**	**6.64**	**198**		**Pn**	**20 51 02.6**	**+0.1**
RAYN				Sn	**Sn**	**20 52 15.5**	**-2.8**
RAYN	**Ar Rayn**	**6.64**	**198**	P	**Pn**	**20 51 04.2**	**+1.7**
RAYN				S	**Sn**	**20 52 19.0**	**+0.6**
GHWR	**Ruwais**	**7.45**	**141**	P	**Pn**	**20 51 14.7**	**+1.1**
GHWR				S	**Sn**	**20 52 37.3**	**-0.9**
KHGB	**Koh Gabri**	**7.57**	**84**	Pn	**Pn**	**20 51 19.5**	**+4.2**
MSL	**Mosul**	**7.58**	**330**	*e*Pn	**Pn**	**20 51 18.0**	**+2.7**
MSL				*e*Sn	**Sn**	**20 52 42.0**	**+0.7**
NGRK	**Negar Kerman**	**7.80**	**90**	Pn	**Pn**	**20 51 22.8**	**+4.0**
KRM1	**Kerman Provinc**	**8.26**	**83**	Pn	**Pn**	**20 51 28.6**	**+3.7**
AJN	**Ajban**	**8.33**	**128**	P	**Pn**	**20 51 27.9**	**+2.3**
AJN				S	**Sn**	**20 52 58.0**	**-1.8**
SHME	**Shamm**	**8.34**	**115**	P	**Pn**	**20 51 27.3**	**+1.6**
SHME				S	**Sn**	**20 52 56.9**	**-3.0**
SHME	**Shamm**	**8.34**	**115**	P	**Pn**	**20 51 27.3**	**+1.6**
SHME				S	**Sn**	**20 52 56.0**	**-4.0**
BANOM	**Banah**	**8.52**	**115**	P	**Pn**	**20 51 30.1**	**+1.8**
BANOM				S	**Sn**	**20 53 02.4**	**-2.1**
BANOM	**Banah**	**8.52**	**115**	*i* P	**Pn**	**20 51 29.9**	**+1.6**
	SNR=8.7						
ASUD	**Al Ashush, Dub**	**8.53**	**126**	P	**Pn**	**20 51 31.4**	**+3.1**
	SNR=9.9						
ASUD				S	**Sn**	**20 53 02.8**	**-1.9**
ASUD	**Al Ashush, Dub**	**8.53**	**126**	*i* P	**Pn**	**20 51 31.0**	**+2.6**
	SNR=9.9						
NAZ	**Nazwa, Dubai**	**8.54**	**123**	P	**Pn**	**20 51 31.2**	**+2.6**
	SNR=6.1						
NAZ				S	**Sn**	**20 53 03.5**	**-1.6**
NAZ	**Nazwa, Dubai**	**8.54**	**123**	*i* P	**Pn**	**20 51 30.7**	**+2.2**
	SNR=6.2						
MZR	**Muzera**	**8.55**	**142**	P	**Pn**	**20 51 31.0**	**+2.3**
MZR				S	**Sn**	**20 53 03.8**	**-1.6**
MZR	**Muzera**	**8.55**	**142**	P	**Pn**	**20 51 30.9**	**+2.2**
FAQ	**Al Faqa, Dubai**	**8.64**	**124**	P	**Pn**	**20 51 30.9**	**+1.0**
FAQ				S	**Sn**	**20 53 05.9**	**-1.5**
MASF	**Masafi**	**8.70**	**119**	P	**Pn**	**20 51 33.0**	**+2.3**
MASF				S	**Sn**	**20 53 05.9**	**-3.0**
MSFE	**Esma-Masafi**	**8.71**	**119**	P	**Pn**	**20 51 32.5**	**+1.7**
MDH	**Madha**	**8.84**	**119**	P	**Pn**	**20 51 34.5**	**+1.9**
MDH				S	**Sn**	**20 53 08.6**	**-3.8**
MDH	**Madha**	**8.84**	**119**	P	**Pn**	**20 51 34.2**	**+1.5**
UOSS	**Minazif**	**8.97**	**121**		**Pn**	**20 51 31.7**	**-2.7**
UOSS				Sn	**Sn**	**20 53 11.8**	**-3.8**
UOSS	**Minazif**	**8.97**	**121**	P	**Pn**	**20 51 35.3**	**+0.9**
UOSS				S	**Sn**	**20 53 11.9**	**-3.6**
HATD	**Hatta, Dubai**	**8.98**	**122**	P	**Pn**	**20 51 36.1**	**+1.5**
	SNR=11						
HATD				S	**Sn**	**20 53 13.8**	**-2.2**
HATD	**Hatta, Dubai**	**8.98**	**122**	*i* P	**Pn**	**20 51 36.3**	**+1.6**
	SNR=11						
ASHO	**Ashiyiah**	**9.02**	**123**	P	**Pn**	**20 51 36.8**	**+1.8**
	SNR=6.7						
ASHO				S	**Sn**	**20 53 13.7**	**-3.0**
ASHO	**Ashiyiah**	**9.02**	**123**	*i* P	**Pn**	**20 51 36.5**	**+1.4**
	SNR=11						
ALNE	**Al Ain**	**9.19**	**127**	P	**Pn**	**20 51 39.2**	**+1.9**
	SNR=6.7						
ALNE				S	**Sn**	**20 53 18.5**	**-2.4**
ALNE	**Al Ain**	**9.19**	**127**	*i* P	**Pn**	**20 51 39.3**	**+1.9**
	SNR=19						
MARD	**Mardin**	**9.42**	**324**	Pn	**Pn**	**20 51 36.0**	**-4.6**
SOHO	**SOHO**	**9.69**	**124**	P	**Pn**	**20 51 45.4**	**+1.2**
SOHO	**SOHO**	**9.69**	**124**	P	**Pn**	**20 51 45.5**	**+1.2**
UMZA	**Um Al Zommool**	**9.75**	**135**	P	**Pn**	**20 51 46.4**	**+1.4**
ARQ	**Araqi**	**10.19**	**128**	P	**Pn**	**20 51 53.1**	**+1.9**
GNI	**Garni**	**10.54**	**347**	LR	LR	20 56 20.1	
	comp=E,42nm,20.4s,baz=120,slow=37						
HOQ	**Hoqain**	**10.59**	**124**	P	**Pn**	**20 51 58.4**	**+1.8**
	SNR=5.6						
MMAI	**Mount Meron Ar**	**11.01**	**290**	LR	LR	20 56 42.9	
	comp=E,49nm,20.1s,baz=114,slow=40						
BSY	**Bisya**	**11.05**	**128**	P	**Pn**	**20 52 05.1**	**+2.2**
EIL	**Elat**	**11.13**	**272**	LR	LR	20 56 56.6	
	comp=E,55nm,18.2s,baz=60,slow=42						
SMDO	**Samad**	**11.45**	**124**	P	**Pn**	**20 52 10.8**	**+2.4**
	SNR=6.0						
WSAR	**Wadi Sarin**	**11.76**	**122**	P	**Pn**	**20 52 14.3**	**+1.6**
JMDO	**Jabal Madar**	**11.92**	**126**	P	**Pn**	**20 52 15.7**	**+0.8**
	SNR=6.1						
WBK	**Wadi Bani Khal**	**12.39**	**123**	P	**Pn**	**20 52 22.1**	**+0.8**
DOK	**Doka**	**12.62**	**151**	P	**Pn**	**20 52 26.0**	**+1.6**
MHTO	**MHTO**	**12.78**	**132**	P	**Pn**	**20 52 27.1**	**+0.6**
	SNR=8.0						
JLN	**Jalan Bani Buh**	**12.99**	**124**	P	**Pn**	**20 52 30.6**	**+1.2**
WHFO	**Wadi Hawf**	**13.11**	**154**	P	**Pn**	**20 52 32.3**	**+1.2**
ABTO	**Aybut**	**13.46**	**157**	P	**Pn**	**20 52 37.2**	**+1.3**
RBK	**Rabkut**	**13.66**	**153**	P	**Pn**	**20 52 40.0**	**+1.4**
DMTO	**DMTO**	**13.77**	**150**	P	**Pn**	**20 52 41.2**	**+1.1**
	SNR=5.9						
BRTR	**Keskin Array B**	**15.18**	**314**	Pn	**P**	**20 53 03.5**	**-0.9**
	baz=132,slow=8.6,SNR=8.6						
	comp=E,1.8nm,0.9s						
BRTR	**Keskin Array B**	**15.18**	**314**	P	**Pn**	**20 52 59.4**	**+0.1**
CHGR	**Chuyangaron**	**19.70**	**58**	P	**P**	**20 53 49.5**	**-4.8**
CHGR				IAmb	IAmb	20 54 01.7	
	comp=Z,10nm,0.9s						
GAR	**Garm**	**20.67**	**58**	P	**P**	**20 54 00.2**	**-4.7**
DRK	**Karamyk**	**21.91**	**58**	P	**P**	**20 54 12.9**	**-5.6**
DRK				IAmb	IAmb	20 54 28.1	
	comp=Z,7.1nm,1.0s						
AKTO	**Aktyubinsk**	**21.94**	**18**	LR	LR	21 05 42.9	
	comp=Z,49nm,18.3s,baz=74,slow=43						
KK31	**Karatay Array**	**22.47**	**48**	P	**P**	**20 54 18.9**	**-5.2**
AAK	**Ala-Archa**	**24.92**	**52**	LR	LR	21 06 24.9	
	comp=Z,49nm,19.5s,baz=260,slow=40						
AKASG	**Malin Array Be**	**25.02**	**331**	P	**P**	**20 54 49.6**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=141,slow=8.7,SNR=7.8						
	comp=Z,0.9nm,0.5s						
AKBB	**Malin Array Si**	**25.02**	**331**	P	**P**	**20 54 43.9**	**-4.8**
AKBB				IAmb	IAmb	20 54 56.1	
	comp=Z,5.4nm,0.9s						
KIEV	**Kiev**	**25.02**	**331**	P	**P**	**20 54 43.5**	**-5.2**
KIEV				IAmb	IAmb	20 54 56.1	
	comp=Z,4.8nm,0.9s						
BVAR	**Borovoye Array**	**28.45**	**29**	P	**P**	**20 55 20.9**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=220,slow=8.6,SNR=4.1						
BVAR				LR	LR	21 08 08.3	
	comp=Z,53nm,19.0s,baz=162,slow=38						
	comp=Z,0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**30.97**	**39**	P	**P**	**20 55 43.1**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=242,slow=9.7,SNR=2.1						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**31.07**	**39**	P	**P**	**20 55 38.9**	**-3.9**
KURK				IAmb	IAmb	20 55 56.7	
	comp=Z,2.0nm,1.0s						
MKAR	**Makanchi Array**	**31.60**	**48**	P	**P**	**20 55 47.9**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=252,slow=9.3,SNR=2.3						
	comp=Z,0.5nm,0.7s						
FIA1	**FINESS Array S**	**34.66**	**342**	P	**P**	**20 56 09.9**	**-4.2**
FINES	**FINESS Array B**	**34.66**	**342**	P	**P**	**20 56 16.3**	**+2.1**
	comp=Z,0.7nm,0.5s,baz=160,slow=13,SNR=4.3						
	comp=Z,0.7nm,0.5s						
FINES	**FINESS Array B**	**34.66**	**342**	P	P	20 56 09.3	-4.8
ZALV	**Zalesovo Beam**	**35.95**	**37**	P	**P**	**20 56 28.0**	**+2.7**
	comp=Z,0.5nm,0.4s,baz=247,slow=9.1,SNR=4.3						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**35.95**	**37**	P	P	20 56 20.4	-4.9
HFS	**Hagfors**	**37.89**	**333**	P	**P**	**20 56 42.4**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=134,slow=10,SNR=9.8						
	comp=Z,2.6nm,0.6s						
LBTB	**Lobatse**	**58.58**	**204**	LR	LR	21 24 37.9	
	comp=Z,60nm,18.7s,baz=356,slow=37						
YAK	**Yakutsk**	**60.35**	**32**	LR	LR	21 29 26.3	
	comp=Z,35nm,20.6s,baz=88,slow=39						

*IDC **15** 20:51:16.3±1.4, 1°.79N×126°.44E, h0km, mb3.6/4, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=57.9km s-min=20.8km az=71.0*
*DJA **15** 20:51:20.0±0.7, 2°.N±2°×12°6E±°, h11km±6km, M3.7/10, mb3.7/1, MLv3.7/10*
ISC 15 20:51:21.4±1.3,**1°.70N**±0°.07×**126°.3E**±0°.1,**h35**km,**n10**, σ0s**90**/12,**mb3.7**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.12**	**338**	P	**Pn**	**20 51 54.1**	**-0.3**
SGSI				S	**Sn**	**20 52 20.6**	**+1.0**
KMSI	**Cibinong**	**2.60**	**244**	P	**Pn**	**20 52 00.0**	**-0.9**
KMSI				S	**Sn**	**20 52 31.1**	**-0.2**
LUWI	**Luwuk**	**4.48**	**233**	P	**Pn**	**20 52 26.0**	**-0.8**
MRSI	**Marisa**	**4.55**	**255**	P	**Pn**	**20 52 27.5**	**-0.3**
KAPI	**Kappang**	**9.36**	**225**	Pn	**Pn**	**20 53 35.6**	**+1.7**
	3.1nm,0.3s,baz=143,slow=20,SNR=2.1						
	6.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	**P**	**20 55 47.0**	**-0.7**
	0.1nm,0.3s,baz=22,slow=11,SNR=1.7						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**22.90**	**160**	P	**P**	**20 56 22.2**	**-0.2**
	1.5nm,0.5s,baz=338,slow=11,SNR=10						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**26.27**	**164**	P	**P**	**20 56 54.5**	**+0.8**
	0.7nm,0.5s,baz=345,slow=9.3,SNR=10						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**21 01 17.2**	**-0.4**
	0.4nm,0.6s,baz=128,slow=8.2,SNR=2.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**21 01 46.6**	**+0.5**
	0.4nm,0.7s,baz=131,slow=6.5,SNR=4.9						
	0.4nm,0.7s						

*DJA **15** 21:02:01.6±0.1, 4°.S±1°×12°8E±°, h10km, M4.6/55, mb4.8/55, mB5.1/22, MLv4.7/23, Mw(mB)4.5/22, MwMwp5.2/1, Mwp5.4/1*
*NEIC **15** 21:02:04.3±1.3, 3°.45S±0°.05×128°.33E±0°.06, h35km±2km, mb4.5/35, Error ellipse: s-maj=10.6km s-min=7.1km az=118.0*
*IDC **15** 21:02:05.3±2.9, 3°.65S×128°.13E, h52km±26km, mb3.9/12, mbtmp4.3/16, ML3.8/3, MS3.4/18, Error ellipse: s-maj=26.2km s-min=9.8km az=72.0*
ISC 15 21:02:00.8±0.3,**3°.55S**±0°.04×**128°.27E**±0°.03,**h10**km,**n165**, σ1s**84**/157,**mb4.5**/31,**MS3.4**/14,**1C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.16**	**207**	P	**Pg**	**21 02 04.1**	**-0.2**
AAI				S	**Sg**	**21 02 07.7**	**+1.0**
MSAI	**Masohi**	**0.69**	**73**	P	**Pg**	**21 02 14.2**	**0.0**
NLAI	**Namlea**	**1.20**	**285**	P	**Pn**	**21 02 22.7**	**-1.0**
NLAI				S	**Sb**	**21 02 39.5**	**+0.2**
BNDI	**Bandanaira**	**1.90**	**121**	P	**Pn**	**21 02 32.3**	**-1.0**
BNDI	**Bandanaira**	**1.90**	**121**	P	**Pn**	**21 02 32.8**	**-0.5**
SANI	**Sanana**	**2.72**	**303**	P	**Pn**	**21 02 45.0**	**+0.5**
SANI	**Sanana**	**2.72**	**303**	P	**Sb**	**21 03 21.0**	**-1.9**
SANI				S	**Sn**	**21 03 18.3**	**+0.8**
SWI	**Sorong**	**4.01**	**48**	P	**Pn**	**21 03 03.0**	**+0.7**
SWI				S	**Sn**	**21 03 48.8**	**-0.5**
FAKI	**Fak Fak**	**4.03**	**81**		**Pn**	**21 03 02.0**	**-0.6**
FAKI	**Fak Fak**	**4.03**	**81**	P	**Pn**	**21 03 03.9**	**+1.3**
FAKI	**Fak Fak**	**4.03**	**81**	P	**Pn**	**21 03 02.3**	**-0.3**
TNTI	**Ternate**	**4.38**	**348**		**Pn**	**21 03 07.3**	**-0.2**
TNTI	**Ternate**	**4.38**	**348**	P	**Pn**	**21 03 09.6**	**+2.2**
TNTI	**Ternate**	**4.38**	**348**	P	**Pn**	**21 03 09.6**	**+2.2**
TNTI				S	**Sn**	**21 04 00.5**	**+1.9**
SAUI	**Saumlaki**	**5.34**	**146**	Pn	**Pn**	**21 03 21.9**	**+1.3**
KMPI	**Kaimana, Papua**	**5.43**	**91**	P	**Pn**	**21 03 21.9**	**0.0**
KMPI				S	**Sn**	**21 04 24.0**	**-0.5**
KDI	**Kendari**	**5.65**	**266**	P	**Pn**	**21 03 24.7**	**-0.2**
KMSI	**Cibinong**	**5.92**	**314**	P	**Pn**	**21 03 29.5**	**+0.8**
BBSI	**Bau Bau**	**6.00**	**251**	P	**Pn**	**21 03 30.3**	**+0.6**
	0.3nm954nm111nm,0.9s						
LUWI	**Luwuk**	**6.03**	**294**		**Pn**	**21 03 31.1**	**+1.1**
LUWI	**Luwuk**	**6.03**	**294**	P	**Pn**	**21 03 33.0**	**+2.9**
LUWI	**Luwuk**	**6.03**	**294**	P	**Pn**	**21 03 31.3**	**+1.2**
RKPI	**Ransiki, Papua**	**6.24**	**71**	P	**Pn**	**21 03 33.9**	**+0.9**
APSI	**Ampana**	**7.11**	**291**	P	**Pn**	**21 03 48.5**	**+3.5**
	3μm205nm,1.1s						
SOEI	**Soe**	**7.34**	**213**		**Pn**	**21 03 50.7**	**+2.5**
SOEI	**Soe**	**7.34**	**213**	P	Pn	21 03 53.7	+5.5
SOEI	**Soe**	**7.34**	**213**	P	**Pn**	**21 03 50.5**	**+2.3**
	0.3nm1μm57nm,0.8s						
MRSI	**Marisa**	**7.48**	**302**	P	**Pn**	**21 03 53.1**	**+3.1**
	0.3nm1μm101nm,0.8s						
SGSI	**Sangihe**	**7.69**	**339**	P	**Pn**	**21 03 55.3**	**+2.4**
MMRI	**Maumere**	**7.84**	**230**	Pn	**Pn**	**21 03 57.0**	**+2.0**
MMRI	**Maumere**	**7.84**	**230**	P	**Pn**	**21 03 55.4**	**+0.4**
	0.3nm1μm35nm,0.9s						
BATI	**Baumata**	**8.04**	**214**	P	**Pn**	**21 03 57.6**	**-0.2**
	2.5nm,0.3s,baz=68,slow=11,SNR=8.6						
BATI				LR	LR	21 06 56.8	
	comp=Z,464nm,20.6s,baz=26,slow=37						
	9.7nm,0.4s						
BATI	**Baumata**	**8.04**	**214**	P	**Pn**	**21 03 59.5**	**+1.7**
	36nm,0.7s						
BSSI	**Bau Bau, Buton**	**8.17**	**251**	P	**Pn**	**21 03 59.8**	**+0.3**
BAKI	**Biak**	**8.18**	**74**	P	**Pn**	**21 04 00.1**	**+0.5**
	1μm124nm,1.1s						
BNSI	**Bone**	**8.18**	**264**	P	**Pn**	**21 04 00.0**	**+0.3**
	35nm,0.8s						
BKSI	**Bulukumba**	**8.31**	**257**	P	**Pn**	**21 04 02.1**	**+0.7**
	894nm81nm,1.1s						
EDFI	**Ende, Flores**	**8.33**	**231**	P	**Pn**	**21 04 04.3**	**+2.4**
	37nm,0.9s						
TTSI	**Tana Toraja**	**8.45**	**273**	P	**Pn**	**21 04 03.4**	**+0.1**
	37nm,1.0s						
SPSI	**Sidrap Palu**	**8.49**	**267**	P	**Pn**	**21 04 05.5**	**+1.6**
	612nm47nm,0.9s						
KAPI	**Kappang**	**8.62**	**260**	P	Pn	21 04 10.5	+4.8
	35nm,0.6s,baz=101,slow=7.7,SNR=22						
KAPI				LR	LR	21 08 18.0	
	comp=Z,171nm,18.3s,baz=74,slow=44						
KAPI	**Kappang**	**8.62**	**260**		**Pn**	**21 04 07.0**	**+1.3**
KAPI	**Kappang**	**8.62**	**260**	P	Pn	21 04 10.4	+4.8
TOLI2	**Tolitoli**	**8.79**	**302**		**Pn**	**21 04 08.7**	**+0.5**
TOLI2	**Tolitoli**	**8.79**	**302**	P	**Pn**	**21 04 11

ASAR	**Alice Springs**	**20.73**	**165**	P	**P**	**21 06 42.5**	**+0.8**
	comp=Z,30nm,0.7s,baz=344,slow=10,SNR=120							
ASAR				S	**S**	**21 10 29.1**	**-4.2**
	comp=Z,5.3nm,1.0s,baz=349,slow=24,SNR=7.6							
ASAR				PcP	**PcP**	**21 10 50.5**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=355,slow=1.8,SNR=10							
ASAR				LR	LR	21 15 23.0		
	comp=Z,109nm,19.9s,baz=340,slow=39							
	comp=Z,30nm,0.7s							
ASAR	**Alice Springs**	**20.73**	**165**		**P**	**21 06 42.2**	**+0.4**
AUALC	**St Philip's Co**	**20.75**	**165**	P	**P**	**21 06 42.7**	**+0.8**
BBJI	**Bungbulang**	**20.88**	**258**	P	**P**	**21 06 44.4**	**+0.9**
MTSU	**Mount Surprise**	**21.39**	**134**	P	**P**	**21 06 50.1**	**+1.3**
GUMO	**Guam**	**23.69**	**44**	LR	LR	21 16 13.4		
	comp=Z,64nm,21.4s,baz=220,slow=36							
RABL	**Rabaul**	**23.85**	**92**	P	**P**	**21 07 14.9**	**+0.3**
DSRI	**Dabo**	**23.87**	**277**	P	**P**	**21 07 15.5**	**+0.8**
	comp=Z,20nm,1.1s							
CTA	**Charters Tower**	**24.04**	**135**	P	**P**	**21 07 16.7**	**+0.4**
CTAO	**Charters Tower**	**24.04**	**135**	P	**P**	**21 07 16.1**	**-0.2**
CTAO				IAmb	IAmb	21 07 18.1		
	comp=Z,12nm,1.1s							
CTAO	**Charters Tower**	**24.04**	**135**	P	**P**	**21 07 17.1**	**+0.8**
TPRI	**Tanjung Pinang**	**24.14**	**280**	P	**P**	**21 07 17.5**	**+0.2**
	comp=Z,34nm,1.0s							
MEEK	**Meekatharra**	**24.75**	**201**	P	**P**	**21 07 22.8**	**0.0**
MNAI	**Manna**	**25.26**	**267**	P	**P**	**21 07 26.3**	**-1.2**
INKA	**Innaminka**	**26.85**	**155**	P	**P**	**21 07 42.1**	**+0.5**
RPSI	**Rantau Prapat**	**29.98**	**282**	P	**P**	**21 08 08.7**	**-1.1**
RPSI				IAmb	IAmb	21 08 10.5		
	comp=Z,9.1nm,1.1s							
PSI	**Prapat**	**30.00**	**282**	LR	LR	21 21 45.6		
	comp=Z,74nm,19.0s,baz=113,slow=40							
PSI	**Prapat**	**30.00**	**282**		**P**	**21 08 09.9**	**-0.2**
JOW	**Kunigami**	**30.20**	**0**	LR	LR	21 19 51.4		
	comp=Z,72nm,20.8s,baz=120,slow=35							
STKA	**Stephens Creek**	**30.84**	**158**	P	**P**	**21 08 16.3**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=317,slow=21,SNR=2.9							
STKA				LR	LR	21 22 10.8		
	comp=Z,102nm,18.0s,baz=15,slow=39							
	comp=Z,1.0nm,0.3s							
STKA	**Stephens Creek**	**30.84**	**158**	P	**P**	**21 08 20.6**	**+3.4**
HNR	**Honiara**	**32.00**	**102**	LR	LR	21 24 14.8		
	comp=Z,52nm,19.2s,baz=296,slow=41							
CMSA	**Cobar Meteorol**	**32.32**	**151**	P	**P**	**21 08 33.2**	**+3.0**
TW1H	**Toowoomba 1 Ha**	**32.89**	**139**	P	**P**	**21 08 36.6**	**+1.2**
AUMAG	**Moama Anglican**	**35.79**	**157**	P	**P**	**21 09 02.7**	**+2.4**
CMAR	**Chiang Mai Arr**	**36.23**	**308**	P	**P**	**21 09 03.0**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=140,slow=7.4,SNR=13							
CMAR				PcP	**PcP**	**21 11 27.9**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=156,slow=3.2,SNR=4.9							
	comp=Z,1.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**36.23**	**308**	P	**P**	**21 09 03.3**	**-1.0**
CHTO	**Chiang Mai**	**36.43**	**309**		**P**	**21 09 04.7**	**-1.3**
CHTO				IAmb	IAmb	21 09 07.3		
	comp=Z,5.3nm,1.1s							
CHTO	**Chiang Mai**	**36.43**	**309**	P	**P**	**21 09 07.5**	**+1.5**
NJ2	**Nanjing**	**36.51**	**347**	*eP*	**P**	**21 09 07.6**	**+1.1**
NJ2				pmax	pmax			
	comp=Z,6.0nm,0.6s							
JNU	**Nakatsue**	**36.55**	**4**	LR	LR	21 25 12.7		
	comp=Z,86nm,19.2s,baz=279,slow=38							
KMI	**Kunming**	**37.77**	**320**	P	**P**	**21 09 21.9**	**+4.4**
KMI				pmax	pmax			
	comp=Z,8.0nm,0.8s							
JHJ	**Hachijo jima 2**	**38.06**	**16**	LR	LR	21 22 48.0		
	comp=Z,86nm,21.8s,baz=16,slow=32							
PZH	**PanZhiHua**	**39.38**	**321**	P	**P**	**21 09 31.4**	**+0.5**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
KSRS	**Korea Array**	**40.79**	**360**	P	**P**	**21 09 42.2**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=172,slow=6.9,SNR=6.6							
	comp=Z,1.7nm,0.7s							
MJAR	**Matsushiro Arr**	**40.95**	**12**	P	**P**	**21 09 43.2**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=191,slow=9.9,SNR=8.3							
	comp=Z,2.5nm,0.7s							
XAN	**Xi'an**	**41.60**	**336**	⇑P	**P**	**21 09 48.6**	**-0.5**
XAN				pmax	pmax			
	comp=Z,7.0nm,0.9s							
LZH	**Lanzhou**	**45.56**	**332**	*eP*	**P**	**21 10 20.3**	**-0.9**
LZH				pP	sP	21 10 30.8	+5.2	
LZH				pmax	pmax			
	comp=Z,14nm,1.1s							
HHC	**Hu-ho-hao-te**	**46.75**	**343**	*eP*	**P**	**21 10 32.0**	**+1.6**
HHC				pmax	pmax			
	comp=Z,8.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,140nm,4.6s							
LSA	**Lhasa**	**48.53**	**316**		**P**	**21 10 44.3**	**-0.6**
LSA				IAmb	IAmb	21 10 46.2		
	comp=Z,6.5nm,0.9s							
LSA	**Lhasa**	**48.53**	**316**	P	**P**	**21 10 40.9**	**-4.0**
GTA	**Gaotai**	**50.13**	**331**	*eP*	**P**	**21 10 57.6**	**+1.0**
GTA				pP	sP	21 11 06.1	+5.1	
GTA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
EVN	**Everest**	**50.72**	**311**		**P**	**21 11 00.8**	**-1.1**
EVN				IAmb	IAmb	21 11 02.7		
	comp=Z,7.6nm,0.7s							
SONM	**Songino Array**	**54.64**	**342**	P	**P**	**21 11 29.7**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=156,slow=7.5,SNR=8.1							
	comp=Z,1.7nm,0.9s							
MKAR	**Makanchi Array**	**64.41**	**327**	P	**P**	**21 12 36.6**	**-0.7**
	comp=Z,4.3nm,0.8s,baz=124,slow=7.6,SNR=22							
	comp=Z,4.3nm,0.8s							
ZAA0	**Zalesovo Array**	**67.74**	**334**		**P**	**21 12 55.7**	**-2.8**
ZAA0				IAmb	IAmb	21 12 58.0		
	comp=Z,4.9nm,0.9s							
ZALV	**Zalesovo Beam**	**67.74**	**334**	P	**P**	**21 12 57.0**	**-1.5**
	comp=Z,3.1nm,0.8s,baz=111,slow=6.5,SNR=15							
	comp=Z,3.1nm,0.8s							
ZALV	**Zalesovo Beam**	**67.74**	**334**		**P**	**21 12 56.3**	**-2.2**
GAR	**Garm**	**68.02**	**315**	P	**P**	**21 12 59.2**	**-1.6**
GAR				IAmb	IAmb	21 13 14.7		
	comp=Z,9.7nm,1.1s							
SHEM	**Shemya Is, Ala**	**68.03**	**28**	P	**P**	**21 12 58.9**	**-1.4**
SMY	**Shemya**	**68.03**	**28**	P	**P**	**21 12 58.8**	**-1.5**
KURBB	**Kurchatov Arra**	**68.68**	**329**	P	**P**	**21 13 03.5**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=130,slow=5.5,SNR=46							
	comp=Z,6.0nm,0.8s							
KURK	**Kurchatov**	**68.69**	**329**		**P**	**21 13 03.0**	**-1.5**
CHGR	**Chuyangaron**	**68.72**	**314**	P	**P**	**21 13 04.2**	**-0.9**
RAR	**Rarotonga**	**71.91**	**111**	LR	LR	21 44 49.0		
	comp=Z,14nm,18.1s,baz=282,slow=36							
BVAR	**Bovovoye Array**	**74.24**	**328**	P	**P**	**21 13 36.9**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=128,slow=9.3,SNR=9.7							
	comp=Z,2.3nm,0.8s							
TIXI	**Tiksi**	**75.06**	**0**		**P**	**21 13 41.0**	**-1.3**
TIXI				IAmb	IAmb	21 13 42.7		
	comp=Z,4.8nm,0.8s							
UOSS	**Minazif**	**75.33**	**297**	P	**P**	**21 13 42.8**	**-2.1**
UOSS				IAmb	IAmb	21 13 51.3		
	comp=Z,4.6nm,0.9s							
VNDA	**Vanda**	**76.06**	**173**	P	**P**	**21 13 45.6**	**-2.5**
	comp=Z,0.5nm,0.6s,baz=315,slow=4.5,SNR=4.2							
VNDA				LR	LR	21 46 56.8		
	comp=Z,36nm,19.3s,baz=350,slow=35							
	comp=Z,0.5nm,0.6s							
RAYN	**Ar Rayn**	**84.78**	**294**	P	**P**	**21 14 35.4**	**-0.7**
RAYN				IAmb	IAmb	21 14 43.4		
	comp=Z,4.9nm,0.9s							
QSPA	**South Pole Qui**	**86.41**	**180**	LR	LR	21 51 36.5		
	comp=Z,22nm,21.5s,baz=330,slow=34							
QSPA	**South Pole Qui**	**86.41**	**180**	P	**P**	**21 14 44.5**	**+1.2**
QSPA				IAmb	IAmb	21 14 45.7		
	comp=Z,7.3nm,1.1s							
ILAR	**Eielson Array**	**90.98**	**25**	P	**P**	**21 15 03.6**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=237,slow=5.7,SNR=6.6							
	comp=Z,0.3nm,0.6s							
MMAI	**Mount Meron Ar**	**94.31**	**303**	LR	LR	22 07 31.8		
	comp=Z,14nm,18.3s,baz=163,slow=42							
BRTR	**Keskin Array B**	**95.81**	**309**	LR	LR	22 10 35.1		
	comp=Z,5.4nm,18.4s,baz=276,slow=43							
MBAR	**Mbarara**	**97.48**	**269**	LR	LR	21 52 16.6		
	comp=Z,24nm,21.5s,baz=38,slow=31							

IDC ***15*** *21:05:48.8±1.9, 1.68N×126.37E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=188.9km s-min=22.5km az=66.0*

DJA ***15*** *21:05:51.7±0.9, 2.7N±3.2×12.6E±.1°, h10km±8km, M3.6/7, MLv3.6/7*

ISC 15 21:05:54.2±1.0, **1.57N**±0.08×**126.45E**±0.09, **h35**km, **n7**, σ0.98/9, **mb3.6**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TNTI	**Ternate**	**1.21**	**131**	P		**Pn**	**21 06 14.3**	**-0.4**
TNTI				S		**Sn**	**21 06 30.9**	**+1.0**
SGSI	**Sangihe**	**2.29**	**336**	P		**Pn**	**21 06 29.5**	**-0.1**
SGSI				S		**Sn**	**21 06 57.8**	**+1.2**
KMSI	**Cibinong**	**2.66**	**248**	P		**Pn**	**21 06 34.5**	**0.0**
WRA	**Warramunga Arr**	**22.74**	**160**	P		**P**	**21 10 53.3**	**-0.1**
	1.4nm,0.5s,baz=339,slow=10,SNR=5.4							
	1.4nm,0.5s							
ASAR	**Alice Springs**	**26.11**	**164**	P		**P**	**21 11 26.2**	**+1.1**
	0.5nm,0.7s,baz=339,slow=11,SNR=5.3							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**59.17**	**326**	P		**P**	**21 15 50.4**	**-1.2**
	0.3nm,0.4s,baz=117,slow=8.3,SNR=5.6							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**63.40**	**328**	P		**P**	**21 16 19.5**	**-0.6**
	0.2nm,0.5s,baz=127,slow=5.2,SNR=4.3							
	0.2nm,0.5s							

NEIC ***15*** *21:07:00.7, 16.95N×85.57W, h10km*

NEIC ***15*** *21:07:01.3±2.3, 16.95N±0.06×85.57W±0.07, h10km±1km, mb4.6/139, Mwr4.4/16, Error ellipse: s-maj=11.6km s-min=10.2km az=244.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.77; Mθθ=-3.33; Mϕϕ=4.10; Mrθ=0.78; Mθϕ=2.75; Mϕr=1.45; Fault plane solution: M₀=4.95000×10¹⁵ NP1:ϕs=154.45000°, δ=85.30000°, λ=-159.41000°. NP2:ϕs=62.69000°, δ=69.48000°, λ=-5.01000°. Principal axes: T 5.2267, Plg11.0000°, Azm287.0000°; N -0.6060, Plg69.0000°, Azm167.0000°; P -4.6207, Plg18.0000°, Azm20.0000°;*

IDC ***15*** *21:07:01.3±1.2, 16.97N×85.53W, h0km, mb4.3/4, mbtmp4.4/8, ML1.6/2, MS3.5/23 Error ellipse: s-maj=23.9km s-min=22.3km az=10.0*

CATAC ***15*** *21:07:04.1±0.4, 17.2N±2.8×5.5W±.5°, h5km, M5.0/20, mB5.3/4, mb4.8/5, MLv5.1/20, Mw(mB)4.8/4, MwMwp4.5/1, Mwp4.9/1, Error ellipse: s-maj=5.4km s-min=4.1km az=159.8, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.29; Mθθ-4.27; Mϕϕ3.98; Mrθ-0.23; Mθϕ3.29; Mϕr1.08; Fault plane solution: M₀5.39703×10¹⁵ NP1: ϕs=333.92445°, δ86.54564°, λ168.26106°. NP2: ϕs=64.64178°, δ78.28269°, λ3.52796°. Principal axes: T 5.3092, Plg10.7315°, Azm288.7250°; N 0.1715, Plg77.7702°, Azm177.7544°; P -5.4807, Plg5.7965°, Azm19.8274°; confirmed*

GCG ***15*** *21:07:07.2±2.8, 17.01N×85.82W, h36km±977km, MD5.1, ML5.0*

SSNC ***15*** *21:07:19.1±2.9, 17.80N×84.57W, h15km±114km, MB5.3*

ISC 15 21:07:03.0±0.5, **16.98N**±0.03×**85.54W**±0.04, **h28**km, **n222**, σ1.95/221, **mb4.6**/39, **MS3.5**/17, **1C-9D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
YUSH	**Yuscaran**	**3.26**	**203**	S		**Sn**	**21 08 30.9**	**+0.4**
YUSH	**Yuscaran**	**3.26**	**203**	⇓P		**Pn**	**21 07 53.0**	**+0.6**
SIUN	**Universidad Ur**	**3.33**	**167**			**Pn**	**21 07 53.0**	**-0.3**
SIUN	**Universidad Ur**	**3.33**	**167**	P		**Pn**	**21 07 53.5**	**+0.2**
SIUN				S		**Sn**	**21 08 30.9**	**-1.1**
TGUH	**Tegucigalpa,Un**	**3.35**	**210**	P		**Pn**	**21 07 53.9**	**+0.2**
TGUH	**Tegucigalpa,Un**	**3.35**	**210**	⇓P		**Pn**	**21 07 54.3**	**+0.5**
TGUH				S		**Sn**	**21 08 32.0**	**-0.7**
RCVN	**Varillal2**	**3.44**	**191**	P		**Pn**	**21 07 55.2**	**+0.3**
RCVN	**Varillal2**	**3.44**	**191**	S		**Sn**	**21 08 32.9**	**-1.9**
OCON	**Estacion meteo**	**3.45**	**195**	⇓P		**Pn**	**21 07 55.7**	**+0.7**
OCON				S		**Sn**	**21 08 33.7**	**-1.4**
RCPN	**Sur Rio San Ju**	**3.48**	**189**	P		**Pn**	**21 07 55.9**	**+0.5**
RCPN	**Sur Rio San Ju**	**3.48**	**189**	S		**Sn**	**21 08 33.8**	**-2.0**
RCON	**San Juan de Ri**	**3.53**	**190**	S		**Sn**	**21 08 36.8**	**-0.3**
RCON	**San Juan de Ri**	**3.53**	**190**	⇓P		**Pn**	**21 07 56.8**	**+0.6**
BILN	**Bilwi Airport**	**3.59**	**144**			**Pn**	**21 07 57.1**	**+0.3**
BILN	**Bilwi Airport**	**3.59**	**144**	⇓P		**Pn**	**21 07 55.5**	**-1.3**
BILN				S		**Sn**	**21 08 36.1**	**-2.2**
MATN	**Matagalpa**	**4.05**	**185**	P		**Pn**	**21 08 02.5**	**-0.7**
MATN	**Matagalpa**	**4.05**	**185**	S		**Sn**	**21 08 48.3**	**-1.5**
TEIG	**Tepich**	**4.14**	**322**	Pn		**Pn**	**21 08 05.9**	**+1.6**
	baz=132,slow=24,SNR=2350							
TEIG				Sn		**Sn**	**21 08 49.8**	**-2.1**
	baz=130,slow=24,SNR=28							
TEIG	**Tepich**	**4.14**	**322**			**Pn**	**21 08 05.7**	**+1.4**
PETF	**Flores**	**4.14**	**270**			**Pn**	**21 08 04.2**	**-0.3**
PETF	**Flores**	**4.14**	**270**	*i* P		**Pn**	**21 08 04.6**	**+0.1**
PETF				*e*S		**Sn**	**21 08 49.3**	**-2.7**
PETF				IAML			21 09 02.9	
	comp=N,3μm,0.7s							
CNCH	**Conchagua**	**4.30**	**211**	S		**Sn**	**21 08 56.6**	**+0.6**
CNCH	**Conchagua**	**4.30**	**211**	P		**Pn**	**21 08 07.5**	**+0.8**
ESQI	**Esquipulas**	**4.38**	**237**			**Pn**	**21 08 08.2**	**+0.3**
POTN	**Potosi Cosigui**	**4.39**	**206**	⇓P		**Pn**	**21 08 08.5**	**+0.6**
POTN				S		**Sn**	**21 08 51.5**	**-0.6**
PACA	**Pacayal**	**4.41**	**218**	⇓P		**Pn**	**21 08 09.3**	**+1.1**
MTO3	**Montecristo**	**4.49**	**236**			**Pn**	**21 08 09.5**	**+0.1**
MTO3	**Montecristo**	**4.49**	**236**	*e*P		**Pn**	**21 08 10.4**	**+1.0**
MTO3	**Montecristo**	**4.49**	**236**	P		**Pn**	**21 08 10.5**	**+1.1**
MTO3	**Montecristo**	**4.49**	**236**	S		**Sn**	**21 09 03.9**	**+3.1**
CRIN	**San Cristobal**	**4.50**	**199**			**Pn**	**21 08 08.3**	**-1.2**
CRIN	**San Cristobal**	**4.50**	**199**	P		**Pn**	**21 08 10.4**	**+0.9**
PKGN	**Cerro Pekin**	**4.51**	**198**	P		**Pn**	**21 08 10.4**	**+0.9**
HERN	**Volcan Telica**	**4.53**	**196**	Pn		**Pn**	**21 08 07.6**	**-2.2**
MOM3	**MOM3**	**4.55**	**192**	⇓P		**Pn**	**21 08 10.9**	**+0.9**
MOM3				S		**Sn**	**21 08 59.7**	**-2.3**
CNGN	**Cerro Negro**	**4.60**	**194**			**Pn**	**21 08 11.5**	**+0.7**
CNGN	**Cerro Negro**	**4.60**	**194**	P		**Pn**	**21 08 12.1**	**+1.4**
CNGN	**Cerro Negro**	**4.60**	**194**	S		**Sn**	**21 09 02.7**	**-0.6**
CNGA	**Al SSO del Vol**	**4.60**	**194**	P		**Pn**	**21 08 12.3**	**+1.5**
MOM2	**El Cardon**	**4.61**	**192**	⇓P		**Pn**	**21 08 12.3**	**+1.4**
MOM2				S		**Sn**	**21 09 01.8**	**-1.8**
PAVA	**Las Pavas**	**4.62**	**226**	S		**Sn**	**21 09 05.2**	**+1.3**
MOMN	**Momotombo**	**4.65**	**192**	P		**Pn**	**21 08 12.8**	**+1.3**
APQ3	**Volcan Apoyequ**	**4.75**	**190**	S		**Sn**	**21 09 05.8**	**-1.2**
MGAN	**Managua**	**4.86**	**188**			**Pn**	**21 08 13.7**	**-0.6**
ESPN	**Las Esperanzas**	**4.91**	**166**			**Pn**	**21 08 16.6**	**+1.6**
ESPN	**Las Esperanzas**	**4.91**	**166**	P		**Pn**	**21 08 15.7**	**+0.7**
ESPN	**Las Esperanzas**	**4.91**	**166**	S		**Sn**	**21 09 09.9**	**-1.1**
NUBE	**Las Nubes**	**5.11**	**234**	*e*P		**Pn**	**21 08 19.2**	**+1.4**
NUBE	**Las Nubes**	**5.11**	**234**	P		**Pn**	**21 08 19.2**	**+1.4**
APG	**El Apazote**	**5.13**	**248**	Pn		**Pn**	**21 08 18.6**	**+0.3**
	comp=N,0.2nm,0.3s,baz=90,slow=15,SNR=7.5							
APG				Sn		**Sn**	**21 09 14.7**	**-2.0**
	comp=N,1.7nm,0.3s,baz=70,slow=21,SNR=7.0							
APG				LR		LR	21 10 14.9	
	comp=N,88nm,18.9s,baz=102,slow=38							
APG	**El Apazote**	**5.13**	**248**	*e*P		**Pn**	**21 08 18.0**	**-0.2**
PRVC	**Isla de Provid**	**5.40**	**131**			**Pn**	**21 08 22.0**	**+0.3**
PRVC	**Isla de Provid**	**5.40**	**131**	P		**Pn**	**21 08 22.2**	**+0.5**
PRVC				S		**Sn**	**21 09 19.6**	**-3.4**
SCIG	**Sabancuy**	**5.72**	**291**	*i* P		**Pn**	**21 08 25.5**	**-0.7**
SCIG				*i* S		Sn	21 09 22.1	-8.9
SCIG				IAML			21 09 30.3	
	comp=E,617nm,0.4s							
CBCY	**The Bluff, Cay**	**6.14**	**63**	⇑P		**Pn**	**21 08 33.5**	**+1.6**
CBCY				S		**Sn**	**21 09 40.7**	**-0.4**
CBCY	**The Bluff, Cay**	**6.14**	**63**	*e*P		**Pn**	**21 08 32.7**	**+0.8**
SOR	**Soroa**	**6.25**	**22**			**Pn**	**21 08 35.9**	**+2.4**
SOR	**Soroa**	**6.25**	**22**	*e*P		**Pn**	**21 08 37.0**	**+3.6**
SOR				*e*S		Sn	21 09 16.9	-27
CCIG	**Comitan**	**6.36**	**265**			**Pn**	**21 08 36.3**	**+1.1**
CCIG	**Comitan**	**6.36**	**265**	*i* P		**Pn**	**21 08 35.9**	**+0.8**
SOCE	**Pocosol**	**6.62**	**172**			**Pn**	**21 08 37.1**	**-1.5**
JTS	**Las Juntas de**	**6.68**	**175**	Pn		**Pn**	**21 08 40.9**	**+1.6**
	comp=E,14nm,0.3s,baz=356,slow=14,SNR=11							
JTS				Sn		**Sn**	**21 09 51.7**	**-2.8**
	comp=E,4.8nm,0.3s,baz=238,slow=17,SNR=5.2							
JTS	**Las Juntas de**	**6.68**	**175**			**Pn**	**21 08 39.1**	**-0.2**
JTS	**Las Juntas de**	**6.68**	**175**	P		**Pn**	**21 08 40.6**	**+1.2**
CAMR	**Camarioca**	**7.20**	**32**			**Pn**	**21 08 46.5**	**0.0**
CAMR	**Camarioca**	**7.20**	**32**	*e*P		**Pn**	**21 08 48.4**	**+1.9**
TGIG		**7.26**	**269**	*e*P		**Pn**	**21 08 47.6**	**+0.2**
MGU	**Managua**	**7.31**	**45**	*e*P		**Pn**	**21 08 47.5**	**-0.5**
MTDJ	**Mount Denham**	**7.73**	**80**	*e*P		**Pn**	**21 08 57.2**	**+3.3**
MTDJ				*i* S		**Sn**	**21 10 14.2**	**-6.5**
MTDJ				IAML			21 10 56.7	
	comp=Z,42nm,1.0s							
CCCC	**Cccc**	**8.46**	**59**	*e*P		Pn	21 09 09.2	+5.4
LMGC	**Las Mercedes**	**8.66**	**68**	*e*P		**Pn**	**21 09 08.4**	**+1.9**
CMIG	**Matias Romero**	**8.94**	**272**	Pn		**Pn**	**21 09 11.0**	**+0.6**
	comp=Z,12nm,0.5s,baz=97,slow=7.1,SNR=13							
CMIG				Sn		**Sn**	**21 10 43.7**	**-6.5**
	comp=Z,1.9nm,0.3s,baz=301,slow=19,SNR=1.8							
CMIG				LR		LR	21 12 50.8	
	comp=Z,556nm,19.7s,baz=114,slow=39							
CHIV	**Chivirico**	**9.16**	**70**			**Pn**	**21 09 14.6**	**+1.3**
061Z	**Ochoppi**	**9.83**	**25**	*e*P		**Pn**	**21 09 24.1**	**+1.5**
061Z				*e*S		**Sn**	**21 11 07.9**	**-4.1**
GTBY	**Guantanamo Bay**	**10.32**	**72**	*e*P		**Pn**	**21 09 30.1**	**+0.8**
060A	**Indiantown**	**11.09**	**25**	*e*P		**Pn**	**21 09 42.3**	**+2.5**
060A				IAmb		IAmb	21 09 52.6	
	comp=Z,270nm,0.7s							
060A				*e*S		**Sn**	**21 11 36.8**	**-6.2**
DWPF	**Disney Wildern**	**11.70**	**18**	*e*P		**Pn**	**21 09 50.2**	**+2.0**
656A	**Willston**	**12.63**	**12**			**Pn**	**21 10 00.4**	**-0.5**
SDDR	**Presa de Saban**	**13.71**	**80**			**Pn**	**21 10 15.6**	**0.0**
HBVL	**Hebbronville**	**15.76**	**312**			**Pn**	**21 10 43.6**	**+0.5**
HBVL				IAmb		IAmb	21 10 48.1	
	comp=Z,40nm,0.8s							
146A	**Union**	**15.91**	**349**	P		**Pn**	**21 10 45.4**	**+0.5**
HKT	**Hockley**	**15.98**	**326**			**Pn**	**21 10 46.3**	**+0.5**
HKT				IAmb		IAmb	21 10 51.2	
	comp=Z,48nm,0.8s							
LRAL	**Lakeview Retre**	**16.04**	**356**			**Pn**	**21 10 47.8**	**+1.2**
ROSC	**El Rosal**	**16.33**	**136**	LR		LR	21 17 55.9	
	comp=Z,117nm,18.2s,baz=45,slow=40							
735A	**Kenedy**	**16.33**	**318**			**Pn**	**21 10 49.9**	**-0.5**
HNVL	**Huntsville, TX**	**16.43**	**328**			**Pn**	**21 10 50.4**	**-1.2**
GOGA	**Godfrey**	**16.46**	**6**			**Pn**	**21 10 51.3**	**-0.7**
MLDN	**Muldoon**	**16.55**	**322**			**Pn**	**21 10 51.7**	**-1.4**
EF04	**Eagle Ford 04**	**16.57**	**319**	Pn		**Pn**	**21 10 52.5**	**-0.9**
SDV	**Santo Domingo**	**16.60**	**117**	Pn		**Pn**	**21 10 55.6**	**+1.6**
	comp=Z,9.3nm,0.5s,baz=330,slow=8.9,SNR=10							
SDV				LR		LR	21 18 28.4	
	comp=Z,126nm,18.8s,baz=266,slow=41							
SDV	**Santo Domingo**	**16.60**	**117**			**Pn**	**21 10 54.1**	**0.0**
NATX	**Nacogdoches**	**16.88**	**332**			**Pn**	**21 10 56.8**	**-0.6**
NATX				IAmb		IAmb	21 11 14.5	
	comp=Z,45nm,0.7s							
ZAIG	**Zacatecas**	**17.01**	**293**			**Pn**	**21 10 59.3**	**0.0**
833A	**Chaparral WMA,**	**17.04**	**314**	P		**Pn**	**21 10 59.2**	**-0.1**
X48A	**Hartselle**	**17.45**	**356**	P		**Pn**	**21 11 05.2**	**+0.8**
FPAL	**Fort Paine**	**17.48**	**360**	P		**Pn**	**21 11 05.5**	**+0.6**
X51A	**Calhoun**	**17.52**	**2**	P		**Pn**	**21 11 06.2**	**+0.9**
435B	**Jarrell**	**17.59**	**324**			**Pn**	**21 11 06.0**	**-0.2**
237A	**Washetta, Mont**	**17.61**	**330**	P		**Pn**	**21 11 07.8**	**+1.3**
HNDO	**Hondo**	**17.73**	**317**	P		**Pn**	**21 11 07.3**	**-0.7**
PLAL	**Pickwick Lake**	**18.07**	**353**			**Pn**	**21 11 11.6**	**-0.4**
W52A	**Murphy**	**18.09**	**4**	P		**Pn**	**21 11 12.3**	**0.0**
W52A				IAmb		IAmb	21 11 17.7	
	comp=Z,31nm,0.8s							
W50A	**Signal Mountai**	**18.14**	**1**			**Pn**	**21 11 12.5**	**-0.5**
Z38A	**Mt. Pleasant**	**18.31**	**334**			**P**	**21 11 15.0**	**+0.1**
Z38A				IAmb		IAmb	21 11 22.7	
	comp=Z,52nm,1.0s							
TREL	**Terrell**	**18.35**	**331**	P		**P**	**21 11 16.7**	**+1.4**
WHTX	**Lake Whitney,**	**18.44**	**326**	P		**Pn**	**21 11 18.1**	**+1.5**
KMSC	**Kings Mountain**

P51A	**Williamsport**	**22.52**	**5**	P	**P**	**21 12 01.0**	**+0.5**
P51A				IAmb	IAmb	21 12 13.5	
	comp=Z,21nm,0.9s						
CLN7	**Carlsbad 7**	**22.56**	**316**	P	**P**	**21 11 59.5**	**-1.7**
KAN14	**Manchester OK**	**22.73**	**334**	P	**P**	**21 12 05.2**	**+2.4**
P52A	**Corning**	**22.76**	**7**	P	**P**	**21 12 02.3**	**-0.9**
GDL2	**Guadalupe Moun**	**22.80**	**315**	P	**P**	**21 12 02.9**	**-0.9**
MSTX	**Muleshoe**	**22.92**	**321**	P	**P**	**21 12 05.1**	**+0.1**
AMTX	**Amarillo**	**22.93**	**324**	P	**P**	**21 12 04.6**	**-0.4**
AMTX				IAmb	IAmb	21 12 46.0	
	comp=Z,23nm,0.8s						
MNTX	**Cornudas Mount**	**23.21**	**313**		**P**	**21 12 07.3**	**-0.5**
MNTX				IAmb	IAmb	21 12 10.5	
	comp=Z,13nm,0.8s						
O54A	**Avella**	**23.55**	**10**	P	**P**	**21 12 10.9**	**-0.2**
O54A				IAmb	IAmb	21 12 17.0	
	comp=Z,20nm,0.8s						
SDMD	**Soldier's Deli**	**23.60**	**17**	P	**P**	**21 12 11.4**	**-0.2**
SLBS	**Sierra La Lagu**	**23.82**	**290**		**P**	**21 12 13.2**	**-0.7**
SLBS				IAmb	IAmb	21 12 19.1	
	comp=Z,30nm,1.4s						
N51A	**Ashland**	**24.01**	**6**	P	**P**	**21 12 15.1**	**-0.3**
EPT	**El Paso**	**24.05**	**312**	P	**P**	**21 12 17.1**	**+1.1**
EPT				IAmb	IAmb	21 12 49.4	
	comp=Z,16nm,1.0s						
LPIG	**La Paz**	**24.23**	**291**	LR	LR	21 22 52.4	
	comp=Z,123nm,18.8s,baz=28,slow=39						
RTBA	**Rita Blanca**	**24.65**	**325**	P	**P**	**21 12 22.9**	**+1.4**
RTBA				IAmb	IAmb	21 12 36.4	
	comp=Z,11nm,1.0s						
ATAH	**Atahualpa**	**24.98**	**163**	LR	LR	21 21 26.1	
	comp=Z,124nm,18.5s,baz=334,slow=35						
ABQ	**Albuquerque**	**25.86**	**318**	P	**P**	**21 12 33.0**	**+0.4**
ANMO	**Albuquerque**	**25.86**	**318**		**P**	**21 12 31.7**	**-0.9**
TASM	**ASL Pad, Albuq**	**25.86**	**318**	P	**P**	**21 12 33.9**	**+1.3**
TASM	**ASL Pad, Albuq**	**25.86**	**318**	P	**P**	**21 12 31.9**	**-0.7**
TASM				IAmb	IAmb	21 13 01.9	
	comp=Z,3.9nm,0.9s						
TASM	**ASL Pad, Albuq**	**25.86**	**318**	P	**P**	**21 12 32.7**	**+0.1**
TASM				IAmb	IAmb	21 13 01.9	
	comp=Z,4.0nm,0.9s						
SADO	**Sadowa**	**28.22**	**10**	LR	LR	21 23 52.1	
	comp=Z,122nm,18.7s,baz=241,slow=36						
BELC	**Belle Mtn. Jos**	**32.13**	**308**	P	**P**	**21 13 27.5**	**-0.9**
PFO	**Pinyon Flats O**	**32.32**	**307**	LR	LR	21 29 38.0	
	comp=Z,102nm,18.5s,baz=143,slow=42						
PSUT	**Pine Spring**	**32.77**	**317**	P	**P**	**21 13 34.1**	**+0.1**
PDAR	**Pinedale Array**	**32.85**	**326**	LR	LR	21 29 09.4	
	comp=Z,52nm,20.4s,baz=123,slow=40						
QSM	**Queen of Sheba**	**33.60**	**310**	P	**P**	**21 13 40.2**	**-0.9**
QSM				IAmb	IAmb	21 13 46.9	
	comp=Z,11nm,1.5s						
TPNV	**Topopah Spring**	**33.61**	**312**	P	**P**	**21 13 42.2**	**+0.9**
WSHM	**Spangler Hills**	**33.91**	**309**	P	**P**	**21 13 44.2**	**+0.5**
WSHM				IAmb	IAmb	21 13 48.6	
	comp=Z,7.7nm,0.9s						
HVU	**Hansel Valley**	**34.00**	**322**	P	**P**	**21 13 44.7**	**+0.1**
CLC	**China Lake**	**34.08**	**310**	P	**P**	**21 13 45.5**	**+0.2**
CLC				IAmb	IAmb	21 13 49.8	
	comp=Z,6.6nm,1.1s						
TPAW	**Teton Pass**	**34.09**	**326**	P	**P**	**21 13 45.8**	**+0.3**
MPMC	**Manual Prospec**	**34.10**	**310**	P	**P**	**21 13 45.4**	**-0.2**
MPMC				IAmb	IAmb	21 13 50.1	
	comp=Z,7.1nm,1.1s						
MDP	**Montagnes des**	**34.31**	**106**	LR	LR	21 30 50.4	
	comp=Z,83nm,18.2s,baz=276,slow=42						
GMN	**Gold Mountain**	**34.48**	**312**	P	**P**	**21 13 49.8**	**+0.8**
NVAR	**Mina Array Bea**	**35.74**	**313**	LR	LR	21 33 14.9	
	comp=Z,78nm,18.1s,baz=120,slow=44						
LPAZ	**La Paz**	**37.25**	**152**	LR	LR	21 30 34.0	
	comp=Z,57nm,20.9s,baz=314,slow=38						
SCHQ	**Schefferville**	**40.43**	**17**	P	**P**	**21 14 40.8**	**+2.0**
	comp=Z,5.7nm,0.8s,baz=199,slow=6.0,SNR=7.9						
SCHQ				LR	LR	21 30 59.2	
	comp=Z,64nm,18.3s,baz=212,slow=36						
	comp=Z,5.7nm,0.8s						
SIV	**San Ignacio**	**40.69**	**142**	LR	LR	21 33 51.2	
	comp=Z,62nm,18.6s,baz=76,slow=40						
FRB	**Frobisher Bay**	**48.16**	**10**	LR	LR	21 35 37.6	
	comp=Z,96nm,18.7s,baz=124,slow=36						
BDFB	**Brasilia**	**49.20**	**129**	LR	LR	21 37 42.7	
	comp=Z,75nm,19.6s,baz=144,slow=37						
CPUP	**Villa Florida**	**51.05**	**147**	LR	LR	21 38 48.9	
	comp=Z,6.1nm,20.6s,baz=181,slow=37						
R32K	**Eaglecrest**	**54.66**	**331**	P	**P**	**21 16 27.9**	**-1.3**
SFJD	**Kangerlussuaq**	**54.88**	**16**	LR	LR	21 39 15.8	
	comp=Z,98nm,19.3s,baz=236,slow=35						
A36M	**Sachs Harbour**	**59.67**	**347**	P	**P**	**21 17 04.2**	**-0.2**
A36M				IAmb	IAmb	21 17 21.9	
	comp=Z,5.2nm,0.8s						
E29M	**Blow River**	**60.91**	**340**	P	**P**	**21 17 14.7**	**+1.7**
F28M	**Old Crow**	**61.19**	**339**	P	**P**	**21 17 14.7**	**-0.2**
F28M				IAmb	IAmb	21 17 19.3	
	comp=Z,6.5nm,0.9s						
E28M	**Babbage River**	**61.54**	**340**	P	**P**	**21 17 19.5**	**+2.2**
E28M				IAmb	IAmb	21 17 54.2	
	comp=Z,7.2nm,1.5s						
GLI	**Glacier Island**	**61.56**	**331**		**P**	**21 17 18.1**	**+0.5**
J25K	**Salcha River,**	**62.01**	**335**	P	**P**	**21 17 20.9**	**+0.3**
J25K				IAmb	IAmb	21 17 24.5	
	comp=Z,6.7nm,1.1s						
E27K	**Coleen River**	**62.03**	**339**	P	**P**	**21 17 21.9**	**+1.3**
E27K				IAmb	IAmb	21 17 24.5	
	comp=Z,3.2nm,0.8s						
IL31		**62.68**	**335**	P	**P**	**21 17 23.9**	**-1.0**
ILAR	**Eielson Array**	**62.68**	**335**	P	**P**	**21 17 27.4**	**+2.5**
	comp=Z,3.3nm,0.7s,baz=117,slow=4.9,SNR=29						
ILAR				LR	LR	21 47 42.2	
	comp=Z,41nm,19.2s,baz=70,slow=39						
	comp=Z,3.3nm,0.7s						
ILAR	**Eielson Array**	**62.68**	**335**	P	**P**	**21 17 25.0**	**0.0**
BMAR	**Burnt Mountain**	**62.75**	**338**	P	**P**	**21 17 26.6**	**+1.2**
F25K	**Christian Rive**	**63.19**	**338**	P	**P**	**21 17 29.2**	**+0.8**
C27K	**Jago River**	**63.34**	**341**	P	**P**	**21 17 31.0**	**+1.7**
C27K				IAmb	IAmb	21 17 33.4	
	comp=Z,4.0nm,0.9s						
D25K	**Kavik River**	**64.09**	**340**	P	**P**	**21 17 35.9**	**+1.7**
E23K	**Chandalar**	**64.77**	**338**	P	**P**	**21 17 40.4**	**+1.6**
E23K				IAmb	IAmb	21 17 43.3	
	comp=Z,7.6nm,1.2s						
ESDC	**Sonseca Array**	**72.97**	**53**	P	**P**	**21 18 33.3**	**+2.9**
	comp=Z,1.3nm,0.8s,baz=286,slow=5.6,SNR=7.6						
	comp=Z,1.3nm,0.8s						
NOA	**NORSAR Array B**	**78.53**	**30**	LR	LR	21 52 04.6	
	comp=Z,17nm,19.4s,baz=285,slow=34						
VAE	**Valguarnera**	**87.46**	**52**	LR	LR	21 55 50.1	
	comp=Z,66nm,18.5s,baz=144,slow=34						
HHC	**Hu-ho-hao-te**	**120.31**	**345**	*eP*		**PKPdf**	**21 25 47.6**	**-4.5**
PZH	**PanZhiHua**	**136.20**	**351**	PKP		**PKPdf**	**21 26 21.8**	**-0.9**
ASAR	**Alice Springs**	**142.51**	**253**	PKP		**PKPdf**	**21 26 36.7**	**+2.6**
	comp=Z,0.5nm,0.8s,baz=95,slow=3.1,SNR=5.5						

*AEIC **15** 21:08:08.1±0.4,53.7°N±0.1°×166.3°W±0.1°,h73km±8km, Error ellipse: s-maj=24.2km s-min=4.4km az=152.0*

NEIC 15 21:08:08.1±0.9**,53.43°N**±0.04°×**166.00°W**±0.05**,h35**km±2km**, ML3.4**/6**, ML3.0**(AEIC)**, Error ellipse: s-maj=7.4km s-min=4.8km az=333.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.51**	**324**		Pn	21 08 19.3	+0.4
UNV					Sn	21 08 27.5	+1.1
UNV				IAML		21 08 28.9	
	comp=E,2μm,0.2s						
UNV				IAML		21 08 29.4	
	comp=N,2μm,0.3s						
MREP	**Makushin Rep't**	**0.58**	**311**		Pn	21 08 20.4	+0.3
MNAT	**Makushin Natee**	**0.61**	**318**		Pn	21 08 20.1	-0.2
MGOD	**Makushin Gods**	**0.64**	**305**		Pn	21 08 20.7	+0.1
AKMO	**Akutan Morgan**	**0.66**	**359**		Pn	21 08 20.8	-0.2
AKMO					Sn	21 08 30.8	+0.7
ZRO	**Akutan Zero**	**0.66**	**1**		Pn	21 08 20.9	-0.1
ZRO					Sn	21 08 30.9	+0.8
AKBBA	**Akutan Broad B**	**0.67**	**3**		Pn	21 08 21.1	-0.1
AKBBA					Sn	21 08 31.0	+0.6
MSW	**Makushin Switc**	**0.67**	**316**		Pn	21 08 20.5	-0.6
MSW					Sn	21 08 30.3	-0.2
MAPS	**Pakushin South**	**0.68**	**304**		Pn	21 08 21.1	-0.1
AHB	**Akutan Harbor**	**0.69**	**9**		Pn	21 08 21.4	0.0
AHB					Sn	21 08 31.6	+0.6
AKRB	**Akutan Reef Bi**	**0.70**	**356**		Pn	21 08 21.1	-0.4
AKUT	**Akutan**	**0.72**	**11**		Pn	21 08 21.6	-0.1
AKUT					Sn	21 08 31.6	+0.2
AKUT				IAML		21 08 32.3	
	comp=N,3μm,0.3s						
AKSA	**Akutan Strait**	**0.73**	**14**		Pn	21 08 21.8	-0.1
AKSA					Sn	21 08 32.2	+0.5
LVA	**Lava Point**	**0.73**	**358**		Pn	21 08 21.4	-0.5
LVA				Sn	Sn	21 08 31.4	-0.5
LVA				IAML		21 08 36.2	
	comp=N,2μm,0.6s						
AKLV	**Akutan Long Va**	**0.73**	**2**		Pn	21 08 21.4	-0.6
AKLV					Sn	21 08 31.7	-0.2
OKNC	**Okmok New Cone**	**1.27**	**272**		Pn	21 08 28.9	-0.5
OKNC					Sn	21 08 44.4	-0.8
OKWE	**Okmok W'ng Wal**	**1.34**	**273**		Pn	21 08 29.8	-0.6
WEBT	**Westdahl Beart**	**1.37**	**32**		Pn	21 08 30.4	-0.4
NIKH	**Nikolski High**	**1.78**	**256**		Pn	21 08 36.4	+0.1
NIKH					Sn	21 08 58.2	+0.5
FALS	**False Pass**	**2.08**	**46**		Pn	21 08 40.5	+0.1
FALS					Sn	21 09 05.0	-0.2
CLCO	**Concord Point,**	**2.34**	**255**		Pn	21 08 44.0	+0.1
DT1	**Dutton Round H**	**2.75**	**51**		Pn	21 08 49.7	0.0
DOL	**Dolgoi Island**	**2.97**	**53**		Pn	21 08 52.2	-0.5
SDPT	**Sand Point**	**3.75**	**57**	Pn	Pn	21 09 03.0	-0.5
CNBA	**Chernabura Isl**	**4.02**	**67**	Pn	Pn	21 09 07.1	+0.1

IDC 15 21:32:18.8±5.1**,6.42°N**×**94.00°E, h0**km**, mb3.3**/5**, mbtmp3.3**/5**, Error ellipse: s-maj=268.9km s-min=25.0km az=57.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**25.60**	**237**	T	T	22 04 38.8	
	baz=56,slow=76,SNR=29						
H08S2	**Diego Garcia H**	**25.60**	**237**	T	T	22 04 33.7	
	baz=56,slow=76,SNR=32						
H08S1	**Diego Garcia H**	**25.62**	**237**	T	T	22 04 41.9	
	baz=56,slow=76,SNR=10						
KURBB	**Kurchatov Arra**	**45.92**	**346**	P	P	21 40 42.5	-0.7
	0.4nm,0.7s,baz=171,slow=7.2,SNR=4.5						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**47.54**	**124**	P	P	21 40 55.7	-0.8
	0.2nm,0.8s,baz=299,slow=9.4,SNR=1.7						
	0.2nm,0.8s						
ZALV	**Zalesovo Beam**	**47.98**	**353**	P	P	21 40 58.4	-0.8
	0.2nm,0.2s,baz=178,slow=7.7,SNR=1.7						
	0.2nm,0.2s						
ASAR	**Alice Springs**	**49.10**	**129**	P	P	21 41 09.1	+0.6
	0.2nm,0.7s,baz=299,slow=7.8,SNR=1.7						
	0.2nm,0.7s						
BVAR	**Borovoye Array**	**50.32**	**342**	P	P	21 41 18.4	+1.2
	0.2nm,0.5s,baz=132,slow=8.0,SNR=1.7						
	0.2nm,0.5s						
H04N2	**CROZET ISLANDS**	**64.41**	**211**	T	T	22 53 36.3	
	baz=48,slow=75,SNR=9.1						
H04N1	**CROZET ISLANDS**	**64.42**	**211**	T	T	22 53 36.3	
	baz=48,slow=75,SNR=8.9						
H04N3	**CROZET ISLANDS**	**64.43**	**211**	T	T	22 53 29.4	
	baz=48,slow=75,SNR=6.0						

*TIR **15** 21:39:57.5,40.86°N×21.36°E, h17km±1km, Ml2.9/3*
*SKO **15** 21:39:58.0,40.85°N×21.37°E, h15km, ML2.7*
*THE **15** 21:39:57.8,41.°N±2.°×2.°1E±.°, h3km±3km, M2.6/8, MLh2.6/8*
*ATH **15** 21:39:57.8,40.86°N×21.35E, h2km, ML2.8/8, Manual Solution by S.Koutrakis First location: 2019/11/15 21:41:14, This location: 2019/11/16 05:53:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 15 21:39:58.0±1.0**,40.85N**±0.02°×**21.36E**±0.02**,h14**km±9km**, n47**,σ0°87/72**,2C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.49**	**243**	Pg	**Pg**	**21 40 07.3**	**-0.5**
KBN				Sg	**Sg**	**21 40 14.0**	**-0.3**
KBN				AML	AML	21 40 17.8	
	2.8nm,0.3s						
KBN	**Korca**	**0.49**	**243**	P	**Pg**	**21 40 07.0**	**-0.7**
KBN				S	**Sg**	**21 40 14.6**	**+0.3**
NEST	**Nestorio**	**0.50**	**209**	*e*Pg	**Pg**	**21 40 07.6**	**-0.3**
NEST				Sg	**Sg**	**21 40 14.3**	**-0.2**
NEST				AML	AML	21 40 16.0	
	5.9nm,0.4s						
NEST				AML	AML	21 40 16.1	
	7.7nm,0.5s						
NEST	**Nestorio**	**0.50**	**209**	P	**Pg**	**21 40 07.5**	**-0.4**
NEST				S	**Sg**	**21 40 14.9**	**+0.4**
NEST	**Nestorio**	**0.50**	**209**	P	**Pg**	**21 40 07.5**	**-0.3**
NEST				S	**Sg**	**21 40 14.5**	**0.0**
OHR	**Ohrid**	**0.50**	**302**	*i* Pg	**Pb**	**21 40 08.1**	**-0.5**
OHR				*i* Sg	**Sb**	**21 40 16.2**	**+0.4**
OHR				*e*Lg	Lg	21 40 16.4	
	comp=N,1μm,0.6s						
OHR				*e*Lg	Lg	21 40 16.6	
	comp=E,836nm,0.6s						
KZN	**Kozani**	**0.63**	**150**	P	**Pg**	**21 40 10.1**	**-0.2**
KZN				S	**Sb**	**21 40 19.4**	**-0.1**
KZN	**Kozani**	**0.63**	**150**	P	**Pg**	**21 40 10.4**	**+0.1**
KZN				S	**Sb**	**21 40 19.7**	**+0.1**
PENT	**Pentalofos**	**0.68**	**194**	P	**Pg**	**21 40 10.8**	**-0.4**
PENT	**Pentalofos**	**0.68**	**194**	P	**Pg**	**21 40 11.3**	**0.0**
PENT				S	**Sb**	**21 40 20.8**	**-0.2**
VAY	**Valandovo**	**1.03**	**62**	*i* Pg	**Pn**	**21 40 17.9**	**-0.2**
VAY				*i* Sg	**Sn**	**21 40 32.3**	**0.0**
VAY				*e*Lg	Lg	21 40 39.2	
	comp=N,75nm,0.6s						
VAY				*e*Lg	Lg	21 40 44.5	
	comp=E,73nm,0.6s						
PHP	**Peshkopia**	**1.08**	**321**	Pn	**Pb**	**21 40 17.6**	**-1.1**
PHP				Sn	**Sn**	**21 40 33.2**	**-0.6**
PHP				AML	AML	21 40 37.1	
	comp=E,1.0nm,0.8s						
PHP				AML	AML	21 40 37.1	
	comp=E,0.6nm,0.7s						
PHP	**Peshkopia**	**1.08**	**321**	P	**Pb**	**21 40 17.4**	**-1.2**
SKO	**Skopje**	**1.12**	**3**	*i* Pg	**Pg**	**21 40 20.1**	**+0.4**
SKO				*i* Sg	**Sn**	**21 40 35.8**	**+1.1**
LIT	**Litokhoron**	**1.14**	**131**	P	**Pn**	**21 40 19.4**	**-0.3**
LIT	**Litokhoron**	**1.14**	**131**	*i* Pg	**Pg**	**21 40 20.2**	**+0.1**
LIT				*i* Sg	**Sg**	**21 40 36.7**	**+1.8**
LIT	**Litokhoron**	**1.14**	**131**	P	**Pg**	**21 40 20.1**	**+0.1**
LIT				S	**Sn**	**21 40 34.8**	**-0.4**
KNT	**Kendrikon**	**1.21**	**75**	P	**Pg**	**21 40 21.0**	**-0.2**
KNT	**Kendrikon**	**1.21**	**75**	*i* Pg	**Pg**	**21 40 21.1**	**-0.2**
KNT				*i* Sg	**Sg**	**21 40 37.2**	**+0.2**
KNT	**Kendrikon**	**1.21**	**75**	P	**Pg**	**21 40 21.1**	**-0.2**
TIR	**Tirane**	**1.23**	**294**	Pn	**Pg**	**21 40 22.9**	**+1.1**
TIR				Sn	**Sg**	**21 40 39.6**	**+1.8**
THE	**Thessaloniki**	**1.24**	**100**	*i* Pg	**Pg**	**21 40 21.6**	**-0.3**
THE				*i* Sg	**Sg**	**21 40 40.8**	**+2.8**
THE	**Thessaloniki**	**1.24**	**100**	P	**Pg**	**21 40 21.9**	**+0.1**
JAN	**Janina**	**1.25**	**198**	P	**Pg**	**21 40 22.9**	**+0.8**
JAN				S	**Sg**	**21 40 38.9**	**+0.4**
HORT	**Hortiatis**	**1.35**	**100**	P	**Pg**	**21 40 23.3**	**-0.6**
THL	**Klokotos Trika**	**1.38**	**158**	Pn	**Pb**	**21 40 23.3**	**-0.4**
THL				Sn	**Sg**	**21 40 43.3**	**+0.8**
THL	**Klokotos Trika**	**1.38**	**158**	P	**Pn**	**21 40 22.9**	**0.0**
THL				S	**Sg**	**21 40 42.6**	**+0.1**
THL	**Klokotos Trika**	**1.38**	**158**	P	**Pn**	**21 40 23.0**	**+0.1**
THL				S	**Sg**	**21 40 42.7**	**+0.2**
TETR	**Tetrakomo, Epi**	**1.51**	**182**	P	**Pb**	**21 40 25.8**	**0.0**
SOH	**Sokhos**	**1.51**	**90**	*e*Pn	**Pb**	**21 40 26.1**	**+0.1**
SOH				*e*Sn	**Sg**	**21 40 47.1**	**+0.3**
SOH	**Sokhos**	**1.51**	**90**	P	**Pb**	**21 40 26.1**	**+0.1**
IGT	**Igoumenitsa**	**1.53**	**211**	Pn	**Pb**	**21 40 26.7**	**+0.4**
IGT				Sn	**Sg**	**21 40 50.3**	**+2.9**
IGT	**Igoumenitsa**	**1.53**	**211**	P	**Pg**	**21 40 27.1**	**-0.4**
PLG	**Polygyros**	**1.66**	**106**	P	**Pb**	**21 40 28.8**	**+0.4**
KKB	**Krupnik**	**1.66**	**53**	*e*Pn	**Pb**	**21 40 28.5**	**+0.1**
KKB				*e*Sn	**Sg**	**21 40 50.1**	**-1.3**
SRS	**Serrai**	**1.71**	**80**	*i* Pn	**Pb**	**21 40 29.4**	**+0.1**
SRS	**Serrai**	**1.71**	**80**	P	**Pb**	**21 40 29.3**	**0.0**
MAKR	**Makrakomi, Fth**	**1.93**	**162**	P	**Pb**	**21 40 32.1**	**-0.9**
MMB	**Musomishta**	**1.93**	**68**	P	**Pb**	**21 40 31.7**	**-1.4**
MMB	**Musomishta**	**1.93**	**68**	*i* Pn	**Pb**	**21 40 32.1**	**-1.0**
AGG	**Agios Georgios**	**1.97**	**157**	P	**Pb**	**21 40 32.4**	**-1.4**
BARS	**Barje**	**1.99**	**10**	*i* Pn	**Pb**	**21 40 32.8**	**-1.3**
OUR	**Ouranopolis**	**2.06**	**104**	P	**Pb**	**21 40 33.9**	**-1.4**
LKD2	**Lefkada island**	**2.13**	**195**	Pn	**Pb**	**21 40 35.6**	**-0.8**
LKD2				Sn	**Sb**	**21 41 04.1**	**+1.4**
LKD2	**Lefkada island**	**2.13**	**195**	P	**Pb**	**21 40 35.3**	**-1.2**
LKD2	**Lefkada island**	**2.13**	**195**	P	**Pb**	**21 40 35.5**	**-0.9**
ANX	**Ano Chora**	**2.30**	**169**	P	**Pb**	**21 40 37.8**	**-1.6**

*DJA **15** 21:45:36.6±1.2,2.°N±4.°×12.°6E±.°, h12km±12km, M3.6/7, MLv3.6/7*
*IDC **15** 21:45:40.9±1.8,1.°87N×126.°22E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=182.9km s-min=20.7km az=66.0*

ISC 15 21:45:37.7±5.5**,1.7N**±0.6×**125.99E**±0.0**9,h10**km**,n7, σ2°85/5, mb3.8/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.67**	**125**	P	Pn	**21 46 05.9**	**-1.2**
TNTI				S	**Sn**	**21 46 27.6**	**-1.1**
KMSI	**Cibinong**	**2.32**	**240**	P	**Pn**	**21 46 15.1**	**-0.9**
LUWI	**Luwuk**	**4.24**	**229**	P	**Pn**	**21 46 41.1**	**-1.4**
WRA	**Warramunga Arr**	**23.05**	**160**	P	**P**	**21 50 46.7**	**+3.3**
	0.7nm,0.4s,baz=339,slow=11,SNR=9.2						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.40**	**164**	P	P	21 51 21.4	+6.8
	0.4nm,0.4s,baz=344,slow=8.5,SNR=9.6						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.78**	**326**	P	P	21 55 40.7	+4.5
	0.5nm,0.4s,baz=122,slow=8.2,SNR=9.9						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.02**	**328**	P	P	21 56 09.8	+4.9
	0.6nm,0.5s,baz=131,slow=5.7,SNR=7.3						
	0.6nm,0.5s						

*IDC **15** 21:59:38.0±1.7,1.°76N×126.°35E, h0km, mb3.4/4, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=122.0km s-min=20.9km az=69.0*
*DJA **15** 21:59:41.6±0.8,2.°N±3.°×12.°6E±.°, h12km±6km, M3.6/9, MLv3.6/9*

ISC 15 21:59:43.6±1.0**,1.61N**±0.06×**126.40E**±0.08**,h35**km**,n9, σ1°24/11, mb3.5/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**131**	P	**Pn**	**22 00 05.6**	**+0.7**
SGSI	**Sangihe**	**2.24**	**337**	P	**Pn**	**22 00 18.3**	**0.0**
SGSI				S	**Sn**	**22 00 46.0**	**+1.3**
KMSI	**Cibinong**	**2.63**	**247**	P	**Pn**	**22 00 23.6**	**+0.1**
KMSI				S	**Sn**	**22 00 56.1**	**+1.9**
SANI	**Sanana**	**3.65**	**186**	P	**Pn**	**22 00 36.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P	**Pn**	**22 04 10.4**	**0.0**
	0.1nm,0.3s,baz=11,slow=16,SNR=1.5						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**22.79**	**160**	P	**P**	**22 04 43.5**	**+0.2**
	0.8nm,0.5s,baz=338,slow=11,SNR=9.6						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**26.16**	**164**	P	**P**	**22 05 15.9**	**+1.1**
	0.3nm,0.5s,baz=349,slow=8.5,SNR=7.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**22 09 38.9**	**-1.8**
	0.2nm,0.5s,baz=118,slow=8.0,SNR=4.3						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**22 10 08.2**	**-0.9**
	0.3nm,0.5s,baz=131,slow=6.2,SNR=4.1						
	0.3nm,0.5s						

*NEIC **15** 22:02:02.9±2.0,1.°57N±0.°08×126.°44E±0.°06, h31km±6km, mb4.7/55, Error ellipse: s-maj=12.2km s-min=7.5km az=204.0*
*DJA **15** 22:02:02.2±0.2,2.°N±2.°×12.°6E±.°, h10km, M4.6/23, mb4.9/23, mB5.1/10, MLv4.7/18, Mw(mB)4.5/10*
*IDC **15** 22:02:07.5±1.7,1.°51N×126.°39E, h80km±15km, mb4.2/24, mbtmp4.5/29, MS3.3/9, Error ellipse: s-maj=18.1km s-min=8.5km az=84.0*

ISC 15 22:02:03.3±0.3**,1.°57N**±0.°04×**126.°47E**±0.°05**,h35**km**,n146, σ1°892/151, mb4.6**/56**, MS3.4**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**131**		**Pn**	**22 02 23.8**	**+0.3**
TNTI	**Ternate**	**1.20**	**131**	P	**Pn**	**22 02 23.9**	**+0.3**
TNTI	**Ternate**	**1.20**	**131**	S	**Sn**	**22 02 39.5**	**+0.9**
TNTI	**Ternate**	**1.20**	**131**	P	**Pn**	**22 02 23.9**	**+0.3**
TNTI				S	**Sn**	**22 02 42.4**	**+3.8**
SGSI	**Sangihe**	**2.31**	**336**	P	**Pn**	**22 02 38.7**	**-0.1**
SGSI				S	**Sn**	**22 03 06.7**	**+0.7**
KMSI	**Cibinong**	**2.68**	**248**	P	**Pn**	**22 02 44.7**	**+0.8**
KMSI				S	**Sn**	**22 03 18.7**	**+3.5**
SANI	**Sanana**	**3.63**	**188**	P	**Pn**	**22 02 58.1**	**+1.1**
SANI	**Sanana**	**3.63**	**188**	S	**Sn**	**22 03 41.8**	**+3.2**
SANI	**Sanana**	**3.63**	**188**	P	**Pn**	**22 02 58.1**	**+1.1**
LUWI	**Luwuk**	**4.52**	**235**		**

comp=Z,19nm,0.8s
YULB Yu-li 22.27 347 P **P** **22 06 55.8 -1.7**
TPUB Ta-pu 22.33 346 P **P** **22 06 55.8 -2.4**
TPUB IAmb IAmb 22 07 04.7
comp=Z,30nm,0.6s
TPUB Ta-pu 22.33 346 P **P** **22 06 55.6 -2.6**
WB0 Warramunga Arr 22.58 160 P **P** **22 07 00.5 -0.4**
COEN Coen 22.63 134 P **P** **22 07 01.5 +0.1**
COEN Coen 22.63 134 P **P** **22 07 01.3 -0.1**
WRAB Tennant Creek 22.72 160 P **P** **22 07 02.3 -0.1**
WRAB IAmb IAmb 22 07 13.3
comp=Z,16nm,0.7s
WRAB Tennant Creek 22.72 160 P **P** **22 07 01.4 -1.0**
SSLB Suanglung 22.73 347 P **P** **22 07 00.1 -2.3**
SSLB IAmb IAmb 22 07 07.4
comp=Z,47nm,1.5s
SSLB Suanglung 22.73 347 P **P** **22 07 01.2 -1.2**
WRA Warramunga Arr 22.73 161 P **P** **22 07 01.3 -1.2**
comp=Z,15nm,0.6s,baz=339,slow=11,SNR=76
WRA PcP **PcP** **22 10 53.1 -0.8**
comp=Z,0.7nm,0.6s,baz=334,slow=2.0,SNR=3.6
WRA S **S** **22 11 06.7 -2.2**
comp=Z,0.3nm,0.5s,baz=343,slow=17,SNR=2.3
comp=Z,15nm,0.6s
WRA Warramunga Arr 22.73 161 P **P** **22 07 01.2 -1.2**
WR8 Warramunga Arr 22.79 160 P **P** **22 07 02.2 -0.9**
WR8 IAmb IAmb 22 07 07.7
comp=Z,16nm,0.7s
NACB Ninganchiao 22.96 349 P **P** **22 07 03.2 -1.6**
NACB IAmb IAmb 22 07 15.8
comp=Z,27nm,1.1s
NACB Ninganchiao 22.96 349 P **P** **22 07 05.1 +0.3**
YOJ Yonaguni jima 23.00 352 P **P** **22 07 04.9 -0.3**
JMJ Miyako jima 2 23.14 357 P **P** **22 07 07.4 +0.8**
PMG Port Moresby 23.31 118 LR LR 22 18 46.1
comp=Z,127nm,19.2s,baz=325,slow=43
PMG Port Moresby 23.31 118 P **P** **22 07 06.4 -2.0**
PMG IAmb IAmb 22 07 12.4
comp=Z,29nm,1.2s
YHNB Yeheng 23.49 348 P **P** **22 07 09.1 -1.0**
YHNB IAmb IAmb 22 07 18.9
comp=Z,50nm,1.5s
YHNB Yeheng 23.49 348 P **P** **22 07 10.1 0.0**
MBWA Marble Bar 23.53 196 P **P** **22 07 08.6 -1.9**
MBWA Marble Bar 23.53 196 P **P** **22 07 12.5 +2.0**
PSA00 Pilbara Seismi 23.89 195 P **P** **22 07 12.7 -1.2**
PSA00 Pilbara Seismi 23.89 195 P **P** **22 07 12.4 -1.5**
PSA00 IAmb IAmb 22 07 20.1
comp=Z,4.8nm,1.0s
QIS Mount Isa 25.48 150 P **P** **22 07 28.8 +0.4**
IPM Ipoh 25.57 277 P **P** **22 07 29.2 -0.2**
IPM IAmb IAmb 22 07 31.0
comp=Z,11nm,0.9s
AS31 Alice Springs 26.10 164 P **P** **22 07 33.2 -0.9**
ASAR Alice Springs 26.10 164 P **P** **22 07 33.9 -0.2**
comp=Z,3.0nm,0.3s,baz=350,slow=14,SNR=69
ASAR PcP **PcP** **22 11 01.0 -0.2**
comp=Z,1.2nm,0.5s,baz=348,slow=2.4,SNR=4.7
ASAR S **S** **22 12 05.0 +1.6**
comp=Z,0.4nm,0.7s,baz=74,slow=34,SNR=1.8
comp=Z,3.0nm,0.3s
ASAR Alice Springs 26.10 164 P **P** **22 07 33.3 -0.8**
RPSI Rantau Prapat 27.55 273 P **P** **22 07 45.2 -2.0**
GSI Gunungsitoli 28.89 270 P **P** **22 07 57.3 -1.8**
GSI IAmb IAmb 22 08 01.8
comp=Z,16nm,0.7s
CTAO Charters Tower 28.98 139 P **P** **22 07 59.1 -0.8**
CTAO IAmb IAmb 22 08 09.6
comp=Z,12nm,1.2s
MEEK Meekatharra 29.05 195 P **P** **22 07 59.7 -0.7**
NJ2 Nanjing 31.16 347 *e*P **P** **22 08 19.5 +0.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
CMAR Chiang Mai Arr 31.79 304 P **P** **22 08 24.5 -0.3**
comp=Z,0.8nm,0.4s,baz=113,slow=9.9,SNR=4.8
comp=Z,0.8nm,0.4s
CHTO Chiang Mai 31.96 304 P **P** **22 08 24.8 -1.4**
CHTO IAmb IAmb 22 08 28.6
comp=Z,3.7nm,0.7s
MORW Morawa 32.06 197 P **P** **22 08 25.1 -1.8**
MORW IAmb IAmb 22 08 43.3
comp=Z,5.5nm,0.8s
FORT Forrest 32.20 177 P **P** **22 08 27.7 -0.5**
FORT IAmb IAmb 22 08 36.9
comp=Z,7.0nm,0.7s
INKA Innaminka 32.21 156 P **P** **22 08 28.1 -0.2**
PZH PanZhiHua 34.34 318 P **P** **22 08 49.8 +2.7**
HNR Honiara 35.09 109 LR LR 22 23 34.6
comp=Z,54nm,18.6s,baz=298,slow=37
KSRS Korea Array 35.74 2 P **P** **22 08 58.9 +0.2**
comp=Z,1.8nm,0.6s,baz=179,slow=10,SNR=9.6
comp=Z,1.8nm,0.6s
STKA Stephens Creek 36.22 158 P **P** **22 09 02.2 -0.8**
comp=Z,2.8nm,0.3s,baz=334,slow=8.2,SNR=9.4
comp=Z,2.8nm,0.3s
XAN Xi'an 36.24 335 P **P** **22 09 02.1 -1.1**
XAN pP pP 22 09 11.9 -1.0
XAN pmax pmax
comp=Z,13nm,0.7s
MJAR Matsushiro Arr 36.46 16 P **P** **22 09 04.1 -0.9**
comp=Z,3.7nm,0.8s,baz=181,slow=10,SNR=8.2
MJAR S **S** **22 14 41.0 -3.6**
comp=Z,0.5nm,0.4s,baz=92,slow=38,SNR=1.8
MJAR LR LR 22 23 50.5
comp=Z,36nm,21.0s,baz=210,slow=36
comp=Z,3.7nm,0.8s
BJI Beijing 39.42 348 P **P** **22 09 29.3 -0.6**
BJI pmax pmax
comp=Z,4.0nm,1.0s
LZH Lanzhou 40.24 331 *e*P **P** **22 09 36.4 -0.6**
LZH pP pP 22 09 44.8 -2.0
LZH ScP **ScP** **22 15 31.8 +4.5**
LZH pmax pmax
comp=Z,13nm,1.1s
SHL Shillong 40.98 309 P **P** **22 09 41.0 -2.3**
SHL IAmb IAmb 22 09 44.5
comp=Z,14nm,0.6s
HHC Hu-ho-hao-te 41.37 343 *e*P **P** **22 09 48.5 +2.3**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,100nm,4.6s
USRK Ussuriysk Ar. 42.73 6 P **P** **22 09 58.0 +0.9**
comp=Z,5.7nm,0.8s,baz=193,slow=6.5,SNR=6.6
comp=Z,5.7nm,0.8s
GTA Gaotai 44.82 330 *e*P **P** **22 10 16.0 +1.8**
GTA PcP **PcP** **22 11 56.9 +1.2**
GTA pmax pmax
comp=Z,5.0nm,0.7s
GOMU GeErMu 45.23 323 P **P** **22 10 18.1 +0.3**
GOMU S **S** **22 16 56.8 +0.9**
GOMU pmax pmax
comp=Z,2.0nm,0.9s
EVN Everest 46.09 308 P **P** **22 10 22.9 -2.1**
EVN IAmb IAmb 22 10 27.5
comp=Z,24nm,1.5s
HILR Hailar Array B 48.15 354 P **P** **22 10 40.9 +0.9**
comp=Z,3.7nm,0.5s,baz=168,slow=9.1,SNR=5.5
comp=Z,3.7nm,0.5s
HEH HeiHe 48.51 1 *e*P **P** **22 10 42.8 +0.1**
HEH pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 49.09 343 P **P** **22 10 46.0 -1.4**
ULN IAmb IAmb 22 10 57.5
comp=Z,9.0nm,1.3s
SONM Songino Array 49.26 342 P **P** **22 10 48.3 -0.3**
comp=Z,2.7nm,0.7s,baz=162,slow=8.4,SNR=9.7
comp=Z,2.7nm,0.7s
WMQ Urumqi 54.35 326 *e*P **P** **22 11 27.8 +1.1**
WMQ pmax pmax
comp=Z,17nm,0.9s
PETK Petropavlovsk- 57.52 22 P **P** **22 11 49.9 +0.8**
comp=Z,4.4nm,0.5s,baz=186,slow=5.1,SNR=12
comp=Z,4.4nm,0.5s
MKAR Makanchi Array 59.18 326 P **P** **22 11 59.8 -1.1**
comp=Z,4.4nm,0.5s,baz=120,slow=7.6,SNR=43
MKAR LR LR 22 39 48.5
comp=Z,49nm,18.6s,baz=110,slow=38
comp=Z,4.4nm,0.5s
YAK Yakutsk 60.36 2 P **P** **22 12 09.2 +0.6**
ARSB Arslanbob 62.23 317 IAmb IAmb 22 12 25.0
comp=Z,4.4nm,1.0s
ZALV Zalesovo Beam 62.39 334 P **P** **22 12 20.5 -2.0**
comp=Z,1.5nm,0.4s,baz=130,slow=6.3,SNR=8.4
comp=Z,1.5nm,0.4s
ZALV Zalesovo Beam 62.39 334 P **P** **22 12 22.0 -0.4**

KBL Kabul 62.64 308 P **P** **22 12 24.1 -0.7**
GAR Garm 63.20 314 P **P** **22 12 29.0 +0.6**
KURBB Kurchatov Arra 63.42 328 P **P** **22 12 28.2 -1.1**
comp=Z,6.3nm,0.5s,baz=128,slow=6.3,SNR=41
comp=Z,6.3nm,0.5s
KURK Kurchatov 63.42 328 P **P** **22 12 28.5 -0.9**
SEY Seymchan 64.18 13 LR LR 22 39 23.5
comp=Z,14nm,21.9s,baz=44,slow=35
BVAR Borovoye Array 66.99 328 P **P** **22 13 03.6 -1.5**
comp=Z,1.9nm,0.4s,baz=134,slow=6.1,SNR=8.2
BVAR LR LR 22 44 09.1
comp=Z,25nm,20.9s,baz=106,slow=36
comp=Z,1.9nm,0.4s
TIXI Tiksi 69.99 1 P **P** **22 13 11.0 +0.1**
TIXI IAmb IAmb 22 13 11.8
comp=Z,8.6nm,1.1s
ARTI Arti 76.70 328 P **P** **22 13 51.7 +1.0**
RAYN Ar Rayn 81.09 293 P **P** **22 14 15.2 -0.5**
RAYN IAmb IAmb 22 14 19.2
comp=Z,6.0nm,0.8s
VNDA Vanda 81.33 173 P **P** **22 14 16.0 +0.3**
comp=Z,2.9nm,0.5s,baz=321,slow=8.4,SNR=11
VNDA LR LR 22 50 21.6
comp=Z,17nm,20.1s,baz=353,slow=36
comp=Z,2.9nm,0.5s
VNDA Vanda 81.33 173 P **P** **22 14 16.5 +0.8**
VNDA IAmb IAmb 22 14 20.3
comp=Z,3.4nm,0.7s
MAW Mawson 81.65 200 P **P** **22 14 17.4 -0.2**
comp=Z,2.2nm,0.7s,baz=74,slow=6.4,SNR=4.1
comp=Z,2.2nm,0.7s
KBZ Khabaz 84.27 314 P **P** **22 14 30.8 -0.8**
comp=Z,3.3nm,0.7s,baz=111,slow=7.1,SNR=10
comp=Z,3.3nm,0.7s
SLKM Skilak Lake 85.34 30 P **P** **22 14 37.7 +1.0**
COLD Coldfoot 85.97 23 IAmb IAmb 22 14 42.3
comp=Z,7.2nm,0.9s
TOLK Toolik Lake Re 86.34 21 IAmb IAmb 22 14 44.7
comp=Z,8.7nm,1.2s
ILAR Eielson Array 87.15 25 P **P** **22 14 44.3 -1.2**
comp=Z,0.8nm,0.8s,baz=250,slow=4.9,SNR=10
comp=Z,0.8nm,0.8s
MMAI Mount Meron Ar 90.05 303 P **P** **22 14 58.6 -1.4**
comp=Z,3.4nm,0.7s,baz=82,slow=6.2,SNR=5.5
comp=Z,3.4nm,0.7s
BRTR Keskin Array B 91.19 310 P **P** **22 15 03.7 -1.5**
comp=Z,0.8nm,0.7s,baz=142,slow=6.3,SNR=6.7
comp=Z,0.8nm,0.7s
ARCES ARCESS Array B 92.37 340 P **P** **22 15 07.8 -2.2**
comp=Z,3.7nm,0.8s,baz=95,slow=5.5,SNR=7.7
comp=Z,3.7nm,0.8s
AKASG Malin Array Be 93.39 321 P **P** **22 15 15.6 +0.6**
comp=Z,0.6nm,0.5s,baz=70,slow=4.5,SNR=2.3
comp=Z,0.6nm,0.5s
FINES FINESS Array B 93.60 332 P **P** **22 15 14.1 -1.6**
comp=Z,2.1nm,0.8s,baz=27,slow=1.3,SNR=7.0
comp=Z,2.1nm,0.8s
BURAR Bucovina Array 96.43 318 P **P** **22 15 28.6 -0.6**
BURAR IAmb IAmb 22 15 36.7
comp=Z,3.1nm,0.8s
BUR08 Bucovina Ar. S 96.44 318 IAmb IAmb 22 15 36.0
comp=Z,5.4nm,1.1s
HFS Hagfors 99.80 332 P **Pdif** **22 15 44.2 +0.4**
comp=Z,1.2nm,0.8s,baz=91,slow=7.6,SNR=1.3
comp=Z,1.2nm,0.8s
LANS Liptovska Anna 99.87 320 *e*PDIFF **Pdif** **22 15 43.1 -1.4**
SCHQ Schefferville 122.73 9 PKP **PKPdf** **22 20 55.1 -0.4**
comp=Z,2.7nm,0.6s,baz=234,slow=19,SNR=1.7
TXAR Lajitas Array 123.11 53 PKP **PKPdf** **22 20 55.1 -2.0**
comp=Z,0.5nm,0.8s,baz=278,slow=2.2,SNR=4.7

IDC 15 22:09:58.5±2.1, 16.71S×177.58W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=123.4km s-min=27.8km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
WRA	**Warramunga Arr**	**45.64**	**258**	P	P	22 18 21.5	+0.3
	0.4nm,0.4s,baz=96,slow=7.5,SNR=10						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**45.89**	**253**	P	P	22 18 22.7	-0.5
	0.2nm,0.3s,baz=88,slow=8.7,SNR=5.7						
	0.2nm,0.3s						
ILAR	**Eielson Array**	**84.55**	**13**	P	P	22 22 32.8	-0.4
	0.3nm,0.4s,baz=207,slow=5.8,SNR=7.7						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**84.69**	**57**	P	P	22 22 35.1	+0.3
	0.6nm,0.7s,baz=241,slow=4.9,SNR=7.6						
	0.6nm,0.7s						

*IDC **15** 22:29:48.8±3.4, 38.83N×122.89W, h0km, mbtmp3.2/3, ML2.8/2, Error ellipse: s-maj=43.4km s-min=28.0km az=19.0.*
*NEIC **15** 22:29:48.2±2.1, 38.822N±0.007×122.72W±0.02, h2km±5km, Error ellipse: s-maj=2.5km s-min=1.0km az=89.0*
*NCEDC **15** 22:29:48.6±1.8, 38.81N±0.01×122.79W±0.02, h4km, ML3.3/79, ML3.1/124(NEIC), Error ellipse: s-maj=2.2km s-min=1.7km az=58.0*

ISC 15 22:29:48.8±0.8, 38.79N±0.02×122.82W±0.02, h11km±4km, n114, σ0.9 90/106, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
GDXM	**Geysers**	**0.03**	**50**	Pg	**Pg**	**22 29 49.5**	**-1.5**
GDXM				Sg	**Sg**	**22 29 50.2**	**-2.3**
GAXM	**Alexander Vall**	**0.10**	**147**		**Pg**	**22 29 50.9**	**-0.6**
GPMM	**Pine Mountain**	**0.11**	**300**		**Pg**	**22 29 51.5**	**-0.3**
GPMM					**Sg**	**22 29 53.8**	**-0.2**
GCVM	**Cloverdale**	**0.15**	**262**		**Pb**	**22 29 52.7**	**-1.0**
GRTM	**Round Top Moun**	**0.19**	**38**		**Pb**	**22 29 54.3**	**-0.1**
HOPS	**Hopland Field**	**0.28**	**316**		**Pg**	**22 29 54.4**	**-0.2**
MNRC	**McLaughlin Min**	**0.31**	**73**		**Pg**	**22 29 54.9**	**-0.2**
GSNM	**Snow Mountain**	**0.33**	**297**		**Pb**	**22 29 55.8**	**-0.9**
GHGM	**Hogback Ridge**	**0.34**	**359**		**Pg**	**22 29 55.0**	**-0.6**
GALB	**Galbreath Wild**	**0.35**	**282**		**Pb**	**22 29 56.2**	**-0.9**
FTR	**Fort Ross**	**0.38**	**225**		**Pb**	**22 29 57.3**	**-0.3**
NTYM	**Taylor**	**0.42**	**163**		**Pb**	**22 29 57.5**	**-0.7**
BONV	**Boonville, CA**	**0.46**	**296**		**Pb**	**22 29 58.6**	**-0.3**
OAKV	**Oakville Exper**	**0.48**	**138**		**Pb**	**22 29 58.3**	**-1.0**
CVS	**Carmenet Viney**	**0.53**	**147**		**Pb**	**22 29 59.1**	**-1.0**
CVS				Sg	**Sg**	**22 30 06.2**	**+0.1**
CVS				IAML		22 30 11.0	
	comp=E,2μm,0.6s						
GWRM	**Wonder Ranch**	**0.56**	**318**		**Pb**	**22 29 59.8**	**-0.9**
NAPC	**Atlas Peak**	**0.57**	**128**		**Pg**	**22 29 59.6**	**-0.2**
GHOM	**Hamilton Openi**	**0.62**	**295**		**Pb**	**22 30 01.4**	**-0.2**
MCCM	**Marconi Confer**	**0.65**	**184**		**Pb**	**22 30 02.3**	**+0.2**
MCCM	**Marconi Confer**	**0.65**	**184**	IAML		22 30 18.1	
	comp=E,1μm,1.0s						
MCCM				IAML		22 30 22.3	
	comp=N,1μm,0.8s						
SNT	**Sears Point**	**0.67**	**154**		**Pg**	**22 30 01.6**	**-0.2**
NGVM		**0.70**	**137**		**Pb**	**22 30 02.3**	**-0.7**
NOLM	**Olema**	**0.75**	**178**		**Pb**	**22 30 04.0**	**+0.1**
RUSS	**Russell Ranch**	**0.79**	**108**		**Pn**	**22 30 05.1**	**-0.7**
DCMP	**DeCamp, Califo**	**0.79**	**329**		**Pb**	**22 30 04.1**	**-0.5**
NPMM	**Point Reyes**	**0.81**	**191**		**Pn**	**22 30 05.1**	**-1.0**
KRKM	**Rackout Spring**	**0.82**	**340**		**Pb**	**22 30 05.1**	**0.0**
GTC	**Three Chop Rid**	**0.83**	**317**		**Pb**	**22 30 05.1**	**-0.3**
NLHM	**Lake Herman**	**0.85**	**142**		**Pb**	**22 30 05.0**	**-0.6**
PINL	**Point Pinole R**	**0.86**	**155**		**Pb**	**22 30 05.5**	**-0.2**
OSUM	**Sutter Buttes**	**0.89**	**57**		**Pg**	**22 30 05.2**	**-0.9**
CPMM	**Point Molate**	**0.90**	**159**		**Pb**	**22 30 06.3**	**-0.2**
SUTB	**Sutter Butte**	**0.92**	**61**		**Pg**	**22 30 05.1**	**-1.4**
SUTB	**Sutter Butte**	**0.92**	**61**	IAML		22 30 26.7	
	comp=E,636nm,0.6s						
SUTB				IAML		22 30 33.3	
	comp=N,527nm,0.7s						
CSPM	**San Pablo Rdg**	**0.92**	**154**		**Pn**	**22 30 07.3**	**-0.4**
CPIM	**Pinole Ridge**	**0.93**	**149**		**Pn**	**22 30 07.1**	**-0.7**
JEPS	**Jepson Natural**	**0.94**	**124**		**Pn**	**22 30 08.0**	**0.0**
CTAM	**Taylor**	**0.99**	**140**		**Pn**	**22 30 08.7**	**0.0**
INGLE	**Inglenook, Smi**	**1.00**	**317**		**Pn**	**22 30 09.2**	**+0.4**
BRK	**Berkeley--Havi**	**1.02**	**154**		**Pn**	**22 30 08.3**	**-0.7**
VAK	**Adit at Lawren**	**1.02**	**154**		**Pn**	**22 30 08.3**	**-0.7**
BL67	**Building 67, L**	**1.02**	**154**		**Pn**	**22 30 08.5**	**-0.6**
BRIB	**Briones**	**1.02**	**149**		**Pb**	**22 30 07.9**	**-0.6**
BKS	**Berkeley--Byer**	**1.02**	**153**		**Pn**	**22 30 08.4**	**-0.7**
HMR	**Hamilton Ranch**	**1.02**	**128**		**Pn**	**22 30 09.6**	**+0.6**
JPRM	**Presidio of Sa**	**1.03**	**165**		**Pn**	**22 30 08.6**	**-0.6**
KCPM	**Cahto Peak**	**1.07**	**327**		**Pg**	**22 30 08.9**	**-0.6**
KCPM				IAML		22 30 31.4	

comp=N,701nm,0.7s
FARB Farallon Islan 1.10 187 **Pn** **22 30 09.6 -0.5**
FARB IAML 22 30 30.7
comp=E,605nm,1.3s
BDM Black Diamond 1.12 138 **Pb** **22 30 09.8 -0.5**
TWIT Twitchell Isla 1.13 128 **Pn** **22 30 11.1 +0.5**
CRHM Round Hill Res 1.14 145 **Pb** **22 30 09.9 -0.6**
KBNM Bluenose Ridge 1.14 345 **Pn** **22 30 11.7 +0.9**
JSBM San Bruno Moun 1.16 163 **Pg** **22 30 10.7 -0.4**
OHCM Honcut 1.17 62 **Pb** **22 30 09.4 -1.7**
JMGM Milagra Ridge 1.18 167 **Pg** **22 30 11.0 -0.6**
CSLM San Leandro Hi 1.20 152 **Pg** **22 30 11.5 -0.3**
CLCB Lake Chabot 1.21 150 **Pn** **22 30 10.6 -1.0**
SAC San Andreas 1.25 165 **Pn** **22 30 11.9 -0.5**
JCPM Coyote Point 1.26 162 **Pg** **22 30 12.5 -0.6**
CMOB Morgan Territo 1.26 140 **Pn** **22 30 11.8 -0.7**
ORV Oroville 1.28 53 **Pn** **22 30 10.9 -1.7**
JCHM Cahill Ridge 1.32 164 **Pn** **22 30 12.0 -1.1**
CNIC Niles Canyon 1.36 150 **Pn** **22 30 13.4 -0.4**
O02D Mt. Diablo Mer 1.38 1 **Pb** **22 30 14.4 -0.4**
WENL Wente Vineyard 1.44 144 **Pb** **22 30 14.6 -0.9**
JRSC Jasper Ridge 1.46 161 **Pn** **22 30 14.1 -1.0**
JRSC **Pg** **22 30 17.9 +1.1**
JRSC IAML 22 30 37.5
comp=N,372nm,0.9s
CSTL Corral Hollow 1.55 137 **Pn** **22 30 16.3 -0.1**
CALM Calaveras Res. 1.56 149 **Pn** **22 30 15.8 -0.7**
JBMM Black Mountain 1.56 160 **Pb** **22 30 17.5 -0.2**
KMRM Mail Ridge 1.59 335 **Pn** **22 30 14.3 -2.6**
KMRM **Pg** **22 30 20.9 +1.6**
KMRM IAML 22 30 27.1
comp=N,266nm,0.8s
KMRM IAML 22 30 55.6
comp=E,302nm,0.9s
WELL Weller Preserv 1.68 101 **Pn** **22 30 17.4 -0.8**
CMMM Mount Mocho 1.69 141 **Pn** **22 30 17.7 -0.7**
O03E Paynes Creek 1.70 27 **Pn** **22 30 17.3 -1.2**
MHC Mount Hamilton 1.72 147 **Pn** **22 30 18.5 -0.3**
MHC IAML 22 31 02.0
comp=N,152nm,1.2s
CCOB Coe Ranch Numb 1.78 149 **Pn** **22 30 19.3 -0.2**
KHBM Hayfork Bally 1.89 351 **Pn** **22 30 21.2 -0.1**
KMPM Mount Pierce 1.91 329 **Pb** **22 30 22.0 -1.7**
KMPM IAML 22 30 36.4
comp=N,166nm,1.2s
KMPM IAML 22 31 13.4
comp=E,204nm,1.9s
DONR Donner Summit 2.02 73 **Pn** **22 30 23.6 +0.5**
CMB Columbia Colle 2.06 111 **Pn** **22 30 22.8 -0.5**
CMB IAML 22 31 04.2
comp=N,97nm,0.7s
N02D Trinity Center 2.18 2 **Pn** **22 30 25.1 0.0**
BEKR Beckworth 2.19 60 **Pn** **22 30 25.9 +0.6**
KHMM Horse Mountain 2.20 342 Pn **Pn** **22 30 26.0 +0.6**
KHMM IAML 22 30 41.2
comp=E,86nm,1.7s
KHMM IAML 22 31 15.3
comp=N,89nm,2.3s
JCC Jacoby Creek, 2.23 336 Pn **Pn** **22 30 26.2 +0.5**
JCC IAML 22 31 26.2
comp=N,80nm,2.5s
JCC IAML 22 31 50.5
comp=E,79nm,2.0s
MPK Martis Peak 2.23 76 **Pn** **22 30 26.5 +0.5**
HATC Hat Creek Radi 2.28 27 Pn **Pn** **22 30 26.7 +0.3**
HATC IAML 22 31 18.5
comp=E,95nm,1.6s
HATC IAML 22 31 28.7
comp=N,107nm,2.4s
SAO San Andreas Ge 2.30 151 **Pn** **22 30 25.9 -0.7**
PNTR Pine Nut 2.53 82 **Pn** **22 30 31.3 +1.3**
M03C McCloud 2.54 12 **Pn** **22 30 30.8 +0.7**
M03C IAML 22 31 24.0
comp=N,66nm,1.3s
M03C IAML 22 31 50.8
comp=E,80nm,1.4s
KRPM Rodgers 2.54 339 **Pn** **22 30 30.1 +0.1**
KRPM IAML 22 31 21.4
comp=E,79nm,1.6s
KRPM IAML 22 31 29.5
comp=N,126nm,4.8s
M02C Callahan 2.60 359 **Pn** **22 30 30.6 -0.3**
BBGB Big Mountain B 2.62 147 **Pn** **22 30 31.5 +0.3**
WAKR Walker 2.66 95 **Pn** **22 30 33.6 +1.7**
WAKR IAML 22 30 46.9
comp=N,75nm,0.6s
WAKR IAML 22 31 12.5
comp=E,103nm,0.8s
PAHR Pah Rah Range 2.82 70 **Pn** **22 30 34.7 +0.7**
PAHR IAML 22 31 26.5
comp=N,50nm,1.6s
PAHR IAML 22 31 36.2
comp=E,56nm,1.5s
YBH Yreka Blue Hor 2.94 2 Pn **Pn** **22 30 36.2 +0.7**
YBH **Pg** **22 30 43.1 -2.0**
PMPB Monarch Peak 3.03 147 IAML 22 31 52.2
comp=E,70nm,1.6s
PMPB IAML 22 31 53.0
comp=N,85nm,1.8s
HULI Fort Hunter Li 3.04 155 IAML 22 31 46.9
comp=E,75nm,1.6s
KSXB Camp Six Broad 3.14 345 **Pn** **22 30 39.8 +1.4**
KSXB IAML 22 32 17.6
comp=E,38nm,3.7s
MDPB Devils Postpil 3.17 110 IAML 22 31 28.7
comp=E,68nm,0.9s
MDPB IAML 22 31 30.9
comp=N,70nm,0.7s
RYN Ryan 3.37 91 IAML 22 31 41.2
comp=E,55nm,0.9s
RYN IAML 22 31 46.6
comp=N,39nm,0.9s
PKD Bear Valley Ra 3.37 147 **Pn** **22 30 41.1 -0.4**
PKD IAML 22 31 35.7
comp=N,28nm,3.2s
PKD IAML 22 31 49.4
comp=E,32nm,1.4s
LHV Little Huntoon 3.43 98 **Pn** **22 30 43.5 +1.4**
L04D Klamath Falls 3.45 6 **Pn** **22 30 42.6 0.0**
L04D IAML 22 31 54.2
comp=E,29nm,3.3s
NVAR Mina Array Bea 3.56 94 Pn **Pn** **22 30 45.2 +1.0**
comp=E,1.1nm,0.3s,baz=269,slow=15,SNR=13
NVAR Pg **Pb** **22 30 52.4 +0.6**
comp=E,3.5nm,0.3s,baz=273,slow=17,SNR=29
NVAR Lg Lg 22 31 40.8
comp=E,1.6nm,0.3s,baz=280,slow=25,SNR=4.3
comp=E,2.6nm,0.5s
KBO Bosley Butte 3.58 343 Pn **Pn** **22 30 43.9 -0.4**
DSP Deep Springs 4.08 109 IAML 22 31 58.6
comp=E,22nm,1.4s
DSP IAML 22 32 07.9
comp=N,19nm,2.2s
BBOR Butler Butte 4.09 1 IAML 22 33 29.6
comp=E,17nm,4.0s
CWC Cottonwood Cre 4.43 120 IAML 22 32 04.8
comp=E,18nm,2.2s
CWC IAML 22 32 17.8
comp=N,24nm,1.3s
GMN Gold Mountain 4.63 107 IAML 22 32 24.2
comp=N,12nm,1.1s
ISA Isabella, Lake 4.67 131 IAML 22 31 48.5
comp=N,23nm,0.2s
WVOR Wild Horse Val 4.83 40 IAML 22 32 29.2
comp=N,10nm,4.9s
WVOR IAML 22 33 08.4
comp=N,9.9nm,4.1s
CLC China Lake 5.11 124 IAML 22 32 34.8
comp=E,8.9nm,3.8s
CLC IAML 22 32 43.7
comp=N,8.4nm,4.7s
WCT Wildcat Mounta 5.30 110 IAML 22 32 48.2
comp=N,9.9nm,4.7s
WCT IAML 22 32 53.6
comp=E,8.9nm,4.5s
PDAR Pinedale Array 10.81 64 Pn Pn 22 32 28.7 +5.0
comp=E,1.5nm,0.9s,baz=251,slow=14,SNR=4.4
TXAR Lajitas Array 18.43 115 Pn **Pn** **22 34 07.5 +3.1**
baz=303,slow=9.1,SNR=6.6
comp=E,0.5nm,0.8s

*IDC **15** 22:30:07.9±1.9, 3.26S×128.71E, h0km, mb3.8/3, mbtmp3.8/5, ML3.4/2, MS3.2/1, Error ellipse: s-maj=123.1km s-min=23.2km az=72.0*

DJA ***15*** *22:30:10.0±0.3,4°S±3°×12°8E±°, h10km, M3.7/8, MLv3.7/8*
ISC 15 22:30:10.5±1.0,**3°56S**±0°06×**128°24E**±0°03,**h13**km±7km, **n13**,σ1§**00**/17,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.13**	**198**	P	**Pg**	**22 30 14.1**	**+0.2**
AAI				S	**Sg**	**22 30 16.5**	**+0.2**
MSAI	**Masohi**	**0.72**	**73**	P	**Pg**	**22 30 23.6**	**-0.9**
MSAI				S	**Sg**	**22 30 34.1**	**0.0**
NLAI	**Namlea**	**1.18**	**286**	P	**Pg**	**22 30 31.3**	**-1.9**
NLAI				S	**Sg**	**22 30 48.5**	**0.0**
BNDI	**Bandanaira**	**1.92**	**120**	P	**Pn**	**22 30 41.5**	**-1.4**
SANI	**Sanana**	**2.70**	**304**	P	**Pn**	**22 30 54.1**	**+0.5**
SANI				S	**Sn**	**22 31 27.9**	**+1.7**
SWI	**Sorong**	**4.04**	**49**	P	**Pn**	**22 31 12.8**	**+0.7**
SWI				S	**Sn**	**22 32 00.2**	**+0.9**
FAKI	**Fak Fak**	**4.06**	**81**	P	**Pn**	**22 31 12.9**	**+0.6**
DAV	**Davao City (W)**	**10.89**	**346**	LR	LR	22 36 03.1	
	comp=Z,141nm,21.5s,baz=131,slow=33						
FITZ	**Fitzroy Crossi**	**14.67**	**190**	Pn	**P**	**22 33 44.1**	**0.0**
	0.2nm,0.3s,baz=25,slow=11,SNR=2.0						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**17.34**	**160**	P	**Pn**	**22 34 12.0**	**-0.4**
	0.1nm,0.3s,baz=342,slow=12,SNR=6.6						
	1.9nm,0.9s						
ASAR	**Alice Springs**	**20.73**	**165**	P	**P**	**22 34 52.0**	**+1.1**
	4.5nm,0.7s,baz=346,slow=11,SNR=47						
	4.5nm,0.7s						
MKAR	**Makanchi Array**	**64.40**	**327**	P	**P**	**22 40 46.0**	**-0.4**
	0.7nm,0.7s,baz=114,slow=7.0,SNR=6.1						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**68.68**	**329**	P	**P**	**22 41 13.2**	**-0.5**
	0.6nm,0.7s,baz=132,slow=5.6,SNR=6.4						
	0.6nm,0.7s						

IDC ***15*** *22:31:51.1±1.5,3°21N×127°34E, h0km, mb3.7/6, mbtmp3.8/6, MS2.8/1, Error ellipse: s-maj=112.2km s-min=19.0km az=69.0*
DJA ***15*** *22:31:58.9±0.5,3°N±3°×12°7E±°, h10km, M3.8/6, MLv3.8/6*
ISC 15 22:31:56.6±1.4,**3°2N**±0°2×**127°1E**±0°2,**h35**km,**n8**,σ1§**50**/8, **mb3.7**/6,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.64**	**289**	P	**Pn**	**22 32 23.8**	**+0.8**
SGSI				S	**Sn**	**22 32 41.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**21.16**	**184**	P	**P**	**22 36 40.7**	**+1.8**
	1.6nm,0.8s,baz=27,slow=13,SNR=3.1						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**24.03**	**163**	P	**P**	**22 37 07.7**	**-0.8**
	0.7nm,0.4s,baz=341,slow=10,SNR=7.5						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**27.47**	**166**	P	**P**	**22 37 38.1**	**-1.6**
	0.3nm,0.5s,baz=342,slow=8.1,SNR=4.6						
	0.3nm,0.5s						
JNU	**Nakatsue**	**30.03**	**6**	LR	LR	22 50 53.4	
	comp=Z,19nm,21.1s,baz=326,slow=38						
STKA	**Stephens Creek**	**37.46**	**159**	P	**P**	**22 39 06.6**	**-0.3**
	1.2nm,0.2s,baz=0.0,slow=7.1,SNR=4.0						
	1.2nm,0.2s						
MKAR	**Makanchi Array**	**58.23**	**325**	P	**P**	**22 41 46.8**	**-0.7**
	0.9nm,0.8s,baz=117,slow=7.0,SNR=5.0						
	0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**62.42**	**327**	P	**P**	**22 42 17.3**	**+1.3**
	0.8nm,0.7s,baz=126,slow=6.5,SNR=8.1						
	0.8nm,0.7s						

DJA ***15*** *22:35:14.1±0.3,4°S±3°×12°8E±°, h10km, M4.1/10, mb4.2/2, MLv4.0/10*
IDC ***15*** *22:35:23.0±5.3,3°28S×129°67E, h112km±47km, mb3.7/6, mbtmp4.0/8, Error ellipse: s-maj=74.8km s-min=11.7km az=72.0*
ISC 15 22:35:15.1±1.0,**3°67S**±0°06×**128°30E**±0°04,**h18**km±3km, **n15**,σ1§**86**/21,**mb4.1**/5,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.11**	**263**	P	**Pg**	**22 35 19.1**	**+0.2**
AAI				S	**Sg**	**22 35 20.8**	**-0.6**
MSAI	**Masohi**	**0.70**	**63**	P	**Pg**	**22 35 27.8**	**-1.0**
MSAI				S	**Sg**	**22 35 36.5**	**-1.9**
NLAI	**Namlea**	**1.27**	**290**	P	**Pn**	**22 35 36.9**	**-1.0**
NLAI				S	**Sb**	**22 35 54.9**	**+0.3**
BNDI	**Bandanaira**	**1.81**	**118**	P	**Pn**	**22 35 43.6**	**-1.7**
SANI	**Sanana**	**2.82**	**305**	P	**Pn**	**22 35 58.4**	**-0.8**
SANI				S	**Sn**	**22 36 33.8**	**+1.1**
FAKI	**Fak Fak**	**4.01**	**79**	P	**Pn**	**22 36 17.6**	**+2.0**
FAKI				S	**Sn**	**22 37 03.6**	**+1.4**
SWI	**Sorong**	**4.07**	**47**	P	**Pn**	**22 36 16.9**	**+0.5**
SWI				S	**Sn**	**22 37 04.1**	**+0.6**
FITZ	**Fitzroy Crossi**	**14.57**	**190**	P	**P**	**22 38 51.2**	**+4.4**
	2.2nm,0.5s,baz=24,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**17.21**	**160**	P	**Pn**	**22 39 15.5**	**+0.8**
	2.0nm,0.8s,baz=346,slow=12,SNR=6.9						
WRA				S	**Sn**	**22 42 23.7**	**-2.1**
	0.1nm,0.3s,baz=96,slow=9.7,SNR=1.4						
ASAR	**Alice Springs**	**20.60**	**165**	P	Pn	22 39 56.1	+0.5
	5.5nm,0.6s,baz=345,slow=11,SNR=41						
ASAR				S	**S**	**22 43 39.5**	**-3.6**
	1.9nm,1.0s,baz=349,slow=24,SNR=7.9						
	5.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**36.33**	**308**	P	P	22 42 24.6	+6.5
	1.0nm,0.3s,baz=104,slow=7.7,SNR=4.4						
	1.0nm,0.3s						
MKAR	**Makanchi Array**	**64.53**	**327**	P	**P**	**22 45 50.6**	**-0.4**
	1.0nm,0.5s,baz=117,slow=8.4,SNR=17						
	1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**67.87**	**334**	P	**P**	**22 46 10.7**	**-1.5**
	0.6nm,0.6s,baz=112,slow=6.5,SNR=4.0						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**68.81**	**329**	P	**P**	**22 46 17.4**	**-0.7**
	1.4nm,0.6s,baz=131,slow=5.9,SNR=14						
	1.4nm,0.6s						
BVAR	**Borovoye Array**	**74.36**	**328**	P	**P**	**22 46 50.3**	**-1.3**
	0.6nm,0.6s,baz=131,slow=4.4,SNR=2.6						
	0.6nm,0.6s						

IDC ***15*** *22:39:55.4±4.2,30°92N×69°80E, h0km, mb3.6/6, mbtmp3.7/7, ML3.1/1, MS3.6/4, Error ellipse: s-maj=77.9km s-min=40.8km az=170.0*
ISC 15 22:39:59.7±3.8,**31°0N**±0°5×**69°8E**±0°3,**h23**km,**n11**, σ0§**66**/7,**mb3.8**/5,**MS3.5**/4,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.45**	**28**	P	**P**	**22 44 13.2**	**-0.4**
	0.1nm,0.3s,baz=219,slow=11,SNR=4.9						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**20.61**	**16**	P	**P**	**22 44 36.7**	**-0.5**
	0.4nm,0.7s,baz=206,slow=8.9,SNR=4.4						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**21.97**	**1**	P	**P**	**22 44 52.5**	**+0.7**
	0.9nm,0.7s,baz=166,slow=9.8,SNR=4.3						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**25.32**	**21**	P	**P**	**22 45 25.2**	**+0.8**
	0.4nm,0.3s,baz=210,slow=11,SNR=3.1						
	0.4nm,0.3s						
MLR	**Muntele Rosu**	**36.87**	**306**	LR	LR	23 04 50.8	
	comp=Z,68nm,18.6s,baz=94,slow=40						
HILR	**Hailar Array B**	**41.48**	**49**	LR	LR	23 09 34.0	
	comp=Z,74nm,18.6s,baz=125,slow=43						
HFS	**Hagfors**	**46.87**	**325**	P	**P**	**22 48 27.8**	**+0.1**
	0.9nm,0.5s,baz=101,slow=7.5,SNR=5.5						
	0.9nm,0.5s						
NOA	**NORSAR Array B**	**48.25**	**326**	P	**P**	**22 48 38.1**	**-0.5**
	1.2nm,1.1s,baz=106,slow=8.0,SNR=1.5						
	1.2nm,1.1s						
JNU	**Nakatsue**	**51.13**	**71**	LR	LR	23 11 13.7	
	comp=Z,79nm,18.8s,baz=346,slow=37						
DAV	**Davao City (W)**	**57.18**	**102**	LR	LR	23 17 05.4	
	comp=Z,28nm,18.0s,baz=136,slow=39						
PETK	**Petropavlovsk-**	**64.63**	**42**	P	**P**	**22 50 35.3**	**0.0**
	6.4nm,1.0s,baz=273,slow=5.1,SNR=2.2						
	6.4nm,1.0s						

IDC ***15*** *22:46:44.2±2.2, 1°41N×126°68E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=177.2km s-min=27.1km az=66.0*
DJA ***15*** *22:46:44.1±0.7, 1°N±2°×12°6E±°, h10km±6km, M3.4/8, MLv3.4/8*
ISC 15 22:46:47.9±1.1,**1°47N**±0°09×**126°47E**±0°09,**h35**km,**n6**, σ2§**10**/7,**mb3.3**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**128**	P	**Pn**	**22 47 05.9**	**-1.4**
TNTI				S	**Sn**	**22 47 21.6**	**-0.1**
SGSI	**Sangihe**	**2.39**	**337**	P	**Pn**	**22 47 22.3**	**-2.2**
LUWI	**Luwuk**	**4.46**	**236**	P	**Pn**	**22 47 51.6**	**-1.5**
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**22 51 45.3**	**-0.7**
	0.8nm,0.7s,baz=340,slow=11,SNR=5.5						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**22 52 18.3**	**+0.5**
	0.4nm,0.4s,baz=342,slow=11,SNR=7.5						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**22 56 48.7**	**+2.8**
	0.3nm,0.5s,baz=111,slow=8.1,SNR=4.1						
	0.3nm,0.5s						

SSNC ***15*** *22:50:23.6±1.2, 19°71N×76°42W, h11km±9km, MD2.9, ML2.7, MW3.0*
JSN ***15*** *22:50:24.5±0.6, 19°63N×76°46W, h15km±999km, MD4.0*
ISC 15 22:50:21.4±1.0,**19°69N**±0°04×**76°43W**±0°03,**h25**km±10km, **n16**,σ0§**97**/29,**1C-3D**,**Cuba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIV	**Chivirico**	**0.28**	**3**	*i* P	**Pb**	**22 50 28.4**	**+0.1**
CHIV				*e*S	**Sb**	**22 50 32.0**	**-0.8**
CHIV				IAML		22 50 33.4	
	comp=E,2μm,0.4s						
CHIV				IAML		22 50 33.8	
	comp=N,1μm,0.4s						
MARVS	**Santiago de Cu**	**0.58**	**58**	*i* P	**Pn**	**22 50 33.7**	**-0.4**
MARVS				*i* S	**Sb**	**22 50 41.3**	**+0.3**
MARVS				IAML		22 50 43.5	
	comp=E,329nm,0.3s						
MARVS				IAML		22 50 44.4	
	comp=N,560nm,0.6s						
LMGC	**Las Mercedes**	**0.66**	**304**	*i* P	**Pn**	**22 50 35.1**	**0.0**
LMGC				*e*S	**Sb**	**22 50 43.4**	**+0.4**
PINC	**Pinares de May**	**0.99**	**37**	*e*P	**Pb**	**22 50 40.1**	**+0.1**
PINC				*i* S	**Sn**	**22 50 53.1**	**+0.2**
HLGC	**Holguin**	**1.24**	**16**	*i* P	**Pb**	**22 50 44.3**	**+0.1**
HLGC				*i* S	**Sb**	**22 51 01.6**	**+1.8**
GTBY	**Guantanamo Bay**	**1.26**	**79**	*i* P	**Pb**	**22 50 44.8**	**+0.2**
GTBY				*e*S	**Sb**	**22 51 01.9**	**+1.5**
QMBU	**Quimbuelo**	**1.60**	**71**	*i* P	**Pn**	**22 50 48.6**	**+0.4**
QMBU				*i* S	**Sn**	**22 51 08.1**	**0.0**
NMDO	**Nuevo Mundo**	**1.61**	**57**	*i* P	**Pn**	**22 50 48.4**	**+0.2**
NMDO				*i* S	**Sb**	**22 51 09.8**	**-0.6**
GWJ	**Greenwich**	**1.63**	**190**	*i* P	**Pb**	**22 50 50.5**	**-0.5**
STH	**Stony Hill**	**1.65**	**193**	*i* P	**Pb**	**22 50 50.6**	**-0.5**
MOAC	**Moa**	**1.68**	**55**	*e*S	**Sb**	**22 51 13.2**	**+0.8**
MTDJ	**Mount Denham**	**1.79**	**216**	*i* P	**Pb**	**22 50 52.9**	**-0.8**
MTDJ				*i* S	**Sn**	**22 51 13.8**	**+0.9**
MTDJ	**Mount Denham**	**1.79**	**216**	*e*P	**Pb**	**22 50 53.1**	**-0.6**
MTDJ				*e*S	**Sn**	**22 51 13.2**	**+0.3**
CCCC	**Cccc**	**1.96**	**320**	*e*P	**Pn**	**22 50 52.6**	**-0.4**
CCCC				*e*S	**Sn**	**22 51 14.9**	**-1.7**
MASC	**Masc**	**2.12**	**77**	*e*P	**Pb**	**22 50 58.0**	**-1.2**
MASC				*e*S	**Sb**	**22 51 23.9**	**-1.3**
MASC				IAML		22 51 34.8	
	comp=N,34nm,0.6s						
MASC				IAML		22 51 35.1	
	comp=E,37nm,0.4s						
CBCY	**The Bluff, Cay**	**3.14**	**271**	*e*P	**Pn**	**22 51 11.4**	**+2.2**
CBCY				*e*S	**Sn**	**22 51 44.4**	**-1.5**

IDC ***15*** *22:51:32.5±1.7, 1°41N×126°06E, h0km, mb3.4/4, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=125.7km s-min=21.5km az=68.0*
DJA ***15*** *22:51:35.6±0.3, 1°N±3°×12°6E±°, h10km, M3.4/7, MLv3.4/7*
ISC 15 22:51:38.1±1.1,**1°3N**±0°1×**126°2E**±0°2,**h35**km,**n7**,σ1§**35**/8, **mb3.6**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**115**	P	**Pn**	**22 51 59.5**	**+0.4**
SGSI	**Sangihe**	**2.46**	**343**	P	**Pn**	**22 52 16.6**	**+0.9**
SGSI				S	**Sn**	**22 52 44.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.30**	**182**	P	**P**	**22 56 00.8**	**+0.7**
	0.1nm,0.3s,baz=359,slow=9.3,SNR=1.9						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**22.57**	**160**	P	**P**	**22 56 35.3**	**-0.2**
	1.9nm,0.9s,baz=338,slow=10,SNR=8.9						
	1.9nm,0.9s						
ASAR	**Alice Springs**	**25.93**	**164**	P	**P**	**22 57 08.1**	**+0.9**
	0.3nm,0.6s,baz=333,slow=7.4,SNR=4.8						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**23 01 33.6**	**-2.6**
	0.4nm,0.7s,baz=124,slow=7.0,SNR=2.0						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**63.50**	**328**	P	**P**	**23 02 04.4**	**-0.3**
	0.4nm,0.8s,baz=130,slow=6.0,SNR=4.4						
	0.4nm,0.8s						

IDC ***15*** *22:52:33.9±1.6, 1°39N×126°02E, h0km, mb3.5/4, mbtmp3.6/4, Error ellipse: s-maj=165.5km s-min=21.6km az=66.0*
DJA 15 22:52:36.5±0.4,**2°N±7°×12°6E±°**,**h10**km,**M3.5**/6,**MLv3.5**/6, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**127**	P	Pn	22 52 59.2	-0.6
WRA	**Warramunga Arr**	**22.71**	**160**	P	P	22 57 37.4	-1.3
	0.7nm,0.4s,baz=338,slow=11,SNR=7.7						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.08**	**164**	P	P	22 58 09.4	-1.1
	0.5nm,0.6s,baz=343,slow=7.9,SNR=8.0						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	23 02 35.7	-2.0
	0.3nm,0.4s,baz=122,slow=8.1,SNR=5.1						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.41**	**328**	P	P	23 03 05.0	-1.3
	0.4nm,0.6s,baz=128,slow=6.1,SNR=6.6						
	0.4nm,0.6s						

MOS ***15*** *22:54:27.3, 40°31N×49°13E, h10km, MPVA3.9*
DRS ***15*** *22:54:28.0, 40°65N×49°80E, h54km*
AZER ***15*** *22:54:31.6, 40°36N×48°83E, h21km, ml2.6*
ISC 15 22:54:33.1±1.0,**40°34N**±0°02×**48°88E**±0°04,**h28**km±8km, **n38**,σ1§**46**/75,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBS	**Qobustan**	**0.20**	**14**	P	**Pb**	**22 54 38.0**	**-1.2**
GBS				S	**Sb**	**22 54 44.9**	**+1.6**
ALIB	**&Aumlli-Bayram**	**0.39**	**165**	P	**Pn**	**22 54 42.8**	**-0.1**
ALIB				S	**Sn**	**22 54 52.2**	**+2.8**
PQL	**Pirkuli**	**0.50**	**334**	P	**Pb**	**22 54 42.2**	**-1.3**
PQL				S	**Sn**	**22 54 51.3**	**-1.0**
ATGJ	**Altiaghaj**	**0.52**	**5**	P	**Pn**	**22 54 43.7**	**-1.2**
ATGJ				S	**Sn**	**22 54 54.1**	**+1.3**
SAAT	**Saatly**	**0.59**	**216**	P	**Pn**	**22 54 45.0**	**-0.6**
SAAT				S	**Sn**	**22 54 54.7**	**+0.4**
IML	**Ismayilli**	**0.70**	**311**	P	**Pb**	**22 54 45.0**	**-1.7**
IML				S	**Sn**	**22 54 56.4**	**-0.6**
SIZA	**Siyzn**	**0.74**	**1**	P	**Pn**	**22 54 47.4**	**-0.3**
SIZA				S	**Sn**	**22 54 59.1**	**+1.1**
ZRD	**Zardab**	**0.91**	**267**	P	**Pn**	**22 54 49.1**	**-1.0**
ZRD				S	**Sn**	**22 55 03.8**	**+1.5**
QBL	**Gabala**	**1.00**	**308**	P	**Pn**	**22 54 49.4**	**-1.9**
QBL				S	**Sn**	**22 55 03.8**	**-0.6**
XNQ	**Khinaliq**	**1.00**	**326**	P	**Pn**	**22 54 50.3**	**-1.2**
XNQ				S	**Sn**	**22 55 04.8**	**0.0**
QUBA	**Quba, Azerbaij**	**1.05**	**344**	P	**Pb**	**22 54 53.0**	**+0.2**
QUBA				S	**Sb**	**22 55 07.6**	**+1.3**
GLBA	**Clilabad**	**1.16**	**199**	P	**Pb**	**22 54 52.9**	**-1.6**
GLBA				S	**Sb**	**22 55 11.4**	**+2.4**
BLQ	**Beylaqan**	**1.19**	**239**	P	**Pn**	**22 54 52.9**	**-0.9**
BLQ				S	**Sb**	**22 55 09.6**	**-0.3**
QSAR	**Qusar**	**1.26**	**339**	P	**Pb**	**22 54 56.2**	**-0.1**
QSAR				S	**Sb**	**22 55 13.7**	**+1.5**
BRDA	**Brd**	**1.30**	**267**	P	**Pb**	**22 54 55.7**	**-1.2**
BRDA				S	**Sn**	**22 55 12.5**	**+0.7**
AGDM	**Agdam**	**1.37**	**261**	Pn	**Pn**	**22 54 55.9**	**-0.5**
AGDM				Sn	**Sb**	**22 55 15.4**	**+0.1**
KSMR	**Kasumkent**	**1.38**	**336**	*e*Pg	**Pb**	**22 54 57.8**	**-0.5**
KSMR				*e*Sg	**Sb**	**22 55 17.8**	**+2.2**
MNGR	**Mingechevir, A**	**1.43**	**288**	Pn	**Pn**	**22 54 57.3**	**+0.1**
MNGR				Sn	**Sb**	**22 55 16.8**	**-0.1**
AKT	**Akhty**	**1.43**	**323**	*e*Pg	**Pn**	**22 54 57.3**	**0.0**
AKT				*e*Sg	**Sb**	**22 55 20.6**	**+3.5**
QRD	**Qoradiz**	**1.48**	**234**	Pn	**Pn**	**22 54 57.2**	**-0.7**
QRD				Sn	**Sb**	**22 55 17.5**	**-1.0**
YRD	**Yardimli**	**1.50**	**199**	Pn	**Pn**	**22 54 58.0**	**-0.4**
YRD				Sn	**Sb**	**22 55 19.3**	**+0.1**
SEKA	**Sheki**	**1.54**	**305**	Pn	**Pn**	**22 54 58.1**	**-0.6**
SEKA				Sn	**Sn**	**22 55 18.4**	**+0.5**
LKRN	**Lenkeran, Azer**	**1.63**	**183**	Pn	**Pb**	**22 55 00.7**	**-1.7**
LKRN				Sn	**Sb**	**22 55 21.2**	**-1.4**
DRN	**Derbent**	**1.74**	**346**	*e*Pg	**Pn**	**22 54 58.0**	**-3.4**
DRN				*e*Sg	**Sn**	**22 55 22.3**	**-0.3**
LRK	**Lerik**	**1.75**	**194**	Pn	**Pn**	**22 55 01.2**	**-0.4**
LRK				Sn	**Sb**	**22 55 24.8**	**-1.3**
ASTR	**Astara**	**1.78**	**182**	Pn	**Pn**	**22 55 01.6**	**-0.4**
ASTR				Sn	**Sb**	**22 55 28.3**	**+1.4**
GANJ	**Ganja**	**1.97**	**280**	Pn	**Pn**	**22 55 04.3**	**-0.4**
GANJ				Sn	**Sn**	**22 55 30.6**	**+2.1**
URKR	**Urkarakh**	**2.05**	**333**	*e*Pg	**Pn**	**22 55 06.7**	**+0.8**
URKR				*e*Sg	**Sb**	**22 55 35.0**	**+0.2**
ZKTA	**Zakatala**	**2.14**	**308**	Pn	**Pn**	**22 55 08.4**	**+1.4**
ZKTA				Sn	**Sb**	**22 55 35.5**	**-1.9**
KMKR	**Kumukh**	**2.24**	**324**	*e*Pn	**Pb**	**22 55 10.3**	**-2.6**
KMKR				*e*Sn	**Sb**	**22 55 42.6**	**+2.3**
SGKR	**Sergokala**	**2.31**	**337**	*e*Pn	**Pb**	**22 55 11.5**	**-2.5**
SGKR				*e*Sn	**Sb**	**22 55 42.6**	**+0.4**
GDB	**GEDABAY**	**2.41**	**280**	Pn	**Pn**	**22 55 10.2**	**-0.6**
GDB				Sn	**Sn**	**22 55 41.2**	**+1.7**
TLTR	**Tlyarata**	**2.59**	**314**	*e*Pn	**Pn**	**22 55 15.2**	**+1.8**
ORD	**Ordubad**	**2.63**	**239**	Pn	**Pn**	**22 55 15.0**	**+1.2**
ORD				Sn	**Sn**	**22 55 46.9**	**+2.0**
ARKR	**Arakani**	**2.67**	**329**	*e*Pn	**Pn**	**22 55 16.0**	**+1.7**
ARKR				*e*Sn	**Sb**	**22 55 52.0**	**-0.5**
SBZ	**Shahbuz**	**2.73**	**251**	Pn	**Pn**	**22 55 16.8**	**+1.7**
SBZ				Sn	**Sn**	**22 55 49.8**	**+2.6**
QZX	**Qazax, Azerbai**	**2.76**	**286**	Pn	**Pn**	**22 55 16.3**	**+0.8**
QZX				Sn	**Sn**	**22 55 50.3**	**+2.4**
KRNR	**Karanay**	**2.89**	**330**	*e*Pn	**Pn**	**22 55 18.5**	**+1.1**
KRNR				*e*Sn	**Sb**	**22 55 57.5**	**-1.4**

IDC ***15*** *22:55:54.7±1.8, 2°70N×127°48E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=125.4km s-min=19.3km az=71.0*
DJA ***15*** *22:56:00.8±0.9, 3°N±3°×12°7E±°, h14km±10km, M3.9/6, mB5.1/1, mb4.3/1, MLv3.6/6, Mw(mB)4.4/1*
ISC 15 22:55:59.7±1.5,**2°8N**±0°1×**127°6E**±0°2,**h35**km,**n9**, σ1§**68**/10,**mb3.7**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.00**	**188**	P	**Pn**	**22 56 33.3**	**+2.4**
SGSI	**Sangihe**	**2.29**	**294**	P	**Pn**	**22 56 35.1**	**+0.1**
SGSI				S	**Sn**	**22 57 02.6**	**+0.6**
SANI	**Sanana**	**5.05**	**199**	P	**Pn**	**22 57 13.0**	**0.0**
LUWI	**Luwuk**	**6.15**	**232**	P	**Pn**	**22 57 28.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**20.82**	**185**	P	**P**	**23 00 35.3**	**-3.0**
	0.8nm,0.6s,baz=12,slow=9.3,SNR=1.4						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**23.51**	**164**	P	**P**	**23 01 05.1**	**-1.6**
	0.4nm,0.4s,baz=342,slow=9.0,SNR=5.6						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.97**	**167**	P	**P**	**23 01 37.7**	**-0.6**
	0.1nm,0.3s,baz=348,slow=7.3,SNR=4.0						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.86**	**325**	P	**P**	**23 05 56.0**	**+1.0**
	0.7nm,0.4s,baz=117,slow=8.1,SNR=12						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**63.03**	**327**	P	**P**	**23 06 23.9**	**+0.7**
	1.8nm,0.8s,baz=130,slow=6.0,SNR=16						
	1.8nm,0.8s						

IDC ***15*** *22:59:43.4±1.9, 1°86N×126°29E, h0km, mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=177.2km s-min=24.0km az=66.0*
DJA ***15*** *22:59:50.3±0.8, 1°N±2°×12°6E±°, h13km±6km, M3.3/7, mB6.6/1, MLv3.3/7, Mw(mB)6.4/1*
ISC 15 22:59:48.3±1.4,**1°9N**±0°4×**126°5E**±0°6,**h35**km,**n5**,σ1§**67**/6, **mb3.3**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**142**	P	**Pn**	**23 00 12.0**	**+0.3**
TNTI				S	**Sn**	**23 00 28.8**	**-0.5**
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**	**23 04 49.8**	**-0.7**
	0.4nm,0.5s,baz=340,slow=11,SNR=4.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**23 05 22.9**	**+1.0**
	0.1nm,0.5s,baz=350,slow=15,SNR=4.1						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**23 09 42.0**	**-1.9**
	0.4nm,0.8s,baz=123,slow=7.7,SNR=1.4						
	0.4nm,0.8s				

ISC 15 23:13:56.1±0.8, 51°56N±0.03×16°10E±0.03, h0km, n24, σ1§24/48, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**170**	*e*Pg	**Pg**	**23 14 10.2**	**+0.2**
KSP				*e*Sg	**Sg**	**23 14 18.8**	**-0.6**
CHVC	**Chvalec**	**0.97**	**182**	*e*PG	**Pg**	**23 14 14.9**	**+0.2**
CHVC				*e*SG	**Sg**	**23 14 26.6**	**-0.7**
OSTC	**Ostas**	**1.00**	**176**	*e*PG	**Pg**	**23 14 15.5**	**+0.1**
OSTC				*e*SG	**Sg**	**23 14 27.7**	**-0.7**
	comp=Z,18nm,0.3s						
UPC	**Upice**	**1.05**	**183**	*e*PG	**Pg**	**23 14 16.5**	**+0.2**
UPC				*e*SG	**Sg**	**23 14 29.3**	**-0.6**
	comp=Z,50nm,0.4s						
DPC	**Dobruska-Polom**	**1.22**	**173**	*e*PG	**Pg**	**23 14 18.8**	**-0.6**
DPC				*e*SG	**Sg**	**23 14 33.3**	**-1.9**
	comp=Z,8.1nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pb**	**23 14 23.7**	**+0.3**
PVCC				*e*SG	**Sg**	**23 14 41.4**	**-0.1**
	comp=Z,36nm,0.3s						
KRLC	**Kraliky**	**1.55**	**164**	*e*PG	**Pn**	**23 14 25.3**	**+0.3**
PRU	**Pruhonice**	**1.86**	**213**	*e*PG	**Pn**	**23 14 30.3**	**+1.1**
PRU				*e*SG	**Sb**	**23 14 54.4**	**-0.3**
HSKC	**Hora Svate Kat**	**1.93**	**242**	*e*PG	**Pb**	**23 14 32.8**	**+0.5**
HSKC				*e*SG	**Sb**	**23 14 57.5**	**+0.6**
	comp=Z,11nm,0.3s						
STEB	**Steborice**	**1.94**	**146**	*e*PG	**Pb**	**23 14 31.9**	**-0.5**
STEB				*e*SG	**Sn**	**23 14 55.8**	**+0.4**
CLL	**Collm**	**1.96**	**264**	*i* Pn	**Pn**	**23 14 30.7**	**+0.2**
CLL				*i* Pg	**Pg**	**23 14 34.4**	**+0.8**
CLL				*i* x	x	23 14 40.6	
CLL				*i* Sg	**Sg**	**23 15 00.7**	**+1.8**
	comp=Z,9.0nm,0.3s						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*PN	**Pn**	**23 14 31.1**	**-0.2**
MORC				*e*SG	**Sn**	**23 14 56.3**	**-0.8**
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*SG	**Sb**	**23 15 03.0**	**-0.3**
VRAC	**Vranov**	**2.27**	**172**	*e*PN	**Pn**	**23 14 35.3**	**+0.4**
VRAC				*e*SG	**Sb**	**23 15 06.3**	**-0.4**
TREC	**Trest**	**2.30**	**190**	*e*SG	**Sb**	**23 15 08.2**	**+0.8**
	comp=Z,6.1nm,0.2s						
KRUC	**Moravsky**	**2.51**	**176**	*e*PN	**Pn**	**23 14 39.0**	**+0.9**
KRUC				*e*SG	**Sb**	**23 15 13.7**	**+0.4**
OJC	**Ojcow**	**2.70**	**118**	*e*Pg	**Pg**	**23 14 49.2**	**+1.4**
OJC				*e*Sg	**Sg**	**23 15 24.1**	**+1.4**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**23 14 44.2**	**+0.4**
KHC				*e*PG	**Pb**	**23 14 49.9**	**+0.9**
KHC				*e*SN	**Sn**	**23 15 17.6**	**-2.0**
KHC				*e*SG	**Sg**	**23 15 28.5**	**-1.3**
CKRC	**Cesky Krumlov**	**2.97**	**203**	*e*PN	**Pn**	**23 14 45.1**	**+0.5**
CKRC				*e*PG	**Pb**	**23 14 50.0**	**0.0**
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	**Pn**	**23 14 54.8**	**+1.2**
BSD				*i* S	**Sn**	**23 15 37.2**	**+0.1**
BSD				IAML		23 15 52.4	
	comp=Z,24nm,1.0s						
CONA	**Conrad Observa**	**3.64**	**183**	*i* Pn	**Pn**	**23 14 55.2**	**+1.5**
	comp=Z,2.1nm,0.3s						
CONA				*i* Sn	**Sn**	**23 15 37.3**	**0.0**
	comp=Z,1.9nm,0.2s						
LUNU	**Lund**	**4.38**	**340**	*i* P	**Pn**	**23 15 04.5**	**+0.7**
LUNU				*i* S	**Sn**	**23 15 54.2**	**-1.2**
BJUU	**Bjuv**	**4.88**	**339**	*i* P	**Pn**	**23 15 11.1**	**+0.4**
BJUU				*i* S	**Sn**	**23 16 02.2**	**-5.6**
DEL	**Delary**	**5.09**	**346**	*i* P	**Pn**	**23 15 14.2**	**+0.6**
DEL				*e*S	**Sn**	**23 16 10.6**	**-2.6**

*AEIC **15** 23:14:50.1±0.9, 51°7N±0°1×176°48W±0°07, h60km±7km, Error ellipse: s-maj=16.6km s-min=4.1km az=164.0*

NEIC 15 23:14:51.3±1.0, 51°7N±0°1×176°52W±0°07, h61km±7km, mb3.7/19, ML3.9/10, ML3.2(AEIC), Error ellipse: s-maj=22.1km s-min=2.5km az=165.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.14**	**30**		Pn	23 15 00.2	-0.3
ETKA					Sn	23 15 07.7	+0.4
ADK	**Adak**	**0.17**	**324**		Pn	23 15 00.4	-0.3
ADK					Sn	23 15 08.2	+0.7
ADAG	**Mount Adagdak**	**0.24**	**348**		Pn	23 15 01.5	+0.4
ADAG					Sn	23 15 09.8	+1.5
GSCK	**Great Sitkin C**	**0.35**	**39**		Pn	23 15 01.6	-0.3
GSCK					Sn	23 15 10.3	+0.7
GSTD	**Great Sitkin T**	**0.39**	**36**		Pn	23 15 01.9	-0.4
GSTD					Sn	23 15 10.9	+0.6
KIRH	**Kanaga Island**	**0.39**	**294**		Pn	23 15 02.4	+0.2
KIRH					Sn	23 15 11.4	+1.2
KIWB	**Kanaga Island**	**0.41**	**286**		Pn	23 15 02.4	0.0
KIWB					Sn	23 15 11.4	+0.9
KIWB				IAML		23 15 12.4	
	comp=N,6μm,0.1s						
GSSP	**Great Sitkin S**	**0.41**	**31**		Pn	23 15 02.3	-0.2
GSSP					Sn	23 15 11.4	+0.9
GSMY	**Great Sitkin M**	**0.42**	**43**		Pn	23 15 02.2	-0.3
GSMY					Sn	23 15 11.2	+0.6
KINC	**Kanaga Island**	**0.42**	**297**		Pn	23 15 02.6	0.0
KIKV	**Kanaga Island**	**0.43**	**289**		Sn	23 15 11.9	+1.1
GSIG	**Igitkin Island**	**0.44**	**56**		Pn	23 15 02.2	-0.6
KIMD	**Kanaga Island**	**0.45**	**273**		Pn	23 15 02.4	-0.3
KIMD					Sn	23 15 11.5	+0.4
GSTR	**Great Sitkin T**	**0.45**	**39**		Pn	23 15 02.8	-0.1
GSTR				IAML		23 15 15.9	
	comp=N,4μm,0.4s						
KICM	**Kanaga Island**	**0.46**	**293**		Pn	23 15 03.0	+0.1
TAFL	**Tanaga Flats**	**0.86**	**271**		Pn	23 15 07.3	-0.2
TAFL					Sn	23 15 20.3	+0.8
TAFP	**Tanaga Falls P**	**0.92**	**280**		Pn	23 15 08.1	-0.2
TANO	**Tanaga North**	**1.01**	**281**		Pn	23 15 09.7	+0.3
GAEA	**Gareloi East**	**1.39**	**273**		Pn	23 15 14.3	-0.2
GANE	**Gareloi Northe**	**1.41**	**274**		Pn	23 15 14.6	-0.1
GANE					Sn	23 15 32.9	+0.6
GANO	**Gareloi North**	**1.42**	**274**		Pn	23 15 14.6	-0.3
GAKI	**Gareloi-Kavalg**	**1.44**	**263**		Pn	23 15 14.5	-0.7
GAKI					Sn	23 15 33.8	+0.6
GASW	**Gareloi Southw**	**1.45**	**272**		Pn	23 15 14.9	-0.5
ATKA	**Atka Island**	**1.51**	**71**		Sn	23 15 34.9	+0.2
ATKA	**Atka Island**	**1.51**	**71**	Pn	Pn	23 15 15.5	-0.6
KOWE	**Korovin West**	**1.53**	**65**		Pn	23 15 16.4	-0.1
KOKL	**Mount Kliuchef**	**1.55**	**67**		Pn	23 15 16.6	0.0
KONW	**Korovin Northw**	**1.57**	**64**		Pn	23 15 17.0	+0.1
KOFP	**Korovin Flat P**	**1.59**	**69**		Pn	23 15 17.2	0.0
CEPE	**Semis' Perret**	**2.39**	**277**		Pn	23 15 27.8	-0.2
CERB	**Semis' Cerberu**	**2.40**	**276**		Pn	23 15 28.1	0.0
CESW	**Semis' Southwe**	**2.44**	**275**		Pn	23 15 28.2	-0.4
AMKA	**Amchitka**	**2.63**	**264**		Pn	23 15 30.8	-0.6
LSSE	**Little Sitkin**	**3.05**	**276**		Pn	23 15 37.1	0.0
SHEM	**Shemya Is, Ala**	**5.85**	**283**	Pn	Pn	23 16 15.2	-0.1
SMY	**Shemya**	**5.85**	**283**	Pn	Pn	23 16 15.4	+0.1
UNV	**Unalaska Valle**	**6.43**	**67**	Pn	Pn	23 16 23.8	+0.6
K15K	**Wolf Creek Mou**	**13.32**	**32**	Pn	Pn	23 17 56.7	-0.5
L18K	**Granite Mounta**	**14.99**	**38**	Pn	Pn	23 18 17.2	-2.1
KDAK	**Kodiak Island**	**15.03**	**57**	Pn	Pn	23 18 20.5	+0.6
H17K	**Granite Mounta**	**15.76**	**27**	P	P	23 18 32.6	+0.6
SLKM	**Skilak Lake**	**16.98**	**49**	Pn	Pn	23 18 43.3	-1.1
SLKM				IAmb	IAmb	23 18 49.4	
	comp=Z,15nm,1.2s						
L22K	**Petersville**	**17.52**	**42**		Pn	23 18 51.0	-0.1
KNK	**Knik Glacier**	**18.09**	**47**	P	P	23 18 57.5	-0.2
KNK				IAmb	IAmb	23 19 10.3	
	comp=Z,7.5nm,1.0s						
E19K	**Redstone River**	**18.39**	**24**	P	P	23 19 01.0	0.0
DHY	**Denali Highway**	**19.17**	**42**		P	23 19 09.2	-0.4
DHY				IAmb	IAmb	23 19 15.9	
	comp=Z,3.1nm,1.1s						
KLU	**Klutina**	**19.27**	**48**	P	P	23 19 10.7	0.0
KLU				IAmb	IAmb	23 19 16.2	
	comp=Z,10nm,1.2s						
M24K	**Tolsona, Glenn**	**19.34**	**46**	P	P	23 19 11.7	+0.2
M24K				IAmb	IAmb	23 19 18.8	
	comp=Z,7.5nm,1.1s						
D20K	**Etivluk River**	**19.51**	**22**	P	P	23 19 12.9	-0.3
D20K				IAmb	IAmb	23 19 19.8	
	comp=Z,2.8nm,1.1s						
N25K	**Chitina, Valde**	**19.91**	**48**	P	P	23 19 17.5	-0.2
B20K	**Meade River**	**20.42**	**19**		P	23 19 23.6	+0.6
B20K				IAmb	IAmb	23 19 32.4	
	comp=Z,5.3nm,1.1s						
TGL	**Tana Glacier**	**20.56**	**51**	P	P	23 19 22.2	-2.5
D22K	**Ayikyak River**	**20.60**	**25**	P	P	23 19 23.3	-1.7
B21K	**Ikpikpuk River**	**20.67**	**22**	P	P	23 19 25.9	+0.2
B21K				IAmb	IAmb	23 19 41.1	
	comp=Z,2.3nm,0.9s						
DOT	**Dot Lake**	**20.77**	**42**	P	P	23 19 26.9	0.0
DOT				IAmb	IAmb	23 19 28.2	
	comp=Z,2.0nm,0.9s						
ISLE	**Juniper Island**	**20.77**	**51**	P	P	23 19 26.9	-0.2
SCRK	**Sand Creek**	**20.91**	**42**	P	P	23 19 27.7	-0.9
YAH	**Yahtse**	**21.02**	**52**	P	P	23 19 29.8	-0.1
J26L	**Joseph Creek**	**21.27**	**40**	P	P	23 19 33.9	+1.5
J26L				IAmb	IAmb	23 19 46.8	
	comp=Z,3.0nm,1.2s						
C23K	**Itkillik River**	**21.79**	**24**	P	P	23 19 37.9	+0.2
C23K				IAmb	IAmb	23 19 39.2	
	comp=Z,2.7nm,0.9s						

*IDC **15** 23:23:41.2±2.2, 1°45N×126°16E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=194.2km s-min=27.0km az=65.0*

*DJA **15** 23:23:44.2±0.3, 2°N±4°×12°6E±°, h10km, M3.2/6, MLv3.2/6*

ISC 15 23:23:46.0±1.5, 1°5N±0°3×126°4E±0°3, h35km, n4, σ0§31/5, mb3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**128**	P	**Pn**	**23 24 06.3**	**-0.3**
TNTI				S	**Sn**	**23 24 22.2**	**+0.3**
WRA	**Warramunga Arr**	**22.72**	**160**	P	**P**	**23 28 45.1**	**+0.1**
	0.4nm,0.4s,baz=338,slow=11,SNR=5.6 0.4nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**23 29 16.5**	**-0.1**
	0.1nm,0.5s,baz=345,slow=11,SNR=1.6 0.1nm,0.5s						
MKAR	**Makanchi Array**	**59.18**	**326**	P	**P**	**23 33 43.5**	**+0.1**
	0.1nm,0.3s,baz=121,slow=6.8,SNR=5.2 0.1nm,0.3s						

*IDC **15** 23:33:28.7±2.3, 1°74N×126°48E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=196.5km s-min=28.2km az=66.0*

*DJA **15** 23:33:31.9±0.7, 1°N±2°×12°6E±°, h11km±5km, M3.7/7, MLv3.7/7*

ISC 15 23:33:34.5±1.2, 1°5N±0°2×126°6E±0°3, h35km, n5, σ2§24/7, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.08**	**131**	P	**Pn**	**23 33 52.0**	**-1.2**
TNTI				S	**Sn**	**23 34 08.8**	**+1.8**
SGSI	**Sangihe**	**2.41**	**335**	P	**Pn**	**23 34 11.1**	**-0.4**
SGSI				S	**Sn**	**23 34 42.1**	**+2.3**
WRA	**Warramunga Arr**	**22.63**	**161**	P	**P**	**23 38 33.7**	**+1.1**
	0.5nm,0.5s,baz=339,slow=11,SNR=6.9 0.5nm,0.5s						
ASAR	**Alice Springs**	**26.01**	**164**	P	**P**	**23 39 06.3**	**+1.9**
	0.2nm,0.4s,baz=343,slow=10,SNR=6.9 0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.29**	**326**	P	**P**	**23 43 30.6**	**-2.2**
	0.6nm,0.9s,baz=126,slow=7.7,SNR=2.0 0.6nm,0.9s						

*IDC **15** 23:34:56.2±1.5, 1°74N×126°57E, h0km, mb4.1/4, mbtmp4.0/5, ML3.7/1, Error ellipse: s-maj=111.8km s-min=18.8km az=69.0*

*DJA **15** 23:35:00.9±0.2, 2°N±2°×12°6E±°, h10km, M4.2/13, mb4.4/6, MLv4.1/13*

ISC 15 23:35:02.4±1.0, 1°68N±0°07×126°50E±0°06, h35km, n14, σ1§83/18, mb4.2/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**136**	P	**Pn**	**23 35 24.2**	**+0.7**
TNTI				S	**Sn**	**23 35 42.7**	**+3.5**
SGSI	**Sangihe**	**2.21**	**334**	P	**Pn**	**23 35 36.7**	**0.0**
SGSI				S	**Sn**	**23 36 05.8**	**+2.9**
KMSI	**Cibinong**	**2.74**	**246**	P	**Pn**	**23 35 43.9**	**-0.1**
KMSI				S	**Sn**	**23 36 17.6**	**+1.7**
SANI	**Sanana**	**3.74**	**188**	P	**Pn**	**23 35 58.4**	**+0.7**
LUWI	**Luwuk**	**4.60**	**234**	P	**Pn**	**23 36 11.2**	**+1.6**
NLAI	**Namlea**	**4.92**	**173**	P	**Pn**	**23 36 14.9**	**+0.9**
APSI	**Ampana**	**5.49**	**242**	P	**Pn**	**23 36 22.3**	**+0.6**
MPSI	**Mapaga**	**6.73**	**259**	P	**Pn**	**23 36 39.5**	**+0.7**
	0.0nm15nm,0.7s						
SPSI	**Sidrap Palu**	**8.75**	**230**	P	**Pn**	**23 37 07.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P	**P**	**23 39 27.8**	**-0.9**
	0.2nm,0.3s,baz=13,slow=11,SNR=5.0 0.9nm,0.5s						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**23 40 00.7**	**-1.9**
	2.8nm,0.4s,baz=339,slow=11,SNR=29						
WRA				S	**S**	**23 44 06.0**	**-3.7**
	0.4nm,0.7s,baz=330,slow=20,SNR=1.8 2.8nm,0.4s						
ASAR	**Alice Springs**	**26.21**	**164**	P	**P**	**23 40 34.0**	**-0.2**
	1.1nm,0.5s,baz=346,slow=7.7,SNR=15 1.1nm,0.5s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**23 44 58.4**	**-1.0**
	0.9nm,0.4s,baz=123,slow=8.4,SNR=25 0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**23 45 27.0**	**-1.0**
	1.2nm,0.5s,baz=129,slow=6.0,SNR=7.3 1.2nm,0.5s						

*BJI **15** 23:44:27.5, 0°.94N×126°.47E, h32km, mB5.1/14, mb4.8/62, Ms4.4/16, Ms7 4.3/21*

*MOS **15** 23:44:32.6±1.1, 1°.50N×126°.40E, h43km, mb5.2/33, Error ellipse: s-maj=10.4km s-min=5.8km az=119.0*

*NEIC **15** 23:44:33.9±1.3, 1°.47N±0°.06×126°.46E±0°.06, h35km±1km, mb5.1/85, Error ellipse: s-maj=11.4km s-min=8.5km az=215.0*

*IDC **15** 23:44:35.0±1.5, 1°.52N×126°.52E, h49km±14km, mb4.4/28, mbtmp4.7/32, ML4.6/4, MS3.8/27, Error ellipse: s-maj=16.3km s-min=7.1km az=82.0*

*DJA **15** 23:44:35.3±0.2, 2°N±2°×12°7E±°, h41km±2km, M4.9/72, mb5.0/72, mB5.4/37, MLv5.1/21, Mw(mB)4.9/37, MwMwp4.7/6, Mwp5.0/6*

*GCMT **15** 23:44:36.9±0.2, 1°.66N±0°.01×126°.45E±0°.01, h30km±1km, MW5.0/115, Moment Tensor Solution. s41,c53; s115,c167; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=-0.32±.17; Mθθ=3.44±.13; Mϕϕ=-3.12±.14; Mrθ=0.09±.19; Mrϕ=-3.13±.12; Mθϕ=-0.01±.21; Best double couple: M=4.53500×10^16^ NP1:ϕs=157.00000°, δ89.00000°, λ0.00000°. NP2:ϕs=67.00000°, δ90.00000°, λ179.00000°. Principal axes: T 4.6950, Plg1.0000°, Azm22.0000°; N -0.3200, Plg89.0000°, Azm221.0000°; P -4.3740, Plg0.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 23:44:34.4±0.4, 1°52N±0°03×126°49E±0°04, h40km±3km, h40km:pP-P, n401, σ1§39/421, mb4.9/130, MS4.1/35, 24C-9D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**130**		**Pn**	**23 44 53.0**	**-1.0**
TNTI	**Ternate**	**1.15**	**130**	P	**Pn**	**23 44 53.1**	**-0.9**
TNTI	**Ternate**	**1.15**	**130**	S	**Sn**	**23 45 09.2**	**+0.7**
TNTI	**Ternate**	**1.15**	**130**	P	**Pn**	**23 44 52.7**	**-1.3**
TNTI				S	**Sn**	**23 45 09.0**	**+0.5**
SGSI	**Sangihe**	**2.35**	**336**	P	**Pn**	**23 45 10.0**	**-0.6**
KMSI	**Cibinong**	**2.68**	**249**	P	**Pn**	**23 45 15.0**	**-0.1**
SANI	**Sanana**	**3.58**	**188**	P	**Pn**	**23 45 28.9**	**+1.4**
SANI	**Sanana**	**3.58**	**188**	S	**Sn**	**23 46 09.9**	**+1.3**
SANI	**Sanana**	**3.58**	**188**	P	**Pn**	**23 45 27.4**	**-0.1**
LUWI	**Luwuk**	**4.51**	**236**		**Pn**	**23 45 39.3**	**-1.0**
LUWI	**Luwuk**	**4.51**	**236**	P	**Pn**	**23 45 41.9**	**+1.7**
LUWI	**Luwuk**	**4.51**	**236**	S	**Sn**	**23 46 32.9**	**+1.4**
LUWI	**Luwuk**	**4.51**	**236**	P	**Pn**	**23 45 40.4**	**+0.2**
MRSI	**Marisa**	**4.67**	**257**	P	**Pn**	**23 45 43.6**	**+1.2**
NLAI	**Namlea**	**4.77**	**173**	P	**Pn**	**23 45 44.7**	**+0.9**
SWI	**Sorong**	**5.32**	**116**	P	**Pn**	**23 45 52.5**	**+1.1**
	0.5nm4μm136nm,0.9s						
APSI	**Ampana**	**5.41**	**244**	P	**Pn**	**23 45 54.2**	**+1.5**
MSAI	**Masohi**	**5.41**	**153**	P	**Pn**	**23 45 54.7**	**+2.0**
	1.6nm242nm,0.8s						
AAI	**Ambon**	**5.45**	**162**	P	**Pn**	**23 45 54.2**	**+1.1**
	0.8nm3μm215nm,0.8s						
DAV	**Davao City (W)**	**5.59**	**351**	P	**Pn**	**23 45 57.2**	**+2.1**
	105nm,0.3s,baz=271,slow=8.7,SNR=4.4						
DAV				S	**Sn**	**23 46 59.2**	**+1.2**
	327nm,0.4s,baz=96,slow=21,SNR=1.8 149nm,0.4s						
DAV	**Davao City (W)**	**5.59**	**351**	Pn	**Pn**	**23 45 56.2**	**+1.2**
TOLI2	**Tolitoli**	**5.72**	**266**		**Pn**	**23 45 55.2**	**-1.7**
TOLI2	**Tolitoli**	**5.72**	**266**	P	**Pn**	**23 45 55.8**	**-1.1**
TOLI2	**Tolitoli**	**5.72**	**266**	S	**Sn**	**23 47 03.0**	**+1.6**
KDI	**Kendari**	**6.68**	**215**	P	**Pn**	**23 46 10.6**	**+0.5**
MPSI	**Mapaga**	**6.70**	**260**	P	**Pn**	**23 46 10.5**	**+0.2**
	0.5nm4μm2μm173nm,0.7s						
BNDI	**Bandanaira**	**6.91**	**150**	P	**Pn**	**23 46 14.7**	**+1.5**
BNDI	**Bandanaira**	**6.91**	**150**	P	**Pn**	**23 46 13.4**	**+0.2**
	1.2nm4μm198nm,0.8s						
PCI	**Palu**	**7.08**	**250**	P	**Pn**	**23 46 16.4**	**+0.8**
	0.8nm6μm149nm,0.9s						
FAKI	**Fak Fak**	**7.25**	**127**		**Pn**	**23 46 19.4**	**+1.5**
FAKI	**Fak Fak**	**7.25**	**127**	P	**Pn**	**23 46 20.5**	**+2.6**
FAKI	**Fak Fak**	**7.25**	**127**	P	**Pn**	**23 46 20.2**	**+2.3**
BBSI	**Bau Bau**	**7.99**	**209**	P	**Pn**	**23 46 29.1**	**+1.0**
	3μm256nm,1.1s						
TTSI	**Tana Toraja**	**8.07**	**236**	P	**Pn**	**23 46 29.8**	**+0.7**
	2μm163nm,0.6s						
SPSI	**Sidrap Palu**	**8.65**	**231**	P	**Pn**	**23 46 38.4**	**+1.2**
	5μm111nm,0.8s						
BNSI	**Bone**	**8.68**	**227**	P	**Pn**	**23 46 38.7**	**+1.2**
	1μm138nm,0.7s						
MYLDM	**Lahad Datu**	**8.77**	**295**		**Pn**	**23 46 39.7**	**+1.0**
MYLDM	**Lahad Datu**	**8.77**	**295**	P	**Pn**	**23 46 40.6**	**+1.9**
KMPI	**Kaimana, Papua**	**8.86**	**126**	P	**Pn**	**23 46 41.5**	**+1.5**
	3μm223nm,1.1s						
BKSI	**Bulukumba**	**9.31**	**223**	P	**Pn**	**23 46 47.3**	**+1.1**
	763nm58nm,0.5s						
KAPI	**Kappang**	**9.36**	**226**	P	**Pn**	**23 46 48.9**	**+2.2**
	6.1nm,0.3s,baz=39,slow=8.8,SNR=12						
KAPI				S	**Sn**	**23 48 32.5**	**+1.7**
	6.3nm,0.4s,baz=47,slow=22,SNR=1.0 20nm,0.5s						
KAPI	**Kappang**	**9.36**	**226**		**Pn**	**23 46 46.7**	**-0.1**
KAPI	**Kappang**	**9.36**	**226**	P	**Pn**	**23 46 45.6**	**-1.2**
KAPI				P	**Pn**	**23 46 45.6**	**-1.2**
KAPI				S	**Sn**	**23 48 33.6**	**+2.8**
KAPI				S	**Sn**	**23 48 33.6**	**+2.8**
KAPI	**Kappang**	**9.36**	**226**	P	**Pn**	**23 46 48.8**	**+2.0**
KAPI	**Kappang**	**9.36**	**226**	*i* P	**Pn**	**23 46 45.6**	**-1.2**
BSSI	**Bau Bau, Buton**	**9.69**	**218**	P	**Pn**	**23 46 53.7**	**+2.3**
	1μm101nm,0.6s						
BAKI	**Biak**	**9.98**	**106**	P	Pn	23 47 00.5	+5.1
SAUI	**Saumlaki**	**10.59**	**153**	P	**Pn**	**23 47 05.1**	**+1.4**
MMRI	**Maumere**	**10.95**	**203**	Pn	**Pn**	**23 47 08.8**	**+0.2**
EDFI	**Ende, Flores**	**11.27**	**205**	P	**Pn**	**23 47 14.9**	**+1.8**
	36nm,1.0s						
SOEI	**Soe**	**11.42**	**191**	Pn	**Pn**	**23 47 15.0**	**-0.2**
SOEI	**Soe**	**11.42**	**191**	P	**Pn**	**23 47 16.9**	**+1.7**
SOEI	**Soe**	**11.42**	**191**	P	**Pn**	**23 47 16.5**	**+1.3**
BATI	**Baumata**	**11.99**	**194**	P	Pn	23 47 29.9	+7.0
	46nm,0.7s,baz=0.8,slow=7.9,SNR=9.5						
BATI				LR	LR	23 52 53.9	
	comp=Z,362nm,18.4s,baz=9.0,slow=42						
BATI	**Baumata**	**11.99**	**194**	P	**Pn**	**23 47 24.2**	**+1.3**
	898nm88nm,0.9s						
SMPI	**Sarmi**	**12.70**	**106**	P	**Pn**	**23 47 36.1**	**+3.5**
	81nm,1.9s						
WSI	**Waingapu**	**12.71**	**209**	P	**Pn**	**23 47 33.5**	**+0.7**
	55nm,0.7s						
BASI	**Baing, Sumba**	**13.07**	**207**	P	**Pn**	**23 47 39.3**	**+1.7**
	2μm86nm,0.8s						
WBSI	**Waikabubak, Su**	**13.15**	**212**	P	**Pn**	**23 47 41.5**	**+2.7**
	56nm,0.8s						
PLAI	**Plampang**	**13.46**	**220**	P	**Pn**	**23 47 45.1**	**+2.1**
PLAI	**Plampang**	**13.46**	**220**	P	**P**	**23 47 48.1**	**-3.4**
	1μm139nm,0.9s						
TGY	**Tagaytay City**	**13.65**	**337**	LR	LR	23 53 36.3	
	comp=Z,1μm,19.2s,baz=188,slow=40						
GENI	**Genyem**	**14.27**	**107**	P	**Pn**	**23 47 55.1**	**+1.1**
GENI	**Genyem**	**14.27**	**107**	P	**Pn**	**23 47 55.7**	**+1.7**
	3μm86nm,1.5s						
SBUM	**Sibu**	**14.29**	**274**		**Pn**	**23 47 53.7**	**-0.7**
SBUM	**Sibu**	**14.29**	**274**	P	**Pn**	**23 47 56.4**	**+2.1**
AUDHS	**Darwin High Sc**	**14.53**	**163**	P	**Pn**	**23 47 55.9**	**-1.5**
DRS	**Darwin Rock St**	**14.54**	**163**	P	**Pn**	**23 47 58.6**	**+1.0**
JAY	**Jayapura**	**14.76**	**106**	P	**Pn**	**23 48 01.1**	**+0.4**
	1.2nm,0.3s,baz=265,slow=4.2,SNR=4.8 5.6nm,0.7s						
JAY	**Jayapura**	**14.76**	**106**	P	**Pn**	**23 48 02.7**	**+2.0**
	43nm,0.9s						
MTN	**Manton Dam**	**15.00**	**162**	P	**Pn**	**23 48 03.3**	**-0.4**
	comp=Z,30nm,0.7s						
MTN	**Manton Dam**	**15.00**	**162**		**Pn**	**23 48 02.2**	**-1.5**
KMMI	**Kalianget**	**15.12**	**236**	P	**P**	**23 48 08.6**	**-1.4**
	comp=Z,140nm,1.0s						
DNP	**Denpasar**	**15.14**	**228**	P	**Pn**	**23 48 07.4**	**+1.8**
JAGI	**Jajag, Banyuwa**	**15.81**	**231**		**Pn**	**23 48 12.4**	**-1.9**

comp=Z,22nm,0.7s
PMG Port Moresby 23.27 118 P **P** **23 49 37.6 -1.1**
PMG Port Moresby 23.27 118 P **P** **23 49 39.6 +0.9**
LWLI Liwa 23.33 254 P **P** **23 49 42.1 +2.6**
MBWA Marble Bar 23.49 196 P **P** **23 49 39.6 -1.1**
comp=Z,30nm,1.6s
MBWA Marble Bar 23.49 196 P **P** **23 49 39.0 -1.8**
MBWA Marble Bar 23.49 196 P **P** **23 49 39.6 -1.1**
MBWA P **P** **23 49 39.6 -1.1**
MBWA Marble Bar 23.49 196 P **P** **23 49 39.9 -0.9**
YHNB Yeheng 23.54 348 P **P** **23 49 41.0 -0.2**
PSAC1 Pilbara Seismi 23.83 196 P **P** **23 49 43.5 -0.4**
comp=Z,26nm,0.9s
PSAC2 Pilbara Seismi 23.83 195 P **P** **23 49 43.2 -0.8**
comp=Z,28nm,0.7s
QIZ Qiongzhong 23.85 318 P **P** **23 49 44.0 -0.2**
QIZ pP **pP** **23 49 53.8 -0.9**
QIZ S **S** **23 54 00.8 +3.2**
QIZ LR LR
comp=Z,420nm,14.2s
QIZ LR LR
comp=Z,390nm,12.1s
QIZ LR LR
comp=Z,480nm,17.0s
PSA00 Pilbara Seismi 23.86 195 P **P** **23 49 43.9 -0.3**
comp=Z,31nm,0.7s
PSA00 Pilbara Seismi 23.86 195 P **P** **23 49 43.5 -0.7**
PSA00 IAmb IAmb 23 50 12.6
comp=Z,41nm,1.2s
PSA00 Pilbara Seismi 23.86 195 P **P** **23 49 42.8 -1.4**
PSA00 IAmb IAmb 23 50 01.3
comp=Z,25nm,1.3s
PSA00 Pilbara Seismi 23.86 195 P **P** **23 49 43.5 -0.7**
PSAB3 Pilbara Seismi 23.87 195 P **P** **23 49 44.1 -0.3**
comp=Z,28nm,1.9s
MNAI Manna 24.23 256 P **P** **23 49 48.5 +0.7**
JMZ Minamidaito 2 24.58 10 P **P** **23 49 52.5 +1.7**
MASI Maura Aman, Be 24.68 259 P **P** **23 49 53.2 +1.3**
JOW Kunigami 25.22 4 P **P** **23 49 58.4 +1.8**
comp=Z,33nm,0.8s,baz=172,slow=7.1,SNR=8.7
JOW LR LR 00 02 12.2
comp=Z,117nm,18.5s,baz=224,slow=42
comp=Z,33nm,0.8s
JOW Kunigami 25.22 4 P **P** **23 49 58.0 +1.4**
JOW Kunigami 25.22 4 P **P** **23 49 59.4 +2.8**
QIS Mount Isa 25.43 150 P **P** **23 49 58.3 -0.3**
comp=Z,39nm,0.8s
QIS Mount Isa 25.43 150 P **P** **23 49 58.6 0.0**
ASAR Alice Springs 26.05 164 P **P** **23 50 04.0 -0.3**
comp=Z,15nm,0.7s,baz=348,slow=8.0,SNR=114
ASAR PcP **PcP** **23 53 32.1 +0.5**
comp=Z,2.1nm,0.8s,baz=342,slow=2.4,SNR=2.7
ASAR S **S** **23 54 32.6 -0.2**
comp=Z,8.1nm,0.9s,baz=347,slow=20,SNR=13
ASAR ScP **ScP** **23 57 06.6 -1.7**
comp=Z,0.4nm,0.7s,baz=31,slow=2.6,SNR=1.7
comp=Z,15nm,0.7s
ASAR Alice Springs 26.05 164 P **P** **23 50 03.4 -0.9**
AUALC St Philip's Co 26.07 164 P **P** **23 50 04.5 +0.1**
PDSI Padang 26.14 265 P **P** **23 50 06.5 +1.3**
comp=Z,20nm,1.1s
MTSU Mount Surprise 26.26 139 P **P** **23 50 06.6 +0.5**
comp=Z,21nm,0.9s
WRKA Warakurna 26.46 176 P **P** **23 50 08.3 +0.4**
comp=Z,22nm,1.2s
RPSI Rantau Prapat 27.57 273 P **P** **23 50 17.0 -1.1**
PSI Prapat 27.58 273 P **P** **23 50 19.1 +0.9**
PSI Prapat 27.58 273 P **P** **23 50 17.0 -1.2**
PSI pmax pmax
comp=Z,18nm,1.1s
TV1H Townsville Har 28.71 137 P **P** **23 50 30.1 +2.1**
KCSI Kotacane, Aceh 28.76 275 P **P** **23 50 28.5 -0.1**
GSI Gunungsitoli 28.91 270 P **P** **23 50 28.3 -1.7**
GSI IAmb IAmb 23 50 34.4
comp=Z,26nm,0.8s
GSI Gunungsitoli 28.91 270 P **P** **23 50 29.5 -0.4**
GSI Gunungsitoli 28.91 270 P **P** **23 50 29.8 -0.1**
comp=Z,35nm,1.0s
CTA Charters Tower 28.93 139 P **P** **23 50 30.1 +0.1**
CTAO Charters Tower 28.93 139 P **P** **23 50 29.3 -0.7**
CTAO Charters Tower 28.93 139 P **P** **23 50 30.1 +0.1**
CTAO Charters Tower 28.93 139 P **P** **23 50 29.3 -0.7**
CTAO pmax pmax
comp=Z,10.0nm,0.9s
MEEK Meekatharra 29.01 195 P **P** **23 50 30.5 -0.2**
comp=Z,22nm,1.4s
MEEK Meekatharra 29.01 195 P **P** **23 50 31.5 +0.8**
SLVN Son La 29.54 313 P **P** **23 50 34.9 -0.5**
SLVN Son La 29.54 313 P **P** **23 50 35.0 -0.5**
WHN Wuhan 31.08 339 P **P** **23 50 51.5 +2.6**
GYA Guiyang 31.27 324 ⇑P **P** **23 50 53.3 +2.5**
GYA pmax pmax
comp=Z,15nm,0.7s
JNU Nakatsue 31.70 7 P **P** **23 50 54.2 -0.2**
comp=Z,8.0nm,0.7s,baz=307,slow=4.1,SNR=6.5
JNU LR LR 00 08 25.6
comp=Z,78nm,18.1s,baz=192,slow=45
comp=Z,8.0nm,0.7s
JNU Nakatsue 31.70 7 P **P** **23 50 54.7 +0.3**
JNU IAmb IAmb 23 51 01.8
comp=Z,33nm,0.9s
JNU Nakatsue 31.70 7 P **P** **23 50 55.3 +0.9**
CMAR Chiang Mai Arr 31.84 304 P **P** **23 50 55.5 -0.3**
comp=Z,2.0nm,0.8s,baz=112,slow=6.9,SNR=8.2
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 31.84 304 P **P** **23 50 54.4 -1.3**
CHTO Chiang Mai 32.01 304 P **P** **23 50 56.2 -1.0**
CHTO Chiang Mai 32.01 304 P **P** **23 50 56.9 -0.4**
CHTO P **P** **23 50 56.9 -0.4**
CHTO Chiang Mai 32.01 304 P **P** **23 50 57.1 -0.1**
CHTO Chiang Mai 32.01 304 P **P** **23 50 56.2 -1.0**
CHTO pmax pmax
comp=Z,5.0nm,0.7s
CHTO Chiang Mai 32.01 304 P **P** **23 50 56.0 -1.2**
MORW Morawa 32.02 197 P **P** **23 50 57.5 +0.3**
comp=Z,17nm,1.1s
MORW Morawa 32.02 197 P **P** **23 50 57.2 -0.1**
MORW Morawa 32.02 197 P **P** **23 50 57.6 +0.3**
FORT Forrest 32.16 177 P **P** **23 50 58.4 +0.1**
comp=Z,25nm,0.7s
FORT Forrest 32.16 177 P **P** **23 50 57.4 -1.0**
FORT IAmb IAmb 23 51 14.8
comp=Z,17nm,0.7s
QLP Quilpie 32.77 150 P **P** **23 51 03.8 0.0**
comp=Z,28nm,0.9s
QLP Quilpie 32.77 150 P **P** **23 51 04.3 +0.5**
KMI Kunming 32.80 318 P **P** **23 51 07.3 +2.9**
KMI pmax pmax
comp=Z,11nm,1.2s
KMI LR LR
comp=Z,210nm,11.9s
KMI LR LR
comp=Z,270nm,17.1s
KMI LR LR
comp=Z,350nm,20.9s
ENH Enshi 32.84 332 P **P** **23 51 04.2 -0.2**
KMBL Kambalda 33.00 187 P **P** **23 51 06.3 +0.5**
comp=Z,13nm,0.8s
BLDU Ballidu 33.29 195 P **P** **23 51 08.4 +0.1**
comp=Z,17nm,1.3s
BLDU Ballidu 33.29 195 P **P** **23 51 08.6 +0.3**
KLBR Kellerberrin 33.96 193 P **P** **23 51 14.1 0.0**
comp=Z,45nm,0.8s
KLBR Kellerberrin 33.96 193 P **P** **23 51 14.8 +0.7**
AUNRC North Rockhamp 34.04 138 P **P** **23 51 16.0 +1.1**
PZH PanZhiHua 34.39 318 P **P** **23 51 20.0 +1.9**
INU Inuyama 35.05 15 P **P** **23 51 24.2 +0.7**
INU IAmb IAmb 23 51 31.0
comp=Z,36nm,0.9s
INU Inuyama 35.05 15 P **P** **23 51 24.8 +1.3**
BBOO Buckleboo 35.33 166 P **P** **23 51 25.7 -0.2**
comp=Z,32nm,1.2s
BBOO Buckleboo 35.33 166 P **P** **23 51 25.6 -0.2**
BBOO IAmb IAmb 23 51 30.1
comp=Z,49nm,1.4s
BBOO Buckleboo 35.33 166 P **P** **23 51 26.1 +0.2**
NWAO Narrogin (SRO) 35.36 194 P **P** **23 51 25.2 -1.0**
LYN LuoYang 35.37 340 P **P** **23 51 29.9 +3.6**
LYN pmax pmax
comp=Z,13nm,0.6s
LYN pmax pmax
comp=Z,150nm,8.0s
LYN LR LR
comp=Z,340nm,23.4s
LYN LR LR
comp=Z,330nm,19.9s
LYN LR LR
comp=Z,680nm,22.7s
KSAR Wonju Array Be 35.77 2 P **P** **23 51 29.9 +0.3**
KSAR Wonju Array Be 35.77 2 P **P** **23 51 29.9 +0.3**
KSRS Korea Array 35.78 2 P **P** **23 51 29.2 -0.5**
comp=Z,3.7nm,0.7s,baz=178,slow=9.8,SNR=16
comp=Z,3.7nm,0.7s
EIDS Eidsvold 35.80 140 P **P** **23 51 29.5 -0.6**
comp=Z,18nm,1.1s
EIDS Eidsvold 35.80 140 P **P** **23 51 29.1 -1.0**
EIDS IAmb IAmb 23 51 34.6
comp=Z,16nm,1.0s
EIDS Eidsvold 35.80 140 P **P** **23 51 29.7 -0.4**
KS19 Wonju Array Si 35.83 2 P **P** **23 51 30.9 +0.8**
WHYH Whyalla 35.93 164 P **P** **23 51 31.4 +0.4**
STKA Stephens Creek 36.17 158 P **P** **23 51 33.1 -0.1**
comp=Z,85nm,1.0s
STKA Stephens Creek 36.17 158 P **P** **23 51 31.8 -1.5**
comp=Z,9.2nm,0.4s,baz=339,slow=8.3,SNR=24
comp=Z,9.2nm,0.4s
STKA Stephens Creek 36.17 158 P **P** **23 51 33.6 +0.4**
XAN Xi'an 36.29 335 ⇓P **P** **23 51 32.8 -1.4**
XAN pP pP 23 51 41.3 -3.6
XAN pmax pmax
comp=Z,17nm,0.9s
XAN pmax pmax
comp=Z,170nm,4.1s
CD2 Chengdu 36.30 326 P **P** **23 51 33.3 -1.1**
CD2 S **S** **23 57 13.5 +0.9**
CD2 LR LR
comp=Z,450nm,12.0s
AUJCS Jamestown Cent 36.38 163 P **P** **23 51 35.3 +0.3**
MJAR Matsushiro Arr 36.49 16 P **P** **23 51 33.9 -2.0**
comp=Z,8.0nm,0.7s,baz=184,slow=9.4,SNR=18
comp=Z,8.0nm,0.7s
MJAR Matsushiro Arr 36.49 16 P **P** **23 51 35.1 -0.8**
MJAR Matsushiro Arr 36.49 16 P **P** **23 51 35.1 -0.8**
MJAR pmax pmax
comp=Z,8.0nm,1.0s
MAJO Matsushiro 36.49 16 P **P** **23 51 35.1 -0.7**
MAJO pP 23 51 37.4 -9.2
MAJO IAmb IAmb 23 51 39.1
comp=Z,18nm,0.9s
MAJO Matsushiro 36.49 16 P **P** **23 51 38.2 +2.3**
MAJO Matsushiro 36.49 16 *i* P **P** **23 51 36.4 +0.5**
MAJO pmax pmax
comp=Z,12nm,1.0s
MJB9 Matsu-Tunnel 36.50 16 P **P** **23 51 36.0 +0.1**
MJB9 IAmb IAmb 23 51 40.1
comp=Z,20nm,1.0s
HTT Hallett 36.69 162 P **P** **23 51 37.5 -0.1**
comp=Z,7.8nm,1.5s
HTT Hallett 36.69 162 P **P** **23 51 38.6 +1.0**
AULRC Lightning Ridg 37.01 148 P **P** **23 51 41.1 +0.8**
DL2 Dalian 37.47 354 P **P** **23 51 45.1 +1.0**
DL2 pmax pmax
comp=Z,70nm,0.8s
CMSA Cobar Meteorol 37.59 153 P **P** **23 51 46.2 +0.9**
comp=Z,15nm,1.7s
CMSA Cobar Meteorol 37.59 153 P **P** **23 51 48.2 +2.9**
JMM Marumori 38.48 18 P **P** **23 51 52.1 -0.6**
JMM IAmb IAmb 23 52 16.8
comp=Z,44nm,0.9s
JMM Marumori 38.48 18 P **P** **23 51 54.9 +2.2**
BJT Baijiatuan 39.45 347 P **P** **23 52 03.3 +2.5**
BJI Beijing 39.47 348 P **P** **23 52 00.8 -0.1**
BJI pmax pmax
comp=Z,6.0nm,0.7s
BJI LR LR
comp=Z,140nm,16.8s
AUDCS Dubbo College 39.58 150 P **P** **23 52 03.5 +1.6**
SNY Shenyang 40.21 357 ⇓P **P** **23 52 07.8 +0.8**
SNY pmax pmax
comp=Z,22nm,0.8s
LZDM Lanzhou Array 40.26 331 P **P** **23 52 07.3 -0.7**
comp=Z,0.8nm,0.3s,baz=147,slow=8.3,SNR=4.3
comp=Z,0.8nm,0.3s
LZH Lanzhou 40.29 331 *e*P **P** **23 52 05.3 -2.7**
LZH pP pP 23 52 18.6 -0.3
LZH pmax pmax
comp=Z,19nm,1.4s
LZH LR LR
comp=Z,190nm,17.5s
LZH LR LR
comp=Z,410nm,17.0s
LZH LR LR
comp=Z,440nm,18.6s
ARPS Mount Arapiles 40.68 161 P **P** **23 52 11.6 +0.6**
comp=Z,20nm,1.2s
SHL Shillong 41.02 309 P **P** **23 52 13.6 -0.7**
SHL IAmb IAmb 23 52 16.6
comp=Z,20nm,0.8s
SHL Shillong 41.02 309 P **P** **23 52 14.2 -0.1**
SHL Shillong 41.02 309 P **P** **23 52 13.6 -0.7**
SHL pmax pmax
comp=Z,20nm,0.8s
HHC Hu-ho-hao-te 41.41 343 *e*P **P** **23 52 19.9 +2.8**
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,75nm,5.7s
HHC LR LR
comp=Z,170nm,15.5s
HHC LR LR
comp=Z,140nm,14.7s
HHC LR LR
comp=Z,270nm,14.1s
BTO Baotou 41.67 341 *e*P **P** **23 52 22.3 +3.1**
BTO pP **pP** **23 52 32.0 +1.8**
BTO sP **sP** **23 52 36.0 +1.2**
BTO pmax pmax
comp=Z,14nm,0.7s
BTO pmax pmax
comp=Z,290nm,5.3s
CN2 Changchun 42.11 359 *e*P **P** **23 52 25.8 +3.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Ar. 42.77 6 P **P** **23 52 27.5 -0.5**
comp=Z,9.6nm,0.7s,baz=189,slow=6.3,SNR=14
comp=Z,9.6nm,0.7s
MDJ Mudanjiang 43.00 3 P **P** **23 52 30.8 +1.0**
MDJ pmax pmax
comp=Z,27nm,1.0s
MDJ Mudanjiang 43.00 3 P **P** **23 52 31.6 +1.8**
XLT XiLinHaoTe 43.20 349 *e*P **P** **23 52 35.3 +3.7**
XLT pP pP 23 52 42.9 +0.3
XLT sP sP 23 52 49.1 +1.9
XLT pmax pmax
comp=Z,29nm,0.9s
XLT pmax pmax
comp=Z,150nm,8.9s
BNX BinXian 44.04 1 ⇑P **P** **23 52 38.6 +0.4**
BNX pmax pmax
comp=Z,13nm,1.1s
ASAJ Asahikawa 44.76 16 P **P** **23 52 44.9 +0.9**
comp=Z,20nm,0.8s,baz=249,slow=22,SNR=3.8
comp=Z,20nm,0.8s
GTA Gaotai 44.87 330 *e*P **P** **23 52 44.8 -0.4**
GTA sP pP 23 52 58.0 +1.9
GTA PcP **PcP** **23 54 25.3 -1.1**
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA LR LR
comp=Z,300nm,17.4s
GTA LR LR
comp=Z,260nm,16.4s
GTA LR LR
comp=Z,480nm,21.8s
PALK Pallekele 45.99 279 LR LR 00 14 28.6
comp=Z,222nm,20.4s,baz=94,slow=39
EVN Everest 46.14 308 P **P** **23 52 54.0 -2.0**
EVN IAmb IAmb 23 53 19.9
comp=Z,19nm,1.0s
HILR Hailar Array B 48.20 354 P **P** **23 53 11.9 +0.9**
comp=Z,12nm,0.7s,baz=180,slow=10,SNR=14
comp=Z,12nm,0.7s
HEH HeiHe 48.56 1 *e*P **P** **23 53 13.4 -0.2**
HEH pmax pmax
comp=Z,23nm,0.9s
ULN Ulaanbaatar 49.14 343 P **P** **23 53 18.1 -0.3**
ULN IAmb IAmb 23 53 33.4
comp=Z,11nm,0.8s
ULN Ulaanbaatar 49.14 343 ⇑P **P** **23 53 19.0 +0.7**
ULN Ulaanbaatar 49.14 343 P **P** **23 53 18.4 0.0**
ULN pP **pP** **23 53 28.6 -0.8**
SONM Songino Array 49.31 342 P **P** **23 53 19.5 -0.1**
comp=Z,5.2nm,0.7s,baz=156,slow=8.0,SNR=13
SONM LR LR 00 16 41.9
comp=Z,89nm,19.6s,baz=146,slow=39
comp=Z,5.2nm,0.7s
HYBB Hyderabad (bro 49.67 292 *e*P **P** **23 53 22.1 -0.6**
HYBB *e*PP **PP** **23 55 17.4 -0.2**
CIT Chita 51.48 350 *e*P **P** **23 53 37.0 +1.2**
CIT *e* 23 53 46.6
CIT *e* 23 53 58.2
CIT *e* 23 54 53.2
CIT *e* 23 55 32.7
CIT *e* 23 56 30.7
CIT pmax pmax
comp=Z,108nm,1.6s
WMQ Urumqi 54.40 326 *e*P **P** **23 53 58.3 +0.7**
WMQ pP pP 23 54 06.3 -2.5
WMQ pmax pmax
comp=Z,19nm,1.3s
WMQ LR LR
comp=Z,210nm,21.5s
PETK Petropavlovsk- 57.55 22 P **P** **23 54 19.1 -0.8**
comp=Z,5.4nm,0.5s,baz=190,slow=4.9,SNR=22
comp=Z,5.4nm,0.5s
DGZ Jazzator, Alta 58.40 331 *i* P **P** **23 54 25.7 -0.3**
DGZ pmax pmax
comp=Z,13nm,1.2s
PYZ Puysegur Point 59.22 149 P **P** **23 54 31.5 -0.1**
MK31 Makanchi Array 59.23 326 *ce*P **P** **23 54 31.5 -0.2**
MKAR Makanchi Array 59.23 326 P **P** **23 54 31.0 -0.7**
comp=Z,11nm,0.7s,baz=120,slow=7.6,SNR=71
MKAR LR LR 00 20 56.4
comp=Z,192nm,18.9s,baz=138,slow=37
comp=Z,11nm,0.7s
TARG Taragay, Kyrgy 59.24 319 P **P** **23 54 31.6 -0.8**
TARG IAmb IAmb 23 54 55.5
comp=Z,15nm,1.0s
TARG Taragay, Kyrgy 59.24 319 P **P** **23 54 31.6 -0.8**
TARG pmax pmax
comp=Z,15nm,1.0s
QRZ Quartz Range 59.37 141 P **P** **23 54 32.0 -0.7**
MAKZ Makanchi 59.42 326 P **P** **23 54 32.3 -0.7**
THZ Tophouse 60.12 141 P **P** **23 54 38.2 +0.2**
THZ IAmb IAmb 23 54 42.3
comp=Z,16nm,0.7s
YAK Yakutsk 60.41 2 LR LR 00 23 14.9
comp=Z,40nm,18.7s,baz=182,slow=38
YAK Yakutsk 60.41 2 P **P** **23 54 40.0 +0.5**
YAK Yakutsk 60.41 2 *e*P **P** **23 54 39.8 +0.4**
YAK *e* 23 55 19.3
YAK *e* 23 56 49.6
YAK *e*S **S** **00 02 55.8 +4.4**
YAK *e**SS **pS** **00 03 01.2 -3.5**
YAK *e* 00 04 28.2
YAK *e*SS **SS** **00 06 51.3 +1.6**
YAK pmax pmax
comp=Z,47nm,1.1s
YAK pmax pmax
comp=N,14nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,373nm,4.1s
YAK pmax pmax
comp=N,378nm,3.3s
YAK pmax pmax
comp=E,165nm,2.2s
YAK smax smax
comp=N,340nm,3.3s
YAK smax smax
comp=E,66nm,2.8s
YAK Yakutsk 60.41 2 P **P** **23 54 39.9 +0.5**
YAK pP **pP** **23 54 50.0 -0.8**
YAK sP **sP** **23 54 54.1 -1.3**
MA2 Magadan 60.89 14 LR LR 00 21 36.8
comp=E,19nm,21.7s,baz=136,slow=36
URZ Urewera 61.12 136 LR LR 00 22 38.2
comp=E,105nm,18.2s,baz=309,slow=37
BKZ Black Stump Fm 61.12 137 P **P** **23 54 44.0 -0.8**
BKZ IAmb IAmb 23 54 47.9
comp=Z,11nm,0.8s
RTZ Ruatahuna 61.19 136 P **P** **23 54 44.6 -0.8**
BFZ Birch Farm 61.70 139 P **P** **23 54 51.7 +3.0**
AAK Ala-Archa 61.84 319 P **P** **23 54 50.0 +0.2**
AAK Ala-Archa 61.84 319 *ce*P **P** **23 54 48.4 -1.4**
AAK pmax pmax
comp=Z,7.0nm,1.7s
DRK Karamyk 62.36 315 P **P** **23 54 52.7 -0.8**
DRK IAmb IAmb 23 55 02.6
comp=Z,15nm,0.8s
DRK Karamyk 62.36 315 P **P** **23 54 52.7 -0.8**
DRK pmax pmax
comp=Z,15nm,0.8s
ZAA0 Zalesovo Array 62.44 334 P **P** **23 54 53.6 +0.2**
ZAA0 IAmb IAmb 23 55 15.2
comp=Z,21nm,1.4s
ZALV Zalesovo Beam 62.44 334 P **P** **23 54 52.6 -0.8**
comp=Z,2.6nm,0.4s,baz=116,slow=6.0,SNR=16
ZALV LR LR 00 23 32.1
comp=Z,67nm,20.2s,baz=114,slow=37
comp=Z,2.6nm,0.4s
ZALV Zalesovo Beam 62.44 334 P **P** **23 54 51.8 -1.6**
KBL Kabul 62.69 308 P **P** **23 54 54.5 -1.2**
KBL IAmb IAmb 23 55 01.2
comp=Z,15nm,0.8s
KBL Kabul 62.69 308 P **P** **23 54 54.5 -1.2**
KBL pmax pmax
comp=Z,15nm,0.8s
AFI Afiamalu 63.03 106 P **P** **23 54 56.7 -1.4**
AFI Afiamalu 63.03 106 P **P** **23 54 56.7 -1.4**
AFI pmax pmax
comp=Z,77nm,1.3s
GAR Garm 63.25 314 P **P** **23 54 58.3 -0.9**
KURBB Kurchatov Arra 63.47 328 P **P** **23 54 59.6 -0.6**
comp=Z,14nm,0.6s,baz=129,slow=6.4,SNR=86
comp=Z,14nm,0.6s
KURK Kurchatov 63.47 328 P **P** **23 54 59.2 -1.1**
KURK Kurchatov 63.47 328 *ce*P **P** **23 54 59.4 -0.9**
KURK pmax pmax
comp=Z,29nm,0.8s
KURK Kurchatov 63.47 328 P **P** **23 54 59.2 -1.1**
CHGR Chuyangaron 63.97 313 P **P** **23 55 02.3 -1.6**
CHGR IAmb IAmb 23 55 09.9
comp=Z,26nm,1.0s
CHGR Chuyangaron 63.97 313 P **P** **23 55 02.3 -1.6**
CHGR pmax pmax
comp=Z,27nm,1.0s
SEY Seymchan 64.22 13 *e*P **P** **23 55 05.4 +0.4**
SEY pmax pmax
comp=Z,19nm,1.1s
AMKA Amchitka 66.47 33 P **P** **23 55 19.9 +0.2**
HRA Herat 68.04 307 P **P** **23 55 29.6 -0.8**
CASY Casey 68.61 187 P **P** **23 55 31.9 -1.0**
BVAR Borovoye Array 69.04 328 P **P** **23 55 35.5 -0.4**
comp=Z,3.7nm,0.6s,baz=63,slow=5.0,SNR=13
comp=Z,3.7nm,0.6s
BORK Borovoye 69.08 328 *ce*P **P** **23 55 36.0 -0.2**
BORK pmax pmax
comp=Z,22nm,1.7s
BORK Borovoye 69.08 328 P **P** **23 55 35.5 -0.7**
MHTO MHTO 69.43 292 P **P** **23 55 38.0 -1.0**
MHTO P **P** **23 55 38.0 -1.0**
JMDO Jabal Madar 69.47 293 P **P** **23 55 39.9 +0.7**
TIXI Tiksi 70.04 1 LR LR 00 28 57.2
comp=Z,58nm,19.5s,baz=196,slow=38
TIXI Tiksi 70.04 1 P **P** **23 55 41.6 -0.1**
TIXI IAmb IAmb 23 55 44.0
comp=Z,7.8nm,0.8s
TIXI Tiksi 70.04 1 *ce*P **P** **23 55 41.8 +0.1**
TIXI pmax pmax
comp=Z,19nm,1.7s
ARQ Araqi 71.03 294 P **P** **23 55 48.4 -0.4**
BILL Bilibino 71.73 15 *i* P **P** **23 55 54.5 +2.4**
BILL pmax pmax
comp=Z,4.0nm,1.0s
ALNE Al Ain 71.81 295 P **P** **23 55 53.1 -0.4**
ALNE P **P** **23 55 53.1 -0.4**
AJN Ajban 72.56 295 P **P** **23 55 57.9 0.0**
DOK Doka 72.81 289 P **P** **23 55 58.6 -0.9**
DOK P **P** **23 55 58.6 -0.9**
WHFO Wadi Hawf 73.10 288 P **P** **23 56 00.6 -0.7**
MZWR Madinat Zayed 73.48 294 P **P** **23 56 02.5 -0.9**
ABTO Aybut 73.51 288 P **P** **23 56 04.9 +1.2**
MZR Muzera 73.78 293 P **P** **23 56 03.3 -1.9**
GHWR Ruwais 74.42 294 P **P** **23 56 05.8 -3.0**

AKTO	**Aktyubinsk**	**75.24**	**322**	LR	LR	00 31 00.2	
	comp=Z,145nm,20.9s,baz=196,slow=37						
RAR	**Rarotonga**	**75.42**	**112**	LR	LR	00 28 22.8	
	comp=Z,30nm,19.5s,baz=286,slow=35						
SVE	**Sverdlovsk**	**75.71**	**329**	*eP*	**P**	**23 56 15.4**	**-0.2**
SVE				pmax	pmax		
	comp=Z,33nm,1.1s						
TRNA	**Turayna**	**76.00**	**295**	P	**P**	**23 56 14.6**	**-3.3**
SMRA	**Abu-Samra**	**76.35**	**295**	P	**P**	**23 56 18.2**	**-1.7**
ARTI	**Arti**	**76.75**	**328**	P	**P**	**23 56 20.6**	**-0.9**
ARTI				IAmb	IAmb	23 56 28.6	
	comp=Z,18nm,0.6s						
ARTI	**Arti**	**76.75**	**328**	*c iP*	**P**	**23 56 20.5**	**-1.0**
ARTI						23 59 08.6	
ARTI				S	**S**	**00 06 05.5**	**-0.1**
ARTI				SS	**SS**	**00 11 01.0**	**-1.1**
ARTI				pmax	pmax		
	comp=Z,25nm,1.8s						
ARTI	**Arti**	**76.75**	**328**	P	**P**	**23 56 20.2**	**-1.3**
L14K	**Kuka Creek**	**79.55**	**28**	P	**P**	**23 56 37.7**	**+0.8**
L14K				IAmb	IAmb	23 56 59.6	
	comp=Z,38nm,1.2s						
AKT	**Akhty**	**80.57**	**312**	*eP*	**P**	**23 56 40.1**	**-3.0**
AKT				pmax	pmax		
	comp=Z,13nm,1.4s						
RAYN	**Ar Rayn**	**81.13**	**293**	P	**P**	**23 56 45.7**	**-0.7**
RAYN	**Ar Rayn**	**81.13**	**293**	P	**P**	**23 56 45.8**	**-0.5**
RAYN	**Ar Rayn**	**81.13**	**293**	⇓P	**P**	**23 56 46.2**	**-0.1**
RAYN	**Ar Rayn**	**81.13**	**293**	P	**P**	**23 56 46.0**	**-0.3**
RAYN				PcP	**PcP**	**23 56 51.7**	**-0.9**
VNDA	**Vanda**	**81.28**	**173**	P	**P**	**23 56 47.0**	**+1.1**
	comp=Z,2.6nm,0.6s,baz=321,slow=6.2,SNR=15						
VNDA				LR	LR	00 33 10.8	
	comp=Z,33nm,21.5s,baz=350,slow=36						
	comp=Z,2.6nm,0.6s						
VNDA	**Vanda**	**81.28**	**173**	P	**P**	**23 56 47.0**	**+1.1**
VNDA	**Vanda**	**81.28**	**173**	P	**P**	**23 56 46.7**	**+0.7**
VNDA				PcP	**PcP**	**23 56 52.0**	**0.0**
MAW	**Mawson**	**81.62**	**200**	P	**P**	**23 56 48.1**	**+0.3**
	comp=Z,3.4nm,1.0s,baz=23,slow=1.7,SNR=6.4						
MAW				LR	LR	00 31 47.3	
	comp=Z,22nm,18.6s,baz=73,slow=35						
	comp=Z,3.4nm,1.0s						
KIRV	**Kirov**	**81.98**	**329**	*ce*	**P**	**23 56 50.3**	**+0.4**
BELG	**Belogornoye**	**82.00**	**323**	*i* P	**P**	**23 56 50.1**	**-0.1**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
C19K	**Lookout Ridge**	**82.88**	**20**	P	**P**	**23 56 55.1**	**+0.6**
KDAK	**Kodiak Island**	**83.87**	**32**	LR	LR	00 27 46.3	
	comp=Z,114nm,21.0s,baz=238,slow=31						
KBZ	**Khabaz**	**84.32**	**314**	P	**P**	**23 57 01.6**	**-0.8**
	comp=Z,6.0nm,0.9s,baz=123,slow=8.1,SNR=12						
KBZ				LR	LR	00 41 35.7	
	comp=Z,44nm,18.1s,baz=72,slow=41						
	comp=Z,6.0nm,0.9s						
KBZ	**Khabaz**	**84.32**	**314**	*ce*	**P**	**23 57 03.3**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IMAR	**Indian Mountai**	**84.44**	**24**	P	**P**	**23 57 02.6**	**0.0**
KIV	**Kislovodsk**	**84.48**	**314**	⇑P	**P**	**23 57 03.4**	**0.0**
KIV	**Kislovodsk**	**84.48**	**314**	*eP*	**P**	**23 57 03.4**	**0.0**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SPU	**Mount Spurr**	**84.54**	**29**	P	**P**	**23 57 02.7**	**-0.5**
SPU				IAmb	IAmb	23 57 22.4	
	comp=Z,12nm,1.1s						
HOM	**Homer**	**84.57**	**30**	P	**P**	**23 57 02.4**	**-0.9**
GURO	**Guroymak-BITLI**	**84.72**	**308**	P	**P**	**23 57 04.0**	**-0.8**
SUA	**Susitna One**	**85.20**	**29**	P	**P**	**23 57 06.5**	**-0.1**
SLKM	**Skilak Lake**	**85.37**	**30**	P	**P**	**23 57 07.2**	**-0.2**
M22K	**Willow**	**85.53**	**28**	P	**P**	**23 57 08.5**	**+0.5**
VRH	**Novokhopyorsk**	**85.54**	**321**	*eP*	**P**	**23 57 05.0**	**-3.3**
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
MARD	**Mardin**	**85.67**	**307**	P	**P**	**23 57 08.7**	**-0.8**
MARD				IAmb	IAmb	23 57 18.1	
	comp=Z,9.9nm,0.7s						
LABN	**Labinsk**	**85.92**	**314**	*eP*	**P**	**23 57 05.7**	**-4.7**
LABN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOPT	**Kop Dagi**	**85.96**	**310**	P	**P**	**23 57 09.9**	**-1.2**
PMR	**Palmer**	**85.98**	**28**	P	**P**	**23 57 10.2**	**-0.1**
PMR	**Palmer**	**85.98**	**28**	P	**P**	**23 57 10.2**	**-0.1**
PMR				pmax	pmax		
	comp=Z,23nm,1.0s						
COLD	**Coldfoot**	**86.00**	**23**	P	**P**	**23 57 10.5**	**+0.2**
COLD				IAmb	IAmb	23 57 31.9	
	comp=Z,6.7nm,0.9s						
ERBR	**Yeremizino-Bor**	**86.13**	**316**	*eP*	**P**	**23 57 10.7**	**-0.7**
ERBR				*e**PP	**pP**	**23 57 20.1**	**-3.1**
ERBR				pmax	pmax		
	comp=Z,15nm,0.8s						
TOLK	**Toolik Lake Re**	**86.37**	**21**	P	**P**	**23 57 12.5**	**+0.3**
TOLK				IAmb	IAmb	23 57 15.2	
	comp=Z,5.7nm,0.8s						
VORD	**Divnogorie**	**87.06**	**321**	*eP*	**P**	**23 57 14.6**	**-1.2**
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VORR	**Voronezh**	**87.13**	**321**	*eP*	**P**	**23 57 13.9**	**-2.2**
VORR				pmax	pmax		
	comp=Z,40nm,1.0s						
VSR	**Storozhevoye**	**87.14**	**321**	*eP*	**P**	**23 57 15.3**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ILAR	**Eielson Array**	**87.19**	**25**	P	**P**	**23 57 14.2**	**-2.0**
	comp=Z,0.8nm,0.7s,baz=250,slow=4.8,SNR=8.1						
	comp=Z,0.8nm,0.7s						
KLMR	**Klimovskoe**	**87.20**	**331**	*eP*	**P**	**23 57 14.1**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
LPSR	**Galich'ya Gora**	**87.32**	**322**	*eP*	**P**	**23 57 15.5**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
E25K	**Arctic Village**	**87.83**	**22**	P	**P**	**23 57 19.8**	**+0.5**
E25K				IAmb	IAmb	23 57 24.4	
	comp=Z,7.5nm,1.1s						
MOS	**Moscow**	**88.11**	**326**	*eP*	**P**	**23 57 18.5**	**-2.3**
BMAR	**Burnt Mountain**	**88.19**	**23**	P	**P**	**23 57 22.1**	**+1.1**
ANN	**Anapa**	**88.27**	**315**	*eP*	**P**	**23 57 21.4**	**-0.3**
ANN				*e**PP	**PcP**	**23 57 28.9**	**+5.5**
ANN				pmax	pmax		
	comp=Z,27nm,0.9s						
OBN	**Obninsk**	**88.72**	**325**	P	**P**	**23 57 23.0**	**-0.6**
OBN	**Obninsk**	**88.72**	**325**	*de*	**P**	**23 57 23.0**	**-0.6**
OBN				*e*		00 01 00.5	
OBN				*e*SS	SS	00 13 58.0	-1.5
OBN				pmax	pmax		
	comp=Z,29nm,1.5s						
OBN				MLR	MLR		
	comp=Z,61nm,15.0s						
ASF	**Jabal al Asfar**	**88.86**	**302**	LR	LR	00 41 29.9	
	comp=Z,58nm,21.5s,baz=111,slow=38						
KMBO	**Kilima Mbogo**	**89.27**	**269**	LR	LR	00 35 02.4	
	comp=Z,55nm,19.0s,baz=96,slow=34						
MMAI	**Mount Meron Ar**	**90.10**	**303**	P	**P**	**23 57 31.4**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=91,slow=6.7,SNR=6.4						
MMAI				LR	LR	00 47 08.8	
	comp=Z,30nm,18.2s,baz=99,slow=42						
	comp=Z,1.0nm,0.5s						
I28M	**Miner Creek**	**90.12**	**25**	P	**P**	**23 57 30.6**	**+0.5**
I28M				IAmb	IAmb	23 57 38.4	
	comp=Z,8.1nm,1.1s						
SYO	**Syowa Base**	**90.30**	**201**	⇑*e*PcP	**PcP**	**23 57 34.2**	**+2.4**
EIL	**Elat**	**90.60**	**300**	LR	LR	00 42 49.2	
	comp=Z,89nm,19.9s,baz=1.0,slow=39						
BRTR	**Keskin Array B**	**91.24**	**310**	P	**P**	**23 57 37.1**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=131,slow=3.8,SNR=6.1						
	comp=Z,1.1nm,0.7s						
ARCES	**ARCESS Array B**	**92.42**	**340**	P	**P**	**23 57 40.2**	**-0.4**
	comp=Z,5.4nm,0.8s,baz=64,slow=5.6,SNR=7.5						
	comp=Z,5.4nm,0.8s						
SPITS	**Spitsbergen Ar**	**92.58**	**349**	LR	LR	00 43 47.1	
	comp=Z,69nm,21.4s,baz=68,slow=38						
FINES	**FINESS Array B**	**93.65**	**332**	P	**P**	**23 57 45.8**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=46,slow=5.5,SNR=7.8						
FINES				LR	LR	00 44 34.7	
	comp=Z,95nm,18.5s,baz=72,slow=38						
	comp=Z,1.6nm,0.7s						
FINES	**FINESS Array B**	**93.65**	**332**	*i* P	**P**	**23 57 47.7**	**+1.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SORM	**Soroca**	**94.31**	**318**	⇓P	**P**	**23 57 49.3**	**-0.5**
SORM	**Soroca**	**94.31**	**318**	⇓P	**P**	**23 57 49.3**	**-0.5**
C36M	**Paulatuk**	**95.36**	**20**	P	**P**	**23 57 54.0**	**-0.1**
C36M				IAmb	IAmb	23 57 55.1	
	comp=Z,5.9nm,1.0s						
VRI	**Vrincioaia**	**95.72**	**316**	⇑P	**P**	**23 57 56.5**	**+0.2**
VRI	**Vrincioaia**	**95.72**	**316**	⇑P	**P**	**23 57 56.5**	**+0.2**
PLOR	**Plostina**	**95.77**	**316**	⇑P	**P**	**23 57 57.4**	**+0.8**
PLOR	**Plostina**	**95.77**	**316**	⇑P	**P**	**23 57 57.4**	**+0.8**
NEHR	**Nehoiu**	**96.08**	**316**	⇑P	**P**	**23 57 58.4**	**+0.4**
MLR	**Muntele Rosu**	**96.31**	**316**	⇑P	**P**	**23 57 59.3**	**+0.1**
MLR	**Muntele Rosu**	**96.31**	**316**	⇑P	**P**	**23 57 59.3**	**+0.1**
BURAR	**Bucovina Array**	**96.48**	**318**	P	**P**	**23 57 59.1**	**-0.7**
BURAR				IAmb	IAmb	23 58 08.1	
	comp=Z,6.9nm,0.9s						
BURAR	**Bucovina Array**	**96.48**	**318**	⇑P	**P**	**23 57 59.6**	**-0.2**
BURAR	**Bucovina Array**	**96.48**	**318**	⇑P	**P**	**23 57 59.6**	**-0.2**
BUR08	**Bucovina Ar. S**	**96.48**	**318**	P	**P**	**23 57 58.6**	**-1.2**
BUR08				IAmb	IAmb	23 58 08.4	
	comp=Z,8.2nm,0.9s						
SUW	**Suwalki**	**96.58**	**325**	P	**P**	**23 57 59.5**	**-0.5**
SUW	**Suwalki**	**96.58**	**325**	P	**P**	**23 57 59.5**	**-0.5**
WRGLY	**Wrigley**	**97.56**	**25**	P	**P**	**23 58 03.2**	**-1.0**
WRGLY				IAmb	IAmb	23 58 13.9	
	comp=Z,12nm,1.2s						
MARR	**Marisel-Cluj**	**98.05**	**317**	⇓P	Pdif	23 58 07.6	+0.6
DRGR		**98.31**	**318**	⇓P	**P**	**23 58 07.7**	**-0.3**
DRGR		**98.31**	**318**	⇓P	**P**	**23 58 07.7**	**-0.3**
LSZ	**Lusaka**	**98.41**	**255**	LR	LR	00 40 27.2	
	comp=Z,61nm,19.8s,baz=134,slow=34						
HOLB	**Holberg**	**98.53**	**38**		**P**	**23 58 07.6**	**-1.3**
NVL	**N'lazarevskaya**	**99.39**	**198**	*eP*	**Pdif**	**23 58 14.5**	**+2.3**
NVL				*e*		00 02 17.0	
NVL				*e*PPP	PPP	00 04 24.6	
NVL				*eS*	**SKSac**	**00 08 50.5**	**+3.3**
NVL				*e*SS	**SS**	**00 16 36.3**	**+5.5**
NVL				*e*SSS	SSS	00 20 25.5	
NVL				pmax	pmax		
	comp=Z,11nm,0.7s						
NVL				MLR	MLR		
	comp=Z,110nm,19.7s						
HFS	**Hagfors**	**99.85**	**332**	P	**Pdif**	**23 58 12.9**	**-1.6**
	comp=Z,1.8nm,0.9s,baz=100,slow=7.5,SNR=1.6						
HFS				LR	LR	00 48 45.2	
	comp=Z,126nm,18.1s,baz=70,slow=39						
	comp=Z,1.8nm,0.9s						
NOA	**NORSAR Array B**	**100.64**	**333**	P	**Pdif**	**23 58 15.8**	**-2.4**
	comp=Z,1.1nm,0.8s,baz=68,slow=4.3,SNR=3.3						
NC204	**NORSAR Array S**	**100.75**	**334**	Pdif	**Pdif**	**23 58 18.9**	**+0.3**
NAO01	**NORSAR Array S**	**100.87**	**333**	Pdif	**Pdif**	**23 58 17.4**	**-1.7**
SCHQ	**Schefferville**	**122.77**	**9**	PKP	**PKiKP**	**00 03 26.0**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=312,slow=2.3,SNR=6.8						
TXAR	**Lajitas Array**	**123.12**	**53**	PKP	**PKPdf**	**00 03 26.7**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=324,slow=1.0,SNR=12						

***SJA* 15 23:53:28.9±0.4, 22°.39S×69°.12W, h102km±3km, ML3.5, MW3.2, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.60**	**349**	*i* P		23 53 46.5	+0.5
PB09				*eS*		23 53 59.8	+1.1
PB03	**IPOC Station P**	**0.68**	**300**	*i* P		23 53 47.4	+0.8
PB03				*eS*		23 54 00.9	+1.1
PB07	**IPOC Station P**	**0.97**	**313**	*i* P		23 53 50.2	+0.8
PB07				*eS*		23 54 05.9	+1.0
PB02	**IPOC Station P**	**1.29**	**326**	*i* P		23 53 53.9	+0.9
PB02				*eS*		23 54 12.3	+1.3

TEH ***15*** *23:57:35.7, 26°.97N×58°.00E, h19km±68km*
OMAN ***15*** *23:57:37.1±0.1, 27°.07N×58°.02E, h10km±2km, ml2.8/18, Error ellipse: s-maj=4.2km s-min=0.9km az=26.0*
ISC 15 23:57:36.2±1.2, 26°.97N±0°.04×57°.94E±0°.06, h10km, n27, σ2s15/35, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**1.33**	**292**	Pg	**Pg**	**23 58 01.5**	**-0.3**
IBND				Sg	**Sg**	**23 58 21.2**	**+2.2**
GENO	**Geno**	**1.63**	**286**	Pg	**Pb**	**23 58 06.0**	**-0.4**
BANOM	**Banah**	**1.80**	**235**	P	**Pg**	**23 58 09.8**	**-0.9**
BANOM				S	**Sg**	**23 58 34.7**	**+0.8**
SHME	**Shamm**	**1.85**	**241**	P	**Pg**	**23 58 11.3**	**-0.3**
SHME				S	**Sg**	**23 58 35.9**	**+0.3**
MDH	**Madha**	**2.22**	**222**	P	**Pb**	**23 58 14.8**	**-1.6**
MDH				S	**Sb**	**23 58 43.8**	**0.0**
MASF	**Masafi**	**2.25**	**226**	P	**Pg**	**23 58 17.6**	**-1.7**
UOSS	**Minazif**	**2.54**	**218**	P	**Pb**	**23 58 19.6**	**-2.4**
UOSS				S	**Sb**	**23 58 51.3**	**-2.0**
HATD	**Hatta, Dubai**	**2.68**	**218**	P	**Pb**	**23 58 23.9**	**-0.3**
ASHO	**Ashiyiah**	**2.83**	**217**	P	**Pb**	**23 58 25.4**	**-1.4**
	SNR=8.7						
NGRK	**Negar Kerman**	**2.87**	**339**	Pn	**Pn**	**23 58 22.2**	**-0.1**
CHMN	**Cheshme madani**	**2.91**	**353**	Pn	**Pn**	**23 58 22.9**	**0.0**
SOHO	**SOHO**	**3.09**	**204**	P	**Pn**	**23 58 26.0**	**+1.0**
ASUD	**Al Ashush, Dub**	**3.31**	**226**	P	**Pb**	**23 58 32.6**	**-2.3**
HOQ	**Hoqain**	**3.42**	**190**	P	**Pn**	**23 58 30.8**	**+1.3**
	SNR=67						
ALNE	**Al Ain**	**3.50**	**215**	P	**Pb**	**23 58 34.6**	**-3.8**
KRM1	**Kerman Provinc**	**3.57**	**351**	Pn	**Pn**	**23 58 32.7**	**+0.9**
KHGB	**Koh Gabri**	**3.63**	**340**	Pn	**Pn**	**23 58 33.1**	**+0.4**
WSAR	**Wadi Sarin**	**3.76**	**170**	P	**Pn**	**23 58 36.5**	**+2.2**
ARQ	**Araqi**	**3.83**	**200**	P	**Pb**	**23 58 39.4**	**-4.5**
ARQ				S	**Sb**	**23 59 26.3**	**-4.1**
SMDO	**Samad**	**3.89**	**178**	P	**Pn**	**23 58 38.2**	**+2.1**
SMDO				S	**Sn**	**23 59 25.5**	**+3.5**
BSY	**Bisya**	**4.25**	**189**	P	Pn	23 58 44.8	+3.8
WBK	**Wadi Bani Khal**	**4.44**	**168**	P	**Pn**	**23 58 45.3**	**+1.8**
	SNR=13						
WBK				S	**Sn**	**23 59 37.9**	**+2.5**
JMDO	**Jabal Madar**	**4.58**	**178**	P	**Pn**	**23 58 48.5**	**+3.0**
UMZA	**Um Al Zommool**	**4.93**	**211**	P	**Pn**	**23 58 52.9**	**+2.6**
JLN	**Jalan Bani Buh**	**4.98**	**164**	P	**Pn**	**23 58 52.4**	**+1.4**
JLN				S	**Sn**	**23 59 51.8**	**+3.1**
TRNA	**Turayna**	**6.45**	**251**	P	**Pn**	**23 59 12.8**	**+1.6**
SMRA	**Abu-Samra**	**6.78**	**253**	P	**Pn**	**23 59 17.3**	**+1.6**

IDC ***15*** *23:57:53.1±1.6, 1°.61N×126°.49E, h0km, mb3.9/4, mbtmp4.0/4, MS3.5/1, Error ellipse: s-maj=165.9km s-min=22.0km az=65.0*
DJA ***15*** *23:57:57.1±0.3, 1°.N±2°×12°6E±°, h10km, M4.1/13, mb4.0/4, MLv4.1/13*
ISC 15 23:57:59.5±0.9, 1°.40N±0°.05×126°.48E±0°.06, h35km, n13, σ1s49/16, mb4.0/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.08**	**125**	P	**Pn**	**23 58 18.0**	**-0.1**
SGSI	**Sangihe**	**2.46**	**337**	P	**Pn**	**23 58 37.9**	**+0.7**
SGSI				S	**Sn**	**23 59 09.0**	**+2.9**
KMSI	**Cibinong**	**2.63**	**252**	P	**Pn**	**23 58 40.1**	**+0.6**
KMSI				S	**Sn**	**23 59 10.8**	**+0.6**
SANI	**Sanana**	**3.46**	**188**	P	**Pn**	**23 58 51.2**	**+0.3**
LUWI	**Luwuk**	**4.43**	**237**	P	**Pn**	**23 59 03.5**	**-0.8**
NLAI	**Namlea**	**4.65**	**172**	P	**Pn**	**23 59 08.0**	**+0.8**
NLAI				S	**Sn**	**00 00 02.7**	**+2.8**
APSI	**Ampana**	**5.35**	**245**	P	**Pn**	**23 59 17.8**	**+0.9**
	0.4nm58nm,1.2s						
MPSI	**Mapaga**	**6.67**	**261**	P	**Pn**	**23 59 34.9**	**-0.1**
	0.1nm9.4nm,0.9s						
WRA	**Warramunga Arr**	**22.56**	**160**	P	**P**	**00 02 57.4**	**+0.5**
	2.7nm,0.5s,baz=338,slow=11,SNR=18						
	2.7nm,0.5s						
ASAR	**Alice Springs**	**25.94**	**164**	P	**P**	**00 03 30.1**	**+1.4**
	0.9nm,0.3s,baz=345,slow=11,SNR=16						
ASAR				PcP	**PcP**	**00 06 57.0**	**0.0**
	0.2nm,0.4s,baz=356,slow=2.5,SNR=2.8						
	0.9nm,0.3s						
STKA	**Stephens Creek**	**36.06**	**158**	P	**P**	**00 04 56.4**	**-1.4**
	0.7nm,0.3s,baz=333,slow=6.8,SNR=3.1						
	0.7nm,0.3s						
LZDM	**Lanzhou Array**	**40.36**	**331**	LR	LR	00 24 27.5	
	comp=Z,65nm,18.2s,baz=190,slow=40						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**00 07 55.8**	**-2.3**
	0.4nm,0.3s,baz=121,slow=8.9,SNR=14						
	0.4nm,0.3s						

IDC 16 00:10:47.5±5.3, 1°.28N×125°.55E, h33km±39km, mb3.1/3, mbtmp3.3/4, ML3.3/1, MS3.5/1, Error ellipse: s-maj=58.3km s-min=17.7km az=80.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.26**	**180**	P		00 15 11.2	+0.7
	0.1nm,0.3s,baz=344,slow=7.4,SNR=1.4						
FITZ				S	Sn	00 18 45.0	-0.7
	2.9nm,1.1s,baz=302,slow=14,SNR=6.1						
	0.9nm,0.9s						
WRA	**Warramunga Arr**	**22.79**	**158**	P	P	00 15 46.7	-0.9
	0.3nm,0.4s,baz=337,slow=11,SNR=5.4						
WRA				S	S	00 19 55.7	+1.1
	0.5nm,0.6s,baz=340,slow=11,SNR=3.3						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**162**	P	P	00 16 19.6	+1.1
	0.2nm,0.4s,baz=340,slow=9.3,SNR=5.5						
	0.2nm,0.4s						
HNR	**Honiara**	**35.87**	**108**	LR	LR	00 33 52.4	
	comp=Z,67nm,18.4s,baz=306,slow=39						
MKAR	**Makanchi Array**	**58.91**	**327**	P	P	00 20 42.8	-0.7
	0.1nm,0.4s,baz=117,slow=7.7,SNR=1.5						
	0.1nm,0.4s						

IDC ***16*** *00:14:50.8±0.6, 18°.81N×147°.10E, h0km, mb4.3/23, mbtmp4.3/25, ML4.1/2, MS3.1/5, Error ellipse: s-maj=21.2km s-min=12.5km az=87.0*
NEIC ***16*** *00:14:57.5±1.5, 18°.86N±0°.08×147°.0E±0°.1, h35km±1km, mb4.7/44, Error ellipse: s-maj=22.4km s-min=13.6km az=101.0*
ISC 16 00:14:57.0±0.5, 18°.83N±0°.06×147°.0E±0°.1, h37km, n83, σ0s88/80, mb4.6/45, MS3.2/4, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.58**	**201**	Pn	**Pn**	**00 16 16.9**	**-0.6**
	24nm,0.3s,baz=170,slow=17,SNR=4.1						
GUMO				Sn	**Sn**	**00 17 23.1**	**+2.7**
	25nm,0.3s,baz=310,slow=20,SNR=1.7						
GUMO				LR	LR	00 18 09.6	
	comp=Z,91nm,18.8s,baz=316,slow=35						
	43nm,0.3s						
JCJ	**Chichijima**	**9.32**	**333**	Sn	Sn	00 18 41.0	-11
	6.3nm,0.3s,baz=302,slow=21,SNR=2.3						
H11S3	**WAKE ISLAND Hy**	**18.70**	**88**	T	T	00 38 19.5	
	baz=276,slow=74,SNR=17						
H11S1	**WAKE ISLAND Hy**	**18.71**	**88**	T	T	00 38 16.1	
	baz=276,slow=74,SNR=31						
H11S2	**WAKE ISLAND Hy**	**18.72**	**88**	T	T	00 38 21.2	
	baz=276,slow=74,SNR=13						
JGF	**Kuroka**	**18.74**	**335**	P	**Pn**	**00 19 13.8**	**+0.5**
MJAR	**Matsushiro Arr**	**19.25**	**338**	P	**P**	**00 19 17.9**	**-0.4**
	0.2nm,0.3s,baz=161,slow=11,SNR=6.4						
	2.0nm,0.5s						
MAJO	**Matsushiro**	**19.25**	**338**	P	**Pn**	**00 19 18.8**	**-0.6**
DAV	**Davao City (W)**	**23.85**	**243**	LR	LR	00 27 34.7	
	comp=Z,84nm,21.1s,baz=343,slow=32						
SSLB	**Suanglung**	**24.70**	**286**	P	**P**	**00 20 14.7**	**-0.2**
SSLB				IAmb	IAmb	00 20 57.4	
	comp=Z,45nm,1.5s						
KSRS	**Korea Array**	**24.93**	**322**	P	**P**	**00 20 16.6**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=149,slow=8.6,SNR=25						
	comp=Z,6.3nm,0.7s						
KSAR	**Wonju Array Be**	**24.95**	**322**	P	**P**	**00 20 16.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**28.23**	**337**	P	**P**	**00 20 47.1**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=140,slow=14,SNR=4.4						
	comp=Z,1.8nm,0.7s						
HILR	**Hailar Array B**	**37.62**	**331**	P	**P**	**00 22 08.0**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=140,slow=10,SNR=8.2						
	comp=Z,2.2nm,0.4s						
WR8	**Warramunga Ar**	**40.43**	**198**	P	**P**	**00 22 31.8**	**-0.2**
WRA	**Warramunga Arr**	**40.47**	**198**	P	**P**	**00 22 31.7**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=20,slow=8.6,SNR=9.7						
WRA				PcP	**PcP**	**00 24 34.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=23,slow=3.3,SNR=4.8						
	comp=Z,0.9nm,0.5s						
AMKA	**Amchitka**	**41.28**	**31**	P	**P**	**00 22 41.1**	**+2.5**
LZDM	**Lanzhou Array**	**41.65**	**303**	P	**P**	**00 22 42.7**	**+0.4**
	comp=Z,4.9nm,0.5s,baz=139,slow=7.7,SNR=7.8						
	comp=Z,4.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**42.25**	**211**	P	**P**	**00 22 45.8**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=303,slow=17,SNR=2.2						
	comp=Z,0.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**42.25**	**211**	P	**P**	**00 22 45.9**	**-1.0**
SONM	**Songino Array**	**43.79**	**321**	P	**P**	**00 22 59.6**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=134,slow=9.7,SNR=5.8						
SONM				PcP	**PcP**	**00 24 45.5**	**0.0**
	comp=Z,1.2nm,0.6s,baz=120,slow=2.3,SNR=1.9						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**44.12**	**197**	P	**P**	**00 23 00.6**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=15,slow=14,SNR=13						
ASAR				PcP	**PcP**	**00 24 46.8**	**+0.1**
	comp=Z,0.3nm

M29M	**Somme Creek**	**66.35**	**29**	P	**P**	**00 25 42.6**	**+0.7**
M29M				IAmb	IAmb	00 25 48.5	
	comp=Z,5.4nm,0.9s						
NIL	**Nilore**	**66.51**	**299**	P	**P**	**00 25 43.9**	**+0.6**
L29M	**L29M**	**66.56**	**29**	P	**P**	**00 25 44.1**	**+1.0**
L29M				IAmb	IAmb	00 25 49.9	
	comp=Z,6.8nm,0.9s						
E28M	**Babbage River**	**66.60**	**23**	P	**P**	**00 25 43.7**	**+0.5**
HYT	**Haines Junctio**	**66.70**	**31**	P	**P**	**00 25 43.9**	**-0.2**
H29M	**Whitestone**	**66.75**	**25**	P	**P**	**00 25 43.5**	**-0.8**
H29M				IAmb	IAmb	00 26 09.8	
	comp=Z,7.8nm,1.4s						
K29M	**Barlow Dome**	**66.89**	**28**	P	**P**	**00 25 45.6**	**+0.3**
K29M				IAmb	IAmb	00 25 51.8	
	comp=Z,4.5nm,0.8s						
BVAR	**Borovoye Array**	**67.13**	**320**	P	**P**	**00 25 47.0**	**+0.1**
	comp=Z,12nm,0.5s,baz=92,slow=7.6,SNR=40 comp=Z,12nm,0.5s						
I30M	**Mount Dempster**	**67.48**	**26**	P	**P**	**00 25 48.9**	**-0.2**
F30M	**Barrier River**	**67.89**	**24**	P	**P**	**00 25 51.7**	**+0.3**
F30M				IAmb	IAmb	00 26 03.4	
	comp=Z,7.7nm,1.2s						
H31M	**Peel River**	**68.36**	**26**	P	**P**	**00 25 54.5**	**+0.1**
H31M				IAmb	IAmb	00 26 00.8	
	comp=Z,5.1nm,0.9s						
CHGR	**Chuyangaron**	**69.12**	**305**		**P**	**00 25 59.6**	**-0.1**
R33M	**Jennings River**	**69.97**	**33**	P	**P**	**00 26 04.7**	**0.0**
R33M				IAmb	IAmb	00 26 24.6	
	comp=Z,10nm,1.4s						
ARTI	**Arti**	**73.75**	**325**	P	**P**	**00 26 26.6**	**-0.6**
ARTI				IAmb	IAmb	00 26 30.1	
	comp=Z,8.5nm,1.1s						
AB31	**Akbulak array**	**74.05**	**317**	P	**P**	**00 26 28.9**	**-0.2**
AB31				IAmb	IAmb	00 26 29.8	
	comp=Z,6.5nm,0.8s						
KRPM	**Rodgers**	**77.14**	**51**	P	**P**	**00 26 44.4**	**-2.7**
PINE	**Pine Mountain**	**78.69**	**48**	P	**P**	**00 26 56.7**	**+0.9**
PINE				IAmb	IAmb	00 27 02.3	
	comp=Z,11nm,1.2s						
NVAR	**Mina Array Bea**	**82.12**	**52**	P	**P**	**00 27 14.2**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=283,slow=5.9,SNR=6.0 comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**82.73**	**342**	P	**P**	**00 27 17.9**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=57,slow=6.5,SNR=7.1 comp=Z,2.9nm,0.8s						
ARCES	**ARCESS Array B**	**82.73**	**342**	IAmb	IAmb	00 27 41.4	
	comp=Z,15nm,1.2s						
PDAR	**Pinedale Array**	**86.88**	**46**	P	**P**	**00 27 37.7**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=287,slow=2.6,SNR=3.6 comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**87.26**	**336**	P	**P**	**00 27 37.8**	**-1.7**
	comp=Z,1.3nm,0.4s,baz=72,slow=3.8,SNR=16 comp=Z,1.3nm,0.4s						
FINES	**FINESS Array B**	**87.26**	**336**	P	**P**	**00 27 38.3**	**-1.2**
HFS	**Hagfors**	**92.70**	**339**	P	**P**	**00 28 04.9**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=270,slow=3.0,SNR=4.3 comp=Z,2.7nm,0.9s						
NOA	**NORSAR Array B**	**92.86**	**340**	P	**P**	**00 28 07.1**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=41,slow=4.8,SNR=3.2 comp=Z,0.6nm,0.8s						
BRTR	**Keskin Array B**	**94.87**	**315**	P	**P**	**00 28 13.8**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=62,slow=3.4,SNR=4.0 comp=Z,0.6nm,0.8s						
LPAZ	**La Paz**	**146.49**	**91**	PKPbc	**PKPdf**	**00 34 34.0**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=0.0,slow=2.0,SNR=5.3						

UPP ***16*** *00:17:31.8±0.0, 67°.82N×20°.20E, h1km, ML2.5, Suspected explosion*
HEL ***16*** *00:17:31.3±0.3, 67°.77N×20°.20E, h0km, ML1.2, Suspected explosion*

ISC 16 00:17:31.4±0.8, 67°.79N±0°.02×20°.24E±0°.02, h0km, n25, σ0s75/42, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.17**	**13**	P	**Pg**	**00 17 34.7**	**+0.2**
KUA				S	**Sg**	**00 17 36.8**	**+0.1**
RATU	**Laukkuluspa**	**0.25**	**277**	P	**Pg**	**00 17 36.3**	**+0.2**
RATU				S	**Sg**	**00 17 39.6**	**+0.2**
NIKU	**Nikkaluokta**	**0.46**	**280**	P	**Pg**	**00 17 40.2**	**-0.1**
NIKU				S	**Sg**	**00 17 46.6**	**+0.3**
DUNU	**Dundret**	**0.69**	**169**	P	**Pg**	**00 17 45.1**	**+0.6**
DUNU				S	**Sb**	**00 17 55.1**	**-1.2**
LANU	**Lannavaara**	**0.71**	**68**	P	**Pg**	**00 17 45.2**	**+0.2**
LANU				S	**Sg**	**00 17 55.1**	**+0.9**
LANU	**Lannavaara**	**0.71**	**68**	PB	**Pg**	**00 17 45.2**	**+0.2**
LANU				SG	**Sg**	**00 17 54.7**	**+0.5**
MASU	**Masugnsbyn**	**0.75**	**116**	P	**Pg**	**00 17 46.4**	**+0.6**
SALU	**Saltoluokta**	**0.78**	**239**	P	**Pg**	**00 17 46.6**	**+0.2**
KIF	**Kilpisjarvi**	**1.23**	**9**	*eP*	**Pg**	**00 17 54.7**	**-0.3**
KIF	**Kilpisjarvi**	**1.23**	**9**	PG	**Pg**	**00 17 55.0**	**-0.1**
KIF				smax	smax	00 18 10.4	
	comp=Z,3.0nm,0.2s						
KIF				SG	**Sg**	**00 18 11.2**	**+0.2**
PAJU	**Pajala**	**1.35**	**124**	P	**Pg**	**00 17 57.0**	**-0.3**
PAJU				S	**Sb**	**00 18 15.5**	**+0.1**
PAJU	**Pajala**	**1.35**	**124**	PN	**Pg**	**00 17 56.8**	**-0.5**
	baz=304						
PAJU				SN	**Sb**	**00 18 15.3**	**-0.1**
HEF	**Hetta**	**1.42**	**63**	*eP*	**Pn**	**00 17 58.5**	**-0.1**
HEF	**Hetta**	**1.42**	**63**	PN	**Pn**	**00 17 57.9**	**-0.6**
HEF				smax	smax	00 18 14.8	
	comp=Z,1.7nm,0.2s						
HEF				SN	**Sg**	**00 18 16.7**	**-0.4**
ERTU	**Ertsjaerv**	**1.46**	**148**	P	**Pg**	**00 17 59.2**	**-0.1**
ERTU	**Ertsjaerv**	**1.46**	**148**	PN	**Pn**	**00 17 58.9**	**-0.1**
ERTU				SN	**Sn**	**00 18 19.1**	**+0.3**
KTK1	**Kautokeino**	**1.65**	**41**	PG	**Pn**	**00 18 01.7**	**0.0**
KTK1				SN	**Sg**	**00 18 26.2**	**+1.8**
HARU	**Harads**	**1.66**	**170**	P	**Pb**	**00 18 02.6**	**-0.2**
TRO	**Tromso**	**1.91**	**346**	PG	**Pn**	**00 18 05.8**	**+0.7**
TRO				SG	**Sb**	**00 18 30.9**	**-0.5**
KALU	**Kalix**	**2.30**	**146**	PG	**Pb**	**00 18 12.6**	**-1.1**
KALU				SG	**Sb**	**00 18 43.1**	**+0.5**
TOF	**Tornio**	**2.35**	**135**	PG	**Pb**	**00 18 13.4**	**-1.3**
TOF				smax	smax	00 18 40.8	
	comp=Z,0.7nm,0.2s						
TOF				SG	**Sb**	**00 18 45.0**	**+0.8**
RNF	**Rovaniemi**	**2.54**	**115**	PG	**Pb**	**00 18 16.3**	**-1.5**
RNF				SG	**Sb**	**00 18 50.0**	**+0.3**
ARA0	**ARCESS Array S**	**2.60**	**45**	PB	**Pn**	**00 18 16.2**	**+1.6**
ARA0				SG	**Sb**	**00 18 49.8**	**-1.5**
RAJF	**Raja-Jooseppi**	**3.10**	**74**	SG	**Sb**	**00 19 05.0**	**-0.6**
KEV	**Kevo**	**3.15**	**48**	SB	**Sn**	**00 19 01.9**	**+1.5**

IDC 16 00:22:52.1±1.6, 1°.52N×126°.90E, h0km, mb3.8/3, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=108.5km s-min=26.2km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.53**	**184**	P	P	00 27 21.5	+0.2
	0.1nm,0.3s,baz=13,slow=19,SNR=1.3 0.9nm,0.8s						
WRA	**Warramunga Arr**	**22.54**	**161**	P	P	00 27 54.0	+0.1
	1.8nm,0.4s,baz=340,slow=11,SNR=14						
WRA				PcP	PcP	00 31 46.7	-1.3
	0.3nm,0.8s,baz=340,slow=2.2,SNR=1.7 1.8nm,0.4s						
ASAR	**Alice Springs**	**25.94**	**165**	P	P	00 28 26.5	+0.1
	0.6nm,0.4s,baz=345,slow=11,SNR=15						
ASAR				PcP	PcP	00 31 55.1	-0.3
	0.1nm,0.4s,baz=339,slow=3.3,SNR=1.4 0.6nm,0.4s						
MKAR	**Makanchi Array**	**59.47**	**326**	P	P	00 32 57.2	+0.3
	1.7nm,1.1s,baz=121,slow=7.2,SNR=2.1 1.7nm,1.1s						

SOME ***16*** *00:26:10.6, 39°.38N×76°.95E, h15km*
NNC ***16*** *00:26:13.2±0.8, 39°.55N×76°.87E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=5.8km s-min=4.4km az=150.0*
KRNET ***16*** *00:26:13.9±0.1, 39°.50N×76°.81E, mb3.9*

ISC 16 00:26:17.6±1.7, 39°.54N±0°.07×76°.78E±0°.05, h10km, n49, σ1s97/80, 34C-16D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNKS	**Jany-Kuch**	**1.75**	**331**	↑*eP*	**Pn**	**00 26 47.4**	**-0.9**
JNKS				↑*eS*	**Sb**	**00 27 12.1**	**0.0**
TARG	**Taragay, Kyrgy**	**2.33**	**19**	↑*eP*	**Pn**	**00 26 56.1**	**-0.2**
TARG				↑*eS*	**Sb**	**00 27 27.0**	**-1.8**
SFK	**Sufi-Kurgan**	**2.57**	**282**	↓*eP*	**Pn**	**00 26 59.5**	**0.0**
SFK				↓*eS*	**Sn**	**00 27 32.8**	**+1.8**
KDJ	**Kajisay**	**2.61**	**7**	↑*eP*	**Pn**	**00 27 00.0**	**0.0**
KDJ				↑*eS*	**Sn**	**00 27 33.6**	**+1.7**
SALK	**Salom-Alik**	**2.64**	**302**	↑*eP*	**Pn**	**00 27 00.5**	**+0.1**
SALK				↑*eS*	**Sn**	**00 27 34.5**	**+2.0**
ULHL	**Ulahol**	**2.74**	**352**	↑*eP*	**Pn**	**00 27 01.9**	**+0.1**
ULHL				↑*eS*	**Sn**	**00 27 37.0**	**+1.9**
BOOM	**Boomskoye usch**	**3.02**	**348**	↑*eP*	**Pn**	**00 27 06.0**	**+0.3**
BOOM				↑*eS*	**Sn**	**00 27 43.5**	**+1.5**
PRZ	**Przheval'sk**	**3.19**	**22**	↑*eP*	**Pn**	**00 27 08.2**	**+0.2**
PRZ				↑*eS*	**Sn**	**00 27 47.8**	**+1.6**
UCH	**Uchtor**	**3.19**	**328**	↑*eP*	**Pn**	**00 27 08.4**	**+0.1**
UCH				↑*eS*	**Sn**	**00 27 48.3**	**+1.7**
OHH	**Osh**	**3.22**	**289**	↑*eP*	**Pn**	**00 27 08.4**	**0.0**
OHH				↑*eS*	**Sn**	**00 27 48.3**	**+1.4**
ARSB	**Arslanbob**	**3.41**	**303**	↓*eP*	**Pn**	**00 27 11.1**	**+0.2**
ARSB				↓*eS*	**Sn**	**00 27 52.9**	**+1.4**
KBK	**Karagaybulak**	**3.41**	**337**	↓*eP*	**Pn**	**00 27 11.3**	**+0.2**
KBK				↓*eS*	**Sn**	**00 27 53.2**	**+1.6**
TKM2	**Tokmak 2**	**3.50**	**346**	↑*eP*	**Pn**	**00 27 12.6**	**+0.3**
TKM2				↑*eS*	**Sn**	**00 27 55.4**	**+1.6**
IZV	**Izvestkoviy**	**3.50**	**358**	Pg	**Pb**	**00 27 17.0**	**-2.7**
	11nm,0.5s						
IZV				Lg	Lg	00 28 04.7	
	52nm,0.4s						
IZV	**Izvestkoviy**	**3.50**	**358**	*eP*	**Pb**	**00 27 17.0**	**-2.7**
	11nm,0.5s						
IZV				*eS*	**Sb**	**00 28 04.7**	**+2.3**
	52nm,0.4s						
TNSS	**Tian-Shan**	**3.50**	**2**	Pg	**Pb**	**00 27 17.2**	**-2.7**
	5.2nm,0.3s						
TNSS				Lg	Lg	00 28 05.3	
	28nm,0.9s						
TNSS	**Tian-Shan**	**3.50**	**2**	*eP*	**Pb**	**00 27 17.2**	**-2.7**
	5.2nm,0.3s						
TNSS				*eS*	**Sb**	**00 28 05.3**	**+2.7**
	28nm,0.9s						
AAK	**Ala-Archa**	**3.55**	**332**	↑Pg	**Pb**	**00 27 17.7**	**-2.8**
	8.3nm,0.5s						
AAK				↑Lg	Lg	00 28 07.5	
	78nm,0.9s						
AAK	**Ala-Archa**	**3.55**	**332**	↓*eP*	**Pn**	**00 27 13.3**	**+0.4**
AAK				↑*eS*	**Sn**	**00 27 56.6**	**+1.6**
KST	**Kastek**	**3.56**	**350**	Pg	**Pb**	**00 27 18.1**	**-2.6**
	12nm,0.7s						
KST				Lg	Lg	00 28 07.2	
	75nm,0.4s						
KST	**Kastek**	**3.56**	**350**	*eP*	**Pb**	**00 27 18.1**	**-2.6**
	12nm,0.7s						
KST				*eS*	**Sb**	**00 28 07.2**	**+3.2**
	75nm,0.4s						
MTBS	**Maitube**	**3.60**	**356**	Pg	**Pb**	**00 27 18.6**	**-2.8**
	18nm,0.3s						
MTBS				Lg	Lg	00 28 07.9	
	57nm,0.4s						
MTBS	**Maitube**	**3.60**	**356**	*eP*	**Pb**	**00 27 18.6**	**-2.8**
	18nm,0.3s						
MTBS				*eS*	**Sb**	**00 28 07.8**	**+2.6**
	57nm,0.4s						
MDOK	**Medeo**	**3.63**	**3**	Pg	**Pb**	**00 27 19.9**	**-2.1**
	7.6nm,0.4s						
MDOK				Lg	Lg	00 28 09.6	
	59nm,0.6s						
FRU1	**Bishkek**	**3.65**	**334**	↓*eP*	**Pn**	**00 27 14.9**	**+0.6**
FRU1				↓*eS*	**Sn**	**00 27 59.5**	**+2.1**
KNDC	**Almaty**	**3.68**	**2**	↓Pg	**Pb**	**00 27 20.5**	**-2.3**
	32nm,0.6s						
KNDC				↑Lg	Lg	00 28 10.9	
	73nm,0.8s						
KOTS	**Kotyrbulak**	**3.70**	**4**	Pg	**Pb**	**00 27 20.7**	**-2.6**
	17nm,0.3s						
KOTS				Lg	Lg	00 28 10.9	
	208nm,0.5s						
KOTS	**Kotyrbulak**	**3.70**	**4**	*eP*	**Pb**	**00 27 20.7**	**-2.6**
	17nm,0.3s						
KOTS				*eS*	**Sb**	**00 28 10.9**	**+2.7**
	208nm,0.5s						
SATY	**Saty**	**3.73**	**19**	Pg	**Pb**	**00 27 20.5**	**-3.2**
	8.9nm,0.7s						
SATY				Lg	Lg	00 28 10.6	
	55nm,0.3s						
DGS	**Degeres**	**3.78**	**349**	Pg	**Pb**	**00 27 21.5**	**-3.0**
	13nm,0.6s						
DGS				Lg	Lg	00 28 12.3	
	38nm,0.5s						
CHMS	**Chumysh**	**3.78**	**337**	↓*eP*	**Pn**	**00 27 16.4**	**+0.4**
CHMS				↓*eS*	**Sn**	**00 28 01.9**	**+1.3**
DRK	**Karamyk**	**3.85**	**271**	↓*eP*	**Pn**	**00 27 17.3**	**+0.1**
DRK				↓*eS*	**Sn**	**00 28 03.6**	**+0.9**
EKS2	**Erkin-Say**	**3.86**	**325**	↑*eP*	**Pn**	**00 27 17.5**	**+0.3**
EKS2				↑*eS*	**Sn**	**00 28 04.0**	**+1.4**
USP	**Ospenovka**	**4.10**	**336**	↓*eP*	**Pn**	**00 27 20.8**	**+0.4**
USP				↓*eS*	**Sn**	**00 28 09.7**	**+1.2**
SHLS	**Shalkode**	**4.14**	**28**	Pg	**Pb**	**00 27 32.0**	**+1.3**
	10nm,0.3s						
SHLS				Lg	Lg	00 28 29.7	
	24nm,0.6s						
SHLS	**Shalkode**	**4.14**	**28**	*eP*	**Pb**	**00 27 32.0**	**+1.3**
	10nm,0.3s						
SHLS				*eS*	**Sg**	**00 28 29.7**	**-0.9**
	24nm,0.6s						
KTBS	**Karatobe**	**4.17**	**359**	Pg	**Pb**	**00 27 29.0**	**-2.1**
	8.1nm,0.3s						
KTBS				Lg	Lg	00 28 25.3	
	70nm,0.7s						
KPKS	**Kokpek**	**4.18**	**19**	Pg	**Pb**	**00 27 29.1**	**-2.2**
	0.3nm,0.1s						
KPKS				Lg	Lg	00 28 25.1	
	48nm,0.4s						
MRKS	**Merke**	**4.18**	**321**	Pg	**Pb**	**00 27 30.5**	**-0.8**
	20nm,0.3s						
MRKS				Lg	Lg	00 28 27.6	
	52nm,0.3s						
MRKS	**Merke**	**4.18**	**321**	*eP*	**Pb**	**00 27 30.5**	**-0.8**
	20nm,0.3s						
MRKS				*eS*	**Sg**	**00 28 27.6**	**-4.3**
	52nm,0.3s						
PDGK	**Podgornoye**	**4.30**	**27**	↑Pg	**Pb**	**00 27 30.8**	**-2.6**
	9.7nm,0.5s						
PDGK				↑Lg	Lg	00 28 29.0	
	40nm,0.9s						
ARK	**Arkit**	**4.30**	**303**	↑*eP*	**Pn**	**00 27 23.6**	**+0.3**
ARK				↑*eS*	**Sn**	**00 28 14.5**	**+0.9**
KUU	**Kurty**	**4.37**	**356**	Pg	**Pb**	**00 27 32.5**	**-2.0**
	4.1nm,0.0s						
KUU				Lg	Lg	00 28 31.5	
	32nm,0.6s						
KUU	**Kurty**	**4.37**	**356**	*eP*	**Pb**	**00 27 32.5**	**-2.0**
	4.1nm,0.0s						
KUU				*eS*	**Sb**	**00 28 31.5**	**+4.4**
	32nm,0.6s						
TRKS	**Terek-Say**	**4.74**	**297**	↑*eP*	**Pn**	**00 27 28.9**	**-0.4**
TRKS				↑*eS*	**Sn**	**00 28 23.7**	**-0.6**
ARXS	**Arharly**	**4.74**	**9**	Pg	**Pb**	**00 27 37.9**	**-2.9**
	4.5nm,0.4s						
ARXS				Lg	Lg	00 28 40.9	
	37nm,0.4s						
ARXS	**Arharly**	**4.74**	**9**	*eP*	**Pb**	**00 27 37.9**	**-2.9**
ARXS				*eS*	**Sb**	**00 28 40.9**	**+3.0**
KNOS	**Konyrlen**	**5.14**	**20**	Pg	**Pb**	**00 27 45.0**	**-2.7**
	4.0nm,0.3s						
KNOS				Lg	Lg	00 28 52.8	
	1.2nm,0.2s						
KK31	**Karatay Array**	**5.91**	**309**	↓Pn	**Pn**	**00 27 43.8**	**-1.5**
	0.2nm,0.2s,baz=82,slow=15,SNR=4.1						
KK31				Pg	**Pb**	**00 28 01.9**	**+1.1**
	1.1nm,0.3s,baz=133,slow=19,SNR=18						
KK31				↑Lg	Lg	00 29 22.0	
	6.9nm,0.5s,baz=128,slow=28,SNR=3.5						

IDC ***16*** *00:30:35.1±1.8, 14°.88N×146°.96E, h0km, mb3.9/7, mbtmp3.9/8, ML3.8/1, MS2.2/1, Error ellipse: s-maj=49.2km s-min=19.7km az=95.0*
NEIC ***16*** *00:30:38.0±2.2, 14°.73N±0°.06×147°.0E±0°.1, h10km±1km, mb4.2/7, Error ellipse: s-maj=17.2km s-min=8.7km az=109.0*

ISC 16 00:30:40.6±1.2, 14°.8N±0°.1×146°.8E±0°.2, h32km, n16, σ0s87/16, mb4.2/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.23**	**238**	Pn	**Pn**	**00 31 16.1**	**+0.9**
	23nm,0.3s,baz=32,slow=17,SNR=2.3						
GUMO				Sn	**Sb**	**00 31 46.4**	**-0.9**
	25nm,0.3s,baz=0.0,slow=20,SNR=3.6						
GUMO				LR	LR	00 31 58.9	
	comp=Z,47nm,18.0s,baz=146,slow=35 77nm,0.3s						
JCJ	**Chichijima**	**13.00**	**341**	Pn	**Pn**	**00 33 43.9**	**+0.8**
WB0	**Warramunga Arr**	**36.44**	**200**	P	**P**	**00 37 42.9**	**+0.3**
WB0				IAmb	IAmb	00 37 53.5	
	comp=Z,7.2nm,1.4s						
WR8	**Warramunga Arr**	**36.58**	**200**	P	**P**	**00 37 43.7**	**-0.1**
WR8				IAmb	IAmb	00 37 48.9	
	comp=Z,4.2nm,1.2s						
WRA	**Warramunga Arr**	**36.62**	**200**	P	**P**	**00 37 43.8**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=18,slow=9.1,SNR=4.1 comp=Z,0.9nm,1.0s						
WRA	**Warramunga Arr**	**36.62**	**200**	P	**P**	**00 37 44.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**38.77**	**213**	P	**P**	**00 38 03.3**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=12,slow=9.3,SNR=1.8 comp=Z,1.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.77**	**213**	IAmb	IAmb	00 38 07.2	
	comp=Z,1.0nm,1.2s						
ASAR	**Alice Springs**	**40.24**	**198**	P	**P**	**00 38 15.0**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=21,slow=9.5,SNR=1.9 comp=Z,0.3nm,0.9s						
SONM	**Songino Array**	**46.88**	**323**	P	**P**	**00 39 07.4**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=138,slow=6.3,SNR=2.4 comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**61.96**	**315**	P	**P**	**00 40 57.2**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=91,slow=8.3,SNR=16 comp=Z,0.8nm,0.5s						
KURK	**Kurchatov**	**64.91**	**319**	P	**P**	**00 41 16.4**	**-0.4**
KURK				IAmb	IAmb	00 41 17.3	
	comp=Z,2.5nm,0.8s						
KURBB	**Kurchatov Arra**	**64.95**	**319**	P	**P**	**00 41 16.8**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=98,slow=6.6,SNR=20 comp=Z,2.5nm,0.5s						
I23K	**Minto, Yukon-K**	**65.79**	**25**	P	**P**	**00 41 20.4**	**-1.9**
G23K	**Bananza Creek**	**66.03**	**23**	P	**P**	**00 41 25.2**	**+1.3**
G23K				IAmb	IAmb	00 41 34.6	
	comp=Z,2.6nm,0.7s						
BVAR	**Borovoye Array**	**70.18**	**321**	P	**P**	**00 41 49.6**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=109,slow=7.1,SNR=8.0 comp=Z,1.0nm,0.5s						

NEIC ***16*** *00:34:06.0±2.5, 35°.140N±0°.004×95°.37W±0°.02, h6km±4km, Error ellipse: s-maj=2.1km s-min=0.7km az=84.0*

NEIC 16 00:34:05.9±2.8, 35°.15N±0°.01×95°.38W±0°.02, h5km±1km, mb_Lg2.4/10, ML2.3/9, ML2.5/14, Error ellipse: s-maj=2.9km s-min=2.4km az=23.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUL3	**Leonard**	**0.83**	**336**		Pg	00 34 22.1	+0.1
TUL3					Sg	00 34 33.4	+0.7
RLO	**Rose Lookout**	**1.06**	**16**		Pg	00 34 26.0	-0.2
RLO					Sb	00 34 41.0	+0.1
RLO				IAML		00 34 45.6	
	comp=E,141nm,0.2s						
RLO				IAML		00 34 47.1	
	comp=N,148nm,0.2s						
DEOK	**Depew**	**1.15**	**308**		Pg	00 34 27.8	-0.1
DEOK					Sb	00 34 43.2	-0.2
DEOK				IAML		00 34 47.8	
	comp=N,118nm,0.3s						
DEOK				IAML		00 34 48.2	
	comp=E,86nm,0.2s						
OK052	**Battle Ridge R**	**1.44**	**307**		Pn	00 34 32.0	-0.6
OK052					Sg	00 34 52.5	+0.4
QUOK	**Quay**	**1.49**	**314**		Pn	00 34 32.3	-1.1
QUOK					Sg	00 34 54.1	+0.3
U38A	**Gravette**	**1.52**	**32**		Pn	00 34 33.7	-0.1
U38A				Sg	Sg	00 34 54.6	-0.2
MIAR	**Mount Ida**	**1.60**	**111**		Pb	00 34 35.4	-0.5
MIAR				Sg	Sb	00 34 56.7	+0.3
HHAR	**Hobbs**	**1.63**	**46**		Pn	00 34 35.6	+0.3
HHAR					Sb	00 34 57.6	+0.2
FNO	**Franklin**	**1.66**	**274**		Pb	00 34 36.5	-0.5
FNO				Sg	Sg	00 35 00.1	+0.9
OKCSW	**OKLAHOMA CITY**	**1.70**	**279**		Pn	00 34 36.8	+0.4
OKCFA	**Oklahoma City**	**1.72**	**280**		Pb	00 34 37.3	-0.6
OKCFA					Sg	00 35 01.0	-0.1
OK048	**Pawnee Station**	**1.80**	**315**		Pb	00 34 38.4	-0.9
OK029	**Liberty Lake**	**1.81**	**292**		Pb	00 34 38.9	-0.7
OK029					Sg	00 35 04.1	-0.1
Z38A	**Mt. Pleasant**	**1.91**	**170**	IAmb_Lg		00 35 10.1	
	comp=Z,26nm,1.2s						
T35A	**Sooner Cattle**	**1.99**	**333**		Pn	00 34 39.9	-0.3
BLOK	**Blackwell**	**2.19**	**318**		Pg	00 34 45.9	-0.2
X40A	**Basin Creek Fa**	**2.19**	**107**		Pb	00 34 45.6	-0.5
X40A				IAmb_Lg		00 35 18.5	
	comp=Z,12nm,0.7s						
WLAR	**White Oak Lake**	**2.37**	**127**	Pn	Pn	00 34 44.3	-1.1
Z35A	**Perchaven, San**	**2.38**	**221**		Pn	00 34 46.0	+0.3
TREL	**Terrell**	**2.48**	**194**		Pn	00 34 47.5	+0.5
CROK	**Carrier**	**2.51**	**303**		Pn	00 34 47.0	-0.5
WHAR	**Wooly Hollow**	**2.54**	**86**		Pn	00 34 47.7	0.0
GC02	**Grant County #**	**2.63**	**311**	Pn	Pn	00 34 48.5	-0.6
FCAR	**Ozark Folk Cen**	**2.76**	**73**		Pn	00 34 51.5	+0.8
FW06	**Azle**	**2.82**	**220**	Pn	Pn	00 34 52.0	+0.3
WMOK	**Wichita Mounta**	**2.82**	**263**		Pn	00 34 51.2	-0.5
WMOK	**Wichita Mounta**	**2.82**	**263**		Pn	00 34 51.3	-0.4
Z41A	**Richland Creek**	**2.85**	**131**	Pn	Pn	00 34 51.8	-0.2
PARMO	**Parma**	**4.81**	**70**	IAmb_Lg		00 36 46.7

comp=E,47250µm,1.0s
BULG AML AML
comp=N,69700µm,0.4s
BULG AML AML
comp=N,67400µm,0.4s
BULG AML AML
comp=E,45550µm,1.0s
BULG AML AML
comp=E,47250µm,1.0s
BULG AML AML
comp=N,69676µm,0.4s
BULG AML AML
comp=N,67440µm,0.4s
BULG AML AML
comp=E,42301µm,0.5s
BULG AML AML
comp=E,43549µm,0.5s
CUC Castrocucco 0.39 43 ⇓P Pg 01 07 41.3 -0.5
CUC S **Sg 01 07 47.4 +0.2**
CUC AML AML
comp=N,21650µm,0.2s
CUC AML AML
comp=N,22000µm,0.2s
CUC AML AML
comp=E,23300µm,1.0s
CUC AML AML
comp=E,23500µm,1.0s
CUC AML AML
comp=E,22263µm,0.3s
CUC AML AML
comp=N,22017µm,0.2s
CUC AML AML
comp=E,22383µm,0.3s
CUC AML AML
comp=N,21656µm,0.2s
CET2 Cetraro 0.41 116 ⇑P Pg 01 07 42.1 -0.1
CET2 S **Sb 01 07 48.9 -0.2**
CET2 AML AML
comp=E,16000µm,1.3s
CET2 AML AML
comp=N,32700µm,0.3s
CET2 AML AML
comp=N,32700µm,0.3s
CET2 AML AML
comp=E,16000µm,0.7s
CET2 AML AML
comp=E,15723µm,0.3s
CET2 AML AML
comp=N,32693µm,0.3s
MGR Morigerati 0.43 8 ⇓P Pg 01 07 41.9 -0.7
MGR S **Sg 01 07 48.1 -0.4**
MGR AML AML
comp=N,12300µm,0.8s
MGR AML AML
comp=N,12300µm,0.9s
MGR AML AML
comp=E,13250µm,0.4s
MGR AML AML
comp=E,13550µm,0.4s
MGR AML AML
comp=N,12250µm,0.2s
MGR AML AML
comp=N,12300µm,1.1s
MGR AML AML
comp=E,13554µm,0.4s
MGR AML AML
comp=N,12236µm,0.2s
MGR AML AML
comp=N,11966µm,0.4s
MGR AML AML
comp=E,13257µm,0.4s
MMN Mormanno 0.44 66 ⇓P Pg 01 07 42.5 -0.2
MMN S **Sb 01 07 49.3 -0.4**
MMN AML AML
comp=N,48800µm,0.6s
MMN AML AML
comp=E,36400µm,1.6s
MMN AML AML
comp=E,36400µm,0.4s
MMN AML AML
comp=N,45538µm,0.2s
MMN AML AML
comp=E,31113µm,0.3s
SIRI Monte Sirino - 0.56 33 ⇓P Pg 01 07 44.8 -0.2
SIRI AML AML
comp=N,29650µm,0.3s
SIRI AML AML
comp=N,30400µm,0.3s
SIRI AML AML
comp=E,21450µm,0.2s
SIRI AML AML
comp=E,22250µm,0.2s
SIRI AML AML
comp=N,30378µm,0.3s
SIRI AML AML
comp=E,21465µm,0.2s
SIRI AML AML
comp=N,29657µm,0.3s
SIRI AML AML
comp=E,22245µm,0.2s
CMPR Campora 0.62 348 ⇓P Pg 01 07 44.9 -1.2
CMPR S **Sg 01 07 54.1 -0.3**
CMPR AML AML
comp=E,59050µm,0.3s
CMPR AML AML
comp=N,28000µm,0.3s
MCEL Monticello 0.66 22 ⇓P Pg 01 07 46.3 -0.7
MCEL S **Sb 01 07 56.7 +0.3**
MCEL AML AML
comp=E,7770µm,0.4s
MCEL AML AML
comp=N,6500µm,0.3s
MCEL AML AML
comp=N,6315µm,0.3s
MCEL AML AML
comp=E,7565µm,0.4s
MCEL AML AML
comp=E,6018µm,0.4s
MCEL AML AML
comp=E,5915µm,0.4s
TDS Terranova Siba 0.67 94 ⇑P Pg 01 07 46.4 -0.7
TDS S **Sn 01 07 58.1 -1.0**
TDS AML AML
comp=N,4755µm,1.5s
TDS AML AML
comp=E,4415µm,0.6s
TDS AML AML
comp=N,4755µm,0.5s
TDS AML AML
comp=N,4586µm,0.4s
TDS AML AML
comp=E,4411µm,0.6s
SCHR S. Chirico Rap 0.67 43 ⇓P Pg 01 07 46.5 -0.6
SCHR S **Sb 01 07 56.8 +0.1**
SCHR AML AML
comp=E,8590µm,1.4s
SCHR AML AML
comp=N,8005µm,0.3s
SCHR AML AML
comp=N,8004µm,0.3s
SCHR AML AML
comp=E,7624µm,0.2s
SLCN Sala Consilina 0.69 10 P Pg 01 07 46.5 -1.0
SLCN AML AML
comp=E,16500µm,0.3s
SLCN AML AML
comp=N,14300µm,0.9s
SALB San Lorenzo Be 0.69 76 P Pg 01 07 47.1 -0.4
SALB S **Sn 01 07 59.1 -0.8**
SALB AML AML
comp=E,8950µm,1.5s
SALB AML AML
comp=N,6585µm,0.8s
SALB AML AML
comp=E,8950µm,0.5s
SALB AML AML
comp=N,6076µm,0.3s
SALB AML AML
comp=E,8919µm,0.3s
CAR1 CAROLEI 0.73 128 ⇑P Pg 01 07 47.9 -0.3
CAR1 S **Sg 01 07 57.7 -0.2**
CAR1 AML AML
comp=N,16300µm,0.5s
CAR1 AML AML
comp=N,14250µm,0.3s
CAR1 AML AML
comp=E,21000µm,0.7s
CAR1 AML AML
comp=N,16300µm,0.5s
CAR1 AML AML
comp=E,21000µm,1.3s
CAR1 AML AML
comp=E,21450µm,0.5s
CAR1 AML AML
comp=N,14250µm,1.7s
CAR1 AML AML
comp=N,14236µm,0.3s
CAR1 AML AML
comp=N,16341µm,0.5s
CAR1 AML AML
comp=E,21494µm,0.5s
CAR1 AML AML
comp=E,20966µm,0.7s
CDRU Civita di Ruta 0.79 351 ⇓P Pg 01 07 47.6 -1.7
CDRU S **Sb 01 07 59.9 -0.1**
CDRU AML AML
comp=E,17050µm,1.1s
CDRU AML AML
comp=N,6855µm,1.2s
CDRU AML AML
comp=E,17050µm,0.9s
CDRU AML AML
comp=N,6855µm,0.8s
CDRU AML AML
comp=N,6390µm,0.4s
CDRU AML AML
comp=E,16129µm,0.2s
SPS2 Spezzano della 0.79 122 ⇑P Pg 01 07 49.0 -0.2
SPS2 S **Sb 01 08 00.3 +0.4**
SPS2 AML AML
comp=E,5305µm,1.5s
SPS2 AML AML
comp=N,7525µm,0.3s
SPS2 AML AML
comp=E,5305µm,0.5s
SPS2 AML AML
comp=N,7526µm,0.3s
SPS2 AML AML
comp=E,5219µm,0.4s
STN3 Satriano di Lu 0.83 10 AML AML
STN3 AML AML
STN3 AML AML
STN3 AML AML
ORI Oriolo Calabro 0.83 65 P Pb 01 07 50.4 +0.3
ORI AML AML
comp=E,19250µm,0.5s
ORI AML AML
comp=N,18850µm,0.4s
ORI AML AML
comp=E,19231µm,0.5s
ORI AML AML
comp=N,18856µm,0.4s
CAGG Caggiano 0.85 2 P Pg 01 07 49.4 -1.0
CELI Celico 0.86 111 ⇑P Pg 01 07 50.2 -0.4
CELI S **Sb 01 08 02.5 +0.5**
CELI AML AML
comp=N,8300µm,0.6s
CELI AML AML
comp=N,20400µm,0.6s
CELI AML AML
comp=N,20400µm,1.4s
CELI AML AML
comp=N,8300µm,1.4s
CELI AML AML
comp=E,6710µm,0.6s
CELI AML AML
comp=E,16600µm,0.6s
CELI AML AML
comp=E,16633µm,0.6s
CELI AML AML
comp=N,8300µm,0.6s
CELI AML AML
comp=N,20443µm,0.6s
CELI AML AML
comp=E,6706µm,0.6s
IST3 Stromboli F 0.93 192 P Pb 01 07 50.6 -1.1
IST3 AML AML
comp=N,4750µm,0.6s
IST3 AML AML
comp=E,3655µm,0.4s
IST3 AML AML
comp=E,2574µm,0.4s
IST3 AML AML
comp=N,4491µm,0.5s
ISTR Stromboli Gino 0.95 193 P Pb 01 07 51.6 -0.5
PZUN Potenza 0.97 15 P Pg 01 07 52.4 -0.3
PZUN AML AML
comp=E,2400µm,0.4s
PZUN AML AML
comp=N,2325µm,1.2s
PZUN AML AML
comp=N,2410µm,1.2s
PZUN AML AML
comp=E,2400µm,0.4s
PZUN AML AML
comp=N,2320µm,1.2s
PZUN AML AML
comp=E,2515µm,0.4s
PZUN AML AML
comp=N,2410µm,0.8s
PZUN AML AML
comp=N,2320µm,0.8s
PZUN AML AML
comp=E,2516µm,0.4s
PZUN AML AML
comp=E,2400µm,0.4s
PZUN AML AML
comp=N,2100µm,0.7s
PZUN AML AML
comp=N,2136µm,0.7s
CRAC Craco 0.99 48 ⇓P Pn 01 07 53.2 -0.1
CRAC AML AML
comp=N,14750µm,0.4s
CRAC AML AML
comp=E,7455µm,0.4s
CRAC AML AML
comp=E,7453µm,0.4s
CRAC AML AML
comp=N,14793µm,0.4s
MRLC Muro Lucano 1.04 1 P Pb 01 07 53.3 -0.4
MRLC AML AML
comp=N,1905µm,0.5s
MRLC AML AML
comp=N,4225µm,0.5s
MRLC AML AML
comp=E,1540µm,0.4s
MRLC AML AML
comp=E,3160µm,0.5s
MRLC AML AML
comp=E,1541µm,0.4s
MRLC AML AML
comp=E,3162µm,0.5s
MRLC AML AML
comp=N,4225µm,0.5s
MRLC AML AML
comp=N,1903µm,0.5s
MCRV Calabrutti - M 1.10 348 P Pb 01 07 52.9 -1.7
MCRV S **Sn 01 08 09.7 -0.1**
MCRV AML AML
comp=N,6545µm,0.3s
MCRV AML AML
comp=E,4825µm,1.5s
MCRV AML AML
comp=E,4825µm,0.5s
MCRV AML AML
comp=N,6545µm,1.7s
MCRV AML AML
comp=E,4782µm,0.5s
TIP Timpagrande 1.13 118 ⇑P Pb 01 07 55.0 -0.2
TIP ⇓S **Sn 01 08 10.9 +0.3**
TIP Timpagrande 1.13 118 ⇑P Pb 01 07 54.9 -0.3
TIP AML AML
comp=E,1370µm,0.5s
TIP AML AML
comp=N,1250µm,1.3s
TIP AML AML
comp=N,1270µm,1.3s
TIP AML AML
comp=E,1370µm,0.5s
TIP AML AML
comp=E,1370µm,1.5s
TIP AML AML
comp=N,1250µm,0.7s
TIP AML AML
comp=N,1270µm,0.7s
TIP AML AML
comp=E,1370µm,0.5s
TIP AML AML
comp=E,1368µm,0.5s
TIP AML AML
comp=N,1268µm,1.3s
TIP AML AML
comp=N,1252µm,1.3s
ACER Acerenza 1.13 18 P Pb 01 07 55.0 -0.3
ACER AML AML
comp=N,4920µm,0.6s
ACER AML AML
comp=N,5130µm,0.6s
ACER AML AML
comp=E,4110µm,0.7s
ACER AML AML
comp=E,3910µm,0.7s
JOPP Joppolo 1.15 164 P Pn 01 07 54.4 -1.1
JOPP S **Sb 01 08 08.5 -1.7**
JOPP AML AML
comp=E,1880µm,0.8s
JOPP AML AML
comp=N,1590µm,1.1s
JOPP AML AML
comp=E,1880µm,1.2s
JOPP AML AML
comp=E,1728µm,0.7s
JOPP AML AML
comp=N,1523µm,0.9s
GRI Girifalco 1.15 140 P Pn 01 07 54.5 -1.0
GRI AML AML
comp=N,3085µm,0.7s
GRI AML AML
comp=N,3085µm,1.3s
GRI AML AML
comp=E,4420µm,0.5s
GRI AML AML
comp=E,4417µm,0.5s
GRI AML AML
comp=N,3084µm,0.7s
MIGL Miglionico 1.16 39 P Pb 01 07 55.0 -0.7
MIGL AML AML
comp=N,8060µm,1.2s
MIGL AML AML
comp=E,9950µm,0.4s
MIGL AML AML
comp=N,7346µm,0.4s
MIGL AML AML
comp=E,9941µm,0.4s
SNAL S. Angelo Dei 1.23 351 P Pn 01 07 56.3 -0.4
SNAL AML AML
comp=E,4900µm,0.5s
SNAL AML AML
comp=N,5160µm,0.6s
SNAL AML AML
comp=E,5215µm,0.5s
SNAL AML AML
comp=N,5410µm,0.6s
SNAL AML AML
comp=E,5215µm,1.5s
SNAL AML AML
comp=E,4900µm,1.5s
SNAL AML AML
comp=N,5408µm,0.6s
SNAL AML AML
comp=N,5156µm,0.6s
SNAL AML AML
comp=E,5215µm,0.5s
SNAL AML AML
comp=E,4903µm,0.5s
LADO San Nicola del 1.24 110 P Pn 01 07 56.8 0.0
VULT Monte Vulture 1.25 5 P Pg 01 07 58.0 0.0
MTMR Montemarano 1.26 344 P Pn 01 07 56.3 -0.7
PALZ Palazzo San Ge 1.29 17 P Pb 01 07 58.0 +0.1
PALZ AML AML
comp=N,2545µm,1.3s
PALZ AML AML
comp=N,2545µm,0.7s
PALZ AML AML
comp=E,2200µm,1.1s
PALZ AML AML
comp=E,1989µm,0.7s
PALZ AML AML
comp=N,2334µm,1.2s
CAFE Carife 1.33 352 P Pn 01 07 58.1 +0.1
CAFE AML AML
comp=E,4045µm,0.5s
CAFE AML AML
comp=E,4090µm,0.5s
CAFE AML AML
comp=N,3910µm,0.5s
CAFE AML AML
comp=N,3835µm,0.5s
CAFE AML AML
comp=E,4045µm,1.5s
CAFE AML AML
comp=E,4090µm,1.5s
CAFE AML AML
comp=N,3910µm,0.5s
CAFE AML AML
comp=E,4091µm,0.5s
CAFE AML AML
comp=N,3836µm,0.5s
CAFE AML AML
comp=E,4041µm,0.5s
MATE Matera 1.33 45 ⇓P Pb 01 07 58.4 -0.1
MATE ⇑S **Sn 01 08 15.8 +0.4**
VAE Valguarnera 2.38 201 P Pb 01 08 15.2 -1.3
comp=E,37nm,0.7s,baz=172,slow=6.7,SNR=12
VAE S **Sn 01 08 41.2 -0.2**
comp=E,40nm,0.6s,baz=188,slow=14,SNR=4.8
AQU L'Aquila 3.07 330 ePn Pn 01 08 24.6 +2.7
STON Ston 3.58 27 ePn Pn 01 08 29.0 +0.2
STON eSn **Sn 01 09 10.7 -0.1**
STON Ston 3.58 27 AML AML
comp=N,181µm,0.8s
STON AML AML
comp=E,129µm,1.5s
STON AML AML
comp=N,181µm,0.8s
STON AML AML
comp=E,111µm,0.3s
BUM Brajici-Budva 3.66 44 ePn Pn 01 08 30.6 +0.5
BUM *i* Sn **Sn 01 09 13.3 +0.3**
TREB Trebinje 3.71 35 ePn Pn 01 08 30.0 -0.6
DRME Dracevica, Mon 3.75 47 ePn Pn 01 08 31.6 +0.4
DRME Dracevica, Mon 3.75 47 ePn Pn 01 08 31.8 +0.6
DRME *i* Sn **Sn 01 09 15.4 +0.4**
BRY Bratogost 3.94 35 ePn Pn 01 08 34.5 +0.6
BRY *i* Sn **Sn 01 09 20.1 +0.2**
PDG Podgorica 3.94 45 ⇑P Pn 01 08 34.3 +0.4
PDG ⇑S **Sn 01 09 20.3 +0.4**
PDG Podgorica 3.94 45 ePn Pn 01 08 34.2 +0.3
PDG eSn **Sn 01 09 20.5 +0.6**
PDG Podgorica 3.94 45 ePn Pn 01 08 34.2 +0.3
PDG *i* Sn **Sn 01 09 20.2 +0.3**
NKME Niksic 4.03 40 ePn Pn 01 08 35.7 +0.6
NKME *i* Sn **Sn 01 09 22.2 +0.2**
VLS Valsamata 4.27 109 AML AML
comp=E,84µm,1.2s
VLS AML AML
comp=N,112µm,1.5s
VLS AML AML
comp=N,112µm,0.5s
VLS AML AML
comp=E,84µm,0.8s
VLS AML AML
comp=N,99µm,1.0s
VLS AML AML
comp=E,78µm,0.3s
OHR Ohrid 4.30 69 ePn Pn 01 08 42.4 +3.5
OHR eSn **Sn 01 09 28.1 -0.7**
KOME Kolasin 4.37 43 ePn Pn 01 08 41.1 +1.2
KOME Kolasin 4.37 43 ePn Pn 01 08 40.6 +0.7
KOME *i* Sn **Sn 01 09 30.7 +0.1**
IVA Berane 4.59 45 ePn Pn 01 08 43.6 +0.7
IVA *i* Sn **Sn 01 09 36.1 +0.1**
PLE Pljevlja 4.66 38 ePn Pn 01 08 44.6 +0.7
PLE *i* Sn **Sn 01 09 37.8 +0.1**
SJES Sjenica 4.90 42 ePn Pn 01 08 48.7 +1.6
SJES eSn **Sn 01 09 42.9 -0.7**
BBLS Lazi&#263i 5.09 34 ePn Pn 01 08 51.1 +1.4
BBLS eSn **Sn 01 09 48.3 +0.1**
BLY Banja Luka 5.19 14 ePn Pn 01 08 51.3 +0.2
BLY Banja Luka 5.19 14 ⇑P Pn 01 08 52.8 +1.7

BLY	**Banja Luka**	**5.19**	**14**	*e*Pn		**Pn**	**01 08 52.5**	**+1.4**
IVAS	**Ivanjica**	**5.22**	**41**	*e*Pn		**Pn**	**01 08 52.0**	**+0.6**
IVAS				*e*Sn		**Sn**	**01 09 50.7**	**-0.7**
SELS	**Selova**	**5.50**	**49**	*e*Pn		**Pn**	**01 08 56.1**	**+0.7**
SELS				*e*Sn		**Sn**	**01 09 57.0**	**-1.4**
DIVS	**Divibare**	**5.53**	**36**	*e*Pn		**Pn**	**01 08 55.1**	**-0.7**
DIVS				*e*Sn		**Sn**	**01 09 57.4**	**-1.7**
GOCS	**Kraljevo Serbi**	**5.58**	**45**	*e*Pn		**Pn**	**01 08 57.1**	**+0.6**
GOCS				*e*Sn		**Sn**	**01 09 58.9**	**-1.6**
VAY	**Valandovo**	**5.64**	**71**	*e*Pn		Pn	01 08 50.8	-6.5
VAY				*e*Sn		**Sn**	**01 09 55.4**	**-6.4**
TEKS	**Tekeris**	**5.70**	**31**	*e*Pn		**Pn**	**01 08 57.4**	**-0.6**
BARS	**Barje**	**5.70**	**55**	*e*Pn		**Pn**	**01 08 58.4**	**+0.4**
GRUS	**Gruza**	**5.72**	**41**	*e*Pn		**Pn**	**01 08 58.8**	**+0.4**
GRUS				*e*Sn		**Sn**	**01 10 01.7**	**-2.1**
BOJS	**Bojanci**	**5.79**	**358**	*e*Pn		**Pn**	**01 09 00.9**	**+1.6**
BOJS				*e*Sn		**Sn**	**01 10 04.3**	**-1.1**
TRUS	**Trudelj**	**5.82**	**38**	*e*Pn		**Pn**	**01 09 00.3**	**+0.6**
TRUS				*e*Sn		**Sn**	**01 10 03.9**	**-2.2**
BOSS	**Bosilegrad**	**5.98**	**60**	*e*Pn		**Pn**	**01 09 03.2**	**+1.3**
BOVS	**Bovan**	**6.09**	**48**	⇓P		**Pn**	**01 09 04.6**	**+1.1**
BOVS	**Bovan**	**6.09**	**48**	*e*Pn		**Pn**	**01 09 04.0**	**+0.6**
BOVS				*e*Sn		**Sn**	**01 10 10.7**	**-2.2**
KEST	**Kesra**	**6.27**	**233**	P		**Pn**	**01 09 08.1**	**+2.1**
	comp=E,0.4nm,0.3s,baz=355,slow=9.2,SNR=9.4							
KEST				S		**Sn**	**01 10 17.9**	**+0.5**
	comp=E,2.9nm,0.9s,baz=254,slow=9.9,SNR=1.4							
	comp=E,4.8nm,0.9s							
ZAPS	**Zavoj**	**6.45**	**54**	*e*Pn		**Pn**	**01 09 10.1**	**+1.8**
ZAPS				*e*Sn		**Sn**	**01 10 19.2**	**-2.5**
ZAGS	**Zajecar**	**6.51**	**49**	*e*Pn		**Pn**	**01 09 10.1**	**+1.0**
ZAGS				*e*Sn		**Sn**	**01 10 20.8**	**-2.2**
VTS	**Vitosha**	**6.54**	**61**	*e*Pn		**Pn**	**01 09 10.5**	**+0.8**
VTS				*e*Sn		**Sn**	**01 10 22.0**	**-2.0**
BORS2	**Bor- Borsko je**	**6.56**	**46**	*e*Pn		**Pn**	**01 09 09.4**	**-0.4**
KUBS	**Kucevo**	**6.58**	**42**	*e*Pn		**Pn**	**01 09 08.9**	**-1.3**
BLKB	**Belogradchik**	**6.66**	**52**	⇓P		**Pn**	**01 09 12.5**	**+1.2**
MORH	**Mrgy, Hungar**	**6.90**	**19**	*e*Pn		**Pn**	**01 09 10.3**	**-4.2**
MORH	**Mrgy, Hungar**	**6.90**	**19**	⇑P		**Pn**	**01 09 16.0**	**+1.5**
SOKA	**Soboth**	**6.97**	**358**	*i* Pn		**Pn**	**01 09 17.1**	**+1.5**
	comp=E,0.5nm,0.2s							
SOKA				*i* Sn		**Sn**	**01 10 37.6**	**+3.0**
	comp=E,1.9nm,0.6s							
HERR	**Herculane**	**7.29**	**43**	⇑P		**Pn**	**01 09 20.2**	**+0.4**
PLD	**Plovdiv**	**7.43**	**68**	*e*Pn		**Pn**	**01 09 23.1**	**+1.3**
BZS	**Buzias**	**7.44**	**35**	*e*Pn		**Pn**	**01 09 21.0**	**-0.9**
BZS				*e*Sn		**Sn**	**01 10 42.5**	**-3.4**
KBA	**Koelnbreinsper**	**7.53**	**349**	*i* Pn		**Pn**	**01 09 24.5**	**+1.3**
	comp=E,1.9nm,0.4s							
KBA				*i* Sn		**Sn**	**01 10 48.9**	**+0.5**
	comp=E,3.2nm,0.6s							
ARSA	**Arzberg**	**7.54**	**0**	*i* Pn		**Pn**	**01 09 22.2**	**-1.0**
	comp=E,1.3nm,0.3s							
ARSA				*e*Sn		**Sn**	**01 10 47.0**	**-1.4**
	comp=E,1.3nm,0.4s							
ARSA	**Arzberg**	**7.54**	**0**	*e*Pn		**Pn**	**01 09 22.4**	**-0.9**
PLVB	**Pleven**	**7.78**	**59**	⇑P		**Pn**	**01 09 28.2**	**+1.6**
GZR	**Gura Zlata**	**7.83**	**41**	⇑P		**Pn**	**01 09 27.9**	**+0.6**
LESA	**Schwarzleotal**	**7.97**	**346**	*i* Pn		**Pn**	**01 09 30.8**	**+1.5**
	comp=E,3.1nm,0.4s							
LESA				*i* Sn		**Sn**	**01 10 56.4**	**-2.9**
	comp=E,2.1nm,0.5s							
RONA	**Rosalia, Austr**	**8.01**	**4**	*i* Pn		**Pn**	**01 09 31.2**	**+1.4**
	comp=E,1.0nm,0.2s							
WTTA	**Wattenberg**	**8.05**	**341**	*i* Pn		**Pn**	**01 09 32.3**	**+1.9**
	comp=E,0.2nm,0.1s							
WTTA				*e*Sn		**Sn**	**01 11 00.2**	**-1.0**
	comp=E,6.7nm,0.6s							
BIOA	**Bad Ischl, Aus**	**8.09**	**351**	*i* Pn		**Pn**	**01 09 32.7**	**+1.9**
	comp=E,2.7nm,0.4s							
BIOA				*e*Sn		**Sn**	**01 10 57.5**	**-4.5**
	comp=E,3.9nm,0.5s							
WATA	**Walderalm**	**8.13**	**341**	*i* Pn		**Pn**	**01 09 33.9**	**+2.4**
	comp=E,0.8nm,0.2s							
WATA				*e*Sn		**Sn**	**01 11 01.1**	**-2.1**
	comp=E,3.3nm,0.6s							
DAVOX	**Davos/Dischmat**	**8.16**	**332**	P		**Pn**	**01 09 35.0**	**+3.0**
	comp=E,0.4nm,0.3s,baz=177,slow=23,SNR=6.2							
	comp=E,1.4nm,0.5s							
MOA	**Molln**	**8.18**	**354**	*i* Pn		**Pn**	**01 09 33.3**	**+1.2**
	comp=E,2.0nm,0.3s							
MOA				*i* Sn		**Sn**	**01 11 02.4**	**-1.9**
	comp=E,5.3nm,0.7s							
MOA	**Molln**	**8.18**	**354**	*e*Pn		**Pn**	**01 09 32.9**	**+0.8**
CONA	**Conrad Observa**	**8.22**	**2**	*i* Pn		**Pn**	**01 09 34.3**	**+1.6**
	comp=E,1.1nm,0.3s							
CONA				*i* Sn		**Sn**	**01 11 03.6**	**-1.7**
	comp=E,0.9nm,0.3s							
ELND	**Elena**	**8.46**	**64**	⇑P		**Pn**	**01 09 37.0**	**+1.1**
RETA	**Reutte**	**8.49**	**338**	*e*Pn		**Pn**	**01 09 37.2**	**+0.9**
	comp=E,0.8nm,0.3s							
RETA				*i* Sn		**Sn**	**01 11 10.8**	**-1.1**
	comp=E,1.8nm,0.7s							
DAVA	**Damuels**	**8.59**	**334**	Pn		**Pn**	**01 09 39.9**	**+2.1**
	comp=E,0.8nm,0.3s							
DAVA				*e*Sn		**Sn**	**01 11 16.4**	**+1.9**
	comp=E,2.0nm,0.5s							
IDI	**Anoyia**	**8.69**	**118**	P		**Pn**	**01 09 40.3**	**+1.2**
	comp=E,2.9nm,0.7s,baz=253,slow=10,SNR=8.6							
IDI				S		**Sn**	**01 11 12.7**	**-4.2**
	comp=E,3.5nm,0.4s,baz=318,slow=22,SNR=5.7							
DRGR		**8.83**	**34**	⇑P		**Pn**	**01 09 41.6**	**+0.6**
VOIR		**9.09**	**48**	⇓P		**Pn**	**01 09 45.7**	**+1.1**
GERES	**GERESS Array B**	**9.22**	**353**	P		**Pn**	**01 09 47.7**	**+1.3**
	baz=179,slow=9.8,SNR=4.4							
GERES				S		**Sn**	**01 11 24.7**	**-5.2**
	comp=E,1.7nm,0.5s,baz=166,slow=23,SNR=6.4							
	comp=E,0.5nm,0.3s							
MLR	**Muntele Rosu**	**9.64**	**50**	P		**Pn**	**01 09 54.7**	**+2.5**
	comp=E,0.2nm,0.3s,baz=185,slow=14,SNR=3.5							
MLR				S		**Sn**	**01 11 39.3**	**-1.0**
	comp=E,1.9nm,0.8s,baz=263,slow=20,SNR=2.3							
	comp=E,1.3nm,0.7s							
MLR	**Muntele Rosu**	**9.64**	**50**	⇑P		**Pn**	**01 09 53.0**	**+0.9**
BURAR	**Bucovina Array**	**10.59**	**39**	⇑P		**Pn**	**01 10 07.5**	**+2.4**
MMAI	**Mount Meron Ar**	**17.37**	**106**	P		**Pn**	**01 11 34.3**	**-1.5**
	comp=E,0.4nm,0.3s,baz=312,slow=11,SNR=5.7							
	comp=E,0.4nm,0.3s							
EIL	**Elat**	**18.86**	**116**	P		**Pn**	**01 11 57.4**	**+3.3**
	comp=E,1.7nm,0.6s,baz=312,slow=12,SNR=1.1							
ASF	**Jabal al Asfar**	**18.88**	**107**	P		Pn	01 12 02.1	+7.7
	comp=E,0.7nm,0.3s,baz=113,slow=21,SNR=2.0							
KBZ	**Khabaz**	**20.82**	**70**	P		Pn	01 12 16.2	-1.0
	comp=E,2.5nm,0.9s,baz=296,slow=4.3,SNR=4.1							
	comp=E,2.5nm,0.9s							
NOA	**NORSAR Array B**	**21.52**	**354**	P		**P**	**01 12 23.1**	**+1.0**
	comp=E,0.8nm,0.8s,baz=171,slow=12,SNR=3.7							
NOA				LR		LR	01 21 58.2	
	comp=E,30nm,18.1s,baz=230,slow=40							
	comp=E,0.8nm,0.8s							
FINES	**FINESS Array B**	**22.72**	**13**	P		**P**	**01 12 35.7**	**+0.8**
	comp=E,1.6nm,0.9s,baz=202,slow=8.5,SNR=5.6							
	comp=E,1.6nm,0.9s							
BVAR	**Borovoye Array**	**39.20**	**51**	P		**P**	**01 15 00.4**	**-0.8**
	comp=E,0.5nm,0.6s,baz=242,slow=3.1,SNR=3.0							
	comp=E,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**44.51**	**54**	P		**P**	**01 15 43.4**	**-1.2**
	comp=E,0.1nm,0.4s,baz=282,slow=9.0,SNR=5.2							
	comp=E,0.1nm,0.4s							
MKAR	**Makanchi Array**	**47.85**	**58**	P		**P**	**01 16 11.4**	**+0.3**
	comp=E,0.4nm,0.5s,baz=269,slow=8.9,SNR=5.4							
	comp=E,0.4nm,0.5s							

IDC **16** *01:15:11.5±1.8,1°.66N×126°.42E,h0km,mb3.4/4, mbtmp3.4/5,ML3.1/1,Error ellipse: s-maj=126.8km s-min=21.8km az=69.0,Northern Molucca Sea*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	P	01 15 45.6	+0.1
	baz=15,slow=12,SNR=1.2						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**22.83**	**160**	P	P	01 16 19.6	-0.3
	0.6nm,0.4s,baz=339,slow=10,SNR=9.2						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**26.20**	**164**	P	P	01 16 51.6	0.0
	0.3nm,0.5s,baz=340,slow=9.2,SNR=7.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	01 21 18.1	+1.0
	0.2nm,0.4s,baz=111,slow=7.8,SNR=2.0						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	P	01 21 44.9	-0.8
	0.2nm,0.5s,baz=137,slow=6.2,SNR=2.0						
	0.2nm,0.5s						

IDC **16** *01:16:28.3±0.9,1°.58N×126°.21E,h0km,mb4.2/9, mbtmp4.1/10,ML4.0/1,MS3.9/1,Error ellipse: s-maj=109.5km s-min=11.2km az=69.0*

DJA **16** *01:16:32.5±0.2,2°.N±2°×12°.6E±°,h10km,M4.1/8,MLv4.1/8*

NEIC **16** *01:16:33.7±1.8,1°.63N±0°.09×126°.49E±0°.08,h35km±2km, mb4.4/13,Error ellipse: s-maj=19.6km s-min=3.9km az=220.0*

ISC 16 01:16:33.8±0.5,1°.64N±0°.05×126°.49E±0°.06,h35km,n34, σt1°.72/41,mb4.3/17,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**134**		**Pn**	**01 16 54.9**	**+0.4**
TNTI				Sn	**Sn**	**01 17 09.5**	**-0.4**
TNTI	**Ternate**	**1.23**	**134**	P	**Pn**	**01 16 55.3**	**+0.8**
TNTI				S	**Sn**	**01 17 13.6**	**+3.7**
SGSI	**Sangihe**	**2.25**	**335**	P	**Pn**	**01 17 09.7**	**+1.1**
SGSI				S	**Sn**	**01 17 37.9**	**+2.7**
KMSI	**Cibinong**	**2.72**	**247**	P	**Pn**	**01 17 15.6**	**+0.5**
KMSI				S	**Sn**	**01 17 49.3**	**+2.5**
LUWI	**Luwuk**	**4.57**	**234**	Pn	**Pn**	**01 17 40.4**	**-0.1**
TOLI2	**Tolitoli**	**5.73**	**265**		**Pn**	**01 17 56.8**	**+0.3**
MYLDM	**Lahad Datu**	**8.71**	**294**		**Pn**	**01 18 37.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**01 20 58.5**	**-1.0**
	0.3nm,0.3s,baz=3.3,slow=2.9,SNR=8.7						
	1.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**01 20 57.4**	**-2.1**
WB0	**Warramunga Arr**	**22.64**	**160**		**P**	**01 21 30.8**	**-1.2**
WB0				IAmb	IAmb	01 21 35.6	
	comp=Z,7.3nm,0.5s						
COEN	**Coen**	**22.66**	**134**	P	**P**	**01 21 32.0**	**-0.3**
COEN				IAmb	IAmb	01 21 38.1	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**22.79**	**161**	P	**P**	**01 21 32.0**	**-1.6**
	comp=E,5.3nm,0.5s,baz=340,slow=11,SNR=35						
WRA				PcP	**PcP**	**01 25 24.6**	**0.0**
	comp=E,0.5nm,0.7s,baz=320,slow=2.7,SNR=2.9						
WRA				S	**S**	**01 25 45.7**	**+5.2**
	comp=Z,0.3nm,0.8s,baz=272,slow=12,SNR=2.0						
	comp=Z,5.3nm,0.5s						
WRA	**Warramunga Arr**	**22.79**	**161**		**P**	**01 21 31.0**	**-2.5**
AS31	**Alice Springs**	**26.16**	**164**		**P**	**01 22 05.0**	**-0.2**
AS31				IAmb	IAmb	01 22 13.0	
	comp=Z,1.9nm,0.3s						
ASAR	**Alice Springs**	**26.17**	**164**	P	**P**	**01 22 05.1**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=349,slow=14,SNR=35						
ASAR				PcP	**PcP**	**01 25 32.2**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=330,slow=2.5,SNR=4.8						
ASAR				S	**S**	**01 26 38.5**	**+3.6**
	comp=Z,0.2nm,0.3s,baz=224,slow=39,SNR=1.8						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	**26.17**	**164**	P	**P**	**01 22 04.9**	**-0.3**
JCJ	**Chichijima**	**29.45**	**29**	LR	LR	01 32 41.1	
	comp=Z,249nm,19.6s,baz=108,slow=33						
FORT	**Forrest**	**32.27**	**177**	P	**P**	**01 22 58.3**	**-1.0**
FORT				IAmb	IAmb	01 23 01.0	
	comp=Z,14nm,1.5s						
PZH	**PanZhiHua**	**34.30**	**318**	P	**P**	**01 23 18.8**	**+1.5**
BBOO	**Buckleboo**	**35.44**	**166**	P	**P**	**01 23 26.2**	**-0.6**
BBOO				IAmb	IAmb	01 23 53.8	
	comp=Z,24nm,1.5s						
JSD	**Sado**	**37.80**	**15**	P	**P**	**01 23 46.1**	**-0.8**
HHC	**Hu-ho-hao-te**	**41.30**	**343**	*e*P	**P**	**01 24 17.0**	**+0.8**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,66nm,3.8s						
EVN	**Everest**	**46.06**	**308**	P	**P**	**01 24 54.2**	**-1.1**
SONM	**Songino Array**	**49.20**	**342**	P	**P**	**01 25 18.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=154,slow=7.7,SNR=2.1						
	comp=Z,0.4nm,0.4s						
WMQ	**Urumqi**	**54.30**	**326**	*e*P	**P**	**01 25 59.0**	**+2.2**
WMQ				LR	LR		
	comp=Z,120nm,22.1s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**01 26 30.1**	**-1.0**
	comp=Z,2.3nm,0.5s,baz=120,slow=8.1,SNR=36						
	comp=Z,2.3nm,0.5s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**01 26 51.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=140,slow=3.4,SNR=2.5						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.37**	**328**	P	**P**	**01 26 58.4**	**-1.2**
	comp=Z,3.0nm,0.6s,baz=128,slow=6.0,SNR=32						
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**63.37**	**328**	P	**P**	**01 26 58.2**	**-1.4**
BVAR	**Borovoye Array**	**68.94**	**328**	P	**P**	**01 27 34.4**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=100,slow=4.4,SNR=5.4						
	comp=Z,0.7nm,0.4s						
ARTI	**Arti**	**76.65**	**328**	P	**P**	**01 28 19.4**	**-1.6**
ARTI				IAmb	IAmb	01 28 20.6	
	comp=Z,7.1nm,1.2s						
RAYN	**Ar Rayn**	**81.08**	**293**	P	**P**	**01 28 43.8**	**-2.3**
RAYN				IAmb	IAmb	01 29 08.0	
	comp=Z,2.9nm,1.2s						
ARCES	**ARCESS Array B**	**92.32**	**340**	P	**P**	**01 29 40.7**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=78,slow=4.9,SNR=1.3						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**01 29 46.7**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=71,slow=6.4,SNR=6.1						
	comp=Z,0.7nm,0.5s						

IDC **16** *01:27:03.5±1.1,1°.15N×125°.36E,h0km,mb3.4/5, mbtmp3.4/5,Error ellipse: s-maj=60.4km s-min=19.5km az=57.0*

DJA **16** *01:27:05.9±0.4,2°.N±4°×12°.6E±°,h10km,M3.3/5,MLv3.3/5*

ISC 16 01:27:04.7±1.1,1°.5N±0°.2×126°.2E±0°.2,h10km,n7,σ3°.36/8, mb3.6/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.39**	**120**	P	**Pn**	**01 27 29.2**	**-1.0**
TNTI				S	**Sb**	**01 27 46.2**	**-2.4**
WRA	**Warramunga Arr**	**22.74**	**160**	P	**P**	**01 32 05.8**	**-1.3**
	0.7nm,0.6s,baz=340,slow=11,SNR=6.7						
	0.7nm,0.6s						
PMG	**Port Moresby**	**23.54**	**118**	P	**P**	**01 32 22.2**	**+6.7**
	134nm,0.6s,baz=344,slow=7.4,SNR=52						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**01 32 39.0**	**+0.2**
	0.3nm,0.5s,baz=352,slow=15,SNR=8.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**01 37 04.8**	**-0.5**
	0.5nm,0.7s,baz=114,slow=7.1,SNR=2.3						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**01 37 32.7**	**-1.3**
	0.2nm,0.6s,baz=126,slow=5.7,SNR=2.7						
	0.2nm,0.6s						
BVAR	**Borovoye Array**	**68.91**	**328**	P	**P**	**01 38 09.1**	**-0.6**
	0.3nm,0.5s,baz=127,slow=6.2,SNR=1.9						
	0.3nm,0.5s						

AEIC **16** *01:27:16.7±1.3,51°.6N±0°.2×176°.66E±0°.08,h59km±9km, Error ellipse: s-maj=25.2km s-min=6.1km az=189.0*

NEIC 16 01:27:17.7±1.4,51°.7N±0°.1×176°.66E±0°.08,h35km±2km, ML3.6/8,ML3.3(AEIC),**Error ellipse: s-maj=21.5km s-min=5.7km az=196.0,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSNW	**Little Sitkin**	**1.19**	**75**		Pn	01 27 37.3	-0.5
LSNW					Sn	01 27 53.8	+1.1
LSSE	**Little Sitkin**	**1.21**	**77**		Pn	01 27 37.4	-0.8
LSSE					Sn	01 27 53.8	+0.5
LSPA	**Little Sitkin**	**1.22**	**76**		Pn	01 27 37.8	-0.5
LSPA					Sn	01 27 55.1	+1.5
AMKA	**Amchitka**	**1.68**	**99**		Sn	01 28 05.7	+1.0
AMKA	**Amchitka**	**1.68**	**99**		Pn	01 27 44.2	-0.3
CESW	**Semis' Southwe**	**1.82**	**82**		Pn	01 27 45.9	-0.6
CESW					Sn	01 28 08.6	+0.3
CERB	**Semis' Cerberu**	**1.86**	**81**		Pn	01 27 47.4	+0.3
CERB					Sn	01 28 11.3	+1.9
CEPE	**Semis' Perret**	**1.88**	**80**		Pn	01 27 47.2	-0.1
CEPE					Sn	01 28 11.0	+1.3
SHEM	**Shemya Is, Ala**	**1.90**	**305**		Pn	01 27 47.7	+0.2
SMY	**Shemya**	**1.90**	**305**		Sn	01 28 10.7	+0.6
SMY	**Shemya**	**1.90**	**305**		Pn	01 27 47.7	+0.2
GASW	**Gareloi Southw**	**2.79**	**86**		Pn	01 27 59.8	0.0
GASW					Sn	01 28 32.6	+0.3
GANO	**Gareloi North**	**2.82**	**85**		Sn	01 28 35.3	+2.2
GAKI	**Gareloi-Kavalg**	**2.83**	**91**		Pn	01 28 00.6	+0.3
GAKI					Sn	01 28 34.2	+1.1
TASE	**Tanaga Southea**	**3.30**	**85**		Sn	01 28 46.3	+1.4
TAFL	**Tanaga Flats**	**3.39**	**87**		Pn	01 28 08.0	0.0
TAFL					Sn	01 28 48.1	+1.2
TAPA	**Tanaga Point A**	**3.44**	**86**		Pn	01 28 08.7	-0.1
TAPA					Sn	01 28 48.0	-0.3
KIMD	**Kanaga Island**	**3.80**	**86**		Pn	01 28 13.7	0.0
KIMD					Sn	01 28 57.3	+0.2
KIKV	**Kanaga Island**	**3.84**	**85**		Pn	01 28 14.3	+0.1
KIKV					Sn	01 28 59.5	+1.4
KIWB	**Kanaga Island**	**3.85**	**85**		Pn	01 28 14.1	-0.3
KIWB					Sn	01 28 58.7	+0.4
KIWB	**Kanaga Island**	**3.85**	**85**	IAML		01 29 04.2	
	comp=E,87nm,0.5s						
KIWB				IAML		01 29 12.8	
	comp=N,78nm,1.1s						
ADK	**Adak**	**4.14**	**85**		Sn	01 29 06.0	+0.6
ADK	**Adak**	**4.14**	**85**		Pn	01 28 18.4	+0.1
ADK				IAML		01 29 10.4	
	comp=N,75nm,1.2s						
ADK				IAML		01 29 35.9	
	comp=N,65nm,1.0s						
ATKA	**Atka Island**	**5.68**	**81**	Pn	Pn	01 28 39.6	+0.1

NEIC **16** *01:36:36.3±2.4,7°.39N±0°.09×124°.81E±0°.06,h10km±1km, mb4.7/23,Error ellipse: s-maj=17.6km s-min=7.6km az=28.0*

GCMT **16** *01:36:36.3±0.4,7°.69N±0°.02×125°.00E±0°.02,h20km±2km, MW4.8/77,Moment Tensor Solution. s9,c9; s77,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.24±.14; $M_{\theta\theta}$1.89±.11; $M_{\phi\phi}$-1.65±.11; $M_{r\theta}$-0.65±.18; $M_{r\phi}$-0.54±.08; $M_{\theta\phi}$0.28±.20; Best double couple: $M_0$1.96300×10^{16} NP1:ϕ_s232.00000°,δ73.00000°,λ174.00000°. NP2: ϕ_s324.00000°,δ84.00000°,λ17.00000°. Principal axes: T 2.1690, Plg16.0000°, Azm189.0000°; N -0.4150, Plg72.0000°, Azm343.0000°; P -1.7560, Plg8.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC **16** *01:36:38.2±1.4,7°.78N×125°.69E,h48km±14km,mb3.8/15, mbtmp4.2/17,ML4.8/2,MS3.7/50 Error ellipse: s-maj=32.3km s-min=12.3km az=70.0*

DJA **16** *01:36:44.7±0.4,7°.N±3°×12°.5E±°,h10km,M4.8/30, mb4.7/30,mB5.4/14,MLv4.9/10,Mw(mB)4.8/14, MwMwp4.6/1,Mwp5.0/1*

ISC 16 01:36:36.4±0.4,7°.42N±0°.06×124°.83E±0°.06,h10km,n112, σ2°.29/68,mb4.4/30,MS3.8/50,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.82**	**115**	P	**Pg**	**01 36 52.3**	**-0.1**
	2µm,0.4s,baz=270,slow=9.1,SNR=31						
DAV				S	**Sb**	**01 37 03.7**	**-0.3**
	6µm,0.3s,baz=183,slow=22,SNR=9.9						
DAV	**Davao City (W)**	**0.82**	**115**		**Pg**	**01 36 52.2**	**-0.1**
DAV				Sn	**Sn**	**01 37 05.8**	**-0.5**
SGSI	**Sangihe**	**3.77**	**169**	P	**Pn**	**01 37 36.7**	**+2.0**
SGSI				S	**Sn**	**01 38 18.7**	**-0.5**
MYLDM	**Lahad Datu**	**6.67**	**251**	Pn	Pn	01 38 22.2	+7.7
TNTI	**Ternate**	**7.07**	**159**	P	**Pn**	**01 38 23.1**	**+3.0**
	0.4nm2µm59nm,0.6s						
TOLI2	**Tolitoli**	**7.45**	**213**	Pn	**Pn**	**01 38 22.9**	**-2.4**
MRSI	**Marisa**	**7.47**	**203**	P	**Pn**	**01 38 25.2**	**-0.3**
	0.4nm1µm79nm,0.7s						
MPSI	**Mapaga**	**8.58**	**215**	P	Pn	01 38 48.0	+7.2
LUWI	**Luwuk**	**8.65**	**194**	Pn	**Pn**	**01 38 45.0**	**+3.2**
LUWI	**Luwuk**	**8.65**	**194**	P	Pn	01 38 47.8	+6.1
APSI	**Ampana**	**8.86**	**201**	P	Pn	01 38 51.7	+7.1
	797nm73nm,1.1s						
SANI	**Sanana**	**9.48**	**173**	P	**Pn**	**01 38 56.3**	**+3.2**
	44nm,0.9s						
PCI	**Palu**	**9.65**	**211**	P	Pn	01 39 03.2	+7.7
NLAI	**Namlea**	**10.83**	**168**	P	Pn	01 39 16.6	+5.0
	3µm26nm,0.8s						
TTSI	**Tana Toraja**	**11.53**	**206**	P	**Pn**	**01 39 24.4**	**+3.2**
	42nm,1.2s						
BNSI	**Bone**	**12.65**	**202**

ASAR				LR	LR	01 57 54.0	
	comp=Z,119nm,19.7s,baz=320,slow=40						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**32.15**	**164**		**P**	**01 43 03.4**	**-1.0**
LZDM	**Lanzhou Array**	**34.36**	**329**	P	**P**	**01 43 21.6**	**-2.3**
	comp=Z,1.1nm,0.3s,baz=141,slow=9.3,SNR=1.4						
	comp=Z,1.1nm,0.3s						
HHC	**Hu-ho-hao-te**	**35.33**	**342**	*eP*	**P**	**01 43 33.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,38nm,4.2s						
HHC				LR	LR		
	comp=N,290nm,16.6s						
HHC				LR	LR		
	comp=E,280nm,15.6s						
HHC				LR	LR		
	comp=Z,370nm,16.2s						
BRDH	**Bariadhala**	**35.33**	**299**	LR	LR	01 58 54.5	
	comp=Z,188nm,20.9s,baz=162,slow=37						
SHL	**Shillong**	**36.22**	**304**	P	**P**	**01 43 40.0**	**+0.1**
CN2	**Changchun**	**36.24**	**1**	*eP*	**P**	**01 43 42.8**	**+3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FORT	**Forrest**	**38.11**	**175**		**P**	**01 43 54.7**	**-0.9**
FORT				IAmb	IAmb	01 43 59.5	
	comp=Z,9.1nm,0.8s						
GTA	**Gaotai**	**38.98**	**329**	*eP*	**P**	**01 44 06.3**	**+3.2**
GTA				pP	sP	01 44 11.9	+4.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				LR	LR		
	comp=N,370nm,18.9s						
GTA				LR	LR		
	comp=E,250nm,17.4s						
GTA				LR	LR		
	comp=Z,240nm,18.2s						
GOMU	**GeErMu**	**39.64**	**321**	P	**P**	**01 44 10.3**	**+1.4**
GOMU				pP	sP	01 44 13.9	+0.5
GOMU				sP	pP	01 44 17.4	+5.3
GOMU				S	**S**	**01 50 10.8**	**-1.7**
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				LR	LR		
	comp=N,170nm,12.7s						
GOMU				LR	LR		
	comp=E,96nm,12.4s						
GOMU				LR	LR		
	comp=Z,200nm,12.8s						
ASAJ	**Asahikawa**	**39.72**	**20**	LR	LR	01 58 53.0	
	comp=Z,89nm,19.6s,baz=56,slow=34						
NWAO	**Narrogin (SRO)**	**40.77**	**190**	LR	LR	02 05 22.1	
	comp=Z,73nm,18.5s,baz=260,slow=42						
EVN	**Everest**	**41.32**	**304**	P	**P**	**01 44 22.0**	**-1.3**
EVN				IAmb	IAmb	01 44 26.6	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**41.41**	**166**	P	**P**	**01 44 22.5**	**-0.7**
BBOO				IAmb	IAmb	01 44 27.3	
	comp=Z,17nm,0.9s						
HILR	**Hailar Array B**	**42.21**	**355**	P	P	01 44 23.0	-6.5
	comp=Z,0.8nm,0.4s,baz=160,slow=11,SNR=1.6						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**42.23**	**159**	P	**P**	**01 44 26.8**	**-3.1**
	comp=Z,1.8nm,0.9s,baz=343,slow=10.0,SNR=9.3						
STKA				LR	LR	02 04 15.9	
	comp=Z,133nm,18.0s,baz=1.7,slow=39						
	comp=Z,1.8nm,0.9s						
ULN	**Ulaanbaatar**	**43.05**	**342**	P	**P**	**01 44 33.0**	**-3.5**
SONM	**Songino Array**	**43.22**	**342**	P	**P**	**01 44 33.9**	**-3.9**
	comp=Z,0.5nm,0.4s,baz=131,slow=4.5,SNR=4.5						
SONM				LR	LR	02 03 35.8	
	comp=Z,336nm,21.5s,baz=158,slow=38						
	comp=Z,0.5nm,0.4s						
PALK	**Pallekele**	**43.75**	**273**	LR	LR	02 05 24.8	
	comp=Z,74nm,19.1s,baz=84,slow=39						
WMQ	**Urumqi**	**48.64**	**324**	*eP*	**P**	**01 45 22.5**	**+1.9**
WMQ				LR	LR		
	comp=Z,120nm,18.5s						
PETK	**Petropavlovsk-**	**52.81**	**24**	P	P	01 45 44.3	-7.6
	comp=Z,4.9nm,1.0s,baz=230,slow=11,SNR=2.4						
PETK				LR	LR	02 07 47.8	
	comp=Z,89nm,20.2s,baz=225,slow=36						
	comp=Z,4.9nm,1.0s						
MKAR	**Makanchi Array**	**53.47**	**325**	P	**P**	**01 45 56.0**	**-0.9**
	comp=Z,2.5nm,0.8s,baz=134,slow=6.9,SNR=10						
	comp=Z,2.5nm,0.8s						
YAK	**Yakutsk**	**54.62**	**3**	LR	LR	02 09 49.3	
	comp=Z,67nm,21.8s,baz=203,slow=37						
AAK	**Ala-Archa**	**56.38**	**317**	LR	LR	02 14 06.6	
	comp=Z,85nm,18.9s,baz=108,slow=40						
ZALV	**Zalesovo Beam**	**56.46**	**333**	P	**P**	**01 46 16.4**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=124,slow=9.7,SNR=5.6						
ZALV				LR	LR	02 13 07.4	
	comp=Z,77nm,19.5s,baz=137,slow=39						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**56.46**	**333**	P	**P**	**01 46 18.2**	**-0.1**
KURBB	**Kurchatov Arra**	**57.63**	**327**	P	**P**	**01 46 24.9**	**-1.8**
	comp=Z,2.0nm,0.9s,baz=125,slow=6.7,SNR=10						
KURBB				LR	LR	02 12 40.2	
	comp=Z,89nm,19.2s,baz=170,slow=37						
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**57.63**	**327**	P	**P**	**01 46 25.0**	**-1.7**
KURK				IAmb	IAmb	01 46 36.0	
	comp=Z,7.7nm,1.0s						
GAR	**Garm**	**58.06**	**312**	P	**P**	**01 46 31.6**	**+1.5**
SEY	**Seymchan**	**58.92**	**14**	LR	LR	02 10 56.3	
	comp=Z,67nm,21.6s,baz=336,slow=35						
SHEM	**Shemya Is, Ala**	**60.31**	**32**	LR	LR	02 08 14.3	
	comp=Z,31nm,21.1s,baz=199,slow=32						
BVAR	**Borovoye Array**	**63.21**	**327**	P	**P**	**01 47 01.2**	**-3.6**
	comp=Z,0.4nm,0.5s,baz=241,slow=39,SNR=6.5						
BVAR				LR	LR	02 16 18.6	
	comp=Z,63nm,19.7s,baz=119,slow=38						
	comp=Z,0.4nm,0.5s						
TIXI	**Tiksi**	**64.21**	**1**	LR	LR	02 16 49.8	
	comp=Z,86nm,20.9s,baz=194,slow=38						
TIXI	**Tiksi**	**64.21**	**1**	P	**P**	**01 47 11.1**	**0.0**
AKTO	**Aktyubinsk**	**69.61**	**321**	LR	LR	02 20 28.3	
	comp=Z,92nm,18.3s,baz=116,slow=38						
ARTI	**Arti**	**70.91**	**327**	LR	LR	02 19 47.7	
	comp=Z,79nm,19.4s,baz=76,slow=36						
KIRV	**Kirov**	**76.10**	**329**	LR	LR	02 25 45.0	
	comp=Z,60nm,20.4s,baz=97,slow=39						
RAYN	**Ar Rayn**	**77.31**	**292**	P	**P**	**01 48 33.8**	**+1.9**
RAYN				IAmb	IAmb	01 48 35.2	
	comp=Z,6.6nm,1.0s						
GNI	**Garni**	**77.68**	**309**	LR	LR	02 26 08.7	
	comp=Z,22nm,21.4s,baz=76,slow=38						
ILAR	**Eielson Array**	**82.61**	**26**	P	P	01 48 51.8	-7.8
	comp=Z,0.3nm,0.8s,baz=257,slow=5.5,SNR=1.6						
	comp=Z,0.3nm,0.8s						
ASF	**Jabal al Asfar**	**84.35**	**302**	LR	LR	02 32 02.6	
	comp=Z,30nm,20.9s,baz=107,slow=39						
I27K	**Kandik River**	**84.77**	**25**		**P**	**01 49 09.5**	**-1.3**
E28M	**Babbage River**	**85.21**	**21**	IAmb	IAmb	01 49 19.5	
	comp=Z,3.5nm,1.0s						
F28M	**Old Crow**	**85.22**	**23**	P	**P**	**01 49 13.8**	**+0.8**
I28M	**Miner Creek**	**85.48**	**25**		**P**	**01 49 13.4**	**-1.0**
I28M				IAmb	IAmb	01 49 21.0	
	comp=Z,6.1nm,0.9s						
MMAI	**Mount Meron Ar**	**85.53**	**303**	P	**P**	**01 49 14.9**	**-0.4**
	comp=Z,2.4nm,1.0s,baz=108,slow=4.7,SNR=1.7						
	comp=Z,2.4nm,1.0s						
EIL	**Elat**	**86.27**	**299**	LR	LR	02 34 30.7	
	comp=Z,36nm,18.7s,baz=0.0,slow=40						
ARCES	**ARCESS Array B**	**86.35**	**340**	LR	LR	02 30 13.0	
	comp=Z,52nm,18.8s,baz=76,slow=37						
SPITS	**Spitsbergen Ar**	**86.51**	**349**	LR	LR	02 33 25.2	
	comp=Z,65nm,18.1s,baz=64,slow=40						
MAW	**Mawson**	**86.55**	**200**	LR	LR	02 23 45.5	
	comp=Z,20nm,19.4s,baz=64,slow=32						
VNDA	**Vanda**	**87.31**	**172**	LR	LR	02 27 48.4	
	comp=Z,28nm,21.0s,baz=348,slow=35						
FINES	**FINESS Array B**	**87.70**	**332**	LR	LR	02 32 03.9	
	comp=Z,99nm,18.1s,baz=28,slow=38						
KMBO	**Kilima Mbogo**	**87.74**	**269**	LR	LR	02 27 08.2	
	comp=Z,31nm,18.2s,baz=96,slow=34						
MLR	**Muntele Rosu**	**90.94**	**316**	LR	LR	02 35 36.4	
	comp=Z,78nm,18.4s,baz=45,slow=39						
HFS	**Hagfors**	**93.89**	**332**	LR	LR	02 35 51.9	
	comp=Z,97nm,18.9s,baz=64,slow=38						
MBAR	**Mbarara**	**94.13**	**270**	LR	LR	02 28 02.3	
	comp=Z,30nm,21.5s,baz=76,slow=32						
RES	**Resolute Bay**	**94.53**	**10**	LR	LR	02 36 52.9	
	comp=Z,17nm,18.6s,baz=33,slow=38						
NOA	**NORSAR Array B**	**94.66**	**333**	LR	LR	02 35 22.5	
	comp=Z,86nm,21.3s,baz=65,slow=37						
VRAC	**Vranov**	**96.09**	**321**	LR	LR	02 37 58.4	
	comp=Z,53nm,20.3s,baz=48,slow=38						
QSPA	**South Pole Qui**	**97.30**	**180**	LR	LR	02 34 59.8	
	comp=Z,17nm,19.9s,baz=358,slow=36						
LSZ	**Lusaka**	**98.29**	**256**	LR	LR	02 34 58.2	
	comp=Z,41nm,18.9s,baz=127,slow=35						
MATP	**Matopo**	**98.45**	**250**	LR	LR	02 28 50.6	
	comp=Z,41nm,20.5s,baz=91,slow=32						

DSN ***16*** *01:48:15.9±1.8,27°.29N×58°.50E,h10km,ML2.9/8, Error ellipse: s-maj=28.6km s-min=15.6km az=144.0*
TEH ***16*** *01:48:20.0,27°.06N×57°.94E,h20km±44km*
OMAN ***16*** *01:48:21.3±0.1,27°.04N×57°.98E,h8km±1km,mb4.0/3, ml3.1/18, Error ellipse: s-maj=3.0km s-min=1.2km az=226.0*

ISC 16 01:48:22.0±2.5,27°.07N±0°.05×57°.99E±0°.07,h16km±16km, n51,σ1°27/61,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.34**	**286**	Pg	**Pb**		**01 48 46.1**	**-0.7**
GENO	**Geno**	**1.65**	**282**	Pg	**Pb**		**01 48 51.2**	**-1.0**
BANOM	**Banah**	**1.90**	**233**	P	**Pb**		**01 48 54.6**	**-1.7**
BANOM				S	**Sb**		**01 49 19.1**	**-0.7**
BANOM	**Banah**	**1.90**	**233**	P	**Pb**		**01 48 54.7**	**-1.7**
BANOM				S	**Sg**		**01 49 25.3**	**+2.1**
SHME	**Shamm**	**1.94**	**239**	P	**Pb**		**01 48 56.1**	**-1.0**
SHME	**Shamm**	**1.94**	**239**	P	**Pb**		**01 48 55.9**	**-1.1**
MDH	**Madha**	**2.33**	**221**	P	**Pn**		**01 48 59.6**	**-0.1**
MDH				S	**Sn**		**01 49 28.6**	**+0.6**
MDH	**Madha**	**2.33**	**221**	P	**Pn**		**01 48 59.2**	**-0.5**
UMQ	**Umm Al-Quwin**	**2.60**	**234**	P	**Pn**		**01 49 04.6**	**+1.3**
UOSS	**Minazif**	**2.66**	**218**	Pn	**Pn**		**01 49 04.0**	**-0.3**
UOSS	**Minazif**	**2.66**	**218**	P	**Pn**		**01 49 03.9**	**-0.3**
UOSS				S	**Sn**		**01 49 36.7**	**+0.5**
NGRK	**Negar Kerman**	**2.79**	**337**	Pn	**Pn**		**01 49 06.6**	**+0.3**
HATD	**Hatta, Dubai**	**2.79**	**217**	P	**Pn**		**01 49 05.9**	**-0.2**
HATD				S	**Sn**		**01 49 39.6**	**+0.1**
HATD	**Hatta, Dubai**	**2.79**	**217**	P	**Pn**		**01 49 06.1**	**0.0**
CHMN	**Cheshme madani**	**2.81**	**352**	Pn	**Pn**		**01 49 07.2**	**+0.7**
ASHO	**Ashiyiah** SNR=22	**2.95**	**217**	P	**Pn**		**01 49 09.9**	**+1.7**
ASHO	**Ashiyiah**	**2.95**	**217**	P	**Pn**		**01 49 10.5**	**+2.2**
ASHO				S	**Sb**		**01 49 50.7**	**+0.6**
NAZ	**Nazwa, Dubai**	**2.95**	**226**	P	**Pn**		**01 49 07.6**	**-0.6**
NAZ	**Nazwa, Dubai**	**2.95**	**226**	P	**Pn**		**01 49 10.7**	**+2.5**
SOHO	**SOHO**	**3.21**	**205**	P	**Pn**		**01 49 11.3**	**-0.5**
SOHO				S	**Sn**		**01 49 50.2**	**+0.5**
SOHO	**SOHO**	**3.21**	**205**	P	**Pn**		**01 49 10.8**	**-1.0**
ASUD	**Al Ashush, Dub** SNR=9.3	**3.42**	**225**	P	**Pn**		**01 49 17.7**	**+3.0**
HOQ	**Hoqain**	**3.53**	**190**	Pn	**Pn**		**01 49 15.9**	**-0.3**
HOQ	**Hoqain**	**3.53**	**190**	P	**Pn**		**01 49 16.1**	**-0.1**
HOQ				S	**Sn**		**01 49 58.9**	**+1.2**
KHGB	**Koh Gabri**	**3.55**	**338**	Pn	**Pn**		**01 49 18.3**	**+1.6**
ALNE	**Al Ain** SNR=6.7	**3.62**	**214**	P	**Pn**		**01 49 19.6**	**+2.2**
ALNE	**Al Ain**	**3.62**	**214**	P	**Pn**		**01 49 19.5**	**+2.0**
WSAR	**Wadi Sarin** SNR=35	**3.86**	**171**	P	**Pn**		**01 49 21.9**	**+1.1**
ARQ	**Araqi** SNR=10	**3.95**	**200**	P	**Pn**		**01 49 24.4**	**+2.4**
SMDO	**Samad** SNR=8.9	**4.00**	**179**	P	**Pn**		**01 49 23.6**	**+0.8**
SMDO				S	**Sn**		**01 50 10.7**	**+1.4**
BSY	**Bisya**	**4.37**	**190**	P	**Pn**		**01 49 30.1**	**+2.3**
WBK	**Wadi Bani Khal**	**4.53**	**168**	Pn	**Pn**		**01 49 30.5**	**+0.5**
WBK	**Wadi Bani Khal** SNR=15	**4.53**	**168**	P	**Pn**		**01 49 30.6**	**+0.5**
WBK				S	**Sn**		**01 50 23.5**	**+1.1**
NHDN	**Nehbandan**	**4.67**	**22**	Pn	**Pn**		**01 49 32.7**	**+0.8**
JMDO	**Jabal Madar** SNR=8.3	**4.68**	**179**	P	**Pn**		**01 49 33.7**	**+1.6**
JLN	**Jalan Bani Buh** SNR=28	**5.07**	**165**	P	**Pn**		**01 49 37.8**	**+0.4**
IMEH	**Mehriz**	**5.22**	**326**	Pn	**Pn**		**01 49 40.3**	**+0.7**
MZR	**Muzera**	**5.76**	**226**	P	**Pn**		**01 49 47.8**	**+1.0**
ITEG	**Tejag**	**5.84**	**6**	Pn	**Pn**		**01 49 48.6**	**+0.5**
MHTO	**MHTO**	**6.06**	**180**	P	**Pn**		**01 49 52.4**	**+1.4**
TRNA	**Turayna** SNR=5.6	**6.53**	**251**	S	**Sn**		**01 51 13.0**	**+1.4**
KLNJ	**Kolanjah**	**6.84**	**306**	Pn	**Pn**		**01 50 01.7**	**-0.2**
SMRA	**Abu-Samra**	**6.86**	**252**	P	**Pn**		**01 50 02.6**	**+0.7**
IBRJ	**Brojen**	**7.59**	**311**	Pn	**Pn**		**01 50 12.4**	**+0.2**
DOK	**Doka**	**9.14**	**204**	P	**Pn**		**01 50 33.3**	**0.0**
KBD	**Kabd**	**9.33**	**285**	P	**Pn**		**01 50 35.6**	**-0.2**
DMTO	**DMTO**	**9.73**	**197**	P	**Pn**		**01 50 40.4**	**-1.0**
WHFO	**Wadi Hawf** SNR=12	**9.91**	**204**	P	**Pn**		**01 50 43.0**	**-0.9**
RBK	**Rabkut**	**10.15**	**201**	P	**Pn**		**01 50 45.9**	**-1.3**
ABTO	**Aybut** SNR=11	**10.60**	**205**	P	**Pn**		**01 50 52.5**	**-0.9**
RAYN	**Ar Rayn**	**11.84**	**255**	P	**Pn**		**01 51 07.8**	**-2.4**

NEIC ***16*** *01:52:59.0±0.4, 19°.9S±0°.2×174°.85W±0°.09,h35km±2km, mb4.4/10, Error ellipse: s-maj=40.0km s-min=14.4km az=1.0*
IDC ***16*** *01:53:05.0±5.2, 19°.73S×176°.59W,h0km,mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=290.0km s-min=56.7km az=152.0*

ISC 16 01:52:59.3±0.9,20°.0S±0°.2×174°.9W±0°.1,h35km,n18, σ1°60/18,mb4.5/9,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.78**	**80**	Pn	**Pn**		**01 54 07.3**	**-1.5**
MSVF	**Nonsavu**	**7.05**	**288**	Pn	**Pn**		**01 54 39.4**	**-0.8**
CTAO	**Charters Tower**	**36.44**	**263**	P	**P**		**02 00 02.1**	**+1.1**
CTAO				IAmb	IAmb		02 00 38.0	
	comp=Z,13nm,1.5s							
BBOO	**Buckleboo**	**45.37**	**243**	P	**P**		**02 01 14.2**	**-0.3**
WR8	**Warramunga Arr**	**47.40**	**261**	P	**P**		**02 01 29.6**	**-0.9**
WR8				IAmb	IAmb		02 01 40.9	
	comp=Z,5.6nm,1.4s							
AS31	**Alice Springs**	**47.46**	**256**	P	**P**		**02 01 30.3**	**-0.8**
AS31				IAmb	IAmb		02 01 30.9	
	comp=Z,1.3nm,0.7s							
ASAR	**Alice Springs**	**47.47**	**256**	P	**P**		**02 01 30.4**	**-0.7**
	comp=Z,3.6nm,0.6s,baz=96,slow=7.6,SNR=58							
	comp=Z,3.6nm,0.6s							
ASAR	**Alice Springs**	**47.47**	**256**	P	**P**		**02 01 30.2**	**-0.9**
WRA	**Warramunga Arr**	**47.55**	**261**	P	**P**		**02 01 30.8**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=97,slow=7.6,SNR=35							
	comp=Z,1.8nm,0.3s							
WRA	**Warramunga Arr**	**47.55**	**261**	P	**P**		**02 01 30.6**	**-1.2**
FORT	**Forrest**	**52.16**	**246**	P	**P**		**02 02 05.8**	**-0.8**
FORT				IAmb	IAmb		02 02 46.0	
	comp=Z,12nm,1.4s							
KNRA	**Kununurra**	**53.60**	**265**	P	**P**		**02 02 16.8**	**-0.6**
KNRA				IAmb	IAmb		02 02 29.1	
	comp=Z,10.0nm,1.1s							
FITZ	**Fitzroy Crossi**	**55.98**	**261**	P	**P**		**02 02 34.0**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=108,slow=8.4,SNR=2.0							
	comp=Z,1.0nm,0.4s							
FITZ	**Fitzroy Crossi**	**55.98**	**261**	P	**P**		**02 02 33.8**	**-0.8**
VNDA	**Vanda**	**58.67**	**186**	P	**P**		**02 02 53.7**	**+1.1**
VNDA				IAmb	IAmb		02 02 56.0	
	comp=Z,1.5nm,1.1s							
MORW	**Morawa**	**62.70**	**247**	P	**P**		**02 03 19.5**	**-1.5**
AKASG	**Malin Array Be**	**143.93**	**334**	PKP	**PKiKP**		**02 12 39.0**	**+4.7**
	comp=Z,0.9nm,0.4s,baz=45,slow=4.4,SNR=5.4							
MMAI	**Mount Meron Ar**	**150.07**	**302**	PKPbc	**PKPab**		**02 12 54.1**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=72,slow=4.7,SNR=9.4							

NNC ***16*** *01:59:47.8±4.7,40°.25N×77°.92E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=32.4km s-min=26.1km az=8.0*
KRNET ***16*** *01:59:49.0±0.1,40°.23N×77°.80E,h27km,mb3.0*
SOME ***16*** *01:59:49.6,40°.30N×77°.73E,h5km*

ISC 16 01:59:47.9±3.3,40°.1N±0°.1×77°.93E±0°.08,h15km±25km, n24,σ1°14/42,14C-16D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.65**	**357**	⇓*eP*		**Pn**	**02 00 16.5**	**-0.3**
TARG				⇓*eS*		**Sn**	**02 00 36.5**	**-1.4**
JNKS	**Jany-Kuch**	**1.99**	**300**	⇑*eP*		**Pb**	**02 00 22.2**	**-1.8**
JNKS				⇑*eS*		**Sn**	**02 00 46.4**	**+0.3**
KDJ	**Kajisay**	**2.13**	**345**	⇓*eP*		**Pn**	**02 00 23.9**	**+0.8**
KDJ				⇓*eS*		**Sn**	**02 00 49.4**	**+0.1**
PRZ	**Przheval'sk**	**2.43**	**8**	⇓*eP*		**Pn**	**02 00 28.1**	**+0.9**
PRZ				⇓*eS*		**Sn**	**02 00 58.0**	**+1.2**
ULHL	**Ulahol**	**2.51**	**330**	⇓*eP*		**Pn**	**02 00 29.3**	**+0.9**
ULHL				⇓*eS*		**Sn**	**02 00 58.5**	**-0.4**
BOOM	**Boomskoye usch**	**2.84**	**329**	⇑*eP*		**Pn**	**02 00 34.1**	**+1.2**
BOOM				⇑*eS*		**Sn**	**02 01 05.9**	**-1.0**
TNSS	**Tian-Shan** 3.8nm,0.4s	**3.05**	**346**	Pg		**Pb**	**02 00 41.7**	**-0.4**
TNSS				Lg		Lg	02 01 19.4	
	2.0nm,0.3s							
TNSS	**Tian-Shan** 3.8nm,0.4s	**3.05**	**346**	*eP*		**Pb**	**02 00 41.7**	**-0.4**
TNSS				*eS*		**Sb**	**02 01 19.4**	**+0.1**
	2.0nm,0.3s							
IZV	**Izvestkoviy** 15nm,0.5s	**3.12**	**342**	*eP*		**Pb**	**02 00 42.3**	**-0.8**
IZV				*eS*		**Sb**	**02 01 20.3**	**-0.7**
	13nm,1.0s							
KNDC	**Almaty** 10.0nm,0.3s	**3.22**	**347**	Pg		**Pn**	**02 00 41.2**	**+3.2**
KNDC				Lg		Lg	02 01 24.4	
	5.3nm,0.3s							
SALK	**Salom-Alik**	**3.24**	**286**	⇓*eP*		**Pn**	**02 00 39.7**	**+1.4**
SALK				⇓*eS*		**Sn**	**02 01 17.1**	**+0.4**
MTBS	**Maitube** 4.6nm,0.5s	**3.25**	**340**	*eP*		**Pb**	**02 00 45.3**	**-0.1**
MTBS				*eS*		**Sb**	**02 01 25.2**	**+0.4**
	4.4nm,0.3s							
ARLS	**Aral**	**3.26**	**304**	⇑*eP*		**Pn**	**02 00 39.7**	**+1.0**
ARLS				⇑*eS*		**Sn**	**02 01 16.6**	**-0.7**
KST	**Kastek** 1.5nm,0.2s	**3.31**	**334**	Pg		**Pb**	**02 00 46.4**	**0.0**
KST				Lg		Lg	02 01 27.1	
	7.7nm,0.3s							
KST	**Kastek** 1.5nm,0.2s	**3.31**	**334**	*eP*		**Pb**	**02 00 46.4**	**0.0**
KST				*eS*		**Sb**	**02 01 27.1**	**+0.6**
	7.7nm,0.3s							
TKM2	**Tokmak 2**	**3.34**	**329**	⇑*eP*		**Pn**	**02 00 40.8**	**+1.1**
TKM2				⇑*eS*		**Sn**	**02 01 18.4**	**-0.8**
UCH	**Uchtor**	**3.36**	**311**	⇑*eP*		**Pn**	**02 00 41.2**	**+1.0**
UCH				⇑*eS*		**Sn**	**02 01 19.2**	**-0.9**
KBK	**Karagaybulak**	**3.42**	**320**	⇓*eP*		**Pn**	**02 00 41.7**	**+0.9**
KBK				⇓*eS*		**Sn**	**02 01 20.3**	**-0.8**
KPKS	**Kokpek** 0.4nm,0.1s	**3.43**	**9**	Pg		**Pb**	**02 00 49.4**	**+0.9**
KPKS				Lg		Lg	02 01 32.6	
	15nm,0.5s							
PDGK	**Podgornoye** 3.0nm,0.5s	**3.45**	**19**	⇑Pg		**Pb**	**02 00 45.9**	**-2.9**
PDGK				⇑Lg		Lg	02 01 32.7	
	13nm,0.7s							
DGS	**Degeres** 4.4nm,0.6s	**3.55**	**334**	Pg		**Pb**	**02 00 50.3**	**-0.2**
DGS				Lg		Lg	02 01 34.2	
	6.4nm,0.4s							
AAK	**Ala-Archa**	**3.64**	**316**	⇓*eP*		**Pn**	**02 00 44.8**	**+1.0**
AAK				⇓*eS*		**Sn**	**02 01 25.5**	**-1.1**
EKS2	**Erkin-Say**	**4.05**	**311**	⇓*eP*		**Pn**	**02 00 50.6**	**+1.1**
EKS2				⇓*eS*		**Sn**	**02 01 35.5**	**-1.3**
USP	**Ospenovka**	**4.09**	**322**	⇑*eP*		**Pn**	**02 00 51.0**	**+1.0**
USP				⇑*eS*		**Sn**	**02 01 36.3**	**-1.3**

DJA ***16*** *02:06:06.3±0.5,2°.7N±7°×12°.6E±°,h10km,M3.4/6,MLv3.4/6*

IDC 16 02:06:01.8±1.9,1°.61N×126°.35E,h0km,mb3.3/4, mbtmp3.4/4,Error ellipse: s-maj=188.5km s-min=23.3km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.22**	**338**	P		Pg	02 06 44.7	+0.3
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=339,slow=11,SNR=8.2	**22.80**	**160**	P		P	02 11 06.5	+0.1
	0.7nm,0.6s							
ASAR	**Alice Springs** 0.3nm,0.6s,baz=346,slow=8.5,SNR=6.0	**26.18**	**164**	P		P	02 11 38.2	0.0
	0.3nm,0.6s							
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=113,slow=11,SNR=1.3	**59.08**	**326**	P		P	02 16 05.3	+1.3
	0.3nm,0.6s							
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=119,slow=7.6,SNR=2.0	**63.32**	**328**	P		P	02 16 31.3	-1.3
	0.3nm,0.6s							

IDC ***16*** *02:08:29.1±1.9,1°.61N×126°.18E,h0km,mb3.5/4, mbtmp3.6/4,MS3.3/2,Error ellipse: s-maj=211.4km s-min=21.0km az=66.0*
DJA ***16*** *02:08:32.4±0.3,2°.N±3°×12°.6E±°,h10km,M3.6/7,MLv3.6/7*

ISC 16 02:08:34.2±1.4,1°.61N±0°.08×126°.6E±0°.1,h35km,n8, σ1°28/8,mb3.6/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.30**	**333**	P		**Pn**	**02 09 09.8**	**+0.1**
SGSI				S		**Sn**	**02 09 37.8**	**+1.0**
KMSI	**Cibinong**	**2.78**	**248**	P		**Pn**	**02 09 15.7**	**-0.5**
KMSI			

JKA	Kamikawa-asahi	20.01	1	P		P	02 20 33.5	-1.0
DAV	Davao City (W)	23.20	226	LR		LR	02 29 29.6	
	comp=Z,126nm,22.0s,baz=154,slow=35							
H11N1	WAKE ISLAND Hy	23.34	96	T		T	02 45 52.1	
	baz=283,slow=74,SNR=24							
H11N2	WAKE ISLAND Hy	23.34	96	T		T	02 45 49.9	
	baz=283,slow=74,SNR=27							
H11N3	WAKE ISLAND Hy	23.36	96	T		T	02 45 57.2	
	baz=283,slow=74,SNR=26							
H11S3	WAKE ISLAND Hy	23.50	99	T		T	02 46 46.9	
	baz=289,slow=75,SNR=25							
H11S1	WAKE ISLAND Hy	23.51	99	T		T	02 46 48.1	
	baz=289,slow=75,SNR=18							
H11S2	WAKE ISLAND Hy	23.52	99	T		T	02 46 48.9	
	baz=289,slow=75,SNR=16							
PETK	Petropavlovsk-	31.30	18	LR		LR	02 34 25.1	
	comp=Z,23nm,22.0s,baz=197,slow=35							
LZDM	Lanzhou Array	35.14	299	P		P	02 22 59.8	+5.1
	2.4nm,0.4s,baz=114,slow=6.8,SNR=3.5							
SONM	Songino Array	36.93	319	PcP		PcP	02 25 30.3	+0.8
	1.0nm,0.4s,baz=145,slow=5.3,SNR=2.7							
CTAO	Charters Tower	44.06	174	P		P	02 24 06.8	-1.7
WB0	Warramunga Arr	44.22	191			P	02 24 08.3	-1.4
WR8	Warramunga Arr	44.38	190			P	02 24 09.6	-1.5
WRA	Warramunga Arr	44.40	191	P		P	02 24 09.6	-1.5
	6.9nm,0.8s,baz=11,slow=8.3,SNR=49							
WRA				PcP		PcP	02 25 53.9	+0.1
	1.9nm,0.7s,baz=1.8,slow=3.6,SNR=6.2							
	6.9nm,0.8s							
FITZ	Fitzroy Crossi	44.90	203	P		P	02 24 14.7	-0.5
	4.2nm,0.6s,baz=22,slow=7.8,SNR=23							
	4.2nm,0.6s							
FITZ	Fitzroy Crossi	44.90	203			P	02 24 14.8	-0.3
ASAR	Alice Springs	48.12	190	P		P	02 24 38.3	-2.0
	1.5nm,0.6s,baz=18,slow=11,SNR=27							
	1.5nm,0.6s							
AKUT	Akutan	48.82	38	P		P	02 24 45.7	+0.4
EVN	Everest	49.54	287			P	02 24 54.4	+2.3
EVN				IAmb		IAmb	02 24 55.6	
	comp=Z,5.1nm,0.7s							
PSA00	Pilbara Seismi	50.29	207	P		P	02 24 56.1	-0.8
ZALV	Zalesovo Beam	51.78	321	P		P	02 25 07.8	0.0
	comp=Z,0.9nm,0.5s,baz=116,slow=7.7,SNR=5.3							
ZALV				PcP		PcP	02 26 18.2	-1.6
	comp=Z,0.9nm,0.6s,baz=90,slow=3.0,SNR=3.7							
	comp=Z,0.9nm,0.5s							
ZALV	Zalesovo Beam	51.78	321	P		P	02 25 09.8	+2.0
MK31	Makanchi Array	52.42	311	P		P	02 25 14.1	+1.4
MKAR	Makanchi Array	52.42	311	P		P	02 25 13.6	+1.0
	comp=Z,0.8nm,0.4s,baz=90,slow=10,SNR=6.5							
	comp=Z,0.8nm,0.4s							
O15K	Ungalikthiuk R	53.35	33	P		P	02 25 20.2	+0.9
KURK	Kurchatov	55.12	316	P		P	02 25 32.5	+0.3
KURBB	Kurchatov Arra	55.17	316	P		P	02 25 32.9	+0.3
	comp=Z,2.5nm,0.6s,baz=92,slow=7.8,SNR=32							
	comp=Z,2.5nm,0.6s							
STKA	Stephens Creek	55.62	181	P		P	02 25 34.5	-1.5
	comp=Z,4.6nm,0.5s,baz=351,slow=7.3,SNR=10							
	comp=Z,4.6nm,0.5s							
FORT	Forrest	56.18	195	P		P	02 25 39.2	-0.7
FORT				IAmb		IAmb	02 25 39.7	
	comp=Z,7.1nm,0.8s							
KDAK	Kodiak Island	56.82	36	LR		LR	02 46 46.7	
	comp=Z,30nm,21.9s,baz=210,slow=32							
D20K	Etivluk River	57.45	22	P		P	02 25 50.2	+1.7
C23K	Itkillik River	59.80	22			P	02 26 07.2	+2.4
E24K	Your Creek	60.21	24	P		P	02 26 09.9	+2.2
E24K				IAmb		IAmb	02 26 10.5	
	comp=Z,3.0nm,0.8s							
BVAR	Borovoye Array	60.27	319	P		P	02 26 09.0	+0.6
	comp=Z,4.7nm,0.6s,baz=86,slow=6.9,SNR=22							
	comp=Z,4.7nm,0.6s							
ILAR	Eielson Array	60.39	28	P		P	02 26 09.2	+0.3
	comp=Z,3.3nm,0.8s,baz=262,slow=5.7,SNR=27							
	comp=Z,3.3nm,0.8s							
KK31	Karatay Array	60.87	307	P		P	02 26 13.7	+1.1
SCRK	Sand Creek	61.58	29			P	02 26 18.2	+1.1
SCRK				IAmb		IAmb	02 26 19.3	
	comp=Z,7.0nm,1.0s							
J26L	Joseph Creek	61.79	28	P		P	02 26 19.5	+1.0
J26L				IAmb		IAmb	02 26 20.1	
	comp=Z,4.8nm,0.8s							
F26K	Sheenjek River	61.79	25	IAmb		IAmb	02 26 21.5	
	comp=Z,4.2nm,0.6s							
E28M	Babbage River	63.57	24			P	02 26 32.6	+2.4
E28M				IAmb		IAmb	02 26 33.0	
	comp=Z,4.1nm,0.8s							
E29M	Blow River	64.17	24	IAmb		IAmb	02 26 39.9	
	comp=Z,7.6nm,1.4s							
AB31	Akbulak array	67.21	315	P		P	02 26 54.4	+0.5
C36M	Paulatuk	69.04	22	P		P	02 27 06.1	+1.0
C36M				IAmb		IAmb	02 27 23.1	
	comp=Z,9.5nm,1.1s							
SPITS	Spitsbergen Ar	73.35	350	P		P	02 27 32.3	+1.3
	comp=Z,4.6nm,0.8s,baz=104,slow=12,SNR=4.3							
	comp=Z,4.6nm,0.8s							
YKA	Yellowknife Ar	74.82	28	P		P	02 27 40.7	+0.9
	comp=Z,1.7nm,0.6s,baz=299,slow=6.7,SNR=10							
	comp=Z,1.7nm,0.6s							
YKAW1	Yellowknife Wh	74.87	28	P		P	02 27 41.3	+1.2
YKAW1				IAmb		IAmb	02 27 55.1	
	comp=Z,6.9nm,0.8s							
ARCES	ARCESS Array B	76.39	341	P		P	02 27 49.8	+1.2
	comp=Z,3.7nm,0.7s,baz=76,slow=8.1,SNR=20							
	comp=Z,3.7nm,0.7s							
ARCES	ARCESS Array B	76.39	341	P		P	02 27 49.8	+1.2
ARCES				IAmb		IAmb	02 28 08.4	
	comp=Z,14nm,1.4s							
L04D	Klamath Falls	78.12	49	P		P	02 28 00.2	+1.2
J05D	Fort Rock, OR	78.45	48	IAmb		IAmb	02 28 03.2	
	comp=Z,4.9nm,0.7s							
PINE	Pine Mountain	78.46	47			P	02 28 02.4	+1.4
K05A	Summer Lake	78.89	48			P	02 28 05.0	+1.6
K05A				IAmb		IAmb	02 28 05.9	
	comp=Z,12nm,1.2s							
KBZ	Khabaz	80.06	313	P		P	02 28 09.8	+0.4
	comp=Z,2.9nm,0.8s,baz=108,slow=7.5,SNR=6.9							
	comp=Z,2.9nm,0.8s							
BEKR	Beckworth	80.37	51	P		P	02 28 12.4	+1.0
BEKR				IAmb		IAmb	02 28 12.9	
	comp=Z,5.4nm,0.7s							
FINES	FINESS Array B	80.65	334	P		P	02 28 12.2	0.0
	comp=Z,1.3nm,0.3s,baz=65,slow=5.0,SNR=26							
	comp=Z,1.3nm,0.3s							
FINES	FINESS Array B	80.65	334	P		P	02 28 12.5	+0.4
CMB	Columbia Colle	81.08	52	IAmb		IAmb	02 28 16.7	
	comp=Z,4.2nm,0.8s							
PAHR	Pah Rah Range	81.12	51	IAmb		IAmb	02 28 17.2	
	comp=Z,9.0nm,1.4s							
PNTR	Pine Nut	81.22	51	IAmb		IAmb	02 28 19.1	
	comp=Z,4.2nm,0.6s							
MFID	Camas Ranch	82.01	46	IAmb		IAmb	02 28 21.5	
	comp=Z,4.2nm,0.8s							
NVAR	Mina Array Bea	82.42	51	P		P	02 28 21.3	-1.0
	comp=Z,1.0nm,0.3s,baz=311,slow=5.3,SNR=15							
	comp=Z,1.0nm,0.3s							
ELK	Elko	83.56	48	IAmb		IAmb	02 28 30.1	
	comp=Z,7.0nm,1.4s							
LRMC	Laurel Mtn Rad	84.11	54	IAmb		IAmb	02 28 32.4	
	comp=Z,3.8nm,0.7s							
FURC	Furnace Creek,	84.28	53	IAmb		IAmb	02 28 33.5	
	comp=Z,3.4nm,0.8s							
TPNV	Topopah Spring	84.52	52	IAmb		IAmb	02 28 34.1	
	comp=Z,3.9nm,0.5s							
GWY	Greenwater Val	84.55	53	IAmb		IAmb	02 28 35.0	
	comp=Z,13nm,1.5s							
YNR	Norris Junctio	84.72	43	IAmb		IAmb	02 28 38.0	
	comp=Z,5.6nm,0.9s							
YFT	Old Faithful	84.75	43	IAmb		IAmb	02 28 38.2	
	comp=Z,7.7nm,1.0s							
HVU	Hansel Valley	84.76	46	IAmb		IAmb	02 28 36.5	
	comp=Z,6.4nm,1.4s							
AKASG	Malin Array Be	85.05	324	P		P	02 28 34.7	-0.4
	comp=Z,0.3nm,0.3s,baz=72,slow=3.0,SNR=1.6							
	comp=Z,0.3nm,0.3s							
TPAW	Teton Pass	85.14	44	IAmb		IAmb	02 28 38.1	
	comp=Z,6.6nm,1.4s							
PSUT	Pine Spring	85.51	50	IAmb		IAmb	02 28 39.2	
	comp=Z,2.6nm,0.7s							
HWUT	Hardware Ranch	85.64	46	IAmb		IAmb	02 28 40.4	
	comp=Z,3.0nm,0.8s							
BELC	Belle Mtn. Jos	86.00	55	IAmb		IAmb	02 28 41.7	
	comp=Z,2.3nm,0.7s							
V12A	Nelson	86.07	53	IAmb		IAmb	02 28 42.5	
	comp=Z,3.9nm,0.7s							
HFS	Hagfors	86.19	337	P		P	02 28 39.0	-1.6
	comp=Z,1.2nm,0.5s,baz=122,slow=5.4,SNR=11							
	comp=Z,1.2nm,0.5s							
RAYN	Ar Rayn	86.35	294	P		P	02 28 43.8	+1.6
RAYN				IAmb		IAmb	02 28 44.7	
	comp=Z,2.3nm,0.6s							
PDAR	Pinedale Array	86.38	44	P		P	02 28 41.5	-0.7
	comp=Z,0.8nm,0.8s,baz=302,slow=2.9,SNR=6.3							
	comp=Z,0.8nm,0.8s							
NOA	NORSAR Array B	86.41	338	P		P	02 28 41.4	-0.4
	comp=Z,1.1nm,0.8s,baz=33,slow=5.2,SNR=3.4							
	comp=Z,1.1nm,0.8s							
BC3	Big Chuckawall	86.56	55	IAmb		IAmb	02 28 44.8	
	comp=Z,5.9nm,1.2s							
LCMT	Little Creek M	86.64	51	IAmb		IAmb	02 28 45.5	
	comp=Z,3.7nm,0.8s							
SRU	San Rafael Swe	87.53	48	IAmb		IAmb	02 28 49.4	
	comp=Z,4.2nm,0.7s							
U15A	North Rim	87.59	51	IAmb		IAmb	02 28 50.2	
	comp=Z,3.8nm,1.0s							
BRTR	Keskin Array B	88.04	313	P		P	02 28 50.4	+0.2
	comp=Z,1.1nm,0.8s,baz=117,slow=2.5,SNR=11							
	comp=Z,1.1nm,0.8s							
BRTR	Keskin Array B	88.04	313	P		P	02 28 50.2	0.0
PV13	Radium Mtn., P	89.16	48	IAmb		IAmb	02 28 57.1	
	comp=Z,2.7nm,0.6s							
MMAI	Mount Meron Ar	90.09	306	P		P	02 29 00.8	+0.9
	comp=Z,2.6nm,0.8s,baz=20,slow=4.6,SNR=3.6							
	comp=Z,2.6nm,0.8s							
TASM	ASL Pad, Albuq	92.44	50	IAmb		IAmb	02 29 13.4	
	comp=Z,3.1nm,0.8s							
TASM	ASL Pad, Albuq	92.44	50	IAmb		IAmb	02 29 13.4	
	comp=Z,3.2nm,0.9s							
GERES	GERESS Array B	94.08	329	P		P	02 29 17.4	-0.6
	comp=Z,0.5nm,0.7s,baz=41,slow=7.3,SNR=3.8							
	comp=Z,0.5nm,0.7s							
TXAR	Lajitas Array	97.43	53	P		P	02 29 34.1	+0.5
	comp=Z,0.5nm,0.6s,baz=291,slow=3.2,SNR=8.7							
	comp=Z,0.5nm,0.6s							
TXAR	Lajitas Array	97.43	53	P		Pdif	02 29 34.8	+1.1
DBIC	Dimbokro	135.63	309	PKP		PKPdf	02 35 17.7	-2.6
	comp=Z,2.8nm,0.6s,baz=166,slow=4.2,SNR=4.7							
BOAV	Boa Vista	145.68	43			PKPdf	02 35 38.5	+0.1
PLCA	Paso Flores	148.00	129	PKPbc		PKPbc	02 35 44.2	-0.5
	comp=Z,1.8nm,0.8s,baz=199,slow=3.0,SNR=4.6							
AC01	Pan de Azucar	150.31	101	PKPbc		PKPbc	02 35 50.1	-0.8
LPAZ	La Paz	150.58	80	PKPbc		PKPbc	02 35 53.1	+0.6
	comp=Z,1.4nm,0.5s,baz=235,slow=2.0,SNR=7.4							

IDC **16** *02:24:37.1±1.1,1°.88N×126°.90E,h0km,mb4.1/8, mbtmp4.1/9,ML4.5/2,MS3.3/1,Error ellipse: s-maj=84.5km s-min=14.8km az=71.0*
DJA **16** *02:24:42.0±0.7,2°N±2°×12°6E±°,h11km±5km,M4.4/15, mB5.0/3,mb4.5/4,MLv4.3/15,Mw(mB)4.3/3*
NEIC **16** *02:24:43.7±1.9,1°.69N±0°.04×126°.58E±0°.08,h35km±1km, mb4.3/15,Error ellipse: s-maj=14.7km s-min=5.7km az=69.0*

ISC 16 02:24:43.7±0.6,**1°.70N**±0°.05×**126°.55E**±0°.06,**h35km**,**n42,** σ1°**26**/45,**mb4.3**/16,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.23	138		Pn	02 25 04.6	+0.2
TNTI	Ternate	1.23	138	P	Pn	02 25 04.7	+0.3
TNTI				S	Sn	02 25 22.2	+2.4
SGSI	Sangihe	2.22	333	P	Pn	02 25 19.0	+0.9
SGSI				S	Sn	02 25 46.6	+2.2
KMSI	Cibinong	2.80	247	P	Pn	02 25 26.1	+0.1
SANI	Sanana	3.76	189	P	Pn	02 25 39.5	+0.2
SANI				S	Sn	02 26 23.8	+1.4
LUWI	Luwuk	4.65	234		Pn	02 25 52.9	+1.4
LUWI	Luwuk	4.65	234	P	Pn	02 25 52.2	+0.7
MRSI	Marisa	4.76	255	P	Pn	02 25 53.1	+0.1
MRSI				S	Sn	02 26 48.4	+1.3
NLAI	Namlea	4.93	174	P	Pn	02 25 56.8	+1.4
APSI	Ampana	5.54	242	P	Pn	02 26 03.8	+0.1
	2μm132nm,1.0s						
TOLI2	Tolitoli	5.79	264		Pn	02 26 05.4	-1.8
MPSI	Mapaga	6.79	259	P	Pn	02 26 22.9	+2.1
MYLDM	Lahad Datu	8.75	294		Pn	02 26 48.7	+0.9
BATI	Baumata	12.17	194	Pn	Pn	02 27 36.1	+1.4
	15nm,0.3s,baz=10,slow=4.4,SNR=4.3						
JAY	Jayapura	14.76	106	LR	LR	02 33 34.1	
	comp=Z,115nm,21.1s,baz=350,slow=37						
KNRA	Kununurra	17.40	173	P	Pn	02 28 44.7	+0.8
KNRA				IAmb	IAmb	02 28 46.2	
	comp=Z,17nm,1.1s						
FITZ	Fitzroy Crossi	19.69	183	P	P	02 29 09.4	-0.6
	comp=Z,0.3nm,0.3s,baz=332,slow=6.0,SNR=7.9						
	comp=Z,1.7nm,0.7s						
FITZ	Fitzroy Crossi	19.69	183	P	P	02 29 08.3	-1.7
TWG	Pinlang	21.66	346	P	P	02 29 29.8	-1.5
TWG				IAmb	IAmb	02 29 30.4	
	comp=Z,36nm,1.4s						
WRA	Warramunga Arr	22.82	161	P	P	02 29 42.7	-1.1
	comp=Z,5.4nm,0.5s,baz=339,slow=11,SNR=39						
	comp=Z,5.4nm,0.5s						
WRA	Warramunga Arr	22.82	161		P	02 29 41.4	-2.4
WR8	Warramunga Arr	22.89	160		P	02 29 43.3	-1.2
WR8				IAmb	IAmb	02 29 47.2	
	comp=Z,12nm,0.8s						
AS31	Alice Springs	26.20	165		P	02 30 16.1	+0.7
ASAR	Alice Springs	26.20	165	P	P	02 30 15.0	-0.4
	comp=Z,2.3nm,0.4s,baz=349,slow=14,SNR=65						
	comp=Z,2.3nm,0.4s						
ASAR	Alice Springs	26.20	165		P	02 30 14.1	-1.3
FORT	Forrest	32.33	178	P	P	02 31 08.8	-0.9
FORT				IAmb	IAmb	02 31 21.7	
	comp=Z,7.8nm,1.2s						
BBOO	Buckleboo	35.48	166	P	P	02 31 37.2	+0.2
STKA	Stephens Creek	36.31	158	P	P	02 31 42.5	-1.7
	comp=Z,0.7nm,0.3s,baz=333,slow=4.5,SNR=3.2						
	comp=Z,0.7nm,0.3s						
SONM	Songino Array	49.16	342	P	P	02 33 29.5	+1.2
	comp=Z,0.7nm,0.4s,baz=170,slow=10,SNR=3.9						
MK31	Makanchi Array	59.12	326	P	P	02 34 39.2	-1.6
MK31				IAmb	IAmb	02 35 12.1	
	comp=Z,2.7nm,1.1s						
MKAR	Makanchi Array	59.12	326	P	P	02 34 39.7	-1.1
	comp=Z,1.7nm,0.5s,baz=123,slow=6.7,SNR=14						
	comp=Z,1.7nm,0.5s						
MAKZ	Makanchi	59.30	326	P	P	02 34 41.4	-0.7
MAKZ				IAmb	IAmb	02 35 25.4	
	comp=Z,4.6nm,1.2s						
ZALV	Zalesovo Beam	62.31	334	P	P	02 35 00.6	-1.8
	comp=Z,0.4nm,0.3s,baz=116,slow=6.8,SNR=3.7						
	comp=Z,0.4nm,0.3s						
KURBB	Kurchatov Arra	63.35	328	P	P	02 35 08.7	-0.6
	comp=Z,2.3nm,0.7s,baz=132,slow=6.4,SNR=25						
	comp=Z,2.3nm,0.7s						
KURK	Kurchatov	63.35	328	P	P	02 35 08.6	-0.7
AMKA	Amchitka	66.29	33	P	P	02 35 28.4	0.0
BVAR	Borovoye Array	68.92	327	P	P	02 35 44.3	-0.7
	comp=Z,1.0nm,0.5s,baz=122,slow=10,SNR=4.6						
	comp=Z,1.0nm,0.5s						
AB31	Akbulak array	73.61	321	P	P	02 36 13.1	-0.4
AB31				IAmb	IAmb	02 36 13.6	
	comp=Z,1.5nm,0.8s						
VNDA	Vanda	81.44	173	P	P	02 36 56.6	-0.1
	comp=Z,0.6nm,0.6s,baz=323,slow=5.9,SNR=3.6						
	comp=Z,0.6nm,0.6s						
VNDA	Vanda	81.44	173	P	P	02 36 56.4	-0.2
VNDA				IAmb	IAmb	02 37 09.9	
	comp=Z,3.2nm,1.4s						
D19K	Kuna River	83.07	21	P	P	02 37 07.5	+2.0
C27K	Jago River	88.33	21	P	P	02 37 31.2	-0.2
C27K				IAmb	IAmb	02 37 35.7	
	comp=Z,2.4nm,1.0s						

IDC 16 02:26:59.3±1.9,**1°.67N**×**126°.24E**,**h0km**,**mb3.7**/4, **mbtmp3.7**/4,**Error ellipse: s-maj=189.3km s-min=23.0km az=66.0**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.91	160	P	P	02 32 03.3	-1.7
	2.3nm,0.7s,baz=338,slow=11,SNR=5.1						
	2.3nm,0.7s						
ASAR	Alice Springs	26.27	164	P	P	02 32 38.1	+1.5
	0.7nm,0.7s,baz=351,slow=13,SNR=4.7						
	0.7nm,0.7s						
MKAR	Makanchi Array	58.97	326	P	P	02 37 00.4	-0.3
	0.3nm,0.5s,baz=124,slow=8.8,SNR=2.4						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.20	328	P	P	02 37 29.3	0.0
	0.6nm,0.5s,baz=129,slow=6.3,SNR=5.6						
	0.6nm,0.5s						

IDC **16** *02:30:08.5±1.2,35°.32N×27°.38E,h0km,mb3.9/3, mbtmp3.7/7,ML3.5/3,Error ellipse: s-maj=27.0km s-min=16.7km az=168.0*
AFAD **16** *02:30:10.0,35°.41N×27°.21E,h16km±9km,ML3.1*
ISK **16** *02:30:11.7,35°.47N×27°.28E,h6km,ML3.2/24*
THE **16** *02:30:11.8,35°N±3°×2°7E±°,h10km±8km,M3.1/18, mb4.3/1,MLh3.1/18*
ATH **16** *02:30:11.8,35°.44N×27°.28E,h4km±1km,ML3.2/4,Manual Solution by S.Koutrakis First location: 2019/11/16 02:31:29, This location: 2019/11/16 11:52:44 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 0 km*

ISC 16 02:30:10.7±1.1,**35°.38N**±0°.04×**27°.26E**±0°.03,**h12**km±6km, **n95**,σ1°**49**/119,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.19	333	Pg	Pg	02 30 14.5	-0.4
KARP				Sg	Sg	02 30 17.5	-0.2
KARP	Karpathos	0.19	333	P	Pg	02 30 14.8	-0.1
KARP				S	Sg	02 30 18.0	+0.3
KARP	Karpathos	0.19	333	P	Pg	02 30 14.9	+0.1
KARP				S	Sg	02 30 17.0	-0.8
ARG	Arkhangelos	1.09	40	Pg	Pg	02 30 31.2	-0.5
ARG				Sg	Sb	02 30 46.4	+0.6
ARG	Arkhangelos	1.09	40	P	Pg	02 30 31.4	-0.3
ARG				S	Sn	02 30 47.7	+0.8
ARG	Arkhangelos	1.09	40	P	Pg	02 30 31.6	-0.1
ARG				S	Sg	02 30 45.2	-0.7
NISR	Nisiros	1.23	355	P	Pg	02 30 34.3	-0.1
NISR				S	Sg	02 30 50.4	-0.1
YAZI	Mula-Dat§a-	1.31	7	SPECP		02 30 34.0	
YAZI				P	Pn	02 30 34.5	-0.3
NPS	Neapolis	1.35	265	P	Pn	02 30 35.4	-0.2
NPS				S	Sb	02 30 53.3	-0.1
NPS	Neapolis	1.35	265	P	Pn	02 30 35.9	+0.4
NPS				S	Sb	02 30 53.5	0.0
DAT	Datca	1.37	11	SPECP		02 30 36.0	
DAT				P	Pn	02 30 36.2	+0.4
DAT				S	Sn	02 30 55.6	+1.6
DAT				*i* IAML		02 31 01.0	
	comp=N,448nm,0.2s						
DAT				*i* IAML		02 31 01.0	
	comp=E,416nm,0.2s						
DAT	Datca	1.37	11	Pn	Pn	02 30 36.3	+0.4
DAT				Sn	Sb	02 30 54.4	+0.5
DATC	Datca-Mugla	1.41	13	Pn	Pn	02 30 37.2	+0.9
TURN	Turunc	1.60	29	SPECP		02 30 39.0	
TURN				P	Pn	02 30 39.9	+1.0
TURN	Turunc	1.60	29	Pn	Pn	02 30 40.2	+1.3
BODT	Bodrum	1.68	1	Pn	Pn	02 30 40.9	+0.9
BODT	Bodrum	1.68	1	P	Pb	02 30 42.5	+0.8
BODT				S	Sn	02 31 01.8	+0.3
BDRM	Kayabasi	1.69	5	SPECP		02 30 40.0	
BDRM				P	Pn	02 30 40.2	+0.1
BDRM				S	Sn	02 31 01.0	-0.7
YKAV	Yalikavak-Bodr	1.74	0	Pn	Pn	02 30 41.2	+0.1
THERA	Ancient Thera,	1.75	305	P	Pn	02 30 41.2	+0.1
THERA				S	Sn	02 31 02.9	-0.4
THR8	Santorini-Mono	1.77	306	P	Pn	02 30 41.3	0.0
THR6	Thira Island,	1.80	303	P	Pn	02 30 42.1	+0.4
SFIR	Foira Santorin	1.82	305	P	Pn	02 30 41.8	-0.1
DALY	Dalyan (Mula)	1.82	38	Pn	Pn	02 30 43.9	+2.0
THR2	Thira island,	1.83	306	P	Pn	02 30 42.2	+0.2
SNT5	Nea Kammeni, S	1.83	304	P	Pn	02 30 42.3	+0.3
THR3	Thira Island,	1.83	305	P	Pn	02 30 42.1	+0.1
THR9	Santorini-Faro	1.83	303	P	Pn	02 30 42.3	+0.3
SAP3	Santorini-Thir	1.88	305	P	Pn	02 30 43.0	+0.2
SAP3				S	Sn	02 31 08.3	+1.9
IZZE	Mula-Seydike	1.91	56	P	Pn	02 30 43.6	+0.4
FETY	Fethiye	1.94	49	P	Pn	02 30 36.8	-6.8
YER	Yerkesik	1.94	25	Pn	Pn	02 30 44.8	+1.2
YER	Yerkesik	1.94	25	S	Sn	02 31 08.1	+0.2
IDI	Anoyia	1.94	268	Pn	Pn	02 30 46.1	+2.5
	34nm,0.3s,baz=36,slow=9.8,SNR=51						
IDI				Sn	Sb	02 31 11.4	+1.0
	28nm,0.3s,baz=354,slow=17,SNR=7.1						
IDI	Anoyia	1.94	268	Pn	Pn	02 30 46.1	+2.5
IDI	Anoyia	1.94	268	P	Pn	02 30 44.1	+0.4
IDI				S	Sn	02 31 09.0	+1.0
IDI	Anoyia	1.94	268	P	Pn	02 30 46.1	+2.5
IDI				S	Sn	02 31 11.0	+2.9
SABU	Mula-Dalaman	2.00	43	SPECP		02 30 46.0	
SABU				P	Pn	02 30 46.7	+2.3
SABU				S	Sg	02 31 15.1	+0.2
SABU				*i* IAML		02 31 27.0	
	comp=N,148nm,0.5s						
MULA	Mugla, Merkez-	2.06	24	SPECP		02 30 47.0	
M

BRTR Keskin Array B 6.67 48 Pn **Pn** **02 31 50.5 +1.8**
0.4nm,0.3s,baz=218,slow=15,SNR=14
BRTR Sn **Sn** **02 33 06.8 +2.1**
0.1nm,0.3s,baz=209,slow=26,SNR=3.9
0.6nm,0.3s
MMAI Mount Meron Ar 7.14 107 Pn **Pn** **02 31 52.3 -2.9**
2.3nm,0.3s,baz=297,slow=12,SNR=26
MMAI Sn **Sn** **02 33 12.6 -3.7**
1.7nm,0.3s,baz=301,slow=26,SNR=5.6
1.3nm,0.3s
EIL Elat 8.63 129 Pn **Pn** **02 32 13.7 -1.8**
0.6nm,0.3s,baz=292,slow=1.9,SNR=14
2.7nm,0.6s
TORD Torodi Ar. Bea 31.97 233 P **P** **02 36 35.8 -1.1**
1.4nm,0.3s,baz=41,slow=12,SNR=1.1
1.4nm,0.3s
ARCES ARCESS Array B 34.22 359 P **P** **02 36 54.1 -1.9**
1.2nm,0.8s,baz=163,slow=8.9,SNR=5.5
1.2nm,0.8s
MKAR Makanchi Array 42.21 57 P **P** **02 38 03.4 -0.2**
0.4nm,0.4s,baz=263,slow=12,SNR=5.6
0.4nm,0.4s

IDC ***16*** *02:33:16.2±0.8, 1°.08S×127°.34E, h0km, mb4.3/9, mbtmp4.3/12, ML3.9/3, MS4.0/4, Error ellipse: s-maj=36.7km s-min=14.7km az=75.0*
DJA ***16*** *02:33:20.2±0.2, 1°S±.2°×12°.7E±°, h10km, M4.5/19, mB5.3/4, mb4.7/8, MLv4.5/19, Mw(mB)4.7/4*
NEIC ***16*** *02:33:21.8±2.0, 1°.07S±0°.06×127°.26E±0°.07, h35km±2km, mb4.8/7, Error ellipse: s-maj=12.2km s-min=10.6km az=101.0*
ISC 16 02:33:21.5±0.5, 1°.14S±0°.04×127°.25E±0°.06, h31km, n51,
σ1§56/51, mb4.6/15, MS4.2/4, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SANI	**Sanana**	**1.56**	**234**	P		**Pn**	**02 33 44.6**	**-2.4**
TNTI	**Ternate**	**1.90**	**3**			**Pn**	**02 33 49.0**	**-2.7**
TNTI	**Ternate**	**1.90**	**3**	P		**Pn**	**02 33 49.4**	**-2.4**
NLAI	**Namlea**	**2.10**	**184**	P		**Pn**	**02 33 54.9**	**+0.4**
NLAI				S		**Sn**	**02 34 21.8**	**+2.3**
AAI	**Ambon**	**2.70**	**160**	P		**Pb**	**02 34 06.7**	**-2.5**
MSAI	**Masohi**	**2.76**	**143**	P		**Pn**	**02 34 06.8**	**+3.1**
MSAI				S		**Sb**	**02 34 42.4**	**-1.3**
KMSI	**Cibinong**	**3.69**	**297**	P		**Pn**	**02 34 17.6**	**+1.2**
SWI	**Sorong**	**4.02**	**86**	P		**Pn**	**02 34 23.0**	**+2.1**
BNDI	**Bandanaira**	**4.28**	**142**	P		**Pn**	**02 34 27.0**	**+2.4**
LUWI	**Luwuk**	**4.48**	**271**			**Pn**	**02 34 26.6**	**-0.8**
LUWI	**Luwuk**	**4.48**	**271**	P		**Pn**	**02 34 26.5**	**-0.8**
FAKI	**Fak Fak**	**5.30**	**110**			**Pn**	**02 34 38.5**	**-0.1**
FAKI	**Fak Fak**	**5.30**	**110**	P		**Pn**	**02 34 38.2**	**-0.4**
	0.2nm48nm,0.7s							
APSI	**Ampana**	**5.61**	**272**	P		**Pn**	**02 34 42.5**	**-0.3**
TOLI2	**Tolitoli**	**6.84**	**289**			**Pn**	**02 34 58.9**	**-0.9**
MPSI	**Mapaga**	**7.50**	**281**	P		**Pn**	**02 35 10.8**	**+2.0**
TTSI	**Tana Toraja**	**7.67**	**256**	P		**Pn**	**02 35 11.5**	**+0.4**
	0.2nm659nm41nm,0.7s							
SPSI	**Sidrap Palu**	**7.99**	**249**	P		**Pn**	**02 35 16.5**	**+1.0**
	5µm68nm,0.6s							
KAPI	**Kappang**	**8.42**	**243**	Pn		**Pn**	**02 35 22.4**	**+1.0**
	3.6nm,0.3s,baz=134,slow=1.9,SNR=9.3							
KAPI				Sn		**Sn**	**02 36 52.4**	**-3.1**
	baz=150,slow=20							
	12nm,0.4s							
I39PW	**PALAU INFRASON**	**11.28**	**40**			**Pn**	**02 36 00.0**	**-0.6**
MTN	**Manton Dam**	**12.25**	**162**			**Pn**	**02 36 15.2**	**+1.3**
JAY	**Jayapura**	**13.52**	**96**	LR		LR	02 42 44.0	
	comp=Z,153nm,20.5s,baz=331,slow=42							
FITZ	**Fitzroy Crossi**	**16.93**	**185**	Pn		**Pn**	**02 37 15.8**	**-0.4**
	0.2nm,0.3s,baz=8.8,slow=8.1,SNR=5.7							
	1.3nm,0.5s							
FITZ	**Fitzroy Crossi**	**16.93**	**185**			**Pn**	**02 37 16.6**	**+0.4**
WB0	**Warramunga Arr**	**19.79**	**160**			**P**	**02 37 48.0**	**-1.5**
WB0				IAmb		IAmb	02 38 32.0	
	comp=Z,45nm,0.5s							
WRA	**Warramunga Arr**	**19.94**	**160**	P		**P**	**02 37 49.8**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=341,slow=12,SNR=20							
	comp=Z,3.2nm,0.8s							
WR8	**Warramunga Arr**	**20.00**	**160**			**P**	**02 37 50.8**	**-0.9**
AS31	**Alice Springs**	**23.31**	**164**	P		**P**	**02 38 26.5**	**-0.5**
AS31				IAmb		IAmb	02 39 03.0	
	comp=Z,23nm,0.6s							
ASAR	**Alice Springs**	**23.31**	**164**	P		**P**	**02 38 26.1**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=345,slow=11,SNR=68							
ASAR				LR		LR	02 48 57.2	
	comp=Z,114nm,19.0s,baz=86,slow=40							
	comp=Z,4.6nm,0.7s							
ASAR	**Alice Springs**	**23.31**	**164**	P		**P**	**02 38 26.2**	**-0.8**
STKA	**Stephens Creek**	**33.44**	**158**	P		**P**	**02 39 57.0**	**-0.7**
	comp=Z,15nm,0.6s,baz=347,slow=9.0,SNR=20							
	comp=Z,15nm,0.6s							
AUJCS	**Jamestown Cent**	**33.63**	**163**	P		**P**	**02 40 01.4**	**+2.0**
CMAR	**Chiang Mai Arr**	**33.97**	**306**	P		**P**	**02 40 05.3**	**+2.8**
	comp=Z,1.9nm,0.3s,baz=122,slow=9.0,SNR=5.3							
KSRS	**Korea Array**	**38.40**	**1**	P		**P**	**02 40 39.6**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=185,slow=13,SNR=5.8							
	comp=Z,1.9nm,0.8s							
LZH	**Lanzhou**	**42.98**	**332**	*eP*		**P**	**02 41 20.0**	**+1.9**
LZH				pP		pP	02 41 26.6	0.0
LZH				pmax		pmax		
	comp=Z,21nm,1.4s							
HHC	**Hu-ho-hao-te**	**44.16**	**343**	*eP*		**P**	**02 41 28.3**	**+0.7**
HHC				pmax		pmax		
	comp=Z,12nm,0.8s							
HHC				pmax		pmax		
	comp=Z,94nm,6.6s							
ASAJ	**Asahikawa**	**47.09**	**15**	LR		LR	02 59 44.2	
	comp=Z,1µm,21.8s,baz=188,slow=34							
GTA	**Gaotai**	**47.55**	**331**	*eP*		**P**	**02 41 56.9**	**+2.6**
GTA				pmax		pmax		
	comp=Z,9.0nm,1.2s							
EVN	**Everest**	**48.40**	**310**	P		**P**	**02 42 02.3**	**+0.6**
ULN	**Ulaanbaatar**	**51.88**	**343**	P		**P**	**02 42 25.5**	**-1.7**
SONM	**Songino Array**	**52.05**	**342**	P		**P**	**02 42 27.0**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=154,slow=11,SNR=5.1							
	comp=Z,1.7nm,0.7s							
WMQ	**Urumqi**	**57.02**	**327**	*eP*		**P**	**02 43 04.9**	**+0.4**
WMQ				LR		LR		
	comp=Z,220nm,23.5s							
PETK	**Petropavlovsk-**	**59.74**	**21**	P		**P**	**02 43 22.5**	**-0.8**
	comp=Z,4.5nm,0.8s,baz=205,slow=9.4,SNR=3.5							
	comp=Z,4.5nm,0.8s							
MKAR	**Makanchi Array**	**61.85**	**327**	P		**P**	**02 43 36.9**	**-0.9**
	comp=Z,2.0nm,0.3s,baz=117,slow=8.2,SNR=22							
	comp=Z,2.0nm,0.3s							
MA2	**Magadan**	**63.28**	**13**	LR		LR	03 10 47.3	
	comp=Z,201nm,19.8s,baz=240,slow=36							
ZALV	**Zalesovo Beam**	**65.15**	**334**	P		**P**	**02 43 59.8**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=132,slow=6.6,SNR=5.2							
	comp=Z,1.0nm,0.6s							
KURBB	**Kurchatov Arra**	**66.11**	**328**	P		**P**	**02 44 04.5**	**-1.2**
	comp=Z,3.7nm,0.7s,baz=127,slow=5.9,SNR=24							
	comp=Z,3.7nm,0.7s							
KURK	**Kurchatov**	**66.12**	**329**	P		**P**	**02 44 04.7**	**-1.0**
KURK				IAmb		IAmb	02 44 13.7	
	comp=Z,6.9nm,0.8s							
KURK	**Kurchatov**	**66.12**	**329**	P		**P**	**02 44 04.4**	**-1.3**
BVAR	**Borovoye Array**	**71.67**	**328**	P		**P**	**02 44 39.6**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=134,slow=8.3,SNR=6.3							
	comp=Z,1.1nm,0.5s							
SYO	**Syowa Base**	**88.10**	**201⇑**	*eP*		**P**	**02 46 09.2**	**+0.5**

NEIC ***16*** *02:34:25.9±1.3, 5°.39S±0°.06×146°.8E±0°.1, h226km±6km, mb4.6/44, Error ellipse: s-maj=17.1km s-min=9.3km az=89.0*
IDC ***16*** *02:34:25.8±1.4, 5°.44S×146°.81E, h235km±13km, mb4.1/17, mbtmp4.7/21, Error ellipse: s-maj=17.2km s-min=7.0km az=102.0*
ISC 16 02:34:27.3±0.4, 5°.48S±0°.05×146°.82E±0°.07, h250km, n141,
σ1§44/130, mb4.5/43, 1C-2D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MANU	**Manus Island**	**3.46**	**9**			**Pn**	**02 35 22.1**	**-2.8**
PMG	**Port Moresby**	**3.91**	**175**	P		**Pn**	**02 35 26.6**	**-3.5**
	527nm,0.4s,baz=44,slow=5.3,SNR=228							
PMG				S		**S**	**02 36 11.8**	**-8.2**
	387nm,0.5s,baz=232,slow=22,SNR=5.7							
PMG	**Port Moresby**	**3.91**	**175**	P		**Pn**	**02 35 26.6**	**-3.5**
JAY	**Jayapura**	**6.77**	**296**	P		**Pn**	**02 36 02.2**	**-2.9**
	67nm,0.7s,baz=132,slow=6.5,SNR=29							
GENI	**Genyem**	**7.22**	**293**	P		**Pn**	**02 36 07.9**	**-3.0**
COEN	**Coen**	**9.15**	**203**			**Pn**	**02 36 35.5**	**+0.3**
COEN	**Coen**	**9.15**	**203**	P		**Pn**	**02 36 35.5**	**+0.3**
MTSU	**Mount Surprise**	**12.81**	**191**	P		**P**	**02 37 21.8**	**-1.2**
SAVO	**Savo Central**	**13.40**	**107**	P		**P**	**02 37 28.2**	**-1.3**
TV1H	**Townsville Har**	**13.70**	**180**	P		**P**	**02 37 33.3**	**+0.6**
CTA	**Charters Tower**	**14.53**	**182**	P		**Pn**	**02 37 41.8**	**-0.1**
CTAO	**Charters Tower**	**14.53**	**182**			**Pn**	**02 37 43.0**	**+1.1**
CTAO	**Charters Tower**	**14.53**	**182**	P		**Pn**	**02 37 41.9**	**0.0**
QIS	**Mount Isa**	**16.54**	**204**	P		**Pn**	**02 38 05.5**	**-0.4**
QIS	**Mount Isa**	**16.54**	**204**	S		**S**	**02 41 07.5**	**+3.2**
MTN	**Manton Dam**	**17.11**	**244**			**Pn**	**02 38 10.8**	**-1.8**
AUDHS	**Darwin High Sc**	**17.23**	**245**	P		**Pn**	**02 38 12.3**	**-1.6**
AUDHS	**Darwin High Sc**	**17.23**	**245**	S		**S**	**02 41 18.9**	**+0.8**
AUNRC	**North Rockhamp**	**18.12**	**169**	P		**Pn**	**02 38 22.7**	**-1.6**
WRAB	**Tennant Creek**	**18.80**	**219**	P		**P**	**02 38 29.2**	**+0.6**
WRAB	**Tennant Creek**	**18.80**	**219**	P		**P**	**02 38 29.0**	**+0.4**
WRAB	**Tennant Creek**	**18.80**	**219**	S		**S**	**02 41 50.6**	**+1.5**
WRA	**Warramunga Arr**	**18.81**	**219**	P		**P**	**02 38 29.2**	**+0.5**
	22nm,0.4s,baz=45,slow=9.5,SNR=53							
WRA				S		**S**	**02 41 49.5**	**+0.1**
	23nm,0.8s,baz=39,slow=20,SNR=6.8							
WRA	**Warramunga Arr**	**18.81**	**219**	P		**P**	**02 38 28.2**	**-0.6**
WRA				IAmb		IAmb	02 38 34.7	
	comp=Z,1.3nm,0.9s							
GUMO	**Guam**	**19.05**	**354**	P		**P**	**02 38 29.7**	**-1.6**
	comp=Z,74nm,0.4s,baz=184,slow=12,SNR=5.7							
EIDS	**Eidsvold**	**20.19**	**169**			**P**	**02 38 44.4**	**+0.9**
EIDS	**Eidsvold**	**20.19**	**169**	P		**P**	**02 38 44.2**	**+0.8**
KNRA	**Kununurra**	**20.41**	**239**			**P**	**02 38 45.7**	**-0.2**
QLP	**Quilpie**	**21.13**	**186**	P		**P**	**02 38 53.9**	**+0.7**
ASAR	**Alice Springs**	**21.94**	**213**	P		**P**	**02 39 02.1**	**+1.2**
	comp=Z,49nm,0.6s,baz=43,slow=7.9,SNR=171							
ASAR				S		**S**	**02 42 46.5**	**+1.4**
	comp=Z,7.3nm,0.9s,baz=26,slow=18,SNR=9.1							
	comp=Z,49nm,0.6s							
AUALC	**St Philip's Co**	**21.97**	**213**	P		**P**	**02 39 02.5**	**+1.3**
TW1H	**Toowoomba 1 Ha**	**22.48**	**168**	P		**P**	**02 39 07.4**	**+1.6**
AUWSH	**Wavell State H**	**22.59**	**165**	P		**P**	**02 39 07.7**	**+1.0**
INKA	**Innamarka**	**22.88**	**194**			**P**	**02 39 11.0**	**+1.7**
GC1S	**Gold Coast 1 S**	**23.44**	**165**	P		**P**	**02 39 15.9**	**+1.5**
AULRC	**Lightning Ridg**	**23.85**	**177**	P		**P**	**02 39 18.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**24.19**	**237**	P		**P**	**02 39 22.1**	**+0.8**
	comp=Z,43nm,0.4s,baz=30,slow=7.8,SNR=160							
	comp=Z,43nm,0.4s							
FITZ	**Fitzroy Crossi**	**24.19**	**237**	P		**P**	**02 39 21.9**	**+0.6**
FITZ				IAmb		IAmb	02 39 24.5	
	comp=Z,11nm,0.6s							
FITZ	**Fitzroy Crossi**	**24.19**	**237**	P		**P**	**02 39 21.7**	**+0.4**
YATNC	**Mamie plateau,**	**25.47**	**132**	P		**P**	**02 39 35.4**	**+2.5**
AUPHS	**Peel High Schs**	**25.77**	**172**	P		**P**	**02 39 36.7**	**+1.2**
CMSA	**Cobar Meteorol**	**25.94**	**182**	P		**P**	**02 39 37.8**	**+0.8**
STKA	**Stephens Creek**	**26.71**	**190**	P		**P**	**02 39 44.1**	**+0.3**
	comp=Z,4.2nm,0.5s,baz=17,slow=8.0,SNR=22							
	comp=Z,4.2nm,0.5s							
STKA	**Stephens Creek**	**26.71**	**190**	P		**P**	**02 39 44.2**	**+0.3**
WHYH	**Whyalla**	**28.73**	**196**	P		**P**	**02 40 02.4**	**+0.7**
HTT	**Hallett**	**28.76**	**194**	P		**P**	**02 40 02.8**	**+0.7**
BBOO	**Buckleboo**	**28.98**	**199**	P		**P**	**02 40 04.3**	**+0.3**
BBOO				IAmb		IAmb	02 40 05.1	
	comp=Z,16nm,0.8s							
PSA00	**Pilbara Seismi**	**30.62**	**236**	P		**P**	**02 40 18.3**	**-0.3**
FORT	**Forrest**	**30.73**	**213**	P		**P**	**02 40 20.1**	**+0.6**
MILA	**Mila**	**31.50**	**176**	P		**P**	**02 40 26.7**	**+0.6**
BRAT	**Ballarat**	**32.03**	**184**	P		**P**	**02 40 32.2**	**+1.6**
MEEK	**Meekatharra**	**34.15**	**229**	P		**P**	**02 40 49.6**	**+0.4**
MORW	**Morawa**	**37.38**	**228**	P		**P**	**02 41 17.0**	**+0.5**
MORW				IAmb		IAmb	02 41 17.4	
	comp=Z,11nm,0.6s							
MORW	**Morawa**	**37.38**	**228**	P		**P**	**02 41 17.0**	**+0.5**
KLBR	**Kellerberrin**	**37.62**	**223**	P		**P**	**02 41 18.5**	**0.0**
OUZ	**Omahuta**	**38.55**	**144**	P		**P**	**02 41 27.7**	**+1.7**
JNU	**Nakatsue**	**41.26**	**340**	P		**P**	**02 41 48.0**	**-0.4**
JNU				IAmb		IAmb	02 41 49.1	
	comp=Z,23nm,0.9s							
TOZ	**Tahuroa Road**	**41.39**	**145**	P		**P**	**02 41 51.4**	**+2.0**
TOZ				IAmb		IAmb	02 41 52.0	
	comp=Z,28nm,0.9s							
MJAR	**Matsushiro Arr**	**42.57**	**350**	P		**P**	**02 41 57.8**	**-1.1**
	comp=Z,2.0nm,0.4s,baz=178,slow=8.7,SNR=11							
	comp=Z,2.0nm,0.4s							
MJAR	**Matsushiro Arr**	**42.57**	**350**	P		**P**	**02 41 58.4**	**-0.5**
MAJO	**Matsushiro**	**42.57**	**350**	P		**P**	**02 41 57.2**	**-1.7**
MAJO				IAmb		IAmb	02 41 58.2	
	comp=Z,11nm,0.7s							
URZ	**Urewera**	**42.68**	**144**	P		**P**	**02 42 00.5**	**+0.8**
HAZ	**Te Kaha**	**42.74**	**143**	P		**P**	**02 42 01.4**	**+1.2**
RUGZ	**Raukumara Rang**	**42.82**	**143**	P		**P**	**02 42 11.6**	**+0.6**
MTHZ	**Maungataniwha**	**42.92**	**145**	P		**P**	**02 42 02.6**	**+0.8**
MXZ	**Matakaoa Point**	**42.93**	**142**	P		**P**	**02 42 02.8**	**+1.1**
BKZ	**Black Stump Fm**	**42.94**	**146**	P		**P**	**02 42 02.8**	**+0.9**
BKZ				IAmb		IAmb	02 42 03.8	
	comp=Z,20nm,0.6s							
BKZ	**Black Stump Fm**	**42.94**	**146**	P		**P**	**02 42 02.6**	**+0.7**
MWZ	**Matawai**	**42.97**	**144**	P		**P**	**02 42 02.8**	**+0.6**
PKGZ	**Pakihiroa**	**42.99**	**143**	P		**P**	**02 42 03.9**	**+1.6**
TWGZ	**Tauwhareparae**	**43.13**	**143**	P		**P**	**02 42 02.6**	**-0.8**
WMGZ	**Waiomatatini S**	**43.16**	**143**	P		**P**	**02 42 04.7**	**+1.1**
TKGZ	**Te Karaka**	**43.23**	**144**	P		**P**	**02 42 05.1**	**+1.0**
MCHZ	**McNeill Hill**	**43.25**	**146**	P		**P**	**02 42 05.9**	**+1.6**
TSZ	**Takapari Road**	**43.27**	**147**	P		**P**	**02 42 05.5**	**+1.0**
ARHZ	**Aropaoanui**	**43.29**	**145**	P		**P**	**02 42 05.7**	**+1.1**
RIGZ	**Rimuhau**	**43.36**	**144**	P		**P**	**02 42 05.7**	**+0.5**
MRZ	**Mangatainoka R**	**43.49**	**148**	P		**P**	**02 42 07.0**	**+0.8**
MRZ	**Mangatainoka R**	**43.49**	**148**	P		**P**	**02 42 06.7**	**+0.5**
KNZ	**Kokohu**	**43.52**	**145**	P		**P**	**02 42 06.9**	**+0.5**
CKHZ	**Cape Kidnapper**	**43.61**	**146**	P		**P**	**02 42 08.1**	**+1.0**
PXZ	**Pawanui**	**43.74**	**146**	P		**P**	**02 42 08.8**	**+0.6**
MLZ	**Mavora Lakes**	**43.85**	**158**	P		**P**	**02 42 10.2**	**+1.2**
BFZ	**Birch Farm**	**43.86**	**147**	P		**P**	**02 42 09.7**	**+0.5**
EAZ	**Earnscleugh**	**44.19**	**157**	P		**P**	**02 42 11.9**	**+0.3**
WHZ	**Wether Hill Ro**	**44.24**	**159**	P		**P**	**02 42 12.8**	**+0.8**
TUZ	**Tuapeka**	**44.92**	**157**	P		**P**	**02 42 18.3**	**+1.0**
APZ	**The Paps**	**45.06**	**159**	P		**P**	**02 42 18.5**	**0.0**
SYZ	**Scrubby Hill**	**45.22**	**158**	P		**P**	**02 42 21.0**	**+1.3**
NJ2	**Nanjing**	**45.85**	**326**	*eP*		**P**	**02 42 25.4**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,15nm,0.5s							
KSRS	**Korea Array**	**46.20**	**339**	P		**P**	**02 42 27.7**	**+0.2**
	comp=Z,12nm,0.7s,baz=155,slow=8.9,SNR=34							
	comp=Z,12nm,0.7s							
KSAR	**Wonju Array Be**	**46.21**	**339**	P		**P**	**02 42 27.3**	**-0.2**
KS19	**Wonju Array Si**	**46.27**	**339**	IAmb		IAmb	02 43 08.2	
	comp=Z,38nm,1.4s							
USRK	**Ussuriysk Ar.**	**51.23**	**346**	P		**P**	**02 43 05.2**	**-0.2**
	comp=Z,5.9nm,0.5s,baz=171,slow=8.0,SNR=14							
	comp=Z,5.9nm,0.5s							
HNS	**HongShan**	**52.11**	**328**	⇓P		**P**	**02 43 12.0**	**-0.1**
HNS				pmax		pmax		
	comp=Z,15nm,0.7s							
MDJ	**Mudanjiang**	**52.22**	**344**	P		**P**	**02 43 12.3**	**-0.5**
MDJ				pmax		pmax		
	comp=Z,27nm,2.1s							
CMAR	**Chiang Mai Arr**	**52.84**	**298**	P		**P**	**02 43 17.6**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=108,slow=7.8,SNR=1.6							
	comp=Z,1.7nm,0.3s							
BNX	**BinXian**	**53.86**	**343**	⇑P		**P**	**02 43 24.4**	**-0.3**
BNX				pmax		pmax		
	comp=Z,9.0nm,0.9s							
PZH	**PanZhiHua**	**53.99**	**308**	P		**P**	**02 43 28.3**	**+2.1**
HHC	**Hu-ho-hao-te**	**56.30**	**328**	*eP*		P	02 43 46.8	+4.4
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,110nm,4.6s							
PETK	**Petropavlovsk-**	**59.09**	**8**	P		**P**	**02 44 01.4**	**0.0**
	comp=Z,7.5nm,0.5s,baz=164,slow=6.4,SNR=25							
	comp=Z,7.5nm,0.5s							
HILR	**Hailar Array B**	**59.65**	**340**	P		**P**	**02 44 05.7**	**+0.4**
	comp=Z,5.0nm,0.5s,baz=149,slow=7.9,SNR=9.1							
	comp=Z,5.0nm,0.5s							
GTA	**Gaotai**	**62.23**	**320**	*eP*		**P**	**02 44 24.6**	**+1.7**
GTA				pP		pP	02 45 17.3	-1.6
GTA				pmax		pmax		
	comp=Z,4.0nm,0.8s							
ULN	**Ulaanbaatar**	**63.57**	**331**	P		**P**	**02 44 31.7**	**+0.1**
ULN				IAmb		IAmb	02 44 33.1	
	comp=Z,5.6nm,0.7s							
SONM	**Songino Array**	**63.86**	**331**	P		**P**	**02 44 34.1**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=153,slow=6.2,SNR=6.4							
	comp=Z,2.4nm,0.6s							
CASY	**Casey**	**65.70**	**195**	P		**P**	**02 44 45.3**	**+0.5**
WMQ	**Urumqi**	**72.28**	**319**	*eP*		**P**	**02 45 28.1**	**+2.4**
WMQ				LR		LR		
	comp=Z,170nm,19.3s							
VNDA	**Vanda**	**72.44**	**177**	P		**P**	**02 45 26.8**	**+0.8**
	comp=Z,8.8nm,0.7s,baz=328,slow=6.9,SNR=53							
	comp=Z,8.8nm,0.7s							
VNDA	**Vanda**	**72.44**	**177**	P		**P**	**02 45 26.8**	**+0.8**
VNDA				IAmb		IAmb	02 45 27.7	
	comp=Z,10.0nm,0.8s							
VNDA	**Vanda**	**72.44**	**177**	P		**P**	**02 45 26.8**	**+0.8**
MKAR	**Makanchi Array**	**76.98**	**320**	P		**P**	**02 45 52.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=93,slow=7.7,SNR=7.2							
	comp=Z,0.7nm,0.3s							
ZALV	**Zalesovo Beam**	**78.48**	**328**	P		**P**	**02 45 59.3**	**-1.3**
	comp=Z,1.9nm,0.4s,baz=117,slow=6.1,SNR=9.0							
	comp=Z,1.9nm,0.4s							
ZALV	**Zalesovo Beam**	**78.48**	**328**	P		**P**	**02 45 59.0**	**-1.5**
L16K	**Owhat River**	**78.62**	**23**	P		**P**	**02 46 02.0**	**+0.8**
L16K				IAmb		IAmb	02 46 22.3	
	comp=Z,19nm,1.5s							
KURK	**Kurchatov**	**80.69**	**323**	P		**P**	**02 46 12.6**	**+0.1**
KURK	**Kurchatov**	**80.69**	**323**	IAmb		IAmb	02 46 14.3	
	comp=Z,1.7nm,0.9s							
KURBB	**Kurchatov Arra**	**80.71**	**323**	P		**P**	**02 46 12.6**	**0.0**
	comp=Z,0.8nm,0.9s,baz=101,slow=6.3,SNR=3.7							
MAW	**Mawson**	**82.65**	**203**	P		**P**	**02 46 22.9**	**+0.5**
	comp=Z,3.7nm,0.6s,baz=105,slow=8.0,SNR=19							
	comp=Z,3.7nm,0.6s							
E19K	**Redstone River**	**82.68**	**19**	IAmb		IAmb	02 46 25.7	
	comp=Z,5.4nm,0.7s							
D19K	**Kuna River**	**83.00**	**18**	IAmb		IAmb	02 46 26.1	
	comp=Z,17nm,1.2s							
QSPA	**South Pole Qui**	**84.48**	**180**	P		**P**	**02 46 34.9**	**+2.9**
	comp=Z,9.1nm,0.7s,baz=345,slow=1.7,SNR=24							
QSPA	**South Pole Qui**	**84.48**	**180**	P		**P**	**02 46 35.0**	**+3.1**
QSPA				IAmb		IAmb	02 46 35.9	
	comp=Z,11nm,0.9s							
B21K	**Ikpikpuk River**	**84.67**	**17**	IAmb		IAmb	02 46 35.7	
	comp=Z,5.7nm,0.8s							
IL31		**85.08**	**23**	P		**P**	**02 46 33.9**	**-0.8**
ILAR	**Eielson Array**	**85.08**	**23**	P		**P**	**02 46 33.2**	**-1.5**
	comp=Z,5.2nm,0.8s,baz=252,slow=4.8,SNR=48							
	comp=Z,5.2nm,0.8s							
ILAR	**Eielson Array**	**85.08**	**23**	P		**P**	**02 46 33.7**	**-1.1**
D23K	**Nanushuk River**	**85.56**	**19**	IAmb		IAmb	02 46 39.9	
	comp=Z,5.4nm,0.7s							
J25K	**Salcha River,**	**85.62**	**24**	IAmb		IAmb	02 46 38.5	
	comp=Z,5.7nm,0.8s							
F24K	**Squaw Lake**	**85.85**	**21**	IAmb		IAmb	02 46 41.6	
	comp=Z,3.8nm,0.7s							
C23K	**Itkillik River**	**85.99**	**18**	IAmb		IAmb	02 46 42.6	
	comp=Z,7.2nm,0.7s							
BVAR	**Borovoye Array**	**86.24**	**324**	P		**P**	**02 46 40.2**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=118,slow=5.0,SNR=4.6							
	comp=Z,0.8nm,0.5s							
C24K	**Franklin Bluff**	**86.53**	**18**	IAmb		IAmb	02 46 45.8	
	comp=Z,15nm,1.1s							
K29M	**Barlow Dome**	**88.61**	**25**	IAmb		IAmb	02 46 53.7	
	comp=Z,12nm,1.2s							
J30M	**Hart River**	**89.31**	**25**	IAmb		IAmb	02 47 12.6	
	comp=Z,9.9nm,1.5s							
BELA	**Belgrano 2**	**96.75**	**180**	P		**P**	**02 47 28.6**	**-0.4**
NVAR	**Mina Array Bea**	**97.20**	**52**	P		Pdif	02 47 33.0	+0.

MKAR Makanchi Array 59.08 326 P **P** 02 59 06.8 +0.1
comp=Z,0.4nm,0.4s,baz=119,slow=8.3,SNR=5.2
comp=Z,0.4nm,0.4s
KURBB Kurchatov Arra 63.31 328 P **P** 02 59 36.4 +1.2
comp=Z,0.5nm,0.5s,baz=129,slow=6.5,SNR=11
comp=Z,0.5nm,0.5s
KURK Kurchatov 63.32 328 P **P** 02 59 35.3 0.0
KURK IAmb IAmb 02 59 39.6
comp=Z,1.3nm,0.7s

BJI ***16*** *02:51:45.7, 34˙02N×141˙98E, h17km, mB5.0/30, mb4.8/69, Ms4.6/59, Ms7 4.5/58*
IDC ***16*** *02:51:47.8±0.3, 34˙05N×141˙63E, h0km, mb4.9/37, mbtmp4.9/41, ML4.4/4, MS4.3/43, Error ellipse: s-maj=10.6km s-min=9.2km az=100.0*
MOS ***16*** *02:51:48.9±1.0, 33˙99N×141˙60E, h19km, mb5.3/65, MS4.6/11, Error ellipse: s-maj=8.3km s-min=4.2km az=118.0*
NEIC ***16*** *02:51:49.8±1.6, 34˙04N±0˙05×141˙71E±0˙07, h10km±1km, mb5.3/526, Mww4.9/12, Error ellipse: s-maj=10.0km s-min=7.9km az=120.0*
NEIC ***16*** *02:51:50, 34˙07N×141˙72E, h16km, Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^16 Nm; Mrr-2.71; Mθθ 0.63; Mϕϕ 2.08; Mrθ-0.73; Mθϕ 0.43; Mϕr 0.68; Fault plane solution: M0 2.69000×10^16 NP1:ϕs 27.24000°, δ 40.93000°, λ -68.62000°. NP2:ϕs 179.85000°, δ 52.41000°, λ -107.54000°. Principal axes: T 2.2465, Plg 6.0000°, Azm 282.0000°; N 0.7319, Plg 14.0000°, Azm 191.0000°; P -2.9784, Plg 75.0000°, Azm 35.0000°;*
NEIC ***16*** *02:51:50, 34˙07N×141˙72E, h16km*
JMA ***16*** *02:51:51.6±0.6, 34˚N±1˚×14˚2E±˚, h50km±4km, MD4.9/34, MW4.9/34, FAR SE OFF BOSO PEN*
JMA Felt I J1 at FAR SE OFF BOSO PEN .
NIED ***16*** *02:51:51.6, 34˙07N×141˙66E, h50km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr-1.03; Mθθ 0.26; Mϕϕ 0.77; Mrθ 0.30; Mθϕ 0.83; Mϕr 0.01; Fault plane solution: M0 1.26000×10^16 NP1:ϕs 20.00000°, δ 43.00000°, λ -115.00000°. NP2:ϕs 232.00000°, δ 52.00000°, λ -68.00000°.*
GCMT ***16*** *02:51:53.8±0.3, 34˙07N±0˙03×141˙66E±0˙02, h19km, MW4.9/108, Moment Tensor Solution. s38, c50; s108, c152; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.08±.15; Mθθ 1.07±.10; Mϕϕ 2.01±.10; Mrθ-0.04±.23; Mθϕ 1.10±.06; Mϕr 1.02±.19; Best double couple: M0 3.07300×10^16 NP1:ϕs 42.00000°, δ 38.00000°, λ -75.00000°. NP2:ϕs 204.00000°, δ 54.00000°, λ -101.00000°. Principal axes: T 2.8550, Plg 8.0000°, Azm 301.0000°; N 0.4370, Plg 9.0000°, Azm 210.0000°; P -3.2920, Plg 78.0000°, Azm 73.0000°; nsta1 refers to body waves, cutoff=50s. Triangular moment-rate function*
BGR ***16*** *02:52:07.1, 36˙67N×140˙43E, h33km, mb5.1*
ISC 16 02:51:51.4±0.6, 34˚05N±0˚03×141˚72E±0˚04, h25km±4km, n1090, σ1s50/871, mb5.2/400, MS4.5/74, 65C-52D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.86**	**314**	*eP*		**Pb**	**02 52 06.9**	**-0.5**
BSO3	**Boso 3**	**1.25**	**307**	P		**Pn**	**02 52 12.9**	**-0.2**
BSO4	**Boso 4**	**1.47**	**310**	P		**Pn**	**02 52 16.5**	**+0.2**
KTR	**Katsuura**	**1.59**	**314**	*eP*		**Pn**	**02 52 17.8**	**-0.2**
JKUC	**kamogawauchiur**	**1.67**	**312**	*eP*		**Pn**	**02 52 18.9**	**-0.2**
JKUC				*eS*		**Sn**	**02 52 39.4**	**-0.2**
JKUC	**kamogawauchiur**	**1.67**	**312**	A		A	02 52 18.9	
	comp=N,20nm,5.7s,comp=E,22nm,6.3s							
JMKN	**Mikurajimanish**	**1.78**	**265**	P		**Pn**	**02 52 20.0**	**-0.6**
JMKN				*eS*		**Sn**	**02 52 41.1**	**-1.2**
JMKN	**Mikurajimanish**	**1.78**	**265**	A		A	02 52 20.0	
	comp=N,16nm,0.6s,comp=E,25nm,0.6s							
TATJ	**Tateyama 2**	**1.80**	**303**	A		A	02 52 20.3	
	comp=N,25nm,2.7s,comp=E,23nm,3.0s							
JMYK	**Miyake Tsubota**	**1.80**	**271**	*eP*		**Pn**	**02 52 20.3**	**-0.6**
JMYK				*eS*		**Sn**	**02 52 41.4**	**-1.5**
JHJ2	**Mitsune**	**1.85**	**240**			**Pn**	**02 52 21.6**	**+0.2**
JHJ2	**Mitsune**	**1.85**	**240**	P		**Pn**	**02 52 22.0**	**+0.5**
JHJ2	**Mitsune**	**1.85**	**240**	S		**Sn**	**02 52 43.8**	**-0.2**
JHJ2	**Mitsune**	**1.85**	**240**	*eP*		**Pn**	**02 52 21.7**	**+0.2**
JHJ2	**Mitsune**	**1.85**	**240**	A		A	02 52 21.7	
	comp=N,16nm,4.9s,comp=E,20nm,4.7s							
JHJ	**Hachijo jima 2**	**1.87**	**241**	Pn		**Pn**	**02 52 21.6**	**-0.2**
	comp=E,598nm,0.3s,baz=330,slow=15,SNR=261							
JHJ				Sn		**Sn**	**02 52 43.7**	**-0.8**
	comp=E,1μm,0.3s,baz=72,slow=20,SNR=9.0							
JIM2	**Oshima 3**	**2.00**	**290**	*eP*		**Pn**	**02 52 22.5**	**-1.2**
JIM2	**Oshima 3**	**2.00**	**290**	A		A	02 52 22.5	
	comp=N,15nm,2.3s,comp=E,16nm,2.2s							
JIHU	**Itakohorinouch**	**2.14**	**333**	A		A	02 52 25.4	
	comp=N,39nm,1.2s,comp=E,31nm,1.4s							
JAOM	**Aogashimamukai**	**2.28**	**226**	*eP*		**Pn**	**02 52 27.6**	**+0.1**
TOK	**Tokyo**	**2.29**	**316**	A		A	02 52 27.4	
	comp=N,47nm,0.5s,comp=E,39nm,0.6s							
JHTM	**Izuhatsuma**	**2.41**	**293**	A		A	02 52 28.9	
	comp=N,14nm,0.8s,comp=E,17nm,1.0s							
JIZS	**Izushimoda**	**2.44**	**287**	*eP*		**Pn**	**02 52 28.8**	**-0.9**
JHYU	**Hitachinakayam**	**2.46**	**338**	A		A	02 52 30.0	
	comp=N,13nm,1.6s,comp=E,33nm,0.8s							
JOD2	**Odawara 2**	**2.48**	**300**	*eP*		**Pn**	**02 52 29.4**	**-0.9**
JYT	**Yasato**	**2.50**	**330**	A		A	02 52 30.5	
	comp=N,16nm,1.3s,comp=E,15nm,0.4s							
JSG	**Sagara**	**2.99**	**283**			**Pn**	**02 52 38.2**	**+1.1**
JSG	**Sagara**	**2.99**	**283**	P		**Pn**	**02 52 38.4**	**+1.2**
JSG	**Sagara**	**2.99**	**283**	S		**Sn**	**02 53 12.7**	**+0.5**
JSB	**Shiboa**	**3.26**	**334**	A		A	02 52 41.2	
	comp=N,12nm,2.6s,comp=E,9.0nm,1.5s							
JOTO	**OTAMA OYAMA**	**3.67**	**343**	A		A	02 52 47.1	
	comp=N,17nm,1.0s,comp=E,18nm,1.6s							
JMST	**Minamisoumatoc**	**3.72**	**350**	A		A	02 52 47.9	
	comp=N,6.0nm,0.3s,comp=E,5.0nm,1.9s							
MJAR	**Matsushiro Arr**	**3.79**	**312**	Pn		**Pn**	**02 52 48.0**	**-0.4**
	comp=E,28nm,0.3s,baz=163,slow=13,SNR=304							
MJAR				Sn		**Sn**	**02 53 32.8**	**+0.6**
	comp=E,14nm,0.3s,baz=166,slow=20,SNR=4.2							
	comp=E,109nm,0.3s							
MJAR	**Matsushiro Arr**	**3.79**	**312**			**Pn**	**02 52 48.2**	**-0.1**
MAJO	**Matsushiro**	**3.80**	**312**			**Pn**	**02 52 48.5**	**+0.2**
MAJO	**Matsushiro**	**3.80**	**312**	P		**Pn**	**02 52 49.1**	**+0.8**
MAJO	**Matsushiro**	**3.80**	**312**	*i* P		**Pn**	**02 52 47.4**	**-0.9**
MJB9	**Matsu-Tunnel**	**3.80**	**312**			**Pn**	**02 52 49.6**	**+1.2**
JMM	**Marumori**	**3.88**	**349**			**Pn**	**02 52 48.1**	**-1.3**
JGF	**Kuroka**	**3.91**	**294**			**Pn**	**02 52 50.9**	**+1.0**
JGF	**Kuroka**	**3.91**	**294**	P		**Pn**	**02 52 51.3**	**+1.4**
INU	**Inuyama**	**4.08**	**290**			**Pn**	**02 52 53.1**	**+0.9**
INU	**Inuyama**	**4.08**	**290**	P		**Pn**	**02 52 53.2**	**+0.9**
INU	**Inuyama**	**4.08**	**290**	S		**Sn**	**02 53 39.6**	**+0.4**
JSD	**Sado**	**4.86**	**326**			**Pn**	**02 53 02.6**	**-0.4**
JSD	**Sado**	**4.86**	**326**	P		**Pn**	**02 53 02.8**	**-0.2**
JMN	**Monobe**	**6.53**	**269**			**Pn**	**02 53 27.3**	**+1.4**
JMN	**Monobe**	**6.53**	**269**	P		**Pn**	**02 53 26.9**	**+1.0**
JTM	**Tenmabayashi**	**6.74**	**356**			**Pn**	**02 53 27.2**	**-1.6**
JTM	**Tenmabayashi**	**6.74**	**356**	P		**Pn**	**02 53 29.5**	**+0.8**
JCJ	**Chichijima**	**6.95**	**177**	Pn		Pn	02 53 23.2	-8.5
	comp=E,37nm,0.3s,baz=2.0,slow=20,SNR=14							
JCJ				Sn		Sn	02 54 35.2	-15
	comp=E,109nm,0.3s,baz=307,slow=22,SNR=7.4							
JCJ	**Chichijima**	**6.95**	**177**			**Pn**	**02 53 31.3**	**-0.4**
ERM	**Erimo**	**8.03**	**8**	Pn		**Pn**	**02 53 43.3**	**-3.1**
ERM	**Erimo**	**8.03**	**8**	P		**Pn**	**02 53 43.3**	**-3.1**
JNU	**Nakatsue**	**9.09**	**267**	Pn		**Pn**	**02 54 01.0**	**-0.1**
	comp=E,3.7nm,0.3s,baz=136,slow=4.2,SNR=9.4							
JNU				LR		LR	02 57 14.4	
	comp=E,299nm,21.5s,baz=84,slow=36							
	comp=E,15nm,0.6s							
JNU	**Nakatsue**	**9.09**	**267**			**Pn**	**02 54 02.2**	**+1.1**
JNU	**Nakatsue**	**9.09**	**267**	P		**Pn**	**02 54 02.5**	**+1.4**
NMR	**Nemuro--Hokkai**	**9.81**	**17**	*eP*		**Pn**	**02 54 06.3**	**-4.5**
ASAJ	**Asahikawa**	**10.07**	**4**	Pn		**Pn**	**02 54 12.2**	**-2.3**
	comp=E,7.8nm,0.3s,baz=208,slow=13,SNR=25							
ASAJ				Sn		**Sn**	**02 55 59.2**	**-7.3**
	comp=E,5.0nm,0.3s,baz=42,slow=20,SNR=4.6							
	comp=E,27nm,0.4s							
JKA	**Kamikawa-asahi**	**10.07**	**4**			**Pn**	**02 54 11.4**	**-3.0**
RUSJ	**Misakicho**	**10.40**	**14**	*eP*		**Pn**	**02 54 15.7**	**-3.2**
YUK	**Yuzh-Kuril'sk**	**10.47**	**17**	*eP*		**Pn**	**02 54 17.0**	**-2.9**
YUK				pmax		pmax		
	comp=E,80nm,0.2s							
YUK				pmax		pmax		
	comp=Z,108nm,0.2s							
YUK				pmax		pmax		
	comp=N,43nm,0.1s							
KSRS	**Korea Array**	**11.71**	**291**	Pn		**Pn**	**02 54 38.6**	**+1.8**
	comp=N,0.4nm,0.3s,baz=105,slow=14,SNR=41							
KSRS				LR		LR	02 59 28.1	
	comp=N,469μm,19.3s,baz=95,slow=39							
KSAR	**Wonju Array Be**	**11.74**	**291**			**Pn**	**02 54 37.8**	**+0.6**
KSAR	**Wonju Array Be**	**11.74**	**291**	P		**Pn**	**02 54 37.8**	**+0.6**
KS19	**Wonju Array Si**	**11.76**	**291**			**Pn**	**02 54 37.9**	**+0.3**
MSHR	**Mys Shultsa**	**11.88**	**319**	*ce*P		**Pn**	**02 54 38.1**	**-1.0**
MSHR				pmax		pmax		
	comp=Z,284nm,2.5s							
TJN	**Taejon**	**11.97**	**285**	P		**Pn**	**02 54 41.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**12.63**	**326**	Pn		**Pn**	**02 54 49.0**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=137,slow=12,SNR=15							
	comp=Z,13nm,0.8s							
USRK	**Ussuriysk Ar.**	**12.63**	**326**	P		**Pn**	**02 54 49.0**	**-0.4**
YSS	**Yuzhno-Sakhali**	**12.91**	**3**			**Pn**	**02 54 50.5**	**-2.7**
YSS	**Yuzhno-Sakhali**	**12.91**	**3**	*eP*		**Pn**	**02 54 50.8**	**-2.4**
YSS				*eS*		**Sn**	**02 57 12.8**	**-3.2**
YSS				pmax		pmax		
	comp=Z,70nm,0.9s							
YSS				pmax		pmax		
	comp=N,60nm,0.7s							
YSS				pmax		pmax		
	comp=Z,300nm,4.7s							
YSS				pmax		pmax		
	comp=N,200nm,4.9s							
YSS				pmax		pmax		
	comp=E,400nm,3.2s							
YSS				smax		smax		
	comp=N,10.0nm,0.8s							
YSS				smax		smax		
	comp=E,30nm,1.0s							
YSS				MLR		MLR		
	comp=Z,2μm,14.0s							
YSS				MLR		MLR		
	comp=N,2μm,15.0s							
YSS				MLR		MLR		
	comp=E,1μm,15.0s							
JOW	**Kunigami**	**13.64**	**242**	LR		LR	03 00 25.5	
	comp=E,1000nm,19.1s,baz=88,slow=38							
MDJ	**Mudanjiang**	**14.10**	**322**	P		**Pn**	**02 55 09.1**	**-0.4**
MDJ				S		**Sn**	**02 57 48.3**	**+3.2**
MDJ				pmax		pmax		
	comp=E,14nm,1.6s							
MDJ				LR		LR		
	comp=E,2μm,12.4s							
MDJ				LR		LR		
	comp=E,1μm,17.2s							
MDJ				LR		LR		
	comp=E,3μm,17.2s							
MDJ	**Mudanjiang**	**14.10**	**322**	P		**Pn**	**02 55 10.6**	**+1.1**
CN2	**Changchun**	**15.95**	**312**	*eP*		**Pn**	**02 55 34.6**	**+0.6**
CN2				*es*P		pP	02 55 41.5	-0.7
CN2				pmax		pmax		
	comp=E,10.0nm,0.8s							
CN2				LR		LR		
	comp=E,900nm,15.0s							
CN2				LR		LR		
	comp=E,1μm,15.0s							
CN2				LR		LR		
	comp=E,1μm,16.0s							
BNX	**BinXian**	**16.00**	**321**	⇓P		**Pn**	**02 55 31.5**	**-3.2**
BNX				pmax		pmax		
	comp=E,19nm,1.1s							
SNY	**Shenyang**	**16.26**	**304**	⇓P		**Pn**	**02 55 39.0**	**+1.0**
SNY				S		**Sn**	**02 58 41.8**	**+4.2**
SNY				pmax		pmax		
	comp=E,9.0nm,0.9s							
SNY				pmax		pmax		
	comp=E,180nm,5.4s							
SNY				LR		LR		
	comp=E,450nm,10.4s							
SNY				LR		LR		
	comp=E,530nm,13.4s							
SNY				LR		LR		
	comp=E,820nm,13.7s							
TYV	**Tymovskoe**	**16.81**	**2**	*eP*		**Pn**	**02 55 45.2**	**+0.2**
TYV				*eS*		**Sn**	**02 58 44.2**	**-6.7**
TYV				pmax		pmax		
	comp=Z,46nm,1.6s							
TYV				pmax		pmax		
	comp=Z,700nm,5.4s							
TYV				smax		smax		
	comp=N,1μm,5.7s							
TYV				smax		smax		
	comp=E,1μm,5.7s							
TYV				smax		smax		
	comp=E,51nm,1.7s							
TYV				MLR		MLR		
	comp=Z,2μm,15.0s							
GRNR	**Gornyy**	**17.15**	**349**	⇓*i*P		**P**	**02 55 50.7**	**0.0**
GRNR				pmax		pmax		
	comp=Z,20nm,0.9s							
GRNR				MLR		MLR		
	comp=E,340nm,11.0s							
GRNR				MLR		MLR		
	comp=N,600nm,15.0s							
GRNR				MLR		MLR		
	comp=Z,680nm,16.0s							
SSE	**Sheshan**	**17.55**	**266**	P		**Pn**	**02 55 53.0**	**-1.4**
SSE				S		**Sn**	**02 59 09.4**	**+0.3**
SSE				pmax		pmax		
	comp=Z,11nm,0.7s							
SSE				pmax		pmax		
	comp=Z,44nm,3.8s							
SSE				LR		LR		
	comp=Z,290nm,15.0s							
SSE				LR		LR		
	comp=Z,840nm,12.5s							
NJ2	**Nanjing**	**19.27**	**270**	*eP*		**Pn**	**02 56 15.4**	**+0.2**
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
NJ2				LR		LR		
	comp=Z,930nm,16.1s							
NJ2				LR		LR		
	comp=Z,890nm,19.0s							
NJ2				LR		LR		
	comp=Z,1μm,19.9s							
HEH	**HeiHe**	**19.30**	**331**	*eP*		**P**	**02 56 11.0**	**-3.3**
HEH				pmax		pmax		
	comp=Z,21nm,0.8s							
HEH				LR		LR		
	comp=Z,2μm,16.8s							
HEH				LR		LR		
	comp=Z,1μm,16.1s							
HEH				LR		LR		
	comp=Z,3μm,18.7s							
TIA	**Tai'an**	**20.22**	**283**	P		Pn	02 56 32.5	+5.9
TIA				S		Sn	03 00 14.9	+1.4
TIA				pmax		pmax		
	comp=Z,14nm,0.7s							
TIA				LR		LR		
	comp=N,580nm,11.3s							
TIA				LR		LR		
	comp=E,1μm,12.7s							
TIA				LR		LR		
	comp=Z,2μm,13.1s							
GUMO	**Guam**	**20.57**	**171**	P		**P**	**02 56 27.4**	**-1.1**
	comp=Z,48nm,0.3s,baz=197,slow=19,SNR=1.5							
GUMO				LR		LR	03 06 37.3	
	comp=Z,167nm,18.5s,baz=7.0,slow=43							
	comp=Z,48nm,0.3s							
GUMO	**Guam**	**20.57**	**171**	P		Pn	02 56 31.1	+0.3
GUMO	**Guam**	**20.57**	**171**	P		**P**	**02 56 29.0**	**+0.5**
BJI	**Beijing**	**21.21**	**294**	P		**P**	**02 56 40.8**	**+5.6**
BJI				S		**S**	**03 00 19.8**	**-10**
BJI				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BJI				LR		LR		
	comp=N,330nm,12.6s							
BJI				LR		LR		
	comp=E,250nm,10.8s							
BJI				LR		LR		
	comp=Z,290nm,12.0s							
XLT	**XiLinHaoTe**	**22.15**	**304**	*eP*		**P**	**02 56 41.3**	**-4.0**
XLT				S		**S**	**03 00 43.0**	**-5.1**
XLT				PcS		**PcS**	**03 04 13.1**	**-7.3**
XLT				pmax		pmax		
	comp=Z,78nm,1.1s							
XLT				pmax		pmax		
	comp=Z,230nm,5.5s							
XLT				LR		LR		
	comp=Z,500nm,22.5s							
XLT				LR		LR		
	comp=Z,620nm,15.9s							
HNS	**HongShan**	**22.15**	**286**	⇓P		**P**	**02 56 42.9**	**-2.4**
HNS				S		**S**	**03 00 49.8**	**+1.7**
HNS				pmax		pmax		
	comp=Z,14nm,0.8s							
HNS				LR		LR		
	comp=Z,440nm,14.1s							
HNS				LR		LR		
	comp=Z,560nm,13.0s							
HNS				LR		LR		
	comp=Z,730nm,13.1s							
ZEA	**Zeya**	**22.19**	**337**	*eP*		**P**	**02 56 45.9**	**+0.3**
ZEA				pmax		pmax		
	comp=N,160nm,0.8s							
ZEA				pmax		pmax		
	comp=E,50nm,0.8s							
ZEA				pmax		pmax		
	comp=Z,380nm,0.8s							
ZEA				MLR		MLR		
	comp=N,400nm,16.0s							
ZEA				MLR		MLR		
	comp=Z,600nm,17.0s							
PEA0B	**Petropavlovsk-**	**22.19**	**26**	*ce*P		**P**	**02 56 44.8**	**-0.9**
PETK	**Petropavlovsk-**	**22.19**	**26**	P		**P**	**02 56 45.5**	**-0.2**
	comp=Z,11nm,1.0s,baz=298,slow=3.2,SNR=4.9							
	comp=Z,11nm,1.0s							
HIA	**Hailar**	**22.26**	**320**	P		**P**	**02 56 47.3**	**+0.9**
HIA	**Hailar**	**22.26**	**320**	P		**P**	**02 56 48.1**	**+1.7**
HIA	**Hailar**	**22.26**	**320**	P		**P**	**02 56 47.3**	**+0.9**
HIA				pmax		pmax		
	comp=Z,72nm,1.4s							
HILR	**Hailar Array B**	**22.42**	**320**	P		**P**	**02 56 47.0**	**-1.2**
	comp=Z,18nm,0.8s,baz=132,slow=11,SNR=12							
HILR				LR		LR	03 06 33.6	
	comp=Z,976nm,20.0s,baz=275,slow=40							
	comp=Z,18nm,0.8s							
WHN	**Wuhan**	**23.37**	**269**	P		**P**	**02 56 56.8**	**-1.3**
WHN				sP		**pP**	**02 57 02.8**	**-0.3**
WHN				S		**S**	**03 01 04.1**	**-5.4**
WHN				pmax		pmax		
	comp=Z,110nm,0.7s							
WHN				LR		LR		
	comp=Z,3μm,15.8s							
WHN				LR		LR		
	comp=Z,3μm,13.0s							
WHN				LR		LR		
	comp=Z,3μm,14.0s							
TIY	**Taiyuan**	**23.96**	**287**	*eP*		**P**	**02 57 04.6**	**+0.8**
TIY				S		**S**	**03 01 16.6**	**-2.5**
TIY				pmax		pmax		
	comp=Z,15nm,0.6s							
TIY				LR		LR		
	comp=Z,510nm,15.1s							
TIY				LR		LR		
	comp=Z,250nm,13.7s							
TIY				LR		LR		
	comp=Z,440nm,15.1s							
LYN	**LuoYang**	**24.14**	**279**	P		**P**	**02 57 03.1**	**-2.3**
LYN				sP		pP	02 57 09.6	-1.0
LYN				S		**S**	**03 01 16.5**	**-5.3**
LYN				pmax		pmax		
	comp=Z,35nm,0.8s							
LYN				LR		LR		
	comp=Z,580nm,14.4s							
LYN				LR		LR		
	comp=Z,2μm,14.9s							
LYN				LR		LR		
	comp=Z,3μm,14.3s							
HHC	**Hu-ho-hao-te**	**24.80**	**295**	*eP*		**P**	**02 57 11.4**	**-0.1**
HHC				pP		pP	02 57 15.3	-1.6
HHC				sP		sP	02 57 18.4	-0.5
HHC				S		**S**	**03 01 30.4**	**-2.2**
HHC				pmax		pmax		
	comp=Z,15nm,0.6s							
HHC				pmax		pmax		
	comp=Z,160nm,3.9s							
HHC				LR		LR		
	comp=Z,460nm,10.7s							
HHC				LR		LR		
	comp=Z,350nm,9.6s							
HHC				LR		LR		
	comp=Z,370nm,10.8s							
BTO	**Baotou**	**25.95**	**294**	*eP*		**P**	**02 57 22.8**	**+0.9**
BTO				pP		**pP**	**02 57 27.1**	**-0.1**
BTO				sP		**sP**	**02 57 30.0**	**+0.5**
BTO				PP		**PnPn**	**02 58 03.8**	**+4.0**
BTO				S		**S**	**03 01 50.4**	**-0.4**
BTO				sS		**pS**	**03 01 57.5**	**+0.9**
BTO				SS		**SnSn**	**03 02 59.8**	**+11**
BTO				pmax		pmax		
	comp=Z,66nm,0.8s							
BTO				pmax		pmax		
	comp=Z,360nm,5.5s							
BTO				LR		LR		
	comp=Z,1μm,16.5s							
BTO				LR		LR		
	comp=Z,2μm,15.2s							
BTO				LR		LR		
	comp=Z,2μm,14.3s							
H11N2	**WAKE ISLAND Hy**	**26.51**	**116**	T		T	03 25 23.1	
	baz=308,slow=74,SNR=7.9							
H11N1	**WAKE ISLAND Hy**	**26.52**	**116**	T		T	03 25 16.9	
	baz=308							
H11N3	**WAKE ISLAND Hy**	**26.53**	**116**	T		T	03 25 19.7	
	baz=308,slow=74,SNR=6.7							
CIT	**Chita**	**27.06**	**320**	*eP*		**P**	**02 57 35.0**	**+3.2**
CIT				*e*			02 57 39.6	
CIT				*e*			02 58 15.0	
CIT				*e*			02 58 25.8	
CIT				pmax		pmax		
	comp=Z,127nm,2.6s							
XAN	**Xi'an**	**27.11**	**279**	⇓P		**P**	**02 57 34.3**	**+1.9**
XAN				pP		sP	02 57 41.4	+1.5
XAN				S		**S**	**03 02 13.0**	**+3.7**
XAN				pmax		pmax		
	comp=Z,30nm,0.9s							
XAN				pmax		pmax		
	comp=Z,130nm,5.1s							
XAN				LR		LR		
	comp=Z,790nm,14.7s							
XAN				LR		LR		
	comp=Z,2μm,14.1s							
XAN				LR		LR		
	comp=Z,2μm,14.3s							
H11S3	**WAKE ISLAND Hy**	**27.12**	**119**	T		T	03 26 22.5	
	baz=314,slow=76,SNR=5.7							
H11S1	**WAKE ISLAND Hy**	**27.13**	**118**	T		T	03 26 20.3	
	baz=314,slow=76,SNR=6.1							
H11S2	**WAKE ISLAND Hy**	**27.14**	**119**	T		T	03 26 23.2	
	baz=314,slow=76,SNR=6.8							
YAK	**Yakutsk**	**29.03**	**348**	*eP*		**P**	**02 57 48.6**	**-0.5**
YAK				*e*			02 58 37.9	
YAK				*e*PPP		PPP	02 58 54.5	
YAK				*e*S		**S**	**03 02 38.5**	**-0.2**
YAK				*e*SS		**SnSn**	**03 04 13.5**	**+11**
YAK				*e*			03 08 27.8	
YAK				pmax		pmax		
	comp=Z,23nm,0.9s							
YAK				pmax		pmax		
	comp=N,17nm,1.4s							
YAK				pmax		pmax		
	comp=E,3.0nm,0.9s							
YAK				pmax		pmax		
	comp=Z,492nm,4.9s							
YAK				pmax		pmax		
	comp=N,541nm,5.8s							
YAK				pmax		pmax		
	comp=E,337nm,4.1s							
YAK				smax		smax		
	comp=E,691nm,4.2s							
YAK				smax		smax		
	comp=N,558nm,3.9s							
ULN	**Ulaanbaatar**	**29.32**	**309**	P		**P**	**02 57 52.4**	**+0.3**
ULN	**Ulaanbaatar**	**29.32**	**309**	P		**P**	**02 57 54.3**	**+2.2**
ULN	**Ulaanbaatar**	**29.32**	**309**	*i* P		**P**	**02 57 51.6**	**-0.5**
ULN				pmax		pmax		
	comp=Z,15nm,1.0s							
SEY	**Seymchan**	**29.67**	**10**	*ce*P		**P**	**02 57 56.1**	**+1.3**
SEY				pmax		pmax		
	comp=Z,36nm,

BOD Bodaibo 30.21 330 *e*P **P** **02 57 59.6 0.0**
BOD pmax pmax
comp=Z,52nm,1.0s
LZH Lanzhou 30.94 285 *e*P **P** **02 58 05.6 -1.0**
LZH sP pP 02 58 13.0 +1.0
LZH PcP **PcP** **03 01 02.9 +0.3**
LZH pmax pmax
comp=Z,25nm,1.0s
LZH LR LR
comp=Z,660nm,17.3s
LZH LR LR
comp=Z,600nm,17.0s
LZH LR LR
comp=Z,680nm,18.7s
LZDM Lanzhou Array 31.08 284 P **P** **02 58 06.8 -1.2**
comp=Z,2.2nm,0.4s,baz=134,slow=6.4,SNR=7.9
comp=Z,2.2nm,0.4s
QIZ Qiongzhong 32.05 250 P **P** **02 58 15.9 -0.3**
QIZ S **S** **03 03 26.6 -0.2**
QIZ LR LR
comp=Z,290nm,12.2s
QIZ LR LR
comp=Z,260nm,11.6s
QIZ LR LR
comp=Z,370nm,11.8s
CD2 Chengdu 32.06 275 P **P** **02 58 14.5 -1.8**
CD2 S **S** **03 03 26.5 -0.4**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,1μm,21.1s
CD2 LR LR
comp=Z,1μm,16.2s
ZAK Zakamensk 32.38 312 *e*P **P** **02 58 19.6 +0.6**
ZAK pmax pmax
comp=Z,25nm,1.5s
TLY Talaya 32.53 314 P **P** **02 58 23.0 +2.8**
TLY IAmb IAmb 02 58 40.9
comp=Z,27nm,1.0s
GTA Gaotai 33.78 291 P **P** **02 58 31.3 -0.1**
GTA pP pP 02 58 34.6 -2.0
GTA PcP **PcP** **03 01 10.6 +0.3**
GTA S **S** **03 03 50.6 -3.2**
GTA pmax pmax
comp=Z,9.0nm,0.9s
GTA LR LR
comp=Z,430nm,16.7s
GTA LR LR
comp=Z,210nm,13.4s
GTA LR LR
comp=Z,460nm,15.3s
MOY Mondy 34.11 314 *e*P **P** **02 58 37.3 +3.2**
MOY pmax pmax
comp=Z,33nm,1.8s
KMI Kunming 34.87 266 P **P** **02 58 40.6 -0.5**
KMI pmax pmax
comp=Z,14nm,0.9s
KMI LR LR
comp=Z,510nm,13.3s
KMI LR LR
comp=Z,780nm,14.0s
KMI LR LR
comp=Z,840nm,12.9s
PZH PanZhiHua 35.16 269 P **P** **02 58 44.8 +1.3**
PZH S **S** **03 04 16.8 +1.5**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,120nm,4.8s
PZH LR LR
comp=Z,320nm,17.1s
PZH LR LR
comp=Z,500nm,17.1s
PZH LR LR
comp=Z,610nm,15.5s
MYLDM Lahad Datu 35.91 222 P **P** **02 58 50.1 +0.3**
SMPI Sarmi 35.96 185 P **P** **02 58 50.3 +0.1**
comp=Z,2μmcomp=Z,47nm,1.5s
SWI Sorong 36.10 198 P **P** **02 58 50.3 -1.0**
comp=Z,70nm,0.9s
BILL Bilibino 36.82 15 P **P** **02 58 57.2 +0.2**
BILL IAmb IAmb 02 58 58.2
comp=Z,40nm,1.1s
BILL Bilibino 36.82 15*ce*P **P** **02 58 57.0 0.0**
BILL pmax pmax
comp=Z,24nm,1.0s
FAKI Fak Fak 37.84 196 **P** **02 59 04.6 -1.6**
FAKI IAmb IAmb 02 59 09.6
comp=Z,34nm,1.0s
FAKI Fak Fak 37.84 196 P **P** **02 59 06.8 +0.6**
FAKI Fak Fak 37.84 196 P **P** **02 59 05.6 -0.6**
comp=Z,34nm,0.8s
GOMU GeErMu 38.13 287 P **P** **02 59 08.6 -0.4**
GOMU pP pP 02 59 11.9 -2.4
GOMU sP sP 02 59 16.8 +0.4
GOMU S **S** **03 05 03.6 +2.7**
GOMU pmax pmax
comp=Z,19nm,1.1s
GOMU LR LR
comp=Z,210nm,11.2s
GOMU LR LR
comp=Z,150nm,11.3s
GOMU LR LR
comp=Z,170nm,11.6s
TOLI2 Tolitoli 38.19 215 P **P** **02 59 06.6 -2.5**
TOLI2 Tolitoli 38.19 215 P **P** **02 59 07.6 -1.5**
MRSI Marisa 38.20 213 P **P** **02 59 07.8 -1.4**
comp=Z,2μmcomp=Z,59nm,1.2s
TIXI Tiksi 38.27 353 LR LR 03 17 40.2
comp=Z,757nm,18.5s,baz=192,slow=41
TIXI Tiksi 38.27 353 P **P** **02 59 09.2 +0.1**
TIXI Tiksi 38.27 353*ce*P **P** **02 59 09.3 +0.1**
TIXI pmax pmax
comp=Z,20nm,1.3s
SANI Sanana 38.84 206 P **P** **02 59 13.1 -1.5**
SANI Sanana 38.84 206 P **P** **02 59 12.3 -2.3**
MSAI Masohi 39.11 201 P **P** **02 59 19.3 +2.5**
comp=Z,4μmcomp=Z,75nm,0.9s
MPSI Mapaga 39.28 216 P **P** **02 59 16.1 -2.2**
APSI Ampana 39.56 213 P **P** **02 59 18.8 -1.8**
NLAI Namlea 39.57 203 P **P** **02 59 19.7 -1.0**
comp=Z,67nm,0.9s
SPIA Saint Paul Isl 39.66 39 P **P** **02 59 23.0 +2.0**
baz=255
CHTO Chiang Mai 40.89 259 **P** **02 59 30.3 -1.4**
CHTO Chiang Mai 40.89 259 P **P** **02 59 30.7 -1.0**
CHTO Chiang Mai 40.89 259 P **P** **02 59 30.3 -1.4**
CHTO pmax pmax
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 41.07 259 P **P** **02 59 31.9 -1.2**
comp=Z,4.9nm,0.6s,baz=48,slow=8.4,SNR=7.7
CMAR PcP **PcP** **03 01 32.8 +0.1**
comp=Z,1.2nm,0.3s,baz=23,slow=1.6,SNR=4.3
CMAR LR LR 03 19 24.1
comp=Z,197nm,18.7s,baz=80,slow=40
comp=Z,4.9nm,0.6s
CMAR Chiang Mai Arr 41.07 259 P **P** **02 59 32.0 -1.2**
SBUM Sibu 41.79 228 **P** **02 59 37.9 -1.2**
SBUM Sibu 41.79 228 P **P** **02 59 38.1 -0.9**
DGZ Jazzator, Alta 42.39 309 *i* P **P** **02 59 43.3 -0.5**
DGZ pmax pmax
comp=Z,25nm,0.7s
WMQ Urumqi 42.47 300 *e*P **P** **02 59 47.3 +2.8**
WMQ LR LR
comp=Z,440nm,18.9s
WMQ LR LR
comp=Z,160nm,18.9s
M11K Mekoryuk 42.51 35 P **P** **02 59 46.1 +1.8**
baz=256
TNA Tin City 43.34 28 P **P** **02 59 53.0 +1.9**
baz=249
BNSI Bone 43.35 212 P **P** **02 59 51.1 -0.6**
comp=Z,44nm,1.1s
PMG Port Moresby 43.53 172 P **P** **02 59 53.3 +0.2**
comp=Z,19nm,0.8s,baz=333,slow=9.2,SNR=5.1
PMG PcP **PcP** **03 01 39.7 -1.0**
comp=Z,9.5nm,0.7s,baz=145,slow=0.5,SNR=3.4
comp=Z,19nm,0.8s
PMG Port Moresby 43.53 172 **P** **02 59 52.7 -0.4**
PMG Port Moresby 43.53 172 P **P** **02 59 53.4 +0.3**
PMG Port Moresby 43.53 172*ce*P **P** **02 59 52.8 -0.3**
PMG pmax pmax
comp=Z,23nm,1.0s
K13K Kusilvak Mount 43.62 34 P **P** **02 59 55.4 +2.0**
baz=256
S12K Black Hills 43.88 43 P **P** **02 59 57.3 +1.7**
baz=265
F14K Arctic Creek 43.94 28 P **P** **02 59 58.1 +2.2**
baz=250
ANM Nome 44.03 30 P **P** **02 59 58.7 +2.0**
baz=252
KAPI Kappang 44.06 212 P **P** **02 59 57.4 +0.1**
comp=Z,21nm,0.9s,baz=23,slow=8.8,SNR=10
comp=Z,21nm,0.9s
KAPI Kappang 44.06 212 **P** **02 59 55.3 -2.0**
KAPI Kappang 44.06 212 P **P** **02 59 57.7 +0.3**
KAPI Kappang 44.06 212 *i* P **P** **02 59 56.9 -0.5**
KAPI pmax pmax
comp=Z,27nm,0.9s
ZAA0 Zalesovo Array 44.14 315 **P** **02 59 57.2 -0.5**
ZALV Zalesovo Beam 44.14 315 P **P** **02 59 57.5 -0.1**
comp=Z,6.2nm,0.8s,baz=90,slow=7.4,SNR=19
ZALV PcP **PcP** **03 01 41.5 -0.8**
comp=Z,6.1nm,0.7s,baz=82,slow=3.1,SNR=3.7
ZALV LR LR 03 20 00.9
comp=Z,322nm,18.6s,baz=96,slow=38
comp=Z,6.2nm,0.8s
ZALV Zalesovo Beam 44.14 315 P **P** **02 59 57.6 0.0**
ZSN Zaisan 44.15 305 *e*P **P** **02 59 57.1 -0.9**
ZSN Zaisan 44.15 305 *e*P **P** **02 59 57.0 -0.9**
J14K Nanvaranak Lak 44.31 33 P **P** **03 00 00.8 +1.9**
baz=256
L14K Kuka Creek 44.40 35 P **P** **03 00 01.5 +1.9**
baz=258
N14K Kuskokwak Cree 44.62 37 P **P** **03 00 03.0 +1.6**
baz=261
M14K Bethel 44.63 36 P **P** **03 00 03.5 +2.0**
baz=260
F15K North Star Dit 44.67 28 P **P** **03 00 03.8 +2.0**
baz=252
G15K Niukluk 44.70 29 P **P** **03 00 03.9 +1.9**
baz=253
O14K Tigyukauivet M 44.73 38 P **P** **03 00 03.8 +1.5**
baz=262
L15K Ungalak Mounta 45.03 34 P **P** **03 00 06.3 +1.6**
baz=259
BRDH Bariadhala 45.11 269 LR LR 03 21 48.9
comp=Z,492nm,18.6s,baz=94,slow=40
K15K Wolf Creek Mou 45.13 33 IAmb IAmb 03 00 08.6
comp=Z,38nm,1.0s
K15K Wolf Creek Mou 45.13 33 P **P** **03 00 07.5 +2.1**
baz=258
CHNA Chernabura Isl 45.23 44 P **P** **03 00 07.1 +0.8**
baz=268
M15K Kasigluk River 45.24 36 P **P** **03 00 07.7 +1.4**
baz=261
C16K Lisburne Hills 45.28 25 P **P** **03 00 07.7 +1.2**
baz=249
S14K Fog Glacier 45.33 42 P **P** **03 00 08.2 +1.0**
baz=266
H16K Elim 45.35 30 P **P** **03 00 08.7 +1.5**
baz=255
N15K Kwethluk River 45.45 37 IAmb IAmb 03 00 10.7
comp=Z,32nm,0.8s
N15K Kwethluk River 45.45 37 P **P** **03 00 09.6 +1.5**
baz=262,SNR=5.0
O15K Ungalikthiuk R 45.45 38 IAmb IAmb 03 00 10.6
comp=Z,38nm,0.8s
O15K Ungalikthiuk R 45.45 38 P **P** **03 00 09.5 +1.5**
baz=263
G16K Koyuk River 45.50 29 P **P** **03 00 09.7 +1.4**
baz=255
J16K Anvik River 45.74 32 P **P** **03 00 12.0 +1.6**
baz=258
I17K Unalakleet 45.83 31 P **P** **03 00 12.7 +1.7**
baz=258
D17K Noatak River 45.89 26 P **P** **03 00 13.1 +1.7**
baz=252
MK31 Makanchi Array 45.96 305*ce*P **P** **03 00 13.1 +0.8**
MKAR Makanchi Array 45.96 305 P **P** **03 00 12.3 0.0**
comp=Z,6.7nm,0.6s,baz=87,slow=9.3,SNR=21
MKAR PcP **PcP** **03 01 48.0 -0.8**
comp=Z,6.4nm,0.8s,baz=113,slow=2.4,SNR=4.7
MKAR LR LR 03 21 27.6
comp=Z,335nm,18.1s,baz=68,slow=39
comp=Z,6.7nm,0.6s
MKAR Makanchi Array 45.96 305*ce*P **P** **03 00 12.3 0.0**
MKAR pmax pmax
comp=Z,10.0nm,0.8s
L16K Owhat River 45.98 35 **P** **03 00 13.1 +0.9**
L16K IAmb IAmb 03 00 14.6
comp=Z,42nm,1.4s
L16K Owhat River 45.98 35 P **P** **03 00 13.6 +1.4**
baz=261
RDOG Red Dog Mine 46.06 25 P **P** **03 00 14.2 +1.4**
baz=252
C17K DeLong Mountai 46.10 25 P **P** **03 00 14.7 +1.6**
baz=251
M16K Timber Creek 46.12 36 IAmb IAmb 03 00 15.8
comp=Z,36nm,1.2s
M16K Timber Creek 46.12 36 P **P** **03 00 14.8 +1.5**
baz=262
N16K Nishlik Lake 46.14 36 P **P** **03 00 15.2 +1.7**
baz=263,SNR=7.0
E17K Hotham Inlet 46.17 27 P **P** **03 00 15.4 +1.8**
baz=254,SNR=6.0
F17K Baldwin Pennin 46.21 28 P **P** **03 00 15.8 +1.8**
baz=255
G17K Kwalik Mounta 46.21 29 P **P** **03 00 15.8 +1.8**
baz=256,SNR=5.4
SAVO Savo Central 46.27 155 P **P** **03 00 15.5 +0.5**
O16K Kokwok River B 46.38 38 P **P** **03 00 16.8 +1.4**
baz=264
P16K Nushagak River 46.38 38 P **P** **03 00 17.2 +1.8**
baz=265
H17K Granite Mounta 46.39 30 P **P** **03 00 17.0 +1.7**
baz=258
J17K VABM Dome 46.44 32 IAmb IAmb 03 00 18.9
comp=Z,37nm,0.9s
J17K VABM Dome 46.44 32 P **P** **03 00 17.4 +1.6**
baz=260
R16K Pilot Point 46.49 40 P **P** **03 00 18.0 +1.7**
baz=267
L17K Donlin 46.59 34 P **P** **03 00 18.9 +1.9**
baz=262,SNR=9.1
SOEI Soe 46.62 204 **P** **03 00 17.2 -0.6**
SOEI Soe 46.62 204 P **P** **03 00 18.2 +0.4**
SOEI Soe 46.62 204 P **P** **03 00 18.2 +0.4**
K17K Iditarod 46.68 33 P **P** **03 00 19.9 +2.2**
baz=261,SNR=13
E18K Tukpahlearik C 46.72 27 IAmb IAmb 03 00 20.9
comp=Z,21nm,0.9s
E18K Tukpahlearik C 46.72 27 P **P** **03 00 19.8 +1.9**
baz=254,SNR=5.5
C18K Utukok River 46.85 25 IAmb IAmb 03 00 21.4
comp=Z,28nm,0.9s
C18K Utukok River 46.85 25 P **P** **03 00 20.3 +1.3**
baz=253,SNR=6.2
B18K Kokolik River 46.86 24 P **P** **03 00 21.1 +2.1**
baz=252,SNR=5.7
F18K Selawik 46.87 28 P **P** **03 00 20.8 +1.7**
baz=256,SNR=7.7
M17K Holitna River 46.90 35 P **P** **03 00 21.5 +2.0**
baz=263,SNR=8.5
O17K Koliganek Bris 46.90 37 P **P** **03 00 20.9 +1.4**
baz=265
N17K Nushagak Hills 46.93 36 IAmb IAmb 03 00 22.6
comp=Z,29nm,1.1s
N17K Nushagak Hills 46.93 36 P **P** **03 00 21.5 +1.9**
baz=264
EVN Everest 46.98 278 P **P** **03 00 20.6 -0.7**
EVN IAmb IAmb 03 00 29.4
comp=Z,43nm,1.4s
Q16K King Salmon 47.05 39 P **P** **03 00 21.9 +1.4**
baz=266
H18K Honhosa River 47.08 30 IAmb IAmb 03 00 23.2
comp=Z,31nm,0.9s
H18K Honhosa River 47.08 30 P **P** **03 00 22.3 +1.6**
baz=259,SNR=6.2
G18K Tagagawik 47.11 29 P **P** **03 00 22.4 +1.4**
baz=258,SNR=16
R17L Mt. Peulik Vol 47.15 40 P **P** **03 00 22.3 +0.8**
baz=268
P17K Kvichak River 47.19 38 P **P** **03 00 22.6 +0.9**
baz=266
BATI Baumata 47.24 205 P **P** **03 00 21.9 -0.7**
comp=Z,79nm,0.7s,baz=141,slow=1.4,SNR=16
comp=Z,79nm,0.7s
KDU Kakadu 47.31 192 P **P** **03 00 22.8 -0.2**
comp=Z,21nm,0.9s
L18K Granite Mounta 47.35 34 P **P** **03 00 24.7 +1.8**
baz=263
A19K Wainwright 47.37 23 P **P** **03 00 25.0 +2.1**
baz=252
AUDHS Darwin High Sc 47.38 195 P **P** **03 00 22.9 -0.7**
Q17K Contact Creek 47.43 39 P **P** **03 00 24.9 +1.2**
baz=268
CHIR Chirikof Islan 47.52 43 P **P** **03 00 25.6 +1.3**
baz=270
C19K Lookout Ridge 47.54 25 P **P** **03 00 26.2 +1.9**
baz=254,SNR=8.9
N18K Kilae Creek 47.58 36 P **P** **03 00 25.6 +0.8**
baz=265
GCSA Galena City Sc 47.62 31 P **P** **03 00 25.8 +0.9**
baz=261
F19K Shaleruckik Mo 47.65 28 P **P** **03 00 26.3 +1.1**
baz=258,SNR=7.0
M18K Stony River 47.68 35 P **P** **03 00 27.3 +1.8**
baz=265,SNR=5.4
MTN Manton Dam 47.71 194 P **P** **03 00 25.2 -1.0**
comp=Z,67nm,0.8s
MTN Manton Dam 47.71 194 **P** **03 00 25.7 -0.4**
COEN Coen 47.76 178 P **P** **03 00 27.4 +0.8**
comp=Z,19nm,0.9s
COEN Coen 47.76 178 P **P** **03 00 27.6 +1.0**
COEN IAmb IAmb 03 00 30.1
comp=Z,14nm,0.8s
COEN Coen 47.76 178 P **P** **03 00 27.3 +0.8**
G19K Purcell Mounta 47.78 29 P **P** **03 00 27.4 +1.1**
baz=259,SNR=8.5
P18K Big Mountain, 47.82 38 P **P** **03 00 27.7 +1.0**
baz=267
O18K Koktuh Hills 47.86 37 P **P** **03 00 28.2 +1.2**
baz=267
D19K Kuna River 47.90 26 IAmb IAmb 03 00 29.6
comp=Z,32nm,1.1s
D19K Kuna River 47.90 26 P **P** **03 00 28.4 +1.3**
baz=256
Q18K Katmai Hardscr 47.90 39 P **P** **03 00 28.8 +1.4**
baz=268
H19K Roundabout Mou 47.93 30 P **P** **03 00 29.0 +1.7**
baz=260
E19K Redstone River 47.99 27 P **P** **03 00 29.5 +1.6**
baz=258
KURK Kurchatov 48.01 310 **P** **03 00 28.0 -0.2**
KURK Kurchatov 48.01 310 P **P** **03 00 28.0 -0.2**
KURK Kurchatov 48.01 310*ce*P **P** **03 00 28.1 0.0**
KURK pmax pmax
comp=Z,59nm,1.3s
J19K Poorman 48.05 32 IAmb IAmb 03 00 30.7
comp=Z,34nm,1.0s
J19K Poorman 48.05 32 P **P** **03 00 29.6 +1.2**
baz=262,SNR=9.5
KURBB Kurchatov Arra 48.07 310 P **P** **03 00 28.4 -0.2**
comp=Z,17nm,0.7s,baz=84,slow=7.8,SNR=83
KURBB PcP **PcP** **03 01 54.9 -1.2**
comp=Z,6.1nm,0.8s,baz=90,slow=3.6,SNR=4.8
KURBB LR LR 03 22 28.1
comp=Z,728nm,19.0s,baz=156,slow=38
comp=Z,17nm,0.7s
L19K White Mountain 48.20 34 IAmb IAmb 03 00 32.4
comp=Z,27nm,1.1s
L19K White Mountain 48.20 34 P **P** **03 00 30.9 +1.3**
baz=265
N19K Bonanza Creek 48.28 36 P **P** **03 00 31.6 +1.3**
baz=266
SII Sitkinak Islan 48.32 42 P **P** **03 00 32.1 +1.6**
baz=270
PLAI Plampang 48.32 212 P **P** **03 00 31.7 +0.8**
F20K Avaraart Lake 48.48 28 IAmb IAmb 03 00 34.1
comp=Z,16nm,0.9s
F20K Avaraart Lake 48.48 28 P **P** **03 00 33.0 +1.4**
baz=260,SNR=10
D20K Etivluk River 48.49 25 P **P** **03 00 33.2 +1.5**
baz=257
SHLS Shalkode 48.49 300 *e*P **P** **03 00 28.8 -3.5**
comp=Z,16nm,1.0s
SHLS Shalkode 48.49 300 *e*P **P** **03 00 28.7 -3.5**
SHLS pmax pmax
comp=Z,16nm,1.0s
E20K Nigu River 48.54 26 P **P** **03 00 33.6 +1.5**
baz=258
H20K Anotleneega Mo 48.57 30 P **P** **03 00 34.0 +1.6**
baz=262,SNR=11
B20K Meade River 48.60 24 P **P** **03 00 34.1 +1.7**
baz=256,SNR=13
I20K Naaghedeneel 48.65 31 P **P** **03 00 34.7 +1.8**
baz=263
K20K Telida 48.67 33 P **P** **03 00 35.1 +1.9**
baz=265
L20K Farewell, AK 48.68 34 IAmb IAmb 03 00 36.0
comp=Z,27nm,1.1s
L20K Farewell, AK 48.68 34 P **P** **03 00 35.0 +1.8**
baz=266,SNR=5.1
J20K Nowinta River 48.72 32 IAmb IAmb 03 00 36.3
comp=Z,34nm,0.9s
J20K Nowinta River 48.72 32 P **P** **03 00 35.3 +1.8**
baz=264,SNR=16
OHAK Old Harbor 48.80 41 P **P** **03 00 34.6 +0.4**
OHAK Old Harbor 48.80 41 P **P** **03 00 35.5 +1.3**
baz=271
P19K Oil Pt 48.85 38 P **P** **03 00 36.1 +1.5**
baz=269
TDK Taldyqorghan 48.90 303 *e*P **P** **03 00 34.5 -0.8**
comp=Z,7.5nm,0.7s
TDK Taldyqorghan 48.90 303 *e*P **P** **03 00 34.4 -0.8**
TDK pmax pmax
comp=Z,7.0nm,0.7s
M20K Styx River 48.99 35 P **P** **03 00 37.3 +1.6**
baz=267
IMAR Indian Mountai 49.10 29 P **P** **03 00 37.5 +1.1**
A21K Barrow 49.11 22 P **P** **03 00 37.7 +1.4**
baz=255
O20K Slope Mountain 49.17 37 P **P** **03 00 37.8 +0.8**
baz=269
KDAK Kodiak Island 49.18 40 LR LR 03 19 45.9
comp=Z,265nm,21.9s,baz=251,slow=34
KDAK Kodiak Island 49.18 40 P **P** **03 00 37.6 +0.6**
baz=271
C21K Knifeblade Rid 49.23 25 P **P** **03 00 39.1 +1.8**
baz=259,SNR=12
G21K Allakaket 49.27 29 IAmb IAmb 03 00 40.2
comp=Z,29nm,0.8s
G21K Allakaket 49.27 29 P **P** **03 00 39.2 +1.5**
baz=262
Q20K Shuyak Island 49.27 39 P **P** **03 00 38.7 +1.0**
baz=270
B21K Ikpikpuk River 49.38 24 P **P** **03 00 40.1 +1.7**
baz=259,SNR=25
F21K Alatna River 49.38 28 P **P** **03 00 39.8 +1.2**
baz=262,SNR=11
E21K Killik River 49.39 26 P **P** **03 00 39.9 +1.4**
baz=260
N20K Mount Spurr 49.40 36 P **P** **03 00 40.4 +1.6**
baz=268
SPCR Spurr Chakacha 49.40 36 P **P** **03 00 40.3 +1.5**
baz=268,SNR=9.5
H21K Melozitna Rive 49.45 30 P **P** **03 00 40.9 +1.8**
baz=264,SNR=8.1
ARXS Arharly 49.45 302 *i* P **P** **03 00 39.1 -0.4**
SPU Mount Spurr 49.48 36 IAmb IAmb 03 00 41.8
comp=Z,28nm,1.1s
PPLA Purkeypile 49.49 33 IAmb IAmb 03 00 42.5
comp=Z,33nm,1.0s
PPLA Purkeypile 49.49 33 P **P** **03 00 41.3 +1.8**
baz=267,SNR=5.1
A22K Sinclair Lake 49.55 23 P **P** **03 00 41.4 +1.7**
baz=257
STLK Strandline Lak 49.59 35 IAmb IAmb 03 00 42.6
comp=Z,28nm,1.4s
HOM Homer 49.66 38 P **P** **03 00 42.3 +1.6**
baz=270
I21K Tanana 49.75 30 IAmb IAmb 03 00 44.3
comp=Z,69nm,1.6s
I21K Tanana 49.75 30 P **P** **03 00 43.1 +1.8**
baz=265,SNR=5.6
SKT Skwentna 49.75 35 P **P** **03 00 42.4 +1.0**
SKT IAmb IAmb 03 00 43.3
comp=Z,20nm,1.0s
SKT Skwentna 49.75 35 P **P** **03 00 42.3 +0.8**
baz=268,SNR=6.7
CAPN Captain Cook N 49.91 36 P **P** **03 00 44.5 +2.0**
baz=269
F22K John River 49.92 27 P **P** **03 00 44.5 +1.9**
baz=263
B22K Teshekpuk Lake 49.92 24 IAmb IAmb 03 00 44.5
comp=Z,30nm,0.8s
B22K Teshekpuk Lake 49.92 24 P **P** **03 00 44.0 +1.5**
baz=259,SNR=9.3
D22K Ayikyak River 49.92 26 P **P** **03 00 44.5 +1.9**
baz=261,SNR=31
TARG Taragay, Kyrgy 49.99 299 IAmb IAmb 03 00 48.7

comp=Z,25nm,0.9s
H22K **Ishtalitna Cre** 50.06 30 IAmb IAmb 03 00 46.8
comp=Z,42nm,1.1s
H22K **Ishtalitna Cre** 50.06 30 P **P** **03 00 45.8 +2.0**
baz=265,SNR=22
BPAW **Bear Paw Mtn.** 50.09 32 P **P** **03 00 45.4 +1.4**
baz=267
KTH **Kantishna Hill** 50.10 33 IAmb IAmb 03 00 46.6
comp=Z,29nm,1.1s
G22K **Bettles** 50.11 28 P **P** **03 00 45.3 +1.3**
baz=264,SNR=5.4
SUA **Susitna One** 50.11 35 P **P** **03 00 45.2 +0.9**
baz=269
L22K **Petersville** 50.12 34 IAmb IAmb 03 00 45.9
comp=Z,36nm,1.0s
E22K **Anaktuvuk Pass** 50.13 27 P **P** **03 00 46.1 +1.8**
baz=263,SNR=48
MDOK **Medeo** 50.22 301 *e*P **P** **03 00 44.4 -1.0**
MDOK **Medeo** 50.22 301 *e*P **P** **03 00 44.4 -1.0**
MLY **Manley** 50.26 31 IAmb IAmb 03 00 48.0
comp=Z,28nm,0.9s
MLY **Manley** 50.26 31 P **P** **03 00 47.0 +1.7**
baz=266
AAA **Alma-Ata** 50.31 301 *e*P **P** **03 00 45.1 -0.9**
AAA **Alma-Ata** 50.31 301 *e*P **P** **03 00 45.1 -0.9**
TNSS **Tian-Shan** 50.32 300 *e*P **P** **03 00 45.1 -1.4**
TNSS **Tian-Shan** 50.32 300 *e*P **P** **03 00 45.1 -1.4**
CUT **Chulitna** 50.35 34 P **P** **03 00 47.5 +1.6**
baz=269
SLKM **Skilak Lake** 50.37 37 IAmb IAmb 03 00 58.4
comp=Z,70nm,1.4s
TRF **Thorofare Moun** 50.38 33 P **P** **03 00 47.3 +1.0**
baz=268
M22K **Willow** 50.41 35 P **P** **03 00 47.8 +1.5**
baz=270
RC01 **Rabbit Creek A** 50.60 36 P **P** **03 00 48.3 +0.5**
baz=270
O22K **Cooper Landing** 50.61 37 P **P** **03 00 49.5 +1.5**
baz=271
COLD **Coldfoot** 50.65 28 P **P** **03 00 49.7 +1.6**
baz=265
D23K **Nanushuk River** 50.65 26 IAmb IAmb 03 00 51.1
comp=Z,60nm,1.3s
D23K **Nanushuk River** 50.65 26 P **P** **03 00 50.1 +2.0**
baz=263,SNR=20
G23K **Bananza Creek** 50.67 29 IAmb IAmb 03 00 51.0
comp=Z,33nm,0.9s
G23K **Bananza Creek** 50.67 29 P **P** **03 00 49.8 +1.4**
baz=266
C23K **Itkillik River** 50.79 24 P **P** **03 00 50.9 +1.8**
baz=262
H23K **Yukon River** 50.81 30 IAmb IAmb 03 00 52.5
comp=Z,41nm,1.2s
H23K **Yukon River** 50.81 30 P **P** **03 00 51.5 +2.1**
baz=267,SNR=15
I23K **Minto, Yukon-K** 50.85 31 P **P** **03 00 51.3 +1.7**
baz=267
PMR **Palmer** 50.89 35 IAmb IAmb 03 00 51.3
comp=Z,61nm,1.2s
PMR **Palmer** 50.89 35 P **P** **03 00 51.5 +1.5**
PMR **Palmer** 50.89 35 P **P** **03 00 50.2 +0.2**
baz=270,SNR=5.5
E23K **Chandalar** 50.95 27 P **P** **03 00 52.4 +1.9**
baz=265,SNR=38
NEA2 **Nenana** 50.95 31 P **P** **03 00 51.8 +1.4**
baz=268,SNR=18
KNRA **Kununurra** 50.97 196 P **P** **03 00 51.0 -0.1**
comp=Z,100nm,0.8s
GHO **Glory Hole Cre** 50.98 35 IAmb IAmb 03 00 52.6
comp=Z,43nm,1.1s
MCK **McKinley** 50.99 32 P **P** **03 00 51.7 +0.9**
MCK IAmb IAmb 03 00 52.5
comp=Z,32nm,1.0s
MCK **McKinley** 50.99 32 P **P** **03 00 51.7 +0.9**
MCK pmax pmax
comp=Z,32nm,1.0s
MCK **McKinley** 50.99 32 P **P** **03 00 51.6 +0.8**
baz=269,SNR=11
TOLK **Toolik Lake Re** 51.02 26 IAmb IAmb 03 00 53.6
comp=Z,41nm,0.8s
TOLK **Toolik Lake Re** 51.02 26 P **P** **03 00 52.5 +1.6**
baz=264,SNR=29
RND **Reindeer** 51.02 33 IAmb IAmb 03 00 52.5
comp=Z,31nm,0.9s
UGM **Wanagama** 51.15 221 P **P** **03 00 53.4 +0.9**
WAT1 **Susitna Watana** 51.15 34 P **P** **03 00 52.5 +0.5**
baz=270
KNK **Knik Glacier** 51.21 35 IAmb IAmb 03 00 54.1
comp=Z,34nm,0.9s
KNK **Knik Glacier** 51.21 35 P **P** **03 00 52.9 +0.5**
baz=271,SNR=7.0
SML **Sawmill** 51.27 35 IAmb IAmb 03 00 55.5
comp=Z,34nm,0.8s
SML **Sawmill** 51.27 35 P **P** **03 00 53.7 +0.8**
baz=271,SNR=6.7
PWL **Port Wells** 51.29 36 P **P** **03 00 53.1 +0.1**
baz=272
D24K **Happy Valley** 51.34 25 P **P** **03 00 55.0 +1.7**
baz=265
E24K **Your Creek** 51.37 27 IAmb IAmb 03 00 57.3
comp=Z,30nm,0.9s
E24K **Your Creek** 51.37 27 P **P** **03 00 55.4 +1.8**
baz=266,SNR=28
C24K **Franklin Bluff** 51.43 25 P **P** **03 00 55.5 +1.5**
baz=264
COLA **College** 51.48 31 P **P** **03 00 56.0 +1.7**
COLA IAmb IAmb 03 00 57.1
comp=Z,26nm,0.8s
COLA **College** 51.48 31 P **P** **03 00 55.7 +1.3**
COLA **College** 51.48 31 P **P** **03 00 56.1 +1.7**
COLA pmax pmax
comp=Z,26nm,0.8s
COLA **College** 51.48 31 P **P** **03 00 56.3 +1.9**
baz=269
H24K **Noodor Dome** 51.49 30 IAmb IAmb 03 00 57.4
comp=Z,27nm,1.0s
H24K **Noodor Dome** 51.49 30 P **P** **03 00 56.5 +1.9**
baz=268,SNR=14
WAT6 **Susitna Watana** 51.53 34 P **P** **03 00 55.8 +0.8**
baz=271,SNR=6.9
M23K **Glacier View** 51.55 35 P **P** **03 00 55.7 +0.7**
baz=272
F24K **Squaw Lake** 51.56 28 IAmb IAmb 03 00 57.6
comp=Z,20nm,0.8s
F24K **Squaw Lake** 51.56 28 P **P** **03 00 56.7 +1.6**
baz=267,SNR=23
POKR **Poker Plat Res** 51.66 31 IAmb IAmb 03 00 58.4
comp=Z,42nm,0.8s
POKR **Poker Plat Res** 51.66 31 P **P** **03 00 57.1 +1.4**
baz=269,SNR=11
G24K **Hadweenzic Riv** 51.69 29 IAmb IAmb 03 00 59.1
comp=Z,28nm,0.9s
G24K **Hadweenzic Riv** 51.69 29 P **P** **03 00 57.9 +1.9**
baz=268,SNR=12
DHY **Denali Highway** 51.69 33 P **P** **03 00 56.7 +0.6**
baz=271
SCM **Sheep Creek Mo** 51.74 35 P **P** **03 00 57.3 +0.9**
baz=272,SNR=5.3
P23K **Montague Islan** 51.79 37 P **P** **03 00 57.5 +0.7**
baz=273
HDA **Harding Lake** 51.87 32 IAmb IAmb 03 00 58.5
comp=Z,37nm,0.8s
HDA **Harding Lake** 51.87 32 P **P** **03 00 57.4 +0.1**
baz=270,SNR=19
BRZS **Berezniki** 51.87 310 *e*P **P** **03 00 57.0 -0.6**
BRZS **Berezniki** 51.87 310 *e*P **P** **03 00 56.9 -0.6**
SGDS **Sogindy** 51.88 301 *e*P **P** **03 00 56.9 -0.9**
GLI **Glacier Island** 51.89 36 P **P** **03 00 58.2 +0.7**
baz=273
IL31 51.89 31 IAmb IAmb 03 00 58.8
comp=Z,37nm,0.8s
ILAR **Eielson Array** 51.89 31 P **P** **03 00 57.6 +0.2**
comp=Z,24nm,0.8s,baz=267,slow=6.2,SNR=195
ILAR LR LR 03 23 52.7
comp=Z,126nm,21.4s,baz=258,slow=37
comp=Z,24nm,0.8s
ILAR **Eielson Array** 51.89 31 P **P** **03 00 57.5 +0.1**
KSH **Kashi** 51.90 296 P **P** **03 01 01.6 +3.5**
KSH pmax pmax
comp=Z,11nm,1.1s
MTSU **Mount Surprise** 51.96 177 P **P** **03 00 59.2 +0.8**
comp=Z,16nm,1.0s
MTSU **Mount Surprise** 51.96 177 P **P** **03 00 59.5 +1.1**
AAK **Ala-Archa** 52.17 301 P **P** **03 01 00.1 0.0**
AAK **Ala-Archa** 52.17 301 *ce*P **P** **03 00 59.0 -1.1**
AAK pmax pmax
comp=Z,11nm,1.0s
D25K **Kavik River** 52.22 25 P **P** **03 01 01.4 +1.5**
baz=267,SNR=57
G25K **Bearman Lake** 52.23 29 P **P** **03 01 01.9 +1.9**
baz=269
M24K **Tolsona, Glenn** 52.27 34 P **P** **03 01 02.0 +1.5**
baz=273
Q23K **Middleton Isla** 52.36 38 P **P** **03 01 02.2 +1.2**
baz=275
K24K **Donnelly Dome** 52.39 32 IAmb IAmb 03 01 02.7
comp=Z,32nm,0.8s
K24K **Donnelly Dome** 52.39 32 P **P** **03 01 02.0 +0.7**
baz=272,SNR=6.9
F25K **Christian Rive** 52.43 27 IAmb IAmb 03 01 04.9
comp=Z,38nm,0.9s
F25K **Christian Rive** 52.43 27 P **P** **03 01 03.9 +2.4**
baz=269,SNR=35
KLU **Klutina** 52.43 35 IAmb IAmb 03 01 03.8
comp=Z,44nm,1.0s
KLU **Klutina** 52.43 35 P **P** **03 01 02.9 +1.3**
baz=273,SNR=8.6
E25K **Arctic Village** 52.47 27 IAmb IAmb 03 01 04.9
comp=Z,45nm,0.9s
E25K **Arctic Village** 52.47 27 P **P** **03 01 04.0 +2.3**
baz=269,SNR=44
GSI **Gunungsitoli** 52.54 241 IAmb IAmb 03 01 41.3
comp=Z,36nm,0.9s
GSI **Gunungsitoli** 52.54 241 P **P** **03 01 03.9 +1.0**
J25K **Salcha River,** 52.55 31 P **P** **03 01 03.3 +0.9**
baz=272
PAX **Paxson** 52.56 33 P **P** **03 01 03.4 +0.8**
baz=273,SNR=7.8
EYAK **Cordova Ski Ar** 52.57 36 P **P** **03 01 03.8 +1.3**
baz=274
HARP **HAARP** 52.73 34 P **P** **03 01 05.4 +1.6**
baz=273,SNR=8.6
C26K **Camden Bay** 52.76 25 P **P** **03 01 06.1 +2.3**
baz=268,SNR=33
BVAR **Borovoye Array** 52.79 314 P **P** **03 01 04.5 +0.2**
comp=Z,9.8nm,0.9s,baz=79,slow=7.5,SNR=21
BVAR LR LR 03 25 37.6
comp=Z,448nm,18.2s,baz=85,slow=38
comp=Z,9.8nm,0.9s
BORK **Borovoye** 52.83 314 *ce*P **P** **03 01 05.0 +0.4**
BORK pmax pmax
comp=Z,27nm,1.3s
BMAR **Burnt Mountain** 52.83 28 P **P** **03 01 06.5 +2.0**
F26K **Sheenjek River** 53.00 27 IAmb IAmb 03 01 09.2
comp=Z,47nm,1.1s
F26K **Sheenjek River** 53.00 27 P **P** **03 01 08.0 +2.3**
baz=270,SNR=44
N25K **Chitina, Valde** 53.05 35 P **P** **03 01 07.4 +1.1**
baz=274
BMRM **Bremner River** 53.10 36 IAmb IAmb 03 01 08.9
comp=Z,52nm,1.0s
BMRM **Bremner River** 53.10 36 P **P** **03 01 07.9 +1.3**
baz=275,SNR=5.0
G26K **Porcupine Rive** 53.15 28 IAmb IAmb 03 01 10.1
comp=Z,42nm,1.4s
G26K **Porcupine Rive** 53.15 28 P **P** **03 01 08.9 +2.1**
baz=271
DOT **Dot Lake** 53.16 32 IAmb IAmb 03 01 08.4
comp=Z,21nm,0.8s
C27K **Jago River** 53.17 25 IAmb IAmb 03 01 09.6
comp=Z,40nm,0.8s
C27K **Jago River** 53.17 25 P **P** **03 01 08.6 +1.8**
baz=269,SNR=52
SCRK **Sand Creek** 53.17 32 IAmb IAmb 03 01 08.8
comp=Z,36nm,0.9s
SCRK **Sand Creek** 53.17 32 P **P** **03 01 07.6 +0.4**
baz=273,SNR=24
TV1H **Townsville Har** 53.24 174 P **P** **03 01 08.4 +0.6**
KAIM **Kayak Island** 53.29 37 P **P** **03 01 08.9 +1.0**
baz=276
J26L **Joseph Creek** 53.33 31 P **P** **03 01 08.6 +0.3**
baz=273,SNR=21
MENT **Mentasta** 53.36 33 IAmb IAmb 03 01 11.0
comp=Z,24nm,0.8s
MENT **Mentasta** 53.36 33 P **P** **03 01 10.4 +2.0**
GLB **Gilahina Butte** 53.44 35 IAmb IAmb 03 01 27.4
comp=Z,38nm,1.4s
I26K **Coal Creek Min** 53.46 30 P **P** **03 01 10.2 +1.1**
baz=273
L26K **Log Cabin Wild** 53.52 33 IAmb IAmb 03 01 12.2
comp=Z,36nm,0.8s
L26K **Log Cabin Wild** 53.52 33 P **P** **03 01 11.3 +1.7**
baz=274,SNR=21
ARSB **Arslanbob** 53.60 299 IAmb IAmb 03 01 23.1
comp=Z,18nm,0.6s
M26K **Nabesna, AK** 53.74 34 P **P** **03 01 12.7 +1.4**
baz=275,SNR=5.4
MCARA **McCarthy VSAT** 53.82 35 P **P** **03 01 13.2 +1.5**
baz=276,SNR=12
CRQE **Ciue** 53.86 36 P **P** **03 01 13.6 +1.4**
baz=276,SNR=7.2
E27K **Coleen River** 53.95 27 IAmb IAmb 03 01 15.6
comp=Z,29nm,0.9s
E27K **Coleen River** 53.95 27 P **P** **03 01 14.5 +1.8**
baz=272,SNR=30
WB0 **Warramunga Arr** 53.97 189 P **P** **03 01 12.8 -0.5**
G27K **Doyon Strip** 53.99 28 P **P** **03 01 14.7 +1.7**
baz=273,SNR=5.6
K27K **Chicken** 54.01 32 IAmb IAmb 03 01 15.5
comp=Z,28nm,0.9s
K27K **Chicken** 54.01 32 P **P** **03 01 14.6 +1.5**
baz=275
CTAO **Charters Tower** 54.01 175 P **P** **03 01 14.2 +0.6**
CTAO IAmb IAmb 03 01 15.3
comp=Z,80nm,1.9s
CTAO **Charters Tower** 54.01 175 P **P** **03 01 14.4 +0.8**
CTAO **Charters Tower** 54.01 175 P **P** **03 01 14.2 +0.6**
CTAO pmax pmax
comp=Z,80nm,1.9s
FITZ **Fitzroy Crossi** 54.08 199 P **P** **03 01 14.2 +0.1**
comp=Z,12nm,1.3s
FITZ **Fitzroy Crossi** 54.08 199 P **P** **03 01 14.4 +0.3**
comp=Z,24nm,0.6s,baz=17,slow=7.3,SNR=115
comp=Z,24nm,0.6s
FITZ **Fitzroy Crossi** 54.08 199 IAmb IAmb 03 01 15.3
comp=Z,41nm,1.9s
FITZ **Fitzroy Crossi** 54.08 199 P **P** **03 01 14.5 +0.5**
H27K **Steamboat Moun** 54.08 29 IAmb IAmb 03 01 16.9
comp=Z,48nm,1.4s
H27K **Steamboat Moun** 54.08 29 P **P** **03 01 15.7 +2.1**
baz=274,SNR=10
I27K **Kandik River** 54.09 30 P **P** **03 01 14.9 +1.2**
baz=274,SNR=8.3
D27M **Malcolm River** 54.14 25 IAmb IAmb 03 01 16.9
comp=Z,25nm,0.9s
D27M **Malcolm River** 54.14 25 P **P** **03 01 15.8 +1.7**
baz=272
WRAB **Tennant Creek** 54.14 189 P **P** **03 01 14.2 -0.3**
WRAB **Tennant Creek** 54.14 189 *ce*P **P** **03 01 14.2 -0.3**
WRAB pmax pmax
comp=Z,50nm,1.7s
WR0 **Warramunga Arr** 54.15 188 P **P** **03 01 13.6 -1.0**
WR8 **Warramunga Arr** 54.15 188 IAmb IAmb 03 01 15.3
comp=Z,26nm,0.6s
WRA **Warramunga Arr** 54.15 189 P **P** **03 01 14.2 -0.4**
comp=Z,17nm,0.6s,baz=6.0,slow=7.6,SNR=125
comp=Z,17nm,0.6s
WRA **Warramunga Arr** 54.15 189 P **P** **03 01 13.1 -1.5**
WRA **Warramunga Arr** 54.15 189 *i* P **P** **03 01 12.8 -1.8**
WRA pmax pmax
comp=Z,17nm,0.6s
WB1 **Warramunga Ar.** 54.17 189 P **P** **03 01 14.3 -0.4**
L27K **Beaver Creek,** 54.21 33 IAmb IAmb 03 01 17.2
comp=Z,26nm,0.9s
L27K **Beaver Creek,** 54.21 33 P **P** **03 01 16.2 +1.5**
baz=276
BCAR **Beaver Creek A** 54.23 33 P **P** **03 01 16.4 +1.6**
M27K **Edge Creek, AK** 54.26 34 P **P** **03 01 16.6 +1.4**
baz=276,SNR=6.0
QIS **Mount Isa** 54.34 182 P **P** **03 01 15.6 -0.4**
comp=Z,46nm,1.1s
QIS **Mount Isa** 54.34 182 P **P** **03 01 16.1 +0.1**
MESA **MESA** 54.49 37 P **P** **03 01 18.6 +1.7**
baz=278
GRNC **Granite Creek** 54.51 36 IAmb IAmb 03 01 19.1
comp=Z,25nm,0.8s
BARN **Barnard Glacie** 54.52 36 IAmb IAmb 03 01 19.2
comp=Z,28nm,0.9s
F28M **Old Crow** 54.63 27 IAmb IAmb 03 01 20.6
comp=Z,21nm,1.0s
F28M **Old Crow** 54.63 27 P **P** **03 01 19.4 +1.8**
baz=274,SNR=15
CTG **Chitna Glacier** 54.68 36 P **P** **03 01 19.4 +1.1**
baz=278
CTGM **Chitina Glacie** 54.69 36 IAmb IAmb 03 01 20.4
comp=Z,23nm,0.9s
E28M **Babbage River** 54.69 26 IAmb IAmb 03 01 21.0
comp=Z,29nm,1.0s
E28M **Babbage River** 54.69 26 P **P** **03 01 20.0 +2.0**
baz=274,SNR=28
BVCY **Beaver Creek** 54.73 34 P **P** **03 01 19.7 +1.3**
baz=277,SNR=8.6
I28M **Miner Creek** 54.80 30 IAmb IAmb 03 01 21.3
comp=Z,18nm,0.8s
I28M **Miner Creek** 54.80 30 P **P** **03 01 20.4 +1.4**
baz=276
D28M **Stokes Point** 54.93 25 P **P** **03 01 21.4 +1.7**
baz=274,SNR=7.3
YUK3 **Moose Creek** 54.99 35 P **P** **03 01 21.7 +1.1**
baz=278,SNR=9.5
DAWY **Dawson** 55.18 32 IAmb IAmb 03 01 24.0
comp=Z,39nm,1.7s
DAWY **Dawson** 55.18 32 P **P** **03 01 23.0 +1.3**
baz=277,SNR=6.8
O28M **Mount Upton** 55.27 36 P **P** **03 01 23.6 +0.9**
baz=279
E29M **Blow River** 55.31 26 IAmb IAmb 03 01 25.4
comp=Z,26nm,0.9s
E29M **Blow River** 55.31 26 P **P** **03 01 24.4 +1.9**
baz=275,SNR=26
H29M **Whitestone** 55.35 29 IAmb IAmb 03 01 42.9
comp=Z,43nm,1.6s
H29M **Whitestone** 55.35 29 P **P** **03 01 24.7 +1.8**
baz=276
BRLS **Boroldav** 55.37 302 *e*P **P** **03 01 24.0 +0.6**
BRLS **Boroldav** 55.37 302 *e*P **P** **03 01 23.9 +0.6**
G29M **Pine Creek** 55.41 28 P **P** **03 01 25.4 +2.2**
baz=276
IUG **Iuzhnay** 55.48 301 *e*P **P** **03 01 23.3 -1.0**
comp=Z,18nm,1.0s
IUG **Iuzhnay** 55.48 301 *e*P **P** **03 01 23.3 -1.0**
IUG pmax pmax
comp=Z,19nm,1.0s
CHM **Chimkent** 55.74 301 *e*P **P** **03 01 25.3 -0.7**
CHM **Chimkent** 55.74 301 *e*P **P** **03 01 25.3 -0.7**
M29M **Somme Creek** 55.83 34 IAmb IAmb 03 01 29.3
comp=Z,31nm,0.8s
M29M **Somme Creek** 55.83 34 P **P** **03 01 28.4 +2.0**
baz=279
NIL **Nilore** 55.83 290 P **P** **03 01 26.9 +0.1**
NIL IAmb IAmb 03 01 32.6
comp=Z,20nm,0.8s
NIL **Nilore** 55.83 290 P **P** **03 01 26.9 +0.1**
NIL pmax pmax
comp=Z,20nm,0.8s
L29M **L29M** 55.87 33 P **P** **03 01 28.8 +2.1**
baz=279,SNR=29
YUK4 **Talbot Arm** 55.92 35 P **P** **03 01 29.1 +1.9**
baz=280
EPYK **Eagle Plains** 56.00 29 P **P** **03 01 29.1 +1.6**
baz=278,SNR=24
K29M **Barlow Dome** 56.03 32 IAmb IAmb 03 01 30.7
comp=Z,28nm,1.1s
K29M **Barlow Dome** 56.03 32 P **P** **03 01 29.7 +1.9**
baz=279
G30M **tAoh Zraii Nji** 56.11 28 P **P** **03 01 29.6 +1.3**
baz=278
YUK6 **Outpost Mounta** 56.12 35 P **P** **03 01 30.4 +1.7**
baz=280
O29M **Mount Kennedy** 56.13 36 IAmb IAmb 03 01 31.8
comp=Z,41nm,1.1s
O29M **Mount Kennedy** 56.13 36 P **P** **03 01 30.6 +2.0**
baz=280
F30M **Barrier River** 56.19 27 P **P** **03 01 30.7 +1.9**
baz=278,SNR=20
GAR **Garm** 56.24 297 IAmb IAmb 03 01 34.4
comp=Z,34nm,0.9s
I30M **Mount Dempster** 56.31 30 IAmb IAmb 03 01 32.3
comp=Z,32nm,0.9s
I30M **Mount Dempster** 56.31 30 P **P** **03 01 31.2 +1.4**
baz=279,SNR=31
J30M **Hart River** 56.43 31 P **P** **03 01 32.2 +1.5**
baz=279,SNR=11
HYT **Haines Junctio** 56.56 35 IAmb IAmb 03 01 35.9
comp=Z,37nm,0.9s
HYT **Haines Junctio** 56.56 35 P **P** **03 01 33.6 +2.0**
baz=281,SNR=11
M30M **Minto, Yukon** 56.57 33 IAmb IAmb 03 01 34.5
comp=Z,24nm,0.9s
M30M **Minto, Yukon** 56.57 33 P **P** **03 01 33.5 +1.8**
baz=280,SNR=11
P29M **Windy Craggy** 56.67 37 IAmb IAmb 03 01 35.6
comp=Z,39nm,0.9s
P29M **Windy Craggy** 56.67 37 P **P** **03 01 34.1 +1.7**
baz=282,SNR=6.0
G31M **Satah River** 56.88 28 IAmb IAmb 03 01 35.1
comp=Z,22nm,0.6s
G31M **Satah River** 56.88 28 P **P** **03 01 34.5 +0.9**
baz=280,SNR=11
INK **Inuvik** 56.93 26 IAmb IAmb 03 01 35.8
comp=Z,22nm,1.0s
INK **Inuvik** 56.93 26 P **P** **03 01 34.8 +0.8**
baz=279,SNR=13
P30M **Million Dollar** 56.96 36 P **P** **03 01 36.2 +1.7**
baz=282,SNR=5.3
F31M **Tsiigehtchic** 56.99 27 P **P** **03 01 35.4 +0.9**
baz=280,SNR=7.7
H31M **Peel River** 57.04 29 IAmb IAmb 03 01 37.4
comp=Z,44nm,1.1s
H31M **Peel River** 57.04 29 P **P** **03 01 36.2 +1.3**
baz=280
N31M **Braeburn, Yuko** 57.25 34 P **P** **03 01 38.5 +2.0**
baz=282,SNR=11
O30N **Mendenhall** 57.25 35 P **P** **03 01 38.2 +1.7**
baz=282
PLBC **Pleasant Camp** 57.40 37 P **P** **03 01 39.3 +1.9**
baz=283,SNR=7.6
SVE **Sverdlovsk** 57.56 320 *e*P **P** **03 01 39.4 +0.7**
SVE pmax pmax
comp=Z,33nm,1.0s
AUNRC **North Rockhamp** 57.70 170 P **P** **03 01 40.9 +1.0**
M31M **Drury Creek, Y** 57.74 33 IAmb IAmb 03 01 42.4
comp=Z,35nm,0.9s
M31M **Drury Creek, Y** 57.74 33 P **P** **03 01 41.5 +1.7**
baz=282,SNR=14
WHY **Whitehorse** 57.85 35 P **P** **03 01 42.6 +1.8**
baz=283,SNR=14
ASAR **Alice Springs** 57.88 188 P **P** **03 01 41.0 -0.3**
comp=Z,15nm,0.8s,baz=13,slow=8.5,SNR=167
ASAR PcP **PcP** **03 02 34.1 +0.6**
comp=Z,9.6nm,0.8s,baz=14,slow=4.9,SNR=5.8
comp=Z,15nm,0.8s
ASAR **Alice Springs** 57.88 188 P **P** **03 01 40.7 -0.5**
AUALC **St Philip's Co** 57.91 188 P **P** **03 01 41.3 -0.1**
SKAG **Skagway** 57.91 37 P **P** **03 01 42.9 +1.9**
baz=284
SIT **Sitka** 58.50 39 P **P** **03 01 46.8 +1.6**
baz=285
N32M **Quiet Lake** 58.59 34 P **P** **03 01 47.3 +1.4**
baz=284
R32K **Eaglecrest** 58.61 38 P **P** **03 01 47.3 +1.3**
baz=285
P32M **Atlin** 58.68 36 IAmb IAmb 03 01 49.3
comp=Z,34nm,0.9s
P32M **Atlin** 58.68 36 P **P** **03 01 48.1 +1.6**
baz=285,SNR=8.0
JIS **Juneau Island** 58.68 38 P **P** **03 01 47.7 +1.3**
KBL **Kabul** 58.76 293 P **P** **03 01 47.2 -0.5**
KBL IAmb IAmb 03 02 07.2
comp=Z,17nm,0.9s
KBL **Kabul** 58.76 293 P **P** **03 01 47.2 -0.5**
SNR=7.5
KBL **Kabul** 58.76 293 P **P** **03 01 47.2 -0.5**
KBL pmax pmax
comp=Z,17nm,1.0s
MBWA **Marble Bar** 58.77 204 P **P** **03 01 46.5 -0.9**
comp=Z,43nm,1.0s
MBWA **Marble Bar** 58.77 204 P **P** **03 01 47.1 -0.3**
MBWA **Marble Bar** 58.77 204 P **P** **03 01 47.3 -0.1**
MBWA **Marble Bar** 58.77 204 P **P** **03 01 48.2 +0.8**
ARTI **Arti** 58.88 320 LR LR 03 30 03.8
comp=Z,126nm,21.1s,baz=91,slow=39
ARTI **Arti** 58.88 320 P **P** **03 01 47.6 -0.3**
ARTI **Arti** 58.88 320 *ce*P **P** **03 01 47.8 -0.1**
ARTI pmax pmax
comp=Z,53nm,1.3s
A36M **Sachs Harbour** 58.93 21 P **P** **03 01 49.3 +1.3**
baz=285,SNR=32
P33M **Teslin, Yukon** 58.95 36 P **P** **03 01 50.2 +1.7**
baz=285,SNR=20
PSAC2 **Pilbara Seismi** 59.08 204 P **P** **03 01 48.8 -0.8**
comp=Z,36nm,0.9s

PSAC1 **Pilbara Seismi** 59.09 204 P P 03 01 49.3 -0.3
comp=Z,42nm,1.3s
PSA00 **Pilbara Seismi** 59.11 204 P P 03 01 49.7 -0.1
comp=Z,35nm,0.8s
PSA00 **Pilbara Seismi** 59.11 204 P P 03 01 49.4 -0.4
PSA00 IAmb IAmb 03 01 50.5
comp=Z,18nm,0.9s
PSA00 **Pilbara Seismi** 59.11 204 IAmb IAmb 03 01 50.5
comp=Z,31nm,0.9s
PSA00 **Pilbara Seismi** 59.11 204 P P 03 01 50.9 +1.1
PSAB3 **Pilbara Seismi** 59.13 204 P P 03 01 49.2 -0.7
comp=Z,28nm,0.8s
Q32M **Nakina River** 59.56 37 P P 03 01 54.6 +1.8
baz=286
EIDS **Eidsvold** 59.76 170 P P 03 01 55.0 +0.8
comp=Z,21nm,0.9s
EIDS **Eidsvold** 59.76 170 IAmb IAmb 03 01 55.7
comp=Z,15nm,0.9s
EIDS **Eidsvold** 59.76 170 P P 03 01 54.8 +0.6
C36M **Paulatuk** 60.03 24 P P 03 01 56.3 +0.7
C36M IAmb IAmb 03 01 56.7
comp=Z,23nm,0.7s
C36M **Paulatuk** 60.03 24 P P 03 01 56.2 +0.6
baz=287,SNR=18
R33M **Jennings River** 60.08 36 IAmb IAmb 03 01 59.4
comp=Z,24nm,1.1s
R33M **Jennings River** 60.08 36 P P 03 01 58.2 +1.9
baz=287,SNR=5.8
CRAG **Craig** 60.12 41 P P 03 01 58.4 +2.0
baz=288
WRKA **Warakurna** 60.13 194 P P 03 01 56.4 -0.5
comp=Z,20nm,1.0s
WRAK **Wrangell Islan** 60.26 40 P P 03 01 59.0 +1.7
baz=288
QLP **Quilpie** 60.35 177 P P 03 01 58.2 -0.1
comp=Z,60nm,1.2s
QLP **Quilpie** 60.35 177 P P 03 01 59.1 +0.9
S34M **Telegraph Cree** 60.44 38 IAmb IAmb 03 02 01.7
comp=Z,37nm,1.1s
S34M **Telegraph Cree** 60.44 38 P P 03 02 00.6 +2.0
baz=288,SNR=7.9
DLBC **Dease Lake** 60.83 37 P P 03 02 03.3 +1.9
baz=288,SNR=11
AKTO **Aktyubinsk** 60.87 313 LR LR 03 30 34.3
comp=Z,334nm,18.6s,baz=240,slow=38
WTLY **Watson Lake, Y** 60.91 35 P P 03 02 03.5 +1.7
baz=288,SNR=8.1
T35M **Bob Quinn** 61.18 39 P P 03 02 06.3 +2.6
baz=289,SNR=8.3
INKA **Innaminka** 61.47 181 P P 03 02 05.6 -0.2
INKA IAmb IAmb 03 02 07.0
comp=Z,22nm,0.8s
PALK **Pallekele** 62.02 259 P P 03 02 09.8 -0.1
PALK IAmb IAmb 03 02 10.8
comp=Z,20nm,0.9s
PALK **Pallekele** 62.02 259 P P 03 02 09.7 -0.2
PALK **Pallekele** 62.02 259 P P 03 02 09.9 -0.1
PALK pmax pmax
comp=Z,20nm,0.9s
WRGLY **Wrigley** 62.27 31 P P 03 02 12.3 +1.4
WRGLY **Wrigley** 62.27 31 P P 03 02 12.4 +1.6
baz=291,SNR=5.4
LIRD **Liard River Hi** 62.43 35 P P 03 02 13.9 +1.9
baz=291,SNR=37
KIRV **Kirov** 62.78 324 LR LR 03 32 44.4
comp=Z,586nm,18.7s,baz=55,slow=39
KIRV **Kirov** 62.78 324 *ce*P P 03 02 14.5 +0.1
TOAD **Toad River Com** 63.05 36 P P 03 02 17.6 +1.4
baz=292,SNR=11
KOTAN **Kotaneelee Air** 63.13 34 P P 03 02 17.9 +1.2
baz=292
AULRC **Lightning Ridg** 63.42 174 P P 03 02 19.2 +0.4
HRA **Herat** 63.97 295 P P 03 02 23.6 +0.6
HRA IAmb IAmb 03 02 41.3
comp=Z,15nm,0.7s
BBB **Bella Bella** 64.04 43 LR LR 03 26 39.7
comp=Z,86nm,21.2s,baz=236,slow=33
MEEK **Meekatharra** 64.22 203 P P 03 02 23.5 -0.7
comp=Z,22nm,1.0s
MEEK **Meekatharra** 64.22 203 P P 03 02 24.2 0.0
ARMA **Armidale** 64.81 171 IAmb IAmb 03 02 30.9
comp=Z,28nm,1.0s
CMSA **Cobar Meteorol** 65.35 176 P P 03 02 32.2 +0.8
comp=Z,44nm,1.1s
CMSA **Cobar Meteorol** 65.35 176 P P 03 02 32.7 +1.3
RES **Resolute Bay** 65.42 14 LR LR 03 36 23.3
comp=Z,51nm,18.0s,baz=349,slow=41
RES **Resolute Bay** 65.42 14 P P 03 02 31.6 +0.2
RES **Resolute Bay** 65.42 14 P P 03 02 31.6 +0.2
RES pmax pmax
comp=Z,32nm,1.0s
APA **Apatity** 65.51 336 ⇓*e*P P 03 02 35.6 +3.5
APA *e* 03 02 59.7
APA MLR MLR
comp=Z,891nm,5.2s
STKA **Stephens Creek** 65.58 180 P P 03 02 32.9 0.0
comp=Z,66nm,2.7s
STKA **Stephens Creek** 65.58 180 P P 03 02 33.5 +0.6
comp=Z,14nm,1.1s,baz=350,slow=7.2,SNR=13
comp=Z,14nm,1.1s
STKA **Stephens Creek** 65.58 180 P P 03 02 33.8 +0.9
STKA **Stephens Creek** 65.58 180 *i*P P 03 02 32.9 0.0
FORT **Forrest** 65.76 193 P P 03 02 34.2 +0.1
comp=Z,82nm,1.0s
FORT **Forrest** 65.76 193 P P 03 02 34.6 +0.5
BELG **Belogornoye** 66.16 318 *i*P P 03 02 36.6 +0.1
BELG pmax pmax
comp=Z,6.0nm,0.8s
YKA **Yellowknife Ar** 66.26 30 P P 03 02 37.4 +0.4
comp=Z,4.8nm,0.8s,baz=297,slow=7.0,SNR=8.9
comp=Z,4.8nm,0.8s
YKAW1 **Yellowknife Wh** 66.32 30 IAmb IAmb 03 02 38.7
comp=Z,17nm,0.9s
KLMR **Klimovskoe** 66.41 329 *e*P P 03 02 36.2 -1.8
KLMR pmax pmax
comp=Z,48nm,1.8s
BBOO **Buckleboo** 66.72 185 P P 03 02 40.1 -0.2
comp=Z,34nm,1.0s
BBOO **Buckleboo** 66.72 185 P P 03 02 40.3 0.0
BBOO **Buckleboo** 66.72 185 P P 03 02 40.9 +0.7
WHYH **Whyalla** 66.85 184 P P 03 02 41.8 +0.8
ARCES **ARCESS Array B** 66.87 340 P P 03 02 41.1 +0.2
comp=Z,3.9nm,0.7s,baz=40,slow=8.4,SNR=5.6
comp=Z,3.9nm,0.7s
ARCES **ARCESS Array B** 66.87 340 P P 03 02 41.1 +0.2
ARCES pmax pmax
comp=Z,112nm,1.9s
HTT **Hallett** 67.18 183 P P 03 02 43.4 +0.2
comp=Z,9.7nm,1.1s
HTT **Hallett** 67.18 183 P P 03 02 44.0 +0.8
MORW **Morawa** 67.32 204 P P 03 02 43.7 -0.4
comp=Z,28nm,1.3s
MORW **Morawa** 67.32 204 P 03 02 44.0 -0.1
MORW IAmb IAmb 03 02 44.9
comp=Z,23nm,1.0s
MORW **Morawa** 67.32 204 P P 03 02 44.2 +0.1
KMBL **Kambalda** 67.71 198 P P 03 02 46.0 -0.6
comp=Z,11nm,1.1s
LLLB **Lillooet** 68.24 43 P P 03 02 50.9 +1.0
LLLB IAmb IAmb 03 02 52.0
comp=Z,28nm,0.9s
YNG **Young** 68.28 174 P P 03 02 51.0 +0.9
comp=Z,33nm,1.2s
NEEM **North Greenlan** 68.48 3 *i*P P 03 02 51.1 -0.2
NEEM IAmb IAmb 03 02 52.0
comp=Z,20nm,0.8s
BLDU **Ballidu** 68.52 203 P P 03 02 51.2 -0.4
comp=Z,23nm,1.1s
BLDU **Ballidu** 68.52 203 P P 03 02 51.7 +0.1
JOF **Joensuu** 68.71 333 *e*P P 03 02 51.9 -0.6
DAG **Danmarks Havn** 68.76 355 *i*P P 03 02 52.0 -0.6
DAG IAmb IAmb 03 02 52.9
comp=Z,8.5nm,0.9s
KLBR **Kellerberrin** 69.09 202 P P 03 02 54.7 -0.5
comp=Z,65nm,0.8s
KLBR **Kellerberrin** 69.09 202 P P 03 02 55.1 -0.1
GNW **Green Mountain** 69.11 46 IAmb IAmb 03 02 58.3
comp=Z,32nm,1.1s
CNB **Canberra Magne** 69.38 173 P P 03 02 54.5 -2.5
D05A **Enumclaw** 69.78 46 IAmb IAmb 03 03 02.1
comp=Z,27nm,1.0s
MOS **Moscow** 69.80 324 *e*P P 03 02 57.2 -2.1
MOS pmax pmax
comp=Z,29nm,1.0s
VRH **Novokhopyorsk** 69.97 319 *e*P P 03 02 58.0 -2.5
VRH pmax pmax
comp=Z,10.0nm,0.9s
COR **Corvallis** 70.22 49 P P 03 03 04.6 +2.5
COR **Corvallis** 70.22 49 P P 03 03 04.6 +2.5
COR pmax pmax
comp=Z,56nm,1.0s
ARPS **Mount Arapiles** 70.46 180 P P 03 03 03.4 -0.1
comp=Z,17nm,1.3s
NWAO **Narrogin (SRO)** 70.49 202 P P 03 03 03.4 -0.4
comp=Z,67nm,0.9s
NWAO **Narrogin (SRO)** 70.49 202 P P 03 03 03.1 -0.7
comp=Z,41nm,0.9s
NWAO **Narrogin (SRO)** 70.49 202 P P 03 03 03.8 0.0
NWAO IAmb IAmb 03 03 04.7
comp=Z,22nm,0.8s
NWAO **Narrogin (SRO)** 70.49 202 P P 03 03 03.6 -0.2
NWAO **Narrogin (SRO)** 70.49 202 P P 03 03 03.8 0.0
NWAO pmax pmax
comp=Z,22nm,0.9s
LTY **Liberty** 70.54 46 IAmb IAmb 03 03 05.7
comp=Z,14nm,0.9s
H04D **Lebanon** 70.60 49 IAmb IAmb 03 03 10.8
comp=Z,26nm,1.0s
OBN **Obninsk** 70.64 324 *d i*P P 03 03 04.0 -0.5
OBN *i* 03 03 11.6
OBN *i* 03 03 26.6
OBN *i* 03 05 43.3
OBN pmax pmax
comp=Z,19nm,1.2s
OBN MLR MLR
comp=Z,441nm,18.0s
LPSR **Galich'ya Gora** 70.76 321 *e*P P 03 03 03.3 -2.0
LPSR pmax pmax
comp=Z,20nm,0.9s
K02D **Willamette Mer** 70.89 51 IAmb IAmb 03 03 09.1
comp=Z,30nm,1.1s
AKT **Akhty** 71.07 308 *e*P P 03 03 06.2 -1.4
AKT *e* 03 03 25.4
AKT pmax pmax
comp=Z,35nm,0.7s
MILA **Mila** 71.08 174 P P 03 03 08.5 +1.2
comp=Z,23nm,1.0s
VORR **Voronezh** 71.09 320 *e*P P 03 03 04.1 -3.2
VORR pmax pmax
comp=Z,10.0nm,0.9s
MXC **Moxie City** 71.10 46 IAmb IAmb 03 03 10.1
comp=Z,30nm,0.9s
G05A **Wamic** 71.13 48 IAmb IAmb 03 03 10.6
comp=Z,30nm,0.9s
KSXB **Camp Six Broad** 71.17 52 IAmb IAmb 03 03 11.2
comp=Z,31nm,1.1s
L02F **Cave Junction** 71.23 52 IAmb IAmb 03 03 11.2
comp=Z,16nm,0.9s
BRAT **Ballarat** 71.27 178 P P 03 03 09.1 +0.8
AUMTC **Mt Clear Colle** 71.33 178 P P 03 03 09.9 +1.2
VSR **Storozhevoye** 71.34 320 *e*P P 03 03 03.5 -5.4
VSR pmax pmax
comp=Z,20nm,1.0s
TOO **Toolangi** 71.35 177 P P 03 03 10.1 +1.2
comp=Z,9.2nm,2.4s
E07A **Sunnyside** 71.37 46 P 03 03 10.6 +1.5
E07A IAmb IAmb 03 03 11.7
comp=Z,31nm,1.0s
VORD **Divnogorie** 71.41 319 *e*P P 03 03 06.8 -2.4
VORD pmax pmax
comp=Z,10.0nm,1.0s
WAH2 **Wahluke Slope** 71.44 46 IAmb IAmb 03 03 11.8
comp=Z,20nm,1.0s
I05D **Terrebonne, OR** 71.56 49 IAmb IAmb 03 03 13.0
comp=Z,26nm,0.8s
FINES **FINESS Array B** 71.57 333 P P 03 03 10.0 0.0
comp=Z,17nm,0.8s,baz=68,slow=7.0,SNR=37
FINES LR LR 03 38 29.1
comp=Z,296nm,18.0s,baz=38,slow=39
comp=Z,17nm,0.8s
FINES **FINESS Array B** 71.57 333 P P 03 03 10.1 0.0
FINES **FINESS Array B** 71.57 333 *i*P P 03 03 09.8 -0.2
FINES pmax pmax
comp=Z,17nm,0.8s
KEF **Keuruu** 71.57 334 *e*P P 03 03 09.5 -0.5
HAWA **Hanford** 71.64 46 IAmb IAmb 03 03 13.2
comp=Z,16nm,0.9s
D08A **Wamman Farm,** 71.67 45 IAmb IAmb 03 03 13.1
comp=Z,23nm,0.9s
C09A **Chrisman Ranch** 71.67 44 IAmb IAmb 03 03 13.1
comp=Z,29nm,0.9s
KHMM **Horse Mountain** 71.73 53 IAmb IAmb 03 03 14.2
comp=Z,27nm,1.0s
VAF **Ylistaro** 71.80 335 *e*P P 03 03 11.2 -0.1
JLN **Jalan Bani Buh** 71.82 285 P P 03 03 12.0 -0.3
WSAR **Wadi Sarin** 71.91 286 P P 03 03 13.1 +0.4
WBK **Wadi Bani Khal** 71.95 285 P P 03 03 13.2 +0.1
YBH **Yreka Blue Hor** 71.98 52 P P 03 03 15.2 +2.1
comp=Z,0.9nm,0.9s,baz=349,slow=2.4,SNR=32
YBH LR LR 03 28 16.6
comp=Z,13nm,21.8s,baz=291,slow=30
NEW **Newport** 72.10 44 P P 03 03 14.9 +1.3
comp=Z,24nm,0.9s,baz=298,slow=5.2,SNR=44
comp=Z,24nm,0.9s
NEW **Newport** 72.10 44 IAmb IAmb 03 03 15.7
comp=Z,29nm,0.9s
YPT **Yellepit** 72.16 46 IAmb IAmb 03 03 16.4
comp=Z,18nm,0.9s
N02D **Trinity Center** 72.36 52 IAmb IAmb 03 03 18.2
comp=Z,22nm,0.9s
E09A **Wood Farm, Sta** 72.41 45 IAmb IAmb 03 03 17.8
comp=Z,39nm,1.1s
BANOM **Banah** 72.42 290 P P 03 03 16.2 +0.4
KCPM **Cahto Peak** 72.42 54 IAmb IAmb 03 03 18.5
comp=Z,41nm,1.1s
SMDO **Samad** 72.46 286 P P 03 03 15.6 -0.6
SNR=3
SHME **Shamm** 72.48 290 P P 03 03 16.4 +0.2
O02D **Mt. Diablo Mer** 72.70 53 IAmb IAmb 03 03 20.3
comp=Z,25nm,1.1s
JMDO **Jabal Madar** 72.76 286 P P 03 03 17.4 -0.5
HOQ **Hoqain** 72.78 287 P P 03 03 17.9 -0.2
SNR=5.8
ARBE **Arbavere** 72.85 331 *e*P P 03 03 17.2 -0.5
UOSS **Minazif** 72.98 289 P P 03 03 19.1 -0.1
KBZ **Khabaz** 73.04 312 P P 03 03 19.7 +0.5
comp=Z,15nm,1.0s,baz=55,slow=4.3,SNR=17
KBZ LR LR 03 40 16.3
comp=Z,213nm,18.2s,baz=40,slow=40
comp=Z,15nm,1.0s
KBZ **Khabaz** 73.04 312 *ce*P P 03 03 19.5 +0.3
KBZ pmax pmax
comp=Z,20nm,1.0s
KIV **Kislovodsk** 73.06 312 P P 03 03 19.9 +0.6
KIV **Kislovodsk** 73.06 312 P P 03 03 20.5 +1.1
KIV **Kislovodsk** 73.06 312 ⇑P P 03 03 20.0 +0.6
KIV **Kislovodsk** 73.06 312 *e*P P 03 03 18.3 -1.1
KIV pmax pmax
comp=Z,34nm,1.1s
HATD **Hatta, Dubai** 73.09 289 P P 03 03 20.4 +0.6
SOHO **SOHO** 73.12 288 P P 03 03 19.7 -0.3
VSU **Vasula** 73.15 330 *e*P P 03 03 18.5 -1.0
VSU **Vasula** 73.15 330 *ce*P P 03 03 19.7 +0.2
VSU pmax pmax
comp=Z,25nm,1.3s
SHA1 **Shidzhatmaz** 73.19 312 *i*P P 03 03 20.0 -0.4
ASHO **Ashiyiah** 73.22 289 P P 03 03 20.6 0.0
HATC **Hat Creek Radi** 73.25 52 IAmb IAmb 03 03 23.2
comp=Z,30nm,0.9s
BSY **Bisya** 73.29 286 P P 03 03 21.5 +0.4
SNR=5.1
O03E **Paynes Creek** 73.30 53 IAmb IAmb 03 03 22.8
comp=Z,27nm,1.1s
RAF **Rauma** 73.44 334 *e*P P 03 03 20.9 -0.3
ARQ **Araqi** 73.53 287 P P 03 03 22.7 +0.3
SNR=6.3
FAQ **Al Faqa, Dubai** 73.56 289 P P 03 03 22.4 -0.2
MHTO **MHTO** 73.57 284 P P 03 03 21.5 -1.1
SNR=7.6
SUMG **Summit** 73.66 0 IAmb IAmb 03 03 24.9
comp=Z,36nm,1.0s
SUMG **Summit** 73.66 0 *i*P P 03 03 23.0 +0.2
SUMG IAmb IAmb 03 03 25.2
comp=Z,32nm,0.9s
GNI **Garni** 73.70 308 LR LR 03 39 09.9
comp=Z,255nm,19.9s,baz=64,slow=39
BMO **Blue Mountains** 73.78 47 IAmb IAmb 03 03 26.0
comp=Z,24nm,0.9s
ALNE **Al Ain** 73.78 288 P P 03 03 24.0 +0.1
WVOR **Wild Horse Val** 74.23 49 IAmb IAmb 03 03 28.9
comp=Z,18nm,0.9s
BEKR **Beckworth** 74.47 52 IAmb IAmb 03 03 29.9
comp=Z,23nm,0.8s
MSO **Missoula** 74.69 44 IAmb IAmb 03 03 30.9
comp=Z,26nm,1.2s
MPK **Martis Peak** 74.98 53 IAmb IAmb 03 03 33.5
comp=Z,41nm,1.3s
SAATT **Saattut** 74.99 5 *i*P P 03 03 30.3 +0.3
SAATT IAmb IAmb 03 03 32.1
comp=Z,110nm,1.5s
SOC **Sochi** 75.08 313 *e*P P 03 03 28.8 -2.3
SOC *e* 03 06 15.1
SOC *e*PPP PPP 03 08 01.8
SOC *e*S S 03 13 07.9 +0.2
SOC MLR MLR
comp=Z,226nm,18.0s
SCO **Scoresbysund** 75.10 354 *i*P P 03 03 31.0 +0.4
SCO IAmb IAmb 03 03 32.8
comp=Z,17nm,1.0s
MNK **Minsk** 75.10 326 *i*P P 03 03 31.3 +0.3
MNK *i* 03 06 19.7
MNK *i*PPP PPP 03 08 05.9
MNK *i*S S 03 13 10.8 +3.2
MNK pmax pmax
comp=Z,26nm,0.9s
MNK pmax pmax
comp=N,12nm,0.8s
MNK pmax pmax
comp=E,20nm,0.9s
MNK MLR MLR
comp=E,229nm,16.0s
MNK MLR MLR
comp=Z,265nm,16.0s
MNK MLR MLR
comp=N,120nm,12.0s
ISAL **Salakas** 75.22 328 *e*P P 03 03 31.8 +0.1
CMB **Columbia Colle** 75.41 54 IAmb IAmb 03 03 35.4
comp=Z,19nm,1.0s
MFID **Camas Ranch** 75.45 47 IAmb IAmb 03 03 35.9
comp=Z,31nm,1.0s
BBGB **Big Mountain B** 75.73 55 IAmb IAmb 03 03 37.6
comp=Z,25nm,0.9s
FFC **Flin Flon** 76.08 32 P P 03 03 36.9 +0.3
FFC IAmb IAmb 03 03 37.9
comp=Z,34nm,1.1s
FFC **Flin Flon** 76.08 32 P P 03 03 36.9 +0.3
FFC pmax pmax
comp=Z,34nm,1.1s
PABE **Paberze** 76.20 329 *e*P P 03 03 37.8 +0.5
HLID **Hailey** 76.22 47 IAmb IAmb 03 03 40.6
comp=Z,18nm,1.0s
GURO **Guroymak-BITLI** 76.33 307 IAmb IAmb 03 03 40.5
comp=Z,19nm,1.0s
EGMT **Eagleton** 76.35 41 IAmb IAmb 03 03 40.5
comp=Z,39nm,1.1s
GDH **Godhavn** 76.39 6 *i*P P 03 03 37.3 -0.8
GDH IAmb IAmb 03 03 38.7
comp=Z,34nm,0.9s
PKD **Bear Valley Ra** 76.41 56 IAmb IAmb 03 03 41.1
comp=Z,27nm,1.0s
LHV **Little Huntoon** 76.55 53 IAmb IAmb 03 03 42.0
comp=Z,16nm,1.0s
NVAR **Mina Array Bea** 76.58 53 P P 03 03 41.4 +1.3
comp=Z,8.5nm,0.7s,baz=286,slow=5.8,SNR=64
NVAR LR LR 03 34 25.5
comp=Z,175nm,19.3s,baz=274,slow=33
comp=Z,8.5nm,0.7s
BOZ **Bozeman (W)** 76.71 44 IAmb IAmb 03 03 42.9
comp=Z,28nm,0.9s
AKASG **Malin Array Be** 76.81 323 P P 03 03 40.4 -0.4
comp=Z,6.1nm,0.5s,baz=48,slow=6.0,SNR=40
AKASG LR LR 03 41 24.2
comp=Z,814nm,18.4s,baz=45,slow=39
comp=Z,6.1nm,0.5s
AKASG **Malin Array Be** 76.81 323 P P 03 03 40.8 0.0
AKASG **Malin Array Be** 76.81 323 *i*P P 03 03 40.4 -0.4
AKASG pmax pmax
comp=Z,14nm,0.8s
AKBB **Malin Array Si** 76.81 323 IAmb IAmb 03 03 41.4
comp=Z,22nm,0.8s
AKBB **Malin Array Si** 76.81 323 *ce*P P 03 03 39.2 -1.6
AKBB pmax pmax
comp=Z,21nm,0.9s
NC405 **NORSAR Array S** 76.81 338 IAmb IAmb 03 03 41.8
comp=Z,38nm,1.0s
KIEV **Kiev** 76.82 323 P P 03 03 40.6 -0.3
KIEV IAmb IAmb 03 03 41.4
comp=Z,20nm,0.8s
KIEV **Kiev** 76.82 323 ⇑P P 03 03 40.7 -0.1
KIEV **Kiev** 76.82 323 ⇑P P 03 03 40.7 -0.1
NC303 **NORSAR Array S** 76.84 338 IAmb IAmb 03 03 43.8
comp=Z,19nm,1.1s
HFS **Hagfors** 76.90 336 P P 03 03 41.1 -0.1
comp=Z,6.1nm,0.7s,baz=93,slow=3.1,SNR=21
HFS LR LR 03 40 36.8
comp=Z,426nm,20.4s,baz=62,slow=38
comp=Z,6.1nm,0.7s
NC204 **NORSAR Array S** 76.99 338 IAmb IAmb 03 03 42.8
comp=Z,24nm,0.8s
NB201 **NORSAR Array S** 77.00 338 IAmb IAmb 03 03 42.3
comp=Z,34nm,1.1s
NB2 **NORSAR Subarra** 77.03 338 P P 03 03 41.6 -0.3
comp=Z,29nm,1.0s,baz=40,slow=5.9
NOA **NORSAR Array B** 77.03 338 P P 03 03 41.8 -0.1
comp=Z,9.9nm,0.8s,baz=39,slow=5.7,SNR=42
NOA LR LR 03 41 33.8
comp=Z,411nm,19.3s,baz=55,slow=39
comp=Z,9.9nm,0.8s
NBO00 **NORSAR Array S** 77.17 338 IAmb IAmb 03 03 43.8
comp=Z,22nm,0.9s
NAO01 **NORSAR Array S** 77.28 338 IAmb IAmb 03 03 44.1
comp=Z,23nm,1.0s
ELK **Elko** 77.29 49 P P 03 03 45.5 +1.4
comp=Z,8.3nm,0.9s,baz=306,slow=6.4,SNR=34
ELK LR LR 03 34 37.9
comp=Z,50nm,20.2s,baz=272,slow=33
comp=Z,8.3nm,0.9s
ELK **Elko** 77.29 49 IAmb IAmb 03 03 46.8
comp=Z,18nm,1.1s
KBD **Kabd** 77.33 297 P P 03 03 44.0 -0.2
YHL **Hebgen Lake** 77.40 44 IAmb IAmb 03 03 47.4
comp=Z,29nm,1.0s
VES **Vestal, Richgr** 77.46 55 IAmb IAmb 03 03 46.2
comp=Z,31nm,0.8s
SUW **Suwalki** 77.53 328 *e*P P 03 03 44.9 +0.1
YMR **Madison River** 77.63 44 IAmb IAmb 03 03 48.8
comp=Z,34nm,1.0s
SIM **Simferopol'** 77.63 316 P P 03 03 46.2 +0.6
SIM pmax pmax
comp=Z,20nm,0.8s
SIM MLR MLR
comp=Z,100nm,14.0s
DMTO **DMTO** 77.69 283 P P 03 03 45.9 -0.4
YNR **Norris Junctio** 77.77 44 IAmb IAmb 03 03 50.7
comp=Z,33nm,1.1s
MARD **Mardin** 77.83 307 IAmb IAmb 03 03 48.6
comp=Z,27nm,0.8s
DOK **Doka** 77.88 284 P P 03 03 46.6 -0.7
YPP **Pitchstone Pla** 77.96 44 IAmb IAmb 03 03 51.5
comp=Z,20nm,1.0s
HVU **Hansel Valley** 78.23 47 IAmb IAmb 03 03 52.0
comp=Z,34nm,0.9s
MOOW **Moose Ponds** 78.30 45 IAmb IAmb 03 03 52.5
comp=Z,16nm,0.9s
TPAW **Teton Pass** 78.33 45 IAmb IAmb 03 03 52.8
comp=Z,31nm,0.9s
RBK **Rabkut** 78.41 283 P P 03 03 49.3 -1.0
R11B **Troy Canyon, C** 78.41 52 IAmb IAmb 03 03 52.8
comp=Z,47nm,1.9s
LOHW **Long Hollow** 78.46 45 IAmb IAmb 03 03 53.3
comp=Z,17nm,1.0s
SNOW **Snow King Moun** 78.46 45 IAmb IAmb 03 03 53.5
comp=Z,29nm,1.0s
WHFO **Wadi Hawf** 78.54 284 P P 03 03 49.9 -1.2
TPO **Tropico Hills** 78.57 56 IAmb IAmb 03 03 52.9
comp=Z,18nm,0.9s
FURC **Furnace Creek,** 78.62 54 IAmb IAmb 03 03 55.3
comp=Z,20nm,1.1s
AHID **Auburn Hatcher** 78.67 46 IAmb IAmb 03 03 53.9
comp=Z,22nm,0.9s
S11A **Rachel** 78.70 52 IAmb IAmb 03 03 54.4
comp=Z,82nm,1.9s
CCCA **Chr Cany lake** 78.80 55 IAmb IAmb 03 03 54.5
comp=Z,25nm,1.3s
SFJD **Kangerlussuaq** 78.83 5 LR LR 03 40 25.2
comp=Z,150nm,21.4s,baz=352,slow=37
SFJD **Kangerlussuaq** 78.83 5 *i*P P 03 03 51.0 -0.7
SFJD IAmb IAmb 03 03 52.9
comp=Z,16nm,1.0s

SPR3 **Spring Creek 3** 78.85 50 IAmb IAmb 03 03 56.6
comp=Z,30nm,1.5s
SORM **Soroca** 78.86 321 ⇓P P **03 03 51.9 -0.4**
SORM **Soroca** 78.86 321 ⇓P P **03 03 51.9 -0.4**
QSM **Queen of Sheba** 78.89 54 IAmb IAmb 03 03 54.8
comp=Z,21nm,1.0s
MWC **Mount Wilson** 79.05 56 IAmb IAmb 03 03 55.8
comp=Z,38nm,1.5s
DUG **Dugway, Tooele** 79.12 49 IAmb IAmb 03 03 56.8
comp=Z,33nm,1.0s
ABTO **Aybut** 79.22 284 P P **03 03 54.1 -0.7**
MILM **Milestii Mici** 79.38 320 *eP* P **03 03 53.0 -2.1**
comp=Z,18nm,1.0s
MILM *eL* L 03 42 19.0
MILM LRM MLR 03 42 39.0
comp=Z,500nm,18.0s
TCUT **Toone Canyon** 79.45 47 IAmb IAmb 03 03 58.5
comp=Z,36nm,0.9s
CTU **Camp Tracy** 79.49 48 IAmb IAmb 03 03 58.5
comp=Z,24nm,1.0s
PDAR **Pinedale Array** 79.58 45 P P **03 03 57.3 +0.6**
comp=Z,10nm,0.7s,baz=273,slow=2.4,SNR=100
comp=Z,10nm,0.7s
FRB **Frobisher Bay** 79.61 13 LR LR 03 42 45.7
comp=Z,153nm,20.6s,baz=300,slow=38
MPU **Maple Canyon** 79.96 48 IAmb IAmb 03 04 01.3
comp=Z,33nm,1.1s
ILGA **Ilgaz** 80.18 313 IAmb IAmb 03 04 23.0
comp=Z,20nm,0.8s
DNR **Dunn Ranch,Anz** 80.40 56 IAmb IAmb 03 04 03.1
comp=Z,41nm,1.0s
VLDR **Vladesti** 80.45 320 ⇑P P **03 04 00.8 -0.2**
PFO **Pinyon Flats O** 80.49 56 P P **03 04 02.7 +1.1**
comp=Z,18nm,0.8s,baz=301,slow=4.8,SNR=29
PFO LR LR 03 33 14.3
comp=Z,327nm,20.4s,baz=280,slow=31
comp=Z,18nm,0.8s
PFO **Pinyon Flats O** 80.49 56 P P **03 04 02.2 +0.6**
PFO IAmb IAmb 03 04 03.5
comp=Z,25nm,1.0s
PFO **Pinyon Flats O** 80.49 56 *i* P P **03 04 01.1 -0.5**
PFO pmax pmax
comp=Z,36nm,0.9s
PMD **Palm Desert** 80.53 56 IAmb IAmb 03 04 03.4
comp=Z,24nm,0.9s
BELC **Belle Mtn. Jos** 80.59 55 IAmb IAmb 03 04 03.6
comp=Z,17nm,0.9s
BORG **Borgarnes** 80.63 353 LR LR 03 40 26.3
comp=Z,47nm,21.6s,baz=1.6,slow=36
MRZ **Mangatainoka R** 80.64 155 P P **03 04 02.2 +0.4**
MRZ IAmb IAmb 03 04 02.9
comp=Z,42nm,0.9s
DANC **Danby, Needles** 80.64 55 IAmb IAmb 03 04 04.6
comp=Z,30nm,0.9s
ANGG **Ammassalik, Gr** 80.65 360 *i* P P **03 04 01.4 -0.3**
ANGG IAmb IAmb 03 04 03.3
comp=Z,52nm,1.0s
KWP **Kalwaria Pacla** 80.70 325 *eP* P **03 04 02.8 +0.6**
JURR **Jurilovca** 80.70 318 ⇑P P **03 04 02.5 +0.2**
TESR **Tescani** 80.78 321 ⇓P P **03 04 02.9 +0.2**
BURAR **Bucovina Array** 80.81 322 P P **03 04 03.4 +0.4**
BURAR **Bucovina Array** 80.81 322 ⇑P P **03 04 03.6 +0.6**
BURAR **Bucovina Array** 80.81 322 ⇑P P **03 04 03.6 +0.6**
CFR **Carcaliu** 80.84 319 ⇑P P **03 04 03.2 +0.2**
CFR **Carcaliu** 80.84 319 ⇑P P **03 04 03.2 +0.2**
BAR **Barrett** 80.87 57 IAmb IAmb 03 04 05.3
comp=Z,21nm,1.0s
TPGR **Topolog** 80.89 319 ⇑P P **03 04 03.9 +0.5**
Q16A **Castle Valley** 80.90 49 IAmb IAmb 03 04 06.5
comp=Z,55nm,1.3s
PANC **Panciu** 80.93 320 ⇑P P **03 04 03.7 +0.2**
KNB **Kanab** 80.97 51 IAmb IAmb 03 04 06.9
comp=Z,33nm,1.0s
BR131 **Keskin Array S** 81.02 312 *i* P P **03 04 04.0 -0.3**
BRTR **Keskin Array B** 81.02 312 P P **03 04 04.7 +0.3**
comp=Z,9.0nm,0.9s,baz=101,slow=3.9,SNR=37
BRTR LR LR 03 45 12.6
comp=Z,86nm,19.6s,baz=48,slow=40
comp=Z,9.0nm,0.9s
BRTR **Keskin Array B** 81.02 312 P P **03 04 04.9 +0.5**
BRTR **Keskin Array B** 81.02 312 *i* P P **03 04 04.3 0.0**
BRTR pmax pmax
comp=Z,10.0nm,0.9s
ONER **Baraj Valea Uz** 81.03 321 ⇓P P **03 04 04.8 +0.7**
P18A **Preston Nutter** 81.05 48 IAmb IAmb 03 04 07.5
comp=Z,63nm,1.6s
CBX **Cerro Bola** 81.09 57 IAmb IAmb 03 04 06.7
comp=Z,31nm,1.0s
TIRR **Tirgusor** 81.15 318 ⇓P P **03 04 04.6 -0.1**
TIRR **Tirgusor** 81.15 318 P P **03 04 04.6 -0.1**
BC3 **Big Chuckawall** 81.16 55 IAmb IAmb 03 04 07.0
comp=Z,26nm,0.9s
VRI **Vrincioaia** 81.16 320 ⇑P P **03 04 05.6 +0.8**
VRI **Vrincioaia** 81.16 320 ⇑P P **03 04 05.6 +0.8**
SRU **San Rafael Swe** 81.19 49 IAmb IAmb 03 04 07.5
comp=Z,38nm,0.9s
PLOR **Plostina** 81.21 320 ⇓P P **03 04 06.1 +1.0**
PLOR **Plostina** 81.21 320 ⇓P P **03 04 06.1 +1.0**
HARR **Harsova** 81.27 319 ⇑P P **03 04 05.3 0.0**
HARR **Harsova** 81.27 319 ⇑P P **03 04 05.3 0.0**
TLBR **Topalu** 81.30 319 ⇑P P **03 04 06.0 +0.5**
BISRR **Bisoca** 81.38 320 ⇑P P **03 04 07.4 +1.4**
YUH **Yuha Desert** 81.41 56 IAmb IAmb 03 04 08.2
comp=Z,21nm,1.0s
TURR **Turia** 81.42 321 ⇓P P **03 04 07.4 +1.2**
K22A **Casper** 81.42 44 IAmb IAmb 03 04 09.3
comp=Z,19nm,1.0s
ANTO **Ankara** 81.45 313 P P **03 04 06.9 +0.4**
ANTO **Ankara** 81.45 313 P P **03 04 07.0 +0.4**
ANTO **Ankara** 81.45 313 ⇑P P **03 04 07.3 +0.8**
ANTO **Ankara** 81.45 313 P P **03 04 06.9 +0.4**
ANTO pmax pmax
comp=Z,13nm,0.9s
COVR **Voineasa-Covas** 81.45 320 ⇑P P **03 04 07.0 +0.6**
OZUR 81.51 321 ⇓P P **03 04 07.7 +1.0**
STHS **Stebnicka Huta** 81.54 325 *eP* P **03 04 07.3 +0.6**
STHS **Stebnicka Huta** 81.54 325 *eP* P **03 04 07.3 +0.6**
NEHR **Nehoiu** 81.68 320 ⇓P P **03 04 09.1 +1.5**
ICOR **Ion Corvin** 81.71 318 ⇓P P **03 04 08.5 +0.8**
BLYC **Blythe** 81.74 55 IAmb IAmb 03 04 10.2
comp=Z,20nm,0.8s
ISR **Istrita** 81.75 320 ⇑P P **03 04 09.2 +1.2**
ISR **Istrita** 81.75 320 ⇑P P **03 04 09.2 +1.2**
HMU **Henry Mountain** 81.75 50 IAmb IAmb 03 04 10.5
comp=Z,23nm,0.9s
ESJX **Sierra Juarez** 81.76 57 IAmb IAmb 03 04 10.6
comp=Z,26nm,1.0s
DOPR **Dopca** 81.80 321 ⇑P P **03 04 09.5 +1.3**
MLR **Muntele Rosu** 81.82 320 LR LR 03 44 53.8
comp=Z,492nm,18.1s,baz=46,slow=39
MLR **Muntele Rosu** 81.82 320 ⇓P P **03 04 09.2 +0.8**
MLR **Muntele Rosu** 81.82 320 ⇓P P **03 04 09.2 +0.8**
ULM **Lac du Bonnet** 81.85 33 P P **03 04 08.4 0.0**
comp=Z,9.9nm,0.9s,baz=288,slow=4.4,SNR=5.1
ULM LR LR 03 41 05.4
comp=Z,73nm,21.2s,baz=10.0,slow=36
comp=Z,9.9nm,0.9s
SSRD **Sdr. Stenderup** 81.87 335 *i* P P **03 04 08.8 +0.5**
SSRD IAmb IAmb 03 04 09.5
comp=Z,44nm,0.8s
RSSD **Black Hills** 81.89 42 P P **03 04 09.4 +0.5**
RSSD **Black Hills** 81.89 42 P P **03 04 09.4 +0.5**
RSSD pmax pmax
comp=Z,25nm,1.5s
GLA **Glamis** 81.93 56 IAmb IAmb 03 04 11.3
comp=Z,32nm,0.8s
O20A **White River Ci** 81.97 47 IAmb IAmb 03 04 11.4
comp=Z,32nm,1.0s
NIE **Niedzica** 81.98 326 *eP* P **03 04 09.6 +0.5**
RAYN **Ar Rayn** 82.03 293 P P **03 04 10.1 +0.2**
RAYN IAmb IAmb 03 04 10.8
comp=Z,15nm,0.8s
RAYN **Ar Rayn** 82.03 293 P P **03 04 10.2 +0.4**
RAYN **Ar Rayn** 82.03 293 ⇓P P **03 04 10.0 +0.2**
MDUB **Mudurnu** 82.05 314 IAmb IAmb 03 04 12.4
comp=Z,22nm,0.8s
E28A **Huff** 82.05 38 IAmb IAmb 03 04 10.5
comp=Z,15nm,0.8s
CJR **Cluj-Napoca** 82.23 322 ⇑P P **03 04 11.8 +1.3**
CJR **Cluj-Napoca** 82.23 322 ⇑P P **03 04 11.8 +1.3**
VOIR 82.33 321 ⇑P P **03 04 11.6 +0.5**
VOIR 82.33 321 ⇑P P **03 04 11.6 +0.5**
MARR **Marisel-Cluj** 82.50 322 ⇑P P **03 04 13.1 +1.1**
LANS **Liptovska Anna** 82.56 326 *eP* P **03 04 11.4 -0.7**
LANS **Liptovska Anna** 82.56 326 *eP* P **03 04 11.4 -0.7**

ARR **Arges** 82.60 321 ⇑P P **03 04 13.8 +1.3**
PV22 **Blue Mesa, Par** 82.61 48 IAmb IAmb 03 04 15.2
comp=Z,30nm,1.0s
DRGR 82.62 323 ⇑P P **03 04 13.2 +0.6**
DRGR 82.62 323 ⇑P P **03 04 13.2 +0.6**
PV07 **Paradox Valley** 82.76 48 IAmb IAmb 03 04 16.0
comp=Z,27nm,1.4s
KSP **Ksiaz** 82.77 329 *eP* P **03 04 12.8 -0.3**
STEB **Steborice** 82.77 327 *eP* P **03 04 13.6 +0.4**
WUAZ **Wupatki** 82.80 52 IAmb IAmb 03 04 16.1
comp=Z,16nm,1.1s
PV15 **Paradox Valley** 82.92 48 IAmb IAmb 03 04 17.8
comp=Z,22nm,1.0s
MORC **Moravsky Berou** 82.99 327 IAmb IAmb 03 04 15.8
comp=Z,22nm,1.4s
MORC **Moravsky Berou** 82.99 327 ⇓P P **03 04 14.6 +0.3**
MORC **Moravsky Berou** 82.99 327 *eP* P **03 04 14.3 -0.1**
MORC **Moravsky Berou** 82.99 327 ⇓P P **03 04 14.6 +0.3**
LOT **Lotru** 82.99 321 ⇑P P **03 04 15.1 +0.6**
OSTC **Ostas** 83.01 328 AMS AMS 03 45 50.0
comp=Z,500nm,12.8s
CHVC **Chvalec** 83.06 329 *eP* P **03 04 16.0 +1.3**
CHVC **Chvalec** 83.06 329 *eP* P **03 04 16.0 +1.3**
COPA **Copaceanca** 83.11 320 ⇓P P **03 04 15.4 +0.4**
DPC **Dobruska-Polom** 83.11 328 *eP* P **03 04 16.1 +1.1**
DPC *e* 03 04 25.4
DPC MLR MLR
comp=Z,400nm,13.6s
DPC **Dobruska-Polom** 83.11 328 *eP* P **03 04 16.1 +1.1**
DPC *ex* x 03 04 25.4
DPC AMS AMS 03 45 50.0
comp=Z,400nm,13.6s
UPC **Upice** 83.13 329 AMS AMS 03 45 10.0
comp=Z,500nm,18.8s
DEV **Deva** 83.15 322 ⇑P P **03 04 16.0 +0.8**
DEV **Deva** 83.15 322 ⇑P P **03 04 16.0 +0.8**
PSZ **Piszkesteto** 83.23 325 ⇑P P **03 04 16.7 +1.0**
PSZ **Piszkesteto** 83.23 325 *eP* P **03 04 15.9 +0.3**
PSZ **Piszkesteto** 83.23 325 ⇑P P **03 04 16.7 +1.0**
AGMN **Agassiz Nation** 83.24 35 IAmb IAmb 03 04 16.3
comp=Z,22nm,1.1s
X16A **Lo Mia Camp, P** 83.41 53 IAmb IAmb 03 04 19.5
comp=Z,14nm,1.0s
PHSR **Pinarhisar** 83.47 317 ⇓P P **03 04 17.9 +1.0**
ELND **Elena** 83.54 318 ⇓P P **03 04 17.6 +0.3**
GZR **Gura Zlata** 83.55 322 ⇑P P **03 04 17.7 +0.4**
GZR **Gura Zlata** 83.55 322 ⇑P P **03 04 17.7 +0.4**
JAVC **Velka Javorina** 83.59 327 *eP* P **03 04 18.7 +1.2**
MVCO **Mesa Verde** 83.61 49 IAmb IAmb 03 04 20.2
comp=Z,22nm,1.2s
VLAD **Vladila** 83.63 320 ⇓P P **03 04 17.9 +0.2**
PVCC **Panska Ves** 83.74 329 *eP* P **03 04 18.1 0.0**
PVCC *e* 03 04 27.1
PVCC **Panska Ves** 83.74 329 *eP* P **03 04 18.1 0.0**
PVCC *ex* x 03 04 27.1
BRG **Berggiesshubel** 83.74 330 *eP* P **03 04 18.0 -0.2**
comp=Z,11nm,0.9s,baz=39,slow=5.2
VRAC **Vranov** 83.76 327 LR LR 03 45 20.6
comp=Z,229nm,18.8s,baz=53,slow=38
VRAC **Vranov** 83.76 327 ⇑P P **03 04 19.2 +0.9**
VRAC **Vranov** 83.76 327 *eP* P **03 04 18.7 +0.4**
VRAC **Vranov** 83.76 327 ⇑P P **03 04 19.2 +0.9**
CLL **Collm** 83.80 330 IAmb IAmb 03 04 19.3
comp=Z,24nm,1.0s
CLL **Collm** 83.80 330 ⇓*i* P P **03 04 18.4 0.0**
CLL pmax pmax
comp=Z,27nm,1.0s
CLL **Collm** 83.80 330 *eP* P **03 04 18.0 -0.4**
comp=Z,23nm,1.0s,baz=39,slow=5.2
CLL **Collm** 83.80 330 ⇓*i* P P **03 04 18.4 0.0**
comp=Z,27nm,1.0s
CLL *i* x x 03 04 28.3
CLL AMS AMS 03 45 00.0
comp=Z,300nm,19.1s
SRE **Strehaia** 83.82 321 ⇑P P **03 04 20.0 +1.3**
SRE **Strehaia** 83.82 321 ⇑P P **03 04 20.0 +1.3**
MMAI **Mount Meron Ar** 83.90 306 P P **03 04 19.9 +0.5**
comp=Z,15nm,0.8s,baz=52,slow=5.6,SNR=19
comp=Z,15nm,0.8s
PLVB **Pleven** 83.93 319 ⇓P P **03 04 19.4 +0.1**
214A **Organ Pipe Nat** 83.95 55 IAmb IAmb 03 04 21.8
comp=Z,16nm,1.0s
BAND **Balkesir-Ban** 83.95 315 ⇑P P **03 04 19.8 +0.4**
SMOL **Smolenice** 83.96 326 *eP* P **03 04 20.6 +1.3**
SMOL pmax pmax
comp=Z,13nm,0.9s
BZS **Buzias** 83.98 322 ⇓P P **03 04 19.4 -0.1**
BZS **Buzias** 83.98 322 ⇓P P **03 04 19.4 -0.1**
KRUC **Moravsky** 84.03 327 *eP* P **03 04 19.9 +0.3**
HERR **Herculane** 84.08 321 ⇑P P **03 04 20.2 +0.2**
MODS **Modra-Piesok** 84.13 326 *eP* P **03 04 21.4 +1.2**
MODS pmax pmax
comp=Z,63nm,1.3s
MODS **Modra-Piesok** 84.13 326 *eP* P **03 04 21.4 +1.2**
PRA **Prague** 84.14 329 *eP* P **03 04 20.7 +0.5**
PRA MLR MLR
comp=Z,500nm,21.1s
PRA **Prague** 84.14 329 *eP* P **03 04 20.7 +0.5**
PRA AMS AMS 03 46 40.0
comp=Z,500nm,21.1s
PRU **Pruhonice** 84.15 329 *eP* P **03 04 20.6 +0.3**
PRU MLR MLR
comp=Z,600nm,18.5s
PRU **Pruhonice** 84.15 329 *eP* P **03 04 20.6 +0.3**
PRU AMS AMS 03 46 40.0
comp=Z,600nm,18.5s
HSKC **Hora Svate Kat** 84.16 330 *eP* P **03 04 20.5 +0.2**
HSKC AMS AMS 03 45 20.0
comp=Z,300nm,15.1s
BAIL **Bailesti** 84.18 320 ⇑P P **03 04 20.1 -0.4**
TREC **Trest** 84.26 328 *eP* P **03 04 21.3 +0.5**
TREC **Trest** 84.26 328 *eP* P **03 04 21.3 +0.5**
CLZ **Clausthal** 84.44 332 *eP* P **03 04 21.7 -0.1**
comp=Z,25nm,1.0s,baz=39,slow=5.2
MDVR **Moldovita** 84.51 322 ⇓P P **03 04 22.2 -0.1**
TANN **Tannenbergstha** 84.70 330 *eP* P **03 04 22.7 -0.4**
comp=Z,30nm,1.8s,baz=39,slow=5.2
ZVC **Zvikov** 84.71 329 *eP* P **03 04 23.4 +0.3**
ZVC *ex* x 03 04 32.5
ZVC AMS AMS 03 46 50.0
comp=Z,600nm,18.0s
IVI **Ivigtut** 84.74 5 ⇓*i* P P **03 04 23.7 +0.8**
PLN **Plauen** 84.78 330 *eP* P **03 04 23.4 0.0**
comp=Z,17nm,1.7s,baz=39,slow=5.2
BLKB **Belogradchik** 84.81 320 ⇓P P **03 04 24.4 +0.6**
GTTG **Gottingen** 84.83 332 *eP* P **03 04 23.4 -0.2**
comp=Z,24nm,1.0s,baz=39,slow=5.2
MOX **Moxa** 84.88 331 *eP* P **03 04 23.6 -0.3**
comp=Z,17nm,1.1s,baz=39,slow=5.2
MORH **Mrgy, Hungar** 85.04 324 ⇓P P **03 04 24.6 -0.2**
RONA **Rosalia, Austr** 85.07 326 *i* P P **03 04 25.6 +0.6**
comp=Z,30nm,1.0s
CONA **Conrad Observa** 85.10 327 *i* P P **03 04 25.8 +0.6**
comp=Z,20nm,0.9s
TUC **Tucson** 85.12 54 P P **03 04 26.1 +0.5**
TUC **Tucson** 85.12 54 P P **03 04 26.1 +0.5**
TUC pmax pmax
comp=Z,10.0nm,1.1s
CKRC **Cesky Krumlov** 85.13 328 *eP* P **03 04 25.0 -0.2**
CKRC **Cesky Krumlov** 85.13 328 *eP* P **03 04 25.0 -0.2**
ELL **Elmali** 85.17 312 IAmb IAmb 03 04 38.5
comp=Z,28nm,1.2s
MANZ **Manzenberg** 85.18 330 *eP* P **03 04 25.4 -0.1**
comp=Z,2.8nm,0.9s,baz=39,slow=5.2
KHC **Kasperske Hory** 85.21 329 IAmb IAmb 03 04 26.8
comp=Z,17nm,0.9s
KHC **Kasperske Hory** 85.21 329 *ce* P P **03 04 26.0 +0.3**
KHC pmax pmax
comp=Z,27nm,1.3s
KHC **Kasperske Hory** 85.21 329 *eP* P **03 04 25.8 +0.1**
KHC AMS AMS 03 47 10.0
comp=Z,600nm,13.8s
ROTZ **Rotzenmuhle** 85.31 330 *eP* P **03 04 26.4 +0.2**
comp=Z,11nm,1.4s,baz=39,slow=5.2
BOVS **Bovan** 85.31 321 ⇑P P **03 04 26.2 -0.1**
GEC2 **GERESS Array S** 85.37 329 IAmb IAmb 03 04 27.2
comp=Z,12nm,0.9s
GEC2 **GERESS Array S** 85.37 329 *eP* P **03 04 26.1 -0.4**
comp=Z,12nm,0.9s,baz=39,slow=5.2
GERES **GERESS Array B** 85.37 329 P P **03 04 26.5 -0.1**
comp=Z,5.9nm,0.7s,baz=31,slow=5.4,SNR=41
GERES LR LR 03 46 60.0
comp=Z,223nm,18.9s,baz=64,slow=39
comp=Z,5.9nm,0.7s
WET **Wettzell** 85.50 329 *eP* P **03 04 27.1 -0.1**
comp=Z,8.3nm,1.0s,baz=39,slow=5.2
EYMN **Ely** 85.50 33 IAmb IAmb 03 04 28.3
comp=Z,27nm,1.4s
KASTN **Kahler Asten** 85.70 333 *eP* P **03 04 27.8 -0.3**
comp=Z,15nm,0.9s,baz=39,slow=5.2
ARSA **Arzberg** 85.75 327 IAmb IAmb 03 04 29.7
comp=Z,16nm,1.2s
ARSA **Arzberg** 85.75 327 *i* P P **03 04 28.5 +0.1**
comp=Z,17nm,1.4s
GRF **Grafenberg Arr** 85.77 330 *eP* P **03 04 28.7 +0.2**
comp=Z,42nm,1.0s,baz=39,slow=5.2
MOA **Molln** 85.88 328 *i* P P **03 04 29.0 0.0**
comp=Z,11nm,1.1s
BUG **Bochum--Univer** 85.94 333 *eP* P **03 04 29.0 -0.2**
comp=Z,25nm,0.9s,baz=39,slow=5.2
EKA **Eskdalemuir Ar** 86.02 341 P P **03 04 29.8 +0.3**
comp=Z,7.9nm,0.9s,baz=38,slow=4.2,SNR=7.8
comp=Z,7.9nm,0.9s
ECSD **EROS Data Cent** 86.10 38 IAmb IAmb 03 04 31.2
comp=Z,24nm,1.1s
T25A **Trinidad** 86.18 47 IAmb IAmb 03 04 33.2
comp=Z,28nm,1.7s
BIOA **Bad Ischl, Aus** 86.27 328 *i* P P **03 04 31.0 0.0**
comp=Z,10nm,0.9s
TASM **ASL Pad, Albuq** 86.31 50 IAmb IAmb 03 04 33.6
comp=Z,5.3nm,1.0s
TASM **ASL Pad, Albuq** 86.31 50 IAmb IAmb 03 04 33.6
comp=Z,5.3nm,1.0s
ANMO **Albuquerque** 86.31 50 LR LR 03 38 50.4
comp=Z,189nm,19.2s,baz=44,slow=33
ANMO **Albuquerque** 86.31 50 P P **03 04 33.5 +1.9**
ANMO **Albuquerque** 86.31 50 *ce* P P **03 04 30.4 -1.2**
ANMO pmax pmax
comp=Z,5.0nm,0.8s
SOKA **Soboth** 86.41 326 *i* P P **03 04 31.8 +0.1**
comp=Z,21nm,1.4s
E38A **The Farm, Brul** 86.48 34 IAmb IAmb 03 04 32.7
comp=Z,21nm,1.0s
LESA **Schwarzleotal** 86.90 328 *i* P P **03 04 33.7 -0.5**
comp=Z,12nm,1.1s
SPMN **Marine on St.** 86.91 35 IAmb IAmb 03 04 35.9
comp=Z,31nm,1.3s
BEBN **Eben Emael** 87.05 334 *dP* P **03 04 34.5 -0.1**
comp=Z,29nm,0.9s
BTNL **Ternell** 87.05 333 *dP* P **03 04 34.4 -0.4**
comp=Z,11nm,0.9s
MEM **Membach** 87.08 334 *dP* P **03 04 34.7 -0.1**
comp=Z,16nm,1.1s
BSTI **Sart Tilman** 87.26 334 *dP* P **03 04 35.7 0.0**
comp=Z,4.0nm,0.9s
BHOU **Houvegnez** 87.29 333 *dP* P **03 04 36.1 +0.2**
comp=Z,9.8nm,1.1s
WTTA **Wattenberg** 87.48 329 *eP* P **03 04 35.7 -1.3**
comp=Z,7.3nm,1.4s
UCC **Uccle** 87.52 335 *dP* P **03 04 36.3 -0.6**
comp=Z,7.9nm,1.1s
BGES **Gesves** 87.60 334 *dP* P **03 04 37.0 -0.3**
comp=Z,13nm,1.0s
BGES *d*PP **PP 03 08 00.9 -0.8**
RETA **Reutte** 87.68 329 *eP* P **03 04 37.5 -0.3**
comp=Z,23nm,1.8s
RCHB **Rochefort** 87.74 334 *dP* P **03 04 37.8 -0.2**
comp=Z,16nm,1.0s
BMRD **Maredsous** 87.79 334 *dP* P **03 04 38.1 -0.1**
comp=Z,15nm,0.8s
WLF **Walferdange** 87.80 333 *dP* P **03 04 37.8 -0.4**
comp=Z,9.4nm,1.1s
BFO **Black Forest** 88.02 331 P P **03 04 39.1 -0.3**
BFO IAmb IAmb 03 04 42.9
comp=Z,28nm,1.6s
BFO **Black Forest** 88.02 331 P P **03 04 39.1 -0.3**
BFO pmax pmax
comp=Z,28nm,1.6s
SCHQ **Schefferville** 88.13 16 P P **03 04 40.0 +0.3**
comp=Z,7.3nm,0.7s,baz=12,slow=5.4,SNR=3.7
SCHQ LR LR 03 47 60.0
comp=Z,132nm,20.3s,baz=336,slow=38
comp=Z,7.3nm,0.7s
DAVA **Damuels** 88.21 330 *i* PcP P **03 04 40.5 0.0**
comp=Z,16nm,1.7s
FUORN **Ofenpass-Fuorn** 88.57 329 IAmb IAmb 03 04 43.2
comp=Z,14nm,0.9s
DAVOX **Davos/Dischmat** 88.61 329 LR LR 03 48 53.9
comp=Z,468nm,18.9s,baz=72,slow=39
TUE **Stuetta** 89.08 329 IAmb IAmb 03 04 48.0
comp=Z,39nm,1.9s
AMTX **Amarillo** 89.33 47 IAmb IAmb 03 04 48.6
comp=Z,16nm,1.1s
LPIG **La Paz** 90.44 60 LR LR 03 48 25.0
comp=Z,77nm,18.4s,baz=272,slow=38
SLBS **Sierra La Lagu** 90.96 60 P P **03 04 55.8 +2.1**
SLBS IAmb IAmb 03 04 56.4
comp=Z,11nm,0.8s
APMT **Aspermont** 91.33 48 IAmb IAmb 03 04 56.4
comp=Z,11nm,1.1s
TX31 **Lajitas Ar. Si** 91.73 53 IAmb IAmb 03 04 59.1
comp=Z,19nm,1.5s
TXAR **Lajitas Array** 91.73 53 P P **03 04 58.0 +0.8**
comp=Z,3.2nm,0.7s,baz=299,slow=3.1,SNR=46
comp=Z,3.2nm,0.7s
ABTX **Abilene, Hawle** 92.10 48 IAmb IAmb 03 04 59.8
comp=Z,8.6nm,1.0s
R40A **Maddies Statio** 92.30 40 IAmb IAmb 03 05 00.3
comp=Z,6.4nm,0.7s
U38A **Gravette** 92.51 42 IAmb IAmb 03 05 01.6
comp=Z,9.9nm,0.9s
PLPT **Palo Pinto** 92.78 47 IAmb IAmb 03 05 03.4
comp=Z,18nm,1.3s
MGMO **Mountain Grove** 93.14 40 IAmb IAmb 03 05 04.1
comp=Z,9.7nm,0.9s
SADO **Sadowa** 93.21 28 LR LR 03 49 45.9
comp=Z,27nm,20.0s,baz=319,slow=37
VAE **Valguarnera** 93.59 321 LR LR 03 53 30.4
comp=Z,273nm,18.5s,baz=18,slow=40
MIAR **Mount Ida** 94.33 43 IAmb IAmb 03 05 11.2
comp=Z,11nm,0.9s
833A **Chaparral WMA,** 95.19 51 IAmb IAmb 03 05 14.9
comp=Z,14nm,1.1s
KEST **Kesra** 97.54 323 LR LR 03 55 06.0
comp=Z,2281nm,18.0s,baz=337,slow=39
TORD **Torodi Ar. Bea** 119.59 314 PKP **PKPdf 03 10 39.1 -0.6**
comp=Z,0.9nm,0.3s,baz=15,slow=5.3,SNR=4.2
TORD PKKPab **PKKPbc 03 20 51.6 +2.1**
comp=Z,1.7nm,0.6s,baz=300,slow=1.7,SNR=4.6
QSPA **South Pole Qui** 123.80 180 PKP **PKiKP 03 10 48.7 +2.3**
comp=Z,7.7nm,0.9s,baz=302,slow=1.0,SNR=20
QSPA **South Pole Qui** 123.80 180 **PKiKP 03 10 49.0 +2.5**
SDV **Santo Domingo** 127.41 42 *eP* **PKiKP 03 10 55.6 +0.2**
DBIC **Dimbokro** 128.61 316 PKP **PKPdf 03 10 54.8 -2.2**
comp=Z,9.9nm,0.8s,baz=93,slow=5.4,SNR=4.1
TROLL **Troll, Antarti** 136.47 197 ⇓P PKPpre 03 10 58.4
comp=Z,127nm,0.8s
SNAA **Sanae** 137.97 196 ⇓P PKPpre 03 11 02.6
comp=Z,58nm,1.0s
SNAA **Sanae** 137.97 196 PKhKP PKPpre 03 11 02.8
comp=Z,0.9nm,0.8s,baz=210,slow=4.8,SNR=7.1
SNAA PKP **PKiKP 03 11 14.1 -0.8**
comp=Z,3.0nm,0.9s,baz=207,slow=5.2,SNR=6.3
SNAA **Sanae** 137.97 196 *c i* PKIKP **PKPdf 03 11 12.1 -0.8**
SNAA pmax pmax
comp=Z,9.0nm,2.5s
VNA2 **Neumayer--Watz** 139.52 195 ⇓P PKPpre 03 11 05.1
comp=Z,6.6nm,0.8s,baz=100,slow=1.1
VNA3 **Neumayer Olymp** 139.75 194 ⇓P PKPpre 03 11 06.3
comp=Z,4.5nm,0.8s
VNA1 **Neumayer--Stat** 139.92 195 ⇓P PKPpre 03 11 08.6
comp=Z,5.5nm,0.9s
ITTB **Itaituba** 146.30 33 *eP* **PKPdf 03 11 29.6 +0.2**
TMAB **Tom-Au,PA,Br** 147.17 18 *eP* **PKPdf 03 11 31.6 +0.7**
LPAZ **La Paz** 147.88 64 PKP **PKPdf 03 11 33.7 +1.0**
comp=Z,23nm,0.8s,baz=353,slow=5.6,SNR=62
LPAZ PKPbc **PKiKP 03 11 36.7 -0.8**
comp=Z,23nm,0.8s,baz=322,slow=2.0,SNR=74
LPAZ **La Paz** 147.88 64 *eP* **PKPdf 03 11 32.1 -0.5**
NPGB **Novo Progresso** 148.83 34 *eP* **PKPdf 03 11 33.9 +0.4**
PRPB **Parauapebas** 150.27 24 *eP* **PKPdf 03 11 36.5 +0.7**
VILB **Vilhena** 151.05 49 *eP* **PKPdf 03 11 37.7 +0.7**
CLDB **Colider** 151.91 39 *eP* **PKPdf 03 11 38.5 +0.2**
PDRB **Porto dos Gac** 152.02 41 *eP* **PKPdf 03 11 37.9 -0.6**
SMTB **Santa Maria do** 153.50 21 *eP* **PKPdf 03 11 41.3 +0.6**
PTLB **Pontes e Lacer** 153.60 51 *eP* **PKPdf 03 11 41.1 +0.4**
PLCA **Paso Flores** 153.61 114 PKPbc **PKPbc 03 11 46.8 -1.1**
comp=Z,5.7nm,0.9s,baz=291,slow=6.7,SNR=6.7
PLCA PKPab **PKPab 03 12 00.5 -0.1**
comp=Z,7.3nm,1.0s,baz=218,slow=7.6,SNR=6.4

UCR ***16*** *02:53:13.8±0.6, 11˚.64N×86˚.24W, h74km±6km, MW3.8*
CATAC ***16*** *02:53:14.2±0.3, 12˚N±2˚×8˚6W±˚, h67km±3km, M3.1/25, MLv3.1/25, Error ellipse: s-maj=7.3km s-min=3.3km az=52.6, confirmed*

ISC 16 02:53:13.3±1.5, 11˚.64N±0˚.05×86˚.28W±0˚.07, h88km±9km, n55, σ0946/64, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NADN	**Granada**	**0.27**	**65**	P		**Pn**	**02 53 26.6**	**+0.3**
NADN	**Granada**	**0.27**	**65**	*eP*		**Pn**	**02 53 26.6**	**+0.3**
NADN				eS		**Sn**	**02 53 35.1**	**-1.0**
NANN	**Nandasmo**	**0.34**	**27**	P		**Pn**	**02 53 27.8**	**+1.0**
NANN	**Nandasmo**	**0.34**	**27**	S		**Sn**	**02 53 37.0**	**+0.2**
MASN	**Masaya**	**0.37**	**20**	P		**Pn**	**02 53 27.5**	**+0.4**
MASN				S		**Sn**	**02 53 37.3**	**+0.1**
MAS3	**Al N del Volca**	**0.40**	**15**	P		**Pn**	**02 53 27.0**	**-0.1**
UNAN	**Cigeo UNAN**	**0.47**	**1**	P		**Pn**	**02 53 27.8**	**+0.1**
UNAN				S		**Sn**	**02 53 38.7**	**+0.4**
TISN	**Laguna Tiscapa**	**0.51**	**1**	P		**Pn**	**02 53 28.1**	**+0.2**
MGAN	**Managua**	**0.51**	**4**	P		**Pn**	**02 53 28.2**	**+0.2**
MGAN	**Managua**	**0.51**	**4**	S		**Sn**	**02 53 39.3**	**+0.4**
WILN	**Americas 2**	**0.53**	**10**	P		**Pn**	**02 53 28.1**	**0.0**
APQ2	**Apoyeque**	**0.56**	**355**	P		**Pn**	**02 53 28.7**	**+0.3**
APQ2	**Apoyeque**	**0.56**	**355**	P		**Pn**	**02 53 28.4**	**0.0**
COPN	**Copaltepe**	**0.62**	**331**	P		**Pn**	**02 53 28.8**	**-0.1**
COPN				S		**Sn**	**02 53 40.1**	**-0.5**
COPN	**Copaltepe**	**0.62**	**331**	*eP*		**Pn**	**02 53 28.6**	**-0.3**
MORN	**Al O del Volca**	**0.62**	**98**	P		**Pn**	**02 53 29.2**	**+0.3**
APQ3	**Volcan Apoyequ**	**0.64**	**352**	P		**Pn**	**02 53 29.4**	**+0.3**
CONN	**Concepcion**	**0.64**	**96**	P		**Pn**	**02 53 29.2**	**0.0**
CONN				S		**Sn**	**02 53 41.2**	**+0.3**
MOMN	**Momotombo**	**0.81**	**342**	P		**Pn**	**02 53 30.5**	**-0.3**
MOM2	**El Cardon**	**0.82**	**346**	P		**Pn**	**02 53 30.8**	**-0.1**
MOM2				S		**Sn**	**02 53 44.1**	**0.0**
LEVN	**Ruinas Leon Vi**	**0.83**	**337**	P		**Pn**	**02 53 31.8**	**+0.8**
CARN	**Rivas**	**0.86**	**121**	P		**Pn**	**02 53 31.5**	**+0.1**
CARN				S		**Sn**	**02 53 44.5**	**-0.4**
CARN	**Rivas**	**0.86**	**121**	*eP*		**Pn**	**02 53 31.2**	**-0.2**
MOM3	**MOM3**	**0.90**	**345**	P		**Pn**	**02 53 31.6**	**-0.1**
MOM3				S		**Sn**	**02 53 45.2**	**-0.4**
CNGN	**Cerro Negro**	**0.95**	**335**	P		**Pn**	**02 53 32.1**	**-0.3**
CNGN	**Cerro Negro**	**0.95**	**335**	S		**Sn**	**02 53 46.1**	**-0.6**
CNGN	**Cerro Negro**	**0.95**	**335**	*eP*		**Pn**	**02 53 32.0**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.01**	**36**	P		**Pn**	**02 53 32.7**	**-0.2**
BOAB	**BOACO BROADBAN**	**1.01**	**36**	S		**Sn**	**02 53 47.0**	**-0.7**
BUAI	**Buenos Aires**	**1.20**	**129**	*eP*		**Pn**	**02 53 35.4**	**+0.2**
LAPC	**Finca la Perla**	**1.20**	**136**	*eP*		**Pn**	**02 53 35.0**	**-0.2**
VRLE	**La Escondida,**	**1.23**	**133**	*eP*		**Pn**	**02 53 36.2**	**+0.5**
PKGN	**Cerro Pekin**	**1.23**	**326**	P		**Pn**	**02 53 35.9**	**+0.3**
ALIBA	**Liberia Airpor**	**1.26**	**145**	*eP*		**Pn**	**02 53 36.6**	**+0.7**
CRIN	**San Cristobal**	**1.30**	**325**	P		**Pn**	**02 53 36.3**	**-0.2**
CRIN	**San Cristobal**	**1.30**	**325**	S		**Sn**	**02 53 53.4**	**-0.6**
MATN	**Matagalpa**	**1.33**	**15**	S		**Sn**	**02 53 54.5**	**-0.3**
MATN	**Matagalpa**	**1.33**	**15**	P		**Pn**	**02 53 35.8**	**-1.2**
MESS	**Mesas**	**1.39**	**130**	*eP*		**Pn**	**02 53 37.6**	**0.0**
VMAR	**Armenia, Volca**	**1.41**	**125**	*eP*		**Pn**	**02 53 37.6**	**-0.2**
HORNC	**Hornillas**	**1.42**	**130**	*eP*		**Pn**	**02 53 37.9**	**-0.1**
CUI	**Cuipilapa**	**1.46**	**131**	*eP*		**Pn**	**02 53 38.8**	**+0.3**
TIMP	**Tierras Morena**	**1.62**	**130**	*eP*		**Pn**	**02 53 40.3**	**-0.3**
JUD3	**Juan Diaz 3**	**1.63**	**153**	*eP*		**Pn**	**02 53 41.0**	**+0.3**
SAJU	**San Juanillo,**	**1.66**	**160**	*eP*		**Pn**	**02 53 40.9**	**-0.1**
NICO	**Nicoya**	**1.70**	**151**	*eP*		**Pn**	**02 53 40.8**	**-0.8**
CMARA	**Lajas Hojancha**	**1.81**	**152**	*eP*		**Pn**	**02 53 43.0**	**0.0**
RCON	**San Juan de Ri**	**1.84**	**4**	P		**Pn**	**02 53 44.3**	**+0.7**
JTS	**Las Juntas de**	**1.87**	**136**	P		**Pn**	**02 53 44.0**	**+0.3**
JTS				S		**Sn**	**02 54 06.9**	**0.0**
JTS	**Las Juntas de**	**1.87**	**136**	*eP*		**Pn**	**02 53 43.8**	**+0.1**
RCPN	**Sur Rio San Ju**	**1.89**	**5**	P		**Pn**	**02 53 44.5**	**+0.4**
ARE1	**Arenal 1**	**1.93**	**127**	*eP*		**Pn**	**02 53 45.0**	**+0.5**
RCVN	**Varillal2**	**1.94**	**2**	P		**Pn**	**02 53 45.4**	**+0.6**
JCR1	**Jicaral**	**2.11**	**147**	*eP*		**Pn**	**02 53 47.5**	**+0.5**
YUSH	**Yuscaran**	**2.37**	**347**	P		**Pn**	**02 53 51.8**	**+1.4**

DJA 16 02:56:15.9±0.3, 2˚N±3˚×12˚6E±˚, h10km, M4.0/6, mB5.8/1, mb4.5/1, MLv3.7/6, Mw(mB)5.4/1, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.27**	**134**	P		Pn	02 56 38.6	-1.2
TNTI				S		Sb	02 56 56.1	-0.3
SGSI	**Sangihe**	**2.21**	**335**	P		Pn	02 56 53.5	+0.8
MSAI	**Masohi**	**5.56**	**154**	P		Pn	02 57 39.7	+1.0

IDC ***16*** *03:01:55.0±1.6, 1˚.85N×126˚.84E, h0km, mb3.8/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=116.9km s-min=19.6km az=69.0*
DJA ***16*** *03:02:00.2±1.4, 1˚N±3˚×12˚6E±˚, h23km±13km, M4.0/11, mB4.7/1, mb4.1/2, MLv3.9/11, Mw(mB)4.0/1*

ISC 16 03:02:01.3±0.9, 1˚.50N±0˚.06×126˚.47E±0˚.08, h35km, n11, σ1§23/13, mb3.9/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.16**	**129**	P		**Pn**	**03 02 20.2**	**-0.8**
TNTI				S		**Sn**	**03 02 37.1**	**+1.4**
SGSI	**Sangihe**	**2.36**	**337**	P		**Pn**	**03 02 38.1**	**+0.5**
SGSI				S		**Sn**	**03 03 06.5**	**+1.1**
SANI	**Sanana**	**3.56**	**188**	P		**Pn**	**03 02 53.9**	**-0.3**
LUWI	**Luwuk**	**4.48**	**236**	P		**Pn**	**03 03 06.5**	**-0.2**
APSI	**Ampana**	**5.38**	**244**	P		**Pn**	**03 03 18.8**	**-0.4**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=28,slow=9.9,SNR=2.0 2.9nm,0.9s	**19.50**	**182**	P		**Pn**	**03 06 28.8**	**+1.8**
WRAB	**Tennant Creek**	**22.66**	**160**	P		**P**	**03 06 59.8**	**0.0**
WRA	**Warramunga Arr** 1.8nm,0.4s,baz=339,slow=11,SNR=16 1.8nm,0.4s	**22.67**	**160**	P		**P**	**03 06 59.5**	**-0.3**
ASAR	**Alice Springs** 0.6nm,0.4s,baz=350,slow=14,SNR=11 0.6nm,0.4s	**26.05**	**164**	P		**P**	**03 07 32.6**	**+1.0**
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=124,slow=6.9,SNR=5.9 0.5nm,0.5s	**59.23**	**326**	P		**P**	**03 11 57.0**	**-2.3**
KURBB	**Kurchatov Arra** 0.6nm,0.6s,baz=132,slow=6.5,SNR=7.9 0.6nm,0.6s	**63.47**	**328**	P		**P**	**03 12 26.7**	**-1.1**

NEIC ***16*** *03:08:20.9±2.2, 10˚.69S±0˚.09×165˚.35E±0˚.07, h35km±2km, mb4.7/13, Error ellipse: s-maj=17.2km s-min=7.6km az=33.0*
IDC ***16*** *03:08:22.1±3.9, 10˚.71S×165˚.14E, h54km±32km, mb4.0/9, mbtmp4.3/11, ML4.7/2, MS3.7/7, Error ellipse: s-maj=29.7km s-min=23.7km az=80.0*

ISC 16 03:08:20.4±0.5, 10˚.73S±0˚.07×165˚.36E±0˚.08, h35km, n53, σ1§57/42, mb4.5/18, MS3.6/7, 5C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**5.02**	**159**			**Pn**	**03 09 34.1**	**+0.7**
HNR	**Honiara** 47nm,0.3s,baz=143,slow=7.2,SNR=10	**5.48**	**283**	P		**Pn**	**03 09 40.3**	**+0.6**
HNR	595nm,0.9s,baz=125,slow=21,SNR=7.7			S		**Sn**	**03 10 43.0**	**+1.4**
HNR	comp=Z,1μm,18.0s,baz=130,slow=39 286nm,0.5s			LR		LR	03 11 48.8	
HNR	**Honiara**	**5.48**	**283**			**Pn**	**03 09 40.4**	**+0.7**
HNR	**Honiara**	**5.48**	**283**	P		**Pn**	**03 09 42.3**	**+2.6**
SAVO	**Savo Central**	**5.69**	**286**	P		**Pn**	**03 09 42.9**	**+0.4**
MARNC	**Mare, Loyalty**	**10.99**	**167**	Pn		**Pn**	**03 10 56.9**	**+1.6**
DZM	**Mont Dzumac** 3.2nm,0.3s,baz=313,slow=16,SNR=48	**11.33**	**175**	P		**Pn**	**03 11 00.9**	**+0.9**
DZM	4.1nm,0.9s,baz=180,slow=17,SNR=1.2			S		**Sn**	**03 13 01.8**	**-3.6**
DZM	comp=Z,407nm,18.4s,baz=40,slow=35 11nm,0.4s			LR		LR	03 14 59.0	
ONTNC	**Ouen Toro**	**11.56**	**175**	Pn		**Pn**	**03 11 04.7**	**+1.6**
PINNC	**Pines Island,**	**11.98**	**171**	Pn		**Pn**	**03 11 10.2**	**+1.4**
MSVF	**Nonsavu**	**14.13**	**121**	P		**P**	**03 11 44.7**	**-0.8**
EIDS	**Eidsvold**	**19.88**	**221**			**Pn**	**03 12 50.8**	**+0.2**
EIDS	comp=Z,23nm,1.1s				IAmb	IAmb	03 12 51.7	
CTA	**Charters Tower** comp=Z,4.7nm,18.5s,baz=30,slow=36	**20.62**	**241**	LR		LR	03 20 40.0	
CTAO	**Charters Tower**	**20.62**	**241**	P		**P**	**03 12 56.4**	**-0.5**
CTAO	comp=Z,16nm,1.2s				IAmb	IAmb	03 13 03.0	
RAO	**Raoul Island** comp=Z,153nm,20.5s,baz=122,slow=31	**24.16**	**142**	LR		LR	03 21 01.9	
INKA	**Innaminka**	**28.65**	**230**	P		**P**	**03 14 13.2**	**-0.8**
H11S2	**WAKE ISLAND Hy** baz=183,slow=76,SNR=79	**29.06**	**3**	T		T	03 44 31.9	
H11S3	**WAKE ISLAND Hy** baz=183,slow=76,SNR=50	**29.07**	**3**	T		T	03 44 30.8	
H11S1	**WAKE ISLAND Hy** baz=183,slow=76,SNR=54	**29.08**	**3**	T		T	03 44 31.7	
BKZ	**Black Stump Fm**	**30.01**	**163**	P		**P**	**03 14 27.9**	**+1.9**
BKZ	comp=Z,25nm,1.3s				IAmb	IAmb	03 14 59.9	
H11N1	**WAKE ISLAND Hy** baz=182,slow=76,SNR=57	**30.29**	**3**	T		T	03 46 15.2	
H11N3	**WAKE ISLAND Hy** baz=182,slow=76,SNR=36	**30.29**	**3**	T		T	03 46 15.6	
H11N2	**WAKE ISLAND Hy** baz=182,slow=76,SNR=34	**30.31**	**3**	T		T	03 46 16.5	
STKA	**Stephens Creek** comp=Z,4.5nm,1.0s,baz=54,slow=9.9,SNR=5.2 comp=Z,4.5nm,1.0s	**30.41**	**223**	P		**P**	**03 14 26.4**	**-3.2**
WB0	**Warramunga Arr**	**31.15**	**250**	P		**P**	**03 14 34.2**	**-2.0**
WRA	**Warramunga Arr** comp=Z,1.5nm,0.9s,baz=80,slow=9.3,SNR=5.9 comp=Z,1.5nm,0.9s	**31.24**	**249**	P		**P**	**03 14 35.1**	**-1.9**
WRA	**Warramunga Arr**	**31.24**	**249**	P		**P**	**03 14 37.0**	**0.0**
GUMO	**Guam**	**31.58**	**319**	LR		LR	03 25 31.9	
ASAR	**Alice Springs** comp=Z,1.3nm,0.8s,baz=81,slow=8.8,SNR=12 comp=Z,1.3nm,0.8s	**32.60**	**243**	P		**P**	**03 14 46.4**	**-2.6**
BBOO	**Buckleboo**	**34.77**	**226**	P		**P**	**03 15 07.1**	**-0.6**
BBOO	comp=Z,17nm,1.1s				IAmb	IAmb	03 15 08.7	
PETK	**Petropavlovsk-** comp=Z,35nm,21.0s,baz=174,slow=33	**63.92**	**355**	LR		LR	03 43 21.1	
KIWB	**Kanaga Island**	**64.13**	**12**	P		**P**	**03 18 51.8**	**+0.7**
BNX	**BinXian**	**65.75**	**332**	⇓P		**P**	**03 19 00.3**	**-1.5**
BNX	comp=Z,11nm,1.2s			pmax		pmax		
CASY	**Casey**	**66.53**	**201**	P		**P**	**03 19 06.8**	**+0.2**
CASY	comp=Z,11nm,1.4s				IAmb	IAmb	03 19 07.7	
VNDA	**Vanda** comp=Z,1.6nm,1.1s,baz=356,slow=10,SNR=4.0 comp=Z,1.6nm,1.1s	**66.80**	**181**	P		**P**	**03 19 09.3**	**+1.3**
YAK	**Yakutsk** comp=Z,42nm,18.0s,baz=155,slow=37	**77.69**	**344**	LR		LR	03 55 57.5	
SONM	**Songino Array** comp=Z,1.3nm,0.7s,baz=139,slow=6.8,SNR=5.1 comp=Z,1.3nm,0.7s	**78.19**	**324**	P		**P**	**03 20 15.6**	**-0.9**
GTA	**Gaotai**	**78.57**	**314**	P		**P**	**03 20 19.6**	**+0.8**
GTA				pP		PcP	03 20 26.3	-1.4
GTA	comp=Z,6.0nm,1.2s			pmax		pmax		
GTA	comp=Z,290nm,20.0s			LR		LR		
QSPA	**South Pole Qui** comp=Z,6.2nm,1.1s,baz=342,slow=2.5,SNR=8.6	**79.27**	**180**	P		**P**	**03 20 25.6**	**+3.4**
QSPA	**South Pole Qui**	**79.27**	**180**	P		**P**	**03 20 25.0**	**+2.8**
QSPA	comp=Z,12nm,1.3s				IAmb	IAmb	03 20 27.5	
VRDI	**Verde Repeater**	**82.18**	**22**	P		**P**	**03 20 37.4**	**-0.3**
B21K	**Ikpikpuk River**	**84.82**	**13**	P		**P**	**03 20 51.5**	**+0.6**
B21K	comp=Z,11nm,1.3s				IAmb	IAmb	03 21 16.6	
MAW	**Mawson** comp=Z,6.3nm,1.0s,baz=102,slow=6.7,SNR=7.4 comp=Z,6.3nm,1.0s	**84.87**	**202**	P		**P**	**03 20 51.8**	**+0.5**
NVAR	**Mina Array Bea** comp=Z,0.7nm,0.9s,baz=238,slow=8.5,SNR=5.5 comp=Z,0.7nm,0.9s	**86.11**	**50**	P		**P**	**03 20 57.5**	**-0.9**
INK	**Inuvik** comp=Z,26nm,21.9s,baz=322,slow=34	**89.72**	**19**	LR		LR	03 59 42.9	
BELA	**Belgrano 2**	**90.83**	**176**	P		**P**	**03 21 19.9**	**+0.1**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.6s,baz=101,slow=3.7,SNR=4.8 comp=Z,0.8nm,0.6s	**93.08**	**324**	P		**P**	**03 21 29.0**	**-1.5**
ZALV	**Zalesovo Beam**	**93.08**	**324**	P		**P**	**03 21 29.0**	**-1.5**
TROLL	**Troll, Antarti** comp=Z,98nm,0.8s	**96.66**	**185**	⇑P		**P**	**03 21 46.4**	**-0.5**
SNAA	**Sanae** comp=Z,51nm,1.1s	**97.41**	**184**	⇑P		**P**	**03 21 48.9**	**-1.2**
SNAA	**Sanae** comp=Z,2.9nm,1.0s,baz=171,slow=6.4,SNR=6.2 comp=Z,2.9nm,1.0s	**97.41**	**184**	P		**P**	**03 21 49.3**	**-0.8**
VNA3	**Neumayer Olymp** comp=Z,1.1nm,0.8s	**98.15**	**182**	⇑P		**P**	**03 21 52.4**	**-1.0**
VNA2	**Neumayer--Watz** comp=Z,1.3nm,0.7s,baz=151,slow=2.1	**98.39**	**182**	⇑P		**P**	**03 21 53.8**	**-0.7**
VNA1	**Neumayer--Stat** comp=Z,2.3nm,1.0s	**98.69**	**182**	⇑P		Pdif	03 21 55.8	0.0

IDC ***16*** *03:12:29.8±0.4, 1˚.63N×126˚.47E, h0km, mb4.6/25, mbtmp4.6/26, ML4.5/1, MS3.7/5, Error ellipse: s-maj=21.6km s-min=10.3km az=70.0*
BJI ***16*** *03:12:31.7, 1˚.34N×126˚.54E, h36km, mB5.0/9, mb4.6/37, Ms4.5/3, Ms7 4.2/5*
DJA ***16*** *03:12:34.0±0.2, 2˚N±2˚×12˚7E±˚, h10km, M4.7/22, mB5.2/13, mb5.1/19, MLv4.8/22, Mw(mB)4.5/13*
NEIC ***16*** *03:12:35.5±1.9, 1˚.66N±0˚.08×126˚.54E±0˚.07, h35km±1km, mb4.9/60, Error ellipse: s-maj=14.4km s-min=9.2km az=215.0*

ISC 16 03:12:35.6±0.3, 1˚.58N±0˚.04×126˚.48E±0˚.05, h35km, n141, σ1§77/130, mb4.8/60, MS4.0/6, 4C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.19**	**132**			**Pn**	**03 12 54.9**	**-1.0**
TNTI	**Ternate**	**1.19**	**132**	P		**Pn**	**03 12 53.9**	**-1.9**
TNTI				S		**Sn**	**03 13 12.8**	**+2.0**
SGSI	**Sangihe**	**2.30**	**336**	P		**Pn**	**03 13 11.3**	**+0.3**
SGSI				S		**Sn**	**03 13 40.2**	**+2.0**
KMSI	**Cibinong**	**2.69**	**248**	P		**Pn**	**03 13 17.8**	**+1.4**
KMSI				S		**Sn**	**03 13 50.8**	**+3.0**
SANI	**Sanana**	**3.64**	**188**	P		**Pn**	**03 13 30.1**	**+0.7**
LUWI	**Luwuk**	**4.53**	**235**			**Pn**	**03 13 42.7**	**+1.0**
LUWI	**Luwuk**	**4.53**	**235**	P		**Pn**	**03 13 43.3**	**+1.6**
MRSI	**Marisa**	**4.67**	**257**	P		**Pn**	**03 13 47.1**	**+3.5**
NLAI	**Namlea**	**4.83**	**173**	P		**Pn**	**03 13 47.0**	**+1.2**
SWU	**Sorong**	**5.36**	**117**	P		**Pn**	**03 13 55.6**	**+2.5**
APSI	**Ampana** 2.5nm4μm339nm,1.0s	**5.43**	**243**	P		**Pn**	**03 13 56.8**	**+2.7**
MSAI	**Masohi** 0.7nm206nm,0.7s	**5.47**	**153**	P		**Pn**	**03 13 57.8**	**+3.1**
AAI	**Ambon** 0.4nm1μm113nm,0.6s	**5.50**	**162**	P		**Pn**	**03 13 56.0**	**+0.9**
TOLI2	**Tolitoli**	**5.72**	**265**			**Pn**	**03 13 57.9**	**-0.1**
MPSI	**Mapaga** 0.2nm934nm72nm,0.8s	**6.70**	**259**	P		**Pn**	**03 14 15.1**	**+3.6**
KDI	**Kendari**	**6.72**	**215**	P		**Pn**	**03 13 13.1**	**+1.3**
BNDI	**Banbanaira** 0.6nm94nm,0.6s	**6.96**	**151**	P		**Pn**	**03 14 16.4**	**+1.3**
PCI	**Palu** 114nm,0.8s	**7.09**	**250**	P		**Pn**	**03 14 17.8**	**+0.9**
FAKI	**Fak Fak**	**7.29**	**128**			**Pn**	**03 14 21.6**	**+1.9**
FAKI	**Fak Fak** 0.3nm758nm81nm,0.8s	**7.29**	**128**	P		**Pn**	**03 14 21.7**	**+1.9**
BBSI	**Bau Bau**	**8.03**	**209**	P		**Pn**	**03 14 30.3**	**+0.4**
TTSI	**Tana Toraja** 1μm105nm,0.7s	**8.09**	**235**	P		**Pn**	**03 14 33.3**	**+2.6**
SPSI	**Sidrap Palu** 1μm79nm,0.6s	**8.68**	**231**	P		**Pn**	**03 14 40.9**	**+2.2**
BNSI	**Bone** 993nm88nm,0.6s	**8.71**	**227**	P		**Pn**	**03 14 42.1**	**+2.9**
MYLDM	**Lahad Datu**	**8.73**	**294**			**Pn**	**03 14 41.8**	**+2.3**
KAPI	**Kappang** 4.7nm,0.3s,baz=25,slow=4.3,SNR=11	**9.38**	**226**	Pn		**Pn**	**03 14 51.2**	**+2.8**
KAPI	3.6nm,0.3s,baz=68,slow=21,SNR=6.3			Sn		**Sn**	**03 16 27.8**	**-5.0**
KAPI	comp=Z,222nm,21.1s,baz=53,slow=41			LR		LR	03 18 56.7	
KAPI	**Kappang**	**9.38**	**226**			**Pn**	**03 14 50.6**	**+2.2**
BSSI	**Bau Bau, Buton** 79nm,0.6s	**9.73**	**218**	P		**Pn**	**03 14 54.4**	**+1.3**
BAKI	**Biak**	**10.01**	**106**	P		**Pn**	**03 15 01.5**	**+4.5**
SOEI	**Soe**	**11.47**	**191**	P		**Pn**	**03 15 20.4**	**+3.2**
BATI	**Baumata** comp=Z,177nm,20.9s,baz=19,slow=44	**12.04**	**193**	LR		LR	03 21 19.3	
SBUM	**Sibu**	**14.28**	**274**	P		**P**	**03 16 03.7**	**+1.6**
MTN	**Manton Dam**	**15.05**	**162**			**Pn**	**03 16 05.4**	**-0.5**
JAGI	**Jajag, Banyuwa**	**15.83**	**231**			**P**	**03 16 20.7**	**+1.3**
KNRA	**Kununurra**	**17.29**	**173**			**Pn**	**03 16 34.0**	**-0.4**
FITZ	**Fitzroy Crossi** 1.1nm,0.3s,baz=14,slow=8.6,SNR=22 4.6nm,0.5s	**19.57**	**182**	P		**P**	**03 16 59.4**	**-1.3**
FITZ	**Fitzroy Crossi** comp=Z,3.1nm,0.7s	**19.57**	**182**	IAmb		IAmb	03 17 08.0	
YULB	**Yu-li**	**22.26**	**347**	P		**P**	**03 17 25.6**	**-4.1**
YULB	comp=Z,69nm,1.5s				IAmb	IAmb	03 17 36.5	
TPUB	**Ta-pu**	**22.33**	**346**	P		**P**	**03 17 28.2**	**-2.2**
TPUB	comp=Z,37nm,0.6s				IAmb	IAmb	03 17 37.0	
COEN	**Coen**	**22.63**	**134**	P		**P**	**03 17 33.6**	**-0.1**
SSLB	**Suanglung**	**22.72**	**347**	P		**P**	**03 17 32.5**	**-2.0**
SSLB	comp=Z,23nm,0.7s				IAmb	IAmb	03 17 36.0	
WRAB	**Tennant Creek**	**22.73**	**161**	P		**P**	**03 17 32.8**	**-2.0**
WRAB	comp=Z,66nm,1.0s				IAmb	IAmb	03 17 41.6	
WRA	**Warramunga Arr** comp=Z,51nm,0.7s,baz=344,slow=11,SNR=93	**22.73**	**161**	P		**P**	**03 17 33.9**	**-0.9**
WRA	comp=Z,6.1nm,0.8s,baz=343,slow=18,SNR=11 comp=Z,51nm,0.7s			S		**S**	**03 21 37.0**	**-4.3**
WRA	**Warramunga Arr**	**22.73**	**161**	P		**P**	**03 17 31.0**	**-3.8**
WR8	**Warramunga Arr**	**22.80**	**160**	P		**P**	**03 17 34.1**	**-1.3**
WR8	comp=Z,77nm,1.2s				IAmb	IAmb	03 17 36.5	
PMG	**Port Moresby** comp=Z,16nm,0.7s,baz=310,slow=6.9,SNR=7.0 comp=Z,16nm,0.7s	**23.31**	**118**	P		**P**	**03 17 40.9**	**+0.2**
MBWA	**Marble Bar**	**23.54**	**196**	P		**P**	**03 17 41.5**	**-1.4**
QIZ	**Qiongzhong**	**23.80**	**318**	P		**P**	**03 17 44.1**	**-1.3**
QIZ				S		**S**	**03 22 00.3**	**+1.4**
QIZ	comp=Z,250nm,18.1s			LR		LR		
QIZ	comp=Z,330nm,11.3s			LR		LR		
QIZ	comp=Z,370nm,19.5s			LR		LR		
JOW	**Kunigami** comp=Z,42nm,0.8s,baz=174,slow=9.1,SNR=6.9	**25.17**	**4**	P		**P**	**03 17 59.0**	**+1.2**
JOW	**Kunigami**	**25.17**	**4**	P		**P**	**03 17 59.2**	**+1.4**
AS31	**Alice Springs** comp=Z,12nm,0.5s	**26.11**	**164**	IAmb		IAmb	03 18 10.8	
ASAR	**Alice Springs** comp=Z,9.8nm,0.5s,baz=348,slow=14,SNR=95	**26.11**	**164**	P		**P**	**03 18 05.5**	**-0.9**
ASAR	comp=Z,2.0nm,0.5s,baz=347,slow=2.3,SNR=6.3			PcP		**PcP**	**03 21 33.2**	**-0.3**
ASAR	comp=Z,1.0nm,0.8s,baz=331,slow=13,SNR=3.8 comp=Z,9.8nm,0.5s			S		**S**	**03 22 33.2**	**-2.5**
ASAR	**Alice Springs**	**26.11**	**164**	P		**P**	**03 18 05.0**	**-1.4**
RPSI	**Rantau Prapat**	**27.56**	**273**	P		**P**	**03 18 18.2**	**-1.4**
GSI	**Gunungsitoli**	**28.90**	**270**	P		**P**	**03 18 29.1**	**-2.4**
GSI	comp=Z,24nm,1.0s				IAmb	IAmb	03 18 35.0	
CTAO	**Charters Tower**	**28.98**	**139**	P		**P**	**03 18 31.9**	**-0.3**
NJ2	**Nanjing**	**31.15**	**347**	*eP*		**P**	**03 18 52.4**	**+1.2**
NJ2	comp=Z,12nm,0.5s			pmax		pmax		
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.3s,baz=114,slow=6.6,SNR=8.8 comp=Z,1.1nm,0.3s	**31.79**	**304**	P		**P**	**03 18 55.2**	**-1.8**
CHTO	**Chiang Mai**	**31.96**	**304**	P		**P**	**03 18 57.2**	**-1.4**
MORW	**Morawa** comp=Z,17nm,1.2s	**32.07**	**197**	IAmb		IAmb	03 19 03.6	
FORT	**Forrest** comp=Z,16nm,0.7s	**32.21**	**177**	IAmb		IAmb	03 19 02.4	
PZH	**PanZhiHua**	**34.34**	**318**	P		**P**	**03 19 20.8**	**+1.4**
BBOO	**Buckleboo** comp=Z,18nm,0.7s	**35.38**	**166**	IAmb		IAmb	03 19 29.4	
KSRS	**Korea Array** comp=Z,2.0nm,0.7s,baz=180,slow=8.7,SNR=13	**35.73**	**2**	P		**P**	**03 19 28.8**	**-2.1**
KSRS	comp=Z,1.8nm,0.8s,baz=178,slow=4.0,SNR=5.3 comp=Z,2.0nm,0.7s			PcP		**PcP**	**03 22 00.1**	**+1.5**
EIDS	**Eidsvold**	**35.85**	**140**	P		**P**	**03 19 31.8**	**-0.4**
EIDS	comp=Z,22nm,1.1s				IAmb	IAmb	03 19 32.1	
STKA	**Stephens Creek** comp=Z,11nm,0.7s,baz=329,slow=9.7,SNR=26	**36.23**	**158**	P		**P**	**03 19 34.7**	**-0.6**
STKA	comp=Z,3.2nm,0.7s,baz=34,slow=2.2,SNR=2.3 comp=Z,11nm,0.7s			PcP		**PcP**	**03 22 00.8**	**+0.5**
MAJO	**Matsushiro**	**36.44**	**16**	P		**P**	**03 19 34.9**	**-2.3**
MJAR	**Matsushiro Arr** comp=Z,6.7nm,0.8s,baz=183,slow=9.5,SNR=16 comp=Z,6.7nm,0.8s	**36.44**	**16**	P		**P**	**03 19 36.2**	**-0.9**
MJB9	**Matsu-Tunnel**	**36.45**	**16**	P		**P**	**03 19 36.0**	**-1.1**
BJI	**Beijing**	**39.41**	**348**	P		**P**	**03 20 00.3**	**-1.8**
BJI	comp=Z,4.0nm,0.4s			pmax		pmax		
ARMA	**Armidale** comp=Z,23nm,0.8s	**39.84**	**

KK31	**Karatay Array**	**64.64**	**318**	IAmb	IAmb	03 23 52.6	
	comp=Z,16nm,1.6s						
CASY	**Casey**	**68.67**	**187**	P	**P**	**03 23 35.5**	**+0.5**
CASY	**Casey**	**68.67**	**187**	P	**P**	**03 23 35.5**	**+0.5**
CASY	**Casey**	**68.67**	**187**	pP	pP	03 23 46.7	+1.2
BVAR	**Borovoye Array**	**68.98**	**328**	P	**P**	**03 23 34.3**	**-3.1**
	comp=Z,15nm,0.6s,baz=136,slow=7.2,SNR=4.2						
ARTI	**Arti**	**76.69**	**328**	P	**P**	**03 24 21.9**	**-1.1**
ARTI				IAmb	IAmb	03 24 29.7	
	comp=Z,12nm,0.6s						
RAYN	**Ar Rayn**	**81.10**	**293**	P	**P**	**03 24 48.4**	**+0.4**
RAYN				pP	**pP**	**03 24 59.4**	**+0.9**
VNDA	**Vanda**	**81.34**	**173**	P	**P**	**03 24 48.1**	**+0.1**
	comp=Z,6.2nm,0.7s,baz=318,slow=6.0,SNR=39						
	comp=Z,6.2nm,0.7s						
VNDA	**Vanda**	**81.34**	**173**	IAmb	IAmb	03 24 49.0	
	comp=Z,6.6nm,0.7s						
VNDA	**Vanda**	**81.34**	**173**	P	**P**	**03 24 48.1**	**+0.1**
VNDA	**Vanda**	**81.34**	**173**	pP	pP	03 24 59.1	+0.3
MAW	**Mawson**	**81.66**	**200**	P	**P**	**03 24 50.7**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=64,slow=10,SNR=7.0						
	comp=Z,1.5nm,0.5s						
SBA	**Scott Base**	**82.25**	**172**	P	**P**	**03 24 53.9**	**+1.1**
D19K	**Kuna River**	**83.20**	**21**	IAmb	IAmb	03 25 11.2	
	comp=Z,12nm,0.9s						
J19K	**Poorman**	**83.28**	**26**	P	**P**	**03 24 59.7**	**+1.2**
J19K				IAmb	IAmb	03 25 00.5	
	comp=Z,12nm,1.1s						
E19K	**Redstone River**	**83.30**	**22**	IAmb	IAmb	03 25 22.4	
	comp=Z,15nm,0.9s						
D20K	**Etivluk River**	**83.79**	**21**	IAmb	IAmb	03 25 14.4	
	comp=Z,19nm,1.2s						
KBZ	**Khabaz**	**84.27**	**314**	P	**P**	**03 25 03.2**	**-0.7**
	comp=Z,6.2nm,0.8s,baz=81,slow=1.2,SNR=10						
	comp=Z,6.2nm,0.8s						
B22K	**Teshekpuk Lake**	**85.19**	**20**	P	**P**	**03 25 08.6**	**+0.6**
B22K				IAmb	IAmb	03 25 11.6	
	comp=Z,9.2nm,0.8s						
C23K	**Itkillik River**	**86.07**	**20**	IAmb	IAmb	03 25 36.7	
	comp=Z,7.8nm,0.9s						
E23K	**Chandalar**	**86.26**	**22**	IAmb	IAmb	03 25 21.6	
	comp=Z,7.8nm,1.1s						
ILAR	**Eielson Array**	**87.14**	**25**	P	**P**	**03 25 15.7**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=244,slow=5.3,SNR=5.1						
	comp=Z,0.5nm,0.7s						
C27K	**Jago River**	**88.46**	**21**	P	**P**	**03 25 22.9**	**-1.1**
C27K				IAmb	IAmb	03 25 25.3	
	comp=Z,4.4nm,0.8s						
KMBO	**Kilima Mbogo**	**89.26**	**269**	P	**P**	**03 25 30.6**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=213,slow=4.7,SNR=5.3						
	comp=Z,1.2nm,0.3s						
SYO	**Syowa Base**	**90.34**	**201**⇑	*eP*	**P**	**03 25 31.8**	**-0.9**
BR131	**Keskin Array S**	**91.19**	**310**	IAmb	IAmb	03 26 17.6	
	comp=Z,13nm,1.8s						
BRTR	**Keskin Array B**	**91.19**	**310**	P	**P**	**03 25 36.5**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=133,slow=4.1,SNR=8.4						
	comp=Z,1.2nm,0.8s						
QSPA	**South Pole Qui**	**91.50**	**180**	P	**P**	**03 25 39.3**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=293,slow=0.3,SNR=9.4						
	comp=Z,2.1nm,0.7s						
QSPA	**South Pole Qui**	**91.50**	**180**	P	**P**	**03 25 40.8**	**+2.5**
QSPA				IAmb	IAmb	03 25 48.9	
	comp=Z,3.5nm,0.8s						
ARCES	**ARCESS Array B**	**92.37**	**340**	P	**P**	**03 25 41.9**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=72,slow=4.5,SNR=5.7						
	comp=Z,3.4nm,0.8s						
FINES	**FINESS Array B**	**93.60**	**332**	P	**P**	**03 25 46.5**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=53,slow=6.4,SNR=10						
	comp=Z,2.1nm,0.6s						
VRI	**Vrincioaia**	**95.67**	**316**	⇑P	**P**	**03 25 57.7**	**-0.2**
DLBC	**Dease Lake**	**95.70**	**31**	LR	LR	04 05 30.3	
	comp=Z,62nm,19.4s,baz=267,slow=33						
PLOR	**Plostina**	**95.72**	**316**	⇓P	P	03 25 52.0	-6.1
MLR	**Muntele Rosu**	**96.27**	**316**	⇑P	**P**	**03 26 00.1**	**-0.6**
BURAR	**Bucovina Array**	**96.43**	**318**	P	**P**	**03 26 01.5**	**+0.1**
BURAR				IAmb	IAmb	03 26 03.0	
	comp=Z,3.3nm,0.8s						
BURAR	**Bucovina Array**	**96.43**	**318**	⇓P	**P**	**03 26 02.0**	**+0.6**
BUR08	**Bucovina Ar. S**	**96.44**	**318**	IAmb	IAmb	03 26 17.8	
	comp=Z,9.4nm,1.4s						
HFS	**Hagfors**	**99.79**	**332**	P	**Pdif**	**03 26 14.9**	**-1.2**
	comp=Z,1.9nm,0.8s,baz=114,slow=3.5,SNR=4.0						
	comp=Z,1.9nm,0.8s						
TXAR	**Lajitas Array**	**123.09**	**53**	PKP	**PKPdf**	**03 31 29.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=201,slow=0.5,SNR=7.9						
PLCA	**Paso Flores**	**138.08**	**161**	PKP	**PKPdf**	**03 31 58.6**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=156,slow=3.2,SNR=6.6						
CPUP	**Villa Florida**	**155.12**	**172**	PKPbc	PKPdf	03 32 34.9	+9.0
	comp=Z,0.7nm,0.8s,baz=50,slow=2.6,SNR=4.8						
LPAZ	**La Paz**	**159.49**	**136**	PKP	**PKPdf**	**03 32 33.8**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=232,slow=1.6,SNR=6.1						

DJA 16 03:21:43.8±1.5,**3°S**±4°×**13°1E**±°,**h20**km±13km,**M4.1**/9,
mb4.8/3,**MLv3.7**/9,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.69**	**93**	P	Pn	03 22 11.9	-0.3
FAKI				S	Sb	03 22 34.2	-0.9
MSAI	**Masohi**	**1.71**	**253**	P	Pb	03 22 13.8	-0.7
BNDI	**Bandanaira**	**1.79**	**201**	P	Pn	03 22 14.0	+0.3
SWI	**Sorong**	**2.08**	**20**	P	Pn	03 22 19.1	+1.5
NLAI	**Namlea**	**3.48**	**263**	P	Pn	03 22 37.2	+0.4
BAKI	**Biak**	**5.78**	**74**	P	Pn	03 23 08.5	0.0
	0.2nm56nm,0.6s						
KMSI	**Cibinong**	**7.40**	**297**	P	Pn	03 23 31.3	+0.5
	191nm,0.6s						

NEIC ***16*** *03:24:51.3*±*1.4,19°.48N*±*0°.05*×*64°.20W*±*0°.07,h10*km±*2*km*, ML2.9/14,Md3.7/11(RSPR),Error ellipse: s-maj=11.9km s-min=7.8km az=93.0*

RSPR ***16*** *03:24:53.5,19°.74N*×*64°.30W,h17*km±*26*km*,MD3.7/11*

ISC 16 03:24:51.1±3.1,**19°.7N**±0°.2×**64°.1W**±0°.1,**h34**km,**n33,**
σ0°**66/31,10C-1D,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**2.22**	**227**		**Pn**	**03 25 26.4**	**+0.8**
HUMP					**Sn**	**03 25 51.3**	**-0.5**
HUMP	**Col San Antoni**	**2.22**	**227**	IAML		03 25 57.5	
	comp=N,72nm,0.2s						
HUMP				IAML		03 25 58.6	
	comp=E,83nm,0.2s						
HUMP	**Col San Antoni**	**2.22**	**227**⇑	*eP*	**Pn**	**03 25 26.4**	**+0.8**
HUMP	**Col San Antoni**	**2.22**	**227**	*eS*	**Sn**	**03 25 51.3**	**-0.5**
GCPR	**Guaynabo City**	**2.29**	**234**		**Pn**	**03 25 26.3**	**-0.1**
GCPR	**Guaynabo City**	**2.29**	**234**⇑	*eP*	**Pn**	**03 25 26.3**	**-0.1**
SJG	**San Juan**	**2.46**	**231**		**Pn**	**03 25 29.1**	**+0.4**
SJG	**San Juan**	**2.46**	**231**	IAML		03 26 18.9	
	comp=E,54nm,0.6s						
SJG	**San Juan**	**2.46**	**231**⇑	*eP*	**Pn**	**03 25 29.1**	**+0.4**
SJG	**San Juan**	**2.46**	**231**	*eS*	**Sn**	**03 25 57.0**	**-0.6**
ECPR	**Experimental S**	**2.50**	**238**⇑	*eP*	**Pn**	**03 25 29.6**	**+0.3**
AOPR	**Arecibo Observ**	**2.80**	**242**		**Pn**	**03 25 33.5**	**0.0**
AOPR					**Sn**	**03 26 05.5**	**-0.7**
AOPR	**Arecibo Observ**	**2.80**	**242**	IAML		03 26 09.4	
	comp=N,123nm,0.5s						
AOPR	**Arecibo Observ**	**2.80**	**242**⇑	*eP*	**Pn**	**03 25 33.5**	**0.0**
AOPR	**Arecibo Observ**	**2.80**	**242**	*eS*	**Sn**	**03 26 05.5**	**-0.7**
UUPR	**Utuado, UPR, P**	**2.82**	**241**		**Pn**	**03 25 34.4**	**+0.6**
UUPR					**Sn**	**03 26 06.5**	**-0.2**
UUPR	**Utuado, UPR, P**	**2.82**	**241**⇑	*eP*	**Pn**	**03 25 34.4**	**+0.6**
UUPR	**Utuado, UPR, P**	**2.82**	**241**	*eS*	**Sn**	**03 26 06.5**	**-0.2**
OBIP	**Obispado Ponce**	**2.84**	**236**		**Pn**	**03 25 35.1**	**+1.0**
OBIP	**Obispado Ponce**	**2.84**	**236**	IAML		03 26 08.5	
	comp=N,37nm,0.7s						
OBIP				IAML		03 26 15.9	
	comp=E,37nm,1.1s						
OBIP	**Obispado Ponce**	**2.84**	**236**⇑	*eP*	**Pn**	**03 25 35.1**	**+1.0**
AGPR	**Aguadilla, PR**	**3.06**	**248**		**Pn**	**03 25 37.1**	**+0.1**
AGPR	**Aguadilla, PR**	**3.06**	**248**⇑	*eP*	**Pn**	**03 25 37.1**	**+0.1**
LSP	**Las Mesas**	**3.16**	**242**		**Pn**	**03 25 39.4**	**+0.9**
LSP	**Las Mesas**	**3.16**	**242**⇑	*eP*	**Pn**	**03 25 39.4**	**+0.9**
MLPR	**Magueyes Islan**	**3.23**	**239**⇑	*eP*	**Pn**	**03 25 39.8**	**+0.4**
MLPR	**Magueyes Islan**	**3.23**	**239**	*eS*	**Sn**	**03 26 15.7**	**-1.0**
CRPR	**Cabo Rojo, PR**	**3.27**	**240**		**Pn**	**03 25 40.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**3.27**	**240**	IAML		03 26 22.1	
	comp=N,33nm,1.3s						
CRPR				IAML		03 26 28.2	
	comp=E,40nm,1.1s						
CRPR	**Cabo Rojo, PR**	**3.27**	**240**⇓	*eP*	**Pn**	**03 25 40.5**	**+0.6**
ABD	**La Joyeuse, An**	**4.05**	**141**	Pn	**Pn**	**03 25 51.2**	**+0.5**
DR12	**Loma Pena Alta**	**5.03**	**261**	Pn	**Pn**	**03 26 04.1**	**-0.2**
SDDR	**Presa de Saban**	**6.79**	**265**		**Pn**	**03 26 29.8**	**+1.4**

IDC ***16*** *03:29:27.0*±*1.1,1°.63N*×*126°.30E,h0*km*,mb4.1/8, mbtmp4.1/9,ML4.0/1,MS3.1/1,Error ellipse: s-maj=122.5km s-min=15.0km az=68.0*

DJA ***16*** *03:29:31.3*±*0.2,2°.N*±*3°*×*12°.6E*±°*,h10*km*,M4.2/14,mB5.4/1, mb4.3/4,MLv4.1/14,Mw(mB)4.8/1*

NEIC ***16*** *03:29:32.8*±*1.3,1°.63N*±*0°.09*×*126°.39E*±*0°.08,h35km*±*1km, mb4.3/14,Error ellipse: s-maj=17.9km s-min=9.3km az=43.0*

ISC 16 03:29:32.7±0.7,**1°.68N**±0°.06×**126°.53E**±0°.07,**h35**km,**n40,**
σ1°**73/42,mb4.2/14,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**137**		**Pn**	**03 29 54.1**	**+0.7**
TNTI	**Ternate**	**1.23**	**137**	P	**Pn**	**03 29 54.1**	**+0.7**
SGSI	**Sangihe**	**2.23**	**333**	P	**Pn**	**03 30 08.2**	**+1.1**
SGSI				S	**Sn**	**03 30 35.2**	**+1.7**
KMSI	**Cibinong**	**2.77**	**247**	P	**Pn**	**03 30 14.8**	**+0.2**
KMSI				S	**Sn**	**03 30 47.2**	**+0.3**
SANI	**Sanana**	**3.74**	**188**	P	**Pn**	**03 30 29.0**	**+1.0**
MRSI	**Marisa**	**4.74**	**255**	P	**Pn**	**03 30 44.0**	**+2.3**
NLAI	**Namlea**	**4.92**	**173**	P	**Pn**	**03 30 45.4**	**+1.3**
APSI	**Ampana**	**5.51**	**242**	P	**Pn**	**03 30 56.1**	**+3.8**
TOLI2	**Tolitoli**	**5.77**	**264**		**Pn**	**03 30 53.7**	**-2.2**
MPSI	**Mapaga**	**6.76**	**259**	P	**Pn**	**03 31 09.5**	**0.0**
	0.1nm2µm25nm,0.8s						
FAKI	**Fak Fak**	**7.32**	**129**	Pn	**Pn**	**03 31 21.3**	**+4.2**
FAKI	**Fak Fak**	**7.32**	**129**	P	**Pn**	**03 31 20.9**	**+3.7**
MYLDM	**Lahad Datu**	**8.73**	**294**		**Pn**	**03 31 40.7**	**+4.1**
KAPI	**Kappang**	**9.49**	**225**	Pn	**Pn**	**03 31 48.0**	**+1.1**
	1.4nm,0.3s,baz=212,slow=1.6,SNR=4.2						
KAPI	**Kappang**	**9.49**	**225**		**Pn**	**03 31 47.6**	**+0.7**
SAUI	**Saumlaki**	**10.71**	**154**	Pn	**Pn**	**03 32 02.7**	**-1.0**
MTN	**Manton Dam**	**15.13**	**163**		**Pn**	**03 33 04.4**	**+0.4**
KNRA	**Kununurra**	**17.39**	**173**		**Pn**	**03 33 32.4**	**-0.2**
KNRA				IAmb	IAmb	03 33 55.9	
	comp=Z,20nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.67**	**183**	P	**P**	**03 33 56.8**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=3.9,slow=9.5,SNR=8.9						
	comp=Z,1.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.67**	**183**	P	**P**	**03 33 57.6**	**-1.2**
GUMO	**Guam**	**21.66**	**56**	LR	LR	03 42 38.5	
	comp=Z,44nm,18.4s,baz=129,slow=36						
WRA	**Warramunga Arr**	**22.81**	**161**	P	**P**	**03 34 31.4**	**-1.3**
	comp=Z,4.2nm,0.5s,baz=342,slow=11,SNR=47						
	comp=Z,4.2nm,0.5s						
WRA	**Warramunga Arr**	**22.81**	**161**		**P**	**03 34 30.4**	**-2.3**
WR8	**Warramunga Arr**	**22.88**	**160**		**P**	**03 34 32.2**	**-1.1**
WR8				IAmb	IAmb	03 34 44.5	
	comp=Z,6.3nm,0.8s						
KULM	**Kulim**	**26.07**	**279**	P	**P**	**03 35 00.8**	**-2.4**
KULM				IAmb	IAmb	03 35 32.9	
	comp=Z,19nm,1.4s						
AS31	**Alice Springs**	**26.20**	**165**	P	**P**	**03 35 03.6**	**-0.6**
AS31				IAmb	IAmb	03 35 13.6	
	comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**26.20**	**165**	P	**P**	**03 35 04.2**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=347,slow=7.1,SNR=48						
ASAR				PcP	**PcP**	**03 38 31.1**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=348,slow=2.2,SNR=8.4						
	comp=Z,2.2nm,0.4s						
INKA	**Innaminka**	**32.29**	**156**	P	**P**	**03 35 56.7**	**-1.6**
FORT	**Forrest**	**32.31**	**178**	P	**P**	**03 35 58.0**	**-0.5**
FORT				IAmb	IAmb	03 36 10.0	
	comp=Z,5.4nm,0.9s						
JGF	**Kuroka**	**35.22**	**15**	P	**P**	**03 36 24.5**	**+0.7**
JGF				IAmb	IAmb	03 37 03.2	
	comp=Z,13nm,1.2s						
BBOO	**Buckleboo**	**35.47**	**166**	P	**P**	**03 36 24.6**	**-1.3**
STKA	**Stephens Creek**	**36.30**	**158**	P	**P**	**03 36 32.5**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=327,slow=8.9,SNR=4.6						
	comp=Z,2.8nm,0.8s						
JMM	**Marumori**	**38.33**	**18**	P	**P**	**03 36 51.4**	**+1.3**
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**03 39 28.7**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=120,slow=7.6,SNR=14						
	comp=Z,1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**62.32**	**334**	P	**P**	**03 39 49.7**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=133,slow=7.5,SNR=3.1						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**03 39 57.5**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=130,slow=6.4,SNR=24						
	comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**63.36**	**328**	P	**P**	**03 39 57.2**	**-1.1**
KURK				IAmb	IAmb	03 39 59.2	
	comp=Z,4.5nm,0.6s						
BVAR	**Borovoye Array**	**68.92**	**327**	P	**P**	**03 40 34.0**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=116,slow=8.2,SNR=4.4						
	comp=Z,1.0nm,0.5s						
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**03 41 45.7**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=316,slow=7.5,SNR=6.4						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**03 41 45.8**	**+0.2**
VNDA				IAmb	IAmb	03 41 49.1	
	comp=Z,2.9nm,1.2s						

IDC ***16*** *03:30:36.6*±*0.9,36°.69N*×*137°.44E,h250*km±*13*km*,mb3.4/4, mbtmp4.0/5,Error ellipse: s-maj=46.6km s-min=20.1km az=83.0*

JMA ***16*** *03:30:36.0*±*0.3,36°.6N*±*0°.7*×*137°.4E*±*0°.9,h256*km±*2*km*, MV3.0/32,TOYAMA PREF*

ISC 16 03:30:36.8±0.9,**36°.66N**±0°.08×**137°.35E**±0°.08,**h250**km,**n26,**
σ0°**50/27,mb3.5/4,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAJO	**Matsushiro**	**0.70**	**99**	P	**Pn**	**03 31 10.4**	**-0.1**
MAT	**Matsushiro**	**0.70**	**99**	P	**Pn**	**03 31 10.2**	**-0.2**
MJAR	**Matsushiro Arr**	**0.70**	**99**	P	**Pn**	**03 31 10.5**	**0.0**
	19nm,0.4s,baz=266,slow=5.4,SNR=105						
JKG	**Kaga**	**0.90**	**245**	*eP*	**Pn**	**03 31 11.2**	**-0.1**
JGF	**Kuroka**	**1.06**	**179**	P	**Pn**	**03 31 11.7**	**-0.6**
JYTA	**Yamagatataniai**	**1.17**	**205**	P	**Pn**	**03 31 12.4**	**-0.5**
JHG	**Hegura jima**	**1.23**	**344**	*eP*	**Pn**	**03 31 13.5**	**+0.3**
INU	**Inuyama**	**1.33**	**192**	P	**Pn**	**03 31 13.2**	**-0.8**
JRY	**Ryogami san**	**1.41**	**117**	P	**Pn**	**03 31 14.5**	**0.0**
JYN	**Shimob**	**1.51**	**140**	P	**Pn**	**03 31 14.8**	**-0.5**
JSD	**Sado**	**1.56**	**28**	P	**Pn**	**03 31 15.7**	**+0.2**
JSD	**Sado**	**1.56**	**28**	P	**Pn**	**03 31 15.6**	**+0.2**
JSD				*eS*	**S**	**03 31 46.4**	**+0.4**
JAG	**Ashikaga**	**1.71**	**97**	*eP*	**Pn**	**03 31 16.2**	**-0.6**
JAG				*eS*	**S**	**03 31 48.8**	**+0.5**
JNS	**Sasagawa**	**1.95**	**53**	*eP*	**Pn**	**03 31 19.0**	**+0.2**
JOD2	**Odawara 2**	**1.98**	**134**	*eP*	**Pn**	**03 31 19.2**	**0.0**
JWT	**Wachi**	**2.09**	**230**	P	Pn	03 31 10.3	-10
JWT	**Wachi**	**2.09**	**230**	*eP*	**Pn**	**03 31 19.8**	**-0.3**
JIE	**Ise**	**2.32**	**193**	*eP*	**Pn**	**03 31 22.4**	**+0.1**
JAW	**Awa shima**	**2.35**	**40**	*eP*	**Pn**	**03 31 22.6**	**+0.2**
TK02	**Tokai 2**	**2.73**	**173**	*eP*	**Pn**	**03 31 26.6**	**+0.4**
JMM	**Marumori**	**3.00**	**65**	P	**Pn**	**03 31 29.6**	**+0.3**
ASAJ	**Asahikawa**	**8.46**	**27**	P	**Pn**	**03 32 34.0**	**-1.8**
	4.0nm,0.3s,baz=249,slow=13,SNR=10						
KURBB	**Kurchatov Arra**	**43.66**	**308**	P	**P**	**03 38 16.7**	**0.0**
	0.8nm,0.5s,baz=84,slow=7.6,SNR=9.1						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**56.37**	**183**	P	**P**	**03 39 52.2**	**0.0**
	0.4nm,0.3s,baz=355,slow=7.7,SNR=5.7						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**67.59**	**331**	P	**P**	**03 41 06.0**	**-0.2**
	1.0nm,0.8s,baz=62,slow=5.4,SNR=8.6						
	1.0nm,0.8s						
HFS	**Hagfors**	**73.04**	**334**	P	**P**	**03 41 39.3**	**+0.2**
	2.9nm,1.0s,baz=29,slow=3.3,SNR=1.8						
	2.9nm,1.0s						

BJI ***16*** *03:40:49.3,0°.78N*×*126°.92E,h45km,mB5.0/4,mb4.7/24, Ms4.5/1*

IDC ***16*** *03:40:49.9*±*0.5,1°.49N*×*126°.35E,h0km,mb4.4/17, mbtmp4.3/18,ML4.3/1,MS3.0/4,Error ellipse: s-maj=29.8km s-min=10.4km az=75.0*

DJA ***16*** *03:40:54.3*±*0.2,2°.N*±*2°*×*12°.7E*±°*,h10*km*,M4.5/18, mb4.8/13,mB5.1/10,MLv4.5/18,Mw(mB)4.4/10*

NEIC ***16*** *03:40:56.0*±*1.8,1°.62N*±*0°.08*×*126°.67E*±*0°.08,h35km*±*1km, mb4.7/21,Error ellipse: s-maj=16.2km s-min=9.6km az=220.0*

ISC 16 03:40:56.0±0.4,**1°.60N**±0°.05×**126°.63E**±0°.06,**h35**km,**n81,**
σ1°**67/79,mb4.6/36,MS3.0/4,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.11**	**138**		**Pn**	**03 41 15.8**	**+0.8**
TNTI	**Ternate**	**1.11**	**138**	P	**Pn**	**03 41 15.1**	**+0.1**
TNTI				S	**Sn**	**03 41 31.6**	**+2.5**
SGSI	**Sangihe**	**2.34**	**332**	P	**Pn**	**03 41 31.0**	**-1.0**
SGSI				S	**Sn**	**03 41 59.6**	**0.0**
KMSI	**Cibinong**	**2.84**	**249**	P	**Pn**	**03 41 38.9**	**+0.1**
KMSI				S	**Sn**	**03 42 13.3**	**+1.5**
SANI	**Sanana**	**3.68**	**190**	P	**Pn**	**03 41 50.6**	**+0.1**
LUWI	**Luwuk**	**4.67**	**236**		**Pn**	**03 42 05.5**	**+1.5**
LUWI	**Luwuk**	**4.67**	**236**	P	**Pn**	**03 42 04.5**	**+0.5**
MRSI	**Marisa**	**4.82**	**257**	P	**Pn**	**03 42 09.1**	**+3.1**
NLAI	**Namlea**	**4.83**	**174**	P	**Pn**	**03 42 08.1**	**+1.8**
MSAI	**Masohi**	**5.43**	**155**	P	Pn	03 42 10.1	-4.4
AAI	**Ambon**	**5.48**	**163**	P	**Pn**	**03 42 17.9**	**+2.7**
	0.3nm3µm72nm,0.7s						
DAV	**Davao City (W)**	**5.53**	**349**	LR	LR	03 44 36.6	
	comp=Z,160nm,20.0s,baz=150,slow=40						
APSI	**Ampana**	**5.57**	**243**	P	**Pn**	**03 42 18.8**	**+2.4**
TOLI2	**Tolitoli**	**5.86**	**265**		**Pn**	**03 42 19.0**	**-1.5**
KDI	**Kendari**	**6.82**	**216**	P	**Pn**	**03 42 35.4**	**+1.8**
MPSI	**Mapaga**	**6.84**	**259**	P	**Pn**	**03 42 35.8**	**+1.9**
	0.2nm592nm40nm,0.7s						
BNDI	**Bandanaira**	**6.91**	**152**	P	**Pn**	**03 42 38.9**	**+4.1**
FAKI	**Fak Fak**	**7.19**	**129**		**Pn**	**03 42 41.0**	**+2.3**
FAKI	**Fak Fak**	**7.19**	**129**	P	**Pn**	**03 42 40.9**	**+2.2**
	0.1nm29nm,0.8s						
TTSI	**Tana Toraja**	**8.22**	**236**	P	**Pn**	**03 42 52.4**	**-0.5**
	576nm49nm,0.6s						
SPSI	**Sidrap Palu**	**8.81**	**231**	P	**Pn**	**03 43 01.8**	**+0.9**
	45nm,0.5s						
BNSI	**Bone**	**8.83**	**228**	P	**Pn**	**03 43 02.2**	**+1.0**
	632nm47nm,0.7s						
MYLDM	**Lahad Datu**	**8.86**	**294**			**03 43 03.4**	**+1.8**
BKSI	**Bulukumba**	**9.46**	**223**	P	**Pn**	**03 43 11.8**	**+1.9**
	485nm37nm,0.5s						
KAPI	**Kappang**	**9.51**	**226**	Pn	**Pn**	**03 43 11.8**	**+1.4**
	3.3nm,0.3s,baz=13,slow=1.5,SNR=3.9						
BSSI	**Bau Bau, Buton**	**9.84**	**218**	P	**Pn**	**03 43 16.8**	**+1.8**
MTN	**Manton Dam**	**15.03**	**163**		**Pn**	**03 44 26.2**	**+0.3**
KNRA	**Kununurra**	**17.30**	**173**		**Pn**	**03 44 52.6**	**-2.2**
KNRA				IAmb	IAmb	03 44 57.4	
	comp=Z,35nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.60**	**183**	P	**P**	**03 45 20.3**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=14,slow=8.6,SNR=14						
	comp=Z,7.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.60**	**183**	P	**P**	**03 45 20.2**	**-1.1**
GUMO	**Guam**	**21.62**	**56**	LR	LR	03 53 18.0	
	comp=Z,44nm,21.4s,baz=228,slow=34						
COEN	**Coen**	**22.54**	**134**	P	**P**	**03 45 52.5**	**-0.6**
COEN				IAmb	IAmb	03 45 54.7	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**22.71**	**161**	P	**P**	**03 45 53.8**	**-1.1**
	comp=Z,38nm,0.5s,baz=338,slow=11,SNR=95						
WRA				S	**S**	**03 50 01.2**	**0.0**
	comp=Z,2.3nm,0.9s,baz=331,slow=20,SNR=4.9						
WRA	**Warramunga Arr**	**22.71**	**161**	P	**P**	**03 45 53.2**	**-1.7**
SSLB	**Suanglung**	**22.73**	**346**	P	**P**	**03 45 54.6**	**-0.4**
WR8	**Warramunga Arr**	**22.77**	**161**	P	**P**	**03 45 54.7**	**-0.9**
ASAR	**Alice Springs**	**26.10**	**165**	P	**P**	**03 46 26.6**	**-0.1**
	comp=Z,20nm,0.9s,baz=349,slow=7.8,SNR=79						
ASAR				PcP	**PcP**	**03 49 53.7**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=348,slow=2.5,SNR=5.1						
ASAR				S	**S**	**03 50 56.3**	**+0.3**
	comp=Z,0.9nm,1.0s,baz=349,slow=24,SNR=4.7						
	comp=Z,20nm,0.9s						
ASAR	**Alice Springs**	**26.10**	**165**	P	**P**	**03 46 26.2**	**-0.4**
NJ2	**Nanjing**	**31.16**	**347**	*eP*	**P**	**03 47 14.5**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JNU	**Nakatsue**

E19K	**Redstone River**	**83.23**	**22**		**P**	**P**	**03 53 19.7**	**+1.2**
E19K				IAmb	IAmb		03 53 42.2	
	comp=Z,10nm,1.1s							
KBZ	**Khabaz**	**84.36**	**314**	P	**P**	**P**	**03 53 23.8**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=144,slow=6.4,SNR=4.5							
	comp=Z,1.1nm,0.6s							
GURO	**Guroymak-BITLI**	**84.78**	**308**	P	**P**	**P**	**03 53 26.3**	**-0.9**
GURO				IAmb	IAmb		03 53 27.7	
	comp=Z,6.5nm,0.8s							
ILAR	**Eielson Array**	**87.06**	**25**	P	**P**	**P**	**03 53 40.0**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=250,slow=5.8,SNR=4.7							
	comp=Z,0.2nm,0.5s							
MMAI	**Mount Meron Ar**	**90.17**	**303**	P	**P**	**P**	**03 53 51.7**	**-1.5**
	comp=Z,1.9nm,0.8s,baz=76,slow=7.0,SNR=4.4							
	comp=Z,1.9nm,0.8s							
ARCES	**ARCESS Array B**	**92.40**	**340**	P	**P**	**P**	**03 54 02.3**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=75,slow=5.1,SNR=5.0							
	comp=Z,2.7nm,0.8s							
BUR08	**Bucovina Ar. S**	**96.51**	**318**	P	**P**	**P**	**03 54 21.2**	**-1.0**
BUR08				IAmb	IAmb		03 54 22.7	
	comp=Z,3.2nm,0.8s							
TXAR	**Lajitas Array**	**122.96**	**53**	PKP	**PKPdf**	**PKPdf**	**03 59 47.3**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=348,slow=1.2,SNR=2.4							
LPAZ	**La Paz**	**159.40**	**136**	PKP	**PKPdf**	**PKPdf**	**04 00 50.4**	**-2.3**
	comp=Z,1.0nm,0.8s,baz=7.8,slow=2.9,SNR=4.5							

*NEIC **16** 03:41:32.0±0.6, 19.°06N±0.°05×63.°97W±0.°06, h35km±2km, ML2.7/10, Md3.6/4(RSPR), Error ellipse: s-maj=10.9km s-min=6.8km az=117.0*
*RSPR **16** 03:41:33.1, 19.°12N×64.°04W, h50km±18km, MD3.6/4*
ISC 16 03:41:31.8±4.4, 18.°9N±0.°4×64.°0W±0.°1, h22km, n14, σ0.53/13, 4C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SABA	**Saba**	**1.50**	**150**	Pn	**Pn**	**03 41 57.5**	**+0.1**
SABA				IAML		03 42 22.2	
	comp=N,97nm,1.7s						
HUMP	**Col San Antoni**	**1.89**	**246**	Pn	**Pb**	**03 42 05.1**	**-0.5**
ECPR	**Experimental S**	**2.29**	**255**	*eP*	**Pn**	**03 42 07.9**	**-0.3**
ECPR	**Experimental S**	**2.29**	**255**	*eS*	**Sn**	**03 42 35.5**	**-0.3**
OBIP	**Obispado Ponce**	**2.59**	**251**	Pn	**Pn**	**03 42 11.6**	**-0.8**
OBIP				IAML		03 43 49.3	
	comp=E,16nm,4.9s						
OBIP				IAML		03 43 50.2	
	comp=N,27nm,4.5s						
AOPR	**Arecibo Observ**	**2.64**	**258**		**Pn**	**03 42 13.3**	**+0.2**
AOPR	**Arecibo Observ**	**2.64**	**258**	IAML		03 42 41.2	
	comp=E,48nm,3.2s						
AOPR	**Arecibo Observ**	**2.64**	**258**	*eP*	**Pn**	**03 42 13.3**	**+0.2**
MLPR	**Magueyes Islan**	**3.01**	**252**	*eP*	**Pn**	**03 42 18.4**	**+0.3**
MLPR	**Magueyes Islan**	**3.01**	**252**	*eS*	**Sn**	**03 42 54.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**3.06**	**253**		**Pn**	**03 42 19.3**	**+0.5**
CRPR					**Sn**	**03 42 55.4**	**+0.6**
CRPR	**Cabo Rojo, PR**	**3.06**	**253**	IAML		03 43 33.9	
	comp=E,28nm,1.8s						
CRPR				IAML		03 44 18.9	
	comp=N,24nm,2.0s						
CRPR	**Cabo Rojo, PR**	**3.06**	**253**	*eP*	**Pn**	**03 42 19.3**	**+0.5**
CRPR	**Cabo Rojo, PR**	**3.06**	**253**	*eS*	**Sn**	**03 42 55.4**	**+0.6**

*TAP **16** 03:45:31.1, 21.°45N×121.°08E, h29km, ML3.7, D*
*JMA **16** 03:45:33.6±0.3, 22.°N±1.°×121.°2E±0.°9, h0km, MV4.1/13, TAIWAN REGION*
ISC 16 03:45:30.1±2.2, 21.°48N±0.°09×121.°07E±0.°03, h17km±10km, n101, σ1.55/131, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**0.45**	**340**	P	**Pn**	**03 45 41.9**	**+0.1**
TSEB				S	**Sn**	**03 45 49.8**	**+0.4**
TWKBT	**Hengchun**	**0.52**	**333**	*i* P	**Pn**	**03 45 42.5**	**-0.2**
TWKBT				S	**Sn**	**03 45 50.5**	**-0.7**
TWK1	**Hengchun**	**0.52**	**332**	*i* P	**Pn**	**03 45 42.6**	**-0.2**
TWK1				S	**Sn**	**03 45 51.0**	**-0.3**
SMST	**Manzhou Townsh**	**0.58**	**338**	*eP*	**Pn**	**03 45 43.5**	**-0.1**
SMST				S	**Sn**	**03 45 52.7**	**0.0**
HEN	**Hengchun**	**0.61**	**330**	P	**Pn**	**03 45 44.2**	**+0.3**
HEN				S	**Sn**	**03 45 53.7**	**+0.3**
LYUB	**Lan-yu**	**0.71**	**42**	*i* P	**Pn**	**03 45 45.2**	**-0.1**
LYUB				S	**Sn**	**03 45 55.0**	**-0.9**
LAY	**Lan-yu**	**0.72**	**39**	*eP*	**Pn**	**03 45 45.5**	**0.0**
SLIU	**Shizi**	**0.78**	**341**	*eP*	**Pn**	**03 45 46.3**	**0.0**
SLIU				S	**Sn**	**03 45 59.5**	**+1.9**
TAWH	**Dawu Township**	**0.87**	**349**	*eP*	**Pg**	**03 45 46.9**	**-0.2**
TAWH				S	**Sn**	**03 46 01.9**	**+2.0**
TAW	**Tawu**	**0.89**	**350**	*eP*	**Pg**	**03 45 47.3**	**-0.1**
TAW				*eS*	**Sn**	**03 46 02.7**	**+2.3**
EAST	**Anshuo**	**0.92**	**347**	*eP*	**Pg**	**03 45 47.9**	**-0.2**
EAST				*i* S	**Sn**	**03 46 03.6**	**+2.3**
SCZT	**Fangliau**	**0.98**	**335**	*eP*	**Pn**	**03 45 50.3**	**+1.2**
SCZT				*i* S	**Sn**	**03 46 03.9**	**+1.2**
MASBT	**Mashibuluo**	**1.20**	**340**	*eP*	**Pb**	**03 45 52.7**	**+0.3**
LDUT	**Ludao**	**1.25**	**17**	*eP*	**Pn**	**03 45 52.0**	**-0.8**
LDUT				*eS*	**Sn**	**03 46 08.5**	**-0.6**
TSMG	**Majia**	**1.28**	**342**	P	**Pg**	**03 45 55.8**	**+0.9**
TSMG				*eS*	**Sg**	**03 46 13.0**	**+1.4**
SSD	**Sandimen**	**1.33**	**342**	*eP*	**Pg**	**03 45 55.5**	**-0.2**
SSD				*eS*	**Sg**	**03 46 13.0**	**0.0**
TWGBT	**Beinan**	**1.33**	**0**	*eP*	**Pn**	**03 45 52.5**	**-1.4**
TWG	**Pinlang**	**1.34**	**0**	*eP*	**Pb**	**03 45 54.6**	**-0.1**
WSSB	**Gushan**	**1.38**	**327**	*eP*	**Pb**	**03 45 56.1**	**+0.6**
LONT	**Longtian**	**1.42**	**2**	*eP*	**Pn**	**03 45 55.1**	**-0.1**
SCST	**Cishan**	**1.50**	**339**	*eP*	**Pg**	**03 46 01.4**	**+2.4**
EDH	**Donghe**	**1.50**	**8**	*eP*	**Pn**	**03 45 55.5**	**-0.8**
ECS	**Chishang**	**1.62**	**5**	*eP*	**Pb**	**03 45 60.0**	**+0.5**
CHKT	**Chengkung**	**1.64**	**10**	*eP*	**Pb**	**03 45 59.5**	**-0.4**
CHKT				*eS*	**Sb**	**03 46 19.7**	**-0.5**
EHD	**Haiduan**	**1.67**	**4**	*eP*	**Pn**	**03 45 57.3**	**-1.3**
ELDTW	**Lidau**	**1.70**	**358**	*eP*	**Pn**	**03 45 59.7**	**+0.5**
STYH	**Taoyuan**	**1.71**	**351**	*eP*	**Pb**	**03 46 01.3**	**+0.3**
FULB	**Fuli**	**1.73**	**7**	*eP*	**Pn**	**03 45 59.7**	**+0.3**
CHKH	**Chenggong**	**1.73**	**10**	*eP*	**Pb**	**03 46 00.7**	**-0.7**
CHN1	**Nanshi**	**1.77**	**344**	*eP*	**Pg**	**03 46 03.6**	**-0.6**
WTP	**Ta-pu**	**1.81**	**347**	*eP*	**Pb**	**03 46 03.6**	**+0.8**
SNST	**Tainan City**	**1.81**	**343**	*eP*	**Pg**	**03 46 04.1**	**-0.8**
TPUB	**Ta-pu**	**1.86**	**347**	*eP*	**Pb**	**03 46 04.1**	**+0.5**
TWK	**Hsinying**	**1.86**	**343**	*eP*	**Pg**	**03 46 05.0**	**-0.9**
ECBN	**Changbin**	**1.86**	**11**	*eP*	**Pb**	**03 46 02.7**	**-1.0**
ECBN				*eS*	**Sn**	**03 46 24.4**	**0.0**
SCLT	**Jiali**	**1.87**	**335**	*eP*	**Pb**	**03 46 04.8**	**+0.9**
SCLT				*eS*	**Sb**	**03 46 25.5**	**-1.5**
TWF1	**Yuli**	**1.88**	**6**	*eP*	**Pn**	**03 46 01.6**	**+0.1**
TSCK	**Chigu Township**	**1.89**	**331**	*eP*	**Pn**	**03 46 02.2**	**+0.6**
YULB	**Yu-li**	**1.92**	**6**	*eP*	**Pn**	**03 46 03.0**	**+1.0**
YUS	**Yu-Shan**	**2.00**	**357**	*eP*	**Pb**	**03 46 05.8**	**-0.6**
CHN8	**Yiju**	**2.02**	**337**	*eP*	**Pn**	**03 46 02.9**	**-0.5**
EHY	**Hungye**	**2.03**	**7**	*eP*	**Pn**	**03 46 03.6**	**0.0**
HGSD	**Ruisui**	**2.03**	**9**	*eP*	**Pb**	**03 46 05.4**	**-1.2**
ALS	**Alishan**	**2.04**	**353**	*eP*	**Pb**	**03 46 07.6**	**+0.8**
CHN5	**Tsauling**	**2.14**	**350**	*eP*	**Pb**	**03 46 08.3**	**-0.2**
WSL	**Shuilin Townsh**	**2.18**	**339**	*eP*	**Pb**	**03 46 08.0**	**-1.1**
EGFH	**Guangfu**	**2.21**	**9**	*eP*	**Pn**	**03 46 07.3**	**+1.4**
WHYT	**Xinyi Township**	**2.22**	**355**	*eP*	**Pb**	**03 46 09.8**	**0.0**
WARBT	**Fenglin Townsh**	**2.25**	**7**	*eP*	**Pn**	**03 46 08.0**	**+1.4**
VWDT	**VWDT**	**2.27**	**2**	*eP*	**Pb**	**03 46 08.9**	**-1.6**
VCHM	**Qimei**	**2.30**	**319**	*eP*	**Pn**	**03 46 06.3**	**-0.9**
SSLB	**Suanglung**	**2.30**	**357**	*eP*	**Pn**	**03 46 09.2**	**+1.9**
SHUL	**Shoufeng**	**2.34**	**11**	P	**Pb**	**03 46 10.2**	**-1.7**
SHUL				*eS*	**Sb**	**03 46 38.0**	**-2.6**
ESL	**Shilin**	**2.35**	**8**	*eP*	**Pb**	**03 46 11.1**	**-0.9**
SMLT	**Sun Moon Lake**	**2.40**	**356**	*eP*	**Pb**	**03 46 11.2**	**-1.8**
WNT	**Mingjian**	**2.42**	**352**	*eP*	**Pb**	**03 46 12.6**	**-0.6**
WNT				*eS*	**Sb**	**03 46 42.0**	**-0.6**
PHUB	**P'eng-hu**	**2.45**	**326**	*eP*	**Pn**	**03 46 09.4**	**0.0**
PHUB				S	**Sn**	**03 46 36.6**	**-2.3**
OWD	**Renai**	**2.47**	**2**	*eP*	**Pb**	**03 46 12.5**	**-1.6**
OWD				*eS*	**Sn**	**03 46 40.6**	**+1.1**
WUSB	**Renai**	**2.50**	**1**	*eP*	**Pb**	**03 46 12.3**	**+2.1**
PNG	**Penghu**	**2.51**	**326**	*eP*	**Pn**	**03 46 10.1**	**0.0**
PNG				*eS*	**Sn**	**03 46 39.0**	**-1.2**
LXIB	**Xiulin Townshi**	**2.55**	**7**	*eP*	**Pn**	**03 46 11.9**	**+1.1**
WCS	**Beigang Elemen**	**2.57**	**357**	*eP*	**Pn**	**03 46 13.1**	**+2.1**
WHF	**Hehuan Shan**	**2.66**	**4**	*eP*	**Pb**	**03 46 15.5**	**-2.0**
NACB	**Ninganchiao**	**2.73**	**10**	*eP*	**Pn**	**03 46 13.9**	**+0.8**
ETLH	**Xiulin Townshi**	**2.74**	**8**	*eP*	**Pn**	**03 46 15.4**	**+2.0**
FUSS	**Fushou**	**2.76**	**3**	*eP*	**Pb**	**03 46 16.7**	**-2.5**
TDCB	**Techi**	**2.76**	**2**	*eP*	**Pn**	**03 46 16.3**	**+2.5**
TWT	**Tachien**	**2.77**	**2**	*eP*	**Pn**	**03 46 16.4**	**+2.6**
WHP	**Taichung City**	**2.79**	**358**	*eP*	**Pn**	**03 46 15.6**	**+1.6**
TWQ1	**Liyutan**	**2.87**	**355**	*eP*	**Pn**	**03 46 17.1**	**+2.0**
NNSB	**Datong**	**2.95**	**6**	*eP*	**Pn**	**03 46 19.1**	**+2.8**
NNS	**Nan Shan**	**2.96**	**5**	*eP*	**Pb**	**03 46 19.7**	**-2.8**
ENA	**Nanau**	**3.00**	**12**	*eP*	**Pn**	**03 46 18.3**	**+1.4**
LATG	**Datong**	**3.07**	**8**	*eP*	**Pn**	**03 46 20.5**	**+2.5**
NSTT	**Nanjuang**	**3.14**	**359**	*eP*	**Pn**	**03 46 20.7**	**+1.9**
NFF	**Wufeng Townshi**	**3.14**	**1**	*eP*	**Pn**	**03 46 22.2**	**+3.4**
LIOB	**Emei**	**3.15**	**359**	*eP*	**Pn**	**03 46 22.1**	**+3.1**
ENTT	**Nioudou**	**3.18**	**8**	*eP*	**Pn**	**03 46 22.8**	**+3.4**
YHNB	**Yeheng**	**3.19**	**5**	*eP*	**Pn**	**03 46 21.2**	**+1.6**
NSK	**Sanguang**	**3.19**	**5**	*eP*	**Pn**	**03 46 21.8**	**+2.2**
NSK				*eS*	**Sn**	**03 46 59.8**	**+2.4**
TWC	**Suao**	**3.20**	**13**	*eP*	**Pb**	**03 46 23.1**	**-3.4**
TWE	**Neicheng**	**3.27**	**10**	*eP*	**Pb**	**03 46 24.4**	**-3.4**
FUSB	**Fushanzhiwuyua**	**3.30**	**8**	*eP*	**Pn**	**03 46 23.2**	**+2.1**
NWLT	**Wulai**	**3.31**	**7**	*eP*	**Pn**	**03 46 24.5**	**+3.3**
JYNG	**Yonagunijimaku**	**3.43**	**30**	*eP*	**Pn**	**03 46 24.5**	**+1.7**
YOJ	**Yonaguni jima**	**3.47**	**31**	*eP*	**Pn**	**03 46 25.0**	**+1.7**
YOJ	**Yonaguni jima**	**3.47**	**31**	*eP*	**Pn**	**03 46 24.9**	**+1.6**
YOJ				*eS*	**Sn**	**03 47 05.5**	**+1.5**
TIPB	**Shuangxi**	**3.55**	**11**	*eP*	**Pn**	**03 46 27.0**	**+2.6**
HATJ	**Hateruma jima**	**3.60**	**44**	*eP*	**Pn**	**03 46 27.1**	**+2.0**
HATJ				*eS*	**Sn**	**03 47 07.6**	**+0.3**
SXI1	**Grass Mountain**	**3.68**	**11**	*eP*	**Pn**	**03 46 29.2**	**+3.0**
IRIF	**Iriomote-Funau**	**3.76**	**40**	*eP*	**Pn**	**03 46 29.3**	**+2.0**
IRIF				*eS*	**Sn**	**03 47 10.9**	**-0.2**
KNM	**Kinmen**	**3.80**	**321**	*eP*	**Pn**	**03 46 29.2**	**+1.4**
JKRS	**Kuro-shima**	**3.86**	**44**	*eP*	**Pn**	**03 46 30.8**	**+2.1**
JKRS				*eS*	**Sn**	**03 47 13.6**	**-0.1**
KNMB	**Chin-men Tao**	**3.87**	**321**	*eP*	**Pn**	**03 46 28.7**	**0.0**
PTMZ	**Houxiangcun**	**3.97**	**334**	*eP*	**Pn**	**03 46 30.5**	**+0.3**
DSXP	**Dongshan**	**4.03**	**304**	P	**Pn**	**03 46 31.7**	**+0.7**
JIJ	**Ishigaki jima**	**4.04**	**44**	*eP*	**Pn**	**03 46 33.1**	**+2.0**
JIJ				*eS*	**Sn**	**03 47 17.9**	**-0.1**
JISG	**Ishigakijimahi**	**4.30**	**43**	*eP*	**Pn**	**03 46 36.9**	**+2.1**
JISG				*eS*	**Sn**	**03 47 24.3**	**-0.2**
JTJ	**Tarama**	**4.59**	**46**	*eP*	**Pn**	**03 46 41.6**	**+2.8**
JTJ				*eS*	**Sn**	**03 47 33.0**	**+1.2**
MATB	**Ma-tsu**	**4.76**	**348**	*eP*	**Pn**	**03 46 41.8**	**+0.6**
MHZQ	**Yeshan**	**4.97**	**338**	*eP*	**Pn**	**03 46 43.9**	**0.0**

*GCG **16** 03:50:47.7±0.6, 14.°19N×91.°40W, h59km±6km, MD3.5, ML3.5, Guatemala*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG8	**El Palmar, Qui**	**0.26**	**10**	*i* P	Pn	03 51 01.2	+3.5
STG8				*eS*	Sn	03 51 11.5	+6.6
STG8				IAML		03 51 13.3	
	comp=E,2µm,0.2s						
ESSG	**Sabana Grande**	**0.58**	**71**	*eP*	Pn	03 51 00.9	+0.3
ESSG				*eS*	Sn	03 51 10.8	+0.8
ESSG				IAML		03 51 11.4	
	comp=E,1µm,0.3s						
SOKI	**Kika Raxquin**	**0.62**	**360**	*eS*	Sn	03 51 13.9	+2.6
SOKI				IAML		03 51 15.0	
	comp=N,905nm,0.3s						
FG16	**Alotenango, Sa**	**0.87**	**85**	*i* P	Pn	03 51 01.3	-2.9
FG16				*i* S	Sn	03 51 11.9	-4.4
FG16				IAML		03 51 16.4	
	comp=N,8µm,0.2s						
SMCA	**Catarina**	**0.93**	**315**	*eP*	Pn	03 51 05.0	+0.2
PCG5	**San Vicente Pa**	**0.99**	**88**	*i* S	Sn	03 51 14.8	-4.3
APG	**El Apazote**	**1.21**	**48**	*eP*	Pn	03 51 09.5	+0.8
NUBE	**Las Nubes**	**1.60**	**100**	*i* P	Pn	03 51 13.9	+0.1

*TEH **16** 03:52:14.5, 28.°49N×56.°80E, h8km±58km*
*DSN **16** 03:52:15.5±0.9, 28.°33N×57.°02E, h10km, ML2.9/10, Error ellipse: s-maj=16.5km s-min=8.4km az=104.0*
*OMAN **16** 03:52:17.5±0.1, 28.°14N×56.°97E, h16km±3km, mb4.2/3, ml3.2/14, Error ellipse: s-maj=4.8km s-min=1.1km az=18.0*
ISC 16 03:52:13.3±1.0, 28.°39N±0.°04×57.°06E±0.°07, h10km, n39, σ1.46/51, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**1.04**	**206**	Pg	**Pn**	**03 52 35.3**	**+1.2**
IBND				Sg	**Sn**	**03 52 50.0**	**+1.3**
GENO	**Geno**	**1.26**	**219**	Pg	**Pg**	**03 52 38.5**	**+0.9**
NGRK	**Negar Kerman**	**1.28**	**347**	Pg	**Pn**	**03 52 37.2**	**-0.4**
CHMN	**Cheshme madani**	**1.52**	**16**	Pg	**Pb**	**03 52 42.8**	**+0.9**
KHGB	**Koh Gabri**	**2.04**	**346**	Pn	**Pb**	**03 52 49.4**	**-1.3**
SHME	**Shamm** SNR=31	**2.47**	**200**	P	**Pn**	**03 52 54.6**	**+1.0**
SHME	**Shamm** SNR=31	**2.47**	**200**	*eP*	**Pn**	**03 52 54.4**	**+0.7**
SHME				S	**Sn**	**03 53 25.2**	**+1.3**
BANOM	**Banah**	**2.55**	**196**	P	**Pn**	**03 52 55.8**	**+1.0**
BANOM				S	**Sn**	**03 53 26.2**	**+0.3**
BANOM	**Banah** SNR=61	**2.55**	**196**	*eP*	**Pn**	**03 52 55.5**	**+0.7**
MASF	**Masafi**	**3.11**	**195**	P	**Pn**	**03 53 02.3**	**-0.2**
UMQ	**Umm Al-Quwin**	**3.12**	**204**	P	**Pn**	**03 53 02.7**	**+0.2**
MSFE	**Esma-Masafi**	**3.12**	**195**	P	**Pn**	**03 53 04.3**	**+1.6**
MDH	**Madha**	**3.15**	**193**	P	**Pn**	**03 53 03.7**	**+0.7**
NAZ	**Nazwa, Dubai**	**3.61**	**201**	P	**Pn**	**03 53 10.5**	**+0.2**
NAZ				S	**Sn**	**03 53 50.4**	**-1.6**
NAZ	**Nazwa, Dubai** SNR=11	**3.61**	**201**	*i* P	**Pn**	**03 53 10.7**	**+1.4**
ASHO	**Ashiyiah**	**3.80**	**194**	P	**Pn**	**03 53 11.1**	**-0.8**
ASHO				S	**Sn**	**03 53 54.7**	**-2.1**
ASHO	**Ashiyiah** SNR=8.3	**3.80**	**194**	*i* P	**Pn**	**03 53 13.7**	**+1.7**
FAQ	**Al Faqa, Dubai**	**3.86**	**200**	P	**Pn**	**03 53 12.2**	**-0.6**
FAQ				S	**Sn**	**03 53 56.0**	**-2.2**
FAQ	**Al Faqa, Dubai** SNR=16	**3.86**	**200**	*i* P	**Pn**	**03 53 14.4**	**+1.6**
NHDN	**Nehbandan**	**3.96**	**40**	Pn	**Pn**	**03 53 18.7**	**+4.5**
ASUD	**Al Ashush, Dub** SNR=20	**4.06**	**203**	P	**Pn**	**03 53 16.1**	**+0.6**
ASUD				S	**Sn**	**03 54 00.9**	**-2.1**
ASUD	**Al Ashush, Dub** SNR=20	**4.06**	**203**	*i* P	**Pn**	**03 53 17.4**	**+1.9**
AJN	**Ajban**	**4.24**	**206**	P	**Pn**	**03 53 18.1**	**+0.1**
AJN				S	**Sn**	**03 54 05.4**	**-2.2**
AJN	**Ajban** SNR=9.3	**4.24**	**206**	*i* P	**Pn**	**03 53 19.5**	**+1.6**
SOHO	**SOHO**	**4.26**	**187**	P	**Pn**	**03 53 18.5**	**+0.2**
HOQ	**Hoqain**	**4.79**	**177**	P	**Pn**	**03 53 25.6**	**0.0**
HOQ				S	**Sn**	**03 54 18.9**	**-2.4**
SRVN	**Saravan**	**4.82**	**101**	Pn	**Pn**	**03 53 33.5**	**+7.4**
ARQ	**Araqi** SNR=5.4	**5.06**	**186**	P	**Pn**	**03 53 29.6**	**+0.4**
ARQ				S	**Sn**	**03 54 25.8**	**-1.9**
DSBU	**Dashti - Bushe**	**5.11**	**271**	Pn	**Pn**	**03 53 29.6**	**-0.4**
WSAR	**Wadi Sarin**	**5.32**	**164**	P	**Pn**	**03 53 33.9**	**+1.1**
WSAR				S	**Sn**	**03 54 32.2**	**-2.0**
SMDO	**Samad**	**5.38**	**170**	P	**Pn**	**03 53 34.8**	**+1.0**
SMDO				S	**Sn**	**03 54 34.9**	**-1.0**
KLNJ	**Kolanjah**	**5.43**	**300**	Pn	**Pn**	**03 53 35.2**	**+0.6**
BSY	**Bisya**	**5.62**	**179**	P	**Pn**	**03 53 37.6**	**+0.6**
SHMA	**Al-Shehemyia** SNR=9.1	**5.99**	**247**	P	**Pn**	**03 53 43.0**	**+1.0**
WBK	**Wadi Bani Khal**	**6.01**	**163**	P	**Pn**	**03 53 43.2**	**+0.9**
WBK				S	**Sn**	**03 54 48.1**	**-3.1**
TRNA	**Turayna**	**6.38**	**237**	P	**Pn**	**03 53 48.2**	**+0.8**
JLN	**Jalan Bani Buh**	**6.57**	**161**	P	**Pn**	**03 53 50.8**	**+0.8**
SMRA	**Abu-Samra**	**6.66**	**238**	P	**Pn**	**03 53 52.0**	**+0.7**
MHTO	**MHTO**	**7.42**	**173**	P	**Pn**	**03 54 02.7**	**+1.0**

*TXNET **16** 03:53:47.4, 31.°7N±0.°6×104.°3W±1.°0, h6km±1km, ML2.6/17, Error ellipse: s-maj=1.5km s-min=0.9km az=68.8, final*
NEIC 16 03:53:47.7±0.9, 31.°68N±0.°01×104.°31W±0.°02, h5km±1km, mb_Lg2.3/23, ML2.4/48, 1C, Error ellipse: s-maj=3.2km s-min=2.8km az=262.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPB09	**Culberson Coun**	**0.09**	**4**	P	Pg	03 53 49.9	+0.1
TPB09				S	Sg	03 53 51.3	+0.2
TPB11	**China Draw**	**0.34**	**43**	P	Pg	03 53 54.4	0.0
TPB11				S	Sg	03 53 59.0	+0.1
PECS	**Pecos**	**0.49**	**130**		Pg	03 53 57.5	+0.3
PECS				Sg	Sg	03 54 03.9	+0.3
PECS	**Pecos**	**0.49**	**130**	P	Pg	03 53 57.4	+0.2
PECS				S	Sg	03 54 03.7	+0.2
GDL2	**Guadalupe Moun**	**0.52**	**355**		Pg	03 53 57.9	+0.2
GDL2	**Guadalupe Moun**	**0.52**	**355**	P	Pg	03 53 57.7	0.0
TPB07	**Mentone**	**0.56**	**101**	P	Pb	03 53 59.3	-0.7
TPB07				S	Sg	03 54 06.4	+0.8
TPB12	**Southwest of T**	**0.56**	**147**	P	Pg	03 53 58.6	+0.1
TPB12				S	Sg	03 54 05.9	+0.2
TPB10	**Southeast of T**	**0.62**	**130**	P	Pg	03 53 59.9	+0.3
TPB10				S	Sg	03 54 08.3	+0.6
CLNB	**Carlsbad**	**0.68**	**32**		Pg	03 54 00.9	0.0
CLNB	**Carlsbad**	**0.68**	**32**	P	Pg	03 54 00.9	+0.1
CLNB				S	Sg	03 54 10.4	+0.6
LWM1	**Layne Water Mi**	**0.73**	**128**	P	Pg	03 54 02.1	+0.3
LWM1				S	Sg	03 54 12.3	+0.9
PCOS	**Crockett Middl**	**0.73**	**112**		Sg	03 54 12.2	+0.8
PCOS	**Crockett Middl**	**0.73**	**112**	S	Sg	03 54 12.2	+0.8
LWM2	**Layne Water Mi**	**0.74**	**124**	P	Pg	03 54 02.4	+0.4
LWM2				S	Sg	03 54 12.5	+0.9
CBET	**Carlsbad E Tow**	**0.78**	**20**	P	Pn	03 54 04.8	-0.7
CBET	**Carlsbad E Tow**	**0.78**	**20**	P	Pn	03 54 04.8	-0.7
CLN7	**Carlsbad 7**	**0.84**	**30**		Pg	03 54 03.4	-0.5
CLN7	**Carlsbad 7**	**0.84**	**30**	P	Pg	03 54 03.4	-0.5
TPB01	**Permian Basin**	**0.87**	**148**	P	Pg	03 54 03.7	-0.6
TPB01				S	Sg	03 54 14.9	-0.7
TPB03	**Saragosa**	**0.91**	**131**	P	Pg	03 54 05.0	-0.1
TPB03				S	Sg	03 54 17.0	+0.2
MNTX	**Cornudas Mount**	**0.92**	**271**		Pg	03 54 05.3	0.0
MNTX					Sg	03 54 17.3	+0.2
MNTX	**Cornudas Mount**	**0.92**	**271**	P	Pg	03 54 05.2	0.0
MNTX				S	Sg	03 54 17.3	+0.2
TPB06	**Permian Basin**	**0.93**	**92**	P	Pg	03 54 05.5	-0.1
TPB06				S	Sg	03 54 18.2	+0.5
HTMS	**Hat Mesa**	**0.97**	**36**	P	Pg	03 54 05.9	-0.5
HTMS				S	Sg	03 54 19.1	+0.1
TPB27	**North of Pyote**	**1.01**	**96**	S	Sg	03 54 20.4	+0.2
TPB04	**Verhalen**	**1.02**	**119**	P	Pg	03 54 20.6	-0.3
TPB04				S	Sg	03 54 20.6	+0.2
NM01	**Eunice**	**1.02**	**49**	P	Pb	03 54 07.8	-0.1
NM01				S	Sg	03 54 20.5	-0.1
TPB16	**Coyonosa**	**1.06**	**121**	P	Pg	03 54 07.8	-0.3
TPB16				S	Sg	03 54 22.3	+0.5
VHRN	**Van Horn**	**1.07**	**213**		Pg	03 54 08.0	-0.1
VHRN					Sg	03 54 22.5	+0.5
VHRN				IAML		03 54 28.8	
	78nm,0.3s						
VHRN				IAML		03 54 30.4	
	80nm,0.4s						
VHRN	**Van Horn**	**1.07**	**213**	P	Pg	03 54 07.7	-0.5
VHRN				S	Sg	03 54 22.5	+0.5
TPB05	**Hovey Rd**	**1.14**	**132**	P	Pg	03 54 09.0	-0.5
TPB05				S	Sg	03 54 24.0	+0.3
MNHN	**Monahans**	**1.37**	**104**		Pn	03 54 12.8	-0.6
MNHN					Sb

SGSI	Sangihe	2.26 335	P		Pn	04 02 33.5	+1.4	
APSI	Ampana	5.46 243	P		Pn	04 03 17.0	+1.0	
WRA	Warramunga Arr	22.77 161	P		P	04 06 56.4	-0.4	
	0.5nm,0.5s,baz=338,slow=11,SNR=7.0							
	0.5nm,0.5s							
ASAR	Alice Springs	26.15 164	P		P	04 07 28.4	+0.1	
	0.3nm,0.3s,baz=344,slow=9.4,SNR=5.8							
	0.3nm,0.3s							
ASAJ	Asahikawa	44.66 17	LR		LR	04 32 10.3		
	comp=Z,8.7nm,18.0s,baz=127,slow=40							
MKAR	Makanchi Array	59.15 326	P		P	04 11 53.2	-1.3	
	0.3nm,0.5s,baz=114,slow=8.6,SNR=5.4							
	0.3nm,0.5s							
KURBB	Kurchatov Arra	63.38 328	P		P	04 12 22.0	-1.0	
	0.2nm,0.3s,baz=128,slow=4.7,SNR=1.8							
	0.2nm,0.3s							

IDC ***16*** *04:04:32.7±1.8,1˝.77N×126˝.32E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=177.5km s-min=22.7km az=66.0*

DJA ***16*** *04:04:37.6±1.5,2˝N±3˝×12˝6E±˚,h19km±14km,M3.4/8, MLv3.4/8*

ISC 16 04:04:38.5±1.1,1˚62N±0˝.08×126˚28E±0˝.10,h35km,n7, σ1§29/8,mb3.7/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.38	128	P	Pn	04 05 01.7	+0.5
SGSI	Sangihe	2.18	340	P	Pn	04 05 12.6	+0.3
SGSI				S	Sn	04 05 39.5	+1.4
KMSI	Cibinong	2.52	246	P	Pn	04 05 17.5	+0.5
WRA	Warramunga Arr	22.84	160	P	P	04 09 37.9	-0.9
	1.3nm,0.5s,baz=339,slow=11,SNR=8.0						
	1.3nm,0.5s						
ASAR	Alice Springs	26.21	164	P	P	04 10 11.6	+1.4
	0.3nm,0.5s,baz=349,slow=14,SNR=6.0						
	0.3nm,0.5s						
MKAR	Makanchi Array	59.03	326	P	P	04 14 33.5	-1.5
	0.7nm,0.9s,baz=143,slow=7.0,SNR=2.1						
	0.7nm,0.9s						
KURBB	Kurchatov Arra	63.27	328	P	P	04 15 02.6	-0.9
	0.5nm,0.6s,baz=134,slow=7.4,SNR=4.6						
	0.5nm,0.6s						

IDC ***16*** *04:12:50.5±2.2,1˝.92N×126˝.68E,h0km,mb3.5/3, mbtmp3.6/3,MS3.4/1,Error ellipse: s-maj=183.0km s-min=26.5km az=66.0*

DJA ***16*** *04:12:54.5±1.4,2˝N±3˝×12˝6E±˚,h12km±13km,M3.8/10, mB5.8/1,mb4.2/2,MLv3.6/10,Mw(mB)5.4/1,MwMwp4.5/1, Mwp4.9/1*

ISC 16 04:12:56.4±1.2,1˚64N±0˝.09×126˚5E±0˝.1,h35km,n9, σ1§51/8,mb3.5/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.21	135	P	Pn	04 13 17.3	+0.4
SGSI	Sangihe	2.26	334	P	Pn	04 13 32.1	+0.8
KMSI	Cibinong	2.74	247	P	Pn	04 13 38.4	+0.5
NLAI	Namlea	4.88	173	P	Pn	04 14 07.1	-0.2
MSAI	Masohi	5.51	154	P	Pn	04 14 16.5	+0.5
	2µm9µm32nm,0.4s						
WRA	Warramunga Arr	22.78	161	P	P	04 17 55.5	-0.6
	1.1nm,0.6s,baz=340,slow=11,SNR=8.0						
	1.1nm,0.6s						
ASAR	Alice Springs	26.16	164	P	P	04 18 30.2	+2.6
	0.2nm,0.4s,baz=348,slow=14,SNR=7.9						
	0.2nm,0.4s						
LZDM	Lanzhou Array	40.17	331	LR	LR	04 38 00.1	
	comp=Z,50nm,20.5s,baz=30,slow=38						
MKAR	Makanchi Array	59.15	326	P	P	04 22 52.0	-1.7
	0.7nm,0.8s,baz=116,slow=7.6,SNR=4.5						
	0.7nm,0.8s						

IDC ***16*** *04:17:45.1±0.8,11˚18S×166˚32E,h0km,mb4.4/12, mbtmp4.4/13,ML4.2/1,MS3.8/34,Error ellipse: s-maj=26.2km s-min=19.2km az=117.0*

NOU ***16*** *04:17:46.9,11˚19S×166˚75E,h14km,mb5.0/8,Santa Cruz Islands*

NEIC ***16*** *04:17:50.3±2.4,11˚36S±0˝.09×166˚59E±0˝.04,h35km±2km, mb4.8/30,Error ellipse: s-maj=16.3km s-min=5.4km az=159.0*

ISC 16 04:17:51.1±0.7,11˚44S±0˝.07×166˚57E±0˝.10,h35km,n99, σ1§91/60,mb4.8/37,MS3.8/35,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	4.03	171		Pn	04 18 49.3	-1.2
SANVU	Saraoutou	4.03	171	P	Pn	04 18 51.2	+0.8
SAVO	Savo Central	7.03	288	P	Pn	04 19 30.7	-0.9
KOUNC	Koumac, New Ca	9.32	193	P	Pn	04 20 04.7	+1.6
DZM	Mont Dzumac	10.57	181	Pn	Pn	04 20 20.6	+0.2
	1.8nm,0.3s,baz=298,slow=15,SNR=23						
DZM				Sn	Sn	04 22 17.9	+0.3
	0.6nm,0.3s,baz=102,slow=20,SNR=1.1						
DZM				LR	LR	04 24 13.3	
	comp=Z,892nm,18.8s,baz=40,slow=36						
	15nm,0.6s						
ONTNC	Ouen Toro	10.81	181	Pn	Pn	04 20 24.7	+1.2
PINNC	Pines Island,	11.14	176	Pn	Pn	04 20 29.1	+1.1
PMG	Port Moresby	19.20	274		Pn	04 22 12.6	-0.6
EIDS	Eidsvold	20.17	224		P	04 22 21.5	-1.2
EIDS	Eidsvold	20.17	224	P	Pn	04 22 23.8	-0.9
TV1H	Townsville Har	20.58	245	P	Pn	04 22 28.4	-1.2
TW1H	Toowoomba 1 Ha	21.08	218	P	P	04 22 34.5	+1.9
MANU	Manus Island	21.21	295		P	04 22 33.5	-0.6
MANU				IAmb	IAmb	04 22 43.2	
	comp=Z,74nm,1.2s						
CTA	Charters Tower	21.34	244	LR	LR	04 29 40.7	
	comp=Z,13nm,19.9s,baz=60,slow=34						
CTAO	Charters Tower	21.34	244		P	04 22 35.1	-0.3
CTAO				IAmb	IAmb	04 22 38.4	
	comp=Z,30nm,0.9s						
MTSU	Mount Surprise	22.51	250	P	P	04 22 48.8	+0.8
COEN	Coen	22.95	261		P	04 22 52.5	-0.2
COEN				IAmb	IAmb	04 23 00.2	
	comp=Z,30nm,1.4s						
ARMA	Armidale	23.43	214	P	P	04 22 56.0	-1.4
ARMA				IAmb	IAmb	04 22 59.3	
	comp=Z,59nm,1.1s						
JAY	Jayapura	27.13	287	LR	LR	04 35 10.1	
	comp=Z,202nm,18.5s,baz=39,slow=39						
JAY	Jayapura	27.13	287	P	P	04 23 33.6	+2.3
	comp=Z,17nm,1.3s						
URZ	Urewera	28.32	162	LR	LR	04 33 29.9	
	comp=Z,160nm,18.3s,baz=329,slow=33						
INKA	Innaminka	29.14	232		P	04 23 47.7	-1.4
H11S2	WAKE ISLAND Hy	29.74	0	T	T	04 54 51.2	
	baz=181,slow=76,SNR=76						
H11S3	WAKE ISLAND Hy	29.74	0	T	T	04 54 51.5	
	baz=181,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	29.76	0	T	T	04 54 52.5	
	baz=181,slow=76,SNR=34						
STKA	Stephens Creek	30.72	225	P	P	04 24 02.2	-0.8
	comp=Z,15nm,0.8s,baz=39,slow=8.2,SNR=26						
	comp=Z,15nm,0.8s						
H11N1	WAKE ISLAND Hy	30.96	1	T	T	04 56 01.6	
	baz=182,slow=76,SNR=5.4						
H11N3	WAKE ISLAND Hy	30.96	1	T	T	04 56 01.7	
	baz=182,slow=76,SNR=3.2						
H11N2	WAKE ISLAND Hy	30.97	1	T	T	04 56 03.6	
	baz=182,slow=76,SNR=5.9						
WR8	Warramunga Arr	31.96	251		P	04 24 12.0	-2.2
WR8				IAmb	IAmb	04 24 19.3	
	comp=Z,23nm,1.1s						
WB0	Warramunga Arr	32.03	251		P	04 24 12.3	-2.4
WRAB	Tennant Creek	32.10	251	P	P	04 24 11.4	-3.9
WRA	Warramunga Arr	32.11	251	P	P	04 24 12.9	-2.5
	comp=Z,12nm,0.9s,baz=81,slow=8.9,SNR=50						
	comp=Z,12nm,0.9s						
GUMO	Guam	32.89	319	LR	LR	04 37 07.9	
	comp=Z,97nm,19.1s,baz=140,slow=36						
AS31	Alice Springs	33.34	244		P	04 24 23.6	-2.6
ASAR	Alice Springs	33.34	244	P	P	04 24 23.4	-2.8
	comp=Z,13nm,0.8s,baz=75,slow=9.5,SNR=127						
	comp=Z,13nm,0.8s						
ASAR	Alice Springs	33.34	244		P	04 24 23.6	-2.6
RAR	Rarotonga	33.67	111	LR	LR	04 35 12.6	
	comp=Z,194nm,21.8s,baz=279,slow=31						
BBOO	Buckleboo	35.16	228		P	04 24 39.4	-2.4
BBOO				IAmb	IAmb	04 24 51.0	
	comp=Z,16nm,1.0s						
MSAI	Masohi	38.14	279	P	P	04 24 57.6	-10

NLAI	Namlea	39.94	279	P	P	04 25 25.7	+3.2	
FITZ	Fitzroy Crossi	40.06	256	P	P	04 25 21.4	-2.0	
	comp=Z,7.3nm,0.9s,baz=103,slow=7.0,SNR=11							
FITZ				LR	LR	04 40 53.2		
	comp=Z,309nm,20.0s,baz=82,slow=35							
	comp=Z,7.3nm,0.9s							
FITZ	Fitzroy Crossi	40.06	256	P	P	04 25 21.6	-1.8	
LBMI	Labuha	40.24	283	P	P	04 25 15.8	-9.2	
FORT	Forrest	40.48	236		P	04 25 24.6	-2.1	
FORT				IAmb	IAmb	04 25 35.2		
	comp=Z,13nm,0.9s							
SANI	Sanana	41.31	280	P	P	04 25 37.7	+3.9	
	comp=Z,31nm,1.1s							
BATI	Baumata	42.13	267	LR	LR	04 42 52.9		
	comp=Z,173nm,21.1s,baz=86,slow=36							
PPT	Papeete	42.82	103	LR	LR	04 42 23.9		
	comp=Z,186nm,18.0s,baz=296,slow=34							
DAV	Davao City (W)	44.73	292	LR	LR	04 41 47.9		
	comp=Z,100nm,21.1s,baz=154,slow=32							
PSA00	Pilbara Seismi	45.76	251	P	P	04 26 07.5	-2.2	
PSA00				IAmb	IAmb	04 26 16.1		
	comp=Z,16nm,1.1s							
MBWA	Marble Bar	45.84	252	P	P	04 26 08.6	-1.6	
BNSI	Bone	46.50	275	P	P	04 26 17.1	+1.6	
	comp=Z,28nm,0.8s							
KAPI	Kappang	46.73	274	LR	LR	04 48 53.9		
	comp=Z,39nm,18.3s,baz=100,slow=40							
MPSI	Mapaga	47.81	281	P	P	04 26 27.4	+1.7	
	comp=Z,6.6nm,1.2s							
NWAO	Nagin (SRO)	49.92	236	P	P	04 26 40.0	-1.6	
	comp=Z,21nm,0.9s,baz=69,slow=8.8,SNR=5.9							
NWAO				LR	LR	04 47 46.5		
	comp=Z,411nm,18.9s,baz=22,slow=36							
	comp=Z,21nm,0.9s							
NWAO	Narrogin (SRO)	49.92	236	P	P	04 26 39.8	-1.8	
JAGI	Jajag, Banyuwa	51.66	268	P	P	04 26 54.5	-0.5	
	comp=Z,30nm,1.1s							
PCJI	Pacitan	54.61	268	P	P	04 27 20.0	+3.2	
MJAR	Matashiro Arr	54.69	332	P	P	04 27 17.9	+1.0	
	comp=Z,2.4nm,0.8s,baz=160,slow=6.3,SNR=5.4							
TPI	Tanjungpandan	59.00	274	P	P	04 27 51.0	+3.1	
	comp=Z,16nm,1.3s							
KSRS	Korea Array	60.66	325	P	P	04 27 55.7	-3.1	
	comp=Z,0.4nm,0.3s,baz=163,slow=6.2,SNR=2.2							
	comp=Z,0.4nm,0.3s							
NJ2	Nanjing	62.87	315	eP	P	04 28 15.6	+1.8	
NJ2				pmax	pmax			
	comp=Z,15nm,0.6s							
SHEM	Shemya Is, Ala	64.23	5	LR	LR	04 49 41.9		
	comp=Z,43nm,22.0s,baz=250,slow=30							
VNDA	Vanda	66.12	181	P	P	04 28 36.4	+2.0	
	comp=Z,1.3nm,0.7s,baz=313,slow=6.4,SNR=8.3							
VNDA				LR	LR	04 54 14.7		
	comp=Z,73nm,19.5s,baz=358,slow=33							
	comp=Z,1.3nm,0.7s							
VNDA	Vanda	66.12	181	P	P	04 28 36.7	+2.3	
PSI	Prapat	68.72	278	LR	LR	05 03 22.0		
	comp=Z,46nm,18.2s,baz=96,slow=40							
HHC	Hu-ho-hao-te	72.65	319	eP	P	04 29 17.3	+1.8	
HHC				pmax	pmax			
	comp=Z,10.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,110nm,4.5s							
CMAR	Chiang Mai Arr	73.01	293	P	P	04 29 22.1	+4.2	
	comp=Z,2.0nm,0.3s,baz=108,slow=4.4,SNR=7.7							
CMAR				LR	LR	04 58 42.4		
	comp=Z,26nm,21.7s,baz=160,slow=34							
PZH	PanZhiHua	73.37	302	P	P	04 29 20.8	+0.8	
LZH	Lanzhou	75.62	312	eP	P	04 29 34.8	+1.8	
LZH				pP	PcP	04 29 45.3	-0.4	
LZH				pmax	pmax			
	comp=Z,20nm,1.2s							
QSPA	South Pole Qui	78.57	180	P	P	04 29 49.7	+0.7	
	comp=Z,3.4nm,1.0s,baz=14,slow=2.2,SNR=12							
QSPA				LR	LR	05 02 41.5		
	comp=Z,58nm,19.1s,baz=37,slow=34							
	comp=Z,3.4nm,1.0s							
QSPA	South Pole Qui	78.57	180	P	P	04 29 49.7	+0.7	
QSPA				IAmb	IAmb	04 29 58.4		
	comp=Z,16nm,0.9s							
YAK	Yakutsk	78.70	343	LR	LR	05 05 26.3		
	comp=Z,24nm,18.2s,baz=154,slow=36							
RPN	Rapa Nui	79.68	116	LR	LR	04 59 51.9		
	comp=Z,30nm,19.0s,baz=268,slow=32							
GTA	Gaotai	79.91	314	P	P	04 30 01.8	+5.0	
GTA				pP	sP	04 30 09.1	-2.4	
GTA				pmax	pmax			
	comp=Z,8.0nm,1.3s							
BRDH	Bariadhala	80.80	295	LR	LR	05 03 58.0		
	comp=Z,20nm,21.7s,baz=187,slow=34							
ILAR	Eielson Array	83.63	18	P	P	04 30 13.7	-2.0	
	comp=Z,0.5nm,0.8s,baz=245,slow=4.9,SNR=6.3							
ILAR				LR	LR	04 59 12.0		
	comp=Z,45nm,21.7s,baz=168,slow=30							
	comp=Z,0.5nm,0.8s							
BBB	Bella Bella	84.45	34	LR	LR	05 06 37.1		
	comp=Z,96nm,18.3s,baz=240,slow=35							
BEKR	Beckworth	84.61	48	P	P	04 30 20.2	-1.2	
MAW	Mawson	84.66	202	LR	LR	05 01 47.8		
	comp=Z,55nm,21.9s,baz=110,slow=31							
PAHR	Pah Rah Range	85.27	48	P	P	04 30 23.9	-0.8	
PAHR				IAmb	IAmb	04 30 31.1		
	comp=Z,9.5nm,1.4s							
DSP	Deep Springs	85.58	51	P	P	04 30 25.7	-0.4	
DSP				IAmb	IAmb	04 30 33.4		
	comp=Z,6.7nm,1.3s							
PFO	Pinyon Flats O	85.65	55	LR	LR	05 00 24.9		
	comp=Z,90nm,20.5s,baz=274,slow=30							
NVAR	Mina Array Bea	85.66	50	P	P	04 30 26.1	-0.7	
	comp=Z,1.3nm,1.0s,baz=233,slow=9.0,SNR=6.0							
NVAR				LR	LR	05 00 28.3		
	comp=Z,167nm,21.1s,baz=268,slow=30							
	comp=Z,1.3nm,1.0s							
DLBC	Dease Lake	86.37	28	LR	LR	05 08 44.0		
	comp=Z,59nm,18.3s,baz=260,slow=36							
EVN	Everest	86.42	299	P	P	04 30 31.1	-0.2	
PALK	Pallekele	87.40	278	LR	LR	05 12 50.0		
	comp=Z,30nm,18.9s,baz=120,slow=38							
LPIG	La Paz	88.44	65	LR	LR	05 01 41.5		
	comp=Z,28nm,20.7s,baz=286,slow=30							
ELK	Elko	88.61	48	LR	LR	05 04 56.9		
	comp=Z,79nm,18.2s,baz=258,slow=32							
LCMT	Little Creek M	89.10	52	IAmb	IAmb	04 30 50.1		
	comp=Z,4.7nm,1.3s							
U15A	Nenana	89.70	53	IAmb	IAmb	04 30 53.3		
	comp=Z,7.8nm,1.3s							
WMQ	Urumqi	89.94	315	eP	P	04 30 48.5	+1.5	
WMQ				pmax	pmax			
	comp=Z,28nm,0.7s							
WMQ				LR	LR			
	comp=Z,150nm,22.3s							
INK	Inuvik	90.01	19	LR	LR	05 05 01.4		
	comp=Z,76nm,21.1s,baz=328,slow=32							
PDAR	Pinedale Array	93.22	47	LR	LR	05 08 54.4		
	comp=Z,31nm,18.0s,baz=256,slow=33							
ANMO	Albuquerque	94.00	55	LR	LR	05 04 56.4		
	comp=Z,83nm,21.2s,baz=356,slow=30							
ZALV	Zalesovo Beam	94.34	324	P	P	04 31 06.7	-0.3	
	comp=Z,0.4nm,0.3s,baz=137,slow=4.9,SNR=4.6							
	comp=Z,0.4nm,0.3s							
MKAR	Makanchi Array	94.36	317	P	P	04 31 04.6	-2.7	
	comp=Z,0.5nm,0.7s,baz=79,slow=5.3,SNR=8.1							
MKAR				LR	LR	05 15 29.2		
	comp=Z,14nm,18.0s,baz=139,slow=37							
	comp=Z,0.5nm,0.7s							
YKA	Yellowknife Ar	94.95	27	LR	LR	05 11 30.2		
	comp=Z,29nm,19.1s,baz=276,slow=34							
TXAR	Lajitas Array	95.31	61	LR	LR	05 06 36.3		
	comp=Z,82nm,18.7s,baz=262,slow=31							

IDC ***16*** *04:20:28.2±1.5,1˚70N×127˚36E,h0km,mb3.9/5, mbtmp3.8/6,ML3.7/1,Error ellipse: s-maj=105.8km s-min=19.4km az=69.0*

DJA ***16*** *04:20:42.6±0.5,2˝N±4˝×12˝7E±˚,h107km±6km,M3.8/13, mB5.3/1,mb3.9/3,MLv3.8/13,Mw(mB)4.7/1*

NEIC ***16*** *04:20:44.1±1.4,1˚46N±0˝.05×127˝.2E±0˝.1,h134km±4km, mb4.3/8,Error ellipse: s-maj=16.0km s-min=6.7km az=75.0*

ISC 16 04:20:43.3±0.8,1˚55N±0˝.07×127˚35E±0˝.10,h128km,n25, σ1§42/27,mb3.9/10,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.77	178		Pn	04 21 04.2	+0.2
TNTI					Sn	04 21 20.1	+0.4
TNTI	Ternate	0.77	178	P	Pn	04 21 03.9	-0.1
TNTI				S	Sn	04 21 19.8	+0.1
SGSI	Sangihe	2.79	320	P	Pn	04 21 24.9	-2.3
SANI	Sanana	3.82	201	P	Pn	04 21 40.9	+0.2
SWI	Sorong	4.59	121	P	Pn	04 21 50.6	-0.3
NLAI	Namlea	4.76	183	P	Pn	04 21 54.5	+1.3
LUWI	Luwuk	5.25	241	Pn	Pn	04 21 56.1	-3.6
MRSI	Marisa	5.51	259	P	Pn	04 22 05.9	+2.7
	0.1nm3µm25nm,1.2s						
TOLI2	Tolitoli	6.58	266		Pn	04 22 18.4	+0.8
FAKI	Fak Fak	6.61	132	Pn	Pn	04 22 18.9	+0.9
KDI	Kendari	7.22	221	P	Pn	04 22 28.5	+2.1
FITZ	Fitzroy Crossi	19.59	185	P	P	04 25 00.8	-0.8
	0.2nm,0.3s,baz=1.8,slow=8.1,SNR=6.9						
	1.1nm,0.6s						
FITZ	Fitzroy Crossi	19.59	185	P	P	04 24 59.9	-1.7
WB0	Warramunga Arr	22.28	162	P	P	04 25 29.6	-0.7
WB0				IAmb	IAmb	04 25 30.0	
	comp=Z,5.3nm,0.5s						
WRA	Warramunga Arr	22.43	163	P	P	04 25 30.8	-0.9
	comp=Z,2.6nm,0.4s,baz=340,slow=11,SNR=15						
	comp=Z,2.6nm,0.4s						
WR8	Warramunga Arr	22.49	162	P	P	04 25 31.4	-1.0
WR8				IAmb	IAmb	04 25 31.5	
	comp=Z,5.9nm,1.1s						
PSA00	Pilbara Seismi	24.12	197	P	P	04 25 46.3	-1.0
ASAR	Alice Springs	25.86	166	P	P	04 26 02.7	-0.5
	comp=Z,0.6nm,0.3s,baz=343,slow=8.5,SNR=15						
	comp=Z,0.6nm,0.3s						
BBOO	Buckleboo	35.15	167	P	P	04 27 24.4	-0.4
BBOO				IAmb	IAmb	04 27 26.1	
	comp=Z,15nm,1.3s						
STKA	Stephens Creek	35.88	159	P	P	04 27 30.5	-0.6
	comp=Z,1.3nm,0.5s,baz=337,slow=14,SNR=2.8						
	comp=Z,1.3nm,0.5s						
MDJ	Mudanjiang	42.93	2	P	P	04 28 31.9	+2.5
MDJ				pmax	pmax		
	comp=Z,19nm,1.5s						
PEA0B	Petropavlovsk-	57.22	21	P	P	04 30 17.0	0.0
MKAR	Makanchi Array	59.69	326	P	P	04 30 34.1	-0.2
	comp=Z,0.3nm,0.3s,baz=113,slow=7.4,SNR=7.0						
	comp=Z,0.3nm,0.3s						
KURBB	Kurchatov Arra	63.90	328	P	P	04 31 01.7	-0.7
	comp=Z,0.5nm,0.5s,baz=132,slow=6.1,SNR=2.2						
	comp=Z,0.5nm,0.5s						
KURK	Kurchatov	63.90	328	P	P	04 31 01.7	-0.7
KURK				IAmb	IAmb	04 31 06.3	
	comp=Z,1.1nm,0.8s						

NOU ***16*** *04:32:58.9,41˚91S×174˚54E,h14km,MLv3.8/10,Cook Strait, New Zealand*

WEL ***16*** *04:33:00.8±0.3,42˚S±2˚×17˚4E±˚,h5km,M3.4/17, ML3.4/17,MLv3.4/17,Error ellipse: s-maj=3.0km s-min=2.1km az=145.7,confirmed*

ISC 16 04:32:59.6±0.9,41˚78S±0˝.03×174˚31E±0˝.02,h18km±2km, n89,σ1§06/106,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.08	290	P	Pg	04 33 03.1	+0.1
CMWZ				S	Sg	04 33 05.9	+0.5
WDFS	Ward Fire Stat	0.14	248	P	Pg	04 33 04.4	+0.7
WDFS				S	Sg	04 33 08.0	+1.5
SDNS	Seddon	0.17	311	P	Pb	04 33 03.6	0.0
SDNS				S	Sg	04 33 06.8	-0.4
SEDS	Seddon Fire St	0.20	301	P	Pb	04 33 03.9	-0.4
SEDS				S	Sb	04 33 07.0	-0.5
BSWZ	Blackbirch Sta	0.33	280	P	Pg	04 33 06.2	-0.4
BSWZ				S	Sg	04 33 11.1	-0.3
MGCS	Blenheim Marlb	0.38	314	P	Pg	04 33 06.7	-0.8
MGCS				S	Sg	04 33 11.6	-1.3
TUWZ	Tuamarina	0.44	321	P	Pg	04 33 07.6	-1.0
TUWZ				S	Sg	04 33 13.0	-1.6
BWRS	Waikakaho Road	0.45	318	P	Pg	04 33 07.8	-0.9
SNZO	South Karori	0.55	33	P	Pb	04 33 10.6	0.0
BHW	Baring Head	0.56	49	P	Pg	04 33 11.2	+0.4
TCW	Tory Channel	0.56	358	P	Pb	04 33 09.7	-1.2
TCW				S	Sg	04 33 16.5	-1.9
WEL	Wellington	0.60	35	P	Pb	04 33 11.6	+0.1
WEL				S	Sb	04 33 19.9	+0.4
PLWZ	Palliser	0.74	74	P	Pn	04 33 15.3	+0.2
MSWZ	Moikau Station	0.79	63	P	Pn	04 33 16.0	+0.1
KHZ	Kahutara	0.86	222	P	Pn	04 33 17.6	+0.9
KHZ	Kahutara	0.86	222	P	Pn	04 33 17.4	+0.7
KHZ				S	Sn	04 33 31.0	+2.2
CAW	Cannon Point	0.88	41	P	Pb	04 33 16.4	+0.1
CAW				S	Sb	04 33 28.0	+0.4
NNZ	Nelson	0.89	308	P	Pb	04 33 15.5	-1.0
NNZ				S	Sb	04 33 27.2	-0.8
PAWZ	Paruwai Farm	0.93	65	P	Pg	04 33 17.9	+0.3
DUWZ	D'Urville Isla	1.01	343	P	Pb	04 33 17.5	-1.1
DUWZ				S	Sb	04 33 31.1	-0.5
KIW	Kapiti Island	1.02	27	P	Pb	04 33 18.3	-0.4
KIW				S	Sb	04 33 31.6	-0.1
THZ	Tophouse	1.05	270	P	Pb	04 33 19.2	0.0
THZ				S	Sg	04 33 35.1	+1.3
MTW	Mount Morrison	1.09	56	P	Pb	04 33 19.9	+0.1
TRWZ	Traveller	1.10	70	P	Pn	04 33 20.1	0.0
OGWZ	Otaki Gorge	1.16	34	P	Pn	04 33 20.9	0.0
MRNZ	Matariki Terra	1.22	287	P	Pn	04 33 22.1	+0.4
TKNZ	Takaka Hill	1.26	306	P	Pn	04 33 22.0	-0.2
TKNZ				S	Sb	04 33 38.8	+0.3
HOWZ	Holdsworth Sta	1.26	46	P	Pn	04 33 22.2	-0.1
TMWZ	Te Maipa	1.36	61	P	Pn	04 33 23.4	-0.3
MRZ	Mangatainoka R	1.47	41	P	Pn	04 33 25.2	+0.1
GVZ	Greta Valley S	1.52	218	P	Pn	04 33 26.6	+0.8
QRZ	Quartz Range	1.64	305	P	Pn	04

MUGZ	**Murupara**	**3.80**	**31**	P		**Pn**	**04 33 59.0**	**+1.8**
URZ	**Urewera**	**4.12**	**32**	P		**Pn**	**04 34 01.8**	**+0.3**
ODZ	**Otahua Downs**	**4.22**	**218**	P		**Pn**	**04 34 02.7**	**-0.2**
ODZ	**Otahua Downs**	**4.22**	**218**	P		**Pn**	**04 34 02.1**	**-0.8**
MKAZ	**Moumakai**	**4.71**	**8**	P		**Pn**	**04 34 10.9**	**+1.2**

DJA 16 04:46:31.1±0.2, 8°S±3°×11°5E±°, h10km, M3.8/19, mB4.9/1, mb4.2/5, MLv3.6/19, Mw(mB)4.2/1, Bali region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.31**	**78**	P	Pb	04 46 38.0	-0.7
DNP	**Denpasar**	**0.60**	**150**	P	Pg	04 46 42.5	-0.3
ABJI	**Asem Bagus**	**0.76**	**298**	P	Pg	04 46 45.3	-0.4
JAGI	**Jajag, Banyuwa**	**0.81**	**247**	P	Pg	04 46 46.3	-0.5
JAGI				S	Sg	04 46 57.5	0.0
BLJI	**Banyuglugur**	**1.36**	**287**	P	Pn	04 46 55.6	-0.6
BLJI				S	Sg	04 47 14.9	-0.1
KMMI	**Kalianget**	**1.44**	**319**	P	Pn	04 46 56.8	-0.4
TWSI	**Taliwang, Sumb**	**2.04**	**107**	P	Pn	04 47 06.0	+0.5
PLAI	**Plampang**	**2.91**	**104**	P	Pn	04 47 18.6	+1.0
PCJI	**Pacitan**	**3.70**	**269**	P	Pn	04 47 29.0	+0.7
UGM	**Wanagama**	**4.35**	**273**	P	Pn	04 47 38.5	+1.1
BSSI	**Bau Bau, Buton**	**5.88**	**71**	P	Pn	04 47 56.6	-1.9
	0.1nm989nm28nm, 1.2s						
EDFI	**Ende, Flores**	**6.73**	**96**	P	Pn	04 48 10.9	+0.7
CNJI	**Cibinong**	**7.76**	**276**	P	Pn	04 48 25.0	+0.9

DJA 16 04:54:04.7±1.5, 2°N±4°×12°6E±°, h16km±15km, M3.7/8, mB5.2/1, mb3.8/2, MLv3.7/8, Mw(mB)4.6/1, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.16**	**338**	P	Pn	04 54 41.1	+1.0
SGSI				S	Sn	04 55 07.2	+0.6
KMSI	**Cibinong**	**2.61**	**245**	P	Pn	04 54 44.9	-1.3
APSI	**Ampana**	**5.35**	**241**	P	Pn	04 55 24.9	+0.9
	0.1nm2μm24nm, 1.0s						

WEL 16 05:05:45.3±1.1, 32°S±25°×17°9W±5°1, h399km±26km, M4.2/7, mB4.4/3, ML4.3/7, MLv4.3/7, Mw(mB)3.5/3, Error ellipse: s-maj=72.6km s-min=11.6km az=115.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**6.05**	**203**	P	Pn	05 07 19.0	+0.7
MXZ				S	S	05 08 33.2	-1.0
WMGZ	**Waiomatatini S**	**6.25**	**201**	P	Pn	05 07 19.9	-0.6
WMGZ				S	S	05 08 39.9	+1.6
HAZ	**Te Kaha**	**6.41**	**205**	P	Pn	05 07 21.5	-0.7
HAZ				S	S	05 08 42.1	+0.7
PUZ	**Puketiti**	**6.54**	**201**	P	P	05 07 25.1	+0.8
PUZ				S	S	05 08 45.4	+1.4
RUGZ	**Raukumara Rang**	**6.63**	**205**	P	Pn	05 07 23.9	-1.0
RUGZ				S	S	05 08 45.3	-0.8
MWZ	**Matawai**	**7.02**	**205**	P	P	05 07 30.4	+0.8
URZ	**Urewera**	**7.11**	**207**	P	Pn	05 07 29.1	-0.9
URZ				S	S	05 08 55.2	-0.4
MUGZ	**Murupara**	**7.43**	**208**	P	Pn	05 07 33.5	-0.2
KNZ	**Kokohu**	**7.59**	**202**	P	Pn	05 07 33.4	-2.0
KNZ				S	S	05 09 03.5	-2.1
MHGZ	**Mahia Peninsul**	**7.64**	**200**	P	P	05 07 37.6	+1.1
MHGZ				S	S	05 09 06.4	-0.3
WHHZ	**Waihua**	**7.78**	**204**	P	P	05 07 38.7	+0.6
WHHZ				S	S	05 09 10.6	+1.0
ARHZ	**Aropaoanui**	**8.03**	**204**	P	Pn	05 07 40.5	0.0
ARHZ				S	S	05 09 16.4	+1.5
BKZ	**Black Stump Fm**	**8.13**	**207**	P	Pn	05 07 40.9	-0.8
MCHZ	**McNeill Hill**	**8.30**	**205**	P	Pn	05 07 43.5	-0.1
MCHZ				S	S	05 09 22.9	+2.3
CKHZ	**Cape Kidnapper**	**8.36**	**203**	P	Pn	05 07 43.7	-0.6
CKHZ				S	S	05 09 24.6	+2.8
KWHZ	**Kaweka Forest**	**8.38**	**207**	P	Pn	05 07 44.1	-0.5
KWHZ				S	S	05 09 23.4	+1.0
KRHZ	**Kereru**	**8.59**	**206**	P	Pn	05 07 45.6	-1.4
KRHZ				S	S	05 09 26.2	-0.7
PXZ	**Pawanui**	**8.77**	**203**	P	Pn	05 07 48.5	-0.5
PXZ				S	S	05 09 29.7	-0.7

*SNET **16** 05:23:22.1±1.1, 12°62N×88°17W, h12km±19km, ML2.8*
CATAC 16 05:23:22.9±0.3, 13°N±3°×8°8W±°, h31km±3km, M3.3/19, MLv3.3/19, 1C-3D, Error ellipse: s-maj=6.4km s-min=2.5km az=26.2, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POTN	**Potosi Cosigui**	**0.55**	**56**	P	Pn	05 23 34.8	+0.3
POTN				S	Sn	05 23 44.2	+1.6
CNCH	**Conchagua**	**0.60**	**13**	*eP*	Pn	05 23 35.5	+0.2
CNCH				*eS*	Sn	05 23 46.6	+2.6
CNCH	**Conchagua**	**0.60**	**13**	P	Pn	05 23 35.6	+0.3
CNCH	**Conchagua**	**0.60**	**13**	S	Sn	05 23 45.5	+1.5
LCND	**La Caada**	**0.62**	**7**	*iP*	Pn	05 23 35.7	+0.2
LCND				IAML		05 23 47.7	
	comp=Z,410nm,0.3s						
LCND	**La Caada**	**0.62**	**7**	P	Pn	05 23 35.7	+0.2
BLLM	**Bellamira**	**0.79**	**341**	*eP*	Pn	05 23 37.5	-0.4
LCY	**Lacayo**	**0.79**	**337**	*eP*	Pn	05 23 37.4	-0.6
RANC	**El Ranchito**	**0.80**	**337**	*eP*	Pn	05 23 37.6	-0.5
RANC				*eS*	Sn	05 23 50.2	+1.1
PACA	**Pacayal**	**0.85**	**336**	*eP*	Pn	05 23 38.2	-0.5
PACA				*eS*	Sb	05 23 51.3	+1.0
PACA	**Pacayal**	**0.85**	**336**	P	Pn	05 23 38.4	-0.3
PACA	**Pacayal**	**0.85**	**336**	S	Sb	05 23 51.0	+0.7
CRIN	**San Cristobal**	**0.90**	**89**	S	Sb	05 23 52.7	+1.0
CRIN	**San Cristobal**	**0.90**	**89**	P	Pb	05 23 40.0	0.0
TECA	**Tecapa**	**0.95**	**327**	*eP*	Pn	05 23 39.6	-0.7
TECA				*eS*	Sn	05 23 52.4	-0.5
PKGN	**Cerro Pekin**	**0.97**	**91**	P	Pn	05 23 40.4	0.0
PKGN				S	Sb	05 23 53.9	+0.2
TECO	**Alcaldia de Te**	**1.15**	**317**	*eP*	Pn	05 23 41.5	-1.4
TECO				*eS*	Sn	05 23 56.2	-1.4
TECO	**Alcaldia de Te**	**1.15**	**317**	P	Pn	05 23 42.2	-0.7
UESV	**Universidad de**	**1.23**	**320**	P	Pn	05 23 44.2	+0.3
SCLA	**Alcaldia de Sa**	**1.25**	**324**	*eP*	Pn	05 23 43.4	-0.8
SCLA	**Alcaldia de Sa**	**1.25**	**324**	S	Sn	05 24 00.7	+0.7
SCLA	**Alcaldia de Sa**	**1.25**	**324**	P	Pn	05 23 43.5	-0.8
CNGN	**Cerro Negro**	**1.26**	**99**	P	Pn	05 23 44.0	-0.3
CNGN	**Cerro Negro**	**1.26**	**99**	S	Sn	05 24 00.9	+0.7
PAVA	**Las Pavas**	**1.39**	**317**	P	Pn	05 23 46.2	0.0
LFRS	**El Faro**	**1.41**	**311**	*eP*	Pn	05 23 45.5	-1.0
MOMN	**Momotombo**	**1.43**	**101**	P	Pn	05 23 46.3	-0.3
MOM3	**MOM3**	**1.43**	**97**	P	Pn	05 23 46.5	-0.1
MOM3				S	Sn	05 24 05.1	+0.7
COPN	**Copaltepe**	**1.44**	**111**	P	Pn	05 23 46.3	-0.5
LOMA	**Loma Larga**	**1.50**	**309**	*eP*	Pn	05 23 47.8	-0.1
LOMA	**Loma Larga**	**1.50**	**309**	P	Pn	05 23 48.5	+0.7
TGUH	**Tegucigalpa,Un**	**1.52**	**26**	P	Pn	05 23 47.9	-0.1
TGUH				S	Sn	05 24 07.2	+0.4
UDBS	**Universidad Do**	**1.54**	**312**	P	Pn	05 23 49.0	+0.8
UDBS	**Universidad Do**	**1.54**	**312**	S	Sn	05 24 07.8	+0.6
PMON	**Piamonte**	**1.66**	**308**	P	Pn	05 23 50.1	+0.2
PMON	**Piamonte**	**1.66**	**308**	S	Sn	05 24 10.5	+0.3
YUSH	**Yuscaran**	**1.67**	**41**	P	Pn	05 23 49.7	-0.3
YUSH	**Yuscaran**	**1.67**	**41**	S	Sn	05 24 10.6	+0.2
JAYA	**Jayaque - finc**	**1.73**	**304**	*eP*	Pn	05 23 50.2	-0.7
JAYA	**Jayaque - finc**	**1.73**	**304**	P	Pn	05 23 51.0	+0.1
RCON	**San Juan de Ri**	**1.94**	**66**	P	Pn	05 23 53.8	0.0
RCVN	**Varillal2**	**1.94**	**63**	P	Pn	05 23 53.8	0.0
NANN	**Nandasmo**	**1.96**	**112**	P	Pn	05 23 54.6	+0.7
NANN	**Nandasmo**	**1.96**	**112**	S	Sn	05 24 18.1	+0.7
MATN	**Matagalpa**	**2.01**	**83**	P	Pn	05 23 54.7	0.0
NUBE	**Las Nubes**	**2.13**	**305**	P	Pn	05 23 56.2	-0.3
NUBE	**Las Nubes**	**2.13**	**305**	S	Sn	05 24 21.9	-0.1

IDC 16 05:43:15.4±1.4, 7°18N×124°62E, h0km, mb3.6/4, mbtmp3.6/4, MS2.7/4, Error ellipse: s-maj=27.1km s-min=12.6km az=2.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.96**	**97**	Pg	Pg	05 43 34.1	+0.3
	196nm,0.3s,baz=276,slow=6.4,SNR=9.0						
DAV				Lg	Lg	05 43 46.8	
	1μm,0.3s,baz=322,slow=19,SNR=15						
KAPI	**Kappang**	**13.05**	**202**	LR	LR	05 51 51.0	
	comp=Z,35nm,20.8s,baz=82,slow=40						
GUMO	**Guam**	**20.90**	**71**	LR	LR	05 56 30.5	
	comp=Z,9.4nm,19.9s,baz=114,slow=38						
FITZ	**Fitzroy Crossi**	**25.14**	**178**	P	P	05 48 41.6	-0.7
	1.1nm,0.7s,baz=16,slow=12,SNR=3.3 1.1nm,0.7s						
JNU	**Nakatsue**	**26.45**	**12**	LR	LR	05 58 02.5	
	comp=Z,21nm,21.0s,baz=146,slow=34						
WRA	**Warramunga Arr**	**28.60**	**161**	P	P	05 49 12.9	-0.7
	0.4nm,0.8s,baz=331,slow=10.0,SNR=6.1 0.4nm,0.8s						
MJAR	**Matsushiro Arr**	**31.75**	**21**	LR	LR	06 00 45.5	
	comp=Z,23nm,21.7s,baz=191,slow=33						
ASAR	**Alice Springs**	**31.98**	**164**	P	P	05 49 44.8	+1.3
	0.5nm,0.5s,baz=343,slow=7.1,SNR=14 0.5nm,0.5s						
MKAR	**Makanchi Array**	**53.54**	**325**	P	P	05 52 37.8	-0.2
	0.8nm,0.7s,baz=111,slow=7.9,SNR=5.0 0.8nm,0.7s						

SCB 16 05:49:03.9±1.3, 21°25S×67°43W, h184km±15km, ML2.7/3, Error ellipse: s-maj=5.2km s-min=4.6km az=1.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.67**	**90**	Pg	Pn	05 49 38.8	+0.4
MOCB	**Mochara**	**1.67**	**90**	Pg	Pn	05 49 38.7	+0.3
MOCB				Pg	Sn	05 50 03.8	-1.2
MOCB				IAML		05 50 05.0	
	41nm,0.4s						
PB09	**IPOC Station P**	**1.77**	**252**	Pg	Pn	05 49 40.2	+1.1
PB09	**IPOC Station P**	**1.77**	**252**	Pg	Pn	05 49 40.3	+1.2
PB01	**IPOC Station P**	**1.93**	**276**	Pg	Pn	05 49 42.0	+1.4
PB01				Sg	Sn	05 50 09.6	+0.5
PB01				IAML		05 50 11.9	
	15nm,0.2s						
PB01	**IPOC Station P**	**1.93**	**276**	Pg	Pn	05 49 41.8	+1.2
PB01				Sg	Sn	05 50 09.9	+0.8
PB01				IAML		05 50 10.7	
	20nm,0.3s						
PB08	**IPOC Station P**	**1.95**	**304**	Pg	Pn	05 49 42.1	+0.9
PB08	**IPOC Station P**	**1.95**	**304**	Pg	Pn	05 49 42.5	+1.3
YJA	**Yavi**	**2.01**	**118**	Pg	Pn	05 49 42.5	+0.7
YJA	**Yavi**	**2.01**	**118**	Pg	Pn	05 49 42.9	+1.1
GO01	**Chusmiza**	**2.28**	**313**	Pg	Pn	05 49 46.3	+1.4
GO01	**Chusmiza**	**2.28**	**313**	Pg	Pn	05 49 45.8	+0.9
PB02	**IPOC Station P**	**2.30**	**268**	Pg	Pn	05 49 45.5	+0.8
PB02				Sg	Sn	05 50 15.7	-0.7
PB02				IAML		05 50 19.6	
	44nm,0.2s						
PB02	**IPOC Station P**	**2.30**	**268**	Pg	Pn	05 49 45.5	+0.8
PB02				Sg	Sn	05 50 15.5	-0.9
PB02				IAML		05 50 22.8	
	24nm,0.4s						
PB06	**IPOC Station P**	**2.46**	**233**	Pg	Pn	05 49 47.0	+0.4
PB06	**IPOC Station P**	**2.46**	**233**	Pg	Pn	05 49 47.4	+0.8
PB11	**IPOC Station P**	**2.56**	**305**	Pg	Pn	05 49 47.8	+0.1
PB11				Sg	Sn	05 50 20.8	-0.9
PB11				IAML		05 50 23.4	
	35nm,0.2s						
PB11	**IPOC Station P**	**2.56**	**305**	Pg	Pn	05 49 48.4	+0.7
SOET	**ToroToro**	**3.47**	**26**	Pg	Pn	05 49 59.0	+0.1
PB16	**IPOC Station P**	**3.49**	**326**	Pg	Pn	05 50 00.2	+0.8
PB16	**IPOC Station P**	**3.49**	**326**	Pg	Pn	05 50 00.6	+1.2
BBOJ	**La Paz, Jacaqu**	**4.31**	**350**	Pg	Pn	05 50 11.0	+1.3
PB14	**IPOC Station P**	**4.34**	**219**	Pg	Pn	05 50 10.3	+0.5
GO02	**Mina Guanaco**	**4.38**	**207**	Pg	Pn	05 50 10.3	+0.1
GO02	**Mina Guanaco**	**4.38**	**207**	Pg	Pn	05 50 10.6	+0.4
BBOE	**La Paz, Chanca**	**4.44**	**353**	Pg	Pn	05 50 13.7	+2.3
BBOD	**La Paz, Gloria**	**4.71**	**346**	Pg	Pn	05 50 17.1	+2.2

*DJA **16** 05:51:29.4±1.5, 2°N±5°×12°6E±°, h13km±16km, M3.4/7, MLv3.4/7*
IDC 16 05:51:26.4±1.9, 1°78N×126°71E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=180.5km s-min=23.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.20**	**147**	P	Pb	05 51 50.0	0.0
SGSI	**Sangihe**	**2.23**	**328**	P	Pn	05 52 05.6	+0.9
WRA	**Warramunga Arr**	**22.85**	**161**	P	P	05 56 29.8	-1.7
	1.0nm,0.5s,baz=339,slow=11,SNR=5.8 1.0nm,0.5s						
ASAR	**Alice Springs**	**26.25**	**165**	P	P	05 57 05.0	+1.5
	0.2nm,0.3s,baz=348,slow=14,SNR=4.6 0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	P	06 01 28.6	-0.4
	0.2nm,0.4s,baz=112,slow=8.8,SNR=2.5 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	P	06 01 57.7	+0.2
	0.4nm,0.2s,baz=127,slow=5.9,SNR=1.5 0.4nm,0.2s						

IDC 16 05:52:29.9±14.0, 6°55S×129°89E, h108km±153km, mb3.5/1, mbtmp3.5/4, ML3.1/3, Error ellipse: s-maj=88.6km s-min=62.0km az=28.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.20**	**199**	P	Pn	05 55 21.7	+1.6
	baz=21,slow=9.8,SNR=3.6						
FITZ				S	Sn	05 57 33.6	-0.8
	2.5nm,0.4s,baz=144,slow=21,SNR=9.8 0.5nm,0.3s						
WRA	**Warramunga Arr**	**14.00**	**162**	P	Pn	05 55 41.7	-1.9
	0.1nm,0.3s,baz=343,slow=13,SNR=1.4						
WRA				S	Sn	05 58 08.3	-10
	0.6nm,0.4s,baz=356,slow=23,SNR=4.3 0.2nm,0.4s						
ASAR	**Alice Springs**	**17.45**	**168**	P	Pn	05 56 27.1	+0.4
	0.1nm,0.3s,baz=350,slow=10,SNR=6.6						
ASAR				S	Sn	05 59 29.8	-11
	0.3nm,0.7s,baz=354,slow=28,SNR=4.0 0.3nm,0.4s						
MKAR	**Makanchi Array**	**67.79**	**327**	P	P	06 03 16.1	-0.1
	0.5nm,0.4s,baz=115,slow=6.6,SNR=4.4 0.5nm,0.4s						

*AEIC **16** 05:57:15.3±1.6, 54°52N±0°05×161°72W±0°05, h31km±4km, Error ellipse: s-maj=7.3km s-min=3.7km az=169.0*
NEIC 16 05:57:17.4±1.9, 54°62N±0°03×161°80W±0°03, h35km±2km, ML3.2/26, ML3.1(AEIC), Error ellipse: s-maj=5.6km s-min=3.1km az=20.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	**0.53**	**356**		Pn	05 57 27.7	-0.8
DOL					Sn	05 57 37.1	+0.8
DT1	**Dutton Round H**	**0.56**	**331**		Pn	05 57 28.2	-0.7
DT1					Sn	05 57 37.7	+0.7
PS4A	**Pavlof South-4**	**0.73**	**357**		Pn	05 57 31.1	-0.1
PS4A					Sn	05 57 43.0	+1.9
PS1A	**Pavlof South-1**	**0.81**	**2**		Pn	05 57 32.0	-0.2
PS1A					Sn	05 57 44.9	+2.0
PN7A	**Pavlof North-7**	**0.82**	**352**		Pn	05 57 32.4	-0.1
PN7A					Sn	05 57 45.8	+2.3
FALS	**False Pass**	**0.97**	**285**		Sn	05 57 47.7	+0.8
FALS	**False Pass**	**0.97**	**285**	Pn	Pn	05 57 33.6	-0.8
SDPT	**Sand Point**	**1.06**	**46**		Pn	05 57 34.5	-1.1
SDPT	**Sand Point**	**1.06**	**46**		Sn	05 57 49.3	+0.2
S12K	**Black Hills**	**1.10**	**352**		Sn	05 57 50.9	+0.7
S12K				IAML		05 57 54.4	
	comp=E,440nm,0.4s						
S12K				IAML		05 57 55.6	
	comp=N,391nm,0.3s						
S12K	**Black Hills**	**1.10**	**352**		Pn	05 57 36.3	+0.1
ISNN	**Isanotski Nort**	**1.17**	**281**		Pn	05 57 37.1	-0.1
CNBA	**Chernabura Isl**	**1.30**	**80**		Pn	05 57 35.9	-3.1
WEBT	**Westdahl Beart**	**1.72**	**270**		Pn	05 57 44.8	0.0
WEBT					Sn	05 58 07.5	+2.0
VNKR	**Veniaminof 5**	**1.98**	**43**		Pn	05 57 48.3	-0.1
VNFG	**Fog Glacier, M**	**2.10**	**37**		Pn	05 57 50.0	-0.1
VNFG				IAML		05 58 27.9	
	comp=N,309nm,1.0s						
VNFG				IAML		05 58 35.6	
	comp=E,332nm,0.7s						
VNFG	**Fog Glacier, M**	**2.10**	**37**		Pn	05 57 50.5	+0.4
VNSG	**Veniaminof 6**	**2.16**	**45**		Pn	05 57 51.3	+0.4
VNSG					Sn	05 58 18.6	+2.1
AKSA	**Akutan Strait**	**2.33**	**260**		Pn	05 57 52.8	-0.3
AKSA					Sn	05 58 21.2	+0.6
AKUT	**Akutan**	**2.37**	**260**		Sn	05 58 20.1	-1.4
AKUT				IAML		05 58 27.9	
	comp=N,86nm,0.6s						
AKUT				IAML		05 58 35.9	
	comp=E,100nm,1.5s						
AKUT	**Akutan**	**2.37**	**260**		Pn	05 57 53.4	-0.3
AHB	**Akutan Harbor**	**2.40**	**260**		Pn	05 57 54.0	-0.2
AHB					Sn	05 58 24.0	+1.6
AKLV	**Akutan Long Va**	**2.47**	**261**		Pn	05 57 54.9	-0.2
AKLV					Sn	05 58 25.5	+1.4
AKBBA	**Akutan Broad B**	**2.47**	**260**		Pn	05 57 55.0	-0.1
AKBBA					Sn	05 58 25.1	+1.0
UNV	**Unalaska Valle**	**2.87**	**256**		Pn	05 57 59.6	-0.9
UNV					Sn	05 58 33.9	+0.1
ANPB	**Aniakchak Plen**	**2.96**	**41**		Pn	05 58 01.6	-0.2
MNAT	**Makushin Natee**	**2.96**	**258**		Pn	05 58 01.1	-0.7
MNAT					Sn	05 58 36.9	+0.8
MSW	**Makushin Switc**	**3.01**	**258**		Pn	05 58 01.4	-1.0
MSW					Sn	05 58 37.9	+0.6
MREP	**Makushin Rep't**	**3.02**	**256**		Pn	05 58 01.9	-0.7
MREP					Sn	05 58 39.0	+1.5
AZAC	**Aniakchak**	**3.04**	**40**		Pn	05 58 03.6	+0.5
ANPK	**Aniakchak Peak**	**3.05**	**41**		Pn	05 58 03.4	+0.3
CHIR	**Chirikof Islan**	**3.74**	**69**		Pn	05 58 11.1	-1.4
CHIR	**Chirikof Islan**	**3.74**	**69**	IAML		06 00 08.3	
	comp=E,61nm,1.3s						
PLK4	**Peulik 4**	**4.29**	**43**		Pn	05 58 21.0	+0.9
PLK4	**Peulik 4**	**4.29**	**43**	IAML		05 59 22.8	
	comp=N,20nm,1.3s						
PLK4				IAML		05 59 28.5	
	comp=E,32nm,1.3s						
PLK1	**Peulik 1**	**4.31**	**40**		Pn	05 58 20.9	+0.6
O14K	**Tigyukauivet M**	**4.66**	**3**	Pn	Pn	05 58 25.6	+0.6
O14K				IAML		05 59 01.1	
	comp=N,13nm,1.3s						
O15K	**Ungalikthiuk R**	**4.70**	**13**		Pn	05 58 25.9	+0.3
O15K	**Ungalikthiuk R**	**4.70**	**13**	IAML		06 00 03.0	
	comp=N,11nm,1.4s						
CNTC	**Contact Creek**	**4.91**	**40**		Pn	05 58 29.0	+0.3
CAHL	**Cahill**	**4.99**	**44**		Pn	05 58 30.0	+0.2
ANCK	**Angle Creek**	**5.01**	**42**		Pn	05 58 30.6	+0.6
KABU	**Katmai Buttres**	**5.14**	**42**		Pn	05 58 32.6	+0.8
N14K	**Kuskokwak Cree**	**5.32**	**1**		Pn	05 58 34.4	+0.2
N14K				IAML		06 00 30.8	
	comp=N,19nm,1.3s						
O16K	**Kokwok River B**	**5.38**	**21**	Pn	Pn	05 58 35.6	+0.6
O16K				IAML		06 00 25.1	
	comp=E,7.5nm,1.0s						
O16K				IAML		06 00 25.9	
	comp=N,8.3nm,1.5s						
KAWH	**Katmai**	**5.41**	**43**		Pn	05 58 35.4	-0.1
OHAK	**Old Harbor**	**5.45**	**58**		Pn	05 58 34.1	-1.8
P18K	**Big Mountain,**	**5.98**	**34**	Pn	Pn	05 58 43.4	+0.1
KDAK	**Kodiak Island**	**6.04**	**55**	Pn	Pn	05 58 42.7	-1.4
M15K	**Kasigluk River**	**6.12**	**5**		Pn	05 58 45.4	+0.2
O18K	**Koktuh Hills**	**6.35**	**32**		Pn	05 58 49.2	+0.8
N17K	**Nushagak Hills**	**6.42**	**21**	Pn	Pn	05 58 49.1	-0.2
M16K	**Timber Creek**	**6.60**	**12**		Pn	05 58 52.1	+0.4
L14K	**Kuka Creek**	**6.76**	**356**	Pn	Pn	05 58 54.4	+0.5
M17K	**Holitna River**	**7.18**	**17**		Pn	05 58 59.7	0.0
L16K	**Owhat River**	**7.22**	**9**	Pn	Pn	05 59 00.3	+0.1
N19K	**Bonanza Creek**	**7.34**	**29**	Pn	Pn	05 59 02.5	+0.5
RED	**Redoubt Volcan**	**7.57**	**36**	Pn	Pn	05 59 06.3	+1.1

*NNC **16** 05:58:14.3±1.3, 42°81N×78°00E, h0km, mb2.0, mpv2.6, Error ellipse: s-maj=13.8km s-min=3.2km az=3.0*
*SOME **16** 05:58:15.9, 42°82N×77°95E, h15km*
*KRNET **16** 05:58:16.3±0.1, 42°77N×77°97E, h20km, mb2.2*
ISC 16 05:58:15.4±1.0, 42°82N±0°03×77°92E±0°03, h14km±11km, n12, σ2°43/24, 10C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.43**	**56**	P	**Pg**	**05 58 23.2**	**-0.9**
	3.3nm,0.1s						
SATY				S	**Sg**	**05 58 28.5**	**-1.5**
	34nm,0.1s						
PRZ	**Przheval'sk**	**0.49**	**133**	*iP*	**Pg**	**05 58 24.5**	**-0.7**
PRZ				*eS*	**Sg**	**05 58 31.2**	**-0.6**
KNDC	**Almaty**	**0.80**	**300**	*iP*	**Pg**	**05 58 30.7**	**-0.3**
	27nm,0.5s						
KNDC				*iS*	**Sg**	**05 58 42.8**	**+1.2**
	9.1nm,0.5s						
KPKS	**Kokpek**	**0.86**	**41**	P	**Pg**	**05 58 30.7**	**-1.3**
	0.2nm,0.1s						
KPKS				S	**Sg**	**05 58 41.6**	**-1.7**
	5.3nm,0.2s						
KPKS	**Kokpek**	**0.86**	**41**	*eP*	**Pg**	**05 58 30.7**	**-1.3**
	0.2nm,0.1s						
KPKS				*eS*	**Sg**	**05 58 41.6**	**-1.7**
	5.3nm,0.2s						
KDJ	**Kajisay**	**0.88**	**219**	*eP*	**Pb**	**05 58 32.3**	**-0.3**
KDJ				*eS*	**Sg**	**05 58 44.2**	**+0.2**
TARG	**Taragay, Kyrgy**

1.4nm,0.5s
CMAR Chiang Mai Arr 31.79 304 LR LR 06 41 39.3
comp=Z,13nm,19.9s,baz=195,slow=38
STKA Stephens Creek 36.17 158 P **P** **06 28 33.5 +1.0**
2.3nm,0.6s,baz=339,slow=8.4,SNR=4.9
2.3nm,0.6s
PETK Petropavlovsk- 57.61 22 P **P** **06 31 20.5 +0.8**
3.3nm,0.8s,baz=185,slow=7.5,SNR=4.0
3.3nm,0.8s
MKAR Makanchi Array 59.22 326 P **P** **06 31 29.1 -1.9**
0.7nm,0.4s,baz=115,slow=8.5,SNR=6.0
0.7nm,0.4s
KURBB Kurchatov Arra 63.46 328 P **P** **06 31 58.2 -1.3**
1.2nm,0.5s,baz=122,slow=6.7,SNR=5.5
1.2nm,0.5s
VNDA Vanda 81.25 173 P **P** **06 33 45.5 +0.3**
0.4nm,0.5s,baz=311,slow=6.3,SNR=3.0
0.4nm,0.5s

NNC ***16*** *06:23:19.1±3.0,37°15N×71°41E,h0km,mb4.9,mpv5.1, Error ellipse: s-maj=25.0km s-min=17.8km az=9.0*
BJI ***16*** *06:23:23.7,37°08N×71°62E,h137km,mB5.0/5,mb4.6/24*
MOS ***16*** *06:23:24.6±1.0,37°01N×71°80E,h133km,mb4.3/18, Error ellipse: s-maj=7.9km s-min=3.8km az=84.4*
NEIC ***16*** *06:23:25.1±1.7,36°96N±0°06×71°70E±0°09,h135km±5km, mb4.4/26, Error ellipse: s-maj=10.8km s-min=8.7km az=75.0*
IDC ***16*** *06:23:25.2±3.0,36°95N×71°77E,h130km±25km,mb3.9/21, mbtmp4.4/26, Error ellipse: s-maj=19.5km s-min=10.7km az=20.0*

ISC 16 06:23:26.2±0.3,37°02N±0°03×71°81E±0°03,h150km,n211, σ2s22/239,mb4.3/51,19C-7D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
GAR	**Garm**	**2.31**	**330**			**Pn**	**06 24 02.9**	**-2.1**
GAR				Sn		**Sn**	**06 24 30.0**	**-5.0**
DRK	**Karamyk**	**2.46**	**360**			**Pn**	**06 24 05.8**	**-1.3**
DRK	**Karamyk**	**2.46**	**360**	PN		**Pn**	**06 24 05.8**	**-1.3**
CHGR	**Chuyangaron**	**2.67**	**309**			**Pn**	**06 24 06.2**	**-3.2**
CHGR	**Chuyangaron**	**2.67**	**309**	PN		**Pn**	**06 24 06.2**	**-3.2**
KBL	**Kabul**	**3.34**	**223**			**Pn**	**06 24 16.1**	**-2.0**
KBL	**Kabul**	**3.34**	**223**	PN		**Pn**	**06 24 16.1**	**-2.0**
NIL	**Nilore**	**3.56**	**160**			**Pn**	**06 24 19.9**	**-0.9**
NIL	**Nilore**	**3.56**	**160**	PN		**Pn**	**06 24 19.9**	**-0.9**
KSH	**Kashi**	**4.12**	**51**	P		Pn	06 24 23.8	-4.2
KSH				S		Sn	06 25 00.5	-16
KSH				smax		smax		
	comp=N,1μm,0.7s							
KSH				smax		smax		
	comp=E,1μm,0.8s							
JMU	**Jammu**	**4.98**	**149**	*e*P		**Pn**	**06 24 38.1**	**-1.3**
JMU				*e*S		**Sn**	**06 25 31.6**	**-4.9**
JMU				IAML			06 25 35.2	
	comp=N,748nm,0.7s							
JMU				IAML			06 25 36.0	
	comp=E,632nm,0.4s							
ALCI	**Alchi Leh**	**5.19**	**121**	*e*P		**Pn**	**06 24 40.7**	**-1.8**
ALCI				*e*S		**Sn**	**06 25 39.0**	**-3.0**
ALCI				IAML			06 25 43.2	
	comp=N,262nm,0.4s							
ALCI				IAML			06 25 44.2	
	comp=E,236nm,0.2s							
IUG	**luzhnay**	**5.30**	**346**	*e*P		**Pn**	**06 24 43.0**	**-0.7**
IUG	**luzhnay**	**5.30**	**346**	*e*PN		**Pn**	**06 24 42.9**	**-0.7**
TSSA	**Tissa**	**5.48**	**138**	*e*P		**Pn**	**06 24 44.4**	**-1.8**
TSSA				*e*S		**Sn**	**06 25 43.3**	**-5.3**
TSSA				IAML			06 25 47.9	
	comp=E,686nm,0.3s							
TSSA				IAML			06 25 50.8	
	comp=N,687nm,0.2s							
CHM	**Chimkent**	**5.56**	**343**	*e*P		**Pn**	**06 24 46.8**	**-0.2**
CHM	**Chimkent**	**5.56**	**343**	*e*PN		**Pn**	**06 24 46.8**	**-0.2**
THN	**Thein Dam**	**5.59**	**144**	*e*P		**Pn**	**06 24 47.0**	**-0.3**
THN				*e*S		**Sn**	**06 25 47.1**	**-3.7**
THN				IAML			06 25 51.5	
	comp=N,887nm,0.2s							
THN				IAML			06 25 52.1	
	comp=E,643nm,0.2s							
UCH	**Uchtor**	**5.61**	**21**	P		**Pn**	**06 24 47.9**	**-0.1**
	SNR=234							
EKS2	**Erkin-Say**	**5.84**	**14**	P		**Pn**	**06 24 51.0**	**+0.3**
	SNR=137							
DZA	**Taraz**	**5.88**	**357**	*e*P		**Pn**	**06 24 51.1**	**-0.2**
DZA	**Taraz**	**5.88**	**357**	*e*PN		**Pn**	**06 24 51.0**	**-0.2**
AAK	**Ala-Archa**	**5.98**	**19**	P		**Pn**	**06 24 53.4**	**+0.7**
	comp=E,277nm,0.4s,baz=182,slow=5.8,SNR=849							
AAK				S		**Sn**	**06 25 58.5**	**-1.9**
	comp=E,138nm,0.6s,baz=126,slow=21,SNR=19							
AAK	**Ala-Archa**	**5.98**	**19**			**Pn**	**06 24 53.2**	**+0.5**
AAK	**Ala-Archa**	**5.98**	**19**	P		**Pn**	**06 24 53.0**	**+0.3**
	SNR=330							
AAK	**Ala-Archa**	**5.98**	**19**	⇓P		**Pn**	**06 24 50.8**	**-1.8**
	comp=E,87nm,0.5s							
AAK				⇓S		**Sn**	**06 25 58.7**	**-1.7**
	comp=E,123nm,0.7s							
AAK	**Ala-Archa**	**5.98**	**19**	*c*P	*i*PN	**Pn**	**06 24 53.0**	**+0.3**
TLWR	**Talawar**	**6.10**	**145**	*e*P		**Pn**	**06 24 53.3**	**-0.9**
TLWR				*e*S		**Sn**	**06 25 56.6**	**-6.5**
KBK	**Karagaybulak**	**6.13**	**22**	P		**Pn**	**06 24 55.2**	**+0.6**
	SNR=21							
KK31	**Karatay Array**	**6.16**	**351**			**Pn**	**06 24 54.0**	**-0.9**
KK31	**Karatay Array**	**6.16**	**351**	⇑P		Pn	06 24 50.9	-4.0
	comp=E,152nm,0.4s,baz=178,slow=16,SNR=952							
KK31				⇑S		**Sn**	**06 25 59.8**	**-4.6**
	comp=E,140nm,0.5s,baz=74,slow=55,SNR=6.0							
KK31	**Karatay Array**	**6.16**	**351**	PN		**Pn**	**06 24 54.0**	**-0.9**
KKAR	**Karatay Array**	**6.16**	**351**			**Pn**	**06 24 54.0**	**-1.0**
KKAR	**Karatay Array**	**6.16**	**351**	PN		**Pn**	**06 24 54.0**	**-1.0**
FRU1	**Bishkek**	**6.18**	**20**			**Pn**	**06 24 56.4**	**+1.2**
FRU1	**Bishkek**	**6.18**	**20**	PN		**Pn**	**06 24 56.4**	**+1.2**
ULHL	**Ulahol**	**6.24**	**32**	P		**Pn**	**06 24 56.0**	**-0.1**
	SNR=8.8							
BOOM	**Boomskoye usch**	**6.32**	**29**			**Pn**	**06 24 57.3**	**+0.1**
BOOM	**Boomskoye usch**	**6.32**	**29**	PN		**Pn**	**06 24 57.3**	**+0.1**
CHMS	**Chumysh**	**6.38**	**20**	P		**Pn**	**06 24 58.3**	**+0.3**
	SNR=37							
TKM2	**Tokmak 2**	**6.57**	**25**	P		**Pn**	**06 25 00.7**	**+0.1**
	SNR=111							
USP	**Ospenovka**	**6.57**	**17**	P		**Pn**	**06 25 00.3**	**-0.2**
	SNR=46							
KDJ	**Kajisay**	**6.58**	**37**	Pn		**Pn**	**06 25 00.9**	**+0.3**
KDJ	**Kajisay**	**6.58**	**37**	PN		**Pn**	**06 25 01.0**	**+0.3**
TARG	**Taragay, Kyrgy**	**6.61**	**43**			**Pn**	**06 25 01.4**	**+0.1**
TARG	**Taragay, Kyrgy**	**6.61**	**43**	PN		**Pn**	**06 25 01.4**	**+0.1**
BHK	**Bhakra**	**6.76**	**144**	*e*P		**Pn**	**06 25 01.5**	**-1.6**
BHK				IAML			06 26 16.3	
	comp=E,460nm,0.5s							
BHK				IAML			06 26 16.9	
	comp=N,302nm,0.6s							
BHK				*e*S		**Sn**	**06 26 18.3**	**-0.7**
SGDS	**Sogindy**	**6.78**	**18**	*e*P		**Pn**	**06 25 02.9**	**-0.4**
TNSS	**Tian-Shan**	**7.19**	**32**	*e*P		**Pn**	**06 25 08.6**	**-0.4**
TNSS	**Tian-Shan**	**7.19**	**32**	*e*PN		**Pn**	**06 25 08.6**	**-0.4**
HNLY	**HANLEY**	**7.24**	**124**	*e*P		**Pn**	**06 25 07.9**	**-2.1**
HNLY				*e*S		**Sn**	**06 26 27.3**	**-4.0**
HNLY				IAML			06 26 29.7	
	comp=E,56nm,0.8s							
HNLY				IAML			06 26 32.5	
	comp=N,43nm,0.8s							
AAA	**Alma-Ata**	**7.32**	**31**	*e*P		**Pn**	**06 25 10.3**	**-0.1**
AAA	**Alma-Ata**	**7.32**	**31**	*e*PN		**Pn**	**06 25 10.3**	**-0.1**
MDOK	**Medeo**	**7.33**	**32**	*e*P		**Pn**	**06 25 10.5**	**-0.2**
MDOK	**Medeo**	**7.33**	**32**	*e*PN		**Pn**	**06 25 10.5**	**-0.2**
SMLA	**Simla**	**7.36**	**141**	*e*P		**Pn**	**06 25 09.3**	**-1.7**
SMLA				*e*S		**Sn**	**06 26 25.6**	**-7.7**
SMLA				IAML			06 26 32.8	
	comp=E,448nm,0.4s							
SMLA				IAML			06 26 34.4	
	comp=N,357nm,0.5s							
SATY	**Saty**	**7.87**	**38**	*e*P		**Pn**	**06 25 17.9**	**0.0**
SATY				*e*S		**Sn**	**06 26 45.5**	**-0.1**
SATY	**Saty**	**7.87**	**38**	*e*PN		**Pn**	**06 25 17.8**	**0.0**
BTLS	**Baital**	**8.19**	**11**	*e*P		**Pn**	**06 25 21.4**	**-0.7**
BTLS	**Baital**	**8.19**	**11**	*e*PN		**Pn**	**06 25 21.3**	**-0.7**
DDI	**Dehra Dun**	**8.46**	**140**	*e*S		**Sn**	**06 26 57.2**	**-2.8**
SHLS	**Shalkode**	**8.48**	**41**	*e*P		**Pn**	**06 25 28.4**	**+2.4**
SHLS	**Shalkode**	**8.48**	**41**	*e*PN		**Pn**	**06 25 28.4**	**+2.4**
PDGK	**Podgornoye**	**8.62**	**41**	⇓P		**Pn**	**06 25 26.4**	**-1.4**
	comp=N,44nm,1.1s							
PDGK				⇑S		**Sn**	**06 27 07.9**	**+4.3**
	comp=N,40nm,1.0s							
PDGK	**Podgornoye**	**8.62**	**41**	PN		**Pn**	**06 25 26.4**	**-1.4**
PDGK				S		**Sn**	**06 27 07.9**	**+4.3**
JOSI	**Joshimath**	**9.11**	**133**	*e*P		**Pn**	**06 25 32.4**	**-2.1**
JOSI				*e*S		Sn	06 27 04.0	-12
JOSI				IAML			06 27 13.3	
	comp=E,176nm,0.3s							
JOSI				IAML			06 27 14.1	
	comp=N,213nm,0.4s							
TDK	**Taldyqorghan**	**9.40**	**30**	*e*P		**Pn**	**06 25 38.0**	**-0.2**
TDK	**Taldyqorghan**	**9.40**	**30**	*e*P		**Pn**	**06 25 37.9**	**-0.2**
NDI	**New Delhi**	**9.47**	**150**	*e*P		**Pn**	**06 25 35.9**	**-3.2**
NDI				*e*S		Sn	06 27 14.2	-10
NDI				IAML			06 27 18.3	
	comp=N,105nm,0.3s							
NDI				IAML			06 27 20.0	
	comp=E,125nm,0.4s							
NPLP	**NPLP New Delhi**	**9.49**	**150**	*e*P		**Pn**	**06 25 36.7**	**-2.7**
NPLP				*e*S		Sn	06 27 14.9	-10
AYAN	**Aya Nagar**	**9.61**	**151**	*e*P		**Pn**	**06 25 37.8**	**-3.3**
AYAN				*e*S		Sn	06 27 18.0	-10
AYAN				IAML			06 27 19.2	
	comp=E,79nm,0.5s							
AYAN				IAML			06 27 20.8	
	comp=N,107nm,0.5s							
KUDL	**Kundal**	**9.68**	**155**	*e*P		**Pn**	**06 25 38.5**	**-3.4**
KUDL				*e*S		Sn	06 27 19.1	-10
KUDL				IAML			06 27 20.6	
	comp=E,118nm,0.7s							
KUDL				IAML			06 27 22.6	
	comp=N,61nm,0.4s							
SONA	**Sohna**	**9.80**	**152**	*e*P		**Pn**	**06 25 40.1**	**-3.4**
SONA				*e*S		Sn	06 27 21.8	-10
SONA				IAML			06 27 27.9	
	comp=E,161nm,0.3s							
SONA				IAML			06 27 30.1	
	comp=N,92nm,0.6s							
PTH	**Pithoragarh**	**10.24**	**134**	*e*P		**Pn**	**06 25 46.6**	**-2.9**
PTH				*e*S		Sn	06 27 32.1	-11
PTH				IAML			06 27 41.0	
	comp=N,121nm,0.4s							
PTH				IAML			06 27 41.6	
	comp=E,183nm,0.3s							
LGTI	**Lohaghat**	**10.33**	**134**	*e*P		**Pn**	**06 25 46.9**	**-3.6**
LGTI				*e*S		Sn	06 27 34.1	-11
LGTI				IAML			06 27 38.6	
	comp=N,87nm,0.7s							
LGTI				IAML			06 27 39.0	
	comp=E,55nm,0.7s							
AJM	**Ajmer**	**10.78**	**166**	*e*P		**Pn**	**06 25 53.5**	**-3.0**
AJM				*e*S		Sn	06 27 45.6	-10
AJM				IAML			06 27 50.4	
	comp=E,193nm,0.4s							
AJM				IAML			06 27 53.0	
	comp=N,166nm,0.5s							
MAKZ	**Makanchi**	**12.36**	**34**			**Pn**	**06 26 16.6**	**-0.3**
MAKZ	**Makanchi**	**12.36**	**34**	⇓P		**Pn**	**06 26 14.9**	**-2.1**
	comp=N,10nm,0.9s							
MAKZ	**Makanchi**	**12.36**	**34**	P		**Pn**	**06 26 16.6**	**-0.3**
MK31	**Makanchi Array**	**12.49**	**35**	P		**Pn**	**06 26 17.4**	**-1.2**
	comp=N,2.7nm,0.5s,baz=213,slow=13,SNR=23							
MK31	**Makanchi Array**	**12.49**	**35**	*c*P		**Pn**	**06 26 18.2**	**-0.5**
MKAR	**Makanchi Array**	**12.49**	**35**	P		**Pn**	**06 26 18.9**	**+0.3**
	comp=N,3.2nm,0.7s,baz=219,slow=15,SNR=22							
MKAR	**Makanchi Array**	**12.49**	**35**	P		**Pn**	**06 26 19.0**	**+0.3**
UDPR	**Udaipur**	**12.50**	**172**	*e*P		**Pn**	**06 26 16.6**	**-2.4**
UDPR				*e*S		Sn	06 28 25.6	-12
JHNI	**Jhansi**	**12.87**	**152**	*e*P		**Pn**	**06 26 20.1**	**-3.6**
JHNI				*e*S		Sn	06 28 32.7	-13
BRZS	**Berezniki**	**12.98**	**2**	*e*P		**Pn**	**06 26 25.2**	**+0.3**
BRZS	**Berezniki**	**12.98**	**2**	*e*P		**Pn**	**06 26 25.1**	**+0.3**
WMQ	**Urumqi**	**13.87**	**56**	*e*P		**Pn**	**06 26 37.0**	**+0.7**
KURBB	**Kurchatov Arra**	**14.43**	**17**	P		**Pn**	**06 26 41.2**	**-2.0**
	comp=N,8.7nm,0.7s,baz=207,slow=11,SNR=12							
KURBB	**Kurchatov Arra**	**14.43**	**17**	⇑P		**Pn**	**06 26 42.6**	**-0.6**
	comp=N,11nm,0.6s							
KURBB	**Kurchatov Arra**	**14.43**	**17**	P		**Pn**	**06 26 42.6**	**-0.6**
KURK	**Kurchatov**	**14.54**	**17**			**Pn**	**06 26 43.8**	**-0.8**
KURK	**Kurchatov**	**14.54**	**17**	*c*P		**P**	**06 26 46.9**	**-0.1**
KURK				pmax		pmax		
	comp=Z,10.0nm,2.5s							
BHPL	**Bhopal**	**14.56**	**159**	*e*P		**Pn**	**06 26 42.2**	**-2.9**
BHPL				*e*S		Sn	06 29 13.3	-13
AB31	**Akbulak array**	**14.97**	**329**			**Pn**	**06 26 48.3**	**-1.7**
AB31	**Akbulak array**	**14.97**	**329**	⇓P		**Pn**	**06 26 48.5**	**-1.5**
	comp=Z,5.0nm,0.5s,baz=138,slow=12,SNR=103							
AB31				⇑S		**Sn**	**06 29 29.5**	**-6.6**
	comp=Z,6.3nm,0.5s,baz=153,slow=24,SNR=9.4							
AB31	**Akbulak array**	**14.97**	**329**	P		**Pn**	**06 26 48.5**	**-1.5**
AB31				S		**Sn**	**06 29 29.5**	**-6.6**
ABKAR	**Akbulak array**	**14.97**	**329**			**Pn**	**06 26 48.6**	**-1.4**
EVN	**Everest**	**15.54**	**121**			**Pn**	**06 26 55.6**	**-2.3**
EVN				IAmb		IAmb	06 27 00.1	
	comp=Z,10nm,0.6s							
BVA0	**Borovoye Array**	**16.04**	**357**	P		**Pn**	**06 27 01.9**	**-1.2**
	comp=Z,12nm,1.2s,baz=169,slow=11,SNR=22							
BVA0	**Borovoye Array**	**16.04**	**357**	P		**Pn**	**06 27 01.9**	**-1.2**
BVAR	**Borovoye Array**	**16.04**	**357**	P		**Pn**	**06 27 02.2**	**-0.9**
	comp=Z,5.4nm,0.4s,baz=159,slow=12,SNR=18							
BVAR				S		**S**	**06 29 53.4**	**-8.1**
	comp=Z,3.3nm,0.5s,baz=163,slow=23,SNR=3.6							
BORK	**Borovoye**	**16.06**	**357**	*c*P		**Pn**	**06 27 03.2**	**-0.2**
BORK				pmax		pmax		
	comp=Z,11nm,0.8s							
AKTO	**Aktyubinsk**	**16.68**	**328**	P		**Pn**	**06 27 10.7**	**-0.2**
	comp=Z,22nm,0.6s,baz=133,slow=9.5,SNR=48							
AKTO				S		**S**	**06 30 06.8**	**-9.3**
	comp=Z,3.1nm,0.4s,baz=294,slow=19,SNR=2.1							
AKTO	**Aktyubinsk**	**16.68**	**328**	⇓P		**P**	**06 27 09.9**	**-0.8**
	comp=Z,19nm,0.8s							
AKTO				⇑S		**S**	**06 30 12.5**	**-3.6**
	comp=Z,10nm,1.1s							
AKL	**Akola**	**16.88**	**163**	*e*P		**Pn**	**06 27 13.7**	**+0.1**
AKL				*e*S		S	06 30 09.9	-11
DGZ	**Jazzator, Alta**	**16.98**	**37**	*i*P		**Pn**	**06 27 14.8**	**+0.1**
ZAA0	**Zalesovo Array**	**19.18**	**24**			**P**	**06 27 38.7**	**+0.8**
ZAA0				IAmb		IAmb	06 27 40.5	
	comp=Z,23nm,0.8s							
ZALV	**Zalesovo Beam**	**19.18**	**24**	P		**Pn**	**06 27 39.5**	**-1.0**
	comp=Z,13nm,0.3s,baz=223,slow=10,SNR=111							
ZALV	**Zalesovo Beam**	**19.18**	**24**	P		**Pn**	**06 27 39.2**	**-1.2**
ZALV	**Zalesovo Beam**	**19.18**	**24**	*i*P		**Pn**	**06 27 39.5**	**-1.0**
ZALV				pmax		pmax		
	comp=Z,24nm,0.6s							
MAK	**Makhachkala**	**19.52**	**295**	*e*P		**P**	**06 27 40.8**	**-0.9**
MAK				*e*S		**S**	**06 31 13.9**	**-0.1**
MAK				pmax		pmax		
	comp=Z,359nm,1.1s							
MAK				MLR		MLR		
	comp=Z,568nm,13.0s							
SVE	**Sverdlovsk**	**21.18**	**343**	*e*P		**P**	**06 28 00.6**	**+1.1**
ARTI	**Arti**	**21.38**	**339**	P		**P**	**06 28 02.5**	**+0.9**
	comp=Z,14nm,0.6s,baz=150,slow=6.4,SNR=22							
	comp=Z,14nm,0.6s							
ARTI	**Arti**	**21.38**	**339**	P		**P**	**06 28 01.6**	**0.0**
ARTI	**Arti**	**21.38**	**339**	*d*P		**P**	**06 28 02.4**	**+0.9**
ARTI							06 28 35.9	
ARTI				S		**S**	**06 31 52.2**	**+2.6**
ARTI				pmax		pmax		
	comp=Z,20nm,0.8s							
GTA	**Gaotai**	**22.10**	**75**	P		**P**	**06 28 12.8**	**+3.4**
GTA				sP		sP	06 28 54.5	-2.6
GTA				pmax		pmax		
	comp=Z,29nm,1.2s							
BELG	**Belogornoye**	**22.91**	**320**	*i*P		**P**	**06 28 19.1**	**+2.4**
BELG				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KBZ	**Khabaz**	**22.95**	**296**	P		**P**	**06 28 18.4**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=121,slow=4.4,SNR=4.1							
	comp=Z,1.9nm,0.7s							
SHA1	**Shidzhatmaz**	**23.13**	**296**	*i*P		**P**	**06 28 20.6**	**+1.4**
KIV	**Kislovodsk**	**23.13**	**297**	*e*P		**P**	**06 28 21.5**	**+2.4**
KIV				*e*S		**S**	**06 32 23.4**	**+4.4**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.0s							
LZH	**Lanzhou**	**25.69**	**82**	*e*P		**P**	**06 28 45.8**	**+3.4**
LZH				pP		pP	06 29 15.8	+0.5
LZH				sP		sP	06 29 31.5	-1.8
LZH				pmax		pmax		
	comp=Z,19nm,1.1s							
KIRV	**Kirov**	**26.07**	**333**	*i*P		**P**	**06 28 47.6**	**+2.3**
PZH	**PanZhiHua**	**27.42**	**104**	P		**P**	**06 29 00.3**	**+2.3**
SONM	**Songino Array**	**27.50**	**56**	P		**P**	**06 29 01.8**	**+3.3**
	comp=Z,3.0nm,0.5s,baz=264,slow=9.1,SNR=13							
	comp=Z,3.0nm,0.5s							
ULN	**Ulaanbaatar**	**27.95**	**56**	*c*P		**P**	**06 29 04.1**	**+1.6**
ULN				pmax		pmax		
	comp=Z,11nm,2.5s							
BRTR	**Keskin Array B**	**29.90**	**287**	P		**P**	**06 29 20.9**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=101,slow=9.2,SNR=9.6							
	comp=Z,1.6nm,0.7s							
BRTR	**Keskin Array B**	**29.90**	**287**	*c*P		**P**	**06 29 22.1**	**+2.2**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
OBN	**Obninsk**	**29.98**	**318**	*i*P		**P**	**06 29 23.3**	**+3.2**
OBN				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**30.14**	**120**	P		**P**	**06 29 24.1**	**+2.1**
	comp=Z,1.4nm,0.3s,baz=310,slow=8.5,SNR=6.0							
	comp=Z,1.4nm,0.3s							
CMAR	**Chiang Mai Arr**	**30.14**	**120**	*c*P		**P**	**06 29 24.7**	**+2.7**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.3s							
HHC	**Hu-ho-hao-te**	**30.97**	**70**	*e*P		**P**	**06 29 30.9**	**+1.7**
HHC				pmax		pmax		
	comp=Z,13nm,0.5s							
HHC				pmax		pmax		
	comp=Z,110nm,4.5s							
KLMR	**Klimovskoe**	**31.36**	**330**	*e*P		**P**	**06 29 31.1**	**-1.1**
KLMR				*e*			06 30 38.6	
KLMR				pmax		pmax		
	comp=Z,11nm,1.4s							
AKASG	**Malin Array Be**	**33.14**	**308**	P		**P**	**06 29 49.1**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=84,slow=6.9,SNR=11							
	comp=Z,1.4nm,0.5s							
AKASG	**Malin Array Be**	**33.14**	**308**	*c*P		P	06 29 51.7	+3.8
AKASG				pmax		pmax		
	comp=Z,4.0nm,0.6s							
AKBB	**Malin Array Si**	**33.14**	**308**	*c*P		**P**	**06 29 50.5**	**+2.6**
AKBB				pmax		pmax		
	comp=Z,2.0nm,0.9s							
MNK	**Minsk**	**34.60**	**315**	*i*P		**P**	**06 29 60.0**	**-0.5**
	comp=E,37nm,0.9s,baz=101							
MNK				*i*P		**P**	**06 29 60.0**	**-0.5**
	comp=N,26nm,0.9s							
MNK				*i*P		**P**	**06 29 60.0**	**-0.5**
	comp=Z,12nm,0.7s							
MNK				*i* pP		**pP**	**06 30 30.3**	**-3.5**
MNK				*i* sP		**sP**	**06 30 46.6**	**-4.6**
MNK				*i* PP		**PP**	**06 31 21.0**	**-0.8**
MNK				*i* S		**S**	**06 35 19.1**	**+0.7**
MNK				*i* sS		**sS**	**06 36 13.8**	**-3.2**
MNK				*i* SS		SnSn	06 37 27.8	-20
MNK	**Minsk**	**34.60**	**315**	*i*P		**P**	**06 29 59.9**	**-0.5**
MNK				*i* *PP		**pP**	**06 30 30.2**	**-3.5**
MNK				*i* *SP		**sP**	**06 30 46.6**	**-4.6**
MNK				*i*			06 31 29.9	
MNK				*i* S		**S**	**06 35 19.0**	**+0.7**
MNK				*i* *SS		**sS**	**06 36 13.7**	**-3.2**
MNK				pmax		pmax		
	comp=Z,12nm,0.7s							
MNK				pmax		pmax		
	comp=N,26nm,0.9s							
MNK				pmax		pmax		
	comp=E,37nm,0.9s							
TIA	**Tai'an**	**36.12**	**77**	P		**P**	**06 30 14.1**	**+0.4**
TIA				pmax		pmax		
	comp=E,9.0nm,0.6s							
FIA1	**FINESS Array S**	**37.42**	**326**	P		**P**	**06 30 26.0**	**+1.6**
FINES	**FINESS Array B**	**37.42**	**326**	P		**P**	**06 30 26.0**	**+1.6**
	comp=E,2.2nm,0.4s,baz=118,slow=10,SNR=48							
	comp=E,2.2nm,0.4s							
FINES	**FINESS Array B**	**37.42**	**326**	P		**P**	**06 30 25.8**	**+1.4**
FINES	**FINESS Array B**	**37.42**	**326**	*c*P		**P**	**06 30 25.8**	**+1.4**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.4s							
STHS	**Stebnicka Huta**	**38.19**	**305**	*e*P		P	06 30 34.9	+3.9
STHS	**Stebnicka Huta**	**38.19**	**305**	*e*P		P	06 30 34.9	+3.9
NJ2	**Nanjing**	**38.76**	**83**	*e*P		**P**	**06 30 35.3**	**-0.6**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.6s							
VADS	**Vadso**	**40.06**	**339**	*e*P		**P**	**06 30 47.8**	**+1.5**
MODS	**Modra-Piesok**	**40.85**	**304**	*e*P		P	06 30 58.0	+4.9
MODS	**Modra-Piesok**	**40.85**	**304**	*e*P		P	06 30 58.0	+4.9
ARA0	**ARCESS Array S**	**40.92**	**337**	*e*P		**P**	**06 30 55.1**	**+1.8**
ARCES	**ARCESS Array B**	**40.92**	**337**	P		**P**	**06 30 55.3**	**+2.0**
	comp=Z,2.9nm,0.5s,baz=114,slow=8.6,SNR=25							
ARCES				PcP		**PcP**	**06 32 51.4**	**+0.7**
	comp=Z,2.2nm,0.9s,baz=132,slow=3.8,SNR=1.6							
	comp=Z,2.9nm,0.5s							
ARCES	**ARCESS Array B**	**40.92**	**337**	P		**P**	**06 30 53.5**	**+0.2**
KTK1	**Kautokeino**	**41.41**	**336**	*e*P		**P**	**06 30 58.7**	**+1.4**
HEH	**HeiHe**	**41.41**	**53**	*e*P		**P**	**06

G18K	**Tagagawik**	**70.28**	**20**	P	**P**	**06 34 23.7**	**+1.0**
G18K				IAmb	IAmb	06 34 32.9	
	comp=Z,14nm,1.5s						
D25K	**Kavik River**	**70.31**	**13**	P	**P**	**06 34 23.4**	**+0.5**
E24K	**Your Creek**	**70.95**	**15**	P	**P**	**06 34 27.7**	**+0.9**
INK	**Inuvik**	**73.29**	**10**	P	**P**	**06 34 42.5**	**+1.9**
INK				IAmb	IAmb	06 34 44.1	
	comp=Z,7.3nm,1.4s						
INK	**Inuvik**	**73.29**	**10**	P	**P**	**06 34 42.5**	**+1.9**
INK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
C36M	**Paulatuk**	**73.30**	**6**	P	**P**	**06 34 42.0**	**+1.4**
ILAR	**Eielson Array**	**74.10**	**16**	P	**P**	**06 34 45.9**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=324,slow=4.9,SNR=11						
	comp=Z,1.4nm,0.8s						
KTH	**Kantishna Hill**	**74.17**	**18**	P	**P**	**06 34 46.8**	**+0.8**
KTH				IAmb	IAmb	06 35 06.8	
	comp=Z,14nm,1.4s						
MCK	**McKinley**	**74.51**	**18**	P	**P**	**06 34 48.9**	**+1.1**
MCK	**McKinley**	**74.51**	**18**	P	**P**	**06 34 48.9**	**+1.1**
MCK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
I28M	**Miner Creek**	**74.92**	**13**	P	**P**	**06 34 51.8**	**+1.6**
I28M				IAmb	IAmb	06 34 54.7	
	comp=Z,10nm,1.4s						
BCAR	**Beaver Creek A**	**76.70**	**15**	P	**P**	**06 35 02.3**	**+2.0**
YKA	**Yellowknife Ar**	**80.70**	**3**	P	**P**	**06 35 23.4**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=29,slow=9.7,SNR=8.0						
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**81.71**	**122**	P	**P**	**06 35 28.4**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=324,slow=4.8,SNR=19						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**81.71**	**122**	*i* P	**P**	**06 35 28.3**	**+0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WB2	**Warramunga Arr**	**81.72**	**122**	P	**P**	**06 35 28.6**	**+0.6**
WB2				IAmb	IAmb	06 35 29.6	
	comp=Z,3.0nm,0.6s						
WR8	**Warramunga Arr**	**81.83**	**122**	P	**P**	**06 35 29.1**	**+0.4**
SCHQ	**Schefferville**	**81.88**	**337**	P	**P**	**06 35 29.6**	**+1.2**
	comp=Z,6.1nm,0.9s,baz=32,slow=9.5,SNR=2.2						
	comp=Z,6.1nm,0.9s						
AS31	**Alice Springs**	**84.02**	**125**	P	**P**	**06 35 40.2**	**+0.3**
ASAR	**Alice Springs**	**84.02**	**125**	P	**P**	**06 35 40.3**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=311,slow=4.9,SNR=37						
	comp=Z,2.1nm,0.7s						
ASAR	**Alice Springs**	**84.02**	**125**	P	**P**	**06 35 40.5**	**+0.6**
ASAR	**Alice Springs**	**84.02**	**125**	P	**P**	**06 35 40.5**	**+0.6**
FORT	**Forrest**	**85.55**	**134**	P	**P**	**06 35 48.2**	**+0.9**
FORT				IAmb	IAmb	06 36 02.2	
	comp=Z,5.0nm,0.9s						

*IDC **16** 06:54:06.1±1.6,1°.43N×126°.22E,h0km,mb3.6/4, mbtmp3.6/5,ML3.5/1,MS3.2/3,Error ellipse: s-maj=122.3km s-min=19.7km az=68.0*
*DJA **16** 06:54:09.8±0.4,1°.7N×126°.3E±°,h10km,M3.7/6,MLv3.7/6*
ISC 16 06:54:11.1±1.3,1°.4N±0°.2×126°.3E±0°.2,h35km,n8,σ0§46/6, mb3.8/4,MS3.2/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.27**	**119**	P		**Pn**	**06 54 32.4**	**0.0**
FITZ	**Fitzroy Crossi**	**19.38**	**182**	P		**P**	**06 58 33.9**	**-0.2**
	0.1nm,0.3s,baz=27,slow=14,SNR=1.5							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**22.64**	**160**	P		**P**	**06 59 09.1**	**-0.2**
	2.4nm,0.6s,baz=339,slow=11,SNR=14							
	2.4nm,0.6s							
ASAR	**Alice Springs**	**26.00**	**164**	P		**P**	**06 59 41.7**	**+0.7**
	0.3nm,0.4s,baz=344,slow=9.1,SNR=7.2							
	0.3nm,0.4s							
JCJ	**Chichijima**	**29.77**	**30**	LR		LR	07 12 49.4	
	comp=Z,112nm,19.2s,baz=102,slow=38							
MKAR	**Makanchi Array**	**59.20**	**326**	P		**P**	**07 04 08.8**	**0.0**
	0.3nm,0.4s,baz=133,slow=8.5,SNR=6.9							
MKAR				LR		LR	07 30 14.7	
	comp=Z,16nm,19.9s,baz=42,slow=37							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**63.45**	**328**	P		**P**	**07 04 37.3**	**0.0**
	0.4nm,0.5s,baz=131,slow=6.2,SNR=7.7							
	0.4nm,0.5s							
BRTR	**Keskin Array B**	**91.13**	**310**	LR		LR	07 54 28.8	
	comp=Z,6.8nm,18.2s,baz=284,slow=40							

*IDC **16** 06:57:23.6±2.9,47°.39N×151°.58E,h0km,mb3.6/6, mbtmp3.6/6,MS3.0/2,Error ellipse: s-maj=88.5km s-min=26.6km az=175.0*
ISC 16 06:57:43.3±3.2,48°.0N±0°.7×151°.4E±0°.2,h150km,n8, σ0§40/6,mb3.3/6,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHJ	**Hachijo jima 2**	**17.25**	**215**	LR		LR	07 07 00.7	
	comp=Z,33nm,21.8s,baz=100,slow=34							
ILAR	**Eielson Array**	**36.31**	**40**	P		**P**	**07 04 32.0**	**0.0**
	0.5nm,0.8s,baz=282,slow=6.9,SNR=5.7							
	0.5nm,0.8s							
INK	**Inuvik**	**41.23**	**33**	P		**P**	**07 05 13.0**	**+0.2**
	0.8nm,0.3s,baz=303,slow=6.9,SNR=12							
	0.8nm,0.3s							
MKAR	**Makanchi Array**	**45.37**	**296**	P		**P**	**07 05 46.8**	**+0.4**
	0.3nm,0.6s,baz=72,slow=10,SNR=2.5							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**45.83**	**302**	P		**P**	**07 05 49.4**	**-0.5**
	0.4nm,0.6s,baz=68,slow=8.4,SNR=4.5							
	0.4nm,0.6s							
PDAR	**Pinedale Array**	**64.94**	**53**	P		**P**	**07 08 07.0**	**+0.1**
	0.3nm,0.5s,baz=285,slow=4.0,SNR=6.2							
	0.3nm,0.5s							
TXAR	**Lajitas Array**	**77.87**	**60**	P		**P**	**07 09 24.2**	**-0.2**
	0.5nm,0.7s,baz=296,slow=4.7,SNR=8.6							
	0.5nm,0.7s							
EIL	**Elat**	**84.03**	**308**	LR		LR	07 53 39.5	
	comp=Z,10nm,18.8s,baz=347,slow=40							

*SJA **16** 06:58:31.1±0.8,30°.21S×71°.51W,h38km±2km,ML3.6, MW3.6*
*GUC **16** 06:58:32.9±0.8,30°.26S×71°.21W,h63km±3km,ML3.9*
ISC 16 06:58:33.8±0.9,30°.20S±0°.02×71°.44W±0°.04,h62km±7km, n67,σ1§14/91,5C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO05	**La Serena**	**0.33**	**31**	⇓*i*P		Pn	06 58 44.5	+0.1
CO05				*e*S		**Sn**	**06 58 52.8**	**+0.8**
CO05				IAML			06 58 53.3	
	comp=N,7μm,0.3s							
CO06	**Fray Jorge**	**0.50**	**200**	*i* P		Pn	06 58 46.6	+0.6
CO06				*e*S		**Sn**	**06 58 56.2**	**+1.4**
CO06				IAML			06 58 57.2	
	comp=E,5μm,0.3s							
GO04	**Tololo Observa**	**0.55**	**87**	*e*P		**Pn**	**06 58 45.3**	**-1.4**
GO04				*e*S		**Sn**	**06 58 54.3**	**-1.9**
GO04	**Tololo Observa**	**0.55**	**87**	*e*P		Pn	06 58 47.1	+0.3
GO04				*e*S		**Sn**	**06 58 54.7**	**-1.4**
CO03	**El Pedregal**	**0.91**	**135**	⇑*i*P		**Pn**	**06 58 49.2**	**-1.7**
CO03				*e*S		**Sn**	**06 59 00.9**	**-2.5**
CO03	**El Pedregal**	**0.91**	**135**	*e*P		**Pn**	**06 58 49.1**	**-1.7**
CO03				*e*S		**Sn**	**06 59 02.5**	**-0.9**
CO03				IAML			06 59 02.9	
	comp=Z,904nm,0.8s							
CO02	**Combarbal**	**1.07**	**160**	⇑*i*P		**Pn**	**06 58 51.9**	**-1.1**
CO02				IAML			06 59 07.4	
	comp=N,4μm,0.1s							
CO02	**Combarbal**	**1.07**	**160**	*e*P		**Pn**	**06 58 51.8**	**-1.1**
CO02				*e*S		**Sn**	**06 59 06.1**	**-1.0**
CO02				IAML			06 59 08.2	
	comp=Z,1μm,0.1s							
CO01	**Juntas del Tor**	**1.18**	**80**	⇑*i*P		**Pn**	**06 58 53.4**	**-1.1**
CO01				*e*S		**Sn**	**06 59 08.1**	**-1.9**
CO01				IAML			06 59 08.3	
	comp=N,3μm,0.3s							
LCO	**Las Campanas**	**1.35**	**29**	*e*P		**Pn**	**06 58 55.9**	**-0.9**
LCO				IAML			06 59 17.7	
	comp=N,6μm,0.3s							
LCO	**Las Campanas**	**1.35**	**29**	*e*P		**Pn**	**06 58 55.9**	**-0.9**
LCO				*e*S		**Sn**	**06 59 14.5**	**+0.6**
LCO				IAML			06 59 16.0	
	comp=Z,1μm,0.2s							
AC05	**El Transito**	**1.69**	**37**	⇑*i*P		**Pn**	**06 59 01.4**	**+0.1**
AC05				*e*S		**Sn**	**06 59 22.5**	**+0.4**
AC05	**El Transito**	**1.69**	**37**	*e*P		**Pn**	**06 59 00.8**	**-0.5**
AC05				*e*S		**Sn**	**06 59 23.4**	**+1.4**
AROD	**Rodeo**	**1.70**	**89**	*e*P		**Pn**	**06 59 01.6**	**+0.1**
AROD				*e*S		**Sn**	**06 59 22.3**	**-0.2**
CO04	**Los Peladeros**	**1.88**	**168**	*e*P		**Pn**	**06 59 03.5**	**-0.4**
CO04				IAML			06 59 27.2	
	comp=N,2μm,0.2s							
ACDV	**Cuesta del Vie**	**2.00**	**90**	*e*P		**Pn**	**06 59 06.0**	**+0.4**
ACDV				*e*P			06 59 06.1	
ACDV				*e*S		**Sn**	**06 59 26.9**	**-2.7**
ACDV				*e*S			06 59 32.6	
ACDV				IAML			06 59 33.6	
	comp=Z,208nm,0.2s							
AC04	**Llanos de Chal**	**2.01**	**9**	⇑*i*P		**Pn**	**06 59 05.6**	**+0.1**
AC04	**Llanos de Chal**	**2.01**	**9**	*e*P		**Pn**	**06 59 05.0**	**-0.5**
AC04				*e*S		**Sn**	**06 59 28.9**	**-0.7**
AC04				IAML			06 59 37.9	
	comp=Z,276nm,0.6s							
ACCO	**Cerro Coronel**	**2.08**	**101**	*e*P		**Pn**	**06 59 07.5**	**+0.7**
ACCO				*e*S		**Sn**	**06 59 34.5**	**+2.6**
VA06	**Catapilco**	**2.36**	**177**	*i* P		**Pn**	**06 59 09.4**	**-0.7**
VA06				IAML			06 59 46.7	
	comp=N,757nm,0.3s							
RTLS	**Leoncito**	**2.43**	**131**	*e*P		**Pn**	**06 59 12.1**	**+0.6**
RTLS				*e*S		**Sn**	**06 59 42.4**	**+2.1**
RTLS				IAML			06 59 43.5	
	comp=Z,631nm,0.2s							
AGUA	**GUANDACOL**	**2.66**	**75**	*e*P		Pn	06 59 16.0	+1.6
AGUA				*e*S		**Sn**	**06 59 43.9**	**-1.5**
AGUA				IAML			06 59 54.0	
	comp=Z,206nm,0.4s							
VA03	**San Esteban**	**2.67**	**164**	*e*P		**Pn**	**06 59 13.3**	**-1.2**
VA03				IAML			06 59 50.4	
	comp=E,648nm,0.2s							
VA03	**San Esteban**	**2.67**	**164**	*e*P		**Pn**	**06 59 13.6**	**-0.8**
VA03				*e*P			06 59 14.3	
VA03				*e*S		**Sn**	**06 59 46.7**	**+1.1**
VA03				IAML			06 59 52.3	
	comp=Z,306nm,0.3s							
ZON	**Zonda**	**2.72**	**120**	*e*P		**Pn**	**06 59 15.3**	**+0.1**
ZON				*e*S		**Sn**	**06 59 47.7**	**+0.7**
ZON				IAML			06 59 50.9	
	comp=Z,84nm,0.4s							
RTLL	**Cerro Villicun**	**2.79**	**115**	*e*P		**Pn**	**06 59 16.2**	**+0.1**
RTLL				*e*P			06 59 16.4	
RTLL				*e*S		**Sn**	**06 59 48.2**	**-0.3**
RTLL				IAML			06 59 51.4	
	comp=Z,171nm,0.3s							
ROCH	**El Roble**	**2.79**	**173**	*e*P		**Pn**	**06 59 15.4**	**-0.8**
ROCH				IAML			06 59 58.0	
	comp=N,434nm,0.5s							
GO03	**Copiapo**	**2.80**	**22**	*e*P		**Pn**	**06 59 15.9**	**-0.4**
GO03				IAML			07 00 07.2	
	comp=N,201nm,0.4s							
GO03	**Copiapo**	**2.80**	**22**	*e*P		**Pn**	**06 59 16.2**	**-0.1**
GO03				*e*S		Sn	06 59 35.2	-14
GO03				IAML			07 00 08.3	
	comp=Z,116nm,0.8s							
AC06	**Mina Casimiro**	**2.99**	**19**	*e*P		**Pn**	**06 59 18.3**	**-0.5**
AC06				IAML			07 00 14.5	
	comp=E,132nm,0.5s							
PEL	**Peldehue**	**3.00**	**168**	*e*P		**Pn**	**06 59 18.6**	**-0.5**
PEL				IAML			07 00 08.3	
	comp=N,208nm,0.3s							
MT02	**Curacav**	**3.06**	**175**	*e*P		**Pn**	**06 59 18.6**	**-1.1**
MT02	**Curacav**	**3.06**	**175**	*e*P		**Pn**	**06 59 18.6**	**-1.1**
MT02				*e*S		**Sn**	**06 59 55.7**	**+0.5**
MT02				IAML			07 00 11.1	
	comp=Z,124nm,0.5s							
CFA	**Coronel Fontan**	**3.08**	**118**	*e*P		**Pn**	**06 59 19.1**	**-1.0**
CFA				*e*S		**Sn**	**06 59 56.2**	**+0.3**
MT10	**Hacienda Santa**	**3.16**	**166**	*e*P		**Pn**	**06 59 20.8**	**-0.5**
MT10				IAML			06 59 59.2	
	comp=N,533nm,0.3s							
VCA	**Vinchina**	**3.17**	**63**	*e*P		Pn	06 59 22.8	+1.3
VCA				*e*S		**Sn**	**07 00 01.2**	**+3.1**
VCA				IAML			07 00 06.0	
	comp=Z,275nm,0.3s							
MT05	**Renca**	**3.24**	**170**	*e*P		**Pn**	**06 59 22.1**	**-0.1**
MT05				*e*S		**Sn**	**07 00 00.2**	**+0.6**
MT05				IAML			07 00 02.3	
	comp=Z,138nm,0.8s							
ASAL	**Salagasta**	**3.26**	**138**	*e*P		**Pn**	**06 59 23.4**	**+0.9**
MT14	**Cerro Cal¡n**	**3.28**	**167**	*e*P		**Pn**	**06 59 22.7**	**-0.1**
MT14				IAML			07 00 09.7	
	comp=N,370nm,0.7s							
MT16	**CCHEN**	**3.31**	**167**	⇓*e*P		**Pn**	**06 59 23.1**	**-0.2**
MT16				IAML			07 00 19.7	
	comp=N,129nm,0.7s							
MT03	**Universidad Ad**	**3.38**	**167**	*e*P		**Pn**	**06 59 24.0**	**-0.2**
MT03				IAML			07 00 06.7	
	comp=E,490nm,0.2s							
MT03	**Universidad Ad**	**3.38**	**167**	*e*P		**Pn**	**06 59 24.1**	**-0.1**
MT03				*e*S		**Sn**	**07 00 04.1**	**+1.0**
MT03				IAML			07 00 22.3	
	comp=Z,195nm,0.7s							
MT04	**Ro Olivares**	**3.38**	**161**	*e*P		**Pn**	**06 59 24.9**	**+0.5**
MT04				IAML			07 00 05.9	
	comp=E,178nm,0.3s							
MT04	**Ro Olivares**	**3.38**	**161**	*e*P		**Pn**	**06 59 24.8**	**+0.4**
MT04				*e*S		**Sn**	**07 00 05.3**	**+2.0**
MT04				IAML			07 00 13.0	
	comp=Z,92nm,0.2s							
ARCO	**CERRO ARCO**	**3.39**	**142**	*e*P		Pn	06 59 26.4	+2.0
ARCO				*e*S		Sn	07 00 10.9	+7.4
ARCO				IAML			07 00 11.3	
	comp=Z,70nm,1.0s							
VA05	**Santo Domingo**	**3.45**	**182**	*e*P		**Pn**	**06 59 23.5**	**-1.6**
VA05				IAML			07 00 20.8	
	comp=E,362nm,0.4s							
MT08	**Bocatoma Ro**	**3.45**	**160**	*e*P		Pn	06 59 26.9	+1.6
MT08				IAML			07 00 18.1	
	comp=N,126nm,0.5s							
MT08	**Bocatoma Ro**	**3.45**	**160**	*e*P		Pn	06 59 26.9	+1.6
MT08				*e*S		**Sn**	**07 00 06.4**	**+1.3**
MT08				IAML			07 00 11.7	
	comp=Z,81nm,0.9s							
MT15	**Las Vizcachas**	**3.48**	**167**	*e*P		**Pn**	**06 59 25.3**	**-0.3**
MT09	**Talagante**	**3.58**	**174**	*e*P		**Pn**	**06 59 26.3**	**-0.8**
MT09				IAML			07 00 09.4	
	comp=N,330nm,0.1s							
MT12	**Pirque**	**3.60**	**168**	*e*P		**Pn**	**06 59 26.6**	**-0.7**
MT12				IAML			07 00 11.9	
	comp=N,269nm,0.3s							
AAGR	**Agrelo**	**3.63**	**143**	*e*P		Pn	06 59 29.4	+1.7
AAGR				*e*S		Sn	06 59 54.4	-15
AAGR				IAML			07 00 17.0	
	comp=Z,86nm,0.5s							
MT01	**Popeta**	**3.66**	**178**	*e*P		**Pn**	**06 59 26.7**	**-1.2**
MT01	**Popeta**	**3.66**	**178**	*e*P		**Pn**	**06 59 26.9**	**-1.0**
MT01				*e*S		**Sn**	**07 00 09.3**	**-0.5**
MT01				IAML			07 00 17.2	
	comp=Z,122nm,0.9s							
LMEL	**Las Melosas**	**3.78**	**164**	*e*P		**Pn**	**06 59 30.1**	**+0.3**
LMEL	**Las Melosas**	**3.78**	**164**	*e*P		**Pn**	**06 59 30.0**	**+0.1**
LMEL				*e*P			06 59 30.4	
LMEL				*e*S		**Sn**	**07 00 13.6**	**+0.5**
LMEL				IAML			07 00 16.1	
	comp=Z,176nm,0.1s							
AC02	**Maricunga**	**3.92**	**32**	*e*P		**Pn**	**06 59 31.7**	**-0.3**
AC02	**Maricunga**	**3.92**	**32**	*e*P		**Pn**	**06 59 31.9**	**-0.1**
AC02				*e*S		Sn	07 00 30.4	+13
AC02				IAML			07 00 42.7	
	comp=Z,49nm,0.4s							
TINO	**Tinogasta**	**4.00**	**59**	*e*P		**Pn**	**06 59 33.3**	**+0.6**
AC01	**Pan de Azucar**	**4.10**	**11**	*e*P		**Pn**	**06 59 32.2**	**-1.9**
AC01				*e*S		Sn	07 00 29.9	+9.1
AC01				IAML			07 00 35.4	
	comp=Z,30nm,0.8s							
AANI	**Anillaco**	**4.16**	**72**	*e*P		**Pn**	**06 59 35.4**	**+0.5**
AANI				*e*S		**Sn**	**07 00 21.1**	**-1.2**
AANI				IAML			07 00 22.2	
	comp=Z,178nm,0.6s							
ACAN	**Cantantal**	**4.18**	**121**	*e*P		**Pn**	**06 59 34.0**	**-1.2**
ACAN				IAML			07 00 47.0	
	comp=Z,175nm,0.5s							
BO01	**Tunca**	**4.19**	**176**	*e*P		**Pn**	**06 59 34.1**	**-1.1**
BO01				*e*S		**Sn**	**07 00 20.8**	**-2.0**
BO01				IAML			07 00 24.8	
	comp=Z,48nm,0.8s							
BO02	**Sierra Bellavi**	**4.61**	**173**	*e*P		**Pn**	**06 59 40.6**	**-0.4**
BO02				*e*S		**Sn**	**07 00 32.7**	**-0.7**
BO02				IAML			07 00 34.2	
	comp=Z,75nm,0.2s							
GO05	**Hualane**	**4.81**	**185**	*e*P		**Pn**	**06 59 42.8**	**-0.9**
GO05				*e*S		**Sn**	**07 00 36.2**	**-2.0**
GO05				IAML			07 01 04.6	
	comp=Z,32nm,1.0s							
RFA	**San Rafael**	**5.20**	**152**	*e*P		**Pn**	**06 59 48.6**	**-0.5**
GO02	**Mina Guanaco**	**5.28**	**18**	*e*P		**Pn**	**06 59 49.2**	**-1.3**

*SLM **16** 07:23:11.2±0.5,36°.500N±0°.007×89°.370W±0°.008, h4km±4km,Error ellipse: s-maj=1.2km s-min=0.5km az=221.0*
NEIC 16 07:23:11.7±0.4,36°.499N±0°.004×89°.37W±0°.01,h6km±3km, mb_Lg2.3/3,ML2.3/26,Md2.3/37(SLM),Error ellipse: s-maj=1.4km s-min=0.5km az=98.0,New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FLPT	**Flippin**	**0.10**	**158**			Pg	07 23 13.6	-0.3
FLPT						Sg	07 23 15.7	+0.4
HICK	**Hickman**	**0.12**	**69**			Pg	07 23 14.0	-0.2
HICK	**Hickman**	**0.12**	**69**	IAML			07 23 16.9	
	comp=E,2μm,0.2s							
HICK				IAML			07 23 17.4	
	comp=N,2μm,0.2s							
WALK	**Watson Lake**	**0.15**	**286**			Pg	07 23 14.6	-0.1
SJMO	**Saint John's B**	**0.16**	**326**			Pg	07 23 14.9	0.0
SJMO						Sg	07 23 17.8	+0.8
NMMO	**New Madrid**	**0.17**	**301**			Pg	07 23 15.1	-0.1
WYBT	**Wynnburg**	**0.18**	**215**			Pg	07 23 15.2	-0.2
WYBT						Sg	07 23 18.6	+0.7
NMEM	**New Madrid Sch**	**0.19**	**293**			Pg	07 23 15.4	-0.1
PPLM	**Point Pleasant**	**0.20**	**241**			Pg	07 23 15.6	-0.1
PPLM						Sg	07 23 19.0	+0.7
PENMO	**Penman**	**0.22**	**257**			Pg	07 23 15.8	-0.2
PENMO						Sg	07 23 19.4	+0.5
EPRM	**East Prairie**	**0.22**	**2**			Pg	07 23 15.9	-0.1
EPRM						Sg	07 23 19.7	+0.7
HENM	**Henderson Moun**	**0.23**	**339**			Pg	07 23 16.2	-0.1
GLAT	**Glass**	**0.24**	**164**			Pg	07 23 16.2	-0.2
GLAT						Sg	07 23 20.2	+0.7
GLAT	**Glass**	**0.24**	**164**	IAML			07 23 20.3	
	comp=E,968nm,0.3s							
GLAT				IAML			07 23 20.7	
	comp=N,361nm,0.3s							
MARMO	**Marston**	**0.25**	**277**			Pg	07 23 16.4	-0.2
CATM	**Catron**	**0.25**	**297**			Pg	07 23 16.5	-0.1
POBM	**Portage Bay**	**0.26**	**249**			Pg	07 23 16.4	-0.3
POBM						Sg	07 23 20.7	+0.6
KEWM	**Kewanee**	**0.27**	**318**			Pg	07 23 16.8	-0.2
PGVM	**Portageville**	**0.29**	**262**			Pg	07 23 17.2	-0.2
MIST	**Miston**	**0.35**	**199**			Pg	07 23 18.2	-0.2
PARMO	**Parma**	**0.35**	**298**			Pg	07 23 18.3	-0.3
PARMO	**Parma**	**0.35**	**298**	IAML			07 23 24.8	
	comp=E,214nm,0.5s							
PARMO				IAML			07 23 31.0	
	comp=N,154nm,0.4s							
COKM	**Charter Oak**	**0.36**	**306**			Pg	07 23 18.5	-0.2
WADM	**Wardell**	**0.37**	**249**			Pg	07 23 18.6	-0.3
FMKY	**Fulgham**	**0.40**	**66**			Pg	07 23 19.1	-0.4
LNXT	**Lenox**	**0.41**	**194**			Pg	07 23 19.5	-0.1
LNXT	**Lenox**	**0.41**	**194**			Sg	07 23 25.0	0.0
LNXT				IAML			07 23 26.2	
	comp=E,301nm,0.3s							
LNXT				IAML			07 23 33.2	
	comp=N,213nm,0.7s							
TOPM	**Tallapoosa**	**0.42**	**274**			Pg	07 23 19.5	-0.4
UTMT	**University of**	**0.43**	**111**			Pg	07 23 19.8	-0.3
UTMT				IAML			07 23 29.5	
	comp=N,204nm,0.6s							
UTMT				IAML			07 23 30.2	
	comp=E,243nm,0.6s							
BRGM	**Braggadocio**	**0.49**	**234**			Pg	07 23 21.0	-0.2
GUAMO	**Guam**	**0.54**	**316**			Pg	07 23 21.7	-0.5
BRNM	**Bernie**	**0.56**	**294**			Pg	07 23 21.9	-0.5
PEBM	**Pemiscott Bayo**	**0.56**	**226**			Pg	07 23 22.4	0.0
PEBM				IAML			07 23 25.9	
	comp=N,170nm,3.6s							
PEBM				IAML			07 23 38.7	
	comp=E,129nm,0.7s							
GNAR	**Gosnell**	**0.75**	**225**			Pg	07 23 25.8	-0.3
GNAR				IAML			07 23 50.2	
	comp=N,114nm,3.5s							
T45A	**Paducah**	**0.78**	**48**			Pg	07 23 25.6	-1.1
T45A				IAmb_Lg			07 23 36.0	
	comp=Z,23nm,0.8s							
T45A				IAML			07 23 39.2	
	comp=Z,130nm,0.4s							
T45A				IAML			07 23 42.2	
	comp=Z,143nm,0.4s							
CGM3	**Cape Girardeau**	**0.83**	**344**			Pg	07 23 26.6	-1.1
PBMO	**Poplar Bluff**	**0.90**	**288**			Pg	07 23 27.9	-1.1
LPAR	**Lepanto**	**1.17**	**220**			Pg	07 23 33.6	-0.6
S44A	**Carbondale**	**1.20**	**4**			Pg	07 23 34.0	-0.6
S44A	**Carbondale**	**1.20**	**4**	IAML			07 23 53.1	
	comp=Z,92nm,0.2s							
SIUC	**Southern Illin**	**1.22**	**6**			Pg	07 23 33.8	-1.3
WVT	**Waverly**	**1.29**	**106**			Pn	07 23 34.5	-1.8
WVT				IAML			07 23 54.0	
	comp=Z,38nm,0.3s							
HBAR	**Harrisburg**	**1.41**	**228**			Pn	07 23 37.3	-0.6
LCAR	**Lake Charles**	**1.51**	**254**			Pn	07 23 37.6	-1.7
FVM	**French Village**	**1.71**	**331**			Pn	07 23 41.7	-0.

BANI				IAML		07 36 35.5		
	comp=N,441nm,0.6s							
ABDR	**Alto Bandera**	**1.71**	**278**	⇑*e*Pg	Pn	07 36 14.5	-1.6	
ABDR				⇑*e*Sg	Sn	07 36 36.0	-2.8	
ABDR				IAML		07 37 06.9		
	comp=N,0.3nm,1.7s							
SC01	**Santiago de lo**	**1.98**	**296**	⇑*e*Pg	Pn	07 36 18.0	-1.0	
SC01				⇑*e*Sg	Sn	07 36 42.5	-1.7	
SC01				IAML		07 36 48.7		
	comp=N,115nm,0.2s							
PODR	**Polo**	**2.36**	**261**	⇑*e*Pg	Sn	07 36 22.9	-1.1	
PODR				⇑*e*Sg	Sn	07 36 48.8	-4.2	
PODR				IAML		07 36 54.1		
	comp=N,115nm,0.2s							
LUDR	**Luperon**	**2.39**	**304**	⇑*e*Sg	Sn	07 36 49.2	-4.3	
NEDR	**Neiba UASD**	**2.45**	**268**	⇑*e*Pg	Pn	07 36 24.2	-0.8	
NEDR				⇑*e*Sg	Sn	07 36 52.1	-2.8	
NEDR				IAML		07 36 56.6		
	comp=N,28nm,0.8s							
MASC	**Masc**	**5.34**	**288**	*i* P	Pn	07 36 57.7	-5.9	
MASC				*i* S	Sn	07 37 53.1	-11	
QMBU	**Quimbuelo**	**5.87**	**287**	*e*P	Pn	07 37 05.2	-5.6	
QMBU				*e*S	Sn	07 38 04.8	-12	
GTBY	**Guantanamo Bay**	**6.08**	**284**	*e*P	Pn	07 37 04.8	-8.9	
GTBY				*e*S	Sn	07 38 11.0	-11	
NMDO	**Nuevo Mundo**	**6.12**	**290**	*i* S	Sn	07 38 08.3	-15	
MOAC	**Moa**	**6.13**	**291**	*i* S	Sn	07 38 11.0	-12	
PINC	**Pinares de May**	**6.83**	**287**	*e*P	Pn	07 37 18.6	-5.2	
PINC				*e*S	Sn	07 38 26.9	-13	

*JSN **16** 08:02:40.6±0.6, 17°.58N×76°.52W, h13^{km}±34^{km}, MD3.5*
*SSNC **16** 08:02:42.0±1.6, 17°.57N×76°.49W, h20^{km}±18^{km}, ML1.8*
ISC 16 08:02:43.7±2.2, 17°.9N±0°.1×76°.59W±0°.06, h25^{km}±10^{km}, n13, σ1°23/22, 3C-1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJ	**Hope**	**0.20**	**310**	⇑*i*P	**Pb**	**08 02 49.9**	**+0.4**
GWJ	**Greenwich**	**0.24**	**326**	⇑*i*P	**Pb**	**08 02 50.4**	**+0.3**
STH	**Stony Hill**	**0.29**	**314**	⇑*i*P	**Pb**	**08 02 50.7**	**0.0**
MTDJ	**Mount Denham**	**0.97**	**291**	⇓*i*P	**Pb**	**08 03 01.0**	**-0.9**
MTDJ				*i* S	**Sn**	**08 03 16.6**	**+1.6**
MTDJ	**Mount Denham**	**0.97**	**291**	*i* P	**Pb**	**08 03 00.9**	**-1.0**
MTDJ				*e*S	**Sn**	**08 03 16.2**	**+1.3**
CHIV	**Chivirico**	**2.10**	**4**	*e*P	**Pn**	**08 03 17.2**	**-0.1**
CHIV				*e*S	**Sn**	**08 03 44.4**	**+1.7**
CHIV				IAML		08 03 45.4	
	comp=E,2.2nm,0.5s						
CHIV				IAML		08 03 46.3	
	comp=N,2.6nm,0.3s						
MARVS	**Santiago de Cu**	**2.21**	**17**	*i* P	**Pn**	**08 03 19.2**	**+0.3**
MARVS				*i* S	**Sn**	**08 03 47.5**	**+2.0**
LMGC	**Las Mercedes**	**2.22**	**350**	*e*P	Pn	08 03 12.2	-6.8
LMGC				*e*S	**Sn**	**08 03 44.9**	**-0.7**
LMGC				*e*Sg	**Sb**	**08 03 48.0**	**-2.1**
GTBY	**Guantanamo Bay**	**2.48**	**34**	*i* P	**Pn**	**08 03 21.8**	**-0.7**
GTBY				*i* S	**Sn**	**08 03 52.0**	**0.0**
PINC	**Pinares de May**	**2.71**	**16**	*i* P	**Pn**	**08 03 24.4**	**-1.3**
PINC				*i* S	**Sn**	**08 03 59.2**	**+1.6**
PINC				IAML		08 04 28.9	
	comp=Z,9.3nm,1.0s						
QMBU	**Quimbuelo**	**2.86**	**36**	*i* P	**Pn**	**08 03 27.8**	**0.0**
QMBU				*i* S	**Sn**	**08 04 01.9**	**+0.4**
HLGC	**Holguin**	**3.04**	**9**	*i* P	**Pn**	**08 03 32.3**	**+1.9**
CBCY	**The Bluff, Cay**	**3.53**	**302**	*i* P	**Pn**	**08 03 37.1**	**0.0**
CBCY				*i* S	**Sn**	**08 04 18.9**	**+0.8**

*LDG **16** 08:04:36.8±0.1, 47°.11N×0°.36W, h2^{km}, Ml3.5/41, Error ellipse: s-maj=1.3km s-min=1.1km az=23.0*
*STR **16** 08:04:37.1±0.0, 47°.11N±0°.05×0°.40W±0°.04, h2^{km}, MLv3.5/25, LOCSAT earthModelID haslach_taup-2.11 preliminary*
ISC 16 08:04:35.7±0.5, 47°.10N±0°.01×0°.31W±0°.01, h11^{km}, n119, σ2°39/207, 15D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIZF	**Gizeux - Indre**	**0.46**	**48**	Pg	**Pg**	**08 04 46.5**	**+1.8**
GIZF				Sg	**Sg**	**08 04 53.1**	**+2.3**
MFF	**Saint Martin d**	**0.51**	**167**	*e*Pg	**Pg**	**08 04 46.3**	**+0.6**
MFF	**Saint Martin d**	**0.51**	**167**	*e*Pg	**Pg**	**08 04 46.4**	**+0.7**
	baz=343						
MFF				*e*Sg	**Sg**	**08 04 53.1**	**+0.6**
	150nm,0.2s						
MFF				*e*Sg	**Sb**	**08 04 53.4**	**-0.8**
	114nm,0.2s						
MFF	**Saint Martin d**	**0.51**	**167**	Pg	**Pg**	**08 04 46.7**	**+0.9**
MFF				Sg	**Sg**	**08 04 54.8**	**+2.2**
TSDF	**Thoir-sur-Di**	**0.83**	**38**	Pg	**Pg**	**08 04 53.7**	**+2.0**
TSDF				Sg	**Sg**	**08 05 05.3**	**+2.7**
CHIF	**Chize**	**0.97**	**184**	Pg	**Pg**	**08 04 55.3**	**+0.9**
CHIF				Sg	**Sg**	**08 05 09.1**	**+1.9**
SDOF	**Saint-Denis-d'**	**1.30**	**216**	Pg	**Pn**	**08 01 03.1**	**+1.5**
SDOF				Sg	**Sb**	**08 05 18.2**	**+1.3**
GRR	**Gorron**	**1.34**	**344**	*e*Pg	**Pn**	**08 05 00.8**	**+0.5**
GRR				*e*Sg	**Sb**	**08 05 17.9**	**-0.1**
	595nm,0.2s						
UNIO	**Chateau-d'Oler**	**1.35**	**207**	Pg	**Pn**	**08 05 02.5**	**+2.0**
UNIO				Sg	**Sn**	**08 05 20.2**	**+1.7**
BEGF	**Beganne - 5601**	**1.42**	**292**	Pg	**Pn**	**08 05 01.9**	**+0.4**
BEGF				Sg	**Sn**	**08 05 20.3**	**+0.1**
LDF	**La Druitiere**	**1.50**	**5**	*e*Pg	**Pn**	**08 05 03.2**	**+0.7**
LDF				*e*Sg	**Sn**	**08 05 23.3**	**+1.3**
	211nm,0.1s						
FLN	**La Foliniere**	**1.66**	**356**	*e*Pn	**Pn**	**08 05 05.3**	**+0.5**
FLN	**La Foliniere**	**1.66**	**356**	*e*Pg	**Pb**	**08 05 07.7**	**+1.3**
FLN				*e*Sg	**Sb**	**08 05 28.9**	**+1.6**
	330nm,0.2s						
LOUF	**Saint-Loup**	**1.71**	**338**	Pn	**Pn**	**08 05 05.8**	**+0.5**
LOUF				Pg	**Pb**	**08 05 07.7**	**+0.6**
LOUF				Sn	**Sb**	**08 05 29.8**	**+1.3**
GUEF	**Guhenno - 56**	**1.76**	**297**	Pn	**Pn**	**08 05 06.6**	**+0.5**
GUEF				Pg	**Pb**	**08 05 08.3**	**+0.3**
GUEF				Sn	**Sn**	**08 05 29.6**	**+1.0**
CLEV	**Clevilliers**	**1.84**	**38**	Pn	**Pn**	**08 05 08.4**	**+1.2**
CLEV				Pg	**Pb**	**08 05 11.6**	**+2.1**
CLEV				Sn	**Sb**	**08 05 35.2**	**+2.7**
SGMF	**Saint Gilles**	**1.91**	**308**	*e*Pn	**Pn**	**08 05 08.0**	**-0.2**
SGMF	**Saint Gilles**	**1.91**	**308**	*e*Pg	**Pn**	**08 05 10.7**	**+2.5**
SGMF				*e*Sg	**Sb**	**08 05 34.7**	**+0.4**
	87nm,0.2s						
TCF	**Toulx Ste Croi**	**1.92**	**114**	*e*Pn	**Pn**	**08 05 09.4**	**+1.1**
TCF	**Toulx Ste Croi**	**1.92**	**114**	*e*Pg	**Pb**	**08 05 13.0**	**+2.3**
TCF				*e*Sg	**Sb**	**08 05 37.0**	**+2.4**
	246nm,0.3s						
PLEF	**Pleven - 22200**	**1.95**	**316**	Pn	**Pn**	**08 05 09.2**	**+0.4**
PLEF				Pg	**Pb**	**08 05 11.5**	**+0.3**
PLEF				Sn	**Sb**	**08 05 36.3**	**+0.8**
CLF	**Chambon-Foret**	**1.97**	**61**	Pn	**Pn**	**08 05 10.8**	**+1.8**
CLF				Pg	**Pb**	**08 05 14.9**	**+3.3**
HYF	**Humbligny**	**2.02**	**84**	*e*Pn	**Pn**	**08 05 10.6**	**+0.9**
HYF	**Humbligny**	**2.02**	**84**	*e*Pg	**Pb**	**08 05 14.6**	**+2.2**
HYF				*e*Sn	**Sn**	**08 05 34.8**	**-0.1**
HYF				*e*Sg	**Sb**	**08 05 41.5**	**+4.0**
	490nm,0.2s						
QUIF	**Quistinic**	**2.10**	**294**	*e*Pn	**Pn**	**08 05 10.6**	**-0.2**
QUIF	**Quistinic**	**2.10**	**294**	*e*Pg	**Pb**	**08 05 14.2**	**+0.4**
QUIF				*e*Sg	**Sb**	**08 05 39.5**	**-0.4**
	180nm,0.3s						
LRVF	**chteau la Riv**	**2.16**	**180**	Pn	**Pn**	**08 05 13.0**	**+1.4**
LRVF				Pg	**Pb**	**08 05 17.7**	**+3.0**
RJF	**Les Rejaudoux**	**2.20**	**144**	*e*Pn	**Pn**	**08 05 13.0**	**+0.8**
RJF	**Les Rejaudoux**	**2.20**	**144**	*e*Pg	**Pb**	**08 05 17.2**	**+1.7**
RJF				*e*Sg	**Sb**	**08 05 45.8**	**+3.0**
	148nm,0.3s						
PLOF	**Ploemeur**	**2.21**	**288**	Pn	**Pn**	**08 05 12.5**	**+0.1**
PLOF				Pg	**Pb**	**08 05 16.7**	**+1.0**
BGF	**Bois d'Agland**	**2.23**	**103**	*e*Pn	**Pn**	**08 05 13.4**	**+0.7**
BGF	**Bois d'Agland**	**2.23**	**103**	*e*Pg	**Pb**	**08 05 18.9**	**+2.8**
BGF				*e*Sg	**Sb**	**08 05 46.4**	**+2.7**
LFF	**La Frestale**	**2.28**	**161**	*e*Pn	**Pn**	**08 05 14.2**	**+0.9**
LFF	**La Frestale**	**2.28**	**161**	*e*Pg	**Pb**	**08 05 18.9**	**+2.0**
LFF				*e*Sg	**Sb**	**08 05 48.0**	**+2.8**
ROSF	**Rostrenen**	**2.35**	**303**	*e*Pg	**Pb**	**08 05 18.9**	**+0.8**
ROSF				*e*Sg	**Sb**	**08 05 46.9**	**-0.2**
	76nm,0.2s						
ROSF	**Rostrenen**	**2.35**	**303**	Pn	**Pn**	**08 05 14.8**	**+0.5**
ROSF				Pg	**Pb**	**08 05 19.0**	**+0.9**
VERF	**Verneugheol**	**2.36**	**124**	Pn	**Pn**	**08 05 15.8**	**+1.4**
AVF	**Avril sur Loir**	**2.53**	**96**	*e*Pn	**Pn**	**08 05 18.0**	**+1.3**
AVF	**Avril sur Loir**	**2.53**	**96**	*e*Pg	**Pb**	**08 05 24.5**	**+3.4**
AVF				*e*Sg	**Sb**	**08 05 54.8**	**+2.7**
	47nm,0.2s						
AGO	**Saint Agoulin**	**2.59**	**113**	Pn	**Pn**	**08 05 19.3**	**+1.7**
AGO				Pg	**Pb**	**08 05 25.4**	**+3.2**
SSF	**Saint Saulge**	**2.61**	**90**	*e*Pn	**Pn**	**08 05 19.3**	**+1.5**
SSF	**Saint Saulge**	**2.61**	**90**	*e*Pg	**Pb**	**08 05 25.1**	**+2.7**
SSF				*e*Sn	**Sn**	**08 05 48.9**	**-0.5**
SSF				*e*Sg	**Sb**	**08 05 57.9**	**+3.5**
	109nm,0.5s						
FRNF	**Fournols**	**2.63**	**130**	Pn	**Pn**	**08 05 19.6**	**+1.5**
FRNF				Pg	**Pb**	**08 05 26.9**	**+4.0**
OLIV	**Plomelin**	**2.73**	**289**	Pn	**Pn**	**08 05 19.6**	**+0.2**
OLIV				Pg	**Pb**	**08 05 26.9**	**+2.4**
CAF	**Calviac**	**2.73**	**142**	*e*Pn	**Pn**	**08 05 20.6**	**+1.0**
CAF	**Calviac**	**2.73**	**142**	*e*Pg	**Pb**	**08 05 27.1**	**+2.5**
CAF				*e*Sn	**Sn**	**08 05 51.4**	**-1.2**
CAF				*e*Sg	**Sb**	**08 06 03.1**	**+4.9**
	76nm,0.3s						
LOCF	**Locquirec - 29**	**2.76**	**306**	Pn	**Pn**	**08 05 20.6**	**+0.7**
LOCF				Pg	**Pb**	**08 05 27.1**	**+2.1**
LOR	**Lormes**	**2.85**	**85**	*e*Pn	**Pn**	**08 05 22.7**	**+1.6**
LOR	**Lormes**	**2.85**	**85**	*e*Pg	**Pb**	**08 05 30.7**	**+4.2**
LOR				*e*Sn	**Sn**	**08 05 54.8**	**-0.6**
LOR				*e*Sg	**Sb**	**08 06 05.3**	**+3.9**
	106nm,0.5s						
LOR	**Lormes**	**2.85**	**85**	Pn	**Pn**	**08 05 22.5**	**+1.4**
LOR				Pg	**Pg**	**08 05 31.0**	**+0.8**
SMF	**Signal de Mont**	**2.88**	**98**	*e*Pn	**Pn**	**08 05 22.5**	**+0.9**
SMF	**Signal de Mont**	**2.88**	**98**	*e*Pg	**Pb**	**08 05 31.2**	**+4.1**
SMF				*e*Sg	**Sb**	**08 06 04.7**	**+2.3**
	70nm,0.3s						
MONQ	**Montcuq**	**2.93**	**158**	Pn	**Pn**	**08 05 23.2**	**+0.9**
MONQ				Pg	**Pg**	**08 05 33.1**	**+1.2**
PLDF	**La Plantade**	**2.94**	**111**	Pn	**Pn**	**08 05 23.9**	**+1.4**
SFTF	**Sexfontaines**	**3.78**	**71**	*e*Pn	**Pn**	**08 05 34.7**	**+0.8**
SFTF	**Sexfontaines**	**3.78**	**71**	*e*Pg	**Pg**	**08 05 48.5**	**+0.4**
SFTF				*e*Sn	**Sn**	**08 06 17.2**	**-1.1**
SFTF				*e*Sg	**Sb**	**08 06 34.2**	**+6.1**
	23nm,0.3s						
MEZF	**Maizieres J'vi**	**3.87**	**67**	*e*Pn	**Pn**	**08 05 36.0**	**+0.8**
MEZF	**Maizieres J'vi**	**3.87**	**67**	*e*Pg	Pb	08 05 48.9	+4.9
MEZF				*e*Sn	**Sn**	**08 06 19.2**	**-1.4**
MEZF				*e*Sg	**Sb**	**08 06 38.2**	**+7.3**
	20nm,0.4s						
SAVF	**Savonnieres en**	**3.96**	**66**	*e*Pn	**Pn**	**08 05 36.2**	**-0.1**
SAVF	**Savonnieres en**	**3.96**	**66**	*e*Pn	**Pn**	**08 05 37.3**	**+1.0**
SAVF	**Savonnieres en** baz=250	**3.96**	**66**	*e*Pg	Pb	08 05 50.5	+5.1
SAVF	**Savonnieres en**	**3.96**	**66**	*e*Pg	Pb	08 05 51.0	+5.6
SAVF				*e*Sn	**Sn**	**08 06 20.7**	**-2.0**
SAVF				*e*Sn	Sb	08 06 21.1	-12
SAVF				*e*Sg	**Sg**	**08 06 40.8**	**-1.9**
	22nm,0.4s						
SAVF				*e*Sg	Sg	08 06 41.2	-1.5
	2.0nm,0.1s						
LAJAS	**L'Hospitalet-d**	**4.00**	**140**	Pn	**Pn**	**08 05 38.4**	**+1.4**
SJPF	**Ste Jean**	**4.04**	**190**	*e*Pn	**Pn**	**08 05 37.2**	**-0.3**
SJPF	**Ste Jean**	**4.04**	**190**	*e*Pg	**Pb**	**08 05 50.8**	**+3.9**
SJPF				*e*Sn	**Sn**	**08 06 21.6**	**-3.3**
SJPF				*e*Sg	**Sb**	**08 06 42.0**	**+6.2**
	9.0nm,0.2s						
EPF	**Esparros**	**4.10**	**173**	*e*Pn	**Pn**	**08 05 38.6**	**+0.3**
EPF	**Esparros**	**4.10**	**173**	*e*Pg	Pb	08 05 52.9	+5.0
EPF				*e*Sn	**Sn**	**08 06 23.7**	**-2.6**
EPF				*e*Sg	**Sg**	**08 06 45.3**	**-2.0**
	24nm,0.3s						
MTLF	**Montolieu**	**4.16**	**154**	*e*Pn	**Pn**	**08 05 40.2**	**+1.0**
MTLF	**Montolieu**	**4.16**	**154**	*e*Pg	Pb	08 05 54.6	+5.6
MTLF				*e*Sn	**Sn**	**08 06 24.5**	**-3.3**
MTLF				*e*Sg	**Sg**	**08 06 47.6**	**-1.8**
	8.3nm,0.3s						
LASF	**Ste Croix**	**4.21**	**134**	*e*Pn	**Pn**	**08 05 41.4**	**+1.6**
LASF	**Ste Croix**	**4.21**	**134**	*e*Pg	Pb	08 05 55.3	+5.5
LASF				*e*Sg	**Sg**	**08 06 50.1**	**-0.7**
	16nm,0.3s						
ETSF	**Etsaut**	**4.21**	**183**	*e*Pn	**Pn**	**08 05 38.7**	**-1.2**
ETSF	**Etsaut**	**4.21**	**183**	*e*Pg	**Pb**	**08 05 54.0**	**+4.2**
ETSF				*e*Sn	**Sn**	**08 06 25.4**	**-3.6**
ETSF				*e*Sg	**Sb**	**08 06 47.2**	**+6.6**
	21nm,0.4s						
BAIF	**Baives**	**4.21**	**44**	*e*Pn	**Pn**	**08 05 40.5**	**+0.7**
BAIF	**Baives**	**4.21**	**44**	*e*Pg	Pb	08 05 55.3	+5.6
BAIF				*e*Sn	**Sn**	**08 06 26.8**	**-2.1**
BAIF				*e*Sg	**Sg**	**08 06 49.1**	**-1.7**
	4.9nm,0.2s						
PAGF	**Fort de Pagny**	**4.32**	**68**	*e*Pn	**Pn**	**08 05 41.6**	**+0.3**
PAGF	**Fort de Pagny**	**4.32**	**68**	*e*Pg	Pb	08 05 57.4	+5.9
PAGF				*e*Sn	**Sn**	**08 06 28.9**	**-2.6**
PAGF				*e*Sg	**Sb**	**08 06 51.5**	**+7.9**
	10.0nm,0.2s						
CANF	**Canfranc**	**4.34**	**182**	Pn	**Pn**	**08 05 44.9**	**+3.1**
CABF	**La Chapelle**	**4.42**	**94**	*e*Pn	**Pn**	**08 05 43.6**	**+0.9**
CABF	**La Chapelle**	**4.42**	**94**	*e*Pg	**Pg**	**08 06 00.4**	**+0.1**
CABF				*e*Sn	**Sn**	**08 06 32.1**	**-2.0**
CABF				*e*Sg	**Sg**	**08 06 55.4**	**-2.0**
	14nm,0.4s						
DOU	**Dourbes**	**4.42**	**46**	*d*P	**Pn**	**08 05 43.9**	**+1.2**
DOU				*d*S	**Sn**	**08 06 32.5**	**-1.6**
OGMY	**Moye**	**4.45**	**104**	Pn	**Pn**	**08 05 45.7**	**+2.5**
CCA1	**Carnmenellis**	**4.49**	**315**	Pn	**Pn**	**08 05 43.8**	**+0.1**
FNEB	**Nbias**	**4.54**	**157**	Pn	**Pn**	**08 05 44.6**	**+0.2**
FNEB				Pg	**Pg**	**08 06 01.8**	**-0.7**
GIVF	**Givet**	**4.54**	**47**	*e*Pn	**Pn**	**08 05 45.3**	**+1.0**
GIVF	**Givet**	**4.54**	**47**	*e*Pg	**Pg**	**08 06 01.5**	**-1.1**
GIVF				*e*Sn	**Sn**	**08 06 34.8**	**-2.2**
GIVF				*e*Sg	**Sb**	**08 06 58.0**	**+8.0**
	20nm,0.5s						
HAU	**Haudompre**	**4.60**	**76**	*e*Pn	**Pn**	**08 05 45.7**	**+0.6**
HAU	**Haudompre**	**4.60**	**76**	*e*Pg	Pb	08 06 02.0	+5.7
HAU				*e*Sn	**Sn**	**08 06 35.2**	**-3.3**
HAU				*e*Sg	**Sg**	**08 07 00.6**	**-2.6**
	19nm,0.3s						
BMRD	**Maredsous**	**4.64**	**45**	*d*P	**Pn**	**08 05 47.1**	**+1.4**
BMRD				*d*S	**Sn**	**08 06 38.4**	**-1.2**
CLAF	**Gruissan**	**4.64**	**148**	Pn	**Pn**	**08 05 47.2**	**+1.5**
BRANT	**Les Verrieres**	**4.64**	**90**	Pn	**Pn**	**08 05 47.3**	**+1.5**
RCHB	**Rochefort**	**4.78**	**48**	*d*P	**Pn**	**08 05 49.2**	**+1.7**
RCHB				*d*S	**Sn**	**08 06 40.7**	**-2.1**
ORIF	**Oris-en-Rattie**	**4.83**	**115**	*e*Pn	**Pn**	**08 05 49.9**	**+1.4**
ORIF	**Oris-en-Rattie**	**4.83**	**115**	*e*Pg	**Pg**	**08 06 07.1**	**-1.2**
ORIF				*e*Sn	**Sn**	**08 06 43.2**	**-1.2**
ORIF				*e*Sg	**Sg**	**08 07 09.2**	**-1.6**
	5.7nm,0.3s						
BGES	**Gesves**	**4.85**	**45**	*d*S	**Sn**	**08 06 43.6**	**-1.1**
HINF	**Hinteralfeld**	**4.91**	**79**	*e*Pn	**Pn**	**08 05 49.3**	**-0.2**
HINF	**Hinteralfeld**	**4.91**	**79**	*e*Pg	**Pg**	**08 06 08.7**	**-1.0**
HINF				*e*Sn	**Sn**	**08 06 43.2**	**-3.1**
HINF				*e*Sg	**Sg**	**08 07 10.5**	**-2.8**
	25nm,0.4s						
BCLA	**Clavier**	**4.98**	**46**	*d*P	**Pn**	**08 05 51.6**	**+1.3**
BCLA				*d*S	**Sn**	**08 06 45.8**	**-2.0**
RSL	**Roselend**	**5.00**	**104**	Pn	**Pn**	**08 05 52.8**	**+2.0**
VALC	**Valcebollere**	**5.01**	**160**	Pn	**Pn**	**08 05 53.2**	**+2.3**
LPL	**La Plagne**	**5.13**	**105**	*e*Pn	**Pn**	**08 05 54.9**	**+2.2**
LPL	**La Plagne**	**5.13**	**105**	*e*Pg	Pb	08 06 11.7	+6.1
LPL				*e*Sn	**Sn**	**08 06 48.7**	**-3.2**
LPL				*e*Sg	**Sg**	**08 07 17.9**	**-2.5**
	3.7nm,0.3s						
BOURR	**Bourrignon**	**5.14**	**84**	Pn	**Pn**	**08 05 54.2**	**+1.5**
BOURR				Pg	**Pg**	**08 06 14.1**	**-0.1**
LPG	**La Plagne**	**5.15**	**106**	*e*Pn	**Pn**	**08 05 55.3**	**+2.3**
LPG				*e*Sn	**Sn**	**08 06 51.9**	**-0.6**
LPG				*e*Sg	**Sg**	**08 07 20.3**	**-0.7**
	7.1nm,0.4s						
SMRF	**Simiane la Rot**	**5.18**	**125**	*e*Pn	**Pn**	**08 05 53.9**	**+0.7**
SMRF				*e*Sg	**Sg**	**08 07 20.7**	**-1.3**
	2.5nm,0.3s						
WALT	**Westhalten**	**5.21**	**78**	Pn	**Pn**	**08 05 52.1**	**-1.4**
CDF	**Champ du Feu**	**5.28**	**73**	*e*Pn	**Pn**	**08 05 54.3**	**-0.3**
CDF	**Champ du Feu**	**5.28**	**73**	*e*Pg	**Pg**	**08 06 15.3**	**-1.5**
CDF				*e*Sn	**Sn**	**08 06 52.6**	**-2.8**
CDF				*e*Sg	**Sg**	**08 07 22.6**	**-2.5**
	9.0nm,0.3s						
BHOU	**Houvegnez**	**5.29**	**50**	*d*P	**Pn**	**08 05 56.1**	**+1.4**
BHOU				*d*S	**Sn**	**08 06 52.4**	**-3.2**
MEM	**Membach**	**5.45**	**48**	*d*P	**Pn**	**08 05 57.9**	**+1.1**
MEM				*d*S	**Sn**	**08 06 58.2**	**-1.2**
MBDF	**Montbardon**	**5.48**	**113**	*e*Pn	**Pn**	**08 05 57.4**	**0.0**
MBDF				*e*Sn	**Sn**	**08 06 58.0**	**-2.5**
MBDF				*e*Sg	**Sg**	**08 07 30.2**	**-1.4**
	5.2nm,0.3s						
BTNL	**Ternell**	**5.50**	**48**	*d*P	**Pn**	**08 05 58.4**	**+0.9**
BTNL				*d*S	**Sn**	**08 06 58.2**	**-2.5**
LMR	**La Mourre**	**6.11**	**126**	*e*Sg	**Sg**	**08 07 49.7**	**-2.2**
	0.9nm,0.2s						
PBRG	**Braganca**	**7.02**	**223**	*e*Sn	**Sn**	**08 07 33.2**	**-5.0**
PBRG				IAML		08 07 37.1	
PBRG				IAML		08 07 38.3	
PBRG				IAML		08 07 41.1	
MVO	**Moncorvo**	**7.65**	**222**	*e*Pn	**Pn**	**08 06 27.9**	**+0.7**
MVO				*e*Sn	**Sn**	**08 07 47.4**	**-6.5**
PGAV	**Gavieira, Arco**	**7.66**	**231**	*e*Pn	**Pn**	**08 06 26.6**	**-0.8**
PGAV				*e*Sn	**Sn**	**08 07 47.9**	**-6.2**
PCAB	**Cabril**	**7.72**	**228**	*e*Pn	**Pn**	**08 06 27.7**	**-0.3**
PCAB				*e*Sn	**Sn**	**08 07 49.1**	**-6.4**
POLO	**Lamas de Olo**	**7.85**	**226**	*e*Pn	**Pn**	**08 06 29.4**	**-0.6**
POLO				*e*Sn	**Sn**	**08 07 52.3**	**-6.5**
PBAR	**Barrancos**	**10.20**	**211**	*e*Pn	**Pn**	**08 07 02.0**	**-0.1**
PBAR				*e*Sn	Sn	08 08 48.8	-7.6

*IDC **16** 08:27:56.9±0.7, 1°.72N×126°.36E, h0^{km}, mb4.1/14, mbtmp4.0/15, ML3.2/1, MS2.8/4, Error ellipse: s-maj=36.3km s-min=13.6km az=73.0*
*DJA **16** 08:28:01.8±0.3, 2°.N±3°×12°.6E±°, h10^{km}, M4.1/11, MLv4.1/11*
*NEIC **16** 08:28:03.0±1.8, 1°.78N±0°.09×126°.6E±0°.1, h35^{km}±2^{km}, mb4.1/15, Error ellipse: s-maj=23.1km s-min=4.4km az=51.0*
ISC 16 08:28:02.7±0.6, 1°.68N±0°.06×126°.55E±0°.07, h35^{km}, n46, σ1°37/44, mb4.2/22, MS3.0/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**138**		**Pn**	**08 28 24.9**	**+1.8**
TNTI	**Ternate**	**1.21**	**138**	P	**Pn**	**08 28 24.5**	**+1.4**
SGSI	**Sangihe**	**2.24**	**333**	P	**Pn**	**08 28 40.4**	**+3.1**
SGSI				S	**Sn**	**08 29 05.4**	**+1.6**
KMSI	**Cibinong**	**2.79**	**247**	P	**Pn**	**08 28 46.5**	**+1.6**
SANI	**Sanana**	**3.74**	**189**	P	**Pn**	**08 29 00.1**	**+2.1**
LUWI	**Luwuk**	**4.64**	**234**	Pn	**Pn**	**08 29 13.4**	**+3.0**
LUWI	**Luwuk**	**4.64**	**234**	P	**Pn**	**08 29 10.5**	**+0.1**
MRSI	**Marisa**	**4.76**	**256**	P	**Pn**	**08 29 13.4**	**+1.4**
TOLI2	**Tolitoli**	**5.79**	**265**		**Pn**	**08 29 26.8**	**+0.6**
MYLDM	**Lahad Datu**	**8.76**	**294**	Pn	**Pn**	**08 30 07.8**	**+0.9**
KSM	**Kuching**	**16.24**	**270**	Pn	**Pn**	**08 31 46.8**	**-1.5**
KNRA	**Kununurra**	**17.38**	**173**	P	**P**	**08 32 04.9**	**+1.2**
KNRA				IAmb	IAmb	08 32 13.3	
	comp=Z,7.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.67**	**183**	P	**P**	**08 32 27.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=11,slow=10,SNR=2.0						
	comp=Z,1.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.67**	**183**		**P**	**08 32 29.0**	**+0.2**
DLV	**Lat**	**20.61**	**300**	P	**P**	**08 32 39.9**	**+0.5**
GUMO	**Guam**	**21.65**	**56**	LR	LR	08 39 28.0	
	comp=Z,19nm,19.9s,baz=231,slow=32						
WB0	**War

mbtmp3.8/6,ML3.3/1,MS3.0/1,Error ellipse: s-maj=117.8km s-min=19.5km az=69.0
DJA ***16*** *08:40:26.8±0.4, 1°N±6″×12°6E±°, h10km,M3.8/7, MLv3.8/7*
ISC 16 08:40:29.2±1.2,**1°5N**±0°2″×**126°5E**±0°1,**h35**km,**n9,σ0°56**/8,
mb3.9/5,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**130**	P		**Pn**	**08 40 48.1**	**-0.6**
KMSI	**Cibinong**	**2.67**	**250**	P		**Pn**	**08 41 09.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P		**P**	**08 44 54.4**	**+0.9**
	0.1nm,0.3s,baz=2.7,slow=10.0,SNR=1.5 1.5nm,0.9s							
WRA	**Warramunga Arr**	**22.66**	**161**	P		**P**	**08 45 27.6**	**0.0**
	4.3nm,0.8s,baz=340,slow=11,SNR=25 4.3nm,0.8s							
PMG	**Port Moresby**	**23.27**	**118**	LR		LR	08 57 11.3	
	comp=Z,34nm,19.6s,baz=206,slow=44							
ASAR	**Alice Springs**	**26.04**	**164**	P		**P**	**08 45 59.5**	**0.0**
	0.8nm,0.5s,baz=345,slow=11,SNR=21 0.8nm,0.5s							
MKAR	**Makanchi Array**	**59.24**	**326**	P		**P**	**08 50 27.2**	**0.0**
	0.4nm,0.4s,baz=121,slow=7.8,SNR=6.3 0.4nm,0.4s							
KURBB	**Kurchatov Arra**	**63.48**	**328**	P		**P**	**08 50 56.0**	**+0.3**
	0.7nm,0.2s,baz=126,slow=6.5,SNR=5.1 0.7nm,0.2s							
VNDA	**Vanda**	**81.27**	**173**	P		**P**	**08 52 41.4**	**+0.1**
	0.2nm,0.4s,baz=326,slow=5.2,SNR=1.9 0.2nm,0.4s							

VIE ***16*** *08:43:38.9±1.0,50°.15N×18°.36E,h0km,mb2.5/1,ml2.3/2, Error ellipse: s-maj=7.5km s-min=5.2km az=94.0 36 km NNE of Ostrava Suspected Mining induced.*
IPEC ***16*** *08:43:39.7±0.2,50°.08N×18°.43E,h1km,ML2.1/6,Error ellipse: s-maj=1.6km s-min=1.4km az=38.0*
PRU ***16*** *08:43:41.0,50°.07N×18°.35E,h0km*
ISC 16 08:43:39.5±0.9,**50°07N**±0°.04×**18°43E**±0°.03,**h0**km,**n26,**
σ0°86/**44,Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RAC	**Raciborz**	**0.15**	**275**	*e*PG		**Pg**	**08 43 43.5**	**+1.1**
RAC				*e*SG		**Sg**	**08 43 46.5**	**+2.1**
OKC	**Ostrava-Krasne**	**0.30**	**218**	*e*PG		**Pg**	**08 43 45.7**	**+0.5**
OKC				*e*SG		**Sg**	**08 43 50.1**	**+1.1**
	comp=Z,79nm,0.5s							
STEB	**Steborice**	**0.45**	**252**	*e*PG		**Pg**	**08 43 48.4**	**+0.4**
STEB				*e*SG		**Sg**	**08 43 54.8**	**+1.0**
	comp=Z,184nm,0.3s							
MORC	**Moravsky Berou**	**0.64**	**243**	*e*Pg		**Pg**	**08 43 51.9**	**+0.1**
	baz=62							
MORC				*e*Sg		**Sg**	**08 44 00.1**	**-0.1**
	38nm,0.5s,baz=62							
ANAC	**Anensky vrch**	**0.68**	**271**	*e*Pg		**Pg**	**08 43 52.6**	**+0.1**
	baz=90							
ANAC				*e*Sg		**Sg**	**08 44 00.9**	**-0.3**
	32nm,0.3s,baz=90							
LOSC	**Losov**	**0.82**	**237**	*e*Pg		**Pg**	**08 43 55.3**	**+0.1**
	baz=56							
LOSC				*e*Sg		**Sg**	**08 44 05.5**	**-0.3**
	31nm,0.4s,baz=56							
KRLC	**Kraliky**	**1.06**	**271**	*e*PG		**Pg**	**08 43 58.2**	**-1.6**
LANS	**Liptovska Anna**	**1.14**	**143**	*e*PG		**Pg**	**08 44 01.6**	**+0.2**
LANS				*e*SG		**Sn**	**08 44 18.5**	**-0.6**
LANS				*e*LG		Lg	08 44 20.6	
JAVC	**Velka Javorina**	**1.31**	**203**	*e*PG		**Pg**	**08 44 04.6**	**0.0**
JAVC	**Velka Javorina**	**1.31**	**203**	*e*Pg		**Pg**	**08 44 04.5**	**0.0**
	baz=22							
NIE	**Niedzica**	**1.38**	**118**	*e*Pg		**Pg**	**08 44 05.9**	**0.0**
NIE				*e*Sg		**Sn**	**08 44 24.7**	**-0.2**
DPC	**Dobruska-Polom**	**1.38**	**283**	*e*PG		**Pg**	**08 44 05.2**	**-0.8**
DPC				*e*SG		**Sg**	**08 44 23.8**	**-0.1**
	comp=Z,32nm,0.5s							
VRAC	**Vranov**	**1.42**	**238**	*e*Pg		**Pn**	**08 44 05.8**	**-0.7**
	baz=57							
VRAC				*e*Sg		**Sg**	**08 44 24.0**	**-0.9**
	18nm,0.3s,baz=57							
OSTC	**Ostas**	**1.50**	**290**	*e*PG		**Pn**	**08 44 06.8**	**-0.9**
OSTC				*e*SG		**Sg**	**08 44 27.8**	**+0.1**
KSP	**Ksiaz**	**1.57**	**300**	*e*Pg		**Pn**	**08 44 07.8**	**-0.9**
KSP				*e*Sg		**Sb**	**08 44 29.9**	**+0.1**
CHVC	**Chvalec**	**1.61**	**290**	*e*PG		**Pn**	**08 44 08.8**	**-0.4**
CHVC				*e*SG		**Sn**	**08 44 30.9**	**+0.2**
UPC	**Upice**	**1.61**	**287**	*e*PG		**Pn**	**08 44 09.0**	**-0.2**
UPC				*e*SG		**Sn**	**08 44 30.9**	**+0.2**
	comp=Z,11nm,0.5s							
KRUC	**Moravsky**	**1.67**	**233**	*e*Pn		**Pn**	**08 44 09.9**	**0.0**
	baz=52							
KRUC				*e*Sg		**Sn**	**08 44 31.9**	**-0.1**
	14nm,0.5s,baz=52							
MODS	**Modra-Piesok**	**1.86**	**204**	*e*PN		**Pn**	**08 44 11.6**	**-1.0**
MODS				*e*SN		**Sb**	**08 44 38.3**	**+0.2**
STHS	**Stebnicka Huta**	**1.94**	**109**	*e*PN		**Pb**	**08 44 15.1**	**-0.6**
STHS				*e*SG		**Sg**	**08 44 43.7**	**+1.9**
STHS				*e*LG		Lg	08 44 44.6	
PRU	**Pruhonice**	**2.51**	**270**	*e*SG		**Sb**	**08 44 56.9**	**+0.1**
CONA	**Conrad Observa**	**2.73**	**219**	*e*Sn		**Sn**	**08 44 59.1**	**+0.7**
	1.1nm,0.2s							
ZVC	**Zvikov**	**2.82**	**259**	*e*PG		**Pb**	**08 44 31.0**	**+0.3**
KHC	**Kasperske Hory**	**3.29**	**255**	*e*PG		**Pb**	**08 44 39.8**	**+1.0**
KHC				*e*SG		**Sg**	**08 45 23.1**	**-2.1**
MOA	**Molln**	**3.53**	**233**	*i* Sn		**Sn**	**08 45 18.6**	**+0.5**
	0.6nm,0.2s							
CLL	**Collm**	**3.67**	**292**	*e*Sg		**Sg**	**08 45 39.0**	**+1.8**

SJA ***16*** *08:51:10.6±0.7,21°.41S×66°.76W,h248km±6km,ML3.9, MW3.7*
SCB ***16*** *08:51:12.7±1.4,21°.45S×66°.82W,h218km±13km,ML4.0/3, Error ellipse: s-maj=5.4km s-min=4.6km az=2.0*
ISC 16 08:51:12.5±1.8,**21°42S**±0°.04×**66°80W**±0°.05,
h224km±14km,**n37,σ1°57**/58,**Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MOCB	**Mochara**	**1.10**	**81**	Pg		**Pn**	**08 51 45.7**	**-0.2**
YJA	**Yavi**	**1.41**	**122**	Pg		**Pn**	**08 51 48.4**	**+0.3**
YJA	**Yavi**	**1.41**	**122**	*e*P		**Pn**	**08 51 49.1**	**+1.0**
YJA				*e*S		**S**	**08 52 08.9**	**-6.9**
YJA				*e*S		S	08 52 15.2	-0.6
HJA	**Humahuaca**	**2.19**	**144**	*e*P		**Pn**	**08 51 55.9**	**+0.8**
HJA				*e*S		**S**	**08 52 29.2**	**+0.8**
PB09	**IPOC Station P**	**2.30**	**260**	Pg		**Pn**	**08 51 56.8**	**+0.8**
PB09	**IPOC Station P**	**2.30**	**260**	*e*P		**Pn**	**08 51 57.0**	**+0.9**
PB09				*e*S		**S**	**08 52 32.0**	**+2.1**
PB01	**IPOC Station P**	**2.54**	**278**	Pg		**Pn**	**08 51 58.7**	**+0.3**
PB01				Sg		**S**	**08 52 33.6**	**-0.5**
PB01				IAML			08 52 34.8	
	167nm,0.5s							
PB01	**IPOC Station P**	**2.54**	**278**	*e*P		**Pn**	**08 51 58.8**	**+0.3**
PB01				*e*S		**S**	**08 52 34.9**	**+0.7**
PB01				IAML			08 52 36.2	
	comp=Z,137nm,0.1s							
PB08	**IPOC Station P**	**2.55**	**300**	Pg		**Pn**	**08 51 59.7**	**+0.9**
PB08	**IPOC Station P**	**2.55**	**300**	*e*P		**Pn**	**08 51 59.1**	**+0.3**
PB08				*e*S		**S**	**08 52 36.8**	**+1.9**
PB03	**IPOC Station P**	**2.81**	**257**	*e*P		**Pn**	**08 52 01.9**	**+0.4**
PB03				*e*S		**S**	**08 52 38.9**	**-0.9**
PB03				IAML			08 52 39.9	
	comp=Z,206nm,0.3s							
SALTA		**2.82**	**171**	*e*P		**Pn**	**08 52 03.9**	**+2.0**
SALTA				*e*S		**S**	**08 52 44.2**	**+3.7**
GO01	**Chusmiza**	**2.84**	**307**	Pg		**Pn**	**08 52 02.4**	**+0.2**
GO01	**Chusmiza**	**2.84**	**307**	*e*P		**Pn**	**08 52 02.7**	**+0.5**
GO01				*e*S		**S**	**08 52 45.1**	**+4.2**
PB06	**IPOC Station P**	**2.87**	**243**	Pg		**Pn**	**08 52 02.8**	**+0.7**
PB06	**IPOC Station P**	**2.87**	**243**	*e*P		**Pn**	**08 52 02.5**	**+0.4**
PB06				*e*S		**S**	**08 52 41.3**	**+0.4**
PB02	**IPOC Station P**	**2.89**	**272**	Pg		**Pn**	**08 52 02.5**	**+0.3**
PB02				Sg		**S**	**08 52 39.2**	**-1.9**
PB02				IAML			08 52 40.5	
	comp=Z,1μm,0.5s							
PB02	**IPOC Station P**	**2.89**	**272**	*e*P		**Pn**	**08 52 02.5**	**+0.3**
PB02				*e*S		**S**	**08 52 40.0**	**-1.1**
PB02				IAML			08 52 41.6	
	comp=Z,554nm,0.3s							
PB07	**IPOC Station P**	**2.89**	**263**	*e*P		**Pn**	**08 52 02.6**	**+0.3**
PB07				*e*S		**S**	**08 52 40.6**	**-0.6**
PB07				IAML			08 52 41.4	
	comp=Z,208nm,0.2s							
SOEO	**Opoqueri**	**3.02**	**340**	Pg		**Pn**	**08 52 04.9**	**+0.6**
PB11	**IPOC Station P**	**3.15**	**301**	Pg		**Pn**	**08 52 05.0**	**-0.3**
PB11				Sg		**S**	**08 52 44.8**	**-1.7**
PB11				IAML			08 52 47.9	
	comp=Z,175nm,0.4s							
PB11	**IPOC Station P**	**3.15**	**301**	*e*P		**Pn**	**08 52 05.3**	**0.0**
PB11				*e*S		**S**	**08 52 45.9**	**-0.6**
PB11				IAML			08 52 47.8	
	comp=Z,126nm,0.1s							
TA02	**Huaiquique**	**3.32**	**290**	*e*P		**Pn**	**08 52 07.2**	**+0.1**
TA02				*e*S		**S**	**08 52 48.7**	**-1.1**
TA02				IAML			08 52 49.6	
	comp=Z,315nm,0.1s							
SOET	**ToroToro**	**3.42**	**16**	Pg		**Pn**	**08 52 08.9**	**+0.2**
PB05	**IPOC Station P**	**3.46**	**245**	*e*P		**Pn**	**08 52 08.9**	**0.0**
PB05				*e*S		**S**	**08 52 51.3**	**-1.7**
PB16	**IPOC Station P**	**3.99**	**320**	Pg		**Pn**	**08 52 16.6**	**+0.9**
PB16	**IPOC Station P**	**3.99**	**320**	*e*P		**Pn**	**08 52 16.0**	**+0.3**
PB16				*e*S		**S**	**08 53 07.0**	**+1.7**
PB12	**IPOC Station P**	**4.34**	**310**	*e*P		**Pn**	**08 52 18.0**	**-1.5**
PB12				*e*S		**S**	**08 53 09.9**	**-2.3**
AP01	**Chacalluta**	**4.51**	**312**	*e*P		**Pn**	**08 52 21.4**	**0.0**
AP01				*e*S		**S**	**08 53 14.3**	**-1.5**
AP01				*e*S		S	08 53 18.0	+2.2
GO02	**Mina Guanaco**	**4.52**	**214**	Pg		**Pn**	**08 52 21.6**	**-0.2**
GO02	**Mina Guanaco**	**4.52**	**214**	*e*P		**Pn**	**08 52 21.8**	**-0.1**
GO02				*e*S		**S**	**08 53 14.8**	**-1.7**
PB14	**IPOC Station P**	**4.60**	**225**	Pg		**Pn**	**08 52 22.7**	**-0.1**
PB14	**IPOC Station P**	**4.60**	**225**	*e*P		**Pn**	**08 52 22.4**	**-0.5**
BBOJ	**La Paz, Jacagu**	**4.62**	**343**	Pg		**Pn**	**08 52 24.7**	**+1.4**
BBOE	**La Paz, Chanca**	**4.72**	**346**	Pg		**Pn**	**08 52 25.9**	**+1.2**
BBOD	**La Paz, Gloria**	**5.06**	**340**	Pg		**Pn**	**08 52 29.4**	**+0.6**
LPAZ	**La Paz**	**5.26**	**346**	Pg		**Pn**	**08 52 31.4**	**-0.1**

IDC ***16*** *08:52:37.4±1.7,1°.77N×126°.51E,h0km,mb3.6/4, mbtmp3.6/5,ML3.2/1,Error ellipse: s-maj=117.2km s-min=21.0km az=69.0*
DJA ***16*** *08:52:42.6±0.3,2°.N±4°×12°7E±°,h10km,M3.4/7,MLv3.4/7*
ISC 16 08:52:43.7±1.1,**1°6N**±0°.2×**126°4E**±0°.3,**h35**km,**n7,σ1°62**/7,
mb3.6/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**129**	P		**Pn**	**08 53 05.2**	**+0.8**
SGSI	**Sangihe**	**2.29**	**337**	P		**Pn**	**08 53 20.7**	**+1.7**
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P		**P**	**08 57 09.2**	**+0.7**
	0.1nm,0.3s,baz=353,slow=8.1,SNR=1.3 1.0nm,0.9s							
WRA	**Warramunga Arr**	**22.74**	**160**	P		**P**	**08 57 43.0**	**+0.1**
	0.8nm,0.5s,baz=340,slow=11,SNR=15 0.8nm,0.5s							
ASAR	**Alice Springs**	**26.11**	**164**	P		**P**	**08 58 14.9**	**+0.5**
	0.3nm,0.6s,baz=344,slow=7.2,SNR=6.9 0.3nm,0.6s							
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**09 02 39.3**	**-1.8**
	0.3nm,0.5s,baz=119,slow=7.9,SNR=5.1 0.3nm,0.5s							
KURBB	**Kurchatov Arra**	**63.40**	**328**	P		**P**	**09 03 07.9**	**-1.7**
	1.1nm,0.2s,baz=127,slow=5.7,SNR=1.2 1.1nm,0.2s							

NEIC ***16*** *09:05:19.7±1.4,35°.13N±0°.03×95°.36W±0°.03,h6km±3km, Error ellipse: s-maj=4.2km s-min=2.1km az=143.0*
NEIC 16 09:05:19.7±1.4,**35°13N**±0°.02×**95°36W**±0°.02,**h5**km±1km,
mb_Lg2.2/9,**ML2.3**/14,**ML2.2**/6,**Error ellipse:**
s-maj=4.5km s-min=2.7km az=148.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TUL3	**Leonard**	**0.86**	**336**			Pg	09 05 35.9	-0.2
TUL3						Sg	09 05 47.5	+0.2
RLO	**Rose Lookout**	**1.07**	**15**			Pg	09 05 39.9	-0.3
RLO						Sg	09 05 54.4	+0.4
RLO				IAML			09 05 56.9	
	comp=E,138nm,0.2s							
DEOK	**Depew**	**1.17**	**308**			Pg	09 05 41.9	-0.3
DEOK						Sg	09 05 57.4	0.0
DEOK				IAML			09 06 02.3	
	comp=N,88nm,0.3s							
DEOK				IAML			09 06 03.0	
	comp=E,51nm,0.2s							
OK052	**Battle Ridge R**	**1.46**	**307**			Pn	09 05 46.5	-0.2
QUOK	**Quay**	**1.51**	**314**			Pn	09 05 46.9	-0.6
QUOK						Sg	09 06 08.3	-0.1
U38A	**Gravette**	**1.53**	**31**			Pn	09 05 47.7	+0.1
U38A						Sb	09 06 08.0	-0.1
MIAR	**Mount Ida**	**1.57**	**111**			Pn	09 05 48.8	+0.5
HHAR	**Hobbs**	**1.63**	**45**			Pn	09 05 49.2	+0.2
HHAR						Sb	09 06 11.2	+0.2
FNO	**Franklin**	**1.68**	**275**			Pn	09 05 50.4	+0.6
OKCFA	**Oklahoma City**	**1.74**	**280**			Pb	09 05 51.5	-0.6
OKCFA						Sg	09 06 15.0	-0.6
OK048	**Pawnee Station**	**1.82**	**315**			Pn	09 05 52.2	+0.5
OK029	**Liberty Lake**	**1.84**	**292**			Pn	09 05 52.7	+0.7
Z38A	**Mt. Pleasant**	**1.89**	**171**	IAmb_Lg			09 06 23.1	
	comp=Z,11nm,0.9s							
T35A	**Sooner Cattle**	**2.01**	**333**			Pn	09 05 55.5	+1.2
X40A	**Basin Creek Fa**	**2.17**	**106**	Pn		Pb	09 05 58.8	-0.6
X40A				IAmb_Lg			09 06 30.7	
	comp=Z,17nm,0.8s							
Z35A	**Perchaven, San**	**2.39**	**222**	Pn		Pn	09 06 00.2	+0.7
SWET	**Sewanee**	**7.72**	**87**	IAmb_Lg			09 09 36.4	
	comp=Z,7.7nm,0.8s							
WCI	**Wyandotte Cave**	**7.91**	**64**	IAmb_Lg			09 09 34.9	
	comp=Z,2.0nm,0.8s							

NIED ***16*** *09:16:58.8,38°.31N×141°.91E,h64km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr5.97; Mθθ1.13; Mϕϕ-7.10; Mrθ-2.32; Mθϕ2.56; Mϕr-1.75; Fault plane solution: M₀7.64000×10¹⁴ NP1: ϕs320.00000°,δ46.00000°,λ53.00000°. NP2: ϕs188.00000°,δ55.00000°,λ122.00000°.*
JMA ***16*** *09:16:58.8±0.1,38°.3N±0°.3×141°.9E±0°.6,h64km,MD4.0/40, MV4.5/40,E OFF MIYAGI PREF*
JMA Felt III J1 at E OFF MIYAGI PREF .
NEIC ***16*** *09:16:59.0±1.6,38°.38N±0°.08×141°.9E±0°.1,h60km±7km, mb4.3/7,Error ellipse: s-maj=16.8km s-min=8.3km az=125.0*
IDC ***16*** *09:16:58.4±2.1,38°.31N×141°.90E,h64km±18km,mb3.8/15, mbtmp4.0/20,MS2.8/4,Error ellipse: s-maj=18.0km s-min=12.2km az=110.0*
ISC 16 09:16:58.1±1.0,**38°28N**±0°.05×**141°94E**±0°.08,**h63**km±7km,
n84,σ1°03/**74,mb4.1**/20,**11D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.37**	**275**	*i* P		**Pn**	**09 17 09.7**	**+0.7**
JIKH				S		**Sn**	**09 17 17.5**	**+0.5**
JIKH	**Ishinomakikobu**	**0.37**	**275**	A		A	09 17 09.7	
	comp=N,42nm,0.3s,comp=E,40nm,0.2s							
JIO	**Ouri**	**0.50**	**291**	*i* P		**Pn**	**09 17 10.8**	**+0.6**
JIO				S		**Sn**	**09 17 19.3**	**+0.3**
JIO	**Ouri**	**0.50**	**291**	A		A	09 17 10.8	
	comp=N,18nm,0.3s,comp=E,18nm,0.4s							
JKMT	**Kesennumamotoy**	**0.65**	**326**	*i* P		**Pn**	**09 17 12.3**	**+0.5**
JKMT				S		**Sn**	**09 17 22.0**	**+0.1**
JKMT	**Kesennumamotoy**	**0.65**	**326**	A		A	09 17 12.3	
	comp=N,5.0nm,0.7s,comp=E,10.0nm,1.0s							
OFUJ	**Ofunato**	**0.83**	**345**	*i* P		**Pn**	**09 17 14.4**	**+0.3**
OFUJ				S		**Sn**	**09 17 25.8**	**-0.1**
OFUJ	**Ofunato**	**0.83**	**345**	A		A	09 17 14.4	
	comp=N,13nm,0.7s,comp=E,6.0nm,0.3s							
JOFO	**Osakifurukawao**	**0.87**	**292**	A		A	09 17 15.0	
	comp=N,30nm,0.3s,comp=E,54nm,0.3s							
JMK	**Ichinoseki**	**0.88**	**320**	P		**Pn**	**09 17 15.2**	**+0.5**
JMK				S		**Sn**	**09 17 27.1**	**+0.3**
JMK	**Ichinoseki**	**0.88**	**320**	A		A	09 17 15.2	
	comp=N,11nm,0.3s,comp=E,18nm,0.3s							
JMM	**Marumori**	**0.99**	**246**			**Pn**	**09 17 16.7**	**+0.6**
JMM						**Sn**	**09 17 29.6**	**+0.2**
JMM	**Marumori**	**0.99**	**246**	*i* P		**Pn**	**09 17 16.4**	**+0.3**
JMM				S		**Sn**	**09 17 29.7**	**+0.2**
JMM	**Marumori**	**0.99**	**246**	A		A	09 17 16.4	
	comp=N,12nm,0.3s,comp=E,4.0nm,0.4s							
JMST	**Minamisoumatoc**	**1.00**	**237**	A		A	09 17 17.1	
	comp=N,13nm,0.3s,comp=E,16nm,0.3s							
JOU	**Okura**	**1.01**	**275**	*i* P		**Pn**	**09 17 16.9**	**+0.6**
JOU				S		**Sn**	**09 17 30.4**	**+0.6**
JOU	**Okura**	**1.01**	**275**	A		A	09 17 16.9	
	comp=N,14nm,0.3s,comp=E,29nm,0.4s							
JFK	**Kawauchi**	**1.24**	**223**	*i* P		**Pn**	**09 17 19.9**	**+0.5**
JFK				S		**Sn**	**09 17 35.5**	**+0.2**
JFK	**Kawauchi**	**1.24**	**223**	A		A	09 17 19.9	
	comp=N,4.0nm,0.2s,comp=E,3.0nm,0.3s							
JOM	**Ohasama**	**1.30**	**337**	P		**Pn**	**09 17 20.5**	**+0.4**
JOM				S		**Sn**	**09 17 36.9**	**+0.3**
JOM	**Ohasama**	**1.30**	**337**	A		A	09 17 20.5	
	comp=N,5.0nm,0.7s,comp=E,9.0nm,0.3s							
JYK	**Kaneyama**	**1.39**	**298**	*i* P		**Pn**	**09 17 21.9**	**+0.6**
JYK				*e*S		**Sn**	**09 17 39.4**	**+0.5**
JYK	**Kaneyama**	**1.39**	**298**	A		A	09 17 21.9	
	comp=N,3.0nm,1.2s,comp=E,4.0nm,2.0s							
JOTO	**OTAMA OYAMA**	**1.46**	**241**	*i* P		**Pn**	**09 17 23.2**	**+0.9**
JOTO				S		**Sn**	**09 17 41.1**	**+0.6**
JYS	**Shirataka**	**1.48**	**268**	*i* P		**Pn**	**09 17 23.3**	**+0.8**
JYS				S		**Sn**	**09 17 42.2**	**+1.3**
JYS	**Shirataka**	**1.48**	**268**	A		A	09 17 23.3	
	comp=N,6.0nm,1.6s,comp=E,7.0nm,1.2s							
ONAJ	**Iwakimizuishiy**	**1.48**	**218**	A		A	09 17 23.9	
	comp=N,8.0nm,0.3s,comp=E,11nm,0.3s							
JRG	**Rokugo**	**1.51**	**318**	*i* P		**Pn**	**09 17 23.4**	**+0.5**
JRG	**Rokugo**	**1.51**	**318**	A		A	09 17 23.4	
	comp=N,5.0nm,0.4s,comp=E,4.0nm,0.5s							
JYA	**Atsumi**	**1.77**	**281**	*i* P		**Pn**	**09 17 27.2**	**+0.7**
JYA	**Atsumi**	**1.77**	**281**	A		A	09 17 27.2	
	comp=N,5.0nm,1.3s,comp=E,6.0nm,0.5s							
JTM	**Tenmabayashi**	**2.59**	**345**			**Pn**	**09 17 38.3**	**+0.7**
JSD	**Sado**	**2.91**	**266**			**Pn**	**09 17 42.5**	**+0.6**
MAJO	**Matsushiro**	**3.44**	**241**			**Pn**	**09 17 51.4**	**+2.2**
MJAR	**Matsushiro Arr**	**3.44**	**241**	P		**Pn**	**09 17 51.0**	**+1.8**
	comp=E,27nm,0.5s,baz=51,slow=11,SNR=184							
MJAR				LR		LR	09 19 21.6	
	comp=E,102nm,20.9s,baz=48,slow=42							
MJAR	**Matsushiro Arr**	**3.44**	**241**			**Pn**	**09 17 51.5**	**+2.4**
MJB9	**Matsu-Tunnel**	**3.44**	**241**			**Pn**	**09 17 52.2**	**+3.0**
JGF	**Kuroka**	**4.54**	**235**			**Pn**	**09 18 06.7**	**+2.4**
INU	**Inuyama**	**4.91**	**235**			**Pn**	**09 18 11.0**	**+1.7**
JHJ	**Hachijo jima 2**	**5.44**	**199**	P		Pn	09 18 07.5	-9.0
	comp=E,53nm,0.3s,baz=73,slow=22,SNR=7.8							
JHJ				S		**Sn**	**09 19 13.6**	**-4.1**
	comp=E,202nm,0.3s,baz=256,slow=22,SNR=18							
ASAJ	**Asahikawa**	**5.86**	**5**	P		**Pn**	**09 18 22.2**	**0.0**
	comp=E,5.2nm,0.3s,baz=214,slow=11,SNR=14							
ASAJ				S		**Sn**	**09 19 26.9**	**-1.0**
	comp=E,23nm,0.7s,baz=125,slow=33,SNR=6.2							
JKA	**Kamikawa-asahi**	**5.86**	**5**			**Pn**	**09 18 21.7**	**-0.5**
JMN	**Monobe**	**7.95**	**238**	Pn		**Pn**	**09 18 51.0**	**0.0**
USRK	**Ussuriysk Ar.**	**9.54**	**311**	P		**Pn**	**09 19 13.1**	**+0.4**
	comp=E,1.6nm,0.3s,baz=124,slow=14,SNR=11							
JNU	**Nakatsue**	**10.36**	**244**	P		**Pn**	**09 19 22.9**	**-1.0**
	comp=E,6.9nm,0.9s,baz=41,slow=9.3,SNR=9.9							
KSRS	**Korea Array**	**11.11**	**270**	P		**Pn**	**09 19 34.8**	**+0.7**
	comp=E,1.2nm,0.3s,baz=80,slow=14,SNR=6.9							
HILR	**Hailar Array B**	**19.48**	**312**	P		**P**	**09 21 16.8**	**-3.0**
	comp=E,2.1nm,0.4s,baz=113,slow=10,SNR=4.0							
YAK	**Yakutsk**	**24.95**	**346**	LR		LR	09 33 51.7	
	comp=E,24nm,19.5s,baz=100,slow=41							
SEY	**Seymchan**	**25.49**	**11**	LR		LR	09 34 14.8	
	comp=E,24nm,19.1s,baz=78,slow=41							
SONM	**Songino Array**	**27.46**	**302**	P		**P**	**09 22 37.2**	**-1.0**
	comp=E,0.9nm,0.4s,baz=113,slow=9.8,SNR=5.4 comp=E,0.9nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.45**	**123**	T		T	09 53 08.0	
	baz=316,slow=76,SNR=56							
H11N1	**WAKE ISLAND Hy**	**28.46**	**123**	T		T	09 53 15.1	
	baz=316,slow=76,SNR=582							
H11N3	**WAKE ISLAND Hy**	**28.47**	**123**	T		T	09 53 15.8	
	baz=316,slow=76,SNR=414							
H11S1	**WAKE ISLAND Hy**	**29.21**	**125**	T		T	09 54 07.3	
	baz=317,slow=76,SNR=408							
H11S3	**WAKE ISLAND Hy**	**29.21**	**126**	T		T	09 54 07.5	
	baz=317,slow=76,SNR=422							
H11S2	**WAKE ISLAND Hy**	**29.23**	**125**	T		T	09 54 07.7	
	baz=317,slow=76,SNR=308							
ATKA	**Atka Island**	**33.34**	**51**	P		**P**	**09 23 30.2**	**+0.4**

CONN	Concepcion	1.46 70	S	Sb	09 34 47.8	+0.1
MOM3	MOM3	1.52 19	P	Pn	09 34 28.4	-0.5
CMARA	Lajas Hojancha	1.90 123	S	Sn	09 34 58.4	+0.7
CMARA	Lajas Hojancha	1.90 123	P	Pn	09 34 34.9	+0.7

IDC 16 09:50:21.1±4.4, 0.°98N×127.°59E, h0km, mb4.0/2, mbtmp3.6/3, ML3.4/1, MS3.5/1, Error ellipse: s-maj=221.6km s-min=28.7km az=88.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.97	161	P	P	09 54 53.6	-1.5
	0.1nm,0.3s,baz=342,slow=13,SNR=8.2						
	0.1nm,0.4s						
ASAR	Alice Springs	23.36	165	P	P	09 55 32.5	+1.0
	0.3nm,0.3s,baz=350,slow=11,SNR=11						
	0.3nm,0.3s						
JCJ	Chichijima	31.25	26	LR	LR	10 09 04.5	
	comp=Z,86nm,19.6s,baz=85,slow=36						
PETK	Petropavlovsk-	59.48	21	P	P	10 00 25.8	-0.1
	7.3nm,1.0s,baz=231,slow=8.5,SNR=3.6						
	7.3nm,1.0s						

*IDC **16** 09:56:46.7±1.1, 1.°67N×126.°60E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=67.9km s-min=20.6km az=73.0*

*DJA **16** 09:56:50.5±0.2, 1.°N±2.°×12.°6E±.°, h10km, M3.8/10, MLv3.8/10*

ISC 16 09:56:52.4±0.9, 1.°47N±0.°05×126.°50E±0.°07, h35km, n10, σ1s85/13, mb3.5/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.11	129	P	Pn	09 57 11.7	+0.2
TNTI				S	Sn	09 57 28.0	+2.5
SGSI	Sangihe	2.41	336	P	Pn	09 57 31.4	+2.1
SGSI				S	Sn	09 58 00.0	+2.4
KMSI	Cibinong	2.67	251	P	Pn	09 57 32.3	-0.7
SANI	Sanana	3.54	188	P	Pn	09 57 45.1	+0.2
SANI				S	Sn	09 58 27.6	+2.1
LUWI	Luwuk	4.49	236	P	Pn	09 57 59.3	+1.3
WRA	Warramunga Arr	22.63	161	P	P	10 01 51.1	+0.6
	1.2nm,0.6s,baz=339,slow=11,SNR=19						
	1.2nm,0.6s						
ASAR	Alice Springs	26.00	164	P	P	10 02 23.0	+0.7
	0.3nm,0.5s,baz=348,slow=8.0,SNR=10						
	0.3nm,0.5s						
MJAR	Matsushiro Arr	36.54	16	P	P	10 03 52.1	-2.7
	0.2nm,0.3s,baz=200,slow=9.9,SNR=1.3						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.28	326	P	P	10 06 49.9	-0.8
	0.3nm,0.5s,baz=113,slow=8.4,SNR=3.7						
	0.3nm,0.5s						
KURBB	Kurchatov Arra	63.52	328	P	P	10 07 17.6	-1.6
	0.6nm,0.6s,baz=125,slow=6.1,SNR=3.1						
	0.6nm,0.6s						

*BJI **16** 10:19:08.6, 1.°13N×126.°36E, h32km, mB5.7/56, mb5.4/89, Ms5.5/98, Ms7 5.4/93*

*IDC **16** 10:19:09.7±0.3, 1.°68N×126.°37E, h0km, mb5.6/36, mbtmp5.6/37, ML5.1/2, MS5.2/54, Error ellipse: s-maj=14.5km s-min=8.1km az=78.0*

*MOS **16** 10:19:12.5±1.5, 1.°65N×126.°22E, h30km, mb6.0/78, MS5.3/54, Error ellipse: s-maj=7.4km s-min=4.1km az=112.3*

*ISC-PP **16** 10:19:13, 1.°57N×126.°34E, h17km, Mwppsm6.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{18}Nm; M_{rr}0.65±.12; $M_{\theta\theta}$-0.05±.15; $M_{\phi\phi}$-0.55±.15; $M_{r\theta}$0.22±.12; $M_{\theta\phi}$-0.29±.24; $M_{r\phi}$0.03±.11; Fault plane solution: $M_0$1.43000×10^{18} NP1:ϕs7.80000°, δ32.50000°, λ112.80000°. NP2:ϕs161.30000°, δ60.30000°, λ76.10000°.*

*NEIC **16** 10:19:13.3±1.6, 1.°57N±0.°07×126.°34E±0.°05, h24km±1km, mb5.9/297, Ms_20 5.4/396, Mwb5.6/82, Mww5.9/43 Error ellipse: s-maj=11.9km s-min=8.3km az=29.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.12; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-3.07; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.60; $M_{r\phi}$0.55; Fault plane solution: $M_0$3.20000×10^{17} NP1:ϕs8.43000°, δ49.88000°, λ86.86000°. NP2:ϕs193.30000°, δ40.22000°, λ93.72000°. Principal axes: T 3.1659, Plg85.0000°, Azm254.0000°; N 0.0659, Plg2.0000°, Azm10.0000°; P -3.2318, Plg5.0000°, Azm101.0000°;*

*NEIC **16** 10:19:14.7, 1.°54N×126.°14E, h30km, Moment Tensor Solution. Duration: 4s5 Moment tensor: Scale 10^{17}Nm; M_{rr}7.87; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$-6.81; $M_{r\theta}$-1.40; $M_{\theta\phi}$-1.35; $M_{r\phi}$-0.76; Fault plane solution: $M_0$7.69000×10^{17} NP1: ϕs5.20000°, δ41.49000°, λ78.47000°. NP2:ϕs200.43000°, δ49.52000°, λ100.03000°. Principal axes: T 8.1021, Plg81.0000°, Azm166.0000°; N -0.9147, Plg8.0000°, Azm14.0000°; P -7.1874, Plg4.0000°, Azm283.0000°;*

*NEIC **16** 10:19:14.7, 1.°53N×126.°34E, h35km*

*NEIC **16** 10:19:14.7, 1.°54N×126.°34E, h30km*

*IPGP **16** 10:19:15.0, 1.°55N×126.°33E, h29km, Mw5.8, Fault plane solution: NP1:ϕs24.00000°, δ39.00000°, λ101.00000°. NP2:ϕs191.00000°, δ52.00000°, λ81.00000°.*

*DJA **16** 10:19:16.3±0.1, 2.°N±1.°×12.°6E±.°, h45km±2km, M5.6/139, mB6.0/121, mb5.8/139, MLv5.8/23, Mw5.8/153, Mw(mB)5.7/121, MwMwp5.6/113, Mwp5.7/113*

*GCMT **16** 10:19:19.3±0.1, 1.°80N±0.°01×126.°16E, h27km, MW5.9/155, Moment Tensor Solution. s152,c326; s155,c500; Duration: 2s1 Moment tensor: Scale 10^{18}Nm; M_{rr}0.67±.01; $M_{\theta\theta}$0.01±.00; $M_{\phi\phi}$-0.67±.00; $M_{r\theta}$-0.16±.01; $M_{\theta\phi}$-0.20±.00; $M_{r\phi}$-0.28±.01; Best double couple: $M_0$0.76800×10^{18} NP1:ϕs8.00000°, δ34.00000°, λ78.00000°. NP2:ϕs202.00000°, δ57.00000°, λ98.00000°. Principal axes: T 0.7420, Plg76.0000°, Azm135.0000°; N 0.0500, Plg6.0000°, Azm18.0000°; P -0.7930, Plg12.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 16 10:19:14.5±0.3, 1.°62N±0.°02×126.°32E±0.°03, h33km±1km, h33km:pP-P, n1686, σ1s83/1575, mb5.8/348, MS5.4/339, 85C-53D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.34	129	Pn	Pn	10 19 35.7	-1.3
TNTI	Ternate	1.34	129	P	Pn	10 19 36.5	-0.5
SGSI	Sangihe	2.20	339	P	Pn	10 19 48.2	-0.6
KMSI	Cibinong	2.56	246	P	Pn	10 19 55.0	+1.3
SANI	Sanana	3.66	185	P	Pn	10 20 08.6	-0.3
SANI	Sanana	3.66	185	P	Pn	10 20 09.6	+0.8
SANI	Sanana	3.66	185	S	Sn	10 20 52.7	+1.8
SANI	Sanana	3.66	185	P	Pn	10 20 08.8	0.0
LUWI	Luwuk	4.42	233	P	Pn	10 20 21.4	+2.0
LUWI	Luwuk	4.42	233		Pn	10 20 20.5	+1.2
LUWI	Luwuk	4.42	233	P	Pn	10 20 22.7	+3.3
LUWI	Luwuk	4.42	233	P	Pn	10 20 22.0	+2.6
MRSI	Marisa	4.52	256	P	Pn	10 20 22.9	+2.1
NLAI	Namlea	4.89	171	P	Pn	10 20 27.3	+1.6
APSI	Ampana	5.30	242	P	Pn	10 20 34.9	+3.4
DAV	Davao City (W)	5.47	352	Pn	Pn	10 20 31.8	-2.0
	57nm,0.3s,baz=76,slow=4.4,SNR=4.8						
DAV				Sn	Sn	10 21 35.8	+0.2
	107nm,0.3s,baz=153,slow=19,SNR=3.6						
DAV	Davao City (W)	5.47	352	P	Pn	10 20 37.5	+3.7
DAV				P	Pn	10 20 37.5	+3.7
DAV				S	Sn	10 21 42.0	+6.5
DAV				S	Sn	10 21 42.0	+6.5
DAV	Davao City (W)	5.47	352	P	Pn	10 20 36.9	+3.1
SWI	Sorong	5.52	116	P	Pn	10 20 36.1	+1.7
	9μm462nm,1.0s						
TOLI2	Tolitoli	5.56	265		Pn	10 20 34.8	-0.3
TOLI2	Tolitoli	5.56	265	P	Pn	10 20 35.6	+0.6
	2μm,0.7s						
TOLI2	Tolitoli	5.56	265	S	Sn	10 21 41.5	+3.6
	2μm,0.7s						
MSAI	Masohi	5.58	152	P	Pn	10 20 39.0	+3.8
	5.0nm62μm18μm1μm,1.1s						
AAI	Ambon	5.59	160	P	Pn	10 20 35.8	+0.4
	3.5nm37μm9μm806nm,0.9s						
MPSI	Mapaga	6.55	259	P	Pn	10 20 52.5	+3.9
KDI	Kendari	6.66	214	P	Pn	10 20 52.6	+2.5
PCI	Palu	6.95	249	P	Pn	10 20 58.1	+4.0
BNDI	Bandanaira	7.07	150	P	Pn	10 20 57.4	+1.6
BNDI	Bandanaira	7.07	150	P	Pn	10 20 58.2	+2.4
	3.4nm37μm13μm1μm,1.0s						
FAKI	Fak Fak	7.44	127		Pn	10 21 02.1	+1.2
FAKI	Fak Fak	7.44	127	P	Pn	10 21 04.1	+3.2
	419nm,0.8s						
FAKI	Fak Fak	7.44	127	P	Pn	10 21 04.5	+3.6
	1.6nm47μm6μm420nm,0.8s						
TTSI	Tana Toraja	7.98	235	P	Pn	10 21 10.3	+2.0
BBSI	Bau Bau	7.99	208	P	Pn	10 21 09.5	+1.1
	18μm12μm2μm,1.1s						
RKPI	Ransiki, Papua	8.45	112	P	Pn	10 21 16.3	+1.6
	8μm332nm,1.0s						
MYLDM	Lahad Datu	8.57	295		Pn	10 21 18.4	+2.0
MYLDM	Lahad Datu	8.57	295	P	Pn	10 21 19.2	+2.8
	5μm,1.5s						
SPSI	Sidrap Palu	8.58	230	P	Pn	10 21 17.3	+0.8
	35μm16μm1μm,1.0s						
BNSI	Bone	8.62	226	P	Pn	10 21 17.9	+0.9
SGKI	Sangatta, Kali	8.97	256	P	Pn	10 21 20.4	-1.5
KMPI	Kaimana, Papua	9.05	125	P	Pn	10 21 24.4	+1.4
	12μm712nm,1.4s						
BKSI	Bulukumba	9.27	222	P	Pn	10 21 28.0	+2.1
	22μm7μm782nm,1.0s						
KAPI	Kappang	9.30	225	Pn	Pn	10 21 28.8	+2.5
	32nm,0.3s,baz=18,slow=7.8,SNR=32						
KAPI				Sn	Sn	10 23 15.6	+5.7
	10nm,0.3s,baz=211,slow=22,SNR=1.3						
KAPI	Kappang	9.30	225		Pn	10 21 25.8	-0.6
KAPI	Kappang	9.30	225	P	Pn	10 21 29.6	+3.2
KAPI				P	Pn	10 21 29.6	+3.2
KAPI				S	Sn	10 23 13.4	+3.6
KAPI				S	Sn	10 23 13.4	+3.6
KAPI	Kappang	9.30	225	P	Pn	10 21 29.3	+2.9
	384nm,1.5s						
KAPI	Kappang	9.30	225	*ce*P	Pn	10 21 27.9	+1.5
KAPI				pmax	pmax		
	comp=Z,221nm,0.6s						
KAPI				MLR	MLR		
	comp=Z,5μm,16.0s						
BSSI	Bau Bau, Buton	9.66	217	P	Pn	10 21 33.8	+2.5
BKSI	Balikpapan	9.85	253		Pn	10 21 33.1	-0.8
BKB	Balikpapan	9.85	253	P	Pn	10 21 38.1	+4.2
	comp=Z,1μm,0.9s						
BKB	Balikpapan	9.85	253	P	Pn	10 21 37.1	+3.2
	comp=Z,12μmcomp=Z,1μm,0.8s						
I39PW	PALAU INFRASON	10.09	54	I	I	11 22 26.7	
	baz=240,slow=286,SNR=1.8						
BAKI	Biak	10.18	106	P	Pn	10 21 41.6	+3.2
	comp=Z,34μmcomp=Z,2μm,1.2s						
MMRI	Maumere	10.97	202		Pn	10 21 48.0	-1.2
MMRI	Maumere	10.97	202	P	Pn	10 21 52.5	+3.2
	comp=Z,318nm,1.2s						
MMRI	Maumere	10.97	202	P	Pn	10 21 53.8	+4.5
	comp=Z,10μmcomp=Z,4μmcomp=Z,228nm,0.8s						
EDFI	Ende, Flores	11.29	204	P	Pn	10 21 55.7	+2.0
	comp=Z,11μmcomp=Z,4μmcomp=Z,245nm,1.0s						
SOEI	Soe	11.48	190	P	Pn	10 22 00.4	+4.1
SOEI	Soe	11.48	190		Pn	10 21 56.4	+0.1
SOEI	Soe	11.48	190	P	Pn	10 21 57.2	+0.8
	comp=Z,1μm,1.1s						
SOEI	Soe	11.48	190	P	Pn	10 21 57.9	+1.5
	comp=Z,13μmcomp=Z,11μmcomp=Z,1μm,1.0s						
MTKI	Muara Teweh, K	11.70	258	P	Pn	10 22 02.4	+3.1
	comp=Z,513nm,1.8s						
BATI	Baumata	12.04	193	Pn	Pn	10 22 08.6	+4.6
	comp=Z,14nm,0.3s,baz=308,slow=2.3,SNR=19						
BATI				LR	LR	10 27 52.2	
	comp=Z,10μm,21.5s,baz=2.5,slow=43						
BATI	Baumata	12.04	193	P	Pn	10 22 08.7	+4.7
	comp=Z,12μmcomp=Z,5μmcomp=Z,437nm,0.7s						
BBKI	Banjar Baru	12.54	246	P	Pn	10 22 14.2	+3.5
	comp=Z,504nm,1.9s						
WSI	Waingapu	12.71	208	P	Pn	10 22 16.6	+3.4
	comp=Z,12μmcomp=Z,13μmcomp=Z,702nm,1.2s						
SMPI	Sarmi	12.89	106	P	Pn	10 22 19.3	+3.7
	comp=Z,28μmcomp=Z,10μmcomp=Z,418nm,1.4s						
BASI	Baing, Sumba	13.07	206	P	Pn	10 22 21.5	+3.4
	comp=Z,10μmcomp=Z,12μmcomp=Z,721nm,1.6s						
WBSI	Waikabubak, Su	13.14	212	P	P	10 22 24.5	-4.2
	comp=Z,11μmcomp=Z,5μmcomp=Z,459nm,0.9s						
PLAI	Plampang	13.42	219	P	Pn	10 22 25.7	+2.9
PLAI	Plampang	13.42	219	P	P	10 22 28.4	-3.4
TGY	Tagaytay City	13.50	337	Pn	Pn	10 22 26.5	+2.5
	comp=Z,38nm,0.3s,baz=347,slow=5.8,SNR=8.5						
TGY				LR	LR	10 28 06.0	
	comp=Z,14μm,21.0s,baz=157,slow=40						
TWSI	Taliwang, Sumb	13.94	222	P	P	10 22 34.3	-3.3
	comp=Z,13μmcomp=Z,7μmcomp=Z,677nm,0.8s						
SBUM	Sibu	14.12	274		Pn	10 22 32.9	+0.6
SBUM	Sibu	14.12	274	P	Pn	10 22 35.1	+2.8
	comp=Z,746nm,1.5s						
GENI	Genyem	14.46	107	P	Pn	10 22 39.0	+1.9
	comp=Z,647nm,1.0s						
GENI	Genyem	14.46	107	P	Pn	10 22 38.9	+1.9
	comp=Z,24μmcomp=Z,11μmcomp=Z,638nm,1.0s						
AUDHS	Darwin High Sc	14.66	162	P	Pn	10 22 39.4	-0.4
	comp=Z,421nm,1.1s						
DRS	Darwin Rock St	14.68	162	P	Pn	10 22 39.1	-0.8
	comp=Z,452nm,0.9s						
SRBI	Singaraja	14.68	229	P	Pn	10 22 43.3	-2.5
	comp=Z,13μmcomp=Z,7μmcomp=Z,372nm,1.1s						
JAY	Jayapura	14.95	106	Pn	Pn	10 22 44.6	+0.9
	comp=Z,1.1nm,0.3s,baz=271,slow=8.3,SNR=5.1						
JAY				Sn	Sn	10 25 24.1	-4.4
	baz=151,slow=19						
JAY				LR	LR	10 28 07.7	
	comp=Z,18μm,20.6s,baz=308,slow=36						
JAY	Jayapura	14.95	106	P	P	10 22 46.2	-2.7
	comp=Z,17μmcomp=Z,4μmcomp=Z,260nm,0.8s						
KMMI	Kalianget	15.04	235	P	P	10 22 48.5	-1.3
	comp=Z,16μmcomp=Z,10μmcomp=Z,807nm,0.9s						
DNP	Denpasar	15.07	227	P	P	10 22 48.5	-1.7
MTN	Manton Dam	15.14	162	P	Pn	10 22 44.6	-1.5
MTN	Manton Dam	15.14	162		Pn	10 22 44.2	-1.9
ABJI	Asem Bagus	15.26	232	P	P	10 22 50.7	-1.5
	comp=Z,15μmcomp=Z,7μmcomp=Z,454nm,0.9s						
KDU	Kakadu	15.47	157	P	Pn	10 22 47.7	-2.7
JAGI	Jajag, Banyuwa	15.73	230		Pn	10 22 54.5	+0.6
JAGI	Jajag, Banyuwa	15.73	230	P	P	10 22 56.9	-0.6
	comp=Z,1μm,1.1s						
JAGI	Jajag, Banyuwa	15.73	230	P	P	10 22 56.3	-1.2
	comp=Z,12μmcomp=Z,11μmcomp=Z,1μm,1.1s						
BLJI	Banyuglugur	15.74	234	P	P	10 22 56.6	-0.9
	comp=Z,13μmcomp=Z,8μmcomp=Z,606nm,1.4s						
GRJI	Gresik	16.21	238	P	P	10 23 04.0	+1.2
	comp=Z,14μmcomp=Z,8μmcomp=Z,458nm,0.9s						
TBJI	Tambak Boyo	16.70	240	P	P	10 23 08.7	+0.5
	comp=Z,13μmcomp=Z,9μmcomp=Z,468nm,0.8s						
SZP	Santa	16.85	340	P	P	10 23 10.4	+0.5
	comp=Z,510nm,0.8s						
MMPI	Merauke	17.23	126	P	P	10 23 15.0	+0.9
	comp=Z,15μmcomp=Z,1μm,1.0s						
NGJI	Ngawi	17.30	239	P	P	10 23 14.7	-0.2
	comp=Z,8μmcomp=Z,478nm,1.0s						
KNRA	Kununurra	17.35	172	P	Pn	10 23 13.0	-1.4
KNRA	Kununurra	17.35	172	P	Pn	10 23 12.9	-1.4
PCJI	Pacitan	17.97	237	P	P	10 23 22.5	+0.2
	comp=Z,8μmcomp=Z,840nm,0.8s						
UGM	Wanagama	18.38	239	P	Pn	10 23 27.0	0.0
UGM	Wanagama	18.38	239	P	Pn	10 23 29.1	+2.0
	comp=Z,300nm,1.1s						
UGM	Wanagama	18.38	239	S	S	10 26 57.3	+2.0
	comp=Z,300nm,1.1s						
UGM	Wanagama	18.38	239	P	Pn	10 23 28.9	+1.8
	comp=Z,5μmcomp=Z,296nm,1.1s						
YOGI	Yogyakarta	18.53	239	P	Pn	10 23 30.5	+1.7
	comp=Z,8μmcomp=Z,7μmcomp=Z,599nm,0.9s						
TPI	Tanjungpandan	19.16	257	P	P	10 23 35.7	+0.3
KPJI	Karang Pucung	19.50	243	P	P	10 23 39.3	+0.2
	comp=Z,14μmcomp=Z,4μmcomp=Z,319nm,0.8s						
FITZ	Fitzroy Crossi	19.60	182	P	P	10 23 38.2	-1.9
FITZ	Fitzroy Crossi	19.60	182	P	P	10 23 40.0	-0.1
	comp=Z,4.6nm,0.3s,baz=12,slow=10.0,SNR=41						
FITZ				S	S	10 27 17.9	-1.9
	comp=Z,18nm,0.8s,baz=20,slow=22,SNR=1.4						
	comp=Z,114nm,0.8s						
FITZ	Fitzroy Crossi	19.60	182	P	P	10 23 38.5	-1.6
FITZ	Fitzroy Crossi	19.60	182	P	P	10 23 38.9	-1.3
	comp=Z,326nm,1.0s						
DLV	Lat	20.45	301	P	Pn	10 23 51.1	-0.8
DLV				IAmb	IAmb	10 23 59.3	
	comp=Z,354nm,1.1s						
DLV	Lat	20.45	301	P	Pn	10 23 51.8	-0.1
	comp=Z,315nm,1.4s						
PPBI	Pangkal Pinang	20.53	260	P	Pn	10 23 51.5	-1.2
BBJI	Bungbulang	20.70	244	P	P	10 23 52.7	+0.5
	comp=Z,289nm,1.0s						
BBJI	Bungbulang	20.70	244	S	S	10 27 43.9	+2.0
	comp=Z,289nm,1.0s						
CNJI	Cibinong	21.10	245	P	P	10 23 57.4	+0.9
DBJI	Dramaga	21.16	247	P	P	10 23 59.7	+2.6
MANU	Manus Island	21.35	100	P	P	10 23 59.3	+0.1
SBJI	Serang	21.57	249	P	P	10 24 04.8	+3.2
	comp=Z,12μmcomp=Z,365nm,0.8s						
TWGBT	Beinan	21.68	347	P	P	10 24 00.7	-1.9
TWG	Pinlang	21.68	347	P	P	10 23 59.4	-3.2
TPRI	Tanjung Pinang	21.80	268	P	P	10 24 06.0	+2.0
	comp=Z,14μmcomp=Z,248nm,0.8s						
DSRI	Dabo	21.84	265	P	P	10 24 07.6	+3.1
	comp=Z,16μmcomp=Z,8μmcomp=Z,421nm,1.6s						
GUMO	Guam	21.87	56	P	P	10 24 04.4	-0.3
	comp=Z,93nm,0.7s,baz=356,slow=4.1,SNR=7.0						
GUMO				LR	LR	10 32 23.6	
	comp=Z,5μm,19.1s,baz=230,slow=36						
	comp=Z,93nm,0.7s						
GUMO	Guam	21.87	56	P	P	10 24 04.7	0.0
GUMO				IAmb	IAmb	10 24 11.8	
	comp=Z,626nm,1.4s						
GUMO	Guam	21.87	56	P	P	10 24 06.7	+2.0
GUMO	Guam	21.87	56	P	P	10 24 04.7	0.0
GUMO				pmax	pmax		
	comp=Z,627nm,1.4s						
GUMO				MLR	MLR		
	comp=Z,6μm,18.0s						
PMBI	Palembang	22.01	258	P	P	10 24 07.0	+0.7
PMBI				IAmb	IAmb	10 24 20.0	
	comp=Z,675nm,1.0s						
PMBI				IAMs_20	IAMs_20	10 33 28.2	
	comp=Z,12μm,21.0s						
PMBI	Palembang	22.01	258	P	P	10 24 10.0	+3.7
PMBI	Palembang	22.01	258	P	P	10 24 10.2	+3.9
	comp=Z,13μmcomp=Z,923nm,1.2s						
BLSI	Bandar Lampung	22.16	252	P	P	10 24 10.5	+2.5
	comp=Z,8μmcomp=Z,235nm,1.1s						
YULB	Yu-li	22.19	348	P	P	10 24 04.5	-3.6
YULB				IAMs_20	IAMs_20	10 33 51.4	
	comp=Z,14μm,21.0s						
YULB	Yu-li	22.19	348	P	P	10 24 09.6	+1.5
TPUB	Ta-pu	22.25	346	IAMs_20	IAMs_20	10 33 35.0	
	comp=Z,18μm,22.0s						
TPUB	Ta-pu	22.25	346	P	P	10 24 07.2	-1.6
KLI	Kotabumi	22.39	253	P	P	10 24 13.6	+3.2
	comp=Z,10μmcomp=Z,11μmcomp=Z,552nm,0.7s						
BTDF	Bukit Timah Da	22.54	270	P	P	10 24 14.0	+2.0
SSLB	Suanglung	22.64	347	P	P	10 24 10.1	-2.9
SSLB				IAmb	IAmb	10 24 17.4	
	comp=Z,406nm,1.2s						
SSLB	Suanglung	22.64	347	P	P	10 24 11.3	-1.7
WB0	Warramunga Arr	22.68	160	P	P	10 24 11.1	-2.3
COEN	Coen	22.77	133	P	P	10 24 11.9	-2.5
COEN	Coen	22.77	133	P	P	10 24 12.5	-1.9
COEN	Coen	22.77	133	P	P	10 24 12.3	-2.1
WRAB	Tennant Creek	22.82	160	P	P	10 24 12.6	-2.3
WRAB				IAmb	IAmb	10 24 22.6	
	comp=Z,437nm,0.8s						
WRAB	Tennant Creek	22.82	160	P	P	10 24 12.3	-2.6
WRAB	Tennant Creek	22.82	160	*c i*P	P	10 24 12.3	-2.6
WRAB				pmax	pmax		
	comp=Z,331nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,6μm,20.0s						
WRA	Warramunga Arr	22.82	160	P	P	10 24 12.6	-2.3
	comp=Z,258nm,0.9s,baz=342,slow=10,SNR=71						
WRA				S	S	10 28 20.0	-2.2
	comp=Z,48nm,1.0s,baz=343,slow=19,SNR=11						
WB2	Warramunga Arr	22.83	160	P	P	10 24 12.8	-2.1
NACB	Ninganchiao	22.89	349	P	P	10 24 16.0	+0.5
WR8	Warramunga Arr	22.89	160	P	P	10 24 13.2	-2.4
WR8				IAmb	IAmb	10 24 21.1	
	comp=Z,429nm,0.9s						
WR0	Warramunga Arr	22.91	160	P	P	10 24 13.5	-2.3
WR0				IAmb	IAmb	10 24 21.3	
	comp=Z,452nm,0.9s						
KASI	Kota Agung	22.92	252	P	P	10 24 16.6	+0.6
	comp=Z,7μmcomp=Z,3μmcomp=Z,362nm,0.7s						
YOJ	Yonaguni jima	22.94	352	P	P	10 24 16.1	+0.1
YOJ				IAmb	IAmb	10 24 20.6	
	comp=Z,244nm,0.9s						
YOJ	Yonaguni jima	22.94	352	P	P	10 24 18.1	+2.1
YOJ	Yonaguni jima	22.94	352	P	P	10 24 16.1	+0.1
YOJ				pmax	pmax		
	comp=Z,244nm,0.9s						
MDSI	Maura Dua	22.94	255	P	P	10 24 16.0	-0.2
	comp=Z,3μmcomp=Z,265nm,1.0s						
JMJ	Miyako jima 2	23.08	358	P	P	10 24 19.4	+1.9
LWLI	Liwa	23.20	253	P	P	10 24 21.5	+2.6
YHNB	Yeheng	23.41	349	IAmb	IAmb	10 24 32.3	
	comp=Z,221nm,0.9s						
YHNB				IAMs_20	IAMs_20	10 34 31.8	
	comp=Z,16μm,22.0s						
YHNB	Yeheng	23.41	349	P	P	10 24 20.5	-0.4
LHSI	Lahat	23.42	257	P	P	10 24 24.3	+3.3
	comp=Z,10μmcomp=Z,6μmcomp=Z,410nm,2.1s						
PMG	Port Moresby	23.47	118	LR	LR	10 36 01.5	
	comp=Z,10μm,18.5s,baz=334,slow=43						
PMG	Port Moresby	23.47	118	P	P	10 24 20.4	-1.0
PMG				IAmb	IAmb	10 24 23.3	
	comp=Z,441nm,1.6s						
PMG	Port Moresby	23.47	118	P	P	10 24 21.1	-0.3
PMG

GZH S **S** **10 29 03.6 +10**
GZH pmax pmax
comp=Z,220nm,1.0s
GZH LR LR
comp=Z,6µm,25.1s
GZH LR LR
comp=Z,6µm,21.0s
GZH LR LR
comp=Z,11µm,21.5s
KRJI Kerinci 25.13 262 P **P** **10 24 39.5 +2.6**
JOW Kunigami 25.14 4 P **P** **10 24 36.4 -0.3**
comp=Z,262nm,0.8s,baz=213,slow=8.5,SNR=37
comp=Z,262nm,0.8s
JOW Kunigami 25.14 4 IAmb IAmb 10 24 40.8
comp=Z,298nm,0.8s
JOW Kunigami 25.14 4 P **P** **10 24 38.1 +1.4**
BKNI Bangkinang 25.31 267 P **P** **10 24 38.4 0.0**
BKNI Bangkinang 25.31 267 P **P** **10 24 41.6 +3.1**
BKNI Bangkinang 25.31 267 P **P** **10 24 43.7 +5.2**
IPM Ipoh 25.42 277 P **P** **10 24 39.7 +0.3**
IPM IAmb IAmb 10 24 50.7
comp=Z,279nm,1.0s
IPM Ipoh 25.42 277 P **P** **10 24 41.9 +2.5**
QIS Mount Isa 25.59 150 P **P** **10 24 39.4 -1.6**
comp=Z,219nm,1.1s,comp=Z,0.0nm
QIS Mount Isa 25.59 150 P **P** **10 24 40.1 -0.9**
KULM Kulim 25.88 279 P **P** **10 24 43.1 -0.5**
KULM IAmb IAmb 10 25 09.5
comp=Z,288nm,1.4s
KULM Kulim 25.88 279 P **P** **10 24 46.3 +2.7**
PDSI Padang 25.98 265 P **P** **10 24 44.7 +0.1**
comp=Z,7µmcomp=Z,150nm,1.2s
PPI Padang Panjang 26.00 266 P **P** **10 24 46.0 +1.3**
comp=Z,7µmcomp=Z,3µmcomp=Z,180nm,1.7s
PPI pP **sP** **10 24 56.8 -0.7**
comp=Z,7µmcomp=Z,3µmcomp=Z,180nm,1.7s
ASAR Alice Springs 26.19 164 P **P** **10 24 46.0 -0.4**
comp=Z,46nm,0.7s,baz=350,slow=6.6,SNR=136
ASAR PcP **PcP** **10 28 14.6 +1.6**
comp=Z,31nm,0.7s,baz=351,slow=2.0,SNR=9.5
ASAR S **S** **10 29 20.2 +3.8**
comp=Z,21nm,1.0s,baz=345,slow=18,SNR=5.6
ASAR PKiKP **PKiKP** **10 35 53.4 +0.9**
comp=Z,1.3nm,0.8s,baz=263,slow=0.9,SNR=4.0
comp=Z,46nm,0.7s
ASAR Alice Springs 26.19 164 P **P** **10 24 44.6 -1.7**
AUALC St Philip's Co 26.21 164 P **P** **10 24 45.5 -1.0**
MTSU Mount Surprise 26.44 139 P **P** **10 24 47.1 -1.6**
comp=Z,92nm,0.8s
MTSU Mount Surprise 26.44 139 P **P** **10 24 48.1 -0.6**
WRKA Warakurna 26.57 176 P **P** **10 24 48.8 -0.9**
comp=Z,81nm,1.1s,comp=Z,0.0nm
PPSI Pulau Pagai 26.66 261 P **P** **10 24 53.2 +2.5**
comp=Z,5µmcomp=Z,467nm,0.9s
MNSI Mandailing Nat 26.75 269 P **P** **10 24 52.4 +0.9**
comp=Z,142nm,1.1s
MNSI pP **sP** **10 25 03.4 -0.8**
comp=Z,142nm,1.1s
GIRL Giralia 26.84 205 P **P** **10 24 52.7 +0.5**
comp=Z,327nm,1.0s,comp=Z,0.0nm
GIRL Giralia 26.84 205 P **P** **10 24 51.6 -0.5**
GIRL IAmb IAmb 10 24 56.4
comp=Z,244nm,0.8s
SISI Saibi 27.39 264 P **P** **10 24 58.0 +0.8**
comp=Z,4µmcomp=Z,3µmcomp=Z,307nm,0.8s
RPSI Rantau Prapat 27.40 273 P **P** **10 24 55.6 -1.7**
RPSI IAmb IAmb 10 25 02.7
comp=Z,187nm,1.0s
PSI Prapat 27.40 273 LR LR 10 37 02.2
comp=Z,5µm,20.8s,baz=98,slow=39
PSI Prapat 27.40 273 P **P** **10 24 57.6 +0.1**
PSI Prapat 27.40 273 P **P** **10 24 55.6 -1.9**
PSI pmax pmax
comp=Z,187nm,1.0s
PBSI Pulau Batu 28.09 267 P **P** **10 25 04.5 +1.0**
comp=Z,5µmcomp=Z,6µmcomp=Z,87nm,1.0s
GULI GuiLin 28.12 328 P **P** **10 25 00.8 -2.9**
GULI S S 10 29 38.3 -8.5
GULI pmax pmax
comp=Z,32nm,1.1s
GULI LR LR
comp=Z,6µm,23.9s
GULI LR LR
comp=Z,3µm,23.3s
GULI LR LR
comp=Z,10µm,22.2s
KCSI Kotacane, Aceh 28.58 274 P **P** **10 25 09.2 +1.3**
GSI Gunungsitoli 28.74 270 P **P** **10 25 07.9 -1.4**
GSI IAmb IAmb 10 25 14.4
comp=Z,210nm,0.8s
GSI Gunungsitoli 28.74 270 P **P** **10 25 08.6 -0.7**
GSI Gunungsitoli 28.74 270 P **P** **10 25 09.0 -0.3**
comp=Z,7µmcomp=Z,3µmcomp=Z,323nm,0.9s
TV1H Townsville Har 28.90 137 P **P** **10 25 10.8 +0.2**
MEEK Meekatharra 29.06 194 P **P** **10 25 10.5 -1.4**
comp=Z,182nm,0.8s,comp=Z,0.0nm
MEEK Meekatharra 29.06 194 P **P** **10 25 11.2 -0.8**
CTA Charters Tower 29.11 139 P **P** **10 25 12.4 -0.1**
comp=Z,2.6nm,1.6s,comp=Z,0.0nm
CTA Charters Tower 29.11 139 LR LR 10 38 59.4
comp=Z,134nm,18.5s,baz=308,slow=41
CTA Charters Tower 29.11 139 P **P** **10 25 12.2 -0.3**
CTAO Charters Tower 29.11 139 P **P** **10 25 11.6 -0.9**
CTAO Charters Tower 29.11 139 P **P** **10 25 12.2 -0.3**
CTAO Charters Tower 29.11 139 P **P** **10 25 11.6 -0.9**
CTAO pmax pmax
comp=Z,81nm,1.1s
CTAO MLR MLR
comp=Z,6µm,19.0s
SLVN Son La 29.35 314 P **P** **10 25 14.2 -0.5**
SLVN IAMs_20 IAMs_20 10 37 56.0
comp=Z,7µm,20.0s
CNSH ChangSha 29.36 335 P **P** **10 25 14.9 +0.3**
CNSH S **S** **10 30 06.8 +0.7**
CNSH pmax pmax
comp=Z,35nm,1.0s
CNSH LR LR
comp=Z,5µm,18.3s
CNSH LR LR
comp=Z,7µm,19.9s
CNSH LR LR
comp=Z,9µm,21.7s
LHMI Lhok Sumawe 29.54 278 P **P** **10 25 18.9 +2.5**
LHMI Lhok Sumawe 29.54 278 P **P** **10 25 18.4 +2.0**
comp=Z,5µmcomp=Z,185nm,1.2s
JCJ Chichijima 29.55 30 P P 10 25 08.9 -7.4
comp=Z,239nm,0.6s,baz=304,slow=8.0,SNR=12
JCJ LR LR 10 35 56.9
comp=Z,4µm,21.4s,baz=278,slow=34
JCJ Chichijima 29.55 30 P **P** **10 25 16.6 +0.2**
SSE Sheshan 29.72 351 P **P** **10 25 18.8 +1.1**
SSE S **S** **10 30 15.1 +3.4**
SSE pmax pmax
comp=Z,23nm,1.1s
SSE pmax pmax
comp=Z,230nm,8.1s
SSE LR LR
comp=Z,2µm,18.7s
SSE LR LR
comp=Z,1µm,19.6s
SNSI Sinabang, Aceh 29.99 272 P **P** **10 25 22.8 +2.4**
comp=Z,5µmcomp=Z,3µmcomp=Z,126nm,1.0s
MLSI Meulaboh, Aceh 29.99 276 P **P** **10 25 21.2 +0.8**
comp=Z,144nm,0.8s
WHN Wuhan 30.93 340 P **P** **10 25 29.4 +1.0**
WHN pP **sP** **10 25 38.5 -2.8**
WHN PcP **PcP** **10 28 26.5 +1.9**
WHN S **S** **10 30 23.3 -7.4**
WHN pmax pmax
comp=Z,1µm,3.5s
WHN LR LR
comp=Z,12µm,16.9s
WHN LR LR
comp=Z,11µm,18.1s
WHN LR LR
comp=Z,29µm,23.1s
NJ2 Nanjing 31.08 348 ⇑P **P** **10 25 31.5 +1.7**
NJ2 pP **pwP** **10 25 39.0 -1.9**
NJ2 sP **sP** **10 25 43.5 +0.9**
NJ2 PcP **PcP** **10 28 26.4 +1.5**
NJ2 S **S** **10 30 35.8 +2.7**
NJ2 pmax pmax
comp=Z,21nm,0.7s
NJ2 pmax pmax
comp=Z,330nm,3.8s
NJ2 LR LR
comp=Z,2µm,19.9s
NJ2 LR LR
comp=Z,4µm,20.8s
NJ2 LR LR
comp=Z,4µm,19.9s
GYA Guiyang 31.10 324 ⇓P **P** **10 25 32.8 +2.6**
GYA S **S** **10 30 33.9 +0.1**
GYA pmax pmax
comp=Z,53nm,1.0s
GYA pmax pmax
comp=Z,500nm,3.1s
GYA LR LR
comp=Z,4µm,28.1s
GYA LR LR
comp=Z,4µm,23.5s
GYA LR LR
comp=Z,8µm,20.7s
JNU Nakatsue 31.63 7 P **P** **10 25 34.2 -0.4**
comp=Z,135nm,1.0s,baz=172,slow=3.3,SNR=48
JNU LR LR 10 41 04.4
comp=Z,2µm,19.0s,baz=193,slow=42
comp=Z,135nm,1.0s
JNU Nakatsue 31.63 7 IAmb IAmb 10 25 37.3
comp=Z,194nm,1.1s
JNU Nakatsue 31.63 7 P **P** **10 25 34.6 -0.1**
CMAR Chiang Mai Arr 31.64 304 P **P** **10 25 36.0 +1.1**
comp=Z,16nm,0.8s,baz=124,slow=7.3,SNR=38
CMAR PcP **PcP** **10 28 28.8 +2.1**
comp=Z,8.8nm,0.8s,baz=175,slow=1.4,SNR=7.9
CMAR ScP **ScP** **10 32 11.4 +3.7**
comp=Z,1.2nm,0.3s,baz=146,slow=2.1,SNR=8.3
comp=Z,16nm,0.8s
CMAR Chiang Mai Arr 31.64 304 P **P** **10 25 34.9 0.0**
CHTO Chiang Mai 31.81 304 P **P** **10 25 36.0 -0.4**
CHTO IAmb IAmb 10 25 41.5
comp=Z,69nm,0.7s
CHTO Chiang Mai 31.81 304 P **P** **10 25 35.4 -1.0**
CHTO S **S** **10 30 41.6 -3.3**
CHTO Chiang Mai 31.81 304 P **P** **10 25 36.4 0.0**
CHTO Chiang Mai 31.81 304 P **P** **10 25 36.0 -0.4**
CHTO pmax pmax
comp=Z,69nm,0.7s
CHTO MLR MLR
comp=Z,6µm,22.0s
MORW Morawa 32.06 197 P **P** **10 25 37.7 -0.8**
comp=Z,163nm,1.1s,comp=Z,0.0nm
MORW Morawa 32.06 197 P **P** **10 25 37.4 -1.1**
MORW IAmb IAmb 10 25 42.0
comp=Z,235nm,1.2s
MORW Morawa 32.06 197 P **P** **10 25 37.8 -0.7**
FORT Forrest 32.26 177 P **P** **10 25 39.4 -0.8**
comp=Z,120nm,0.7s,comp=Z,0.0nm
FORT Forrest 32.26 177 P **P** **10 25 38.7 -1.5**
FORT IAmb IAmb 10 25 50.5
comp=Z,86nm,0.7s
INKA Innaminka 32.32 156 P **P** **10 25 39.9 -0.8**
COCO West Island 32.34 244 IAMs_20 IAMs_20 10 40 26.7
comp=Z,6µm,19.0s
KMI Kunming 32.62 318 P **P** **10 25 47.0 +3.3**
KMI S **S** **10 30 52.0 -5.7**
KMI pmax pmax
comp=Z,67nm,1.2s
KMI LR LR
comp=Z,5µm,22.4s
KMI LR LR
comp=Z,8µm,22.5s
KMI LR LR
comp=Z,13µm,23.4s
ENH Enshi 32.67 332 IAMs_20 IAMs_20 10 39 55.2
comp=Z,8µm,21.0s
ENH Enshi 32.67 332 P **P** **10 25 41.9 -2.0**
JMN Monobe 32.72 12 IAmb IAmb 10 25 47.2
comp=Z,175nm,1.0s
JMN Monobe 32.72 12 P **P** **10 25 45.8 +1.6**
CMBY CAMPBELL BAY 32.73 280 IAMs_20 IAMs_20 10 46 28.6
comp=Z,3µm,17.2s
JTU Tsushima 32.87 5 P **P** **10 25 46.7 +1.3**
QLP Quilpie 32.94 150 P **P** **10 25 44.2 -2.0**
comp=Z,107nm,0.7s
QLP Quilpie 32.94 150 P **P** **10 25 45.0 -1.2**
KMBL Kambalda 33.07 187 P **P** **10 25 47.0 -0.3**
comp=Z,90nm,0.8s
BLDU Ballidu 33.34 195 P **P** **10 25 48.0 -1.6**
BLDU Ballidu 33.34 195 P **P** **10 25 48.7 -0.9**
JHJ Hachijo jima 2 33.79 21 LR LR 10 40 34.4
comp=Z,3µm,19.6s,baz=234,slow=38
KLBR Kellerberrin 34.01 193 P **P** **10 25 54.6 -0.9**
comp=Z,545nm,0.9s
KLBR P pP 10 25 55.1 -10
KLBR P pP 10 25 55.1 -10
KLBR Kellerberrin 34.01 193 P **P** **10 25 54.7 -0.8**
PZH PanZhiHua 34.21 318 P **P** **10 25 57.9 +0.5**
PZH sS **sS** **10 31 40.3 +3.1**
PZH pmax pmax
comp=Z,90nm,1.1s
PZH pmax pmax
comp=Z,390nm,4.7s
PZH LR LR
comp=Z,5µm,20.2s
PZH LR LR
comp=Z,6µm,21.4s
PZH LR LR
comp=Z,9µm,20.8s
AUNRC North Rockhamp 34.22 138 P **P** **10 25 56.8 -0.6**
TJN Taejon 34.60 1 P **P** **10 26 02.0 +1.5**
TJN Taejon 34.60 1⇓*e*P **P** **10 26 01.7 +1.2**
JSG Sagara 34.70 17 P **P** **10 26 04.0 +2.6**
MUN Mundaring 34.76 195 P **P** **10 26 00.7 -1.2**
comp=Z,125nm,0.8s,comp=Z,0.0nm
MUN Mundaring 34.76 195 P **P** **10 26 03.5 +1.5**
AUMAZ Mazenod Senior 34.84 195 P **P** **10 26 03.2 +0.6**
GD1S Gladstone Soft 34.98 138 P **P** **10 26 06.3 +2.3**
INU Inuyama 35.01 15 IAmb IAmb 10 26 06.5
comp=Z,231nm,1.0s
INU IAMs_20 IAMs_20 10 39 55.7
comp=Z,5µm,20.0s
INU Inuyama 35.01 15 P **P** **10 26 04.0 0.0**
LYN LuoYang 35.23 340 P **P** **10 26 05.6 -0.3**
LYN pP pP 10 26 13.8 -1.2
LYN sP sP 10 26 18.8 0.0
LYN PcP **PcP** **10 28 39.0 +2.5**
LYN S **S** **10 31 34.0 -3.4**
LYN sS sS 10 31 53.9 +1.4
LYN pmax pmax
comp=Z,65nm,0.7s
LYN pmax pmax
comp=Z,910nm,5.8s
LYN LR LR
comp=Z,4µm,19.9s
LYN LR LR
comp=Z,4µm,24.0s
LYN LR LR
comp=Z,10µm,27.5s
HNR Honiara 35.25 109 LR LR 10 39 57.3
comp=Z,4µm,20.2s,baz=279,slow=35
JGF Kuroka 35.33 16 P **P** **10 26 06.2 -0.7**
JGF IAmb IAmb 10 26 38.9
comp=Z,440nm,1.9s
JGF Kuroka 35.33 16 P **P** **10 26 06.7 -0.2**
NWAO Narrogin (SRO) 35.41 193 P **P** **10 26 07.2 -0.4**
NWAO Narrogin (SRO) 35.41 193 P **P** **10 26 07.1 -0.4**
NWAO IAmb IAmb 10 26 10.9
comp=Z,200nm,1.2s
NWAO Narrogin (SRO) 35.41 193 P **P** **10 26 08.7 +1.2**
NWAO S **S** **10 31 42.4 +2.0**
NWAO Narrogin (SRO) 35.41 193 P **P** **10 26 09.5 +1.9**
NWAO Narrogin (SRO) 35.41 193 P **P** **10 26 07.1 -0.5**
NWAO pmax pmax
comp=Z,200nm,1.2s
NWAO MLR MLR
comp=Z,3µm,22.0s
BBOO Buckleboo 35.46 166 P **P** **10 26 06.2 -1.8**
comp=Z,172nm,1.0s
BBOO Buckleboo 35.46 166 P **P** **10 26 06.8 -1.2**
BBOO IAmb IAmb 10 26 14.0
comp=Z,125nm,0.8s
BBOO Buckleboo 35.46 166 P **P** **10 26 07.1 -0.9**
TIA Tai'an 35.46 347 P **P** **10 26 06.6 -1.4**
TIA PcP **PcP** **10 28 39.6 +2.4**
TIA S **S** **10 31 38.0 -3.0**
TIA pmax pmax
comp=Z,34nm,0.7s
TIA pmax pmax
comp=Z,760nm,9.3s
TIA LR LR
comp=Z,2µm,18.9s
TIA LR LR
comp=Z,4µm,20.3s
TIA LR LR
comp=Z,4µm,23.4s
TNCH TengChong 35.52 313 P **P** **10 26 11.4 +2.6**
TNCH PP **PP** **10 27 32.1 +2.3**
TNCH S **S** **10 31 45.8 +3.3**
TNCH SS **SnSn** **10 34 06.5 +2.3**
TNCH pmax pmax
comp=Z,180nm,0.5s
TNCH LR LR
comp=Z,3µm,22.3s
TNCH LR LR
comp=Z,3µm,21.5s
TNCH LR LR
comp=Z,8µm,23.5s
KSAR Wonju Array Be 35.68 2 P **P** **10 26 10.4 +0.6**
KSAR Wonju Array Be 35.68 2 P **P** **10 26 10.4 +0.6**
INCN Inchon 35.69 0 P **P** **10 26 10.1 +0.2**
INCN IAmb IAmb 10 26 15.8
comp=Z,147nm,1.4s
INCN Inchon 35.69 0 P **P** **10 26 11.4 +1.5**
INCN Inchon 35.69 0 P **P** **10 26 12.0 +2.1**
INCN Inchon 35.69 0 P **P** **10 26 10.1 +0.2**
INCN pmax pmax
comp=Z,147nm,1.5s
INCN MLR MLR
comp=Z,4µm,21.0s
KSRS Korea Array 35.69 2 P **P** **10 26 10.3 +0.5**
comp=Z,19nm,0.6s,baz=181,slow=9.1,SNR=68
KSRS PcP **PcP** **10 28 37.9 +0.1**
comp=Z,6.4nm,1.0s,baz=185,slow=4.1,SNR=4.5
comp=Z,19nm,0.6s
KS19 Wonju Array Si 35.74 2 P **P** **10 26 10.4 +0.1**
KS19 IAmb IAmb 10 26 47.0
comp=Z,334nm,1.7s
AUHAR St Anne's Scho 35.90 195 P **P** **10 26 12.5 +0.8**
EIDS Eidsvold 35.98 140 P **P** **10 26 10.2 -2.4**
comp=Z,98nm,1.1s
EIDS Eidsvold 35.98 140 P **P** **10 26 09.7 -2.8**
EIDS Eidsvold 35.98 140 P **P** **10 26 10.1 -2.4**
WHYH Whyalla 36.06 164 P **P** **10 26 12.4 -0.7**
CD2 Chengdu 36.13 326 P **P** **10 26 15.3 +1.5**
CD2 pP sP 10 26 24.3 -2.4
CD2 sP pP 10 26 31.3 +8.4
CD2 PP **PnPn** **10 27 34.0 -1.7**
CD2 S **S** **10 31 48.0 -3.5**
CD2 sS sS 10 32 13.8 +7.2
CD2 pmax pmax
comp=Z,210nm,0.9s
CD2 pmax pmax
comp=Z,440nm,4.0s
CD2 LR LR
comp=Z,8µm,20.2s
CD2 LR LR
comp=Z,11µm,23.5s
CD2 LR LR
comp=Z,10µm,23.3s
XAN Xi'an 36.13 335 ⇑P **P** **10 26 11.8 -2.0**
XAN pP pP 10 26 21.5 -1.3
XAN S **S** **10 31 47.3 -4.1**
XAN SS **SnSn** **10 34 21.1 +2.5**
XAN pmax pmax
comp=Z,220nm,1.0s
XAN pmax pmax
comp=Z,770nm,4.1s
XAN LR LR
comp=Z,5µm,20.6s
XAN LR LR
comp=Z,4µm,18.4s
XAN LR LR
comp=Z,8µm,17.9s
STKA Stephens Creek 36.33 158 P **P** **10 26 13.7 -1.6**
comp=Z,661nm,0.8s,comp=Z,0.0nm
STKA Stephens Creek 36.33 158 P **P** **10 26 14.4 -1.0**
comp=Z,97nm,0.8s,baz=330,slow=9.0,SNR=48
comp=Z,97nm,0.8s
STKA Stephens Creek 36.33 158 P **P** **10 26 14.3 -1.1**
STKA Stephens Creek 36.33 158*ce*P **P** **10 26 13.8 -1.6**
MJAR Matsushiro Arr 36.45 16 P **P** **10 26 15.4 -1.0**
comp=Z,76nm,0.9s,baz=187,slow=7.6,SNR=100
MJAR PcP **PcP** **10 28 41.7 +1.6**
comp=Z,13nm,0.9s,baz=167,slow=2.3,SNR=4.8
MJAR ScP **ScP** **10 32 28.8 +4.4**
comp=Z,2.1nm,0.8s,baz=218,slow=3.4,SNR=4.5
MJAR LR LR 10 40 42.2
comp=Z,6µm,21.3s,baz=218,slow=36
comp=Z,76nm,0.9s
MJAR Matsushiro Arr 36.45 16 P **P** **10 26 15.5 -0.9**
MJAR IAmb IAmb 10 26 19.2
comp=Z,124nm,1.0s
MAJO Matsushiro 36.45 16 P **P** **10 26 15.5 -1.0**
MAJO IAmb IAmb 10 26 19.1
comp=Z,295nm,1.2s
MAJO Matsushiro 36.45 16 IAMs_20 IAMs_20 10 40 29.9
comp=Z,7µm,21.0s
MAJO Matsushiro 36.45 16 P **P** **10 26 15.5 -1.0**
MAJO Matsushiro 36.45 16*d i*P **P** **10 26 15.2 -1.2**
MAJO pmax pmax
comp=Z,108nm,1.0s
MAJO MLR MLR
comp=Z,6µm,21.0s
MJB9 Matsu-Tunnel 36.45 16 IAmb IAmb 10 26 20.1
comp=Z,274nm,1.2s
AUJCS Jamestown Cent 36.52 163 P **P** **10 26 16.5 -0.6**
AUBUS Georgiana Moll 36.57 195 P **P** **10 26 19.1 +1.7**
HTT Hallett 36.83 162 P **P** **10 26 19.6 -0.1**
comp=Z,81nm,1.2s
HTT P pP 10 26 20.9 -8.1
HTT Hallett 36.83 162 P **P** **10 26 18.6 -1.2**
comp=Z,33nm,1.2s
HTT Hallett 36.83 162 P **P** **10 26 19.7 -0.1**
RKGY Rocky Gully 37.09 193 P **P** **10 26 22.5 +0.7**
comp=Z,376nm,1.0s,comp=Z,0.0nm
AULRC Lightning Ridg 37.18 148 P **P** **10 26 20.4 -2.3**
HNS HongShan 37.18 345 ⇓P **P** **10 26 20.6 -2.0**
HNS pP **sP** **10 26 36.9 +1.4**
HNS PcP **PcP** **10 28 44.8 +2.6**
HNS S **S** **10 32 03.1 -4.1**
HNS pmax pmax
comp=Z,73nm,1.3s
HNS LR LR
comp=Z,5µm,24.5s
HNS LR LR
comp=Z,2µm,23.5s
HNS LR LR
comp=Z,8µm,24.0s
AUALB St Joseph's Co 37.27 191 P **P** **10 26 24.9 +1.5**
DL2 Dalian 37.36 354 P **P** **10 26 24.6 +0.5**
DL2 S **S** **10 32 10.3 +0.4**
DL2 pmax pmax
comp=Z,390nm,0.9s
DL2 pmax pmax
comp=Z,1µm,9.5s
DL2 LR LR
comp=Z,5µm,22.7s
DL2 LR LR
comp=Z,3µm,17.0s
DL2 LR LR
comp=Z,7µm,21.9s
CMSA Cobar Meteorol 37.76 152 P **P** **10 26 26.9 -0.7**
comp=Z,83nm,1.0s,comp=Z,0.0nm
CMSA P **P** **10 26 27.2 -0.4**
CMSA P **P** **10 26 28.5 +0.9**
CMSA Cobar Meteorol 37.76 152 P **P** **10 26 26.6 -1.0**
JSD Sado 37.87 15 IAmb IAmb 10 26 31.4
comp=Z,142nm,1.0s
JSD Sado 37.87 15 P **P** **10 26 29.4 +1.0**
TW1H Toowoomba 1 Ha 38.07 141 P **P** **10 26 32.0 +1.6**
AUMAR Marden Senior 38.11 163 P **P** **10 26 30.3 -0.2**
TIY Taiyuan 38.13 342 *e*P **P** **10 26 35.1 +4.4**
TIY sP sP 10 26 48.1 +4.5
TIY PP **PnPn** **10 28 07.3 +7.4**
TIY S **S** **10 32 20.0 -1.8**
TIY sS sS 10 32 43.3 +6.4
TIY SS **SnSn** **10 35 08.4 +1.6**
TIY pmax pmax
comp=Z,210nm,4.4s
TIY LR LR
comp=Z,3µm,21.3s
TIY LR LR
comp=Z,4µm,19.9s
TIY LR LR
comp=Z,6µm,24.7s
JMM Marumori 38.45 19 P **P** **10 26 34.2 +0.9**

AUMBR	Murray Bridge	38.52	163	P	P	10 26 33.5	-0.4		
AUWSH	Wavell State H	38.65	140	P	P	10 26 35.8	+0.7		
IMP	Imphal	38.85	309	*e*P	P	10 26 35.9	-1.1		
IMP				IAmb	IAmb	10 26 42.3			
	comp=Z,113nm,0.9s								
KOHI	KOHIMA	39.20	310	*e*P	P	10 26 37.7	-2.2		
KOHI				IAmb	IAmb	10 26 57.1			
	comp=Z,143nm,0.6s								
MOKO	MOKOCHONG	39.21	312	*e*P	P	10 26 38.8	-1.3		
MOKO				IAmb	IAmb	10 26 48.2			
	comp=Z,309nm,2.2s								
BJT	Baijiatuau	39.32	348	P	P	10 26 41.5	+0.9		
BJI	Beijing	39.34	348	P	P	10 26 41.3	+0.6		
BJI				pP	sP	10 26 50.5	-3.2		
BJI				sP	pwP	10 26 53.4	+1.4		
BJI				PcP	PcP	10 28 51.3	+2.4		
BJI				S	S	10 32 42.0	+2.2		
BJI				pmax	pmax				
	comp=Z,54nm,0.8s								
BJI				LR	LR				
	comp=Z,980nm,17.7s								
BJI				LR	LR				
	comp=Z,840nm,20.2s								
BJI				LR	LR				
	comp=Z,1µm,19.3s								
GC1S	Gold Coast 1 S	39.48	141	P	P	10 26 43.3	+1.3		
JORH	JORHAT	39.64	312	*e*P	P	10 26 42.8	-0.7		
BRDH	Bariadhala	39.65	305	LR	LR	10 43 38.1			
	comp=Z,6µm,21.7s,baz=102,slow=37								
SILR	SILCHAR	39.72	308	*e*P	P	10 26 44.9	+0.8		
AUDCS	Dubbo College	39.74	150	P	P	10 26 43.9	-0.3		
AUPHS	Peel High Scho	40.06	146	P	P	10 26 47.7	+0.8		
BELO	BELONIA	40.07	305	*e*P	P	10 26 48.9	+1.8		
LZDM	Lanzhou Array	40.09	331	P	P	10 26 46.5	-1.0		
	comp=Z,33nm,0.8s,baz=186,slow=13,SNR=13								
LZDM				PcP	PcP	10 28 54.5	+2.6		
	comp=Z,33nm,0.7s,baz=182,slow=4.5,SNR=8.5								
LZDM				ScP	ScP	10 32 40.4	+1.7		
	comp=Z,1.7nm,0.3s,baz=103,slow=6.2,SNR=2.4								
SNY	Shenyang	40.11	357	⇑P	P	10 26 47.4	+0.3		
SNY				S	S	10 32 52.1	+0.9		
SNY				pmax	pmax				
	comp=Z,26nm,0.9s								
SNY				LR	LR				
	comp=Z,4µm,22.5s								
SNY				LR	LR				
	comp=Z,3µm,19.3s								
SNY				LR	LR				
	comp=Z,6µm,22.7s								
LZH	Lanzhou	40.13	331	⇑P	P	10 26 47.1	-0.5		
LZH				sP	sP	10 26 59.3	-1.2		
LZH				S	S	10 32 45.8	-6.3		
LZH				sS	sS	10 33 14.8	+7.4		
LZH				pmax	pmax				
	comp=Z,200nm,1.3s								
LZH				pmax	pmax				
	comp=Z,930nm,4.8s								
LZH				LR	LR				
	comp=Z,3µm,18.2s								
LZH				LR	LR				
	comp=Z,6µm,20.1s								
LZH				LR	LR				
	comp=Z,8µm,22.3s								
ITAN	ITANAGAR	40.26	312	*e*P	P	10 26 47.0	-1.6		
ITAN				IAmb	IAmb	10 27 04.8			
	comp=Z,206nm,1.1s								
ZIRO	ZIRO	40.38	313	*e*P	P	10 26 50.0	+0.2		
ZIRO				IAmb	IAmb	10 27 08.8			
	comp=Z,191nm,1.2s								
AGT	Agartala	40.52	306	*e*P	P	10 26 51.1	+0.3		
TEZP	TEZPUR	40.67	311	*e*P	P	10 26 52.5	+0.5		
TEZP				IAmb	IAmb	10 26 59.9			
	comp=Z,140nm,1.5s								
ARPS	Mount Arapiles	40.83	161	P	P	10 26 52.6	-0.5		
	comp=Z,86nm,1.3s								
SHL	Shillong	40.83	309	P	P	10 26 52.0	-1.6		
SHL				IAmb	IAmb	10 26 59.2			
	comp=Z,207nm,0.6s								
SHL	Shillong	40.83	309	P	P	10 26 53.2	-0.4		
	SNR=63								
SHL	Shillong	40.83	309	*e*P	P	10 26 51.5	-2.0		
SHL				IAmb	IAmb	10 26 59.3			
	comp=Z,159nm,0.6s								
SHL	Shillong	40.83	309	P	P	10 26 52.0	-1.6		
SHL				pmax	pmax				
	comp=Z,207nm,0.6s								
MSHR	Mys Shultsa	41.01	5⇓	*e*P	P	10 26 56.9	+2.4		
MSHR				pmax	pmax				
	comp=Z,90nm,1.0s								
MSHR				MLR	MLR				
	comp=Z,2µm,20.0s								
PSTR	Posyet	41.05	5	*de*P	P	10 26 56.5	+1.6		
JTM	Tenmabayashi	41.22	17	P	P	10 26 56.1	-0.2		
JTM				IAmb	IAmb	10 26 59.2			
	comp=Z,275nm,0.9s								
JTM	Tenmabayashi	41.22	17	P	P	10 26 58.6	+2.3		
AUMAG	Moama Anglican	41.27	157	P	P	10 26 58.4	+1.6		
HHC	Hu-ho-hao-te	41.27	343	*e*P	P	10 26 56.8	-0.1		
HHC				pP	sP	10 27 07.3	-2.6		
HHC				S	S	10 33 08.9	-0.1		
HHC				sS	sS	10 33 28.3	+4.1		
HHC				SS	SS	10 36 11.4	-1.8		
HHC				ScS	ScS	10 36 50.9	-7.9		
HHC				pmax	pmax				
	comp=Z,15nm,1.0s								
HHC				pmax	pmax				
	comp=Z,380nm,5.5s								
HHC				LR	LR				
	comp=Z,5µm,17.1s								
HHC				LR	LR				
	comp=Z,3µm,16.1s								
HHC				LR	LR				
	comp=Z,7µm,17.5s								
GUWA	GUWAHATI	41.30	309	*e*P	P	10 26 56.5	-0.7		
GUWA				IAmb	IAmb	10 27 01.8			
	comp=Z,43nm,0.5s								
YNG	Young	41.31	152	P	P	10 26 56.7	-0.4		
	comp=Z,93nm,1.0s								
BTO	Baotou	41.53	341	*e*P	P	10 27 00.1	+1.1		
BTO				pP	sP	10 27 10.0	-1.9		
BTO				sP	pwP	10 27 13.6	+3.3		
BTO				PP	PnPn	10 28 40.6	+0.4		
BTO				S	S	10 33 11.9	-0.8		
BTO				sS	sS	10 33 33.8	+5.8		
BTO				SS	SS	10 36 18.3	+0.1		
BTO				pmax	pmax				
	comp=Z,11nm,0.9s								
BTO				pmax	pmax				
	comp=Z,1µm,4.4s								
BTO				LR	LR				
	comp=Z,11µm,24.8s								
BTO				LR	LR				
	comp=Z,7µm,22.2s								
BTO				LR	LR				
	comp=Z,15µm,23.5s								
VLA	Vladivostok	41.62	6	*ce*P	P	10 26 59.9	+0.4		
VLA				pmax	pmax				
	comp=Z,107nm,1.0s								
VLA				MLR	MLR				
	comp=Z,2µm,20.0s								
MGCD	Mangrove Creek	41.80	148	P	P	10 27 02.0	+0.8		
	comp=Z,78nm,0.9s								
MGCD	Mangrove Creek	41.80	148	P	P	10 27 04.0	+2.9		
TAWA	Tawang	41.89	311	*e*P	P	10 27 01.7	-0.7		
CN2	Changchun	42.01	359	*e*P	P	10 27 02.4	-0.3		
CN2				PcP	PcP	10 28 57.5	0.0		
CN2				*e*S	S	10 33 20.3	+0.8		
CN2				SS	SS	10 36 22.8	-4.7		
CN2				pmax	pmax				
	comp=Z,30nm,0.9s								
CN2				pmax	pmax				
	comp=Z,1µm,10.0s								
CN2				LR	LR				
	comp=Z,3µm,21.0s								
CN2				LR	LR				
	comp=Z,3µm,21.0s								
CN2				LR	LR				
	comp=Z,4µm,21.0s								
SYDH	Sydney Hard Ro	42.03	149	P	P	10 27 06.0	+2.9		
BRAT	Ballarat	42.25	159	P	P	10 27 05.5	+0.8		
AUMTC	Mt Clear Colle	42.28	159	P	P	10 27 07.1	+2.1		
AUMTS	Mt Stromlo	42.43	152	P	P	10 27 06.8	+0.4		
CAN	Canberra	42.43	152	P	P	10 27 06.0	-0.4		
	comp=Z,100nm,1.0s								
CAN	Canberra	42.43	152	P	P	10 27 05.2	-1.2		
CAN	Canberra	42.43	152	P	P	10 27 07.3	+0.9		
CAN	Canberra	42.43	152	P	P	10 27 05.2	-1.2		
CAN				pmax	pmax				
	comp=Z,78nm,0.9s								
AUDAR	Daramalan Coll	42.44	152	P	P	10 27 06.2	-0.2		
AUSIS	Research Schoo	42.45	152	P	P	10 27 07.6	+1.1		
CNB	Canberra Magne	42.60	152	P	P	10 27 07.9	+0.2		
	comp=Z,58nm,1.1s								
CNB	Canberra Magne	42.60	152	P	P	10 27 08.8	+1.1		
WOLH	Wollongong Har	42.61	150	P	P	10 27 10.3	+2.6		
USRK	Usuriysk Ar.	42.70	6	P	P	10 27 08.5	+0.2		
	comp=Z,116nm,1.0s,baz=184,slow=7.5,SNR=70								
	comp=Z,116nm,1.0s								
TOO	Toolangi	42.84	157	P	P	10 27 10.9	+1.2		
	comp=Z,25nm,0.8s								
TOO	Toolangi	42.84	157	P	P	10 27 09.2	-0.5		
TOO	Toolangi	42.84	157	P	P	10 27 09.2	-0.5		
TOO				pmax	pmax				
	comp=Z,17nm,0.8s								
MLBS	Spotswood, Mel	42.85	158	P	P	10 27 11.7	+2.1		
MDJ	Mudanjiang	42.92	3	IAMs_20	IAMs_20	10 47 15.2			
	comp=Z,6µm,21.0s								
MDJ	Mudanjiang	42.92	3	P	P	10 27 11.1	+1.0		
MDJ				pP	sP	10 27 20.8	-2.3		
MDJ				S	S	10 33 35.4	+2.6		
MDJ				SS	SS	10 36 48.4	+3.1		
MDJ				ScS	ScS	10 37 07.5	-1.0		
MDJ				pmax	pmax				
	comp=Z,99nm,1.4s								
MDJ				pmax	pmax				
	comp=Z,2µm,10.4s								
MDJ				LR	LR				
	comp=Z,5µm,20.6s								
MDJ				LR	LR				
	comp=Z,2µm,24.0s								
MDJ				LR	LR				
	comp=Z,8µm,20.6s								
MDJ	Mudanjiang	42.92	3	P	P	10 27 11.0	+1.0		
GEXS	Deakin Univers	42.96	159	P	P	10 27 13.5	+3.0		
ERM	Erimo	42.97	18	IAMs_20	IAMs_20	10 46 08.4			
	comp=Z,4µm,21.0s								
XLT	XiLinHaoTe	43.08	349	*e*P	P	10 27 10.8	-0.7		
XLT				pP	pP	10 27 16.5	-4.3		
XLT				PcS	PcS	10 32 54.5	+1.0		
XLT				S	S	10 33 30.8	-4.6		
XLT				ScS	ScS	10 37 08.9	-0.8		
XLT				pmax	pmax				
	comp=Z,52nm,0.7s								
XLT				pmax	pmax				
	comp=Z,930nm,10.2s								
XLT				LR	LR				
	comp=Z,240nm,22.6s								
XLT				LR	LR				
	comp=Z,2µm,18.4s								
XLT				LR	LR				
	comp=Z,4µm,23.9s								
AUSMG	Snowy Mountain	43.16	153	P	P	10 27 13.2	+0.9		
LSA	Lhasa	43.55	313	P	P	10 27 15.6	-0.5		
LSA	Lhasa	43.55	313	P	P	10 27 11.8	-4.3		
LSA				S	S	10 33 35.3	-8.3		
LSA				LR	LR				
	comp=Z,2µm,22.7s								
LSA				LR	LR				
	comp=Z,1µm,23.4s								
LSA				LR	LR				
	comp=Z,3µm,23.1s								
LSA	Lhasa	43.55	313	*i* P	P	10 27 16.3	+0.3		
	SNR=12								
BWNR	Bhubaneshwar	43.70	298	*e*P	P	10 27 18.1	+1.3		
BWNR				IAmb	IAmb	10 27 22.2			
	comp=Z,74nm,0.9s								
SANVU	Saraoutou	43.83	114	P	P	10 27 20.2	+2.3		
SANVU				IAmb	IAmb	10 27 32.6			
	comp=Z,122nm,0.9s								
SANVU				IAMs_20	IAMs_20	10 44 54.8			
	comp=Z,5µm,21.0s								
SANVU	Saraoutou	43.83	114	P	P	10 27 19.3	+1.4		
MILA	Mila	43.93	153	P	P	10 27 20.0	+1.6		
MILA				PcP	PP	10 29 00.4	-0.9		
BNX	BinXian	43.95	1	⇓P	P	10 27 19.3	+0.9		
BNX				pP	sP	10 27 28.0	-3.4		
BNX				PcP	PcP	10 29 04.0	+0.1		
BNX				S	S	10 33 49.8	+1.8		
BNX				sS	sS	10 34 06.4	+3.1		
BNX				pmax	pmax				
	comp=Z,64nm,0.9s								
BNX				pmax	pmax				
	comp=Z,1µm,7.3s								
BNX				LR	LR				
	comp=Z,3µm,22.8s								
BNX				LR	LR				
	comp=Z,2µm,21.7s								
BNX				LR	LR				
	comp=Z,5µm,21.7s								
SHBG	Sahibganj	44.03	306	*e*P	P	10 27 20.6	+1.2		
SHBG				IAmb	IAmb	10 27 28.9			
	comp=Z,118nm,0.9s								
TEY	Ternei	44.18	10⇑	*e*P	P	10 27 21.9	+1.7		
TEY				pmax	pmax				
	comp=N,120nm,0.7s								
TEY				pmax	pmax				
	comp=Z,230nm,0.7s								
GTA	Gaotai	44.71	331	P	P	10 27 24.4	-0.4		
GTA				sP	sP	10 27 38.8	+1.0		
GTA				PcP	PcP	10 29 08.5	+1.6		
GTA				ScP	ScP	10 32 58.3	+1.4		
GTA				S	S	10 33 57.3	-2.2		
GTA				ScS	ScS	10 37 20.9	+0.6		
GTA				pmax	pmax				
	comp=Z,12nm,1.1s								
GTA				pmax	pmax				
	comp=Z,490nm,4.7s								
GTA				LR	LR				
	comp=Z,4µm,20.7s								
GTA				LR	LR				
	comp=Z,5µm,20.0s								
GTA				LR	LR				
	comp=Z,9µm,20.0s								
ASAJ	Asahikawa	44.72	17	P	P	10 27 23.4	-1.2		
	comp=Z,141nm,0.9s,baz=231,slow=13,SNR=34								
ASAJ				LR	LR	10 45 54.1			
	comp=Z,6µm,21.5s,baz=213,slow=36								
	comp=Z,141nm,0.9s								
JKA	Kamikawa-asahi	44.72	17	IAmb	IAmb	10 27 27.8			
	comp=Z,162nm,0.9s								
BOK	Bokaro	44.91	303	*e*P	P	10 27 27.8	+1.3		
BOK				IAmb	IAmb	10 27 33.5			
	comp=Z,51nm,1.0s								
GOMU	GeErMu	45.10	323	P	P	10 27 27.8	-0.5		
GOMU				S	S	10 34 08.6	+2.8		
GOMU				SS	ScS	10 37 22.8	-0.7		
GOMU				pmax	pmax				
	comp=Z,6.0nm,0.9s								
GOMU				LR	LR				
	comp=Z,3µm,19.1s								
GOMU				LR	LR				
	comp=Z,1µm,19.2s								
GOMU				LR	LR				
	comp=Z,4µm,19.3s								
VIS	Vishakhapatnam	45.14	294	*e*P	P	10 27 28.2	-0.2		
VIS				IAmb	IAmb	10 27 37.2			
	comp=Z,240nm,1.7s								
VIS				IAMs_20	IAMs_20	10 46 34.6			
	comp=Z,4µm,20.4s								
RAGD	RAYAGADA	45.46	296	*e*P	P	10 27 31.6	+0.7		
RAGD				IAmb	IAmb	10 27 36.7			
	comp=Z,121nm,0.8s								
PALK	Pallekele	45.80	279	P	P	10 27 34.6	+0.8		
	comp=Z,57nm,0.7s,baz=91,slow=7.3,SNR=19								
PALK				LR	LR	10 49 04.7			
	comp=Z,3µm,20.0s,baz=106,slow=39								
	comp=Z,57nm,0.7s								
PALK	Pallekele	45.80	279	P	P	10 27 33.2	-0.6		
PALK	Pallekele	45.80	279	P	P	10 27 35.7	+2.0		
PALK				S	S	10 34 10.1	-5.8		
PALK	Pallekele	45.80	279	⇑*e*P	P	10 27 33.5	-0.3		
PALK				pmax	pmax				
	comp=Z,278nm,2.7s								
PALK				MLR	MLR				
	comp=Z,3µm,20.0s								
EVN	Everest	45.95	308	P	P	10 27 34.4	-1.0		
EVN				IAmb	IAmb	10 27 41.7			
	comp=Z,141nm,0.7s								
JHSG	JHARSUGUGA	45.98	299	*e*P	P	10 27 37.0	+2.1		
YATNC	Mamie plateau,	46.06	123	P	P	10 27 36.4	+0.8		
MALK	Mahakanadarawa	46.06	280	P	P	10 27 36.3	+0.6		
TARA	Tarawa	46.59	90	IAMs_20	IAMs_20	10 44 58.9			
	comp=Z,5µm,20.0s								
CORO	Coronation Par	46.85	159	P	P	10 27 41.9	+0.4		
VJD	Vijayawada	47.32	291	IAmb	IAmb	10 28 00.4			
	comp=Z,109nm,1.0s								
YSS	Yuzhno-Sakhali	47.37	15	P	P	10 27 45.3	-0.2		
YSS				IAmb	IAmb	10 27 48.0			
	comp=Z,135nm,1.0s								
YSS	Yuzhno-Sakhali	47.37	15	P	P	10 27 45.7	+0.3		
YSS	Yuzhno-Sakhali	47.37	15⇑	*e*P	P	10 27 45.9	+0.5		
YSS				*e**SP	sP	10 27 59.3	+0.8		
YSS				*e*S	S	10 34 36.3	-0.9		
YSS				pmax	pmax				
	comp=Z,40nm,1.1s								
YSS				pmax	pmax				
	comp=N,40nm,1.0s								
YSS				pmax	pmax				
	comp=Z,700nm,9.5s								
YSS				MLR	MLR				
	comp=Z,800nm,16.0s								
YSS				MLR	MLR				
	comp=N,800nm,19.0s								
YSS				MLR	MLR				
	comp=E,900nm,19.0s								
BLSP	Bilaspur	47.54	299	*e*P	P	10 27 47.5	+0.3		
BLSP				IAmb	IAmb	10 27 52.0			
	comp=Z,111nm,0.9s								
MOO	Moorlands	47.74	159	P	P	10 27 50.6	+2.2		
HIA	Hailar	47.80	354	P	P	10 27 50.2	+1.4		
HILR	Hailar Array B	48.09	354	P	P	10 27 50.4	-0.6		
	comp=Z,56nm,0.8s,baz=172,slow=11,SNR=54								
HILR				PcP	PcP	10 29 20.7	+2.3		
	comp=Z,34nm,0.7s,baz=153,slow=4.5,SNR=6.3								
	comp=Z,56nm,0.8s								
HEH	HeiHe	48.47	1	*e*P	P	10 27 53.5	-0.4		
HEH				sP	sP	10 28 04.8	-2.1		
HEH				S	S	10 34 50.3	-2.3		
HEH				pmax	pmax				
	comp=Z,170nm,1.3s								
HEH				pmax	pmax				
	comp=Z,900nm,4.3s								
HEH				LR	LR				
	comp=Z,2µm,23.8s								
HEH				LR	LR				
	comp=Z,3µm,22.4s								
HEH				LR	LR				
	comp=Z,5µm,23.1s								
SALM	Salem	48.75	284	*e*P	P	10 27 57.7	+1.1		
SALM				IAmb	IAmb	10 28 02.3			
	comp=Z,134nm,1.0s								
ULN	Ulaanbaatar	49.00	343	P	P	10 27 57.7	-0.5		
ULN				IAmb	IAmb	10 28 04.1			
	comp=Z,76nm,1.0s								
ULN	Ulaanbaatar	49.00	343	IAMs_20	IAMs_20	10 49 09.1			
	comp=Z,4µm,22.0s								
ULN	Ulaanbaatar	49.00	343	P	P	10 27 58.0	-0.2		
ULN				S	S	10 34 57.6	-2.9		
ULN	Ulaanbaatar	49.00	343	*ce*P	P	10 27 57.5	-0.7		
ULN				pmax	pmax				
	comp=Z,82nm,1.1s								
ULN				MLR	MLR				
	comp=Z,6µm,24.0s								
SONM	Songino Array	49.17	342	P	P	10 27 59.1	-0.4		
	comp=Z,43nm,0.9s,baz=162,slow=6.9,SNR=27								
SONM				PcP	PcP	10 29 24.3	+1.9		
	comp=Z,30nm,0.8s,baz=159,slow=4.1,SNR=7.7								
SONM				LR	LR	10 49 37.7			
	comp=Z,5µm,20.9s,baz=155,slow=37								
	comp=Z,43nm,0.9s								
UGL	Uglegorsk	49.18	14	*e*P	P	10 28 01.7	+2.4		
UGL				*e*		10 29 59.0			
UGL				*e*S	S	10 35 05.8	+3.2		
UGL				pmax	pmax				
	comp=Z,300nm,1.7s								
UGL				smax	smax				
	comp=E,4µm,3.4s								
UGL				smax	smax				
	comp=N,6µm,9.4s								
UGL				MLR	MLR				
	comp=E,5µm,16.0s								
UGL				MLR	MLR				
	comp=N,6µm,17.0s								
UGL				MLR	MLR				
	comp=Z,4µm,17.0s								
KOD	Kodaikanal	49.28	282	*e*P	P	10 27 59.6	-1.5		
KOD				IAmb	IAmb	10 28 06.0			
	comp=Z,145nm,0.7s								
HYBB	Hyderabad (bro	49.48	292	*e*P	P	10 28 02.0	-0.3		
HYBB				*e*pP	pP	10 28 09.2	-2.4		
HYBB				*e*PcP	PcP	10 29 24.1	0.0		
HYBB				*e*PP	PP	10 29 56.6	-0.1		
HYBB				*e*ScP	ScP	10 33 17.2	-0.1		
TRD	Trivandrum	49.60	280	*e*P	P	10 28 04.2	+1.0		
TRD				IAmb	IAmb	10 28 08.1			
	comp=Z,290nm,0.8s								
TRD				IAMs_20	IAMs_20	10 48 10.9			
	comp=Z,3µm,20.5s								
GRNR	Gornyy	49.72	8⇑	*i* P	P	10 28 04.6	+1.1		
GRNR				pmax	pmax				
	comp=N,30nm,1.0s								
GRNR				pmax	pmax				
	comp=Z,60nm,1.0s								
GRNR				MLR	MLR				
	comp=E,710nm,14.0s								
GRNR				MLR	MLR				
	comp=N,1µm,16.0s								
GRNR				MLR	MLR				
	comp=Z,2µm,17.0s								
NGP	Nagpur	49.97	296	*e*P	P	10 28 06.5	+0.5		
NGP				IAmb	IAmb	10 28 10.8			
	comp=Z,80nm,0.7s								
NFK	Norfolk Island	50.15	131	P	P	10 28 07.4	+0.4		
	comp=Z,132nm,1.0s								
TYV	Tymovskoe	50.98	13	*e*P	P	10 28 15.0	+2.0		
TYV				*e*S	S	10 35 37.5	+10		
TYV				pmax	pmax				
	comp=Z,52nm,1.1s								
TYV				pmax	pmax				
	comp=Z,800nm,3.5s								
CIT	Chita	51.36	350	*e*P	P	10 28 16.8	+0.9		
CIT				*e*		10 28 28.6			
CIT				*e*		10 29 32.0			
CIT				*e*		10 31 22.0			
CIT				pmax	pmax				
	comp=Z,518nm,2.0s								
AKL	Akola	51.68	295	*e*P	P	10 28 17.6	-1.2		
AKL				IAmb	IAmb	10 28 23.8			
	comp=Z,198nm,0.6s								
AKL				IAMs_20	IAMs_20	10 48 13.8			
	comp=Z,1µm,20.3s								
JHNI	Jhansi	51.74	302	*e*P	P	10 28 16.1	-3.0		
JHNI				IAmb	IAmb	10 28 22.8			
	comp=Z,132nm,0.9s								
JHNI				IAMs_20	IAMs_20	10 47 22.9			
	comp=Z,2µm,19.5s								
LGTI	Lohaghat	51.79	307	*e*P	P	10 28 17.6	-1.8		
LGTI				IAmb	IAmb	10 28 24.9			
	comp=Z,69nm,0.7s								
PTH	Pithoragarh	51.85	307	*e*P	P	10 28 17.9	-2.2		
PTH				IAmb	IAmb	10 28 28.5			
	comp=Z,59nm,0.8s								
ZEA	Zeya	51.95	1	*e*P	P	10 28 20.2	0.0		
ZEA				*e*S	S	10 35 43.9	+2.8		
ZEA				pmax	pmax				
	comp=E,10.0nm,0.7s								
ZEA				pmax	pmax				
	comp=N,20nm,1.2s								
ZEA				pmax	pmax				
	comp=Z,50nm,0.9s								
ZEA				pmax	pmax				
	comp=Z,500nm,4.9s								
ZEA				smax	smax				
	comp=N,500nm,8.0s								
ZEA				smax	smax				
	comp=Z,6µm,8.0s								
ZEA				MLR	MLR				
	comp=E,500nm,18.0s								
ZEA				MLR	MLR				
	comp=N,1µm,24.0s								
ZEA				MLR	MLR				
	comp=Z,2µm,23.0s								
BHPL	Bhopal	52.02	298	*e*P	P	10 28 19.3	-1.9		
BHPL				IAmb	IAmb	10 28 26.1			
	comp=Z,215nm,0.6s								
BHPL				IAMs_20	IAMs_20	10 47 30.5			

comp=Z,2µm,20.6s
NRDN NARMADA NAGAR 52.09 298 *e*P P **10 28 23.8 +2.0**
NRDN IAmb IAmb 10 28 30.4
comp=Z,127nm,0.8s
ZAK Zakamensk 52.38 342 *e*P P **10 28 24.9 +1.3**
ZAK pmax pmax
comp=Z,31nm,1.9s
GUNA GUNA 52.52 300 *e*P P **10 28 23.2 -1.8**
GUNA IAmb IAmb 10 28 29.6
comp=Z,237nm,0.5s
JOSI Joshimath 52.78 308 *e*P P **10 28 26.0 -1.0**
JOSI IAmb IAmb 10 28 31.9
comp=Z,131nm,0.8s
KAAM Kaadhehdhoo 53.33 269 IAMs_20 IAMs_20 10 50 09.7
comp=Z,4µm,22.0s
KAD Karad 53.53 290 *e*P P **10 28 32.3 -0.3**
KAD IAmb IAmb 10 28 39.6
comp=Z,45nm,0.9s
KAD IAMs_20 IAMs_20 10 43 15.1
comp=Z,4µm,20.7s
GOA Goa 53.55 288 IAMs_20 IAMs_20 10 47 34.8
comp=Z,3µm,21.0s
FUNA Funafuti 53.66 102 P P **10 28 32.3 -1.2**
FUNA IAmb IAmb 10 28 40.1
comp=Z,209nm,1.1s
FUNA Funafuti 53.66 102 P P **10 28 35.3 +1.8**
IRK Irkutsk 53.72 343 *e*P P **10 28 36.9 +3.6**
IRK pmax pmax
comp=Z,210nm,2.5s
BISR Bishrakh 53.73 305 *e*P P **10 28 33.4 -0.5**
DDI Dehra Dun 53.88 307 *e*P P **10 28 35.6 +0.7**
DDI IAmb IAmb 10 28 39.9
comp=Z,135nm,1.1s
SONA Sohna 53.91 304 *e*P P **10 28 33.0 -2.1**
SONA IAmb IAmb 10 28 39.3
comp=Z,189nm,0.7s
NDI New Delhi 53.96 305 *e*P P **10 28 34.5 -1.0**
AYAN Aya Nagar 53.96 305 *e*P P **10 28 33.9 -1.6**
AYAN IAmb IAmb 10 28 40.0
comp=Z,150nm,0.9s
NPLP NPLP New Delhi 53.98 305 *e*P P **10 28 34.6 -1.1**
POO Poona 54.09 292 *e*P P **10 28 36.5 -0.1**
POO IAmb IAmb 10 28 43.9
comp=Z,47nm,1.0s
HNLY HANLEY 54.15 310 *e*P P **10 28 36.2 -1.3**
HNLY IAmb IAmb 10 28 43.1
comp=Z,71nm,0.8s
HNLY IAMs_20 IAMs_20 10 42 38.8
comp=Z,2µm,20.5s
MOY Mondy 54.22 341 *e*P P **10 28 39.9 +2.8**
MOY pmax pmax
comp=Z,121nm,2.0s
WMQ Urumqi 54.23 326 *e*P P **10 28 37.4 +0.1**
WMQ S S **10 36 14.4 +1.9**
WMQ pmax pmax
comp=Z,130nm,0.9s
WMQ pmax pmax
comp=Z,590nm,3.7s
WMQ LR LR
comp=Z,4µm,21.3s
WMQ LR LR
comp=Z,5µm,21.3s
WMQ LR LR
comp=Z,6µm,22.9s
KUDL Kundal 54.37 304 *e*P P **10 28 36.1 -2.4**
KUDL IAmb IAmb 10 28 42.5
comp=Z,236nm,0.7s
MSVF Nonsavu 54.44 113 P P **10 28 38.7 -0.5**
MSVF IAmb IAmb 10 28 47.2
comp=Z,140nm,1.2s
MSVF Nonsavu 54.44 113 IAMs_20 IAMs_20 10 54 20.3
comp=Z,3µm,18.0s
MSVF Nonsavu 54.44 113 P P **10 28 40.5 +1.3**
MSVF Nonsavu 54.44 113⇑ *e*P P **10 28 38.8 -0.5**
MSVF pmax pmax
comp=Z,122nm,1.1s
DGAR Diego Garcia 54.48 260 IAMs_20 IAMs_20 10 54 57.0
comp=Z,3µm,20.0s
KNGR Kungurtug, Tuv 54.57 338⇑ *e*P P **10 28 39.2 -0.5**
KNGR pmax pmax
comp=Z,25nm,1.0s
KNGR MLR MLR
comp=Z,1µm,17.0s
SMLA Simla 54.90 308 *e*P P **10 28 41.0 -1.2**
SMLA IAmb IAmb 10 28 47.9
comp=Z,208nm,0.9s
SKR Severo-Kuril's 55.01 23 *e*P P **10 28 42.3 -0.4**
SKR *e*S S **10 36 23.3 +0.7**
SKR pmax pmax
comp=Z,800nm,3.7s
SKR pmax pmax
comp=Z,164nm,0.8s
SKR MLR MLR
comp=Z,2µm,14.0s
AJM Ajmer 55.39 301 *e*P P **10 28 44.1 -1.9**
AJM IAmb IAmb 10 28 50.2
comp=Z,98nm,0.6s
BHK Bhakra 55.60 308 IAmb IAmb 10 28 52.9
comp=Z,101nm,0.4s
UDPR Udaipur 55.65 299 *e*P P **10 28 46.5 -1.4**
UDPR IAmb IAmb 10 28 53.2
comp=Z,456nm,0.8s
DHRM DHARAMSHALA 56.01 308 *e*P P **10 28 48.9 -1.7**
DHRM IAmb IAmb 10 28 56.7
comp=Z,215nm,1.0s
DHRM IAMs_20 IAMs_20 10 45 48.5
comp=Z,2µm,19.8s
ALCI Alchi Leh 56.11 311 *e*P P **10 28 49.4 -2.0**
ALCI IAmb IAmb 10 28 56.2
comp=Z,128nm,0.4s
ALCI IAMs_20 IAMs_20 10 44 01.2
comp=Z,2µm,20.0s
TLWR Talawar 56.17 308 *e*P P **10 28 50.0 -1.4**
TLWR IAmb IAmb 10 28 55.8
comp=Z,163nm,0.7s
TSSA Tissa 56.35 309 *e*P P **10 28 50.8 -2.1**
TSSA IAmb IAmb 10 28 57.9
comp=Z,122nm,0.9s
BOD Bodaibo 56.89 352 *e*P P **10 28 56.2 +0.2**
BOD pmax pmax
comp=Z,237nm,1.6s
OUZ Omahuta 57.37 134 IAMs_20 IAMs_20 10 54 35.9
comp=Z,3µm,22.0s
PEA0B Petropavlovsk- 57.53 22 P P **10 29 00.5 -0.1**
PEA0B IAmb IAmb 10 29 03.6
comp=Z,75nm,0.8s
PEA0B Petropavlovsk- 57.53 22 P P **10 29 00.5 -0.1**
PEA0B pmax pmax
comp=Z,75nm,0.8s
PETK Petropavlovsk- 57.53 22 P P **10 29 00.7 +0.1**
comp=Z,72nm,0.8s,baz=190,slow=2.8,SNR=59
PETK LR LR 10 53 47.8
comp=Z,1µm,20.4s,baz=213,slow=36
comp=Z,72nm,0.8s
PETK Petropavlovsk- 57.53 22 P P **10 29 00.5 -0.1**
PETK Petropavlovsk- 57.53 22 P P **10 29 00.5 -0.1**
PET Petropavlovsk 57.82 22 P P **10 29 02.5 -0.2**
PET IAmb IAmb 10 29 05.6
comp=Z,157nm,1.2s
PET Petropavlovsk 57.82 22 P P **10 29 04.8 +2.1**
PET Petropavlovsk 57.82 22 *e*P P 10 29 12.6 +10
PET *e* 10 29 59.6
PET *e* 10 31 20.4
PET *e*S S 10 37 13.9 +14
PET pmax pmax
comp=Z,400nm,15.4s
PET MLR MLR
comp=Z,3µm,17.0s
PET MLR MLR
comp=Z,4µm,17.0s
ZSN Zaisan 58.06 328 *e*P P **10 29 03.8 -0.7**
comp=Z,41nm,1.1s
ZSN *e*S S **10 37 03.0 -0.3**
ZSN Zaisan 58.06 328 *e*P P **10 29 03.8 -0.7**
ZSN *e*S S **10 37 02.9 -0.3**
ZSN pmax pmax
comp=Z,41nm,1.1s
DGZ Jazzator, Alta 58.23 331⇑ *i*P P **10 29 04.7 -1.1**
DGZ pmax pmax
comp=Z,16nm,0.8s
DGZ MLR MLR
comp=Z,5µm,21.0s
SHLS Shalkode 58.72 321 *e*P P **10 29 06.2 -3.1**
comp=Z,70nm,0.9s
SHLS Shalkode 58.72 321 *e*P P **10 29 06.2 -3.1**
SHLS pmax pmax
comp=Z,70nm,0.9s
NIL Nilore 58.91 309 P P **10 29 09.4 -1.3**
NIL Nilore 58.91 309 P P **10 29 09.4 -1.3**
NIL pmax pmax
comp=Z,276nm,1.3s
NIL MLR MLR
comp=Z,2µm,22.0s
BHUJ Bhuj 58.92 296 IAMs_20 IAMs_20 10 46 53.5
comp=Z,2µm,19.2s
PRZ Przheval'sk 59.04 320 P P **10 29 11.6 -0.1**
PRZ Przheval'sk 59.04 320 P P **10 29 11.6 -0.1**
PRZ pmax pmax
comp=Z,143nm,0.8s
TARG Taragay, Kyrgy 59.05 319 P P **10 29 12.4 +0.3**
TARG IAmb IAmb 10 29 25.1
comp=Z,99nm,0.9s
TARG Taragay, Kyrgy 59.05 319 P P **10 29 12.4 +0.3**
TARG pmax pmax
comp=Z,99nm,0.9s
MK31 Makanchi Array 59.06 326*c* *i*P P **10 29 10.1 -1.4**
MKAR Makanchi Array 59.06 326 P P **10 29 10.6 -0.9**
comp=Z,121nm,0.7s,baz=120,slow=7.7,SNR=72
MKAR S S **10 37 18.9 +2.6**
comp=Z,1.2nm,0.3s,baz=126,slow=12,SNR=3.6
MKAR LR LR 10 55 14.2
comp=Z,7µm,22.0s,baz=111,slow=37
MKAR PKP2bc **P'P'bc** **10 58 51.2 -4.9**
comp=Z,3.7nm,0.9s,baz=308,slow=2.9,SNR=7.4
comp=Z,121nm,0.7s
MKAR Makanchi Array 59.06 326 *i*P P **10 29 10.1 -1.4**
MKAR pmax pmax
comp=Z,87nm,0.7s
DCZ Deep Cove 59.18 148 IAMs_20 IAMs_20 10 55 19.3
comp=Z,3µm,21.0s
JCZ Jackson Bay 59.20 145 P P **10 29 14.0 +1.4**
JCZ Jackson Bay 59.20 145 P P **10 29 12.9 +0.3**
MAKZ Makanchi 59.24 326 P P **10 29 11.5 -1.3**
MAKZ Makanchi 59.24 326 P P **10 29 11.5 -1.3**
MAKZ pmax pmax
comp=Z,174nm,0.9s
MAKZ MLR MLR
comp=Z,8µm,22.0s
KSH Kashi 59.26 316 P P **10 29 13.5 +0.3**
KSH sP sP 10 29 25.3 -1.1
KSH pmax pmax
comp=Z,80nm,1.2s
KSH pmax pmax
comp=Z,610nm,12.8s
KSH LR LR
comp=Z,2µm,21.3s
KSH LR LR
comp=Z,2µm,21.6s
KSH LR LR
comp=Z,4µm,20.0s
SATY Saty 59.33 321 *e*P P **10 29 12.4 -1.3**
comp=Z,59nm,0.8s
SATY Saty 59.33 321 *e*P P **10 29 12.3 -1.3**
SATY pmax pmax
comp=Z,59nm,0.8s
QRZ Quartz Range 59.55 141 IAMs_20 IAMs_20 10 56 49.5
comp=Z,3µm,19.0s
DSZ Denniston Nort 59.61 142 IAMs_20 IAMs_20 10 56 30.9
comp=Z,4µm,22.0s
KDJ Kajisay 59.66 319 IAmb IAmb 10 29 22.2
comp=Z,105nm,0.9s
WKZ Wanaka 59.80 146 P P **10 29 18.1 +1.4**
WHZ Wether Hill Ro 59.88 148 P P **10 29 18.9 +1.7**
WHZ IAMs_20 IAMs_20 10 55 39.9
comp=Z,4µm,21.0s
WHZ Wether Hill Ro 59.88 148 P P **10 29 17.5 +0.4**
TOZ Tahuroa Road 59.93 136 IAMs_20 IAMs_20 10 58 51.7
comp=Z,2µm,19.0s
TOZ Tahuroa Road 59.93 136 P P **10 29 17.2 -0.4**
INZ Inchbonnie 59.95 143 IAMs_20 IAMs_20 10 57 21.8
comp=Z,3µm,20.0s
MRNZ Matariki Terra 60.01 141 P P **10 29 17.7 -0.5**
LBZ Lake Benmore 60.18 145 P P **10 29 20.8 +1.5**
LBZ Lake Benmore 60.18 145 P P **10 29 18.3 -1.0**
MDOK Medeo 60.24 320 *e*P P **10 29 18.7 -1.2**
MDOK *e*S S **10 37 31.0 -1.0**
MDOK LR LR 10 58 27.7
MDOK Medeo 60.24 320 *e*P P **10 29 18.6 -1.3**
MDOK *e*S S **10 37 31.0 -1.0**
TNSS Tian-Shan 60.25 320 *e*P P **10 29 18.8 -1.4**
TNSS Tian-Shan 60.25 320 *e*P P **10 29 18.8 -1.4**
ARXS Arharly 60.28 322 *i*P P **10 29 18.4 -1.6**
RPZ Rata Peaks 60.29 144 LR LR 10 57 54.4
comp=Z,2µm,18.1s,baz=303,slow=38
RPZ Rata Peaks 60.29 144 P P **10 29 23.1 +3.0**
RPZ Rata Peaks 60.29 144 P P **10 29 22.1 +2.1**
THZ Tophouse 60.30 141 P P **10 29 22.1 +1.9**
THZ Tophouse 60.30 141 P P **10 29 19.1 -1.1**
NNZ Nelson 60.31 141 IAMs_20 IAMs_20 10 57 20.4
comp=Z,3µm,19.0s
NNZ Nelson 60.31 141 P P **10 29 20.2 0.0**
YAK Yakutsk 60.32 2 P P **10 29 20.0 +0.1**
comp=Z,438nm,0.8s,baz=30,slow=0.2,SNR=94
comp=Z,438nm,0.8s
YAK Yakutsk 60.32 2 P P **10 29 19.7 -0.1**
YAK Yakutsk 60.32 2 IAMs_20 IAMs_20 11 00 11.4
comp=Z,3µm,20.0s
YAK Yakutsk 60.32 2 *e*P P **10 29 19.9 +0.1**
YAK *e**PP **sP** **10 29 29.9 -3.1**
YAK *e* 10 30 04.2
YAK *e* 10 31 31.8
YAK *e*S S **10 37 33.0 +1.1**
YAK *e**SS **sS** **10 37 51.2 +3.6**
YAK *e* 10 39 07.7
YAK *e*SS SS **10 41 31.5 +1.7**
YAK pmax pmax
comp=Z,574nm,1.1s
YAK pmax pmax
comp=N,128nm,1.2s
YAK pmax pmax
comp=E,62nm,1.7s
YAK pmax pmax
comp=Z,484nm,3.8s
YAK pmax pmax
comp=N,1µm,7.1s
YAK pmax pmax
comp=E,676nm,5.1s
YAK smax smax
comp=E,1µm,4.1s
YAK smax smax
comp=N,518nm,4.1s
YAK MLR MLR
comp=Z,2µm,19.0s
YAK MLR MLR
comp=N,2µm,30.0s
YAK MLR MLR
comp=E,854nm,18.0s
ULHL Ulahol 60.33 319 P P **10 29 24.9 +4.4**
SNR=12
TDK Taldyqorghan 60.33 323 *e*P P **10 29 19.4 -0.8**
comp=E,49nm,0.6s
TDK LR LR 10 58 06.9
comp=E,1µm,21.5s
TDK Taldyqorghan 60.33 323 *e*P P **10 29 19.4 -0.8**
TDK pmax pmax
comp=Z,49nm,0.6s
TDK MLR MLR
comp=Z,1µm,22.0s
AAA Alma-Ata 60.35 320 *i*P P **10 29 19.0 -1.5**
LTZ Lake Taylor 60.48 143 IAMs_20 IAMs_20 10 57 19.9
comp=Z,3µm,21.0s
LTZ Lake Taylor 60.48 143 P P **10 29 23.1 +1.7**
ARCZ Arundel 60.50 144 P P **10 29 20.3 -1.2**
APZ The Paps 60.51 148 P P **10 29 22.2 +0.8**
BOOM Boomskoye usch 60.64 319 IAmb IAmb 10 29 28.9
comp=Z,185nm,1.8s
OXZ Oxford 60.65 143 IAMs_20 IAMs_20 10 58 56.4
comp=Z,3µm,21.0s
OXZ Oxford 60.65 143 P P **10 29 23.0 +0.5**
RATZ Rangitukua 60.67 137 P P **10 29 23.1 +0.3**
RATZ PcP PcP 10 30 50.4 +44
TUWZ Tuamarina 60.78 140 P P **10 29 24.8 +1.5**
MA2 Magadan 60.84 14 LR LR 10 56 17.9
comp=Z,826nm,20.6s,baz=203,slow=37
MA2 Magadan 60.84 14 P P **10 29 24.8 +1.3**
MA2 Magadan 60.84 14 P P **10 29 24.9 +1.5**
MA2 Magadan 60.84 14⇓ *e*P P **10 29 25.9 +2.5**
MA2 pmax pmax
comp=Z,192nm,1.0s
MA2 MLR MLR
comp=Z,2µm,21.0s
KUU Kurty 61.05 321 *e*P P **10 29 24.2 -1.0**
comp=Z,67nm,0.9s
KUU LR LR 10 58 32.9
comp=Z,2µm,22.6s
KUU Kurty 61.05 321 *e*P P **10 29 24.2 -1.0**
KUU pmax pmax
comp=Z,67nm,0.9s
KUU MLR MLR
comp=Z,2µm,23.0s
GVZ Greta Valley S 61.05 142 IAMs_20 IAMs_20 10 57 47.0
comp=Z,3µm,20.0s
GVZ Greta Valley S 61.05 142 P P **10 29 26.5 +1.3**
KHZ Kahutara 61.06 142 IAMs_20 IAMs_20 10 59 36.2
comp=Z,3µm,19.0s
KHZ Kahutara 61.06 142 P P **10 29 23.4 -1.8**
TKM2 Tokmak 2 61.06 319 P P **10 29 24.2 -1.3**
SNR=42
MRHZ Matea Rd 61.10 137 P P **10 29 23.9 -1.8**
SNZO South Karori 61.20 140 IAMs_20 IAMs_20 10 59 15.1
comp=Z,4µm,18.0s
MQZ McQueen's Vall 61.23 143 IAMs_20 IAMs_20 10 59 23.8
comp=Z,2µm,18.0s
URZ Urewera 61.30 136 LR LR 10 57 15.0
comp=Z,2µm,19.7s,baz=304,slow=37
URZ Urewera 61.30 136 P P **10 29 25.7 -1.3**
BKZ Black Stump Fm 61.31 137 P P **10 29 25.9 -1.2**
BKZ IAmb IAmb 10 29 46.9
comp=Z,64nm,1.1s
BKZ IAMs_20 IAMs_20 10 59 11.1
comp=Z,3µm,19.0s
BKZ Black Stump Fm 61.31 137 P P **10 29 27.1 0.0**
BKZ Black Stump Fm 61.31 137 P P **10 29 25.7 -1.4**
RTZ Ruatahuna 61.38 136 P P **10 29 26.3 -1.3**
RTZ IAmb IAmb 10 29 41.0
comp=Z,87nm,0.9s
RTZ IAMs_20 IAMs_20 10 54 45.0
comp=Z,4µm,22.0s
KWHZ Kaweka Forest 61.39 137 P P **10 29 26.2 -1.4**
TSZ Takapari Road 61.39 138 P P **10 29 26.6 -1.0**
MTHZ Maungataniwha 61.40 137 P P **10 29 26.4 -1.3**
MRZ Mangatainoka R 61.44 139 IAMs_20 IAMs_20 10 57 56.4
comp=Z,2µm,19.0s
RAO Raoul Island 61.45 125 LR LR 10 56 32.6
comp=Z,1µm,20.1s,baz=300,slow=36
UCH Uchtor 61.46 318 P P **10 29 27.4 -1.1**
SNR=23
KRHZ Kereru 61.46 138 P P **10 29 26.8 -1.2**
NMHZ Naumai 61.49 137 P P **10 29 27.9 -0.5**
HOWZ Holdsworth Sta 61.52 139 P P **10 29 28.7 +0.3**
HAZ Te Kaha 61.54 135 P P **10 29 28.5 -0.1**
MCHZ McNeill Hill 61.58 137 P P **10 29 28.0 -0.8**
RAHZ Arahi 61.59 137 P P **10 29 28.5 -0.5**
MWZ Matawai 61.63 136 P P **10 29 27.9 -1.3**
CHMS Chumysh 61.65 319 P P **10 29 31.0 +1.7**
SNR=8.3
AAK Ala-Archa 61.65 319 LR LR 10 57 07.2
comp=Z,3µm,21.7s,baz=104,slow=37
AAK Ala-Archa 61.65 319 P P **10 29 29.1 -0.4**
AAK IAmb IAmb 10 29 36.1
comp=Z,80nm,1.1s
AAK Ala-Archa 61.65 319 IAMs_20 IAMs_20 10 56 45.5
comp=Z,3µm,22.0s
AAK Ala-Archa 61.65 319 P P **10 29 29.6 +0.1**
AAK P P **10 29 29.6 +0.1**
AAK S S **10 37 47.6 -2.4**
AAK S S **10 37 47.6 -2.4**
AAK Ala-Archa 61.65 319 P P **10 29 33.2 +3.7**
SNR=23
AAK Ala-Archa 61.65 319 *i*P P **10 29 29.1 -0.4**
SNR=24
AAK Ala-Archa 61.65 319⇑ *e*P P **10 29 29.4 -0.1**
AAK pmax pmax
comp=Z,79nm,1.1s
AAK MLR MLR
comp=Z,3µm,23.0s
ARHZ Aropaoanui 61.70 137 P P **10 29 28.8 -0.9**
SNGZ Shannon Statio 61.71 136 P P **10 29 28.3 -1.4**
MXZ Matakaoa Point 61.82 135 IAMs_20 IAMs_20 10 57 38.8
comp=Z,3µm,20.0s
TMWZ Te Maipa 61.87 139 P P **10 29 28.8 -2.0**
KAHZ Kahuranaki 61.87 138 P P **10 29 29.9 -0.9**
BFZ Birch Farm 61.89 139 IAMs_20 IAMs_20 11 00 26.3
comp=Z,3µm,18.0s
BFZ Birch Farm 61.89 139 P P **10 29 30.9 0.0**
TKGZ Te Karaka 61.90 136 P P **10 29 30.1 -0.9**
SGDS Sogindy 61.94 320 *e*P P **10 29 30.3 -1.0**
USP Ospenovka 61.94 319 P P **10 29 29.8 -1.5**
SNR=25
RIGZ Rimuhau 61.96 136 P P **10 29 30.3 -1.2**
PXZ Pawanui 61.98 138 P P **10 29 31.1 -0.4**
WMGZ Waiomatatini S 62.02 135 P P **10 29 30.8 -1.0**
KNZ Kokohu 62.05 136 P P **10 29 31.5 -0.5**
ARSB Arslanbob 62.10 317 IAmb IAmb 10 29 38.6
comp=Z,138nm,1.2s
EKS2 Erkin-Say 62.14 319 P P **10 29 37.4 +4.7**
SNR=23
CNGZ Carnagh Statio 62.17 136 P P **10 29 31.8 -1.0**
MHGZ Mahia Peninsul 62.27 137 P P **10 29 32.5 -1.0**
ZAA0 Zalesovo Array 62.28 334 P P **10 29 32.1 -1.2**
ZAA0 IAmb IAmb 10 29 39.0
comp=Z,49nm,0.7s
ZALV Zalesovo Beam 62.28 334 P P **10 29 32.6 -0.7**
comp=Z,16nm,0.5s,baz=122,slow=6.6,SNR=44
ZALV LR LR 10 58 16.6
comp=Z,2µm,20.8s,baz=136,slow=38
ZALV PKP2bc **P'P'bc** **10 58 45.9 -1.9**
comp=Z,11nm,0.9s,baz=289,slow=1.9,SNR=9.6
comp=Z,16nm,0.5s
ZALV Zalesovo Beam 62.28 334 P P **10 29 31.4 -1.9**
ZALV Zalesovo Beam 62.28 334 *i*P P **10 29 31.2 -2.1**
ZALV pmax pmax
comp=Z,16nm,0.5s
KBL Kabul 62.49 308 P P **10 29 33.9 -1.5**
KBL Kabul 62.49 308 P P **10 29 34.5 -0.8**
SNR=67
KBL S S **10 37 54.8 -6.1**
KBL Kabul 62.49 308 P P **10 29 33.9 -1.5**
KBL pmax pmax
comp=Z,153nm,0.8s
BTLS Baital 63.04 321 *e*P P **10 29 37.6 -1.0**
comp=Z,35nm,0.8s
BTLS Baital 63.04 321 *e*P P **10 29 37.5 -1.0**
BTLS pmax pmax
comp=Z,35nm,0.8s
GAR Garm 63.06 314 P P **10 29 37.7 -1.3**
KURBB Kurchatov Arra 63.30 328 P P **10 29 38.5 -1.6**
comp=Z,106nm,1.0s,baz=126,slow=6.2,SNR=85
KURBB PKP2bc P'P'bc 10 58 34.5 -11
comp=Z,1.3nm,0.3s,baz=306,slow=3.8,SNR=5.9
KURBB LR LR 10 58 59.9
comp=Z,1µm,18.9s,baz=135,slow=38
comp=Z,106nm,1.0s
KURK Kurchatov 63.30 328 P P **10 29 38.4 -1.7**
KURK Kurchatov 63.30 328 P P **10 29 38.9 -1.2**
KURK P P **10 29 38.9 -1.2**
KURK S S **10 38 07.7 -2.3**
KURK S S **10 38 07.7 -2.3**
KURK Kurchatov 63.30 328*d* *i*P P **10 29 38.4 -1.7**
KURK pmax pmax
comp=Z,143nm,1.0s
KURK MLR MLR
comp=Z,1µm,19.0s
SEY Seymchan 64.17 13 LR LR 10 59 18.2
comp=Z,735nm,20.2s,baz=204,slow=38
SEY Seymchan 64.17 13⇑ *e*P P **10 29 47.5 +1.9**
SEY pmax pmax
comp=Z,293nm,1.7s
IUG Iuzhnay 64.45 317 *e*P P **10 29 46.8 -1.2**
comp=Z,62nm,1.0s
IUG Iuzhnay 64.45 317 *e*P P **10 29 46.8 -1.2**
IUG pmax pmax
comp=Z,62nm,1.0s
SHEM Shemya Is, Ala 64.48 30 LR LR 10 54 13.1
comp=Z,1µm,22.0s,baz=240,slow=33
KK31 Karatay Array 64.50 318 P P **10 29 46.5 -1.7**
KK31 Karatay Array 64.50 318 P P **10 29 46.5 -1.7**
KK31 pmax pmax
comp=Z,34nm,0.8s
KKAR Karatay Array 64.50 318 P P **10 29 46.1 -2.1**
KKAR Karatay Array 64.50 318 P P **10 29 46.1 -2.1**
CHM Chimkent 64.81 317 *e*P P **10 29 49.3 -0.9**
comp=Z,48nm,1.5s
CHM LR LR 11 01 08.9
CHM Chimkent 64.81 317 *e*P P **10 29 49.3 -0.9**
CHM pmax pmax

comp=Z,48nm,1.5s
BRLS Borolday 64.93 318 *e*P **P 10 29 49.1 -1.9**
comp=Z,34nm,1.1s
BRLS Borolday 64.93 318 *e*P **P 10 29 49.9 -1.1**
BRLS pmax pmax
comp=Z,34nm,1.1s
NIUE Niue 65.86 112 P **P 10 29 59.5 +2.1**
NIUE Niue 65.86 112 P **P 10 29 55.8 -1.6**
NIUE Niue 65.86 112 P **P 10 29 59.0 +1.6**
BRZS Berezniki 66.17 325 *e*P **P 10 29 58.3 -0.7**
BRZS Berezniki 66.17 325 *e*P **P 10 29 58.2 -0.7**
AMKA Amchitka 66.48 33 P **P 10 30 00.7 -0.1**
NGCH Negor - Chabah 66.95 297 P **P 10 30 04.5 +0.2**
CTZ Chatham Island 68.00 139 IAMs_20 IAMs_20 10 58 54.0
comp=Z,2µm,21.0s
JLN Jalan Bani Buh 68.04 293 P **P 10 30 11.3 0.0**
SNR=6.7
WBK Wadi Bani Khal 68.50 294 P **P 10 30 14.5 +0.3**
SNR=7.1
KIWB Kanaga Island 68.66 34 IAmb IAmb 10 30 17.3
comp=Z,130nm,0.9s
CASY Casey 68.68 187 P **P 10 30 13.9 -0.5**
CASY IAmb IAmb 10 30 17.6
comp=Z,55nm,0.8s
CASY Casey 68.68 187 IAMs_20 IAMs_20 11 02 53.3
comp=Z,2µm,20.0s
BVAR Borovoye Array 68.86 328 P **P 10 30 16.0 +0.2**
comp=Z,60nm,0.6s,baz=135,slow=7.7,SNR=61
BVAR LR LR 11 01 19.2
comp=Z,2µm,21.8s,baz=120,slow=37
comp=Z,60nm,0.6s
WSAR Wadi Sarin 68.90 294 LR LR 11 01 10.5
comp=Z,11nm,21.9s,baz=106,slow=37
WSAR Wadi Sarin 68.90 294 P **P 10 30 17.0 +0.3**
SNR=8.8
WSAR S **S 10 39 16.0 -3.1**
BORK Borovoye 68.91 328‖ *e*P **P 10 30 14.0 -2.1**
BORK pmax pmax
comp=Z,119nm,1.0s
BORK MLR MLR
comp=Z,3µm,22.0s
ADK Adak 68.93 34 P **P 10 30 16.6 +0.3**
ADK IAmb IAmb 10 30 18.9
comp=Z,130nm,1.0s
ADK Adak 68.93 34 P **P 10 30 18.0 +1.8**
ADK Adak 68.93 34 P **P 10 30 16.6 +0.3**
ADK pmax pmax
comp=Z,130nm,1.0s
MHTO MHTO 69.23 292 P **P 10 30 18.8 +0.1**
SNR=22
MHTO P **P 10 30 18.8 +0.1**
SNR=22
JMDO Jabal Madar 69.27 293 P **P 10 30 19.3 +0.3**
SNR=16
JMDO S **S 10 39 20.7 -2.9**
SMDO Samad 69.41 294 P **P 10 30 19.6 -0.4**
SNR=9.5
TIXI Tiksi 69.95 1 LR LR 11 02 54.7
comp=Z,1µm,20.2s,baz=200,slow=38
TIXI Tiksi 69.95 1‖ *e*P **P 10 30 21.0 -1.1**
TIXI pmax pmax
comp=Z,209nm,1.3s
TIXI MLR MLR
comp=Z,2µm,21.0s
HOQ Hoqain 70.14 294 P **P 10 30 25.2 +0.8**
SNR=9.5
BSY Bisya 70.14 294 P **P 10 30 24.6 +0.2**
SNR=7.2
ATKA Atka Island 70.46 34 P **P 10 30 25.2 -0.5**
ATKA Atka Island 70.46 34 P **P 10 30 26.5 +0.9**
ARQ Araqi 70.83 294 P **P 10 30 28.9 +0.4**
SNR=7.5
SOHO SOHO 70.92 295 P **P 10 30 29.2 +0.1**
SOHO SOHO 70.92 295 *i* P **P 10 30 28.9 -0.1**
SNR=8.2
MSEY Mahe Island 71.05 265 IAMs_20 IAMs_20 10 58 52.4
comp=Z,2µm,22.0s
MSEY Mahe Island 71.05 265 P **P 10 30 30.9 +0.7**
MSEY S **S 10 39 41.9 -2.9**
SHAO Shalim 71.15 288 P **P 10 30 30.7 +0.1**
MDH Madha 71.27 296 P **P 10 30 30.8 -0.4**
UOSS Minazif 71.31 296 P **P 10 30 31.6 +0.1**
UOSS S **S 10 39 43.9 -3.5**
BANOM Banah 71.35 297 P **P 10 30 31.4 -0.3**
HATD Hatta, Dubai 71.36 296 P **P 10 30 31.9 +0.1**
SNR=6.9
HATD S **S 10 39 43.2 -4.8**
HATD Hatta, Dubai 71.36 296 *i* P **P 10 30 32.9 +1.2**
SNR=15
MSFE Esma-Masafi 71.41 296 *i* P **P 10 30 33.0 +0.9**
SNR=6.4
ASHO Ashiyiah 71.41 295 P **P 10 30 33.0 +0.9**
SNR=6.2
ASHO Ashiyiah 71.41 295 *i* P **P 10 30 33.6 +1.5**
SNR=24
SHME Shamm 71.51 297 P **P 10 30 34.1 +1.5**
ALNE Al Ain 71.62 295 P **P 10 30 33.5 +0.1**
SNR=12
ALNE S **S 10 39 47.9 -3.1**
ALNE Al Ain 71.62 295 *i* P **P 10 30 35.7 +2.4**
SNR=10
BILL Bilibino 71.69 15 P **P 10 30 33.4 +0.6**
BILL Bilibino 71.69 15‖ *e*P **P 10 30 33.3 +0.5**
BILL pmax pmax
comp=Z,115nm,2.5s
BILL MLR MLR
comp=Z,2µm,21.0s
NAZ Nazwa, Dubai 71.81 296 P **P 10 30 34.7 +0.3**
NAZ S **S 10 39 50.2 -2.9**
FAQ Al Faqa, Dubai 71.84 295 *i* P **P 10 30 36.4 +1.8**
SNR=6.3
ASUD Al Ashush, Dub 72.07 295 P **P 10 30 37.0 +1.1**
AJN Ajban 72.37 295 P **P 10 30 39.0 +1.3**
DOK Doka 72.61 289 P **P 10 30 39.3 -0.1**
SNR=10.0
WHFO Wadi Hawf 72.91 288 P **P 10 30 40.8 -0.3**
WHFO S **S 10 40 02.9 -3.0**
ABTO Aybut 73.32 288 P **P 10 30 43.8 +0.2**
ABKAR Akbulak array 73.52 321 P **P 10 30 42.5 -1.6**
MZR Muzera 73.58 293 P **P 10 30 44.9 -0.1**
SNR=7.8
MZR S **SKiKP 10 40 10.5 -2.8**
MZR Muzera 73.58 293 *i* P **P 10 30 46.0 +0.9**
SNR=26
NIKH Nikolski High 73.77 35 P **P 10 30 47.4 +1.9**
NIKH Nikolski High 73.77 35 P **P 10 30 45.7 +0.3**
baz=250,SNR=7.1
SPIA Saint Paul Isl 74.51 30 P **P 10 30 49.9 +0.2**
baz=248
AKTO Aktyubinsk 75.06 322 LR LR 11 05 26.4
comp=Z,3µm,21.9s,baz=66,slow=37
UNV Unalaska Valle 75.38 34 IAmb IAmb 10 30 57.6
comp=Z,176nm,1.2s
UNV IAMs_20 IAMs_20 11 01 55.8
comp=Z,3µm,22.0s
UNV Unalaska Valle 75.38 34 P **P 10 30 55.8 +1.0**
UNV Unalaska Valle 75.38 34 P **P 10 30 55.3 +0.5**
baz=252,SNR=7.2
SVE Sverdlovsk 75.54 329 *e*P **P 10 30 54.8 -0.9**
SVE *e*S **S 10 40 33.9 -0.1**
SVE pmax pmax
comp=Z,164nm,0.8s
SVE MLR MLR
comp=Z,2µm,21.0s
RAR Rarotonga 75.61 112 LR LR 11 03 01.0
comp=Z,607nm,20.5s,baz=289,slow=35
TRNA Turayna 75.80 295 P **P 10 30 57.8 0.0**
TRNA S **S 10 40 31.9 -6.2**
AKUT Akutan 75.88 34 P **P 10 30 59.7 +2.1**
KIP Kipapa 76.07 68 P **P 10 31 00.9 +1.5**
KIP Kipapa 76.07 68 P **P 10 31 00.8 +1.4**
KIP Kipapa 76.07 68‖ *e*P **P 10 30 58.1 -1.3**
KIP pmax pmax
comp=Z,28nm,0.9s
SHMA Al-Shehemyia 76.12 296 P **P 10 30 59.8 +0.2**
SHMA S **S 10 40 35.5 -6.1**
SMRA Abu-Samra 76.16 295 P **P 10 30 59.9 +0.1**
SNR=5.2
SMRA S **S 10 40 36.4 -5.6**
GAMB Gambell 76.48 24 P **P 10 31 01.7 +0.9**
baz=245
ARTI Arti 76.58 328 P **P 10 31 00.2 -1.4**
ARTI IAMs_20 IAMs_20 11 09 21.0
comp=Z,2µm,22.0s
ARTI Arti 76.58 328*c i*P **P 10 30 59.9 -1.7**
ARTI 10 33 50.0
ARTI S **S 10 40 43.1 -2.4**
ARTI pmax pmax
comp=Z,48nm,0.6s
ARTI MLR MLR
comp=Z,2µm,21.0s
SBV Sambava 77.16 256 P **P 10 31 06.2 +0.5**
SNR=8.9
FALS False Pass 77.41 34 P **P 10 31 08.5 +2.3**
FALS False Pass 77.41 34 P **P 10 31 06.6 +0.3**
baz=254,SNR=9.6
M11K Mekoryuk 77.61 28 P **P 10 31 08.1 +0.8**
baz=251
POHA Pohakuloa 78.30 70 P **P 10 31 13.4 +1.2**
POHA IAmb IAmb 10 31 17.0
comp=Z,110nm,1.0s
POHA Pohakuloa 78.30 70 P **P 10 31 13.6 +1.3**
S12K Black Hills 78.37 33 IAMs_20 IAMs_20 10 59 49.8
comp=Z,2µm,22.0s
S12K Black Hills 78.37 33 P **P 10 31 12.1 +0.4**
baz=256
MLH Mauna Loa 78.43 71 P **P 10 31 14.3 +1.4**
UWE Uwekahuna 78.51 71 IAmb IAmb 10 31 17.0
comp=Z,169nm,1.1s
RSD Rainshed 78.53 71 P **P 10 31 14.6 +1.2**
PUH Pauahi 78.58 71 IAmb IAmb 10 31 16.8
comp=Z,96nm,0.8s
KNHH Kane Nui o Ham 78.62 71 P **P 10 31 15.0 +1.1**
STCH Steam Cracks 78.67 71 P **P 10 31 15.6 +1.5**
STCH IAmb IAmb 10 31 17.6
comp=Z,93nm,0.9s
TNA Tin City 78.68 23 IAMs_20 IAMs_20 11 06 08.7
comp=Z,2µm,21.0s
TNA Tin City 78.68 23 P **P 10 31 14.0 +0.9**
baz=248
K13K Kusilvak Mount 78.82 27 P **P 10 31 15.5 +1.6**
baz=252
M13K Dall Lake 78.97 28 P **P 10 31 15.9 +1.2**
baz=254
SDPT Sand Point 79.16 34 P **P 10 31 17.1 +1.1**
SDPT Sand Point 79.16 34 P **P 10 31 16.4 +0.5**
baz=257,SNR=14
F14K Arctic Creek 79.27 23 P **P 10 31 18.1 +1.7**
baz=250
KBD Kabd 79.28 299 P **P 10 31 17.6 +0.4**
KBD S **S 10 41 12.2 -3.5**
ANM Nome 79.35 24 P **P 10 31 18.6 +1.8**
baz=251
L14K Kuka Creek 79.55 28 P **P 10 31 19.4 +1.5**
baz=254
CNBA Chernabura Isl 79.55 34 IAmb IAmb 10 31 20.8
comp=Z,98nm,1.0s
CNBA IAMs_20 IAMs_20 11 04 11.9
comp=Z,2µm,21.0s
CHNA Chernabura Isl 79.55 34 P **P 10 31 20.0 +1.9**
CHNA Chernabura Isl 79.55 34 P **P 10 31 19.2 +1.1**
baz=258
J14K Nanvaranak Lak 79.55 26 P **P 10 31 19.2 +1.3**
baz=253
N14K Kuskokwak Cree 79.64 29 P **P 10 31 19.7 +1.3**
baz=255
O14K Tigyukauivet M 79.68 30 P **P 10 31 19.9 +1.2**
baz=256
M14K Bethel 79.72 28 P **P 10 31 20.4 +1.5**
baz=255,SNR=22
S14K Fog Glacier 79.88 33 P **P 10 31 20.8 +0.8**
baz=258,SNR=7.2
F15K North Star Dit 80.01 23 P **P 10 31 21.8 +1.4**
baz=251
G15K Niukluk 80.03 24 P **P 10 31 21.5 +1.1**
baz=252
L15K Ungalak Mounta 80.19 27 P **P 10 31 22.8 +1.4**
baz=255
ABPO Ambohimpanom 80.22 251 P **P 10 31 21.4 -1.3**
ABPO Ambohimpanom 80.22 251 IAMs_20 IAMs_20 11 04 40.5
comp=Z,2µm,21.0s
ABPO Ambohimpanom 80.22 251 P **P 10 31 21.4 -1.3**
ABPO pmax pmax
comp=Z,52nm,0.9s
M15K Kasigluk River 80.31 29 P **P 10 31 23.1 +1.0**
baz=256,SNR=17
K15K Wolf Creek Mou 80.33 27 IAmb IAmb 10 31 26.2
comp=Z,165nm,1.0s
K15K Wolf Creek Mou 80.33 27 P **P 10 31 23.4 +1.2**
baz=255,SNR=34
O15K Ungalikthiuk R 80.38 30 IAMs_20 IAMs_20 11 05 53.7
comp=Z,1µm,20.0s
O15K Ungalikthiuk R 80.38 30 P **P 10 31 23.5 +1.0**
baz=257
AKT Akhty 80.38 312 *e*P **P 10 31 23.5 +0.4**
AKT *e* 10 31 30.0
AKT *e* 10 34 32.6
AKT *e*S **S 10 41 27.2 +0.1**
AKT pmax pmax
comp=Z,89nm,2.0s
N15K Kwethluk River 80.47 29 P **P 10 31 24.2 +1.2**
baz=256,SNR=20
C16K Lisburne Hills 80.60 21 P **P 10 31 24.7 +1.2**
baz=250
H16K Elim 80.66 24 P **P 10 31 25.1 +1.2**
baz=254
MAK Makhachkala 80.71 313*c i*P **P 10 31 21.1 -3.5**
MAK *e* 10 34 25.0
MAK *e*S **S 10 41 23.9 -6.3**
MAK *e*SS **SS 10 46 46.7 +3.0**
MAK pmax pmax
comp=Z,328nm,1.2s
G16K Koyuk River 80.82 24 P **P 10 31 26.1 +1.4**
baz=254
VOI Vohitsoka 80.89 248 P **P 10 31 25.5 -0.6**
VOI IAmb IAmb 10 31 37.1
comp=Z,85nm,0.7s
VOI Vohitsoka 80.89 248 P **P 10 31 26.8 +0.6**
RAYN Ar Rayn 80.94 293 P **P 10 31 25.3 -1.0**
RAYN IAmb IAmb 10 31 32.3
comp=Z,84nm,0.8s
RAYN Ar Rayn 80.94 293 IAMs_20 IAMs_20 11 10 07.8
comp=Z,2µm,20.0s
RAYN Ar Rayn 80.94 293 P **P 10 31 26.4 +0.1**
RAYN S **S 10 41 30.0 -3.4**
RAYN Ar Rayn 80.94 293 *i* P **P 10 31 26.0 -0.3**
SNR=7.1
RAYN Ar Rayn 80.94 293 P **P 10 31 25.3 -1.0**
RAYN pmax pmax
comp=Z,84nm,0.8s
RAYN MLR MLR
comp=Z,2µm,20.0s
J16K Anvik River 81.00 26 P **P 10 31 27.3 +1.6**
baz=256
I17K Unalakleet 81.11 25 IAmb IAmb 10 31 30.5
comp=Z,173nm,1.1s
I17K Unalakleet 81.11 25 P **P 10 31 28.0 +1.8**
baz=255,SNR=12
L16K Owhat River 81.13 28 IAmb IAmb 10 31 30.1
comp=Z,136nm,1.0s
L16K Owhat River 81.13 28 P **P 10 31 27.8 +1.4**
baz=257,SNR=28
N16K Nishlik Lake 81.19 29 P **P 10 31 28.2 +1.4**
baz=258
M16K Timber Creek 81.21 28 IAmb IAmb 10 31 30.6
comp=Z,114nm,1.0s
M16K Timber Creek 81.21 28 P **P 10 31 28.4 +1.4**
baz=257
D17K Noatak River 81.22 21 P **P 10 31 28.4 +1.6**
baz=252,SNR=39
P16K Nushagak River 81.27 30 IAMs_20 IAMs_20 11 03 30.3
comp=Z,2µm,22.0s
P16K Nushagak River 81.27 30 P **P 10 31 28.5 +1.3**
baz=258,SNR=7.3
O16K Kokwok River B 81.33 30 IAMs_20 IAMs_20 11 03 24.0
comp=Z,2µm,22.0s
O16K Kokwok River B 81.33 30 P **P 10 31 28.6 +1.0**
baz=258,SNR=30
RDOG Red Dog Mine 81.39 21 IAmb IAmb 10 31 34.2
comp=Z,130nm,1.1s
RDOG Red Dog Mine 81.39 21 P **P 10 31 29.2 +1.4**
baz=253,SNR=26
VNDA Vanda 81.40 173 P **P 10 31 27.6 0.0**
comp=Z,63nm,0.8s,baz=317,slow=6.0,SNR=83
VNDA PKKPbc **PKKPbc 10 50 01.8 -3.7**
comp=Z,0.8nm,0.8s,baz=250,slow=3.0,SNR=5.7
VNDA LR LR 11 06 53.0
comp=Z,1µm,21.3s,baz=332,slow=35
comp=Z,63nm,0.8s
VNDA Vanda 81.40 173 P **P 10 31 27.1 -0.5**
VNDA IAmb IAmb 10 31 30.9
comp=Z,55nm,0.8s
VNDA Vanda 81.40 173 P **P 10 31 27.1 -0.5**
VNDA pmax pmax
comp=Z,55nm,0.8s
C17K DeLong Mountai 81.42 21 P **P 10 31 29.3 +1.4**
baz=252
E17K Hotham Inlet 81.50 22 P **P 10 31 29.9 +1.6**
baz=254,SNR=39
G17K Kiwalik Mounta 81.54 24 P **P 10 31 29.9 +1.4**
baz=255
F17K Baldwin Pennin 81.55 23 P **P 10 31 30.0 +1.4**
baz=254
MAW Mawson 81.64 200 P **P 10 31 29.4 +0.4**
comp=Z,48nm,0.8s,baz=73,slow=5.7,SNR=79
MAW LR LR 11 05 09.8
comp=Z,824nm,21.4s,baz=54,slow=34
comp=Z,48nm,0.8s
J17K VABM Dome 81.69 26 IAmb IAmb 10 31 33.6
comp=Z,142nm,1.0s
J17K VABM Dome 81.69 26 P **P 10 31 31.0 +1.6**
baz=257
H17K Granite Mounta 81.70 24 P **P 10 31 31.1 +1.7**
baz=256
L17K Donlin 81.76 27 P **P 10 31 31.6 +1.8**
baz=258,SNR=32
KIRV Kirov 81.81 329 LR LR 11 11 12.6
comp=Z,1µm,21.0s,baz=97,slow=38
KIRV Kirov 81.81 329‖ *e*P **P 10 31 28.6 -1.5**
BELG Belogornoye 81.82 323*ce*P **P 10 31 28.8 -1.5**
BELG pmax pmax
comp=Z,16nm,0.8s
BELG MLR MLR
comp=Z,305nm,21.0s
R17L Mt. Peulik Vol 81.86 32 P **P 10 31 30.5 +0.1**
baz=260
PLK4 Peulik 4 81.86 32 IAMs_20 IAMs_20 11 04 02.9
comp=Z,2µm,21.0s
O17K Koliganek Bris 81.86 30 P **P 10 31 31.4 +1.1**
baz=259,SNR=28
K17K Iditarod 81.89 27 P **P 10 31 32.1 +1.7**
baz=258
Q16K King Salmon 81.89 31 P **P 10 31 30.5 0.0**
baz=260
CHIR Chirikof Islan 81.96 34 P **P 10 31 32.5 +1.5**
CHIR Chirikof Islan 81.96 34 P **P 10 31 31.7 +0.8**
baz=261
N17K Nushagak Hills 81.96 29 IAmb IAmb 10 31 35.1
comp=Z,124nm,1.4s
N17K Nushagak Hills 81.96 29 P **P 10 31 32.8 +1.9**
baz=259,SNR=12
M17K Holitna River 82.01 28 IAmb IAmb 10 31 35.5
comp=Z,190nm,1.4s
M17K IAMs_20 IAMs_20 11 06 56.9
comp=Z,1µm,22.0s
M17K Holitna River 82.01 28 P **P 10 31 32.9 +1.7**
baz=259
E18K Tukpahlearik C 82.06 22 IAmb IAmb 10 31 35.3
comp=Z,145nm,0.9s
E18K Tukpahlearik C 82.06 22 P **P 10 31 32.9 +1.6**
baz=255
P17K Kvichak River 82.09 30 P **P 10 31 32.5 +1.0**
baz=260
B18K Kokolik River 82.16 20 P **P 10 31 33.6 +1.8**
baz=254,SNR=13
C18K Utukok River 82.17 21 IAmb IAmb 10 31 35.5
comp=Z,71nm,0.8s
C18K Utukok River 82.17 21 P **P 10 31 33.3 +1.4**
baz=254,SNR=17
F18K Selawik 82.21 23 P **P 10 31 33.2 +1.2**
baz=256,SNR=18
Q17K Contact Creek 82.21 31 P **P 10 31 32.0 -0.4**
baz=260
SBA Scott Base 82.31 172 P **P 10 31 32.4 0.0**
SBA Scott Base 82.31 172 P **P 10 31 32.4 0.0**
H18K Honhosa River 82.39 24 P **P 10 31 34.2 +1.2**
baz=257,SNR=21
G18K Tagagawik 82.44 24 IAmb IAmb 10 31 36.8
comp=Z,124nm,1.1s
G18K Tagagawik 82.44 24 P **P 10 31 34.3 +1.0**
baz=257,SNR=29
ACHA Angle Creek He 82.50 32 IAmb IAmb 10 31 37.6
comp=Z,66nm,1.1s
GNI Garni 82.52 310 P **P 10 31 35.1 +0.6**
GNI S **S 10 41 46.1 -3.3**
GNI Garni 82.52 310 P **P 10 31 35.7 +1.2**
GNI Garni 82.52 310*ce*P **P 10 31 35.1 +0.6**
GNI pmax pmax
comp=Z,14nm,1.0s
L18K Granite Mounta 82.52 27 P **P 10 31 35.4 +1.6**
baz=259,SNR=60
N18K Kilae Creek 82.62 29 P **P 10 31 35.6 +1.3**
baz=260
A19K Wainwright 82.64 19 P **P 10 31 36.3 +2.1**
baz=254
Q18K Katmai Hardscr 82.73 31 P **P 10 31 34.7 -0.4**
baz=261,SNR=14
P18K Big Mountain, 82.73 30 IAMs_20 IAMs_20 11 06 58.0
comp=Z,1µm,20.0s
P18K Big Mountain, 82.73 30 P **P 10 31 35.4 +0.4**
baz=261
J18K Innoko River 82.74 26 P **P 10 31 36.2 +1.2**
baz=259,SNR=13
M18K Stony River 82.79 28 P **P 10 31 36.7 +1.5**
baz=260,SNR=55
O18K Koktuh Hills 82.82 30 IAMs_20 IAMs_20 11 04 30.2
comp=Z,2µm,22.0s
O18K Koktuh Hills 82.82 30 P **P 10 31 36.5 +1.1**
baz=261,SNR=14
C19K Lookout Ridge 82.85 20 P **P 10 31 37.2 +1.8**
baz=256
R18K Karluk 82.86 32 IAMs_20 IAMs_20 11 04 35.4
comp=Z,2µm,22.0s
R18K Karluk 82.86 32 P **P 10 31 35.9 +0.3**
baz=262
SII Sitkinak Islan 82.86 33 IAMs_20 IAMs_20 11 06 33.5
comp=Z,3µm,22.0s
SII Sitkinak Islan 82.86 33 P **P 10 31 38.4 +2.7**
SII Sitkinak Islan 82.86 33 P **P 10 31 36.6 +0.9**
baz=262
GCSA Galena City Sc 82.92 25 P **P 10 31 36.9 +1.2**
baz=259,SNR=94
F19K Shaleruckik Mo 82.99 23 P **P 10 31 37.0 +0.9**
baz=258,SNR=21
G19K Purcell Mounta 83.11 23 P **P 10 31 38.2 +1.4**
baz=258,SNR=180
D19K Kuna River 83.23 21 P **P 10 31 38.7 +1.3**
baz=257
H19K Roundabout Mou 83.25 24 P **P 10 31 39.1 +1.6**
baz=259
ATD Arta Tunnel 83.29 281 LR LR 11 10 46.2
comp=Z,22nm,18.1s,baz=82,slow=37
ATD Arta Tunnel 83.29 281 P **P 10 31 38.7 -0.1**
J19K Poorman 83.32 26 P **P 10 31 39.2 +1.3**
baz=260,SNR=91
N19K Bonanza Creek 83.32 29 P **P 10 31 39.5 +1.4**
baz=261,SNR=84
E19K Redstone River 83.33 22 P **P 10 31 39.4 +1.5**
baz=258
L19K White Mountain 83.36 28 P **P 10 31 39.5 +1.3**
baz=261,SNR=57
OHAK Old Harbor 83.44 33 IAmb IAmb 10 31 41.8
comp=Z,71nm,0.8s
OHAK Old Harbor 83.44 33 P **P 10 31 40.3 +1.7**
OHAK Old Harbor 83.44 33 P **P 10 31 39.3 +0.7**
baz=263
Q19K Cape Douglas, 83.47 31 IAmb IAmb 10 31 43.1
comp=Z,99nm,0.8s
M19K Big River Lodg 83.53 28 P **P 10 31 40.8 +1.7**
baz=261
P19K Oil Pt 83.78 30 IAMs_20 IAMs_20 11 07 39.6
comp=Z,1µm,20.0s
P19K Oil Pt 83.78 30 P **P 10 31 42.1 +1.7**
baz=262
D20K Etivluk River 83.81 21 P **P 10 31 41.8 +1.5**
baz=258,SNR=167
F20K Avaraart Lake 83.82 23 P **P 10 31 42.0 +1.7**
baz=260,SNR=82
L20K Farewell, AK 83.86 27 P **P 10 31 42.2 +1.5**
baz=262,SNR=47
ILSW Iliamna Southw 83.87 30 IAmb IAmb 10 31 42.8
comp=Z,82nm,1.0s
E20K Nigu River 83.88 21 P **P 10 31 42.1 +1.4**
baz=259,SNR=198
KDAK Kodiak Island 83.88 32 P **P 10 31 40.3 -0.6**
comp=Z,110nm,1.1s,baz=302,slow=2.9,SNR=20
KDAK LR LR 11 05 08.5
comp=Z,1µm,21.7s,baz=244,slow=33
comp=Z,110nm,1.1s

KDAK **Kodiak Island** 83.88 32 P P 10 31 41.3 +0.4
KDAK **Kodiak Island** 83.88 32 IAMs_20 IAMs_20 11 04 34.5
comp=Z,2µm,22.0s
KDAK **Kodiak Island** 83.88 32 *de*P P 10 31 41.5 +0.6
KDAK pmax pmax
comp=Z,151nm,1.1s
KDAK **Kodiak Island** 83.88 32 P P 10 31 41.7 +0.8
baz=263
H20K **Anotleneega Mo** 83.89 24 P P 10 31 42.2 +1.4
baz=260
B20K **Meade River** 83.89 20 P P 10 31 42.3 +1.6
baz=258,SNR=39
K20K **Telida** 83.90 26 P P 10 31 42.5 +1.6
baz=261
I20K **Naaghedeneel** 83.94 25 P P 10 31 42.6 +1.6
baz=261
J20K **Nowinta River** 83.99 26 P P 10 31 42.8 +1.4
baz=261,SNR=74
Q20K **Shuyak Island** 84.08 31 P P 10 31 42.6 +0.7
baz=263
SYI **Shuyak Island** 84.08 31 IAmb IAmb 10 31 47.3
comp=Z,114nm,1.0s
SYI IAMs_20 IAMs_20 11 05 33.6
comp=Z,2µm,22.0s
GOF **Gofitskoye** 84.11 315 *ce*P P 10 31 44.2 +1.9
M20K **Styx River** 84.12 28 IAMs_20 IAMs_20 11 08 12.6
comp=Z,1µm,21.0s
M20K **Styx River** 84.12 28 P P 10 31 43.7 +1.6
baz=262
KBZ **Khabaz** 84.13 314 P P 10 31 43.3 +0.8
comp=Z,19nm,0.7s,baz=86,slow=6.6,SNR=25
comp=Z,19nm,0.7s
KBZ **Khabaz** 84.13 314 *de*P P 10 31 43.6 +1.2
KBZ pmax pmax
comp=Z,59nm,1.0s
O20K **Slope Mountain** 84.14 30 P P 10 31 42.7 +0.5
baz=263
KIV **Kislovodsk** 84.29 314 P P 10 31 43.0 -0.5
KIV IAmb IAmb 10 31 49.5
comp=Z,70nm,0.7s
KIV **Kislovodsk** 84.29 314 P P 10 31 43.4 -0.1
KIV S SKSac 10 42 04.1 -0.8
KIV **Kislovodsk** 84.29 314 ⇑P P 10 31 44.6 +1.2
KIV **Kislovodsk** 84.29 314 *i* P P 10 31 44.1 +0.7
SNR=21
KIV **Kislovodsk** 84.29 314 *e*P P 10 31 43.8 +0.4
KIV *e* 10 42 03.9
KIV pmax pmax
comp=Z,56nm,1.0s
KIV pmax pmax
comp=Z,26nm,3.5s
KIV MLR MLR
comp=Z,620nm,19.0s
A21K **Barrow** 84.34 18 P P 10 31 44.7 +1.7
baz=258,SNR=24
IMAR **Indian Mountai** 84.43 24 P P 10 31 43.7 +0.2
N20K **Mount Spurr** 84.47 29 P P 10 31 44.1 +0.2
baz=263,SNR=36
SPCR **Spurr Chakacha** 84.47 29 P P 10 31 44.1 +0.2
baz=263,SNR=30
C21K **Knifeblade Rid** 84.55 21 P P 10 31 45.6 +1.5
baz=260
SPU **Mount Spurr** 84.55 29 IAmb IAmb 10 31 47.1
comp=Z,84nm,1.0s
HOM **Homer** 84.58 30 P P 10 31 44.7 +0.4
baz=264
G21K **Allakaket** 84.60 23 P P 10 31 45.6 +1.2
baz=262
B21K **Ikpikpuk River** 84.68 20 P P 10 31 46.0 +1.4
baz=260,SNR=110
PPLA **Purkeypile** 84.68 27 P P 10 31 45.8 +0.8
baz=263,SNR=9.8
STLK **Strandline Lak** 84.69 28 IAmb IAmb 10 31 47.1
comp=Z,52nm,1.0s
F21K **Alatna River** 84.72 23 P P 10 31 46.1 +1.1
baz=262
E21K **Killik River** 84.72 21 P P 10 31 46.3 +1.3
baz=261
CHUM **Lake Minchumin** 84.75 26 P P 10 31 46.4 +1.3
baz=263,SNR=11
H21K **Melozitna Rive** 84.77 24 P P 10 31 46.7 +1.5
baz=262,SNR=13
CNPM **China Poot** 84.77 30 IAMs_20 IAMs_20 11 04 59.9
comp=Z,2µm,22.0s
A22K **Sinclair Lake** 84.80 19 P P 10 31 46.9 +1.6
baz=260
PPT **Papeete** 84.86 108 LR LR 11 07 49.3
comp=Z,703nm,20.5s,baz=265,slow=34
SKT **Skwentna** 84.88 28 IAmb IAmb 10 31 48.5
comp=Z,76nm,0.9s
SKT **Skwentna** 84.88 28 P P 10 31 45.6 -0.3
baz=264,SNR=39
CAPN **Captain Cook N** 84.94 29 P P 10 31 47.0 +0.9
baz=264
BRLK **Bradley Lake** 84.97 30 IAMs_20 IAMs_20 11 05 45.9
comp=Z,1µm,19.0s
BRSE **Bradley Lake S** 85.04 30 P P 10 31 47.4 +0.6
baz=265,SNR=15
I21K **Tanana** 85.05 25 P P 10 31 48.0 +1.3
baz=263
SUA **Susitna One** 85.20 29 P P 10 31 47.9 +0.3
baz=264,SNR=30
B22K **Teshekpuk Lake** 85.20 20 P P 10 31 48.6 +1.3
baz=261
D22K **Ayikyak River** 85.25 21 P P 10 31 49.1 +1.5
baz=262
F22K **John River** 85.25 22 P P 10 31 49.1 +1.4
baz=263,SNR=55
L22K **Petersville** 85.29 28 IAmb IAmb 10 31 50.2
comp=Z,108nm,1.2s
KTH **Kantishna Hill** 85.33 26 IAmb IAmb 10 31 50.8
comp=Z,172nm,2.0s
BPAW **Bear Paw Mtn.** 85.35 26 IAMs_20 IAMs_20 11 09 47.1
comp=Z,1µm,19.0s
BPAW **Bear Paw Mtn.** 85.35 26 P P 10 31 48.9 +0.7
baz=264
VRH **Novokhopyorsk** 85.36 321 *e*P P 10 31 46.0 -2.4
VRH pmax pmax
comp=Z,160nm,0.8s
SLKM **Skilak Lake** 85.37 30 IAMs_20 IAMs_20 11 06 10.7
comp=Z,1µm,21.0s
H22K **Ishtalitna Cre** 85.38 24 IAmb IAmb 10 32 10.2
comp=Z,52nm,1.1s
H22K **Ishtalitna Cre** 85.38 24 P P 10 31 49.7 +1.4
baz=264,SNR=17
G22K **Bettles** 85.44 23 P P 10 31 49.8 +1.2
baz=263
E22K **Anaktuvuk Pass** 85.47 22 P P 10 31 50.0 +1.2
baz=263,SNR=56
MARD **Mardin** 85.48 307 IAmb IAmb 10 31 54.9
comp=Z,86nm,0.8s
CUT **Chulitna** 85.51 28 P P 10 31 49.4 +0.4
baz=265
M22K **Willow** 85.53 28 P P 10 31 49.0 -0.1
baz=265,SNR=38
MLY **Manley** 85.55 25 P P 10 31 50.1 +0.8
baz=264,SNR=9.5
TRF **Thorofare Moun** 85.60 27 P P 10 31 50.0 +0.3
baz=265,SNR=10
O22K **Cooper Landing** 85.61 30 IAMs_20 IAMs_20 11 06 07.1
comp=Z,1µm,22.0s
O22K **Cooper Landing** 85.61 30 P P 10 31 49.9 +0.4
baz=266,SNR=5.5
RC01 **Rabbit Creek A** 85.66 29 IAMs_20 IAMs_20 11 06 36.2
comp=Z,1µm,21.0s
RC01 **Rabbit Creek A** 85.66 29 P P 10 31 50.2 +0.5
baz=265,SNR=18
SEW **Seward** 85.72 30 IAMs_20 IAMs_20 11 09 22.0
comp=Z,2µm,20.0s
SEW **Seward** 85.72 30 P P 10 31 50.4 +0.4
baz=266,SNR=15
LABN **Labinsk** 85.73 314 *e*P P 10 31 51.8 +1.3
LABN *e* 10 42 14.4
LABN *e* 10 42 22.2
LABN pmax pmax
comp=Z,76nm,0.7s
LABN MLR MLR
comp=E,3µm,20.0s
LABN MLR MLR
comp=Z,2µm,22.0s
ERBR **Yeremizino-Bor** 85.94 316 *e*P P 10 31 52.3 +0.8
ERBR *e* 10 42 15.0
ERBR *e* 10 42 26.2
ERBR pmax pmax
comp=Z,121nm,0.7s
D23K **Nanushuk River** 85.98 21 P P 10 31 52.6 +1.3
baz=264

PMR **Palmer** 85.98 29 P P 10 31 51.9 +0.6
PMR **Palmer** 85.98 29 P P 10 31 51.5 +0.2
baz=266,SNR=17
COLD **Coldfoot** 85.98 23 IAmb IAmb 10 31 55.4
comp=Z,72nm,0.9s
COLD **Coldfoot** 85.98 23 P P 10 31 52.2 +1.0
baz=265,SNR=70
G23K **Bananza Creek** 86.01 23 P P 10 31 52.7 +1.2
baz=265
C23K **Itkillik River** 86.09 20 IAmb IAmb 10 31 55.6
comp=Z,93nm,0.8s
C23K **Itkillik River** 86.09 20 P P 10 31 53.0 +1.2
baz=264,SNR=60
GHO **Glory Hole Cre** 86.09 28 IAMs_20 IAMs_20 11 09 38.8
comp=Z,1µm,22.0s
H23K **Yukon River** 86.12 24 P P 10 31 53.4 +1.3
baz=265
I23K **Minto, Yukon-K** 86.15 25 IAmb IAmb 10 31 56.9
comp=Z,50nm,0.9s
I23K **Minto, Yukon-K** 86.15 25 P P 10 31 52.6 +0.5
baz=266,SNR=8.5
MCK **McKinley** 86.22 26 P P 10 31 52.9 +0.3
baz=266,SNR=19
NEA2 **Nenana** 86.23 25 P P 10 31 53.1 +0.5
baz=266,SNR=16
RND **Reindeer** 86.24 27 IAMs_20 IAMs_20 11 12 32.5
comp=Z,1µm,22.0s
E23K **Chandalar** 86.28 22 IAMs_20 IAMs_20 11 09 50.6
comp=Z,1µm,22.0s
E23K **Chandalar** 86.28 22 P P 10 31 53.9 +1.0
baz=265,SNR=96
KNK **Knik Glacier** 86.29 29 IAMs_20 IAMs_20 11 10 39.1
comp=Z,1µm,20.0s
KNK **Knik Glacier** 86.29 29 P P 10 31 53.4 +0.4
baz=266,SNR=12
PWL **Port Wells** 86.32 29 IAMs_20 IAMs_20 11 06 20.9
comp=Z,2µm,22.0s
PWL **Port Wells** 86.32 29 P P 10 31 53.9 +0.8
baz=267,SNR=11
WAT1 **Susitna Watana** 86.34 27 P P 10 31 53.6 +0.5
baz=266
TOLK **Toolik Lake Re** 86.35 21 IAmb IAmb 10 31 57.1
comp=Z,63nm,0.9s
TOLK **Toolik Lake Re** 86.35 21 P P 10 31 54.1 +1.0
baz=265,SNR=21
SML **Sawmill** 86.38 28 P P 10 31 54.1 +0.7
baz=267,SNR=17
SOC **Sochi** 86.43 313 *ce*P P 10 31 52.8 -1.2
SOC *e* 10 35 15.6
SOC *e*S SKSac 10 42 16.1 -2.1
SOC *e*SS SS 10 48 03.8 -4.5
SOC pmax pmax
comp=Z,139nm,0.7s
SOC MLR MLR
comp=Z,1µm,22.0s
D24K **Happy Valley** 86.66 21 IAmb IAmb 10 31 58.7
comp=Z,79nm,0.8s
D24K **Happy Valley** 86.66 21 P P 10 31 55.7 +1.1
baz=266,SNR=69
M23K **Glacier View** 86.67 28 P P 10 31 55.5 +0.7
baz=267,SNR=9.2
WAT6 **Susitna Watana** 86.70 28 P P 10 31 55.1 0.0
baz=267,SNR=26
E24K **Your Creek** 86.71 22 IAMs_20 IAMs_20 11 14 39.8
comp=Z,1µm,21.0s
E24K **Your Creek** 86.71 22 P P 10 31 56.0 +1.1
baz=266
P23K **Montague Islan** 86.74 30 P P 10 31 55.5 +0.3
baz=268
C24K **Franklin Bluff** 86.75 20 P P 10 31 55.9 +1.0
baz=266
COLA **College** 86.77 25 P P 10 31 55.0 -0.1
COLA **College** 86.77 25 IAMs_20 IAMs_20 11 11 01.4
comp=Z,1µm,22.0s
COLA **College** 86.77 25 P P 10 31 55.4 +0.3
COLA **College** 86.77 25 *c* *i*P P 10 31 54.9 -0.2
COLA pmax pmax
comp=Z,15nm,0.9s
COLA MLR MLR
comp=Z,1µm,21.0s
COLA **College** 86.77 25 P P 10 31 56.3 +1.1
baz=267
CCB **Clear Creek Bu** 86.78 25 IAMs_20 IAMs_20 11 11 00.7
comp=Z,1µm,22.0s
H24K **Nood Dome** 86.81 24 P P 10 31 55.9 +0.5
baz=267,SNR=26
SCM **Sheep Creek Mo** 86.86 28 IAmb IAmb 10 31 59.5
comp=Z,84nm,1.0s
SCM **Sheep Creek Mo** 86.86 28 P P 10 31 56.0 +0.2
baz=268,SNR=12
VORD **Divnogorie** 86.88 321 *e*P P 10 31 53.6 -2.4
VORD pmax pmax
comp=Z,120nm,0.9s
DHY **Denali Highway** 86.89 27 P P 10 31 56.2 +0.2
baz=267,SNR=6.7
F24K **Squaw Lake** 86.90 23 IAmb IAmb 10 32 00.1
comp=Z,70nm,1.1s
F24K **Squaw Lake** 86.90 23 P P 10 31 56.8 +1.0
baz=267,SNR=48
GLI **Glacier Island** 86.93 29 IAMs_20 IAMs_20 11 09 34.9
comp=Z,2µm,21.0s
GLI **Glacier Island** 86.93 29 P P 10 31 56.4 +0.3
baz=268
VORR **Voronezh** 86.95 321 *e*P P 10 31 55.3 -1.0
VORR pmax pmax
comp=Z,250nm,0.8s
POKR **Poker Plat Res** 86.96 25 P P 10 31 56.3 +0.2
baz=267
VSR **Storozhevoye** 86.96 321 *e*P P 10 31 55.3 -1.1
VSR pmax pmax
comp=Z,90nm,0.8s
G24K **Hadweenzic Riv** 87.02 23 P P 10 31 56.6 +0.2
baz=267
KLMR **Klimovskoe** 87.03 331 *e*P P 10 31 54.6 -1.9
KLMR *e* 10 35 16.6
KLMR S SKSac 10 42 19.3 -1.9
KLMR pmax pmax
comp=Z,146nm,1.2s
KLMR MLR MLR
comp=Z,2µm,18.0s
HDA **Harding Lake** 87.13 26 IAmb IAmb 10 31 58.8
comp=Z,41nm,1.0s
HDA **Harding Lake** 87.13 26 P P 10 31 55.6 -1.4
baz=268,SNR=28
LPSR **Galich'ya Gora** 87.14 322 *e*P P 10 31 56.0 -1.2
LPSR pmax pmax
comp=Z,200nm,0.9s
ILAR **Eielson Array** 87.17 25 P P 10 31 55.8 -1.4
comp=Z,20nm,1.1s,baz=295,slow=4.2,SNR=46
ILAR PP PP 10 35 17.8 -3.2
comp=Z,3.5nm,1.0s,baz=261,slow=7.3,SNR=4.7
ILAR PKKPbc PKKPdf 10 49 45.0 +0.3
comp=Z,1.1nm,1.0s,baz=63,slow=1.9,SNR=4.3
comp=Z,20nm,1.1s
ILAR **Eielson Array** 87.17 25 P P 10 31 55.2 -2.0
ILAR **Eielson Array** 87.17 25 P P 10 31 55.2 -2.0
FID **Port Fidalgo** 87.23 29 IAmb IAmb 10 32 07.7
comp=Z,77nm,1.0s
FID IAMs_20 IAMs_20 11 09 27.2
comp=Z,2µm,21.0s
M24K **Tolsona, Glenn** 87.41 28 P P 10 31 57.9 -0.5
baz=268,SNR=12
KLU **Klutina** 87.52 29 IAMs_20 IAMs_20 11 06 48.4
comp=Z,2µm,22.0s
KLU **Klutina** 87.52 29 P P 10 31 58.1 -0.9
baz=269,SNR=11
D25K **Kavik River** 87.54 21 P P 10 31 59.4 +0.5
baz=268
G25K **Bearman Lake** 87.56 23 P P 10 31 58.8 -0.2
baz=268
DIV **Divide** 87.58 29 IAmb IAmb 10 32 03.5
comp=Z,104nm,1.0s
DIV IAMs_20 IAMs_20 11 10 16.1
comp=Z,2µm,21.0s
EYAK **Cordova Ski Ar** 87.58 30 IAMs_20 IAMs_20 11 06 31.1
comp=Z,2µm,22.0s
EYAK **Cordova Ski Ar** 87.58 30 P P 10 31 59.6 +0.5
baz=269
K24K **Donnelly Dome** 87.63 26 IAmb IAmb 10 32 03.1
comp=Z,79nm,0.9s
K24K IAMs_20 IAMs_20 11 11 19.3
comp=Z,1µm,22.0s
K24K **Donnelly Dome** 87.63 26 P P 10 31 59.2 -0.2
baz=269,SNR=31
PAX **Paxson** 87.75 27 IAMs_20 IAMs_20 11 07 44.6
comp=Z,1µm,21.0s
PAX **Paxson** 87.75 27 P P 10 32 00.4 +0.3
baz=269,SNR=22

F25K **Christian Rive** 87.76 23 IAmb IAmb 10 32 05.9
comp=Z,44nm,1.2s
F25K **Christian Rive** 87.76 23 P P 10 32 01.1 +1.0
baz=269,SNR=26
E25K **Arctic Village** 87.80 22 IAmb IAmb 10 32 05.5
comp=Z,57nm,0.9s
E25K IAMs_20 IAMs_20 11 15 56.8
comp=Z,1µm,21.0s
E25K **Arctic Village** 87.80 22 P P 10 32 00.9 +0.7
baz=269
J25K **Salcha River,** 87.82 26 IAMs_20 IAMs_20 11 11 44.4
comp=Z,1µm,22.0s
J25K **Salcha River,** 87.82 26 P P 10 32 00.6 +0.2
baz=269
HARP **HAARP** 87.89 28 P P 10 32 01.0 +0.3
baz=269,SNR=11
MOS **Moscow** 87.94 326 *e*P P 10 31 59.8 -1.2
MOS *e* 10 35 28.7
MOS *e* 10 42 22.2
MOS *e*S S 10 42 37.8 -4.1
MOS *e*PS PnS 10 44 03.9 +17
MOS pmax pmax
comp=Z,176nm,0.6s
MOS pmax pmax
comp=Z,600nm,1.8s
MOS smax smax
comp=N,1µm,5.0s
MOS smax smax
comp=E,2µm,5.0s
MOS MLR MLR
comp=Z,2µm,22.0s
MOS MLR MLR
comp=E,2µm,21.0s
RIDG **Independent Ri** 88.04 26 IAmb IAmb 10 32 05.4
comp=Z,65nm,1.0s
RIDG **Independent Ri** 88.04 26 P P 10 32 01.7 +0.3
baz=270,SNR=12
C26K **Camden Bay** 88.07 20 P P 10 32 02.4 +1.1
baz=269,SNR=49
ANN **Anapa** 88.08 315 *e*P P 10 32 02.0 +0.1
RAGM **Ragged Mountai** 88.11 30 IAMs_20 IAMs_20 11 16 35.1
comp=Z,2µm,19.0s
BMRM **Bremner River** 88.15 29 IAmb IAmb 10 32 05.5
comp=Z,32nm,0.9s
BMRM IAMs_20 IAMs_20 11 10 45.1
comp=Z,1µm,21.0s
BMRM **Bremner River** 88.15 29 P P 10 32 02.3 +0.3
baz=270
N25K **Chitina, Valde** 88.15 29 IAmb IAmb 10 32 05.8
comp=Z,51nm,1.1s
N25K IAMs_20 IAMs_20 11 11 09.2
comp=Z,1µm,21.0s
N25K **Chitina, Valde** 88.15 29 P P 10 32 02.9 +0.8
baz=270,SNR=9.4
BMAR **Burnt Mountain** 88.17 23 P P 10 32 02.2 +0.2
KAIM **Kayak Island** 88.24 30 P P 10 32 02.9 +0.6
baz=270
GAZ **Gaziantep** 88.32 307 P P 10 32 02.8 -0.6
F26K **Sheenjek River** 88.34 22 IAMs_20 IAMs_20 11 18 47.9
comp=Z,1µm,21.0s
F26K **Sheenjek River** 88.34 22 P P 10 32 03.5 +0.8
baz=270,SNR=26
KIBK **Kibwezi** 88.34 268 P P 10 32 04.2 +0.3
KIBK **Kibwezi** 88.34 268 IAMs_20 IAMs_20 11 08 32.8
comp=Z,2µm,22.0s
KIBK **Kibwezi** 88.34 268 P P 10 32 04.4 +0.4
SNR=42
SCRK **Sand Creek** 88.42 26 P P 10 32 03.5 +0.2
baz=270,SNR=16
G26K **Porcupine Rive** 88.48 23 P P 10 32 04.1 +0.8
baz=270
C27K **Jago River** 88.48 21 IAMs_20 IAMs_20 11 15 34.7
comp=Z,1µm,21.0s
C27K **Jago River** 88.48 21 P P 10 32 04.4 +1.1
baz=270
GLB **Gilahina Butte** 88.53 29 IAmb IAmb 10 32 07.4
comp=Z,36nm,1.0s
GLB IAMs_20 IAMs_20 11 10 56.1
comp=Z,1µm,22.0s
OBN **Obninsk** 88.54 325 LR LR 11 15 37.0
comp=Z,1µm,19.3s,baz=18,slow=38
OBN **Obninsk** 88.54 325 P P 10 32 02.9 -0.9
OBN **Obninsk** 88.54 325 ⇑P P 10 32 01.9 -2.0
OBN **Obninsk** 88.54 325 ⇑*i*P P 10 32 03.3 -0.5
OBN *i* 10 32 08.4
OBN *i* 10 35 31.5
OBN *i* S SKSac 10 42 33.8 +3.3
OBN *i* PS PS 10 44 15.2 +20
OBN *i* SSS SSS 10 52 15.7
OBN pmax pmax
comp=Z,75nm,0.9s
OBN MLR MLR
comp=Z,3µm,22.0s
MENT **Mentasta** 88.55 27 P P 10 32 05.5 +1.7
J26L **Joseph Creek** 88.60 26 IAMs_20 IAMs_20 11 11 57.0
comp=Z,1µm,20.0s
J26L **Joseph Creek** 88.60 26 P P 10 32 04.4 +0.3
baz=271
ASF **Jabal al Asfar** 88.66 302 LR LR 11 15 57.5
comp=Z,1µm,21.6s,baz=77,slow=38
VRDI **Verde Repeater** 88.70 29 IAMs_20 IAMs_20 11 11 01.8
comp=Z,1µm,21.0s
L26K **Log Cabin Wild** 88.72 27 P P 10 32 04.8 +0.2
baz=271,SNR=18
I26K **Coal Creek Min** 88.76 25 P P 10 32 04.7 0.0
baz=271
CRQM **Cirque** 88.87 29 IAmb IAmb 10 32 23.0
comp=Z,47nm,1.0s
CRQM IAMs_20 IAMs_20 11 05 43.7
comp=Z,1µm,20.0s
CRQE **Cirque** 88.89 29 P P 10 32 05.8 +0.2
baz=271
M26K **Nabesna, AK** 88.90 28 IAMs_20 IAMs_20 11 10 53.9
comp=Z,2µm,22.0s
M26K **Nabesna, AK** 88.90 28 P P 10 32 05.7 +0.3
baz=271
MCARA **McCarthy VSAT** 88.91 29 IAmb IAmb 10 32 12.5
comp=Z,55nm,1.0s
MCARA **McCarthy VSAT** 88.91 29 P P 10 32 06.0 +0.5
baz=271
TGL **Tana Glacier** 89.02 29 IAmb IAmb 10 32 11.9
comp=Z,37nm,1.0s
TGL IAMs_20 IAMs_20 11 15 10.1
comp=Z,1µm,21.0s
KMBO **Kilima Mbogo** 89.10 269 P P 10 32 09.2 +1.5
comp=Z,13nm,0.8s,baz=73,slow=7.7,SNR=18
KMBO LR LR 11 09 54.6
comp=Z,1µm,20.5s,baz=97,slow=34
comp=Z,13nm,0.8s
LVZ **Lovozero** 89.14 338 IAMs_20 IAMs_20 11 19 23.7
comp=Z,2µm,19.0s
LVZ **Lovozero** 89.14 338 ⇑P P 10 32 03.9 -2.6
ISLE **Juniper Island** 89.26 30 IAMs_20 IAMs_20 11 15 25.6
comp=Z,1µm,19.0s
K27K **Chicken** 89.26 26 IAMs_20 IAMs_20 11 12 39.5
comp=Z,2µm,22.0s
K27K **Chicken** 89.26 26 P P 10 32 08.2 +1.1
baz=272
E27K **Coleen River** 89.29 22 IAmb IAmb 10 32 10.1
comp=Z,45nm,0.9s
E27K **Coleen River** 89.29 22 P P 10 32 07.8 +0.6
baz=272
G27K **Doyon Strip** 89.33 23 P P 10 32 08.5 +1.1
baz=272
BNN **Bunyan** 89.37 309 IAmb IAmb 10 32 13.4
comp=Z,44nm,1.0s
I27K **Kandik River** 89.40 25 P P 10 32 08.6 +0.8
baz=272
H27K **Steamboat Moun** 89.40 24 P P 10 32 08.6 +0.8
baz=273
L27K **Beaver Creek,** 89.41 27 IAmb IAmb 10 32 10.8
comp=Z,33nm,0.8s
L27K **Beaver Creek,** 89.41 27 P P 10 32 08.6 +0.8
baz=272
M27K **Edge Creek, AK** 89.42 28 IAMs_20 IAMs_20 11 10 56.7
comp=Z,2µm,22.0s
M27K **Edge Creek, AK** 89.42 28 P P 10 32 08.4 +0.4
baz=272,SNR=9.5
BCAR **Beaver Creek A** 89.43 27 P P 10 32 08.1 +0.1
D27M **Malcolm River** 89.47 21 P P 10 32 08.7 +0.6
baz=273
MESA **MESA** 89.47 30 P P 10 32 09.0 +0.6
baz=272
GRNC **Granite Creek** 89.55 29 IAMs_20 IAMs_20 11 15 26.1
comp=Z,1µm,21.0s
YAH **Yahtse** 89.57 30 IAmb IAmb 10 32 12.1
comp=Z,55nm,1.1s

BARN	**Barnard Glacie**	**89.58**	**29**	IAmb	IAmb	10 32 13.6			
	comp=Z,54nm,1.0s								
BARN				IAMs_20	IAMs_20	11 11 19.9			
	comp=Z,1µm,21.0s								
APA	**Apatity**	**89.64**	**337**	⇓*i* P	**P**	**10 32 08.0**	**-0.7**		
APA				*i*		10 35 49.9			
APA				*i* S	**S**	**10 42 56.7**	**-0.8**		
APA				MLR	MLR				
	comp=Z,3µm,29.1s								
CTG	**Chitna Glacier**	**89.74**	**29**	P	**P**	**10 32 08.9**	**-0.6**		
	baz=273,SNR=11								
CTGM	**Chitina Glacie**	**89.74**	**29**	IAmb	IAmb	10 32 18.4			
	comp=Z,63nm,1.1s								
GHAJ	**Ghor Haditha**	**89.81**	**301**	IAMs_20	IAMs_20	11 20 37.7			
	comp=Z,1µm,19.0s								
TABL	**Table Mountain**	**89.86**	**30**	IAmb	IAmb	10 32 23.1			
	comp=Z,54nm,1.1s								
BVCY	**Beaver Creek**	**89.89**	**28**	P	**P**	**10 32 09.8**	**-0.3**		
	baz=273,SNR=11								
MMAI	**Mount Meron Ar**	**89.90**	**303**	P	**P**	**10 32 12.1**	**+1.2**		
	comp=Z,12nm,0.5s,baz=92,slow=6.0,SNR=20								
MMAI				LR	LR	11 16 34.9			
	comp=Z,733nm,21.9s,baz=83,slow=38								
	comp=Z,12nm,0.5s								
LOGN	**Logan Glacier**	**89.91**	**29**	IAMs_20	IAMs_20	11 15 45.7			
	comp=Z,1µm,20.0s								
F28M	**Old Crow**	**89.97**	**22**	IAMs_20	IAMs_20	11 19 26.1			
	comp=Z,1µm,20.0s								
F28M	**Old Crow**	**89.97**	**22**	P	**P**	**10 32 09.6**	**-0.8**		
	baz=274,SNR=27								
E28M	**Babbage River**	**90.03**	**21**	IAMs_20	IAMs_20	11 15 46.5			
	comp=Z,1µm,20.0s								
E28M	**Babbage River**	**90.03**	**21**	P	**P**	**10 32 11.4**	**+0.8**		
	baz=274								
I28M	**Miner Creek**	**90.10**	**25**	P	**P**	**10 32 11.9**	**+0.7**		
	baz=274								
YUK3	**Moose Creek**	**90.12**	**28**	P	**P**	**10 32 11.6**	**+0.1**		
	baz=274								
D28M	**Stokes Point**	**90.25**	**21**	P	**P**	**10 32 12.4**	**+0.8**		
	baz=275,SNR=20								
O28M	**Mount Upton**	**90.31**	**29**	P	**P**	**10 32 12.7**	**+0.3**		
	baz=274								
SYO	**Syowa Base**	**90.32**	**201**	⇑*i* P	**P**	**10 32 11.2**	**-0.7**		
SYO	**Syowa Base**	**90.32**	**201**	⇑*i* PcP	**PcP**	**10 32 13.2**	**+0.2**		
PINM	**Pinnacle**	**90.33**	**30**	P	**P**	**10 32 12.3**	**+0.1**		
	baz=274								
EIL	**Elat**	**90.40**	**300**	LR	LR	11 17 16.9			
	comp=Z,765nm,20.8s,baz=77,slow=39								
SIM	**Simferopol'**	**90.43**	**315**	*e*P	**P**	**10 32 13.5**	**+0.5**		
SIM				*e*		10 35 43.0			
SIM				*e*		10 42 37.0			
SIM				*e*S	**S**	**10 43 02.0**	**-3.8**		
SIM				pmax	pmax				
	comp=Z,31nm,0.4s								
SIM				pmax	pmax				
	comp=Z,160nm,19.1s								
SIM				MLR	MLR				
	comp=Z,2µm,24.0s								
DAWY	**Dawson**	**90.44**	**26**	P	**P**	**10 32 12.4**	**-0.2**		
	baz=274,SNR=24								
YUK8	**Steele Glacier**	**90.48**	**29**	P	**P**	**10 32 13.1**	**0.0**		
	baz=274								
E29M	**Blow River**	**90.65**	**22**	P	**P**	**10 32 13.4**	**-0.1**		
	baz=276								
BZK	**Bozkurt**	**90.66**	**312**	IAmb	IAmb	10 32 21.7			
	comp=Z,69nm,0.8s								
BZK	**Bozkurt**	**90.66**	**312**	⇓P	**P**	**10 32 14.2**	**+0.1**		
H29M	**Whitestone**	**90.68**	**24**	P	**P**	**10 32 13.7**	**0.0**		
	baz=276								
PNL	**Peninsula**	**90.79**	**30**	P	**P**	**10 32 13.5**	**-0.8**		
	baz=274								
KIRS	**Kirsehir-Merke**	**90.86**	**309**	⇑P	P	10 32 09.5	-5.7		
LODK	**Lodwar**	**90.86**	**273**	P	**P**	**10 32 15.8**	**+0.1**		
	SNR=12								
ILGA	**Ilgaz**	**90.92**	**311**	IAmb	IAmb	10 32 23.8			
	comp=Z,31nm,0.8s								
M29M	**Somme Creek**	**91.00**	**28**	P	**P**	**10 32 16.1**	**+0.7**		
	baz=275								
YUK4	**Talbot Arm**	**91.02**	**29**	P	**P**	**10 32 16.5**	**+0.9**		
	baz=275								
BR131	**Keskin Array S**	**91.05**	**310**	P	**P**	**10 32 14.6**	**-1.5**		
BR131	**Keskin Array S**	**91.05**	**310**	P	**P**	**10 32 15.9**	**-0.2**		
	SNR=15								
BR131	**Keskin Array S**	**91.05**	**310**	*de*P	**P**	**10 32 15.4**	**-0.7**		
BRTR	**Keskin Array B**	**91.05**	**310**	P	**P**	**10 32 15.1**	**-1.0**		
	comp=Z,19nm,0.8s,baz=125,slow=4.8,SNR=34								
BRTR				PP	**PP**	**10 35 49.5**	**-3.3**		
	comp=Z,3.5nm,1.0s,baz=120,slow=4.9,SNR=5.3								
BRTR				PKKPbc	**PKKPbc**	**10 49 39.5**	**-1.5**		
	comp=Z,1.3nm,0.8s,baz=170,slow=3.6,SNR=6.9								
BRTR				LR	LR	11 21 20.0			
	comp=Z,361nm,18.1s,baz=87,slow=41								
	comp=Z,19nm,0.8s								
BRTR	**Keskin Array B**	**91.05**	**310**	P	**P**	**10 32 14.2**	**-1.9**		
BRTR	**Keskin Array B**	**91.05**	**310**	*i* P	**P**	**10 32 15.1**	**-1.0**		
BRTR				pmax	pmax				
	comp=Z,20nm,0.8s								
L29M	**L29M**	**91.09**	**27**	IAMs_20	IAMs_20	11 09 37.8			
	comp=Z,1µm,20.0s								
L29M	**L29M**	**91.09**	**27**	P	**P**	**10 32 16.6**	**+0.9**		
	baz=276								
O29M	**Mount Kennedy**	**91.14**	**30**	P	**P**	**10 32 15.1**	**-1.0**		
	baz=275								
YUK6	**Outpost Mounta**	**91.19**	**29**	P	**P**	**10 32 17.1**	**+0.6**		
	baz=275								
K29M	**Barlow Dome**	**91.28**	**26**	IAMs_20	IAMs_20	11 13 40.9			
	comp=Z,1µm,21.0s								
K29M	**Barlow Dome**	**91.28**	**26**	P	**P**	**10 32 17.4**	**+0.7**		
	baz=276								
EPYK	**Eagle Plains**	**91.33**	**24**	IAmb	IAmb	10 32 19.0			
	comp=Z,80nm,1.2s								
EPYK	**Eagle Plains**	**91.33**	**24**	P	**P**	**10 32 15.7**	**-1.0**		
	baz=277,SNR=24								
G30M	**tAoh Zrail Nji**	**91.45**	**23**	IAMs_20	IAMs_20	11 18 12.1			
	comp=Z,2µm,21.0s								
G30M	**tAoh Zrail Nji**	**91.45**	**23**	P	**P**	**10 32 16.4**	**-0.9**		
	baz=278								
CIDE	**Kastamonu/Cide**	**91.45**	**312**	⇓P	**P**	**10 32 20.8**	**+3.1**		
F30M	**Barrier River**	**91.53**	**22**	IAMs_20	IAMs_20	11 13 40.3			
	comp=Z,1µm,21.0s								
F30M	**Barrier River**	**91.53**	**22**	P	**P**	**10 32 18.2**	**+0.6**		
	baz=278								
QSPA	**South Pole Qui**	**91.54**	**180**	P	**P**	**10 32 18.9**	**+1.1**		
	comp=Z,18nm,0.8s,baz=312,slow=1.0,SNR=70								
QSPA				LR	LR	11 15 07.0			
	comp=Z,1µm,19.9s,baz=352,slow=37								
	comp=Z,18nm,0.8s								
QSPA	**South Pole Qui**	**91.54**	**180**	P	**P**	**10 32 18.0**	**+0.3**		
QSPA	**South Pole Qui**	**91.54**	**180**	IAMs_20	IAMs_20	11 14 57.5			
	comp=Z,1µm,20.0s								
I30M	**Mount Dempster**	**91.61**	**25**	P	**P**	**10 32 18.4**	**+0.2**		
	baz=277								
HYT	**Haines Junctio**	**91.62**	**29**	P	**P**	**10 32 19.1**	**+0.8**		
	baz=276,SNR=8.1								
P29M	**Windy Craggy**	**91.63**	**30**	IAmb	IAmb	10 32 21.6			
	comp=Z,55nm,1.1s								
P29M				IAMs_20	IAMs_20	11 09 16.2			
	comp=Z,1µm,20.0s								
P29M	**Windy Craggy**	**91.63**	**30**	P	**P**	**10 32 18.8**	**+0.6**		
	baz=276								
ANTO	**Ankara**	**91.69**	**310**	P	**P**	**10 32 18.5**	**-0.5**		
ANTO	**Ankara**	**91.69**	**310**	⇓P	**P**	**10 32 22.5**	**+3.5**		
ANTO	**Ankara**	**91.69**	**310**	⇓P	**P**	**10 32 22.5**	**+3.5**		
J30M	**Hart River**	**91.71**	**25**	IAMs_20	IAMs_20	11 13 30.2			
	comp=Z,1µm,22.0s								
J30M	**Hart River**	**91.71**	**25**	P	**P**	**10 32 19.1**	**+0.4**		
	baz=277								
KEV	**Kevo**	**91.72**	**340**	IAMs_20	IAMs_20	11 21 39.7			
	comp=Z,2µm,21.0s								
N30M	**Aishikik Lake**	**91.75**	**29**	P	**P**	**10 32 19.3**	**+0.5**		
	baz=276								
M30M	**Minto, Yukon**	**91.76**	**27**	IAmb	IAmb	10 32 22.0			
	comp=Z,40nm,0.9s								
M30M	**Minto, Yukon**	**91.76**	**27**	P	**P**	**10 32 18.6**	**-0.2**		
	baz=277,SNR=19								
P30M	**Million Dollar**	**91.97**	**30**	P	**P**	**10 32 19.4**	**-0.4**		
	baz=277								
MAYO	**Mayo, Yukon**	**92.03**	**26**	P	**P**	**10 32 20.2**	**+0.2**		
	baz=278,SNR=14								
G31M	**Satah River**	**92.22**	**23**	IAmb	IAmb	10 32 22.7			
	comp=Z,55nm,1.0s								
G31M				IAMs_20	IAMs_20	11 18 34.4			
	comp=Z,2µm,21.0s								
G31M	**Satah River**	**92.22**	**23**	P	**P**	**10 32 20.7**	**0.0**		
	baz=279,SNR=20								
INK	**Inuvik**	**92.26**	**21**	P	**P**	**10 32 20.3**	**-0.6**		
	comp=Z,28nm,1.0s,baz=279,slow=5.2,SNR=30								
INK				LR	LR	11 15 52.0			
	comp=Z,812nm,20.4s,baz=299,slow=37								
	comp=Z,28nm,1.0s								
INK	**Inuvik**	**92.26**	**21**	IAmb	IAmb	10 32 22.9			
	comp=Z,52nm,1.1s								
INK	**Inuvik**	**92.26**	**21**	P	**P**	**10 32 20.6**	**-0.3**		
	baz=280,SNR=26								
ARA0	**ARCESS Array S**	**92.28**	**340**	*e*P	**P**	**10 32 20.4**	**-0.6**		
ARCES	**ARCESS Array B**	**92.28**	**340**	P	**P**	**10 32 20.1**	**-0.9**		
	comp=Z,30nm,0.8s,baz=76,slow=5.1,SNR=32								
ARCES				PKKPbc	**PKKPdf**	**10 49 35.5**	**-0.4**		
	comp=Z,1.4nm,0.7s,baz=278,slow=0.9,SNR=8.1								
ARCES				LR	LR	11 17 43.8			
	comp=Z,2µm,21.9s,baz=85,slow=38								
	comp=Z,30nm,0.8s								
ARCES	**ARCESS Array B**	**92.28**	**340**	P	**P**	**10 32 20.0**	**-1.1**		
ARCES				IAmb	IAmb	10 32 22.1			
	comp=Z,38nm,0.9s								
O30N	**Mendenhall**	**92.31**	**29**	P	**P**	**10 32 22.0**	**+0.6**		
	baz=277,SNR=7.5								
F31M	**Tsiigehtchic**	**92.33**	**22**	IAmb	IAmb	10 32 23.1			
	comp=Z,56nm,1.0s								
F31M	**Tsiigehtchic**	**92.33**	**22**	P	**P**	**10 32 20.8**	**-0.5**		
	baz=280,SNR=20								
PLBC	**Pleasant Camp**	**92.34**	**30**	P	**P**	**10 32 20.7**	**-0.8**		
	baz=277								
H31M	**Peel River**	**92.37**	**24**	IAmb	IAmb	10 32 23.8			
	comp=Z,38nm,1.2s								
H31M	**Peel River**	**92.37**	**24**	P	**P**	**10 32 21.2**	**-0.4**		
	baz=279,SNR=8.1								
N31M	**Braeburn, Yuko**	**92.37**	**28**	IAmb	IAmb	10 32 26.6			
	comp=Z,71nm,1.0s								
N31M	**Braeburn, Yuko**	**92.37**	**28**	P	**P**	**10 32 22.0**	**+0.4**		
	baz=278,SNR=15								
SPB2	**Spitsbergen Ar**	**92.46**	**349**	P	**P**	**10 32 21.5**	**-0.2**		
SPB2				IAmb	IAmb	10 32 23.1			
	comp=Z,54nm,0.8s								
SPA0	**Spitsbergen Ar**	**92.46**	**349**	*e*P	**P**	**10 32 21.7**	**0.0**		
SPITS	**Spitsbergen Ar**	**92.46**	**349**	P	**P**	**10 32 20.8**	**-0.9**		
	comp=Z,47nm,0.8s,baz=76,slow=7.6,SNR=20								
SPITS				PP	**PP**	**10 36 01.7**	**-1.1**		
	comp=Z,7.5nm,0.9s,baz=65,slow=12,SNR=1.6								
SPITS				LR	LR	11 21 42.4			
	comp=Z,673nm,18.3s,baz=60,slow=41								
	comp=Z,47nm,0.8s								
SPITS	**Spitsbergen Ar**	**92.46**	**349**	P	**P**	**10 32 21.5**	**-0.2**		
SPITS				pmax	pmax				
	comp=Z,64nm,0.9s								
S31K	**Pelican**	**92.60**	**32**	P	**P**	**10 32 22.0**	**-0.7**		
	baz=277								
HAMF	**Hammerfest**	**92.67**	**341**	*e*P	**P**	**10 32 21.6**	**-1.1**		
R31K	**City Hall, Gus**	**92.80**	**31**	P	**P**	**10 32 23.7**	**+0.1**		
	baz=278								
SKAG	**Skagway**	**92.87**	**30**	IAmb	IAmb	10 32 27.6			
	comp=Z,35nm,1.0s								
SKAG	**Skagway**	**92.87**	**30**	P	**P**	**10 32 23.9**	**0.0**		
	baz=278								
M31M	**Drury Creek, Y**	**92.92**	**28**	IAmb	IAmb	10 32 26.9			
	comp=Z,46nm,1.1s								
M31M				IAMs_20	IAMs_20	11 13 01.1			
	comp=Z,1µm,22.0s								
M31M	**Drury Creek, Y**	**92.92**	**28**	P	**P**	**10 32 24.9**	**+0.7**		
	baz=279,SNR=12								
WHY	**Whitehorse**	**92.92**	**29**	P	**P**	**10 32 24.2**	**-0.1**		
WHY	**Whitehorse**	**92.92**	**29**	P	**P**	**10 32 24.5**	**+0.2**		
	baz=278,SNR=23								
KBS	**Kingsbay**	**93.00**	**350**	IAMs_20	IAMs_20	11 21 07.1			
	comp=Z,2µm,21.0s								
KBS	**Kingsbay**	**93.00**	**350**	*i* P	**P**	**10 32 23.9**	**-0.3**		
SAHE	**Sakarya_HENDEK**	**93.09**	**311**	⇓P	**P**	**10 32 23.8**	**-1.6**		
KTK1	**Kautokeino**	**93.17**	**339**	*e*P	**P**	**10 32 23.7**	**-1.5**		
SIT	**Sitka**	**93.20**	**33**	P	**P**	**10 32 25.3**	**-0.1**		
	baz=278								
BESE	**Bessie Mountai**	**93.24**	**31**	IAmb	IAmb	10 32 29.0			
	comp=Z,73nm,1.2s								
AKASG	**Malin Array Be**	**93.26**	**321**	P	**P**	**10 32 26.9**	**+1.0**		
	comp=Z,24nm,0.9s,baz=70,slow=4.8,SNR=23								
AKASG				PP	**PP**	**10 36 09.4**	**-0.3**		
	comp=Z,0.3nm,0.2s,baz=69,slow=7.5,SNR=4.9								
AKASG				PKKPbc	**PKKPdf**	**10 49 34.6**	**+0.9**		
	comp=Z,0.8nm,0.5s,baz=274,slow=3.1,SNR=5.3								
AKASG				LR	LR	11 18 13.5			
	comp=Z,2µm,21.8s,baz=80,slow=38								
	comp=Z,24nm,0.9s								
AKASG	**Malin Array Be**	**93.26**	**321**	*i* P	**P**	**10 32 29.0**	**+3.1**		
AKASG				pmax	pmax				
	comp=Z,25nm,0.6s								
AKBB	**Malin Array Si**	**93.26**	**321**	IAmb	IAmb	10 32 33.0			
	comp=Z,30nm,0.8s								
AKBB	**Malin Array Si**	**93.26**	**321**	⇓*e*P	**P**	**10 32 25.8**	**-0.1**		
KIEV	**Kiev**	**93.27**	**321**	P	**P**	**10 32 25.6**	**-0.4**		
KIEV				IAmb	IAmb	10 32 33.0			
	comp=Z,26nm,0.7s								
KIEV	**Kiev**	**93.27**	**321**	IAMs_20	IAMs_20	11 17 40.7			
	comp=Z,2µm,22.0s								
KIEV	**Kiev**	**93.27**	**321**	⇑P	**P**	**10 32 29.6**	**+3.7**		
KIEV	**Kiev**	**93.27**	**321**	⇑P	**P**	**10 32 29.6**	**+3.7**		
R32K	**Eaglecrest**	**93.46**	**32**	IAmb	IAmb	10 32 34.3			
	comp=Z,46nm,1.1s								
R32K				IAMs_20	IAMs_20	11 09 48.6			
	comp=Z,2µm,21.0s								
R32K	**Eaglecrest**	**93.46**	**32**	P	**P**	**10 32 27.2**	**+0.6**		
	baz=279								
FIA1	**FINESS Array S**	**93.49**	**332**	P	**P**	**10 32 26.2**	**-0.5**		
FIA1				IAmb	IAmb	10 32 34.2			
	comp=Z,74nm,1.1s								
FINES	**FINESS Array B**	**93.49**	**332**	P	**P**	**10 32 26.1**	**-0.6**		
	comp=Z,6.2nm,0.7s,baz=88,slow=2.9,SNR=13								
FINES				LR	LR	11 17 30.3			
	comp=Z,2µm,21.8s,baz=78,slow=38								
	comp=Z,6.2nm,0.7s								
FINES	**FINESS Array B**	**93.49**	**332**	P	**P**	**10 32 25.8**	**-0.9**		
FINES	**FINESS Array B**	**93.49**	**332**	P	**P**	**10 32 25.8**	**-0.9**		
JIS	**Juneau Island**	**93.53**	**31**	P	**P**	**10 32 29.8**	**+2.9**		
S32K	**Kilisnoo**	**93.55**	**32**	P	**P**	**10 32 27.4**	**+0.4**		
	baz=278								
MNK	**Minsk**	**93.60**	**325**	*i* P	**P**	**10 32 29.7**	**+2.3**		
MNK				*i*		10 36 14.6			
MNK				*i* PPP	PPP	10 38 15.1			
MNK				*i* S	**SKSac**	**10 43 04.0**	**+4.5**		
MNK				*i* PS	**PS**	**10 44 51.5**	**+0.2**		
MNK				pmax	pmax				
	comp=E,18nm,0.8s								
MNK				pmax	pmax				
	comp=Z,40nm,0.7s								
MNK				pmax	pmax				
	comp=N,14nm,0.7s								
MNK				MLR	MLR				
	comp=E,1µm,20.0s								
MNK				MLR	MLR				
	comp=N,1µm,16.0s								
MNK				MLR	MLR				
	comp=Z,2µm,17.0s								
ISP	**Isparta**	**93.60**	**308**	IAMs_20	IAMs_20	11 20 01.9			
	comp=Z,1µm,22.0s								
VSU	**Vasula**	**93.65**	**329**	⇑*e*P	**P**	**10 32 26.8**	**-0.7**		
VSU				pmax	pmax				
	comp=Z,21nm,0.9s								
VSU				MLR	MLR				
	comp=Z,3µm,23.0s								
P32M	**Atlin**	**93.66**	**30**	P	**P**	**10 32 27.7**	**+0.1**		
	baz=279								
N32M	**Quiet Lake**	**93.71**	**29**	P	**P**	**10 32 28.8**	**+1.0**		
	baz=280,SNR=12								
KIS	**Kishinev**	**93.95**	**317**	*e*P	**P**	**10 32 27.0**	**-2.2**		
KIS				*e*L	L	11 14 34.0			
KIS				LRM	MLR	11 18 41.0			
	comp=Z,400nm,23.0s								
MILM	**Milestii Mici**	**93.96**	**317**	⇑P	**P**	**10 32 26.9**	**-2.4**		
MILM	**Milestii Mici**	**93.96**	**317**	⇑P	**P**	**10 32 26.9**	**-2.4**		
MILM	**Milestii Mici**	**93.96**	**317**	*e*P	**P**	**10 32 26.5**	**-2.7**		
	comp=Z,240nm,3.7s								
MILM				*e*L	L	11 14 00.0			
MILM				LRM	MLR	11 16 00.0			
	comp=Z,1µm,23.5s								
P33M	**Teslin, Yukon**	**94.00**	**29**	IAmb	IAmb	10 32 32.0			
	comp=Z,38nm,1.1s								
P33M	**Teslin, Yukon**	**94.00**	**29**	P	**P**	**10 32 29.6**	**+0.3**		
	baz=280,SNR=12								
JETT	**Jettan, Norway**	**94.02**	**340**	*e*P	**P**	**10 32 27.8**	**-1.2**		
A36M	**Sachs Harbour**	**94.11**	**17**	IAMs_20	IAMs_20	11 19 44.4			
	comp=Z,1µm,22.0s								
A36M	**Sachs Harbour**	**94.11**	**17**	P	**P**	**10 32 29.5**	**+0.1**		
	baz=288,SNR=15								
SORM	**Soroca**	**94.13**	**318**	⇑P	**P**	**10 32 28.2**	**-1.8**		
SORM	**Soroca**	**94.13**	**318**	⇑P	**P**	**10 32 28.2**	**-1.8**		
TLCR		**94.16**	**315**	⇓P	**P**	**10 32 29.2**	**-1.0**		
TLCR		**94.16**	**315**	⇓P	**P**	**10 32 29.2**	**-1.0**		
ELL	**Elmali**	**94.19**	**307**	IAmb	IAmb	10 32 37.8			
	comp=Z,24nm,0.8s								
KLYT	**Kilyos**	**94.42**	**311**	⇑P	**P**	**10 32 34.5**	**+3.0**		
MANR	**Mangalia**	**94.48**	**314**	⇓P	**P**	**10 32 32.4**	**+0.8**		
TPGR	**Topolog**	**94.48**	**315**	⇓P	**P**	**10 32 32.3**	**+0.6**		
TRO	**Tromso**	**94.49**	**340**	*e*P	**P**	**10 32 28.6**	**-2.6**		
Q32M	**Nakina River**	**94.50**	**31**	IAmb	IAmb	10 33 04.6			
	comp=Z,52nm,1.4s								
Q32M	**Nakina River**	**94.50**	**31**	P	**P**	**10 32 31.7**	**0.0**		
	baz=281								
T33K	**Petersburg**	**94.53**	**33**	P	**P**	**10 32 31.6**	**0.0**		
	baz=280								
TIRR	**Tirgusor**	**94.53**	**315**	IAMs_20	IAMs_20	11 22 14.6			
	comp=Z,1µm,22.0s								
TIRR	**Tirgusor**	**94.53**	**315**	⇑P	**P**	**10 32 32.3**	**+0.4**		
TIRR	**Tirgusor**	**94.53**	**315**	⇑P	**P**	**10 32 32.3**	**+0.4**		
U33K	**Whale Pass**	**94.55**	**34**	P	**P**	**10 32 30.8**	**-0.9**		
	baz=280								
CFR	**Carcaliu**	**94.64**	**315**	⇓P	**P**	**10 32 31.1**	**-1.2**		
CFR	**Carcaliu**	**94.64**	**315**	⇓P	**P**	**10 32 31.1**	**-1.2**		
CRAG	**Craig**	**94.66**	**34**	P	**P**	**10 32 31.7**	**-0.5**		
	baz=280								
SCTR	**Scanteiesti**	**94.67**	**316**	⇑P	**P**	**10 32 35.7**	**+3.1**		
VASR	**Vaslui**	**94.69**	**317**	⇑P	**P**	**10 32 35.1**	**+2.5**		
VARL	**Varlezi**	**94.75**	**316**	⇑P	**P**	**10 32 33.8**	**+0.9**		
HARR	**Harsova**	**94.84**	**315**	⇑P	**P**	**10 32 33.3**	**0.0**		
HARR	**Harsova**	**94.84**	**315**	⇑P	**P**	**10 32 33.3**	**0.0**		
WRAK	**Wrangell Islan**	**94.92**	**33**	IAmb	IAmb	10 32 36.9			
	comp=Z,68nm,1.0s								
WRAK	**Wrangell Islan**	**94.92**	**33**	P	**P**	**10 32 33.5**	**+0.1**		
	baz=280,SNR=5.3								
CTYL	**Yalikoy Yolu**	**94.96**	**312**	⇑P	**P**	**10 32 33.8**	**-0.1**		
R33M	**Jennings River**	**95.08**	**30**	IAmb	IAmb	10 32 37.5			
	comp=Z,38nm,1.0s								
R33M				IAMs_20	IAMs_20	11 10 47.3			
	comp=Z,2µm,21.0s								
R33M	**Jennings River**	**95.08**	**30**	P	**P**	**10 32 34.8**	**+0.5**		
	baz=282,SNR=12								
NOR	**Nord**	**95.14**	**355**	*i* P	**P**	**10 32 33.8**	**-0.2**		
NOR				IAmb	IAmb	10 32 35.5			
	comp=Z,41nm,0.9s								
BAND	**Balkesir-Ban**	**95.23**	**311**	⇑P	**P**	**10 32 34.3**	**-0.9**		
PANC	**Panciu**	**95.24**	**316**	⇓P	**P**	**10 32 33.6**	**-1.5**		
S34M	**Telegraph Cree**	**95.29**	**32**	IAmb	IAmb	10 32 38.4			
	comp=Z,43nm,1.2s								
S34M	**Telegraph Cree**	**95.29**	**32**	P	**P**	**10 32 35.5**	**+0.4**		
	baz=282,SNR=9.4								
C36M	**Paulatuk**	**95.33**	**20**	IAmb	IAmb	10 32 37.0			
	comp=Z,44nm,0.9s								
C36M	**Paulatuk**	**95.33**	**20**	P	**P**	**10 32 34.8**	**-0.2**		
	baz=289,SNR=22								
GRER		**95.42**	**316**	⇑P	**P**	**10 32 37.2**	**+1.2**		
TESR	**Tescani**	**95.49**	**317**	⇓P	**P**	**10 32 35.5**	**-0.8**		
PHSR	**Pinarhisar**	**95.51**	**312**	⇑P	**P**	**10 32 37.3**	**+0.8**		
VRI	**Vrincioaia**	**95.53**	**316**	⇑P	**P**	**10 32 36.7**	**+0.2**		
VRI	**Vrincioaia**	**95.53**	**316**	⇑P	**P**	**10 32 36.7**	**+0.2**		
V35K	**Ketchikan**	**95.53**	**34**	P	**P**	**10 32 35.7**	**-0.5**		
	baz=281								
PLOR	**Plostina**	**95.58**	**316**	⇑P	**P**	**10 32 37.3**	**+0.5**		
PLOR	**Plostina**	**95.58**	**316**	⇑P	**P**	**10 32 37.3**	**+0.5**		
BISRR	**Bisoca**	**95.59**	**316**	⇑P	P	10 32 24.8	-12		
MBAR	**Mbarara**	**95.60**	**270**	LR	LR	11 12 59.0			
	comp=Z,593nm,21.9s,baz=76,slow=34								
MBAR	**Mbarara**	**95.60**	**270**	⇑*e*P	**P**	**10 32 38.0**	**+0.3**		
MBAR				pmax	pmax				
	comp=Z,21nm,1.8s								
PABE	**Paberze**	**95.66**	**326**	IAmb	IAmb	10 32 46.5			
	comp=Z,46nm,0.7s								
ONER	**Baraj Valea Uz**	**95.69**	**317**	⇑P	**P**	**10 32 33.7**	**-3.5**		
DLBC	**Dease Lake**	**95.75**	**31**	P	**P**	**10 32 37.1**	**-0.2**		
	comp=Z,14nm,1.

comp=Z,39nm,0.8s
NVL N'lazarevskaya 99.42 198 *e*P **Pdif 10 32 54.3 +0.9**
NVL *e* 10 36 57.8
NVL *e*PPP PPP 10 39 04.1
NVL *e*S **SKSac 10 43 31.2 +2.0**
NVL *e*SS **SS 10 51 17.0 +4.1**
NVL *e*SSS SSS 10 55 06.0
NVL pmax pmax
comp=Z,7.0nm,0.9s
NVL MLR MLR
comp=Z,101nm,19.0s
BOVS Bovan 99.43 315 ⇑P **Pdif 10 32 58.9 +4.8**
HFS Hagfors 99.68 332 P **Pdif 10 32 54.0 -0.9**
comp=Z,2.2nm,0.6s,baz=108,slow=4.8,SNR=12
HFS LR LR 11 21 33.3
comp=Z,3µm,21.8s,baz=66,slow=38
comp=Z,2.2nm,0.6s
HFS Hagfors 99.68 332 P **Pdif 10 32 54.0 -0.9**
LANS Liptovska Anna 99.74 320 *e*P **Pdif 10 33 00.3 +4.9**
LANS Liptovska Anna 99.74 320 *e*PDIFF **Pdif 10 33 00.3 +4.9**
PSZ Piszkesteto 99.75 319 ⇑P **Pdif 10 32 58.2 +2.6**
PSZ Piszkesteto 99.75 319 ⇑P **Pdif 10 32 58.2 +2.6**
RES Resolute Bay 99.95 10 P **Pdif 10 32 55.7 0.0**
comp=Z,14nm,0.9s,baz=284,slow=6.3,SNR=16
RES PP **PP 10 37 02.6 +2.1**
comp=Z,4.6nm,0.9s,baz=300,slow=5.9,SNR=5.3
RES LR LR 11 22 15.2
comp=Z,514nm,20.4s,baz=332,slow=38
comp=Z,14nm,0.9s
OKC Ostrava-Krasne 100.40 321 AMS AMS 11 21 30.0
comp=Z,800nm,20.5s
NB2 NORSAR Subarra100.48 333 P **Pdif 10 32 56.3 -2.1**
comp=Z,9.4nm,1.0s,baz=69,slow=4.3
NB2 PKKP **PKKPbc 10 49 15.3 -0.9**
comp=Z,2.3nm,0.8s,baz=220,slow=4.3
NOA NORSAR Array B100.48 333 P **Pdif 10 32 57.5 -0.9**
comp=Z,3.2nm,0.7s,baz=69,slow=4.5,SNR=11
NOA PP **PP 10 37 03.0 -1.9**
comp=Z,2.4nm,0.8s,baz=75,slow=7.8,SNR=3.8
BOSA Boshof 100.49 241 P **Pdif 10 33 01.1 +1.8**
comp=Z,3.8nm,0.9s,baz=92,slow=7.1,SNR=4.3
NC204 NORSAR Array S 100.59 334 Pdif 10 32 58.3 -0.7
NC204 NORSAR Array S 100.59 334 *e*P **Pdif 10 32 58.9 -0.1**
STEB Steborice 100.61 321 *e*PDIFF **Pdif 10 33 00.4 +1.2**
MAUC Maruska 100.72 321 *e*PDIFF **Pdif 10 33 03.3 +3.5**
MORC Moravsky Berou 100.79 321 ⇑P **Pdif 10 32 60.0 -0.1**
MORC Moravsky Berou 100.79 321 *e*PDIFF **Pdif 10 33 03.4 +3.3**
MORC Moravsky Berou 100.79 321 ⇑P **Pdif 10 33 00.0 -0.1**
JAVC Velka Javorina 100.96 320 *e*PDIFF **Pdif 10 33 03.1 +2.2**
MORH Mrgy, Hungar 100.99 318 ⇑P **Pdif 10 32 59.3 -1.6**
NEEM North Greenlan 101.02 359 *i* P **Pdif 10 33 01.9 +1.0**
NEEM IAmb IAmb 10 33 03.6
comp=Z,35nm,0.9s
KRLC Kraliky 101.19 322 AMS AMS 11 22 00.0
comp=Z,2µm,21.4s
KSP Ksiaz 101.27 323 *e*P **Pdif 10 33 03.8 +1.7**
MODS Modra-Piesok 101.34 320 *e*P **Pdif 10 33 08.3 +5.8**
MODS Modra-Piesok 101.34 320 *e*PDIFF **Pdif 10 33 08.3 +5.8**
DPC Dobruska-Polom 101.39 322 *e*SKS **SKSac 10 43 33.3 -6.5**
DPC AMS AMS 11 20 30.0
comp=Z,2µm,23.1s
OSTC Ostas 101.40 322 *e*P **Pdif 10 33 05.4 +2.7**
OSTC MLR MLR
comp=Z,2µm,22.0s
OSTC Ostas 101.40 322 *e*PDIFF **Pdif 10 33 05.4 +2.7**
OSTC AMS AMS 11 20 40.0
comp=Z,2µm,22.0s
PDG Podgorica 101.44 314 IAMs_20 IAMs_20 11 27 05.5
comp=Z,1µm,21.0s
TULEG Thule 101.47 4 IAMs_20 IAMs_20 11 16 56.6
comp=Z,1µm,21.0s
CHVC Chvalec 101.48 322 AMS AMS 11 20 50.0
comp=Z,2µm,22.8s
TROLL Troll, Antarti 101.50 195 ⇓P **Pdif 10 33 05.0 +2.1**
comp=Z,192nm,0.7s
VRAC Vranov 101.52 321 P **Pdif 10 33 04.1 +0.8**
comp=Z,1.6nm,0.3s,baz=97,slow=4.3,SNR=2.8
VRAC Vranov 101.52 321 ⇓P **Pdif 10 33 04.9 +1.6**
VRAC Vranov 101.52 321 *e*PDIFF **Pdif 10 33 05.5 +2.2**
VRAC Vranov 101.52 321 ⇓P **Pdif 10 33 04.9 +1.6**
UPC Upice 101.53 322 *e*P **Pdif 10 33 07.0 +3.7**
UPC MLR MLR
comp=Z,2µm,21.8s
UPC Upice 101.53 322 *e*PDIFF **Pdif 10 33 07.0 +3.7**
UPC AMS AMS 11 20 40.0
comp=Z,2µm,21.8s
DBG Daneborg 101.54 351 *i* P **Pdif 10 33 02.6 -0.2**
DBG IAmb IAmb 10 33 05.0
comp=Z,21nm,0.9s
YKA Yellowknife Ar 101.58 24 P **Pdif 10 33 03.4 +0.2**
comp=Z,1.9nm,0.8s,baz=298,slow=5.6,SNR=3.7
YKA PKKPbc **PKKPbc 10 49 13.2 +0.2**
comp=Z,0.7nm,0.7s,baz=353,slow=2.2,SNR=4.2
YKA Yellowknife Ar 101.58 24 *i* P **Pdif 10 33 00.6 -2.6**
YKA pmax pmax
comp=Z,2.0nm,0.9s
KRUC Moravsky 101.71 321 *e*PDIFF **Pdif 10 33 06.4 +2.3**
AKN Aaknes 101.83 335 *e*P **Pdif 10 33 03.7 -0.7**
RONA Rosalia, Austr 102.15 320 *i* Pdiff **Pdif 10 33 07.8 +1.6**
comp=Z,5.6nm,0.7s
RONA *e*PKiKP **PKiKP 10 37 24.3 -4.1**
comp=Z,15nm,1.5s
TREC Trest 102.21 321 AMS AMS 11 22 20.0
comp=Z,1µm,20.2s
CONA Conrad Observa 102.37 320 *i* Pdiff **Pdif 10 33 08.8 +1.6**
comp=Z,5.5nm,0.9s
CONA *e*PKiKP **PKiKP 10 37 24.6 -4.2**
comp=Z,9.5nm,1.5s
PVCC Panska Ves 102.41 323 AMS AMS 11 21 20.0
comp=Z,2µm,21.8s
PRU Pruhonice 102.59 322 *e*P **Pdif 10 33 11.9 +3.9**
PRU MLR MLR
comp=Z,2µm,25.1s
PRU Pruhonice 102.59 322 *e*PDIFF **Pdif 10 33 11.9 +3.9**
PRU AMS AMS 11 21 20.0
comp=Z,2µm,25.1s
PRA Prague 102.63 322 AMS AMS 11 21 20.0
comp=Z,2µm,24.2s
ARSA Arzberg 102.78 319 *e*Pdiff **Pdif 10 33 10.3 +1.3**
comp=Z,5.7nm,1.0s
ARSA *e*PKiKP **PKiKP 10 37 28.3 -1.2**
comp=Z,7.7nm,1.2s
ZVC Zvikov 102.98 322 *e*PDIFF **Pdif 10 33 10.8 +1.0**
ZVC AMS AMS 11 21 30.0
comp=Z,2µm,22.5s
HSKC Hora Svate Kat 103.07 323 *e*PDIFF **Pdif 10 33 14.1 +3.9**
HSKC AMS AMS 11 21 50.0
comp=Z,2µm,21.7s
SNAA Sanae 103.08 195 ⇓P **Pdif 10 33 11.8 +2.0**
comp=Z,79nm,0.9s
SNAA Sanae 103.08 195 Pdiff **Pdif 10 33 12.0 +2.2**
comp=Z,3.2nm,0.8s,baz=149,slow=4.6,SNR=9.3
SNAA PKiKP **PKiKP 10 37 29.6 +0.2**
comp=Z,3.4nm,0.9s,baz=230,slow=3.4,SNR=4.2
SNAA PKKPbc **PKKPbc 10 49 07.7 -1.3**
comp=Z,1.4nm,0.7s,baz=239,slow=2.5,SNR=8.9
SNAA Sanae 103.08 195 IAMs_20 IAMs_20 11 17 53.4
comp=Z,1µm,22.0s
CLL Collm 103.09 324 *i* P **Pdif 10 33 10.5 +0.3**
CLL *e* 10 43 42.0
CLL *e*S **Sdif 10 44 52.0 -2.7**
CLL pmax pmax
comp=Z,17nm,1.7s
CLL MLR MLR
comp=Z,2µm,21.0s
CLL Collm 103.09 324 *i* Pdif **Pdif 10 33 10.5 +0.3**
comp=Z,17nm,1.7s
CLL *i* PKiKP **PKiKP 10 37 30.7 +0.8**
comp=Z,17nm,1.3s
CLL *e*PP PP 10 37 33.0 +8.1
comp=Z,300nm,16.0s
CLL *e*SKSac **SKSac 10 43 42.0 -5.7**
CLL *e*Sdif **Sdif 10 44 52.0 -2.7**
CLL *e*PS **PS 10 46 30.0 -4.0**
CLL *e*PPS PPS 10 47 17.0
CLL *e*SS **SS 10 52 06.0 +1.3**
CLL *e*(SSS) 10 56 36.0
CLL AMS AMS 11 24 00.0
comp=Z,2µm,21.0s
CKRC Cesky Krumlov 103.10 321 *e*P **Pdif 10 33 15.9 +5.6**
CKRC *e* 10 43 45.3
CKRC MLR MLR
comp=Z,1µm,19.0s
CKRC Cesky Krumlov 103.10 321 *e*PDIFF **Pdif 10 33 15.9 +5.6**
CKRC *e*SKS **SKSac 10 43 45.3 -2.6**
CKRC AMS AMS 11 23 00.0
comp=Z,1µm,19.0s
SOKA Soboth 103.27 319 *i* Pdiff **Pdif 10 33 13.8 +2.6**
comp=Z,3.9nm,0.5s
SOKA *e*PKiKP **PKiKP 10 37 29.1 -1.4**
comp=Z,12nm,1.4s
SUE Sulen 103.30 335 *e*P **Pdif 10 33 05.5 -5.4**
ASK Askoy 103.39 334 *e*P **Pdif 10 33 08.2 -3.1**
MOA Molln 103.42 320 *i* Pdiff **Pdif 10 33 15.2 +3.4**
comp=Z,111nm,0.8s
KHC Kasperske Hory 103.46 321 IAMs_20 IAMs_20 11 23 54.3
comp=Z,1µm,22.0s
KHC Kasperske Hory 103.46 321 *e*P **Pdif 10 33 14.8 +2.9**
KHC *e* 10 43 41.9
KHC MLR MLR
comp=Z,2µm,25.6s
KHC Kasperske Hory 103.46 321 *e*PDIFF **Pdif 10 33 14.8 +2.9**
KHC *e*SKS **SKSac 10 43 41.9 -7.7**
KHC AMS AMS 11 21 30.0
comp=Z,2µm,25.6s
GERES GERESS Array B 103.47 321 Pdiff **Pdif 10 33 13.6 +1.5**
comp=Z,3.9nm,0.9s,baz=57,slow=4.9,SNR=12
GERES PKiKP **PKiKP 10 37 32.2 +1.4**
comp=Z,1.6nm,0.8s,baz=77,slow=2.9,SNR=4.3
GERES PKKPbc **PKKPbc 10 49 06.5 -0.7**
comp=Z,0.4nm,0.6s,baz=180,slow=1.3,SNR=4.0
TIP Timpagrande 104.03 311 IAMs_20 IAMs_20 11 29 18.5
comp=Z,1µm,22.0s
MYKA Terra Mystica 104.20 319 *e*Pdiff **Pdif 10 33 18.3 +3.0**
comp=Z,2.6nm,0.5s
MYKA *e*PP **PP 10 37 33.1 -0.3**
comp=Z,12nm,1.0s
KBA Koelnbreinsper 104.25 320 *i* Pdiff **Pdif 10 33 17.6 +1.9**
comp=Z,5.8nm,1.1s
M02C Callahan 104.41 47 IAMs_20 IAMs_20 11 11 53.4
comp=Z,1µm,18.0s
LESA Schwarzleotal 104.58 320 *e*Pdiff **Pdif 10 33 19.2 +2.2**
comp=Z,6.5nm,1.2s
LESA *e*PP **PKiKP 10 37 34.3 +1.4**
comp=Z,7.7nm,1.1s
VNA3 Neumayer Olymp 105.02 193 ⇓P **Pdif 10 33 23.2 +4.8**
comp=Z,3.1nm,0.7s
WTTA Wattenberg 105.30 320 *i* Pdiff **Pdif 10 33 20.8 +0.5**
comp=Z,13nm,0.9s
WTTA *i* pPdiff **pPdif 10 33 28.4 -2.0**
comp=Z,13nm,0.9s
WTTA *e*PKiKP **PKiKP 10 37 36.2 +1.9**
comp=Z,9.7nm,1.2s
SUMG Summit 105.30 355 P **Pdif 10 33 25.6 +5.5**
WATA Walderalm 105.31 320 *e*Pdiff **Pdif 10 33 20.6 +0.2**
comp=Z,15nm,1.3s
WATA *i* pPdiff **pPdif 10 33 28.3 -2.1**
comp=Z,15nm,1.3s
WATA *e*PKiKP **PKiKP 10 37 36.2 +1.9**
comp=Z,11nm,1.5s
O03E Paynes Creek 105.48 47 IAMs_20 IAMs_20 11 16 02.6
comp=Z,1µm,20.0s
SQTA Sankt Quirin 105.58 320 *e*Pdiff **Pdif 10 33 21.7 +0.1**
comp=Z,8.8nm,0.7s
SQTA *i* pPdiff **pPdif 10 33 29.7 -1.9**
comp=Z,10nm,0.7s
SQTA *e*PKiKP **PKiKP 10 37 36.3 +1.5**
comp=Z,6.4nm,1.4s
SQTA *e*pPKiKP **PP 10 37 45.7 +2.1**
comp=Z,11nm,1.0s
MOTA Moosalm 105.61 320 *e*pPdiff **pPdif 10 33 29.8 -1.9**
comp=Z,8.5nm,0.8s
MOTA *i* sPKiKP sPKiKP 10 37 48.8 +0.1
comp=Z,14nm,1.0s
RETA Reutte 105.78 321 *i* Pdiff **Pdif 10 33 22.1 -0.3**
comp=Z,10nm,2.0s
RETA *i* PKiKP **PKiKP 10 37 35.8 +0.8**
comp=Z,8.2nm,1.7s
FETA Feichten 105.96 320 *e*Pdiff **Pdif 10 33 23.1 -0.2**
comp=Z,3.2nm,1.1s
FETA *e*pPdiff **pPdif 10 33 31.8 -1.5**
comp=Z,6.8nm,0.9s
FETA *e*PKiKP **PKiKP 10 37 36.2 +0.7**
comp=Z,5.3nm,0.9s
MHC Mount Hamilton 106.38 50 IAMs_20 IAMs_20 11 09 30.7
comp=Z,1µm,19.0s
FUORN Ofenpass-Fuorn 106.40 320 IAMs_20 IAMs_20 11 25 50.3
comp=Z,2µm,21.0s
DAVA Damuels 106.41 321 *e*PKiKP **PKiKP 10 37 37.6 +1.3**
comp=Z,12nm,1.0s
ECH Echry 107.75 322 IAMs_20 IAMs_20 11 28 50.9
comp=Z,1µm,20.0s
SENIN Lac Senin/Sane 108.40 320 IAMs_20 IAMs_20 11 29 32.1
comp=Z,2µm,21.0s
NVAR Mina Array Bea 108.61 48 Pdiff **Pdif 10 33 36.2 +0.8**
comp=Z,1.8nm,0.8s,baz=267,slow=6.0,SNR=8.7
NVAR PKiKP **PKiKP 10 37 43.2 +2.4**
comp=Z,1.1nm,0.7s,baz=300,slow=1.7,SNR=5.3
NVAR PKKPbc **PKKPbc 10 48 53.4 +2.2**
comp=Z,1.6nm,0.8s,baz=130,slow=3.6,SNR=12
NVAR PKKPab **PKKPab 10 49 04.5 +0.7**
comp=Z,2.9nm,0.7s,baz=115,slow=4.4,SNR=12
TIN Tinemaha, Big 109.08 50 IAMs_20 IAMs_20 11 20 07.0
comp=Z,2µm,20.0s
BNI Bardonecchia 109.31 319 IAMs_20 IAMs_20 11 29 19.3
comp=Z,2µm,21.0s
HLID Hailey 109.63 42 IAMs_20 IAMs_20 11 19 00.1
comp=Z,2µm,19.0s
EKA Eskdalemuir Ar 109.89 332 PKiKP **PKiKP 10 37 42.8 +0.4**
comp=Z,1.7nm,0.8s,baz=40,slow=6.7,SNR=2.6
EKA PKKPbc **PKKPbc 10 48 47.6 +0.2**
comp=Z,2.6nm,0.7s,baz=248,slow=3.4,SNR=6.7
EKA PKKPab **PKKPab 10 48 58.4 +0.7**
comp=Z,6.0nm,1.1s,baz=174,slow=0.7,SNR=3.6
ELK Elko 110.09 45 IAMs_20 IAMs_20 11 27 45.5
comp=Z,886nm,19.0s
SHOC Shoshone, Teco 110.93 51 IAMs_20 IAMs_20 11 17 59.1
comp=Z,1µm,19.0s
FFC Flin Flon 111.28 28 IAMs_20 IAMs_20 11 31 58.6
comp=Z,1µm,20.0s
FXWY Fox Creek 111.86 41 IAMs_20 IAMs_20 11 20 40.9
comp=Z,1µm,20.0s
DUG Dugway, Tooele 112.01 45 IAMs_20 IAMs_20 11 21 50.3
comp=Z,1µm,22.0s
HWUT Hardware Ranch 112.33 43 IAMs_20 IAMs_20 11 20 27.7
comp=Z,1µm,21.0s
BW06 Boulder Array 113.20 42 IAMs_20 IAMs_20 11 21 35.5
comp=Z,1µm,21.0s
PDAR Pinedale Array 113.20 42 PKiKP **PKiKP 10 37 50.5 +1.1**
comp=Z,1.1nm,0.7s,baz=264,slow=3.2,SNR=8.1
PDAR PKKPbc **PKKPbc 10 48 36.3 -0.1**
comp=Z,3.9nm,0.9s,baz=117,slow=4.9,SNR=22
PDAR SKKP **SKKPdf 10 52 34.6 +4.5**
comp=Z,1.1nm,0.9s,baz=111,slow=8.1,SNR=4.0
TUC Tucson 116.41 53 **PKiKP 10 37 56.6 +0.9**
TUC Tucson 116.41 53 IAMs_20 IAMs_20 11 23 38.4
comp=Z,1µm,20.0s
TUC Tucson 116.41 53 PKiKP **PKiKP 10 37 56.6 +0.9**
E28A Huff 116.73 34 IAMs_20 IAMs_20 11 23 53.4
comp=Z,1µm,20.0s
ULM Lac du Bonnet 117.00 29 PKP **PKPdf 10 37 55.9 -0.3**
comp=Z,7.3nm,0.7s,baz=335,slow=3.8,SNR=6.1
ISCO Idaho Springs 117.19 43 IAMs_20 IAMs_20 11 23 39.2
comp=Z,1µm,21.0s
TAM Tamanrasset 117.48 297 IAMs_20 IAMs_20 11 35 41.8
comp=Z,790nm,21.0s
SDCO Great Sand Dun 118.21 45 IAMs_20 IAMs_20 11 23 52.4
comp=Z,1µm,21.0s
ANMO Albuquerque 118.73 48 **PKiKP 10 38 00.8 +0.5**
ANMO Albuquerque 118.73 48 IAMs_20 IAMs_20 11 30 11.6
comp=Z,1µm,19.0s
ANMO Albuquerque 118.73 48 PKIKP **PKiKP 10 38 00.8 +0.5**
ANMO MLR MLR
comp=Z,1µm,19.0s
ESDC Sonseca Array 118.75 318 PKP **PKPdf 10 37 59.7 -0.2**
comp=Z,1.0nm,0.8s,baz=42,slow=4.6,SNR=4.5
ESDC PP **PP 10 39 18.4 +0.6**
comp=Z,4.2nm,1.3s,baz=78,slow=6.0,SNR=5.1
ESDC PKKPbc **PKKPab 10 48 17.8 -0.9**
comp=Z,2.4nm,1.0s,baz=269,slow=3.4,SNR=6.9
SUSD Miller 118.97 36 IAMs_20 IAMs_20 11 25 46.6
comp=Z,1µm,22.0s
OGNE Ogallala 119.01 40 IAMs_20 IAMs_20 11 31 08.0
comp=Z,1µm,20.0s
T25A Trinidad 119.26 45 IAMs_20 IAMs_20 11 20 50.2
comp=Z,1µm,21.0s
K30B Basset 119.59 38 IAMs_20 IAMs_20 11 26 28.2
comp=Z,1µm,20.0s
KSCO Kaye Shedlock' 119.60 43 IAMs_20 IAMs_20 11 32 25.9
comp=Z,1µm,21.0s
MVO Moncorvo 119.98 321 *e*LR LR 11 32 05.0
MVO *i* IAMs_20 IAMs_20 11 36 02.3
comp=Z,869nm,22.0s
EPT El Paso 119.98 52 IAMs_20 IAMs_20 11 31 25.9
comp=Z,1µm,19.0s
PGAV Gavieira, Arco 120.31 322 *e*PKPdf **PKiKP 10 38 05.5 +2.5**
PGAV *e*LR LR 11 27 60.0
PGAV *i* IAMs_20 IAMs_20 11 33 18.4
comp=Z,887nm,22.0s
POLO Lamas de Olo 120.35 321 *e*PKPdf **PKiKP 10 38 04.6 +1.5**
PVRL Vila Real 120.35 321 *e*PKPdf **PKiKP 10 38 04.0 +0.9**
EYMN Ely 120.67 29 IAMs_20 IAMs_20 11 26 58.2
comp=Z,1µm,21.0s
MTE Manteigas 120.72 320 *e*PKPdf **PKiKP 10 38 06.6 +2.8**
MTE *e*LR LR 11 32 38.4
MTE *i* IAMs_20 IAMs_20 11 36 48.8
comp=Z,945nm,22.0s
ECSD EROS Data Cent 120.74 35 **PKPdf 10 38 03.3 -0.3**
ECSD EROS Data Cent 120.74 35 IAMs_20 IAMs_20 11 24 01.5
comp=Z,1µm,22.0s
PVIS Viseu 120.77 321 *e*PKPdf **PKiKP 10 38 06.5 +2.6**
MNTX Cornudas Mount 120.89 51 IAMs_20 IAMs_20 11 22 00.9
comp=Z,1µm,20.0s
PCBR Castelo Branco 120.98 320 *e*PKPdf **PKiKP 10 38 06.9 +2.6**
PCAS Casmilo, Conde 121.53 320 *e*PKPdf **PKiKP 10 38 07.4 +2.1**
PBAR Barrancos 121.58 318 *e*PKPdf **PKiKP 10 38 07.7 +2.2**
PESTR Estremoz 121.58 319 *e*PKPdf **PKiKP 10 38 07.1 +1.6**
SFS San Fernando 121.88 316 IAMs_20 IAMs_20 11 37 55.3
comp=Z,1µm,21.0s
PARRA Arraiolos 121.91 319 *e*PKPdf **PKiKP 10 38 08.2 +0.8**
L34A Svendsen Farm, 121.95 37 IAMs_20 IAMs_20 11 27 26.7
comp=Z,1µm,22.0s
PSBE So Bento 122.01 320 *e*PKPdf **PKiKP 10 38 09.8 +3.4**
PBEJ Beja 122.21 318 *e*PKPdf **PKPdf 10 38 06.2 -0.4**
MOE Montemor 122.27 319 *e*PKPdf **PKPdf 10 38 06.8 +0.2**
AMTX Amarillo 122.27 46 IAMs_20 IAMs_20 11 25 23.0
comp=Z,1µm,21.0s
PVAQ Vaqueiros 122.44 317 *e*PKPdf **PKiKP 10 38 09.9 +2.7**
PVAQ *e*LR LR 11 31 14.8
PVAQ *i* IAMs_20 IAMs_20 11 39 42.3
comp=Z,884nm,20.0s
IFR Ifrane 122.50 312 PKP **PKiKP 10 38 08.6 +0.9**
R32A Long Quarter, 122.52 41 IAMs_20 IAMs_20 11 27 02.0
comp=Z,1µm,20.0s
PCVE Castro Verde 122.54 318 *e*PKPdf **PKiKP 10 38 07.8 +0.4**
MESJ Messejana 122.55 318 *e*PKPdf **PKPdf 10 38 06.9 -0.3**
MESJ IAMs_20 IAMs_20 11 32 55.7
comp=N,805nm,23.2s
MESJ Messejana 122.55 318 *e*PKPdf **PKiKP 10 38 09.7 +2.4**
SCHQ Schefferville 122.70 9 PKP **PKPdf 10 38 06.4 -0.6**
comp=N,13nm,0.8s,baz=360,slow=2.7,SNR=8.9
SCHQ PKKPab **PKKPab 10 48 01.1 -0.2**
comp=N,6.9nm,0.8s,baz=217,slow=4.6,SNR=4.5
MORF Marmelete 123.12 318 *e*PKPdf **PKPdf 10 38 08.0 -0.3**
MORF IAMs_20 IAMs_20 11 32 59.6
comp=Z,1µm,27.9s
MORF Marmelete 123.12 318 *e*PKPdf **PKiKP 10 38 11.4 +2.8**
MORF Marmelete 123.12 318 *e*PKiKP **PKPdf 10 38 08.0 -0.3**
TORD Torodi Ar. Bea 123.16 287 PKP **PKiKP 10 38 09.3 +0.1**
comp=Z,27nm,0.7s,baz=53,slow=4.1,SNR=9.3
TXAR Lajitas Array 123.20 53 PKP **PKPdf 10 38 08.7 -0.1**
comp=Z,7.0nm,0.8s,baz=230,slow=1.2,SNR=46
TXAR PKKPbc **PKKPbc 10 48 01.8 +2.1**
comp=Z,2.0nm,0.9s,baz=134,slow=6.1,SNR=14
TXAR Lajitas Array 123.20 53 **PKPdf 10 38 09.0 +0.1**
WMOK Wichita Mounta 124.42 45 IAMs_20 IAMs_20 11 29 57.7
comp=Z,1µm,21.0s
OK029 Liberty Lake 124.78 43 IAMs_20 IAMs_20 11 34 59.2
comp=Z,1µm,20.0s
ABTX Abilene, Hawle 124.84 48 IAMs_20 IAMs_20 11 27 48.2
comp=Z,1µm,20.0s
H43A Windswept, Lux 124.97 29 IAMs_20 IAMs_20 11 37 58.9
comp=Z,1µm,20.0s
P38A Dawn 125.09 37 IAMs_20 IAMs_20 11 29 10.8
comp=Z,1µm,21.0s
TUL3 Leonard 125.85 42 IAMs_20 IAMs_20 11 31 11.3
comp=Z,1µm,20.0s
WHTX Lake Whitney, 126.76 47 IAMs_20 IAMs_20 11 28 48.1
comp=Z,1µm,20.0s
HDIL Hopedale 126.94 34 IAMs_20 IAMs_20 11 42 47.1
comp=Z,1µm,21.0s
M44A Midewin, Midew 127.04 32 IAMs_20 IAMs_20 11 40 11.0
comp=Z,1µm,20.0s
CCM Cathedral Cave 127.47 37 **PKPdf 10 38 15.8 -0.7**
CCM Cathedral Cave 127.47 37 PKIKP **PKPdf 10 38 15.9 -0.7**
CCM MLR MLR
comp=Z,1µm,21.0s
SFIN Lafayette 128.26 32 IAMs_20 IAMs_20 11 38 26.3
comp=Z,1µm,20.0s
S44A Carbondale 128.89 36 IAMs_20 IAMs_20 11 39 44.4
comp=Z,1µm,21.0s
DBIC Dimbokro 130.58 280 PKP **PKPdf 10 38 23.5 +0.3**
comp=Z,28nm,0.7s,baz=118,slow=1.9,SNR=31
DBIC SKPbc **SKPab 10 41 47.5 +2.9**
comp=Z,44nm,1.0s,baz=115,slow=3.4,SNR=17
R49A Shelbyville 130.80 33 IAMs_20 IAMs_20 11 36 34.5
comp=Z,1µm,20.0s
BCX Boston College 133.48 18 IAMs_20 IAMs_20 11 29 19.3
comp=Z,1µm,22.0s
M65A Busby, Falmout 134.34 18 P **PKPdf 10 38 28.6 -0.9**
baz=336
PLCA Paso Flores 138.17 161 PKhKP PKPpre 10 38 27.6
comp=Z,4.9nm,0.8s,baz=213,slow=4.6,SNR=9.5
PLCA PKP **PKPdf 10 38 37.8 +1.0**
comp=Z,20nm,0.9s,baz=182,slow=3.2,SNR=7.5
PLCA Paso Flores 138.17 161 *e*P **PKPdf 10 38 35.2 -1.6**
TEIG Tepich 139.74 56 IAMs_20 IAMs_20 11 31 07.6
comp=Z,1µm,22.0s
TRQA Tornquist 142.94 169 **PKPdf 10 38 42.0 -3.4**
TRQA Tornquist 142.94 169 PKIKP **PKPdf 10 38 42.0 -3.4**
EDS3 Malargue 143.02 159|| *e*P **PKPdf 10 38 43.5 -2.3**
TGUH Tegucigalpa,Un 143.25 64 IAMs_20 IAMs_20 11 36 50.5
comp=Z,597nm,20.0s
RFA San Rafael 144.25 159 *e*P **PKPab 10 38 43.9 -1.8**
VA01 Torpederas 144.49 153 IAMs_20 IAMs_20 11 39 09.5
comp=Z,753nm,20.0s
MT05 Renca 144.57 155 IAMs_20 IAMs_20 11 53 32.4
comp=Z,620nm,18.0s
PEL Peldehue 144.81 155 *e*P **PKPdf 10 38 48.9 0.0**
VA03 San Esteban 145.19 155 IAMs_20 IAMs_20 11 47 09.8
comp=Z,878nm,21.0s
VA03 San Esteban 145.19 155|| *e*P **PKPdf 10 38 49.7 +0.1**
AAGR Agrelo 145.62 157 *e*P **PKPab 10 38 51.3 +0.6**
ASAL Salagasta 146.05 157 *e*P **PKPab 10 38 53.0 +0.6**
AUSP Uspallata 146.15 156 *e*P **PKPab 10 38 53.8 +0.8**
GPS3 Bodega del ICE 146.17 68 *e*P **PKiKP 10 38 57.5 +1.6**
JUD3 Juan Diaz 3 146.19 69 *e*P **PKPab 10 38 53.4 -0.1**
CO02 Combarbal 146.32 153 *e*P **PKPbc 10 38 53.0 +0.3**
HORNC Hornillas 146.35 68 *e*P **PKPbc 10 38 52.9 -0.3**
RTLS Leoncito 146.56 155 *e*P **PKPab 10 38 54.2 -0.4**
QUEB Quebradon, Cot 146.65 68 *e*P **PKPab 10 38 54.9 -0.2**
JCR1 Jicaral 146.69 69 *e*P **PKPdf 10 38 52.9 +0.4**
JUNT Juntas 146.70 69 *e*P **PKPdf 10 38 52.9 +0.5**
JTS Las Juntas de 146.70 69 PKPbc **PKPdf 10 38 53.2 +0.7**
comp=Z,36nm,0.7s,baz=272,slow=2.7,SNR=26
JTS Las Juntas de 146.70 69 **PKPbc 10 38 53.9 -0.3**
JTS Las Juntas de 146.70 69 *e*P **PKPdf 10 38 53.2 +0.7**
CO03 El Pedregal 146.77 153 *e*P **PKPdf 10 38 53.0 +0.7**
ARE1 Arenal 1 146.86 68 *e*P **PKPdf 10 38 52.9 +0.1**
VARE2 V. Arenal 146.86 68 *e*P **PKPdf 10 38 53.3 +0.4**
CEDE Laguna Cedeo 146.87 68 *e*P **PKPbc 10 38 54.5 -0.3**
VACR Volcan Arenal 146.90 68 *e*P **PKPbc 10 38 54.9 +0.2**
FORC Fortuna 146.91 68 *e*P **PKPab 10 38 55.8 -0.4**
ACAN Cantantal 146.96 159 *e*P **PKPdf 10 38 52.6 +0.1**
ZON Zonda 147.03 156 *e*P **PKPdf 10 38 53.0 +0.3**
CFA Coronel Fontan 147.16 157 PKPbc **PKPbc 10 38 54.5 -0.5**
comp=Z,68nm,0.7s,baz=232,slow=3.2,SNR=45
GO04 Tololo Observa 147.28 152 IAMs_20 IAMs_20 11 44 58.4
comp=Z,619nm,21.0s
RTLL Cerro Villicun 147.30 156 *e*P **PKPdf 10 38 53.0 -0.2**
MRA San Martin 147.33 161|| *e*P **PKPbc 10 38 55.9 +0.3**
HDC Heredia 147.58 69 *e*P **PKPbc 10 38 56.2 -0.6**
HDC Heredia 147.58 69 *e*P **PKPdf 10 38 51.8 -2.3**
ACOS Acosta 147.60 69 *e*P **PKPbc 10 38 55.9 -1.0**
PICV PH. Pirrs 147.62 69 *e*P **PKPbc 10 38 57.0 +0.2**
ACCO Cerro Coronel 147.70 155 *e*P **PKPbc 10 38 57.1 +0.2**
CVIMO Finca Echandi 147.73 68 *e*P **PKPdf 10 38 55.8 +1.3**
LLNJ Naranjito 147.76 69 *e*P **PKiKP 10 38 58.6 -0.5**
CARI Cariari 147.81 68 *e*P **PKPbc 10 38 57.0 -0.2**
PILE Guapiles 147.81 68 *e*P **PKPbc 10 38 57.2 -0.1**
VICA Volcano Irazu 147.83 68 *e*P **PKPbc 10 38 56.6 -1.3**
PIEC Cerro El Cedra 147.84 69 *e*P **PKPdf 10 38 55.8 +1.0**
AROD Rodeo 147.89 154 *e*P **PKPab 10 39 00.0 +0.1**
CVTQ Turrialba Volc 147.90 68 *e*P **PKPdf 10 38 56.6 +1.6**
CVTR Volcan Turrial 147.90 68 *e*P **PKPdf 10 38 55.4 +0.4**
VTR0 Volcan Turrial 147.90 68 *e*P **PKPdf 10 38 56.5 +1.4**
CVTV Tajo 147.91 68 *e*P **PKPdf 10 38 56.5 +1.5**

ABRB	Las Abras (San	147.94	68	*e*P		PKPbc		10 38 57.3	-0.6
VERB	Verbena	147.98	68	*e*P		PKPbc		10 38 56.6	-1.3
EGUB	Earth Gu¡pi	147.99	68	*e*P		PKPbc		10 38 57.5	-0.2
TURIB	Turrialba	148.00	68	*e*P		PKiKP		10 38 59.3	-0.4
ACDV	Cuesta del Vie	148.04	154	*e*P		PKPbc		10 38 58.4	+0.7
BUS1	Rivas	148.06	69	*e*P		PKPbc		10 38 58.9	+0.4
IRES	Siquirres	148.11	68	*e*P		PKPbc		10 38 58.5	+0.4
LCO	Las Campanas	148.29	151			PKPdf		10 38 56.2	+1.1
LCO	Las Campanas	148.29	151		PKIKP	PKPdf		10 38 56.2	+1.1
EDPE	Pejibaye, P	148.35	70	*e*P		PKPbc		10 38 57.4	-1.3
SAJE	San Jernim	148.35	69	*e*P		PKPdf		10 38 57.2	+1.7
VERH	Veragua Rainfo	148.46	68	*e*P		PKPdf		10 38 54.9	-0.5
FIMO	Fila Mora	148.61	70	*e*P		PKPbc		10 38 58.8	-0.7
TCA	Tanti	148.69	162	*e*P		PKPbc		10 38 59.6	+0.4
PRVC	Isla de Provid	148.76	61			PKPbc		10 38 58.0	-1.7
EDP2	Potrero Grande	148.77	70	*e*P		PKPbc		10 38 58.7	-1.1
CEUA	Cerro Uatsi, L	148.79	68	*e*P		PKiKP		10 39 01.0	-0.3
PIRO	Carate, Puerto	148.80	71	*e*P		PKPdf		10 38 56.2	+0.3
EDAD	Golfito	148.89	70	*e*P		PKPbc		10 38 59.0	-1.1
AGUA	GUANDACOL	148.90	154	*e*P		PKPbc		10 38 59.6	-0.2
ALCO	Alturas Coton,	149.11	70	*e*P		PKPdf		10 38 56.5	-0.2
BRU2	Volcan	149.29	70	*e*P		PKPdf		10 38 58.0	+1.0
MTDJ	Mount Denham	149.34	49		IAMs_20	IAMs_20		11 55 39.2	
	comp=Z,906nm,22.0s								
MTDJ	Mount Denham	149.34	49	⇑ *i*P		PKPbc		10 39 01.3	+0.1
VCA	Vinchina	149.68	154	*e*P		PKPbc		10 39 00.9	-1.0
VCA				*e*P		PKiKP		10 39 01.3	-1.6
GO03	Copiapo	149.69	150	*e*P		PKPbc		10 38 59.6	-2.2
STH	Stony Hill	149.97	48	*i* P		PKPbc		10 39 02.6	-0.1
GTBY	Guantanamo Bay	149.99	43		IAMs_20	IAMs_20		11 44 11.1	
	comp=Z,850nm,20.0s								
PLTB	Pedras Altas	150.01	180	*e*P		PKPdf		10 38 55.8	-1.7
GWJ	Greenwich	150.04	48	‖ *i*P		PKPbc		10 39 03.2	+0.2
HOJ	Hope	150.06	48	⇑ *i*P		PKPbc		10 39 03.4	+0.6
AANI	Anillaco	150.14	156	*e*P		PKPbc		10 39 00.9	-2.1
PSAL	Palomas, Salto	150.46	173	*e*P		PKPdf		10 38 56.6	-1.5
TINO	Tinogasta	150.54	154	*e*P		PKPbc		10 39 03.4	-0.6
AC01	Pan de Azucar	150.68	148			PKPdf		10 39 01.1	+2.5
AC02	Maricunga	150.87	151		IAMs_20	IAMs_20		11 38 06.2	
	comp=Z,778nm,21.0s								
AC02	Maricunga	150.87	151	*e*P		PKPbc		10 39 02.9	-2.3
GMAL	Guarumal, Vera	150.98	71	*e*P		PKPdf		10 38 59.8	+0.3
CPSB	Cacapava Do Su	151.37	180	*e*P		PKPdf		10 38 57.4	-2.1
PB14	IPOC Station P	151.99	146	PKP		PKPdf		10 39 03.2	+2.1
GO02	Mina Guanaco	152.00	148		IAMs_20	IAMs_20		11 38 43.0	
	comp=Z,872nm,22.0s								
GO02	Mina Guanaco	152.00	148	*e*P		PKPbc		10 39 07.5	-0.1
AHML	Horco Molle	152.59	157	*e*P		PKPbc		10 39 05.8	-2.7
FSA	Cafayete	152.92	155	*e*P		PKiKP		10 39 11.2	+1.5
SDDR	Presa de Saban	153.19	39			PKPdf		10 39 04.0	+1.4
SDDR					IAMs_20	IAMs_20		11 49 21.2	
	comp=Z,1µm,22.0s								
SLA	San Lorenzo	154.34	155	*e*P		PKiKP		10 39 13.3	+0.6
ITAB	Concordia	154.48	183	*e*P		PKPdf		10 39 02.6	-1.6
ATAH	Atahualpa	154.76	103	PKP		PKPdf		10 39 06.3	+0.9
	comp=Z,14nm,1.0s,baz=208,slow=0.4,SNR=14								
NNA	Nana	154.83	115	PKP		PKPdf		10 39 05.6	+0.5
	comp=Z,12nm,0.6s,baz=315,slow=2.9,SNR=7.1								
NNA	Nana	154.83	115			PKPdf		10 39 07.8	+2.8
AZAP	Zapla	154.97	155	*e*P		PKiKP		10 39 17.0	+3.0
OTAV	Otavalo	155.16	86	*e*P		PKPdf		10 39 02.0	-4.1
CPUP	Villa Florida	155.18	172	PKP		PKPdf		10 39 06.2	+1.0
	comp=Z,3.4nm,1.0s,baz=44,slow=2.3,SNR=12								
CPUP				PKPab		PKPab		10 39 32.2	+2.4
	comp=Z,9.1nm,0.8s,baz=52,slow=3.9,SNR=9.9								
PB08	IPOC Station P	156.17	142	PKP		PKPdf		10 39 07.7	+0.6
PB08	IPOC Station P	156.17	142		IAMs_20	IAMs_20		11 46 02.3	
	comp=Z,848nm,21.0s								
GO01	Chusmiza	156.50	141		IAMs_20	IAMs_20		11 43 37.7	
	comp=Z,688nm,20.0s								
AP01	Chacalluta	156.67	137		IAMs_20	IAMs_20		11 38 08.1	
	comp=Z,784nm,22.0s								
SJG	San Juan	156.87	32	PKP		PKPdf		10 39 08.8	+1.2
	comp=Z,5.8nm,0.6s,baz=72,slow=3.2,SNR=4.5								
SJG				PKPab		PKPab		10 39 35.6	-1.7
	comp=Z,21nm,0.7s,baz=11,slow=2.2,SNR=6.2								
SJG	San Juan	156.87	32			PKPab		10 39 39.1	+1.9
SJG	San Juan	156.87	32		IAMs_20	IAMs_20		11 46 14.8	
	comp=Z,968nm,22.0s								
PTGB	Pitanga	156.98	184	*e*P		PKPdf		10 39 06.0	-1.7
PB18	Visviri	157.80	137		IAMs_20	IAMs_20		11 47 23.0	
	comp=Z,953nm,22.0s								
ROSC	El Rosal	158.40	73	PKP		PKPdf		10 39 10.8	+0.6
	comp=Z,34nm,0.8s,baz=104,slow=5.4,SNR=14								
ROSC				PKPab		PKPab		10 39 45.3	+0.5
	comp=Z,38nm,0.6s,baz=58,slow=8.5,SNR=8.2								
LPAZ	La Paz	159.62	136	PKP		PKPdf		10 39 12.4	+0.7
	comp=Z,19nm,0.9s,baz=30,slow=2.5,SNR=48								
LPAZ				PKPab		PKPab		10 39 51.2	+1.1
	comp=Z,16nm,0.9s,baz=215,slow=3.5,SNR=6.2								
LPAZ	La Paz	159.62	136	*e*P		PKPdf		10 39 10.7	-1.1
MURT	Porto Murtinho	159.71	169	*e*P		PKPdf		10 39 09.2	-1.7
SDV	Santo Domingo	160.14	58	PKP		PKPdf		10 39 10.7	-1.2
	comp=Z,40nm,1.0s,baz=111,slow=1.3,SNR=27								
SDV				PKPab		PKPab		10 39 51.2	-0.7
	comp=Z,27nm,0.9s,baz=269,slow=2.9,SNR=5.4								
SDV	Santo Domingo	160.14	58	*e*P		PKPdf		10 39 09.8	-2.1
CBE	Ft. Capester	160.39	24			PKPab		10 39 54.0	-0.2
ITRB	Iturama	161.73	190	*e*P		PKPdf		10 39 12.3	-0.9
BAUV	El Baul	162.25	54			PKPdf		10 39 12.5	-1.4
SIV	San Ignacio	163.97	153	PKP		PKPdf		10 39 15.7	+0.2
	comp=Z,15nm,1.0s,baz=188,slow=1.6,SNR=43								
SIV				PKPab		PKPab		10 40 08.6	+0.4
	comp=Z,29nm,1.0s,baz=199,slow=4.3,SNR=14								
PP1B	Ponte de Pedra	164.07	176	*e*P		PKPdf		10 39 14.3	-1.2
PTLB	Pontes e Lacer	165.24	159	*e*P		PKPdf		10 39 14.6	-2.0
SALV	Santo Antonio	165.67	172	*e*P		PKPdf		10 39 15.8	-1.2
ARAG	Araguaiana, MT	165.88	187	*e*P		PKPdf		10 39 15.8	-1.4
SDBA	SAO DESIDERIO	166.19	219	*e*P		PKPdf		10 39 16.6	-0.9
VILB	Vilhena	167.02	150	*e*P		PKPdf		10 39 16.0	-2.1
TEFE	Tefe	168.98	100	*e*P		PKPdf		10 39 18.8	-0.7
SNDB	Serra Nova Dou	169.44	193	*e*P		PKPdf		10 39 18.2	-1.5
PDRB	Porto dos Gac	169.62	163	*e*P		PKPdf		10 39 19.0	-0.9
CLDB	Colider	170.57	167	*e*P		PKPdf		10 39 19.4	-1.0
SMTB	Santa Maria do	170.59	220	*e*P		PKPdf		10 39 18.4	-2.1
BOAV	Boa Vista	172.08	60			PKPdf		10 39 19.5	-1.6
BOAV	Boa Vista	172.08	60	*e*P		PKPdf		10 39 18.6	-2.6
MDP	Montagnes des	173.25	351	PKP		PKPdf		10 39 22.0	+0.4
	comp=Z,22nm,1.2s,baz=314,slow=1.6,SNR=4.1								
MDP				PKPab		PKPab		10 40 50.2	+1.1
	comp=Z,20nm,0.9s,baz=10,slow=6.0,SNR=7.8								
PRPB	Parauapebas	174.06	220	*e*P		PKPdf		10 39 20.4	-1.6
NPGB	Novo Progresso	174.35	163	*e*P		PKPdf		10 39 21.0	-1.1
TMAB	Tom-Au,PA,Br	174.37	262	*e*P		PKPdf		10 39 19.8	-2.3
ITTB	Itaituba	176.58	143	*e*P		PKPdf		10 39 21.0	-1.7

*IDC **16** 10:31:42.6±0.6, 1°.54N×126°.12E, h0km, mb4.1/12, mbtmp4.1/13, ML4.5/1, Error ellipse: s-maj=41.9km s-min=13.2km az=74.0*
*DJA **16** 10:31:46.6±2.1, 2°N±3°×12°6E±°, h23km±22km, M4.2/10, MLv4.2/10*
*NEIC **16** 10:31:48.0±1.6, 1°.62N±0°.09×126°.57E±0°.08, h35km±2km, mb4.3/19, Error ellipse: s-maj=17.6km s-min=10.2km az=37.0*

ISC 16 10:31:47.6±0.5, 1°.67N±0°.05×126°.56E±0°.07, h35km, n56, σ1§46/57, mb4.3/22, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.20	138		Pn	10 32 07.5	-0.4
TNTI	Ternate	1.20	138	P	Pn	10 32 09.6	+1.7
TNTI	Ternate	1.20	138	S	Sn	10 32 24.4	+1.4
TNTI	Ternate	1.20	138	P	Pn	10 32 09.9	+2.0
SGSI	Sangihe	2.25	333	P	Pn	10 32 18.7	-3.7
KMSI	Cibinong	2.79	247	P	Pn	10 32 27.7	-2.1
SANI	Sanana	3.73	189	P	Pn	10 32 42.7	0.0
SANI	Sanana	3.73	189	P	Pn	10 32 42.2	-0.5
LUWI	Luwuk	4.64	235		Pn	10 32 55.6	+0.4
LUWI	Luwuk	4.64	235	P	Pn	10 32 55.7	+0.4
TOLI2	Tolitoli	5.80	265	P	Pn	10 33 13.0	+1.8
FAKI	Fak Fak	7.29	129	Pn	Pn	10 33 29.7	-2.0
MYLDM	Lahad Datu	8.77	294		Pn	10 33 52.5	+0.6
MYLDM	Lahad Datu	8.77	294	P	Pn	10 33 56.7	+4.8
PLAI	Plampang	13.61	220	P	Pn	10 34 57.5	-0.7
SBUM	Sibu	14.35	273	Pn	Pn	10 35 06.3	-2.1
MTN	Manton Dam	15.11	163	Pn	Pn	10 35 16.1	-2.5
MTN				IAmb	IAmb	10 35 28.0	
	comp=Z,8.4nm,0.8s						
KNRA	Kununurra	17.37	173	P	Pn	10 35 47.0	-0.4
FITZ	Fitzroy Crossi	19.66	183	P	P	10 36 12.7	-0.9
	comp=Z,1.2nm,0.3s,baz=16,slow=9.5,SNR=26						
	comp=Z,2.7nm,0.4s						
FITZ	Fitzroy Crossi	19.66	183	P	P	10 36 12.6	-0.9
FITZ	Fitzroy Crossi	19.66	183	P	P	10 36 12.2	-1.4
YULB	Yu-li	22.19	347	P	P	10 36 41.3	+0.4
YULB				IAmb	IAmb	10 36 42.4	
	comp=Z,8.7nm,0.9s						
TPUB	Ta-pu	22.26	345	P	P	10 36 40.8	-0.9
COEN	Coen	22.63	134	P	P	10 36 45.8	0.0
WB0	Warramunga Arr	22.64	161	P	P	10 36 45.1	-0.8
WRAB	Tennant Creek	22.79	161	P	P	10 36 46.5	-0.9
WRAB				IAmb	IAmb	10 36 49.0	
	comp=Z,8.6nm,0.8s						
WRAB	Tennant Creek	22.79	161	P	P	10 36 46.4	-0.9
WRA	Warramunga Arr	22.79	161	P	P	10 36 46.2	-1.2
	comp=Z,7.0nm,0.6s,baz=341,slow=11,SNR=43						
WRA				PcP	PcP	10 40 37.8	-0.6
	comp=Z,0.3nm,0.5s,baz=336,slow=2.1,SNR=4.6						
	comp=Z,7.0nm,0.6s						
WR8	Warramunga Arr	22.86	160	P	P	10 36 47.2	-0.9
WR8				IAmb	IAmb	10 37 01.3	
	comp=Z,10nm,1.1s						
YHNB	Yeheng	23.41	348	P	P	10 36 53.4	-0.2
YHNB				IAmb	IAmb	10 37 00.4	
	comp=Z,14nm,1.0s						
MBWA	Marble Bar	23.65	196	P	P	10 36 54.2	-1.6
MBWA				IAmb	IAmb	10 37 12.2	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	24.01	196	P	P	10 36 57.9	-1.3
PSA00				IAmb	IAmb	10 37 16.5	
	comp=Z,11nm,1.1s						
QIS	Mount Isa	25.52	151	P	P	10 37 15.0	+1.9
AS31	Alice Springs	26.17	165	P	P	10 37 19.0	0.0
AS31				IAmb	IAmb	10 37 24.5	
	comp=Z,2.2nm,0.4s						
ASAR	Alice Springs	26.17	165	P	P	10 37 19.9	+0.9
	comp=Z,2.1nm,0.4s,baz=347,slow=12,SNR=34						
ASAR				PcP	PcP	10 40 45.8	+0.1
	comp=Z,0.8nm,0.5s,baz=350,slow=2.1,SNR=11						
	comp=Z,2.1nm,0.4s						
ASAR	Alice Springs	26.17	165	P	P	10 37 18.3	-0.7
MEEK	Meekatharra	29.16	195	P	P	10 37 45.1	-0.6
MORW	Morawa	32.18	197	P	P	10 38 11.5	-0.8
MORW				IAmb	IAmb	10 38 14.2	
	comp=Z,7.6nm,1.1s						
FORT	Forrest	32.30	178	P	P	10 38 12.7	-0.5
FORT				IAmb	IAmb	10 38 20.1	
	comp=Z,5.9nm,0.8s						
BBOO	Buckleboo	35.45	166	P	P	10 38 40.7	+0.1
BBOO				IAmb	IAmb	10 38 53.1	
	comp=Z,5.6nm,1.0s						
NWAO	Narrogin (SRO)	35.52	194	P	P	10 38 40.1	-1.1
KSRS	Korea Array	35.64	2	P	P	10 38 44.0	+1.9
	comp=Z,0.8nm,0.7s,baz=180,slow=8.3,SNR=4.1						
	comp=Z,0.8nm,0.7s						
STKA	Stephens Creek	36.28	158	P	P	10 38 48.6	+0.9
	comp=Z,2.4nm,0.7s,baz=350,slow=8.3,SNR=4.9						
	comp=Z,2.4nm,0.7s						
MJAR	Matsushiro Arr	36.34	16	P	P	10 38 49.4	+1.1
	comp=Z,0.9nm,0.6s,baz=179,slow=9.7,SNR=2.2						
	comp=Z,0.9nm,0.6s						
PETK	Petropavlovsk-	57.40	22	P	P	10 41 35.6	+3.1
	comp=Z,2.4nm,0.8s,baz=186,slow=1.5,SNR=4.4						
	comp=Z,2.4nm,0.8s						
PETK	Petropavlovsk-	57.40	22	P	P	10 41 33.3	+0.8
MKAR	Makanchi Array	59.15	326	P	P	10 41 43.5	-1.4
	comp=Z,1.6nm,0.4s,baz=114,slow=6.4,SNR=21						
	comp=Z,1.6nm,0.4s						
ZALV	Zalesovo Beam	62.34	334	P	P	10 42 05.7	-0.8
	comp=Z,0.5nm,0.3s,baz=125,slow=7.2,SNR=2.7						
	comp=Z,0.5nm,0.3s						
ZALV	Zalesovo Beam	62.34	334	P	P	10 42 05.9	-0.5
KURBB	Kurchatov Arra	63.38	328	P	P	10 42 12.2	-1.1
	comp=Z,2.2nm,0.6s,baz=129,slow=6.1,SNR=19						
	comp=Z,2.2nm,0.6s						
KURK	Kurchatov	63.38	328	P	P	10 42 12.7	-0.7
BVAR	Borovoye Array	68.95	327	P	P	10 42 50.1	+1.0
	comp=Z,0.8nm,0.5s,baz=134,slow=6.2,SNR=2.4						
	comp=Z,0.8nm,0.5s						
AKTO	Aktyubinsk	75.16	322	P	P	10 43 27.2	+0.8
	comp=Z,0.9nm,0.3s,baz=100,slow=6.7,SNR=4.6						
	comp=Z,0.9nm,0.3s						
VNDA	Vanda	81.41	173	P	P	10 44 00.7	+0.3
	comp=Z,0.5nm,0.4s,baz=312,slow=8.2,SNR=6.4						
	comp=Z,0.5nm,0.4s						
VNDA	Vanda	81.41	173	IAmb	IAmb	10 44 09.5	
	comp=Z,1.4nm,1.0s						
CFA	Coronel Fontan	147.10	156	PKPbc	PKPdf	10 51 27.2	+1.7
	comp=Z,1.5nm,0.4s,baz=223,slow=5.2,SNR=6.3						

*NEIC **16** 10:38:55.2±1.0, 19°.474N±0°.004×155°.443W±0°.007, h5km±1km, Error ellipse: s-maj=2.9km s-min=1.0km az=190.0*

HVO 16 10:38:54.8±0.8, 19°.463N±0°.008×155°.439W±0°.007, h7km±3km, ML3.0/45, ML2.9/46(NEIC), Error ellipse: s-maj=1.2km s-min=0.9km az=190.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLH	Mauna Loa	0.06	58		Pg	10 38 57.1	+0.4
MLH					IAML	10 38 59.2	
	comp=N,6µm,0.4s						
AIN	Ainahou	0.09	191		Pg	10 38 57.6	+0.6
WRMHI	West Rim	0.14	113		Pg	10 38 58.3	+0.5
WRMHI					Sg	10 39 01.0	+1.1
UWE	Uwekahuna	0.14	107		Pg	10 38 58.5	+0.6
HMH	Humu'ula Sheep	0.14	343		Pg	10 38 58.4	+0.5
HMH					IAML	10 39 01.3	
	comp=E,3µm,0.3s						
MLOA	Mauna Loa Obse	0.15	299		Pg	10 38 58.5	+0.4
MLOA					Sg	10 39 01.0	+0.7
MLOA					IAML	10 39 01.5	
	comp=E,6µm,0.2s						
MWH	Mokuaweoweo	0.15	279		Pg	10 38 58.4	+0.3
MWH					IAML	10 39 02.1	
	comp=E,6µm,0.5s						
MWH					IAML	10 39 03.8	
	comp=N,4µm,0.5s						
RSD	Rainshed	0.15	90		Pg	10 38 58.7	+0.7
RSD					IAML	10 39 01.9	
	comp=N,6µm,0.2s						
OBL	Observatory Le	0.15	107		Pg	10 38 58.5	+0.5
OBL					Sg	10 39 01.5	+1.3
SDHHI	Sand Hill	0.15	118		Pg	10 38 58.5	+0.5
SDHHI					Sg	10 39 01.4	+1.1
UWB	Uwekahuna Bluf	0.16	104		Pg	10 38 58.5	+0.5
UWB					Sg	10 39 00.9	+0.6
SBLHI	Steaming Bluff	0.17	102		Pg	10 38 58.6	+0.4
SBLHI					Sg	10 39 01.4	+0.9
RIM	Rim	0.17	113		Pg	10 38 58.7	+0.4
RIM					Sg	10 39 01.6	+0.9
HATHI	Halema'uma'u T	0.17	103		Pg	10 38 58.7	+0.4
HATHI					IAML	10 39 02.0	
	comp=E,4µm,0.5s						
HATHI					IAML	10 39 04.7	
	comp=N,4µm,0.3s						
BYL	Byron's Ledge	0.18	107		Pg	10 38 58.9	+0.5
BYL					IAML	10 39 03.5	
	comp=E,2µm,0.3s						
KKO	Keanakako'i	0.18	112		Pg	10 38 58.9	+0.5
KKO					Sg	10 39 01.6	+0.7
HLP	Hilina Pali	0.21	143		Pg	10 38 59.4	+0.5
HLP					IAML	10 39 03.2	
	comp=E,5µm,0.2s						
ALEP	Alea Permanent	0.21	292		Pg	10 38 59.3	+0.3
ALEP					Sg	10 39 02.6	+0.6
HTC	Hot Caves	0.23	170		Pg	10 38 59.6	+0.3
PUH	Pauahi	0.23	113		Pg	10 38 59.5	+0.1
KNHH	Kane Nui o Ham	0.27	108		Pg	10 39 00.2	+0.1
KHU	Kahuku	0.27	218		Pg	10 39 00.1	-0.1
KHU					Sg	10 39 04.1	+0.2
POHA	Pohakuloa	0.31	343		Pg	10 39 00.7	-0.2
POHA					IAML	10 39 10.6	
	comp=E,1µm,0.5s						
POHA					IAML	10 39 11.8	
	comp=E,1µm,0.3s						
STCH	Steam Cracks	0.31	105		Pg	10 39 00.7	-0.1
STCH					IAML	10 39 06.6	
	comp=N,3µm,0.3s						
NPOC	North of Pu'u	0.32	103		Pg	10 39 01.0	-0.1
NPOC					Sg	10 39 05.8	+0.5
JCUZ	Jacuzzi	0.33	104		Pg	10 39 01.2	0.0
JCUZ					Sg	10 39 06.0	+0.4
HPO	Honuapo	0.39	196		Pg	10 39 02.5	+0.2
HPO					Sb	10 39 09.2	-1.0
JOKA	Jonika Flow	0.41	94		Pg	10 39 02.7	-0.1
JOKA					Sg	10 39 08.8	+0.5
JOKA				IAML		10 39 11.9	
	comp=N,853nm,0.2s						
HUH	Hualalai	0.43	301		Pg	10 39 03.8	+0.5
HPAH	Hawaii Prepara	0.61	337		Pg	10 39 05.6	-1.0
HPAH					Sg	10 39 13.6	-1.1
HPAH				IAML		10 39 14.1	
	comp=N,467nm,0.4s						
HPAH				IAML		10 39 14.0	
	comp=E,467nm,0.2s						

*DJA **16** 10:39:41.0±0.3, 2°N±4°×12°6E±°, h10km, M3.4/6, MLv3.4/6*

IDC 16 10:39:35.0±1.9, 1°.93N×126°.69E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=176.4km s-min=21.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.33	150	P	Pb	10 40 04.1	+3.2
WRA	Warramunga Arr	22.99	161	P	P	10 44 41.7	+0.1
	1.0nm,0.5s,baz=340,slow=11,SNR=18						
	1.0nm,0.5s						
ASAR	Alice Springs	26.39	165	P	P	10 45 13.5	0.0
	0.3nm,0.5s,baz=346,slow=8.9,SNR=13						
	0.3nm,0.5s						
MKAR	Makanchi Array	59.01	326	P	P	10 49 36.1	-0.7
	0.2nm,0.4s,baz=123,slow=8.6,SNR=4.3						
	0.2nm,0.4s						
KURBB	Kurchatov Arra	63.23	328	P	P	10 50 05.7	+0.5
	0.6nm,0.8s,baz=131,slow=6.0,SNR=4.2						
	0.6nm,0.8s						

*IDC **16** 10:48:14.5±1.6, 1°.77N×126°.69E, h0km, mb3.7/3, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=114.6km s-min=24.1km az=69.0*
*DJA **16** 10:48:18.8±0.3, 2°N±3°×12°6E±°, h10km, M3.6/8, MLv3.6/8*

ISC 16 10:48:20.0±1.1, 1°.73N±0°.09×126°.5E±0°.1, h35km, n7, σ1§17/8, mb3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.33	136	P	Pn	10 48 42.7	+0.7
SGSI	Sangihe	2.15	335	P	Pn	10 48 53.3	0.0
KMSI	Cibinong	2.72	245	P	Pn	10 49 01.8	+0.6
FITZ	Fitzroy Crossi	19.72	182	P	P	10 52 45.5	-1.1
	0.1nm,0.3s,baz=2.5,slow=13,SNR=1.8						
	2.2nm,1.0s						
WRA	Warramunga Arr	22.89	161	P	P	10 53 19.9	-0.9
	1.2nm,0.5s,baz=341,slow=10,SNR=22						
	1.2nm,0.5s						
ASAR	Alice Springs	26.27	164	P	P	10 53 50.8	-1.5
	0.4nm,0.4s,baz=342,slow=10,SNR=16						
ASAR				PcP	PcP	10 57 19.5	+1.2
	0.2nm,0.6s,baz=357,slow=2.2,SNR=4.6						
	0.4nm,0.4s						
MKAR	Makanchi Array	59.03	326	P	P	10 58 16.9	+0.4
	0.5nm,0.4s,baz=114,slow=8.2,SNR=5.8						
	0.5nm,0.4s						

*IDC **16** 10:48:37.0±1.0, 36°.58N×141°.60E, h0km, mb3.8/7, mbtmp3.8/12, ML3.3/5, Error ellipse: s-maj=22.2km s-min=17.2km az=90.0*
*JMA **16** 10:48:41.7±0.2, 36°.7N±0°.6×14°1E±°, h50km±2km, MD3.8/36, MV3.7/36, E OFF IBARAKI PREF*
JMA Felt I J1 at E OFF IBARAKI PREF .

ISC 16 10:48:38.8±1.9, 36°.67N±0°.04×141°.59E±0°.08, h11km±11km, n46, σ1§53/42, mb3.9/7, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.77	304	*i* P	Pb	10 48 54.5	+0.4
ONAJ				*e*S	Sg	10 49 04.0	+0.4
ONAJ	Iwakimizuishiy	0.77	304	A	A	10 48 54.5	
	comp=N,7.0nm,0.3s,comp=E,7.0nm,0.3s						
JHO	Hitachi	0.82	266	*i* P	Pg	10 48 54.9	+0.2
JHO				S	Sg	10 49 04.0	-1.4
JHYU	Hitachinakayam	0.87	248

	baz=291,slow=76,SNR=5.7						
H03N3	**Juan Fernandez**	**146.86**	**97**	T	T	13 52 53.0	
	baz=291,slow=76,SNR=6.2						
H03N1	**Juan Fernandez**	**146.86**	**97**	T	T	13 52 36.4	
	baz=291,slow=76,SNR=6.1						

DJA 16 10:53:00.8±3.6, 2°N±5°×12°6E±°, h20km±39km, M3.7/7, MLv3.7/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.28**	**125**	P	Pn	10 53 23.4	-0.2
LUWI	**Luwuk**	**4.37**	**234**	P	Pn	10 54 04.2	-1.8
MRSI	**Marisa**	**4.50**	**257**	P	Pn	10 54 09.0	+1.1

IDC 16 10:53:29.4±1.7, 2°03N×126°72E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=173.5km s-min=21.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.08**	**161**	P	P	10 58 36.0	-0.9
	1.7nm,0.6s,baz=340,slow=11,SNR=9.1 1.7nm,0.6s						
ASAR	**Alice Springs**	**26.48**	**165**	P	P	10 59 09.4	+0.9
	0.6nm,0.6s,baz=347,slow=10,SNR=5.3 0.6nm,0.6s						
STKA	**Stephens Creek**	**36.55**	**158**	P	P	11 00 36.9	-0.1
	0.6nm,0.3s,baz=352,slow=14,SNR=3.0 0.6nm,0.3s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	P	11 03 30.4	-0.2
	0.4nm,0.4s,baz=116,slow=8.9,SNR=4.7 0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.16**	**328**	P	P	11 03 59.2	+0.1
	0.4nm,0.6s,baz=131,slow=6.6,SNR=2.7 0.4nm,0.6s						

*IDC **16** 11:12:28.9±1.1, 1°67N×126°47E, h0km, mb4.0/7, mbtmp4.0/8, ML4.2/1, Error ellipse: s-maj=115.8km s-min=16.3km az=68.0*
*DJA **16** 11:12:32.5±0.3, 2°N±3°×12°6E±°, h10km, M4.3/7, MLv4.3/7*
*NEIC **16** 11:12:35.1±1.2, 1°49N±0°09×126°34E±0°07, h35km±2km, mb4.3/22, Error ellipse: s-maj=17.4km s-min=8.7km az=212.0*

ISC 16 11:12:34.6±0.5, 1°59N±0°06×126°40E±0°08, h35km, n43, σ0.87/47, mb4.2/17, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**130**		**Pn**	**11 12 56.0**	**+0.3**
TNTI				Sn	**Sn**	**11 13 11.9**	**+0.5**
TNTI	**Ternate**	**1.26**	**130**	P	**Pn**	**11 12 55.9**	**+0.2**
SGSI	**Sangihe**	**2.26**	**337**	P	**Pn**	**11 13 09.1**	**-0.4**
SGSI				S	**Sn**	**11 13 34.8**	**-1.4**
KMSI	**Cibinong**	**2.62**	**247**	P	**Pn**	**11 13 15.8**	**+1.4**
TOLI2	**Tolitoli**	**5.64**	**265**	Pn	**Pn**	**11 13 55.9**	**0.0**
FAKI	**Fak Fak**	**7.36**	**127**	Pn	**Pn**	**11 14 21.2**	**+1.5**
MYLDM	**Lahad Datu**	**8.65**	**295**		**Pn**	**11 14 39.3**	**+1.9**
MTN	**Manton Dam**	**15.09**	**162**	Pn	**Pn**	**11 16 04.2**	**-1.0**
MTN				IAmb	IAmb	11 16 45.3	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**17.31**	**172**		**Pn**	**11 16 33.8**	**+0.2**
KNRA				IAmb	IAmb	11 17 13.0	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**P**	**11 16 59.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=11,slow=10,SNR=11 comp=Z,1.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.57**	**182**	P	**P**	**11 16 59.1**	**-0.5**
TPUB	**Ta-pu**	**22.30**	**346**	P	**P**	**11 17 30.0**	**+0.9**
WB0	**Warramunga Arr**	**22.62**	**160**		**P**	**11 17 32.0**	**-0.6**
WB0				IAmb	IAmb	11 17 40.6	
	comp=Z,9.4nm,1.1s						
WRAB	**Tennant Creek**	**22.76**	**160**	P	**P**	**11 17 32.3**	**-1.8**
WRAB				IAmb	IAmb	11 17 38.6	
	comp=Z,6.7nm,0.6s						
WRA	**Warramunga Arr**	**22.77**	**160**	P	**P**	**11 17 33.0**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=339,slow=11,SNR=37						
WRA				PcP	**PcP**	**11 21 25.2**	**0.0**
	comp=Z,0.2nm,0.6s,baz=338,slow=2.2,SNR=4.8 comp=Z,3.3nm,0.6s						
WRA	**Warramunga Arr**	**22.77**	**160**	P	**P**	**11 17 32.6**	**-1.5**
WR8	**Warramunga Arr**	**22.84**	**160**		**P**	**11 17 33.9**	**-0.9**
MBWA	**Marble Bar**	**23.53**	**196**	P	**P**	**11 17 41.0**	**-0.7**
MBWA				IAmb	IAmb	11 17 49.0	
	comp=Z,12nm,1.1s						
AS31	**Alice Springs**	**26.14**	**164**		**P**	**11 18 04.9**	**-0.8**
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**11 18 05.7**	**0.0**
ASAR				PcP	**PcP**	**11 21 32.9**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=348,slow=7.8,SNR=21 comp=Z,0.7nm,0.6s,baz=348,slow=2.2,SNR=9.0 comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**11 18 05.3**	**-0.4**
JNU	**Nakatsue**	**31.65**	**7**	P	**P**	**11 18 55.2**	**+0.6**
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**11 19 34.0**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=347,slow=9.1,SNR=5.3 comp=Z,2.6nm,0.8s						
JMM	**Marumori**	**38.45**	**18**	P	**P**	**11 19 53.6**	**+0.5**
PEA0B	**Petropavlovsk-**	**57.53**	**22**	P	**P**	**11 22 21.0**	**+0.6**
PETK	**Petropavlovsk-**	**57.53**	**22**	P	**P**	**11 22 21.1**	**+0.6**
MK31	**Makanchi Array**	**59.13**	**326**	P	**P**	**11 22 31.3**	**-0.4**
MK31				IAmb	IAmb	11 22 34.2	
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**11 22 30.7**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=120,slow=7.8,SNR=9.8 comp=Z,1.0nm,0.5s						
ZAA0	**Zalesovo Array**	**62.34**	**334**	P	**P**	**11 22 53.5**	**+0.1**
ZAA0				IAmb	IAmb	11 22 54.7	
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**11 22 53.5**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=140,slow=6.5,SNR=2.9 comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**11 22 53.7**	**+0.2**
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	**P**	**11 22 59.4**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=128,slow=6.3,SNR=7.1 comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**63.37**	**328**	P	**P**	**11 22 60.0**	**-0.3**
KURK				IAmb	IAmb	11 23 04.8	
	comp=Z,3.1nm,0.5s						
CASY	**Casey**	**68.66**	**187**	P	**P**	**11 23 33.0**	**-1.0**
CASY				IAmb	IAmb	11 24 01.9	
	comp=Z,4.0nm,1.2s						
AB31	**Akbulak array**	**73.60**	**321**	P	**P**	**11 24 03.8**	**-0.5**
AB31				IAmb	IAmb	11 24 10.9	
	comp=Z,2.5nm,1.3s						
ABKAR	**Akbulak array**	**73.60**	**321**	P	**P**	**11 24 03.8**	**-0.5**
VNDA	**Vanda**	**81.36**	**173**	P	**P**	**11 24 48.0**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=310,slow=6.7,SNR=4.9 comp=Z,0.3nm,0.4s						
VNDA	**Vanda**	**81.36**	**173**	P	**P**	**11 24 47.3**	**+0.2**
D20K	**Etivluk River**	**83.81**	**21**	P	**P**	**11 25 01.2**	**+1.1**
D20K				IAmb	IAmb	11 25 39.1	
	comp=Z,5.2nm,1.1s						
BCAR	**Beaver Creek A**	**89.42**	**27**	P	**P**	**11 25 28.0**	**+0.3**
QSPA	**South Pole Qui**	**91.51**	**180**	P	**P**	**11 25 37.5**	**+0.2**
QSPA				IAmb	IAmb	11 26 11.3	
	comp=Z,2.6nm,1.3s						
FIA1	**FINESS Array S**	**93.55**	**332**	P	**P**	**11 25 45.4**	**-1.3**
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**11 25 45.6**	**-1.1**

*AFAD **16** 11:14:58.6, 39°38N×25°98E, h7km±2km, ML2.2*
*ISK **16** 11:14:58.3, 39°39N×25°97E, h6km, ML2.5/27*
*ATH **16** 11:14:58.8, 39°35N×25°93E, h17km±1km, ML2.3/5, Manual Solution by A.Agalos First location: 2019/11/16 11:16:14, This location: 2019/11/16 14:22:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 16 11:14:58.8±0.8, 39°38N±0°02×25°96E±0°02, h14km±6km, n53, σ0.66/77, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.16**	**60**	Pg	**Pg**	**11 15 02.4**	**-0.4**
SIGR	**SIGRI**	**0.18**	**205**	Pg	**Pg**	**11 15 02.9**	**-0.2**
SIGR				Sg	**Sg**	**11 15 06.1**	**+0.2**
SIGR	**SIGRI**	**0.18**	**205**	P	**Pg**	**11 15 03.0**	**0.0**
SIGR				S	**Sg**	**11 15 05.8**	**-0.1**
KOCA	**Canakkale, Ayv**	**0.19**	**48**	P	**Pg**	**11 15 02.9**	**-0.3**
KOCA				*i* IAML		11 15 06.0	
	comp=E,2μm,0.3s						
KOCA				S	**Sg**	**11 15 06.3**	**+0.1**
KOCA				*i* IAML		11 15 07.0	
	comp=N,733nm,0.1s						
BOZC	**Bozcaada**	**0.47**	**9**	P	**Pg**	**11 15 07.9**	**-0.3**
BOZC				S	**Sg**	**11 15 14.6**	**+0.1**
BOZC				*i* IAML		11 15 15.0	
	comp=N,215nm,0.2s						
BOZC				*i* IAML		11 15 15.0	
	comp=E,348nm,0.2s						
BOZC	**Bozcaada**	**0.47**	**9**	Pg	**Pg**	**11 15 07.9**	**-0.3**
BOZC				Sg	**Sg**	**11 15 14.4**	**-0.2**
EZNE	**Ezine-Canakkal**	**0.49**	**40**	Pg	**Pg**	**11 15 07.9**	**-0.7**
EZNE				Sg	**Sg**	**11 15 15.5**	**+0.2**
EZN	**Ezine**	**0.53**	**32**	Pg	**Pg**	**11 15 08.8**	**-0.6**
EZN				Sg	**Sg**	**11 15 16.1**	**-0.4**
AYVA	**Ayvalik**	**0.57**	**96**	P	**Pg**	**11 15 09.7**	**-0.4**
AYVA				S	**Sb**	**11 15 17.9**	**-0.8**
AYVA				*i* IAML		11 15 18.0	
	comp=E,103nm,0.3s						
AYVA				*i* IAML		11 15 22.0	
	comp=N,160nm,0.6s						
BAYC	**CANAKKALE_Bayr**	**0.59**	**51**	P	**Pg**	**11 15 09.5**	**-0.9**
BAYC				S	**Sg**	**11 15 17.5**	**-0.6**
BAYC				*i* IAML		11 15 18.0	
	comp=E,157nm,0.2s						
BAYC				*i* IAML		11 15 19.0	
	comp=N,135nm,0.1s						
ECEA	**Canakkale, Ece**	**0.69**	**14**	P	**Pg**	**11 15 11.9**	**-0.3**
ECEA				S	**Sb**	**11 15 21.7**	**-0.3**
ECEA				*i* IAML		11 15 22.0	
	comp=E,231nm,0.3s						
ECEA				*i* IAML		11 15 25.0	
	comp=N,214nm,0.3s						
CNKL	**anakkale-Mer**	**0.77**	**26**	P	**Pg**	**11 15 12.9**	**-0.9**
CNKL				S	**Sg**	**11 15 23.8**	**-0.1**
CNKL				*i* IAML		11 15 24.0	
	comp=E,116nm,0.4s						
CNKL				*i* IAML		11 15 25.0	
	comp=N,121nm,0.2s						
EFSA	**Agios Efstrati**	**0.77**	**283**	P	**Pg**	**11 15 13.4**	**-0.3**
EFSA				S	**Sg**	**11 15 23.3**	**-0.5**
GOAD	**anakkale-G¶**	**0.79**	**357**	P	**Pg**	**11 15 13.6**	**-0.5**
GOAD				S	**Sb**	**11 15 24.7**	**-0.1**
GOAD				*i* IAML		11 15 26.0	
	comp=N,156nm,0.4s						
GOAD				*i* IAML		11 15 27.0	
	comp=E,111nm,0.3s						
LIA	**Limnos Island**	**0.79**	**311**	P	**Pg**	**11 15 14.0**	**-0.2**
LIA				S	**Sg**	**11 15 24.8**	**+0.1**
KARB	**zmir-Karabur**	**0.80**	**153**	P	**Pg**	**11 15 14.1**	**-0.2**
KARB				S	**Sb**	**11 15 25.4**	**+0.3**
KARB				*i* IAML		11 15 26.0	
	comp=E,223nm,0.2s						
KARB				*i* IAML		11 15 27.0	
	comp=N,208nm,0.4s						
DKL	**Dikili**	**0.80**	**112**	Pg	**Pb**	**11 15 14.3**	**-0.2**
DKL				Sg	**Sb**	**11 15 25.4**	**+0.3**
GADA	**Gvkgeada**	**0.81**	**357**	Pg	**Pg**	**11 15 14.1**	**-0.6**
GADA				Sg	**Sb**	**11 15 25.6**	**0.0**
COMU	**Canakkale**	**0.83**	**29**	Pg	**Pg**	**11 15 14.3**	**-0.6**
COMU				Sg	**Sb**	**11 15 25.7**	**-0.3**
EAG2	**Marmaro, Chios**	**0.84**	**172**	P	**Pg**	**11 15 14.6**	**-0.6**
BUHA	**Balikesir, Bur**	**0.88**	**81**	P	**Pg**	**11 15 14.7**	**-1.2**
BUHA				S	**Sb**	**11 15 27.3**	**-0.2**
BUHA				*i* IAML		11 15 30.0	
	comp=N,89nm,0.2s						
BUHA				*i* IAML		11 15 32.0	
	comp=E,132nm,0.6s						
YAYO	**Edremit-Balk**	**0.90**	**74**	Pg	**Pg**	**11 15 15.7**	**-0.5**
ZEDA	**zmir-Bergama**	**0.96**	**115**	P	**Pg**	**11 15 17.1**	**-0.4**
ZEDA				S	**Sb**	**11 15 30.4**	**+0.5**
ZEDA				*i* IAML		11 15 31.0	
	comp=N,65nm,0.3s						
ZEDA				*i* IAML		11 15 32.0	
	comp=E,44nm,0.4s						
CHOS	**Chios island**	**0.99**	**175**	Pg	**Pb**	**11 15 17.9**	**+0.1**
CHOS	**Chios island**	**0.99**	**175**	P	**Pg**	**11 15 17.1**	**-0.9**
CHOS				S	**Sg**	**11 15 30.6**	**-0.3**
CANM	**Can-anakkale**	**1.06**	**53**	Pg	**Pg**	**11 15 18.5**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.10**	**21**	Pg	**Pg**	**11 15 19.1**	**-0.9**
YENI	**Yenice-Canakka**	**1.14**	**60**	Pn	**Pg**	**11 15 19.5**	**-1.3**
SMTH	**Samothraki Isl**	**1.14**	**344**	P	**Pg**	**11 15 20.1**	**-0.7**
SMTH				S	**Sg**	**11 15 35.0**	**-0.7**
LPK	**Lapseki**	**1.17**	**32**	Pn	**Pg**	**11 15 20.9**	**-0.6**
ENZZ	**Sultanice-Enez**	**1.24**	**7**	Pn	**Pg**	**11 15 22.9**	**+0.2**
SOMA	**Soma-Manisa**	**1.25**	**100**	Pn	**Pn**	**11 15 22.7**	**+0.9**
ERIK	**Erikli-Kesan**	**1.36**	**18**	Pn	**Pn**	**11 15 23.2**	**-0.2**
ENEZ	**Enez**	**1.37**	**6**	Pn	**Pb**	**11 15 24.3**	**+0.1**
KRBG	**Karabiga-Canak**	**1.45**	**45**	Pn	**Pn**	**11 15 25.2**	**+0.6**
GONE	**Gonen-Balikesi**	**1.49**	**63**	Pn	**Pn**	**11 15 25.9**	**+0.7**
ALN	**Alexandroupoli**	**1.52**	**3**	Pn	**Pn**	**11 15 26.1**	**+0.5**
ALN	**Alexandroupoli**	**1.52**	**3**	P	**Pn**	**11 15 25.9**	**+0.3**
ALN				S	**Sn**	**11 15 46.2**	**+1.0**
AKS	**Akhisar**	**1.53**	**108**	Pn	**Pn**	**11 15 25.8**	**+0.1**
THAS	**Thassos island**	**1.55**	**323**	P	**Pn**	**11 15 26.2**	**+0.2**
THAS				S	**Sn**	**11 15 45.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.61**	**35**	Pn	**Pn**	**11 15 27.5**	**+0.6**
KYMI	**Kymi, Euboea I**	**1.62**	**243**	P	**Pn**	**11 15 25.6**	**-1.4**
MRMT	**Marmara Adasi**	**1.76**	**45**	Pn	**Pn**	**11 15 29.6**	**+0.7**
EDC	**Edincik**	**1.76**	**56**	Pn	**Pn**	**11 15 29.9**	**+1.0**
GORD	**Gordes-Manisa**	**1.79**	**104**	Pn	**Pn**	**11 15 29.5**	**+0.1**
OUR	**Ouranopolis**	**1.79**	**303**	Pn	**Pn**	**11 15 30.8**	**+1.4**
RDO	**Rodhopi**	**1.80**	**350**	Pn	**Pn**	**11 15 30.8**	**+1.4**
RDO	**Rodhopi**	**1.80**	**350**	P	**Pn**	**11 15 29.3**	**-0.1**
SMG	**Samos**	**1.80**	**157**	P	**Pn**	**11 15 28.9**	**-0.6**
UKOP	**Uzunkopru-Edir**	**1.83**	**16**	Pn	**Pn**	**11 15 30.8**	**+1.0**
ODEM	**Odemis-Izmir**	**1.99**	**123**	Pn	**Pn**	**11 15 33.4**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**2.08**	**133**	Pn	**Pn**	**11 15 34.9**	**+1.5**
KULA	**Kula-Manisa**	**2.28**	**111**	Pn	**Pn**	**11 15 37.3**	**+1.2**

*IDC **16** 11:29:13.3±8.4, 7°17S×129°43E, h148km±85km, mb3.2/3, mbtmp3.9/7, MS3.7/1, Error ellipse: s-maj=88.3km s-min=27.2km az=46.0*
*DJA **16** 11:29:14.0±0.4, 7°S±4°×12°9E±°, h193km±10km, M4.1/8, mb3.9/7, mB4.7/2, MLv4.3/8, Mw(mB)4.0/2*

ISC 16 11:29:13.7±0.8, 7°34S±0.07×129°25E±0.06, h150km, n17, σ2.94/21, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.13**	**108**	P	**Pn**	**11 29 53.8**	**+3.4**
SAUI				S	**Sn**	**11 30 23.7**	**+5.1**
AAI	**Ambon**	**3.77**	**344**	P	**Pn**	**11 30 11.9**	**+0.8**
FAKI	**Fak Fak**	**5.31**	**34**	P	**Pn**	**11 30 28.6**	**-2.7**
	0.2nm822nm8.1nm,0.8s						
SOEI	**Soe**	**5.48**	**244**	P	**Pn**	**11 30 37.0**	**+3.3**
	0.3nm27nm,0.7s						
BATI	**Baumata**	**6.21**	**242**	P	**Pn**	**11 30 46.6**	**+3.3**
	22nm,0.3s,baz=52,slow=19,SNR=8.0						
BATI				S	**Sn**	**11 31 55.8**	**+2.3**
	46nm,0.4s,baz=125,slow=19,SNR=10						
BATI	**Baumata**	**6.21**	**242**	P	**Pn**	**11 30 46.3**	**+2.9**
	0.3nm24nm,0.9s						
EDFI	**Ende, Flores**	**7.62**	**259**	P	**Pn**	**11 31 05.3**	**+3.1**
	0.0nm3.4nm,0.5s						
BASI	**Baing, Sumba**	**9.04**	**251**	P	**Pn**	**11 31 23.2**	**+2.2**
WBSI	**Waikabubak, Su**	**10.02**	**256**	P	**Pn**	**11 31 35.5**	**+1.4**
	23nm,1.2s						
FITZ	**Fitzroy Crossi**	**11.26**	**198**	P	**Pn**	**11 31 51.6**	**+1.2**
	0.8nm,0.3s,baz=20,slow=11,SNR=13						
FITZ				S	**Sn**	**11 33 49.5**	**-5.5**
	3.8nm,0.3s,baz=119,slow=22,SNR=8.4						
PLAI	**Plampang**	**11.46**	**262**	P	**Pn**	**11 31 52.3**	**-0.7**
WRA	**Warramunga Arr**	**13.47**	**159**	P	**Pn**	**11 32 19.2**	**+0.2**
	2.3nm,0.5s,baz=338,slow=14,SNR=33						
WRA				S	**Sn**	**11 34 44.5**	**-3.7**
	4.4nm,0.6s,baz=332,slow=22,SNR=9.1						
ASAR	**Alice Springs**	**16.84**	**165**	P	**Pn**	**11 33 03.1**	**+2.3**
	2.7nm,0.5s,baz=341,slow=9.9,SNR=36						
ASAR				S	**S**	**11 36 05.7**	**-2.5**
	1.2nm,0.6s,baz=354,slow=27,SNR=6.4						
HNR	**Honiara**	**30.44**	**96**	LR	LR	11 47 48.3	
	comp=Z,143nm,18.9s,baz=355,slow=37						
CMAR	**Chiang Mai Arr**	**39.38**	**311**	P	**P**	**11 36 29.1**	**+0.2**
	0.4nm,0.3s,baz=146,slow=7.0,SNR=5.9 0.4nm,0.3s						
MKAR	**Makanchi Array**	**68.10**	**327**	P	**P**	**11 39 56.8**	**-0.5**
	0.4nm,0.5s,baz=131,slow=6.9,SNR=4.3 0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.41**	**329**	P	**P**	**11 40 22.6**	**-0.9**
	0.3nm,0.5s,baz=130,slow=5.1,SNR=5.8 0.3nm,0.5s						

*JMA **16** 11:35:55.6±0.1, 24°4N±0°6×122°0E±0°3, h18km, MV2.2/11, TAIWAN REGION*
*TAP **16** 11:35:55.5, 24°44N×122°00E, h20km, ML2.9, B*

ISC 16 11:35:55.4±0.9, 24°42N±0°02×122°04E±0°02, h19km±2km, n67, σ0.46/120, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESAO	**Su ao**	**0.24**	**311**	*e*P	**Pg**	**11 36 01.1**	**+0.1**
ESAO				*e*S	**Sg**	**11 36 04.5**	**-0.4**
EWUT	**Wuta**	**0.24**	**276**	*i* P	**Pg**	**11 36 00.8**	**-0.3**
EWUT				*i* S	**Sg**	**11 36 04.4**	**-0.6**
TWC	**Suao**	**0.26**	**318**	*i* P	**Pb**	**11 36 01.1**	**-0.2**
TWC				*i* S	**Sb**	**11 36 04.5**	**-0.6**
ENA	**Nanau**	**0.27**	**272**	*i* P	**Pb**	**11 36 01.2**	**-0.3**
ENA				S	**Sg**	**11 36 05.3**	**-0.4**
EAHA	**Aohua**	**0.29**	**252**	*i* P	**Pg**	**11 36 01.6**	**-0.2**
EAHA				*i* S	**Sg**	**11 36 06.2**	**0.0**
NDS	**Dongshan**	**0.36**	**306**	P	**Pg**	**11 36 03.0**	**-0.2**
NDS				S	**Sg**	**11 36 07.7**	**-0.7**
EGS		**0.43**	**347**	P	**Pg**	**11 36 04.5**	**0.0**
EGS				*e*S	**Sg**	**11 36 10.3**	**-0.2**
ILA	**Ilan**	**0.43**	**323**	*e*S	**Sb**	**11 36 10.7**	**-0.1**
TWE	**Neicheng**	**0.45**	**312**	*i* P	**Pg**	**11 36 04.5**	**-0.2**
TWE				S	**Sg**	**11 36 10.6**	**-0.4**
ETL	**Fush Village**	**0.46**	**236**	*e*P	**Pb**	**11 36 04.9**	**-0.1**
ETL				*e*S	**Sb**	**11 36 12.0**	**+0.6**
NACB	**Ninganchiao**	**0.47**	**239**	*i* P	**Pg**	**11 36 04.7**	**-0.3**
NACB				S	**Sb**	**11 36 11.8**	**0.0**
LATG	**Datong**	**0.48**	**284**	*i* P	**Pg**	**11 36 05.0**	**-0.3**
LATG				*i* S	**Sb**	**11 36 11.8**	**-0.3**
ENTT	**Nioudou**	**0.48**	**297**	*i* P	**Pg**	**11 36 05.0**	**-0.2**
ENTT				S	**Sg**	**11 36 11.4**	**-0.5**
TWD	**Chiawan**	**0.53**	**230**	*e*P	**Pg**	**11 36 06.0**	**0.0**
TWD				*e*S	**Sb**	**11 36 13.9**	**+0.7**
FUSB	**Fushanzhiwuyua**	**0.53**	**310**	*i* P	**Pb**	**11 36 06.2**	**0.0**
FUSB				S	**Sb**	**11 36 13.3**	**-0.1**
ETLH	**Xiulin Townshi**	**0.55**	**248**	*i* P	**Pb**	**11 36 06.1**	**-0.3**
ETLH				*e*S	**Sb**	**11 36 14.1**	**+0.2**
TIPB	**Shuangxi**	**0.58**	**341**	*i* P	**Pg**	**11 36 07.0**	**-0.1**
TIPB				*i* S	**Sb**	**11 36 14.3**	**-0.6**
TWB1	**Santiao Chiao**	**0.59**	**356**	P	**Pb**	**11 36 07.1**	**0.0**
TWB1				S	**Sg**	**11 36 15.2**	**0.0**
NNSH	**Datong**	**0.60**	**271**	*i* P	**Pb**	**11 36 06.9**	**-0.3**
NNSH				S	**Sb**	**11 36 14.4**	**-0.8**
NNSB	**Datong**	**0.60**	**271**	*i* P	**Pb**	**11 36 07.0**	**-0.3**
NNSB				S	**Sb**	**11 36 14.8**	**-0.4**
NWLT	**Wulai**	**0.60**	**306**	*i* P	**Pg**	**11 36 07.4**	**-0.1**
NWLT				*i* S	**Sb**	**11 36 14.8**	**-0.6**
NNS	**Nan Shan**	**0.61**	**272**	*i* P	**Pb**	**11 36 07.0**	**-0.3**
NNS				S	**Sb**	**11 36 14.9**	**-0.7**
YHNB	**Yeheng**	**0.65**	**293**	*i* P	**Pg**	**11 36 08.2**	**-0.2**
YHNB				S	**Sb**	**11 36 16.4**	**-0.5**
NSK	**Sanguang**	**0.67**	**293**	*i* P	**Pb**	**11 36 08.4**	**-0.1**
NSK				*i* S	**Sb**	**11 36 16.7**	**-0.7**
ETM	**Tongmen**	**0.67**	**228**	*e*P	**Pg**	**11 36 08.7**	**0.0**
SXI1	**Grass Mountain**	**0.69**	**348**	*i* P	**Pg**	**11 36 09.2**	**+0.1**
SXI1				S	**Sg**	**11 36 18.9**	**+0.6**
NWF	**Wu-fen Shan**	**0.69**	**340**	P	**Pg**	**11 36 09.2**	**+0.1**
NWF				S	**Sg**	**11 36 18.4**	**+0.1**
WFSB	**Wu-fen Shan**	**0.69**	**340**	P	**Pg**	**11 36 09.1**	**0.0**
WFSB				S	**Sg**	**11 36 18.1**	**-0.2**
LXIB	**Xiulin Townshi**	**0.69**	**235**	*e*P	**Pb**	**11 36 08.9**	**-0.1**
TWA	**Mucha**	**0.69**	**324**	*e*P	**Pg**	**11 36 09.5**	**+0.3**
TWA				S	**Sg**	**11 36 18.1**	**-0.3**
NHDH	**Xindian Distri**	**0.71**	**319**	*e*P	**Pg**	**11 36 09.8**	**+0.2**
NHDH				S	**Sg**	**11 36 18.8**	**-0.3**
FUSS	**Fushou**	**0.74**	**257**	*e*P	**Pg**	**11 36 09.9**	**-0.2**
WHF	**Hehuan Shan**	**0.76**	**249**	P	**Pb**	**11 36 10.0**	**-0.2**
WHF				*e*S	**Sg**	**11 36 20.7**	**+0.1**
SHUL	**Shoufeng**	**0.76**	**215**	*e*P	**Pn**	**11 36 11.8**	**+0.7**
SHUL				*e*S	**Sn**	**11 36 22.3**	**+0.2**
TNOU	**National Taiwa**	**0.77**	**342**	*e*P	**Pg**	**11 36 10.6**	**+0.1**
TNOU				*e*S	**Sb**	**11 36 19.8**	**-0.4**
TAP	**Taipei**	**0.79**	**322**	*e*P	**Pn**	**11 36 11.3**	**-0.2**
TAP				*e*S	**Sg**	**11 36 21.4**	**+0.2**
ESL	**Shilin**	**0.82**	**223**	*e*P	**Pg**	**11 36 11.4**	**0.0**
ESL				*e*S	**Sn**	**11 36 23.6**	**+0.1**
TDCB	**Techi**	**0.82**	**259**	*e*P	**Pg**	**11 36 11.2**	**-0.3**
TDCB				*e*S	**Sg**	**11 36 22.4**	**0.0**
JYNG	**Yonagunijimaku**	**0.83**	**88**	*e*P	**Pb**	**11 36 11.5**	**+0.3**
JYNG				*e*S	**Sb**	**11 36 22.8**	**+0.9**
YM01	**YM01**	**0.84**	**330**	P	**Pn**	**11 36 12.4**

PVAQ Vaqueiros 24.80 119 P **P** **11 48 10.6 +1.9**
BCLA Clavier 24.88 80 *d*P **P** **11 48 10.2 +0.8**
comp=Z,5.1nm,1.2s
BCLA *d*PcP **PcP** **11 51 44.5 -0.3**
ESDC Sonseca Array 25.20 110 P **P** **11 48 13.1 +0.6**
comp=Z,5.0nm,1.1s,baz=315,slow=7.5,SNR=9.7
ESDC LR LR 11 56 29.0
comp=Z,289nm,18.3s,baz=344,slow=33
comp=Z,5.0nm,1.1s
ESDC Sonseca Array 25.20 110 P **P** **11 48 13.4 +0.9**
NB2 NORSAR Subarra 25.74 54 P **P** **11 48 16.8 -0.4**
comp=Z,0.7nm,0.8s,baz=260,slow=6.2
NOA NORSAR Array B 25.74 54 P **P** **11 48 16.8 -0.4**
comp=Z,2.1nm,0.9s,baz=276,slow=9.7,SNR=4.2
NOA LR LR 11 57 07.4
comp=Z,104nm,18.3s,baz=270,slow=33
comp=Z,2.1nm,0.9s
CLL Collm 29.03 74 *i* P **P** **11 48 47.4 +0.7**
comp=Z,7.0nm,0.9s
GERES GERESS Array B 30.49 78 P **P** **11 49 00.6 +0.7**
comp=Z,2.3nm,1.1s,baz=305,slow=5.9,SNR=7.0
comp=Z,2.3nm,1.1s
RES Resolute Bay 31.56 334 LR LR 11 59 34.6
comp=Z,225nm,21.1s,baz=18,slow=32
VRAC Vranov 31.97 76 LR LR 12 01 58.5
comp=Z,224nm,18.1s,baz=304,slow=36
FINES FINESS Array B 32.76 51 P **P** **11 49 20.8 +1.3**
FIA1 FINESS Array S 32.76 51 P **P** **11 49 20.7 +1.3**
MODS Modra-Piesok 32.81 77 *e*P P 11 49 25.2 +5.1
LANS Liptovska Anna 33.71 75 *e*P P 11 49 34.6 +6.6
MNK Minsk 36.00 62 *i* P **P** **11 49 46.6 -1.0**
comp=E,10.0nm,0.7s,baz=295
MNK *i* P **P** **11 49 46.6 -1.0**
comp=N,15nm,0.7s
MNK *i* P **P** **11 49 46.6 -1.0**
comp=Z,13nm,0.8s
MNK *i* PP **PnPn** **11 51 05.2 -2.9**
MNK *i* PPP PPP 11 51 21.5
MNK *i* S **S** **11 55 26.6 +0.9**
MNK *i* SS **SnSn** **11 57 38.4 -11**
MNK *i* SSS SSS 11 58 09.1
MNK *i* LR LR 12 03 23.6
MNK *i* LRM MLR 12 05 03.5
comp=N,390nm,17.5s
MNK *i* LRM MLR 12 05 04.1
comp=E,393nm,17.0s
MNK *i* LRM MLR 12 05 25.9
comp=Z,114nm,17.4s
BUR08 Bucovina Ar. S 37.77 74 P **P** **11 50 04.3 +1.5**
BURAR Bucovina Array 37.79 74 P **P** **11 50 04.3 +1.2**
AKASG Malin Array Be 38.47 67 P **P** **11 50 09.1 +0.5**
comp=Z,0.8nm,0.6s,baz=307,slow=8.4,SNR=8.3
comp=Z,0.8nm,0.6s
MLR Muntele Rosu 39.38 76 LR LR 12 07 08.3
comp=Z,144nm,18.1s,baz=338,slow=37
SIUC Southern Illin 39.97 269 P **P** **11 50 21.5 +0.3**
SIUC IAmb IAmb 11 50 26.4
comp=Z,15nm,0.8s
S44A Carbondale 40.01 269 P **P** **11 50 21.6 0.0**
S44A IAmb IAmb 11 50 22.5
comp=Z,18nm,1.0s
A36M Sachs Harbour 40.48 331 **P** **11 50 25.6 +0.5**
RLO Rose Lookout 44.48 272 P **P** **11 51 01.5 +3.5**
DEOK Depew 45.58 273 P **P** **11 51 10.5 +3.7**
OK029 Liberty Lake 46.18 274 P **P** **11 51 11.8 +0.3**
H31M Peel River 46.37 326 P **P** **11 51 13.0 +0.3**
K22A Casper 47.04 287 IAmb IAmb 11 51 22.6
comp=Z,6.8nm,0.9s
E27K Coleen River 47.22 331 IAmb IAmb 11 51 20.4
comp=Z,5.0nm,1.1s
BR131 Keskin Array S 47.38 78 P **P** **11 51 22.2 +1.2**
BR131 IAmb IAmb 11 51 23.5
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 47.38 78 P **P** **11 51 22.8 +1.7**
comp=Z,1.8nm,0.7s,baz=311,slow=4.7,SNR=12
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 47.38 78 **P** **11 51 22.3 +1.2**
I30M Mount Dempster 47.40 326 IAmb IAmb 11 51 25.9
comp=Z,6.1nm,0.9s
J30M Hart River 47.78 325 IAmb IAmb 11 51 29.4
comp=Z,6.2nm,0.9s
D25K Kavik River 47.82 333 IAmb IAmb 11 51 31.5
comp=Z,3.9nm,0.8s
I28M Miner Creek 48.43 327 IAmb IAmb 11 51 34.2
comp=Z,5.2nm,0.8s
C23K Itkillik River 48.57 335 IAmb IAmb 11 51 37.4
comp=Z,8.7nm,1.2s
BMAR Burnt Mountain 48.58 331 P **P** **11 51 29.8 0.0**
K29M Barlow Dome 48.64 325 IAmb IAmb 11 51 36.2
comp=Z,12nm,1.2s
G26K Porcupine Rive 48.66 330 IAmb IAmb 11 51 37.5
comp=Z,5.7nm,0.8s
PDAR Pinedale Array 48.69 289 P **P** **11 51 29.9 -1.4**
comp=Z,1.1nm,0.7s,baz=64,slow=8.6,SNR=9.1
comp=Z,1.1nm,0.7s
PDAR Pinedale Array 48.69 289 P **P** **11 51 30.4 -0.9**
DAWY Dawson 49.14 326 IAmb IAmb 11 51 46.6
comp=Z,12nm,1.4s
D23K Nanushuk River 49.20 335 IAmb IAmb 11 51 40.4
comp=Z,11nm,1.1s
E24K Your Creek 49.24 333 IAmb IAmb 11 51 40.7
comp=Z,4.1nm,0.8s
I26K Coal Creek Min 49.55 328 IAmb IAmb 11 51 39.4
comp=Z,7.3nm,1.3s
ARTI Arti 49.83 47 **P** **11 51 40.2 +0.7**
ARTI IAmb IAmb 11 51 45.0
comp=Z,6.8nm,0.7s
M29M Somme Creek 49.87 324 IAmb IAmb 11 51 46.1
comp=Z,7.8nm,1.1s
HWUT Hardware Ranch 50.58 289 **P** **11 51 45.8 +0.2**
HWUT IAmb IAmb 11 51 51.2
comp=Z,9.5nm,0.9s
SCRK Sand Creek 50.71 327 **P** **11 51 47.0 +0.7**
SCRK IAmb IAmb 11 51 52.1
comp=Z,9.2nm,0.9s
ILAR Eielson Array 51.08 329 P **P** **11 51 48.3 -0.5**
comp=Z,1.5nm,1.0s,baz=36,slow=6.5,SNR=9.9
comp=Z,1.5nm,1.0s
ILAR Eielson Array 51.08 329 P **P** **11 51 49.0 +0.1**
PV12 Saucer Basin, 51.19 284 IAmb IAmb 11 51 55.1
comp=Z,12nm,1.1s
PV02 Paradox Valley 51.22 284 IAmb IAmb 11 51 52.0
comp=Z,16nm,1.5s
PV16 Nyswonger Mesa 51.26 284 IAmb IAmb 11 51 55.6
comp=Z,6.9nm,1.1s
PV20 West Nyswonger 51.26 284 IAmb IAmb 11 52 00.8
comp=Z,13nm,1.2s
PV18 Skein Mesa, Pa 51.30 284 **P** **11 51 51.6 +0.5**
PV19 Morning Glory 51.30 284 IAmb IAmb 11 51 56.3
comp=Z,7.0nm,0.8s
PV13 Radium Mtn., P 51.30 284 IAmb IAmb 11 51 56.5
comp=Z,7.3nm,1.0s
HDA Harding Lake 51.35 329 IAmb IAmb 11 51 56.3
comp=Z,7.8nm,0.9s
BAUV El Baul 51.65 223 **P** **11 51 53.2 -0.4**
E19K Redstone River 51.97 336 IAmb IAmb 11 52 00.9
comp=Z,8.8nm,0.9s
ANMO Albuquerque 52.12 280 P **P** **11 51 58.2 +1.0**
TASM ASL Pad, Albuq 52.12 280 P **P** **11 51 59.1 +1.8**
TASM IAmb IAmb 11 51 59.1
comp=Z,2.3nm,1.1s
IMAR Indian Mountai 52.18 333 P **P** **11 51 57.0 -0.1**
RND Reindeer 52.66 329 IAmb IAmb 11 52 06.2
comp=Z,7.7nm,1.0s
DBIC Dimbokro 52.68 141 LR LR 12 12 38.4
comp=Z,402nm,21.6s,baz=298,slow=34
AKTO Aktyubinsk 53.51 53 LR LR 12 16 09.5
comp=Z,92nm,18.3s,baz=164,slow=37
WVOR Wild Horse Val 53.96 295 IAmb IAmb 11 52 15.6
comp=Z,8.7nm,1.2s
PINE Pine Mountain 54.28 297 IAmb IAmb 11 52 29.2
comp=Z,15nm,1.4s
KNB Kanab 54.40 286 IAmb IAmb 11 52 54.5
comp=Z,6.3nm,1.4s
TXAR Lajitas Array 54.44 273 P **P** **11 52 13.1 -1.1**
comp=Z,0.2nm,0.6s,baz=45,slow=7.0,SNR=8.5
comp=Z,0.2nm,0.6s
TIXI Tiksi 54.75 6 **P** **11 52 16.1 +0.3**
TIXI IAmb IAmb 11 52 25.1
comp=Z,7.4nm,1.1s
J05D Fort Rock, OR 54.78 297 IAmb IAmb 11 52 23.8
comp=Z,5.2nm,0.9s
AB31 Akbulak array 55.23 53 P **P** **11 52 20.2 +0.6**
ABKAR Akbulak array 55.23 53 P **P** **11 52 20.1 +0.5**
PAHR Pah Rah Range 56.24 293 IAmb IAmb 11 52 32.7
comp=Z,6.2nm,1.0s
NVAR Mina Array Bea 56.53 291 P **P** **11 52 28.9 -0.5**
comp=Z,0.3nm,0.6s,baz=66,slow=6.2,SNR=4.1
comp=Z,0.3nm,0.6s
BEKR Beckworth 56.67 293 IAmb IAmb 11 52 39.5
comp=Z,7.7nm,1.4s
PNTR Pine Nut 56.79 292 IAmb IAmb 11 52 36.5
comp=Z,9.3nm,1.0s
BVAR Borovoye Array 57.22 44 P **P** **11 52 34.8 +1.1**
comp=Z,2.5nm,0.7s,baz=292,slow=7.8,SNR=8.3
comp=Z,2.5nm,0.7s
BC3 Big Chuckawall 58.29 285 IAmb IAmb 11 52 46.7
comp=Z,3.4nm,0.8s
PFO Pinyon Flats O 58.90 286 **P** **11 52 46.6 +0.6**
PFO IAmb IAmb 11 52 51.2
comp=Z,4.4nm,0.8s
ZALV Zalesovo Beam 62.02 35 P **P** **11 53 06.7 -0.1**
comp=Z,0.4nm,0.3s,baz=339,slow=7.9,SNR=4.2
comp=Z,0.4nm,0.3s
ZALV Zalesovo Beam 62.02 35 P **P** **11 53 06.8 +0.1**
KURK Kurchatov 62.30 41 P **P** **11 53 08.7 -0.1**
KURBB Kurchatov Arra 62.34 41 P **P** **11 53 09.0 0.0**
comp=Z,1.3nm,0.8s,baz=324,slow=6.7,SNR=7.5
comp=Z,1.3nm,0.8s
KK31 Karatay Array 64.72 51 P **P** **11 53 25.6 +0.7**
KK31 IAmb IAmb 11 53 26.7
comp=Z,3.8nm,1.2s
KKAR Karatay Array 64.72 51 **P** **11 53 25.8 +0.9**
MAKZ Makanchi 66.76 42 P **P** **11 53 38.3 +0.3**
MAKZ IAmb IAmb 11 53 39.1
comp=Z,3.9nm,1.1s
MKAR Makanchi Array 66.90 42 P **P** **11 53 38.6 -0.3**
comp=Z,1.2nm,0.8s,baz=340,slow=6.7,SNR=8.3
comp=Z,1.2nm,0.8s
AAK Ala-Archa 66.92 49 P **P** **11 53 40.0 +0.8**
AAK IAmb IAmb 11 53 41.7
comp=Z,3.8nm,0.9s
GAR Garm 67.81 54 P **P** **11 53 46.2 +1.3**
TARG Taragay, Kyrgy 69.12 48 P **P** **11 53 53.8 +0.3**
TARG IAmb IAmb 11 53 56.5
comp=Z,4.2nm,0.9s
KSH Kashi 70.08 50 P **P** **11 54 01.8 +2.8**
KSH pP pwP 11 54 06.3 +1.6
KSH pmax pmax
comp=Z,7.0nm,1.3s
LPAZ La Paz 74.98 213 P **P** **11 54 29.6 +0.7**
comp=Z,3.0nm,0.9s,baz=27,slow=10,SNR=8.0
comp=Z,3.0nm,0.9s
CPUP Villa Florida 81.70 200 P **P** **11 55 03.2 -1.9**
comp=Z,0.5nm,0.7s,baz=25,slow=1.7,SNR=3.1
comp=Z,0.5nm,0.7s
HHC Hu-ho-hao-te 81.84 25 *e*P **P** **11 55 04.8 -1.2**
HHC pmax pmax
comp=Z,10.0nm,0.5s
HHC pmax pmax
comp=Z,130nm,3.8s
HNS HongShan 85.88 24 ⇑P **P** **11 55 27.5 +1.0**
HNS pmax pmax
comp=Z,8.0nm,1.0s
NJ2 Nanjing 91.96 22 *e*P **P** **11 55 55.4 -0.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s
PZH PanZhiHua 92.08 38 P **P** **11 55 56.4 +0.1**
SNAA Sanae 126.83 168 PKP **PKPdf** **12 01 47.3 -1.8**
comp=Z,1.5nm,0.8s,baz=18,slow=13,SNR=8.0
QSPA South Pole Qui 143.27 180 PKP **PKPdf** **12 02 18.6 -1.1**
comp=Z,1.3nm,0.9s,baz=170,slow=2.0,SNR=5.1
WRA Warramunga Arr 145.64 18 PKPbc **PKPdf** **12 02 24.5 -0.8**
comp=Z,1.1nm,0.8s,baz=343,slow=3.4,SNR=7.4
ASAR Alice Springs 149.18 20 PKPbc **PKPbc** **12 02 34.0 -1.3**
comp=Z,2.3nm,0.7s,baz=348,slow=2.3,SNR=40
ASAR Alice Springs 149.18 20 **PKPbc** **12 02 34.4 -0.9**

*IDC **16** 11:43:30.8±1.7, 1°.73N×125°.78E, h0km, mb3.5/4, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=122.5km s-min=21.7km az=68.0*
*DJA **16** 11:43:32.0±0.6, 2°.1N±6°×12°.7E±°, h10km, M3.3/5, MLv3.3/5*
ISC 16 11:43:34.7±1.2, 1°.9N±0°.2×126°.5E±0°.4, h35km, n7, σ1§37/7, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**144**	P	**Pn**	**11 43 57.4**	**-0.5**
SGSI	**Sangihe**	**2.02**	**330**	P	**Pn**	**11 44 06.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.91**	**182**	P	**P**	**11 48 02.3**	**-1.1**
	0.1nm,0.3s,baz=345,slow=12,SNR=1.4						
	1.8nm,0.9s						
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**	**11 48 37.5**	**+0.4**
	0.9nm,0.6s,baz=337,slow=11,SNR=13						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**26.43**	**165**	P	**P**	**11 49 10.7**	**+2.3**
	0.5nm,0.9s,baz=340,slow=8.1,SNR=6.1						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**11 53 30.4**	**0.0**
	0.4nm,0.7s,baz=122,slow=5.4,SNR=2.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**63.15**	**328**	P	**P**	**11 53 58.4**	**-0.6**
	0.4nm,0.6s,baz=124,slow=6.5,SNR=2.9						
	0.4nm,0.6s						

IDC 16 11:46:37.0±3.8, 16°.95N×144°.25E, h0km, mb3.6/4, mbtmp3.7/4, MS3.8/5, Error ellipse: s-maj=173.3km s-min=30.8km az=90.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**20.23**	**346**	P	P	11 51 13.7	-0.1
	0.5nm,0.4s,baz=155,slow=11,SNR=1.2						
	0.5nm,0.4s						
PMG	**Port Moresby**	**26.35**	**174**	LR	LR	12 01 26.4	
	comp=Z,60nm,19.4s,baz=250,slow=34						
WRA	**Warramunga Arr**	**37.94**	**195**	P	P	11 53 56.5	0.0
	1.1nm,0.7s,baz=16,slow=8.3,SNR=14						
	1.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**39.35**	**209**	P	P	11 54 08.6	+0.2
	2.6nm,0.8s,baz=24,slow=8.6,SNR=11						
	2.6nm,0.8s						
ASAR	**Alice Springs**	**41.62**	**194**	P	P	11 54 26.4	-0.8
	0.2nm,0.3s,baz=14,slow=7.9,SNR=5.0						
	0.2nm,0.3s						
SONM	**Songino Array**	**43.67**	**323**	LR	LR	12 11 58.8	
	comp=Z,77nm,19.1s,baz=261,slow=35						
RAO	**Raoul Island**	**58.69**	**141**	LR	LR	12 17 46.6	
	comp=Z,39nm,20.9s,baz=60,slow=32						
NVAR	**Mina Array Bea**	**85.30**	**51**	LR	LR	12 33 18.2	
	comp=Z,155nm,19.6s,baz=65,slow=33						
BRTR	**Keskin Array B**	**94.32**	**314**	LR	LR	12 45 45.4	
	comp=Z,121nm,19.1s,baz=291,slow=38						

*NEIC **16** 11:57:59.7±1.2, 17°.9S±0°.2×178°.5W±0°.1, h591km±4km, mb4.2/38, Error ellipse: s-maj=24.7km s-min=16.6km az=165.0*
*IDC **16** 11:57:59.2±2.1, 17°.45S×178°.79W, h584km±26km, mb3.5/8, mbtmp4.4/9, Error ellipse: s-maj=35.9km s-min=11.5km az=153.0*
ISC 16 11:57:59.7±0.6, 17°.9S±0°.1×178°.51W±0°.08, h600km, n55, σ1§01/53, mb4.1/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.28**	**272**	P	**P**	**11 59 21.5**	**+0.8**
NIUE	**Niue**	**8.23**	**100**	P	**P**	**11 59 59.0**	**-2.3**
SANVU	**Saraoutou**	**13.90**	**278**	P	**P**	**12 00 57.8**	**+0.1**
DZM	**Mont Dzumac**	**14.75**	**251**	P	**P**	**12 01 05.2**	**-0.6**
	6.4nm,0.8s,baz=116,slow=18,SNR=10						
URZ	**Urewera**	**20.68**	**190**	P	**P**	**12 02 02.6**	**+3.2**
	5.4nm,0.8s,baz=60,slow=9.6,SNR=1.6						
	5.4nm,0.8s						
EIDS	**Eidsvold**	**29.19**	**250**	P	**P**	**12 03 14.4**	**-0.2**
ARMA	**Armidale**	**29.88**	**240**	P	**P**	**12 03 20.8**	**+0.2**
CTAO	**Charters Tower**	**33.36**	**260**	P	**P**	**12 03 49.9**	**-0.3**
CTAO				IAmb	IAmb	12 03 50.5	
	comp=Z,5.4nm,0.7s						
COEN	**Coen**	**37.01**	**270**	P	**P**	**12 04 20.8**	**+0.4**
TOO	**Toolangi**	**37.12**	**231**	P	**P**	**12 04 20.9**	**-0.1**
TOO				IAmb	IAmb	12 04 57.4	
	comp=Z,16nm,1.5s						
STKA	**Stephens Creek**	**38.57**	**241**	P	**P**	**12 04 32.7**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=83,slow=11,SNR=7.3						
	comp=Z,3.5nm,0.5s						
WR8	**Warramunga Arr**	**44.40**	**260**	P	**P**	**12 05 17.9**	**-0.9**
WR8				IAmb	IAmb	12 05 19.8	
	comp=Z,7.3nm,1.2s						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**12 05 19.0**	**-1.0**
	comp=Z,3.4nm,0.5s,baz=96,slow=7.2,SNR=88						
WRA				S	**S**	**12 11 11.1**	**-2.2**
	comp=Z,0.3nm,0.8s,baz=98,slow=12,SNR=2.0						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**44.55**	**260**		**P**	**12 05 18.8**	**-1.2**
AS31	**Alice Springs**	**44.71**	**254**		**P**	**12 05 20.8**	**-0.4**
AS31				IAmb	IAmb	12 05 21.6	
	comp=Z,5.0nm,0.7s						
ASAR	**Alice Springs**	**44.71**	**254**	P	**P**	**12 05 20.6**	**-0.6**
	comp=Z,18nm,0.7s,baz=87,slow=8.6,SNR=228						
ASAR				ScP	**ScP**	**12 09 48.4**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=91,slow=3.6,SNR=1.9						
ASAR				S	**S**	**12 11 15.0**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=89,slow=16,SNR=4.6						
	comp=Z,18nm,0.7s						
FAKI	**Fak Fak**	**50.48**	**281**	P	**P**	**12 06 04.0**	**-0.2**
FAKI				IAmb	IAmb	12 06 21.1	
	comp=Z,6.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.94**	**261**	P	**P**	**12 06 21.7**	**-0.2**
SOEI	**Soe**	**55.98**	**270**	P	**P**	**12 06 44.3**	**+1.1**
SOEI				IAmb	IAmb	12 06 45.2	
	comp=Z,12nm,0.8s						
PSA00	**Pilbara Seismi**	**57.83**	**255**	P	**P**	**12 06 54.8**	**-0.8**
PSA00				IAmb	IAmb	12 07 15.4	
	comp=Z,20nm,1.2s						
PSA00	**Pilbara Seismi**	**57.83**	**255**	P	**P**	**12 06 54.9**	**-0.8**
PSA00				IAmb	IAmb	12 06 55.6	
	comp=Z,20nm,1.9s						
MBWA	**Marble Bar**	**57.99**	**256**	P	**P**	**12 06 56.0**	**-0.7**
MBWA				IAmb	IAmb	12 07 39.4	
	comp=Z,18nm,1.2s						
CASY	**Casey**	**66.14**	**205**	P	**P**	**12 07 49.1**	**+0.7**
CASY				IAmb	IAmb	12 08 19.7	
	comp=Z,23nm,2.0s						
TPUB	**Ta-pu**	**72.16**	**302**	P	**P**	**12 08 24.6**	**-0.6**
DPP	**Dos Picos Cty**	**77.54**	**49**	P	**P**	**12 08 55.5**	**+0.5**
DPP				IAmb	IAmb	12 08 56.1	
	comp=Z,4.0nm,0.8s						
O02D	**Mt. Diablo Mer**	**77.58**	**40**	P	**P**	**12 08 55.9**	**+0.7**
CMB	**Columbia Colle**	**77.87**	**43**	P	**P**	**12 08 57.4**	**+0.6**
BORC	**Borrego Spring**	**78.05**	**49**	P	**P**	**12 08 58.6**	**+0.9**
O03E	**Paynes Creek**	**78.26**	**41**	P	**P**	**12 08 59.0**	**+0.2**
O03E				IAmb	IAmb	12 09 39.0	
	comp=Z,18nm,1.6s						
MDPB	**Devils Postpil**	**78.51**	**44**	P	**P**	**12 09 01.2**	**+0.8**
YBH	**Yreka Blue Hor**	**78.55**	**39**	P	**P**	**12 09 01.7**	**+1.4**
YBH				IAmb	IAmb	12 10 26.3	
	comp=Z,12nm,1.8s						
BEKR	**Beckworth**	**78.92**	**42**	P	**P**	**12 09 02.9**	**+0.4**
P18K	**Big Mountain,**	**79.30**	**12**	P	**P**	**12 09 03.7**	**-0.1**
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**12 09 05.1**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=223,slow=8.5,SNR=16						
	comp=Z,1.5nm,0.7s						
J04A	**Umpqua Nationa**	**79.80**	**38**	P	**P**	**12 09 08.0**	**+1.0**
J04A				IAmb	IAmb	12 09 08.6	
	comp=Z,10nm,0.6s						
M16K	**Timber Creek**	**80.17**	**10**	P	**P**	**12 09 09.1**	**+0.8**
WVOR	**Wild Horse Val**	**81.44**	**40**	IAmb	IAmb	12 09 16.9	
	comp=Z,4.2nm,1.0s						
LCMT	**Little Creek M**	**82.17**	**47**	IAmb	IAmb	12 11 28.5	
	comp=Z,11nm,1.9s						
X16A	**Lo Mia Camp, P**	**82.23**	**50**	IAmb	IAmb	12 09 22.6	
	comp=Z,14nm,1.9s						
U15A	**North Rim**	**82.56**	**48**	IAmb	IAmb	12 09 23.3	
	comp=Z,3.5nm,0.8s						
IMAR	**Indian Mountai**	**85.66**	**10**	P	**P**	**12 09 37.0**	**+1.5**
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**12 09 35.7**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=220,slow=4.9,SNR=7.3						
	comp=Z,0.8nm,0.4s						
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**12 09 36.8**	**+0.3**
TX31	**Lajitas Ar. Sí**	**86.05**	**58**	P	**P**	**12 09 38.3**	**-0.1**
TXAR	**Lajitas Array**	**86.05**	**58**	P	**P**	**12 09 39.5**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=219,slow=6.3,SNR=30						
	comp=Z,2.2nm,0.8s						
TXAR	**Lajitas Array**	**86.05**	**58**	P	**P**	**12 09 38.4**	**0.0**
M30M	**Minto, Yukon**	**86.62**	**18**	P	**P**	**12 09 40.4**	**+0.2**
PD31	**Pinedale Array**	**87.39**	**43**	IAmb	IAmb	12 12 53.3	
	comp=Z,13nm,2.0s						
PDAR	**Pinedale Array**	**87.39**	**43**	P	**P**	**12 09 44.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=223,slow=3.5,SNR=16						
	comp=Z,1.1nm,0.6s						
PDAR	**Pinedale Array**	**87.39**	**43**	P	**P**	**12 09 44.5**	**0.0**
BMAR	**Burnt Mountain**	**88.64**	**12**	P	**P**	**12 09 50.3**	**+0.8**
CLL	**Collm**	**145.40**	**347**	PKPbc	**PKPbc**	**12 16 32.0**	**+0.5**
SHEL	**Horse Pasture**	**145.64**	**168**	PKPdf	**PKPdf**	**12 16 39.0**	**-0.7**
GERES	**GERESS Array B**	**147.55**	**345**	PKPbc	**PKPbc**	**12 16 37.7**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=39,slow=5.1,SNR=5.9						
EDA	**Edea**	**163.63**	**212**	PKPdf	**PKPdf**	**12 16 53.7**	**-2.0**

*IDC **16** 12:04:11.5±1.0, 52°.15N×174°.23W, h0km, mb3.9/18, mbtmp3.9/21, ML3.5/3, Error ellipse: s-maj=27.9km s-min=14.9km az=174.0*
*AEIC **16** 12:04:12.4±1.6, 51°.40N±0°.04×174°.03W±0°.07, h26km±5km, Error ellipse: s-maj=7.4km s-min=5.6km az=125.0*
*NEIC **16** 12:04:13.7±1.7, 51°.47N±0°.06×174°.05W±0°.08, h35km±2km, mb4.0/41, ML3.8/12, ML3.4(AEIC), Error ellipse: s-maj=10.9km s-min=6.7km az=144.0*
ISC 16 12:04:14.0±1.5, 51°.53N±0°.06×174°.08W±0°.03, h34km±9km, n108, σ1§15/115, mb4.0/25, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.68**	**354**		**Pn**	**12 04 27.3**	**+0.1**
ATKA					**Sn**	**12 04 36.5**	**-0.2**
KOFP	**Korovin Flat P**	**0.75**	**359**		**Pn**	**12 04 28.6**	**+0.3**
KOFP					**Sn**	**12 04 39.5**	**+1.0**
KOKL	**Mount Kliuchef**	**0.80**	**355**		**Pn**	**12 04 29.3**	**+0.3**
KOKL					**Sn**	**12 04 40.9**	**+1.2**
KOSE	**Korovin Southe**	**0.82**	**1**		**Pn**	**12 04 29.9**	**+0.7**
KOSE					**Sn**	**12 04 41.8**	**+1.6**
KOKV	**Korovin Volcan**	**0.84**	**357**		**Pn**	**12 04 30.6**	**+1.1**
KOWE	**Korovin West**	**0.85**	**353**		**Pn**	**12 04 30.1**	**+0.5**
KOWE					**Sn**	**12 04 43.2**	**+2.4**
KONE	**Korovin Northe**	**0.87**	**359**		**Pb**	**12 04 31.4**	**+0.7**
KONW	**Korovin Northw**	**0.88**	**355**		**Pb**	**12 04 30.8**	**-0.1**
GSIG	**Igitkin Island**	**1.23**	**293**		**Pn**	**12 04 34.3**	**-0.6**
GSIG					**Sb**	**12 04 51.7**	**-0.7**
GSMY	**Great Sitkin M**	**1.33**	**294**		**Sb**	**12 04 54.2**	**-0.9**
GSTR	**Great Sitkin T**	**1.35**	**296**		**Pn**	**12 04 36.1**	**-0.4**
GSTR				Sn	**Sn**	**12 04 52.1**	**-1.2**
GSCK	**Great Sitkin C**	**1.38**	**291**		**Pn**	**12 04 36.4**	**-0.5**
GSTD	**Great Sitkin T**	**1.39**	**293**		**Sb**	**12 04 57.5**	**+0.7**
ETKA	**Kagalaska Isla**	**1.48**	**284**		**Sb**	**12 04 58.1**	**-1.4**
ADAG	**Mount Adagdak**	**1.63**	**287**		**Pn**	**12 04 41.0**	**+0.6**
ADK	**Adak**	**1.66**	**283**		**Pn**	**12 04 40.4**	**-0.3**
ADK					**Sn**	**12 05 01.3**	**+0.5**
ADK	**Adak**	**1.66**	**283**	IAML		12 05 04.7	
	927nm,0.3s						
ADK				IAML		12 05 07.0	
	843nm,0.6s						
KIRH	**Kanaga Island**	**1.91**	**282**		**Pn**	**12 04 44.8**	**+0.6**
KIRH					**Sn**	**12 05 08.5**	**+1.4**
KIWB	**Kanaga Island**	**1.94**	**281**		**Pn**	**12 04 44.3**	**-0.3**
KIWB				IAML		12 05 17.1	
	comp=N,800nm,0.5s						
KIWB	**Kanaga Island**	**1.94**	**281**		**Sn**	**12 05 09.5**	**+1.8**
KIKV	**Kanaga Island**	**1.95**	**282**		**Pn**	**12 04 45.5**	**+0.8**
KIKV					**Sn**	**12 05 09.7**	**+1.6**
KIMD	**Kanaga Island**	**1.98**	**278**		**Pn**	**12 04 45.2**	**+0.1**
TAPA	**Tanaga Point A**	**2.34**	**279**		**Pn**	**12 04 50.8**	**+0.7**
TAPA					**Sn**	**12 05 20.0**	**+2.3**
TAFL	**Tanaga Flats**	**2.39**	**277**		**Pn**	**12 04 51.4**	**+0.6**
TAFL					**Sn**	**12 05 21.4**	**+2.6**
TAFP	**Tanaga Falls P**	**2.46**	**280**		**Pn**	**12 04 52.4**	**+0.7**
TAFP					**Sn**	**12 05 23.2**	**+2.7**
TASE	**Tanaga Southea**	**2.48**	**279**		**Pn**	**12 04 53.0**	**+1.0**
GAKI	**Gareloi-Kavalg**	**2.95**	**272**		**Pn**	**

comp=E,3.0nm,0.7s
KDAK **Kodiak Island** 13.89 55 Pn Pn 12 07 26.5 -1.8
K17K **Iditarod** 14.06 31 Pn Pn 12 07 32.1 +1.6
N19K **Bonanza Creek** 14.28 42 Pn Pn 12 07 33.7 0.0
SLKM **Skilak Lake** 16.00 47 Pn Pn 12 07 54.9 -1.4
SEW **Seward** 16.20 48 Pn Pn 12 07 58.2 -0.6
PPLA **Purkeypile** 16.33 37 Pn Pn 12 08 00.4 -0.2
PPLA IAmb IAmb 12 08 03.3
comp=Z,24nm,1.5s
GHO **Glory Hole Cre** 17.10 43 Pn 12 08 10.2 0.0
GHO IAmb IAmb 12 08 50.8
comp=Z,14nm,1.2s
KNK **Knik Glacier** 17.15 45 Pn 12 08 09.9 -0.9
KNK IAmb IAmb 12 08 29.2
comp=Z,20nm,1.4s
PETK **Petropavlovsk-** 17.28 286 P Pn 12 08 10.8 -1.7
comp=Z,0.2nm,0.3s,baz=90,slow=15,SNR=8.6
comp=Z,1.0nm,0.6s
SML **Sawmill** 17.37 44 Pn Pn 12 08 12.1 -1.4
SML IAmb IAmb 12 08 29.7
comp=Z,22nm,1.4s
F19K **Shaleruckik Mo** 17.38 22 Pn Pn 12 08 12.8 -0.7
SCM **Sheep Creek Mo** 17.82 44 Pn Pn 12 08 18.1 -1.0
SCM IAmb IAmb 12 08 43.8
comp=Z,16nm,1.2s
MCK **McKinley** 18.02 38 Pn 12 08 21.1 -0.4
I23K **Minto, Yukon-K** 18.65 34 P Pn 12 08 28.6 -0.5
I23K IAmb IAmb 12 08 43.3
comp=Z,8.9nm,0.8s
D19K **Kuna River** 18.68 18 Pn 12 08 29.6 0.0
D19K IAmb IAmb 12 09 08.4
comp=Z,15nm,1.5s
CCB **Clear Creek Bu** 18.92 36 P 12 08 29.9 -1.7
C19K **Lookout Ridge** 18.94 16 P P 12 08 31.9 +0.1
HDA **Harding Lake** 19.12 37 P P 12 08 33.2 -0.6
D20K **Etivluk River** 19.17 19 Pn Pn 12 08 35.5 +0.1
K24K **Donnelly Dome** 19.29 40 P P 12 08 35.0 -0.7
K24K IAmb IAmb 12 08 52.2
comp=Z,7.9nm,0.6s
IL31 **19.33 36** P 12 08 35.1 -0.8
IL31 IAmb IAmb 12 08 43.2
comp=Z,3.9nm,0.6s
ILAR **Eielson Array** 19.33 36 P P 12 08 33.6 -2.5
comp=Z,0.7nm,0.3s,baz=227,slow=9.0,SNR=39
comp=Z,0.5nm,0.3s
ILAR **Eielson Array** 19.33 36 P P 12 08 35.3 -0.8
H24K **Noodor Dome** 19.55 33 P 12 08 38.3 -0.3
H24K IAmb IAmb 12 09 00.0
comp=Z,12nm,1.4s
J25K **Salcha River,** 19.82 38 P P 12 08 39.7 -1.8
L26K **Log Cabin Wild** 19.98 43 P P 12 08 42.7 -0.5
SCRK **Sand Creek** 20.08 40 P P 12 08 43.1 -1.3
SCRK IAmb IAmb 12 08 50.8
comp=Z,11nm,1.2s
D22K **Ayikyak River** 20.19 23 P P 12 08 46.0 +0.6
D22K IAmb IAmb 12 08 53.1
comp=Z,4.4nm,0.7s
B21K **Ikpikpuk River** 20.33 20 P 12 08 47.1 +0.3
B21K IAmb IAmb 12 08 51.0
comp=Z,6.0nm,0.9s
J26L **Joseph Creek** 20.47 39 P 12 08 47.5 -1.1
BCAR **Beaver Creek A** 20.66 44 P P 12 08 51.1 +0.4
E24K **Your Creek** 20.72 27 P P 12 08 51.9 +0.6
D23K **Nanushuk River** 20.74 24 P P 12 08 51.8 +0.4
D23K IAmb IAmb 12 09 01.6
comp=Z,5.3nm,0.8s
I26K **Coal Creek Min** 20.98 37 P P 12 08 52.6 -1.4
C24K **Franklin Bluff** 21.77 24 P P 12 09 02.2 -0.2
C24K IAmb IAmb 12 09 05.9
comp=Z,9.4nm,1.4s
I28M **Miner Creek** 22.26 38 P 12 09 07.1 -0.8
I28M IAmb IAmb 12 09 09.3
comp=Z,3.3nm,0.6s
C27K **Jago River** 23.05 27 P P 12 09 15.3 -0.7
H29M **Whitestone** 23.15 37 P P 12 09 15.4 -1.6
H29M IAmb IAmb 12 09 52.4
comp=Z,4.4nm,0.9s
I30M **Mount Dempster** 23.59 40 P P 12 09 19.3 -2.2
I30M IAmb IAmb 12 09 42.1
comp=Z,3.7nm,0.9s
E28M **Babbage River** 23.77 31 P P 12 09 22.7 -0.3
E29M **Blow River** 24.20 32 P 12 09 27.0 0.0
E29M IAmb IAmb 12 09 27.5
comp=Z,3.5nm,0.7s
H31M **Peel River** 24.57 39 P P 12 09 29.2 -1.2
H31M IAmb IAmb 12 09 57.3
comp=Z,3.1nm,0.9s
YKAW1 **Yellowknife Wh** 33.03 47 P P 12 10 45.3 -0.4
YKAW1 IAmb IAmb 12 10 50.6
comp=Z,5.6nm,1.1s
H11N2 **WAKE ISLAND Hy** 35.08 212 T T 12 48 52.3
baz=21,slow=76,SNR=3.1
H11N3 **WAKE ISLAND Hy** 35.08 212 T T 12 48 59.5
baz=21,slow=76,SNR=2.6
H11N1 **WAKE ISLAND Hy** 35.09 212 T T 12 49 03.8
baz=21,slow=76,SNR=3.7
USRK **Ussuriysk Ar.** 36.19 280 P P 12 11 12.8 -0.4
comp=Z,4.5nm,0.5s,baz=57,slow=10.0,SNR=12
comp=Z,4.5nm,0.5s
H11S1 **WAKE ISLAND Hy** 36.28 212 T T 12 50 25.6
baz=20,slow=76,SNR=14
H11S2 **WAKE ISLAND Hy** 36.29 212 T T 12 50 25.7
baz=20,slow=76,SNR=16
H11S3 **WAKE ISLAND Hy** 36.30 212 T T 12 50 25.6
baz=20,slow=76,SNR=6.3
NVAR **Mina Array Bea** 40.60 86 P P 12 11 54.4 +3.8
comp=Z,0.1nm,0.4s,baz=303,slow=4.5,SNR=2.5
comp=Z,0.1nm,0.4s
FFC **Flin Flon** 41.63 56 P P 12 11 58.4 -0.2
KSRS **Korea Array** 42.58 274 P P 12 12 07.9 +1.4
comp=Z,0.7nm,0.7s,baz=48,slow=6.6,SNR=3.0
comp=Z,0.7nm,0.7s
PDAR **Pinedale Array** 43.43 75 P P 12 12 14.4 +0.7
comp=Z,0.1nm,0.4s,baz=320,slow=4.4,SNR=4.7
comp=Z,0.1nm,0.4s
SONM **Songino Array** 49.19 299 P P 12 12 59.0 +0.3
comp=Z,1.1nm,0.4s,baz=59,slow=5.9,SNR=3.2
comp=Z,1.1nm,0.4s
TXAR **Lajitas Array** 55.71 85 P P 12 13 49.4 +2.2
comp=Z,0.1nm,0.5s,baz=319,slow=6.8,SNR=3.8
comp=Z,0.1nm,0.5s
ARCES **ARCESS Array B** 58.40 352 P P 12 14 04.0 -1.5
comp=Z,1.7nm,0.8s,baz=15,slow=7.6,SNR=7.1
comp=Z,1.7nm,0.8s
KURBB **Kurchatov Arr** 61.12 316 P P 12 14 23.8 -0.7
comp=Z,1.5nm,0.4s,baz=43,slow=7.0,SNR=12
comp=Z,1.5nm,0.4s
MKAR **Makanchi Array** 62.21 311 P P 12 14 30.9 -1.0
comp=Z,0.8nm,0.4s,baz=43,slow=6.4,SNR=17
comp=Z,0.8nm,0.4s
BVAR **Borovoye Array** 62.63 322 P P 12 14 34.5 -0.2
comp=Z,2.2nm,0.4s,baz=52,slow=7.7,SNR=4.2
comp=Z,2.2nm,0.4s
FINES **FINESS Array B** 66.23 350 P P 12 14 56.7 -1.2
comp=Z,1.9nm,0.7s,baz=0.0,slow=7.6,SNR=7.7
comp=Z,1.9nm,0.7s
FINES **FINESS Array B** 66.23 350 P P 12 14 57.0 -1.0
NOA **NORSAR Array B** 67.70 357 P P 12 15 04.8 -2.6
comp=Z,0.4nm,0.8s,baz=3.3,slow=7.4,SNR=1.5
comp=Z,0.4nm,0.8s
HFS **Hagfors** 68.52 356 P P 12 15 11.1 -1.3
comp=Z,4.2nm,1.0s,baz=11,slow=1.5,SNR=10
comp=Z,4.2nm,1.0s
AKTO **Aktyubinsk** 69.21 327 P P 12 15 16.6 -0.3
comp=Z,2.3nm,0.5s,baz=59,slow=7.3,SNR=11
comp=Z,2.3nm,0.5s
AB31 **Akbulak array** 69.55 326 P P 12 15 19.0 0.0
AB31 IAmb IAmb 12 15 29.6
comp=Z,2.2nm,1.3s
ABKAR **Akbulak array** 69.55 326 P P 12 15 18.9 -0.1
KK31 **Karatay Array** 70.41 315 P P 12 15 24.3 -0.2
KKAR **Karatay Array** 70.41 315 P P 12 15 24.3 -0.1
CMAR **Chiang Mai Arr** 73.92 279 P P 12 15 46.1 +0.3
comp=Z,0.6nm,0.3s,baz=24,slow=6.3,SNR=6.2
comp=Z,0.6nm,0.3s
AKASG **Malin Array Be** 76.24 345 P P 12 15 57.5 -1.2
comp=Z,1.1nm,0.4s,baz=18,slow=5.9,SNR=4.5
comp=Z,1.1nm,0.4s
GERES **GERESS Array B** 79.78 355 P P 12 16 18.2 -0.3
comp=Z,0.6nm,0.7s,baz=356,slow=7.1,SNR=3.9
comp=Z,0.6nm,0.7s
ASAR **Alice Springs** 87.66 226 P P 12 17 05.0 +6.1
comp=Z,0.5nm,0.9s,baz=27,slow=4.3,SNR=4.4
comp=Z,0.5nm,0.9s

*REY **16** 12:14:14.9, 63.66°N × 23.5°E, 53 km, 12 km*
*IDC **16** 12:14:16.6 ± 1.0, 63.81°N × 23.29°E, 0 km, mb3.6/8, mbtmp3.7/10, ML3.7/2, Error ellipse: s-maj=20.8km s-min=14.1km az=142.0*

ISC 16 12:14:18.5 ± 1.3, 63.78°N ± 0.06° × 23.15°E ± 0.05°, h15 km ± 6 km, n36, σ1 80/54, mb3.5/9, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
IRNE	**Reykjanes**	0.20	80	P	**Pg**	12 14 22.4	-0.7
IRNE				S	**Sg**	12 14 28.2	+2.0
INYL	**Nylenda**	0.26	43	P	**Pg**	12 14 23.5	-0.6
INYL				S	**Sg**	12 14 30.0	+2.0
IGRV	**Grindav??k**	0.32	76	P	**Pg**	12 14 24.1	-1.0
IVOG	**Vogar**	0.38	60	P	**Pg**	12 14 25.3	-0.9
IVOG				S	**Sg**	12 14 33.4	+1.9
IKRI	**Krysuvik**	0.48	78	P	**Pg**	12 14 26.7	-1.4
IKRI				S	**Sg**	12 14 36.5	+1.8
IKAS	**Kald??rsel**	0.62	67	P	**Pb**	12 14 29.0	-2.0
IKAS				S	**Sb**	12 14 40.2	+0.7
IVOS	**Vogsosar**	0.64	83	P	**Pb**	12 14 29.1	-2.3
IVOS				S	**Sb**	12 14 40.3	+0.1
ISAN	**Sandskeio**	0.75	68	P	**Pb**	12 14 30.9	-2.3
ISAN				S	**Sb**	12 14 43.9	+0.6
IMOR	**Morastadir**	0.81	49	P	**Pb**	12 14 31.8	-2.4
IMOR				S	**Sb**	12 14 45.4	+0.6
IBJA	**Bjarnastaoir**	0.83	78	P	**Pb**	12 14 32.4	-2.3
IBJA				S	**Sb**	12 14 45.9	+0.3
IEDA	**Engidalur**	0.83	68	P	**Pb**	12 14 32.1	-2.5
IEDA				S	**Sb**	12 14 46.4	+0.7
IHEI	**Heioarbar**	0.94	63	P	**Pb**	12 14 34.5	-2.0
IHEI				S	**Sb**	12 14 49.6	+0.8
IKRO	**Krokur**	0.95	70	P	**Pb**	12 14 34.5	-2.1
IKRO				S	**Sb**	12 14 49.8	+0.8
ISOL	**Solvholt**	0.99	81	P	**Pb**	12 14 34.6	-2.7
ISOL				S	**Sb**	12 14 49.9	-0.1
IASM	**Asmuli**	1.12	86	P	**Pn**	12 14 36.7	-3.0
IASM				S	**Sb**	12 14 53.7	-0.3
ISAU	**Saurbar**	1.23	79	P	**Pn**	12 14 38.6	-2.5
ISAU				S	**Sn**	12 14 57.1	-0.3
BORG	**Borgarnes**	1.25	39	Pg	**Pn**	12 14 39.2	-2.2
	122nm,0.3s,baz=231,slow=4.9,SNR=23						
BORG				Lg	Lg	12 14 58.5	
	448nm,0.3s,baz=22,slow=11,SNR=22						
IASB	**sbjarnarstai**	1.25	39	P	**Pn**	12 14 39.2	-2.2
IASB				S	**Sn**	12 14 58.3	+0.3
IGYG	**Gygjarholskot**	1.38	68	P	**Pn**	12 14 41.8	-1.4
IHAU	**Haukadalur**	1.42	81	P	**Pn**	12 14 41.6	-2.1
IHAU				S	**Sn**	12 15 02.0	-0.2
IMID	**Miomork**	1.46	94	P	**Pn**	12 14 41.8	-2.5
IMID				S	**Sn**	12 15 03.1	+0.1
IMJO	**Mjoaskard**	1.55	83	P	**Pn**	12 14 43.9	-1.7
IHES	**Hestalda**	1.61	79	P	**Pn**	12 14 44.9	-1.4
IHES				S	**Sn**	12 15 07.8	+0.9
EKA	**Eskdalemuir Ar**	13.15	121	Pn	**Pn**	12 17 25.1	+0.7
	baz=323,slow=13						
	3.1nm,1.0s						
SPITS	**Spitsbergen Ar**	18.68	24	P	**P**	12 18 35.9	+0.3
	baz=221,slow=15						
	13nm,1.0s						
FINES	**FINESS Array B**	22.31	73	P	**P**	12 19 15.7	+0.6
	6.4nm,1.1s,baz=326,slow=9.2,SNR=6.0						
	6.4nm,1.1s						
CLL	**Collm**	22.69	106	*i* P	**P**	12 19 25.4	+6.2
	comp=Z,11nm,1.3s						
CLL				AMS	AMS	12 30 00.0	
	comp=Z,300nm,23.8s						
KHC	**Kasperske Hory**	24.58	109	*e*P	**P**	12 19 38.0	+0.4
H07N1	**FLORES T-PHASE**	24.59	195	T	T	12 45 20.8	
	SNR=11						
GERES	**GERESS Array B**	24.85	109	P	**P**	12 19 41.4	+1.2
	comp=Z,0.5nm,0.5s,baz=327,slow=7.1,SNR=4.5						
	comp=Z,0.5nm,0.5s						
ESDC	**Soseca Array**	26.69	146	P	**P**	12 19 56.7	0.0
	comp=Z,1.0nm,0.9s,baz=337,slow=8.0,SNR=2.9						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	45.27	330	P	**P**	12 22 33.3	-1.5
	comp=Z,0.3nm,0.7s,baz=31,slow=7.3,SNR=5.3						
	comp=Z,0.3nm,0.7s						
KURBB	**Kurchatov Arra**	50.70	54	P	**P**	12 23 18.0	+1.1
	comp=Z,0.4nm,0.2s,baz=319,slow=7.4,SNR=5.3						
	comp=Z,0.4nm,0.2s						
PDAR	**Pinedale Array**	51.20	289	P	**P**	12 23 20.5	-0.6
	comp=Z,0.3nm,0.5s,baz=46,slow=7.6,SNR=2.4						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	55.27	54	P	**P**	12 23 51.8	+1.1
	comp=Z,0.8nm,0.8s,baz=329,slow=5.8,SNR=5.8						
	comp=Z,0.8nm,0.8s						
TXAR	**Lajitas Array**	59.96	276	P	**P**	12 24 25.6	+1.5
	comp=Z,0.3nm,0.8s,baz=25,slow=5.3,SNR=3.7						
	comp=Z,0.3nm,0.8s						

*REY **16** 12:17:47.4, 63.67°N × 23.5°E, 53 km, 12 km*
*IDC **16** 12:17:48.1 ± 0.9, 63.78°N × 23.51°E, 0 km, mb3.7/10, mbtmp3.8/12, ML3.5/2, MS4.0/33, Error ellipse: s-maj=19.2km s-min=13.7km az=153.0*
*NEIC **16** 12:17:50.0 ± 1.2, 63.80°N ± 0.08° × 23.3°W ± 0.1°, h10 km ± 1 km, mb4.3/25, Error ellipse: s-maj=16.6km s-min=3.0km az=212.0*

ISC 16 12:17:50.8 ± 1.2, 63.77°N ± 0.05° × 23.14°W ± 0.05°, h17 km ± 6 km, n102, σ1 36/95, mb4.1/20, MS4.0/31, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
IRNE	**Reykjanes**	0.20	75	P	**Pb**	12 17 54.8	-1.2
IRNE				S	**Sg**	12 18 00.6	+1.8
INYL	**Nylenda**	0.27	40	P	**Pb**	12 17 55.9	-1.4
INYL				S	**Sg**	12 18 02.4	+1.6
IGRV	**Grindav??k**	0.32	73	P	**Pg**	12 17 56.6	-0.9
IGRV				S	**Sg**	12 18 04.0	+1.9
IVOG	**Vogar**	0.39	58	P	**Pg**	12 17 57.7	-1.1
IVOG				S	**Sb**	12 18 05.7	+0.8
IKRI	**Krysuvik**	0.48	76	P	**Pb**	12 17 59.0	-1.8
IKRI				S	**Sb**	12 18 08.8	+1.1
IKAS	**Kald??rsel**	0.62	65	P	**Pb**	12 18 01.3	-1.9
IKAS				S	**Sg**	12 18 12.7	+1.3
IVOS	**Vogsosar**	0.64	82	P	**Pb**	12 18 01.6	-2.0
IVOS				S	**Sg**	12 18 12.6	+0.6
ISAN	**Sandskeio**	0.75	67	P	**Pb**	12 18 03.7	-1.8
ISAN				S	**Sn**	12 18 16.5	-1.1
IMOR	**Morastadir**	0.81	48	P	**Pb**	12 18 04.3	-2.2
IMOR				S	**Sg**	12 18 17.6	+0.2
IBJA	**Bjarnastaoir**	0.83	77	P	**Pb**	12 18 04.8	-2.0
IBJA				S	**Sg**	12 18 18.6	+0.7
IEDA	**Engidalur**	0.83	67	P	**Pb**	12 18 04.7	-2.2
IEDA				S	**Sn**	12 18 18.9	-0.8
IHEI	**Heioarbar**	0.94	62	P	**Pb**	12 18 06.7	-2.1
IHEI				S	**Sg**	12 18 21.5	-0.1
IKRO	**Krokur**	0.95	69	P	**Pb**	12 18 07.0	-1.8
IKRO				S	**Sn**	12 18 22.6	0.0
ISOL	**Solvholt**	0.99	80	P	**Pb**	12 18 07.0	-2.5
ISOL				S	**Sb**	12 18 21.5	-0.6
IASM	**Asmuli**	1.12	85	P	**Pn**	12 18 09.0	-2.7
IASM				S	**Sb**	12 18 25.6	-0.4
ISAU	**Saurbar**	1.23	78	P	**Pn**	12 18 10.7	-2.5
ISAU				S	**Sn**	12 18 29.2	-0.1
BORG	**Borgarnes**	1.26	38	Pg	**Pn**	12 18 11.7	-2.0
	161nm,0.3s,baz=230,slow=4.9,SNR=26						
BORG				Lg	Lg	12 18 31.2	
	1μm,0.3s,baz=27,slow=12,SNR=34						
BORG	**Borgarnes**	1.26	38		**Pn**	12 18 12.2	-1.4
IASB	**sbjarnarstai**	1.26	38	P	**Pn**	12 18 11.6	-2.1
IASB				S	**Sn**	12 18 30.1	-0.1
IVES	**Vestmannaeyjar**	1.31	103	S	**Sn**	12 18 31.1	-0.4
IVES				P	**Pn**	12 18 12.4	-2.0
IGYG	**Gygjarholskot**	1.39	67	P	**Pn**	12 18 14.1	-1.3
IHAU	**Haukadalur**	1.42	80	P	**Pn**	12 18 14.0	-1.8
IHAU				S	**Sb**	12 18 34.5	0.0
IMJO	**Mjoaskard**	1.54	82	P	**Pn**	12 18 15.7	-1.9
IHES	**Hestalda**	1.61	78	P	**Pn**	12 18 17.3	-1.1
IHES				S	**Sb**	12 18 39.7	-0.3
SCO	**Scoresbysund**	6.76	3	Pn	**Pn**	12 19 29.2	0.0
SFJD	**Kangerlussuaq**	11.85	298	LR	LR	12 24 34.7	
	comp=Z,929nm,19.9s,baz=100,slow=35						
EKA	**Eskdalemuir Ar**	13.14	121	Pn	**Pn**	12 20 57.0	+0.7
	baz=300,slow=13						
	2.3nm,0.7s						
NOA	**NORSAR Array B**	16.03	84	LR	LR	12 27 57.5	
	comp=Z,109nm,20.3s,baz=265,slow=38						
ARCES	**ARCESS Array B**	19.63	52	P	**Pn**	12 22 19.3	-0.2
	baz=292,slow=6.4,SNR=4.6						
	3.0nm,0.9s						

ARCES **ARCESS Array B** 19.63 52 P Pn 12 22 19.1 -0.4
ARCES IAmb IAmb 12 22 21.3
comp=Z,27nm,1.5s
FIA1 **FINESS Array S** 22.31 73 P P 12 22 48.3 +1.2
FINES **FINESS Array B** 22.31 73 P P 12 22 50.0 +3.0
comp=Z,5.3nm,1.0s,baz=288,slow=6.9,SNR=6.5
comp=Z,5.3nm,1.0s
FINES **FINESS Array B** 22.31 73 P P 12 22 48.2 +1.1
CLL **Collm** 22.68 106 P 12 22 51.9 +0.8
CLL IAmb IAmb 12 23 03.4
comp=Z,20nm,1.5s
CLL **Collm** 22.68 106 *i* P P 12 22 54.8 +3.7
comp=Z,25nm,1.4s
KHC **Kasperske Hory** 24.57 109 *e*P P 12 23 11.6 +2.1
GERES **GERESS Array B** 24.84 109 P P 12 23 12.6 +0.5
comp=Z,1.5nm,1.0s,baz=340,slow=7.4,SNR=5.7
GERES LR LR 12 34 21.5
comp=Z,346nm,18.2s,baz=300,slow=40
comp=Z,1.5nm,1.0s
DAVOX **Davos/Dischmat** 24.93 117 LR LR 12 32 20.3
comp=Z,236nm,21.8s,baz=262,slow=35
SUW **Suwalki** 25.27 91 P P 12 23 16.2 +0.5
VRAC **Vranov** 25.71 105 LR LR 12 32 42.8
comp=Z,190nm,19.9s,baz=292,slow=35
RES **Resolute Bay** 25.77 325 LR LR 12 33 03.0
comp=Z,422nm,21.2s,baz=58,slow=36
MORC **Moravsky Berou** 25.77 104 P P 12 23 20.5 +0.1
MORC IAmb IAmb 12 23 31.2
comp=Z,7.7nm,1.2s
ESDC **Sonseca Array** 26.67 146 P P 12 23 29.7 +1.0
comp=Z,2.8nm,1.0s,baz=336,slow=9.3,SNR=5.9
ESDC LR LR 12 33 16.4
comp=Z,308nm,18.2s,baz=328,slow=35
comp=Z,2.8nm,1.0s
ESDC **Sonseca Array** 26.67 146 P P 12 23 30.0 +1.3
ESDC IAmb IAmb 12 23 33.7
comp=Z,7.4nm,1.4s
MESJ **Messejana** 27.47 154 P P 12 23 36.0 +0.2
CART **Cartagena** 29.41 142 P P 12 23 53.6 +0.6
AKASG **Malin Array Be** 30.24 91 LR LR 12 36 26.4
comp=Z,182nm,19.1s,baz=299,slow=37
MLR **Muntele Rosu** 32.70 100 LR LR 12 38 22.9
comp=Z,250nm,19.1s,baz=294,slow=38
MD01 **Midelt array s** 32.99 151 P P 12 24 25.1 +0.3
MDT **Midelt** 33.07 151 LR LR 12 37 09.8
comp=Z,178nm,19.8s,baz=36,slow=35
KIRV **Kirov** 33.60 65 LR LR 12 37 27.7
comp=Z,230nm,21.4s,baz=309,slow=35
RDO **Rodhopi** 36.02 105 P P 12 24 52.1 +1.4
RDO IAmb IAmb 12 24 54.6
comp=Z,9.8nm,1.4s
YKA **Yellowknife Ar** 37.99 311 LR LR 12 40 16.8
comp=Z,502nm,19.2s,baz=84,slow=36
ARTI **Arti** 38.65 62 LR LR 12 40 23.9
comp=Z,198nm,19.8s,baz=306,slow=35
ULM **Lac du Bonnet** 39.51 286 LR LR 12 40 33.1
comp=Z,185nm,19.2s,baz=184,slow=35
E28M **Babbage River** 40.46 330 P P 12 25 27.6 -0.3
G31M **Satah River** 40.53 326 P P 12 25 27.7 -0.6
G31M IAmb IAmb 12 26 02.2
comp=Z,12nm,1.4s
BR131 **Keskin Array S** 40.71 98 P P 12 25 30.6 +0.3
BRTR **Keskin Array B** 40.71 98 P P 12 25 30.3 -0.1
comp=Z,0.7nm,0.8s,baz=344,slow=12,SNR=3.6
comp=Z,0.7nm,0.8s
BRTR **Keskin Array B** 40.71 98 P P 12 25 30.8 +0.4
E27K **Coleen River** 41.26 330 P P 12 25 34.4 0.0
D25K **Kavik River** 41.33 333 P P 12 25 35.1 0.0
H31M **Peel River** 41.41 324 P P 12 25 35.8 0.0
H31M IAmb IAmb 12 25 49.0
comp=Z,17nm,1.5s
AKTO **Aktyubinsk** 42.91 68 LR LR 12 43 35.3
comp=Z,315nm,18.5s,baz=308,slow=36
I27K **Kandik River** 43.38 328 P P 12 25 51.8 +0.1
D20K **Etivluk River** 43.76 337 P P 12 25 54.8 +0.1
D20K IAmb IAmb 12 26 10.8
comp=Z,12nm,1.4s
L29M **L29M** 44.56 324 P P 12 26 01.9 +0.7
L29M IAmb IAmb 12 26 04.7
comp=Z,3.6nm,0.9s
J26L **Joseph Creek** 44.75 328 P P 12 26 02.5 -0.3
J26L IAmb IAmb 12 26 12.5
comp=Z,4.7nm,1.4s
ILAR **Eielson Array** 45.29 330 P P 12 26 06.7 -0.2
comp=Z,0.6nm,0.6s,baz=29,slow=7.4,SNR=10.0
ILAR LR LR 12 46 25.6
comp=Z,231nm,18.7s,baz=72,slow=38
comp=Z,0.6nm,0.6s
BCAR **Beaver Creek A** 45.53 326 P P 12 26 09.6 +0.6
BVAR **Borovoye Array** 45.78 57 P P 12 26 12.5 +1.5
comp=Z,0.9nm,0.6s,baz=332,slow=5.7,SNR=2.8
BVAR LR LR 12 45 05.3
comp=Z,136nm,19.1s,baz=311,slow=36
comp=Z,0.9nm,0.6s
DLBC **Dease Lake** 46.05 316 LR LR 12 45 22.0
comp=Z,251nm,18.2s,baz=76,slow=36
NEW **Newport** 49.77 299 LR LR 12 47 09.1
comp=Z,172nm,21.9s,baz=74,slow=36
ZALV **Zalesovo Beam** 50.09 47 LR LR 12 50 16.1
comp=Z,74nm,18.2s,baz=334,slow=39
BBB **Bella Bella** 50.57 310 LR LR 12 48 34.9
comp=Z,304nm,18.1s,baz=54,slow=37
KURK **Kurchatov** 50.66 54 P P 12 26 49.9 +1.3
KURBB **Kurchatov Arra** 50.70 54 P P 12 26 50.3 +1.3
comp=Z,0.5nm,0.3s,baz=322,slow=8.1,SNR=6.5
comp=Z,0.5nm,0.3s
PD31 **Pinedale Array** 51.21 289 P P 12 26 51.8 -1.4
PD31 IAmb IAmb 12 26 52.6
comp=Z,3.4nm,1.2s
PDAR **Pinedale Array** 51.21 289 P P 12 26 51.3 -1.9
comp=Z,1.2nm,0.9s,baz=67,slow=5.7,SNR=7.6
PDAR LR LR 12 48 22.1
comp=Z,146nm,21.6s,baz=51,slow=36
comp=Z,1.2nm,0.9s
PDAR **Pinedale Array** 51.21 289 P P 12 26 51.5 -1.6
T25A **Trinidad** 53.67 281 P P 12 27 10.5 -1.0
KK31 **Karatay Array** 53.90 65 P P 12 27 13.2 +0.3
KK31 IAmb IAmb 12 27 15.5
comp=Z,2.3nm,1.1s
KKAR **Karatay Array** 53.90 65 P P 12 27 13.4 +0.5
MKAR **Makanchi Array** 55.27 54 P P 12 27 24.5 +1.7
comp=Z,0.8nm,0.7s,baz=335,slow=5.4,SNR=6.1
comp=Z,0.8nm,0.7s
H05S1 **Guadeloupe/Mar** 55.77 226 T T 13 28 18.1
SNR=21
AAK **Ala-Archa** 55.87 62 LR LR 12 49 49.3
comp=Z,96nm,19.2s,baz=326,slow=34
JCT **Junction City** 57.27 273 P P 12 27 36.3 -0.9
CRNM **Carthage** 57.37 281 P P 12 27 36.9 -1.2
NVAR **Mina Array Bea** 58.46 293 LR LR 12 53 06.3
comp=Z,312nm,20.0s,baz=60,slow=36
DBIC **Dimbokro** 58.50 159 LR LR 12 51 50.0
comp=Z,116nm,18.8s,baz=355,slow=35
TX31 **Lajitas Ar. Si** 59.97 276 P P 12 27 54.3 -1.8
TX31 IAmb IAmb 12 28 37.6
comp=Z,4.7nm,1.4s
TXAR **Lajitas Array** 59.97 276 P P 12 27 54.2 -1.9
comp=Z,0.5nm,0.8s,baz=66,slow=4.3,SNR=5.4
TXAR LR LR 12 53 06.9
comp=Z,108nm,18.4s,baz=22,slow=35
comp=Z,0.5nm,0.8s
TXAR **Lajitas Array** 59.97 276 P P 12 27 54.5 -1.6
TXAR PcP PcP 12 28 41.5 -0.7
PFO **Pinyon Flats O** 61.83 289 LR LR 12 55 05.1
comp=Z,200nm,21.6s,baz=51,slow=36
PEA0B **Petropavlovsk-** 63.46 359 P P 12 28 19.9 +0.7
PETK **Petropavlovsk-** 63.46 359 P P 12 28 19.5 +0.4
LPIG **La Paz** 67.43 279 LR LR 12 56 47.7
comp=Z,105nm,21.3s,baz=18,slow=35
CMAR **Chiang Mai Arr** 86.68 54 LR LR 13 13 40.9
comp=Z,26nm,18.2s,baz=255,slow=39
TSUM **Tsumeb** 88.54 142 LR LR 13 10 55.9
comp=Z,56nm,18.9s,baz=326,slow=36
MATP **Matopo** 92.99 133 LR LR 13 15 15.9
comp=Z,106nm,18.7s,baz=304,slow=37
LBTB **Lobatse** 96.36 137 LR LR 13 14 42.3
comp=Z,124nm,21.5s,baz=327,slow=35
BOSA **Boshof** 99.63 138 LR LR 13 15 56.5
comp=Z,60nm,21.7s,baz=18,slow=35

*ISU **16** 12:18:51, 41.33°N × 70.02°E, 21 km*
*KRNET **16** 12:18:53.6 ± 0.1, 41.16°N × 70.59°E, 14 km, mb2.5*
*SOME **16** 12:18:55.1, 41.37°N × 70.55°E, 5 km*
*NNC **16** 12:18:55.9 ± 3.5, 41.32°N × 70.42°E, 0 km, mb3.2, mpv3.0, Error ellipse: s-maj=22.9km s-min=13.9km az=19.0*

ISC 16 12:18:54.7±1.1, 41°33N±0°.03×70°52E±0°.03, h12km±9km, n16, σ1°§13/29, 9C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHMG	**Chimgan**	**0.44**	**300**	S	**Sg**	**12 19 09.9**	**+0.4**
TRKS	**Terek-Say**	**0.51**	**67** ⇑	*i* P	**Pg**	**12 19 04.0**	**-0.6**
TRKS			⇑	*i* S	**Sg**	**12 19 11.4**	**0.0**
IUG	**Iuzhnay**	**0.90**	**336**	P	**Pg**	**12 19 12.5**	**+0.5**
	5.6nm,0.1s						
IUG				S	**Sb**	**12 19 25.1**	**+0.9**
	22nm,0.3s						
ARK	**Arkit**	**1.18**	**66** ⇓	*i* P	**Pb**	**12 19 16.5**	**-0.5**
ARK			⇓	*i* S	**Sn**	**12 19 33.4**	**+0.3**
CHMI	**Chimion**	**1.30**	**144**	P	**Pg**	**12 19 19.7**	**0.0**
CHMI				S	**Sg**	**12 19 39.9**	**+3.2**
FRG	**Fergana**	**1.35**	**135**	S	**Sg**	**12 19 37.8**	**-0.4**
KK31	**Karatay Array**	**1.77**	**360**	P	**Pg**	**12 19 28.5**	**-0.2**
	1.4nm,0.3s,baz=189,slow=17,SNR=21						
KK31			⇑	S	**Sg**	**12 19 52.0**	**+0.3**
	2.4nm,0.2s,baz=184,slow=31,SNR=8.5						
BRLS	**Borolday**	**1.77**	**343**	P	**Pn**	**12 19 25.4**	**+0.1**
	3.6nm,0.3s						
BRLS				S	**Sn**	**12 19 46.9**	**-0.8**
	18nm,0.2s						
BRLS	**Borolday**	**1.77**	**343**	*e*P	**Pn**	**12 19 25.4**	**+0.1**
	3.6nm,0.3s						
BRLS				*e*S	**Sn**	**12 19 46.9**	**-0.8**
	18nm,0.2s						
ARSB	**Arslanbob**	**1.85**	**89** ⇑	*e*P	**Pn**	**12 19 26.8**	**+0.4**
ARSB			⇑	*e*S	**Sb**	**12 19 51.5**	**-0.2**
OHH	**Osh**	**1.89**	**114** ⇓	*i* P	**Pn**	**12 19 26.6**	**-0.3**
OHH			⇓	*i* S	**Sn**	**12 19 50.7**	**0.0**
GAR	**Garm**	**2.33**	**184** ⇑	*i* P	**Pn**	**12 19 32.2**	**-0.8**
GAR			⇑	*i* S	**Sn**	**12 20 00.5**	**-1.1**
MRKS	**Merke**	**2.46**	**54**	Pg	**Pg**	**12 19 40.6**	**-1.3**
	4.8nm,0.3s						
MRKS				Lg	Lg	12 20 12.9	
	14nm,0.5s						
MRKS	**Merke**	**2.46**	**54**	*e*P	**Pg**	**12 19 40.6**	**-1.3**
	4.8nm,0.3s						
MRKS				*e*S	**Sg**	**12 20 12.9**	**-0.9**
	14nm,0.5s						
SFK	**Sufi-Kurgan**	**2.62**	**119** ⇓	*i* P	**Pn**	**12 19 37.0**	**0.0**
SFK			⇓	*i* S	**Sn**	**12 20 08.7**	**-0.2**
UCH	**Uchtor**	**3.12**	**72** ⇑	*i* P	**Pn**	**12 19 46.0**	**+2.0**
UCH			⇑	*i* S	**Sn**	**12 20 24.2**	**+2.8**

IDC 16 12:20:55.0±1.9, 2°.18S×136°.43E, h0km, mb3.7/2, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=102.1km s-min=28.3km az=100.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.77**	**186**	P	Pn	12 25 04.1	+0.1
	0.1nm,0.3s,baz=8.6,slow=12,SNR=8.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**21.50**	**186**	P	P	12 25 45.0	-0.6
	0.3nm,0.4s,baz=15,slow=11,SNR=15						
	0.3nm,0.4s						
PETK	**Petropavlovsk-**	**57.91**	**15**	P	P	12 30 49.1	+0.3
	3.3nm,0.8s,baz=197,slow=6.4,SNR=2.1						
	3.3nm,0.8s						

IDC ***16*** *12:43:12.6±2.2, 1°.68N×126°.38E, h0km, mb3.2/3, mbtmp3.3/3, MS2.6/1, Error ellipse: s-maj=185.2km s-min=27.1km az=66.0*

DJA ***16*** *12:43:13.2±0.5, 1°N±4°×12°6E±°, h105km±10km, M3.7/11, mbM4.7/1, mb4.1/3, MLv3.5/11, Mw(mB)4.0/1*

ISC 16 12:43:17.0±1.2, 1°.19N±0°.07×126°.20E±0°.07, h35km, n10, σ3§55/9, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.24**	**109**	P	**Pn**	**12 43 37.7**	**-0.1**
KMSI	**Cibinong**	**2.30**	**255**	P	**Pn**	**12 43 52.8**	**+0.4**
SGSI	**Sangihe**	**2.57**	**345**	P	**Pn**	**12 43 53.6**	**-2.6**
SANI	**Sanana**	**3.22**	**184**	P	**Pn**	**12 44 00.6**	**-4.5**
APSI	**Ampana**	**5.00**	**245**	P	**Pn**	**12 44 28.4**	**-1.2**
	976nm43nm,1.4s						
AAI	**Ambon**	**5.24**	**158**	P	**Pn**	**12 44 29.9**	**-2.9**
JAY	**Jayapura**	**14.96**	**104**	LR	LR	12 51 41.9	
	comp=Z,23nm,19.0s,baz=290,slow=34						
WRA	**Warramunga Arr**	**22.46**	**160**	P	**P**	**12 48 17.4**	**+4.0**
	0.8nm,0.7s,baz=339,slow=11,SNR=4.9						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**25.82**	**164**	P	**P**	**12 48 49.7**	**+4.6**
	0.2nm,0.6s,baz=345,slow=8.4,SNR=5.6						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**12 53 14.5**	**-1.2**
	0.3nm,0.5s,baz=136,slow=8.2,SNR=4.3						
	0.3nm,0.5s						

KRSC 16 12:47:26.4±1.3, 50°.48N×157°.22E, h54km±17km, MI3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.73**	**287**	*i* P	Pn	12 47 41.9	+1.2
SKR				*e*S	Sn	12 47 51.7	+0.6
PAU	**Pauzhetka**	**1.03**	**345**	*i* P	Pn	12 47 46.9	+2.4
PAU				*e*S	Sn	12 48 00.6	+2.6
KDTR	**Khodutka, Kamc**	**1.44**	**22**	*e*P	Pn	12 47 52.2	+2.0
KDTR				*e*S	Sn	12 48 09.9	+2.0
RUS	**Russkaya**	**2.12**	**22**	*e*P	Pn	12 48 01.8	+2.4
RUS				*e*S	Sn	12 48 25.8	+1.3
KRMR	**Karymshinskiy**	**2.42**	**13**	*e*P	Pn	12 48 06.6	+3.1
APC	**Apacha**	**2.45**	**359**	*e*P	Pn	12 48 07.1	+3.1
PET	**Petropavlovsk**	**2.70**	**19**	*e*P	Pn	12 48 10.5	+3.2
PET				*e*S	Sn	12 48 41.6	+2.8
DALK	**Dalny**	**2.73**	**20**	*e*P	Pn	12 48 10.7	+3.0
DALK				*e*S	Sn	12 48 42.4	+2.9
INSR	**Institute**	**2.73**	**18**	*e*S	Sn	12 48 43.6	+4.0
AVH	**Avacha**	**2.95**	**18**	*e*P	Pn	12 48 14.7	+3.9
KBTR	**Krutoberegovo**	**6.65**	**28**	*e*P	Pn	12 49 04.4	+3.0

IDC ***16*** *12:50:33.2±1.4, 1°.73N×127°.21E, h0km, mb4.2/5, mbtmp4.1/6, ML4.1/1, Error ellipse: s-maj=98.8km s-min=18.4km az=68.0*

DJA ***16*** *12:50:48.7±0.4, 2°N±4°×12°7E±°, h100km±7km, M4.2/16, mB5.0/3, mb4.2/5, MLv4.2/16, Mw(mB)4.3/3*

ISC 16 12:50:46.2±1.1, 1°.76N±0°.10×127°.4E±0°.1, h112km, n16, σ3§29/18, mb4.1/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.98**	**183**	P	**Pn**	**12 51 09.8**	**+2.4**
SGSI	**Sangihe**	**2.68**	**316**	P	**Pn**	**12 51 30.2**	**+2.1**
KMSI	**Cibinong**	**3.62**	**251**	P	**Pn**	**12 51 42.2**	**+1.6**
SANI	**Sanana**	**4.04**	**201**	P	**Pn**	**12 51 45.8**	**-0.3**
NLAI	**Namlea**	**4.97**	**184**	P	**Pn**	**12 51 59.6**	**+0.9**
MSAI	**Masohi**	**5.29**	**163**	P	**Pn**	**12 52 06.1**	**+3.1**
LUWI	**Luwuk**	**5.41**	**239**	P	**Pn**	**12 52 06.1**	**+1.5**
	0.5nm2µm30nm,0.6s						
APSI	**Ampana**	**6.34**	**245**	P	**Pn**	**12 52 19.0**	**+1.8**
	0.3nm31nm,0.9s						
FAKI	**Fak Fak**	**6.71**	**134**	P	**Pn**	**12 52 25.3**	**+3.1**
SPSI	**Sidrap Palu**	**9.52**	**233**	P	**Pn**	**12 53 02.0**	**+1.7**
FITZ	**Fitzroy Crossi**	**19.81**	**185**	P	**P**	**12 55 06.2**	**-1.7**
	0.4nm,0.3s,baz=16,slow=9.3,SNR=13						
	2.5nm,0.7s						
WRA	**Warramunga Arr**	**22.61**	**163**	P	**P**	**12 55 36.5**	**-1.3**
	3.1nm,0.3s,baz=339,slow=11,SNR=66						
WRA				S	**S**	**12 59 28.9**	**-8.5**
	0.2nm,0.7s,baz=337,slow=11,SNR=1.4						
	3.1nm,0.3s						
ASAR	**Alice Springs**	**26.05**	**166**	P	**P**	**12 56 08.1**	**-1.2**
	1.1nm,0.5s,baz=344,slow=7.6,SNR=42						
ASAR				S	**S**	**13 00 38.5**	**+6.3**
	0.3nm,0.9s,baz=343,slow=18,SNR=2.4						
	1.1nm,0.5s						
STKA	**Stephens Creek**	**36.06**	**159**	P	**P**	**12 57 36.5**	**-0.6**
	4.0nm,0.4s,baz=345,slow=7.5,SNR=16						
	4.0nm,0.4s						
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**13 00 38.9**	**+0.8**
	0.4nm,0.4s,baz=118,slow=7.9,SNR=10						
	0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.76**	**328**	P	**P**	**13 01 05.0**	**-1.1**
	1.0nm,0.3s,baz=128,slow=5.7,SNR=1.8						
	1.0nm,0.3s						

REY ***16*** *13:17:50.8, 63°.64N×23°.61W, h8km*

IDC ***16*** *13:17:52.3±0.6, 63°.60N×23°.57W, h0km, mb4.1/16, mbtmp4.1/20, ML3.2/5, MS4.1/69, Error ellipse: s-maj=22.0km s-min=11.9km az=6.0*

NEIC ***16*** *13:17:53.2±2.2, 63°.78N±0°.02×23°.4W±0°.1, h10km±1km, mb4.7/90, Error ellipse: s-maj=9.7km s-min=3.7km az=260.0*

GCMT ***16*** *13:17:54.2±0.2, 63°.58N±0°.02×23°.54W±0°.03, h12km, MW4.8/108, Moment Tensor Solution. s12,c14; s108,c159; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.08±.07; Mθθ0.58±.07; Mϕϕ0.49±.06; Mrθ0.61±.18; Mθϕ2.07±.05; Mϕr-0.39±.21; Best double couple: M₀2.33100×10^16 NP1:ϕs6.00000°, δ63.00000°, λ-154.00000°. NP2:ϕs264.00000°, δ67.00000°, λ-29.00000°. Principal axes: T 2.6170, Plg3.0000°, Azm316.0000°; N -0.5740, Plg54.0000°, Azm50.0000°; P -2.0450, Plg36.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DNK ***16*** *13:17:59.3±3.3, 63°.86N×23°.30W, h7km±255km, ML3.3*

ISC 16 13:17:51.7±1.6, 63°.73N±0°.05×23°.38W±0°.04, h3km±10km, n239, σ1§69/161, mb4.6/69, MS4.2/79, 8D, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRNE	**Reykjanes**	**0.32**	**73**	P	**Pb**	**13 17 59.0**	**-0.9**
IRNE				S	**Sb**	**13 18 05.4**	**0.0**
INYL	**Nylenda**	**0.38**	**49**	P	**Pb**	**13 18 00.1**	**-1.0**
INYL				S	**Sb**	**13 18 07.2**	**-0.1**
IGRV	**Grindav??k**	**0.43**	**72**	P	**Pg**	**13 18 00.7**	**+0.7**
IGRV				S	**Sb**	**13 18 08.8**	**0.0**
IVOG	**Vogar**	**0.50**	**61**	P	**Pg**	**13 18 01.9**	**+0.6**
IVOG				S	**Sb**	**13 18 10.7**	**-0.2**
IKRI	**Krysuvik**	**0.60**	**75**	P	**Pg**	**13 18 03.4**	**+0.2**
IKRI				S	**Sb**	**13 18 13.2**	**-0.5**
IKAS	**Kald??rsel**	**0.74**	**66**	P	**Pg**	**13 18 05.6**	**-0.3**
IKAS				S	**Sb**	**13 18 17.8**	**+0.1**
IVOS	**Vogsosar**	**0.76**	**80**	P	**Pg**	**13 18 05.8**	**-0.4**
IVOS				S	**Sb**	**13 18 17.6**	**-0.6**
ISAN	**Sandskeio**	**0.87**	**67**	P	**Pg**	**13 18 07.7**	**-0.6**
ISAN				S	**Sb**	**13 18 21.5**	**+0.1**
IMOR	**Morastadir**	**0.92**	**51**	P	**Pg**	**13 18 08.5**	**-0.9**
IMOR				S	**Sb**	**13 18 22.2**	**-0.7**
IBJA	**Bjarnastaoir**	**0.95**	**76**	P	**Pg**	**13 18 09.0**	**-0.9**
IBJA				S	**Sb**	**13 18 23.2**	**-0.5**
IEDA	**Engidalur**	**0.95**	**67**	S	**Sb**	**13 18 23.6**	**-0.2**
IEDA				P	**Pg**	**13 18 08.7**	**-1.2**
IHEI	**Heioarbar**	**1.06**	**62**	P	**Pg**	**13 18 10.4**	**-1.6**
IHEI				S	**Sn**	**13 18 27.1**	**-1.6**
IKRO	**Krokur**	**1.07**	**69**	P	**Pb**	**13 18 11.1**	**-1.6**
IKRO				S	**Sn**	**13 18 27.4**	**-1.5**
ISOL	**Solvholt**	**1.10**	**78**	P	**Pb**	**13 18 11.1**	**-2.2**
IASM	**Asmuli**	**1.23**	**84**	P	**Pn**	**13 18 13.0**	**-2.8**
IASM				S	**Sb**	**13 18 31.0**	**-0.9**
ISAU	**Saurbar**	**1.34**	**77**	P	**Pn**	**13 18 14.9**	**-2.3**
ISAU				S	**Sb**	**13 18 34.4**	**-0.6**
BORG	**Borgarnes**	**1.36**	**40**	Pg	**Pn**	**13 18 15.9**	**-1.7**
	333nm,0.3s,baz=249,slow=3.8,SNR=73						
BORG				Lg	Lg	13 18 34.9	
	2µm,0.3s,baz=324,slow=19,SNR=44						
BORG	**Borgarnes**	**1.36**	**40**	Pn	**Pn**	**13 18 14.4**	**-3.2**
BORG				Sn	**Sg**	**13 18 36.0**	**+0.5**
IASB	**sbjarnarstai**	**1.36**	**40**	P	**Pn**	**13 18 15.7**	**-1.9**
IASB				S	**Sb**	**13 18 34.7**	**-0.9**
IVES	**Vestmannaeyjar**	**1.41**	**100**	P	**Pn**	**13 18 15.8**	**-2.5**
IGYG	**Gygjarholskot**	**1.50**	**67**	P	**Pn**	**13 18 18.4**	**-1.1**
IHAU	**Haukadalur**	**1.53**	**79**	S	**Sb**	**13 18 39.7**	**-0.8**
IHAU				P	**Pn**	**13 18 18.5**	**-1.4**
IMJO	**Mjoaskard**	**1.66**	**81**	P	**Pn**	**13 18 20.2**	**-1.5**
ISLY	**Slysaalda**	**1.90**	**85**	P	**Pn**	**13 18 23.4**	**-1.6**
IAUS	**Austmannsbunga**	**1.92**	**90**	P	**Pn**	**13 18 24.5**	**-0.9**
ISTE	**Stelbrattur**	**1.99**	**54**	P	**Pn**	**13 18 25.5**	**-0.8**
IVAT	**Vatnsfell**	**2.02**	**75**	P	**Pn**	**13 18 25.7**	**-1.0**
IRJU	**Rjupnafell**	**2.10**	**91**	P	**Pn**	**13 18 26.5**	**-1.3**
ISKR	**Skrokkalda**	**2.34**	**67**	P	**Pn**	**13 18 31.1**	**-0.1**
IJOK	**Jokulheimar**	**2.35**	**73**	P	**Pn**	**13 18 30.1**	**-1.1**
IIEY	**Innrieyrar**	**2.35**	**79**	P	**Pn**	**13 18 29.9**	**-1.3**
IKAL	**Kalfafell**	**2.53**	**82**	P	**Pn**	**13 18 32.7**	**-1.0**
IHUS	**Husbondi**	**2.59**	**75**	P	**Pn**	**13 18 34.2**	**-0.4**
IVON	**Vonarskard**	**2.64**	**66**	P	**Pn**	**13 18 35.0**	**-0.2**
IDYN	**Dyngjuhals**	**2.83**	**65**	P	**Pn**	**13 18 38.5**	**+0.6**
IURH	**Urdarhals**	**2.93**	**65**	P	**Pn**	**13 18 40.0**	**+0.7**
IBJK	**Bruarjokull**	**3.00**	**73**	P	**Pn**	**13 18 40.0**	**-0.2**
IKSK	**Karasker**	**3.08**	**79**	P	**Pn**	**13 18 40.7**	**-0.6**
IHLA	**Hella**	**3.08**	**42**	P	**Pn**	**13 18 41.5**	**+0.3**
ISVA	**Svartarkot**	**3.10**	**56**	P	**Pn**	**13 18 42.2**	**+0.7**
THOR	**Thorvaldshraun**	**3.16**	**64**	P	**Pn**	**13 18 43.1**	**+0.8**
IKRE	**Kreppuhraun**	**3.23**	**68**	P	**Pn**	**13 18 44.5**	**+1.2**
IGRA	**Granastaoir**	**3.31**	**46**	P	**Pn**	**13 18 45.4**	**+1.1**
IMEL	**Melhnausar**	**3.43**	**54**	P	**Pn**	**13 18 46.9**	**+0.8**
ANGG	**Ammassalik, Gr**	**6.40**	**294**	Pn	**Pn**	**13 19 27.2**	**+0.5**
ANGG	**Ammassalik, Gr**	**6.40**	**294**	*i* P	Pn	13 19 32.6	+5.9
SCO	**Scoresbysund**	**6.81**	**4**		**Pn**	**13 19 33.2**	**+0.9**
SCO	**Scoresbysund**	**6.81**	**4**	*e*P	**Pn**	**13 19 34.4**	**+2.1**
SCO				*e*S	**Sn**	**13 20 48.5**	**-1.7**
SCO				IAML		13 21 34.1	
	comp=Z,106nm,1.0s						
JMIC	**Jan Mayen**	**9.24**	**32**	LR	LR	13 22 43.0	
	comp=Z,805nm,20.7s,baz=245,slow=31						
SUMG	**Summit**	**10.46**	**334**	*i* P	**Pn**	**13 20 25.1**	**+2.4**
NRS	**Narsarsuaq**	**10.51**	**266**	Pn	**Pn**	**13 20 24.8**	**+1.8**
DBG	**Daneborg**	**10.69**	**5**	*e*P	**Pn**	**13 20 29.3**	**+3.9**
SFJD	**Kangerlussuaq**	**11.77**	**298**	Pn	**Pn**	**13 20 39.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=102,slow=18,SNR=3.7						
SFJD				Sn	**Sn**	**13 22 44.6**	**-7.3**
	comp=Z,0.7nm,0.3s,baz=53,slow=20,SNR=1.9						
SFJD				LR	LR	13 24 39.3	
	comp=Z,2µm,19.8s,baz=96,slow=35						
	comp=Z,5.7nm,0.8s						
EKA	**Eskdalemuir Ar**	**13.21**	**120**	Pn	**Pn**	**13 21 00.5**	**+0.6**
	baz=318,slow=13						
	comp=Z,1.8nm,0.5s						
DSB	**Dublin**	**13.71**	**132**	Pn	**Pn**	**13 21 06.7**	**-0.1**
NOA	**NORSAR Array B**	**16.14**	**84**	Pn	**P**	**13 21 40.6**	**-2.0**
	baz=291,slow=10,SNR=5.1						
NOA				LR	LR	13 27 52.5	
	comp=Z,238nm,18.1s,baz=310,slow=37						
HFS	**Hagfors**	**17.64**	**85**	P	**P**	**13 21 59.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=310,slow=9.5,SNR=3.9						
HFS				LR	LR	13 28 57.6	
	comp=Z,229nm,18.3s,baz=287,slow=38						
	comp=Z,4.3nm,0.9s						
FRB	**Frobisher Bay**	**19.67**	**290**	LR	LR	13 29 03.0	
	comp=Z,864nm,21.4s,baz=77,slow=34						
ARCES	**ARCESS Array B**	**19.74**	**52**	P	**Pn**	**13 22 23.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=284,slow=4.9,SNR=9.2						
ARCES				LR	LR	13 28 24.5	
	comp=Z,417nm,19.4s,baz=264,slow=32						
	comp=Z,9.6nm,1.0s						
ARCES	**ARCESS Array B**	**19.74**	**52**		**Pn**	**13 22 22.1**	**-1.5**
BMRD	**Maredsous**	**20.16**	**119**	*d*P	Pn	13 22 27.5	-1.1
BGES	**Gesves**	**20.21**	**118**	*d*P	**P**	**13 22 27.2**	**-0.2**
BSTI	**Sart Tilman**	**20.25**	**117**	*d*P	Pn	13 22 29.8	+0.1
DOU	**Dourbes**	**20.25**	**119**	*d*P	Pn	13 22 27.9	-1.8
BCLA	**Clavier**	**20.27**	**118**	*d*S	Sn	13 26 16.0	-2.4
MEM	**Membach**	**20.41**	**116**	*d*P	Pn	13 22 29.9	-1.7
BTNL	**Ternell**	**20.47**	**116**	*d*P	Pn	13 22 32.5	+0.2
BHOU	**Houvegnez**	**20.60**	**117**	*d*P	Pn	13 22 33.0	-0.9
FIA1	**FINESS Array S**	**22.43**	**73**		**P**	**13 22 53.4**	**+2.2**
FINES	**FINESS Array B**	**22.43**	**73**	P	**P**	**13 22 52.8**	**+1.6**
	comp=Z,23nm,1.1s,baz=309,slow=8.8,SNR=16						
FINES				LR	LR	13 31 44.5	
	comp=Z,293nm,18.8s,baz=296,slow=37						
	comp=Z,23nm,1.1s						
FINES	**FINESS Array B**	**22.43**	**73**		**P**	**13 22 51.7**	**+0.5**
CLL	**Collm**	**22.78**	**106**		**P**	**13 22 57.2**	**+2.2**
CLL				IAmb	IAmb	13 23 02.5	
	comp=Z,44nm,1.5s						
CLL	**Collm**	**22.78**	**106**	*i* P	**P**	**13 22 56.9**	**+1.9**
	comp=Z,41nm,1.6s						
CLL				*i* x	x	13 23 00.9	
CLL				*e*PPP	PPP	13 23 28.0	
CLL				*e*S	Sn	13 27 10.0	-8.5
SCHQ	**Schefferville**	**23.46**	**268**	P	**P**	**13 23 01.6**	**-0.4**
	comp=Z,6.7nm,0.8s,baz=28,slow=5.8,SNR=5.1						
SCHQ				LR	LR	13 30 14.2	
	comp=Z,101nm,20.5s,baz=142,slow=32						
	comp=Z,6.7nm,0.8s						
SCHQ	**Schefferville**	**23.46**	**268**	P	**P**	**13 22 59.1**	**-2.8**
HSKC	**Hora Svate Kat**	**23.48**	**107**	AMS	AMS	13 35 10.0	
	comp=Z,700nm,12.6s						
PVCC	**Panska Ves**	**24.02**	**105**	*e*P	**P**	**13 23 10.1**	**+2.6**
PVCC				AMS	AMS	13 34 10.0	
	comp=Z,500nm,12.3s						
PRA	**Prague**	**24.31**	**106**	AMS	AMS	13 35 30.0	
	comp=Z,700nm,12.6s						
PRU	**Pruhonice**	**24.42**	**106**	*e*P	**P**	**13 23 12.8**	**+1.7**
PRU				AMS	AMS	13 35 20.0	
	comp=Z,700nm,11.2s						
CHVC	**Chvalec**	**24.62**	**104**	AMS	AMS	13 34 00.0	
	comp=Z,700nm,16.3s						
KHC	**Kasperske Hory**	**24.66**	**109**		**P**	**13 23 13.3**	**-0.1**
KHC	**Kasperske Hory**	**24.66**	**109**	*e*P	**P**	**13 23 14.7**	**+1.4**
KHC				AMS	AMS	13 34 20.0	
	comp=Z,1µm,13.1s						
UPC	**Upice**	**24.66**	**104**	AMS	AMS	13 34 10.0	
	comp=Z,700nm,17.0s						
ZVC	**Zvikov**	**24.68**	**108**	AMS	AMS	13 34 50.0	
	comp=Z,700nm,11.7s						
OSTC	**Ostas**	**24.71**	**103**	AMS	AMS	13 34 10.0	
	comp=Z,600nm,17.4s						
RETA	**Reutte**	**24.79**	**115**	*e*P	**P**	**13 23 17.5**	**+2.9**
	comp=Z,12nm,1.1s						
DPC	**Dobruska-Polom**	**24.91**	**104**	*e*P	**P**	**13 23 17.9**	**+2.3**
DPC				AMS	AMS	13 34 20.0	
	comp=Z,600nm,14.3s						
GERES	**GERESS Array B**	**24.93**	**109**	P	**P**	**13 23 16.8**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=317,slow=7.6,SNR=12						
GERES				LR	LR	13 33 28.9	
	comp=Z,388nm,19.5s,baz=315,slow=38						
	comp=Z,1.7nm,0.8s						
DAVOX	**Davos/Dischmat**	**25.01**	**117**	LR	LR	13 32 45.7	
	comp=Z,428nm,21.1s,baz=260,slow=36						
MOTA	**Moosalm**	**25.04**	**115**	*e*P	**P**	**13 23 19.7**	**+2.7**
	comp=Z,6.0nm,0.8s						
TUE	**Stuetta**	**25.05**	**118**		**P**	**13 23 17.0**	**0.0**
SQTA	**Sankt Quirin**	**25.18**	**115**	*e*P	**P**	**13 23 20.8**	**+2.6**
	comp=Z,8.5nm,1.5s						
CKRC	**Cesky Krumlov**	**25.21**	**108**	*e*P	**P**	**13 23 20.3**	**+2.1**
CKRC				AMS	AMS	13 34 50.0	
	comp=Z,900nm,15.1s						
WATA	**Walderalm**	**25.24**	**114**	*e*P	**P**	**13 23 21.0**	**+2.3**
	comp=Z,16nm,1.4s						
KRLC	**Kraliky**	**25.31**	**104**	*e*P	**P**	**13 23 21.8**	**+2.5**
KRLC				AMS	AMS	13 34 30.0	
	comp=Z,700nm,16.5s						
WTTA	**Wattenberg**	**25.32**	**114**	*e*P	**P**	**13 23 21.7**	**+2.2**
	comp=Z,15nm,1.1s						
TREC	**Trest**	**25.34**	**106**	AMS	AMS	13 35 50.0	
	comp=Z,700nm,10.3s						
LESA	**Schwarzleotal**	**25.62**	**112**	*e*P	**P**	**13 23 24.7**	**+2.6**
	comp=Z,15nm,1.2s						
RES	**Resolute Bay**	**25.73**	**325**	LR	LR	13 33 07.3	
	comp=Z,782nm,20.8s,baz=44,slow=36						
BIOA	**Bad Ischl, Aus**	**25.80**	**111**	*e*P	**P**	**13 23 26.8**	**+3.1**
	comp=Z,10nm,0.9s						
VRAC	**Vranov**	**25.81**	**105**	LR	LR	13 33 20.9	
	comp=Z,308nm,20.9s,baz=314,slow=36						
VRAC	**Vranov**	**25.81**	**105**	*e*P	**P**	**13 23 24.8**	**+1.1**
MORC	**Moravsky Berou**	**25.87**	**103**	*e*P	**P**	**13 23 25.3**	**+1.0**
KRUC	**Moravsky**	**25.91**	**106**	*e*P	**P**	**13 23 25.1**	**+0.5**
MOA	**Molln**	**25.94**	**110**	*e*P	**P**	**13 23 26.9**	**+1.9**
	comp=Z,2.7nm,0.8s						
KBA	**Koelnbreinsper**	**26.17**	**112**	*e*P	**P**	**13 23 29.2**	**+2.1**
	comp=Z,23nm,2.1s						
NACGM	**Naroch**	**26.40**	**86**	*e*P	**P**	**13 23 28.4**	**-0.6**
	comp=Z,12nm,0.8s,baz=310						
CONA	**Conrad Observa**	**26.55**	**108**	*e*P	**P**	**13 23 31.2**	**+0.7**
	comp=Z,8.5nm,1.8s						
ESDC	**Sonseca Array**	**26.70**	**145**	P	**P**	**13 23 31.9**	**0.0**
	comp=Z,1.7nm,0.7s,baz=342,slow=9.8,SNR=8.1						
ESDC				LR	LR	13 33 11.9	
	comp=Z,937nm,19.1s,baz=328,slow=34						
	comp=Z,1.7nm,0.7s						
ESDC	**Sonseca Array**	**26.70**	**145**	P	**P**	**13 23 31.9**	**0.0**
RONA	**Rosalia, Austr**	**26.91**	**108**	*e*P	**P**	**13 23 35.2**	**+1.5**
	comp=Z,9.2nm,1.2s						
LANS	**Liptovska Anna**	**27.17**	**102**	*e*P	**P**	**13 23 38.4**	**+2.4**
SOKA	**Soboth**	**27.19**	**111**	*e*P	**P**	**13 23 38.3**	**+2.0**
	comp=Z,4.7nm,0.9s

BBB Bella Bella 50.51 310 LR LR 13 48 01.8
comp=Z,641nm,18.6s,baz=43,slow=36
X40A Basin Creek Fa 50.67 269 IAmb IAmb 13 26 52.9
comp=Z,11nm,1.1s
KURK Kurchatov 50.77 53 **P** **13 26 54.9 +2.4**
KURK IAmb IAmb 13 26 55.6
comp=Z,6.5nm,1.0s
KURBB Kurchatov Arra 50.82 54 P **P** **13 26 55.1 +2.3**
comp=Z,4.2nm,0.9s,baz=324,slow=7.6,SNR=26
KURBB LR LR 13 48 32.8
comp=Z,225nm,18.2s,baz=186,slow=36
comp=Z,4.2nm,0.9s
PD31 Pinedale Array 51.12 289 IAmb IAmb 13 26 56.9
comp=Z,6.2nm,1.0s
PDAR Pinedale Array 51.12 289 P **P** **13 26 56.2 +0.6**
comp=Z,4.2nm,0.9s,baz=60,slow=8.1,SNR=7.6
PDAR LR LR 13 48 07.6
comp=Z,305nm,18.2s,baz=22,slow=36
comp=Z,4.2nm,0.9s
PDAR Pinedale Array 51.12 289 **P** **13 26 51.8 -3.7**
PLID Pearl Lake 51.85 296 IAmb IAmb 13 27 06.1
comp=Z,13nm,1.3s
HAYD Hayden 51.99 286 IAmb IAmb 13 27 05.1
comp=Z,8.5nm,1.2s
KDAK Kodiak Island 52.73 329 LR LR 13 50 16.0
comp=Z,371nm,21.5s,baz=20,slow=37
RDMU Red Mountain 52.93 288 IAmb IAmb 13 27 11.9
comp=Z,16nm,1.4s
YAK Yakutsk 52.94 16 LR LR 13 49 34.6
comp=Z,88nm,19.7s,baz=346,slow=36
WMOK Wichita Mounta 53.10 275 **P** **13 27 10.2 +0.1**
WMOK IAmb IAmb 13 27 11.8
comp=Z,10nm,1.2s
TCUT Toone Canyon 53.26 290 IAmb IAmb 13 27 15.6
comp=Z,16nm,1.4s
RTBA Rita Blanca 53.42 279 IAmb IAmb 13 27 15.8
comp=Z,13nm,1.2s
T25A Trinidad 53.57 281 IAmb IAmb 13 27 16.8
comp=Z,9.9nm,1.2s
SEY Seymchan 53.61 2 LR LR 13 48 15.3
comp=Z,102nm,21.7s,baz=359,slow=34
WTFS Witchita Falls 53.78 274 P **P** **13 27 16.1 +1.0**
KK31 Karatay Array 54.01 65 P **P** **13 27 17.3 +0.5**
KKAR Karatay Array 54.01 65 P **P** **13 27 17.2 +0.5**
SJG San Juan 54.02 233 LR LR 13 46 03.0
comp=Z,37nm,21.5s,baz=302,slow=31
PV01 Paradox Valley 54.54 285 IAmb IAmb 13 27 24.0
comp=Z,9.2nm,1.3s
SRU San Rafael Swe 54.56 287 IAmb IAmb 13 27 47.5
comp=Z,10nm,1.4s
PV03 Paradox Valley 54.56 286 IAmb IAmb 13 27 23.4
comp=Z,14nm,1.4s
H04A Detroit Lake 54.62 300 IAmb IAmb 13 27 23.5
comp=Z,7.8nm,1.1s
MAKZ Makanchi 55.26 54 P **P** **13 27 26.3 +0.5**
MAKZ IAmb IAmb 13 27 29.1
comp=Z,6.4nm,1.2s
MKAR Makanchi Array 55.38 53 P **P** **13 27 29.0 +2.4**
comp=Z,4.0nm,0.9s,baz=324,slow=6.0,SNR=23
MKAR LR LR 13 50 49.1
comp=Z,116nm,19.1s,baz=312,slow=36
comp=Z,4.0nm,0.9s
HMU Henry Mountain 55.63 287 IAmb IAmb 13 27 32.8
comp=Z,10.0nm,1.4s
AAK Ala-Archa 55.99 62 LR LR 13 51 03.6
comp=Z,215nm,18.8s,baz=332,slow=36
BRDY Brady 56.12 273 IAmb IAmb 13 27 33.7
comp=Z,9.2nm,1.2s
SPR3 Spring Creek 3 56.25 290 IAmb IAmb 13 27 38.0
comp=Z,9.9nm,1.5s
ANMO Albuquerque 56.31 281 LR LR 13 49 26.6
comp=Z,178nm,20.4s,baz=128,slow=34
ARSB Arslanbob 56.50 64 IAmb IAmb 13 27 38.7
comp=Z,11nm,1.2s
PKCU Pink Cliffs 56.72 288 IAmb IAmb 13 27 40.4
comp=Z,11nm,1.2s
SZCU Shurtz Canyon 56.92 289 IAmb IAmb 13 27 41.8
comp=Z,7.4nm,1.4s
MA2 Magadan 56.94 4 LR LR 13 50 44.9
comp=Z,72nm,21.7s,baz=76,slow=35
JCT Junction City 57.17 273 IAmb IAmb 13 27 41.6
comp=Z,9.4nm,0.9s
YBH Yreka Blue Hor 57.32 299 LR LR 13 52 19.0
comp=Z,14nm,19.6s,baz=34,slow=36
Y22A Socorro 57.38 281 IAmb IAmb 13 27 45.3
comp=Z,16nm,1.4s
WUAZ Wupatki 57.95 286 IAmb IAmb 13 27 48.0
comp=Z,5.0nm,0.9s
TARG Taragay, Kyrgy 58.05 60 IAmb IAmb 13 27 51.1
comp=Z,7.3nm,0.9s
NVAR Mina Array Bea 58.38 293 P **P** **13 27 49.4 +1.2**
comp=Z,0.9nm,0.8s,baz=57,slow=5.8,SNR=6.9
NVAR LR LR 13 53 01.9
comp=Z,646nm,18.6s,baz=34,slow=36
comp=Z,0.9nm,0.8s
DBIC Dimbokro 58.50 158 LR LR 13 51 54.1
comp=Z,86nm,19.8s,baz=28,slow=35
X16A Lo Mia Camp, P 58.91 285 IAmb IAmb 13 27 55.8
comp=Z,6.2nm,1.4s
121A Cookes Peak, D 58.94 281 IAmb IAmb 13 27 56.4
comp=Z,9.4nm,1.3s
ALPN Alpine 58.96 276 IAmb IAmb 13 27 54.6
comp=Z,7.8nm,1.3s
KSH Kashi 59.23 63 P P 13 27 58.9 +4.9
KSH pmax pmax
comp=Z,9.0nm,1.2s
KSH LR LR
comp=N,350nm,15.8s
KSH LR LR
comp=E,290nm,13.1s
KSH LR LR
comp=Z,420nm,17.3s
GWY Greenwater Val 59.62 291 IAmb IAmb 13 28 00.8
comp=Z,8.3nm,1.2s
MTPC Mountain Pass 59.75 289 IAmb IAmb 13 28 01.3
comp=Z,5.8nm,1.1s
TX31 Lajitas Ar. Si 59.86 276 IAmb IAmb 13 28 00.6
comp=Z,8.1nm,1.4s
TXAR Lajitas Array 59.86 276 P **P** **13 27 58.7 +0.3**
comp=Z,1.8nm,1.0s,baz=69,slow=4.2,SNR=11
TXAR LR LR 13 53 11.0
comp=Z,169nm,18.4s,baz=20,slow=35
comp=Z,1.8nm,1.0s
TXAR Lajitas Array 59.86 276 P **P** **13 27 58.0 -0.4**
WMQ Urumqi 59.87 51 *eP* P 13 28 02.8 +4.5
WMQ LR LR
comp=E,620nm,16.9s
WMQ LR LR
comp=Z,160nm,18.5s
TUC Tucson 60.43 283 P **P** **13 28 01.4 -1.0**
ISA Isabella, Lake 60.81 292 P **P** **13 28 04.5 -0.4**
ISA IAmb IAmb 13 28 07.9
comp=Z,5.0nm,1.1s
BELC Belle Mtn. Jos 61.21 289 P **P** **13 28 08.7 +1.0**
PFO Pinyon Flats O 61.74 289 LR LR 13 55 10.2
comp=Z,324nm,20.4s,baz=25,slow=36
MDP Montagnes des 62.23 213 LR LR 13 48 29.5
comp=Z,60nm,19.7s,baz=268,slow=30
SHEM Shemya Is, Ala 63.08 348 LR LR 13 54 46.4
comp=Z,90nm,21.3s,baz=338,slow=35
PETK Petropavlovsk- 63.50 359 LR LR 13 57 15.7
comp=Z,69nm,18.0s,baz=11,slow=37
LPIG La Paz 67.33 279 LR LR 13 57 14.0
comp=Z,187nm,20.9s,baz=28,slow=35
JTS Las Juntas de 68.44 249 LR LR 13 54 58.3
comp=Z,23nm,21.7s,baz=15,slow=33
HHC Hu-ho-hao-te 69.82 35 *eP* **P** **13 29 03.3 +0.1**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.0s
ASAJ Asahikawa 71.93 11 LR LR 14 00 38.1
comp=Z,66nm,19.9s,baz=127,slow=36
LZDM Lanzhou Array 72.19 43 LR LR 14 06 51.7
comp=Z,123nm,18.3s,baz=30,slow=41
MBAR Mbarara 75.44 123 LR LR 14 07 30.4
comp=Z,122nm,19.6s,baz=332,slow=40
KMBO Kilima Mbogo 78.42 117 LR LR 14 07 30.1
comp=Z,125nm,18.9s,baz=96,slow=38
MJAR Matsushiro Arr 79.00 15 P **P** **13 29 58.2 +1.6**
comp=Z,1.2nm,0.7s,baz=332,slow=3.8,SNR=3.7
comp=Z,1.2nm,0.7s
NJ2 Nanjing 79.97 32 *eP* **P** **13 30 01.5 -0.4**
NJ2 pmax pmax
comp=Z,12nm,0.6s
BRDH Bariadhala 80.25 58 LR LR 14 08 56.2
comp=Z,145nm,20.0s,baz=326,slow=38
PZH PanZhiHua 80.33 48 P **P** **13 30 05.4 +1.3**
SIV San Ignacio 84.63 216 LR LR 14 02 03.5
comp=Z,89nm,19.1s,baz=97,slow=31
CMAR Chiang Mai Arr 86.79 53 P **P** **13 30 38.7 +1.5**
comp=Z,1.3nm,0.9s,baz=316,slow=6.1,SNR=8.1
CMAR LR LR 14 12 49.0
comp=Z,40nm,19.8s,baz=320,slow=38
comp=Z,1.3nm,0.9s
CMAR Chiang Mai Arr 86.79 53 P **P** **13 30 37.1 -0.2**
LPAZ La Paz 86.91 223 LR LR 14 05 41.0
comp=Z,20nm,21.5s,baz=22,slow=33
LSZ Lusaka 88.14 131 LR LR 14 13 10.8
comp=Z,277nm,18.3s,baz=336,slow=38
TSUM Tsumeb 88.58 142 LR LR 14 10 54.5
comp=Z,109nm,19.1s,baz=324,slow=36
PALK Pallekele 89.70 74 LR LR 14 13 04.8
comp=Z,75nm,21.1s,baz=346,slow=37
MATP Matopo 93.04 132 LR LR 14 15 21.5
comp=Z,150nm,18.7s,baz=341,slow=37
CPUP Villa Florida 93.66 210 LR LR 14 06 08.5
comp=Z,12nm,21.8s,baz=224,slow=31
LBTB Lobatse 96.41 136 LR LR 14 15 18.5
comp=Z,266nm,20.2s,baz=338,slow=36
BOSA Boshof 99.68 138 LR LR 14 18 48.9
comp=Z,91nm,18.6s,baz=15,slow=37
ASAR Alice Springs 137.21 31 PKP **PKiKP** **13 37 15.8 -2.0**
comp=Z,0.5nm,0.8s,baz=358,slow=2.4,SNR=4.4
MAW Mawson 144.69 139 PKP **PKPdf** **13 37 26.2 -1.6**
comp=Z,2.9nm,0.8s,baz=308,slow=4.4,SNR=6.0
STKA Stephens Creek 146.75 24 PKPbc **PKiKP** **13 37 35.5 -1.5**
comp=Z,1.7nm,0.8s,baz=270,slow=7.1,SNR=3.0
QSPA South Pole Qui 153.65 180 PKPbc **PKiKP** **13 37 53.3 +3.1**
comp=Z,3.1nm,0.9s,baz=229,slow=0.9,SNR=7.8
QSPA South Pole Qui 153.65 180 PKPdf **PKPdf** **13 37 43.1 +0.8**

*NEIC **16** 13:20:53.2±1.4, 64.67N±0.01×151.68W±0.03, h10km±1km, Error ellipse: s-maj=2.8km s-min=2.6km az=123.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.49; Mθθ-1.69; Mϕϕ2.19; Mrθ0.97; Mθϕ-3.59; Mϕr0.33; Fault plane solution: M₀4.23000×10¹⁴ NP1: ϕ±193.18000°, δ77.22000°, λ-9.27000°. NP2:ϕ285.25000°, δ80.96000°, λ-167.05000°. Principal axes: T 4.3409, Plg3.0000°, Azm59.0000°; N -0.2235, Plg74.0000°, Azm320.0000°; P -4.1175, Plg16.0000°, Azm150.0000°;*

*NEIC **16** 13:20:54.1, 64.67N×151.61W, h13km*

AEIC 16 13:20:53.8±1.4, 64.66N±0.02×151.68W±0.02, h14km±3km, ML3.7, ML3.8/228(NEIC), **Mwr3.7/**80(NEIC), **Error ellipse: s-maj=2.4km s-min=1.4km az=188.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I21K	**Tanana**	**0.54**	**346**		Pb	13 21 04.7	-0.3
I21K	**Tanana**	**0.54**	**346**		Sg	13 21 11.2	-0.3
MLY	**Manley**	**0.55**	**47**		Sb	13 21 12.5	-0.4
MLY	**Manley**	**0.55**	**47**		Pg	13 21 04.4	-0.2
MLY				IAML		13 21 13.2	
	comp=N,2μm,0.8s						
MLY				IAML		13 21 16.8	
	comp=E,1000nm,0.9s						
BPAW	**Bear Paw Mtn.**	**0.64**	**152**		Sg	13 21 15.1	+0.3
BPAW	**Bear Paw Mtn.**	**0.64**	**152**		Pb	13 21 07.0	+0.2
BPAW				IAML		13 21 15.3	
	comp=N,5μm,0.3s						
BPAW				IAML		13 21 15.7	
	comp=E,3μm,0.5s						
CHUM	**Lake Minchumin**	**0.83**	**200**		Pg	13 21 09.5	-0.4
CHUM					Pb	13 21 10.5	+0.5
CHUM					Sb	13 21 21.7	+0.7
CHUM					Sg	13 21 21.9	+1.1
BWN	**Browne**	**1.08**	**116**		Pg	13 21 15.1	+0.5
BWN				Sg	Sn	13 21 30.1	+0.8
I23K	**Minto, Yukon-K**	**1.10**	**63**		Pb	13 21 14.0	-0.7
I23K	**Minto, Yukon-K**	**1.10**	**63**		Sb	13 21 28.3	-0.6
H21K	**Melozitna Rive**	**1.11**	**335**		Pb	13 21 14.3	-0.4
NEA2	**Nenana**	**1.13**	**92**		Sb	13 21 29.8	+0.2
NEA2	**Nenana**	**1.13**	**92**		Pb	13 21 14.8	-0.3
NEA2				IAML		13 21 30.7	
	comp=N,2μm,0.9s						
NEA2				IAML		13 21 31.5	
	comp=E,1μm,0.6s						
KTH	**Kantishna Hill**	**1.16**	**163**		Sb	13 21 30.7	0.0
KTH	**Kantishna Hill**	**1.16**	**163**		Pb	13 21 15.5	-0.2
KTH				IAML		13 21 31.8	
	comp=E,3μm,0.6s						
KTH				IAML		13 21 32.9	
	comp=N,3μm,0.5s						
J20K	**Nowinta River**	**1.18**	**247**		Pn	13 21 15.8	-0.1
J20K					Sg	13 21 32.5	+0.7
I20K	**Naaghedeneel**	**1.21**	**278**		Pn	13 21 16.2	0.0
I20K					Sb	13 21 31.7	-0.1
I20K					Sg	13 21 32.6	-0.2
H22K	**Ishtalitna Cre**	**1.24**	**6**		Pn	13 21 16.6	-0.2
H22K				Sg	Sb	13 21 32.2	-0.7
TRF	**Thorofare Moun**	**1.36**	**153**		Pn	13 21 18.8	+0.2
TRF				Sn	Sg	13 21 38.1	+0.3
TRF				IAML		13 21 38.6	
	comp=E,1μm,0.7s						
TRF				IAML		13 21 38.7	
	comp=N,1μm,0.3s						
H23K	**Yukon River**	**1.48**	**37**		Pn	13 21 19.2	-0.8
H23K					Sn	13 21 39.2	+0.1
H23K					Sb	13 21 40.4	+0.8
H23K	**Yukon River**	**1.48**	**37**	IAML		13 21 41.5	
	comp=N,1μm,0.6s						
H23K				IAML		13 21 41.5	
	comp=E,2μm,0.9s						
MCK	**McKinley**	**1.52**	**127**		Pn	13 21 19.5	-1.2
MCK					Sb	13 21 40.8	-0.2
MCK	**McKinley**	**1.52**	**127**	IAML		13 21 42.0	
	comp=N,1μm,0.9s						
WRH	**Wood River Hil**	**1.56**	**95**		Pn	13 21 20.4	-0.7
WRH				IAML		13 21 43.8	
	comp=N,1μm,0.6s						
WRH	**Wood River Hil**	**1.56**	**95**		Sg	13 21 43.1	-0.9
IMAR	**Indian Mountai**	**1.59**	**328**		Pn	13 21 20.0	-1.5
H20K	**Anotleneega Mo**	**1.59**	**303**		Pn	13 21 21.1	-0.5
H20K					Pb	13 21 23.0	0.0
H20K					Sb	13 21 43.8	+0.9
COLA	**College**	**1.66**	**81**		Pn	13 21 21.3	-1.1
CCB	**Clear Creek Bu**	**1.67**	**89**		Pn	13 21 21.6	-1.0
CCB	**Clear Creek Bu**	**1.67**	**89**	IAML		13 21 47.3	
	comp=N,1μm,0.6s						
K20K	**Telida**	**1.68**	**220**		Pn	13 21 22.5	-0.3
RND	**Reindeer**	**1.77**	**134**		Pn	13 21 24.0	-0.1
PPLA	**Purkeypile**	**1.79**	**187**		Pn	13 21 24.7	+0.3
PPLA				IAML		13 21 58.5	
	comp=N,1μm,0.9s						
J19K	**Poorman**	**1.84**	**250**		Pn	13 21 24.6	-0.4
J19K				IAML		13 21 58.6	
	comp=E,1μm,0.7s						
POKR	**Poker Plat Res**	**1.87**	**74**		Pn	13 21 24.3	-1.1
H24K	**Noodor Dome**	**1.99**	**52**		Pn	13 21 26.4	-0.6
G21K	**Allakaket**	**2.01**	**339**		Pn	13 21 26.9	-0.4
G21K				IAML		13 22 04.4	
	comp=N,581nm,0.8s						
HDA	**Harding Lake**	**2.06**	**95**		Pn	13 21 27.7	-0.3
HDA				IAML		13 22 00.4	
	comp=N,544nm,0.5s						
HDA				IAML		13 22 00.5	
	comp=E,525nm,0.5s						
IL01		**2.06**	**85**		Pn	13 21 26.8	-1.2
IL31		**2.06**	**85**		Pn	13 21 27.4	-0.5
ILAR	**Eielson Array**	**2.06**	**85**		Pn	13 21 26.8	-1.3
G23K	**Bananza Creek**	**2.17**	**18**		Pn	13 21 29.8	+0.2
G23K				IAML		13 22 02.6	
	comp=E,412nm,0.9s						
L22K	**Petersville**	**2.18**	**169**		Pn	13 21 31.2	+1.4
L22K				IAML		13 22 03.2	
	comp=E,843nm,0.4s						
L22K				IAML		13 22 04.1	
	comp=N,874nm,0.7s						
H19K	**Roundabout Mou**	**2.20**	**295**		Pn	13 21 29.4	-0.5
H19K	**Roundabout Mou**	**2.20**	**295**	IAML		13 22 08.5	
	comp=E,377nm,0.8s						
H19K				IAML		13 22 16.5	
	comp=N,384nm,1.0s						
WAT7	**Susitna Watana**	**2.23**	**144**		Pn	13 21 31.2	+0.8
GCSA	**Galena City Sc**	**2.23**	**275**		Pn	13 21 30.4	+0.1
GCSA					Pb	13 21 31.6	-2.3
WAT1	**Susitna Watana**	**2.31**	**141**		Pn	13 21 32.2	+0.8
CUT	**Chulitna**	**2.35**	**164**		Pn	13 21 33.5	+1.5
L20K	**Farewell, AK**	**2.40**	**205**		Pn	13 21 32.6	-0.1
DHY	**Denali Highway**	**2.48**	**128**		Pn	13 21 34.9	+1.0
DHY				IAML		13 22 13.7	
	comp=N,320nm,0.5s						
J18K	**Innoko River**	**2.52**	**244**		Pn	13 21 34.1	-0.2
J18K				IAML		13 22 17.5	
	comp=E,610nm,0.6s						
J18K				IAML		13 22 27.2	
	comp=N,610nm,0.8s						
COLD	**Coldfoot**	**2.65**	**13**		Pn	13 21 37.0	+0.9
G24K	**Hadweenzic Riv**	**2.69**	**38**		Pn	13 21 36.3	-0.3
SKT	**Skwentna**	**2.69**	**178**		Pn	13 21 38.2	+1.4
G19K	**Purcell Mounta**	**2.71**	**306**		Pn	13 21 36.5	-0.4
J25K	**Salcha River,**	**2.72**	**88**		Pn	13 21 36.3	-0.8
J25K	**Salcha River,**	**2.72**	**88**	IAML		13 22 19.9	
	comp=E,339nm,1.1s						
K24K	**Donnelly Dome**	**2.72**	**106**		Pn	13 21 37.9	+0.9
WAT6	**Susitna Watana**	**2.73**	**138**		Pn	13 21 37.8	+0.4
M20K	**Styx River**	**2.87**	**194**		Pn	13 21 39.8	+0.7
M20K				IAML		13 22 25.3	
	comp=N,490nm,0.4s						
L19K	**White Mountain**	**2.87**	**211**		Pn	13 21 39.0	-0.2
H18K	**Honhosa River**	**2.89**	**283**		Pn	13 21 38.9	-0.6
H18K	**Honhosa River**	**2.89**	**283**	IAML		13 22 26.8	
	comp=E,296nm,0.8s						
H18K				IAML		13 22 36.9	
	comp=N,207nm,0.8s						
F20K	**Avaraart Lake**	**2.92**	**327**		Pn	13 21 40.1	+0.3
G25K	**Bearman Lake**	**3.13**	**45**		Pn	13 21 41.8	-0.8
RIDG	**Independent Ri**	**3.13**	**104**	IAML		13 22 34.6	
	comp=N,365nm,0.7s						
RIDG				IAML		13 22 39.0	
	comp=E,302nm,0.6s						
GHO	**Glory Hole Cre**	**3.16**	**155**		Pn	13 21 43.8	+0.7
GHO	**Glory Hole Cre**	**3.16**	**155**	IAML		13 22 36.7	
	comp=N,314nm,0.6s						
GHO				IAML		13 22 37.6	
	comp=E,328nm,0.8s						
STLK	**Strandline Lak**	**3.18**	**181**	IAML		13 22 37.2	
	comp=E,302nm,0.9s						
STLK				IAML		13 22 39.6	
	comp=N,207nm,0.8s						
G18K	**Tagagawik**	**3.18**	**296**		Pn	13 21 43.2	-0.2
PAX	**Paxson**	**3.23**	**119**	IAML		13 22 36.2	
	comp=E,266nm,0.9s						
PAX				IAML		13 22 40.0	
	comp=N,164nm,0.9s						
SUA	**Susitna One**	**3.24**	**172**	IAML		13 22 39.7	
	comp=N,315nm,1.1s						
SUA				IAML		13 22 43.2	
	comp=E,324nm,0.9s						
SML	**Sawmill**	**3.24**	**151**		Pn	13 21 44.6	+0.3
SML	**Sawmill**	**3.24**	**151**	IAML		13 22 47.9	
	comp=E,260nm,0.9s						
SML				IAML		13 22 48.8	
	comp=N,285nm,0.8s						
F24K	**Squaw Lake**	**3.26**	**27**		Pn	13 21 44.3	-0.2
F24K	**Squaw Lake**	**3.26**	**27**	IAML		13 22 38.3	
	comp=E,142nm,0.8s						
PMR	**Palmer**	**3.29**	**158**		Pn	13 21 45.8	+0.9
PMR	**Palmer**	**3.29**	**158**	IAML		13 22 38.7	
	comp=E,239nm,0.8s						
PMR				IAML		13 22 43.8	
	comp=N,146nm,0.6s						
F19K	**Shaleruckik Mo**	**3.33**	**314**		Pn	13 21 45.2	-0.2
F19K	**Shaleruckik Mo**	**3.33**	**314**	IAML		13 22 46.4	
	comp=N,138nm,1.1s						
SCRK	**Sand Creek**	**3.42**	**98**		Pn	13 21 48.3	+1.5
SCRK	**Sand Creek**	**3.42**	**98**	IAML		13 22 46.8	
	comp=N,198nm,1.1s						
SCRK				IAML		13 22 49.9	
	comp=E,154nm,0.6s						
SPBG	**Spurr Blockage**	**3.43**	**186**		Pn	13 21 48.1	+1.2
SCM	**Sheep Creek Mo**	**3.46**	**143**	IAML		13 22 35.6	
	comp=N,171nm,0.5s						
SCM				IAML		13 22 46.7	
	comp=E,163nm,0.6s						
SPCN	**Chakachatna No**	**3.46**	**184**		Pn	13 21 48.4	+1.2
SPCR	**Spurr Chakacha**	**3.48**	**184**		Pn	13 21 48.5	+0.9
DOT	**Dot Lake**	**3.49**	**103**	IAML		13 22 46.1	
	comp=N,245nm,0.5s						
DOT				IAML		13 22 51.5	
	comp=E,172nm,0.6s						
CKL	**Chakachamna La**	**3.49**	**185**		Pn	13 21 49.0	+1.2
J17K	**VABM Dome**	**3.49**	**252**	IAML		13 22 46.5	
	comp=N,283nm,0.9s						
J26L	**Joseph Creek**	**3.50**	**89**		Pn	13 21 47.7	-0.3
J26L	**Joseph Creek**	**3.50**	**89**	IAML		13 22 47.2	
	comp=N,191nm,0.9s						
J26L				IAML		13 22 48.3	
	comp=E,125nm,0.6s						
E23K	**Chandalar**	**3.51**	**13**	IAML		13 22 46.2	
	comp=E,197nm,1.1s						
E23K				IAML		13 22 51.3	
	comp=N,174nm,1.2s						
H17K	**Granite Mounta**	**3.53**	**278**		Pn	13 21 48.8	+0.6
H17K	**Granite Mounta**	**3.53**	**278**	IAML		13 22 47.5	
	comp=N,196nm,0.7s						
H17K				IAML		13 22 49.3	
	comp=E,219nm,0.8s						
K17K	**Iditarod**	**3.54**	**239**		Pn	13 21 47.6	-0.7
M24K	**Tolsona, Glenn**	**3.57**	**133**		Pn	13 21 50.2	+1.5
M24K	**Tolsona, Glenn**	**3.57**	**133**	IAML		13 23 06.5	
	comp=N,243nm,1.1s						
KNK	**Knik Glacier**	**3.58**	**154**	IAML		13 22 50.7	
	comp=E,202nm,0.4s						
KNK				IAML		13 22 51.3	
	comp=N,135nm,0.9s						
E19K	**Redstone River**	**3.60**	**324**		Pn	13 21 49.6	+0.4
E19K	**Redstone River**	**3.60**	**324**	IAML		13 22 51.6	
	comp=E,121nm,0.9s						
E19K				IAML		13 22 58.9	
	comp=N,120nm,0.9s						
E24K	**Your Creek**	**3.66**	**19**		Pn	13 21 50.1	+0.1
E24K	**Your Creek**	**3.66**	**19**	IAML		13 22 52.1	
	comp=N,191nm,1.1s						
E24K				IAML		13 22 54.3	
	comp=E,255nm,1.1s						
I26K	**Coal Creek Min**	**3.68**	**76**	IAML		13 22 56.0	
	comp=N,190nm,0.6s						
RC01	**Rabbit Creek A**	**3.69**	**165**		Pn	13 21 52.1	+1.6
RC01	**Rabbit Creek A**	**3.69**	**165**	IAML		13 22 58.5	
	comp=E,98nm,0.5s						
RC01				IAML		13 22 58.6	
	comp=N,110nm,0.5s						
M18K	**Stony River**	**3.70**	**212**		Pn	13 21 49.9	-0.6
HARP	**HAARP**	**3.70**	**125**		Pn	13 21 52.4	+1.9
F25K	**Christian Rive**	**3.83**	**37**		Pn	13 21 51.9	-0.4
F25K	**Christian Rive**	**3.83**	**37**	IAML		13 22 57.6	
	comp=E,89nm,1.1s						
F18K	**Selawik**	**3.83**	**304**		Pn	13 21 51.1	-1.1
G17K	**Kiwalik Mounta**	**3.89**	**287**		Pn	13 21 52.8	-0.3
L17K	**Donlin**	**3.91**	**233**		Pn	13 21 52.7	-0.7
G26K	**Porcupine Rive**	**3.98**	**51**	IAML		13 23 03.1	
	comp=E,120nm,1.1s						
G26K				IAML		13 23 15.3	
	comp=N,130nm,0.8s						
I17K	**Unalakleet**	**4.01**	**263**		Pn	13 21 54.2	-0.5
I17K	**Unalakleet**	**4.01**	**263**	IAML		13 23 07.1	
	comp=N,174nm,1.0s						
BM01	**Burnt Mountain**	**4.04**	**43**		Pn	13 21 54.5	-0.7
TOLK	**Toolik Lake Re**	**4.08**	**11**		Pn	13 21 57.4	+1.6
TOLK	**Toolik Lake Re**	**4.08**	**11**	IAML		13 23 11.3	
	comp=E,120nm,1.1s						
PWL	**Port Wells**	**4.12**	**157**		Pn	13 21 58.0	+1.8
PWL	**Port Wells**	**4.12**	**157**	IAML		13 23 04.7	
	comp=N,140nm,0.8s						
PWL				IAML		13 23 09.4	
	comp=E,143nm,1.0s						
KLU	**Klutina**	**4.12**	**138**		Pn	13 21 58.1	+1.8
M17K	**Holitna River**	**4.19**	**221**		Pn	13 21 56.6	-0.6
E25K	**Arctic Village**	**4.25**	**33**		Pn	13 21 57.9	-0.3
E25K	**Arctic Village**	**4.25**	**33**	IAML		13 23 13.9	
	comp=N,79nm,1.1s						
E25K				IAML		13 23 19.0	
	comp=E,90nm,1.1s						
WACK	**Wrangell Chich**	**4.26**	**126**		Pn	13 21 60.0	+1.5
F26K	**Sheenjek River**	**4.31**	**42**		Pn	13 21 58.2	-0.7
D23K	**Nanushuk River**	**4.34**	**5**		Pn	13 21 59.6	+0.3
D23K	**Nanushuk River**	**4.34**	**5**	IAML		13 23 13.3	
	comp=E,70nm,0.8s						
GLI	**Glacier Island**	**4.34**	**149**	IAML		13 23 18.4	
	comp=E,114nm,0.8s						
GLI				IAML		13 23 26.7	
	comp=N,86nm,0.9s						
I27K	**Kandik River**	**4.36**	**73**		Pn	13 21 59.3	-0.3
I27K	**Kandik River**	**4.36**	**73**	IAML		13 23 15.8	
	comp=N,146nm,1.1s						

F17K	**Baldwin Pennin**	**4.36**	**298**	IAML			13 23 17.8		
	comp=E,93nm,1.2s								
F17K				IAML			13 23 18.0		
	comp=N,112nm,1.2s								
N25K	**Chitina, Valde**	**4.44**	**130**			Pn	13 22 02.7	+1.9	
DIV	**Divide**	**4.46**	**140**			Pn	13 22 02.4	+1.4	
DIV	**Divide**	**4.46**	**140**	IAML			13 23 25.7		
	comp=N,83nm,0.8s								
M26K	**Nabesna, AK**	**4.50**	**116**	IAML			13 23 14.7		
	comp=N,120nm,0.6s								
M26K				IAML			13 23 15.2		
	comp=E,94nm,0.8s								
D20K	**Etivluk River**	**4.51**	**336**			Pn	13 22 02.7	+0.9	
H27K	**Steamboat Moun**	**4.52**	**65**	IAML			13 23 21.6		
	comp=E,83nm,0.9s								
H27K				IAML			13 23 24.3		
	comp=N,77nm,0.9s								
G16K	**Koyuk River**	**4.58**	**284**	IAML			13 23 26.8		
	comp=E,108nm,1.1s								
FID	**Port Fidalgo**	**4.60**	**146**			Pn	13 22 04.1	+1.3	
FID	**Port Fidalgo**	**4.60**	**146**	IAML			13 23 31.9		
	comp=N,60nm,1.0s								
FID				IAML			13 23 36.5		
	comp=E,61nm,0.5s								
L16K	**Owhat River**	**4.61**	**234**			Pn	13 22 02.5	-0.5	
L27K	**Beaver Creek,**	**4.64**	**106**			Pn	13 22 02.1	-1.4	
L27K	**Beaver Creek,**	**4.64**	**106**	IAML			13 23 23.4		
	comp=N,93nm,1.0s								
L27K				IAML			13 23 23.6		
	comp=E,66nm,0.8s								
C21K	**Knifeblade Rid**	**4.68**	**346**			Pn	13 22 05.4	+1.5	
ILSW	**Iliamna Southw**	**4.75**	**189**	IAML			13 23 35.1		
	comp=E,66nm,0.9s								
ILSW				IAML			13 23 50.7		
	comp=N,60nm,0.9s								
E17K	**Hotham Inlet**	**4.82**	**305**			Pn	13 22 05.6	-0.3	
GLB	**Gilahina Butte**	**4.82**	**128**	IAML			13 23 29.1		
	comp=N,52nm,0.9s								
N17K	**Nushagak Hills**	**4.87**	**214**			Pn	13 22 06.0	-0.5	
BMRM	**Bremner River**	**4.93**	**136**	IAML			13 23 32.5		
	comp=N,71nm,1.2s								
BMRM				IAML			13 23 33.9		
	comp=E,53nm,1.0s								
M16K	**Timber Creek**	**4.94**	**226**			Pn	13 22 06.6	-1.0	
EYAK	**Cordova Ski Ar**	**4.95**	**144**	IAML			13 23 30.5		
	comp=N,45nm,0.9s								
M27K	**Edge Creek, AK**	**4.96**	**113**	IAML			13 23 34.4		
	comp=N,86nm,1.0s								
M27K				IAML			13 23 35.8		
	comp=E,86nm,1.1s								
K15K	**Wolf Creek Mou**	**5.01**	**246**	IAML			13 23 47.1		
	comp=N,76nm,0.9s								
K15K				IAML			13 23 47.9		
	comp=E,72nm,1.1s								
I28M	**Miner Creek**	**5.04**	**76**			Pn	13 22 08.8	-0.2	
I28M	**Miner Creek**	**5.04**	**76**	IAML			13 23 41.3		
	comp=N,88nm,0.8s								
I28M				IAML			13 23 57.6		
	comp=E,56nm,1.0s								
O18K	**Koktuh Hills**	**5.10**	**200**			Pn	13 22 09.6	-0.1	
B21K	**Ikpikpuk River**	**5.11**	**348**	IAML			13 23 44.2		
	comp=N,52nm,0.9s								
B21K				IAML			13 24 05.4		
	comp=E,38nm,1.2s								
D25K	**Kavik River**	**5.12**	**22**			Pn	13 22 10.8	+0.8	
D25K	**Kavik River**	**5.12**	**22**	IAML			13 23 40.3		
	comp=E,39nm,1.1s								
D25K				IAML			13 23 49.4		
	comp=N,42nm,1.1s								
MCARA	**McCarthy VSAT**	**5.13**	**126**	IAML			13 23 41.3		
	comp=E,51nm,1.1s								
MCARA				IAML			13 24 02.0		
	comp=N,72nm,1.1s								
C23K	**Itkillik River**	**5.21**	**4**	IAML			13 23 44.7		
	comp=N,73nm,1.0s								
C23K				IAML			13 23 44.8		
	comp=E,54nm,1.2s								
N16K	**Nishlik Lake**	**5.33**	**221**			Pn	13 22 12.4	-0.4	
O17K	**Koliganek Bris**	**5.52**	**210**			Pn	13 22 14.6	-0.9	
P18K	**Big Mountain,**	**5.55**	**199**			Pn	13 22 15.9	0.0	
F28M	**Old Crow**	**5.63**	**53**			Pn	13 22 16.0	-1.1	
M15K	**Kasigluk River**	**5.75**	**230**			Pn	13 22 17.9	-0.7	
H29M	**Whitestone**	**5.77**	**68**			Pn	13 22 17.8	-1.1	
C27K	**Jago River**	**5.87**	**28**			Pn	13 22 21.3	+1.0	
G29M	**Pine Creek**	**6.05**	**62**			Pn	13 22 21.6	-1.2	

*SJA **16** 13:30:56.8±0.8,30.°28S×71.°69W,h15km±2km,ML3.7, MW3.7*
*GUC **16** 13:31:00.4±0.7,30.°33S×71.°50W,h48km±2km,ML3.7*
ISC 16 13:31:00.6±1.2,30.°30S±0.°02×71.°51W±0.°04,h18km±6km, n56,σ1°93/86,1C-7D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.39**	**196**	⇑*iP*	**Pg**	**13 31 09.5**	**+0.9**
CO06				*eS*	**Sg**	**13 31 16.3**	**+2.2**
CO05	**La Serena**	**0.45**	**32**	⇓*iP*	**Pg**	**13 31 11.1**	**+1.3**
CO05				*eS*	**Sb**	**13 31 19.0**	**+2.6**
CO05				IAML		13 31 20.0	
	comp=N,14μm,0.5s						
GO04	**Tololo Observa**	**0.63**	**78**	*iP*	**Pg**	**13 31 13.3**	**+0.2**
GO04				*eS*	**Sg**	**13 31 22.9**	**+1.2**
GO04				IAML		13 31 23.9	
	comp=E,12μm,0.2s						
GO04	**Tololo Observa**	**0.63**	**78**	*eP*	**Pg**	**13 31 12.6**	**-0.6**
GO04				IAML		13 31 26.0	
	comp=Z,6μm,0.6s						
CO03	**El Pedregal**	**0.89**	**127**	*iP*	**Pg**	**13 31 16.2**	**-1.8**
CO03				*eS*	**Sg**	**13 31 27.6**	**-2.1**
CO03				IAML		13 31 28.8	
	comp=E,2μm,0.3s						
CO03	**El Pedregal**	**0.89**	**127**	*eP*	**Pg**	**13 31 16.1**	**-1.8**
CO03				*eS*	**Sg**	**13 31 28.7**	**-1.1**
CO03				IAML		13 31 30.5	
	comp=Z,934nm,0.4s						
CO02	**Combarbal**	**1.00**	**154**	⇓*iP*	**Pg**	**13 31 18.2**	**-1.9**
CO02				*eS*	**Sg**	**13 31 31.2**	**-2.0**
CO02				IAML		13 31 34.3	
	comp=E,7μm,0.2s						
CO02	**Combarbal**	**1.00**	**154**	*eP*	**Pg**	**13 31 18.0**	**-2.1**
CO02				*eS*	**Sg**	**13 31 31.8**	**-1.5**
CO02				IAML		13 31 32.5	
	comp=Z,2μm,0.5s						
CO01	**Juntas del Tor**	**1.27**	**76**	*iP*	**Pn**	**13 31 23.0**	**-0.8**
CO01				*eS*	**Sb**	**13 31 38.3**	**-2.0**
CO01				IAML		13 31 39.9	
	comp=N,2μm,0.4s						
CO01	**Juntas del Tor**	**1.27**	**76**	*eP*	**Pn**	**13 31 23.0**	**-0.8**
CO01				*eS*	**Sb**	**13 31 38.5**	**-1.8**
CO01				IAML		13 31 39.7	
	comp=Z,3μm,0.4s						
LCO	**Las Campanas**	**1.47**	**29**	⇓*iP*	**Pn**	**13 31 25.4**	**-1.0**
LCO				*eS*	**Sn**	**13 31 44.1**	**-1.2**
LCO				IAML		13 31 48.0	
LCO	**Las Campanas**	**1.47**	**29**	*eP*	**Pn**	**13 31 25.3**	**-1.1**
LCO				*eS*	**Sn**	**13 31 44.9**	**-0.5**
LCO				IAML		13 31 48.3	
	comp=Z,1μm,0.3s						
AROD	**Rodeo**	**1.77**	**86**	*eP*	**Pn**	**13 31 31.8**	**+1.1**
AROD				*eS*	**Sn**	**13 31 49.0**	**-3.9**
CO04	**Los Peladeros**	**1.80**	**165**	*eP*	**Pn**	**13 31 29.9**	**-1.1**
CO04				*eS*	**Sn**	**13 31 53.4**	**-0.1**
CO04				IAML		13 31 58.0	
	comp=N,2μm,0.3s						
AC05	**El Transito**	**1.82**	**37**	⇓*iP*	**Pn**	**13 31 31.1**	**0.0**
AC05				*eS*	**Sn**	**13 31 53.8**	**0.0**
AC05				IAML		13 31 56.3	
	comp=N,892nm,0.4s						
AC05	**El Transito**	**1.82**	**37**	*eP*	**Pn**	**13 31 31.1**	**0.0**
AC05				*eS*	**Sn**	**13 31 54.9**	**+1.2**
AC05				IAML		13 31 55.8	
	comp=Z,490nm,0.8s						
ACDV	**Cuesta del Vie**	**2.08**	**87**	*eP*	**Pn**	**13 31 36.5**	**+1.8**
ACDV				IAML		13 32 11.1	
	comp=Z,346nm,0.5s						
AC04	**Llanos de Chal**	**2.12**	**11**	*eP*	**Pn**	**13 31 34.3**	**-1.0**
AC04	**Llanos de Chal**	**2.12**	**11**	*eP*	**Sn**	**13 31 34.2**	**-1.0**
AC04				*eS*	**Sn**	**13 31 57.2**	**-4.0**
AC04				IAML		13 32 13.0	
	comp=Z,253nm,0.6s						
ACCO	**Cerro Coronel**	**2.13**	**98**	*eP*	**Pn**	**13 31 37.6**	**+1.9**
ACCO				*eS*	**Sn**	**13 32 06.6**	**+4.7**
VA06	**Catapilco**	**2.26**	**175**	⇓*iP*	**Pn**	**13 31 36.0**	**-1.1**
RTLS	**Leoncito**	**2.42**	**129**	⇓*eP*	**Pn**	**13 31 40.9**	**+1.3**
RTLS				*eS*	Sn	13 31 54.0	-15
RTLS				IAML		13 32 18.5	
	comp=Z,616nm,0.2s						
VA03	**San Esteban**	**2.59**	**162**	*eP*	**Pn**	**13 31 41.7**	**0.0**
VA03	**San Esteban**	**2.59**	**162**	*eP*	**Pn**	**13 31 41.8**	**0.0**
VA03				*eS*	**Sn**	**13 32 16.5**	**+3.7**
VA03				IAML		13 32 18.6	
	comp=Z,458nm,0.2s						
ROCH	**El Roble**	**2.70**	**171**	*iP*	**Pn**	**13 31 42.5**	**-0.8**
ROCH				⇓*iP*		13 31 42.5	
ROCH				*eS*	**Sn**	**13 32 18.3**	**+2.7**
ROC1	**El Roble**	**2.70**	**171**	*eP*	**Pn**	**13 31 42.6**	**-0.8**
ROC1				*eS*	**Sn**	**13 32 13.3**	**-2.5**
VA01	**Torpederas**	**2.71**	**182**	*eP*	Pn	13 31 30.4	-13
ZON	**Zonda**	**2.73**	**118**	*eP*	**Pn**	**13 31 44.8**	**+1.1**
ZON				*eP*		13 31 46.0	
ZON				*eS*	**Sn**	**13 32 20.5**	**+4.2**
AGUA	**GUANDACOL**	**2.75**	**74**	*eP*	**Pn**	**13 31 46.9**	**+3.0**
AGUA				IAML		13 32 32.3	
	comp=Z,286nm,0.7s						
RTLL	**Cerro Villicun**	**2.81**	**112**	*eP*	**Pn**	**13 31 46.0**	**+1.3**
RTLL				*eS*	**Sn**	**13 32 15.1**	**-3.0**
RTLL				IAML		13 32 37.1	
	comp=Z,300nm,0.4s						
SJA	**San Juan**	**2.82**	**116**	*eP*	**Pn**	**13 31 48.2**	**+3.4**
SJA				*eS*	**Sn**	**13 32 16.6**	**-1.7**
SJA				IAML		13 32 31.1	
	comp=Z,146nm,0.5s						
PEL	**Peldehue**	**2.92**	**166**	*eP*	**Pn**	**13 31 47.1**	**+0.9**
PEL				*eS*	**Sn**	**13 32 20.7**	**-0.2**
PEL				IAML		13 32 35.4	
	comp=Z,216nm,0.6s						
GO03	**Copiapo**	**2.92**	**23**	*eP*	**Pn**	**13 31 45.9**	**-0.4**
GO03				*eS*	**Sn**	**13 32 22.6**	**+1.7**
GO03				IAML		13 32 36.0	
	comp=N,373nm,0.5s						
GO03	**Copiapo**	**2.92**	**23**	*eP*	**Pn**	**13 31 46.0**	**-0.3**
GO03				*eS*	**Sn**	**13 32 22.8**	**+1.8**
GO03				IAML		13 32 41.1	
	comp=Z,324nm,0.7s						
MT02	**Curacav**	**2.97**	**174**	*eP*	**Pn**	**13 31 45.7**	**-1.1**
MT02	**Curacav**	**2.97**	**174**	*eP*	**Pn**	**13 31 45.7**	**-1.1**
MT02				*eS*	**Sn**	**13 32 25.8**	**+3.8**
MT02				IAML		13 32 37.6	
	comp=Z,142nm,0.8s						
MT10	**Hacienda Santa**	**3.08**	**165**	*eP*	**Pn**	**13 31 48.9**	**+0.4**
CFA	**Coronel Fontan**	**3.10**	**116**	*eP*	**Pn**	**13 31 49.6**	**+1.0**
AC06	**Mina Casimiro**	**3.10**	**19**	*eP*	**Pn**	**13 31 47.9**	**-0.8**
MT05	**Renca**	**3.15**	**168**	*eP*	**Pn**	**13 31 49.4**	**0.0**
MT05				*eS*	**Sn**	**13 32 28.0**	**+1.4**
MT05				IAML		13 32 41.6	
	comp=Z,264nm,1.2s						
ASAL	**Salagasta**	**3.23**	**136**	*eP*	**Pn**	**13 31 53.0**	**+2.4**
VCA	**Vinchina**	**3.28**	**62**	⇓*iP*	**Pn**	**13 31 54.1**	**+2.8**
MT04	**Ro Olivares**	**3.31**	**160**	*eP*	**Pn**	**13 31 53.2**	**+1.5**
MT08	**Bocatoma Ro**	**3.38**	**158**	*eP*	**Pn**	**13 31 55.1**	**+2.3**
MT08				*eS*	**Sn**	**13 32 37.0**	**+4.4**
MT08	**Bocatoma Ro**	**3.38**	**158**	*eS*	**Sn**	**13 32 34.2**	**+1.7**
MT08				IAML		13 32 44.6	
	comp=Z,172nm,0.7s						
MT09	**Talagante**	**3.49**	**173**	*eP*	**Pn**	**13 31 53.5**	**-0.7**
MT12	**Pirque**	**3.52**	**167**	*eP*	**Pn**	**13 31 55.0**	**+0.6**
MT01	**Popeta**	**3.56**	**176**	*eP*	**Pn**	**13 31 53.7**	**-1.2**
MT01	**Popeta**	**3.56**	**176**	*eS*	**Sn**	**13 32 38.3**	**+1.7**
MT01				IAML		13 32 52.7	
	comp=Z,143nm,0.6s						
MT13	**San Alfonso**	**3.59**	**163**	*eP*	**Pn**	**13 31 57.6**	**+2.2**
MT13	**San Alfonso**	**3.59**	**163**	*eS*	**Sn**	**13 32 38.5**	**+1.1**
MT13				IAML		13 32 49.8	
	comp=Z,171nm,0.3s						
LMEL	**Las Melosas**	**3.71**	**163**	*eP*	**Pn**	**13 31 58.0**	**+0.9**
LMEL				*eS*	**Sn**	**13 32 41.9**	**+1.5**
AC02	**Maricunga**	**4.04**	**32**	*iP*	**Pn**	**13 32 02.0**	**-0.1**
AC02	**Maricunga**	**4.04**	**32**	*eP*	**Pn**	**13 32 02.5**	**+0.4**
AC02				*eP*	**Pn**	**13 32 02.5**	**+0.4**
AC02				*eS*	**Sn**	**13 32 52.8**	**+3.6**
AC02				IAML		13 33 02.0	
	comp=Z,170nm,0.9s						
AC01	**Pan de Azucar**	**4.22**	**11**	*eP*	Pn	13 32 00.6	-3.4
TCA	**Tanti**	**6.04**	**102**	*eP*	**Pn**	**13 32 28.1**	**-1.0**
TCA				*eS*		13 32 31.2	

*IDC **16** 13:35:42.9±2.1,1.°74N×126.°82E,h0km,mb3.3/4, mbtmp3.3/4,MS3.0/1,Error ellipse: s-maj=212.4km s-min=22.4km az=66.0*
*DJA **16** 13:35:46.9±0.8,2.°1N±2.°×12.°6E±.°,h11km±6km,M3.3/10, MLv3.3/10*
ISC 16 13:35:49.0±1.0,1.°66N±0.°06×126.°39E±0.°06,h35km,n10, σ1°39/12,mb3.3/4,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.31**	**132**	P	**Pn**	**13 36 10.7**	**-0.2**
TNTI				S	**Sn**	**13 36 29.2**	**+1.9**
SGSI	**Sangihe**	**2.19**	**337**	P	**Pn**	**13 36 22.6**	**-0.4**
SGSI				S	**Sn**	**13 36 50.3**	**+1.4**
KMSI	**Cibinong**	**2.64**	**246**	P	**Pn**	**13 36 28.6**	**-0.5**
KMSI				S	**Sn**	**13 37 01.4**	**+1.5**
SANI	**Sanana**	**3.70**	**186**	P	**Pn**	**13 36 44.2**	**+0.4**
LUWI	**Luwuk**	**4.50**	**233**	P	**Pn**	**13 36 54.6**	**-0.2**
WRA	**Warramunga Arr**	**22.84**	**160**	P	**P**	**13 40 46.8**	**-2.5**
	0.7nm,0.5s,baz=340,slow=10,SNR=12 0.7nm,0.5s						
JOW	**Kunigami**	**25.10**	**4**	LR	LR	13 52 01.7	
	comp=Z,40nm,20.9s,baz=102,slow=39						
ASAR	**Alice Springs**	**26.21**	**164**	P	**P**	**13 41 19.5**	**-1.3**
	0.2nm,0.5s,baz=347,slow=8.7,SNR=8.8 0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**13 45 45.9**	**+0.1**
	0.1nm,0.4s,baz=122,slow=7.1,SNR=4.1 0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**13 46 15.2**	**+0.9**
	0.1nm,0.4s,baz=135,slow=5.6,SNR=1.6 0.1nm,0.4s						

IDC 16 13:36:21.8±14.0,13.°73S×165.°41E,h0km,mb3.8/3, mbtmp3.7/4,ML2.8/1,Error ellipse: s-maj=246.6km s-min=38.2km az=55.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.36**	**173**	Pn	Pn	13 38 24.8	+0.4
	0.1nm,0.3s,baz=0.3,slow=17,SNR=1.4						
DZM				Sn	Sn	13 40 02.1	+2.5
	baz=25,slow=14 2.3nm,0.9s						
STKA	**Stephens Creek**	**28.32**	**226**	P	P	13 42 16.2	-1.2
	1.5nm,0.4s,baz=56,slow=7.3,SNR=3.7 1.5nm,0.4s						
WRA	**Warramunga Arr**	**30.34**	**254**	P	P	13 42 36.0	+0.5
	0.3nm,0.6s,baz=84,slow=8.5,SNR=12 0.3nm,0.6s						
ASAR	**Alice Springs**	**31.37**	**247**	P	P	13 42 44.7	+0.1
	0.5nm,0.5s,baz=80,slow=9.0,SNR=16 0.5nm,0.5s						

*IDC **16** 13:47:40.0±0.8,15.°68S×174.°10W,h0km,mb3.8/7, mbtmp3.9/8,ML2.9/1,Error ellipse: s-maj=37.9km s-min=21.5km az=146.0*
ISC 16 13:47:52.1±0.8,16.°0S±0.°2×173.°9W±0.°1,h100km,n10, σ1°25/11,mb3.7/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**14.35**	**113**	Pn	**Pn**	**13 51 10.0**	**-0.6**
	0.5nm,0.3s,baz=243,slow=4.5,SNR=2.0						
RAR				Sn	**Sn**	**13 53 47.6**	**-1.1**
	0.5nm,0.3s,baz=117,slow=2.3,SNR=1.2 7.4nm,0.6s						
WRA	**Warramunga Arr**	**49.27**	**257**	P	**P**	**13 56 29.5**	**-1.7**
	0.2nm,0.6s,baz=91,slow=7.4,SNR=4.8 0.2nm,0.6s						
ASAR	**Alice Springs**	**49.50**	**252**	P	**P**	**13 56 31.9**	**-0.9**
	0.9nm,0.6s,baz=89,slow=7.4,SNR=20 0.9nm,0.6s						
QSPA	**South Pole Qui**	**74.07**	**180**	P	**P**	**13 59 19.5**	**+2.4**
	1.0nm,0.9s,baz=56,slow=1.9,SNR=5.4 1.0nm,0.9s						
NVAR	**Mina Array Bea**	**75.06**	**42**	P	**P**	**13 59 23.9**	**+0.5**
	1.3nm,0.9s,baz=230,slow=10,SNR=8.8 1.3nm,0.9s						
TXAR	**Lajitas Array**	**81.31**	**56**	P	**P**	**13 59 58.7**	**+0.8**
	0.4nm,0.7s,baz=216,slow=6.2,SNR=5.1 0.4nm,0.7s						
PDAR	**Pinedale Array**	**83.00**	**42**	P	**P**	**14 00 06.8**	**+0.2**
	1.3nm,0.7s,baz=205,slow=3.3,SNR=15 1.3nm,0.7s						
ILAR	**Eielson Array**	**83.10**	**11**	P	**P**	**14 00 06.3**	**0.0**
	0.3nm,0.5s,baz=198,slow=4.7,SNR=10 0.3nm,0.5s						
ARCES	**ARCESS Array B**	**125.11**	**352**	PKP	**PKPdf**	**14 06 39.9**	**-0.4**
	2.7nm,1.1s,baz=5.7,slow=1.2,SNR=5.2						
BRTR	**Keskin Array B**	**146.31**	**320**	PKPbc	**PKPab**	**14 07 21.9**	**-0.8**
	0.3nm,0.3s,baz=56,slow=2.6,SNR=2.6						

*IDC **16** 13:59:12.7±1.5,1.°65N×126.°46E,h0km,mb3.4/4, mbtmp3.4/5,ML3.4/1,Error ellipse: s-maj=114.0km s-min=16.9km az=69.0*
*DJA **16** 13:59:17.9±0.9,2.°1N±2.°×12.°6E±.°,h20km±8km,M3.2/8, MLv3.2/8*
ISC 16 13:59:19.0±0.9,1.°63N±0.°06×126.°33E±0.°07,h35km,n8, σ1°22/13,mb3.5/4,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**130**	P	**Pn**	**13 59 42.1**	**+0.9**
TNTI				S	**Sn**	**13 59 58.1**	**+0.2**
SGSI	**Sangihe**	**2.19**	**339**	P	**Pn**	**13 59 53.2**	**+0.2**
SGSI				S	**Sn**	**14 00 20.5**	**+1.6**
KMSI	**Cibinong**	**2.57**	**246**	P	**Pn**	**13 59 58.4**	**+0.2**
KMSI				S	**Sn**	**14 00 29.4**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**14 03 43.8**	**-0.7**
	0.1nm,0.3s,baz=356,slow=12,SNR=1.3 0.9nm,0.7s						
WRA	**Warramunga Arr**	**22.83**	**160**	P	**P**	**14 04 17.9**	**-1.4**
	0.8nm,0.5s,baz=340,slow=11,SNR=11 0.8nm,0.5s						
ASAR	**Alice Springs**	**26.20**	**164**	P	**P**	**14 04 49.9**	**-0.8**
	0.3nm,0.5s,baz=343,slow=8.4,SNR=7.8						
ASAR				PcP	**PcP**	**14 08 17.4**	**+0.2**
	0.1nm,0.4s,baz=334,slow=1.9,SNR=4.1						
ASAR				S	**S**	**14 09 22.4**	**+1.8**
	0.2nm,0.4s,baz=350,slow=15,SNR=5.8 0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**14 09 13.7**	**-1.9**
	0.2nm,0.4s,baz=118,slow=7.9,SNR=4.8 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	**P**	**14 09 44.3**	**+0.1**
	0.2nm,0.5s,baz=127,slow=6.5,SNR=2.8 0.2nm,0.5s						

*REY **16** 14:15:06.4,63.°67N×23.°55W,h10km*
*IDC **16** 14:15:06.9±1.7,63.°70N×23.°60W,h0km,mb3.7/5, mbtmp3.7/6,ML3.5/1,MS3.5/37,Error ellipse: s-maj=52.2km s-min=26.9km az=10.0*
ISC 16 14:15:10.5±1.2,63.°80N±0.°06×23.°10W±0.°06,h20km±3km, n63,σ1°88/46,mb3.9/6,MS3.4/32,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRNE	**Reykjanes**	**0.18**	**85**	S	**Sg**	**14 15 19.8**	**+1.3**
IRNE				P	**Pg**	**14 15 14.0**	**-1.3**
INVL	**Nylenda**	**0.24**	**43**	S	**Sg**	**14 15 21.6**	**+1.7**
INVL				P	**Pg**	**14 15 14.9**	**-1.2**
IGRV	**Grindav??k**	**0.29**	**79**	P	**Pg**	**14 15 15.8**	**-1.2**
IGRV				S	**Sg**	**14 15 23.0**	**+1.6**
IVOG	**Vogar**	**0.36**	**61**	P	**Pg**	**14 15 16.8**	**-1.3**
IVOG				S	**Sg**	**14 15 24.7**	**+1.5**
IKRI	**Krysuvik**	**0.46**	**80**	P	**Pg**	**14 15 18.2**	**-1.7**
IKRI				S	**Sg**	**14 15 27.5**	**+1.2**
IKAS	**Kald??rsel**	**0.59**	**68**	P	**Pg**	**14 15 20.5**	**-1.8**
IKAS				S	**Sg**	**14 15 31.9**	**+1.5**
IVOS	**Vogsosar**	**0.62**	**85**	P	**Pg**	**14 15 20.7**	**-2.1**
IVOS				S	**Sg**	**14 15 32.0**	**+0.9**
ISAN	**Sandskeio**	**0.72**	**69**	P	**Pg**	**14 15 22.3**	**-2.4**
ISAN				S	**Sg**	**14 15 35.8**	**+1.4**
IMOR	**Morastadir**	**0.78**	**49**	P	**Pg**	**14 15 23.4**	**-2.3**
IMOR				S	**Sg**	**14 15 36.4**	**+0.4**
IEDA	**Engidalur**	**0.81**	**69**	P	**Pg**	**14 15 23.5**	**-2.8**
IEDA				S	**Sg**	**14 15 37.6**	**+0.6**
IBJA	**Bjarnastaoir**	**0.81**	**79**	P	**Pg**	**14 15 24.1**	**-2.3**
IBJA				S	**Sg**	**14 15 37.6**	**+0.6**
IHEI	**Heioarbar**	**0.91**	**63**	P	**Pb**	**14 15 25.3**	**-2.3**
IHEI				S	**Sb**	**14 15 40.9**	**+1.6**
IKRO	**Krokur**	**0.92**	**70**	P	**Pb**	**14 15 26.3**	**-1.5**
IKRO				S	**Sb**	**14 15 41.2**	**+1.6**
ISOL	**Solvholt**	**0.96**	**81**	P	**Pb**	**14 15 26.0**	**-2.5**
ISOL				S	**Sb**	**14 15 41.0**	**+0.2**
IASM	**Asmuli**	**1.10**	**87**	P	**Pn**	**14 15 28.1**	**-2.7**
IASM				S	**Sb**	**14 15 45.5**	**+0.7**
ISAU	**Saurbar**	**1.20**	**80**	P	**Pn**	**14 15 30.3**	**-1.9**
ISAU				S	**Sn**	**14 15 48.5**	**+0.6**
BORG	**Borgarnes**	**1.23**	**38**	LR	LR	14 15 45.8	
	comp=Z,266nm,18.2s,baz=235,slow=27						
IASB	**sbjarnarstai**	**1.23**	**38**	P	**Pn**	**14 15 30.7**	**-1.8**
IASB				S	**Sn**	**14 15 48.9**	**+0.5**
IMID	**Miomork**	**1.44**	**94**	P	**Pn**	**14 15 33.4**	**-2.0**
IMJO	**Mjoaskard**	**1.52**	**84**	P	**Pn**	**14 15 35.5**	**-1.2**
IHES	**Hestalda**	**1.58**	**80**	P	**Pn**	**14 15 36.1**	**-1.4**
IRJU	**Rjupnafell**	**1.98**	**93**	P	**Pn**	**14 15 41.5**	**-1.3**
SCO	**Scoresbysund**	**6.73**	**3**	*iP*	**Pn**	**14 16 48.0**	**0.0**
SFJD	**Kangerlussuaq**	**11.85**	**298**	LR	LR	14 21 26.3	
	comp=Z,94nm,18.5s,baz=94,slow=32						
EKA	**Eskdalemuir Ar**	**13.14**	**121**	Pn	**Pn**	**14 18 17.3**	**+1.6**
	baz=324,slow=13 0.2nm,0.4s						
NOA	**NORSAR Array B**	**16.01**	**84**	LR	LR	14 24 57.9	

comp=Z,70nm,18.6s,baz=97,slow=36
KURBB **Kurchatov Arra** 50.67 54 P P 14 24 09.6 +1.6
comp=Z,1.0nm,0.9s,baz=323,slow=7.8,SNR=8.0
comp=Z,1.0nm,0.9s
PDAR **Pinedale Array** 51.21 289 P P 14 24 10.1 -2.4
comp=Z,0.6nm,0.8s,baz=18,slow=7.7,SNR=3.9
PDAR LR LR 14 45 15.9
comp=Z,42nm,21.1s,baz=19,slow=35
comp=Z,0.6nm,0.8s
KDAK **Kodiak Island** 52.74 329 LR LR 14 49 17.0
comp=Z,70nm,18.3s,baz=17,slow=39
MKAR **Makanchi Array** 55.24 54 P P 14 24 43.7 +1.9
comp=Z,1.2nm,0.9s,baz=318,slow=7.0,SNR=6.6
MKAR LR LR 14 49 33.9
comp=Z,32nm,18.3s,baz=284,slow=37
comp=Z,1.2nm,0.9s
AAK **Ala-Archa** 55.84 62 LR LR 14 48 18.0
comp=Z,74nm,18.0s,baz=320,slow=36
NVAR **Mina Array Bea** 58.46 293 LR LR 14 52 38.8
comp=Z,63nm,18.2s,baz=324,slow=39
DBIC **Dimbokro** 58.52 159 LR LR 14 49 53.5
comp=Z,22nm,19.2s,baz=55,slow=36
MBAR **Mbarara** 75.37 123 LR LR 15 01 48.3
comp=Z,34nm,18.2s,baz=310,slow=37
CMAR **Chiang Mai Arr** 86.65 54 LR LR 15 08 38.7
comp=Z,14nm,18.2s,baz=330,slow=37
PALK **Pallekele** 89.56 74 LR LR 15 15 22.2
comp=Z,15nm,18.8s,baz=314,slow=40
LBTB **Lobatse** 96.38 137 LR LR 15 12 42.7
comp=Z,49nm,19.7s,baz=6.5,slow=36

*JMA **16** 14:45:10.8±0.1, 22°.6N±0°.6×121°.9E±0°.5, h59km, MV2.9/11, TAIWAN REGION*
*TAP **16** 14:45:11.1, 22°.60N×121°.88E, h26km, ML2.6, D*
ISC 16 14:45:09.5±1.3, 22°.61N±0°.02×121°.94E±0°.03, h19km±3km, n103, σ0s.85/193, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.44**	**279**	*i* P	**Pb**	**14 45 19.3**	**+0.5**
LDUT				*i* S	**Sg**	**14 45 25.1**	**+0.3**
LYUB	**Lan-yu**	**0.69**	**209**	*i* P	**Pb**	**14 45 22.7**	**-0.1**
LYUB				S	**Sb**	**14 45 31.3**	**-0.6**
EDH	**Donghe**	**0.69**	**302**	*i* P	**Pb**	**14 45 23.1**	**+0.2**
EDH				S	**Sb**	**14 45 31.6**	**-0.5**
CHKT	**Chengkung**	**0.72**	**313**	*i* P	**Pb**	**14 45 23.5**	**-0.1**
CHKT				S	**Sb**	**14 45 32.5**	**-0.6**
CHKH	**Chenggong**	**0.77**	**319**	*i* P	**Pb**	**14 45 24.0**	**-0.4**
CHKH				S	**Sb**	**14 45 33.6**	**-0.9**
LONT	**Longtian**	**0.81**	**292**	*i* P	**Pb**	**14 45 24.7**	**-0.2**
LONT				*e*S	**Sb**	**14 45 35.2**	**-0.3**
TWGBT	**Beinan**	**0.82**	**285**	P	**Pg**	**14 45 25.8**	**+0.1**
TWGBT	**Beinan**	**0.82**	**285**	*i* P	**Pg**	**14 45 25.9**	**+0.3**
TWGBT				S	**Sb**	**14 45 35.9**	**-0.1**
ECS	**Chishang**	**0.83**	**306**	*i* P	**Pb**	**14 45 25.8**	**+0.5**
ECS				*i* S	**Sg**	**14 45 36.9**	**+0.2**
TWG	**Pinlang**	**0.83**	**285**	*i* P	**Pg**	**14 45 25.9**	**+0.1**
TWG				S	**Sb**	**14 45 36.4**	**+0.3**
ECBN	**Changbin**	**0.84**	**328**	*i* P	**Pb**	**14 45 25.6**	**+0.1**
ECBN				*i* S	**Sb**	**14 45 35.8**	**-0.6**
FULB	**Fuli**	**0.84**	**315**	*i* P	**Pb**	**14 45 25.2**	**-0.4**
FULB				*i* S	**Sb**	**14 45 35.7**	**-0.8**
EHD	**Haiduan**	**0.87**	**309**	*i* P	**Pb**	**14 45 25.9**	**-0.1**
EHD				S	**Sb**	**14 45 36.9**	**-0.3**
ECL	**Taimali**	**0.91**	**270**	*i* P	**Pb**	**14 45 26.9**	**+0.1**
ECL				*i* S	**Sb**	**14 45 37.8**	**-0.7**
EYUL	**Yuli**	**0.94**	**322**	*i* P	**Pb**	**14 45 27.3**	**+0.2**
EYUL				*e*S	**Sb**	**14 45 37.3**	**-1.9**
TWF1	**Yuli**	**0.95**	**322**	*i* P	**Pb**	**14 45 27.2**	**-0.3**
TWF1				*i* S	**Sb**	**14 45 39.6**	**-0.1**
YULB	**Yu-li**	**0.98**	**323**	P	**Pb**	**14 45 27.7**	**-0.3**
YULB	**Yu-li**	**0.98**	**323**	*i* P	**Pb**	**14 45 27.8**	**-0.3**
YULB				S	**Sb**	**14 45 41.1**	**+0.6**
HGSD	**Ruisui**	**1.00**	**332**	*i*P	**Pb**	**14 45 27.4**	**-0.9**
HGSD				S	**Sb**	**14 45 39.9**	**-1.2**
TAWH	**Dawu Township**	**1.01**	**255**	*i* P	**Pb**	**14 45 28.3**	**-0.1**
TAWH				*i* S	**Sb**	**14 45 40.6**	**-0.7**
ELDTW	**Lidau**	**1.03**	**304**	*i* P	**Pb**	**14 45 28.3**	**-0.5**
ELDTW				S	**Sb**	**14 45 40.8**	**-1.3**
EAST	**Anshuo**	**1.03**	**258**	*i* P	**Pb**	**14 45 29.2**	**+0.3**
EAST				*i* S	**Sb**	**14 45 40.8**	**-1.3**
EHYH	**Wanrong**	**1.04**	**328**	*i* P	**Pb**	**14 45 29.1**	**+0.2**
EHYH				S	**Sb**	**14 45 42.0**	**-0.2**
EHY	**Hungye**	**1.06**	**328**	*i* P	**Pb**	**14 45 29.1**	**-0.2**
EHY				*i* S	**Sb**	**14 45 42.6**	**-1.3**
SLIU	**Shizi**	**1.13**	**250**	*i* P	**Pn**	**14 45 30.4**	**+0.1**
SLIU				S	**Sb**	**14 45 44.2**	**-0.4**
EGFH	**Guangfu**	**1.16**	**336**	*i* P	**Pn**	**14 45 30.8**	**+0.1**
EGFH				*i* S	**Sb**	**14 45 45.7**	**0.0**
TEGC	**Jichi Village**	**1.16**	**341**	*e*P	**Pb**	**14 45 31.3**	**+0.3**
TEGC				S	**Sb**	**14 45 45.0**	**-0.7**
TSEB	**Hengchuen, Pin**	**1.19**	**234**	*e*P	**Pn**	**14 45 30.8**	**-0.4**
TSEB				*i* S	**Sb**	**14 45 45.8**	**-0.7**
TSMG	**Majia**	**1.20**	**275**	*i* P	**Pn**	**14 45 31.0**	**-0.4**
TSMG				*e*S	**Sb**	**14 45 45.1**	**-1.7**
MASBT	**Mashibuluo**	**1.21**	**271**	*i* P	**Pn**	**14 45 31.7**	**+0.3**
MASBT				*e*S	**Sb**	**14 45 45.9**	**-1.2**
STYH	**Taoyuan**	**1.21**	**298**	*i* P	**Pn**	**14 45 31.7**	**+0.2**
STYH				*e*S	**Sb**	**14 45 47.7**	**+0.5**
SSD	**Sandimen**	**1.22**	**277**	*i* P	**Pn**	**14 45 31.7**	**+0.2**
SSD				*e*S	**Sb**	**14 45 44.9**	**-2.4**
WARBT	**Fenglin Townsh**	**1.22**	**335**	*i* P	**Pn**	**14 45 31.2**	**-0.4**
WARBT				*i* S	**Sb**	**14 45 45.9**	**-1.5**
STYT	**Tauyuan**	**1.23**	**297**	*i* P	**Pn**	**14 45 32.0**	**+0.3**
STYT				*e*S	**Sb**	**14 45 46.6**	**-1.0**
SHUL	**Shoufeng**	**1.23**	**344**	*i* P	**Pn**	**14 45 31.8**	**+0.1**
SHUL				*i* S	**Sb**	**14 45 47.1**	**-0.5**
TWKBT	**Hengchun**	**1.24**	**238**	*e*P	**Pn**	**14 45 31.9**	**+0.1**
TWKBT				S	**Sb**	**14 45 47.9**	**0.0**
TWK1	**Hengchun**	**1.24**	**238**	*e*P	**Pb**	**14 45 32.4**	**0.0**
TWK1				*e*S	**Sb**	**14 45 47.1**	**-0.9**
SCZT	**Fangliau**	**1.24**	**260**	*i* P	**Pn**	**14 45 32.4**	**+0.5**
SCZT				S	**Sb**	**14 45 48.3**	**+0.3**
YUS	**Yu-Shan**	**1.27**	**314**	*i* P	**Pn**	**14 45 32.4**	**-0.3**
YUS				S	**Sb**	**14 45 49.1**	**-0.1**
ESL	**Shilin**	**1.29**	**339**	*i* P	**Pn**	**14 45 32.4**	**-0.2**
ESL				*i* S	**Sn**	**14 45 47.7**	**-1.6**
SGST	**Jiashian**	**1.34**	**291**	*i* P	**Pb**	**14 45 34.1**	**+0.1**
SGST				*e*S	**Sb**	**14 45 51.2**	**+0.3**
VWDT	**VWDT**	**1.36**	**327**	*i* P	**Pn**	**14 45 34.1**	**+0.6**
VWDT				*e*S	**Sn**	**14 45 50.5**	**-0.5**
SCST	**Cishan**	**1.36**	**282**	*i* P	**Pb**	**14 45 34.8**	**+0.3**
SCST				*e*S	**Sg**	**14 45 53.6**	**-0.2**
WTP	**Ta-pu**	**1.38**	**298**	*i* P	**Pb**	**14 45 35.4**	**+0.7**
WTP				*i* S	**Sg**	**14 45 53.6**	**-0.7**
ALS	**Alishan**	**1.38**	**311**	*i* P	**Pb**	**14 45 35.2**	**+0.3**
ALS				*e*S	**Sn**	**14 45 52.0**	**0.0**
TPUB	**Ta-pu**	**1.39**	**300**	P	**Pb**	**14 45 35.4**	**+0.4**
TPUB	**Ta-pu**	**1.39**	**300**	*i* P	**Pb**	**14 45 35.5**	**+0.5**
TPUB				*e*S	**Sg**	**14 45 54.3**	**-0.4**
ETM	**Tongmen**	**1.42**	**343**	*i* P	**Pn**	**14 45 33.9**	**-0.4**
ETM				*e*S	**Sn**	**14 45 50.1**	**-2.3**
TWM1	**Shoushan**	**1.42**	**279**	P	**Pg**	**14 45 36.5**	**-0.4**
TWM1				*e*S	**Sb**	**14 45 54.6**	**+1.5**
CHN1	**Nanshi**	**1.43**	**294**	*i* P	**Pb**	**14 45 36.0**	**+0.5**
CHN1				*e*S	**Sg**	**14 45 54.9**	**-0.8**
CHN4	**Tsaushan**	**1.45**	**301**	*i* P	**Pb**	**14 45 36.5**	**+0.6**
CHN4				S	**Sb**	**14 45 55.0**	**+1.1**
SNST	**Tainan City**	**1.47**	**295**	*i* P	**Pb**	**14 45 37.0**	**+0.8**
SNST				S	**Sg**	**14 45 56.9**	**-0.1**
WHYT	**Xinyi Township**	**1.48**	**318**	*i* P	**Pb**	**14 45 36.7**	**+0.3**
WHYT				*e*S	**Sb**	**14 45 56.2**	**+1.3**
SSLB	**Suanglung**	**1.49**	**323**	P	**Pb**	**14 45 36.5**	**-0.1**
SSLB	**Suanglung**	**1.49**	**323**	*i* P	**Pn**	**14 45 35.5**	**+0.2**
SSLB				*e*S	**Sn**	**14 45 53.8**	**-0.4**
LXIB	**Xiulin Townshi**	**1.49**	**341**	*i* P	**Pn**	**14 45 35.2**	**-0.2**
LXIB				*i* S	**Sn**	**14 45 53.2**	**-1.3**
TWK	**Hsinying**	**1.49**	**296**	*i* P	**Pb**	**14 45 37.5**	**+0.8**
TWK				*e*S	**Sb**	**14 45 56.3**	**+1.0**
TWD	**Chiawan**	**1.50**	**348**	P	**Pn**	**14 45 35.0**	**-0.4**
TWD				*i* S	**Sn**	**14 45 52.6**	**-2.0**
OWD	**Renai**	**1.52**	**332**	*i* P	**Pn**	**14 45 36.0**	**+0.2**
OWD				*i* S	**Sn**	**14 45 53.2**	**-1.9**
CHN5	**Tsauling**	**1.53**	**311**	*i* P	**Pb**	**14 45 38.3**	**+1.0**
CHN5				S	**Sb**	**14 45 57.0**	**+0.7**
WUSB	**Renai**	**1.57**	**331**	*i* P	**Pn**	**14 45 37.3**	**+0.7**
WUSB				*i* S	**Sn**	**14 45 55.4**	**-1.2**
SMLT	**Sun Moon Lake**	**1.59**	**323**	*i* P	**Pn**	**14 45 38.0**	**+1.2**
SMLT				*e*S	**Sn**	**14 45 57.9**	**+0.9**
NACB	**Ninganchiao**	**1.59**	**349**	P	**Pg**	**14 45 40.2**	**-0.1**
NACB	**Ninganchiao**	**1.59**	**349**	*i* P	**Pn**	**14 45 35.5**	**-1.2**
NACB				*i* S	**Sn**	**14 45 55.0**	**-1.8**
TYC	**Yuchr**	**1.63**	**323**	*i* P	**Pb**	**14 45 38.8**	**-0.2**
TYC				*e*S	**Sb**	**14 46 00.1**	**+0.8**
WJS	**Zhushan**	**1.65**	**318**	*i* P	**Pb**	**14 45 40.0**	**+0.7**
WJS				S	**Sb**	**14 46 01.4**	**+1.7**
ETLH	**Xiulin Townshi**	**1.65**	**345**	P	**Pn**	**14 45 37.3**	**-0.3**
ETLH				S	**Sn**	**14 45 56.6**	**-1.7**
WHF	**Hehuan Shan**	**1.66**	**338**	*i* P	**Pn**	**14 45 38.1**	**+0.2**
WHF				S	**Sn**	**14 45 58.1**	**-0.8**
CHY	**Chiayi**	**1.66**	**303**	*i* P	**Pb**	**14 45 40.6**	**+1.2**
CHY				*e*S	**Sg**	**14 46 02.1**	**-1.0**
WDLH	**Douliu**	**1.68**	**310**	*i* P	**Pg**	**14 45 41.2**	**-0.7**
WDLH				*i* S	**Sg**	**14 46 02.8**	**-1.1**
DPDB	**Guoxing**	**1.70**	**327**	*i* P	**Pb**	**14 45 39.8**	**-0.4**
DPDB				S	**Sn**	**14 46 00.1**	**+0.5**
WCS	**Beigang Elemen**	**1.73**	**327**	*i* P	**Pb**	**14 45 40.4**	**-0.3**
WCS				*e*S	**Sn**	**14 46 01.1**	**+0.9**
FUSS	**Fushou**	**1.76**	**339**	*i* P	**Pn**	**14 45 40.1**	**+0.9**
FUSS				S	**Sn**	**14 46 01.3**	**+0.1**
TSCK	**Chigu Township**	**1.79**	**288**	*i* P	**Pb**	**14 45 42.0**	**+0.2**
TSCK				S	**Sb**	**14 46 05.1**	**+1.2**
WSL	**Shuilin Townsh**	**1.82**	**300**	*i* P	**Pb**	**14 45 41.9**	**-0.4**
WSL				*i* S	**Sb**	**14 46 05.6**	**+0.8**
EWUT	**Wuta**	**1.84**	**355**	*i* P	**Pn**	**14 45 40.3**	**+0.3**
EWUT				S	**Sn**	**14 46 02.3**	**-0.5**
NNSB	**Datong**	**1.89**	**344**	P	**Pn**	**14 45 42.0**	**+1.1**
NNSB				*e*S	**Sn**	**14 46 03.8**	**-0.4**
NNS	**Nan Shan**	**1.90**	**344**	P	**Pb**	**14 45 43.6**	**-0.1**
NNS				S	**Sn**	**14 46 04.0**	**-0.6**
WHP	**Taichung City**	**1.90**	**331**	*i* P	**Pb**	**14 45 43.8**	**+0.1**
WHP				*e*S	**Sn**	**14 46 05.8**	**+1.3**
WCHH	**Zhanghua**	**1.94**	**319**	P	**Pb**	**14 45 44.0**	**-0.3**
WCHH				*e*S	**Sb**	**14 46 08.4**	**+0.2**
LATG	**Datong**	**1.96**	**349**	P	**Pn**	**14 45 41.5**	**-0.4**
LATG				*e*S	**Sn**	**14 46 06.2**	**+0.2**
TWQ1	**Liyutan**	**2.04**	**329**	*i* P	**Pb**	**14 45 46.0**	**0.0**
TWQ1				*i* S	**Sb**	**14 46 11.5**	**+0.5**
ENTT	**Nioudou**	**2.06**	**350**	*i* P	**Pn**	**14 45 43.2**	**+0.1**
ENTT				*e*S	**Sn**	**14 46 09.5**	**+1.3**
YHNB	**Yeheng**	**2.12**	**346**	P	**Pb**	**14 45 48.1**	**+0.7**
YHNB	**Yeheng**	**2.12**	**346**	*i* P	**Pn**	**14 45 45.4**	**+1.3**
YHNB				S	**Sn**	**14 46 10.4**	**+0.5**
NSK	**Sanguang**	**2.13**	**346**	*i* P	**Pb**	**14 45 46.7**	**-0.9**
NSK				*i* S	**Sn**	**14 46 09.3**	**-0.8**
NFF	**Wufeng Townshi**	**2.15**	**340**	*i* P	**Pb**	**14 45 47.4**	**-0.6**
NFF				S	**Sn**	**14 46 13.0**	**+2.2**
FUSB	**Fushanzhiwuyua**	**2.17**	**351**	P	**Pn**	**14 45 46.2**	**+1.4**
FUSB				*e*S	**Sn**	**14 46 11.9**	**+0.8**
NSTT	**Nanjuang**	**2.19**	**337**	P	**Pb**	**14 45 47.6**	**-1.0**
NSTT				*i* S	**Sb**	**14 46 14.4**	**-1.0**
NWLT	**Wulai**	**2.20**	**350**	P	**Pn**	**14 45 46.8**	**+1.7**
NWLT				*i* S	**Sn**	**14 46 12.4**	**+0.5**
LIOB	**Emei**	**2.20**	**337**	*i* P	**Pb**	**14 45 47.8**	**-1.0**
LIOB				*i* S	**Sb**	**14 46 14.9**	**-0.8**
WDGT	**Dungji**	**2.20**	**288**	*i* P	**Pn**	**14 45 46.7**	**+1.6**
WDGT				*e*S	**Sn**	**14 46 11.7**	**-0.1**
KSHI	**Guanxi Townshi**	**2.27**	**342**	*e*P	**Pb**	**14 45 49.3**	**-0.6**
KSHI				*e*S	**Sn**	**14 46 15.6**	**+2.0**
TIPB	**Shuangxi**	**2.36**	**357**	*i* P	**Pn**	**14 45 49.0**	**+1.7**
TIPB				*i* S	**Sn**	**14 46 16.9**	**+1.1**
PHUB	**P'eng-hu**	**2.36**	**293**	*i* P	**Pn**	**14 45 49.0**	**+1.8**
PHUB				*e*S	**Sn**	**14 46 15.1**	**-0.7**
IRIF	**Iriomote-Funau**	**2.38**	**43**	*e*P	**Pn**	**14 45 48.5**	**+1.0**
JKRS	**Kuro-shima**	**2.50**	**49**	*e*P	**Pn**	**14 45 50.6**	**+1.4**
JIJ	**Ishigaki jima**	**2.67**	**49**	*e*P	**Pn**	**14 45 52.2**	**+0.6**
JISG	**Ishigakijimahi**	**2.94**	**47**	P	**Pn**	**14 45 56.0**	**+0.8**
JTJ	**Tarama**	**3.24**	**51**	*e*P	**Pn**	**14 46 00.5**	**+1.1**
PTMZ	**Houxiangcun**	**3.54**	**314**	*e*P	**Pn**	**14 46 05.0**	**+1.5**
PTMZ				S	**Sn**	**14 46 44.6**	**-0.2**
JIRB	**Irabujima**	**3.70**	**53**	*e*P	**Pn**	**14 46 06.6**	**+0.9**
JMJ2	**Miyako jima3**	**3.76**	**55**	*e*P	**Pn**	**14 46 07.8**	**+1.3**

*HVO **16** 14:54:10.3±0.8, 18°.19N±0°.07×155°.7W±0°.1, h22km±10km, Error ellipse: s-maj=19.0km s-min=9.8km az=101.0*
NEIC 16 14:54:09.7±0.5, 18°.4N±0°.2×155°.70W±0°.06, h25km±23km, ML2.7/38, MLb2.6/20(HVO), Error ellipse: s-maj=22.9km s-min=6.3km az=193.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.86**	**6**		Pb	14 54 26.3	+0.2
KHU					Sn	14 54 38.4	-0.1
HTC	**Hot Caves**	**0.90**	**19**		Pn	14 54 26.8	0.0
HLP	**Hilina Pali**	**0.98**	**22**		Pb	14 54 28.1	0.0
HLP	**Hilina Pali**	**0.98**	**22**		Sn	14 54 41.4	+0.2
HLP	**Hilina Pali**	**0.98**	**22**	IAML		14 54 35.6	
	comp=E,312nm,4.1s						
AIN	**Ainahou**	**1.01**	**13**		Pb	14 54 28.7	0.0
AIN					Sn	14 54 42.1	+0.1
SDHHI	**Sand Hill**	**1.07**	**21**		Pn	14 54 28.9	-0.4
SDHHI					Sb	14 54 43.0	-0.3
RIM	**Rim**	**1.09**	**22**		Pn	14 54 29.1	-0.4
RIM					Sn	14 54 44.1	+0.3
WRMHI	**West Rim**	**1.09**	**21**		Pn	14 54 29.1	-0.4
PUH	**Pauahi**	**1.09**	**25**		Pn	14 54 29.0	-0.5
PUH					Sb	14 54 43.3	-0.5
PUH	**Pauahi**	**1.09**	**25**	IAML		14 54 50.4	
	comp=E,169nm,3.7s						
PUH				IAML		14 55 02.7	
	comp=N,192nm,3.8s						
KKO	**Keanakako'i**	**1.09**	**22**		Pn	14 54 29.2	-0.4
KKO					Sb	14 54 43.4	-0.5
MWH	**Mokuaweoweo**	**1.10**	**5**		Pn	14 54 29.4	-0.7
MWH				IAML		14 54 38.5	
	comp=N,179nm,3.0s						
MWH				IAML		14 54 45.8	
	comp=E,214nm,2.9s						
OBL	**Observatory Le**	**1.10**	**21**		Pn	14 54 29.3	-0.4
OBL					Sb	14 54 43.8	-0.4
UWE	**Uwekahuna**	**1.10**	**21**		Pn	14 54 29.4	-0.4
UWE	**Uwekahuna**	**1.10**	**21**	IAML		14 54 48.0	
	comp=N,234nm,4.0s						
BYL	**Byron's Ledge**	**1.11**	**22**		Pn	14 54 29.2	-0.6
BYL				IAML		14 54 57.6	
	comp=E,167nm,2.2s						
BYL				IAML		14 54 58.1	
	comp=N,126nm,2.6s						
KNHH	**Kane Nui o Ham**	**1.11**	**27**		Pn	14 54 29.3	-0.5
HATHI	**Halema'uma'u T**	**1.12**	**22**		Pn	14 54 29.4	-0.5
HATHI	**Halema'uma'u T**	**1.12**	**22**	IAML		14 54 50.4	
	comp=E,199nm,2.6s						
HATHI				IAML		14 55 01.3	
	comp=N,180nm,3.8s						
SBLHI	**Steaming Bluff**	**1.12**	**22**		Pn	14 54 29.4	-0.5
STCH	**Steam Cracks**	**1.14**	**29**		Pn	14 54 29.6	-0.6
STCH	**Steam Cracks**	**1.14**	**29**	IAML		14 55 00.2	
	comp=N,123nm,4.0s						
MLH	**Mauna Loa**	**1.15**	**15**	IAML		14 54 49.0	
	comp=N,135nm,4.1s						
RSD	**Rainshed**	**1.15**	**21**		Pn	14 54 29.8	-0.6
RSD	**Rainshed**	**1.15**	**21**	IAML		14 54 34.9	
	comp=N,137nm,3.4s						
RSD				IAML		14 54 41.3	
	comp=E,7.1nm,0.2s						
NPOC	**North of Pu'u**	**1.15**	**29**		Pn	14 54 29.7	-0.6
ALEP	**Alea Permanent**	**1.15**	**3**		Pn	14 54 30.3	-0.3
HMH	**Humu'ula Sheep**	**1.23**	**10**		Pn	14 54 31.8	+0.2
HMH	**Humu'ula Sheep**	**1.23**	**10**	IAML		14 54 49.0	
	comp=N,173nm,3.2s						
HMH				IAML		14 55 15.6	
	comp=E,141nm,4.7s						
JOKA	**Jonika Flow**	**1.24**	**32**		Pn	14 54 30.8	-0.7
JOKA	**Jonika Flow**	**1.24**	**32**	IAML		14 54 46.7	
	comp=E,132nm,4.7s						
HUH	**Hualalai**	**1.30**	**355**	Pn	Pn	14 54 32.9	+0.3

*IDC **16** 14:56:46.7±1.5, 1°.74N×126°.32E, h0km, mb3.7/4, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=121.1km s-min=19.6km az=68.0*
*DJA **16** 14:56:51.9±0.9, 2°.N±2°×12°.6E±°, h17km±7km, M3.6/11, mb3.5/1, MLv3.6/11*
ISC 16 14:56:52.7±0.9, 1°.66N±0°.06×126°.45E±0°.07, h35km, n10, σ1s.57/14, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**134**	P	**Pn**	**14 57 15.0**	**+1.0**
TNTI				S	**Sn**	**14 57 32.2**	**+2.3**
SGSI	**Sangihe**	**2.21**	**335**	P	**Pn**	**14 57 27.6**	**+0.6**
SGSI				S	**Sn**	**14 57 55.1**	**+2.0**
KMSI	**Cibinong**	**2.70**	**246**	P	**Pn**	**14 57 34.3**	**+0.7**
KMSI				S	**Sn**	**14 58 06.2**	**+1.1**
SANI	**Sanana**	**3.72**	**187**	P	**Pn**	**14 57 48.1**	**+0.4**
LUWI	**Luwuk**	**4.56**	**234**	P	**Pn**	**14 58 00.9**	**+1.7**
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**15 01 16.1**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=351,slow=11,SNR=1.7						
	1.8nm,1.1s						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**15 01 51.3**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=340,slow=9.1,SNR=14						
	1.4nm,0.5s						
ASAR	**Alice Springs**	**26.20**	**164**	P	**P**	**15 02 24.2**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=344,slow=9.1,SNR=19						
ASAR				PcP	**PcP**	**15 05 50.8**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=351,slow=2.6,SNR=1.7						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**15 06 49.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=120,slow=7.2,SNR=6.2						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**15 07 16.5**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=127,slow=5.8,SNR=5.1						
	0.3nm,0.4s						

*CATAC **16** 16:22:45.8±0.4, 13°.N±2°×9°.0W±°, h21km±2km, M4.2/38, MLv4.2/38, Error ellipse: s-maj=4.0km s-min=2.2km az=24.7, confirmed*
*SNET **16** 16:22:46.8±0.8, 13°.24N×90°.13W, h20km±4km, ML4.2*
*GCG **16** 16:22:47.0±1.8, 13°.33N×90°.21W, h38km±9km, MD4.1, ML4.3, MW3.5*
ISC 16 16:22:45.2±1.3, 13°.27N±0°.04×90°.11W±0°.03, h12km±9km, n116, σ0s.88/128, 3C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.48**	**308**	*i* P	Pn	16 23 04.0	+6.1
FAME	**Alcaldia de Sa**	**0.58**	**9**	P	**Pn**	**16 22 58.4**	**-1.0**
NUBE	**Las Nubes**	**0.71**	**27**	*e*P	**Pn**	**16 23 00.7**	**-0.5**
NUBE				*e*S	**Sb**	**16 23 10.6**	**+1.1**
NUBE	**Las Nubes**	**0.71**	**27**	*i* P	**Pn**	**16 23 00.7**	**-0.5**
NUBE				*e*S	**Sb**	**16 23 10.5**	**+1.1**
NUBE	**Las Nubes**	**0.71**	**27**	S	**Sn**	**16 23 11.2**	**-1.0**
NUBE	**Las Nubes**	**0.71**	**27**	P	**Pn**	**16 23 00.7**	**-0.5**
CEVE	**Cerro Verde**	**0.73**	**40**	*e*P	**Pn**	**16 23 01.5**	**-0.1**
CEVE	**Cerro Verde**	**0.73**	**40**	P	**Pn**	**16 23 01.7**	**0.0**
CEVE	**Cerro Verde**	**0.73**	**40**	S	**Sn**	**16 23 13.0**	**+0.1**
SBLS	**San Blas**	**0.74**	**40**	*i*P	**Pn**	**16 23 01.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.75**	**59**	*e*P	**Pn**	**16 23 01.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.75**	**59**	*i* P	**Pn**	**16 23 01.5**	**-0.2**
JAYA	**Jayaque - finc**	**0.75**	**59**	P	**Pn**	**16 23 01.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.75**	**59**	S	**Sn**	**16 23 12.9**	**-0.3**
RTR	**El Retiro**	**0.78**	**36**	*e*P	**Pn**	**16 23 02.0**	**-0.1**
SNJE	**San Jose**	**0.78**	**39**	*e*P	**Pn**	**16 23 02.0**	**-0.2**
LOAL	**Lomas de Alarc**	**0.80**	**24**	*e*P	**Pn**	**16 23 02.2**	**-0.1**
LOAL	**Lomas de Alarc**	**0.80**	**24**	P	**Pn**	**16 23 02.2**	**-0.1**
LOAL	**Lomas de Alarc**	**0.80**	**24**	S	**Sn**	**16 23 14.1**	**-0.1**
LALI	**Alcalda de L**	**0.80**	**74**	*e*P	**Pn**	**16 23 02.1**	**-0.2**
LALI	**Alcalda de L**	**0.80**	**74**	*i* P	**Pn**	**16 23 01.9**	**-0.4**
LALI	**Alcalda de L**	**0.80**	**74**	P	**Pn**	**16 23 02.1**	**-0.2**
LALI	**Alcalda de L**	**0.80**	**74**	S	**Sn**	**16 23 13.6**	**-0.6**
SLOZ	**Alcaldia de Sa**	**0.82**	**23**	*e*P	**Pg**	**16 22 59.9**	**-1.1**
SLOZ				*e*S	**Sg**	**16 23 11.6**	**-0.3**
SLOZ	**Alcaldia de Sa**	**0.82**	**23**	P	**Pg**	**16 23 00.0**	**-1.1**
CEDA	**San Andres**	**0.88**	**53**	*e*P	**Pn**	**16 23 03.6**	**+0.2**
CEDA	**San Andres**	**0.88**	**53**	P	**Pn**	**16 23

APYN	**Apoyeque**	**3.81**	**105**	P	**Pn**	**16 23 44.9 +1.2**
RCVN	**Varillal2**	**3.83**	**85**	P	**Pn**	**16 23 44.3 +0.2**
APQ2	**Apoyeque**	**3.84**	**106**	P	**Pn**	**16 23 45.7 +1.4**
RCON	**San Juan de Ri**	**3.86**	**86**	P	**Pn**	**16 23 44.9 +0.3**
RCON	**San Juan de Ri**	**3.86**	**86**	S	**Sn**	**16 24 30.5 +0.6**
RCPN	**Sur Rio San Ju**	**3.92**	**86**	P	**Pn**	**16 23 45.5 +0.1**
UNAN	**Cigeo UNAN**	**3.92**	**107**	P	**Pn**	**16 23 46.1 +0.8**
UNAN				S	**Sn**	**16 24 27.9 -3.4**
MGAN	**Managua**	**3.93**	**106**	P	**Pn**	**16 23 47.5 +2.1**

IDC ***16*** *16:26:52.3±15.0, 34.12N×72.88E, h0km, mb3.8/4, mbtmp3.7/6, ML2.9/2, Error ellipse: s-maj=293.9km s-min=39.8km az=151.0*
NNC ***16*** *16:27:29.9±5.2, 37.66N×71.14E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=40.7km s-min=30.2km az=168.0*
ISC 16 16:27:36.3±1.9, 37.8N±0.1×71.5E±0.1, h150km, n11, σ1§99/15, mb3.6/3, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.38**	**24**	⇑P	**Pn**	**16 28 54.3**	**-0.5**
	0.7nm,0.4s						
AAK				⇑S	**Sn**	**16 29 59.5**	**+3.3**
	2.2nm,0.6s						
KK31	**Karatay Array**	**5.40**	**352**	⇑P	**Pn**	**16 28 54.5**	**-0.5**
	5.0nm,0.5s,baz=182,slow=13,SNR=38						
KK31				⇓S	**Sn**	**16 29 58.5**	**+2.0**
	3.9nm,0.3s,baz=178,slow=22,SNR=9.8						
MKAR	**Makanchi Array**	**12.03**	**38**	Pn	**Pn**	**16 30 19.3**	**-3.6**
	baz=214,slow=15,SNR=4.7						
	0.6nm,0.8s						
KURBB	**Kurchatov Arra**	**13.80**	**19**	Pn	**P**	**16 30 49.7**	**+0.7**
	0.1nm,0.3s,baz=196,slow=10,SNR=7.1						
	0.4nm,0.5s						
AB31	**Akbulak array**	**14.23**	**328**	P	**Pn**	**16 30 48.7**	**-2.2**
	0.2nm,0.2s,baz=139,slow=14,SNR=23						
AB31				⇑S	**Sn**	**16 33 27.4**	**-1.1**
	2.8nm,0.7s,baz=252,slow=36,SNR=4.0						
AKTO	**Aktyubinsk**	**15.94**	**327**	⇑P	**P**	**16 31 13.7**	**+1.0**
	6.0nm,1.1s						
AKTO				⇑S	**S**	**16 34 08.0**	**-1.8**
	2.5nm,1.2s						
ZALV	**Zalesovo Beam**	**18.60**	**25**	P	**Pn**	**16 31 43.2**	**-0.7**
	0.7nm,0.3s,baz=223,slow=11,SNR=7.1						
	0.7nm,0.3s						
ARCES	**ARCESS Array B**	**40.16**	**337**	P	**P**	**16 34 59.3**	**+2.1**
	0.8nm,0.7s,baz=104,slow=8.3,SNR=7.6						
	0.8nm,0.7s						
HFS	**Hagfors**	**42.36**	**321**	P	**P**	**16 35 16.6**	**+1.3**
	2.4nm,0.5s,baz=107,slow=9.2,SNR=16						
	2.4nm,0.5s						
NB2	**NORSAR Subarra**	**43.65**	**322**	P	**P**	**16 35 26.7**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**43.65**	**322**	P	**P**	**16 35 26.7**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.8,SNR=3.7						
	comp=Z,0.5nm,0.5s						

ZUR ***16*** *16:43:41.8, 45.71N×6.60E, h5km±1km, MLh1.1/12, Error ellipse: s-maj=2703.8km s-min=819.6km az=253.0*
LDG ***16*** *16:43:41.4±0.1, 45.69N×6.57E, h5km, Md1.7/2, MI1.8/9, Error ellipse: s-maj=1.6km s-min=1.5km az=83.0*
STR 16 16:43:41.4±0.0, 45.70N±0.04×6.56E±0.05, h6km, MLv1.4/18, 1C-3D, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSL	**Roselend**	**0.05**	**97**	Pg	Pg	16 43 43.2	+0.2
RSL				Sg	Sg	16 43 44.3	+0.1
LPL	**La Plagne**	**0.22**	**145**	*e*Pg	Pg	16 43 46.1	+0.4
LPL				*e*Sg	Sg	16 43 49.2	+0.6
	10nm,0.2s						
LPG	**La Plagne**	**0.24**	**145**	*e*Pg	Pg	16 43 46.6	+0.5
LPG				*e*Sg	Sg	16 43 50.2	+0.8
	17nm,0.2s						
BLANC	**P.ta Helbronne**	**0.30**	**60**	⇓Pg	Pg	16 43 47.6	+0.1
BLANC				Sg	Sg	16 43 51.6	+0.1
MRGE	**Morge**	**0.36**	**78**	Pg	Pg	16 43 48.6	+0.1
OGSI	**Sixt**	**0.40**	**20**	⇑Pg	Pg	16 43 48.6	-0.5
OGSI				Sg	Sg	16 43 53.3	-1.0
OGSI	**Sixt**	**0.40**	**20**	Pg	Pg	16 43 48.5	-0.5
OGSI				Sg	Sg	16 43 53.3	-1.0
REMY	**Saint-Rhmy-en**	**0.44**	**71**	Sg	Sg	16 43 56.2	+0.4
REMY	**Saint-Rhmy-en**	**0.44**	**71**	Pg	Pg	16 43 50.4	+0.3
REMY				Sg	Sg	16 43 56.2	+0.3
MFERR	**Prayon, Val Fe**	**0.47**	**56**	Pg	Pg	16 43 50.4	0.0
MFERR				Sg	Sg	16 43 56.1	-0.4
LSD	**Lago del Serru**	**0.47**	**120**	⇓Pg	Pg	16 43 50.6	+0.1
LSD				Sg	Sg	16 43 57.0	+0.4
LSD	**Lago del Serru**	**0.47**	**120**	Pg	Pg	16 43 50.5	0.0
LSD				Sg	Sg	16 43 56.9	+0.3
OGMO	**Fort Saint-Gob**	**0.49**	**169**	Pg	Pg	16 43 51.3	+0.4
OGMO				Sg	Sg	16 43 57.9	+0.5
OGMY	**Moye**	**0.50**	**292**	Pg	Pg	16 43 51.7	+0.7
OGO2	**Monnetier-Morn**	**0.52**	**333**	Sg	Sg	16 43 58.4	+0.4
SALAN	**Lac Salanfe**	**0.54**	**33**	⇓Pg	Pg	16 43 51.4	-0.3
SAVIG	**Le Moulin, Sav**	**0.55**	**313**	Sg	Sg	16 43 59.8	+0.7
OGSM	**Saint Maurice**	**0.61**	**262**	Pg	Pg	16 43 53.5	+0.4
OGSM				Sg	Sg	16 44 01.5	+0.5
GRYON	**Gryon**	**0.68**	**35**	Pg	Pg	16 43 54.2	-0.2
AIGLE	**Aigle**	**0.70**	**23**	Pg	Pg	16 43 54.5	-0.4
DIX	**Grande Dixence**	**0.71**	**57**	Pg	Pg	16 43 54.7	-0.3
DIX				Sg	Sg	16 44 03.9	-0.3
CIRO	**Champorcher**	**0.72**	**97**	Pg	Pg	16 43 54.7	-0.4
CIRO				Sg	Sg	16 44 04.2	-0.3
GRN	**Grenoble**	**0.73**	**232**	Pg	Pg	16 43 55.8	+0.5
GRN				Sg	Sb	16 44 06.2	-0.5
RSP	**Reno Superiore**	**0.74**	**137**	Pg	Pg	16 43 56.0	+0.5
RSP				Sg	Sg	16 44 05.3	+0.2
OG35	**Corcelles**	**0.77**	**297**	Pg	Pg	16 43 56.2	0.0
OG35				Sg	Sg	16 44 06.4	+0.2
RRL	**Rocca Remolon**	**0.79**	**168**	Pg	Pg	16 43 56.8	+0.3
RRL				Sg	Sg	16 44 07.2	+0.4
GIMEL	**St. Georges /**	**0.86**	**347**	Pg	Pg	16 43 57.4	-0.5
GIMEL				Pn	Pn	16 44 00.1	0.0
GIMEL				Sn	Sn	16 44 13.6	+0.5
ORIF	**Oris-en-Rattie**	**0.91**	**212**	*e*Pg	Pg	16 43 58.4	-0.4
ORIF				*e*Sg	Sg	16 44 09.6	-1.0
	1.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.91**	**212**	Pg	Pg	16 43 58.1	-0.7
ORIF				Sg	Sg	16 44 10.1	-0.5
CABF	**La Chapelle**	**0.97**	**341**	*e*Pg	Pg	16 43 59.8	-0.2
CABF				*e*Sg	Sb	16 44 13.9	+0.1
	3.1nm,0.2s						
MBDF	**Montbardon**	**0.98**	**171**	*e*Pg	Pg	16 44 00.4	+0.3
MBDF				*e*Sg	Sg	16 44 12.8	0.0
	0.5nm,0.2s						
RIVEL	**MONT RIVEL**	**1.15**	**338**	Pg	Pg	16 44 03.0	-0.4
RIVEL				Pg	Pn	16 44 04.5	+0.5
RIVEL				Sg	Sb	16 44 19.5	+0.6
BRANT	**Les Verrieres**	**1.25**	**357**	Pg	Pg	16 44 04.9	-0.3
BRANT				Sg	Sn	16 44 22.6	+0.1
JAUF	**Jausiers**	**1.27**	**174**	Pn	Pb	16 44 05.9	+0.1
SSB	**Saint Sauveur**	**1.48**	**254**	Pn	Pn	16 44 08.0	-0.5
CHMF	**Charmoille**	**1.56**	**2**	Pn	Pg	16 44 11.0	-0.2
CHMF				Sn	Sg	16 44 32.1	+0.8
BOUC	**Bouclans**	**1.57**	**353**	Pn	Pn	16 44 10.2	+0.5
BOUC				Pg	Pg	16 44 11.3	-0.1
BOUC				Sg	Sg	16 44 31.9	+0.2
VIVF	**Saint-Julien-l**	**1.57**	**238**	*e*Pg	Pg	16 44 11.5	0.0
VIVF				*e*Sg	Sn	16 44 29.5	-0.9
	6.7nm,0.3s						
SMF	**Signal de Mont**	**2.11**	**298**	*e*Sg	Sb	16 44 47.2	+0.7
	1.5nm,0.2s						
LOR	**Lormes**	**2.44**	**311**	*e*Pg	Pb	16 44 26.8	+1.2
	baz=128						
LOR				*e*Sg	Sb	16 44 56.8	+0.9
	0.8nm,0.2s						
AVF	**Avril sur Loir**	**2.48**	**297**	*e*Sg	Sb	16 44 57.7	+0.7
	0.3nm,0.2s						
LASF	**Ste Croix**	**2.51**	**231**	*e*Pg	Pb	16 44 27.2	+0.4
LASF				*e*Sg	Sb	16 44 58.9	+1.0
	0.5nm,0.2s						

IDC ***16*** *16:51:49.6±1.0, 1.62N×126.11E, h0km, mb3.9/5, mbtmp3.9/6, ML3.2/1, MS2.6/1, Error ellipse: s-maj=59.9km s-min=18.5km az=73.0*
DJA ***16*** *16:51:53.7±0.7, 2°N±2°×12°6E±°, h13km±5km, M3.8/10, mb3.8/3, MLv3.8/10*
ISC 16 16:51:55.5±0.8, 1.73N±0.06×126.47E±0.07, h35km, n12, σ1§52/16, mb4.0/5, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.31**	**137**	P	**Pn**	**16 52 17.5**	**+0.3**
TNTI				S	**Sn**	**16 52 35.7**	**+2.2**
SGSI	**Sangihe**	**2.16**	**334**	P	**Pn**	**16 52 28.9**	**-0.1**
SGSI				S	**Sn**	**16 52 56.7**	**+2.1**
KMSI	**Cibinong**	**2.74**	**245**	P	**Pn**	**16 52 37.5**	**+0.6**
KMSI				S	**Sn**	**16 53 09.8**	**+1.0**
SANI	**Sanana**	**3.78**	**187**	P	**Pn**	**16 52 50.7**	**-0.6**
SANI				S	**Sn**	**16 53 36.7**	**+2.1**
BNSI	**Bone**	**8.80**	**226**	P	**Pn**	**16 54 01.5**	**+1.2**
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	**P**	**16 56 20.6**	**-1.5**
	0.1nm,0.3s,baz=21,slow=11,SNR=1.6						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**22.88**	**161**	P	**P**	**16 56 54.3**	**-1.8**
	4.2nm,0.8s,baz=338,slow=10,SNR=17						
	4.2nm,0.8s						
ASAR	**Alice Springs**	**26.26**	**164**	P	**P**	**16 57 26.9**	**-0.7**
	0.6nm,0.5s,baz=344,slow=7.7,SNR=19						
ASAR				PcP	**PcP**	**17 00 52.9**	**-0.9**
	0.3nm,0.6s,baz=347,slow=2.3,SNR=5.4						
	0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.70**	**303**	LR	LR	17 11 46.5	
	comp=Z,10nm,19.5s,baz=105,slow=38						
PETK	**Petropavlovsk-**	**57.37**	**22**	P	**P**	**17 01 41.6**	**+1.5**
	5.6nm,1.0s,baz=228,slow=9.0,SNR=2.5						
	5.6nm,1.0s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**17 01 51.5**	**-0.6**
	0.8nm,0.6s,baz=120,slow=8.0,SNR=6.6						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**63.28**	**328**	P	**P**	**17 02 18.7**	**-1.9**
	0.6nm,0.7s,baz=130,slow=6.2,SNR=7.2						
	0.6nm,0.7s						

SKHL ***16*** *16:59:20.6±0.4, 44.50N×146.50E, h154km±2km, mb4.3/3, msha4.9/2*
JMA ***16*** *16:59:21.1±0.5, 44°N±2°×14°7E±°, h157km, MV3.2/28, NEAR ETOROFU ISLAND*
ISC 16 16:59:25.6±1.9, 44.4N±0.1×146.3E±0.1, h150km, n18, σ1§67/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.45**	**226**	*e*S	**Sn**	**17 00 03.8**	**+1.2**
YUK				*e*P	**Pn**	**16 59 44.7**	**-1.9**
YUK				AMB	AMB	16 59 45.2	
	100nm,0.3s						
YUK				A	A	17 00 08.1	
	420nm,0.7s						
YUK				A	A	17 00 08.1	
	380nm,0.7s						
SHO	**Shikotan**	**0.61**	**141**	*e*S	**Sn**	**17 00 08.3**	**+4.2**
SHO				*e*P	Pn	16 59 50.9	+3.4
SHO				AMB	AMB	16 59 51.0	
	120nm,0.2s						
SHO				A	A	17 00 08.5	
	240nm,0.3s						
SHO				A	A	17 00 08.5	
	200nm,0.3s						
JRA	**Rausu**	**0.94**	**245**	*e*P	**Pn**	**16 59 48.3**	**-1.5**
NEM2	**Nemuro 2**	**1.06**	**203**	*e*P	**Pn**	**16 59 48.9**	**-2.0**
NEM2				*e*S	**Sn**	**17 00 10.1**	**0.0**
NMR	**Nemuro--Hokkai**	**1.06**	**203**	*e*S	**Sn**	**17 00 10.6**	**+0.5**
NMR				*e*P	**Pn**	**16 59 48.9**	**-1.9**
NMR				AMB	AMB	16 59 49.3	
	30nm,0.2s						
NMR				A	A	17 00 11.1	
	40nm,0.2s						
NMR				A	A	17 00 11.1	
	60nm,0.2s						
JNSB	**Nemuroshibetsu**	**1.10**	**239**	*e*P	**Pn**	**16 59 50.1**	**-1.0**
JNK	**Nakash**	**1.38**	**237**	*e*P	**Pn**	**16 59 52.9**	**-1.0**
JKHN	**Kushirohamanak**	**1.51**	**214**	*e*P	**Pn**	**16 59 54.2**	**-1.0**
AKK	**Akkeshi**	**1.70**	**219**	*e*S	**Sn**	**17 00 23.5**	**+2.0**
AKK				*e*P	**Pn**	**16 59 55.9**	**-1.4**
JTKR	**Abashiri--Toko**	**1.77**	**259**	*e*P	**Pn**	**16 59 56.4**	**-1.6**
JAK	**Akkeshi**	**1.79**	**221**	*e*P	**Pn**	**16 59 57.0**	**-1.2**
JAK				*e*S	**Sn**	**17 00 25.0**	**+1.8**
JAR	**Ashorobuto**	**2.12**	**241**	*e*P	**Pn**	**17 00 01.9**	**-0.1**
JMP	**Maruseppu**	**2.15**	**262**	*e*P	**Pn**	**17 00 01.8**	**-0.6**
JOB	**Onbets**	**2.30**	**232**	*e*P	**Pn**	**17 00 03.9**	**-0.3**
JKK2	**Kamakawa 2**	**2.61**	**261**	*e*P	**Pn**	**17 00 07.2**	**-0.7**
ASAJ	**Asahikawa**	**2.68**	**266**	*e*P	**Pn**	**17 00 07.8**	**-1.0**
JCH	**Churui**	**2.75**	**232**	*e*P	**Pn**	**17 00 08.8**	**-1.0**
JNBK	**Urakawa-nobuka**	**3.31**	**233**	*e*P	**Pn**	**17 00 15.0**	**-1.9**

IDC ***16*** *17:01:55.2±7.5, 7.61S×129.21E, h160km±79km, mb3.1/2, mbtmp3.8/6, Error ellipse: s-maj=72.9km s-min=23.8km az=37.0*
ISC 16 17:01:54.3±1.4, 7.77S±0.10×129.4E±0.1, h150km, n6, σ2§65/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.13**	**246**	P	**Pn**	**17 03 24.1**	**+1.3**
	38nm,0.4s,baz=95,slow=4.5,SNR=16						
BATI				S	**Sn**	**17 04 31.2**	**-0.8**
	15nm,0.4s,baz=77,slow=23,SNR=6.9						
FITZ	**Fitzroy Crossi**	**10.89**	**199**	P	**Pn**	**17 04 28.0**	**+1.9**
	1.7nm,0.5s,baz=24,slow=13,SNR=14						
FITZ				S	**Sn**	**17 06 23.9**	**-2.6**
	3.7nm,0.4s,baz=57,slow=22,SNR=6.8						
WRA	**Warramunga Arr**	**13.03**	**159**	P	**Pn**	**17 04 56.2**	**+2.2**
	1.3nm,0.3s,baz=338,slow=13,SNR=31						
WRA				S	**Sn**	**17 07 15.8**	**-2.4**
	2.3nm,0.6s,baz=333,slow=23,SNR=9.1						
ASAR	**Alice Springs**	**16.40**	**165**	P	**Pn**	**17 05 40.1**	**+4.1**
	0.3nm,0.3s,baz=344,slow=9.6,SNR=29						
ASAR				S	**S**	**17 08 36.5**	**-1.9**
	0.5nm,0.6s,baz=344,slow=25,SNR=4.1						
MKAR	**Makanchi Array**	**68.52**	**327**	P	**P**	**17 12 39.7**	**-0.9**
	0.2nm,0.4s,baz=117,slow=8.1,SNR=6.0						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**72.83**	**329**	P	**P**	**17 13 04.3**	**-2.2**
	0.2nm,0.4s,baz=122,slow=5.1,SNR=4.8						
	0.2nm,0.4s						

SJA ***16*** *17:17:38.6±0.6, 34.61S×70.34W, h132km±3km, ML3.4, MW3.5*
GUC ***16*** *17:17:40.2±0.8, 34.55S×70.35W, h118km±3km, ML3.5*
ISC 16 17:17:38.9±1.4, 34.59S±0.03×70.31W±0.04, h132km±8km, n59, σ1§25/87, 10C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BO02	**Sierra Bellavi**	**0.44**	**242**	*i* P	**Pn**	**17 17 58.3**	**+0.3**
BO02				*e*S	**Sn**	**17 18 12.2**	**-0.2**
BO02				IAML		17 18 17.2	
	comp=E,2μm,0.2s						
BO02	**Sierra Bellavi**	**0.44**	**242**	*e*P	**Pn**	**17 17 58.1**	**+0.2**
BO02				*e*S	**Sn**	**17 18 14.4**	**+2.0**
BO02				IAML		17 18 18.5	
	comp=Z,2μm,0.2s						
BO04	**La Punta**	**0.65**	**338**	⇑*i*P	**Pn**	**17 17 59.2**	**0.0**
BO04				*e*S	**Sn**	**17 18 13.7**	**-0.8**
BO04				IAML		17 18 14.8	
	comp=E,2μm,0.2s						
BO01	**Tunca**	**0.67**	**287**	⇑*i*P	**Pn**	**17 17 59.4**	**+0.2**
BO01				*e*S	**Sn**	**17 18 14.0**	**-0.6**
BO01				IAML		17 18 14.9	
	comp=E,1μm,0.2s						
BO01	**Tunca**	**0.67**	**287**	*e*P	**Pn**	**17 17 59.5**	**+0.2**
BO01				*e*S	**Sn**	**17 18 14.5**	**-0.1**
BO01				IAML		17 18 15.5	
	comp=Z,381nm,0.3s						
LMEL	**Las Melosas**	**0.75**	**7**	*i* P	**Pn**	**17 18 00.4**	**+0.4**
LMEL	**Las Melosas**	**0.75**	**7**	*e*P	**Pn**	**17 18 00.4**	**+0.4**
LMEL				*e*S	**Sn**	**17 18 16.6**	**+0.6**
LMEL				IAML		17 18 26.5	
	comp=Z,302nm,0.1s						
MT13	**San Alfonso**	**0.84**	**2**	*e*P	**Pn**	**17 18 01.3**	**+0.5**
MT13				*e*S	**Sn**	**17 18 18.1**	**+0.8**
MT13				IAML		17 18 18.3	
	comp=Z,445nm,0.4s						
MT09	**Talagante**	**0.99**	**325**	*i* P	**Pn**	**17 18 02.2**	**+0.2**
MT09				*e*S	**Sn**	**17 18 18.9**	**-0.7**
MT09				IAML		17 18 19.4	
	comp=E,2μm,0.3s						

MT15	**Las Vizcachas**	**1.00**	**351**	⇑*i*P	**Pn**	**17 18 02.7**	**+0.6**
MT15				*e*S	**Sn**	**17 18 19.6**	**-0.1**
MT15				IAML		17 18 21.2	
	comp=N,2μm,0.3s						
MT01	**Popeta**	**1.06**	**313**	⇑*i*P	**Pn**	**17 18 02.8**	**+0.2**
MT01	**Popeta**	**1.06**	**313**	*e*P	**Pn**	**17 18 02.7**	**+0.1**
MT01				IAML		17 18 22.1	
	comp=Z,338nm,0.2s						
MT03	**Universidad Ad**	**1.11**	**351**	⇓*i*P	**Pn**	**17 18 02.8**	**-0.3**
MT03				*e*S	**Sn**	**17 18 21.9**	**+0.4**
MT03				IAML		17 18 23.3	
	comp=E,2μm,0.1s						
MT03	**Universidad Ad**	**1.11**	**351**	*e*P	**Pn**	**17 18 03.7**	**+0.6**
MT03				*e*S	**Sn**	**17 18 22.3**	**+0.8**
MT03				IAML		17 18 23.7	
	comp=Z,675nm,0.2s						
MT08	**Bocatoma Ro**	**1.17**	**12**	*e*P	**Pn**	**17 18 03.3**	**-0.6**
MT08				*e*S	**Sn**	**17 18 18.8**	**-4.0**
MT16	**CCHEN**	**1.17**	**351**	⇑*i*P	**Pn**	**17 18 04.3**	**+0.6**
MT16				*e*S	**Sn**	**17 18 22.8**	**+0.2**
MT16				IAML		17 18 28.2	
	comp=E,272nm,0.5s						
MT04	**Ro Olivares**	**1.19**	**7**	⇑*i*P	**Pn**	**17 18 00.3**	**-3.8**
MT04				*e*S	**Sn**	**17 18 23.5**	**+0.3**
MT04				IAML		17 18 26.1	
	comp=N,469nm,0.4s						
MT04	**Ro Olivares**	**1.19**	**7**	*e*P	**Pn**	**17 18 00.3**	**-3.8**
MT04				*e*S	**Sn**	**17 18 23.7**	**+0.5**
MT04				IAML		17 18 29.8	
	comp=Z,181nm,0.8s						
MT14	**Cerro Cal¡n**	**1.21**	**351**	*e*P	**Pn**	**17 18 01.7**	**-2.4**
MT14				*e*S	**Sn**	**17 18 23.0**	**-0.2**
MT14				IAML		17 18 26.0	
	comp=N,1μm,0.4s						
MT05	**Renca**	**1.25**	**343**	*e*P	**Pn**	**17 18 05.0**	**+0.5**
MT05				*e*S	**Sn**	**17 18 23.9**	**0.0**
MT05				IAML		17 18 26.1	
	comp=N,2μm,0.2s						
MT05	**Renca**	**1.25**	**343**	*e*P	**Pn**	**17 18 04.1**	**-0.4**
MT05				*e*S	**Sn**	**17 18 24.5**	**+0.6**
MT05				IAML		17 18 24.6	
	comp=Z,879nm,0.2s						
MT10	**Hacienda Santa**	**1.33**	**352**	⇑*i*P	Pn	17 17 59.9	-5.5
MT10				*e*S	**Sn**	**17 18 26.0**	**+0.4**
MT10				IAML		17 18 28.2	
	comp=E,946nm,0.5s						
BO03	**Pichilemu**	**1.36**	**273**	⇑*i*P	**Pn**	**17 18 06.2**	**+0.6**
BO03				*e*S	**Sn**	**17 18 25.6**	**-0.4**
BO03				IAML		17 18 26.7	
	comp=N,753nm,0.3s						
EDS3	**Malargue**	**1.40**	**148**	*e*P	**Pn**	**17 18 06.6**	**+0.5**
EDS3				*e*S	**Sn**	**17 18 22.1**	**-4.8**
GO05	**Hualane**	**1.40**	**252**	*e*P	**Pn**	**17 18 06.0**	**0.0**
GO05				*e*S	**Sn**	**17 18 25.8**	**-0.8**
GO05	**Hualane**	**1.40**	**252**	*e*P	**Pn**	**17 18 06.1**	**+0.2**
GO05				*e*S	**Sn**	**17 18 26.3**	**-0.3**
GO05				IAML		17 18 26.7	
	comp=Z,464nm,0.1s						
VA05	**Santo Domingo**	**1.43**	**310**	⇑*i*P	**Pn**	**17 18 06.5**	**+0.3**
VA05				*e*S	**Sn**	**17 18 27.3**	**+0.2**
VA05				IAML		17 18 28.7	
	comp=E,1μm,0.3s						
PEL	**Peldehue**	**1.48**	**348**	*e*P	**Pn**	**17 18 07.9**	**+0.9**
PEL				*e*S	**Sn**	**17 18 28.3**	**+0.1**
PEL				IAML		17 18 30.8	
	comp=E,825nm,0.2s						
PEL	**Peldehue**	**1.48**	**348**	*e*P	Pn	17 18 01.2	-5.7
PEL				*e*S	**Sn**	**17 18 29.1**	**+0.9**
PEL				IAML		17 18 33.0	
	comp=Z,453nm,0.2s						
ML02	**Panimavida**	**1.48**	**217**	*e*P	**Pn**	**17 18 08.0**	**+1.1**
ML02	**Panimavida**	**1.48**	**217**	*e*P	**Pn**	**17 18 08.2**	**+1.4**
ML02				*e*S	**Sn**	**17 18 29.5**	**+1.3**
ML02				IAML		17 18 32.4	
	comp=Z,259nm,0.3s						
MT02	**Curacav**	**1.49**	**332**	⇑*i*P	**Pn**	**17 18 07.5**	**+0.4**
MT02				*e*S	**Sn**	**17 18 27.7**	**-0.9**
MT02				IAML		17 18 29.1	
	comp=E,1μm,0.7s						
MT02	**Curacav**	**1.49**	**332**	*e*P	**Pn**	**17 18 07.5**	**+0.4**
MT02				*e*S	**Sn**	**17 18 28.1**	**-0.4**
MT02				IAML		17 18 30.5	
	comp=Z,411nm,0.3s						
RFA	**San Rafael**	**1.53**	**97**	*e*P	**Pn**	**17 18 07.8**	**+0.3**
RFA				*e*S	**Sn**	**17 18 28.8**	**-0.6**
VA03	**San Esteban**	**1.83**	**354**	*e*P	**Pn**	**17 18 03.1**	**-8.0**
VA03				*e*S	**Sn**	**17 18 36.5**	**+0.8**
VA03				IAML		17 18 38.2	
	comp=Z,565nm,0.2s						
AVIZ	**Vizcacheras**	**1.86**	**54**	*e*P	**Pn**	**17 18 12.5**	**+1.1**
VA01	**Torpederas**	**1.92**	**324**	*e*P	**Pn**	**17 18 12.8**	**+0.9**
VA01				IAML		17 18 40.2	
	comp=Z,138nm,0.3s						
AAGR	**Agrelo**	**1.94**	**40**	*e*P	**Pn**	**17 18 13.6**	**+1.2**
ARCO	**CERRO ARCO**	**2.09**	**34**	*e*P	**Pn**	**17 18 15.3**	**+1.1**
VA06	**Catapilco**	**2.18**	**338**	*e*P	**Pn**	**17 18 13.4**	**-1.8**
VA06				*e*S	**Sn**	**17 18 41.3**	**-1.8**
BI02	**San Fabin de**	**2.21**	**200**	*e*P	**Pn**	**17 18 16.2**	**+0.6**
BI02				IAML		17 18 50.1	
	comp=Z,102nm,0.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.83**	**29**	P	**Pg**	**17 40 39.0**	**+1.1**
RTAL				S	**Sg**	**17 40 49.4**	**+0.7**
STG2	**El Palmar, Qui**	**0.96**	**48**	*eP*	**Pg**	**17 40 41.1**	**+0.8**
STG8	**El Palmar, Qui**	**0.99**	**49**	*eP*	**Pg**	**17 40 41.6**	**+0.7**
STG8				IAML		17 40 58.2	
	comp=N,5μm,0.2s						
SMCA	**Catarina**	**1.06**	**2**	*eP*	**Pg**	**17 40 41.3**	**-0.8**
QUEO	**Labor Ovalle**	**1.22**	**29**	*i P*	**Pb**	**17 40 44.5**	**-0.6**
QUEO				IAML		17 41 09.1	
	comp=N,3μm,0.2s						
SOKI	**Kika Raxquin**	**1.23**	**34**	*eP*	**Pb**	**17 40 44.1**	**-1.4**
ESSG	**Sabana Grande**	**1.38**	**65**	*i P*	**Pn**	**17 40 46.1**	**-1.1**
ESSG				IAML		17 41 03.9	
	comp=E,1μm,0.2s						
HUEH	**Huehuetenango**	**1.63**	**21**	P	**Pn**	**17 40 49.9**	**-0.8**
FG16	**Alotenango, Sa**	**1.63**	**73**	*i* P	Pn	17 40 46.7	-4.0
FG16				IAML		17 41 06.3	
	comp=N,10μm,0.2s						
PCG5	**San Vicente Pa**	**1.74**	**76**	*eP*	Pn	17 40 49.0	-3.2
QUIS	**Sacapulas**	**1.79**	**34**	*eP*	**Pn**	**17 40 53.4**	**+0.5**
QUIS				IAML		17 41 20.6	
	comp=E,1μm,0.3s						
APG	**El Apazote**	**2.00**	**53**	Pn	**Pn**	**17 40 56.8**	**+0.9**
	comp=E,2.5nm,0.3s,baz=187,slow=12,SNR=83						
APG				Sn	**Sn**	**17 41 21.8**	**+0.6**
	comp=E,2.9nm,0.3s,baz=216,slow=17,SNR=6.1						
APG	**El Apazote**	**2.00**	**53**	*i* P	**Pn**	**17 40 56.7**	**+0.9**
FAME	**Alcaldia de Sa**	**2.04**	**88**	P	**Pn**	**17 40 56.8**	**+0.5**
FAME	**Alcaldia de Sa**	**2.04**	**88**	S	**Sn**	**17 41 19.6**	**-2.2**
NUBE	**Las Nubes**	**2.27**	**87**	*eP*	**Pn**	**17 40 59.3**	**-0.3**
NUBE	**Las Nubes**	**2.27**	**87**	P	**Pn**	**17 40 59.8**	**+0.3**
NUBE	**Las Nubes**	**2.27**	**87**	S	**Sn**	**17 41 25.4**	**-2.4**
SLOZ	**Alcaldia de Sa**	**2.28**	**84**	P	**Pn**	**17 40 58.6**	**-0.9**
SLOZ	**Alcaldia de Sa**	**2.28**	**84**	S	**Sn**	**17 41 25.6**	**-2.0**
LOAL	**Lomas de Alarc**	**2.28**	**85**	P	**Pn**	**17 40 59.8**	**+0.2**
LOAL	**Lomas de Alarc**	**2.28**	**85**	S	**Sn**	**17 41 26.2**	**-1.5**
CCIG	**Comitan**	**2.47**	**360**	*i* P	**Pn**	**17 41 04.8**	**+2.5**
CCIG	**Comitan**	**2.47**	**360**	P	**Pn**	**17 41 04.7**	**+2.4**
CCIG	**Comitan**	**2.47**	**360**	S	**Sn**	**17 41 33.8**	**+1.0**
JAYA	**Jayaque - finc**	**2.59**	**93**	*eP*	**Pn**	**17 41 03.9**	**-0.1**
JAYA	**Jayaque - finc**	**2.59**	**93**	S	**Sn**	**17 41 34.1**	**-1.7**
JAYA	**Jayaque - finc**	**2.59**	**93**	P	**Pn**	**17 41 04.5**	**+0.5**
PMON	**Piamonte**	**2.72**	**91**	P	**Pn**	**17 41 07.4**	**+1.6**
PMON	**Piamonte**	**2.72**	**91**	S	**Sn**	**17 41 39.6**	**+0.8**
LALI	**Alcalda de L**	**2.73**	**96**	P	**Pn**	**17 41 06.6**	**+0.8**
MTO3	**Montecristo**	**2.74**	**77**	P	**Pn**	**17 41 06.1**	**0.0**
MTO3	**Montecristo**	**2.74**	**77**	S	**Sn**	**17 41 39.4**	**0.0**
LOMA	**Loma Larga**	**2.87**	**93**	P	**Pn**	**17 41 08.6**	**+0.8**
SCLA	**Alcaldia de Sa**	**3.29**	**91**	P	**Pn**	**17 41 14.3**	**+0.7**
PACA	**Pacayal**	**3.70**	**95**	P	**Pn**	**17 41 21.5**	**+2.3**
PACA	**Pacayal**	**3.70**	**95**	S	**Sn**	**17 42 03.2**	**+0.2**
PETF	**Flores**	**3.79**	**35**	P	**Pn**	**17 41 20.5**	**+0.2**
PETF	**Flores**	**3.79**	**35**	S	**Sn**	**17 42 03.0**	**-1.9**
CNCH	**Conchagua**	**4.20**	**97**	P	**Pn**	**17 41 26.7**	**+0.7**
CMIG	**Matias Romero**	**4.23**	**321**	Pn	**Pn**	**17 41 26.2**	**-0.2**
	comp=E,2.3nm,0.3s,baz=138,slow=8.7,SNR=16						
CMIG				Sn	**Sn**	**17 42 13.4**	**-2.3**
	comp=E,7.3nm,0.3s,baz=60,slow=15,SNR=5.1						
CMIG				Lg		17 42 25.0	
	comp=E,6.7nm,0.3s,baz=51,slow=22,SNR=10						
	comp=E,7.5nm,0.4s						
TEIG	**Tepich**	**7.38**	**29**	Pn	**Pn**	**17 42 10.8**	**+1.2**
	baz=129,slow=20,SNR=15						
TEIG				Sn	**Sn**	**17 43 31.3**	**-2.1**
	baz=131,slow=24,SNR=1.2						
JTS	**Las Juntas de**	**7.82**	**116**	Pn	Pn	17 42 13.8	-2.0
	comp=E,0.4nm,0.3s,baz=299,slow=19,SNR=1.7						
JTS				Lg	Lg	17 44 13.6	
	comp=E,0.7nm,0.3s,baz=308,slow=23,SNR=2.5						
	comp=E,2.2nm,0.6s						
TXAR	**Lajitas Array**	**18.81**	**327**	P	**P**	**17 44 43.5**	**+1.8**
	baz=146,slow=9.4,SNR=7.4						
	comp=E,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**33.76**	**321**	P	**P**	**17 47 03.2**	**-0.9**
	comp=E,0.7nm,0.6s,baz=131,slow=9.8,SNR=6.1						
	comp=E,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**51.20**	**347**	P	P	17 49 23.2	-1.9
	comp=E,0.4nm,0.7s,baz=134,slow=8.7,SNR=4.6						
	comp=E,0.4nm,0.7s						
ILAR	**Eielson Array**	**62.98**	**337**	P	**P**	**17 50 48.4**	**-0.2**
	comp=E,0.5nm,0.9s,baz=108,slow=6.5,SNR=4.1						
	comp=E,0.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**146.15**	**341**	PKPbc	**PKPdf**	**18 00 03.2**	**+0.9**
	comp=E,1.0nm,0.7s,baz=8.3,slow=2.5,SNR=5.5						

NEIC ***16*** *17:42:53.4±0.9,36°.145N±0°.007×96°.83W±0°.01,h8km±3km, Error ellipse: s-maj=1.5km s-min=0.7km az=129.0*

NEIC 16 17:42:53.3±0.7,36°.145N±0°.007×96°.838W±0°.009, h5km±1km, mb_Lg2.2/12, ML2.7/58, ML2.6/28, Error ellipse: s-maj=2.4km s-min=1.2km az=78.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUOK	**Quay**	**0.11**	**76**		Pg	17 42 56.1	+0.6
QUOK				Sg	Sg	17 42 58.0	+0.9
QUOK				IAML		17 42 58.3	
	comp=E,3μm,0.2s						
OK052	**Battle Ridge R**	**0.15**	**169**		Pg	17 42 56.8	+0.4
OK052				Sg	Sg	17 42 59.0	+0.5
OK052				IAML		17 43 00.9	
	comp=E,3μm,0.4s						
OK052				IAML		17 43 02.4	
	comp=E,2μm,0.3s						
OK048	**Pawnee Station**	**0.28**	**342**		Pg	17 42 59.4	+0.5
OK048				Sg	Sg	17 43 03.4	+0.8
OK048				IAML		17 43 05.2	
	comp=E,987nm,0.3s						
OK051	**E0350 and S346**	**0.36**	**0**		Pg	17 43 00.8	+0.5
OK051				IAML		17 43 10.1	
	comp=E,632nm,0.2s						
OK051				IAML		17 43 10.7	
	comp=E,566nm,0.2s						
DEOK	**Depew**	**0.41**	**137**		Pg	17 43 01.4	+0.2
DEOK					Sg	17 43 07.0	+0.5
DEOK				IAML		17 43 07.5	
	comp=E,631nm,0.4s						
DEOK				IAML		17 43 09.0	
	comp=N,757nm,0.3s						
OK029	**Liberty Lake**	**0.61**	**235**		Pg	17 43 05.1	+0.1
OK029					Sg	17 43 13.8	+0.8
OK029				IAML		17 43 14.1	
	comp=N,475nm,0.4s						
OK029				IAML		17 43 16.0	
	comp=N,397nm,0.3s						
ADOK	**Arcadia Dam**	**0.66**	**222**		Pg	17 43 06.0	+0.1
ADOK				Sg	Sg	17 43 14.9	+0.5
BLOK	**Blackwell**	**0.69**	**334**		Pg	17 43 06.8	+0.3
BLOK				Sg	Sg	17 43 15.5	+0.1
BCOK	**Bluff Creek, N**	**0.79**	**232**		Pg	17 43 08.7	+0.2
BCOK					Sg	17 43 19.7	+0.9
OK004	**Okla Sci Mus**	**0.81**	**220**		Pg	17 43 08.7	-0.1
OK004					Sb	17 43 20.2	-0.9
T35A	**Sooner Cattle**	**0.81**	**19**		Pg	17 43 09.1	+0.1
T35A				Sg	Sg	17 43 19.4	-0.1
TUL3	**Leonard**	**0.88**	**105**		Pg	17 43 09.9	-0.3
TUL3				Sg	Sg	17 43 21.3	-0.3
OKCFA	**Oklahoma City**	**0.88**	**215**		Pg	17 43 09.9	-0.3
OKCFA					Sg	17 43 22.3	+0.7
OKCSW	**OKLAHOMA CITY**	**0.88**	**214**		Pg	17 43 09.5	-0.8
OKCSW					Sg	17 43 22.3	+0.5
OKCSW				IAML		17 43 25.0	
	comp=E,329nm,0.1s						
OKCSW				IAML		17 43 32.2	
	comp=N,267nm,0.2s						
CROK	**Carrier**	**0.99**	**292**		Pg	17 43 12.3	-0.1
CROK					Sg	17 43 25.5	+0.3
FNO	**Franklin**	**1.00**	**208**		Pg	17 43 11.6	-0.8
FNO				IAmb_Lg		17 43 25.0	
	comp=Z,16nm,0.7s						
FNO					Sg	17 43 25.2	-0.2
FNO				IAML		17 43 28.5	
	comp=E,180nm,0.2s						
GC02	**Grant County #**	**1.08**	**311**		Pg	17 43 13.9	-0.2
GC02					Sg	17 43 28.3	+0.1
KAN14	**Manchester OK**	**1.22**	**312**		Pg	17 43 15.8	-0.8
KAN14					Sg	17 43 32.4	0.0
KAN01	**Argonia South**	**1.25**	**324**		Pg	17 43 16.2	-1.1
KAN01					Sb	17 43 34.0	+0.1
KAN08	**Anthony NE Sta**	**1.41**	**320**		Pn	17 43 19.6	-0.1
RLO	**Rose Lookout**	**1.47**	**89**		Pn	17 43 20.2	-0.2
RLO					Sn	17 43 39.5	-0.6
OK038	**West end E0370**	**1.57**	**283**		Pn	17 43 21.7	-0.2
CSTR	**Hydro, Custer**	**1.58**	**252**		Pn	17 43 22.2	+0.1
X34A	**Smith Ranch, M**	**1.74**	**208**		Pn	17 43 24.9	+0.7
X34A					Sg	17 43 50.1	+0.9
NOKA	**Waynoka**	**1.76**	**287**		Pn	17 43 24.5	0.0
U38A	**Gravette**	**2.00**	**81**		Pn	17 43 26.4	-1.4
U38A					Sb	17 43 54.7	-0.8
WMOK	**Wichita Mounta**	**2.12**	**229**		Pn	17 43 29.5	+0.1
HHAR	**Hobbs**	**2.35**	**86**		Pn	17 43 33.1	+0.6
HHAR				IAmb_Lg		17 44 13.1	
	comp=Z,16nm,0.7s						
WTFS	**Witchita Falls**	**2.72**	**210**		Pn	17 43 36.8	-0.9
WTFS				IAmb_Lg		17 44 20.0	
	comp=Z,6.9nm,0.7s						
MIAR	**Mount Ida**	**3.11**	**120**	Pn	Pn	17 43 42.3	-0.7
CBKS	**Cedar Bluff**	**3.52**	**320**	Pn	Pn	17 43 48.1	-0.6
CBKS					Sb	17 44 39.7	+0.4
X40A	**Basin Creek Fa**	**3.67**	**116**		Pn	17 43 50.3	-0.4
WHAR	**Wooly Hollow**	**3.80**	**102**		Pn	17 43 52.1	-0.4
FCAR	**Ozark Folk Cen**	**3.83**	**92**		Pn	17 43 53.5	+0.6
AMTX	**Amarillo**	**4.15**	**254**		Pn	17 43 56.7	-0.7
R40A	**Maddies Statio**	**4.23**	**58**		Pn	17 43 57.1	-1.3
P38A	**Dawn**	**4.35**	**36**		Pn	17 43 58.1	-2.0
LCAR	**Lake Charles**	**4.60**	**89**		Pn	17 44 01.7	-1.8
CCM	**Cathedral Cave**	**4.86**	**65**		Pn	17 44 04.0	-3.1
P40A	**Paris**	**5.08**	**47**		Pn	17 44 07.3	-2.8
BRDY	**Brady**	**5.17**	**201**		Pn	17 44 09.1	-2.3
FVM	**French Village**	**5.45**	**68**		Pn	17 44 12.0	-3.1
DRIO	**Del Rio**	**7.42**	**206**	IAmb_Lg		17 46 55.4	
	comp=Z,2.8nm,0.9s						

IDC 16 17:43:18.2±2.2,1°.78N×126°.62E,h0km,mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=183.2km s-min=26.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.88**	**161**	P	P	17 48 22.5	-1.1
	0.8nm,0.6s,baz=340,slow=11,SNR=9.4						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**26.27**	**165**	P	P	17 48 56.4	+0.9
	0.2nm,0.4s,baz=343,slow=9.2,SNR=8.3						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	17 53 20.2	-0.2
	0.2nm,0.5s,baz=142,slow=6.9,SNR=4.7						
	0.2nm,0.5s						

MOS ***16*** *17:46:00.3±0.9,3°.32S×137°.54E,h57km,mb5.2/23, Error ellipse: s-maj=9.7km s-min=6.0km az=110.7*
BJI ***16*** *17:46:01.6,3°.52S×137°.76E,h85km,mB5.2/18,mb4.9/57, Ms4.5/14,Ms7 4.3/20*
NEIC ***16*** *17:46:02.9±2.0,3°.33S±0°.07×137°.54E±0°.05,h62km±3km, mb5.3/184,Mww5.1/22, Error ellipse: s-maj=9.8km s-min=7.5km az=174.0*
NEIC ***16*** *17:46:03.4,3°.32S×137°.54E,h60km*
NEIC ***16*** *17:46:03.4,3°.52S×137°.54E,h60km, Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16 Nm; Mrr=4.24; Mθθ-0.14; Mrθ=4.38; Mrφ 1.22; Mθφ=2.54; Mφφ2.76; Fault plane solution: M05.85000×10^16 NP1:φ=24.58000°, δ29.15000°, λ-89.40000°. NP2:φ=203.89000°, δ60.85000°, λ-90.33000°. Principal axes: T 6.3823, Plg16.0000°, Azm294.0000°; N -1.2830, Plg0.0000°, Azm204.0000°; P -5.0994, Plg74.0000°, Azm113.0000°;*
IDC ***16*** *17:46:03.7±0.4,3°.31S×137°.61E,h69km±3km,mb4.4/24, mbtmp4.8/29,MS3.9/44 Error ellipse: s-maj=9.3km s-min=8.3km az=69.0*
DJA ***16*** *17:46:04.3±0.2,3°.5±2°×13°.8E±°,h81km±2km,M5.0/78, mb5.2/78,mB5.5/55,MLv5.8/12,Mw(mB)5.0/55, MwMwp4.8/16,Mwp5.2/16*
GCMT ***16*** *17:46:06.4±0.1,3°.17S±0°.01×137°.52E±0°.01,h80km±1km, MW5.1/118,Moment Tensor Solution. s91,c132; s118,c204; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.79±.12; Mθθ-0.63±.10; Mφφ5.42±.10; Mrθ1.33±.07; Mθφ3.07±.10; Mφ2.65±.09; Best double couple: M06.47000×10^16 NP1:φ=19.00000°,δ31.00000°, λ-96.00000°. NP2:φ=206.00000°,δ59.00000°, λ-86.00000°. Principal axes: T 7.4220, Plg14.0000°, Azm293.0000°; N -1.9050, Plg3.0000°, Azm24.0000°; P -5.5170, Plg76.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 17:46:03.3±0.3,3°.40S±0°.03×137°.56E±0°.03,h72km±2km, h72km:pP-P,n779,σ1°33/754,mb5.2/162,10C-6D,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.81**	**39**	P	**Pn**	**17 46 31.2**	**-1.2**
SMPI				S	**Sn**	**17 46 48.6**	**-5.9**
BAKI	**Biak**	**2.63**	**326**	P	**Pn**	**17 46 44.3**	**+0.8**
GENI	**Genyem**	**2.72**	**73**	P	**Pn**	**17 46 44.6**	**-0.2**
GENI	**Genyem**	**2.72**	**73**	S	**Sn**	**17 47 15.6**	**-1.1**
GENI	**Genyem**	**2.72**	**73**	P	**Pn**	**17 46 44.8**	**0.0**
JAY	**Jayapura**	**3.26**	**75**	P	**Pn**	**17 46 51.5**	**-0.7**
	308nm,0.3s,baz=247,slow=15,SNR=240						
JAY				S	**Sn**	**17 47 28.8**	**-1.0**
	1μm,0.5s,baz=315,slow=20,SNR=7.1						
JAY				LR	LR	17 48 00.8	
	comp=Z,5μm,20.2s,baz=300,slow=37						
JAY	**Jayapura**	**3.26**	**75**	P	**Pn**	**17 46 51.5**	**-0.7**
KMPI	**Kaimana, Papua**	**3.86**	**266**	P	**Pn**	**17 47 03.2**	**+2.9**
RKPI	**Ransiki, Papua**	**3.87**	**299**	P	**Pn**	**17 47 01.1**	**+0.7**
FAKI	**Fak Fak**	**5.33**	**275**		**Pn**	**17 47 20.0**	**-0.3**
FAKI				Sn	**Sn**	**17 48 15.7**	**-4.7**
FAKI	**Fak Fak**	**5.33**	**275**	P	**Pn**	**17 47 20.3**	**0.0**
FAKI	**Fak Fak**	**5.33**	**275**	P	**Pn**	**17 47 21.1**	**+0.8**
	3.2nm5μm6μm490nm,0.8s						
MMPI	**Merauke**	**5.77**	**151**	P	**Pn**	**17 47 30.0**	**+3.6**
SWI	**Sorong**	**6.78**	**292**	P	**Pn**	**17 47 40.8**	**+0.6**
SAUI	**Saumlaki**	**7.72**	**234**		**Pn**	**17 47 53.6**	**+0.5**
SAUI				Sn	**Sn**	**17 49 13.9**	**-5.1**
SAUI	**Saumlaki**	**7.72**	**234**	P	**Pn**	**17 47 53.0**	**-0.1**
SAUI	**Saumlaki**	**7.72**	**234**	S	**Sn**	**17 49 20.8**	**+1.8**
SAUI	**Saumlaki**	**7.72**	**234**	P	**Pn**	**17 47 56.8**	**+3.7**
BNDI	**Bandanaira**	**7.72**	**261**	P	**Pn**	**17 47 55.1**	**+2.0**
BNDI	**Bandanaira**	**7.72**	**261**	P	**Pn**	**17 47 55.8**	**+2.7**
	5.8nm3μm11μm315nm,0.9s						
MSAI	**Masohi**	**8.62**	**270**	P	**Pn**	**17 48 07.4**	**+2.0**
	2μm209nm,1.0s						
AAI	**Ambon**	**9.35**	**268**	P	**Pn**	**17 48 16.6**	**+1.2**
	2μm119nm,0.9s						
MANU	**Manus Island**	**9.89**	**82**		**Pn**	**17 48 23.8**	**+1.0**
NLAI	**Namlea**	**10.45**	**271**	P	**Pn**	**17 48 32.9**	**+2.6**
	2μm85nm,0.9s						
KDU	**Kakadu**	**10.51**	**208**	P	**Pn**	**17 48 31.9**	**+0.6**
	comp=Z,542nm,0.6s						
TNTI	**Ternate**	**11.00**	**292**		**Pn**	**17 48 37.7**	**-0.2**
TNTI	**Ternate**	**11.00**	**292**	P	**Pn**	**17 48 37.7**	**-0.2**
TNTI	**Ternate**	**11.00**	**292**	P	**Pn**	**17 48 40.0**	**+2.1**
	comp=Z,2μmcomp=Z,93nm,1.8s						
DRS	**Darwin Rock St**	**11.19**	**216**	P	**Pn**	**17 48 40.5**	**+0.7**
AUDHS	**Darwin High Sc**	**11.19**	**216**	P	**Pn**	**17 48 42.4**	**+2.0**
PMG	**Port Moresby**	**11.25**	**123**	P	**Pn**	**17 48 42.7**	**+1.4**
	comp=Z,87nm,0.5s,baz=311,slow=9.9,SNR=56						
PMG				S	**Sn**	**17 50 42.3**	**-3.1**
	comp=Z,38nm,0.3s,baz=224,slow=22,SNR=6.2						
PMG				LR	LR	17 53 54.2	
	comp=Z,1μm,19.9s,baz=342,slow=42						
PMG	**Port Moresby**	**11.25**	**123**	P	**Pn**	**17 48 40.3**	**-1.0**
PMG	**Port Moresby**	**11.25**	**123**	P	**Pn**	**17 48 40.5**	**-0.8**
MTN	**Manton Dam**	**11.34**	**214**	P	**Pn**	**17 48 43.5**	**+1.0**
	comp=Z,423nm,0.5s						
MTN	**Manton Dam**	**11.34**	**214**		**Pn**	**17 48 43.1**	**+0.6**
SANI	**Sanana**	**11.64**	**276**	P	**Pn**	**17 48 44.7**	**-1.9**
SANI	**Sanana**	**11.64**	**276**	P	**Pn**	**17 48 45.7**	**-0.9**
	comp=Z,2μmcomp=Z,1μmcomp=Z,137nm,1.1s						
COEN	**Coen**	**11.87**	**152**	P	**Pn**	**17 48 50.4**	**+0.6**
	comp=Z,194nm,0.5s						
COEN	**Coen**	**11.87**	**152**		**Pn**	**17 48 49.7**	**-0.1**
COEN	**Coen**	**11.87**	**152**	P	**Pn**	**17 48 49.9**	**+0.1**
SGSI	**Sangihe**	**13.93**	**300**	P	**Pn**	**17 49 18.0**	**+0.5**
	comp=Z,2μmcomp=Z,396nm,1.7s						
KMSI	**Cibinong**	**14.13**	**286**	P	**Pn**	**17 49 21.1**	**+0.9**
RABL	**Rabaul**	**14.59**	**94**		**Pn**	**17 49 27.5**	**+1.3**
SOEI	**Soe**	**14.63**	**244**		**Pn**	**17 49 26.5**	**-0.3**
SOEI	**Soe**	**14.63**	**244**	P	**Pn**	**17 49 28.4**	**+1.6**
SOEI	**Soe**	**14.63**	**244**	P	**Pn**	**17 49 28.9**	**+2.1**
	comp=Z,2μmcomp=Z,273nm,1.2s						
LUWI	**Luwuk**	**14.96**	**279**		**Pn**	**17 49 30.2**	**-0.7**
LUWI	**Luwuk**	**14.96**	**279**	P	**Pn**	**17 49 31.8**	**+0.9**
LUWI	**Luwuk**	**14.96**	**279**	P	**Pn**	**17 49 32.4**	**+1.5**
	comp=Z,5μmcomp=Z,274nm,1.1s						
KNRA	**Kununurra**	**14.96**	**215**	P	**Pn**	**17 49 32.0**	**+1.1**
	comp=Z,309nm,0.6s						
KNRA	**Kununurra**	**14.96**	**215**		**Pn**	**17 49 30.5**	**-0.4**
BBSI	**Bau Bau**	**15.09**	**262**	P	**Pn**	**17 49 33.4**	**+0.8**
	comp=Z,2μmcomp=Z,4μmcomp=Z,358nm,1.3s						
BATI	**Baumata**	**15.36**	**243**	P	**P**	**17 49 39.1**	**-0.2**
	comp=Z,88nm,0.5s,baz=121,slow=4.3,SNR=17						
BATI				S	**Sn**	**17 52 23.8**	**-1.8**
	comp=Z,200nm,0.7s,baz=17,slow=19,SNR=7.3						
BATI	**Baumata**	**15.36**	**243**	P	**P**	**17 49 39.1**	**-0.2**
	comp=Z,4μmcomp=Z,357nm,0.8s						
DAV	**Davao City (W)**	**15.85**	**311**	P	**P**	**17 49 48.3**	**+3.6**
	comp=Z,137nm,0.4s,baz=124,slow=3.6,SNR=7.3						
DAV				S	**Sn**	**17 52 38.2**	**+1.0**
	comp=Z,154nm,0.3s,baz=139,slow=21,SNR=6.4						
DAV				LR	LR	17 56 31.6	
	comp=Z,206nm,19.1s,baz=140,slow=40						
DAV	**Davao City (W)**	**15.85**	**311**		**Pn**	**17 49 42.9**	**+0.6**
DAV	**Davao City (W)**	**15.85**	**311**	P	**Pn**	**17 49 42.0**	**-0.2**
MTSU	**Mount Surprise**	**16.07**	**156**	P	**Pn**	**17 49 44.9**	**-0.1**
	comp=Z,72nm,0.6s						
MTSU	**Mount Surprise**	**16.07**	**156**	P	**Pn**	**17 49 46.2**	**+1.1**
MRSI	**Marisa**	**16.08**	**284**	P	**P**	**17 49 46.5**	**-0.7**
	comp=Z,2μmcomp=Z,207nm,0.6s						
APSI	**Ampana**	**16.09**	**278**	P	**P**	**17 49 47.5**	**+0.2**
	comp=Z,4μmcomp=Z,437nm,1.3s						
MMRI	**Maumere**	**16.10**	**250**		**Pn**	**17 49 44.5**	**-0.9**
MMRI	**Maumere**	**16.10**	**250**	P	**Pn**	**17 49 45.9**	**+0.5**
MMRI	**Maumere**	**16.10**	**250**	P	**P**	**17 49 48.3**	**+0.9**
	comp=Z,57nm,1.1s						
WB0	**Warramunga Arr**	**16.56**	**191**		**Pn**	**17 49 49.6**	**-1.6**
EDFI	**Ende, Flores**	**16.65**	**251**	P	**P**	**17 49 55.1**	**+1.4**
WR8	**Warramunga Arr**	**16.73**	**190**		**Pn**	**17 49 52.8**	**-0.5**
WRAB	**Tennant Creek**	**16.73**	**191**		**Pn**	**17 49 52.5**	**-0.7**
WRAB	**Tennant Creek**	**16.73**	**191**	P	**Pn**	**17 49 52.8**	**-0.5**
WRAB	**Tennant Creek**	**16.73**	**191**	*de*P	**Pn**	**17 49 51.9**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,67nm,0.6s						
WRA	**Warramunga Arr**	**16.74**	**191**	P	**Pn**	**17 49 53.5**	**+0.1**
	comp=Z,35nm,0.5s,baz=12,slow=12,SNR=102						
WRA				LR	LR	17 57 55.9	
	comp=Z,112nm,18.2s,baz=6.5,slow=42						
WRA	**Warramunga Arr**	**16.74**	**191**		**Pn**	**17 49 50.9**	**-2.5**
WRA	**Warramunga Arr**	**16.74**	**191**	*i* P	**Pn**	**17 49 50.7**	**-2.7**
WRA				pmax	pmax		
	comp=Z,35nm,0.5s						
QIS	**Mount Isa**	**17.17**	**174**	P	**Pn**	**17 49 57.9**	**-0.8**
	comp=Z,174nm,0.7s						
QIS	**Mount Isa**	**17.17**	**174**	P	**Pn**	**17 49 58.8**	**+0.1**
BSSI	**Bau Bau, Buton**	**17.23**	**260**	P	**P**	**17 50 03.2**	**+3.2**
	comp=Z,2μmcomp=Z,125nm,1.2s						
TOLI2	**Tolitoli**	**17.36**	**285**	P	**Pn**	**17 50 00.4**	**-0.7**
TOLI2				IAmb	IAmb	17 50 04.8	
	comp=Z,233nm,0.8s						
TOLI2	**Tolitoli**	**17.36**	**285**	P	**P**	**17 50 02.7**	**+1.3**
BNSI	**Bone**	**17.44**	**266**	P	**P**	**17 50 03.8**	**+1.5**
	comp=Z,1μmcomp=Z,67nm,0.9s						
BKSI	**Bulukumba**	**17.49**	**263**	P	**P**	**17 50 06.1**	**+3.2**
TTSI	**Tana Toraja**	**17.72**	**271**	P	**Pn**	**17 50 08.7**	**+3.3**
	comp=Z,2μmcomp=Z,99nm,1.3s						
SPSI	**Sidrap Palu**	**17.77**	**268**	P	**Pn**	**17 50 07.1**	**+1.1**
KAPI	**Kappang**	**17.83**	**264**	P	**Pn**	**17 50 08.7**	**+1.9**
	comp=Z,9.2nm,0.6s,baz=82,slow=3.8,SNR=6.0						
KAPI	**Kappang**	**17.83**	**264**	P	**P**	**17 50 04.5**	**-2.1**
KAPI	**Kappang**	**17.83**	**264**	*ce*P	**Pn**	**17 50 07.4**	**+0.6**
KAPI				pmax	pmax		
	comp=Z,21nm,1.1s						
PCI	**Palu**	**17.88**	**278**	P	**Pn**	**17 50 09.8**	**+2.4**
	comp=Z,4μmcomp=Z,231nm,1.0s						
MPSI	**Mapaga**	**18.04**	**282**	P	**Pn**	**17 50 10.1**	**+0.8**
BASI	**Baing, Sumba**	**18.17**	**247**	P	**Pn**	**

comp=Z,128nm,0.8s
PSA00 Pilbara Seismi 24.96 222 P **P** **17 51 21.3 +1.1**
comp=Z,127nm,0.8s
PSA00 Pilbara Seismi 24.96 222 P **P** **17 51 20.1 -0.1**
PSA00 IAmb IAmb 17 51 24.2
comp=Z,88nm,0.6s
PSA00 Pilbara Seismi 24.96 222 P **P** **17 51 20.1 -0.1**
PSA00 IAmb IAmb 17 51 24.2
comp=Z,80nm,0.7s
PSA00 Pilbara Seismi 24.96 222 P **P** **17 51 21.9 +1.6**
PSAB3 Pilbara Seismi 24.96 222 P **P** **17 51 21.3 +1.0**
comp=Z,115nm,0.8s
EIDS Eidsvold 25.42 150 P **P** **17 51 24.5 +0.1**
EIDS IAmb IAmb 17 51 28.5
comp=Z,40nm,0.7s
EIDS Eidsvold 25.42 150 P **P** **17 51 27.6 +3.2**
SBUM Sibu 25.99 283 P **P** **17 51 29.5 -0.2**
SBUM Sibu 25.99 283 P **P** **17 51 32.2 +2.5**
PCJI Pacitan 26.67 259 P **P** **17 51 36.2 +0.4**
comp=Z,41nm,1.0s
SMRI Semarang 27.25 261 P **P** **17 51 39.8 -1.2**
TW1H Toowoomba 1 Ha 27.68 152 P **P** **17 51 47.1 +2.3**
AULRC Lightning Ridg 27.72 160 P **P** **17 51 47.6 +2.6**
STKA Stephens Creek 28.58 173 P **P** **17 51 52.9 +0.2**
comp=Z,26nm,0.3s,baz=356,slow=8.0,SNR=93
STKA LR LR 18 05 27.0
comp=Z,246nm,20.8s,baz=351,slow=41
comp=Z,26nm,0.3s
STKA Stephens Creek 28.58 173 P **P** **17 51 53.6 +0.9**
STKA Stephens Creek 28.58 173 *ce*P **P** **17 51 53.1 +0.4**
FORT Forrest 28.68 197 P **P** **17 51 52.8 -0.8**
FORT IAmb IAmb 17 52 40.4
comp=Z,52nm,0.6s
CMSA Cobar Meteorol 29.02 166 P **P** **17 51 58.4 +1.8**
BBOO Buckleboo 29.30 183 P **P** **17 51 58.3 -0.7**
BBOO IAmb IAmb 17 52 59.5
comp=Z,55nm,1.1s
MEEK Meekatharra 29.39 216 P **P** **17 52 01.1 +1.1**
GIRL Giralia 29.61 228 P **P** **17 52 01.9 -0.1**
GIRL IAmb IAmb 17 52 10.8
comp=Z,104nm,1.3s
AUJCS Jamestown Cent 29.67 178 P **P** **17 52 05.0 +2.7**
HTT Hallett 29.91 178 P **P** **17 52 07.4 +2.9**
BBJI Bungbulang 30.04 261 P **P** **17 52 09.1 +3.1**
AUDCS Dubbo College 30.51 161 P **P** **17 52 13.1 +3.3**
YULB Yu-li 30.99 330 P **P** **17 52 12.3 -1.9**
YOJ Yonaguni jima 31.10 334 P **P** **17 52 12.3 -2.7**
YOJ Yonaguni jima 31.10 334 P **P** **17 52 12.3 -2.7**
YOJ pmax pmax
comp=Z,212nm,1.6s
TPUB Ta-pu 31.25 329 P **P** **17 52 15.0 -1.4**
TPUB IAmb IAmb 17 53 22.9
comp=Z,118nm,1.7s
JOW Kunigami 31.36 344 LR LR 18 05 30.8
comp=Z,175nm,19.5s,baz=257,slow=37
SSLB Suanglung 31.49 330 P **P** **17 52 16.6 -2.0**
NACB Ninganchiao 31.50 331 P **P** **17 52 16.5 -2.1**
NACB IAmb IAmb 17 52 36.5
comp=Z,43nm,1.2s
SANVU Saraoutou 31.54 114 P **P** **17 52 16.0 -3.1**
AUMBR Murray Bridge 31.62 177 P **P** **17 52 22.8 +3.3**
YHNB Yeheng 32.03 331 P **P** **17 52 20.5 -2.8**
YHNB IAmb IAmb 17 52 53.7
comp=Z,27nm,0.9s
MORW Morawa 32.71 216 P **P** **17 52 29.7 +0.5**
MORW IAmb IAmb 17 52 31.2
comp=Z,88nm,1.4s
MORW Morawa 32.71 216 P **P** **17 52 30.5 +1.3**
KASI Kota Agung 33.03 265 P **P** **17 52 33.2 +1.1**
comp=Z,24nm,1.9s
AUDAR Daramalan Coll 33.47 163 P **P** **17 52 38.7 +3.0**
BLDU Ballidu 33.48 214 P **P** **17 52 37.3 +1.4**
AUMTS Mt Stromlo 33.49 163 P **P** **17 52 39.5 +3.6**
CAN Canberra 33.49 163 P **P** **17 52 37.3 +1.4**
CAN IAmb IAmb 17 52 40.1
comp=Z,89nm,1.5s
CAN Canberra 33.49 163 P **P** **17 52 39.1 +3.2**
CAN Canberra 33.49 163 P **P** **17 52 37.3 +1.4**
CAN pmax pmax
comp=Z,89nm,1.5s
CNB Canberra Mesa 33.59 162 P **P** **17 52 40.1 +3.2**
DZM Mont Dzumac 33.61 126 LR LR 18 06 15.4
comp=Z,234nm,20.0s,baz=312,slow=36
KLBR Kellerberrin 33.68 211 P **P** **17 52 38.8 +1.2**
MGBR Mount Gambier 34.28 176 P **P** **17 52 43.2 +0.5**
HKPS Hong Kong Po S 34.28 319 P **P** **17 52 41.8 -1.1**
TOO Toolangi 34.78 169 P **P** **17 52 48.5 +1.4**
TOO IAmb IAmb 17 52 57.2
comp=Z,52nm,1.9s
TOO Toolangi 34.78 169 P **P** **17 52 48.5 +1.4**
TOO pmax pmax
comp=Z,52nm,2.0s
MUN Mundaring 34.80 213 P **P** **17 52 48.6 +1.3**
AUMAZ Mazenod Senior 34.92 213 P **P** **17 52 49.8 +1.5**
MTKN Mount Kenneth 35.00 213 P **P** **17 52 52.5 +3.5**
NWAO Narrogin (SRO) 35.00 211 LR LR 18 08 28.6
comp=Z,654nm,18.7s,baz=330,slow=38
NWAO Narrogin (SRO) 35.00 211 P **P** **17 52 49.1 +0.1**
NWAO Narrogin (SRO) 35.00 211 P **P** **17 52 50.8 +1.8**
NWAO Narrogin (SRO) 35.00 211 P **P** **17 52 49.1 +0.1**
NWAO pmax pmax
comp=Z,48nm,0.8s
QIZ Qiongzhong 35.22 310 P **P** **17 52 51.5 +0.4**
QIZ PP **PP** **17 54 18.3 +6.0**
QIZ S **S** **17 58 20.5 +0.9**
QIZ pmax pmax
comp=Z,34nm,1.0s
QIZ LR LR
comp=Z,280nm,20.0s
QIZ LR LR
comp=Z,240nm,13.8s
QIZ LR LR
comp=Z,520nm,27.5s
MASI Maura Aman, Be 35.26 269 P **P** **17 52 52.1 +0.5**
comp=Z,75nm,1.3s
JHJ2 Mitsune 36.37 3 P **P** **17 53 00.5 -0.2**
JHJ Hachijo jima 2 36.38 3 LR LR 18 04 33.1
comp=Z,167nm,21.8s,baz=76,slow=31
BKNI Bangkinang 36.69 275 P **P** **17 53 03.8 0.0**
JNU Nakatsue 36.87 351 P **P** **17 53 04.3 -0.7**
comp=Z,31nm,0.8s,baz=141,slow=6.3,SNR=20
JNU LR LR 18 06 17.5
comp=Z,184nm,21.5s,baz=172,slow=33
comp=Z,31nm,0.8s
JNU Nakatsue 36.87 351 P **P** **17 53 02.3 -2.7**
JNU IAmb IAmb 17 53 06.2
comp=Z,40nm,1.0s
JNU Nakatsue 36.87 351 P **P** **17 53 06.3 +1.4**
JMN Monobe 37.09 355 P **P** **17 53 06.2 -0.6**
JMN IAmb IAmb 17 53 08.6
comp=Z,54nm,1.0s
JMN Monobe 37.09 355 P **P** **17 53 08.5 +1.7**
PDSI Padang 37.15 273 P **P** **17 53 08.1 +0.4**
comp=Z,27nm,0.6s
PPI Padang Panjang 37.25 274 P **P** **17 53 09.6 +1.1**
comp=Z,819nmcomp=Z,49nm,0.8s
IPM Ipoh 37.33 282 P **P** **17 53 08.9 -0.3**
IPM IAmb IAmb 17 53 30.2
comp=Z,27nm,1.2s
IPM Ipoh 37.33 282 P **P** **17 53 10.9 +1.7**
SSE Sheshan 37.69 337 P **P** **17 53 11.8 0.0**
SSE S **S** **17 58 56.3 -0.6**
SSE pmax pmax
comp=Z,15nm,0.7s
SSE pmax pmax
comp=Z,50nm,3.8s
SSE LR LR
comp=Z,100nm,22.8s
SSE LR LR
comp=Z,140nm,23.0s
KULM Kulim 37.87 283 P **P** **17 53 13.8 +0.1**
SISI Saibi 38.49 272 P **P** **17 53 19.9 +1.0**
comp=Z,40nm,1.0s
INU Inuyama 38.54 359 P **P** **17 53 18.2 -0.8**
INU IAmb IAmb 17 53 23.1
comp=Z,65nm,1.8s
GLAD Gladstone 38.59 167 P **P** **17 53 22.0 +2.7**
JGF Kuroka 38.79 360 P **P** **17 53 20.4 -0.7**
JGF IAmb IAmb 17 54 16.3
comp=Z,97nm,2.0s
RPSI Rantau Prapat 39.09 278 P **P** **17 53 22.1 -1.9**
RPSI IAmb IAmb 17 53 41.4
comp=Z,28nm,1.0s
PSI Prapat 39.11 279 P **P** **17 53 24.6 +0.4**
PSI Prapat 39.11 279 P **P** **17 53 22.1 -2.1**
PSI pmax pmax
comp=Z,28nm,1.0s
CNSH ChangSha 39.34 325 P **P** **17 53 26.8 +1.0**
CNSH S **S** **17 59 21.0 -0.9**
CNSH pmax pmax
comp=Z,21nm,1.0s
CNSH LR LR
comp=Z,400nm,30.1s
NJ2 Nanjing 39.48 335 *e*P **P** **17 53 29.5 +2.6**
NJ2 pP **pP** **17 53 44.8 +0.4**
NJ2 S **S** **17 59 26.1 +2.2**
NJ2 pmax pmax
comp=Z,14nm,0.7s
NJ2 pmax pmax
comp=Z,190nm,3.8s
NJ2 LR LR
comp=Z,220nm,19.0s
NJ2 LR LR
comp=Z,200nm,21.8s
NJ2 LR LR
comp=Z,320nm,20.4s
MJAR Matsushiro Arr 39.74 1 P **P** **17 53 27.3 -1.7**
comp=Z,3.5nm,0.5s,baz=181,slow=9.3,SNR=28
MJAR pP **pP** **17 53 47.1 +0.6**
comp=Z,3.1nm,0.8s,baz=167,slow=9.3,SNR=3.8
MJAR PcP **PcP** **17 55 35.1 +0.9**
comp=Z,3.0nm,1.0s,baz=163,slow=2.4,SNR=4.5
MJAR LR LR 18 08 02.7
comp=Z,168nm,20.4s,baz=173,slow=33
comp=Z,3.5nm,0.5s
MJAR Matsushiro Arr 39.74 1 P **P** **17 53 28.0 -1.0**
MJAR Matsushiro Arr 39.74 1 P **P** **17 53 28.0 -1.0**
MJAR 17 55 35.1
MJAR pmax pmax
comp=Z,9.0nm,1.4s
MAJO Matsushiro 39.74 1 P **P** **17 53 28.1 -0.9**
MAJO Matsushiro 39.74 1 *ce*P **P** **17 53 28.9 -0.1**
MAJO pmax pmax
comp=Z,20nm,1.2s
MJB9 Matsu-Tunnel 39.74 1 P **P** **17 53 29.0 0.0**
TAU Tasmania Unive 40.29 169 P **P** **17 53 34.9 +1.4**
TAU IAmb IAmb 17 53 37.2
comp=Z,56nm,0.9s
TAU Tasmania Unive 40.29 169 P **P** **17 53 34.9 +1.4**
TAU pmax pmax
comp=Z,57nm,1.0s
KCSI Kotacane, Aceh 40.35 279 P **P** **17 53 34.4 -0.1**
WHN Wuhan 40.38 328 P P 17 53 39.4 +5.0
WHN pP pP 17 53 53.3 +1.3
WHN S **S** **17 59 42.1 +4.7**
SLVN Son La 41.11 308 P **P** **17 53 39.8 -0.8**
SLVN IAmb IAmb 17 53 43.0
comp=Z,36nm,1.2s
SLVN Son La 41.11 308 P **P** **17 53 42.1 +1.4**
JMM Marumori 41.16 4 P **P** **17 53 39.6 -1.1**
JMM IAmb IAmb 17 54 07.8
comp=Z,56nm,1.0s
JMM Marumori 41.16 4 P **P** **17 53 41.1 +0.4**
LHMI Lhok Sumawe 41.47 282 P **P** **17 53 41.0 -2.6**
KSAR Wonju Array Be 41.62 348 P **P** **17 53 42.1 -2.3**
KSAR Wonju Array Be 41.62 348 P **P** **17 53 42.1 -2.3**
KSRS Korea Array 41.62 348 P **P** **17 53 44.2 -0.2**
comp=Z,2.6nm,0.8s,baz=159,slow=9.4,SNR=12
KSRS pP **pP** **17 54 02.5 +0.4**
comp=Z,5.0nm,1.0s,baz=168,slow=8.7,SNR=7.7
KSRS PcP **PcP** **17 55 41.5 +1.2**
comp=Z,1.6nm,0.7s,baz=188,slow=4.1,SNR=5.1
comp=Z,2.6nm,0.8s
GYA Guiyang 42.11 317 ⇓P **P** **17 53 49.9 +1.1**
GYA pmax pmax
comp=Z,11nm,0.9s
ENH Enshi 42.91 323 P **P** **17 53 53.7 -1.4**
ENH Enshi 42.91 323 P **P** **17 53 55.6 +0.5**
CM31 Chiang Mai Arr 43.80 301 P **P** **17 54 01.4 -1.1**
CMAR Chiang Mai Arr 43.80 301 P **P** **17 54 02.9 +0.5**
comp=Z,5.2nm,0.9s,baz=121,slow=6.2,SNR=45
CMAR ScP **ScP** **17 59 35.5 +1.9**
comp=Z,0.3nm,0.3s,baz=115,slow=5.0,SNR=2.2
CMAR LR LR 18 14 09.8
comp=Z,67nm,18.2s,baz=110,slow=38
comp=Z,5.2nm,0.9s
CMAR Chiang Mai Arr 43.80 301 P **P** **17 54 01.2 -1.2**
CMAR Chiang Mai Arr 43.80 301 *i* P **P** **17 54 03.2 +0.8**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 43.95 302 P **P** **17 54 03.1 -0.6**
CHTO Chiang Mai 43.95 302 P **P** **17 54 03.8 +0.2**
CHTO Chiang Mai 43.95 302 P **P** **17 54 03.1 -0.6**
CHTO pmax pmax
comp=Z,14nm,1.0s
CHTO Chiang Mai 43.95 302 P **P** **17 54 04.2 +0.5**
KMI Kunming 44.11 312 P **P** **17 54 06.3 +1.2**
KMI pP pP 17 54 23.8 +0.9
KMI S **S** **18 00 32.0 -1.0**
KMI pmax pmax
comp=Z,14nm,0.9s
KMI LR LR
comp=Z,210nm,17.0s
KMI LR LR
comp=Z,190nm,22.3s
KMI LR LR
comp=Z,500nm,34.3s
PZH PanZhiHua 45.63 313 P **P** **17 54 18.8 +1.7**
CD2 Chengdu 46.93 319 P **P** **17 54 27.6 +0.5**
CD2 pmax pmax
comp=Z,30nm,0.5s
TNCH TengChong 47.26 309 P **P** **17 54 30.4 +0.5**
TNCH pP pP 17 54 47.5 -0.4
TNCH S **S** **18 01 17.9 -0.4**
TNCH pmax pmax
comp=Z,21nm,0.8s
TNCH pmax pmax
comp=Z,130nm,4.0s
JKA Kamikawa-asahi 47.51 5 P **P** **17 54 31.0 -0.3**
ASAJ Asahikawa 47.51 5 P **P** **17 54 31.8 +0.5**
comp=Z,9.5nm,0.6s,baz=245,slow=7.1,SNR=12
ASAJ LR LR 18 14 58.8
comp=Z,48nm,20.0s,baz=144,slow=37
comp=Z,9.5nm,0.6s
ASAJ Asahikawa 47.51 5 P **P** **17 54 31.0 -0.3**
ASAJ pmax pmax
comp=Z,171nm,1.8s
USRK Ussuriysk Ar. 47.65 355 P **P** **17 54 33.0 +0.7**
comp=Z,3.1nm,0.4s,baz=178,slow=7.2,SNR=12
USRK pP **pP** **17 54 50.6 +0.3**
comp=Z,10nm,0.7s,baz=181,slow=7.3,SNR=6.6
comp=Z,3.1nm,0.4s
MDJ Mudanjiang 48.33 352 P **P** **17 54 36.4 -1.2**
MDJ IAmb IAmb 17 54 57.8
comp=Z,40nm,1.0s
MDJ Mudanjiang 48.33 352 P **P** **17 54 37.8 +0.2**
MDJ pmax pmax
comp=Z,18nm,1.2s
MDJ Mudanjiang 48.33 352 P **P** **17 54 40.2 +2.6**
RAO Raoul Island 49.41 126 LR LR 18 15 43.5
comp=Z,119nm,18.1s,baz=196,slow=36
NNZ Nelson 49.51 145 P **P** **17 54 46.4 -0.3**
MLZ Mavora Lakes 49.63 152 P **P** **17 54 46.8 -0.9**
BNX BinXian 49.75 351 ⇓P **P** **17 54 49.5 +1.1**
BNX pmax pmax
comp=Z,47nm,1.1s
RPZ Rata Peaks 49.90 148 LR LR 18 14 51.3
comp=Z,312nm,21.6s,baz=296,slow=35
LBZ Lake Benmore 49.92 150 P **P** **17 54 48.8 -1.0**
LBZ IAmb IAmb 17 54 56.5
comp=Z,61nm,1.4s
TUWZ Tuamarina 49.97 144 P **P** **17 54 49.7 -0.6**
TCW Tory Channel 50.03 144 P **P** **17 54 51.1 +0.4**
HHC Hu-ho-hao-te 50.03 334 *e*P **P** **17 54 53.4 +2.6**
HHC pP pP 17 55 09.9 +0.9
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,150nm,4.4s
HHC LR LR
comp=Z,190nm,15.1s
HHC LR LR
comp=Z,120nm,15.1s
HHC LR LR
comp=Z,200nm,17.1s
URZ Urewera 50.04 139 LR LR 18 16 13.9
comp=Z,340nm,19.6s,baz=303,slow=36
RTZ Ruatahuna 50.16 140 P **P** **17 54 52.0 +0.2**
YSS Yuzhno-Sakhali 50.34 5 *e*P **P** **17 54 53.4 +0.5**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=Z,700nm,17.0s
LZDM Lanzhou Array 50.35 324 P **P** **17 54 53.2 -0.4**
comp=Z,1.9nm,0.3s,baz=151,slow=9.1,SNR=1.7
LZDM LR LR 18 16 13.4
comp=Z,102nm,21.9s,baz=105,slow=36
comp=Z,1.9nm,0.3s
LZH Lanzhou 50.35 324 *e*P **P** **17 54 54.5 +1.1**
LZH pP pP 17 55 12.1 +0.6
LZH S **S** **18 02 01.9 +0.5**
LZH pmax pmax
comp=Z,18nm,1.1s
LZH LR LR
comp=Z,380nm,18.4s
LZH LR LR
comp=Z,280nm,18.0s
LZH LR LR
comp=Z,310nm,17.0s
KHZ Kahutara 50.37 146 P **P** **17 54 53.2 0.0**
KHZ Kahutara 50.37 146 P **P** **17 54 56.3 +3.1**
LKP Lekhapani 50.50 310 IAmb IAmb 17 54 50.3
comp=Z,14nm,0.8s
LKP *e*P **P** **17 54 54.1 -0.4**
IMP Imphal 50.79 306 *e*P **P** **17 54 56.2 -0.6**
IMP IAmb IAmb 17 55 27.1
comp=Z,15nm,1.0s
BFZ Birch Farm 50.89 142 P **P** **17 54 57.5 +0.3**
MOKO MOKOCHONG 51.04 308 *e*P **P** **17 54 58.7 0.0**
MOKO IAmb IAmb 17 55 07.7
comp=Z,11nm,0.8s
ITAN ITANAGAR 52.05 308 *e*P **P** **17 55 05.6 -0.5**
ZIRO ZIRO 52.14 309 *e*P **P** **17 55 05.7 -1.2**
ZIRO IAmb IAmb 17 55 34.4
comp=Z,32nm,1.0s
TEZP TEZPUR 52.53 307 *e*P **P** **17 55 09.6 0.0**
TEZP IAmb IAmb 17 55 17.4
comp=Z,12nm,0.8s
SHL Shillong 52.79 306 *e*P **P** **17 55 11.6 -0.2**
TAWA Tawang 53.72 308 *e*P **P** **17 55 17.2 -1.6**
TAWA IAmb IAmb 17 55 39.5
comp=Z,43nm,0.7s
GTA Gaotai 54.95 325 *e*P **P** **17 55 27.8 +0.5**
GTA pP pP 17 55 46.3 +0.7
GTA pmax pmax
comp=Z,10.0nm,1.0s
HILR Hailar Array B 54.95 346 P **P** **17 55 27.1 +0.2**
comp=Z,2.3nm,0.4s,baz=155,slow=13,SNR=2.5
HILR pP **pP** **17 55 45.2 -0.1**
comp=Z,5.9nm,0.7s,baz=148,slow=8.7,SNR=2.4
comp=Z,2.3nm,0.4s
LSA Lhasa 55.26 310 IAmb IAmb 17 56 04.7
comp=Z,72nm,2.0s
LSA Lhasa 55.26 310 P **P** **17 55 27.5 -2.6**
LSA S **S** **18 03 04.3 -4.8**
LSA pmax pmax
comp=Z,8.0nm,1.3s
LSA LR LR
comp=Z,160nm,22.0s
LSA LR LR
comp=Z,260nm,20.6s
LSA LR LR
comp=Z,250nm,21.2s
SHBG Sahibganj 56.11 303 *e*P **P** **17 55 36.4 +0.7**
SHBG IAmb IAmb 17 55 55.2
comp=Z,31nm,0.9s
ULN Ulaanbaatar 57.61 336 P **P** **17 55 45.7 -0.4**
ULN IAmb IAmb 17 56 06.0
comp=Z,17nm,1.1s
ULN Ulaanbaatar 57.61 336⇑ *e*P **P** **17 55 46.9 +0.8**
ULN pmax pmax
comp=Z,16nm,2.5s
ULN Ulaanbaatar 57.61 336 P **P** **17 55 46.8 +0.7**
SONM Songino Array 57.86 336 P **P** **17 55 47.8 +0.1**
comp=Z,1.8nm,0.5s,baz=160,slow=9.2,SNR=2.4
SONM LR LR 18 22 26.9
comp=Z,162nm,18.1s,baz=153,slow=38
comp=Z,1.8nm,0.5s
EVN Everest 57.90 306 P **P** **17 55 49.6 +0.5**
EVN IAmb IAmb 17 56 18.2
comp=Z,46nm,1.4s
GAYA Gaya 58.00 302 *e*P **P** **17 55 49.4 +0.4**
GAYA IAmb IAmb 17 56 15.8
comp=Z,14nm,0.7s
PEA0B Petropavlovsk- 58.80 14 P **P** **17 55 55.0 +1.0**
PEA0B Petropavlovsk- 58.80 14⇓ *e*P **P** **17 55 54.3 +0.3**
PETK Petropavlovsk- 58.80 14 P **P** **17 55 55.1 +1.0**
comp=Z,6.9nm,0.7s,baz=173,slow=6.3,SNR=8.6
PETK pP **pP** **17 56 12.4 -0.2**
comp=Z,35nm,1.2s,baz=126,slow=2.6,SNR=6.3
PETK LR LR 18 18 59.0
comp=Z,25nm,21.4s,baz=201,slow=34
comp=Z,6.9nm,0.7s
PET Petropavlovsk 58.95 15 P **P** **17 55 55.5 +0.4**
HYBB Hyderabad (bro 61.76 292 *e*P **P** **17 56 14.7 -0.3**
DRV Dumont d'Urvil 63.17 179 P **P** **17 56 24.8 +1.3**
RAR Rarotonga 63.33 112 LR LR 18 21 20.1
comp=Z,69nm,21.7s,baz=280,slow=33
MA2 Magadan 63.64 7 LR LR 18 22 20.7
comp=Z,30nm,21.6s,baz=130,slow=34
LGTI Lohaghat 63.81 305 *e*P **P** **17 56 27.5 -0.8**
SHEM Shemya Is, Ala 63.83 24 LR LR 18 18 58.2
comp=Z,127nm,21.7s,baz=162,slow=31
NRDN NARMADA NAGAR 64.36 297 *e*P **P** **17 56 32.5 +0.4**
GUNA GUNA 64.75 299 *e*P **P** **17 56 34.8 +0.1**
JOSI Joshimath 64.75 306 *e*P **P** **17 56 35.5 +0.7**
WMQ Urumqi 64.84 322 *e*P **P** **17 56 35.9 +1.0**
DGAR Diego Garcia 64.90 263 P **P** **17 56 34.5 -1.3**
DGAR Diego Garcia 64.90 263 P **P** **17 56 34.5 -1.3**
DGAR pmax pmax
comp=Z,126nm,1.2s
YAK Yakutsk 65.53 356 P **P** **17 56 39.2 +0.4**
comp=Z,6.1nm,0.6s,baz=154,slow=3.5,SNR=4.6
YAK pP **pP** **17 56 57.5 -0.3**
comp=Z,20nm,0.9s,baz=128,slow=0.3,SNR=5.5
YAK LR LR 18 23 37.9
comp=Z,101nm,20.4s,baz=162,slow=34
comp=Z,6.1nm,0.6s
YAK Yakutsk 65.53 356 P **P** **17 56 39.2 +0.4**
YAK IAmb IAmb 17 57 03.3
comp=Z,31nm,1.0s
YAK Yakutsk 65.53 356 *e*P **P** **17 56 38.7 -0.1**
YAK *e**PP **pP** **17 56 58.7 +1.0**
YAK *e* 17 57 09.4
YAK *e* 17 59 02.9
YAK *e*PPP PPP 18 00 37.9
YAK *e*S **S** **18 05 18.7 +0.5**
YAK *e**SS **sS** **18 05 54.0 +3.6**
YAK *e* 18 06 27.9
YAK *e*SS **SS** **18 09 34.7 +1.5**
YAK pmax pmax
comp=Z,14nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,9.0nm,2.7s
YAK pmax pmax
comp=Z,348nm,2.7s
YAK pmax pmax
comp=N,942nm,5.2s
YAK pmax pmax
comp=E,341nm,2.4s
YAK smax smax
comp=N,1μm,5.3s
YAK smax smax
comp=E,463nm,3.8s
CASY Casey 65.57 192 P **P** **17 56 40.2 +1.1**
CASY Casey 65.57 192 P **P** **17 56 40.5 +1.4**
KAD Karad 65.80 291 *e*P **P** **17 56 43.4 +1.8**
SMLA Simla 66.88 306 *e*P **P** **17 56 49.2 +1.0**
SMLA IAmb IAmb 17 57 15.6
comp=Z,20nm,1.1s
SEY Seymchan 67.10 7 P **P** **17 56 49.4 +0.5**
comp=Z,2.7nm,0.6s,baz=195,slow=20,SNR=2.1
SEY LR LR 18 24 28.4
comp=Z,25nm,21.9s,baz=248,slow=34
comp=Z,2.7nm,0.6s
ADK Adak 67.32 29 P **P** **17 56 51.2 +0.7**
ADK Adak 67.32 29 P **P** **17 56 51.2 +0.7**
ADK pmax pmax
comp=Z,94nm,1.4s
HON Honolulu 67.65 65 P **P** **17 56 52.4 -0.8**
HON Honolulu 67.65 65 P **P** **17 56 52.4 -0.8**
HON pmax pmax
comp=Z,169nm,1.1s
KIP Kipapa 67.66 65⇑ *e*P **P** **17 56 51.1 -2.2**

KIP pmax pmax
comp=Z,29nm,1.1s
UDPR Udaipur 67.90 298 *e*P **P 17 56 55.2 +0.4**
ALCI Alchi Leh 67.92 309 *e*P **P 17 56 54.3 -0.8**
DGZ Jazzator, Alta 68.24 328‖ *e*P **P 17 56 57.0 +0.4**
DGZ pmax pmax
comp=Z,6.0nm,0.8s
ZSN Zaisan 68.44 325 *e*P **P 17 56 58.2 +0.4**
ZSN Zaisan 68.44 325 *e*P **P 17 56 58.2 +0.4**
ATKA Atka Island 68.73 30 P **P 17 56 58.5 -0.9**
MK31 Makanchi Array 69.64 323c*e*P **P 17 57 05.7 +0.5**
MKAR Makanchi Array 69.64 323 P **P 17 57 05.7 +0.5**
comp=Z,4.0nm,0.6s,baz=105,slow=8.5,SNR=62
MKAR pP **pP 17 57 23.9 -0.4**
comp=Z,8.7nm,0.9s,baz=115,slow=8.7,SNR=9.2
MKAR LR LR 18 28 54.5
comp=Z,80nm,20.6s,baz=110,slow=37
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 69.64 323 P **P 17 57 05.8 +0.6**
MKAR Makanchi Array 69.64 323 P **P 17 57 05.8 +0.6**
SHLS Shalkode 69.76 319 *e*P **P 17 57 04.8 -1.4**
SHLS Shalkode 69.76 319 *e*P **P 17 57 04.7 -1.4**
MAKZ Makanchi 69.83 323 P **P 17 57 06.5 +0.2**
MAKZ Makanchi 69.83 323 P **P 17 57 06.5 +0.2**
MAKZ pmax pmax
comp=Z,13nm,0.8s
MAKZ Makanchi 69.83 323 P **P 17 57 06.2 -0.1**
MAKZ pP **pP 17 57 23.1 -2.3**
SATY Saty 70.42 318 *e*P **P 17 57 10.7 +0.4**
comp=Z,10nm,0.9s
SATY Saty 70.42 318 *e*P **P 17 57 10.6 +0.4**
SATY pmax pmax
comp=Z,10.0nm,0.9s
KSH Kashi 70.72 314 P **P 17 57 14.4 +2.3**
KSH pP PcP 17 57 32.1 -0.5
KSH pmax pmax
comp=Z,8.0nm,1.2s
TDK Taldyqorghan 71.24 320 *e*P **P 17 57 15.5 +0.5**
TDK Taldyqorghan 71.24 320 *e*P **P 17 57 15.4 +0.5**
MDOK Medeo 71.37 318 *e*P **P 17 57 16.4 +0.4**
MDOK Medeo 71.37 318 *e*P **P 17 57 16.4 +0.4**
TNSS Tian-Shan 71.39 318 *e*P **P 17 57 16.5 +0.1**
TNSS Tian-Shan 71.39 318 *e*P **P 17 57 16.5 +0.1**
AAA Alma-Ata 71.48 318 *e*P **P 17 57 17.1 +0.5**
comp=Z,7.6nm,0.5s
AAA Alma-Ata 71.48 318 *e*P **P 17 57 17.0 +0.5**
AAA pmax pmax
comp=Z,8.0nm,0.5s
NIKH Nikolski High 71.85 31 P **P 17 57 18.3 -0.1**
baz=238
ZALV Zalesovo Beam 71.95 330 P **P 17 57 18.6 -0.5**
comp=Z,2.1nm,0.5s,baz=113,slow=6.8,SNR=15
ZALV pP **PcP 17 57 36.8 -0.5**
comp=Z,4.3nm,0.7s,baz=111,slow=6.4,SNR=6.5
ZALV LR LR 18 27 53.4
comp=Z,37nm,21.7s,baz=86,slow=35
comp=Z,2.1nm,0.5s
ZALV Zalesovo Beam 71.95 330 P **P 17 57 18.0 -1.1**
ZALV Zalesovo Beam 71.95 330 *i* P **P 17 57 18.7 -0.3**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
CCD Concordia, Ant 72.12 184 P **P 17 57 21.9 +1.7**
PPT Papeete 72.65 107 LR LR 18 25 48.5
comp=Z,33nm,20.7s,baz=259,slow=33
AAK Ala-Archa 72.91 317 LR LR 18 31 16.5
comp=Z,105nm,20.8s,baz=108,slow=37
AAK Ala-Archa 72.91 317 P **P 17 57 24.6 -0.6**
AAK Ala-Archa 72.91 317‖ *e*P **P 17 57 26.3 +1.1**
AAK pmax pmax
comp=Z,3.0nm,1.3s
SGDS Sogindy 73.11 317 *e*P **P 17 57 26.5 +0.3**
SPIA Saint Paul Isl 73.50 27 P **P 17 57 28.7 +0.6**
baz=235
UNV Unalaska Valle 73.50 31 P **P 17 57 28.2 0.0**
baz=240
KURK Kurchatov 73.62 325 P **P 17 57 28.7 -0.3**
KURK Kurchatov 73.62 325‖ *e*P **P 17 57 28.8 -0.2**
KURK pmax pmax
comp=Z,14nm,1.7s
KURBB Kurchatov Arra 73.63 325 P **P 17 57 29.1 +0.1**
comp=Z,1.4nm,0.3s,baz=111,slow=5.1,SNR=12
KURBB pP **pP 17 57 47.0 -1.2**
comp=Z,6.5nm,1.0s,baz=115,slow=5.1,SNR=6.0
comp=Z,1.4nm,0.3s
TIXI Tiksi 75.12 357 P **P 17 57 36.6 -0.6**
comp=Z,1.3nm,0.4s,baz=184,slow=3.3,SNR=9.6
TIXI pP **pP 17 57 56.0 -0.6**
comp=Z,4.4nm,0.7s,baz=159,slow=5.4,SNR=3.9
TIXI LR LR 18 28 55.6
comp=Z,121nm,21.4s,baz=194,slow=34
comp=Z,1.3nm,0.4s
TIXI Tiksi 75.12 357 P **P 17 57 36.7 -0.6**
TIXI Tiksi 75.12 357‖ *e*P **P 17 57 36.9 -0.3**
TIXI pmax pmax
comp=Z,16nm,2.5s
DZA Taraz 75.18 316 *e*P **P 17 57 38.6 +0.3**
DZA Taraz 75.18 316 *e*P **P 17 57 38.6 +0.3**
VNDA Vanda 75.20 175 P **P 17 57 38.5 +0.8**
comp=Z,12nm,0.6s,baz=324,slow=6.8,SNR=137
VNDA LR LR 18 31 50.5
comp=Z,241nm,18.1s,baz=355,slow=36
comp=Z,12nm,0.6s
VNDA Vanda 75.20 175 **P 17 57 39.0 +1.3**
VNDA Vanda 75.20 175 P **P 17 57 39.0 +1.3**
VNDA pmax pmax
comp=Z,13nm,0.7s
VNDA Vanda 75.20 175 P **P 17 57 39.1 +1.4**
VNDA PcP **PcP 17 57 52.1 +1.3**
VNDA pP **pP 17 57 56.0 -1.5**
FALS False Pass 75.58 31 P **P 17 57 40.7 +0.6**
baz=242
KKAR Karatay Array 75.82 316 P **P 17 57 41.4 -0.5**
KKAR Karatay Array 75.82 316 P **P 17 57 41.4 -0.5**
IUG Iuzhnay 75.85 315 *e*P **P 17 57 42.4 +0.2**
IUG Iuzhnay 75.85 315 *e*P **P 17 57 42.4 +0.2**
SBA Scott Base 75.99 174 P **P 17 57 43.7 +1.5**
SBA Scott Base 75.99 174 P **P 17 57 43.7 +1.5**
SBA pmax pmax
comp=Z,15nm,0.9s
SBA Scott Base 75.99 174 P **P 17 57 44.7 +2.5**
CHM Chimkent 76.21 315 *e*P **P 17 57 44.5 +0.4**
CHM Chimkent 76.21 315 *e*P **P 17 57 44.5 +0.4**
BRLS Boroldoy 76.26 316 *e*P **P 17 57 44.9 +0.4**
BRLS Boroldoy 76.26 316 *e*P **P 17 57 44.8 +0.4**
S12K Black Hills 76.66 30 P **P 17 57 46.7 +0.4**
baz=243
BRZS Berezniki 76.78 323 *e*P **P 17 57 48.0 +0.7**
BRZS Berezniki 76.78 323 *e*P **P 17 57 47.9 +0.7**
GAMB Gambell 76.82 21 P **P 17 57 47.2 +0.2**
baz=232
M11K Mekoryuk 77.03 25 P **P 17 57 48.8 +0.5**
baz=238
SDPT Sand Point 77.31 31 P **P 17 57 50.4 +0.4**
baz=245
CHNA Chernabura Isl 77.55 32 P **P 17 57 51.7 +0.4**
baz=245
S14K Fog Glacier 78.18 30 P **P 17 57 55.1 +0.2**
baz=245
M13K Dall Lake 78.26 26 P **P 17 57 56.1 +0.9**
baz=241
K13K Kusilvak Mount 78.47 24 P **P 17 57 56.9 +0.6**
baz=240
O14K Tigyukauivet M 78.65 27 P **P 17 57 58.1 +0.7**
baz=243
N14K Kuskokwak Cree 78.77 27 P **P 17 57 58.9 +1.0**
baz=243
L14K Kuka Creek 79.00 25 P **P 17 57 59.8 +0.7**
L14K Kuka Creek 79.00 25 P **P 17 57 59.6 +0.4**
baz=241
M14K Bethel 79.03 26 P **P 17 57 60.0 +0.6**
baz=242
TNA Tin City 79.19 20 P **P 17 58 00.6 +0.4**
baz=236
BVAR Borovoye Array 79.22 325 P **P 17 58 01.3 +0.7**
comp=Z,2.6nm,0.5s,baz=110,slow=7.2,SNR=17
BVAR pP **pP 17 58 18.7 -1.3**
comp=Z,8.3nm,0.8s,baz=116,slow=8.0,SNR=8.9
BVAR LR LR 18 34 19.3
comp=Z,44nm,21.9s,baz=94,slow=37
comp=Z,2.6nm,0.5s
BORK Borovoye 79.27 325*de*P **P 17 58 01.4 +0.5**
BORK pmax pmax
comp=Z,14nm,1.7s
O15K Ungalikthiuk R 79.28 28 P **P 17 58 01.1 +0.3**
baz=244
J14K Nanvaranak Lak 79.33 24 P **P 17 58 02.2 +1.3**
baz=240
ANM Nome 79.55 22 P **P 17 58 03.2 +1.0**
baz=238
M15K Kasigluk River 79.56 26 P **P 17 58 03.2 +0.9**
baz=243
N15K Kwethluk River 79.59 27 P **P 17 58 03.4 +0.9**
baz=244
L15K Ungalak Mounta 79.66 25 P **P 17 58 03.5 +0.7**
baz=242
R16K Pilot Point 79.69 30 P **P 17 58 03.8 +0.8**
baz=247
F14K Arctic Creek 79.70 21 P **P 17 58 03.5 +0.6**
baz=237
K15K Wolf Creek Mou 79.93 25 P **P 17 58 05.1 +0.8**
baz=242
CHIR Chirikof Islan 80.03 32 P **P 17 58 05.7 +0.8**
baz=249
P16K Nushagak River 80.08 28 P **P 17 58 05.4 +0.3**
baz=246
O16K Kokwok River B 80.26 28 P **P 17 58 06.7 +0.6**
baz=246
G15K Niukluk 80.27 22 P **P 17 58 06.5 +0.5**
baz=240
N16K Nishlik Lake 80.32 27 P **P 17 58 06.6 +0.2**
baz=245
R17L Mt. Peulik Vol 80.32 30 P **P 17 58 06.6 +0.1**
baz=248
F15K North Star Dit 80.41 21 P **P 17 58 06.9 +0.1**
baz=239
M16K Timber Creek 80.46 26 P **P 17 58 07.4 +0.2**
baz=245
L16K Owhat River 80.54 25 P **P 17 58 08.1 +0.6**
baz=244
Q16K King Salmon 80.58 29 P **P 17 58 08.0 +0.2**
baz=247
H16K Elim 80.76 22 P **P 17 58 09.0 +0.3**
baz=241
J16K Anvik River 80.77 24 P **P 17 58 08.8 +0.1**
baz=243
Q17K Contact Creek 80.79 29 P **P 17 58 09.0 -0.1**
baz=248
O17K Koliganek Bris 80.80 28 P **P 17 58 09.2 +0.3**
baz=247
P17K Kvichak River 80.88 28 P **P 17 58 09.4 0.0**
baz=247
I17K Unalakleet 81.00 23 P **P 17 58 10.5 +0.5**
baz=243
SII Sitkinak Islan 81.04 31 P **P 17 58 10.7 +0.3**
baz=250
N17K Nushagak Hills 81.05 27 P **P 17 58 11.0 +0.7**
baz=247
MAW Mawson 81.06 202 P **P 17 58 11.9 +1.6**
comp=Z,7.9nm,0.6s,baz=90,slow=6.6,SNR=23
MAW LR LR 18 31 20.1
comp=Z,92nm,21.8s,baz=67,slow=34
comp=Z,7.9nm,0.6s
G16K Koyuk River 81.08 22 P **P 17 58 10.8 +0.4**
baz=241
L17K Donlin 81.22 25 P **P 17 58 11.5 +0.3**
baz=245
R18K Karluk 81.25 30 P **P 17 58 11.9 +0.5**
baz=249
M17K Holitna River 81.29 26 IAmb IAmb 17 58 14.5
comp=Z,35nm,1.2s
M17K Holitna River 81.29 26 P **P 17 58 12.2 +0.7**
baz=246
Q18K Katmai Hardscr 81.36 29 P **P 17 58 12.0 -0.1**
baz=249
J17K VABM Dome 81.43 24 P **P 17 58 12.7 +0.4**
baz=244
K17K Iditarod 81.46 25 IAmb IAmb 17 58 15.2
comp=Z,26nm,1.1s
K17K Iditarod 81.46 25 P **P 17 58 13.0 +0.6**
baz=245
P18K Big Mountain, 81.53 28 P **P 17 58 13.2 +0.3**
baz=248
C16K Lisburne Hills 81.53 18 P **P 17 58 13.2 +0.5**
baz=238
N18K Kilae Creek 81.70 27 P **P 17 58 14.1 +0.3**
baz=248
O18K Koktuh Hills 81.71 28 P **P 17 58 14.5 +0.7**
baz=248
OHAK Old Harbor 81.73 31 P **P 17 58 14.5 +0.6**
baz=250
G17K Kiwalik Mounta 81.76 22 P **P 17 58 14.7 +0.7**
baz=243
H17K Granite Mounta 81.78 22 P **P 17 58 14.5 +0.4**
baz=244
L18K Granite Mounta 81.94 26 P **P 17 58 15.5 +0.5**
baz=247
D17K Noatak River 81.96 19 P **P 17 58 15.9 +1.0**
baz=240
F17K Baldwin Pennin 81.98 21 P **P 17 58 15.9 +0.8**
baz=242
M18K Stony River 82.04 26 P **P 17 58 16.6 +1.1**
baz=248
E17K Hotham Inlet 82.08 20 P **P 17 58 16.9 +1.2**
baz=241
RDOG Red Dog Mine 82.20 19 P **P 17 58 17.4 +1.2**
baz=240
KDAK Kodiak Island 82.27 30 P **P 17 58 16.8 0.0**
comp=Z,9.8nm,1.0s,baz=243,slow=4.5,SNR=3.6
KDAK pP **pP 17 58 36.7 +0.4**
comp=Z,11nm,0.9s,baz=250,slow=3.2,SNR=3.2
KDAK LR LR 18 32 34.1
comp=Z,83nm,19.5s,baz=242,slow=34
comp=Z,9.8nm,1.0s
KDAK Kodiak Island 82.27 30 P **P 17 58 17.3 +0.5**
KDAK IAmb IAmb 17 59 06.9
comp=Z,76nm,1.7s
KDAK Kodiak Island 82.27 30 P **P 17 58 17.3 +0.5**
KDAK pmax pmax
comp=Z,76nm,1.7s
KDAK Kodiak Island 82.27 30 P **P 17 58 17.2 +0.5**
baz=251
C17K DeLong Mountai 82.32 19 P **P 17 58 17.9 +1.0**
baz=240
N19K Bonanza Creek 82.39 27 IAmb IAmb 17 58 19.8
comp=Z,30nm,1.2s
N19K Bonanza Creek 82.39 27 P **P 17 58 18.0 +0.5**
baz=249
J18K Innoko River 82.43 24 P **P 17 58 18.2 +0.6**
baz=247
H18K Honhosa River 82.47 23 P **P 17 58 18.3 +0.6**
baz=245
P19K Oil Pt 82.57 29 P **P 17 58 18.8 +0.4**
baz=250
F18K Selawik 82.62 21 P **P 17 58 19.1 +0.7**
baz=244
Q20K Shuyak Island 82.64 30 P **P 17 58 19.1 +0.5**
baz=251
E18K Tukpahlearik C 82.67 20 P **P 17 58 19.1 +0.4**
baz=242
G18K Tagagawik 82.68 22 P **P 17 58 19.2 +0.5**
baz=244
L19K White Mountain 82.73 26 P **P 17 58 19.6 +0.5**
baz=248
GCSA Galena City Sc 82.88 23 P **P 17 58 20.2 +0.5**
baz=246
O20K Slope Mountain 83.01 28 P **P 17 58 19.0 -1.6**
baz=251
C18K Utukok River 83.04 19 P **P 17 58 20.1 -0.6**
baz=242
J19K Poorman 83.08 24 P **P 17 58 21.9 +1.0**
J19K Poorman 83.08 24 P **P 17 58 20.3 -0.6**
baz=248
B18K Kokolik River 83.19 18 P **P 17 58 20.8 -0.6**
baz=241
L20K Farewell, AK 83.26 26 P **P 17 58 21.2 -0.7**
baz=249
HOM Homer 83.34 29 P **P 17 58 21.8 -0.5**
baz=252
H19K Roundabout Mou 83.36 23 IAmb IAmb 17 58 26.5
comp=Z,49nm,1.4s
H19K Roundabout Mou 83.36 23 P **P 17 58 21.9 -0.3**
baz=247
G19K Purcell Mounta 83.36 22 P **P 17 58 21.6 -0.7**
baz=246
M20K Styx River 83.38 26 P **P 17 58 22.1 -0.5**
baz=250
F19K Shaleruckik Mo 83.40 21 P **P 17 58 22.3 -0.1**
baz=245
K20K Telida 83.49 25 P **P 17 58 22.9 -0.2**
baz=249
J20K Nowinta River 83.75 24 IAmb IAmb 17 58 28.2
comp=Z,22nm,1.1s
J20K Nowinta River 83.75 24 P **P 17 58 24.8 +0.5**
baz=249
C19K Lookout Ridge 83.77 19 P **P 17 58 24.6 +0.2**
baz=243,SNR=6.5
BRSE Bradley Lake S 83.80 29 P **P 17 58 24.6 -0.1**
baz=252
A19K Wainwright 83.82 18 P **P 17 58 24.6 +0.1**
baz=242
I20K Naaghedeneel 83.84 24 P **P 17 58 25.2 +0.4**
baz=248
E19K Redstone River 83.85 21 P **P 17 58 24.9 +0.1**
baz=246
H20K Anotleneega Mo 83.94 23 P **P 17 58 25.3 0.0**
baz=248
D19K Kuna River 83.98 20 IAmb IAmb 17 58 27.8
comp=Z,41nm,1.4s
D19K Kuna River 83.98 20 P **P 17 58 26.2 +0.8**
baz=245
SKT Skwentna 84.13 27 P **P 17 58 26.4 +0.1**
baz=252
PPLA Purkeypile 84.13 26 IAmb IAmb 17 58 28.8
comp=Z,38nm,1.4s
PPLA Purkeypile 84.13 26 P **P 17 58 26.3 -0.2**
baz=251
F20K Avaraart Lake 84.22 21 P **P 17 58 27.0 +0.4**
baz=247
SLKM Skilak Lake 84.28 28 **P 17 58 26.3 -0.8**
SLKM IAmb IAmb 17 58 28.8
comp=Z,34nm,1.1s
SUA Susitna One 84.32 27 P **P 17 58 27.2 -0.2**
baz=252
CHUM Lake Minchumin 84.41 25 P **P 17 58 27.4 -0.2**
baz=251
AB31 Akbulak array 84.50 320 P **P 17 58 28.1 -0.3**
ABKAR Akbulak array 84.50 320 **P 17 58 27.6 -0.8**
SEW Seward 84.53 29 P **P 17 58 28.1 -0.2**
baz=254
E20K Nigu River 84.54 20 P **P 17 58 28.4 0.0**
baz=247,SNR=11
IMAR Indian Mountai 84.56 23 P **P 17 58 28.2 -0.2**
D20K Etivluk River 84.58 20 IAmb IAmb 17 58 30.8
comp=Z,45nm,1.3s
D20K Etivluk River 84.58 20 P **P 17 58 28.2 -0.3**
baz=246,SNR=11
L22K Petersville 84.64 26 IAmb IAmb 17 58 31.4
comp=Z,31nm,1.3s
RC01 Rabbit Creek A 84.67 28 P **P 17 58 28.9 -0.2**
baz=253
M22K Willow 84.69 27 P **P 17 58 29.1 0.0**
baz=253
H21K Melozitna Rive 84.81 23 P **P 17 58 29.4 -0.3**
baz=250
CUT Chulitna 84.82 26 P **P 17 58 29.8 0.0**
baz=253
G21K Allakaket 84.84 22 P **P 17 58 29.7 -0.1**
baz=249
KTH Kantishna Hill 84.89 25 IAmb IAmb 17 58 32.3
comp=Z,32nm,1.2s
B20K Meade River 84.93 18 P **P 17 58 30.5 +0.4**
baz=246
I21K Tanana 84.97 24 P **P 17 58 30.4 0.0**
baz=251
BPAW Bear Paw Mtn. 85.03 25 P **P 17 58 31.1 +0.3**
baz=252
PMR Palmer 85.10 27 IAmb IAmb 17 58 32.7
comp=Z,18nm,1.0s
PMR Palmer 85.10 27 P **P 17 58 31.5 +0.4**
baz=254
F21K Alatna River 85.10 21 P **P 17 58 31.5 +0.3**
baz=249
TRF Thorofare Moun 85.13 25 P **P 17 58 30.9 -0.6**
baz=252
PWL Port Wells 85.27 28 IAmb IAmb 17 58 34.1
comp=Z,32nm,1.0s
PWL Port Wells 85.27 28 P **P 17 58 31.7 -0.4**
baz=254
KNK Knik Glacier 85.36 28 P **P 17 58 31.7 -0.8**
baz=254
C21K Knifeblade Rid 85.36 19 P **P 17 58 32.9 +0.6**
baz=248
E21K Killik River 85.37 20 P **P 17 58 32.5 +0.1**
E21K IAmb IAmb 17 58 34.8
comp=Z,25nm,1.2s
E21K Killik River 85.37 20 P **P 17 58 33.1 +0.6**
baz=249
MLY Manley 85.42 24 P **P 17 58 33.5 +0.7**
baz=252
H22K Ishtalitna Cre 85.44 23 P **P 17 58 33.2 +0.4**
baz=251
P23K Montague Islan 85.49 29 P **P 17 58 33.4 +0.2**
baz=255
SML Sawmill 85.52 27 IAmb IAmb 17 58 37.1
comp=Z,32nm,1.1s
SML Sawmill 85.52 27 P **P 17 58 32.7 -0.7**
baz=254
B21K Ikpikpuk River 85.59 19 P **P 17 58 34.0 +0.5**
baz=248
A21K Barrow 85.64 17 P **P 17 58 34.2 +0.5**
baz=246
F22K John River 85.67 21 P **P 17 58 35.0 +1.0**
baz=250
WAT1 Susitna Watana 85.70 26 P **P 17 58 34.1 -0.1**
baz=254
G22K Bettles 85.73 22 P **P 17 58 34.4 +0.3**
baz=251
MCK McKinley 85.79 25 P **P 17 58 34.4 -0.2**
MCK IAmb IAmb 17 58 36.4
comp=Z,18nm,0.9s
MCK McKinley 85.79 25 P **P 17 58 34.4 -0.2**
MCK pmax pmax
comp=Z,19nm,0.9s
MCK McKinley 85.79 25 P **P 17 58 34.2 -0.4**
baz=254,SNR=8.8
M23K Glacier View 85.80 27 P **P 17 58 35.0 +0.3**
baz=255
GLI Glacier Island 85.86 28 P **P 17 58 35.0 0.0**
baz=256
Q23K Middleton Isla 85.87 30 P **P 17 58 34.7 -0.3**
baz=256
D22K Ayikyak River 85.97 20 IAmb IAmb 17 58 38.1
comp=Z,28nm,1.2s
D22K Ayikyak River 85.97 20 P **P 17 58 35.8 +0.4**
baz=250
NEA2 Nenana 85.98 24 P **P 17 58 35.6 +0.1**
baz=254
SCM Sheep Creek Mo 85.99 27 P **P 17 58 35.9 +0.2**
baz=255
WAT6 Susitna Watana 86.00 27 P **P 17 58 35.8 -0.1**
baz=255
A22K Sinclair Lake 86.00 18 P **P 17 58 36.0 +0.6**
baz=248
E22K Anaktuvuk Pass 86.02 21 IAmb IAmb 17 58 38.2
comp=Z,34nm,1.1s
E22K Anaktuvuk Pass 86.02 21 P **P 17 58 36.0 +0.3**
baz=251,SNR=22
I23K Minto, Yukon-K 86.02 24 IAmb IAmb 17 58 38.6
comp=Z,21nm,1.1s
I23K Minto, Yukon-K 86.02 24 P **P 17 58 35.8 +0.1**
baz=253,SNR=5.5
H23K Yukon River 86.14 23 IAmb IAmb 17 58 39.5
comp=Z,23nm,1.3s
H23K Yukon River 86.14 23 P **P 17 58 36.7 +0.4**
baz=253
G23K Bananza Creek 86.22 22 P **P 17 58 36.4 -0.3**
baz=252
B22K Teshekpuk Lake 86.24 18 P **P 17 58 36.4 -0.2**
baz=249
DHY Denali Highway 86.29 26 IAmb IAmb 17 58 40.1
comp=Z,19nm,0.8s
DHY Denali Highway 86.29 26 P **P 17 58 37.3 +0.1**
baz=255,SNR=14
COLD Coldfoot 86.31 22 IAmb IAmb 17 58 39.7
comp=Z,27nm,1.1s
COLD Coldfoot 86.31 22 P **P 17 58 37.9 +0.8**
baz=252,SNR=13
WRH Wood River Hil 86.35 25 IAmb IAmb 17 58 39.2
comp=Z,12nm,0.9s
EYAK Cordova Ski Ar 86.42 29 P **P 17 58 38.3 +0.6**
baz=257
CCB Clear Creek Bu 86.52 25 IAmb IAmb 17 58 39.7
comp=Z,27nm,1.0s
DIV Divide 86.54 28 P **P 17 58 38.3 -0.2**
DIV IAmb IAmb 17 58 40.4
comp=Z,23nm,1.0s
QSPA South Pole Qui 86.55 180 P **P 17 58 40.6 +2.1**
comp=Z,34nm,0.7s,baz=324,slow=1.1,SNR=176
QSPA pP **pP 17 58 59.2 +0.6**
comp=Z,22nm,1.0s,baz=38,slow=0.9,SNR=5.5
QSPA LR LR 18 38 41.7

comp=Z,165nm,19.5s,baz=9.5,slow=36
comp=Z,344nm,0.7s
QSPA **South Pole Qui** 86.55 180 P **P** 17 58 40.7 +2.2
COLA **College** 86.56 24 P **P** 17 58 38.7 +0.4
baz=255
KLU **Klutina** 86.56 28 P **P** 17 58 38.6 +0.1
baz=256
M24K **Tolsona, Glenn** 86.59 27 P **P** 17 58 39.1 +0.5
baz=256
D23K **Nanushuk River** 86.68 20 P **P** 17 58 40.0 +1.2
baz=252
E23K **Chandalar** 86.77 21 P **P** 17 58 40.9 +1.5
baz=253,SNR=22
POKR **Poker Plat Res** 86.79 24 P **P** 17 58 39.9 +0.4
baz=255
H24K **Noodor Dome** 86.80 23 P **P** 17 58 40.0 +0.5
baz=254,SNR=21
HDA **Harding Lake** 86.81 25 P **P** 17 58 39.9 +0.3
baz=256
ARTI **Arti** 86.83 327 LR LR 18 38 43.2
comp=Z,60nm,21.3s,baz=101,slow=36
ARTI **Arti** 86.83 327*c i*P **P** 17 58 39.2 -0.6
ARTI *PP **pP** 17 59 02.1 +2.6
ARTI S **SKSac** 18 08 58.4 -2.0
ARTI SS **SS** 18 14 52.0 -3.3
ARTI pmax pmax
comp=Z,11nm,2.5s
IL31 86.93 25 IAmb IAmb 17 58 41.1
comp=Z,23nm,1.1s
ILAR **Eielson Array** 86.93 25 P **P** 17 58 39.2 -0.9
comp=Z,12nm,1.0s,baz=267,slow=4.5,SNR=59
ILAR pP **pP** 17 58 59.5 -0.3
comp=Z,3.6nm,0.9s,baz=254,slow=3.5,SNR=3.6
ILAR LR LR 18 32 41.6
comp=Z,61nm,21.0s,baz=244,slow=32
comp=Z,12nm,1.0s
ILAR **Eielson Array** 86.93 25 P **P** 17 58 38.9 -1.2
ILAR **Eielson Array** 86.93 25 P **P** 17 58 38.9 -1.2
KAIM **Kayak Island** 86.93 30 P **P** 17 58 41.1 +0.8
baz=258
TOLK **Toolik Lake Re** 86.96 21 IAmb IAmb 17 58 43.5
comp=Z,30nm,1.3s
TOLK **Toolik Lake Re** 86.96 21 P **P** 17 58 41.4 +1.1
baz=253
C23K **Itkillik River** 86.97 19 IAmb IAmb 17 58 42.7
comp=Z,20nm,1.2s
C23K **Itkillik River** 86.97 19 P **P** 17 58 41.0 +0.8
baz=252
BMRM **Bremner River** 87.06 29 P **P** 17 58 41.2 +0.3
baz=258
PAX **Paxson** 87.11 26 IAmb IAmb 17 58 44.0
comp=Z,19nm,1.2s
PAX **Paxson** 87.11 26 P **P** 17 58 41.6 +0.5
baz=257,SNR=6.7
HARP **HAARP** 87.12 27 P **P** 17 58 41.7 +0.6
baz=257
K24K **Donnelly Dome** 87.16 26 P **P** 17 58 41.7 +0.4
baz=257
E24K **Your Creek** 87.19 21 P **P** 17 58 42.3 +0.9
baz=254
G24K **Hadweenzic Riv** 87.19 23 P **P** 17 58 41.3 -0.1
baz=255,SNR=7.4
N25K **Chitina, Valde** 87.20 28 P **P** 17 58 40.9 -0.7
baz=258
F24K **Squaw Lake** 87.25 22 IAmb IAmb 17 58 44.6
comp=Z,33nm,1.2s
F24K **Squaw Lake** 87.25 22 P **P** 17 58 42.0 +0.3
baz=254
D24K **Happy Valley** 87.37 20 IAmb IAmb 17 58 45.1
comp=Z,16nm,1.1s
D24K **Happy Valley** 87.37 20 P **P** 17 58 42.4 +0.3
baz=254
J25K **Salcha River,** 87.52 25 P **P** 17 58 43.4 +0.3
baz=257
GLB **Gilahina Butte** 87.54 28 P **P** 17 58 43.1 -0.1
GLB IAmb IAmb 17 58 45.7
comp=Z,21nm,1.2s
RIDG **Independent Ri** 87.55 26 P **P** 17 58 44.1 +0.8
baz=257
C24K **Franklin Bluff** 87.58 20 P **P** 17 58 44.0 +0.9
baz=254
G25K **Bearman Lake** 87.73 23 P **P** 17 58 44.4 +0.5
baz=256
CRQE **Cirque** 87.74 29 P **P** 17 58 44.0 -0.3
baz=259
DOT **Dot Lake** 87.87 26 IAmb IAmb 17 58 46.6
comp=Z,33nm,1.1s
MENT **Mentasta** 87.88 27 IAmb IAmb 17 58 47.0
comp=Z,29nm,1.4s
MCARA **McCarthy VSAT** 87.90 28 P **P** 17 58 45.3 +0.4
baz=259
SCRK **Sand Creek** 87.97 26 IAmb IAmb 17 58 47.1
comp=Z,17mm,1.2s
SCRK **Sand Creek** 87.97 26 P **P** 17 58 45.3 -0.1
baz=258,SNR=8.7
L26K **Log Cabin Wild** 88.06 27 IAmb IAmb 17 58 47.8
comp=Z,19nm,1.1s
L26K **Log Cabin Wild** 88.06 27 P **P** 17 58 45.9 +0.2
baz=259,SNR=6.5
M26K **Nabesna, AK** 88.10 27 IAmb IAmb 18 00 06.6
comp=Z,26nm,1.6s
M26K **Nabesna, AK** 88.10 27 P **P** 17 58 46.4 +0.5
baz=259
F25K **Christian Rive** 88.11 22 P **P** 17 58 45.8 0.0
baz=256
MESA **MESA** 88.20 30 P **P** 17 58 45.7 -0.8
baz=260
E25K **Arctic Village** 88.26 21 IAmb IAmb 18 01 29.1
comp=Z,12nm,0.5s
E25K **Arctic Village** 88.26 21 P **P** 17 58 46.2 -0.3
baz=257,SNR=8.4
D25K **Kavik River** 88.26 20 P **P** 17 58 47.1 +0.6
baz=256
J26L **Joseph Creek** 88.26 25 P **P** 17 58 47.6 +0.9
baz=258,SNR=31
GRNC **Granite Creek** 88.39 29 IAmb IAmb 17 58 49.8
comp=Z,32nm,1.2s
BMAR **Burnt Mountain** 88.47 22 P **P** 17 58 47.6 +0.1
BARN **Barnard Glacie** 88.49 29 P **P** 17 58 47.2 -0.7
BARN IAmb IAmb 17 58 50.5
comp=Z,32nm,1.2s
I26K **Coal Creek Min** 88.59 24 IAmb IAmb 17 58 49.7
comp=Z,22nm,1.2s
I26K **Coal Creek Min** 88.59 24 P **P** 17 58 48.3 +0.2
baz=259,SNR=10
M27K **Edge Creek, AK** 88.61 27 IAmb IAmb 17 58 50.9
comp=Z,19nm,1.1s
M27K **Edge Creek, AK** 88.61 27 P **P** 17 58 49.2 +0.8
baz=260
CTG **Chitna Glacier** 88.63 29 P **P** 17 58 48.4 -0.1
baz=261,SNR=6.1
G26K **Porcupine Rive** 88.67 23 P **P** 17 58 49.5 +1.1
baz=258,SNR=12
F26K **Sheenjek River** 88.69 22 IAmb IAmb 17 58 51.8
comp=Z,18nm,1.1s
F26K **Sheenjek River** 88.69 22 P **P** 17 58 49.4 +0.9
baz=258
L27K **Beaver Creek,** 88.75 27 IAmb IAmb 17 58 51.4
comp=Z,24nm,1.1s
L27K **Beaver Creek,** 88.75 27 P **P** 17 58 49.6 +0.7
baz=260
BCAR **Beaver Creek A** 88.77 27 P **P** 17 58 49.4 +0.3
K27K **Chicken** 88.81 26 P **P** 17 58 50.7 +1.6
baz=260
C26K **Camden Bay** 88.90 20 P **P** 17 58 50.3 +0.9
baz=257
PINM **Pinnacle** 89.02 30 P **P** 17 58 51.2 +1.0
baz=262
BVCY **Beaver Creek** 89.08 27 P **P** 17 58 52.0 +1.5
baz=261,SNR=5.9
O28M **Mount Upton** 89.15 29 P **P** 17 58 51.9 +0.8
baz=262
YUK3 **Moose Creek** 89.17 28 P **P** 17 58 51.9 +0.8
baz=261,SNR=7.0
C27K **Jago River** 89.24 20 IAmb IAmb 17 58 52.3
comp=Z,30nm,1.9s
C27K **Jago River** 89.24 20 P **P** 17 58 51.9 +0.9
baz=258
I27K **Kandik River** 89.28 24 P **P** 17 58 53.0 +1.6
baz=260
PNL **Peninsula** 89.39 30 P **P** 17 58 53.5 +1.5
baz=262
H27K **Steamboat Moun** 89.42 24 P **P** 17 58 52.3 +0.3
H27K IAmb IAmb 17 58 55.7
comp=Z,27nm,1.3s
H27K **Steamboat Moun** 89.42 24 P **P** 17 58 53.7 +1.7
baz=260
YUK8 **Steele Glacier** 89.43 29 P **P** 17 58 53.7 +1.3
baz=262
G27K **Doyon Strip** 89.47 23 P **P** 17 58 52.4 +0.2
baz=260
E27K **Coleen River** 89.73 22 P **P** 17 58 54.7 +1.3
baz=260
O29M **Mount Kennedy** 89.88 30 P **P** 17 58 55.4 +1.1
baz=263
I28M **Miner Creek** 89.94 24 IAmb IAmb 17 58 57.0
comp=Z,20nm,1.2s
I28M **Miner Creek** 89.94 24 P **P** 17 58 55.5 +1.0
baz=262,SNR=11
YUK4 **Talbot Arm** 89.97 29 P **P** 17 58 56.2 +1.4
baz=263
DAWY **Dawson** 89.98 26 P **P** 17 58 55.8 +1.1
baz=262,SNR=16
YUK6 **Outpost Mounta** 90.06 29 P **P** 17 58 56.0 +0.7
D27M **Malcolm River** 90.13 21 P **P** 17 58 55.6 +0.3
baz=261
M29M **Somme Creek** 90.19 28 IAmb IAmb 17 58 58.4
comp=Z,13nm,1.1s
M29M **Somme Creek** 90.19 28 P **P** 17 58 56.5 +0.7
baz=263,SNR=6.0
P29M **Windy Craggy** 90.22 30 P **P** 17 58 56.1 +0.3
baz=264
F28M **Old Crow** 90.28 22 P **P** 17 58 56.6 +0.6
baz=262
L29M **L29M** 90.42 27 IAmb IAmb 17 58 59.6
comp=Z,12nm,1.0s
L29M **L29M** 90.42 27 P **P** 17 58 57.4 +0.6
baz=263
HYT **Haines Junctio** 90.47 29 P **P** 17 58 57.5 +0.5
baz=264
E28M **Babbage River** 90.54 21 P **P** 17 58 57.6 +0.5
baz=262
P30M **Million Dollar** 90.66 30 P **P** 17 58 58.4 +0.4
baz=264
H29M **Whitestone** 90.69 24 P **P** 17 58 58.8 +0.9
baz=263
N30M **Aishikik Lake** 90.73 29 P **P** 17 58 58.6 +0.3
baz=264
K29M **Barlow Dome** 90.78 26 IAmb IAmb 17 59 01.0
comp=Z,22nm,1.2s
K29M **Barlow Dome** 90.78 26 P **P** 17 58 58.5 0.0
baz=264
S31K **Pelican** 90.84 32 P **P** 17 58 59.0 +0.3
baz=265
PLBC **Pleasant Camp** 90.90 31 P **P** 17 58 59.3 +0.3
baz=265
G29M **Pine Creek** 90.90 23 P **P** 17 58 59.3 +0.4
baz=264
D28M **Stokes Point** 90.92 21 P **P** 17 58 59.4 +0.5
baz=263
M30M **Minto, Yukon** 90.98 27 P **P** 17 58 59.5 +0.2
baz=265
E29M **Blow River** 91.12 22 IAmb IAmb 17 59 02.5
comp=Z,16nm,1.7s
E29M **Blow River** 91.12 22 P **P** 17 59 00.6 +0.9
baz=264
O30N **Mendenhall** 91.15 29 P **P** 17 59 00.5 +0.3
baz=265
SIT **Sitka** 91.25 33 P **P** 17 59 01.4 +0.8
baz=266
N31M **Braeburn, Yuko** 91.36 29 P **P** 17 59 02.0 +0.9
baz=266
EPYK **Eagle Plains** 91.36 24 P **P** 17 59 02.1 +1.0
baz=265
J30M **Hart River** 91.37 26 P **P** 17 59 01.9 +0.7
baz=265
I30M **Mount Dempster** 91.40 25 P **P** 17 59 01.9 +0.5
baz=265
G30M **tAoh Zraii Nji** 91.62 23 P **P** 17 59 03.1 +0.9
baz=265
WHY **Whitehorse** 91.73 29 P **P** 17 59 03.9 +0.9
baz=266
R32K **Eaglecrest** 91.77 32 P **P** 17 59 03.6 +0.6
baz=266
F30M **Barrier River** 91.83 22 P **P** 17 59 03.8 +0.6
baz=266
KIRV **Kirov** 91.90 328 LR LR 18 42 27.8
comp=Z,68nm,21.9s,baz=82,slow=37
M31M **Drury Creek, Y** 92.06 28 P **P** 17 59 04.8 +0.5
baz=267
P32M **Atlin** 92.25 31 P **P** 17 59 05.8 +0.5
baz=267
H31M **Peel River** 92.29 24 P **P** 17 59 05.6 +0.3
baz=267
G31M **Satah River** 92.38 23 P **P** 17 59 05.7 0.0
baz=267
CRAG **Craig** 92.38 35 P **P** 17 59 06.4 +0.5
baz=268
U33K **Whale Pass** 92.41 34 P **P** 17 59 06.8 +0.8
baz=268
F31M **Tsiigehtchic** 92.61 23 P **P** 17 59 06.8 +0.2
baz=268
N32M **Quiet Lake** 92.64 29 P **P** 17 59 07.1 0.0
baz=268
INK **Inuvik** 92.73 22 P **P** 17 59 07.8 +0.6
baz=268
P33M **Teslin, Yukon** 92.73 30 P **P** 17 59 08.0 +0.4
baz=268
WRAK **Wrangell Islan** 92.86 34 P **P** 17 59 08.0 0.0
baz=268
Q32M **Nakina River** 92.97 31 P **P** 17 59 09.1 +0.3
baz=268
V35K **Ketchikan** 93.24 35 P **P** 17 59 10.7 +0.8
baz=269
S34M **Telegraph Cree** 93.55 32 P **P** 17 59 12.1 +0.8
baz=269
R33M **Jennings River** 93.65 31 P **P** 17 59 12.8 +0.9
baz=270
T35M **Bob Quinn** 94.02 33 P **P** 17 59 13.5 +0.1
baz=270
DLBC **Dease Lake** 94.14 32 LR LR 18 35 14.2
comp=Z,38nm,21.5s,baz=236,slow=31
DLBC **Dease Lake** 94.14 32 P **P** 17 59 14.3 +0.2
baz=270
U35K **Hyder** 94.15 34 P **P** 17 59 15.4 +1.4
baz=270
GNI **Garni** 94.33 310 LR LR 18 47 01.3
comp=Z,25nm,20.4s,baz=76,slow=39
WTLY **Watson Lake, Y** 94.74 30 P **P** 17 59 17.8 +1.1
baz=272
BBB **Bella Bella** 95.32 38 LR LR 18 35 26.8
comp=Z,82nm,20.2s,baz=226,slow=31
A36M **Sachs Harbour** 95.44 18 IAmb IAmb 17 59 20.0
comp=Z,6.6nm,0.9s
A36M **Sachs Harbour** 95.44 18 P **P** 17 59 19.8 +0.2
baz=276
KIV **Kislovodsk** 95.85 314 *e*P **P** 17 59 20.3 -1.9
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,32nm,20.0s
C36M **Paulatuk** 96.12 21 P **P** 17 59 21.9 -0.8
C36M IAmb IAmb 17 59 23.7
comp=Z,16nm,1.3s
C36M **Paulatuk** 96.12 21 P **P** 17 59 23.0 +0.3
baz=277
LIRD **Liard River Hi** 96.14 31 P **P** 17 59 23.2 +0.1
baz=274
KLMR **Klimovskoe** 96.87 331 *e*P **P** 17 59 23.3 -3.0
KLMR *e**PP **pP** 17 59 43.0 -3.2
KLMR pmax pmax
comp=Z,9.0nm,1.2s
WRGLY **Wrigley** 97.07 27 P Pdif 17 59 27.2 0.0
baz=276
KOTAN **Kotaneelee Air** 97.11 30 P Pdif 17 59 28.0 +0.5
baz=276
NVL **N'lazarevskaya** 97.91 196 *e*P **P** 17 59 29.2 -1.6
NVL *e* 18 03 30.1
NVL *e*PPP PPP 18 05 33.9
NVL *e*S **SKSac** 18 09 59.3 -2.6
NVL *e*SS **SS** 18 17 33.6 +0.5
NVL *e*SSS SSS 18 21 20.9
NVL pmax pmax
comp=Z,9.0nm,0.7s
NVL smax smax
comp=N,259nm,17.4s
NVL MLR MLR
comp=Z,130nm,21.0s
BELA **Belgrano 2** 98.72 182 IAmb IAmb 17 59 35.8
comp=Z,6.6nm,0.7s
ARCES **ARCESS Array B** 100.77 341 P Pdif 17 59 42.8 -0.8
comp=Z,3.1nm,0.8s,baz=94,slow=5.5,SNR=12
SNAA **Sanae** 100.81 192 P Pdif 17 59 45.1 +1.2
comp=Z,3.0nm,1.0s,baz=146,slow=3.4,SNR=6.9
SNAA **Sanae** 100.81 192 Pdif 17 59 44.8 +0.9
FINES **FINESS Array B** 103.14 333 Pdiff Pdif 17 59 55.2 +0.9
comp=Z,3.5nm,1.0s,baz=16,slow=11,SNR=3.0
NVAR **Mina Array Bea** 103.17 51 Pdiff Pdif 17 59 55.4 +0.1
comp=Z,1.6nm,1.0s,baz=279,slow=4.9,SNR=6.4
ELK **Elko** 105.22 49 Pdiff Pdif 18 00 06.5 +2.1
comp=Z,1.3nm,0.9s,baz=186,slow=6.7,SNR=4.4
PDAR **Pinedale Array** 109.00 46 Pdiff Pdif 18 00 24.8 +3.6
comp=Z,0.3nm,0.5s,baz=276,slow=5.9,SNR=5.3
GERES **GERESS Array B** 114.31 323 PKP PKiKP 18 04 35.3 +0.2
comp=Z,0.2nm,0.5s,baz=63,slow=0.7,SNR=2.6
TXAR **Lajitas Array** 116.63 59 PKP PKiKP 18 04 40.6 +0.5
comp=Z,0.6nm,0.6s,baz=291,slow=1.7,SNR=12
TXAR pPKP pPKPdf 18 05 01.3 +0.5
comp=Z,0.7nm,0.9s,baz=320,slow=1.7,SNR=3.8
TXAR PKKPbc **PKKPab** 18 15 13.1 +1.1
comp=Z,0.9nm,0.8s,baz=103,slow=6.0,SNR=8.7
TXAR PKKP **PKKPdf** 18 15 32.1 -2.3
comp=Z,0.8nm,0.8s,baz=119,slow=6.8,SNR=6.1
BLOK **Blackwell** 119.83 49 **PKPdf** 18 04 44.2 -1.7
P38A **Dawn** 121.44 45 **PKPdf** 18 04 48.6 -0.4
R40A **Maddies Statio** 122.89 46 **PKPdf** 18 04 51.8 0.0
SCHQ **Schefferville** 125.03 17 PKP PKiKP 18 04 56.2 +0.5
comp=Z,5.6nm,1.0s,baz=315,slow=2.9,SNR=1.9
PLCA **Paso Flores** 129.11 153 PKP PKiKP 18 05 05.2 +0.8
comp=Z,4.0nm,0.8s,baz=257,slow=0.6,SNR=7.1
TORD **Torodi Ar. Bea** 135.34 285 PKP **PKPdf** 18 05 16.1 +0.1
comp=Z,1.6nm,0.3s,baz=58,slow=3.2,SNR=2.1
DBIC **Dimbokro** 142.43 276 PKhKP PKPpre 18 05 25.8
comp=Z,3.6nm,0.6s,baz=129,slow=3.4,SNR=9.2
DBIC **Dimbokro** 142.43 276 **PKPdf** 18 05 24.9 -4.1
DBIC **Dimbokro** 142.43 276 PKIKP **PKPdf** 18 05 24.9 -4.1
PLTB **Pedras Altas** 143.46 164 PKPbc 18 05 28.0 +0.3
PAC1 **Pacto, Paraso** 143.54 94 P PKPab 18 05 28.1 +0.4
OTAV **Otavalo** 143.87 94 PKPab 18 05 29.4 0.0
OTAV **Otavalo** 143.87 94 PKIKP PKPab 18 05 29.4 0.0
OTAV **Otavalo** 143.87 94 P PKPab 18 05 29.1 -0.3
CUSE **Cuicocha Este** 143.93 94 P PKPab 18 05 29.6 0.0
TULM **Tulcn-Chalpat** 144.58 94 P **PKPab** 18 05 32.1 0.0
BONI **La Bonita** 144.81 94 P **PKPab** 18 05 29.5 -3.2
CRUC **La Cruz** 145.47 92 P **PKPab** 18 05 36.4 +1.2
JAMC **Jamundi, Valle** 145.82 89 P **PKPab** 18 05 36.6 +0.2
YOTC **Yotoco, Valle** 146.16 88 P **PKPab** 18 05 35.8 +0.1
FLOC **Florencia** 146.77 92 **PKPdf** 18 05 37.3 +0.6
SJCC **San Jacinto, C** 146.87 77 P **PKPbc** 18 05 37.9 -0.8
GUY2C **Guyana, Caldas** 147.12 86 P **PKPab** 18 05 41.6 -0.1
CPUP **Villa Florida** 147.12 155 PKPbc **PKPbc** 18 05 39.2 +0.2
comp=Z,7.9nm,1.1s,baz=95,slow=1.2,SNR=28
CPUP pPKPbc **pPKPbc** 18 05 58.8 -1.2
comp=Z,4.6nm,1.0s,baz=39,slow=5.0,SNR=6.6
CPUP **Villa Florida** 147.12 155 **PKPbc** 18 05 38.4 -0.6
CPUP **Villa Florida** 147.12 155 PKP2 **PKPbc** 18 05 38.4 -0.6
ORTC **Ortega, Tolima** 147.26 88 P **PKPdf** 18 05 38.3 +0.9
SMRC **Santa Marta, M** 147.57 75 **PKPdf** 18 05 39.0 +1.2
SMRC **Santa Marta, M** 147.57 75 P **PKPdf** 18 05 38.9 +1.1
NORC **Norcasia** 147.60 85 P **PKPbc** 18 05 40.7 -0.1
PRAC **Prado** 147.61 88 P **PKPbc** 18 05 39.5 -1.3
SDDR **Presa de Saban** 147.83 59 **PKPbc** 18 05 40.0 -1.2
LPAZ **La Paz** 147.94 128 PKPbc **PKPbc** 18 05 41.5 -0.8
comp=Z,12nm,0.7s,baz=246,slow=2.8,SNR=40
LPAZ **La Paz** 147.94 128 **PKPdf** 18 05 40.6 +1.4
LPAZ **La Paz** 147.94 128 PKP2 **PKPdf** 18 05 40.6 +1.4
PTBC **PUERTO BERRIO** 147.96 83 P **PKPbc** 18 05 41.2 -0.5
ROSC **El Rosal** 148.17 86 PKPbc **PKPbc** 18 05 42.6 -0.1
comp=Z,19nm,0.5s,baz=194,slow=19,SNR=8.4
ROSC **El Rosal** 148.17 86 **PKPdf** 18 05 39.5 +0.1
ROSC **El Rosal** 148.17 86 PKIKP **PKPdf** 18 05 39.5 +0.1
SPBC **San Pablo de B** 148.39 85 P **PKPdf** 18 05 40.8 +1.4
CVER **Cruz Verde, Cu** 148.42 87 P **PKPbc** 18 05 44.0 +0.5
MACC **Macarena, Meta** 148.60 91 P **PKPbc** 18 05 39.9 +0.3
BRJC **Barrancabermej** 148.63 82 P **PKPdf** 18 05 40.4 +0.8
CHIC **Chingaza** 148.76 87 P **PKPbc** 18 05 44.1 -0.2
CRJC **Cerrejon, Guaj** 148.89 74 P **PKPdf** 18 05 39.8 -0.3
BARC **Barichara** 149.21 83 P **PKPdf** 18 05 37.5 -3.4
RUSC **La Rusia** 149.36 84 **PKPdf** 18 05 41.2 -0.2
RUSC **La Rusia** 149.36 84 P **PKPdf** 18 05 41.5 +0.1
PAMC **Pamplona, Colo** 149.63 81 P **PKPbc** 18 05 46.8 +0.3
SDV **Santo Domingo** 151.45 78 **PKPdf** 18 05 44.7 +0.4
SDV **Santo Domingo** 151.45 78 P **PKPdf** 18 05 44.3 0.0
HUMP **Col San Antoni** 152.79 56 PKPdf **PKPdf** 18 05 42.9 -3.1
HUMP **PKPbc** 18 05 51.7 -1.4
BAUV **El Baul** 153.97 77 **PKPdf** 18 05 45.1 -2.7
BAUV **pPKPdf** 18 06 07.1 -1.4

MOS ***16*** *18:14:08.9±1.1,36.72N×30.07E,h73km,mb4.4/10,Error ellipse: s-maj=6.4km s-min=3.6km az=89.1*
ISK ***16*** *18:14:10.1,36.78N×30.00E,h69km±1km,ML4.4/27*
IDC ***16*** *18:14:10.2±1.1,36.70N×30.15E,h64km±11km,mb3.9/16, mbtmp4.1/29,MS2.9/3,Error ellipse: s-maj=10.3km s-min=9.3km az=21.0*
MED_RC ***16*** *18:14:10.0±0.7,36.70N×30.04E,h94km±11km,MW4.5/8, Moment Tensor Solution.Mantle waves: s8,c8; Duration: 1!0 Moment tensor: Scale 10^15Nm; Mrr-1.96±1.46; Mθθ-4.79±.98; Mφφ6.75±.84; Mrθ3.03±.98; Mrφ-1.37±1.03; Mθφ-0.49±.95; Best double couple: M=6.89000×10^15 NP1:φ=214.00000°,δ64.00000°,λ-20.00000°. NP2: φ=313.00000°,δ73.00000°,λ-152.00000°. Principal axes: T 7.0000, Plg6.0000°, Azm82.0000°; N -0.2200, Plg58.0000°, Azm343.0000°; P -6.7800, Plg32.0000°, Azm176.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC ***16*** *18:14:10.5±1.4,36.75N±0.04×30.04E±0.06,h69km±5km, mb4.3/36 Error ellipse: s-maj=8.1km s-min=4.3km az=117.0*
HLW ***16*** *18:14:10.6,36.65N×30.11E,h69km±5km,Ml4.4*
ATH ***16*** *18:14:10.5,36.72N×30.07E,h65km±15km,ML4.3/19, Manual Solution by A.Agalos First location: 2019/11/16 18:15:33, This location: 2019/11/16 18:34:45 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
THE ***16*** *18:14:11.7,37°N±5°×3°0E±°,h33km±15km,M4.3/61, mb4.6/22,MLh4.0/61*
AFAD ***16*** *18:14:11.0,36.79N×29.99E,h54km±2km,MW4.2*
GII ***16*** *18:14:14.2±0.0,36.30N±0.03×30.18E±0.01,h40km, Mws4.0,confirmed*
NAO ***16*** *18:14:35.5,39.82N×29.15E,h10km,MB4.0*

ISC 16 18:14:09.6±0.5,36.69N±0.03×30.08E±0.03,h64km±5km, n549,σ1?48/594,mb4.3/36,51C-20D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELL	**Elmali**	**0.15**	**293**	Pg	**Pn**	**18 14 20.3**	**+0.8**
ELL				Sg	**Sn**	**18 14 28.4**	**+1.8**
ELL	**Elmali**	**0.15**	**293**		**Pn**	**18 14 20.2**	**+0.8**
ELL				Sn	**Sn**	**18 14 27.4**	**+0.8**
KORT	**Korkueli**	**0.38**	**34**	Pg	**Pn**	**18 14 21.7**	**+0.8**
KORT				Sg	**Sn**	**18 14 30.9**	**+1.8**
KEMT	**Kemer-ANTALYA**	**0.39**	**102**	Pg	**Pn**	**18 14 23.1**	**+2.3**
AKUM	**Antalya-Kumluc**	**0.42**	**150**	SPECP		18 14 23.0	
AKUM				P	**Pn**	**18 14 23.4**	**+2.3**
KNIK	**Mula-Seydike**	**0.44**	**291**	SPECP		18 14 22.0	
KNIK				P	**Pn**	**18 14 22.2**	**+0.8**
KNIK				S	**Sn**	**18 14 29.5**	**-0.5**
KNIK				*i* IAML		18 14 31.0	
	comp=N,3μm,0.3s						
KNIK				*i* IAML		18 14 31.0	
	comp=E,2μm,0.5s						
DEMR	**Demre-Antalya**	**0.47**	**198**	Pg	**Pn**	**18 14 23.5**	**+1.9**
DEMR				Sg	**Sn**	**18 14 33.9**	**+3.6**
ANTB	**Antalya**	**0.50**	**65**	Pg	**Pn**	**18 14 23.9**	**+2.0**
AKAS	**Kas**	**0.60**	**220**	SPECP		18 14 25.0	
AKAS				P	**Pn**	**18 14 25.1**	**+2.1**
AKAS	**Kas**	**0.60**	**220**	Pg	**Pn**	**18 14 24.8**	**+1.8**
AKAS	**Kas**	**0.60**	**220**		**Pn**	**18 14 24.7**	**+1.7**
AKAS				Sn	**Sn**	**18 14 35.1**	**+2.2**
CAME	**Cameli-Denizli**	**0.68**	**292**	Pg	**Pn**	**18 14 24.7**	**+0.8**
CAME				Sg	**Sn**	**18 14 34.9**	**+0.4**
GOLH	**Golhisar**	**0.69**	**323**	SPECP		18 14 25.0	
GOLH				P	**Pn**	**18 14 25.2**	**+1.1**
GOLH				S	**Sn**	**18 14 33.6**	**-1.1**
GOLH				*i* IAML		18 14 37.0	
	comp=N,3μm,0.4s						
IZZE	**Mula-Seydike**	**0.73**	**250**	SPECP		18 14 26.0	
IZZE				P	**Pn**	**18 14 26.2**	**+1.7**
BUCA	**Burdur, Bucak-**	**0.74**	**31**	SPECP		18 14 25.0	
BUCA				P	**Pn**	**18 14 25.8**	**+1.2**

CAEL Denizli, Camel 0.75 306 SPECP 18 14 25.0
CAEL P Pn **18 14 25.8 +1.0**
CAEL S Sn **18 14 34.8 -1.2**
CAEL *i* IAML 18 14 40.0
comp=N,3µm,0.6s
CAEL *i* IAML 18 14 45.0
comp=E,3µm,0.7s
FETY Fethiye 0.81 267 P Pn 18 14 18.8 -6.6
BCK Bucak 0.87 28 Pg **Pn** **18 14 27.3 +1.1**
BCK Sg **Sn** **18 14 39.7 +1.2**
SABU Mula-Dalaman 0.91 279 SPECP 18 14 27.0
SABU P **Pn** **18 14 27.6 +1.0**
APMY Acipayam-Deniz 1.00 322 Pg **Pn** **18 14 28.3 +0.4**
BRDR BURDUR-Merkez 1.01 359 SPECP 18 14 29.0
BRDR P **P** **18 14 29.0 +1.1**
DNZT Denizli-Tavas- 1.03 305 P **Pn** **18 14 29.4 +1.1**
DNZT S **Sn** **18 14 41.0 -1.2**
DNZT *i* IAML 18 14 43.0
comp=E,4µm,0.4s
DNZT *i* IAML 18 14 43.0
comp=N,6µm,0.6s
MNVG Manavgat-Antal 1.08 84 Pn **Pn** **18 14 31.5 +2.8**
INCE Denizli-Bozkur 1.10 338 SPECP 18 14 29.0
INCE P **Pn** **18 14 29.8 +0.7**
DALY Dalyan (Mula) 1.16 277 Pn **Pn** **18 14 30.4 +0.7**
ISP Isparta 1.19 17 Pn **Pn** **18 14 31.2 +0.9**
ISP Isparta 1.19 17 **Pn** **18 14 31.0 +0.8**
ISP Sn **Sn** **18 14 46.4 +0.7**
ISP Isparta 1.19 17 *d* *i*P **Pn** **18 14 31.1 +0.8**
ISP Isparta 1.19 17 P **Pn** **18 14 31.3 +1.0**
ISP S **Sn** **18 14 46.9 +1.1**
TAVA DENIZLI_Tavas 1.22 310 P **Pn** **18 14 31.5 +0.8**
TAVA S **Sn** **18 14 44.1 -2.4**
TAVA *i* IAML 18 14 51.0
comp=N,4µm,1.1s
TAVA *i* IAML 18 14 51.0
comp=E,3µm,0.9s
BASM Basmaki-Afyon 1.23 359 Pn **Pn** **18 14 31.2 +0.4**
DNIZ Denizli-Tavas- 1.25 319 SPECP 18 14 31.0
DNIZ P **Pn** **18 14 31.7 +0.6**
DNIZ S **Sn** **18 14 46.7 -0.6**
DNIZ *i* IAML 18 14 50.0
comp=E,1µm,0.4s
DNIZ *i* IAML 18 14 51.0
comp=N,1µm,0.5s
TURN Turunc 1.48 274 P **Pn** **18 14 35.2 +1.2**
TURN Turunc 1.48 274 Pn **Pn** **18 14 35.0 +1.0**
YER Yerkesik 1.51 288 S **Sn** **18 14 53.1 -0.3**
RDI1 Rhodes Town Ha 1.52 262 P **Pn** **18 14 35.2 +0.7**
RODB Rodos 1.52 261 P **Pn** **18 14 35.8 +1.3**
RODB S **Sn** **18 14 54.5 +1.1**
MULA Mugla, Merkez- 1.52 292 P **Pn** **18 14 35.7 +1.0**
SEDI Konya, Seydise 1.54 60 SPECP 18 14 37.0
SEDI P **Pn** **18 14 37.7 +2.7**
KZIL AFYON_Kizioren 1.57 2 SPECP 18 14 35.0
KZIL P **Pn** **18 14 35.7 +0.4**
ALAN Alanya-ANTALYA 1.57 94 Pn **Pn** **18 14 37.9 +2.6**
SEYD Seydisehir-KON 1.58 62 Pn **Pn** **18 14 38.2 +2.7**
ARG Arkhangelos 1.65 254 Pn **Pn** **18 14 37.4 +1.1**
ARG Arkhangelos 1.65 254 **Pn** **18 14 37.2 +0.9**
ARG Arkhangelos 1.65 254 P **Pn** **18 14 37.4 +1.1**
ARG S **Sn** **18 14 56.3 -0.2**
ARG Arkhangelos 1.65 254 P **Pn** **18 14 37.2 +0.9**
ARG Arkhangelos 1.65 254 P **Pn** **18 14 37.2 +0.9**
ARG S **Sn** **18 14 57.6 +1.1**
KHL Karahalli 1.69 345 Pn **Pn** **18 14 36.9 -0.1**
PASA Karahalli, USA 1.72 344 P **Pn** **18 14 37.1 -0.3**
ESEN Aydn-Nazilli 1.77 309 P **Pn** **18 14 38.4 +0.4**
GAZI Gazipasa 1.86 103 Pn **Pn** **18 14 41.6 +2.5**
RGEI Gennadi, Rhode 1.86 250 P **Pn** **18 14 41.8 +1.2**
SHUT Suhut-Afyon 1.90 11 Pn **Pn** **18 14 40.6 +0.8**
NAZL Nazilli-Aydin 1.91 312 Pn **Pn** **18 14 40.0 +0.1**
MLSB Milas 1.94 289 Pn **Pn** **18 14 39.6 -0.7**
HDMB Hadim 1.95 81 Pn **Pn** **18 14 43.9 +3.3**
DATC Datca-Mugla 1.95 273 Pn **Pn** **18 14 41.6 +1.3**
BNAZ Uak-Banaz 1.99 355 SPECP 18 14 41.0
BNAZ P **Pn** **18 14 41.3 +0.2**
AYDN Tasoluk 2.01 300 P **Pn** **18 14 42.4 +1.1**
DAT Datca 2.01 272 Pn **Pn** **18 14 42.7 +1.3**
DAT Datca 2.01 272 P **Pn** **18 14 42.0 +0.6**
DAT S **Sn** **18 15 06.2 +0.7**
YAZI Mula-Dat§a- 2.11 271 SPECP 18 14 43.0
YAZI P **Pn** **18 14 43.9 +1.3**
KULA Kula-Manisa 2.15 329 Pn **Pn** **18 14 42.6 -0.5**
BDRM Kayabasi 2.15 281 P **Pn** **18 14 44.1 +1.0**
AYDB Zeytinkoy-Aydi 2.15 306 Pn **Pn** **18 14 43.3 0.0**
MANT Manisa 2.17 327 **Pn** **18 14 43.0 -0.5**
MANT Sn **Sn** **18 15 06.7 -2.8**
USAK Uak-Merkez 2.19 338 SPECP 18 14 43.0
USAK P **Pn** **18 14 43.5 -0.2**
IZMR zmir-demi 2.23 311 P **Pn** **18 14 44.1 0.0**
ODEM Odemis-Izmir 2.25 315 Pn **Pn** **18 14 44.3 -0.2**
BODT Bodrum 2.25 280 S **Sn** **18 15 11.8 +0.6**
YKAV Yalikavak-Bodr 2.29 282 Pn **Pn** **18 14 45.9 +0.9**
DIDI Didim-Aydin 2.38 288 Pn **Pn** **18 14 47.1 +0.9**
NISR Nisiros 2.38 269 P **Pn** **18 14 46.4 +0.3**
NISR S **Sn** **18 15 13.0 -1.3**
NISR Nisiros 2.38 269 P **Pn** **18 14 47.0 +0.8**
DDIM Aydin, Didim 2.40 290 SPECP 18 14 46.0
DDIM P **Pn** **18 14 47.0 +0.5**
AKMS Akamas 2.48 132 P **Pn** **18 14 49.3 +1.7**
GCAM G?zelcaml? 2.49 295 P **Pn** **18 14 48.2 +0.5**
KLNA Kalymnos 2.51 277 P **Pn** **18 14 48.8 +0.8**
ALFC Alefka 2.55 126 P **Pn** **18 14 49.4 +0.8**
KARP Karpathos 2.63 245 **Pn** **18 14 50.9 +1.3**
KARP Sn **Sn** **18 15 19.8 -0.6**
KARP Karpathos 2.63 245 P **Pn** **18 14 51.1 +1.5**
KARP S **Sn** **18 15 20.1 -0.3**
KARP Karpathos 2.63 245 P **Pn** **18 14 50.9 +1.3**
KARP S **Sn** **18 15 21.3 +1.0**
NATA Nata 2.78 133 P **Pn** **18 14 53.6 +1.9**
SMG Samos 2.79 292 P **Pn** **18 14 51.8 +0.1**
SMG S **Sn** **18 15 20.5 -3.7**
SMG Samos 2.79 292 P **Pn** **18 14 51.8 +0.1**
KRL1 Karlovasi Samo 2.91 293 P **Pn** **18 14 53.6 +0.1**
BLCB Balcova 2.95 306 P **Pn** **18 14 54.1 +0.1**
BLCB S **Sn** **18 15 24.5 -3.8**
CSS Mathiatis 3.15 122 **Pn** **18 14 57.2 +0.5**
CSS Mathiatis 3.15 122 P **Pn** **18 14 57.6 +0.8**
CSS Mathiatis 3.15 122 S **Sn** **18 15 32.1 -1.1**
CSS Mathiatis 3.15 122 P **Pn** **18 14 57.3 +0.5**
ASGA Asgata 3.20 125 P **Pn** **18 14 59.0 +1.6**
BORA Eskisehir 3.20 5 **Pn** **18 14 57.5 0.0**
MVOU Mavrovouni 3.33 119 P **Pn** **18 14 59.7 +0.5**
SIT2 Siteia 3.55 247 P **Pn** **18 15 03.3 +1.1**
CHOS Chios island 3.62 299 P **Pn** **18 15 03.9 +0.7**
CHOS S **Sn** **18 15 42.0 -2.9**
CHOS Chios island 3.62 299 P **Pn** **18 15 03.6 +0.4**
EAG2 Marmaro, Chios 3.66 302 P **Pn** **18 15 04.2 +0.6**
THR8 Santorini-Mono 3.72 267 P **Pn** **18 15 04.9 +0.5**
THR8 Santorini-Mono 3.72 267 P **Pn** **18 15 05.2 +0.7**
THERA Ancient Thera, 3.73 266 P **Pn** **18 15 05.3 +0.7**
THERA S **Sn** **18 15 48.1 +0.9**
THERA Ancient Thera, 3.73 266 P **Pn** **18 15 05.0 +0.4**
THR2 Thira island, 3.75 268 P **Pn** **18 15 05.2 +0.3**
THR2 Thira island, 3.75 268 P **Pn** **18 15 06.0 +1.0**
THRA Thira 3.75 267 P **Pn** **18 15 05.5 +0.5**
THR3 Thira Island, 3.78 267 P **Pn** **18 15 06.6 +1.2**
THR3 Thira Island, 3.78 267 P **Pn** **18 15 06.1 +0.7**
SNT5 Nea Kammeni, S 3.79 267 P **Pn** **18 15 06.4 +1.1**
SNT5 S **Sn** **18 15 50.1 +1.5**
SNT5 Nea Kammeni, S 3.79 267 P **Pn** **18 15 05.6 +0.2**
THR6 Thira Island, 3.79 266 P **Pn** **18 15 06.8 +1.3**
THR6 Thira Island, 3.79 266 P **Pn** **18 15 06.2 +0.8**
NAX1 Naxos Island 3.80 278 P **Pn** **18 15 06.1 +0.5**
THR9 Santorini-Faro 3.82 266 P **Pn** **18 15 06.9 +1.0**
THR9 Santorini-Faro 3.82 266 P **Pn** **18 15 06.5 +0.7**
SAP3 Santorini-Thir 3.82 268 P **Pn** **18 15 07.0 +1.1**
SAP3 S **Sn** **18 15 48.6 -1.0**
SAP3 Santorini-Thir 3.82 268 P **Pn** **18 15 06.9 +1.0**
THR5 Thira Island, 3.82 267 P **Pn** **18 15 06.7 +0.7**
ANTO Ankara 3.83 33 **Pn** **18 15 07.0 +1.0**
ANTO Ankara 3.83 33 ⇑P **Pn** **18 15 07.8 +1.7**
ANTO Ankara 3.83 33 P **Pn** **18 15 07.7 +1.7**
MDUB Mudurnu 3.88 13 **Pn** **18 15 08.4 +1.6**
KIRS Kirsehir-Merke 3.89 50 ⇑P **Pn** **18 15 08.8 +1.9**
NPS Neapolis 3.90 250 P **Pn** **18 15 07.6 +0.6**
NPS Neapolis 3.90 250 P **Pn** **18 15 07.2 +0.3**
PRK Paraskevi 3.95 311 P **Pn** **18 15 07.9 +0.3**
PRK Paraskevi 3.95 311 P **Pn** **18 15 07.7 +0.1**

BAND Balkesir-Ban 3.98 338 ⇑P **Pn** **18 15 07.7 -0.3**
TNSA Tinos 4.02 284 P **Pn** **18 15 09.4 +0.8**
BR131 Keskin Array S 4.13 42 **Pn** **18 15 11.2 +1.0**
BR131 Keskin Array S 4.13 42 *c* *i*P **Pn** **18 15 11.2 +1.0**
BRTR Keskin Array B 4.13 42 P **Pn** **18 15 10.9 +0.7**
68nm,0.5s,baz=215,slow=15,SNR=414
BRTR S **Sn** **18 15 57.5 +0.2**
159nm,0.5s,baz=214,slow=26,SNR=30
BRTR Keskin Array B 4.13 42 **Pn** **18 15 11.1 +1.0**
BRTR Keskin Array B 4.13 42 *i* P **Pn** **18 15 11.3 +1.0**
BRTR pmax pmax
comp=Z,80nm,0.5s
SIGR SIGRI 4.18 308 P **Pn** **18 15 10.9 +0.1**
SIGR SIGRI 4.18 308 P **Pn** **18 15 10.9 +0.1**
SAHE Sakarya_HENDEK 4.20 8 ⇑P **Pn** **18 15 12.1 +1.0**
IACM Heraklion 4.29 253 P **Pn** **18 15 13.5 +1.2**
EZN Ezine 4.31 318 P **Pn** **18 15 12.6 +0.1**
EZN Ezine 4.31 318 ⇑P **Pn** **18 15 12.2 -0.4**
EZN Ezine 4.31 318 P **Pn** **18 15 12.1 -0.4**
IDI Anoyia 4.44 253 P **Pn** **18 15 14.4 +0.1**
comp=Z,145nm,0.3s,baz=64,slow=14,SNR=183
IDI S **Sn** **18 16 02.8 -2.0**
comp=Z,346nm,0.4s,baz=333,slow=23,SNR=17
IDI Anoyia 4.44 253 P **Pn** **18 15 14.5 +0.1**
IDI Anoyia 4.44 253 P **Pn** **18 15 14.5 +0.1**
MHLO Agia Marina, M 4.57 272 P **Pn** **18 15 17.5 +1.4**
KLYT Kilyos 4.63 350 ⇑P **Pn** **18 15 16.8 -0.1**
KARY Karystos 4.69 288 P **Pn** **18 15 18.7 +0.9**
KARY Karystos 4.69 288 P **Pn** **18 15 18.6 +0.7**
GADA Gvkgeada 4.80 318 P **Pn** **18 15 19.4 +0.2**
SKY Skiros Island 4.90 298 P **Pn** **18 15 21.8 +1.2**
CTYL Yalikoy Yolu 4.98 344 ⇓P **Pn** **18 15 21.3 -0.4**
LIA Limnos Island 5.01 311 P **Pn** **18 15 22.6 +0.4**
LIA Limnos Island 5.01 311 P **Pn** **18 15 23.2 +1.0**
CHNB Souda 5.02 258 P **Pn** **18 15 23.4 +1.2**
CHAN Chania 5.03 258 P **Pn** **18 15 23.4 +1.0**
CHAN Chania 5.03 258 P **Pn** **18 15 23.3 +0.9**
CAVK Edirne/Enez-Ca 5.04 324 ⇓P **Pn** **18 15 22.5 0.0**
BNN Bunyan 5.05 63 **Pn** **18 15 24.8 +2.0**
ENEZ Enez 5.08 324 P **Pn** **18 15 23.4 +0.3**
DION Dionisos Attik 5.09 288 P **Pn** **18 15 24.6 +1.0**
DION Dionisos Attik 5.09 288 P **Pn** **18 15 24.2 +0.9**
KYMI Kymi, Euboea I 5.13 294 P **Pn** **18 15 24.9 +1.1**
KYMI Kymi, Euboea I 5.13 294 P **Pn** **18 15 25.1 +1.4**
PTL Penteli 5.14 287 P **Pn** **18 15 25.3 +1.4**
PTL Penteli 5.14 287 P **Pn** **18 15 25.1 +1.2**
VLY Voula,Athens 5.15 285 P **Pn** **18 15 25.6 +1.5**
VLY Voula,Athens 5.15 285 P **Pn** **18 15 24.9 +0.9**
ATHU Athens Univers 5.18 286 P **Pn** **18 15 25.7 +1.2**
ATHU Athens Univers 5.18 286 P **Pn** **18 15 25.3 +0.8**
SMTH Samothraki Isl 5.19 318 P **Pn** **18 15 24.4 -0.3**
SMTH Samothraki Isl 5.19 318 P **Pn** **18 15 24.6 -0.1**
ILGA Ilgaz 5.20 32 **Pn** **18 15 25.6 +0.7**
GVD Gavdhos 5.21 251 P **Pn** **18 15 26.3 +1.3**
GVD Gavdhos 5.21 251 P **Pn** **18 15 26.1 +1.1**
ATH Athens Observa 5.23 286 P **Pn** **18 15 26.9 +1.7**
ATH Athens Observa 5.23 286 P **Pn** **18 15 26.3 +1.1**
RODP Rodopos 5.24 269 P **Pn** **18 15 28.4 +3.1**
comp=Z,0.2nmcomp=Z,31nm,0.6s
ALN Alexandropouli 5.25 324 **Pn** **18 15 25.3 -0.1**
ALN Alexandropouli 5.25 324 P **Pn** **18 15 25.5 0.0**
comp=Z,46nm,1.1s
ALN Alexandropouli 5.25 324 P **Pn** **18 15 25.3 -0.1**
ALN Alexandropouli 5.25 324 P **Pn** **18 15 25.1 -0.3**
PHSR Pinarhisar 5.32 339 ⇑P **Pn** **18 15 26.0 -0.4**
BHL Bhannes 5.33 120 *eP* **Pn** **18 15 26.7 0.0**
HWQ Hawqa 5.35 115 *eP* **Pn** **18 15 27.9 +0.9**
BEIL Beino 5.41 112 *eP* **Pn** **18 15 28.1 +0.4**
STFN Stefani 5.41 288 P **Pn** **18 15 29.1 +1.4**
comp=Z,0.2nmcomp=Z,42nm,0.4s
STFN Stefani 5.41 288 P **Pn** **18 15 29.1 +1.4**
MAGU Magoula 5.41 287 P **Pn** **18 15 28.7 +1.1**
KNDR Palaiochora Ch 5.43 256 P **Pn** **18 15 29.5 +1.6**
comp=Z,0.4nmcomp=Z,87nm,0.8s
KNDR Palaiochora Ch 5.43 256 P **Pn** **18 15 29.5 +1.6**
AOS Alonnisos 5.49 299 P **Pn** **18 15 30.0 +1.2**
comp=Z,26nm,0.5s
HNTI Hanita 5.52 129 P **Pn** **18 15 30.0 +0.9**
HNTI Hanita 5.52 129 S **Sn** **18 16 29.4 -1.8**
ZAHL Zahle 5.52 119 *eP* **Pn** **18 15 30.1 +0.7**
ANKY Antikythira Is 5.54 264 P **Pn** **18 15 29.7 +0.3**
QRWL Qaraoun 5.56 123 *eP* **Pn** **18 15 30.2 +0.5**
VILL Villia 5.59 287 P **Pn** **18 15 31.7 +1.6**
comp=Z,0.1nmcomp=Z,39nm,0.8s
VIL2 Platees 5.63 288 P **Pn** **18 15 31.3 +0.6**
CIDE Kastamonu/Cide 5.64 22 ⇑P **Pn** **18 15 33.4 +2.7**
KTHA Kythira Island 5.67 268 P **Pn** **18 15 32.6 +1.3**
RDO Rodhopi 5.69 323 **Pn** **18 15 31.0 -0.4**
RDO Rodhopi 5.69 323 P **Pn** **18 15 31.5 +0.1**
RDO Rodhopi 5.69 323 P **Pn** **18 15 31.8 +0.4**
RCY Rachaya 5.69 212 *eP* **Pn** **18 15 32.5 +0.9**
MMA0B Mount Meron ar 5.71 128 P **Pn** **18 15 32.6 +0.8**
MMA0B Mount Meron ar 5.71 128 S **Sn** **18 16 33.9 -2.0**
MMAI Mount Meron Ar 5.71 128 P **Pn** **18 15 32.8 +1.0**
comp=Z,52nm,0.3s,baz=316,slow=12,SNR=435
MMAI S **Sn** **18 16 33.9 -2.0**
comp=Z,54nm,0.5s,baz=307,slow=27,SNR=13
MMAI LR LR 18 18 01.6
comp=Z,45nm,21.2s,baz=332,slow=41
FKH Fakeheh 5.71 113 *eP* **Pn** **18 15 33.4 +1.6**
SHBL Chebaa 5.72 124 *eP* **Pn** **18 15 32.7 +0.7**
OFRI `Ofer 5.72 134 P **Pn** **18 15 32.1 +0.1**
OFRI `Ofer 5.72 134 S **Sn** **18 16 34.9 -1.5**
THAS Thassos island 5.74 315 P **Pn** **18 15 31.6 -0.5**
comp=Z,0.2nmcomp=Z,27nm,0.5s
VLI Veliai 5.74 272 P **Pn** **18 15 33.6 +1.5**
VLI Veliai 5.74 272 P **Pn** **18 15 33.8 +1.6**
GEM Giv'at Ha'Em 5.75 126 P **Pn** **18 15 33.3 +1.1**
GEM Giv'at Ha'Em 5.75 126 S **Sn** **18 16 34.9 -2.0**
NATI Neve Ativ 5.76 125 P **Pn** **18 15 33.4 +0.9**
NATI Neve Ativ 5.76 125 S **Sn** **18 16 35.6 -1.6**
BLGI Bet Lehem HaGe 5.77 132 P **Pn** **18 15 33.6 +1.1**
BLGI Bet Lehem HaGe 5.77 132 S **Sn** **18 16 35.4 -1.9**
LTK Loutraki 5.82 285 P **Pn** **18 15 35.0 +1.7**
MATC Matruh 5.83 205 P **Pn** **18 15 34.9 +1.5**
ATAL Atalanti 5.95 292 P **Pn** **18 15 36.5 +1.5**
comp=Z,0.1nmcomp=Z,59nm,0.6s
ATAL Atalanti 5.95 292 P **Pn** **18 15 36.4 +1.4**
LKR Lokris 5.95 291 P **Pn** **18 15 36.4 +1.4**
LKR Lokris 5.95 291 P **Pn** **18 15 36.2 +1.2**
KSHT Keshet 5.99 126 P **Pn** **18 15 37.3 +1.7**
KSHT Keshet 5.99 126 S **Sn** **18 16 41.9 -0.9**
OUR Ouranopolis 6.01 309 P **Pn** **18 15 35.4 -0.4**
comp=Z,0.1nmcomp=Z,30nm,0.8s
NEO Neokhori 6.01 298 P **Pn** **18 15 37.2 +1.3**
NEO Neokhori 6.01 298 P **Pn** **18 15 37.0 +1.1**
SLTI Sal'it 6.04 136 P **Pn** **18 15 36.5 +0.3**
SLTI Sal'it 6.04 136 S **Sn** **18 16 41.6 -2.3**
BZK Bozkurt 6.08 29 Pn **Pn** **18 15 37.1 +0.4**
BZK Bozkurt 6.08 29 ⇑P **Pn** **18 15 39.8 +3.0**
MMLI Mount Malkishu 6.11 132 P **Pn** **18 15 38.4 +1.1**
MMLI Mount Malkishu 6.11 132 S **Sn** **18 16 44.1 -1.7**
KAVA Kavala 6.12 316 P **Pn** **18 15 37.0 -0.2**
TOKA Tokat 6.19 52 **Pn** **18 15 39.5 +1.2**
VLX Vlachokerasia 6.20 279 P **Pn** **18 15 40.8 +2.2**
comp=Z,24nm,0.6s
AXAR Agios Charalam 6.24 292 P **Pn** **18 15 41.0 +2.0**
comp=Z,0.2nmcomp=Z,54nm,0.6s
AXAR Agios Charalam 6.24 292 P **Pn** **18 15 40.5 +1.6**
SALP Salfit 6.25 136 P **Pn** **18 15 39.8 +0.6**
SALP Salfit 6.25 136 S **Sn** **18 16 47.1 -2.1**
GUR Goura 6.29 284 P **Pn** **18 15 41.9 +2.1**
GUR Goura 6.29 284 P **Pn** **18 15 41.6 +1.8**
HMDT Nahal Hemdat 6.31 133 P **Pn** **18 15 41.1 +1.2**
HMDT Nahal Hemdat 6.31 133 S **Sn** **18 16 48.9 -1.7**
JMB Yambol 6.41 336 P **Pn** **18 15 41.2 -0.1**
JMB Yambol 6.41 336 *eP* **Pn** **18 15 41.7 +0.4**
KLV Kalavryta, Ach 6.46 284 P **Pn** **18 15 44.4 +2.3**
KLV Kalavryta, Ach 6.46 284 P **Pn** **18 15 43.5 +1.4**
UJAP Al Uja 6.49 135 P **Pn** **18 15 43.3 +0.9**
UJAP Al Uja 6.49 135 S **Sn** **18 16 53.4 -1.6**
BALJ Balqa 6.49 133 **Pn** **18 15 43.9 +1.4**
RZN Rozhen 6.50 322 P **Pn** **18 15 43.0 +0.3**
RZN Rozhen 6.50 322 *eP* **Pn** **18 15 43.2 +0.5**
RZN *eS* **Sn** **18 16 51.9 -3.5**
AMAZ Amatzia 6.52 141 P **Pn** **18 15 43.6 +0.7**
AMAZ Amatzia 6.52 141 S **Sn** **18 16 54.4 -1.4**
KALE Kalithea 6.54 287 P **Pn** **18 15 45.4 +2.3**
ITM Ithomi 6.55 277 **Pn** **18 15 46.4 +3.1**
ITM Ithomi 6.55 277 P **Pn** **18 15 46.4 +3.1**
AGG Agios Georgios 6.56 293 P **Pn** **18 15 45.5 +2.1**

comp=Z,0.0nmcomp=Z,30nm,0.6s
SLUM Salum 6.57 219 P **Pn** **18 15 45.1 +1.6**
SERG Sergoula 6.61 288 P **Pn** **18 15 45.8 +1.8**
MAKR Makrakomi, Fth 6.71 293 P **Pn** **18 15 48.0 +2.6**
SRS Serrai 6.72 313 P **Pn** **18 15 44.9 -0.7**
EFP Efpalio 6.72 287 P **Pn** **18 15 48.0 +2.4**
comp=Z,0.1nmcomp=Z,64nm,0.9s
DSI Dead Sea 6.73 138 P **Pn** **18 15 47.1 +1.3**
DSI Dead Sea 6.73 138 S **Sn** **18 16 58.7 -2.4**
ANX Ano Chora 6.75 289 P **Pn** **18 15 48.5 +2.4**
YTIR Yattir 6.76 140 P **Pn** **18 15 46.6 +0.4**
YTIR Yattir 6.76 140 S **Sn** **18 16 59.2 -2.6**
PRD Provadia 6.78 343 *eP* **Pn** **18 15 46.4 0.0**
DRO Drossia 6.79 283 P **Pn** **18 15 49.0 +2.5**
KZIT Kziot 6.79 147 P **Pn** **18 15 47.3 +0.7**
KZIT Kziot 6.79 147 S **Sn** **18 16 59.4 -3.1**
PLD Plovdiv 6.84 324 P **Pn** **18 15 47.4 +0.2**
PLD Plovdiv 6.84 324 *eP* **Pn** **18 15 47.6 +0.5**
LIT Litokhoron 6.87 302 **Pn** **18 15 46.9 -0.7**
LIT Litokhoron 6.87 302 P **Pn** **18 15 49.3 +1.7**
comp=Z,0.0nmcomp=Z,15nm,0.6s
LIT Litokhoron 6.87 302 P **Pn** **18 15 46.9 -0.7**
KOT Kottamia 6.90 167 P **Pn** **18 15 49.3 +1.2**
HMYD Mayadein 6.90 175 P **Pn** **18 15 49.7 +1.6**
MMB Musomishta 6.91 317 P **Pn** **18 15 48.0 -0.2**
MMB Musomishta 6.91 317 *eP* **Pn** **18 15 48.9 +0.7**
NEF Nevsha 6.91 343 *eP* **Pn** **18 15 48.2 0.0**
EVR Evrytania 6.92 291 P **Pn** **18 15 51.2 +2.9**
MSBI Mazada 6.92 139 P **Pn** **18 15 49.3 +1.0**
MSBI Mazada 6.92 139 S **Sn** **18 17 03.2 -2.4**
HHAG Hagoal 6.93 165 P **Pn** **18 15 49.9 +1.5**
THL Klokotos Trika 6.98 297 P **Pn** **18 15 51.3 +2.2**
RLS Riolos of Patr 7.00 284 P **Pn** **18 15 52.2 +2.9**
ELND Elena 7.02 334 ⇑P **Pn** **18 15 49.0 -0.7**
GHAJ Ghor Haditha 7.04 138 **Pn** **18 15 51.2 +1.3**
GHAJ Ghor Haditha 7.04 138 P **Pn** **18 15 51.6 +1.7**
PVO Paravola 7.06 288 P **Pn** **18 15 53.1 +3.0**
AXS Araxos 7.09 285 P **Pn** **18 15 53.7 +3.2**
comp=Z,0.1nmcomp=Z,36nm,1.0s
PSN Preselentsi 7.10 348 *eP* **Pn** **18 15 51.8 +1.1**
KNT Kendrikon 7.16 311 P **Pn** **18 15 52.9 +1.3**
LOZB Loznitsa 7.19 339 ⇑P **Pn** **18 15 51.7 -0.3**
SUZ Suez 7.21 161 P **Pn** **18 15 53.3 +1.1**
ASF Jabal al Asfar 7.21 127 P **Pn** **18 15 53.7 +1.4**
comp=Z,12nm,0.4s,baz=14,slow=1.9,SNR=27
ASF S **Sn** **18 17 13.7 +0.8**
comp=Z,26nm,0.4s,baz=317,slow=22,SNR=3.6
IDAN Idan 7.26 142 P **Pn** **18 15 53.6 +0.6**
IDAN Idan 7.26 142 S **Sn** **18 17 10.9 -3.1**
SZH Strazhitsa 7.29 336 P **Pn** **18 15 53.3 +0.1**
comp=Z,0.1nmcomp=Z,41nm,0.7s
AMPL Ampelaki 7.37 290 P **Pn** **18 15 54.8 +0.3**
comp=Z,0.1nmcomp=Z,36nm,0.8s
PGB Panagyurishte 7.39 324 *eP* **Pn** **18 15 55.3 +0.5**
RAZG Razgrad 7.39 339 ⇓P **Pn** **18 15 54.8 0.0**
TETR Tetrakomo, Epi 7.44 294 P **Pn** **18 15 58.3 +2.8**
ZFRI Zfri 7.45 144 P **Pn** **18 15 55.5 0.0**
ZFRI Zfri 7.45 144 S **Sn** **18 17 14.7 -3.8**
PVL Pavlikeni 7.45 331 *eP* **Pn** **18 15 56.3 +0.8**
PRNI Paran 7.54 146 P **Pn** **18 15 56.9 +0.1**
PRNI Paran 7.54 146 S **Sn** **18 17 17.2 -3.6**
RTZL Ratzakli, Kefa 7.54 283 P **Pn** **18 16 00.1 +3.3**
comp=Z,0.1nmcomp=Z,39nm,1.1s
ORTH Orthonies,Zaky 7.57 282 P **Pn** **18 15 59.1 +1.9**
RYAN Fayoum 7.59 179 P **Pn** **18 15 58.9 +1.5**
MFTR Murfatlar 7.59 351 ⇑P **Pn** **18 15 57.8 +0.4**
KRMI Paran Flat 7.62 148 P **Pn** **18 15 58.2 +0.3**
KRMI Paran Flat 7.62 148 S **Sn** **18 17 19.2 -3.5**
ICOR Ion Corvin 7.62 348 ⇓P **Pn** **18 15 59.0 +1.1**
PRMD Pramanda 7.63 295 P **Pn** **18 16 01.2 +3.1**
comp=Z,0.1nmcomp=Z,56nm,0.6s
VLS Valsamata 7.70 284 P **Pn** **18 16 01.1 +2.1**
NYDR Nydri-Lefkada 7.71 288 P **Pn** **18 16 01.8 +2.8**
EVGI Lefkada island 7.72 287 P **Pn** **18 16 01.9 +2.7**
comp=Z,0.1nmcomp=Z,27nm,1.1s
LKD2 Lefkada island 7.76 289 P **Pn** **18 16 03.4 +3.7**
FSK Fiskardo 7.76 286 P **Pn** **18 16 00.7 +0.8**
HRFI Mount Harif 7.82 147 P **Pn** **18 16 01.1 +0.4**
HRFI Mount Harif 7.82 147 S **Sn** **18 17 24.2 -3.6**
TIRR Tirgusor 7.87 351 **Pn** **18 16 00.9 -0.2**
TIRR **Sn** **18 17 24.2 -4.4**
TIRR Tirgusor 7.87 351 ⇑P **Pn** **18 16 01.7 +0.5**
TIRR Tirgusor 7.87 351 P **Pn** **18 16 01.6 +0.5**
PLVB Pleven 7.89 330 ⇓P **Pn** **18 16 02.4 +0.8**
VTS Vitosha 7.93 320 *eP* **Pn** **18 16 03.1 +0.8**
MBRI Mt Berech 7.98 148 P **Pn** **18 16 03.3 +0.5**
MBRI Mt Berech 7.98 148 S **Sn** **18 17 27.7 -4.0**
NEST Nestorio 8.00 300 P **Pn** **18 16 05.7 +2.6**
comp=Z,0.1nmcomp=Z,22nm,0.6s
EIL Elat 8.10 148 P **Pn** **18 16 05.2 +0.7**
comp=Z,96nm,0.5s,baz=284,slow=2.3,SNR=292
EIL S **Sn** **18 17 30.4 -4.1**
comp=Z,112nm,0.6s,baz=32,slow=11,SNR=9.8
EIL Elat 8.10 148 P **Pn** **18 16 04.6 +0.1**
EIL Elat 8.10 148 S **Sn** **18 17 30.7 -3.9**
NBNS Bani Suef 8.11 172 P **Pn** **18 16 05.6 +1.0**
JURR Jurilovca 8.12 354 ⇑P **Pn** **18 16 05.1 +0.4**
HARR Harsova 8.16 349 ⇓P **Pn** **18 16 06.6 +1.4**
HARR Harsova 8.16 349 P **Pn** **18 16 06.5 +1.4**
IGT Igoumenitsa 8.19 293 P **Pn** **18 16 08.8 +3.1**
MPEP Malo Peshtene 8.24 326 *eP* **Pn** **18 16 06.8 +0.4**
TPGR Topolog 8.26 352 ⇑P **Pn** **18 16 06.7 +0.2**
SEV Sevastopol' 8.31 18 *eP* **Pn** **18 16 09.1 +1.9**
SEV *eS* **Sn** **18 17 35.2 -4.2**
COPA Copaceanca 8.31 335 ⇓P **Pn** **18 16 06.4 -0.9**
YAL Yalta 8.38 20 *eP* **Pn** **18 16 10.7 +2.5**
YAL *eS* **Sn** **18 17 37.6 -3.7**
HBST Basata 8.41 151 P **Pn** **18 16 10.3 +1.6**
HQLS 8.47 149 P **Pn** **18 16 10.0 +0.5**
HQLS 8.47 149 S **Sn** **18 17 39.1 -4.6**
TLCR 8.54 354 ⇓P **Pn** **18 16 10.8 +0.4**
TLCR 8.54 354 P **Pn** **18 16 10.4 +0.4**
MARD Mardin 8.58 83 **Pn** **18 16 11.7 +0.5**
JMOS Jabal al Moall 8.61 149 P **Pn** **18 16 11.7 +0.4**
CFR Carcaliu 8.61 351 ⇑P **Pn** **18 16 11.2 -0.2**
CFR Carcaliu 8.61 351 P **Pn** **18 16 11.1 -0.2**
ALU Alushta 8.63 21 *eP* **Pn** **18 16 11.8 +0.2**
ALU *eS* **Sn** **18 17 41.7 -5.7**
HUMR Humele 8.74 335 ⇑P **Pn** **18 16 13.9 +0.8**
HKAT Jabal Katrina 8.78 157 S **Sn** **18 17 47.1 -4.5**
SIM Simferopol' 8.80 19 *de* **P** **Pn** **18 16 17.1 +3.2**
SIM *eS* **Sn** **18 17 48.4 -3.1**
SIM pmax pmax
comp=Z,37nm,0.3s
SIM smax smax
comp=N,12nm,0.5s
SIM smax smax
comp=E,21nm,0.4s
KOPT Kop Dagi 8.83 65 **Pn** **18 16 13.9 -0.7**
BLKB Belogradchik 8.95 323 ⇑P **Pn** **18 16 16

OZUR		9.94	342	⇑P		Pn	18 16 30.6	+1.0
LOT	Lotru	9.96	333	⇑P		Pn	18 16 30.6	+0.7
ONER	Baraj Valea Uz	10.03	345	⇑P		Pn	18 16 31.6	+0.9
HERR	Herculane	10.03	327	⇓P		Pn	18 16 29.9	-0.9
VASR	Vaslui	10.09	351	⇑P		Pn	18 16 33.3	+1.7
TESR	Tescani	10.14	346	⇑P		Pn	18 16 32.6	+0.3
MILM	Milestii Mici	10.27	355	⇑P		Pn	18 16 35.4	+1.4
MILM	Milestii Mici	10.27	355	P		Pn	18 16 35.3	+1.4
GZR	Gura Zlata	10.29	330	⇑P		Pn	18 16 34.5	0.0
GZR	Gura Zlata	10.29	330	P		Pn	18 16 34.4	0.0
MDB	Medias	10.37	337	⇑P		Pn	18 16 36.5	+1.1
MDB	Medias	10.37	337	P		Pn	18 16 36.4	+1.1
DESA	DESA	10.50	149	P		Pn	18 16 38.3	+1.0
TIP	Timpagrande	10.81	287	Pn		Pn	18 16 40.9	-0.7
TIP	Timpagrande	10.81	287	⇑P		Pn	18 16 40.7	-0.8
BZS	Buzias	10.96	327	⇑P		Pn	18 16 42.8	-0.7
BZS	Buzias	10.96	327	P		Pn	18 16 42.7	-0.7
CEL	Celeste	11.39	282	Pn		Pn	18 16 47.3	-2.1
DRGR		11.49	334	⇑P		Pn	18 16 51.2	+0.4
DRGR		11.49	334	P		Pn	18 16 51.2	+0.4
BURAR	Bucovina Array	11.50	343			Pn	18 16 50.9	+0.1
BURAR	Bucovina Array	11.50	343	⇓P		Pn	18 16 51.7	+0.8
BURAR	Bucovina Array	11.50	343	P		Pn	18 16 51.7	+0.8
BUR08	Bucovina Ar. S	11.53	343			Pn	18 16 51.0	-0.4
CUC	Castrocucco	11.68	291	Pn		Pn	18 16 53.0	-0.4
ACER	Acerenza	11.78	295	Pn		Pn	18 16 54.2	-0.5
SHA1	Shidzhatmaz	11.91	50⇑	*eP*		Pn	18 16 56.9	+0.3
GNI	Garni	12.01	69	LR		LR	18 22 34.5	
	comp=E,58nm,21.5s,baz=288,slow=42							
KIV	Kislovodsk	12.04	49	*eP*		Pn	18 16 58.8	+0.5
KIV				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KVAR	Kislovodsk Arr	12.05	49	P		Pn	18 16 59.7	+1.3
	comp=Z,0.8nm,0.3s,baz=276,slow=18,SNR=1.5							
KBZ	Khabaz	12.05	50	P		Pn	18 16 59.5	+1.2
	comp=Z,1.3nm,0.9s,baz=221,slow=11,SNR=4.1							
KBZ	Khabaz	12.05	50⇑	*eP*		Pn	18 17 00.5	+2.2
KBZ				pmax	pmax			
	comp=Z,6.0nm,1.3s							
VAE	Valguarnera	12.54	278	P		Pn	18 17 06.4	+1.3
	comp=Z,6.4nm,0.4s,baz=150,slow=20,SNR=2.1							
VAE				S		Sn	18 19 15.5	-7.6
	comp=Z,4.3nm,0.4s,baz=46,slow=14,SNR=1.6							
RAFF	Raffo Rosso	12.59	277	Pn		Pn	18 17 03.6	-2.2
PAOL	Paolisi	12.85	294	Pn		Pn	18 17 08.7	-0.6
AKASG	Malin Array Be	14.02	358	P		Pn	18 17 24.3	-0.6
	comp=Z,0.4nm,0.2s,baz=175,slow=12,SNR=2.3							
AKASG				S		Sn	18 19 56.1	-2.7
	comp=Z,2.9nm,0.6s,baz=187,slow=26,SNR=4.1							
AKBB	Malin Array Si	14.02	358⇑	*eP*		Pn	18 17 24.7	-0.2
FDMO	Fiordimonte	14.50	301	Pn		Pn	18 17 29.7	-1.6
LANS	Liptovska Anna	14.66	331	*eP*		P	18 17 36.6	-1.4
LANS	Liptovska Anna	14.66	331	*eP*		P	18 17 36.6	-1.4
MAK	Makhachkala	14.77	60	*eP*		Pn	18 17 33.4	-1.3
MAK				*eS*		Sn	18 20 16.1	-1.0
MAK				pmax	pmax			
	comp=Z,347nm,1.4s							
MAK				MLR	MLR			
	comp=Z,137nm,14.0s							
MODS	Modra-Piesok	14.99	325	*eP*		P	18 17 43.1	+1.5
MODS	Modra-Piesok	14.99	325	*eP*		P	18 17 43.1	+1.5
SMOL	Smolenice	15.02	326	*eP*		P	18 17 43.4	+1.4
ARSA	Arzberg	15.10	319	*eP*		P	18 17 44.6	+1.8
	comp=Z,5.3nm,0.7s							
MAUC	Maruska	15.49	329	*eP*		P	18 17 49.0	+1.8
KRUC	Moravsky	15.89	325	*eP*		P	18 17 52.5	+0.9
VSR	Storozhevoye	15.91	21	*eP*		P	18 17 50.6	-1.2
VSR				pmax	pmax			
	comp=Z,6.0nm,0.9s							
MORC	Moravsky Berou	15.93	329	*eP*		P	18 17 53.5	+1.4
VRAC	Vranov	15.98	326	P		P	18 17 52.5	-0.1
	comp=Z,1.5nm,0.3s,baz=130,slow=12,SNR=4.7							
VRAC	Vranov	15.98	326	*eP*		P	18 17 53.9	+1.3
MOA	Molln	16.14	319	*i* P		P	18 17 56.6	+2.3
	comp=Z,10nm,1.4s							
KBA	Koelnbreinsper	16.19	315	*i* P		P	18 17 57.2	+2.1
	comp=Z,5.7nm,0.9s							
BIOA	Bad Ischl, Aus	16.38	317	*eP*		P	18 17 59.0	+1.9
	comp=Z,4.4nm,0.6s							
VRH	Novokhopyorsk	16.72	26	*eP*		P	18 18 00.4	-0.4
VRH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
CKRC	Cesky Krumlov	16.73	321	*eP*		P	18 18 02.2	+1.3
CKRC	Cesky Krumlov	16.73	321	*eP*		P	18 18 02.2	+1.3
KEST	Kesra	16.77	273	P		P	18 18 03.1	+1.7
	comp=Z,4.5nm,0.8s,baz=114,slow=12,SNR=1.9							
KEST	Kesra	16.77	273	P		Pn	18 18 00.5	+0.2
KEST				IAmb	IAmb		18 18 17.3	
	comp=Z,40nm,1.4s							
GEC2	GERESS Array S	17.05	321	P		P	18 18 04.3	-0.2
GERES	GERESS Array B	17.05	321	P		P	18 18 05.6	+1.0
	comp=Z,3.1nm,0.7s,baz=128,slow=11,SNR=30							
ZVC	Zvikov	17.19	323	*eP*		P	18 18 07.0	+1.0
WTTA	Wattenberg	17.27	313	*i* P		P	18 18 09.0	+1.9
	comp=Z,10.0nm,1.2s							
KHC	Kasperske Hory	17.30	321	P		P	18 18 07.6	+0.4
KHC	Kasperske Hory	17.30	321⇑	*eP*		P	18 18 07.9	+0.7
KHC				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KHC	Kasperske Hory	17.30	321	*eP*		P	18 18 08.4	+1.2
WATA	Walderalm	17.34	314	*i* P		P	18 18 09.5	+1.7
	comp=Z,4.7nm,0.9s							
SQTA	Sankt Quirin	17.50	313	*i* P		P	18 18 11.4	+1.9
	comp=Z,6.9nm,1.3s							
MOTA	Moosalm	17.62	313	*i* P		P	18 18 12.5	+1.5
	comp=Z,11nm,1.0s							
FETA	Feichten	17.69	312	*i* P		P	18 18 14.1	+2.4
	comp=Z,8.1nm,1.2s							
FUORN	Ofenpass-Fuorn	17.78	310	P		P	18 18 15.0	+2.2
RETA	Reutte	17.90	313	*e*Pn		Pn	18 18 15.2	+1.2
	comp=Z,5.8nm,1.3s							
DAVOX	Davos/Dischmat	18.09	310	P		Pn	18 18 17.9	+1.4
	comp=Z,1.7nm,0.8s,baz=149,slow=5.9,SNR=2.5							
TUE	Stuetta	18.29	309	P		Pn	18 18 19.7	+0.8
DAVA	Damuels	18.32	312	*e*Pn		Pn	18 18 20.1	+0.8
	comp=Z,3.7nm,0.6s							
OBN	Obninsk	18.96	12⇑	*i* P		P	18 18 24.4	-0.9
OBN				pmax	pmax			
	comp=Z,5.0nm,1.0s							
CLL	Collm	19.02	326	*i* P		Pn	18 18 28.0	+0.6
CLL				pmax	pmax			
	comp=Z,10.0nm,1.2s							
CLL	Collm	19.02	326	*i* Px		Px	18 18 28.0	
	comp=Z,10.0nm,1.2s							
PABE	Paberze	19.28	349	P		P	18 18 28.6	-0.2
PABE				IAmb	IAmb		18 18 32.0	
	comp=Z,34nm,1.3s							
BNI	Bardonecchia	19.52	303	P		P	18 18 30.8	-1.0
BNI				IAmb	IAmb		18 19 01.4	
	comp=Z,16nm,1.4s							
BNI	Bardonecchia	19.52	303	P		P	18 18 30.8	-1.0
BNI				pmax	pmax			
	comp=Z,16nm,1.5s							
SENIN	Lac Senin/Sane	19.55	307	P		P	18 18 31.6	-0.5
BFO	Black Forest	19.74	313	P		P	18 18 32.9	-1.0
BFO				IAmb	IAmb		18 18 55.8	
	comp=Z,8.3nm,0.8s							
BFO	Black Forest	19.74	313	P		P	18 18 32.9	-1.0
BFO				pmax	pmax			
	comp=Z,8.0nm,0.8s							
BELG	Belogornoye	19.99	33	P		P	18 18 35.8	-0.7
	comp=Z,5.1nm,0.5s,baz=256,slow=2.3,SNR=6.9							
BELG	Belogornoye	19.99	33	*ce*P		Pn	18 18 37.8	-1.0
BELG				pmax	pmax			
	comp=Z,2.0nm,1.0s							
AKTO	Aktyubinsk	24.29	47	P		P	18 19 20.8	+0.1
	comp=Z,8.2nm,0.7s,baz=250,slow=8.2,SNR=25							
	comp=Z,8.2nm,0.7s							
FINES	FINESS Array B	24.91	355	P		P	18 19 26.4	+0.2
	comp=Z,1.7nm,0.5s,baz=157,slow=11,SNR=22							
	comp=Z,1.7nm,0.5s							
FINES	FINESS Array B	24.91	355	P		P	18 19 26.3	+0.1
FINES	FINESS Array B	24.91	355	*i* P		P	18 19 26.3	+0.1
FINES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
FIA1	FINESS Array S	24.91	355	P		P	18 19 26.3	+0.1
KLMR	Klimovskoe	24.92	11	*eP*		P	18 19 24.6	-1.7
KLMR				*e**PP		pP	18 19 41.3	-0.7
KLMR				pmax	pmax			
	comp=Z,18nm,1.3s							
AB31	Akbulak array	25.02	50			P	18 19 27.4	0.0
ABKAR	Akbulak array	25.02	50			P	18 19 27.5	+0.1
UOSS	Minazif	25.22	110	P		P	18 19 30.9	+1.5
KIRV	Kirov	25.31	24⇑	*eP*		P	18 19 29.7	-0.1
HFS	Hagfors	25.71	341	P		P	18 19 35.2	+1.7
	comp=Z,7.1nm,0.8s,baz=134,slow=6.4,SNR=13							
	comp=Z,7.1nm,0.8s							
NC602	NORSAR Array S	26.80	340	P		P	18 19 42.8	-0.5
NC602				IAmb	IAmb		18 19 46.9	
	comp=Z,18nm,1.3s							
ESDC	Sonseca Array	26.84	287	P		P	18 19 45.5	+1.5
	comp=Z,0.7nm,0.8s,baz=89,slow=9.8,SNR=4.3							
	comp=Z,0.7nm,0.8s							
NAO01	NORSAR Array S	27.08	339	P		P	18 19 44.9	-0.9
NB201	NORSAR Array S	27.13	340	P		P	18 19 45.8	-0.6
NB201				IAmb	IAmb		18 19 54.3	
	comp=Z,20nm,1.4s							
NB2	NORSAR Subarra	27.14	340	P		P	18 19 48.7	+2.2
	comp=Z,3.5nm,0.7s,baz=144,slow=10							
NOA	NORSAR Array B	27.14	340	P		P	18 19 45.9	-0.6
	comp=Z,2.6nm,0.8s,baz=153,slow=9.1,SNR=7.4							
	comp=Z,2.6nm,0.8s							
NBO00	NORSAR Array S	27.26	339	P		P	18 19 46.5	-0.9
NBO00				IAmb	IAmb		18 20 07.6	
	comp=Z,9.8nm,1.0s							
ARTI	Arti	27.38	35	P		P	18 19 48.2	-0.4
ARTI				IAmb	IAmb		18 20 14.8	
	comp=Z,5.6nm,0.6s							
ARTI	Arti	27.38	35	P		P	18 19 47.7	-0.9
ARTI				PP		PnPn	18 20 34.4	-1.4
ARTI				S		S	18 24 24.6	+0.8
ARTI				SS		SnSn	18 25 40.8	+2.2
EKA	Eskdalemuir Ar	29.27	320	P		P	18 20 05.1	-0.3
	comp=Z,2.1nm,0.9s,baz=117,slow=11,SNR=4.3							
	comp=Z,2.1nm,0.9s							
KK31	Karatay Array	31.44	66	P		P	18 20 23.3	-1.4
KK31	Karatay Array	31.44	66	P		P	18 20 23.3	-1.4
KK31				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KKAR	Karatay Array	31.44	66	P		P	18 20 23.9	-0.9
KKAR	Karatay Array	31.44	66	P		P	18 20 23.9	-0.9
BORK	Borovoye	32.36	47⇓	*eP*		P	18 20 33.3	+0.6
BORK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
BVAR	Borovoye Array	32.40	47	P		P	18 20 34.0	+1.0
	comp=Z,0.6nm,0.5s,baz=226,slow=9.0,SNR=6.5							
	comp=Z,0.6nm,0.5s							
ARCES	ARCESS Array B	33.00	357	P		P	18 20 38.1	+0.1
	comp=Z,1.7nm,0.5s,baz=170,slow=8.7,SNR=21							
	comp=Z,1.7nm,0.5s							
ARCES	ARCESS Array B	33.00	357	P		P	18 20 38.1	+0.1
KEV	Kevo	33.17	358	P		P	18 20 39.6	+0.1
KEV	Kevo	33.17	358	P		P	18 20 39.6	+0.1
KEV				pmax	pmax			
	comp=Z,41nm,1.5s							
ARSB	Arslanbob	33.40	69	P		P	18 20 42.3	+0.2
ARSB				IAmb	IAmb		18 21 24.1	
	comp=Z,3.4nm,1.2s							
ARSB	Arslanbob	33.40	69	P		P	18 20 42.3	+0.2
ARSB				pmax	pmax			
	comp=Z,3.0nm,1.2s							
AAK	Ala-Archa	34.39	66	P		P	18 20 50.8	+0.1
AAK				IAmb	IAmb		18 20 52.8	
	comp=Z,2.2nm,0.7s							
AAK	Ala-Archa	34.39	66	P		P	18 20 50.8	+0.1
AAK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
TORD	Torodi Ar. Bea	34.58	235	P		P	18 20 54.7	+2.3
	comp=Z,1.7nm,0.4s,baz=37,slow=11,SNR=1.9							
	comp=Z,1.7nm,0.4s							
TORD	Torodi Ar. Bea	34.58	235	P		P	18 20 51.6	-0.7
TORD				IAmb	IAmb		18 21 11.1	
	comp=Z,8.5nm,1.4s							
KURBB	Kurchatov Arra	37.04	52	P		P	18 21 13.5	+0.4
	comp=Z,1.7nm,0.4s,baz=276,slow=8.9,SNR=17							
	comp=Z,1.7nm,0.4s							
KURK	Kurchatov	37.10	52	P		P	18 21 12.8	-0.7
KURK				IAmb	IAmb		18 21 37.3	
	comp=Z,2.8nm,0.6s							
KURK	Kurchatov	37.10	52⇑	*eP*		P	18 21 13.7	+0.2
KURK				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MAKZ	Makanchi	39.37	58	P		P	18 21 31.8	-0.9
MAKZ				IAmb	IAmb		18 21 34.6	
	comp=Z,2.9nm,0.6s							
MAKZ	Makanchi	39.37	58	P		P	18 21 31.8	-0.9
MAKZ				pmax	pmax			
	comp=Z,3.0nm,0.6s							
MK31	Makanchi Array	39.59	58	P		P	18 21 35.0	+0.5
MK31				IAmb	IAmb		18 21 36.2	
	comp=Z,3.3nm,0.6s							
MK31	Makanchi Array	39.59	58	*c* *i*P		P	18 21 34.9	+0.4
MKAR	Makanchi Array	39.59	58	P		P	18 21 35.0	+0.5
	comp=Z,4.1nm,0.5s,baz=276,slow=7.3,SNR=52							
MKAR				ScP		ScP	18 27 24.0	+0.3
	comp=Z,0.1nm,0.4s,baz=278,slow=2.4,SNR=1.1							
	comp=Z,4.1nm,0.5s							
MKAR	Makanchi Array	39.59	58	P		P	18 21 34.9	+0.4
ZALV	Zalesovo Beam	41.05	47	P		P	18 21 46.2	-0.2
	comp=Z,1.6nm,0.4s,baz=261,slow=9.4,SNR=9.1							
	comp=Z,1.6nm,0.4s							
SPITS	Spitsbergen Ar	42.00	356	P		P	18 21 54.4	+0.4
	comp=Z,1.3nm,0.5s,baz=140,slow=11,SNR=1.0							
	comp=Z,1.3nm,0.5s							
DGZ	Jazzator, Alta	42.78	54⇓	*eP*		P	18 22 01.5	+0.7
DGZ				pmax	pmax			
	comp=Z,9.0nm,2.1s							
DBIC	Dimbokro	43.68	235	P		P	18 22 08.8	+0.5
	comp=Z,1.4nm,0.7s,baz=0.0,slow=3.0,SNR=2.0							
	comp=Z,1.4nm,0.7s							
DBIC	Dimbokro	43.68	235	P		P	18 22 08.8	+0.5
DBIC				pmax	pmax			
	comp=Z,11nm,1.2s							
EVN	Everest	48.13	83	P		P	18 22 45.0	+1.1
GTA	Gaotai	53.71	64	*eP*		P	18 23 25.3	+0.2
GTA				pmax	pmax			
	comp=Z,5.0nm,1.2s							
PALK	Pallekele	54.50	110	P		P	18 23 32.3	+1.3
PALK	Pallekele	54.50	110	P		P	18 23 32.3	+1.3
PALK				pmax	pmax			
	comp=Z,6.0nm,1.0s							
SONM	Songino Array	55.41	53	P		P	18 23 35.3	-2.0
	comp=Z,1.6nm,0.4s,baz=279,slow=7.2,SNR=2.2							
FRB	Frobisher Bay	61.37	330	LR		LR	18 52 06.6	
	comp=Z,33nm,19.9s,baz=315,slow=37							
HHC	Hu-ho-hao-te	61.45	59	*eP*		P	18 24 19.8	+0.3
HHC				pmax	pmax			
	comp=Z,8.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,63nm,4.2s							
HHC				LR	LR			
	comp=N,250nm,12.3s							
HHC				LR	LR			
	comp=E,210nm,13.5s							
HHC				LR	LR			
	comp=Z,270nm,13.9s							
CHTO	Chiang Mai	62.27	86	P		P	18 24 25.3	+0.1
CHTO				IAmb	IAmb		18 24 26.2	
	comp=Z,2.0nm,0.7s							
CHTO	Chiang Mai	62.27	86	P		P	18 24 25.3	+0.1
CHTO				pmax	pmax			
	comp=Z,2.0nm,0.7s							
CM31	Chiang Mai Arr	62.46	87	P		P	18 24 25.2	-1.2
CMAR	Chiang Mai Arr	62.46	87	P		P	18 24 26.9	+0.5
	comp=Z,1.6nm,0.3s,baz=298,slow=8.1,SNR=20							
	comp=Z,1.6nm,0.3s							
CMAR	Chiang Mai Arr	62.46	87	P		P	18 24 26.7	+0.3
KULM	Kulim	71.29	97	P		P	18 25 22.5	-0.1
C36M	Paulatuk	72.57	351	P		P	18 25 29.6	+0.3
C36M				IAmb	IAmb		18 26 08.1	
	comp=Z,5.7nm,1.4s							
KSAR	Wonju Array Be	74.14	55	P		P	18 25 39.3	+0.2
KSAR	Wonju Array Be	74.14	55	P		P	18 25 39.3	+0.2
KSRS	Korea Array	74.16	55	P		P	18 25 39.4	+0.1
	comp=Z,2.5nm,0.6s,baz=305,slow=4.1,SNR=15							
	comp=Z,2.5nm,0.6s							
ASAR	Alice Springs	114.42	102	PKiKP		PKPdf	18 32 42.3	-0.1
	comp=Z,0.2nm,0.8s,baz=328,slow=2.2,SNR=4.2							

AFAD ***16*** *18:19:46.3,38.41N×45.19E,h7km±1km,ML2.7*
AZER ***16*** *18:19:47.7,38.62N×45.00E,h4km,ml3.0*
TEH ***16*** *18:19:50.1,38.37N×45.21E,h8km±65km*

ISC 16 18:19:47.2±1.1,38.50N±0.02×45.12E±0.02,h6km±10km,
n43,σ0 99/69,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	Shabestar	0.45	119	Pg	Pb	18 19 56.9	-0.8
NAX	Nakhchivan	0.73	24	P	Pn	18 20 03.2	-1.0
NAX				S	Sn	18 20 14.5	-1.3
ORD	Ordubad	0.81	58	P	Pn	18 20 04.6	-0.6
ORD				S	Sn	18 20 16.9	-0.7
ITBZ	Tabriz	0.85	108	Pg	Pb	18 20 04.0	-0.6
ITBZ				Sg	Sb	18 20 16.8	+0.6
OZAP	Van, Ozalp-Mer	0.90	281	P	Pb	18 20 05.2	-0.1
OZAP				S	Sg	18 20 16.1	0.0
SBZ	Shahbuz	0.96	21	P	Pn	18 20 06.9	-0.4
SBZ				S	Sn	18 20 21.5	+0.1
IAZR	Azarshahr	1.07	140	Pg	Pn	18 20 08.3	-0.6
YOVA	Hakkari_Yksek	1.12	216	P	Pg	18 20 08.2	-0.5
HYR	Heyderabad	1.23	350	P	Pg	18 20 10.9	+0.1
HYR				S	Sn	18 20 28.7	+0.6
VMUR	Van-Muradiye	1.30	292	P	Pg	18 20 12.1	0.0
TVAN	Van	1.34	272	P	Pg	18 20 13.1	+0.1
TVAN				S	Sn	18 20 33.2	+2.3
TVAN				*i* IAML		18 20 37.0	
	comp=N,115nm,0.7s						
HAKT	HAKKARI	1.46	230	P	Pn	18 20 13.8	-0.5
HAKT				S	Sg	18 20 34.5	+0.5
HAKT	HAKKARI	1.46	230	Pg	Pb	18 20 14.2	-0.7
HAKT				Sg	Sg	18 20 36.0	+1.9
IHRS	Heris	1.52	96	Pg	Pg	18 20 17.1	+0.6
DYDN	Diyadin	1.52	314	P	Pg	18 20 17.1	+0.6
MAHB	Mahabad	1.79	165	Pg	Pg	18 20 21.1	-0.5
ADCV	BITLIS_Adilcev	1.90	280	P	Pg	18 20 22.9	-0.8
QRD	Qoradiz	1.97	60	Pn	Sg	18 20 24.7	-0.2
QRD				Sn	Sg	18 20 52.2	+1.8
KOTA	Agri, Merkez-K	1.97	312	P	Pg	18 20 25.0	-0.1
DORK	Agr/Tutak/Do	2.03	297	P	Pb	18 20 25.0	+0.5
IHSH	Hashtrud	2.08	124	Pn	Pb	18 20 25.7	+0.2
PERV	Siirt/Pervari-	2.10	256	P	Pb	18 20 25.7	-0.1
ISRB	Sarab	2.12	108	Pn	Pb	18 20 26.4	+0.3
GRMI	Germi	2.20	81	Pn	Pg	18 20 28.5	-0.8
AGDM	Agdam	2.23	43	Pn	Pg	18 20 29.2	-0.7
AGDM				Sn	Sg	18 20 59.9	+1.1
BLQ	Beylaqan	2.26	57	Pn	Pb	18 20 29.1	+0.8
BLQ				Sn	Sg	18 21 01.1	+1.4
GDB	GEDABAY	2.27	12	Pn	Pb	18 20 29.4	+0.7
GDB				Sn	Sg	18 20 59.9	-0.3
GANJ	Ganja	2.34	23	Pn	Pb	18 20 29.4	-0.3
GANJ				Sn	Sg	18 21 02.6	+0.3
EATA	Eleskirt	2.45	305	P	Pg	18 20 33.2	-1.0
EAK	Akyaka	2.48	332	P	Pg	18 20 33.8	-0.8
YRD	Yardimli	2.48	79	Pn	Pb	18 20 32.4	+0.2
YRD				Sn	Sg	18 21 07.8	+1.0
LRK	Lerik	2.53	86	Pn	Pg	18 20 34.8	-1.0
LRK				Sn	Sg	18 21 09.4	+0.9
QZX	Qazax, Azerbai	2.56	4	Pg	Pb	18 20 33.2	-0.4
QZX				Sg	Sb	18 21 06.8	+1.5
SRTM	Siirt_Merkez	2.57	260	P	Pb	18 20 32.1	-1.6
GLBA	Clilabad	2.66	73	Pg	Pg	18 20 37.2	-1.0
GLBA				Sg	Sg	18 21 15.2	+2.5
LKRN	Lenkeran, Azer	2.88	85	Pg	Pg	18 20 40.9	-1.4
LKRN				Sg	Sg	18 21 20.8	+1.2
ASTR	Astara	2.88	88	Pg	Pg	18 20 41.7	-0.8
ASTR				Sg	Sg	18 21 20.5	+0.8
QBL	Gabala	3.22	40	Pg	Pb	18 20 45.5	+0.7
QBL				Sg	Sg	18 21 30.6	0.0
IML	Ismayilli	3.29	45	Pg	Pb	18 20 46.8	+0.8
IML				Sg	Sg	18 21 32.4	-0.5
ZKTA	Zakatala	3.34	20	Pg	Pb	18 20 47.1	+0.2
ZKTA				Sg	Sg	18 21 32.2	-2.2
PQL	Pirkuli	3.52	48	Pg	Pb	18 20 51.3	+1.2
PQL				Sg	Sg	18 21 39.4	-1.0
XNQ	Khinaliq	3.54	40	Pg	Pb	18 20 51.6	+1.2
XNQ				Sg	Sg	18 21 41.3	+0.3
SIZA	Siyzn	3.89	47	Pg	Pb	18 20 56.9	+0.7
SIZA				Sg	Sg	18 21 50.0	-2.1

BJI ***16*** *18:32:38.4,28.38N×130.44E,h31km,mB4.6/7,mb4.3/29, Ms4.3/24,Ms7 4.1/22*
NEIC ***16*** *18:32:39.8±1.6,28.57N±0.05×130.26E±0.07,h25km±5km, mb4.8/67,Error ellipse: s-maj=9.7km s-min=6.5km az=130.0*
NIED ***16*** *18:32:44.1,28.80N×129.91E,h28km,MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-2.46; Mθθ5.74; Mφφ-3.28; Mrθ-2.57; Mθφ-2.01; Mφr7.95; Fault plane solution: Mo9.76000×10¹⁵ NP1: φs250.00000°,δs33.00000°,λ-165.00000°. NP2: φs147.00000°,δs82.00000°,λ-58.00000°.*
JMA ***16*** *18:32:44.1±0.2,28.8N±0.7×13.0E±°,h28km,MD4.6/27, MV4.6/27,NEAR AMAMI-OSHIMA ISLAND*
JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.
IDC ***16*** *18:32:45.7±1.1,28.86N×129.90E,h48km±10km,mb3

JJT3 Tamagusuku3 3.33 221 A A 18 33 33.8
comp=N,19nm,5.2s,comp=E,17nm,3.5s
JAGN Aguni-jima 3.37 232 *e*P **Pn** **18 33 33.7 +2.0**
JAGN Aguni-jima 3.37 232 A A 18 33 33.7
comp=N,6.0nm,3.2s,comp=E,6.0nm,2.3s
JKE Kume jima 2 3.85 233 P **Pn** **18 33 40.1 +1.7**
JNU Nakatsue 4.46 7 P **Pn** **18 33 50.2 +3.5**
comp=E,9.5nm,0.3s,baz=219,slow=8.4,SNR=119
JNU S **Sn** **18 34 39.8 +2.1**
comp=E,127nm,0.9s,baz=247,slow=13,SNR=1.7
JNU LR LR 18 35 50.4
comp=E,749nm,19.2s,baz=190,slow=43
comp=E,124nm,0.8s
JNU Nakatsue 4.46 7 **Pn** **18 33 49.0 +2.3**
JNU Sn **Sn** **18 34 39.0 +1.3**
JMN Monobe 5.92 31 **Pn** **18 34 07.6 +0.8**
JMN Sn **Sn** **18 35 13.1 -0.7**
YOJ Yonaguni jima 7.71 239 Pn **Pn** **18 34 30.4 -0.9**
TJN Taejon 8.04 343 Pn **Pn** **18 34 37.1 +1.2**
SSE Sheshan 8.20 289 P **Pn** **18 34 39.3 +1.2**
SSE S **Sn** **18 36 14.4 +4.5**
SSE pmax pmax
comp=E,9.0nm,0.9s
SSE pmax pmax
comp=E,37nm,4.7s
SSE LR LR
comp=E,420nm,15.7s
SSE LR LR
comp=E,350nm,17.6s
TATO Taipei 8.63 247 Pn **Pn** **18 34 43.4 -0.6**
INU Inuyama 8.79 39 **Pn** **18 34 46.6 +0.4**
YHNB Yeheng 8.87 245 **Pn** **18 34 47.1 -0.2**
NACB Ninganchiao 8.94 242 **Pn** **18 34 47.2 -1.1**
KSAR Wonju Array Be 8.95 348 **Pn** **18 34 49.7 +1.4**
KSRS Korea Array 8.95 348 P Pn 18 34 53.9 +5.5
comp=E,5.7nm,0.9s,baz=163,slow=14,SNR=20
KS19 Wonju Array Si 9.01 348 **Pn** **18 34 50.5 +1.3**
JSG Sagara 9.03 47 Pn **Pn** **18 34 49.1 -0.4**
JGF Kuroka 9.17 39 **Pn** **18 34 51.3 -0.1**
JHJ Hachijo jima 2 9.32 59 P Pn 18 34 58.7 +5.2
comp=E,10nm,0.3s,baz=260,slow=24,SNR=0.9
JHJ LR LR 18 38 21.6
comp=E,960nm,21.0s,baz=91,slow=35
comp=E,33nm,0.4s
YULB Yu-li 9.60 239 **Pn** **18 34 54.6 -2.7**
SSLB Suanglung 9.64 242 **Pn** **18 34 55.0 -2.9**
TWG Pinlang 10.10 237 Pn **Pn** **18 35 01.4 -2.9**
TPUB Ta-pu 10.16 240 **Pn** **18 35 03.8 -1.2**
MAJO Matsushiro 10.32 39 **Pn** **18 35 05.7 -1.6**
MJAR Matsushiro Arr 10.32 39 P **Pn** **18 35 10.3 +3.1**
comp=E,0.2nm,0.3s,baz=233,slow=14,SNR=24
MJAR LR LR 18 39 16.1
comp=E,390nm,21.5s,baz=218,slow=38
comp=E,1.3nm,0.4s
MJAR Matsushiro Arr 10.32 39 **Pn** **18 35 06.3 -0.9**
MJB9 Matsu-Tunnel 10.32 39 **Pn** **18 35 05.8 -1.5**
JCJ Chichijima 10.70 96 P Pn 18 35 09.5 -2.9
comp=E,56nm,0.4s,baz=273,slow=23,SNR=7.2
JCJ LR LR 18 38 53.6
comp=E,474nm,19.0s,baz=86,slow=34
JCJ Chichijima 10.70 96 Pn **Pn** **18 35 10.4 -2.0**
JMM Marumori 12.72 41 Pn **Pn** **18 35 38.5 -1.5**
TIA Tai'an 13.36 307 P **Pn** **18 35 46.6 -2.1**
TIA pmax pmax
comp=Z,6.0nm,0.4s
TIA LR LR
comp=N,270nm,15.1s
TIA LR LR
comp=E,590nm,14.4s
TIA LR LR
comp=Z,690nm,13.7s
USRK Ussuriysk Ar. 15.55 5 P **Pn** **18 36 19.7 +1.6**
comp=Z,0.1nm,0.3s,baz=139,slow=6.8,SNR=2.0
comp=Z,1.0nm,0.6s
CN2 Changchun 15.56 347 *e*P **P** **18 36 25.3 +2.9**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 LR LR
comp=Z,600nm,11.0s
CN2 LR LR
comp=Z,700nm,11.0s
CN2 LR LR
comp=Z,600nm,13.0s
ENH Enshi 18.12 280 **Pn** **18 36 48.4 -2.3**
ASAJ Asahikawa 18.30 29 P **P** **18 36 52.6 -0.2**
comp=Z,15nm,0.9s,baz=240,slow=14,SNR=2.9
ASAJ LR LR 18 44 16.9
comp=Z,393nm,19.9s,baz=228,slow=38
JKA Kamikawa-asahi 18.30 29 **P** **18 36 50.5 -2.3**
JKA IAmb IAmb 18 36 54.1
comp=Z,197nm,1.9s
XLT XiLinHaoTe 18.94 327 *e*P **Pn** **18 37 03.0 +2.4**
XLT pP sP 18 37 12.1 +1.9
XLT S **S** **18 40 43.0 +10**
XLT pmax pmax
comp=Z,15nm,1.5s
XLT LR LR
comp=Z,310nm,5.6s
XLT LR LR
comp=Z,260nm,16.7s
XAN Xi'an 18.95 292 ⇑P **Pn** **18 37 04.0 +3.3**
XAN pP pP 18 37 08.0 +1.0
XAN pmax pmax
comp=Z,10.0nm,1.2s
HHC Hu-ho-hao-te 19.50 313 *e*P **Pn** **18 37 11.0 +3.6**
HHC pmax pmax
comp=Z,9.0nm,0.6s
HHC pmax pmax
comp=Z,85nm,4.2s
HHC LR LR
comp=Z,150nm,8.8s
HHC LR LR
comp=Z,140nm,8.8s
HHC LR LR
comp=Z,170nm,9.8s
GUMO Guam 20.27 135 LR LR 18 44 23.5
comp=Z,52nm,18.3s,baz=267,slow=34
QIZ Qiongzhong 20.94 247 P **P** **18 37 20.3 -1.5**
QIZ S **S** **18 41 14.1 +0.2**
QIZ LR LR
comp=Z,360nm,15.0s
QIZ LR LR
comp=Z,340nm,15.2s
QIZ LR LR
comp=Z,630nm,23.1s
DAV Davao City (W) 21.95 192 LR LR 18 47 37.8
comp=Z,199nm,18.3s,baz=26,slow=40
HILR Hailar Array B 22.32 342 P **P** **18 37 36.4 +0.1**
comp=Z,0.5nm,0.3s,baz=150,slow=12,SNR=1.7
comp=Z,0.5nm,0.3s
LZH Lanzhou 23.42 295 *e*P P 18 37 57.8 +10
LZH pP sP 18 38 05.6 +7.1
LZH pmax pmax
comp=Z,22nm,1.3s
LZH LR LR
comp=N,360nm,18.9s
LZH LR LR
comp=E,290nm,19.5s
LZH LR LR
comp=Z,420nm,21.5s
LZDM Lanzhou Array 23.51 295 P **P** **18 37 49.0 -0.1**
comp=Z,2.1nm,0.3s,baz=140,slow=9.2,SNR=3.8
LZDM LR LR 18 48 04.9
comp=Z,249nm,19.9s,baz=30,slow=40
comp=Z,2.1nm,0.3s
SLVN Son La 24.91 259 **P** **18 38 00.1 -1.8**
ULN Ulaanbaatar 26.24 323 **P** **18 38 13.7 -0.1**
SONM Songino Array 26.57 323 P **P** **18 38 16.8 0.0**
comp=Z,1.8nm,0.8s,baz=144,slow=12,SNR=5.4
SONM LR LR 18 49 38.8
comp=Z,286nm,20.1s,baz=92,slow=39
comp=Z,1.8nm,0.8s
GTA Gaotai 27.25 301 *e*P **P** **18 38 23.6 +0.6**
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA LR LR
comp=Z,370nm,13.8s
GTA LR LR
comp=Z,390nm,15.3s
GTA LR LR
comp=Z,630nm,13.8s
CHTO Chiang Mai 30.19 258 P **P** **18 38 47.8 -1.4**
CM31 Chiang Mai Arr 30.34 257 P **P** **18 38 48.4 -2.0**
CMAR Chiang Mai Arr 30.34 257 P **P** **18 38 51.5 +1.0**
comp=Z,1.8nm,0.8s,baz=67,slow=7.7,SNR=14
comp=Z,1.8nm,0.8s

CMAR Chiang Mai Arr 30.34 257 P **P** **18 38 48.1 -2.4**
PETK Petropavlovsk- 31.68 32 P **P** **18 39 04.6 +2.6**
comp=Z,6.8nm,1.0s,baz=238,slow=4.9,SNR=3.1
PETK LR LR 18 51 54.1
comp=Z,218nm,21.9s,baz=231,slow=36
comp=Z,6.8nm,1.0s
PETK Petropavlovsk- 31.68 32 P **P** **18 39 01.5 -0.4**
JAY Jayapura 32.62 160 LR LR 18 50 40.0
comp=Z,188nm,19.3s,baz=316,slow=33
MA2 Magadan 33.92 19 LR LR 18 54 27.9
comp=Z,145nm,19.8s,baz=194,slow=38
H11N2 WAKE ISLAND Hy 34.51 97 T T 19 16 24.9
baz=290,slow=75,SNR=10
H11N1 WAKE ISLAND Hy 34.51 97 T T 19 16 22.3
baz=290,slow=75,SNR=9.7
H11N3 WAKE ISLAND Hy 34.52 97 T T 19 16 23.1
baz=290,slow=75,SNR=9.2
H11S3 WAKE ISLAND Hy 34.80 99 T T 19 17 01.0
baz=290,slow=75,SNR=9.2
H11S1 WAKE ISLAND Hy 34.81 99 T T 19 16 58.0
baz=290,slow=75,SNR=6.2
H11S2 WAKE ISLAND Hy 34.82 99 T T 19 17 02.5
baz=290,slow=75,SNR=7.3
KAPI Kappang 34.99 198 LR LR 18 53 15.1
comp=Z,53nm,21.6s,baz=23,slow=35
BRDH Bariadhala 35.17 269 LR LR 18 54 11.7
comp=Z,82nm,18.3s,baz=170,slow=37
IPM Ipoh 36.71 234 P **P** **18 39 45.8 -0.1**
WMQ Urumqi 37.04 306 *e*P **P** **18 39 51.4 +2.8**
WMQ LR LR
comp=Z,370nm,18.9s
WMQ LR LR
comp=Z,200nm,16.7s
SEY Seymchan 37.16 17 LR LR 18 55 08.1
comp=Z,177nm,21.5s,baz=215,slow=36
SHEM Shemya Is, Ala 40.16 41 LR LR 18 57 29.8
comp=Z,52nm,21.8s,baz=290,slow=37
PMG Port Moresby 41.25 154 LR LR 18 55 35.9
comp=Z,184nm,21.4s,baz=337,slow=33
MKAR Makanchi Array 41.28 309 P **P** **18 40 24.0 +0.1**
comp=Z,0.8nm,0.6s,baz=94,slow=10.0,SNR=7.8
MKAR PcP **PcP** **18 42 23.5 +1.3**
comp=Z,1.0nm,0.8s,baz=90,slow=3.6,SNR=3.2
MKAR LR LR 18 59 13.7
comp=Z,151nm,19.6s,baz=94,slow=39
comp=Z,0.8nm,0.6s
MKAR Makanchi Array 41.28 309 P **P** **18 40 23.1 -0.8**
MKAR PcP **PcP** **18 42 22.1 -0.2**
ZALV Zalesovo Beam 41.42 320 P **P** **18 40 24.9 0.0**
comp=Z,1.7nm,0.6s,baz=100,slow=8.8,SNR=8.5
ZALV PcP **PcP** **18 42 23.2 +0.8**
comp=Z,0.3nm,0.3s,baz=48,slow=2.1,SNR=3.8
ZALV LR LR 18 58 39.4
comp=Z,95nm,19.2s,baz=70,slow=38
comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam 41.42 320 P **P** **18 40 24.1 -0.8**
ZALV PcP **PcP** **18 42 20.0 -2.5**
TARG Taragay, Kyrgy 44.13 302 P **P** **18 40 46.9 -0.6**
KURK Kurchatov 44.31 315 P **P** **18 40 47.7 -0.6**
KURK PP **PP** **18 42 27.6 -4.2**
KURBB Kurchatov Arra 44.35 314 P **P** **18 40 48.5 -0.1**
comp=Z,1.1nm,0.7s,baz=101,slow=8.9,SNR=10
KURBB PcP **PP** **18 42 31.6 -0.6**
comp=Z,0.6nm,0.9s,baz=96,slow=3.9,SNR=2.1
KURBB LR LR 19 00 53.1
comp=Z,278nm,18.9s,baz=154,slow=38
comp=Z,1.1nm,0.7s
AAK Ala-Archa 46.58 303 LR LR 19 03 10.9
comp=Z,139nm,19.8s,baz=94,slow=40
NIL Nilore 48.48 291 P **P** **18 41 20.1 -1.3**
NIL IAmb IAmb 18 41 31.4
comp=Z,11nm,0.8s
BVAR Borovoye Array 49.66 317 P **P** **18 41 30.6 +0.5**
comp=Z,2.3nm,0.5s,baz=85,slow=9.1,SNR=15
BVAR PcP **PcP** **18 42 52.2 +1.1**
comp=Z,1.9nm,0.7s,baz=121,slow=3.6,SNR=3.0
BVAR LR LR 19 04 13.2
comp=Z,184nm,19.7s,baz=102,slow=38
comp=Z,2.3nm,0.5s
SPIA Saint Paul Isl 49.97 38 P **P** **18 41 29.5 -2.9**
baz=261
NIKH Nikolski High 50.32 43 P **P** **18 41 31.6 -3.5**
baz=266
GAMB Gambell 50.63 29 P **P** **18 41 34.5 -2.7**
baz=266
CHGR Chuyangaron 50.96 298 P **P** **18 41 38.6 -1.6**
PALK Pallekele 51.25 255 LR LR 19 04 33.4
comp=Z,162nm,20.9s,baz=64,slow=37
UNV Unalaska Valle 51.77 42 P **P** **18 41 42.1 -3.8**
baz=267
M11K Mekoryuk 52.51 34 P P 18 41 46.9 -4.4
baz=262
TNA Tin City 52.65 27 P **P** **18 41 49.3 -3.0**
baz=257
F14K Arctic Creek 53.28 28 P **P** **18 41 53.7 -3.3**
baz=258
K13K Kusilvak Mount 53.45 32 P **P** **18 41 55.8 -2.4**
baz=263
FALS False Pass 53.61 41 P **P** **18 41 56.8 -2.7**
baz=269
M13K Dall Lake 53.92 34 P **P** **18 41 59.4 -2.3**
baz=265
F15K North Star Dit 54.01 28 P **P** **18 42 00.4 -2.0**
baz=260
J14K Nanvaranak Lak 54.05 31 P **P** **18 42 00.3 -2.4**
baz=263
G15K Niukluk 54.15 29 P **P** **18 42 01.3 -2.0**
baz=261
C16K Lisburne Hills 54.24 24 P **P** **18 42 02.4 -1.6**
baz=257
L14K Kuka Creek 54.32 33 P **P** **18 42 03.3 -1.3**
baz=265
M14K Bethel 54.63 34 P **P** **18 42 04.1 -2.7**
baz=266
N14K Kuskokwak Cree 54.71 35 P **P** **18 42 05.7 -1.7**
baz=267
H16K Elim 54.86 29 P **P** **18 42 06.0 -2.4**
baz=263
O14K Tigyukauivet M 54.90 36 P **P** **18 42 06.1 -2.7**
baz=268
G16K Koyuk River 54.91 28 P **P** **18 42 06.4 -2.4**
baz=262
L15K Ungalak Mounta 54.92 33 P **P** **18 42 06.0 -2.9**
baz=266
K15K Wolf Creek Mou 54.94 32 P P 18 42 04.8 -4.4
baz=265
D17K Noatak River 54.97 25 P **P** **18 42 08.6 -0.6**
baz=260
C17K DeLong Mountai 55.07 24 P **P** **18 42 07.8 -2.2**
baz=259
RDOG Red Dog Mine 55.09 25 P **P** **18 42 08.4 -1.8**
baz=260
M15K Kasigluk River 55.25 34 P **P** **18 42 08.5 -2.9**
baz=267
SDPT Sand Point 55.29 41 P **P** **18 42 08.2 -3.5**
baz=271
E17K Hotham Inlet 55.35 26 P **P** **18 42 08.6 -3.4**
baz=262
J16K Anvik River 55.45 31 P **P** **18 42 10.8 -2.0**
baz=265
I17K Unalakleet 55.45 30 P **P** **18 42 12.0 -0.8**
baz=265
F17K Baldwin Pennin 55.49 27 P **P** **18 42 12.3 -0.7**
baz=263
N15K Kwethluk River 55.52 35 P **P** **18 42 12.0 -1.4**
baz=268
G17K Kiwalik Mounta 55.63 28 P **P** **18 42 12.8 -1.2**
baz=264
O15K Ungalikthiuk R 55.63 36 P **P** **18 42 12.7 -1.4**
baz=269
B18K Kokolik River 55.71 23 P **P** **18 42 12.9 -1.7**
baz=260
S14K Fog Glacier 55.79 39 P **P** **18 42 11.8 -3.6**
baz=271
C18K Utukok River 55.81 24 P **P** **18 42 14.3 -1.1**
baz=261
CHNA Chernabura Isl 55.82 41 P **P** **18 42 12.4 -3.2**
baz=272
E18K Tukpahlearik C 55.87 26 P **P** **18 42 13.9 -1.8**
baz=263
L16K Owhat River 55.88 33 P **P** **18 42 14.9 -0.9**
baz=268
H17K Granite Mounta 55.88 29 P P 18 42 11.2 -4.7
baz=265
M16K Timber Creek 56.10 34 P **P** **18 42 15.0 -2.5**
baz=268
J17K VABM Dome 56.14 31 P P 18 42 13.4 -4.3
baz=267

F18K Selawik 56.14 27 P **P** **18 42 15.1 -2.6**
baz=264
N16K Nishlik Lake 56.19 34 P **P** **18 42 14.4 -3.8**
baz=269
AB31 Akbulak array 56.29 312 **P** **18 42 18.7 -0.3**
ABKAR Akbulak array 56.29 312 **P** **18 42 18.7 -0.3**
L17K Donlin 56.45 32 P **P** **18 42 16.7 -3.3**
baz=268
C19K Lookout Ridge 56.45 24 P **P** **18 42 17.7 -2.2**
baz=262
K17K Iditarod 56.46 32 P **P** **18 42 18.0 -2.1**
baz=268
G18K Tagagawik 56.48 28 P **P** **18 42 19.8 -0.4**
baz=265
O16K Kokwok River B 56.52 35 P **P** **18 42 18.7 -1.8**
baz=270
ARTI Arti 56.69 321 LR LR 19 11 02.3
comp=Z,71nm,18.1s,baz=82,slow=41
M17K Holitna River 56.85 33 P **P** **18 42 23.3 +0.5**
baz=270
D19K Kuna River 56.92 25 P **P** **18 42 23.7 +0.4**
baz=264
N17K Nushagak Hills 56.97 34 P **P** **18 42 23.0 -0.7**
baz=270
O17K Koliganek Bris 57.03 35 P **P** **18 42 22.3 -1.8**
baz=271
G19K Purcell Mounta 57.14 28 P **P** **18 42 22.1 -2.7**
baz=267
E19K Redstone River 57.16 26 IAmb IAmb 18 42 39.9
comp=Z,8.9nm,0.9s
E19K Redstone River 57.16 26 P **P** **18 42 23.5 -1.5**
baz=266
GCSA Galena City Sc 57.16 29 P **P** **18 42 23.0 -2.0**
baz=268
J18K Innoko River 57.20 31 P **P** **18 42 22.8 -2.5**
baz=269
L18K Granite Mounta 57.20 32 P P 18 42 20.5 -4.8
baz=270
H19K Roundabout Mou 57.37 28 P **P** **18 42 23.7 -2.7**
baz=268
P17K Kvichak River 57.38 36 P **P** **18 42 25.1 -1.5**
baz=272
AKTO Aktyubinsk 57.39 314 LR LR 19 08 37.9
comp=Z,188nm,20.4s,baz=336,slow=38
B20K Meade River 57.41 23 P **P** **18 42 24.5 -2.1**
baz=264
D20K Etivluk River 57.49 24 **P** **18 42 27.5 +0.3**
D20K Etivluk River 57.49 24 P **P** **18 42 25.8 -1.5**
baz=266
R17L Mt. Peulik Vol 57.49 38 P **P** **18 42 24.3 -3.1**
baz=273
N18K Kilae Creek 57.61 34 P **P** **18 42 25.6 -2.6**
baz=271
E20K Nigu River 57.61 25 P **P** **18 42 27.0 -1.2**
baz=266
M18K Stony River 57.62 33 P P **P** **18 42 28.0 -0.2**
baz=271
J19K Poorman 57.70 30 IAmb IAmb 18 42 32.9
comp=Z,9.4nm,0.8s
J19K Poorman 57.70 30 P **P** **18 42 28.2 -0.5**
baz=269
Q17K Contact Creek 57.71 37 P **P** **18 42 27.0 -2.1**
baz=273
A21K Barrow 57.72 21 P **P** **18 42 28.2 -0.5**
baz=264
F20K Avaraart Lake 57.73 26 P **P** **18 42 28.5 -0.3**
baz=267
O18K Koktuh Hills 57.98 35 P **P** **18 42 30.9 0.0**
baz=272
P18K Big Mountain, 57.99 36 P **P** **18 42 28.6 -2.3**
baz=273
H20K Anotleneega Mo 58.03 28 P **P** **18 42 31.8 +0.7**
baz=269
L19K White Mountain 58.06 32 P **P** **18 42 29.6 -1.8**
baz=271
Q18K Katmai Hardscr 58.15 36 P **P** **18 42 30.5 -1.7**
baz=273
C21K Knifeblade Rid 58.17 24 P **P** **18 42 29.0 -3.0**
baz=267
I20K Naaghedeneel 58.20 29 P **P** **18 42 29.1 -3.1**
baz=270
A22K Sinclair Lake 58.22 22 P P 18 42 26.3 -5.9
baz=266
B21K Ikpikpuk River 58.26 23 P P 18 42 28.1 -4.5
baz=267
M19K Big River Lodg 58.29 33 P P 18 42 28.9 -4.1
baz=272
N19K Bonanza Creek 58.29 34 P P 18 42 28.5 -4.6
baz=272
J20K Nowinta River 58.34 30 **P** **18 42 34.3 +1.0**
J20K IAmb IAmb 18 42 37.9
comp=Z,7.0nm,0.8s
J20K Nowinta River 58.34 30 P **P** **18 42 30.5 -2.8**
baz=271
K20K Telida 58.40 31 P **P** **18 42 31.2 -2.5**
baz=271
E21K Killik River 58.44 25 P **P** **18 42 31.6 -2.3**
baz=268
L20K Farewell, AK 58.51 32 P **P** **18 42 32.7 -1.8**
baz=272
R18K Karluk 58.52 38 P **P** **18 42 31.1 -3.5**
baz=274
G21K Allakaket 58.59 27 P **P** **18 42 33.8 -1.2**
baz=270
F21K Alatna River 58.61 26 P **P** **18 42 31.6 -3.5**
baz=269
B22K Teshekpuk Lake 58.70 23 P **P** **18 42 32.7 -2.9**
baz=268
SII Sitkinak Islan 58.75 39 P **P** **18 42 32.7 -3.6**
baz=275
H21K Meloziina Rive 58.89 28 P P 18 42 32.0 -5.1
baz=271
M20K Styx River 58.89 33 P **P** **18 42 36.1 -1.1**
baz=273
D22K Ayikyak River 58.92 24 P **P** **18 42 35.0 -2.3**
baz=269
P19K Oil Pt 58.99 35 P **P** **18 42 34.0 -3.9**
baz=274
F22K John River 59.11 26 P **P** **18 42 35.9 -2.7**
baz=270
CHUM Lake Minchumin 59.16 30 P **P** **18 42 36.9 -2.1**
baz=272
OHAK Old Harbor 59.18 38 P **P** **18 42 36.8 -2.3**
baz=276
E22K Anaktuvuk Pass 59.24 25 P **P** **18 42 39.8 +0.2**
E22K IAmb IAmb 18 42 44.4
comp=Z,8.5nm,0.8s
E22K Anaktuvuk Pass 59.24 25 P **P** **18 42 37.9 -1.6**
baz=270,SNR=8.9
I21K Tanana 59.25 29 P **P** **18 42 38.7 -0.9**
baz=272
O20K Slope Mountain 59.26 35 P **P** **18 42 36.8 -3.0**
baz=274
PPLA Purkeypile 59.27 31 P **P** **18 42 39.9 0.0**
baz=273,SNR=5.1
G22K Bettles 59.38 27 P **P** **18 42 39.3 -1.2**
baz=271
H22K Ishtalitna Cre 59.47 28 P **P** **18 42 41.0 -0.1**
baz=272
KDAK Kodiak Island 59.50 37 P **P** **18 42 40.6 -0.8**
baz=276
Q20K Shuyak Island 59.51 36 P **P** **18 42 39.9 -1.5**
baz=276
SKT Skwentna 59.64 32 IAmb IAmb 18 42 45.8
comp=Z,13nm,1.1s
SKT Skwentna 59.64 32 P **P** **18 42 42.4 +0.1**
baz=274
D23K Nanushuk River 59.65 24 IAmb IAmb 18 42 46.3
comp=Z,6.6nm,1.0s
D23K Nanushuk River 59.65 24 P **P** **18 42 42.7 +0.4**
baz=271
C23K Itkillik River 59.66 23 P **P** **18 42 42.4 +0.1**
baz=270
BPAW Bear Paw Mtn. 59.73 30 P **P** **18 42 40.4 -2.5**
baz=274
MLY Manley 59.78 29 P **P** **18 42 41.9 -1.4**
baz=273
HOM Homer 59.79 35 P **P** **18 42 40.3 -3.1**
baz=276
COLD Coldfoot 59.88 26 P **P** **18 42 40.8 -3.1**
baz=272
CAPN Captain Cook N 59.92 34 P **P** **18 42 40.5 -3.7**
baz=275
G23K Bananza Creek 59.98 27 P **P** **18 42 43.0 -1.7**
baz=273
SUA Susitna One 60.05 33 P **P** **18 42 44.9 -0.5**
baz=275,SNR=6.3
TOLK Toolik Lake Re 60.06 25 IAmb IAmb 18 43 09.9

comp=Z,20nm,1.6s
TOLK Toolik Lake Re 60.06 25 P **P** **18 42 45.5 +0.3**
baz=272
E23K Chandalar 60.07 25 IAmb IAmb 18 43 02.6
comp=Z,15nm,1.1s
E23K Chandalar 60.07 25 P **P** **18 42 43.2 -2.1**
baz=272,SNR=8.4
TRF Thorofare Moun 60.09 31 P **P** **18 42 41.7 -3.9**
baz=274
CUT Chulitna 60.19 32 P **P** **18 42 43.2 -2.9**
baz=275
H23K Yukon River 60.23 28 P **P** **18 42 43.5 -2.9**
baz=274
BRSE Bradley Lake S 60.24 35 P **P** **18 42 43.4 -3.1**
baz=276
D24K Happy Valley 60.31 24 P **P** **18 42 45.6 -1.1**
baz=273
C24K Franklin Bluff 60.32 23 P **P** **18 42 47.3 +0.5**
baz=272
M22K Willow 60.32 33 P **P** **18 42 45.2 -1.8**
baz=276
I23K Minto, Yukon-K 60.35 29 P **P** **18 42 47.4 +0.3**
baz=274
E24K Your Creek 60.49 25 IAmb IAmb 18 43 07.6
comp=Z,5.1nm,0.8s
E24K Your Creek 60.49 25 P **P** **18 42 48.8 +0.7**
baz=274
NEA2 Nenana 60.53 29 P **P** **18 42 47.8 -0.6**
baz=275,SNR=6.1
RC01 Rabbit Creek A 60.58 33 P **P** **18 42 48.8 +0.1**
baz=276
O22K Cooper Landing 60.66 34 P **P** **18 42 47.8 -1.5**
baz=277
MCK McKinley 60.67 30 **P** **18 42 49.4 0.0**
MCK McKinley 60.67 30 P **P** **18 42 48.3 -1.0**
baz=276,SNR=7.2
RND Reindeer 60.74 31 **P** **18 42 49.5 -0.4**
F24K Squaw Lake 60.76 26 IAmb IAmb 18 42 54.5
comp=Z,13nm,1.4s
F24K Squaw Lake 60.76 26 P **P** **18 42 48.7 -1.3**
baz=274
PMR Palmer 60.81 33 P **P** **18 42 49.6 -0.7**
baz=277
SEW Seward 60.84 34 P **P** **18 42 49.4 -1.1**
baz=277
H24K Noodor Dome 60.91 28 P **P** **18 42 50.4 -0.6**
baz=275
WAT1 Susitna Watana 60.94 31 P **P** **18 42 50.5 -0.7**
baz=276
G24K Hadweenzic Riv 60.99 27 P **P** **18 42 49.8 -1.7**
baz=275
KNK Knik Glacier 61.15 33 P **P** **18 42 50.8 -1.9**
baz=277,SNR=5.3
SML Sawmill 61.16 32 P **P** **18 42 50.1 -2.7**
baz=277
D25K Kavik River 61.17 24 IAmb IAmb 18 43 11.3
comp=Z,5.7nm,0.9s
D25K Kavik River 61.17 24 P **P** **18 42 52.6 -0.1**
baz=275,SNR=5.5
POKR Poker Plat Res 61.17 29 P **P** **18 42 52.5 -0.2**
baz=276
STKA Stephens Creek 61.20 169 P P 18 42 59.4 +6.2
comp=Z,3.3nm,0.7s,baz=335,slow=9.1,SNR=3.2
STKA LR LR 19 08 40.9
comp=Z,25nm,21.5s,baz=23,slow=35
PWL Port Wells 61.29 33 P **P** **18 42 50.5 -3.1**
baz=278
KIRV Kirov 61.29 324 LR LR 19 12 20.2
comp=Z,185nm,18.7s,baz=74,slow=39
WAT6 Susitna Watana 61.34 32 P **P** **18 42 52.1 -2.0**
baz=277,SNR=5.1
DZM Mont Dzumac 61.38 141 P **P** **18 42 58.6 +3.9**
comp=Z,3.7nm,0.6s,baz=54,slow=16,SNR=2.1
DZM LR LR 19 07 38.3
comp=Z,47nm,20.6s,baz=30,slow=34
comp=Z,3.7nm,0.6s
DHY Denali Highway 61.44 31 P **P** **18 42 53.2 -1.6**
baz=277
ILAR Eielson Array 61.44 29 P **P** **18 42 56.5 +1.9**
comp=Z,1.9nm,0.8s,baz=280,slow=6.7,SNR=12
comp=Z,1.9nm,0.8s
M23K Glacier View 61.45 32 P **P** **18 42 54.0 -0.7**
baz=278
HDA Harding Lake 61.46 29 P **P** **18 42 53.8 -0.9**
HDA Harding Lake 61.46 29 P **P** **18 42 54.9 +0.2**
baz=277,SNR=6.9
G25K Bearman Lake 61.53 27 P **P** **18 42 54.2 -0.8**
baz=276
E25K Arctic Village 61.58 25 P **P** **18 42 55.4 -0.1**
baz=276,SNR=7.2
F25K Christian Rive 61.61 26 P **P** **18 42 55.6 -0.2**
baz=276
C26K Camden Bay 61.62 23 P **P** **18 42 55.7 0.0**
baz=276
SCM Sheep Creek Mo 61.63 32 P **P** **18 42 54.0 -2.0**
baz=278
P23K Montague Islan 61.87 34 P **P** **18 42 56.0 -1.5**
baz=279
GLI Glacier Island 61.88 33 P P 18 42 51.9 -5.8
baz=279
K24K Donnelly Dome 62.05 30 P P 18 42 53.4 -5.3
baz=278
C27K Jago River 62.07 23 P **P** **18 42 56.4 -2.3**
baz=277
J25K Salcha River, 62.11 29 P **P** **18 42 57.3 -1.8**
baz=278
M24K Tolsona, Glenn 62.13 32 P **P** **18 42 57.0 -2.3**
baz=279
F26K Sheenjek River 62.16 25 P **P** **18 42 58.1 -1.3**
baz=278
PAX Paxson 62.31 31 P **P** **18 42 57.5 -3.1**
baz=279
KLU Klutina 62.35 33 P **P** **18 42 59.2 -1.6**
baz=279
G26K Porcupine Rive 62.41 26 P **P** **18 43 00.1 -0.9**
baz=278
HARP HAARP 62.55 32 P **P** **18 43 01.4 -0.7**
baz=280
EYAK Cordova Ski Ar 62.59 34 P **P** **18 43 02.0 -0.3**
baz=280
SCRK Sand Creek 62.80 30 P **P** **18 43 03.3 -0.6**
SCRK Sand Creek 62.80 30 P **P** **18 43 03.8 0.0**
baz=280,SNR=6.5
DOT Dot Lake 62.83 30 IAmb IAmb 18 43 06.7
comp=Z,8.4nm,0.9s
J26L Joseph Creek 62.90 29 IAmb IAmb 18 43 07.4
comp=Z,9.1nm,0.8s
J26L Joseph Creek 62.90 29 P **P** **18 43 02.9 -1.5**
baz=280
I26K Coal Creek Min 62.93 28 P **P** **18 43 03.2 -1.3**
baz=280
E27K Coleen River 63.04 25 IAmb IAmb 18 43 09.8
comp=Z,12nm,1.3s
E27K Coleen River 63.04 25 P **P** **18 43 04.7 -0.5**
baz=280
BMRM Bremner River 63.07 33 P **P** **18 43 03.2 -2.4**
baz=281
D27M Malcolm River 63.09 24 P **P** **18 43 05.4 -0.1**
baz=280
L26K Log Cabin Wild 63.26 31 P **P** **18 43 05.7 -1.1**
baz=281,SNR=5.3
G27K Doyon Strip 63.26 26 P **P** **18 43 04.6 -2.1**
baz=280
H27K Steamboat Moun 63.42 27 P **P** **18 43 06.1 -1.8**
baz=281
I27K Kandik River 63.51 28 P **P** **18 43 07.4 -1.0**
baz=281,SNR=9.3
M26K Nabesna, AK 63.54 31 P **P** **18 43 07.1 -1.6**
baz=281
K27K Chicken 63.62 29 P **P** **18 43 07.3 -1.8**
baz=281
E28M Babbage River 63.71 24 IAmb IAmb 18 43 14.3
comp=Z,11nm,1.2s
E28M Babbage River 63.71 24 P **P** **18 43 08.0 -1.6**
baz=281
MCARA McCarthy VSAT 63.73 32 P **P** **18 43 09.9 0.0**
baz=282
F28M Old Crow 63.79 25 P **P** **18 43 10.0 -0.2**
baz=282,SNR=7.0
CRQE Cirque 63.84 33 P **P** **18 43 08.7 -2.1**
baz=282
D28M Stokes Point 63.85 23 P **P** **18 43 08.5 -1.9**
baz=282
BGLC Bering Glacier 63.88 34 P **P** **18 43 10.8 0.0**
baz=282
L27K Beaver Creek, 63.93 30 IAmb IAmb 18 43 15.7
comp=Z,6.9nm,1.0s
L27K Beaver Creek, 63.93 30 P **P** **18 43 10.5 -0.7**
baz=282
BCAR Beaver Creek A 63.95 30 **P** **18 43 11.1 -0.3**
M27K Edge Creek, AK 64.06 31 P **P** **18 43 10.5 -1.7**
baz=282
I28M Miner Creek 64.22 28 IAmb IAmb 18 43 17.8
comp=Z,10nm,1.0s
I28M Miner Creek 64.22 28 P **P** **18 43 12.1 -1.1**
baz=282,SNR=8.5
E29M Blow River 64.35 24 IAmb IAmb 18 43 27.6
comp=Z,6.1nm,1.1s
E29M Blow River 64.35 24 P **P** **18 43 11.8 -2.0**
baz=283
BVCY Beaver Creek 64.51 31 P **P** **18 43 13.5 -1.5**
baz=283
CTG Chitna Glacier 64.62 33 P **P** **18 43 12.3 -3.7**
baz=283
G29M Pine Creek 64.64 26 P **P** **18 43 12.2 -3.7**
baz=283,SNR=5.6
H29M Whitestone 64.67 27 P **P** **18 43 15.8 -0.2**
baz=283
DAWY Dawson 64.77 29 P **P** **18 43 14.8 -1.9**
baz=284
YUK3 Moose Creek 64.84 32 P **P** **18 43 15.3 -2.2**
baz=284
O28M Mount Upton 65.22 33 P **P** **18 43 16.5 -3.5**
baz=284
EPYK Eagle Plains 65.28 26 IAmb IAmb 18 43 24.0
comp=Z,13nm,1.0s
EPYK Eagle Plains 65.28 26 P **P** **18 43 20.5 +0.5**
baz=285
YUK8 Steele Glacier 65.29 32 P **P** **18 43 16.6 -3.8**
baz=284
F30M Barrier River 65.31 25 **P** **18 43 20.3 +0.1**
F30M Barrier River 65.31 25 P **P** **18 43 20.0 -0.2**
baz=285
G30M tAoh Zraii Nji 65.31 26 IAmb IAmb 18 43 23.4
comp=Z,11nm,0.9s
G30M tAoh Zraii Nji 65.31 26 P **P** **18 43 18.8 -1.4**
baz=285
PINM Pinnacle 65.36 33 P **P** **18 43 19.3 -1.3**
baz=285
L29M L29M 65.55 30 P **P** **18 43 19.5 -2.3**
baz=285
M29M Somme Creek 65.58 31 P **P** **18 43 18.9 -3.2**
baz=285
K29M Barlow Dome 65.62 29 P **P** **18 43 19.2 -3.2**
baz=285,SNR=5.4
I30M Mount Dempster 65.72 27 **P** **18 43 23.5 +0.5**
I30M Mount Dempster 65.72 27 P **P** **18 43 22.2 -0.8**
baz=286,SNR=7.1
YUK4 Talbot Arm 65.79 32 P **P** **18 43 21.9 -1.7**
baz=285
PNL Peninsula 65.89 34 P **P** **18 43 22.5 -1.5**
baz=286
J30M Hart River 65.92 28 P **P** **18 43 23.1 -1.2**
baz=286
INK Inuvik 65.94 24 LR LR 19 14 10.0
comp=Z,67nm,20.4s,baz=322,slow=38
INK Inuvik 65.94 24 P **P** **18 43 23.2 -0.9**
baz=287
G31M Satah River 66.07 25 P **P** **18 43 24.4 -0.5**
baz=287
F31M Tsiigehtchic 66.11 25 P **P** **18 43 24.0 -1.3**
baz=287
M30M Minto, Yukon 66.29 30 P **P** **18 43 25.5 -1.1**
baz=286
H31M Peel River 66.37 27 P **P** **18 43 24.4 -2.6**
baz=287
HYT Haines Junctio 66.47 32 P **P** **18 43 24.6 -3.3**
baz=287
P29M Windy Craggy 66.71 34 P P 18 43 24.5 -4.8
baz=287
SPITS Spitsbergen Ar 66.79 348 P **P** **18 43 29.8 +0.3**
comp=Z,5.4nm,1.0s,baz=20,slow=4.6,SNR=2.7
SPITS LR LR 19 16 04.0
comp=Z,56nm,18.1s,baz=39,slow=39
comp=Z,5.4nm,1.0s
P30M Million Dollar 66.94 33 P **P** **18 43 28.3 -2.5**
baz=287
N31M Braeburn, Yuko 67.07 31 P **P** **18 43 30.7 -0.8**
baz=288
O30N Mendenhall 67.15 32 P **P** **18 43 31.2 -0.9**
baz=288
A36M Sachs Harbour 67.34 19 P **P** **18 43 31.9 -1.1**
baz=293
PLBC Pleasant Camp 67.43 34 P **P** **18 43 31.8 -2.0**
baz=288
M31M Drury Creek, Y 67.47 30 P **P** **18 43 34.4 +0.3**
baz=288
WHY Whitehorse 67.75 32 P **P** **18 43 33.8 -2.1**
baz=289
SKAG Skagway 67.93 33 P **P** **18 43 36.1 -0.8**
baz=289
S31K Pelican 67.97 35 P **P** **18 43 35.9 -1.3**
baz=289
ARCES ARCESS Array B 68.37 339 P **P** **18 43 38.7 -0.9**
comp=Z,1.8nm,0.9s,baz=70,slow=11,SNR=4.3
ARCES LR LR 19 18 44.6
comp=Z,96nm,18.1s,baz=62,slow=40
comp=Z,1.8nm,0.9s
P32M Atlin 68.66 33 P **P** **18 43 40.3 -1.3**
baz=290
R32K Eaglecrest 68.72 34 P **P** **18 43 39.1 -2.9**
baz=290
SIT Sitka 68.73 36 P P 18 43 38.0 -4.0
baz=290
C36M Paulatuk 68.77 21 P **P** **18 43 40.4 -1.6**
baz=295
P33M Teslin, Yukon 68.86 32 P **P** **18 43 41.2 -1.7**
baz=291
GNI Garni 68.91 305 LR LR 19 17 55.9
comp=Z,32nm,19.2s,baz=64,slow=40
S32K Killisnoo 68.97 35 P **P** **18 43 39.5 -4.0**
baz=290
KBZ Khabaz 68.98 309 P **P** **18 43 44.3 +0.5**
comp=Z,5.0nm,0.9s,baz=141,slow=6.5,SNR=8.3
KBZ LR LR 19 19 03.7
comp=Z,105nm,18.2s,baz=86,slow=40
comp=Z,5.0nm,0.9s
Q32M Nakina River 69.58 33 P **P** **18 43 43.6 -3.9**
baz=292
R33M Jennings River 70.03 33 P P 18 43 46.1 -4.2
baz=292
U33K Whale Pass 70.21 36 P **P** **18 43 47.7 -3.4**
baz=292
CRAG Craig 70.45 37 P **P** **18 43 48.9 -3.7**
baz=292
WTLY Watson Lake, Y 70.76 31 P **P** **18 43 52.0 -2.5**
baz=294
DLBC Dease Lake 70.86 33 P **P** **18 43 53.0 -2.2**
baz=293
V35K Ketchikan 71.30 37 P **P** **18 43 55.6 -2.2**
baz=293
T35M Bob Quinn 71.34 35 P **P** **18 43 54.7 -3.3**
baz=294
FINES FINESS Array B 71.60 331 P **P** **18 43 58.7 -0.8**
comp=Z,1.0nm,0.5s,baz=69,slow=5.6,SNR=16
FINES LR LR 19 18 35.5
comp=Z,97nm,18.9s,baz=46,slow=39
comp=Z,1.0nm,0.5s
WRGLY Wrigley 71.70 27 P **P** **18 43 57.8 -2.3**
baz=297
U35K Hyder 71.89 36 P **P** **18 43 58.0 -3.3**
baz=294
RES Resolute Bay 72.80 11 LR LR 19 18 33.0
comp=Z,42nm,19.9s,baz=25,slow=38
RES Resolute Bay 72.80 11 IAmb IAmb 18 44 09.3
comp=Z,8.3nm,0.9s
KOTAN Kotaneelee Air 72.89 30 P **P** **18 44 04.4 -2.8**
baz=298
TOAD Toad River Com 72.95 32 P **P** **18 44 07.0 -0.6**
baz=297
AKASG Malin Array Be 74.81 320 P **P** **18 44 18.7 0.0**
comp=Z,0.7nm,0.4s,baz=60,slow=6.1,SNR=5.1
AKASG LR LR 19 20 20.6
comp=Z,94nm,18.5s,baz=56,slow=38
comp=Z,0.7nm,0.4s
YKA Yellowknife Ar 75.56 26 P **P** **18 44 25.2 +2.5**
comp=Z,3.9nm,0.8s,baz=299,slow=6.4,SNR=15
YKA LR LR 19 19 11.7
comp=Z,25nm,20.8s,baz=281,slow=37
comp=Z,3.9nm,0.8s
YKA Yellowknife Ar 75.56 26 P **P** **18 44 22.2 -0.5**
YKAW1 Yellowknife Wh 75.61 26 P **P** **18 44 22.7 -0.3**
YKAW1 IAmb IAmb 18 44 26.9
comp=Z,10nm,0.8s
BR131 Keskin Array S 76.92 308 **P** **18 44 30.2 -0.9**
BR131 IAmb IAmb 18 44 41.1
comp=Z,8.0nm,1.0s
BRTR Keskin Array B 76.92 308 P **P** **18 44 31.9 +0.7**
comp=Z,2.4nm,0.8s,baz=86,slow=4.8,SNR=11
BRTR LR LR 19 23 18.4
comp=Z,42nm,21.1s,baz=42,slow=40
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 76.92 308 **P** **18 44 30.5 -0.6**
HFS Hagfors 77.46 333 P **P** **18 44 33.2 -0.3**
comp=Z,2.4nm,0.8s,baz=95,slow=10,SNR=5.0
HFS LR LR 19 21 46.0
comp=Z,61nm,18.9s,baz=54,slow=38
comp=Z,2.4nm,0.8s
ASF Jabal al Asfar 77.89 300 LR LR 19 25 56.5
comp=Z,28nm,18.8s,baz=111,slow=41
NB2 NORSAR Subarra 77.89 334 P **P** **18 44 35.6 -0.4**
comp=Z,3.5nm,1.0s,baz=51,slow=5.9
NOA NORSAR Array B 77.89 334 P **P** **18 44 35.6 -0.4**
comp=Z,0.9nm,0.8s,baz=50,slow=5.3,SNR=5.2
NOA LR LR 19 22 50.3
comp=Z,47nm,18.1s,baz=55,slow=39
comp=Z,0.9nm,0.8s
MMAI Mount Meron Ar 78.64 301 P **P** **18 44 40.3 -0.4**
comp=Z,0.2nm,0.3s,baz=99,slow=15,SNR=1.7
MMAI LR LR 19 24 14.4
comp=Z,31nm,19.8s,baz=37,slow=39
comp=Z,0.2nm,0.3s
VRAC Vranov 82.50 323 LR LR 19 25 30.9
comp=Z,109nm,18.3s,baz=59,slow=38
NEW Newport 82.58 38 P **P** **18 45 03.9 +2.4**
comp=Z,2.8nm,0.8s,baz=313,slow=5.7,SNR=6.3
comp=Z,2.8nm,0.8s
NEW Newport 82.58 38 IAmb IAmb 18 45 05.5
comp=Z,7.4nm,1.1s
YBH Yreka Blue Hor 82.89 46 P **P** **18 45 05.4 +2.0**
comp=Z,0.3nm,1.1s,baz=311,slow=1.6,SNR=6.1
CLL Collm 83.14 326 *i* P **P** **18 45 05.5 +1.2**
comp=Z,7.0nm,1.0s
CLL *i* sP **pP** **18 45 14.6 +2.1**
comp=Z,7.0nm,1.0s
CONA Conrad Observa 83.70 322 *i* PcP **PcP** **18 45 10.0 -1.6**
comp=Z,1.4nm,0.6s
RAR Rarotonga 83.77 118 LR LR 19 22 59.0
comp=Z,59nm,18.3s,baz=300,slow=36
GERES GERESS Array B 84.30 324 P **P** **18 45 11.3 +0.9**
comp=Z,0.7nm,0.7s,baz=33,slow=5.1,SNR=6.2
GERES LR LR 19 26 20.5
comp=Z,97nm,20.2s,baz=60,slow=38
comp=Z,0.7nm,0.7s
SFJD Kangerlussuaq 84.61 0 LR LR 19 24 27.7
comp=Z,56nm,19.2s,baz=339,slow=37
ORV Oroville 84.84 47 P **P** **18 45 12.6 -0.7**
ORV IAmb IAmb 18 45 16.9
comp=Z,9.2nm,1.1s
KBA Koelnbreinsper 85.58 322 *i* PcP **PcP** **18 45 19.5 -0.4**
comp=Z,1.2nm,0.5s
FRB Frobisher Bay 86.69 8 LR LR 19 27 38.3
comp=Z,50nm,19.0s,baz=325,slow=38
EKA Eskdalemuir Ar 87.30 335 P **P** **18 45 24.8 -0.2**
comp=Z,0.8nm,0.6s,baz=53,slow=4.4,SNR=3.7
comp=Z,0.8nm,0.6s
NVAR Mina Array Bea 87.54 47 P **P** **18 45 30.1 +3.3**
comp=Z,1.3nm,0.8s,baz=302,slow=6.2,SNR=8.3
NVAR LR LR 19 20 56.4
comp=Z,35nm,19.7s,baz=270,slow=33
comp=Z,1.3nm,0.8s
DAVOX Davos/Dischmat 87.60 324 LR LR 19 28 46.9
comp=Z,160nm,19.3s,baz=74,slow=38
ELK Elko 88.09 44 P **P** **18 45 32.8 +3.3**
comp=Z,0.7nm,0.7s,baz=322,slow=4.2,SNR=4.4
comp=Z,0.7nm,0.7s
ELK Elko 88.09 44 IAmb IAmb 18 45 34.3
comp=Z,6.5nm,1.5s
PPT Papeete 90.04 110 LR LR 19 17 41.9
comp=Z,21nm,20.6s,baz=296,slow=30
PDAR Pinedale Array 90.15 40 P **P** **18 45 41.6 +2.6**
comp=Z,1.7nm,0.9s,baz=4.6,slow=1.4,SNR=13
comp=Z,1.7nm,0.9s
PDAR Pinedale Array 90.15 40 P **P** **18 45 37.4 -1.6**
ULM Lac du Bonnet 91.43 28 P **P** **18 45 46.8 +2.3**
comp=Z,5.5nm,0.7s,baz=0.0,slow=2.0,SNR=3.6
comp=Z,5.5nm,0.7s
PFO Pinyon Flats O 91.55 50 LR LR 19 18 11.8
comp=Z,58nm,21.1s,baz=294,slow=30
KMBO Kilima Mbogo 93.14 270 LR LR 19 30 58.5
comp=Z,31nm,18.2s,baz=100,slow=38
SCHQ Schefferville 95.53 10 LR LR 19 33 56.0
comp=Z,54nm,18.3s,baz=56,slow=38
M65A Busby, Falmout 107.48 16 P **PKiKP** **18 51 03.3 -1.9**
baz=341
QSPA South Pole Qui 118.46 180 PKP **PKiKP** **18 51 29.4 +4.1**
comp=Z,0.8nm,0.9s,baz=330,slow=5.5,SNR=1.8
QSPA South Pole Qui 118.46 180 **PKPdf** **18 51 24.0 -1.3**

*TXNET **16** 18:32:47.4, 31°.7N±0°.7×10°4W±°, h6km±1km, ML2.6/14, Error ellipse: s-maj=2.0km s-min=1.0km az=75.4, final*
NEIC 16 18:32:47.4±1.7, 31°.64N±0°.01×104°.33W±0°.01, h5km±1km, mb_Lg2.5/25, ML2.6/80, 1C, Error ellipse: s-maj=2.9km s-min=2.2km az=339.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s ISC
TPB09	**Culberson Coun**	**0.13**	**12**	⇑P		Pg	18 32 50.5 +0.4
TPB09					S	Sg	18 32 52.6 +0.6
TPB11	**China Draw**	**0.39**	**41**	P		Pg	18 32 54.8 -0.1
TPB11					S	Sg	18 32 59.9 -0.1
PECS	**Pecos**	**0.48**	**124**			Pg	18 32 56.9 +0.2
PECS					Sg	Sg	18 33 02.6 -0.3
PECS	**Pecos**	**0.48**	**124**	P		Pg	18 32 57.1 +0.5
PECS					S	Sg	18 33 03.4 +0.4
TPB12	**Southwest of T**	**0.54**	**143**	P		Pg	18 32 58.1 +0.4
TPB12					S	Sg	18 33 05.5 +0.8
TPB07	**Mentone**	**0.57**	**96**	P		Pb	18 32 59.3 -0.6
TPB07					S	Sg	18 33 07.0 +1.1
TPB10	**Southeast of T**	**0.61**	**126**	P		Pg	18 32 59.5 +0.4
TPB10					S	Sg	18 33 07.8 +0.7
CLNB	**Carlsbad**	**0.73**	**32**			Pg	18 33 01.0 -0.4
CLNB						Sg	18 33 11.2 +0.3
CLNB	**Carlsbad**	**0.73**	**32**	P		Pg	18 33 01.3 -0.1
CLNB					S	Sg	18 33 11.4 +0.5
LWM1	**Layne Water Mi**	**0.73**	**124**	P		Pg	18 33 01.6 +0.3
LWM1					S	Sg	18 33 11.9 +1.0
LWM2	**Layne Water Mi**	**0.74**	**120**	P		Pg	18 33 02.0 +0.4
LWM2					S	Sg	18 33 12.0 +0.7
PCOS	**Crockett Middl**	**0.74**	**108**			Sg	18 33 12.0 +0.7
PCOS	**Crockett Middl**	**0.74**	**108**	S		Sg	18 33 12.0 +0.7
CBET	**Carlsbad E Tow**	**0.83**	**21**			Pn	18 33 05.2 -0.6
CBET	**Carlsbad E Tow**	**0.83**	**21**	P		Pn	18 33 05.2 -0.6
TPB01	**Permian Basin**	**0.84**	**146**	P		Pg	18 33 03.1 -0.5
TPB01					S	Sg	18 33 14.2 -0.3
CLN7	**Carlsbad 7**	**0.89**	**30**			Pg	18 33 03.9 -0.5
CLN7						Sg	18 33 16.4 +0.5
CLN7	**Carlsbad 7**	**0.89**	**30**	P		Pg	18 33 04.0 -0.4
MNTX	**Cornudas Mount**	**0.90**	**274**			Pg	18 33 04.8 +0.3
MNTX					Sg	Sg	18 33 16.8 +0.6
MNTX	**Cornudas Mount**	**0.90**	**274**	P		Pg	18 33 04.9 +0.4
MNTX					S	Sb	18 33 16.9 -0.7
TPB03	**Saragosa**	**0.90**	**128**	P		Pg	18 33 04.6 0.0
TPB03					S	Sg	18 33 16.5 +0.3
TPB06	**Permian Basin**	**0.95**	**90**	S		Sg	18 33 18.3 +0.3
HTMS	**Hat Mesa**	**1.02**	**36**			Pg	18 33 05.8 -1.1
HTMS	**Hat Mesa**	**1.02**	**36**	P		Pg	18 33 07.1 +0.2
HTMS					S	Sg	18 33 20.2 0.0
TPB04	**Verhalen**	**1.02**	**116**	P		Pg	18 33 06.9 0.0
TPB04					S	Sg	18 33 20.5 +0.4
VHRN	**Van Horn**	**1.02**	**213**			Pg	18 33 06.9 -0.1
VHRN					Sg	Sg	18 33 20.6 +0.4
VHRN					IAML		18 33 26.4
	92nm,0.4s						
VHRN	**Van Horn**	**1.02**	**213**	P		Pg	18 33 07.1 +0.2
VHRN					S	Sb	18 33 21.0 -0.3
TPB16	**Coyonosa**	**1.06**	**119**	P		Pg	18 33 07.8 +0.1
TPB16					S	Sg	18 33 21.3 -0.1
NM01	**Eunice**	**1.06**	**48**	P		Pg	18 33 07.4 -0.4
NM01					S	Sg	18 33 21.5 -0.2
TPB05	**Hovey Rd**	**1.13**	**130**	P		Pg	18 33 08.5 -0.5
TPB05					S	Sg	18 33 23.4 -0.2
TPB15	**Southwest of C**	**1.15**	**112**	S		Sb	18 33 25.0 -0.1
MNHN	**Monahans**	**1.38**	**102**			Pn	18 33 12.9 -0.4
MNHN						Sb	18 33 31.2 -0.3
MNHN	**Monahans**	**1.38**	**102**	P		Pn	18 33 13.1 -0.2
MNHN					S	Sb	18 33 31.2 -0.3
ALPN	**Alpine**	**1.40**	**155**			Pn	18 33 12.8 -0.9
ALPN						Sb	18 33 30.8 -1.5
ALPN					IAML		18 33 37.8
	106nm,0.2s						

ALPN				IAML		18 33 39.7			
	111nm,0.4s								
ALPN	**Alpine**	**1.40**	**155**	P	Pn	18 33 12.8	-0.9		
ALPN				S	Sb	18 33 30.8	-1.5		
TPB08	**Permian Basin**	**1.43**	**121**	S	Sg	18 33 33.9	+0.4		
CPRX	**Cap Rock**	**1.44**	**16**		Pn	18 33 14.2	0.0		
CPRX	**Cap Rock**	**1.44**	**16**	P	Pn	18 33 14.2	-0.1		
ODSA	**Odessa**	**1.59**	**72**		Pn	18 33 16.1	-0.2		
ODSA					Sn	18 33 36.8	-0.4		
ODSA	**Odessa**	**1.59**	**72**	P	Pn	18 33 16.2	-0.1		
ODSA				S	Sn	18 33 36.8	-0.5		
TMB04	**Seminole**	**1.85**	**58**	P	Pb	18 33 20.8	-0.9		
TMB04				S	Sb	18 33 45.4	+0.3		
EPT	**El Paso**	**1.85**	**274**	Pn	Pn	18 33 19.8	-0.1		
EPT				IAML		18 33 49.0			
	comp=E,44nm,0.5s								
EPT				IAML		18 33 50.6			
	comp=N,57nm,0.4s								
TMB01	**Midkiff**	**1.92**	**89**	P	Pb	18 33 22.0	-0.9		
TMB01				S	Sb	18 33 47.1	-0.2		
TMB02	**Rankin**	**2.01**	**102**	P	Pb	18 33 23.7	-0.8		
TMB02				S	Sb	18 33 49.7	-0.2		
TMB06	**Greenwood**	**2.18**	**81**	S	Sb	18 33 54.9	+0.1		
TMB05	**Klondike**	**2.32**	**64**	P	Pb	18 33 28.3	-1.4		
TMB05				S	Sb	18 33 58.1	-0.5		
TX31	**Lajitas Ar. Si**	**2.37**	**166**		Pn	18 33 26.9	-0.1		
TX31	**Lajitas Ar. Si**	**2.37**	**166**	P	Pn	18 33 28.3	+1.3		
TX31				Pg	Pb	18 33 30.0	-0.6		
TXAR	**Lajitas Array**	**2.37**	**166**		Pn	18 33 26.6	-0.4		
SAND	**Sanderson**	**2.54**	**131**		Pn	18 33 29.4	+0.1		
SAND				IAmb_Lg		18 34 11.7			
	comp=Z,26nm,0.7s								
SAND	**Sanderson**	**2.54**	**131**	P	Pn	18 33 30.9	+1.6		
MSTX	**Muleshoe**	**2.67**	**29**		Pn	18 33 31.8	+0.7		
SGCY	**Sterling City**	**2.75**	**84**	Pn	Pn	18 33 31.4	-0.7		
SGCY				IAmb_Lg		18 34 18.4			
	comp=Z,22nm,0.8s								
POST	**Post**	**2.79**	**59**		Pn	18 33 32.7	0.0		
OZNA	**Ozona**	**2.84**	**104**	Pn	Pn	18 33 32.9	-0.5		
121A	**Cookes Peak, D**	**3.06**	**288**		Pn	18 33 36.4	-0.2		
121A				IAML		18 34 28.7			
	comp=N,21nm,0.3s								
121A				IAML		18 34 37.4			
	comp=E,19nm,0.6s								
CRNM	**Carthage**	**3.06**	**319**		Pn	18 33 36.7	+0.1		
BNM	**Barren Site**	**3.16**	**323**		Pn	18 33 38.9	+0.9		
Y22A	**Socorro**	**3.18**	**317**		Pn	18 33 39.6	+1.4		
Y22A				IAmb_Lg		18 34 31.1			
	comp=Z,14nm,1.0s								
SN07	**Snyder 07**	**3.25**	**63**		Pn	18 33 40.0	+0.9		
SN07				IAmb_Lg		18 34 31.8			
	comp=Z,13nm,0.9s								
SBM	**South Baldy**	**3.34**	**315**		Pn	18 33 41.2	+0.6		
LENM	**Lemitar**	**3.35**	**319**		Pn	18 33 42.4	+1.8		
DKNS	**Dickens**	**3.51**	**54**		Pn	18 33 45.2	+2.5		
DKNS				IAmb_Lg		18 34 42.5			
	comp=Z,15nm,0.8s								
ABQ	**Albuquerque**	**3.74**	**332**		Pn	18 33 47.7	+1.7		
ABQ				IAmb_Lg		18 34 50.1			
	comp=Z,11nm,0.9s								
ANMO	**Albuquerque**	**3.74**	**332**	IAML		18 34 42.6			
	comp=Z,8.0nm,0.4s								
ANMO				IAML		18 34 43.6			
	comp=Z,11nm,0.6s								
ANMO	**Albuquerque**	**3.74**	**332**		Pn	18 33 46.4	+0.4		
ANMO				IAmb_Lg		18 34 46.1			
	comp=Z,15nm,1.0s								
TASM	**ASL Pad, Albuq**	**3.74**	**332**		Pn	18 33 46.4	+0.4		
TASM				IAmb_Lg		18 34 50.9			
	comp=Z,16nm,1.1s								
TASM	**ASL Pad, Albuq**	**3.74**	**332**		Pn	18 33 45.6	-0.4		
TASM				IAML		18 34 43.0			
	comp=Z,12nm,0.7s								
TASM				IAML		18 34 44.6			
	comp=Z,14nm,0.6s								
TASM				IAmb_Lg		18 34 46.8			
	comp=Z,10.0nm,0.9s								
TASM	**ASL Pad, Albuq**	**3.74**	**332**		Pn	18 33 45.3	-0.7		
TASM				IAML		18 34 43.0			
	comp=Z,15nm,0.8s								
TASM				IAmb_Lg		18 34 45.7			
	comp=Z,11nm,0.8s								
TASM				IAML		18 34 46.0			
	comp=Z,16nm,0.7s								
DRIO	**Del Rio**	**3.90**	**124**		Pn	18 33 46.6	-1.3		
DRIO				IAmb_Lg		18 34 57.6			
	comp=Z,10.0nm,0.9s								
AMTX	**Amarillo**	**3.92**	**34**		Pn	18 33 47.2	-1.1		
APMT	**Aspermont**	**3.94**	**64**		Pn	18 33 48.2	-0.3		
JCT	**Junction City**	**4.06**	**105**	Pn	Pn	18 33 48.1	-2.1		
ABTX	**Abilene, Hawle**	**4.10**	**75**	Pn	Pn	18 33 47.5	-3.2		
319A	**Douglas**	**4.23**	**268**		Pn	18 33 50.7	-2.0		
BRDY	**Brady**	**4.57**	**93**	Pn	Pn	18 33 54.2	-3.0		
HNDO	**Hondo**	**4.84**	**115**	Pn	Pn	18 33 58.7	-2.2		
SMWD	**Samnorwood**	**4.86**	**44**	Pn	Pn	18 33 59.1	-2.1		
RTBA	**Rita Blanca**	**4.96**	**15**		Pn	18 33 59.7	-3.0		
PLPT	**Palo Pinto**	**5.23**	**76**	Pn	Pn	18 34 04.2	-2.1		
T25A	**Trinidad**	**5.48**	**359**	Pn	Pn	18 34 07.5	-2.4		
X18A	**Snowflake**	**5.52**	**303**	Pn	Pn	18 34 07.6	-2.9		
WMOK	**Wichita Mounta**	**5.58**	**55**	Pn	Pn	18 34 09.2	-1.9		

IDC 16 18:33:22.3±2.2,1.05N×125.23E,h0km,mb3.2/4, mbtmp3.2/4,MS3.3/3,Error ellipse: s-maj=302.4km s-min=23.6km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**8.13**	**222**	LR	LR	18 38 42.5	
	comp=Z,147nm,20.9s,baz=42,slow=39						
BATI	**Baumata**	**11.29**	**188**	LR	LR	18 41 49.0	
	comp=Z,218nm,18.2s,baz=356,slow=45						
FITZ	**Fitzroy Crossi**	**19.03**	**179**	LR	LR	18 46 49.3	
	comp=Z,71nm,18.9s,baz=15,slow=42						
WRA	**Warramunga Arr**	**22.69**	**157**	P	P	18 38 24.4	-1.4
	0.2nm,0.4s,baz=335,slow=9.8,SNR=4.9						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**25.97**	**162**	P	P	18 38 57.4	+0.5
	0.1nm,0.4s,baz=343,slow=11,SNR=5.4						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**58.93**	**327**	P	P	18 43 23.2	-0.2
	0.5nm,0.7s,baz=128,slow=6.3,SNR=1.8						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.21**	**329**	P	P	18 43 53.0	+0.6
	0.3nm,0.6s,baz=133,slow=5.8,SNR=1.9						
	0.3nm,0.6s						

*NEIC **16** 18:34:50.8±1.9,0.47N±0.06×123.90E±0.05,h159km±5km, mb4.7/74,Error ellipse: s-maj=8.9km s-min=7.7km az=151.0*

*IDC **16** 18:34:52.3±1.0,0.44N×123.88E,h176km±8km,mb4.1/26, mbtmp4.6/31,Error ellipse: s-maj=12.9km s-min=6.7km az=84.0*

*DJA **16** 18:34:52.3±0.1,0.1N±2.4E,h162km±2km,M4.6/81, mb5.0/81,mB5.1/42,MLv5.2/30,Mw(mB)4.5/42*

ISC 16 18:34:51.3±0.6,0.41N±0.04×123.91E±0.04,h168km±5km, n253,σ1§45/261,mb4.6/76,1D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.18**	**23**	P	**Pn**	**18 35 14.4**	**+0.7**
KMSI				S	**Sn**	**18 35 31.0**	**+0.1**
LUWI	**Luwuk**	**1.84**	**218**		**Pn**	**18 35 25.4**	**-0.3**
LUWI				Sn	**Sn**	**18 35 49.6**	**-2.8**
LUWI	**Luwuk**	**1.84**	**218**	P	**Pn**	**18 35 26.2**	**+0.4**
LUWI	**Luwuk**	**1.84**	**218**	P	**Pn**	**18 35 25.9**	**+0.1**
LUWI				S	**Sn**	**18 35 49.3**	**-3.1**
MRSI	**Marisa**	**1.97**	**272**	P	**Pn**	**18 35 27.4**	**+0.2**
MRSI				S	**Sn**	**18 35 52.7**	**-2.2**
APSI	**Ampana**	**2.61**	**240**	P	**Pn**	**18 35 35.8**	**+1.1**
TOLI2	**Tolitoli**	**3.21**	**283**		**Pn**	**18 35 42.0**	**0.0**
TOLI2				Sn	**Sn**	**18 36 17.1**	**-4.3**
TOLI2	**Tolitoli**	**3.21**	**283**	P	**Pn**	**18 35 42.7**	**+0.7**
SANI	**Sanana**	**3.21**	**140**	P	**Pn**	**18 35 40.9**	**-1.1**
TNTI	**Ternate**	**3.48**	**84**		**Pn**	**18 35 45.0**	**-0.4**
TNTI				Sn	**Sn**	**18 36 23.5**	**-3.9**
TNTI	**Ternate**	**3.48**	**84**	P	**Pn**	**18 35 45.7**	**+0.3**
TNTI	**Ternate**	**3.48**	**84**	P	**Pn**	**18 35 45.4**	**0.0**
SGSI	**Sangihe**	**3.63**	**26**	P	**Pn**	**18 35 48.8**	**+1.4**
MPSI	**Mapaga**	**4.01**	**269**	P	**Pn**	**18 35 53.3**	**+1.1**
PCI	**Palu**	**4.28**	**252**	P	**Pn**	**18 35 56.8**	**+1.1**

KDI	**Kendari**	**4.53**	**197**	P	**Pn**	**18 35 59.5**	**+0.6**		
NLAI	**Namlea**	**4.83**	**139**	P	**Pn**	**18 36 04.0**	**+1.2**		
TTSI	**Tana Toraja**	**5.34**	**230**	P	**Pn**	**18 36 10.8**	**+1.3**		
	1.3nm3µm281nm,0.8s								
AAI	**Ambon**	**5.91**	**134**	P	**Pn**	**18 36 18.8**	**+1.8**		
	2.0nm4µm265nm,0.5s								
SPSI	**Sidrap Palu**	**6.00**	**224**	P	**Pn**	**18 36 19.9**	**+1.7**		
	0.8nm2µm238nm,0.6s								
BBSI	**Bau Bau**	**6.01**	**193**	P	**Pn**	**18 36 19.3**	**+0.9**		
	0.6nm2µm172nm,0.7s								
BNSI	**Bone**	**6.11**	**218**	P	**Pn**	**18 36 21.0**	**+1.4**		
	0.6nm2µm189nm,0.8s								
MSAI	**Masohi**	**6.25**	**127**	P	**Pn**	**18 36 23.1**	**+1.5**		
SGKI	**Sangatta, Kali**	**6.37**	**262**	P	**Pn**	**18 36 24.0**	**+0.8**		
KAPI	**Kappang**	**6.80**	**218**	P	**Pn**	**18 36 30.4**	**+1.5**		
	34nm,0.3s,baz=45,slow=9.8,SNR=17								
KAPI				S	**Sn**	**18 37 44.7**	**-0.9**		
	31nm,0.6s,baz=45,slow=20,SNR=1.3								
KAPI	**Kappang**	**6.80**	**218**		**Pn**	**18 36 29.0**	**+0.2**		
DAV	**Davao City (W)**	**6.82**	**14**	P	**Pn**	**18 36 30.1**	**+1.0**		
	98nm,0.3s,baz=217,slow=10,SNR=6.4								
DAV				S	**Sn**	**18 37 47.6**	**+1.5**		
	167nm,0.4s,baz=281,slow=7.6,SNR=1.9								
DAV	**Davao City (W)**	**6.82**	**14**		**Pn**	**18 36 27.5**	**-1.6**		
BKSI	**Bulukumba**	**6.83**	**214**	P	**Pn**	**18 36 30.3**	**+1.0**		
	0.5nm99nm,0.7s								
MYLDM	**Lahad Datu**	**7.19**	**311**		**Pn**	**18 36 33.3**	**-0.6**		
MYLDM	**Lahad Datu**	**7.19**	**311**	P	**Pn**	**18 36 37.4**	**+3.5**		
BKB	**Balikpapan**	**7.21**	**257**		**Pn**	**18 36 32.2**	**-2.0**		
BKB	**Balikpapan**	**7.21**	**257**	P	**Pn**	**18 36 35.4**	**+1.2**		
	0.9nm3µm245nm,0.6s								
BSSI	**Bau Bau, Buton**	**7.35**	**208**	P	**Pn**	**18 36 38.1**	**+2.0**		
SWI	**Sorong**	**7.46**	**100**	P	**Pn**	**18 36 38.5**	**+1.0**		
	0.7nm2µm218nm,0.6s								
BNDI	**Bandanaira**	**7.74**	**129**	P	**Pn**	**18 36 42.4**	**+1.2**		
BNDI	**Bandanaira**	**7.74**	**129**	P	**Pn**	**18 36 42.2**	**+1.0**		
	4µm280nm,0.8s								
FAKI	**Fak Fak**	**8.97**	**112**		**Pn**	**18 36 56.3**	**-1.3**		
FAKI	**Fak Fak**	**8.97**	**112**	P	**Pn**	**18 36 56.5**	**-1.1**		
FAKI	**Fak Fak**	**8.97**	**112**	S	**Sn**	**18 38 33.7**	**-3.8**		
FAKI	**Fak Fak**	**8.97**	**112**	P	**Pn**	**18 36 56.7**	**-0.9**		
	1µm84nm,0.9s								
MTKI	**Muara Teweh, K**	**9.11**	**262**	P	**Pn**	**18 37 00.7**	**+1.2**		
	174nm,1.1s								
MMRI	**Maumere**	**9.14**	**190**		**Pn**	**18 37 00.0**	**+0.2**		
MMRI	**Maumere**	**9.14**	**190**	P	**Pn**	**18 37 00.6**	**+0.8**		
MMRI	**Maumere**	**9.14**	**190**	P	**Pn**	**18 37 01.3**	**+1.5**		
	911nm78nm,0.9s								
EDFI	**Ende, Flores**	**9.36**	**194**	P	**Pn**	**18 37 03.7**	**+0.8**		
	35nm,0.7s								
BBKI	**Banjar Baru**	**9.85**	**247**	P	**Pn**	**18 37 11.9**	**+2.8**		
	75nm,0.8s								
SOEI	**Soe**	**10.10**	**178**		**Pn**	**18 37 13.4**	**+0.8**		
SOEI	**Soe**	**10.10**	**178**	P	**Pn**	**18 37 13.7**	**+1.1**		
SOEI	**Soe**	**10.10**	**178**	P	**Pn**	**18 37 16.4**	**+3.8**		
	2µm187nm,0.9s								
BATI	**Baumata**	**10.55**	**181**	P	**Pn**	**18 37 20.9**	**+2.5**		
	132nm,0.8s,baz=75,slow=0.2,SNR=30								
BATI	**Baumata**	**10.55**	**181**	P	**Pn**	**18 37 22.0**	**+3.6**		
	1µm178nm,0.9s								
KMPI	**Kaimana, Papua**	**10.59**	**113**	P	**Pn**	**18 37 19.4**	**+0.5**		
WSI	**Waingapu**	**10.64**	**200**	P	**Pn**	**18 37 20.9**	**+1.4**		
	2µm196nm,1.0s								
WBSI	**Waikabubak, Su**	**10.95**	**204**	P	**Pn**	**18 37 25.5**	**+1.9**		
	57nm,1.0s								
PLAI	**Plampang**	**11.02**	**214**	P	**Pn**	**18 37 28.4**	**+3.9**		
PLAI	**Plampang**	**11.02**	**214**	P	**Pn**	**18 37 27.6**	**+3.0**		
	45nm,0.7s								
BASI	**Baing, Sumba**	**11.07**	**197**	P	**Pn**	**18 37 27.0**	**+1.9**		
	1µm116nm,1.0s								
SAUI	**Saumlaki**	**11.13**	**139**	Pn	**Pn**	**18 37 25.3**	**-0.5**		
TWSI	**Taliwang, Sumb**	**11.47**	**217**	P	Pn	18 37 34.7	+4.3		
	709nm78nm,0.8s								
SBUM	**Sibu**	**11.86**	**280**		**Pn**	**18 37 34.9**	**-0.5**		
SBUM	**Sibu**	**11.86**	**280**	P	**Pn**	**18 37 37.3**	**+1.9**		
SRBI	**Singaraja**	**12.10**	**226**	P	**P**	**18 37 46.8**	**+2.6**		
	62nm,1.2s								
BAKI	**Biak**	**12.30**	**97**	P	**P**	**18 37 43.2**	**-3.3**		
	1µm160nm,1.0s								
KMMI	**Kalianget**	**12.38**	**233**	P	**Pn**	**18 37 45.6**	**+3.5**		
DNP	**Denpasar**	**12.52**	**224**	P	**Pn**	**18 37 45.0**	**+1.2**		
BLJI	**Banyuglugur**	**13.09**	**232**	P	**Pn**	**18 37 53.3**	**+2.1**		
JAGI	**Jajag, Banyuwa**	**13.13**	**228**		**Pn**	**18 37 54.5**	**+2.8**		
JAGI	**Jajag, Banyuwa**	**13.13**	**228**	P	**Pn**	**18 37 53.9**	**+2.2**		
JAGI	**Jajag, Banyuwa**	**13.13**	**228**	P	**Pn**	**18 37 55.1**	**+3.4**		
	1µm198nm,0.9s								
GRJI	**Gresik**	**13.53**	**237**	P	**Pn**	**18 37 59.3**	**+2.6**		
	166nm,0.9s								
TGY	**Tagaytay City**	**13.92**	**348**	P	**Pn**	**18 38 02.7**	**+1.0**		
	103nm,0.3s,baz=264,slow=3.7,SNR=6.8								
NGJI	**Ngawi**	**14.62**	**238**	P	**P**	**18 38 13.5**	**+1.2**		
	130nm,1.1s								
SMPI	**Sarmi**	**14.99**	**99**	P	**P**	**18 38 16.6**	**+0.3**		
	954nm59nm,0.9s								
MTN	**Manton Dam**	**14.99**	**152**		**Pn**	**18 38 16.0**	**+1.0**		
MTN				IAmb	IAmb	18 38 27.0			
	comp=Z,40nm,1.5s								
PCJI	**Pacitan**	**15.30**	**236**	P	**P**	**18 38 21.2**	**+1.4**		
	comp=Z,2µmcomp=Z,206nm,0.7s								
SMRI	**Semarang**	**15.34**	**241**		**Pn**	**18 38 20.3**	**+0.9**		
SMRI	**Semarang**	**15.34**	**241**	P	**P**	**18 38 21.7**	**+1.4**		
	comp=Z,222nm,1.1s								
UGM	**Wanagama**	**15.70**	**238**	P	**Pn**	**18 38 23.6**	**-0.1**		
UGM	**Wanagama**	**15.70**	**238**	P	**P**	**18 38 26.1**	**+1.9**		
UGM	**Wanagama**	**15.70**	**238**	P	**Pn**	**18 38 24.6**	**+0.9**		
	comp=Z,73nm,1.1s								
GENI	**Genyem**	**16.52**	**100**	P	**Pn**	**18 38 35.5**	**+1.8**		
	comp=Z,110nm,1.1s								
TPI	**Tanjungpandan**	**16.55**	**259**	P	**P**	**18 38 34.7**	**+1.1**		
	comp=Z,47nm,0.9s								
KNRA	**Kununurra**	**16.69**	**164**		**P**	**18 38 35.2**	**+0.2**		
KNRA				IAmb	IAmb	18 38 48.7			
	comp=Z,58nm,1.2s								
KPJI	**Karang Pucung**	**16.80**	**242**	P	**P**	**18 38 37.6**	**+1.2**		
	comp=Z,1µmcomp=Z,135nm,0.9s								
JAY	**Jayapura**	**17.04**	**100**	P	**Pn**	**18 38 40.7**	**+0.8**		
	comp=Z,21nm,0.8s,baz=232,slow=10,SNR=9.7								
JAY	**Jayapura**	**17.04**	**100**	P	**Pn**	**18 38 40.5**	**+0.5**		
PPBI	**Pangkal Pinang**	**17.95**	**262**	P	**P**	**18 38 50.6**	**+1.6**		
BBJI	**Bungbulang**	**18.00**	**244**	P	**P**	**18 38 49.8**	**+0.2**		
CNJI	**Cibinong**	**18.41**	**245**	P	**P**	**18 38 55.1**	**+1.1**		
FITZ	**Fitzroy Crossi**	**18.47**	**175**	P	**P**	**18 38 55.9**	**+1.4**		
	comp=Z,30nm,0.6s,baz=8.3,slow=7.7,SNR=58								
FITZ				S	**S**	**18 42 14.2**	**-2.5**		
	comp=Z,4.6nm,0.7s,baz=330,slow=20,SNR=6.2								
FITZ				ScP	**ScP**	**18 46 37.8**	**+0.2**		
	comp=Z,2.2nm,0.6s,baz=347,slow=4.5,SNR=6.7								
FITZ	**Fitzroy Crossi**	**18.47**	**175**		**P**	**18 38 55.1**	**+0.5**		
MMPI	**Merauke**	**18.64**	**119**	P	**Pn**	**18 38 58.3**	**-0.4**		
	comp=Z,271nm,1.1s								
DSRI	**Dabo**	**19.35**	**267**	P	**P**	**18 39 06.1**	**+1.9**		
TPRI	**Tanjung Pinang**	**19.39**	**272**	P	**P**	**18 39 06.8**	**+2.2**		
	comp=Z,89nm,0.9s								
BTDF	**Bukit Timah Da**	**20.16**	**273**	P	**P**	**18 39 15.0**	**+2.1**		
KASI	**Kota Agung**	**20.26**	**253**	P	**P**	**18 39 13.2**	**-0.8**		
	comp=Z,75nm,0.7s								
MDSI	**Maura Dua**	**20.30**	**256**	P	**P**	**18 39 13.9**	**-0.5**		
	comp=Z,33nm,1.1s								
LWLI	**Liwa**	**20.55**	**255**	P	**P**	**18 39 18.6**	**+1.4**		
	comp=Z,2µmcomp=Z,96nm,0.7s								
MNAI	**Manna**	**21.46**	**257**	P	**P**	**18 39 25.6**	**-1.2**		
MNAI	**Manna**	**21.46**	**257**	P	**P**	**18 39 28.9**	**+2.0**		
MNAI	**Manna**	**21.46**	**257**	P	**P**	**18 39 26.6**	**-0.3**		
	comp=Z,231nm,1.1s								
MBWA	**Marble Bar**	**21.82**	**191**	P	**P**	**18 39 29.0**	**-1.5**		
MBWA	**Marble Bar**	**21.82**	**191**	P	**P**	**18 39 30.8**	**+0.3**		
MASI	**Maura Aman, Be**	**21.95**	**261**	P	**P**	**18 39 31.9**	**0.0**		
PSA00	**Pilbara Seismi**	**22.20**	**190**	P	**P**	**18 39 32.9**	**-1.3**		
PSA00				IAmb	IAmb	18 39 39.0			
	comp=Z,17nm,1.1s								
PSA00	**Pilbara Seismi**	**22.20**	**190**	P	**P**	**18 39 33.5**	**-0.7**		
PSA00				IAmb	IAmb	18 39 38.3			
	comp=Z,11nm,1.4s								
PSA00	**Pilbara Seismi**	**22.20**	**190**	P	**P**	**18 39 35.7**	**+1.4**		
WB0	**Warramunga Arr**	**22.53**	**153**		**P**	**18 39 37.3**	**-0.1**		
WB0				IAmb	IAmb	18 40 22.4			
	comp=Z,20nm,0.9s								
WRAB	**Tennant Creek**	**22.66**	**154**	P	**P**	**18 39 38.9**	**+0.3**		
WRAB	**Tennant Creek**	**22.66**	**154**	P	**P**	**18 39 39.5**	**+0.9**		
WRA	**Warramunga Arr**	**22.66**	**154**	P	**P**	**18 39 39.8**	**+1.2**		
	comp=Z,5.2nm,0.5s,baz=337,slow=10,SNR=85								
WRA				S	**S**	**18 43 30.8**	**-3.3**		
	comp=Z,1.8nm,0.9s,baz=337,slow=18,SNR=5.2								
WRA				ScP	**ScP**	**18 46 47.5**	**-0.2**		
	comp=Z,1.5nm,0.9s,baz=343,slow=3.3,SNR=6.5								
	comp=Z,5.2nm,0.5s								

WRA	**Warramunga Arr**	**22.66**	**154**	P	**P**	**18 39 36.3**	**-2.3**		
WR8	**Warramunga Arr**	**22.75**	**153**		**P**	**18 39 39.6**	**+0.3**		
WR8				IAmb	IAmb	18 39 42.9			
	comp=Z,11nm,0.7s								
TPUB	**Ta-pu**	**22.98**	**352**		**P**	**18 39 40.2**	**-1.2**		
TPUB				IAmb	IAmb	18 39 43.8			
	comp=Z,44nm,0.9s								
TPUB	**Ta-pu**	**22.98**	**352**	P	**P**	**18 39 41.8**	**+0.4**		
IPM	**Ipoh**	**23.21**	**280**		**P**	**18 39 43.9**	**+0.2**		
IPM				IAmb	IAmb	18 39 49.0			
	comp=Z,19nm,0.7s								
SSLB	**Suanglung**	**23.41**	**353**	P	**P**	**18 39 45.4**	**0.0**		
SSLB				IAmb	IAmb	18 39 53.0			
	comp=Z,17nm,0.8s								
SSLB	**Suanglung**	**23.41**	**353**	P	**P**	**18 39 46.6**	**+1.2**		
PDSI	**Padang**	**23.48**	**267**	P	**P**	**18 39 46.8**	**+0.6**		
	comp=Z,731nmcomp=Z,53nm,0.7s								
KULM	**Kulim**	**23.73**	**282**		**P**	**18 39 46.3**	**-2.0**		
KULM				IAmb	IAmb	18 39 51.2			
	comp=Z,18nm,1.1s								
KULM	**Kulim**	**23.73**	**282**	P	**P**	**18 39 50.4**	**+2.1**		
NACB	**Ninganchiao**	**23.73**	**355**	P	**P**	**18 39 47.8**	**-0.5**		
NACB				IAmb	IAmb	18 40 24.5			
	comp=Z,17nm,1.1s								
COEN	**Coen**	**23.83**	**128**	P	**P**	**18 39 48.4**	**-0.9**		
COEN				IAmb	IAmb	18 40 27.7			
	comp=Z,14nm,0.9s								
COEN	**Coen**	**23.83**	**128**	P	**P**	**18 39 50.2**	**+0.9**		
PPSI	**Pulau Pagai**	**24.10**	**262**	P	**P**	**18 39 53.5**	**+1.7**		
	comp=Z,125nm,1.2s								
YHNB	**Yeheng**	**24.24**	**354**	P	**P**	**18 39 51.0**	**-2.0**		
YHNB	**Yeheng**	**24.24**	**354**	P	**P**	**18 39 53.6**	**+0.6**		
SISI	**Saibi**	**24.88**	**266**	P	**P**	**18 40 00.2**	**+1.4**		
	comp=Z,67nm,0.7s								
RPSI	**Rantau Prapat**	**25.08**	**275**		**P**	**18 39 59.6**	**-1.0**		
RPSI				IAmb	IAmb	18 40 03.8			
	comp=Z,18nm,0.8s								
PMG	**Port Moresby**	**25.12**	**113**	P	**P**	**18 40 01.3**	**+0.4**		
	comp=Z,17nm,1.0s,baz=321,slow=6.5,SNR=3.7								
	comp=Z,17nm,1.0s								
PMG	**Port Moresby**	**25.12**	**113**	P	**P**	**18 40 00.7**	**-0.3**		
PMG				IAmb	IAmb	18 40 04.5			
	comp=Z,21nm,1.1s								
PBSI	**Pulau Batu**	**25.63**	**269**	P	**P**	**18 40 06.6**	**+0.9**		
	comp=Z,34nm,1.1s								
AS31	**Alice Springs**	**25.83**	**159**		**P**	**18 40 07.6**	**+0.3**		
ASAR	**Alice Springs**	**25.83**	**159**	P	**P**	**18 40 07.8**	**+0.5**		
	comp=Z,1.3nm,0.3s,baz=345,slow=7.1,SNR=28								
ASAR				PcP	**PcP**	**18 43 33.2**	**+0.8**		
	comp=Z,0.9nm,0.4s,baz=348,slow=2.4,SNR=4.0								
ASAR				ScP	**ScP**	**18 46 55.6**	**-0.7**		
	comp=Z,2.3nm,0.6s,baz=345,slow=2.4,SNR=16								
	comp=Z,1.3nm,0.3s								
ASAR	**Alice Springs**	**25.83**	**159**	P	**P**	**18 40 05.8**	**-1.5**		
ASAR	**Alice Springs**	**25.83**	**159**		**ScP**	**18 46 56.8**	**+0.4**	

BNX					pmax	pmax			
	comp=Z,8.0nm,0.9s								
BNX					pmax	pmax			
	comp=Z,540nm,4.6s								
ASAJ	**Asahikawa**	**46.59**	**19**	P		**P**	**18 43 03.0**	**+0.6**	
	comp=Z,43nm,0.7s,baz=224,slow=10,SNR=14								
	comp=Z,43nm,0.7s								
JKA	**Kamikawa-asahi**	**46.59**	**19**	P		**P**	**18 43 01.3**	**-1.2**	
HILR	**Hailar Array B**	**49.09**	**356**	P		**P**	**18 43 21.8**	**+0.2**	
	comp=Z,17nm,0.6s,baz=177,slow=9.6,SNR=17								
	comp=Z,17nm,0.6s								
SONM	**Songino Array**	**49.63**	**345**	P		**P**	**18 43 23.9**	**-2.0**	
	comp=Z,2.2nm,0.4s,baz=158,slow=9.3,SNR=2.5								
	comp=Z,2.2nm,0.4s								
HEH	**HeiHe**	**49.75**	**3**	*eP*		**P**	**18 43 26.3**	**-0.2**	
HEH					pmax	pmax			
	comp=Z,14nm,0.6s								
MKAR	**Makanchi Array**	**58.75**	**328**	P		P	**18 44 31.4**	**-0.3**	
	comp=Z,2.2nm,0.5s,baz=123,slow=8.3,SNR=23								
MKAR					ScP	**ScP**	**18 49 02.5**	**-1.9**	
	comp=Z,2.2nm,0.7s,baz=130,slow=5.0,SNR=9.2								
	comp=Z,2.2nm,0.5s								
MKAR	**Makanchi Array**	**58.75**	**328**	P		P	**18 44 30.9**	**-0.8**	
PETK	**Petropavlovsk-**	**59.56**	**23**	P		**P**	**18 44 38.0**	**+0.9**	
	comp=Z,20nm,0.8s,baz=223,slow=1.9,SNR=48								
	comp=Z,20nm,0.8s								
PETK	**Petropavlovsk-**	**59.56**	**23**	P		**P**	**18 44 36.5**	**-0.6**	
ARSB	**Arslanbob**	**61.35**	**318**	P		**P**	**18 44 48.5**	**-1.2**	
YAK	**Yakutsk**	**61.62**	**3**	P		**P**	**18 44 50.4**	**-0.4**	
ZALV	**Zalesovo Beam**	**62.32**	**335**	P		**P**	**18 44 53.7**	**-2.0**	
	comp=Z,1.0nm,0.4s,baz=127,slow=6.1,SNR=6.1								
	comp=Z,1.0nm,0.4s								
MA2	**Magadan**	**62.60**	**15**	P		**P**	**18 44 57.9**	**+0.4**	
KURBB	**Kurchatov Arra**	**63.07**	**329**	P		**P**	**18 45 00.0**	**-0.7**	
	comp=Z,2.2nm,0.7s,baz=139,slow=6.3,SNR=32								
	comp=Z,2.2nm,0.7s								
KURK	**Kurchatov**	**63.08**	**330**	P		**P**	**18 44 59.8**	**-1.0**	
KURK					IAmb	IAmb	18 45 02.1		
	comp=Z,8.1nm,0.5s								
CASY	**Casey**	**67.23**	**186**	P		**P**	**18 45 27.5**	**+0.3**	
BVAR	**Borovoye Array**	**68.61**	**329**	P		**P**	**18 45 35.4**	**-0.7**	
	comp=Z,1.4nm,0.7s,baz=137,slow=8.1,SNR=6.1								
	comp=Z,1.4nm,0.7s								
TIXI	**Tiksi**	**71.20**	**2**	P		**P**	**18 45 50.2**	**-1.3**	
TIXI					IAmb	IAmb	18 45 51.7		
	comp=Z,17nm,0.8s								
ATKA	**Atka Island**	**72.81**	**35**	P		**P**	**18 46 01.9**	**+0.4**	
AB31	**Akbulak array**	**72.97**	**322**	P		**P**	**18 46 01.2**	**-1.3**	
VOI	**Vohitsoka**	**78.20**	**248**	P		**P**	**18 46 31.4**	**-1.6**	
AKUT	**Akutan**	**78.23**	**34**	P		**P**	**18 46 33.3**	**+1.0**	
RAYN	**Ar Rayn**	**79.21**	**294**	P		**P**	**18 46 36.9**	**-1.5**	
MAW	**Mawson**	**79.69**	**200**	P		**P**	**18 46 41.1**	**+1.1**	
	comp=Z,3.5nm,0.6s,baz=100,slow=5.7,SNR=13								
	comp=Z,3.5nm,0.6s								
VNDA	**Vanda**	**80.53**	**172**	P		**P**	**18 46 45.5**	**+1.2**	
	comp=Z,2.8nm,0.8s,baz=309,slow=6.4,SNR=17								
	comp=Z,2.8nm,0.8s								
VNDA	**Vanda**	**80.53**	**172**	P		**P**	**18 46 45.1**	**+0.8**	
SBA	**Scott Base**	**81.47**	**172**	P		**P**	**18 46 51.1**	**+1.9**	
SDPT	**Sand Point**	**81.50**	**34**	P		**P**	**18 46 50.0**	**+0.1**	
SDPT	**Sand Point**	**81.50**	**34**	P		**P**	**18 46 50.7**	**+0.8**	
K15K	**Wolf Creek Mou**	**82.49**	**27**	IAmb		IAmb	18 46 58.1		
	comp=Z,20nm,0.9s								
J16K	**Anvik River**	**83.13**	**26**	P		**P**	**18 46 59.0**	**+0.8**	
KBZ	**Khabaz**	**83.22**	**314**	P		**P**	**18 46 59.7**	**+0.7**	
	comp=Z,2.1nm,0.8s,baz=129,slow=4.1,SNR=3.1								
	comp=Z,2.1nm,0.8s								
E18K	**Tukpaklerik C**	**84.07**	**22**	IAmb		IAmb	18 47 05.9		
	comp=Z,16nm,0.7s								
C19K	**Lookout Ridge**	**84.82**	**21**	IAmb		IAmb	18 47 09.8		
	comp=Z,16nm,0.8s								
SII	**Sitkinak Islan**	**85.19**	**33**	P		**P**	**18 47 09.6**	**+0.9**	
D19K	**Kuna River**	**85.22**	**21**	IAmb		IAmb	18 47 11.3		
	comp=Z,14nm,1.1s								
E19K	**Redstone River**	**85.35**	**22**			**P**	**18 47 09.6**	**+0.3**	
E19K					IAmb	IAmb	18 47 12.9		
	comp=Z,13nm,1.0s								
OHAK	**Old Harbor**	**85.75**	**33**	P		**P**	**18 47 12.4**	**+1.0**	
	comp=Z,19nm,2.4s								
B21K	**Ikpikpuk River**	**86.64**	**20**	IAmb		IAmb	18 47 19.1		
	comp=Z,8.2nm,0.8s								
B22K	**Teshekpuk Lake**	**87.14**	**20**	IAmb		IAmb	18 47 19.5		
	comp=Z,4.8nm,0.8s								
E22K	**Anaktuvuk Pass**	**87.48**	**22**	P		**P**	**18 47 19.8**	**0.0**	
BPAW	**Bear Paw Mtn.**	**87.49**	**26**	P		**P**	**18 47 18.3**	**-1.5**	
BPAW					IAmb	IAmb	18 47 24.8		
	comp=Z,11nm,1.0s								
COLD	**Coldfoot**	**88.03**	**23**	P		**P**	**18 47 21.6**	**-0.6**	
COLD					IAmb	IAmb	18 47 24.3		
	comp=Z,4.3nm,0.6s								
C23K	**Itkillik River**	**88.05**	**20**	IAmb		IAmb	18 47 24.2		
	comp=Z,13nm,1.4s								
E23K	**Chandalar**	**88.30**	**22**	IAmb		IAmb	18 47 27.4		
	comp=Z,3.9nm,0.8s								
MMAI	**Mount Meron Ar**	**88.53**	**303**	P		**P**	**18 47 24.4**	**-1.1**	
	comp=Z,0.9nm,0.5s,baz=120,slow=5.2,SNR=2.8								
	comp=Z,0.9nm,0.5s								
ILAR	**Eielson Array**	**89.29**	**25**	P		**P**	**18 47 27.2**	**-1.0**	
	comp=Z,0.8nm,0.5s,baz=251,slow=4.8,SNR=15								
	comp=Z,0.8nm,0.5s								
BRTR	**Keskin Array B**	**89.95**	**310**	P		**P**	**18 47 31.1**	**-1.0**	
	comp=Z,0.7nm,0.7s,baz=98,slow=5.0,SNR=4.4								
	comp=Z,0.7nm,0.7s								
QSPA	**South Pole Qui**	**90.34**	**180**	P		**P**	**18 47 37.5**	**+4.3**	
	comp=Z,1.6nm,0.5s,baz=320,slow=3.9,SNR=26								
QSPA	**South Pole Qui**	**90.34**	**180**	IAmb		IAmb	18 47 44.7		
	comp=Z,8.0nm,1.4s								
I27K	**Kandik River**	**91.49**	**24**	IAmb		IAmb	18 47 41.9		
	comp=Z,7.8nm,1.2s								
ARCES	**ARCESS Array B**	**92.56**	**340**	P		**P**	**18 47 41.6**	**-1.8**	
	comp=Z,1.1nm,0.5s,baz=87,slow=7.4,SNR=9.6								
	comp=Z,1.1nm,0.5s								
ARCES	**ARCESS Array B**	**92.56**	**340**	IAmb		IAmb	18 47 42.5		
	comp=Z,18nm,1.5s								
G29M	**Pine Creek**	**92.80**	**23**	P		**P**	**18 47 44.6**	**+0.1**	
G29M					IAmb	IAmb	18 47 46.2		
	comp=Z,11nm,1.1s								
SPITS	**Spitsbergen Ar**	**93.16**	**349**	P		**P**	**18 47 44.8**	**-1.2**	
	comp=Z,4.1nm,0.7s,baz=113,slow=3.3,SNR=11								
	comp=Z,4.1nm,0.7s								
FINES	**FINESS Array B**	**93.40**	**332**	P		**P**	**18 47 46.2**	**-1.1**	
	comp=Z,5.6nm,1.2s,baz=60,slow=3.4,SNR=1.5								
	comp=Z,5.6nm,1.2s								
BOSA	**Boshof**	**97.80**	**241**	P		**P**	**18 48 07.7**	**-0.6**	
	comp=Z,1.9nm,0.8s,baz=27,slow=2.3,SNR=1.5								
	comp=Z,1.9nm,0.8s								
TORD	**Torodi Ar. Bea**	**121.18**	**286**	PKP		**PKPdf**	**18 53 23.9**	**-1.4**	
	comp=Z,2.4nm,0.4s,baz=77,slow=2.8,SNR=1.9								
TXAR	**Lajitas Array**	**125.84**	**53**	PKP		**PKPdf**	**18 53 32.7**	**-1.4**	
	comp=Z,0.1nm,0.4s,baz=279,slow=2.0,SNR=1.5								

*SNET **16** 18:53:38.0±0.7, 13.°71N×89.°23W, h6km, ML3.1*
*CATAC **16** 18:53:38.9±0.2, 14.°N±1.°×89.°2W±0.°9, h5km, M3.3/22, MLv3.3/22, Error ellipse: s-maj=2.6km s-min=1.6km az=27.2, confirmed*
*GCG **16** 18:53:39.1±1.0, 13.°73N×89.°23W, h6km±10km, MD4.0, ML3.3*

ISC 16 18:53:39.0±0.8, 13.°72N±0.°02×89.°23W±0.°01, h7km±4km, n85, σ0°73/94, 9C-10D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
UEES	**Universidad Ev**	**0.01**	**227**	ǁ	*eP*	**Pg**	**18 53 40.3**	**0.0**
UEES					*eS*	**Sg**	**18 53 41.3**	**+0.1**
UEES	**Universidad Ev**	**0.01**	**227**	P		**Pg**	**18 53 40.0**	**-0.2**
UESS	**Universidad de**	**0.03**	**95**	⇑	*eP*	**Pg**	**18 53 40.5**	**+0.1**
UESS					*eS*	**Sg**	**18 53 41.7**	**+0.3**
PIC2	**El Picacho**	**0.03**	**313**	ǁ	*eP*	**Pg**	**18 53 40.9**	**+0.4**
PIC2					*eS*	**Sg**	**18 53 42.6**	**+1.0**
UTEC	**Universidad Te**	**0.04**	**126**	P		**Pg**	**18 53 40.7**	**+0.3**
UTEC	**Universidad Te**	**0.04**	**126**	S		**Sg**	**18 53 41.8**	**+0.3**
BOQS	**Boqueron**	**0.05**	**285**	ǁ	*iP*	**Pg**	**18 53 40.9**	**+0.2**
MAGS	**Ministerio de**	**0.07**	**234**	⇑	*eP*	**Pg**	**18 53 41.0**	**+0.3**
MAGS					*eS*	**Sg**	**18 53 42.6**	**+0.6**
PMON	**Piamonte**	**0.08**	**263**	ǁ	*eP*	**Pg**	**18 53 41.3**	**+0.3**
PMON	**Piamonte**	**0.08**	**263**	S		**Sg**	**18 53 43.2**	**+0.8**
PMON	**Piamonte**	**0.08**	**263**	P		**Pg**	**18 53 41.3**	**+0.3**
LOMA	**Loma Larga**	**0.10**	**142**	ǁ	*iP*	**Pg**	**18 53 41.2**	**-0.1**
LOMA	**Loma Larga**	**0.10**	**142**	S		**Sg**	**18 53 43.1**	**+0.3**
LOMA	**Loma Larga**	**0.10**	**142**	P		**Pg**	**18 53 41.1**	**-0.1**
LFU	**La Fuente**	**0.12**	**77**	⇑	*iP*	**Pg**	**18 53 42.0**	**+0.4**
QUEZ	**Alcaldia de Qu**	**0.12**	**341**		*eP*	**Pg**	**18 53 42.1**	**+0.6**
PANCS	**Alcalda de**	**0.12**	**155**		*eP*	**Pg**	**18 53 41.4**	**-0.2**
PANCS	**Alcalda de**	**0.12**	**155**	S		**Sg**	**18 53 43.5**	**+0.1**
PANCS	**Alcalda de**	**0.12**	**155**	P		**Pg**	**18 53 41.4**	**-0.2**
CEDA	**San Andres**	**0.18**	**297**	P		**Pg**	**18 53 42.9**	**+0.3**
CEDA	**San Andres**	**0.18**	**297**	S		**Sg**	**18 53 46.3**	**+1.3**
LBRS	**Las Brisas**	**0.18**	**85**	ǁ	*eP*	**Pg**	**18 53 43.2**	**+0.5**
LFRS	**El Faro**	**0.19**	**121**	ǁ	*iP*	**Pg**	**18 53 43.1**	**+0.2**
JAYA	**Jayaque - finc**	**0.22**	**252**	ǁ	*eP*	**Pg**	**18 53 43.7**	**+0.3**
JAYA	**Jayaque - finc**	**0.22**	**252**		*i P*	**Pg**	**18 53 43.7**	**+0.3**
JAYA					*i S*	**Sg**	**18 53 47.4**	**+1.0**
JAYA	**Jayaque - finc**	**0.22**	**252**	P		**Pg**	**18 53 43.6**	**+0.2**
LALI	**Alcalda de L**	**0.25**	**200**	ǁ	*iP*	**Pg**	**18 53 44.2**	**+0.4**
LALI	**Alcalda de L**	**0.25**	**200**		*i P*	**Pg**	**18 53 44.2**	**+0.4**
LALI					*i S*	**Sg**	**18 53 48.4**	**+1.3**
LALI					IAML		18 53 49.0	
	comp=E,7µm,0.4s							
LALI	**Alcalda de L**	**0.25**	**200**	P		**Pg**	**18 53 44.1**	**+0.2**
PAVA	**Las Pavas**	**0.29**	**92**	ǁ	*eP*	**Pg**	**18 53 45.2**	**+0.5**
PAVA	**Las Pavas**	**0.29**	**92**	S		**Sg**	**18 53 49.7**	**+1.2**
PAVA	**Las Pavas**	**0.29**	**92**	P		**Pg**	**18 53 45.1**	**+0.5**
SNJE	**San Jose**	**0.39**	**292**	ǁ	*eP*	**Pg**	**18 53 47.1**	**+0.5**
CEVE	**Cerro Verde**	**0.40**	**285**		*eP*	**Pb**	**18 53 47.8**	**-0.7**
CEVE	**Cerro Verde**	**0.40**	**285**	S		**Sb**	**18 53 54.0**	**-0.8**
CEVE	**Cerro Verde**	**0.40**	**285**	P		**Pb**	**18 53 47.9**	**-0.6**
SBLS	**San Blas**	**0.40**	**287**	ǁ	*iP*	**Pg**	**18 53 47.5**	**+0.8**
SNVI	**San Vicente**	**0.40**	**106**		*eP*	**Pg**	**18 53 47.0**	**+0.3**
UNIC	**Universidad Ca**	**0.40**	**310**	P		**Pg**	**18 53 47.0**	**+0.2**
UNIC	**Universidad Ca**	**0.40**	**310**	S		**Sg**	**18 53 53.3**	**+1.2**
RTR	**El Retiro**	**0.44**	**293**		*eP*	**Pg**	**18 53 48.3**	**+0.8**
UESV	**Universidad de**	**0.44**	**101**	P		**Pg**	**18 53 47.6**	**0.0**
UESV	**Universidad de**	**0.44**	**101**	S		**Sg**	**18 53 54.2**	**+0.8**
TECO	**Alcaldia de Te**	**0.48**	**113**	ǁ	*eP*	**Pg**	**18 53 48.1**	**0.0**
TECO	**Alcaldia de Te**	**0.48**	**113**	S		**Sg**	**18 53 54.9**	**+0.5**
TECO	**Alcaldia de Te**	**0.48**	**113**	P		**Pg**	**18 53 47.9**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.49**	**92**	ǁ	*eP*	**Pg**	**18 53 48.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**0.49**	**92**	P		**Pg**	**18 53 48.8**	**+0.4**
SCLA	**Alcaldia de Sa**	**0.49**	**92**	S		**Sb**	**18 53 56.3**	**-1.2**
LLGN	**La Laguna**	**0.52**	**33**		*eP*	**Pg**	**18 53 49.2**	**+0.2**
LLGN	**La Laguna**	**0.52**	**33**	S		**Sg**	**18 53 56.5**	**+0.7**
LLGN	**La Laguna**	**0.52**	**33**	P		**Pg**	**18 53 49.1**	**0.0**
NUBE	**Las Nubes**	**0.56**	**289**	ǁ	*eP*	**Pg**	**18 53 50.2**	**+0.3**
NUBE	**Las Nubes**	**0.56**	**289**		*eP*	**Pg**	**18 53 50.2**	**+0.3**
NUBE	**Las Nubes**	**0.56**	**289**	S		**Sg**	**18 53 58.1**	**+0.9**
NUBE	**Las Nubes**	**0.56**	**289**	P		**Pg**	**18 53 50.0**	**+0.2**
RBDL	**Robledal**	**0.59**	**311**	ǁ	*iP*	**Pg**	**18 53 50.4**	**+0.1**
LOAL	**Lomas de Alarc**	**0.60**	**297**	S		**Sb**	**18 53 59.6**	**-1.0**
LOAL	**Lomas de Alarc**	**0.60**	**297**	P		**Pg**	**18 53 49.3**	**-1.2**
SLOZ	**Alcaldia de Sa**	**0.61**	**299**	P		**Pg**	**18 53 49.1**	**-1.7**
SLOZ	**Alcaldia de Sa**	**0.61**	**299**	S		**Sg**	**18 53 59.1**	**+0.2**
MTO3	**Montecristo**	**0.68**	**350**	S		**Sg**	**18 54 02.0**	**+0.9**
MTO3	**Montecristo**	**0.68**	**350**	P		**Pg**	**18 53 51.1**	**-1.1**
TECA	**Tecapa**	**0.74**	**108**		*eP*	**Pg**	**18 53 53.4**	**+0.1**
FAME	**Alcaldia de Sa**	**0.77**	**279**	S		**Sg**	**18 54 04.0**	**+0.2**
FAME	**Alcaldia de Sa**	**0.77**	**279**	P		**Pg**	**18 53 53.8**	**0.0**
ESQI	**Esquipulas**	**0.84**	**353**		*eP*	**Pg**	**18 53 55.1**	**0.0**
ESQI	**Esquipulas**	**0.84**	**353**	S		**Sb**	**18 54 06.7**	**-0.8**
ESQI	**Esquipulas**	**0.84**	**353**	P		**Pg**	**18 53 54.6**	**-0.6**
PACA	**Pacayal**	**0.92**	**106**	P		**Pg**	**18 53 56.6**	**0.0**
PACA	**Pacayal**	**0.92**	**106**	S		**Sb**	**18 54 10.0**	**+0.1**
LCND	**La Caada**	**1.37**	**107**		*eP*	**Pn**	**18 54 03.5**	**-1.1**
LCND	**La Caada**	**1.37**	**107**	P		**Pn**	**18 54 04.1**	**-0.5**
LCND	**La Caada**	**1.37**	**107**	S		**Sb**	**18 54 21.2**	**-1.5**
CNCH	**Conchagua**	**1.43**	**108**		*eP*	**Pn**	**18 54 05.1**	**-0.4**
CNCH	**Conchagua**	**1.43**	**108**	S		**Sg**	**18 54 27.7**	**+2.6**
CNCH	**Conchagua**	**1.43**	**108**	P		**Pn**	**18 54 05.3**	**-0.3**
APG	**El Apazote**	**1.75**	**317**		*eP*	**Pn**	**18 54 10.6**	**+0.7**
POTN	**Potosi Cosigui**	**1.83**	**113**	P		**Pn**	**18 54 10.3**	**-0.6**
POTN					S	**Sg**	**18 54 37.1**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.93**	**80**	P		**Pn**	**18 54 13.4**	**+1.0**
TGUH					S	**Sb**	**18 54 39.6**	**+0.5**
YUSH	**Yuscaran**	**2.33**	**84**	S		**Sb**	**18 54 51.8**	**+1.3**
YUSH	**Yuscaran**	**2.33**	**84**	P		**Pb**	**18 54 20.1**	**-1.4**
CRIN	**San Cristobal**	**2.36**	**115**	S		**Sb**	**18 54 52.1**	**+0.9**
CRIN	**San Cristobal**	**2.36**	**115**	P		**Pn**	**18 54 18.9**	**+0.7**
PKGN	**Cerro Pekin**	**2.43**	**115**	P		**Pn**	**18 54 20.6**	**+1.4**
PKGN					S	**Sb**	**18 54 53.5**	**+0.1**

*IDC **16** 19:04:34.3±1.9, 1.°93N×126.°62E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=181.8km s-min=22.6km az=66.0*
*DJA **16** 19:04:39.3±0.8, 2.°N±2.°×12.°6E±.°, h15km±6km, M3.2/9, mb3.4/1, MLv3.2/9*

ISC 16 19:04:40.6±1.0, 1.°69N±0.°07×126.°54E±0.°07, h35km, n7, σ2§00/10, mb3.3/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TNTI	**Ternate**	**1.23**	**137**	P		**Pn**	**19 05 01.8**	**+0.4**
TNTI					S	**Sn**	**19 05 18.2**	**+1.4**
SGSI	**Sangihe**	**2.23**	**333**	P		**Pn**	**19 05 15.2**	**+0.1**
SGSI					S	**Sn**	**19 05 44.5**	**+3.1**
KMSI	**Cibinong**	**2.78**	**247**	P		**Pn**	**19 05 23.1**	**+0.4**
KMSI					S	**Sn**	**19 05 56.1**	**+1.0**
WRA	**Warramunga Arr**	**22.82**	**161**	P		**P**	**19 09 40.0**	**-0.7**
	0.5nm,0.7s,baz=340,slow=11,SNR=6.2							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**26.20**	**165**	P		**P**	**19 10 13.7**	**+1.4**
	0.3nm,0.5s,baz=344,slow=9.6,SNR=11							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**59.12**	**326**	P		**P**	**19 14 34.3**	**-3.5**
	0.2nm,0.5s,baz=130,slow=8.0,SNR=4.1							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**63.35**	**328**	P		**P**	**19 15 05.7**	**-0.6**
	0.2nm,0.4s,baz=118,slow=5.3,SNR=1.9							
	0.2nm,0.4s							

*ISK **16** 19:14:11.3, 33.°91N×34.°65E, h72km, ML3.1/15*
*NIC **16** 19:14:12.1, 33.°92N×34.°66E, h34km±65km, ML2.5/8*
*GRAL **16** 19:14:13.6±0.3, 33.°92N×34.°74E, h20km±2km, MD3.2*
*GII **16** 19:14:13.7±0.0, 33.°73N±0.°01×34.°70E±0.°02, h9km, Mws2.8, confirmed*
*JSO **16** 19:14:14.4±0.0, 34.°N±2.°×3.°5E±.°, h-1km±2km, M3.5/8, Md3.5/8, ML3.5/6, MLv3.4/8, MLv3.4/8*
*AFAD **16** 19:14:20.1, 34.°80N×34.°72E, h9km±1km, ML2.7*

ISC 16 19:14:09.3±1.1, 33.°92N±0.°02×34.°66E±0.°03, h14km±9km, n130, σ1§49/153, 2C-9D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BEYL	**Beirut**	**0.70**	**94**		*eP*	**Pn**	**19 14 25.1**	**+0.5**
BHL	**Bhannes**	**0.83**	**91**		*eP*	**Pn**	**19 14 26.9**	**+0.3**
QRWL	**Qaraoun**	**0.93**	**113**		*eP*	**Pn**	**19 14 29.0**	**+1.0**
HNTI	**Hanita**	**0.94**	**153**	P		**Pn**	**19 14 28.6**	**+0.6**
HNTI	**Hanita**	**0.94**	**153**	P		**Pn**	**19 14 28.0**	**-0.1**
HNTI	**Hanita**	**0.94**	**153**	S		**Sg**	**19 14 37.8**	**-1.9**
ZRT	**Zar'it**	**0.97**	**147**	P		**Pn**	**19 14 29.1**	**+0.6**
MTLA	**Metula**	**1.00**	**130**	P		**Pn**	**19 14 29.7**	**+0.8**
MSAM	**Misgav Am**	**1.00**	**132**	P		**Pn**	**19 14 29.8**	**+0.9**
ZAHL	**Zahle**	**1.02**	**93**		*eP*	**Pn**	**19 14 30.4**	**+1.1**
KIRY	**Kiryat Shemona**	**1.04**	**133**	P		**Pn**	**19 14 30.3**	**+0.9**
KIRY	**Kiryat Shemona**	**1.04**	**133**	S		**Sg**	**19 14 42.4**	**-0.6**
GOSH	**HaGoshrim**	**1.07**	**131**	P		**Pn**	**19 14 30.9**	**+1.1**
GOSH	**HaGoshrim**	**1.07**	**131**	S		**Sg**	**19 14 43.6**	**-0.2**
RCY	**Rachaya**	**1.07**	**113**		*eP*	**Pn**	**19 14 31.2**	**+1.3**
RCY					*eS*	**Sb**	**19 14 44.1**	**+0.6**
SHBL	**Chebaa**	**1.07**	**122**		*eP*	**Pn**	**19 14 31.2**	**+1.2**
YFTH	**Yftach**	**1.09**	**136**	P		**Pn**	**19 14 31.1**	**+1.0**
MMA0B	**Mount Meron ar**	**1.10**	**145**	ǁ		**Pn**	**19 14 31.0**	**+0.7**
MMA0B	**Mount Meron ar**	**1.10**	**145**	S		**Sb**	**19 14 43.6**	**-0.6**
GEM	**Giv'at Ha'Em**	**1.10**	**130**	P		**Pn**	**19 14 31.1**	**+0.9**
GEM	**Giv'at Ha'Em**	**1.10**	**130**	ǁ		**Pn**	**19 14 31.4**	**+1.2**
GEM	**Giv'at Ha'Em**	**1.10**	**130**	S		**Sg**	**19 14 44.6**	**-0.2**
NATI	**Neve Ativ**	**1.11**	**126**	P		**Pn**	**19 14 31.5**	**+1.1**
NATI	**Neve Ativ**	**1.11**	**126**	ǁ		**Pn**	**19 14 31.6**	**+1.1**
NATI	**Neve Ativ**	**1.11**	**126**	S		**Sn**	**19 14 45.5**	**0.0**
HWQ	**Hawqa**	**1.13**	**71**		*eP*	**Pn**	**19 14 31.9**	**+1.2**
HWQ					*eS*	**Sg**	**19 14 45.6**	**-0.1**
LVBS	**Lehavot Habash**	**1.14**	**133**	P		**Pg**	**19 14 31.9**	**+0.8**
AFK	**Afek**	**1.15**	**160**	P		**Pg**	**19 14 31.9**	**+0.5**
HULT	**Hulata**	**1.18**	**137**	P		**Pg**	**19 14 32.6**	**+0.6**
HTEC	**Technion Haifa**	**1.18**	**165**	P		**Pg**	**19 14 32.1**	**+0.1**
ZEFT	**Zefat**	**1.18**	**143**	P		**Pg**	**19 14 32.5**	**+0.5**
PARAL	**Paralimni**	**1.19**	**335**	P		**Pg**	**19 14 32.4**	**+0.3**
PARAL					S	**Sb**	**19 14 46.6**	**-0.2**
PARAL					AML	AML	19 14 49.3	
	0.2nm,0.3s							
PARAL					AML	AML	19 14 50.1	
	0.2nm,0.3s							
KMKB	**Kefar Hamakabi**	**1.19**	**161**	P		**Pg**	**19 14 32.8**	**+0.6**
RSPN	**Rosh Pina**	**1.20**	**142**	P		**Pg**	**19 14 32.6**	**+0.2**
BTOR	**Bet Oren**	**1.22**	**166**	P		**Pg**	**19 14 32.7**	**-0.1**
BTOR	**Bet Oren**	**1.22**	**166**	S		**Sb**	**19 14 47.1**	**-0.7**
AMID	**Amiad**	**1.23**	**143**	P		**Pg**	**19 14 33.1**	**0.0**
AMID	**Amiad**	**1.23**	**143**	S		**Sb**	**19 14 47.7**	**-0.4**
KDZV	**Kedmat Zvi**	**1.24**	**135**	P		**Pg**	**19 14 33.7**	**+0.5**
KDZV	**Kedmat Zvi**	**1.24**	**135**	S		**Sb**	**19 14 48.4**	**+0.1**
ALON	**ALONIM**	**1.26**	**161**	P		**Pg**	**19 14 33.8**	**+0.2**
ALON	**ALONIM**	**1.26**	**161**	S		**Sb**	**19 14 47.9**	**-1.1**
BLGI	**Bet Lehem HaGe**	**1.26**	**159**	P		**Pg**	**19 14 33.9**	**+0.3**
BLGI					S	**Sg**	**19 14 49.6**	**-0.5**
BLGI	**Bet Lehem HaGe**	**1.26**	**159**	ǁ	P	**Pg**	**19 14 33.7**	**0.0**
BLGI	**Bet Lehem HaGe**	**1.26**	**159**	S		**Sb**	**19 14 48.4**	**-0.6**
SPIR	**Sapir Facility**	**1.28**	**145**	P		**Pg**	**19 14 34.0**	**0.0**
HDNS	**Had-Ness**	**1.29**	**140**	P		**Pg**	**19 14 34.4**	**+0.3**
KNHM	**Kefar Nahum**	**1.29**	**143**	P		**Pg**	**19 14 33.9**	**-0.2**
KNHM	**Kefar Nahum**	**1.29**	**143**	S		**Sb**	**19 14 49.2**	**-0.4**
OFRI	**`Ofer**	**1.32**	**168**	P		**Pb**	**19 14 34.0**	**+0.1**
OFRI	**`Ofer**	**1.32**	**168**	S		**Sb**	**19 14 49.1**	**-1.6**
KSHT	**Keshet**	**1.34**	**134**	ǁ	P	**Pg**	**19 14 35.3**	**+0.2**
KSHT	**Keshet**	**1.34**	**134**	S		**Sn**	**19 14 51.8**	**+0.5**
RMOT	**Ramot**	**1.36**	**141**	P		**Pg**	**19 14 35.4**	**-0.1**
HYGV	**Hayogev**	**1.38**	**161**	P		**Pg**	**19 14 35.6**	**-0.3**
HYGV	**Hayogev**	**1.38**	**161**	S		**Sn**	**19 14 51.7**	**-0.5**
MVOU	**Mavrovouni**	**1.38**	**322**	P		**

NACB	**Ninganchiao**	**1.26 233**	P		Pn	19 14 43.6 +1.6

*JMA **16** 19:14:37.7±0.1,23°.9N±0°.3×121°.8E±0°.5,h43km±1km, MV2.8/12,TAIWAN REGION*
*TAP **16** 19:14:38.1,23°.93N×121°.78E,h49km,ML3.0,C*
ISC 16 19:14:38.4±1.2,**23°.90N**±0°.02×**121°.85E**±0°.02,**h41**km±6km, **n118,σ0§97/220,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.23 262**	*i* P		**Pn**	**19 14 46.5**	**+0.3**
TEYL			*i* S		**Sn**	**19 14 53.0**	**+1.5**
HWA	**Hwalien**	**0.24 288**	*i* P		**Pn**	**19 14 46.4**	**+0.3**
HWA			S		**Sn**	**19 14 52.5**	**+0.9**
SHUL	**Shoufeng**	**0.29 247**	*i* P		**Pn**	**19 14 46.9**	**+0.2**
SHUL			S		**Sn**	**19 14 53.7**	**+1.3**
TWD	**Chiawan**	**0.29 307**	*i* P		**Pn**	**19 14 46.5**	**-0.2**
TWD			*i* S		**Sn**	**19 14 52.7**	**+0.2**
ETL	**Fush Village**	**0.33 321**	*i* P		**Pn**	**19 14 46.8**	**-0.4**
ETL			S		**Sn**	**19 14 53.5**	**+0.2**
ETM	**Tongmen**	**0.33 281**	*i* P		**Pn**	**19 14 47.0**	**-0.2**
ETM			*i* S		**Sn**	**19 14 53.3**	**0.0**
TEGC	**Jichi Village**	**0.34 236**	*i* P		**Pn**	**19 14 47.3**	**+0.1**
TEGC			*i* S		**Sn**	**19 14 54.6**	**+1.2**
NACB	**Ninganchiao**	**0.36 319**	*i* P		**Pn**	**19 14 47.0**	**-0.5**
NACB			*i* S		**Sn**	**19 14 53.5**	**-0.3**
ESL	**Shilin**	**0.39 257**	*i* P		**Pn**	**19 14 47.4**	**-0.4**
ESL			*i* S		**Sn**	**19 14 54.4**	**-0.1**
LXIB	**Xiulin Townshi**	**0.42 287**	*i* P		**Pn**	**19 14 47.7**	**-0.6**
LXIB			*i* S		**Sn**	**19 14 54.5**	**-0.8**
EAHA	**Aohua**	**0.44 347**	P		**Pn**	**19 14 48.0**	**-0.5**
EAHA			S		**Sn**	**19 14 55.4**	**-0.1**
EGFH	**Guangfu**	**0.45 239**	P		**Pn**	**19 14 48.2**	**-0.4**
EGFH			S		**Sn**	**19 14 55.6**	**-0.1**
ETLH	**Xiulin Townshi**	**0.45 312**	*eP*		**Pn**	**19 14 48.3**	**-0.5**
ETLH			S		**Sn**	**19 14 55.7**	**-0.2**
WARBT	**Fenglin Townsh**	**0.46 247**	P		**Pn**	**19 14 48.1**	**-0.6**
WARBT			S		**Sn**	**19 14 55.4**	**-0.6**
ENA	**Nanau**	**0.53 349**	*eP*		**Pn**	**19 14 49.2**	**-0.4**
ENA			S		**Sn**	**19 14 57.6**	**0.0**
EWUT	**Wuta**	**0.55 353**	P		**Pn**	**19 14 49.4**	**-0.4**
EWUT			S		**Sn**	**19 14 57.9**	**+0.1**
HGSD	**Ruisui**	**0.56 224**	P		**Pn**	**19 14 49.8**	**-0.2**
HGSD			*eS*		**Sn**	**19 14 59.1**	**+0.8**
WHF	**Hehuan Shan**	**0.59 294**	P		**Pn**	**19 14 50.0**	**-0.8**
WHF			S		**Sn**	**19 14 58.4**	**-1.1**
EHYH	**Wanrong**	**0.62 229**	*eP*		**Pn**	**19 14 50.1**	**-0.6**
EHYH			S		**Sn**	**19 14 58.8**	**-0.7**
OWD	**Renai**	**0.62 275**	P		**Pn**	**19 14 50.4**	**-0.5**
OWD			*eS*		**Sn**	**19 14 58.8**	**-1.1**
EHY	**Hungye**	**0.62 231**	*i* P		**Pn**	**19 14 50.1**	**-0.8**
EHY			S		**Sn**	**19 14 58.6**	**-1.2**
FUSS	**Fushou**	**0.65 302**	*i* P		**Pn**	**19 14 51.2**	**-0.3**
FUSS			S		**Sn**	**19 15 00.4**	**-0.4**
VWDT	**VWDT**	**0.67 257**	*i* P		**Pn**	**19 14 51.4**	**-0.1**
VWDT			*eS*		**Sn**	**19 15 00.1**	**-0.6**
ESAO	**Su ao**	**0.67 359**	P		**Pn**	**19 14 52.0**	**+0.5**
ESAO			S		**Sn**	**19 15 01.5**	**+0.6**
NNSB	**Datong**	**0.68 321**	P		**Pn**	**19 14 51.2**	**-0.5**
NNSB			S		**Sn**	**19 15 00.5**	**-0.7**
WUSB	**Renai**	**0.68 278**	*i* P		**Pn**	**19 14 51.3**	**-0.4**
WUSB			S		**Sn**	**19 15 00.8**	**-0.4**
ECBN	**Changbin**	**0.69 212**	P		**Pn**	**19 14 51.5**	**-0.2**
ECBN			S		**Sn**	**19 15 01.4**	**+0.1**
NNS	**Nan Shan**	**0.69 321**	P		**Pn**	**19 14 51.0**	**-0.9**
NNS			S		**Sn**	**19 15 00.8**	**-0.7**
LATG	**Datong**	**0.70 335**	P		**Pn**	**19 14 51.3**	**-0.7**
LATG			*eS*		**Sn**	**19 15 01.6**	**0.0**
TWC	**Suao**	**0.70 360**	*i* P		**Pn**	**19 14 52.0**	**+0.1**
TWC			*i* S		**Sn**	**19 15 02.1**	**+0.4**
TWT	**Tachien**	**0.71 300**	*eP*		**Pn**	**19 14 52.5**	**+0.4**
TWT			*eS*		**Sn**	**19 15 01.8**	**-0.2**
YULB	**Yu-li**	**0.72 225**	P		**Pn**	**19 14 51.0**	**-1.1**
YULB	**Yu-li**	**0.72 225**	*eP*		**Pn**	**19 14 51.3**	**-0.8**
YULB			S		**Sn**	**19 15 00.7**	**-1.3**
TDCB	**Techi**	**0.72 299**	P		**Pn**	**19 14 52.0**	**-0.3**
TDCB			S		**Sn**	**19 15 01.4**	**-1.0**
EYUL	**Yuli**	**0.74 222**	*eP*		**Pn**	**19 14 52.5**	**+0.2**
EYUL			*eS*		**Sn**	**19 15 03.1**	**+0.7**
NDS	**Dongshan**	**0.74 350**	P		**Pn**	**19 14 52.5**	**+0.1**
NDS			S		**Sn**	**19 15 02.7**	**+0.2**
TWF1	**Yuli**	**0.75 223**	*eP*		**Pn**	**19 14 51.8**	**-0.7**
TWF1			S		**Sn**	**19 15 02.1**	**-0.6**
ENTT	**Nioudou**	**0.78 341**	*eP*		**Pn**	**19 14 52.8**	**-0.2**
ENTT			S		**Sn**	**19 15 03.2**	**-0.4**
CHKH	**Chenggong**	**0.82 211**	*eP*		**Pn**	**19 14 53.1**	**-0.4**
CHKH			*eS*		**Sn**	**19 15 04.4**	**0.0**
SSLB	**Suanglung**	**0.83 262**	P		**Pn**	**19 14 53.1**	**-0.5**
SSLB	**Suanglung**	**0.83 262**	P		**Pn**	**19 14 53.2**	**-0.5**
SSLB			*eS*		**Sn**	**19 15 04.5**	**-0.2**
TWE	**Neicheng**	**0.83 348**	*eP*		**Pn**	**19 14 53.3**	**-0.4**
TWE			*eS*		**Sn**	**19 15 04.8**	**0.0**
FULB	**Fuli**	**0.87 216**	*i* P		**Pn**	**19 14 54.3**	**+0.2**
FULB			*eS*		**Sn**	**19 15 06.1**	**+0.4**
SMLT	**Sun Moon Lake**	**0.87 269**	*eP*		**Pn**	**19 14 54.2**	**-0.1**
SMLT			S		**Sn**	**19 15 05.4**	**-0.5**
WCS	**Beigang Elemen**	**0.87 280**	*eP*		**Pn**	**19 14 54.2**	**-0.1**
WCS			*eS*		**Sn**	**19 15 06.4**	**+0.2**
YHNB	**Yeheng**	**0.88 331**	*eP*		**Pn**	**19 14 54.0**	**-0.4**
YHNB			S		**Sn**	**19 15 05.6**	**-0.5**
FUSB	**Fushanzhiwuyua**	**0.89 344**	*eP*		**Pn**	**19 14 54.0**	**-0.5**
FUSB			*eS*		**Sn**	**19 15 05.9**	**-0.3**
NSK	**Sanguang**	**0.89 330**	*eP*		**Pn**	**19 14 54.4**	**-0.2**
NSK			S		**Sn**	**19 15 05.6**	**-0.8**
WHP	**Taichung City**	**0.91 295**	*eP*		**Pn**	**19 14 55.8**	**+1.0**
CHKT	**Chengkung**	**0.92 209**	*eP*		**Pn**	**19 14 53.7**	**-1.1**
CHKT			*eS*		**Sn**	**19 15 05.4**	**-1.4**
YUS	**Yu-Shan**	**0.92 244**	P		**Pn**	**19 14 55.0**	**-0.3**
YUS			S		**Sn**	**19 15 06.7**	**-0.9**
NWLT	**Wulai**	**0.93 340**	P		**Pn**	**19 14 54.6**	**-0.5**
NWLT			S		**Sn**	**19 15 06.4**	**-0.7**
WHYT	**Xinyi Township**	**0.94 258**	*eP*		**Pn**	**19 14 55.8**	**+0.7**
WHYT			S		**Sn**	**19 15 07.7**	**+0.3**
EHD	**Haiduan**	**0.95 218**	P		**Pn**	**19 14 55.3**	**-0.1**
EHD			S		**Sn**	**19 15 07.2**	**-0.4**
NFF	**Wufeng Townshi**	**0.99 318**	*eP*		**Pn**	**19 14 56.9**	**+1.1**
NFF			*eS*		**Sn**	**19 15 08.4**	**-0.3**
ECS	**Chishang**	**0.99 216**	*eP*		**Pn**	**19 14 56.1**	**+0.3**
ECS			*eS*		**Sn**	**19 15 08.5**	**-0.2**
WJS	**Zhushan**	**1.03 266**	P		**Pn**	**19 14 57.3**	**+0.9**
WJS			*eS*		**Sn**	**19 15 11.0**	**+1.3**
ALS	**Alishan**	**1.03 248**	*eP*		**Pn**	**19 14 57.0**	**+0.2**
ALS			S		**Sn**	**19 15 10.2**	**0.0**
ELDTW	**Lidau**	**1.04 227**	*eP*		**Pn**	**19 14 56.0**	**-0.7**
ELDTW			*i* S		**Sn**	**19 15 09.1**	**-1.0**
EDH	**Donghe**	**1.05 209**	*eP*		**Pn**	**19 14 56.2**	**-0.5**
EDH			*eS*		**Sn**	**19 15 08.9**	**-1.2**
NSTT	**Nanjuang**	**1.06 313**	*eP*		**Pn**	**19 14 57.7**	**+0.9**
NSTT			*eS*		**Sn**	**19 15 10.9**	**+0.4**
LIOB	**Emei**	**1.06 314**	*eP*		**Pn**	**19 14 57.8**	**+1.0**
LIOB			*i* S		**Sn**	**19 15 11.3**	**+0.8**
TIPB	**Shuangxi**	**1.07 359**	*eP*		**Pn**	**19 14 56.9**	**-0.1**
TIPB			*eS*		**Sn**	**19 15 11.7**	**+1.1**
KSHI	**Guanxi Townshi**	**1.07 325**	*eP*		**Pn**	**19 14 57.4**	**+0.5**
KSHI			*eS*		**Sn**	**19 15 12.1**	**+1.6**
WNT	**Mingjian**	**1.07 269**	P		**Pn**	**19 14 57.4**	**+0.5**
WNT			*eS*		**Sn**	**19 15 11.8**	**+1.2**
TWQ1	**Liyutan**	**1.08 294**	*eP*		**Pn**	**19 14 57.5**	**+0.4**
TWQ1			*eS*		**Sn**	**19 15 10.9**	**0.0**
TCU	**Taichung**	**1.10 283**	*eP*		**Pn**	**19 14 58.1**	**+0.7**
TCU			*eS*		**Sn**	**19 15 13.4**	**+2.0**
CHN5	**Tsauling**	**1.12 254**	*eP*		**Pn**	**19 14 58.0**	**+0.4**
CHN5			*eS*		**Sn**	**19 15 13.5**	**+1.6**
NSY	**Sanyi**	**1.12 297**	*eP*		**Pn**	**19 14 58.4**	**+0.8**
JYNG	**Yonagunijimaku**	**1.14 61**	*eP*		**Pn**	**19 14 58.2**	**+0.3**
NMLH	**Miaoli**	**1.16 303**	P		**Pn**	**19 14 58.2**	**+0.1**
NMLH			S		**Sn**	**19 15 13.1**	**+0.4**
LONT	**Longtian**	**1.19 214**	*eP*		**Pn**	**19 14 57.4**	**-1.2**
LONT			*eS*		**Sn**	**19 15 12.8**	**-0.8**
WCHH	**Zhanghua**	**1.20 279**	P		**Pn**	**19 14 59.3**	**+0.7**
WCHH			S		**Sn**	**19 15 15.1**	**+1.4**
YOJ	**Yonaguni jima**	**1.20 62**	*eP*		**Pn**	**19 14 59.0**	**+0.3**
WGK	**Gukeng**	**1.20 260**	*eP*		**Pn**	**19 14 59.5**	**+0.8**
WCH1	**Changhua City**	**1.21 278**	*eP*		**Pn**	**19 14 59.4**	**+0.6**
WCH1			*eS*		**Sn**	**19 15 16.2**	**+2.3**
WDL	**Douliou City**	**1.22 261**	P		**Pn**	**19 14 59.9**	**+1.0**
WDL			*i* S		**Sn**	**19 15 16.4**	**+2.2**
WDLH	**Douliu**	**1.22 260**	*eP*		**Pn**	**19 14 59.7**	**+0.7**
WDLH			*i* S		**Sn**	**19 15 15.7**	**+1.4**
STYH	**Taoyuan**	**1.23 234**	*i* P		**Pn**	**19 14 59.6**	**+0.5**
STYH			*eS*		**Sn**	**19 15 14.9**	**+0.4**
TPUB	**Ta-pu**	**1.27 242**	P		**Pn**	**19 15 00.3**	**+0.5**
TPUB	**Ta-pu**	**1.27 242**	*eP*		**Pn**	**19 15 00.2**	**+0.5**
TPUB			*eS*		**Sn**	**19 15 16.8**	**+1.2**
LDUT	**Ludao**	**1.27 196**	*eP*		**Pn**	**19 14 58.1**	**-1.6**
LDUT			*eS*		**Sn**	**19 15 13.7**	**-1.9**
CHN4	**Tsaushan**	**1.28 245**	*eP*		**Pn**	**19 15 00.7**	**+0.9**
CHN4			S		**Sn**	**19 15 17.7**	**+2.0**
TWGBT	**Beinan**	**1.29 213**	*eP*		**Pn**	**19 14 58.5**	**-1.5**
TWGBT			*eS*		**Sn**	**19 15 14.5**	**-1.6**
TWG	**Pinlang**	**1.29 214**	*eP*		**Pn**	**19 14 58.5**	**-1.5**
TWG			*eS*		**Sn**	**19 15 14.1**	**-2.0**
WTP	**Ta-pu**	**1.31 240**	*eP*		**Pn**	**19 15 01.0**	**+0.8**
WTP			*eS*		**Sn**	**19 15 18.7**	**+2.1**
CHN2	**Minshiung**	**1.31 254**	*eP*		**Pn**	**19 15 01.2**	**+0.9**
WTK	**Tuku**	**1.36 261**	P		**Pn**	**19 15 01.8**	**+1.0**
WTK			*i* S		**Sn**	**19 15 19.1**	**+1.4**
CHY	**Chiayi**	**1.37 253**	*eP*		**Pn**	**19 15 01.9**	**+0.9**
CHY			S		**Sn**	**19 15 19.4**	**+1.5**
TWK	**Hsinying**	**1.40 243**	*eP*		**Pn**	**19 15 02.3**	**+0.8**
TWK			*eS*		**Sn**	**19 15 20.9**	**+2.0**
CHN1	**Nanshi**	**1.41 240**	*eP*		**Pn**	**19 15 02.8**	**+1.2**
CHN1			*eS*		**Sn**	**19 15 20.9**	**+1.9**
SNST	**Tainan City**	**1.42 242**	*eP*		**Pn**	**19 15 02.2**	**+0.6**
SNST			*eS*		**Sn**	**19 15 20.9**	**+1.8**
WTCT	**Ta-ch'eng**	**1.44 269**	*eP*		**Pn**	**19 15 02.5**	**+0.5**
WTCT			*eS*		**Sn**	**19 15 21.6**	**+2.0**
WSF	**Szhu**	**1.52 260**	*eP*		**Pn**	**19 15 03.8**	**+0.8**
WSF			S		**Sn**	**19 15 23.2**	**+1.7**
WSL	**Shuilin Townsh**	**1.54 256**	P		**Pn**	**19 15 03.9**	**+0.6**
WSL			*eS*		**Sn**	**19 15 23.2**	**+1.2**
CHN8	**Yiju**	**1.60 250**	*eP*		**Pn**	**19 15 04.3**	**+0.1**
CHN8			*eS*		**Sn**	**19 15 24.8**	**+1.1**
SCST	**Cishan**	**1.61 231**	P		**Pn**	**19 15 06.4**	**+2.1**
SCST			*eS*		**Sn**	**19 15 27.1**	**+3.4**
SSD	**Sandimen**	**1.61 224**	*eP*		**Pn**	**19 15 05.1**	**+0.8**
SSD			*eS*		**Sn**	**19 15 24.9**	**+1.1**
TSMG	**Majia**	**1.63 223**	*eP*		**Pn**	**19 15 05.7**	**+1.1**
TSMG			*eS*		**Sn**	**19 15 26.2**	**+1.9**
MASBT	**Mashibuluo**	**1.70 221**	*eP*		**Pn**	**19 15 05.8**	**+0.1**
MASBT			*eS*		**Sn**	**19 15 28.6**	**+2.3**
IRIF	**Iriomote-Funau**	**1.77 76**	*eP*		**Pn**	**19 15 06.9**	**+0.4**
IRIF			*eS*		**Sn**	**19 15 28.8**	**+0.9**
EAST	**Anshuo**	**1.77 212**	*eP*		**Pn**	**19 15 06.3**	**-0.3**
TSCK	**Chigu Township**	**1.79 245**	P		**Pn**	**19 15 07.4**	**+0.7**
TSCK			*i* S		**Sn**	**19 15 29.7**	**+1.5**
TAWH	**Dawu Township**	**1.79 210**	*eP*		**Pn**	**19 15 08.1**	**+1.3**
SCZT	**Fangliau**	**1.90 217**	*eP*		**Pn**	**19 15 09.6**	**+1.3**
SCZT			*eS*		**Sn**	**19 15 30.1**	**-0.9**
LYUB	**Lan-yu**	**1.91 187**	*eP*		**Pn**	**19 15 08.1**	**-0.3**
JKRS	**Kuro-shima**	**2.00 80**	*eP*		**Pn**	**19 15 10.5**	**+0.8**
JKRS			*eS*		**Sn**	**19 15 34.7**	**+1.2**
WDGT	**Dungji**	**2.11 253**	P		**Pn**	**19 15 11.1**	**-0.1**
WDGT			*eS*		**Sn**	**19 15 35.2**	**-0.9**
PHUB	**P'eng-hu**	**2.12 260**	P		**Pn**	**19 15 10.9**	**-0.5**
PHUB			*i* S		**Sn**	**19 15 36.0**	**-0.6**
PNG	**Penghu**	**2.13 261**	P		**Pn**	**19 15 10.5**	**-1.0**
PNG			S		**Sn**	**19 15 36.5**	**-0.3**
JIJ	**Ishigaki jima**	**2.14 77**	*eP*		**Pn**	**19 15 11.8**	**+0.1**
JIJ			*eS*		**Sn**	**19 15 36.9**	**-0.1**
VCHM	**Qimei**	**2.33 253**	P		**Pn**	**19 15 13.9**	**-0.3**
VCHM			*eS*		**Sn**	**19 15 41.1**	**-0.5**
JISG	**Ishigakijimahi**	**2.35 73**	*eP*		**Pn**	**19 15 14.5**	**0.0**
JISG			*eS*		**Sn**	**19 15 41.3**	**-0.7**
JTJ	**Tarama**	**2.70 74**	*eP*		**Pn**	**19 15 19.7**	**+0.3**
PTMZ	**Houxiangcun**	**2.73 295**	*eP*		**Pn**	**19 15 18.4**	**-1.4**
PTMZ			*eS*		**Sn**	**19 15 47.9**	**-3.7**
JIRB	**Irabujima**	**3.17 72**	*eP*		**Pn**	**19 15 25.7**	**0.0**
KNMB	**Chin-men Tao**	**3.21 281**	*eP*		**Pn**	**19 15 24.4**	**-2.0**
ZPLA	**Ao Xicun**	**3.75 271**	*eP*		**Pn**	**19 15 32.5**	**-1.3**

*IDC **16** 19:15:59.0±2.3,8°.41S×114°.56E,h0km,mb3.3/4, mbtmp3.4/5,ML2.9/1,Error ellipse: s-maj=142.2km s-min=25.6km az=50.0*
*DJA **16** 19:16:02.8±0.2,8°.S±2°×11°.5E±°,h10km,M3.8/17,mb4.1/3, MLv3.6/17*
ISC 16 19:16:01.8±1.3,**8°.29S**±0°.06×**114°.82E**±0°.03,**h12**km±9km, **n19,σ1§66/33,mb3.4/4,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.44 63**		P	**Pg**	**19 16 10.1**	**-0.4**
SRBI				S	**Sg**	**19 16 16.1**	**-0.3**
DNP	**Denpasar**	**0.55 135**		P	**Pn**	**19 16 15.8**	**+0.3**
DNP				S	**Sb**	**19 16 22.7**	**+1.5**
JAGI	**Jajag, Banyuwa**	**0.68 254**		P	**Pn**	**19 16 17.4**	**+0.1**
JAGI				S	**Sn**	**19 16 28.4**	**+0.5**
ABJI	**Asem Bagus**	**0.76 310**		P	**Pb**	**19 16 17.2**	**+0.3**
ABJI				S	**Sb**	**19 16 28.6**	**+1.4**
BLJI	**Banyuglugur**	**1.32 294**		P	**Pg**	**19 16 27.3**	**0.0**
BLJI				S	**Sn**	**19 16 45.6**	**+1.9**
KMMI	**Kalianget**	**1.49 325**		P	**Pb**	**19 16 29.3**	**-0.1**
KMMI				S	**Sg**	**19 16 50.0**	**+0.2**
TWSI	**Taliwang, Sumb**	**2.09 103**		P	**Pn**	**19 16 37.5**	**+0.8**
TWSI				S	**Sn**	**19 17 03.8**	**+1.1**
PLAI	**Plampang**	**2.98 101**		P	**Pn**	**19 16 49.8**	**+0.9**
PLAI				S	**Sn**	**19 17 25.8**	**+1.3**
PCJI	**Pacitan**	**3.60 271**		P	**Pn**	**19 16 59.6**	**+2.1**
PCJI				S	**Sb**	**19 17 44.0**	**-5.2**
UGM	**Wanagama**	**4.27 275**		P	**Pn**	**19 17 08.7**	**+2.0**
UGM				S	**Sn**	**19 17 59.8**	**+3.3**
WBSI	**Waikabubak, Su**	**4.71 107**		P	**Pn**	**19 17 14.0**	**+1.2**
WBSI				S	**Sn**	**19 18 08.0**	**+0.5**
BSSI	**Bau Bau, Buton**	**6.02 70**		P	**Pn**	**19 17 30.0**	**-0.7**
	54nm,1.8s						
BSSI				S	**Sn**	**19 18 38.0**	**-1.6**
	54nm,1.8s						
BNSI	**Bone**	**6.52 54**		P	**Pn**	**19 17 38.4**	**+0.8**
	0.1nm17nm,1.1s						
BNSI				S	**Sn**	**19 18 51.8**	**-0.2**
	0.1nm17nm,1.1s						
EDFI	**Ende, Flores**	**6.81 94**		P	**Pn**	**19 17 43.7**	**+1.9**
FITZ	**Fitzroy Crossi**	**14.35 134**		Pn	**Pn**	**19 19 25.1**	**+0.1**
	baz=317,slow=16,SNR=2.0						
FITZ				Sn	**Sn**	**19 22 00.9**	**-3.2**
	0.1nm,0.3s,baz=37,slow=10,SNR=1.4 2.7nm,1.1s						
WRA	**Warramunga Arr**	**22.17 124**		P	**P**	**19 20 57.7**	**-0.2**
	0.5nm,0.7s,baz=298,slow=12,SNR=6.1 0.5nm,0.7s						
ASAR	**Alice Springs**	**23.84 132**		P	**P**	**19 21 15.6**	**+0.5**
	0.5nm,0.7s,baz=307,slow=9.1,SNR=11 0.5nm,0.7s						
STKA	**Stephens Creek**	**34.21 137**		P	**P**	**19 22 47.4**	**-0.1**
	0.4nm,0.4s,baz=334,slow=14,SNR=3.3 0.4nm,0.4s						
MKAR	**Makanchi Array**	**62.01 335**		P	**P**	**19 26 21.2**	**-0.8**
	0.4nm,0.8s,baz=148,slow=6.5,SNR=2.2 0.4nm,0.8s						

TRN 16 19:16:18.7,15°.03N×60°.36W,h28km,MD3.5,North-east of Martinique.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAM	**Ilet Lapin Mar**	**0.55 243**		*eP*	Pn	19 16 31.4	+0.6
ILAM				*eS*	Sn	19 16 40.8	+1.7
SVN	**Savane Anatole**	**0.80 257**		*eP*	Pn	19 16 36.0	+1.8
SVN				*eS*	Sn	19 16 47.4	+2.1
BIM	**Bigot**	**0.85 234**		*eP*	Pb	19 16 35.6	+0.7
BIM				*eS*	Sn	19 16 48.6	+2.1
DLPL	**La Plaine**	**0.91 290**		*eP*	Pb	19 16 36.9	+1.1
DLPL				*eS*	Sn	19 16 50.2	+2.4
DWS	**Wesley**	**1.06 301**		*eP*	Pn	19 16 38.0	+0.2
DWS				*eS*	Sb	19 16 53.5	+1.5
DSLB	**Salisbury**	**1.10 292**		*eP*	Pb	19 16 39.2	+0.1
DSLB				*eS*	Sb	19 16 54.7	+1.6
SLBI	**Saint Lucia, B**	**1.16 211**		*eP*	Pb	19 16 40.5	+0.4
SLBI				*eS*	Sb	19 16 54.9	+0.1
SLCP	**Castries, St.**	**1.18 211**		*eP*	Pb	19 16 40.1	-0.4
SLCP				*eS*	Sb	19 16 55.9	+0.6
SLAC	**Saint Lucia, A**	**1.24 205**		*eP*	Pn	19 16 40.6	+0.4
SLAC				*eS*	Sb	19 16 57.0	0.0
MCLT	**Moule a Chique**	**1.42 203**		*eP*	Pb	19 16 44.2	-0.4
MCLT				*eS*	Sb	19 17 03.3	+0.9
DSDZ	**La Diserade, G**	**1.45 332**		*eP*	Pn	19 16 43.5	+0.5
DSDZ				*eS*	Sb	19 17 03.4	+0.3
TBG	**Guadaloupe-3**	**1.48 304**		*eP*	Pn	19 16 44.1	+0.5
TBG				*eS*	Sb	19 17 03.4	-0.8
MMLZ	**Guadeloupe Bro**	**1.61 309**		*eP*	Pb	19 16 46.6	-1.2
MMLZ				*eS*	Sb	19 17 07.0	-0.8
ATGZ	**Broadband at L**	**1.69 309**		*eP*	Pn	19 16 47.6	+1.2
ATGZ				*eS*	Sb	19 17 09.3	-0.7
DHSZ	**Broadband at M**	**1.83 313**		*eP*	Pn	19 16 49.6	+1.2
DHSZ				*eS*	Sb	19 17 12.8	-1.3
SVB	**Belmont**	**1.95 206**		*eP*	Pn	19 16 51.1	+1.1
SVB				*eS*	Sn	19 17 14.9	+1.3
GRHS	**Sauteurs**	**3.05 204**		*eP*	Pn	19 17 07.8	+2.6
GRHS				*eS*	Sn	19 17 42.9	+2.1
GRW	**Mount Saint Ca**	**3.12 204**		*eP*	Pn	19 17 09.1	+2.9
GRW				*eS*	Sn	19 17 43.1	+0.5

*DJA **16** 19:19:16.5±0.4,2°.N±5°×12°.6E±°,h10km,M3.0/6,MLv3.0/6*
IDC 16 19:19:14.1±2.3,**1°.58N×126°.27E,h0km,mb3.1/3, mbtmp3.1/3,Error ellipse: s-maj=198.5km s-min=28.6km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36 126**		P	Pg	19 19 39.2	-1.0
SGSI	**Sangihe**	**2.22 340**		P	Pn	19 19 52.6	+0.4
WRA	**Warramunga Arr**	**22.81 160**		P	P	19 24 17.0	-1.8
	0.2nm,0.3s,baz=338,slow=10,SNR=4.8 0.2nm,0.3s						
ASAR	**Alice Springs**	**26.17 164**		P	P	19 24 51.8	+1.3
	0.3nm,0.9s,baz=343,slow=11,SNR=5.0 0.3nm,0.9s						
MKAR	**Makanchi Array**	**59.06 326**		P	P	19 29 16.1	0.0
	0.3nm,0.7s,baz=118,slow=8.3,SNR=1.7 0.3nm,0.7s						

*IDC **16** 19:21:03.4±1.2,3°.46S×139°.63E,h0km,mb3.6/2, mbtmp3.8/4,ML4.1/2,MS4.2/1,Error ellipse: s-maj=39.3km s-min=13.7km az=133.0*
*DJA **16** 19:21:11.0±0.9,3°.S±9°×14°1E±°,h118km±10km,M3.7/5, mb4.0/3,MLv3.5/5*
ISC 16 19:21:09.7±1.4,**3°.7S**±0°.1×**140°.7E**±0°.2,**h100**km,**n10, σ0§64/10,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.15 358**		Pg	**Pn**	**19 21 31.6**	**-0.3**
	45nm,0.3s,baz=205,slow=6.9,SNR=385						
JAY				Lg	Lg	19 21 48.1	
	19nm,0.3s,baz=216,slow=19,SNR=7.0						
JAY	**Jayapura**	**1.15 358**		P	**Pn**	**19 21 32.0**	**+0.1**
JAY				S	**Sn**	**19 21 48.3**	**-0.3**
GENI	**Genyem**	**1.22 332**		P	**Pn**	**19 21 32.7**	**+0.1**
SMPI	**Sarmi**	**2.63 309**		P	**Pn**	**19 21 50.5**	**0.0**
BAKI	**Biak**	**5.25 298**		P	**Pn**	**19 22 26.0**	**+0.2**
	30nm,1.0s						
WRA	**Warramunga Arr**	**17.33 201**		P	**P**	**19 25 05.5**	**+0.1**
	1.2nm,0.3s,baz=23,slow=13,SNR=60 2.4nm,0.3s						
FITZ	**Fitzroy Crossi**	**20.60 225**		P	**P**	**19 25 39.5**	**-1.4**
	0.2nm,0.3s,baz=35,slow=11,SNR=10 1.8nm,0.9s						
ASAR	**Alice Springs**	**20.95 198**		P	**P**	**19 25 45.3**	**+0.6**
	1.3nm,0.5s,baz=29,slow=9.0,SNR=43 1.3nm,0.5s						
JHJ	**Hachijo jima 2**	**36.60 359**		LR	LR	19 40 23.5	
	comp=Z,355nm,21.9s,baz=114,slow=32						
MKAR	**Makanchi Array**	**71.79 322**		P	**P**

ASAR	**Alice Springs**	**21.36**	**181**	P	**P**	**19 38 26.9**	**+0.1**
	7.5nm,1.0s,baz=6.8,slow=11,SNR=14						
ASAR				S	**S**	**19 42 19.3**	**-3.6**
	1.1nm,0.9s,baz=5.7,slow=20,SNR=4.1						
ASAR				LR	LR	19 46 59.3	
	comp=Z,59nm,21.4s,baz=352,slow=38						
	7.5nm,1.0s						
STKA	**Stephens Creek**	**30.35**	**167**	LR	LR	19 53 21.5	
	comp=Z,63nm,18.9s,baz=18,slow=39						
CMAR	**Chiang Mai Arr**	**40.30**	**302**	P	**P**	**19 41 17.6**	**+0.9**
	0.6nm,0.9s,baz=116,slow=8.0,SNR=6.3						
	0.6nm,0.9s						
ASAJ	**Asahikawa**	**46.70**	**8**	LR	LR	20 00 10.9	
	comp=Z,28nm,20.1s,baz=150,slow=34						
MKAR	**Makanchi Array**	**66.66**	**324**	P	**P**	**19 44 30.6**	**+0.8**
	1.4nm,0.6s,baz=109,slow=8.8,SNR=16						
	1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**69.26**	**331**	P	**P**	**19 44 45.3**	**-0.6**
	0.6nm,0.5s,baz=114,slow=7.1,SNR=4.1						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**70.74**	**326**	P	**P**	**19 44 55.5**	**+0.4**
	0.6nm,0.3s,baz=123,slow=5.3,SNR=12						
	0.6nm,0.3s						
BVAR	**Borovoye Array**	**76.33**	**326**	P	**P**	**19 45 28.2**	**+0.2**
	1.7nm,0.9s,baz=112,slow=6.5,SNR=6.3						
	1.7nm,0.9s						
VNDA	**Vanda**	**76.74**	**174**	P	**P**	**19 45 29.3**	**-0.5**
	0.9nm,0.8s,baz=304,slow=5.5,SNR=5.8						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**87.24**	**25**	P	**P**	**19 46 24.3**	**-0.9**
	0.4nm,0.9s,baz=266,slow=7.4,SNR=2.9						
	0.4nm,0.9s						
QSPA	**South Pole Qui**	**87.76**	**180**	P	**P**	**19 46 28.9**	**+1.1**
	1.3nm,1.0s,baz=2.7,slow=1.8,SNR=2.6						
	1.3nm,1.0s						

KRSC ***16*** *19:34:51.0±1.5, 48°.72N×156°.32E, h6km±28km, Ml4.2*
IDC ***16*** *19:34:53.4±4.1, 48°.54N×155°.15E, h98km±39km, mb3.2/6, mbtmp3.5/7, MS2.7/1, Error ellipse: s-maj=34.6km s-min=27.4km az=129.0*
ISC 16 19:34:47.7±1.0, 48°.4N±0°.1×155°.2E±0°.2, h43km, n35, σ2$27/32, mb3.5/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.39**	**15**	*eP*	**Pn**	**19 35 25.0**	**+0.7**
SKR				*eS*	**Sn**	**19 35 50.3**	**-2.0**
PAU	**Pauzhetka**	**3.27**	**18**	*eP*	**Pn**	**19 35 37.5**	**+1.1**
PAU				*eS*	**Sn**	**19 36 12.3**	**-1.8**
KDTR	**Khodutka, Kamc**	**3.92**	**28**	*eP*	**Pn**	**19 35 46.2**	**+1.0**
KDTR				*eS*	**Sn**	**19 36 27.6**	**-2.2**
MIPR	**Malaya Ipel'ka**	**4.04**	**14**	*eP*	**Pn**	**19 35 50.1**	**+3.2**
ASAK	**Asacha**	**4.38**	**23**	*eP*	**Pn**	**19 35 53.7**	**+2.0**
MTVR	**Mutnovka**	**4.54**	**24**	*eP*	**Pn**	**19 35 55.9**	**+2.0**
MTVR				*eS*	**Sn**	**19 36 44.9**	**-0.6**
GRL	**Gorelyy**	**4.58**	**23**	*eP*	**Pn**	**19 35 56.6**	**+2.2**
RUS	**Russkaya**	**4.59**	**27**	*eP*	**Pn**	**19 35 55.4**	**+0.9**
RUS				*eS*	**Sn**	**19 36 44.8**	**-1.7**
KRMR	**Karymshinskiy**	**4.84**	**22**	*eP*	**Pn**	**19 36 00.6**	**+2.6**
PETK	**Petropavlovsk-**	**5.00**	**18**	P	**Pn**	**19 36 02.4**	**+2.2**
	2.5nm,0.5s,baz=184,slow=11,SNR=17						
PETK				S	**Sn**	**19 37 00.8**	**+4.2**
	2.5nm,0.7s,baz=113,slow=19,SNR=1.9						
DALK	**Dalny**	**5.19**	**25**	*eP*	**Pn**	**19 36 04.6**	**+1.9**
DALK				*eS*	**Sn**	**19 36 59.7**	**-1.5**
UGLR	**Uglovaya**	**5.37**	**24**	*eP*	**Pn**	**19 36 07.8**	**+2.5**
KOK	**Koryaka**	**5.39**	**23**	*eP*	**Pn**	**19 36 09.0**	**+3.4**
AVH	**Avacha**	**5.39**	**24**	*eP*	**Pn**	**19 36 08.9**	**+3.4**
SMAR	**Somma**	**5.41**	**24**	*eP*	**Pn**	**19 36 09.0**	**+3.1**
KRER	**Koryakskii**	**5.43**	**23**	*eP*	**Pn**	**19 36 08.8**	**+2.6**
SDLR	**Sedlovina**	**5.45**	**24**	*eP*	**Pn**	**19 36 07.9**	**+1.6**
KRX	**Arik**	**5.46**	**23**	*eP*	**Pn**	**19 36 09.3**	**+2.8**
MKZ	**Mys Kozlova**	**7.42**	**31**	*eP*	**Pn**	**19 36 35.2**	**+2.0**
MA2	**Magadan**	**11.51**	**349**	LR	LR	19 41 29.7	
	comp=Z,39nm,19.6s,baz=188,slow=35						
H11N2	**WAKE ISLAND Hy**	**30.11**	**158**	T	T	20 13 13.8	
	baz=344,slow=76,SNR=19						
H11N1	**WAKE ISLAND Hy**	**30.13**	**158**	T	T	20 12 51.1	
	baz=344,slow=76,SNR=38						
H11N3	**WAKE ISLAND Hy**	**30.13**	**158**	T	T	20 12 48.1	
	baz=344,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**31.24**	**159**	T	T	20 14 10.7	
	baz=344,slow=76,SNR=214						
H11S3	**WAKE ISLAND Hy**	**31.25**	**159**	T	T	20 14 08.5	
	baz=344,slow=76,SNR=229						
H11S2	**WAKE ISLAND Hy**	**31.25**	**159**	T	T	20 14 09.1	
	baz=344,slow=76,SNR=160						
MKAR	**Makanchi Array**	**47.43**	**297**	P	**P**	**19 43 16.0**	**-1.8**
	0.2nm,0.7s,baz=68,slow=9.8,SNR=1.6						
	0.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**54.10**	**257**	P	**P**	**19 44 09.6**	**+1.4**
	0.7nm,0.7s,baz=35,slow=7.4,SNR=6.7						
	0.7nm,0.7s						
FINES	**FINESS Array B**	**63.15**	**335**	P	**P**	**19 45 08.7**	**-1.8**
	1.9nm,1.0s,baz=51,slow=6.4,SNR=1.2						
	1.9nm,1.0s						
WRA	**Warramunga Arr**	**70.52**	**201**	P	**P**	**19 45 56.8**	**-1.1**
	0.8nm,1.1s,baz=19,slow=7.2,SNR=2.9						
	0.8nm,1.1s						
ASAR	**Alice Springs**	**74.20**	**200**	P	**P**	**19 46 21.5**	**+1.7**
	0.3nm,0.7s,baz=12,slow=5.9,SNR=2.5						
	0.3nm,0.7s						
TXAR	**Lajitas Array**	**75.50**	**62**	P	**P**	**19 46 26.9**	**-0.6**
	0.1nm,0.5s,baz=319,slow=6.5,SNR=2.8						
	0.1nm,0.5s						
H03N2	**Juan Fernandez**	**137.37**	**90**	T	T	22 27 15.2	
	baz=311,slow=77,SNR=27						
H03N1	**Juan Fernandez**	**137.38**	**90**	T	T	22 27 16.1	
	baz=311,slow=77,SNR=27						
H03N3	**Juan Fernandez**	**137.38**	**90**	T	T	22 27 12.8	
	baz=311,slow=77,SNR=21						

WEL 16 20:19:37.1±0.8, 38°S±4°×17°9E±°, h30km±7km, M3.6/8, ML3.7/9, MLv3.6/8, Error ellipse: s-maj=7.1km s-min=5.6km az=106.5, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**0.51**	**254**	P	Pn	20 19 48.2	-0.2
CNGZ				S	Sn	20 19 59.0	+2.9
PUZ	**Puketiti**	**0.53**	**301**	P	Pb	20 19 47.7	-0.3
PUZ				S	Sb	20 19 55.7	+0.2
WMGZ	**Waiomatatini S**	**0.62**	**328**	P	Pb	20 19 49.7	+0.2
WMGZ				S	Sn	20 19 59.7	+0.9
TWGZ	**Tauwhareparae**	**0.69**	**284**	P	Pb	20 19 50.0	-0.7
TWGZ				S	Sn	20 20 02.1	+1.4
ECLS	**East Cape Ligh**	**0.70**	**341**	P	Pn	20 19 51.9	+1.0
GKBS	**Kaiti Beach**	**0.71**	**242**	P	Pn	20 19 51.2	+0.1
PKGZ	**Pakihiroa**	**0.76**	**309**	P	Pn	20 19 51.5	-0.4
PKGZ				S	Sn	20 20 02.8	+0.4
TKGZ	**Te Karaka**	**0.78**	**263**	P	Pn	20 19 51.9	-0.1
TKGZ				S	Sn	20 20 03.6	+0.9
TDHS	**Te Araroa Dist**	**0.80**	**333**	P	Pb	20 19 53.2	+0.7
MXZ	**Matakaoa Point**	**0.89**	**332**	P	Pb	20 19 53.9	-0.1
MXZ				S	Sb	20 20 07.6	+2.1
RIGZ	**Rimuhau**	**0.91**	**247**	P	Pn	20 19 53.8	-0.1
RIGZ				S	Sb	20 20 07.4	+1.2
RUGZ	**Raukumara Rang**	**0.99**	**293**	P	Pn	20 19 54.9	-0.2
RUGZ				S	Sn	20 20 08.2	+0.2
MWZ	**Matawai**	**1.02**	**270**	P	Pn	20 19 55.3	-0.2
MWZ				S	Sn	20 20 08.7	-0.2
CTZ	**Chatham Island**	**6.39**	**149**	P	Pn	20 21 09.4	+0.2
CTZ				S	Sn	20 22 14.1	-6.8

IDC ***16*** *20:26:12.9±1.8, 1°.65N×126°.11E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=191.0km s-min=22.1km az=66.0*
DJA ***16*** *20:26:16.6±0.3, 2°N±4°×12°7E±°, h10km, M3.4/8, MLv3.4/8*
ISC 16 20:26:17.9±1.2, 1°.81N±0°.10×126°.6E±0°.1, h35km, n7, σ0$98/7, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.30**	**143**	P	**Pn**	**20 26 40.3**	**+0.8**
SGSI	**Sangihe**	**2.14**	**331**	P	**Pn**	**20 26 51.8**	**+0.7**
KMSI	**Cibinong**	**2.88**	**245**	P	**Pn**	**20 27 01.8**	**+0.6**
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**20 31 17.7**	**-1.3**
	0.5nm,0.4s,baz=338,slow=10,SNR=11						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.31**	**165**	P	**P**	**20 31 51.0**	**+0.5**
	0.5nm,0.8s,baz=344,slow=11,SNR=6.3						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**59.04**	**326**	P	**P**	**20 36 14.1**	**-0.4**
	0.1nm,0.4s,baz=122,slow=9.3,SNR=4.0						
	0.1nm,0.4s						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	**P**	**20 36 42.5**	**-0.5**
	0.3nm,0.5s,baz=130,slow=6.3,SNR=4.8						
	0.3nm,0.5s						

IDC ***16*** *20:29:21.0±1.6, 1°.77N×126°.55E, h0km, mb3.6/4, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=120.5km s-min=20.0km az=69.0*
DJA ***16*** *20:29:26.2±0.3, 2°N±4°×12°7E±°, h10km, M3.4/9, MLv3.4/9*
ISC 16 20:29:27.0±1.1, 1°.64N±0°.08×126°.54E±0°.09, h35km, n9, σ1$53/9, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.20**	**136**	P	**Pn**	**20 29 48.7**	**+1.4**
SGSI	**Sangihe**	**2.26**	**334**	P	**Pn**	**20 30 03.7**	**+1.7**
KMSI	**Cibinong**	**2.77**	**247**	P	**Pn**	**20 30 09.9**	**+1.0**
LUWI	**Luwuk**	**4.61**	**235**	P	**Pn**	**20 30 35.7**	**+1.4**
FITZ	**Fitzroy Crossi**	**19.64**	**183**	P	**P**	**20 33 51.6**	**-1.2**
	0.1nm,0.3s,baz=12,slow=14,SNR=1.9						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**22.78**	**161**	P	**P**	**20 34 26.3**	**-0.4**
	1.1nm,0.6s,baz=340,slow=11,SNR=16						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**26.16**	**165**	P	**P**	**20 34 59.0**	**+0.7**
	0.6nm,0.4s,baz=350,slow=14,SNR=19						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**20 39 23.0**	**-1.4**
	0.2nm,0.4s,baz=120,slow=7.7,SNR=6.2						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	**P**	**20 39 51.5**	**-1.4**
	0.4nm,0.5s,baz=129,slow=6.0,SNR=4.5						
	0.4nm,0.5s						

IDC ***16*** *20:42:22.1±2.4, 1°.96N×126°.75E, h0km, mb3.2/3, mbtmp3.2/3, MS3.1/1, Error ellipse: s-maj=214.1km s-min=26.8km az=66.0*
DJA ***16*** *20:42:27.3±1.2, 2°N±5°×12°6E±°, h11km±12km, M3.0/7, MLv3.0/7*
ISC 16 20:42:28.5±1.3, 1°.5N±0°.2×126°.2E±0°.3, h35km, n6, σ1$45/6, mb3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**123**	P	**Pn**	**20 42 50.8**	**-0.2**
SGSI	**Sangihe**	**2.26**	**342**	P	**Pn**	**20 43 03.6**	**+0.1**
SGSI				S	**Sn**	**20 43 31.2**	**+1.0**
BATI	**Baumata**	**11.92**	**192**	LR	LR	20 50 37.2	
	comp=Z,74nm,18.2s,baz=179,slow=40						
WRA	**Warramunga Arr**	**22.76**	**160**	P	**P**	**20 47 28.6**	**+0.6**
	0.5nm,0.8s,baz=340,slow=11,SNR=5.8						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**26.12**	**164**	P	**P**	**20 48 00.9**	**+1.5**
	0.1nm,0.4s,baz=346,slow=12,SNR=4.6						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**20 52 23.8**	**-1.6**
	0.2nm,0.5s,baz=120,slow=8.1,SNR=4.9						
	0.2nm,0.5s						

SJA ***16*** *20:43:33.0±0.7, 31°.77S×71°.54W, h33km±2km, ML3.8, MW3.9*
GUC ***16*** *20:43:35.4±0.8, 31°.79S×71°.37W, h53km±2km, ML4.1*
IDC ***16*** *20:43:36.1±4.1, 31°.85S×71°.38W, h71km±41km, mbtmp3.6/4, ML3.7/4, Error ellipse: s-maj=44.8km s-min=25.8km az=139.0*
ISC 16 20:43:33.2±1.2, 31°.79S±0°.02×71°.44W±0°.04, h17km±8km, n86, σ1$67/119, 10C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO04	**Los Peladeros**	**0.47**	**123**	⇑*iP*	**Pn**	**20 43 46.2**	**+0.8**
CO04				*eS*	**Sb**	**20 43 54.0**	**+3.9**
CO04				IAML		20 43 55.6	
	comp=N,17μm,0.2s						
CO02	**Combarbal**	**0.69**	**33**	⇑*iP*	**Pn**	**20 43 49.0**	**+0.7**
CO02				*eS*	**Sn**	**20 43 58.5**	**-0.2**
CO02	**Combarbal**	**0.69**	**33**	*eP*	**Pb**	**20 43 48.0**	**+1.2**
CO02				*eS*	**Sn**	**20 43 58.9**	**+0.2**
CO02				IAML		20 44 02.2	
	comp=Z,8μm,0.1s						
VA06	**Catapilco**	**0.78**	**171**	⇓*iP*	**Pb**	**20 43 50.3**	**+1.9**
VA06				*eS*	**Sb**	**20 44 01.6**	**+2.8**
VA06				IAML		20 44 03.7	
	comp=E,12μm,0.4s						
CO06	**Fray Jorge**	**1.12**	**351**	*iP*	**Pb**	**20 43 55.6**	**+1.4**
CO06				*eS*	**Sg**	**20 44 08.3**	**-1.3**
CO03	**El Pedregal**	**1.14**	**34**	⇑*iP*	**Pg**	**20 43 55.1**	**-0.1**
CO03				*eS*	**Sg**	**20 44 09.6**	**-0.6**
CO03				IAML		20 44 12.5	
	comp=N,5μm,0.2s						
CO03	**El Pedregal**	**1.14**	**34**	*eP*	**Pg**	**20 43 55.0**	**-0.3**
CO03				*eS*	**Sb**	**20 44 09.8**	**+0.7**
CO03				IAML		20 44 11.3	
	comp=Z,3μm,0.3s						
VA03	**San Esteban**	**1.23**	**143**	⇑*iP*	**Pb**	**20 43 56.1**	**0.0**
VA03				*eS*	**Sb**	**20 44 11.1**	**-0.6**
VA03				IAML		20 44 15.0	
	comp=E,5μm,0.2s						
VA03	**San Esteban**	**1.23**	**143**	*eP*	**Pb**	**20 43 56.0**	**-0.1**
VA03				*eS*	**Sb**	**20 44 11.8**	**+0.1**
VA03				IAML		20 44 15.6	
	comp=Z,2μm,0.3s						
VA01	**Torpederas**	**1.25**	**188**	*eP*	**Pn**	**20 43 56.7**	**+0.8**
VA01	**Torpederas**	**1.25**	**188**	*eP*	**Pn**	**20 43 55.9**	**0.0**
VA01				IAML		20 44 16.2	
	comp=Z,1μm,0.2s						
MT02	**Curacav**	**1.49**	**170**	*eP*	**Pn**	**20 43 59.8**	**+0.5**
MT02	**Curacav**	**1.49**	**170**	*eP*	**Pn**	**20 43 59.7**	**+0.5**
MT02				*eS*	**Sn**	**20 44 18.9**	**+0.5**
MT02				IAML		20 44 21.1	
	comp=Z,942nm,0.2s						
PEL	**Peldehue**	**1.50**	**155**	*eP*	**Pn**	**20 44 00.0**	**+0.6**
PEL	**Peldehue**	**1.50**	**155**	*eP*	**Pn**	**20 43 60.0**	**+0.6**
PEL				*eS*	**Sn**	**20 44 19.6**	**+1.1**
PEL				IAML		20 44 25.8	
	comp=Z,805nm,0.4s						
MT10	**Hacienda Santa**	**1.67**	**153**	⇓*iP*	**Pn**	**20 44 02.4**	**+0.6**
MT10				*eS*	**Sn**	**20 44 23.0**	**+0.1**
MT10				IAML		20 44 24.5	
	comp=N,4μm,0.4s						
GO04	**Tololo Observa**	**1.70**	**19**	*iP*	**Pn**	**20 44 03.6**	**+1.2**
GO04				*iS*	**Sn**	**20 44 24.9**	**+1.1**
GO04				IAML		20 44 27.2	
	comp=E,4μm,0.3s						
GO04	**Tololo Observa**	**1.70**	**19**	*eP*	**Pn**	**20 44 03.3**	**+0.9**
GO04				IAML		20 44 29.8	
	comp=Z,3μm,0.5s						
MT05	**Renca**	**1.71**	**160**	*iP*	**Pn**	**20 44 03.1**	**+0.9**
MT05				*iS*	**Sn**	**20 44 23.9**	**+0.1**
MT05				IAML		20 44 29.9	
	comp=E,3μm,0.4s						
MT05	**Renca**	**1.71**	**160**	*eP*	**Pn**	**20 44 03.2**	**+0.9**
MT05				*eS*	**Sg**	**20 44 30.4**	**+2.2**
MT05				IAML		20 44 31.0	
	comp=Z,998nm,0.2s						
MT14	**Cerro Calµn**	**1.78**	**155**	*eP*	**Pn**	**20 44 04.1**	**+0.8**
MT16	**CCHEN**	**1.81**	**155**	⇑*iP*	**Pn**	**20 44 04.7**	**+0.9**
RTLS	**Leoncito**	**1.82**	**91**	*eP*	**Pb**	**20 44 05.8**	**-0.5**
RTLS				IAML		20 44 35.6	
	comp=Z,2μm,0.6s						
CO05	**La Serena**	**1.87**	**5**	*eP*	**Pn**	**20 44 05.7**	**+1.2**
VA05	**Santo Domingo**	**1.87**	**185**	*eP*	**Pn**	**20 44 05.2**	**+0.6**
MT03	**Universidad Ad**	**1.87**	**156**	⇑*iP*	**Pn**	**20 44 05.5**	**+0.9**
MT03	**Universidad Ad**	**1.87**	**156**	*eP*	**Pn**	**20 44 05.7**	**+1.0**
MT03				*eS*	**Sn**	**20 44 30.2**	**+2.2**
MT03				IAML		20 44 43.4	
	comp=Z,1μm,0.3s						
MT04	**Ro Olivares**	**1.95**	**146**	*iP*	**Pn**	**20 44 06.7**	**+0.9**
MT04	**Ro Olivares**	**1.95**	**146**	*eP*	**Pn**	**20 44 07.4**	**+1.6**
MT04				*eS*	**Sb**	**20 44 33.2**	**+0.5**
MT04				IAML		20 44 39.1	
	comp=Z,483nm,0.2s						
MT15	**Las Vizcachas**	**1.97**	**157**	*eP*	**Pn**	**20 44 06.9**	**+0.9**
MT09	**Talagante**	**2.02**	**169**	⇑*iP*	**Pn**	**20 44 07.8**	**+1.1**
MT08	**Bocatoma Ro**	**2.04**	**144**	⇑*iP*	**Pn**	**20 44 09.3**	**+2.2**
MT08	**Bocatoma Ro**	**2.04**	**144**	*eP*	**Pn**	**20 44 09.1**	**+2.0**
MT08				*eS*	**Sg**	**20 44 39.6**	**+0.6**
MT08				IAML		20 44 43.3	
	comp=Z,367nm,0.5s						
MT01	**Popeta**	**2.08**	**176**	*eP*	**Pn**	**20 44 08.2**	**+0.8**
MT01	**Popeta**	**2.08**	**176**	*eP*	**Pn**	**20 44 08.2**	**+0.8**
MT01				*eS*	Sn	20 44 19.1	-14
MT01				IAML		20 44 39.8	
	comp=Z,550nm,0.5s						
MT12	**Pirque**	**2.08**	**159**	*iP*	**Pn**	**20 44 08.2**	**+0.8**
MT12				*iS*	**Sn**	**20 44 33.1**	**+0.1**
CO01	**Juntas del Tor**	**2.14**	**33**	*eP*	**Pn**	**20 44 10.1**	**+1.7**
CO01				*eS*	**Sn**	**20 44 35.7**	**+1.0**
CO01	**Juntas del Tor**	**2.14**	**33**	*eP*	**Pn**	**20 44 07.9**	**-0.6**
CO01				*eS*	**Sn**	**20 44 36.0**	**+1.3**
CO01				IAML		20 44 39.6	
	comp=Z,619nm,0.2s						
MT13	**San Alfonso**	**2.18**	**154**	*eP*	**Pn**	**20 44 10.4**	**+1.5**
MT13	**San Alfonso**	**2.18**	**154**	*eP*	**Pn**	**20 44 10.3**	**+1.5**
MT13				*eS*	**Sn**	**20 44 38.5**	**+3.0**
MT13				IAML		20 44 42.6	
	comp=Z,528nm,0.5s						
LMEL	**Las Melosas**	**2.30**	**154**	*iP*	**Pn**	**20 44 12.0**	**+1.4**
LMEL				*iS*	**Sn**	**20 44 39.4**	**+0.7**
LMEL	**Las Melosas**	**2.30**	**154**	*eP*	**Pn**	**20 44 12.2**	**+1.6**
LMEL				*eS*	**Sn**	**20 44 41.4**	**+2.7**
LMEL				IAML		20 44 45.0	
	comp=Z,606nm,0.1s						
BO04	**La Punta**	**2.30**	**163**	⇑*iP*	**Pn**	**20 44 11.4**	**+0.9**
BO04				*iS*	**Sn**	**20 44 39.1**	**+0.6**
AROD	**Rodeo**	**2.33**	**47**	*eP*	**Pb**	**20 44 14.1**	**-0.9**
AROD				*eS*	**Sb**	**20 44 44.9**	**+1.2**
ASAL	**Salagasta**	**2.35**	**111**	*eP*	**Pb**	**20 44 14.0**	**-1.1**
ASAL				*eS*	**Sg**	**20 44 48.7**	**0.0**
ACCO	**Cerro Coronel**	**2.36**	**60**	*eP*	**Pb**	**20 44 14.4**	**-1.1**
ACCO				*eS*	**Sb**	**20 44 45.5**	**+1.0**
ZON	**Zonda**	**2.36**	**85**	*eP*	**Pn**	**20 44 13.6**	**+2.3**
ZON				*eS*	**Sb**	**20 44 44.4**	**+0.1**
ZON				IAML		20 44 48.2	
	comp=Z,272nm,0.6s						
ARCO	**CERRO ARCO**	**2.37**	**117**	*eP*	**Pb**	**20 44 15.2**	**-0.4**
ARCO				*eS*	**Sn**	**20 44 38.2**	**-2.0**
ARCO				IAML		20 44 51.2	
	comp=Z,513nm,0.4s						
SJA	**San Juan**	**2.46**	**85**	*eP*	Pn	20 44 06.0	-6.7
SJA				IAML		20 44 57.9	
	comp=Z,192nm,0.3s						
AAGR	**Agrelo**	**2.56**	**121**	*eP*	**Pb**	**20 44 17.2**	**-1.5**
AAGR				IAML		20 45 10.9	
	comp=Z,259nm,1.1s						
ACDV	**Cuesta del Vie**	**2.56**	**52**	*eP*	Pn	20 43 57.7	-16
ACDV				IAML		20 44 56.4	
	comp=Z,183nm,0.5s						
RTLL	**Cerro Villicun**	**2.57**	**81**	*eP*	**Pn**	**20 44 16.1**	**+1.9**
RTLL				*eS*	**Sb**	**20 44 49.7**	**-0.6**
RTLL				IAML		20 44 54.5	
	comp=Z,331nm,0.3s						
BO01	**Tunca**	**2.62**	**174**	⇑*eP*	**Pn**	**20 44 15.3**	**+0.5**
BO01	**Tunca**	**2.62**	**174**	*eP*	**Pn**	**20 44 15.3**	**+0.5**
BO01				*eS*	**Sn**	**20 44 42.3**	**-3.9**
BO01				IAML		20 45 01.5	
	comp=Z,257nm,0.5s						
CFA	**Coronel Fontan**	**2.73**	**87**	P	**Pn**	**20 44 18.1**	**+1.7**
	comp=Z,22nm,0.3s,baz=260,slow=16,SNR=162						
CFA				S	**Sn**	**20 44 49.0**	**-0.1**
	comp=Z,112nm,0.3s,baz=330,slow=20,SNR=8.4						
	comp=Z,64nm,0.3s						
CFA	**Coronel Fontan**	**2.73**	**87**	*eP*	**Pn**	**20 44 18.4**	**+2.0**
CFA				*eS*	**Sn**	**20 44 51.8**	**+2.7**
LCO	**Las Campanas**	**2.84**	**13**	*eP*	**Pn**	**20 44 19.1**	**+1.1**
LCO				*eS*	**Sn**	**20 44 54.8**	**+2.8**
LCO				IAML		20 45 01.8	
	comp=Z,553nm,0.3s						
AVIZ	**Vizcacheras**	**2.98**	**125**	*eP*	**Pn**	**20 44 22.9**	**+3.0**
BO02	**Sierra Bellavi**	**3.05**	**170**	*eP*	**Pn**	**20 44 21.6**	**+0.9**
BO02	**Sierra Bellavi**	**3.05**	**170**	*eP*	**Pn**	**20 44 21.7**	**+0.9**
BO02				*eS*	**Sn**	**20 44 56.1**	**-0.8**
BO02				IAML		20 45 07.9	
	comp=Z,541nm,0.6s						
AC05	**El Transito**	**3.11**	**19**	*eP*	**Pn**	**20 44 23.3**	**+1.7**
AC05	**El Transito**	**3.11**	**19**	*eP*	**Pn**	**20 44 23.3**	**+1.7**
AC05				*eS*	**Sn**	**20 44 59.6**	**+1.2**
AC05				IAML		20 45 14.3	
	comp=Z,251nm,0.6s						
GO05	**Hualane**	**3.24**	**187**	*eP*	**Pn**	**20 44 23.4**	**0.0**
GO05				IAML		20 45 23.9	
	comp=Z,139nm,0.7s						
AGUA	**GUANDACOL**	**3.42**	**49**	*eS*	**Sb**	**20 45 15.4**	**+0.6**
AGUA				IAML		20 45 19.6	
	comp=Z,395nm,0.4s						
RFA	**San Rafael**	**3.88**	**141**	*eP*	**Pn**	**20 44 33.4**	**+1.2**
RFA				IAML		20 45 47.3	
	comp=Z,62nm,0.6s						
ACHE	**Chepes**	**4.12**	**83**	*eP*	**Pn**	**20 44 39.0**	**+3.4**
AC

s-min=5.8km az=171.4, confirmed
ISC 16 20:56:56.8±1.3, 38°31S±0°04×176°12E±0°04, h187km±7km, n115, σ1§67/120, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLZ	**Tolley Road**	**0.46**	**267**	P	**Pn**	**20 57 23.5**	**+1.2**
TLZ				S	**Sn**	**20 57 40.8**	**-1.2**
MUGZ	**Murupara**	**0.54**	**109**	P	**Pn**	**20 57 23.6**	**+1.0**
MRHZ	**Matea Rd**	**0.58**	**156**	P	**Pn**	**20 57 23.8**	**+1.0**
RITZ	**Rihia Road**	**0.70**	**197**	P	**Pn**	**20 57 25.1**	**+1.7**
RTZ	**Ruatahuna**	**0.74**	**115**	P	**Pn**	**20 57 24.8**	**+1.2**
RTZ				S	**Sn**	**20 57 42.6**	**-1.8**
TOZ	**Tahuroa Road**	**0.75**	**319**	P	**Pn**	**20 57 24.8**	**+1.1**
URZ	**Urewera**	**0.78**	**87**	P	**Pn**	**20 57 24.2**	**+0.4**
URZ	**Urewera**	**0.78**	**87**	P	**Pn**	**20 57 24.3**	**+0.6**
URZ				S	**Sn**	**20 57 41.6**	**-3.0**
MTHZ	**Maungataniwha**	**0.79**	**134**	P	**Pn**	**20 57 25.4**	**+1.5**
NTVZ	**North Tongarir**	**0.87**	**204**	P	**Pn**	**20 57 26.3**	**+1.8**
TMVZ	**Te Maari**	**0.87**	**202**	P	**Pn**	**20 57 26.0**	**+1.5**
ETVZ	**East Tongariro**	**0.89**	**201**	P	**Pn**	**20 57 26.3**	**+1.7**
BKZ	**Black Stump Fm**	**0.91**	**161**	P	**Pn**	**20 57 26.0**	**+1.4**
BKZ	**Black Stump Fm**	**0.91**	**161**	S	**Sn**	**20 57 44.2**	**-2.2**
BKZ	**Black Stump Fm**	**0.91**	**161**	P	**Pn**	**20 57 26.0**	**+1.4**
BKZ				S	**Sn**	**20 57 44.0**	**-2.4**
WTVZ	**West Tongariro**	**0.91**	**207**	P	**Pn**	**20 57 26.3**	**+1.6**
NNVZ	**North Ngauruho**	**0.92**	**205**	P	**Pn**	**20 57 26.6**	**+1.8**
OTVZ	**Oturere**	**0.93**	**202**	P	**Pn**	**20 57 25.8**	**+0.9**
TWVZ	**Taurewa**	**0.93**	**215**	P	**Pn**	**20 57 26.4**	**+1.5**
NMHZ	**Naumai**	**0.96**	**146**	P	**Pn**	**20 57 27.5**	**+2.5**
SNVZ	**South Ngauruho**	**0.96**	**203**	P	**Pn**	**20 57 26.4**	**+1.3**
NGZ	**Ngauruhoe**	**0.96**	**205**	P	**Pn**	**20 57 27.0**	**+1.9**
RAHZ	**Arahi**	**0.97**	**129**	P	**Pn**	**20 57 27.2**	**+2.2**
HIZ	**Hauiti**	**1.02**	**258**	P	**Pn**	**20 57 26.8**	**+1.5**
HIZ	**Hauiti**	**1.02**	**258**	P	**Pn**	**20 57 27.0**	**+1.6**
TUVZ	**Tukino**	**1.03**	**201**	P	**Pn**	**20 57 27.4**	**+1.8**
FWVZ	**Far West T-bar**	**1.05**	**205**	P	**Pn**	**20 57 27.3**	**+1.5**
SNGZ	**Shannon Statio**	**1.07**	**117**	P	**Pn**	**20 57 27.5**	**+1.8**
TRVZ	**Turoa**	**1.09**	**204**	P	**Pn**	**20 57 28.0**	**+1.9**
WNVZ	**Wahianoa**	**1.10**	**202**	P	**Pn**	**20 57 27.8**	**+1.7**
MWZ	**Matawai**	**1.11**	**92**	P	**Pn**	**20 57 27.3**	**+1.3**
MWZ				S	**Sn**	**20 57 46.5**	**-2.2**
MOVZ	**Moawhango**	**1.14**	**195**	P	**Pn**	**20 57 27.7**	**+1.4**
KWHZ	**Kaweka Forest**	**1.14**	**168**	P	**Pn**	**20 57 28.3**	**+1.9**
PKVZ	**Pokaka**	**1.15**	**211**	P	**Pn**	**20 57 26.9**	**+0.5**
WHHZ	**Waihua**	**1.16**	**132**	P	**Pn**	**20 57 29.8**	**+3.3**
ARHZ	**Aropaoanui**	**1.18**	**145**	P	**Pn**	**20 57 28.9**	**+2.3**
MTVZ	**Mangateitei**	**1.19**	**205**	P	**Pn**	**20 57 28.6**	**+1.9**
MCHZ	**McNeill Hill**	**1.22**	**159**	P	**Pn**	**20 57 29.4**	**+2.5**
RUGZ	**Raukumara Rang**	**1.27**	**75**	P	**Pn**	**20 57 27.8**	**+0.3**
VRZ	**Vera Road**	**1.34**	**232**	P	**Pn**	**20 57 30.2**	**+2.2**
RIGZ	**Rimuhau**	**1.35**	**108**	P	**Pn**	**20 57 29.9**	**+1.9**
KRHZ	**Kereru**	**1.35**	**172**	P	**Pn**	**20 57 30.0**	**+2.0**
TKGZ	**Te Karaka**	**1.36**	**96**	P	**Pn**	**20 57 30.0**	**+1.9**
KNZ	**Kokohu**	**1.41**	**121**	P	**Pn**	**20 57 30.4**	**+1.9**
MKAZ	**Moumakai**	**1.42**	**327**	P	**Pn**	**20 57 29.4**	**+0.6**
HAZ	**Te Kaha**	**1.42**	**68**	P	**Pn**	**20 57 31.4**	**+2.8**
PRGZ	**Paritu Road**	**1.51**	**115**	P	**Pn**	**20 57 31.5**	**+2.0**
CKHZ	**Cape Kidnapper**	**1.54**	**151**	P	**Pn**	**20 57 32.2**	**+2.5**
KUZ	**Kuaotunu**	**1.59**	**348**	P	**Pn**	**20 57 31.6**	**+1.3**
KAHZ	**Kahuranaki**	**1.60**	**159**	P	**Pn**	**20 57 32.8**	**+2.4**
PKGZ	**Pakihiroa**	**1.61**	**75**	P	**Pn**	**20 57 31.9**	**+1.5**
PNHZ	**Pukenui**	**1.61**	**178**	P	**Pn**	**20 57 32.2**	**+1.8**
MHGZ	**Mahia Peninsul**	**1.63**	**122**	P	**Pn**	**20 57 33.0**	**+2.4**
ETAZ	**East Tamaki Re**	**1.65**	**325**	P	**Pn**	**20 57 32.4**	**+1.6**
CNGZ	**Carnagh Statio**	**1.65**	**97**	P	**Pn**	**20 57 33.2**	**+2.5**
WAZ	**Wanganui**	**1.70**	**211**	P	**Pn**	**20 57 33.5**	**+2.3**
PUZ	**Puketiti**	**1.70**	**83**	P	**Pn**	**20 57 32.6**	**+1.3**
AWAZ	**Awhitu Peninsu**	**1.71**	**316**	P	**Pn**	**20 57 33.1**	**+1.7**
TSZ	**Takapari Road**	**1.76**	**184**	P	**Pn**	**20 57 33.7**	**+1.9**
LREZ	**Lake Rotokare**	**1.77**	**229**	P	**Pn**	**20 57 34.8**	**+2.9**
WPHZ	**Waipukurau**	**1.77**	**172**	P	**Pn**	**20 57 34.1**	**+2.1**
MBAZ	**Motutapu North**	**1.82**	**327**	P	**Pn**	**20 57 34.3**	**+1.8**
PXZ	**Pawanui**	**1.82**	**162**	P	**Pn**	**20 57 34.6**	**+2.2**
PREZ	**Palmer Road**	**1.85**	**295**	P	**Pn**	**20 57 35.6**	**+2.8**
WMGZ	**Waiomatatini S**	**1.87**	**76**	P	**Pn**	**20 57 34.1**	**+1.1**
MXZ	**Matakaoa Point**	**1.88**	**67**	P	**Pn**	**20 57 34.7**	**+1.6**
MXZ	**Matakaoa Point**	**1.88**	**67**	P	**Sn**	**20 58 00.3**	**-0.9**
MXZ	**Matakaoa Point**	**1.88**	**67**	P	**Pn**	**20 57 34.9**	**+1.9**
PKE	**Pukeiti**	**1.89**	**241**	P	**Pn**	**20 57 36.0**	**+2.8**
KHEZ	**Kahui Hut**	**1.92**	**238**	P	**Pn**	**20 57 35.9**	**+2.3**
KHEZ	**Kahui Hut**	**1.92**	**238**	P	**Pn**	**20 57 36.6**	**+3.1**
DVHZ	**Dannevirke**	**1.99**	**179**	P	**Pn**	**20 57 36.0**	**+1.7**
PRHZ	**Porangahau**	**2.00**	**169**	P	**Pn**	**20 57 36.4**	**+2.1**
POWZ	**Post Office Ro**	**2.10**	**187**	P	**Pn**	**20 57 37.1**	**+1.7**
PRWZ	**Pori Road**	**2.25**	**183**	P	**Pn**	**20 57 39.0**	**+1.9**
BFZ	**Birch Farm**	**2.38**	**178**	P	**Pn**	**20 57 40.2**	**+1.7**
BFZ	**Birch Farm**	**2.38**	**178**	S	**Sn**	**20 58 09.8**	**-1.2**
BFZ	**Birch Farm**	**2.38**	**178**	P	**Pn**	**20 57 40.1**	**+1.7**
MRZ	**Mangatainoka R**	**2.39**	**190**	P	**Pn**	**20 57 40.1**	**+1.5**
TIWZ	**Tintock**	**2.48**	**180**	P	**Pn**	**20 57 41.4**	**+1.8**
CPWZ	**Castlepoint**	**2.60**	**179**	P	**Pn**	**20 57 43.2**	**+2.2**
OGWZ	**Otaki Gorge**	**2.61**	**196**	P	**Pn**	**20 57 42.7**	**+1.6**
HOWZ	**Holdsworth Sta**	**2.63**	**190**	P	**Pn**	**20 57 42.6**	**+1.2**
KIW	**Kapiti Island**	**2.72**	**200**	P	**Pn**	**20 57 43.7**	**+1.3**
TMWZ	**Te Maipa**	**2.80**	**184**	P	**Pn**	**20 57 44.7**	**+1.3**
MTW	**Mount Morrison**	**2.89**	**189**	P	**Pn**	**20 57 45.4**	**+1.0**
CAW	**Cannon Point**	**2.92**	**196**	P	**Pn**	**20 57 45.9**	**+1.2**
DUWZ	**D'Urville Isla**	**3.02**	**214**	P	**Pn**	**20 57 47.4**	**+1.4**
TRWZ	**Traveller**	**3.11**	**186**	P	**Pn**	**20 57 48.2**	**+1.2**
PAWZ	**Paruwai Farm**	**3.12**	**190**	P	**Pn**	**20 57 48.1**	**+1.0**
WEL	**Wellington**	**3.15**	**199**	P	**Pn**	**20 57 48.9**	**+1.4**
MSWZ	**Moikau Station**	**3.18**	**192**	P	**Pn**	**20 57 48.8**	**+0.9**
SNZO	**South Karori**	**3.19**	**200**	P	**Pn**	**20 57 48.6**	**+0.6**
SNZO	**South Karori**	**3.19**	**200**	S	**Sn**	**20 58 27.6**	**-0.6**
TCW	**Tory Channel**	**3.23**	**206**	P	**Pn**	**20 57 49.7**	**+1.2**
BHW	**Baring Head**	**3.25**	**197**	P	**Pn**	**20 57 49.5**	**+0.8**
PLWZ	**Palliser**	**3.33**	**191**	P	**Pn**	**20 57 50.4**	**+0.7**
NNZ	**Nelson**	**3.52**	**215**	P	**Pn**	**20 57 53.8**	**+0.9**
TKNZ	**Takaka Hill**	**3.66**	**221**	P	**Pn**	**20 57 54.4**	**+0.6**
QRZ	**Quartz Range**	**3.75**	**227**	P	**Pn**	**20 57 55.0**	**+0.1**
QRZ	**Quartz Range**	**3.75**	**227**	S	**Sn**	**20 58 39.9**	**-0.6**
QRZ	**Quartz Range**	**3.75**	**227**	P	**Pn**	**20 57 55.2**	**+0.3**
BSWZ	**Blackbirch Sta**	**3.82**	**206**	P	**Pn**	**20 57 56.9**	**+1.1**
MRNZ	**Matariki Terra**	**4.03**	**219**	P	**Pn**	**20 57 58.7**	**+0.3**
THZ	**Tophouse**	**4.25**	**215**	P	**Pn**	**20 58 02.0**	**+0.8**
KHZ	**Kahutara**	**4.55**	**205**	P	**Pn**	**20 58 05.8**	**+0.8**
KHZ	**Kahutara**	**4.55**	**205**	S	**Sn**	**20 58 58.0**	**-0.8**
KHZ	**Kahutara**	**4.55**	**205**	P	**Pn**	**20 58 05.8**	**+0.8**
DSZ	**Denniston Nort**	**4.77**	**223**	P	**Pn**	**20 58 07.6**	**-0.4**
GVZ	**Greta Valley S**	**5.21**	**206**	P	**Pn**	**20 58 14.1**	**+0.5**
OKCZ	**Okains Bay**	**5.89**	**202**	P	**Pn**	**20 58 22.5**	**+0.2**
MQZ	**McQueen's Vall**	**6.00**	**205**	P	**Pn**	**20 58 22.9**	**-0.8**
ARCZ	**Arundel**	**6.76**	**212**	P	**Pn**	**20 58 33.9**	**+0.2**
TMZ	**Timaru**	**7.19**	**211**	P	**Pn**	**20 58 39.1**	**-0.3**
NIUE	**Niue**	**22.68**	**36**	S	**S**	**21 05 36.7**	**+0.4**

*SOME **16** 21:03:08.2, 41.88N×82.50E, h5km*
*NNC **16** 21:03:11.8±2.8, 41.84N×82.22E, h0km, mb3.6, mpv3.2,*
Error ellipse: s-maj=22.8km s-min=14.1km az=177.0
ISC 16 21:03:09.2±2.6, 42.0N±0.1×82.51E±0.08, h10km, n13, σ2§24/17, 4C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.13**	**313**	Pg	**Pg**	**21 03 50.0**	**-0.1**
	4.5nm,0.4s						
KTMS				Lg	Lg	21 04 19.8	
	17nm,0.4s						
KTMS	**Ketmen**	**2.13**	**313**	*eP*	**Pg**	**21 03 50.0**	**-0.1**
	4.5nm,0.4s						
KTMS				*eS*	**Sg**	**21 04 19.8**	**+2.1**
	17nm,0.4s						
SHLS	**Shalkode**	**2.52**	**298**	Pg	**Pn**	**21 03 52.2**	**+1.9**
	15nm,0.3s						
SHLS				Lg	Lg	21 04 24.2	
	50nm,0.4s						
SHLS	**Shalkode**	**2.52**	**298**	*eP*	**Pn**	**21 03 52.2**	**+1.9**
	15nm,0.3s						
SHLS				*eS*	**Sb**	**21 04 24.2**	**-1.5**
	50nm,0.4s						
PDGK	**Podgornoye**	**2.58**	**301**	⇑Pg	**Pb**	**21 03 56.4**	**+0.8**
	3.0nm,0.5s						
PDGK				⇑Lg	Lg	21 04 28.9	
	45nm,0.7s						
KPKS	**Kokpek**	**3.16**	**298**	Pg	**Pb**	**21 04 07.2**	**+1.6**
	0.6nm,0.2s						
KPKS				Lg	Lg	21 04 49.9	
	17nm,0.5s						
SATY	**Saty**	**3.20**	**290**	Pg	**Pg**	**21 04 08.4**	**-2.2**
	1.6nm,0.2s						
SATY				Lg	Lg	21 04 52.2	
	22nm,0.5s						
KOTS	**Kotyrbulak**	**4.16**	**289**	Pg	**Pb**	**21 04 24.4**	**+1.8**
	2.3nm,0.2s						
KOTS				Lg	Lg	21 05 19.8	
	9.4nm,0.8s						
KOTS	**Kotyrbulak**	**4.16**	**289**	*eP*	**Pb**	**21 04 24.4**	**+1.8**
	2.3nm,0.2s						
KOTS				*eS*	**Sg**	**21 05 19.8**	**-2.9**
	9.4nm,0.8s						
KTBS	**Karatobe**	**4.60**	**293**	Pg	**Pg**	**21 04 33.8**	**-3.6**
	0.5nm,0.2s						
KTBS				Lg	Lg	21 05 35.8	
	9.1nm,0.8s						
MK31	**Makanchi Array**	**4.77**	**358**	⇑Pn	**Pb**	**21 04 30.1**	**-2.9**
	5.4nm,1.0s,baz=193,slow=14,SNR=19						
MK31				⇑Lg	Lg	21 05 47.1	
	3.7nm,0.7s,baz=180,slow=26,SNR=4.3						
ZSN	**Zaisan**	**5.68**	**16**	Pg	**Pg**	**21 04 56.6**	**-1.4**
	1.2nm,0.2s						
ZSN				Lg	Lg	21 06 14.4	
	6.4nm,0.8s						
ZSN	**Zaisan**	**5.68**	**16**	*eP*	**Pg**	**21 04 56.6**	**-1.4**
	1.2nm,0.2s						
ZSN				*eS*	**Sg**	**21 06 14.4**	**+2.9**
	6.4nm,0.8s						

GII 16 21:11:08.2±0.0, 32°498N±0°001×35°285E±0°001, h14km, Mws1.4, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZRL	**Izrael**	**0.07**	**26**	P	Pg	21 11 11.4	+0.3
MMLI	**Mount Malkishu**	**0.13**	**117**	P	Pg	21 11 11.9	+0.1
MMLI				S	Sg	21 11 14.7	+0.5
HYGV	**Hayogev**	**0.13**	**328**	P	Pg	21 11 11.8	0.0
HYGV	**Hayogev**	**0.13**	**328**	S	Sb	21 11 14.9	-0.5
HMDT	**Nahal Hemdat**	**0.32**	**140**	P	Pb	21 11 15.3	-0.4
HMDT	**Nahal Hemdat**	**0.32**	**140**	S	Sb	21 11 20.1	-0.6
SLTI	**Sal'it**	**0.33**	**219**	P	Pg	21 11 15.2	+0.2
SLTI	**Sal'it**	**0.33**	**219**	S	Sb	21 11 20.6	-0.5
GOLA	**Golan Heights**	**0.38**	**55**	P	Pg	21 11 15.8	-0.1
GOLA	**Golan Heights**	**0.38**	**55**	S	Sb	21 11 22.2	-0.2
DSI	**Dead Sea**	**0.93**	**175**	P	Pb	21 11 25.4	-0.8
DSI				S	Sg	21 11 38.9	+0.5

*AEIC **16** 21:14:20.2±1.1, 51.7N±0.1×174.98W±0.07, h54km±9km,*
Error ellipse: s-maj=17.9km s-min=4.0km az=166.0
NEIC 16 21:14:20.6±0.4, 51.61N±0.05×174.91W±0.04, h34km±11km, ML3.6/10, ML3.1(AEIC), Error ellipse: s-maj=8.2km s-min=3.2km az=165.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSIG	**Igitkin Island**	**0.73**	**301**		Pn	21 14 34.4	-0.2
GSIG					Sb	21 14 44.8	-0.1
ATKA	**Atka Island**	**0.74**	**36**		Pn	21 14 34.1	-0.4
ATKA					Sn	21 14 44.5	-0.2
ATKA				IAML		21 14 45.0	
	comp=N,2µm,0.2s						
GSMY	**Great Sitkin M**	**0.83**	**302**		Pn	21 14 35.5	-0.4
GSMY					Sn	21 14 46.9	-0.1
KOFP	**Korovin Flat P**	**0.83**	**37**		Pn	21 14 36.0	0.0
KOFP					Sb	21 14 47.9	+0.2
KOKL	**Mount Kliuchef**	**0.84**	**31**		Pn	21 14 35.9	-0.1
KOKL					Sn	21 14 47.3	+0.1
KOWE	**Korovin West**	**0.86**	**28**		Pn	21 14 36.2	0.0
KOWE					Sb	21 14 48.3	-0.1
GSTR	**Great Sitkin T**	**0.86**	**305**		Pn	21 14 36.1	-0.2
GSTR				IAML		21 14 50.4	
	comp=E,3µm,0.4s						
GSTD	**Great Sitkin T**	**0.89**	**301**		Pn	21 14 36.3	-0.4
GSTD					Sn	21 14 48.3	-0.1
ETKA	**Kagalaska Isla**	**0.96**	**286**		Sn	21 14 50.3	+0.1
ADAG	**Mount Adagdak**	**1.11**	**290**		Sn	21 14 54.6	+0.7
ADK	**Adak**	**1.14**	**285**		Pn	21 14 39.9	-0.2
ADK					Sn	21 14 54.5	+0.1
ADK	**Adak**	**1.14**	**285**	IAML		21 14 55.1	
	comp=E,2µm,0.4s						
KIWB	**Kanaga Island**	**1.42**	**281**		Pn	21 14 43.9	0.0
KIWB					Sn	21 15 01.2	-0.1
KIWB				IAML		21 15 02.1	
	comp=N,646nm,0.4s						
KIKV	**Kanaga Island**	**1.43**	**282**		Pn	21 14 44.2	+0.1
KIKV					Sn	21 15 01.9	+0.2
KIMD	**Kanaga Island**	**1.46**	**277**		Pn	21 14 44.5	+0.1
KIMD					Sn	21 15 02.3	0.0
TAPA	**Tanaga Point A**	**1.82**	**278**		Pn	21 14 49.5	+0.1
TAPA					Sn	21 15 11.9	+0.6
TAFL	**Tanaga Flats**	**1.87**	**276**		Sn	21 15 13.2	+0.7
TASE	**Tanaga Southea**	**1.96**	**278**		Pn	21 14 51.5	+0.1
TASE					Sn	21 15 15.3	+0.5
GALAA	**Gareloi Lava P**	**2.41**	**275**		Pn	21 14 57.9	+0.4
GALAA					Sn	21 15 26.1	+0.2
GANE	**Gareloi Northe**	**2.42**	**276**		Pn	21 14 57.7	+0.1
GANE					Sn	21 15 25.9	-0.1
GAKI	**Gareloi-Kavalg**	**2.44**	**270**		Pn	21 14 57.9	0.0
GAKI					Sn	21 15 25.4	-1.1
AMKA	**Amchitka**	**3.62**	**269**		Pn	21 15 13.6	-0.6
NIKH	**Nikolski High**	**3.96**	**67**	Pn	Pn	21 15 18.7	-0.1
NIKH				IAML		21 16 04.4	
	comp=N,50nm,1.0s						
NIKH				IAML		21 16 58.9	
	comp=E,52nm,1.0s						
UNV	**Unalaska Valle**	**5.58**	**63**	Pn	Pn	21 15 41.9	+0.8

*AEIC **16** 21:19:03.5±1.2, 55.51N±0.07×162.4W±0.1, h146km±1km,*
Error ellipse: s-maj=12.8km s-min=7.6km az=136.0
NEIC 16 21:19:03.5±0.7, 55.6N±0.1×162.3W±0.1, h153km±4km, ML2.6/10, ML2.2(AEIC), Error ellipse: s-maj=16.6km s-min=6.9km az=148.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
S12K	**Black Hills**	**0.15**	**45**		Pn	21 19 24.1	+0.1
S12K					Sn	21 19 39.6	-0.1
S12K				IAML		21 19 40.0	
	comp=N,177nm,0.6s						
PN7A	**Pavlof North-7**	**0.22**	**139**		Pn	21 19 24.6	+0.4
PS4A	**Pavlof South-4**	**0.34**	**138**		Pn	21 19 25.1	+0.6
PS4A					Sn	21 19 39.4	-1.0
PS1A	**Pavlof South-1**	**0.34**	**121**		Pn	21 19 24.7	+0.2
PS1A					Sn	21 19 39.7	-0.7
DT1	**Dutton Round H**	**0.49**	**182**		Pn	21 19 24.9	-0.2
DT1					Sn	21 19 41.9	+0.4
DOL	**Dolgoi Island**	**0.50**	**154**		Pn	21 19 25.2	+0.1
DOL					Sn	21 19 42.3	+0.7
FALS	**False Pass**	**1.00**	**223**		Pn	21 19 28.2	-0.2
FALS					Sn	21 19 47.2	-0.3
SDPT	**Sand Point**	**1.04**	**103**		Pn	21 19 28.8	0.0
SDPT					Sn	21 19 47.8	-0.3
SDPT				IAML		21 19 48.9	
	comp=E,92nm,0.3s						
SDPT				IAML		21 19 49.0	
	comp=N,82nm,0.3s						
SSBA	**Shishaldin**	**1.36**	**233**		Pn	21 19 30.9	-1.0
SSBA					Sn	21 19 52.3	-1.2
CNBA	**Chernabura Isl**	**1.71**	**116**		Pn	21 19 35.1	-0.3
CNBA					Sn	21 19 59.5	-0.5
CNBA				IAML		21 20 06.5	
	comp=E,23nm,0.8s						
UNV	**Unalaska Valle**	**3.03**	**236**	Pn	Pn	21 19 51.1	-0.1
UNV				IAML		21 20 59.2	
	comp=E,7.8nm,1.2s						
UNV				IAML		21 21 53.2	
	comp=N,8.1nm,0.9s						

*SKHL **16** 21:49:40.0±0.0, 44.50N×149.20E, h74km±3km, mb4.7/3*
*JMA **16** 21:49:42.0±1.2, 45°N±5.5°×14°9E±°, h30km, MV3.8/12, SE OFF ETOROFU*
ISC 16 21:49:37.6±4.1, 44.38N±0.09×149.4E±0.2, h36km, n14, σ2§78/22, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.41**	**308**	*eP*	**Pn**	**21 50 00.5**	**-0.2**
KUR				AMB	AMB	21 50 02.8	
	330nm,0.3s						
KUR				*eS*	**Sn**	**21 50 15.9**	**-2.1**
KUR				A	A	21 50 18.2	
	820nm,0.2s						
KUR				A	A	21 50 18.2	
	620nm,0.2s						
SHO	**Shikotan**	**1.95**	**256**	*eP*	Pn	21 50 15.9	+7.9
SHO				AMB	AMB	21 50 18.1	
	100nm,0.5s						
SHO				*eS*	**Sn**	**21 50 34.6**	**+3.4**
SHO				A	A	21 50 37.8	
	200nm,0.3s						
SHO				A	A	21 50 37.8	
	190nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.60**	**264**	*eP*	**Pn**	**21 50 18.1**	**+1.1**
YUK				AMB	AMB	21 50 21.7	
	140nm,0.2s						
YUK				*eS*	**Sn**	**21 50 46.7**	**-0.5**
YUK				A	A	21 50 50.7	
	310nm,0.4s						
YUK				A	A	21 50 50.7	
	180nm,0.4s						
NEM2	**Nemuro 2**	**2.86**	**251**	*eP*	**Pn**	**21 50 22.0**	**+1.4**
NEM2				*eS*	**Sn**	**21 50 50.7**	**-3.0**
NMR	**Nemuro--Hokkai**	**2.87**	**251**	*eP*	**Pn**	**21 50 21.9**	**+1.2**
NMR				*eS*	**Sn**	**21 50 52.5**	**-1.4**
JRA	**Rausu**	**3.14**	**263**	*eP*	**Pn**	**21 50 26.2**	**+1.8**
JRA				*eS*	**Sn**	**21 51 00.4**	**-0.2**
JNK	**Nakash**	**3.50**	**259**	*eP*	**Pn**	**21 50 31.9**	**+2.5**
JNK				*eS*	**Sn**	**21 51 09.2**	**-0.3**
AKK	**Akkeshi**	**3.60**	**249**	*eP*	**Pn**	**21 50 32.9**	**+2.1**
JAK	**Akkeshi**	**3.71**	**250**	*eP*	**Pn**	**21 50 33.8**	**+1.5**
JAK				*eS*	**Sn**	**21 51 12.4**	**-2.2**
JTKR	**Abashiri--Toko**	**4.00**	**266**	*eP*	Pn	21 50 40.4	+4.1
JAR	**Ashorobuto**	**4.24**	**257**	*eP*	**Pn**	**21 50 41.8**	**+2.2**
JAR				*eS*	**Sn**	**21 51 27.6**	**-0.3**
JOB	**Onbets**	**4.33**	**252**	*eP*	**Pn**	**21 50 43.6**	**+2.8**
JCH	**Churui**	**4.76**	**250**	*eP*	**Pn**	**21 50 48.7**	**+2.0**
JCH				*eS*	**Sn**	**21 51 39.0**	**-1.6**
JANG	**Nango**	**7.10**	**238**	*eS*	**Sn**	**21 52 29.7**	**-8.6**

OMAN 16 22:06:44.8±0.1, 28°03N×54°55E, h12km±1km, mb4.0/4, ml2.9/7, Error ellipse: s-maj=3.6km s-min=1.1km az=4.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHME	**Shamm**	**2.43**	**144**	P	Pn	22 07 24.5	+0.2
SHME				S	Sn	22 07 54.4	+0.5
BANOM	**Banah**	**2.61**	**143**	P	Pn	22 07 26.9	0.0
BANOM				S	Sn	22 07 59.2	+0.7
MASF	**Masafi**	**3.01**	**151**	P	Pn	22 07 32.8	+0.5
MASF				S	Sn	22 08 09.9	+1.5
MDH	**Madha**	**3.14**	**150**	P	Pn	22 07 34.2	+0.2
UOSS	**Minazif**	**3.41**	**154**	P	Pn	22 07 37.6	-0.2
UOSS				S	Sn	22 08 19.2	+1.1
ASUD	**Al Ashush, Dub**	**3.46**	**168**	P	Pn	22 07 39.3	+0.8
ASUD				S	Sn	22 08 20.5	+1.1
HATD	**Hatta, Dubai**	**3.49**	**156**	P	Pn	22 07 39.6	+0.7
HATD				S	Sn	22 08 21.2	+1.0
ASHO	**Ashiyiah**	**3.60**	**158**	P	Pn	22 07 41.1	+0.7
	SNR=6.7						
ASHO				S	Sn	22 08 24.7	+1.9
SOHO	**SOHO**	**4.27**	**155**	P	Pn	22 07 50.4	+0.9
SOHO				S	Sn	22 08 40.0	+0.6
ARQ	**Araqi**	**5.00**	**159**	P	Pn	22 07 59.4	-0.3
ARQ				S	Sn	22 08 58.9	+1.5
HOQ	**Hoqain**	**5.08**	**150**	P	Pn	22 08 00.6	-0.2
HOQ				S	Sn	22 08 59.9	+0.6
MZR	**Muzera**	**5.10**	**191**	P	Pn	22 08 00.9	-0.1
MZR				S	Sn	22 09 01.7	+1.8
BSY	**Bisya**	**5.78**	**155**	P	Pn	22 08 10.6	+0.2
BSY				S	Sn	22 09 17.7	+1.0
SMDO	**Samad**	**5.87**	**147**	P	Pn	22 08 12.4	+0.7
SMDO				S	Sn	22 09 20.2	+1.1
WSAR	**Wadi Sarin**	**6.03**	**141**	P	Pn	22 08 12.5	-1.2
JMDO	**Jabal Madar**	**6.49**	**150**	P	Pn	22 08 20.3	+0.1
**WBK

TIN	**Tinemaha, Big**	**0.91**	**341**			Pg	22 11 38.6	-0.3
TIN						Sg	22 11 51.5	+0.8
TIN					IAML		22 11 54.0	
	comp=N,1µm,0.5s							
DTP	**Desert Tortois**	**0.92**	**179**			Pg	22 11 38.4	-0.6
DTP						Sg	22 11 50.5	-0.3
GWY	**Greenwater Val**	**0.96**	**90**			Pg	22 11 39.5	-0.4
GWY					IAML		22 11 56.5	
	comp=N,626nm,0.3s							
GWY					IAML		22 12 02.5	
	comp=E,1µm,0.8s							
SGV	**South Grapevin**	**1.04**	**40**			Pg	22 11 41.6	+0.3
VES	**Vestal, Richgr**	**1.05**	**251**	Pg		Pg	22 11 41.1	-0.4
VES						Sg	22 11 55.4	+0.3
VES					IAML		22 11 58.7	
	comp=N,1µm,0.5s							
WCT	**Wildcat Mounta**	**1.17**	**58**			Pg	22 11 43.2	-0.5
WCT					IAML		22 12 01.6	
	comp=E,834nm,0.5s							
WCT					IAML		22 12 02.4	
	comp=N,409nm,0.5s							
TEJ	**El Tejon**	**1.17**	**215**			Pg	22 11 43.0	-0.8
DSP	**Deep Springs**	**1.18**	**356**			Pg	22 11 43.1	-1.0
GMN	**Gold Mountain**	**1.21**	**23**			Pg	22 11 44.4	-0.2
GMN					IAML		22 12 00.9	
	comp=N,531nm,0.4s							
GMN					IAML		22 12 03.6	
	comp=E,518nm,0.5s							
GSC	**Goldstone, Bar**	**1.23**	**135**			Pg	22 11 44.5	-0.5
VOG	**Valley Oaks Go**	**1.24**	**277**			Pg	22 11 44.5	-0.5
MTUM	**Tungsten Hills**	**1.29**	**334**			Pg	22 11 45.4	-0.8
SHOC	**Shoshone, Teco**	**1.32**	**102**			Pg	22 11 46.0	-0.7
TPO	**Tropico Hills**	**1.34**	**193**			Pg	22 11 46.1	-0.9
TPO						Sg	22 12 03.8	-0.6
TPO					IAML		22 12 06.3	
	comp=N,692nm,0.6s							
TPO					IAML		22 12 08.5	
	comp=E,733nm,0.8s							
TPNV	**Topopah Spring**	**1.50**	**59**			Pn	22 11 48.6	-0.9
TPNV					IAML		22 12 12.5	
	comp=E,332nm,0.7s							
TPNV					IAML		22 12 12.8	
	comp=E,349nm,0.7s							
KCC	**Kaiser Creek**	**1.63**	**315**			Pn	22 11 50.7	-0.3
MLAC	**Mammoth, Mammo**	**1.64**	**332**			Pn	22 11 51.8	+0.5
OSI	**Osito Audit: C**	**1.72**	**204**			Pn	22 12 52.5	+0.2
OSI					IAML		22 12 23.8	
	comp=N,489nm,0.7s							
MTPC	**Mountain Pass**	**2.00**	**110**			Pn	22 11 55.0	-1.3
MTPC					IAML		22 12 25.8	
	comp=N,361nm,0.7s							
MTPC					IAML		22 12 26.1	
	comp=E,338nm,0.6s							
TSCN	**Private Proper**	**2.12**	**253**			Pn	22 11 58.8	+1.1
LHV	**Little Huntoon**	**2.12**	**346**			Pn	22 11 56.9	-0.9
LHV					IAML		22 12 36.2	
	comp=E,105nm,0.9s							
NV11	**Mina Array Sit**	**2.25**	**354**	Pn		Pn	22 11 59.0	-0.7
V12A	**Nelson**	**2.49**	**100**			Pn	22 12 02.1	-0.8
V12A					IAML		22 12 46.2	
	comp=E,81nm,1.0s							
V12A					IAML		22 12 46.3	
	comp=N,92nm,0.8s							
RYN	**Ryan**	**2.49**	**348**			Pn	22 12 03.1	+0.1
ELS	**Elsinore Mount**	**2.56**	**172**			Pn	22 12 03.1	-0.8
PRN	**Pahroc Range**	**2.56**	**61**			Pn	22 12 03.8	-0.2
PRN					IAML		22 12 50.8	
	comp=N,126nm,0.7s							
PRN					IAML		22 12 56.9	
	comp=E,125nm,1.0s							
WAKR	**Walker**	**2.63**	**332**			Pn	22 12 05.1	+0.1
WAKR					IAML		22 12 56.8	
	comp=N,67nm,1.0s							
WAKR					IAML		22 13 03.2	
	comp=E,74nm,0.6s							
BELC	**Belle Mtn. Jos**	**2.66**	**144**			Pn	22 12 04.3	-1.1
BELC					IAML		22 12 48.5	
	comp=N,124nm,0.5s							
BELC					IAML		22 12 51.4	
	comp=E,96nm,0.8s							
CMB	**Columbia Colle**	**2.73**	**313**			Pn	22 12 05.2	-1.0
CMB					IAML		22 12 48.9	
	comp=E,134nm,0.5s							
PMD	**Palm Desert**	**2.81**	**154**			Pn	22 12 07.0	-0.3
PFO	**Pinyon Flats O**	**2.82**	**155**			Pn	22 12 06.6	-0.9
R11B	**Troy Canyon, C**	**2.82**	**39**			Pn	22 12 07.5	0.0
R11B					IAML		22 12 52.8	
	comp=E,95nm,0.9s							
SAO	**San Andreas Ge**	**2.95**	**282**			Pn	22 12 09.0	-0.1
MHC	**Mount Hamilton**	**3.25**	**292**			Pn	22 12 13.7	+0.3
MHC					IAML		22 13 08.5	
	comp=N,110nm,0.7s							
MHC					IAML		22 13 11.5	
	comp=E,76nm,0.7s							
W13A	**Hualapai Mount**	**3.42**	**107**			Pn	22 12 15.0	-0.8
W13A					IAML		22 13 15.8	
	comp=E,48nm,1.3s							
W13A					IAML		22 13 16.5	
	comp=N,64nm,1.6s							
BAR	**Barrett**	**3.63**	**164**			Pn	22 12 17.3	-1.2
BAR					IAML		22 13 15.6	
	comp=E,29nm,0.6s							
BLYC	**Blythe**	**3.66**	**131**			Pn	22 12 17.8	-1.2
BLYC					IAML		22 13 20.8	
	comp=N,44nm,0.8s							
BLYC					IAML		22 13 27.5	
	comp=E,64nm,0.9s							
PAHR	**Pah Rah Range**	**3.71**	**342**			Pn	22 12 20.2	+0.4
LCMT	**Little Creek M**	**3.81**	**76**			Pn	22 12 21.1	+0.1
CCUT	**Cedar City**	**3.86**	**68**			Pn	22 12 21.7	-0.1
PSUT	**Pine Spring**	**3.96**	**53**			Pn	22 12 23.1	-0.1
PSUT					IAML		22 13 31.1	
	comp=N,39nm,0.6s							
PSUT					IAML		22 13 38.6	
	comp=E,58nm,1.0s							
CBX	**Cerro Bola**	**3.99**	**165**			Pn	22 12 23.0	-0.6
SZCU	**Shurtz Canyon**	**4.08**	**68**			Pn	22 12 25.1	+0.2
KNB	**Kanab**	**4.14**	**77**			Pn	22 12 25.2	-0.5
KNB					IAML		22 13 46.0	
	comp=N,21nm,2.7s							
ESJX	**Sierra Juarez**	**4.46**	**159**			Pn	22 12 29.4	-0.7
U15A	**North Rim**	**4.51**	**85**			Pn	22 12 31.6	+0.8
U15A					IAML		22 14 00.1	
	comp=N,16nm,1.4s							
U15A					IAML		22 14 02.8	
	comp=E,18nm,2.1s							
PKCU	**Pink Cliffs**	**4.63**	**73**			Pn	22 12 33.0	+0.5
PKCU					IAML		22 13 26.2	
	comp=E,32nm,4.9s							
PKCU					IAML		22 13 37.0	
	comp=N,28nm,3.7s							
MTPU	**Mount Pierson**	**4.90**	**66**			Pn	22 12 37.0	+0.7
MTPU					IAML		22 13 11.3	
	comp=E,18nm,4.5s							
ELK	**Elko**	**4.99**	**24**			Pn	22 12 38.0	+0.5
ELK					IAML		22 14 01.6	
	comp=E,11nm,0.6s							
ELK					IAML		22 14 03.0	
	comp=E,18nm,0.6s							

*TAP **16** 22:13:34.7,21.˙14N×121.˙03E,h51km±1km,ML3.6,D*
ISC 16 22:13:36.6±3.9,21.˙2N±0.˙2×121.˙15E±0.˙09,h50km,n38,
σ1§56/54,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.75**	**342**	*i* P	**Pn**	**22 13 49.9**	**-1.1**
TSEB				S	**Sn**	**22 13 59.0**	**-2.6**
TWKBT	**Hengchun**	**0.82**	**338**	*i* P	**Pn**	**22 13 50.6**	**-1.4**
TWKBT				*e*S	**Sn**	**22 14 02.1**	**-1.0**
TWK1	**Hengchun**	**0.82**	**337**	P	**Pn**	**22 13 50.7**	**-1.3**
TWK1				*e*S	**Sn**	**22 14 00.2**	**-3.0**
SMST	**Manzhou Townsh**	**0.89**	**341**	*i* P	**Pn**	**22 13 51.6**	**-1.2**
SMST				S	**Sn**	**22 14 04.1**	**-0.6**
HEN	**Hengchun**	**0.91**	**335**	P	**Pn**	**22 13 52.4**	**-0.7**
HEN				S	**Sn**	**22 14 04.4**	**-0.8**
LYUB	**Lan-yu**	**0.92**	**26**	P	**Pn**	**22 13 52.8**	**-0.5**
LAY	**Lan-yu**	**0.94**	**24**	P	**Pn**	**22 13 53.3**	**-0.2**
SLIU	**Shizi**	**1.08**	**343**	P	**Pn**	**22 13 54.2**	**-1.2**
TAWH	**Dawu Township**	**1.18**	**348**	P	**Pn**	**22 13 55.0**	**-1.8**
TAWH				*e*S	**Sn**	**22 14 11.1**	**-0.6**
TAW	**Tawu**	**1.20**	**349**	P	**Pn**	**22 13 55.3**	**-1.7**
TAW				*e*S	**Sn**	**22 14 11.6**	**-0.5**
EAST	**Anshuo**	**1.23**	**347**	P	**Pn**	**22 13 55.9**	**-1.7**
EAST				*i* S	**Sn**	**22 14 13.6**	**+0.6**
SCZT	**Fangliau**	**1.28**	**338**	*e*P	**Pn**	**22 13 58.1**	**-0.1**
MASBT	**Mashibuluo**	**1.50**	**342**	*i* P	**Pn**	**22 14 00.9**	**-0.3**
MASBT				*e*S	**Sn**	**22 14 20.9**	**+1.2**
LDUT	**Ludao**	**1.52**	**11**	P	**Pn**	**22 13 59.9**	**-1.4**
TTN	**Taitung**	**1.57**	**0**	*e*P	**Pn**	**22 14 01.6**	**-0.5**
SSD	**Sandimen**	**1.63**	**343**	*e*P	**Pn**	**22 14 03.7**	**+0.7**
SSD				*e*S	**Sn**	**22 14 25.2**	**+2.4**
TWGBT	**Beinan**	**1.63**	**358**	P	**Pn**	**22 14 03.9**	**+0.9**
LONT	**Longtian**	**1.72**	**359**	*e*P	**Pn**	**22 14 01.7**	**-2.5**
EDH	**Donghe**	**1.79**	**5**	*e*P	**Pn**	**22 14 03.8**	**-1.3**
SCST	**Cishan**	**1.80**	**341**	*e*P	**Pn**	**22 14 06.8**	**+1.5**
SCST				*e*S	**Sn**	**22 14 29.7**	**+2.7**
EHD	**Haiduan**	**1.96**	**2**	*e*P	**Pn**	**22 14 05.4**	**-2.1**
ELDTW	**Lidau**	**2.00**	**357**	*e*P	**Pn**	**22 14 06.9**	**-1.2**
ELDTW				*e*S	**Sn**	**22 14 29.8**	**-2.3**
STYH	**Taoyuan**	**2.01**	**350**	*e*P	**Pn**	**22 14 09.2**	**+1.1**
FULB	**Fuli**	**2.02**	**4**	*e*P	**Pn**	**22 14 07.5**	**-0.7**
CHKH	**Chenggong**	**2.02**	**7**	*e*P	**Pn**	**22 14 07.3**	**-0.9**
WTP	**Ta-pu**	**2.12**	**347**	*e*P	**Pn**	**22 14 10.8**	**+1.2**
TPUB	**Ta-pu**	**2.17**	**347**	P	**Pn**	**22 14 11.9**	**+1.6**
TPUB	**Ta-pu**	**2.17**	**347**	*e*P	**Pn**	**22 14 12.2**	**+2.0**
YULB	**Yu-li**	**2.21**	**4**	P	**Pn**	**22 14 10.7**	**-0.2**
YULB	**Yu-li**	**2.21**	**4**	*e*P	**Pn**	**22 14 10.7**	**-0.2**
YULB				S	**Sn**	**22 14 33.5**	**-3.5**
HGSD	**Ruisui**	**2.32**	**6**	*e*P	**Pn**	**22 14 12.8**	**+0.5**
VWDT	**VWDT**	**2.56**	**360**	P	**Pn**	**22 14 15.8**	**+0.2**
VWDT				S	**Sn**	**22 14 48.2**	**+2.6**
SSLB	**Suanglung**	**2.60**	**356**	P	**Pn**	**22 14 17.9**	**+1.6**
SMLT	**Sun Moon Lake**	**2.70**	**355**	*e*P	**Pn**	**22 14 19.2**	**+1.5**
SMLT				*e*S	**Sn**	**22 14 51.5**	**+2.3**
TYC	**Yuchr**	**2.73**	**354**	*e*P	**Pn**	**22 14 19.6**	**+1.6**
TYC				*e*S	**Sn**	**22 14 49.8**	**+0.1**
NACB	**Ninganchiao**	**3.01**	**8**	P	**Pn**	**22 14 22.9**	**+1.1**
YHNB	**Yeheng**	**3.48**	**3**	P	**Pn**	**22 14 29.1**	**+0.7**
YOJ	**Yonaguni jima**	**3.69**	**27**	P	**Pn**	**22 14 33.2**	**+2.0**

DJA 16 22:15:55.5±0.9,7.˙N±7.˙×12.˙5E±.˚,h10km,M4.3/6,mB5.0/1,
mb4.5/4,MLv4.3/6,Mw(mB)4.3/1,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**3.28**	**170**	P	Pn	22 16 46.3	-0.7
MRSI	**Marisa**	**7.10**	**205**	P	Pn	22 17 39.7	+0.2
	0.1nm19nm,0.5s						

*SJA **16** 22:26:14.4±0.6,20.˙57S×68.˙01W,h175km,ML3.5,MW3.4*
ISC 16 22:26:15.5±1.8,20.˙60S±0.˙04×68.˙3W±0.˙1,h197km±14km,
n28,σ1§24/49,5C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**1.24**	**318**	*e*P	**Pn**	**22 26 46.4**	**-1.0**
GO01				*i* S	**Sn**	**22 27 09.7**	**-2.3**
GO01	**Chusmiza**	**1.24**	**318**	*e*P	**Pn**	**22 26 46.7**	**-0.7**
PB09	**IPOC Station P**	**1.47**	**216**	⇑*i* P	**Pn**	**22 26 49.5**	**+0.5**
PB09				*i* S	**Sn**	**22 27 14.9**	**0.0**
PB09				IAML		22 27 17.4	
	comp=E,188nm,0.5s						
PB09	**IPOC Station P**	**1.47**	**216**	*e*P	Pn	22 26 38.5	-10
PB09				*e*S	**Sn**	**22 27 16.2**	**+1.3**
PB09				IAML		22 27 16.9	
	comp=Z,174nm,0.1s						
PB11	**IPOC Station P**	**1.51**	**303**	⇑*i* P	**Pn**	**22 26 48.9**	**-0.4**
PB11				*i* S	**Sn**	**22 27 14.1**	**-1.3**
PB11				IAML		22 27 16.9	
	comp=N,761nm,0.3s						
PB11	**IPOC Station P**	**1.51**	**303**	*e*P	**Pn**	**22 26 49.0**	**-0.2**
PB11				*e*S	**Sn**	**22 27 15.2**	**-0.1**
PB11				IAML		22 27 16.5	
	comp=Z,224nm,0.1s						
PB02	**IPOC Station P**	**1.64**	**244**	*e*P	**Pn**	**22 26 50.9**	**+0.6**
PB02				*i* S	**Sn**	**22 27 17.2**	**-0.3**
PB02				IAML		22 27 19.8	
	comp=N,570nm,0.4s						
PB02	**IPOC Station P**	**1.64**	**244**	*e*P	**Pn**	**22 26 51.2**	**+0.8**
PB02				*e*S	**Sn**	**22 27 17.7**	**+0.3**
PB02				IAML		22 27 19.1	
	comp=Z,567nm,0.2s						
PATCX	**Punta Patache**	**1.73**	**262**	⇑*i* P	**Pn**	**22 26 51.9**	**+0.7**
PATCX				*i* S	**Sn**	**22 27 19.2**	**+0.2**
PATCX				IAML		22 27 21.1	
	comp=N,647nm,0.3s						
PATCX	**Punta Patache**	**1.73**	**262**	*e*P	**Pn**	**22 26 52.0**	**+0.7**
PATCX				*e*S	**Sn**	**22 27 20.0**	**+1.0**
PATCX				IAML		22 27 21.7	
	comp=Z,203nm,0.3s						
TA02	**Huaiquique**	**1.73**	**281**	*e*P	**Pn**	**22 26 51.5**	**+0.4**
TA02				*i* S	**Sn**	**22 27 18.4**	**-0.3**
TA02				IAML		22 27 23.1	
	comp=N,2µm,0.1s						
TA02	**Huaiquique**	**1.73**	**281**	*e*P	**Pn**	**22 26 51.5**	**+0.4**
TA02				IAML		22 27 21.9	
	comp=Z,398nm,0.2s						
TA01	**Diego Aracena**	**1.74**	**271**	⇑*i* P	**Pn**	**22 26 51.6**	**+0.4**
TA01				*i* S	**Sn**	**22 27 18.4**	**-0.6**
TA01				IAML		22 27 19.8	
	comp=N,244nm,0.2s						
TA01	**Diego Aracena**	**1.74**	**271**	*e*P	**Pn**	**22 26 51.0**	**-0.2**
TA01				*e*S	**Sn**	**22 27 18.8**	**-0.2**
TA01				IAML		22 27 19.7	
	comp=Z,78nm,0.3s						
PB07	**IPOC Station P**	**1.84**	**232**	*e*P	**Pn**	**22 26 53.0**	**+0.5**
PB07				*i* S	**Sn**	**22 27 20.9**	**-0.3**
PB07				IAML		22 27 22.9	
	comp=N,378nm,0.2s						
PB07	**IPOC Station P**	**1.84**	**232**	*e*P	**Pn**	**22 26 53.1**	**+0.6**
PB07				*e*S	**Sn**	**22 27 21.8**	**+0.6**
PB07				IAML		22 27 23.1	
	comp=Z,187nm,0.1s						
PB03	**IPOC Station P**	**1.97**	**223**	*e*P	Pn	22 26 48.2	-5.5
PB03				*e*S	**Sn**	**22 27 23.3**	**-0.1**
PB03				IAML		22 27 26.7	
	comp=Z,308nm,0.2s						
PB06	**IPOC Station P**	**2.40**	**209**	*e*P	**Pn**	**22 26 59.1**	**+0.8**
PB06				*i* S	**Sn**	**22 27 31.3**	**-0.4**
PB06				IAML		22 27 34.6	
	comp=E,1µm,0.1s						
PB06	**IPOC Station P**	**2.40**	**209**	*e*P	**Pn**	**22 26 58.6**	**+0.3**
PB06				*e*S	**Sn**	**22 27 32.4**	**+0.6**
PB06				IAML		22 27 37.5	
	comp=Z,219nm,0.3s						
PB16	**IPOC Station P**	**2.52**	**333**	⇑*i* P	**Pn**	**22 27 00.5**	**+0.4**
PB16				*i* S	**Sn**	**22 27 34.1**	**-0.6**
PB16				IAML		22 27 36.2	
	comp=E,101nm,0.4s						
PB16	**IPOC Station P**	**2.52**	**333**	*e*P	**Pn**	**22 27 00.8**	**+0.7**
PB16				*e*S	**Sn**	**22 27 37.9**	**+3.2**
PB12	**IPOC Station P**	**2.73**	**316**	⇓*e*P	**Pn**	**22 27 01.4**	**-0.8**
PB12				*i* S	**Sn**	**22 27 36.0**	**-2.4**
PB12				IAML		22 27 43.9	
	comp=N,107nm,0.5s						
PB12	**IPOC Station P**	**2.73**	**316**	*e*P	**Pn**	**22 27 01.3**	**-0.8**
PB12				*e*S	**Sn**	**22 27 37.2**	**-1.2**
PB12				IAML		22 27 38.5	
	comp=Z,53nm,0.2s						
PB05	**IPOC Station P**	**2.84**	**218**	*e*S	**Sn**	**22 27 40.9**	**+0.1**
PB05				IAML		22 27 43.1	
	comp=Z,103nm,0.2s						
AP01	**Chacalluta**	**2.92**	**319**	*e*P	**Pn**	**22 27 04.6**	**+0.4**
AP01				*e*S	**Sn**	**22 27 44.6**	**+2.5**
AP01				IAML		22 27 48.7	
	comp=Z,105nm,0.1s						
LPAZ	**La Paz**	**4.29**	**2**	*e*P	**Pn**	**22 27 22.0**	**+0.5**
PB14	**IPOC Station P**	**4.45**	**205**	*e*P	**Pn**	**22 27 24.1**	**+0.9**
PB14				*e*S	**Sn**	**22 28 11.4**	**-4.9**
PB14				IAML		22 28 18.0	
	comp=Z,45nm,0.2s						
GO02	**Mina Guanaco**	**4.69**	**194**	*e*S	**Sn**	**22 28 21.1**	**-0.8**
GO02				IAML		22 28 25.1	
	comp=Z,61nm,0.1s						

*NEIC **16** 22:29:25.8±1.2,36.˚179N±0.˚009×117.˚86W±0.˚01,*
h5km,Error ellipse: s-maj=1.9km s-min=1.6km az=250.0
PAS 16 22:29:26.1±1.1,36.˚187N±0.˚009×117.˚865W±0.˚007,
h2km±2km,ML3.4/89,ML3.1/128(NEIC),Error ellipse:
s-maj=1.4km s-min=0.6km az=199.0,California-Nevada
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFS	**McCloud Flat S**	**0.07**	**173**		Pg	22 29 27.9	+0.3
MFS					Sg	22 29 29.3	+0.7
WCSM	**Coso Springs S**	**0.18**	**154**		Pg	22 29 29.9	+0.3
WCSM					Sg	22 29 32.8	+0.8
WRVM	**Rose V. Centra**	**0.18**	**186**		Pg	22 29 29.8	+0.2
WRVM					Sg	22 29 32.7	+0.7
WVPM	**Volcano Peak E**	**0.24**	**171**		Pg	22 29 30.9	+0.2
WVPM					Sg	22 29 34.8	+0.9
CWC	**Cottonwood Cre**	**0.31**	**326**		Pg	22 29 32.2	+0.1
CWC					Sg	22 29 36.6	+0.5
MPMC	**Manual Prospec**	**0.33**	**113**		Pg	22 29 32.5	0.0
MPMC					Sg	22 29 37.1	+0.3
MPMC					IAML	22 29 39.1	
	comp=N,4µm,0.5s						
CGO	**Cerro Gordo**	**0.37**	**8**		Pg	22 29 33.2	-0.1
CGO					Sg	22 29 39.0	+0.9
TOW	**Tower One**	**0.39**	**168**		Pg	22 29 34.0	+0.5
TOW					Sg	22 29 40.3	+1.7
CLC	**China Lake**	**0.43**	**150**		Pg	22 29 34.3	-0.1
CLC					Sg	22 29 40.2	+0.3
SRTC	**Snort**	**0.50**	**169**		Pg	22 29 36.2	+0.5
SRTC					Sb	22 29 44.0	-1.5
GPO	**China Lake**	**0.56**	**163**		Pg	22 29 37.0	+0.1
GPO					Sg	22 29 45.3	+1.2
WORM	**Onyx Ranch**	**0.58**	**212**		Pg	22 29 36.9	-0.3
WORM					Sg	22 29 44.7	0.0
WHFM	**Hanning Flat**	**0.63**	**219**		Pg	22 29 38.0	-0.1
WHFM					Sg	22 29 46.5	+0.2
WSHM	**Spangler Hills**	**0.66**	**153**		Pg	22 29 38.7	-0.1
WSHM					Sg	22 29 47.4	+0.1
WSHM				IAML		22 29 48.2	
	comp=N,937nm,0.3s						
WASM	**Alta Sierra Ca**	**0.72**	**232**		Pg	22 29 39.7	-0.2
WASM					Sg	22 29 49.4	+0.2
ISA	**Isabella, Lake**	**0.72**	**224**		Pg	22 29 39.7	-0.2
ISA					Sg	22 29 49.1	-0.1
ISA				IAML		22 29 49.6	
	comp=N,1µm,0.5s						
ISA				IAML		22 29 49.7	
	comp=E,1µm,0.5s						
LRMC	**Laurel Mtn Rad**	**0.72**	**168**		Pg	22 29 39.8	-0.1
LRMC					Sg	22 29 49.9	+0.6
LRMC				IAML		22 29 53.9	
	comp=N,578nm,0.4s						
LRMC				IAML		22 29 55.1	
	comp=E,751nm,0.6s						
SPG2	**Springville 2**	**0.73**	**271**		Sg	22 29 49.5	-0.1
CCCA	**Chr Cany lake**	**0.78**	**148**		Pg	22 29 41.2	+0.2
CCCA					Sg	22 29 51.9	+0.8
QSM	**Queen of Sheba**	**0.84**	**105**		Pg	22 29 42.1	-0.1
QSM					Sg	22 29 53.0	0.0
QSM				IAML		22 29 59.7	
	comp=N,709nm,0.7s						
QSM				IAML		22 30 00.3	
	comp=E,1µm,0.8s						
FURC	**Furnace Creek,**	**0.86**	**71**		Pg	22 29 42.7	+0.1
FURC					Sg	22 29 54.2	+0.5
GRAC	**Grapevine Rang**	**0.90**	**26**		Pg	22 29 43.3	-0.2
GRAC	**Grapevine Rang**	**0.90**	**26**		Sg	22 29 55.9	+0.8
TIN	**Tinemaha, Big**	**0.91**	**341**		Pg	22 29 43.5	-0.1
TIN					Sg	22 29 56.4	+0.9
DTP	**Desert Tortois**	**0.92**	**179**		Pg	22 29 43.2	-0.5
DTP					Sg	22 29 55.5	-0.1
GWY	**Greenwater Val**	**0.97**	**90**		Pg	22 29 44.5	-0.2
GWY				IAML		22 30 02.4	
	comp=N,436nm,0.5s						
GWY				IAML		22 30 04.0	
	comp=E,803nm,0.7s						
VES	**Vestal, Richgr**	**1.05**	**251**		Pg	22 29 45.9	-0.3
VES					Sg	22 30 00.2	+0.4
VES				IAML		22 30 03.5	
	comp=N,649nm,0.6s						
VES				IAML		22 30 05.8	
	comp=E,749nm,0.5s						
WCT	**Wildcat Mounta**	**1.17**	**58**		Pg	22 29 47.9	-0.7
WCT					Sg	22 30 03.6	-0.1
WCT				IAML		22 30 06.5	
	comp=E,695nm,0.5s						
WCT				IAML		22 30 07.2	
	comp=N,320nm,0.5s						
DSP	**Deep Springs**	**1.18**	**356**		Pg	22 29 47.9	-0.9
GMN	**Gold Mountain**	**1.21**	**23**		Pg	22 29 48.8	-0.6
GMN					Sg	22 30 04.9	-0.2
GMN				IAML		22 30 07.2	
	comp=E,378nm,0.3s						
GMN				IAML		22 30 08.1	
	comp=N,516nm,0.6s						
GSC	**Goldstone, Bar**	**1.23**	**135**		Pg	22 29 49.1	-0.7
MTUM	**Tungsten Hills**	**1.29**	**334**		Pg	22 29 50.2	-0.7
TPO	**Tropico Hills**	**1.34**	**193**		Pg	22 29 50.8	-1.0
TPO					Sg	22 30 08.8	-0.3
TPO				IAML		22 30 11.1	
	comp=N,460nm,0.6s						
TPO				IAML		22 30 13.3	
	comp=E,501nm,0.7s						
TPNV	**Topopah Spring**	**1.51**	**59**		Pn	22 29 53.5	-0.8
TPNV				IAML		22 30 16.3	
	comp=E,273nm,0.9s						
TPNV				IAML		22 30 17.3	
	comp=E,266nm,1.1s						
KCC	**Kaiser Creek**	**1.63**	**315**		Pn	22 29 55.6	-0.2
OSI	**Osito Audit: C**	**1.72**	**204**		Pn	22 29 56.2	-0.8
OSI				IAML		22 30 28.6	
	comp=N,314nm,0.7s						
BFSC	**Mount Baldy Ra**	**1.95**	**175**		Pn	22 29 60.0	-0.4
MWC	**Mount Wilson**	**1.96**	**185**		Pn	22 30 00.4	-0.2
MWC				IAML		22 30 33.8	
	comp=N,187nm,0.6s						
MWC				IAML		22 30 33.8	
	comp=E,184nm,0.6s						
MTPC	**Mountain Pass**	**2.00**	**110**		Pn	22 29 59.8	-1.3
MTPC				IAML		22 30 30.6	
	comp=N,256nm,0.7s						
MTPC				IAML		22 30 30.7	
	comp=E,234nm,0.5s						
LHV	**Little Huntoon**	**2.12**	**346**

IRM					IAML		22 31 05.3		
	comp=E,50nm,0.4s								
BC3	**Big Chuckawall**	**3.21**	**141**			Pn	22 30 16.1	-1.5	
BC3					IAML		22 31 14.1		
	comp=N,50nm,0.5s								
BC3					IAML		22 31 21.3		
	comp=E,34nm,1.5s								
BAR	**Barrett**	**3.63**	**164**			Pn	22 30 22.8	-0.7	
LCMT	**Little Creek M**	**3.81**	**76**			Pn	22 30 25.7	-0.2	
KNB	**Kanab**	**4.14**	**77**			Pn	22 30 30.6	+0.1	
KNB					IAML		22 31 50.0		
	comp=N,18nm,1.9s								
U15A	**North Rim**	**4.51**	**85**			Pn	22 30 36.7	+1.0	
U15A					IAML		22 32 04.9		
	comp=N,14nm,3.4s								
U15A					IAML		22 32 20.4		
	comp=E,15nm,4.2s								
PKCU	**Pink Cliffs**	**4.63**	**73**			Pn	22 30 37.8	+0.4	
MTPU	**Mount Pierson**	**4.90**	**66**			Pn	22 30 41.2	+0.1	
MTPU					IAML		22 33 00.5		
	comp=N,12nm,4.8s								
MTPU					IAML		22 33 18.3		
	comp=E,12nm,4.1s								
ELK	**Elko**	**5.00**	**24**			Pn	22 30 42.7	+0.4	
ELK					IAML		22 32 06.5		
	comp=E,9.0nm,0.7s								
ELK					IAML		22 32 07.9		
	comp=E,15nm,0.6s								

*SOME **16** 22:35:47.0, 39°.47N × 73°.02E, h10km*
*KRNET **16** 22:35:50.5±0.1, 39°.55N × 73°.23E, h13km, mb3.5*
*NNC **16** 22:35:53.7±2.6, 39°.63N × 73°.35E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=19.8km s-min=10.6km az=0.0

ISC 16 22:35:52.7±1.0, 39°.57N±0°.04 × 73°.20E±0°.03, h10km, n57, σ2§13/91, 33C-23D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.50**	**28**	⇑*iP*		**Pg**	**22 36 00.7**	**-1.8**
SFK				⇑*iS*		**Sg**	**22 36 08.1**	**-1.0**
OHH	**Osh**	**1.00**	**341**	⇓*iP*		**Pg**	**22 36 09.8**	**-2.2**
OHH				⇓*iS*		**Sg**	**22 36 24.8**	**-0.3**
DRK	**Karamyk**	**1.09**	**266**	⇓*iP*		**Pb**	**22 36 11.8**	**-2.0**
DRK				⇓*iS*		**Sg**	**22 36 27.3**	**-0.6**
SALK	**Salom-Alik**	**1.39**	**20**	⇓*eP*		**Pn**	**22 36 16.9**	**-1.5**
SALK				⇓*eS*		**Sn**	**22 36 36.2**	**-0.7**
ARSB	**Arslanbob**	**1.76**	**355**	⇓*iP*		**Pn**	**22 36 23.8**	**+0.4**
ARSB				⇓*iS*		**Sb**	**22 36 48.3**	**+1.0**
GAR	**Garm**	**2.31**	**257**	⇓*iP*		**Pn**	**22 36 32.2**	**+1.2**
GAR				⇓*iS*		**Sb**	**22 37 02.5**	**-0.7**
JNKS	**Jany-Kuch**	**2.39**	**51**	⇑*iP*		**Pb**	**22 36 33.1**	**-2.9**
JNKS				⇑*iS*		**Sb**	**22 37 04.2**	**-1.4**
ARK	**Arkit**	**2.42**	**337**	⇑*iP*		**Pn**	**22 36 33.8**	**+1.4**
ARK				⇑*iS*		**Sn**	**22 37 05.4**	**+3.3**
ARLS	**Aral**	**2.44**	**20**	⇓*iP*		**Pn**	**22 36 33.8**	**+1.0**
ARLS				⇓*iS*		**Sb**	**22 37 05.5**	**-1.4**
TRKS	**Terek-Say**	**2.51**	**322**	⇑*iP*		**Pn**	**22 36 34.1**	**+0.4**
TRKS				⇑*iS*		**Sn**	**22 37 06.1**	**+1.7**
UCH	**Uchtor** SNR=27	**2.83**	**20**	P		**Pb**	**22 36 41.0**	**-2.6**
UCH	**Uchtor**	**2.83**	**20**	⇓*iP*		**Pn**	**22 36 39.6**	**+1.2**
UCH				⇓*iS*		**Sn**	**22 37 15.4**	**+2.6**
EKS2	**Erkin-Say** SNR=19	**3.12**	**8**	P		**Pb**	**22 36 45.6**	**-2.6**
EKS2	**Erkin-Say**	**3.12**	**8**	⇑*iP*		**Pn**	**22 36 43.4**	**+1.4**
EKS2				⇑*iS*		**Sn**	**22 37 22.0**	**+2.6**
MRKS	**Merke** 4.5nm,0.3s	**3.17**	**0**	Pg		**Pb**	**22 36 46.5**	**-2.7**
MRKS				Lg	Lg		22 37 29.2		
	33nm,0.4s								
MRKS	**Merke** 4.5nm,0.3s	**3.17**	**0**	*eP*		**Pb**	**22 36 46.5**	**-2.7**
MRKS				*eS*		**Sb**	**22 37 29.2**	**+1.3**
	33nm,0.4s								
AAK	**Ala-Archa** SNR=24	**3.21**	**17**	P		**Pb**	**22 36 46.5**	**-3.5**
AAK	**Ala-Archa** 4.5nm,0.5s	**3.21**	**17**	⇓Pn		**Pn**	**22 36 46.2**	**+2.8**
AAK				⇑Lg	Lg		22 37 29.1		
	58nm,1.3s								
AAK	**Ala-Archa**	**3.21**	**17**	⇑*iP*		**Pn**	**22 36 44.6**	**+1.2**
AAK				⇑*iS*		**Sn**	**22 37 24.2**	**+2.4**
CHGR	**Chuyangaron**	**3.28**	**255**	⇓*iP*		**Pn**	**22 36 45.5**	**+1.3**
CHGR				⇓*iS*		**Sn**	**22 37 25.6**	**+2.3**
KBK	**Karagaybulak** SNR=7.0	**3.35**	**23**	P		**Pb**	**22 36 54.1**	**+1.8**
KBK	**Karagaybulak**	**3.35**	**23**	⇑*iP*		**Pn**	**22 36 46.6**	**+1.3**
KBK				⇑*iS*		**Sn**	**22 37 27.5**	**+2.3**
FRU1	**Bishkek**	**3.41**	**18**	⇑*iP*		**Pn**	**22 36 47.6**	**+1.6**
FRU1				⇑*iS*		**Sn**	**22 37 29.2**	**+2.7**
IUG	**Iuzhnay** 7.7nm,0.4s	**3.52**	**318**	Pg		**Pn**	**22 36 50.6**	**+3.0**
IUG				Lg	Lg		22 37 36.0		
	38nm,0.5s								
ULHL	**Ulahol** SNR=5.9	**3.53**	**40**	P		**Pb**	**22 36 55.4**	**+0.1**
ULHL	**Ulahol**	**3.53**	**40**	⇑*iP*		**Pn**	**22 36 49.0**	**+1.3**
ULHL				⇑*iS*		**Sn**	**22 37 31.6**	**+2.0**
BOOM	**Boomskoye usch**	**3.58**	**35**	⇑*eP*		**Pn**	**22 36 49.4**	**+1.0**
BOOM				⇑*eS*		**Sn**	**22 37 33.0**	**+2.2**
DZA	**Taraz** 18nm,0.1s	**3.60**	**338**	Pg		**Pb**	**22 36 53.4**	**-3.1**
DZA				Lg	Lg		22 37 41.1		
	40nm,0.4s								
DZA	**Taraz** 18nm,0.1s	**3.60**	**338**	*eP*		**Pb**	**22 36 53.4**	**-3.1**
DZA				*eS*		**Sb**	**22 37 41.1**	**+0.8**
	40nm,0.4s								
CHMS	**Chumysh** SNR=8.6	**3.62**	**18**	P		**Pn**	**22 36 51.9**	**+3.1**
CHMS	**Chumysh**	**3.62**	**18**	⇑*iP*		**Pn**	**22 36 50.1**	**+1.3**
CHMS				⇑*iS*		**Sn**	**22 37 33.7**	**+2.1**
TKM2	**Tokmak 2** SNR=5.9	**3.80**	**28**	P		**Pn**	**22 36 53.9**	**+2.4**
TKM2	**Tokmak 2**	**3.80**	**28**	⇑*iP*		**Pn**	**22 36 52.8**	**+1.3**
TKM2				⇑*iS*		**Sn**	**22 37 38.3**	**+1.9**
USP	**Ospenovka** SNR=7.7	**3.82**	**14**	P		**Pn**	**22 36 54.4**	**+2.8**
USP	**Ospenovka**	**3.82**	**14**	⇑*iP*		**Pn**	**22 36 53.0**	**+1.4**
USP				⇑*iS*		**Sn**	**22 37 38.6**	**+2.0**
KDJ	**Kajisay**	**3.95**	**48**	⇓*iP*		**Pn**	**22 36 54.9**	**+1.3**
KDJ				⇓*iS*		**Sn**	**22 37 41.8**	**+1.7**
KST	**Kastek** 6.8nm,0.5s	**4.04**	**30**	Pg		**Pb**	**22 37 05.1**	**+1.1**
KST				Lg	Lg		22 38 01.3		
	28nm,1.0s								
KST	**Kastek** 6.8nm,0.5s	**4.04**	**30**	*eP*		**Pb**	**22 37 05.1**	**+1.1**
KST				*eS*		**Sg**	**22 38 01.3**	**-1.2**
	28nm,1.0s								
KK31	**Karatay Array** 0.5nm,0.2s,baz=138,slow=13,SNR=16	**4.07**	**331**	⇓Pn		**Pn**	**22 36 58.4**	**+3.4**
KK31				⇑Pg		**Pg**	**22 37 08.8**	**-1.9**
	1.4nm,0.3s,baz=153,slow=16,SNR=8.5								
KK31				⇑Sn		**Sn**	**22 37 49.5**	**+6.8**
	4.0nm,0.3s,baz=147,slow=25,SNR=5.8								
KK31				⇑Lg	Lg		22 38 01.8		
	6.5nm,0.4s								
TARG	**Taragay, Kyrgy**	**4.11**	**57**	⇓*iP*		**Pn**	**22 36 56.9**	**+1.0**
TARG				⇓*iS*		**Sn**	**22 37 45.2**	**+0.9**
DGS	**Degeres** 7.5nm,0.6s	**4.14**	**27**	Pg		**Pb**	**22 37 06.6**	**+0.8**
DGS				Lg	Lg		22 38 04.0		
	19nm,1.1s								
BRLS	**Boroldaу** 1.3nm,0.2s	**4.29**	**325**	Pg		**Pn**	**22 37 02.0**	**+4.0**
BRLS				Lg	Lg		22 37 56.0		
	14nm,0.5s								
BRLS	**Boroldaу** 1.3nm,0.2s	**4.29**	**325**	*eP*		**Pn**	**22 37 02.0**	**+4.0**
BRLS				*eS*		**Sb**	**22 37 56.0**	**-3.9**
	14nm,0.5s								
MTBS	**Maitube** 5.0nm,0.3s	**4.30**	**33**	Pg		**Pb**	**22 37 09.3**	**+0.8**
MTBS				Lg	Lg		22 38 08.9		
	12nm,0.7s								
MTBS	**Maitube** 5.0nm,0.3s	**4.30**	**33**	*eP*		**Pb**	**22 37 09.3**	**+0.8**
MTBS				*eS*		**Sg**	**22 38 08.9**	**-2.0**
	12nm,0.7s								
TNSS	**Tian-Shan** 2.0nm,0.4s	**4.46**	**38**	Pg		**Pb**	**22 37 12.9**	**+1.5**
TNSS				Lg	Lg		22 38 15.0		
	5.8nm,0.6s								
TNSS	**Tian-Shan** 2.0nm,0.4s	**4.46**	**38**	*eP*		**Pb**	**22 37 12.9**	**+1.5**
TNSS				*eS*		**Sg**	**22 38 15.0**	**-1.1**
	5.8nm,0.6s								
KRBS	**Karabastau** 5.4nm,0.4s	**4.52**	**23**	Pg		**Pb**	**22 37 13.7**	**+1.6**
KRBS				Lg	Lg		22 38 16.2		
	24nm,1.0s								
MDOK	**Medeo** 2.6nm,0.5s	**4.61**	**38**	Pg		**Pb**	**22 37 15.4**	**+1.7**
MDOK				Lg	Lg		22 38 19.2		
	12nm,0.8s								
KOTS	**Kotyrbulak** 6.2nm,0.4s	**4.69**	**38**	Pg		**Pb**	**22 37 17.0**	**+1.9**
KOTS				Lg	Lg		22 38 21.4		
	52nm,1.2s								
KOTS	**Kotyrbulak** 6.2nm,0.4s	**4.69**	**38**	*eP*		**Pb**	**22 37 17.1**	**+1.9**
KOTS				*eS*		**Sg**	**22 38 21.4**	**-2.0**
	52nm,1.2s								
KTBS	**Karatobe** 5.3nm,0.5s	**4.89**	**31**	Pg		**Pb**	**22 37 20.4**	**+2.0**
KTBS				Lg	Lg		22 38 27.5		
	13nm,1.9s								
PRZ	**Przheval'sk**	**4.89**	**52**	⇑*iP*		**Pn**	**22 37 07.8**	**+1.4**
PRZ				⇑*iS*		**Sn**	**22 38 04.1**	**+0.9**
KUU	**Kurty**	**4.91**	**28**	Pg		**Pb**	**22 37 20.9**	**+2.1**
KUU				Lg	Lg		22 38 28.2		
KUU	**Kurty**	**4.91**	**28**	*eP*		**Pb**	**22 37 20.9**	**+2.1**
KUU				*eS*		**Sg**	**22 38 28.2**	**-2.2**
SATY	**Saty** 5.7nm,0.7s	**5.24**	**47**	Pg		**Pb**	**22 37 25.6**	**+1.1**
SATY				Lg	Lg		22 38 37.2		
	7.3nm,0.7s								
PDGK	**Podgornoye** 3.5nm,0.8s	**6.03**	**50**	⇓Pn		**Pn**	**22 37 22.0**	**-0.1**
PDGK				⇑Lg	Lg		22 39 00.1		
	8.5nm,0.9s								

*IDC **16** 22:37:36.2±0.8, 31°.13N × 103°.54E, h0km, mb3.8/12,*
mbtmp3.8/14, ML3.7/1, MS3.0/5, Error ellipse:
s-maj=27.9km s-min=15.7km az=61.0

ISC 16 22:37:38.6±0.8, 31°.11N±0°.09 × 103°.6E±0°.2, h16km, n16, σ0§75/14, mb3.9/12, MS3.1/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array** baz=163,slow=12 1.2nm,0.4s	**4.83**	**1**	Pn		**Pn**	**22 38 51.9**	**+0.9**
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=22,slow=13,SNR=4.3	**13.27**	**199**	Pn		**Pn**	**22 40 46.6**	**+0.2**
CMAR				LR	LR		22 46 43.0		
	comp=Z,24nm,18.4s,baz=40,slow=41								
KSRS	**Korea Array** 1.6nm,0.6s,baz=262,slow=10,SNR=8.9 1.6nm,0.6s	**21.08**	**66**	P		**P**	**22 42 21.8**	**-0.4**
HILR	**Hailar Array B** 0.6nm,0.3s,baz=215,slow=9.7,SNR=1.6 0.6nm,0.3s	**22.10**	**29**	P		**P**	**22 42 34.1**	**+1.0**
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=115,slow=13,SNR=5.6	**22.66**	**320**	P		**P**	**22 42 38.8**	**-0.3**
MKAR				LR	LR		22 52 16.3		
	comp=Z,67nm,18.6s,baz=116,slow=39 0.7nm,0.8s								
AAK	**Ala-Archa** comp=Z,2nm,20.3s,baz=93,slow=40	**25.81**	**305**	LR	LR		22 54 56.3		
ZALV	**Zalesovo Beam** 0.8nm,0.6s,baz=153,slow=10.0,SNR=4.2	**26.51**	**335**	P		**P**	**22 43 14.7**	**-0.5**
ZALV				LR	LR		22 54 04.9		
	comp=Z,25nm,18.2s,baz=34,slow=37 0.8nm,0.6s								
KURBB	**Kurchatov Arra** 0.7nm,0.2s,baz=131,slow=9.3,SNR=5.8 0.7nm,0.2s	**26.95**	**324**	P		**P**	**22 43 19.0**	**-0.1**
TIXI	**Tiksi** comp=Z,30nm,19.2s,baz=192,slow=38	**42.84**	**11**	LR	LR		23 04 39.7		
ARCES	**ARCESS Array B** 3.6nm,1.0s,baz=84,slow=8.3,SNR=2.3 3.6nm,1.0s	**57.06**	**336**	P		**P**	**22 47 22.8**	**-0.7**
FINES	**FINESS Array B** 2.9nm,1.0s,baz=186,slow=1.9,SNR=4.0 2.9nm,1.0s	**57.30**	**326**	P		**P**	**22 47 25.0**	**-0.2**
WRA	**Warramunga Arr** 2.5nm,0.9s,baz=337,slow=7.5,SNR=16 2.5nm,0.9s	**58.75**	**146**	P		**P**	**22 47 36.2**	**+0.3**
ASAR	**Alice Springs** 0.9nm,0.8s,baz=334,slow=5.8,SNR=9.6 0.9nm,0.8s	**61.75**	**148**	P		**P**	**22 47 56.9**	**+0.4**
HFS	**Hagfors** 5.0nm,1.1s,baz=70,slow=13,SNR=2.1 5.0nm,1.1s	**63.50**	**326**	P		**P**	**22 48 08.0**	**+0.3**
NOA	**NORSAR Array B** 0.7nm,1.0s,baz=71,slow=5.4,SNR=1.6 0.7nm,1.0s	**64.39**	**327**	P		**P**	**22 48 14.5**	**+0.9**
ILAR	**Eielson Array** 0.3nm,0.7s,baz=314,slow=4.0,SNR=4.1 0.3nm,0.7s	**70.04**	**25**	P		**P**	**22 48 47.8**	**-1.5**

*IDC **16** 22:45:01.8±8.6, 36°.82N × 70°.25E, h215km±58km, mb3.5/4,*
mbtmp3.9/7, Error ellipse: s-maj=91.8km s-min=48.7km
az=165.0

ISC 16 22:45:00.1±2.2, 36°.7N±0°.2 × 70°.2E±0°.2, h200km, n14, σ0§78/17, mb3.9/4, 1C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 1.1nm,0.2s,baz=182,slow=13,SNR=22	**6.37**	**2**	Pn		**Pn**	**22 46 33.0**	**+0.9**
KK31				⇓Sn		**Sn**	**22 47 44.3**	**-0.7**
	2.5nm,0.5s								
UCH	**Uchtor** SNR=27	**6.42**	**30**	P		**Pn**	**22 46 33.7**	**+0.6**
EKS2	**Erkin-Say** SNR=6.4	**6.53**	**24**	P		**Pn**	**22 46 35.2**	**+1.0**
AAK	**Ala-Archa** 3.4nm,0.4s,baz=170,slow=5.3,SNR=19	**6.76**	**28**	P		**Pn**	**22 46 38.2**	**+1.0**
AAK				S		**Sn**	**22 47 54.7**	**+0.3**
	6.9nm,0.7s,baz=4.0,slow=20,SNR=12								
AAK	**Ala-Archa** SNR=6.9	**6.76**	**28**	P		**Pn**	**22 46 38.3**	**+1.0**
AAK	**Ala-Archa** 1.1nm,0.5s	**6.76**	**28**	⇓Pn		**Pn**	**22 46 37.6**	**+0.3**
AAK				⇑Sn		**Sn**	**22 47 53.4**	**-1.0**
	6.3nm,0.9s								
KBK	**Karagaybulak** SNR=5.2	**6.96**	**30**	P		**Pn**	**22 46 41.1**	**+1.3**
TKM2	**Tokmak 2** SNR=5.2	**7.45**	**32**	P		**Pn**	**22 46 46.8**	**+0.6**
MKAR	**Makanchi Array** 1.7nm,0.9s,baz=225,slow=18,SNR=6.4	**13.49**	**38**	P		**Pn**	**22 48 02.9**	**-0.7**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,baz=218,slow=9.1,SNR=3.4	**19.98**	**26**	P		**P**	**22 49 16.8**	**-0.1**
FINES	**FINESS Array B** 3.0nm,1.0s,baz=117,slow=8.0,SNR=2.0 3.0nm,1.0s	**36.94**	**326**	P		**P**	**22 51 49.3**	**-0.2**
ARCES	**ARCESS Array B** 7.6nm,1.1s,baz=110,slow=7.9,SNR=7.1 7.6nm,1.1s	**40.69**	**338**	P		**P**	**22 52 20.4**	**-0.1**
HFS	**Hagfors** 4.2nm,1.1s,baz=102,slow=11,SNR=5.1 4.2nm,1.1s	**42.49**	**322**	P		**P**	**22 52 34.8**	**-0.4**
NOA	**NORSAR Array B** 0.6nm,0.8s,baz=95,slow=7.9,SNR=1.6 0.6nm,0.8s	**43.81**	**323**	P		**P**	**22 52 45.7**	**-0.1**

*IDC **16** 22:48:12.6±2.1, 1°.37N × 126°.41E, h0km, mb3.4/3,*
mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=127.2km
s-min=27.0km az=68.0
*DJA **16** 22:48:15.2±0.3, 2°.N±4°.4 × 12°.6E±°, h10km, M3.8/7, mB5.5/1,*
mb4.7/1, MLv3.3/7, Mw(mB)5.0/1

ISC 16 22:48:17.2±1.1, 1°.5N±0°.1 × 126°.5E±0°.2, h35km, n7, σ1§19/7, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**129**	P		**Pn**	**22 48 36.8**	**0.0**
SGSI	**Sangihe**	**2.37**	**337**	P		**Pn**	**22 48 53.3**	**-0.3**
AAI	**Ambon**	**5.43**	**162**	P		**Pn**	**22 49 36.6**	**+0.9**
FITZ	**Fitzroy Crossi** baz=29,slow=10,SNR=1.6 1.2nm,0.9s	**19.49**	**182**	P		**P**	**22 52 40.1**	**-1.2**
WRA	**Warramunga Arr** 1.1nm,0.5s,baz=338,slow=10,SNR=10 1.1nm,0.5s	**22.66**	**160**	P		**P**	**22 53 14.9**	**-0.7**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=346,slow=12,SNR=7.7 0.1nm,0.3s	**26.04**	**164**	P		**P**	**22 53 46.3**	**-1.0**
MKAR	**Makanchi Array** 0.7nm,1.0s,baz=121,slow=7.5,SNR=2.1 0.7nm,1.0s	**59.24**	**326**	P		**P**	**22 58 16.5**	**+1.4**

*IDC **16** 22:50:45.6±1.5, 1°.73N × 126°.71E, h0km, mb3.5/4,*
mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=113.5km
s-min=20.7km az=69.0
*DJA **16** 22:50:50.4±0.3, 2°.N±4°.4 × 12°.6E±°, h10km, M3.7/8, mb3.9/1,*
MLv3.6/8

ISC 16 22:50:52.0±1.0, 1°.54N±0°.09 × 126°.40E±0°.10, h35km, n8, σ1§43/9, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**128**	P		**Pn**	**22 51 14.2**	**+1.5**
SGSI	**Sangihe**	**2.30**	**338**	P		**Pn**	**22 51 29.1**	**+1.6**
KMSI	**Cibinong**	**2.61**	**248**	P		**Pn**	**22 51 33.0**	**+1.3**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=15,slow=12,SNR=1.2 0.8nm,0.7s	**19.53**	**182**	P		**P**	**22 55 16.9**	**+0.2**
WRA	**Warramunga Arr** 0.9nm,0.4s,baz=341,slow=11,SNR=12 0.9nm,0.4s	**22.73**	**160**	P		**P**	**22 55 50.0**	**-1.2**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=346,slow=9.3,SNR=8.3	**26.10**	**164**	P		**P**	**22 56 21.8**	**-0.9**
ASAR				PcP		**PcP**	**22 59 50.5**	**+0.6**
	0.2nm,0.4s,baz=354,slow=2.6,SNR=4.4 0.2nm,0.4s								
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=119,slow=7.7,SNR=6.1 0.7nm,0.7s	**59.17**	**326**	P		**P**	**23 00 48.3**	**-1.2**
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=116,slow=6.3,SNR=2.9 0.3nm,0.5s	**63.40**	**328**	P		**P**	**23 01 16.6**	**-1.4**

*NEIC **16** 23:09:05.6±2.4, 19°.00N±0°.06 × 145°.6E±0°.1, h223km±6km,*
mb4.4/18, Error ellipse: s-maj=19.6km s-min=8.0km
az=77.0
*IDC **16** 23:09:06.1±2.0, 19°.00N × 145°.43E, h236km±20km,*
mb3.5/17, mbtmp4.1/19, Error ellipse: s-maj=18.8km
s-min=12.5km az=75.0

ISC 16 23:09:04.6±0.6, 19°.08N±0°.07 × 145°.5E±0°.1, h214km, n44, σ1§10/45, mb4.0/24, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 43nm,0.7s,baz=14,slow=17,SNR=2.3	**5.50**	**186**	P		**Pn**	**23 10 27.5**	**+1.8**
GUMO				S		**S**	**23 11 29.2**	**-0.5**
	27nm,0.3s,baz=359,slow=23,SNR=4.4								
JOW	**Kunigami**	**17.63**	**299**	P		**Pn**	**23 12 58.9**	**+1.3**
JGF	**Kuroka**	**17.96**	**338**	P		**Pn**	**23 13 01.5**	**+0.1**
JGF				IAmb	IAmb		23 13 03.2		
	comp=Z,10nm,0.8s								
MJAR	**Matsushiro Arr** comp=Z,3.5nm,0.7s,baz=169,slow=10.0,SNR=14	**18.54**	**341**	P		**Pn**	**23 13 06.9**	**-1.3**
MJAR	**Matsushiro Arr**	**18.54**	**341**	P		**P**	**23 13 06.0**	**+0.7**
MAJO	**Matsushiro**	**18.54**	**341**	P		**Pn**	**23 13 07.4**	**-0.8**
MAJO				IAmb	IAmb		23 13 22.4		
	comp=Z,25nm,1.4s								
MJB9	**Matsu-Tunnel**	**18.55**	**341**	P		**Pn**	**23 13 07.9**	**-0.3**
MJB9				IAmb	IAmb		23 13 23.3		
	comp=Z,27nm,1.4s								
KSRS	**Korea Array** comp=Z,0.6nm,0.5s,baz=135,slow=8.9,SNR=2.2 comp=Z,0.6nm,0.5s	**23.90**	**324**	P		**P**	**23 13 59.3**	**+0.5**
HILR	**Hailar Array B** comp=Z,0.9nm,0.4s,baz=116,slow=9.8,SNR=2.2 comp=Z,0.9nm,0.4s	**36.74**	**332**	P		**P**	**23 15 51.3**	**-0.1**
WB0	**Warramunga Arr**	**40.12**	**196**	P		**P**	**23 16 18.7**	**-1.0**
WB0				IAmb	IAmb		23 16 25.0		
	comp=Z,9.4nm,1.5s								
WRA	**Warramunga Arr** comp=Z,0.7nm,0.6s,baz=7.0,slow=8.8,SNR=12 comp=Z,0.7nm,0.6s	**40.30**	**196**	P		**P**	**23 16 20.0**	**-1.2**
LZDM	**Lanzhou Array** comp=Z,0.6nm,0.3s,baz=116,slow=3.4,SNR=1.5 comp=Z,0.6nm,0.3s	**40.37**	**303**	P		**P**	**23 16 22.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**41.79**	**209**	P		**P**	**23 16 32.8**	**-0.5**
ASAR	**Alice Springs** comp=Z,0.3nm,0.7s,baz=12,slow=7.9,SNR=4.8 comp=Z,0.3nm,0.7s	**43.97**	**195**	P		**P**	**23 16 49.8**	**-1.0**
YAK	**Yakutsk**	**44.31**	**349**	P		**P**	**23 16 53.2**	**+0.2**
YAK				IAmb	IAmb		23 16 54.6		
	comp=Z,16nm,0.7s								
UNV	**Unalaska Valle**	**50.44**	**35**	P		**P**	**23 17 41.0**	**+0.7**
UNV				IAmb	IAmb		23 18 03.0		
	comp=Z,50nm,1.3s								
S12K	**Black Hills**	**53.54**	**34**	P		**P**	**23 18 03.5**	**+0.4**
EVN	**Everest**	**54.10**	**291**	P		**P**	**23 18 09.4**	**+0.9**
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=107,slow=7.7,SNR=2.0 comp=Z,0.3nm,0.3s	**57.60**	**322**	P		**P**	**23 18 31.4**	**-0.6**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.5s,baz=91,slow=7.4,SNR=14 comp=Z,0.8nm,0.5s	**58.07**	**314**	P		**P**	**23 18 34.8**	**-0.6**
MKAR	**Makanchi Array**	**58.07**	**314**	P		**P**	**23 18 35.3**	**-0.1**
MAKZ	**Makanchi**	**58.28**	**314**	P		**P**	**23 18 36.9**	**-0.1**
MAKZ				IAmb	IAmb		23 18 39.0		
	comp=Z,9.1nm,1.2s								
KURK	**Kurchatov**	**60.87**	**318**	P		**P**	**23 18 54.1**	**-0.3**
D20K	**Etivluk River**	**60.91**	**21**	P		**P**	**23 18 56.3**	**+1.8**
D20K				IAmb	IAmb		23 18 57.1		
	comp=Z,6.1nm,0.8s								
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.4s,baz=92,slow=7.5,SNR=28 comp=Z,1.0nm,0.4s	**60.91**	**318**	P		**P**	**23 18 53.8**	**-1.0**
IMAR	**Indian Mountai**	**60.94**	**24**	P		**P**	**23 18 56.6**	**+1.9**
D23K	**Nanushuk River**	**63.02**	**21**	P		**P**	**23 19 10.8**	**+2.3**
D23K				IAmb	IAmb		23 19 11.2		
	comp=Z,2.1nm,0.6s								
ILAR	**Eielson Array** comp=Z,1.8nm,0.6s,baz=256,slow=5.3,SNR=26 comp=Z,1.8nm,0.6s	**63.38**	**26**	P		**P**	**23 19 10.8**	**-0.1**
ILAR	**Eielson Array**	**63.38**	**26**	P		**P**	**23 19 10.6**	**-0.4**
ARSB	**Arslanbob**	**64.68**	**307**	P		**P**	**23 19 20.2**	**+0.2**
ARSB				IAmb	IAmb		23 19 21.4		
	comp=Z,1.7nm,0.6s								
BMAR	**Burnt Mountain**	**64.84**	**24**	P		**P**	**23 19 21.6**	**+1.2**
BVAR	**Borovoye Array** comp=Z,3.4nm,0.5s,baz=96,slow=7.1,SNR=11 comp=Z

0.3nm,0.4s,baz=338,slow=10,SNR=5.3
0.3nm,0.4s
ASAR Alice Springs 26.20 164 P P 23 16 02.1 +1.3
0.2nm,0.4s,baz=345,slow=12,SNR=5.3
0.2nm,0.4s
MKAR Makanchi Array 58.99 326 P P 23 20 25.8 +0.1
0.6nm,0.9s,baz=114,slow=7.8,SNR=1.6
0.6nm,0.9s

TAP 16 23:13:21.2,24˚29N×122˚10E,h25km,ML2.8,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.18**	**43**	*eP*	**Pb**	23 13 27.0	+0.6
EAHA	**Aohua**	**0.33**	**277**	P	Pb	23 13 29.0	+0.4
EAHA				S	Sb	23 13 35.0	+1.3
EWUT	**Wuta**	**0.33**	**298**	*i* P	Pb	23 13 28.7	0.0
ESAO	**Su ao**	**0.37**	**321**	*i* P	Pb	23 13 29.8	+0.5
ESAO				S	Sb	23 13 35.1	+0.3
TWC	**Suao**	**0.39**	**324**	*i* P	Pb	23 13 29.6	0.0
TWC				*i* S	Sb	23 13 35.5	+0.1
ETL	**Fush Village**	**0.45**	**254**	P	Pn	23 13 31.4	-0.7
ETL				*eS*	Sn	23 13 39.9	+0.4
NACB	**Ninganchiao**	**0.47**	**256**	P	Pb	23 13 31.4	+0.5
NACB				*eS*	Sn	23 13 40.0	0.0
NDS	**Dongshan**	**0.49**	**315**	P	Pb	23 13 31.6	+0.3
TWD	**Chiawan**	**0.51**	**246**	*eP*	Pb	23 13 32.0	+0.5
TWD				*eS*	Sn	23 13 40.4	-0.3
HWA	**Hwalien**	**0.55**	**236**	P	Pn	23 13 33.0	-0.4
ETLH	**Xiulin Townshi**	**0.57**	**262**	P	Pb	23 13 33.1	+0.4
ETLH				*eS*	Sn	23 13 42.7	+0.2
ILA	**Ilan**	**0.57**	**326**	P	Pn	23 13 33.2	-0.5
ILA				S	Sn	23 13 42.5	+0.1
EGS		**0.57**	**345**	*eP*	Pn	23 13 33.3	-0.5
LATG	**Datong**	**0.58**	**295**	P	Pb	23 13 33.1	+0.3
LATG				S	Sn	23 13 41.9	-0.9
TWE	**Neicheng**	**0.58**	**318**	P	Pb	23 13 33.1	+0.3
TWE				S	Sn	23 13 41.9	-0.8
ENTT	**Nioudou**	**0.60**	**306**	P	Pb	23 13 33.6	+0.5
TEYL	**Yanliau Villag**	**0.62**	**228**	P	Pb	23 13 33.3	-0.1
TEYL				S	Sn	23 13 43.8	+0.2
ETM	**Tongmen**	**0.64**	**240**	*eP*	Pb	23 13 34.1	+0.3
ETM				*eS*	Sn	23 13 43.7	-0.3
FUSB	**Fushanzhiwuyua**	**0.66**	**315**	*i* P	Pn	23 13 34.7	-0.4
FUSB				S	Sn	23 13 44.1	-0.6
NNSB	**Datong**	**0.67**	**282**	P	Pn	23 13 32.1	-0.1
NNS	**Nan Shan**	**0.68**	**283**	P	Pn	23 13 35.3	0.0
NNS				*eS*	Sn	23 13 44.6	-0.7
LXIB	**Xiulin Townshi**	**0.68**	**247**	P	Pb	23 13 34.7	+0.2
LXIB				*eS*	Sn	23 13 45.0	-0.3
SHUL	**Shoufeng**	**0.70**	**225**	*eP*	Pn	23 13 36.1	+0.7
SHUL				*eS*	Sn	23 13 45.9	+0.4
TWB1	**Santiao Chiao**	**0.72**	**352**	P	Pn	23 13 35.9	0.0
TIPB	**Shuangxi**	**0.72**	**340**	P	Pn	23 13 35.8	-0.1
TIPB				*eS*	Sn	23 13 45.8	-0.5
NWLT	**Wulai**	**0.73**	**312**	P	Pn	23 13 36.0	0.0
NWLT				*eS*	Sn	23 13 46.1	-0.3
YHNB	**Yeheng**	**0.76**	**300**	P	Pn	23 13 36.6	+0.2
YHNB				*eS*	Sn	23 13 47.1	-0.1
ESL	**Shilin**	**0.77**	**232**	P	Pn	23 13 36.3	-0.2
WHF	**Hehuan Shan**	**0.78**	**260**	P	Pb	23 13 36.6	+0.3
WHF				*eS*	Sn	23 13 47.6	-0.4
NSK	**Sanguang**	**0.78**	**300**	*eP*	Pn	23 13 36.9	+0.2
NSK				*eS*	Sn	23 13 47.3	-0.3
FUSS	**Fushou**	**0.78**	**267**	*i* P	Pn	23 13 37.1	+0.2
FUSS				S	Sn	23 13 48.6	+0.7
SXI1	**Grass Mountain**	**0.83**	**346**	P	Pn	23 13 37.8	+0.5
SXI1				*eS*	Sn	23 13 49.5	+0.7
NWF	**Wu-fen Shan**	**0.83**	**340**	*eP*	Pn	23 13 38.2	+0.8
NWF				*eS*	Sn	23 13 49.6	+0.7
WFSB	**Wu-fen Shan**	**0.83**	**340**	*eP*	Pn	23 13 38.3	+1.0
WFSB				*eS*	Sn	23 13 49.6	+0.7
TWA	**Mucha**	**0.83**	**326**	P	Pn	23 13 38.3	+0.9
TWA				*eS*	Sn	23 13 49.8	+0.9
TWT	**Tachien**	**0.84**	**268**	*eP*	Pn	23 13 38.6	+0.9
TWT				*eS*	Sn	23 13 50.1	+0.7
YOJ	**Yonaguni jima**	**0.85**	**78**	P	Pb	23 13 37.2	-0.1
YOJ				S	Sn	23 13 49.1	-0.1
YOJ	**Yonaguni jima**	**0.85**	**78**	P	Pb	23 13 37.2	-0.1
NHDH	**Xindian Distri**	**0.85**	**322**	*eP*	Pn	23 13 38.4	+1.3
NHDH				*eS*	Sn	23 13 49.7	+0.5
TDCB	**Techi**	**0.86**	**268**	*eP*	Pn	23 13 38.6	+0.8
TDCB				*eS*	Sn	23 13 50.2	+0.5
WARBT	**Fenglin Townsh**	**0.86**	**229**	*eP*	Pb	23 13 36.7	-0.9
WARBT				S	Sb	23 13 48.4	-0.4
NHY	**Taipei**	**0.89**	**327**	P	Pn	23 13 41.1	+3.0
OWD	**Renai**	**0.91**	**249**	*eP*	Pb	23 13 38.3	-0.1
OWD				*eS*	Sb	23 13 50.3	+0.2
TNOU	**National Taiwa**	**0.91**	**341**	P	Pn	23 13 39.0	+0.6
TNOU				S	Sn	23 13 51.9	+1.2
WUSB	**Renai**	**0.94**	**252**	P	Pb	23 13 39.0	0.0
WUSB				S	Sn	23 13 52.0	+0.3
NFF	**Wufeng Townshi**	**0.96**	**291**	*eP*	Pb	23 13 39.8	+0.7
NFF				*eS*	Sn	23 13 53.1	+1.0
KSHI	**Guanxi Townshi**	**0.97**	**300**	*eP*	Pb	23 13 40.9	+1.5
KSHI				*eS*	Sn	23 13 55.4	+3.1
YM01	**YM01**	**0.98**	**331**	*eP*	Pb	23 13 40.7	+1.1
ZUZH	**Zhuzihu**	**1.01**	**330**	*eP*	Pb	23 13 41.1	+1.1
ZUZH				*eS*	Sn	23 13 54.5	+1.3
YM08	**YM08**	**1.01**	**333**	*eP*	Pb	23 13 41.3	+1.2
YM08				*eS*	Sn	23 13 53.6	+0.4
TWS1	**Kuangyinshan**	**1.02**	**323**	P	Pb	23 13 41.5	+1.3
TWS1				*eS*	Sn	23 13 56.9	+3.4
VWDT	**VWDT**	**1.02**	**239**	*eP*	Pb	23 13 40.2	0.0
VWDT				*eS*	Sn	23 13 53.7	+0.1
EHYH	**Wanrong**	**1.05**	**221**	*eP*	Pb	23 13 40.8	+0.1
LIOB	**Emei**	**1.05**	**290**	P	Pb	23 13 42.2	+1.4
LIOB				*eS*	Sn	23 13 58.4	+4.2
WHP	**Taichung City**	**1.05**	**270**	P	Pb	23 13 41.6	+0.8
WHP				S	Sn	23 13 55.8	+1.4
NSTT	**Nanjuang**	**1.06**	**289**	P	Pb	23 13 42.0	+1.2
NSTT				*eS*	Sn	23 13 56.1	+1.7
TWY	**Chenhua**	**1.08**	**335**	P	Pb	23 13 43.0	+1.7
TWY				S	Sn	23 13 57.1	+2.0
WCS	**Beigang Elemen**	**1.11**	**258**	*eP*	Pb	23 13 42.3	+0.6
YULB	**Yu-li**	**1.16**	**220**	*eP*	Pn	23 13 40.2	-1.6
YULB				*eS*	Sn	23 13 55.1	-1.7
SSLB	**Suanglung**	**1.16**	**245**	*eP*	Pb	23 13 42.4	-0.2
SSLB				*eS*	Sb	23 13 57.7	+0.5
SMLT	**Sun Moon Lake**	**1.17**	**250**	*eP*	Pn	23 13 42.3	+0.3
TYC	**Yuchr**	**1.20**	**252**	*eP*	Pb	23 13 42.8	-0.4
TYC				*eS*	Sb	23 13 59.2	+0.9
TWQ1	**Liyutan**	**1.21**	**273**	*eP*	Pb	23 13 44.9	+1.4
TWQ1				*eS*	Sb	23 14 01.8	+3.1
WHYT	**Xinyi Township**	**1.28**	**243**	*eP*	Pb	23 13 45.0	+0.3
WHYT				*eS*	Sb	23 14 00.8	0.0
TCU	**Taichung**	**1.31**	**264**	*eP*	Pb	23 13 45.2	+0.1
TCU				*eS*	Sb	23 14 03.7	+2.3
WJS	**Zhushan**	**1.34**	**250**	*eP*	Pb	23 13 45.9	+0.3
CHN5	**Tsauling**	**1.47**	**242**	*eP*	Pb	23 13 48.3	+0.4
CHN5				*eS*	Sb	23 14 08.4	+2.2
EDH	**Donghe**	**1.50**	**209**	*eP*	Pn	23 13 44.5	-2.0
EDH				S	Sn	23 14 02.1	-3.2
TWK	**Hsinying**	**1.79**	**236**	*eP*	Pb	23 13 52.3	-1.1
TWK				S	Sb	23 14 15.1	-0.4
CHN1	**Nanshi**	**1.81**	**233**	*eS*	Sb	23 14 16.3	+0.3
SNST	**Tainan City**	**1.81**	**234**	*eS*	Sb	23 14 15.9	0.0
WSL	**Shuilin Townsh**	**1.88**	**246**	*eP*	Pb	23 13 54.1	-0.6
WSL				*eS*	Sb	23 14 17.9	+0.1

*IGIL **16** 23:16:56.3,36˚59N×9˚75W,h15km,ML1.0*
*INMG **16** 23:16:56.3±1.1,36˚60N×9˚76W,h14km±4km,ML1.5,Error ellipse: s-maj=5.3km s-min=5.1km az=27.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Cabo S.Vicente*
*CNRM **16** 23:16:56.3,36˚39N×9˚35W,h25km,ML3.3*
ISC 16 23:16:53.7±2.5,36.48N±0.03×9.58W±0.07,h16km±15km, n28,σ1ˢ58/41,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.89**	**43**	*eP*	**Pn**	**23 17 12.8**	**+1.2**
PFVI				*eS*	**Sn**	**23 17 25.1**	**+1.0**
PFVI				*i* IAML		23 17 25.5	
PFVI				*i* IAML		23 17 25.9	
PFVI				*i* IAML		23 17 26.4	
MORF	**Marmelete**	**1.11**	**42**	*eS*	**Sn**	**23 17 30.3**	**+0.7**
MORF				IAML		23 17 32.0	
	comp=E,3.0nm,0.1s						
MORF	**Marmelete**	**1.11**	**42**	*eP*	**Pn**	**23 17 16.0**	**+1.4**
MORF				*eS*	**Sn**	**23 17 31.1**	**+1.6**
MORF				*i* IAML		23 17 31.9	
MORF				*i* IAML		23 17 32.0	
MORF				*i* IAML		23 17 32.9	
PTEO	**Sao Teotonio**	**1.26**	**32**	*eP*	**Pn**	**23 17 18.0**	**+1.2**
PTEO				*eS*	**Sn**	**23 17 34.1**	**+0.7**
PTEO				*i* IAML		23 17 36.1	
PTEO				*i* IAML		23 17 38.6	
PTEO				*i* IAML		23 17 38.9	
PBDV	**Barranco-do-Ve**	**1.52**	**60**	*eS*	**Sg**	**23 17 41.9**	**-0.9**
PBDV				*i* IAML		23 17 44.8	
PBDV				*i* IAML		23 17 46.0	
PBDV				*i* IAML		23 17 55.0	
PCVE	**Castro Verde**	**1.68**	**47**	*eS*	**Sb**	**23 17 45.1**	**-0.2**
PCVE				*i* IAML		23 17 47.0	
PCVE				*i* IAML		23 17 48.5	
PCVE				*i* IAML		23 17 50.0	
MESJ	**Messejana**	**1.73**	**38**	*eP*	**Pn**	**23 17 24.3**	**+1.1**
MESJ				*eS*	**Sn**	**23 17 44.9**	**-0.2**
MESJ				IAML		23 17 46.2	
	comp=E,1.2nm,0.2s						
MESJ	**Messejana**	**1.73**	**38**	*eP*	**Pn**	**23 17 24.3**	**+1.1**
MESJ				*eS*	**Sn**	**23 17 45.6**	**+0.5**
MESJ				*i* IAML		23 17 46.6	
MESJ				*i* IAML		23 17 47.1	
MESJ				*i* IAML		23 17 52.8	
PVAQ	**Vaqueiros**	**1.75**	**58**	*eP*	**Pb**	**23 17 25.4**	**-0.1**
PVAQ				*eS*	**Sb**	**23 17 47.3**	**0.0**
PVAQ				*i* IAML		23 17 48.4	
PVAQ				*i* IAML		23 17 50.6	
PVAQ				*i* IAML		23 17 57.0	
PVAQ	**Vaqueiros**	**1.75**	**58**	P	**Pn**	**23 17 24.0**	**+0.6**
PVAQ	**Vaqueiros**	**1.75**	**58**	S	**Sn**	**23 17 44.7**	**-0.7**
MOE	**Montemor**	**2.26**	**25**	*eP*	**Pn**	**23 17 31.6**	**+1.2**
MOE				*eS*	**Sn**	**23 17 57.6**	**-0.4**
MOE				*i* IAML		23 17 58.4	
EVO	**Evora**	**2.40**	**31**	*eS*	**Sn**	**23 18 00.7**	**-0.7**
PMAFR	**Mafra**	**2.48**	**5**	*eP*	**Pn**	**23 17 32.5**	**-1.0**
PMAFR				*eS*	**Sn**	**23 18 00.4**	**-3.1**
PMAFR				*i* IAML		23 18 09.5	
PARRA	**Arraiolos**	**2.63**	**27**	*eP*	**Pb**	**23 17 36.6**	**+0.6**
PARRA				*eS*	**Sb**	**23 18 06.2**	**+1.2**
PARRA				*i* IAML		23 18 12.1	
PARRA				*i* IAML		23 18 14.5	
PARRA				*i* IAML		23 18 26.9	
PBAR	**Barrancos**	**2.64**	**49**	*eP*	**Pn**	**23 17 37.5**	**+1.9**
PBAR				*eS*	**Sn**	**23 18 07.9**	**+0.7**
PBAR				*i* IAML		23 18 09.5	
PBAR				*i* IAML		23 18 11.1	
PBAR				*i* IAML		23 18 19.9	
PMTG	**Montargil**	**2.80**	**22**	*eP*	**Pn**	**23 17 38.3**	**+0.5**
PMTG				*eS*	**Sn**	**23 18 09.7**	**-1.5**
PMTG				*i* IAML		23 18 10.7	
PMTG				*i* IAML		23 18 13.1	
PMTG				*i* IAML		23 18 22.8	
PESTR	**Estremoz**	**2.86**	**33**	*eS*	**Sn**	**23 18 12.0**	**-0.8**
PESTR				*i* IAML		23 18 14.6	
PESTR				*i* IAML		23 18 19.1	
PSBE	**So Bento**	**3.09**	**11**	*eP*	**Pn**	**23 17 41.5**	**-0.3**
PSBE				*eS*	**Sn**	**23 18 17.0**	**-1.5**
PSARD	**Sardoal**	**3.31**	**19**	*eP*	**Pn**	**23 17 44.9**	**0.0**
PSARD				*eS*	**Sn**	**23 18 21.1**	**-2.8**
PSARD				*i* IAML		23 18 24.3	
PSARD				*i* IAML		23 18 27.0	
PSARD				*i* IAML		23 18 31.7	
ZHG	**ZHG**	**3.87**	**141**	P	**Pn**	**23 17 51.5**	**-1.2**
ZHG	**ZHG**	**3.87**	**141**	S	**Sn**	**23 18 36.1**	**-1.8**
SRHM	**Skhour des Reh**	**4.23**	**160**	P	**Pn**	**23 17 59.5**	**+1.8**
SRHM	**Skhour des Reh**	**4.23**	**160**	S	**Sn**	**23 18 51.4**	**+4.6**
MD31	**MD31**	**5.36**	**131**	P	**Pn**	**23 18 12.8**	**-0.4**
MD31	**MD31**	**5.36**	**131**	S	**Sn**	**23 19 11.1**	**-3.5**
MDT	**Midelt**	**5.49**	**130**	P	**Pn**	**23 18 14.7**	**-0.2**
MDT	**Midelt**	**5.49**	**130**	S	**Sn**	**23 19 15.6**	**-2.3**

*IDC **16** 23:22:15.1±1.5,1˚53N×125˚81E,h0km,mb3.8/4, mbtmp3.7/5,ML2.7/1,MS3.2/2,Error ellipse: s-maj=117.3km s-min=19.1km az=68.0*
*DJA **16** 23:22:19.4±0.3,2˚N±3˚×12˚6E±˚,h10km,M3.9/12,mB5.0/2, mb4.0/3,MLv3.8/12,Mw(mB)4.4/2*
ISC 16 23:22:19.8±1.1,1.75N±0.08×126.57E±0.09,h35km,n14, σ2ˢ26/12,mb3.8/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**141**	P	**Pn**	**23 22 42.6**	**+1.7**
SGSI	**Sangihe**	**2.18**	**332**	P	**Pn**	**23 22 55.6**	**+1.9**
KMSI	**Cibinong**	**2.84**	**246**	P	**Pn**	**23 23 03.4**	**+0.7**
SANI	**Sanana**	**3.82**	**189**	P	**Pn**	**23 23 18.1**	**+1.9**
LUWI	**Luwuk**	**4.71**	**234**	P	**Pn**	**23 23 29.5**	**+1.1**
APSI	**Ampana**	**5.59**	**242**	P	**Pn**	**23 23 44.1**	**+3.6**
	0.2nm2µm35nm,1.1s						
MPSI	**Mapaga**	**6.82**	**258**	P	**Pn**	**23 23 58.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.75**	**183**	P	**P**	**23 26 42.8**	**-4.0**
	baz=9.5,slow=12,SNR=1.4						
	1.2nm,0.9s						
WRA	**Warramunga Arr**	**22.87**	**161**	P	**P**	**23 27 20.2**	**-0.3**
	1.2nm,0.4s,baz=338,slow=11,SNR=14						
	1.2nm,0.4s						
PMG	**Port Moresby**	**23.31**	**119**	LR	LR	23 40 16.8	
	comp=Z,35nm,20.0s,baz=136,slow=45						
ASAR	**Alice Springs**	**26.25**	**165**	P	**P**	**23 27 53.4**	**+1.4**
	0.9nm,0.4s,baz=346,slow=8.0,SNR=15						
	0.9nm,0.4s						
DZM	**Mont Dzumac**	**45.56**	**124**	LR	LR	23 53 13.0	
	comp=Z,47nm,18.0s,baz=265,slow=40						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**23 32 15.2**	**-1.5**
	0.5nm,0.5s,baz=120,slow=8.3,SNR=11						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	**P**	**23 32 44.8**	**-0.4**
	0.6nm,0.7s,baz=131,slow=6.0,SNR=6.5						
	0.6nm,0.7s						

*IDC **16** 23:32:25.9±2.2,1˚41S×77˚52W,h168km±22km,mb3.5/8, mbtmp4.1/12,Error ellipse: s-maj=25.5km s-min=13.9km az=58.0*
*RSNC **16** 23:32:26.3±0.4,2˚S±3˚×77˚8W±˚,h180km±5km,M3.8,mB4.8, mb3.8,ML3.2,MLv3.9,Mw(mB)4.1*
*NEIC **16** 23:32:27.2±2.3,1˚55S±0.06×77˚77W±0.09,h175km±6km, mb4.4/44,Error ellipse: s-maj=12.6km s-min=8.4km az=96.0*
ISC 16 23:32:26.4±0.6,1˚56S±0.04×77˚87W±0.07,h177km±6km, n108,σ1ˢ35/124,mb4.4/22,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIAT	**Ana Tenorio**	**0.68**	**325**	P	**Pn**	**23 32 53.0**	**+0.8**
PIAT				S	**Sn**	**23 33 12.9**	**+0.9**
SLOR	**San Lorenzo -**	**1.04**	**323**		**Pn**	**23 32 55.5**	**+0.9**
SLOR				Sn	**Sn**	**23 33 17.4**	**+1.1**
COHC	**Cochancay**	**1.65**	**237**		**Pn**	**23 32 59.9**	**+0.4**
COHC				Sn	**Sn**	**23 33 26.2**	**+1.0**
COHC	**Cochancay**	**1.65**	**237**	P	**Pn**	**23 33 00.0**	**+0.4**
COHC				S	**Sn**	**23 33 26.2**	**+1.0**
OTAV	**Otavalo**	**1.88**	**342**		**Pn**	**23 33 02.8**	**+0.4**
OTAV				Sn	**Sn**	**23 33 31.2**	**+0.9**
OTAV	**Otavalo**	**1.88**	**342**	P	**Pn**	**23 33 02.6**	**+0.2**
CUSE	**Cuicocha Este**	**1.93**	**344**	P	**Pn**	**23 33 03.5**	**+0.6**
BONI	**La Bonita**	**2.03**	**10**	P	**Pn**	**23 33 03.8**	**-0.1**
PAC1	**Pacto, Paraso**	**2.04**	**333**	P	**Pn**	**23 33 04.0**	**+0.2**
TULM	**Tulcn-Chalpat**	**2.26**	**2**	P	**Pn**	**23 33 07.3**	**+0.6**
CMBC	**Cumbal**	**2.49**	**1**	P	**Pn**	**23 33 10.4**	**+1.2**
GCUF	**Volcan Galeras**	**2.82**	**11**	P	**Pn**	**23 33 13.3**	**+0.1**
PPLP	**Puerto Lpez**	**2.90**	**270**	P	**Pn**	**23 33 12.9**	**-0.8**
PPLP				S	**Sn**	**23 33 47.2**	**-3.4**
CRUC	**La Cruz**	**3.24**	**16**	P	**Pn**	**23 33 19.0**	**+0.8**
TUMC	**Tumaco**	**3.47**	**346**	Pn	**Pn**	**23 33 20.5**	**-0.2**
TUMC	**Tumaco**	**3.47**	**346**	P	**Pn**	**23 33 19.8**	**-0.9**
TUMC				S	**Sn**	**23 34 01.9**	**-1.3**
MCRA	**Macar, Loja**	**3.48**	**217**	P	**Pn**	**23 33 19.6**	**-1.3**
MCRA				S	**Sn**	**23 34 01.5**	**-2.0**
FLOC	**Florencia**	**3.83**	**35**		**Pn**	**23 33 24.6**	**-0.7**
FLOC	**Florencia**	**3.83**	**35**	P	**Pn**	**23 33 24.4**	**-0.9**
FLOC				S	**Sn**	**23 34 08.5**	**-2.9**
POPC	**Popayan, Colom**	**4.25**	**16**	P	**Pn**	**23 33 30.1**	**-0.7**
POPC				S	**Sn**	**23 34 19.0**	**-2.2**
GARC	**Garzon, Huila**	**4.42**	**33**	P	**Pn**	**23 33 32.8**	**-0.2**
JAMC	**Jamundi, Valle**	**4.89**	**14**	P	**Pn**	**23 33 36.9**	**-2.2**
JAMC				S	**Sn**	**23 34 33.1**	**-3.1**
MACC	**Macarena, Meta**	**5.45**	**48**	P	**Pn**	**23 33 45.7**	**-0.6**
	13nm,0.7s						
ATAH	**Atahualpa**	**5.56**	**185**	P	**Pn**	**23 33 49.3**	**+1.3**
	36nm,0.5s,baz=15,slow=9.0,SNR=28						
ATAH				S	**Sn**	**23 34 46.2**	**-6.0**
	104nm,0.5s,baz=128,slow=22,SNR=16						
YOTC	**Yotoco, Valle**	**5.71**	**15**	P	**Pn**	**23 33 46.7**	**-3.1**
	5.2nm,0.5s						
URMC	**La Uribe, Meta**	**5.92**	**36**	P	**Pn**	**23 33 52.0**	**-0.4**
	1µm22nm,0.7s						
PRAC	**Prado**	**6.03**	**30**	P	**Pn**	**23 33 52.7**	**-1.1**
	15nm,0.7s						
MAPC	**Malpelo**	**6.67**	**326**	P	**Pn**	**23 34 02.1**	**-0.1**
	4µm72nm,0.6s						
VILC	**Villavicencio,**	**7.01**	**37**	P	**Pn**	**23 34 06.5**	**-0.4**
	376nm39nm,0.7s						
GUY2C	**Guyana, Caldas**	**7.19**	**20**	P	**Pn**	**23 34 09.7**	**+0.2**
	5.5nm,0.7s						
NORC	**Norcasia**	**7.69**	**23**	P	**Pn**	**23 34 14.2**	**-1.5**
	3.4nm,0.7s						
DBBC	**Dabeiba**	**8.68**	**11**	P	**Pn**	**23 34 29.3**	**+0.5**
	25µm23nm,0.7s						
PTBC	**PUERTO BERRIO,**	**8.74**	**23**	P	**Pn**	**23 34 27.9**	**-1.6**
	3.9nm,2.4s						
RUSC	**La Rusia**	**8.81**	**33**		**Pn**	**23 34 30.6**	**-0.3**
RUSC	**La Rusia**	**8.81**	**33**	P	**Pn**	**23 34 31.0**	**+0.1**
	13nm,1.1s						
BARC	**Barichara**	**9.36**	**30**	P	**Pn**	**23 34 38.2**	**+0.4**
PAMC	**Pamplona, Colo**	**10.24**	**30**	P	**Pn**	**23 34 49.1**	**-0.5**
NNA	**Nana**	**10.41**	**174**	P	**Pn**	**23 34 52.0**	**+0.6**
	3.3nm,0.3s,baz=348,slow=14,SNR=1.7						
NNA				S	Sn	23 36 38.1	-9.1
	11nm,0.3s,baz=140,slow=13,SNR=5.7						
NNA	**Nana**	**10.41**	**174**	Pn	**Pn**	**23 34 52.2**	**+0.8**
SDV	**Santo Domingo**	**12.64**	**35**	P	**Pn**	**23 35 17.0**	**-3.4**
	4.3nm,0.3s,baz=238,slow=11,SNR=8.5						
SDV	**Santo Domingo**	**12.64**	**35**		**Pn**	**23 35 18.8**	**-1.6**
BAUV	**El Baul**	**14.31**	**43**		**Pn**	**23 35 39.0**	**-2.2**
LPAZ	**La Paz**	**17.50**	**147**	P	**P**	**23 36 19.5**	**+0.4**
	4.5nm,0.5s,baz=336,slow=8.6,SNR=24						
LPAZ	**La Paz**	**17.50**	**147**	P	**P**		
PB12	**IPOC Station P**	**18.49**	**157**		**P**	**23 36 29.9**	**+0.6**
PB12				IAmb	IAmb	23 36 31.0	
	comp=Z,16nm,0.7s						
PB16	**IPOC Station P**	**18.58**	**154**	P	**P**	**23 36 32.2**	**+1.4**
PB16				IAmb	IAmb	23 36 33.9	
	comp=Z,13nm,0.8s						
MTDJ	**Mount Denham**	**19.67**	**1**		**P**	**23 36 40.9**	**-1.1**
PB11	**IPOC Station P**	**19.79**	**157**	P	**P**	**23 36 44.6**	**+1.1**
PB11				IAmb	IAmb	23 36 48.7	
	comp=Z,20nm,1.0s						
GO01	**Chusmiza**	**19.90**	**155**	P	**P**	**23 36 46.8**	**+1.8**
HMBC	**Humberstone**	**20.17**	**158**	P	**P**	**23 36 48.4**	**+0.9**
HMBC				IAmb	IAmb	23 36 54.0	
	comp=Z,11nm,0.7s						
TA01	**Diego Aracena**	**20.33**	**159**	P	**P**	**23 36 50.7**	**+1.7**
TA01				IAmb	IAmb	23 36 58.4	
	comp=Z,12nm,1.1s						
PB08	**IPOC Station P**	**20.34**	**156**	P	**P**	**23 36 50.0**	**+0.5**
PB08				IAmb	IAmb	23 36 56.2	
	comp=Z,9.6nm,0.7s						
VILB	**Vilhena**	**20.84**	**124**	P	**P**	**23 36 53.5**	**-1.0**
VILB				IAmb	IAmb	23 36 54.9	
	comp=Z,11nm,0.7s						
PB01	**IPOC Station P**	**21.02**	**158**	P	**P**	**23 36 58.8**	**+2.3**
PB02	**IPOC Station P**	**21.12**	**159**	P	**P**	**23 36 59.0**	**+1.4**
PB02				IAmb	IAmb	23 37 18.4	
	comp=Z,12nm,0.7s						
HUEH	**Huehuetenango**	**21.52**	**322**	P	**P**	**23 37 02.3**	**+0.3**
PB09	**IPOC Station P**	**21.80**	**158**	P	**P**	**23 37 06.0**	**+1.3**
PB09				IAmb	IAmb	23 37 24.9	
	comp=Z,8.9nm,0.8s						
DR12	**Loma Pena Alta**	**21.88**	**22**	P	**P**	**23 37 06.6**	**+1.2**
SIV	**San Ignacio**	**21.90**	**132**	P	**P**	**23 37 04.4**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=268,slow=6.7,SNR=12						
	comp=Z,2.0nm,0.5s						
PTLB	**Pontes e Lacer**	**23.06**	**128**	P	**P**	**23 37 15.5**	**-1.0**
TEIG	**Tepich**	**23.94**	**335**	P	**P**	**23 37 24.8**	**+0.4**
LCO	**Las Campanas**	**28.14**	**167**	P	**P**	**23 38 03.3**	**+0.9**
LCO				IAmb	IAmb	23 38 28.4	
	comp=Z,15nm,1.2s						
CO01	**Juntas del Tor**	**29.21**	**166**	P	**P**	**23 38 13.3**	**+1.5**
CO01				IAmb

ILAR	**Eielson Array**	**82.59**	**336**	P	**P**	**23 44 29.8**	**+0.4**
BMAR	**Burnt Mountain**	**82.67**	**339**	P	**P**	**23 44 30.2**	**+0.3**
ZALV	**Zalesovo Beam**	**125.87**	**13**	PKP	**PKPdf**	**23 51 07.1**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=270,slow=2.9,SNR=3.0						
KURBB	**Kurchatov Arra**	**127.18**	**19**	PKP	**PKPdf**	**23 51 09.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=323,slow=2.5,SNR=5.7						
MKAR	**Makanchi Array**	**131.74**	**18**	PKP	**PKPdf**	**23 51 18.2**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=292,slow=2.8,SNR=6.8						
MKAR	**Makanchi Array**	**131.74**	**18**		**PKPdf**	**23 51 17.9**	**-0.7**
ASAR	**Alice Springs**	**140.21**	**229**	PKhKP	PKPpre	23 51 28.0	
	comp=Z,0.1nm,0.4s,baz=124,slow=3.9,SNR=4.3						
ASAR				PKP	**PKPdf**	**23 51 35.3**	**+0.2**
	comp=Z,0.5nm,1.0s,baz=106,slow=1.9,SNR=4.2						
WRA	**Warramunga Arr**	**141.86**	**234**	PKP	**PKPdf**	**23 51 37.1**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=110,slow=2.4,SNR=3.2						
LZDM	**Lanzhou Array**	**145.75**	**358**	PKPbc	**PKPbc**	**23 51 46.1**	**+0.5**
	comp=Z,3.0nm,0.4s,baz=323,slow=4.7,SNR=5.8						

*SDD **16** 23:32:32.6±2.2, 19°.25N×67°.56W, h22km±135km, MD3.2, ML2.4, MW2.7*
*NEIC **16** 23:32:35.3±1.2, 18°.95N±0°.04×67°.61W±0°.03, h12km±5km, ML2.2/12, Md3.1/14(RSPR), Error ellipse: s-maj=5.5km s-min=3.7km az=213.0*
*RSPR **16** 23:32:39.0, 18°.74N×67°.64W, h10km±31km, MD3.1/14*

ISC 16 23:32:34.6±1.7, 18°.98N±0°.08×67°.61W±0°.03, h9km±10km, n43, σ0°.98/55, 11C-11D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.60**	**168**		**Pg**	**23 32 46.3**	**+0.1**
IDE					**Sg**	**23 32 53.9**	**-0.3**
IDE	**Isla Desecheo**	**0.60**	**168**	⇓*iP*	**Pg**	**23 32 46.3**	**+0.1**
IDE	**Isla Desecheo**	**0.60**	**168**	*eS*	**Sg**	**23 32 53.9**	**-0.3**
AGPR	**Aguadilla, PR**	**0.69**	**137**	⇑*eP*	**Pg**	**23 32 48.5**	**+0.5**
AGPR				⇑*eS*	**Sn**	**23 33 00.2**	**-1.2**
AGPR				IAML		23 33 01.1	
	comp=N,115nm,0.1s						
AGPR	**Aguadilla, PR**	**0.69**	**137**	⇓*iP*	**Pb**	**23 32 48.7**	**-0.2**
AGPR	**Aguadilla, PR**	**0.69**	**137**	*eS*	**Sn**	**23 32 59.8**	**-1.6**
PRSN	**Puerto Rico Se**	**0.88**	**150**		**Pg**	**23 32 51.6**	**+0.2**
PRSN	**Puerto Rico Se**	**0.88**	**150**	⇓*ePg*	**Pg**	**23 32 50.1**	**-1.3**
PRSN				IAML		23 34 49.4	
	comp=N,49nm,0.1s						
PRSN	**Puerto Rico Se**	**0.88**	**150**	⇓*iP*	**Pg**	**23 32 51.6**	**+0.2**
LSP	**Las Mesas**	**0.94**	**148**		**Pg**	**23 32 52.8**	**+0.1**
LSP					**Sn**	**23 33 09.1**	**+1.6**
LSP	**Las Mesas**	**0.94**	**148**	⇑*iP*	**Pg**	**23 32 52.8**	**+0.1**
AOPR	**Arecibo Observ**	**1.03**	**128**		**Pg**	**23 32 54.2**	**-0.1**
AOPR	**Arecibo Observ**	**1.03**	**128**	⇓*ePg*	**Pg**	**23 32 54.0**	**-0.3**
AOPR				⇓*eSg*	**Sb**	**23 33 08.3**	**+0.2**
AOPR				IAML		23 33 17.0	
	comp=N,120nm,0.2s						
AOPR	**Arecibo Observ**	**1.03**	**128**	⇓*eP*	**Pb**	**23 32 54.7**	**+0.2**
AOPR	**Arecibo Observ**	**1.03**	**128**	*eS*	**Sn**	**23 33 10.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.08**	**154**		**Pb**	**23 32 54.0**	**-1.4**
CRPR					**Sn**	**23 33 11.0**	**+0.1**
CRPR				IAML		23 33 15.9	
	comp=E,71nm,0.7s						
CRPR				IAML		23 33 17.9	
	comp=N,75nm,0.8s						
CRPR	**Cabo Rojo, PR**	**1.08**	**154**	⇑*ePg*	**Pb**	**23 32 54.5**	**-0.9**
CRPR				⇑*eSg*	**Sn**	**23 33 13.0**	**+2.2**
CRPR				IAML		23 33 17.1	
	comp=N,85nm,0.7s						
CRPR	**Cabo Rojo, PR**	**1.08**	**154**	⇓*eP*	**Pb**	**23 32 54.5**	**-0.9**
UUPR	**Utuado, UPR, P**	**1.11**	**131**		**Pb**	**23 32 55.5**	**-0.4**
UUPR					**Sn**	**23 33 11.6**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.11**	**131**	⇑*eP*	**Pb**	**23 32 55.5**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.11**	**131**	*eS*	**Sn**	**23 33 11.6**	**-0.1**
MLPR	**Magueyes Islan**	**1.14**	**152**	⇑*iP*	**Pb**	**23 32 55.3**	**-1.1**
GBPR	**Guanica, Bosqu**	**1.22**	**145**		**Pg**	**23 32 59.5**	**+1.6**
GBPR	**Guanica, Bosqu**	**1.22**	**145**	⇑*eP*	**Pg**	**23 32 59.5**	**+1.6**
OBIP	**Obispado Ponce**	**1.33**	**134**		**Pn**	**23 32 58.5**	**-0.8**
OBIP					**Sg**	**23 33 18.2**	**+0.7**
OBIP				IAML		23 33 22.8	
	comp=N,39nm,0.3s						
OBIP	**Obispado Ponce**	**1.33**	**134**	⇑*eP*	**Pn**	**23 32 59.2**	**-0.1**
OBIP	**Obispado Ponce**	**1.33**	**134**	*eS*	**Sg**	**23 33 18.0**	**+0.5**
ECPR	**Experimental S**	**1.35**	**119**	⇑*eP*	**Pn**	**23 32 59.5**	**-0.1**
ECPR	**Experimental S**	**1.35**	**119**	*eS*	**Sb**	**23 33 17.4**	**-0.1**
MIDR	**Miches**	**1.36**	**270**	⇑*eP*	**Pn**	**23 32 59.0**	**-0.7**
MIDR	**Miches**	**1.36**	**270**	*eS*	**Sb**	**23 33 17.8**	**0.0**
GCPR	**Guaynabo City**	**1.59**	**115**		**Pn**	**23 33 03.3**	**+0.4**
GCPR					**Sb**	**23 33 24.6**	**+0.2**
GCPR	**Guaynabo City**	**1.59**	**115**	⇑*eP*	**Pn**	**23 33 03.3**	**+0.4**
GCPR	**Guaynabo City**	**1.59**	**115**	*eS*	**Sb**	**23 33 24.6**	**+0.2**
SJG	**San Juan**	**1.63**	**122**		**Pn**	**23 33 03.7**	**+0.3**
SJG				IAML		23 33 30.1	
	comp=N,29nm,0.2s						
SJG	**San Juan**	**1.63**	**122**	⇓*eP*	**Pb**	**23 33 04.4**	**-0.4**
SJG	**San Juan**	**1.63**	**122**	*eS*	**Sb**	**23 33 25.3**	**-0.2**
DR12	**Loma Pena Alta**	**1.69**	**264**	Pn	**Pn**	**23 33 04.3**	**+0.1**
DR12				Sn	**Sn**	**23 33 26.4**	**+0.3**
HATOM	**Hato Mayor del**	**1.69**	**264**	⇓*ePg*	**Pn**	**23 33 04.5**	**+0.2**
HATOM				⇑*eSg*	**Sn**	**23 33 25.8**	**-0.2**
HATOM				IAML		23 33 28.6	
	comp=N,21nm,0.6s						
HUMP	**Col San Antoni**	**1.86**	**116**		**Pn**	**23 33 05.8**	**-0.9**
HUMP					**Sn**	**23 33 30.0**	**-0.3**
HUMP				IAML		23 33 34.3	
	comp=N,21nm,0.2s						
HUMP				IAML		23 33 38.5	
	comp=E,22nm,0.2s						
HUMP	**Col San Antoni**	**1.86**	**116**	⇓*eP*	**Pb**	**23 33 08.0**	**-0.7**
HUMP	**Col San Antoni**	**1.86**	**116**	*eS*	**Sn**	**23 33 29.7**	**-0.6**
BANI	**BANI**	**2.67**	**258**	Pn	**Pn**	**23 33 18.8**	**+0.9**

*NNC **16** 23:41:55.3±1.3, 41°.88N×79°.15E, h0km, mb3.0, mpv2.9, Error ellipse: s-maj=9.0km s-min=5.0km az=154.0*
*SOME **16** 23:41:55.6, 41°.87N×79°.18E, h15km*
*KRNET **16** 23:41:56.1±0.1, 41°.88N×79°.13E, h14km, mb2.6*

ISC 16 23:41:54.6±1.7, 41°.73N±0°.07×79°.25E±0°.05, h22km±7km, n30, σ0°.99/50, 15C-1D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.98**	**320**	⇑*iP*	**Pb**	**23 42 12.0**	**-1.1**
PRZ				⇑*iS*	**Sb**	**23 42 23.7**	**-2.0**
TARG	**Taragay, Kyrgy**	**1.08**	**270**	⇑*iP*	**Pn**	**23 42 15.2**	**+0.4**
TARG				⇑*iS*	**Sb**	**23 42 29.4**	**+0.7**
SHLS	**Shalkode**	**1.44**	**6**	P	**Pb**	**23 42 21.4**	**+0.7**
	20nm,0.1s						
SHLS				S	**Sb**	**23 42 39.7**	**+1.1**
	14nm,0.2s						
SHLS	**Shalkode**	**1.44**	**6**	*eP*	**Pb**	**23 42 21.4**	**+0.7**
	20nm,0.1s						
SHLS				*eS*	**Sb**	**23 42 39.8**	**+1.1**
	14nm,0.2s						
SATY	**Saty**	**1.47**	**335**	P	**Pn**	**23 42 20.0**	**+0.1**
	1.0nm,0.1s						
SATY				S	**Sn**	**23 42 37.4**	**-1.2**
	19nm,0.1s						
KDJ	**Kajisay**	**1.60**	**285**	⇑*iP*	**Pb**	**23 42 23.5**	**0.0**
KDJ				⇑*iS*	**Sb**	**23 42 43.7**	**+0.4**
PDGK	**Podgornoye**	**1.61**	**6**	⇓P	**Pn**	**23 42 21.6**	**-0.2**
	1.9nm,0.4s						
PDGK				⇑S	**Sb**	**23 42 42.7**	**-0.9**
	3.5nm,0.5s						
KPKS	**Kokpek**	**1.79**	**347**	P	**Pb**	**23 42 25.9**	**-0.8**
	0.4nm,0.2s						
KPKS				S	**Sn**	**23 42 47.2**	**+0.9**
	8.6nm,0.4s						
KPKS	**Kokpek**	**1.79**	**347**	*eP*	**Pb**	**23 42 25.9**	**-0.8**
	0.4nm,0.2s						
KPKS				*eS*	**Sn**	**23 42 47.2**	**+0.9**
	8.6nm,0.4s						
KTMS	**Ketmen**	**1.90**	**25**	P	**Pb**	**23 42 28.4**	**-0.2**
KTMS				S	**Sb**	**23 42 51.7**	**-0.3**
KTMS	**Ketmen**	**1.90**	**25**	*eP*	**Pb**	**23 42 28.4**	**-0.2**
KTMS				*eS*	**Sb**	**23 42 51.6**	**-0.3**
MDOK	**Medeo**	**2.17**	**312**	Pg	**Pb**	**23 42 33.1**	**-0.2**
	2.5nm,0.2s						
MDOK				Lg	Lg	23 43 00.1	
	4.9nm,0.7s						
KOTS	**Kotyrbulak**	**2.18**	**314**	Pg	**Pb**	**23 42 33.6**	**+0.1**
	3.5nm,0.2s						
KOTS				Lg	Lg	23 43 00.6	
	14nm,0.5s						
KOTS	**Kotyrbulak**	**2.18**	**314**	*eP*	**Pb**	**23 42 33.6**	**+0.1**
	3.5nm,0.2s						
KOTS				*eS*	**Sb**	**23 43 00.6**	**+0.4**
	14nm,0.5s						
KNDC	**Almaty**	**2.25**	**312**	⇑Pg	**Pn**	**23 42 30.0**	**-0.6**
	4.3nm,0.3s						
KNDC				⇑Lg	Lg	23 42 59.3	
	4.2nm,0.2s						
ULHL	**Ulahol**	**2.30**	**284**	*i* P	**Pb**	**23 42 35.5**	**0.0**
ULHL				*i* S	**Sb**	**23 43 04.5**	**+0.9**
IZV	**Izvestkoviy**	**2.35**	**305**	Pg	**Pb**	**23 42 36.3**	**-0.1**
	1.5nm,0.2s						
IZV				Lg	Lg	23 43 05.3	
	5.9nm,0.3s						
IZV	**Izvestkoviy**	**2.35**	**305**	*eP*	**Pb**	**23 42 36.3**	**-0.1**
	1.5nm,0.2s						
IZV				*eS*	**Sb**	**23 43 05.3**	**+0.3**
	5.9nm,0.3s						
BLB	**Baldybastay**	**2.43**	**347**	Pg	**Pb**	**23 42 37.6**	**-0.1**
	1.9nm,0.1s						
BLB				Lg	Lg	23 43 07.6	
	12nm,0.4s						
BOOM	**Boomskoye usch**	**2.58**	**288**	⇑*eP*	**Pb**	**23 42 39.4**	**-0.8**
BOOM				⇑*eS*	**Sb**	**23 43 11.0**	**-0.5**
KNOS	**Konyrlen**	**2.63**	**359**	Pg	**Pb**	**23 42 40.2**	**-0.8**
KNOS				Lg	Lg	23 43 12.1	
ARXS	**Arharly**	**2.69**	**338**	Pg	**Pb**	**23 42 42.2**	**+0.1**
	0.7nm,0.3s						
ARXS				Lg	Lg	23 43 15.6	
	8.6nm,0.5s						
ARXS	**Arharly**	**2.69**	**338**	*eP*	**Pb**	**23 42 42.2**	**+0.1**
	0.7nm,0.3s						
ARXS				*eS*	**Sb**	**23 43 15.6**	**+0.8**
	8.6nm,0.5s						
KTBS	**Karatobe**	**2.74**	**317**	Pg	**Pb**	**23 42 43.3**	**+0.4**
	1.0nm,0.2s						
KTBS				Lg	Lg	23 43 17.6	
	6.4nm,0.2s						
KST	**Kastek**	**2.77**	**299**	Pg	**Pb**	**23 42 44.3**	**+0.9**
	1.0nm,0.2s						
KST				Lg	Lg	23 43 19.1	
	5.9nm,0.7s						
KST	**Kastek**	**2.77**	**299**	*eP*	**Pb**	**23 42 44.3**	**+0.9**
	1.0nm,0.2s						
KST				*eS*	**Sb**	**23 43 19.1**	**+2.2**
	5.9nm,0.7s						
JNKS	**Jany-Kuch**	**2.79**	**257**	⇑*eP*	**Pb**	**23 42 43.6**	**-0.3**
JNKS				⇑*eS*	**Sb**	**23 43 17.8**	**+0.1**
TKM2	**Tokmak 2**	**2.96**	**295**	⇑*iP*	**Pb**	**23 42 44.3**	**-2.4**
TKM2				⇑*iS*	**Sb**	**23 43 19.6**	**-2.9**
DGS	**Degeres**	**2.98**	**302**	Pg	**Pb**	**23 42 47.7**	**+0.6**
	0.9nm,0.3s						
DGS				Lg	Lg	23 43 25.1	
	5.8nm,0.5s						
DGS	**Degeres**	**2.98**	**302**	*eP*	**Pb**	**23 42 47.7**	**+0.6**
	0.9nm,0.3s						
DGS				*eS*	**Sb**	**23 43 25.1**	**+2.0**
	5.8nm,0.5s						

*IDC **16** 23:50:17.2±1.3, 1°.65N×126°.02E, h0km, mb4.0/6, mbtmp4.0/7, ML3.7/1, MS2.8/1, Error ellipse: s-maj=113.5km s-min=17.0km az=69.0*
*DJA **16** 23:50:21.5±0.3, 2°.N±3°×12°.6E±°, h10km, M4.2/15, mB5.2/3, mb4.4/7, MLv4.0/15, Mw(mB)4.6/3*
*NEIC **16** 23:50:22.2±1.7, 1°.85N±0°.06×126°.55E±0°.04, h35km±2km, mb4.2/11, Error ellipse: s-maj=10.6km s-min=5.9km az=172.0*

ISC 16 23:50:21.9±0.7, 1°.80N±0°.06×126°.45E±0°.08, h35km, n34, σ1s22/34, mb4.1/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.37**	**138**		**Pn**	**23 50 44.8**	**+0.3**
TNTI					**Sn**	**23 51 03.1**	**+1.7**
TNTI	**Ternate**	**1.37**	**138**	P	**Pn**	**23 50 45.9**	**+1.4**
SGSI	**Sangihe**	**2.09**	**334**	P	**Pn**	**23 50 56.2**	**+1.7**
KMSI	**Cibinong**	**2.75**	**244**	P	**Pn**	**23 51 05.2**	**+1.7**
SANI	**Sanana**	**3.85**	**187**	P	**Pn**	**23 51 18.8**	**+0.2**
LUWI	**Luwuk**	**4.63**	**233**	Pn	**Pn**	**23 51 31.6**	**+2.1**
LUWI	**Luwuk**	**4.63**	**233**	P	**Pn**	**23 51 30.9**	**+1.4**
MRSI	**Marisa**	**4.70**	**254**	P	**Pn**	**23 51 30.3**	**0.0**
APSI	**Ampana**	**5.50**	**241**	P	**Pn**	**23 51 43.4**	**+2.0**
	0.3nm82nm,1.3s						
TOLI2	**Tolitoli**	**5.71**	**263**	Pn	**Pn**	**23 51 44.2**	**-0.1**
AAI	**Ambon**	**5.72**	**162**	P	**Pn**	**23 51 44.9**	**+0.6**
MPSI	**Mapaga**	**6.71**	**258**	P	**Pn**	**23 51 59.8**	**+1.8**
	0.1nm894nm10nm,0.8s						
MYLDM	**Lahad Datu**	**8.62**	**293**	Pn	**Pn**	**23 52 26.1**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.78**	**182**	P	**P**	**23 54 47.8**	**-1.4**
	0.2nm,0.3s,baz=15,slow=12,SNR=7.1						
	1.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.78**	**182**	P	**P**	**23 54 47.4**	**-1.9**
TPUB	**Ta-pu**	**22.11**	**346**	P	**P**	**23 55 13.0**	**-1.4**
TPUB				IAmb	IAmb	23 55 22.7	
	comp=Z,35nm,1.3s						
WB0	**Warramunga Arr**	**22.80**	**160**	P	**P**	**23 55 20.8**	**-1.0**
WB0				IAmb	IAmb	23 55 25.9	
	comp=Z,4.6nm,0.7s						
WRA	**Warramunga Arr**	**22.95**	**161**	P	**P**	**23 55 22.9**	**-0.4**
	comp=Z,5.4nm,0.7s,baz=338,slow=11,SNR=15						
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	**22.95**	**161**	P	**P**	**23 55 21.5**	**-1.8**
AS31	**Alice Springs**	**26.32**	**164**	P	**P**	**23 55 53.2**	**-1.5**
AS31				IAmb	IAmb	23 55 59.7	
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**26.33**	**164**	P	**P**	**23 55 55.3**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=346,slow=9.0,SNR=15						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**26.33**	**164**	P	**P**	**23 55 53.9**	**-0.8**
BBOO	**Buckleboo**	**35.60**	**166**	P	**P**	**23 57 15.7**	**-0.5**
PALK	**Pallekele**	**45.91**	**278**	LR	LR	00 18 29.0	
	comp=Z,11nm,21.3s,baz=69,slow=37						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**00 00 17.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=122,slow=8.5,SNR=13						
	comp=Z,0.9nm,0.6s						
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**	**00 00 19.2**	**-0.2**
ZALV	**Zalesovo Beam**	**62.18**	**334**	P	**P**	**00 00 39.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=119,slow=6.2,SNR=3.6						
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.22**	**328**	P	**P**	**00 00 46.9**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=131,slow=6.1,SNR=8.9						
	comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**63.22**	**328**		**P**	**00 00 46.5**	**-0.1**
KURK				IAmb	IAmb	00 00 53.3	
	comp=Z,3.1nm,0.6s						
AB31	**Akbulak array**	**73.47**	**321**	P	**P**	**00 01 50.1**	**-0.8**
AB31				IAmb	IAmb	00 01 55.2	
	comp=Z,1.1nm,0.7s						
ABKAR	**Akbulak array**	**73.47**	**321**	P	**P**	**00 01 50.4**	**-0.5**
ARTI	**Arti**	**76.50**	**328**	P	**P**	**00 02 08.5**	**+0.4**
ARTI				IAmb	IAmb	00 02 08.9	
	comp=Z,9.3nm,1.5s						
VNDA	**Vanda**	**81.55**	**173**	P	**P**	**00 02 35.7**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=324,slow=5.6,SNR=4.6						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**81.55**	**173**	P	**P**	**00 02 36.7**	**+1.3**
VNDA				IAmb	IAmb	00 02 37.2	
	comp=Z,1.0nm,0.9s						

*AEIC **16** 23:53:54.2±0.8, 53°.82N±0°.08×165°.37W±0°.09, h63km±7km, Error ellipse: s-maj=12.6km s-min=4.0km az=148.0*

NEIC 16 23:53:54.7±0.5, 53°.9N±0°.1×165°.4W±0°.1, h70km±7km, mb3.7/8, ML3.7/20, ML3.2(AEIC), Error ellipse: s-maj=18.2km s-min=4.7km az=154.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.33**	**331**		Pn	23 54 05.9	-0.3
AKSA					Sn	23 54 14.5	0.0
AHB	**Akutan Harbor**	**0.36**	**319**		Pn	23 54 06.2	-0.1
AHB					Sn	23 54 15.1	+0.2
AKUT	**Akutan**	**0.36**	**325**		Pn	23 54 06.2	-0.1
AKUT					Sn	23 54 14.9	+0.1
AKBBA	**Akutan Broad B**	**0.39**	**310**		Pn	23 54 06.4	-0.2
AKBBA					Sn	23 54 15.3	0.0
LVA	**Lava Point**	**0.48**	**311**		Pn	23 54 07.2	-0.2
LVA						23 54 17.5	
	comp=N,3μm,0.6s						
LVA				IAML		23 54 18.9	
	comp=E,3μm,0.5s						
LVA	**Lava Point**	**0.48**	**311**		Sn	23 54 16.7	0.0
UNV	**Unalaska Valle**	**0.64**	**270**		Pn	23 54 08.9	-0.1
UNV					Sn	23 54 19.3	-0.1
UNV				IAML		23 54 19.7	
	comp=E,1μm,0.4s						
UNV				IAML		23 54 20.0	
	comp=N,2μm,0.3s						
MNAT	**Makushin Natee**	**0.75**	**273**		Pn	23 54 10.0	-0.1
MNAT					Sn	23 54 21.7	0.0
MREP	**Makushin Rep't**	**0.79**	**268**		Pn	23 54 10.7	+0.1
MREP					Sn	23 54 23.1	+0.7
MSW	**Makushin Switc**	**0.81**	**275**		Pn	23 54 10.8	-0.1
MSW					Sn	23 54 23.0	+0.1
WEBT	**Westdahl Beart**	**0.84**	**27**		Pn	23 54 10.9	-0.4
WEBT					Sn	23 54 23.4	-0.2
SSBA	**Shishaldin**	**1.20**	**39**		Pn	23 54 15.6	-0.2
SSBA					Sn	23 54 32.0	+0.4
SSLN	**Shishaldin Nor**	**1.28**	**40**		Pn	23 54 16.1	0.0
SSLN					Sn	23 54 34.1	+0.7
ISNN	**Isanotski Nort**	**1.38**	**44**		Pn	23 54 18.4	+0.3
ISNN					Sn	23 54 37.1	+1.4
FALS	**False Pass**	**1.55**	**48**		Pn	23 54 20.4	+0.1
FALS					Sn	23 54 40.3	+0.7
OKNC	**Okmok New Cone**	**1.66**	**257**		Pn	23 54 21.8	0.0
OKNC					Sn	23 54 42.3	+0.1
DT1	**Dutton Round H**	**2.23**	**54**		Sn	23 54 55.9	0.0
NIKH	**Nikolski High**	**2.23**	**248**		Pn	23 54 30.0	+0.5
NIKH				IAML		23 55 10.3	
	comp=N,167nm,0.6s						
DOL	**Dolgoi Island**	**2.45**	**56**		Pn	23 54 32.8	+0.3
PN7A	**Pavlof North-7**	**2.55**	**50**		Pn	23 54 34.4	+0.6
PS1A	**Pavlof South-1**	**2.66**	**52**		Pn	23 54 35.9	+0.6
S12K	**Black Hills**	**2.69**	**45**		Pn	23 54 35.6	-0.1
CLCO	**Concord Point,**	**2.79**	**249**		Pn	23 54 37.4	+0.4
SDPT	**Sand Point**	**3.25**	**60**		Pn	23 54 43.6	+0.4
SDPT				IAML		23 55 28.4	
	comp=N,99nm,0.7s						
SDPT				IAML		23 55 35.0	
	comp=E,81nm,0.6s						
CNBA	**Chernabura Isl**	**3.55**	**72**		Pn	23 54 46.5	-0.9
VNFG	**Fog Glacier, M**	**4.17**	**52**		Pn	23 54 56.5	+0.6
VNFG				IAML		23 56 05.9	
	comp=N,183nm,1.3s						
SPIA	**Saint Paul Isl**	**4.32**	**323**	Pn	Pn	23 54 57.0	-0.8
SPIA				IAML		23 56 26.9	
	comp=E,165nm,2.5s						
SPIA				IAML		23 57 33.9	
	comp=N,173nm,3.0s						
ATKA	**Atka Island**	**5.54**	**256**	Pn	Pn	23 55 15.0	+0.4
O14K	**Tigyukauivet M**	**5.89**	**21**	Pn	Pn	23 55 19.5	+0.3
CHIR	**Chirikof Islan**	**6.00**	**67**	Pn	Pn	23 55 19.4	-1.3
O15K	**Ungalikthiuk R**	**6.17**	**28**	Pn	Pn	23 55 23.4	+0.3
PLK4	**Peulik 4**	**6.37**	**50**	Pn	Pn	23 55 26.6	+0.6
N14K	**Kuskokwak Cree**	**6.43**	**17**	Pn	Pn	23 55 26.4	-0.2
N15K	**Kwethluk River**	**6.97**	**22**	Pn	Pn	23 55 34.6	+0.6
O16K	**Kokwok River B**	**7.03**	**32**	Pn	Pn	23 55 35.0	+0.2
L14K	**Kuka Creek**	**7.66**	**10**	Pn	Pn	23 55 43.2	-0.2
OHAK	**Old Harbor**	**7.67**	**59**	Pn	Pn	23 55 42.1	-1.4
P18K	**Big Mountain,**	**7.90**	**41**	Pn	Pn	23 55 47.9	+1.1
M16K	**Timber Creek**	**7.99**	**23**	Pn	Pn	23 55 48.1	+0.2
Q19K	**Cape Douglas,**	**8.28**	**47**	Pn	Pn	23 55 51.7	-0.3
SYI	**Shuyak Island**	**8.68**	**51**	Pn	Pn	23 55 55.6	-1.7
CNPM	**China Poot**	**9.65**	**48**	Pn	Pn	23 56 09.0	-1.6
KLU	**Klutina**	**12.90**	**46**	Pn	Pn	23 56 51.4	-3.6
M24K	**Tolsona, Glenn**	**13.10**	**43**	Pn	Pn	23 56 55.0	-2.5
N25K	**Chitina, Valde**	**13.52**	**47**	Pn	Pn	23 57 01.4	-1.8
GLB	**Gilahina Butte**	**13.79**	**48**	Pn	Pn	23 57 03.9	-2.9
GRNC	**Granite Creek**	**14.48**	**52**	Pn	Pn	23 57 13.7	-2.2
O29M	**Mount Kennedy**	**15.88**	**55**	Pn	Pn	23 57 31.9	-2.0
HYT	**Haines Junctio**	**16.51**	**54**	Pn	Pn	23 57 41.6	-0.1
HYT				IAmb	IAmb	23 58 22.0	
	comp=Z,7.0nm,1.1s						
L29M	**L29M**	**16.89**	**46**		Pn	23 57 46.2	-0.1
L29M				IAmb	IAmb	23 58 08.2	
	comp=Z,8.0nm,1.4s						
O30N	**Mendenhall**	**17.18**	**54**		P	23 57 50.4	-0.1
I28M	**Miner Creek**	**17.19**	**37**	Pn	Pn	23 57 48.8	-1.1
J30M	**Hart River**	**18.17**	**42**	P	P	23 58 00.7	-0.8
J30M				IAmb	IAmb	23 58 37.6	
	comp=Z,8.3nm,1.5s						
H31M	**Peel River**	**19.42**	**40**	P	P	23 58 12.5	-2.5
G31M	**Satah River**	**19.91**	**37**	P	P	23 58 19.0	-1.3
G31M				IAmb	IAmb	23 58 59.7	

0.4nm,0.7s,baz=126,slow=7.3,SNR=1.4
0.4nm,0.7s
VNDA Vanda 81.42 173 P **P** **00 16 41.7 +2.1**
0.3nm,0.6s,baz=332,slow=6.6,SNR=1.8
0.3nm,0.6s

NEIC ***17*** *00:07:56.8±1.9, 54.°1N±0.°1×168.°90E±0.°10, h10km±1km, mb4.4/27, Error ellipse: s-maj=20.5km s-min=9.2km az=188.0*
IDC ***17*** *00:07:57.1±0.7, 54.°50N×168.°94E, h0km, mb3.8/20, mbtmp3.9/23, ML4.9/2, MS3.2/12, Error ellipse: s-maj=21.1km s-min=12.4km az=1.0*
KRSC ***17*** *00:07:58.2±1.3, 54.°15N×168.°86E, h61km±22km, Ml4.5*
MOS ***17*** *00:07:59.0±0.8, 54.°14N×169.°01E, h45km, mb4.5/2, Error ellipse: s-maj=9.3km s-min=6.2km az=18.3*

ISC 17 00:07:59.7±0.5, 54.°19N±0.°06×168.°94E±0.°04, h25km, n156, σ1§42/156, mb4.2/34, MS3.4/9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BKI	**Bering**	**2.00**	**302**	PN	**Pn**		**00 08 30.0**	**-1.8**
BKI				S	**Sn**		**00 08 53.7**	**-2.2**
BKI	**Bering**	**2.00**	**302**	*eP*	**Pn**		**00 08 30.0**	**-1.8**
BKI				*eS*	**Sn**		**00 08 53.7**	**-2.2**
SHEM	**Shemya Is, Ala**	**3.42**	**113**	Pn	**Pn**		**00 08 51.4**	**+0.1**
	37nm,0.3s,baz=280,slow=13,SNR=17							
SHEM				Sn	**Sn**		**00 09 31.6**	**+0.7**
	48nm,0.3s,baz=287,slow=19,SNR=8.0							
	136nm,0.4s							
SHEM	**Shemya Is, Ala**	**3.42**	**113**		**Pn**		**00 08 50.3**	**-1.0**
SMY	**Shemya**	**3.42**	**113**		**Pn**		**00 08 50.1**	**-1.2**
SMY				Sn	**Sn**		**00 09 28.5**	**-2.5**
SMY	**Shemya**	**3.42**	**113**	PN	**Pn**		**00 08 51.4**	**+0.1**
SMY				S	**Sn**		**00 09 30.7**	**-0.2**
KBTR	**Krutoberegovo**	**4.05**	**302**	PN	**Pn**		**00 08 59.9**	**0.0**
KBTR	**Krutoberegovo**	**4.05**	**302**	*eP*	**Pn**		**00 08 60.0**	**0.0**
MKZ	**Mys Kozlova**	**4.23**	**278**	PN	**Pn**		**00 09 03.3**	**+0.8**
MKZ	**Mys Kozlova**	**4.23**	**278**	*eP*	**Pn**		**00 09 03.3**	**+0.8**
MKZ				*eS*	**Sn**		**00 09 49.1**	**-1.9**
SMKR	**Semkarok**	**4.88**	**302**	PN	**Pn**		**00 09 14.4**	**+2.8**
SMKR	**Semkarok**	**4.88**	**302**	*eP*	**Pn**		**00 09 14.4**	**+2.8**
BZGR	**Bezymyannyi-Gr**	**5.05**	**294**	PN	**Pn**		**00 09 14.9**	**+1.1**
BZGR	**Bezymyannyi-Gr**	**5.05**	**294**	*eP*	**Pn**		**00 09 14.9**	**+1.1**
TUMD	**Tumrok D**	**5.06**	**285**	PN	**Pn**		**00 09 15.2**	**+1.4**
TUMD	**Tumrok D**	**5.06**	**285**	*eP*	**Pn**		**00 09 15.2**	**+1.4**
SRKR	**Sorokina**	**5.07**	**302**	PN	**Pn**		**00 09 15.9**	**+1.9**
SRKR	**Sorokina**	**5.07**	**302**	*eP*	**Pn**		**00 09 16.0**	**+1.9**
KZV	**Kizimen**	**5.10**	**284**	PN	**Pn**		**00 09 16.0**	**+1.4**
KZV	**Kizimen**	**5.10**	**284**	*eP*	**Pn**		**00 09 16.1**	**+1.4**
KMNR	**Kamenistaya**	**5.25**	**291**	PN	**Pn**		**00 09 18.3**	**+1.7**
KMNR	**Kamenistaya**	**5.25**	**291**	*eP*	**Pn**		**00 09 18.4**	**+1.7**
KPT	**Kopyto**	**5.31**	**293**	PN	**Pn**		**00 09 19.7**	**+2.2**
KPT	**Kopyto**	**5.31**	**293**	*eP*	**Pn**		**00 09 19.7**	**+2.2**
KOZ	**Kozyrevsk**	**5.53**	**293**	PN	**Pn**		**00 09 22.6**	**+2.3**
KOZ	**Kozyrevsk**	**5.53**	**293**	*eP*	**Pn**		**00 09 22.7**	**+2.3**
KII	**Karymskiy**	**5.58**	**272**	PN	**Pn**		**00 09 22.2**	**+1.1**
KII	**Karymskiy**	**5.58**	**272**	*eP*	**Pn**		**00 09 22.3**	**+1.1**
NLC	**Nalytchevo**	**5.79**	**264**	PN	**Pn**		**00 09 24.6**	**+0.7**
NLC	**Nalytchevo**	**5.79**	**264**	*eP*	**Pn**		**00 09 24.7**	**+0.7**
NLC				*eS*	**Sn**		**00 10 27.0**	**-2.5**
UGLR	**Uglovaya**	**6.09**	**265**	PN	**Pn**		**00 09 29.3**	**+1.2**
UGLR	**Uglovaya**	**6.09**	**265**	*eP*	**Pn**		**00 09 29.3**	**+1.2**
SMAR	**Somma**	**6.09**	**265**	PN	**Pn**		**00 09 29.3**	**+1.1**
SMAR	**Somma**	**6.09**	**265**	*eP*	**Pn**		**00 09 29.3**	**+1.1**
KRER	**Koryakskii**	**6.11**	**266**	PN	**Pn**		**00 09 29.8**	**+1.3**
KRER	**Koryakskii**	**6.11**	**266**	*eP*	**Pn**		**00 09 29.9**	**+1.3**
AVH	**Avacha**	**6.13**	**265**	PN	**Pn**		**00 09 29.9**	**+1.3**
AVH	**Avacha**	**6.13**	**265**	*eP*	**Pn**		**00 09 30.0**	**+1.3**
ESO	**Esso**	**6.13**	**291**	PN	**Pn**		**00 09 30.6**	**+2.0**
ESO	**Esso**	**6.13**	**291**	*eP*	**Pn**		**00 09 30.6**	**+2.0**
KRX	**Arik**	**6.16**	**266**	PN	**Pn**		**00 09 30.3**	**+1.2**
KRX	**Arik**	**6.16**	**266**	*eP*	**Pn**		**00 09 30.3**	**+1.2**
DALK	**Dalny**	**6.17**	**263**	PN	**Pn**		**00 09 29.6**	**+0.5**
DALK	**Dalny**	**6.17**	**263**	*eP*	**Pn**		**00 09 29.6**	**+0.5**
DALK				*eS*	**Sn**		**00 10 37.0**	**-1.9**
KOK	**Koryaka**	**6.18**	**266**	PN	**Pn**		**00 09 30.4**	**+1.1**
KOK	**Koryaka**	**6.18**	**266**	*eP*	**Pn**		**00 09 30.5**	**+1.1**
PET	**Petropavlovsk**	**6.23**	**263**	Pn	**Pn**		**00 09 30.7**	**+0.7**
PET					**Sn**		**00 10 38.6**	**-1.8**
PET	**Petropavlovsk**	**6.23**	**263**	*e*Pn	**Pn**		**00 09 32.8**	**+2.8**
PET				MLR	MLR			
	comp=Z,100nm,18.0s							
PET	**Petropavlovsk**	**6.23**	**263**	*eP*	**Pn**		**00 09 31.1**	**+1.1**
PET				*eS*	**Sn**		**00 10 40.2**	**-0.1**
TILK	**Tilichiki**	**6.45**	**348**	PN	**Pn**		**00 09 33.3**	**+0.4**
TILK	**Tilichiki**	**6.45**	**348**	*eP*	**Pn**		**00 09 33.4**	**+0.4**
RUS	**Russkaya**	**6.49**	**258**	PN	**Pn**		**00 09 34.2**	**+0.7**
RUS	**Russkaya**	**6.49**	**258**	*eP*	**Pn**		**00 09 34.3**	**+0.7**
KRMR	**Karymshinskiy**	**6.59**	**262**	PN	**Pn**		**00 09 36.1**	**+1.2**
KRMR	**Karymshinskiy**	**6.59**	**262**	*eP*	**Pn**		**00 09 36.1**	**+1.2**
KRMR				*eS*	**Sn**		**00 10 46.7**	**-2.5**
MTVR	**Mutnovka**	**6.67**	**259**	PN	**Pn**		**00 09 37.3**	**+1.2**
MTVR	**Mutnovka**	**6.67**	**259**	*eP*	**Pn**		**00 09 37.3**	**+1.2**
MTVR				*eS*	**Sn**		**00 10 48.6**	**-2.6**
GRL	**Gorelyy**	**6.71**	**260**	PN	**Pn**		**00 09 38.5**	**+1.9**
GRL	**Gorelyy**	**6.71**	**260**	*eP*	**Pn**		**00 09 38.5**	**+1.9**
PEA0B	**Petropavlovsk-**	**6.77**	**265**	Pn	**Pn**		**00 09 36.2**	**-1.2**
PEA0B	**Petropavlovsk-**	**6.77**	**265**	PN	**Pn**		**00 09 36.2**	**-1.2**
PETK	**Petropavlovsk-**	**6.77**	**265**	Pn	**Pn**		**00 09 36.9**	**-0.5**
	comp=Z,9.5nm,0.4s,baz=75,slow=18,SNR=124							
PETK				Sn	**Sn**		**00 10 54.0**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=68,slow=33,SNR=5.0							
PETK				LR	LR		00 12 20.4	
	comp=Z,88nm,20.5s,baz=87,slow=39							
PETK	**Petropavlovsk-**	**6.77**	**265**	Pn	**Pn**		**00 09 36.2**	**-1.2**
ASAK	**Asacha**	**6.86**	**259**	PN	**Pn**		**00 09 40.3**	**+1.6**
ASAK	**Asacha**	**6.86**	**259**	*eP*	**Pn**		**00 09 40.3**	**+1.6**
AMKA	**Amchitka**	**6.89**	**110**	Pn	**Pn**		**00 09 37.3**	**-1.7**
KDTR	**Khodutka, Kamc**	**6.98**	**254**	PN	**Pn**		**00 09 40.9**	**+0.7**
KDTR	**Khodutka, Kamc**	**6.98**	**254**	*eP*	**Pn**		**00 09 40.9**	**+0.7**
KDTR				*eS*	**Sn**		**00 10 55.4**	**-3.2**
SKR	**Severo-Kuril's**	**8.59**	**251**	PN	**Pn**		**00 10 03.4**	**+1.2**
SKR	**Severo-Kuril's**	**8.59**	**251**	*eP*	**Pn**		**00 10 03.4**	**+1.2**
KIWB	**Kanaga Island**	**8.71**	**100**	Pn	**Pn**		**00 10 03.5**	**-0.4**
ADK	**Adak**	**8.97**	**99**	Pn	**Pn**		**00 10 06.6**	**-0.9**
ADK	**Adak**	**8.97**	**99**	PN	**Pn**		**00 10 06.6**	**-0.9**
ATKA	**Atka Island**	**10.31**	**94**	Pn	**Pn**		**00 10 26.5**	**+0.6**
MA2	**Magadan**	**11.29**	**306**	Pn	**Pn**		**00 10 37.7**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=108,slow=16,SNR=1.9							
	comp=Z,27nm,1.1s							
MA2	**Magadan**	**11.29**	**306**		**Pn**		**00 10 37.4**	**-1.8**
SPIA	**Saint Paul Isl**	**12.11**	**67**	Pn	**Pn**		**00 10 51.2**	**+0.8**
SEY	**Seymchan**	**12.27**	**322**	LR	LR		00 15 19.6	
	comp=Z,62nm,19.8s,baz=148,slow=37							
UNV	**Unalaska Valle**	**14.42**	**81**	Pn	**Pn**		**00 11 19.9**	**-2.1**
N17K	**Nushagak Hills**	**19.17**	**57**	P	**Pn**		**00 12 22.0**	**0.0**
J18K	**Innoko River**	**19.81**	**48**	P	**P**		**00 12 27.2**	**-0.8**
ASAJ	**Asahikawa**	**19.85**	**250**	LR	LR		00 18 57.6	
	comp=Z,30nm,21.4s,baz=43,slow=33							
ACHA	**Angle Creek He**	**20.12**	**64**	P	**P**		**00 12 30.7**	**-0.8**
ACHA				IAmb	IAmb		00 12 34.9	
	comp=Z,16nm,1.4s							
L19K	**White Mountain**	**20.45**	**52**		**P**		**00 12 35.0**	**+0.1**
L19K				IAmb	IAmb		00 12 38.2	
	comp=Z,14nm,0.9s							
OHAK	**Old Harbor**	**21.31**	**66**	P	**P**		**00 12 44.4**	**+0.2**
OHAK				IAmb	IAmb		00 12 51.5	
	comp=Z,31nm,1.3s							
D20K	**Etivluk River**	**21.53**	**34**	P	**P**		**00 12 47.3**	**+0.7**
KDAK	**Kodiak Island**	**21.62**	**65**	P	**P**		**00 12 46.0**	**-1.5**
	comp=Z,3.1nm,0.7s,baz=292,slow=4.7,SNR=1.8							
	comp=Z,3.1nm,0.7s							
KDAK	**Kodiak Island**	**21.62**	**65**	P	**P**		**00 12 47.8**	**+0.3**
KDAK	**Kodiak Island**	**21.62**	**65**	P	**P**		**00 12 46.0**	**-1.5**
SPU	**Mount Spurr**	**21.71**	**56**	P	**P**		**00 12 48.9**	**+0.3**
SPU				IAmb	IAmb		00 12 52.5	
	comp=Z,16nm,1.4s							
STLK	**Strandline Lak**	**21.83**	**55**	P	**P**		**00 12 50.9**	**+1.0**
SKT	**Skwentna**	**21.99**	**53**	P	**P**		**00 12 52.8**	**+1.2**
SKT				IAmb	IAmb		00 13 04.0	
	comp=Z,14nm,1.2s							
BRLK	**Bradley Lake**	**22.32**	**59**	P	**P**		**00 12 54.3**	**-0.8**
BRLK				IAmb	IAmb		00 13 11.8	
	comp=Z,22nm,1.3s							
JTM	**Tenmabayashi**	**22.93**	**246**	P	**P**		**00 12 57.2**	**-4.5**
E22K	**Anaktuvuk Pass**	**22.98**	**37**	P	**P**		**00 13 00.8**	**-1.2**
SEW	**Seward**	**23.02**	**58**	P	**P**		**00 13 00.8**	**-1.6**
SML	**Sawmill**	**23.50**	**54**	P	**P**		**00 13 06.5**	**-0.8**
SML				IAmb	IAmb		00 13 10.0	
	comp=Z,18nm,1.0s							
WRH	**Wood River Hil**	**23.72**	**47**	P	**P**		**00 13 08.2**	**-1.1**
WRH				IAmb	IAmb		00 13 31.7	
	comp=Z,14nm,1.4s							
CCB	**Clear Creek Bu**	**23.86**	**47**		**P**		**00 13 09.5**	**-1.1**
CCB				IAmb	IAmb		00 13 22.8	
	comp=Z,4.4nm,0.6s							
IL31		**24.26**	**47**	P	**P**		**00 13 13.4**	**-1.0**
IL31				IAmb	IAmb		00 13 33.2	
	comp=Z,10nm,1.4s							
ILAR	**Eielson Array**	**24.26**	**47**	P	**P**		**00 13 13.7**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=265,slow=8.6,SNR=14							
	comp=Z,1.4nm,0.8s							
ILAR	**Eielson Array**	**24.26**	**47**	P	**P**		**00 13 12.9**	**-1.5**
ILAR	**Eielson Array**	**24.26**	**47**	P	**P**		**00 13 12.9**	**-1.5**
TIXI	**Tiksi**	**24.51**	**331**	LR	LR		00 22 25.5	
	comp=Z,21nm,18.1s,baz=16,slow=36							
TIXI	**Tiksi**	**24.51**	**331**		**P**		**00 13 15.8**	**-0.8**
TIXI				IAmb	IAmb		00 13 28.5	
	comp=Z,8.9nm,1.1s							
TIXI	**Tiksi**	**24.51**	**331**	P	**P**		**00 13 15.8**	**-0.8**
TIXI				pmax	pmax			
	comp=Z,9.0nm,1.1s							
M24K	**Tolsona, Glenn**	**24.51**	**53**		**P**		**00 13 16.1**	**-0.6**
D25K	**Kavik River**	**25.21**	**36**	P	**P**		**00 13 21.9**	**-1.1**
D25K				IAmb	IAmb		00 13 35.7	
	comp=Z,7.8nm,0.8s							
E25K	**Arctic Village**	**25.24**	**39**		**P**		**00 13 22.3**	**-0.9**
E25K				IAmb	IAmb		00 13 36.5	
	comp=Z,4.7nm,0.7s							
BMAR	**Burnt Mountain**	**25.50**	**41**	P	**P**		**00 13 24.4**	**-1.2**
BCAR	**Beaver Creek A**	**26.50**	**51**	P	**P**		**00 13 34.5**	**-0.2**
A36M	**Sachs Harbour**	**32.45**	**32**	P	**P**		**00 14 27.0**	**-0.3**
A36M				IAmb	IAmb		00 14 35.2	
	comp=Z,9.4nm,1.4s							
KSRS	**Korea Array**	**32.56**	**256**	P	**P**		**00 14 31.7**	**+3.1**
	comp=Z,0.8nm,0.6s,baz=47,slow=8.6,SNR=3.0							
	comp=Z,0.8nm,0.6s							
C36M	**Paulatuk**	**33.07**	**37**	P	**P**		**00 14 32.1**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**34.44**	**183**	T	T		00 51 36.1	
	baz=1.8,slow=76,SNR=1598							
H11N3	**WAKE ISLAND Hy**	**34.45**	**183**	T	T		00 51 37.0	
	baz=1.8,slow=76,SNR=1776							
H11N1	**WAKE ISLAND Hy**	**34.45**	**183**	T	T		00 51 20.4	
	baz=1.8,slow=76,SNR=1922							
H11S1	**WAKE ISLAND Hy**	**35.66**	**184**	T	T		00 52 43.9	
	baz=1.9,slow=76,SNR=391							
H11S3	**WAKE ISLAND Hy**	**35.67**	**184**	T	T		00 53 03.1	
	baz=1.9,slow=76,SNR=207							
H11S2	**WAKE ISLAND Hy**	**35.68**	**184**	T	T		00 53 07.6	
	baz=1.9,slow=76,SNR=308							
YKA	**Yellowknife Ar**	**38.69**	**46**	P	**P**		**00 15 19.1**	**-1.8**
	comp=Z,0.8nm,0.9s,baz=296,slow=9.1,SNR=3.2							
	comp=Z,0.8nm,0.9s							
HHC	**Hu-ho-hao-te**	**39.87**	**275**	*eP*	**P**		**00 15 31.3**	**+0.1**
HHC				pmax	pmax			
	comp=Z,9.0nm,0.6s							
HHC				pmax	pmax			
	comp=Z,140nm,4.4s							
NEW	**Newport**	**44.72**	**66**	LR	LR		00 35 03.5	
	comp=Z,29nm,18.1s,baz=279,slow=36							
ZALV	**Zalesovo Beam**	**46.51**	**306**	P	**P**		**00 16 24.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=77,slow=6.5,SNR=2.8							
ZALV				LR	LR		00 36 31.8	
	comp=Z,24nm,21.8s,baz=35,slow=37							
	comp=Z,0.4nm,0.3s							
LZDM	**Lanzhou Array**	**47.73**	**275**	P	**P**		**00 16 37.5**	**+2.9**
	comp=Z,0.9nm,0.3s,baz=30,slow=12,SNR=1.5							
	comp=Z,0.9nm,0.3s							
NVAR	**Mina Array Bea**	**50.38**	**77**	P	**P**		**00 16 55.9**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=315,slow=9.7,SNR=4.4							
	comp=Z,0.8nm,0.7s							
ELK	**Elko**	**50.55**	**73**	LR	LR		00 37 26.8	
	comp=Z,24nm,19.5s,baz=318,slow=35							
KURK	**Kurchatov**	**51.50**	**306**	P	**P**		**00 17 03.7**	**+1.0**
KURBB	**Kurchatov Arra**	**51.60**	**306**	P	**P**		**00 17 03.7**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=51,slow=7.7,SNR=11							
	comp=Z,0.5nm,0.3s							
MKAR	**Makanchi Array**	**52.30**	**300**	P	**P**		**00 17 06.9**	**-1.9**
	comp=Z,1.0nm,0.9s,baz=46,slow=6.7,SNR=2.6							
	comp=Z,1.0nm,0.9s							
MKAR	**Makanchi Array**	**52.30**	**300**	P	**P**		**00 17 07.9**	**-0.9**
PDAR	**Pinedale Array**	**52.31**	**67**	P	**P**		**00 17 08.8**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=320,slow=7.1,SNR=6.2							
	comp=Z,1.0nm,0.9s							
PDAR	**Pinedale Array**	**52.31**	**67**	P	**P**		**00 17 09.8**	**+0.6**
BVAR	**Borovoye Array**	**53.70**	**312**	P	**P**		**00 17 19.1**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=46,slow=7.8,SNR=20							
BVAR				LR	LR		00 40 55.0	
	comp=Z,30nm,19.5s,baz=65,slow=37							
	comp=Z,3.3nm,0.6s							
ARCES	**ARCESS Array B**	**53.74**	**345**	P	**P**		**00 17 18.6**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=25,slow=11,SNR=1.5							
	comp=Z,2.2nm,0.9s							
HMU	**Henry Mountain**	**55.01**	**72**	P	**P**		**00 17 29.5**	**+0.4**
JMIC	**Jan Mayen**	**55.11**	**359**	LR	LR		00 41 07.2	
	comp=Z,88nm,18.4s,baz=194,slow=36							
PZH	**PanZhiHua**	**55.72**	**269**	P	**P**		**00 17 35.1**	**+0.9**
ARTI	**Arti**	**56.10**	**321**	P	**P**		**00 17 35.8**	**-0.5**
ARTI				IAmb	IAmb		00 17 37.2	
	comp=Z,3.0nm,0.7s							
ARTI	**Arti**	**56.10**	**321**	P	**P**		**00 17 35.8**	**-0.5**
ARTI				pmax	pmax			
	comp=Z,3.0nm,0.7s							
AB31	**Akbulak array**	**60.93**	**315**	P	**P**		**00 18 09.6**	**-0.5**
ABKAR	**Akbulak array**	**60.93**	**315**	P	**P**		**00 18 09.9**	**-0.1**
FINES	**FINESS Array B**	**61.02**	**341**	LR	LR		00 48 15.9	
	comp=Z,24nm,18.3s,baz=72,slow=40							
CMAR	**Chiang Mai Arr**	**63.55**	**265**	P	**P**		**00 18 29.5**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=37,slow=6.7,SNR=4.1							
	comp=Z,0.5nm,0.3s							
NB2	**NORSAR Subarra**	**63.76**	**348**	P	**P**		**00 18 29.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=16,slow=6.9							
NOA	**NORSAR Array B**	**63.76**	**349**	P	**P**		**00 18 28.1**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=16,slow=6.6,SNR=4.8							
	comp=Z,1.3nm,0.8s							
HFS	**Hagfors**	**64.32**	**347**	P	**P**		**00 18 32.5**	**+0.1**
	comp=Z,4.3nm,1.0s,baz=23,slow=7.8,SNR=2.1							
	comp=Z,4.3nm,1.0s							
TXAR	**Lajitas Array**	**65.31**	**74**	P	**P**		**00 18 41.4**	**+1.8**
	comp=Z,0.6nm,0.5s,baz=322,slow=7.4,SNR=13							
	comp=Z,0.6nm,0.5s							
AKASG	**Malin Array Be**	**70.16**	**334**	P	**P**		**00 19 09.1**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=37,slow=6.4,SNR=1.8							
	comp=Z,0.3nm,0.4s							
GNI	**Garni**	**74.54**	**319**	LR	LR		00 57 16.0	
	comp=Z,21nm,19.7s,baz=29,slow=40							
BRTR	**Keskin Array B**	**78.88**	**326**	P	**P**		**00 20 02.0**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=10,slow=4.5,SNR=4.3							
	comp=Z,0.4nm,0.6s							
BRTR	**Keskin Array B**	**78.88**	**326**	P	**P**		**00 20 00.9**	**+0.2**
BRTR	**Keskin Array B**	**78.88**	**326**	P	**P**		**00 20 00.9**	**+0.2**
WRA	**Warramunga Arr**	**79.59**	**213**	P	**P**		**00 20 07.7**	**+3.2**
	comp=Z,0.3nm,0.8s,baz=21,slow=5.8,SNR=1.9							
	comp=Z,0.3nm,0.8s							
ASAR	**Alice Springs**	**83.21**	**212**	P	**P**		**00 20 24.7**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=19,slow=6.0,SNR=3.1							
ASAR				LR	LR		00 57 27.2	
	comp=Z,21nm,19.4s,baz=312,slow=36							
	comp=Z,0.4nm,0.9s							
QSPA	**South Pole Qui**	**143.94**	**180**	PKP	**PKiKP**		**00 27 33.5**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=23,slow=1.8,SNR=3.9							

NEIC ***17*** *00:16:24.1±1.1, 4.°0S±0.°1×152.°14E±0.°10, h207km±5km, mb4.5/18, Error ellipse: s-maj=15.3km s-min=13.3km az=210.0*
IDC ***17*** *00:16:25.0±1.7, 4.°03S×152.°05E, h223km±16km, mb3.6/15, mbtmp4.2/17, Error ellipse: s-maj=16.5km s-min=9.6km az=110.0*

ISC 17 00:16:23.6±0.8, 4.°02S±0.°07×152.°09E±0.°09, h208km±6km, n47, σ0§84/49, mb4.2/22, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RABL	**Rabaul**	**0.19**	**157**		**Pn**		**00 16 51.2**	**+0.3**
RABL				Sn	**S**		**00 17 11.9**	**-0.5**
MANU	**Manus Island**	**5.11**	**292**		**Pn**		**00 17 39.9**	**+0.2**
PMG	**Port Moresby**	**7.25**	**222**	P	**Pn**		**00 18 08.2**	**+0.9**
	16nm,0.4s,baz=42,slow=12,SNR=10							
PMG				S	**S**		**00 19 29.8**	**+0.1**
	72nm,0.6s,baz=41,slow=20,SNR=11							
PMG	**Port Moresby**	**7.25**	**222**		**Pn**		**00 18 08.0**	**+0.7**
JAY	**Jayapura**	**11.47**	**277**	P	**Pn**		**00 19 01.0**	**-0.7**
	20nm,0.9s,baz=128,slow=8.1,SNR=8.1							
COEN	**Coen**	**13.22**	**221**		**P**		**00 19 25.9**	**-0.6**
FAKI	**Fak Fak**	**19.84**	**273**	P	**P**		**00 20 39.6**	**+0.7**
FAKI				IAmb	IAmb		00 20 58.9	
	comp=Z,20nm,1.0s							
DZM	**Mont Dzumac**	**22.71**	**143**	P	**P**		**00 21 08.6**	**+0.7**
	comp=Z,3.6nm,0.5s,baz=330,slow=20,SNR=9.4							
	comp=Z,3.6nm,0.5s							
WB0	**Warramunga Arr**	**23.30**	**226**		**P**		**00 21 14.3**	**+1.1**
WRA	**Warramunga Arr**	**23.45**	**226**	P	**P**		**00 21 15.3**	**+0.8**
	comp=Z,82nm,0.6s,baz=48,slow=10,SNR=462							
WRA				S	**S**		**00 25 11.5**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=50,slow=19,SNR=2.3							
WRA	**Warramunga Arr**	**23.45**	**226**	P	**P**		**00 21 15.5**	**+1.0**
WRA				IAmb	IAmb		00 21 16.8	
	comp=Z,11nm,0.6s							
KNRA	**Kununurra**	**25.70**	**242**	P	**P**		**00 21 37.4**	**+2.4**
KNRA				IAmb	IAmb		00 22 05.8	
	comp=Z,15nm,1.4s							
INKA	**Innaminka**	**25.95**	**203**	P	**P**		**00 21 36.9**	**-0.2**
AS31	**Alice Springs**	**26.26**	**220**	P	**P**		**00 21 40.9**	**+0.9**
AS31				IAmb	IAmb		00 21 42.5	
	comp=Z,2.9nm,0.3s							
ASAR	**Alice Springs**	**26.27**	**220**	P	**P**		**00 21 40.4**	**+0.4**
	comp=Z,2.2nm,0.3s,baz=41,slow=9.9,SNR=72							
ASAR				S	**S**		**00 25 55.7**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=49,slow=15,SNR=3.1							
	comp=Z,2.2nm,0.3s							
ASAR	**Alice Springs**	**26.27**	**220**	P	**P**		**00 21 40.0**	**0.0**
STKA	**Stephens Creek**	**29.41**	**198**	P	**P**		**00 22 07.2**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=36,slow=19,SNR=3.6							
	comp=Z,0.7nm,0.3s							
FITZ	**Fitzroy Crossi**	**29.43**	**240**	P	**P**		**00 22 07.8**	**-0.2**
BBOO	**Buckleboo**	**32.33**	**206**	P	**P**		**00 22 33.8**	**+0.4**
BBOO				IAmb	IAmb		00 22 35.1	
	comp=Z,18nm,1.4s							
FORT	**Forrest**	**34.96**	**218**	P	**P**		**00 22 56.0**	**0.0**
PSA00	**Pilbara Seismi**	**35.83**	**238**	P	**P**		**00 23 03.0**	**-0.6**
JNU	**Nakatsue**	**42.05**	**333**	P	**P**		**00 23 54.5**	**-0.6**
	comp=Z,11nm,0.8s,baz=131,slow=9.3,SNR=7.1							
	comp=Z,11nm,0.8s							
JNU	**Nakatsue**	**42.05**	**333**	P	**P**		**00 23 54.9**	**-0.2**
JNU				IAmb	IAmb		00 23 57.3	
	comp=Z,20nm,1.0s							
TUWZ	**Tuamarina**	**42.09**	**155**	P	**P**		**00 23 55.0**	**-0.1**
JTM	**Tenmabayashi**	**45.72**	**348**	P	**P**		**00 24 23.9**	**-0.1**
KSRS	**Korea Array**	**46.99**	**334**	P	**P**		**00 24 34.6**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=143,slow=7.9,SNR=4.3							
	comp=Z,1.4nm,0.8s							
USRK	**Ussuriysk Ar.**	**51.29**	**342**	P	**P**		**00 25 07.6**	**+1.3**
	comp=Z,

HOPEN	**Hopen**	**1.40**	**104**	*eP*	Pn	00	29	27.3	-1.3
HOPEN				*eSg*	Sn	00	29	45.9	-0.9
HOPEN				IAML		00	29	57.2	
	comp=Z,6.3nm,0.9s								
SPA0	**Spitsbergen Ar**	**1.42**	**336**	*eP*	Pn	00	29	26.0	-2.9
SPA0				*eSg*	Sn	00	29	45.9	-1.3
SPA0				IAML		00	29	48.0	
	comp=Z,2.0nm,0.3s								
BRBA	**Barentsburg A**	**1.59**	**319**	*eP*	Pn	00	29	29.9	-1.3
BRBA				*eS*	Sn	00	29	49.3	-2.1
BRBA				IAML		00	29	53.1	
	comp=Z,4.4nm,0.5s								
BRBB	**Barentsburg B**	**1.61**	**320**	*eP*	Pn	00	29	30.3	-1.3
BRBB				*eS*	Sn	00	29	50.9	-1.1
KBS	**Kingsbay**	**2.54**	**326**	*eP*	Pb	00	29	47.3	-1.6
KBS				*eSg*	Sb	00	30	17.8	-1.9
KBS				IAML		00	30	24.2	
	comp=Z,2.2nm,0.3s								

IDC ***17*** *00:32:38.5±0.5, 1.°69N×126.°51E, h0km, mb4.4/23, mbtmp4.4/26, ML4.2/3, MS3.4/11, Error ellipse: s-maj=25.4km s-min=9.8km az=75.0*
BJI ***17*** *00:32:43.3, 1.°47N×126.°21E, h44km, mB5.1/5, mb4.7/35, Ms7 4.1/1*
DJA ***17*** *00:32:43.5±0.2, 2.°N±3.°×12.°6E±.°, h10km, M4.6/23, mB5.2/12, mb4.9/19, MLv4.6/23, Mw(mB)4.6/12*
NEIC ***17*** *00:32:44.2±1.5, 1.°69N±0.°03×126.°47E±0.°07, h35km±1km, mb4.8/52, Error ellipse: s-maj=12.4km s-min=3.1km az=244.0*
ISC 17 00:32:43.9±0.3,**1.°70N**±0.°05×**126.°48E**±0.°06,**h35**km,**n143,** σ1s**57**/143,**mb4.7**/54,**MS3.5**/10,**1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.28**	**136**		**Pn**	**00 33 05.9**	**+0.6**
TNTI				Sn	**Sn**	**00 33 20.8**	**-0.5**
TNTI	**Ternate**	**1.28**	**136**	P	**Pn**	**00 33 06.0**	**+0.6**
SGSI	**Sangihe**	**2.19**	**334**	P	**Pn**	**00 33 18.5**	**+0.7**
LBMI	**Labuha**	**2.54**	**156**	P	**Pn**	**00 33 25.2**	**+2.5**
KMSI	**Cibinong**	**2.73**	**246**	P	**Pn**	**00 33 27.4**	**+2.1**
SANI	**Sanana**	**3.76**	**187**	P	**Pn**	**00 33 39.8**	**+0.4**
LUWI	**Luwuk**	**4.60**	**234**		**Pn**	**00 33 53.2**	**+2.3**
LUWI	**Luwuk**	**4.60**	**234**	P	**Pn**	**00 33 54.0**	**+3.1**
MRSI	**Marisa**	**4.69**	**255**	P	**Pn**	**00 33 54.0**	**+1.7**
NLAI	**Namlea**	**4.95**	**173**	P	**Pn**	**00 33 57.9**	**+2.1**
	0.4nm960nm60nm,0.7s						
DAV	**Davao City (W)**	**5.41**	**351**	Sn	**Sn**	**00 35 04.2**	**+1.1**
	29nm,0.3s,baz=150,slow=20,SNR=1.2						
SWI	**Sorong**	**5.42**	**118**	P	**Pn**	**00 34 04.7**	**+2.4**
APSI	**Ampana**	**5.48**	**242**	P	**Pn**	**00 34 06.9**	**+3.8**
MSAI	**Masohi**	**5.58**	**154**	P	**Pn**	**00 34 08.1**	**+3.6**
	0.4nm82nm,0.9s						
AAI	**Ambon**	**5.62**	**162**	P	**Pn**	**00 34 09.0**	**+4.0**
	0.3nm57nm,0.6s						
TOLI2	**Tolitoli**	**5.72**	**264**		**Pn**	**00 34 06.3**	**-0.1**
MPSI	**Mapaga**	**6.71**	**258**	P	**Pn**	**00 34 17.9**	**-2.1**
	0.6nm69nm,0.8s						
BNDI	**Bandanaira**	**7.07**	**151**	P	**Pn**	**00 34 28.9**	**+4.0**
	0.5nm101nm,1.5s						
PCI	**Palu**	**7.12**	**249**	P	**Pn**	**00 34 28.6**	**+2.9**
	0.5nm140nm,1.1s						
FAKI	**Fak Fak**	**7.38**	**128**		**Pn**	**00 34 29.5**	**+0.4**
FAKI	**Fak Fak**	**7.38**	**128**	P	**Pn**	**00 34 32.1**	**+3.0**
	0.2nm583nm71nm,1.1s						
TTSI	**Tana Toraja**	**8.15**	**235**	P	**Pn**	**00 34 41.1**	**+1.3**
	764nm71nm,0.9s						
MYLDM	**Lahad Datu**	**8.68**	**294**		**Pn**	**00 34 47.6**	**+0.6**
SPSI	**Sidrap Palu**	**8.75**	**230**	P	**Pn**	**00 34 51.9**	**+3.9**
	50nm,0.8s						
BNSI	**Bone**	**8.79**	**226**	P	**Pn**	**00 34 52.3**	**+3.8**
	2µm67nm,0.7s						
BKSI	**Bulukumba**	**9.43**	**222**	P	**Pn**	**00 34 59.8**	**+2.5**
	25nm,0.6s						
KAPI	**Kappang**	**9.47**	**225**	Pn	**Pn**	**00 34 57.9**	**+0.1**
	2.4nm,0.3s,baz=44,slow=2.1,SNR=9.3						
	11nm,0.5s						
KAPI	**Kappang**	**9.47**	**225**		**Pn**	**00 34 59.0**	**+1.1**
BSSI	**Bau Bau, Buton**	**9.82**	**217**	P	**Pn**	**00 35 05.7**	**+3.0**
	54nm,1.0s						
BAKI	**Biak**	**10.05**	**107**	P	**Pn**	**00 35 09.5**	**+3.6**
EDFI	**Ende, Flores**	**11.43**	**205**	P	**Pn**	**00 35 27.8**	**+3.0**
SOEI	**Soe**	**11.59**	**191**	Pn	**Pn**	**00 35 27.5**	**+0.4**
BATI	**Baumata**	**12.16**	**193**	Pn	**Pn**	**00 35 33.9**	**-0.9**
	2.0nm,0.3s,baz=27,slow=6.8,SNR=1.6						
BATI				LR	LR	00 41 32.9	
	comp=Z,101nm,19.4s,baz=5.5,slow=44						
	5.1nm,0.3s						
SBUM	**Sibu**	**14.27**	**273**		**Pn**	**00 36 04.0**	**+0.5**
MTN	**Manton Dam**	**15.17**	**162**		**Pn**	**00 36 13.3**	**-2.4**
KNRA	**Kununurra**	**17.42**	**173**		**Pn**	**00 36 42.7**	**-1.5**
KNRA				IAmb	IAmb	00 36 47.6	
	comp=Z,48nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	**P**	**00 37 09.2**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=1.6,slow=9.9,SNR=13						
	comp=Z,5.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.69**	**182**		**P**	**00 37 09.3**	**-1.0**
TPUB	**Ta-pu**	**22.21**	**346**	P	**P**	**00 37 37.0**	**-0.4**
TPUB				IAmb	IAmb	00 37 45.3	
	comp=Z,44nm,0.9s						
SSLB	**Suanglung**	**22.60**	**347**	P	**P**	**00 37 41.4**	**-0.2**
SSLB				IAmb	IAmb	00 37 59.5	
	comp=Z,90nm,1.9s						
WB0	**Warramunga Arr**	**22.71**	**160**		**P**	**00 37 41.9**	**-0.9**
WB0				IAmb	IAmb	00 37 46.3	
	comp=Z,48nm,0.8s						
COEN	**Coen**	**22.72**	**134**	P	**P**	**00 37 41.4**	**-1.5**
WRA	**Warramunga Arr**	**22.85**	**161**	P	**P**	**00 37 43.2**	**-1.1**
	comp=Z,44nm,0.9s,baz=339,slow=10,SNR=107						
WRA				PcP	**PcP**	**00 41 35.4**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=332,slow=2.2,SNR=4.5						
WRA				S	**S**	**00 41 49.1**	**-2.5**
	comp=Z,2.7nm,1.0s,baz=343,slow=19,SNR=7.1						
	comp=Z,44nm,0.9s						
WRA	**Warramunga Arr**	**22.85**	**161**		**P**	**00 37 42.5**	**-1.8**
YHNB	**Yeheng**	**23.36**	**348**	P	**P**	**00 37 48.1**	**-1.4**
YHNB				IAmb	IAmb	00 37 56.5	
	comp=Z,110nm,2.0s						
PMG	**Port Moresby**	**23.37**	**119**	LR	LR	00 47 58.6	
	comp=Z,153nm,18.5s,baz=258,slow=39						
MBWA	**Marble Bar**	**23.66**	**196**		**P**	**00 37 50.9**	**-1.4**
PSA00	**Pilbara Seismi**	**24.02**	**195**	P	**P**	**00 37 54.6**	**-1.1**
AS31	**Alice Springs**	**26.23**	**164**		**P**	**00 38 15.5**	**-0.3**
ASAR	**Alice Springs**	**26.23**	**164**	P	**P**	**00 38 15.8**	**0.0**
	comp=Z,3.6nm,0.4s,baz=343,slow=8.7,SNR=121						
ASAR				PcP	**PcP**	**00 41 42.4**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=344,slow=2.2,SNR=5.8						
ASAR				S	**S**	**00 42 49.1**	**+3.1**
	comp=Z,0.8nm,0.9s,baz=345,slow=18,SNR=4.8						
	comp=Z,3.6nm,0.4s						
ASAR	**Alice Springs**	**26.23**	**164**		**P**	**00 38 15.6**	**-0.2**
RPSI	**Rantau Prapat**	**27.55**	**273**	P	**P**	**00 38 26.8**	**-1.0**
GSI	**Gunungsitoli**	**28.89**	**270**	P	**P**	**00 38 37.2**	**-2.6**
GSI				IAmb	IAmb	00 38 41.0	
	comp=Z,36nm,1.0s						
CTAO	**Charters Tower**	**29.07**	**139**		**P**	**00 38 39.7**	**-1.6**
CTAO				IAmb	IAmb	00 38 45.6	
	comp=Z,18nm,1.3s						
NJ2	**Nanjing**	**31.03**	**347**	*eP*	**P**	**00 39 00.6**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**00 39 05.8**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=116,slow=8.4,SNR=12						
CMAR				LR	LR	00 52 14.6	
	comp=Z,63nm,21.6s,baz=120,slow=37						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**00 39 05.1**	**+0.4**
CHTO	**Chiang Mai**	**31.89**	**304**	P	**P**	**00 39 05.0**	**-1.2**
FORT	**Forrest**	**32.34**	**177**	P	**P**	**00 39 09.6**	**-0.3**
FORT				IAmb	IAmb	00 39 15.0	
	comp=Z,8.9nm,0.8s						
JMN	**Monobe**	**32.61**	**11**	P	**P**	**00 39 11.6**	**-0.7**
ENH	**Enshi**	**32.67**	**332**	P	**P**	**00 39 12.1**	**-0.8**
ENH				IAmb	IAmb	00 39 14.2	
	comp=Z,19nm,0.9s						
PZH	**PanZhiHua**	**34.24**	**318**	P	**P**	**00 39 29.8**	**+3.0**
HNR	**Honiara**	**35.13**	**109**	LR	LR	00 55 08.5	
	comp=Z,68nm,19.1s,baz=304,slow=38						
BBOO	**Buckleboo**	**35.50**	**166**	P	**P**	**00 39 37.0**	**-0.4**
KSRS	**Korea Array**	**35.60**	**2**	P	**P**	**00 39 39.7**	**+1.5**
	comp=Z,2.0nm,0.8s,baz=182,slow=9.7,SNR=8.8						
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**36.33**	**16**	P	**P**	**00 39 44.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=192,slow=11,SNR=2.0						
MJAR				LR	LR	00 54 19.7	
	comp=Z,88nm,19.1s,baz=184,slow=36						
	comp=Z,0.5nm,0.3s						
STKA	**Stephens Creek**	**36.35**	**158**	P	**P**	**00 39 44.3**	**-0.4**
	comp=Z,5.4nm,0.8s,baz=331,slow=9.4,SNR=13						
	comp=Z,5.4nm,0.8s						
HNS	**HongShan**	**37.14**	**344**	⇓P	**P**	**00 39 51.3**	**0.0**
ARMA	**Armidale**	**39.94**	**145**	P	**P**	**00 40 15.8**	**+0.7**
LZDM	**Lanzhou Array**	**40.09**	**331**	P	**P**	**00 40 16.1**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=148,slow=11,SNR=1.5						
	comp=Z,1.0nm,0.4s						
LZH	**Lanzhou**	**40.13**	**331**	*eP*	**P**	**00 40 17.4**	**+0.7**
LZH				pP	pP	00 40 26.6	+0.2
LZH				pmax	pmax		
	comp=Z,22nm,1.8s						
SHL	**Shillong**	**40.90**	**308**		**P**	**00 40 22.1**	**-1.1**
SHL				IAmb	IAmb	00 40 24.4	
	comp=Z,9.3nm,0.7s						
HHC	**Hu-ho-hao-te**	**41.24**	**343**	*eP*	**P**	**00 40 29.0**	**+3.3**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,5.5s						
TOO	**Toolangi**	**42.87**	**158**	P	**P**	**00 40 38.4**	**-0.5**
TOO				IAmb	IAmb	00 41 40.5	
	comp=Z,29nm,1.9s						
LSA	**Lhasa**	**43.60**	**313**	P	P	00 40 41.5	-4.1
GTA	**Gaotai**	**44.71**	**330**	*eP*	**P**	**00 40 56.4**	**+2.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
EVN	**Everest**	**46.01**	**308**	P	**P**	**00 41 05.3**	**+0.3**
EVN				IAmb	IAmb	00 41 11.0	
	comp=Z,10nm,1.0s						
HILR	**Hailar Array B**	**48.02**	**354**	P	**P**	**00 41 17.7**	**-1.9**
	comp=Z,1.9nm,0.6s,baz=163,slow=10,SNR=5.1						
	comp=Z,1.9nm,0.6s						
WMQ	**Urumqi**	**54.24**	**326**	*eP*	**P**	**00 42 09.0**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,32nm,1.1s						
PETK	**Petropavlovsk-**	**57.39**	**22**	P	**P**	**00 42 30.0**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=210,slow=7.8,SNR=4.1						
	comp=Z,2.4nm,0.8s						
PETK	**Petropavlovsk-**	**57.39**	**22**	P	**P**	**00 42 29.5**	**+0.7**
NIL	**Nilore**	**58.97**	**309**	P	**P**	**00 42 39.6**	**-0.6**
NIL				IAmb	IAmb	00 42 41.7	
	comp=Z,14nm,1.3s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**00 42 40.9**	**+0.2**
	comp=Z,8.9nm,0.7s,baz=122,slow=8.1,SNR=61						
MKAR				LR	LR	01 10 49.8	
	comp=Z,52nm,18.6s,baz=127,slow=39						
	comp=Z,8.9nm,0.7s						
MKAR	**Makanchi Array**	**59.07**	**326**		**P**	**00 42 40.6**	**-0.1**
TARG	**Taragay, Kyrgy**	**59.09**	**319**		**P**	**00 42 40.6**	**-0.7**
TARG				IAmb	IAmb	00 42 46.1	
	comp=Z,6.3nm,0.9s						
MAKZ	**Makanchi**	**59.26**	**326**	P	**P**	**00 42 41.8**	**-0.2**
MAKZ	**Makanchi**	**59.26**	**326**	P	**P**	**00 42 41.6**	**-0.4**
KSH	**Kashi**	**59.30**	**316**	P	**P**	**00 42 44.4**	**+1.9**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LBZ	**Lake Benmore**	**60.17**	**145**	P	**P**	**00 42 48.0**	**-0.2**
AAK	**Ala-Archa**	**61.69**	**319**	P	**P**	**00 42 58.8**	**0.0**
AAK				IAmb	IAmb	00 43 00.9	
	comp=Z,3.7nm,0.9s						
AAK	**Ala-Archa**	**61.69**	**319**	P	**P**	**00 43 00.0**	**+1.2**
DRK	**Karamyk**	**62.23**	**314**	P	**P**	**00 43 02.5**	**-0.1**
DRK				IAmb	IAmb	00 43 07.1	
	comp=Z,8.3nm,0.7s						
ZAA0	**Zalesovo Array**	**62.27**	**334**		**P**	**00 43 01.6**	**-0.7**
ZALV	**Zalesovo Beam**	**62.27**	**334**	P	**P**	**00 43 01.9**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=122,slow=7.1,SNR=10						
ZALV				LR	LR	01 11 33.4	
	comp=Z,32nm,19.7s,baz=98,slow=38						
	comp=Z,2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**62.27**	**334**		**P**	**00 43 01.1**	**-1.1**
KBL	**Kabul**	**62.56**	**308**	P	**P**	**00 43 03.8**	**-1.0**
KBL				IAmb	IAmb	00 43 06.2	
	comp=Z,7.7nm,0.9s						
GAR	**Garm**	**63.11**	**313**	P	**P**	**00 43 07.3**	**-1.0**
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**00 43 09.4**	**+0.2**
	comp=Z,8.7nm,0.6s,baz=128,slow=6.1,SNR=145						
	comp=Z,8.7nm,0.6s						
KURK	**Kurchatov**	**63.31**	**328**	P	**P**	**00 43 09.0**	**-0.2**
KURK	**Kurchatov**	**63.31**	**328**	P	**P**	**00 43 09.1**	**-0.2**
CHGR	**Chuyangaron**	**63.84**	**313**	P	**P**	**00 43 12.1**	**-1.0**
SEY	**Seymchan**	**64.05**	**13**	LR	LR	01 12 05.4	
	comp=Z,8.3nm,20.2s,baz=352,slow=37						
KK31	**Karatay Array**	**64.54**	**318**	P	**P**	**00 43 16.6**	**-0.9**
KK31				IAmb	IAmb	00 43 18.4	
	comp=Z,3.8nm,0.9s						
KKAR	**Karatay Array**	**64.54**	**318**	P	**P**	**00 43 16.8**	**-0.8**
BVAR	**Borovoye Array**	**68.88**	**327**	P	**P**	**00 43 45.2**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=134,slow=9.6,SNR=17						
	comp=Z,2.7nm,0.7s						
BORK	**Borovoye**	**68.92**	**327**	P	**P**	**00 43 45.3**	**+0.1**
BORK	**Borovoye**	**68.92**	**327**	sP	**sP**	**00 43 59.9**	**+0.5**
BORK				PcP	**PcP**	**00 44 08.2**	**-1.2**
TIXI	**Tiksi**	**69.86**	**1**	P	**P**	**00 43 50.6**	**0.0**
TIXI				IAmb	IAmb	00 44 00.1	
	comp=Z,10nm,1.2s						
AB31	**Akbulak array**	**73.55**	**321**		**P**	**00 44 13.2**	**-0.2**
ABKAR	**Akbulak array**	**73.55**	**321**		**P**	**00 44 13.1**	**-0.2**
AKTO	**Aktyubinsk**	**75.08**	**322**	LR	LR	01 21 01.7	
	comp=Z,44nm,18.6s,baz=50,slow=39						
ARTI	**Arti**	**76.59**	**328**		**P**	**00 44 30.6**	**-0.1**
ARTI				IAmb	IAmb	00 44 31.7	
	comp=Z,9.7nm,0.6s						
ARTI	**Arti**	**76.59**	**328**	P	**P**	**00 44 30.4**	**-0.3**
ARTI				sP	**sP**	**00 44 45.7**	**+0.6**
RAYN	**Ar Rayn**	**81.04**	**293**	P	**P**	**00 44 55.1**	**-0.8**
RAYN				IAmb	IAmb	00 45 00.9	
	comp=Z,4.9nm,0.8s						
RAYN	**Ar Rayn**	**81.04**	**293**	P	**P**	**00 44 55.6**	**-0.3**
VOI	**Vohitsoka**	**81.06**	**248**	P	**P**	**00 44 55.9**	**-0.2**
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**00 44 56.8**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=326,slow=3.2,SNR=12						
VNDA				LR	LR	01 20 42.9	
	comp=Z,14nm,20.5s,baz=342,slow=35						
	comp=Z,2.4nm,0.8s						
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**00 44 57.4**	**+0.4**
VNDA	**Vanda**	**81.46**	**173**	P	**P**	**00 44 57.8**	**+0.8**
VNDA	**Vanda**	**81.46**	**173**	sP	sP	00 45 12.6	+1.2
MAW	**Mawson**	**81.78**	**200**	P	**P**	**00 44 58.4**	**-0.4**
	comp=Z,3.0nm,1.0s,baz=65,slow=7.9,SNR=2.0						
	comp=Z,3.0nm,1.0s						
KDAK	**Kodiak Island**	**83.73**	**32**	LR	LR	01 16 53.2	
	comp=Z,54nm,20.7s,baz=236,slow=32						
KBZ	**Khabaz**	**84.18**	**314**	P	**P**	**00 45 12.5**	**+0.7**
	comp=Z,3.7nm,0.9s,baz=135,slow=4.3,SNR=6.1						
	comp=Z,3.7nm,0.9s						
IMAR	**Indian Mountai**	**84.29**	**24**	P	**P**	**00 45 12.7**	**+0.9**
GURO	**Guroymak-BITLI**	**84.59**	**308**		**P**	**00 45 14.3**	**+0.1**
MARD	**Mardin**	**85.55**	**307**		**P**	**00 45 18.6**	**-0.4**
MARD				IAmb	IAmb	00 45 24.4	
	comp=Z,6.4nm,0.7s						
ILAR	**Eielson Array**	**87.03**	**25**	P	**P**	**00 45 25.2**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=248,slow=5.6,SNR=5.6						
	comp=Z,0.5nm,0.9s						
BMAR	**Burnt Mountain**	**88.03**	**23**	P	**P**	**00 45 32.1**	**+1.8**
GAZ	**Gaziantep**	**88.39**	**307**		**P**	**00 45 32.7**	**0.0**
GAZ				IAmb	IAmb	00 45 34.6	
	comp=Z,6.0nm,0.8s						
MMAI	**Mount Meron Ar**	**89.98**	**303**	P	**P**	**00 45 41.8**	**+1.5**
	comp=Z,1.7nm,0.5s,baz=92,slow=4.6,SNR=6.3						
	comp=Z,1.7nm,0.5s						
BRTR	**Keskin Array B**	**91.11**	**310**	P	**P**	**00 45 44.4**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=98,slow=2.9,SNR=7.3						
	comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**91.11**	**310**	P	**P**	**00 45 43.5**	**-2.0**
QSPA	**South Pole Qui**	**91.62**	**180**	P	**P**	**00 45 50.0**	**+2.8**
	comp=Z,0.9nm,0.9s,baz=323,slow=1.4,SNR=2.5						
QSPA	**South Pole Qui**	**91.62**	**180**	P	**P**	**00 45 50.0**	**+2.8**
ARCES	**ARCESS Array B**	**92.25**	**340**	P	**P**	**00 45 49.6**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=76,slow=5.9,SNR=5.7						
	comp=Z,2.1nm,0.7s						
ARCES	**ARCESS Array B**	**92.25**	**340**	P	**P**	**00 45 49.6**	**-0.3**
SPITS	**Spitsbergen Ar**	**92.41**	**349**	P	**P**	**00 45 50.0**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=75,slow=11,SNR=4.5						
	comp=Z,2.6nm,0.7s						
AKASG	**Malin Array Be**	**93.29**	**321**	P	**P**	**00 45 55.1**	**0.0**
	comp=Z,0.4nm,0.4s,baz=71,slow=4.4,SNR=1.5						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**93.49**	**332**	P	**P**	**00 45 55.4**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=80,slow=4.8,SNR=7.7						
	comp=Z,3.3nm,0.9s						
BURAR	**Bucovina Array**	**96.33**	**318**		**P**	**00 46 09.7**	**+0.4**
BURAR				IAmb	IAmb	00 46 29.5	
	comp=Z,3.1nm,1.0s						
BUR08	**Bucovina Ar. S**	**96.34**	**318**		**P**	**00 46 09.3**	**0.0**
BUR08				IAmb	IAmb	00 46 16.7	
	comp=Z,3.5nm,0.9s						
TXAR	**Lajitas Array**	**123.02**	**53**	PKP	**PKPdf**	**00 51 37.7**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=292,slow=3.2,SNR=3.5						
LPAZ	**La Paz**	**159.58**	**136**	PKP	**PKPdf**	**00 52 39.4**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=243,slow=4.5,SNR=3.9						

IDC ***17*** *00:35:28.4±1.6, 24.°17S×66.°92W, h156km±16km, mb3.0/3, mbtmp3.4/8, Error ellipse: s-maj=28.1km s-min=12.5km az=86.0*
SJA ***17*** *00:35:30.4±0.7, 24.°04S×66.°86W, h224km±6km, ML4.1, MW3.8*
NEIC ***17*** *00:35:34.1±1.5, 24.°01S±0.°03×67.°1W±0.°2, h212km±8km, mb4.1/6, ML4.0(GUC), Error ellipse: s-maj=20.7km s-min=4.6km az=93.0*
GUC ***17*** *00:35:35.7±0.8, 24.°00S×67.°43W, h204km±12km, ML4.0*
ISC 17 00:35:32.1±0.7,**24.°02S**±0.°04×**66.°91W**±0.°04,**h205**km±7km, **n95,**σ1s**33**/115,**mb3.5**/4,**10C-2D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.56**	**111**	*eP*	**Pn**	**00 36 00.9**	**+0.2**
SALTA		**0.56**	**111**	*eP*	**Pn**	**00 36 00.9**	**+0.2**
SLA	**San Lorenzo**	**1.46**	**119**	⇓*eP*	**Pn**	**00 36 06.6**	**+0.5**
SLA	**San Lorenzo**	**1.46**	**119**	*eP*	**Pn**	**00 36 06.6**	**+0.5**
AF01	**San Pedro de A**	**1.58**	**312**		**Pn**	**00 36 08.6**	**+1.3**
AF01				Sn	**S**	**00 36 36.8**	**+2.5**
AF01	**San Pedro de A**	**1.58**	**312**	⇑*eP*	**Pn**	**00 36 08.7**	**+1.4**
AF01	**San Pedro de A**	**1.58**	**312**	*eP*	**Pn**	**00 36 09.9**	**+2.5**
AF01				*eS*	S	00 36 18.4	-16
HJA	**Humahuaca**	**1.60**	**60**	*eP*	**Pn**	**00 36 08.0**	**+0.3**
AZAP	**Zapla**	**1.70**	**97**	*eP*	**Pn**	**00 36 08.5**	**+0.1**
FSA	**Cafayete**	**2.25**	**158**	*eP*	**Pn**	**00 36 13.7**	**0.0**
YJA	**Yavi**	**2.25**	**35**	*eP*	**Pn**	**00 36 15.2**	**+1.1**
YJA	**Yavi**	**2.25**	**35**	*eP*	**Pn**	**00 36 09.9**	**-4.2**
YJA				*eP*		00 36 15.3	
YJA				*eS*	**S**	**00 36 47.0**	**+0.8**
GO02	**Mina Guanaco**	**2.69**	**244**		**Pn**	**00 36 19.4**	**+0.6**
GO02				Sn	**S**	**00 36 54.6**	**0.0**
GO02	**Mina Guanaco**	**2.69**	**244**	⇑*eP*	**Pn**	**00 36 19.4**	**+0.6**
GO02	**Mina Guanaco**	**2.69**	**244**	*eP*	**Pn**	**00 36 18.8**	**0.0**
GO02				*eS*	**S**	**00 36 55.1**	**+0.5**
GO02				IAML		00 36 56.1	
	comp=Z,1µm,0.2s						
PB06	**IPOC Station P**	**2.77**	**298**		**Pn**	**00 36 20.4**	**+0.8**
PB06				Sn	**S**	**00 36 55.1**	**-0.9**
PB06	**IPOC Station P**	**2.77**	**298**	⇑*eP*	**Pn**	**00 36 20.4**	**+0.8**
PB06				IAML		00 37 00.9	
	comp=N,367nm,0.2s						
PB06	**IPOC Station P**	**2.77**	**298**	*eP*	**Pn**	**00 36 20.4**	**+0.8**
PB06				*eS*	**S**	**00 36 57.3**	**+1.2**
PB06				IAML		00 37 01.8	
	comp=Z,275nm,0.3s						
PB09	**IPOC Station P**	**3.08**	**315**		**Pn**	**00 36 24.4**	**+1.1**
AHML	**Horco Molle**	**3.10**	**153**	*eP*	**Pn**	**00 36 21.3**	**-1.9**
AHML				*eS*	**S**	**00 36 58.7**	**-4.1**
PB05	**IPOC Station P**	**3.24**	**290**		**Pn**	**00 36 25.1**	**+0.1**
PB05	**IPOC Station P**	**3.24**	**290**	⇑*eP*	**Pn**	**00 36 25.1**	**+0.1**
PB05				IAML		00 37 07.6	
	comp=N,143nm,0.4s						
PB05	**IPOC Station P**	**3.24**	**290**	*eP*	**Pn**	**00 36 25.3**	**+0.3**
PB05				*eS*	**S**	**00 37 06.3**	**+0.5**
PB05				IAML		00 37 14.3	
	comp=Z,110nm,0.5s						
PB14	**IPOC Station P**	**3.24**	**259**		**Pn**	**00 36 25.4**	**+0.2**
PB14	**IPO

comp=Z,0.7nm,0.4s,baz=157,slow=5.8,SNR=12
LPAZ S **S** **00 38 49.7 -1.8**
comp=Z,1.1nm,0.5s,baz=90,slow=16,SNR=3.9
LPAZ La Paz 7.78 351 Pn 00 37 23.4 +0.3
CPUP Villa Florida 8.98 107 P **Pn 00 37 34.6 -3.4**
comp=Z,0.4nm,0.8s,baz=358,slow=10,SNR=4.2
SIV San Ignacio 9.69 36 P **Pn 00 37 45.4 -2.0**
comp=Z,1.4nm,0.5s,baz=216,slow=11,SNR=9.0
BO04 La Punta 10.44 197 Pn **Pn 00 37 55.3 -1.7**
ITAB Concordia 13.71 107 Pn **P 00 38 39.6 -0.8**
PLTB Pedras Altas 14.06 126 Pn **P 00 38 44.0 -0.2**
TRQA Tornquist 14.61 164 Pn **Pn 00 38 48.3 -1.0**
LR05 Currie 16.72 194 P **P 00 39 14.8 +1.4**
PLCA Paso Flores 16.94 190 P **P 00 39 12.6 -3.4**
comp=Z,1.3nm,0.9s,baz=22,slow=5.4,SNR=1.2
PLCA Paso Flores 16.94 190 P **P 00 39 14.9 -1.1**
PLCA IAmb IAmb 00 39 18.9
comp=Z,6.7nm,1.2s
VAO Valinhos 18.32 91 P **P 00 39 30.5 -0.7**
VAO IAmb IAmb 00 39 52.9
comp=Z,21nm,1.1s
BOAV Boa Vista 26.98 14 P **P 00 40 55.3 +0.2**
RUSC La Rusia 30.34 348 P **P 00 41 25.1 -0.2**
RUSC IAmb IAmb 00 41 29.4
comp=Z,3.4nm,0.9s
SNAA Sanae 59.30 161 P **P 00 45 13.1 +1.2**
comp=Z,0.2nm,0.4s,baz=281,slow=16,SNR=7.0
comp=Z,0.2nm,0.4s
SNAA Sanae 59.30 161 P **P 00 45 14.2 +2.3**
SNAA IAmb IAmb 00 45 41.4
comp=Z,4.2nm,1.5s
TXAR Lajitas Array 63.74 324 P **P 00 45 44.8 +2.6**
comp=Z,0.5nm,0.8s,baz=142,slow=5.4,SNR=5.5
comp=Z,0.5nm,0.8s
TXAR Lajitas Array 63.74 324 P **P 00 45 43.5 +1.2**
PDAR Pinedale Array 77.21 329 P **P 00 47 06.0 +2.4**
comp=Z,0.3nm,0.5s,baz=139,slow=8.5,SNR=4.4
comp=Z,0.3nm,0.5s
PDAR Pinedale Array 77.21 329 P **P 00 47 03.6 +0.1**
WRA Warramunga Arr 131.64 207 PKP **PKiKP 00 54 23.1 +0.9**
comp=Z,0.3nm,0.3s,baz=167,slow=1.8,SNR=2.5
KURBB Kurchatov Arra 142.35 36 PKhKP PKPpre 00 54 38.0
comp=Z,0.3nm,0.7s,baz=300,slow=3.2,SNR=2.7
ZALV Zalesovo Beam 143.38 28 PKhKP PKPpre 00 54 40.6
comp=Z,0.8nm,0.6s,baz=306,slow=3.4,SNR=5.5
MKAR Makanchi Array 146.49 40 PKPbc **PKPab 00 54 50.1 -0.4**
comp=Z,1.0nm,0.5s,baz=309,slow=2.8,SNR=13

*IDC **17** 00:36:23.7±16.0, 20.°54S×177.°47W, h390km±138km, mb3.3/5, mbtmp4.0/5, Error ellipse: s-maj=136.5km s-min=37.9km az=130.0*
ISC 17 00:36:22.1±2.2, 20.°9S±0.°5×177.°1W±0.°4, h400km, n10, σ0.°90/10, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.25**	**257**	P	**P**	**00 44 02.8**	**+0.8**
	1.8nm,0.8s,baz=95,slow=8.1,SNR=10						
ASAR				PcP	**PcP**	**00 45 35.0**	**+0.8**
	0.2nm,0.6s,baz=99,slow=3.3,SNR=2.6						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**45.39**	**262**	P	**P**	**00 44 02.8**	**-0.3**
	0.3nm,0.3s,baz=97,slow=8.0,SNR=6.7						
	0.3nm,0.3s						
PETK	**Petropavlovsk-**	**76.90**	**345**	P	**P**	**00 47 31.6**	**+0.4**
	3.0nm,0.9s,baz=162,slow=5.2,SNR=2.1						
	3.0nm,0.9s						
ILAR	**Eielson Array**	**88.54**	**12**	P	**P**	**00 48 30.7**	**+0.6**
	0.2nm,0.4s,baz=206,slow=4.7,SNR=5.7						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**91.06**	**289**	P	**P**	**00 48 41.9**	**-1.0**
	0.7nm,0.4s,baz=102,slow=5.3,SNR=4.0						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**119.95**	**320**	PKP	**PKiKP**	**00 54 26.2**	**+0.5**
	0.3nm,0.4s,baz=130,slow=1.2,SNR=2.4						
AKASG	**Malin Array Be**	**143.80**	**331**	PKhKP	PKPpre	00 55 08.3	
	1.6nm,0.5s,baz=44,slow=4.2,SNR=8.2						
EKA	**Eskdalemuir Ar**	**145.34**	**6**	PKPbc	**PKiKP**	**00 55 15.4**	**-1.4**
	1.1nm,0.8s,baz=344,slow=2.8,SNR=2.0						
BRTR	**Keskin Array B**	**147.76**	**312**	PKPbc	**PKiKP**	**00 55 21.8**	**-0.7**
	0.5nm,0.9s,baz=85,slow=3.0,SNR=2.9						
MMAI	**Mount Meron Ar**	**148.77**	**299**	PKPbc	**PKiKP**	**00 55 24.9**	**+0.2**
	1.2nm,0.6s,baz=75,slow=6.1,SNR=2.3						

*FUNV **17** 00:45:46.8, 8.°17N×71.°95W, h2km, MW3.2*
*RSNC **17** 00:45:48.7±0.0, 8.°7N±2.°7×71.°2W±.°, h4km±6km, M2.3, ML1.9*
ISC 17 00:45:45.7±1.5, 8.°18N±0.°04×71.°90W±0.°03, h5km±12km, n19, σ1.°14/31, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**0.52**	**232**	eP	**Pg**	**00 45 55.5**	**-0.1**
CAPV				eS	**Sg**	**00 46 02.6**	**+0.3**
PAMC	**Pamplona, Colo**	**1.15**	**223**	P	**Pb**	**00 46 07.3**	**-1.1**
PAMC				S	**Sg**	**00 46 22.4**	**-0.4**
OCAC	**Ocana**	**1.40**	**272**	P	**Pn**	**00 46 11.9**	**-0.2**
OCAC				S	**Sn**	**00 46 30.8**	**-0.3**
SDV	**Santo Domingo**	**1.44**	**61**	P	**Pb**	**00 46 13.3**	**+0.2**
SDV				S	**Sn**	**00 46 31.7**	**-0.3**
BARC	**Barichara**	**2.03**	**219**	P	**Pb**	**00 46 23.9**	**+0.7**
BRJC	**Barrancabermej**	**2.19**	**237**	P	**Pb**	**00 46 26.2**	**+0.4**
BRJC				S	**Sb**	**00 46 54.3**	**+1.1**
RUSC	**La Rusia**	**2.56**	**207**	P	**Pb**	**00 46 31.3**	**-1.1**
RUSC				S	**Sb**	**00 47 04.3**	**-0.1**
ARGC	**Ariguani, Magd**	**2.85**	**306**	P	**Pb**	**00 46 37.1**	**-0.1**
ARGC				S	**Sg**	**00 47 16.1**	**-1.3**
CRJC	**Cerrejon, Guaj**	**2.98**	**341**	P	**Pn**	**00 46 35.7**	**+1.9**
CRJC				S	**Sb**	**00 47 15.8**	**-0.4**
PTBC	**PUERTO BERRIO,**	**3.01**	**237**	P	**Pb**	**00 46 39.1**	**-0.8**
PTBC				S	**Sb**	**00 47 17.9**	**+0.9**
TEPV	**Terepaima**	**3.21**	**56**	eP	**Pn**	**00 46 38.6**	**+1.8**
URIC	**Uribia, Colomb**	**3.50**	**359**	P	**Pn**	**00 46 40.9**	**+0.1**
URIC				S	**Sn**	**00 47 21.5**	**-1.2**
SJCC	**San Jacinto, C**	**3.66**	**298**	P	**Pn**	**00 46 45.2**	**+2.1**
MAPV	**Macapo**	**3.78**	**64**	eP	**Pn**	**00 46 46.5**	**+1.8**
MAPV				eS	**Sn**	**00 47 28.9**	**-0.7**
BAUV	**El Baul**	**3.89**	**78**	eP	**Pn**	**00 46 46.7**	**+0.5**
BAUV				eS	**Sn**	**00 47 31.6**	**-0.7**
TURV	**Turiamo**	**4.60**	**60**	eP	**Pn**	**00 46 56.4**	**+0.4**
BENV	**Beln**	**4.60**	**67**	eP	**Pn**	**00 46 57.8**	**+1.7**
BENV				eS	**Sn**	**00 47 47.6**	**-2.5**
TACV	**Tcata**	**5.19**	**68**	eP	**Pn**	**00 47 04.6**	**+0.5**
CACV	**CAICARA DEL OR**	**5.35**	**96**	eP	Pb	00 47 14.2	-5.5

*UPA **17** 00:47:22.0±1.1, 8.°48N×83.°09W, h12km±3km, MW3.6*
*UCR **17** 00:47:22.1±0.8, 8.°45N×83.°09W, h12km±2km, MW3.7*
ISC 17 00:47:22.3±1.0, 8.°48N±0.°03×83.°11W±0.°03, h18km±4km, n53, σ0.°96/61, 3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITO	**Golfito**	**0.15**	**342**	eP	**Pg**	**00 47 25.8**	**-0.8**
FITO				eS	**Sg**	**00 47 28.8**	**-0.6**
PTJ1	**Puerto Jimnez**	**0.20**	**285**	eP	**Pg**	**00 47 27.2**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.20**	**285**	eP	**Pg**	**00 47 26.8**	**-0.5**
PTJ1				eS	**Sg**	**00 47 31.6**	**+1.0**
NELY	**Ciudad Neily**	**0.23**	**44**	eP	**Pb**	**00 47 27.6**	**-0.3**
NELY				eS	**Sg**	**00 47 32.3**	**+0.9**
PIRO	**Carate, Puerto**	**0.24**	**251**	eP	**Pg**	**00 47 27.2**	**-0.7**
PIRO	**Carate, Puerto**	**0.24**	**251**	eP	**Pg**	**00 47 27.1**	**-0.8**
LESP3	**La Esperanza,**	**0.32**	**104**	eP	**Pn**	**00 47 34.2**	**+2.1**
DMCAL	**E. de Neily**	**0.36**	**59**	eP	**Pg**	**00 47 29.8**	**-0.2**
VITO	**San Vito**	**0.36**	**22**	eP	**Pb**	**00 47 30.2**	**-0.1**
MLIR3	**Monte Lirio, C**	**0.42**	**42**	eP	**Pb**	**00 47 31.5**	**+0.3**
LMNES	**Limones**	**0.45**	**147**	eP	**Pb**	**00 47 31.7**	**-0.1**
SCLRA	**Santa Clara, W**	**0.47**	**43**	eP	**Pb**	**00 47 32.3**	**0.0**
BRU2	**Volcan**	**0.51**	**53**	eP/P	**Pb**	**00 47 32.7**	**-0.3**
BRU2				eS	**Sb**	**00 47 40.9**	**+0.7**
BRU2	**Volcan**	**0.51**	**53**	eP	**Pg**	**00 47 32.5**	**-0.2**
EDP2	**Potrero Grande**	**0.54**	**353**	eP	**Pg**	**00 47 33.0**	**-0.1**
ALCO	**Alturas Coton,**	**0.54**	**30**	eP	**Pg**	**00 47 32.7**	**-0.5**
TBS2		**0.54**	**55**	eP	**Pb**	**00 47 34.1**	**+0.7**
FIMO	**Fila Mora**	**0.56**	**334**	eP	**Pg**	**00 47 33.1**	**-0.5**
BAGA3	**Bagala, Chiriq**	**0.57**	**91**	eP	**Pb**	**00 47 33.4**	**-0.4**
PANP	**Palmar Norte**	**0.59**	**324**	eP	**Pg**	**00 47 33.1**	**-1.0**
BC3P	**Paso Ancho**	**0.59**	**56**	eP	**Pg**	**00 47 33.7**	**-0.5**
BC3P				eS	**Sn**	**00 47 43.1**	**+1.9**
JEFFS	**S de V. Baru**	**0.60**	**72**	eP	**Pg**	**00 47 33.8**	**-0.5**
DVD	**David**	**0.65**	**94**	eP	**Pg**	**00 47 34.4**	**-0.8**
DVD				eS	**Sb**	**00 47 44.0**	**+0.1**
LOCO3	**Loma Colorada,**	**0.68**	**96**	eP	**Pg**	**00 47 35.0**	**-0.8**
LOCO3				eS	**Sn**	**00 47 46.4**	**-1.0**
BQTLY	**Boquete Panama**	**0.69**	**67**	eP	**Pg**	**00 47 35.2**	**-0.9**
LOMA3	**Las Lomas, Chi**	**0.71**	**94**	eP	**Pg**	**00 47 35.5**	**-0.8**
WILLF	**Boquete**	**0.71**	**68**	eP	**Pg**	**00 47 35.4**	**-1.1**
LNBQ3	**Los Naranjos,**	**0.73**	**65**	eP	**Pg**	**00 47 35.8**	**-0.9**
DAP26	**falda E V. Bar**	**0.74**	**66**	eP	**Pg**	**00 47 35.7**	**-1.3**
DRK0	**Durika**	**0.79**	**350**	eP	**Pg**	**00 47 36.9**	**-0.9**
DRK0				eS	**Sg**	**00 47 48.6**	**+0.3**
DRK0	**Durika**	**0.79**	**350**	eP	**Pg**	**00 47 36.9**	**-0.9**
PSOM3	**Paja de Sombre**	**0.80**	**75**	eP	**Pg**	**00 47 34.9**	**-3.1**
EDPE	**Pejibaye, P**	**0.81**	**326**	eP	**Pg**	**00 47 37.1**	**-1.2**
SAJE	**San Jernim**	**0.95**	**335**	eP	**Pg**	**00 47 39.3**	**-1.5**
PBNVO	**Pueblo Nuevo,**	**0.99**	**66**	eP	**Pb**	**00 47 39.3**	**-1.7**
RBALA	**Bur**	**1.02**	**67**	eP	**Pb**	**00 47 40.0**	**-1.6**
CHGR2	**Aguacate**	**1.05**	**64**	eP	**Pb**	**00 47 40.9**	**-1.2**
CEUA	**Cerro Uatsi, L**	**1.14**	**8**	eP	**Pb**	**00 47 43.9**	**+0.2**
BUS1	**Rivas**	**1.24**	**329**	eP	**Pn**	**00 47 44.4**	**-0.8**
LAES	**El Progreso Va**	**1.27**	**3**	eP	**Pn**	**00 47 45.5**	**+0.2**
LLNJ	**Naranjito**	**1.39**	**315**	eP	**Pn**	**00 47 47.1**	**+0.2**
PIEC	**Cerro El Cedra**	**1.41**	**323**	eP	**Pn**	**00 47 47.5**	**+0.1**
VERH	**Veragua Rainfo**	**1.44**	**357**	eP	**Pn**	**00 47 47.6**	**0.0**
LCR2	**La Lucha 2**	**1.53**	**325**	eS	**Sg**	**00 48 11.8**	**-0.2**
PICV	**PH. Pirrs**	**1.56**	**317**	eP	**Pn**	**00 47 49.8**	**+0.4**
RESJ	**San Isidro (Tu**	**1.63**	**341**	eP	**Pn**	**00 47 51.0**	**+0.7**
ABRB	**Las Abras (San**	**1.63**	**338**	eP	**Pn**	**00 47 51.3**	**+0.9**
CVTV	**Tajo**	**1.64**	**337**	eP	**Pn**	**00 47 51.4**	**+0.8**
CVTQ	**Turrialba Volc**	**1.65**	**337**	eP	**Pn**	**00 47 51.6**	**+0.8**
IRES	**Siquirres**	**1.65**	**346**	eP	**Pn**	**00 47 51.7**	**+1.3**
LCOCO	**El Coco**	**1.65**	**344**	eP	**Pn**	**00 47 51.7**	**+1.2**
VTR0	**Volcan Turrial**	**1.66**	**337**	eP	**Pn**	**00 47 51.8**	**+0.9**
CVTR	**Volcan Turrial**	**1.66**	**337**	eP	**Pn**	**00 47 51.6**	**+0.6**

*IDC **17** 00:50:12.7±1.8, 1.°72N×126.°42E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=188.9km s-min=21.2km az=66.0*
*DJA **17** 00:50:18.7±1.4, 2.°N±3.°×12.°6E±.°, h20km±12km, M3.6/8, MLv3.6/8*
ISC 17 00:50:18.9±1.0, 1.°67N±0.°08×126.°43E±0.°10, h35km, n8, σ1.°97/10, mb3.5/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.30**	**134**	P	**Pn**	**00 50 41.7**	**+1.2**
TNTI				S	**Sn**	**00 50 58.9**	**+2.3**
SGSI	**Sangihe**	**2.19**	**336**	P	**Pn**	**00 50 54.1**	**+1.2**
SGSI				S	**Sn**	**00 51 21.0**	**+2.2**
KMSI	**Cibinong**	**2.68**	**246**	P	**Pn**	**00 51 01.1**	**+1.5**
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**00 55 16.5**	**-2.7**
	0.5nm,0.4s,baz=339,slow=10,SNR=4.7						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.22**	**164**	P	**P**	**00 55 51.0**	**+0.3**
	0.3nm,0.5s,baz=342,slow=11,SNR=5.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**01 00 14.0**	**-1.7**
	0.8nm,1.0s,baz=122,slow=7.1,SNR=5.3						
	0.8nm,1.0s						
KURBB	**Kurchatov Arra**	**63.31**	**328**	P	**P**	**01 00 43.5**	**-0.7**
	0.3nm,0.5s,baz=124,slow=5.7,SNR=7.3						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**68.88**	**328**	P	**P**	**01 01 19.0**	**-1.0**
	0.4nm,0.8s,baz=135,slow=5.3,SNR=2.2						
	0.4nm,0.8s						

IDC 17 00:50:29.9±5.6, 6.°77S×129.°87E, h214km±56km, mb3.2/2, mbtmp3.7/5, Error ellipse: s-maj=75.8km s-min=23.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.99**	**200**	P	Pn	00 53 14.3	0.0
	0.6nm,0.3s,baz=24,slow=11,SNR=16						
FITZ				S	S	00 55 24.2	-2.7
	3.0nm,0.5s,baz=20,slow=12,SNR=7.7						
WRA	**Warramunga Arr**	**13.79**	**162**	P	Pn	00 53 36.2	-0.6
	0.6nm,0.4s,baz=344,slow=12,SNR=7.9						
WRA				S	S	00 56 03.4	-6.3
	0.9nm,0.3s,baz=341,slow=20,SNR=8.5						
ASAR	**Alice Springs**	**17.24**	**167**	P	P	00 54 16.9	+0.3
	1.3nm,0.5s,baz=350,slow=11,SNR=12						
ASAR				S	S	00 57 25.4	+0.4
	0.5nm,0.7s,baz=350,slow=25,SNR=3.1						
MKAR	**Makanchi Array**	**67.97**	**327**	P	P	01 01 06.0	+0.1
	0.6nm,0.4s,baz=115,slow=7.9,SNR=10						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**72.25**	**329**	P	P	01 01 31.5	-0.2
	0.2nm,0.4s,baz=125,slow=5.2,SNR=2.2						
	0.2nm,0.4s						

*IDC **17** 00:51:20.0±1.8, 1.°67N×126.°19E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=207.5km s-min=20.2km az=66.0*
*DJA **17** 00:51:24.0±0.3, 2.°N±3.°×12.°6E±.°, h10km, M3.7/6, MLv3.7/6*
ISC 17 00:51:23.7±1.5, 2.°2N±0.°1×127.°5E±0.°3, h35km, n7, σ1.°01/8, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.46**	**185**	P	**Pn**	**00 51 47.5**	**-0.1**
TNTI				S	**Sn**	**00 52 05.9**	**+0.4**
SGSI	**Sangihe**	**2.44**	**306**	P	**Pn**	**00 52 00.7**	**-0.4**
WRA	**Warramunga Arr**	**23.04**	**163**	P	**P**	**00 56 24.9**	**-1.2**
	1.9nm,0.4s,baz=338,slow=10,SNR=7.3						
	1.9nm,0.4s						
ASAR	**Alice Springs**	**26.49**	**167**	P	**P**	**00 56 58.0**	**0.0**
	0.8nm,0.5s,baz=342,slow=8.3,SNR=9.0						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**59.21**	**325**	P	**P**	**01 01 20.7**	**-0.8**
	0.8nm,0.6s,baz=122,slow=6.6,SNR=5.8						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**63.40**	**327**	P	**P**	**01 01 49.5**	**-0.2**
	0.8nm,0.7s,baz=128,slow=5.9,SNR=8.4						
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**68.98**	**327**	P	**P**	**01 02 27.1**	**+1.6**
	0.3nm,0.5s,baz=134,slow=6.2,SNR=3.4						
	0.3nm,0.5s						

*AEIC **17** 01:08:43.0±1.2, 53.°49N±0.°09×160.°5W±0.°1, h26km±9km, Error ellipse: s-maj=13.2km s-min=8.3km az=164.0*
NEIC 17 01:08:40.6±0.5, 53.°48N±0.°03×160.°35W±0.°09, h10km±2km, ML3.1/18, ML2.9(AEIC), Error ellipse: s-maj=9.7km s-min=3.8km az=244.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**1.41**	**18**		Pn	01 09 06.6	+0.3
SDPT	**Sand Point**	**1.87**	**358**		Pn	01 09 12.5	-0.1
SDPT					Sn	01 09 35.5	-0.8
SDPT	**Sand Point**	**1.87**	**358**	IAML		01 09 38.4	
	comp=E,65nm,0.4s						
DOL	**Dolgoi Island**	**1.89**	**333**		Pn	01 09 12.9	-0.1
DOL					Sn	01 09 35.6	-1.2
DT1	**Dutton Round H**	**1.98**	**326**		Pn	01 09 14.0	-0.1
DT1					Sn	01 09 38.2	-0.9
PS4A	**Pavlof South-4**	**2.06**	**335**		Pn	01 09 15.6	+0.3
PS4A					Sn	01 09 40.9	+0.2
PS1A	**Pavlof South-1**	**2.11**	**338**		Pn	01 09 16.5	+0.6
PS1A					Sn	01 09 42.5	+0.4
PN7A	**Pavlof North-7**	**2.18**	**334**		Pn	01 09 17.8	+0.8
FALS	**False Pass**	**2.27**	**309**		Pn	01 09 17.9	-0.2
FALS	**False Pass**	**2.27**	**309**	IAML		01 09 46.8	
	comp=E,334nm,0.5s						
ISNN	**Isanotski Nort**	**2.43**	**305**		Pn	01 09 20.6	+0.3
S12K	**Black Hills**	**2.44**	**337**		Pn	01 09 21.3	+0.9
SSLS	**Shishaldin Sou**	**2.48**	**301**		Pn	01 09 21.0	0.0
SSBA	**Shishaldin**	**2.57**	**302**		Pn	01 09 22.2	-0.1
AKSA	**Akutan Strait**	**3.24**	**284**		Pn	01 09 31.1	-0.3
AKUT	**Akutan**	**3.28**	**284**	Pn	Pn	01 09 31.7	-0.2
AKUT				IAML		01 11 21.6	
	comp=N,49nm,0.1s						
AKUT				IAML		01 11 21.7	
	comp=E,52nm,0.2s						
ZRO	**Akutan Zero**	**3.39**	**283**		Pn	01 09 33.2	-0.3
LVA	**Lava Point**	**3.44**	**284**	Pn	Pn	01 09 34.3	+0.1
LVA				IAML		01 10 13.6	
	comp=E,83nm,0.9s						
CHIR	**Chirikof Islan**	**3.61**	**48**	Pn	Pn	01 09 36.6	+0.1
CHIR				IAML		01 11 26.8	
	comp=E,35nm,1.2s						
CHIR				IAML		01 11 36.8	
	comp=N,32nm,1.1s						
UNV	**Unalaska Valle**	**3.68**	**278**		Pn	01 09 36.5	-1.0
UNV	**Unalaska Valle**	**3.68**	**278**	IAML		01 10 19.9	
	comp=N,13nm,1.0s						
MREP	**Makushin Rep't**	**3.82**	**278**		Pn	01 09 39.4	-0.1
MSW	**Makushin Switc**	**3.85**	**279**		Pn	01 09 39.8	0.0
MGOD	**Makushin Gods**	**3.89**	**277**		Pn	01 09 40.3	-0.2
PLK4	**Peulik 4**	**4.74**	**27**	Pn	Pn	01 09 54.2	+2.1
PLK4				IAML		01 10 45.0	
	comp=N,17nm,1.2s						
PLK4				IAML		01 10 50.1	
	comp=E,18nm,0.5s						
CAHL	**Cahill**	**5.39**	**30**		Pn	01 10 01.4	+0.4
OHAK	**Old Harbor**	**5.50**	**44**		Pn	01 10 02.7	+0.2

*IDC **17** 01:13:25.5±0.7, 15.°00S×66.°94E, h0km, mb3.8/10, mbtmp3.8/11, ML3.9/1, MS3.6/4, Error ellipse: s-maj=24.2km s-min=21.2km az=70.0*
*NEIC **17** 01:13:27.6±2.2, 15.°0S±0.°2×66.°93E±0.°07, h10km±1km, mb4.3/5, Error ellipse: s-maj=25.7km s-min=10.6km az=184.0*
ISC 17 01:13:28.1±0.7, 15.°0S±0.°1×66.°9E±0.°1, h16km, n30, σ0.°52/17, mb3.9/11, MS3.6/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**9.16**	**37**	T	T	01 24 58.4	
	baz=217,slow=75,SNR=374						
H08S2	**Diego Garcia H**	**9.17**	**37**	T	T	01 24 59.1	
	baz=217,slow=75,SNR=672						
H08S3	**Diego Garcia H**	**9.18**	**37**	T	T	01 24 59.8	
	baz=217,slow=75,SNR=491						
OPO	**Ambohidratompo**	**19.18**	**257**	P	**Pn**	**01 17 52.8**	**+0.5**
	baz=102,slow=9.3,SNR=3.3						
	5.2nm,1.0s						
H04N2	**CROZET ISLANDS**	**33.52**	**199**	T	T	01 55 30.1	
	baz=28,slow=76,SNR=82						
H04N1	**CROZET ISLANDS**	**33.52**	**199**	T	T	01 55 30.7	
	baz=28,slow=76,SNR=77						
H04N3	**CROZET ISLANDS**	**33.53**	**199**	T	T	01 55 28.7	
	baz=28,slow=76,SNR=81						
MATP	**Matopo**	**36.89**	**256**	LR	LR	01 33 22.4	
	comp=Z,90nm,20.5s,baz=59,slow=32						
LSZ	**Lusaka**	**37.32**	**264**	LR	LR	01 34 45.1	
	comp=Z,114nm,18.4s,baz=122,slow=34						
LBTB	**Lobatse**	**39.91**	**249**	LR	LR	01 34 21.6	
	comp=Z,91nm,19.1s,baz=70,slow=31						
LBTB	**Lobatse**	**39.91**	**249**	P	**P**	**01 21 01.0**	**-0.8**
BOSA	**Boshof**	**40.73**	**244**	LR	LR	01 34 41.4	
	comp=Z,57nm,21.6s,baz=65,slow=31						
CMAR	**Chiang Mai Arr**	**45.88**	**45**	P	**P**	**01 21 50.7**	**+0.6**
	0.6nm,0.3s,baz=227,slow=8.1,SNR=8.2						
	0.6nm,0.3s						
H01W3	**Cape Leeuwin H**	**46.69**	**124**	T	T	02 12 00.3	
	baz=283,slow=75,SNR=49						
H01W2	**Cape Leeuwin H**	**46.69**	**124**	T	T	02 11 58.6	
	baz=283,slow=75,SNR=49						
H01W1	**Cape Leeuwin H**	**46.71**	**124**	T	T	02 12 01.6	
	baz=283,slow=75,SNR=49						
BRTR	**Keskin Array B**	**62.67**	**332**	P	**P**	**01 23 52.4**	**+0.2**
	1.1nm,1.1s,baz=130,slow=7.8,SNR=3.8						
	1.1nm,1.1s						
ASAR	**Alice Springs**	**63.33**	**109**	P	**P**	**01 23 56.1**	**-0.8**
	0.4nm,0.7s,baz=259,slow=7.0,SNR=7.9						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**64.16**	**105**	P	**P**	**01 24 02.2**	**-0.2**
	0.8nm,0.9s,baz=259,slow=6.6,SNR=13						
	0.8nm,0.9s						
ABKAR	**Akbulak array**	**64.30**	**355**	P	**P**	**01 24 03.0**	**+0.4**
WR8	**Warramunga Arr**	**64.30**	**105**	P	**P**	**01 24 03.4**	**+0.1**
WR8				IAmb	IAmb	01 24 10.4	
	comp=Z,3.3nm,0.9s						
KURBB	**Kurchatov Arra**	**66.17**	**8**	P	**P**	**01 24 13.8**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=208,slow=6.9,SNR=5.7						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**67.85**	**2**	P	**P**	**01 24 25.0**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=202,slow=3.2,SNR=1.8						
	comp=Z,0.6nm,0.9s						
SNAA	**Sanae**	**69.48**	**198**	P	**P**	**01 24 35.6**	**+0.1**
	comp=Z,1.5nm,1.1s,baz=70,slow=7.1,SNR=3.1						
	comp=Z,1.5nm,1.1s						
SNAA	**Sanae**	**69.48**	**198**	P	**P**	**01 24 35.7**	**+0.1**
SNAA				IAmb	IAmb	01 24 36.8	
	comp=Z,2.8nm,1.2s						
ZALV	**Zalesovo Beam**	**70.40**	**11**	P	**P**	**01 24 40.6**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=208,slow=8.1,SNR=4.5						
	comp=Z,0.2nm,0.4s						
QSPA	**South Pole Qui**	**75.05**	**180**	P	**P**	**01 25 09.5**	**+0.6**
	comp=Z,2.2nm,1.1s,baz

H01W1	**Cape Leeuwin H**	**46.41**	**124**	T	T	02 19 34.4		
	baz=283							
ASAR	**Alice Springs**	**62.93**	**109**	P	P	01 31 36.7	+0.4	
	0.2nm,0.7s,baz=266,slow=6.9,SNR=5.3							
	0.2nm,0.7s							
WRA	**Warramunga Arr**	**63.72**	**105**	P	P	01 31 41.3	-0.3	
	0.5nm,0.8s,baz=265,slow=6.5,SNR=6.5							
	0.5nm,0.8s							
PDAR	**Pinedale Array**	**152.03**	**355**	PKPbc	PKPbc	01 41 05.2	-0.2	
	0.2nm,0.6s,baz=5.2,slow=4.2,SNR=2.3							

GCG 17 01:26:25.9±0.9, 14.75N×91.55W, h0$^{km}_{\pm 3}$, MD3.5, ML3.3, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
QUEO	**Labor Ovalle**	**0.12**	**17**	*i* P	Pg	01 26 30.5	+2.2	
QUEO				*i* S	Sg	01 26 33.1	+3.1	
SOKI	**Kika Raxquin**	**0.16**	**64**	*i* P	Pg	01 26 30.8	+1.8	
SOKI				*i* S	Sg	01 26 33.6	+2.6	
STG8	**El Palmar, Qui**	**0.36**	**147**	*i* P	Pg	01 26 27.6	-5.2	
STG8				*i* S	Sg	01 26 28.1	-9.3	
STG8				IAML		01 26 28.3		
	comp=N,56μm,0.2s							
STG5	**El Palmar, Qui**	**0.40**	**150**	*i* P	Pg	01 26 28.3	-5.2	

IDC ***17*** *01:28:52.2±0.4, 7.09N×94.38E, h0^{km}, mb4.5/34, mbtmp4.5/36, ML4.9/3, MS4.4/63, Error ellipse: s-maj=13.4km s-min=10.5km az=59.0*

MOS ***17*** *01:28:52.2±1.0, 7.14N×94.33E, h10^{km}, mb5.1/44, MS4.4/10, Error ellipse: s-maj=9.3km s-min=4.3km az=112.7*

BJI ***17*** *01:28:53.1, 7.04N×94.29E, h11^{km}, mB5.1/31, mb4.7/69, Ms5.0/68, Ms7 4.6/66*

NDI ***17*** *01:28:55.9±4.7, 7.09N×94.58E, h23$^{km}_{\pm 17}$, mb5.2, ML5.2, MW5.1*

DJA ***17*** *01:28:55.8±0.1, 7.1°±2.2°×9.4°±1.1°, h10^{km}, M5.1/96, mb5.2/96, mB5.6/42, MLv5.4/12, Mw(mB)5.1/42, MwMwp4.8/6, Mwp5.1/6*

NEIC ***17*** *01:28:55.4, 7.21N×94.52E, h20^{km}*

NEIC ***17*** *01:28:55.4, 7.21N×94.32E, h20^{km}, Moment Tensor Solution. Duration: 18 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.24; $M_{\theta\theta}$-5.41; $M_{\phi\phi}$5.65; $M_{r\theta}$-1.24; $M_{\theta\phi}$3.14; $M_{\phi r}$-2.23; Fault plane solution: $M_0$6.86000×10^{16} NP1: ϕ_s148.28000°, δ72.53000°, λ171.41000°. NP2: ϕ_s240.87000°, δ81.81000°, λ17.66000°. Principal axes: T 7.2953, Plg18.0000°, Azm106.0000°; N -0.9811, Plg71.0000°, Azm265.0000°; P -6.3142, Plg6.0000°, Azm14.0000°;*

NEIC ***17*** *01:28:55.5±2.4, 7.20N±0.07×94.53E±0.08, h10$^{km}_{\pm 1}$, mb5.2/116, Mww5.2/19 Error ellipse: s-maj=13.8km s-min=10.7km az=65.0*

GCMT ***17*** *01:28:57.4±0.1, 7.16N±0.01×94.54E±0.01, h17^{km}, MW5.2/131, Moment Tensor Solution. s72,c99; s131,c210; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.27±.15; $M_{\theta\theta}$-5.54±.12; $M_{\phi\phi}$6.82±.14; $M_{r\theta}$-2.01±.34; $M_{\theta\phi}$2.92±.11; $M_{\phi r}$0.04±.30; Best double couple: $M_0$7.19100×10^{16} NP1:ϕ_s149.00000°, δ74.00000°, λ-168.00000°. NP2:ϕ_s56.00000°, δ78.00000°, λ-16.00000°. Principal axes: T 7.4940, Plg3.0000°, Azm103.0000°; N -0.5960, Plg70.0000°, Azm201.0000°; P -6.8880, Plg19.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 01:28:57.2±0.5, 7.13N±0.03×94.41E±0.03, h25$^{km}_{\pm 3}$, h25^{km}:pP-P, n592, σ1‡85/566, mb5.1/192, MS4.5/96, 30C-48D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
CMBY	**CAMPBELL BAY**	**0.50**	**256**	*eP*	**Pb**	**01 29 07.8**	**+0.4**	
CMBY				*eS*	**Sn**	**01 29 16.5**	**0.0**	
CMBY				IAML		01 29 17.9		
	comp=N,218μm,0.3s							
CMBY				IAML		01 29 19.0		
	comp=E,103μm,0.3s							
LHMI	**Lhok Sumawe**	**3.15**	**127**		**Pn**	**01 29 44.4**	**-0.9**	
LHMI	**Lhok Sumawe**	**3.15**	**127**	P	**Pn**	**01 29 44.6**	**-0.7**	
LHMI	**Lhok Sumawe**	**3.15**	**127**	P	**Pn**	**01 29 43.9**	**-1.4**	
MLSI	**Meulaboh, Aceh**	**3.47**	**145**	P	**Pn**	**01 29 49.6**	**-0.1**	
PBA	**Port Blair**	**4.79**	**340**		**Pn**	**01 30 07.5**	**-0.2**	
PBA	**Port Blair**	**4.79**	**340**	P	**Pn**	**01 30 09.5**	**+1.7**	
PBA				S	**Sn**	**01 31 07.4**	**+4.9**	
PBA	**Port Blair**	**4.79**	**340**	*eP*	**Pn**	**01 30 09.4**	**+1.7**	
PBA				*eS*	**Sn**	**01 31 04.2**	**+1.7**	
PBA				IAML		01 31 25.7		
	comp=N,2μm,1.1s							
PBA				IAML		01 31 31.7		
	comp=E,2μm,1.3s							
KCSI	**Kotacane, Aceh**	**4.90**	**137**	P	**Pn**	**01 30 09.6**	**+0.2**	
SNSI	**Sinabang, Aceh**	**5.07**	**158**	P	**Pn**	**01 30 09.8**	**-1.8**	
	comp=E,2.8nmcomp=E,4μmcomp=E,8μmcomp=E,598nm,0.9s							
DGPR	**DIGLIPUR**	**6.18**	**346**	*eP*	**Pn**	**01 30 28.8**	**+1.8**	
DGPR				*ex*	x	01 31 40.5		
DGPR				IAML		01 32 20.0		
	comp=N,7μm,1.4s							
DGPR				IAML		01 32 22.9		
	comp=E,8μm,2.2s							
PSI	**Prapat**	**6.22**	**134**	LR	LR	01 33 04.0		
	comp=E,5μm,18.4s,baz=300,slow=40							
PSI	**Prapat**	**6.22**	**134**	P	**Pn**	**01 30 28.5**	**+0.9**	
PSI	**Prapat**	**6.22**	**134**	P	**Pn**	**01 30 27.4**	**-0.2**	
RPSI	**Rantau Prapat**	**6.30**	**134**		**Pn**	**01 30 27.4**	**-1.2**	
KULM	**Kulim**	**6.47**	**106**		**Pn**	**01 30 27.9**	**-3.0**	
KULM	**Kulim**	**6.47**	**106**	P	**Pn**	**01 30 28.3**	**-2.6**	
GSI	**Gunungsitoli**	**6.59**	**151**		**Pn**	**01 30 31.9**	**-0.7**	
GSI	**Gunungsitoli**	**6.59**	**151**	P	**Pn**	**01 30 35.9**	**+3.3**	
GSI	**Gunungsitoli**	**6.59**	**151**	P	**Pn**	**01 30 31.1**	**-1.5**	
	comp=E,2μmcomp=E,133nm,0.9s							
IPM	**Ipoh**	**7.09**	**111**		**Pn**	**01 30 35.8**	**-3.6**	
IPM	**Ipoh**	**7.09**	**111**	P	**Pn**	**01 30 36.3**	**-3.1**	
PBSI	**Pulau Batu**	**8.12**	**151**	P	**Pn**	**01 30 53.1**	**-0.4**	
	comp=E,0.5nmcomp=E,167nm,1.1s							
MNSI	**Mandailing Nat**	**8.13**	**140**	P	**Pn**	**01 30 53.9**	**+0.1**	
	comp=E,0.5nmcomp=E,153nm,0.7s							
BKNI	**Bangkinang**	**9.46**	**135**	P	**Pn**	**01 31 13.3**	**+1.4**	
BKNI	**Bangkinang**	**9.46**	**135**	P	**Pn**	**01 31 12.6**	**+0.7**	
	comp=E,247nm,0.9s							
SISI	**Saibi**	**9.61**	**151**	P	**Pn**	**01 31 14.0**	**-0.1**	
	comp=E,77nm,0.7s							
PPI	**Padang Panjang**	**9.62**	**141**	P	**Pn**	**01 31 14.2**	**+0.1**	
	comp=E,2μmcomp=E,2μmcomp=E,136nm,0.8s							
PDSI	**Padang**	**10.02**	**143**	P	**Pn**	**01 31 18.8**	**-0.8**	
	comp=E,87nm,1.1s							
BTDF	**Bukit Timah Da**	**10.95**	**121**	P	**Pn**	**01 31 31.8**	**-0.7**	
PPSI	**Pulau Pagai**	**11.31**	**150**	P	**Pn**	**01 31 36.8**	**-0.5**	
	comp=E,122nm,0.9s							
KRJI	**Kerinci**	**11.55**	**142**	P	**Pn**	**01 31 40.2**	**-0.6**	
	comp=E,201nm,1.0s							
CM31	**Chiang Mai Arr**	**12.09**	**21**		**Pn**	**01 31 47.8**	**-0.3**	
CMAR	**Chiang Mai Arr**	**12.09**	**21**	Pn	**Pn**	**01 31 45.7**	**-2.3**	
	comp=E,2.5nm,0.3s,baz=203,slow=14,SNR=53							
CMAR				Lg	Lg	01 35 06.8		
	comp=E,0.3nm,0.3s,baz=190,slow=31,SNR=2.7							
	comp=E,8.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**12.09**	**21**		**Pn**	**01 31 48.3**	**+0.3**	
CMAR	**Chiang Mai Arr**	**12.09**	**21**	P	**Pn**	**01 31 48.3**	**+0.3**	
CHTO	**Chiang Mai**	**12.42**	**20**		**Pn**	**01 31 52.6**	**+0.1**	
CHTO	**Chiang Mai**	**12.42**	**20**	P	**Pn**	**01 31 50.2**	**-2.4**	
CHTO				P	**Pn**	**01 31 50.2**	**-2.4**	
CHTO				S	**Sn**	**01 34 10.5**	**+0.2**	
CHTO				S	**Sn**	**01 34 10.5**	**+0.2**	
CHTO	**Chiang Mai**	**12.42**	**20**	P	**Pn**	**01 31 52.6**	**+0.1**	
DSRI	**Dabo**	**12.65**	**126**	P	**Pn**	**01 31 54.4**	**-1.3**	
MASI	**Maura Aman, Be**	**12.85**	**142**	P	**Pn**	**01 31 58.5**	**0.0**	
	comp=E,2μmcomp=E,200nm,0.9s							
KSI	**Kapahiang**	**13.47**	**142**	P	**Pn**	**01 32 05.5**	**-1.4**	
PALK	**Pallekele**	**13.60**	**271**	Pn	**Pn**	**01 32 05.1**	**-3.7**	
	comp=E,1.0nm,0.3s,baz=90,slow=14,SNR=12							
PALK				Sn	Sn	01 34 27.2	-12	
	comp=E,1.2nm,0.3s,baz=167,slow=18,SNR=6.5							
	comp=E,3.1nm,1.0s							
PALK	**Pallekele**	**13.60**	**271**		**Pn**	**01 32 09.9**	**+1.1**	
PALK	**Pallekele**	**13.60**	**271**	P	**Pn**	**01 32 12.1**	**+3.3**	
PALK				S	Sn	01 34 48.4	+9.2	
PALK	**Pallekele**	**13.60**	**271**	⇓*eP*	**Pn**	**01 32 09.8**	**+1.0**	
PALK				pmax	pmax			
	comp=Z,68nm,4.3s							
LHSI	**Lahat**	**14.19**	**140**	P	**Pn**	**01 32 15.5**	**-1.2**	
	comp=Z,2μmcomp=Z,159nm,1.1s							
MNAI	**Manna**	**14.25**	**143**	P	**Pn**	**01 32 14.4**	**-3.2**	
VIS	**Vishakhapatnam**	**15.09**	**315**	*eP*	**Pn**	**01 32 27.0**	**-1.8**	
VIS				IAmb	IAmb	01 32 37.8		
	comp=Z,132nm,0.7s							
MDSI	**Maura Dua**	**15.11**	**140**	P	**Pn**	**01 32 25.8**	**-3.4**	
	comp=Z,73nm,1.0s							
LWLI	**Liwa**	**15.44**	**141**	P	**Pn**	**01 32 33.4**	**-0.2**	
BRDH	**Bariadhala**	**15.68**	**350**	Pn	**Pn**	**01 32 36.5**	**-0.1**	
	comp=Z,26nm,0.3s,baz=233,slow=20,SNR=4.3							
BRDH				LR	LR	01 39 55.6		
	comp=Z,4μm,21.1s,baz=174,slow=42							
KLI	**Kotabumi**	**15.83**	**139**	P	**Pn**	**01 32 37.6**	**-1.0**	
RAGD	**RAYAGADA**	**16.07**	**320**	*eP*	**Pn**	**01 32 40.0**	**-1.7**	
KASI	**Kota Agung**	**16.10**	**141**	P	**Pn**	**01 32 42.2**	**+0.1**	
	comp=Z,70nm,1.0s							
BELO	**BELONIA**	**16.27**	**350**	*eP*	**Pn**	**01 32 45.1**	**+0.9**	
VJD	**Vijayawada**	**16.37**	**306**	*eP*	**P**	**01 32 47.0**	**-1.2**	
TPI	**Tanjungpandan**	**16.47**	**126**	P	**Pn**	**01 32 46.5**	**-0.2**	
	comp=Z,49nm,1.0s							
SALM	**Salem**	**16.61**	**287**	*eP*	**Pn**	**01 32 49.3**	**+0.8**	
SALM				IAmb	IAmb	01 33 02.0		
	comp=Z,73nm,0.7s							
KOD	**Kodaikanal**	**17.03**	**282**	*eP*	**P**	**01 32 55.3**	**-0.6**	
IMP	**Imphal**	**17.61**	**359**	*eP*	**Pn**	**01 32 58.6**	**-2.4**	
IMP				*eS*	**Sn**	**01 36 17.9**	**+1.4**	
JHSG	**JHARSUGUGA**	**17.80**	**326**	*eP*	**P**	**01 33 06.6**	**+2.5**	
JHSG				IAmb	IAmb	01 33 09.0		
	comp=Z,201nm,1.1s							
TNCH	**TengChong**	**18.22**	**12**	P	**P**	**01 33 09.9**	**+1.1**	
TNCH				S	**Sn**	**01 36 31.8**	**+0.1**	
TNCH				pmax	pmax			
	comp=Z,130nm,0.7s							
TNCH				pmax	pmax			
	comp=Z,630nm,3.5s							
TNCH				LR	LR			
	comp=Z,2μm,12.1s							
TNCH				LR	LR			
	comp=Z,2μm,10.3s							
TNCH				LR	LR			
	comp=Z,2μm,14.6s							
DBJI	**Dramaga**	**18.34**	**138**	P	**P**	**01 33 09.2**	**-0.8**	
	comp=Z,82nm,1.0s							
SBUM	**Sibu**	**18.34**	**104**	P	**P**	**01 33 09.4**	**-0.6**	
SBUM	**Sibu**	**18.34**	**104**	P	**P**	**01 33 09.9**	**-0.1**	
STKI	**Sintang**	**18.41**	**112**	P	**Pn**	**01 33 12.0**	**+1.1**	
	comp=Z,61nm,0.7s							
BOK	**Bokaro**	**18.48**	**335**	*eP*	**P**	**01 33 10.7**	**-0.8**	
BOK				IAmb	IAmb	01 33 19.2		
	comp=Z,80nm,0.9s							
BOK				*eS*	**S**	**01 36 40.7**	**-0.4**	
KOHI	**KOHIMA**	**18.49**	**359**	*eP*	**P**	**01 33 10.7**	**-0.9**	
KOHI				IAmb	IAmb	01 33 18.8		
	comp=Z,67nm,0.7s							
SHL	**Shillong**	**18.49**	**353**	P	**P**	**01 33 08.3**	**-3.4**	
SHL	**Shillong**	**18.49**	**353**	*eP*	**P**	**01 33 09.1**	**-2.7**	
SHL				IAmb	IAmb	01 33 28.1		
	comp=Z,156nm,1.6s							
SHL				*eS*	**Sn**	**01 36 33.6**	**-4.5**	
SHL	**Shillong**	**18.49**	**353**	P	**P**	**01 33 08.3**	**-3.4**	
SHL				pmax	pmax			
	comp=Z,36nm,0.9s							
HYBB	**Hyderabad (bro**	**18.55**	**305**	*eP*	**Pn**	**01 33 12.9**	**+0.3**	
MOKO	**MOKOCHONG**	**19.08**	**0**	*eP*	**P**	**01 33 18.1**	**-0.1**	
MOKO				IAmb	IAmb	01 33 29.7		
	comp=Z,70nm,0.6s							
MOKO				*eS*	**S**	**01 36 54.2**	**+0.9**	
QIZ	**Qiongzhong**	**19.10**	**50**	P	**Pn**	**01 33 20.0**	**+0.7**	
QIZ				S	**Sn**	**01 36 52.0**	**-0.7**	
QIZ				pmax	pmax			
	comp=Z,31nm,1.2s							
QIZ				pmax	pmax			
	comp=Z,340nm,5.6s							
QIZ				LR	LR			
	comp=Z,7μm,12.9s							
QIZ				LR	LR			
	comp=Z,3μm,12.2s							
QIZ				LR	LR			
	comp=Z,2μm,15.0s							
SHBG	**Sahibganj**	**19.10**	**341**	*eP*	**P**	**01 33 18.1**	**-0.1**	
SHBG				IAmb	IAmb	01 33 27.4		
	comp=Z,121nm,0.6s							
GUWA	**GUWAHATI**	**19.13**	**353**	*eP*	**P**	**01 33 16.5**	**-2.0**	
GUWA				IAmb	IAmb	01 33 38.0		
	comp=Z,50nm,1.2s							
CNJI	**Cibinong**	**19.15**	**138**	P	**P**	**01 33 18.6**	**-0.3**	
COCO	**West Island**	**19.35**	**173**	P	**P**	**01 33 21.2**	**+0.2**	
COCO				IAmb	IAmb	01 33 33.6		
	comp=Z,252nm,1.2s							
COCO	**West Island**	**19.35**	**173**	P	Pn	01 33 30.4	+8.2	
COCO	**West Island**	**19.35**	**173**	P	**P**	**01 33 21.2**	**+0.2**	
COCO				pmax	pmax			
	comp=Z,252nm,1.2s							
KMI	**Kunming**	**19.58**	**23**	⇓P	**Pn**	**01 33 26.1**	**+0.9**	
KMI				S	**S**	**01 37 03.4**	**-0.3**	
KMI				pmax	pmax			
	comp=Z,32nm,1.6s							
KMI				pmax	pmax			
	comp=Z,420nm,5.3s							
KMI				LR	LR			
	comp=Z,2μm,14.8s							
KMI				LR	LR			
	comp=Z,1μm,14.3s							
KMI				LR	LR			
	comp=Z,2μm,14.1s							
BBJI	**Bungbulang**	**19.61**	**137**	P	**Pn**	**01 33 28.0**	**+2.6**	
ITAN	**ITANAGAR**	**19.91**	**358**	*eP*	**Pn**	**01 33 29.0**	**+0.2**	
ITAN				IAmb	IAmb	01 33 41.2		
	comp=Z,225nm,1.1s							
ITAN				*eS*	**S**	**01 37 11.3**	**-3.4**	
MNGI	**Mangalore**	**20.13**	**288**	*eP*	Pn	01 33 31.3	-0.2	
MNGI				IAmb	IAmb	01 33 41.4		
	comp=Z,35nm,1.2s							
LKP	**Lekhapani**	**20.14**	**4**	IAmb	IAmb	01 33 34.5		
	comp=Z,122nm,0.6s							
LKP				*eS*	**S**	**01 37 11.3**	**-3.4**	
NGP	**Nagpur**	**20.37**	**315**	*eP*	Pn	01 33 33.3	-1.0	
NGP				IAmb	IAmb	01 33 54.4		
	comp=Z,85nm,0.3s							
KPJI	**Karang Pucung**	**20.40**	**134**	P	**P**	**01 33 31.9**	**-0.6**	
	comp=Z,45nm,1.1s							
PZH	**PanZhiHua**	**20.49**	**19**	P	Pn	01 33 35.8	0.0	
TAWA	**Tawang**	**20.49**	**354**	*eP*	**P**	**01 33 32.1**	**-1.7**	
TAWA				IAmb	IAmb	01 33 49.2		
	comp=Z,50nm,0.7s							
TAWA				*eS*	Sn	01 37 24.5	-2.2	
SMRI	**Semarang**	**21.31**	**131**		**P**	**01 33 43.4**	**+1.0**	
SMRI				IAmb	IAmb	01 33 56.4		
	comp=Z,168nm,1.0s							
SMRI	**Semarang**	**21.31**	**131**	P	**P**	**01 33 45.7**	**+3.3**	
SMRI	**Semarang**	**21.31**	**131**	P	**P**	**01 33 42.2**	**-0.2**	
	comp=Z,4μmcomp=Z,172nm,0.9s							
AKL	**Akola**	**21.58**	**310**	*eP*	**P**	**01 33 45.9**	**+0.7**	
AKL				IAmb	IAmb	01 33 55.5		
	comp=Z,117nm,1.1s							
ALBI	**Allahabad**	**21.72**	**328**	*eP*	**P**	**01 33 46.1**	**-0.6**	
EVN	**Everest**	**21.93**	**342**	P	**P**	**01 33 47.4**	**-2.1**	
EVN				IAmb	IAmb	01 33 57.5		
	comp=Z,57nm,0.7s							
UGM	**Wanagama**	**21.94**	**133**	P	**P**	**01 33 49.8**	**+0.6**	
	comp=Z,106nm,2.1s							
KAD	**Karad**	**22.18**	**299**	*eP*	**P**	**01 33 52.8**	**+1.0**	
TBJI	**Tambak Boyo**	**22.24**	**128**	P	**P**	**01 33 55.1**	**+2.8**	
	comp=Z,4μmcomp=Z,273nm,1.7s							
NGJI	**Ngawi**	**22.29**	**130**	P	**P**	**01 33 56.2**	**+3.4**	
	comp=Z,3μmcomp=Z,320nm,1.2s							
KAAM	**Kaadhehdhoo**	**22.35**	**254**	P	**P**	**01 33 56.6**	**+3.0**	
GYA	**Guiyang**	**22.48**	**30**	⇑P	**P**	**01 33 55.3**	**+0.3**	
GYA				S	**S**	**01 37 58.9**	**-1.7**	
GYA				pmax	pmax			
	comp=Z,17nm,1.4s							
GYA				pmax	pmax			
	comp=Z,140nm,3.1s							
GYA				LR	LR			
	comp=Z,2μm,12.9s							
GYA				LR	LR			
	comp=Z,1μm,12.6s							
GYA				LR	LR			
	comp=Z,2μm,13.6s							
PCJI	**Pacitan**	**22.61**	**132**	P	**P**	**01 33 56.8**	**+0.5**	
	comp=Z,46nm,1.1s							
LSA	**Lhasa**	**22.66**	**353**		**P**	**01 33 56.4**	**-0.8**	
LSA				IAmb	IAmb	01 34 06.3		
	comp=Z,71nm,0.7s							
LSA	**Lhasa**	**22.66**	**353**	P	**P**	**01 33 54.6**	**-2.6**	
LSA				S	**S**	**01 38 00.8**	**-3.5**	
LSA				pmax	pmax			
	comp=Z,23nm,0.9s							
LSA				LR	LR			
	comp=Z,370nm,14.4s							
LSA				LR	LR			
	comp=Z,520nm,15.5s							
LSA				LR	LR			
	comp=Z,280nm,14.1s							
LSA	**Lhasa**	**22.66**	**353**	P	**P**	**01 33 56.4**	**-0.8**	
LSA				pmax	pmax			
	comp=Z,71nm,0.7s							
NRDN	**NARMADA NAGAR**	**22.71**	**315**	*eP*	**P**	**01 33 59.6**	**+2.2**	
NRDN				IAmb	IAmb	01 34 11.4		
	comp=Z,113nm,1.1s							
GRJI	**Gresik**	**22.79**	**127**	P	**P**	**01 33 59.0**	**+0.7**	
	comp=Z,5μmcomp=Z,197nm,1.2s							
BHPL	**Bhopal**	**22.88**	**316**	*eP*	**P**	**01 33 59.3**	**+0.2**	
BHPL				IAmb	IAmb	01 34 10.3		
	comp=Z,112nm,1.3s							
BHPL				*eS*	**S**	**01 38 08.1**	**+0.6**	
BBKI	**Banjar Baru**	**22.95**	**117**	P	**P**	**01 33 59.2**	**-0.7**	
	comp=Z,127nm,1.0s							
POO	**Poona**	**23.00**	**301**	*eP*	**P**	**01 34 00.7**	**+0.3**	
POO				*eS*	**S**	**01 38 13.5**	**+3.8**	
LKN	**LUCKNOW**	**23.38**	**328**	*eP*	**P**	**01 34 03.2**	**-1.0**	
GULI	**GuiLin**	**23.63**	**38**	P	P	01 33 59.1	-7.5	
GULI				S	**S**	**01 38 14.0**	**-5.9**	
GULI				pmax	pmax			
	comp=Z,320nm,6.6s							
GULI				pmax	pmax			
	comp=Z,42nm,1.7s							
GULI				LR	LR			
	comp=N,2μm,11.6s							
GULI				LR	LR			
	comp=E,2μm,10.6s							
GULI				LR	LR			
	comp=Z,2μm,11.6s							
JHNI	**Jhansi**	**23.71**	**322**	*eP*	**P**	**01 34 06.6**	**-0.7**	
JHNI				IAmb	IAmb	01 34 14.3		
	comp=Z,124nm,0.7s							
GUNA	**GUNA**	**23.89**	**319**	*eP*	**P**	**01 34 09.6**	**+0.4**	
GUNA				IAmb	IAmb	01 34 17.2		
	comp=Z,44nm,0.6s							
GUNA				*eS*	**S**	**01 38 25.0**	**+0.9**	
MYLDM	**Lahad Datu**	**24.03**	**93**		**P**	**01 34 11.0**	**+0.6**	
MYLDM	**Lahad Datu**	**24.03**	**93**	P	**P**	**01 34 12.0**	**+1.5**	
KMMI	**Kalianget**	**24.06**	**125**	P	**P**	**01 34 12.6**	**+1.8**	
	comp=Z,5μmcomp=Z,131nm,1.0s							
BLJI	**Banyuglugur**	**24.17**	**127**	P	**P**	**01 34 12.2**	**+0.4**	
	comp=Z,3μmcomp=Z,198nm,1.0s							
ABJI	**Asem Bagus**	**24.71**	**127**	P	**P**	**01 34 19.0**	**+2.3**	
JAGI	**Jajag, Banyuwa**	**25.05**	**128**	P	**P**	**01 34 15.8**	**-3.9**	
JAGI				IAmb	IAmb	01 34 29.1		
	comp=Z,54nm,1.0s							
JAGI	**Jajag, Banyuwa**	**25.05**	**128**	P	**P**	**01 34 24.1**	**+4.3**	
CD2	**Chengdu**	**25.22**	**19**	P	**P**	**01 34 21.6**	**+0.4**	
CD2				S	**S**	**01 38 50.0**	**+4.6**	
CD2				pmax	pmax			
	comp=Z,30nm,0.5s							
CD2				pmax	pmax			
	comp=Z,220nm,5.0s							
CD2				LR	LR			
	comp=Z,2μm,13.7s							
CD2				LR	LR			
	comp=Z,3μm,10.8s							
CD2				LR	LR			
	comp=Z,2μm,14.2s							
SRBI	**Singaraja**	**25.66**	**126**	P	**P**	**01 34 25.0**	**-0.3**	
LGTI	**Lohaghat**	**25.90**	**331**	*eP*	**P**	**01 34 27.0**	**-0.3**	
MPSI	**Mapaga**	**26.30**	**104**	P	**P**	**01 34 32.0**	**+0.9**	
	comp=Z,2μmcomp=Z,102nm,1.1s							
UDPR	**Udaipur**	**26.34**	**314**	*eP*	**P**	**01 34 32.1**	**+0.7**	
PCI	**Palu**	**26.59**	**106**	P	**P**	**01 34 36.4**	**+2.6**	
	comp=Z,72nm,0.9s							
AYAN	**Aya Nagar**	**26.79**	**325**	*eP*	**P**	**01 34 34.7**	**-0.7**	
AYAN				IAmb	IAmb	01 34 42.4		
	comp=Z,62nm,0.5s							
LDR	**Lodi Road**	**26.82**	**325**	*eP*	**P**	**01 34 38.1**	**+2.4**	
MERT	**Meerut**	**26.82**	**326**	*eP*	**P**	**01 34 36.0**	**+0.3**	
NPLP	**NPLP New Delhi**	**26.89**	**325**	*eP*	**P**	**01 34 35.4**	**-0.9**	
NPLP				IAmb	IAmb	01 34 42.7		
	comp=Z,38nm,0.6s							
NDI	**New Delhi**	**26.89**	**325**	IAmb	IAmb	01 34 50.3		
	comp=Z,306μm,30.3s							
KUDL	**Kundal**	**26.91**	**323**	*eP*	**P**	**01 34 39.1**	**+2.6**	
TOLI2	**Tolitoli**	**26.96**	**102**		**P**	**01 34 36.7**	**-0.4**	
TOLI2				IAmb	IAmb	01 34 49.2		
	comp=Z,74nm,1.1s							
TOLI2	**Tolitoli**	**26.96**	**102**	P	**P**	**01 34 39.6**	**+2.5**	
TTSI	**Tana Toraja**	**27.30**	**111**	P	**P**	**01 34 42.0**	**+1.9**	
	comp=Z,556nmcomp=Z,30nm,1.2s							
KAPI	**Kappang**	**28.02**	**115**	LR	LR	01 45 51.6		
	comp=Z,953nm,21.9s,baz=282,slow=36							
KAPI	**Kappang**	**28.02**	**115**	P	**P**	**01 34 45.4**	**-1.2**	
KAPI				IAmb	IAmb	01 34 53.7		
	comp=Z,43nm,1.1s							
KAPI	**Kappang**	**28.02**	**115**	P	**P**	**01 34 50.4**	**+3.8**	
KAPI	**Kappang**	**28.02**	**115**	⇓*eP*	**P**	**01 34 47.4**	**+0.8**	
KAPI				pmax	pmax			
	comp=Z,36nm,1.6s							
MRSI	**Maris

comp=Z,23nm,0.7s
MMRI Maumere 31.85 119 P **P** **01 35 24.8 +4.2**
MMRI Maumere 31.85 119 P **P** **01 35 20.9 +0.3**
comp=Z,41nm,1.4s
LYN LuoYang 31.96 29 P **P** **01 35 21.3 0.0**
LYN pP pP 01 35 26.4 -1.5
LYN S **S** **01 40 32.5 +1.2**
LYN sS pS 01 40 40.4 +1.6
LYN pmax pmax
comp=Z,45nm,0.7s
LYN pmax pmax
comp=Z,220nm,4.0s
LYN LR LR
comp=Z,2µm,15.1s
LYN LR LR
comp=Z,2µm,16.4s
LYN LR LR
comp=Z,2µm,13.5s
GTA Gaotai 32.50 8 *e*P **P** **01 35 26.6 +0.5**
GTA sP sP 01 35 35.5 0.0
GTA S **S** **01 40 45.3 +5.4**
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA LR LR
comp=Z,730nm,16.4s
GTA LR LR
comp=Z,660nm,15.6s
GTA LR LR
comp=Z,900nm,14.5s
SANI Sanana 32.80 105 P **P** **01 35 30.7 +1.8**
NIL Nilore 32.86 326 P **P** **01 35 28.0 -1.2**
NIL Nilore 32.86 326 P **P** **01 35 28.0 -1.2**
NIL pmax pmax
comp=Z,159nm,0.8s
NJ2 Nanjing 33.66 39 *e*P **P** **01 35 36.0 -0.2**
NJ2 S **S** **01 41 04.3 +6.5**
NJ2 pmax pmax
comp=Z,13nm,0.5s
NJ2 pmax pmax
comp=Z,290nm,4.9s
NJ2 LR LR
comp=Z,2µm,17.1s
NJ2 LR LR
comp=Z,2µm,15.2s
NJ2 LR LR
comp=Z,790nm,18.9s
BATI Baumata 33.84 120 LR LR 01 50 49.6
comp=Z,2µm,20.1s,baz=302,slow=39
BATI Baumata 33.84 120 P **P** **01 35 38.5 +0.5**
comp=Z,25nm,0.7s
SOEI Soe 34.15 119 P **P** **01 35 44.6 +3.9**
SOEI Soe 34.15 119 P **P** **01 35 40.6 -0.1**
comp=Z,57nm,1.0s
SSE Sheshan 34.57 43 P **P** **01 35 42.5 -1.6**
SSE S **S** **01 41 14.3 +2.4**
SSE pmax pmax
comp=Z,10.0nm,0.6s
SSE pmax pmax
comp=Z,77nm,3.5s
SSE LR LR
comp=Z,640nm,13.9s
SSE LR LR
comp=Z,1µm,13.4s
HNS HongShan 35.33 29 ⇑P **P** **01 35 52.0 +1.5**
HNS S S 01 41 34.4 +11
HNS pmax pmax
comp=Z,38nm,1.0s
HNS LR LR
comp=Z,1µm,13.3s
HNS LR LR
comp=Z,1µm,17.4s
HNS LR LR
comp=Z,1µm,15.9s
TIA Tai'an 35.62 32 P **P** **01 35 53.6 +0.5**
TIA sP **pP** **01 35 59.9 +0.1**
TIA S **S** **01 41 27.0 -1.0**
TIA pmax pmax
comp=Z,15nm,0.9s
TIA LR LR
comp=Z,960nm,15.3s
TIA LR LR
comp=Z,2µm,15.5s
TIA LR LR
comp=Z,1µm,14.9s
KBL Kabul 35.92 323 **P** **01 35 54.9 -1.1**
KBL IAmb IAmb 01 36 03.9
comp=Z,23nm,0.8s
KBL Kabul 35.92 323 P **P** **01 35 55.7 -0.2**
SNR=14
KBL P **P** **01 35 55.7 -0.2**
SNR=14
KBL S **S** **01 41 38.1 +5.1**
KBL S **S** **01 41 38.1 +5.1**
KBL Kabul 35.92 323 P **P** **01 35 54.9 -1.1**
KBL pmax pmax
comp=Z,23nm,0.8s
BTO Baotou 36.13 20 *e*P **P** **01 35 58.1 +0.6**
BTO pP **pP** **01 36 02.5 -1.7**
BTO sP **sP** **01 36 05.1 -1.8**
BTO S **S** **01 41 38.8 +2.9**
BTO sS **sS** **01 41 52.3 +5.6**
BTO SS **SnSn** **01 43 59.9 -2.5**
BTO pmax pmax
comp=Z,18nm,0.9s
BTO pmax pmax
comp=Z,260nm,4.9s
BTO LR LR
comp=Z,2µm,10.8s
BTO LR LR
comp=Z,2µm,12.0s
BTO LR LR
comp=Z,3µm,14.4s
KSH Kashi 36.26 336 P **P** **01 35 56.0 -2.6**
KSH sP pP 01 36 02.5 -2.8
KSH pmax pmax
comp=Z,18nm,0.7s
KSH LR LR
comp=Z,290nm,15.5s
KSH LR LR
comp=Z,620nm,18.0s
KSH LR LR
comp=Z,580nm,22.7s
JLN Jalan Bani Buh 36.88 298 P **P** **01 36 06.8 +2.7**
SNR=7.0
JLN P **P** **01 36 06.8 +2.7**
SNR=7.0
HHC Hu-ho-hao-te 36.90 22 *e*P **P** **01 36 08.5 +4.4**
HHC pP sP 01 36 13.1 -0.3
HHC pmax pmax
comp=Z,16nm,1.7s
HHC pmax pmax
comp=Z,140nm,4.3s
HHC LR LR
comp=Z,730nm,16.0s
HHC LR LR
comp=Z,2µm,13.0s
HHC LR LR
comp=Z,1µm,18.5s
WMQ Urumqi 37.02 352 *e*P **P** **01 36 06.5 +1.5**
WMQ LR LR
comp=Z,690nm,17.7s
WMQ LR LR
comp=Z,1µm,23.9s
WMQ LR LR
comp=Z,480nm,18.9s
WBK Wadi Bani Khal 37.42 298 P **P** **01 36 11.0 +2.3**
MBWA Marble Bar 37.53 139 P **P** **01 36 11.6 +2.1**
comp=Z,30nm,1.2s
SWI Sorong 37.61 101 P **P** **01 36 10.0 -0.3**
comp=Z,32nm,1.0s
MHTO MHTO 37.82 295 P **P** **01 36 13.1 +1.0**
MHTO P **P** **01 36 13.1 +1.0**
PSAC1 Pilbara Seismi 37.85 139 P **P** 01 36 06.2 -6.0
PSA00 Pilbara Seismi 37.90 139 P **P** **01 36 13.4 +0.7**
comp=Z,38nm,1.1s
PSA00 Pilbara Seismi 37.90 139 P **P** **01 36 11.5 -1.1**
PSA00 IAmb IAmb 01 36 18.6
comp=Z,28nm,0.9s
PSA00 Pilbara Seismi 37.90 139 P **P** **01 36 11.6 -1.1**
PSA00 IAmb IAmb 01 36 18.7
comp=Z,17nm,1.1s
WSAR Wadi Sarin 37.92 299 P **P** **01 36 14.6 +1.8**
WSAR S **S** **01 42 08.1 +4.8**
PSAB3 Pilbara Seismi 37.92 139 P **P** **01 36 12.1 -0.7**
comp=Z,40nm,1.4s
PSAC2 Pilbara Seismi 37.93 139 P **P** **01 36 12.3 -0.6**
comp=Z,44nm,1.8s
JMDO Jabal Madar 38.10 297 P **P** **01 36 16.2 +1.7**
JMDO P **P** **01 36 16.2 +1.7**
BJI Beijing 38.13 27 P **P** **01 36 14.9 +0.5**
BJI S **S** **01 42 10.3 +4.2**
BJI pmax pmax
comp=Z,6.0nm,1.0s
BJI LR LR
comp=Z,520nm,19.3s
BJI LR LR
comp=Z,380nm,18.5s
BJI LR LR
comp=Z,350nm,14.3s
SHLS Shalkode 38.22 342 *e*P **P** **01 36 13.0 -2.3**
comp=Z,23nm,1.4s
SHLS Shalkode 38.22 342 *e*P **P** **01 36 12.9 -2.3**
SHLS pmax pmax
comp=Z,23nm,1.4s
SMDO Samad 38.37 298 P **P** **01 36 18.9 +2.2**
SNR=6.2
SMDO P **P** **01 36 18.9 +2.2**
SNR=6.2
SATY Saty 38.46 341 *e*P **P** **01 36 15.9 -1.3**
SATY Saty 38.46 341 *e*P **P** **01 36 15.9 -1.3**
TNSS Tian-Shan 38.93 340 *e*P **P** **01 36 19.8 -1.7**
TNSS Tian-Shan 38.93 340 *e*P **P** **01 36 19.8 -1.7**
MDOK Medeo 39.00 340 *e*P **P** **01 36 20.5 -1.4**
MDOK Medeo 39.00 340 *e*P **P** **01 36 20.4 -1.4**
BSY Bisya 39.01 298 P **P** **01 36 24.0 +1.9**
SNR=7.1
ARSB Arslanbob 39.02 334 IAmb IAmb 01 36 28.8
comp=Z,54nm,0.7s
FAKI Fak Fak 39.06 104 P **P** **01 36 23.9 +1.3**
comp=Z,24nm,1.2s
UCH Uchtor 39.14 336 P **P** **01 36 23.1 -0.3**
SNR=5.3
HOQ Hoqain 39.17 299 P **P** **01 36 24.8 +1.3**
HOQ P **P** **01 36 24.8 +1.3**
TKM2 Tokmak 2 39.31 338 P P 01 36 30.4 +5.8
SNR=5.4
KBK Karagaybulak 39.33 337 P **P** **01 36 24.8 +0.2**
SNR=11
AAK Ala-Archa 39.49 337 LR LR 01 54 20.4
comp=Z,888nm,20.9s,baz=158,slow=39
AAK Ala-Archa 39.49 337 P **P** **01 36 25.6 -0.4**
AAK Ala-Archa 39.49 337 P **P** **01 36 25.9 -0.1**
AAK P **P** **01 36 25.9 -0.1**
AAK Ala-Archa 39.49 337⇑ *e*P **P** **01 36 25.0 -1.0**
AAK pmax pmax
comp=Z,11nm,1.3s
CHMS Chumysh 39.70 337 P P 01 36 33.3 +5.8
SNR=5.4
FITZ Fitzroy Crossi 39.73 130 P **P** **01 36 24.2 -3.8**
FITZ Fitzroy Crossi 39.73 130 LR LR 01 54 33.5
comp=Z,712nm,21.0s,baz=303,slow=39
FITZ Fitzroy Crossi 39.73 130 **P** **01 36 26.0 -2.1**
ARQ Araqi 39.79 298 P **P** **01 36 29.9 +1.4**
SNR=5.3
ARQ P **P** **01 36 29.9 +1.4**
SNR=5.3
EKS2 Erkin-Say 39.80 336 P P 01 36 35.1 +6.6
SNR=7.7
DMTO DMTO 39.87 289 P **P** **01 36 31.1 +1.8**
USP Ospenovka 40.02 337 P **P** **01 36 29.1 -1.1**
SNR=6.2
SOHO SOHO 40.02 299 P **P** **01 36 31.7 +1.3**
DL2 Dalian 40.03 34 P **P** **01 36 33.9 +3.6**
DL2 pmax pmax
comp=Z,89nm,1.5s
DL2 pmax pmax
comp=Z,360nm,4.8s
DL2 LR LR
comp=Z,1µm,18.0s
DL2 LR LR
comp=Z,680nm,16.1s
DL2 LR LR
comp=Z,990nm,12.0s
SGDS Sogindy 40.13 338 *e*P **P** **01 36 29.7 -1.4**
HRA Herat 40.18 317 P **P** **01 36 31.1 -0.7**
TDK Taldyqorghan 40.21 342 *e*P **P** **01 36 30.3 -1.5**
TDK Taldyqorghan 40.21 342 *e*P **P** **01 36 30.2 -1.5**
RKPI Ransiki, Papua 40.60 101 P **P** **01 36 35.7 +0.3**
comp=Z,27nm,0.8s
ASHO Ashiyiah 40.61 300 P **P** **01 36 36.9 +1.5**
ASHO P **P** **01 36 36.9 +1.5**
ALNE Al Ain 40.68 299 P **P** **01 36 36.8 +0.9**
SNR=9.5
ALNE P **P** **01 36 36.8 +0.9**
SNR=9.5
DOK Doka 40.80 290 P **P** **01 36 38.7 +1.8**
DOK P **P** **01 36 38.7 +1.8**
MK31 Makanchi Array 40.87 347 *ce*P **P** **01 36 35.5 -1.6**
MKAR Makanchi Array 40.87 347 P **P** **01 36 35.8 -1.4**
comp=Z,5.2nm,0.8s,baz=164,slow=8.1,SNR=24
MKAR LR LR 01 56 49.3
comp=Z,339nm,19.9s,baz=160,slow=41
comp=Z,5.2nm,0.8s
MAKZ Makanchi 40.95 347 P **P** **01 36 39.9 +2.1**
MAKZ Makanchi 40.95 347 P **P** **01 36 39.9 +2.1**
MAKZ pmax pmax
comp=Z,24nm,0.9s
ZSN Zaisan 40.99 350 *e*P **P** **01 36 37.2 -1.0**
ZSN Zaisan 40.99 350 *e*P **P** **01 36 37.1 -1.0**
SHME Shamm 41.00 302 P **P** **01 36 41.1 +2.6**
WHFO Wadi Hawf 41.01 289 P **P** **01 36 40.1 +1.4**
WHFO P **P** **01 36 40.1 +1.4**
IUG Iuzhnay 41.01 332 *e*P **P** **01 36 37.2 -1.3**
comp=Z,20nm,0.7s
IUG Iuzhnay 41.01 332 *e*P **P** **01 36 37.2 -1.3**
IUG pmax pmax
comp=Z,20nm,0.7s
DZA Taraz 41.01 334 *e*P **P** **01 36 37.0 -1.4**
DZA Taraz 41.01 334 *e*P **P** **01 36 37.0 -1.4**
ASUD Al Ashush, Dub 41.22 299 P **P** **01 36 41.7 +1.3**
ASUD P **P** **01 36 41.7 +1.3**
XLT XiLinHaoTe 41.24 24 *e*P P 01 36 45.4 +5.0
XLT pP sP 01 36 49.8 0.0
XLT pmax pmax
comp=Z,22nm,1.0s
XLT LR LR
comp=Z,2µm,16.0s
XLT LR LR
comp=Z,1µm,21.7s
ABTO Aybut 41.36 288 P **P** **01 36 42.5 +0.9**
ABTO P **P** **01 36 42.5 +0.9**
MTN Manton Dam 41.53 118 P **P** **01 36 45.3 +2.3**
comp=Z,16nm,1.2s
KKAR Karatay Array 41.54 333 P **P** **01 36 42.1 -0.7**
KKAR Karatay Array 41.54 333 P **P** **01 36 42.1 -0.7**
BTLS Baital 41.71 338 *e*P **P** **01 36 42.6 -1.5**
BTLS Baital 41.71 338 *e*P **P** **01 36 42.5 -1.5**
BRLS Borolday 41.79 333 *e*P **P** **01 36 42.3 -2.5**
BRLS Borolday 41.79 333 *e*P **P** **01 36 42.2 -2.5**
SONM Songino Array 41.83 12 P **P** **01 36 44.8 -0.3**
comp=Z,2.1nm,0.6s,baz=198,slow=9.1,SNR=4.4
SONM PcP **PcP** **01 38 40.9 0.0**
comp=Z,1.4nm,0.8s,baz=209,slow=2.6,SNR=1.4
comp=Z,2.1nm,0.6s
TJN Taejon 41.85 41⇓ *e*P **P** **01 36 43.5 -1.8**
ULN Ulaanbaatar 41.99 13 P **P** **01 36 47.0 +0.5**
ULN Ulaanbaatar 41.99 13 P **P** **01 36 45.1 -1.4**
ULN Ulaanbaatar 41.99 13⇓ *e*P **P** **01 36 46.3 -0.2**
ULN pmax pmax
comp=Z,21nm,2.5s
MZR Muzera 42.38 296 P **P** **01 36 51.2 +1.3**
SNR=8.4
MZR P **P** **01 36 51.2 +1.3**
SNR=8.4
JNU Nakatsue 42.54 48 P **P** **01 36 51.7 +0.6**
comp=Z,8.2nm,0.9s,baz=236,slow=3.6,SNR=5.9
comp=Z,8.2nm,0.9s
DGZ Jazzator, Alta 42.83 353⇓ *e*P **P** **01 36 52.3 -1.0**
DGZ pmax pmax
comp=Z,8.0nm,2.6s
KSRS Korea Array 42.85 40 P **P** **01 36 53.2 -0.2**
comp=Z,1.8nm,0.8s,baz=221,slow=7.0,SNR=7.5
comp=Z,1.8nm,0.8s
KNGR Kungurtug, Tuv 43.41 3⇑ *e*P **P** **01 36 58.1 +0.2**
KNGR pmax pmax
comp=Z,5.0nm,0.8s
KURBB Kurchatov Arra 45.33 346 P **P** **01 37 12.6 -0.5**
comp=Z,10.0nm,0.8s,baz=164,slow=7.3,SNR=75
KURBB PcP **PcP** **01 38 53.0 +0.5**
comp=Z,2.0nm,0.6s,baz=160,slow=2.9,SNR=4.2
KURBB LR LR 01 59 15.3
comp=Z,477nm,21.3s,baz=152,slow=40
comp=Z,10.0nm,0.8s
NWAO Narrogin (SRO) 45.37 153 P **P** **01 37 13.1 -0.6**
comp=Z,39nm,1.7s
NWAO Narrogin (SRO) 45.37 153 P **P** **01 37 13.1 -0.6**
NWAO Narrogin (SRO) 45.37 153 LR LR 01 55 13.7
comp=Z,450nm,21.8s,baz=314,slow=35
NWAO Narrogin (SRO) 45.37 153 P **P** **01 37 13.0 -0.7**
NWAO IAmb IAmb 01 37 15.4
comp=Z,32nm,1.0s
NWAO Narrogin (SRO) 45.37 153 P **P** **01 37 11.6 -2.1**
NWAO Narrogin (SRO) 45.37 153 P **P** **01 37 13.0 -0.7**
NWAO pmax pmax
comp=Z,32nm,1.0s
KURK Kurchatov 45.39 346 P **P** **01 37 13.1 -0.5**
KURK IAmb IAmb 01 37 29.1
comp=Z,38nm,0.9s
KURK Kurchatov 45.39 346 P **P** **01 37 14.1 +0.5**
KURK P **P** **01 37 14.1 +0.5**
KURK Kurchatov 45.39 346 *de*P **P** **01 37 13.3 -0.3**
KURK pmax pmax
comp=Z,26nm,1.3s
CN2 Changchun 45.51 32 *e*P **P** **01 37 16.8 +2.1**
CN2 *e*S **S** **01 43 55.9 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.5s
CN2 LR LR
comp=Z,800nm,15.0s
CN2 LR LR
comp=Z,1µm,15.0s
CN2 LR LR
comp=Z,1µm,16.1s
WRKA Warakurna 45.94 135 P **P** **01 37 18.0 -0.4**
comp=Z,20nm,0.9s
BRZS Berezniki 46.43 341 *e*P **P** **01 37 20.8 -1.0**
BRZS Berezniki 46.43 341 *e*P **P** **01 37 20.8 -1.0**
ZALV Zalesovo Beam 47.32 352 P **P** **01 37 28.2 -0.5**
comp=Z,4.3nm,0.5s,baz=172,slow=8.3,SNR=26
ZALV LR LR 02 01 59.7
comp=Z,453nm,18.9s,baz=182,slow=42
comp=Z,4.3nm,0.5s
ZALV Zalesovo Beam 47.32 352 P **P** **01 37 28.4 -0.3**
ZALV Zalesovo Beam 47.32 352 *i* P **P** **01 37 28.5 -0.3**
ZALV pmax pmax
comp=Z,4.0nm,0.4s
HILR Hailar Array B 47.34 22 P **P** **01 37 29.5 +0.5**
comp=Z,1.8nm,0.7s,baz=220,slow=8.7,SNR=8.2
HILR LR LR 01 58 24.2
comp=Z,697nm,18.9s,baz=120,slow=37
comp=Z,1.8nm,0.7s
WRA Warramunga Arr 47.62 125 P **P** **01 37 29.9 -1.7**
comp=Z,1.8nm,0.5s,baz=300,slow=7.7,SNR=22
WRA PcP **PcP** **01 39 00.3 -0.8**
comp=Z,2.8nm,0.9s,baz=304,slow=3.1,SNR=2.1
WRA LR LR 01 59 19.4
comp=Z,697nm,20.2s,baz=292,slow=38
comp=Z,1.8nm,0.5s
WRA Warramunga Arr 47.62 125 **P** **01 37 29.8 -1.8**
WRA Warramunga Arr 47.62 125 *i* P **P** **01 37 30.6 -1.0**
WRA pmax pmax
comp=Z,5.0nm,0.7s
WRAB Tennant Creek 47.62 125 P **P** **01 37 30.7 -0.9**
WRAB IAmb IAmb 01 37 40.6
comp=Z,15nm,0.9s
WRAB Tennant Creek 47.62 125⇑ *e*P **P** **01 37 29.8 -1.8**
WRAB pmax pmax
comp=Z,28nm,2.5s
WR8 Warramunga Arr 47.75 125 IAmb IAmb 01 37 45.8
comp=Z,27nm,1.0s
BNX BinXian 47.86 31 ⇓P **P** **01 37 33.6 +0.6**
BNX pmax pmax
comp=Z,23nm,1.0s
ASAR Alice Springs 49.24 130 P **P** **01 37 42.5 -1.5**
comp=Z,5.1nm,0.8s,baz=305,slow=8.0,SNR=58
ASAR PcP **PcP** **01 39 06.8 -0.2**
comp=Z,2.7nm,0.7s,baz=306,slow=4.5,SNR=5.3
ASAR S **S** **01 44 47.9 -0.9**
comp=Z,0.1nm,0.3s,baz=315,slow=10,SNR=1.2
ASAR LR LR 02 00 29.3
comp=Z,686nm,20.5s,baz=296,slow=38
comp=Z,5.1nm,0.8s
ASAR Alice Springs 49.24 130 P **P** **01 37 43.4 -0.6**
JHJ Hachijo jima 2 49.30 52 LR LR 01 57 42.3
comp=Z,579nm,21.3s,baz=292,slow=35
USRK Ussuriysk Ar. 49.35 35 P **P** **01 37 44.5 0.0**
comp=Z,2.3nm,0.8s,baz=244,slow=9.3,SNR=5.5
comp=Z,2.3nm,0.8s
MJAR Matsushiro Arr 49.46 47 P **P** **01 37 44.8 -0.8**
comp=Z,1.4nm,0.8s,baz=247,slow=7.7,SNR=7.8
MJAR LR LR 01 58 51.5
comp=Z,343nm,21.1s,baz=240,slow=36
comp=Z,1.4nm,0.8s
MJAR Matsushiro Arr 49.46 47 P **P** **01 37 44.8 -0.8**
MJAR pmax pmax
comp=Z,23nm,1.6s
FORT Forrest 49.59 141 P **P** **01 37 45.9 -0.7**
comp=Z,56nm,1.1s
FORT Forrest 49.59 141 P **P** **01 37 45.5 -1.1**
RAYN Ar Rayn 49.64 295 P **P** **01 37 47.7 +0.6**
RAYN IAmb IAmb 01 38 03.0
comp=Z,24nm,0.8s
RAYN Ar Rayn 49.64 295 P **P** **01 37 48.2 +1.0**
RAYN Ar Rayn 49.64 295 P **P** **01 37 47.7 +0.6**
RAYN pmax pmax
comp=Z,24nm,0.8s
BVAR Borovoye Array 49.77 341 P **P** **01 37 46.4 -1.2**
comp=Z,7.2nm,0.7s,baz=143,slow=8.9,SNR=33
BVAR PcP **PcP** **01 39 06.0 -2.3**
comp=Z,2.6nm,0.9s,baz=152,slow=6.5,SNR=0.8
comp=Z,7.2nm,0.7s
BORK Borovoye 49.81 341 *de*P **P** **01 37 46.8 -1.1**
BORK pmax pmax
comp=Z,13nm,1.3s
AB31 Akbulak array 51.01 332 IAmb IAmb 01 38 04.5
comp=Z,51nm,0.9s
ABKAR Akbulak array 51.01 332 **P** **01 37 56.8 -0.3**
HEH HeiHe 51.03 27 *e*P P 01 38 03.8 +6.6
HEH pmax pmax
comp=Z,24nm,0.9s
QIS Mount Isa 52.24 123 P **P** **01 38 08.1 +1.3**
comp=Z,19nm,1.0s
AKTO Aktyubinsk 52.72 332 LR LR 02 02 52.9
comp=Z,233nm,18.6s,baz=146,slow=39
ZEA Zeya 53.52 24 *e*P P 01 38 25.0 +9.4
ZEA pmax pmax
comp=Z,20nm,0.8s
ZEA MLR MLR
comp=Z,400nm,17.0s
AKT Akhty 53.63 317 *e*P **P** **01 38 17.1 +0.3**
AKT pmax pmax
comp=Z,20nm,1.3s
MAK Makhachkala 54.45 319 *e*P P 01 38 17.3 -5.3
MAK *e* 01 40 20.8
MAK *e*PPP PPP 01 41 36.2
MAK *e*S **S** **01 45 53.3 -6.6**
MAK *e*SS **SS** **01 49 38.7 -3.8**
MAK *e*SSS SSS 01 51 38.7
MAK pmax pmax
comp=Z,375nm,1.5s
PMG Port Moresby 55.06 107 LR LR 02 06 09.8
comp=Z,220nm,18.7s,baz=292,slow=41
GNI Garni 55.15 315 LR LR 02 04 53.0
comp=Z,160nm,20.6s,baz=101,slow=39
ASAJ Asahikawa 55.80 40 LR LR 02 02 39.0
comp=Z,374nm,20.7s,baz=130,slow=36
BBOO Buckleboo 56.09 138 IAmb IAmb 01 38 45.2
comp=Z,29nm,1.2s
SVE Sverdlovsk 56.19 338 *e*P **P** **01 38 34.3 -0.6**
SVE pmax pmax
comp=Z,75nm,1.1s
ARTI Arti 56.71 337 LR LR 02 05 01.7
comp=Z,626nm,20.7s,baz=149,slow=38
ARTI Arti 56.71 337 **P** **01 38 37.8 -0.8**
ARTI Arti 56.71 337 *d i* P **P** **01 38 37.9 -0.8**
ARTI 01 39 38.1
ARTI 01 40 39.7
ARTI S **S** **01 46 32.6 +2.9**
ARTI SS **SS** **01 50 14.5 -3.2**
ARTI pmax pmax
comp=Z,22nm,1.0s
ARTI MLR MLR
comp=Z,551nm,19.0s
KIBK Kibwezi 57.03 263 **P** **01 38 43.8 +2.1**
KIBK Kibwezi 57.03 263 P **P** **01 38 42.9 +1.1**

MARD Mardin 57.07 310 P P 01 38 38.2 -3.5
YSS Yuzhno-Sakhali 57.20 38 eP P 01 38 43.2 +1.0
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,600nm,18.0s
YSS MLR MLR
comp=N,1μm,13.0s
YSS MLR MLR
comp=E,1μm,19.0s
KMBO Kilima Mbogo 57.61 264 P P 01 38 46.6 +0.5
comp=E,8.7nm,0.8s,baz=82,slow=17,SNR=15
KMBO LR LR 02 00 29.5
comp=E,397nm,18.5s,baz=100,slow=33
comp=E,8.7nm,0.8s
KMBO Kilima Mbogo 57.61 264ceP P 01 38 48.1 +2.1
KMBO pmax pmax
comp=Z,9.0nm,0.8s
CTA Charters Tower 57.71 119 LR LR 02 05 27.0
comp=Z,9.4nm,21.3s,baz=279,slow=38
KBZ Khabaz 57.81 318 P P 01 38 45.9 -0.7
comp=Z,5.0nm,0.8s,baz=124,slow=4.9,SNR=8.9
KBZ LR LR 02 08 25.0
comp=Z,125nm,18.3s,baz=116,slow=41
comp=Z,5.0nm,0.8s
KBZ Khabaz 57.81 318deP P 01 38 45.6 -1.0
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KVAR Kislovodsk Arr 58.04 318 LR LR 02 06 08.2
comp=Z,140nm,21.4s,baz=144,slow=38
KIV Kislovodsk 58.05 318 P P 01 38 45.7 -2.7
KIV IAmb IAmb 01 38 56.8
comp=Z,20nm,0.9s
KIV Kislovodsk 58.05 318 P P 01 38 45.6 -2.8
KIV P P 01 38 45.6 -2.8
KIV Kislovodsk 58.05 318 ⇑P P 01 38 47.3 -1.1
KIV Kislovodsk 58.05 318 eP P 01 38 46.7 -1.7
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,124nm,17.0s
QLP Quilpie 58.77 127 P P 01 38 56.4 +2.8
ASF Jabal al Asfar 58.84 303 LR LR 02 08 04.5
comp=Z,167nm,18.8s,baz=86,slow=40
BELG Belogornoye 59.08 329 LR LR 02 08 35.8
comp=Z,560nm,19.0s,baz=108,slow=40
BELG Belogornoye 59.08 329deP P 01 38 53.8 -1.5
BELG pmax pmax
comp=Z,6.0nm,0.9s
STKA Stephens Creek 59.40 134 P P 01 39 01.0 +3.1
STKA Stephens Creek 59.40 134 P P 01 38 55.7 -2.2
comp=Z,2.4nm,0.7s,baz=318,slow=9.0,SNR=5.7
STKA LR LR 02 07 41.5
comp=Z,415nm,20.4s,baz=298,slow=39
comp=Z,2.4nm,0.7s
STKA Stephens Creek 59.40 134⇓eP P 01 38 57.7 -0.2
SOC Sochi 59.90 317 eP P 01 39 00.0 -1.2
SOC e 01 41 09.7
SOC eS S 01 47 13.9 +2.2
SOC eSS SS 01 51 02.3 -6.0
SOC eSSS SSS 01 53 43.1
SOC MLR MLR
comp=Z,256nm,21.0s
EIL Elat 60.03 300 LR LR 02 07 35.0
comp=Z,297nm,18.6s,baz=4.0,slow=39
ERBR Yeremizino-Bor 60.17 319 eP P 01 39 00.3 -2.7
ERBR pmax pmax
comp=Z,13nm,0.9s
MMAI Mount Meron Ar 60.25 304 P P 01 39 00.7 -3.2
comp=Z,2.1nm,0.7s,baz=110,slow=6.6,SNR=5.6
MMAI LR LR 02 09 00.5
comp=Z,177nm,18.3s,baz=90,slow=40
comp=Z,2.1nm,0.7s
YAK Yakutsk 60.61 18⇑eP P 01 39 07.0 +1.4
YAK pmax pmax
comp=Z,38nm,0.8s
VRH Novokhopyorsk 61.69 325 eP P 01 39 09.7 -3.4
VRH pmax pmax
comp=Z,20nm,0.9s
KIRV Kirov 61.79 335 LR LR 02 08 40.6
comp=Z,310nm,18.9s,baz=134,slow=39
KIRV Kirov 61.79 335deP P 01 39 12.9 -0.8
CMSA Cobar Meteorol 62.24 131 P P 01 39 17.9 +0.7
comp=Z,31nm,1.4s
KIRS Kirsehir-Merke 62.76 310 ⇓P P 01 39 19.5 -1.2
BR131 Keskin Array S 63.11 311 P P 01 39 21.0 -2.2
BR131 P P 01 39 21.0 -2.2
BR131 P P 01 39 21.3 -1.8
SNR=7.5
BR131 P P 01 39 21.3 -1.8
SNR=7.5
BR131 Keskin Array S 63.11 311 iP P 01 39 20.8 -2.4
BRTR Keskin Array B 63.11 311 P P 01 39 20.4 -2.8
comp=Z,5.7nm,0.8s,baz=125,slow=7.2,SNR=52
BRTR LR LR 02 10 04.5
comp=Z,175nm,20.4s,baz=104,slow=39
comp=Z,5.7nm,0.8s
BRTR Keskin Array B 63.11 311 P P 01 39 20.8 -2.4
BRTR Keskin Array B 63.11 311ceP P 01 39 21.1 -2.0
BRTR pmax pmax
comp=Z,6.0nm,0.8s
VSR Storozhevoye 63.15 325 eP P 01 39 19.0 -3.9
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 63.31 325 eP P 01 39 20.2 -3.8
VORR pmax pmax
comp=Z,20nm,0.9s
ILGA Ilgaz 63.38 312 P P 01 39 23.3 -1.7
ILGA IAmb IAmb 01 39 38.3
comp=Z,15nm,1.0s
ANTO Ankara 63.78 311 ⇓P P 01 39 25.9 -1.6
ANTO Ankara 63.78 311 ⇓P P 01 39 25.9 -1.6
LPSR Galich'ya Gora 63.85 326 eP P 01 39 24.6 -2.9
LPSR pmax pmax
comp=Z,20nm,0.9s
MBAR Mbarara 63.97 266 LR LR 02 04 48.6
comp=Z,544nm,19.3s,baz=82,slow=34
MBAR Mbarara 63.97 266 P P 01 39 30.8 +1.5
MBAR P P 01 39 30.8 +1.5
MBAR Mbarara 63.97 266⇑eP P 01 39 31.3 +2.0
MBAR pmax pmax
comp=Z,2.0nm,0.9s
SIM Simferopol' 64.15 317 eP P 01 39 33.7 +4.0
SIM eS S 01 48 08.9 +3.5
SIM pmax pmax
comp=Z,25nm,1.3s
SIM smax smax
comp=E,33nm,18.3s
SIM MLR MLR
comp=Z,167nm,22.9s
MDUB Mudurnu 65.11 311 IAmb IAmb 01 40 14.6
comp=Z,21nm,1.1s
TOO Toolangi 65.14 137 P P 01 39 38.2 +2.0
comp=Z,11nm,0.9s
TOO Toolangi 65.14 137 P P 01 39 37.5 +1.2
TOO IAmb IAmb 01 39 43.7
comp=Z,28nm,1.6s
TOO Toolangi 65.14 137 P P 01 39 37.5 +1.2
TOO pmax pmax
comp=Z,28nm,1.6s
H04N2 CROZET ISLANDS 65.23 211 T T 02 50 10.4
baz=47,slow=75,SNR=137
H04N1 CROZET ISLANDS 65.24 211 T T 02 50 11.1
baz=47,slow=75,SNR=223
H04N3 CROZET ISLANDS 65.25 211 T T 02 50 09.7
baz=47,slow=75,SNR=199
H04S1 CROZET ISLANDS 65.63 211 T T 02 51 07.2
baz=47,slow=75,SNR=7.3
H04S3 CROZET ISLANDS 65.64 211 T T 02 51 17.9
baz=47,slow=75,SNR=14
H04S2 CROZET ISLANDS 65.65 211 T T 02 51 08.9
baz=47,slow=75,SNR=10
MOS Moscow 65.85 329 eP P 01 39 38.0 -2.5
MOS eS S 01 48 21.0 -4.8
MOS pmax pmax
comp=Z,28nm,0.7s
MOS pmax pmax
comp=Z,28nm,0.7s
MOS MLR MLR
comp=Z,400nm,21.0s
OBN Obninsk 66.15 328 LR LR 02 12 18.0
comp=Z,214nm,18.1s,baz=87,slow=39
OBN Obninsk 66.15 328⇑iP P 01 39 41.5 -0.9
OBN i 01 40 10.9
OBN e 01 42 07.3
OBN pmax pmax
comp=Z,29nm,0.8s
OBN MLR MLR
comp=Z,221nm,18.0s
SKR Severo-Kuril's 66.77 38 eP P 01 39 52.6 +6.1
SKR e 01 42 14.2
SKR eS S 01 49 06.3 +29
SKR pmax pmax
comp=Z,700nm,5.7s
SKR MLR MLR
comp=Z,300nm,17.0s
KLMR Klimovskoe 67.23 334 eP P 01 39 46.4 -2.9
KLMR e 01 42 14.5
KLMR pmax pmax
comp=Z,25nm,0.9s
HNR Honiara 67.33 103 LR LR 02 12 55.8
comp=Z,94nm,18.7s,baz=268,slow=39
TIXI Tiksi 67.90 11 P P 01 39 51.8 -1.5
TIXI Tiksi 67.90 11⇑eP P 01 39 51.6 -1.7
TIXI pmax pmax
comp=Z,13nm,1.0s
MILM Milestii Mici 68.23 318 ⇑P P 01 39 51.1 -4.7
MILM Milestii Mici 68.23 318 ⇑P P 01 39 51.1 -4.7
MILM Milestii Mici 68.23 318 eP P 01 39 52.6 -3.2
MILM eL L 02 07 53.0
MILM LRM MLR 02 09 27.0
comp=Z,200nm,15.0s
CFR Carcaliu 68.31 316 ⇓P P 01 39 54.6 -1.8
CFR Carcaliu 68.31 316 ⇓P P 01 39 54.6 -1.8
HARR Harsova 68.35 315 ⇓P P 01 39 55.4 -1.2
HARR Harsova 68.35 315 ⇓P P 01 39 55.4 -1.2
PEA0B Petropavlovsk- 68.45 35⇓eP P 01 39 56.9 -0.2
PETK Petropavlovsk- 68.45 35 LR LR 02 10 17.7
comp=Z,271nm,21.2s,baz=227,slow=36
VLDR Vladesti 68.49 317 ⇑P P 01 39 56.5 -1.0
SORM Soroca 68.82 319 ⇓P P 01 39 57.5 -1.9
SORM Soroca 68.82 319 ⇓P P 01 39 57.5 -1.9
AKASG Malin Array Be 68.90 322 P P 01 39 57.6 -2.4
comp=Z,2.7nm,0.7s,baz=87,slow=6.0,SNR=9.6
AKASG LR LR 02 14 32.2
comp=Z,176nm,19.1s,baz=104,slow=40
comp=Z,2.7nm,0.7s
AKASG Malin Array Be 68.90 322ceP P 01 39 57.5 -2.4
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 68.90 322 P P 01 39 57.8 -2.1
AKBB Malin Array Si 68.90 322⇓eP P 01 39 57.6 -2.3
KIEV Kiev 68.91 322 P P 01 39 57.7 -2.3
KIEV Kiev 68.91 322 ⇓P P 01 39 57.7 -2.3
KIEV Kiev 68.91 322 ⇓P P 01 39 57.7 -2.3
LOZB Loznitsa 69.05 314 ⇓P P 01 39 59.8 -1.2
IDI Anoyia 69.21 305 LR LR 02 16 26.9
comp=Z,64nm,18.4s,baz=108,slow=41
IDI Anoyia 69.21 305 P P 01 40 01.6 -0.6
IDI IAmb IAmb 01 40 02.5
comp=Z,18nm,0.6s
BISRR Bisoca 69.37 316 ⇓P P 01 40 03.0 0.0
VRI Vrincioaia 69.42 316 ⇓P P 01 40 02.8 -0.5
VRI Vrincioaia 69.42 316 ⇓P P 01 40 02.8 -0.5
PLOR Plostina 69.47 316 ⇑P P 01 40 02.7 -0.9
PLOR Plostina 69.47 316 ⇓P P 01 40 03.0 -0.6
SEY Seymchan 69.48 24 LR LR 02 12 26.8
comp=Z,306nm,18.7s,baz=274,slow=38
ELND Elena 69.49 313 ⇑P P 01 40 02.2 -1.6
TESR Tescani 69.60 317 ⇑P P 01 40 03.0 -1.3
ONER Baraj Valea Uz 69.74 317 ⇑P P 01 40 04.9 -0.4
COVR Voineasa-Covas 69.77 316 ⇑P P 01 40 04.5 -1.0
MLR Muntele Rosu 69.89 316 LR LR 02 17 28.6
comp=Z,217nm,18.0s,baz=78,slow=42
MLR Muntele Rosu 69.89 316 IAmb IAmb 01 40 13.6
comp=Z,24nm,1.0s
MLR Muntele Rosu 69.89 316 ⇑P P 01 40 05.5 -0.8
MLR Muntele Rosu 69.89 316 ⇑P P 01 40 05.5 -0.8
TURR Turia 69.94 316 ⇓P P 01 40 05.7 -0.8
DOPR Dopca 70.36 316 ⇓P P 01 40 07.7 -1.4
PLVB Pleven 70.47 313 ⇑P P 01 40 08.8 -1.0
VOIR 70.50 316 ⇓P P 01 40 08.1 -1.9
VOIR 70.50 316 ⇓P P 01 40 08.1 -1.9
MNK Minsk 70.69 325 iP P 01 40 09.2 -1.6
MNK i 01 42 45.3
MNK iPPP PPP 01 44 27.1
MNK iS S 01 49 24.0 +0.4
MNK iSS SS 01 53 53.3 -2.3
MNK pmax pmax
comp=Z,19nm,0.8s
MNK pmax pmax
comp=N,25nm,1.0s
MNK pmax pmax
comp=E,13nm,1.1s
BURAR Bucovina Array 70.77 318 P P 01 40 10.9 -0.8
BURAR Bucovina Array 70.77 318 ⇓P P 01 40 11.0 -0.7
BURAR Bucovina Array 70.77 318 ⇓P P 01 40 11.0 -0.7
ARR Arges 70.77 316 ⇓P P 01 40 10.1 -1.6
BUR08 Bucovina Ar. S 70.79 318 IAmb IAmb 01 40 25.2
comp=Z,26nm,1.6s
LOT Lotru 71.39 316 ⇓P P 01 40 08.6 -6.9
BROLN Tlhalogang 71.53 245 iP P 01 40 23.2 +6.5
LIT Litokhoron 71.62 310 IAmb IAmb 01 40 22.8
comp=Z,36nm,1.4s
CJR Cluj-Napoca 71.70 317 ⇓P P 01 40 15.6 -1.7
CJR Cluj-Napoca 71.70 317 ⇓P P 01 40 15.6 -1.7
MREMI Moremi 71.83 244 iP P 01 40 26.7 +8.2
MARR Marisel-Cluj 72.03 317 ⇑P P 01 40 20.8 +1.6
HERR Herculane 72.25 315 ⇑P P 01 40 19.2 -1.3
DRGR 72.32 317 ⇓P P 01 40 20.2 -0.8
DRGR 72.32 317 ⇓P P 01 40 20.2 -0.8
VSU Vasula 72.36 329 iP P 01 40 17.8 -3.0
APA Apatity 72.63 339⇓eP P 01 40 20.6 -1.7
APA e 01 40 36.3
APA MLR MLR
comp=Z,992nm,21.1s
KSANE Kasane 72.69 249 iP P 01 40 28.3 +4.5
KWP Kalwaria Pacla 72.77 320 eP P 01 40 21.6 -1.9
PABE Paberze 73.12 326 P P 01 40 24.5 -0.9
SUW Suwalki 73.26 324 eP P 01 40 24.8 -1.5
KHWEE KHWEE 73.45 245 iP P 01 40 35.2 +7.0
LPHEP Lephephe 73.45 243 iP P 01 40 35.6 +7.5
FINES FINESS Array B 73.49 332 P P 01 40 26.5 -1.0
comp=Z,6.9nm,0.7s,baz=109,slow=6.6,SNR=23
FINES LR LR 02 17 02.8
comp=Z,267nm,19.0s,baz=115,slow=39
comp=Z,6.9nm,0.7s
STHS Stebnicka Huta 73.68 319 eP P 01 40 28.1 -0.8
STHS e 01 40 34.9
NIE Niedzica 74.29 319 eP P 01 40 32.1 -0.4
PSZ Piszkesteto 74.37 318 ⇓P P 01 40 32.1 -0.9
PSZ Piszkesteto 74.37 318 ⇓P P 01 40 32.1 -0.9
KDWAN Kaudwane 74.52 243 iP P 01 40 41.9 +7.5
OJC Ojcow 74.71 320 eP P 01 40 34.2 -0.7
OJC Ojcow 74.71 320 P 01 40 34.3 -0.6
OJC Ojcow 74.71 320 P P 01 40 34.3 -0.6
VADS Vadso 74.98 341 eP P 01 40 33.3 -2.7
BOSA Boshof 75.42 238 P P 01 40 38.3 -1.3
comp=Z,2.2nm,0.5s,baz=73,slow=7.1,SNR=7.7
comp=Z,2.2nm,0.5s
BOSA Boshof 75.42 238 P P 01 40 39.8 +0.3
BOSA IAmb IAmb 01 40 55.9
comp=Z,14nm,0.9s
SKOMA Sekoma 75.45 242 iP P 01 40 47.4 +7.6
MAUC Maruska 75.89 319 eP P 01 41 41.1 -0.6
JAVC Velka Javorina 75.94 318 eP P 01 40 41.3 -0.8
STEB Steborice 75.98 320 eP P 01 40 42.0 -0.2
ARA0 ARCESS Array S 76.05 340 eP P 01 40 40.5 -1.7
ARCES ARCESS Array B 76.05 340 P P 01 40 40.6 -1.6
comp=Z,1.6nm,0.6s,baz=103,slow=5.4,SNR=14
ARCES LR LR 02 16 58.2
comp=Z,563nm,21.2s,baz=112,slow=38
comp=Z,1.6nm,0.6s
ARCES ARCESS Array B 76.05 340 P P 01 40 40.6 -1.6
ARCES pmax pmax
comp=Z,95nm,1.9s
MORC Moravsky Berou 76.11 319 eP P 01 40 41.2 -1.8
MODS Modra-Piesok 76.16 318 eP P 01 40 43.0 -0.3
MODS e 01 40 49.1
MODS pmax pmax
comp=Z,8.0nm,0.9s
MODS Modra-Piesok 76.16 318 eP P 01 40 43.0 -0.3
MODS e 01 40 49.1
DZM Mont Dzumac 76.24 115 LR LR 02 18 58.5
comp=Z,98nm,19.5s,baz=239,slow=39
KGCAE Kacgae 76.58 245 iP P 01 40 52.8 +6.6
KRLC Kraliky 76.63 320 eP P 01 40 45.6 -0.3
KRLC Kraliky 76.63 320 eP P 01 40 45.6 -0.3
BILL Bilibino 76.67 22⇑eP P 01 40 47.0 +1.2
BILL pmax pmax
comp=Z,4.0nm,1.0s
KTK1 Kautokeino 76.68 339 eP P 01 40 43.4 -2.4
VRAC Vranov 76.68 319 LR LR 02 18 42.1
comp=Z,142nm,20.6s,baz=92,slow=39
VRAC Vranov 76.68 319 eP P 01 40 45.7 -0.5
QNGWA Qangwa 76.77 248 iP P 01 40 55.0 +7.6
KRUC Moravsky 76.80 319 eP P 01 40 46.0 -0.8
DPC Dobruska-Polom 76.94 320 eP P 01 40 47.8 +0.1
DPC Dobruska-Polom 76.94 320 eP P 01 40 47.8 +0.1
HAMF Hammerfest 76.97 341 eP P 01 40 46.4 -0.9
KSP Ksiaz 77.00 320 eP P 01 40 46.1 -1.9
OSTC Ostas 77.03 320 eP P 01 40 48.3 +0.2
OSTC Ostas 77.03 320 eP P 01 40 48.3 +0.2
GRTLG Ghanzi 77.13 246 iP P 01 40 56.1 +6.7
CHVC Chvalec 77.13 320 eP P 01 40 48.4 -0.3
CHVC MLR MLR
comp=Z,800nm,12.0s
CHVC Chvalec 77.13 320 eP P 01 40 48.4 -0.3
UPC Upice 77.15 320 eP P 01 40 48.9 +0.1
UPC Upice 77.15 320 eP P 01 40 48.9 +0.1
ARSA Arzberg 77.26 317 eP P 01 40 49.0 -0.5
comp=Z,11nm,1.8s
SOKA Soboth 77.56 316 eP P 01 40 50.8 -0.5
comp=Z,12nm,1.1s
VAE Valguarnera 77.77 307 LR LR 02 18 49.4
comp=Z,88nm,21.3s,baz=135,slow=38
MAW Mawson 77.87 192 P P 01 40 52.6 +0.3
comp=Z,5.6nm,0.8s,baz=43,slow=3.2,SNR=8.9
MAW LR LR 02 10 40.4
comp=Z,282nm,18.9s,baz=32,slow=32
comp=Z,5.6nm,0.8s
PRU Pruhonice 78.06 319 AMS AMS 02 23 00.0
comp=Z,200nm,12.1s
PRA Prague 78.14 320 AMS AMS 02 23 00.0
comp=Z,300nm,22.9s
ZVC Zvikov 78.26 319 eP P 01 40 54.6 -0.4
ZVC ex x 01 41 00.2
TRO Tromso 78.31 340 eP P 01 40 53.3 -1.5
KOOLE Kule 78.42 245 iP P 01 41 05.3 +8.8
BIOA Bad Ischl, Aus 78.55 317 eP P 01 40 55.7 -1.1
comp=Z,2.5nm,0.6s
GEC2 GERESS Array S 78.56 318 IAmb IAmb 01 41 04.6
comp=Z,69nm,2.0s
GERES GERESS Array B 78.56 318 P P 01 40 55.9 -0.9
comp=Z,4.3nm,0.7s,baz=92,slow=4.6,SNR=27
GERES LR LR 02 19 40.0
comp=Z,132nm,20.2s,baz=72,slow=39
comp=Z,4.3nm,0.7s
KHC Kasperske Hory 78.65 319⇓eP P 01 40 56.3 -0.9
KHC pmax pmax
comp=Z,16nm,2.5s
KHC Kasperske Hory 78.65 319 eP P 01 40 56.5 -0.7
KHC epP pP 01 41 03.5 -0.9
CLL Collm 79.10 321 eP P 01 40 59.0 -0.6
CLL i 01 41 05.4
CLL eS S 01 50 47.0 -11
CLL Collm 79.10 321 eP P 01 40 59.0 -0.6
CLL i x x 01 41 05.4
comp=Z,35nm,1.9s
CLL eS S 01 51 00.0 +2.5
CLL ePPS PPS 01 52 03.0
LESA Schwarzleotal 79.20 317 eP P 01 40 58.7 -1.6
comp=Z,3.7nm,0.5s,SNR=5.7
HFS Hagfors 79.23 330 P P 01 40 58.9 -1.2
comp=Z,5.4nm,0.6s,baz=102,slow=3.2,SNR=19
HFS LR LR 02 20 17.4
comp=Z,357nm,19.6s,baz=89,slow=39
comp=Z,5.4nm,0.6s
FAUS Fauske 79.27 337 eP P 01 40 59.5 -0.7
CIMO Cimolais 79.34 316 IAmb IAmb 01 41 15.3
comp=Z,27nm,1.0s
STEI Steigen 79.36 338 eP P 01 40 59.1 -1.5
CTI Castel Tesino 79.89 315 IAmb IAmb 01 41 16.7
comp=Z,54nm,1.4s
WTTA Wattenberg 79.90 317 eP P 01 41 02.9 -1.4
comp=Z,10nm,1.0s,SNR=6.4
WATA Walderalm 79.94 317 eP P 01 41 02.8 -1.7
comp=Z,5.6nm,0.8s
SQTA Sankt Quirin 80.19 317 eP P 01 41 04.4 -1.4
comp=Z,7.1nm,0.7s,SNR=7.1
NC405 NORSAR Array S 80.27 331 P P 01 41 04.5 -1.2
NC405 IAmb IAmb 01 41 15.3
comp=Z,27nm,1.1s
MOTA Moosalm 80.27 317 eP P 01 41 04.7 -1.6
comp=Z,7.9nm,0.8s,SNR=7.8
NC602 NORSAR Array S 80.33 330 eP P 01 41 05.1 -1.0
RETA Reutte 80.50 317 eP P 01 41 06.1 -1.3
comp=Z,5.8nm,0.6s,SNR=8.4
NB2 NORSAR Subarra 80.50 331 P P 01 41 05.5 -1.6
comp=Z,9.6nm,1.0s,baz=95,slow=5.1
NOA NORSAR Array B 80.50 331 P P 01 41 05.3 -1.8
comp=Z,2.4nm,0.7s,baz=92,slow=5.3,SNR=15
NOA LR LR 02 20 31.2
comp=Z,174nm,18.9s,baz=105,slow=38
comp=Z,2.4nm,0.7s
FETA Feichten 80.52 316 eP P 01 41 06.6 -1.0
comp=Z,5.5nm,0.8s,SNR=4.9
SPA0 Spitsbergen Ar 80.61 348 eP P 01 41 07.4 0.0
SPITS Spitsbergen Ar 80.61 348 P P 01 41 05.1 -2.2
comp=Z,8.9nm,0.9s,baz=98,slow=10,SNR=8.7
SPITS LR LR 02 23 15.5
comp=Z,252nm,20.4s,baz=110,slow=40
comp=Z,8.9nm,0.9s
DAVA Damuels 81.10 317 eP P 01 41 09.7 -1.0
comp=Z,4.0nm,0.8s
DAVOX Davos/Dischmat 81.11 316 LR LR 02 21 44.1
comp=Z,116nm,21.7s,baz=76,slow=39
TUE Stuetta 81.48 316 IAmb IAmb 01 41 30.1
comp=Z,15nm,0.9s
DOMB Dombas 81.56 332 eP P 01 41 14.1 +1.4
KEST Kesra 81.89 305 P P 01 41 14.7 -0.3
comp=Z,7.4nm,1.0s,baz=60,slow=8.1,SNR=5.3
KEST LR LR 02 22 23.5
comp=Z,110nm,19.7s,baz=342,slow=39
comp=Z,7.4nm,1.0s
MOL Molde 82.27 332 eP P 01 41 15.3 -1.0
BLS5 Blasjo 82.87 329 eP P 01 41 18.8 -0.7
SENIN Lac Senin/Sane 82.90 316 IAmb IAmb 01 42 03.7
comp=Z,25nm,1.4s
BNI Bardonecchia 83.41 315 IAmb IAmb 01 42 08.5
comp=Z,33nm,1.4s
SYO Syowa Base 84.78 197⇑eP P 01 41 30.6 +1.6
NOR Nord 86.02 352 iP P 01 41 33.1 -2.0
NOR IAmb IAmb 01 41 54.1
comp=Z,12nm,1.0s
TAM Tamanrasset 86.26 292 IAmb IAmb 01 41 48.1
comp=Z,14nm,0.9s
DAG Danmarks Havn 88.25 348 iP P 01 41 43.9 -2.0
DAG IAmb IAmb 01 41 55.4
comp=Z,12nm,1.3s
EKA Eskdalemuir Ar 88.48 325 P P 01 41 47.1 -0.3
comp=Z,5.4nm,0.7s,baz=92,slow=5.5,SNR=17
comp=Z,5.4nm,0.7s
C18K Utukok River 88.60 21 IAmb IAmb 01 41 56.2
comp=Z,16nm,0.8s
URZ Urewera 88.67 129 LR LR 02 25 11.9
comp=Z,165nm,18.3s,baz=292,slow=38
C19K Lookout Ridge 89.03 20 IAmb IAmb 01 42 01.6
comp=Z,29nm,1.2s
F17K Baldwin Pennin 89.19 23 IAmb IAmb 01 41 59.0
comp=Z,16nm,0.8s
E19K Redstone River 90.38 21 IAmb IAmb 01 42 12.0
comp=Z,18nm,0.8s
B21K Ikpikpuk River 90.51 19 IAmb IAmb 01 42 08.0
comp=Z,19nm,1.1s
TORD Torodi Ar. Bea 91.03 283 P P 01 42 00.1 -0.1
comp=Z,3.1nm,0.3s,baz=64,slow=6.8,SNR=12
comp=Z,3.1nm,0.3s
RAO Raoul Island 91.42 119 LR LR 02 25 14.5
comp=Z,222nm,19.3s,baz=120,slow=37
D22K Ayikyak River 91.43 20 IAmb IAmb 01 42 12.4
comp=Z,14nm,0.9s
C23K Itkillik River 91.69 18 IAmb IAmb 01 42 13.2
comp=Z,19nm,1.3s
ESDC Sonseca Array 91.90 310 P P 01 42 01.8 -2.1
comp=Z,3.4nm,0.8s,baz=75,slow=4.7,SNR=25
ESDC LR LR 02 29 12.4
comp=Z,70nm,18.1s,baz=72,slow=39
comp=Z,3.4nm,0.8s
ESDC Sonseca Array 91.90 310 P P 01 42 03.5 -0.4
ESDC IAmb IAmb 01 42 11.7
comp=Z,8.5nm,1.1s
D23K Nanushuk River 92.05 19 IAmb IAmb 01 42 15.4
comp=Z,21nm,1.1s
VNDA Vanda 92.15 168 P P 01 42 03.7 -0.4
comp=Z,1.1nm,0.8s,baz=297,slow=2.3,SNR=5.6

VNDA				LR	LR	02 20 58.9		
	comp=Z,151nm,18.2s,baz=314,slow=34							
	comp=Z,1.1nm,0.8s							
VNDA	**Vanda**	**92.15**	**168**	P	**P**	**01 42 03.1**	**-0.9**	
VNDA	**Vanda**	**92.15**	**168**	P	**P**	**01 42 03.2**	**-0.9**	
VNDA				pmax	pmax			
	comp=Z,3.0nm,1.0s							
IMAR	**Indian Mountai**	**92.21**	**22**	P	**P**	**01 42 04.8**	**+0.1**	
J19K	**Peorman**	**92.22**	**24**	IAmb	IAmb	01 42 16.3		
	comp=Z,17nm,1.1s							
TOLK	**Toolik Lake Re**	**92.56**	**19**	P	**P**	**01 42 06.8**	**+0.5**	
TOLK				IAmb	IAmb	01 42 19.3		
	comp=Z,11nm,0.8s							
H21K	**Melozitna Rive**	**92.69**	**22**	IAmb	IAmb	01 42 19.2		
	comp=Z,20nm,1.2s							
J20K	**Nowinta River**	**92.75**	**24**	IAmb	IAmb	01 42 18.9		
	comp=Z,23nm,1.3s							
H22K	**Ishtalitna Cre**	**93.13**	**22**	IAmb	IAmb	01 42 20.6		
	comp=Z,14nm,1.1s							
E24K	**Your Creek**	**93.18**	**20**	IAmb	IAmb	01 42 24.9		
	comp=Z,6.6nm,0.8s							
NEEM	**North Greenlan**	**93.35**	**353**	*i* P	**P**	**01 42 14.0**	**+3.9**	
NEEM				IAmb	IAmb	01 42 15.6		
	comp=Z,8.9nm,1.2s							
F24K	**Squaw Lake**	**93.64**	**20**	IAmb	IAmb	01 42 27.2		
	comp=Z,6.1nm,0.8s							
MDT	**Midelt**	**93.70**	**304**	LR	LR	02 30 13.3		
	comp=Z,105nm,19.9s,baz=95,slow=39							
C27K	**Jago River**	**93.90**	**17**	IAmb	IAmb	01 42 24.5		
	comp=Z,12nm,1.1s							
BORG	**Borgarnes**	**94.21**	**337**	LR	LR	02 27 24.0		
	comp=Z,144nm,18.3s,baz=69,slow=37							
NVL	**N'lazarevskaya**	**94.24**	**199**	*e*P	**P**	**01 42 11.5**	**-2.3**	
NVL				*e*		01 45 58.3		
NVL				*e*PPP	PPP	01 47 59.2		
NVL				*e*S	**SKSac**	**01 52 46.7**	**-0.2**	
NVL				*e*SS	**SS**	**01 59 45.8**	**+1.3**	
NVL				*e*SSS	SSS	02 03 27.3		
NVL				pmax	pmax			
	comp=Z,11nm,0.6s							
NVL				smax	smax			
	comp=E,206nm,13.3s							
NVL				MLR	MLR			
	comp=Z,82nm,17.0s							
F25K	**Christian Rive**	**94.36**	**19**	IAmb	IAmb	01 42 30.9		
	comp=Z,7.5nm,1.1s							
BMAR	**Burnt Mountain**	**94.79**	**19**	P	**P**	**01 42 17.1**	**+0.5**	
F26K	**Sheenjek River**	**94.80**	**19**	IAmb	IAmb	01 42 27.8		
	comp=Z,9.4nm,1.1s							
D27M	**Malcolm River**	**94.92**	**17**	IAmb	IAmb	01 42 28.5		
	comp=Z,14nm,1.4s							
SUMG	**Summit**	**94.92**	**347**	*i* P	P	01 42 25.1	+7.6	
ILAR	**Eielson Array**	**95.32**	**22**	P	**P**	**01 42 16.4**	**-2.6**	
	comp=Z,0.4nm,0.7s,baz=290,slow=3.7,SNR=8.9							
ILAR				PP	**PP**	**01 46 05.8**	**-3.2**	
	comp=Z,0.6nm,0.8s,baz=283,slow=6.3,SNR=4.6							
ILAR				LR	LR	02 27 27.3		
	comp=Z,199nm,21.7s,baz=284,slow=37							
	comp=Z,0.4nm,0.7s							
E28M	**Babbage River**	**95.71**	**17**	IAmb	IAmb	01 42 31.8		
	comp=Z,8.3nm,1.1s							
KDAK	**Kodiak Island**	**95.95**	**30**	LR	LR	02 30 50.1		
	comp=Z,147nm,19.3s,baz=269,slow=39							
E29M	**Blow River**	**96.33**	**17**	IAmb	IAmb	01 42 34.8		
	comp=Z,4.5nm,0.8s							
QSPA	**South Pole Qui**	**97.04**	**180**	P	Pdif	01 42 29.5	+2.6	
	comp=Z,0.6nm,0.9s,baz=315,slow=1.4,SNR=2.0							
QSPA				LR	LR	02 23 55.0		
	comp=Z,235nm,18.1s,baz=305,slow=34							
QSPA	**South Pole Qui**	**97.04**	**180**	IAmb	IAmb	01 45 20.5		
	comp=Z,18nm,1.8s							
INK	**Inuvik**	**97.62**	**16**	LR	LR	02 33 00.6		
	comp=Z,174nm,18.4s,baz=313,slow=39							
RES	**Resolute Bay**	**98.12**	**2**	LR	LR	02 32 26.4		
	comp=Z,116nm,18.3s,baz=18,slow=39							
DBIC	**Dimbokro**	**98.31**	**278**	LR	LR	02 26 57.6		
	comp=Z,255nm,19.0s,baz=106,slow=36							
SNAA	**Sanae**	**99.01**	**199**	P	**Pdif**	**01 42 32.5**	**-3.0**	
	comp=Z,0.7nm,1.0s,baz=108,slow=20,SNR=1.7							
SNAA				LR	LR	02 23 08.2		
	comp=Z,132nm,18.3s,baz=132,slow=33							
	comp=Z,0.7nm,1.0s							
SNAA	**Sanae**	**99.01**	**199**	IAmb	IAmb	01 45 04.6		
	comp=Z,14nm,2.0s							
SNAA	**Sanae**	**99.01**	**199**	P	**Pdif**	**01 42 32.5**	**-3.0**	
SNAA				pmax	pmax			
	comp=Z,14nm,2.0s							
NVAR	**Mina Array Bea**	**125.41**	**31**	PKP	**PKiKP**	**01 47 57.4**	**+0.2**	
	comp=Z,2.0nm,0.8s,baz=305,slow=3.3,SNR=7.7							
PDAR	**Pinedale Array**	**125.75**	**22**	PKP	**PKPdf**	**01 47 56.5**	**-0.9**	
	comp=Z,2.5nm,0.8s,baz=329,slow=1.0,SNR=16							
TXAR	**Lajitas Array**	**139.78**	**25**	PKhKP	PKPpre	01 48 17.6		
	comp=Z,0.6nm,0.7s,baz=323,slow=3.8,SNR=9.1							
TXAR				PKP	**PKPdf**	**01 48 22.8**	**-1.2**	
	comp=Z,0.4nm,0.7s,baz=336,slow=3.3,SNR=4.4							
TXAR				PP	**PP**	**01 51 18.3**	**-0.1**	
	comp=Z,0.8nm,0.8s,baz=357,slow=9.3,SNR=5.0							
PLCA	**Paso Flores**	**143.95**	**200**	PKP	PKPbc	01 48 29.5	+0.7	
	comp=Z,2.7nm,1.0s,baz=162,slow=3.2,SNR=2.9							
CPUP	**Villa Florida**	**147.02**	**231**	PKPbc	**PKPdf**	**01 48 36.9**	**+0.3**	
	comp=Z,0.7nm,0.7s,baz=18,slow=1.4,SNR=6.0							
CPUP	**Villa Florida**	**147.02**	**231**		**PKPbc**	**01 48 38.4**	**-0.2**	
BO02	**Sierra Bellavi**	**149.28**	**204**		**PKPbc**	**01 48 44.2**	**-0.3**	
VA03	**San Esteban**	**150.92**	**207**		**PKPbc**	**01 48 48.0**	**-0.6**	
BOAV	**Boa Vista**	**153.25**	**290**		**PKPbc**	**01 48 53.5**	**-0.7**	
LPAZ	**La Paz**	**160.65**	**240**	PKP	**PKPdf**	**01 48 55.7**	**-1.1**	
	comp=Z,0.5nm,0.3s,baz=115,slow=2.0,SNR=1.1							
LPAZ				PKPab	**PKPab**	**01 49 38.6**	**+0.1**	
	comp=Z,3.5nm,0.9s,baz=107,slow=7.3,SNR=5.0							

*SNET **17** 01:36:28.8±1.4, 12.°98N×90.°86W, h10km, ML3.9*
*IDC **17** 01:36:29.7±4.2, 13.°33N×90.°12W, h0km, mb3.5/4, mbtmp3.6/4, MS3.5/7, Error ellipse: s-maj=218.6km s-min=64.1km az=45.0*
*CATAC **17** 01:36:30.2±0.5, 13.°N±2.°×9.°1W±.°, h6km±3km, M3.8/19, MLv3.8/19, Error ellipse: s-maj=5.6km s-min=4.2km az=39.3, confirmed*
*GCG **17** 01:36:31.7±2.1, 12.°94N×90.°80W, h35km±89km, MD4.1, ML4.1*

ISC 17 01:36:31.6±1.9, **13.°01N**±0.°06×**90.°71W**±0.°04, **h13**km±10km, **n79**, σ0**°85**/82, **mb3.7**/3, **MS3.4**/7, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**1.07**	**39**	P	**Pb**	**01 36 51.3**	**-0.7**
FAME	**Alcaldia de Sa**	**1.07**	**39**	S	**Sb**	**01 37 06.5**	**+0.6**
PCGS	**San Vicente Pa**	**1.24**	**15**	*e*P	**Pg**	**01 36 54.7**	**-0.9**
NUBE	**Las Nubes**	**1.27**	**45**	*e*P	**Pn**	**01 36 53.9**	**-1.3**
NUBE				*e*S	**Sb**	**01 37 11.5**	**-0.3**
NUBE	**Las Nubes**	**1.27**	**45**	*e*P	**Pn**	**01 36 54.1**	**-1.1**
NUBE	**Las Nubes**	**1.27**	**45**	P	**Pn**	**01 36 54.3**	**-0.9**
NUBE	**Las Nubes**	**1.27**	**45**	S	**Sg**	**01 37 12.7**	**0.0**
CEVE	**Cerro Verde**	**1.33**	**52**	*e*P	**Pn**	**01 36 55.6**	**-0.6**
CEVE				*e*S	**Sg**	**01 37 15.2**	**+0.5**
CEVE	**Cerro Verde**	**1.33**	**52**	P	**Pn**	**01 36 55.6**	**-0.6**
LOAL	**Lomas de Alarc**	**1.34**	**43**	P	**Pn**	**01 36 55.5**	**-0.5**
LOAL	**Lomas de Alarc**	**1.34**	**43**	S	**Sg**	**01 37 15.1**	**+0.3**
SBLS	**San Blas**	**1.34**	**52**	*e*P	**Pn**	**01 36 55.5**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.35**	**42**	S	**Sb**	**01 37 13.8**	**-0.3**
RTR	**El Retiro**	**1.36**	**49**	*e*P	**Pn**	**01 36 55.8**	**-0.7**
SNJE	**San Jose**	**1.37**	**51**	*e*P	**Pn**	**01 36 55.7**	**-0.9**
JAYA	**Jayaque - finc**	**1.39**	**62**	*e*P	**Pn**	**01 36 55.8**	**-1.0**
JAYA	**Jayaque - finc**	**1.39**	**62**	*e*P	**Pn**	**01 36 55.9**	**-1.0**
JAYA	**Jayaque - finc**	**1.39**	**62**	P	**Pn**	**01 36 55.6**	**-1.1**
JAYA	**Jayaque - finc**	**1.39**	**62**	S	**Sn**	**01 37 15.2**	**+0.1**
LALI	**Alcalda de L**	**1.44**	**70**	*e*P	**Pn**	**01 36 55.9**	**-1.5**
LALI	**Alcalda de L**	**1.44**	**70**	*e*P	**Pn**	**01 36 56.2**	**-1.1**
LALI	**Alcalda de L**	**1.44**	**70**	P	**Pn**	**01 36 56.2**	**-1.1**
LALI	**Alcalda de L**	**1.44**	**70**	S	**Sb**	**01 37 17.0**	**+0.6**
RBDL	**Robledal**	**1.48**	**42**	*e*P	**Pn**	**01 36 57.6**	**-0.5**
RBDL				*e*S	**Sb**	**01 37 17.9**	**-0.1**
UNIC	**Universidad Ca**	**1.49**	**49**	*e*P	**Pn**	**01 36 57.6**	**-0.5**
UNIC	**Universidad Ca**	**1.49**	**49**	P	**Pn**	**01 36 57.6**	**-0.5**
UNIC	**Universidad Ca**	**1.49**	**49**	S	**Sn**	**01 37 17.2**	**-0.2**
CEDA	**San Andres**	**1.50**	**58**	*e*P	**Pn**	**01 36 57.7**	**-0.7**
CEDA				*e*S	**Sg**	**01 37 19.5**	**-0.6**
PMON	**Piamonte**	**1.53**	**63**	*e*P	**Pn**	**01 36 57.8**	**-0.9**
PMON	**Piamonte**	**1.53**	**63**	P	**Pn**	**01 36 58.2**	**-0.5**
STG8	**El Palmar, Qui**	**1.56**	**337**	*e*P	**Pg**	**01 37 03.2**	**+1.6**
STG8				IAML		01 37 34.6	
	comp=N,1μm,0.3s						
BOQS	**Boqueron**	**1.57**	**62**	*e*P	**Pn**	**01 36 58.6**	**-0.8**
BOQS				*e*S	**Sb**	**01 37 21.1**	**+0.6**
UEES	**Universidad Ev**	**1.60**	**64**	*e*P	**Pn**	**01 36 59.4**	**-0.2**
UEES	**Universidad Ev**	**1.60**	**64**	P	**Pn**	**01 36 59.2**	**-0.4**
LOMA	**Loma Larga**	**1.63**	**67**	*e*P	**Pn**	**01 36 59.2**	**-0.9**
LOMA	**Loma Larga**	**1.63**	**67**	P	**Pn**	**01 36 59.3**	**-0.8**
JUAM	**Asuncion Mita**	**1.64**	**36**	*e*S	**Sb**	**01 37 22.7**	**+0.3**
LFRS	**El Faro**	**1.72**	**69**	*e*P	**Pn**	**01 37 01.0**	**-0.3**
PAVA	**Las Pavas**	**1.86**	**68**	*e*P	**Pn**	**01 37 03.4**	**+0.1**
PAVA	**Las Pavas**	**1.86**	**68**	P	**Pn**	**01 37 03.7**	**+0.4**
MTO3	**Montecristo**	**1.91**	**43**	*e*P	**Pn**	**01 37 03.4**	**-0.6**
MTO3	**Montecristo**	**1.91**	**43**	*e*P	**Pn**	**01 37 03.9**	**-0.2**
MTO3	**Montecristo**	**1.91**	**43**	P	**Pn**	**01 37 04.1**	**+0.1**
MTO3	**Montecristo**	**1.91**	**43**	S	**Sn**	**01 37 28.9**	**+0.9**
SOKI	**Kika Raxquin**	**1.92**	**340**	*e*P	**Pn**	**01 37 03.5**	**-0.9**
SOKI				*e*S	**Sn**	**01 37 26.6**	**-2.0**
SOKI				IAML		01 37 45.8	
	comp=N,1μm,1.0s						
TECO	**Alcaldia de Te**	**1.95**	**74**	*e*P	**Pn**	**01 37 03.8**	**-0.6**
TECO	**Alcaldia de Te**	**1.95**	**74**	P	**Pn**	**01 37 03.8**	**-0.6**
TECO	**Alcaldia de Te**	**1.95**	**74**	S	**Sb**	**01 37 30.7**	**-0.6**
UESV	**Universidad de**	**1.97**	**71**	S	**Sb**	**01 37 31.4**	**-0.6**
APG	**El Apazote**	**2.00**	**7**	*i* P	**Pn**	**01 37 05.8**	**+0.5**
ESQI	**Esquipulas**	**2.04**	**41**	P	**Pn**	**01 37 06.4**	**+0.7**
ZAFR2	**Estanzuela, Za**	**2.04**	**40**	*i* P	**Pb**	**01 37 09.0**	**+0.3**
SCLA	**Alcaldia de Sa**	**2.05**	**70**	*e*P	**Pn**	**01 37 05.9**	**+0.1**
SCLA	**Alcaldia de Sa**	**2.05**	**70**	P	**Pn**	**01 37 06.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**2.05**	**70**	S	**Sn**	**01 37 32.8**	**+1.5**
QUIS	**Sacapulas**	**2.30**	**351**	*e*P	**Pn**	**01 37 10.3**	**+1.0**
QUIS				IAML		01 37 44.3	
	comp=E,950nm,0.4s						
PACA	**Pacayal**	**2.37**	**79**	*e*P	**Pn**	**01 37 10.4**	**+0.1**
PACA	**Pacayal**	**2.37**	**79**	P	**Pn**	**01 37 10.9**	**+0.6**
PACA	**Pacayal**	**2.37**	**79**	S	**Sb**	**01 37 41.8**	**-1.7**
LCND	**La Caada**	**2.76**	**83**	*e*P	**Pn**	**01 37 15.4**	**-0.2**
LCND	**La Caada**	**2.76**	**83**	P	**Pn**	**01 37 15.6**	**0.0**
CNCH	**Conchagua**	**2.82**	**84**	P	**Pn**	**01 37 16.5**	**0.0**
CSGN	**Cosiguina Volc**	**3.07**	**90**	P	**Pn**	**01 37 19.5**	**-0.4**
CSGN				S	**Sn**	**01 37 58.3**	**+1.7**
POTN	**Potosi Cosigui**	**3.12**	**90**	P	**Pn**	**01 37 20.7**	**+0.1**
POTN				S	**Sn**	**01 37 59.5**	**+1.8**
TGUH	**Tegucigalpa,Un**	**3.50**	**72**	P	**Pn**	**01 37 25.7**	**-0.2**
TGUH				S	**Sn**	**01 38 08.7**	**+1.4**
PKGN	**Cerro Pekin**	**3.66**	**95**	P	**Pn**	**01 37 26.8**	**-1.1**
POLN	**Al Sur del Vol**	**3.82**	**95**	P	**Pn**	**01 37 28.8**	**-1.3**
YUSH	**Yuscaran**	**3.88**	**76**	P	**Pn**	**01 37 30.9**	**-0.1**
MATN	**Matagalpa**	**4.67**	**90**	S	**Sn**	**01 38 37.8**	**+1.8**
TXAR	**Lajitas Array**	**20.21**	**325**	P	Pn	01 41 08.1	-0.3
	comp=E,1.9nm,0.7s,baz=136,slow=11,SNR=9.9							
TXAR				LR	LR	01 50 55.0		
	comp=E,52nm,19.8s,baz=354,slow=43							
	comp=E,1.9nm,0.7s							
TKL	**Tuckaleechee C**	**23.41**	**14**	LR	LR	01 52 04.8		
	comp=E,122nm,18.5s,baz=198,slow=41							
ANMO	**Albuquerque**	**26.08**	**330**	LR	LR	01 54 34.3		
	comp=E,35nm,18.0s,baz=108,slow=42							
SADO	**Sadowa**	**33.16**	**15**	LR	LR	01 57 19.0		
	comp=E,103nm,18.3s,baz=202,slow=38							
PDAR	**Pinedale Array**	**33.84**	**335**	P	**P**	**01 43 14.1**	**+0.1**	
	comp=E,0.4nm,0.8s,baz=148,slow=9.5,SNR=2.5							
	comp=E,0.4nm,0.8s							
NVAR	**Mina Array Bea**	**35.23**	**321**	P	**P**	**01 43 26.7**	**+0.7**	
	comp=E,0.8nm,0.7s,baz=136,slow=6.5,SNR=5.1							
NVAR				LR	LR	01 57 54.3		
	comp=E,40nm,19.8s,baz=98,slow=36							
	comp=E,0.8nm,0.7s							
ULM	**Lac du Bonnet**	**37.38**	**355**	LR	LR	02 02 24.1		
	comp=E,67nm,19.1s,baz=198,slow=42							
ILAR	**Eielson Array**	**64.24**	**337**	P	**P**	**01 47 05.4**	**-0.7**	
	comp=E,0.3nm,0.6s,baz=109,slow=7.4,SNR=7.4							
	comp=E,0.3nm,0.6s							
JMIC	**Jan Mayen**	**75.25**	**20**	LR	LR	02 23 30.5		
	comp=E,114nm,18.0s,baz=56,slow=38							
CMAR	**Chiang Mai Arr**	**147.32**	**343**	PKPbc	**PKPbc**	**01 56 15.4**	**-0.4**	
	comp=E,1.7nm,0.3s,baz=12,slow=1.9,SNR=5.3							

*IDC **17** 01:50:33.3±1.6, 1.°31N×125.°96E, h0km, mb3.7/4, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=120.7km s-min=20.1km az=68.0*
*DJA **17** 01:50:36.8±0.3, 1.°N±3.°×12.°6E±.°, h10km, M3.6/8, MLv3.6/8*

ISC 17 01:50:38.5±1.0, **1.°47N**±0.°08×**126.°49E**±0.°09, **h35**km, **n8,** σ1**°73**/10, **mb3.9**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**128**	P	**Pn**	**01 50 58.8**	**+1.1**
TNTI				S	**Sn**	**01 51 13.6**	**+1.8**
SGSI	**Sangihe**	**2.40**	**336**	P	**Pn**	**01 51 16.6**	**+1.2**
SGSI				S	**Sn**	**01 51 44.5**	**+0.8**
KMSI	**Cibinong**	**2.66**	**251**	P	**Pn**	**01 51 20.9**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.46**	**182**	P	**P**	**01 54 59.4**	**-3.0**
	baz=0.0,slow=6.1,SNR=1.0						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**22.63**	**160**	P	**P**	**01 55 36.5**	**-0.2**
	2.5nm,0.5s,baz=338,slow=10,SNR=25						
	2.5nm,0.5s						
ASAR	**Alice Springs**	**26.00**	**164**	P	**P**	**01 56 08.1**	**-0.3**
	0.3nm,0.4s,baz=343,slow=10,SNR=19						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.28**	**326**	P	**P**	**02 00 35.6**	**-1.2**
	0.3nm,0.4s,baz=126,slow=7.8,SNR=7.9						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	**P**	**02 01 04.7**	**-0.6**
	0.4nm,0.3s,baz=127,slow=5.8,SNR=1.2						
	0.4nm,0.3s						

*IDC **17** 01:53:56.7±0.7, 1.°59N×126.°37E, h0km, mb4.0/10, mbtmp4.0/11, ML3.9/1, Error ellipse: s-maj=54.1km s-min=14.3km az=74.0*
*DJA **17** 01:54:02.1±0.2, 2.°N±2.°×12.°7E±.°, h10km, M4.2/14, mB5.3/3, mb4.4/7, MLv4.0/14, Mw(mB)4.7/3*
*NEIC **17** 01:54:02.9±2.5, 1.°72N±0.°06×126.°73E±0.°09, h35km±1km, mb4.2/11, Error ellipse: s-maj=17.1km s-min=8.8km az=245.0*

ISC 17 01:54:02.6±0.7, **1.°66N**±0.°07×**126.°72E**±0.°07, **h35**km, **n36,** σ1**°38**/39, **mb4.1**/14, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.09**	**144**		**Pn**	**01 54 22.8**	**+1.3**
TNTI	**Ternate**	**1.09**	**144**	P	**Pn**	**01 54 22.8**	**+1.3**
TNTI				S	**Sn**	**01 54 36.5**	**+1.1**
SGSI	**Sangihe**	**2.34**	**329**	P	**Pn**	**01 54 42.3**	**+3.7**
KMSI	**Cibinong**	**2.94**	**249**	P	**Pn**	**01 54 48.3**	**+1.4**
SANI	**Sanana**	**3.76**	**191**	P	**Pn**	**01 54 58.0**	**-0.1**
LUWI	**Luwuk**	**4.77**	**236**		**Pn**	**01 55 13.8**	**+1.6**
LUWI	**Luwuk**	**4.77**	**236**	P	**Pn**	**01 55 14.2**	**+2.1**
MRSI	**Marisa**	**4.92**	**256**	P	**Pn**	**01 55 14.5**	**+0.3**
APSI	**Ampana**	**5.68**	**243**	P	**Pn**	**01 55 26.6**	**+2.0**
	0.2nm823nm39nm,0.5s						
TOLI2	**Tolitoli**	**5.96**	**265**		**Pn**	**01 55 29.2**	**+0.7**
TTSI	**Tana Toraja**	**8.33**	**236**	P	**Pn**	**01 56 02.3**	**+1.3**
	19nm,0.8s						
SPSI	**Sidrap Palu**	**8.91**	**231**	P	**Pn**	**01 56 09.8**	**+0.8**
BNSI	**Bone**	**8.94**	**228**	P	**Pn**	**01 56 10.2**	**+0.8**
MTN	**Manton Dam**	**15.06**	**163**	Pn	**Pn**	**01 57 35.1**	**+2.1**
MTN				IAmb	IAmb	01 57 47.7	
	comp=Z,8.4nm,1.2s						
KNRA	**Kununurra**	**17.34**	**173**	P	**Pn**	**01 58 02.6**	**+0.5**
KNRA				IAmb	IAmb	01 58 19.1	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.66**	**183**	P	**P**	**01 58 27.2**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=15,slow=9.3,SNR=6.9						
	comp=Z,1.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.66**	**183**	P	**P**	**01 58 27.3**	**-1.4**
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**01 59 00.6**	**-1.2**
	comp=Z,14nm,0.7s,baz=338,slow=10,SNR=50						
WRA				PcP	**PcP**	**02 02 52.8**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=336,slow=2.5,SNR=1.7						
	comp=Z,14nm,0.7s						
WRA	**Warramunga Arr**	**22.73**	**161**		**P**	**01 59 00.1**	**-1.7**
WR8	**Warramunga Arr**	**22.80**	**161**		**P**	**01 59 01.5**	**-1.0**
WR8				IAmb	IAmb	01 59 04.0	
	comp=Z,11nm,0.6s						
AS31	**Alice Springs**	**26.12**	**165**		**P**	**01 59 34.8**	**+1.1**
AS31				IAmb	IAmb	01 59 37.2	
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**26.12**	**165**	P	**P**	**01 59 32.9**	**-0.8**
	comp=Z,2.7nm,0.4s,baz=344,slow=11,SNR=61						
ASAR				PcP	**PcP**	**02 02 60.0**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=346,slow=2.7,SNR=1.7						
	comp=Z,2.7nm,0.4s						
ASAR	**Alice Springs**	**26.12**	**165**	P	**P**	**01 59 33.9**	**+0.3**
FORT	**Forrest**	**32.28**	**178**	P	**P**	**02 00 28.3**	**+0.1**
FORT				IAmb	IAmb	02 00 45.2	
	comp=Z,14nm,1.2s						
BBOO	**Buckleboo**	**35.40**	**166**	P	**P**	**02 00 54.5**	**-0.8**
KSRS	**Korea Array**	**35.64**	**2**	P	**P**	**02 00 57.5**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=188,slow=10,SNR=1.5						
	comp=Z,0.5nm,0.5s						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**02 01 02.1**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=335,slow=14,SNR=3.0						
	comp=Z,0.9nm,0.3s						
MJAR	**Matsushiro Arr**	**36.30**	**16**	P	**P**	**02 01 03.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=177,slow=9.8,SNR=1.5						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**02 03 58.1**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=122,slow=7.1,SNR=10						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**02 03 58.4**	**-2.2**
ZALV	**Zalesovo Beam**	**62.42**	**334**	P	**P**	**02 04 20.7**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=140,slow=5.4,SNR=2.4						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	**P**	**02 04 27.7**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=124,slow=6.0,SNR=11						
	comp=Z,1.1nm,0.5s						
BVAR	**Borovoye Array**	**69.04**	**327**	P	**P**	**02 05 04.2**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=112,slow=7.0,SNR=2.2						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**81.39**	**173**	P	**P**	**02 06 15.1**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=319,slow=5.8,SNR=5.3						
	comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**81.39**	**173**	P	**P**	**02 06 15.2**	**-0.2**
VNDA				IAmb	IAmb	02 06 16.5	
	comp=Z,2.9nm,1.1s						
D20K	**Etivluk River**	**83.63**	**21**	P	**P**	**02 06 28.2**	**+0.9**
D20K				IAmb	IAmb	02 07 08.5	
	comp=Z,8.3nm,1.4s						

*IDC **17** 02:07:46.2±2.1, 1.°53N×126.°46E, h0km, mb3.5/3, mbtmp3.6/3, MS3.6/1, Error ellipse: s-maj=174.1km s-min=25.9km az=66.0*
*DJA **17** 02:07:49.1±0.3, 1.°N±2.°×12.°6E±.°, h10km, M3.5/8, MLv3.5/8*

ISC 17 02:07:46.1±1.0, **1.°77N**±0.°09×**126.°7E**±0.°1, **h10**km, **n8,** σ1**°71**/9, **mb3.7**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.17**	**148**	P	**Pn**	**02 08 06.1**	**-2.5**
TNTI				S	**Sn**	**02 08 26.4**	**+1.8**
SGSI	**Sangihe**	**2.25**	**327**	P	**Pg**	**02 08 29.4**	**0.0**
SGSI				S	**Sg**	**02 08 57.4**	**-1.2**
KMSI	**Cibinong**	**3.01**	**247**	P	**Pn**	**02 08 32.5**	**-1.3**
SANI	**Sanana**	**3.87**	**191**	P	**Pn**	**02 08 44.6**	**-1.1**
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**02 12 49.7**	**+0.2**
	1.3nm,0.5s,baz=339,slow=11,SNR=12						
	1.3nm,0.5s						
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**02 13 21.6**	**+0.1**
	0.4nm,0.4s,baz=342,slow=11,SNR=11						
	0.4nm,0.4s						
DZM	**Mont Dzumac**	**45.42**	**124**	LR	LR	02 35 18.8	
	comp=Z,61nm,19.2s

MRKS	**Merke**	**2.75**	**35**	Pg		**Pb**	**02 22 56.7**	**-0.4**
	1.8nm,0.4s							
MRKS				Lg		Lg	02 23 33.9	
	4.8nm,0.3s							
MRKS	**Merke**	**2.75**	**35**	*eP*		**Pb**	**02 22 56.7**	**-0.4**
	1.8nm,0.4s							
MRKS				*eS*		**Sg**	**02 23 33.9**	**-2.3**
	4.8nm,0.3s							
ARLS	**Aral**	**2.80**	**60**⇑	*eP*		**Pb**	**02 22 55.9**	**-2.1**
ARLS			⇑	*eS*		**Sb**	**02 23 33.7**	**+1.3**
EKS2	**Erkin-Say**	**2.95**	**43**⇑	*eP*		**Pb**	**02 22 57.1**	**-3.5**
EKS2			⇑	*eS*		**Sb**	**02 23 36.0**	**-0.7**

GCG 17 02:23:00.3±0.3, 13°72'N×90°05'.85W, h25km±3km, MD3.8, ML3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG16	**Alotenango, Sa**	**0.64**	**31**	*i* P	Pn	02 23 14.7	+0.7
FG16				*i* S	Sn	02 23 26.0	+2.5
FG16				IAML		02 23 28.4	
	comp=E,3μm,0.2s						
ESSG	**Sabana Grande**	**0.66**	**1**	*eP*	Pb	02 23 13.1	-0.3
ESSG				*eS*	Sn	02 23 23.4	-0.5
NUBE	**Las Nubes**	**1.05**	**80**	*i* P	Pn	02 23 19.7	+0.1
NUBE				*i* S	Sn	02 23 34.9	+1.3
APG	**El Apazote**	**1.33**	**16**	*eP*	Pn	02 23 24.0	+0.4

SJA 17 02:24:26.0±1.2, 26°.47S×71°.49W, h10km, ML3.8, MW3.5
GUC 17 02:24:33.8±0.8, 26°.61S×71°.04W, h15km±59km, ML3.6

ISC 17 02:24:30.2±1.7, 26°.58S±0°.03×71°.02W±0°.07, h6km±12km, n34, σ1§10/42, 1C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.57**	**41**⇓	*iP*	**Pn**	**02 24 44.5**	**-0.5**
AC01				*eS*	**Sb**	**02 24 52.2**	**+1.0**
AC01				IAML		02 24 53.2	
	comp=N,6μm,0.2s						
AC01	**Pan de Azucar**	**0.57**	**41**	*i* P	**Pn**	**02 24 44.5**	**-0.5**
AC01				IAML		02 24 56.9	
	comp=E,842nm,0.3s						
AC06	**Mina Casimiro**	**0.97**	**143**⇓	*iP*	**Pn**	**02 24 50.4**	**-0.1**
AC06				*eS*	**Sb**	**02 25 02.7**	**+0.1**
AC06				IAML		02 25 04.3	
	comp=E,3μm,0.2s						
GO03	**Copiapo**	**1.22**	**145**	*i* P	**Pg**	**02 24 54.6**	**+0.8**
GO03				*eS*	**Sn**	**02 25 11.2**	**+0.3**
GO03				IAML		02 25 15.9	
	comp=E,2μm,0.5s						
GO03	**Copiapo**	**1.22**	**145**	*i* P	**Pg**	**02 24 54.5**	**+0.8**
GO03				*eS*	**Sn**	**02 25 12.0**	**+1.1**
GO03				IAML		02 25 13.5	
	comp=Z,1μm,0.3s						
AC04	**Llanos de Chal**	**1.61**	**182**	*eP*	**Pn**	**02 24 58.8**	**-0.5**
AC04	**Llanos de Chal**	**1.61**	**182**	*i* P	**Pn**	**02 24 58.2**	**-1.1**
AC04				IAML		02 25 29.2	
	comp=Z,261nm,0.7s						
AC02	**Maricunga**	**1.71**	**99**⇓	*iP*	**Pg**	**02 25 03.6**	**+0.6**
AC02				IAML		02 25 28.1	
	comp=N,1μm,0.2s						
AC02	**Maricunga**	**1.71**	**99**	*i* P	**Pg**	**02 25 03.6**	**+0.6**
AC02				*eS*	**Sg**	**02 25 25.7**	**+0.5**
AC02				IAML		02 25 29.6	
	comp=Z,564nm,0.6s						
GO02	**Mina Guanaco**	**1.91**	**43**⇑	*iP*	**Pb**	**02 25 05.7**	**-0.1**
GO02	**Mina Guanaco**	**1.91**	**43**	*i* P	**Pb**	**02 25 05.1**	**-0.6**
GO02				*eS*	**Sg**	**02 25 32.1**	**+0.3**
GO02				IAML		02 25 40.2	
	comp=Z,736nm,0.3s						
PB14	**IPOC Station P**	**2.03**	**16**	*eP*	**Pn**	**02 25 05.3**	**0.0**
PB14				IAML		02 25 42.4	
	comp=E,517nm,0.4s						
PB14	**IPOC Station P**	**2.03**	**16**	*i* P	**Pn**	**02 25 05.2**	**-0.1**
PB14				*eS*	**Sg**	**02 25 36.7**	**+1.3**
PB14				IAML		02 25 43.9	
	comp=Z,550nm,0.5s						
AC05	**El Transito**	**2.34**	**164**	*eP*	**Pb**	**02 25 11.2**	**-1.7**
AC05				IAML		02 25 49.8	
	comp=N,537nm,0.5s						
AC05	**El Transito**	**2.34**	**164**	*i* P	**Pn**	**02 25 10.6**	**+1.2**
AC05				*eS*	**Sg**	**02 25 44.8**	**-0.6**
AC05				IAML		02 25 48.8	
	comp=Z,447nm,0.8s						
LCO	**Las Campanas**	**2.43**	**173**	*eP*	**Pn**	**02 25 11.5**	**+0.7**
LCO	**Las Campanas**	**2.43**	**173**	*i* P	**Pn**	**02 25 11.0**	**+0.2**
LCO				IAML		02 25 50.9	
	comp=Z,437nm,0.3s						
CO05	**La Serena**	**3.33**	**183**	IAML		02 26 21.7	
	comp=N,370nm,0.5s						
TINO	**Tinogasta**	**3.40**	**116**	*i* P	**Pb**	**02 25 28.8**	**-2.3**
TINO				*eS*	**Sg**	**02 26 17.6**	**-2.0**
CO01	**Juntas del Tor**	**3.48**	**167**	*eP*	**Pn**	**02 25 27.4**	**+2.3**
CO01				IAML		02 26 25.1	
	comp=E,120nm,0.4s						
CO01	**Juntas del Tor**	**3.48**	**167**	*i* P	**Pn**	**02 25 27.2**	**+2.1**
CO01				IAML		02 26 25.0	
	comp=Z,112nm,0.6s						
GO04	**Tololo Observa**	**3.58**	**177**	*eP*	**Pn**	**02 25 28.6**	**+2.0**
PB05	**IPOC Station P**	**3.79**	**11**	*eP*	**Pn**	**02 25 28.5**	**-0.8**
PB05	**IPOC Station P**	**3.79**	**11**	*i* P	**Pn**	**02 25 28.1**	**-1.2**
PB05				IAML		02 26 36.3	
	comp=Z,81nm,1.0s						
PB06	**IPOC Station P**	**4.08**	**19**	*eP*	**Pn**	**02 25 33.3**	**-0.1**
PB06	**IPOC Station P**	**4.08**	**19**	*i* P	**Pn**	**02 25 33.1**	**-0.2**
PB06				IAML		02 26 44.2	
	comp=Z,174nm,1.1s						
CO06	**Fray Jorge**	**4.11**	**187**	*eP*	**Pn**	**02 25 32.2**	**-1.5**
CO03	**El Pedregal**	**4.25**	**176**	*eP*	**Pn**	**02 25 36.4**	**+0.8**
CO03	**El Pedregal**	**4.25**	**176**	*i* P	**Pn**	**02 25 35.9**	**+0.3**
CO03				IAML		02 26 50.8	
	comp=Z,110nm,0.6s						
CO02	**Combarbal**	**4.60**	**180**	*i* P	**Pn**	**02 25 40.7**	**+0.2**
CO02				IAML		02 26 59.4	
	comp=Z,288nm,0.6s						
PB03	**IPOC Station P**	**4.66**	**15**	*i* P	**Pn**	**02 25 40.2**	**-1.2**
PB03				IAML		02 27 05.5	
	comp=Z,163nm,0.5s						
PB07	**IPOC Station P**	**4.95**	**12**	*i* P	**Pn**	**02 25 43.9**	**-1.4**
PB07				IAML		02 27 08.4	
	comp=Z,104nm,0.5s						
PB09	**IPOC Station P**	**5.04**	**19**	*i* P	**Pn**	**02 25 46.9**	**+0.4**
PB09				IAML		02 27 15.2	
	comp=Z,177nm,0.8s						
PB02	**IPOC Station P**	**5.34**	**11**	*i* P	**Pn**	**02 25 49.4**	**-1.2**
PB02				IAML		02 27 30.9	
	comp=Z,87nm,0.4s						

NEIC 17 02:30:48.7±2.6, 6°.64N±0°.09×124°.73E±0°.08, h10km±1km, mb4.5/9, Error ellipse: s-maj=18.1km s-min=10.3km az=323.0
IDC 17 02:30:48.1±1.4, 6°.27N×124°.73E, h0km, mb3.6/4, mbtmp3.6/4, MS3.9/2, Error ellipse: s-maj=32.5km s-min=12.3km az=123.0
DJA 17 02:30:51.6±0.4, 6°N±3°×12°5E±°, h10km, M4.6/11, mB5.2/5, mb4.6/11, MLv4.5/11, Mw(mB)4.6/5

ISC 17 02:30:51.8±0.7, 6°57N±0°07×124°71E±0°07, h36km, n28, σ1§43/27, mb4.2/9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.00**	**60**	Pg	**Pn**	**02 31 09.4**	**+0.1**
	134nm,0.3s,baz=75,slow=10,SNR=8.5						
DAV				Lg	Lg	02 31 26.5	
	109nm,0.3s,baz=129,slow=23,SNR=16						
DAV				LR	LR	02 31 57.8	
	comp=Z,278nm,18.4s,baz=152,slow=60						
DAV	**Davao City (W)**	**1.00**	**60**		**Pn**	**02 31 08.2**	**-1.0**
SGSI	**Sangihe**	**2.98**	**164**	P	**Pn**	**02 31 36.2**	**-0.3**
SGSI				S	**Sn**	**02 32 10.1**	**-0.9**
MYLDM	**Lahad Datu**	**6.33**	**258**		**Pn**	**02 32 22.7**	**+0.2**
MRSI	**Marisa**	**6.65**	**205**	P	**Pn**	**02 32 25.9**	**-1.1**
TOLI2	**Tolitoli**	**6.69**	**216**		**Pn**	**02 32 24.3**	**-3.2**
LUWI	**Luwuk**	**7.80**	**194**		**Pn**	**02 32 43.9**	**+1.1**
LUWI	**Luwuk**	**7.80**	**194**	P	**Pn**	**02 32 43.6**	**+0.8**
	2μm106nm,1.0s						
MPSI	**Mapaga**	**7.83**	**218**	P	**Pn**	**02 32 44.5**	**+1.3**
APSI	**Ampana**	**8.03**	**202**	P	**Pn**	**02 32 46.8**	**+0.8**
	0.2nm2μm54nm,0.7s						
SANI	**Sanana**	**8.66**	**171**	P	**Pn**	**02 32 53.5**	**-1.0**
	12nm,0.8s						
NLAI	**Namlea**	**10.03**	**166**	P	**Pn**	**02 33 13.3**	**-0.1**
	38nm,1.0s						
KNRA	**Kununurra**	**22.46**	**170**	P	**P**	**02 35 49.4**	**+1.4**
KNRA				IAmb	IAmb	02 35 50.2	
	comp=Z,9.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.53**	**178**	P	**P**	**02 36 07.3**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=7.7,slow=11,SNR=6.1						
	comp=Z,2.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**24.53**	**178**	P	**P**	**02 36 07.5**	**-0.5**
JNU	**Nakatsue**	**27.04**	**11**	LR	LR	02 49 02.6	
	comp=Z,55nm,18.2s,baz=1.5,slow=40						
WRA	**Warramunga Arr**	**28.00**	**160**	P	**P**	**02 36 38.8**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=332,slow=10,SNR=5.5						
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**28.00**	**160**	P	**P**	**02 36 39.5**	**+0.1**
WR8	**Warramunga Arr**	**28.07**	**160**	P	**P**	**02 36 40.0**	**0.0**
WR8				IAmb	IAmb	02 37 17.3	
	comp=Z,7.7nm,1.4s						
ASAR	**Alice Springs**	**31.36**	**164**	P	**P**	**02 37 07.4**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=345,slow=6.9,SNR=7.3						
	comp=Z,0.3nm,0.5s						
BBOO	**Buckleboo**	**40.62**	**165**	P	**P**	**02 38 28.7**	**+0.3**
BBOO				IAmb	IAmb	02 38 31.2	
	comp=Z,8.1nm,1.1s						
WMQ	**Urumqi**	**49.26**	**325**	*eP*	**P**	**02 39 37.1**	**+0.1**
MKAR	**Makanchi Array**	**54.09**	**325**	P	**P**	**02 40 16.9**	**+3.9**
	comp=Z,0.5nm,0.7s,baz=126,slow=8.0,SNR=1.5						
	comp=Z,0.5nm,0.7s						
KK31	**Karatay Array**	**59.80**	**317**	P	**P**	**02 40 51.3**	**-2.2**
KK31				IAmb	IAmb	02 41 02.8	
	comp=Z,6.2nm,0.9s						
BKZ	**Black Stump Fm**	**66.03**	**138**	P	**P**	**02 41 36.5**	**+1.5**
AB31	**Akbulak array**	**68.69**	**320**	P	**P**	**02 41 50.6**	**-1.0**
AB31				IAmb	IAmb	02 42 28.3	
	comp=Z,7.1nm,1.4s						
BELG	**Belogornoye**	**76.94**	**322**	LR	LR	03 18 45.7	
	comp=Z,368nm,20.7s,baz=96,slow=37						
G24K	**Hadweenzic Riv**	**83.15**	**24**	P	**P**	**02 43 14.1**	**+0.3**

IDC 17 02:36:15.9±3.2, 36°.45N×71°.17E, h192km±29km, mb3.5/14, mbtmp4.0/20, Error ellipse: s-maj=21.4km s-min=14.8km az=30.0
MOS 17 02:36:17.1±0.7, 36°.63N×71°.05E, h210km, mb4.0/7, Error ellipse: s-maj=13.5km s-min=5.8km az=89.0
NEIC 17 02:36:18.2±1.6, 36°.64N±0°.07×70°.99E±0°.10, h209km±7km, mb4.3/13, Error ellipse: s-maj=11.2km s-min=9.7km az=81.0
NNC 17 02:36:19.9±3.2, 36°.90N×70°.78E, h174km±45km, mb3.3, mpv4.2, Error ellipse: s-maj=30.6km s-min=18.4km az=25.0

ISC 17 02:36:16.5±0.5, 36°.57N±0°.05×71°.04E±0°.06, h188km, n101, σ1§73/111, mb4.0/20, 9C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.49**	**347**		**Pn**	**02 37 01.6**	**+2.0**
CHGR	**Chuyangaron**	**2.56**	**325**		**Pn**	**02 37 02.2**	**+1.8**
CHGR	**Chuyangaron**	**2.56**	**325**	PN	**Pn**	**02 37 02.2**	**+1.8**
KBL	**Kabul**	**2.60**	**219**		**Pn**	**02 37 04.1**	**+3.1**
KBL	**Kabul**	**2.60**	**219**	PN	**Pn**	**02 37 04.1**	**+3.1**
DRK	**Karamyk**	**2.96**	**11**		**Pn**	**02 37 07.5**	**+2.2**
DRK	**Karamyk**	**2.96**	**11**	PN	**Pn**	**02 37 07.5**	**+2.2**
NIL	**Nilore**	**3.43**	**147**		**Pn**	**02 37 14.3**	**+3.5**
NIL	**Nilore**	**3.43**	**147**	PN	**Pn**	**02 37 14.3**	**+3.5**
KSH	**Kashi**	**4.88**	**51**	Pn	**Pn**	**02 37 26.4**	**-2.7**
KSH				Sn	Sn	02 38 15.8	-10
KSH				smax	smax		
	comp=N,75nm,0.6s						
KSH				smax	smax		
	comp=E,89nm,0.8s						
ARSB	**Arslanbob**	**4.98**	**17**		**Pn**	**02 37 31.1**	**+0.7**
ARSB	**Arslanbob**	**4.98**	**17**	PN	**Pn**	**02 37 31.1**	**+0.7**
JMU	**Jammu**	**4.99**	**139**	*eS*	**Sn**	**02 38 27.6**	**-1.1**
JMU				IAML		02 38 31.1	
	comp=N,725nm,0.7s						
JMU				IAML		02 38 31.8	
	comp=E,398nm,0.7s						
TSSA	**Tissa**	**5.62**	**130**	*eP*	**Pn**	**02 37 40.4**	**+1.5**
TSSA				*eS*	**Sn**	**02 38 42.1**	**-1.6**
TSSA				IAML		02 38 45.0	
	comp=E,457nm,0.4s						
TSSA				IAML		02 38 47.0	
	comp=N,549nm,0.0s						
THN	**Thein Dam**	**5.65**	**136**	*eP*	**Pn**	**02 37 41.4**	**+2.4**
THN				*eS*	**Sn**	**02 38 44.4**	**+0.4**
THN				IAML		02 38 45.5	
	comp=E,452nm,0.4s						
THN				IAML		02 38 47.5	
	comp=N,314nm,0.4s						
TLWR	**Talawar**	**6.14**	**137**	*eS*	**Sn**	**02 38 55.3**	**-0.4**
UCH	**Uchtor**	**6.25**	**24**	P	**Pn**	**02 37 48.1**	**+0.9**
	SNR=33						
EKS2	**Erkin-Say**	**6.44**	**18**	P	**Pn**	**02 37 49.5**	**+0.2**
	SNR=21						
KK31	**Karatay Array**	**6.54**	**357**		**Pn**	**02 37 50.9**	**+0.4**
KK31	**Karatay Array**	**6.54**	**357**	⇓P	**Pn**	**02 37 50.8**	**+0.4**
	comp=N,18nm,0.3s,baz=179,slow=12,SNR=348						
KK31				S	**Sn**	**02 38 59.7**	**-5.2**
	comp=N,18nm,0.4s,baz=185,slow=19,SNR=12						
KK31	**Karatay Array**	**6.54**	**357**	PN	**Pn**	**02 37 50.9**	**+0.4**
KKAR	**Karatay Array**	**6.54**	**357**		**Pn**	**02 37 50.8**	**+0.3**
KKAR	**Karatay Array**	**6.54**	**357**	PN	**Pn**	**02 37 50.8**	**+0.3**
AAK	**Ala-Archa**	**6.62**	**23**	P	**Pn**	**02 37 52.6**	**+1.0**
	comp=N,12nm,0.3s,baz=178,slow=5.9,SNR=65						
AAK				S	**Sn**	**02 39 04.5**	**-2.5**
	comp=N,7.4nm,0.4s,baz=317,slow=22,SNR=9.2						
AAK	**Ala-Archa**	**6.62**	**23**	P	**Pn**	**02 37 52.6**	**+1.0**
	SNR=24						
AAK	**Ala-Archa**	**6.62**	**23**	⇑P	**Pn**	**02 37 52.3**	**+0.6**
	comp=N,3.7nm,0.5s						
AAK				⇓S	**Sn**	**02 39 06.0**	**-1.0**
	comp=N,9.5nm,0.6s						
AAK	**Ala-Archa**	**6.62**	**23**	*d* PN	**Pn**	**02 37 52.1**	**+0.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KBK	**Karagaybulak**	**6.78**	**25**	P	**Pn**	**02 37 55.2**	**+1.3**
	SNR=18						
BHK	**Bhakra**	**6.81**	**137**	IAML		02 39 12.6	
	comp=N,128nm,0.3s						
BHK				IAML		02 39 12.9	
	comp=E,158nm,0.2s						
BHK				*eS*	**Sn**	**02 39 15.6**	**+4.2**
CHMS	**Chumysh**	**7.03**	**23**	P	**Pn**	**02 37 57.3**	**+0.4**
	SNR=11						
USP	**Ospenovka**	**7.20**	**21**	P	**Pn**	**02 37 59.9**	**+0.8**
	SNR=14						
TKM2	**Tokmak 2**	**7.25**	**28**	P	**Pn**	**02 38 00.9**	**+0.9**
	SNR=7.8						
TARG	**Taragay, Kyrgy**	**7.36**	**44**		**Pn**	**02 38 01.9**	**+0.3**
TARG	**Taragay, Kyrgy**	**7.36**	**44**	PN	**Pn**	**02 38 01.9**	**+0.3**
SMLA	**Simla**	**7.44**	**135**	*eP*	**Pn**	**02 38 03.5**	**+1.1**
SMLA				*eS*	**Sn**	**02 39 23.5**	**-2.9**
SMLA				IAML		02 39 27.8	
	comp=E,164nm,0.4s						
SMLA				IAML		02 39 28.4	
	comp=N,152nm,0.3s						
KST	**Kastek**	**7.49**	**29**	Pg	**Pn**	**02 38 03.9**	**+0.8**
	comp=N,18nm,0.5s						
KST				Lg	Lg	02 39 23.2	
	comp=N,12nm,0.6s						
HNLY	**HANLEY**	**7.55**	**118**	*eP*	**Pn**	**02 38 05.8**	**+1.4**
HNLY				*eS*	**Sn**	**02 39 28.8**	**-0.9**
HNLY				IAML		02 39 31.4	
	comp=N,99nm,0.5s						
HNLY				IAML		02 39 37.5	
	comp=E,13nm,1.1s						
DGS	**Degeres**	**7.59**	**27**	P	**Pn**	**02 38 04.7**	**+0.4**
	comp=E,5.2nm,0.4s						
IZV	**Izvestkoviy**	**7.75**	**32**	P	**Pn**	**02 38 07.7**	**+1.2**
	comp=E,12nm,0.6s						
MTBS	**Maitube**	**7.75**	**31**	P	**Pn**	**02 38 07.3**	**+0.9**
	comp=E,14nm,0.7s						
KRBS	**Karabastau**	**7.95**	**25**	P	**Pn**	**02 38 08.8**	**-0.3**
	comp=E,4.3nm,0.7s						
KTBS	**Karatobe**	**8.34**	**29**	P	**Pn**	**02 38 14.6**	**+0.5**
	comp=E,1.8nm,0.4s						
JOSI	**Joshimath**	**9.30**	**128**	*eP*	**Pn**	**02 38 28.2**	**+1.3**
JOSI				*eS*	**Sn**	**02 40 06.6**	**-4.3**
JOSI				IAML		02 40 13.1	
	comp=E,81nm,0.6s						
JOSI				IAML		02 40 14.5	
	comp=N,85nm,0.3s						
KUDL	**Kundal**	**9.58**	**150**	*eP*	**Pn**	**02 38 30.2**	**-0.2**
KUDL				*eS*	**Sn**	**02 40 10.8**	**-6.6**
KUDL				IAML		02 40 11.7	
	comp=E,432nm,0.6s						
KUDL				IAML		02 40 13.2	
	comp=N,179nm,0.3s						
MAKZ	**Makanchi**	**13.08**	**35**	Pn	**Pn**	**02 39 15.5**	**+0.3**
MAKZ	**Makanchi**	**13.08**	**35**	P	**Pn**	**02 39 15.5**	**+0.3**
MK31	**Makanchi Array**	**13.21**	**36**	P	**P**	**02 39 20.9**	**+0.8**
	comp=N,1.5nm,0.6s,baz=213,slow=9.4,SNR=5.7						
MK31	**Makanchi Array**	**13.21**	**36**	P	**P**	**02 39 21.0**	**+0.8**
MKAR	**Makanchi Array**	**13.21**	**36**	P	**Pn**	**02 39 15.9**	**-1.0**
	comp=N,0.5nm,0.5s,baz=213,slow=8.7,SNR=6.6						
BHPL	**Bhopal**	**14.39**	**156**	*eP*	**P**	**02 39 36.2**	**+2.8**
BHPL				*eS*	**Sn**	**02 42 05.2**	**-7.1**
AB31	**Akbulak array**	**15.04**	**331**	P	**Pn**	**02 39 38.6**	**-0.9**
AB31	**Akbulak array**	**15.04**	**331**	⇓P	**Pn**	**02 39 38.7**	**-0.7**
	comp=N,3.2nm,0.5s,baz=143,slow=13,SNR=123						
AB31	**Akbulak array**	**15.04**	**331**	P	**Pn**	**02 39 38.7**	**-0.7**
ABKAR	**Akbulak array**	**15.04**	**331**	P	**Pn**	**02 39 39.3**	**-0.1**
KURBB	**Kurchatov Arra**	**15.04**	**19**	P	**Pn**	**02 39 37.9**	**-1.6**
	comp=N,0.9nm,0.3s,baz=202,slow=11,SNR=2.1						
KURK	**Kurchatov**	**15.15**	**19**⇑	*eP*	**P**	**02 39 42.4**	**+0.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
EVN	**Everest**	**15.85**	**118**	P	**P**	**02 39 50.9**	**+0.7**
EVN				IAmb	IAmb	02 39 51.6	
	comp=Z,12nm,0.6s						
BVA0	**Borovoye Array**	**16.46**	**359**	⇑P	**P**	**02 39 56.0**	**0.0**
	comp=Z,3.3nm,1.0s,baz=156,slow=9.1,SNR=10						
BVA0	**Borovoye Array**	**16.46**	**359**	P	**P**	**02 39 56.0**	**0.0**
BVAR	**Borovoye Array**	**16.46**	**359**	P	**P**	**02 39 56.6**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=163,slow=10,SNR=10						
BORK	**Borovoye**	**16.48**	**358**⇑	*eP*	**P**	**02 39 56.8**	**+0.6**
BORK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKTO	**Aktyubinsk**	**16.73**	**330**	P	**P**	**02 39 59.8**	**+0.8**
	comp=Z,2.9nm,0.4s,baz=142,slow=8.4,SNR=13						
DGZ	**Jazzator, Alta**	**17.70**	**37**⇓	*eP*	**P**	**02 40 10.8**	**+1.0**
ZAA0	**Zalesovo Array**	**19.84**	**25**	P	**P**	**02 40 32.6**	**-0.1**
ZALV	**Zalesovo Beam**	**19.84**	**25**	P	**P**	**02 40 32.6**	**-0.1**
	comp=Z,2.6nm,0.3s,baz=222,slow=11,SNR=17						
ZALV	**Zalesovo Beam**	**19.84**	**25**	P	**P**	**02 40 32.2**	**-0.4**
ARTI	**Arti**	**21.59**	**341**	P	**P**	**02 40 51.6**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=219,slow=3.5,SNR=4.7						
	comp=Z,2.5nm,0.7s						
ARTI	**Arti**	**21.59**	**341**	*c iP*	**P**	**02 40 52.0**	**+0.8**
ARTI				*PP	**pP**	**02 41 22.1**	**-2.0**
ARTI						02 41 32.2	
ARTI				S	**S**	**02 44 39.3**	**+1.7**
ARTI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PZH	**PanZhiHua**	**27.92**	**102**	P	**P**	**02 41 51.8**	**+2.5**
BRTR	**Keskin Array B**	**29.44**	**288**	P	**P**	**02 42 04.2**	**+1.5**
	comp=Z,3.0nm,0.5s,baz=101,slow=10,SNR=2.4						
	comp=Z,0.3nm,0.5s						
OBN	**Obninsk**	**29.91**	**319**⇑	*eP*	**P**	**02 42 06.2**	**-0.1**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**31.71**	**70**	*eP*	**P**	**02 42 23.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,4.7s						
AKASG	**Malin Array Be**	**32.93**	**309**	P	**P**	**02 42 33.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=82,slow=6.6,SNR=5.0						
	comp=Z,1.4nm,0.7s						
AKASG	**Malin Array Be**	**32.93**	**309**	*ce* P	**P**	**02 42 33.2**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FIA1	**FINESS Array S**	**37.44**	**326**	P	**P**	**02 43 11.8**	**+0.6**
FINES	**FINESS Array B**	**37.44**	**326**	P	**P**	**02 43 11.7**	**+0.4**
	comp=Z,1.7nm,0.4s,baz=121,slow=9.3,SNR=27						
	comp=Z,1.7nm,0.4s						
ARCES	**ARCESS Array B**	**41.09**	**338**	P	**P**	**02 43 41.9**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=120,slow=8.6,SNR=28						
	comp=Z,1.6nm,0.4s						
ARCES	**ARCESS Array B**	**41.09**	**338**	P	**P**	**02 43 42.0**	**+0.6**
ARCES				IAmb	IAmb	02 43 46.6	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**41.09**	**338**	P	**P**	**02 43 42.0**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,12nm,1.4s						
HFS	**Hagfors**	**43.03**	**322**	P	**P**	**02 43 57.3**	**+0.2**
	comp=Z,6.1nm,0.5s,baz=94,slow=12,SNR=42						
	comp=Z,6.1nm,0.5s						
NC602	**NORSAR Array S**	**44.16**	**323**	P	**P**	**02 44 05.8**	**-0.2**
NC602				IAmb	IAmb	02 44 21.7	
	comp=Z,12nm,1.2s						
NB2	**NORSAR Subarra**	**44.34**	**323**	P	**P**	**02 44 07.4**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.34**	**323**	P	**P**	**02 44 07.3**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=104,slow=7.1,SNR=18						
	comp=Z,2.7nm,0.6s						
TIXI	**Tiksi**	**45.69**	**22**⇑	*eP*	**P**	**02 44 17.8**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SPITS	**Spitsbergen Ar**	**47.43**	**347**	P	**P**	**02 44 32.3**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=95,slow=7.2,SNR=11						
	comp=Z,0.9nm,0.4s						
MEM	**Membach**	**47.64**	**309**	*dP*	**P**	**02 44 32.6**	**-0.8**

GCG ***17*** *02:59:57.9±0.9, 13°.41N×90°.49W, h17km±10km, MD3.7, ML3.6*
CATAC ***17*** *02:59:58.5±0.6, 13°.N±4°.×9°.0W±°, h26km±3km, M2.8/10, MLv2.8/10, Error ellipse: s-maj=8.2km s-min=3.6km az=20.1, confirmed*

ISC 17 02:59:56.8±1.5, 13°.33N±0°.08×90°.39W±0°.04, h10km, n37, σ1§07/37, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.63**	**35**	P	**Pb**	**03 00 10.6**	**+0.7**
FAME	**Alcaldia de Sa**	**0.63**	**35**	S	**Sb**	**03 00 19.7**	**+0.9**
NUBE	**Las Nubes**	**0.83**	**46**	*e*P	**Pg**	**03 00 13.5**	**+0.8**
NUBE	**Las Nubes**	**0.83**	**46**	P	**Pb**	**03 00 13.7**	**+0.3**
NUBE	**Las Nubes**	**0.83**	**46**	S	**Sb**	**03 00 25.3**	**+0.7**
PCG5	**San Vicente Pa**	**0.89**	**1**	*e*P	**Pb**	**03 00 15.8**	**+1.4**
LOAL	**Lomas de Alarc**	**0.89**	**42**	P	**Pg**	**03 00 14.8**	**+0.7**
LOAL	**Lomas de Alarc**	**0.89**	**42**	S	**Sb**	**03 00 26.8**	**+0.3**
CEVE	**Cerro Verde**	**0.90**	**56**	P	**Pb**	**03 00 15.0**	**+0.4**
CEVE	**Cerro Verde**	**0.90**	**56**	S	**Sb**	**03 00 27.8**	**+1.0**
SLOZ	**Alcaldia de Sa**	**0.91**	**40**	S	**Sg**	**03 00 25.0**	**-1.3**
FG16	**Alotenango, Sa**	**0.95**	**353**	*e*P	**Pn**	**03 00 18.4**	**+2.0**
FG16				IAML		03 00 36.0	
	comp=E,1μm,0.3s						
JAYA	**Jayaque - finc**	**0.97**	**70**	P	**Pg**	**03 00 15.8**	**+0.2**
JAYA	**Jayaque - finc**	**0.97**	**70**	S	**Sb**	**03 00 29.4**	**+0.5**
UNIC	**Universidad Ca**	**1.05**	**51**	S	**Sg**	**03 00 30.6**	**0.0**
UNIC	**Universidad Ca**	**1.05**	**51**	P	**Pg**	**03 00 16.9**	**-0.1**
LALI	**Alcalda de L**	**1.05**	**81**	P	**Pb**	**03 00 17.6**	**+0.5**
LALI	**Alcalda de L**	**1.05**	**81**	S	**Sb**	**03 00 31.4**	**+0.4**
CEDA	**San Andres**	**1.08**	**64**	S	**Sb**	**03 00 32.3**	**+0.5**
CEDA	**San Andres**	**1.08**	**64**	P	**Pg**	**03 00 17.4**	**-0.1**
PMON	**Piamonte**	**1.12**	**70**	S	**Sb**	**03 00 33.2**	**+0.4**
ESSG	**Sabana Grande**	**1.14**	**338**	*e*P	**Pb**	**03 00 16.7**	**-1.8**
UEES	**Universidad Ev**	**1.19**	**71**	S	**Sb**	**03 00 35.1**	**+0.2**
UEES	**Universidad Ev**	**1.19**	**71**	P	**Pb**	**03 00 19.0**	**-0.5**
LOMA	**Loma Larga**	**1.23**	**75**	P	**Pb**	**03 00 20.2**	**0.0**
STG5	**El Palmar, Qui**	**1.42**	**319**	*i* P	**Pg**	**03 00 25.5**	**+1.5**
MTO3	**Montecristo**	**1.46**	**43**	P	**Pn**	**03 00 22.9**	**-0.6**
MTO3	**Montecristo**	**1.46**	**43**	S	**Sn**	**03 00 40.8**	**-2.0**
PAVA	**Las Pavas**	**1.47**	**75**	P	**Pn**	**03 00 23.7**	**+0.3**
PAVA	**Las Pavas**	**1.47**	**75**	S	**Sn**	**03 00 42.2**	**-0.5**
TECO	**Alcaldia de Te**	**1.58**	**82**	S	**Sn**	**03 00 44.9**	**-0.6**
UESV	**Universidad de**	**1.59**	**79**	S	**Sn**	**03 00 45.7**	**0.0**
ESQI	**Esquipulas**	**1.59**	**40**	S	**Sn**	**03 00 43.8**	**-2.2**
SCLA	**Alcaldia de Sa**	**1.66**	**77**	P	**Pn**	**03 00 26.0**	**0.0**
SCLA	**Alcaldia de Sa**	**1.66**	**77**	S	**Sn**	**03 00 46.8**	**-0.6**
APG	**El Apazote**	**1.67**	**358**	*i* P	**Pn**	**03 00 26.4**	**+0.1**
RTAL	**Retalhuleu**	**1.74**	**313**	S	**Sn**	**03 00 46.2**	**-3.1**

IDC ***17*** *03:08:31.3±0.7, 14°.97S×66°.95E, h0km, mb4.0/14, mbtmp4.0/14, MS3.7/30, Error ellipse: s-maj=26.2km s-min=20.3km az=53.0*
NEIC ***17*** *03:08:33.6±2.1, 15°.0S±0°.1×66°.7E±0°.2, h10km±1km, mb4.6/6, Error ellipse: s-maj=27.6km s-min=19.4km az=302.0*

ISC 17 03:08:34.0±0.6, 14°.9S±0°.1×66°.9E±0°.1, h16km, n58, σ1§21/27, mb4.2/17, MS3.7/30, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.10**	**38**	T	T	03 20 02.8	
	baz=216,slow=75,SNR=672						
H08S2	**Diego Garcia H**	**9.11**	**38**	T	T	03 20 06.8	
	baz=216,slow=75,SNR=670						
H08S3	**Diego Garcia H**	**9.12**	**38**	T	T	03 20 06.3	
	baz=216,slow=75,SNR=671						
PALK	**Pallekele**	**25.98**	**33**	LR	LR	03 21 59.8	
	comp=Z,184nm,21.0s,baz=210,slow=31						
H04N2	**CROZET ISLANDS**	**33.61**	**199**	T	T	03 50 38.0	
	baz=28,slow=75,SNR=67						
H04N1	**CROZET ISLANDS**	**33.61**	**199**	T	T	03 50 38.4	
	baz=28,slow=75,SNR=63						
H04N3	**CROZET ISLANDS**	**33.63**	**199**	T	T	03 50 37.2	
	baz=28,slow=75,SNR=83						
PSI	**Prapat**	**36.32**	**64**	LR	LR	03 27 54.5	
	comp=Z,166nm,19.8s,baz=232,slow=32						
MATP	**Matopo**	**36.88**	**256**	LR	LR	03 28 50.8	
	comp=Z,123nm,20.5s,baz=52,slow=33						
LSZ	**Lusaka**	**37.29**	**264**	LR	LR	03 29 51.2	
	comp=Z,290nm,18.7s,baz=122,slow=34						
MBAR	**Mbarara**	**38.41**	**288**	LR	LR	03 29 59.8	
	comp=Z,141nm,18.2s,baz=124,slow=33						
LBTB	**Lobatse**	**39.91**	**249**	LR	LR	03 29 28.0	
	comp=Z,137nm,20.1s,baz=77,slow=31						
LBTB	**Lobatse**	**39.91**	**249**	P	**P**	**03 16 05.0**	**-2.7**
BOSA	**Boshof**	**40.75**	**243**	LR	LR	03 29 37.4	
	comp=Z,167nm,19.1s,baz=40,slow=31						
BRDH	**Bariadhala**	**44.57**	**34**	LR	LR	03 36 53.2	
	comp=Z,81nm,18.4s,baz=257,slow=38						
CMAR	**Chiang Mai Arr**	**45.83**	**45**	P	**P**	**03 16 54.9**	**-0.6**
	0.8nm,0.3s,baz=245,slow=10,SNR=4.1						
CMAR				LR	LR	03 34 05.7	
	comp=Z,88nm,20.0s,baz=230,slow=34						
	0.8nm,0.3s						
H01W3	**Cape Leeuwin H**	**46.78**	**124**	T	T	04 06 57.8	
	baz=282,slow=75,SNR=52						
H01W2	**Cape Leeuwin H**	**46.78**	**124**	T	T	04 07 01.4	
	baz=282,slow=75,SNR=70						
H01W1	**Cape Leeuwin H**	**46.80**	**124**	T	T	04 06 58.1	
	baz=282,slow=75,SNR=63						
TSUM	**Tsumeb**	**47.17**	**258**	LR	LR	03 35 09.5	
	comp=Z,73nm,20.3s,baz=120,slow=34						
MAW	**Mawson**	**52.70**	**182**	LR	LR	03 34 32.9	
	comp=Z,51nm,21.9s,baz=9.0,slow=30						
KAPI	**Kappang**	**52.91**	**85**	LR	LR	03 37 07.4	
	comp=Z,67nm,21.6s,baz=266,slow=32						
EIL	**Elat**	**53.97**	**325**	LR	LR	03 38 01.3	
	comp=Z,29nm,20.2s,baz=181,slow=33						
BATI	**Baumata**	**55.54**	**92**	LR	LR	03 38 10.2	
	comp=Z,81nm,21.9s,baz=336,slow=32						
FITZ	**Fitzroy Crossi**	**56.26**	**102**	LR	LR	03 39 02.3	
	comp=Z,93nm,20.6s,baz=236,slow=33						
AAK	**Ala-Archa**	**57.70**	**7**	LR	LR	03 40 58.3	
	comp=Z,43nm,19.7s,baz=218,slow=34						
GNI	**Garni**	**58.52**	**340**	LR	LR	03 42 50.2	
	comp=Z,24nm,18.6s,baz=104,slow=35						
BRTR	**Keskin Array B**	**62.85**	**332**	P	**P**	**03 18 57.7**	**+0.3**
	0.5nm,0.9s,baz=134,slow=3.6,SNR=3.8						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**62.98**	**12**	P	**P**	**03 19 00.3**	**+0.4**
	0.4nm,0.6s,baz=191,slow=8.2,SNR=1.3						
MKAR				LR	LR	03 44 39.7	
	comp=Z,48nm,18.4s,baz=175,slow=34						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**62.98**	**12**	P	**P**	**03 19 00.2**	**+0.3**
ASAR	**Alice Springs**	**63.41**	**109**	P	**P**	**03 19 02.5**	**-0.8**
	0.4nm,0.6s,baz=269,slow=6.1,SNR=8.1						
ASAR				LR	LR	03 44 06.4	
	comp=Z,67nm,18.6s,baz=280,slow=34						
	0.4nm,0.6s						
ABKAR	**Akbulak array**	**64.19**	**355**	P	**P**	**03 19 08.8**	**+1.0**
WRA	**Warramunga Arr**	**64.22**	**105**	P	**P**	**03 19 08.7**	**0.0**
	2.0nm,1.1s,baz=264,slow=5.8,SNR=6.7						
	2.0nm,1.1s						
WB0	**Warramunga Arr**	**64.29**	**105**	P	**P**	**03 19 09.2**	**0.0**
WB0				IAmb	IAmb	03 19 39.2	
	comp=Z,5.4nm,1.3s						
WR8	**Warramunga Arr**	**64.37**	**105**	P	**P**	**03 19 10.1**	**+0.4**
WR8				IAmb	IAmb	03 19 22.2	
	comp=Z,5.6nm,1.2s						
KURBB	**Kurchatov Arra**	**66.06**	**8**	P	**P**	**03 19 19.6**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=198,slow=5.0,SNR=4.0						
KURBB				LR	LR	03 46 10.8	
	comp=Z,43nm,18.2s,baz=175,slow=34						
	comp=Z,0.6nm,0.7s						
BVAR	**Borovoye Array**	**67.74**	**2**	P	**P**	**03 19 31.1**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=182,slow=8.1,SNR=5.3						
BVAR				LR	LR	03 47 08.8	
	comp=Z,28nm,21.9s,baz=180,slow=34						
	comp=Z,0.9nm,0.7s						
STKA	**Stephens Creek**	**69.46**	**119**	P	**P**	**03 19 40.8**	**-1.2**
	comp=Z,1.4nm,1.0s,baz=337,slow=7.7,SNR=1.8						
	comp=Z,1.4nm,1.0s						
SNAA	**Sanae**	**69.58**	**198**	P	**P**	**03 19 41.7**	**-0.3**
	comp=Z,1.8nm,1.1s,baz=196,slow=22,SNR=5.8						
	comp=Z,1.8nm,1.1s						
SNAA	**Sanae**	**69.58**	**198**	P	**P**	**03 19 42.0**	**+0.1**
SNAA				IAmb	IAmb	03 19 43.4	
	comp=Z,6.2nm,1.4s						
ZALV	**Zalesovo Beam**	**70.30**	**11**	P	**P**	**03 19 46.5**	**0.0**
	comp=Z,0.6nm,0.6s,baz=264,slow=3.0,SNR=3.6						
ZALV				LR	LR	03 49 44.0	
	comp=Z,23nm,19.0s,baz=34,slow=35						
	comp=Z,0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**70.30**	**11**	P	**P**	**03 19 46.3**	**-0.1**
JOW	**Kunigami**	**72.65**	**55**	LR	LR	03 53 42.0	
	comp=Z,37nm,18.0s,baz=170,slow=37						
DBIC	**Dimbokro**	**74.22**	**281**	P	**P**	**03 20 11.7**	**+0.9**
	comp=Z,4.5nm,1.1s,baz=90,slow=7.1,SNR=3.0						
DBIC				LR	LR	03 53 26.4	
	comp=Z,32nm,18.0s,baz=162,slow=36						
	comp=Z,4.5nm,1.1s						
QSPA	**South Pole Qui**	**75.16**	**180**	P	**P**	**03 20 18.3**	**+2.9**
	comp=Z,2.4nm,1.0s,baz=278,slow=3.4,SNR=4.2						
QSPA				LR	LR	03 49 23.4	
	comp=Z,37nm,21.5s,baz=220,slow=33						
QSPA	**South Pole Qui**	**75.16**	**180**	P	**P**	**03 20 18.4**	**+2.9**
JNU	**Nakatsue**	**77.52**	**51**	LR	LR	03 55 48.1	
	comp=Z,50nm,18.7s,baz=251,slow=37						
MDT	**Midelt**	**83.06**	**306**	LR	LR	03 58 53.4	
	comp=Z,34nm,18.9s,baz=240,slow=36						
MJAR	**Matsushiro Arr**	**84.43**	**50**	P	**P**	**03 21 05.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=250,slow=5.7,SNR=2.5						
	comp=Z,0.5nm,0.3s						
ESDC	**Sonseca Array**	**85.27**	**313**	P	**P**	**03 21 11.3**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=115,slow=4.1,SNR=6.9						
	comp=Z,1.6nm,0.9s						
ESDC	**Sonseca Array**	**85.27**	**313**	P	**P**	**03 21 08.9**	**-1.4**
ESDC				IAmb	IAmb	03 21 12.1	
	comp=Z,2.9nm,1.1s						
HFS	**Hagfors**	**86.07**	**336**	P	**P**	**03 21 14.3**	**+0.7**
	comp=Z,6.1nm,1.0s,baz=108,slow=3.2,SNR=3.1						
	comp=Z,6.1nm,1.0s						
BBTS	**Babate**	**87.51**	**286**	LR	LR	03 58 41.9	
	comp=Z,57nm,19.9s,baz=262,slow=34						
YAK	**Yakutsk**	**91.01**	**25**	LR	LR	04 02 12.6	
	comp=Z,46nm,19.3s,baz=222,slow=35						
PMSA	**Palmer Station**	**92.29**	**199**	LR	LR	03 59 50.0	
	comp=Z,30nm,18.4s,baz=213,slow=33						
ILAR	**Eielson Array**	**125.15**	**17**	PKP	**PKPdf**	**03 27 32.0**	**-1.4**
	comp=Z,0.5nm,1.0s,baz=321,slow=2.3,SNR=2.9						
PDAR	**Pinedale Array**	**152.08**	**354**	PKPbc	**PKPbc**	**03 28 29.2**	**0.0**
	comp=Z,0.6nm,0.6s,baz=59,slow=2.3,SNR=6.5						
PDAR	**Pinedale Array**	**152.08**	**354**		**PKiKP**	**03 28 29.6**	**0.0**

IDC ***17*** *03:20:02.8±1.2, 0°.95N×126°.58E, h0km, mb3.9/6, mbtmp3.9/7, ML3.3/1, Error ellipse: s-maj=103.4km s-min=16.7km az=67.0*
DJA ***17*** *03:20:06.9±0.6, 1°.N±3°.×12°.7E±°, h10km±4km, M3.4/7, MLv3.4/7*
NEIC ***17*** *03:20:08.8±1.4, 0°.90N±0°.07×126°.55E±0°.07, h35km±2km, mb4.0/6, Error ellipse: s-maj=15.0km s-min=8.5km az=226.0*

ISC 17 03:20:08.6±0.8, 0°.96N±0°.10×126°.56E±0°.06, h39km, n20, σ0§88/22, mb4.0/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.83**	**103**		**Pn**	**03 20 22.9**	**-0.8**
TNTI	**Ternate**	**0.83**	**103**	P	**Pn**	**03 20 23.1**	**-0.7**
TNTI				S	**Sn**	**03 20 35.4**	**+0.6**
SANI	**Sanana**	**3.04**	**191**	P	**Pn**	**03 20 54.7**	**+0.5**
TOLI2	**Tolitoli**	**5.78**	**272**	Pn	**Pn**	**03 21 30.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**18.95**	**183**	P	**P**	**03 24 25.9**	**-0.8**
	0.1nm,0.3s,baz=24,slow=12,SNR=1.9						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**22.12**	**160**	P	**P**	**03 24 59.6**	**-1.4**
	2.1nm,0.5s,baz=339,slow=9.9,SNR=22						
	2.1nm,0.5s						
WB2	**Warramunga Arr**	**22.13**	**160**	P	**P**	**03 24 59.9**	**-1.2**
WB2				IAmb	IAmb	03 25 06.5	
	comp=Z,4.3nm,0.8s						
WR8	**Warramunga Arr**	**22.19**	**160**	P	**P**	**03 25 00.5**	**-1.2**
WR8				IAmb	IAmb	03 25 03.0	
	comp=Z,7.2nm,1.2s						
AS31	**Alice Springs**	**25.49**	**164**	P	**P**	**03 25 32.3**	**-1.2**
ASAR	**Alice Springs**	**25.49**	**164**	P	**P**	**03 25 33.2**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=352,slow=16,SNR=39						
ASAR				PcP	**PcP**	**03 29 04.7**	**0.0**
	comp=Z,0.2nm,0.7s,baz=334,slow=2.4,SNR=1.9						
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**25.49**	**164**	P	**P**	**03 25 33.1**	**-0.4**
STKA	**Stephens Creek**	**35.63**	**158**	P	**P**	**03 27 02.2**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=333,slow=11,SNR=3.5						
	comp=Z,1.5nm,0.8s						
PINNC	**Pines Island,**	**46.20**	**123**	P	**P**	**03 28 31.3**	**+1.3**
MKAR	**Makanchi Array**	**59.74**	**326**	P	**P**	**03 30 09.8**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=116,slow=7.5,SNR=13						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**59.74**	**326**	P	**P**	**03 30 10.1**	**+0.5**
KURBB	**Kurchatov Arra**	**63.98**	**328**	P	**P**	**03 30 38.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=128,slow=6.1,SNR=9.5						
	comp=Z,0.6nm,0.4s						
KURK	**Kurchatov**	**63.99**	**328**	P	**P**	**03 30 38.7**	**+0.7**
KURK				IAmb	IAmb	03 30 41.0	
	comp=Z,2.9nm,1.1s						
BVAR	**Borovoye Array**	**69.55**	**328**	P	**P**	**03 31 12.8**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=127,slow=3.8,SNR=3.4						
	comp=Z,0.5nm,0.6s						
AB31	**Akbulak array**	**74.19**	**321**	P	**P**	**03 31 42.3**	**+1.0**
AB31				IAmb	IAmb	03 31 46.8	
	comp=Z,1.3nm,0.9s						
ABKAR	**Akbulak array**	**74.19**	**321**	P	**P**	**03 31 42.1**	**+0.8**

IDC 17 03:25:20.9±1.8, 15°.10S×67°.07E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=63.0km s-min=46.8km az=162.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.11**	**36**	T	T	03 36 55.1	
	baz=216,slow=75,SNR=36						
H08S2	**Diego Garcia H**	**9.12**	**36**	T	T	03 36 59.3	
	baz=216,slow=75,SNR=49						
H08S3	**Diego Garcia H**	**9.13**	**36**	T	T	03 36 56.6	
	baz=216,slow=75,SNR=37						
H04N2	**CROZET ISLANDS**	**33.51**	**199**	T	T	04 07 29.7	
	baz=28,slow=75,SNR=8.1						
H04N1	**CROZET ISLANDS**	**33.51**	**199**	T	T	04 07 30.6	
	baz=28,slow=75,SNR=9.0						
H04N3	**CROZET ISLANDS**	**33.52**	**199**	T	T	04 07 26.8	
	baz=28,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**46.51**	**124**	T	T	04 23 43.4	
	baz=285,slow=75,SNR=9.0						
H01W2	**Cape Leeuwin H**	**46.51**	**124**	T	T	04 23 52.2	
	baz=285,slow=75,SNR=6.3						
H01W1	**Cape Leeuwin H**	**46.52**	**124**	T	T	04 23 54.8	
	baz=285,slow=75,SNR=6.6						
ASAR	**Alice Springs**	**63.15**	**109**	P	P	03 35 50.3	-0.8
	0.1nm,0.6s,baz=261,slow=5.4,SNR=1.4						
	0.1nm,0.6s						
WRA	**Warramunga Arr**	**63.97**	**105**	P	P	03 35 57.3	+0.7
	0.3nm,0.8s,baz=276,slow=6.3,SNR=2.3						
	0.3nm,0.8s						
SNAA	**Sanae**	**69.47**	**198**	P	P	03 36 30.9	0.0
	0.4nm,1.0s,baz=123,slow=17,SNR=3.9						
	0.4nm,1.0s						
PDAR	**Pinedale Array**	**152.28**	**355**	PKPbc	PKPbc	03 45 19.1	-0.2
	0.3nm,0.6s,baz=90,slow=3.0,SNR=4.1						

IDC ***17*** *03:36:32.5±2.1, 1°.68N×126°.17E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=166.9km s-min=27.7km az=65.0*
DJA ***17*** *03:36:36.3±0.3, 2°.N±3°.×12°.6E±°, h10km, M3.2/7, MLv3.2/7*

ISC 17 03:36:38.4±1.1, 1°.8N±0°.1×126°.6E±0°.2, h35km, n6, σ1§65/8, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.24**	**144**	P	**Pn**	**03 36 59.5**	**+0.2**
TNTI				S	**Sn**	**03 37 16.7**	**+2.0**
SGSI	**Sangihe**	**2.19**	**330**	P	**Pn**	**03 37 12.8**	**+0.4**
SGSI				S	**Sn**	**03 37 40.6**	**+2.2**
KAPI	**Kappang**	**9.63**	**226**	Pn	**Pn**	**03 38 55.0**	**+0.3**
	0.6nm,0.3s,baz=39,slow=13,SNR=1.4						
WRA	**Warramunga Arr**	**22.87**	**161**	P	**P**	**03 41 38.4**	**-0.7**
	1.1nm,0.5s,baz=339,slow=11,SNR=15						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.26**	**165**	P	**P**	**03 42 10.2**	**-0.4**
	0.2nm,0.5s,baz=343,slow=7.5,SNR=7.8						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**03 46 33.5**	**-2.0**
	0.5nm,0.5s,baz=117,slow=7.1,SNR=2.2						
	0.5nm,0.5s						

IDC 17 04:00:10.1±1.4, 7°.96S×159°.28E, h0km, mb3.7/3, mbtmp3.8/4, ML3.5/1, MS2.9/1, Error ellipse: s-maj=31.1km s-min=27.2km az=95.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.61**	**156**	Pn	Pn	04 00 38.7	-1.0
	542nm,0.3s,baz=217,slow=3.0,SNR=100						
HNR				Sn	Sn	04 00 55.7	-5.5
	323nm,0.3s,baz=212,slow=20,SNR=4.3						
PMG	**Port Moresby**	**12.07**	**262**	LR	LR	04 07 44.6	
	comp=Z,58nm,18.9s,baz=122,slow=38						
DZM	**Mont Dzumac**	**15.64**	**155**	Pn	Pn	04 03 53.3	+1.3
	0.2nm,0.3s,baz=343,slow=18,SNR=2.0						
	4.6nm,0.9s						
WRA	**Warramunga Arr**	**26.93**	**241**	P	P	04 05 54.0	+0.6
	0.4nm,0.3s,baz=63,slow=8.7,SNR=10						
	0.4nm,0.3s						
H11S2	**WAKE ISLAND Hy**	**27.28**	**16**	T	T	04 34 31.1	
	baz=196,slow=76,SNR=254						
H11S3	**WAKE ISLAND Hy**	**27.28**	**15**	T	T	04 34 30.7	
	baz=196,slow=76,SNR=208						
H11S1	**WAKE ISLAND Hy**	**27.30**	**16**	T	T	04 34 32.4	
	baz=196,slow=76,SNR=206						
H11N1	**WAKE ISLAND Hy**	**28.50**	**15**	T	T	04 36 03.2	
	baz=196,slow=76,SNR=333						
H11N3	**WAKE ISLAND Hy**	**28.51**	**15**	T	T	04 36 03.8	
	baz=196,slow=76,SNR=398						
H11N2	**WAKE ISLAND Hy**	**28.52**	**15**	T	T	04 36 04.3	
	baz=196,slow=76,SNR=397						
ASAR	**Alice Springs**	**28.90**	**234**	P	P	04 06 10.4	-0.5
	0.4nm,0.7s,baz=62,slow=9.9,SNR=6.8						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**82.75**	**20**	P	P	04 12 35.8	+0.2
	0.5nm,0.6s,baz=242,slow=4.9,SNR=12						
	0.5nm,0.6s						

MOS ***17*** *04:02:36.0±0.9, 35°.07N×102°.72E, h10km, mb4.4/12, Error ellipse: s-maj=14.6km s-min=7.2km az=113.2*
IDC ***17*** *04:02:36.5±0.7, 35°.11N×102°.66E, h0km, mb4.0/15, mbtmp4.0/19, ML4.2/3, MS3.3/10, Error ellipse: s-maj=14.6km s-min=11.7km az=147.0*
BJI ***17*** *04:02:37.9, 35°.17N×102°.76E, h8km, mb4.2/7, ML3.9/18, Ms3.8/9, Ms7 3.7/5*
NEIC ***17*** *04:02:38.6±2.3, 35°.19N±0°.06×102°.7E±0°.1, h10km±1km, mb4.6/12, Error ellipse: s-maj=16.5km s-min=8.1km az=294.0*

ISC 17 04:02:38.0±0.4, 35°.12N±0°.04×102°.69E±0°.04, h10km, n77, σ1§51/78, mb4.2/26, MS3.3/9, 6C-5D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**1.17**	**44**	Pg	**Pb**	**04 02 59.1**	**-1.5**
	baz=205,slow=12						
LZDM				Lg	Lg	04 03 16.5	
	baz=229,slow=40						
LZDM				Rg	Rg	04 03 22.7	
	912nm,0.3s,baz=264,slow=27,SNR=17						
LZH	**Lanzhou**	**1.35**	**44**	Pg	**Pn**	**04 03 02.4**	**-0.7**
LZH				Sg	**Sg**	**04 03 21.6**	**+0.1**
LZH				smax	smax		
	comp=N,5μm,1.9s						
LZH				smax	smax		
	comp=E,5μm,1.5s						
CD2	**Chengdu**	**4.29**	**168**	Pg	**Pg**	**04 03 58.6**	**-1.7**
CD2				Sg	**Sg**	**04 04 58.0**	**+2.1**
CD2				smax	smax		
	comp=N,180nm,1.1s						
CD2				smax	smax		
	comp=E,130nm,1.2s						
GTA	**Gaotai**	**4.86**	**333**	Pn	**Pn**	**04 03 54.3**	**+3.0**
GTA				Pg	**Pg**	**04 04 07.8**	**-3.3**
GTA				Sn	**Sn**	**04 04 51.8**	**+4.1**
GTA				Sg	**Sg**	**04 05 16.3**	**+2.2**
GTA				smax	smax		
	comp=N,85nm,0.8s						
GTA				smax	smax		
	comp=E,83nm,1.2s						
GTA				LR	LR		
	comp=N,560nm,9.5s						
GTA				LR	LR		
	comp=E,850nm,10.9s						
GTA				LR	LR		
	comp=Z,660nm,9.5s						
GOMU	**GeErMu**	**6.50**	**282**	Pn	**Pn**	**04 04 14.9**	**+0.8**
GOMU				Pg	**Pg**	**04 04 38.8**	**-3.7**
GOMU				Sg	**Sg**	**04 06 04.6**	**-2.1**
GOMU				smax	smax		
	comp=N,80nm,0.8s						
GOMU				smax	smax		
	comp=E,31nm,0.6s						
BTO	**Baotou**	**7.98**	**44**	*e*Pg	Pg	04 05 05.6	-5.1
BTO				Sg	**Sn**	**04 06 03.5**	**-0.9**
BTO				LR	LR		
	comp=N,140nm,1.0s						
BTO				LR	LR		
	comp=E,170nm,0.9s						
WHN	**Wuhan**	**10.82**	**112**	P	Pn	04 05 18.1	+5.2
WHN				LR	LR		
	comp=E,1μm,6.8s						
WHN

AAK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KURBB	**Kurchatov Arra**	**23.38**	**319**	P	**P**	**04 07**	**46.6**	**0.0**
	comp=Z,9.5nm,0.8s,baz=122,slow=10,SNR=33							
	comp=Z,9.5nm,0.8s							
KURK	**Kurchatov**	**23.38**	**319**	P	**P**	**04 07**	**46.8**	**+0.1**
KURK				IAmb	IAmb	04 07	48.4	
	comp=Z,9.4nm,0.6s							
KURK	**Kurchatov**	**23.38**	**319**	*de*P	**P**	**04 07**	**46.8**	**+0.1**
KURK				pmax	pmax			
	comp=Z,20nm,1.3s							
JNU	**Nakatsue**	**23.39**	**87**	LR	LR	04 19	08.0	
	comp=Z,68nm,18.4s,baz=6.5,slow=42							
NIL	**Nilore**	**24.30**	**275**	P	**P**	**04 07**	**54.1**	**-1.6**
NIL				IAmb	IAmb	04 08	12.4	
	comp=Z,11nm,0.6s							
NIL	**Nilore**	**24.30**	**275**	P	**P**	**04 07**	**54.1**	**-1.6**
NIL				pmax	pmax			
	comp=Z,11nm,0.6s							
KKAR	**Karatay Array**	**26.09**	**298**	P	**P**	**04 08**	**11.3**	**-0.5**
KKAR	**Karatay Array**	**26.09**	**298**	P	**P**	**04 08**	**11.4**	**-0.5**
BVAR	**Borovoye Array**	**28.96**	**318**	P	**P**	**04 08**	**38.0**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=112,slow=11,SNR=9.8							
BVAR				LR	LR	04 19	42.5	
	comp=Z,51nm,19.4s,baz=117,slow=35							
	comp=Z,1.8nm,0.6s							
BORK	**Borovoye**	**29.01**	**318**⇑	*e*P	**P**	**04 08**	**38.4**	**+0.5**
BORK				pmax	pmax			
	comp=Z,3.0nm,0.7s							
AB31	**Akbulak array**	**34.20**	**308**	IAmb	IAmb	04 09	25.2	
	comp=Z,2.6nm,0.7s							
ABKAR	**Akbulak array**	**34.20**	**308**	P	**P**	**04 09**	**22.6**	**-0.9**
AKTO	**Aktyubinsk**	**35.60**	**309**	LR	LR	04 25	06.7	
	comp=Z,72nm,18.4s,baz=150,slow=38							
ARTI	**Arti**	**36.66**	**319**	*c i*P	**P**	**04 09**	**44.6**	**0.0**
ARTI						04 12	07.9	
ARTI				S	**S**	**04 15**	**28.6**	**+1.1**
ARTI				SS	**SnSn**	**04 17**	**53.6**	**-3.7**
ARTI				pmax	pmax			
	comp=Z,5.0nm,1.0s							
TIXI	**Tiksi**	**39.09**	**13**⇑	*e*P	**P**	**04 10**	**05.0**	**+0.1**
TIXI				pmax	pmax			
	comp=Z,9.0nm,1.7s							
KIRV	**Kirov**	**41.87**	**321**	*ce*P	**P**	**04 10**	**28.2**	**+0.1**
AKT	**Akhty**	**42.98**	**296**	*e*P	**P**	**04 10**	**36.9**	**-0.6**
KIV	**Kislovodsk**	**46.20**	**300**	*e*P	**P**	**04 11**	**02.5**	**-0.7**
KIV				pmax	pmax			
	comp=Z,5.0nm,1.1s							
KLMR	**Klimovskoe**	**47.12**	**323**	*e*P	**P**	**04 11**	**08.9**	**-1.1**
KLMR				*e*		04 12	40.5	
KLMR				pmax	pmax			
	comp=Z,12nm,1.5s							
ARCES	**ARCESS Array B**	**53.13**	**335**	P	**P**	**04 11**	**55.4**	**0.0**
	comp=Z,2.3nm,0.6s,baz=79,slow=8.1,SNR=17							
	comp=Z,2.3nm,0.6s							
ARCES	**ARCESS Array B**	**53.13**	**335**	P	**P**	**04 11**	**55.2**	**-0.2**
ARCES				IAmb	IAmb	04 12	02.9	
	comp=Z,11nm,1.2s							
FINES	**FINESS Array B**	**53.60**	**324**	P	**P**	**04 11**	**58.7**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=97,slow=6.3,SNR=10							
	comp=Z,1.8nm,0.8s							
FINES	**FINESS Array B**	**53.60**	**324**	P	**P**	**04 11**	**58.9**	**-0.1**
FINES	**FINESS Array B**	**53.60**	**324**	*e*P	**P**	**04 11**	**59.3**	**+0.3**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
VSU	**Vasula**	**53.72**	**321**⇑	*e*P	**P**	**04 11**	**58.6**	**-1.3**
VSU				pmax	pmax			
	comp=Z,16nm,1.7s							
BRTR	**Keskin Array B**	**53.80**	**297**	P	**P**	**04 12**	**01.5**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=89,slow=6.4,SNR=7.1							
	comp=Z,0.9nm,0.7s							
AKASG	**Malin Array Be**	**53.82**	**311**	P	**P**	**04 12**	**00.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=66,slow=7.4,SNR=3.0							
AKASG				LR	LR	04 36	08.3	
	comp=Z,39nm,19.4s,baz=20,slow=37							
	comp=Z,0.7nm,0.5s							
SPITS	**Spitsbergen Ar**	**55.16**	**345**	P	**P**	**04 12**	**09.8**	**-0.4**
	comp=Z,8.2nm,1.0s,baz=194,slow=9.6,SNR=2.2							
	comp=Z,8.2nm,1.0s							
HFS	**Hagfors**	**59.80**	**325**	P	**P**	**04 12**	**42.9**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=103,slow=6.5,SNR=15							
	comp=Z,1.4nm,0.4s							
NC405	**NORSAR Array S**	**60.41**	**326**	P	**P**	**04 12**	**46.7**	**-0.6**
NB2	**NORSAR Subarra**	**60.66**	**326**	P	**P**	**04 12**	**48.3**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=71,slow=6.9							
NOA	**NORSAR Array B**	**60.66**	**326**	P	**P**	**04 12**	**48.4**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=77,slow=7.8,SNR=14							
	comp=Z,0.5nm,0.4s							
D19K	**Kuna River**	**61.05**	**25**	P	**P**	**04 12**	**52.6**	**+1.0**
D19K				IAmb	IAmb	04 13	27.9	
	comp=Z,9.6nm,1.2s							
VRAC	**Vranov**	**62.00**	**312**	LR	LR	04 40	29.0	
	comp=Z,58nm,18.0s,baz=284,slow=37							
COEN	**Coen**	**62.09**	**134**	P	**P**	**04 13**	**01.1**	**+1.9**
WRA	**Warramunga Arr**	**62.46**	**146**	P	**P**	**04 13**	**01.9**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=343,slow=7.0,SNR=8.0							
	comp=Z,1.2nm,0.7s							
WRA	**Warramunga Arr**	**62.46**	**146**	P	**P**	**04 13**	**00.0**	**-1.6**
WRA	**Warramunga Arr**	**62.46**	**146**	*e*P	**P**	**04 13**	**01.8**	**+0.2**
WRA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
WR8	**Warramunga Arr**	**62.55**	**146**	P	**P**	**04 13**	**02.3**	**+0.1**
C23K	**Itkillik River**	**62.91**	**22**	P	**P**	**04 13**	**04.9**	**+0.9**
C23K				IAmb	IAmb	04 13	14.9	
	comp=Z,8.7nm,1.3s							
ASAR	**Alice Springs**	**65.53**	**149**	P	**P**	**04 13**	**21.3**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=337,slow=7.0,SNR=6.7							
	comp=Z,0.6nm,0.5s							
BMAR	**Burnt Mountain**	**66.05**	**23**	P	**P**	**04 13**	**26.0**	**+1.4**
ILAR	**Eielson Array**	**66.75**	**26**	P	**P**	**04 13**	**28.3**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=316,slow=5.4,SNR=5.3							
	comp=Z,0.7nm,0.9s							
ILAR	**Eielson Array**	**66.75**	**26**	P	**P**	**04 13**	**28.0**	**-1.1**
EKA	**Eskdalemuir Ar**	**70.00**	**324**	P	**P**	**04 13**	**49.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=63,slow=6.8,SNR=4.0							
	comp=Z,0.6nm,0.6s							
BORG	**Borgarnes**	**71.30**	**338**	LR	LR	04 47	57.6	
	comp=Z,16nm,19.3s,baz=284,slow=38							
NVL	**N'lazarevskaya**	**122.98**	**203**	*e*PKIKP	**PKiKP**	**04 21**	**35.5**	**+1.8**
NVL				*e*		04 23	14.5	
NVL				*e*PPP	PPP	04 25	51.4	
NVL				*e*SS	SS	04 40	00.5	+3.8
NVL				*e*SSS	SSS	04 44	34.0	
NVL				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NVL				pmax	pmax			
	comp=E,264nm,13.3s							
NVL				MLR	MLR			
	comp=Z,180nm,21.0s							

IDC ***17*** *04:03:36.0±0.6, 1°.14N×126°.40E, h0km, mb4.1/14, mbtmp4.1/15, ML3.9/1, MS3.2/9, Error ellipse: s-maj=38.2km s-min=13.0km az=76.0*

DJA ***17*** *04:03:41.1±0.2, 1°.1N±2°×12°.6E±°, h10km, M4.3/19, mB4.9/5, mb4.5/10, MLv4.3/19, Mw(mB)4.2/5*

NEIC ***17*** *04:03:41.9±1.5, 1°.18N±0°.09×126°.44E±0°.06, h35km±2km, mb4.5/15, Error ellipse: s-maj=14.7km s-min=9.8km az=193.0*

ISC 17 04:03:42.1±0.5, 1°.17N±0°.05×126°.47E±0°.05, h39km, n70, σ1ᵍ37/62, mb4.3/21, MS3.4/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**0.98**	**114**			**Pn**	**04 04 00.6**	**+1.2**
TNTI	**Ternate**	**0.98**	**114**	P		**Pn**	**04 04 00.6**	**+1.2**
TNTI				S		**Sn**	**04 04 14.1**	**+2.0**
KMSI	**Cibinong**	**2.55**	**257**	P		**Pn**	**04 04 21.8**	**+0.8**
KMSI				S		**Sn**	**04 04 50.8**	**-0.1**
SGSI	**Sangihe**	**2.67**	**339**	P		**Pn**	**04 04 23.0**	**+0.4**
SGSI				S		**Sn**	**04 04 55.7**	**+2.0**
SANI	**Sanana**	**3.23**	**188**	P		**Pn**	**04 04 30.7**	**+0.3**
LUWI	**Luwuk**	**4.30**	**239**			**Pn**	**04 04 47.2**	**+2.2**
LUWI	**Luwuk**	**4.30**	**239**	P		**Pn**	**04 04 47.8**	**+2.8**
NLAI	**Namlea**	**4.43**	**172**	P		**Pn**	**04 04 49.1**	**+2.3**
MRSI	**Marisa**	**4.58**	**261**	P		**Pn**	**04 04 50.5**	**+1.7**
SWI	**Sorong**	**5.20**	**113**	P		**Pn**	**04 05 00.2**	**+2.8**
	0.1nm24nm,0.8s							
APSI	**Ampana**	**5.24**	**247**	P		**Pn**	**04 04 59.5**	**+1.5**
TOLI2	**Tolitoli**	**5.68**	**269**			**Pn**	**04 05 04.1**	**0.0**
DAV	**Davao City (W)**	**5.93**	**351**	LR		LR	04 07 48.5	
	comp=Z,79nm,19.3s,baz=168,slow=42							
MPSI	**Mapaga**	**6.62**	**263**	P		**Pn**	**04 05 19.4**	**+2.5**
	0.1nm556nm19nm,0.7s							
FAKI	**Fak Fak**	**7.07**	**125**			Pn	04 05 27.7	+4.6
FAKI	**Fak Fak**	**7.07**	**125**	P		Pn	04 05 27.2	+4.1
	0.1nm46nm,0.9s							
TTSI	**Tana Toraja**	**7.85**	**238**	P		**Pn**	**04 05 36.0**	**+2.1**
	0.2nm33nm,0.4s							
SPSI	**Sidrap Palu**	**8.41**	**233**	P		**Pn**	**04 05 42.5**	**+0.9**
	30nm,0.9s							
MYLDM	**Lahad Datu**	**8.89**	**297**			**Pn**	**04 05 51.6**	**+3.5**
BKSI	**Bulukumba**	**9.04**	**224**	P		**Pn**	**04 05 52.2**	**+2.1**
	15nm,0.8s							
KAPI	**Kappang**	**9.10**	**227**	Pn		**Pn**	**04 05 51.9**	**+1.0**
	4.7nm,0.3s,baz=157,slow=20,SNR=7.6							
KAPI	**Kappang**	**9.10**	**227**			**Pn**	**04 05 52.1**	**+1.2**
EDFI	**Ende, Flores**	**10.94**	**206**	P		**Pn**	**04 06 19.3**	**+3.0**
BATI	**Baumata**	**11.64**	**194**	LR		LR	04 11 24.9	
	comp=Z,116nm,20.9s,baz=302,slow=40							
SBUM	**Sibu**	**14.29**	**275**	P		**P**	**04 07 09.1**	**+0.5**
MTN	**Manton Dam**	**14.67**	**162**	Pn		**Pn**	**04 07 06.9**	**-0.2**
JAY	**Jayapura**	**14.70**	**104**	LR		LR	04 12 29.5	
	comp=Z,80nm,19.3s,baz=250,slow=36							
KNRA	**Kununurra**	**16.89**	**172**	P		**Pn**	**04 07 35.4**	**-0.3**
KNRA				IAmb		IAmb	04 07 37.7	
	comp=Z,20nm,1.2s							
FITZ	**Fitzroy Crossi**	**19.17**	**182**	P		**P**	**04 08 01.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=9.1,slow=11,SNR=6.8							
	comp=Z,1.1nm,0.4s							
FITZ	**Fitzroy Crossi**	**19.17**	**182**	P		**P**	**04 08 01.6**	**-0.8**
WRA	**Warramunga Arr**	**22.36**	**160**	P		**P**	**04 08 35.9**	**-1.1**
	comp=Z,11nm,0.6s,baz=336,slow=11,SNR=54							
	comp=Z,11nm,0.6s							
WRA	**Warramunga Arr**	**22.36**	**160**			**P**	**04 08 35.8**	**-1.1**
WR8	**Warramunga Arr**	**22.43**	**160**			**P**	**04 08 36.8**	**-0.9**
WR8				IAmb		IAmb	04 08 40.0	
	comp=Z,13nm,0.9s							
TPUB	**Ta-pu**	**22.71**	**346**	P		**P**	**04 08 39.0**	**-1.8**
TPUB				IAmb		IAmb	04 08 43.2	
	comp=Z,25nm,0.7s							
PMG	**Port Moresby**	**23.14**	**117**	LR		LR	04 21 08.1	
	comp=Z,53nm,18.4s,baz=332,slow=45							
AS31	**Alice Springs**	**25.73**	**164**			**P**	**04 09 08.4**	**-0.7**
ASAR	**Alice Springs**	**25.73**	**164**	P		**P**	**04 09 08.4**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=344,slow=6.4,SNR=37							
ASAR				PcP		**PcP**	**04 12 38.0**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=339,slow=2.3,SNR=1.6							
	comp=Z,2.3nm,0.4s							
ASAR	**Alice Springs**	**25.73**	**164**			**P**	**04 09 08.2**	**-0.9**
BBOO	**Buckleboo**	**34.99**	**166**	P		**P**	**04 10 30.2**	**-0.6**
BBOO				IAmb		IAmb	04 10 44.8	
	comp=Z,14nm,1.2s							
JGF	**Kuroka**	**35.72**	**15**	P		**P**	**04 10 38.3**	**+1.2**
JGF				IAmb		IAmb	04 11 00.7	
	comp=Z,11nm,1.2s							
STKA	**Stephens Creek**	**35.86**	**158**	P		**P**	**04 10 37.8**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=337,slow=10,SNR=9.6							
	comp=Z,2.7nm,0.6s							
KSRS	**Korea Array**	**36.13**	**2**	P		**P**	**04 10 40.9**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=180,slow=10,SNR=4.1							
KSRS				LR		LR	04 28 18.9	
	comp=Z,5μm,18.1s,baz=285,slow=41							
	comp=Z,0.8nm,0.5s							
MJAR	**Matsushiro Arr**	**36.84**	**16**	P		**P**	**04 10 46.2**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=181,slow=9.5,SNR=7.9							
MJAR				LR		LR	04 28 38.7	
	comp=Z,12nm,18.7s,baz=260,slow=41							
	comp=Z,1.6nm,0.6s							
ARMA	**Armidale**	**39.52**	**145**	P		**P**	**04 11 10.8**	**+1.4**
ARMA				IAmb		IAmb	04 11 53.4	
	comp=Z,17nm,1.5s							
H11S3	**WAKE ISLAND Hy**	**43.04**	**64**	T		T	04 58 49.0	
	baz=253							
H11S2	**WAKE ISLAND Hy**	**43.06**	**64**	T		T	04 58 53.0	
	baz=253							
H11S1	**WAKE ISLAND Hy**	**43.06**	**64**	T		T	04 58 41.6	
	baz=253							
SONM	**Songino Array**	**49.63**	**342**	P		**P**	**04 12 29.5**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=140,slow=7.5,SNR=2.0							
SONM				LR		LR	04 34 27.1	
	comp=Z,24nm,18.3s,baz=283,slow=37							
	comp=Z,0.9nm,0.6s							
PETK	**Petropavlovsk-**	**57.89**	**22**	P		**P**	**04 13 30.3**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=192,slow=5.5,SNR=7.5							
	comp=Z,1.8nm,0.8s							
PETK	**Petropavlovsk-**	**57.89**	**22**	P		**P**	**04 13 30.5**	**+0.5**
MK31	**Makanchi Array**	**59.51**	**326**	P		**P**	**04 13 40.9**	**-0.5**
MK31				IAmb		IAmb	04 13 42.7	
	comp=Z,8.4nm,1.4s							
MKAR	**Makanchi Array**	**59.51**	**326**	P		**P**	**04 13 40.9**	**-0.5**
	comp=Z,2.1nm,0.4s,baz=120,slow=7.7,SNR=27							
	comp=Z,2.1nm,0.4s							
MKAR	**Makanchi Array**	**59.51**	**326**	P		**P**	**04 13 40.8**	**-0.6**
BKZ	**Black Stump Fm**	**60.89**	**137**	P		**P**	**04 13 50.3**	**-0.8**
ZALV	**Zalesovo Beam**	**62.74**	**334**	P		**P**	**04 14 01.9**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=126,slow=7.3,SNR=5.2							
	comp=Z,1.0nm,0.4s							
ZALV	**Zalesovo Beam**	**62.74**	**334**	P		**P**	**04 14 02.4**	**-0.8**
KURBB	**Kurchatov Arra**	**63.75**	**328**	P		**P**	**04 14 09.4**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=128,slow=6.0,SNR=48							
	comp=Z,2.9nm,0.5s							
KURK	**Kurchatov**	**63.75**	**328**	P		**P**	**04 14 09.1**	**-0.8**
KKAR	**Karatay Array**	**64.93**	**318**	P		**P**	**04 14 16.3**	**-1.5**
BVAR	**Borovoye Array**	**69.31**	**328**	P		**P**	**04 14 45.9**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=119,slow=8.0,SNR=4.0							
	comp=Z,1.2nm,0.4s							
AB31	**Akbulak array**	**73.96**	**321**	P		**P**	**04 15 13.0**	**-0.5**
AB31				IAmb		IAmb	04 15 16.0	
	comp=Z,2.3nm,0.6s							
ABKAR	**Akbulak array**	**73.96**	**321**	P		**P**	**04 15 12.7**	**-0.8**
VNDA	**Vanda**	**80.94**	**173**	P		**P**	**04 15 51.3**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=294,slow=6.4,SNR=4.9							
	comp=Z,0.6nm,0.5s							
VNDA	**Vanda**	**80.94**	**173**	P		**P**	**04 15 51.8**	**-0.2**
VNDA				IAmb		IAmb	04 16 03.5	
	comp=Z,1.7nm,1.1s							
MAW	**Mawson**	**81.28**	**200**	LR		LR	04 48 51.3	
	comp=Z,17nm,19.0s,baz=66,slow=33							
D19K	**Kuna River**	**83.59**	**21**	P		**P**	**04 16 07.9**	**+1.9**
KDAK	**Kodiak Island**	**84.18**	**32**	LR		LR	04 49 31.4	
	comp=Z,25nm,20.6s,baz=128,slow=33							
ILAR	**Eielson Array**	**87.51**	**25**	P		**P**	**04 16 24.5**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=253,slow=4.2,SNR=5.5							
	comp=Z,0.2nm,0.6s							
FINES	**FINESS Array B**	**93.95**	**332**	P		**P**	**04 16 55.8**	**+0.2**
	comp=Z,1.4nm,0.9s,baz=123,slow=5.1,SNR=3.8							
	comp=Z,1.4nm,0.9s							
MLR	**Muntele Rosu**	**96.54**	**316**	LR		LR	05 07 52.1	
	comp=Z,22nm,18.0s,baz=6.0,slow=40							

THE ***17*** *04:09:30.7, 37°N±3°×2°.7E±°, h116km±8km, M2.8/7, MLh2.8/7*

ATH ***17*** *04:09:30.3, 36°.68N×26°.85E, h118km±8km, ML2.8/4, Manual Solution by S.Koutrakis First location: 2019/11/17 04:11:12, This location: 2019/11/17 05:19:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*

ISK ***17*** *04:09:31.5, 36°.75N×26°.75E, h31km, ML2.6/11*

ISC 17 04:09:30.5±1.9, 36°.70N±0°.04×26°.87E±0°.04, h115km±16km, n31, σ1ᵍ03/47, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MLSB	**Milas**	**0.94**	**51**	Pg		**Pn**	**04 09 49.8**	**-1.7**
SMG	**Samos**	**1.01**	**359**	P		**Pn**	**04 09 52.7**	**+0.6**
SMG				S		**Sn**	**04 10 10.0**	**+1.5**
SMG	**Samos**	**1.01**	**359**	P		**Pn**	**04 09 52.5**	**+0.4**
TURN	**Turunc**	**1.11**	**86**	Pn		**Pn**	**04 09 52.7**	**-0.4**
TURN				Sn		**Sn**	**04 10 07.6**	**-2.7**
ARG	**Arkhangelos**	**1.13**	**115**	Pn		**Pn**	**04 09 52.9**	**-0.4**
ARG	**Arkhangelos**	**1.13**	**115**	P		**Pn**	**04 09 53.5**	**+0.2**
ARG				S		**Sn**	**04 10 11.4**	**+0.7**
ARG	**Arkhangelos**	**1.13**	**115**	P		**Pn**	**04 09 53.4**	**+0.1**
ARG				S		**Sn**	**04 10 11.3**	**+0.7**
APE	**Apeiranthos**	**1.13**	**289**	Pg		**Pn**	**04 09 50.0**	**-3.4**
APE	**Apeiranthos**	**1.13**	**289**	P		**Pn**	**04 09 54.6**	**+1.1**
THERA	**Ancient Thera,**	**1.17**	**254**	P		**Pn**	**04 09 55.1**	**+1.3**
THERA				S		**Sn**	**04 10 12.1**	**+0.6**
KARP	**Karpathos**	**1.18**	**168**	Pn		**Pn**	**04 09 53.5**	**-0.5**
KARP	**Karpathos**	**1.18**	**168**	P		**Pn**	**04 09 54.0**	**+0.1**
KARP				S		**Sn**	**04 10 12.5**	**+0.9**
KARP	**Karpathos**	**1.18**	**168**	P		**Pn**	**04 09 54.0**	**+0.1**
KARP				S		**Sn**	**04 10 12.6**	**+0.9**
YER	**Yerkesik**	**1.22**	**69**	S		**Sn**	**04 10 14.3**	**+1.8**
DALY	**Dalyan (Mula)**	**1.44**	**85**	Pn		**Pn**	**04 09 57.1**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.49**	**33**	Pn		**Pn**	**04 09 56.7**	**-0.8**
NPS	**Neapolis**	**1.76**	**216**	P		**Pn**	**04 10 00.7**	**0.0**
NPS				S		**Sn**	**04 10 23.5**	**-0.2**
NPS	**Neapolis**	**1.76**	**216**	P		**Pn**	**04 10 00.8**	**0.0**
NPS				S		**Sn**	**04 10 23.5**	**-0.2**
IDI	**Anoyia**	**2.13**	**229**	Pn		**Pn**	**04 10 05.2**	**-0.2**
IDI				Sn		**Sn**	**04 10 30.3**	**-1.9**
IDI	**Anoyia**	**2.13**	**229**	P		**Pn**	**04 10 05.2**	**-0.2**
IDI				S		**Sn**	**04 10 31.2**	**-1.0**
IDI	**Anoyia**	**2.13**	**229**	P		**Pn**	**04 10 05.0**	**-0.4**
IDI				S		**Sn**	**04 10 31.4**	**-0.8**
GVD	**Gavdhos**	**2.92**	**231**	Pn		**Pn**	**04 10 16.4**	**+0.8**
GVD	**Gavdhos**	**2.92**	**231**	P		**Pn**	**04 10 15.6**	**0.0**
GVD				S		**Sn**	**04 10 50.3**	**0.0**
GVD	**Gavdhos**	**2.92**	**231**	P		**Pn**	**04 10 15.9**	**+0.3**
GVD				S		**Sn**	**04 10 50.5**	**+0.1**
ANKY	**Antikythira Is**	**3.00**	**255**	P		**Pn**	**04 10 16.9**	**+0.4**
ANKY				S		**Sn**	**04 10 50.8**	**-1.2**
KTHA	**Kythira Island**	**3.10**	**263**	Pn		**Pn**	**04 10 18.3**	**+0.4**
KTHA	**Kythira Island**	**3.10**	**263**	P		**Pn**	**04 10 18.2**	**+0.3**
VLI	**Veliai**	**3.16**	**271**	P		**Pn**	**04 10 18.7**	**0.0**
VLI				S		**Sn**	**04 10 55.2**	**-0.6**
VLI	**Veliai**	**3.16**	**271**	P		**Pn**	**04 10 18.9**	**+0.2**
ITM	**Ithomi**	**3.98**	**278**	Pn		**Pn**	**04 10 30.7**	**+1.0**
ITM	**Ithomi**	**3.98**	**278**	P		**Pn**	**04 10 30.5**	**+0.8**

SDD ***17*** *04:13:51.1±1.1, 19°.05N×67°.14W, h27km±33km, MD3.3, ML1.9, MW2.4*

RSPR ***17*** *04:13:51.7, 19°.08N×67°.24W, h16km±25km, MD2.9/10*

ISC 17 04:13:49.4±1.7, 19°.07N±0°.08×67°.20W±0°.05, h22km±6km, n24, σ0ᵍ38/29, 9C-10D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.60**	**172**⇑	*e*Pg		**Pn**	**04 14 02.4**	**-0.2**
AGPR				⇓*e*Sg		**Sb**	**04 14 09.2**	**-0.3**
AGPR				IAML			04 14 13.2	
	comp=N,62nm,0.3s							
AGPR	**Aguadilla, PR**	**0.60**	**172**⇓	*e*P		**Pn**	**04 14 03.0**	**+0.3**
AGPR	**Aguadilla, PR**	**0.60**	**172**	*e*S		**Sn**	**04 14 10.9**	**-0.9**
AOPR	**Arecibo Observ**	**0.83**	**150**⇑	*e*Pg		**Pb**	**04 14 05.3**	**+0.1**
AOPR				*e*Sg		**Sb**	**04 14 15.5**	**-0.4**
AOPR				IAML			04 14 23.8	
	comp=N,48nm,4.6s							
AOPR	**Arecibo Observ**	**0.83**	**150**	*e*P		**Pn**	**04 14 06.0**	**+0.1**
AOPR	**Arecibo Observ**	**0.83**	**150**	*e*S		**Sn**	**04 14 16.9**	**-0.6**
PRSN	**Puerto Rico Se**	**0.85**	**177**⇓	*e*Pg		**Pb**	**04 14 05.2**	**-0.3**
PRSN				IAML			04 14 41.7	
	comp=N,50nm,0.2s							
LSP	**Las Mesas**	**0.90**	**173**⇓	*e*P		**Pb**	**04 14 06.4**	**+0.2**
LSP	**Las Mesas**	**0.90**	**173**	*e*S		**Sn**	**04 14 18.9**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.93**	**151**	*e*S		**Sn**	**04 14 19.4**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.06**	**176**⇑	*e*Pg		**Pn**	**04 14 09.2**	**+0.2**
CRPR				⇓*e*Sg		**Sb**	**04 14 22.7**	**+0.2**
CRPR				IAML			04 14 27.5	
	comp=N,23nm,2.0s							
CRPR	**Cabo Rojo, PR**	**1.06**	**176**⇓	*e*P		**Pn**	**04 14 09.2**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.06**	**176**	*e*S		**Sn**	**04 14 23.4**	**+0.4**
ECPR	**Experimental S**	**1.09**	**133**⇓	*e*P		**Pn**	**04 14 09.5**	**+0.2**
ECPR	**Experimental S**	**1.09**	**133**	*e*S		**Sn**	**04 14 23.9**	**+0.2**
MLPR	**Magueyes Islan**	**1.10**	**173**⇑	*e*Pg		**Pn**	**04 14 09.0**	**-0.5**
MLPR				⇓*e*Sg		**Sb**	**04 14 23.9**	**+0.2**
MLPR				IAML			04 14 25.1	
	comp=N,5.8nm,1.9s							
MLPR	**Mague

PIC2	**El Picacho**	0.03	315	*eP*		**Pg**	04 19 43.2	+0.4
PIC2				*eS*		**Sg**	04 19 44.4	+0.5
UESS	**Universidad de**	0.03	93	*eP*		**Pg**	04 19 42.8	+0.2
UESS				*eS*		**Sg**	04 19 44.1	+0.6
UTEC	**Universidad Te**	0.04	124	*eP*		**Pg**	04 19 42.6	+0.1
UTEC				*eS*		**Sg**	04 19 43.8	+0.2
UTEC	**Universidad Te**	0.04	124	P		**Pg**	04 19 42.7	+0.1
BOQS	**Boqueron**	0.05	286	*eP*		**Pg**	04 19 43.1	+0.2
MAGS	**Ministerio de**	0.06	234	*eP*		**Pg**	04 19 43.2	+0.2
MAGS				*eS*		**Sg**	04 19 44.8	+0.6
UDBS	**Universidad Do**	0.08	95	*eP*		**Pg**	04 19 43.3	+0.3
UDBS				*eS*		**Sg**	04 19 45.1	+0.6
UDBS	**Universidad Do**	0.08	95	P		**Pg**	04 19 43.4	+0.3
PMON	**Piamonte**	0.08	263	*eP*		**Pg**	04 19 43.6	+0.4
PMON				*eS*		**Sg**	04 19 45.4	+0.8
PMON	**Piamonte**	0.08	263	P		**Pg**	04 19 43.6	+0.4
LOMA	**Loma Larga**	0.10	142	*eP*		**Pg**	04 19 43.4	-0.1
LOMA				*eS*		**Sg**	04 19 45.0	0.0
LFU	**La Fuente**	0.12	77	*eP*		**Pg**	04 19 44.3	+0.5
QUEZ	**Alcaldia de Qu**	0.12	341	*eP*		**Pg**	04 19 44.4	+0.6
PANCS	**Alcalda de**	0.12	155	*eP*		**Pg**	04 19 43.6	-0.2
PANCS				*eS*		**Sg**	04 19 45.5	-0.1
PANCS	**Alcalda de**	0.12	155	P		**Pg**	04 19 43.7	-0.2
CEDA	**San Andres**	0.18	297	*eP*		**Pg**	04 19 45.1	+0.3
LBRS	**Las Brisas**	0.18	85	*eP*		**Pg**	04 19 45.5	+0.5
LFRS	**El Faro**	0.19	120	*eP*		**Pg**	04 19 45.3	+0.2
JAYA	**Jayaque - finc**	0.22	252	*eP*		**Pg**	04 19 46.0	+0.4
JAYA	**Jayaque - finc**	0.22	252	*i* P		**Pg**	04 19 46.0	+0.4
JAYA				*i* S		**Sg**	04 19 49.6	+1.0
JAYA	**Jayaque - finc**	0.22	252	P		**Pg**	04 19 46.0	+0.4
LALI	**Alcalda de L**	0.25	200	*eP*		**Pg**	04 19 46.4	+0.4
LALI	**Alcalda de L**	0.25	200	*i* P		**Pg**	04 19 46.5	+0.4
LALI				*eS*		**Sg**	04 19 50.4	+1.0
LALI				IAML			04 19 51.1	
	comp=E,5µm,0.4s							
LALI	**Alcalda de L**	0.25	200	P		**Pg**	04 19 46.5	+0.4
PAVA	**Las Pavas**	0.29	92	*eP*		**Pg**	04 19 47.4	+0.5
PAVA				*eS*		**Sg**	04 19 52.0	+1.2
PAVA	**Las Pavas**	0.29	92	S		**Sg**	04 19 52.1	+1.3
PAVA	**Las Pavas**	0.29	92	P		**Pg**	04 19 47.4	+0.5
CEVE	**Cerro Verde**	0.39	286	P		**Pb**	04 19 49.8	-0.9
UNIC	**Universidad Ca**	0.40	310	P		**Pg**	04 19 49.2	+0.1
UNIC	**Universidad Ca**	0.40	310	S		**Sg**	04 19 54.9	+0.5
UESV	**Universidad de**	0.44	101	*eP*		**Pg**	04 19 50.0	+0.2
UESV	**Universidad de**	0.44	101	S		**Sg**	04 19 56.5	+0.9
UESV	**Universidad de**	0.44	101	P		**Pg**	04 19 49.9	+0.2
TECO	**Alcaldia de Te**	0.48	113	P		**Pg**	04 19 50.4	-0.1
TECO	**Alcaldia de Te**	0.48	113	S		**Sg**	04 19 57.3	+0.6
SCLA	**Alcaldia de Sa**	0.49	92	P		**Pg**	04 19 51.0	+0.3
SCLA	**Alcaldia de Sa**	0.49	92	S		**Sg**	04 19 58.3	+1.1
LLGN	**La Laguna**	0.52	33	P		**Pg**	04 19 51.2	-0.1
LLGN	**La Laguna**	0.52	33	S		**Sg**	04 19 58.8	+0.7
NUBE	**Las Nubes**	0.56	289	*i* P		**Pg**	04 19 52.3	+0.2
NUBE				*eS*		**Sg**	04 20 00.3	+0.9
NUBE	**Las Nubes**	0.56	289	P		**Pg**	04 19 52.3	+0.2
SLOZ	**Alcaldia de Sa**	0.61	300	S		**Sg**	04 20 00.8	-0.3
MTO3	**Montecristo**	0.68	350			**Pg**	04 19 54.2	-0.2
MTO3				Sg		**Sg**	04 20 03.9	+0.4
MTO3	**Montecristo**	0.68	350	*i* P		**Pg**	04 19 54.3	-0.2
MTO3	**Montecristo**	0.68	350	S		**Sg**	04 20 03.8	+0.4
MTO3	**Montecristo**	0.68	350	P		**Pg**	04 19 54.4	0.0
FAME	**Alcaldia de Sa**	0.77	279	P		**Pg**	04 19 55.8	-0.2
FAME	**Alcaldia de Sa**	0.77	279	S		**Sg**	04 20 06.4	+0.4
ESQI	**Esquipulas**	0.84	353			**Pg**	04 19 57.3	-0.1
ESQI				Sg		**Sg**	04 20 09.0	+0.7
ESQI				IAML			04 20 09.5	
	comp=E,1µm,0.5s							
ESQI				IAML			04 20 13.3	
	comp=N,711nm,0.4s							
ESQI	**Esquipulas**	0.84	353	P		**Pg**	04 19 57.3	-0.1
ESQI	**Esquipulas**	0.84	353	S		**Sg**	04 20 09.1	+0.8
ZAFR2	**Estanzuela, Za**	0.86	352	*i* P		Pn	04 20 04.9	+5.0
ZAFR2				*eS*		Sn	04 20 22.2	+9.4
PACA	**Pacayal**	0.92	106	P		**Pb**	04 19 59.3	-0.4
LCND	**La Caada**	1.37	107	P		**Pn**	04 20 06.5	-0.4
LCND	**La Caada**	1.37	107	S		**Sg**	04 20 25.4	+0.1
CNCH	**Conchagua**	1.43	108	S		**Sg**	04 20 27.5	+0.2
CNCH	**Conchagua**	1.43	108	P		**Pn**	04 20 07.2	-0.6
APG	**El Apazote**	1.75	317	*eP*		**Pn**	04 20 12.5	-0.1
POTN	**Potosi Cosigui**	1.83	113	P		**Pn**	04 20 13.0	-0.2
TGUH	**Tegucigalpa,Un**	1.93	80			**Pb**	04 20 15.6	-1.3
TGUH				Sn		**Sb**	04 20 41.5	+0.1
TGUH				IAML			04 20 44.6	
	comp=N,393nm,0.6s							
TGUH				IAML			04 20 45.9	
	comp=N,410nm,0.7s							
CRIN	**San Cristobal**	2.36	115	Pn		**Pn**	04 20 21.5	+1.0
CRIN				IAML			04 20 59.3	
	comp=E,486nm,0.7s							
CNGN	**Cerro Negro**	2.75	116			**Pn**	04 20 26.7	+0.8
MGAN	**Managua**	3.31	118	Pn		**Pn**	04 20 34.4	+0.8
MGAN				IAML			04 21 22.9	
	comp=E,57nm,0.9s							
MGAN				IAML			04 21 52.0	
	comp=N,84nm,0.1s							
BOAB	**BOACO BROADBAN**	3.70	110			**Pn**	04 20 38.2	-0.7
BOAB				IAML			04 21 38.1	
	comp=E,30nm,1.6s							
JUD3	**Juan Diaz 3**	5.05	134	Pn		**Pn**	04 20 57.8	+0.2
JTS	**Las Juntas de**	5.40	129	Pn		**Pn**	04 21 02.2	-0.2

*IDC **17** 04:24:02.1±1.3,35˚.25N×26˚.03E, h0km, mb3.8/6, mbtmp3.8/8, ML2.8/2, Error ellipse: s-maj=35.4km s-min=19.0km az=169.0*
*ATH **17** 04:24:05.2,35˚.40N×26˚.14E, h14km±1km, ML3.1/6, Manual Solution by A.Moschou First location: 2019/11/17 04:24:35, This location: 2019/11/17 04:50:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*ISK **17** 04:24:05.1,35˚.52N×26˚.10E, h6km, ML3.2/11*
*THE **17** 04:24:07.3,35˚N±3˚×2˚6E±˚, h33km±5km, M3.0/12, MLh3.0/12*
*GII **17** 04:24:09.5±0.0,35˚.107N±0˚.005×26˚.210E±0˚.002, h30km, Mws3.3, confirmed*
*AFAD **17** 04:24:12.3,35˚.65N×26˚.64E, h17km±1km, ML2.8*

ISC 17 04:24:05.5±0.9, **35˚.40N**±0˚.02×**26˚.14E**±0˚.02, **h15**km±**6**km, **n98**, σ1°**52**/131, **mb3.5**/5, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIT2	**Siteia**	**0.20**	**187**	P	**Pg**	**04 24 09.6**	**-0.5**
SIT2				S	**Sg**	**04 24 12.7**	**-0.5**
NPS	**Neapolis**	**0.45**	**252**	P	**Pg**	**04 24 14.4**	**-0.1**
NPS	**Neapolis**	**0.45**	**252**	P	**Pg**	**04 24 14.3**	**-0.3**
NPS				S	**Sg**	**04 24 20.4**	**-0.2**
KARP	**Karpathos**	**0.85**	**80**	Pg	**Pb**	**04 24 22.1**	**+0.1**
KARP				Sg	**Sb**	**04 24 34.5**	**+1.3**
KARP	**Karpathos**	**0.85**	**80**	P	**Pb**	**04 24 22.4**	**+0.4**
KARP				S	**Sb**	**04 24 33.9**	**+0.7**
KARP	**Karpathos**	**0.85**	**80**	P	**Pb**	**04 24 21.9**	**0.0**
KARP				S	**Sb**	**04 24 33.0**	**-0.1**
IACM	**Heraklion**	**0.88**	**264**	P	**Pb**	**04 24 23.8**	**+1.5**
IACM				S	**Sg**	**04 24 34.1**	**+0.1**
IACM	**Heraklion**	**0.88**	**264**	P	**Pb**	**04 24 22.9**	**+0.5**
IACM				S	**Sg**	**04 24 34.2**	**+0.2**
IDI	**Anoyia**	**1.02**	**264**	Pg	**Pg**	**04 24 25.1**	**-0.2**
IDI				Sg	**Sg**	**04 24 39.2**	**+0.4**
IDI	**Anoyia**	**1.02**	**264**	P	**Pg**	**04 24 24.3**	**-1.0**
IDI				S	**Sg**	**04 24 38.1**	**-0.6**
IDI	**Anoyia**	**1.02**	**264**	P	**Pg**	**04 24 25.0**	**-0.4**
IDI				S	**Sg**	**04 24 38.2**	**-0.6**
THERA	**Ancient Thera,**	**1.10**	**331**	P	**Pg**	**04 24 26.0**	**-0.9**
THERA				S	**Sg**	**04 24 40.0**	**-1.3**
THERA	**Ancient Thera,**	**1.10**	**331**	P	**Pg**	**04 24 26.2**	**-0.6**
THERA				S	**Sg**	**04 24 40.3**	**-1.0**
THR6	**Thira Island,**	**1.13**	**328**	P	**Pg**	**04 24 26.8**	**-0.4**
THR8	**Santorini-Mono**	**1.14**	**332**	P	**Pg**	**04 24 26.7**	**-0.8**
THR9	**Santorini-Faro**	**1.15**	**327**	P	**Pg**	**04 24 26.8**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.17**	**329**	P	**Pg**	**04 24 27.1**	**-1.0**
SNT5				S	**Sg**	**04 24 42.1**	**-1.2**
SNT5	**Nea Kammeni, S**	**1.17**	**329**	P	**Pg**	**04 24 27.3**	**-0.8**
SNT5				S	**Sg**	**04 24 43.3**	**0.0**
SFIR	**Foira Santorin**	**1.17**	**331**	S	**Sg**	**04 24 42.5**	**-0.9**
THR3	**Thira Island,**	**1.17**	**330**	P	**Pg**	**04 24 27.2**	**-0.9**
THR2	**Thira island,**	**1.19**	**332**	P	**Pg**	**04 24 27.8**	**-0.7**
SAP3	**Santorini-Thir**	**1.22**	**328**	P	**Pg**	**04 24 28.3**	**-0.7**
SAP3				S	**Sg**	**04 24 43.3**	**-1.5**
SAP3	**Santorini-Thir**	**1.22**	**328**	P	**Pb**	**04 24 28.8**	**+0.6**
SAP3				S	**Sg**	**04 24 44.5**	**-0.4**
NISR	**Nisiros**	**1.45**	**33**	P	**Pn**	**04 24 30.6**	**-0.6**
NISR				S	**Sb**	**04 24 50.0**	**-0.5**
NISR	**Nisiros**	**1.45**	**33**	P	**Pn**	**04 24 31.5**	**+0.3**
YAZI	**Mula-Dat§a-**	**1.67**	**39**	P	**Pn**	**04 24 34.9**	**+0.8**
YAZI				S	**Sn**	**04 24 51.9**	**-3.3**
APE	**Apeiranthos**	**1.74**	**344**	Pn	**Pn**	**04 24 34.6**	**-0.5**
APE				Sn	**Sn**	**04 24 56.7**	**-0.3**
APE	**Apeiranthos**	**1.74**	**344**	P	**Pn**	**04 24 35.0**	**-0.2**
APE				S	**Sn**	**04 24 55.8**	**-1.2**
APE	**Apeiranthos**	**1.74**	**344**	P	**Pn**	**04 24 35.7**	**+0.6**
APE	**Apeiranthos**	**1.74**	**344**	P	**Pn**	**04 24 34.9**	**-0.2**
APE				S	**Sn**	**04 24 56.8**	**-0.2**
DAT	**Datca**	**1.77**	**41**	P	**Pb**	**04 24 37.4**	**-0.3**
DAT				S	**Sn**	**04 24 58.6**	**+0.8**
DAT	**Datca**	**1.77**	**41**	Pn	**Pn**	**04 24 36.5**	**+0.9**
DAT	**Datca**	**1.77**	**41**	S	**Sn**	**04 24 57.9**	**0.0**
GVD	**Gavdhos**	**1.77**	**252**	Pn	**Pb**	**04 24 37.7**	**+0.1**
GVD	**Gavdhos**	**1.77**	**252**	P	**Pn**	**04 24 37.4**	**+1.9**
GVD				S	**Sn**	**04 24 56.6**	**-1.2**
GVD	**Gavdhos**	**1.77**	**252**	P	**Pn**	**04 24 35.9**	**+0.4**
GVD				S	**Sn**	**04 24 58.0**	**+0.2**
ARG	**Arkhangelos**	**1.81**	**63**	Pn	**Pn**	**04 24 37.5**	**+1.4**
ARG				Sn	**Sn**	**04 25 00.6**	**+1.8**
ARG	**Arkhangelos**	**1.81**	**63**	P	**Pn**	**04 24 36.9**	**+0.8**
ARG				S	**Sn**	**04 24 58.4**	**-0.3**
BDRM	**Kayabasi**	**1.97**	**32**	P	**Pb**	**04 24 41.8**	**+0.7**
TURN	**Turunc**	**2.19**	**51**	P	**Pn**	**04 24 42.3**	**+1.0**
TURN	**Turunc**	**2.19**	**51**	Pn	**Pn**	**04 24 41.9**	**+0.6**
ANKY	**Antikythira Is**	**2.36**	**282**	P	**Pn**	**04 24 44.0**	**+0.4**
SMG	**Samos**	**2.37**	**14**	P	**Pn**	**04 24 43.9**	**0.0**
SMG	**Samos**	**2.37**	**14**	P	**Pn**	**04 24 43.1**	**-0.8**
SMG				S	**Sn**	**04 25 12.8**	**+0.1**
YER	**Yerkesik**	**2.45**	**44**	P	**Pn**	**04 24 46.0**	**+1.0**
GCAM	**G?zelcaml?**	**2.46**	**21**	P	**Pg**	**04 24 53.6**	**+0.9**
GCAM				S	**Sg**	**04 25 25.9**	**+1.3**
DALY	**Dalyan (Mula)**	**2.48**	**55**	Pn	**Pn**	**04 24 46.6**	**+1.3**
MULA	**Mugla, Merkez-**	**2.56**	**43**	P	**Pg**	**04 24 53.9**	**-0.6**
MULA				S	**Sn**	**04 25 17.8**	**+0.5**
KTHA	**Kythira Island**	**2.64**	**290**	Pn	**Pn**	**04 24 48.5**	**+1.0**
KTHA	**Kythira Island**	**2.64**	**290**	P	**Pn**	**04 24 47.9**	**+0.3**
AYDN	**Tasoluk**	**2.66**	**31**	P	**Pb**	**04 24 51.8**	**-1.0**
FETY	**Fethiye**	**2.69**	**62**	P	**Pn**	**04 24 45.6**	**-2.6**
SABU	**Mula-Dalaman**	**2.70**	**57**	P	**Pn**	**04 24 51.0**	**+2.6**
SABU				S	**Sn**	**04 25 21.1**	**+0.4**
SABU				*i* IAML		04 25 33.0	
	comp=E,64nm,0.9s						
SABU				*i* IAML		04 25 37.0	
	comp=N,52nm,0.9s						
IZZE	**Mula-Seydike**	**2.71**	**67**	P	**Pn**	**04 24 50.5**	**+2.0**
ZEYE	**Izmir, Urla-Ze**	**2.85**	**6**	P	**Pn**	**04 24 51.4**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**2.91**	**29**	Pn	**Pn**	**04 24 52.6**	**+1.3**
VLI	**Veliai**	**2.91**	**298**	P	**Pn**	**04 24 51.8**	**+0.6**
AKAS	**Kas**	**2.94**	**73**	P	**Pb**	**04 24 55.7**	**-1.9**
KARY	**Karystos**	**2.96**	**333**	P	**Pn**	**04 24 52.5**	**+0.6**
CHOS	**Chios island**	**2.98**	**359**	P	**Pn**	**04 24 52.7**	**+0.4**
ESEN	**Aydn-Nazilli**	**2.98**	**36**	P	**Pn**	**04 24 55.0**	**+2.7**
ESEN				S	**Sn**	**04 25 26.8**	**-0.9**
DNZT	**Denizli-Tavas-**	**2.99**	**50**	P	**Pn**	**04 24 55.6**	**+3.1**
TAVA	**DENIZLI_Tavas**	**3.04**	**47**	P	**Pn**	**04 24 56.0**	**+2.8**
NAZL	**Nazilli-Aydin**	**3.09**	**33**	Pn	**Pn**	**04 24 54.5**	**+0.8**
CAEL	**Denizli, Camel**	**3.10**	**55**	P	**Pn**	**04 24 56.7**	**+2.8**
IZMR	**zmir-demi**	**3.10**	**28**	P	**Pn**	**04 24 57.6**	**+3.0**
KNIK	**Mula-Seydike**	**3.13**	**62**	P	**Pn**	**04 24 57.0**	**+2.6**
ATHU	**Athens Univers**	**3.18**	**324**	P	**Pn**	**04 24 55.8**	**+0.8**
DNIZ	**Denizli-Tavas-**	**3.23**	**46**	P	**Pn**	**04 24 58.9**	**+3.2**
GOLH	**Golhisar**	**3.32**	**55**	P	**Pn**	**04 24 59.4**	**+2.5**
KIRA	**zmir-Kiraz**	**3.33**	**32**	P	**Pn**	**04 25 00.9**	**+3.8**
AKUM	**Antalya-Kumluc**	**3.54**	**74**	P	**Pn**	**04 25 02.1**	**+2.3**
INCE	**Denizli-Bozkur**	**3.60**	**49**	P	**Pn**	**04 25 04.4**	**+3.6**
VLX	**Vlachokerasia**	**3.61**	**304**	P	**Pn**	**04 25 02.3**	**+1.3**
MANT	**Manisa**	**3.64**	**31**	P	**Pn**	**04 25 05.1**	**+3.6**
GUR	**Goura**	**3.96**	**311**	P	**Pn**	**04 25 07.0**	**+1.2**
USAK	**Uak-Merkez**	**4.03**	**34**	P	**Pn**	**04 25 09.0**	**+2.3**
CSS	**Mathiatis**	**5.91**	**92**	P	**Pn**	**04 25 33.7**	**+1.2**
BRTR	**Keskin Array B**	**7.36**	**52**	Pn	**Pn**	**04 25 54.0**	**+1.6**
	0.1nm,0.3s,baz=232,slow=14,SNR=3.3						
BRTR				Sn	**Sn**	**04 27 16.9**	**+1.2**
	baz=215,slow=22,SNR=2.1						
MMAI	**Mount Meron Ar**	**8.04**	**105**	Pn	**Pn**	**04 25 59.8**	**-2.0**
	0.9nm,0.3s,baz=350,slow=15,SNR=11						
MMAI				Sn	**Sn**	**04 27 32.9**	**+0.5**
	1.7nm,0.3s,baz=298,slow=24,SNR=1.8						
DSI	**Dead Sea**	**8.61**	**114**	P	**Pn**	**04 26 10.3**	**+0.7**
DSI	**Dead Sea**	**8.61**	**114**	S	**Sn**	**04 27 45.3**	**-1.1**
PRNI	**Paran**	**9.00**	**122**	P	**Pn**	**04 26 15.0**	**+0.2**
PRNI	**Paran**	**9.00**	**122**	S	**Sn**	**04 27 52.3**	**-3.6**
HRFI	**Mount Harif**	**9.21**	**123**	P	**Pn**	**04 26 18.5**	**+0.7**
HRFI	**Mount Harif**	**9.21**	**123**	S	**Sn**	**04 27 58.8**	**-2.3**
MBRI	**Mt Berech**	**9.28**	**125**	P	**Pn**	**04 26 19.1**	**+0.4**
MBRI	**Mt Berech**	**9.28**	**125**	S	**Sn**	**04 27 59.6**	**-3.2**
EIL	**Elat**	**9.38**	**125**	P	**Pn**	**04 26 19.6**	**-0.5**
EIL	**Elat**	**9.38**	**125**	S	**Sn**	**04 28 01.8**	**-3.4**
KBZ	**Khabaz**	**15.35**	**52**	Pn	**Pn**	**04 27 44.6**	**+3.2**
	0.1nm,0.3s,baz=243,slow=11,SNR=3.5						
	2.3nm,0.9s						
AKASG	**Malin Array Be**	**15.46**	**7**	Pn	**Pn**	**04 27 45.7**	**+2.9**
	0.6nm,0.3s,baz=203,slow=11,SNR=2.2						
ESDC	**Sonseca Array**	**24.19**	**289**	P	**P**	**04 29 20.2**	**-1.2**
	0.9nm,1.1s,baz=92,slow=11,SNR=1.7						
	0.9nm,1.1s						
EKA	**Eskdalemuir Ar**	**28.31**	**324**	P	**P**	**04 29 56.9**	**-1.4**
	4.2nm,1.2s,baz=125,slow=9.5,SNR=2.4						
	4.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**31.26**	**231**	P	**P**	**04 30 22.2**	**-2.6**
	1.6nm,0.3s,baz=34,slow=13,SNR=2.0						
	1.6nm,0.3s						
KURBB	**Kurchatov Arra**	**40.35**	**51**	P	**P**	**04 31 42.6**	**+0.3**
	0.4nm,0.5s,baz=279,slow=8.8,SNR=5.4						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**42.98**	**57**	P	**P**	**04 32 04.8**	**+0.8**
	0.5nm,0.5s,baz=282,slow=8.2,SNR=5.5						
	0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**44.26**	**46**	P	**P**	**04 32 15.3**	**+1.2**
	0.4nm,0.3s,baz=284,slow=5.8,SNR=2.1						
	0.4nm,0.3s						

*IDC **17** 05:00:08.2±2.2, 1˚.84N×126˚.77E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=170.8km s-min=28.0km az=66.0*
*DJA **17** 05:00:13.3±1.2,2˚N±3˚×12˚6E±˚, h22km±10km, M3.5/7, mb3.7/1, MLv3.4/7*

ISC 17 05:00:14.1±1.2, **1˚.6N**±0˚.2×**126˚.4E**±0˚.4, **h35**km, **n5**, σ1°**04**/6, **mb3.6**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**130**	P	**Pn**	**05 00 34.7**	**+0.1**
SGSI	**Sangihe**	**2.30**	**337**	P	**Pn**	**05 00 49.9**	**+0.4**
SGSI				S	**Sn**	**05 01 16.9**	**+0.3**
WRA	**Warramunga Arr**	**22.73**	**160**	P	**P**	**05 05 12.9**	**-0.3**
	1.7nm,0.8s,baz=340,slow=11,SNR=11						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**26.11**	**164**	P	**P**	**05 05 46.2**	**+1.3**
	0.4nm,0.5s,baz=348,slow=13,SNR=6.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**05 10 10.5**	**-1.0**
	0.4nm,0.7s,baz=127,slow=6.9,SNR=2.1						
	0.4nm,0.7s						

*IDC **17** 05:38:10.1±1.4, 1˚.47N×126˚.11E, h0km, mb3.5/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=117.7km s-min=20.3km az=68.0*
*DJA **17** 05:38:14.3±1.2,2˚N±3˚×12˚6E±˚, h25km±11km, M3.4/7, MLv3.4/7*

ISC 17 05:38:15.0±1.0, **1˚.65N**±0˚.08×**126˚.4E**±0˚.2, **h35**km, **n8**, σ1°**02**/10, **mb3.5**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**131**	P	**Pn**	**05 38 37.8**	**+0.7**
SGSI	**Sangihe**	**2.19**	**338**	P	**Pn**	**05 38 48.8**	**-0.1**
SGSI				S	**Sn**	**05 39 15.1**	**+0.4**
SANI	**Sanana**	**3.69**	**186**	P	**Pn**	**05 39 10.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	**P**	**05 42 39.7**	**-1.1**
	0.1nm,0.3s,baz=2.2,slow=11,SNR=1.4						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**22.84**	**160**	P	**P**	**05 43 13.5**	**-1.8**
	0.7nm,0.4s,baz=336,slow=11,SNR=11						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.21**	**164**	P	**P**	**05 43 46.1**	**-0.7**
	0.4nm,0.5s,baz=345,slow=10,SNR=8.9						
ASAR				PcP	**PcP**	**05 47 12.9**	**-0.3**
	0.3nm,0.9s,baz=343,slow=2.4,SNR=1.7						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**05 48 12.2**	**+0.6**
	0.5nm,0.7s,baz=117,slow=6.9,SNR=8.4						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	**P**	**05 48 41.0**	**+0.8**
	0.2nm,0.4s,baz=126,slow=6.8,SNR=1.8						
	0.2nm,0.4s						

*IDC **17** 05:39:20.7±0.8, 7˚.03N×94˚.26E, h0km, mb3.8/13, mbtmp3.8/15, ML4.0/2, MS3.2/6, Error ellipse: s-maj=38.3km s-min=17.2km az=56.0*
*NDI **17** 05:39:21.2±0.9, 7˚.89N×93˚.78E, h10km, ML4.1, MW4.3*
*NEIC **17** 05:39:24.0±1.4, 7˚.49N±0˚.02×94˚.9E±0˚.1, h10km±1km, mb4.3/11, Error ellipse: s-maj=23.4km s-min=3.0km az=261.0*
*BKK **17** 05:39:30.6±0.8, 7˚N±6˚×9˚5E±˚, h10km, M4.0/10, mB4.4/3, mb4.3/5, Mjma3.6/10, ML4.1/10, MLv4.0/9, Mw(mB)3.5/3*
*DJA **17** 05:39:37.1±1.3, 7˚N±4˚×9˚6E±˚, h27km±14km, M3.9/7, mB4.4/1, mb4.2/5, MLv3.8/7, Mw(mB)3.6/1*

ISC 17 05:39:22.3±0.5, **7.07N**±0˚.06×**94˚.46E**±0˚.05, **h10**km, **n61**, σ1°**73**/50, **mb4.1**/20, **MS3.1**/4, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.53**	**263**	*eP*	**Pn**	**05 39 35.9**	**-0.1**
CMBY				*ex*	x	05 39 35.9	
	baz=348,slow=22						
CMBY				*eS*	**Sn**	**05 39 44.8**	**-0.2**
CMBY				IAML		05 39 45.5	
	comp=N,10µm,0.3s						
CMBY				IAML		05 39 48.4	
	comp=E,9µm,0.3s						
LHMI	**Lhok Sumawe**	**3.08**	**126**	Pn	**Pn**	**05 40 12.7**	**+1.7**
LHMI	**Lhok Sumawe**	**3.08**	**126**	P	**Pn**	**05 40 12.4**	**+1.4**
MLSI	**Meulaboh, Aceh**	**3.39**	**145**	P	**Pb**	**05 40 19.6**	**-3.0**
PKDT	**Phuket**	**3.93**	**78**	P	**Pn**	**05 40 23.1**	**+0.4**
RNTT	**Ranong**	**4.60**	**60**	P	**Pn**	**05 40 33.0**	**+1.1**
KCSI	**Kotacane, Aceh**	**4.83**	**137**	P	**Pn**	**05 40 38.4**	**+3.3**
PBA	**Port Blair**	**4.86**	**340**	*ex*	**Pg**	**05 40 57.1**	**+1.6**
PSI	**Prapat**	**6.15**	**133**	Pn	**Pn**	**05 40 57.0**	**+3.7**
	comp=E,1.2nm,0.3s,baz=240,slow=7.4,SNR=5.7						
PSI				Sn	**Sn**	**05 42 05.8**	**+2.0**
	comp=E,0.7nm,0.3s,baz=179,slow=2.5,SNR=1.3						
PSI				LR	LR	05 43 31.1	
	comp=E,200nm,18.0s,baz=303,slow=40						
	comp=E,3.2nm,0.4s						
RPSI	**Rantau Prapat**	**6.22**	**134**		**Pn**	**05 40 56.5**	**+2.2**
RPSI	**Rantau Prapat**	**6.22**	**134**		**Pn**	**05 40 57.0**	**+2.8**
DGPR	**DIGLIPUR**	**

AUST 17 05:51:55.3±0.7, 18°S±6″×12°0E±°, h10km, mb4.0/6, ML2.7/4, Error ellipse: s-maj=15.2km s-min=5.5km az=146.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAAN	**Eighty Mile Be**	**1.67**	**132**	P	Pb	05 52 25.6	-0.6
AUBRM	**Broome Senior**	**1.95**	**85**	P	Pn	05 52 28.9	+0.5
AUBRM				S	Sb	05 52 54.3	-1.0
MBWA	**Marble Bar**	**3.03**	**188**	P	Pn	05 52 43.9	+0.5
MBWA				S	Sn	05 53 19.6	-0.1
PSAD1	**Pilbara Seismi**	**3.31**	**186**	P	Pn	05 52 48.3	+1.1
PSAC1	**Pilbara Seismi**	**3.39**	**186**	P	Pn	05 52 48.8	+0.5
PSAB2	**Pilbara Seismi**	**3.41**	**185**	P	Pn	05 52 49.1	+0.6
PSAC2	**Pilbara Seismi**	**3.41**	**185**	P	Pn	05 52 49.6	+1.0
PSA00	**Pilbara Seismi**	**3.42**	**185**	P	Pn	05 52 49.2	+0.4
PSAB3	**Pilbara Seismi**	**3.44**	**185**	P	Pn	05 52 49.8	+0.8
PSAB3				S	Sn	05 53 28.5	-1.4
FITZ	**Fitzroy Crossi**	**5.18**	**90**	P	Pn	05 53 10.6	-2.3
GIRL	**Giralia** comp=Z,41nm,1.9s,comp=Z,0.1nm	**7.16**	**230**	P	Pn	05 53 41.3	+1.2
CVQOZ	**Cooralya Stati** comp=Z,181nm,1.5s,comp=Z,0.4nm	**8.47**	**221**	P	Pn	05 53 58.3	+0.2
KNRA	**Kununurra** comp=Z,5.9nm,1.0s,comp=Z,0.0nm	**8.56**	**75**	P	Pn	05 53 57.3	-2.1
MEEK	**Meekatharra** comp=Z,9.9nm,1.7s,comp=Z,0.1nm	**8.58**	**190**	P	Pn	05 53 59.9	+0.3
MORW	**Morawa** comp=Z,11nm,2.3s	**11.52**	**199**	P	Pn	05 54 38.7	-1.1
BLDU	**Balidu** comp=Z,21nm,2.4s	**12.81**	**194**	P	Pn	05 54 56.2	-1.3

*IDC **17** 05:55:09.0±1.6, 7.°01N×94.°20E, h0km, mb3.9/7, mbtmp3.9/9, ML4.0/2, MS3.3/11, Error ellipse: s-maj=71.6km s-min=18.5km az=57.0*
*NEIC **17** 05:55:09.7±1.2, 7.°17N±0.°09×94.°4E±0.°2, h10km±1km, mb4.2/5, Error ellipse: s-maj=30.0km s-min=8.9km az=244.0*
*NDI **17** 05:55:13.2±0.3, 7.°78N×93.°82E, h10km, ML4.2, MW4.4*
*BKK **17** 05:55:13.8±1.1, 7.°N±4″×9°5E±°, h18km±10km, M4.2/10, mB4.9/5, mb4.1/7, Mjma3.8/10, ML4.4/8, MLv4.3/8, Mw(mB)4.2/5*
*DJA **17** 05:55:15.7±0.5, 7.°N±5″×9°5E±°, h81km±11km, M4.3/10, mB4.9/7, mb4.4/9, MLv4.4/10, Mw(mB)4.2/7, MwMwp4.4/1, Mwp4.8/1*

ISC 17 05:55:12.6±0.6, 7.°22N±0.°05×94.°44E±0.°05, h26km, n51, σ1§49/45, mb4.0/10, MS3.3/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.55**	**248**	*eP*	**Pn**	**05 55 24.8**	**0.0**
CMBY	baz=349,slow=18			*ex*	x	05 55 24.8	
CMBY				*eS*	**Sn**	**05 55 33.3**	**+0.1**
CMBY	comp=N,12μm,0.3s			IAML		05 55 33.9	
CMBY	comp=E,11μm,0.3s			IAML		05 55 34.8	
LHMI	**Lhok Sumawe**	**3.18**	**128**		**Pn**	**05 55 59.6**	**-1.3**
LHMI	**Lhok Sumawe**	**3.18**	**128**	P	**Pn**	**05 56 01.5**	**+0.5**
LHMI				S	**Sn**	**05 56 36.8**	**-1.3**
LHMI	**Lhok Sumawe**	**3.18**	**128**	P	**Pn**	**05 56 01.3**	**+0.3**
LHMI				S	**Sn**	**05 56 37.0**	**-1.1**
MLSI	**Meulaboh, Aceh**	**3.53**	**146**	P	**Pn**	**05 56 08.0**	**+2.3**
MLSI				S	**Sn**	**05 56 47.8**	**+1.2**
MLSI	**Meulaboh, Aceh**	**3.53**	**146**	P	**Pn**	**05 56 06.6**	**+0.9**
MLSI				S	**Sn**	**05 56 46.8**	**+0.2**
PKDT	**Phuket**	**3.92**	**80**	P	**Pn**	**05 56 12.2**	**+1.1**
RNTT	**Ranong**	**4.54**	**61**	P	**Pn**	**05 56 20.6**	**+1.0**
KCSI	**Kotacane, Aceh**	**4.95**	**138**	P	**Pn**	**05 56 27.8**	**+2.5**
KCSI	**Kotacane, Aceh**	**4.95**	**138**	P	**Pn**	**05 56 28.2**	**+2.9**
SNSI	**Sinabang, Aceh**	**5.14**	**158**	P	**Pn**	**05 56 29.9**	**+2.0**
SNSI	**Sinabang, Aceh**	**5.14**	**158**	P	**Pn**	**05 56 27.1**	**-0.8**
PSI	**Prapat** comp=E,1.7nm,0.3s,baz=289,slow=6.8,SNR=4.7	**6.26**	**134**	Pn	**Pn**	**05 56 46.0**	**+2.5**
PSI	comp=E,2.9nm,0.3s,baz=264,slow=22,SNR=3.5			Sn	**Sn**	**05 57 55.1**	**+0.8**
PSI	comp=E,280nm,19.1s,baz=298,slow=40 comp=E,4.8nm,0.3s			LR	LR	05 59 20.7	
RPSI	**Rantau Prapat**	**6.34**	**135**	Pn	**Pn**	**05 56 42.8**	**-1.6**
KULM	**Kulim**	**6.46**	**107**		**Pn**	**05 56 44.9**	**-1.2**
GSI	**Gunungsitoli**	**6.66**	**152**	Pn	**Pn**	**05 56 46.1**	**-2.8**
GSI	**Gunungsitoli** comp=E,0.2nmcomp=E,3μmcomp=E,17nm,0.8s	**6.66**	**152**	P	**Pn**	**05 56 49.0**	**+0.2**
IPM	**Ipoh**	**7.09**	**112**		**Pn**	**05 56 52.8**	**-2.0**
CMAR	**Chiang Mai Arr** comp=E,0.5nm,0.3s,baz=203,slow=14,SNR=6.2	**11.99**	**21**	Pn	**Pn**	**05 58 05.3**	**+3.3**
CMAR	comp=E,103nm,20.3s,baz=200,slow=37 comp=E,0.9nm,0.3s			LR	LR	06 02 44.2	
CMAR	**Chiang Mai Arr**	**11.99**	**21**		**Pn**	**05 58 01.5**	**-0.5**
CHTO	**Chiang Mai**	**12.32**	**20**	Pn	**Pn**	**05 58 05.3**	**-1.2**
PALK	**Pallekele** comp=E,28nm,21.4s,baz=88,slow=30	**13.63**	**271**	LR	LR	06 01 46.1	
EVN	**Everest**	**21.85**	**342**		**P**	**06 00 02.7**	**-1.3**
EVN	comp=Z,5.1nm,0.8s			IAmb	IAmb	06 00 30.6	
H08S3	**Diego Garcia H** baz=56,slow=76,SNR=116	**26.40**	**236**	T	T	06 27 31.9	
H08S2	**Diego Garcia H** baz=56,slow=76,SNR=103	**26.41**	**236**	T	T	06 27 31.1	
H08S1	**Diego Garcia H** baz=56,slow=76,SNR=87	**26.42**	**236**	T	T	06 27 27.6	
KAPI	**Kappang** comp=Z,74nm,18.4s,baz=304,slow=37	**28.03**	**115**	LR	LR	06 12 18.4	
NIL	**Nilore**	**32.80**	**326**	P	**P**	**06 01 42.3**	**-1.6**
AAK	**Ala-Archa** comp=Z,62nm,18.5s,baz=160,slow=39	**39.42**	**337**	LR	LR	06 20 48.1	
MKAR	**Makanchi Array** comp=Z,0.9nm,0.7s,baz=163,slow=8.7,SNR=4.4	**40.78**	**347**	P	**P**	**06 02 53.2**	**+1.5**
MKAR	comp=Z,26nm,18.3s,baz=143,slow=44 comp=Z,0.9nm,0.7s			LR	LR	06 24 57.5	
MKAR	**Makanchi Array**	**40.78**	**347**	P	**P**	**06 02 50.5**	**-1.2**
KKAR	**Karatay Array**	**41.47**	**333**	P	**P**	**06 02 57.0**	**-0.4**
JNU	**Nakatsue** comp=Z,77nm,21.0s,baz=2.5,slow=37	**42.46**	**48**	LR	LR	06 21 32.2	
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.2s,baz=166,slow=6.5,SNR=4.3	**45.25**	**346**	P	**P**	**06 03 29.2**	**+1.5**
KURBB	comp=Z,22nm,20.2s,baz=168,slow=40 comp=Z,1.0nm,0.2s			LR	LR	06 25 31.1	
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.4s,baz=185,slow=9.3,SNR=6.1 comp=Z,0.6nm,0.4s	**47.24**	**352**	P	**P**	**06 03 44.8**	**+1.5**
ZALV	**Zalesovo Beam**	**47.24**	**352**	P	**P**	**06 03 42.2**	**-1.0**
WB0	**Warramunga Arr**	**47.60**	**125**		**P**	**06 03 46.1**	**-0.6**
WB0	comp=Z,2.2nm,1.1s			IAmb	IAmb	06 03 55.1	
WRA	**Warramunga Arr** comp=Z,0.3nm,0.6s,baz=306,slow=8.5,SNR=7.1 comp=Z,0.3nm,0.6s	**47.64**	**125**	P	**P**	**06 03 47.6**	**+0.6**
WRA	**Warramunga Arr**	**47.64**	**125**	P	**P**	**06 03 45.2**	**-1.8**
ASAR	**Alice Springs** comp=Z,0.5nm,0.7s,baz=298,slow=7.5,SNR=6.9	**49.27**	**130**	P	**P**	**06 03 59.6**	**+0.1**
ASAR	comp=Z,35nm,19.5s,baz=292,slow=39 comp=Z,0.5nm,0.7s			LR	LR	06 27 27.9	
ASAR	**Alice Springs**	**49.27**	**130**	P	**P**	**06 03 57.9**	**-1.6**
BVAR	**Borovoye Array** comp=Z,27nm,18.0s,baz=144,slow=39	**49.70**	**341**	LR	LR	06 27 48.8	
AB31	**Akbulak array**	**50.94**	**331**	P	**P**	**06 04 11.8**	**0.0**
AB31	comp=Z,6.2nm,1.0s			IAmb	IAmb	06 04 22.4	
ABKAR	**Akbulak array**	**50.94**	**331**	P	**P**	**06 04 11.6**	**-0.2**
ARTI	**Arti** comp=Z,44nm,19.3s,baz=160,slow=38	**56.64**	**337**	LR	LR	06 30 55.5	
H04N2	**CROZET ISLANDS** baz=47,slow=75,SNR=11	**65.33**	**211**	T	T	07 16 30.0	
H04N1	**CROZET ISLANDS** baz=47,slow=75,SNR=7.1	**65.34**	**211**	T	T	07 16 21.2	
H04N3	**CROZET ISLANDS** baz=47,slow=75,SNR=6.1	**65.34**	**211**	T	T	07 16 21.0	
FINES	**FINESS Array B** comp=Z,1.5nm,0.8s,baz=5.7,slow=1.9,SNR=3.4 comp=Z,1.5nm,0.8s	**73.42**	**332**	P	**P**	**06 06 43.6**	**+1.3**
ARCES	**ARCESS Array B** comp=Z,3.2nm,1.1s,baz=108,slow=6.7,SNR=1.3 comp=Z,3.2nm,1.1s	**75.97**	**340**	P	**P**	**06 06 58.5**	**+1.4**
TXAR	**Lajitas Array** baz=344,slow=3.1,SNR=1.6	**139.69**	**25**	PKP	**PKPdf**	**06 14 39.7**	**+0.7**

*JMA **17** 06:10:40.5±0.1, 24.°2N±1.°×122.°6E±0.°4, h38km±2km, MV2.5/14, NW OFF ISHIGAKIJIMA IS*
*TAP **17** 06:10:40.5, 24.°20N×122.°62E, h47km, ML3.1, C*

ISC 17 06:10:38.8±1.0, 24.°09N±0.°02×122.°56E±0.°02, h16km±9km, n101, σ0§73/181, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.50**	**44**	*eP*	**Pb**	**06 10 50.4**	**+1.1**
JYNG				*eS*	**Sb**	**06 10 58.0**	**+1.6**
YOJ	**Yonaguni jima**	**0.55**	**48**	*eP*	**Pb**	**06 10 51.3**	**+1.1**
YOJ				*eS*	**Sb**	**06 10 59.0**	**+1.1**
YOJ	**Yonaguni jima**	**0.55**	**48**	*i P*	**Pb**	**06 10 51.3**	**+1.1**
YOJ				*i S*	**Sb**	**06 10 59.2**	**+1.3**
EAHA	**Aohua**	**0.79**	**288**	P	**Pn**	**06 10 56.0**	**+0.8**
EAHA				S	**Sn**	**06 11 08.1**	**+1.3**
EWUT	**Wuta**	**0.80**	**296**	P	**Pn**	**06 10 55.6**	**+0.2**
EWUT				S	**Sn**	**06 11 07.4**	**+0.5**
ESAO	**Su ao**	**0.81**	**307**	P	**Pn**	**06 10 56.6**	**+0.9**
ESAO				S	**Sn**	**06 11 07.6**	**+0.3**
ENA	**Nanau**	**0.82**	**294**	*eP*	**Pn**	**06 10 56.0**	**+0.2**
ENA				*eS*	**Sn**	**06 11 07.3**	**-0.3**
TWC	**Suao**	**0.83**	**309**	*i P*	**Pn**	**06 10 55.9**	**0.0**
TWC				S	**Sb**	**06 11 06.9**	**+1.1**
ETL	**Fush Village**	**0.86**	**275**	*eP*	**Pn**	**06 10 56.9**	**+0.6**
ETL				*eS*	**Sn**	**06 11 09.3**	**+0.7**
TWD	**Chiawan**	**0.88**	**269**	*eP*	**Pn**	**06 10 57.0**	**+0.4**
TWD				*eS*	**Sn**	**06 11 09.5**	**+0.5**
NACB	**Ninganchiao**	**0.88**	**276**	P	**Pn**	**06 10 57.0**	**+0.3**
NACB	**Ninganchiao**	**0.88**	**276**	P	**Pn**	**06 10 57.0**	**+0.3**
NACB				*eS*	**Sn**	**06 11 09.6**	**+0.4**
NDS	**Dongshan**	**0.94**	**305**	*eP*	**Pn**	**06 10 58.2**	**+0.8**
NDS				*eS*	**Sn**	**06 11 11.2**	**+0.7**
EGS		**0.94**	**323**	*eP*	**Pb**	**06 10 56.7**	**-0.2**
EGS				*eS*	**Sb**	**06 11 09.2**	**+0.1**
SHUL	**Shoufeng**	**0.96**	**252**	*eP*	**Pn**	**06 10 59.0**	**+1.3**
SHUL				*eS*	**Sn**	**06 11 12.2**	**+1.1**
ETM	**Tongmen**	**0.98**	**263**	*eP*	**Pn**	**06 10 58.1**	**+0.1**
ETM				*eS*	**Sn**	**06 11 12.0**	**+0.3**
ETLH	**Xiulin Townshi**	**0.99**	**277**	P	**Pn**	**06 10 58.6**	**+0.4**
ETLH				*eS*	**Sn**	**06 11 12.1**	**+0.1**
TWE	**Neicheng**	**1.03**	**308**	*eP*	**Pn**	**06 10 59.3**	**+0.6**
TWE				S	**Sg**	**06 11 12.8**	**+0.6**
LATG	**Datong**	**1.04**	**295**	*eP*	**Pn**	**06 10 59.5**	**+0.5**
LATG				*eS*	**Sn**	**06 11 13.9**	**+0.7**
LXIB	**Xiulin Townshi**	**1.05**	**266**	*eP*	**Pn**	**06 10 59.6**	**+0.5**
LXIB				*eS*	**Sn**	**06 11 14.6**	**+1.1**
TWB1	**Santiao Chiao**	**1.05**	**330**	P	**Pb**	**06 10 58.1**	**-0.5**
TWB1				S	**Sb**	**06 11 11.2**	**-1.1**
ENTT	**Nioudou**	**1.06**	**301**	*i P*	**Pg**	**06 10 59.9**	**+0.6**
ENTT				*eS*	**Sg**	**06 11 13.6**	**+0.4**
ESL	**Shilin**	**1.07**	**255**	*eP*	**Pn**	**06 10 59.9**	**+0.8**
ESL				*eS*	**Sn**	**06 11 13.8**	**+0.2**
IRIF	**Iriomote-Funau**	**1.10**	**77**	*eP*	**Pb**	**06 10 59.1**	**-0.3**
IRIF				*eS*	**Sb**	**06 11 13.6**	**0.0**
TIPB	**Shuangxi**	**1.10**	**323**	*eP*	**Pb**	**06 10 59.4**	**-0.2**
TIPB				S	**Sb**	**06 11 12.9**	**-0.8**
FUSB	**Fushanzhiwuyua**	**1.11**	**307**	P	**Pn**	**06 11 00.4**	**+0.6**
FUSB				*eS*	**Sn**	**06 11 15.8**	**+0.9**
EGFH	**Guangfu**	**1.12**	**248**	*eS*	**Sn**	**06 11 16.1**	**+1.2**
NNSB	**Datong**	**1.12**	**288**	*eP*	**Pn**	**06 11 00.4**	**+0.4**
NNSB				*eS*	**Sn**	**06 11 15.6**	**+0.3**
NNSH	**Datong**	**1.12**	**288**	*eS*	**Sg**	**06 11 15.2**	**-0.1**
WARBT	**Fenglin Townsh**	**1.14**	**251**	*i P*	**Pg**	**06 11 00.8**	**0.0**
WARBT				S	**Sn**	**06 11 15.8**	**+0.3**
HATJ	**Hateruma jima**	**1.14**	**91**	*eP*	**Pb**	**06 11 00.8**	**+0.6**
HATJ				*eS*	**Sb**	**06 11 15.6**	**+0.8**
SXI1	**Grass Mountain**	**1.18**	**328**	*eP*	**Pn**	**06 11 00.3**	**-0.5**
SXI1				*eS*	**Sb**	**06 11 15.1**	**-0.8**
NWLT	**Wulai**	**1.18**	**306**	P	**Pb**	**06 11 01.6**	**+0.7**
NWLT				S	**Sb**	**06 11 16.8**	**+0.8**
WHF	**Hehuan Shan**	**1.18**	**273**	*eP*	**Pg**	**06 11 01.8**	**0.0**
HGSD	**Ruisui**	**1.20**	**240**	*eP*	**Pg**	**06 11 01.8**	**-0.1**
HGSD				*eS*	**Sg**	**06 11 17.6**	**0.0**
NWF	**Wu-fen Shan**	**1.21**	**324**	P	**Pn**	**06 11 00.9**	**-0.2**
NWF				S	**Sb**	**06 11 15.7**	**-1.1**
WFSB	**Wu-fen Shan**	**1.21**	**324**	P	**Pn**	**06 11 00.8**	**-0.2**
WFSB				S	**Sb**	**06 11 15.5**	**-1.2**
YHNB	**Yeheng**	**1.22**	**298**	P	**Pb**	**06 11 02.0**	**+0.3**
YHNB	**Yeheng**	**1.22**	**298**	P	**Pb**	**06 11 02.1**	**+0.4**
YHNB				S	**Sb**	**06 11 17.5**	**+0.3**
NSK	**Sanguang**	**1.24**	**298**	P	**Pb**	**06 11 02.3**	**+0.3**
NSK				*eS*	**Sb**	**06 11 18.1**	**+0.3**
TWA	**Mucha**	**1.25**	**315**	*eP*	**Pn**	**06 11 02.0**	**+0.3**
TWA				*eS*	**Sb**	**06 11 17.6**	**-0.5**
EHYH	**Wanrong**	**1.26**	**242**	*eP*	**Pg**	**06 11 03.8**	**+0.6**
EHYH				*eS*	**Sg**	**06 11 20.4**	**+0.7**
OWD	**Renai**	**1.27**	**264**	P	**Pg**	**06 11 03.0**	**-0.4**
OWD				*eS*	**Sn**	**06 11 19.0**	**0.0**
TWT	**Tachien**	**1.27**	**278**	*eP*	**Pg**	**06 11 03.9**	**+0.5**
TWT				*eS*	**Sg**	**06 11 20.3**	**+0.2**
EHY	**Hungye**	**1.27**	**243**	*eP*	**Pg**	**06 11 03.4**	**0.0**
EHY				*eS*	**Sg**	**06 11 19.8**	**-0.3**
TNOU	**National Taiwa**	**1.27**	**326**	*eP*	**Pn**	**06 11 01.8**	**-0.3**
TNOU				*eS*	**Sb**	**06 11 16.7**	**-1.9**
ECBN	**Changbin**	**1.27**	**233**	*eP*	**Pg**	**06 11 04.0**	**+0.6**
ECBN				*eS*	**Sg**	**06 11 19.2**	**-0.9**
TDCB	**Techi**	**1.29**	**277**	*eP*	**Pg**	**06 11 04.1**	**+0.4**
TDCB				*eS*	**Sg**	**06 11 20.1**	**-0.5**
TATO	**Taipei**	**1.31**	**312**	P	**Pg**	**06 11 05.5**	**+1.3**
TATO	**Taipei**	**1.31**	**312**	S	**Sb**	**06 11 20.3**	**+0.5**
TATO	**Taipei**	**1.31**	**312**	*eP*	**Pn**	**06 11 03.1**	**+0.6**
TATO				*eS*	**Sb**	**06 11 19.6**	**-0.2**
WUSB	**Renai**	**1.32**	**266**	*i P*	**Pg**	**06 11 03.9**	**-0.5**
WUSB				S	**Sn**	**06 11 20.3**	**+0.2**
JKRS	**Kuro-shima**	**1.33**	**83**	*eP*	**Pn**	**06 11 03.4**	**+0.6**
JKRS				*eS*	**Sn**	**06 11 19.8**	**-0.4**
VWDT	**VWDT**	**1.34**	**256**	*i P*	**Pg**	**06 11 04.5**	**-0.2**
VWDT				S	**Sg**	**06 11 21.5**	**-0.6**
YULB	**Yu-li**	**1.35**	**239**	P	**Pg**	**06 11 04.5**	**-0.3**
YULB	**Yu-li**	**1.35**	**239**	S	**Sg**	**06 11 21.3**	**-1.1**
YULB	**Yu-li**	**1.35**	**239**	*eP*	**Pg**	**06 11 04.2**	**-0.6**
YULB				S	**Sg**	**06 11 21.4**	**-1.0**
TWF1	**Yuli**	**1.37**	**238**	*eP*	**Pg**	**06 11 04.7**	**-0.5**
TWF1				*eS*	**Sg**	**06 11 23.0**	**-0.1**
YM01	**YM01**	**1.38**	**320**	*eP*	**Pn**	**06 11 03.6**	**0.0**
YM01				*eS*	**Sn**	**06 11 19.8**	**-1.8**
CHKH	**Chenggong**	**1.39**	**230**	*eP*	**Pb**	**06 11 04.3**	**-0.2**
CHKH				*eS*	**Sb**	**06 11 21.6**	**-0.4**
YM08	**YM08**	**1.40**	**321**	*eS*	**Sn**	**06 11 19.9**	**-2.2**
ZUZH	**Zhuzihu**	**1.41**	**319**	*eP*	**Pn**	**06 11 03.5**	**-0.4**
ZUZH				*eS*	**Sn**	**06 11 19.7**	**-2.6**
NFF	**Wufeng Townshi**	**1.42**	**293**	*eP*	**Pb**	**06 11 05.2**	**+0.2**
NFF				*eS*	**Sb**	**06 11 23.1**	**+0.2**
KSHI	**Guanxi Townshi**	**1.43**	**299**	*eP*	**Pb**	**06 11 05.7**	**+0.5**
KSHI				S	**Sn**	**06 11 23.4**	**+0.7**
ANP	**Anpu**	**1.44**	**319**	*eS*	**Sn**	**06 11 21.4**	**-1.8**
FULB	**Fuli**	**1.46**	**233**	*eP*	**Pg**	**06 11 06.2**	**-0.7**
FULB				*eS*	**Sg**	**06 11 24.4**	**-1.6**
TWY	**Chenhua**	**1.47**	**324**	*eP*	**Pn**	**06 11 04.7**	**0.0**
TWY				*eS*	**Sn**	**06 11 22.1**	**-1.5**
JIJ	**Ishigaki jima**	**1.47**	**79**	*eP*	**Pn**	**06 11 04.4**	**-0.4**
JIJ				*eS*	**Sn**	**06 11 22.2**	**-1.4**
CHKT	**Chengkung**	**1.47**	**228**	*eP*	**Pg**	**06 11 06.4**	**-0.9**
CHKT				*eS*	**Sb**	**06 11 24.0**	**-0.4**
WHP	**Taichung City**	**1.48**	**278**	*eP*	**Pg**	**06 11 07.0**	**-0.5**
WHP				*eS*	**Sb**	**06 11 25.4**	**+0.5**
DPDB	**Guoxing**	**1.49**	**268**	*eP*	**Pb**	**06 11 06.5**	**+0.3**
SSLB	**Suanglung**	**1.50**	**259**	P	**Pb**	**06 11 06.5**	**+0.1**
SSLB	**Suanglung**	**1.50**	**259**	S	**Sb**	**06 11 24.8**	**-0.4**
SSLB	**Suanglung**	**1.50**	**259**	*eP*	**Pb**	**06 11 06.5**	**+0.1**
SSLB				*eS*	**Sb**	**06 11 25.6**	**+0.5**
WCS	**Beigang Elemen**	**1.51**	**269**	*eP*	**Pb**	**06 11 06.5**	**+0.1**
LIOB	**Emei**	**1.51**	**292**	*eP*	**Pb**	**06 11 06.9**	**+0.3**
LIOB				*eS*	**Sb**	**06 11 25.9**	**+0.3**
NSTT	**Nanjuang**	**1.52**	**291**	*eP*	**Pb**	**06 11 06.8**	**+0.2**
NSTT				*eS*	**Sn**	**06 11 25.3**	**+0.4**
SMLT	**Sun Moon Lake**	**1.53**	**263**	*eP*	**Pb**	**06 11 07.2**	**+0.3**
EHD	**Haiduan**	**1.56**	**233**	*eP*	**Pg**	**06 11 08.3**	**-0.5**
EHD				*eS*	**Sg**	**06 11 28.8**	**-0.2**
TYC	**Yuchr**	**1.57**	**264**	*eP*	**Pb**	**06 11 07.7**	**+0.2**
TYC				*eS*	**Sb**	**06 11 26.6**	**-0.5**
YUS	**Yu-Shan**	**1.59**	**248**	*eP*	**Pb**	**06 11 08.3**	**+0.1**
YUS				*eS*	**Sb**	**06 11 28.4**	**+0.2**
PCYT	**Pengchaiyu**	**1.59**	**344**	*eP*	**Pn**	**06 11 06.0**	**-0.4**
PCYT				*eS*	**Sn**	**06 11 24.8**	**-2.0**
EDH	**Donghe**	**1.60**	**226**	*eP*	**Pb**	**06 11 07.5**	**-0.6**
EDH				*eS*	**Sn**	**06 11 26.7**	**-0.2**
WHYT	**Xinyi Township**	**1.61**	**256**	*eP*	**Pb**	**06 11 08.7**	**+0.5**
WHYT				*eS*	**Sg**	**06 11 30.1**	**-0.6**
TWQ1	**Liyutan**	**1.65**	**279**	*eP*	**Pg**	**06 11 09.9**	**-0.7**
TWQ1				*eS*	**Sb**	**06 11 30.2**	**+0.7**
JISG	**Ishigakijimahi**	**1.67**	**72**	*eS*	**Sn**	**06 11 27.5**	**-1.2**
ELDTW	**Lidau**	**1.68**	**238**	*eP*	**Pb**	**06 11 08.8**	**-0.6**
ELDTW				*eS*	**Sn**	**06 11 28.8**	**-0.1**
WWF	**Wufeng**	**1.70**	**269**	*eP*	**Pg**	**06 11 11.0**	**-0.6**
ALS	**Alishan**	**1.71**	**251**	*eP*	**Pb**	**06 11 10.6**	**+0.5**
ALS				*eS*	**Sb**	**06 11 31.6**	**+0.2**
LDUT	**Ludao**	**1.73**	**216**	*eP*	**Pb**	**06 11 09.6**	**-0.7**
LDUT				*eS*	**Sn**	**06 11 30.0**	**-0.1**
CHN5	**Tsauling**	**1.79**	**254**	*eP*	**Pb**	**06 11 11.7**	**+0.4**
CHN5				*eS*	**Sb**	**06 11 33.4**	**-0.3**
WDLH	**Douliu**	**1.89**	**258**	*eP*	**Pb**	**06 11 13.4**	**+0.4**
WDLH				*eS*	**Sg**	**06 11 38.5**	**-1.3**
STYT	**Tauyuan**	**1.89**	**241**	*eS*	**Sb**	**06 11 36.4**	**-0.2**
TPUB	**Ta-pu**	**1.94**	**246**	P	**Pb**	**06 11 14.6**	**+0.8**
TPUB	**Ta-pu**	**1.94**	**246**	S	**Sb**	**06 11 38.6**	**+0.9**
TPUB	**Ta-pu**	**1.94**	**246**	*eP*	**Pb**	**06 11 14.0**	**+0.2**
TPUB				*eS*	**Sb**	**06 11 38.4**	**+0.6**
CHN4	**Tsaushan**	**1.95**	**248**	*eP*	**Pb**	**06 11 13.8**	**-0.2**
CHN4				*eS*	**Sb**	**06 11 38.8**	**+0.7**
WTP	**Ta-pu**	**1.97**	**245**	*eP*	**Pb**	**06 11 14.5**	**+0.1**
WTP				*eS*	**Sb**	**06 11 39.3**	**+0.5**
WTK	**Tuku**	**2.03**	**259**	*eP*	**Pb**	**06 11 15.4**	**+0.1**
WTK				*eS*	**Sb**	**06 11 40.6**	**+0.3**
JTJ	**Tarama**	**2.03**	**74**	P	**Pn**	**06 11 12.7**	**+0.2**
JTJ				*eS*	**Sn**	**06 11 36.5**	**-1.0**
JMJ2	**Miyako jima3**	**2.61**	**75**	*eP*	**Pn**	**06 11 21.2**	**+0.9**
JMJ2				*eS*	**Sn**	**06 11 51.2**	**-0.5**

*IDC **17** 06:18:33.4±0.6, 54.°22S×6.°01E, h0km, mb4.4/14, mbtmp4.3/14, ML4.8/1, MS4.5/39, Error ellipse: s-maj=21.8km s-min=17.2km az=66.0*
*NEIC **17** 06:18:34.5±1.0, 54.°1S±0.°1×6.°1E±0.°2, h10km±1km, mb5.2/40, Ms_20 4.9/54, Mww5.4/13, Error ellipse: s-maj=22.2km s-min=19.1km az=132.0*
*NEIC **17** 06:18:34.7, 53.°85S×6.°27E, h24km, Moment Tensor Solution. Duration: 2§6 Moment tensor: Scale 10^17^Nm; Mrr-0.31; Mθθ1.83; Mφφ-1.52; Mrθ0.31; Mθφ-0.02; Mφr0.62; Fault plane solution: M0 1.83000×10^17^ NP1: φs133.44000°, δ67.61000°, λ-10.82000°. NP2: φs227.61000°, δ80.01000°, λ-157.24000°. Principal axes: T 1.8786, Plg8.0000°, Azm359.0000°; N -0.0932, Plg65.0000°, Azm250.0000°; P -1.7853, Plg23.0000°, Azm92.0000°;*
*NEIC **17** 06:18:34.7, 54.°05S×6.°10E, h24km*
*GCMT **17** 06:18:39.5±0.1, 54.°08S±0.°01×6.°62E±0.°01, h15km, MW5.4/148, Moment Tensor Solution. s120,c206; s148,c294; Duration: 1§3 Moment tensor: Scale 10^17^ Nm; Mrr-0.23±.02; Mθθ1.85±.02; Mφφ-1.62±.02; Mrθ0.26±.05; Mθφ0.19±.02; Mφr0.38±.06; Best double couple: M0 1.81100×10^17^ NP1:φs131.00000°, δ75.00000°, λ-5.00000°. NP2:φs223.00000°, δ86.00000°, λ-165.00000°. Principal axes: T 1.8990, Plg8.0000°, Azm356.0000°; N -0.1740, Plg74.0000°, Azm238.0000°; P -1.7230, Plg14.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 06:18:34.7±0.4, 54.°07S±0.°06×6.°09E±0.°09, h10km, n146, σ1§20/81, mb5.1/34, MS4.7/61, 9C-2D, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat** comp=Z,175nm,0.5s	**17.83**	**196**	⇑P	**Pn**	**06 22 42.2**	**-0.3**
VNA2	**Neumayer--Watz** comp=Z,104nm,0.5s,baz=14,slow=14	**17.94**	**194**	⇓P	**Pn**	**06 22 43.1**	**-0.7**
VNA2	baz=1.

CASY Casey 47.21 148 IAMs_20 IAMs_20 06 44 00.3
comp=Z,2µm,21.0s
PLTB Pedras Altas 47.42 273 P **P** **06 27 08.6 -0.6**
PLTB IAmb IAmb 06 27 11.1
comp=Z,20nm,1.1s
SBA Scott Base 47.80 175 **P** **06 27 11.8 +0.4**
SBA Scott Base 47.80 175 IAMs_20 IAMs_20 06 45 35.9
comp=Z,864nm,20.0s
VNDA Vanda 47.81 173 P **P** **06 27 11.6 0.0**
VNDA comp=Z,19nm,1.0s,baz=218,slow=8.4,SNR=62 LR LR 06 46 43.7
comp=Z,1µm,19.7s,baz=195,slow=36
comp=Z,19nm,1.0s
VNDA Vanda 47.81 173 **P** **06 27 11.5 0.0**
TRQA Tornquist 47.95 260 **P** **06 27 13.4 +0.2**
TRQA IAmb IAmb 06 27 19.1
comp=Z,27nm,1.3s
H10S2 ASCENSION HYDR 47.96 332 T T 07 18 52.8
baz=163,slow=7.4,SNR=37
H10S3 ASCENSION HYDR 47.98 332 T T 07 18 53.5
baz=57,slow=74,SNR=30
LL01 San Ignacio de 50.98 249 IAMs_20 IAMs_20 06 43 35.7
comp=Z,1µm,20.0s
PLCA Paso Flores 51.05 252 P **P** **06 27 36.2 -0.6**
PLCA comp=Z,1.2nm,0.7s,baz=120,slow=10.0,SNR=3.7 LR LR 06 46 05.9
comp=Z,261nm,21.5s,baz=136,slow=32
comp=Z,1.2nm,0.7s
PLCA Paso Flores 51.05 252 P **P** **06 27 37.0 +0.2**
CPUP Villa Florida 53.62 275 P **P** **06 27 55.6 -0.3**
comp=Z,4.6nm,1.1s,baz=353,slow=6.3,SNR=19
CPUP LR LR 06 47 53.1
comp=Z,57nm,20.9s,baz=360,slow=33
comp=Z,4.6nm,1.1s
CPUP Villa Florida 53.62 275 **P** **06 27 56.0 0.0**
BI02 San Fabin de 54.27 255 **P** **06 28 00.8 +0.1**
BO02 Sierra Bellavi 55.31 257 P **P** **06 28 08.5 +0.2**
CFA Coronel Fontan 56.14 262 LR LR 06 48 35.5
comp=Z,350nm,21.2s,baz=170,slow=32
MT09 Talagante 56.16 258 P **P** **06 28 14.4 -0.1**
MT09 IAmb IAmb 06 28 23.0
comp=Z,42nm,1.4s
ZON Zonda 56.44 261 P **P** **06 28 15.2 -1.2**
ZON IAmb IAmb 06 28 30.5
comp=Z,50nm,1.9s
MBAR Mbarara 57.04 30 LR LR 06 51 36.5
comp=Z,632nm,18.3s,baz=188,slow=35
MBAR Mbarara 57.04 30 IAMs_20 IAMs_20 06 50 19.6
comp=Z,719nm,19.0s
AQDB Aquidauana 57.17 280 P **P** **06 28 21.5 -0.1**
AQDB IAmb IAmb 06 28 30.8
comp=Z,48nm,1.7s
CO02 Combarbal 58.04 260 P **P** **06 28 26.6 -1.2**
KMBO Kilima Mbogo 58.67 37 LR LR 06 52 09.9
comp=Z,605nm,19.0s,baz=129,slow=34
CO06 Fray Jorge 58.80 260 IAMs_20 IAMs_20 06 50 46.9
comp=Z,960nm,21.0s
AC05 El Transito 59.37 262 P **P** **06 28 37.1 0.0**
LCO Las Campanas 59.48 262 P **P** **06 28 38.6 +0.5**
AC02 Maricunga 60.19 265 **P** **06 28 43.4 +0.2**
AC06 Mina Casimiro 60.52 263 **P** **06 28 44.2 -0.7**
DBIC Dimbokro 61.21 348 P **P** **06 28 50.3 +0.8**
comp=Z,4.7nm,0.9s,baz=164,slow=5.1,SNR=3.8
comp=Z,4.7nm,0.9s
AC01 Pan de Azucar 61.57 264 P **P** **06 28 51.3 -0.7**
AC01 IAmb IAmb 06 29 45.4
comp=Z,24nm,1.3s
GO02 Mina Guanaco 61.72 266 IAMs_20 IAMs_20 06 51 30.6
comp=Z,1µm,22.0s
PTLB Pontes e Lacer 63.12 281 **P** **06 29 02.6 +0.1**
PTLB IAmb IAmb 06 29 11.0
comp=Z,19nm,1.2s
PB06 IPOC Station P 63.59 267 IAMs_20 IAMs_20 06 51 34.9
comp=Z,796nm,22.0s
SIV San Ignacio 63.82 279 LR LR 06 53 56.9
comp=Z,595nm,19.4s,baz=137,slow=33
PB03 IPOC Station P 64.20 268 P **P** **06 29 09.5 -0.2**
PB03 IAmb IAmb 06 29 19.6
comp=Z,26nm,1.6s
PB07 IPOC Station P 64.52 268 **P** **06 29 11.6 -0.2**
PB07 IAmb IAmb 06 29 23.1
comp=Z,15nm,1.0s
PB01 IPOC Station P 64.81 269 IAmb IAmb 06 29 23.7
comp=Z,23nm,1.5s
PB01 IAMs_20 IAMs_20 06 56 27.6
comp=Z,562nm,19.0s
PB02 IPOC Station P 64.84 268 IAMs_20 IAMs_20 06 53 40.3
comp=Z,838nm,22.0s
PB08 IPOC Station P 65.32 269 IAMs_20 IAMs_20 06 51 05.8
comp=Z,740nm,22.0s
GO01 Chusmiza 65.71 270 P **P** **06 29 19.2 -0.8**
VILB Vilhena 65.73 282 **P** **06 29 19.5 -0.1**
PB11 IPOC Station P 65.91 269 P **P** **06 29 18.9 -2.0**
PB11 IAmb IAmb 06 29 29.9
comp=Z,23nm,1.2s
PB11 IAMs_20 IAMs_20 06 53 24.5
comp=Z,818nm,21.0s
TORD Torodi Ar. Bea 67.05 355 P **P** **06 29 28.4 +0.5**
comp=Z,0.9nm,0.3s,baz=181,slow=7.1,SNR=4.1
comp=Z,0.9nm,0.3s
LPAZ La Paz 67.72 273 P **P** **06 29 33.2 +0.2**
LPAZ comp=Z,5.9nm,0.8s,baz=118,slow=5.2,SNR=18 LR LR 06 56 59.3
comp=Z,356nm,20.5s,baz=112,slow=34
comp=Z,5.9nm,0.8s
LPAZ La Paz 67.72 273 P **P** **06 29 32.2 -0.8**
BBTS Babate 71.13 337 LR LR 06 54 21.2
comp=Z,364nm,21.1s,baz=81,slow=30
H01W2 Cape Leeuwin H 71.94 125 T T 07 49 27.1
baz=217,slow=75,SNR=964
H01W1 Cape Leeuwin H 71.95 125 T T 07 49 28.1
baz=217,slow=75,SNR=1059
H01W3 Cape Leeuwin H 71.95 125 T T 07 49 28.1
baz=217,slow=75,SNR=666
ATD Arta Tunnel 72.40 38 LR LR 07 00 50.3
comp=Z,8.2nm,19.3s,baz=276,slow=35
NNA Nana 76.25 269 LR LR 07 01 50.2
comp=Z,286nm,21.6s,baz=142,slow=34
MDP Montagnes des 76.50 299 LR LR 07 00 05.1
comp=Z,391nm,18.9s,baz=148,slow=33
ATAH Atahualpa 81.03 270 LR LR 07 05 50.1
comp=Z,182nm,21.2s,baz=155,slow=35
RPZ Rata Peaks 81.75 169 LR LR 07 05 08.7
comp=Z,748nm,20.8s,baz=167,slow=34
RPN Rapa Nui 81.90 234 LR LR 06 59 05.5
comp=Z,82nm,22.0s,baz=130,slow=30
HTT Hallett 83.81 142 P **P** **06 31 06.5 +2.4**
comp=Z,4.2nm,1.4s
COHC Cochancay 85.28 272 P **P** **06 31 10.6 -1.0**
STKA Stephens Creek 86.17 143 P P 06 31 24.8 +8.9
STKA Stephens Creek 86.17 143 P **P** **06 31 14.6 -1.3**
comp=Z,2.7nm,0.8s,baz=171,slow=10,SNR=4.0
comp=Z,2.7nm,0.8s
MDT Midelt 87.02 351 LR LR 07 04 45.7
comp=Z,254nm,22.0s,baz=187,slow=32
EIL Elat 87.05 25 LR LR 07 09 55.9
comp=Z,394nm,18.2s,baz=182,slow=35
URZ Urewera 87.72 173 P **P** **06 31 23.0 -0.3**
comp=Z,4.9nm,0.8s,baz=261,slow=8.6,SNR=3.6
URZ LR LR 07 08 13.7
comp=Z,442nm,20.7s,baz=186,slow=34
comp=Z,4.9nm,0.8s
ROSC El Rosal 88.27 281 LR LR 07 09 02.4
comp=Z,249nm,19.6s,baz=177,slow=34
MXZ Matakaoa Point 88.49 174 IAMs_20 IAMs_20 07 08 51.8
comp=Z,683nm,22.0s
GHAJ Ghor Haditha 88.77 25 IAMs_20 IAMs_20 07 08 33.4
comp=Z,467nm,19.0s
SDV Santo Domingo 89.44 286 LR LR 07 10 12.4
comp=Z,262nm,18.5s,baz=146,slow=35
SDV Santo Domingo 89.44 286 IAMs_20 IAMs_20 07 10 48.5
comp=Z,377nm,19.0s
KEST Kesra 89.48 3 LR LR 07 10 12.6
comp=Z,163nm,18.7s,baz=184,slow=35
ASF Jabal al Asfar 89.93 26 LR LR 07 11 19.4
comp=Z,268nm,18.5s,baz=189,slow=35
MMAI Mount Meron Ar 90.36 24 LR LR 07 10 07.3
comp=Z,280nm,21.1s,baz=184,slow=34
IDI Anoyia 90.47 15 LR LR 07 11 36.0
comp=Z,107nm,21.4s,baz=146,slow=35
ASAR Alice Springs 90.51 134 P **P** **06 31 35.8 -1.1**
comp=Z,2.2nm,1.0s,baz=214,slow=5.4,SNR=5.5
comp=Z,2.2nm,1.0s
ASAR Alice Springs 90.51 134 **P** **06 31 35.5 -1.3**
SFS San Fernando 90.79 350 IAMs_20 IAMs_20 07 20 12.2
comp=Z,394nm,19.0s
KARP Karpathos 91.09 17 IAMs_20 IAMs_20 07 12 28.0
comp=Z,307nm,21.0s
VAE Valguarnera 91.46 7 LR LR 07 12 05.0
comp=Z,156nm,18.1s,baz=135,slow=35
ESDC Sonseca Array 93.77 352 P **P** **06 31 53.5 +2.3**
comp=Z,0.9nm,1.0s,baz=162,slow=5.5,SNR=2.2
ESDC LR LR 07 11 07.8
comp=Z,83nm,18.1s,baz=162,slow=34
comp=Z,0.9nm,1.0s
PSI Prapat 93.92 91 LR LR 07 06 34.2
comp=Z,65nm,18.5s,baz=252,slow=31
WRA Warramunga Arr 93.98 132 P **P** **06 31 53.4 +0.6**
comp=Z,0.2nm,0.5s,baz=206,slow=3.9,SNR=2.0
comp=Z,0.2nm,0.5s
WRAB Tennant Creek 93.99 132 IAMs_20 IAMs_20 07 18 34.1
comp=Z,318nm,19.0s
SJG San Juan 94.51 295 LR LR 07 10 27.3
comp=Z,86nm,21.1s,baz=152,slow=33
BRTR Keskin Array B 96.39 21 P **P** **06 32 05.5 +2.3**
comp=Z,0.2nm,0.5s,baz=173,slow=4.5,SNR=1.8
BRTR LR LR 07 17 45.8
comp=Z,90nm,18.9s,baz=182,slow=37
comp=Z,0.2nm,0.5s
RAO Raoul Island 96.95 176 LR LR 07 14 48.6
comp=Z,220nm,18.3s,baz=128,slow=35
MMRI Maumere 97.84 116 IAMs_20 IAMs_20 07 07 07.6
comp=Z,401nm,18.0s
BNI Bardonecchia 98.75 0 IAMs_20 IAMs_20 07 14 05.7
comp=Z,419nm,22.0s
JTS Las Juntas de 98.85 275 LR LR 07 15 48.4
comp=Z,105nm,20.6s,baz=134,slow=35
GNI Garni 99.56 29 LR LR 07 16 52.5
comp=Z,323nm,20.0s,baz=206,slow=35
GNI Garni 99.56 29 IAMs_20 IAMs_20 07 16 40.0
comp=Z,408nm,21.0s
MLR Muntele Rosu 100.62 14 IAMs_20 IAMs_20 07 20 57.1
comp=Z,246nm,18.0s
KIV Kislovodsk 102.53 26 IAMs_20 IAMs_20 07 17 06.8
comp=Z,245nm,19.0s
PZH PanZhiHua 114.24 78 PKP **PKiKP** **06 37 14.3 +0.1**
BVAR Borovoye Array 119.30 39 PKP **PKiKP** **06 37 24.3 +1.4**
comp=Z,0.8nm,0.7s,baz=230,slow=1.1,SNR=2.6
MKAR Makanchi Array 119.37 50 PKP **PKiKP** **06 37 24.5 +1.2**
comp=Z,0.7nm,0.9s,baz=186,slow=3.2,SNR=2.5
WMQ Urumqi 119.68 56 *e*PKP **PKiKP** **06 37 25.5 +1.4**
WMQ LR LR
comp=Z,310nm,24.1s
ARCES ARCESS Array B 124.11 8 PKP **PKiKP** **06 37 33.2 +1.2**
comp=Z,4.3nm,1.1s,baz=197,slow=2.8,SNR=3.7
TXAR Lajitas Array 124.59 273 PKP **PKiKP** **06 37 34.9 +0.7**
comp=Z,1.1nm,1.1s,baz=160,slow=4.0,SNR=4.5
NJ2 Nanjing 128.34 87 *e*P **PKPdf** **06 37 40.5 -0.4**
NJ2 pmax pmax
comp=Z,19nm,0.5s
HHC Hu-ho-hao-te 130.22 73 *e*P **PKPdf** **06 37 40.6 -3.8**
SONM Songino Array 131.91 63 PKP **PKiKP** **06 37 48.7 +0.3**
comp=Z,1.2nm,0.6s,baz=239,slow=4.5,SNR=2.5
PDAR Pinedale Array 137.25 282 PKP **PKPdf** **06 37 58.4 +0.7**
comp=Z,0.4nm,0.6s,baz=132,slow=2.2,SNR=4.5
NVAR Mina Array Bea 139.60 271 PKP **PKPdf** **06 38 02.4 +0.3**
comp=Z,0.8nm,0.8s,baz=145,slow=4.0,SNR=5.3
MOD Modoc Plateau 142.99 273 IAMs_20 IAMs_20 07 35 08.8
comp=Z,266nm,21.0s
YKA Yellowknife Ar 148.78 310 PKPbc **PKPbc** **06 38 20.3 -0.5**
comp=Z,4.0nm,0.8s,baz=81,slow=1.5,SNR=7.4
E27K Coleen River 159.30 326 IAMs_20 IAMs_20 07 48 50.2
comp=Z,262nm,21.0s
ILAR Eielson Array 162.73 319 PKPab **PKPab** **06 39 24.1 -0.1**
comp=Z,2.7nm,0.8s,baz=46,slow=3.7,SNR=19

IDC ***17*** *06:39:33.6±2.2, 1°.61N×126°.82E, h0km, mb3.2/3, mbtmp3.2/3, MS2.7/1, Error ellipse: s-maj=171.1km s-min=27.8km az=66.0*

DJA ***17*** *06:39:36.5±0.3, 1°.N±4°×12°.6E±°, h10km, M3.3/7, MLv3.3/7*

ISC 17 06:39:35.2±1.2, 1°.5N±0°.2×126°.4E±0°.4, h10km, n6, σ1s 34/5, mb 3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.21**	**129**	P	**Pn**	**06 39 58.3**	**+0.2**
SGSI	**Sangihe**	**2.32**	**337**	P	**Pb**	**06 40 16.4**	**-0.7**
KAPI	**Kappang**	**9.32**	**226**	LR	LR	06 46 29.9	
	comp=Z,43nm,19.7s,baz=43,slow=43						
WRA	**Warramunga Arr**	**22.71**	**160**	P	**P**	**06 44 36.0**	**-1.4**
	0.7nm,0.5s,baz=340,slow=11,SNR=22						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**06 45 09.5**	**+0.3**
	0.2nm,0.4s,baz=344,slow=11,SNR=8.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.19**	**326**	P	**P**	**06 49 37.5**	**+1.1**
	0.1nm,0.3s,baz=130,slow=6.3,SNR=1.2						
	0.1nm,0.3s						

IDC ***17*** *06:47:04.4±0.4, 7°.27N×94°.51E, h0km, mb4.1/28, mbtmp4.1/31, ML4.2/3, MS4.0/29, Error ellipse: s-maj=19.1km s-min=11.1km az=61.0*

NEIC ***17*** *06:47:05.7±1.2, 7°.28N±0°.06×94°.86E±0°.07, h10km±1km, mb4.7/33, Error ellipse: s-maj=12.3km s-min=10.0km az=244.0*

BJI ***17*** *06:47:06.3, 6°.96N×94°.92E, h24km, mB4.9/8, mb4.5/26, Ms4.5/19, Ms7 4.3/14*

GCMT ***17*** *06:47:09.7±0.4, 7°.17N±0°.02×94°.55E±0°.02, h13km±2km, MW4.8/80, Moment Tensor Solution. s2,c2; s80,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~0.28±.12; Mθθ~1.46±.09; Mφφ 1.75±.11; Mrθ~0.64±.30; Mθφ 0.83±.09; Mφr~0.17±.22; Best double couple: Ms1.93700×10¹⁶ NP1:φs150.00000°, δ70.00000°, λ~171.00000°. NP2: φs=57.00000°, δ82.00000°, λ~21.00000°. Principal axes: T 1.9960, Plg8.0000°, Azm105.0000°; N -0.1100, Plg68.0000°, Azm216.0000°; P -1.8790, Plg20.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BKK ***17*** *06:47:15.5±0.5, 7°.N±5°×9°.5E±°, h10km, M4.4/13, mB4.7/6, mb4.4/9, Mjma4.3/13, ML4.8/8, MLv4.6/7, Mw(mB)3.9/6*

DJA ***17*** *06:47:18.4±1.1, 7°.N±3°×9°.6E±°, h11km±10km, M4.6/11, mb4.7/11, mB5.1/7, MLv4.7/10, Mw(mB)4.4/7*

ISC 17 06:47:05.6±0.3, 7°.13N±0°.04×94°.70E±0°.04, h10km, n182, σ2s 9 0 3/156, mb 4.5/55, MS 4.0/31, 2C-1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.78**	**261**	*e*P	**Pg**	**06 47 18.4**	**-2.2**
CMBY				*e*S	**Sg**	**06 47 26.9**	**-3.8**
CMBY				IAML		06 47 30.0	
	comp=N,29µm,0.5s						
CMBY				IAML		06 47 31.1	
	comp=E,21µm,0.3s						
LHMI	**Lhok Sumawe**	**2.93**	**130**		**Pn**	**06 47 52.4**	**+0.2**
LHMI	**Lhok Sumawe**	**2.93**	**130**	P	**Pb**	**06 47 55.8**	**-2.1**
LHMI	**Lhok Sumawe**	**2.93**	**130**	S	**Sn**	**06 48 24.0**	**-3.4**
LHMI	**Lhok Sumawe**	**2.93**	**130**	P	**Pn**	**06 47 55.3**	**+3.1**
LHMI				S	**Sn**	**06 48 23.2**	**-4.2**
MLSI	**Meulaboh, Aceh**	**3.31**	**149**	P	**Pb**	**06 48 03.2**	**-1.2**
PKDT	**Phuket**	**3.68**	**78**	P	**Pn**	**06 48 05.5**	**+2.9**
RNTT	**Ranong**	**4.36**	**59**	P	**Pn**	**06 48 14.9**	**+2.9**
KCSI	**Kotacane, Aceh**	**4.71**	**139**	P	**Pn**	**06 48 20.3**	**+3.5**
KCSI				S	**Sn**	**06 49 08.5**	**-3.0**
PBA	**Port Blair**	**4.89**	**337**	Pn	**Pn**	**06 48 17.7**	**-1.5**
SNSI	**Sinabang, Aceh**	**4.96**	**161**	P	Pb	06 48 27.3	-5.3
PSI	**Prapat**	**6.02**	**135**	Pn	**Pn**	**06 48 38.8**	**+3.9**
	comp=E,3.4nm,0.3s,baz=325,slow=12,SNR=14						
PSI				Sn	**Sn**	**06 49 47.9**	**+4.0**
	comp=E,4.6nm,0.3s,baz=253,slow=22,SNR=4.3						
PSI				LR	LR	06 51 14.4	
	comp=E,2µm,18.9s,baz=301,slow=40						
	comp=E,9.0nm,0.3s						
PSI	**Prapat**	**6.02**	**135**	P	Pn	06 48 40.4	+5.6
RPSI	**Rantau Prapat**	**6.09**	**136**		**Pn**	**06 48 35.3**	**-0.5**
KULM	**Kulim**	**6.19**	**107**		**Pn**	**06 48 35.6**	**-1.5**
KULM	**Kulim**	**6.19**	**107**	P	**Pn**	**06 48 39.3**	**+2.2**
DGPR	**DIGLIPUR**	**6.26**	**344**	*e*P	**Pn**	**06 48 40.8**	**+2.8**
DGPR				*e*S	**Sn**	**06 49 52.6**	**+3.0**
DGPR				IAML		06 50 08.0	
	comp=N,632nm,0.6s						
DGPR				IAML		06 50 09.0	
	comp=E,516nm,0.3s						
GSI	**Gunungsitoli**	**6.46**	**154**	Pn	**Pn**	**06 48 42.0**	**+1.2**
IPM	**Ipoh**	**6.82**	**112**		**Pn**	**06 48 44.9**	**-0.9**
IPM	**Ipoh**	**6.82**	**112**	P	**Pn**	**06 48 47.2**	**+1.4**

PPI Padang Panjang 9.44 143 P **Pn** **06 49 25.1 +3.4**
comp=E,4µmcomp=E,51nm,1.4s
PDSI Padang 9.84 144 P **Pn** **06 49 31.8 +4.5**
comp=E,32nm,1.2s
MYKOM Kota Tinggi 10.55 120 Pn **Pn** **06 49 35.6 -1.4**
MYKOM Kota Tinggi 10.55 120 P **Pn** **06 49 39.6 +2.6**
CM13 Chiang Mai Arr 11.95 20 P Pn 06 50 02.7 +6.6
CM01 Chiang Mai Arr 11.97 20 P Pn 06 50 01.3 +5.0
comp=E,0.1nmcomp=E,189nmcomp=E,20nm,0.9s
CMAR Chiang Mai Arr 11.99 20 Pn **Pn** **06 49 56.5 -0.2**
comp=E,0.9nm,0.3s,baz=214,slow=14,SNR=6.9
CMAR LR LR 06 54 37.9
comp=E,535nm,19.9s,baz=200,slow=38
comp=E,1.0nm,0.4s
CMAR Chiang Mai Arr 11.99 20 Pn **Pn** **06 49 53.6 -3.1**
CHTO Chiang Mai 12.33 19 Pn **Pn** **06 49 58.2 -3.1**
CHTO Chiang Mai 12.33 19 P Pn 06 50 05.4 +4.1
comp=E,0.4nmcomp=E,17nm,1.6s
DSRI Dabo 12.42 127 P **Pn** **06 50 04.4 +1.8**
comp=E,50nm,1.0s
PALK Pallekele 13.89 271 Pn **Pn** **06 50 20.0 -2.7**
comp=E,0.5nm,0.3s,baz=84,slow=13,SNR=5.9
PALK Sn Sn 06 52 41.2 -16
comp=E,0.6nm,0.3s,baz=184,slow=23,SNR=2.3
PALK LR LR 06 55 40.1
comp=E,692nm,18.3s,baz=98,slow=38
comp=E,1.8nm,0.6s
PALK Pallekele 13.89 271 Pn **Pn** **06 50 23.5 +0.8**
MDSI Maura Dua 14.92 140 P **Pn** **06 50 37.3 +0.6**
VIS Vishakhapatnam 15.29 315 *e*P **Pn** **06 50 40.2 -1.4**
VIS IAmb IAmb 06 50 46.1
comp=Z,74nm,1.1s
BRDH Bariadhala 15.74 350 LR LR 06 58 06.3
comp=Z,1µm,20.6s,baz=174,slow=42
SALM Salem 16.88 287 *e*P **Pn** **06 51 02.0 -0.1**
SALM IAmb IAmb 06 51 11.6
comp=Z,13nm,0.8s
SALM *ex* x 06 53 49.9
IMP Imphal 17.62 358 *e*P **Pn** **06 51 11.2 -0.1**
SBUM Sibu 18.06 104 P **Pn** **06 51 15.1 -1.8**
TNCH TengChong 18.17 11 P **Pn** **06 51 16.6 -1.7**
TNCH pmax pmax
comp=Z,320nm,3.8s
KOHI KOHIMA 18.50 358 *e*P **Pn** **06 51 24.8 +2.5**
SHL Shillong 18.53 352 P **P** **06 51 20.1 -2.4**
SHL Shillong 18.53 352 *e*P **Pn** **06 51 26.4 +3.7**
SHL IAmb IAmb 06 51 40.0
comp=Z,31nm,1.3s
HYBB Hyderabad (bro 18.79 304 *e*P **Pn** **06 51 25.7 0.0**
QIZ Qiongzhong 18.89 50 P **P** **06 51 23.6 -2.7**
QIZ S **Sn** **06 54 53.6 -4.9**
QIZ LR LR
comp=Z,2µm,12.6s
QIZ LR LR
comp=Z,720nm,11.4s
TEZP TEZPUR 19.46 355 *e*P **Pn** **06 51 34.6 +0.8**
KMI Kunming 19.48 22 P **Pn** **06 51 39.6 +5.4**
KMI pmax pmax
comp=Z,17nm,1.0s
KMI pmax pmax
comp=Z,140nm,6.4s
KMI LR LR
comp=Z,560nm,14.4s
KMI LR LR
comp=Z,480nm,13.3s
ITAN ITANAGAR 19.93 357 *e*P **Pn** **06 51 38.5 -0.8**
LKP Lekhapani 20.12 3 *e*P **P** **06 51 39.3 -0.5**
PZH PanZhiHua 20.40 18 P Pn 06 51 44.8 -0.2
TAWA Tawang 20.53 353 *e*P **P** **06 51 44.8 +0.2**
EVN Everest 22.02 341 **P** **06 51 59.4 -1.5**
EVN IAmb IAmb 06 52 11.3
comp=Z,18nm,0.7s
GYA Guiyang 22.34 29 ⇑P **P** **06 52 06.3 +2.4**
GYA pmax pmax
comp=Z,16nm,1.2s
LSA Lhasa 22.70 352 P **P** **06 52 05.2 -2.9**
LSA IAmb IAmb 06 52 18.4
comp=Z,19nm,0.8s
LSA Lhasa 22.70 352 P P 06 51 51.6 -16
MYLDM Lahad Datu 23.74 93 P **P** **06 52 22.9 +4.6**
H08S3 Diego Garcia H 26.57 237 T T 07 19 26.5
baz=56,slow=76,SNR=164
H08S2 Diego Garcia H 26.57 237 T T 07 19 16.8
baz=56,slow=76,SNR=129
H08S1 Diego Carcia H 26.58 237 T T 07 19 15.0
baz=56,slow=76,SNR=153
TOLI2 Tolitoli 26.68 102 P **P** **06 52 42.4 -2.8**
TOLI2 IAmb IAmb 06 52 53.5
comp=Z,10.0nm,0.9s
TGY Tagaytay City 26.68 73 LR LR 07 03 49.1
comp=Z,246nm,18.4s,baz=356,slow=38
ENH Enshi 26.89 29 P **P** **06 52 44.7 -2.1**
ENH IAmb IAmb 06 53 06.4
comp=Z,31nm,1.4s
KAPI Kappang 27.76 115 LR LR 07 05 31.0
comp=Z,331nm,18.4s,baz=242,slow=40
KAPI Kappang 27.76 115 P P 06 53 02.4 +7.6
LUWI Luwuk 29.16 105 P P 06 53 14.2 +6.9
XAN Xi'an 29.83 24 ⇑P P 06 53 19.5 +6.4
XAN pP pwP 06 53 23.8 +5.3
XAN pmax pmax
comp=Z,23nm,0.7s
XAN pmax pmax
comp=Z,98nm,4.7s
XAN LR LR
comp=Z,560nm,14.4s
XAN LR LR
comp=Z,790nm,15.1s
XAN LR LR
comp=Z,1µm,21.6s
LZDM Lanzhou Array 29.85 15 P **P** **06 53 14.1 +0.5**
comp=Z,0.9nm,0.3s,baz=212,slow=6.8,SNR=1.6
comp=Z,0.9nm,0.3s
GTA Gaotai 32.47 7 *e*P P 06 53 40.9 +4.5
GTA sP pwP 06 53 47.0 +5.2
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA LR LR
comp=Z,330nm,16.7s
GTA LR LR
comp=Z,170nm,13.5s
GTA LR LR
comp=Z,370nm,13.8s
NJ2 Nanjing 33.49 39 *e*P **P** **06 53 42.8 -2.4**
NJ2 pmax pmax
comp=Z,13nm,0.5s
BATI Baumata 33.59 121 LR LR 07 09 09.5
comp=Z,475nm,18.8s,baz=283,slow=39
SSE Sheshan 34.38 43 P **P** **06 53 52.1 -0.9**
SSE S **S** **06 59 21.5 +0.6**
SSE pmax pmax
comp=Z,16nm,0.7s
SSE pmax pmax
comp=Z,110nm,3.5s
SSE LR LR
comp=Z,260nm,11.2s
SSE LR LR
comp=Z,240nm,11.9s
HNS HongShan 35.20 28 ⇓P P 06 54 05.3 +5.4
HNS pmax pmax
comp=Z,21nm,1.2s
HNS LR LR
comp=Z,440nm,13.7s
HNS LR LR
comp=Z,360nm,16.9s
HNS LR LR
comp=Z,430nm,16.5s
HHC Hu-ho-hao-te 36.80 22 *e*P **P** **06 54 11.4 -2.4**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,70nm,3.8s
HHC LR LR
comp=Z,460nm,21.0s
HHC LR LR
comp=Z,730nm,16.0s
HHC LR LR
comp=Z,390nm,16.0s
WMQ Urumqi 37.06 352 *e*P **P** **06 54 16.8 +0.9**
WMQ pP pwP 06 54 22.4 +1.0
WMQ pmax pmax
comp=Z,40nm,0.9s
WMQ LR LR
comp=Z,200nm,18.1s
TARG Taragay, Kyrgy 37.58 339 P **P** **06 54 18.4 -2.3**
TARG IAmb IAmb 06 54 26.9

	comp=Z,6.1nm,0.9s							
FITZ	**Fitzroy Crossi**	**39.51**	**130**	P		**P**	**06 54 38.6**	**+1.8**
	comp=Z,1.4nm,0.7s,baz=330,slow=8.8,SNR=8.0							
	comp=Z,1.4nm,0.7s							
FITZ	**Fitzroy Crossi**	**39.51**	**130**	P		**P**	**06 54 36.2**	**-0.6**
AAK	**Ala-Archa**	**39.61**	**336**	LR		LR	07 13 16.6	
	comp=Z,207nm,18.6s,baz=174,slow=40							
MK31	**Makanchi Array**	**40.93**	**347**	P		**P**	**06 54 46.8**	**-1.4**
MKAR	**Makanchi Array**	**40.93**	**347**	P		**P**	**06 54 46.5**	**-1.8**
	comp=Z,2.4nm,0.8s,baz=183,slow=5.2,SNR=13							
MKAR				PcP		**PcP**	**06 56 48.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=150,slow=5.7,SNR=1.4							
MKAR				LR		LR	07 14 59.5	
	comp=Z,92nm,20.6s,baz=172,slow=41							
	comp=Z,2.4nm,0.8s							
MKAR	**Makanchi Array**	**40.93**	**347**	P		**P**	**06 54 46.6**	**-1.7**
MAKZ	**Makanchi**	**41.02**	**347**	P		**P**	**06 54 48.1**	**-0.9**
KK31	**Karatay Array**	**41.67**	**333**	P		**P**	**06 54 53.9**	**-0.5**
KK31				IAmb		IAmb	06 55 00.5	
	comp=Z,15nm,1.4s							
KKAR	**Karatay Array**	**41.67**	**333**			**P**	**06 54 54.0**	**-0.4**
SONM	**Songino Array**	**41.77**	**12**	P		**P**	**06 54 54.9**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=193,slow=5.9,SNR=6.0							
SONM				LR		LR	07 13 34.5	
	comp=Z,112nm,21.3s,baz=200,slow=38							
	comp=Z,0.9nm,0.6s							
NWAO	**Narrogin (SRO)**	**45.24**	**153**	LR		LR	07 12 49.8	
	comp=Z,93nm,20.0s,baz=329,slow=34							
KURBB	**Kurchatov Arra**	**45.40**	**346**	P		**P**	**06 55 22.9**	**-1.4**
	comp=Z,2.4nm,0.2s,baz=163,slow=7.7,SNR=17							
KURBB				LR		LR	07 17 37.1	
	comp=Z,109nm,21.1s,baz=180,slow=40							
	comp=Z,2.4nm,0.2s							
KURK	**Kurchatov**	**45.46**	**346**			**P**	**06 55 25.0**	**+0.2**
JAY	**Jayapura**	**46.90**	**100**	LR		LR	07 18 31.5	
	comp=Z,172nm,21.9s,baz=214,slow=40							
HILR	**Hailar Array B**	**47.23**	**22**	P		**P**	**06 55 38.9**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=193,slow=12,SNR=1.2							
HILR				LR		LR	07 17 09.1	
	comp=Z,292nm,20.5s,baz=220,slow=38							
	comp=Z,0.8nm,0.4s							
WB0	**Warramunga Arr**	**47.34**	**125**	P		**P**	**06 55 39.0**	**-1.0**
WB0				IAmb		IAmb	06 55 57.4	
	comp=Z,4.2nm,0.7s							
ZAA0	**Zalesovo Array**	**47.36**	**352**	P		**P**	**06 55 38.7**	**-1.0**
ZAA0				IAmb		IAmb	06 56 01.2	
	comp=Z,8.7nm,1.0s							
ZALV	**Zalesovo Beam**	**47.36**	**352**	P		**P**	**06 55 39.1**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=194,slow=6.7,SNR=13							
ZALV				PcP		**PcP**	**06 57 09.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=158,slow=4.7,SNR=0.8							
	comp=Z,2.7nm,0.7s							
ZALV	**Zalesovo Beam**	**47.36**	**352**	P		**P**	**06 55 38.3**	**-1.3**
WRA	**Warramunga Arr**	**47.38**	**125**	P		**P**	**06 55 41.1**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=302,slow=7.5,SNR=21							
WRA				PcP		**PcP**	**06 57 12.6**	**+1.5**
	comp=Z,1.0nm,1.0s,baz=306,slow=3.1,SNR=2.2							
	comp=Z,0.5nm,0.4s							
WR8	**Warramunga Arr**	**47.52**	**125**	P		**P**	**06 55 40.0**	**-1.4**
WR8				IAmb		IAmb	06 55 56.2	
	comp=Z,8.5nm,1.1s							
AS31	**Alice Springs**	**49.02**	**130**	P		**P**	**06 55 51.6**	**-1.4**
ASAR	**Alice Springs**	**49.02**	**130**	P		**P**	**06 55 53.6**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=301,slow=7.9,SNR=27							
ASAR				PcP		**PcP**	**06 57 18.0**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=307,slow=3.5,SNR=1.3							
ASAR				LR		LR	07 18 49.0	
	comp=Z,193nm,19.5s,baz=281,slow=39							
	comp=Z,0.9nm,0.4s							
ASAR	**Alice Springs**	**49.02**	**130**	P		**P**	**06 55 50.8**	**-2.1**
FORT	**Forrest**	**49.41**	**141**	P		**P**	**06 55 54.1**	**-1.8**
FORT				IAmb		IAmb	06 56 10.7	
	comp=Z,11nm,0.8s							
BVAR	**Borovoye Array**	**49.87**	**341**	P		**P**	**06 55 57.6**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=139,slow=7.7,SNR=9.5							
	comp=Z,2.2nm,0.7s							
RAYN	**Ar Rayn**	**49.90**	**295**	P		**P**	**06 56 00.9**	**+1.2**
RAYN				IAmb		IAmb	06 56 14.1	
	comp=Z,5.4nm,0.7s							
AB31	**Akbulak array**	**51.15**	**331**	P		**P**	**06 56 08.0**	**-0.7**
ABKAR	**Akbulak array**	**51.15**	**331**	P		**P**	**06 56 08.0**	**-0.7**
PMG	**Port Moresby**	**54.79**	**107**	LR		LR	07 26 48.1	
	comp=Z,116nm,18.4s,baz=188,slow=43							
GNI	**Garni**	**55.35**	**314**	P		**P**	**06 56 43.4**	**+3.3**
	comp=Z,9.8nm,1.4s							
ARTI	**Arti**	**56.83**	**337**	LR		LR	07 23 48.1	
	comp=Z,140nm,18.8s,baz=216,slow=39							
ARTI	**Arti**	**56.83**	**337**	P		**P**	**06 56 50.8**	**+0.7**
KMBO	**Kilima Mbogo**	**57.90**	**264**	P		**P**	**06 56 58.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=122,slow=13,SNR=2.2							
KMBO				LR		LR	07 18 57.9	
	comp=Z,108nm,18.4s,baz=96,slow=33							
	comp=Z,1.3nm,0.4s							
KBZ	**Khabaz**	**58.01**	**318**	P		**P**	**06 56 58.5**	**-0.1**
	comp=Z,4.3nm,1.2s,baz=140,slow=6.1,SNR=2.8							
	comp=Z,4.3nm,1.2s							
STKA	**Stephens Creek**	**59.20**	**134**	P		**P**	**06 57 10.3**	**+3.2**
	comp=Z,0.6nm,0.3s,baz=329,slow=12,SNR=4.3							
	comp=Z,0.6nm,0.3s							
KIRV	**Kirov**	**61.92**	**335**	LR		LR	07 27 42.6	
	comp=Z,130nm,18.4s,baz=192,slow=40							
BR104	**Keskin Array S**	**63.33**	**311**	P		**P**	**06 57 37.1**	**+1.9**
	comp=Z,2.1nm,1.2s							
BRTR	**Keskin Array B**	**63.33**	**311**	P		**P**	**06 57 32.6**	**-2.6**
	comp=Z,1.2nm,0.7s,baz=116,slow=8.4,SNR=6.9							
	comp=Z,1.2nm,0.7s							
BRTR	**Keskin Array B**	**63.33**	**311**	P		**P**	**06 57 33.7**	**-1.5**
BR105	**Keskin Array S**	**63.35**	**311**	P		**P**	**06 57 37.3**	**+1.9**
	comp=Z,3.0nm,0.8s							
BR106	**Keskin Array S**	**63.35**	**311**	P		**P**	**06 57 37.0**	**+1.6**
	comp=Z,2.4nm,0.9s							
ANTO	**Ankara**	**64.00**	**311**	P		**P**	**06 57 41.2**	**+1.6**
	comp=Z,4.0nm,1.3s							
MBAR	**Mbarara**	**64.26**	**266**	LR		LR	07 22 10.7	
	comp=Z,153nm,20.6s,baz=76,slow=33							
H04N2	**CROZET ISLANDS**	**65.38**	**211**	T		T	08 08 19.6	
	baz=47							
H04N1	**CROZET ISLANDS**	**65.39**	**211**	T		T	08 08 19.8	
	baz=47,slow=75							
H04N3	**CROZET ISLANDS**	**65.40**	**211**	T		T	08 08 26.0	
	baz=47,slow=75							
ELL	**Elmali**	**65.61**	**307**	P		**P**	**06 57 50.9**	**+0.6**
H04S1	**CROZET ISLANDS**	**65.78**	**211**	T		T	08 09 25.1	
	baz=46							
H04S3	**CROZET ISLANDS**	**65.79**	**211**	T		T	08 08 42.1	
	baz=46							
H04S2	**CROZET ISLANDS**	**65.80**	**211**	T		T	08 08 44.0	
	baz=46							
KARP	**Karpathos**	**67.63**	**305**	P		**P**	**06 58 02.9**	**-0.1**
TIXI	**Tiksi**	**67.85**	**11**	P		**P**	**06 58 02.6**	**-1.0**
TIXI				IAmb		IAmb	06 58 11.4	
	comp=Z,7.7nm,0.7s							
AK09	**Malin Array Si**	**69.02**	**322**	P		**P**	**06 58 13.8**	**+2.4**
AK10	**Malin Array Si**	**69.03**	**322**	P		**P**	**06 58 13.9**	**+2.4**
AK10				pP		**pwP**	**06 58 17.2**	**+0.4**
AK08	**Malin Array Si**	**69.04**	**322**	P		**P**	**06 58 14.0**	**+2.5**
AK07	**Malin Array Si**	**69.05**	**322**	P		**P**	**06 58 14.0**	**+2.4**
AK07				pP		**pwP**	**06 58 17.4**	**+0.5**
AK06	**Malin Array Si**	**69.06**	**322**	P		**P**	**06 58 14.1**	**+2.5**
AK05	**Malin Array Si**	**69.07**	**322**	P		**P**	**06 58 14.1**	**+2.4**
AK02	**Malin Array Si**	**69.08**	**322**	P		**P**	**06 58 14.2**	**+2.5**
AKASG	**Malin Array Be**	**69.08**	**322**	P		**P**	**06 58 10.1**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=96,slow=4.9,SNR=4.8							
	comp=Z,0.4nm,0.5s							
AKBB	**Malin Array Si**	**69.08**	**322**	P		**P**	**06 58 14.2**	**+2.5**
AK01	**Malin Array Si**	**69.08**	**322**	P		**P**	**06 58 14.0**	**+2.2**
AK03	**Malin Array Si**	**69.09**	**322**	P		**P**	**06 58 14.0**	**+2.2**
KIEV	**Kiev**	**69.09**	**322**	P		**P**	**06 58 14.2**	**+2.4**
	comp=Z,15nm,1.9s							
AK12	**Malin Array Si**	**69.11**	**322**	P		**P**	**06 58 14.2**	**+2.3**
IDI	**Anoyia**	**69.44**	**305**	P		**P**	**06 58 13.8**	**-0.6**
IDI				IAmb		IAmb	06 58 14.9	
	comp=Z,6.6nm,0.7s							
TESR	**Tescani**	**69.80**	**317**	P		**P**	**06 58 18.5**	**+2.2**
LUBAR	**Lubar, Ukraine**	**69.80**	**321**	P		**P**	**06 58 18.5**	**+2.3**
MLR	**Muntele Rosu**	**70.09**	**316**	P		**P**	**06 58 18.9**	**+0.7**
BURAR	**Bucovina Array**	**70.97**	**318**	P		**P**	**06 58 22.7**	**-0.8**
RNPP5	**Staryi Chortor**	**71.25**	**322**	P		**P**	**06 58 27.8**	**+2.7**
RNPP9	**Sopachiv**	**71.29**	**322**	P		**P**	**06 58 28.1**	**+2.8**
LIT	**Litokhoron**	**71.84**	**310**	P		**P**	**06 58 27.4**	**-1.5**
LIT				IAmb		IAmb	06 58 32.8	
	comp=Z,15nm,1.4s							
FIA1	**FINESS Array S**	**73.62**	**332**	P		**P**	**06 58 38.4**	**-0.6**
FINES	**FINESS Array B**	**73.62**	**332**	P		**P**	**06 58 37.5**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=102,slow=5.4,SNR=9.3							
	comp=Z,2.2nm,0.7s							
FINES	**FINESS Array B**	**73.62**	**332**	P		**P**	**06 58 38.1**	**-0.9**
LBTB	**Lobatse**	**74.38**	**242**	LR		LR	07 26 45.4	
	comp=Z,75nm,21.8s,baz=60,slow=32							
OJC	**Ojcow**	**74.90**	**320**	P		**P**	**06 58 46.8**	**+0.1**
BOSA	**Boshof**	**75.66**	**238**	P		**P**	**06 58 51.8**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=87,slow=4.2,SNR=7.2							
BOSA				LR		LR	07 25 59.6	
	comp=Z,73nm,19.8s,baz=24,slow=31							
	comp=Z,1.8nm,0.6s							
BOSA	**Boshof**	**75.66**	**238**	P		**P**	**06 58 51.6**	**0.0**
BOSA				IAmb		IAmb	06 59 02.3	
	comp=Z,18nm,1.4s							
KEV	**Kevo**	**75.72**	**341**	P		**P**	**06 58 50.6**	**-0.4**
JAVC	**Velka Javorina**	**76.13**	**318**	*e*P		P	06 59 00.0	+6.1
ARCES	**ARCESS Array B**	**76.15**	**340**	P		**P**	**06 58 53.1**	**-0.4**
	comp=Z,2.7nm,1.0s,baz=74,slow=4.4,SNR=7.9							
	comp=Z,2.7nm,1.0s							
MORC	**Moravsky Berou**	**76.30**	**319**	*e*P		P	06 58 59.7	+4.9
MODS	**Modra-Piesok**	**76.35**	**318**	*e*P		P	06 59 00.8	+5.7
KRUC	**Moravsky**	**76.99**	**319**	*e*P		**P**	**06 59 02.9**	**+4.3**
MAW	**Mawson**	**77.92**	**192**	P		**P**	**06 59 05.3**	**+2.0**
	comp=Z,1.6nm,0.9s,baz=3.2,slow=8.8,SNR=4.2							
MAW				LR		LR	07 28 41.2	
	comp=Z,116nm,18.4s,baz=36,slow=32							
	comp=Z,1.6nm,0.9s							
GEC2	**GERESS Array S**	**78.75**	**318**	P		**P**	**06 59 08.4**	**-0.1**
GERES	**GERESS Array B**	**78.75**	**318**	P		**P**	**06 59 07.4**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=83,slow=5.5,SNR=6.3							
	comp=Z,0.9nm,0.6s							
HFS	**Hagfors**	**79.37**	**330**	P		**P**	**06 59 11.2**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=116,slow=6.8,SNR=6.5							
	comp=Z,3.6nm,0.7s							
NB2	**NORSAR Subarra**	**80.65**	**331**	P		**P**	**06 59 18.4**	**-0.2**
	comp=Z,13nm,1.7s,baz=91,slow=5.9							
NOA	**NORSAR Array B**	**80.65**	**331**	P		**P**	**06 59 16.9**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=93,slow=5.8,SNR=6.3							
NOA				LR		LR	07 37 30.1	
	comp=Z,40nm,20.6s,baz=150,slow=38							
	comp=Z,0.7nm,0.7s							
SPITS	**Spitsbergen Ar**	**80.67**	**348**	P		**P**	**06 59 19.3**	**+0.9**
	comp=Z,3.4nm,0.5s,baz=121,slow=7.9,SNR=4.3							
SPITS				PP		**PP**	**07 02 21.3**	**-0.6**
	comp=Z,5.0nm,0.9s,baz=116,slow=9.8,SNR=7.4							
	comp=Z,3.4nm,0.5s							
EKA	**Eskdalemuir Ar**	**88.64**	**326**	P		**P**	**06 59 59.1**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=88,slow=5.3,SNR=6.0							
	comp=Z,2.3nm,0.9s							
TORD	**Torodi Ar. Bea**	**91.31**	**283**	LR		LR	07 38 58.3	
	comp=Z,84nm,20.7s,baz=60,slow=34							
VNDA	**Vanda**	**92.09**	**168**	P		**P**	**07 00 16.4**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=323,slow=4.7,SNR=4.1							
VNDA				LR		LR	07 36 41.0	
	comp=Z,56nm,20.0s,baz=324,slow=32							
	comp=Z,0.4nm,0.8s							
ESDC	**Soseca Array**	**92.12**	**310**	P		**P**	**07 00 14.7**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=57,slow=4.5,SNR=7.9							
	comp=Z,1.5nm,0.9s							
MDT	**Midelt**	**93.94**	**304**	LR		LR	07 48 23.1	
	comp=Z,26nm,20.8s,baz=104,slow=39							
ILAR	**Eielson Array**	**95.22**	**22**	P		**P**	**07 00 30.0**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=308,slow=5.1,SNR=4.5							
	comp=Z,0.2nm,0.7s							
QSPA	**South Pole Qui**	**97.03**	**180**	P		Pdif	07 00 39.5	+1.8
	comp=Z,0.3nm,0.6s,baz=47,slow=10,SNR=1.0							
QSPA				LR		LR	07 41 38.7	
	comp=Z,76nm,18.4s,baz=294,slow=34							
	comp=Z,0.3nm,0.6s							
DBIC	**Dimbokro**	**98.59**	**278**	LR		LR	07 45 07.5	
	comp=Z,88nm,18.5s,baz=78,slow=35							
NVAR	**Mina Array Bea**	**125.26**	**32**	PKP		**PKiKP**	**07 06 08.7**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=311,slow=3.4,SNR=3.7							
PDAR	**Pinedale Array**	**125.65**	**22**	PKP		**PKiKP**	**07 06 09.2**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=80,slow=1.8,SNR=4.5							
TXAR	**Lajitas Array**	**139.67**	**25**	PKP		**PKPdf**	**07 06 34.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=216,slow=0.5,SNR=5.2							
PLCA	**Paso Flores**	**144.04**	**199**	PKP		**PKPdf**	**07 06 42.6**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=303,slow=7.2,SNR=3.5							
CPUP	**Villa Florida**	**147.24**	**231**	PKPbc		**PKPbc**	**07 06 49.7**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=274,slow=6.7,SNR=3.3							

NNC 17 06:52:28.1±7.5, 36.98N×69.84E, h0km, mb4.0, mpv3.4, 2C-2D, Error ellipse: s-maj=67.5km s-min=57.4km az=135.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**6.14**	**5**	⇑P		Pn	06 54 00.7	+0.7
	0.7nm,0.3s,baz=190,slow=13,SNR=19							
KK31				⇑S		Sn	06 55 12.0	+1.1
	3.2nm,0.7s,baz=192,slow=22,SNR=13							
AAK	**Ala-Archa**	**6.69**	**31**	⇓P		Pn	06 54 06.6	-1.2
	2.1nm,0.5s							
AAK				S		Sn	06 55 26.1	+1.4
AKTO	**Aktyubinsk**	**15.91**	**331**	⇓P		Pn	06 56 14.6	+1.4
	13nm,1.2s							

IDC ***17*** *07:02:09.0±2.2, 1.62N×126.64E, h0km, mb3.2/3, mbtmp3.2/3, MS3.8/1, Error ellipse: s-maj=172.3km s-min=27.8km az=66.0*

DJA ***17*** *07:02:15.0±1.3, 1.1N±3.3×12.6E±°, h27km±12km, M3.3/7, MLv3.3/7*

ISC 17 07:02:14.7±1.3, 1.4N±0.2×126.3E±0.2, h35km, n5, σ0°54/7, mb3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**118**	P		**Pn**	**07 02 35.6**	**-0.1**
TNTI				S		**Sn**	**07 02 51.5**	**+0.1**
SGSI	**Sangihe**	**2.42**	**342**	P		**Pn**	**07 02 51.8**	**-0.1**
SGSI				S		**Sn**	**07 03 20.9**	**+0.5**
WRA	**Warramunga Arr**	**22.60**	**160**	P		**P**	**07 07 12.7**	**+0.1**
	0.3nm,0.3s,baz=340,slow=11,SNR=16							
WRA				LR		LR	07 17 09.3	
	comp=Z,255nm,21.2s,baz=271,slow=40							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**25.96**	**164**	P		**P**	**07 07 44.9**	**+0.7**
	0.2nm,0.6s,baz=344,slow=10.0,SNR=7.2							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**59.24**	**326**	P		**P**	**07 12 12.1**	**-0.6**
	0.1nm,0.3s,baz=113,slow=7.6,SNR=1.0							
	0.1nm,0.3s							

IDC ***17*** *07:03:58.6±1.9, 1.57N×126.30E, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=169.6km s-min=27.8km az=66.0*

DJA ***17*** *07:04:01.9±0.4, 2.1N±4.4×12.6E±°, h10km, M3.5/6, MLv3.5/6*

ISC 17 07:04:03.3±3.2, 2.1N±1.5×12.7E±°, h35km, n4, σ0°53/6, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**2.25**	**331**	P		**Pn**	**07 04 37.4**	**-0.6**
SGSI				S		**Sn**	**07 05 05.0**	**+0.5**
WRA	**Warramunga Arr**	**22.81**	**161**	P		**P**	**07 09 03.3**	**0.0**
	0.8nm,0.6s,baz=339,slow=11,SNR=11							
	0.8nm,0.6s							
ASAR	**Alice Springs**	**26.20**	**165**	P		**P**	**07 09 34.6**	**-0.2**
	0.3nm,0.5s,baz=343,slow=8.3,SNR=6.5							
ASAR				PcP		**PcP**	**07 13 01.8**	**+0.4**
	0.2nm,0.7s,baz=334,slow=1.7,SNR=1.8							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**59.15**	**326**	P		**P**	**07 14 00.8**	**+0.2**
	0.2nm,0.5s,baz=127,slow=7.6,SNR=2.0							
	0.2nm,0.5s							

IDC ***17*** *07:14:50.2±1.7, 2.50S×81.85W, h0km, mb3.4/4, mbtmp3.6/6, ML3.2/2, Error ellipse: s-maj=65.7km s-min=29.0km az=53.0*

IGQ ***17*** *07:14:50.9±1.2, 2.5S±3.8°2W±°, h13km±5km, MLv3.6/12*

ISC 17 07:14:50.8±0.9, 2.23S±0.04×81.41W±0.07, h10km, n42, σ2°16/41, mb3.2/4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SALI	**Salinas**	**0.42**	**85**	P		**Pn**	**07 15 03.5**	**+0.5**
SALI				S		**Sb**	**07 15 10.6**	**+3.7**
ALIBE	**La Libertad**	**0.57**	**92**	P		**Pn**	**07 15 05.7**	**+0.8**
PPLP	**Puerto Lpez**	**0.93**	**43**	P		**Pn**	**07 15 10.4**	**+0.4**
ISPT	**Isla de la Pla**	**1.01**	**20**	P		**Pn**	**07 15 10.8**	**-0.3**
ISPT				S		**Sn**	**07 15 25.9**	**+0.5**
MORR	**Playas El Morr**	**1.15**	**111**	P		**Pn**	**07 15 13.1**	**+0.2**
JIPI	**JIPIJAPA**	**1.21**	**45**	P		**Pn**	**07 15 15.0**	**+1.2**
ISPG	**Isla Puna-Puer**	**1.45**	**121**	P		**Pg**	**07 15 18.5**	**-0.1**
PECV	**Mancha de Ca P**	**1.98**	**43**	P		**Pn**	**07 15 23.0**	**-1.4**
CAB1	**Cabo Pasado-Ma**	**2.07**	**28**	P		**Pn**	**07 15 24.4**	**-1.3**
PCRA	**Pucara 2**	**2.14**	**117**	P		**Pn**	**07 15 26.7**	**-0.3**
COHC	**Cochancay**	**2.17**	**96**	P		**Pn**	**07 15 27.6**	**+0.6**
JSCH	**Cashca Totoras**	**2.48**	**78**	P		**Pb**	**07 15 33.4**	**-2.4**
MCRA	**Macar, Loja**	**2.58**	**146**	P		**Pn**	**07 15 31.3**	**-1.4**
CHSH	**Refugio Sur-Vo**	**2.64**	**74**	P		**Pb**	**07 15 36.9**	**-1.7**
TAMH	**Tambohuasha Ch**	**2.72**	**76**	P		**Pb**	**07 15 37.6**	**-2.2**
GONZ	**Gonzanam**	**2.84**	**135**	P		**Pn**	**07 15 37.8**	**+1.3**
BMAS	**Trigal station**	**3.02**	**76**	P		**Pb**	**07 15 40.7**	**-4.2**
BOSC	**San Juan Bosco**	**3.06**	**108**	P		**Pb**	**07 15 43.2**	**-2.2**
BPAT	**Tungurahua Vol**	**3.06**	**77**	P		**Pb**	**07 15 44.6**	**-1.1**
ILLI	**Illinizas Sur**	**3.07**	**61**	P		**Pb**	**07 15 44.6**	**-1.3**
PIS1	**Pisayambo**	**3.24**	**69**	P		**Pb**	**07 15 47.1**	**-1.7**
SLOR	**San Lorenzo -**	**3.27**	**63**	P		**Pb**	**07 15 47.4**	**-1.8**
CAMI	**Rancho Maria**	**3.29**	**62**	P		**Pb**	**07 15 47.7**	**-1.9**
BMOR	**Cotopaxi Volca**	**3.30**	**63**	P		**Pb**	**07 15 49.6**	**-0.3**
VCES	**Cotopaxi**	**3.33**	**65**	P		**Pb**	**07 15 47.8**	**-2.5**
JUA2	**San Juan 2**	**3.44**	**55**	P		**Pb**	**07 15 48.9**	**-3.3**
ZUMB	**Zumba**	**3.46**	**139**	P		**Pn**	**07 15 46.2**	**+1.2**
TERV	**Terraza Guagua**	**3.47**	**54**	P		**Pb**	**07 15 49.4**	**-3.3**
PINO	**Pino**	**3.48**	**54**	P		**Pb**	**07 15 49.4**	**-3.4**
PAC1	**Pacto, Paraso**	**3.60**	**47**	P		Pb	07 15 49.5	-5.3
PULU	**Pululahua**	**3.67**	**53**	P		**Pb**	**07 15 52.3**	**-3.7**
PKYU	**Pakayacu**	**3.86**	**82**	P		**Pb**	**07 15 55.1**	**-3.9**
ATAH	**Atahualpa**	**5.73**	**148**	Pn		**Pn**	**07 16 18.4**	**+2.0**
	1.2nm,0.3s,baz=353,slow=10,SNR=9.5							
ATAH				Sn		**Sn**	**07 17 19.2**	**-3.2**
	1.1nm,0.3s,baz=41,slow=19,SNR=5.9							
	12nm,0.6s							
SDV	**Santo Domingo**	**15.40**	**44**	Pn		**P**	**07 18 35.6**	**+2.4**
	0.6nm,0.3s,baz=246,slow=14,SNR=4.3							
	3.1nm,0.5s							
CMIG	**Matias Romero**	**23.35**	**326**	P		**P**	**07 20 02.1**	**+2.6**
	4.8nm,1.0s,baz=163,slow=14,SNR=3.5							
	4.8nm,1.0s							
H03N2	**Juan Fernandez**	**31.14**	**176**	T		T	07 53 46.3	
	baz=354							
H03N1	**Juan Fernandez**	**31.14**	**176**	T		T	07 53 46.3	
	baz=354,slow=74							
H03N3	**Juan Fernandez**	**31.16**	**176**	T		T	07 53 44.9	
	baz=354,slow=74							
TXAR	**Lajitas Array**	**37.93**	**327**	P		**P**	**07 22 09.3**	**+0.5**
	0.1nm,0.6s,baz=122,slow=8.0,SNR=3.8							
	0.1nm,0.6s							
PDAR	**Pinedale Array**	**51.48**	**334**	P		**P**	**07 23 57.0**	**+0.1**
	0.2nm,0.6s,baz=144,slow=7.9,SNR=4.1							
	0.2nm,0.6s							
NVAR	**Mina Array Bea**	**52.86**	**324**	P		**P**	**07 24 08.0**	**+0.8**
	0.2nm,0.6s,baz=141,slow=5.7,SNR=4.1							
	0.2nm,0.6s							
WRA	**Warramunga Arr**	**138.58**	**236**	PKP		**PKPdf**	**07 34 15.4**	**-2.5**
	0.3nm,0.6s,baz=110,slow=2.1,SNR=3.2							

CNRM ***17*** *07:15:13.4, 36.89N×5.27W, h15km, ML2.8*

SFS ***17*** *07:15:14.5, 36.95N×5.32W, h14km, ML2.5/10, ML2.2/12, MLv2.0/12*

IGIL ***17*** *07:15:14.5, 37.07N×5.32W, h9km, ML1.3*

MDD ***17*** *07:15:14.7±0.3, 37.07N×5.32W, h9km±2km, mb_Lg

PESTR			*i* IAML			07 16 39.7	
PESTR			*i* IAML			07 16 40.6	
PESTR			*i* IAML			07 16 42.1	
PESTR	**Estremoz**	**2.60 317**	P	**Pn**		**07 15 56.6**	**+1.9**
PESTR	**Estremoz**	**2.60 317**	S	**Sn**		**07 16 29.2**	**+2.9**
EVO	**Evora**	**2.64 307**	*e*Pn	**Pn**		**07 15 55.7**	**+0.5**
EVO			*e*Sn	**Sn**		**07 16 25.6**	**-1.5**
EVO			*i* IAML			07 16 42.4	
EVO			*i* IAML			07 16 45.2	
EVO			*i* IAML			07 16 47.3	
PAB	**San Pablo**	**2.67 16**	Pn	**Pn**		**07 15 56.8**	**+1.1**
PAB			Pg	**Pb**		**07 16 02.4**	**+1.8**
PAB			Sn	**Sn**		**07 16 26.5**	**-1.6**
PAB			Sg	**Sg**		**07 16 36.4**	**-2.3**
PAB			*i* IVmb_Lg			07 16 41.2	
MORF	**Marmelete**	**2.69 278**	*e*P	**Pn**		**07 15 56.3**	**+0.4**
MORF	**Marmelete**	**2.69 278**	*e*Pn	**Pn**		**07 15 56.4**	**+0.6**
MORF			*e*Sn	**Sn**		**07 16 27.9**	**-0.4**
MORF			*i* IAML			07 16 40.3	
MORF			*i* IAML			07 16 43.9	
MORF			*i* IAML			07 16 46.9	
PTEO	**Sao Teotonio**	**2.78 283**	*e*Pn	**Pn**		**07 15 56.4**	**-0.6**
PTEO			*e*Sn	**Sn**		**07 16 30.3**	**-0.2**
PFVI	**Vila Bisbo**	**2.81 274**	*e*Pn	**Pn**		**07 15 58.2**	**+0.6**
PFVI			*e*Sn	**Sn**		**07 16 31.2**	**-0.2**
PARRA	**Arraiolos**	**2.83 311**	*e*Pn	Pn		07 15 57.8	-8.8
PARRA			*e*Sn	Sn		07 16 31.6	-16
PARRA			*e*Sg	Sb		07 16 41.7	-15
PARRA			*i* IAML			07 16 49.4	
PARRA			*i* IAML			07 16 51.0	
PARRA			*i* IAML			07 16 51.3	
MOE	**Montemor**	**2.86 304**	*e*Pn	**Pn**		**07 15 58.7**	**+0.5**
PMTG	**Montargil**	**3.10 313**	*e*Pn	**Pn**		**07 16 02.9**	**+1.3**
PMTG			*e*Sn	**Sn**		**07 16 39.0**	**+0.4**
PMTG			*e*Sg	**Sg**		**07 16 50.0**	**-2.4**
PMTG			*i* IAML			07 16 55.0	
PMTG			*i* IAML			07 16 59.0	
PMTG			*i* IAML			07 16 59.5	
EPLA	**Plasencia**	**3.14 349**	Pn	**Pn**		**07 16 01.7**	**-0.4**
EPLA			Sn	**Sn**		**07 16 35.9**	**-3.6**
EPLA			Sg	**Sg**		**07 16 51.4**	**-2.1**
EPLA			*i* IVmb_Lg			07 16 56.6	
PCBR	**Castelo Branco**	**3.32 330**	*e*Sn	**Sn**		**07 16 42.5**	**-1.5**
PSARD	**Sardoal**	**3.44 320**	*e*Pn	**Pn**		**07 16 07.0**	**+0.8**
PSARD			*e*Sn	**Sn**		**07 16 46.8**	**-0.2**
PSARD			*e*Sg	**Sg**		**07 17 01.0**	**-2.4**
PSARD			*i* IAML			07 17 07.2	
PSARD			*i* IAML			07 17 12.0	
PSARD			*i* IAML			07 17 12.7	
PCAS	**Casmilo, Conde**	**3.96 322**	*e*Sn	**Sn**		**07 16 58.4**	**-1.2**
MD31	**MD31**	**4.13 173**	P	**Pn**		**07 16 15.4**	**-0.4**
MD31	**MD31**	**4.13 173**	S	**Sn**		**07 17 02.6**	**-1.4**
PVIS	**Viseu**	**4.24 332**	*e*Sn	**Sn**		**07 17 06.0**	**-0.7**
MVO	**Moncorvo**	**4.39 343**	*e*Sn	**Sn**		**07 17 09.1**	**-1.2**
MVO			*i* IAML			07 17 35.9	
MVO			*i* IAML			07 17 37.9	
MVO			*i* IAML			07 17 38.3	
PVRL	**Vila Real**	**4.68 337**	*e*Sn	**Sn**		**07 17 16.4**	**-1.1**
PVRL			*i* IAML			07 17 17.2	
PVRL			*i* IAML			07 17 17.3	
PVRL			*i* IAML			07 17 17.4	

JMA ***17*** *07:26:16.2±0.1, 35°N±2″×13°7E±″, h364km, MV2.8/26, MIKAWA BAY REGION*
IDC ***17*** *07:26:18.8±0.9, 34°.57N×137°.09E, h329km±11km, mb2.7/5, mbtmp3.3/7, Error ellipse: s-maj=25.5km s-min=19.5km az=102.0*
ISC 17 07:26:19.3±0.9, 34°.6N±0°.1×137°.01E±0°.08, h335km±7km, n19, σ1s00/24, mb2.9/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.11**	**78**	P	**Pn**	**07 27 01.7**	**+0.4**
JIE	**Ise**	**0.33**	**229**	P	**Pn**	**07 27 01.8**	**+0.2**
JYTA	**Yamagatataniai**	**1.01**	**347**	P	**Pn**	**07 27 03.6**	**+0.2**
JWY	**Kouya**	**1.23**	**252**	P	**Pn**	**07 27 04.6**	**0.0**
JTNC	**Tanabenakahech**	**1.40**	**236**	P	**Pn**	**07 27 05.3**	**-0.1**
JWT	**Wachi**	**1.48**	**297**	P	**Pn**	**07 27 05.7**	**-0.1**
JKG	**Kaga**	**1.75**	**342**	*e*P	**Pn**	**07 27 07.2**	**-0.2**
JOD2	**Odawara 2**	**1.83**	**68**	*e*P	**Pn**	**07 27 08.6**	**+0.6**
JOD2				*e*S	**S**	**07 27 49.2**	**+2.2**
JRY	**Ryogami san**	**2.09**	**47**	P	**Pn**	**07 27 10.9**	**+1.0**
JRY				*e*S	**S**	**07 27 51.3**	**+0.9**
MJAR	**Matsushiro Arr**	**2.16**	**27**	P	**Pn**	**07 27 10.6**	**+0.2**
	6.3nm,0.7s,baz=210,slow=8.7,SNR=16						
MJAR				S	**S**	**07 27 50.1**	**-1.3**
	1.3nm,0.6s,baz=222,slow=12,SNR=4.8						
JAI	**Aioi**	**2.27**	**250**	*e*P	**Pn**	**07 27 10.9**	**-0.3**
JAG	**Ashikaga**	**2.70**	**47**	P	**Pn**	**07 27 14.4**	**-0.3**
JAG				*e*S	**S**	**07 27 57.0**	**-2.3**
BSO1	**Boso 1**	**3.27**	**88**	P	**Pn**	**07 27 19.0**	**-0.5**
BSO1				*e*S	**S**	**07 28 06.7**	**-1.2**
KSRS	**Korea Array**	**7.89**	**294**	P	**Pn**	**07 28 12.2**	**+0.4**
	1.0nm,0.6s,baz=107,slow=13,SNR=4.8						
MKAR	**Makanchi Array**	**42.43**	**304**	P	**P**	**07 33 42.7**	**+0.7**
	0.3nm,0.5s,baz=74,slow=10,SNR=2.3 0.3nm,0.5s						
ILAR	**Eielson Array**	**53.44**	**31**	P	**P**	**07 35 04.2**	**-1.1**
	0.2nm,0.8s,baz=268,slow=7.5,SNR=2.4 0.2nm,0.8s						
WRA	**Warramunga Arr**	**54.31**	**183**	P	**P**	**07 35 11.1**	**-0.9**
	0.3nm,0.3s,baz=0.8,slow=7.4,SNR=11 0.3nm,0.3s						
ASAR	**Alice Springs**	**58.03**	**183**	P	**P**	**07 35 38.5**	**+0.4**
	0.3nm,0.7s,baz=1.8,slow=6.2,SNR=7.3 0.3nm,0.7s						
NVAR	**Mina Array Bea**	**79.30**	**51**	P	**P**	**07 37 49.5**	**+0.9**
	0.2nm,0.5s,baz=292,slow=3.9,SNR=2.4 0.2nm,0.5s						

NEIC ***17*** *07:31:39.3±0.6, 36°.274N±0°.005×97°.64W±0°.01, h7km±4km, Error ellipse: s-maj=1.3km s-min=0.6km az=116.0*
NEIC 17 07:31:39.2±0.4, 36°.275N±0°.008×97°.64W±0°.01, h5km±1km, mb_Lg2.2/6, ML2.4/76, ML2.5/23, Error ellipse: s-maj=2.1km s-min=1.3km az=124.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.36**	**310**		Pg	07 31 46.8	+0.6
CROK					Sg	07 31 51.8	+0.8
OK029	**Liberty Lake**	**0.50**	**163**		Pg	07 31 49.1	+0.2
OK029					Sg	07 31 56.1	+0.7
OK029				IAML		07 31 56.4	
	285nm,0.3s						
OK048	**Pawnee Station**	**0.58**	**76**	Pg	Pg	07 31 50.6	+0.2
BLOK	**Blackwell**	**0.59**	**35**		Pg	07 31 51.0	+0.3
BLOK					Sg	07 31 59.2	+0.8
BLOK				IAML		07 32 10.3	
	comp=E,190nm,0.2s						
GC02	**Grant County #**	**0.60**	**343**		Pg	07 31 51.1	+0.3
GC02					Sg	07 31 59.6	+1.0
BCOK	**Bluff Creek, N**	**0.62**	**178**		Pg	07 31 51.4	+0.3
BCOK					Sg	07 31 59.9	+0.8
OK051	**E0350 and S346**	**0.69**	**70**		Pg	07 31 52.7	+0.2
OK051				IAML		07 32 05.0	
	comp=E,239nm,0.2s						
KAN14	**Manchester OK**	**0.73**	**339**		Pg	07 31 53.3	+0.1
KAN14					Sg	07 32 03.4	+0.7
OK052	**Battle Ridge R**	**0.73**	**112**		Pg	07 31 53.3	+0.2
OK052					Sg	07 32 03.4	+0.5
OK052				IAML		07 32 04.6	
	comp=E,149nm,0.2s						
KAN13	**South Haven SW**	**0.75**	**10**		Pg	07 31 53.8	+0.2
KAN13					Sg	07 32 04.0	+0.7
QUOK	**Quay**	**0.76**	**98**		Pg	07 31 53.9	+0.1
QUOK					Sg	07 32 04.0	+0.3
QUOK				IAML		07 32 04.4	
	comp=N,183nm,0.3s						
QUOK				IAML		07 32 07.5	
	comp=E,133nm,0.1s						
OK004	**Okla Sci Mus**	**0.76**	**170**		Pb	07 31 54.5	-0.5
OK004					Sg	07 32 04.5	+0.8
OKCFA	**Oklahoma City**	**0.87**	**170**		Pg	07 31 56.1	+0.1
OKCFA					Sg	07 32 07.8	+0.6
KAN01	**Argonia South**	**0.88**	**354**		Pg	07 31 56.0	-0.2
KAN01					Sg	07 32 08.0	+0.4
KAN01				IAML		07 32 08.4	
	comp=E,128nm,0.2s						
OKCSW	**OKLAHOMA CITY**	**0.88**	**169**		Pg	07 31 56.1	0.0
OKCSW					Sg	07 32 08.1	+0.5
OK038	**West end E0370**	**0.91**	**283**		Pg	07 31 56.5	-0.2
OK038					Sg	07 32 08.3	-0.3
DEOK	**Depew**	**1.02**	**115**		Pg	07 31 58.5	-0.3
DEOK				IAML		07 32 12.6	
	comp=N,111nm,0.2s						
DEOK				IAML		07 32 12.9	
	comp=E,101nm,0.2s						
FNO	**Franklin**	**1.03**	**169**		Pg	07 31 58.7	-0.3
FNO					Sg	07 32 12.8	+0.3
FNO				IAML		07 32 14.0	
	comp=E,136nm,0.2s						
CSTR	**Hydro, Custer**	**1.06**	**234**		Pg	07 31 59.1	-0.5
NOKA	**Waynoka**	**1.10**	**289**	Pg	Pg	07 31 59.9	-0.5
NOKA				IAML		07 32 19.1	
	comp=N,130nm,0.2s						
NOKA				IAML		07 32 19.9	
	comp=E,118nm,0.3s						
T35A	**Sooner Cattle**	**1.11**	**54**		Pg	07 32 00.3	-0.2
T35A				IAML		07 32 19.6	
	comp=E,103nm,0.3s						
TUL3	**Leonard**	**1.54**	**103**		Pn	07 32 07.0	-0.3
X34A	**Smith Ranch, M**	**1.68**	**185**		Pb	07 32 10.1	-0.5
WMOK	**Wichita Mounta**	**1.79**	**212**		Pn	07 32 10.9	0.0
WMOK				IAmb_Lg		07 32 36.4	
	comp=Z,23nm,0.9s						
R32A	**Long Quarter,**	**2.31**	**339**	IAmb_Lg		07 32 51.9	
	comp=Z,7.8nm,0.8s						
SMWD	**Samnorwood**	**2.42**	**242**	Pn	Pn	07 32 19.6	+0.1
MGMO	**Mountain Grove**	**4.40**	**77**	IAmb_Lg		07 34 00.2	
	comp=Z,6.2nm,0.8s						

IDC ***17*** *07:57:30.2±0.8, 28°.59N×140°.03E, h390km±28km, mb2.9/7, mbtmp3.7/8, Error ellipse: s-maj=86.3km s-min=15.2km az=72.0*
ISC 17 07:57:30.2±0.9, 28°.6N±0°.2×140°.3E±0°.3, h400km, n8, σ0s61/9, mb3.0/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.26**	**133**	P	**Pn**	**07 58 27.1**	**-0.9**
	69nm,0.4s,baz=262,slow=17,SNR=17						
JCJ				S	**S**	**07 59 15.4**	**+0.9**
	87nm,0.6s,baz=268,slow=22,SNR=11						
SONM	**Songino Array**	**32.46**	**316**	P	**P**	**08 03 25.5**	**+0.3**
	0.3nm,0.3s,baz=128,slow=7.4,SNR=2.5 0.3nm,0.3s						
MKAR	**Makanchi Array**	**48.22**	**309**	P	**P**	**08 05 32.0**	**-0.4**
	0.3nm,0.6s,baz=92,slow=8.3,SNR=2.1 0.3nm,0.6s						
WRA	**Warramunga Arr**	**48.65**	**188**	P	**P**	**08 05 36.0**	**+0.1**
	0.2nm,0.3s,baz=3.6,slow=7.8,SNR=14 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**50.78**	**314**	P	**P**	**08 05 50.9**	**-0.4**
	0.7nm,0.3s,baz=91,slow=8.8,SNR=7.3 0.7nm,0.3s						
ASAR	**Alice Springs**	**52.37**	**187**	P	**P**	**08 06 03.5**	**+0.2**
	0.1nm,0.3s,baz=2.8,slow=5.8,SNR=5.5 0.1nm,0.3s						
BVAR	**Borovoye Array**	**55.79**	**317**	P	**P**	**08 06 27.3**	**0.0**
	0.7nm,0.5s,baz=90,slow=7.7,SNR=4.3 0.7nm,0.5s						
FINES	**FINESS Array B**	**75.83**	**333**	P	**P**	**08 08 33.7**	**+0.4**
	1.0nm,0.8s,baz=68,slow=5.9,SNR=3.7 1.0nm,0.8s						

NEIC ***17*** *08:02:35.5±1.1, 36°.186N±0°.005×117°.856W±0°.009, h1km±1km, Error ellipse: s-maj=1.3km s-min=0.3km az=50.0*
PAS 17 08:02:36.0±1.0, 36°.184N±0°.008×117°.87W±0°.01, h2km±2km, Mwr3.6/4, ML3.3/92(NEIC), Error ellipse: s-maj=1.4km s-min=1.2km az=91.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFS	**McCloud Flat S**	**0.07**	**172**		Pg	08 02 37.8	+0.3
MFS					Sg	08 02 39.5	+1.1
WCSM	**Coso Springs S**	**0.18**	**153**		Pg	08 02 39.8	+0.3
WCSM					Sg	08 02 42.5	+0.7
WRVM	**Rose V. Centra**	**0.18**	**186**		Pg	08 02 39.6	+0.1
WRVM					Sg	08 02 42.5	+0.7
WVPM	**Volcano Peak E**	**0.24**	**170**		Pg	08 02 40.7	+0.1
WVPM					Sg	08 02 44.3	+0.6
CWC	**Cottonwood Cre**	**0.31**	**326**		Pg	08 02 41.9	-0.1
CWC				IAML		08 02 46.8	
	comp=E,3μm,0.3s						
CWC				IAML		08 02 47.0	
	comp=N,2μm,0.2s						
WNMM	**Nine Mile Cany**	**0.34**	**185**		Pn	08 02 47.5	-0.5
CGO	**Cerro Gordo**	**0.37**	**8**		Pg	08 02 43.0	-0.2
CGO					Sg	08 02 48.8	+0.7
TOW	**Tower One**	**0.38**	**167**		Pg	08 02 43.9	+0.5
TOW					Sb	08 02 50.2	-1.7
CLC	**China Lake**	**0.43**	**149**		Pg	08 02 44.1	-0.1
SRTC	**Snort**	**0.50**	**169**		Pg	08 02 46.1	+0.5
SRTC					Sb	08 02 54.1	-1.2
GPO	**China Lake**	**0.56**	**163**		Pg	08 02 47.0	+0.3
GPO					Sg	08 02 55.2	+1.2
WORM	**Onyx Ranch**	**0.57**	**212**		Pg	08 02 46.8	-0.3
WORM					Sg	08 02 54.7	+0.2
WHFM	**Hanning Flat**	**0.62**	**219**		Pg	08 02 47.8	-0.2
WHFM					Sg	08 02 56.3	+0.2
WSHM	**Spangler Hills**	**0.66**	**152**		Pg	08 02 48.4	-0.3
WBSM	**Bird Springs**	**0.68**	**199**		Pg	08 02 49.0	-0.2
WBSM					Sg	08 02 58.3	+0.3
WASM	**Alta Sierra Ca**	**0.71**	**232**		Pg	08 02 49.6	-0.2
WASM					Sg	08 02 59.2	+0.2
ISA	**Isabella, Lake**	**0.72**	**224**		Sg	08 02 59.6	+0.5
ISA	**Isabella, Lake**	**0.72**	**224**		Pg	08 02 49.5	-0.3
ISA				IAML		08 02 59.8	
	comp=N,1μm,0.2s						
ISA				IAML		08 03 00.5	
	comp=E,1μm,0.4s						
LRMC	**Laurel Mtn Rad**	**0.72**	**168**		Pg	08 02 49.5	-0.3
LRMC					Sg	08 02 59.8	+0.7
LRMC				IAML		08 03 05.4	
	comp=E,903nm,0.5s						
SPG2	**Springville 2**	**0.73**	**272**		Pg	08 02 49.7	-0.3
SPG2					Sg	08 02 59.6	+0.1
CCCA	**Chr Cany lake**	**0.77**	**148**		Pg	08 02 50.8	-0.1
CCCA	**Chr Cany lake**	**0.77**	**148**		Sb	08 03 02.3	-0.9
QSM	**Queen of Sheba**	**0.84**	**105**		Pg	08 02 51.7	-0.4
QSM					Sg	08 03 03.1	+0.2
QSM				IAML		08 03 10.2	
	comp=N,1μm,1.1s						
FURC	**Furnace Creek,**	**0.86**	**71**		Pg	08 02 52.5	0.0
GRAC	**Grapevine Rang**	**0.91**	**26**		Pg	08 02 53.2	-0.2
GRAC	**Grapevine Rang**	**0.91**	**26**		Sg	08 03 05.6	+0.4
DTP	**Desert Tortois**	**0.92**	**179**		Sg	08 02 53.1	-0.5
DTP					Sg	08 03 05.6	+0.1
TIN	**Tinemaha, Big**	**0.92**	**342**		Pg	08 02 53.1	-0.5
GWY	**Greenwater Val**	**0.97**	**90**		Pg	08 02 54.2	-0.4
GWY				IAML		08 03 15.6	
	comp=N,677nm,0.7s						
GWY				IAML		08 03 17.3	
	comp=E,1μm,0.8s						
CCAC	**Calif City Air**	**1.04**	**187**		Pg	08 02 55.4	-0.5
CCAC					Sg	08 03 09.8	+0.4
SGV	**South Grapevin**	**1.04**	**40**		Pg	08 02 55.4	-0.6
VES	**Vestal, Richgr**	**1.04**	**251**		Pg	08 02 55.8	-0.3
VES					Sg	08 03 09.9	+0.3
VES				IAML		08 03 13.5	
	comp=N,704nm,0.5s						
LCH	**Last Change Ra**	**1.06**	**10**		Pg	08 02 55.4	-1.0
LCH					Sg	08 03 10.4	+0.2
TEJ	**El Tejon**	**1.16**	**215**		Pg	08 02 57.5	-0.8
TEJ					Sg	08 03 13.2	-0.2
WCT	**Wildcat Mounta**	**1.17**	**58**		Pg	08 02 57.7	-0.7
WCT				IAML		08 03 16.1	
	comp=E,706nm,0.7s						
WCT				IAML		08 03 16.9	
	comp=N,405nm,0.8s						
DSP	**Deep Springs**	**1.19**	**356**		Pg	08 02 57.6	-1.2
DSP					Sg	08 03 13.6	-0.5
GMN	**Gold Mountain**	**1.22**	**23**		Pg	08 02 58.8	-0.6
GMN					Sg	08 03 14.7	-0.5
GMN				IAML		08 03 17.8	
	comp=N,565nm,0.5s						
GMN				IAML		08 03 22.6	
	comp=E,536nm,0.9s						
GSC	**Goldstone, Bar**	**1.23**	**135**		Sb	08 03 16.6	+0.1
GSC	**Goldstone, Bar**	**1.23**	**135**		Pg	08 02 58.9	-0.8
GSC				IAML		08 03 18.7	
	comp=N,766nm,0.6s						
VOG	**Valley Oaks Go**	**1.23**	**277**		Pg	08 02 59.2	-0.5
MTUM	**Tungsten Hills**	**1.29**	**335**		Pg	08 03 00.1	-0.8
EDW2	**Edwards Air Fo**	**1.30**	**185**		Pg	08 02 59.9	-1.1
EDW2					Sg	08 03 17.1	-0.8
AMDNV	**Amargosa**	**1.31**	**78**		Pg	08 02 59.9	-1.2
AMDNV					Sg	08 03 18.2	+0.1
BAKC	**Calstate**	**1.31**	**231**		Pg	08 03 01.1	-0.1
BAKC					Sb	08 03 18.9	+0.3
ARVC	**Arvin**	**1.31**	**217**		Pg	08 03 00.7	-0.6
ARVC					Sb	08 03 18.7	0.0
TPO	**Tropico Hills**	**1.34**	**193**		Pg	08 03 00.7	-0.9
TPO				IAML		08 03 21.1	
	comp=N,582nm,0.7s						
TPO				IAML		08 03 23.3	
	comp=E,711nm,0.7s						
HYS	**Haystack Butte**	**1.34**	**169**		Pg	08 03 00.7	-1.0
RRX	**Edison Barstow**	**1.49**	**151**		Pg	08 03 04.5	0.0
SBB	**Saddle Back Bu**	**1.49**	**179**		Pn	08 03 03.4	-0.5
TPNV	**Topopah Spring**	**1.51**	**59**		Pn	08 03 03.4	-0.9
TPNV				IAML		08 03 27.3	
	comp=E,382nm,0.9s						
TPNV				IAML		08 03 41.7	
	comp=E,334nm,0.8s						
KCC	**Kaiser Creek**	**1.63**	**315**		Pn	08 03 05.6	-0.2
KCC					Sn	08 03 26.7	-0.6
MLAC	**Mammoth, Mammo**	**1.64**	**332**		Pn	08 03 06.5	+0.4
LRRC	**Littlerock Res**	**1.66**	**185**		Pb	08 03 06.7	-0.5
MCSM	**Casa Diablo Ho**	**1.69**	**331**		Pn	08 03 07.3	+0.6
HOLC	**Holcomb Ridge**	**1.72**	**179**		Pb	08 03 08.0	-0.4
JNH	**Juniper Hills**	**1.73**	**182**		Pb	08 03 08.7	0.0
MDPB	**Devils Postpil**	**1.74**	**326**		Pn	08 03 08.0	+0.5
MDPB				IAML		08 03 31.5	
	comp=N,365nm,0.6s						
MDPB				IAML		08 03 33.1	
	comp=E,314nm,0.7s						
BCW	**Bitter Crk WRg**	**1.77**	**226**		Pn	08 03 08.3	+0.6
CRGC	**Crocker Grade**	**1.78**	**239**		Pb	08 03 08.8	-0.6
CARC	**Carrizo Plain**	**1.83**	**242**		Pb	08 03 09.6	-0.7
CHFC	**Chilao Flat St**	**1.85**	**184**		Pb	08 03 10.9	+0.2
BFSC	**Mount Baldy Ra**	**1.95**	**175**		Pn	08 03 10.4	+0.1
SSK	**Sunset Peak**	**1.97**	**176**		Pn	08 03 10.9	+0.3
MTPC	**Mountain Pass**	**2.00**	**110**		Pn	08 03 10.3	-0.7
MTPC				IAML		08 03 41.0	
	comp=E,244nm,0.7s						
SIL	**Silver Peak**	**2.02**	**155**		Pb	08 03 14.0	+0.4
PSRC	**Puddingstone R**	**2.09**	**179**		Pb	08 03 15.0	+0.4
TSCN	**Private Proper**	**2.11**	**253**		Pn	08 03 13.3	+0.9
LHV	**Little Huntoon**	**2.12**	**346**		Pn	08 03 13.3	+0.8
LHV				IAML		08 03 51.0	
	comp=E,167nm,0.8s						
SHPR	**Sheep Range**	**2.21**	**81**		Pn	08 03 13.7	-0.1
PSMM	**Smith Mountain**	**2.21**	**268**		Pb	08 03 15.4	-1.4
GMRC	**Granite Mounta**	**2.28**	**127**		Pn	08 03 12.4	-2.4
PSAM	**San Ardo**	**2.45**	**267**		Pn	08 03 18.8	+1.8
V12A	**Nelson**	**2.49**	**100**		Pn	08 03 17.1	-0.5
V12A				IAML		08 04 01.2	
	comp=N,111nm,0.9s						
V12A				IAML		08 04 04.1	
	comp=E,94nm,1.2s						
RYN	**Ryan**	**2.50**	**348**		Pn	08 03 18.1	+0.3
RAMR	**Ramage Ranch**	**2.50**	**258**		Pn	08 03 18.7	+1.0
TPC	**Twentynine Pal**	**2.55**	**144**		Pn	08 03 17.4	-1.1
ELS	**Elsinore Mount**	**2.56**	**172**		Pn	08 03 18.0	-0.5
PRN	**Pahroc Range**	**2.57**	**61**		Pn	08 03 18.6	-0.2
PRN				IAML		08 04 15.4	
	comp=N,128nm,1.1s						
PRN				IAML		08 04 18.1	
	comp=E,151nm,0.9s						
HMTC	**Hemet**	**2.57**	**164**		Pn	08 03 18.7	0.0
POB	**Polly Butte**	**2.61**	**162**		Pn	08 03 19.1	-0.2
BELC	**Belle Mtn. Jos**	**2.66**	**144**		Pn	08 03 19.0	-1.1
BELC				IAML		08 04 03.2	
	comp=N,80nm,0.5s						
BELC				IAML		08 04 06.1	
	comp=E,90nm,1.0s						
PCCM	**Crazy Canyon**	**2.67**	**269**		Pn	08 03 21.4	+1.4
PFO	**Pinyon Flats O**	**2.81**	**155**		Pn	08 03 21.4	-0.8
IRM	**Iron Mountain**	**3.01**	**131**		Pn	08 03 23.1	-1.7
IRM				IAML		08 04 14.0	
	comp=E,59nm,0.9s						
IRM				IAML		08 04 23.3	
	comp=N,52nm,1.7s						
BORC	**Borrego Spring**	**3.15**	**157**		Pn	08 03 26.7	+0.1
BORC				IAML		08 04 22.9	
	comp=E,56nm,1.0s						
BORC				IAML		08 04 31.2	
	comp=N,49nm,1.1s						
DPP	**Dos Picos Cty**	**3.27**	**166**	Pn	Pn	08 03 27.8	-0.4
BAR	**Barrett**	**3.63**	**164**		Pn	08 03 33.0	-0.3
BLYC	**Blythe**	**3.67**	**131**		Pn	08 03 32.1	-1.6
BLYC				IAML		08 04 37.8	
	comp=N,43nm,0.8s						
BLYC				IAML		08 04 42.3	
	comp=E,76nm,0.9s						
ESJX	**Sierra Juarez**	**4.46**	**159**	Pn	Pn	08 03 44.4	-0.4
ELK	**Elko**	**5.00**	**24**		Pn	08 03 52.9	+0.7
ELK				IAML		08 05 17.2	
	comp=E,13nm,1.2s						
ELK				IAML		08 05 17.8	
	comp=E,17nm,0.7s						

SCB 17 08:07:54.7±1.3, 21°.45S×66°.75W, h218km±10km, ML3.0/3, Error ellipse: s-maj=5.8km s-min=4.3km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.05**	**79**	Pg	Pn	08 08 27.6	+0.4
MOCB				Sg	S	08 08 51.7	-0.6
MOCB				IAML		08 08 52.7	
	88nm,0.5s						
MOCB	**Mochara**	**1.05**	**79**	Pg	Pn	08 08 27.6	+0.4
MOCB				Sg	S	08 08 51.8	-0.5
MOCB				IAML		08 08 54.0	
	49nm,0.4s						
YJA	**Yavi**	**1.36**	**122**	Pg	Pn	08 08 30.4	+1.1

UCR ***17*** *08:18:37.4±1.1,9.°72N×85.°93W,h28km±3km,MW3.7*
CATAC ***17*** *08:18:38.6±1.1,10.°N±5.°8×6W.°,h20km±5km,M3.6/11, MLv3.6/11,Error ellipse: s-maj=14.6km s-min=5.8km az=46.0,confirmed*

ISC 17 08:18:37.7±1.7,9.°67N±0.°06×85.°85W±0.°07,h29km±11km, n102,σ1§06/110,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAJU	**San Juanillo,**	**0.41**	**19**	*eP*	**Pb**	**08 18 46.8**	**0.0**
SAJU				*eS*	**Sn**	**08 18 53.4**	**-1.1**
CMARA	**Lajas Hojancha**	**0.54**	**50**	P	**Pb**	**08 18 48.5**	**-0.3**
CMARA				S	**Sb**	**08 18 56.4**	**0.0**
CMARA	**Lajas Hojancha**	**0.54**	**50**	*eP*	**Pb**	**08 18 48.4**	**-0.3**
JUD3	**Juan Diaz 3**	**0.58**	**32**	*eP*	**Pb**	**08 18 49.1**	**-0.3**
JUD3				*eS*	**Sn**	**08 18 57.8**	**-0.8**
NICO	**Nicoya**	**0.60**	**41**	*eP*	**Pb**	**08 18 49.5**	**-0.3**
NICO				*eS*	**Sn**	**08 18 58.6**	**-0.6**
SACU	**Santa Cruz**	**0.64**	**24**	*eP*	**Pb**	**08 18 50.1**	**-0.4**
SACU				*eS*	**Sn**	**08 18 59.9**	**-0.3**
CBL1	**Cabuya**	**0.75**	**96**	*eP*	**Pb**	**08 18 51.4**	**-0.8**
CBL1				*eS*	**Sn**	**08 19 03.8**	**+1.0**
DELF	**Filadelfia**	**0.82**	**21**	*eP*	**Pb**	**08 18 53.1**	**-0.3**
DELF				*eS*	**Sn**	**08 19 05.0**	**+0.4**
PLVR	**Palo Verde**	**0.83**	**36**	*eP*	**Pb**	**08 18 52.9**	**-0.9**
PLVR				*eS*	**Sn**	**08 19 04.6**	**-0.5**
ALIBA	**Liberia Airpor**	**0.96**	**18**	*eP*	**Pn**	**08 18 55.7**	**+0.4**
ELI1	**Hacienda Flor**	**1.01**	**17**	P	**Pb**	**08 18 56.6**	**0.0**
ELI1	**Hacienda Flor**	**1.01**	**17**	S	**Sn**	**08 19 10.8**	**+1.6**
ELI1	**Hacienda Flor**	**1.01**	**17**	*eP*	**Pb**	**08 18 56.5**	**0.0**
CNAS	**Canas**	**1.06**	**45**	*eP*	**Pn**	**08 18 56.6**	**0.0**
JTS	**Las Juntas de**	**1.07**	**55**	*eP*	**Pn**	**08 18 56.5**	**-0.4**
INVE	**Universidad In**	**1.11**	**44**	*eP*	**Pn**	**08 18 57.4**	**0.0**
LAPC	**Finca la Perla**	**1.16**	**20**	*eP*	**Pn**	**08 18 58.1**	**0.0**
TILA	**Tilaran**	**1.17**	**47**	*eP*	**Pn**	**08 18 58.1**	**-0.1**
GPS3	**Bodega del ICE**	**1.18**	**24**	*eP*	**Pn**	**08 18 58.8**	**+0.4**
CUI	**Cuipilapa**	**1.19**	**34**	*eP*	**Pn**	**08 18 58.5**	**0.0**
MTEVE	**Monteverde**	**1.19**	**57**	*eP*	**Pn**	**08 18 58.6**	**-0.1**
GPS1	**Guardaparques**	**1.20**	**24**	*eP*	**Pn**	**08 18 58.8**	**+0.2**
VRLE	**La Escondida,**	**1.21**	**23**	*eP*	**Pn**	**08 18 58.9**	**+0.1**
TIMP	**Tierras Morena**	**1.22**	**42**	*eP*	**Pn**	**08 18 58.8**	**-0.1**
HORNC	**Hornillas**	**1.23**	**32**	*eP*	**Pn**	**08 18 59.0**	**0.0**
MESS	**Mesas**	**1.24**	**31**	*eP*	**Pn**	**08 18 59.4**	**+0.1**
MOTZ	**Rio Naranjo**	**1.26**	**37**	*eP*	**Pn**	**08 18 59.8**	**+0.3**
BUAI	**Buenos Aires**	**1.30**	**23**	*eP*	**Pn**	**08 19 00.3**	**+0.3**
QUEB	**Quebradon, Cot**	**1.33**	**45**	*eP*	**Pn**	**08 19 00.6**	**+0.2**
TENO	**El Achiote**	**1.33**	**40**	*eP*	**Pn**	**08 18 59.7**	**-0.8**
TABAC	**Tabacon**	**1.34**	**52**	*eP*	**Pn**	**08 19 01.3**	**+0.6**
VMAR	**Armenia, Volca**	**1.34**	**32**	*eP*	**Pn**	**08 19 00.8**	**+0.1**
VARE2	**V. Arenal**	**1.36**	**55**	*eP*	**Pn**	**08 19 01.6**	**+0.8**
CEDE	**Laguna Cedeo**	**1.39**	**54**	*eP*	**Pn**	**08 19 02.1**	**+0.9**
VACR	**Volcan Arenal**	**1.40**	**55**	*eP*	**Pn**	**08 19 02.1**	**+0.7**
SOCE	**Pocosol**	**1.40**	**60**	*eP*	**Pn**	**08 19 01.8**	**+0.4**
FORC	**Fortuna**	**1.40**	**56**	*eP*	**Pn**	**08 19 01.8**	**+0.4**
SRA1	**San Ramn**	**1.41**	**73**	*eP*	**Pn**	**08 19 02.4**	**+0.9**
REZ	**Monterrey de S**	**1.41**	**53**	*eP*	**Pb**	**08 19 02.6**	**-0.9**
PALD	**Palmares**	**1.44**	**75**	*eP*	**Pn**	**08 19 02.3**	**+0.3**
UPAL	**Upala**	**1.47**	**34**	P	**Pn**	**08 19 03.3**	**+1.0**
UPAL	**Upala**	**1.47**	**34**	*eP*	**Pn**	**08 19 03.1**	**+0.8**
CARN	**Rivas**	**1.54**	**12**	*eP*	**Pn**	**08 19 03.5**	**+0.2**
TCS1	**Tacares**	**1.57**	**76**	*eP*	**Pn**	**08 19 04.6**	**+0.9**
VPL2	**V. Platanar**	**1.57**	**66**	*eP*	**Pn**	**08 19 05.1**	**+1.2**
PICV	**PH. Pirrs**	**1.63**	**91**	*eP*	**Pn**	**08 19 04.6**	**0.0**
SANTA	**Santa Ana**	**1.66**	**81**	*eP*	**Pn**	**08 19 05.5**	**+0.5**
VPS8	**V Poas**	**1.66**	**72**	*eP*	**Pn**	**08 19 06.5**	**+1.3**
BELE	**Belen**	**1.66**	**79**	*eP*	**Pn**	**08 19 05.6**	**+0.6**
ACOS	**Acosta**	**1.66**	**86**	*eP*	**Pn**	**08 19 06.0**	**+0.9**
HEME	**Heredia, Merce**	**1.71**	**79**	*eP*	**Pb**	**08 19 07.4**	**-1.3**
ARTO	**Ro Cuarto**	**1.74**	**67**	*eP*	**Pb**	**08 19 07.8**	**-1.3**
HDC	**Heredia**	**1.74**	**79**	*eP*	**Pn**	**08 19 07.6**	**+1.5**
MEXI	**Barrio Mexico**	**1.75**	**81**	*eP*	**Pb**	**08 19 08.0**	**-1.3**
COVE	**Coope Vega, Sa**	**1.76**	**54**	P	**Pn**	**08 19 06.9**	**+0.6**
AMPA	**Desamparados**	**1.77**	**83**	*eP*	**Pn**	**08 19 07.6**	**+1.0**
LUPE	**Guadalupe**	**1.79**	**81**	*eP*	**Pn**	**08 19 08.3**	**+1.5**
TRIO	**Tres Rios**	**1.84**	**83**	*eP*	**Pn**	**08 19 08.7**	**+1.2**
CORON	**Coronado**	**1.84**	**81**	*eP*	**Pn**	**08 19 09.3**	**+1.7**
JAPN	**AI SSO del Vol**	**1.85**	**5**	P	**Pb**	**08 19 09.6**	**-1.3**
JAPN	**AI SSO del Vol**	**1.85**	**5**	*eP*	**Pn**	**08 19 08.6**	**+1.1**
PIEC	**Cerro El Cedra**	**1.86**	**91**	*eP*	**Pn**	**08 19 09.7**	**+0.1**
CONN	**Concepcion**	**1.89**	**7**	P	**Pn**	**08 19 09.7**	**+1.5**
CVIMO	**Finca Echandi**	**1.91**	**79**	*eP*	**Pn**	**08 19 09.8**	**+1.2**
REPA	**Paraso**	**1.96**	**85**	*eP*	**Pn**	**08 19 09.9**	**+0.7**
VICA	**Volcano Irazu**	**2.00**	**81**	*eP*	**Pn**	**08 19 11.2**	**+1.3**
PCAYA	**Pacayas**	**2.02**	**83**	*eP*	**Pn**	**08 19 11.4**	**+1.3**
BUS1	**Rivas**	**2.07**	**93**	*eP*	**Pn**	**08 19 11.0**	**0.0**
CVTQ	**Turrialba Volc**	**2.08**	**81**	*eP*	**Pn**	**08 19 12.7**	**+1.7**
CVTV	**Tajo**	**2.09**	**81**	*eP*	**Pn**	**08 19 13.0**	**+1.8**
CVTG	**V. Turrialba,**	**2.10**	**77**	*eP*	**Pn**	**08 19 13.0**	**+2.0**
PILE	**Guapiles**	**2.10**	**75**	*eP*	**Pn**	**08 19 12.9**	**+1.9**
VTCV	**VTCV, Calle Va**	**2.11**	**81**	*eP*	**Pn**	**08 19 13.1**	**+1.8**
ABRB	**Las Abras (San**	**2.12**	**81**	*eP*	**Pn**	**08 19 13.3**	**+1.8**
VERB	**Verbena**	**2.14**	**83**	*eP*	**Pn**	**08 19 13.3**	**+1.7**
RESJ	**San Isidro (Tu**	**2.20**	**81**	*eP*	**Pn**	**08 19 14.4**	**+2.0**
OCHAL	**Ojochal**	**2.25**	**105**	P	**Pn**	**08 19 13.2**	**+0.2**
OCHAL	**Ojochal**	**2.25**	**105**	S	**Sn**	**08 19 38.9**	**-0.9**
TRT2	**Tortugero**	**2.26**	**67**	P	**Pn**	**08 19 14.0**	**+0.8**
TRT2	**Tortugero**	**2.26**	**67**	*eP*	**Pn**	**08 19 14.0**	**+1.2**
NANN	**Nandasmo**	**2.27**	**353**	P	**Pn**	**08 19 15.8**	**+2.5**
EGUB	**Earth Gu¡pi**	**2.29**	**76**	*eP*	**Pn**	**08 19 15.1**	**+1.6**
LCOCO	**El Coco**	**2.29**	**80**	*eP*	**Pn**	**08 19 15.5**	**+1.9**
EDPE	**Pejibaye, P**	**2.30**	**103**	*eP*	**Pn**	**08 19 14.2**	**+0.4**
SAJE	**San Jernim**	**2.33**	**98**	*eP*	**Pn**	**08 19 14.6**	**+0.4**
IRES	**Siquirres**	**2.34**	**79**	*eP*	**Pn**	**08 19 16.4**	**+2.1**
UNAN	**Cigeo UNAN**	**2.46**	**350**	P	**Pn**	**08 19 18.2**	**+2.2**
FIMO	**Fila Mora**	**2.55**	**105**	*eP*	**Pn**	**08 19 18.0**	**+0.7**
COPN	**Copaltepe**	**2.60**	**344**	*eP*	**Pn**	**08 19 18.1**	**+0.2**
VERH	**Veragua Rainfo**	**2.63**	**84**	*eP*	**Pn**	**08 19 19.6**	**+1.3**
EDP2	**Potrero Grande**	**2.71**	**104**	*eP*	**Pn**	**08 19 20.4**	**+0.9**
LAES	**El Progreso Va**	**2.76**	**88**	*eP*	**Pn**	**08 19 21.6**	**+1.6**
PIRO	**Carate, Puerto**	**2.78**	**117**	P	**Pn**	**08 19 21.1**	**+0.7**
PIRO	**Carate, Puerto**	**2.78**	**117**	*eP*	**Pn**	**08 19 21.7**	**+1.3**
EDAD	**Golfito**	**2.83**	**111**	*eP*	**Pn**	**08 19 21.5**	**+0.4**
CEUA	**Cerro Uatsi, L**	**2.87**	**91**	*eP*	**Pn**	**08 19 23.9**	**+2.3**
CNGN	**Cerro Negro**	**2.93**	**343**	*eP*	**Pn**	**08 19 22.4**	**-0.1**
ALCO	**Alturas Coton,**	**3.06**	**103**	*eP*	**Pn**	**08 19 25.1**	**+0.7**
BRU2	**Volcan**	**3.23**	**105**	*eP*	**Pn**	**08 19 28.1**	**+1.3**
JEFFS	**S de V. Baru**	**3.42**	**107**	*eP*	**Pn**	**08 19 30.9**	**+1.7**
CSGN	**Cosiguina Volc**	**3.69**	**333**	*eP*	**Pn**	**08 19 32.0**	**-0.9**
RBALA	**Bur**	**3.73**	**102**	*eP*	**Pn**	**08 19 34.4**	**+1.0**

IDC ***17*** *08:21:10.0±0.9,1.°42N×126.°25E,h0km,mb4.1/6, mbtmp4.0/7,ML3.8/1,Error ellipse: s-maj=54.5km s-min=16.6km az=72.0*
DJA ***17*** *08:21:14.4±0.2,1.°N±2.°×12.°6E±.°,h10km,M4.1/13,mB5.0/1, mb4.3/2,MLv4.0/13,Mw(mB)4.3/1*

ISC 17 08:21:16.1±0.8,1.°48N±0.°05×126.°52E±0.°07,h35km,n15, σ1§86/17,mb4.1/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.10**	**130**	P	**Pn**	**08 21 35.6**	**+0.6**
TNTI				S	**Sn**	**08 21 52.7**	**+3.7**
SGSI	**Sangihe**	**2.41**	**336**	P	**Pn**	**08 21 54.0**	**+0.9**
SGSI				S	**Sn**	**08 22 23.8**	**+2.4**
KMSI	**Cibinong**	**2.69**	**251**	P	**Pn**	**08 22 00.0**	**+3.0**
SANI	**Sanana**	**3.54**	**189**	P	**Pn**	**08 22 09.3**	**+0.6**
SANI				S	**Sn**	**08 22 51.9**	**+2.5**
LUWI	**Luwuk**	**4.51**	**236**	P	**Pn**	**08 22 21.7**	**-0.3**
MRSI	**Marisa**	**4.69**	**258**	P	Pn	08 22 33.0	+8.6
APSI	**Ampana**	**5.42**	**244**	P	**Pn**	**08 22 34.3**	**-0.2**
	0.3nm1µm73nm,1.1s						
MPSI	**Mapaga**	**6.72**	**260**	P	Pn	08 23 04.2	+12
FITZ	**Fitzroy Crossi**	**19.47**	**183**	P	**P**	**08 25 38.4**	**-1.7**
	0.2nm,0.3s,baz=26,slow=8.4,SNR=1.7 1.1nm,0.7s						
WRA	**Warramunga Arr**	**22.63**	**161**	P	**P**	**08 26 13.0**	**-1.2**
	4.0nm,0.6s,baz=340,slow=11,SNR=47 4.0nm,0.6s						
ASAR	**Alice Springs**	**26.00**	**164**	P	**P**	**08 26 44.7**	**-1.3**
	1.2nm,0.4s,baz=343,slow=8.4,SNR=29						
ASAR				PcP	**PcP**	**08 30 13.5**	**-0.4**
	0.1nm,0.4s,baz=348,slow=2.2,SNR=4.0 1.2nm,0.4s						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**08 28 14.7**	**-0.3**
	0.9nm,0.3s,baz=353,slow=13,SNR=3.3 0.9nm,0.3s						
PETK	**Petropavlovsk-**	**57.58**	**22**	P	**P**	**08 31 02.9**	**+0.5**
	5.1nm,1.0s,baz=217,slow=7.3,SNR=5.7 5.1nm,1.0s						
MKAR	**Makanchi Array**	**59.29**	**326**	P	**P**	**08 31 12.8**	**-1.6**
	1.0nm,0.6s,baz=133,slow=8.1,SNR=9.7 1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**63.52**	**328**	P	**P**	**08 31 41.3**	**-1.6**
	1.7nm,0.6s,baz=129,slow=6.3,SNR=18 1.7nm,0.6s						

IDC ***17*** *08:26:25.8±0.4,16.°43S×66.°78E,h0km,mb4.4/30, mbtmp4.4/31,ML3.9/1,MS4.1/24,Error ellipse: s-maj=14.1km s-min=12.7km az=49.0*
MOS ***17*** *08:26:26.0±1.0,16.°34S×66.°73E,h10km,mb5.1/48,Error ellipse: s-maj=8.8km s-min=4.9km az=96.6*
BJI ***17*** *08:26:26.4,16.°41S×66.°40E,h16km,mB5.2/9,mb4.7/37, Ms4.9/23,Ms7 4.6/26*
NEIC ***17*** *08:26:29.0±1.5,16.°42S±0.°08×66.°71E±0.°08,h10km±1km, mb5.1/90,Error ellipse: s-maj=14.8km s-min=11.7km az=215.0*
GCMT ***17*** *08:26:30.0±0.2,16.°40S±0.°01×66.°71E±0.°02,h12km, MW5.1/110,Moment Tensor Solution. s43,c50; s110,c172; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.19±.13; Mθθ-5.49±.09; Mϕϕ1.30±.14; Mrθ0.49±.32; Mrϕ-0.40±.10; Mθϕ0.33±.62; Best double couple: M₀4.89300×10¹⁶ NP1:ϕ₁273.00000°,δ42.00000°, λ99.00000°. NP2:ϕ₂81.00000°,δ48.00000°,λ82.00000°. Principal axes: T 4.2460, Plg83.0000°, Azm294.0000°; N 1.2940, Plg6.0000°, Azm86.0000°; P -5.5400, Plg3.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 08:26:28.3±0.3,16.°33S±0.°05×66.°66E±0.°06,h10km,n406, σ1§19/392,mb4.9/144,MS4.4/38,42C-11D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**10.34**	**34**	T	T	08 39 33.5	
	baz=212,slow=75,SNR=6942						
H08S2	**Diego Garcia H**	**10.35**	**34**	T	T	08 39 36.8	
	baz=212,slow=75,SNR=4699						
H08S3	**Diego Garcia H**	**10.36**	**34**	T	T	08 39 35.1	
	baz=212,slow=75,SNR=5102						
DGAR	**Diego Garcia**	**10.52**	**33**	Pn	**Pn**	**08 29 00.2**	**+1.0**
DGAR	**Diego Garcia**	**10.52**	**33**	*ceP*	**Pn**	**08 29 01.9**	**+2.7**
DGAR				pmax	pmax		
	comp=Z,372nm,2.5s						
MSEY	**Mahe Island**	**15.96**	**315**	Pn	**Pn**	**08 30 14.1**	**+1.0**
MSEY	**Mahe Island**	**15.96**	**315**	P	**Pn**	**08 30 14.1**	**+1.0**
MSEY				pmax	pmax		
	comp=Z,50nm,1.7s						
ABPO	**Ambohimpanom**	**18.71**	**259**	P	**Pn**	**08 30 47.9**	**+0.3**
ABPO	**Ambohimpanom**	**18.71**	**259**	P	**Pn**	**08 30 47.9**	**+0.3**
ABPO				pmax	pmax		
	comp=Z,42nm,1.4s						
OPO	**Ambohidratompo**	**18.71**	**260**	P	**Pn**	**08 30 49.2**	**+1.6**
	baz=64,slow=15,SNR=1.7 comp=Z,2.8nm,0.7s						
PALK	**Pallekele**	**27.26**	**32**	LR	LR	08 41 04.5	
	comp=Z,690nm,18.4s,baz=209,slow=32						
PALK	**Pallekele**	**27.26**	**32**	*i* P	**P**	**08 32 12.7**	**-0.3**
KIBK	**Kibwezi**	**31.40**	**293**		**P**	**08 32 50.0**	**+0.1**
H04N2	**CROZET ISLANDS**	**32.23**	**200**	T	T	09 06 59.2	
	baz=28,slow=75,SNR=725						
H04N1	**CROZET ISLANDS**	**32.23**	**200**	T	T	09 06 55.7	
	baz=28,slow=75,SNR=855						
H04N3	**CROZET ISLANDS**	**32.24**	**200**	T	T	09 06 55.8	
	baz=28,slow=75,SNR=831						
KMBO	**Kilima Mbogo**	**32.67**	**295**	P	**P**	**08 33 02.9**	**+1.6**
	comp=Z,1.8nm,0.5s,baz=133,slow=7.7,SNR=7.9 comp=Z,1.8nm,0.5s						
POGA	**Pongola**	**34.14**	**245**	P	**P**	**08 33 12.9**	**-0.8**
POGA				IAmb	IAmb	08 33 15.5	
	comp=Z,30nm,1.3s						
GSI	**Gunungsitoli**	**35.19**	**63**	P	**P**	**08 33 22.6**	**-0.3**
GSI				IAmb	IAmb	08 33 37.1	
	comp=Z,21nm,1.1s						
HYBB	**Hyderabad (bro**	**35.52**	**20**	*eP*	**P**	**08 33 26.5**	**+0.8**
ATD	**Arta Tunnel**	**36.35**	**318**	LR	LR	08 47 11.8	
	comp=Z,28nm,18.6s,baz=133,slow=34						
ATD	**Arta Tunnel**	**36.35**	**318**	P	**P**	**08 33 33.1**	**+0.3**
ATD				IAmb	IAmb	08 34 40.9	
	comp=Z,68nm,1.5s						
MATP	**Matopo**	**36.39**	**258**	LR	LR	08 47 24.2	
	comp=Z,244nm,18.3s,baz=90,slow=34						
LODK	**Lodwar**	**36.64**	**300**	P	**P**	**08 33 36.0**	**+0.7**
LHMI	**Lhok Sumawe**	**36.83**	**57**	P	**P**	**08 33 37.0**	**+0.1**
PSI	**Prapat**	**37.12**	**62**	LR	LR	08 47 20.7	
	comp=Z,123nm,18.2s,baz=277,slow=34						
MBAR	**Mbarara**	**38.70**	**290**	P	**P**	**08 33 53.7**	**+0.8**
MBAR	**Mbarara**	**38.70**	**290**	P	**P**	**08 33 53.7**	**+0.8**
MBAR				pmax	pmax		
	comp=Z,21nm,1.9s						
LPHEP	**Lephephe**	**38.91**	**253**	P	**P**	**08 33 55.4**	**+0.8**
KHWEE	**KHWEE**	**39.25**	**255**	P	**P**	**08 33 57.1**	**-0.3**
KHWEE				IAmb	IAmb	08 34 40.4	
	comp=Z,38nm,1.2s						
LBTB	**Lobatse**	**39.25**	**250**	LR	LR	08 48 04.4	
	comp=Z,216nm,18.3s,baz=87,slow=33						
LBTB	**Lobatse**	**39.25**	**250**		**P**	**08 33 57.5**	**+0.1**
LBTB				IAmb	IAmb	08 33 59.0	
	comp=Z,26nm,0.9s						
LBTB	**Lobatse**	**39.25**	**250**	P	**P**	**08 33 57.5**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,26nm,1.0s						
KSANE	**Kasane**	**39.64**	**262**		**P**	**08 34 01.1**	**+0.4**
KSANE				IAmb	IAmb	08 34 03.0	
	comp=Z,49nm,1.4s						
BOSA	**Boshof**	**39.97**	**245**	P	**P**	**08 34 02.6**	**-0.8**
	comp=Z,17nm,1.2s,baz=83,slow=7.5,SNR=7.5						
BOSA				LR	LR	08 47 11.8	
	comp=Z,103nm,18.6s,baz=156,slow=31 comp=Z,17nm,1.2s						
BOSA	**Boshof**	**39.97**	**245**		**P**	**08 34 02.8**	**-0.6**
BOSA				IAmb	IAmb	08 34 04.6	
	comp=Z,43nm,1.4s						
BOSA	**Boshof**	**39.97**	**245**	P	**P**	**08 34 02.8**	**-0.6**
BOSA				pmax	pmax		
	comp=Z,43nm,1.5s						
KDWAN	**Kaudwane**	**40.01**	**253**	P	**P**	**08 34 04.7**	**+0.9**
PHDHD	**Phuduhudu**	**40.11**	**258**	P	**P**	**08 34 04.6**	**0.0**
PHDHD				IAmb	IAmb	08 34 06.7	
	comp=Z,51nm,1.4s						
PHPEN	**Phepeng**	**41.76**	**250**	P	**P**	**08 34 18.7**	**+0.5**
KGCAE	**Kacgae**	**42.26**	**254**		**P**	**08 34 22.4**	**+0.1**
KGCAE				IAmb	IAmb	08 34 24.1	
	comp=Z,74nm,1.6s						
XAUDM	**Khaudum**	**43.21**	**260**	P	**P**	**08 34 31.1**	**+1.0**
XAUDM				IAmb	IAmb	08 34 32.8	
	comp=Z,62nm,1.8s						
QNGWA	**Qangwa**	**43.30**	**259**	P	**P**	**08 34 31.0**	**+0.2**
KOOLE	**Kule**	**44.11**	**254**	P	**P**	**08 34 37.3**	**0.0**
KOOLE				IAmb	IAmb	08 34 38.2	
	comp=Z,37nm,1.4s						
RAYN	**Ar Rayn**	**44.68**	**332**	P	**P**	**08 34 41.8**	**+0.2**
RAYN	**Ar Rayn**	**44.68**	**332**	P	**P**	**08 34 41.8**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,24nm,1.7s						
BRDH	**Bariadhala**	**45.84**	**33**	LR	LR	08 54 22.5	
	comp=Z,772nm,18.6s,baz=194,slow=37						
H01W3	**Cape Leeuwin H**	**46.16**	**123**	T	T	09 24 05.7	
	baz=278,slow=75,SNR=316						
H01W2	**Cape Leeuwin H**	**46.16**	**123**	T	T	09 24 09.6	
	baz=278,slow=75,SNR=213						
H01W1	**Cape Leeuwin H**	**46.18**	**123**	T	T	09 24 11.1	
	baz=278,slow=75,SNR=219						
TSUM	**Tsumeb**	**46.70**	**259**	P	**P**	**08 34 58.4**	**+0.5**
TSUM				IAmb	IAmb	08 35 00.0	
	comp=Z,14nm,1.2s						
CMAR	**Chiang Mai Arr**	**46.96**	**44**	P	**P**	**08 34 59.9**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=234,slow=8.0,SNR=12						
CMAR				PcP	**PcP**	**08 36 32.2**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=214,slow=3.5,SNR=1.6						
CMAR				LR	LR	08 52 31.3	
	comp=Z,383nm,19.8s,baz=225,slow=33 comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**46.96**	**44**	*i* P	**P**	**08 35 01.0**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHTO	**Chiang Mai**	**47.21**	**44**	P	**P**	**08 35 02.6**	**+1.0**
CHTO				IAmb	IAmb	08 35 04.2	
	comp=Z,20nm,1.8s						
CHTO	**Chiang Mai**	**47.21**	**44**	P	**P**	**08 35 02.6**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,20nm,1.8s						
EVN	**Everest**	**48.16**	**24**		**P**	**08 35 09.8**	**+0.2**
EVN				IAmb	IAmb	08 35 24.9	
	comp=Z,12nm,1.0s						
SHL	**Shillong**	**48.35**	**31**		**P**	**08 35 11.3**	**+0.8**
SHL	**Shillong**	**48.35**	**31**	P	**P**	**08 35 11.3**	**+0.8**
SHL				pmax	pmax		
	comp=Z,65nm,1.7s						
NWAO	**Narrogin (SRO)**	**48.39**	**120**	LR	LR	08 50 23.6	
	comp=Z,116nm,21.6s,baz=263,slow=30						
SBUM	**Sibu**	**48.72**	**72**	P	**P**	**08 35 13.0**	**-0.4**
SBUM				IAmb	IAmb	08 35 21.5	
	comp=Z,15nm,1.0s						
NIL	**Nilore**	**50.10**	**7**	P	**P**	**08 35 23.7**	**+0.1**
NIL				IAmb	IAmb	08 35 50.5	
	comp=Z,23nm,1.6s						
NIL	**Nilore**	**50.10**	**7**	P	**P**	**08 35 23.7**	**+0.1**
NIL				pmax	pmax		
	comp=Z,23nm,1.6s						
HRA	**Herat**	**50.61**	**355**		**P**	**08 35 27.9**	**+0.2**
KBL	**Kabul**	**50.64**	**3**	P	**P**	**08 35 27.2**	**-0.7**
KBL				IAmb	IAmb	08 35 41.8	
	comp=Z,32nm,1.6s						
KBL	**Kabul**	**50.64**	**3**	P	**P**	**08 35 27.2**	**-0.7**
KBL				pmax	pmax		
	comp=Z,32nm,1.7s						
MAW	**Mawson**	**51.30**	**182**	P	**P**	**08 35 30.2**	**-2.0**
	comp=Z,2.7nm,0.9s,baz=36,slow=12,SNR=3.8						
MAW				LR	LR	08 51 46.5	
	comp=Z,500nm,21.6s,baz=352,slow=30 comp=Z,2.7nm,0.9s						
LSA	**Lhasa**	**51.50**	**27**	P	**P**	**08 35 34.8**	**0.0**
LSA				IAmb	IAmb	08 36 53.5	
	comp=Z,11nm,0.6s						
LSA	**Lhasa**	**51.50**	**27**	P	**P**	**08 35 32.4**	**-2.4**
LSA	**Lhasa**	**51.50**	**27**	P	**P**	**08 35 34.8**	**0.0**
LSA				pmax	pmax		
	comp=Z,11nm,0.6s						
KAPI	**Kappang**	**53.23**	**84**	LR	LR	08 55 05.4	
	comp=Z,101nm,21.3s,baz=253,slow=32						
EDFI	**Ende, Flores**	**54.11**	**89**	P	**P**	**08 35 55.0**	**+1.0**
	comp=Z,13nm,1.0s						
PZH	**PanZhiHua**	**54.55**	**39**	P	P	08 36 00.8	+3.9
MMRI	**Maumere**	**54.66**	**89**	P	**P**	**08 35 57.3**	**-0.6**
QIZ	**Qiongzhong**	**55.13**	**52**	P	**P**	**08 36 01.3**	**+0.2**
QIZ				S	**S**	**08 43 46.8**	**+2.5**
QIZ				LR	LR		
	comp=Z,200nm,11.8s						
QIZ				LR	LR		
	comp=Z,230nm,11.2s						
QIZ				LR	LR		
	comp=Z,190nm,13.9s						
DRK	**Karamyk**	**55.73**	**5**	P	**P**	**08 36 05.7**	**+0.3**
DRK	**Karamyk**	**55.73**	**5**	P	**P**	**08 36 05.7**	**+0.3**
DRK				pmax	pmax		
	comp=Z,35nm,0.3s						
TOLI2	**Tolitoli**	**56.14**	**77**	P	**P**	**08 36 07.5**	**-1.0**
TOLI2				IAmb	IAmb	08 36 09.2	
	comp=Z,16nm,1.3s						
FITZ	**Fitzroy Crossi**	**56.16**	**101**	P	**P**	**08 36 08.0**	**-0.7**
	comp=Z,4.1nm,0.8s,baz=223,slow=7.3,SNR=6.9						
FITZ				LR	LR	08 56 40.4	
	comp=Z,127nm,21.2s,baz=282,slow=32 comp=Z,4.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**56.16**	**101**		**P**	**08 36 08.1**	**-0.5**
KSH	**Kashi**	**56.23**	**9**	P	**P**	**08 36 06.3**	**-2.5**
KSH				sP	pwP	08 36 18.3	+3.0
KSH				pmax	pmax		
	comp=Z,14nm,1.3s						
KSH				LR	LR		
	comp=Z,550nm,17.

BTLS	**Baital**	**61.45**	**6**	*eP*		**P**	**08 36 44.6**	**-0.2**
MAK	**Makhachkala**	**61.57**	**344**	*eP*		**P**	**08 36 41.1**	**-4.6**
MAK				*eS*		**S**	**08 44 59.9**	**-7.6**
MAK				pmax	pmax			
	comp=Z,274nm,1.2s							
MAK				MLR	MLR			
	comp=Z,646nm,13.0s							
TDK	**Taldyqorghan**	**61.97**	**9**	*eP*		**P**	**08 36 48.1**	**-0.3**
	comp=Z,5.5nm,0.7s							
TDK	**Taldyqorghan**	**61.97**	**9**	*eP*		**P**	**08 36 48.1**	**-0.3**
TDK				pmax	pmax			
	comp=Z,5.0nm,0.7s							
BNN	**Bunyan**	**62.01**	**333**			**P**	**08 36 49.7**	**+0.8**
BNN				IAmb	IAmb		08 36 51.7	
	comp=Z,21nm,1.2s							
ENH	**Enshi**	**62.03**	**42**	P		**P**	**08 36 48.5**	**-0.6**
WMQ	**Urumqi**	**62.88**	**17**	*eP*		**P**	**08 36 56.6**	**+2.0**
WMQ				PcP		**PcP**	**08 37 36.5**	**+3.7**
WMQ				PP		**PP**	**08 39 18.8**	**+5.6**
WMQ				pmax	pmax			
	comp=Z,25nm,1.1s							
WMQ				LR	LR			
	comp=Z,530nm,22.7s							
WMQ				LR	LR			
	comp=Z,330nm,19.1s							
WMQ				LR	LR			
	comp=Z,410nm,19.9s							
LZH	**Lanzhou**	**62.89**	**33**	*eP*		P	08 37 00.1	+5.2
LZH				sP		pwP	08 37 07.8	+6.7
LZH				pmax	pmax			
	comp=Z,18nm,1.2s							
LZH				LR	LR			
	comp=Z,280nm,19.5s							
LZH				LR	LR			
	comp=Z,190nm,20.5s							
LZH				LR	LR			
	comp=Z,200nm,18.9s							
KIRS	**Kirsehir-Merke**	**63.10**	**332**	⇓P		**P**	**08 36 56.2**	**0.0**
ASAR	**Alice Springs**	**63.12**	**109**	P		**P**	**08 36 53.8**	**-3.0**
	comp=Z,3.0nm,0.9s,baz=265,slow=6.4,SNR=18							
ASAR				LR		LR	09 02 06.2	
	comp=Z,123nm,18.2s,baz=278,slow=34							
	comp=Z,3.0nm,0.9s							
ASAR	**Alice Springs**	**63.12**	**109**			**P**	**08 36 55.5**	**-1.2**
ASAR	**Alice Springs**	**63.12**	**109**	P		**P**	**08 36 55.5**	**-1.2**
AS31	**Alice Springs**	**63.13**	**109**			**P**	**08 36 55.3**	**-1.4**
NVL	**N'lazarevskaya**	**63.45**	**198**	*eP*		**P**	**08 36 59.1**	**+1.2**
NVL				*e*			08 39 19.5	
NVL				*e*PPP		PPP	08 40 50.9	
NVL				*e*S		**S**	**08 45 32.4**	**+1.7**
NVL				*e*SS		**SS**	**08 49 44.3**	**+7.0**
NVL				pmax	pmax			
	comp=Z,8.0nm,0.5s							
NVL				smax	smax			
	comp=E,212µm,14.3s							
NVL				MLR	MLR			
	comp=Z,101nm,20.0s							
GTA	**Gaotai**	**63.51**	**28**	*eP*		**P**	**08 36 59.0**	**+0.1**
GTA				sP		pwP	08 37 11.8	+6.6
GTA				S		**S**	**08 45 33.6**	**+1.1**
GTA				pmax	pmax			
	comp=Z,14nm,1.3s							
GTA				LR	LR			
	comp=Z,280nm,16.7s							
GTA				LR	LR			
	comp=Z,310nm,16.7s							
GTA				LR	LR			
	comp=Z,370nm,18.2s							
KBZ	**Khabaz**	**63.60**	**341**	P		**P**	**08 37 00.1**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=125,slow=3.8,SNR=4.6							
	comp=Z,2.5nm,0.8s							
KBZ	**Khabaz**	**63.60**	**341**	*ce*P		**P**	**08 37 01.4**	**+2.2**
KBZ				pmax	pmax			
	comp=Z,10.0nm,1.5s							
ISP	**Isparta**	**63.68**	**329**	P		**P**	**08 37 00.3**	**+0.3**
ISP	**Isparta**	**63.68**	**329**	*ce*P		**P**	**08 37 00.9**	**+0.9**
ISP				pmax	pmax			
	comp=Z,21nm,1.7s							
BR104	**Keskin Array S**	**63.69**	**332**	P		**P**	**08 37 00.9**	**+0.8**
	comp=Z,83nmcomp=Z,6.6nm,1.1s							
BRTR	**Keskin Array B**	**63.70**	**332**	P		**P**	**08 37 00.8**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=149,slow=5.0,SNR=20							
	comp=Z,4.5nm,0.9s							
BRTR	**Keskin Array B**	**63.70**	**332**			**P**	**08 37 00.3**	**+0.1**
BR131	**Keskin Array S**	**63.70**	**332**			**P**	**08 37 00.6**	**+0.4**
BR131				IAmb	IAmb		08 37 02.4	
	comp=Z,29nm,1.5s							
BR131	**Keskin Array S**	**63.70**	**332**	*i* P		**P**	**08 36 59.0**	**-1.2**
BR105	**Keskin Array S**	**63.71**	**332**	P		**P**	**08 37 01.0**	**+0.8**
	comp=Z,101nmcomp=Z,7.6nm,1.3s							
BR106	**Keskin Array S**	**63.72**	**332**	P		**P**	**08 37 01.1**	**+0.8**
	comp=Z,71nmcomp=Z,5.9nm,1.1s							
KARP	**Karpathos**	**63.74**	**325**	P		**P**	**08 37 01.3**	**+0.9**
	comp=Z,25nm,0.9s							
KIV	**Kislovodsk**	**63.88**	**341**	P		**P**	**08 37 01.8**	**+0.6**
KIV	**Kislovodsk**	**63.88**	**341**	*eP*		**P**	**08 36 59.7**	**-1.5**
KIV				pmax	pmax			
	comp=Z,10.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,259nm,17.0s							
WRA	**Warramunga Arr**	**64.04**	**105**	P		**P**	**08 37 01.1**	**-1.7**
	comp=Z,4.8nm,0.9s,baz=269,slow=5.7,SNR=28							
WRA				LR	LR		09 02 05.4	
	comp=Z,33nm,20.1s,baz=231,slow=34							
	comp=Z,4.8nm,0.9s							
WRA	**Warramunga Arr**	**64.04**	**105**			**P**	**08 37 02.2**	**-0.6**
WRAB	**Tennant Creek**	**64.05**	**105**	P		**P**	**08 37 01.5**	**-1.3**
WRAB				IAmb	IAmb		08 37 09.7	
	comp=Z,32nm,1.4s							
WRAB	**Tennant Creek**	**64.05**	**105**	*ce*P		**P**	**08 37 02.5**	**-0.3**
WRAB				pmax	pmax			
	comp=Z,20nm,1.7s							
WB0	**Warramunga Arr**	**64.11**	**104**			**P**	**08 37 02.3**	**-1.0**
WR8	**Warramunga Arr**	**64.19**	**105**			**P**	**08 37 02.5**	**-1.2**
WR8				IAmb	IAmb		08 37 10.5	
	comp=Z,29nm,1.4s							
XAN	**Xi'an**	**64.25**	**38**	⇓P		**P**	**08 37 04.0**	**+0.2**
XAN				pP		pwP	08 37 08.6	-1.5
XAN				S		**S**	**08 45 35.9**	**-5.8**
XAN				pmax	pmax			
	comp=Z,16nm,1.0s							
XAN				pmax	pmax			
	comp=Z,58nm,6.1s							
XAN				LR	LR			
	comp=Z,640nm,22.7s							
XAN				LR	LR			
	comp=Z,420nm,21.3s							
XAN				LR	LR			
	comp=Z,450nm,24.7s							
MAKZ	**Makanchi**	**64.34**	**12**			**P**	**08 37 04.0**	**-0.1**
MAKZ				IAmb	IAmb		08 37 16.5	
	comp=Z,12nm,1.3s							
MAKZ	**Makanchi**	**64.34**	**12**	P		**P**	**08 37 04.0**	**-0.1**
MAKZ				pmax	pmax			
	comp=Z,12nm,1.3s							
MK31	**Makanchi Array**	**64.39**	**12**	*ce*P		**P**	**08 37 05.1**	**+0.7**
MKAR	**Makanchi Array**	**64.39**	**12**	P		**P**	**08 37 03.2**	**-1.2**
	comp=Z,3.0nm,0.9s,baz=193,slow=5.9,SNR=11							
MKAR				LR	LR		09 03 56.4	
	comp=Z,212nm,22.0s,baz=246,slow=35							
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**64.39**	**12**			**P**	**08 37 03.9**	**-0.5**
MKAR	**Makanchi Array**	**64.39**	**12**	P		**P**	**08 37 03.9**	**-0.5**
SOC	**Sochi**	**64.53**	**339**	*eP*		**P**	**08 37 03.4**	**-2.0**
SOC				*e*			08 39 25.8	
SOC				*e*PPP		PPP	08 41 00.1	
SOC				*e*S		**S**	**08 45 43.0**	**-1.6**
SOC				*e*SS		**SS**	**08 49 55.9**	**+0.4**
SOC				MLR	MLR			
	comp=Z,330nm,19.0s							
IDI	**Anoyia**	**64.84**	**323**			**P**	**08 37 08.4**	**+0.8**
MANT	**Manisa**	**65.18**	**328**	P		**P**	**08 37 10.8**	**+0.8**
MANT				IAmb	IAmb		08 37 12.3	
	comp=Z,19nm,1.4s							
BORA	**Eskisehir**	**65.31**	**330**	IAmb	IAmb		08 37 13.9	
	comp=Z,32nm,1.4s							
WHN	**Wuhan**	**65.40**	**45**	P		**P**	**08 37 12.8**	**+1.5**
ZSN	**Zaisan**	**65.56**	**13**	*eP*		**P**	**08 37 11.9**	**-0.1**
ZSN	**Zaisan**	**65.56**	**13**	*eP*		**P**	**08 37 11.9**	**-0.1**
AB31	**Akbulak array**	**65.56**	**355**			**P**	**08 37 11.2**	**-0.7**
AB31				IAmb	IAmb		08 37 14.2	
	comp=Z,10nm,0.9s							
ABKAR	**Akbulak array**	**65.56**	**355**			**P**	**08 37 10.8**	**-1.1**
ERBR	**Yeremizino-Bor**	**66.15**	**340**	*eP*		**P**	**08 37 14.4**	**-1.4**
ERBR				pmax	pmax			
	comp=Z,12nm,1.0s							
BRZS	**Berezniki**	**66.23**	**4**	*eP*		**P**	**08 37 16.5**	**+0.2**
BRZS	**Berezniki**	**66.23**	**4**	*eP*		**P**	**08 37 16.5**	**+0.2**
ANN	**Anapa**	**66.40**	**338**	*eP*		**P**	**08 37 16.5**	**-0.9**
ANN				pmax	pmax			
	comp=Z,44nm,0.9s							
TROLL	**Troll, Antarti**	**66.68**	**198**	⇑P		**P**	**08 37 18.6**	**-0.5**
	comp=Z,115nm,0.9s							
EZN	**Ezine**	**67.33**	**327**	⇓P		**P**	**08 37 24.2**	**+0.7**
EZN	**Ezine**	**67.33**	**327**	P		**P**	**08 37 24.1**	**+0.7**
KURBB	**Kurchatov Arra**	**67.47**	**8**	P		**P**	**08 37 23.2**	**-0.9**
	comp=Z,2.9nm,0.9s,baz=203,slow=6.9,SNR=19							
KURBB				LR	LR		09 04 26.1	
	comp=Z,482nm,21.8s,baz=172,slow=34							
	comp=Z,2.9nm,0.9s							
KURK	**Kurchatov**	**67.58**	**8**			**P**	**08 37 24.8**	**0.0**
KURK				IAmb	IAmb		08 37 38.1	
	comp=Z,27nm,1.6s							
KURK	**Kurchatov**	**67.58**	**8**	*ce*P		**P**	**08 37 25.8**	**+1.0**
KURK				pmax	pmax			
	comp=Z,28nm,2.5s							
SNAA	**Sanae**	**68.19**	**199**	⇑P		**P**	**08 37 27.6**	**-1.0**
	comp=Z,67nm,0.9s							
SNAA	**Sanae**	**68.19**	**199**	P		**P**	**08 37 27.5**	**-1.1**
	comp=Z,3.2nm,1.0s,baz=93,slow=5.1,SNR=12							
SNAA				LR	LR		09 02 15.8	
	comp=Z,302nm,18.5s,baz=14,slow=32							
	comp=Z,3.2nm,1.0s							
SNAA	**Sanae**	**68.19**	**199**			**P**	**08 37 28.2**	**-0.4**
SNAA	**Sanae**	**68.19**	**199**	*ce*P		**P**	**08 37 29.1**	**+0.5**
SNAA				pmax	pmax			
	comp=Z,17nm,2.5s							
DGZ	**Jazzator, Alta**	**68.26**	**14**	*i* P		**P**	**08 37 28.9**	**-0.4**
DGZ				pmax	pmax			
	comp=Z,12nm,1.6s							
INKA	**Innaminka**	**68.73**	**114**	P		**P**	**08 37 32.3**	**-0.4**
INKA				IAmb	IAmb		08 37 39.8	
	comp=Z,33nm,2.0s							
STKA	**Stephens Creek**	**68.95**	**118**	P		**P**	**08 37 32.4**	**-1.6**
	comp=Z,1.9nm,0.8s,baz=282,slow=7.6,SNR=4.7							
STKA				LR	LR		09 02 32.5	
	comp=Z,78nm,21.7s,baz=221,slow=32							
	comp=Z,1.9nm,0.8s							
STKA	**Stephens Creek**	**68.95**	**118**	*i* P		**P**	**08 37 33.0**	**-1.0**
BVAR	**Borovoye Array**	**69.14**	**2**	P		**P**	**08 37 33.5**	**-1.1**
	comp=Z,4.6nm,0.8s,baz=159,slow=6.3,SNR=11							
BVAR				LR	LR		09 05 54.8	
	comp=Z,245nm,21.0s,baz=223,slow=34							
	comp=Z,4.6nm,0.8s							
BORK	**Borovoye**	**69.16**	**2**	*ce*P		**P**	**08 37 35.0**	**+0.3**
BORK				pmax	pmax			
	comp=Z,13nm,1.3s							
NJ2	**Nanjing**	**69.38**	**46**	*eP*		**P**	**08 37 37.6**	**+1.1**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
VNA2	**Neumayer--Watz**	**69.47**	**200**	⇑P		**P**	**08 37 35.7**	**-0.8**
	comp=Z,8.6nm,0.7s,baz=70,slow=6.2							
VNA1	**Neumayer--Stat**	**69.71**	**200**	⇑P		**P**	**08 37 38.3**	**+0.4**
	comp=Z,7.1nm,1.2s							
TIRR	**Tirgusor**	**69.82**	**332**	P		**P**	**08 37 39.8**	**+0.9**
	comp=Z,12nm,0.7s							
LOZB	**Loznitsa**	**69.84**	**330**	⇑P		**P**	**08 37 39.8**	**+0.7**
ELND	**Elena**	**69.86**	**329**	⇑P		**P**	**08 37 38.9**	**-0.4**
HNS	**HongShan**	**69.99**	**39**	⇑P		**P**	**08 37 42.1**	**+2.0**
HNS				pmax	pmax			
	comp=Z,14nm,1.4s							
HNS				LR	LR			
	comp=Z,260nm,19.2s							
HNS				LR	LR			
	comp=Z,200nm,17.9s							
HNS				LR	LR			
	comp=Z,190nm,17.9s							
VNA3	**Neumayer Olymp**	**70.25**	**200**	⇑P		**P**	**08 37 40.5**	**-0.9**
	comp=Z,7.1nm,0.8s							
BELG	**Belogornoye**	**70.40**	**348**	*i* P		**P**	**08 37 41.1**	**-1.2**
BELG				pmax	pmax			
	comp=Z,7.0nm,1.2s							
CFR	**Carcaliu**	**70.50**	**332**	⇑P		**P**	**08 37 43.8**	**+0.7**
CFR	**Carcaliu**	**70.50**	**332**	P		**P**	**08 37 43.7**	**+0.7**
TORD	**Torodi Ar. Bea**	**70.57**	**291**	P		**P**	**08 37 43.2**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=90,slow=6.9,SNR=2.2							
	comp=Z,1.5nm,0.3s							
VRH	**Novokhopyorsk**	**70.70**	**344**	*eP*		**P**	**08 37 42.0**	**-2.1**
VRH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PLVB	**Pleven**	**70.82**	**329**	⇓P		**P**	**08 37 44.7**	**-0.4**
VORD	**Divnogorie**	**71.17**	**342**	*eP*		**P**	**08 37 45.2**	**-1.8**
VORD				pmax	pmax			
	comp=Z,10.0nm,1.1s							
ISR	**Istrita**	**71.18**	**331**	P		**P**	**08 37 47.8**	**+0.5**
	comp=Z,22nm,1.5s							
BISRR	**Bisoca**	**71.43**	**332**	P		**P**	**08 37 49.3**	**+0.4**
VSR	**Storozhevoye**	**71.43**	**342**	*eP*		**P**	**08 37 45.8**	**-2.8**
VSR				pmax	pmax			
	comp=Z,10.0nm,1.0s							
VRI	**Vrincioaia**	**71.67**	**332**	⇑P		**P**	**08 37 49.1**	**-1.1**
VRI	**Vrincioaia**	**71.67**	**332**	P		**P**	**08 37 49.0**	**-1.1**
VRI	**Vrincioaia**	**71.67**	**332**	P		**P**	**08 37 50.7**	**+0.5**
	comp=Z,556nmcomp=Z,31nm,1.2s							
PLOR	**Plostina**	**71.69**	**332**	⇑P		**P**	**08 37 50.6**	**+0.2**
PLOR	**Plostina**	**71.69**	**332**	P		**P**	**08 37 50.6**	**+0.2**
ZAA0	**Zalesovo Array**	**71.71**	**11**			**P**	**08 37 49.6**	**-0.6**
ZALV	**Zalesovo Beam**	**71.71**	**11**	P		**P**	**08 37 49.1**	**-1.1**
	comp=Z,5.4nm,0.7s,baz=207,slow=6.2,SNR=16							
	comp=Z,5.4nm,0.7s							
ZALV	**Zalesovo Beam**	**71.71**	**11**			**P**	**08 37 49.6**	**-0.6**
ZALV	**Zalesovo Beam**	**71.71**	**11**	*i* P		**P**	**08 37 50.4**	**+0.2**
ZALV				pmax	pmax			
	comp=Z,6.0nm,0.7s							
MLR	**Muntele Rosu**	**71.74**	**331**			**P**	**08 37 51.0**	**+0.2**
MLR				IAmb	IAmb		08 37 53.4	
	comp=Z,31nm,1.5s							
MLR	**Muntele Rosu**	**71.74**	**331**	⇑P		**P**	**08 37 50.2**	**-0.6**
MLR	**Muntele Rosu**	**71.74**	**331**	P		**P**	**08 37 51.0**	**+0.2**
MLR				pmax	pmax			
	comp=Z,31nm,1.5s							
MLR	**Muntele Rosu**	**71.74**	**331**	P		**P**	**08 37 51.2**	**+0.4**
	comp=Z,13nm,2.1s							
PHP	**Peshkopia**	**71.79**	**325**	P		**PKiKP**	**08 43 57.0**	**+0.9**
COVR	**Voineasa-Covas**	**71.89**	**331**	⇑P		**P**	**08 37 51.9**	**+0.4**
BLKB	**Belogradchik**	**71.96**	**328**	⇑P		**P**	**08 37 52.4**	**+0.4**
VOIR		**72.12**	**331**	⇑P		**P**	**08 37 52.8**	**-0.3**
VOIR		**72.12**	**331**	P		**P**	**08 37 52.7**	**-0.3**
VOIR		**72.12**	**331**	P		**P**	**08 37 53.5**	**+0.5**
	comp=Z,11nm,1.3s							
TESR	**Tescani**	**72.19**	**332**	⇑P		**P**	**08 37 53.1**	**-0.2**
TESR	**Tescani**	**72.19**	**332**	P		**P**	**08 37 53.9**	**+0.6**
	comp=Z,14nm,2.1s							
ARR	**Arges**	**72.27**	**330**	⇑P		**P**	**08 37 53.5**	**-0.3**
BOVS	**Bovan**	**72.47**	**327**	⇑P		**P**	**08 37 55.0**	**0.0**
SORM	**Soroca**	**72.71**	**334**	⇓P		**P**	**08 37 56.0**	**-0.3**
SORM	**Soroca**	**72.71**	**334**	P		**P**	**08 37 56.0**	**-0.3**
LPSR	**Galich'ya Gora**	**72.73**	**343**	*eP*		**P**	**08 37 53.8**	**-2.5**
LPSR				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ARTI	**Arti**	**72.77**	**355**			**P**	**08 37 55.9**	**-0.6**
ARTI	**Arti**	**72.77**	**355**	*c* iP		**P**	**08 37 56.9**	**+0.4**
ARTI				S		**S**	**08 47 23.3**	**+1.2**
ARTI				SS		**SS**	**08 51 59.2**	**-3.2**
ARTI				pmax	pmax			
	comp=Z,17nm,1.1s							
SVE	**Sverdlovsk**	**73.05**	**357**	*eP*		**P**	**08 37 58.4**	**+0.2**
SVE				pmax	pmax			
	comp=Z,24nm,1.4s							
SONM	**Songino Array**	**73.08**	**27**	P		**P**	**08 37 58.9**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=220,slow=6.3,SNR=14							
	comp=Z,3.5nm,0.9s							
GZR	**Gura Zlata**	**73.18**	**329**	⇑P		**P**	**08 37 59.5**	**+0.1**
GZR	**Gura Zlata**	**73.18**	**329**	P		**P**	**08 37 59.4**	**+0.1**
ULN	**Ulaanbaatar**	**73.39**	**27**	*ce*P		**P**	**08 38 01.9**	**+1.3**
ULN				pmax	pmax			
	comp=Z,22nm,2.5s							
BURAR	**Bucovina Array**	**73.67**	**332**			**P**	**08 38 02.9**	**+0.8**
BURAR	**Bucovina Array**	**73.67**	**332**	⇓P		**P**	**08 38 01.8**	**-0.4**
BURAR	**Bucovina Array**	**73.67**	**332**	P		**P**	**08 38 01.8**	**-0.4**
QSPA	**South Pole Qui**	**73.76**	**180**	P		**P**	**08 38 04.6**	**+2.1**
	comp=Z,18nm,1.0s,baz=276,slow=3.0,SNR=42							
QSPA				LR	LR		09 05 26.8	
	comp=Z,260nm,21.9s,baz=280,slow=32							
QSPA	**South Pole Qui**	**73.76**	**180**			**P**	**08 38 03.5**	**+0.9**
QSPA				IAmb	IAmb		08 38 06.8	
	comp=Z,30nm,1.1s							
BZS	**Buzias**	**73.91**	**329**	⇑P		**P**	**08 38 02.8**	**-0.8**
BZS	**Buzias**	**73.91**	**329**	P		**P**	**08 38 02.7**	**-0.8**
MARR	**Marisel-Cluj**	**73.94**	**330**	⇑P		**P**	**08 38 03.2**	**-0.6**
DRGR		**74.22**	**330**	⇑P		**P**	**08 38 05.2**	**-0.2**
DRGR		**74.22**	**330**	P		**P**	**08 38 05.2**	**-0.2**
KSV	**Kosov**	**74.26**	**333**	P		**P**	**08 38 05.6**	**+0.1**
AK07	**Malin Array Si**	**74.27**	**336**	P		**P**	**08 38 05.0**	**-0.5**
AK09	**Malin Array Si**	**74.29**	**336**	P		**P**	**08 38 05.2**	**-0.4**
AK10	**Malin Array Si**	**74.29**	**336**	P		**P**	**08 38 05.2**	**-0.4**
AK06	**Malin Array Si**	**74.30**	**336**	P		**P**	**08 38 05.3**	**-0.4**
DBIC	**Dimbokro**	**74.33**	**282**	P		**P**	**08 38 06.5**	**-0.1**
	comp=Z,16nm,0.9s,baz=133,slow=6.6,SNR=13							
	comp=Z,16nm,0.9s							
DBIC	**Dimbokro**	**74.33**	**282**			**P**	**08 38 06.7**	**+0.1**
DBIC				IAmb	IAmb		08 38 08.4	
	comp=Z,28nm,1.1s							
DBIC	**Dimbokro**	**74.33**	**282**	P		**P**	**08 38 07.2**	**+0.6**
SIRR	**Siria**	**74.35**	**329**	⇑P		**P**	**08 38 05.9**	**-0.2**
AKASG	**Malin Array Be**	**74.39**	**336**	P		**P**	**08 38 05.4**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=140,slow=4.8,SNR=18							
	comp=Z,2.5nm,0.6s							
AKASG	**Malin Array Be**	**74.39**	**336**	P		**P**	**08 38 05.7**	**-0.4**
AKASG	**Malin Array Be**	**74.39**	**336**	*i* P		**P**	**08 38 06.6**	**+0.5**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.6s							
AKBB	**Malin Array Si**	**74.39**	**336**			**P**	**08 38 05.9**	**-0.2**
AKBB				IAmb	IAmb		08 38 07.5	
	comp=Z,37nm,1.6s							
AKBB	**Malin Array Si**	**74.39**	**336**	*ce*P		**P**	**08 38 05.5**	**-0.6**
AKBB				pmax	pmax			
	comp=Z,24nm,1.5s							
KIEV	**Kiev**	**74.39**	**336**			**P**	**08 38 05.9**	**-0.2**
KIEV				IAmb	IAmb		08 38 07.5	
	comp=Z,33nm,1.6s							
KIEV	**Kiev**	**74.39**	**336**	⇑P		**P**	**08 38 06.2**	**+0.1**
KIEV	**Kiev**	**74.39**	**336**	P		**P**	**08 38 06.2**	**+0.1**
BMR	**Baia Mare**	**74.49**	**331**	⇑P		**P**	**08 38 07.0**	**+0.1**
BMR	**Baia Mare**	**74.49**	**331**	P		**P**	**08 38 06.9**	**+0.1**
KEST	**Kesra**	**74.96**	**315**	LR	LR		09 12 19.2	
	comp=Z,154nm,18.1s,baz=205,slow=37							
VNDA	**Vanda**	**75.30**	**167**	P		**P**	**08 38 10.1**	**-1.1**
	comp=Z,2.1nm,1.1s,baz=268,slow=7.2,SNR=11							
	comp=Z,2.1nm,1.1s							
VNDA	**Vanda**	**75.30**	**167**			**P**	**08 38 10.4**	**-0.7**
OBN	**Obninsk**	**75.61**	**343**	⇓*eP*		**P**	**08 38 14.3**	**+1.2**
OBN				*e*			08 38 26.3	
OBN				*e*			08 41 03.2	
OBN				pmax	pmax			
	comp=Z,54nm,1.7s							
MORH	**Mrgy, Hungar**	**75.82**	**328**	⇑P		**P**	**08 38 14.3**	**-0.3**
MOS	**Moscow**	**75.86**	**344**	*eP*		**P**	**08 38 14.7**	**+0.2**
MOS				*e*			08 38 26.4	
MOS				*e*			08 41 03.2	
MOS				pmax	pmax			
	comp=Z,39nm,0.7s							
KIRV	**Kirov**	**75.98**	**351**	*ce*P		**P**	**08 38 15.5**	**+0.4**
RNPP8	**Varash**	**76.21**	**335**	P		**P**	**08 38 17.3**	**+0.7**
RNPP9	**Sopachiv**	**76.26**	**335**	P		**P**	**08 38 17.6**	**+0.7**
SBA	**Scott Base**	**76.26**	**168**	P		**P**	**08 38 17.0**	**+0.3**
SBA				IAmb	IAmb		08 38 36.4	
	comp=Z,30nm,1.8s							
SBA	**Scott Base**	**76.26**	**168**	P		**P**	**08 38 17.0**	**+0.3**
SBA				pmax	pmax			
	comp=Z,30nm,1.8s							
KWP	**Kalwaria Pacla**	**76.28**	**332**	*eP*		**P**	**08 38 16.3**	**-0.8**
BELA	**Belgrano 2**	**76.50**	**192**	P		**P**	**08 38 17.5**	**-0.5**
BELA				IAmb	IAmb		08 38 19.4	
	comp=Z,43nm,2.0s							
NIE	**Niedzica**	**77.22**	**331**	*eP*		**P**	**08 38 22.9**	**+0.4**
LANS	**Liptovska Anna**	**77.43**	**330**	*eP*		**P**	**08 38 25.8**	**+2.1**
LANS				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LANS	**Liptovska Anna**	**77.43**	**330**	*eP*		**P**	**08 38 25.8**	**+2.1**
LANS				*e*			08 44 28.5	
MODS	**Modra-Piesok**	**77.96**	**329**	*eP*		**P**	**08 38 27.6**	**+1.0**
MODS				pmax	pmax			
	comp=Z,52nm,1.7s							
MODS	**Modra-Piesok**	**77.96**	**329**	*eP*		**P**	**08 38 27.6**	**+1.0**
SOKA	**Soboth**	**78.01**	**327**	*eP*		**P**	**08 38 27.8**	**+0.8**
	comp=Z,18nm,1.7s							
RONA	**Rosalia, Austr**	**78.01**	**328**	*eP*		**P**	**08 38 27.0**	**+0.1**
	comp=Z,17nm,1.3s							
OJC	**Ojcow**	**78.02**	**331**	*eP*		**P**	**08 38 23.1**	**-3.8**
JAVC	**Velka Javorina**	**78.09**	**329**	*eP*		**P**	**08 38 29.3**	**+1.9**
ARSA	**Arzberg**	**78.12**	**327**	IAmb	IAmb		08 38 29.9	
	comp=Z,27nm,1.2s							
ARSA	**Arzberg**	**78.12**	**327**	*eP*		**P**	**08 38 27.8**	**+0.3**
	comp=Z,19nm,1.0s,SNR=6.6							
CONA	**Conrad Observa**	**78.38**	**328**	*i* P		**P**	**08 38 29.1**	**+0.1**
	comp=Z,31nm,1.5s							
NACGM	**Naroch**	**78.61**	**338

FIA1	FINESS Array S	83.95	342	P		P	08 38 59.5	+1.3
FINES	FINESS Array B	83.95	342	P		P	08 38 58.1	-0.1
	comp=Z,2.0nm,0.7s,baz=145,slow=4.7,SNR=8.1							
	comp=Z,2.0nm,0.7s							
FINES	FINESS Array B	83.95	342	P		P	08 38 58.6	+0.4
FINES	FINESS Array B	83.95	342	*i* P		P	08 38 59.2	+1.0
FINES				pmax	pmax			
	comp=Z,2.0nm,0.6s							
WLF	Walferdange	84.56	325	*d*P		P	08 39 02.8	+1.2
USRK	Ussuriysk Ar.	84.60	41	P		P	08 39 00.3	-1.7
	comp=Z,2.0nm,0.6s,baz=179,slow=2.8,SNR=2.2							
	comp=Z,2.0nm,0.6s							
BTNL	Ternell	85.08	326	*d*P		P	08 39 04.3	0.0
MJAR	Matsushiro Arr	85.47	50	P		P	08 39 05.8	-0.8
	comp=Z,4.2nm,0.9s,baz=233,slow=5.9,SNR=9.7							
	comp=Z,4.2nm,0.9s							
MJAR	Matsushiro Arr	85.47	50			P	08 39 06.5	0.0
MJAR				IAmb	IAmb	IAmb	08 39 07.7	
	comp=Z,23nm,1.5s							
DOU	Dourbes	85.64	325	*d*P		P	08 39 07.2	+0.2
BMRD	Maredsous	85.66	325	*d*P		P	08 39 07.9	+0.8
ESDC	Sonseca Array	86.09	313	P		P	08 39 09.6	0.0
	comp=Z,4.7nm,0.9s,baz=106,slow=3.3,SNR=15							
ESDC				LR	LR		09 18 46.5	
	comp=Z,59nm,18.6s,baz=119,slow=36							
	comp=Z,4.7nm,0.9s							
HFS	Hagfors	87.28	336	P		P	08 39 14.9	+0.1
	comp=Z,7.6nm,1.1s,baz=118,slow=8.6,SNR=4.6							
	comp=Z,7.6nm,1.1s							
NOA	NORSAR Array B	88.80	336	P		P	08 39 22.3	+0.1
	comp=Z,0.4nm,0.7s,baz=126,slow=4.9,SNR=1.9							
	comp=Z,0.4nm,0.7s							
SMAI	San Martin Ant	89.41	196	IAmb		IAmb	08 39 26.3	
	comp=Z,33nm,1.7s							
ARCES	ARCESS Array B	90.42	347	P		P	08 39 29.2	-0.3
	comp=Z,2.4nm,0.6s,baz=134,slow=3.9,SNR=12							
	comp=Z,2.4nm,0.6s							
ARCES	ARCESS Array B	90.42	347	P		P	08 39 30.0	+0.5
PMSA	Palmer Station	90.91	199	LR		LR	09 12 12.5	
	comp=Z,116nm,19.9s,baz=77,slow=30							
IMAR	Indian Mountai	123.66	19			PKiKP	08 45 25.8	-0.1
F24K	Squaw Lake	124.20	15			PKiKP	08 45 27.7	+0.6
LPAZ	La Paz	124.87	236	PKP		PKPdf	08 45 29.6	-0.6
	comp=Z,1.4nm,0.8s,baz=137,slow=3.6,SNR=6.4							
COLA	College	126.19	17	*i* PKIKP		PKiKP	08 45 32.2	+1.2
ILAR	Eielson Array	126.55	17	PKP		PKPdf	08 45 29.4	-1.9
	comp=Z,1.9nm,0.9s,baz=306,slow=2.9,SNR=16							
ILAR	Eielson Array	126.55	17			PKiKP	08 45 31.2	-0.6
J30M	Hart River	129.32	13			PKiKP	08 45 36.9	-0.6
ACSO	Alum Creek Sta	144.49	318			PKPdf	08 46 04.2	-1.0
Q52A	Bidwell	144.70	316			PKPdf	08 46 05.1	-0.6
N49A	Columbus Grove	144.86	320			PKPdf	08 46 04.8	-1.0
O49A	Covington	145.38	319			PKPab	08 46 06.8	0.0
Q51A	Peebles	145.38	317			PKPab	08 46 07.2	+0.3
TKL	Tuckaleechee C	147.38	312	PKPbc		PKPbc	08 46 11.6	-1.1
	comp=Z,4.2nm,0.8s,baz=139,slow=4.7,SNR=4.8							
NEW	Newport	148.00	5	PKPbc		PKPbc	08 46 11.9	-2.2
	comp=Z,5.8nm,0.8s,baz=68,slow=1.1,SNR=11							
CLTN	Cedars of Leba	148.95	314			PKPbc	08 46 16.8	-0.1
ECSD	EROS Data Cent	149.21	336			PKPbc	08 46 16.6	-0.7
E07A	Sunnyside	149.38	9			PKiKP	08 46 18.6	-0.2
HAWA	Hanford	149.59	8			PKiKP	08 46 18.4	-0.8
MSO	Missoula	149.59	1			PKPdf	08 46 14.4	+0.7
WVT	Waverly	149.95	316			PKiKP	08 46 19.9	-0.3
WVT	Waverly	149.95	316	PKP2		PKiKP	08 46 20.0	-0.3
G08A	Pilot Rock	150.75	8			PKiKP	08 46 21.1	-0.7
CCM	Cathedral Cave	150.91	322			PKiKP	08 46 21.9	-0.3
CCM	Cathedral Cave	150.91	322	PKIKP		PKiKP	08 46 21.9	-0.3
DLMT	Dillon	151.05	359			PKiKP	08 46 22.1	-0.3
P38A	Dawn	151.07	327			PKiKP	08 46 21.8	-0.7
RSSD	Black Hills	151.20	346			PKiKP	08 46 22.8	-0.1
RSSD	Black Hills	151.20	346	PKIKP		PKiKP	08 46 22.8	-0.1
WIFE	Three Sisters-	151.44	13			PKiKP	08 46 23.5	+0.1
SOCE	Pocosol	151.46	262			PKPdf	08 46 15.8	-1.6
MCMT	McKenzie Canyo	151.59	359			PKiKP	08 46 23.9	+0.2
Z47A	Carrollton	151.68	311			PKiKP	08 46 23.1	-0.8
JTS	Las Juntas de	151.75	261			PKPdf	08 46 15.8	-2.1
JTS	Las Juntas de	151.75	261	PKIKP		PKPdf	08 46 15.8	-2.1
PINE	Pine Mountain	151.88	12			PKiKP	08 46 24.9	+0.6
J05D	Fort Rock, OR	152.30	12			PKiKP	08 46 25.3	+0.2
LOHW	Long Hollow	152.71	356			PKiKP	08 46 26.8	+0.8
HLID	Hailey	152.84	2			PKiKP	08 46 26.3	0.0
K05A	Summer Lake	152.91	12			PKiKP	08 46 27.1	+0.7
YBH	Yreka Blue Hor	153.43	16	PKPbc		PKPbc	08 46 26.1	-1.2
	comp=Z,0.1nm,0.5s,baz=360,slow=6.6,SNR=2.6							
PDAR	Pinedale Array	153.45	354	PKP		PKPdf	08 46 17.2	-2.7
	comp=Z,0.3nm,0.8s,baz=34,slow=3.9,SNR=3.9							
PDAR				PKPbc		PKPbc	08 46 26.6	-0.8
	comp=Z,2.1nm,0.6s,baz=74,slow=2.3,SNR=27							
HWUT	Hardware Ranch	154.76	357			PKPab	08 46 46.3	+1.2
ELK	Elko	155.62	3	PKPab		PKPab	08 46 48.5	-0.4
	comp=Z,1.9nm,0.8s,baz=13,slow=3.0,SNR=9.3							
ELK	Elko	155.62	3			PKPab	08 46 49.6	+0.8
NVAR	Mina Array Bea	157.56	10	PKPab		PKPab	08 46 57.4	+0.2
	comp=Z,2.2nm,0.9s,baz=360,slow=3.1,SNR=11							
R11B	Troy Canyon, C	157.98	5			PKPab	08 47 00.1	+1.1
BRDY	Brady	160.19	321			PKPdf	08 46 29.0	+0.4
ANMO	Albuquerque	160.46	343	PKPab		PKPab	08 47 10.2	+0.3
	comp=Z,1.6nm,0.9s,baz=110,slow=0.8,SNR=3.1							
DRIO	Del Rio	162.49	320			PKPab	08 47 18.9	+0.1
PFO	Pinyon Flats O	162.56	9	PKPab		PKPab	08 47 19.3	+0.3
	comp=Z,4.1nm,1.1s,baz=233,slow=9.5,SNR=5.6							
PFO	Pinyon Flats O	162.56	9			PKPab	08 47 20.3	+1.3
TXAR	Lajitas Array	164.29	327	PKPab		PKPab	08 47 27.0	+0.3
	comp=Z,1.2nm,0.9s,baz=71,slow=4.0,SNR=9.2							

IDC ***17*** *08:27:56.1±2.4,6.˚37N×93.˚38E, h0km, mb3.3/5, mbtmp3.4/6, ML4.4/1, MS2.5/1, Error ellipse: s-maj=95.0km s-min=24.0km az=60.0*

BKK ***17*** *08:28:02.4±1.3, 7.˚1N±8.˚9*˚*4E±.˚, h20km±12km, M3.7/7, mb3.5/1, mB4.8/1, Mjma3.4/7, ML4.0/7, MLv3.8/5, Mw(mB)4.0/1*

ISC 17 08:28:03.3±1.7,7.˚1N±0.˚2×94.˚5E±0.˚2, h26km, n15, σ1§22/8, mb3.3/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKDT	Phuket	3.92	79	P	Pn	08 29 02.5	+0.5
RNTT	Ranong	4.57	60	P	Pn	08 29 11.5	+0.6
PSI	Prapat	6.20	134	LR	LR	08 31 58.8	
	comp=Z,40nm,20.1s,baz=288,slow=37						
CMAR	Chiang Mai Arr	12.07	21	Pn	P	08 31 04.8	-1.6
	0.7nm,0.3s,baz=217,slow=15,SNR=1.8						
	0.9nm,0.3s						
H08S3	Diego Garcia H	26.36	237	T	T	09 00 21.5	
	baz=56,slow=76,SNR=49						
H08S2	Diego Garcia H	26.36	237	T	T	09 00 21.7	
	baz=56,slow=76,SNR=64						
H08S1	Diego Garcia H	26.38	237	T	T	09 00 22.9	
	baz=56,slow=76,SNR=55						
MKAR	Makanchi Array	40.87	347	P	P	08 35 43.4	+0.3
	0.2nm,0.6s,baz=170,slow=8.2,SNR=2.3						
	0.2nm,0.6s						
KURBB	Kurchatov Arra	45.33	346	P	P	08 36 19.9	+0.8
	0.5nm,0.8s,baz=166,slow=6.9,SNR=9.8						
	0.5nm,0.8s						
ZALV	Zalesovo Beam	47.32	352	P	P	08 36 36.1	+1.4
	0.3nm,0.3s,baz=170,slow=8.8,SNR=1.6						
	0.3nm,0.3s						
WRA	Warramunga Arr	47.59	125	P	P	08 36 37.9	+0.6
	0.2nm,0.7s,baz=308,slow=8.1,SNR=2.3						
	0.2nm,0.7s						
ASAR	Alice Springs	49.21	130	P	P	08 36 48.6	-1.2
	0.2nm,0.7s,baz=305,slow=8.4,SNR=2.2						
	0.2nm,0.7s						
H04N2	CROZET ISLANDS	65.26	211	T	T	09 49 09.9	
	baz=47,slow=75,SNR=12						
H04N1	CROZET ISLANDS	65.27	211	T	T	09 49 24.0	
	baz=47,slow=75,SNR=10						
H04N3	CROZET ISLANDS	65.28	211	T	T	09 49 21.2	
	baz=47,slow=75,SNR=8.3						

IDC ***17*** *08:34:02.3±0.7, 16.˚42S×66.˚73E, h0km, mb4.0/13, mbtmp4.0/13, Error ellipse: s-maj=23.3km s-min=18.5km az=75.0*

NEIC ***17*** *08:34:04.5±1.0, 16.˚23S±0.˚08×66.˚7E±0.˚1, h10km±1km, mb4.5/17, Error ellipse: s-maj=23.4km s-min=3.4km az=304.0*

ISC 17 08:34:04.1±0.5,16.˚3S±0.˚1×66.˚7E±0.˚1, h10km, n50, σ0§88/42, mb4.3/21, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	Diego Garcia H	10.27	34	T	T	08 47 02.6	
	baz=212,slow=75,SNR=158						
H08S2	Diego Garcia H	10.28	34	T	T	08 47 07.9	
	baz=212,slow=75,SNR=122						
H08S3	Diego Garcia H	10.29	34	T	T	08 47 15.6	
	baz=212,slow=75,SNR=144						
ABPO	Ambohimpanom	18.75	259	P	P	08 38 23.4	-0.1
H04N2	CROZET ISLANDS	32.29	200	T	T	09 14 22.3	
	baz=28,slow=76,SNR=109						
H04N1	CROZET ISLANDS	32.30	200	T	T	09 14 23.3	
	baz=28,slow=76,SNR=113						
H04N3	CROZET ISLANDS	32.31	200	T	T	09 14 22.1	
	baz=28,slow=76,SNR=135						
LBTB	Lobatse	39.31	250	P	P	08 41 33.7	0.0
LBTB				IAmb	IAmb	08 41 34.9	
	comp=Z,7.2nm,0.9s						
BOSA	Boshof	40.03	245	P	P	08 41 39.3	-0.4
	comp=Z,3.2nm,1.0s,baz=66,slow=9.1,SNR=4.3						
	comp=Z,3.2nm,1.0s						
BOSA	Boshof	40.03	245	P	P	08 41 38.9	-0.8
KDWAN	Kaudwane	40.06	253	P	P	08 41 38.9	-1.1
KDWAN				IAmb	IAmb	08 41 50.7	
	comp=Z,15nm,1.1s						
H01W3	Cape Leeuwin H	46.16	123	T	T	09 31 43.2	
	baz=278,slow=75,SNR=36						
H01W2	Cape Leeuwin H	46.16	123	T	T	09 31 49.4	
	baz=278,slow=75,SNR=42						
H01W1	Cape Leeuwin H	46.18	123	T	T	09 31 49.5	
	baz=278,slow=75,SNR=37						
CMAR	Chiang Mai Arr	46.89	44	P	P	08 42 36.5	+1.5
	comp=Z,1.6nm,0.3s,baz=225,slow=7.6,SNR=5.1						
	comp=Z,1.6nm,0.3s						
CMAR	Chiang Mai Arr	46.89	44	P	P	08 42 33.9	-1.1
EVN	Everest	48.10	24	P	P	08 42 44.2	-0.8
SHL	Shillong	48.28	31	P	P	08 42 45.9	0.0
FITZ	Fitzroy Crossi	56.13	101	P	P	08 43 44.6	+0.4
ASAR	Alice Springs	63.10	109	P	P	08 44 31.3	-1.1
	comp=Z,0.8nm,0.9s,baz=273,slow=5.8,SNR=12						
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	63.10	109	P	P	08 44 31.6	-0.8
BRTR	Keskin Array B	63.67	332	P	P	08 44 36.9	+1.1
	comp=Z,1.2nm,0.9s,baz=143,slow=8.9,SNR=5.7						
	comp=Z,1.2nm,0.9s						
BRTR	Keskin Array B	63.67	332	P	P	08 44 35.8	-0.1
WRA	Warramunga Arr	64.01	105	P	P	08 44 37.8	-0.6
	comp=Z,1.5nm,0.9s,baz=267,slow=5.7,SNR=14						
	comp=Z,1.5nm,0.9s						
WRA	Warramunga Arr	64.01	105	P	P	08 44 38.0	-0.4
WB2	Warramunga Arr	64.02	105	P	P	08 44 38.1	-0.4
WB2				IAmb	IAmb	08 44 44.3	
	comp=Z,3.3nm,0.9s						
WB0	Warramunga Arr	64.09	104	P	P	08 44 38.0	-0.9
WB0				IAmb	IAmb	08 45 12.3	
	comp=Z,5.4nm,1.2s						
WR8	Warramunga Arr	64.16	105	P	P	08 44 39.4	0.0
WR8				IAmb	IAmb	08 44 40.6	
	comp=Z,4.0nm,1.0s						
BBOO	Buckleboo	64.19	119	P	P	08 44 39.2	-0.2
MK31	Makanchi Array	64.33	12	P	P	08 44 39.3	-0.6
MK31				IAmb	IAmb	08 44 46.8	
	comp=Z,4.4nm,1.2s						
MKAR	Makanchi Array	64.33	12	P	P	08 44 40.4	+0.6
	comp=Z,0.7nm,0.8s,baz=202,slow=7.3,SNR=4.0						
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	64.33	12	P	P	08 44 39.1	-0.7
AB31	Akbulak array	65.52	355	P	P	08 44 47.4	-0.1
ABKAR	Akbulak array	65.52	355	P	P	08 44 47.3	-0.2
KURBB	Kurchatov Arra	67.42	8	P	P	08 44 59.8	+0.2
	comp=Z,1.5nm,0.9s,baz=201,slow=6.5,SNR=7.4						
	comp=Z,1.5nm,0.9s						
KURK	Kurchatov	67.52	8	P	P	08 45 00.1	-0.2
KURK				IAmb	IAmb	08 45 02.6	
	comp=Z,2.1nm,0.8s						
SNAA	Sanae	68.25	199	P	P	08 45 03.9	-0.9
	comp=Z,0.7nm,0.8s,baz=24,slow=4.1,SNR=3.0						
	comp=Z,0.7nm,0.8s						
SNAA	Sanae	68.25	199	P	P	08 45 04.7	-0.1
SNAA				IAmb	IAmb	08 45 11.7	
	comp=Z,4.7nm,1.3s						
STKA	Stephens Creek	68.94	118	P	P	08 45 09.4	-0.4
	comp=Z,2.9nm,1.0s,baz=276,slow=12,SNR=3.9						
	comp=Z,2.9nm,1.0s						
BVAR	Borovoye Array	69.09	2	P	P	08 45 10.6	+0.5
	comp=Z,1.9nm,0.8s,baz=163,slow=5.6,SNR=5.1						
	comp=Z,1.9nm,0.8s						
ZALV	Zalesovo Beam	71.65	11	P	P	08 45 25.5	-0.2
	comp=Z,1.9nm,0.7s,baz=208,slow=6.1,SNR=7.3						
	comp=Z,1.9nm,0.7s						
SONM	Songino Array	73.02	27	P	P	08 45 34.4	+0.2
	comp=Z,0.8nm,0.8s,baz=216,slow=6.8,SNR=3.6						
	comp=Z,0.8nm,0.8s						
QSPA	South Pole Qui	73.81	180	P	P	08 45 41.3	+2.6
	comp=Z,2.4nm,0.9s,baz=280,slow=1.2,SNR=10						
QSPA	South Pole Qui	73.81	180	P	P	08 45 41.2	+2.6
QSPA				IAmb	IAmb	08 45 48.6	
	comp=Z,7.2nm,1.2s						
VNDA	Vanda	75.34	167	P	P	08 45 46.0	-1.2
	comp=Z,0.3nm,0.5s,baz=247,slow=7.7,SNR=2.5						
	comp=Z,0.3nm,0.5s						
VNDA	Vanda	75.34	167	P	P	08 45 46.7	-0.5
NEW	Newport	147.95	5	PKPbc	PKPbc	08 53 50.5	+0.8
	comp=Z,1.7nm,0.8s,baz=0.0,slow=8.1,SNR=2.1						
PDAR	Pinedale Array	153.41	354	PKP	PKPdf	08 53 54.9	-0.8
	comp=Z,0.3nm,0.7s,baz=6.6,slow=3.3,SNR=1.0						
PDAR				PKPbc	PKPbc	08 54 02.9	-0.4
	comp=Z,0.8nm,0.5s,baz=97,slow=4.4,SNR=7.3						
NVAR	Mina Array Bea	157.50	10	PKPab	PKPab	08 54 33.7	+0.9
	comp=Z,0.6nm,0.7s,baz=8.0,slow=2.9,SNR=4.9						
TXAR	Lajitas Array	164.27	327	PKPab	PKPab	08 55 02.7	+0.2
	comp=Z,0.5nm,0.8s,baz=28,slow=3.4,SNR=2.2						

BGR ***17*** *08:38:51.3, 30.˚41N×3.˚81W, h33km, mb5.1, Ms3.9*

IDC ***17*** *08:39:07.1±0.5, 32.˚61N×4.˚16W, h0km, mb4.5/29, mbtmp4.5/32, ML4.3/3, MS4.4/54, Error ellipse: s-maj=11.2km s-min=6.2km az=19.0*

MOS ***17*** *08:39:07.3±1.1, 32.˚76N×4.˚26W, h11km, mb5.2/45, MS4.3/14, Error ellipse: s-maj=8.7km s-min=3.5km az=58.5*

CNRM ***17*** *08:39:07.8, 32.˚60N×4.˚16W, h6km, ML5.8*

MED_RC ***17*** *08:39:09.0±0.3, 32.˚62N×4.˚10W, h13km±1km, MW5.1/40, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s40,c52; Duration: 1*§*4 Moment tensor: Scale 10*^{16}*Nm; Mrr0.19±.14; Mθθ-1.10±.11; Mθφ0.91±.13; Mrθ1.54±.37; Mθθ-4.74±.11; Mφr1.12±.28; Best double couple: M*$_0$*5.16000×10*^{16} *NP1:*ϕ_s*184.00000°, δ76.00000°, λ-12.00000°. NP2:*ϕ_s*277.00000°, δ78.00000°, λ-166.00000°. Principal axes: T 4.7500, Plg1.0000°, Azm51.0000°; N 0.8200, Plg72.0000°, Azm317.0000°; P -5.5700, Plg18.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

NEIC ***17*** *08:39:09.3, 32.˚67N×4.˚27W, h14km*

NEIC ***17*** *08:39:09.3, 32.˚67N×4.˚27W, h10km*

NEIC ***17*** *08:39:09.0±1.3, 32.˚66N±0.˚06×4.˚25W±0.˚05, h10km±1km, mb5.0/105, Mwr5.0/15, Mww5.0/41, Error ellipse: s-maj=10.4km s-min=6.2km az=19.0, Moment Tensor Solution. Moment tensor: Scale 10*^{16}*Nm; Mrr-0.33; Mθθ-2.56; Mφφ2.88; Mrθ-0.19; Mθφ-1.97; Mφr0.42; Fault plane solution: M*$_0$*3.40000×10*^{16} *NP1:*ϕ_s*27.24000°, δ84.62000°, λ4.01000°. NP2:*ϕ_s*296.87000°, δ86.01000°, λ174.61000°. Principal axes: T 3.5762, Plg7.0000°, Azm252.0000°; N -0.3772, Plg83.0000°, Azm80.0000°; P -3.1990, Plg1.0000°, Azm342.0000°;*

NEIC ***17*** *08:39:09.3, 32.˚37N×4.˚51W, h14km, Moment Tensor Solution. Duration: 1*§*7 Moment tensor: Scale 10*^{16}*Nm; Mrr0.16; Mθθ-0.96; Mφφ0.80; Mrθ-1.31; Mθφ-4.34; Mφr-0.51; Fault plane solution: M*$_0$*4.65000×10*^{16} *NP1:*ϕ_s*4.77000°, δ75.05000°, λ-6.35000°. NP2:*ϕ_s*96.42000°, δ83.87000°, λ-164.96000°. Principal axes: T 4.3947, Plg6.0000°, Azm230.0000°; N 0.4726, Plg74.0000°, Azm118.0000°; P -4.8673, Plg15.0000°, Azm321.0000°;*

IGIL ***17*** *08:39:10.1, 32.˚59N×4.˚26W, h20km, ML4.8*

GCMT ***17*** *08:39:11.0±0.2, 32.˚60N±0.˚01×4.˚08W±0.˚01, h12km±1km, MW5.1/127, Moment Tensor Solution. s61,c83; s127,c220; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; Mrr-0.43±.10; Mθθ0.05±.10; Mφφ0.37±.10; Mrθ1.94±.31; Mθφ-5.13±.10; Mφr-1.10±.25; Best double couple: M*$_0$*5.53500×10*^{16} *NP1:*ϕ_s*182.00000°, δ71.00000°, λ7.00000°. NP2:*ϕ_s*90.00000°, δ83.00000°, λ161.00000°. Principal axes: T 6.0560, Plg18.0000°, Azm45.0000°; N -1.0410, Plg70.0000°, Azm252.0000°; P -5.0150, Plg9.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

INMG ***17*** *08:39:11.2±2.9, 32.˚70N×4.˚32W, h16km±7km, ML4.6 Error ellipse: s-maj=6.4km s-min=5.9km az=91.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

MDD ***17*** *08:39:11.7±0.4, 32.˚71N×4.˚49W, h10km±3km, Mb5.4/75, M_mb5.1/76, Error ellipse: s-maj=4.0km s-min=2.6km az=141.0*

CRAAG ***17*** *08:39:13.0, 32.˚70N×4.˚49W, Mb4.7, Maroc*

NAO ***17*** *08:39:18.5, 32.˚61N×4.˚16W, h10km, MB4.8*

ISC 17 08:39:08.4±0.3, 32.˚64N±0.˚02×4.˚27W±0.˚02, h10km, n809, σ1§92/842, mb4.9/156, MS4.4/71, 115C-60D, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	Midelt	0.34	301	Pg	Pg	08 39 15.9	+0.7
	6μm,0.3s,baz=119,slow=15						
MDT				Lg	Lg	08 39 21.2	
	10μm,0.3s,baz=20,slow=19,SNR=30						
MDT				LR	LR	08 39 37.0	
	comp=Z,20μm,19.6s,baz=270,slow=70						
MDT	Midelt	0.34	301	S	Sb	08 39 22.3	+0.3
MD31	MD31	0.47	299		Pg	08 39 18.3	+0.6
MD31	MD31	0.47	299	S	Sb	08 39 27.2	+1.2
MD01	Midelt array s	0.47	299		Pg	08 39 18.4	+0.7
CZD	Col de Zad	0.76	301	P	Pb	08 39 24.4	+0.5
CZD	Col de Zad	0.76	301	S	Sn	08 39 36.9	-0.3
GOLM	Goulmima	1.10	212	P	Pg	08 39 29.6	+0.1
GOLM	Goulmima	1.10	212	S	Sn	08 39 47.7	+2.4
IFR	Ifrane	1.13	321	Sg	Sn	08 39 47.3	+1.0
IFR				Pg	Pn	08 39 31.3	+0.8
LCRM	LCR	1.16	335	P	Pb	08 39 30.0	-0.6
ARF	Arif	1.20	178	P	Pb	08 39 30.4	-0.9
ARF	Arif	1.20	178	S	Sb	08 39 46.9	-0.2
AKLM	AKL	1.90	10	P	Pn	08 39 42.4	+1.4
AKLM	AKL	1.90	10	S	Sb	08 40 08.8	+1.8
TISM	Timmit	2.06	244	P	Pb	08 39 45.4	-0.5
RTC	Rabat Centre	2.55	303	Pn	Pn	08 39 50.5	+1.5
RTC	Rabat Centre	2.55	303	⇓P	Pn	08 39 50.8	+1.0
PALE	Palemas	2.59	6	P	Pn	08 39 51.2	+0.8
PALE	Palemas	2.59	6	S	Sn	08 40 23.3	+1.4
FIGM	Figuig	2.59	100	P	Pn	08 39 49.4	-1.2
TAF	Taforalt	2.66	35	P	Pn	08 39 51.0	-0.5
TAF	Taforalt	2.66	35	S	Sn	08 40 24.6	+0.7
AVE	Averroes	2.72	285	Sn	Sn	08 40 26.8	+1.5
AVE				Pn	Pn	08 39 53.7	+1.5
AVE	Averroes	2.72	285		Pn	08 39 53.9	+1.6
OUZM	OUZ	2.73	232	P	Pn	08 39 53.7	+1.2
OUZM	OUZ	2.73	232	S	Sb	08 40 32.7	+1.5
ZGR	Zagora	2.77	205	P	Pn	08 39 53.0	+0.1
ZGR	Zagora	2.77	205	S	Sn	08 40 28.0	+1.5
EMEL	Melilla	2.87	22	Pn	Pn	08 39 54.5	+0.3
EMEL				Sn	Sn	08 40 28.3	-0.5
EMLI	Melilla	2.87	22	Pn	Pn	08 39 54.6	+0.3
EMLI				Sn	Sn	08 40 29.1	+0.2
TIO	Tiouine	3.07	237	Sn	Sn	08 40 33.4	-0.6
TIO				Pn	Pn	08 39 58.2	+1.1
SRHM	Skhour des Reh	3.07	268	P	Pn	08 39 58.8	+1.7
OBBL	Beni Bahdel	3.09	47	P	Pn	08 39 56.5	-0.9
OUK	Oukaimeden	3.38	246	P	Pn	08 40 02.1	+0.6
ECEU	Ceuta	3.38	345	Pn	Pn	08 40 02.8	+1.5
ECEU	Ceuta	3.38	345	Pn	Pn	08 40 03.1	+1.8
ECEU				⇑*i*VMb_VC		08 40 07.8	
	5μm,SNR=16						
ECEU				Sn	Sn	08 40 38.8	-2.6
EALB	Alboran	3.45	17	Pn	Pn	08 40 02.0	-0.2
EALB	Alboran	3.45	17	Pn	Pn	08 40 02.4	+0.3
EALB				⇑*i*VMb_VC		08 40 11.0	
	4μm,SNR=2.5						
EALB				Sn	Sn	08 40 40.4	-2.7
OLHC	Oulhaca	3.52	41	P	Pn	08 40 01.5	-1.7
EMIJ	Mijas	3.94	354	Pn	Pn	08 40 07.3	-1.6
EMIJ	Mijas	3.94	354	Pn	Pn	08 40 07.5	-1.4
EMIJ				⇑*i*VMb_VC		08 40 17.5	
	2μm,SNR=20						
EMIJ				Sn	Sn	08 40 49.9	-5.4
CNIL	Conil	4.00	339	Pn	Pn	08 40 10.9	+1.1
TTIG	Tnine Tigouga,	4.13	241	P	Pn	08 40 12.5	+0.9

EADA ⇑*i*Vmb_VC 08 40 35.0
2µm,SNR=21
EADA Sn **Sn** **08 41 31.0 -3.3**
PVAQ Vaqueiros 5.53 330 Pn **08 40 30.2 -0.7**
PVAQ Vaqueiros 5.53 330⇓*e*P Pn **08 40 30.1 -0.7**
PVAQ *e*S **Sn** **08 41 29.5 -5.0**
PVAQ *i* IAML 08 41 33.6
PVAQ *i* IAML 08 41 34.2
PVAQ *i* IAML 08 41 34.3
PVAQ Vaqueiros 5.53 330 ⇓P Pn **08 40 30.0 -0.9**
EANR `Ain N'Sour 5.54 52 P Pn **08 40 30.5 -0.5**
EGRO El Granado 5.55 333 Pn Pn **08 40 30.3 -0.8**
EGRO Sn **Sn** **08 41 30.9 -4.0**
EGRO El Granado 5.55 333 Pn Pn **08 40 30.2 -0.8**
EGRO ⇑*i*Vmb_VC 08 40 31.9
14µm,SNR=138
EGRO Sn **Sn** **08 41 27.8 -7.1**
CART Cartagena 5.62 28 Pn Pn **08 40 31.1 -0.9**
CART Sn **Sn** **08 41 31.8 -4.7**
CART Cartagena 5.62 28 Pn **08 40 30.6 -1.4**
CART Cartagena 5.62 28 P Pn **08 40 30.8 -1.2**
CART Cartagena 5.62 28 ⇑P Pn **08 40 30.5 -1.4**
EMUR La Murta 5.75 25 Pn Pn **08 40 33.5 -0.4**
EMUR La Murta 5.75 25 Pn Pn **08 40 33.4 -0.5**
EMUR ⇑*i*Vmb_VC 08 40 45.3
7µm,SNR=46
EMUR Sn **Sn** **08 41 42.0 +2.0**
PFVI Vila Bisbo 5.84 321 Pn Pn **08 40 34.3 -0.7**
PFVI Sn **Sn** **08 41 37.8 -4.3**
PFVI Vila Bisbo 5.84 321 Pn **08 40 34.1 -1.0**
PFVI Vila Bisbo 5.84 321⇓*e*P Pn **08 40 34.4 -0.7**
PFVI *e*S **Sn** **08 41 39.4 -2.8**
PFVI *i* IAML 08 41 43.9
PFVI *i* IAML 08 41 48.1
PFVI *i* IAML 08 41 50.4
PCVE Castro Verde 5.86 329 Pn Pn **08 40 34.6 -0.7**
PCVE Sn **Sn** **08 41 38.2 -4.4**
PCVE Castro Verde 5.86 329⇓*e*P Pn **08 40 34.7 -0.7**
PCVE *e*S **Sn** **08 41 39.5 -3.1**
PCVE *i* IAML 08 41 41.9
PCVE *i* IAML 08 41 42.5
PCVE *i* IAML 08 41 49.5
MORF Marmelete 5.88 324 *e*P Pn **08 40 34.7 -1.0**
MORF *e*S **Sn** **08 41 36.5 -6.7**
MORF IAML 08 41 45.2
comp=N,1µm,0.2s
MORF Marmelete 5.88 324 Pn **08 40 34.3 -1.4**
MORF Marmelete 5.88 324⇓*e*P Pn **08 40 34.7 -1.0**
MORF *e*S **Sn** **08 41 39.1 -4.1**
MORF *i* IAML 08 41 42.8
MORF *i* IAML 08 41 45.4
MORF *i* IAML 08 41 46.2
MORF Marmelete 5.88 324 P Pn **08 40 34.3 -1.4**
MORF Marmelete 5.88 324 ⇓P Pn **08 40 34.6 -1.1**
EZEK Zmalet El Emir 5.91 66 P Pn **08 40 35.2 -0.9**
EBGR Bougara 5.92 59 P Pn **08 40 35.5 -0.7**
PBAR Barrancos 5.97 339 Pn Pn **08 40 35.9 -0.9**
PBAR Sn **Sn** **08 41 42.2 -3.0**
PBAR Barrancos 5.97 339⇓*e*P Pn **08 40 36.0 -0.9**
PBAR *e*S **Sn** **08 41 41.7 -3.5**
PBAR *i* IAML 08 41 42.9
PBAR *i* IAML 08 41 52.9
PBAR *i* IAML 08 41 57.9
PTEO Sao Teotonio 6.11 325⇓*e*P Pn **08 40 38.0 -0.7**
PTEO *e*S **Sn** **08 41 44.8 -3.9**
PTEO *i* IAML 08 41 50.8
PTEO *i* IAML 08 41 52.5
PTEO *i* IAML 08 41 55.3
MESJ Messejana 6.11 329 *e*P Pn **08 40 38.0 -0.8**
MESJ *e*S **Sn** **08 41 42.1 -6.7**
MESJ IAML 08 41 50.8
comp=N,931nm,0.3s
MESJ Messejana 6.11 329 Pn **08 40 37.9 -0.9**
MESJ Messejana 6.11 329⇓*e*P Pn **08 40 38.1 -0.8**
MESJ *e*S **Sn** **08 41 46.3 -2.5**
MESJ *i* IAML 08 41 49.6
MESJ *i* IAML 08 41 51.0
MESJ *i* IAML 08 41 53.5
MESJ Messejana 6.11 329 *e*P Pn **08 40 38.0 -0.8**
MESJ *e*S **Sn** **08 41 42.1 -6.7**
MESJ Messejana 6.11 329 ⇓P Pn **08 40 38.1 -0.8**
PBEJ Beja 6.13 332 *e*P Pn **08 40 38.0 -1.0**
PBEJ *e*S **Sn** **08 41 46.7 -2.5**
PBEJ *i* IAML 08 41 48.8
PBEJ *i* IAML 08 41 50.6
PBEJ *i* IAML 08 41 50.7
PSIM Granatula de C 6.18 4 Pn Pn **08 40 41.2 +1.3**
PSIM Sn **Sn** **08 41 48.4 -2.2**
EHRZ Djelida 6.35 54 P Pn **08 40 41.6 -0.5**
ETOB Tobarra 6.39 20 Pn Pn **08 40 44.0 +1.3**
ETOB Tobarra 6.39 20 Pn Pn **08 40 45.1 +2.5**
ETOB ⇑*i*Vmb_VC 08 41 17.9
comp=N,3µm,SNR=17
ETOB Sn **Sn** **08 41 56.8 +1.1**
EBAD Badajoz 6.50 341 Pn Pn **08 40 43.3 -0.8**
EBAD Sn **Sn** **08 41 52.2 -6.1**
EBAD Badajoz 6.50 341 Pn Pn **08 40 43.5 -0.6**
EBAD ⇑*i*Vmb_VC 08 40 56.9
comp=N,5µm,SNR=51
EBAD Sn **Sn** **08 41 52.6 -5.7**
EVO Evora 6.62 334 Pn Pn **08 40 45.1 -0.7**
EVO Sn **Sn** **08 41 56.2 -5.2**
EVO Evora 6.62 334 *e*P Pn **08 40 45.2 -0.7**
EVO *e*S **Sn** **08 41 56.9 -4.5**
EVO *i* IAML 08 42 00.3
EVO *i* IAML 08 42 00.4
EVO *i* IAML 08 42 06.2
AFON Font Roja 6.73 26 Pn Pn **08 40 48.8 +1.4**
AFON ⇑*i*Vmb_VC 08 41 07.8
comp=N,3µm,SNR=12
MOE Montemor 6.75 332⇓*e*P Pn **08 40 46.8 -0.7**
MOE *e*S **Sn** **08 42 02.0 -2.4**
MOE *i* IAML 08 42 05.2
MOE *i* IAML 08 42 05.5
MOE *i* IAML 08 42 05.6
PESTR Estremoz 6.78 337 Pn Pn **08 40 47.0 -0.9**
PESTR Sn **Sn** **08 42 00.0 -5.1**
PESTR Estremoz 6.78 337 Pn **08 40 46.8 -1.1**
PESTR Estremoz 6.78 337⇓*e*P Pn **08 40 47.0 -0.9**
PESTR *e*S **Sn** **08 42 00.5 -4.7**
PESTR *i* IAML 08 42 08.8
PESTR *i* IAML 08 42 10.2
PESTR *i* IAML 08 42 11.9
PESTR Estremoz 6.78 337 ⇓P Pn **08 40 46.9 -1.1**
ABRIN Birine 6.81 62 P Pn **08 40 47.5 -1.0**
EBEN2 Beniarda presa 6.88 28 Pn Pn **08 40 50.8 +1.5**
EBEN2 ⇑*i*Vmb_VC 08 41 24.4
comp=N,4µm,SNR=9.2
PARRA Arraiolos 6.88 335 *e*P Pn 08 40 48.6 -6.3
PARRA *e*S Sn 08 42 03.4 -14
PARRA *i* IAML 08 42 05.3
PARRA *i* IAML 08 42 20.3
PARRA *i* IAML 08 42 23.5
PAB San Pablo 6.89 359 Pn Pn **08 40 49.5 -0.1**
PAB ⇑*i*Vmb_VC 08 41 30.7
comp=N,1µm,SNR=12
PAB Sn **Sn** **08 42 03.6 -4.5**
PAB San Pablo 6.89 359 Pn **08 40 49.0 -0.6**
PAB San Pablo 6.89 359 P Pn **08 40 49.0 -0.6**
ESDC Sonseca Array 7.03 2 Pn Pn **08 40 52.2 +0.8**
ESDC ⇑*i*Vmb_VC 08 41 04.7
comp=N,1µm,SNR=10
ESDC Sn **Sn** **08 42 07.8 -3.5**
ESDC Sonseca Array 7.03 2 Pn Pn **08 40 51.4 0.0**
comp=N,1.7nm,0.3s,baz=184,slow=13,SNR=55
ESDC Sn **Sn** **08 42 06.5 -4.8**
comp=N,5.8nm,0.3s,baz=198,slow=23,SNR=4.9
ESDC LR LR 08 43 46.6
comp=N,3µm,18.0s,baz=178,slow=40
comp=N,37nm,1.0s
ESDC Sonseca Array 7.03 2 Pn **08 40 51.9 +0.5**
ESBB Sonseca Array 7.03 2 Pn Pn **08 40 52.4 +1.0**
ESBB ⇑*i*Vmb_VC 08 41 04.8
comp=N,1µm,SNR=10.0
ESBB Sn **Sn** **08 42 08.9 -2.5**
ESBB Sonseca Array 7.03 2 Pn **08 40 52.8 +1.3**
EVIV Cofrentes, Val 7.09 20 Pn Pn **08 40 53.9 +1.7**
EVIV ⇑*i*Vmb_VC 08 41 31.6
comp=N,1µm,SNR=5.1
ADOR Douera 7.15 54 P Pn **08 40 55.7 +2.4**
PMTG Montargil 7.17 335⇓*e*P Pn **08 40 52.4 -1.0**

PMTG *e*S **Sn** **08 42 10.3 -4.7**
PMTG *i* IAML 08 42 19.0
PMTG *i* IAML 08 42 29.9
PMTG *i* IAML 08 42 39.3
LIS Lisbon 7.25 328 *e*P Pn **08 40 54.8 +0.4**
LIS *e*S **Sn** **08 42 15.2 -1.5**
LIS *i* IAML 08 42 30.6
LIS *i* IAML 08 42 32.0
LIS *i* IAML 08 42 33.6
LIS Lisbon 7.25 328 ⇑P Pn **08 40 54.0 -0.4**
ADJB Djebel Djouab 7.27 59 P Pn **08 40 55.1 +0.3**
ECHE Chera 7.43 20 Pn Pn **08 40 58.4 +1.4**
AKED El Kharrouba 7.49 56 P Pn **08 40 56.6 -1.1**
PMAFR Mafra 7.50 329 Pn Pn **08 40 57.4 -0.6**
PMAFR Sn **Sn** **08 42 19.3 -3.8**
PMAFR Mafra 7.50 329⇓*e*P Pn **08 40 57.2 -0.7**
PMAFR *e*S **Sn** **08 42 19.7 -3.4**
PMAFR *i* IAML 08 42 30.6
PMAFR *i* IAML 08 42 30.9
PMAFR *i* IAML 08 42 30.9
EPLA Plasencia 7.55 349 Pn Pn **08 40 58.7 +0.1**
EPLA ⇑*i*Vmb_VC 08 41 09.5
comp=N,3µm,SNR=24
EPLA Sn **Sn** **08 42 18.3 -6.0**
ABSD Ouled Sidi Bra 7.56 66 P Pn **08 40 59.0 +0.3**
PSARD Sardoal 7.63 337 *e*P Pn **08 40 58.9 -0.7**
PSARD *e*S **Sn** **08 42 20.9 -5.2**
PSARD *i* IAML 08 42 27.0
PSARD *i* IAML 08 42 28.6
PSARD *i* IAML 08 42 28.7
PCBR Castelo Branco 7.64 341 *e*P Pn **08 40 59.3 -0.5**
PCBR *e*S **Sn** **08 42 19.3 -7.1**
PCBR *i* IAML 08 42 26.9
PCBR *i* IAML 08 42 26.9
PCBR *i* IAML 08 42 27.7
PSBE So Bento 7.78 333⇓*e*P Pn **08 41 01.0 -0.7**
PSBE *e*S **Sn** **08 42 24.7 -5.2**
PSBE *i* IAML 08 42 28.9
PSBE *i* IAML 08 42 35.9
PSBE *i* IAML 08 42 52.1
EIBI Ibiza 7.83 34 Pn Pn **08 41 03.0 +0.5**
EIBI Ibiza 7.83 34 Pn Pn **08 41 02.7 +0.3**
EIBI ⇑*i*Vmb_VC 08 41 22.3
comp=N,3µm,SNR=4.4
EIBI Sn **Sn** **08 42 25.7 -5.4**
YEBES Yebes (Guadala 7.93 7 Pn Pn **08 41 05.5 +1.7**
YEBES ⇑*i*Vmb_VC 08 41 50.3
comp=N,2µm,SNR=6.9
ATKB Taksebt 8.00 57 P Pn **08 41 04.8 +0.1**
PCAS Casmilo, Conde 8.15 336 *e*P Pn **08 41 06.1 -0.7**
MTE Manteigas 8.18 342 Pn **08 41 06.8 -0.4**
MTE Manteigas 8.18 342⇑*e*P Pn **08 41 07.0 -0.3**
MTE *e*S **Sn** **08 42 34.0 -5.8**
MTE *i* IAML 08 42 41.8
MTE *i* IAML 08 42 42.0
MTE *i* IAML 08 42 42.4
MTE Manteigas 8.18 342 ⇑P Pn **08 41 06.5 -0.8**
E0901 Celadas (Terue 8.22 17 Pn Pn **08 41 11.4 +3.5**
E0901 ⇑*i*Vmb_VC 08 41 34.7
comp=N,2µm,SNR=12
CTCHA Tamokra 8.27 60 P Pn **08 41 08.6 +0.1**
EMOS Mosqueruela 8.29 21 Pn Pn **08 41 11.8 +2.9**
EMOS ⇑*i*Vmb_VC 08 41 30.2
comp=N,1µm,SNR=6.2
ETOR Torete 8.36 12 Pn Pn **08 41 11.9 +2.2**
ETOR ⇑*i*Vmb_VC 08 41 33.5
comp=N,1µm,SNR=7.9
EJUZ Juzbado, Salam 8.53 352 Pn Pn **08 41 12.0 -0.1**
EJUZ Sn **Sn** **08 42 41.0 -7.4**
CAZD Ain Tagrout 8.55 63 P Pn **08 41 17.0 +4.7**
PVIS Viseu 8.57 341 *e*P Pn **08 41 11.7 -0.9**
PVIS *e*S **Sn** **08 42 43.5 -5.9**
CKHR Kef el Ahmar 8.76 65 P Pn 08 41 22.6 +7.3
MVO Moncorvo 8.79 346⇑*e*P Pn **08 41 14.9 -0.7**
MVO *e*S **Sn** **08 42 48.5 -6.3**
MVO *i* IAML 08 43 02.1
MVO *i* IAML 08 43 03.1
MVO *i* IAML 08 43 04.2
CJSR Ain Djasser 9.05 66 P Pn **08 41 19.0 -0.2**
PVRL Vila Real 9.05 343 *e*P Pn **08 41 18.8 -0.4**
PVRL *e*S **Sn** **08 42 54.2 -7.0**
PVRL *i* IAML 08 42 58.1
PVRL *i* IAML 08 42 58.2
PVRL *i* IAML 08 42 58.7
ERTA Horta de San J 9.08 23 Pn Pn **08 41 21.7 +2.1**
ERTA ⇑*i*Vmb_VC 08 41 35.5
comp=N,2µm,SNR=7.7
ETOS Mallorca 9.13 37 Pn Pn **08 41 20.6 +0.4**
ETOS Mallorca 9.13 37 Pn Pn **08 41 20.7 +0.5**
ETOS ⇑*i*Vmb_VC 08 41 41.6
comp=N,2µm,SNR=2.7
POLO Lamas de Olo 9.16 343⇑*e*P Pn **08 41 20.4 -0.3**
POLO *e*S Sn 08 42 55.7 -8.2
POLO *i* IAML 08 43 00.6
POLO *i* IAML 08 43 00.6
POLO *i* IAML 08 43 01.0
DFRA Djebel Bou Aff 9.22 62 P Pn 08 41 26.5 +4.8
PBRG Braganca 9.36 349 *e*P Pn **08 41 22.6 -0.8**
PBRG *e*S **Sn** **08 43 01.4 -7.3**
PBRG *i* IAML 08 43 13.9
PBRG *i* IAML 08 43 25.4
PBRG *i* IAML 08 43 30.2
CTGD Timgad 9.41 69 P Pn **08 41 24.7 +0.5**
COAT Oued Athmania 9.42 65 P Pn **08 41 24.3 0.0**
ECAL Calabor 9.49 349 Pn Pn **08 41 24.7 -0.6**
ECAL Sn **Sn** **08 43 07.0 -5.0**
ECAL Calabor 9.49 349 Pn Pn **08 41 25.4 +0.2**
ECAL ⇑*i*Vmb_VC 08 41 44.3
comp=N,2µm,SNR=8.0
ECAL Sn Sn 08 43 03.1 -8.9
CBHR Beni Haroun da 9.53 63 P Pn 08 41 35.0 +9.3
PCAB Cabril 9.54 343⇑*i*P Pn **08 41 25.5 -0.4**
PCAB *e*S Sn 08 43 04.9 -8.1
PCAB *i* IAML 08 43 09.5
PCAB *i* IAML 08 43 10.2
PCAB *i* IAML 08 43 36.5
CGIN Giniginamar, F 9.55 245 Pn Pn **08 41 24.1 -2.0**
CGIN ⇑*i*Vmb_VC 08 42 03.8
comp=N,872nm,SNR=1.9
CGIN Sn **Sn** **08 43 05.2 -8.3**
CASM Ain Smara 9.59 65 P Pn 08 41 34.0 +7.4
EPOB Poblet 9.69 25 Pn Pn **08 41 29.9 +1.9**
EPOB ⇑*i*Vmb_VC 08 42 01.7
comp=N,662nm,SNR=4.2
ELOB Lobios 9.69 343 Pn Pn **08 41 27.7 -0.3**
ELOB ⇑*i*Vmb_VC 08 41 31.3
comp=N,3µm,SNR=11
ELOB Sn Sn 08 43 08.4 -8.6
CSGS Sigus 9.72 66 P Pn **08 41 31.3 +2.9**
CKFL Kef-Lekhel 9.81 64 P Pn **08 41 29.3 -0.4**
PGAV Gavieira, Arco 9.84 342⇑*e*P Pn **08 41 29.4 -0.6**
PGAV *e*S Sn 08 43 11.7 -8.9
PGAV *i* IAML 08 43 16.2
PGAV *i* IAML 08 43 16.2
PGAV *i* IAML 08 43 17.9
CBBAR Babar 9.85 72 P Pn **08 41 33.5 +3.3**
MAHO Mahon 9.99 41 Pn Pn **08 41 31.1 -0.9**
CAEH `Ain El Ouahch 10.04 63 P Pn **08 41 30.1 -2.6**
CBST Bordj Sabath 10.10 65 P Pn **08 41 36.5 +2.9**
PMPS Porto Santo 10.16 276 *e*P Pn **08 41 36.0 +1.6**
PMPST Porto Santo, M 10.16 276 *e*P Pn **08 41 36.3 +2.0**
PMPST *e*S **Sn** **08 43 21.4 -7.0**
ABSA Djebel Ababsia 10.35 66 P Pn **08 41 37.0 -0.1**
CMAH Djebel Manchou 10.42 64 P Pn **08 41 38.2 +0.3**
EORO Oroz-Betelu 10.50 12 Pn Pn **08 41 43.4 +4.4**
CORI Orista 10.58 27 Pn **08 41 40.6 +0.4**
EAGO Agolada(Pontev 10.59 345 Pn Pn **08 41 40.3 +0.2**
EAGO ⇑*i*Vmb_VC 08 41 52.3
comp=N,1µm,SNR=4.0
ELAN Lanestosa 10.60 3 Pn Pn **08 41 42.4 +2.0**
ELAN ⇑*i*Vmb_VC 08 42 00.7
comp=N,701nm,SNR=2.1
ELAN Sn Sn 08 43 28.9 -10
FUL Funchal 10.64 273 *e*S Sn **08 43 35.1 -5.2**
PMAR Madeira 10.66 274 *e*P Pn **08 41 42.1 +0.8**
PMAR *e*S **Sn** **08 43 35.1 -5.8**
EOSO Osorio 10.76 248 Pn Pn **08 41 40.5 -2.1**
EOSO Sn Sn 08 43 34.0 -9.2
CEST Esterri de Car 10.86 22 Pn **08 41 44.8 +0.8**
PMOZ Porto Moniz, M 10.89 274 Pn Pn **08 41 45.6 +1.1**
PMOZ Sn **Sn** **08 43 38.5 -8.0**

PMOZ Porto Moniz, M 10.89 274 *e*P Pn **08 41 45.8 +1.3**
PMOZ *e*S **Sn** **08 43 44.3 -2.2**
PMOZ Porto Moniz, M 10.89 274 P Pn **08 41 44.3 -0.2**
PMOZ Porto Moniz, M 10.89 274 ⇑P Pn **08 41 46.0 +1.5**
EPON Pontenova 10.91 349 Pn Pn **08 41 44.8 +0.2**
EPON ⇑*i*Vmb_VC 08 42 04.3
comp=N,844nm,SNR=2.6
EMAZ Mazaricos 10.94 341 Pn Pn **08 41 44.3 -0.8**
EMAZ ⇑*i*Vmb_VC 08 42 08.5
comp=N,1µm,SNR=2.7
EMAZ Sn **Sn** **08 43 39.8 -7.7**
CLUM San Bartolome 10.95 247 Pn Pn **08 41 47.0 +1.7**
CLUM ⇑*i*Vmb_VC 08 42 13.8
comp=N,1µm,SNR=1.9
CBOGS Bougous 11.20 65 P Pn 08 41 53.5 +4.9
EJON La Jonquera 11.31 28 Pn Pn **08 41 52.1 +1.9**
CGUI Guimar, Teneri 11.35 251 Pn Pn **08 41 50.9 +0.2**
CGUI ⇑*i*Vmb_VC 08 42 23.6
comp=N,2µm,SNR=2.0
KEST Kesra 11.69 71 Pn Pn **08 41 55.5 +0.1**
comp=N,3.8nm,0.3s,baz=284,slow=3.4,SNR=27
KEST LR LR 08 46 35.3
comp=N,3µm,21.9s,baz=259,slow=39
comp=N,36nm,0.6s
KEST Kesra 11.69 71 Pn **08 41 55.8 +0.4**
MTLF Montolieu 11.84 24 ⇑P Pn 08 42 02.4 +5.0
VSL Villasalto 12.98 54 Pn **08 42 12.8 -0.1**
VSL Villasalto 12.98 54 ⇑P Pn **08 42 13.0 0.0**
TAM Tamanrasset 13.09 136 Pn **08 42 10.6 -4.0**
TAM Tamanrasset 13.09 136 P Pn **08 42 10.6 -4.0**
TAM Tamanrasset 13.09 136 ⇑P Pn **08 42 10.2 -4.3**
MFF Saint Martin d 14.30 12 ⇓P P **08 42 35.3 -2.8**
SSB Saint Sauveur 14.35 26 Pn **08 42 31.1 -0.6**
SSB Saint Sauveur 14.35 26 P Pn **08 42 31.1 -0.6**
BNI Bardonecchia 15.03 31 Pn Pn **08 42 39.7 -1.2**
BNI Bardonecchia 15.03 31 P Pn **08 42 39.7 -1.2**
CASP Castiglione de 15.66 45 Pn Pn **08 42 49.0 -0.2**
CASP IAmb IAmb 08 42 55.0
comp=Z,136nm,1.3s
ROSF Rostrenen 15.70 2 ⇑P Pn **08 42 50.0 +0.4**
LOR Lormes 15.87 21 ⇑P P **08 42 54.6 -1.0**
VAE Valguarnera 16.04 67 Pn Pn **08 42 55.9 +1.8**
comp=Z,2.2nm,0.3s,baz=208,slow=22,SNR=2.8
VAE LR LR 08 50 31.7
comp=Z,6µm,18.1s,baz=346,slow=43
BOB Bobbio (Coli) 16.14 37 ⇓P P **08 43 01.3 +2.7**
CLF Chambon-Foret 16.14 16 IAmb IAmb 08 43 03.7
comp=Z,112nm,1.1s
CESX Cesi 16.62 48 Pn **08 43 02.0 +0.5**
AQU L'Aquila 17.02 50 P Pn **08 43 07.2 +0.6**
comp=Z,67nm,1.2s
NRCA Norcia 17.07 48 P Pn **08 43 08.1 +0.9**
FDMO Fiordimonte 17.16 48 P P **08 43 09.8 -0.2**
TUE Stuetta 17.32 33 Pn **08 43 10.6 +0.2**
TUE Stuetta 17.32 33 ⇑P P **08 43 13.6 +1.8**
TUE Stuetta 17.32 33 P Pn **08 43 10.8 +0.4**
comp=Z,192nm,1.0s
TEOL Teolo 17.70 40 P P **08 43 16.4 +0.6**
DAVOX Davos/Dischmat 17.79 33 Pn P **08 43 17.5 +0.5**
comp=Z,0.6nm,0.3s,baz=249,slow=10.0,SNR=12
comp=Z,16nm,1.0s
ECH Echery 17.79 26 P **08 43 17.1 +0.2**
ECH Echery 17.79 26 P P **08 43 17.1 +0.2**
ECH pmax pmax
comp=Z,39nm,1.1s
ECH Echery 17.79 26 ⇑P P **08 43 17.1 +0.2**
FUORN Ofenpass-Fuorn 17.85 34 Pn **08 43 17.6 +0.5**
DAVA Damuels 18.17 32 *e*Pn Pn **08 43 21.0 +0.1**
comp=Z,18nm,0.6s
DAVA Damuels 18.17 32 ⇑P Pn **08 43 21.2 +0.3**
BFO Black Forest 18.33 28 P Pn **08 43 22.7 0.0**
BFO Black Forest 18.33 28 P Pn **08 43 22.7 0.0**
BFO pmax pmax
comp=Z,105nm,1.9s
BFO Black Forest 18.33 28 ⇓P P **08 43 24.4 +1.6**
BFO Black Forest 18.33 28 *e*P Pn **08 43 23.0 +0.3**
comp=Z,74nm,1.7s,baz=216,slow=10
FETA Feichten 18.36 34 *e*Pn Pn **08 43 23.2 -0.1**
comp=Z,29nm,0.8s
DOU Dourbes 18.64 18 *d*P P **08 43 26.1 -0.1**
comp=Z,30nm,1.0s
DOU *d*S **Sn** **08 46 55.5 +0.7**
WLF Walferdange 18.70 22 Pn Pn **08 43 28.1 +0.9**
WLF Walferdange 18.70 22 P **08 43 26.8 0.0**
WLF IAmb IAmb 08 43 33.5
comp=Z,88nm,1.0s
WLF Walferdange 18.70 22 *d*P Pn **08 43 27.6 +0.4**
comp=Z,49nm,1.1s
WLF Walferdange 18.70 22 P P **08 43 26.8 0.0**
WLF pmax pmax
comp=Z,87nm,1.0s
WLF Walferdange 18.70 22 ⇑P Pn **08 43 28.0 +0.9**
WLF Walferdange 18.70 22 *e*P P **08 43 27.2 +0.4**
comp=Z,109nm,1.1s,baz=216,slow=10
RETA Reutte 18.72 33 *e*P P **08 43 26.8 -0.3**
comp=Z,8.1nm,0.6s
SQTA Sankt Quirin 18.73 34 *e*P P **08 43 27.0 -0.4**
comp=Z,37nm,0.7s,SNR=15
MOTA Moosalm 18.77 34 *e*P P **08 43 27.6 -0.3**
comp=Z,23nm,0.9s
RCHB Rochefort 18.87 19 *d*P P **08 43 29.2 +0.5**
comp=Z,43nm,0.9s
BMRD Maredsous 18.88 18 *d*P P **08 43 29.5 +0.8**
comp=Z,36nm,0.8s
WTTA Wattenberg 18.97 35 *e*P P **08 43 29.5 -0.5**
comp=Z,61nm,1.3s,SNR=6.5
WATA Walderalm 18.99 35 *e*P P **08 43 29.6 -0.6**
comp=Z,82nm,1.3s,SNR=20
STU Stuttgart 19.03 28 *e*P P **08 43 30.9 +0.4**
STU Stuttgart 19.03 28 *e*P P **08 43 30.7 +0.2**
comp=Z,86nm,1.1s,baz=216,slow=10
BGES Gesves 19.04 19 *d*P Pn **08 43 31.7 +0.5**
comp=Z,22nm,0.9s
BCLA Clavier 19.13 19 *d*P P **08 43 32.0 +0.6**
comp=Z,21nm,1.1s
STRD Stroud 19.19 4 *e*P Pn **08 43 35.1 +2.1**
STRD IAmb IAmb 08 43 40.9
comp=Z,25nm,1.0s
MONM Monmouth 19.22 3 *e*P Pn **08 43 35.6 +2.2**
MONM IAmb IAmb 08 43 40.1
comp=Z,33nm,1.1s
UCC Uccle 19.23 17 P **08 43 32.9 +0.3**
UCC Uccle 19.23 17 P P **08 43 32.9 +0.3**
UCC pmax pmax
comp=Z,35nm,0.9s
BHOU Houvegnez 19.27 20 *d*P Pn **08 43 34.5 +0.5**
comp=Z,19nm,1.1s
PTCC Patocco-Chiusa 19.27 39 ⇑P Pn **08 43 34.6 +0.4**
BSTI Sart Tilman 19.35 19 *d*P P **08 43 34.7 +0.8**
MCH1 Michaelchurch 19.37 2 *e*P Pn **08 43 36.5 +1.3**
MCH1 IAmb IAmb 08 43 39.9
comp=Z,30nm,1.1s
MCH1 Michaelchurch 19.37 2 ⇑P Pn **08 43 37.2 +2.0**
MEM Membach 19.50 20 *d*P Pn **08 43 38.9 +2.1**
comp=Z,14nm,1.0s
BTNL Ternell 19.51 20 *d*P P **08 43 36.3 +0.6**
comp=Z,14nm,1.2s
MYKA Terra Mystica 19.57 39 *e*P P **08 43 36.9 +0.4**
comp=Z,68nm,0.9s,SNR=14
LESA Schwarzleotal 19.59 36 *e*P P **08 43 36.2 -0.5**
comp=Z,56nm,1.3s
KBA Koelnbreinsper 19.70 38 *e*P P **08 43 37.7 -0.3**
comp=Z,20nm,0.7s
IWEX Carrickbyrne, 19.81 355 P Pn **08 43 42.5 +2.1**
RJOB Jochberg 19.87 36 *e*P P **08 43 39.1 -0.6**
comp=Z,30nm,1.0s,baz=216,slow=10
HLM1 Long Mynd 19.89 2 *e*P Pn **08 43 42.6 +1.1**
HLM1 IAmb IAmb 08 43 44.1
comp=Z,20nm,1.0s
TNS Taunus Mts 19.94 24 *e*P P **08 43 40.6 +0.2**
comp=Z,61nm,1.0s,baz=216,slow=10
OBKA Obir 19.99 41 *e*P P **08 43 41.4 +0.3**
comp=Z,26nm,0.7s
TORD Torodi Ar. Bea 20.16 163 P P **08 43 40.7 -2.2**
comp=Z,44nm,0.9s,baz=353,slow=13,SNR=18
TORD S **S** **08 47 19.1 -10**
comp=Z,9.8nm,0.8s,baz=353,slow=24,SNR=2.9
TORD Lg Lg 08 49 31.3
comp=Z,1.1nm,0.3s,baz=352,slow=28,SNR=5.2
comp=Z,44nm,0.9s
CWF Charnwood Fore 20.20 5 *e*P Pn 08 43 45.6 +0.5
CWF IAmb IAmb 08 43 48.3
comp=Z,16nm,0.7s
LLW Llanuwchllyn 20.20 1 *e*P Pn 08 43 45.2 +0.1
LLW IAmb IAmb 08 43 49.3

comp=Z,17nm,1.1s
BIOA Bad Ischl, Aus 20.26 37 *e*P **P 08 43 43.9 0.0**
comp=Z,6.4nm,0.6s
SOKA Soboth 20.36 41 *e*P **P 08 43 45.0 0.0**
comp=Z,20nm,0.9s
GRF Grafenberg Arr 20.57 30 *e*P **P 08 43 47.0 -0.4**
comp=Z,261nm,1.4s,baz=216,slow=10
GRF *e*L L 08 54 52.1
comp=Z,386nm,19.7s
BLY Banja Luka 20.58 48 ⇑P **P 08 43 46.5 -0.9**
BUG Bochum--Univer 20.60 21 *e*P **P 08 43 47.7 +0.2**
comp=Z,116nm,1.2s,baz=216,slow=10
DSB Dublin 20.65 356 P Pn 08 43 51.2 +0.8
DSB Dublin 20.65 356 ⇑P Pn 08 43 51.5 +1.2
MOA Molln 20.68 37 *e*P **P 08 43 47.5 -1.0**
comp=Z,21nm,1.0s,SNR=12
KASTN Kahler Asten 20.76 23 *e*P **P 08 43 48.9 -0.4**
comp=Z,153nm,1.5s,baz=216,slow=10
LBWR Ladybower, Pea 20.83 4 *e*P Pn 08 43 52.4 -0.1
LBWR IAmb IAmb 08 43 55.9
comp=Z,46nm,0.8s
WET Wettzell 20.89 33 *e*P **P 08 43 49.0 -1.8**
comp=Z,75nm,1.2s,baz=216,slow=10
ARSA Arzberg 20.97 40 P 08 43 51.8 +0.2
ARSA IAmb IAmb 08 43 59.0
comp=Z,158nm,1.7s
ARSA Arzberg 20.97 40 *e*P **P 08 43 51.3 -0.3**
comp=Z,51nm,1.3s,SNR=7.8
ARSA Arzberg 20.97 40 ⇓P **P 08 43 51.6 0.0**
PDG Podgorica 21.00 56 P **P 08 43 52.2 +0.2**
PDG IAmb IAmb 08 43 56.9
comp=Z,121nm,1.2s
PDG Podgorica 21.00 56 ⇑P **P 08 43 51.7 -0.2**
PDG Podgorica 21.00 56 ⇓P **P 08 43 51.9 -0.1**
ROTZ Rotzenmuhle 21.05 31 *e*P **P 08 43 51.5 -0.9**
comp=Z,10nm,1.1s,baz=216,slow=10
GEC2 GERESS Array S 21.07 35 P **P 08 43 52.3 -0.4**
GEC2 GERESS Array S 21.07 35 *e*P **P 08 43 50.2 -2.6**
comp=Z,179nm,1.4s,baz=216,slow=10
GERES GERESS Array B 21.07 35 P **P 08 43 51.5 -1.3**
comp=Z,37nm,1.1s,baz=224,slow=9.3,SNR=41
GERES LR LR 08 52 06.2
comp=Z,690nm,19.6s,baz=236,slow=37
comp=Z,37nm,1.1s
IGLA Glengowla, Co 21.09 351 P **P 08 43 56.4 +3.6**
BBTS Babate 21.10 215 P **P 08 43 53.8 +0.6**
comp=Z,91nm,0.9s,baz=354,slow=1.2,SNR=13
BBTS LR LR 08 51 52.8
comp=Z,1µm,18.6s,baz=261,slow=36
comp=Z,91nm,0.9s
MANZ Manzenberg 21.17 30 *e*P **P 08 43 52.7 -1.1**
comp=Z,11nm,1.1s,baz=216,slow=10
KHC Kasperske Hory 21.21 34 **P 08 43 53.6 -0.5**
KHC IAmb IAmb 08 44 01.4
comp=Z,140nm,1.2s
KHC Kasperske Hory 21.21 34*ce*P **P 08 43 53.7 -0.5**
KHC pmax pmax
comp=Z,127nm,1.7s
KHC Kasperske Hory 21.21 34 *e*P **P 08 43 53.5 -0.7**
KHC *e*S **S 08 47 48.4 -1.5**
KHC AMS AMS 08 53 40.0
comp=Z,2µm,13.2s
KHC Kasperske Hory 21.21 34 ⇑P **P 08 43 53.3 -0.9**
KHC Kasperske Hory 21.21 34 P **P 08 43 54.7 +0.5**
comp=Z,1µmcomp=Z,103nm,1.5s
BEHE Becsehely 21.22 43 P **P 08 43 54.5 +0.2**
CKRC Cesky Krumlov 21.34 35 *e*P **P 08 43 54.1 -1.5**
CKRC MLR MLR
comp=Z,1µm,15.0s
CKRC Cesky Krumlov 21.34 35 *e*P **P 08 43 54.1 -1.5**
CKRC AMS AMS 08 53 00.0
comp=Z,1µm,15.0s
JAN Janina 21.42 64 P **P 08 43 56.3 -0.3**
ILTH Belurgan, Co L 21.43 357 P **P 08 43 59.3 +2.9**
ILTH Belurgan, Co L 21.43 357 *e*P **P 08 43 59.0 +2.5**
MOX Moxa 21.47 28 *e*P **P 08 43 56.2 -0.8**
comp=Z,97nm,1.9s,baz=216,slow=10
MOX *e*L L 08 54 32.6
comp=Z,396nm,19.1s
IBBN Ibbenburen 21.51 20 ⇓P **P 08 43 60.0 +2.6**
IBBN Ibbenburen 21.51 20 *e*P **P 08 43 58.2 +0.9**
comp=Z,99nm,1.2s,baz=216,slow=10
CONA Conrad Observa 21.56 39 *e*P **P 08 43 57.0 -1.0**
comp=Z,104nm,1.8s,SNR=16
PLN Plauen 21.57 29 *e*P **P 08 43 56.8 -1.2**
comp=Z,19nm,1.0s,baz=216,slow=10
GTTG Gottingen 21.57 25 *e*P **P 08 43 58.0 0.0**
comp=Z,49nm,1.1s,baz=216,slow=10
PRMD Pramanda 21.58 64 P **P 08 43 58.7 +0.4**
IOMK Kirk Michael 21.61 360 *e*P **P 08 44 00.4 +2.0**
IOMK IAmb IAmb 08 44 02.8
comp=Z,7.4nm,0.8s
RLS Riolos of Patr 21.64 68 P **P 08 43 57.4 -1.6**
TANN Tannenbergstha 21.64 30 *e*P **P 08 43 57.9 -1.0**
comp=Z,106nm,1.0s,baz=216,slow=10
RONA Rosalia, Austr 21.66 40 *e*P **P 08 43 58.0 -1.0**
comp=Z,13nm,0.8s,SNR=9.1
TETR Tetrakomo, Epi 21.68 65 P **P 08 44 00.6 +1.1**
OHR Ohrid 21.71 60 *i* P **P 08 44 01.1 +1.4**
ZVC Zvikov 21.71 34 *e*P **P 08 43 59.1 -0.5**
NEST Nestorio 21.73 62 P **P 08 44 00.8 +0.9**
PENT Pentalofos 21.74 63 P **P 08 44 01.2 +1.1**
PVO Paravola 21.76 67 P **P 08 43 59.9 -0.3**
KOVH Kovagotottos 21.80 45 ⇓P **P 08 44 02.7 +1.4**
DRO Drossia 21.82 69 P **P 08 44 00.7 -0.2**
ITM Ithomi 21.93 71 P **P 08 44 01.4 -0.6**
KESW Keswick, Cumbr 21.96 2 *e*P **P 08 44 05.2 +3.0**
KESW IAmb IAmb 08 44 07.2
comp=Z,25nm,0.8s
CLZ Clausthal 21.96 25 *e*P **P 08 44 02.2 -0.1**
comp=Z,90nm,1.5s,baz=216,slow=10
NEUB Neuenburg 21.98 28 *e*P **P 08 44 01.9 -0.5**
comp=Z,220nm,1.0s,baz=216,slow=10
EVR Evrytania 22.02 66 P **P 08 44 01.3 -1.8**
EFP Efpalio 22.03 67 P **P 08 44 02.7 -0.4**
ANX Ano Chora 22.07 67 P **P 08 44 03.8 +0.2**
SERG Sergoula 22.15 68 P **P 08 44 04.5 +0.1**
KLV Kalavryta, Ach 22.18 69 P **P 08 44 05.0 +0.2**
MORH Mrgy, Hungar 22.19 46 ⇑P **P 08 44 03.7 -1.0**
MORH Mrgy, Hungar 22.19 46 P **P 08 44 05.3 +0.6**
comp=Z,447nmcomp=Z,29nm,1.2s
HSKC Hora Svate Kat 22.20 31 *e*S **S 08 48 10.4 +1.2**
HSKC AMS AMS 08 54 00.0
comp=Z,1µm,10.2s
KALE Kalithea 22.21 68 P **P 08 44 04.1 -1.0**
GAL1 Galloway 22.22 359 *e*P **P 08 44 07.0 +2.0**
GAL1 IAmb IAmb 08 44 09.7
comp=Z,30nm,1.0s
TREC Trest 22.24 36 *e*P **P 08 44 04.7 -0.6**
TREC Trest 22.24 36 *e*P **P 08 44 04.7 -0.6**
KZN Kozani 22.24 62 P **P 08 44 05.4 -0.1**
EDMD Edmundbyers 22.25 4 *e*P **P 08 44 07.4 +2.2**
EDMD IAmb IAmb 08 44 12.4
comp=Z,42nm,1.0s
PRU Pruhonice 22.26 33 *e*P **P 08 44 04.4 -1.0**
PRU *e*S **S 08 48 07.5 -2.7**
PRU MLR MLR
comp=Z,900nm,15.1s
PRU Pruhonice 22.26 33 *e*P **P 08 44 04.4 -1.0**
PRU *e*S **S 08 48 07.5 -2.7**
PRU AMS AMS 08 53 00.0
comp=Z,900nm,15.1s
PRA Prague 22.26 33 *e*P **P 08 44 06.3 +0.8**
PRA MLR MLR
comp=Z,1µm,9.8s
PRA Prague 22.26 33 *e*P **P 08 44 06.3 +0.8**
PRA AMS AMS 08 54 00.0
comp=Z,1µm,9.8s
THL Klokotos Trika 22.29 65 P **P 08 44 05.2 -0.6**
MAKR Makrakomi, Fth 22.29 66 P **P 08 44 06.4 +0.5**
VLX Vlachokerasia 22.30 70 P **P 08 44 05.7 -0.4**
ASSE Asse, Remlinge 22.30 25 *e*P **P 08 44 06.4 +0.6**
comp=Z,103nm,1.7s,baz=216,slow=10
GUR Goura 22.32 69 P **P 08 44 06.4 0.0**
AGG Agios Georgios 22.44 66 P **P 08 44 06.3 -1.2**
AGG Agios Georgios 22.44 66 ⇓P **P 08 44 08.8 +1.3**
RICC Richard 22.45 32 *e*P **P 08 44 07.6 +0.2**
NEWG New Galloway 22.47 0 *e*P **P 08 44 09.6 +2.0**
NEWG IAmb IAmb 08 44 12.4
comp=Z,25nm,1.1s
CLL Collm 22.54 29 IAmb IAmb 08 44 14.1
comp=Z,85nm,1.1s
CLL Collm 22.54 29 *e*P **P 08 44 07.0 -1.5**
CLL *i* 08 44 09.0
CLL *i* 08 44 12.1
CLL *e*S **S 08 48 17.0 +1.5**
CLL Collm 22.54 29 *e*P **P 08 44 07.2 -1.3**
comp=Z,75nm,1.1s,baz=216,slow=10
CLL Collm 22.54 29 P **P 08 44 08.8 +0.3**
comp=Z,927nmcomp=Z,74nm,1.1s
CLL Collm 22.54 29 *e*P **P 08 44 07.0 -1.5**
CLL *i* (pP) **pP 08 44 09.0 -2.7**
comp=Z,48nm,1.3s
CLL *i* x x 08 44 12.1
comp=Z,142nm,1.5s
CLL *e*S **S 08 48 17.0 +1.5**
comp=N,500nm,17.9s
CLL *e*S **S 08 48 17.0 +1.5**
comp=E,300nm,19.0s
CLL *e*S **S 08 48 17.0 +1.5**
comp=Z,300nm,22.7s
CLL AMS AMS 08 54 00.0
IDGL Inch Island, C 22.54 355 P **P 08 44 12.0 +3.6**
MODS Modra-Piesok 22.59 40 *e*P **P 08 44 08.6 -0.4**
MODS pmax pmax
comp=Z,515nm,1.4s
MODS Modra-Piesok 22.59 40 *e*P **P 08 44 08.6 -0.4**
BRG Berggiesshubel 22.62 31 *e*P **P 08 44 07.7 -1.6**
comp=Z,100nm,1.0s,baz=216,slow=10
PVCC Panska Ves 22.65 32 AMS AMS 08 54 10.0
comp=Z,1µm,10.4s
FLTG Flechtingen 22.67 25 *e*P **P 08 44 10.2 +0.5**
comp=Z,23nm,1.1s,baz=216,slow=10
ESK Eskdalemuir 22.68 2 ⇑P **P 08 44 13.8 +3.9**
EKA Eskdalemuir Ar 22.70 2 P **P 08 44 11.2 +1.1**
comp=Z,15nm,1.0s,baz=183,slow=11,SNR=15
comp=Z,15nm,1.0s
VLI Velíai 22.71 72 P **P 08 44 09.9 -0.4**
LIT Litokhoron 22.74 63 P **P 08 44 10.9 +0.2**
LIT IAmb IAmb 08 44 22.7
comp=Z,46nm,0.9s
LIT Litokhoron 22.74 63 P **P 08 44 10.1 -0.6**
LIT Litokhoron 22.74 63 P **P 08 44 10.9 +0.2**
LIT pmax pmax
comp=Z,46nm,0.9s
LIT Litokhoron 22.74 63 ⇓P **P 08 44 10.7 0.0**
SMOL Smolenice 22.75 39 *e*P **P 08 44 10.0 -0.7**
SMOL pmax pmax
comp=Z,33nm,1.1s
VRAC Vranov 22.80 37 P **P 08 44 10.1 -1.1**
comp=Z,37nm,0.8s,baz=240,slow=10,SNR=24
comp=Z,37nm,0.8s
VRAC Vranov 22.80 37 ⇑P **P 08 44 09.8 -1.4**
VRAC Vranov 22.80 37 *e*P **P 08 44 10.0 -1.2**
VRAC Vranov 22.80 37 P **P 08 44 10.5 -0.7**
LTK Loutraki 22.82 69 P **P 08 44 10.4 -1.2**
LKR Lokris 22.91 67 P **P 08 44 10.6 -1.8**
ATAL Atalanti 22.93 67 P **P 08 44 11.3 -1.4**
VAY Valandovo 23.05 60 *i* P **P 08 44 13.4 -0.5**
JAVC Velka Javorina 23.09 39 *e*P **P 08 44 12.9 -1.3**
BOVS Bovan 23.10 54 ⇑P **P 08 44 13.6 -0.7**
VILL Villia 23.10 68 P **P 08 44 14.9 +0.4**
NEO Neokhori 23.17 66 P **P 08 44 14.5 -0.7**
THE Thessaloniki 23.20 62 P **P 08 44 14.6 -0.7**
GORT1 Trebel 23.23 24 *e*P **P 08 44 15.5 0.0**
comp=Z,157nm,1.4s,baz=216,slow=10
MAGU Magoula 23.25 69 P **P 08 44 17.6 +1.6**
KNT Kendrikon 23.26 61 P **P 08 44 15.6 -0.5**
STFN Stefani 23.29 68 P **P 08 44 13.9 -2.5**
HORT Hortiatis 23.29 62 P **P 08 44 15.7 -0.8**
UPC Upice 23.30 34 *e*P **P 08 44 15.3 -1.0**
UPC MLR MLR
comp=Z,900nm,14.4s
UPC Upice 23.30 34 *e*P **P 08 44 15.3 -1.0**
UPC AMS AMS 08 53 40.0
comp=Z,900nm,14.4s
DPC Dobruska-Polom 23.34 35 *e*P **P 08 44 15.7 -1.1**
DPC *e*S **S 08 48 29.2 -0.3**
DPC MLR MLR
comp=Z,700nm,17.1s
DPC Dobruska-Polom 23.34 35 *e*P **P 08 44 15.7 -1.1**
DPC *e*S **S 08 48 29.2 -0.3**
DPC AMS AMS 08 53 50.0
comp=Z,700nm,17.1s
DPC Dobruska-Polom 23.34 35 P **P 08 44 17.3 +0.5**
comp=Z,2µmcomp=Z,102nm,1.6s
CHVC Chvalec 23.38 34 *e*S **S 08 48 31.5 +1.5**
CHVC AMS AMS 08 53 40.0
comp=Z,800nm,12.0s
OSTC Ostas 23.43 34 *e*P **P 08 44 16.1 -1.6**
OSTC Ostas 23.43 34 *e*P **P 08 44 16.1 -1.6**
VLY Voula,Athens 23.46 69 P **P 08 44 17.2 -0.8**
MAUC Maruska 23.47 38 *e*P **P 08 44 17.3 -0.8**
PLG Polygyros 23.51 63 P **P 08 44 16.2 -2.4**
MDVR Moldovita 23.51 51 ⇑P **P 08 44 18.1 -0.5**
SOH Sokhos 23.53 62 P **P 08 44 17.1 -1.7**
PTL Penteli 23.53 69 P **P 08 44 17.8 -0.9**
MORC Moravsky Berou 23.58 37 P **P 08 44 17.8 -1.4**
MORC Moravsky Berou 23.58 37 ⇑P **P 08 44 17.3 -1.9**
MORC Moravsky Berou 23.58 37 *e*P **P 08 44 17.3 -1.9**
MORC Moravsky Berou 23.58 37 P **P 08 44 18.4 -0.8**
MORC Moravsky Berou 23.58 37 ⇑P **P 08 44 18.1 -1.1**
GVD Gavdhos 23.65 77 P **P 08 44 22.3 +2.3**
KSP Ksiaz 23.66 34 *e*P **P 08 44 20.1 +0.3**
KSP Ksiaz 23.66 34 ⇓P **P 08 44 19.0 -0.9**
KSP Ksiaz 23.66 34 P **P 08 44 20.3 +0.4**
comp=Z,1µmcomp=Z,63nm,1.5s
BSEG Bad Segeberg 23.70 22 *e*P **P 08 44 18.8 -1.4**
comp=Z,113nm,1.9s,baz=216,slow=10
BLKB Belogradchik 23.75 55 ⇑P **P 08 44 20.2 -0.8**
SRS Serrai 23.76 61 P **P 08 44 20.1 -1.0**
BZS Buzias 23.78 49 ⇑P **P 08 44 20.1 -1.0**
BZS Buzias 23.78 49 P **P 08 44 20.1 -1.0**
BZS Buzias 23.78 49 ⇓P **P 08 44 19.7 -1.4**
STEB Steborice 23.79 37 *e*P **P 08 44 20.5 -0.7**
PSZ Piszkesteto 23.79 43 **P 08 44 20.1 -1.2**
PSZ Piszkesteto 23.79 43 ⇑P **P 08 44 19.6 -1.7**
PSZ Piszkesteto 23.79 43 *e*P **P 08 44 20.4 -0.9**
PSZ Piszkesteto 23.79 43 P **P 08 44 20.1 -1.2**
PSZ pmax pmax
comp=Z,166nm,1.8s
PSZ Piszkesteto 23.79 43 ⇓P **P 08 44 20.4 -0.9**
VTS Vitosha 23.86 57 P **P 08 44 21.4 -0.7**
OKC Ostrava-Krasne 23.92 38 *e*S **S 08 48 38.1 -0.6**
OKC AMS AMS 08 55 40.0
comp=Z,1µm,12.1s
MMB Musomishta 23.97 60 P **P 08 44 22.3 -0.7**
HERR Herculane 24.01 52 ⇓P **P 08 44 22.2 -1.2**
SIRR Siria 24.08 48 ⇑P **P 08 44 22.4 -1.6**
IDI Anoyia 24.29 76 LR LR 08 55 25.0
comp=Z,1µm,19.8s,baz=292,slow=40
IDI Anoyia 24.29 76 P **P 08 44 26.8 +0.7**
IDI IAmb IAmb 08 44 36.4
comp=Z,43nm,0.8s
IDI Anoyia 24.29 76 P **P 08 44 24.4 -1.7**
DRUM Mains of Drumt 24.30 2 *e*P **P 08 44 26.0 +0.1**
DRUM IAmb IAmb 08 44 30.3
comp=Z,19nm,0.8s
KAVA Kavala 24.42 62 P **P 08 44 26.6 -0.6**
KECS Kecovo 24.42 42 *e*P **P 08 44 30.5 +3.4**
KECS pmax pmax
comp=Z,69nm,0.9s
KECS Kecovo 24.42 42 *e*P **P 08 44 30.5 +3.4**
IACM Heraklion 24.44 76 P **P 08 44 29.7 +2.3**
GZR Gura Zlata 24.44 51 ⇑P **P 08 44 26.9 -0.5**
GZR Gura Zlata 24.44 51 P **P 08 44 26.8 -0.5**
SNT5 Nea Kammeni, S 24.68 73 P **P 08 44 28.3 -1.2**
THR6 Thira Island, 24.68 73 P **P 08 44 30.5 +1.0**
THR3 Thira Island, 24.68 73 P **P 08 44 28.4 -1.1**
DEV Deva 24.71 50 ⇑P **P 08 44 28.8 -0.9**
DEV Deva 24.71 50 P **P 08 44 28.8 -0.9**
RZN Rozhen 24.73 60 P **P 08 44 30.4 +0.3**
THERA Ancient Thera, 24.75 73 P **P 08 44 30.2 0.0**
THR8 Santorini-Mono 24.75 73 P **P 08 44 29.0 -1.1**
APE Apeiranthos 24.80 71 P **P 08 44 30.1 -0.5**
APE Apeiranthos 24.80 71 ⇑P **P 08 44 31.5 +0.9**
APE Apeiranthos 24.80 71 *i* P **P 08 44 31.6 +0.9**
APE pmax pmax
comp=Z,70nm,1.7s
APE Apeiranthos 24.80 71 ⇑P **P 08 44 31.4 +0.8**
NIE Niedzica 24.82 40 *e*P **P 08 44 30.7 -0.1**
NIE Niedzica 24.82 40 P **P 08 44 31.0 +0.3**
comp=Z,35nm,1.1s
PLD Plovdiv 24.83 59 P **P 08 44 31.1 +0.3**
NPS Neapolis 24.88 76 P **P 08 44 31.6 +0.2**
DRGR 24.96 48 ⇑P **P 08 44 30.2 -1.9**
DRGR 24.96 48 P **P 08 44 30.1 -1.9**
OJC Ojcow 25.01 38 *e*P **P 08 44 31.5 -0.8**
OJC Ojcow 25.01 38 ⇓P **P 08 44 32.3 -0.1**
OJC Ojcow 25.01 38 P **P 08 44 32.6 +0.3**
comp=Z,31nm,1.3s
PLVB Pleven 25.05 56 ⇑P **P 08 44 32.9 +0.1**
VLAD Vladila 25.07 55 ⇑P **P 08 44 32.6 -0.3**
LOT Lotru 25.11 51 ⇑P **P 08 44 33.7 +0.2**
KDZ Kurdzhali 25.15 61 P **P 08 44 33.8 0.0**
MARR Marisel-Cluj 25.16 48 ⇑P **P 08 44 33.9 0.0**
RDO Rodhopi 25.21 62 IAmb IAmb 08 44 41.9
comp=Z,53nm,1.1s
RDO Rodhopi 25.21 62 P **P 08 44 35.2 +0.9**
RDO Rodhopi 25.21 62 ⇓P **P 08 44 36.0 +1.7**
STHS Stebnicka Huta 25.34 41 *e*P **P 08 44 36.7 +1.3**
DIM Dimitrovgrad 25.41 60 P **P 08 44 36.0 0.0**
BERU Beregovo 25.56 45 P **P 08 44 37.6 +0.3**
EZN Ezine 25.61 65 P **P 08 44 38.6 +0.7**
EZN Ezine 25.61 65 ⇑P **P 08 44 38.9 +0.9**
EZN Ezine 25.61 65 P **P 08 44 38.8 +0.9**
ARR Arges 25.66 52 ⇑P **P 08 44 38.7 +0.4**
MUKU Mukachevo 25.68 44 P **P 08 44 38.8 +0.3**
GKP Gorka Klasztor 25.75 30 *e*P **P 08 44 37.6 -1.4**
GKP Gorka Klasztor 25.75 30 *e*P **P 08 44 39.6 +0.5**
MDB Medias 25.76 50 ⇑P **P 08 44 38.7 -0.6**
MDB Medias 25.76 50 P **P 08 44 38.6 -0.6**
KORU Korolevo 25.81 45 P **P 08 44 39.9 +0.3**
BMR Baia Mare 25.82 46 ⇓P **P 08 44 39.1 -0.7**
BMR Baia Mare 25.82 46 P **P 08 44 39.0 -0.7**
ELND Elena 25.82 58 ⇑P **P 08 44 39.7 -0.1**
BRIU Brid 25.82 45 P **P 08 44 39.8 0.0**
DBIC Dimbokro 25.84 181 P **P 08 44 40.0 -0.1**
comp=Z,15nm,1.0s,baz=20,slow=8.5,SNR=11
DBIC LR LR 08 54 14.5
comp=Z,1µm,19.5s,baz=25,slow=35
comp=Z,15nm,1.0s
DBIC Dimbokro 25.84 181 **P 08 44 40.6 +0.4**
DBIC Dimbokro 25.84 181 P **P 08 44 40.6 +0.4**
DBIC pmax pmax
comp=Z,45nm,0.8s
DBIC Dimbokro 25.84 181 ⇑P **P 08 44 41.2 +1.1**
SMG Samos 25.86 70 P **P 08 44 39.7 -0.5**
VOIR 25.95 52 ⇓P **P 08 44 41.0 -0.1**
VOIR 25.95 52 P **P 08 44 41.4 +0.3**
VOIR 25.95 52 P **P 08 44 41.6 +0.5**
comp=Z,523nmcomp=Z,38nm,1.0s
SZH Strazhitsa 25.97 57 P **P 08 44 41.2 0.0**
KARP Karpathos 26.13 75 **P 08 44 43.0 +0.3**
KARP Karpathos 26.13 75 P **P 08 44 42.2 -0.5**
KARP Karpathos 26.13 75 *e*P **P 08 44 42.4 -0.4**
KARP Karpathos 26.13 75 ⇓P **P 08 44 43.2 +0.5**
KARP Karpathos 26.13 75 P **P 08 44 43.3 +0.5**
comp=Z,854nmcomp=Z,82nm,1.4s
JMB Yambol 26.19 59 P **P 08 44 43.3 +0.1**
MEZ Mezhgor'ye 26.20 45 P **P 08 44 43.4 +0.2**
BODT Bodrum 26.22 71 P **P 08 44 43.4 -0.1**
KWP Kalwaria Pacla 26.27 42 *e*P **P 08 44 43.8 0.0**
KWP Kalwaria Pacla 26.27 42 ⇓P **P 08 44 43.8 0.0**
KWP Kalwaria Pacla 26.27 42 P **P 08 44 44.4 +0.6**
comp=Z,891nmcomp=Z,77nm,1.3s
RAKU Rahkiv 26.37 46 P **P 08 44 46.1 +1.3**
RAZG Razgrad 26.42 57 ⇑P **P 08 44 44.1 -1.1**
SHIU Shidnytsya 26.44 43 P **P 08 44 45.9 +0.5**
BEL Belsk 26.47 36 *e*P **P 08 44 46.3 +0.8**
MLR Muntele Rosu 26.57 52 LR LR 08 54 59.7
comp=Z,1µm,20.9s,baz=242,slow=36
MLR Muntele Rosu 26.57 52 IAmb IAmb 08 45 09.6
comp=Z,58nm,1.0s
MLR Muntele Rosu 26.57 52 ⇓P **P 08 44 46.4 -0.3**
MLR Muntele Rosu 26.57 52 P **P 08 44 46.4 -0.3**
MLR Muntele Rosu 26.57 52 P **P 08 44 47.1 +0.4**
comp=Z,653nmcomp=Z,39nm,1.1s
OZUR 26.66 51 ⇑P **P 08 44 47.4 0.0**
BURAR Bucovina Array 26.85 47 **P 08 44 49.5 +0.3**
BURAR Bucovina Array 26.85 47 ⇑P **P 08 44 48.9 -0.3**
BURAR Bucovina Array 26.85 47 P **P 08 44 49.4 +0.2**
BUR08 Bucovina Ar. S 26.85 47 **P 08 44 49.4 +0.1**
BUR08 IAmb IAmb 08 45 26.8
comp=Z,32nm,1.2s
COVR Voineasa-Covas 26.85 52 ⇓P **P 08 44 48.4 -0.8**
ISR Istrita 26.86 53 P **P 08 44 49.8 +0.6**
LEHL Lehliu 26.87 55 ⇑P **P 08 44 49.3 +0.1**
STNU Starunia 26.87 45 P **P 08 44 49.8 +0.5**
ARG Arkhangelos 26.89 73 IAmb IAmb 08 45 08.5
comp=Z,62nm,1.2s
ARG Arkhangelos 26.89 73 ⇓P **P 08 44 51.6 +2.1**
ONER Baraj Valea Uz 27.14 51 ⇑P **P 08 44 51.5 -0.2**
PLOR Plostina 27.15 52 ⇑P **P 08 44 51.5 -0.3**
PLOR Plostina 27.15 52 P **P 08 44 51.5 -0.3**
VRI Vrincioaia 27.21 52 ⇑P **P 08 44 51.9 -0.4**
VRI Vrincioaia 27.21 52 P **P 08 44 51.9 -0.4**
VRI Vrincioaia 27.21 52 P **P 08 44 52.9 +0.6**
comp=Z,19nm,1.1s
GRER 27.23 53 ⇑P **P 08 44 52.7 +0.2**
MANT Manisa 27.24 68 IAmb IAmb 08 45 01.7
comp=Z,90nm,1.8s
TESR Tescani 27.36 51 ⇑P **P 08 44 52.4 -1.3**
TESR Tescani 27.36 51 P **P 08 44 54.5 +0.8**
comp=Z,17nm,1.2s
ICOR Ion Corvin 27.46 56 ⇑P **P 08 44 54.6 0.0**
CFR Carcaliu 27.96 54 ⇑P **P 08 44 57.8 -1.2**
CFR Carcaliu 27.96 54 P **P 08 44 57.7 -1.2**
TIRR Tirgusor 27.97 56 IAmb IAmb 08 45 03.5
comp=Z,30nm,1.1s
TIRR Tirgusor 27.97 56 ⇑P **P 08 44 59.1 -0.1**
TIRR Tirgusor 27.97 56 P **P 08 44 59.0 -0.1**
TIRR Tirgusor 27.97 56 P **P 08 45 00.9 +1.8**
comp=Z,27nm,1.2s
TPGR Topolog 28.07 55 ⇓P **P 08 44 59.0 -1.1**
ELL Elmali 28.31 72 IAmb IAmb 08 45 09.2
comp=Z,18nm,0.9s
KONO Kongsberg 28.55 15 *i* P **P 08 45 01.7 -2.4**
KONO pmax pmax
comp=Z,36nm,1.5s
ISP Isparta 28.78 70*ce*P **P 08 45 08.2 +1.7**
ISP pmax pmax
comp=Z,16nm,1.7s
RNPP5 Staryi Chortor 28.82 41 P **P 08 45 07.4 +0.8**
RNPP8 Varash 28.86 41 P **P 08 45 07.5 +0.6**
RNPP9 Sopachiv 28.91 41 P **P 08 45 08.0 +0.6**
SUW Suwalki 28.93 34 *e*P **P 08 45 06.0 -1.6**
SUW Suwalki 28.93 34 *e*P **P 08 45 07.7 +0.2**
SUW Suwalki 28.93 34 ⇑P **P 08 45 08.8 +1.3**
SORM Soroca 29.00 48 ⇑P **P 08 45 06.6 -1.7**
SORM Soroca 29.00 48 P **P 08 45 06.5 -1.7**
LUBAR Lubar, Ukraine 29.32 44 P **P 08 45 11.4 +0.4**
HFS Hagfors 29.96 18 P **P 08 45 15.4 -1.2**
comp=Z,11nm,1.1s,baz=174,slow=4.2,SNR=4.7
HFS LR LR 08 57 52.5
comp=Z,984nm,19.0s,baz=210,slow=38
comp=Z,11nm,1.1s
NB2 NORSAR Subarra 30.16 15 P **P 08 45 17.6 -0.9**
comp=Z,16nm,1.2s,baz=206,slow=9.3
NOA NORSAR Array B 30.16 15 P **P 08 45 17.5 -0.9**
comp=Z,7.5nm,1.1s,baz=208,slow=8.7,SNR=4.0
NOA LR LR 08 58 55.8
comp=Z,654nm,18.3s,baz=220,slow=39
comp=Z,7.5nm,1.1s
PABE Paberze 30.19 32 *e*P **P 08 45 18.8 +0.1**
AK20 Malin Array Si 30.38 44 P **P 08 45 21.3 +0.8**
AK17 Malin Array Si 30.39 44 P **P 08 45 21.3 +0.8**
AK14 Malin Array Si 30.39 44 P **P 08 45 21.4 +0.8**
AK21 Malin Array Si 30.41 44 P **P 08 45 21.5 +0.8**
AK21 pP **pP 08 45 24.7 +0.5**
AK07 Malin Array Si 30.42 44 P **P 08 45 21.6 +0.8**
AK06 Malin Array Si 30.43 44 P **P 08 45 21.6 +0.7**
AK05 Malin Array Si 30.45 44 P **P 08 45 21.6 +0.6**
AK04 Malin Array Si 30.46 44 P **P 08 45 20.8 -0.4**
KIEV Kiev 30.48 44 P **P 08 45 22.0 +0.7**
KIEV IAmb IAmb 08 45 23.2
comp=Z,48nm,1.9s
KIEV Kiev 30.48 44 P **P 08 45 22.0 +0.7**
KIEV pmax pmax
comp=Z,47nm,1.9s
AKASG Malin Array Be 30.49 44 P **P 08 45 19.1 -2.4**
comp=Z,2.2nm,0.7s,baz=248,slow=10,SNR=7.1
AKASG LR LR 08 57 40.4
comp=Z,301nm,21.9s,baz=243,slow=37
AKASG Malin Array Be 30.49 44 *i* P **P 08 45 22.5 +1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 30.49 44*ce*P **P 08 45 23.0 +1.6**
AKBB pmax pmax
comp=Z,28nm,1.8s
AKBB Malin Array Si 30.49 44 P **P 08 45 21.0 -0.4**

NACGM **Naroch** 31.17 35 *e*P P 08 45 30.4 +3.1
comp=Z,22nm,1.0s,baz=238
BR131 **Keskin Array S** 31.23 66 P P 08 45 28.6 +0.3
BR131 **Keskin Array S** 31.23 66 P P 08 45 28.6 +0.3
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BRTR **Keskin Array B** 31.23 66 P P 08 45 27.7 -0.6
comp=Z,0.9nm,0.6s,baz=292,slow=8.9,SNR=8.1
comp=Z,0.9nm,0.6s
BRTR **Keskin Array B** 31.23 66 P P 08 45 29.3 +1.0
BRTR **Keskin Array B** 31.23 66 P P 08 45 29.3 +1.0
MNK **Minsk** 31.50 36 *i* P P 08 45 25.0 -5.2
comp=E,21nm,0.7s
MNK *i* P P 08 45 25.0 -5.2
comp=N,14nm,0.9s
MNK *i* P P 08 45 25.0 -5.2
comp=Z,15nm,0.7s,baz=240
MNK *i* PP PnPn 08 46 28.0 -5.2
MNK *i* PPP PPP 08 46 36.8
MNK *i* S S 08 50 34.3 -3.9
MNK *i* SS SnSn 08 52 20.7 -2.1
MNK *i* SSS SSS 08 52 35.0
MNK *i* LQ LQ 08 55 11.7
MNK *i* LR LR 08 57 55.5
MNK *i* LRM MLR 08 59 14.3
comp=N,355nm,15.0s
MNK *i* LRM MLR 08 59 23.2
comp=Z,375nm,16.2s
MNK *i* LRM MLR 08 59 48.6
comp=E,420nm,14.7s
MNK **Minsk** 31.50 36 *i* P P 08 45 25.0 -5.3
MNK *i* PPP PPP 08 46 36.7
MNK *i* S S 08 50 34.3 -3.9
MNK *i* SS SnSn 08 52 20.6 -2.1
MNK pmax pmax
comp=N,14nm,0.9s
MNK pmax pmax
comp=E,21nm,0.7s
MNK pmax pmax
comp=Z,15nm,0.7s
MNK MLR MLR
comp=N,355nm,15.0s
MNK MLR MLR
comp=Z,375nm,16.0s
MNK MLR MLR
comp=E,420nm,15.0s
SIM **Simferopol'** 32.05 56 *e*P P 08 45 32.6 -2.6
SIM *e*S S 08 50 44.4 -2.7
SIM smax smax
comp=E,220nm,16.4s
SIM MLR MLR
comp=Z,397nm,25.2s
VSU **Vasula** 33.20 30 *e*P P 08 45 43.8 -1.3
VSU **Vasula** 33.20 30 *ce*P P 08 45 44.9 -0.2
VSU pmax pmax
comp=Z,101nm,1.3s
VSU **Vasula** 33.20 30 ⇓P P 08 45 44.0 -1.1
MMAI **Mount Meron Ar** 33.20 78 P P 08 45 46.5 +0.9
comp=Z,11nm,0.7s,baz=281,slow=9.3,SNR=9.2
comp=Z,11nm,0.7s
ARBE **Arbavere** 33.50 28 *e*P P 08 45 47.9 +0.2
BORG **Borgarnes** 33.81 347 LR LR 08 58 39.4
comp=Z,229nm,19.9s,baz=160,slow=35
ANN **Anapa** 34.37 57 *e*P P 08 45 53.4 -2.0
ANN *e*S S 08 51 26.7 +3.7
ANN MLR MLR
comp=E,709nm,23.0s
ANN MLR MLR
comp=Z,301nm,12.0s
ANN MLR MLR
comp=N,359nm,10.0s
FINES **FINESS Array B** 34.85 25 P P 08 45 58.6 -0.8
comp=N,11nm,0.8s,baz=206,slow=5.2,SNR=20
comp=N,11nm,0.8s
FINES **FINESS Array B** 34.85 25 P 08 45 59.0 -0.5
FINES **FINESS Array B** 34.85 25 P P 08 45 59.0 -0.5
FIA1 **FINESS Array S** 34.85 25 P P 08 45 59.0 -0.4
SOC **Sochi** 35.91 59 *e*P P 08 46 06.0 -2.8
SOC *e* 08 47 30.6
SOC *e*PPP PPP 08 47 43.7
SOC *e*S S 08 51 46.2 -0.7
SOC *e*SS SnSn 08 54 13.6 +3.5
SOC *e*SSS SSS 08 54 33.3
SOC MLR MLR
comp=Z,256nm,20.0s
OBN **Obninsk** 36.28 39 LR LR 09 02 21.4
comp=Z,375nm,18.2s,baz=164,slow=38
OBN **Obninsk** 36.28 39 *e*P P 08 46 12.2 +0.4
OBN *e* 08 47 34.6
OBN *e*SS SS 08 54 44.2 +14
OBN pmax pmax
comp=Z,69nm,1.6s
OBN MLR MLR
comp=Z,319nm,15.0s
ERBR **Yeremizino-Bor** 36.60 56 *e*P P 08 46 14.5 -0.2
ERBR pmax pmax
comp=Z,37nm,1.0s
VSR **Storozhevoye** 36.62 46 *e*P P 08 46 12.4 -2.3
VSR pmax pmax
comp=Z,30nm,1.0s
VORD **Divnogorie** 36.63 47 *e*P P 08 46 12.4 -2.5
VORD pmax pmax
comp=Z,20nm,1.1s
LABN **Labinsk** 36.69 58 *e*P P 08 46 18.6 +3.1
LABN pmax pmax
comp=Z,38nm,0.7s
VORR **Voronezh** 36.75 46 *e*P P 08 46 13.9 -1.9
VORR pmax pmax
comp=Z,40nm,1.0s
LPSR **Galich'ya Gora** 36.82 44 *e*P P 08 46 14.2 -2.2
LPSR pmax pmax
comp=Z,30nm,1.2s
MOS **Moscow** 37.07 39 *e*P P 08 46 14.8 -3.7
MOS pmax pmax
comp=Z,126nm,1.8s
MOS MLR MLR
comp=Z,400nm,17.0s
JOF **Joensuu** 37.69 26 *e*P P 08 46 23.0 -0.7
SHA1 **Shidzhatmaz** 38.05 59 *i* P P 08 46 26.3 -1.0
KIV **Kislovodsk** 38.08 59 *e*P P 08 46 27.5 +0.2
KIV pmax pmax
comp=Z,7.0nm,1.0s
NEUR **Neytrino** 38.08 60 *i* P P 08 46 28.9 +1.4
NEUR pmax pmax
comp=Z,6.0nm,1.1s
KVAR **Kislovodsk Arr** 38.08 59 LR LR 09 05 07.4
comp=Z,408nm,18.6s,slow=41
VRH **Novokhopyorsk** 38.18 47 *e*P P 08 46 26.5 -1.5
VRH pmax pmax
comp=Z,50nm,1.0s
KBZ **Khabaz** 38.23 59 P P 08 46 28.4 0.0
comp=Z,6.3nm,1.0s,baz=270,slow=4.1,SNR=9.7
comp=Z,6.3nm,1.0s
KBZ **Khabaz** 38.23 59 *i* P P 08 46 28.7 +0.3
KBZ pmax pmax
comp=Z,17nm,1.8s
JMIC **Jan Mayen** 38.47 358 LR LR 09 03 08.7
comp=Z,745nm,19.3s,baz=188,slow=37
NCK **Nalchik** 38.73 60 *i* P P 08 46 33.9 +1.1
NCK pmax pmax
comp=Z,13nm,0.8s
GNI **Garni** 39.74 65 *ce*P P 08 46 42.3 +0.9
GNI pmax pmax
comp=Z,16nm,1.7s
KLMR **Klimovskoe** 39.98 32 *e*P P 08 46 40.4 -2.5
KLMR pmax pmax
comp=Z,76nm,1.5s
KLMR MLR MLR
comp=Z,530nm,17.0s
ARCES **ARCESS Array B** 40.53 16 P P 08 46 46.4 -1.0
comp=Z,8.7nm,0.9s,baz=218,slow=7.6,SNR=11
comp=Z,8.7nm,0.9s
ARCES **ARCESS Array B** 40.53 16 P P 08 46 46.8 -0.6
ARCES IAmb IAmb 08 46 52.0
comp=Z,48nm,1.4s
ARCES **ARCESS Array B** 40.53 16 P P 08 46 46.8 -0.6
ARCES pmax pmax
comp=Z,48nm,1.5s
KEV **Kevo** 41.04 16 P P 08 46 51.1 -0.5
KEV IAmb IAmb 08 47 38.3
comp=Z,46nm,1.3s
KEV **Kevo** 41.04 16 P P 08 46 51.1 -0.5
KEV pmax pmax
comp=Z,46nm,1.3s
APA **Apatity** 41.24 21 ⇓*i*P P 08 46 52.3 -0.9
APA MLR MLR
comp=Z,883nm,20.8s
AKT **Akhty** 41.88 62 *e*P P 08 46 58.3 -0.7
AKT *e*S S 08 53 16.7 -0.4
AKT pmax pmax
comp=Z,30nm,1.3s
BELG **Belogornoye** 41.99 46 *i* P P 08 46 58.5 -1.0
BELG pmax pmax
comp=Z,15nm,1.3s
SFJD **Kangerlussuaq** 43.74 336 LR LR 09 04 35.6
comp=Z,346nm,18.4s,baz=116,slow=35
SUMG **Summit** 43.77 346 *i* P P 08 47 15.0 +0.8
KIRV **Kirov** 44.03 37 *ce*P P 08 47 15.5 -0.5
RAYN **Ar Rayn** 44.51 89 P P 08 47 23.0 +2.6
RAYN **Ar Rayn** 44.51 89 P P 08 47 23.0 +2.6
RAYN pmax pmax
comp=Z,8.0nm,0.9s
DAG **Danmarks Havn** 44.72 355 *i* P P 08 47 23.0 +1.7
SPITS **Spitsbergen Ar** 46.52 6 LR LR 09 08 44.9
comp=Z,357nm,18.9s,baz=188,slow=38
MBAR **Mbarara** 46.73 128 LR LR 09 07 25.7
comp=Z,451nm,20.2s,baz=327,slow=36
MBAR **Mbarara** 46.73 128 P P 08 47 38.6 +0.4
MBAR IAmb IAmb 08 47 44.4
comp=Z,16nm,1.4s
MBAR **Mbarara** 46.73 128 *ce*P P 08 47 40.8 +2.7
MBAR pmax pmax
comp=Z,18nm,1.7s
LODK **Lodwar** 47.12 120 P P 08 47 41.3 +0.2
SCHQ **Schefferville** 48.49 317 P P 08 47 51.2 0.0
comp=Z,5.8nm,0.5s,baz=118,slow=5.3,SNR=6.7
SCHQ LR LR 09 06 12.1
comp=Z,166nm,18.2s,baz=73,slow=34
comp=Z,5.8nm,0.5s
ARTI **Arti** 48.57 41 P P 08 47 51.3 -0.4
ARTI **Arti** 48.57 41 *d* *i*P P 08 47 51.6 -0.2
ARTI 08 49 13.6
ARTI S S 08 54 55.1 +1.9
ARTI SS SS 08 58 21.4 -1.4
ARTI pmax pmax
comp=Z,33nm,0.9s
ARTI MLR MLR
comp=Z,438nm,15.0s
ARTI **Arti** 48.57 41 ⇓P P 08 47 51.4 -0.4
AB31 **Akbulak array** 49.76 51 P P 08 48 01.1 +0.2
AB31 IAmb IAmb 08 48 05.8
comp=Z,12nm,1.1s
ABKAR **Akbulak array** 49.76 51 P P 08 48 00.8 -0.1
SVE **Sverdlovsk** 49.83 41 *e*P P 08 48 01.6 +0.3
SVE pmax pmax
comp=Z,33nm,1.5s
FRB **Frobisher Bay** 49.94 328 LR LR 09 06 59.2
comp=Z,240nm,18.7s,baz=90,slow=33
KMBO **Kilima Mbogo** 51.60 122 P P 08 48 17.7 +2.1
comp=Z,1.1nm,0.3s,baz=304,slow=5.8,SNR=4.7
MDP **Montagnes des** 52.72 249 LR LR 09 06 20.0
comp=Z,459nm,21.6s,baz=50,slow=31
UOSS **Minazif** 52.94 82 P P 08 48 25.0 -0.1
TSUM **Tsumeb** 55.63 155 LR LR 09 11 21.0
comp=Z,276nm,18.1s,baz=336,slow=35
BORK **Borovoye** 55.72 45 *ce*P P 08 48 46.1 +1.1
BORK pmax pmax
comp=Z,32nm,1.7s
BVAR **Borovoye Array** 55.76 45 P P 08 48 45.8 +0.5
comp=Z,10nm,1.1s,baz=270,slow=5.9,SNR=10
comp=Z,10nm,1.1s
SJG **San Juan** 57.04 271 LR LR 09 07 48.7
comp=Z,107nm,21.6s,baz=64,slow=30
SADO **Sadowa** 57.75 306 LR LR 09 12 35.6
comp=Z,458nm,20.0s,baz=104,slow=35
PRPB **Parauapebas** 57.98 237 *e*P P 08 49 03.0 +1.5
KK31 **Karatay Array** 58.15 56 P P 08 49 02.1 -0.3
KK31 **Karatay Array** 58.15 56 P P 08 49 02.1 -0.3
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR **Karatay Array** 58.15 56 P P 08 49 01.9 -0.5
KKAR **Karatay Array** 58.15 56 P P 08 49 01.9 -0.5
GRTLG **Ghanzi** 58.97 152 P P 08 49 08.2 -0.2
GRTLG IAmb IAmb 08 49 16.9
comp=Z,14nm,1.0s
BOAV **Boa Vista** 60.62 252 P P 08 49 19.5 -0.3
BOAV **Boa Vista** 60.62 252 *e*P P 08 49 21.1 +1.3
BOAV *e*S S 08 57 38.8 +2.4
AAK **Ala-Archa** 61.08 56 LR LR 09 21 08.8
comp=Z,200nm,18.2s,baz=292,slow=41
AAK **Ala-Archa** 61.08 56 P P 08 49 22.9 +0.1
AAK **Ala-Archa** 61.08 56 *ce*P P 08 49 24.4 +1.6
AAK pmax pmax
comp=Z,9.0nm,1.0s
ITTB **Itaituba** 61.09 243 *e*P P 08 49 24.2 +1.3
KURBB **Kurchatov Arra** 61.24 46 P P 08 49 23.5 0.0
comp=Z,19nm,0.9s,baz=292,slow=7.6,SNR=38
comp=Z,19nm,0.9s
KURK **Kurchatov** 61.27 46 P P 08 49 23.8 +0.1
KURK **Kurchatov** 61.27 46 *ce*P P 08 49 23.8 +0.1
KURK pmax pmax
comp=Z,40nm,1.3s
NPGB **Novo Progresso** 62.58 240 *e*P P 08 49 33.9 +0.9
SNDB **Serra Nova Dou** 63.12 233 *e*P P 08 49 38.5 +1.9
KDJ **Kajisay** 63.12 56 IAmb IAmb 08 49 42.0
comp=Z,16nm,1.0s
KSH **Kashi** 63.20 59 P P 08 49 37.4 +0.3
KSH pP pP 08 49 40.6 -0.3
KSH pmax pmax
comp=Z,56nm,1.0s
KSH LR LR
comp=Z,560nm,24.5s
KSH LR LR
comp=Z,390nm,20.2s
KSH LR LR
comp=Z,760nm,23.2s
ZAA0 **Zalesovo Array** 63.84 41 P P 08 49 41.0 +0.2
ZAA0 IAmb IAmb 08 49 45.6
comp=Z,8.0nm,1.1s
ZALV **Zalesovo Beam** 63.84 41 P P 08 49 40.9 +0.1
comp=Z,2.9nm,0.7s,baz=285,slow=7.4,SNR=14
comp=Z,2.9nm,0.7s
ZALV **Zalesovo Beam** 63.84 41 P P 08 49 40.6 -0.2
ZALV **Zalesovo Beam** 63.84 41 *i* P P 08 49 41.0 +0.1
ZALV pmax pmax
comp=Z,3.0nm,0.7s
LBTB **Lobatse** 64.02 150 LR LR 09 16 14.5
comp=Z,486nm,19.2s,baz=332,slow=35
TKL **Tuckaleechee C** 64.11 297 P P 08 49 44.6 +1.7
comp=Z,3.1nm,0.8s,baz=113,slow=7.7,SNR=1.4
TKL LR LR 09 14 15.5
comp=Z,193nm,20.8s,baz=73,slow=33
comp=Z,3.1nm,0.8s
MACA **Manacapuru-AM** 64.11 248 *e*P P 08 49 44.2 +1.1
MACA *e*S S 08 58 22.7 +2.4
MAKZ **Makanchi** 64.66 49 P P 08 49 46.6 +0.3
MAKZ IAmb IAmb 08 49 51.1
comp=Z,17nm,0.9s
MAKZ **Makanchi** 64.66 49 P P 08 49 46.6 +0.3
MAKZ pmax pmax
comp=Z,17nm,1.0s
MAKZ **Makanchi** 64.66 49 ⇓P P 08 49 46.6 +0.3
MK31 **Makanchi Array** 64.86 49 *i* P P 08 49 47.0 -0.7
MKAR **Makanchi Array** 64.86 49 P P 08 49 47.5 -0.2
comp=Z,9.0nm,0.8s,baz=289,slow=4.7,SNR=19
comp=Z,9.0nm,0.8s
MKAR **Makanchi Array** 64.86 49 P P 08 49 47.4 -0.4
SDV **Santo Domingo** 65.38 265 LR LR 09 15 02.9
comp=Z,70nm,21.8s,baz=72,slow=33
SDV **Santo Domingo** 65.38 265 *e*P P 08 49 53.4 +1.6
T47A **Sharon Grove** 66.06 300 P P 08 49 55.7 +0.1
ULM **Lac du Bonnet** 66.65 316 LR LR 09 17 24.6
comp=Z,141nm,18.2s,baz=17,slow=34
PDRB **Porto dos Gac** 66.65 238 *e*P P 08 50 01.0 +1.4
DGZ **Jazzator, Alta** 66.92 45 *i* P P 08 50 00.4 -0.7
DGZ pmax pmax
comp=Z,19nm,1.3s
BOSA **Boshof** 67.06 152 P P 08 50 01.1 -1.0
comp=Z,2.5nm,0.7s,baz=342,slow=7.0,SNR=7.6
BOSA LR LR 09 17 46.7
comp=Z,294nm,18.6s,baz=342,slow=35
comp=Z,2.5nm,0.7s
BOSA **Boshof** 67.06 152 P P 08 50 01.8 -0.3
BOSA **Boshof** 67.06 152 P P 08 50 01.8 -0.3
BOSA pmax pmax
comp=Z,44nm,1.7s
TEFE **Tefe** 67.43 250 *e*P P 08 50 05.5 +0.9
A36M **Sachs Harbour** 67.97 343 P P 08 50 08.3 +1.2
A36M IAmb IAmb 08 50 38.4
comp=Z,11nm,0.9s
WMQ **Urumqi** 69.55 51 *e*P P 08 50 19.8 +2.2
WMQ PcP PcP 08 50 45.8 +5.1
WMQ S S 08 59 25.9 +0.4
WMQ pmax pmax
comp=Z,22nm,0.9s
VILB **Vilhena** 70.05 239 IAmb IAmb 08 50 28.0
comp=Z,14nm,0.9s
VILB **Vilhena** 70.05 239 *e*P P 08 50 23.1 +2.2
YKA **Yellowknife Ar** 70.17 332 P P 08 50 21.2 +0.3
comp=Z,2.1nm,0.8s,baz=29,slow=6.8,SNR=7.1
YKA LR LR 09 20 02.4
comp=Z,170nm,18.3s,baz=76,slow=35
comp=Z,2.1nm,0.8s
YKA **Yellowknife Ar** 70.17 332 P P 08 50 20.1 -0.8
FCAR **Ozark Folk Cen** 70.19 300 P P 08 50 22.0 +0.4
FCAR IAmb IAmb 08 50 39.2
comp=Z,14nm,1.1s
ROSC **El Rosal** 70.62 263 LR LR 09 22 03.9
comp=Z,160nm,18.1s,baz=82,slow=36
TIXI **Tiksi** 70.95 14 *i* P P 08 50 23.0 -2.5
TIXI pmax pmax
comp=Z,27nm,3.7s
PTLB **Pontes e Lacer** 70.97 237 P P 08 50 26.3 -0.1
PTLB IAmb IAmb 08 51 32.0
comp=Z,14nm,1.6s
PTLB **Pontes e Lacer** 70.97 237 *e*P P 08 50 28.2 +1.8
KNGR **Kungurtug, Tuv** 72.31 41 *i* P P 08 50 34.4 +0.1
KNGR pmax pmax
comp=Z,16nm,1.0s
INK **Inuvik** 72.55 342 LR LR 09 21 24.6
comp=Z,132nm,20.7s,baz=6.5,slow=35
SIV **San Ignacio** 72.70 237 LR LR 09 21 31.8
comp=Z,420nm,18.4s,baz=81,slow=35
G31M **Satah River** 73.77 342 P P 08 50 42.6 +0.2
G31M IAmb IAmb 08 51 08.9
comp=Z,17nm,1.3s
HYBB **Hyderabad (bro** 74.91 79 *e*P P 08 50 50.1 +0.1
F26K **Sheenjek River** 75.53 345 IAmb IAmb 08 50 59.4
comp=Z,24nm,1.8s
ZAK **Zakamensk** 75.55 39 *e*P P 08 50 56.5 +3.2
ZAK pmax pmax
comp=Z,15nm,1.6s
H27K **Steamboat Moun** 76.14 344 IAmb IAmb 08 51 02.8
comp=Z,9.3nm,0.9s
EVN **Everest** 76.34 66 IAmb IAmb 08 51 03.5
comp=Z,16nm,0.9s
OTAV **Otavalo** 76.58 262 *e*P P 08 51 01.7 +1.7
I27K **Kandik River** 76.67 343 IAmb IAmb 08 51 47.6
comp=Z,14nm,1.1s
JTS **Las Juntas de** 76.72 274 LR LR 09 19 08.7
comp=Z,136nm,21.9s,baz=56,slow=31
CPUP **Villa Florida** 77.39 227 P P 08 51 04.3 +0.6
comp=Z,0.6nm,0.7s,baz=142,slow=0.7,SNR=7.3
CPUP LR LR 09 22 49.7
comp=Z,142nm,21.6s,baz=268,slow=34
comp=Z,0.6nm,0.7s
CPUP **Villa Florida** 77.39 227 P P 08 51 03.8 0.0
LPAZ **La Paz** 78.03 242 P P 08 51 08.4 +0.1
comp=Z,1.8nm,0.7s,baz=34,slow=8.7,SNR=6.2
LPAZ LR LR 09 24 05.6
comp=Z,141nm,20.4s,baz=52,slow=35
comp=Z,1.8nm,0.7s
LPAZ **La Paz** 78.03 242 *e*P P 08 51 09.0 +0.7
PD31 **Pinedale Array** 78.50 314 P P 08 51 10.5 +0.3
PD31 IAmb IAmb 08 52 40.1
comp=Z,18nm,1.8s
PDAR **Pinedale Array** 78.50 314 P P 08 51 10.2 0.0
comp=Z,3.1nm,0.9s,baz=66,slow=6.4,SNR=7.1
PDAR LR LR 09 23 36.9
comp=Z,128nm,21.2s,baz=48,slow=34
comp=Z,3.1nm,0.9s
ILAR **Eielson Array** 78.60 345 P P 08 51 11.0 +1.0
comp=Z,0.4nm,0.6s,baz=12,slow=5.2,SNR=10
comp=Z,0.4nm,0.6s
ILAR **Eielson Array** 78.60 345 P P 08 51 10.6 +0.6
YAK **Yakutsk** 78.62 20 LR LR 09 29 19.7
comp=Z,380nm,21.9s,baz=322,slow=38
YAK **Yakutsk** 78.62 20 *e*P P 08 51 08.3 -1.8
YAK *e* 08 51 16.9
YAK *e* 08 54 07.2
YAK *e*S S 09 01 05.9 -0.8
YAK *e* 09 01 30.4
YAK *e*SS SS 09 06 08.4 -0.8
YAK pmax pmax
comp=Z,12nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.4s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=Z,580nm,3.5s
YAK pmax pmax
comp=E,467nm,3.2s
YAK pmax pmax
comp=N,508nm,3.5s
YAK smax smax
comp=E,687nm,3.3s
YAK smax smax
comp=N,500nm,3.4s
DLBC **Dease Lake** 78.63 334 LR LR 09 25 55.6
comp=N,173nm,18.1s,baz=12,slow=36
SONM **Songino Array** 78.69 40 P P 08 51 11.9 +0.9
comp=N,3.9nm,1.1s,baz=298,slow=6.7,SNR=7.0
SONM LR LR 09 29 06.1
comp=N,360nm,20.0s,baz=317,slow=38
comp=N,3.9nm,1.1s
LSA **Lhasa** 78.74 62 P P 08 51 08.8 -3.2
F19K **Shaleruckit Mo** 78.80 350 IAmb IAmb 08 51 14.9
comp=Z,6.0nm,0.7s
ULN **Ulaanbaatar** 79.03 40 P P 08 51 11.4 -1.5
ULN pmax pmax
comp=Z,15nm,1.4s
BILL **Bilibino** 79.38 4 *i* P P 08 51 12.4 -1.8
BILL pmax pmax
comp=Z,14nm,1.8s
GTA **Gaotai** 79.61 50 *e*P P 08 51 16.3 +0.1
GTA pP pP 08 51 20.3 +0.2
GTA pmax pmax
comp=Z,10.0nm,0.8s
GTA LR LR
comp=Z,230nm,18.9s
GTA LR LR
comp=Z,280nm,18.5s
GTA LR LR
comp=Z,280nm,18.2s
PB18 **Visviri** 79.85 242 IAmb IAmb 08 51 41.7
comp=Z,17nm,1.0s
PB16 **IPOC Station P** 80.34 241 P P 08 51 20.4 -0.4
PB16 IAmb IAmb 08 51 28.2
comp=Z,56nm,2.0s
ATAH **Atahualpa** 80.63 255 LR LR 09 25 39.0
comp=Z,143nm,19.9s,baz=56,slow=35
B08A **Colville Reser** 80.70 322 P P 08 51 22.2 +0.4
B08A IAmb IAmb 08 51 28.0
comp=Z,11nm,1.1s
ANMO **Albuquerque** 80.81 306 LR LR 09 27 36.3
comp=Z,361nm,18.6s,baz=150,slow=36
GO01 **Chusmiza** 80.95 240 P P 08 51 23.4 -0.6
GO01 IAmb IAmb 08 51 58.4
comp=Z,14nm,1.5s
PB11 **IPOC Station P** 81.34 240 P P 08 51 25.4 -0.3
PB11 IAmb IAmb 08 51 29.8
comp=Z,15nm,0.9s
CMIG **Matias Romero** 81.48 285 LR LR 09 23 29.7
comp=Z,197nm,21.4s,baz=54,slow=33
Y22A **Socorro** 81.71 305 IAmb IAmb 08 52 23.1
comp=Z,12nm,1.4s
BMO **Blue Mountains** 81.81 319 P P 08 51 27.8 0.0
BMO IAmb IAmb 08 51 34.6
comp=Z,33nm,1.9s
BMO **Blue Mountains** 81.81 319 P P 08 51 27.8 0.0
BMO pmax pmax
comp=Z,33nm,2.0s
TXAR **Lajitas Array** 81.88 300 P P 08 51 29.8 +1.3
comp=Z,0.8nm,0.9s,baz=61,slow=4.5,SNR=6.0
TXAR LR LR 09 27 55.8
comp=Z,350nm,19.5s,baz=49,slow=36
comp=Z,0.8nm,0.9s
PALK **Pallekele** 81.90 87 LR LR 09 29 50.4
comp=Z,206nm,18.2s,baz=291,slow=37
NNA **Nana** 82.16 250 LR LR 09 24 05.8
comp=Z,158nm,21.8s,baz=48,slow=33
PB02 **IPOC Station P** 82.50 239 IAmb IAmb 08 51 33.6
comp=Z,15nm,1.0s
BRDH **Bariadhala** 82.79 68 LR LR 09 34 53.7
comp=Z,244nm,18.2s,baz=316,slow=40
SEY **Seymchan** 82.94 11 LR LR 09 31 51.5

	comp=Z,115nm,21.9s,baz=328,slow=38							
LON	**Longmire**	**83.02**	**322**	IAmb	IAmb	08 52 08.8		
	comp=Z,6.5nm,0.9s							
121A	**Cookes Peak, D**	**83.07**	**304**	IAmb	IAmb	08 51 42.5		
	comp=Z,10nm,1.3s							
ELK	**Elko**	**83.13**	**314**	P	**P**	**08 51 38.8**	**+3.8**	
	comp=Z,0.5nm,0.6s,baz=334,slow=4.4,SNR=3.1							
LZDM	**Lanzhou Array**	**84.11**	**51**	P	**P**	**08 51 41.9**	**+1.7**	
	comp=Z,1.4nm,0.4s,baz=9.1,slow=3.6,SNR=1.5							
	comp=Z,1.4nm,0.4s							
X16A	**Lo Mia Camp, P**	**84.49**	**307**	IAmb	IAmb	08 51 54.8		
	comp=Z,8.6nm,1.1s							
319A	**Douglas**	**84.77**	**304**	IAmb	IAmb	08 52 04.3		
	comp=Z,16nm,1.1s							
J05D	**Fort Rock, OR**	**84.99**	**319**	IAmb	IAmb	08 51 51.1		
	comp=Z,10nm,1.2s							
K05A	**Summer Lake**	**85.17**	**319**	IAmb	IAmb	08 51 56.3		
	comp=Z,11nm,1.0s							
W13A	**Hualapai Mount**	**85.70**	**309**	IAmb	IAmb	08 52 10.6		
	comp=Z,17nm,1.8s							
MA2	**Magadan**	**85.83**	**12**	LR	LR	09 35 52.0		
	comp=Z,168nm,19.0s,baz=317,slow=40							
HHC	**Hu-ho-hao-te**	**85.94**	**43**	*e*P	**P**	**08 51 48.3**	**-0.7**	
HHC				pmax	pmax			
	comp=Z,12nm,0.6s							
HHC				pmax	pmax			
	comp=Z,130nm,4.2s							
CD2	**Chengdu**	**87.14**	**55**	P	**P**	**08 51 58.9**	**+3.9**	
CD2				pmax	pmax			
	comp=Z,30nm,0.7s							
PZH	**PanZhiHua**	**88.30**	**60**	P	**P**	**08 52 01.8**	**+1.1**	
BJI	**Beijing**	**89.10**	**41**	P	**P**	**08 52 01.4**	**-2.6**	
BJI				pmax	pmax			
	comp=Z,4.0nm,1.3s							
KMI	**Kunming**	**89.83**	**60**	P	**P**	**08 52 12.4**	**+4.3**	
KMI				pmax	pmax			
	comp=Z,11nm,1.3s							
KMI				LR	LR			
	comp=Z,180nm,16.5s							
KMI				LR	LR			
	comp=Z,200nm,16.6s							
KMI				LR	LR			
	comp=Z,180nm,17.6s							
CMAR	**Chiang Mai Arr**	**90.81**	**68**	P	**P**	**08 52 13.3**	**+0.9**	
CMAR				LR	LR	09 40 54.8		
	comp=Z,1.9nm,0.3s,baz=298,slow=6.4,SNR=9.6							
CMAR				LR	LR	09 40 54.8		
	comp=Z,62nm,18.2s,baz=300,slow=41							
	comp=Z,1.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**90.81**	**68**		**P**	**08 52 11.9**	**-0.5**	
CMAR	**Chiang Mai Arr**	**90.81**	**68**	*i* P	**P**	**08 52 13.5**	**+1.1**	
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
GYA	**Guiyang**	**91.85**	**57**	⇓P	**P**	**08 52 16.6**	**-0.7**	
GYA				pmax	pmax			
	comp=Z,15nm,0.9s							
WHN	**Wuhan**	**94.43**	**49**	P	**P**	**08 52 28.1**	**-0.8**	
SHEM	**Shemya Is, Ala**	**94.98**	**1**	LR	LR	09 30 55.2		
	comp=Z,72nm,20.8s,baz=280,slow=33							
PLCA	**Paso Flores**	**95.22**	**224**	LR	LR	09 34 06.1		
	comp=Z,261nm,21.1s,baz=62,slow=35							
NJ2	**Nanjing**	**96.20**	**46**	*e*P	**P**	**08 52 35.6**	**-1.4**	
NJ2				pmax	pmax			
	comp=Z,11nm,0.5s							
ASAJ	**Asahikawa**	**97.85**	**23**	LR	LR	09 40 50.2		
	comp=Z,304nm,19.9s,baz=352,slow=38							
SYO	**Syowa Base**	**106.35**	**165**	*e*PKiKP	**PKiKP**	**08 57 32.2**	**-0.1**	
SYO	**Syowa Base**	**106.35**	**165**	⇓*e*PKiKP	**PKiKP**	**08 57 35.2**	**+2.9**	
QSPA	**South Pole Qui**	**122.53**	**180**	PKP	**PKiKP**	**08 58 06.4**	**+2.9**	
	comp=Z,1.4nm,0.7s,baz=169,slow=1.5,SNR=8.6							
VNDA	**Vanda**	**134.60**	**176**	PKP	**PKiKP**	**08 58 27.4**	**0.0**	
	comp=Z,0.7nm,0.8s,baz=241,slow=7.8,SNR=4.2							
WRA	**Warramunga Arr**	**141.03**	**82**	PKhKP	PKPpre	08 58 34.0		
	comp=Z,0.9nm,0.9s,baz=315,slow=2.2,SNR=8.3							
ASAR	**Alice Springs**	**142.25**	**87**	PKhKP	PKPpre	08 58 37.0		
	comp=Z,0.7nm,0.7s,baz=292,slow=2.6,SNR=8.3							
STKA	**Stephens Creek**	**151.19**	**98**	PKPbc	**PKiKP**	**08 59 02.8**	**+0.1**	
	comp=Z,9.9nm,0.8s,baz=320,slow=3.6,SNR=14							

*MDD **17** 08:52:30.6±1.4, 32.°80N×4.°59W, h0km, Mb4.2/6, M_mb3.6/6, Error ellipse: s-maj=17.3km s-min=11.7km az=74.0*

*IGIL **17** 08:52:32.1, 32.°80N×4.°59W, h2km*

INMG 17 08:52:28.2±1.7, 32.°70N×4.°10W, h12km±9km, ML2.5, 7C-2D, Error ellipse: s-maj=13.7km s-min=6.2km az=67.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr), Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EADA	**Adamuz**	**5.47**	**356**	Pn	Pn	08 53 50.9	+1.2
EADA				⇑*i*IVmb_VC		08 53 52.3	
	140nm,SNR=1.3						
EADA				Sn	Sn	08 54 49.6	-3.0
ECAB	**El Cabril**	**5.47**	**349**	Pn	Pn	08 53 50.1	+0.5
ECAB				⇑*i*IVmb_VC		08 53 52.4	
	80nm,SNR=0.9						
ECAB				Sn	Sn	08 54 48.1	-4.4
EMIN	**Mina Concepcio**	**5.48**	**338**	Pn	Pn	08 53 48.3	-1.3
EMIN				⇑*i*IVmb_VC		08 53 51.0	
	132nm,SNR=1.6						
EMIN				Sn	Sn	08 54 47.2	-5.5
PBDV	**Barranco-do-Ve**	**5.52**	**326**	*e*P	Pn	08 53 49.0	-1.3
PBDV				*e*S	Sn	08 54 50.3	-3.3
PVAQ	**Vaqueiros**	**5.55**	**329**	*e*P	Pn	08 53 49.4	-1.3
PVAQ				*e*S	Sn	08 54 48.8	-5.7
PVAQ				*i* IAML		08 54 51.8	
PVAQ				*i* IAML		08 54 52.0	
PVAQ				*i* IAML		08 54 52.5	
EGRO	**El Granado**	**5.56**	**331**	Pn	Pn	08 53 49.6	-1.3
EGRO				⇑*i*IVmb_VC		08 53 50.8	
	216nm,SNR=2.1						
EGRO				Sn	Sn	08 54 48.2	-6.6
PCVE	**Castro Verde**	**5.88**	**328**	*e*P	Pn	08 53 55.0	-0.3
PCVE				*e*S	Sn	08 54 59.8	-2.8
PCVE				*i* IAML		08 55 01.7	
PCVE				*i* IAML		08 55 02.0	
PCVE				*i* IAML		08 55 03.0	
PFVI	**Vila Bisbo**	**5.88**	**320**	*e*P	Pn	08 53 55.2	0.0
PFVI				*e*S	Sn	08 54 60.0	-2.7
PFVI				*i* IAML		08 55 00.8	
PFVI				*i* IAML		08 55 04.1	
PFVI				*i* IAML		08 55 07.9	
MORF	**Marmelete**	**5.92**	**322**	*e*P	Pn	08 53 54.3	-1.5
MORF	**Marmelete**	**5.92**	**322**	*e*P	Pn	08 53 54.3	-1.5
MORF				*e*S	Sn	08 55 00.5	-3.1
MORF				*i* IAML		08 55 03.7	
MORF				*i* IAML		08 55 04.8	
MORF				*i* IAML		08 55 06.2	
PBAR	**Barrancos**	**5.97**	**337**	*e*P	Pn	08 53 55.5	-0.9
PBAR				*e*S	Sn	08 55 00.7	-4.0
PBAR				*i* IAML		08 55 01.4	
PBAR				*i* IAML		08 55 04.3	
PBAR				*i* IAML		08 55 09.6	
MESJ	**Messejana**	**6.14**	**328**	*e*P	Pn	08 53 57.2	-1.5
MESJ	**Messejana**	**6.14**	**328**	*e*P	Pn	08 53 57.7	-1.0
MESJ				*e*S	Sn	08 55 05.0	-3.9
MESJ				*i* IAML		08 55 08.7	
MESJ				*i* IAML		08 55 09.3	
MESJ				*i* IAML		08 55 09.9	
PBEJ	**Beja**	**6.14**	**331**	*e*P	Pn	08 53 58.1	-0.7
PTEO	**Sao Teotonio**	**6.14**	**323**	*e*P	Pn	08 53 57.4	-1.4
PTEO				*e*S	Sn	08 55 04.9	-4.1
PTEO				*i* IAML		08 55 07.3	
PTEO				*i* IAML		08 55 09.1	
PTEO				*i* IAML		08 55 09.4	
EBAD	**Badajoz**	**6.49**	**339**	⇑*i*IVmb_VC		08 54 02.1	
	167nm,SNR=1.5						
EBAD				Pn	Pn	08 54 02.6	-1.0
EBAD				Sn	Sn	08 55 10.1	-7.5
EVO	**Evora**	**6.64**	**332**	⇓*i*P	Pn	08 54 05.0	-0.6
EVO				*e*S	Sn	08 55 16.3	-4.9
EVO				*i* IAML		08 55 20.0	
EVO				*i* IAML		08 55 21.1	
EVO				*i* IAML		08 55 22.1	
MOE	**Montemor**	**6.76**	**330**	*e*P	Pn	08 54 06.8	-0.6
MOE				*e*S	Sn	08 55 19.7	-4.7
MOE				*i* IAML		08 55 23.2	
MOE				*i* IAML		08 55 23.5	
MOE				*i* IAML		08 55 24.4	
PESTR	**Estremoz**	**6.78**	**336**	*e*P	Pn	08 54 07.5	0.0
PESTR				*e*S	Sn	08 55 19.9	-4.7
PESTR				*i* IAML		08 55 22.4	
PESTR				*i* IAML		08 55 27.1	
PARRA	**Arraiolos**	**6.89**	**333**	⇑*e*P	Pn	08 54 08.3	-0.8
PARRA				*e*S	Sn	08 55 21.7	-5.8
PARRA				*i* IAML		08 55 30.2	
PARRA				*i* IAML		08 55 31.9	
PARRA				*i* IAML		08 55 36.6	
PMTG	**Montargil**	**7.18**	**333**	*e*P	Pn	08 54 12.2	-0.9
PMTG				*e*S	Sn	08 55 30.4	-4.2
EPLA	**Plasencia**	**7.52**	**348**	Pn	Pn	08 54 17.3	-0.5
EPLA				⇑*i*IVmb_VC		08 54 18.2	
	117nm,SNR=0.8						
PSARD	**Sardoal**	**7.63**	**336**	⇓*e*P	Pn	08 54 18.8	-0.5
PSARD				*e*S	Sn	08 55 40.7	-5.0
PSARD				*i* IAML		08 55 50.3	
PSARD				*i* IAML		08 55 50.4	
PSARD				*i* IAML		08 55 58.6	
PCBR	**Castelo Branco**	**7.63**	**340**	*e*P	Pn	08 54 18.6	-0.6
PSBE	**So Bento**	**7.79**	**332**	*e*P	Pn	08 54 20.8	-0.6
PCAS	**Casmilo, Conde**	**8.15**	**335**	*e*P	Pn	08 54 26.0	-0.4
MVO	**Moncorvo**	**8.77**	**345**	*e*P	Pn	08 54 35.1	+0.2
POLO	**Lamas de Olo**	**9.15**	**342**	*e*P	Pn	08 54 40.2	+0.1

*IDC **17** 09:09:24.0±3.9, 41.°13N×20.°13E, h0km, mb3.2/4, mbtmp3.4/6, ML2.8/2, Error ellipse: s-maj=73.4km s-min=23.1km az=38.0*

*PRU **17** 09:09:26.8, 40.°89N×20.°02E, h10km*

*TIR **17** 09:09:27.9, 41.°33N×20.°01E, h29km±2km, Ml3.7/8*

*BEO **17** 09:09:27.2±0.5, 41.°19N×20.°02E, h0km, ML3.6/25*

*NEIC **17** 09:09:28.5±1.5, 41.°35N±0.°06×19.°95E±0.°03, h10km±2km, ML3.7/28, Error ellipse: s-maj=10.6km s-min=3.2km az=184.0*

*THE **17** 09:09:29.2, 41.°N±2.°×2.°0E±.°, h3km±3km, M3.4/37, MLh3.4/37*

*PDG **17** 09:09:29.3±0.8, 41.°32N×19.°98E, h11km±2km, MD3.8/8, ML3.7/10, Error ellipse: s-maj=1.2km s-min=1.6km az=0.0*

*SKO **17** 09:09:31.4, 41.°27N×20.°17E, h16km, ML3.5*

ISC 17 09:09:28.2±0.9, 41.°30N±0.°02×20.°01E±0.°02, h10km±6km, n201, σ1°30/265, 15C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.12**	**292**	Pg	**Pg**	**09 09 30.9**	**-0.2**
TIR				Sg	**Sg**	**09 09 33.8**	**+0.7**
TIR				AML	AML	09 09 35.3	
	138nm,0.4s						
TIR				AML	AML	09 09 35.4	
	147nm,0.6s						
PHP	**Peshkopia**	**0.50**	**40**	Pg	**Pg**	**09 09 37.4**	**-0.5**
PHP				Sg	**Sg**	**09 09 45.2**	**+0.6**
PHP				AML	AML	09 09 52.7	
	16nm,0.5s						
PHP	**Peshkopia**	**0.50**	**40**	P	**Pg**	**09 09 37.5**	**-0.5**
PHP				S	**Sg**	**09 09 44.9**	**+0.4**
OHR	**Ohrid**	**0.62**	**108**	*i* Pg	**Pg**	**09 09 39.9**	**-0.4**
OHR				*i* Sg	**Sb**	**09 09 50.4**	**+0.3**
OHR				*e*Lg	Lg	09 09 50.9	
	comp=N,2μm,0.5s						
OHR				*e*Lg	Lg	09 09 53.2	
	comp=E,4μm,0.9s						
ULC	**Ulcinj**	**0.88**	**319**	⇑*i*Pg	**Pg**	**09 09 44.0**	**-1.1**
ULC				*i* Sg	**Sb**	**09 09 57.3**	**-0.1**
KBN	**Korca**	**0.90**	**139**	Pg	**Pg**	**09 09 44.7**	**-0.8**
KBN				Sg	**Sb**	**09 09 58.4**	**+0.3**
KBN				AML	AML	09 10 04.7	
	comp=E,8.2nm,0.6s						
KBN	**Korca**	**0.90**	**139**	P	**Pg**	**09 09 44.7**	**-0.8**
KBN				S	**Sg**	**09 09 57.4**	**+0.2**
VLO	**Vlora**	**0.92**	**205**	Pg	**Pg**	**09 09 44.8**	**-1.1**
VLO				Sg	**Sn**	**09 10 01.7**	**+1.1**
VLO				AML	AML	09 10 06.0	
	comp=E,22nm,0.6s						
VLO	**Vlora**	**0.92**	**205**	P	**Pg**	**09 09 45.8**	**-0.1**
VLO				S	**Sn**	**09 10 00.8**	**+0.2**
DRME	**Dracevica, Mon**	**1.08**	**325**	*e*Pg	**Pg**	**09 09 47.9**	**-1.1**
DRME	**Dracevica, Mon**	**1.08**	**325**	*e*Pg	**Pg**	**09 09 47.7**	**-1.3**
DRME				*i* Sg	**Sn**	**09 10 04.3**	**-0.2**
NEST	**Nestorio**	**1.19**	**138**	Pn	**Pb**	**09 09 50.0**	**-0.9**
NEST				Sn	**Sn**	**09 10 08.9**	**+1.6**
NEST				AML	AML	09 10 18.6	
	comp=E,4.4nm,1.0s						
NEST	**Nestorio**	**1.19**	**138**	P	**Pb**	**09 09 50.4**	**-0.6**
NEST				S	**Sg**	**09 10 06.9**	**+0.4**
PDG	**Podgorica**	**1.26**	**334**	Pg	**Pn**	**09 09 51.0**	**-1.0**
PDG				Sg	**Sn**	**09 10 09.0**	**0.0**
PDG	**Podgorica**	**1.26**	**334**	Pn	**Pn**	**09 09 50.7**	**-1.2**
PDG				IAML		09 10 16.4	
	comp=E,1μm,0.6s						
PDG				IAML		09 10 16.6	
	comp=N,1μm,0.7s						
PDG	**Podgorica**	**1.26**	**334**	⇑P	**Pn**	**09 09 50.3**	**-1.7**
PDG	**Podgorica**	**1.26**	**334**	*e*Pg	**Pn**	**09 09 50.8**	**-1.2**
PDG				*e*Sg	**Sn**	**09 10 10.5**	**+1.5**
PDG	**Podgorica**	**1.26**	**334**	*e*Pg	**Pn**	**09 09 50.9**	**-1.1**
PDG				*i* Sg	**Sn**	**09 10 10.4**	**+1.4**
SKO	**Skopje**	**1.26**	**58**	*i* Pg	**Pg**	**09 09 52.2**	**-0.2**
SKO				*i* Sg	**Sn**	**09 10 09.5**	**+0.4**
PVY	**Plav**	**1.29**	**358**	*e*Pg	**Pn**	**09 09 51.9**	**-0.6**
PVY	**Plav**	**1.29**	**358**	*e*Pg	**Pn**	**09 09 51.5**	**-1.0**
PVY				*e*Sg	**Sn**	**09 10 11.2**	**+1.2**
BUM	**Brajici-Budva**	**1.30**	**320**	*e*Pg	**Pn**	**09 09 51.8**	**-0.8**
BUM				*i* Sg	**Sn**	**09 10 11.8**	**+1.7**
PENT	**Pentalofos**	**1.40**	**142**	P	**Pb**	**09 09 54.6**	**+0.1**
PENT				S	**Sg**	**09 10 13.5**	**+0.3**
BEY	**Berane**	**1.57**	**357**	*e*Pg	**Pb**	**09 09 57.2**	**-0.3**
IVA	**Berane**	**1.57**	**357**	*e*Pg	**Pn**	**09 09 56.6**	**+0.3**
IVA				*i* Sg	**Sg**	**09 10 20.2**	**+1.5**
KOME	**Kolasin**	**1.59**	**347**	*e*Pg	**Pb**	**09 09 57.3**	**-0.5**
KOME	**Kolasin**	**1.59**	**347**	⇑*i*Pg	**Pn**	**09 09 56.9**	**+0.3**
KOME				*i* Sg	**Sg**	**09 10 20.8**	**+1.4**
KEK	**Kerkira**	**1.60**	**186**	Pn	**Pg**	**09 10 01.5**	**+2.7**
KEK				IAML		09 10 33.4	
	comp=E,649nm,0.8s						
NKME	**Niksic**	**1.66**	**332**	*e*Pn	**Pb**	**09 09 58.4**	**-0.6**
NKME				*i* Sn	**Sg**	**09 10 22.7**	**+1.0**
KZN	**Kozani**	**1.67**	**126**	P	**Pn**	**09 09 58.1**	**+0.5**
KZN				S	**Sb**	**09 10 20.6**	**+0.4**
JAN	**Janina**	**1.77**	**158**	P	**Pb**	**09 10 00.5**	**-0.2**
JAN				S	**Sb**	**09 10 23.1**	**+0.1**
IGT	**Igoumenitsa**	**1.79**	**172**	Pn	**Pb**	**09 10 01.1**	**0.0**
IGT				Sn	**Sg**	**09 10 27.8**	**+2.1**
IGT	**Igoumenitsa**	**1.79**	**172**	P	**Pb**	**09 10 00.6**	**-0.5**
IGT				S	**Sn**	**09 10 23.1**	**+1.1**
TREB	**Trebinje**	**1.88**	**319**	*e*Pn	**Pn**	**09 10 01.3**	**+0.8**
TREB	**Trebinje**	**1.88**	**319**	*e*Pg	**Pb**	**09 10 02.1**	**-0.6**
TREB				*e*Sg	**Sg**	**09 10 29.9**	**+1.3**
VAY	**Valandovo**	**1.93**	**89**	*i* Pn	**Pb**	**09 10 02.7**	**-0.8**
VAY				*i* Sg	**Sb**	**09 10 28.1**	**+0.5**
VAY				*e*Lg	Lg	09 10 31.0	
	comp=N,578nm,1.0s						
VAY				*e*Lg	Lg	09 10 31.5	
	comp=E,246nm,0.7s						
BRY	**Bratogost**	**1.94**	**326**	*e*Pn	**Pn**	**09 10 02.3**	**+0.9**
BRY				*i* Sn	**Sb**	**09 10 29.3**	**+1.2**
PRMD	**Pramanda**	**1.96**	**155**	P	**Pb**	**09 10 03.8**	**-0.2**
SJES	**Sjenica**	**1.96**	**359**	*e*Pn	**Pb**	**09 10 03.7**	**-0.4**
SJES				*e*Sg	**Sg**	**09 10 34.1**	**+3.0**
BARS	**Barje**	**2.02**	**41**	*i* Pn	**Pb**	**09 10 04.3**	**-0.8**
BARS	**Barje**	**2.02**	**41**	*e*Pn	**Pn**	**09 10 03.4**	**+0.9**
PLE	**Pljevlja**	**2.08**	**347**	*e*Pg	**Pb**	**09 10 06.6**	**+0.5**
PLE	**Pljevlja**	**2.08**	**347**	*e*Pn	**Pn**	**09 10 04.3**	**+1.0**
PLE				*i* Sn	**Sb**	**09 10 32.6**	**+0.5**
SELS	**Selova**	**2.08**	**23**	*e*Pn	**Pn**	**09 10 04.3**	**+1.0**
KNT	**Kendrikon**	**2.18**	**93**	P	**Pn**	**09 10 04.3**	**-0.4**
KNT				S	**Sn**	**09 10 32.0**	**+0.2**
KNT	**Kendrikon**	**2.18**	**93**	*i* Pn	**Pb**	**09 10 06.3**	**-1.5**
BOSS	**Bosilegrad**	**2.19**	**56**	*e*Pn	**Pn**	**09 10 05.6**	**+0.8**
LIT	**Litokhoron**	**2.23**	**122**	Pn	**Pn**	**09 10 05.5**	**+0.1**
LIT	**Litokhoron**	**2.23**	**122**	P	**Pn**	**09 10 05.3**	**-0.1**
LIT				S	**Sn**	**09 10 32.0**	**-1.0**
LIT	**Litokhoron**	**2.23**	**122**	*i* Pn	**Pn**	**09 10 06.1**	**+0.7**
IVAS	**Ivanjica**	**2.27**	**3**	*e*Pn	**Pb**	**09 10 07.8**	**-1.7**
THL	**Klokotos Trika**	**2.31**	**138**	P	**Pn**	**09 10 07.2**	**+0.8**
THL				S	**Sn**	**09 10 34.5**	**-0.5**
STON	**Ston**	**2.33**	**313**	*e*Pg	**Pb**	**09 10 09.5**	**-0.8**
STON				*e*Sg	**Sg**	**09 10 44.7**	**+1.7**
THE	**Thessaloniki**	**2.33**	**106**	Pn	**Pn**	**09 10 07.5**	**+0.8**
THE				Sn	**Sb**	**09 10 38.1**	**-1.2**
THE	**Thessaloniki**	**2.33**	**106**	P	**Pn**	**09 10 06.8**	**+0.1**
THE				S	**Sn**	**09 10 35.9**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.35**	**15**	*e*Pn	**Pn**	**09 10 08.5**	**+1.5**
RUDO	**Rudo**	**2.36**	**349**	*e*Pn	**Pb**	**09 10 09.6**	**-1.3**
RUDO	**Rudo**	**2.36**	**349**	*e*Pn	**Pb**	**09 10 09.7**	**-1.2**
KKB	**Krupnik**	**2.40**	**76**	P	**Pn**	**09 10 07.0**	**-0.6**
KKB				S	**Sn**	**09 10 37.8**	**+0.7**
KKB	**Krupnik**	**2.40**	**76**	*e*P	**Pn**	**09 10 09.0**	**+1.4**
KKB				*e*S	**Sb**	**09 10 41.1**	**-0.1**
KKB	**Krupnik**	**2.40**	**76**	*i* Pn	**Pn**	**09 10 09.1**	**+1.4**
HORT	**Hortiatis**	**2.44**	**106**	P	**Pn**	**09 10 07.7**	**-0.6**
HORT				S	**Sn**	**09 10 39.0**	**+0.7**
TSLK	**Tsoukalades, L**	**2.52**	**169**	P	**Pn**	**09 10 10.3**	**+1.0**
TSLK				S	**Sn**	**09 10 41.4**	**+1.2**
AMPL	**Ampelaki**	**2.55**	**158**	P	**Pn**	**09 10 11.6**	**+1.9**
LKD2	**Lefkada island**	**2.56**	**169**	Pn	**Pn**	**09 10 10.3**	**+0.4**
LKD2				AML	AML	09 10 57.2	
	comp=E,1.4nm,1.0s						
LKD2	**Lefkada island**	**2.56**	**169**	P	**Pn**	**09 10 10.4**	**+0.6**
SOH	**Sokhos**	**2.57**	**100**	P	**Pn**	**09 10 10.1**	**+0.1**
SOH	**Sokhos**	**2.57**	**100**	*i* Pn	**Pn**	**09 10 11.5**	**+1.4**
MATE	**Matera**	**2.59**	**256**	⇑P	**Pn**	**09 10 11.8**	**+1.6**
BBLS	**Lazi&#263i**	**2.60**	**350**	*e*Pn	**Pn**	**09 10 12.6**	**+2.1**
GRUS	**Gruza**	**2.63**	**11**	*e*Pn	**Pn**	**09 10 12.4**	**+1.5**
NYDR	**Nydri-Lefkada**	**2.64**	**168**	P	**Pn**	**09 10 11.1**	**+0.2**
NYDR				S	**Sn**	**09 10 45.8**	**+2.8**
BOVS	**Bovan**	**2.65**	**28**	⇓P	**Pn**	**09 10 10.9**	**-0.1**
BOVS	**Bovan**	**2.65**	**28**	*e*Pn	**Pn**	**09 10 12.0**	**+1.0**
SRS	**Serrai**	**2.71**	**93**	P	**Pn**	**09 10 12.4**	**+0.5**
SRS				S	**Sn**	**09 10 44.6**	**-0.1**
SRS	**Serrai**	**2.71**	**93**	*i* Pn	**Pn**	**09 10 14.2**	**+2.3**
SRS				*i* Pn	**Pn**	**09 10 14.7**	**-2.1**
EVGI	**Lefkada island**	**2.73**	**169**	P	**Pn**	**09 10 13.3**	**+1.2**
EVGI				S	**Sn**	**09 10 46.8**	**+1.6**
VTS	**Vitosha**	**2.74**	**60**	P	**Pn**	**09 10 12.7**	**+0.3**
VTS				S	**Sn**	**09 10 45.4**	**-0.3**
VTS	**Vitosha**	**2.74**	**60**	P	**Pn**	**09 10 14.5**	**+2.1**
VTS				S	**Sn**	**09 10 48.2**	**+2.5**
VTS	**Vitosha**	**2.74**	**60**	*e*Pn	**Pn**	**09 10 14.0**	**+1.6**
EVR	**Evrytania**	**2.75**	**149**	P	**Pn**	**09 10 15.1**	**+2.5**
PLG	**Polygyros**	**2.77**	**108**	P	**Pn**	**09 10 13.2**	**+0.5**
PLG				S	**Sn**	**09 10 45.1**	**-1.1**
ZAPS	**Zavoj**	**2.77**	**44**	*e*Pn	**Pn**	**09 10 14.5**	**+1.8**
DIVS	**Divibare**	**2.79**	**360**	*e*Pn	**Pn**	**09 10 15.1**	**+2.0**
MAKR	**Makrakomi, Fth**	**2.81**	**144**	P	**Pn**	**09 10 15.1**	**+1.9**
MAKR				S	**Sn**	**09 10 49.5**	**+2.4**
PLNA	**Plana**	**2.81**	**64**	*e*P	**Pn**	**09 10 15.5**	**+2.2**
PLNA				*e*S	**Sb**	**09 10 54.5**	**+1.5**
MMB	**Musomishta**	**2.82**	**84**	P	**Pn**	**09 10 14.2**	**+0.7**
MMB				S	**Sn**	**09 10 47.4**	**-0.1**
MMB	**Musomishta**	**2.82**	**84**	*e*P	**Pn**	**09 10 14.9**	**+1.4**
MMB				*e*S	**Sn**	**09 10 48.5**	**+0.9**
FSK	**Fiskardo**	**2.87**	**171**	P	**Pn**	**09 10 14.7**	**+0.5**
FSK				S	**Sn**	**09 10 49.8**	**+1.0**
BLSH	**Balsha**	**2.88**	**56**	*e*P	**Pn**	**09 10 16.9**	**+2.5**
BLSH				*e*S	**Sb**	**09 10 57.5**	**+2.3**
AGG	**Agios Georgios**	**2.89**	**141**	P	**Pn**	**09 10 15.2**	**+0.8**
AGG				S	**Sn**	**09 10 50.2**	**+1.0**
PVO	**Paravola**	**2.92**	**156**	P	**Pn**	**09 10 17.0**	**+2.2**
TRUS	**Trudelj**	**2.93**	**6**	*e*Pn	**Pn**	**09 10 17.3**	**+2.3**
ZAGS	**Zajecar**	**3.00**	**32**	*e*Pn	**Pn**	**09 10 17.1**	**+1.3**
BLKB	**Belogradchik**	**3.04**	**39**	⇑P	**Pn**	**09 10 16.6**	**+0.1**
BLKB	**Belogradchik**	**3.04**	**39**	*e*Pn	**Pn**	**09 10 18.2**	**+1.7**
ANX	**Ano Chora**	**3.08**	**151**	P	**Pn**	**09 10 19.2**	**+2.2**
ACER	**Acerenza**	**3.12**	**262**	Pn	**Pn**	**09 10 17.8**	**+0.2**
BORS2	**Bor- Borsko je**	**3.15**	**27**	*e*Pn	**Pn**	**09 10 17.5**	**-0.5**
VLS	**Valsamata**	**3.15**	**172**	P	**Pn**	**09 10 17.8**	**-0.2**
NEO	**Neokhori**	**3.16**	**128**	P	**Pn**	**09 10 18.2**	**0.0**
OUR	**Ouranopolis**	**3.16**	**107**	P	**Pn**	**09 10 17.2**	**-0.9**
EFP	**Efpalio**	**3.22**	**152**	P	**Pn**	**09 10 20.4**	**+1.5**
SGRT	**San Giovanni R**	**3.24**	**279**	Pn	**Pn**	**09 10 18.6**	**-0.6**
SGRT				IAML		09 11 34.1	
	comp=E,136nm,1.9s						
SGRT				IAML		09 11 58.2	
	comp=N,131nm,1.3s						

MYKA	**Terra Mystica**	**7.03**	**321**	*e*Pn		**Pn**	**09 11 10.5**	**-0.9**
	comp=E,3.1nm,0.4s								
IDI	**Anoyia**	**7.12**	**146**	Pn		**Pn**	**09 11 13.2**	**+0.5**
KECS	**Kecovo**	**7.19**	**3**	*e*PN		**Pn**	**09 11 17.8**	**+4.4**
KECS				*e*SN		**Sn**	**09 12 37.0**	**+1.9**
CONA	**Conrad Observa**	**7.25**	**337**	*e*Pn		**Pn**	**09 11 14.5**	**+0.1**
	comp=E,0.4nm,0.4s								
BURAR	**Bucovina Array**	**7.33**	**29**	Pn		**Pn**	**09 11 16.0**	**+0.6**
MODS	**Modra-Piesok**	**7.33**	**346**	*e*SN		**Sn**	**09 12 39.5**	**+0.8**
BUR08	**Bucovina Ar. S**	**7.34**	**29**	Pn		**Pn**	**09 11 17.0**	**+1.3**
KBA	**Koelnbreinsper**	**7.50**	**323**	*e*Pn		**Pn**	**09 11 18.3**	**+0.4**
	comp=E,8.5nm,0.9s								
CTI	**Castel Tesino**	**7.69**	**311**	Pn		**Pn**	**09 11 19.2**	**-1.3**
MOA	**Molln**	**7.72**	**330**	*e*Pn		**Pn**	**09 11 22.4**	**+1.7**
	comp=E,1.7nm,0.4s								
BIOA	**Bad Ischl, Aus**	**7.84**	**327**	*e*Pn		**Pn**	**09 11 23.0**	**+0.6**
	comp=E,1.9nm,0.3s								
LESA	**Schwarzleotal**	**8.06**	**322**	*e*Pn		**Pn**	**09 11 24.9**	**-0.6**
	comp=E,1.3nm,0.2s								
STHS	**Stebnicka Huta**	**8.16**	**6**	*e*PN		Pn	09 11 32.8	+6.1
STHS				*e*SN		**Sn**	**09 13 06.2**	**+7.2**
MSSA	**Maissana**	**8.28**	**295**	Pn		**Pn**	**09 11 27.7**	**-0.8**
WTTA	**Wattenberg**	**8.46**	**318**	*e*Pn		**Pn**	**09 11 31.2**	**+0.2**
	comp=E,1.7nm,0.3s								
WTTA				*e*Sn		**Sn**	**09 13 06.5**	**-0.1**
	comp=E,4.7nm,0.5s								
WATA	**Walderalm**	**8.54**	**318**	*e*Pn		**Pn**	**09 11 32.6**	**+0.6**
	comp=E,2.6nm,0.3s								
SQTA	**Sankt Quirin**	**8.65**	**316**	*e*Pn		**Pn**	**09 11 33.6**	**0.0**
	comp=E,4.5nm,0.4s								
SQTA				*e*Sn		**Sn**	**09 13 13.2**	**+1.9**
	comp=E,7.6nm,0.6s								
GERES	**GERESS Array B**	**8.76**	**332**	Pn		**Pn**	**09 11 35.4**	**+0.3**
	baz=148,slow=13,SNR=6.7								
GERES				Sn		**Sn**	**09 13 15.4**	**+1.5**
	baz=147,slow=21,SNR=2.7								
	comp=E,0.7nm,0.4s								
FETA	**Feichten**	**8.78**	**314**	*e*Pn		**Pn**	**09 11 34.7**	**-0.7**
	comp=E,1.6nm,0.4s								
MOTA	**Moosalm**	**8.79**	**316**	*e*Pn		**Pn**	**09 11 34.9**	**-0.6**
	comp=E,1.8nm,0.4s								
MOTA				*e*Sn		**Sn**	**09 13 14.4**	**-0.2**
	comp=E,6.0nm,0.8s								
FUORN	**Ofenpass-Fuorn**	**8.81**	**310**	Pn		**Pn**	**09 11 37.6**	**+1.7**
KHC	**Kasperske Hory**	**9.04**	**332**	Pn		**Pn**	**09 11 39.6**	**+0.7**
KHC	**Kasperske Hory**	**9.04**	**332**	*e*PN		**Pn**	**09 11 39.6**	**+0.7**
KHC				*e*SN		**Sn**	**09 13 22.6**	**+1.8**
RETA	**Reutte**	**9.05**	**316**	*e*Pn		**Pn**	**09 11 39.2**	**+0.1**
	comp=E,2.3nm,0.4s								
RETA				*e*Sn		**Sn**	**09 13 19.7**	**-1.4**
	comp=E,3.7nm,0.5s								
TUE	**Stuetta**	**9.27**	**307**	Pn		**Pn**	**09 11 42.2**	**0.0**
DAVA	**Damuels**	**9.41**	**313**	*e*Pn		**Pn**	**09 11 44.1**	**+0.2**
	comp=E,2.3nm,0.6s								
SENIN	**Lac Senin/Sane**	**10.48**	**303**	Pn		**Pn**	**09 11 56.8**	**-1.9**
BFO	**Black Forest**	**10.87**	**314**	Pn		**Pn**	**09 12 02.5**	**-1.3**
HFS	**Hagfors**	**19.26**	**350**	P		**P**	**09 13 52.3**	**-0.3**
	comp=E,0.1nm,0.3s,baz=176,slow=12,SNR=1.7								
	comp=E,3.3nm,1.0s								
NOA	**NORSAR Array B**	**20.48**	**348**	P		**P**	**09 14 05.4**	**-0.7**
	comp=E,0.3nm,0.5s,baz=172,slow=12,SNR=3.3								
	comp=E,0.3nm,0.5s								
FINES	**FINESS Array B**	**20.50**	**8**	P		**P**	**09 14 06.0**	**-0.2**
	comp=E,1.5nm,0.7s,baz=178,slow=10.0,SNR=4.6								
	comp=E,1.5nm,0.7s								
EKA	**Eskdalemuir Ar**	**20.71**	**321**	P		**P**	**09 14 08.7**	**+0.2**
	comp=E,2.0nm,0.9s,baz=118,slow=9.1,SNR=3.8								
	comp=E,2.0nm,0.9s								
MKAR	**Makanchi Array**	**44.06**	**61**	P		**P**	**09 17 33.0**	**-3.3**
	comp=E,0.2nm,0.6s,baz=289,slow=7.5,SNR=1.4								
	comp=E,0.2nm,0.6s								

*IDC **17** 09:14:37.2±2.9, 12°.41S×166°.46E, h0km, mb3.8/5, mbtmp3.8/5, MS2.8/2, Error ellipse: s-maj=115.7km s-min=32.2km az=142.0*

ISC 17 09:14:45.3±2.9, 12°.5S±0°.6×166°.4E±0°.5, h59km, n7, σ1s00/6, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.55**	**180**	LR	LR	09 19 15.5	
	comp=Z,37nm,20.3s,baz=184,slow=29						
WRA	**Warramunga Arr**	**31.62**	**252**	P	**P**	**09 21 02.7**	**-0.3**
	0.2nm,0.5s,baz=82,slow=9.8,SNR=1.9						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**32.75**	**246**	P	**P**	**09 21 12.7**	**-0.2**
	0.4nm,0.7s,baz=75,slow=11,SNR=4.7						
ASAR				LR	LR	09 33 04.6	
	comp=Z,30nm,21.8s,baz=86,slow=34						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.26**	**294**	P	**P**	**09 26 11.8**	**+1.0**
	1.0nm,0.3s,baz=112,slow=6.3,SNR=6.1						
	1.0nm,0.3s						
ILAR	**Eielson Array**	**84.65**	**18**	P	**P**	**09 27 11.9**	**-0.3**
	0.4nm,0.6s,baz=236,slow=5.2,SNR=9.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**94.98**	**317**	P	**P**	**09 28 00.6**	**-1.0**
	0.9nm,0.7s,baz=90,slow=6.1,SNR=5.2						
	0.9nm,0.7s						
ARCES	**ARCESS Array B**	**117.86**	**345**	PKP	**PKiKP**	**09 33 25.6**	**+1.0**
	6.3nm,1.2s,baz=54,slow=2.0,SNR=1.8						

*IGIL **17** 09:16:06.7, 32°.71N×3°.93W, h2km, ML3.0*
*CNRM **17** 09:16:07.2, 32°.60N×4°.22W, h5km, ML3.8*
*MDD **17** 09:16:09.7±0.9, 32°.69N×4°.27W, h17km±6km, Mb4.2/10, M_mb3.6/10, Error ellipse: s-maj=7.8km s-min=6.9km az=23.0*
*INMG **17** 09:16:09.7±1.8, 32°.67N×4°.07W, h31km, ML2.9, Error ellipse: s-maj=11.2km s-min=7.2km az=87.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

ISC 17 09:16:05.6±0.8, 32°.57N±0°.02×4°.34W±0°.03, h10km, n82, σ2s44/109, 8C-1D, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**0.33**	**317**	P	**Pb**	**09 16 14.5**	**+0.9**
MDT	**Midelt**	**0.33**	**317**	S	**Sb**	**09 16 20.3**	**+1.2**
MD31	**MD31**	**0.46**	**310**	P	**Pb**	**09 16 17.3**	**+1.5**
MD31	**MD31**	**0.46**	**310**	S	**Sb**	**09 16 25.1**	**+2.3**
GOLM	**Goulmima**	**1.01**	**211**	P	**Pn**	**09 16 28.7**	**+2.8**
GOLM	**Goulmima**	**1.01**	**211**	S	**Sn**	**09 16 46.4**	**+6.2**
ARF	**Arif**	**1.14**	**175**	P	**Pn**	**09 16 30.0**	**+2.4**
ARF	**Arif**	**1.14**	**175**	S	**Sn**	**09 16 45.9**	**+2.6**
IFR	**Ifrane**	**1.15**	**325**	Sn	**Sn**	**09 16 44.6**	**+0.7**
IFR				Pn	**Pn**	**09 16 30.2**	**+2.3**
LCRM	**LCR**	**1.19**	**339**	P	**Pb**	**09 16 29.2**	**+0.8**
LCRM	**LCR**	**1.19**	**339**	S	**Sb**	**09 16 44.9**	**+0.9**
TISM	**Timmit**	**1.97**	**245**	P	**Pg**	**09 16 42.7**	**-0.7**
TISM	**Timmit**	**1.97**	**245**	S	**Sg**	**09 17 11.4**	**+2.4**
AKLM	**AKL**	**1.98**	**12**	P	**Pb**	**09 16 41.9**	**+0.2**
AKLM	**AKL**	**1.98**	**12**	S	**Sb**	**09 17 08.2**	**+1.8**
TZRR	**Tazzarine**	**2.06**	**211**	P	**Pg**	**09 16 45.0**	**-0.2**
TZRR	**Tazzarine**	**2.06**	**211**	S	**Sg**	**09 17 14.0**	**+2.0**
ZHG	**ZHG**	**2.12**	**295**	P	**Pb**	**09 16 44.5**	**+0.3**
ZHG	**ZHG**	**2.12**	**295**	S	**Sg**	**09 17 17.0**	**+3.2**
RTC	**Rabat Centre**	**2.54**	**305**	Sg	**Sg**	**09 17 28.2**	**+1.1**
FIGM	**Figuig**	**2.64**	**99**	P	**Pn**	**09 16 49.5**	**+1.1**
FIGM	**Figuig**	**2.64**	**99**	S	**Sn**	**09 17 21.7**	**+1.2**
OUZM	**OUZ**	**2.64**	**232**	P	**Pg**	**09 16 54.1**	**-2.1**
OUZM	**OUZ**	**2.64**	**232**	S	**Sg**	**09 17 30.8**	**+0.3**
PALE	**Palemas**	**2.66**	**7**	P	**Pn**	**09 16 50.9**	**+2.3**
PALE	**Palemas**	**2.66**	**7**	S	**Sn**	**09 17 23.6**	**+2.7**
ZGR	**Zagora**	**2.68**	**204**	P	**Pb**	**09 16 52.4**	**-1.2**
ZGR				P	**Pb**	**09 16 52.4**	**-1.2**
ZGR	**Zagora**	**2.68**	**204**	S	**Sb**	**09 17 26.0**	**-0.6**
AVE	**Averroes**	**2.68**	**287**	Pn	**Pb**	**09 16 53.1**	**-0.6**
AVE				Sn	**Sn**	**09 17 21.9**	**+0.6**
AVE	**Averroes**	**2.68**	**287**	P	**Pb**	**09 16 52.7**	**-1.0**
AVE	**Averroes**	**2.68**	**287**	S	**Sb**	**09 17 27.0**	**+0.4**
TAF	**Taforalt**	**2.75**	**35**	P	**Pn**	**09 16 50.6**	**+0.7**
TAF	**Taforalt**	**2.75**	**35**	S	**Sn**	**09 17 25.4**	**+2.2**
TIO	**Tiouine**	**2.98**	**237**	Pn	**Pb**	**09 16 57.2**	**-1.6**
TIO				Sg	**Sg**	**09 17 41.7**	**+0.4**
TIO	**Tiouine**	**2.98**	**237**	P	**Pb**	**09 16 57.1**	**-1.7**
TIO	**Tiouine**	**2.98**	**237**	S	**Sb**	**09 17 34.6**	**-0.7**
SRHM	**Skhour des Reh**	**3.01**	**269**	P	**Pb**	**09 16 58.7**	**-0.6**
SRHM	**Skhour des Reh**	**3.01**	**269**	S	**Sb**	**09 17 38.5**	**+2.5**
OUK	**Oukaimeden**	**3.29**	**247**	P	**Pb**	**09 17 01.8**	**-2.5**
OUK	**Oukaimeden**	**3.29**	**247**	S	**Sb**	**09 17 42.5**	**-2.1**
ECEU	**Ceuta**	**3.43**	**346**	Pn	**Pn**	**09 17 02.4**	**+3.4**
ELGU	**Los Guajares,**	**4.33**	**8**	Pn	**Pn**	**09 17 14.3**	**+2.8**
ELGU	**Los Guajares,**	**4.33**	**8**	Pn	**Pn**	**09 17 12.0**	**+0.5**
ELGU				*i*VmbVC		09 17 15.2	
	231nm,SNR=1.5						
ELGU				Sn	**Sn**	**09 17 57.2**	**-4.8**
ESPR	**Espera**	**4.47**	**344**	Sn	**Sn**	**09 18 04.8**	**-0.5**
ESPR	**Espera**	**4.47**	**344**	*i*VmbVC		09 17 18.1	
	632nm,SNR=5.2						
ESPR				Sn	**Sn**	**09 18 01.4**	**-3.9**
PBDV	**Barranco-do-Ve**	**5.52**	**329**	*e*P	**Pn**	**09 17 28.8**	**+1.0**
PBDV				*e*S	**Sn**	**09 18 29.2**	**-2.1**
PBDV				*i* IAML		09 18 34.2	
PBDV				*i* IAML		09 18 34.3	
EMIN	**Mina Concepcio**	**5.53**	**340**	Pn	**Pn**	**09 17 28.0**	**+0.2**
EMIN				*i*VmbVC		09 17 33.5	
	125nm,SNR=1.7						
EMIN				Sn	**Sn**	**09 18 27.6**	**-3.9**
PVAQ	**Vaqueiros**	**5.56**	**331**	*e*P	**Pn**	**09 17 29.2**	**+0.8**
PVAQ				*e*S	**Sn**	**09 18 28.6**	**-3.8**
PVAQ				*i* IAML		09 18 31.2	
PVAQ				*i* IAML		09 18 32.3	
PVAQ				*i* IAML		09 18 33.7	
PVAQ	**Vaqueiros**	**5.56**	**331**	P	**Pn**	**09 17 30.4**	**+2.0**
ECAB	**El Cabril**	**5.56**	**351**	Pn	**Pn**	**09 17 29.6**	**+1.2**
ECAB				*i*VmbVC		09 17 34.9	
	120nm,SNR=1.1						
ECAB				Sn	**Sn**	**09 18 26.3**	**-6.2**
EGRO	**El Granado**	**5.58**	**333**	Pn	**Pn**	**09 17 29.3**	**+0.7**
EGRO				Sn	**Sn**	**09 18 27.3**	**-5.5**
EADA	**Adamuz**	**5.59**	**358**	Pn	**Pn**	**09 17 29.7**	**+0.9**
EADA				*i*VmbVC		09 17 33.1	
	144nm,SNR=1.4						
EADA				Sn	**Sn**	**09 18 29.4**	**-3.7**
EMUR	**La Murta**	**5.84**	**25**	Pn	**Pn**	**09 17 32.8**	**+0.6**
EMUR				*i*VmbVC		09 17 38.1	
	124nm,SNR=0.9						
PFVI	**Vila Bisbo**	**5.86**	**322**	*e*P	**Pn**	**09 17 33.8**	**+1.4**
PFVI				*e*S	**Sn**	**09 18 39.5**	**-0.2**
PFVI				*i* IAML		09 18 43.4	
PFVI				*i* IAML		09 18 44.8	
PFVI				*i* IAML		09 18 45.4	
PCVE	**Castro Verde**	**5.89**	**330**	*e*P	**Pn**	**09 17 34.5**	**+1.6**
PCVE				*e*S	**Sn**	**09 18 38.8**	**-1.6**
PCVE				*i* IAML		09 18 42.9	
PCVE				*i* IAML		09 18 43.2	
PCVE				*i* IAML		09 18 43.5	
MORF	**Marmelete**	**5.90**	**324**	*e*P	**Pn**	**09 17 34.1**	**+1.0**
MORF	**Marmelete**	**5.90**	**324**	*e*P	**Pn**	**09 17 34.1**	**+1.0**
MORF				*e*S	**Sn**	**09 18 40.3**	**-0.5**
MORF				*i* IAML		09 18 42.4	
MORF				*i* IAML		09 18 43.7	
MORF				*i* IAML		09 18 45.7	
PBAR	**Barrancos**	**6.01**	**339**	*e*P	**Pn**	**09 17 35.1**	**+0.5**
PBAR				*e*S	**Sn**	**09 18 40.1**	**-3.3**
PBAR				*i* IAML		09 18 42.8	
PBAR				*i* IAML		09 18 44.1	
PBAR				*i* IAML		09 18 48.6	
PTEO	**Sao Teotonio**	**6.13**	**325**	*e*P	**Pn**	**09 17 37.2**	**+1.1**
PTEO				*e*S	**Sn**	**09 18 44.4**	**-1.9**
PTEO				*i* IAML		09 18 47.0	
PTEO				*i* IAML		09 18 48.8	
PTEO				*i* IAML		09 18 49.1	
MESJ	**Messejana**	**6.14**	**330**	*e*P	**Pn**	**09 17 37.1**	**+0.8**
MESJ				*e*S	**Sn**	**09 18 42.8**	**-3.9**
MESJ				IAML		09 18 48.3	
	comp=N,17nm,0.4s						
MESJ	**Messejana**	**6.14**	**330**	*e*P	**Pn**	**09 17 37.4**	**+1.0**
MESJ				*e*S	**Sn**	**09 18 45.1**	**-1.6**
MESJ				*i* IAML		09 18 48.3	
MESJ				*i* IAML		09 18 48.4	
MESJ				*i* IAML		09 18 49.1	
PBEJ	**Beja**	**6.16**	**333**	*e*P	**Pn**	**09 17 37.2**	**+0.6**
PBEJ				*e*S	**Sn**	**09 18 45.4**	**-1.7**
PBEJ				*i* IAML		09 18 47.7	
PBEJ				*i* IAML		09 18 49.7	
PBEJ				*i* IAML		09 18 50.7	
PSIM	**Granatula de C**	**6.25**	**4**	Sn	**Sn**	**09 18 44.2**	**-5.3**
EBAD	**Badajoz**	**6.54**	**341**	Pn	**Pn**	**09 17 42.3**	**+0.5**
EBAD				*i*VmbVC		09 17 48.0	
	comp=N,201nm,SNR=2.3						
EBAD				Sn	**Sn**	**09 18 50.1**	**-6.4**
EVO	**Evora**	**6.66**	**334**	*e*P	**Pn**	**09 17 44.7**	**+1.2**
EVO				*e*S	**Sn**	**09 18 56.0**	**-3.3**
EVO				*i* IAML		09 18 57.9	
EVO				*i* IAML		09 18 59.7	
EVO				*i* IAML		09 19 01.0	
MOE	**Montemor**	**6.78**	**332**	*e*P	**Pn**	**09 17 46.4**	**+1.3**
MOE				*e*S	**Sn**	**09 18 59.4**	**-2.9**
MOE				*i* IAML		09 19 01.8	
MOE				*i* IAML		09 19 02.3	
MOE				*i* IAML		09 19 03.3	
PESTR	**Estremoz**	**6.82**	**338**	*e*P	**Pn**	**09 17 47.4**	**+1.8**
PESTR				*e*S	**Sn**	**09 18 59.7**	**-3.6**
PARRA	**Arraiolos**	**6.92**	**335**	*e*P	Pn	09 17 47.9	-4.5
PARRA				*e*S	Sn	09 19 03.0	-12
PARRA				*i* IAML		09 19 04.5	
PARRA				*i* IAML		09 19 05.1	
PARRA				*i* IAML		09 19 05.7	
PMTG	**Montargil**	**7.21**	**335**	*e*P	**Pn**	**09 17 52.0**	**+1.0**
PMTG				*e*S	**Sn**	**09 19 10.1**	**-2.9**
PMTG				*i* IAML		09 19 27.0	
PMTG				*i* IAML		09 19 30.3	
PMTG				*i* IAML		09 19 37.6	
PMAFR	**Mafra**	**7.53**	**329**	*e*P	**Pn**	**09 17 58.1**	**+2.7**
EPLA	**Plasencia**	**7.61**	**350**	Pn	**Pn**	**09 17 57.4**	**+0.8**
EPLA				*i*VmbVC		09 17 57.7	
	comp=N,172nm,SNR=1.4						
EPLA				Sn	**Sn**	**09 19 16.7**	**-6.1**
PSARD	**Sardoal**	**7.67**	**337**	*e*P	**Pn**	**09 17 58.2**	**+0.9**
PSARD				*e*S	**Sn**	**09 19 19.6**	**-4.6**
PSARD				*i* IAML		09 19 21.4	
PSARD				*i* IAML		09 19 22.7	
PSARD				*i* IAML		09 19 23.1	
PCBR	**Castelo Branco**	**7.68**	**342**	*e*P	**Pn**	**09 17 58.6**	**+1.1**
PCBR				*e*S	**Sn**	**09 19 19.3**	**-5.3**
PCBR				*i* IAML		09 19 26.0	
PCBR				*i* IAML		09 19 28.9	
PCBR				*i* IAML		09 19 38.0	
PSBE	**So Bento**	**7.81**	**334**	*e*P	**Pn**	**09 18 00.7**	**+1.4**
PCAS	**Casmilo, Conde**	**8.19**	**337**	*e*P	**Pn**	**09 18 05.6**	**+1.2**
MTE	**Manteigas**	**8.23**	**343**	*e*P	**Pn**	**09 18 06.3**	**+1.3**
PVIS	**Viseu**	**8.62**	**342**	*e*P	**Pn**	**09 18 10.7**	**+0.4**
MVO	**Moncorvo**	**8.84**	**347**	*e*P	**Pn**	**09 18 15.1**	**+1.6**
MVO				*i* IAML		09 19 48.3	
MVO				*e*S	**Sn**	**09 19 48.7**	**-4.6**
MVO				*i* IAML		09 19 49.5	
MVO				*i* IAML		09 20 00.4	
PVRL	**Vila Real**	**9.10**	**344**	*e*P	**Pn**	**09 18 18.0**	**+1.1**
POLO	**Lamas de Olo**	**9.21**	**344**	*e*P	**Pn**	**09 18 19.6**	**+1.1**
PCAB	**Cabril**	**9.58**	**343**	*e*P	**Pn**	**09 18 24.8**	**+1.2**
PGAV	**Gavieira, Arco**	**9.88**	**343**	*e*P	**Pn**	**09 18 29.4**	**+1.6**

*CATAC **17** 09:16:07.0±0.6, 13°.N±3°×9°.0W±°, h11km±2km, M3.6/17, MLv3.6/17, Error ellipse: s-maj=6.3km s-min=4.9km az=40.6, confirmed*
*SNET **17** 09:16:07.6±1.1, 13°.20N×89°.93W, h29km, ML3.5*
*GCG **17** 09:16:08.3±2.0, 13°.27N×89°.97W, h37km±17km, MD4.2*

ISC 17 09:16:08.6±1.6, 13°.22N±0°.06×89°.90W±0°.05, h27km±12km, n72, σ0s68/93, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.62**	**45**	*e*P	**Pb**	**09 16 20.8**	**-0.1**
JAYA				*e*S	**Sn**	**09 16 30.3**	**-0.5**
JAYA	**Jayaque - finc**	**0.62**	**45**	*i* P	**Pb**	**09 16 20.9**	**-0.1**
JAYA				*e*S	**Sn**	**09 16 30.3**	**-0.5**
JAYA	**Jayaque - finc**	**0.62**	**45**	P	**Pn**	**09 16 21.0**	**-0.7**
LALI	**Alcalda de L**	**0.62**	**64**	*e*P	**Pb**	**09 16 20.6**	**-0.4**
LALI				*e*S	**Sb**	**09 16 29.6**	**+0.3**
LALI	**Alcalda de L**	**0.62**	**64**	*i* P	**Pb**	**09 16 20.6**	**-0.4**
LALI				*e*S	**Sb**	**09 16 29.3**	**0.0**
LALI	**Alcalda de L**	**0.62**	**64**	P	**Pb**	**09 16 20.8**	**-0.2**
FAME	**Alcaldia de Sa**	**0.63**	**350**	P	**Pb**	**09 16 20.4**	**-0.8**
CEVE	**Cerro Verde**	**0.66**	**24**	*e*P	**Pn**	**09 16 21.6**	**-0.8**
CEVE				*e*S	**Sn**	**09 16 32.9**	**+0.8**
CEVE	**Cerro Verde**	**0.66**	**24**	P	**Pn**	**09 16 21.7**	**-0.8**
SBLS	**San Blas**	**0.67**	**23**	*e*P	**Pb**	**09 16 21.7**	**-0.3**
NUBE	**Las Nubes**	**0.69**	**9**	*e*P	**Pb**	**09 16 21.6**	**-0.6**
NUBE				*e*S	**Sn**	**09 16 32.0**	**-0.7**
NUBE	**Las Nubes**	**0.69**	**9**	*i* P	**Pb**	**09 16 21.7**	**-0.6**
NUBE	**Las Nubes**	**0.69**	**9**	P	**Pb**	**09 16 21.8**	**-0.4**
NUBE	**Las Nubes**	**0.69**	**9**	S	**Sn**	**09 16 32.4**	**-0.3**
SNJE	**San Jose**	**0.71**	**24**	*e*P	**Pb**	**09 16 22.0**	**-0.5**
RTR	**El Retiro**	**0.72**	**20**	*e*P	**Pn**	**09 16 22.5**	**-0.7**
PMON	**Piamonte**	**0.75**	**49**	*e*P	**Pb**	**09 16 22.7**	**-0.5**
PMON				*e*S	**Sn**	**09 16 35.2**	**+1.2**
PMON	**Piamonte**	**0.75**	**49**	P	**Pn**	**09 16 23.2**	**-0.4**
PMON	**Piamonte**	**0.75**	**49**	S	**Sn**	**09 16 34.6**	**+0.6**
MAGS	**Ministerio de**	**0.75**	**52**	*e*P	**Pb**	**09 16 22.7**	**-0.5**
MAGS				*e*S	**Sn**	**09 16 34.5**	**+0.4**
CEDA	**San Andres**	**0.76**	**40**	*e*P	**Pb**	**09 16 22.9**	**-0.4**
CEDA				*e*S	**Sn**	**09 16 35.0**	**+0.8**
CEDA	**San Andres**	**0.76**	**40**	P	**Pn**	**09 16 23.1**	**-0.4**
CEDA	**San Andres**	**0.76**	**40**	S	**Sn**	**09 16 35.4**	**+1.2**
LOAL	**Lomas de Alarc**	**0.79**	**8**	*e*P	**Pb**	**09 16 23.3**	**-0.4**
LOAL	**Lomas de Alarc**	**0.79**	**8**	P	**Pb**	**09 16 23.6**	**-0.1**
LOAL	**Lomas de Alarc**	**0.79**	**8**	S	**Sn**	**09 16 34.4**	**-0.5**
BOQS	**Boqueron**	**0.79**	**49**	*e*P	**Pn**	**09 16 23.4**	**-0.7**
BOQS				*e*S	**Sn**	**09 16 36.0**	**+0.8**
PANCS	**Alcalda de**	**0.80**	**61**	*e*P	**Pn**	**09 16 23.0**	**-1.1**
PANCS				*e*S	**Sb**	**09 16 34.7**	**+0.2**
UEES	**Universidad Ev**	**0.81**	**52**	*e*P	**Pn**	**09 16 23.3**	**-1.0**
UEES				*e*S	**Sn**	**09 16 36.3**	**+0.8**
UEES	**Universidad Ev**	**0.81**	**52**	P	**Pn**	**09 16 23.6**	**-0.7**
LOMA	**Loma Larga**	**0.82**	**59**	*e*P	**Pn**	**09 16 23.4**	**-1.1**
LOMA				*e*S	**Sn**	**09 16 35.9**	**0.0**
LOMA	**Loma Larga**	**0.82**	**59**	P	**Pn**	**09 16 23.6**	**-1.0**
LOMA	**Loma Larga**	**0.82**	**59**	S	**Sn**	**09 16 36.2**	**+0.3**
UNIC	**Universidad Ca**	**0.83**	**24**	*e*P	**Pn**	**09 16 24.0**	**-0.6**
UNIC	**Universidad Ca**	**0.83**	**24**	P	**Pn**	**09 16 24.0**	**-0.6**
UNIC	**Universidad Ca**	**0.83**	**24**	S	**Sn**	**09 16 36.4**	**+0.4**
UESS	**Universidad de**	**0.84**	**53**	*e*P	**Pn**	**09 16 24.4**	**-0.3**
UESS				*e*S	**Sn**	**09 16 37.1**	**+0.9**
QUEZ	**Alcaldia de Qu**	**0.86**	**45**	*e*P	**Pb**	**09 16 24.9**	**-0.2**
QUEZ				*e*S	**Sn**	**09 16 37.7**	**+0.9**
UDBS	**Universidad Do**	**0.88**	**55**	*e*P	**Pn**	**09 16 24.5**	**-0.7**
UDBS				*e*S	**Sn**	**09 16 37.3**	**+0.3**
LFRS	**El Faro**	**0.91**	**63**	*e*P	**Pn**	**09 16 24.8**	**-0.9**
RBDL	**Robledal**	**0.91**	**13**	*e*P	**Pn**	**09 16 25.3**	**-0.5**
RBDL				*e*S	**Sn**	**09 16 39.1**	**+0.9**
LFU	**La Fuente**	**0.93**	**55**	*e*P	**Pn**	**09 16 25.5**	**-0.4**
LBRS	**Las Brisas**	**0.98**	**58**	*e*P	**Pn**	**09 16 26.2**	**-0.4**
PAVA	**Las Pavas**	**1.06**	**62**	*e*P	**Pn**	**09 16 27.2**	**-0.5**
PAVA				*e*S	**Sb**	**09 16 42.8**	**+0.9**
PAVA	**Las Pavas**	**1.06**	**62**	P	**Pn**	**09 16 27.5**	**-0.2**
PAVA	**Las Pavas**	**1.06**	**62**	S	**Sb**	**09 16 43.4**	**+1.6**
TECO	**Alcaldia de Te**	**1.13**	**74**	*e*P	**Pn**	**09 16 27.6**	**-1.1**
TECO				*e*S	**Sn**	**09 16 43.0**	**-0.4**
TECO	**Alcaldia de Te**	**1.13**	**74**	P	**Pn**	**09 16 28.0**	**-0.7**
UESV	**Universidad de**	**1.16**	**69**	*e*P	**Pn**	**09 16 28.6**	**-0.4**
UESV				*e*S	**Sb**	**09 16 44.7**	**+0.1**
UESV	**Universidad de**	**1.16**	**69**	P	**Pn**	**09 16 28.7**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.23**	**67**	*e*P	**Pn**	**09 16 29.9**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.23**	**67**	P	**Pb**	**09 16 30.4**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.23**	**67**	S	**Sb**	**09 16 48.3**	**+1.4**
MTO3	**Montecristo**	**1.29**	**24**	*e*P	**Pn**	**09 16 31.1**	**+0.1**
MTO3	**Montecristo**	**1.29

ALKP	**Alkanpan, Nort**	**5.77**	**232**	*e*P		**Pn**	**09 20 33.0**	**+0.1**
ALKP				*e*S		**Sn**	**09 21 37.2**	**-2.7**
ALKP				IAML			09 22 14.7	
	comp=Z,38nm,0.4s							
UPI	**Upington**	**5.83**	**249**	*e*P		**Pn**	**09 20 34.1**	**+0.4**
UPI				*e*S		**Sn**	**09 21 38.1**	**-3.3**
UPI				IAML			09 22 12.1	
	comp=Z,17nm,0.5s							
KGCAE	**Kacgae**	**5.95**	**306**	*i* P		**Pn**	**09 20 37.5**	**+1.9**
KGCAE				IAML			09 22 23.8	
	comp=E,82nm,0.6s							
BFON	**Badsfontein, M**	**6.28**	**211**	*e*P		**Pn**	**09 20 40.0**	**+0.1**
BFON				*e*S		**Sn**	**09 21 49.2**	**-3.2**
BFON				IAML			09 22 36.4	
	comp=Z,16nm,0.5s							
GRAF	**Camdeboo Natio**	**6.37**	**203**	*e*P		**Pn**	**09 20 41.3**	**+0.1**
GRAF				*e*S		**Sn**	**09 21 51.7**	**-2.9**
GRAF				IAML			09 22 30.4	
	comp=Z,12nm,0.5s							
BRAK	**Brakfontein**	**6.65**	**216**	*e*P		**Pn**	**09 20 45.4**	**+0.3**
BRAK				*e*S		**Sn**	**09 21 59.4**	**-2.2**
BRAK				IAML			09 22 43.7	
	comp=Z,14nm,0.4s							
KOOLE	**Kule**	**7.43**	**296**	*i* P		**Pn**	**09 20 55.8**	**0.0**
FRAZ	**Fraserburg**	**7.61**	**223**	*e*P		**Pn**	**09 20 58.1**	**0.0**
FRAZ				*e*S		**Sn**	**09 22 21.4**	**-3.7**
FRAZ				IAML			09 23 13.2	
	comp=Z,7.5nm,0.5s							
GRTLG	**Ghanzi**	**7.62**	**310**	*i* P		**Pn**	**09 20 58.6**	**+0.3**
GRTLG				*i* S		**Sn**	**09 22 25.3**	**-0.2**
GRTLG				IAML			09 23 09.7	
	comp=E,22nm,0.7s							
SUR	**Sutherland**	**8.28**	**223**	*e*P		**Pn**	**09 21 08.5**	**+1.0**
SUR				*e*S		**Sn**	**09 22 36.7**	**-5.2**
SUR				IAML			09 23 33.5	
	comp=Z,10nm,0.6s							
XAUDM	**Khaudum**	**9.68**	**323**	*i* P		**Pn**	**09 21 25.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**46.64**	**324**	P		**P**	**09 27 37.5**	**+1.3**
	comp=Z,1.9nm,0.3s,baz=153,slow=9.7,SNR=1.1							
	comp=Z,1.9nm,0.3s							
ESDC	**Sonseca Array**	**72.00**	**335**	P		**P**	**09 30 33.5**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=149,slow=4.5,SNR=1.2							
	comp=Z,0.2nm,0.5s							

*SNET **17** 09:20:31.8±4.4, 12°.99N×90°.16W, h22km, ML3.1*
*CATAC **17** 09:20:36.7±0.7, 13°.N±3°×9°.0W±°, h14km±3km, M2.9/12, MLv2.9/12, Error ellipse: s-maj=7.9km s-min=5.6km az=28.5, confirmed*
*GCG **17** 09:20:38.0±1.1, 13°.24N×89°.94W, h25km±12km, MD3.5*
ISC 17 09:20:37.3±2.5, 13°.21N±0°.10×89°.94W±0°.08, h26km±12km, n49, σ0945/62, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.63**	**353**	P	**Pb**	**09 20 49.9**	**+0.1**
FAME	**Alcaldia de Sa**	**0.63**	**353**	S	**Sb**	**09 20 59.1**	**+0.8**
JAYA	**Jayaque - finc**	**0.65**	**47**	*e*P	**Pn**	**09 20 50.4**	**-0.5**
JAYA				*e*S	**Sn**	**09 21 00.4**	**0.0**
JAYA	**Jayaque - finc**	**0.65**	**47**	*e*P	**Pn**	**09 20 50.5**	**-0.5**
JAYA				*e*S	**Sn**	**09 21 00.4**	**0.0**
LALI	**Alcalda de L**	**0.66**	**65**	*e*P	**Pb**	**09 20 50.2**	**0.0**
LALI				*e*S	**Sb**	**09 20 59.4**	**+0.3**
LALI	**Alcalda de L**	**0.66**	**65**	*e*P	**Pb**	**09 20 50.2**	**0.0**
LALI				*e*S	**Sb**	**09 20 59.2**	**+0.2**
LALI	**Alcalda de L**	**0.66**	**65**	P	**Pb**	**09 20 49.9**	**-0.3**
CEVE	**Cerro Verde**	**0.69**	**26**	*e*P	**Pn**	**09 20 51.2**	**-0.3**
CEVE	**Cerro Verde**	**0.69**	**26**	P	**Pn**	**09 20 51.2**	**-0.3**
SBLS	**San Blas**	**0.70**	**26**	*e*P	**Pn**	**09 20 51.3**	**-0.4**
NUBE	**Las Nubes**	**0.70**	**13**	*e*P	**Pn**	**09 20 51.3**	**-0.4**
NUBE				*e*S	**Sn**	**09 21 01.7**	**-0.1**
NUBE	**Las Nubes**	**0.70**	**13**	*i* P	**Pn**	**09 20 51.2**	**-0.4**
NUBE				*e*S	**Sn**	**09 21 01.4**	**-0.5**
NUBE	**Las Nubes**	**0.70**	**13**	P	**Pn**	**09 20 51.3**	**-0.4**
RTR	**El Retiro**	**0.74**	**23**	*e*P	**Pn**	**09 20 51.9**	**-0.3**
PMON	**Piamonte**	**0.79**	**51**	*e*P	**Pn**	**09 20 52.6**	**-0.2**
PMON	**Piamonte**	**0.79**	**51**	P	**Pn**	**09 20 52.5**	**-0.2**
PMON	**Piamonte**	**0.79**	**51**	S	**Sn**	**09 21 04.0**	**+0.2**
MAGS	**Ministerio de**	**0.79**	**53**	*e*P	**Pn**	**09 20 52.7**	**-0.2**
CEDA	**San Andres**	**0.79**	**42**	*e*P	**Pn**	**09 20 52.5**	**-0.3**
CEDA				*e*S	**Sn**	**09 21 04.6**	**+0.8**
CEDA	**San Andres**	**0.79**	**42**	P	**Pn**	**09 20 52.5**	**-0.3**
CEDA	**San Andres**	**0.79**	**42**	S	**Sn**	**09 21 03.8**	**0.0**
BOQS	**Boqueron**	**0.83**	**51**	*e*P	**Pb**	**09 20 53.0**	**-0.2**
BOQS				*e*S	**Sn**	**09 21 05.4**	**+0.5**
UEES	**Universidad Ev**	**0.85**	**53**	*e*P	**Pb**	**09 20 52.9**	**-0.5**
UEES				*e*S	**Sn**	**09 21 05.9**	**+0.7**
UEES	**Universidad Ev**	**0.85**	**53**	P	**Pn**	**09 20 53.5**	**-0.1**
UNIC	**Universidad Ca**	**0.85**	**26**	*e*P	**Pn**	**09 20 53.6**	**-0.1**
UNIC	**Universidad Ca**	**0.85**	**26**	P	**Pb**	**09 20 53.4**	**-0.1**
UNIC	**Universidad Ca**	**0.85**	**26**	S	**Sb**	**09 21 04.9**	**+0.3**
LOMA	**Loma Larga**	**0.86**	**60**	*e*P	**Pb**	**09 20 53.1**	**-0.6**
LOMA				*e*S	**Sb**	**09 21 05.2**	**+0.3**
LOMA	**Loma Larga**	**0.86**	**60**	P	**Pb**	**09 20 53.5**	**-0.2**
QUEZ	**Alcaldia de Qu**	**0.90**	**46**	*e*P	**Pn**	**09 20 54.4**	**+0.2**
QUEZ				*e*S	**Sn**	**09 21 07.6**	**+1.2**
UDBS	**Universidad Do**	**0.91**	**57**	*e*P	**Pn**	**09 20 54.0**	**-0.5**
UDBS	**Universidad Do**	**0.91**	**57**	P	**Pb**	**09 20 54.0**	**-0.5**
UDBS	**Universidad Do**	**0.91**	**57**	S	**Sn**	**09 21 07.7**	**+0.9**
LFRS	**El Faro**	**0.95**	**64**	*e*P	**Pb**	**09 20 54.4**	**-0.7**
LFU	**La Fuente**	**0.96**	**56**	*e*P	**Pb**	**09 20 55.0**	**-0.4**
LBRS	**Las Brisas**	**1.02**	**59**	*e*P	**Pn**	**09 20 55.7**	**-0.2**
PAVA	**Las Pavas**	**1.09**	**63**	*e*P	**Pn**	**09 20 57.0**	**0.0**
PAVA				*e*S	**Sn**	**09 21 12.2**	**+0.8**
TECO	**Alcaldia de Te**	**1.17**	**74**	*e*P	**Pn**	**09 20 57.2**	**-0.8**
TECO				*e*S	**Sb**	**09 21 13.3**	**-0.4**
TECO	**Alcaldia de Te**	**1.17**	**74**	P	**Pn**	**09 20 57.8**	**-0.2**
UESV	**Universidad de**	**1.20**	**69**	*e*P	**Pn**	**09 20 58.1**	**-0.3**
UESV	**Universidad de**	**1.20**	**69**	P	**Pn**	**09 20 58.3**	**-0.1**
UESV	**Universidad de**	**1.20**	**69**	S	**Sb**	**09 21 14.2**	**-0.2**
MTO3	**Montecristo**	**1.31**	**25**	P	**Pn**	**09 21 00.6**	**+0.6**
MTO3	**Montecristo**	**1.31**	**25**	S	**Sb**	**09 21 18.1**	**+0.3**
ESQI	**Esquipulas**	**1.46**	**23**	*e*P	**Pb**	**09 21 03.0**	**-0.9**
ESQI	**Esquipulas**	**1.46**	**23**	P	**Pb**	**09 21 03.2**	**-0.7**
ESQI	**Esquipulas**	**1.46**	**23**	S	**Sb**	**09 21 22.3**	**+0.2**
LCY	**Lacayo**	**1.61**	**82**	*e*P	**Pn**	**09 21 04.2**	**0.0**
LCND	**La Caada**	**2.00**	**87**	*e*P	**Pn**	**09 21 09.8**	**+0.4**

*IDC **17** 09:22:48.5±1.0, 56°.75S×24°.93W, h0km, mb4.2/5, mbtmp4.2/5, Error ellipse: s-maj=33.9km s-min=27.5km az=43.0*
*NEIC **17** 09:22:49.3±2.2, 56°.83S±0°.10×24°.9W±0°.1, h10km±1km, mb4.6/18, Error ellipse: s-maj=18.2km s-min=9.1km az=155.0*
ISC 17 09:22:51.1±0.6, 56°.86S±0°.09×25°.0W±0°.1, h22km, n38, σ1903/33, mb4.5/11, 4C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.00**	**287**	Pn	**Pn**	**09 24 32.8**	**+0.6**
VNA1	**Neumayer--Stat**	**15.60**	**159**	⇑P	**P**	**09 26 31.4**	**-1.9**
	comp=Z,8.7nm,0.9s						
VNA3	**Neumayer Olymp**	**15.83**	**162**	⇑P	**Pn**	**09 26 31.3**	**-1.0**
	comp=Z,1.2nm,0.3s						
VNA2	**Neumayer--Watz**	**15.99**	**159**	⇑P	**Pn**	**09 26 33.9**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=328,slow=15						
SNAA	**Sanae**	**17.51**	**157**	⇑P	**P**	**09 26 55.0**	**+0.4**
	comp=Z,48nm,0.8s						
SNAA	**Sanae**	**17.51**	**157**	P	**P**	**09 26 54.4**	**-0.2**
PMSA	**Palmer Station**	**20.31**	**231**	P	**P**	**09 27 25.0**	**-0.1**
PMSA				IAmb	IAmb	09 27 29.6	
	comp=Z,47nm,1.4s						
BELA	**Belgrano 2**	**21.37**	**186**	P	**P**	**09 27 35.5**	**-1.1**
BELA				IAmb	IAmb	09 27 40.4	
	comp=Z,11nm,1.4s						
MG02	**Cerro Sombrero**	**25.45**	**260**	P	**P**	**09 28 16.0**	**-1.0**
GO09	**Cerro Castillo**	**27.87**	**261**	P	**P**	**09 28 37.1**	**-1.8**
PLTB	**Pedras Altas**	**31.95**	**310**	P	**P**	**09 29 15.5**	**+0.4**
PLTB				IAmb	IAmb	09 29 42.3	
	comp=Z,15nm,1.4s						
QSPA	**South Pole Qui**	**33.39**	**180**	P	**P**	**09 29 29.8**	**+2.2**
CPUP	**Villa Florida**	**38.26**	**309**	P	**P**	**09 30 09.6**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=167,slow=0.8,SNR=5.8						
	comp=Z,0.7nm,0.6s						
CPUP	**Villa Florida**	**38.26**	**309**	P	**P**	**09 30 09.1**	**-0.4**
MT09	**Talagante**	**38.71**	**287**	P	**P**	**09 30 11.1**	**-2.3**
AC04	**Llanos de Chal**	**43.18**	**292**	P	**P**	**09 30 49.7**	**-0.4**
AC04				IAmb	IAmb	09 31 25.3	
	comp=Z,24nm,1.4s						
BOSA	**Boshof**	**45.02**	**73**	P	**P**	**09 31 05.8**	**+0.7**
	comp=Z,3.2nm,1.0s,baz=270,slow=3.0,SNR=1.8						
	comp=Z,3.2nm,1.0s						
BOSA	**Boshof**	**45.02**	**73**	P	**P**	**09 31 04.2**	**-0.8**
BOSA				IAmb	IAmb	09 31 13.4	
	comp=Z,12nm,1.4s						
VNDA	**Vanda**	**45.81**	**182**	P	**P**	**09 31 11.9**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=187,slow=4.0,SNR=8.2						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**45.81**	**182**	P	**P**	**09 31 11.7**	**+1.2**
H10S2	**ASCENSION HYDR**	**48.47**	**14**	T	T	10 24 31.7	
	baz=189,slow=74,SNR=3.6						
H10S3	**ASCENSION HYDR**	**48.47**	**14**	T	T	10 24 31.9	
	baz=31,slow=74,SNR=3.4						
H10N1	**ASCENSION HYDR**	**49.58**	**14**	T	T	10 25 53.3	
	baz=189						
H10N3	**ASCENSION HYDR**	**49.59**	**14**	T	T	10 25 56.5	
	baz=189						
H10N2	**ASCENSION HYDR**	**49.60**	**14**	T	T	10 25 57.4	
	baz=189						
LPHEP	**Lephephe**	**49.60**	**69**	P	**P**	**09 31 40.3**	**-0.4**
LPHEP				IAmb	IAmb	09 31 53.1	
	comp=Z,14nm,1.4s						
LPAZ	**La Paz**	**51.84**	**303**	P	**P**	**09 31 59.0**	**+0.9**
	comp=Z,10nm,0.6s,baz=144,slow=7.9,SNR=99						
	comp=Z,10nm,0.6s						
LPAZ	**La Paz**	**51.84**	**303**	P	**P**	**09 31 58.7**	**+0.5**
BOAV	**Boa Vista**	**65.67**	**320**	P	**P**	**09 33 33.2**	**-0.4**
BOAV				IAmb	IAmb	09 33 37.4	
	comp=Z,2.8nm,1.0s						
OTAV	**Otavalo**	**71.11**	**302**	P	**P**	**09 34 09.8**	**+1.5**
OTAV				IAmb	IAmb	09 34 13.8	
	comp=Z,4.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.19**	**27**	P	**P**	**09 34 19.5**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=194,slow=4.1,SNR=1.5						
	comp=Z,1.4nm,0.3s						
TORD	**Torodi Ar. Bea**	**73.19**	**27**	P	**P**	**09 34 19.4**	**-0.6**
TORD				IAmb	IAmb	09 34 34.5	
	comp=Z,3.3nm,0.5s						
AMCZ	**Amberley**	**79.23**	**193**	P	**P**	**09 34 53.7**	**-0.5**
P32M	**Atlin**	**144.00**	**305**	PKPdf	**PKPdf**	**09 42 24.5**	**+1.1**
BESE	**Bessie Mountai**	**144.05**	**303**	PKPdf	**PKPdf**	**09 42 23.1**	**-0.5**
A36M	**Sachs Harbour**	**145.54**	**327**		**PKPab**	**09 42 26.5**	**+0.4**
H31M	**Peel River**	**146.75**	**315**	PKPdf	**PKPdf**	**09 42 27.5**	**-0.4**
ILAR	**Eielson Array**	**151.56**	**310**	PKPbc	**PKiKP**	**09 42 42.9**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=112,slow=1.6,SNR=14						

*JMA **17** 09:29:25.4±0.1, 30°.6N±0°.3×131°.2E±0°.8, h30km, MV3.3/38, NEAR TANEGASHIMA ISLAND*
JMA Felt I J1 at NEAR TANEGASHIMA ISLAND .
*IDC **17** 09:29:27.4±1.9, 30°.56N×130°.94E, h52km±17km, mb3.4/5, mbtmp3.6/8, ML3.0/3, Error ellipse: s-maj=35.2km s-min=9.3km az=101.0*
ISC 17 09:29:25.0±1.3, 30°.53N±0°.05×131°.16E±0°.09, h32km±7km, n17, σ1900/24, mb3.5/5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.20**	**309**	*i* P	**Pb**	**09 29 31.0**	**-0.5**
JTN				S	**Sb**	**09 29 35.7**	**-0.2**
JMTN	**Minamitane**	**0.26**	**240**	*i* P	**Pb**	**09 29 32.4**	**+0.2**
JMTN				S	**Sn**	**09 29 38.1**	**+0.6**
JYAK	**Yakushimahirau**	**0.63**	**243**	*i* P	**Pb**	**09 29 37.6**	**-0.1**
JYAK				S	**Sb**	**09 29 46.7**	**+0.4**
JTSR	**Tashiro 2**	**0.67**	**342**	*i* P	**Pb**	**09 29 37.4**	**-0.9**
JTSR				S	**Sb**	**09 29 46.6**	**-0.7**
JKC	**Kuchinoerabu**	**0.83**	**266**	*i* P	**Pn**	**09 29 40.7**	**+0.2**
JKC				S	**Sn**	**09 29 52.7**	**+1.0**
JNAR	**Kushima--Naru**	**1.00**	**6**	P	**Pn**	**09 29 43.2**	**+0.4**
JNKG	**Nichinankitago**	**1.15**	**9**	*i* P	**Pn**	**09 29 45.5**	**+0.7**
JNN	**Nakanoshima**	**1.31**	**239**	P	**Pb**	**09 29 48.5**	**-0.5**
JTZ	**Takazaki**	**1.37**	**357**	*i* P	**Pn**	**09 29 48.8**	**+0.8**
JNU	**Nakatsue**	**2.60**	**355**	P	**Pn**	**09 30 05.7**	**+0.9**
	3.7nm,0.3s,baz=190,slow=17,SNR=34						
JNU				S	**Sn**	**09 30 37.1**	**+1.8**
	46nm,0.8s,baz=246,slow=20,SNR=5.0						
	20nm,0.6s						
JOW	**Kunigami**	**4.47**	**215**	P	**Pn**	**09 30 31.4**	**+0.8**
	1.7nm,0.3s,baz=82,slow=19,SNR=10						
JOW				S	**Sn**	**09 31 21.8**	**+0.3**
	9.1nm,0.3s,baz=183,slow=27,SNR=7.7						
	9.7nm,0.5s						
KSRS	**Korea Array**	**7.41**	**340**	P	**Pn**	**09 31 13.4**	**+2.5**
	0.4nm,0.3s,baz=158,slow=14,SNR=5.6						
	1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**43.68**	**313**	P	**P**	**09 37 25.6**	**-1.0**
	0.4nm,0.7s,baz=100,slow=8.4,SNR=4.1						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**48.90**	**316**	P	**P**	**09 38 07.2**	**-0.6**
	1.2nm,0.5s,baz=101,slow=9.4,SNR=7.4						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**50.27**	**176**	P	**P**	**09 38 19.0**	**+0.6**
	0.4nm,0.7s,baz=353,slow=7.9,SNR=6.5						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**53.95**	**177**	P	**P**	**09 38 46.3**	**+0.5**
	0.2nm,0.7s,baz=359,slow=7.5,SNR=2.1						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**70.40**	**330**	P	**P**	**09 40 34.1**	**-1.5**
	1.2nm,0.7s,baz=71,slow=8.5,SNR=7.3						
	1.2nm,0.7s						

*SNET **17** 09:44:45.5±1.0, 12°.66N×88°.93W, h20km, ML3.7*
*CATAC **17** 09:44:45.1±1.0, 13°.N±4°×8°.9W±°, h29km±11km, M3.6/18, MLv3.6/18, Error ellipse: s-maj=10.8km s-min=4.7km az=36.4, confirmed*
*GCG **17** 09:44:46.0±0.6, 12°.60N×89°.15W, h25km±6km, MD4.2*
ISC 17 09:44:43.9±1.9, 12°.55N±0°.08×88°.91W±0°.05, h26km±15km, n62, σ0964/74, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.99**	**7**	*e*P	**Pn**	**09 45 01.9**	**-0.3**
TECO				*e*S	**Sn**	**09 45 14.2**	**-1.1**
TECA	**Tecapa**	**1.01**	**23**	*e*P	**Pn**	**09 45 02.5**	**-0.2**
LCY	**Lacayo**	**1.05**	**35**	*e*P	**Pn**	**09 45 03.2**	**+0.1**
PACA	**Pacayal**	**1.07**	**32**	*e*P	**Pn**	**09 45 03.8**	**+0.4**
PACA				*e*S	**Sb**	**09 45 18.0**	**+0.4**
PACA	**Pacayal**	**1.07**	**32**	P	**Pn**	**09 45 03.9**	**+0.5**
LFRS	**El Faro**	**1.07**	**352**	*e*P	**Pn**	**09 45 03.5**	**+0.1**
UESV	**Universidad de**	**1.08**	**6**	*e*P	**Pn**	**09 45 03.4**	**-0.1**
UESV				*e*S	**Sn**	**09 45 17.2**	**-0.5**
UESV	**Universidad de**	**1.08**	**6**	P	**Pn**	**09 45 03.6**	**+0.1**
BLLM	**Bellamira**	**1.10**	**36**	*e*P	**Pn**	**09 45 03.9**	**+0.2**
LOMA	**Loma Larga**	**1.11**	**347**	*e*P	**Pn**	**09 45 04.0**	**0.0**
LOMA				*e*S	**Sn**	**09 45 17.4**	**-1.2**
LOMA	**Loma Larga**	**1.11**	**347**	P	**Pn**	**09 45 03.9**	**0.0**
PAVA	**Las Pavas**	**1.15**	**358**	*e*P	**Pn**	**09 45 04.5**	**0.0**
PAVA				*e*S	**Sn**	**09 45 19.5**	**-0.1**
PAVA	**Las Pavas**	**1.15**	**358**	P	**Pn**	**09 45 04.7**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.16**	**9**	*e*P	**Pn**	**09 45 04.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.16**	**9**	P	**Pn**	**09 45 05.2**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.16**	**9**	S	**Sb**	**09 45 19.9**	**+0.1**
UTEC	**Universidad Te**	**1.18**	**346**	*e*P	**Pn**	**09 45 05.3**	**+0.5**
UTEC	**Universidad Te**	**1.18**	**346**	P	**Pb**	**09 45 05.9**	**+0.3**
UDBS	**Universidad Do**	**1.18**	**348**	*e*P	**Pn**	**09 45 05.2**	**+0.4**
MAGS	**Ministerio de**	**1.18**	**342**	*e*P	**Pn**	**09 45 05.4**	**+0.5**
LBRS	**Las Brisas**	**1.19**	**354**	*e*P	**Pn**	**09 45 05.0**	**0.0**
UESS	**Universidad de**	**1.20**	**346**	*e*P	**Pn**	**09 45 05.5**	**+0.4**
UEES	**Universidad Ev**	**1.20**	**344**	*e*P	**Pn**	**09 45 05.5**	**+0.3**
UEES				*e*S	**Sn**	**09 45 19.9**	**-0.8**
UEES	**Universidad Ev**	**1.20**	**344**	P	**Pn**	**09 45 05.8**	**+0.6**
LFU	**La Fuente**	**1.21**	**350**	*e*P	**Pn**	**09 45 05.5**	**+0.2**
JAYA	**Jayaque - finc**	**1.22**	**334**	*e*P	**Pn**	**09 45 05.5**	**0.0**
JAYA				*e*S	**Sn**	**09 45 20.8**	**-0.3**
JAYA	**Jayaque - finc**	**1.22**	**334**	*e*P	**Pn**	**09 45 05.5**	**0.0**
JAYA	**Jayaque - finc**	**1.22**	**334**	P	**Pn**	**09 45 05.6**	**+0.2**
PMON	**Piamonte**	**1.22**	**341**	*e*P	**Pn**	**09 45 05.5**	**+0.1**
PMON				*e*S	**Sn**	**09 45 20.4**	**-0.8**
PMON	**Piamonte**	**1.22**	**341**	P	**Pn**	**09 45 06.0**	**+0.5**
BOQS	**Boqueron**	**1.23**	**343**	*e*P	**Pn**	**09 45 06.0**	**+0.3**
PIC2	**El Picacho**	**1.23**	**344**	*e*P	**Pb**	**09 45 06.9**	**+0.2**
LCND	**La Caada**	**1.24**	**53**	P	**Pn**	**09 45 06.1**	**+0.5**
CNCH	**Conchagua**	**1.27**	**55**	P	**Pn**	**09 45 07.1**	**+1.0**
QUEZ	**Alcaldia de Qu**	**1.32**	**344**	*e*P	**Pn**	**09 45 07.5**	**+0.7**
CEDA	**San Andres**	**1.33**	**339**	*e*P	**Pn**	**09 45 07.4**	**+0.5**
CEDA				*e*S	**Sn**	**09 45 24.0**	**+0.2**
CSGN	**Cosiguina Volc**	**1.38**	**72**	P	**Pn**	**09 45 07.9**	**+0.2**
CEVE	**Cerro Verde**	**1.45**	**331**	*e*P	**Pn**	**09 45 09.2**	**+0.5**
CEVE	**Cerro Verde**	**1.45**	**331**	P	**Pn**	**09 45 09.7**	**+1.0**
CEVE	**Cerro Verde**	**1.45**	**331**	S	**Sb**	**09 45 27.9**	**-0.6**
SBLS	**San Blas**	**1.46**	**331**	*e*P	**Pn**	**09 45 09.4**	**+0.6**
SNJE	**San Jose**	**1.47**	**333**	*e*P	**Pb**	**09 45 10.4**	**-0.4**
RTR	**El Retiro**	**1.52**	**332**	*e*P	**Pn**	**09 45 10.3**	**+0.7**
UNIC	**Universidad Ca**	**1.55**	**336**	*e*P	**Pn**	**09 45 10.8**	**+0.9**
UNIC	**Universidad Ca**	**1.55**	**336**	S	**Sb**	**09 45 30.5**	**-0.8**
UNIC	**Universidad Ca**	**1.55**	**336**	P	**Pn**	**09 45 10.9**	**+0.9**
NUBE	**Las Nubes**	**1.59**	**328**	*e*P	**Pn**	**09 45 10.9**	**+0.4**
NUBE				*e*S	**Sn**	**09 45 30.1**	**-0.3**
NUBE	**Las Nubes**	**1.59**	**328**	*e*P	**Pn**	**09 45 10.9**	**+0.4**
NUBE				*i* S	**Sn**	**09 45 30.3**	**0.0**
NUBE	**Las Nubes**	**1.59**	**328**	P	**Pn**	**09 45 11.0**	**+0.4**
LLGN	**La Laguna**	**1.60**	**359**	*e*P	**Pn**	**09 45 12.0**	**+1.3**
LLGN				*e*S	**Sb**	**09 45 31.9**	**-0.8**
LLGN	**La Laguna**	**1.60**	**359**	P	**Pn**	**09 45 11.8**	**+1.1**
FAME	**Alcaldia de Sa**	**1.68**	**320**	P	**Pn**	**09 45 11.9**	**+0.2**
MTO3	**Montecristo**	**1.89**	**347**	*e*P	**Pn**	**09 45 15.9**	**+1.2**
MTO3	**Montecristo**	**1.89**	**347**	P	**Pn**	**09 45 15.9**	**+1.2**
PKGN	**Cerro Pekin**	**1.89**	**86**	P	**Pn**	**09 45 15.4**	**+0.8**
ESQI	**Esquipulas**	**2.04**	**348**	*e*P	**Pn**	**09 45 18.3**	**+1.5**
ESQI	**Esquipulas**	**2.04**	**348**	S	**Sn**	**09 45 42.2**	**+0.7**
ESQI	**Esquipulas**	**2.04**	**348**	P	**Pn**	**09 45 18.2**	**+1.5**
POLN	**Al Sur del Vol**	**2.05**	**87**	P	**Pn**	**09 45 16.0**	**-0.7**
CNGA	**Al SSO del Vol**	**2.15**	**91**	P	**Pn**	**09 45 18.7**	**+0.5**
CNGN	**Cerro Negro**	**2.16**	**91**	P	**Pn**	**09 45 18.3**	**+0.1**
MOMN	**Momotombo**	**2.31**	**93**	P	**Pn**	**09 45 20.8**	**+0.4**

*SOME **17** 09:46:40.6, 41°.87N×84°.28E, h10km*
*NNC **17** 09:46:42.3±3.5, 41°.91N×84°.27E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=28.0km s-min=15.9km az=162.0*
ISC 17 09:46:48.9±3.0, 41°.9N±0°.2×83°.92E±0°.09, h10km, n16, σ2966/18, 4C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.06**	**302**	Pg	**Pb**	**09 47 41.5**	**-2.0**
	1.4nm,0.3s						
KTMS				Lg	Lg	09 48 25.4	
	32nm,0.6s						
KTMS	**Ketmen**	**3.06**	**302**	*e*P	**Pb**	**09 47 41.5**	**-2.0**
	1.4nm,0.3s						
KTMS				*e*S	**Sb**	**09 48 25.4**	**+4.3**
	32nm,0.6s						
SHLS	**Shalkode**	**3.54**	**293**	Pg	**Pn**	**09 47 45.5**	**+1.5**
	7.9nm,0.4s						
SHLS				Lg	Lg	09 48 32.1	
	32nm,0.3s						
SHLS	**Shalkode**	**3.54**	**293**	*e*P	**Pn**	**09 47 45.5**	**+1.5**
	7.9nm,0.4s						
SHLS				*e*S	**Sb**	**09 48 32.1**	**-2.6**
	32nm,0.3s						
PDGK	**Podgornoye**	**3.58**	**295**	⇑Pg	**Pb**	**09 47 51.4**	**-1.0**
	2.6nm,0.9s						
PDGK				⇑Lg	Lg	09 48 43.8	
	18nm,0.6s						
KPKS	**Kokpek**	**4.18**	**294**	Pg	**Pb**	**09 48 02.2**	**-0.3**
	0.7nm,0.3s						
KPKS				Lg	Lg	09 49 00.6	
	8.6nm,0.5s						
SATY	**Saty**	**4.25**	**288**	Pg	**Pb**	**09 48 04.2**	**+0.4**
	2.0nm,0.2s						
SATY				Lg	Lg	09 49 04.3	
	8.1nm,0.6s						
**KNOS

SYVR eSg Sg 09 48 26.2 +1.2
SYVR Pmax
comp=E,120nm,0.4s
SYVR Smax
comp=E,379nm,0.5s
SYVR Suvo 1.70 212 ⇑ iPG Pn 09 48 01.0 +0.3
SYVR e 09 48 02.3
SYVR e 09 48 26.4
SYVR pmax pmax
comp=Z,119nm,0.3s
SYVR smax smax
comp=N,378nm,0.5s
MXMB Maximikha 2.46 223 ePn Pn 09 48 11.7 +0.5
MXMB eNg Pb 09 48 16.0 +0.8
MXMB eSg Sb 09 48 48.8 +3.1
OGRR Ongureny 2.72 239 ePn Pn 09 48 14.0 -0.8
OGRR ePg Pb 09 48 20.4 +0.8
OGRR e 09 48 48.3
OGRR eSg Sb 09 48 56.7 +3.5
OGRR Pmax
comp=N,34nm,0.4s
OGRR Smax
comp=N,157nm,0.5s
OGRR Ongureny 2.72 239 ePN Pn 09 48 15.1 +0.3
OGRR e 09 48 19.6
OGRR e 09 48 54.7
OGRR pmax pmax
comp=Z,20nm,0.3s
OGRR smax smax
comp=E,191nm,2.0s
NLYR Nelyaty 2.74 58 ePn Pn 09 48 15.1 0.0
NLYR ePg Pb 09 48 20.9 +0.9
NLYR eSg Sg 09 48 55.9 -2.6
NLYR Pmax
comp=E,48nm,0.7s
NLYR Smax
comp=E,215nm,1.4s
UZR Uzur 2.85 233 ePn Pn 09 48 16.6 +0.1
UZR ePg Pb 09 48 22.3 +0.6
UZR eSg Sb 09 49 00.3 +3.5
UZR Pmax
comp=E,39nm,0.5s
UZR Smax
comp=E,297nm,1.6s
GORB Goryachinsk 2.85 223 ePn Pn 09 48 16.9 +0.3
GORB ePg Pb 09 48 23.2 +1.4
GORB eSg Sg 09 49 01.0 -1.0
BOD Bodaibo 3.05 26 ePn Pn 09 48 19.2 -0.1
BOD ePg Pb 09 48 25.6 +0.4
BOD eSn Sn 09 48 54.0 -2.2
BOD eSg Sb 09 49 04.2 +1.5
BOD Pmax
comp=E,35nm,0.7s
BOD Smax
comp=E,181nm,1.3s
BOD Bodaibo 3.05 26 ePN Pn 09 48 19.1 -0.2
BOD e 09 48 24.9
BOD e 09 49 03.1
BOD pmax pmax
comp=Z,47nm,0.8s
BOD smax smax
comp=N,164nm,0.6s
KELR Kotokel 3.10 222 ePn Pn 09 48 21.0 +0.9
KELR ePg Pb 09 48 28.4 +2.3
KELR eSg Sg 09 49 09.5 -0.7
CIT Chita 3.32 158 eSg Sg 09 49 15.6 -1.4
CIT Smax
comp=N,242nm,0.4s
ZRHB Zarechye 3.63 227 ePg Pb 09 48 37.9 +2.7
ZRHB eSg Sg 09 49 25.9 -1.3
ZRHB Pmax
comp=N,38nm,0.4s
ZRHB Smax
comp=N,608nm,1.6s
TRG Tyrgan 3.85 235 ePn Pn 09 48 30.6 +0.2
TRG ePg Pb 09 48 40.4 +1.5
TRG eSg Sb 09 49 31.3 +5.5
TRG Pmax
comp=N,6.0nm,0.3s
TRG Smax
comp=N,76nm,0.6s
FFNB Fofonovo 4.17 225 ePg Pb 09 48 47.0 +2.7
FFNB eSg Sg 09 49 41.4 -3.0
CRS Chara 4.20 62 ePn Pn 09 48 34.9 -0.2
CRS ePg Pb 09 48 46.5 +1.8
CRS eSg Sg 09 49 41.1 -4.1
CRS Pmax
comp=N,34nm,1.3s
CRS Smax
comp=N,71nm,1.0s
CRS Chara 4.20 62 ePN Pb 09 48 45.6 +0.9
CRS e 09 49 41.3
CRS pmax pmax
comp=Z,38nm,0.8s
CRS smax smax
comp=E,61nm,0.9s
KAB Kabansk 4.21 225 eSg Sg 09 49 42.5 -3.2
KAB Smax
comp=E,631nm,1.6s
STDB Stepnoy Dvoret 4.25 228 eSg Sb 09 49 43.4 +6.3
VTMR Vitim 4.39 7 eSg Sb 09 49 45.9 +4.9
HRMR Khuramsha 4.42 220 ePn Pn 09 48 38.8 +0.6
HRMR ePg Pb 09 48 51.0 +2.4
HRMR eSg Sg 09 49 49.0 -3.5
HRMR Pmax
comp=E,20nm,0.4s
HRMR Smax
comp=E,130nm,1.0s
BGT Bolshoye Golou 4.76 232 ePg Pb 09 48 57.9 +3.6
BGT eSg Sg 09 49 59.9 -3.3
BGT Pmax
comp=E,4.0nm,0.1s
BGT Smax
comp=E,44nm,0.8s
TUP Tupik 4.93 94 ePn Pn 09 48 44.9 -0.2
TUP ePg Pb 09 49 00.3 +3.0
TUP eSg Sg 09 50 04.6 -4.2
TUP Pmax
comp=E,2.0nm,0.3s
TUP Smax
comp=E,187nm,1.3s
TUP Tupik 4.93 94 ePN Pn 09 48 45.0 -0.2
TUP e 09 48 59.0
TUP eS Sn 09 49 38.5 -4.0
TUP e 09 50 04.6
TUP pmax pmax
comp=Z,2.0nm,0.1s
TUP smax smax
comp=N,187nm,1.0s
LSTR Listvyanka 5.14 234 ePg Pb 09 49 04.1 +3.3
LSTR eSg Sb 09 50 10.6 +7.8
LSTR Pmax
comp=N,2.0nm,0.2s
LSTR Smax
comp=N,45nm,1.6s
IRK Irkutsk 5.17 239 eSg Sg 09 50 12.6 -3.9
IRK Smax
comp=N,152nm,0.4s
IVK Ivanovka 5.38 235 ePg Pb 09 49 08.8 +3.9
IVK eSg Sg 09 50 18.8 -4.4
IVK Pmax
comp=N,9.0nm,0.3s
IVK Smax
comp=N,53nm,0.9s
KPC Khapcheranga 5.43 174 eSg Sg 09 50 21.8 -3.1
KPC Smax
comp=N,96nm,1.0s
TLY Talaya 5.83 237 eSg Sg 09 50 31.7 -5.7
TLY Smax
comp=N,37nm,1.1s
ARS Arshan 6.29 243 ePn Pn 09 49 03.5 -0.4
ARS eSg Sb 09 50 45.7 +10
ARS max
comp=N,6.0nm,0.4s
ARS Smax
comp=N,94nm,1.1s
ZAK Zakamensk 6.88 230 eSg Sg 09 51 05.0 -6.3
ZAK Smax
comp=N,24nm,1.1s
MOY Mondy 7.17 246 ePn Pn 09 49 16.9 +0.9
MOY ePg Pb 09 49 40.9 +5.4
MOY eSn Sn 09 50 33.4 -4.4
MOY eSg Sg 09 51 12.8 -7.8
MOY Pmax
comp=N,5.0nm,0.8s
MOY Smax
comp=N,40nm,1.2s
ORL Orlik 7.39 254 ePn Pn 09 49 19.6 +0.6
ORL eSn Sn 09 50 39.0 -4.2
ORL eSg Sg 09 51 20.4 -7.2
ORL max
comp=N,3.0nm,0.5s
ORL Smax
comp=N,24nm,0.8s
HILR Hailar Array B 7.50 134 Pn Pn 09 49 18.8 -1.7
baz=326,slow=18
HILR Lg Lg 09 51 23.1
baz=334,slow=29
comp=N,1.0nm,0.4s
SONM Songino Array 7.95 206 Pn Pn 09 49 26.7 0.0
comp=N,0.2nm,0.3s,baz=16,slow=13,SNR=2.4
SONM Lg Lg 09 51 40.9
comp=N,1.7nm,0.3s,baz=20,slow=29,SNR=12
comp=N,0.4nm,0.3s
ZALV Zalesovo Beam 15.51 277 Pn P 09 51 17.5 +3.4
comp=N,0.1nm,0.3s,baz=72,slow=12,SNR=4.4
comp=N,0.9nm,0.6s

NEIC 17 09:50:45.2±2.0, 40.85N±0.02×107.00W±0.03, h5km±1km, ML1.9/28, Error ellipse: s-maj=4.8km s-min=2.8km az=329.0, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAYD	**Hayden**	**0.38**	**212**		Pg	09 50 53.6	+0.9
HAYD				Sg	Sb	09 50 59.4	-1.6
O20A	**White River Ci**	**1.19**	**234**		Pg	09 51 07.6	-0.3
O20A				Sg	Sg	09 51 22.6	-0.7
O20A				IAML		09 51 25.8	
	11nm,1.4s						
O20A				IAML		09 51 33.7	
	11nm,1.4s						
ISCO	**Idaho Springs**	**1.49**	**134**		Pn	09 51 12.5	-0.4
K22A	**Casper**	**1.84**	**11**	Pn	Pn	09 51 17.2	-0.3
K22A				IAML		09 51 43.3	
	14nm,0.3s						
K22A				IAML		09 51 46.1	
	15nm,0.3s						
RDMU	**Red Mountain**	**1.98**	**263**	Pn	Pn	09 51 18.6	-0.9
RDMU				IAML		09 51 48.1	
	comp=N,4.0nm,1.1s						
PD31	**Pinedale Array**	**2.71**	**316**	Pn	Pn	09 51 30.0	+0.4
PDAR	**Pinedale Array**	**2.71**	**316**	Pn	Pn	09 51 29.5	-0.1
PV23	**Carpenter Ridg**	**2.85**	**214**	Pn	Pn	09 51 29.8	-1.8
PV23				IAML		09 52 26.5	
	comp=N,4.3nm,0.5s						
PV12	**Saucer Basin,**	**2.89**	**209**	Pn	Pn	09 51 30.4	-1.6
PV03	**Paradox Valley**	**2.96**	**210**	Pn	Pn	09 51 32.4	-0.6
PV03				IAML		09 52 47.4	
	comp=E,1.6nm,1.1s						
PV03				IAML		09 52 53.6	
	comp=N,3.3nm,1.4s						
SRU	**San Rafael Swe**	**3.22**	**239**	Pn	Pn	09 51 36.6	0.0
SRU				IAML		09 52 25.1	
	comp=N,5.1nm,0.7s						

*NOU **17** 09:54:29.5, 25.56S×179.80W, h534km, mb4.5/37, South of Fiji Islands*
*IDC **17** 09:54:30.6±0.8, 25.54S×179.64E, h492km±8km, mb3.6/16, mbtmp4.5/18, Error ellipse: s-maj=11.8km s-min=10.8km az=169.0*
*NEIC **17** 09:54:32.3±1.5, 25.5S±0.1×179.8E±0.1, h499km±9km, mb4.5/57, Error ellipse: s-maj=17.3km s-min=14.4km az=175.0*

ISC 17 09:54:31.5±0.3, 25.52S±0.05×179.74E±0.05, h507km, n316, σ1.983/342, mb4.4/46, 19C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**4.25**	**151**	P	**P**	**09 55 52.0**	**-0.4**
RIZ				S	S	09 56 59.3	+0.9
RAO	**Raoul Island**	**4.26**	**151**	P	**P**	**09 55 51.4**	**-1.0**
	937nm,0.3s,baz=357,slow=5.1,SNR=14						
RAO				S	**S**	**09 56 57.5**	**-1.1**
	1μm,0.3s,baz=62,slow=23,SNR=5.5						
RAO	**Raoul Island**	**4.26**	**151**	P	**P**	**09 55 51.5**	**-1.0**
RAO	**Raoul Island**	**4.26**	**151**	S	**S**	**09 56 57.0**	**-1.5**
RAO	**Raoul Island**	**4.26**	**151**	P	**P**	**09 55 52.0**	**-0.5**
GLKZ	**Green Lake**	**4.27**	**151**	P	**P**	**09 55 52.2**	**-0.3**
GLKZ				S	**S**	**09 56 58.4**	**-0.2**
MSVF	**Nonsavu**	**7.90**	**348**		**P**	**09 56 27.0**	**-0.3**
MSVF	**Nonsavu**	**7.90**	**348**	P	**P**	**09 56 26.8**	**-0.5**
OUZ	**Omahuta**	**11.03**	**207**	P	**P**	**09 57 00.9**	**+1.2**
OUZ	**Omahuta**	**11.03**	**207**	P	**P**	**09 57 00.6**	**+0.9**
GRZ	**Great Barrier**	**11.31**	**198**	P	**P**	**09 57 03.4**	**+0.8**
WCZ	**Waipu Caves**	**11.38**	**203**	P	**P**	**09 57 04.9**	**+1.5**
MARNC	**Mare, Loyalty**	**11.47**	**288**	P	**P**	**09 57 04.3**	**-0.3**
MARNC	**Mare, Loyalty**	**11.47**	**288**	P	**P**	**09 57 05.3**	**+0.7**
NIUE	**Niue**	**11.51**	**58**	P	**P**	**09 57 04.7**	**-0.2**
PINNC	**Pines Island,**	**11.60**	**282**	P	**P**	**09 57 05.9**	**0.0**
KUZ	**Kuaotunu**	**11.71**	**196**	P	**P**	**09 57 07.2**	**+0.4**
KUZ	**Kuaotunu**	**11.71**	**196**	P	**P**	**09 57 07.4**	**+0.5**
ABAZ	**Army Bay**	**11.82**	**200**	P	**P**	**09 57 09.0**	**+1.0**
WIAZ	**Waiheke Island**	**11.91**	**198**	P	**P**	**09 57 10.1**	**+1.1**
MBAZ	**Motutapu North**	**11.96**	**199**	P	**P**	**09 57 10.6**	**+1.2**
RVAZ	**Riverhead Bore**	**12.06**	**200**	P	**P**	**09 57 11.3**	**+0.8**
MXZ	**Matakaoa Point**	**12.07**	**185**	P	**P**	**09 57 08.9**	**-1.7**
MXZ	**Matakaoa Point**	**12.07**	**185**	S	**S**	**09 59 20.3**	**-1.5**
MXZ	**Matakaoa Point**	**12.07**	**185**	P	**P**	**09 57 06.0**	**-4.7**
MXZ				S	**S**	**09 59 19.7**	**-2.1**
HBAZ	**Herne Bay Bore**	**12.08**	**200**	P	**P**	**09 57 11.9**	**+1.1**
EPAZ	**Eden Park BICE**	**12.10**	**199**	P	**P**	**09 57 11.9**	**+1.0**
ETAZ	**East Tamaki Re**	**12.12**	**199**	P	**P**	**09 57 12.3**	**+1.1**
MKAZ	**Mokai**	**12.20**	**198**	P	**P**	**09 57 12.6**	**+0.6**
WTAZ	**Waiatarua**	**12.21**	**200**	P	**P**	**09 57 13.1**	**+1.0**
KBAZ	**Karaka Road Bo**	**12.26**	**199**	P	**P**	**09 57 14.0**	**+1.3**
AWAZ	**Awhitu Peninsu**	**12.31**	**199**	P	**P**	**09 57 13.8**	**+0.6**
HAZ	**Te Kaha**	**12.32**	**187**	P	**P**	**09 57 11.8**	**-1.4**
HAZ				S	**S**	**09 59 23.3**	**-3.2**
WMGZ	**Waiomatatini S**	**12.32**	**185**	P	**P**	**09 57 11.5**	**-1.7**
WMGZ				S	**S**	**09 59 21.6**	**-4.9**
PKGZ	**Pakihiroa**	**12.39**	**186**	P	**P**	**09 57 13.9**	**-0.2**
PKGZ				S	**S**	**09 59 25.3**	**-2.8**
TGRZ	**Tauranga**	**12.53**	**193**	P	**P**	**09 57 15.8**	**+0.3**
RUGZ	**Raukumara Rang**	**12.54**	**188**	P	**P**	**09 57 14.5**	**-1.2**
RUGZ				S	**S**	**09 59 25.6**	**-5.4**
PUZ	**Puketiti**	**12.58**	**185**	P	**P**	**09 57 13.5**	**-2.6**
PUZ				S	**S**	**09 59 24.6**	**-7.1**
OPRZ	**Ohinepanea**	**12.59**	**192**	P	**P**	**09 57 15.8**	**-0.2**
DZM	**Mont Dzumac**	**12.65**	**283**	P	**P**	**09 57 18.1**	**+1.0**
	11nm,0.7s,baz=323,slow=20,SNR=7.0						
TOZ	**Tahuroa Road**	**12.70**	**195**	P	**P**	**09 57 17.7**	**+0.4**
KMRZ	**Kaimai**	**12.71**	**194**	P	**P**	**09 57 17.9**	**+0.5**
TWGZ	**Tauwhareparae**	**12.71**	**186**	P	**P**	**09 57 16.6**	**-0.8**
TWGZ				S	**S**	**09 59 31.7**	**-2.6**
EDRZ	**Edgecumbe**	**12.81**	**191**	P	**P**	**09 57 18.2**	**-0.3**
KARZ	**Kaharoa**	**12.82**	**193**	P	**P**	**09 57 19.0**	**+0.4**
OMRZ	**Omania**	**12.87**	**192**	P	**P**	**09 57 19.6**	**+0.4**
OMRZ				S	**S**	**09 59 36.6**	**-0.7**
URZ	**Urewera**	**12.90**	**189**	P	P	09 57 14.4	-4.9
	198nm,0.5s,baz=304,slow=2.1,SNR=136						
URZ				S	**S**	**09 59 32.7**	**-5.0**
	56nm,0.5s,baz=50,slow=22,SNR=12						
URZ	**Urewera**	**12.90**	**189**	P	**P**	**09 57 16.8**	**-2.6**
URZ	**Urewera**	**12.90**	**189**	S	**S**	**09 59 36.6**	**-1.2**
URZ	**Urewera**	**12.90**	**189**	P	**P**	**09 57 15.9**	**-3.5**
URZ				S	**S**	**09 59 31.9**	**-5.8**
NGRZ	**Ngongotaha**	**12.91**	**193**	P	**P**	**09 57 20.2**	**+0.7**
MWZ	**Matawai**	**12.92**	**188**	P	**P**	**09 57 17.1**	**-2.5**
MWZ				S	**S**	**09 59 34.2**	**-4.0**
TARZ	**Mount Tarawera**	**12.97**	**191**	P	**P**	**09 57 20.9**	**+0.6**
UTU	**Utuhina**	**12.98**	**193**	P	**P**	**09 57 21.9**	**+1.6**
TKGZ	**Te Karaka**	**12.98**	**187**	P	**P**	**09 57 19.9**	**-0.4**
CNGZ	**Carnagh Statio**	**12.99**	**185**	P	**P**	**09 57 18.9**	**-1.5**
CNGZ				S	**S**	**09 59 40.9**	**+1.3**
HLRZ	**Highlands Stat**	**13.02**	**192**	P	**P**	**09 57 21.2**	**+0.5**
RRRZ	**Republican Roa**	**13.07**	**191**	P	**P**	**09 57 20.8**	**-0.4**
RRRZ				S	**S**	**09 59 44.2**	**+3.0**
RAGZ	**Rawiri**	**13.09**	**188**	P	**P**	**09 57 19.2**	**-2.3**
HSRZ	**Hossack Road**	**13.10**	**192**	P	**P**	**09 57 22.1**	**+0.6**
GRRZ	**Galatos Road**	**13.16**	**193**	P	**P**	**09 57 22.0**	**-0.2**
HRRZ	**Handcock Road**	**13.17**	**192**	P	**P**	**09 57 21.0**	**-1.3**
RIGZ	**Rimuhau**	**13.26**	**187**	P	**P**	**09 57 23.5**	**+0.3**
WPRZ	**Whakapapatarin**	**13.31**	**192**	P	**P**	**09 57 22.9**	**-0.9**
ALRZ	**Allen Road**	**13.32**	**192**	P	**P**	**09 57 22.9**	**-0.9**
KUTZ	**Kaahu Road**	**13.35**	**193**	P	**P**	**09 57 25.0**	**+0.8**
SNGZ	**Shannon Statio**	**13.38**	**188**	P	**P**	**09 57 21.4**	**-3.1**
SNGZ				S	**S**	**09 59 49.0**	**+1.9**
PRGZ	**Paritu Road**	**13.46**	**186**	P	**P**	**09 57 24.9**	**-0.5**
MTHZ	**Maungataniwha**	**13.52**	**190**	P	**P**	**09 57 23.8**	**-2.2**
MTHZ				S	**S**	**09 59 48.1**	**-1.7**
RAHZ	**Arahi**	**13.55**	**189**	P	**P**	**09 57 23.1**	**-3.1**
RAHZ				S	**S**	**09 59 48.1**	**-2.2**
MRHZ	**Matea Rd**	**13.57**	**191**	P	**P**	**09 57 24.5**	**-2.0**
MRHZ				S	**S**	**09 59 48.9**	**-2.0**
KNZ	**Kokohu**	**13.58**	**187**	P	**P**	**09 57 23.3**	**-3.2**
KNZ				S	**S**	**09 59 47.3**	**-3.5**
WATZ	**Wairara**	**13.58**	**193**	P	**P**	**09 57 26.7**	**+0.1**
HIZ	**Hauiti**	**13.60**	**197**	P	**P**	**09 57 26.5**	**-0.3**
HIZ	**Hauiti**	**13.60**	**197**	S	**S**	**09 59 50.9**	**-0.4**
HIZ	**Hauiti**	**13.60**	**197**	P	**P**	**09 57 27.2**	**+0.4**
MHGZ	**Mahia Peninsul**	**13.69**	**186**	P	**P**	**09 57 26.4**	**-1.3**
MHGZ				S	**S**	**09 59 51.1**	**-1.8**
RATZ	**Rangitukua**	**13.73**	**193**	P	**P**	**09 57 27.3**	**-0.9**
NMHZ	**Naumai**	**13.77**	**190**	P	**P**	**09 57 27.0**	**-1.6**
NMHZ				S	**S**	**09 59 54.3**	**-0.3**
KATZ	**Kakaramea**	**13.85**	**193**	P	**P**	**09 57 29.1**	**-0.5**
BKZ	**Black Stump Fm**	**13.88**	**191**	P	**P**	**09 57 26.1**	**-3.7**
BKZ	**Black Stump Fm**	**13.88**	**191**	P	**P**	**09 57 26.9**	**-2.9**
ARHZ	**Aropaoanui**	**13.90**	**189**	P	**P**	**09 57 26.8**	**-3.1**
NTVZ	**North Tongarir**	**13.97**	**193**	P	**P**	**09 57 29.6**	**-1.2**
KRVZ	**Karewarewa**	**13.97**	**193**	P	**P**	**09 57 29.5**	**-1.4**
TMVZ	**Te Maari**	**13.98**	**193**	P	**P**	**09 57 29.5**	**-1.4**
ETVZ	**East Tongariro**	**14.00**	**193**	P	**P**	**09 57 29.7**	**-1.4**
AFI	**Afiamalu**	**14.03**	**36**	P	**P**	**09 57 28.0**	**-3.6**
AFI	**Afiamalu**	**14.03**	**36**	P	**P**	**09 57 28.1**	**-3.5**
AFI	**Afiamalu**	**14.03**	**36**	S	**S**	**09 59 53.5**	**-6.7**
AFI	**Afiamalu**	**14.03**	**36**	P	**P**	**09 57 27.6**	**-4.1**
COVZ	**Chateau Observ**	**14.10**	**194**	P	**P**	**09 57 30.6**	**-1.5**
MCHZ	**McNeill Hill**	**14.12**	**190**	P	**P**	**09 57 28.3**	**-4.0**
FWVZ	**Far West T-bar**	**14.15**	**193**	P	**P**	**09 57 31.4**	**-1.4**
KWHZ	**Kaweka Forest**	**14.15**	**191**	P	**P**	**09 57 29.6**	**-3.0**
VRZ	**Vera Road**	**14.20**	**196**	P	**P**	**09 57 33.0**	**-0.1**
MOVZ	**Moawhango**	**14.25**	**193**	P	**P**	**09 57 31.0**	**-2.7**
PXZ	**Pawanui**	**14.67**	**189**	P	**P**	**09 57 35.1**	**-2.9**
WAZ	**Wanganui**	**14.75**	**195**	P	**P**	**09 57 36.5**	**-2.4**
TSZ	**Takapari Road**	**14.84**	**191**	P	**P**	**09 57 35.7**	**-4.1**
BFZ	**Birch Farm**	**15.40**	**190**	P	**P**	**09 57 41.7**	**-3.9**
BFZ	**Birch Farm**	**15.40**	**190**	P	**P**	**09 57 40.8**	**-4.8**
SANVU	**Saraoutou**	**15.43**	**308**	P	**P**	**09 57 46.7**	**+0.5**
MRZ	**Mangatainoka R**	**15.50**	**192**	P	**P**	**09 57 41.6**	**-5.1**
SNZO	**South Karori**	**16.30**	**194**	P	**P**	**09 57 52.2**	**-2.7**
QRZ	**Quartz Range**	**16.41**	**200**	P	**P**	**09 57 53.9**	**-2.2**
QRZ	**Quartz Range**	**16.41**	**200**	P	**P**	**09 57 54.0**	**-2.2**
NNZ	**Nelson**	**16.53**	**197**	P	**P**	**09 57 53.6**	**-3.7**
THZ	**Tophouse**	**17.16**	**198**	P	**P**	**09 58 00.3**	**-3.4**
DSZ	**Denniston Nort**	**17.47**	**200**	P	**P**	**09 58 04.4**	**-2.1**
KHZ	**Kahutara**	**17.62**	**195**	P	**P**	**09 58 03.9**	**-3.9**
KHZ	**Kahutara**	**17.62**	**195**	P	**P**	**09 58 04.1**	**-3.7**
GVZ	**Greta Valley S**	**18.26**	**196**	P	**P**	**09 58 10.7**	**-3.0**
LTZ	**Lake Taylor**	**18.29**	**198**	P	**P**	**09 58 11.0**	**-3.0**
CTZ	**Chatham Island**	**18.42**	**172**	P	**P**	**09 58 11.8**	**-3.3**
INZ	**Inchbonnie**	**18.47**	**200**	P	**P**	**09 58 13.3**	**-2.3**
OXZ	**Oxford**	**18.85**	**198**	P	**P**	**09 58 16.3**	**-2.8**
WVZ	**Waitaha Valley**	**19.01**	**201**	P	**P**	**09 58 18.4**	**-2.1**
MQZ	**McQueen's Vall**	**19.05**	**196**	P	**P**	**09 58 18.2**	**-2.7**
RAR	**Rarotonga**	**19.28**	**81**	P	**P**	**09 58 23.3**	**0.0**
	9.9nm,0.5s,baz=216,slow=12,SNR=2.6						
RAR	**Rarotonga**	**19.28**	**81**	P	**P**	**09 58 23.7**	**+0.3**
RPZ	**Rata Peaks**	**19.49**	**199**	P	**P**	**09 58 22.7**	**-2.2**
	27nm,0.5s,baz=20,slow=4.5,SNR=20						
RPZ				S	**S**	**10 01 32.5**	**-2.4**
	15nm,0.6s,baz=26,slow=20,SNR=5.4						
RPZ	**Rata Peaks**	**19.49**	**199**	P	**P**	**09 58 22.4**	**-2.6**
RPZ	**Rata Peaks**	**19.49**	**199**	P	**P**	**09 58 22.3**	**-2.6**
FOZ	**Fox Glacier**	**19.72**	**202**	P	**P**	**09 58 24.9**	**-2.1**
TMZ	**Timaru**	**20.12**	**198**	P	**P**	**09 58 28.0**	**-2.7**
LBZ	**Lake Benmore**	**20.36**	**200**	P	**P**	**09 58 30.1**	**-2.8**
JCZ	**Jackson Bay**	**20.55**	**203**	P	**P**	**09 58 32.4**	**-2.3**
JCZ	**Jackson Bay**	**20.55**	**203**	P	**P**	**09 58 33.1**	**-1.6**
ODZ	**Otahua Downs**	**20.82**	**198**	P	**P**	**09 58 34.5**	**-2.6**
ODZ	**Otahua Downs**	**20.82**	**198**	P	**P**	**09 58 35.0**	**-2.0**
WKZ	**Wanaka**	**21.13**	**202**	P	**P**	**09 58 37.3**	**-2.6**
EAZ	**Earnscleugh**	**21.40**	**201**	P	**P**	**09 58 40.4**	**-1.8**
MLZ	**Mavora Lakes**	**21.91**	**202**	P	**P**	**09 58 45.5**	**-1.4**
TUZ	**Tuapeka**	**21.95**	**199**	P	**P**	**09 58 45.9**	**-1.3**
WHZ	**Wether Hill Ro**	**22.43**	**202**	P	**P**	**09 58 49.8**	**-1.7**
HNR	**Honiara**	**24.69**	**307**	P	**P**	**09 59 11.4**	**-0.7**
EIDS	**Eidsvold**	**25.86**	**264**	P	**P**	**09 59 23.2**	**+0.8**
EIDS				IAmb	IAmb	09 59 49.5	
	comp=Z,12nm,1.1s						
EIDS	**Eidsvold**	**25.86**	**264**	P	**P**	**09 59 22.3**	**-0.1**
CAN	**Canberra**	**28.16**	**242**	P	**P**	**09 59 43.4**	**+0.9**
CAN				IAmb	IAmb	09 59 54.3	
	comp=Z,31nm,1.4s						
PPT	**Papeete**	**29.56**	**81**	P	**P**	**09 59 56.5**	**+1.7**
	comp=Z,17nm,0.6s,baz=222,slow=19,SNR=4.8						
	comp=Z,17nm,0.6s						
CMSA	**Cobar Meteorol**	**30.43**	**251**	P	**P**		**10 00 01.6**	**-0.6**
CTA	**Charters Tower**	**31.29**	**273**	P	**P**		**10 00 10.0**	**+0.2**
CTAO	**Charters Tower**	**31.29**	**273**		**P**		**10 00 10.5**	**+0.7**
CTAO				IAmb	IAmb	10 00 11.0	
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**31.29**	**273**	P	**P**		**10 00 10.0**	**+0.2**
TOO	**Toolangi**	**31.40**	**239**	P	**P**		**10 00 10.5**	**0.0**
QLP	**Quilpie**	**31.86**	**260**	P	**P**		**10 00 14.6**	**0.0**
STKA	**Stephens Creek**	**33.93**	**250**	P	**P**		**10 00 32.1**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=82,slow=11,SNR=7.7						
	comp=Z,1.9nm,0.5s						
STKA	**Stephens Creek**	**33.93**	**250**	P	**P**		**10 00 31.8**	**-0.3**
PMG	**Port Moresby**	**34.83**	**292**	P	**P**		**10 00 39.7**	**-0.1**
	comp=Z,26nm,0.8s,baz=128,slow=5.4,SNR=7.7						
	comp=Z,26nm,0.8s						
PMG	**Port Moresby**	**34.83**	**292**		**P**		**10 00 40.0**	**+0.2**
MGBR	**Mount Gambier**	**35.27**	**240**	P	**P**		**10 00 44.2**	**+1.1**
COEN	**Coen**	**36.17**	**281**		**P**		**10 00 51.9**	**+0.9**
COEN				IAmb	IAmb	10 00 52.3	
	comp=Z,15nm,0.6s						
COEN	**Coen**	**36.17**	**281**	P	**P**		**10 00 51.7**	**+0.7**
HTT	**Hallett**	**36.22**	**248**	P	**P**		**10 00 50.7**	**-0.6**
QIS	**Mount Isa**	**37.17**	**269**	P	**P**		**10 00 59.0**	**-0.2**
BBOO	**Buckleboo**	**38.62**	**249**	P	**P**		**10 01 09.8**	**-1.0**
BBOO	**Buckleboo**	**38.62**	**249**	P	**P**		**10 01 09.6**	**-1.3**
MANU	**Manus Island**	**38.94**	**302**	P	**P**		**10 01 14.2**	**+0.5**
TAOE	**Nuku Hiva Isla**	**41.54**	**74**	P	**P**		**10 01 36.0**	**+1.4**
AS31	**Alice Springs**	**41.57**	**262**	P	**P**		**10 01 34.4**	**-0.3**
ASAR	**Alice Springs**	**41.57**	**262**	P	**P**		**10 01 34.1**	**-0.5**
	comp=Z,4.8nm,0.7s,baz=88,slow=7.2,SNR=70						
ASAR				pP	**pP**		**10 03 02.8**	**-2.4**
	comp=Z,3.1nm,0.9s,baz=98,slow=7.9,SNR=3.9						
ASAR				ScP	**ScP**		**10 06 23.9**	**+2.0**
	comp=Z,1.5nm,0.9s,baz=107,slow=4.0,SNR=6.4						
ASAR				S	**S**		**10 07 11.2**	**-2.7**
	comp=Z,1.4nm,0.6s,baz=97,slow=15,SNR=9.1						
ASAR				PKiKP	**PKiKP**		**10 10 24.1**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=90,slow=1.8,SNR=4.6						
	comp=Z,4.8nm,0.7s						
WR8	**Warramunga Arr**	**41.94**	**268**		**P**		**10 01 37.0**	**-0.7**
WRAB	**Tennant Creek**	**42.08**	**268**	P	**P**		**10 01 38.1**	**-0.6**
WRAB	**Tennant Creek**	**42.08**	**268**	P	**P**		**10 01 37.6**	**-1.2**
WRA	**Warramunga Arr**	**42.09**	**268**	P	**P**		**10 01 37.8**	**-1.0**
	comp=Z,5.7nm,0.7s,baz=103,slow=8.0,SNR=34						
WRA				ScP	**ScP**		**10 06 25.1**	**+1.1**
	comp=Z,2.9nm,0.9s,baz=105,slow=3.8,SNR=10						
WRA				S	**S**		**10 07 19.1**	**-2.4**
	comp=Z,4.0nm,0.8s,baz=100,slow=14,SNR=18						
WRA				PKiKP	**PKiKP**		**10 10 24.6**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=84,slow=0.3,SNR=5.4						
	comp=Z,5.7nm,0.7s						
WRA	**Warramunga Arr**	**42.09**

comp=Z,1.7nm,0.8s,baz=347,slow=5.1,SNR=9.3
comp=Z,0.5nm,0.5s
VNDA Vanda 52.76 185 P **P** **10 02 59.4 +1.2**
BLDU Ballidu 55.23 249 P **P** **10 03 14.7 -1.7**
LUWI Luwuk 59.99 285 P **P** **10 03 47.8 -1.3**
QSPA South Pole Qui 64.57 180 P **P** **10 04 22.2 +4.0**
comp=Z,8.4nm,0.6s,baz=339,slow=0.4,SNR=86
QSPA South Pole Qui 64.57 180 P **P** **10 04 22.5 +4.3**
QSPA IAmb IAmb 10 04 23.1
comp=Z,9.8nm,0.8s
MJAR Matsushiro Arr 73.10 326 P **P** **10 05 09.6 -0.3**
comp=Z,2.8nm,0.8s,baz=170,slow=4.9,SNR=8.2
comp=Z,2.8nm,0.8s
SMAI San Martin Ant 74.69 159 P **P** **10 05 20.1 +1.7**
SMAI IAmb IAmb 10 05 20.8
comp=Z,20nm,0.8s
BELA Belgrano 2 74.87 173 P **P** **10 05 19.5 +0.1**
BELA IAmb IAmb 10 05 19.8
comp=Z,11nm,0.5s
MAW Mawson 76.16 201 P **P** **10 05 27.1 +0.4**
comp=Z,3.4nm,0.6s,baz=137,slow=5.8,SNR=21
comp=Z,3.4nm,0.6s
PMSA Palmer Station 77.52 157 P **P** **10 05 35.2 +1.1**
PMSA IAmb IAmb 10 05 36.5
comp=Z,19nm,1.1s
KSRS Korea Array 79.33 320 P **P** **10 05 44.0 -0.3**
comp=Z,1.3nm,0.7s,baz=125,slow=4.9,SNR=4.3
comp=Z,1.3nm,0.7s
PETK Petropavlovsk- 80.61 347 P **P** **10 05 52.5 +1.9**
comp=Z,2.5nm,0.8s,baz=154,slow=5.8,SNR=4.5
comp=Z,2.5nm,0.8s
NJ2 Nanjing 81.55 311 *eP* **P** **10 05 58.8 +2.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
TROLL Troll, Antarti 82.72 181 ⇑P **P** **10 06 00.9 -0.6**
comp=Z,2μm,0.7s
SNAA Sanae 83.06 179 ⇑P **P** **10 06 02.4 -0.7**
comp=Z,56nm,0.4s
SNAA Sanae 83.06 179 P **P** **10 06 02.5 -0.6**
comp=Z,2.2nm,0.5s,baz=210,slow=8.2,SNR=45
comp=Z,2.2nm,0.5s
SNAA Sanae 83.06 179 P **P** **10 06 02.9 -0.3**
VNA3 Neumayer Olymp 83.28 177 ⇑P **P** **10 06 03.5 -0.6**
comp=Z,38nm,0.7s
CVS Carmenet Viney 83.46 42 P **P** **10 06 07.6 +2.1**
HOPS Hopland Field 83.50 41 P **P** **10 06 08.0 +2.3**
CBX Cerro Bola 83.55 50 P **P** **10 06 08.8 +2.6**
CBX IAmb IAmb 10 06 09.2
comp=Z,13nm,0.8s
VNA2 Neumayer--Stat 83.69 178 ⇑P **P** **10 06 05.1 -1.1**
comp=Z,7.1nm,0.7s,baz=174,slow=4.7
MWC Mount Wilson 83.72 48 P **P** **10 06 08.3 +1.1**
DPP Dos Picos Cty 83.75 49 P **P** **10 06 09.2 +2.1**
DPP IAmb IAmb 10 06 09.9
comp=Z,11nm,0.9s
VNA1 Neumayer--Stat 83.94 177 ⇑P **P** **10 06 07.0 -0.3**
comp=Z,1.9nm,1.1s
YUH Yuha Desert 84.25 50 P **P** **10 06 11.4 +1.8**
O02D Mt. Diablo Mer 84.43 40 P **P** **10 06 12.9 +2.6**
O02D IAmb IAmb 10 06 14.0
comp=Z,20nm,1.0s
KHBM Hayfork Bally 84.49 40 P **P** **10 06 12.6 +1.8**
KHBM IAmb IAmb 10 06 14.4
comp=Z,8.6nm,1.0s
WSHM Spangler Hills 84.91 47 P **P** **10 06 14.4 +1.7**
WSHM IAmb IAmb 10 06 15.5
comp=Z,8.0nm,0.8s
GSC Goldstone, Bar 85.19 47 P **P** **10 06 15.3 +1.1**
GSC IAmb IAmb 10 06 17.0
comp=Z,8.0nm,0.9s
WAKR Walker 85.41 43 P **P** **10 06 16.6 +1.3**
NVAR Mina Array Bea 86.07 44 P **P** **10 06 20.1 +1.6**
comp=Z,4.6nm,0.8s,baz=223,slow=8.4,SNR=42
comp=Z,4.6nm,0.8s
TPNV Topopah Spring 86.51 46 P **P** **10 06 22.2 +1.6**
TPNV IAmb IAmb 10 06 24.1
comp=Z,7.5nm,0.8s
Y14A Wickenburg 87.00 50 P **P** **10 06 24.2 +1.4**
K05A Summer Lake 87.15 39 **P** **10 06 24.5 +1.0**
J05D Fort Rock, OR 87.31 39 **P** **10 06 25.8 +1.6**
PLCA Paso Flores 87.31 134 P **P** **10 06 25.7 +1.4**
comp=Z,3.4nm,0.8s,baz=247,slow=6.2,SNR=8.5
comp=Z,3.4nm,0.8s
TUC Tucson 87.68 53 **P** **10 06 28.1 +2.0**
TUC IAmb IAmb 10 06 29.9
comp=Z,9.7nm,0.9s
WVOR Wild Horse Val 88.28 41 P **P** **10 06 30.2 +1.5**
WVOR IAmb IAmb 10 06 31.6
comp=Z,17nm,1.2s
BI02 San Fabin de 88.95 130 **P** **10 06 33.8 +1.7**
BI02 IAmb IAmb 10 06 34.8
comp=Z,11nm,0.9s
X18A Snowflake 89.45 51 P **P** **10 06 35.0 +0.6**
X18A IAmb IAmb 10 06 37.4
comp=Z,5.8nm,0.8s
CMAR Chiang Mai Arr 89.87 290 pP pP 10 08 26.8 -1.0
comp=Z,0.7nm,0.3s,baz=138,slow=1.8,SNR=1.2
MT01 Popeta 90.42 128 P **P** **10 06 39.3 +0.5**
TMUT Trail Mountain 91.12 46 P **P** **10 06 44.0 +1.8**
PZH PanZhiHua 91.25 299 P **P** **10 06 44.8 +2.0**
HHC Hu-ho-hao-te 91.39 315 *eP* **P** **10 06 44.0 +0.9**
HHC pmax pmax
comp=Z,7.0nm,0.8s
HHC pmax pmax
comp=Z,86nm,4.5s
HVU Hansel Valley 91.46 44 **P** **10 06 45.2 +1.7**
HVU IAmb IAmb 10 06 46.0
comp=Z,6.0nm,0.7s
TXAR Lajitas Array 91.48 58 P **P** **10 06 45.6 +1.8**
comp=Z,3.4nm,0.8s,baz=214,slow=6.6,SNR=40
comp=Z,3.4nm,0.8s
ILAR Eielson Array 93.65 14 P **P** **10 06 52.6 -0.2**
comp=Z,0.5nm,0.7s,baz=229,slow=4.6,SNR=6.5
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 94.01 44 P **P** **10 06 55.5 +0.2**
comp=Z,0.4nm,0.6s,baz=224,slow=4.1,SNR=4.9
comp=Z,0.4nm,0.6s
MKAR Makanchi Array 113.07 312 PKiKP **PKiKP** **10 12 10.1 -0.6**
comp=Z,0.5nm,0.5s,baz=147,slow=2.5,SNR=1.8
MKAR PKKPbc **PKKPbc** **10 22 59.5 +0.1**
comp=Z,0.9nm,0.7s,baz=292,slow=2.8,SNR=6.4
KURBB Kurchatov Arra 116.24 316 PKP **PKPdf** **10 12 15.9 -0.8**
comp=Z,1.6nm,0.7s,baz=107,slow=1.5,SNR=3.9
KURBB SKP **SKPdf** **10 15 05.1 +1.3**
comp=Z,1.1nm,0.9s,baz=102,slow=2.0,SNR=5.2
BOSA Boshof 120.86 206 PKP **PKiKP** **10 12 26.9 +0.2**
comp=Z,2.5nm,0.7s,baz=193,slow=2.0,SNR=8.8
BVAR Borovoye Array 121.49 318 PKP **PKPdf** **10 12 26.5 -0.2**
comp=Z,4.0nm,0.5s,baz=103,slow=1.6,SNR=12
SCHQ Schefferville 123.86 40 PKP **PKPdf** **10 12 30.6 -0.6**
comp=Z,12nm,1.2s,baz=350,slow=6.1,SNR=1.9
SPITS Spitsbergen Ar 126.71 356 PKP **PKPdf** **10 12 36.0 0.0**
comp=Z,2.2nm,0.5s,baz=90,slow=5.8,SNR=12
AB31 Akbulak array 128.16 314 P PKPdf 10 12 26.5 -13
comp=Z,0.1nm,0.2s,baz=262,slow=33,SNR=10
ARCES ARCESS Array B 133.41 348 PKhKP PKPpre 10 12 43.0
comp=Z,2.0nm,0.8s,baz=96,slow=0.9,SNR=8.9
ARCES PKP **PKPdf** **10 12 49.5 +0.6**
comp=Z,2.4nm,0.8s,baz=89,slow=2.7,SNR=3.9
ARCES SKPbc **SKPab** **10 15 31.4 -1.2**
comp=Z,3.6nm,0.5s,baz=58,slow=4.6,SNR=20
FINES FINESS Array B 139.89 341 PKhKP PKPpre 10 12 53.8
comp=Z,1.0nm,0.4s,baz=48,slow=2.8,SNR=14
FINES PKP **PKiKP** **10 13 03.2 -0.4**
comp=Z,0.9nm,0.4s,baz=72,slow=1.8,SNR=8.2
FINES SKPbc **SKiKP** **10 15 51.0 -0.4**
comp=Z,6.0nm,0.5s,baz=36,slow=3.7,SNR=30
MOL Molde 142.59 354 *eP* **PKPdf** **10 13 03.1 -2.8**
DOMB Dombas 142.95 353 *eP* **PKPdf** **10 13 04.3 -2.3**
AKN Aaknes 143.02 354 *eP* PKPbc 10 13 05.4 +0.8
NB2 NORSAR Subarra1 43.63 351 PKP PKPab 10 13 06.1 -0.4
comp=Z,5.9nm,0.5s,baz=17,slow=3.4
NOA NORSAR Array B 143.63 351 PKP PKPab 10 13 05.6 -0.8
comp=Z,2.5nm,0.5s,baz=16,slow=4.1,SNR=48
FOO Floro 143.75 356 *eP* PKPbc 10 13 06.8 0.0
NC602 NORSAR Array S 143.87 350 *eP* PKPbc 10 13 06.7 -0.6
HFS Hagfors 144.08 348 PKP PKPbc 10 13 07.7 -0.3
comp=Z,10nm,0.4s,baz=66,slow=3.6,SNR=121
HYA Hoyanger 144.09 355 *eP* PKPbc 10 13 07.7 -0.2
SUE Sulen 144.31 356 *eP* PKPbc 10 13 08.6 0.0
SKAR Skarslia 144.36 353 *eP* **PKPdf** **10 13 09.1 0.0**
NACGM Naroch 144.54 333 ⇓*i* PKP **PKPab** **10 13 10.0 0.0**
comp=Z,31nm,0.8s,baz=46
ASK Askoy 144.85 355 *eP* PKPbc 10 13 10.1 -0.2
BER Bergen 144.94 355 *eP* **PKPdf** **10 13 09.6 -0.4**
KONO Kongsberg 145.20 351 *eP* **PKPbc** **10 13 11.5 +0.1**
ODD1 Odda 145.29 354 *eP* **PKPbc** **10 13 12.0 +0.3**
STRU Stroemstad 145.55 350 *i* P **PKPbc** **10 13 11.7 -0.7**
BLS5 Blasjo 145.79 354 *eP* **PKPbc** **10 13 13.5 +0.3**
KMY Karmoy 146.10 355 *eP* **PKPbc** **10 13 13.8 -0.2**
AK03 Malin Array Si 146.17 326 PKP **PKPbc** **10 13 13.5 -1.0**
AKASG Malin Array Be 146.18 326 PKPbc **PKPbc** **10 13 14.2 -0.4**
comp=Z,2.1nm,0.3s,baz=46,slow=3.9,SNR=18
AKASG pPKPbc pPKPab 10 15 10.4 -0.6
comp=Z,3.0nm,0.8s,baz=50,slow=2.9,SNR=2.7
AKASG SKPbc **SKiKP** **10 16 06.4 +1.6**
comp=Z,1.4nm,0.6s,baz=49,slow=2.6,SNR=5.0
AKBB Malin Array Si 146.18 326 PKP **PKPdf** **10 13 13.4 +1.0**
AK01 Malin Array Si 146.20 326 PKP **PKPdf** **10 13 13.4 +0.9**
KIEV Kiev 146.20 326 ⇓P **PKPbc** **10 13 14.1 -0.5**
KIEV Kiev 146.20 326 PKP **PKPbc** **10 13 13.5 -1.0**
AK04 Malin Array Si 146.20 326 PKP **PKPdf** **10 13 13.4 +0.9**
AK09 Malin Array Si 146.21 326 PKP **PKPdf** **10 13 13.3 +0.8**
AK08 Malin Array Si 146.21 326 PKP **PKPdf** **10 13 13.3 +0.8**
AK02 Malin Array Si 146.22 326 PKP **PKPbc** **10 13 13.6 -1.0**
AK22 Malin Array Si 146.23 326 PKP **PKPbc** **10 13 13.6 -1.0**
AK11 Malin Array Si 146.23 326 PKP **PKPbc** **10 13 13.6 -1.0**
AK21 Malin Array Si 146.23 326 PKP **PKPbc** **10 13 13.6 -1.0**
AK10 Malin Array Si 146.23 326 PKP **PKPbc** **10 13 13.6 -1.0**
AK05 Malin Array Si 146.24 326 PKP **PKPdf** **10 13 13.5 +0.9**
AK18 Malin Array Si 146.25 326 PKP **PKPdf** **10 13 13.4 +0.8**
TJOU Tjoern 146.43 349 *i* P **PKPbc** **10 13 13.8 -1.1**
HOMB Homborsund 146.68 352 *eP* **PKPbc** **10 13 15.5 -0.1**
HOMB Homborsund 146.68 352 *i* P **PKPbc** **10 13 15.3 -0.3**
SNART Snartemo 146.78 353 *eP* **PKPbc** **10 13 16.0 +0.2**
SNART Snartemo 146.78 353 *i* P **PKPbc** **10 13 15.9 0.0**
ONAU Onsala 146.97 348 *i* P **PKPbc** **10 13 15.3 -1.1**
RNPP9 Sopachiv 147.35 329 PKP **PKPdf** **10 13 15.3 +0.9**
LUBAR Lubar, Ukraine 147.41 326 PKP **PKPbc** **10 13 16.9 -0.9**
RNPP8 Varash 147.42 329 PKP **PKPbc** **10 13 16.3 -1.5**
DEL Delary 147.42 345 *i* P **PKPbc** **10 13 16.0 -1.6**
RNPP5 Staryi Chortor 147.47 329 PKP **PKPbc** **10 13 16.3 -1.7**
MCD Coleburn Disti 147.89 3 *eP* **PKPbc** **10 13 18.6 -0.2**
KPL Plockton 147.97 6 *eP* **PKPbc** **10 13 19.2 +0.2**
MMAI Mount Meron Ar 148.12 292 PKPbc **PKiKP** **10 13 21.4 -0.3**
comp=Z,6.9nm,0.4s,baz=84,slow=4.3,SNR=14
SORM Soroca 148.15 323 ⇑P **PKPbc** **10 13 19.8 0.0**
KIRS Kirsehir-Merke 148.29 304 ⇑P **PKPbc** **10 13 20.3 -0.3**
BRTR Keskin Array B 148.34 305 PKP **PKPdf** **10 13 16.2 -0.3**
comp=Z,1.7nm,0.5s,baz=150,slow=2.8,SNR=11
BRTR PKPbc **PKPbc** **10 13 20.7 -0.1**
comp=Z,1.8nm,0.6s,baz=111,slow=2.6,SNR=7.8
BSD Bornholm Skovb 148.40 343 *i* P **PKPbc** **10 13 19.3 -0.8**
INVG Invergeldie, C 148.99 4 *eP* **PKPbc** **10 13 21.6 0.0**
LAWE Loch Awe, Argy 149.06 6 *eP* **PKPbc** **10 13 21.9 +0.2**
PGBU Glenifferbraes 149.58 5 *eP* **PKPbc** **10 13 23.0 0.0**
ESY Stoneypath 149.58 3 *eP* **PKPbc** **10 13 23.2 +0.1**
TPGR Topolog 149.88 317 ⇑P **PKPbc** **10 13 24.1 0.0**
CFR Carcaliu 149.89 318 ⇑P **PKiKP** **10 13 24.5 -0.2**
EKA Eskdalemuir Ar 150.14 3 PKPbc **PKPbc** **10 13 24.2 -0.2**
comp=Z,2.0nm,0.4s,baz=344,slow=2.8,SNR=36
ESK Eskdalemuir 150.15 3 *eP* **PKPbc** **10 13 24.2 -0.2**
BURAR Bucovina Array 150.16 324 ⇑P **PKiKP** **10 13 25.3 -0.1**
HARR Harsova 150.27 317 ⇓P **PKiKP** **10 13 26.4 +0.9**
NEWG New Galloway 150.28 5 *eP* **PKPbc** **10 13 24.7 0.0**
VRI Vrincioaia 150.36 320 ⇑P **PKiKP** **10 13 25.9 +0.2**
EDMD Edmundbyers 150.69 2 *eP* **PKPbc** **10 13 25.4 -0.2**
NEHR Nehoiu 150.85 320 ⇑P **PKPbc** **10 13 26.1 -0.3**
KESW Keswick, Cumbr 150.88 3 *eP* **PKPbc** **10 13 26.2 +0.1**
MLR Muntele Rosu 151.02 320 ⇑P **PKPbc** **10 13 26.8 -0.1**
WIM Isle of Man 151.21 5 *eP* **PKiKP** **10 13 27.3 +0.1**
VOIR 151.57 321 ⇑P **PKPbc** **10 13 27.6 -0.5**
LANS Liptovska Anna 151.84 332 *e*PKP **PKiKP** **10 13 29.1 +0.4**
ARR Arges 151.84 321 ⇑P **PKPdf** **10 13 24.4 +2.7**
DRGR 151.99 325 ⇑P **PKPdf** **10 13 24.8 +2.9**
CLL Collm 152.32 342 *ex* x 10 15 39.0
CLL Collm 152.32 342 ⇑*i* PKPbc **PKiKP** **10 13 29.7 +0.1**
comp=Z,9.0nm,0.7s
CLL Collm 152.32 342 *e*PKPab **PKPab** **10 13 42.0 +0.1**
CLL Collm 152.32 342 *ep*PKPbc pPKPbc 10 15 27.0 -1.1
SIRR Siria 152.88 325 ⇑P **PKPdf** **10 13 19.4 -3.8**
SURR Surduc 152.98 324 ⇑P **PKPdf** **10 13 22.8 -0.5**
GERES GERESS Array B 154.28 338 PKPbc **PKPbc** **10 13 33.9 +0.1**
comp=Z,0.6nm,0.6s,baz=2.9,slow=2.7,SNR=2.6
DBIC Dimbokro 160.75 166 PKP **PKPdf** **10 13 33.5 -0.5**
comp=Z,1.4nm,0.6s,baz=243,slow=2.0,SNR=3.1
DBIC PKPab **PKPab** **10 14 18.9 -0.3**
comp=Z,3.7nm,0.7s,baz=217,slow=7.2,SNR=4.9
ESDC Sonseca Array 165.54 12 PKPab **PKPab** **10 14 39.4 -0.4**
comp=Z,1.5nm,1.1s,baz=336,slow=4.8,SNR=4.2
TORD Torodi Ar. Bea 167.56 189 PKP **PKPdf** **10 13 39.1 -0.9**
comp=Z,2.2nm,0.3s,baz=141,slow=1.3,SNR=4.4
TORD PKPab **PKPab** **10 14 48.8 -0.3**
comp=Z,1.2nm,0.3s,baz=162,slow=2.3,SNR=2.3

*IDC **17** 10:05:02.5±3.5,39°.74N×77°.91E,h0km,mb4.4/1, mbtmp3.7/5,ML3.0/4,MS2.6/3,Error ellipse: s-maj=70.4km s-min=24.0km az=125.0*
*KRNET **17** 10:05:08.8±0.1,40°.33N×77°.59E,h19km,mb3.9*
*SOME **17** 10:05:08.2,40°.23N×77°.68E,h10km*
*NNC **17** 10:05:10.7±0.6,40°.34N×77°.67E,h0km,mb4.6,mpv4.3, Error ellipse: s-maj=4.5km s-min=3.3km az=165.0*
ISC 17 10:05:13.5±1.4,**40°.50N**±0°.04×**77°.60E**±0°.03,**h8**km±10km, **n74**,σ1**984**/102,**27C-23D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.23**	**7**	⇓*eP*		**Pg**	**10 05 35.4**	**-1.8**
TARG				⇓*eS*		**Sn**	**10 05 54.8**	**+0.4**
JNKS	**Jany-Kuch**	**1.58**	**291**	⇑*eP*		**Pn**	**10 05 39.6**	**-2.4**
JNKS				⇑*eS*		**Sn**	**10 06 02.1**	**-0.6**
KSH	**Kashi**	**1.59**	**232**	Pn		**Pb**	**10 05 43.3**	**+0.1**
KSH				Sn		**Sg**	**10 06 11.0**	**+6.3**
KSH	comp=N,760nm,0.6s			smax	smax			
KSH	comp=E,550nm,0.7s			smax	smax			
KDJ	**Kajisay**	**1.66**	**349**	⇑*eP*		**Pn**	**10 05 42.6**	**-0.4**
KDJ				⇑*eS*		**Sg**	**10 06 07.4**	**+0.7**
ULHL	**Ulahol** SNR=6.0	**2.02**	**330**	P		**Pb**	**10 05 50.4**	**-0.2**
ULHL	**Ulahol**	**2.02**	**330**	⇑*eP*		**Pn**	**10 05 48.1**	**+0.1**
ULHL				⇑*eS*		**Sb**	**10 06 16.9**	**+1.0**
PRZ	**Przheval'sk**	**2.07**	**17**	⇑*eP*		**Pn**	**10 05 49.3**	**+0.6**
PRZ				⇑*eS*		**Sg**	**10 06 18.8**	**-1.1**
BOOM	**Boomskoye usch**	**2.34**	**328**	⇓*eP*		**Pn**	**10 05 52.6**	**+0.2**
BOOM				⇓*eS*		**Sb**	**10 06 24.6**	**-0.6**
TNSS	**Tian-Shan** comp=E,43nm,0.5s	**2.58**	**349**	Pg		**Pb**	**10 06 00.9**	**+0.7**
TNSS	comp=E,102nm,0.4s			Lg		Lg	10 06 39.2	
TNSS	**Tian-Shan** comp=E,43nm,0.5s	**2.58**	**349**	*eP*		**Pb**	**10 06 00.9**	**+0.7**
TNSS	comp=E,102nm,0.4s			*eS*		**Sg**	**10 06 39.2**	**+2.8**
SATY	**Saty** comp=E,160nm,0.7s	**2.62**	**13**	Pg		**Pb**	**10 06 01.4**	**+0.6**
SATY	comp=E,207nm,0.4s			Lg		Lg	10 06 40.1	
MDOK	**Medeo** comp=E,65nm,0.7s	**2.69**	**351**	Pg		**Pb**	**10 06 02.6**	**+0.7**
MDOK	comp=E,311nm,0.7s			Lg		Lg	10 06 42.0	
AAA	**Alma-Ata** comp=E,203nm,0.2s	**2.75**	**350**	Pg		**Pb**	**10 06 04.5**	**+1.6**
AAA	comp=E,86nm,0.4s			Lg		Lg	10 06 45.5	
AAA	**Alma-Ata** comp=E,203nm,0.2s	**2.75**	**350**	*eP*		**Pb**	**10 06 04.5**	**+1.6**
AAA	comp=E,86nm,0.4s			*eS*		**Sg**	**10 06 45.5**	**+3.6**
KNDC	**Almaty** comp=E,152nm,0.8s	**2.75**	**350**	⇓Pg		**Pb**	**10 06 03.9**	**+0.9**
KNDC	comp=E,486nm,0.6s			⇑Lg		Lg	10 06 44.7	
KOTS	**Kotyrbulak** comp=E,113nm,0.4s	**2.75**	**353**	Pg		**Pb**	**10 06 04.1**	**+1.1**
KOTS	comp=E,590nm,0.5s			Lg		Lg	10 06 44.7	
KOTS	**Kotyrbulak** comp=E,113nm,0.4s	**2.75**	**353**	*eP*		**Pb**	**10 06 04.1**	**+1.1**
KOTS	comp=E,590nm,0.5s			*eS*		**Sg**	**10 06 44.7**	**+2.8**
MTBS	**Maitube** comp=E,31nm,0.2s	**2.77**	**342**	Pg		**Pb**	**10 06 04.0**	**+0.8**
MTBS	comp=E,410nm,0.5s			Lg		Lg	10 06 44.1	
MTBS	**Maitube**	**2.77**	**342**	*eP*		**Pb**	**10 06 04.0**	**+0.8**
MTBS	comp=E,31nm,0.2s			*eS*		**Sg**	**10 06 44.1**	**+1.7**
TKM2	**Tokmak 2** SNR=71	**2.84**	**329**	P		**Pn**	**10 06 01.7**	**+2.4**
TKM2	**Tokmak 2**	**2.84**	**329**	⇑*eP*		**Pn**	**10 05 59.6**	**+0.3**
TKM2				⇑*eS*		**Sb**	**10 06 36.7**	**-2.9**
UCH	**Uchtor** SNR=24	**2.89**	**308**	P		**Pn**	**10 06 01.1**	**+0.9**
UCH	**Uchtor**	**2.89**	**308**	⇓*eP*		**Pn**	**10 05 59.8**	**-0.4**
UCH				⇓*eS*		**Sn**	**10 06 37.1**	**+1.7**
SALK	**Salom-Alik**	**2.90**	**279**	⇑*eP*		**Pn**	**10 05 58.6**	**-1.5**
SALK				⇑*eS*		**Sn**	**10 06 35.0**	**-0.2**
KBK	**Karagaybulak** SNR=24	**2.93**	**318**	P		**Pb**	**10 06 06.0**	**0.0**
KBK	**Karagaybulak**	**2.93**	**318**	⇑*eP*		**Pn**	**10 06 00.5**	**0.0**
KBK				⇑*eS*		**Sn**	**10 06 38.3**	**+2.4**
SHLS	**Shalkode** comp=E,124nm,0.4s	**2.99**	**27**	Pg		**Pg**	**10 06 09.2**	**-1.7**
SHLS	comp=E,211nm,0.5s			Lg		Lg	10 06 53.1	
SHLS	**Shalkode** comp=E,124nm,0.4s	**2.99**	**27**	*eP*		**Pg**	**10 06 09.2**	**-1.7**
SHLS	comp=E,211nm,0.5s			*eS*		**Sg**	**10 06 53.1**	**+3.5**
DGS	**Degeres** comp=E,21nm,0.6s	**3.06**	**334**	Pg		**Pb**	**10 06 09.5**	**+1.3**
DGS	comp=E,238nm,0.4s			Lg		Lg	10 06 53.3	
KPKS	**Kokpek** comp=E,36nm,0.5s	**3.07**	**15**	Pg		**Pb**	**10 06 08.2**	**-0.1**
KPKS	comp=E,93nm,0.5s			Lg		Lg	10 06 51.5	
PDGK	**Podgornoye** comp=E,95nm,0.5s	**3.15**	**26**	⇓Pn		**Pn**	**10 06 04.6**	**+1.1**
PDGK	comp=E,166nm,0.6s			⇓Lg		Lg	10 06 55.0	
AAK	**Ala-Archa** comp=E,31nm,20.0s,baz=206,slow=42	**3.16**	**313**	LR		LR	10 07 43.8	
AAK	**Ala-Archa** SNR=15	**3.16**	**313**	P		**Pb**	**10 06 09.6**	**-0.4**
AAK	**Ala-Archa** comp=E,130nm,0.6s	**3.16**	**313**	⇑Pn		**Pn**	**10 06 04.9**	**+1.3**
AAK	comp=E,1μm,0.7s			⇓Lg		Lg	10 06 53.8	
AAK	**Ala-Archa**	**3.16**	**313**	⇓*eP*		**Pn**	**10 06 03.5**	**-0.1**
AAK				⇑*eS*		**Sn**	**10 06 43.4**	**+1.8**
SFK	**Sufi-Kurgan**	**3.17**	**262**	⇓*eP*		**Pn**	**10 06 01.9**	**-2.0**
SFK				⇓*eS*		**Sn**	**10 06 40.6**	**-1.4**
FRU1	**Bishkek**	**3.20**	**317**	⇑*eP*		**Pn**	**10 06 04.5**	**+0.3**
FRU1				⇑*eS*		**Sn**	**10 06 45.2**	**+2.7**
KTBS	**Karatobe** comp=E,32nm,0.5s	**3.28**	**348**	Pg		**Pb**	**10 06 12.9**	**+1.0**
KTBS	comp=E,137nm,0.3s			Lg		Lg	10 06 59.4	
CHMS	**Chumysh** SNR=6.6	**3.28**	**320**	P		**Sg**	**10 07 00.8**	**+2.0**
CHMS	**Chumysh**	**3.28**	**320**	⇓*eP*		**Pn**	**10 06 05.3**	**+0.1**
CHMS				⇓*eS*		**Sn**	**10 06 46.5**	**+2.1**
KRBS	**Karabastau** comp=E,18nm,0.4s	**3.50**	**336**	Pg		**Pb**	**10 06 17.1**	**+1.5**
KRBS	comp=E,42nm,0.6s			Lg		Lg	10 07 06.6	
KUU	**Kurty** comp=E,5.7nm,0.1s	**3.51**	**345**	Pg		**Pb**	**10 06 17.7**	**+1.8**
KUU	comp=E,168nm,0.6s			Lg		Lg	10 07 07.7	
KUU	**Kurty** comp=E,5.7nm,0.1s	**3.51**	**345**	*eP*		**Pb**	**10 06 17.7**	**+1.8**
KUU	comp=E,168nm,0.6s			*eS*		**Sg**	**10 07 07.7**	**+1.4**
KTMS	**Ketmen** comp=E,19nm,0.4s	**3.58**	**34**	Pg		**Pb**	**10 06 17.7**	**+0.5**
KTMS	comp=E,38nm,0.4s			Lg		Lg	10 07 07.4	
KTMS	**Ketmen** comp=E,19nm,0.4s	**3.58**	**34**	*eP*		**Pb**	**10 06 17.7**	**+0.5**
KTMS	comp=E,38nm,0.4s			*eS*		**Sg**	**10 07 07.4**	**-1.2**
EKS2	**Erkin-Say** SNR=9.6	**3.59**	**308**	P		**Pn**	**10 06 11.8**	**+2.3**
EKS2	**Erkin-Say**	**3.59**	**308**	⇓*eP*		**Pn**	**10 06 09.3**	**-0.2**
EKS2				⇓*eS*		**Sn**	**10 06 53.5**	**+1.4**
ARSB	**Arslanbob**	**3.59**	**285**	⇑*eP*		**Pn**	**10 06 08.4**	**-1.2**
ARSB				⇑*eS*		**Sn**	**10 06 51.8**	**-0.5**
USP	**Ospenovka** SNR=22	**3.60**	**321**	P		**Pb**	**10 06 17.6**	**+0.2**
USP	**Ospenovka**	**3.60**	**321**	⇑*eP*		**Pn**	**10 06 09.7**	**+0.1**
USP				⇑*eS*		**Sn**	**10 06 54.3**	**+2.0**
BLB	**Baldybastay** comp=E,118nm,0.4s	**3.65**	**10**	Pg		**Pb**	**10 06 19.8**	**+1.5**
BLB	comp=E,194nm,0.4s			Lg		Lg	10 07 11.5	
SGDS	**Sogindy** comp=E,19nm,0.4s	**3.69**	**324**	Pg		**Pb**	**10 06 20.6**	**+1.7**
SGDS	comp=E,110nm,0.7s			Lg		Lg	10 07 12.5	
ARXS	**Arharly** comp=E,24nm,0.4s	**3.71**	**3**	Pg		**Pb**	**10 06 21.4**	**+2.1**
ARXS	comp=E,202nm,0.6s			Lg		Lg	10 07 14.2	
ARXS	**Arharly**	**3.71**	**3**	*eP*		**Pb**	**10 06 21.4**	**+2.1**
ARXS				*eS*		**Sg**	**10 07 14.2**	**+1.5**
MRKS	**Merke** comp=E,17nm,0.6s	**3.97**	**306**	Pg		**Pb**	**10 06 25.1**	**+1.4**
MRKS	comp=E,60nm,0.6s			Lg		Lg	10 07 20.2	
MRKS	**Merke** comp=E,17nm,0.6s	**3.97**	**306**	*eP*		**Pb**	**10 06 25.1**	**+1.4**
MRKS	comp=E,60nm,0.6s			*eS*		**Sg**	**10 07 20.2**	**-0.8**
KNOS	**Konyrlen** comp=E,41nm,0.5s	**4.03**	**16**	Pg		**Pb**	**10 06 26.8**	**+2.1**
KNOS				Lg		Lg	10 07 23.4	
ARK	**Arkit**	**4.45**	**289**	⇓*eP*		**Pn**	**10 06 20.5**	**-0.8**
ARK				⇓*eS*		**Sn**	**10 07 12.8**	**-0.5**
KAPS	**Kapalarasan** comp=E,28nm,0.5s	**4.95**	**15**	Pg		**Pb**	**10 06 43.8**	**+3.4**
KAPS	comp=E,27nm,0.4s			Lg		Lg	10 07 52.4	
TRKS	**Terek-Say**	**4.99**	**284**	⇓*eP*		**Pn**	**10 06 27.3**	**-1.5**
TRKS				⇓*eS*		**Sn**	**10 07 24.7**	**-2.1**
BTLS	**Baital** comp=E,10nm,0.7s	**5.23**	**331**	Pg		**Pg**	**10 06 50.8**	**-2.9**
BTLS	comp=E,30nm,0.8s			Lg		Lg	10 08 04.6	
BTLS	**Baital** comp=E,10nm,0.7s	**5.23**	**331**	*eP*		**Pg**	**10 06 50.8**	**-2.9**
BTLS	comp=E,30nm,0.8s			*eS*		**Sg**	**10 08 04.6**	**+3.1**
KK31	**Karatay Array** comp=E,2.2nm,0.4s,baz=122,slow=15,SNR=17	**5.90**	**298**	Pg		**Pb**	**10 06 59.9**	**+3.3**
KK31	comp=E,12nm,0.7s,baz=118,slow=28,SNR=5.2			⇑Lg		Lg	10 08 20.4	
IUG	**Iuzhnay** comp=E,17nm,0.4s	**5.93**	**289**	Pg		**Pb**	**10 07 01.4**	**+4.2**
IUG	comp=E,50nm,0.9s			Lg		Lg	10 08 22.7	
MK31	**Makanchi Array** comp=E,0.6nm,0.3s	**7.15**	**27**	⇑Pn		**Pn**	**10 06 58.3**	**0.0**
MK31

	comp=E,0.9nm,0.6s							
CMAR	**Chiang Mai Arr**	**28.63**	**134**	LR	LR	10 23 13.4		
	comp=E,16nm,19.6s,baz=40,slow=39							
ASF	**Jabal al Asfar**	**33.59**	**269**	LR	LR	10 29 44.4		
	comp=E,22nm,19.4s,baz=357,slow=44							
TORD	**Torodi Ar. Bea**	**70.91**	**271**	P	P	10 16 23.3	**-8.1**	
	comp=E,1.4nm,0.3s,baz=38,slow=8.0,SNR=4.1							
	comp=E,1.4nm,0.3s							

IDC ***17*** *10:15:01.6±1.1, 34°.50N×137°.68E, h259*$^{km}_{\pm 29}$*, mb3.0/3, mbtmp3.5/5, Error ellipse: s-maj=51.6km s-min=23.6km az=45.0*

JMA ***17*** *10:15:01.2±0.3, 35°.1×137°.7E±0°.9, h292*$^{km}_{\pm 3}$*, MV3.0/39, HAMANAKO LAKE REGION*

ISC 17 10:15:02.8±1.0, 34°.72N±0°.08×137°.72E±0°.09, h280$^{km}_{\pm 9}$**km, n23, σ0°.64/28, mb3.2/3, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNY	**Yasuok**	**0.65**	**10**	P	**Pn**	**10 15 39.6**	**+0.1**
JAO	**Obara**	**0.67**	**325**	P	**Pn**	**10 15 39.6**	**+0.1**
TK02	**Tokai 2**	**0.77**	**178**	*e*P	**Pn**	**10 15 40.2**	**+0.5**
INU	**Inuyama**	**0.85**	**318**	P	**Pn**	**10 15 40.0**	**-0.2**
JIE	**Ise**	**0.90**	**249**	*e*P	**Pn**	**10 15 40.3**	**-0.1**
JGF	**Kuroka**	**0.93**	**341**	P	**Pn**	**10 15 40.1**	**-0.5**
JEG	**Eigenji**	**1.17**	**291**	*e*P	**Pn**	**10 15 42.0**	**+0.1**
JYTA	**Yamagatataniai**	**1.19**	**318**	P	**Pn**	**10 15 41.8**	**-0.1**
JOD2	**Odawara 2**	**1.25**	**64**	*e*P	**Pn**	**10 15 42.5**	**+0.2**
JRY	**Ryogami san**	**1.62**	**36**	*e*P	**Pn**	**10 15 45.5**	**+0.8**
JRY				*e*S	**S**	**10 16 19.5**	**+1.5**
MAJO	**Matsushiro**	**1.86**	**12**	P	**Pn**	**10 15 46.6**	**0.0**
MAT	**Matsushiro**	**1.86**	**12**	*e*P	**Pn**	**10 15 46.5**	**-0.1**
MAT				*e*S	**S**	**10 16 20.8**	**-0.6**
MJAR	**Matsushiro Arr**	**1.86**	**12**	P	**Pn**	**10 15 46.6**	**0.0**
	28nm,0.5s,baz=190,slow=9.3,SNR=98						
MJAR				S	**S**	**10 16 20.1**	**-1.3**
	4.0nm,0.9s,baz=193,slow=16,SNR=5.1						
JKG	**Kaga**	**1.92**	**324**	*e*P	**Pn**	**10 15 46.9**	**-0.1**
BSO4	**Boso 4**	**2.17**	**82**	*e*P	**Pn**	**10 15 48.8**	**-0.3**
BSO4				*e*S	**S**	**10 16 25.5**	**-0.3**
JAG	**Ashikaga**	**2.21**	**39**	P	**Pn**	**10 15 49.0**	**-0.5**
BSO3	**Boso 3**	**2.30**	**87**	P	**Pn**	**10 15 49.7**	**-0.3**
BSO3				*e*S	**S**	**10 16 27.6**	**+0.1**
JSD	**Sado**	**3.34**	**7**	P	**Pn**	**10 16 00.8**	**+0.2**
JMM	**Marumori**	**4.00**	**37**	P	**Pn**	**10 16 07.3**	**-0.6**
KSRS	**Korea Array**	**8.39**	**292**	P	**Pn**	**10 17 01.1**	**+0.2**
	1.4nm,0.7s,baz=107,slow=14,SNR=4.5						
SONM	**Songino Array**	**26.74**	**309**	P	**P**	**10 20 18.5**	**+1.5**
	0.5nm,0.6s,baz=99,slow=9.1,SNR=2.4						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**54.45**	**184**	P	**P**	**10 24 00.7**	**-1.0**
	0.3nm,0.3s,baz=0.2,slow=7.6,SNR=38						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**58.18**	**184**	P	**P**	**10 24 27.4**	**-0.4**
	0.2nm,0.3s,baz=0.9,slow=6.4,SNR=11						
	0.2nm,0.3s						

JMA ***17*** *10:20:09.5±0.1, 36°.5N±0°.2×140°.6E±0°.5, h59*^{km}*, MD3.5/34, MV3.6/34, NORTHERN IBARAKI PREF*

JMA Felt II J1 at NORTHERN IBARAKI PREF .

IDC ***17*** *10:20:10.3±8.1, 35°.25N×139°.62E, h0*^{km}*, mb3.3/2, mbtmp3.3/2, MS3.3/1, Error ellipse: s-maj=274.7km s-min=14.0km az=59.0*

ISC 17 10:20:09.9±1.1, 36°.50N±0°.05×140°.67E±0°.07, h52$^{km}_{\pm 7}$**km, n32, σ1°.30/28, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.14**	**325**	⇓P	**Pn**	**10 20 18.6**	**+0.4**
JHO				⇓S	**Sn**	**10 20 24.8**	**+0.8**
JHYU	**Hitachinakayam**	**0.17**	**203**	⇓P	**Pn**	**10 20 18.6**	**+0.4**
JHYU				⇓S	**Sn**	**10 20 25.1**	**+0.9**
JHYU	**Hitachinakayam**	**0.17**	**203**	A	A	10 20 18.6	
	comp=N,9.0nm,0.3s,comp=E,10.0nm,0.3s						
JYT	**Yasato**	**0.47**	**235**	P	**Pn**	**10 20 20.6**	**-0.3**
JYT				*e*S	**Sn**	**10 20 28.3**	**-0.5**
JYT	**Yasato**	**0.47**	**235**	A	A	10 20 20.6	
	comp=N,13nm,0.3s,comp=E,15nm,0.3s						
ONAJ	**Iwakimizuishiy**	**0.61**	**10**	⇓P	**Pn**	**10 20 22.5**	**-0.2**
ONAJ				⇓*e*S	**Sn**	**10 20 32.4**	**+0.4**
JFK	**Kawauchi**	**0.88**	**11**	⇓P	**Pn**	**10 20 25.8**	**-0.4**
JAG	**Ashikaga**	**0.98**	**266**	P	**Pn**	**10 20 27.0**	**-0.5**
JAG				*e*S	**Sn**	**10 20 39.2**	**-1.1**
JOTO	**OTAMA OYAMA**	**1.09**	**346**	P	**Pn**	**10 20 29.1**	**+0.1**
JOTO				*e*S	**Sn**	**10 20 43.8**	**+0.7**
JKT	**Katashina**	**1.17**	**284**	*e*S	**Sn**	**10 20 45.0**	**-0.1**
JKT	**Katashina**	**1.17**	**284**	A	A	10 20 45.0	
	comp=N,3.0nm,0.3s,comp=E,4.0nm,1.2s						
JFY	**Yanaizu**	**1.19**	**329**	⇓P	**Pn**	**10 20 30.4**	**+0.1**
JMM	**Marumori**	**1.37**	**4**	P	**Pn**	**10 20 32.9**	**+0.2**
JMM	**Marumori**	**1.37**	**4**	S	**Sn**	**10 20 50.2**	**+0.5**
MJAR	**Matsushiro Arr**	**1.98**	**272**	Pg	**Pn**	**10 20 40.9**	**-0.1**
	comp=E,1.3nm,0.3s,baz=120,slow=9.4,SNR=33						
MJAR				Lg	Lg	10 21 04.3	
	comp=E,2.3nm,0.3s,baz=86,slow=17,SNR=5.8						
MAJO	**Matsushiro**	**1.98**	**272**	P	**Pn**	**10 20 41.4**	**+0.3**
JSG	**Sagara**	**2.72**	**229**	P	**Pn**	**10 20 53.5**	**+2.4**
JGF	**Kuroka**	**2.83**	**253**	P	**Pn**	**10 20 54.2**	**+1.5**
JGF	**Kuroka**	**2.83**	**253**	S	**Sn**	**10 21 28.3**	**+2.8**
INU	**Inuyama**	**3.18**	**250**	P	**Pn**	**10 20 59.1**	**+1.7**
JTM	**Tenmabayashi**	**4.29**	**4**	P	**Pn**	**10 21 13.6**	**+0.9**
JTM	**Tenmabayashi**	**4.29**	**4**	S	**Sn**	**10 22 04.0**	**+2.5**
ERM	**Erimo**	**5.84**	**19**	P	**Pn**	**10 21 35.3**	**+1.5**
HILR	**Hailar Array B**	**20.02**	**317**	LR	LR	10 32 45.2	
	comp=E,74nm,18.6s,baz=40,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.40**	**119**	T	T	10 55 57.5	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**28.41**	**119**	T	T	10 55 52.8	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**28.42**	**119**	T	T	10 56 02.2	
	baz=312						
H11S1	**WAKE ISLAND Hy**	**29.08**	**121**	T	T	10 56 44.6	
	baz=313						
H11S3	**WAKE ISLAND Hy**	**29.08**	**121**	T	T	10 56 42.5	
	baz=313						
H11S2	**WAKE ISLAND Hy**	**29.10**	**121**	T	T	10 56 50.5	
	baz=313						
WRA	**Warramunga Arr**	**56.45**	**187**	P	**P**	**10 29 44.1**	**-2.4**
	comp=E,0.3nm,0.5s,baz=4.1,slow=7.5,SNR=7.3						
	comp=E,0.3nm,0.5s						
ASAR	**Alice Springs**	**60.18**	**187**	P	**P**	**10 30 11.0**	**-1.4**
	comp=E,0.2nm,0.7s,baz=8.7,slow=7.7,SNR=1.9						
	comp=E,0.2nm,0.7s						

IDC ***17*** *10:25:02.9±0.8, 14°.65N×93°.89W, h0*^{km}*, mb3.9/8, mbtmp3.9/10, ML3.6/3, MS3.4/19, Error ellipse: s-maj=27.8km s-min=15.9km az=51.0*

CATAC ***17*** *10:25:05.3±0.8, 15°.N±.5°×9°.4W±°, h1*^{km}*, M4.9/19, mb5.2/4, mB5.0/4, MLv5.0/19, Mw(mB)4.3/4, Error ellipse: s-maj=14.3km s-min=7.4km az=55.3, Moment Tensor Solution. Moment tensor: Scale 10*^{15}*Nm; Mrr0.86; Mθθ-1.70; Mϕϕ0.84; Mrθ1.35; Mrϕ0.21; Mθϕ-1.33; Fault plane solution: M0*2.40695×10^{15} *NP1:ϕ1=128.46679°, δ77.54729°, λ120.05684°. NP2:ϕ2=238.90391°, δ32.31019°, λ23.79270°. Principal axes: T 2.3600, Plg48.5990°, Azm70.8468°; N 0.0913, Plg29.2799°, Azm301.3541°; P -2.4513, Plg26.4328°, Azm195.1691°; confirmed*

GCG ***17*** *10:25:06.2±2.3, 14°.60N×93°.90W, h35*$^{km}_{\pm 999}$*km, MD4.6, ML4.9*

NEIC ***17*** *10:25:08.6±2.4, 14°.86N±0°.08×93°.86W±0°.05, h35*$^{km}_{\pm 2}$*km, mb4.2/10, Error ellipse: s-maj=14.7km s-min=7.0km az=26.0*

MEX ***17*** *10:25:08.6±0.8, 15°.25N×93°.62W, h107*$^{km}_{\pm 56}$*km, MD4.6*

ISC 17 10:25:03.7±2.1, 14°.84N±0°.05×93°.83W±0°.03, h4$^{km}_{\pm 13}$**km, n171, σ2°.39/188, mb4.1/10, MS3.4/16, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.51**	**87**	*e*P	**Pn**	**10 25 31.6**	**0.0**
THIG				*e*S	**Sn**	**10 25 50.4**	**-1.4**
THIG		**1.51**	**87**	*i* P	**Pn**	**10 25 31.7**	**+0.1**
PATR	**El Naranjo**	**1.56**	**80**	*e*P	**Pn**	**10 25 32.4**	**-0.2**
PATR				*e*S	**Sn**	**10 25 50.9**	**-2.5**
PAVE	**Pavencul**	**1.63**	**77**	*e*P	**Pn**	**10 25 33.6**	**+0.1**
PAVE				*e*S	**Sn**	**10 25 51.1**	**-4.0**
CHUJ	**Union Juarez**	**1.68**	**81**	*e*P	**Pn**	**10 25 34.1**	**0.0**
CHUJ				*e*S	**Sn**	**10 25 53.8**	**-2.6**
SMCA	**Catarina**	**1.69**	**89**	*e*P	**Pn**	**10 25 34.2**	**+0.1**
SMCA				IAML		10 25 56.8	
	comp=E,3μm,0.2s						
TGIG		**2.04**	**19**		**Pb**	**10 25 41.0**	**-0.5**
TGIG		**2.04**	**19**	*e*P	**Pb**	**10 25 41.0**	**-0.5**
TGIG				*e*S	**Sg**	**10 26 06.0**	**-3.5**
TGIG		**2.04**	**19**	*i* P	**Pb**	**10 25 41.0**	**-0.5**
TGIG				IAML		10 26 10.2	
	comp=Z,6μm,0.9s						
TGBT	**Tuxtla Gutierr**	**2.05**	**20**	*e*	**Pb**	**10 25 41.1**	**-0.5**
TGBT				*e*		10 26 06.5	
RTAL	**Retalhuleu**	**2.09**	**98**		**Pn**	**10 25 40.0**	**+0.4**
RTAL	**Retalhuleu**	**2.09**	**98**	*e*P	**Pn**	**10 25 39.8**	**+0.3**
RTAL				*e*S	**Sn**	**10 26 00.0**	**-6.0**
CCIG	**Comitan**	**2.17**	**48**		**Pb**	**10 25 43.3**	**-0.4**
CCIG	**Comitan**	**2.17**	**48**	*e*	**Pb**	**10 25 43.7**	**0.0**
CCIG				*e*S	**Sg**	**10 26 10.6**	**-2.9**
CCIG	**Comitan**	**2.17**	**48**	*e*P	**Pb**	**10 25 43.7**	**0.0**
CCIG				IAML		10 26 15.4	
	comp=N,7μm,0.4s						
CCIG	**Comitan**	**2.17**	**48**	P	**Pb**	**10 25 44.2**	**+0.5**
QUEO	**Labor Ovalle**	**2.24**	**89**	*e*P	**Pn**	**10 25 42.9**	**+1.1**
QUEO				*e*S	**Sn**	**10 26 09.5**	**-0.7**
QUEO				IAML		10 26 16.2	
	comp=N,11μm,0.7s						
HUEH	**Huehuetenango**	**2.29**	**78**		**Pn**	**10 25 44.5**	**+1.9**
HUEH	**Huehuetenango**	**2.29**	**78**	*e*P	**Pb**	**10 25 45.4**	**-0.4**
HUEH				*e*S	**Sb**	**10 26 14.1**	**-0.7**
HUEH	**Huehuetenango**	**2.29**	**78**	*e*P	**Pb**	**10 25 45.3**	**-0.6**
HUEH				*e*S	**Sb**	**10 26 14.6**	**-0.1**
HUEH				IAML		10 26 25.6	
	comp=E,14μm,0.6s						
HUEH	**Huehuetenango**	**2.29**	**78**	S	**Sb**	**10 26 15.2**	**+0.4**
HUEH	**Huehuetenango**	**2.29**	**78**	P	**Pb**	**10 25 45.2**	**-0.6**
SOKI	**Kika Raxquin**	**2.34**	**90**	*e*P	**Pn**	**10 25 44.9**	**+1.5**
HUIG	**Huatulco**	**2.39**	**293**		**Pn**	**10 25 42.2**	**-1.5**
HUIG	**Huatulco**	**2.39**	**293**	*e*P	**Pn**	**10 25 42.2**	**-1.5**
HUIG				*e*S	**Sn**	**10 26 07.7**	**-5.7**
HUIG	**Huatulco**	**2.39**	**293**	*e*P	**Pn**	**10 25 42.2**	**-1.5**
STG2	**El Palmar, Qui**	**2.41**	**99**	*e*P	**Pn**	**10 25 40.3**	**-3.7**
STG8	**El Palmar, Qui**	**2.43**	**99**	*e*P	**Pn**	**10 25 40.9**	**-3.5**
STG8				*e*S	**Sn**	**10 26 05.6**	**-9.2**
STG8				IAML		10 26 17.5	
	comp=E,7μm,0.3s						
STG5	**El Palmar, Qui**	**2.44**	**100**	*e*P	Pn	10 25 41.0	-3.5
CMIG	**Matias Romero**	**2.46**	**336**	Pn	**Pn**	**10 25 44.7**	**+0.1**
	comp=E,22nm,0.3s,baz=173,slow=11,SNR=328						
CMIG				Sn	**Sn**	**10 26 12.5**	**-2.8**
	comp=E,61nm,0.3s,baz=248,slow=22,SNR=13						
CMIG				LR	LR	10 26 53.4	
	comp=E,568nm,19.0s,baz=150,slow=42						
	comp=E,174nm,0.6s						
CMIG	**Matias Romero**	**2.46**	**336**		**Pn**	**10 25 43.8**	**-0.9**
UXUV	**UXUV**	**2.48**	**353**		**Pb**	**10 25 47.0**	**-1.9**
UXUV	**UXUV**	**2.48**	**353**	*e*P	**Pb**	**10 25 47.0**	**-1.9**
UXUV				*e*S	Sn	10 26 02.4	-13
QUIS	**Sacapulas**	**2.68**	**80**	*e*P	**Pb**	**10 25 51.3**	**-1.0**
QUIS				*e*S	**Sb**	**10 26 24.4**	**-1.3**
QUIS				IAML		10 26 31.4	
	comp=E,5μm,0.4s						
TUIG	**Tuzandepetl**	**3.23**	**350**	*e*P	**Pn**	**10 25 52.9**	**-2.4**
TUIG				*e*S	**Sn**	**10 26 32.7**	**-1.5**
APG	**El Apazote**	**3.25**	**87**	Pn	**Pn**	**10 25 58.0**	**+2.2**
	comp=E,2.0nm,0.3s,baz=127,slow=11,SNR=45						
APG				Sn	**Sb**	**10 26 39.2**	**-3.1**
	comp=E,2.7nm,0.3s,baz=220,slow=18,SNR=5.6						
APG	**El Apazote**	**3.25**	**87**	*e*P	**Pn**	**10 25 58.1**	**+2.3**
FG16	**Alotenango, Sa**	**3.26**	**100**	*i* P	Pn	10 25 51.6	-4.3
PCG5	**San Vicente Pa**	**3.40**	**100**	*e*P	**Pn**	**10 25 54.8**	**-2.9**
PEIG	**Puerto Escondi**	**3.40**	**290**	*e*P	**Pn**	**10 25 55.9**	**-1.8**
PEIG				*e*S	Sn	10 26 30.3	-8.3
NEUV	**Arroyo Zacate**	**3.43**	**327**		**Pn**	**10 25 57.8**	**-0.2**
NEUV	**Arroyo Zacate**	**3.43**	**327**	*e*P	**Pn**	**10 25 57.8**	**-0.2**
NEUV				*e*S	**Sn**	**10 26 32.9**	**-6.3**
OXIG	**Oaxaca**	**3.57**	**309**		**Pn**	**10 26 01.9**	**+1.8**
VHO	**Vista Hermosa**	**3.57**	**309**	*e*P	**Pn**	**10 26 01.9**	**+1.8**
VHO				*e*S	**Sn**	**10 26 39.4**	**-3.6**
FAME	**Alcaldia de Sa**	**3.83**	**105**	P	**Pn**	**10 26 05.3**	**+1.9**
PMUV	**Sontecomapan**	**3.89**	**342**		**Pn**	**10 26 03.9**	**-0.5**
PMUV	**Sontecomapan**	**3.89**	**342**	*e*P	**Pn**	**10 26 03.9**	**-0.5**
PMUV				*i* S	**Sn**	**10 26 46.9**	**-3.7**
LOAL	**Lomas de Alarc**	**4.01**	**102**	P	**Pn**	**10 26 07.5**	**+1.5**
NUBE	**Las Nubes**	**4.03**	**103**	*e*P	**Pn**	**10 26 07.6**	**+1.2**
NUBE				*e*S	**Sn**	**10 26 54.4**	**+0.1**
NUBE	**Las Nubes**	**4.03**	**103**	P	**Pn**	**10 26 07.6**	**+1.2**
YOIG	**Yosondua**	**4.10**	**300**		**Pn**	**10 26 09.1**	**+1.5**
YOIG	**Yosondua**	**4.10**	**300**	*e*P	**Pn**	**10 26 09.1**	**+1.5**
YOIG				*e*S	**Sn**	**10 26 52.7**	**-3.5**
CEVE	**Cerro Verde**	**4.20**	**103**	P	**Pn**	**10 26 10.5**	**+1.7**
UNIC	**Universidad Ca**	**4.23**	**101**	S	**Sn**	**10 27 01.2**	**+2.2**
UNIC	**Universidad Ca**	**4.23**	**101**	P	**Pn**	**10 26 10.8**	**+1.7**
PETF	**Flores**	**4.33**	**61**		**Pn**	**10 26 13.3**	**+2.9**
PETF	**Flores**	**4.33**	**61**	*e*	**Pn**	**10 26 13.2**	**+2.7**
PETF				*e*		10 27 01.5	
PETF	**Flores**	**4.33**	**61**	*i* P	**Pn**	**10 26 13.7**	**+3.3**
PETF				IAML		10 27 06.3	
	comp=E,2μm,0.5s						
PETF	**Flores**	**4.33**	**61**	P	**Pn**	**10 26 13.8**	**+3.3**
ZAFR2	**Estanzuela, Za**	**4.34**	**93**	*e*P	**Pn**	**10 26 09.1**	**-1.5**
MTO3	**Montecristo**	**4.34**	**95**		**Pn**	**10 26 12.3**	**+1.5**
MTO3	**Montecristo**	**4.34**	**95**	P	**Pn**	**10 26 12.7**	**+1.9**
ESQI	**Esquipulas**	**4.35**	**93**		**Pn**	**10 26 12.5**	**+1.8**
JAYA	**Jayaque - finc**	**4.41**	**105**	S	**Sn**	**10 27 05.7**	**+2.2**
JAYA	**Jayaque - finc**	**4.41**	**105**	P	**Pn**	**10 26 12.8**	**+1.2**
PNIG	**Pinotepa**	**4.42**	**291**		**Pn**	**10 26 11.8**	**+0.1**
PNIG	**Pinotepa**	**4.42**	**291**	*e*P	**Pn**	**10 26 11.8**	**+0.1**
PNIG				*e*S	**Sn**	**10 26 57.5**	**-6.2**
TXIG	**Tlaxiaco**	**4.49**	**303**		**Pn**	**10 26 15.1**	**+2.3**
TXIG	**Tlaxiaco**	**4.49**	**303**	*e*P	**Pn**	**10 26 15.1**	**+2.3**
TXIG				*e*S	**Sn**	**10 27 06.5**	**+0.8**
TOIG	**Toxpalan**	**4.49**	**317**		**Pn**	**10 26 14.8**	**+2.2**
TOIG	**Toxpalan**	**4.49**	**317**	*e*P	**Pn**	**10 26 14.8**	**+2.2**
TOIG				*e*S	**Sn**	**10 27 03.6**	**-1.8**
PMON	**Piamonte**	**4.52**	**104**	P	**Pn**	**10 26 14.6**	**+1.5**
LOMA	**Loma Larga**	**4.67**	**104**	P	**Pn**	**10 26 16.8**	**+1.7**
SCIG	**Sabancuy**	**4.82**	**31**		**Pn**	**10 26 19.2**	**+2.1**
SCIG	**Sabancuy**	**4.82**	**31**	*e*P	**Pn**	**10 26 19.2**	**+2.1**
SCIG				*e*S	Sn	10 27 01.4	-12
SCIG	**Sabancuy**	**4.82**	**31**	P	**Pn**	**10 26 20.6**	**+3.5**
PAVA	**Las Pavas**	**4.87**	**103**	P	**Pn**	**10 26 19.6**	**+1.7**
TPIG	**Tehuac#an**	**4.92**	**317**		**Pn**	**10 26 18.7**	**+0.1**
TPIG	**Tehuac#an**	**4.92**	**317**	*e*P	**Pn**	**10 26 18.7**	**+0.1**
TPIG				*e*S	**Sn**	**10 27 14.2**	**-1.9**
TECO	**Alcaldia de Te**	**5.06**	**104**	P	**Pn**	**10 26 22.0**	**+1.5**
SCLA	**Alcaldia de Sa**	**5.07**	**102**	P	**Pn**	**10 26 22.5**	**+1.9**
FTIG	**Fresnillo de T**	**5.14**	**307**	*e*P	**Pn**	**10 26 24.4**	**+2.7**
FTIG				*e*S	**Sn**	**10 27 18.9**	**-2.6**
MGIG	**Malinaltepec**	**5.20**	**298**		**Pn**	**10 26 24.4**	**+1.9**
MGIG	**Malinaltepec**	**5.20**	**298**	*e*P	**Pn**	**10 26 24.4**	**+1.9**
MGIG				*e*S	**Sn**	**10 27 18.7**	**-4.4**
TLIG	**Tlapa**	**5.30**	**301**		**Pn**	**10 26 26.2**	**+2.3**
TLIG	**Tlapa**	**5.30**	**301**	*e*P	**Pn**	**10 26 26.1**	**+2.3**
TLIG				*e*S	**Sn**	**10 27 22.2**	**-3.3**
JAUV	**Jalcomulco**	**5.33**	**328**	*e*P	**Pn**	**10 26 22.6**	**-1.6**
JAUV				*e*S	**Sn**	**10 27 22.6**	**-3.5**
CRIG	**Cruz Grande**	**5.44**	**291**		**Pn**	**10 26 26.2**	**+0.5**
CRIG	**Cruz Grande**	**5.44**	**291**	*e*P	**Pn**	**10 26 26.2**	**+0.5**
CRIG				*e*		10 27 19.5	
LVIG	**Laguna Verde**	**5.45**	**333**		**Pn**	**10 26 24.7**	**-1.1**
LVIG	**Laguna Verde**	**5.45**	**333**	*e*P	**Pn**	**10 26 24.7**	**-1.1**
LVIG				*e*S	**Sn**	**10 27 21.8**	**-7.3**
PACA	**Pacayal**	**5.51**	**104**	P	**Pn**	**10 26 27.7**	**+1.0**
LCND	**La Caada**	**5.96**	**104**	P	**Pn**	**10 26 34.7**	**+1.9**
DAIG	**Los Arroyos**	**6.01**	**292**		**Pn**	**10 26 34.5**	**+1.0**
DAIG	**Los Arroyos**	**6.01**	**292**	*e*P	**Pn**	**10 26 34.5**	**+1.0**
DAIG				*e*S	**Sn**	**10 27 35.7**	**-7.1**
PPM	**Popocatepetl**	**6.23**	**313**	*e*P	**Pn**	**10 26 41.2**	**+4.2**
PPM				*e*S	**Sn**	**10 27 49.0**	**+0.1**
MEIG	**Mezcala**	**6.35**	**300**	*e*P	**Pn**	**10 26 40.9**	**+2.6**
MEIG				*e*S	**Sn**	**10 27 49.3**	**-2.1**
TGUH	**Tegucigalpa,Un**	**6.40**	**96**		**Pn**	**10 26 40.0**	**+1.1**
CXUV	**Coxquihui**	**6.41**	**326**		**Pn**	**10 26 41.2**	**+2.2**
CXUV	**Coxquihui**	**6.41**	**326**	*e*P	**Pn**	**10 26 41.2**	**+2.2**
CXUV				*e*S	**Sn**	**10 27 59.8**	**+7.1**
YAIG	**Yautepec**	**6.42**	**309**	*e*P	**Pn**	**10 26 42.5**	**+3.2**
YAIG				*e*S	**Sn**	**10 27 48.9**	**-4.2**
CAIG	**El Cayaco**	**6.57**	**290**		**Pn**	**10 26 42.5**	**+1.2**
CAIG	**El Cayaco**	**6.57**	**290**	*e*P	**Pn**	**10 26 42.5**	**+1.2**
CAIG				*e*S	Sn	10 27 47.9	-8.9
TLVM	**San Miguel Top**	**6.70**	**311**		**Pn**	**10 26 45.4**	**+2.1**
TLVM	**San Miguel Top**	**6.70**	**311**	*e*P	**Pn**	**10 26 45.4**	**+2.1**
MAVM	**Malinalco, Edo**	**6.80**	**308**	*e*P	**Pn**	**10 26 48.1**	**+3.6**
INVM	**La Marquesa**	**6.92**	**311**	*e*P	**Pn**	**10 26 50.5**	**+4.2**
ARIG	**Puente Sto Nin**	**7.13**	**300**	*e*P	**Pn**	**10 26 52.4**	**+3.5**
ARIG				*e*S	**Sn**	**10 28 08.2**	**-2.2**
TOVM	**TOLUCA**	**7.13**	**309**		**Pn**	**10 26 50.0**	**+0.8**
TOVM	**TOLUCA**	**7.13**	**309**	*e*P	**Pn**	**10 26 50.0**	**+0.8**
HERN	**Volcan Telica**	**7.15**	**107**		**Pn**	**10 26 49.8**	**+0.5**
MYIG	**Merida**	**7.22**	**32**	P	Pn	10 26 54.7	+4.6
CNGN	**Cerro Negro**	**7.31**	**108**		**Pn**	**10 26 52.6**	**+1.2**
TEIG	**Tepich**	**7.53**	**44**	Pn	**Pn**	**10 26 56.1**	**+1.7**
	baz=127,slow=20,SNR=28						
TEIG				Sn	**Sn**	**10 28 18.9**	**-1.4**
	baz=131,slow=24,SNR=6.7						
TEIG	**Tepich**	**7.53**	**44**		**Pn**	**10 26 55.7**	**+1.3**
ZIIG	**Zihuatanejo**	**7.84**	**292**	*e*P	**Pn**	**10 27 01.7**	**+3.1**
CTUV	**Llano Grande**	**7.88**	**328**		**Pn**	**10 26 59.8**	**+0.6**
CTUV	**Llano Grande**	**7.88**	**328**	*e*P	**Pn**	**10 26 59.8**	**+0.6**
CTUV				*e*S	**Sn**	**10 28 23.5**	**-5.3**
BOAB	**BOACO BROADBAN**	**8.28**	**106**		**Pn**	**10 27 05.3**	**+0.6**
MOIG	**Morelia**	**8.52**	**305**		**Pn**	**10 27 10.9**	**+2.7**
RPIG	**Rio Verde**	**9.12**	**321**	*e*P	**Pn**	**10 27 20.9**	**+4.5**
JUD3	**Juan Diaz 3**	**9.33**	**119**		**Pn**	**10 27 21.4**	**+2.2**
JTS	**Las Juntas de**	**9.77**	**117**	Pn	**Pn**	**10 27 29.2**	**+4.0**
	comp=E,1.3nm,0.3s,baz=256,slow=10,SNR=6.4						
JTS	**Las Juntas de**	**9.77**	**117**		**Pn**	**10 27 28.9**	**+3.7**
EZ5V		**10.42**	**298**	*e*P	Pn	10 27 39.4	+5.1
MNGA	**Volcan de Coli**	**10.43**	**298**	*e*P	**Pn**	**10 27 38.7**	**+4.3**
INCO	**Volcan de Coli**	**10.44**	**298**	*e*P	Pn	10 27 39.7	+5.0
SOMAC	**Volcano de Col**	**10.46**	**298**	*e*P	**Pn**	**10 27 39.5**	**+4.6**
CEGR	**Campo Tres**	**10.60**	**297**	*e*P	**Pn**	**10 27 41.2**	**+4.5**
PIRO	**Carate, Puerto**	**12.10**	**121**	Pn	**Pn**	**10 28 00.5**	**+3.4**
SOR	**Soroa**	**12.94**	**51**	Pn	**Pn**	**10 28 09.5**	**+1.1**
833A	**Chaparral WMA,**	**14.38**	**340**		**Pn**	**10 28 29.8**	**+1.6**
HNDO	**Hondo**	**15.46**	**342**	Pn	**Pn**	**10 28 43.2**	**+0.4**
HNDO				IAmb	IAmb	10 28 56.3	
	comp=Z,14nm,0.8s						
DRIO	**Del Rio**	**15.81**	**338**	Pn	**Pn**	**10 28 48.7**	**+1.4**
DRIO				IAmb	IAmb	10 29 03.2	
	comp=Z,6.7nm,0.9s						
JCT	**Junction City**	**16.51**	**342**	P	**P**	**10 28 58.4**	**-0.7**
JCT				IAmb	IAmb	10 29 28.9	
	comp=Z,9.0nm,0.6s						
TX31	**

ASAR	**Alice Springs**	**25.28**	**164**	P		**P**	**11 00 45.7**	**+0.7**
	0.4nm,0.6s,baz=344,slow=11,SNR=7.4							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**59.88**	**326**	P		**P**	**11 05 24.3**	**+0.3**
	0.2nm,0.5s,baz=138,slow=6.7,SNR=1.3							
	0.2nm,0.5s							

*IDC **17** 10:59:23.8±1.9,3°.32S×129°.48E, h0km, mb3.8/3, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=85.7km s-min=24.5km az=67.0*

DJA 17 10:59:01.2±0.3, 4°.5S×12°.9E±°, h10km, M4.1/11, MLv4.1/11, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSAI	**Masohi**	**0.42**	**27**	P		Pg	10 59 08.4	-1.0
MSAI				S		Sb	10 59 16.9	-0.2
AAI	**Ambon**	**0.55**	**273**	P		Pg	10 59 12.2	+0.4
AAI				S		Sb	10 59 20.6	-0.2
BNDI	**Bandanaira**	**1.41**	**124**	P		Pn	10 59 25.1	-1.8
BNDI				S		Sn	10 59 45.1	-0.5
NLAI	**Namlea**	**1.71**	**286**	P		Pn	10 59 31.4	+0.4
NLAI				S		Sn	10 59 53.0	+0.1
SANI	**Sanana**	**3.21**	**301**	P		Pn	10 59 52.6	+0.9
FAKI	**Fak Fak**	**3.59**	**77**	P		Pn	10 59 57.3	+0.3
SWI	**Sorong**	**3.79**	**42**	P		Pn	11 00 00.2	+0.4
KMPI	**Kaimana, Papua**	**4.96**	**89**	P		Pn	11 00 15.4	-0.3
FITZ	**Fitzroy Crossi**	**14.61**	**192**	Pn		P	11 03 01.3	+27
	0.3nm,0.3s,baz=12,slow=8.5,SNR=2.5							
	3.9nm,1.1s							
WRA	**Warramunga Arr**	**17.02**	**162**	P		P	11 03 24.8	+23
	0.3nm,0.3s,baz=348,slow=12,SNR=10							
	2.8nm,0.8s							
ASAR	**Alice Springs**	**20.45**	**166**	P		Pn	11 04 05.2	+24
	6.3nm,0.7s,baz=348,slow=11,SNR=4.1							
ASAR				PcP		PcP	11 08 16.0	+25
	0.2nm,0.3s,baz=0.0,slow=1.9,SNR=1.7							
	6.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**36.71**	**308**	P		P	11 06 35.0	+26
	0.4nm,0.3s,baz=136,slow=8.6,SNR=4.2							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**64.81**	**327**	P		P	11 10 05.5	+25
	0.3nm,0.4s,baz=112,slow=7.4,SNR=4.1							
	0.3nm,0.4s							

*CNRM **17** 11:02:17.6, 32°.62N×4°.17W, h1km, ML4.2*
*MDD **17** 11:02:18.4±0.6, 32°.56N×4°.29W, h0km, Mb4.4/18, M_mb3.9/18, Error ellipse: s-maj=4.8km s-min=3.7km az=136.0*
*IGIL **17** 11:02:18.4, 32°.67N×4°.03W, h7km, ML3.2*
*INMG **17** 11:02:21.5±1.6, 32°.69N×4°.23W, h19km, ML3.3, Error ellipse: s-maj=8.2km s-min=5.7km az=84.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

ISC 17 11:02:19.3±0.9, 32°.73N±0°.03×4°.31W±0°.03, h10km, n110, σ1§74/161, 12C-1D, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDT	**Midelt**	**0.27**	**288**	P		**Pg**	**11 02 25.6**	**-0.8**
MDT	**Midelt**	**0.27**	**288**	S		**Sb**	**11 02 31.5**	**+0.5**
MD31	**MD31**	**0.41**	**290**	P		**Pg**	**11 02 28.4**	**+1.1**
MD31	**MD31**	**0.41**	**290**	S		**Sb**	**11 02 35.5**	**+0.5**
IFR	**Ifrane**	**1.04**	**319**	Pg		**Pn**	**11 02 41.4**	**+1.2**
IFR				Sn		**Sn**	**11 02 56.8**	**+1.9**
LCRM	**LCR**	**1.06**	**334**	P		**Pn**	**11 02 41.9**	**+1.5**
LCRM	**LCR**	**1.06**	**334**	S		**Sn**	**11 02 56.1**	**+0.8**
GOLM	**Goulmima**	**1.16**	**208**	P		**Pb**	**11 02 39.8**	**-1.7**
GOLM	**Goulmima**	**1.16**	**208**	S		**Sn**	**11 02 58.7**	**+0.9**
ARF	**Arif**	**1.30**	**177**	P		**Pn**	**11 02 40.6**	**-2.9**
ARF	**Arif**	**1.30**	**177**	S		**Sb**	**11 02 57.4**	**-3.2**
AKLM	**AKL**	**1.81**	**12**	P		**Pb**	**11 02 52.2**	**-0.5**
AKLM	**AKL**	**1.81**	**12**	S		**Sg**	**11 03 18.5**	**+0.9**
TISM	**Timmit**	**2.07**	**241**	P		**Pn**	**11 02 55.3**	**+1.1**
TISM	**Timmit**	**2.07**	**241**	S		**Sb**	**11 03 23.3**	**+0.5**
ZHG	**ZHG**	**2.09**	**291**	P		**Pn**	**11 02 55.6**	**+1.2**
TZRR	**Tazzarine**	**2.22**	**209**	P		**Pn**	**11 02 55.2**	**-1.1**
TZRR	**Tazzarine**	**2.22**	**209**	P		**Pn**	**11 02 55.4**	**-0.8**
TZRR	**Tazzarine**	**2.22**	**209**	S		**Sn**	**11 03 24.7**	**+0.9**
RSA	**Sarsar**	**2.49**	**330**	P		**Pn**	**11 03 01.6**	**+1.6**
RSA	**Sarsar**	**2.49**	**330**	S		**Sb**	**11 03 35.5**	**+0.6**
PALE	**Palemas**	**2.50**	**7**	P		**Pn**	**11 03 01.4**	**+1.3**
PALE	**Palemas**	**2.50**	**7**	S		**Sb**	**11 03 34.3**	**-0.9**
TAF	**Taforalt**	**2.61**	**37**	P		**Pn**	**11 03 01.3**	**-0.3**
TAF	**Taforalt**	**2.61**	**37**	S		**Sn**	**11 03 34.8**	**+1.4**
FIGM	**Figuig**	**2.64**	**102**	P		**Pn**	**11 03 00.5**	**-1.6**
FIGM	**Figuig**	**2.64**	**102**	S		**Sn**	**11 03 32.1**	**-2.2**
AVE	**Averroes**	**2.67**	**283**	Pn		**Pn**	**11 03 03.9**	**+1.5**
AVE				Sn		**Sn**	**11 03 36.2**	**+1.4**
AVE	**Averroes**	**2.67**	**283**	P		**Pn**	**11 03 04.3**	**+1.9**
AVE	**Averroes**	**2.67**	**283**	S		**Sb**	**11 03 39.8**	**-0.3**
OUZM	**OUZ**	**2.77**	**230**	P		**Pn**	**11 03 04.1**	**+0.2**
OUZM	**OUZ**	**2.77**	**230**	S		**Sb**	**11 03 43.2**	**+0.2**
EMEL	**Melilla**	**2.80**	**23**	Pn		**Pn**	**11 03 05.7**	**+1.5**
EMEL				Sn		**Sn**	**11 03 39.2**	**+1.3**
ZGR	**Zagora**	**2.84**	**204**	P		**Pn**	**11 03 03.5**	**-1.2**
ZGR	**Zagora**	**2.84**	**204**	S		**Sn**	**11 03 39.5**	**+0.5**
SRHM	**Skhour des Reh**	**3.04**	**266**	P		**Pn**	**11 03 09.2**	**+1.6**
SRHM	**Skhour des Reh**	**3.04**	**266**	S		**Sb**	**11 03 50.7**	**-0.1**
SMIR	**Smir Dam**	**3.08**	**343**	P		**Pn**	**11 03 09.2**	**+1.2**
TIO	**Tiouine**	**3.09**	**235**	Pn		**Pn**	**11 03 08.3**	**0.0**
TIO				Sg		**Sb**	**11 03 54.4**	**+2.1**
TIO	**Tiouine**	**3.09**	**235**	P		**Pn**	**11 03 08.2**	**-0.2**
OUK	**Oukaimeden**	**3.39**	**244**	P		**Pn**	**11 03 12.8**	**+0.3**
OUK	**Oukaimeden**	**3.39**	**244**	S		**Sn**	**11 03 55.5**	**+2.5**
EMIJ	**Mijas**	**3.84**	**354**	Pn		**Pn**	**11 03 20.0**	**+1.4**
EMIJ	**Mijas**	**3.84**	**354**	Pn		**Pn**	**11 03 19.6**	**+1.0**
EMIJ				Sn		**Sn**	**11 04 07.2**	**+3.4**
CNIL	**Conil**	**3.91**	**339**	Pn		**Pn**	**11 03 19.9**	**+0.5**
ELGU	**Los Guajares,**	**4.17**	**8**	Pn		**Pn**	**11 03 24.8**	**+1.8**
ELGU				⇑*i*Vmb_VC			11 03 32.6	
	296nm,SNR=1.4							
ELGU				Sn		**Sn**	**11 04 13.7**	**+1.9**
ESPR	**Espera**	**4.32**	**343**	Pn		**Pn**	**11 03 26.2**	**+1.1**
ESPR				⇑*i*Vmb_VC			11 03 30.7	
	414nm,SNR=3.4							
ESPR				Sn		**Sn**	**11 04 16.4**	**+0.9**
EGOR	**Sierra Gorda,**	**4.37**	**2**	Pn		**Pn**	**11 03 27.8**	**+1.8**
EGOR				Sn		**Sn**	**11 04 13.7**	**-3.3**
EGOR	**Sierra Gorda,**	**4.37**	**2**	Pn		**Pn**	**11 03 28.2**	**+2.3**
EGOR				Sn		**Sn**	**11 04 18.1**	**+1.1**
EQUE	**Quentar**	**4.52**	**9**	Pn		**Pn**	**11 03 29.1**	**+1.2**
EQTA	**Presa de Quent**	**4.52**	**9**	Pn		**Pn**	**11 03 29.8**	**+1.9**
ENIJ	**Nijar**	**4.57**	**22**	Pn		**Pn**	**11 03 28.7**	**+0.1**
ENIJ	**Nijar**	**4.57**	**22**	Pn		**Pn**	**11 03 28.8**	**+0.3**
ENIJ				⇑*i*Vmb_VC			11 03 33.8	
	308nm,SNR=1.6							
ENIJ				Sn		**Sn**	**11 04 23.6**	**+2.0**
EQES	**Quesada**	**5.16**	**11**	Pn		**Pn**	**11 03 39.2**	**+2.5**
EQES				⇑*i*Vmb_VC			11 03 45.5	
	282nm,SNR=2.2							
EQES				Sn		**Sn**	**11 04 38.0**	**+1.6**
EMIN	**Mina Concepcio**	**5.38**	**340**	Pn		**Pn**	**11 03 39.4**	**-0.3**
EMIN				Sn		**Sn**	**11 04 38.9**	**-2.9**
EMIN	**Mina Concepcio**	**5.38**	**340**	Pn		**Pn**	**11 03 39.3**	**-0.3**
EMIN				⇑*i*Vmb_VC			11 03 48.8	
	241nm,SNR=2.7							
EMIN				Sn		**Sn**	**11 04 40.3**	**-1.5**
PBDV	**Barranco-do-Ve**	**5.40**	**328**	Pn		**Pn**	**11 03 39.9**	**0.0**
PBDV				Sn		**Sn**	**11 04 39.7**	**-2.4**
PBDV	**Barranco-do-Ve**	**5.40**	**328**	*e*P		**Pn**	**11 03 39.9**	**0.0**
PBDV				*e*S		**Sn**	**11 04 40.3**	**-1.8**
PBDV				*i* IAML			11 04 44.0	
PBDV				*i* IAML			11 04 44.8	
PBDV				*i* IAML			11 04 49.0	
ECAB	**El Cabril**	**5.41**	**351**	Pn		**Pn**	**11 03 41.0**	**+0.9**
ECAB				Sn		**Sn**	**11 04 40.1**	**-2.4**
ECAB	**El Cabril**	**5.41**	**351**	Pn		**Pn**	**11 03 40.7**	**+0.7**
ECAB				⇑*i*Vmb_VC			11 03 42.7	
	145nm,SNR=1.6							
ECAB				Sn		**Sn**	**11 04 43.9**	**+1.5**
EADA	**Adamuz**	**5.43**	**358**	Pn		**Pn**	**11 03 41.9**	**+1.6**
EADA				Sn		**Sn**	**11 04 41.5**	**-1.4**
EADA	**Adamuz**	**5.43**	**358**	Pn		**Pn**	**11 03 41.9**	**+1.6**
EADA				⇑*i*Vmb_VC			11 03 51.8	
	178nm,SNR=1.7							
EADA				Sn		**Sn**	**11 04 43.3**	**+0.4**
PVAQ	**Vaqueiros**	**5.44**	**330**	⇓*e*P		**Pn**	**11 03 40.2**	**-0.2**
PVAQ				*e*S		**Sn**	**11 04 39.6**	**-3.4**
PVAQ				*i* IAML			11 04 43.0	
PVAQ				*i* IAML			11 04 43.5	
PVAQ				*i* IAML			11 04 43.5	
PVAQ	**Vaqueiros**	**5.44**	**330**	P		**Pn**	**11 03 40.4**	**0.0**
EGRO	**El Granado**	**5.45**	**332**	Pn		**Pn**	**11 03 40.6**	**0.0**
EGRO				Sn		**Sn**	**11 04 38.8**	**-4.6**
EGRO	**El Granado**	**5.45**	**332**	Pn		**Pn**	**11 03 40.4**	**-0.2**
EGRO				Sn		**Sn**	**11 04 43.1**	**-0.3**
CART	**Cartagena**	**5.55**	**28**	Pn		**Pn**	**11 03 41.9**	**-0.1**
CART	**Cartagena**	**5.55**	**28**	P		**Pn**	**11 03 41.6**	**-0.3**
EMUR	**La Murta**	**5.68**	**25**	Pn		**Pn**	**11 03 43.7**	**-0.1**
EMUR	**La Murta**	**5.68**	**25**	Pn		**Pn**	**11 03 44.7**	**+0.9**
EMUR				⇑*i*Vmb_VC			11 03 53.3	
	320nm,SNR=1.6							
PFVI	**Vila Bisbo**	**5.75**	**321**	Pn		**Pn**	**11 03 44.7**	**0.0**
PFVI				Sn		**Sn**	**11 04 47.9**	**-2.9**
PFVI	**Vila Bisbo**	**5.75**	**321**	*e*P		**Pn**	**11 03 44.9**	**+0.2**
PFVI				*e*S		**Sn**	**11 04 50.5**	**-0.2**
PFVI				*i* IAML			11 04 53.5	
PFVI				*i* IAML			11 04 55.1	
PFVI				*i* IAML			11 04 57.0	
PFVI	**Vila Bisbo**	**5.75**	**321**	P		**Pn**	**11 03 46.0**	**+1.3**
PCVE	**Castro Verde**	**5.77**	**329**	Pn		**Pn**	**11 03 45.7**	**+0.7**
PCVE				Sn		**Sn**	**11 04 48.2**	**-3.0**
PCVE	**Castro Verde**	**5.77**	**329**	*e*P		**Pn**	**11 03 45.6**	**+0.7**
PCVE				*e*S		**Sn**	**11 04 50.6**	**-0.6**
PCVE				*i* IAML			11 04 50.9	
PCVE				*i* IAML			11 04 52.6	
PCVE				*i* IAML			11 04 54.5	
MORF	**Marmelete**	**5.79**	**323**	*e*P		**Pn**	**11 03 44.9**	**-0.4**
MORF	**Marmelete**	**5.79**	**323**	*e*P		**Pn**	**11 03 45.7**	**+0.4**
MORF				*e*S		**Sn**	**11 04 51.5**	**-0.3**
MORF				*i* IAML			11 04 53.5	
MORF				*i* IAML			11 04 54.4	
MORF				*i* IAML			11 04 59.4	
PBAR	**Barrancos**	**5.87**	**338**	Pn		**Pn**	**11 03 46.3**	**-0.1**
PBAR				Sn		**Sn**	**11 04 49.6**	**-4.1**
PBAR	**Barrancos**	**5.87**	**338**	*e*P		**Pn**	**11 03 46.3**	**-0.1**
PBAR				*e*S		**Sn**	**11 04 51.8**	**-2.0**
PBAR				*i* IAML			11 04 52.7	
PBAR				*i* IAML			11 05 02.1	
PBAR				*i* IAML			11 05 02.1	
PTEO	**Sao Teotonio**	**6.01**	**324**	*e*P		**Pn**	**11 03 48.3**	**-0.1**
PTEO				*e*S		**Sn**	**11 04 56.2**	**-1.0**
PTEO				*i* IAML			11 04 58.0	
PTEO				*i* IAML			11 04 60.0	
PTEO				*i* IAML			11 05 00.4	
MESJ	**Messejana**	**6.02**	**329**	*e*P		**Pn**	**11 03 48.0**	**-0.4**
MESJ				*e*S		**Sn**	**11 04 53.3**	**-4.1**
MESJ				*i* IAML			11 04 59.5	
	comp=E,27nm,0.3s							
MESJ	**Messejana**	**6.02**	**329**	*e*P		**Pn**	**11 03 48.5**	**+0.1**
MESJ				*e*S		**Sn**	**11 04 56.5**	**-0.9**
MESJ				*i* IAML			11 04 58.5	
MESJ				*i* IAML			11 04 59.6	
MESJ				*i* IAML			11 04 59.7	
PBEJ	**Beja**	**6.03**	**332**	*e*P		**Pn**	**11 03 48.7**	**+0.1**
PBEJ				*e*S		**Sn**	**11 04 56.1**	**-1.6**
PBEJ				*i* IAML			11 04 58.5	
PBEJ				*i* IAML			11 05 01.9	
PBEJ				*i* IAML			11 05 02.3	
PSIM	**Granatula de C**	**6.09**	**4**	Pn		**Pn**	**11 03 50.2**	**+0.7**
PSIM				Sn		**Sn**	**11 04 59.1**	**-0.1**
ETOB	**Tobarra**	**6.31**	**20**	Pn		**Pn**	**11 03 55.1**	**+2.6**
EBAD	**Badajoz**	**6.40**	**341**	Pn		**Pn**	**11 03 53.6**	**-0.1**
EBAD				Sn		**Sn**	**11 05 03.5**	**-3.3**
EBAD	**Badajoz**	**6.40**	**341**	Pn		**Pn**	**11 03 53.6**	**-0.1**
EBAD				⇑*i*Vmb_VC			11 03 59.0	
	comp=E,258nm,SNR=2.2							
EBAD				Sn		**Sn**	**11 05 04.7**	**-2.1**
EVO	**Evora**	**6.53**	**334**	Pn		**Pn**	**11 03 55.3**	**-0.1**
EVO				Sn		**Sn**	**11 05 06.0**	**-3.9**
EVO	**Evora**	**6.53**	**334**	*e*P		**Pn**	**11 03 55.6**	**+0.2**
EVO				*e*S		**Sn**	**11 05 06.6**	**-3.3**
EVO				*i* IAML			11 05 10.9	
EVO				*i* IAML			11 05 12.0	
EVO				*i* IAML			11 05 15.6	
MOE	**Montemor**	**6.65**	**331**	*e*P		**Pn**	**11 03 57.1**	**0.0**
MOE				*e*S		**Sn**	**11 04 59.1**	**-1.0**
MOE				*i* IAML			11 05 13.9	
MOE				*i* IAML			11 05 14.5	
MOE				*i* IAML			11 05 14.7	
PESTR	**Estremoz**	**6.68**	**337**	Pn		**Pn**	**11 03 57.8**	**+0.3**
PESTR				Sn		**Sn**	**11 05 10.1**	**-3.6**
PESTR	**Estremoz**	**6.68**	**337**	*e*P		**Pn**	**11 03 57.9**	**+0.3**
PESTR				*e*S		**Sn**	**11 05 10.9**	**-2.7**
PESTR				*i* IAML			11 05 13.5	
PESTR				*i* IAML			11 05 15.2	
PESTR				*i* IAML			11 05 19.4	
PESTR	**Estremoz**	**6.68**	**337**	P		**Pn**	**11 03 58.3**	**+0.8**
PARRA	**Arraiolos**	**6.79**	**334**	*e*P		Pn	11 03 59.1	-5.3
PARRA				*e*S		Sn	11 05 14.5	-12
PARRA				*i* IAML			11 05 15.6	
PARRA				*i* IAML			11 05 16.0	
PARRA				*i* IAML			11 05 16.7	
PAB	**San Pablo**	**6.80**	**360**	⇑*i*Vmb_VC		**Pn**	**11 04 00.1**	**+0.9**
	comp=E,98nm,SNR=1.2							
PAB				Pn		**Pn**	**11 04 00.1**	**+0.9**
PAB				Sn		**Sn**	**11 05 16.8**	**+0.1**
PMTG	**Montargil**	**7.08**	**334**	*e*P		**Pn**	**11 04 03.0**	**0.0**
PMTG				*e*S		**Sn**	**11 05 21.2**	**-2.3**
PMTG				*i* IAML			11 05 34.7	
PMTG				*i* IAML			11 05 37.2	
PMTG				*i* IAML			11 05 41.4	
TANT	**Tantan**	**7.37**	**236**	P		**Pn**	**11 04 07.1**	**+0.2**
EPLA	**Plasencia**	**7.46**	**349**	Pn		**Pn**	**11 04 08.9**	**+0.7**
EPLA				⇑*i*Vmb_VC			11 04 14.5	
	comp=E,280nm,SNR=2.1							
EPLA				Sn		**Sn**	**11 05 31.0**	**-1.8**
PSARD	**Sardoal**	**7.53**	**337**	*e*P		**Pn**	**11 04 09.4**	**+0.2**
PSARD				*e*S		**Sn**	**11 05 31.4**	**-3.2**
PSARD				*i* IAML			11 05 34.4	
PSARD				*i* IAML			11 05 36.9	
PSARD				*i* IAML			11 05 37.3	
PCBR	**Castelo Branco**	**7.54**	**341**	*e*P		**Pn**	**11 04 09.7**	**+0.4**
PCBR				*e*S		**Sn**	**11 05 30.1**	**-4.8**
PCBR				*i* IAML			11 05 31.8	
PCBR				*i* IAML			11 05 32.5	
PCBR				*i* IAML			11 05 45.3	
PSBE	**So Bento**	**7.68**	**333**	*e*P		**Pn**	**11 04 11.8**	**+0.6**
PSBE				*e*S		**Sn**	**11 05 35.8**	**-2.5**
PCAS	**Casmilo, Conde**	**8.05**	**336**	*e*P		**Pn**	**11 04 16.7**	**+0.4**
MTE	**Manteigas**	**8.08**	**342**	*e*P		**Pn**	**11 04 17.5**	**+0.6**
PVIS	**Viseu**	**8.47**	**341**	*e*P		**Pn**	**11 04 22.8**	**+0.7**
MVO	**Moncorvo**	**8.70**	**346**	*e*P		**Pn**	**11 04 26.0**	**+0.8**
MVO				*e*S		**Sn**	**11 05 58.1**	**-5.2**
MVO				*i* IAML			11 05 59.7	
MVO				*i* IAML			11 06 00.2	
MVO				*i* IAML			11 06 09.0	
PVRL	**Vila Real**	**8.95**	**343**	*e*P		**Pn**	**11 04 29.2**	**+0.5**
PVRL				*e*S		**Sn**	**11 06 04.0**	**-5.7**
PVRL				*i* IAML			11 06 07.4	
PVRL				*i* IAML			11 06 07.4	
PVRL				*i* IAML			11 06 07.5	
POLO	**Lamas de Olo**	**9.06**	**343**	*e*P		**Pn**	**11 04 30.6**	**+0.3**
ECAL	**Calabor**	**9.39**	**349**	Pn		**Pn**	**11 04 35.3**	**+0.5**
ECAL				⇑*i*Vmb_VC			11 04 41.1	
	comp=E,250nm,SNR=1.1							
ECAL				Sn		**Sn**	**11 06 17.2**	**-3.3**
ELOB	**Lobios**	**9.60**	**343**	Pn		**Pn**	**11 04 38.0**	**+0.4**
ELOB				Sn		**Sn**	**11 06 23.0**	**-2.5**
PGAV	**Gavieira, Arco**	**9.74**	**342**	*e*P		**Pn**	**11 04 40.2**	**+0.6**

*IDC **17** 11:05:30.9±0.5, 34°.64N×139°.16E, h0km, mb4.1/24, mbtmp4.2/30, ML4.2/5, MS3.8/34, Error ellipse: s-maj=14.5km s-min=11.4km az=68.0*
*MOS **17** 11:05:31.0±1.0, 34°.67N×139°.17E, h15km, mb4.8/20, MS4.0/4, Error ellipse: s-maj=9.8km s-min=5.8km az=107.2*
*JMA **17** 11:05:33.1±0.1, 34°.6N±0°.2×139°.1E±0°.2, h13km, MD4.7/40, MW4.6/40, NEAR IZU-OSHIMA ISLAND*
JMA Felt IV J1 at NEAR IZU-OSHIMA ISLAND .
*NIED **17** 11:05:33.1, 34°.64N×139°.05E, h13km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=2.78; Mθθ=4.56; Mϕϕ7.34; Mrθ3.20; Mθϕ-4.87; Mϕr-1.02; Fault plane solution: M₀8.61000×10¹⁵ NP1: ϕs203.00000°, δ62.00000°, λ-15.00000°. NP2: ϕs300.00000°, δ77.00000°, λ-151.00000°.*
*NEIC **17** 11:05:33.7±1.5, 34°.60N±0°.04×139°.06E±0°.02, h16km±4km, mb4.8/35 Error ellipse: s-maj=6.5km s-min=1.9km az=197.0*
*GCMT **17** 11:05:37.7±0.4, 34°.69N±0°.02×138°.96E±0°.03, h22km±1km, MW4.8/78, Moment Tensor Solution. s10,c11; s78,c102; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.33±.11; Mθθ-1.20±.08; Mϕϕ1.53±.09; Mrθ-0.20±.12; Mθϕ-1.18±.09; Mϕr-0.23±.12; Best double couple: M₀1.83400×10¹⁶ NP1:ϕs115.00000°, δ80.00000°, λ-175.00000°. NP2: ϕs24.00000°, δ85.00000°, λ-10.00000°. Principal axes: T 1.9780, Plg4.0000°, Azm70.0000°; N -0.2870, Plg78.0000°, Azm177.0000°; P -1.6910, Plg11.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 11:05:32.4±0.9, 34°.65N±0°.02×139°.11E±0°.03, h10km±5km, n505, σ1§09/455, mb4.6/65, MS4.0/42, 4C-12D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIZS	**Izushimoda**	**0.20**	**291**	*i* P		**Pg**	**11 05 37.0**	**+0.5**
JIZS				S		**Sg**	**11 05 39.9**	**+0.5**
JIZS	**Izushimoda**	**0.20**	**291**	A		A	11 05 37.0	
	comp=N,794nm,1.2s,comp=E,583nm,1.1s							
JIM2	**Oshima 3**	**0.28**	**75**	*i* P		**Pg**	**11 05 39.6**	**+1.7**
JIM2	**Oshima 3**	**0.28**	**75**	A		A	11 05 39.6	
	comp=N,268nm,1.7s,comp=E,226nm,3.0s							
KTJ3	**Kamata3**	**0.29**	**354**	⇓*i*P		**Pg**	**11 05 39.1**	**+1.0**
KTJ3				⇓*e*S		**Sg**	**11 05 43.5**	**+1.5**
JHTM	**Izuhatsuma**	**0.32**	**346**	A		A	11 05 39.6	
	comp=N,336nm,1.2s,comp=E,251nm,1.5s							
JSKK	**Shikinejimakit**	**0.32**	**164**	A		A	11 05 39.8	
	comp=N,163nm,0.3s,comp=E,241nm,0.4s							
JOD2	**Odawara 2**	**0.61**	**359**	⇓*i*P		**Pg**	**11 05 45.0**	**+0.7**
JOD2				⇓S		**Sb**	**11 05 54.0**	**0.0**
JOD2	**Odawara 2**	**0.61**	**359**	A		A	11 05 45.0	
	comp=N,50nm,1.6s,comp=E,88nm,1.2s							
JFNN	**Fujinakano**	**0.65**	**328**	⇓*i*P		**Pg**	**11 05 45.5**	**+0.6**
JFNN				⇓S		**Sb**	**11 05 54.8**	**-0.1**
JFNN	**Fujinakano**	**0.65**	**328**	A		A	11 05 45.5	
	comp=N,53nm,9.6s,comp=E,47nm,8.5s							
JMYK	**Miyake Tsubota**	**0.69**	**148**	*i* P		**Pg**	**11 05 46.4**	**+0.7**
JMYK				S		**Sb**	**11 05 56.5**	**+0.4**
JMYK	**Miyake Tsubota**	**0.69**	**148**	A		A	11 05 46.4	
	comp=N,59nm,3.4s,comp=E,54nm,5.1s							
JYO	**Yokosk**	**0.74**	**38**	A		A	11 05 47.8	
	comp=N,196nm,0.8s,comp=E,331nm,0.9s							
TATJ	**Tateyama 2**	**0.75**	**59**	A		A	11 05 48.1	
	comp=N,88nm,1.4s,comp=E,94nm,1.1s							
JSG	**Sagara**	**0.76**	**272**			**Pb**	**11 05 47.8**	**+0.1**
JSG						**Sn**	**11 05 58.6**	**-2.2**
JSG	**Sagara**	**0.76**	**272**	P		**Pb**	**11 05 47.7**	**+0.1**
JSG	**Sagara**	**0.76**	**272**	S		**Sn**	**11 05 59.6**	**-1.1**
JSG	**Sagara**	**0.76**	**272**	A		A	11 05 46.8	
	comp=N,273nm,0.6s,comp=E,125nm,0.5s							
SHZ3	**Shizuoka 3**	**0.85**	**300**	*i* P		**Pg**	**11 05 49.0**	**+0.3**
SHZ3				S		**Sb**	**11 06 00.9**	**+0.2**
SHZ3	**Shizuoka 3**	**0.85**	**300**	A		A	11 05 49.0	
	comp=N,167nm,0.4s,comp=E,109nm,1.1s							
JMKN	**Mikurajimanish**	**0.85**	**152**	⇓*i*P		**Pb**	**11 05 49.1**	**-0.2**
JMKN				⇓S		**Sg**	**11 06 01.2**	**+1.3**
JMKN	**Mikurajimanish**	**0.85**	**152**	A		A	11 05 49.1	
	comp=N,25nm,1.2s,comp=E,39nm,1.6s							
JKKS	**Kakegawashinom**	**0.93**	**277**	A		A	11 05 49.8	
	comp=N,105nm,0.9s,comp=E,87nm,1.0s							
JSGW	**Sagamiharawaka**	**0.96**	**5**	A		A	11 05 51.3	
	comp=N,18nm,5.5s,comp=E,29nm,1.1s							
JYN	**Shimob**	**0.96**	**332**	⇓*i*P		**Pb**	**11 05 50.7**	**-0.6**
JYN				⇓S		**Sb**	**11 06 04.0**	**-0.2**
JYN	**Shimob**	**0.96**	**332**	A		A	11 05 50.7	
	comp=N,16nm,0.8s,comp=E,35nm,0.5s			

JKY	**Yasaka**	**3.42**	**288**		A	A	11 06 27.2		
	comp=N,8.0nm,1.5s,comp=E,5.0nm,0.8s								
JSD	**Sado**	**3.45**	**349**			**Pn**	**11 06 26.4**	**+0.2**	
JSD	**Sado**	**3.45**	**349**		P	**Pn**	**11 06 29.3**	**+3.1**	
JMM	**Marumori**	**3.49**	**23**			**Pn**	**11 06 27.3**	**+0.5**	
JMM	**Marumori**	**3.49**	**23**		P	**Pn**	**11 06 27.9**	**+1.2**	
JMN	**Monobe**	**4.43**	**260**			**Pn**	**11 06 39.1**	**-0.5**	
JMN	**Monobe**	**4.43**	**260**		P	**Pn**	**11 06 39.2**	**-0.5**	
JTM	**Tenmabayashi**	**6.32**	**14**		Pn	**Pn**	**11 07 06.9**	**+1.2**	
JTM	**Tenmabayashi**	**6.32**	**14**		P	**Pn**	**11 07 07.6**	**+1.9**	
JNU	**Nakatsue**	**7.01**	**260**		Pn	**Pn**	**11 07 15.3**	**+0.1**	
	comp=E,18nm,0.3s,baz=43,slow=5.2,SNR=190								
JNU					LR	LR	11 10 06.5		
	comp=E,1µm,20.6s,baz=71,slow=39								
	comp=E,33nm,0.3s								
JNU	**Nakatsue**	**7.01**	**260**		Pn	**Pn**	**11 07 14.6**	**-0.6**	
JNU	**Nakatsue**	**7.01**	**260**		P	**Pn**	**11 07 15.8**	**+0.6**	
JCJ	**Chichijima**	**7.98**	**160**		LR	LR	11 10 05.9		
	comp=E,356nm,21.8s,baz=103,slow=35								
JCJ	**Chichijima**	**7.98**	**160**		Pn	**Pn**	**11 07 27.3**	**-1.1**	
JTU	**Tsushima**	**8.01**	**272**		P	**Pn**	**11 07 28.5**	**-0.3**	
ERM	**Erimo**	**8.01**	**22**		Pn	**Pn**	**11 07 28.7**	**-0.1**	
ERM	**Erimo**	**8.01**	**22**		P	**Pn**	**11 07 29.9**	**+1.0**	
ERM	**Erimo**	**8.01**	**22**		P	**Pn**	**11 07 28.7**	**-0.1**	
KSRS	**Korea Array**	**9.48**	**290**		Pn	**Pn**	**11 07 50.5**	**+1.6**	
	comp=E,0.5nm,0.3s,baz=111,slow=15,SNR=12								
KSRS					Sn	**Sn**	**11 09 37.6**	**+2.1**	
	comp=E,0.3nm,0.3s,baz=102,slow=23,SNR=4.7								
	comp=E,6.5nm,0.9s								
KSAR	**Wonju Array Be**	**9.51**	**290**		Pn	**Pn**	**11 07 49.0**	**-0.4**	
KSAR	**Wonju Array Be**	**9.51**	**290**		P	**Pn**	**11 07 49.0**	**-0.4**	
KS19	**Wonju Array Si**	**9.53**	**291**		Pn	**Pn**	**11 07 49.5**	**-0.3**	
TJN	**Taejon**	**9.73**	**284**		Pn	**Pn**	**11 07 52.7**	**+0.3**	
TJN	**Taejon**	**9.73**	**284**		P	**Pn**	**11 07 52.7**	**+0.3**	
ASAJ	**Asahikawa**	**9.83**	**15**		Pn	**Pn**	**11 07 52.5**	**-1.4**	
	comp=E,1.2nm,0.3s,baz=204,slow=11,SNR=11								
ASAJ					LR	LR	11 12 19.6		
	comp=E,389nm,18.3s,baz=354,slow=42								
	comp=E,10nm,0.9s								
ASAJ	**Asahikawa**	**9.83**	**15**		P	**Pn**	**11 07 52.6**	**-1.2**	
JKA	**Kamikawa-asahi**	**9.83**	**15**		Pn	**Pn**	**11 07 52.6**	**-1.2**	
VLA	**Vladivostok**	**10.16**	**329**	*i*	P	**Pn**	**11 07 58.1**	**-0.1**	
USRK	**Ussuriysk Ar.**	**11.01**	**332**		Pn	**Pn**	**11 08 07.9**	**-2.0**	
	comp=E,1.1nm,0.6s,baz=147,slow=11,SNR=4.9								
JOW	**Kunigami**	**12.14**	**233**		Pn	**Pn**	**11 08 26.1**	**+0.7**	
	comp=E,3.4nm,0.3s,baz=61,slow=13,SNR=6.6								
JOW					LR	LR	11 12 59.1		
	comp=E,386nm,20.4s,baz=86,slow=37								
	comp=E,12nm,0.4s								
JOW	**Kunigami**	**12.14**	**233**		Pn	**Pn**	**11 08 22.9**	**-2.5**	
BNX	**BinXian**	**14.22**	**325**	⇓	P	**P**	**11 08 58.1**	**-3.1**	
BNX					pmax	pmax			
	comp=Z,15nm,1.1s								
DL2	**Dalian**	**14.64**	**292**		P	**Pn**	**11 08 58.3**	**-1.2**	
DL2				*e*	S	**Sn**	**11 11 39.8**	**-2.0**	
DL2					pmax	pmax			
	comp=Z,54nm,1.5s								
DL2					pmax	pmax			
	comp=Z,730nm,4.2s								
DL2					LR	LR			
	comp=N,680nm,13.3s								
DL2					LR	LR			
	comp=E,990nm,14.8s								
DL2					LR	LR			
	comp=Z,1µm,12.2s								
SSE	**Sheshan**	**15.47**	**262**		P	**Pn**	**11 09 09.4**	**-1.2**	
SSE					S	**Sn**	**11 12 02.8**	**+0.7**	
SSE					pmax	pmax			
	comp=Z,11nm,0.5s								
SSE					pmax	pmax			
	comp=Z,120nm,4.1s								
SSE					LR	LR			
	comp=N,94nm,11.0s								
SSE					LR	LR			
	comp=E,330nm,10.2s								
NJ2	**Nanjing**	**17.12**	**267**	*e*	P	**P**	**11 09 32.3**	**-1.2**	
NJ2					pmax	pmax			
	comp=Z,8.0nm,0.5s								
TIA	**Tai'an**	**17.98**	**281**		P	**P**	**11 09 47.0**	**+4.0**	
TIA					S	Sn	11 12 42.8	-20	
TIA					SS	**SnSn**	**11 13 14.3**	**-2.3**	
TIA					pmax	pmax			
	comp=Z,23nm,1.4s								
TIA					LR	LR			
	comp=N,610nm,15.7s								
TIA					LR	LR			
	comp=E,1µm,17.3s								
TIA					LR	LR			
	comp=Z,1µm,18.6s								
TPUB	**Ta-pu**	**19.69**	**240**		P	**P**	**11 09 59.0**	**-2.8**	
TPUB					IAmb	IAmb	11 10 09.2		
	comp=Z,32nm,0.9s								
HNS	**HongShan**	**19.91**	**285**	⇓	P	**Pn**	**11 10 07.8**	**+2.0**	
HNS					S	**Sn**	**11 13 54.0**	**+4.3**	
HNS					pmax	pmax			
	comp=Z,16nm,1.2s								
HNS					LR	LR			
	comp=N,980nm,14.4s								
HNS					LR	LR			
	comp=E,470nm,14.4s								
HNS					LR	LR			
	comp=Z,670nm,15.3s								
QZH	**Quanzhou**	**20.23**	**247**		P	Pn	11 10 13.6	+4.0	
QZH					S	Sn	11 14 03.8	+6.4	
QZH					LR	LR			
	comp=N,320nm,15.1s								
QZH					LR	LR			
	comp=E,550nm,14.4s								
QZH					LR	LR			
	comp=Z,430nm,14.1s								
HILR	**Hailar Array B**	**20.60**	**322**		P	**P**	**11 10 11.9**	**+0.2**	
	comp=Z,0.5nm,0.3s,baz=108,slow=9.3,SNR=2.0								
	comp=Z,0.5nm,0.3s								
ZEA	**Zeya**	**20.84**	**340**	*e*	P	**P**	**11 10 14.3**	**+0.2**	
ZEA					pmax	pmax			
	comp=Z,10.0nm,1.1s								
ZEA					MLR	MLR			
	comp=Z,300nm,10.0s								
WHN	**Wuhan**	**21.24**	**266**	⇑	P	**P**	**11 10 23.5**	**+4.9**	
WHN					sP	sP	11 10 33.6	+11	
WHN					pmax	pmax			
	comp=Z,100nm,1.0s								
WHN					LR	LR			
	comp=N,2µm,14.3s								
WHN					LR	LR			
	comp=E,2µm,13.5s								
LYN	**LuoYang**	**21.91**	**277**		P	**P**	**11 10 28.8**	**+3.0**	
LYN					pP	sP	11 10 32.5	+2.9	
LYN					pmax	pmax			
	comp=Z,19nm,0.6s								
LYN					LR	LR			
	comp=N,2µm,17.9s								
LYN					LR	LR			
	comp=E,1µm,17.6s								
LYN					LR	LR			
	comp=Z,2µm,14.3s								
HHC	**Hu-ho-hao-te**	**22.59**	**294**	*e*	P	**P**	**11 10 34.5**	**+1.4**	
HHC					pmax	pmax			
	comp=Z,11nm,0.6s								
HHC					pmax	pmax			
	comp=Z,120nm,4.4s								
HHC					LR	LR			
	comp=N,760nm,16.9s								
HHC					LR	LR			
	comp=E,320nm,17.5s								
HHC					LR	LR			
	comp=Z,330nm,18.6s								
PEA0B	**Petropavlovsk-**	**22.69**	**30**	*i*	P	**P**	**11 10 32.2**	**-1.7**	
PETK	**Petropavlovsk-**	**22.69**	**30**		P	**P**	**11 10 35.3**	**+1.3**	
	comp=Z,13nm,0.9s,baz=228,slow=5.9,SNR=7.6								
PETK					LR	LR	11 19 40.0		
	comp=Z,171nm,19.4s,baz=213,slow=37								
	comp=Z,13nm,0.9s								
PETK	**Petropavlovsk-**	**22.69**	**30**		P	**P**	**11 10 33.6**	**-0.3**	
PETK	**Petropavlovsk-**	**22.69**	**30**		P	**P**	**11 10 33.6**	**-0.3**	
PET	**Petropavlovsk**	**23.02**	**31**		P	**P**	**11 10 36.1**	**-1.3**	
PET	**Petropavlovsk**	**23.02**	**31**	*e*	P	**P**	**11 10 36.4**	**-1.0**	
PET				*e*	S	**S**	**11 14 46.6**	**-1.4**	
PET					MLR	MLR			
	comp=Z,300nm,18.0s								
XAN	**Xi'an**	**24.89**	**277**	⇑	P	**P**	**11 11 00.6**	**+5.1**	
XAN					pP	sP	11 11 06.9	+7.5	
XAN					S	S	11 15 34.8	+16	
XAN					pmax	pmax			
	comp=Z,12nm,1.0s								
XAN					pmax	pmax			
	comp=Z,76nm,4.8s								
XAN					LR	LR			
	comp=N,2µm,16.5s								
XAN					LR	LR			
	comp=E,850nm,17.2s								
XAN					LR	LR			
	comp=Z,1µm,15.1s								
MA2	**Magadan**	**26.09**	**14**		LR	LR	11 21 59.8		
	comp=Z,127nm,19.1s,baz=204,slow=38								
MA2	**Magadan**	**26.09**	**14**		P	**P**	**11 11 06.2**	**+0.2**	
MA2	**Magadan**	**26.09**	**14**	*i*	P	**P**	**11 11 05.0**	**-1.1**	
MA2					pmax	pmax			
	comp=Z,141nm,2.0s								
ULN	**Ulaanbaatar**	**27.26**	**309**	*i*	P	**P**	**11 11 18.6**	**+1.7**	
ULN					pmax	pmax			
	comp=Z,13nm,3.1s								
SONM	**Songino Array**	**27.68**	**308**		P	**P**	**11 11 22.8**	**+2.2**	
	comp=Z,1.0nm,0.8s,baz=126,slow=11,SNR=6.8								
SONM					LR	LR	11 22 37.5		
	comp=Z,292nm,18.4s,baz=80,slow=37								
	comp=Z,1.0nm,0.8s								
YAK	**Yakutsk**	**28.05**	**351**		LR	LR	11 22 34.0		
	comp=Z,180nm,18.8s,baz=146,slow=36								
YAK	**Yakutsk**	**28.05**	**351**	*e*	P	**P**	**11 11 23.0**	**-0.6**	
YAK				*e*			11 12 11.1		
YAK				*e*			11 14 35.2		
YAK				*e*	S	**S**	**11 16 08.8**	**+0.8**	
YAK				*e*	SS	**SnSn**	**11 17 24.2**	**+1.6**	
YAK				*e*			11 22 09.9		
YAK					pmax	pmax			
	comp=Z,33nm,1.1s								
YAK					pmax	pmax			
	comp=N,26nm,1.5s								
YAK					pmax	pmax			
	comp=E,5.0nm,1.6s								
YAK					pmax	pmax			
	comp=Z,547nm,3.5s								
YAK					pmax	pmax			
	comp=N,472nm,4.0s								
YAK					smax	smax			
	comp=N,748nm,3.7s								
H11N2	**WAKE ISLAND Hy**	**28.72**	**114**		T	T	11 41 18.8		
	baz=307,slow=75,SNR=1403								
H11N1	**WAKE ISLAND Hy**	**28.73**	**114**		T	T	11 41 18.4		
	baz=307,slow=75,SNR=980								
H11N3	**WAKE ISLAND Hy**	**28.74**	**114**		T	T	11 41 20.2		
	baz=307,slow=75,SNR=442								
H11S3	**WAKE ISLAND Hy**	**29.32**	**116**		T	T	11 42 03.7		
	baz=310,slow=76,SNR=102								
H11S1	**WAKE ISLAND Hy**	**29.32**	**116**		T	T	11 42 07.2		
	baz=310,slow=76,SNR=138								
H11S2	**WAKE ISLAND Hy**	**29.33**	**116**		T	T	11 42 04.9		
	baz=310,slow=76,SNR=98								
SEY	**Seymchan**	**29.50**	**12**		LR	LR	11 23 29.4		
	comp=N,146nm,19.5s,baz=176,slow=37								
SEY	**Seymchan**	**29.50**	**12**	*i*	P	**P**	**11 11 35.1**	**-1.4**	
SEY					pmax	pmax			
	comp=Z,19nm,1.4s								
QIZ	**Qiongzhong**	**30.25**	**247**		P	**P**	**11 11 44.1**	**+0.5**	
QIZ					S	**S**	**11 16 44.0**	**+0.6**	
QIZ					LR	LR			
	comp=N,390nm,16.2s								
QIZ					LR	LR			
	comp=E,370nm,17.2s								
QIZ					LR	LR			
	comp=Z,340nm,20.8s								
SHEM	**Shemya Is, Ala**	**30.68**	**43**		LR	LR	11 21 11.0		
	comp=Z,132nm,19.9s,baz=289,slow=31								
GTA	**Gaotai**	**31.55**	**290**	*e*	P	**P**	**11 11 58.1**	**+3.0**	
GTA					pP	sP	11 12 02.8	+3.8	
GTA					pmax	pmax			
	comp=Z,4.0nm,1.2s								
GTA					LR	LR			
	comp=N,880nm,20.7s								
GTA					LR	LR			
	comp=E,220nm,17.4s								
GTA					LR	LR			
	comp=Z,510nm,16.4s								
PZH	**PanZhiHua**	**33.03**	**266**		P	**P**	**11 12 09.8**	**+1.6**	
BILL	**Bilibino**	**36.84**	**17**	*i*	P	**P**	**11 12 39.2**	**-1.2**	
BILL					pmax	pmax			
	comp=Z,36nm,3.3s								
TIXI	**Tiksi**	**37.46**	**355**		LR	LR	11 29 35.6		
	comp=Z,269nm,19.3s,baz=218,slow=39								
TIXI	**Tiksi**	**37.46**	**355**			**P**	**11 12 45.3**	**-0.3**	
TIXI					IAmb	IAmb	11 12 45.8		
	comp=Z,19nm,1.6s								
TIXI	**Tiksi**	**37.46**	**355**	*i*	P	**P**	**11 12 44.2**	**-1.4**	
TIXI					pmax	pmax			
	comp=Z,24nm,2.8s								
CMAR	**Chiang Mai Arr**	**39.09**	**256**		P	**P**	**11 12 59.8**	**-0.1**	
	comp=Z,0.5nm,0.3s,baz=45,slow=8.5,SNR=4.5								
	comp=Z,0.5nm,0.3s								
WMQ	**Urumqi**	**40.30**	**299**	*e*	P	**P**	**11 13 11.5**	**+1.7**	
WMQ					LR	LR			
	comp=N,610nm,17.3s								
WMQ					LR	LR			
	comp=E,360nm,19.1s								
WMQ					LR	LR			
	comp=Z,140nm,20.3s								
DGZ	**Jazzator, Alta**	**40.33**	**308**	*i*	P	**P**	**11 13 11.2**	**+1.1**	
DGZ					pmax	pmax			
	comp=Z,8.0nm,1.1s								
SPIA	**Saint Paul Isl**	**40.59**	**40**		P	**P**	**11 13 11.2**	**-0.8**	
	baz=258								
NIKH	**Nikolski High**	**40.76**	**47**		P	**P**	**11 13 12.3**	**-1.1**	
	baz=265								
GAMB	**Gambell**	**41.72**	**30**		P	**P**	**11 13 20.8**	**-0.3**	
	baz=250								
ZAA0	**Zalesovo Array**	**42.19**	**314**			**P**	**11 13 25.2**	**+0.1**	
ZALV	**Zalesovo Beam**	**42.19**	**314**		P	**P**	**11 13 25.6**	**+0.4**	
	comp=Z,1.6nm,0.5s,baz=97,slow=7.6,SNR=9.8								
	comp=Z,1.6nm,0.5s								
ZALV	**Zalesovo Beam**	**42.19**	**314**			**P**	**11 13 24.9**	**-0.3**	
UNV	**Unalaska Valle**	**42.24**	**46**		P	**P**	**11 13 24.8**	**-0.7**	
	baz=266								
M11K	**Mekoryuk**	**43.29**	**36**		P	**P**	**11 13 33.7**	**-0.3**	
M11K	**Mekoryuk**	**43.29**	**36**		P	**P**	**11 13 33.4**	**-0.6**	
	baz=259								
MK31	**Makanchi Array**	**43.84**	**304**	*i*	P	**P**	**11 13 37.8**	**-0.9**	
MKAR	**Makanchi Array**	**43.84**	**304**		P	**P**	**11 13 39.3**	**+0.5**	
	comp=Z,3.7nm,0.8s,baz=92,slow=9.7,SNR=24								
	comp=Z,3.7nm,0.8s								
MKAR	**Makanchi Array**	**43.84**	**304**		P	**P**	**11 13 38.3**	**-0.4**	
TNA	**Tin City**	**43.85**	**29**		P	**P**	**11 13 37.7**	**-0.6**	
	baz=252								
MAKZ	**Makanchi**	**44.06**	**304**			**P**	**11 13 40.8**	**+0.4**	
MAKZ	**Makanchi**	**44.06**	**304**		P	**P**	**11 13 40.8**	**+0.4**	
MAKZ					pmax	pmax			
	comp=Z,5.0nm,0.8s								
FALS	**False Pass**	**44.11**	**44**		P	**P**	**11 13 40.3**	**-0.3**	
	baz=267								
K13K	**Kusilvak Mount**	**44.33**	**34**		P	**P**	**11 13 42.0**	**-0.3**	
	baz=259								
F14K	**Arctic Creek**	**44.45**	**29**		P	**P**	**11 13 43.1**	**-0.2**	
	baz=254								
ANM	**Nome**	**44.60**	**30**		P	**P**	**11 13 44.1**	**-0.4**	
	baz=255								
M13K	**Dall Lake**	**44.69**	**37**		P	**P**	**11 13 45.1**	**-0.1**	
	baz=262								
S12K	**Black Hills**	**44.92**	**43**		P	**P**	**11 13 46.8**	**-0.3**	
	baz=267								
J14K	**Nanvaranak Lak**	**44.99**	**33**		P	**P**	**11 13 47.5**	**0.0**	
	baz=259								
L14K	**Kuka Creek**	**45.15**	**35**		P	**P**	**11 13 48.8**	**-0.1**	
	baz=261								
F15K	**North Star Dit**	**45.19**	**29**		P	**P**	**11 13 48.9**	**-0.3**	
	baz=255								
G15K	**Niukluk**	**45.26**	**30**		P	**P**	**11 13 49.4**	**-0.3**	
	baz=256								
M14K	**Bethel**	**45.42**	**36**		P	**P**	**11 13 50.7**	**-0.3**	
	baz=262								
N14K	**Kuskokwak Cree**	**45.45**	**37**		P	**P**	**11 13 51.3**	**0.0**	
	baz=264								
O14K	**Tigyukauivet M**	**45.60**	**38**		P	**P**	**11 13 51.5**	**-0.9**	
	baz=265								
C16K	**Lisburne Hills**	**45.66**	**25**		P	**P**	**11 13 52.5**	**-0.3**	
	baz=252								
L15K	**Ungalak Mounta**	**45.77**	**35**		P	**P**	**11 13 52.8**	**-1.0**	
	baz=262								
SDPT	**Sand Point**	**45.81**	**44**		P	**P**	**11 13 53.6**	**-0.6**	
	baz=269								
K15K	**Wolf Creek Mou**	**45.84**	**34**		P	**P**	**11 13 54.1**	**-0.2**	
	baz=261								
H16K	**Elim**	**45.94**	**31**		P	**P**	**11 13 54.8**	**-0.3**	
	baz=258								
KURK	**Kurchatov**	**45.97**	**310**			**P**	**11 13 56.4**	**+0.9**	
KURK					IAmb	IAmb	11 14 02.5		
	comp=Z,9.0nm,0.7s								
KURK	**Kurchatov**	**45.97**	**310**	*i*	P	**P**	**11 13 56.3**	**+0.8**	
KURK					pmax	pmax			
	comp=Z,17nm,1.1s								
KURBB	**Kurchatov Arra**	**46.03**	**310**		P	**P**	**11 13 57.5**	**+1.5**	
	comp=Z,6.7nm,0.8s,baz=87,slow=8.2,SNR=23								
KURBB					LR	LR	11 33 44.9		
	comp=Z,227nm,18.3s,baz=174,slow=37								
	comp=Z,6.7nm,0.8s								
M15K	**Kasigluk River**	**46.03**	**36**		P	**P**	**11 13 55.8**	**0.0**	
	baz=264								
G16K	**Koyuk River**	**46.04**	**30**		P	**P**	**11 13 55.3**	**-0.6**	
	baz=258								
N15K	**Kwethluk River**	**46.27**	**37**		P	**P**	**11 13 56.7**	**-1.1**	
	baz=265								
D17K	**Noatak River**	**46.31**	**27**		P	**P**	**11 13 57.9**	**0.0**	
	baz=255								
CHNA	**Chernabura Isl**	**46.32**	**45**		P	**P**	**11 13 58.3**	**+0.1**	
	baz=270								
O15K	**Ungalikthiuk R**	**46.33**	**39**		P	**P**	**11 13 58.2**	**-0.1**	
	baz=266								
J16K	**Anvik River**	**46.41**	**33**		P	**P**	**11 13 59.0**	**+0.2**	
	baz=261								
I17K	**Unalakleet**	**46.46**	**32**		P	**P**	**11 13 58.8**	**-0.4**	
	baz=261								
RDOG	**Red Dog Mine**	**46.47**	**26**		P	**P**	**11 13 59.3**	**0.0**	
	baz=255								
C17K	**DeLong Mountai**	**46.49**	**25**		P	**P**	**11 13 59.1**	**-0.3**	
	baz=254								
E17K	**Hotham Inlet**	**46.63**	**28**		P	**P**	**11 14 00.1**	**-0.4**	
	baz=257								
F17K	**Baldwin Pennin**	**46.71**	**28**		P	**P**	**11 14 01.2**	**+0.1**	
	baz=258								
L16K	**Owhat River**	**46.73**	**35**		P	**P**	**11 14 00.9**	**-0.4**	
	baz=264								
G17K	**Kiwalik Mounta**	**46.76**	**30**		P	**P**	**11 14 01.2**	**-0.3**	
	baz=259								
M16K	**Timber Creek**	**46.91**	**36**		P	**P**	**11 14 02.3**	**-0.4**	
	baz=265								
N16K	**Nishlik Lake**	**46.96**	**37**		P	**P**	**11 14 03.3**	**+0.1**	
	baz=266								
H17K	**Granite Mounta**	**46.97**	**31**		P	**P**	**11 14 03.5**	**+0.3**	
	baz=260								
J17K	**VABM Dome**	**47.11**	**33**		P	**P**	**11 14 04.2**	**0.0**	
	baz=263								
E18K	**Tukpahlearik C**	**47.17**	**27**		P	**P**	**11 14 04.7**	**0.0**	
	baz=258								
B18K	**Kokolik River**	**47.21**	**24**		P	**P**	**11 14 04.8**	**-0.2**	
	baz=255								
C18K	**Utukok River**	**47.24**	**26**			**P**	**11 14 05.4**	**+0.1**	
C18K	**Utukok River**	**47.24**	**26**		P	**P**	**11 14 05.0**	**-0.3**	
	baz=256								
O16K	**Kokwok River B**	**47.24**	**38**		P	**P**	**11 14 04.9**	**-0.4**	
	baz=267								
P16K	**Nushagak River**	**47.27**	**39**		P	**P**	**11 14 05.5**	**-0.1**	
	baz=268								
L17K	**Donlin**	**47.32**	**35**		P	**P**	**11 14 06.0**	**0.0**	
	baz=265								
F18K	**Selawik**	**47.37**	**28**		P	**P**	**11 14 06.6**	**+0.4**	
	baz=259								
K17K	**Iditarod**	**47.38**	**34**		P	**P**	**11 14 06.2**	**-0.2**	
	baz=264								
R16K	**Pilot Point**	**47.45**	**41**		P	**P**	**11 14 06.9**	**-0.1**	
	baz=269								
G18K	**Tagagawik**	**47.65**	**29**			**P**	**11 14 09.2**	**+0.7**	
G18K					IAmb	IAmb	11 14 10.5		
	comp=Z,11nm,1.1s								
G18K	**Tagagawik**	**47.65**	**29**		P	**P**	**11 14 08.4**	**0.0**	
	baz=261								
H18K	**Honhosa River**	**47.65**	**30**		P	**P**	**11 14 08.6**	**+0.1**	
	baz=262								
M17K	**Holitna River**	**47.67**	**36**		P	**P**	**11 14 08.7**	**0.0**	
	baz=266								
A19K	**Wainwright**	**47.68**	**23**		P	**P**	**11 14 08.6**	**0.0**	
	baz=255								
N17K	**Nushagak Hills**	**47.74**	**37**		P	**P**	**11 14 09.5**	**+0.2**	
	baz=267								
O17K	**Koliganek Bris**	**47.75**	**38**		P	**P**	**11 14 09.2**	**-0.1**	
	baz=268								
C19K	**Lookout Ridge**	**47.91**	**25**		P	**P**	**11 14 11.8**	**+1.2**	
C19K	**Lookout Ridge**	**47.91**	**25**		P	**P**	**11 14 10.7**	**+0.2**	
	baz=257,SNR=6.0								
Q16K	**King Salmon**	**47.95**	**39**		P	**P**	**11 14 10.8**	**-0.1**	
	baz=269								
P17K	**Kvichak River**	**48.07**	**39**		P	**P**	**11 14 11.7**	**-0.1**	
	baz=269								
HNR	**Honiara**	**48.08**	**152**		LR	LR	11 32 22.7		
	comp=Z,96nm,21.6s,baz=328,slow=34								
L18K	**Granite Mounta**	**48.08**	**35**		P	**P**	**11 14 11.6**	**-0.3**	
	baz=266								
R17L	**Mt. Peulik Vol**	**48.10**	**41**		P	**P**	**11 14 11.8**	**-0.3**	
	baz=270								
F19K	**Shaleruckik Mo**	**48.15**	**28**		P	**P**	**11 14 12.4**	**+0.1**	
	baz=261								
J18K	**Innoko River**	**48.17**	**33**		P	**P**	**11 14 12.8**	**+0.2**	
	baz=265								
GCSA	**Galena City Sc**	**48.23**	**31**		P	**P**	**11 14 12.8**	**-0.1**	
	baz=264								
D19K	**Kuna River**	**48.31**	**26**			**P**	**11 14 15.0**	**+1.4**	
D19K					IAmb	IAmb	11 14 15.7		
	comp=Z,12nm,0.9s								
D19K	**Kuna River**	**48.31**	**26**		P	**P**	**11 14 13.3**	**-0.3**	
	baz=259								
G19K	**Purcell Mounta**	**48.32**	**29**		P	**P**	**11 14 13.8**	**+0.2**	
	baz=262								
Q17K	**Contact Creek**	**48.35**	**40**		P	**P**	**11 14 13.9**	**-0.3**	
	baz=270								
N18K	**Kilae Creek**	**48.39**	**37**		P	**P**	**11 14 14.8**	**+0.5**	
	baz=268								
M18K	**Stony River**	**48.45**	**36**		P	**P**	**11 14 14.9**	**+0.2**	
	baz=267								
E19K	**Redstone River**	**48.45**	**27**		P	**P**	**11 14 15.1**	**+0.4**	
	baz=261								
H19K	**Roundabout Mou**	**48.50**	**30**		P	**P**	**11 14 15.5**	**+0.6**	
	baz=263								
CHIR	**Chirikof Islan**	**48.56**	**43**		P	**P**	**11 14 15.7**	**0.0**	
	baz=273								
P18K	**Big Mountain,**	**48.69**	**38**		P	**P**	**11 14 16.7**	**0.0**	
	baz=270								

baz=265
E21K Killik River 49.81 26 P P 11 14 25.5 +0.4
baz=263,SNR=6.7
A22K Sinclair Lake 49.84 23 P P 11 14 25.5 +0.3
baz=260
F21K Alatna River 49.87 28 P P 11 14 25.4 -0.1
baz=265
AAK Ala-Archa 50.00 300 *i* P P 11 14 27.9 +0.8
AAK pmax pmax
comp=Z,4.0nm,0.8s
H21K Melozitna Rive 50.02 30 P P 11 14 26.9 +0.2
baz=267
KDAK Kodiak Island 50.12 40 LR LR 11 35 34.5
comp=Z,84nm,21.9s,baz=238,slow=36
KDAK Kodiak Island 50.12 40 P P 11 14 27.5 -0.1
baz=273
CHUM Lake Minchumin 50.15 32 P P 11 14 27.9 +0.2
baz=268
Q20K Shuyak Island 50.18 39 P P 11 14 28.0 +0.1
baz=273
SPCR Spurr Chakacha 50.19 36 P P 11 14 28.3 +0.2
baz=271
PPLA Purkeypile 50.19 34 P P 11 14 27.9 -0.3
baz=270
B22K Teshekpuk Lake 50.25 24 P P 11 14 28.7 +0.3
baz=262
D22K Ayikyak River 50.33 26 P P 11 14 29.3 +0.2
baz=264
I21K Tanana 50.34 31 P P 11 14 29.0 -0.1
baz=268
F22K John River 50.39 28 P P 11 14 29.2 -0.3
baz=266
SKT Skwentna 50.50 35 P P 11 14 30.3 -0.1
baz=271
HOM Homer 50.52 38 P P 11 14 30.3 -0.2
baz=273
E22K Anaktuvuk Pass 50.58 27 P P 11 14 31.0 +0.1
baz=266,SNR=7.3
H22K Ishtalitna Cre 50.62 30 P P 11 14 31.4 +0.2
baz=268
BPAW Bear Paw Mtn. 50.74 32 P P 11 14 32.5 +0.3
baz=270
BVAR Borovoye Array 50.82 313 P P 11 14 33.9 +1.0
comp=Z,0.6nm,0.5s,baz=81,slow=8.9,SNR=1.8
BVAR LR LR 11 35 32.5
comp=Z,111nm,21.6s,baz=81,slow=35
comp=Z,0.6nm,0.5s
L22K Petersville 50.85 34 P P 11 14 33.0 0.0
BORK Borovoye 50.86 313 *i* P P 11 14 33.7 +0.5
BORK pmax pmax
comp=Z,4.0nm,0.8s
MLY Manley 50.86 31 P 11 14 33.4 +0.3
MLY IAmb IAmb 11 14 41.4
comp=Z,10nm,1.0s
MLY Manley 50.86 31 P P 11 14 32.8 -0.3
baz=269,SNR=6.9
SUA Susitna One 50.89 36 P P 11 14 33.0 -0.4
baz=272
BRSE Bradley Lake S 50.97 38 P P 11 14 33.4 -0.6
baz=273
TRF Thorofare Moun 51.05 33 P P 11 14 34.3 -0.4
baz=271
D23K Nanushuk River 51.06 26 P P 11 14 33.9 -0.5
baz=266
CUT Chulitna 51.08 34 P P 11 14 34.6 -0.1
baz=272
COLD Coldfoot 51.14 28 P P 11 14 35.1 0.0
baz=268
C23K Itkillik River 51.15 25 P P 11 14 35.2 +0.1
baz=265
M22K Willow 51.17 35 P P 11 14 35.5 +0.1
baz=272
G23K Bananza Creek 51.19 29 P P 11 14 35.3 -0.3
baz=268
H23K Yukon River 51.37 30 P P 11 14 37.1 +0.2
baz=270
RC01 Rabbit Creek A 51.39 36 P P 11 14 37.1 0.0
baz=273
E23K Chandalar 51.40 27 P P 11 14 37.3 +0.1
baz=268
BWN Browne 51.41 32 P P 11 14 38.3 +1.2
O22K Cooper Landing 51.43 37 P P 11 14 37.6 +0.3
baz=274
TOLK Toolik Lake Re 51.44 26 P P 11 14 37.4 -0.1
baz=267
I23K Minto, Yukon-K 51.44 31 P P 11 14 37.4 0.0
baz=270
NEA2 Nenana 51.57 32 P P 11 14 38.7 +0.3
baz=271,SNR=9.5
SEW Seward 51.59 37 P P 11 14 38.4 -0.2
baz=274
MCK McKinley 51.65 33 P 11 14 38.7 -0.3
MCK IAmb IAmb 11 14 48.0
comp=Z,7.7nm,0.8s
MCK McKinley 51.65 33 P P 11 14 38.7 -0.3
MCK pmax pmax
comp=Z,8.0nm,0.8s
MCK McKinley 51.65 33 P P 11 14 37.9 -1.1
baz=272
PMR Palmer 51.65 35 P P 11 14 38.5 -0.5
baz=273
D24K Happy Valley 51.74 26 P P 11 14 38.9 -0.7
baz=268,SNR=6.3
C24K Franklin Bluff 51.81 25 P P 11 14 40.4 +0.4
baz=267
E24K Your Creek 51.82 27 P P 11 14 40.4 +0.1
baz=269
WAT1 Susitna Watana 51.86 34 P P 11 14 40.0 -0.6
baz=273
KNK Knik Glacier 51.99 36 P P 11 14 41.0 -0.6
baz=274
SML Sawmill 52.02 35 P P 11 14 41.8 -0.1
baz=274
F24K Squaw Lake 52.04 28 P P 11 14 41.9 0.0
baz=270
H24K Noodor Dome 52.05 30 P P 11 14 43.0 +0.9
H24K Noodor Dome 52.05 30 P P 11 14 41.8 -0.2
baz=271
PWL Port Wells 52.09 36 P P 11 14 42.6 +0.3
baz=274
COLA College 52.09 31 *i* P P 11 14 41.1 -1.1
COLA pmax pmax
comp=Z,8.0nm,0.9s
COLA College 52.09 31 P P 11 14 42.2 0.0
baz=272
G24K Hadweenzic Riv 52.21 29 P P 11 14 43.0 -0.1
baz=271
WAT6 Susitna Watana 52.25 34 P P 11 14 43.6 -0.1
baz=274
POKR Poker Plat Res 52.26 31 P P 11 14 42.8 -0.8
baz=272
M23K Glacier View 52.31 35 P P 11 14 43.2 -0.7
baz=274
DHY Denali Highway 52.38 33 P P 11 14 43.7 -1.0
baz=274
SCM Sheep Creek Mo 52.49 35 P P 11 14 44.8 -0.6
baz=275
HDA Harding Lake 52.50 32 P P 11 14 45.1 -0.2
baz=273,SNR=6.4
ILAR Eielson Array 52.51 31 P P 11 14 45.2 -0.1
comp=Z,2.9nm,0.9s,baz=282,slow=6.8,SNR=18
ILAR LR LR 11 37 26.6
comp=Z,43nm,21.8s,baz=244,slow=36
comp=Z,2.9nm,0.9s
ILAR Eielson Array 52.51 31 P P 11 14 45.0 -0.3
D25K Kavik River 52.61 26 P P 11 14 45.7 -0.4
baz=270,SNR=6.1
P23K Montague Islan 52.63 37 P P 11 14 45.8 -0.5
baz=276
GLI Glacier Island 52.69 36 P P 11 14 46.4 -0.4
baz=276
KKAR Karatay Array 52.72 301 P P 11 14 46.2 -1.1
KKAR Karatay Array 52.72 301 P P 11 14 46.2 -1.1
G25K Bearman Lake 52.75 29 P P 11 14 47.1 0.0
baz=272
H25L Birch Creek 52.88 29 P P 11 14 48.4 +0.3
baz=272
F25K Christian Rive 52.90 28 P P 11 14 50.1 +1.8
F25K Christian Rive 52.90 28 P P 11 14 48.4 +0.1
baz=272
E25K Arctic Village 52.92 27 P P 11 14 49.5 +1.1
E25K IAmb IAmb 11 14 57.1
comp=Z,10nm,1.2s
E25K Arctic Village 52.92 27 P P 11 14 48.8 +0.4
baz=271
M24K Tolsona, Glenn 53.01 35 P P 11 14 49.5 +0.3
baz=275
K24K Donnelly Dome 53.05 32 P P 11 14 49.8 +0.4
baz=274
C26K Camden Bay 53.12 25 P P 11 14 50.3 +0.5
baz=271
J25K Salcha River, 53.17 31 P P 11 14 51.0 +0.7
baz=274
KLU Klutina 53.19 35 P P 11 14 51.0 +0.4
baz=276
PAX Paxson 53.26 33 P P 11 14 51.1 +0.1
baz=275
EYAK Cordova Ski Ar 53.38 37 P P 11 14 51.8 0.0
baz=277
HARP HAARP 53.46 34 P P 11 14 53.3 +0.9
baz=276
RIDG Independent Ri 53.47 32 P P 11 14 53.1 +0.6
baz=275
F26K Sheenjek River 53.47 28 P P 11 14 52.8 +0.3
baz=273,SNR=6.4
C27K Jago River 53.55 25 P P 11 14 53.2 +0.2
C27K IAmb IAmb 11 14 55.8
comp=Z,25nm,1.7s
C27K Jago River 53.55 25 P P 11 14 53.4 +0.4
baz=272,SNR=5.4
G26K Porcupine Rive 53.66 28 P P 11 14 54.0 +0.3
baz=274
N25K Chitina, Valde 53.81 35 P P 11 14 55.3 +0.2
baz=277
SCRK Sand Creek 53.82 32 P P 11 14 55.4 +0.2
baz=276
BMRM Bremner River 53.89 36 P P 11 14 55.8 +0.1
baz=278
J26L Joseph Creek 53.95 31 P P 11 14 56.3 +0.2
baz=276
I26K Coal Creek Min 54.05 30 P P 11 14 57.0 +0.4
baz=276
L26K Log Cabin Wild 54.22 33 P P 11 14 58.0 +0.1
baz=277,SNR=6.2
WB0 Warramunga Arr 54.30 185 P P 11 14 58.9 0.0
WB0 IAmb IAmb 11 15 02.6
comp=Z,8.1nm,0.8s
E27K Coleen River 54.40 27 P P 11 14 59.8 +0.6
baz=275
M26K Nabesna, AK 54.46 34 P P 11 15 00.2 +0.5
baz=278
WRA Warramunga Arr 54.48 186 P P 11 15 00.2 0.0
comp=Z,3.8nm,0.7s,baz=2.8,slow=7.4,SNR=2.4
comp=Z,3.8nm,0.7s
WRA Warramunga Arr 54.48 186 P P 11 14 59.4 -0.9
G27K Doyon Strip 54.51 29 P P 11 15 00.7 +0.7
baz=276
D27M Malcolm River 54.54 26 P P 11 15 00.8 +0.5
baz=275
MCARA McCarthy VSAT 54.59 35 P P 11 15 01.1 +0.4
baz=278
H27K Steamboat Moun 54.62 29 P P 11 15 01.2 +0.3
baz=276
CRQE Cirque 54.65 36 P P 11 15 01.5 +0.2
baz=279
K27K Chicken 54.65 32 P P 11 15 01.3 +0.2
baz=277
I27K Kandik River 54.65 30 P P 11 15 01.9 +0.7
baz=277
BGLC Bering Glacier 54.66 37 P P 11 15 01.7 +0.6
baz=279
L27K Beaver Creek, 54.90 33 P P 11 15 03.5 +0.6
baz=278
M27K Edge Creek, AK 54.98 34 P P 11 15 04.2 +0.6
baz=279
CHGR Chuyangaron 55.01 296 P P 11 15 03.6 -0.6
CHGR Chuyangaron 55.01 296 P P 11 15 03.6 -0.6
CHGR pmax pmax
comp=Z,16nm,0.8s
F28M Old Crow 55.11 27 P P 11 15 05.0 +0.7
baz=277
E28M Babbage River 55.12 26 P P 11 15 05.5 +1.1
baz=276
MESA MESA 55.30 37 P P 11 15 06.2 +0.1
baz=280
D28M Stokes Point 55.32 25 P P 11 15 07.2 +1.4
baz=277
I28M Miner Creek 55.37 30 P P 11 15 07.8 +1.4
baz=278
BVCY Beaver Creek 55.44 34 P P 11 15 08.1 +1.3
baz=280
CTG Chitna Glacier 55.46 36 P P 11 15 07.0 -0.1
baz=280
YUK3 Moose Creek 55.73 35 P P 11 15 09.1 -0.1
baz=280
E29M Blow River 55.74 26 P P 11 15 09.2 +0.4
baz=278
DAWY Dawson 55.82 32 P P 11 15 09.8 +0.2
baz=280
H29M Whitestone 55.89 29 P P 11 15 10.3 +0.3
baz=279
G29M Pine Creek 55.91 28 P P 11 15 10.6 +0.4
baz=279
O28M Mount Upton 56.05 36 P P 11 15 11.9 +0.3
baz=281
PINM Pinnacle 56.16 37 P P 11 15 11.5 -0.5
baz=282
EPYK Eagle Plains 56.52 29 P P 11 15 15.2 +0.7
baz=280,SNR=5.9
M29M Somme Creek 56.53 34 P P 11 15 15.4 +0.6
M29M IAmb IAmb 11 15 23.2
comp=Z,6.9nm,0.8s
M29M Somme Creek 56.53 34 P P 11 15 15.5 +0.8
baz=282
L29M L29M 56.55 33 P P 11 15 15.1 +0.3
baz=281
G30M tAoh Zraii Nji 56.60 28 P P 11 15 15.5 +0.4
baz=280
F30M Barrier River 56.65 27 P P 11 15 15.9 +0.5
baz=280
PNL Peninsula 56.67 37 P P 11 15 16.2 +0.5
baz=283
K29M Barlow Dome 56.67 32 P P 11 15 16.1 +0.3
baz=281
YUK4 Talbot Arm 56.67 35 P P 11 15 16.5 +0.6
baz=282
I30M Mount Dempster 56.88 30 P P 11 15 18.0 +0.8
baz=282
YUK6 Outpost Mounta 56.89 35 P P 11 15 17.8 +0.3
baz=283
O29M Mount Kennedy 56.93 36 P P 11 15 18.4 +0.7
baz=283
ARTI Arti 57.02 319 *c i* P P 11 15 21.8 +3.6
ARTI 11 17 25.5
ARTI S S 11 23 20.3 +7.7
ARTI SS SS 11 27 07.7 +7.1
ARTI pmax pmax
comp=Z,5.0nm,1.0s
J30M Hart River 57.03 31 P P 11 15 18.6 +0.3
baz=282
M30M Minto, Yukon 57.26 33 P P 11 15 20.1 +0.3
baz=283
HYT Haines Junctio 57.33 35 P P 11 15 20.7 +0.3
baz=283
INK Inuvik 57.35 26 P P 11 15 21.2 +0.9
baz=282
G31M Satah River 57.37 28 P P 11 15 20.9 +0.5
baz=282
N30M Aishikik Lake 57.38 35 P P 11 15 21.1 +0.4
baz=283
MAYO Mayo, Yukon 57.43 32 P P 11 15 21.3 +0.3
baz=283
F31M Tsiigehtchic 57.46 27 P P 11 15 21.9 +0.8
baz=282
P29M Windy Craggy 57.50 37 P P 11 15 22.3 +0.7
baz=284
H31M Peel River 57.58 29 P P 11 15 22.5 +0.5
baz=283
P30M Million Dollar 57.76 36 P P 11 15 23.6 +0.2
baz=284
N31M Braeburn, Yuko 57.98 34 P P 11 15 25.1 +0.2
baz=284
O30N Mendenhall 58.01 35 P P 11 15 26.1 +0.9
baz=284
AB31 Akbulak array 58.05 311 P P 11 15 25.3 -0.3
ABKAR Akbulak array 58.05 311 P P 11 15 24.7 -0.8
ASAR Alice Springs 58.20 186 P P 11 15 27.7 +0.9
comp=Z,4.4nm,0.8s,baz=8.9,slow=8.2,SNR=2.1
comp=Z,2.4nm,0.8s
PLBC Pleasant Camp 58.22 37 P P 11 15 26.6 +0.1
baz=285
M31M Drury Creek, Y 58.44 33 P P 11 15 28.3 +0.2
baz=285
WHY Whitehorse 58.62 35 P P 11 15 29.7 +0.3
baz=286
S31K Pelican 58.69 38 P P 11 15 30.7 +0.9
baz=286
SKAG Skagway 58.73 37 P P 11 15 31.1 +1.0
baz=286
A36M Sachs Harbour 59.16 21 P P 11 15 33.1 +0.2
baz=287
N32M Quiet Lake 59.32 34 P P 11 15 34.5 +0.2
baz=287
SIT Sitka 59.42 39 P P 11 15 35.0 +0.1
baz=287
R32K Eaglecrest 59.47 38 P P 11 15 35.2 -0.1
baz=287
S32K Killisnoo 59.68 39 P P 11 15 36.8 +0.1
baz=288
P33M Teslin, Yukon 59.73 35 P P 11 15 37.8 +0.6
baz=287
C36M Paulatuk 60.37 24 P P 11 15 41.7 +0.4
baz=290
Q32M Nakina River 60.38 37 P P 11 15 41.9 +0.1
baz=289
R33M Jennings River 60.87 36 P P 11 15 45.6 +0.6
baz=289
U33K Whale Pass 60.87 40 P P 11 15 45.2 +0.3
baz=289
KIRV Kirov 61.02 323 LR LR 11 43 24.4
comp=Z,87nm,18.4s,baz=68,slow=37
CRAG Craig 61.09 41 P P 11 15 46.6 +0.3
baz=290
WRAK Wrangell Islan 61.18 39 P P 11 15 47.7 +0.7
baz=290
S34M Telegraph Cree 61.29 37 P P 11 15 47.6 -0.1
baz=290
DLBC Dease Lake 61.66 37 P P 11 15 50.3 0.0
baz=290
WTLY Watson Lake, Y 61.66 35 P P 11 15 50.1 -0.1
baz=291
V35K Ketchikan 61.94 40 P P 11 15 52.6 +0.5
baz=291
T35M Bob Quinn 62.06 38 P P 11 15 53.0 0.0
baz=291
KBS Kingsbay 62.68 350 *i* P P 11 16 02.8 +6.0
WRGLY Wrigley 62.85 30 P P 11 15 58.4 +0.3
baz=293
LIRD Liard River Hi 63.19 35 P P 11 15 60.0 -0.5
baz=293
TOAD Toad River Com 63.82 35 P P 11 16 05.5 +0.9
baz=294
KLMR Klimovskoe 64.77 328 *e* P P 11 16 08.6 -2.2
KLMR pmax pmax
comp=Z,17nm,1.6s
BBB Bella Bella 65.08 43 LR LR 11 42 01.2
comp=Z,35nm,20.7s,baz=206,slow=34
RES Resolute Bay 65.37 14 LR LR 11 46 48.0
comp=Z,44nm,19.2s,baz=38,slow=38
ARCES ARCESS Array B 65.56 339 P P 11 16 15.6 -0.2
comp=Z,3.8nm,0.9s,baz=52,slow=6.0,SNR=3.8
ARCES LR LR 11 50 09.9
comp=Z,131nm,18.1s,baz=62,slow=41
comp=Z,3.8nm,0.9s
STKA Stephens Creek 66.21 178 P P 11 16 19.6 -0.7
comp=Z,4.3nm,1.1s,baz=326,slow=6.1,SNR=4.1
comp=Z,4.3nm,1.1s
YKA Yellowknife Ar 66.80 29 P P 11 16 23.7 -0.2
comp=Z,1.3nm,0.8s,baz=297,slow=7.3,SNR=4.7
comp=Z,1.3nm,0.8s
DAG Danmarks Havn 67.98 355 *i* P P 11 16 29.1 -2.0
DAG IAmb IAmb 11 16 37.6
comp=Z,4.9nm,0.9s
NEEM North Greenlan 67.99 2 *i* P P 11 16 27.7 -3.8
NEEM IAmb IAmb 11 16 39.1
comp=Z,21nm,1.1s
MAK Makhachkala 68.44 308 *c i* P P 11 16 30.0 -4.6
MAK *e* S S 11 25 30.0 -6.3
MAK pmax pmax
comp=Z,275nm,1.4s
MAK MLR MLR
comp=Z,257nm,20.0s
OBN Obninsk 68.88 323 *e* P P 11 16 37.9 +0.9
OBN pmax pmax
comp=Z,6.0nm,0.9s
FINES FINESS Array B 70.04 332 P P 11 16 43.6 -0.5
comp=Z,1.9nm,0.4s,baz=58,slow=5.9,SNR=23
FINES LR LR 11 48 26.5
comp=Z,134nm,18.8s,baz=47,slow=37
comp=Z,1.9nm,0.4s
FINES FINESS Array B 70.04 332 *i* P P 11 16 43.4 -0.7
FINES pmax pmax
comp=Z,2.0nm,0.4s
KBZ Khabaz 71.02 310 LR LR 11 48 52.2
comp=Z,91nm,19.6s,baz=62,slow=37
KIV Kislovodsk 71.04 311 *e* P P 11 16 49.5 -1.2
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,72nm,18.0s
C09A Chrisman Ranch 72.75 44 P P 11 17 01.1 +0.3
C09A IAmb IAmb 11 17 13.8
comp=Z,13nm,1.3s
SUMG Summit 73.05 359 *i* P P 11 17 01.9 -0.7
SUMG IAmb IAmb 11 17 08.7
comp=Z,8.5nm,0.9s
L04D Klamath Falls 73.30 50 P P 11 17 04.9 +0.6
L04D IAmb IAmb 11 17 07.2
comp=Z,13nm,1.0s
M03C McCloud 73.91 51 P P 11 17 08.2 +0.3
M03C IAmb IAmb 11 17 10.3
comp=Z,16nm,1.1s
K05A Summer Lake 73.91 49 P P 11 17 09.2 +1.2
K05A IAmb IAmb 11 17 10.8
comp=Z,13nm,1.0s
AKASG Malin Array Be 75.02 322 P P 11 17 14.0 0.0
comp=Z,1.1nm,0.6s,baz=45,slow=6.8,SNR=4.6
AKASG LR LR 11 52 19.6
comp=Z,112nm,19.0s,baz=53,slow=37
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 75.02 322 *i* P P 11 17 13.5 -0.5
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 75.02 322 *i* P P 11 17 13.4 -0.6
AKBB pmax pmax
comp=Z,15nm,2.5s
WVOR Wild Horse Val 75.47 48 P P 11 17 16.7 -0.2
WVOR Wild Horse Val 75.47 48 P P 11 17 16.7 -0.2
WVOR pmax pmax
comp=Z,6.0nm,1.0s
HFS Hagfors 75.47 335 P P 11 17 15.9 -0.6
comp=Z,1.3nm,0.6s,baz=51,slow=5.9,SNR=9.2
HFS LR LR 11 53 14.0
comp=Z,116nm,18.5s,baz=54,slow=38
comp=Z,1.3nm,0.6s
NB2 NORSAR Subarra 75.64 337 P P 11 17 16.6 -0.9
comp=Z,1.9nm,0.7s,baz=43,slow=5.9
NOA NORSAR Array B 75.64 337 P P 11 17 17.0 -0.5
comp=Z,1.2nm,0.7s,baz=41,slow=5.7,SNR=6.2
NOA LR LR 11 53 23.9
comp=Z,71nm,18.2s,baz=260,slow=38
comp=Z,1.2nm,0.7s
NOA NORSAR Array B 75.64 337 P P 11 17 17.0 -0.5
NVAR Mina Array Bea 77.93 52 P P 11 17 31.8 +0.8
comp=Z,4.7nm,0.7s,baz=286,slow=5.4,SNR=40
NVAR LR LR 11 44 25.9
comp=Z,66nm,20.5s,baz=283,slow=30
comp=Z,4.7nm,0.7s
SFJD Kangerlussuaq 78.40 4 LR LR 11 54 02.0
comp=Z,63nm,18.1s,baz=341,slow=37
BRTR Keskin Array B 79.01 311 P P 11 17 37.2 +0.3
comp=Z,0.2nm,0.3s,baz=55,slow=5.8,SNR=8.5
comp=Z,0.2nm,0.3s
FRB Frobisher Bay 79.51 12 LR LR 11 55 23.8
comp=Z,68nm,19.5s,baz=318,slow=38
PDAR Pinedale Array 80.68 44 P P 11 17 45.9 -0.1
comp=Z,1.8nm,0.9s,baz=290,slow=3.7,SNR=10
comp=Z,1.8nm,0.9s
PFO Pinyon Flats O 81.93 55 LR LR 11 46 19.4
comp=Z,94nm,21.6s,baz=282,slow=30
LCMT Little Creek M 82.00 50 P P 11 17 53.7 +0.7
LCMT IAmb IAmb 11 17 55.1
comp=Z,7.5nm,1.0s
MTPU Mount Pierson 82.04 49 P P 11 17 54.6 +1.1
MTPU IAmb IAmb 11 17 56.0
comp=Z,8.6nm,1.1s
VRAC Vranov 82.08 326 LR LR 11 58 07.8
comp=Z,67nm,20.3s,baz=36,slow=38
CLL Collm 82.20 329 *i* P P 11 17 53.6 0.0
CLL Collm 82.20 329 *i* P P 11 17 53.6 0.0
CLL AMS AMS 11 59 00.0
comp=Z,100nm,18.9s
IRM Iron Mountain 82.49 54 P P 11 17 55.8 +0.4
IRM IAmb IAmb 11 17 57.2

	comp=Z,8.0nm,1.3s							
GERES	**GERESS Array B**	**83.72**	**327**	P		**P**	**11 18 01.0**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=22,slow=4.8,SNR=5.7							
GERES				LR		LR	11 58 49.2	
	comp=Z,73nm,19.1s,baz=52,slow=38							
	comp=Z,0.9nm,0.8s							
GERES	**GERESS Array B**	**83.72**	**327**	P		**P**	**11 18 01.0**	**-0.6**
PV17	**East Wray Mesa**	**83.87**	**47**	P		**P**	**11 18 03.4**	**+0.6**
EKA	**Eskdalemuir Ar**	**84.73**	**339**	P		**P**	**11 18 05.9**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=38,slow=3.9,SNR=1.8							
	comp=Z,0.7nm,0.7s							
DAVOX	**Davos/Dischmat**	**86.97**	**328**	LR		LR	12 02 17.1	
	comp=Z,92nm,18.2s,baz=46,slow=39							
TXAR	**Lajitas Array**	**93.07**	**51**	P		**P**	**11 18 47.0**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=298,slow=2.7,SNR=13							
	comp=Z,2.0nm,0.9s							
M65A	**Busby, Falmout**	**99.39**	**22**	P		**Pdif**	**11 19 14.1**	**-1.0**
	baz=336							
TKL	**Tuckaleechee C**	**99.41**	**34**	LR		LR	12 07 49.6	
	comp=Z,28nm,18.9s,baz=340,slow=38							
QSPA	**South Pole Qui**	**124.39**	**180**	PKP		**PKiKP**	**11 24 31.7**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=281,slow=1.5,SNR=5.6							
H03N2	**Juan Fernandez**	**148.58**	**99**	T		T	14 11 10.4	
	baz=287,slow=75,SNR=62							
H03N3	**Juan Fernandez**	**148.59**	**99**	T		T	14 11 08.5	
	baz=287,slow=75,SNR=94							
H03N1	**Juan Fernandez**	**148.59**	**99**	T		T	14 11 08.6	
	baz=287,slow=75,SNR=80							
LPAZ	**La Paz**	**149.51**	**60**	PKPbc		**PKPbc**	**11 25 22.8**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=304,slow=4.4,SNR=4.6							

NEIC ***17*** *11:08:03.0±1.5, 1°.50N±0°.08×126°.43E±0°.06, h35km±2km, mb4.7/43, Error ellipse: s-maj=14.3km s-min=9.0km az=207.0*

DJA ***17*** *11:08:03.7±0.2,2°.N±2°×12°.6E±°, h44km±4km, M4.6/31, mb4.7/31, mB5.1/12, MLv4.8/21, Mw(mB)4.4/12, MwMwp4.6/6, Mwp5.0/6*

GCMT ***17*** *11:08:04.0±0.3, 1°.56N±0°.02×126°.34E±0°.03, h29km, MW4.9/69, Moment Tensor Solution. s40,c48; s69,c94; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.39±.15; Mθθ-0.80±.09; Mϕϕ-1.59±.12; Mrθ 0.14±.17; Mrϕ-1.38±.07; Mθϕ-0.98±.20; Best double couple: M=2.70700×10¹⁶ NP1:ϕs=53.00000°,δ39.00000°,λ115.00000°. NP2: ϕs=202.00000°,δ55.00000°,λ71.00000°. Principal axes: T 2.6840, Plg72.0000°, Azm61.0000°; N 0.0410, Plg16.0000°, Azm213.0000°; P -2.7290, Plg8.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***17*** *11:08:04.7±2.6, 1°.43N×126°.31E, h56km±25km, mb4.1/26, mbtmp4.4/29, ML4.3/3, MS3.7/17 Error ellipse: s-maj=18.5km s-min=10.1km az=79.0*

ISC 17 11:08:02.9±0.3, 1°.51N±0°.04×126°.44E±0°.05, h35km, n166, σ1.9s33/161, mb4.7/55, MS3.6/16, 1D, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**128**		**Pn**	**11 08 21.9**	**-1.0**
TNTI	**Ternate**	**1.18**	**128**	P	**Pn**	**11 08 23.1**	**+0.2**
TNTI	**Ternate**	**1.18**	**128**	P	**Pn**	**11 08 22.2**	**-0.7**
SGSI	**Sangihe**	**2.35**	**337**	P	**Pn**	**11 08 39.4**	**+0.4**
KMSI	**Cibinong**	**2.62**	**249**	P	**Pn**	**11 08 43.0**	**+0.2**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**11 08 55.8**	**+0.1**
SANI	**Sanana**	**3.56**	**187**	S	**Sn**	**11 09 37.2**	**+0.6**
SANI	**Sanana**	**3.56**	**187**	P	**Pn**	**11 08 55.3**	**-0.4**
LUWI	**Luwuk**	**4.46**	**235**		**Pn**	**11 09 08.9**	**+0.9**
LUWI	**Luwuk**	**4.46**	**235**	P	**Pn**	**11 09 10.4**	**+2.4**
LUWI	**Luwuk**	**4.46**	**235**	P	**Pn**	**11 09 09.1**	**+1.1**
MRSI	**Marisa**	**4.61**	**257**	P	**Pn**	**11 09 11.4**	**+1.3**
NLAI	**Namlea**	**4.76**	**172**	P	**Pn**	**11 09 12.7**	**+0.5**
APSI	**Ampana**	**5.36**	**243**	P	**Pn**	**11 09 21.8**	**+1.4**
SWI	**Sorong**	**5.37**	**116**	P	**Pn**	**11 09 22.4**	**+1.9**
MSAI	**Masohi**	**5.43**	**153**	P	**Pn**	**11 09 22.4**	**+1.1**
	0.7nm132nm,0.9s						
AAI	**Ambon**	**5.45**	**161**	P	**Pn**	**11 09 22.6**	**+0.9**
	0.5nm2μm150nm,1.1s						
DAV	**Davao City (W)**	**5.59**	**351**	LR	LR	11 11 58.6	
	comp=Z,922nm,20.8s,baz=156,slow=41						
TOLI2	**Tolitoli**	**5.67**	**266**		**Pn**	**11 09 24.4**	**-0.2**
TOLI2	**Tolitoli**	**5.67**	**266**	P	**Pn**	**11 09 24.4**	**-0.2**
KDI	**Kendari**	**6.63**	**215**	P	**Pn**	**11 09 39.1**	**+1.2**
MPSI	**Mapaga**	**6.64**	**260**	P	**Pn**	**11 09 38.8**	**+0.8**
	0.3nm3μm65nm,0.8s						
FAKI	**Fak Fak**	**7.29**	**127**		**Pn**	**11 09 48.9**	**+2.0**
FAKI	**Fak Fak**	**7.29**	**127**	P	**Pn**	**11 09 48.9**	**+2.0**
FAKI	**Fak Fak**	**7.29**	**127**	P	**Pn**	**11 09 48.2**	**+1.3**
	0.2nm714nm56nm,0.8s						
BBSI	**Bau Bau**	**7.95**	**209**	P	**Pn**	**11 09 59.3**	**+3.3**
TTSI	**Tana Toraja**	**8.01**	**236**	P	**Pn**	**11 09 57.6**	**+0.7**
	2μm81nm,0.8s						
SPSI	**Sidrap Palu**	**8.60**	**231**	P	**Pn**	**11 10 06.4**	**+1.5**
BNSI	**Bone**	**8.63**	**227**	P	**Pn**	**11 10 07.3**	**+2.0**
	63nm,0.8s						
MYLDM	**Lahad Datu**	**8.72**	**295**		**Pn**	**11 10 08.2**	**+1.6**
MYLDM	**Lahad Datu**	**8.72**	**295**	P	**Pn**	**11 10 09.0**	**+2.4**
BKSI	**Bulukumba**	**9.26**	**223**	P	**Pn**	**11 10 16.5**	**+2.5**
	527nm33nm,0.6s						
KAPI	**Kappang**	**9.30**	**226**	P	**Pn**	**11 10 15.8**	**+1.2**
	4.5nm,0.3s,baz=299,slow=3.1,SNR=9.1						
KAPI				S	**Sn**	**11 11 57.8**	**-0.3**
	4.0nm,0.4s,baz=202,slow=23,SNR=1.3						
	16nm,0.4s						
KAPI	**Kappang**	**9.30**	**226**		**Pn**	**11 10 16.3**	**+1.7**
KAPI	**Kappang**	**9.30**	**226**	P	**Pn**	**11 10 16.1**	**+1.5**
KAPI	**Kappang**	**9.30**	**226**	S	**Sn**	**11 11 59.3**	**+1.2**
BSSI	**Bau Bau, Buton**	**9.64**	**218**	P	**Pn**	**11 10 20.1**	**+0.8**
EDFI	**Ende, Flores**	**11.23**	**205**	P	**Pn**	**11 10 44.2**	**+3.1**
	391nm12nm,0.7s						
SOEI	**Soe**	**11.39**	**191**	P	**Pn**	**11 10 43.3**	**-0.1**
BATI	**Baumata**	**11.96**	**193**	P	**Pn**	**11 10 52.3**	**+1.3**
	1.5nm,0.3s,baz=355,slow=12,SNR=1.4						
BATI				LR	LR	11 16 41.6	
	comp=Z,358nm,21.4s,baz=1.5,slow=44						
	8.2nm,0.3s						
PLAI	**Plampang**	**13.41**	**220**	P	**Pn**	**11 11 11.4**	**+0.6**
SBUM	**Sibu**	**14.24**	**274**	Pn	**Pn**	**11 11 21.8**	**-0.4**
SBUM	**Sibu**	**14.24**	**274**	P	**Pn**	**11 11 23.8**	**+1.7**
DRS	**Darwin Rock St**	**14.54**	**162**	P	**Pn**	**11 11 26.3**	**+0.1**
MTN	**Manton Dam**	**15.00**	**162**		**Pn**	**11 11 31.3**	**-1.1**
JAGI	**Jajag, Banyuwa**	**15.76**	**231**	P	**P**	**11 11 45.5**	**-0.4**
	1μm52nm,1.2s						
KNRA	**Kununurra**	**17.23**	**172**	P	**Pn**	**11 12 00.2**	**-0.7**
KNRA				IAmb	IAmb	11 12 05.3	
	comp=Z,59nm,1.1s						
PCJI	**Pacitan**	**18.01**	**237**	P	**P**	**11 12 12.0**	**+1.2**
TPI	**Tanjungpandan**	**19.25**	**257**	P	**P**	**11 12 25.7**	**+1.2**
	comp=Z,21nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**11 12 25.9**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=16,slow=8.3,SNR=17						
	comp=Z,4.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**11 12 25.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.50**	**182**	P	**P**	**11 12 25.9**	**-1.2**
KPJI	**Karang Pucung**	**19.55**	**243**	P	**P**	**11 12 27.9**	**+0.2**
	comp=Z,49nm,0.8s						
DLV	**Lat**	**20.60**	**301**	P	**P**	**11 12 38.7**	**-0.7**
DLV				IAmb	IAmb	11 12 49.1	
	comp=Z,26nm,0.8s						
BBJI	**Bungbulang**	**20.75**	**244**	P	**P**	**11 12 41.9**	**+1.0**
YULB	**Yu-li**	**22.32**	**347**	P	**P**	**11 12 56.4**	**-1.2**
YULB	**Yu-li**	**22.32**	**347**	P	**P**	**11 12 57.8**	**+0.2**
TPUB	**Ta-pu**	**22.39**	**346**	P	**P**	**11 12 56.4**	**-1.9**
WB0	**Warramunga Arr**	**22.54**	**160**	P	**P**	**11 12 58.8**	**-1.2**
MYKOM	**Kota Tinggi**	**22.58**	**271**	P	**P**	**11 12 59.5**	**-1.0**
MYKOM				IAmb	IAmb	11 13 07.1	
	comp=Z,32nm,1.0s						
COEN	**Coen**	**22.61**	**133**	P	**P**	**11 13 01.2**	**+0.4**
COEN	**Coen**	**22.61**	**133**	P	**P**	**11 13 01.6**	**+0.8**
WRAB	**Tennant Creek**	**22.68**	**160**	P	**P**	**11 13 00.0**	**-1.4**
WRA	**Warramunga Arr**	**22.68**	**160**	P	**P**	**11 13 00.0**	**-1.5**
	comp=Z,37nm,0.8s,baz=338,slow=11,SNR=144						
WRA				PcP	**PcP**	**11 16 54.0**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=312,slow=2.9,SNR=2.9						
	comp=Z,37nm,0.8s						
WRA	**Warramunga Arr**	**22.68**	**160**	P	**P**	**11 12 60.0**	**-1.5**
SSLB	**Suanglung**	**22.78**	**347**	P	**P**	**11 13 02.6**	**+0.1**
KASI	**Kota Agung**	**23.00**	**252**	P	**P**	**11 13 02.4**	**-2.5**
	comp=Z,37nm,1.1s						
NACB	**Ninganchiao**	**23.02**	**349**	P	**P**	**11 13 07.4**	**+2.5**
MDSI	**Maura Dua**	**23.02**	**255**	P	**P**	**11 13 05.1**	**0.0**
	comp=Z,15nm,0.8s						
PMG	**Port Moresby**	**23.32**	**118**	P	**P**	**11 13 08.2**	**+0.2**
	comp=Z,10nm,0.7s,baz=287,slow=9.1,SNR=4.3						
	comp=Z,10nm,0.7s						
PMG	**Port Moresby**	**23.32**	**118**	P	**P**	**11 13 07.3**	**-0.7**
PMG				IAmb	IAmb	11 13 09.2	
	comp=Z,38nm,1.4s						
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**11 13 08.1**	**-1.2**
MBWA				IAmb	IAmb	11 13 10.2	
	comp=Z,16nm,0.8s						
MBWA	**Marble Bar**	**23.46**	**196**	P	**P**	**11 13 09.4**	**0.0**
PSA00	**Pilbara Seismi**	**23.83**	**195**	P	**P**	**11 13 11.9**	**-1.0**
PSA00				IAmb	IAmb	11 13 14.2	
	comp=Z,21nm,0.8s						
PSA00	**Pilbara Seismi**	**23.83**	**195**	P	**P**	**11 13 11.5**	**-1.4**
PSA00				IAmb	IAmb	11 13 13.6	
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**23.83**	**195**	P	**P**	**11 13 13.8**	**+1.0**
QIS	**Mount Isa**	**25.44**	**150**	P	**P**	**11 13 28.8**	**+1.2**
IPM	**Ipoh**	**25.55**	**277**	P	**P**	**11 13 27.7**	**-1.0**
AS31	**Alice Springs**	**26.05**	**164**	P	**P**	**11 13 32.0**	**-1.1**
AS31				IAmb	IAmb	11 13 43.0	
	comp=Z,7.7nm,0.4s						
ASAR	**Alice Springs**	**26.05**	**164**	P	**P**	**11 13 32.4**	**-0.8**
	comp=Z,6.6nm,0.4s,baz=347,slow=12,SNR=97						
ASAR				PcP	**PcP**	**11 17 00.7**	**0.0**
	comp=Z,1.9nm,0.6s,baz=346,slow=2.0,SNR=6.7						
	comp=Z,6.6nm,0.4s						
ASAR	**Alice Springs**	**26.05**	**164**	P	**P**	**11 13 32.2**	**-1.0**
MTSU	**Mount Surprise**	**26.28**	**139**	P	**P**	**11 13 37.4**	**+2.1**
CTAO	**Charters Tower**	**28.95**	**139**	P	**P**	**11 13 58.9**	**-0.3**
JCJ	**Chichijima**	**29.59**	**29**	LR	LR	11 23 10.8	
	comp=Z,95nm,21.6s,baz=110,slow=30						
NJ2	**Nanjing**	**31.21**	**348**	*eP*	**P**	**11 14 21.0**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	**31.72**	**7**	P	**P**	**11 14 23.4**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=201,slow=8.6,SNR=6.3						
JNU				LR	LR	11 30 24.2	
	comp=Z,72nm,18.1s,baz=178,slow=42						
	comp=Z,3.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.80**	**304**	P	**P**	**11 14 23.3**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=122,slow=7.0,SNR=4.9						
	comp=Z,0.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.80**	**304**	P	**P**	**11 14 23.2**	**-1.2**
FORT	**Forrest**	**32.14**	**177**	P	**P**	**11 14 26.5**	**-0.7**
FORT				IAmb	IAmb	11 14 33.9	
	comp=Z,12nm,0.8s						
KMI	**Kunming**	**32.77**	**318**	P	**P**	**11 14 35.9**	**+2.8**
KMI				S	**S**	**11 19 46.3**	**-1.8**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI				LR	LR		
	comp=N,610nm,16.2s						
KMI				LR	LR		
	comp=E,280nm,19.8s						
KMI				LR	LR		
	comp=Z,370nm,21.0s						
JHJ	**Hachijo jima 2**	**33.85**	**20**	LR	LR	11 27 21.4	
	comp=Z,81nm,19.3s,baz=302,slow=34						
PZH	**PanZhiHua**	**34.36**	**318**	P	**P**	**11 14 49.5**	**+2.7**
BBOO	**Okidelebo**	**35.32**	**166**	P	**P**	**11 14 53.6**	**-1.2**
KSRS	**Korea Array**	**35.80**	**2**	P	**P**	**11 14 59.5**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=178,slow=10,SNR=4.7						
	comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**36.18**	**158**	P	**P**	**11 15 01.5**	**-0.7**
	comp=Z,8.4nm,0.7s,baz=334,slow=9.2,SNR=17						
	comp=Z,8.4nm,0.7s						
MAJO	**Matsushiro**	**36.52**	**16**	P	**P**	**11 15 05.3**	**+0.2**
MAJO				IAmb	IAmb	11 15 13.2	
	comp=Z,6.1nm,0.7s						
MJAR	**Matsushiro Arr**	**36.52**	**16**	P	**P**	**11 15 04.9**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=189,slow=7.3,SNR=4.9						
MJAR				LR	LR	11 28 24.5	
	comp=Z,109nm,21.4s,baz=232,slow=33						
	comp=Z,1.5nm,0.4s						
JMM	**Marumori**	**38.52**	**18**	P	**P**	**11 15 23.2**	**+1.3**
LZH	**Lanzhou**	**40.28**	**331**	*eP*	**P**	**11 15 39.4**	**+2.5**
LZH				pP	pP	11 15 46.5	-0.2
LZH				pmax	pmax		
	comp=Z,23nm,1.7s						
SHL	**Shillong**	**40.99**	**309**	P	**P**	**11 15 41.5**	**-1.5**
SHL				IAmb	IAmb	11 15 47.2	
	comp=Z,9.2nm,0.6s						
HHC	**Hu-ho-hao-te**	**41.41**	**343**	*eP*	**P**	**11 15 49.3**	**+3.2**
CN2	**Changchun**	**42.12**	**359**	*eP*	**P**	**11 15 55.8**	**+4.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TOO	**Toolangi**	**42.70**	**158**	P	**P**	**11 15 56.6**	**0.0**
USRK	**Ussuriysk Ar.**	**42.80**	**6**	P	**P**	**11 15 58.8**	**+1.6**
	comp=Z,5.1nm,0.7s,baz=171,slow=10,SNR=5.9						
	comp=Z,5.1nm,0.7s						
BNX	**BinXian**	**44.06**	**1**	⇓P	**P**	**11 16 07.5**	**+0.2**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ASAJ	**Asahikawa**	**44.79**	**17**	P	**P**	**11 16 14.4**	**+1.2**
	comp=Z,10nm,0.9s,baz=180,slow=4.0,SNR=6.4						
	comp=Z,10nm,0.9s						
JKA	**Kamikawa-asahi**	**44.79**	**17**	P	**P**	**11 16 13.7**	**+0.5**
GTA	**Gaotai**	**44.86**	**331**	*eP*	**P**	**11 16 13.8**	**-0.2**
GTA				pP	pP	11 16 17.5	-6.4
GTA				PcP	**PcP**	**11 17 57.8**	**+2.4**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
EVN	**Everest**	**46.10**	**308**	P	**P**	**11 16 23.9**	**-0.8**
EVN				IAmb	IAmb	11 16 31.6	
	comp=Z,18nm,1.4s						
HILR	**Hailar Array B**	**48.21**	**354**	P	**P**	**11 16 41.9**	**+1.9**
	comp=Z,3.0nm,0.5s,baz=170,slow=8.8,SNR=6.8						
	comp=Z,3.0nm,0.5s						
HEH	**HeiHe**	**48.57**	**1**	*eP*	**P**	**11 16 42.8**	**+0.1**
HEH				pmax	pmax		
	comp=Z,11nm,1.0s						
SONM	**Songino Array**	**49.30**	**342**	P	**P**	**11 16 48.9**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=157,slow=7.7,SNR=6.9						
SONM				LR	LR	11 41 09.1	
	comp=Z,61nm,18.5s,baz=164,slow=40						
	comp=Z,1.8nm,0.7s						
PEA0B	**Petropavlovsk-**	**57.59**	**22**	P	**P**	**11 17 48.9**	**-0.2**
PETK	**Petropavlovsk-**	**57.59**	**22**	P	**P**	**11 17 50.3**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=226,slow=7.6,SNR=11						
	comp=Z,1.8nm,0.5s						
PETK	**Petropavlovsk-**	**57.59**	**22**	P	**P**	**11 17 49.1**	**0.0**
TARG	**Taragay, Kyrgy**	**59.21**	**319**	P	**P**	**11 18 00.8**	**-0.4**
TARG				IAmb	IAmb	11 18 14.2	
	comp=Z,7.3nm,1.1s						
MKAR	**Makanchi Array**	**59.22**	**326**	P	**P**	**11 18 00.0**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=119,slow=7.3,SNR=53						
MKAR				LR	LR	11 44 05.9	
	comp=Z,152nm,21.5s,baz=93,slow=36						
	comp=Z,5.1nm,0.7s						
MKAR	**Makanchi Array**	**59.22**	**326**	P	**P**	**11 18 00.2**	**-0.4**
QRZ	**Quartz Range**	**59.40**	**141**	P	**P**	**11 18 02.0**	**+0.1**
MAKZ	**Makanchi**	**59.40**	**326**	P	**P**	**11 18 01.1**	**-0.8**
MAKZ				IAmb	IAmb	11 18 05.0	
	comp=Z,9.8nm,0.9s						
KSH	**Kashi**	**59.42**	**316**	P	**P**	**11 18 05.8**	**+3.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KDJ	**Kajisay**	**59.82**	**319**	P	**P**	**11 18 04.0**	**-1.1**
KDJ				IAmb	IAmb	11 18 09.0	
	comp=Z,6.9nm,0.8s						
YAK	**Yakutsk**	**60.42**	**2**	LR	LR	11 45 44.6	
	comp=Z,42nm,20.9s,baz=176,slow=37						
MA2	**Magadan**	**60.92**	**14**	LR	LR	11 50 02.2	
	comp=Z,18nm,18.0s,baz=220,slow=41						
ZALV	**Zalesovo Beam**	**62.43**	**334**	P	**P**	**11 18 20.5**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=130,slow=5.9,SNR=7.6						
	comp=Z,0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**62.43**	**334**	P	**P**	**11 18 22.4**	**+0.1**
KBL	**Kabul**	**62.65**	**308**	P	**P**	**11 18 24.5**	**+0.1**
KBL				IAmb	IAmb	11 18 25.9	
	comp=Z,7.2nm,0.9s						
GAR	**Garm**	**63.22**	**314**	P	**P**	**11 18 26.8**	**-1.2**
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**11 18 28.4**	**-0.7**
	comp=Z,9.0nm,0.7s,baz=128,slow=6.3,SNR=21						
	comp=Z,9.0nm,0.7s						
KURK	**Kurchatov**	**63.45**	**328**	P	**P**	**11 18 28.6**	**-0.6**
CHGR	**Chuyangaron**	**63.94**	**313**	P	**P**	**11 18 32.4**	**-0.4**
SEY	**Seymchan**	**64.25**	**13**	LR	LR	11 45 59.3	
	comp=Z,31nm,21.8s,baz=338,slow=35						
SHEM	**Shemya Is, Ala**	**64.52**	**30**	LR	LR	11 42 56.4	
	comp=Z,31nm,19.7s,baz=284,slow=32						
KK31	**Karatay Array**	**64.66**	**318**	P	**P**	**11 18 36.5**	**-0.9**
KK31				IAmb	IAmb	11 18 40.6	
	comp=Z,4.8nm,1.0s						
KKAR	**Karatay Array**	**64.66**	**318**	P	**P**	**11 18 36.5**	**-0.8**
BVAR	**Borovoye Array**	**69.02**	**328**	P	**P**	**11 19 03.5**	**-1.4**
	comp=Z,1.7nm,0.4s,baz=116,slow=6.6,SNR=5.9						
	comp=Z,1.7nm,0.4s						
TIXI	**Tiksi**	**70.05**	**1**	P	**P**	**11 19 10.5**	**-0.4**
TIXI				IAmb	IAmb	11 19 22.3	
	comp=Z,6.6nm,1.1s						
AB31	**Akbulak array**	**73.68**	**321**	P	**P**	**11 19 32.6**	**-0.5**
ABKAR	**Akbulak array**	**73.68**	**321**	P	**P**	**11 19 32.7**	**-0.3**
ARTI	**Arti**	**76.73**	**328**	P	**P**	**11 19 49.6**	**-0.9**
ARTI				IAmb	IAmb	11 19 53.1	
	comp=Z,13nm,0.7s						
RAYN	**Ar Rayn**	**81.09**	**293**	P	**P**	**11 20 14.2**	**-0.9**
RAYN				IAmb	IAmb	11 20 19.5	
	comp=Z,11nm,1.2s						
VNDA	**Vanda**	**81.27**	**173**	P	**P**	**11 20 14.3**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=322,slow=7.2,SNR=17						
VNDA				LR	LR	11 56 31.1	
	comp=Z,47nm,20.9s,baz=328,slow=36						
	comp=Z,1.7nm,0.7s						
VNDA	**Vanda**	**81.27**	**173**	P	**P**	**11 20 14.3**	**-0.6**
MAW	**Mawson**	**81.58**	**200**	P	**P**	**11 20 16.9**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=55,slow=6.2,SNR=8.4						
MAW				LR	LR	11 56 26.6	
	comp=Z,22nm,18.4s,baz=50,slow=36						
	comp=Z,1.8nm,0.6s						
SBA	**Scott Base**	**82.19**	**172**	P	**P**	**11 20 21.1**	**+1.3**
SBA				IAmb	IAmb	11 20 37.8	
	comp=Z,4.7nm,1.0s						
J19K	**Poorman**	**83.37**	**26**	P	**P**	**11 20 27.5**	**+1.3**
J19K				IAmb	IAmb	11 20 30.2	
	comp=Z,9.2nm,1.1s						
KDAK	**Kodiak Island**	**83.91**	**32**	LR	LR	11 52 29.6	
	comp=Z,90nm,20.1s,baz=229,slow=32						
KBZ	**Khabaz**	**84.29**	**314**	P	**P**	**11 20 31.1**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=103,slow=3.7,SNR=5.5						
	comp=Z,2.7nm,0.7s						
COLD	**Coldfoot**	**86.04**	**23**	P	**P**	**11 20 41.4**	**+1.8**
COLD				IAmb	IAmb	11 20 44.2	
	comp=Z,5.3nm,1.2s						
ILAR	**Eielson Array**	**87.22**	**25**	P	**P**	**11 20 45.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=243,slow=4.0,SNR=9.7						
	comp=Z,0.4nm,0.6s						
KMBO	**Kilima Mbogo**	**89.22**	**269**	LR	LR	11 57 04.8	
	comp=Z,70nm,21.6s,baz=98,slow=33						
BRTR	**Keskin Array B**	**91.20**	**310**	P	**P**	**11 21 03.5**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=103,slow=6.4,SNR=2.6						
	comp=Z,0.6nm,0.8s						
ARCES	**ARCESS Array B**	**92.42**	**340**	P	**P**	**11 21 08.7**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=71,slow=3.8,SNR=6.8						
	comp=Z,2.5nm,0.8s						
AK03	**Malin Array Si**	**93.42**	**321**	P	**P**	**11 21 14.2**	**-0.5**
AKASG	**Malin Array Be**	**93.42**	**321**	P	**P**	**11 21 12.8**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=76,slow=3.9,SNR=1.1						
	comp=Z,0.3nm,0.4s						
AK01	**Malin Array Si**	**93.43**	**321**	P	**P**	**11 21 14.1**	**-0.6**
AK11	**Malin Array Si**	**93.46**	**321**	P	**P**	**11 21 14.2**	**-0.6**
FINES	**FINESS Array B**	**93.64**	**332**	P	**P**	**11 21 13.4**	**-2.0**
	comp=Z,3.0nm,0.9s,baz=66,slow=6.2,SNR=4.3						
	comp=Z,3.0nm,0.9s						
RNPP9	**Sopachiv**	**95.41**	**322**	P	**P**	**11 21 22.3**	**-1.5**
RNPP1	**Kostyukhnivka**	**95.49**	**322**	P	**P**	**11 21 23.7**	**-0.5**
TESR	**Tescani**	**95.65**	**317**	P	**P**	**11 21 23.8**	**-1.2**
	comp=Z,6.9nm,1.0s						
ISR	**Istrita**	**95.92**	**315**	P	**P**	**11 21 24.6**	**-1.8**
MATP	**Matopo**	**97.96**	**250**	LR	LR	12 03 51.8	
	comp=Z,64nm,18.5s,baz=62,slow=34						
HFS	**Hagfors**	**99.83**	**332**	P	**Pdif**	**11 21 41.1**	**-2.4**
	comp=Z,0.8nm,0.6s,baz=55,slow=5.8,SNR=1.1						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**123.17**	**53**	PKP	**PKPdf**	**11 26 56.0**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=246,slow=1.5,SNR=6.9						
PLCA	**Paso Flores**	**138.03**	**161**	PKP	**PKPdf**	**11 27 24.6**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=236,slow=3.6,SNR=5.4						

SJA ***17*** *11:10:43.8±0.8, 26°.57S×71°.20W, h22km±3km, ML3.4, MW3.6*

GUC ***17*** *11:10:47.9±0.7, 26°.60S×70°.98W, h36km±3km, ML3.3*

ISC 17 11:10:44.1±2.0, 26°.58S±0°.02×71°.22W±0°.06, h10km±14km, n27, σ1.9s66/51, 1C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01

CO03					IAML		11 13 04.4		
	comp=Z,38nm,0.6s								
PB03	**IPOC Station P**	**4.71**	**17**	*eP*		**Pn**	**11 11 50.9**	**-4.4**
PB03				*eP*		**Pn**	**11 11 55.7**	**+0.3**
PB03				*eS*		**Sb**	**11 13 05.9**	**+2.3**
PB03					IAML		11 13 18.6		
	comp=Z,58nm,1.1s								
PB09	**IPOC Station P**	**5.09**	**21**	*eP*		**Pn**	**11 12 02.4**	**+1.7**
PB09				*eS*		**Sb**	**11 13 14.9**	**+0.1**
PB02	**IPOC Station P**	**5.38**	**13**	*eP*		**Pn**	**11 12 04.8**	**+0.3**
PB02				*eS*		**Sb**	**11 13 24.9**	**+2.1**

JMA 17 11:13:06.4±0.1, 34°.6N±0°.4×139°.1E±0°.3, h9km±2km, MV1.6/32, NEAR IZU-OSHIMA ISLAND, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIZS	**Izushimoda**	**0.17**	**301**	P		Pg	11 13 10.4	+0.3
JIZS				*eS*		Sg	11 13 12.9	+0.4
KTJ3	**Kamata3**	**0.30**	**2**	P		Pg	11 13 12.4	-0.1
JIM2	**Oshima 3**	**0.32**	**74**	*eP*		Pg	11 13 13.0	+0.2
JHTM	**Izuhatsuma**	**0.33**	**353**	P		Pg	11 13 13.1	+0.1
JOD2	**Odawara 2**	**0.63**	**2**	*eP*		Pg	11 13 18.6	-0.1
SHZ3	**Shizuoka 3**	**0.82**	**302**	*eS*		Sb	11 13 34.4	+0.3

*NEIC **17** 11:13:10.5±0.7, 36°.463N±0°.009×98°.16W±0°.01, h5km±1km, mb_Lg2.5/4, ML2.5/24, ML2.5/64, Error ellipse: s-maj=2.8km s-min=1.5km az=257.0*

NEIC 17 11:13:10.5±0.8, 36°.460N±0°.009×98°.158W±0°.006, h8km±4km, Error ellipse: s-maj=1.4km s-min=0.6km az=162.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CROK	**Carrier**	**0.15**	**72**			Pg	11 13 14.2	+0.5
CROK					IAML		11 13 16.8	
	comp=E,2μm,0.1s							
GC02	**Grant County #**	**0.46**	**31**			Pg	11 13 19.6	+0.2
GC02						Sg	11 13 26.1	+0.7
OK038	**West end E0370**	**0.47**	**272**			Pg	11 13 19.8	+0.2
OK038						Sg	11 13 26.6	+0.8
OK038					IAML		11 13 27.1	
	comp=E,451nm,0.3s							
OK038					IAML		11 13 33.3	
	comp=E,471nm,0.3s							
KAN14	**Manchester OK**	**0.52**	**17**			Pg	11 13 20.6	0.0
KAN14					IAML		11 13 28.3	
	comp=E,448nm,0.2s							
KAN14						Sg	11 13 28.0	+0.6
NOKA	**Waynoka**	**0.65**	**286**			Pg	11 13 22.9	-0.1
NOKA						Sg	11 13 31.9	+0.5
NOKA					IAML		11 13 32.5	
	comp=E,261nm,0.4s							
NOKA					IAML		11 13 36.4	
	comp=N,225nm,0.2s							
KAN01	**Argonia South**	**0.76**	**25**	Pg		Pg	11 13 25.1	-0.1
KAN01						Sg	11 13 35.4	+0.2
KAN01					IAML		11 13 35.5	
	comp=N,184nm,0.2s							
KAN13	**South Haven SW**	**0.78**	**44**			Pg	11 13 25.4	-0.1
KAN13						Sg	11 13 35.7	+0.1
KAN08	**Anthony NE Sta**	**0.78**	**11**	Pg		Pg	11 13 25.3	-0.3
KAN08						Sg	11 13 36.1	+0.4
KAN08					IAML		11 13 36.2	
	comp=N,248nm,0.3s							
BLOK	**Blackwell**	**0.82**	**68**			Pg	11 13 26.1	-0.1
BLOK						Sg	11 13 37.0	+0.2
BLOK					IAML		11 13 44.5	
	comp=E,184nm,0.2s							
OK029	**Liberty Lake**	**0.87**	**139**			Pg	11 13 27.0	-0.3
OK029						Sg	11 13 38.9	+0.2
OK029					IAML		11 13 41.5	
	comp=E,201nm,0.4s							
BCOK	**Bluff Creek, N**	**0.92**	**151**			Pg	11 13 27.8	-0.3
BCOK						Sg	11 13 40.3	+0.3
CSTR	**Hydro, Custer**	**0.92**	**208**	Pg		Pg	11 13 28.1	0.0
CSTR						Sb	11 13 40.9	-0.3
OK048	**Pawnee Station**	**0.98**	**92**			Pg	11 13 29.1	-0.3
ADOK	**Arcadia Dam**	**1.03**	**141**	Pg		Pg	11 13 29.8	-0.5
OK052	**Battle Ridge R**	**1.19**	**113**			Pg	11 13 32.6	-0.7
OKCFA	**Oklahoma City**	**1.19**	**151**			Pg	11 13 32.5	-0.8
OKCFA						Sg	11 13 48.8	0.0
OKCSW	**OKLAHOMA CITY**	**1.20**	**151**			Pb	11 13 32.6	-1.0
QUOK	**Quay**	**1.21**	**103**			Pb	11 13 33.1	-0.5
DEOK	**Depew**	**1.48**	**114**			Pn	11 13 37.3	-0.2
WMOK	**Wichita Mounta**	**1.79**	**197**	Pn		Pn	11 13 41.9	+0.1
X34A	**Smith Ranch, M**	**1.87**	**172**	Pn		Pn	11 13 44.0	+1.0
TUL3	**Leonard**	**1.99**	**105**	Pn		Pn	11 13 44.6	0.0
R32A	**Long Quarter,**	**2.01**	**347**	Pn		Pb	11 13 46.2	-1.2
RTBA	**Rita Blanca**	**3.69**	**271**			Pn	11 14 09.5	+1.5
JCT	**Junction City**	**6.12**	**193**	IAmb_Lg			11 16 31.4	
	comp=Z,5.9nm,0.8s							

*IDC **17** 11:28:49.2±1.8, 1°.57N×126°.54E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=173.2km s-min=22.2km az=66.0*

*DJA **17** 11:28:53.2±1.2, 1°.N±3°×12°.6E±°, h20km±11km, M3.6/9, mb3.7/1, MLv3.5/9*

ISC 17 11:28:54.8±1.0, 1°.31N±0°.08×126°.35E±0°.08, h35km, n7, σ1s13/9, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.15**	**118**	P		**Pn**	**11 29 14.1**	**-0.3**
TNTI				S		**Sn**	**11 29 29.2**	**+0.3**
SGSI	**Sangihe**	**2.50**	**341**	P		**Pn**	**11 29 32.6**	**-0.4**
SGSI				S		**Sn**	**11 30 03.8**	**+1.6**
LUWI	**Luwuk**	**4.28**	**237**	P		**Pn**	**11 29 57.2**	**-0.2**
WRA	**Warramunga Arr**	**22.53**	**160**	P		**P**	**11 33 52.6**	**+0.8**
	2.2nm,0.7s,baz=339,slow=11,SNR=25							
	2.2nm,0.7s							
ASAR	**Alice Springs**	**25.89**	**164**	P		**P**	**11 34 25.1**	**+1.4**
	0.3nm,0.6s,baz=345,slow=9.8,SNR=8.6							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**59.33**	**326**	P		**P**	**11 38 52.4**	**-1.0**
	0.1nm,0.3s,baz=121,slow=6.4,SNR=2.2							
	0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**63.57**	**328**	P		**P**	**11 39 20.8**	**-1.1**
	0.4nm,0.6s,baz=139,slow=6.1,SNR=4.4							
	0.4nm,0.6s							

*JMA **17** 12:08:46.0±0.5, 22°.N±2°×12°3E±°, h47km, MV3.0/12, FAR S OFF ISHIGAKIJIMA*

*TAP **17** 12:08:47.3, 22°.40N×122°.77E, h65km±1km, ML3.5, D*

ISC 17 12:08:43.5±3.0, 22°.47N±0°.04×122°.85E±0°.04, h11km±22km, n101, σ0s94/151, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LYUB	**Lan-yu**	**1.26**	**248**	P		**Pb**	**12 09 07.8**	**+0.5**
LYUB				*i* S		**Sb**	**12 09 23.2**	**-0.4**
LAY	**Lan-yu**	**1.28**	**251**	⇓*i* P		**Pn**	**12 09 07.6**	**+0.4**
LAY				*i* S		**Sb**	**12 09 22.8**	**-1.2**
LDUT	**Ludao**	**1.29**	**279**	P		**Pn**	**12 09 07.8**	**+0.4**
LDUT				*i* S		**Sb**	**12 09 23.0**	**-1.3**
CHKT	**Chengkung**	**1.51**	**295**	P		**Pn**	**12 09 11.0**	**+0.6**
CHKT				S		**Sn**	**12 09 28.6**	**-1.4**
EDH	**Donghe**	**1.51**	**289**	P		**Pb**	**12 09 11.4**	**-0.1**
EDH				S		**Sn**	**12 09 29.3**	**-0.8**
CHKH	**Chenggong**	**1.52**	**298**	*eP*		**Pb**	**12 09 12.1**	**+0.4**
CHKH				*eS*		**Sn**	**12 09 28.9**	**-1.4**
ECBN	**Changbin**	**1.54**	**303**	*eP*		**Pb**	**12 09 11.8**	**-0.2**
ECBN				*i* S		**Sn**	**12 09 28.9**	**-1.9**
TTN	**Taitung**	**1.60**	**280**	*eP*		**Pb**	**12 09 12.9**	**-0.1**
TTN				*eS*		**Sn**	**12 09 32.0**	**-0.2**
FULB	**Fuli**	**1.61**	**297**	P		**Pn**	**12 09 12.5**	**+0.7**
FULB				*eS*		**Sn**	**12 09 31.6**	**-0.9**
ECS	**Chishang**	**1.63**	**293**	*eP*		**Pb**	**12 09 13.7**	**+0.2**
LONT	**Longtian**	**1.65**	**286**	*eP*		**Pb**	**12 09 14.2**	**+0.4**
LONT				*eS*		**Sn**	**12 09 33.6**	**+0.1**
EHD	**Haiduan**	**1.66**	**294**	P		**Pn**	**12 09 13.5**	**+1.0**
EHD				S		**Sn**	**12 09 33.6**	**-0.2**
HGSD	**Ruisui**	**1.66**	**308**	P		**Pn**	**12 09 13.1**	**+0.6**
HGSD				*eS*		**Sn**	**12 09 32.6**	**-1.2**
TWGBT	**Beinan**	**1.67**	**282**	P		**Pb**	**12 09 14.0**	**-0.2**
TWGBT	**Beinan**	**1.67**	**282**	S		**Sn**	**12 09 34.6**	**+0.5**
TWGBT	**Beinan**	**1.67**	**282**	⇓*i* P		**Pb**	**12 09 14.2**	**0.0**
TWGBT				S		**Sn**	**12 09 34.5**	**+0.4**
TWF1	**Yuli**	**1.68**	**302**	*i* P		**Pb**	**12 09 13.9**	**-0.5**
TWF1				S		**Sn**	**12 09 35.0**	**+0.7**
TWG	**Pinlang**	**1.68**	**282**	P		**Pb**	**12 09 14.3**	**-0.1**
TWG				S		**Sn**	**12 09 34.2**	**0.0**
YULB	**Yu-li**	**1.70**	**303**	P		**Pn**	**12 09 14.0**	**+1.0**
YULB	**Yu-li**	**1.70**	**303**	*eP*		**Pb**	**12 09 14.2**	**-0.5**
YULB				*eS*		**Sn**	**12 09 33.3**	**-1.5**
EHYH	**Wanrong**	**1.72**	**307**	*eP*		**Pb**	**12 09 15.1**	**0.0**
EHYH				*eS*		**Sb**	**12 09 36.1**	**-0.6**
EHY	**Hungye**	**1.74**	**306**	*i* P		**Pn**	**12 09 14.7**	**+1.1**
EHY				S		**Sn**	**12 09 34.7**	**-1.2**
ECL	**Taimali**	**1.76**	**274**	P		**Pb**	**12 09 15.1**	**-0.6**
ECL				S		**Sn**	**12 09 36.1**	**-0.1**
SHUL	**Shoufeng**	**1.77**	**318**	*eS*		**Sn**	**12 09 36.4**	**0.0**
EGFH	**Guangfu**	**1.77**	**313**	*eP*		**Pb**	**12 09 15.7**	**-0.3**
HATJ	**Hateruma jima**	**1.80**	**29**	*eP*		**Pn**	**12 09 15.6**	**+1.1**
HATJ				S		**Sn**	**12 09 36.9**	**-0.4**
TAW	**Tawu**	**1.81**	**267**	P		**Pb**	**12 09 16.6**	**0.0**
TAW				S		**Sn**	**12 09 35.5**	**-2.0**
TAWH	**Dawu Township**	**1.82**	**266**	*eP*		**Pb**	**12 09 17.0**	**+0.2**
TAWH				*eS*		**Sn**	**12 09 36.7**	**-1.0**
WARBT	**Fenglin Townsh**	**1.83**	**313**	*eP*		**Pb**	**12 09 16.3**	**-0.6**
WARBT				S		**Sn**	**12 09 37.7**	**-0.4**
ELDTW	**Lidau**	**1.83**	**293**	*eP*		**Pb**	**12 09 16.5**	**-0.6**
ELDTW				*eS*		**Sn**	**12 09 37.8**	**-0.5**
EAST	**Anshuo**	**1.85**	**268**	*i* P		**Pb**	**12 09 16.9**	**-0.5**
EAST				*i* S		**Sn**	**12 09 37.1**	**-1.5**
ESL	**Shilin**	**1.87**	**316**	*eP*		**Pn**	**12 09 16.2**	**+0.9**
SLIU	**Shizi**	**1.92**	**263**	*eP*		**Pn**	**12 09 17.6**	**+1.6**
SLIU				*eS*		**Sn**	**12 09 39.8**	**-0.4**
SMST	**Manzhou Townsh**	**1.92**	**257**	*eP*		**Pb**	**12 09 16.8**	**+0.7**
SMST				*eS*		**Sn**	**12 09 40.2**	**+0.1**
ETM	**Tongmen**	**1.94**	**320**	*eP*		**Pb**	**12 09 18.2**	**-0.6**
TWKBT	**Hengchun**	**1.96**	**255**	*eP*		**Pb**	**12 09 19.4**	**+0.3**
TWK1	**Hengchun**	**1.97**	**255**	P		**Pn**	**12 09 18.1**	**+1.4**
JYNG	**Yonagunijimaku**	**1.97**	**3**	*eP*		**Pb**	**12 09 18.8**	**-0.5**
JYNG				*eS*		**Sn**	**12 09 42.4**	**+1.0**
YOJ	**Yonaguni jima**	**1.98**	**4**	S		**Sb**	**12 09 44.3**	**0.0**
YOJ	**Yonaguni jima**	**1.98**	**4**	*eP*		**Pb**	**12 09 19.1**	**-0.5**
YOJ				*eS*		**Sb**	**12 09 44.4**	**0.0**
HEN	**Hengchun**	**2.01**	**257**	*eP*		**Pb**	**12 09 19.3**	**-0.8**
ETL	**Fush Village**	**2.02**	**326**	*eP*		**Pn**	**12 09 18.6**	**+1.1**
IRIF	**Iriomote-Funau**	**2.02**	**23**	P		**Pn**	**12 09 18.9**	**+1.4**
IRIF				S		**Sn**	**12 09 42.3**	**-0.4**
VWDT	**VWDT**	**2.02**	**309**	P		**Pb**	**12 09 19.7**	**-0.5**
VWDT				*eS*		**Sn**	**12 09 43.1**	**+0.4**
LXIB	**Xiulin Townshi**	**2.03**	**320**	*eP*		**Pb**	**12 09 19.7**	**-0.7**
LXIB				*eS*		**Sn**	**12 09 43.8**	**+0.6**
STYH	**Taoyuan**	**2.04**	**290**	*eP*		**Pb**	**12 09 19.8**	**-0.7**
STYH				*i* S		**Sn**	**12 09 44.6**	**+1.5**
NACB	**Ninganchiao**	**2.05**	**326**	P		**Pn**	**12 09 19.1**	**+1.3**
NACB	**Ninganchiao**	**2.05**	**326**	S		**Sn**	**12 09 43.0**	**-0.4**
NACB	**Ninganchiao**	**2.05**	**326**	P		**Pn**	**12 09 19.3**	**+1.5**
NACB				S		**Sn**	**12 09 42.9**	**-0.4**
TSMG	**Majia**	**2.05**	**277**	*eP*		**Pb**	**12 09 19.9**	**-0.8**
JKRS	**Kuro-shima**	**2.05**	**31**	*eP*		**Pn**	**12 09 19.3**	**+1.4**
JKRS				S		**Sn**	**12 09 43.4**	**-0.1**
MASBT	**Mashibuluo**	**2.06**	**274**	*eP*		**Pb**	**12 09 19.9**	**-0.8**
SCZT	**Fangliau**	**2.07**	**268**	*eP*		**Pb**	**12 09 20.4**	**-0.6**
SSD	**Sandimen**	**2.07**	**278**	*eP*		**Pb**	**12 09 19.9**	**-1.1**
OWD	**Renai**	**2.13**	**314**	*eP*		**Pb**	**12 09 21.3**	**-0.9**
OWD				*eS*		**Sn**	**12 09 45.7**	**0.0**
ETLH	**Xiulin Townshi**	**2.14**	**324**	*eP*		**Pn**	**12 09 20.7**	**+1.6**
ETLH				S		**Sn**	**12 09 46.2**	**+0.6**
ALS	**Alishan**	**2.15**	**299**	*eP*		**Pb**	**12 09 22.3**	**-0.3**
SSLB	**Suanglung**	**2.18**	**307**	P		**Pn**	**12 09 21.8**	**-1.2**
SSLB	**Suanglung**	**2.18**	**307**	S		**Sn**	**12 09 46.3**	**-0.4**
SSLB	**Suanglung**	**2.18**	**307**	*eP*		**Pb**	**12 09 21.9**	**-1.0**
SSLB				S		**Sn**	**12 09 46.8**	**0.0**
EWUT	**Wuta**	**2.20**	**334**	*eP*		**Pn**	**12 09 21.6**	**+1.7**
WUSB	**Renai**	**2.20**	**314**	*eP*		**Pb**	**12 09 22.0**	**-1.2**
WTP	**Ta-pu**	**2.20**	**291**	*i* P		**Pb**	**12 09 23.0**	**-0.3**
WHYT	**Xinyi Township**	**2.21**	**304**	*eP*		**Pb**	**12 09 23.0**	**-0.4**
TPUB	**Ta-pu**	**2.21**	**292**	P		**Pb**	**12 09 23.3**	**-0.1**
TPUB	**Ta-pu**	**2.21**	**292**	*eP*		**Pb**	**12 09 23.6**	**+0.2**
SCST	**Cishan**	**2.21**	**281**	*eP*		**Pb**	**12 09 24.1**	**+0.6**
JIJ	**Ishigaki jima**	**2.23**	**32**	*eP*		**Pn**	**12 09 20.9**	**+0.7**
JIJ				*eS*		**Sn**	**12 09 46.3**	**-1.4**
CHN1	**Nanshi**	**2.26**	**289**	*i* P		**Pb**	**12 09 24.6**	**+0.4**
CHN1				*i* S		**Sb**	**12 09 52.1**	**0.0**
TWM1	**Shoushan**	**2.27**	**279**	*eP*		**Pb**	**12 09 25.7**	**+1.3**
SMLT	**Sun Moon Lake**	**2.28**	**308**	*eP*		**Pb**	**12 09 23.8**	**-0.9**
CHN5	**Tsauling**	**2.29**	**300**	*eP*		**Pb**	**12 09 25.4**	**+0.5**
SNST	**Tainan City**	**2.29**	**280**	*eP*		**Pb**	**12 09 25.8**	**+0.5**
FUSS	**Fushou**	**2.30**	**320**	*eP*		**Pb**	**12 09 23.7**	**-1.5**
FUSS				*eS*		**Sn**	**12 09 51.1**	**+1.1**
TWK	**Hsinying**	**2.32**	**290**	P		**Pb**	**12 09 25.4**	**+0.1**
TWK				S		**Sb**	**12 09 53.5**	**-0.5**
TYC	**Yuchr**	**2.32**	**308**	*eP*		**Pb**	**12 09 25.9**	**+0.6**
NNSB	**Datong**	**2.37**	**326**	P		**Pb**	**12 09 24.5**	**-1.7**
NNSB				S		**Sn**	**12 09 51.8**	**+0.4**
WJS	**Zhushan**	**2.37**	**305**	*eP*		**Pb**	**12 09 26.4**	**+0.2**
WJS				*eS*		**Sb**	**12 09 55.4**	**0.0**
WCS	**Beigang Elemen**	**2.38**	**312**	*eP*		**Pb**	**12 09 25.6**	**-0.7**
NNS	**Nan Shan**	**2.38**	**326**	*eP*		**Pb**	**12 09 24.8**	**-1.6**
LATG	**Datong**	**2.39**	**330**	P		**Pb**	**12 09 24.9**	**-1.6**
LATG				*eS*		**Sn**	**12 09 53.1**	**+1.3**
WGK	**Gukeng**	**2.43**	**300**	*eP*		**Pb**	**12 09 27.2**	**0.0**
WNT	**Mingjian**	**2.44**	**305**	P		**Pb**	**12 09 27.9**	**+0.7**
WDLH	**Douliu**	**2.45**	**300**	*eP*		**Pb**	**12 09 27.9**	**+0.4**
CHYT	**Chiayi**	**2.46**	**295**	*eP*		**Pb**	**12 09 28.2**	**+0.5**
ENTT	**Nioudou**	**2.46**	**332**	P		**Pb**	**12 09 25.7**	**-1.9**
JISG	**Ishigakijimahi**	**2.50**	**32**	P		**Pn**	**12 09 24.6**	**+0.7**
JISG				*eS*		**Sn**	**12 09 53.8**	**-0.6**
WHP	**Taichung City**	**2.51**	**316**	*eP*		**Pb**	**12 09 28.7**	**+0.1**
FUSB	**Fushanzhiwuyua**	**2.55**	**333**	*eP*		**Pb**	**12 09 27.8**	**-1.5**
YHNB	**Yeheng**	**2.57**	**329**	P		**Pn**	**12 09 27.5**	**+2.4**
YHNB	**Yeheng**	**2.57**	**329**	S		**Sn**	**12 09 57.4**	**+1.0**
YHNB	**Yeheng**	**2.57**	**329**	*eP*		**Pb**	**12 09 28.0**	**-1.6**
YHNB				*i* S		**Sn**	**12 09 57.7**	**+1.3**
NSK	**Sanguang**	**2.58**	**328**	*eP*		**Pb**	**12 09 28.1**	**-1.8**
NSK				*eS*		**Sn**	**12 09 57.2**	**+0.4**
NWLT	**Wulai**	**2.61**	**332**	*eP*		**Pb**	**12 09 29.0**	**-1.2**
WSL	**Shuilin Townsh**	**2.63**	**294**	*eP*		**Pb**	**12 09 30.3**	**-0.3**
WSL				*i* S		**Sb**	**12 10 02.0**	**-1.0**
TWQ1	**Liyutan**	**2.67**	**315**	*eP*		**Pb**	**12 09 30.3**	**-0.9**
NFF	**Wufeng Townshi**	**2.67**	**324**	*eP*		**Pb**	**12 09 31.2**	**-0.1**
NFF				S		**Sb**	**12 10 01.9**	**-2.3**
LIOB	**Emei**	**2.74**	**322**	*eP*		**Pb**	**12 09 31.7**	**-0.8**
JTJ	**Tarama**	**2.75**	**38**	*eS*		**Sn**	**12 10 00.1**	**-0.5**
SXI1	**Grass Mountain**	**2.76**	**341**	*eP*		**Pn**	**12 09 30.2**	**+2.6**
KSHI	**Guanxi Townshi**	**2.76**	**327**	*eP*		**Pb**	**12 09 32.2**	**-0.6**

AUST 17 12:11:46.5±0.2, 31°.S±3°×12°.3E±°, h10km, mb3.7/5, ML2.9/8, Error ellipse: s-maj=5.6km s-min=3.3km az=174.3, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DNDOZ	**Balladonia**	**1.20**	**160**	P		Pg	12 12 09.4	-0.1
DNDOZ				S		Sb	12 12 22.4	-2.4
KMBL	**Kambalda**	**1.29**	**268**	P		Pg	12 12 12.7	+1.4
KMBL				S		Sg	12 12 31.0	+2.9
FORT	**Forrest**	**4.04**	**83**	P		Pn	12 12 49.5	+1.0
FORT				S		Sn	12 13 34.2	-1.6
KLBR	**Kellerberrin**	**4.82**	**265**	P		Pn	12 13 02.5	+3.3
KLBR	**Kellerberrin**	**4.82**	**265**	S		Sn	12 13 53.8	-1.3
BLDU	**Ballidu**	**5.78**	**275**	P		Pn	12 13 13.8	+1.5
	comp=Z,0.1nmcomp=Z,23nm,2.5s							
BLDU	**Ballidu**	**5.78**	**275**	S		Sn	12 14 15.6	-3.2
MUN	**Mundaring**	**6.16**	**262**	P		Pn	12 13 20.8	+3.3
MUN	**Mundaring**	**6.16**	**262**	S		Sn	12 14 26.2	-1.8
MEEK	**Meekatharra**	**6.28**	**317**	P		Pn	12 13 20.4	+1.2
	comp=Z,0.0nmcomp=Z,12nm,1.0s							
MEEK	**Meekatharra**	**6.28**	**317**	S		Sn	12 14 25.8	-5.2
RKGY	**Rocky Gully**	**6.30**	**237**	P		Pn	12 13 20.8	+1.3
RKGY				S		Sn	12 14 31.1	-0.5
MORW	**Morawa**	**6.75**	**288**	P		Pn	12 13 26.9	+1.3
	comp=Z,0.0nmcomp=Z,8.3nm,1.5s							
MORW	**Morawa**	**6.75**	**288**	S		Sn	12 14 39.6	-3.0
WRKA	**Warakurna**	**7.62**	**36**	P		Pn	12 13 35.9	-1.7
WRKA				S		Sn	12 15 03.9	-0.2
MULG	**Mulgathing**	**9.23**	**86**	P		Pn	12 14 01.7	+2.0
	comp=Z,0.0nmcomp=Z,6.2nm,2.4s							
MULG				S		Sn	12 15 36.5	-7.2
OOD	**Oodnadatta**	**11.27**	**75**	P		Pn	12 14 28.1	+0.5
	comp=Z,2.5nm,2.6s							
OOD				S		Sn	12 16 24.4	-9.3

*BJI **17** 12:13:26.9, 20°.64S×177°.63W, h505km, mB5.5/62, mb5.1/73*

*NEIC **17** 12:13:27.8, 20°.80S×178°.04W, h500km, Moment Tensor Solution. Duration: 4s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.55; $M_{\theta\theta}$3.75; $M_{\phi\phi}$0.80; $M_{r\theta}$-2.75; $M_{r\phi}$-3.70; $M_{\theta\phi}$-3.70; Fault plane solution: $M_0$7.26000×10^{17} NP1: ϕ_s334.53000°, δ54.11000°, λ-42.93000°. NP2:ϕ_s93.14000°, δ56.51000°, λ-135.33000°. Principal axes: T 6.2638, Plg1.0000°, Azm213.0000°; N 1.6880, Plg36.0000°, Azm122.0000°; P -7.9518, Plg54.0000°, Azm305.0000°;*

*NEIC **17** 12:13:27.8±1.9, 20°.81S±0°.09×177°.83W±0°.10, h499km±2km, mb5.3/91, Mwb5.9/84, Mww5.8/38 Error ellipse: s-maj=16.2km s-min=15.2km az=149.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-7.47; $M_{\theta\theta}$5.76; $M_{\phi\phi}$1.71; $M_{r\theta}$-3.32; $M_{r\phi}$-4.05; $M_{\theta\phi}$-4.48; Fault plane solution: $M_0$9.66000×10^{17} NP1:ϕ_s94.91000°, δ53.96000°, λ-127.38000°. NP2:ϕ_s327.32000°, δ50.02000°, λ-50.16000°. Principal axes: T 8.2768, Plg2.0000°, Azm210.0000°; N 2.3431, Plg29.0000°, Azm119.0000°; P -10.6200, Plg60.0000°, Azm304.0000°;*

*IPGP **17** 12:13:27.0, 20°.81S×177°.82W, h511km, Mw5.9, Fault plane solution: NP1:ϕ_s328.00000°, δ56.00000°, λ-36.00000°. NP2:ϕ_s80.00000°, δ61.00000°, λ-140.00000°.*

*MOS **17** 12:13:27.4±1.0, 20°.88S×177°.93W, h507km, mb5.1/26, Error ellipse: s-maj=9.9km s-min=7.8km az=125.9*

*NOU **17** 12:13:27.8, 20°.89S×177°.77W, h505km, ML5.2/157, Fiji Islands Region*

*NEIC **17** 12:13:27.8, 20°.80S×177°.84W, h498km*

*NEIC **17** 12:13:27.8, 20°.80S×177°.83W, h500km*

*IDC **17** 12:13:28.0±0.4, 20°.88S×177°.89W, h509km±4km, mb4.7/25, mbtmp5.6/28, Error ellipse: s-maj=8.8km s-min=7.7km az=152.0*

*GCMT **17** 12:13:31.8±0.1, 20°.71S±0°.01×177°.91W±0°.01, h508km, MW5.9/145, Moment Tensor Solution. s145, c295; s113, c130; Duration: 2s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.82±.05; $M_{\theta\theta}$4.75±.08; $M_{\phi\phi}$0.06±.09; $M_{r\theta}$-3.01±.08; $M_{r\phi}$-3.76±.07; $M_{\theta\phi}$-4.65±.07; Best double couple: $M_0$7.99100×10^{17} NP1:ϕ_s330.00000°, δ54.00000°, λ-41.00000°. NP2:ϕ_s87.00000°, δ58.00000°, λ-136.00000°. Principal axes: T 6.8550, Plg3.0000°, Azm207.0000°; N 2.2690, Plg38.0000°, Azm115.0000°; P -9.1270, Plg52.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

ISC 17 12:13:27.9±0.2, 20.88S±0°.03×177.77W±0°.04, h509km±2km, h510km:pP-P, n1165, σ1s28/1284, mb5.3/180, 92C-70D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.04**	**308**			**P**	**12 14 55.9**	**0.0**
MSVF	**Nonsavu**	**5.04**	**308**	P		**P**	**12 14 56.5**	**+0.7**
MSVF	**Nonsavu**	**5.04**	**308**	*i* P		**P**	**12 14 56.0**	**+0.2**
NIUE	**Niue**	**7.59**	**78**	P		**P**	**12 15 19.0**	**-1.3**
	comp=Z,2μm,0.7s							
NIUE					S	**S**	**12 16 51.2**	**-1.2**
NIUE	**Niue**	**7.59**	**78**			**P**	**12 15 19.5**	**-0.8**
NIUE	**Niue**	**7.59**	**78**	P		**P**	**12 15 20.3**	**0.0**
NIUE	**Niue**	**7.59**	**78**	P		**P**	**12 15 20.0**	**-0.3**
NIUE					S	**S**	**12 16 50.1**	**-2.4**
**R

KHZ **Kahutara** 22.69 197 P **P** 12 17 48.6 -1.5
KHZ **Kahutara** 22.69 197 P **P** 12 17 48.8 -1.3
CTZ **Chatham Island** 22.82 178 P **P** 12 17 52.6 +1.4
LHI **Lord Howe Isla** 23.29 238 P **P** 12 17 56.3 +0.7
GVZ **Greta Valley S** 23.34 197 P **P** 12 17 54.4 -1.5
LTZ **Lake Taylor** 23.39 199 P **P** 12 17 54.4 -2.1
INZ **Inchbonnie** 23.59 200 P **P** 12 17 56.6 -1.6
OXZ **Oxford** 23.96 199 P **P** 12 17 59.7 -1.8
MQZ **McQueen's Vall** 24.13 197 P **P** 12 18 01.7 -1.2
WVZ **Waitaha Valley** 24.14 201 P **P** 12 18 01.8 -1.2
HNR **Honiara** 24.30 295 P **P** 12 18 04.1 -0.7
comp=Z,82nm,0.5s,baz=114,slow=7.2,SNR=7.8
comp=Z,82nm,0.5s
HNR **Honiara** 24.30 295 P **P** 12 18 05.0 +0.2
SAVO **Savo Central** 24.55 295 P **P** 12 18 07.8 +0.7
RPZ **Rata Peaks** 24.61 200 P **P** 12 18 05.8 -1.4
RPZ **Rata Peaks** 24.61 200 P **P** 12 18 05.9 -1.4
FOZ **Fox Glacier** 24.86 202 P **P** 12 18 07.3 -2.1
TMZ **Timaru** 25.23 199 P **P** 12 18 11.2 -1.5
LBZ **Lake Benmore** 25.49 200 P **P** 12 18 12.5 -2.6
JCZ **Jackson Bay** 25.70 203 P **P** 12 18 16.5 -0.4
JCZ **Jackson Bay** 25.70 203 P **P** 12 18 16.1 -0.8
ODZ **Otahua Downs** 25.94 199 P **P** 12 18 17.2 -1.7
ODZ **Otahua Downs** 25.94 199 P **P** 12 18 17.4 -1.5
WKZ **Wanaka** 26.27 202 P **P** 12 18 19.9 -2.0
EAZ **Earnscleugh** 26.53 201 P **P** 12 18 22.9 -1.2
PPT **Papeete** 26.81 88 P **P** 12 18 28.0 +1.0
comp=Z,212nm,0.9s,baz=270,slow=4.0,SNR=16
comp=Z,212nm,0.9s
PPTF **Pamatai, Papee** 26.81 88 **P** 12 18 27.3 +0.2
PPTF **Pamatai, Papee** 26.81 88 P **P** 12 18 28.5 +1.4
MLZ **Mavora Lakes** 27.05 202 P **P** 12 18 28.0 -0.8
TUZ **Tuapeka** 27.07 200 P **P** 12 18 28.9 0.0
AUWSH **Wavell State H** 27.38 251 P **P** 12 18 32.4 +0.5
DCZ **Deep Cove** 27.49 203 P **P** 12 18 32.6 0.0
WHZ **Wether Hill Ro** 27.57 202 P **P** 12 18 32.3 -1.0
SYZ **Scrubby Hill** 27.74 200 P **P** 12 18 34.3 -0.5
TW1H **Toowoomba 1 Ha** 28.34 250 P **P** 12 18 41.1 +0.7
APZ **The Paps** 28.37 201 P **P** 12 18 40.6 +0.3
GD1S **Gladstone Soft** 28.85 258 P **P** 12 18 45.1 +0.3
EIDS **Eidsvold** 28.96 255 P **P** 12 18 44.3 -1.5
comp=Z,132nm,0.7s
EIDS **Eidsvold** 28.96 255 **P** 12 18 44.5 -1.3
EIDS **Eidsvold** 28.96 255 P **P** 12 18 45.3 -0.5
AUNRC **North Rockhamp** 29.45 259 P **P** 12 18 50.3 +0.3
AUPHS **Peel High Scho** 29.87 244 P **P** 12 18 53.8 +0.2
AUKHS **Kincumber High** 30.06 239 P **P** 12 18 55.7 +0.5
MGCD **Mangrove Creek** 30.20 239 P **P** 12 18 56.1 -0.4
comp=Z,129nm,0.8s
MGCD **Mangrove Creek** 30.20 239 **P** 12 18 57.1 +0.6
SYDH **Sydney Hard Ro** 30.65 239 P **P** 12 19 00.7 +0.4
AUDCS **Dubbo College** 31.99 242 P **P** 12 19 12.2 +0.4
AULRC **Lightning Ridg** 32.06 248 P **P** 12 19 12.2 -0.3
CNB **Canberra Magne** 32.20 236 P **P** 12 19 13.3 -0.4
comp=Z,106nm,0.8s,comp=Z,0.0nm
CNB **Canberra Magne** 32.20 236 **P** 12 19 13.9 +0.3
AUDAR **Daramalan Coll** 32.35 237 P **P** 12 19 14.7 -0.2
AUSIS **Research Schoo** 32.39 237 P **P** 12 19 15.7 +0.5
AUMTS **Mt Stromlo** 32.48 237 P **P** 12 19 16.1 +0.1
CAN **Canberra** 32.48 237 P **P** 12 19 15.0 -1.0
CAN **Canberra** 32.48 237 P **P** 12 19 16.1 0.0
YNG **Young** 32.67 239 P **P** 12 19 17.0 -0.6
comp=Z,14nm,0.7s
AUSMG **Snowy Mountain** 33.12 235 P **P** 12 19 22.0 +0.5
TV1H **Townsville Har** 33.29 266 P **P** 12 19 22.6 -0.4
RABL **Rabaul** 33.60 295 **P** 12 19 25.4 -0.4
CTA **Charters Tower** 33.67 265 P **P** 12 19 26.0 -0.3
CTAO **Charters Tower** 33.67 265 **P** 12 19 25.3 -1.0
CTAO **Charters Tower** 33.67 265 P **P** 12 19 26.0 -0.3
CTAO **Charters Tower** 33.67 265 P **P** 12 19 25.3 -1.0
CTAO pmax pmax
comp=Z,277nm,0.7s
CTAO **Charters Tower** 33.67 265 P **P** 12 19 25.8 -0.4
CMSA **Cobar Meteorol** 34.32 244 P **P** 12 19 30.8 -0.7
comp=Z,132nm,0.8s
CMSA **Cobar Meteorol** 34.32 244 **P** 12 19 31.3 -0.3
QLP **Quilpie** 35.16 253 P **P** 12 19 37.5 -1.1
comp=Z,343nm,1.0s
QLP **Quilpie** 35.16 253 P **P** 12 19 38.1 -0.5
PMG **Port Moresby** 35.64 283 P **P** 12 19 42.1 -0.7
comp=Z,428nm,0.7s,baz=104,slow=6.7,SNR=119
comp=Z,428nm,0.7s
PMG **Port Moresby** 35.64 283 **P** 12 19 41.9 -0.9
PMG **Port Moresby** 35.64 283 P **P** 12 19 42.7 -0.1
PMG **Port Moresby** 35.64 283 P **P** 12 19 42.5 -0.3
PMG **Port Moresby** 35.64 283*d iP* **P** 12 19 41.5 -1.3
PMG pmax pmax
comp=Z,461nm,0.7s
PMG **Port Moresby** 35.64 283 **P** 12 19 42.1 -0.7
MTSU **Mount Surprise** 35.79 268 P **P** 12 19 43.5 -0.5
comp=Z,274nm,0.8s
MTSU **Mount Surprise** 35.79 268 **P** 12 19 43.4 -0.7
TOO **Toolangi** 35.85 234 P **P** 12 19 44.1 -0.2
comp=Z,22nm,0.7s
CORO **Coronation Par** 36.02 227 P **P** 12 19 46.7 +1.2
GEXS **Deakin Univers** 36.95 234 P **P** 12 19 54.0 +0.7
BRAT **Ballarat** 37.04 235 P **P** 12 19 54.7 +0.7
AUMTC **Mt Clear Colle** 37.09 235 P **P** 12 19 55.0 +0.5
STKA **Stephens Creek** 37.82 245 P **P** 12 20 00.4 -0.2
comp=Z,60nm,0.8s,baz=90,slow=9.9,SNR=116
comp=Z,60nm,0.8s
STKA **Stephens Creek** 37.82 245 **P** 12 20 00.3 -0.3
STKA **Stephens Creek** 37.82 245*c iP* **P** 12 19 59.8 -0.8
COEN **Coen** 37.83 274 P **P** 12 20 00.1 -0.7
COEN **Coen** 37.83 274 P **P** 12 20 00.5 -0.3
TAOE **Nuku Hiva Isla** 38.17 77 P **P** 12 20 04.1 +0.4
TAOE **Nuku Hiva Isla** 38.17 77 P **P** 12 20 04.5 +0.8
TAOE **Nuku Hiva Isla** 38.17 77 P **P** 12 20 04.8 +1.0
INKA **Innaminka** 38.29 251 P **P** 12 20 04.4 0.0
INKA IAmb IAmb 12 20 08.6
comp=Z,154nm,1.9s
ARPS **Mount Arapiles** 38.46 237 P **P** 12 20 05.1 -0.6
comp=Z,22nm,0.8s
MANU **Manus Island** 38.80 294 P **P** 12 20 08.3 -0.5
QIS **Mount Isa** 39.79 263 P **P** 12 20 15.5 -1.2
AUMBR **Murray Bridge** 40.18 240 P **P** 12 20 18.7 -0.9
HTT **Hallett** 40.25 243 P **P** 12 20 19.4 -0.9
AUJCS **Jamestown Cent** 40.46 243 P **P** 12 20 21.7 -0.4
AUMAR **Marden Senior** 40.67 240 P **P** 12 20 24.3 +0.8
WHYH **Whyalla** 41.33 243 P **P** 12 20 28.9 +0.1
BBOO **Buckleboo** 42.58 244 P **P** 12 20 37.3 -1.4
BBOO IAmb IAmb 12 20 38.8
comp=Z,81nm,0.9s
BBOO **Buckleboo** 42.58 244 **P** 12 20 37.8 -0.9
WAKE **Wake Island** 42.73 338 P **P** 12 20 39.1 -0.8
WAKE **Wake Island** 42.73 338 P **P** 12 20 39.4 -0.5
H11N3 **WAKE ISLAND Hy** 43.04 339 P **P** 12 20 42.0 -0.2
baz=173,slow=11,SNR=7.3
H11N1 **WAKE ISLAND Hy** 43.04 339 P **P** 12 20 42.7 +0.5
baz=173,slow=11,SNR=7.8
H11N2 **WAKE ISLAND Hy** 43.04 339 P **P** 12 20 41.3 -1.0
baz=173,slow=11,SNR=3.8
JAY **Jayapura** 44.37 289 P **P** 12 20 52.6 -0.4
comp=Z,515nm,0.5s,baz=144,slow=4.9,SNR=226
comp=Z,515nm,0.5s
JAY **Jayapura** 44.37 289 P **P** 12 20 52.6 -0.4
comp=Z,11μmcomp=Z,780nm,1.1s
AS31 **Alice Springs** 44.65 257 **P** 12 20 53.9 -1.1
ASAR **Alice Springs** 44.65 257 P **P** 12 20 54.1 -0.9
comp=Z,161nm,0.9s,baz=92,slow=8.0,SNR=970
ASAR PcP **pP** 12 22 27.5 -0.2
comp=Z,26nm,1.0s,baz=88,slow=5.2,SNR=6.1
ASAR S **S** 12 26 51.8 -2.3
comp=Z,36nm,0.9s,baz=95,slow=15,SNR=27
ASAR ScS **ScS** 12 29 55.9 -0.6
comp=Z,3.2nm,1.0s,baz=90,slow=6.7,SNR=4.2
comp=Z,161nm,0.9s
ASAR **Alice Springs** 44.65 257 P **P** 12 20 53.7 -1.3
AUALC **St Philip's Co** 44.66 257 P **P** 12 20 54.1 -1.0
WRAB **Tennant Creek** 44.76 262 P **P** 12 20 54.0 -1.8
WRAB **Tennant Creek** 44.76 262*c iP* **P** 12 20 54.1 -1.8
WRAB pmax pmax
comp=Z,251nm,1.0s
WRAB **Tennant Creek** 44.76 262 P **P** 12 20 54.3 -1.6
WRAB pP **PcP** 12 22 26.3 -1.0
WRA **Warramunga Arr** 44.77 262 P **P** 12 20 54.4 -1.5
comp=Z,115nm,0.7s,baz=97,slow=7.6,SNR=487
WRA S **S** 12 26 53.5 -2.2
comp=Z,11nm,0.7s,baz=98,slow=13,SNR=7.6
WRA ScS **ScS** 12 29 57.5 +0.2
comp=Z,2.4nm,0.9s,baz=93,slow=9.0,SNR=4.5
comp=Z,115nm,0.7s
WRA **Warramunga Arr** 44.77 262 P **P** 12 20 54.2 -1.7

GENI **Genyem** 44.81 288 P **P** 12 20 57.0 +0.7
GENI **Genyem** 44.81 288 P **P** 12 20 56.4 +0.1
POHA **Pohakuloa** 45.87 30 P **P** 12 21 04.2 -0.4
KIP **Kipapa** 46.26 26 P **P** 12 21 08.1 +0.9
KIP **Kipapa** 46.26 26 P **P** 12 21 07.9 +0.7
KIP **Kipapa** 46.26 26*ce* **P** 12 21 08.6 +1.4
KIP pmax pmax
comp=Z,199nm,2.5s
SMPI **Sarmi** 46.38 288 P **P** 12 21 07.8 -0.5
comp=Z,3μmcomp=Z,6μmcomp=Z,567nm,1.0s
BAKI **Biak** 49.06 287 P **P** 12 21 30.0 +1.6
MTN **Manton Dam** 49.38 271 P **P** 12 21 30.1 -0.8
DRS **Darwin Rock St** 49.72 271 P **P** 12 21 33.3 0.0
AUDHS **Darwin High Sc** 49.78 271 P **P** 12 21 32.3 -1.5
KMPI **Kaimana, Papua** 50.17 283 P **P** 12 21 38.4 +1.8
GUMO **Guam** 50.21 310 P **P** 12 21 36.1 -0.7
comp=Z,617nm,0.7s,baz=152,slow=6.3,SNR=27
comp=Z,617nm,0.7s
GUMO **Guam** 50.21 310 **P** 12 21 35.9 -0.9
GUMO **Guam** 50.21 310 P **P** 12 21 36.3 -0.5
RKPI **Ransiki, Papua** 50.65 286 P **P** 12 21 41.8 +1.7
comp=Z,4μmcomp=Z,236nm,0.6s
SAUI **Saumlaki** 50.76 277 P **P** 12 21 41.1 +0.2
SAUI **Saumlaki** 50.76 277 P **P** 12 21 41.9 +1.0
FAKI **Fak Fak** 51.80 283 P **P** 12 21 47.8 -0.7
FAKI **Fak Fak** 51.80 283 P **P** 12 21 47.9 -0.6
FAKI **Fak Fak** 51.80 283 P **P** 12 21 47.8 -0.7
comp=Z,4μmcomp=Z,5μmcomp=Z,355nm,1.2s
DRV **Dumont d'Urvil** 53.07 200 P **P** 12 21 57.3 +0.6
DRV pP **pP** 12 23 32.8 -2.3
FITZ **Fitzroy Crossi** 53.20 263 **P** 12 21 57.4 -1.1
FITZ **Fitzroy Crossi** 53.20 263 P **P** 12 21 58.1 -0.4
BNDI **Bandanaira** 53.31 280 P **P** 12 22 00.1 +0.7
BNDI **Bandanaira** 53.31 280 P **P** 12 22 00.0 +0.7
SWI **Sorong** 53.55 285 P **P** 12 22 00.7 -0.4
MSAI **Masohi** 54.66 281 P **P** 12 22 09.8 +0.9
AAI **Ambon** 55.20 280 P **P** 12 22 11.9 -0.8
comp=Z,3μmcomp=Z,6μmcomp=Z,413nm,1.0s
NLAI **Namlea** 56.38 280 P **P** 12 22 20.0 -0.9
comp=Z,3μmcomp=Z,5μmcomp=Z,260nm,1.3s
SOEI **Soe** 56.73 272 P **P** 12 22 24.9 +1.4
SOEI **Soe** 56.73 272 P **P** 12 22 24.0 +0.6
SOEI **Soe** 56.73 272 P **P** 12 22 24.4 +1.0
comp=Z,4μmcomp=Z,8μmcomp=Z,496nm,0.9s
BATI **Baumata** 57.15 271 P **P** 12 22 26.9 +0.7
comp=Z,3μmcomp=Z,4μmcomp=Z,155nm,0.9s
SBA **Scott Base** 57.51 184 P **P** 12 22 30.3 +2.7
SBA **Scott Base** 57.51 184 P **P** 12 22 30.3 +2.7
SBA pmax pmax
comp=Z,36nm,0.9s
VNDA **Vanda** 57.56 185 P **P** 12 22 29.4 +1.5
comp=Z,10nm,0.9s,baz=357,slow=7.3,SNR=34
comp=Z,10nm,0.9s
VNDA **Vanda** 57.56 185 P **P** 12 22 29.4 +1.5
VNDA **Vanda** 57.56 185 P **P** 12 22 29.4 +1.5
VNDA pmax pmax
comp=Z,30nm,1.4s
TNTI **Ternate** 57.77 285 P **P** 12 22 31.6 +1.2
TNTI **Ternate** 57.77 285 P **P** 12 22 31.0 +0.6
TNTI **Ternate** 57.77 285 P **P** 12 22 30.1 -0.3
comp=Z,2μmcomp=Z,6μmcomp=Z,504nm,1.1s
PSA00 **Pilbara Seismi** 57.80 257 P **P** 12 22 29.4 -1.1
PSA00 IAmb IAmb 12 22 32.4
comp=Z,121nm,0.8s
PSA00 **Pilbara Seismi** 57.80 257 P **P** 12 22 29.4 -1.1
SANI **Sanana** 57.87 281 P **P** 12 22 31.7 +0.6
SANI **Sanana** 57.87 281 P **P** 12 22 30.9 -0.2
comp=Z,4μmcomp=Z,5μmcomp=Z,362nm,1.1s
MBWA **Marble Bar** 57.98 258 P **P** 12 22 30.3 -1.5
MBWA IAmb IAmb 12 22 33.6
comp=Z,113nm,0.7s
MBWA **Marble Bar** 57.98 258 P **P** 12 22 30.8 -1.0
MBWA **Marble Bar** 57.98 258 P **P** 12 22 30.6 -1.2
MBWA PcP **PcP** 12 23 16.2 -0.9
MBWA pP **pP** 12 24 09.0 -2.6
MEEK **Meekatharra** 58.00 251 P **P** 12 22 30.6 -1.3
KLBR **Kellerberrin** 58.10 245 P **P** 12 22 31.5 -0.9
NWAO **Narrogin (SRO)** 58.40 244 P **P** 12 22 33.9 -0.5
NWAO **Narrogin (SRO)** 58.40 244 P **P** 12 22 33.7 -0.7
NWAO **Narrogin (SRO)** 58.40 244 P **P** 12 22 33.4 -1.0
NWAO **Narrogin (SRO)** 58.40 244 P **P** 12 22 33.9 -0.5
NWAO pmax pmax
comp=Z,42nm,1.0s
MMRI **Maumere** 58.99 272 P **P** 12 22 37.1 -1.6
MMRI IAmb IAmb 12 22 40.5
comp=Z,123nm,0.8s
MMRI **Maumere** 58.99 272 P **P** 12 22 39.4 +0.8
MMRI **Maumere** 58.99 272 P **P** 12 22 37.7 -0.9
comp=Z,3μmcomp=Z,4μmcomp=Z,183nm,0.8s
BLDU **Ballidu** 59.10 246 P **P** 12 22 38.3 -0.9
MUN **Mundaring** 59.36 244 P **P** 12 22 40.8 -0.1
EDFI **Ende, Flores** 59.46 272 P **P** 12 22 40.3 -1.7
comp=Z,2μmcomp=Z,3μmcomp=Z,186nm,0.9s
AUMAZ **Mazenod Senior** 59.50 244 P **P** 12 22 41.6 -0.2
MORW **Morawa** 59.89 248 P **P** 12 22 43.4 -1.1
MORW **Morawa** 59.89 248 P **P** 12 22 43.6 -0.9
BASI **Baing, Sumba** 60.03 270 P **P** 12 22 46.0 +0.4
comp=Z,2μmcomp=Z,5μmcomp=Z,175nm,1.5s
WSI **Waingapu** 60.47 271 P **P** 12 22 48.5 0.0
SGSI **Sangihe** 60.68 287 P **P** 12 22 50.6 +0.7
comp=Z,3μmcomp=Z,7μmcomp=Z,586nm,1.1s
H01W1 **Cape Leeuwin H** 60.74 241 P **P** 12 22 50.9 +1.1
baz=126,slow=6.7,SNR=4.3
KMSI **Cibinong** 60.76 283 P **P** 12 22 51.5 +1.1
comp=Z,3μmcomp=Z,5μmcomp=Z,498nm,0.9s
H01W2 **Cape Leeuwin H** 60.76 241 P **P** 12 22 50.8 +0.9
baz=126,slow=6.7,SNR=3.1
H01W3 **Cape Leeuwin H** 60.76 241 P **P** 12 22 49.8 -0.1
baz=126,slow=6.7,SNR=2.7
LUWI **Luwuk** 61.22 281 P **P** 12 22 53.7 +0.2
LUWI **Luwuk** 61.22 281 P **P** 12 22 54.7 +1.2
LUWI **Luwuk** 61.22 281 P **P** 12 22 54.0 +0.5
comp=Z,6μmcomp=Z,435nm,1.1s
WBSI **Waikabubak, Su** 61.33 270 P **P** 12 22 55.3 +1.1
comp=Z,2μmcomp=Z,3μmcomp=Z,107nm,0.8s
BSSI **Bau Bau, Buton** 61.45 274 P **P** 12 22 56.7 +1.7
comp=Z,2μmcomp=Z,2μmcomp=Z,104nm,1.3s
BKSI **Bulukumba** 62.08 275 P **P** 12 23 00.1 +1.0
CCD **Concordia, Ant** 62.16 195 P **P** 12 22 60.0 +0.9
CCD pP **pP** 12 24 40.7 -1.0
APSI **Ampana** 62.30 280 P **P** 12 23 01.6 +1.1
comp=Z,3μmcomp=Z,184nm,1.4s
BNSI **Bone** 62.42 276 P **P** 12 23 01.7 +0.4
comp=Z,2μmcomp=Z,2μmcomp=Z,126nm,1.3s
KAPI **Kappang** 62.53 275 P **P** 12 23 02.6 +0.6
KAPI **Kappang** 62.53 275 P **P** 12 23 03.1 +1.0
KAPI **Kappang** 62.53 275*d iP* **P** 12 23 01.3 -0.8
KAPI pmax pmax
comp=Z,38nm,1.1s
MRSI **Marisa** 62.58 282 P **P** 12 23 02.7 +0.3
comp=Z,2μmcomp=Z,112nm,1.1s
SPSI **Sidrap Palu** 62.89 276 P **P** 12 23 04.4 0.0
comp=Z,2μmcomp=Z,3μmcomp=Z,66nm,0.9s
PLAI **Plampang** 63.09 271 P **P** 12 23 04.7 -0.9
PLAI **Plampang** 63.09 271 P **P** 12 23 04.8 -0.9
comp=Z,3μmcomp=Z,3μmcomp=Z,225nm,1.0s
TTSI **Tana Toraja** 63.18 277 P **P** 12 23 06.1 -0.2
CASY **Casey** 63.72 205 P **P** 12 23 08.9 +0.2
TOLI2 **Tolitoli** 63.90 282 P **P** 12 23 11.0 +0.1
TOLI2 IAmb IAmb 12 23 12.9
comp=Z,154nm,1.1s
TOLI2 **Tolitoli** 63.90 282 P **P** 12 23 10.9 +0.1
TWSI **Taliwang, Sumb** 63.96 270 P **P** 12 23 12.0 +0.8
comp=Z,3μmcomp=Z,164nm,0.9s
PCI **Palu** 63.97 280 P **P** 12 23 13.0 +1.7
comp=Z,6μmcomp=Z,440nm,1.1s
MPSI **Mapaga** 64.40 281 P **P** 12 23 13.0 -1.0
comp=Z,2μmcomp=Z,2μmcomp=Z,150nm,1.1s
SRBI **Singaraja** 65.73 270 P **P** 12 23 23.2 +0.8
comp=Z,3μmcomp=Z,2μmcomp=Z,95nm,1.0s
JAGI **Jajag, Banyuwa** 66.60 270 P **P** 12 23 28.5 +0.6
JAGI **Jajag, Banyuwa** 66.60 270 P **P** 12 23 28.2 +0.3
comp=Z,2μmcomp=Z,2μmcomp=Z,91nm,1.0s
KMMI **Kalianget** 67.24 271 P **P** 12 23 33.9 +2.1
comp=Z,3μmcomp=Z,3μmcomp=Z,92nm,0.9s
BLJI **Banyuglugur** 67.36 270 P **P** 12 23 34.6 +2.1
comp=Z,3μmcomp=Z,125nm,0.7s
MYLDM **Lahad Datu** 67.64 285 P **P** 12 23 35.1 +0.9
MYLDM **Lahad Datu** 67.64 285 P **P** 12 23 36.0 +1.8
BBKI **Banjar Baru** 67.66 275 P **P** 12 23 37.1 +2.7
comp=Z,150nm,0.7s
MTKI **Muara Teweh, K** 68.53 277 P **P** 12 23 41.3 +1.6
comp=Z,85nm,0.9s
QSPA **South Pole Qui** 69.20 180 P **P** 12 23 46.8 +3.9
comp=Z,52nm,0.9s,baz=34,slow=3.4,SNR=165
QSPA **South Pole Qui** 69.20 180 P **P** 12 23 47.4 +4.5
QSPA **South Pole Qui** 69.20 180 P **P** 12 23 48.2 +5.3
JSG **Sagara** 69.31 322 P **P** 12 23 45.2 +1.3
JSG **Sagara** 69.31 322 P **P** 12 23 44.8 +0.9
PCJI **Pacitan** 69.47 269 P **P** 12 23 46.1 +0.8
comp=Z,3μmcomp=Z,345nm,0.7s
UGM **Wanagama** 70.17 269 P **P** 12 23 49.3 -0.3
UGM IAmb IAmb 12 23 51.6
comp=Z,68nm,0.7s
JMM **Marumori** 70.23 326 P **P** 12 23 49.0 -0.3
JMM **Marumori** 70.23 326 P **P** 12 23 49.0 -0.3
JGF **Kuroka** 70.44 322 P **P** 12 23 50.2 -0.5
JGF IAmb IAmb 12 23 52.8
comp=Z,51nm,0.6s
JGF **Kuroka** 70.44 322 P **P** 12 23 50.1 -0.6
INU **Inuyama** 70.46 322 P **P** 12 23 50.7 -0.1
INU **Inuyama** 70.46 322 P **P** 12 23 51.2 +0.5
JOW **Kunigami** 70.57 310 P **P** 12 23 51.0 -0.6
JOW IAmb IAmb 12 23 54.7
comp=Z,100nm,0.9s
JOW **Kunigami** 70.57 310 P **P** 12 23 52.6 +1.0
MJAR **Matsushiro Arr** 70.64 324 P **P** 12 23 51.1 -0.7
comp=Z,71nm,0.6s,baz=157,slow=6.3,SNR=127
comp=Z,71nm,0.6s
MJAR **Matsushiro Arr** 70.64 324 P **P** 12 23 51.0 -0.8
MJAR IAmb IAmb 12 23 53.9
comp=Z,82nm,0.7s
MAJO **Matsushiro** 70.64 324 P **P** 12 23 51.1 -0.7
MAJO IAmb IAmb 12 23 54.0
comp=Z,111nm,0.7s
MAJO **Matsushiro** 70.64 324 P **P** 12 23 51.4 -0.4
MAJO **Matsushiro** 70.64 324*d iP* **P** 12 23 51.1 -0.7
MAJO pmax pmax
comp=Z,102nm,0.7s
MAJO **Matsushiro** 70.64 324 P **P** 12 23 51.2 -0.7
MAJO PcP **PcP** 12 24 10.0 +0.9
MJB9 **Matsu-Tunnel** 70.64 324 P **P** 12 23 52.0 +0.1
MJB9 IAmb IAmb 12 23 54.9
comp=Z,108nm,0.6s
JMN **Monobe** 71.21 319 P **P** 12 23 55.5 +0.3
JMN IAmb IAmb 12 23 58.4
comp=Z,81nm,1.1s
JMN **Monobe** 71.21 319 P **P** 12 23 56.4 +1.1
JSD **Sado** 71.70 325 P **P** 12 23 57.9 -0.1
JSD IAmb IAmb 12 24 01.3
comp=Z,81nm,1.1s
JSD **Sado** 71.70 325 P **P** 12 23 58.7 +0.7
KPJI **Karang Pucung** 71.85 269 P **P** 12 24 00.4 +1.0
comp=Z,2μmcomp=Z,1μmcomp=Z,81nm,1.0s
SBUM **Sibu** 72.28 280 P **P** 12 24 01.6 -0.3
SBUM IAmb IAmb 12 24 05.2
comp=Z,138nm,1.8s
SBUM **Sibu** 72.28 280 P **P** 12 24 02.6 +0.7
JTM **Tenmabayashi** 72.30 328 P **P** 12 24 02.0 +0.6
JTM IAmb IAmb 12 24 04.3
comp=Z,124nm,0.8s
JTM **Tenmabayashi** 72.30 328 P **P** 12 24 02.5 +1.1
KIWB **Kanaga Island** 72.42 0 P **P** 12 24 00.8 -1.0
ADK **Adak** 72.45 1 P **P** 12 23 59.7 -2.3
ADK IAmb IAmb 12 24 08.8
comp=Z,56nm,0.8s
ADK **Adak** 72.45 1 P **P** 12 23 59.7 -2.3
ADK pmax pmax
comp=Z,56nm,0.8s
JNU **Nakatsue** 72.70 317 P **P** 12 24 03.5 -0.5
JNU IAmb IAmb 12 24 06.9
comp=Z,137nm,0.9s
JNU **Nakatsue** 72.70 317 P **P** 12 24 04.3 +0.4
ATKA **Atka Island** 72.83 2 P **P** 12 24 03.4 -0.8
BBJI **Bungbulang** 73.01 268 P **P** 12 24 06.7 +0.5
YOJ **Yonaguni jima** 73.13 305 P **P** 12 24 06.0 -0.6
YOJ **Yonaguni jima** 73.13 305 P **P** 12 24 07.4 +0.9
YOJ **Yonaguni jima** 73.13 305 P **P** 12 24 06.0 -0.6
YOJ pmax pmax
comp=Z,207nm,0.8s
TWGBT **Beinan** 73.76 303 P **P** 12 24 09.7 -0.5
YULB **Yu-li** 73.89 303 P **P** 12 24 09.8 -1.2
YULB IAmb IAmb 12 24 12.1
comp=Z,53nm,0.6s
YULB **Yu-li** 73.89 303 P **P** 12 24 11.0 +0.1
NIKH **Nikolski High** 73.94 6 P **P** 12 24 10.5 0.0
NIKH **Nikolski High** 73.94 6 P **P** 12 24 09.5 -1.0
baz=189,SNR=6.3
NACB **Ninganchiao** 74.07 304 P **P** 12 24 11.7 -0.2
DBJI **Dramaga** 74.15 269 P **P** 12 24 13.8 +1.1
comp=Z,179nm,0.9s
JKA **Kamikawa-asahi** 74.16 331 P **P** 12 24 12.5 +0.5
ASAJ **Asahikawa** 74.16 331 P **P** 12 24 12.5 +0.5
ASAJ pmax pmax
comp=Z,171nm,0.8s
SSLB **Suanglung** 74.36 303 P **P** 12 24 12.7 -0.9
TPUB **Ta-pu** 74.36 303 P **P** 12 24 12.9 -0.7
YHNB **Yeheng** 74.50 304 P **P** 12 24 13.8 -0.7
YHNB IAmb IAmb 12 24 16.9
comp=Z,103nm,0.8s
YHNB **Yeheng** 74.50 304 P **P** 12 24 14.7 +0.3
TATO **Taipei** 74.57 305 P **P** 12 24 14.3 -0.5
TATO **Taipei** 74.57 305 P **P** 12 24 14.5 -0.2
TPI **Tanjungpandan** 74.62 273 P **P** 12 24 17.2 +1.9
comp=Z,2μmcomp=Z,1μmcomp=Z,73nm,0.9s
UNV **Unalaska Valle** 75.04 7 P **P** 12 24 15.0 -1.7
UNV **Unalaska Valle** 75.04 7 P **P** 12 24 15.0 -1.7
baz=191
PPBI **Pangkal Pinang** 76.24 273 P **P** 12 24 24.8 +0.4
YSS **Yuzhno-Sakhali** 76.33 333 P **P** 12 24 23.1 -0.9
YSS IAmb IAmb 12 24 28.1
comp=Z,156nm,1.0s
YSS **Yuzhno-Sakhali** 76.33 333 P **P** 12 24 25.1 +1.1
YSS **Yuzhno-Sakhali** 76.33 333 *eP* **P** 12 24 26.3 +2.3
YSS *e**SP **sP** 12 27 10.6 +5.7
YSS *eS* **S** 12 33 31.7 +4.6
YSS pmax pmax
comp=Z,140nm,0.9s
YSS smax smax
comp=N,2μm,4.3s
YSS smax smax
comp=E,900nm,3.5s
PET **Petropavlovsk** 76.38 346 *eP* **P** 12 24 24.4 +0.2
PET *e**SP **sP** 12 27 03.1 -2.3
PET *eS* **S** 12 33 29.3 +1.8
PET *eSS* **SS** 12 38 42.5 +6.0
PET pmax pmax
comp=Z,65nm,1.9s
PET pmax pmax
comp=Z,300nm,13.2s
PET **Petropavlovsk** 76.38 346 P **P** 12 24 24.2 0.0
comp=Z,74nm,2.0s
FALS **False Pass** 76.42 8 P **P** 12 24 22.9 -1.4
baz=194
KASI **Kota Agung** 76.61 269 P **P** 12 24 26.5 +0.1
comp=Z,2μmcomp=Z,2μmcomp=Z,167nm,1.0s
PEA0B **Petropavlovsk-** 76.69 345 P **P** 12 24 25.4 -0.4
PEA0B IAmb IAmb 12 24 29.1
comp=Z,91nm,0.9s
PEA0B **Petropavlovsk-** 76.69 345*ce* **P** 12 24 26.9 +1.0
PETK **Petropavlovsk-** 76.69 345 P **P** 12 24 25.7 -0.2
comp=Z,37nm,0.7s,baz=127,slow=5.1,SNR=38
PETK PKiKP **PKiKP** 12 30 02.6 -1.1
comp=Z,3.2nm,0.9s,baz=86,slow=3.7,SNR=11
comp=Z,37nm,0.7s
PETK **Petropavlovsk-** 76.69 345 P **P** 12 24 25.3 -0.6
QZH **Quanzhou** 76.80 303 *iP* **P** 12 24 27.1 0.0
QZH *sP* **sP** 12 27 07.8 +0.2
QZH S **S** 12 33 33.3 +0.2
QZH pmax pmax
comp=Z,150nm,0.8s
QZH pmax pmax
comp=Z,970nm,7.4s
CHNA **Chernabura Isl** 76.99 11 P **P** 12 24 26.1 -1.3
baz=198
TJN **Taejon** 76.99 317 P **P** 12 24 28.7 +0.8
TJN **Taejon** 76.99 317 P **P** 12 24 28.8 +0.8
TJN **Taejon** 76.99 317 *iP* **P** 12 24 29.0 +1.1
LWLI **Liwa** 77.19 269 P **P** 12 24 30.2 +0.5
comp=Z,2μmcomp=Z,235nm,0.8s
MDSI **Maura Dua** 77.26 270 P **P** 12 24 28.6 -1.3
comp=Z,2μmcomp=Z,151nm,0.9s
KSRS **Korea Array** 77.31 319 P **P** 12 24 30.6 +0.9
comp=Z,20nm,0.7s,baz=127,slow=6.2,SNR=72
comp=Z,20nm,0.7s
KSAR **Wonju Array Be** 77.33 318 P **P** 12 24 29.8 +0.1
KSAR **Wonju Array Be** 77.33 318 P **P** 12 24 29.8 +0.1
SDPT **Sand Point** 77.34 10 P **P** 12 24 29.3 0.0

SDPT IAmb IAmb 12 24 29.8
comp=Z,63nm,0.8s
SDPT Sand Point 77.34 10 P **P** **12 24 28.7 -0.6**
baz=197
KS19 Wonju Array Si 77.38 319 P **P** **12 24 31.8 +1.7**
S12K Black Hills 77.43 9 P **P** **12 24 29.5 -0.4**
baz=195
FARB Farallon Islan 77.75 42 P **P** **12 24 33.1 +1.1**
FARB IAmb IAmb 12 24 34.8
comp=Z,167nm,1.1s
HULI Fort Hunter Li 77.84 44 P **P** **12 24 33.8 +1.2**
HULI IAmb IAmb 12 24 35.9
comp=Z,173nm,1.2s
SPIA Saint Paul Isl 78.00 4 P **P** **12 24 32.5 -0.4**
baz=187
LHSI Lahat 78.10 270 P **P** **12 24 35.5 +1.0**
comp=Z,2µmcomp=Z,90nm,1.1s
INCN Inchon 78.13 318 P **P** **12 24 35.2 +1.1**
SAO San Andreas Ge 78.15 43 P **P** **12 24 35.4 +1.2**
SAO IAmb IAmb 12 24 37.2
comp=Z,88nm,1.0s
SAO San Andreas Ge 78.15 43 P **P** **12 24 35.4 +1.2**
SAO pmax pmax
comp=Z,88nm,1.0s
PMPB Monarch Peak 78.24 44 P **P** **12 24 35.8 +1.0**
PMPB IAmb IAmb 12 24 37.9
comp=Z,108nm,1.2s
DSRI Dabo 78.30 274 P **P** **12 24 36.4 +0.9**
comp=Z,2µmcomp=Z,84nm,0.9s
BBGB Big Mountain B 78.30 43 P **P** **12 24 34.7 -0.4**
BBGB IAmb IAmb 12 24 38.7
comp=Z,98nm,1.1s
MHC Mount Hamilton 78.38 42 P **P** **12 24 36.0 +0.4**
MHC IAmb IAmb 12 24 38.7
comp=Z,89nm,1.1s
MHC Mount Hamilton 78.38 42 P **P** **12 24 36.0 +0.4**
MHC pmax pmax
comp=Z,89nm,1.1s
MNAI Manna 78.45 270 P **P** **12 24 36.1 -0.3**
CVS Carmenet Viney 78.48 41 P **P** **12 24 36.7 +0.7**
CVS IAmb IAmb 12 24 39.2
comp=Z,120nm,1.1s
HOPS Hopland Field 78.51 40 P **P** **12 24 37.4 +1.2**
HOPS IAmb IAmb 12 24 39.6
comp=Z,135nm,1.1s
GDXM Geysers 78.56 41 P **P** **12 24 37.6 +1.1**
CHIR Chirikof Islan 78.67 13 P **P** **12 24 36.1 -0.4**
CHIR IAmb IAmb 12 24 37.8
comp=Z,107nm,0.8s
CHIR Chirikof Islan 78.67 13 P **P** **12 24 36.3 -0.2**
baz=201
VLA Vladivostok 78.72 325 *i*P **P** **12 24 38.3 +1.2**
VLA pmax pmax
comp=Z,61nm,1.0s
MSHR Mys Shultsa 78.75 324 *ce*P **P** **12 24 38.1 +0.9**
MSHR pmax pmax
comp=Z,48nm,0.8s
TPRI Tanjung Pinang 78.85 275 P **P** **12 24 40.8 +2.3**
comp=Z,83nm,1.0s
KMRM Mail Ridge 78.91 39 P **P** **12 24 37.9 -0.4**
PSTR Posyet 78.99 324 *i*P **P** **12 24 40.2 +1.7**
KSI Kapahiang 79.03 270 P **P** **12 24 40.5 +0.9**
HKPS Hong Kong Po S 79.07 299 P **P** **12 24 40.2 +0.8**
USRK Ussuriysk Ar. 79.39 326 P **P** **12 24 41.5 +0.8**
comp=Z,80nm,0.8s,baz=126,slow=3.3,SNR=50
comp=Z,80nm,0.8s
O02D Mt. Diablo Mer 79.42 40 P **P** **12 24 41.9 +0.9**
O02D IAmb IAmb 12 24 44.5
comp=Z,150nm,1.1s
DLV Lat 79.44 287 P **P** **12 24 42.6 +0.8**
TYV Tymovskoe 79.47 336 *e*P **P** **12 24 43.1 +2.2**
TYV pmax pmax
comp=Z,83nm,1.6s
TYV pmax pmax
comp=Z,900nm,6.7s
BORC Borrego Spring 79.50 48 P **P** **12 24 42.3 +0.8**
BORC IAmb IAmb 12 24 44.4
comp=Z,109nm,1.2s
YUH Yuha Desert 79.51 49 P **P** **12 24 42.5 +0.9**
MASI Maura Aman, Be 79.54 271 P **P** **12 24 42.8 +0.6**
comp=Z,4µmcomp=Z,277nm,1.2s
SII Sitkinak Islan 79.66 13 P **P** **12 24 42.5 +0.7**
SII Sitkinak Islan 79.66 13 P **P** **12 24 42.3 +0.5**
baz=202
PFO Pinyon Flats O 79.66 48 *i*P **P** **12 24 42.7 +0.2**
PFO pmax pmax
comp=Z,84nm,1.2s
PFO Pinyon Flats O 79.66 48 P **P** **12 24 43.6 +1.1**
BTDF Bukit Timah Da 79.71 275 P **P** **12 24 43.8 +0.7**
MYKOM Kota Tinggi 79.79 276 P **P** **12 24 44.3 +0.8**
R16K Pilot Point 79.95 11 P **P** **12 24 44.2 +1.0**
baz=199
BELC Belle Mtn. Jos 80.19 48 P **P** **12 24 45.8 +0.5**
BELC IAmb IAmb 12 24 48.2
comp=Z,100nm,1.3s
R17L Mt. Peulik Vol 80.23 11 P **P** **12 24 44.0 -0.7**
baz=200
NJ2 Nanjing 80.28 310 ⇑P **P** **12 24 48.3 +2.7**
NJ2 pmax pmax
comp=Z,55nm,0.9s
GSC Goldstone, Bar 80.36 46 P **P** **12 24 46.8 +0.7**
GSC Goldstone, Bar 80.36 46 P **P** **12 24 46.8 +0.7**
GSC pmax pmax
comp=Z,56nm,1.2s
BC3 Big Chuckawall 80.39 49 P **P** **12 24 46.3 0.0**
BC3 IAmb IAmb 12 24 49.6
comp=Z,119nm,1.6s
OHAK Old Harbor 80.46 13 P **P** **12 24 45.7 -0.2**
OHAK Old Harbor 80.46 13 P **P** **12 24 45.6 -0.3**
baz=203
PMSA Palmer Station 80.86 157 P **P** **12 24 49.3 +1.2**
PMSA IAmb IAmb 12 27 35.8
comp=Z,57nm,0.7s
Q17K Contact Creek 80.91 12 P **P** **12 24 47.8 -0.6**
baz=201
MDJ Mudanjiang 80.95 325 P **P** **12 24 48.8 0.0**
MDJ S **SKSac** **12 34 18.8 +0.2**
MDJ pmax pmax
comp=Z,35nm,2.1s
MDJ pmax pmax
comp=Z,2µm,6.0s
MDJ Mudanjiang 80.95 325 P **P** **12 24 50.3 +1.5**
MDJ Mudanjiang 80.95 325 P **P** **12 24 48.7 0.0**
FURC Furnace Creek, 80.97 45 P **P** **12 24 49.7 +0.6**
O14K Tigyukauivet M 80.98 8 P **P** **12 24 48.9 +0.4**
baz=196
BLYC Blythe 81.09 49 P **P** **12 24 50.5 +0.7**
BLYC IAmb IAmb 12 24 53.0
comp=Z,65nm,1.0s
O15K Ungalikthiuk R 81.11 9 P **P** **12 24 47.9 -1.4**
baz=197,SNR=6.5
KDAK Kodiak Island 81.13 13 *i*P **P** **12 24 49.5 +0.1**
KDAK pmax pmax
comp=Z,71nm,1.0s
KDAK Kodiak Island 81.13 13 P **P** **12 24 48.8 -0.6**
baz=204
NVAR Mina Array Bea 81.15 43 P **P** **12 24 51.1 +0.8**
comp=Z,52nm,1.0s,baz=224,slow=7.8,SNR=173
NVAR pP **pwP** **12 26 41.8 -1.6**
comp=Z,2.0nm,0.6s,baz=220,slow=7.7,SNR=2.5
comp=Z,52nm,1.0s
Q16K King Salmon 81.16 11 P **P** **12 24 48.6 -0.9**
baz=200,SNR=18
QIZ Qiongzhong 81.21 294 P **P** **12 24 51.3 +0.6**
QIZ sP **sP** **12 27 32.4 +0.4**
QIZ S **SKSac** **12 34 20.9 -0.6**
QIZ pmax pmax
comp=Z,580nm,10.0s
P16K Nushagak River 81.27 10 P **P** **12 24 49.3 -0.8**
baz=199,SNR=12
MAW Mawson 81.29 200 P **P** **12 24 50.6 +0.4**
comp=Z,5.7nm,0.5s,baz=129,slow=9.0,SNR=28
MAW pP **pP** **12 26 40.4 +0.1**
comp=Z,13nm,1.1s,baz=116,slow=5.2,SNR=4.3
comp=Z,5.7nm,0.5s
Q18K Katmai Hardscr 81.44 12 P **P** **12 24 50.2 -0.9**
baz=202,SNR=24
M11K Mekoryuk 81.51 6 P **P** **12 24 50.5 -0.7**
baz=191
N14K Kuskokwak Cree 81.57 8 P **P** **12 24 51.1 -0.5**
baz=195,SNR=20
P17K Kvichak River 81.69 11 P **P** **12 24 51.6 -0.6**
baz=200,SNR=22
O16K Kokwok River B 81.78 10 P **P** **12 24 51.8 -0.9**
baz=199,SNR=17
M13K Dall Lake 81.84 7 P **P** **12 24 53.0 0.0**
baz=194
BKNI Bangkinang 81.89 273 P **P** **12 24 55.3 +0.9**
Q20K Shuyak Island 81.93 13 P **P** **12 24 53.7 +0.2**
baz=204
GRNR Gornyy 81.94 333 ⇑*i*P **P** **12 24 54.7 +1.0**
GRNR pmax pmax
comp=Z,10.0nm,0.8s
PDSI Padang 81.98 272 P **P** **12 24 55.5 +0.6**
comp=Z,43nm,1.0s
N15K Kwethluk River 82.03 9 P **P** **12 24 53.9 0.0**
baz=197,SNR=12
P18K Big Mountain, 82.09 11 P **P** **12 24 53.0 -1.4**
baz=201,SNR=12
O17K Koliganek Bris 82.12 10 P **P** **12 24 53.8 -0.6**
baz=200,SNR=8.2
K05A Summer Lake 82.12 39 P **P** **12 24 56.1 +0.9**
K05A IAmb IAmb 12 24 58.2
comp=Z,188nm,1.1s
DL2 Dalian 82.15 317 P **P** **12 24 56.5 +1.4**
DL2 SKS **SKSac** **12 34 27.4 +0.6**
DL2 S **SKKSac** **12 34 29.8 -1.8**
DL2 pmax pmax
comp=Z,94nm,1.0s
DL2 pmax pmax
comp=Z,230nm,6.3s
M14K Bethel 82.34 8 P **P** **12 24 55.5 +0.1**
M14K IAmb IAmb 12 24 57.5
comp=Z,63nm,0.9s
M14K Bethel 82.34 8 P **P** **12 24 55.2 -0.3**
baz=195,SNR=14
M15K Kasigluk River 82.45 8 P **P** **12 24 56.1 0.0**
baz=196
N16K Nishlik Lake 82.52 9 P **P** **12 24 56.7 +0.3**
baz=198
O18K Koktuh Hills 82.53 11 P **P** **12 24 56.2 -0.3**
baz=201,SNR=23
SNY Shenyang 82.63 320 ⇓P **P** **12 24 59.0 +1.6**
SNY pmax pmax
comp=Z,31nm,1.0s
P19K Oil Pt 82.72 12 P **P** **12 24 56.6 -0.9**
P19K Oil Pt 82.72 12 P **P** **12 24 57.0 -0.5**
baz=203
CN2 Changchun 82.73 322 *e*P **P** **12 24 58.8 +0.9**
CN2 *ep*P pP 12 26 50.5 +2.1
CN2 *es*P sP 12 27 41.3 +1.2
CN2 *e*S **S** **12 34 36.6 +3.3**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,800nm,5.1s
CNSH ChangSha 82.80 304 P **P** **12 24 58.6 0.0**
CNSH sP **sP** **12 27 40.6 +0.1**
CNSH PP **PP** **12 28 17.0 -1.2**
CNSH S **SKSac** **12 34 32.4 +0.9**
CNSH pmax pmax
comp=Z,34nm,1.0s
N17K Nushagak Hills 82.82 10 P **P** **12 24 57.7 -0.3**
baz=199,SNR=7.6
L14K Kuka Creek 82.82 7 P **P** **12 24 57.9 0.0**
baz=194
WHN Wuhan 82.84 306 P **P** **12 24 59.0 +0.2**
WHN sP **sP** **12 27 43.5 +2.8**
WHN PP **PP** **12 28 16.5 -2.0**
WHN pmax pmax
comp=Z,180nm,1.0s
WHN pmax pmax
comp=Z,2µm,4.6s
BNX BinXian 82.86 325 ⇑P **P** **12 24 58.6 +0.1**
BNX sP **sP** **12 27 41.3 +0.3**
BNX S **S** **12 34 35.3 +0.8**
BNX pmax pmax
comp=Z,68nm,1.0s
BNX pmax pmax
comp=Z,970nm,6.2s
M16K Timber Creek 83.01 9 P **P** **12 24 59.4 +0.5**
baz=198,SNR=28
TUC Tucson 83.04 52 P **P** **12 25 01.5 +1.7**
HOM Homer 83.05 13 P **P** **12 24 59.4 +0.3**
baz=204
N18K Kilae Creek 83.18 11 P **P** **12 24 59.4 -0.4**
baz=201,SNR=7.0
K13K Kusilvak Mount 83.19 6 P **P** **12 24 58.5 -1.3**
baz=192,SNR=11
O20K Slope Mountain 83.23 12 P **P** **12 24 59.2 -1.0**
baz=204
L15K Ungalak Mounta 83.30 8 P **P** **12 24 59.4 -0.9**
baz=195
BRSE Bradley Lake S 83.31 13 P **P** **12 24 59.5 -1.0**
baz=205,SNR=12
IPM Ipoh 83.39 277 P **P** **12 25 02.3 +0.3**
MNSI Mandailing Nat 83.42 273 P **P** **12 25 02.8 +0.7**
comp=Z,65nm,0.9s
N19K Bonanza Creek 83.55 11 P **P** **12 25 00.6 -1.1**
baz=202
L16K Owhat River 83.60 9 P **P** **12 25 01.7 -0.1**
L16K Owhat River 83.60 9 P **P** **12 25 01.8 -0.1**
baz=197,SNR=13
M17K Holitna River 83.60 10 P **P** **12 25 01.5 -0.4**
baz=199
TIA Tai'an 83.69 312 P **P** **12 25 03.6 +0.7**
TIA sP **sP** **12 27 48.3 +3.2**
TIA PP **PP** **12 28 26.8 +1.5**
TIA S **S** **12 34 42.8 -0.3**
TIA pmax pmax
comp=Z,69nm,1.0s
TIA pmax pmax
comp=Z,990nm,6.2s
K15K Wolf Creek Mou 83.89 8 P **P** **12 25 03.0 -0.3**
baz=195,SNR=16
SEW Seward 83.92 14 P **P** **12 25 03.3 -0.2**
SEW Seward 83.92 14 P **P** **12 25 03.7 +0.3**
baz=206,SNR=9.2
M18K Stony River 83.95 10 P **P** **12 25 03.4 -0.2**
baz=201,SNR=14
KULM Kulim 84.04 278 P **P** **12 25 05.9 +0.7**
J14K Nanvaranak Lak 84.10 7 P **P** **12 25 04.2 0.0**
baz=193
SLKM Skilak Lake 84.12 13 P **P** **12 25 03.8 -0.7**
SLKM IAmb IAmb 12 25 06.1
comp=Z,98nm,0.9s
CAPN Captain Cook N 84.16 13 P **P** **12 25 04.8 +0.2**
baz=205
L17K Donlin 84.17 9 P **P** **12 25 04.8 +0.2**
baz=198,SNR=13
MA2 Magadan 84.20 345 *i*P **P** **12 25 04.4 -0.5**
MA2 pmax pmax
comp=Z,201nm,3.2s
O22K Cooper Landing 84.20 14 P **P** **12 25 04.4 -0.5**
O22K IAmb IAmb 12 25 16.9
comp=Z,72nm,0.8s
O22K Cooper Landing 84.20 14 P **P** **12 25 04.3 -0.5**
baz=206
SPCR Spurr Chakacha 84.34 12 P **P** **12 25 04.2 -1.5**
baz=204,SNR=9.6
L18K Granite Mounta 84.50 10 P **P** **12 25 06.4 +0.2**
baz=200,SNR=26
GAMB Gambell 84.50 3 P **P** **12 25 06.1 -0.1**
baz=186
M19K Big River Lodg 84.59 11 P **P** **12 25 06.5 -0.2**
baz=202
K17K Iditarod 84.72 9 P **P** **12 25 07.4 0.0**
baz=198,SNR=7.5
PSI Prapat 84.74 275 P **P** **12 25 07.7 -1.0**
comp=Z,48nm,1.0s,baz=115,slow=5.5,SNR=28
PSI PP **PP** **12 28 34.5 +0.3**
comp=Z,11nm,0.7s,baz=173,slow=4.8,SNR=7.7
comp=Z,48nm,1.0s
PSI Prapat 84.74 275 P **P** **12 25 07.8 -1.0**
RC01 Rabbit Creek A 84.75 13 P **P** **12 25 07.4 -0.1**
RC01 IAmb IAmb 12 25 08.7
comp=Z,61nm,1.1s
RC01 Rabbit Creek A 84.75 13 P **P** **12 25 06.8 -0.7**
baz=206,SNR=7.0
L19K White Mountain 84.76 11 P **P** **12 25 07.4 -0.3**
baz=202,SNR=29
M20K Styx River 84.79 11 P **P** **12 25 06.9 -0.9**
baz=203,SNR=6.6
PWL Port Wells 84.85 14 P **P** **12 25 06.8 -1.3**
baz=208
SUA Susitna One 84.88 13 P **P** **12 25 07.2 -1.1**
baz=205,SNR=10
J16K Anvik River 84.96 8 P **P** **12 25 08.4 -0.1**
baz=196
CRAG Craig 84.97 24 P **P** **12 25 08.8 +0.1**
baz=221
KAIM Kayak Island 84.99 16 P **P** **12 25 08.0 -0.7**
baz=211
GLI Glacier Island 85.15 15 P **P** **12 25 09.0 -0.5**
baz=209,SNR=11
EYAK Cordova Ski Ar 85.19 15 P **P** **12 25 10.5 +0.9**
EYAK Cordova Ski Ar 85.19 15 P **P** **12 25 09.0 -0.7**
baz=210
SKT Skwentna 85.19 12 P **P** **12 25 07.8 -1.9**
baz=205,SNR=7.3
L20K Farewell, AK 85.21 11 P **P** **12 25 09.2 -0.6**
baz=202
J17K VABM Dome 85.27 8 P **P** **12 25 10.1 +0.1**
baz=198,SNR=8.9
M22K Willow 85.27 13 P **P** **12 25 09.0 -1.0**
baz=206,SNR=18
KNK Knik Glacier 85.32 14 P **P** **12 25 08.7 -1.7**
baz=207,SNR=15
PMR Palmer 85.33 13 P **P** **12 25 09.3 -1.0**
PMR Palmer 85.33 13 P **P** **12 25 09.4 -1.0**
baz=207,SNR=12
SIT Sitka 85.39 22 P **P** **12 25 09.6 -1.1**
baz=219
V35K Ketchikan 85.44 24 P **P** **12 25 10.2 -0.7**
baz=223
BGLC Bering Glacier 85.45 17 P **P** **12 25 11.3 +0.5**
baz=212
U33K Whale Pass 85.46 23 P **P** **12 25 11.2 +0.2**
baz=221
GSI Gunungsitoli 85.47 273 P **P** **12 25 12.4 +0.2**
GSI Gunungsitoli 85.47 273 P **P** **12 25 13.4 +1.2**
comp=Z,3µmcomp=Z,174nm,1.1s
I17K Unalakleet 85.53 7 P **P** **12 25 11.0 -0.2**
baz=196
GHO Glory Hole Cre 85.54 13 P **P** **12 25 10.6 -0.9**
GHO IAmb IAmb 12 25 13.1
comp=Z,89nm,0.9s
J18K Innoko River 85.67 9 P **P** **12 25 11.5 -0.5**
baz=200,SNR=19
SML Sawmill 85.70 14 P **P** **12 25 12.2 0.0**
baz=208
ANM Nome 85.70 5 P **P** **12 25 12.4 +0.4**
baz=192
HEH HeiHe 85.74 328 *e*P **P** **12 25 12.8 +0.2**
HEH pmax pmax
comp=Z,48nm,0.8s
S31K Pelican 85.79 21 P **P** **12 25 12.7 +0.1**
baz=218
M23K Glacier View 85.82 14 P **P** **12 25 12.2 -0.5**
baz=208,SNR=8.8
CUT Chulitna 85.83 12 P **P** **12 25 11.4 -1.2**
baz=206,SNR=19
BMRM Bremner River 85.83 16 P **P** **12 25 12.9 +0.1**
baz=211,SNR=9.8
MESA MESA 85.86 17 P **P** **12 25 12.8 -0.3**
baz=213
PPLA Purkeypile 85.90 11 P **P** **12 25 12.2 -1.0**
baz=204
SCM Sheep Creek Mo 85.94 14 P **P** **12 25 12.8 -0.6**
baz=208,SNR=28
HNS HongShan 85.96 312 ⇓P **P** **12 25 14.4 +0.5**
HNS sP **sP** **12 28 00.5 +3.7**
HNS SKS **SKSac** **12 34 49.8 -1.2**
HNS S **S** **12 35 03.0 -2.0**
HNS sS **sS** **12 38 24.9 +1.9**
HNS pmax pmax
comp=Z,61nm,1.3s
HNS pmax pmax
comp=Z,820nm,5.7s
S32K Killisnoo 85.97 22 P **P** **12 25 13.0 -0.5**
baz=220
KLU Klutina 85.97 15 P **P** **12 25 13.0 -0.5**
baz=210
WRAK Wrangell Islan 85.97 23 P **P** **12 25 13.0 -0.5**
baz=222,SNR=5.3
K20K Telida 85.99 10 P **P** **12 25 12.8 -0.7**
baz=202,SNR=24
CRQE Cirque 86.04 16 P **P** **12 25 13.3 -0.6**
baz=212,SNR=14
T33K Petersburg 86.05 23 P **P** **12 25 13.4 -0.5**
baz=221
KCSI Kotacane, Aceh 86.07 275 P **P** **12 25 15.9 +0.8**
H16K Elim 86.08 7 P **P** **12 25 13.4 -0.4**
baz=195
TGL Tana Glacier 86.11 16 P **P** **12 25 14.2 -0.1**
TGL IAmb IAmb 12 25 15.9
comp=Z,49nm,1.0s
ISLE Juniper Island 86.11 17 P **P** **12 25 13.8 -0.5**
ISLE IAmb IAmb 12 25 15.9
comp=Z,47nm,1.0s
LYN LuoYang 86.16 309 P **P** **12 25 15.4 +0.4**
LYN pP pwP 12 27 11.3 +1.8
LYN sP sP 12 27 58.6 +0.7
LYN PP **PP** **12 28 44.9 -0.2**
LYN SKS **SKSac** **12 34 51.0 -1.4**
LYN S **ScS** **12 35 11.8 -1.4**
LYN sS sS 12 38 29.1 +3.9
LYN pmax pmax
comp=Z,130nm,0.8s
LYN pmax pmax
comp=Z,1µm,8.9s
PNL Peninsula 86.17 18 P **P** **12 25 13.9 -0.5**
baz=216
G15K Niukluk 86.25 6 P **P** **12 25 14.3 -0.3**
baz=193
PINM Pinnacle 86.27 18 P **P** **12 25 14.2 -0.8**
baz=215
BJT Baijiatuau 86.30 315 P **P** **12 25 16.8 +1.3**
R31K City Hall, Gus 86.31 21 P **P** **12 25 14.2 -0.8**
baz=219
BJI Beijing 86.31 315 P **P** **12 25 15.8 +0.3**
BJI sP **sP** **12 28 00.9 +2.4**
BJI S **S** **12 35 11.1 +2.9**
BJI sS **sS** **12 38 28.8 +2.4**
BJI pmax pmax
comp=Z,10.0nm,1.0s
BJI pmax pmax
comp=Z,410nm,3.9s
J19K Poorman 86.34 10 P **P** **12 25 14.9 -0.3**
baz=201
N25K Chitina, Valde 86.39 15 P **P** **12 25 15.3 -0.2**
baz=211,SNR=14
SYO Syowa Base 86.41 193 ⇑*e*P **P** **12 25 15.0 -0.6**
SYO Syowa Base 86.41 193 ⇓*e*PcP **PcP** **12 25 18.4 +1.1**
ENH Enshi 86.43 304 P **P** **12 25 17.2 +0.8**
ENH Enshi 86.43 304 P **P** **12 25 15.5 -0.9**
M24K Tolsona, Glenn 86.45 14 P **P** **12 25 15.7 0.0**
baz=209,SNR=6.7
TNA Tin City 86.49 4 P **P** **12 25 15.0 -0.8**
baz=189
WAT6 Susitna Watana 86.51 13 P **P** **12 25 14.7 -1.5**
baz=208,SNR=24
F14K Arctic Creek 86.52 5 P **P** **12 25 15.3 -0.7**
baz=191
HVU Hansel Valley 86.53 43 P **P** **12 25 17.0 +0.2**
HVU Hansel Valley 86.53 43 P **P** **12 25 17.0 +0.2**
HVU pmax pmax
comp=Z,13nm,0.9s
WAT1 Susitna Watana 86.56 13 P **P** **12 25 15.2 -1.0**
baz=207
MCARA McCarthy VSAT 86.59 16 P **P** **12 25 16.6 +0.2**
baz=212,SNR=7.2
R32K Eaglecrest 86.61 21 P **P** **12 25 16.3 -0.2**
baz=220
P29M Windy Craggy 86.63 19 P **P** **12 25 15.9 -0.8**
baz=217
H17K Granite Mounta 86.64 8 P **P** **12 25 15.7 -0.8**
baz=197
CTG Chitna Glacier 86.68 17 P **P** **12 25 15.3 -1.7**
baz=214,SNR=11
J20K Nowinta River 86.74 10 P **P** **12 25 15.9 -1.2**
baz=202,SNR=9.0
TRF Thorofare Moun 86.77 12 P **P** **12 25 15.5 -1.9**
baz=206,SNR=60
CHUM Lake Minchumin 86.78 11 P **P** **12 25 15.9 -1.3**
baz=204,SNR=16
SEY Seymchan 86.79 347 *ce*P **P** **12 25 17.7 +0.5**
SEY pmax pmax
comp=Z,162nm,2.5s
G16K Koyuk River 86.80 6 P **P** **12 25 17.0 -0.2**
baz=194
O28M Mount Upton 86.84 17 P **P** **12 25 17.6 -0.4**
baz=215
GCSA Galena City Sc 86.86 9 P **P** **12 25 17.4 -0.1**
baz=200,SNR=9.3
F15K North Star Dit 86.89 5 P **P** **12 25 18.0 +0.3**
baz=192
O29M Mount Kennedy 86.92 18 P **P** **12 25 18.2 0.0**
baz=216

PLBC **Pleasant Camp** 86.92 20 P P 12 25 17.9 0.0
baz=218,SNR=6.9
HARP **HAARP** 86.94 15 P P 12 25 17.6 -0.5
baz=210,SNR=6.8
GYA **Guiyang** 87.02 300 ⇑P P 12 25 20.1 +0.7
GYA pP pP 12 27 10.8 -0.1
GYA PP **PP** 12 28 52.0 -0.2
GYA SKS **SKSac** 12 34 57.6 -0.6
GYA S **S** 12 35 17.8 +2.0
GYA sS sS 12 38 35.1 +0.7
GYA SS **SS** 12 41 16.9 +2.6
GYA pmax pmax
comp=Z,19nm,1.9s
GYA pmax pmax
comp=Z,700nm,6.6s
DHY **Denali Highway** 87.03 13 P P 12 25 18.2 -0.4
baz=208,SNR=8.8
H18K **Honhosa River** 87.04 8 P P 12 25 17.8 -0.6
baz=198
TXAR **Lajitas Array** 87.07 57 P P 12 25 20.4 +0.8
comp=Z,22nm|0.9s,baz=217,slow=5.8,SNR=145
TXAR pP **pwP** 12 27 13.8 -0.5
comp=Z,3.8nm,0.9s,baz=211,slow=8.2,SNR=4.8
TXAR PKKPbc **PKKPbc** 12 43 09.1 +0.1
comp=Z,0.8nm,0.7s,baz=158,slow=1.8,SNR=10
comp=Z,22nm,0.9s
G17K **Kiwalik Mounta** 87.09 7 P P 12 25 18.2 -0.5
baz=196
T35M **Bob Quinn** 87.17 24 P P 12 25 19.2 0.0
baz=224
BPAW **Bear Paw Mtn.** 87.22 11 P P 12 25 18.5 -0.8
baz=205,SNR=7.1
SKAG **Skagway** 87.26 20 P P 12 25 20.9 +1.4
SKAG **Skagway** 87.26 20 P P 12 25 17.8 -1.7
baz=219
P30M **Million Dollar** 87.26 19 P P 12 25 18.6 -1.0
baz=218
I20K **Naaghedeneel** 87.27 10 P P 12 25 18.9 -0.6
baz=202
MCK **McKinley** 87.29 12 P P 12 25 18.4 -1.2
baz=207,SNR=50
TROLL **Troll, Antarti** 87.36 180 ⇑P P 12 25 20.1 -0.1
comp=Z,211nm,0.3s
TROLL ⇓pP **pP** 12 27 11.6 -0.1
TROLL ⇑SKSac **SKSac** 12 34 58.7 -0.2
TROLL ⇓S **S** 12 35 16.8 -0.7
PAX **Paxson** 87.36 14 P P 12 25 18.9 -1.2
baz=210,SNR=9.9
LHMI **Lhok Sumawe** 87.45 277 P P 12 25 22.9 +1.4
LHMI **Lhok Sumawe** 87.45 277 P P 12 25 24.7 +3.2
comp=Z,2µmcomp=Z,81nm,0.7s
M26K **Nabesna, AK** 87.46 15 P P 12 25 19.7 -0.9
baz=212
ANMO **Albuquerque** 87.47 51 *ce*P P 12 25 22.3 +0.9
ANMO pmax pmax
comp=Z,41nm,1.3s
ANMO **Albuquerque** 87.47 51 P P 12 25 22.0 +0.6
YUK6 **Outpost Mounta** 87.50 18 P P 12 25 20.5 -0.4
baz=216
S34M **Telegraph Cree** 87.53 23 P P 12 25 21.1 +0.2
baz=223,SNR=18
YUK3 **Moose Creek** 87.59 17 P P 12 25 21.0 -0.4
baz=215,SNR=40
MLSI **Meulaboh, Aceh** 87.61 275 P P 12 25 23.8 +1.5
comp=Z,2µmcomp=Z,116nm,1.2s
SNAA **Sanae** 87.63 178 ⇑P P 12 25 21.0 -0.4
comp=Z,45nm,0.4s
SNAA ⇓pP **pP** 12 27 13.0 0.0
SNAA ⇑SKSac **SKSac** 12 34 59.9 -0.5
SNAA ⇓S **S** 12 35 19.9 +0.1
SNAA **Sanae** 87.63 178 P P 12 25 20.8 -0.6
comp=Z,3.2nm,0.6s,baz=201,slow=4.9,SNR=20
SNAA pP **pP** 12 27 14.3 +1.2
comp=Z,5.7nm,1.1s,baz=209,slow=6.9,SNR=4.7
SNAA PKKPbc **PKKPbc** 12 43 06.3 -2.5
comp=Z,1.6nm,1.0s,baz=339,slow=2.4,SNR=4.6
comp=Z,3.2nm,0.6s
SNAA **Sanae** 87.63 178 *ce*P P 12 25 19.6 -1.8
SNAA pmax pmax
comp=Z,8.0nm,1.3s
H19K **Roundabout Mou** 87.66 9 P P 12 25 21.1 -0.1
baz=200
HYT **Haines Junctio** 87.66 18 P P 12 25 21.3 -0.3
baz=217,SNR=8.7
TIY **Taiyuan** 87.69 312 *e*P P 12 25 25.5 +3.3
TIY sP **sP** 12 28 09.0 +3.3
TIY SKS **SKSac** 12 35 02.5 +0.9
TIY S **S** 12 35 22.4 +0.9
TIY sS **sS** 12 38 40.6 +0.1
TIY SS **SS** 12 41 21.1 -2.3
TIY pmax pmax
comp=Z,41nm,0.6s
TIY pmax pmax
comp=Z,350nm,5.2s
M27K **Edge Creek, AK** 87.71 16 P P 12 25 21.7 -0.1
baz=213
G18K **Tagagawik** 87.71 8 P P 12 25 21.3 -0.3
baz=198
MENT **Mentasta** 87.74 15 P P 12 25 21.6 -0.2
YUK4 **Talbot Arm** 87.75 18 P P 12 25 21.8 -0.3
baz=216
VNA3 **Neumayer Olymp** 87.75 176 ⇑P P 12 25 21.7 -0.2
comp=Z,30nm,0.3s
VNA3 ⇓pP **pP** 12 27 13.7 0.0
VNA3 ⇑SKSac **SKSac** 12 34 59.5 -1.5
VNA3 ⇓S **S** 12 35 21.3 +0.4
H20K **Anotleneega Mo** 87.86 9 P P 12 25 21.5 -0.8
baz=201,SNR=16
P32M **Atlin** 87.88 21 P P 12 25 21.4 -1.2
baz=221,SNR=7.9
Q32M **Nakina River** 87.90 22 P P 12 25 21.8 -1.0
baz=222
L26K **Log Cabin Wild** 87.91 15 P P 12 25 21.8 -0.7
baz=212,SNR=16
F17K **Baldwin Pennin** 87.94 7 P P 12 25 22.1 -0.4
baz=196
K24K **Donnelly Dome** 88.02 14 P P 12 25 21.6 -1.5
baz=210,SNR=26
BVCY **Beaver Creek** 88.02 16 P P 12 25 22.5 -0.6
baz=214,SNR=26
I21K **Tanana** 88.03 11 P P 12 25 22.1 -0.9
baz=204,SNR=54
NEA2 **Nenana** 88.03 12 P P 12 25 21.4 -1.7
baz=207,SNR=30
O30N **Mendenhall** 88.04 19 P P 12 25 20.9 -2.4
baz=218,SNR=11
ZEA **Zeya** 88.06 331 *e*P P 12 25 24.7 +1.3
ZEA pmax pmax
comp=Z,20nm,0.9s
MLY **Manley** 88.12 11 P P 12 25 22.1 -1.4
baz=205,SNR=26
G19K **Purcell Mounta** 88.15 8 P P 12 25 22.4 -1.2
baz=199
RIDG **Independent Ri** 88.17 14 P P 12 25 23.0 -0.9
baz=211,SNR=11
VNA2 **Neumayer--Watz** 88.20 177 ⇑P P 12 25 24.3 +0.3
comp=Z,18nm,0.5s,baz=167,slow=4.5
VNA2 ⇓pP **pP** 12 27 16.2 +0.3
baz=165,slow=9.7
VNA2 ⇑SKSac **SKSac** 12 35 03.5 0.0
baz=352,slow=29
VNA2 ⇓S **S** 12 35 23.0 -2.1
baz=200,slow=32
F18K **Selawik** 88.27 7 P P 12 25 23.9 -0.2
baz=197
N30M **Aishikik Lake** 88.29 18 P P 12 25 23.6 -0.8
baz=218
HDA **Harding Lake** 88.30 13 P P 12 25 23.5 -0.8
baz=209,SNR=45
DLBC **Dease Lake** 88.31 23 P P 12 25 24.7 +0.1
baz=224,SNR=8.5
L27K **Beaver Creek,** 88.31 16 P P 12 25 24.5 +0.1
baz=213
WHY **Whitehorse** 88.33 20 P P 12 25 24.9 +0.2
baz=220,SNR=9.2
H21K **Melozitna Rive** 88.34 10 P P 12 25 23.5 -1.0
baz=203,SNR=26
NVL **N'Iazarevskaya** 88.36 183 *e*P P 12 25 27.1 +2.4
NVL *e* 12 29 03.8
NVL *e*PPP PPP 12 31 04.4
NVL *e*S **SKSac** 12 35 07.2 +2.8
NVL *e*SS **SS** 12 41 35.6 +5.9
NVL *e*SSS SSS 12 45 17.0
NVL pmax pmax
comp=Z,18nm,0.6s
NVL smax smax
comp=N,543nm,11.0s
XLT **XiLinHaoTe** 88.36 319 *e*P P 12 25 27.1 +1.9
XLT sP sP 12 28 12.9 +4.2
XLT PP **PP** 12 29 00.1 -2.4
XLT SKS **SKSac** 12 35 01.8 -3.5
XLT S **ScS** 12 35 31.0 -0.2
XLT pmax pmax
comp=N,38nm,1.3s
XLT pmax pmax
comp=N,530nm,3.6s
VNA1 **Neumayer--Stat** 88.42 177 ⇑P P 12 25 24.8 -0.2
comp=Z,8.0nm,0.4s
I23K **Minto, Yukon-K** 88.48 12 P P 12 25 24.2 -0.9
baz=206,SNR=9.0
E17K **Hotham Inlet** 88.50 6 P P 12 25 24.1 -1.0
baz=195,SNR=11
COLA **College** 88.53 12 P P 12 25 24.0 -1.3
COLA **College** 88.53 12 *i*P P 12 25 24.3 -1.0
COLA pmax pmax
comp=Z,67nm,0.8s
COLA **College** 88.53 12 P P 12 25 24.7 -0.6
baz=208
COLA **College** 88.53 12 P P 12 25 24.1 -1.3
XAN **Xi'an** 88.53 307 ⇑P P 12 25 27.3 +1.1
XAN SKS **SKSac** 12 35 03.8 -2.9
XAN S **SKKSac** 12 35 24.3 +4.4
XAN pmax pmax
comp=Z,120nm,1.0s
XAN pmax pmax
comp=Z,1µm,6.7s
SCRK **Sand Creek** 88.57 14 P P 12 25 24.9 -0.8
baz=211,SNR=21
ILAR **Eielson Array** 88.63 13 P P 12 25 24.6 -1.3
comp=Z,16nm,0.9s,baz=216,slow=5.3,SNR=179
ILAR pP **pP** 12 27 17.7 -0.4
comp=Z,7.4nm,1.2s,baz=224,slow=5.2,SNR=3.7
ILAR PKKP **PKKPdf** 12 42 58.9 -2.6
comp=Z,0.2nm,0.6s,baz=350,slow=1.6,SNR=4.1
comp=Z,16nm,0.9s
P33M **Teslin, Yukon** 88.65 21 P P 12 25 26.1 -0.1
baz=221,SNR=16
R33M **Jennings River** 88.67 22 P P 12 25 26.4 +0.1
baz=223,SNR=8.5
M29M **Somme Creek** 88.69 17 P P 12 25 25.8 -0.5
baz=216
N31M **Braeburn, Yuko** 88.70 19 P P 12 25 25.7 -0.6
baz=219,SNR=13
F19K **Shaleruckik Mo** 88.72 8 P P 12 25 25.1 -1.0
baz=199
H22K **Ishtalitna Cre** 88.79 11 P P 12 25 25.5 -1.1
baz=205,SNR=40
J25K **Salcha River,** 88.81 13 P P 12 25 25.5 -1.3
baz=210,SNR=29
POKR **Poker Plat Res** 88.82 12 P P 12 25 25.0 -1.8
baz=208,SNR=11
PLCA **Paso Flores** 88.86 133 pP pP 12 27 20.2 -0.1
comp=Z,4.7nm,0.9s,baz=209,slow=8.3,SNR=3.8
E18K **Tukpahlearik C** 88.95 7 P P 12 25 25.9 -1.4
baz=196,SNR=15
D17K **Noatak River** 88.98 6 P P 12 25 26.3 -1.0
baz=194
G21K **Allakaket** 89.02 9 P P 12 25 26.5 -1.1
baz=203,SNR=25
H23K **Yukon River** 89.05 11 P P 12 25 27.2 -0.7
baz=206,SNR=9.5
K27K **Chicken** 89.06 15 P P 12 25 27.7 -0.2
baz=213
PDAR **Pinedale Array** 89.08 43 P P 12 25 29.1 +0.3
comp=Z,23nm,0.9s,baz=211,slow=3.2,SNR=106
PDAR pP **pwP** 12 27 23.3 -0.7
comp=Z,0.7nm,0.8s,baz=268,slow=14,SNR=2.2
PDAR PKKPbc **PKKPbc** 12 43 05.0 +0.2
comp=Z,0.8nm,0.8s,baz=100,slow=4.5,SNR=5.2
comp=Z,23nm,0.9s
J26L **Joseph Creek** 89.11 14 P P 12 25 27.8 -0.5
baz=212
HIA **Hailar** 89.12 324 P P 12 25 29.5 +0.9
F20K **Avaraart Lake** 89.19 8 P P 12 25 27.7 -0.7
baz=201
M30M **Minto, Yukon** 89.26 18 P P 12 25 28.1 -0.8
baz=218,SNR=29
N32M **Quiet Lake** 89.27 20 P P 12 25 29.1 +0.1
baz=221
HILR **Hailar Array B** 89.28 325 P P 12 25 29.2 -0.1
comp=Z,18nm,0.8s,baz=127,slow=9.5,SNR=14
comp=Z,18nm,0.8s
L29M **L29M** 89.31 17 P P 12 25 29.1 0.0
baz=217
RDOG **Red Dog Mine** 89.34 6 P P 12 25 28.7 -0.4
baz=194
C16K **Lisburne Hills** 89.36 5 P P 12 25 29.3 +0.2
baz=192
H24K **Noodor Dome** 89.38 12 P P 12 25 29.0 -0.4
baz=208,SNR=6.0
E19K **Redstone River** 89.38 8 P P 12 25 28.5 -0.8
baz=199,SNR=42
BILL **Bilibino** 89.43 354 *ce*P P 12 25 30.5 +1.0
BILL pmax pmax
comp=Z,12nm,0.8s
M31M **Drury Creek, Y** 89.67 19 P P 12 25 30.1 -0.7
baz=220,SNR=17
F21K **Alatna River** 89.68 9 P P 12 25 30.3 -0.5
baz=203
KMI **Kunming** 89.71 297 ⇓P P 12 25 33.0 +0.9
KMI sP sP 12 28 15.3 -0.1
KMI PP **PP** 12 29 11.6 -2.0
KMI SKS **SKSac** 12 35 14.1 -0.2
KMI S **S** 12 35 35.8 -5.0
KMI pmax pmax
comp=Z,56nm,1.1s
KMI pmax pmax
comp=Z,500nm,3.6s
C17K **DeLong Mountai** 89.73 5 P P 12 25 30.8 -0.1
baz=194
DAWY **Dawson** 89.76 16 P P 12 25 30.5 -0.7
baz=216,SNR=54
G23K **Bananza Creek** 89.77 11 P P 12 25 30.7 -0.5
baz=206
HHC **Hu-ho-hao-te** 89.77 314 ⇓*i*P P 12 25 32.5 +0.6
HHC sP sP 12 28 18.0 +2.3
HHC PP **PP** 12 29 09.3 -4.3
HHC SKS **SKSac** 12 35 12.6 -1.1
HHC S **ScS** 12 35 44.6 +1.5
HHC pmax pmax
comp=Z,35nm,1.0s
HHC pmax pmax
comp=Z,150nm,4.0s
I26K **Coal Creek Min** 89.89 14 P P 12 25 31.0 -0.7
baz=212
WTLY **Watson Lake, Y** 89.95 22 P P 12 25 31.7 -0.4
baz=225,SNR=13
K29M **Barlow Dome** 90.07 17 P P 12 25 32.6 -0.1
baz=217,SNR=44
C18K **Utukok River** 90.08 6 P P 12 25 32.0 -0.6
baz=196
F22K **John River** 90.14 10 P P 12 25 32.6 -0.2
baz=204
H25L **Bin Creek** 90.16 12 P P 12 25 31.9 -1.0
baz=210
COLD **Coldfoot** 90.20 10 P P 12 25 33.0 -0.1
baz=206,SNR=8.6
G24K **Hadweenzic Riv** 90.22 12 P P 12 25 32.9 -0.4
baz=208
D19K **Kuna River** 90.26 7 P P 12 25 33.0 -0.4
baz=198
E20K **Nigu River** 90.27 8 P P 12 25 33.3 -0.2
baz=200
MAYO **Mayo, Yukon** 90.32 17 P P 12 25 33.5 -0.2
baz=219,SNR=22
TOAD **Toad River Com** 90.40 24 P P 12 25 34.2 0.0
baz=228,SNR=30
CMAR **Chiang Mai Arr** 90.44 289 P P 12 25 36.0 +0.7
comp=Z,34nm,1.0s,baz=122,slow=2.6,SNR=80
CMAR pP **pwP** 12 27 30.0 -1.3
comp=Z,0.7nm,0.6s,baz=120,slow=3.0,SNR=1.0
CMAR PKKPbc **PKKPbc** 12 43 01.2 +1.1
comp=Z,0.9nm,0.5s,baz=288,slow=4.5,SNR=5.6
comp=Z,34nm,1.0s
LIRD **Liard River Hi** 90.45 24 P P 12 25 34.6 +0.2
baz=227,SNR=10.0
I27K **Kandik River** 90.49 14 P P 12 25 34.3 -0.2
baz=214
G25K **Bearman Lake** 90.54 12 P P 12 25 34.5 -0.1
baz=209
CHTO **Chiang Mai** 90.58 290 P P 12 25 36.8 +0.8
D20K **Etivluk River** 90.65 8 P P 12 25 35.3 +0.1
baz=200,SNR=13
EFI **East Falkland** 90.65 147 *ce*P P 12 25 34.6 -1.1
EFI pmax pmax
comp=Z,145nm,1.7s
C19K **Lookout Ridge** 90.68 6 P P 12 25 35.1 -0.3
baz=197,SNR=5.8
BTO **Baotou** 90.70 314 *e*P P 12 25 39.3 +3.1
BTO pP **pwP** 12 27 32.9 +1.8
BTO sP **sP** 12 28 23.8 +3.8
BTO S **S** 12 35 42.6 -6.2
BTO pmax pmax
comp=Z,51nm,1.4s
BTO pmax pmax
comp=Z,590nm,6.0s
B18K **Kokolik River** 90.72 6 P P 12 25 35.2 -0.2
baz=195
E21K **Killik River** 90.74 9 P P 12 25 34.9 -0.7
baz=202
I28M **Miner Creek** 90.76 15 P P 12 25 35.2 -0.6
baz=215,SNR=26
E22K **Anaktuvuk Pass** 90.77 9 P P 12 25 35.3 -0.5
baz=204,SNR=21
F24K **Squaw Lake** 90.87 11 P P 12 25 36.2 0.0
baz=208,SNR=12
J30M **Hart River** 90.97 17 P P 12 25 36.3 -0.6
baz=218
H27K **Steamboat Moun** 91.04 14 P P 12 25 36.0 -1.0
baz=214
E23K **Chandalar** 91.05 10 P P 12 25 36.4 -0.7
baz=206
PZH **PanZhiHua** 91.08 298 P P 12 25 39.3 +1.0
G26K **Porcupine Rive** 91.16 13 P P 12 25 37.3 -0.2
baz=212
CD2 **Chengdu** 91.17 303 P P 12 25 38.3 -0.2
CD2 PP **PP** 12 29 23.4 -1.3
CD2 SKS **SKSac** 12 35 19.6 -2.4
CD2 S **ScS** 12 35 57.8 +2.7
CD2 pmax pmax
comp=Z,30nm,1.2s
CD2 pmax pmax
comp=Z,560nm,6.1s
E24K **Your Creek** 91.26 11 P P 12 25 38.4 +0.4
baz=207
C21K **Knifeblade Rid** 91.30 8 P P 12 25 37.9 -0.2
baz=202
D22K **Ayikyak River** 91.33 9 P P 12 25 38.5 +0.2
baz=203,SNR=17
F25K **Christian Rive** 91.35 12 P P 12 25 38.9 +0.4
baz=210,SNR=8.4
I30M **Mount Dempster** 91.47 16 P P 12 25 39.0 -0.1
baz=218
G27K **Doyon Strip** 91.49 14 P P 12 25 39.6 +0.5
baz=214,SNR=6.7
TOLK **Toolik Lake Re** 91.59 10 P P 12 25 38.9 -0.7
baz=206,SNR=6.4
A19K **Wainwright** 91.60 6 P P 12 25 39.9 +0.5
baz=196
KOTAN **Kotaneelee Air** 91.70 24 P P 12 25 40.1 -0.1
baz=229
D23K **Nanushuk River** 91.70 9 P P 12 25 39.9 -0.1
baz=205
F26K **Sheenjek River** 91.73 12 P P 12 25 41.0 +0.8
baz=211,SNR=7.4
B21K **Ikpikpuk River** 91.75 8 P P 12 25 40.3 +0.1
baz=202
H29M **Whitestone** 91.76 15 P P 12 25 41.1 +0.7
baz=216
B20K **Meade River** 91.81 7 P P 12 25 40.3 -0.1
baz=199
E25K **Arctic Village** 91.82 12 P P 12 25 40.4 -0.2
baz=210,SNR=6.0
D24K **Happy Valley** 92.17 10 P P 12 25 42.0 -0.1
baz=207
EPYK **Eagle Plains** 92.29 15 P P 12 25 42.3 -0.5
baz=218,SNR=12
G29M **Pine Creek** 92.40 15 P P 12 25 43.1 -0.2
baz=217
H31M **Peel River** 92.45 16 P P 12 25 43.0 -0.6
baz=220
C23K **Itkillik River** 92.51 9 P P 12 25 43.5 -0.1
baz=205
YAK **Yakutsk** 92.54 338 *e*P P 12 25 42.6 -1.3
YAK *e**PP **pP** 12 27 33.4 -3.8
YAK *e*S **SKSac** 12 35 27.1 -0.8
YAK *e* 12 36 04.2
YAK *e*SS **SS** 12 42 26.1 -5.4
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=Z,794nm,3.5s
YAK smax smax
comp=E,830nm,4.8s
YAK smax smax
comp=N,561nm,3.8s
F28M **Old Crow** 92.55 14 P P 12 25 43.5 -0.5
baz=215,SNR=6.6
B22K **Teshekpuk Lake** 92.58 8 P P 12 25 43.6 -0.3
baz=203
E27K **Coleen River** 92.66 13 P P 12 25 43.9 -0.6
baz=214,SNR=5.4
C24K **Franklin Bluff** 92.69 10 P P 12 25 43.7 -0.8
baz=207
D25K **Kavik River** 92.73 11 P P 12 25 43.7 -1.0
baz=209
G30M **tAoh Zraii Nji** 92.89 15 P P 12 25 44.6 -1.0
baz=218,SNR=11
A22K **Sinclair Lake** 93.00 7 P P 12 25 45.2 -0.7
baz=201
A21K **Barrow** 93.12 7 P P 12 25 46.2 -0.2
baz=200
LZH **Lanzhou** 93.17 307 *e*P P 12 25 48.8 +1.1
LZH sP sP 12 28 36.3 +4.6
LZH S **S** 12 36 16.1 +5.3
LZH pmax pmax
comp=N,30nm,1.5s
LZH pmax pmax
comp=N,430nm,4.7s
TNCH **TengChong** 93.22 295 P P 12 25 48.4 +0.2
TNCH pP pwP 12 27 46.4 +2.0
TNCH sP sP 12 28 32.9 +1.2
TNCH PP **PP** 12 29 40.6 -0.2
TNCH SKS **SKSac** 12 35 34.8 +1.1
TNCH S **S** 12 36 11.6 -0.1
TNCH pmax pmax
comp=N,27nm,0.6s
TNCH pmax pmax
comp=N,280nm,4.9s
LZDM **Lanzhou Array** 93.23 307 P P 12 25 47.7 -0.5
comp=N,1.9nm,0.4s,baz=81,slow=8.9,SNR=3.9
comp=N,1.9nm,0.4s
G31M **Satah River** 93.33 16 P P 12 25 46.9 -0.5
baz=220,SNR=16
E28M **Babbage River** 93.44 13 P P 12 25 47.6 -0.4
baz=216,SNR=15
C27K **Jago River** 93.47 11 P P 12 25 47.8 -0.3
baz=212
F30M **Barrier River** 93.49 15 P P 12 25 47.6 -0.6
baz=219
C26K **Camden Bay** 93.50 11 P P 12 25 48.1 -0.1
baz=211
HKT **Hockley** 93.56 59 *i*P P 12 25 50.0 +0.7
HKT pmax pmax
comp=Z,22nm,1.5s
E29M **Blow River** 93.62 14 P P 12 25 48.6 -0.2
baz=217,SNR=7.5
D27M **Malcolm River** 93.67 12 P P 12 25 49.0 -0.1
baz=214
F31M **Tsiigehtchic** 93.86 16 P P 12 25 49.7 -0.2
baz=221,SNR=22
WRGLY **Wrigley** 93.94 22 P P 12 25 51.3 +0.9
baz=230
D28M **Stokes Point** 94.20 13 P P 12 25 52.0 +0.6
baz=216,SNR=6.5
INK **Inuvik** 94.58 15 P P 12 25 53.3 +0.2
baz=221,SNR=12
ULN **Ulaanbaatar** 95.79 319 *ce*P P 12 25 59.6 +0.3
ULN pmax pmax
comp=Z,11nm,0.9s
SONM **Songino Array** 96.18 319 P P 12 26 00.7 -0.4
comp=Z,3.5nm,0.9s,baz=19,slow=3.7,SNR=12
SONM PP **PP** 12 29 59.8 -3.1
comp=Z,4.8nm,1.0s,baz=132,slow=7.5,SNR=8.9
comp=Z,3.5nm,0.9s
YKA **Yellowknife Ar** 96.76 25 P P 12 26 02.3 -0.8
comp=Z,4.1nm,1.0s,baz=243,slow=4.9,SNR=11
YKA pP **pP** 12 27 55.1 -0.9
comp=Z,0.8nm,0.8s,baz=252,slow=5.2,SNR=2.3

comp=Z,4.1nm,1.0s
GTA Gaotai 97.38 309 *e*P **P** **12 26 07.3 +0.6**
GTA pP pP 12 28 01.3 +1.4
GTA PP **PP** **12 30 09.8 -2.4**
GTA SKS **SKSac** **12 35 52.3 -2.5**
GTA pmax pmax
comp=Z,10.0nm,1.5s
C36M Paulatuk 97.75 17 P Pdif 12 26 06.8 -0.5
baz=230
TIXI Tiksi 99.16 345 *i* P **Pdif** **12 26 13.2 -0.4**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
A36M Sachs Harbour 99.19 14 P **Pdif** **12 26 13.8 +0.1**
baz=229
GOMU GeErMu 100.03 305 Pdif **Pdif** **12 26 19.9 +1.1**
GOMU PP **PP** **12 30 33.8 +1.2**
GOMU SS SS 12 44 22.6 +4.5
GOMU pmax pmax
comp=Z,150nm,7.2s
WMQ Urumqi 107.34 311 Pdif **Pdif** **12 26 51.8 +1.1**
HYBB Hyderabad (bro 108.45 282 *e*PKiKP **PKiKP** **12 30 58.8 -0.3**
HYBB *e*PP **PP** **12 31 33.0 -1.2**
HYBB *ep*PKiKP **pPKiKP** **12 32 57.5 -1.8**
HYBB *e*SKSdf **SKSdf** **12 37 23.5 +0.5**
HYBB *e*SKKSac **SKKSac** **12 37 41.9 -2.2**
ZSN Zaisan 109.97 314 *e*PKiKP **PKiKP** **12 31 00.5 -0.6**
ZALV Zalesovo Beam 110.92 321 PKiKP **PKiKP** **12 31 01.2 -1.4**
comp=Z,4.3nm,0.5s,baz=149,slow=1.4,SNR=16
MK31 Makanchi Array 111.61 313*c* *i*PKiKP **PKiKP** **12 31 04.0 -0.2**
MKAR Makanchi Array 111.61 313 Pdiff **Pdif** **12 27 11.7 +2.1**
comp=Z,1.1nm,0.8s,baz=88,slow=5.5,SNR=5.5
MKAR PKiKP **PKiKP**
comp=Z,3.9nm,0.5s,baz=105,slow=1.2,SNR=35
MKAR PKKPbc **PKKPbc** **12 41 59.6 -1.0**
comp=Z,1.0nm,0.9s,baz=273,slow=2.4,SNR=4.1
SHLS Shalkode 113.12 309 *e*PKiKP **PKiKP** **12 31 05.9 -1.5**
SHLS Shalkode 113.12 309 *i* PKiKP **PKiKP** **12 31 05.8 -1.5**
SATY Saty 113.88 309 *e*PKiKP **PKiKP** **12 31 07.9 -0.9**
SATY *e*PP **PP** **12 32 10.7 -1.5**
SATY Saty 113.88 309 *i* PKiKP **PKiKP** **12 31 07.9 -0.9**
SATY *e* 12 32 10.6
TDK Taldyqorghan 114.09 311 *e*PKiKP PKPdf 12 31 08.4 -0.7
TDK Taldyqorghan 114.09 311 *i* PKiKP PKPdf 12 31 08.3 -0.7
KURK Kurchatov 114.42 317*c* *i*PKiKP PKPdf 12 31 09.1 -0.3
KURK pmax pmax
comp=Z,15nm,0.8s
KURBB Kurchatov Arra 114.47 317 PKP PKPdf 12 31 07.5 -2.0
comp=Z,8.7nm,0.7s,baz=98,slow=1.9,SNR=45
MDOK Medeo 114.88 309 *e*PKiKP PKPdf 12 31 09.9 -0.9
MDOK Medeo 114.88 309 *i* PKiKP PKPdf 12 31 09.9 -0.9
KSH Kashi 115.28 305 PKP **PKiKP** **12 31 13.6 +2.0**
SGDS Sogindy 116.66 309 *e*PKP **PKPdf** **12 31 13.2 -0.9**
AAK Ala-Archa 116.70 308 *i* PKiKP **PKPdf** **12 31 12.6 -1.7**
BTLS Baital 117.18 311 *e*PKP **PKPdf** **12 31 14.3 -0.6**
BTLS *e*PP **PP** **12 32 33.6 -1.1**
BTLS Baital 117.18 311 *e*PKiKP **PKPdf** **12 31 14.3 -0.6**
BTLS *e* 12 32 33.6
NEEM North Greenlan 117.90 11 *i* P **PKPdf** **12 31 14.7 -1.1**
NOR Nord 118.72 3 *i* P **PKPdf** **12 31 16.0 -0.9**
BVAR Borovoye Array 119.50 320 PKP **PKPdf** **12 31 17.7 -1.5**
comp=Z,16nm,0.3s,baz=96,slow=1.7,SNR=61
BORK Borovoye 119.55 320*c* *i*PKiKP **PKPdf** **12 31 18.9 -0.3**
BORK pmax pmax
comp=Z,38nm,1.7s
BRLS Borolday 120.14 308 *e*PKP **PKPdf** **12 31 20.2 -0.5**
BRLS *e*PP **PP** **12 32 54.5 -0.5**
BRLS Borolday 120.14 308 *e*PKiKP **PKPdf** **12 31 20.2 -0.5**
BRLS *e* 12 32 54.4
CHM Chimkent 120.30 308 *e*PKP **PKPdf** **12 31 20.1 -0.9**
CHM Chimkent 120.30 308 *e*PKiKP **PKPdf** **12 31 20.1 -0.9**
KBS Kingsbay 121.72 358 *i* P **PKiKP** **12 31 22.9 0.0**
SJMB Sao Joao De Ma 122.07 130 *e*P **PKPdf** **12 31 25.2 0.0**
SPITS Spitsbergen Ar 122.25 357 PKP **PKPdf** **12 31 22.4 -1.4**
comp=Z,15nm,0.8s,baz=28,slow=6.5,SNR=34
SMTB Santa Maria do 122.82 116 *e*P **PKPdf** **12 31 26.5 -0.2**
SDBA SAO DESIDERIO 123.08 121 *e*P **PKPdf** **12 31 26.8 -0.4**
DAG Danmarks Havn 123.09 6 *i* P **PKPdf** **12 31 24.0 -1.4**
SFJD Kangerlussuaq 123.21 22 *e*P **PKPdf** **12 31 24.4 -1.4**
SUMG Summit 123.46 14 *i* P **PKPdf** **12 31 26.0 -0.7**
NUUK Nuuk 124.01 25 *i* P **PKPdf** **12 31 27.1 -0.3**
NUUK *e*P **PKiKP** **12 31 28.4 +0.7**
SVE Sverdlovsk 124.42 325 *e*PKiKP **PKPdf** **12 31 28.3 -0.1**
SVE pmax pmax
comp=Z,33nm,1.0s
DBG Daneborg 125.18 7 *i* P **PKPdf** **12 31 28.6 -0.9**
CMC01 Camacan, BA 125.44 128 *e*P **PKPdf** **12 31 31.3 -0.4**
ARTI Arti 125.74 325 *i* PKiKP **PKPdf** **12 31 30.4 -0.6**
ARTI 12 33 27.8
ARTI 12 37 52.8
ARTI SSS SSS 12 54 49.0
BOSA Boshof 126.01 205 PKP **PKPdf** **12 31 32.5 -0.2**
comp=Z,5.7nm,0.8s,baz=181,slow=1.1,SNR=14
IVI Ivigtut 126.76 28 *e*P **PKPdf** **12 31 32.4 -0.4**
NRS Narsarsuaq 127.97 27 *e*P **PKPdf** **12 31 33.4 -1.7**
SCO Scoresbysund 128.34 10 *i* P **PKPdf** **12 31 35.0 -0.6**
ARCES ARCESS Array B 129.33 350 PKhKP PKPpre 12 31 25.8
comp=Z,0.7nm,0.4s,baz=106,slow=0.6,SNR=12
ARCES PKP **PKPdf** **12 31 36.5 -1.0**
comp=Z,5.4nm,0.4s,baz=17,slow=1.2,SNR=28
APA Apatity 129.36 345*j* *j*PKiKP **PKPdf** **12 31 37.4 -0.2**
APA *j* *i*PP **pPKPdf** **12 33 32.4 -4.8**
KIRV Kirov 129.40 330*c* *e*PKiKP **PKPdf** **12 31 38.0 +0.2**
KLMR Klimovskoe 132.31 336 *e*PKiKP **PKPdf** **12 31 42.7 -0.6**
KLMR *e* 12 34 11.0
KLMR *e* 12 34 28.9
KLMR pmax pmax
comp=Z,21nm,1.0s
BELG Belogornoye 133.03 323 *i* PKiKP **PKPdf** **12 31 45.1 +0.2**
FINES FINESS Array B 136.19 344 PKhKP PKPpre 12 31 36.8
comp=Z,11nm,1.3s,baz=233,slow=28,SNR=11
FINES PKP **PKiKP** **12 31 51.9 -0.4**
comp=Z,4.3nm,0.5s,baz=111,slow=2.6,SNR=6.8
FINES SKPbc **SKPbc** **12 34 35.5 +0.8**
comp=Z,28nm,1.0s,baz=64,slow=4.4,SNR=12
MOS Moscow 136.33 332 *i* PKiKP **PKPdf** **12 31 49.8 -1.2**
MOS *e* 12 33 43.2
MOS *e* 12 38 15.4
MAK Makhachkala 136.36 311*c* *i*P **Pdif** **12 28 57.3 -2.4**
MAK *i* 12 31 52.4
MAK *e* 12 34 37.1
MAK *e* 12 34 38.5
MAK *e* 12 38 15.4
MAK *e*SS SS 12 52 03.8 +2.9
MAK *e*SSS SSS 12 57 16.8
MAK pmax pmax
comp=Z,342nm,1.5s
AKT Akhty 136.57 309 *e*PKiKP **PKPdf** **12 31 52.1 0.0**
AKT *e* 12 34 39.6
AKT *e* 12 38 12.7
AKT pmax pmax
comp=Z,21nm,1.0s
VRH Novokhopyorsk 136.84 324 *e*PKiKP **PKPdf** **12 31 50.7 -1.4**
VRH *e* 12 34 36.7
VRH pmax pmax
comp=Z,20nm,0.8s
OBN Obninsk 137.19 332*f* *e*PKiKP **PKPdf** **12 31 52.4 -0.2**
OBN *i* 12 34 41.1
OBN *e* 12 38 18.2
OBN *e*SS SS 12 52 11.3 +2.0
OBN pmax pmax
comp=Z,59nm,1.6s
LPSR Galich'ya Gora 137.57 327 *e*PKiKP **PKPdf** **12 31 50.1 -3.3**
LPSR *e* 12 34 39.5
LPSR pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 137.94 326 *e*PKiKP **PKPdf** **12 31 52.3 -1.8**
VORR *e* 12 34 40.3
VORR pmax pmax
comp=Z,30nm,0.8s
MOL Molde 138.17 356 *e* PKPpre 12 31 44.2
VSR Storozhevoye 138.21 325 *e*PKiKP **PKPdf** **12 31 54.4 -0.2**
VSR *e* 12 34 40.7
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 138.27 325 *e*PKiKP **PKPdf** **12 31 54.0 -0.7**
VORD *e* 12 34 40.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSU Vasula 138.47 341 *i* PKiKP **PKPdf** **12 31 54.5 -0.3**
DOMB Dombas 138.59 355 *e*PKPdf PKPpre 12 31 45.5
AKN Aaknes 138.60 357 *e*PKPdf PKPpre 12 31 45.5
GNI Garni 139.10 308 *i* PKiKP **PKPdf** **12 31 56.4 -0.4**
KBZ Khabaz 139.31 314 PKhKP PKPpre 12 31 51.8
comp=Z,3.0nm,0.9s,baz=37,slow=2.2,SNR=6.1
KBZ PKP sPdif 12 31 57.0 -0.2
comp=Z,4.9nm,0.9s,baz=53,slow=2.8,SNR=7.5
KBZ SKPab **SKPab** **12 34 53.8 -1.7**
comp=Z,6.8nm,1.0s,baz=78,slow=6.2,SNR=6.1
KMBO Kilima Mbogo 139.36 242 PKhKP PKPpre 12 31 50.2
comp=Z,1.4nm,0.3s,baz=121,slow=5.9,SNR=6.7
KMBO PKP **PKiKP** **12 32 00.1 -0.5**
comp=Z,3.7nm,0.5s,baz=128,slow=5.6,SNR=8.6
KIV Kislovodsk 139.37 314 *i* PKiKP **PKPdf** **12 31 56.9 -0.2**
KIV *e* 12 34 54.9
KIV *e*SS SS 12 52 32.3 -3.9
KIV pmax pmax
comp=Z,8.0nm,0.9s
NB2 NORSAR Subarra1 139.38 353 PKP PKPpre 12 31 47.5
comp=Z,3.2nm,0.8s,baz=10,slow=3.2
NB2 pPKP **SKPbc** **12 34 44.6 +0.8**
comp=Z,4.0nm,0.7s,baz=8.7,slow=2.9
NOA NORSAR Array B 139.38 353 PKhKP PKPpre 12 31 46.6
comp=Z,0.8nm,0.6s,baz=16,slow=3.1,SNR=21
NOA PKP sPdif 12 31 56.9 +0.1
comp=Z,3.6nm,0.8s,baz=14,slow=3.7,SNR=11
NOA SKPbc **SKPbc** **12 34 44.6 +0.8**
comp=Z,6.6nm,0.8s,baz=14,slow=4.3,SNR=13
SHA1 Shidzhatmaz 139.47 314 *i* PKiKP **PKPdf** **12 31 55.5 -2.0**
HYA Hoyanger 139.65 357 *e*PKPdf PKPpre 12 31 51.0
SUE Sulen 139.81 358 *e*PKPdf PKPpre 12 31 51.0
HFS Hagfors 139.94 351 PKhKP PKPpre 12 31 48.5
comp=Z,11nm,0.5s,baz=32,slow=1.5,SNR=34
HFS PKP sPdif 12 31 58.7 -0.7
comp=Z,16nm,0.8s,baz=8.5,slow=2.9,SNR=8.5
HFS SKPbc **SKPbc** **12 34 44.7 -0.6**
comp=Z,10nm,0.8s,baz=64,slow=3.4,SNR=7.0
SKAR Skarslia 140.00 355 *e*PKPdf PKPpre 12 31 51.0
ERBR Yeremizino-Bor 140.11 317 *i* PKiKP **PKiKP** **12 32 02.1 +1.2**
ERBR pmax pmax
comp=Z,29nm,0.9s
ASK Askoy 140.37 358 *e*PKPdf PKPpre 12 31 51.0
BER Bergen 140.47 358 *e*PKPdf PKPpre 12 31 51.0
OSL Oslo 140.51 353 *e*PKPdf PKPpre 12 31 51.0
ODD1 Odda 140.88 356 *e*PKPdf PKPpre 12 31 51.0
KONO Kongsberg 140.91 354 *e*PKPdf PKPpre 12 31 51.0
KONO Kongsberg 140.91 354 ⇑PKHKP PKPpre 12 31 53.7
MNK Minsk 141.21 336 *i* PKHKP PKPpre 12 31 56.3
MNK *i* 12 35 05.5
MNK *i* 12 38 17.4
MNK *i* PPP PPP 12 38 17.5
MNK *i* 12 47 39.8
MNK *i* SS SS 12 52 54.6 -1.2
MNK *i* SSS SSS 12 58 15.6
MNK pmax pmax
comp=N,15nm,1.0s
MNK pmax pmax
comp=Z,22nm,0.7s
MNK pmax pmax
comp=E,9.0nm,0.7s
BLS5 Blasjo 141.37 357 *e*PKPdf PKPpre 12 31 54.4
SOC Sochi 141.50 315 *e*PKHKP PKPpre 12 31 54.2
SOC *e*PPP PPP 12 38 22.3
SOC *e*SS SS 12 53 02.8 +2.3
SOC *e*SSS SSS 12 58 25.4
KMY Karmoy 141.64 358 *e*PKPdf PKPpre 12 31 54.4
HOMB Homborsund 142.37 355 *e*PKPdf PKPpre 12 31 58.1
SNART Snartemo 142.41 356 *e*PKPdf PKPpre 12 31 58.1
ANN Anapa 142.45 318 *i* PKiKP **PKiKP** **12 32 04.5 -1.2**
ANN pmax pmax
comp=Z,53nm,1.2s
KPL Plockton 143.12 7 *e*P PKPab 12 32 00.2 -0.6
SUW Suwalki 143.26 339 *e*PKP PKPab 12 32 01.2 -0.3
AKASG Malin Array Be 143.44 331 PKP PKPab 12 32 01.4 -0.8
comp=Z,26nm,0.4s,baz=44,slow=4.4,SNR=100
AKASG pPKP pPKPdf 12 34 02.3 -1.7
comp=Z,4.9nm,0.7s,baz=39,slow=3.8,SNR=2.9
AKASG SKPbc **SKiKP** **12 34 55.3 +0.1**
comp=Z,12nm,1.0s,baz=44,slow=2.2,SNR=8.2
AKBB Malin Array Si 143.44 331 *i* PKHKP PKPpre 12 32 01.0
KIEV Kiev 143.46 331 ⇑P PKPab 12 32 01.1 -1.1
KIEV Kiev 143.46 331 ⇑PKHKP PKPpre 12 32 01.1
GOET G??ttrup 143.52 354 *i* P PKPab 12 32 01.8 -0.4
DRUM Mains of Drumt 143.84 4 *e*P PKPbc 12 32 01.6 -1.9
MUD Monsted U'grnd 144.10 353 *i* P PKPbc 12 32 03.7 -0.6
INVG Invergeldie, C 144.19 6 *e*P PKPbc 12 32 03.4 -1.2
LAWE Loch Awe, Argy 144.21 7 *e*P PKPbc 12 32 03.3 -1.4
RNPP9 Sopachiv 144.35 334 PKP PKPbc 12 32 05.0 -0.3
COP Copenhagen 144.41 350 *i* P PKPbc 12 32 05.3 0.0
SIM Simferopol' 144.42 320 *e*PKiKP PKPbc 12 32 05.3 -0.4
SIM *e* 12 35 30.2
SIM pmax pmax
comp=Z,10.0nm,0.6s
SIM pmax pmax
comp=Z,215nm,0.8s
SIM pmax pmax
comp=Z,153nm,19.9s
RNPP8 Varash 144.42 334 PKP PKPbc 12 32 04.8 -0.7
RNPP5 Staryi Chortor 144.49 334 PKP PKPbc 12 32 05.2 -0.6
BSD Bornholm Skovb 144.50 347 *i* P PKPbc 12 32 05.1 -0.5
PGBU Glenifferbraes 144.75 7 *e*P **PKPdf** **12 32 05.5 -0.6**
MBAR Mbarara 144.89 236 PKP **PKPab** **12 32 08.9 -0.1**
comp=Z,50nm,0.9s,baz=126,slow=7.2,SNR=46
MBAR pPKP **pPKPdf** **12 34 08.4 +0.3**
comp=Z,4.1nm,0.2s,baz=66,slow=4.3,SNR=1.4
SSRD Sdr. Stenderup 145.00 353 *i* P **PKPab** **12 32 08.5 +0.6**
IDGL Inch Island, C 145.07 10 PKPdf **PKPbc** **12 32 07.2 -0.2**
CLGH Cloghs, Cushen 145.27 8 *e*P **PKPab** **12 32 08.8 -0.2**
EKA Eskdalemuir Ar 145.35 5 PKPbc **PKPdf** **12 32 07.5 +0.3**
comp=Z,38nm,0.8s,baz=336,slow=2.8,SNR=53
EKA pPKP **pPKPdf** **12 34 08.3 +1.5**
comp=Z,4.5nm,0.8s,baz=355,slow=2.6,SNR=3.9
ESK Eskdalemuir 145.37 5 *e*P **PKPbc** **12 32 07.8 -0.4**
R9F13 Warsaw-Wawer 145.44 339 *e*PKP **PKPab** **12 32 09.2 -0.6**
NEWG New Galloway 145.46 7 *e*P **PKPdf** **12 32 07.2 -0.1**
SORM Soroca 145.64 329 ⇑P **PKPbc** **12 32 08.6 -0.7**
SORM Soroca 145.64 329 ⇑PKiKP **PKPbc** **12 32 08.6 -0.7**
GAL1 Galloway 145.66 7 *e*P **PKPdf** **12 32 08.3 +0.6**
GKP Gorka Klasztor 145.66 344 *e*PKP **PKPdf** **12 32 06.1 -1.6**
BEL Belsk 145.88 339 *e*PKP **PKPbc** **12 32 10.6 +0.7**
PURM Purcari 145.92 325 ⇑P **PKPbc** **12 32 09.8 -0.3**
EDMD Edmundbyers 145.95 4 *e*P **PKPdf** **12 32 08.6 +0.4**
BZK Bozkurt 145.99 311 ⇑P **PKPbc** **12 32 10.2 -0.3**
KIS Kishinev 146.17 327⇓ *e*PKP **PKPbc** **12 32 10.0 -0.8**
comp=Z,100nm,0.8s
KIS *ep*PKP pPKPab 12 34 08.0 -0.5
KIS *es*PKP sPKPbc 12 34 59.0 +0.1
MILM Milestii Mici 146.22 327 ⇓P **PKPbc** **12 32 10.0 -1.0**
MILM Milestii Mici 146.22 327 ⇓PKiKP **PKPbc** **12 32 10.0 -1.0**
MILM Milestii Mici 146.22 327 *i* PKP **PKPdf** **12 32 09.0 +0.1**
comp=Z,400nm,1.4s
MILM *ep*PKP **pPKPdf** **12 34 09.0 0.0**
MILM *es*PKP sPKPbc 12 34 59.0 -0.1
ILTH Belurgan, Co L 146.26 9 PKPdf **PKPbc** **12 32 10.7 -0.1**
ILTH Belurgan, Co L 146.26 9 *e*P **PKPbc** **12 32 10.8 0.0**
IGLA Glengowla, Co 146.31 13 PKPdf **PKPbc** **12 32 10.1 -0.9**
WIM Isle of Man 146.37 7 *e*P **PKPbc** **12 32 10.7 -0.4**
GDLE Glaisdale, N Y 146.43 3 *e*P **PKPbc** **12 32 10.8 -0.5**
IASR Iasi 146.68 328 ⇑P **PKPab** **12 32 16.1 +1.3**
VASR Vaslui 146.93 327 ⇑P **PKiKP** **12 32 14.2 -0.7**
KWP Kalwaria Pacla 147.01 335 *e*PKP **PKPbc** **12 32 12.2 -0.9**
DSB Dublin 147.01 10 PKPdf **PKPbc** **12 32 12.1 -0.8**
BEIL Beino 147.17 302 *e*P **PKPdf** **12 32 12.4 +1.5**
WLF1 Llynfaes 147.24 7 *e*P **PKPdf** **12 32 11.4 +1.0**
BRTR Keskin Array B 147.25 312 PKPbc **PKPbc** **12 32 13.2 -1.0**
comp=Z,25nm,0.8s,baz=80,slow=2.6,SNR=53
BRTR pPKP **pPKPdf** **12 34 11.4 0.0**
comp=Z,1.5nm,0.8s,baz=145,slow=5.0,SNR=1.4
BIR Birlad 147.27 327 ⇓P **PKPbc** **12 32 14.6 +0.8**
BIR Birlad 147.27 327 ⇓PKP2 **PKPbc** **12 32 14.6 +0.8**
KIRS Kirsehir-Merke 147.31 311 ⇑P **PKPbc** **12 32 13.1 -1.2**
TLCR 147.34 324 ⇑P **PKPbc** **12 32 12.9 -1.1**
TLCR 147.34 324 ⇑PKiKP **PKPbc** **12 32 12.9 -1.1**
LBWR Ladybower, Pea 147.39 4 *e*P **PKPbc** **12 32 13.3 -0.6**
VARL Varlezi 147.40 326 ⇑P **PKPbc** **12 32 14.7 +0.5**
LMK Market Rasen 147.41 3 *e*P **PKPbc** **12 32 12.8 -1.1**
HWQ Hawqa 147.43 301 *e*P **PKPdf** **12 32 12.8 +1.3**
SCTR Scanteiesti 147.47 325 ⇑P **PKPbc** **12 32 14.5 +0.2**
BURAR Bucovina Array 147.49 331 ⇑P **PKiKP** **12 32 16.2 +0.1**
VAL Valentia 147.50 14 PKPdf **PKPbc** **12 32 14.4 +0.2**
GHRR 147.52 327 ⇑P **PKiKP** **12 32 16.1 0.0**
JURR Jurilovca 147.57 323 ⇑P **PKiKP** **12 32 15.8 -0.4**
OJC Ojcow 147.59 339 *e*PKP **PKPdf** **12 32 11.2 +0.1**
TESR Tescani 147.59 328 ⇓P **PKPbc** **12 32 14.6 -0.1**
TUDR 147.69 326 ⇓P **PKiKP** **12 32 16.8 +0.4**
COSR Cosmesti PH 147.71 326 ⇑P **PKiKP** **12 32 16.9 +0.4**
CFR Carcaliu 147.71 325 ⇑PKP2 **PKPbc** **12 32 15.5 +0.5**
CFR Carcaliu 147.71 325 ⇑PKP2 **PKPbc** **12 32 15.5 +0.5**
STHS Stebnicka Huta 147.74 337 *e*PKP **PKPbc** **12 32 14.0 -1.0**
STHS *e* 12 32 16.3
STHS *e* 12 32 21.0
STHS *e* 12 34 18.8
BHL Bhannes 147.76 301 *e*P **PKPdf** **12 32 12.9 +0.9**
TPGR Topolog 147.76 324 ⇓P **PKiKP** **12 32 16.2 -0.5**
FOEL Foel Wylfa 147.77 6 *e*P **PKPbc** **12 32 14.2 -0.7**
ANTO Ankara 147.77 313 ⇓P **PKPbc** **12 32 15.0 -0.4**
ANTO Ankara 147.77 313 ⇓PKP2 **PKPbc** **12 32 15.0 -0.4**
PANC Panciu 147.78 326 ⇑P **PKiKP** **12 32 16.7 +0.1**
IWEX Carrickbyrne, 147.79 10 PKPdf **PKPbc** **12 32 14.3 -0.7**
ONER Baraj Valea Uz 147.84 328 ⇓P **PKiKP** **12 32 15.7 +0.3**
VRI Vrincioaia 148.00 327 ⇓P **PKPbc** **12 32 16.0 +0.2**
VRI Vrincioaia 148.00 327 ⇓PKP2 **PKPbc** **12 32 16.0 +0.2**
PLOR Plostina 148.05 327 ⇓P **PKPbc** **12 32 16.1 +0.2**
PLOR Plostina 148.05 327 ⇓PKP2 **PKPbc** **12 32 16.1 +0.2**
CWF Charnwood Fore 148.08 4 *e*P **PKPbc** **12 32 15.1 -0.6**
NIE Niedzica 148.09 337 *e*PKP **PKPbc** **12 32 14.9 -1.0**
KSP Ksiaz 148.11 343 *e*PKP **PKPdf** **12 32 12.9 +1.0**
HARR Harsova 148.14 324 ⇓P **PKiKP** **12 32 17.1 -0.3**
HARR Harsova 148.14 324 ⇓PKP2 **PKiKP** **12 32 17.1 -0.3**
HLM1 Long Mynd 148.17 6 *e*P **PKPdf** **12 32 12.4 +0.5**
TLBR Topalu 148.17 324 ⇑P **PKPbc** **12 32 16.2 0.0**
WACR West Acre 148.18 2 *e*P **PKPbc** **12 32 14.8 -1.1**
MMAI Mount Meron Ar 148.19 299 PKPbc **PKPbc** **12 32 17.0 +0.3**
comp=Z,24nm,0.4s,baz=72,slow=3.6,SNR=38
TURR Turia 148.23 328 ⇓P **PKiKP** **12 32 17.4 -0.2**
OZUR 148.31 328 ⇑P **PKiKP** **12 32 17.3 -0.6**
MANR Mangalia 148.32 322 ⇑P **PKiKP** **12 32 18.0 +0.2**
OSTC Ostas 148.39 343 *e*PKHKP PKPpre 12 32 12.6
OSTC Ostas 148.39 343 *e*PKPDF **PKPdf** **12 32 12.6 +0.2**
OSTC ⇑*e*PKP **PKPbc** **12 32 17.1 +0.5**
OSTC *ep*PKP **pPKPab** **12 34 22.7 +5.7**
CHVC Chvalec 148.41 343 ⇓*e*PKP2 **PKiKP** **12 32 17.5 -0.3**
CHVC Chvalec 148.41 343⇑ *e*PKP **PKiKP** **12 32 17.5 -0.3**
OKC Ostrava-Krasne 148.46 340 *e*PKP2 **PKPbc** **12 32 17.3 +0.6**
OKC Ostrava-Krasne 148.46 340⇑ *e*PKP **PKPbc** **12 32 17.3 +0.6**
CLL Collm 148.47 347 *e*PKHKP PKPpre 12 32 13.0
CLL *i* 12 32 21.1
CLL pmax pmax
comp=Z,88nm,0.8s
CLL pmax pmax
comp=Z,65nm,0.9s
STEB Steborice 148.49 341 *e*PKPDF **PKPdf** **12 32 13.2 +0.6**
STEB ⇑*e*PKP **PKPbc** **12 32 16.6 -0.2**
UPC Upice 148.49 343 *e*PKP2 **PKPbc** **12 32 16.9 +0.1**
UPC Upice 148.49 343⇑ *e*PKP **PKPbc** **12 32 16.9 +0.1**
NEHR Nehoiu 148.52 327 ⇓P **PKPbc** **12 32 16.9 -0.2**
DPC Dobruska-Polom 148.55 343 *e*PKHKP PKPpre 12 32 13.0
DPC Dobruska-Polom 148.55 343 *e*PKPDF **PKPdf** **12 32 13.0 +0.3**
DPC ⇑*e*PKP **PKPbc** **12 32 17.3 +0.3**
DPC *ep*PKP **pPKPab** **12 34 23.9 +6.3**
DOPR Dopca 148.60 328 ⇓P **PKPbc** **12 32 17.2 -0.1**
ISR Istrita 148.60 326 ⇑P **PKiKP** **12 32 18.1 -0.3**
ISR Istrita 148.60 326 ⇑PKP2 **PKiKP** **12 32 18.1 -0.3**
MLR Muntele Rosu 148.66 327 ⇑P **PKPbc** **12 32 17.7 +0.1**
MLR Muntele Rosu 148.66 327 ⇑PKP2 **PKPbc** **12 32 17.7 +0.1**
KRLC Kraliky 148.66 342 *e*PKP2 **PKPbc** **12 32 17.5 +0.2**
KRLC Kraliky 148.66 342⇑ *e*PKP **PKPbc** **12 32 17.5 +0.2**
PSN Preselentsi 148.69 322 *e*P **PKiKP** **12 32 18.3 -0.3**
MORC Moravsky Berou 148.70 341 ⇑P **PKiKP** **12 32 15.5 -1.9**
MORC Moravsky Berou 148.70 341 *e*PKP **PKPdf** **12 32 13.1 +0.1**
MORC *e* 12 32 17.5
MORC *ep*PKP **pPKPab** **12 34 17.9 -0.4**
MORC Moravsky Berou 148.70 341 ⇑PKHKP PKPpre 12 32 15.5
KECS Kecovo 148.80 336 *e*PKP2 **PKiKP** **12 32 19.3 +0.6**
KECS Kecovo 148.80 336 *e*PKP **PKiKP** **12 32 19.2 +0.6**
KECS *e* 12 32 24.8
MESR Meseseni 148.86 332 ⇓P **PKiKP** **12 32 19.1 +0.2**
CJR Cluj-Napoca 148.90 331 ⇓P **PKiKP** **12 32 19.1 +0.1**
CJR Cluj-Napoca 148.90 331 ⇓PKP2 **PKiKP** **12 32 19.1 +0.1**
RICC Richard 148.94 345⇑ *e*PKP **PKiKP** **12 32 19.2 +0.3**
MDB Medias 148.96 329 ⇓P **PKiKP** **12 32 19.5 +0.4**
MDB Medias 148.96 329 ⇓PKP2 **PKiKP** **12 32 19.5 +0.4**
STRD Stroud 148.97 5 *e*P **PKPbc** **12 32 17.0 -0.9**
MAUC Maruska 148.97 340⇑ *e*PKP **PKPbc** **12 32 18.5 +0.4**
HSKC Hora Svate Kat 149.04 346⇑ *e*PKP **PKPbc** **12 32 17.9 -0.3**
VOIR 149.14 328 ⇑P **PKPbc** **12 32 17.8 -0.9**
VOIR 149.14 328 ⇑PKHKP PKPpre 12 32 17.8
MARR Marisel-Cluj 149.15 331 ⇓P **PKiKP** **12 32 20.7 +1.1**
DRGR 149.24 332 ⇑P **PKPdf** **12 32 16.3 +2.3**
DRGR 149.24 332 ⇑PKHKP PKPpre 12 32 16.3
PRA Prague 149.30 345 *e*PKHKP PKPpre 12 32 18.4
PRA Prague 149.30 345⇑ *e*PKP **PKPbc** **12 32 18.4 -0.4**
PRU Pruhonice 149.35 344 *e*PKHKP PKPpre 12 32 18.5
PRU Pruhonice 149.35 344⇑ *e*PKP **PKPbc** **12 32 18.5 -0.4**
PRU *ep*PKP **pPKPab** **12 34 22.8 +2.1**
PRD Provadia 149.40 322 *e*P **PKiKP** **12 32 19.8 -0.3**
ARR Arges 149.40 328 ⇓P **PKiKP** **12 32 20.9 +0.8**
VRAC Vranov 149.40 341 *e*PKP **PKPbc** **12 32 19.3 +0.2**
VRAC *ep*PKP **pPKPab** **12 34 20.0 -1.0**
BORR Bors 149.41 333 ⇓P **PKiKP** **12 32 19.9 -0.1**
NEF NEVSHA 149.41 323 *e*P **PKiKP** **12 32 20.0 -0.1**
JAVC Velka Javorina 149.46 340 *e*PKP **PKiKP** **12 32 20.2 +0.1**
JAVC *ep*PKP **pPKPab** **12 34 20.6 -0.7**
PSZ Piszkesteto 149.49 336 ⇓P **PKiKP** **12 32 20.0 -0.2**
PSZ Piszkesteto 149.49 336 ⇓PKHKP PKPpre 12 32 20.0
KRUC Moravsky 149.68 341 *e*PKP **PKPdf** **12 32 14.1 -0.4**
KRUC *e* 12 32 19.0
LOZB Loznitsa 149.73 323 ⇓P **PKiKP** **12 32 20.5 -0.3**
HUMR Humele 149.82 327 ⇓P **PKPbc** **12 32 20.4 +0.2**
SMOL Smolenice 149.84 340 *e*PKP2 **PKiKP** **12 32 21.9 +1.1**
DEV Deva 149.84 331 ⇓P **PKiKP** **12 32 21.2 +0.3**
DEV Deva 149.84 331 ⇓PKHKP PKPpre 12 32 21.2
SBD Saint Breward 149.87 9 *e*P **PKPdf** **12 32 15.3 +0.6**
ZVC Zvikov 149.95 344⇑ *e*PKP **PKPbc** **12 32 20.6 +0.2**
MODS Modra-Piesok 150.01 340 *e*PKHKP PKPpre 12 32 20.9
MODS Modra-Piesok 150.01 340 *e*PKP **PKiKP** **12 32 20.9 -0.3**
MODS *e* 12 34 25.8
BEBN Eben Emael 150.02 356 *d*PKP **PKiKP** **12 32 20.9 -0.1**
BEBN *d*PKPab **PKPab** **12 32 28.0 -0.3**
UCC Uccle 150.09 357 *d*PKP **PKiKP** **12 32 21.0 -0.2**
SIRR Siria 150.10 332 ⇑P **PKPbc** **12 32 20.0 0.0**
SZH Strazhitsa 150.14 324 ⇓P **PKPbc** **12 32 19.2 -1.8**
SZH Strazhitsa 150.14 324 *e*P **PKPbc** **12 32 21.0 0.0**
MEM Membach 150.18 355 *d*PKPdf **PKPdf** **12 32 16.1 +0.9**
MEM *d*PKP **PKPbc** **12 32 21.0 +0.2**
BTNL Ternell 150.19 355 *d*PKPdf **PKPdf** **12 32 15.9 +0.7**
BTNL *d*PKP **PKiKP** **12 32 21.2 -0.3**
BSTI Sart Tilman 150.24 356 *d*PKP **PKiKP** **12 32 21.9 +0.3**
GZR Gura Zlata 150.27 330 ⇑P **PKPbc** **12 32 20.8 -0.5**
GZR Gura Zlata 150.27 330 ⇑PKiKP **PKPbc** **12 32 20.8 -0.5**
JMB Yambol 150.32 322 P **PKPbc** **12 32 20.8 -0.7**
JMB Yambol 150.32 322 *e*P **PKiKP** **12 32 21.8 -0.2**
KHC Kasperske Hory 150.38 345 *e*PKiKP **PKPdf** **12 32 16.5 +0.9**
KHC Kasperske Hory 150.38 345 *e*PKPDF **PKPdf** **12 32 16.5 +0.9**
KHC ⇑*e*PKP **PKPbc** **12 32 21.4 -0.1**
KHC *ep*PKP **pPKPbc** **12 34 21.3 +0.9**
ELND Elena 150.41 323 ⇑P **PKPbc** **12 32 20.4 -1.3**
**BCL

DIM	**Dimitrovgrad**	**151.15**	**322**	P		**PKPbc**	**12 32 22.5**	**-0.8**
DIM	**Dimitrovgrad**	**151.15**	**322**	*e*P		**PKiKP**	**12 32 24.0**	**+0.3**
VALD	**Valchedram**	**151.20**	**327**	*e*P		**PKiKP**	**12 32 24.3**	**+0.6**
MPEP	**Malo Peshtene**	**151.28**	**326**	*e*P		**PKiKP**	**12 32 23.8**	**-0.2**
MORH	**Mrgy, Hungar**	**151.38**	**336**	⇓P		**PKPbc**	**12 32 23.3**	**-0.4**
MOA	**Molln**	**151.39**	**343**	*i* PKP		**PKPbc**	**12 32 23.0**	**-0.8**
	comp=Z,13nm,0.7s							
MOA				*e*pPKP		**pPKPbc**	**12 34 25.4**	**+2.5**
	comp=Z,13nm,1.3s							
KDZ	**Kurdzhali**	**151.55**	**322**	P		**PKPbc**	**12 32 22.9**	**-1.4**
PLD	**Plovdiv**	**151.55**	**323**	P		**PKPbc**	**12 32 23.7**	**-0.5**
ARSA	**Arzberg**	**151.56**	**341**	*i* PKP		**PKPbc**	**12 32 23.3**	**-0.9**
	comp=Z,6.8nm,0.9s							
ARSA				*e*pPKP		**pPKPbc**	**12 34 26.5**	**+3.0**
	comp=Z,8.3nm,1.1s							
ALN	**Alexandroupoli**	**151.59**	**320**	P		**PKPbc**	**12 32 22.6**	**-1.8**
ENEZ	**Enez**	**151.62**	**320**	P		**PKPbc**	**12 32 22.1**	**-2.4**
BLKB	**Belogradchik**	**151.63**	**328**	⇑P		**PKPbc**	**12 32 24.0**	**-0.4**
BIOA	**Bad Ischl, Aus**	**151.70**	**344**	*i* PKP		**PKPbc**	**12 32 23.4**	**-1.1**
	comp=Z,5.6nm,0.4s,SNR=6.4							
BIOA				*e*pPKP		**pPKPbc**	**12 34 26.5**	**+2.8**
	comp=Z,12nm,1.3s							
RDO	**Rodhopi**	**151.74**	**321**	P		**PKPbc**	**12 32 22.7**	**-2.0**
RZN	**Rozhen**	**151.85**	**323**	P		**PKPbc**	**12 32 24.3**	**-0.9**
RZN	**Rozhen**	**151.85**	**323**	*e*P		**PKPbc**	**12 32 24.9**	**-0.3**
BLSH	**Balsha**	**151.87**	**326**	*e*P		**PKiKP**	**12 32 25.8**	**+0.5**
KOGS	**Kog**	**152.04**	**339**	*i* PKPbc		**PKPbc**	**12 32 24.9**	**-0.3**
PLNA	**Plana**	**152.05**	**325**	*e*P		**PKiKP**	**12 32 26.4**	**+0.6**
EZN	**Ezine**	**152.06**	**318**	P		**PKPbc**	**12 32 24.1**	**-1.3**
EZN	**Ezine**	**152.06**	**318**	⇑P		**PKPbc**	**12 32 24.9**	**-0.5**
EZN	**Ezine**	**152.06**	**318**	⇑PKIKP		**PKPbc**	**12 32 24.9**	**-0.5**
VTS	**Vitosha**	**152.06**	**326**	P		**PKPbc**	**12 32 25.2**	**-0.4**
VTS	**Vitosha**	**152.06**	**326**	*e*P		**PKPbc**	**12 32 25.6**	**0.0**
BOVS	**Bovan**	**152.09**	**329**	⇑P		**PKPbc**	**12 32 24.7**	**-0.8**
SMTH	**Samothraki Isl**	**152.16**	**320**	P		**PKPbc**	**12 32 23.7**	**-2.0**
LESA	**Schwarzleotal**	**152.19**	**345**	*i* PKP		**PKPbc**	**12 32 25.0**	**-0.7**
	comp=Z,11nm,0.5s,SNR=6.2							
LESA				*e*pPKP		**pPKPab**	**12 34 29.4**	**-3.1**
	comp=Z,6.5nm,0.9s							
SOKA	**Soboth**	**152.22**	**341**	*i* PKP		**PKPbc**	**12 32 25.4**	**-0.4**
	comp=Z,14nm,0.7s,SNR=5.8							
SOKA				*e*pPKP		**pPKPab**	**12 34 29.6**	**-3.0**
	comp=Z,16nm,1.7s							
KBA	**Koelnbreinsper**	**152.34**	**344**	*e*PKP		**PKPbc**	**12 32 26.2**	**0.0**
	comp=Z,21nm,0.8s							
PRK	**Paraskevi**	**152.42**	**317**	P		**PKPdf**	**12 32 20.7**	**+1.8**
KAVA	**Kavala**	**152.44**	**322**	P		**PKPdf**	**12 32 21.7**	**+2.9**
MMB	**Musomishta**	**152.51**	**323**	P		**PKPbc**	**12 32 24.0**	**-2.5**
MMB	**Musomishta**	**152.51**	**323**	*e*P		**PKPbc**	**12 32 25.9**	**-0.6**
WATA	**Walderalm**	**152.53**	**346**	*e*PKP		**PKPdf**	**12 32 18.7**	**-0.4**
	comp=Z,3.8nm,0.9s							
WATA				*e*pPKP		**pPKPbc**	**12 34 23.8**	**-1.7**
	comp=Z,5.4nm,0.8s							
WTTA	**Wattenberg**	**152.59**	**346**	*e*PKP		**PKPdf**	**12 32 18.9**	**-0.2**
	comp=Z,24nm,1.1s							
WTTA				*e*pPKP		**pPKPbc**	**12 34 23.4**	**-2.3**
	comp=Z,6.0nm,0.7s							
MOTA	**Moosalm**	**152.63**	**347**	*e*PKP		**PKPdf**	**12 32 18.7**	**-0.4**
	comp=Z,18nm,1.0s							
KKB	**Krupnik**	**152.65**	**325**	P		**PKPbc**	**12 32 25.4**	**-1.4**
KKB	**Krupnik**	**152.65**	**325**	*e*P		**PKPbc**	**12 32 26.7**	**-0.1**
MYKA	**Terra Mystica**	**152.67**	**343**	*i* PKP		**PKPbc**	**12 32 25.4**	**-1.3**
	comp=Z,12nm,0.7s							
MYKA				*e*pPKP		**pPKPab**	**12 34 30.9**	**-3.6**
	comp=Z,7.9nm,0.9s							
SQTA	**Sankt Quirin**	**152.72**	**347**	*e*PKP		**PKPdf**	**12 32 19.0**	**-0.3**
	comp=Z,5.3nm,0.8s							
SQTA				*e*pPKiKP		**pPKPbc**	**12 34 25.8**	**-0.1**
	comp=Z,10nm,1.0s							
SRS	**Serrai**	**152.88**	**323**	P		**PKPbc**	**12 32 25.4**	**-1.9**
SMG	**Samos**	**152.89**	**314**	P		**PKPbc**	**12 32 26.9**	**-0.5**
DAVA	**Damuels**	**152.93**	**349**	*e*PKP		**PKPbc**	**12 32 27.2**	**-0.2**
	comp=Z,24nm,1.0s							
LJU	**Ljubljana**	**152.95**	**341**	*i* PKPbc		**PKiKP**	**12 32 27.3**	**0.0**
FETA	**Feichten**	**153.02**	**347**	*e*PKP		**PKPdf**	**12 32 19.5**	**-0.3**
	comp=Z,25nm,1.0s,SNR=6.7							
FETA				*e*pPKP		**pPKPbc**	**12 34 24.1**	**-2.6**
	comp=Z,10nm,1.2s							
CHOS	**Chios island**	**153.04**	**316**	P		**PKPbc**	**12 32 26.8**	**-1.0**
KNT	**Kendrikon**	**153.24**	**324**	P		**PKPbc**	**12 32 26.7**	**-1.3**
KARP	**Karpathos**	**153.71**	**309**	P		**PKiKP**	**12 32 29.4**	**+0.1**
APE	**Apeiranthos**	**154.11**	**314**	P		**PKPbc**	**12 32 28.2**	**-1.9**
PHP	**Peshkopia**	**154.17**	**328**	P		**PKPbc**	**12 32 28.6**	**-1.4**
LIT	**Litokhoron**	**154.19**	**322**	P		**PKPbc**	**12 32 27.8**	**-2.3**
KZN	**Kozani**	**154.45**	**324**	P		**PKiKP**	**12 32 28.7**	**-2.1**
DION	**Dionisos Attik**	**154.59**	**317**	P		**PKPdf**	**12 32 23.9**	**+1.8**
PTL	**Penteli**	**154.65**	**317**	P		**PKiKP**	**12 32 29.5**	**-1.6**
ATHU	**Athens Univers**	**154.75**	**317**	P		**PKiKP**	**12 32 28.9**	**-2.5**
NEST	**Nestorio**	**154.77**	**325**	P		**PKiKP**	**12 32 30.5**	**-0.9**
STFN	**Stefani**	**154.78**	**318**	P		**PKiKP**	**12 32 29.8**	**-1.6**
ATAL	**Atalanti**	**154.78**	**319**	P		**PKiKP**	**12 32 29.8**	**-1.5**
VLY	**Voula,Athens**	**154.81**	**317**	P		**PKiKP**	**12 32 27.9**	**-3.6**
LKR	**Lokris**	**154.82**	**319**	P		**PKiKP**	**12 32 29.9**	**-1.5**
AXAR	**Agios Charalam**	**154.96**	**320**	P		**PKPdf**	**12 32 26.5**	**+4.0**
NPS	**Neapolis**	**154.96**	**310**	P		**PKPbc**	**12 32 32.1**	**+0.2**
AGG	**Agios Georgios**	**154.99**	**321**	P		**PKiKP**	**12 32 30.2**	**-1.6**
MAKR	**Makrakomi, Fth**	**155.11**	**321**	P		PKPdf	12 32 31.0	+8.2
LTK	**Loutraki**	**155.23**	**318**	P		PKPdf	12 32 31.2	+8.2
PRMD	**Pramanda**	**155.36**	**323**	P		**PKPdf**	**12 32 29.7**	**+6.6**
EVR	**Evrytania**	**155.37**	**321**	P		PKPdf	12 32 31.7	+8.5
TETR	**Tetrakomo, Epi**	**155.39**	**323**	P		PKPdf	12 32 31.1	+8.0
JAN	**Janina**	**155.41**	**324**	P		PKPdf	12 32 31.3	+8.2
ANX	**Ano Chora**	**155.51**	**320**	P		PKPdf	12 32 31.6	+8.2
SERG	**Sergoula**	**155.55**	**320**	P		**PKPdf**	**12 32 30.5**	**+7.2**
EFP	**Efpalio**	**155.63**	**320**	P		PKPdf	12 32 31.4	+8.0
GUR	**Goura**	**155.67**	**319**	P		**PKPdf**	**12 32 29.9**	**+6.2**
AMPL	**Ampelaki**	**155.71**	**322**	P		PKPdf	12 32 31.6	+8.1
KLV	**Kalavryta, Ach**	**155.72**	**319**	P		PKPdf	12 32 33.6	+10
PVO	**Paravola**	**155.73**	**321**	P		PKPdf	12 32 32.4	+8.9
IGT	**Igoumenitsa**	**155.78**	**324**	P		PKPdf	12 32 34.0	+10
DRO	**Drossia**	**156.05**	**320**	P		PKPdf	12 32 33.7	+10
EVGI	**Lefkada island**	**156.23**	**322**	P		PKPdf	12 32 34.2	+10
ITM	**Ithomi**	**156.40**	**318**	P		PKPdf	12 32 34.6	+10
PBRG	**Braganca**	**157.80**	**18**	*e*PKPdf		**PKPdf**	**12 32 27.7**	**+1.5**
PBRG				*e*PKPab		**PKPab**	**12 33 01.8**	**-0.2**
POLO	**Lamas de Olo**	**157.87**	**20**	*e*PKPab		**PKPab**	**12 33 02.4**	**0.0**
MVO	**Moncorvo**	**158.30**	**19**	*e*PKPdf		**PKPdf**	**12 32 28.4**	**+1.6**
MVO				*e*PKPab		**PKPab**	**12 33 06.1**	**+1.9**
PVIS	**Viseu**	**158.42**	**21**	*e*PKPab		**PKPab**	**12 33 05.5**	**+0.8**
PCAS	**Casmilo, Conde**	**158.80**	**23**	*e*PKPab		**PKPab**	**12 33 06.3**	**0.0**
MTE	**Manteigas**	**158.82**	**21**	*e*PKPab		**PKPab**	**12 33 07.5**	**+1.0**
PSBE	**So Bento**	**159.15**	**25**	*e*PKPab		**PKPab**	**12 33 07.8**	**-0.1**
PSARD	**Sardoal**	**159.32**	**23**	*e*PKPdf		**PKPdf**	**12 32 29.4**	**+1.4**
PSARD				*e*PKPab		**PKPab**	**12 33 08.1**	**-0.5**
PCBR	**Castelo Branco**	**159.35**	**22**	*e*PKPdf		**PKPdf**	**12 32 29.4**	**+1.4**
PCBR				*e*PKPab		**PKPab**	**12 33 09.2**	**+0.5**
PMTG	**Montargil**	**159.76**	**24**	*e*PKPdf		**PKPdf**	**12 32 29.6**	**+1.1**
PMTG				*e*PKPab		**PKPab**	**12 33 10.3**	**-0.2**
PARRA	**Arraiolos**	**160.05**	**24**	*e*PKPab		**PKPab**	**12 33 11.7**	**+1.6**
PESTR	**Estremoz**	**160.17**	**23**	*e*PKPab		**PKPab**	**12 33 10.0**	**+0.6**
MOE	**Montemor**	**160.18**	**25**	*e*PKPdf		**PKPdf**	**12 32 30.8**	**+1.9**
MOE				*e*PKPab		**PKPab**	**12 33 12.7**	**+0.3**
EVO	**Evora**	**160.31**	**24**	*e*PKPdf		**PKPdf**	**12 32 30.1**	**+1.1**
EVO				*e*PKPab		**PKPab**	**12 33 13.4**	**+0.4**
ESDC	**Sonseca Array**	**160.52**	**14**	PKP		**PKPdf**	**12 32 29.5**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=5.8,slow=1.7,SNR=6.2							
ESDC				PKPab		**PKPab**	**12 33 13.1**	**-0.9**
	comp=Z,5.0nm,1.1s,baz=347,slow=4.6,SNR=9.5							
PBEJ	**Beja**	**160.80**	**25**	*e*PKPdf		**PKPdf**	**12 32 31.3**	**+1.7**
PBEJ				*e*PKPab		**PKPab**	**12 33 15.3**	**+0.2**
PBAR	**Barrancos**	**160.99**	**23**	*e*PKPdf		**PKPdf**	**12 32 31.6**	**+1.9**
PBAR				*e*PKPab		**PKPab**	**12 33 16.5**	**+0.6**
PCVE	**Castro Verde**	**161.07**	**26**	*e*PKPab		**PKPab**	**12 33 16.9**	**+0.5**
MORF	**Marmelete**	**161.09**	**28**	*e*PKPdf		**PKPdf**	**12 32 30.4**	**+0.4**
MORF				*e*PKPab		**PKPab**	**12 33 17.1**	**+0.6**
MORF	**Marmelete**	**161.09**	**28**	*e*PKPdf		**PKPdf**	**12 32 32.7**	**+2.7**
MORF				*e*PKPab		**PKPab**	**12 33 16.9**	**+0.4**
PVAQ	**Vaqueiros**	**161.40**	**26**	*e*PKPdf		**PKPdf**	**12 32 30.2**	**-0.1**
PVAQ				*e*PKPab		**PKPab**	**12 33 17.9**	**+0.1**
PBDV	**Barranco-do-Ve**	**161.45**	**26**	*e*PKPdf		**PKPdf**	**12 32 32.5**	**+2.1**
KEST	**Kesra**	**163.94**	**339**	PKP		**PKPdf**	**12 32 32.4**	**-0.4**
	comp=Z,7.0nm,0.9s,baz=5.9,slow=6.7,SNR=4.2							
KEST				PKPab		**PKPab**	**12 33 30.1**	**+1.0**
	comp=Z,5.1nm,0.9s,baz=0.0,slow=0.0,SNR=5.4							
DBIC	**Dimbokro**	**164.30**	**153**	PKP		**PKPdf**	**12 32 33.8**	**+0.1**
	comp=Z,13nm,0.8s,baz=220,slow=0.3,SNR=12							
DBIC				PKPab		**PKPab**	**12 33 31.6**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=220,slow=4.3,SNR=3.2							
DBIC				pPKP		**pPKPdf**	**12 34 34.8**	**+0.6**
	comp=Z,5.8nm,1.0s,baz=215,slow=5.9,SNR=3.1							
TORD	**Torodi Ar. Bea**	**172.30**	**176**	PKP		**PKPdf**	**12 32 38.0**	**-0.9**
	comp=Z,7.1nm,0.8s,baz=215,slow=1.8,SNR=10							
TORD				PKPab		**PKPab**	**12 34 06.3**	**0.0**
	comp=Z,3.9nm,0.8s,baz=164,slow=3.0,SNR=3.9							
TORD				pPKP		**pPKPdf**	**12 34 40.7**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=45,slow=1.6,SNR=3.2							

AFAD 17 12:30:15.2, 36.43N×28.68E, h7km±3km, ML1.2,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZZE	**Mula-Seydike**	**0.44**	**88**	P	Pg	12 30 23.5	-0.2
IZZE				S	Sg	12 30 30.6	+1.1
IZZE				*i* IAML		12 30 35.0	
	comp=N,34nm,0.4s						
IZZE				*i* IAML		12 30 36.0	
	comp=E,21nm,0.4s						
SABU	**Mula-Dalaman**	**0.46**	**30**	P	Pb	12 30 24.9	-0.7
SABU				S	Sg	12 30 30.9	+0.8
SABU				*i* IAML		12 30 52.0	
	comp=N,17nm,0.8s						
TURN	**Turunc**	**0.49**	**315**	P	Pg	12 30 25.4	+0.6
TURN				S	Sg	12 30 32.2	+1.0

*IDC **17** 12:51:25.2±1.6, 1.73N×126.06E, h0km, mb3.4/4,*
mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=118.0km
s-min=19.7km az=68.0
*DJA **17** 12:51:29.4±0.8, 2.7N±2.7×12.6E±.°, h12km±7km, M3.5/9,*
mb3.5/1, MLv3.5/9
ISC 17 12:51:30.3±1.0, 1.96N±0.08×126.7E±0.1, h35km, n8,
σ1893/10, mb3.5/4, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**150**	P	**Pn**	**12 51 53.2**	**+0.3**
TNTI				S	**Sn**	**12 52 13.1**	**+3.4**
SGSI	**Sangihe**	**2.07**	**326**	P	**Pn**	**12 52 03.4**	**+0.8**
SGSI				S	**Sn**	**12 52 29.0**	**+1.9**
KMSI	**Cibinong**	**3.02**	**243**	P	**Pn**	**12 52 16.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.95**	**183**	P	**P**	**12 55 57.0**	**-2.6**
	0.1nm,0.3s,baz=18,slow=13,SNR=0.9						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**12 56 31.3**	**-1.2**
	0.5nm,0.3s,baz=338,slow=11,SNR=29						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**12 57 03.6**	**-0.3**
	0.3nm,0.5s,baz=341,slow=7.2,SNR=11						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**13 01 26.1**	**-0.3**
	0.3nm,0.4s,baz=122,slow=7.2,SNR=6.4						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.20**	**328**	P	**P**	**13 01 53.7**	**-1.3**
	0.2nm,0.4s,baz=122,slow=7.1,SNR=5.6						
	0.2nm,0.4s						

*IDC **17** 13:42:59.2±1.8, 1.47N×126.25E, h0km, mb3.4/4,*
mbtmp3.4/4, Error ellipse: s-maj=183.6km s-min=22.1km
az=66.0
*DJA **17** 13:43:05.1±1.2, 2.7N±3.7×12.6E±.°, h28km±11km, M3.3/8,*
MLv3.3/8
ISC 17 13:43:05.1±1.0, 1.54N±0.07×126.50E±0.07, h35km, n7,
σ1857/10, mb3.4/4, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.16**	**131**	P	**Pn**	**13 43 25.3**	**+0.5**
TNTI				S	**Sn**	**13 43 41.6**	**+2.2**
SGSI	**Sangihe**	**2.34**	**336**	P	**Pn**	**13 43 41.6**	**+0.4**
SGSI				S	**Sn**	**13 44 10.8**	**+2.1**
KMSI	**Cibinong**	**2.70**	**249**	P	**Pn**	**13 43 47.6**	**+1.6**
KMSI				S	**Sn**	**13 44 17.4**	**-0.1**
WRA	**Warramunga Arr**	**22.69**	**161**	P	**P**	**13 48 02.6**	**-1.3**
	0.7nm,0.5s,baz=338,slow=11,SNR=15						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**13 48 34.8**	**-0.9**
	0.2nm,0.5s,baz=345,slow=9.3,SNR=12						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.22**	**326**	P	**P**	**13 53 01.9**	**-1.1**
	0.5nm,0.7s,baz=122,slow=7.3,SNR=4.2						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**13 53 30.2**	**-1.3**
	0.2nm,0.6s,baz=128,slow=5.9,SNR=2.5						
	0.2nm,0.6s						

*SOME **17** 14:17:00.9, 38.37N×70.85E, h5km*
*MOS **17** 14:17:01.3±1.4, 38.80N×70.71E, h5km, mb4.7/7, Error*
ellipse: s-maj=7.5km s-min=4.1km az=70.9
*IDC **17** 14:17:02.6±0.8, 38.79N×70.90E, h0km, mb3.9/14,*
mbtmp4.0/21, ML3.6/7, MS3.2/8, Error ellipse:
s-maj=11.9km s-min=11.6km az=126.0
*NEIC **17** 14:17:04.6±1.2, 38.94N±0.05×70.85E±0.06, h8km±5km,*
mb4.5/25, Error ellipse: s-maj=7.0km s-min=6.6km
az=139.0
*KRNET **17** 14:17:05.0±0.1, 39.04N×70.87E, h17km, mb4.3*
*BJI **17** 14:17:05.8, 39.07N×70.79E, h32km, mB4.5/6, mb4.4/27,*
ML4.2/4, Ms3.7/5, Ms7 3.6/2
*NNC **17** 14:17:05.5±2.4, 38.90N×70.77E, h0km, mb4.5, mpv4.3,*
Error ellipse: s-maj=20.5km s-min=16.0km az=5.0
ISC 17 14:17:05.9±0.4, 38.94N±0.03×70.80E±0.03, h20km±4km,
n206, σ2.34/246, mb4.4/33, MS3.0/5, 42C-22D,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.38**	**279**		**Pb**	**14 17 13.6**	**-0.4**
GAR	**Garm**	**0.38**	**279**	⇑*i*P	**Pb**	**14 17 13.5**	**-0.4**
GAR				⇑*i*S	**Sb**	**14 17 19.7**	**+0.3**
DRK	**Karamyk**	**0.95**	**55**		**Pn**	**14 17 21.3**	**-3.1**
DRK	**Karamyk**	**0.95**	**55**	⇓*i*P	**Pn**	**14 17 21.2**	**-3.1**
DRK				⇓*i*S	**Sb**	**14 17 32.7**	**-3.4**
DRK	**Karamyk**	**0.95**	**55**	PG	**Pn**	**14 17 21.3**	**-3.1**
CHGR	**Chuyangaron**	**1.31**	**258**		**Pn**	**14 17 29.8**	**+0.6**
CHGR	**Chuyangaron**	**1.31**	**258**	⇓*i*P	**Pb**	**14 17 30.4**	**+0.5**
CHGR				⇓*i*S	**Sb**	**14 17 49.3**	**+3.0**
CHGR	**Chuyangaron**	**1.31**	**258**	PG	**Pn**	**14 17 29.8**	**+0.6**
OHH	**Osh**	**2.20**	**44**	⇓*e*P	**Pn**	**14 17 41.8**	**+0.4**
OHH				⇑*i*S	**Sn**	**14 18 08.7**	**+0.6**
SFK	**Sufi-Kurgan**	**2.35**	**62**	⇑*i*P	**Pn**	**14 17 44.2**	**+0.6**
SFK				⇑*i*S	**Sn**	**14 18 12.9**	**+0.9**
TRKS	**Terek-Say**	**2.60**	**6**	⇑*i*P	**Pn**	**14 17 46.9**	**0.0**
TRKS				⇑*i*S	**Sn**	**14 18 17.3**	**-0.7**
ARSB	**Arslanbob**	**2.91**	**34**		**Pn**	**14 17 50.8**	**-0.4**
ARSB	**Arslanbob**	**2.91**	**34**	⇓*i*P	**Pn**	**14 17 51.8**	**+0.6**
ARSB				⇓*i*S	**Sn**	**14 18 25.8**	**+0.2**
ARSB	**Arslanbob**	**2.91**	**34**	PN	**Pn**	**14 17 50.8**	**-0.4**
ARK	**Arkit**	**2.99**	**17**	⇑*e*P	**Pn**	**14 17 52.9**	**+0.6**
ARK				⇑*i*S	**Sn**	**14 18 28.1**	**+0.6**
SALK	**Salom-Alik**	**3.03**	**49**	⇓*i*P	**Pn**	**14 17 53.4**	**+0.5**
SALK				⇓*i*S	**Sn**	**14 18 28.8**	**+0.2**
CHM	**Chimkent**	**3.49**	**345**	*e*P	**Pb**	**14 18 04.6**	**-2.5**
	42nm,0.2s						
CHM				*e*S	**Sb**	**14 18 49.4**	**+0.4**
	524nm,0.4s						
CHM	**Chimkent**	**3.49**	**345**	*e*Pn	**Pb**	**14 18 04.1**	**-3.0**
CHM				*e*Pg	Pn	14 18 09.2	+10
CHM	**Chimkent**	**3.49**	**345**	*e*PN	**Pb**	**14 18 04.0**	**-3.0**
CHM				*e*		14 18 09.2	
DZA	**Taraz**	**3.97**	**6**	Pg	**Pn**	**14 18 09.8**	**+4.1**
	19nm,0.0s						
DZA				Lg	Lg	14 18 59.8	
	408nm,0.7s						
DZA	**Taraz**	**3.97**	**6**	*e*P	Pb	14 18 11.3	-3.9
	77nm,0.1s						
DZA				*e*S	**Sb**	**14 19 00.5**	**-2.2**
	408nm,0.7s						
DZA	**Taraz**	**3.97**	**6**	*e*Pn	**Pn**	**14 18 10.0**	**+4.3**
DZA				*e*Pg	**Pb**	**14 18 17.3**	**+2.2**
DZA	**Taraz**	**3.97**	**6**	*e*PN	**Pn**	**14 18 09.9**	**+4.3**
DZA				*e*		14 18 17.3	
ARLS	**Aral**	**3.97**	**42**	⇑*e*P	**Pn**	**14 18 06.5**	**+0.7**
ARLS				⇑*i*S	**Sn**	**14 18 51.3**	**-0.5**
KSH	**Kashi**	**4.06**	**80**	Pn	**Pn**	**14 18 04.9**	**-2.1**
KSH				smax	smax		
	comp=N,900nm,1.0s						
KSH				smax	smax		
	comp=E,690nm,1.0s						
BRLS	**Boroldav**	**4.15**	**350**	Pg	**Pn**	**14 18 09.3**	**+1.1**
	8.1nm,0.2s						
BRLS				Lg	Lg	14 18 58.2	
	110nm,1.3s						
BRLS	**Boroldav**	**4.15**	**350**	*e*P	**Pn**	**14 18 09.2**	**+1.1**
	8.1nm,0.2s						
BRLS				*e*S	**Sn**	**14 18 57.4**	**+1.4**
	110nm,1.3s						
BRLS	**Boroldav**	**4.15**	**350**	*e*Pn	**Pn**	**14 18 09.2**	**+1.0**
BRLS				*e*Pg	**Pb**	**14 18 17.1**	**-1.2**
BRLS				*e*Sn	**Sn**	**14 18 53.5**	**-2.5**
BRLS				*e*Lg	Lg	14 19 11.4	
BRLS	**Boroldav**	**4.15**	**350**	*e*PN	**Pn**	**14 18 09.1**	**+1.0**
BRLS				*e*		14 18 17.0	
BRLS				*e*		14 19 11.4	
KK31	**Karatay Array**	**4.16**	**357**		**Pn**	**14 18 08.7**	**+0.4**
KK31	**Karatay Array**	**4.16**	**357**	⇑Pn	**Pn**	**14 18 12.6**	**+4.3**
	7.7nm,0.3s,baz=178,slow=12,SNR=298						
KK31				⇑Lg	Lg	14 19 15.0	
	79nm,0.5s,baz=172,slow=28,SNR=6.4						
KK31	**Karatay Array**	**4.16**	**357**	PN	**Pn**	**14 18 08.7**	**+0.4**
KKAR	**Karatay Array**	**4.16**	**357**		**Pn**	**14 18 10.4**	**+2.1**
KKAR	**Karatay Array**	**4.16**	**357**	PN	**Pn**	**14 18 10.4**	**+2.1**
MRKS	**Merke**	**4.22**	**25**	Pg	**Pn**	**14 18 13.3**	**+4.1**
	58nm,0.6s						
MRKS				Lg	Lg	14 19 07.2	
	97nm,0.9s						
MRKS	**Merke**	**4.22**	**25**	*e*P	**Pn**	**14 18 12.8**	**+3.6**
	58nm,0.6s						
MRKS				*e*S	**Sn**	**14 19 03.1**	**+5.2**
	97nm,0.9s						
JNKS	**Jany-Kuch**	**4.29**	**59**	⇓*e*P	**Pn**	**14 18 11.2**	**+1.0**
JNKS				⇓*i*S	**Sn**	**14 18 59.5**	**-0.3**
UCH	**Uchtor**	**4.33**	**40**	P	**Pn**	**14 18 14.6**	**+3.5**
	SNR=163						
UCH	**Uchtor**	**4.33**	**40**	⇑*i*P	**Pn**	**14 18 11.8**	**+0.8**
UCH				⇑*i*S	**Sn**	**14 19 00.5**	**-0.7**
EKS2	**Erkin-Say**	**4.35**	**30**	P	**Pn**	**14 18 14.8**	**+3.8**
	SNR=31						
EKS2	**Erkin-Say**	**4.35**	**30**	⇑*i*P	**Pn**	**14 18 11.8**	**+0.8**
EKS2				⇑*i*S	**Sn**	**14 19 00.5**	**-0.6**
KBL	**Kabul**	**4.61**	**198**	Pn	**Pn**	**14 18 13.8**	**-0.9**
KBL	**Kabul**	**4.61**	**198**	PN	**Pn**	**14 18 13.8**	**-0.9**
AAK	**Ala-Archa**	**4.64**	**36**	Pn	**Pn**	**14 18 18.6**	**+3.7**
	20nm,0.3s,baz=193,slow=5.3,SNR=158						
AAK				Sn	**Sn**	**14 19 13.6**	**+5.3**
	10nm,0.3s,baz=339,slow=20,SNR=7.2						
AAK				LR	LR	14 20 21.4	
	comp=Z,66nm,18.4s,baz=350,slow=42						
	50nm,0.4s						
AAK	**Ala-Archa**	**4.64**	**36**		**Pn**	**14 18 18.3**	**+3.4**
AAK	**Ala-Archa**	**4.64**	**36**	P	**Pn**	**14 18 18.7**

SATY	**Saty**	**7.07**	**52**	*e*P		**Pn**	**14 18 52.7**	**+4.3**
ARXS	**Arharly**	**7.45**	**43**	*e*P		**Pn**	**14 18 55.2**	**+1.7**
TSSA	**Tissa**	**7.48**	**143**	*e*P		**Pn**	**14 18 55.0**	**+0.9**
TSSA				*e*S		**Sn**	**14 20 18.8**	**+0.4**
TSSA				IAML			14 20 27.6	
	comp=E,136nm,0.7s							
TSSA				IAML			14 20 30.1	
	comp=N,117nm,0.7s							
SHLS	**Shalkode**	**7.78**	**55**	*e*Pn		Pn	14 19 05.6	+7.5
SHLS	**Shalkode**	**7.78**	**55**	*e*P		Pn	14 19 05.6	+7.5
PDGK	**Podgornoye**	**7.89**	**53**	⇓Pn		**Pn**	**14 19 01.1**	**+1.5**
	comp=N,5.9nm,0.8s							
PDGK				⇑Lg		Lg	14 21 16.5	
	comp=N,29nm,0.9s							
PDGK	**Podgornoye**	**7.89**	**53**	P		**Pn**	**14 19 01.1**	**+1.5**
DHRM	**DHARAMSHALA**	**8.04**	**144**	*e*P		**Pn**	**14 19 03.8**	**+2.0**
DHRM				*e*S		**Sn**	**14 20 32.8**	**+0.6**
DHRM				IAML			14 20 38.1	
	comp=N,128nm,0.4s							
DHRM				IAML			14 20 41.4	
	comp=E,131nm,0.4s							
BHK	**Bhakra**	**8.80**	**147**	*ex*		x	14 19 27.1	
BHK				*e*S		**Sn**	**14 20 55.5**	**+4.9**
SMLA	**Simla**	**9.38**	**144**	*e*P		**Pn**	**14 19 21.0**	**+1.1**
SMLA				*e*S		**Sn**	**14 21 02.3**	**-2.5**
SMLA				IAML			14 21 09.2	
	comp=N,68nm,0.3s							
SMLA				IAML			14 21 11.6	
	comp=E,64nm,0.6s							
BRZS	**Berezniki**	**11.12**	**6**	*e*Pn		**Pn**	**14 19 46.2**	**+2.5**
BRZS	**Berezniki**	**11.12**	**6**	*e*P		**Pn**	**14 19 46.1**	**+2.5**
MAKZ	**Makanchi**	**11.35**	**43**			**Pn**	**14 19 49.5**	**+2.6**
MAKZ	**Makanchi**	**11.35**	**43**	⇓Pn		**Pn**	**14 19 49.5**	**+2.6**
	comp=E,76nm,0.8s							
MAKZ	**Makanchi**	**11.35**	**43**	P		**Pn**	**14 19 49.5**	**+2.6**
MK31	**Makanchi Array**	**11.51**	**43**	Pn		**Pn**	**14 19 51.1**	**+2.0**
	comp=E,11nm,0.8s,baz=234,slow=10,SNR=51							
MK31	**Makanchi Array**	**11.51**	**43**	*ce*P		**Pn**	**14 19 49.0**	**-0.1**
MKAR	**Makanchi Array**	**11.51**	**43**	Pn		**Pn**	**14 19 50.5**	**+1.4**
	comp=E,0.7nm,0.3s,baz=230,slow=14,SNR=59							
	comp=E,12nm,0.8s							
MKAR	**Makanchi Array**	**11.51**	**43**			**Pn**	**14 19 48.3**	**-0.8**
MKAR	**Makanchi Array**	**11.51**	**43**	P		**Pn**	**14 19 48.3**	**-0.8**
KUDL	**Kundal**	**11.77**	**155**	*e*P		**Pn**	**14 19 51.7**	**-0.9**
KUDL				*e*S		**Sn**	**14 21 58.4**	**-4.9**
KUDL				IAML			14 22 05.2	
	comp=E,63nm,0.8s							
KUDL				IAML			14 22 09.8	
	comp=N,56nm,0.6s							
LGTI	**Lohaghat**	**12.27**	**138**	*e*P		**Pn**	**14 19 57.8**	**-1.8**
LGTI				*e*S		**Sn**	**14 22 11.6**	**-4.1**
KURBB	**Kurchatov Arra**	**12.89**	**23**	Pn		**Pn**	**14 20 06.5**	**-1.5**
KURBB	comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=8.5							
	baz=205,slow=22,SNR=2.3							
	comp=N,1.0nm,0.8s							
KURBB	**Kurchatov Arra**	**12.89**	**23**	⇑Lg		Lg	14 23 54.6	
	comp=N,32nm,1.0s							
AB31	**Akbulak array**	**12.91**	**326**	Pn		**Pn**	**14 20 07.7**	**-0.5**
AB31	**Akbulak array**	**12.91**	**326**	Pn		**Pn**	**14 20 08.3**	**+0.1**
	comp=N,2.1nm,0.4s,baz=139,slow=13,SNR=123							
AB31	**Akbulak array**	**12.91**	**326**	P		**Pn**	**14 20 08.3**	**+0.1**
ABKAR	**Akbulak array**	**12.91**	**326**	Pn		**Pn**	**14 20 07.7**	**-0.4**
KURK	**Kurchatov**	**13.00**	**23**			**Pn**	**14 20 08.5**	**-0.9**
KURK	**Kurchatov**	**13.00**	**23**			**Sn**	**14 22 26.2**	**-7.2**
KURK	**Kurchatov**	**13.00**	**23**	*i* P		**Pn**	**14 20 08.9**	**-0.5**
ZSN	**Zaisan**	**13.31**	**46**	*e*Pn		**Pn**	**14 20 16.1**	**+2.4**
ZSN	**Zaisan**	**13.31**	**46**	*e*P		**Pn**	**14 20 16.9**	**+3.2**
WMQ	**Urumqi**	**13.59**	**64**	*e*P		**Pn**	**14 20 19.4**	**+1.9**
WMQ				pmax		pmax		
	comp=N,19nm,0.7s							
BVA0	**Borovoye Array**	**14.09**	**359**	⇓Pn		**Pn**	**14 20 26.5**	**+2.3**
	comp=N,4.3nm,0.7s,baz=157,slow=11,SNR=10							
BVA0	**Borovoye Array**	**14.09**	**359**	P		**Pn**	**14 20 26.5**	**+2.3**
BVAR	**Borovoye Array**	**14.09**	**359**	Pn		**Pn**	**14 20 23.6**	**-0.6**
	baz=163,slow=10,SNR=7.4							
BVAR				Sn		**Sn**	**14 22 56.4**	**-3.4**
	baz=49,slow=52,SNR=2.0							
BVAR				LR		LR	14 26 11.8	
	comp=N,102nm,20.6s,baz=192,slow=39							
	comp=N,1.4nm,0.6s							
BORK	**Borovoye**	**14.11**	**359**	*ce*P		**Pn**	**14 20 27.0**	**+2.5**
BORK				pmax		pmax		
	comp=Z,6.0nm,1.3s							
AKTO	**Aktyubinsk**	**14.62**	**326**	Pn		**Pn**	**14 20 31.4**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=140,slow=15,SNR=6.7							
AKTO				Sn		**Sn**	**14 23 09.6**	**-3.4**
	comp=Z,0.8nm,0.3s,baz=218,slow=22,SNR=6.9							
AKTO				LR		LR	14 26 56.2	
	comp=Z,84nm,20.3s,baz=222,slow=40							
	comp=Z,1.5nm,0.3s							
AKTO	**Aktyubinsk**	**14.62**	**326**	⇑Pn		**Pn**	**14 20 31.4**	**-0.1**
	comp=Z,16nm,1.4s							
DGZ	**Jazzator, Alta**	**16.00**	**42**	*i* P		**Pn**	**14 20 48.5**	**-1.4**
BHPL	**Bhopal**	**16.64**	**158**	*e*P		**P**	**14 21 00.2**	**-0.2**
EVN	**Everest**	**17.26**	**125**	Pn		**Pn**	**14 21 03.2**	**-3.2**
ZAA0	**Zalesovo Array**	**17.80**	**28**	Pn		**Pn**	**14 21 11.1**	**-1.1**
ZAA0	**Zalesovo Array**	**17.80**	**28**	⇑Pn		**Pn**	**14 21 12.5**	**+0.3**
	comp=Z,0.7nm,0.7s							
ZALV	**Zalesovo Beam**	**17.80**	**28**	P		**Pn**	**14 21 11.9**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=225,slow=12,SNR=15							
	comp=Z,6.0nm,0.7s							
ZALV	**Zalesovo Beam**	**17.80**	**28**	Pn		**Pn**	**14 21 11.0**	**-1.2**
ZALV	**Zalesovo Beam**	**17.80**	**28**	*i* P		**Pn**	**14 21 12.1**	**-0.1**
ZALV				pmax		pmax		
	comp=Z,6.0nm,0.7s							
MAK	**Makhachkala**	**18.03**	**290**	*e*P		**Pn**	**14 21 11.8**	**-3.3**
MAK				*e*S		**Sn**	**14 24 33.5**	**-2.1**
MAK				pmax		pmax		
	comp=Z,272nm,1.2s							
MAK				MLR		MLR		
	comp=Z,446nm,18.0s							
LSA	**Lhasa**	**19.14**	**113**	P		**P**	**14 21 21.3**	**-7.0**
ARTI	**Arti**	**19.30**	**339**	P		**Pn**	**14 21 30.0**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=140,slow=16,SNR=4.4							
ARTI				LR		LR	14 29 15.4	
	comp=Z,45nm,21.0s,baz=156,slow=38							
	comp=Z,2.2nm,0.8s							
ARTI	**Arti**	**19.30**	**339**	P		**Pn**	**14 21 30.6**	**+0.2**
ARTI				S		**S**	**14 25 13.5**	**+6.8**
GNI	**Garni**	**20.11**	**282**	LR		LR	14 31 09.3	
	comp=Z,61nm,18.1s,baz=84,slow=42							
NCK	**Nalchik**	**20.92**	**291**	*i* P		**P**	**14 21 46.5**	**-0.6**
NCK				pmax		pmax		
	comp=Z,9.0nm,0.3s							
BELG	**Belogornoye**	**20.93**	**318**	P		**P**	**14 21 48.2**	**+1.1**
	comp=Z,11nm,0.8s,baz=130,slow=17,SNR=5.4							
	comp=Z,11nm,0.8s							
BELG	**Belogornoye**	**20.93**	**318**	*i* P		**P**	**14 21 47.8**	**+0.7**
BELG				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KBZ	**Khabaz**	**21.44**	**292**	P		**P**	**14 21 53.4**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=84,slow=9.2,SNR=2.2							
	comp=Z,1.2nm,0.8s							
NEUR	**Neytrino**	**21.56**	**291**	*i* P		**P**	**14 21 51.6**	**-2.6**
KIV	**Kislovodsk**	**21.60**	**292**	*e*P		**P**	**14 21 53.6**	**-1.0**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.1s							
KIV				MLR		MLR		
	comp=Z,20nm,14.0s							
KNGR	**Kungurtug, Tuv**	**22.14**	**50**	*i* P		**P**	**14 22 00.6**	**+0.4**
KNGR				pmax		pmax		
	comp=Z,16nm,0.9s							
GTA	**Gaotai**	**22.46**	**80**	*e*P		**P**	**14 22 03.8**	**-0.1**
GTA				pP		pP	14 22 09.5	-1.0
GTA				pmax		pmax		
	comp=Z,8.0nm,1.2s							
TLY	**Talaya**	**26.14**	**50**	P		**P**	**14 22 39.0**	**+0.5**
TLY	**Talaya**	**26.14**	**50**	P		**P**	**14 22 39.0**	**+0.5**
SONM	**Songino Array**	**27.15**	**59**	P		**P**	**14 22 48.1**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=259,slow=10,SNR=4.9							
	comp=Z,1.2nm,0.8s							
ULN	**Ulaanbaatar**	**27.60**	**59**	*i* P		**P**	**14 22 50.2**	**-1.6**
ULN				pmax		pmax		
	comp=Z,22nm,3.3s							
OBN	**Obninsk**	**28.02**	**317**	P		**P**	**14 22 55.8**	**+0.5**
OBN	**Obninsk**	**28.02**	**317**	P		**P**	**14 22 55.8**	**+0.5**
BRTR	**Keskin Array B**	**28.62**	**283**	P		**P**	**14 23 02.1**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=88,slow=8.9,SNR=2.3							
	comp=Z,0.3nm,0.5s							
PZH	**PanZhiHua**	**28.70**	**106**	P		**P**	**14 23 02.6**	**+0.8**
EIL	**Elat**	**30.86**	**264**	LR		LR	14 37 16.0	
	comp=Z,36nm,20.9s,baz=358,slow=39							
HHC	**Hu-ho-hao-te**	**31.14**	**73**	*e*P		**P**	**14 23 23.4**	**+0.1**
HHC				pmax		pmax		
	comp=Z,13nm,0.7s							
HHC				pmax		pmax		
	comp=Z,110nm,4.2s							
AKBB	**Malin Array Si**	**31.34**	**306**	*i* P		**P**	**14 23 25.5**	**+0.7**
AKBB				pmax		pmax		
	comp=Z,9.0nm,2.0s							
CMAR	**Chiang Mai Arr**	**31.82**	**122**	P		**P**	**14 23 28.8**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=313,slow=9.5,SNR=5.3							
	comp=Z,0.6nm,0.3s							
MLR	**Muntele Rosu**	**33.51**	**296**	LR		LR	14 40 51.4	
	comp=Z,46nm,19.9s,baz=116,slow=42							
BJI	**Beijing**	**34.75**	**73**	P		**P**	**14 23 54.3**	**-0.4**
BJI				pmax		pmax		
	comp=Z,5.0nm,1.7s							
FINES	**FINESS Array B**	**35.39**	**324**	P		**P**	**14 24 00.5**	**+0.5**
	comp=Z,5.3nm,1.1s,baz=97,slow=7.9,SNR=4.0							
	comp=Z,5.3nm,1.1s							
FINES	**FINESS Array B**	**35.39**	**324**	*i* P		**P**	**14 24 01.3**	**+1.4**
FINES				pmax		pmax		
	comp=Z,5.0nm,1.0s							
ARCES	**ARCESS Array B**	**38.84**	**337**	P		**P**	**14 24 29.8**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=119,slow=8.0,SNR=1.7							
ARCES				LR		LR	14 41 51.3	
	comp=Z,93nm,19.3s,baz=141,slow=38							
	comp=Z,1.5nm,0.7s							
ARCES	**ARCESS Array B**	**38.84**	**337**	IAmb		IAmb	14 25 07.6	
	comp=Z,15nm,1.4s							
ARCES	**ARCESS Array B**	**38.84**	**337**	P		**P**	**14 24 29.8**	**+0.7**
ARCES				pmax		pmax		
	comp=Z,15nm,1.4s							
NJ2	**Nanjing**	**39.36**	**85**	*e*P		**P**	**14 24 33.1**	**-0.8**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HEH	**HeiHe**	**40.94**	**55**	*e*P		**P**	**14 24 47.6**	**+0.8**
HEH				pmax		pmax		
	comp=Z,15nm,0.9s							
HFS	**Hagfors**	**41.07**	**320**	P		**P**	**14 24 48.5**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=102,slow=12,SNR=7.4							
	comp=Z,3.2nm,0.6s							
YAK	**Yakutsk**	**42.09**	**37**	*ce*P		**P**	**14 24 53.6**	**-2.5**
YAK				pmax		pmax		
	comp=Z,33nm,2.5s							
NC405	**NORSAR Array S**	**42.11**	**322**	P		**P**	**14 24 57.7**	**+1.4**
NC405				IAmb		IAmb	14 25 23.8	
	comp=Z,11nm,1.2s							
NB2	**NORSAR Subarra**	**42.35**	**321**	P		**P**	**14 24 58.6**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=93,slow=8.6							
NOA	**NORSAR Array B**	**42.35**	**321**	P		**P**	**14 24 58.7**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=94,slow=8.1,SNR=7.2							
	comp=Z,1.3nm,0.8s							
TIXI	**Tiksi**	**43.58**	**23**	P		**P**	**14 25 08.5**	**+0.4**
TIXI				IAmb		IAmb	14 25 09.3	
	comp=Z,6.0nm,0.8s							
TIXI	**Tiksi**	**43.58**	**23**	*ce*P		**P**	**14 25 07.1**	**-0.9**
TIXI				pmax		pmax		
	comp=Z,22nm,2.5s							
PRMA	**PARMA**	**44.52**	**298**	P		**P**	**14 25 17.0**	**+1.1**
GSI	**Gunungsitoli**	**44.75**	**140**	P		**P**	**14 25 17.9**	**-0.2**
MSSA	**Maissana**	**45.18**	**297**	P		**P**	**14 25 21.9**	**+0.5**
MJB9	**Matsu-Tunnel**	**52.24**	**70**	P		**P**	**14 26 15.6**	**0.0**
MJB9				IAmb		IAmb	14 26 45.1	
	comp=Z,8.5nm,1.3s							
MAJO	**Matsushiro**	**52.24**	**70**	P		**P**	**14 26 14.8**	**-0.8**
MAJO				IAmb		IAmb	14 26 44.1	
	comp=Z,8.6nm,1.2s							
MAJO	**Matsushiro**	**52.24**	**70**	P		**P**	**14 26 14.8**	**-0.8**
MAJO				pmax		pmax		
	comp=Z,9.0nm,1.3s							
MJAR	**Matsushiro Arr**	**52.24**	**70**	P		**P**	**14 26 14.6**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=292,slow=9.6,SNR=6.1							
	comp=Z,1.7nm,0.7s							
PVAQ	**Vaqueiros**	**59.85**	**296**	P		**P**	**14 27 09.9**	**-0.1**
E22K	**Anaktuvuk Pass**	**68.57**	**16**	P		**P**	**14 28 07.1**	**+0.4**
E22K				IAmb		IAmb	14 28 13.2	
	comp=Z,7.1nm,1.5s							
TOLK	**Toolik Lake Re**	**68.60**	**15**	P		**P**	**14 28 07.7**	**+0.8**
TOLK				IAmb		IAmb	14 28 08.7	
	comp=Z,2.8nm,0.7s							
C36M	**Paulatuk**	**71.47**	**6**	P		**P**	**14 28 24.6**	**+0.2**
C36M				IAmb		IAmb	14 28 27.9	
	comp=Z,7.7nm,1.4s							
INK	**Inuvik**	**71.52**	**9**	P		**P**	**14 28 25.6**	**+0.8**
INK				IAmb		IAmb	14 29 01.5	
	comp=Z,4.7nm,1.4s							
INK	**Inuvik**	**71.52**	**9**	P		**P**	**14 28 25.6**	**+0.8**
INK				pmax		pmax		
	comp=Z,5.0nm,1.5s							
ILAR	**Eielson Array**	**72.48**	**16**	P		**P**	**14 28 30.5**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=325,slow=4.4,SNR=6.7							
	comp=Z,0.6nm,0.8s							
G31M	**Satah River**	**72.73**	**10**	P		**P**	**14 28 32.4**	**+0.4**
G31M				IAmb		IAmb	14 28 58.4	
	comp=Z,6.3nm,1.4s							
L22K	**Petersville**	**73.50**	**19**	P		**P**	**14 28 36.9**	**+0.1**
L22K				IAmb		IAmb	14 28 54.3	
	comp=Z,8.3nm,1.3s							
SUA	**Susitna One**	**74.41**	**19**	P		**P**	**14 28 42.4**	**+0.3**
SML	**Sawmill**	**74.72**	**18**	P		**P**	**14 28 44.1**	**+0.2**
BCAR	**Beaver Creek A**	**75.04**	**15**	P		**P**	**14 28 46.5**	**+0.8**
M30M	**Minto, Yukon**	**76.42**	**13**	P		**P**	**14 28 54.4**	**+0.8**
M30M				IAmb		IAmb	14 29 34.0	
	comp=Z,8.3nm,1.5s							
WHY	**Whitehorse**	**78.54**	**13**	P		**P**	**14 29 05.7**	**+0.1**
YKA	**Yellowknife Ar**	**78.82**	**3**	P		**P**	**14 29 07.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=354,slow=5.7,SNR=4.1							
	comp=Z,0.7nm,0.7s							
YKA	**Yellowknife Ar**	**78.82**	**3**	*i* P		**P**	**14 29 07.6**	**+0.7**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**83.42**	**122**	P		**P**	**14 29 31.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=323,slow=5.1,SNR=13							
	comp=Z,1.4nm,0.8s							
ASAR	**Alice Springs**	**85.78**	**125**	P		**P**	**14 29 43.7**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=311,slow=5.1,SNR=17							
	comp=Z,0.8nm,0.7s							

*KRNET **17** 14:20:06.8±0.1, 39.˚14N×70.˚87E, h18km, mb3.7*
ISC 17 14:20:07.1±1.3, **39.˚10N**±0.˚06×**70.˚87E**±0.˚04, **h9km**±10km, **n16**, σ1§04/32, **15C-16D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.44**	**257**	⇓*e*P	**Pg**	**14 20 15.9**	**+0.2**
GAR				⇓*e*S	**Sg**	**14 20 22.2**	**+0.6**
DRK	**Karamyk**	**0.82**	**62**	⇑*e*P	**Pg**	**14 20 22.1**	**-0.7**
DRK				⇑*e*S	**Sg**	**14 20 32.9**	**-0.6**
CHGR	**Chuyangaron**	**1.41**	**252**	⇓*e*P	**Pn**	**14 20 32.9**	**-0.1**
CHGR				⇓*e*S	**Sn**	**14 20 51.9**	**+0.2**
OHH	**Osh**	**2.05**	**45**	⇓*e*P	**Pn**	**14 20 42.5**	**+0.7**
OHH				⇑*e*S	**Sn**	**14 21 08.5**	**+0.9**
SFK	**Sufi-Kurgan**	**2.23**	**65**	⇓*e*P	**Pn**	**14 20 45.4**	**+0.9**
SFK				⇓*e*S	**Sn**	**14 21 13.4**	**+1.1**
TRKS	**Terek-Say**	**2.44**	**5**	⇑*e*P	**Pn**	**14 20 47.0**	**-0.2**
TRKS				⇑*e*S	**Sn**	**14 21 16.1**	**-1.1**
ARSB	**Arslanbob**	**2.75**	**35**	⇓*e*P	**Pn**	**14 20 52.3**	**+0.8**
ARSB				⇓*e*S	**Sn**	**14 21 25.2**	**+0.3**
ARK	**Arkit**	**2.82**	**17**	⇓*e*P	**Pn**	**14 20 53.2**	**+0.7**
ARK				⇓*e*S	**Sn**	**14 21 27.0**	**+0.3**
SALK	**Salom-Alik**	**2.88**	**51**	⇓*e*P	**Pn**	**14 20 54.3**	**+0.9**
SALK				⇓*e*S	**Sn**	**14 21 28.7**	**+0.4**
ARLS	**Aral**	**3.81**	**43**	⇑*e*P	**Pn**	**14 21 07.1**	**+1.0**
ARLS				⇑*e*S	**Sn**	**14 21 50.9**	**-0.3**
KK31	**Karatay Array**	**4.01**	**356**	⇑P	**Pb**	**14 21 16.1**	**-1.8**
	12nm,0.7s,baz=173,slow=11,SNR=4.1						
KK31				S	**Sg**	**14 22 18.9**	**+3.1**
	38nm,0.8s,baz=173,slow=33,SNR=9.9						
JNKS	**Jany-Kuch**	**4.16**	**60**	⇓*e*P	**Pn**	**14 21 12.1**	**+1.1**
JNKS				⇓*e*S	**Sn**	**14 21 59.6**	**-0.2**
UCH	**Uchtor**	**4.18**	**40**	⇑*e*P	**Pn**	**14 21 12.3**	**+0.9**
UCH				⇑*e*S	**Sn**	**14 22 00.1**	**-0.5**
AAK	**Ala-Archa**	**4.48**	**37**	⇑*e*P	**Pn**	**14 21 16.3**	**+1.0**
AAK				⇑*e*S	**Sn**	**14 22 06.8**	**-0.8**
FRU1	**Bishkek**	**4.67**	**36**	⇑*e*P	**Pn**	**14 21 19.0**	**+1.1**
FRU1				⇑*e*S	**Sn**	**14 22 11.7**	**-0.6**
USP	**Ospenovka**	**4.98**	**32**	⇓*e*P	**Pn**	**14 21 23.1**	**+1.0**
USP				⇓*e*S	**Sn**	**14 22 18.6**	**-1.3**

*CRAAG **17** 14:39:02.0, 32.˚25N×4.˚59W, Mb4.3, Maroc*
*MDD **17** 14:39:02.4±0.5, 32.˚25N×4.˚60W, h0km, Mb4.8/63, M_mb4.3/63, Error ellipse: s-maj=4.0km s-min=3.1km az=172.0*
*IGIL **17** 14:39:05.7, 32.˚06N×4.˚59W, h37km, ML4.3*
*IDC **17** 14:39:07.3±0.7, 32.˚75N×4.˚17W, h0km, mb3.8/17, mbtmp3.9/20, ML4.0/3, MS3.5/39, Error ellipse: s-maj=16.7km s-min=6.0km az=1.0*
*NEIC **17** 14:39:07.5±1.6, 32.˚60N±0.˚09×4.˚26W±0.˚06, h10km±1km, mb4.2/14, Error ellipse: s-maj=17.0km s-min=3.9km az=210.0*
*MED_RC **17** 14:39:08.0±0.4, 32.˚65N×4.˚32W, h19km±2km, MW4.5/24, Moment Tensor Solution. Mantle waves: s24,c29; Duration: 1§0 Moment tensor: Scale 10¹⁵Nm; Mrr-1.34±1.41; Mθθ-0.96±.74; Mϕϕ2.30±.89; Mrθ-0.29±.93; Mθϕ-6.56±.46; Mϕr4.14±.88; Best double couple: M₀7.91000×10¹⁵ NP1:ϕs277.00000°, δs58.00000°, λ-176.00000°. NP2:ϕs185.00000°, δ87.00000°, λ-32.00000°. Principal axes: T 8.6600, Plg20.0000°, Azm235.0000°; N -1.4900, Plg58.0000°, Azm359.0000°; P -7.1700, Plg25.0000°, Azm136.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*INMG **17** 14:39:09.9±2.6, 32.˚71N×4.˚30W, h14km, ML4.0 Error ellipse: s-maj=7.9km s-min=6.8km az=53.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*

ISC 17 14:39:07.4±0.5, **32.˚64N**±0.˚05×**4.˚46W**±0.˚04, **h10km**, **n236**, σ1§95/290, **mb4.0**/25, **MS3.6**/36, **40C-4D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**0.21**	**323**	Pg	**Pb**	**14 39 14.2**	**+2.3**
	2µm,0.3s,baz=119,slow=16						
MDT				Lg	Lg	14 39 19.8	
	6µm,0.3s,baz=131,slow=12,SNR=64						
MD31	**MD31**	**0.34**	**311**		**Pb**	**14 39 17.1**	**+1.5**
MD01	**Midelt array s**	**0.34**	**311**	Pg	**Pb**	**14 39 17.0**	**+1.3**
MD01				Sg	**Sb**	**14 39 23.8**	**+2.5**
IFR	**Ifrane**	**1.04**	**327**	P	**Pn**	**14 39 29.9**	**+1.7**
IFR				S	**Sn**	**14 39 45.2**	**+2.3**
EMEL	**Melilla**	**2.93**	**25**	Pn	**Pn**	**14 39 53.3**	**-0.7**
EMEL				⇑*i*Vmb_VC		14 39 53.5	
	5µm,SNR=2.3						
EMEL				Sn	**Sn**	**14 40 31.7**	**+2.4**
TIO	**Tiouine**	**2.94**	**235**	P	**Pn**	**14 39 57.2**	**+2.8**
OBBL	**Beni Bahdel**	**3.21**	**49**	P	**Pn**	**14 39 55.6**	**-2.4**
ECEU	**Ceuta**	**3.33**	**347**	Pn	**Pn**	**14 40 00.3**	**+0.7**
ECEU				⇑*i*Vmb_VC		14 40 06.0	
	3µm,SNR=6.2						
ECEU				Sn	**Sn**	**14 40 42.0**	**+2.7**
EALB	**Alboran**	**3.49**	**19**	Pn	**Pn**	**14 40 01.8**	**0.0**
EALB				⇑*i*Vmb_VC		14 40 06.6	
	3µm,SNR=1.9						
EALB				Sn	**Sn**	**14 40 46.7**	**+3.5**
OLHC	**Oulhaca**	**3.62**	**43**	P	**Pn**	**14 40 05.8**	**+2.2**
EMIJ	**Mijas**	**3.92**	**356**	P	**Pn**	**14 40 06.4**	**-1.3**
EMIJ	**Mijas**	**3.92**	**356**	Pn	**Pn**	**14 40 06.9**	**-0.8**
EMIJ				⇑*i*Vmb_VC		14 40 13.2	
	362nm,SNR=3.2						
EMIJ				Sn	**Sn**	**14 40 56.1**	**+2.3**
SFS	**San Fernando**	**4.08**	**340**	Pn	**Pn**	**14 40 11.1**	**+1.2**
ELGU	**Los Guajares,**	**4.27**	**9**	P	**Pn**	**14 40 10.7**	**-1.8**
ELGU				S	**Sn**	**14 41 01.7**	**-0.8**
ELGU	**Los Guajares,**	**4.27**	**9**	Pn	**Pn**	**14 40 11.3**	**-1.2**
ELGU				⇑*i*Vmb_VC		14 40 15.2	
	606nm,SNR=2.3						
ELGU				Sn	**Sn**	**14 41 04.2**	**+1.7**
ESPR	**Espera**	**4.37**	**345**	P	**Pn**	**14 40 14.6**	**+0.7**
ESPR				S	**Sn**	**14 41 04.3**	**-0.6**
ESPR	**Espera**	**4.37**	**345**	Pn	**Pn**	**14 40 14.6**	**+0.7**
ESPR				⇑*i*Vmb_VC		14 40 21.6	
	902nm,SNR=6.5						
ESPR				Sn	**Sn**	**14 41 04.7**	**-0.2**
UMV12	**Villanueva de**	**4.43**	**352**	Pn	**Pn**	**14 40 15.6**	**+0.8**
UMV12				Sn	**Sn**	**14 41 09.2**	**+2.7**
EGOR	**Sierra Gorda,**	**4.47**	**4**	P	**Pn**	**14 40 15.4**	**0.0**
EGOR	**Sierra Gorda,**	**4.47**	**4**	Pn	**Pn**	**14 40 15.2**	**-0.1**
EGOR				⇑*i*Vm

PCVE *i* IAML 14 41 43.8
PCVE *i* IAML 14 41 49.3
MORF Marmelete 5.79 325 *eP* **Pn** **14 40 33.1 -0.3**
MORF *eS* **Sn** **14 41 36.6 -3.3**
MORF IAML 14 41 45.9
comp=N,416nm,0.3s
MORF Marmelete 5.79 325 Pn **Pn** **14 40 33.6 +0.2**
MORF Marmelete 5.79 325 *eP* **Pn** **14 40 33.8 +0.4**
MORF *eS* **Sn** **14 41 37.9 -1.9**
MORF *i* IAML 14 41 42.4
MORF *i* IAML 14 41 44.7
MORF *i* IAML 14 41 46.1
EMUR La Murta 5.82 26 P **Pn** **14 40 32.3 -1.5**
EMUR La Murta 5.82 26 Pn **Pn** **14 40 32.0 -1.8**
EMUR ⇑*i*VmVb_VC 14 40 39.5
comp=N,799nm,SNR=5.0
EMUR Sn **Sn** **14 41 39.6 -0.9**
PBAR Barrancos 5.91 340 P **Pn** **14 40 34.7 -0.3**
PBAR S **Sn** **14 41 41.1 -1.7**
PBAR Barrancos 5.91 340 *eP* **Pn** **14 40 34.9 -0.1**
PBAR *eS* **Sn** **14 41 40.5 -2.3**
PBAR *i* IAML 14 41 50.3
PBAR *i* IAML 14 41 50.7
PBAR *i* IAML 14 41 52.9
PTEO Sao Teotonio 6.01 326 *eP* **Pn** **14 40 37.0 +0.5**
PTEO *eS* **Sn** **14 41 43.7 -1.7**
PTEO *i* IAML 14 41 49.1
PTEO *i* IAML 14 41 54.0
PTEO *i* IAML 14 41 58.2
MESJ Messejana 6.03 330 *eP* **Pn** **14 40 36.7 0.0**
MESJ *eS* **Sn** **14 41 43.0 -2.8**
MESJ IAML 14 41 48.5
comp=N,197nm,0.6s
MESJ Messejana 6.03 330 Pn **Pn** **14 40 36.7 0.0**
MESJ Messejana 6.03 330 *eP* **Pn** **14 40 37.0 +0.3**
MESJ *eS* **Sn** **14 41 42.0 -3.7**
MESJ *i* IAML 14 41 48.8
MESJ *i* IAML 14 41 52.0
MESJ *i* IAML 14 41 54.1
EBGR Bougara 6.05 59 P **Pn** **14 40 39.6 +2.6**
PBEJ Beja 6.05 334 *eP* **Pn** **14 40 37.3 +0.3**
PBEJ *eS* **Sn** **14 41 44.8 -1.5**
PBEJ *i* IAML 14 41 46.6
PBEJ *i* IAML 14 41 50.9
PBEJ *i* IAML 14 41 59.6
EZEK Zmalet El Emir 6.05 67 P **Pn** **14 40 37.4 +0.3**
EBNR Beni Rached 6.14 52 P **Pn** **14 40 40.3 +2.1**
ETRV Los Montesinos 6.16 28 Pn **Pn** **14 40 38.2 -0.1**
ETRV ⇑*i*VmVb_VC 14 40 44.4
comp=N,915nm,SNR=1.5
ETRV Sn **Sn** **14 41 48.7 -0.1**
PSIM Granatula de C 6.19 5 Pn **Pn** **14 40 39.2 +0.3**
PSIM Sn **Sn** **14 41 50.1 +0.3**
ETOB Tobarra 6.44 21 P **Pn** **14 40 43.3 +1.0**
ETOB Tobarra 6.44 21 Pn **Pn** **14 40 42.8 +0.4**
ETOB ⇑*i*VmVb_VC 14 40 50.3
comp=N,349nm,SNR=2.0
ETOB Sn **Sn** **14 41 56.9 +0.9**
EBAD Badajoz 6.44 342 P **Pn** **14 40 41.9 -0.4**
EBAD S **Sn** **14 41 53.7 -2.3**
EBAD Badajoz 6.44 342 Pn **Pn** **14 40 41.5 -0.8**
EBAD ⇑*i*VmVb_VC 14 40 47.4
comp=N,1µm,SNR=13
EBAD Sn **Sn** **14 41 53.2 -2.8**
EHRZ Djelida 6.48 55 P Pn 14 40 46.3 +3.4
EVO Evora 6.55 335 P **Pn** **14 40 43.8 -0.1**
EVO S **Sn** **14 41 56.0 -2.6**
EVO Evora 6.55 335 *eP* **Pn** **14 40 44.1 +0.3**
EVO *eS* **Sn** **14 41 56.2 -2.4**
EVO *i* IAML 14 42 01.1
EVO *i* IAML 14 42 01.5
EVO *i* IAML 14 42 03.5
MOE Montemor 6.67 333 *eP* **Pn** **14 40 45.8 +0.3**
MOE *eS* **Sn** **14 41 59.0 -2.5**
MOE *i* IAML 14 42 02.8
MOE *i* IAML 14 42 03.6
MOE *i* IAML 14 42 04.9
PESTR Estremoz 6.71 339 P **Pn** **14 40 46.0 -0.1**
PESTR S **Sn** **14 41 59.6 -3.0**
PESTR Estremoz 6.71 339 Pn **Pn** **14 40 45.7 -0.4**
PESTR Estremoz 6.71 339 *eP* **Pn** **14 40 46.5 +0.4**
PESTR *eS* **Sn** **14 41 59.5 -3.2**
PESTR *i* IAML 14 42 07.8
PESTR *i* IAML 14 42 09.2
PESTR *i* IAML 14 42 23.0
AFON Font Roja 6.80 27 Pn **Pn** **14 40 46.2 -1.1**
AFON ⇑*i*VmVb_VC 14 40 53.4
comp=N,395nm,SNR=1.7
AFON Sn **Sn** **14 42 06.3 +1.4**
PARRA Arraiolos 6.81 336 *eP* Pn 14 40 47.7 -5.0
PARRA *eS* Sn 14 42 03.6 -11
PARRA *i* IAML 14 42 05.6
PARRA *i* IAML 14 42 09.7
PARRA *i* IAML 14 42 12.1
PAB San Pablo 6.89 1 Pn **Pn** **14 40 47.8 -0.7**
PAB ⇑*i*VmVb_VC 14 40 54.5
comp=N,147nm,SNR=1.5
PAB Sn **Sn** **14 41 59.8 -7.2**
PAB San Pablo 6.89 1 Pn **Pn** **14 40 48.0 -0.5**
EBEN2 Beniarda presa 6.95 29 Pn **Pn** **14 40 49.0 -0.3**
EBEN2 ⇑*i*VmVb_VC 14 40 55.5
comp=N,360nm,SNR=0.7
EBEN2 Sn **Sn** **14 42 08.2 -0.2**
ABRIN Birine 6.95 63 P **Pn** **14 40 47.2 -2.2**
ESDC Sonseca Array 7.03 3 Pn **Pn** **14 40 49.4 -1.1**
ESDC ⇑*i*VmVb_VC 14 40 55.6
comp=N,133nm,SNR=1.6
ESDC Sn **Sn** **14 42 10.3 -0.1**
ESDC Sonseca Array 7.03 3 Pn **Pn** **14 40 49.7 -0.8**
comp=N,0.9nm,0.3s,baz=186,slow=13,SNR=23
ESDC Sn **Sn** **14 42 08.5 -1.9**
comp=N,1.9nm,0.3s,baz=189,slow=24,SNR=5.1
ESDC LR LR 14 43 46.0
comp=N,311nm,18.1s,baz=181,slow=40
comp=N,2.8nm,0.4s
ESDC Sonseca Array 7.03 3 Pn **Pn** **14 40 50.1 -0.3**
ESBB Sonseca Array 7.03 3 Pn **Pn** **14 40 51.2 +0.8**
ESBB ⇑*i*VmVb_VC 14 40 59.7
comp=N,161nm,SNR=1.7
ESBB Sn **Sn** **14 42 11.1 +0.7**
ESBB Sonseca Array 7.03 3 Pn **Pn** **14 40 50.7 +0.2**
PMTG Montargil 7.11 336 *eP* **Pn** **14 40 51.5 0.0**
EVIV Cofrentes, Val 7.14 21 Pn **Pn** **14 40 52.2 +0.2**
EVIV ⇑*i*VmVb_VC 14 41 00.8
comp=N,171nm,SNR=0.9
EVIV Sn **Sn** **14 42 14.6 +1.4**
LIS Lisbon 7.16 329 *eP* **Pn** **14 40 53.5 +1.2**
LIS *eS* **Sn** **14 42 15.9 +2.3**
LIS *i* IAML 14 42 16.7
LIS *i* IAML 14 42 19.8
LIS *i* IAML 14 42 37.0
ADJB Djebel Djouab 7.41 60 P Pn 14 41 01.9 +6.2
PMAFR Mafra 7.42 329 P **Pn** **14 40 56.0 +0.3**
PMAFR S **Sn** **14 42 18.8 -1.2**
PMAFR Mafra 7.42 329 *eP* **Pn** **14 40 56.6 +0.8**
PMAFR *eS* **Sn** **14 42 18.8 -1.2**
PMAFR *i* IAML 14 42 25.4
PMAFR *i* IAML 14 42 41.0
EPLA Plasencia 7.52 350 Pn **Pn** **14 40 57.0 -0.1**
EPLA ⇑*i*VmVb_VC 14 41 02.0
comp=N,885nm,SNR=7.5
EPLA Sn **Sn** **14 42 16.8 -5.8**
PSARD Sardoal 7.56 338 *eP* **Pn** **14 40 58.0 +0.2**
PSARD *eS* **Sn** **14 42 19.6 -3.9**
PSARD *i* IAML 14 42 28.1
PSARD *i* IAML 14 42 32.2
PSARD *i* IAML 14 42 47.0
PCBR Castelo Branco 7.59 342 *eP* **Pn** **14 40 58.2 +0.2**
PCBR *eS* **Sn** **14 42 20.2 -3.8**
PCBR *i* IAML 14 42 29.0
PCBR *i* IAML 14 42 29.3
PCBR *i* IAML 14 42 32.7
AKET Djebel Ketaf 7.69 61 P **Pn** **14 40 58.7 -0.8**
ABSD Ouled Sidi Bra 7.70 66 P Pn 14 41 03.4 +3.7
PSBE So Bento 7.70 334 *eP* **Pn** **14 41 00.5 +0.8**
PSBE *eS* **Sn** **14 42 23.7 -3.3**
PSBE *i* IAML 14 42 28.8
PSBE *i* IAML 14 42 34.5
PSBE *i* IAML 14 43 06.2
EIBI Ibiza 7.92 35 Pn **Pn** **14 41 02.2 -0.4**
EIBI ⇑*i*VmVb_VC 14 41 09.8
comp=N,904nm,SNR=1.5
EIBI Sn **Sn** **14 42 32.4 +0.1**
YEBES **Yebes (Guadala 7.94 8** Pn **Pn** **14 41 02.5 -0.5**
YEBES ⇑*i*VmVb_VC 14 41 09.4
comp=N,573nm,SNR=2.0
YEBES Sn **Sn** **14 42 31.5 -1.4**
GUD Guadarrama 7.99 2 Pn **Pn** **14 41 02.5 -1.2**
GUD Sn **Sn** **14 42 34.3 +0.1**
PCAS Casmilo, Conde 8.08 337 *eP* **Pn** **14 41 05.3 +0.5**
PCAS *eS* **Sn** **14 42 33.2 -3.0**
PCAS *i* IAML 14 42 47.0
PCAS *i* IAML 14 42 57.9
PCAS *i* IAML 14 43 07.3
MTE Manteigas 8.13 343 Pn **Pn** **14 41 05.4 -0.2**
MTE Manteigas 8.13 343 *eP* **Pn** **14 41 05.6 +0.1**
MTE *eS* **Sn** **14 42 33.4 -4.1**
MTE *i* IAML 14 42 53.3
MTE *i* IAML 14 42 58.9
MTE *i* IAML 14 43 06.9
E0901 Celadas (Terue 8.27 18 Pn **Pn** **14 41 08.8 +1.3**
E0901 ⇑*i*VmVb_VC 14 41 11.1
comp=N,366nm,SNR=1.8
E0901 Sn **Sn** **14 42 41.3 +0.4**
EMOS Mosqueruela 8.35 21 Pn **Pn** **14 41 10.3 +1.7**
EMOS ⇑*i*VmVb_VC 14 41 17.9
comp=N,199nm,SNR=1.3
EMOS Sn **Sn** **14 42 43.1 +0.1**
ETOR Torete 8.38 13 Pn **Pn** **14 41 09.3 +0.2**
ETOR ⇑*i*VmVb_VC 14 41 17.2
comp=N,220nm,SNR=2.0
ETOR Sn **Sn** **14 42 42.9 -0.9**
CTCHA Tamokra 8.41 61 P Pn 14 41 14.8 +5.5
PVIS Viseu 8.52 342 *eP* **Pn** **14 41 10.5 -0.4**
PVIS *eS* **Sn** **14 42 44.2 -2.8**
EFAM Famara 8.55 248 Pn **Pn** **14 41 09.1 -2.2**
EFAM ⇑*i*VmVb_VC 14 41 13.0
comp=N,1µm,SNR=1.3
EFAM Sn Sn 14 42 39.7 -8.1
MVO Moncorvo 8.75 347 *eP* **Pn** **14 41 14.0 -0.1**
MVO *eS* **Sn** **14 42 49.3 -3.6**
MVO *i* IAML 14 42 59.3
MVO *i* IAML 14 43 24.6
MVO *i* IAML 14 43 26.5
PVRL Vila Real 9.00 344 *eP* **Pn** **14 41 17.2 -0.3**
PVRL *eS* **Sn** **14 42 53.0 -5.9**
PVRL *i* IAML 14 42 57.7
PVRL *i* IAML 14 42 59.1
PVRL *i* IAML 14 43 03.5
POLO Lamas de Olo 9.11 344 *eP* **Pn** **14 41 19.2 +0.1**
POLO *eS* **Sn** **14 42 55.6 -6.1**
POLO *i* IAML 14 43 05.2
POLO *i* IAML 14 43 05.4
POLO *i* IAML 14 43 10.6
ERTA Horta de San J 9.14 23 Pn **Pn** **14 41 18.2 -1.2**
ERTA ⇑*i*VmVb_VC 14 41 20.5
comp=N,170nm,SNR=1.0
ERTA Sn **Sn** **14 43 01.9 -0.4**
CJSR Ain Djasser 9.19 67 P **Pn** **14 41 21.3 +1.2**
ETOS Mallorca 9.22 37 Pn **Pn** **14 41 19.7 -0.7**
ETOS ⇑*i*VmVb_VC 14 41 24.0
comp=N,625nm,SNR=1.2
ETOS Sn **Sn** **14 43 02.8 -1.5**
PBRG Braganca 9.32 349 *eP* **Pn** **14 41 23.8 +1.8**
PBRG *eS* **Sn** **14 43 02.3 -4.6**
PBRG *i* IAML 14 43 14.6
PBRG *i* IAML 14 43 18.4
PBRG *i* IAML 14 43 41.1
ECAL Calabor 9.46 350 P **Pn** **14 41 24.5 +0.7**
ECAL S **Sn** **14 43 07.2 -3.0**
ECAL Calabor 9.46 350 Pn **Pn** **14 41 24.0 +0.2**
ECAL ⇑*i*VmVb_VC 14 41 31.3
comp=N,376nm,SNR=1.7
ECAL Sn **Sn** **14 43 02.8 -7.4**
PCAB Cabril 9.49 344 *eP* **Pn** **14 41 24.7 +0.5**
PCAB *eS* **Sn** **14 43 06.0 -4.8**
PCAB *i* IAML 14 43 10.5
PCAB *i* IAML 14 43 14.3
PCAB *i* IAML 14 43 14.6
CTGD Timgad 9.56 69 P **Pn** **14 41 25.0 -0.2**
COAT Oued Athmania 9.56 65 P Pn 14 41 36.0 +11
ELOB Lobios 9.64 344 Pn **Pn** **14 41 25.5 -0.8**
ELOB ⇑*i*VmVb_VC 14 41 31.2
comp=N,754nm,SNR=3.4
ELOB Sn **Sn** **14 43 08.9 -5.9**
EPOB Poblet 9.75 25 Pn **Pn** **14 41 28.2 +0.4**
EPOB ⇑*i*VmVb_VC 14 41 33.7
comp=N,174nm,SNR=1.3
EPOB Sn **Sn** **14 43 21.3 +3.9**
PGAV Gavieira, Arco 9.79 343 *eP* **Pn** **14 41 28.9 +0.6**
PGAV *eS* Sn 14 43 09.4 -8.9
PGAV *i* IAML 14 43 21.5
PGAV *i* IAML 14 43 22.6
PGAV *i* IAML 14 43 24.7
PMPS Porto Santo 10.00 276 *eP* **Pn** **14 41 34.6 +3.4**
PMAR Madeira 10.50 274 *eP* Pn 14 41 43.4 +5.2
PMAR *eS* **Sn** **14 43 33.4 -2.6**
PMAR *i* IAML 14 43 42.0
PMAR *i* IAML 14 44 02.5
PMAR *i* IAML 14 44 04.6
EAGO Agolada(Pontev 10.54 345 Pn **Pn** **14 41 38.9 +0.3**
EAGO ⇑*i*VmVb_VC 14 41 43.7
comp=N,510nm,SNR=1.5
EAGO Sn **Sn** **14 43 32.7 -4.0**
CORI Oristà 10.65 27 Pn **Pn** **14 41 41.3 +1.2**
PMOZ Porto Moniz, M 10.73 274 Pn **Pn** **14 41 43.6 +2.3**
PMOZ Porto Moniz, M 10.73 274 *eP* **Pn** **14 41 45.6 +4.3**
EPON Pontenova 10.88 350 Pn **Pn** **14 41 42.8 -0.4**
EPON ⇑*i*VmVb_VC 14 41 50.5
comp=N,367nm,SNR=1.1
EPON Sn **Sn** **14 43 39.3 -5.6**
CEST Esterri de Car 10.92 23 Pn **Pn** **14 41 42.5 -1.3**
KEST Kesra 11.84 71 Pn **Pn** **14 41 54.2 -2.2**
comp=N,2.5nm,0.3s,baz=264,slow=4.2,SNR=10
comp=N,6.7nm,0.6s
KEST Kesra 11.84 71 Pn **Pn** **14 41 54.6 -1.7**
VSL Villasalto 13.11 55 Pn **Pn** **14 42 11.7 -1.9**
TAM Tamanrasset 13.20 136 Pn **Pn** **14 42 11.7 -3.4**
VAE Valguarnera 16.18 67 LR LR 14 50 13.5
comp=N,569nm,19.1s,baz=334,slow=42
TUE Stuetta 17.40 33 **P** **14 43 11.4 -0.3**
DAVOX Davos/Dischmat 17.87 34 P **Pn** **14 43 13.6 -2.7**
comp=N,0.1nm,0.3s,baz=326,slow=6.6,SNR=3.0
DAVOX LR LR 14 49 27.4
comp=N,67nm,18.2s,baz=224,slow=35
comp=N,1.5nm,0.4s
DAVA Damuels 18.25 33 *e*Pn **Pn** **14 43 19.3 -1.6**
comp=N,4.8nm,0.6s
DOU Dourbes 18.69 18 *d*Pn **Pn** **14 43 30.1 +4.1**
RETA Reutte 18.80 34 *e*Pn **Pn** **14 43 28.2 +0.7**
comp=N,2.4nm,0.6s
RCHB Rochefort 18.92 19 *d*P **Pn** **14 43 28.3 -0.5**
BCLA Clavier 19.17 19 *d*P **Pn** **14 43 31.5 -0.4**
BCLA dpP **pP** **14 43 34.6 +0.4**
MYKA Terra Mystica 19.67 39 *e*pP pP 14 43 38.4 -1.4
comp=N,15nm,1.2s
TORD Torodi Ar. Bea 20.20 162 P Pn 14 43 42.3 -2.1
comp=N,4.4nm,0.5s,baz=351,slow=13,SNR=4.7
comp=N,4.4nm,0.5s
TORD Torodi Ar. Bea 20.20 162 P **P** **14 43 41.1 -1.4**
DSB Dublin 20.64 357 **P** **14 43 47.8 +0.9**
DSB IAmb IAmb 14 44 13.1
comp=Z,23nm,1.0s
MOA Molln 20.77 38 *e*P **P** **14 43 47.3 -1.2**
comp=Z,3.5nm,0.6s
BBTS Babate 21.01 214 LR LR 14 52 13.6
comp=Z,190nm,21.6s,baz=81,slow=37
GEC2 GERESS Array S 21.15 35 P **P** **14 43 51.1 -1.5**
GEC2 IAmb IAmb 14 43 55.3
comp=Z,12nm,0.9s
GERES GERESS Array B 21.15 35 P **P** **14 43 51.3 -1.4**
comp=Z,5.8nm,0.9s,baz=222,slow=11,SNR=21
GERES LR LR 14 51 54.5
comp=Z,128nm,18.3s,baz=247,slow=37
comp=Z,5.8nm,0.9s
KHC Kasperske Hory 21.29 34 P **P** **14 43 52.7 -1.4**
KHC IAmb IAmb 14 43 59.6
comp=Z,10nm,0.9s
KHC Kasperske Hory 21.29 34 *e*P **P** **14 43 53.3 -0.8**
CKRC Cesky Krumlov 21.43 36 *e*P **P** **14 43 56.3 +0.7**
CONA Conrad Observa 21.66 39 *e*P **P** **14 43 57.2 -0.9**
comp=Z,4.9nm,0.7s
RONA Rosalia, Austr 21.75 40 *e*P **P** **14 43 57.0 -2.1**
comp=Z,3.8nm,1.0s
ZVC Zvikov 21.80 34 *e*P **P** **14 44 01.5 +2.0**
PRU Pruhonice 22.34 34 *e*P **P** **14 44 04.2 -1.1**
CLL Collm 22.62 29 P **P** **14 44 07.7 -0.5**
CLL IAmb IAmb 14 44 11.7
comp=Z,8.6nm,1.0s
CLL Collm 22.62 29 *i* P **P** **14 44 07.9 -0.3**
CLL *i* x x 14 44 11.0
comp=Z,11nm,1.2s
CLL *ex* x 14 44 15.0
CLL *e*PPP PPP 14 44 39.0
CLL *e*S **S** **14 48 14.0 -1.9**
KRUC Moravsky 22.64 37 *e*P **P** **14 44 06.0 -2.5**
MODS Modra-Piesok 22.68 40 *e*P **P** **14 44 07.3 -1.7**
EKA Eskdalemuir Ar 22.70 2 P **P** **14 44 10.7 +1.6**
comp=Z,1.2nm,0.8s,baz=175,slow=12,SNR=4.2
comp=Z,1.2nm,0.8s
VRAC Vranov 22.89 37 *e*P **P** **14 44 11.0 -0.2**
UPC Upice 23.39 34 *e*P **P** **14 44 17.8 +1.6**
OSTC Ostas 23.52 34 *e*P **P** **14 44 18.4 +0.9**
MORC Moravsky Berou 23.67 37 P **P** **14 44 18.8 -0.2**
MORC IAmb IAmb 14 44 22.2
comp=Z,21nm,1.4s
MORC Moravsky Berou 23.67 37 *e*P **P** **14 44 19.7 +0.6**
LANS Liptovska Anna 24.32 40 *e*P **P** **14 44 24.3 -0.9**
DBIC Dîmbokro 25.84 181 P **P** **14 44 40.8 +1.6**
comp=Z,5.6nm,0.9s,baz=14,slow=5.2,SNR=3.8
comp=Z,5.6nm,0.9s
MLR Muntele Rosu 26.69 52 LR LR 14 54 59.0
comp=Z,185nm,20.0s,baz=264,slow=36
BURAR Bucovina Array 26.96 48 P **P** **14 44 48.4 -0.8**
HFS Hagfors 30.00 18 P **P** **14 45 15.7 -0.3**
comp=Z,2.6nm,1.0s,baz=224,slow=8.1,SNR=1.7
comp=Z,2.6nm,1.0s
NOA NORSAR Array B 30.20 15 P **P** **14 45 17.9 +0.2**
comp=Z,0.7nm,0.8s,baz=210,slow=7.9,SNR=3.8
NOA LR LR 14 59 47.4
comp=Z,72nm,19.1s,baz=295,slow=41
comp=Z,0.7nm,0.8s
AKASG Malin Array Be 30.60 44 LR LR 14 57 28.1
comp=Z,48nm,18.7s,baz=247,slow=36
BRTR Keskin Array B 31.37 66 LR LR 14 59 55.2
comp=Z,26nm,19.6s,baz=266,slow=40
EIL Elat 33.72 84 LR LR 15 00 10.9
comp=Z,48nm,20.1s,baz=1.0,slow=38
BORG Borgarnes 33.77 347 LR LR 15 00 03.4
comp=Z,33nm,18.9s,baz=171,slow=37
ASF Jabal al Asfar 34.76 79 LR LR 15 02 24.8
comp=Z,50nm,20.6s,baz=294,slow=40
FINES FINESS Array B 34.92 25 P **P** **14 45 57.7 -1.2**
comp=Z,0.7nm,0.4s,baz=231,slow=5.8,SNR=11
comp=Z,0.7nm,0.4s
FINES FINESS Array B 34.92 25 P **P** **14 45 57.4 -1.6**
KBZ Khabaz 38.36 59 LR LR 15 04 48.9
comp=Z,36nm,18.8s,baz=264,slow=40
JMIC Jan Mayen 38.46 358 LR LR 15 01 47.8
comp=Z,67nm,21.1s,baz=212,slow=36
GNI Garni 39.88 65 LR LR 15 03 55.0
comp=Z,38nm,20.5s,baz=282,slow=38
ARCES ARCESS Array B 40.57 16 P **P** **14 46 45.7 -1.0**
comp=Z,1.4nm,0.8s,baz=211,slow=10,SNR=3.6
ARCES LR LR 15 03 36.1
comp=Z,111nm,20.3s,baz=248,slow=36
comp=Z,1.4nm,0.8s
SFJD Kangerlussuaq 43.67 336 LR LR 15 04 35.4
comp=Z,58nm,18.4s,baz=144,slow=35
MBAR Mbarara 46.86 128 LR LR 15 08 52.2
comp=Z,77nm,19.0s,baz=326,slow=38
ARTI Arti 48.67 41 LR LR 15 08 02.7
comp=Z,63nm,18.3s,baz=268,slow=36
FRB Frobisher Bay 49.85 328 LR LR 15 06 46.3
comp=Z,51nm,18.3s,baz=108,slow=33
AB31 Akbulak array 49.88 51 P **P** **14 48 00.0 -0.8**
AB31 IAmb IAmb 14 48 04.2
comp=Z,1.4nm,0.8s
ABKAR Akbulak array 49.88 51 P **P** **14 47 59.2 -1.7**
MDP Montagnes des 52.58 249 LR LR 15 06 17.6
comp=Z,64nm,21.6s,baz=95,slow=31
TSUM Tsumeb 55.70 155 LR LR 15 13 30.2
comp=Z,46nm,19.1s,baz=178,slow=37
KK31 Karatay Array 58.28 56 P **P** **14 49 01.9 -0.4**
KK31 IAmb IAmb 14 49 08.5
comp=Z,1.4nm,0.9s
KKAR Karatay Array 58.28 56 P **P** **14 49 00.4 -1.9**
AAK Ala-Archa 61.21 56 LR LR 15 18 35.9
comp=Z,29nm,20.3s,baz=325,slow=39
KURBB Kurchatov Arra 61.35 46 P **P** **14 49 22.3 -0.9**
comp=Z,3.4nm,0.7s,baz=292,slow=7.7,SNR=15
comp=Z,3.4nm,0.7s
KURK Kurchatov 61.38 46 P **P** **14 49 23.2 -0.2**
MATP Matopo 61.46 144 LR LR 15 17 20.2
comp=Z,78nm,18.4s,baz=306,slow=37
KSH Kashi 63.34 59 P **P** **14 49 36.1 -0.8**
KSH pP pP 14 49 40.3 -0.5
KSH pmax pmax
comp=Z,9.0nm,0.9s
ZALV Zalesovo Beam 63.94 41 P **P** **14 49 40.1 -0.3**
comp=Z,0.8nm,0.5s,baz=310,slow=9.5,SNR=4.0
ZALV LR LR 15 17 15.6
comp=Z,20nm,20.8s,baz=3.0,slow=36
comp=Z,0.8nm,0.5s
LBTB Lobatse 64.10 150 LR LR 15 17 40.3
comp=Z,62nm,19.5s,baz=331,slow=36
MKAR Makanchi Array 64.98 49 P **P** **14 49 46.7 -0.8**
comp=Z,2.1nm,0.8s,baz=292,slow=4.3,SNR=5.1
MKAR LR LR 15 20 20.0
comp=Z,54nm,18.1s,baz=301,slow=38
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 64.98 49 P **P** **14 49 45.9 -1.5**
BOSA Boshof 67.14 152 LR LR 15 18 37.8
comp=Z,66nm,18.8s,baz=31,slow=35
A36M Sachs Harbour 67.92 343 P **P** **14 50 06.5 +0.7**
YKA Yellowknife Ar 70.09 332 P **P** **14 50 22.1 +2.6**
comp=Z,0.4nm,0.5s,baz=54,slow=6.0,SNR=4.4
comp=Z,0.4nm,0.5s
TIXI Tiksi 70.98 14 LR LR 15 26 42.8
comp=Z,38nm,19.1s,baz=11,slow=40
E29M Blow River 73.52 344 P **P** **14 50 40.7 +0.8**
E29M IAmb IAmb 14 51 10.1
comp=Z,2.3nm,1.2s
CPUP Villa Florida 77.28 227 LR LR 15 24 14.6
comp=Z,12nm,18.2s,baz=236,slow=35
LPAZ La Paz 77.90 242 LR LR 15 23 51.6
comp=Z,13nm,20.2s,baz=65,slow=34
PDAR Pinedale Array 78.39 313 P **P** **14 51 11.1 +2.6**
comp=Z,0.6nm,0.7s,baz=65,slow=7.0,SNR=4.0
comp=Z,0.6nm,0.7s
ILAR Eielson Array 78.56 345 P **P** **14 51 11.0 +2.3**
comp=Z,0.2nm,0.5s,baz=17,slow=4.0,SNR=6.6
ILAR LR LR 15 26 01.2
comp=Z,22nm,19.6s,baz=72,slow=36
comp=Z,0.2nm,0.5s
YAK Yakutsk 78.67 20 LR LR 15 30 02.1
comp=Z,54nm,18.3s,baz=327,slow=39
SONM Songino Array 78.79 40 P **P** **14 51 10.1 -0.4**
comp=Z,0.2nm,0.4s,baz=302,slow=8.3,SNR=2.1
SONM LR LR 15 29 25.9
comp=Z,57nm,18.4s,baz=12,slow=38
comp=Z,0.2nm,0.4s
ANMO Albuquerque 80.68 305 LR LR 15 23 36.8
comp=Z,57nm,21.7s,baz=140,slow=33
TXAR Lajitas Array 81.74 299 P **P** **14 51 30.3 +3.6**
comp=Z,0.1nm,0.3s,baz=33,slow=5.8,SNR=2.0
TXAR LR LR 15 27 33.9
comp=Z,51nm,19.2s,baz=36,slow=36
comp=Z,0.1nm,0.3s
PALK Pallekele 82.06 86 LR LR 15 29 40.2
comp=Z,22nm,18.1s,baz=300,slow=37
PFO Pinyon Flats O 88.17 309 LR LR 15 29 24.8
comp=Z,36nm,19.9s,baz=30,slow=34
CMAR Chiang Mai Arr 90.95 67 P **P** **14 52 12.8 +0.7**
comp=Z,0.2nm,0.3s,baz=289,slow=3.0,SNR=4.0
comp=Z,0.2nm,0.3s
ASAJ Asahikawa 97.91 23 LR LR 15 41 22.9
comp=Z,41nm,18.6s,baz=350,slow=38
WRA Warramunga Arr 141.18 81 PKP **PKPdf** **14 58 38.8 +0.1**
comp=Z,0.4nm,0.9s,baz=311,slow=2.8,SNR=2.2
ASAR Alice Springs 142.41 87 PKP **PKiKP** **14 58 42.6 -1.4**
comp=Z,0.7nm,1.1s,baz=301,slow=1.7,SNR=4.1
STKA Stephens Creek 151.35 98 PKPbc **PKiKP** **14 59 04.7 +2.7**
comp=Z,1.7nm,0.7s,baz=303,slow=1.1,SNR=5.9

BEO ***17*** *14:40:41.3₂0.9, 40°.73N×21°.49E, h0km, ML2.8/8*
SKO ***17*** *14:40:42.7, 40°.82N×21°.36E, h13km, ML3.2*
SOF ***17*** *14:40:42.2, 40°.82N₂0°.01×21°.36E₂0°.01, h8km₂2km, MD3.4/7*
ATH ***17*** *14:40:42.9, 40°.91N×21°.38E, h4km⊥1km, ML3.2/12,*

Manual Solution by A.Papageorgiou First location: 2019/11/17 14:41:57, This location: 2019/11/17 15:04:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
*THE **17** 14:40:43.1, 41°N ± 1°, 2° E ± *, h1km ± 1km, M3.0/31, MLh3.0/31*
*PDG **17** 14:40:44.0 ± 0.6, 40°.83N × 21°.35E, h16km ± 1km, ML3.1/9, Error ellipse: s-maj=0.8km s-min=1.4km az=0.0*

ISC 17 14:40:43.4 ± 1.0, 40°.83N ± 0°.01 × 21°.38E ± 0°.02, h5km ± 9km, n130, σ 0°.73 / 180, 14C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LMS2	**Laimos Florina**	**0.18**	**270**	P		**Pg**		**14 40 47.0**	**0.0**
LMS2				S		**Sg**		**14 40 49.8**	**+0.5**
NEST	**Nestorio**	**0.49**	**211**	P		**Pg**		**14 40 52.5**	**-0.3**
NEST				S		**Sg**		**14 40 59.8**	**+0.7**
NEST	**Nestorio**	**0.49**	**211**	P		**Pg**		**14 40 52.7**	**0.0**
NEST				S		**Sb**		**14 41 00.7**	**-1.2**
KBN	**Korca**	**0.49**	**245**	P		**Pg**		**14 40 52.2**	**-0.7**
KBN				S		**Sg**		**14 40 58.8**	**-0.5**
OHR	**Ohrid**	**0.52**	**303**	↑ *i* Pg		**Pg**		**14 40 53.1**	**-0.2**
OHR				*i* Sg		**Sg**		**14 41 01.3**	**+1.2**
OHR				*e* Lg		Lg		14 41 01.4	
	comp=N,2μm,0.7s								
OHR				*e* Lg		Lg		14 41 02.1	
	comp=E,2μm,0.5s								
NASA	**Naoussa**	**0.56**	**111**	P		**Pg**		**14 40 54.5**	**+0.3**
NASA				S		**Sb**		**14 41 02.8**	**-1.3**
KZN	**Kozani**	**0.61**	**150**	P		**Pg**		**14 40 55.4**	**+0.4**
KZN				S		**Sb**		**14 41 04.4**	**-1.0**
KZN	**Kozani**	**0.61**	**150**	P		**Pg**		**14 40 55.2**	**+0.2**
KZN				S		**Sb**		**14 41 04.9**	**-0.4**
PENT	**Pentalofos**	**0.66**	**196**	P		**Pg**		**14 40 56.0**	**0.0**
PENT				S		**Sb**		**14 41 06.3**	**-0.7**
PENT	**Pentalofos**	**0.66**	**196**	P		**Pg**		**14 40 56.1**	**0.0**
PENT				S		**Sb**		**14 41 07.3**	**+0.4**
VAY	**Valandovo**	**1.03**	**61**	↑ *i* Pg		**Pg**		**14 41 03.0**	**0.0**
VAY				*i* Sg		**Sb**		**14 41 17.5**	**+0.2**
VAY				*e* Lg		Lg		14 41 19.3	
	comp=E,181nm,0.3s								
VAY				*e* Lg		Lg		14 41 20.2	
	comp=N,459nm,0.6s								
MSVA	**Metsovo**	**1.07**	**188**	P		**Pb**		**14 41 04.1**	**-0.3**
MSVA				S		**Sn**		**14 41 20.7**	**+0.3**
PHP	**Peshkopia**	**1.10**	**321**	P		**Pg**		**14 41 04.7**	**-1.8**
PHP				S		**Sb**		**14 41 19.5**	**-0.1**
LIT	**Litokhoron**	**1.12**	**130**	P		**Pg**		**14 41 04.8**	**-0.1**
LIT				S		**Sn**		**14 41 21.2**	**-0.3**
LIT	**Litokhoron**	**1.12**	**130**	*i* Pg		**Pg**		**14 41 04.8**	**-0.1**
LIT	**Litokhoron**	**1.12**	**130**	P		**Pg**		**14 41 04.6**	**-0.2**
LIT				S		**Sn**		**14 41 20.9**	**-0.7**
SKO	**Skopje**	**1.14**	**2**	*i* Pg		**Pg**		**14 41 04.7**	**-0.5**
SKO				*i* Sg		**Sg**		**14 41 19.3**	**-0.6**
KNT	**Kendrikon**	**1.20**	**74**	P		**Pg**		**14 41 06.3**	**0.0**
KNT				S		**Sn**		**14 41 22.9**	**-0.5**
KNT	**Kendrikon**	**1.20**	**74**	↑ *i* Pg		**Pg**		**14 41 06.2**	**-0.2**
KNT				*i* Sg		**Sn**		**14 41 23.3**	**-0.1**
KNT	**Kendrikon**	**1.20**	**74**	P		**Pg**		**14 41 05.9**	**-0.5**
KNT				S		**Sg**		**14 41 20.4**	**-1.4**
THE	**Thessaloniki**	**1.23**	**99**	P		**Pg**		**14 41 06.3**	**-0.6**
THE	**Thessaloniki**	**1.23**	**99**	*i* Pg		**Pb**		**14 41 06.9**	**-0.1**
THE				*i* Sg		**Sn**		**14 41 25.0**	**+1.0**
THE	**Thessaloniki**	**1.23**	**99**	P		**Pg**		**14 41 06.1**	**-0.8**
JAN	**Janina**	**1.24**	**199**	P		**Pb**		**14 41 07.2**	**-0.1**
JAN				S		**Sn**		**14 41 24.9**	**+0.4**
JAN	**Janina**	**1.24**	**199**	P		**Pn**		**14 41 08.0**	**+0.7**
JAN				S		**Sn**		**14 41 24.8**	**+0.4**
PRMD	**Pramanda**	**1.32**	**189**	P		**Pb**		**14 41 08.6**	**-0.1**
PRMD				S		**Sn**		**14 41 27.1**	**+0.7**
HORT	**Hortiatis**	**1.33**	**100**	P		**Pn**		**14 41 08.1**	**-0.6**
HORT	**Hortiatis**	**1.33**	**100**	P		**Pn**		**14 41 08.1**	**-0.6**
THL	**Klokotos Trika**	**1.36**	**159**	P		**Pn**		**14 41 08.2**	**-0.7**
THL				S		**Sn**		**14 41 27.8**	**+0.5**
THL	**Klokotos Trika**	**1.36**	**159**	P		**Pn**		**14 41 08.9**	**0.0**
THL				S		**Sn**		**14 41 28.2**	**+0.9**
GINA	**Giannouli**	**1.40**	**146**	P		**Pn**		**14 41 09.6**	**+0.1**
TETR	**Tetrakomo, Epi**	**1.49**	**183**	P		**Pb**		**14 41 11.1**	**-0.4**
TETR				S		**Sg**		**14 41 31.0**	**-0.2**
TETR	**Tetrakomo, Epi**	**1.49**	**183**	P		**Pg**		**14 41 11.7**	**-0.2**
TETR				S		**Sg**		**14 41 32.5**	**+1.3**
SOH	**Sokhos**	**1.50**	**90**	P		**Pn**		**14 41 10.5**	**-0.4**
SOH				S		**Sg**		**14 41 32.2**	**+0.6**
SOH	**Sokhos**	**1.50**	**90**	*i* Pn		**Pn**		**14 41 10.9**	**0.0**
IGT	**Igoumenitsa**	**1.53**	**212**	P		**Pn**		**14 41 11.2**	**-0.1**
IGT				S		**Sg**		**14 41 33.0**	**+0.7**
PLG	**Polygyros**	**1.64**	**106**	P		**Pn**		**14 41 12.8**	**0.0**
PLG				S		**Sb**		**14 41 35.4**	**+0.3**
PLG	**Polygyros**	**1.64**	**106**	P		**Pn**		**14 41 12.8**	**0.0**
KKB	**Krupnik**	**1.66**	**52**	P		**Pn**		**14 41 13.4**	**+0.3**
KKB	**Krupnik**	**1.66**	**52**	*i* Pn		**Pb**		**14 41 13.8**	**-0.6**
KKB	**Krupnik**	**1.66**	**52**	*i* P		**Pn**		**14 41 13.6**	**+0.5**
KKB				*e* S		**Sg**		**14 41 37.2**	**+0.5**
SRS	**Serrai**	**1.70**	**80**	P		**Pn**		**14 41 13.2**	**-0.4**
SRS	**Serrai**	**1.70**	**80**	*i* Pn		**Pn**		**14 41 13.4**	**-0.2**
SRS	**Serrai**	**1.70**	**80**	P		**Pn**		**14 41 13.0**	**-0.7**
BOSS	**Bosilegrad**	**1.85**	**26**	*e* Pn		**Pn**		**14 41 16.1**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.91**	**162**	P		**Pn**		**14 41 14.7**	**+0.1**
MAKR				S		**Sn**		**14 41 40.7**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.91**	**162**	P		**Pn**		**14 41 16.6**	**+0.1**
MAKR				S		**Sb**		**14 41 42.2**	**-0.6**
AMPL	**Ampelaki**	**1.91**	**184**	P		**Pn**		**14 41 17.2**	**+0.7**
MMB	**Musomishta**	**1.93**	**68**	P		**Pn**		**14 41 17.4**	**+0.5**
MMB				S		**Sb**		**14 41 43.3**	**0.0**
MMB	**Musomishta**	**1.93**	**68**	*i* P		**Pn**		**14 41 17.3**	**+0.5**
MMB				*e* S		**Sb**		**14 41 42.5**	**-0.8**
MMB	**Musomishta**	**1.93**	**68**	*i* Pn		**Pn**		**14 41 17.4**	**+0.5**
EVR	**Evrytania**	**1.94**	**170**	P		**Pb**		**14 41 18.5**	**-0.8**
EVR				S		**Sb**		**14 41 44.6**	**+0.7**
AGG	**Agios Georgios**	**1.95**	**158**	P		**Pn**		**14 41 17.4**	**+0.3**
AGG	**Agios Georgios**	**1.95**	**158**	P		**Pn**		**14 41 17.1**	**0.0**
ULC	**Ulcinj**	**1.96**	**306**	↑ *i* Pn		**Pb**		**14 41 18.5**	**-1.0**
ULC				*i* Sn		**Sn**		**14 41 42.2**	**0.0**
BARS	**Barje**	**2.01**	**9**	*i* Pn		**Pn**		**14 41 18.0**	**+0.1**
BARS	**Barje**	**2.01**	**9**	*e* Pg		**Pn**		**14 41 17.9**	**+0.1**
OUR	**Ouranopolis**	**2.05**	**103**	P		**Pn**		**14 41 18.5**	**+0.2**
PVY	**Plav**	**2.05**	**329**	*e* Pg		**Pb**		**14 41 21.3**	**+0.1**
PVY	**Plav**	**2.05**	**329**	↓ *i* Pn		**Pb**		**14 41 20.4**	**-0.8**
PVY				*i* Sn		**Sb**		**14 41 47.3**	**+0.3**
TSLK	**Tsoukalades, L**	**2.08**	**196**	P		**Pn**		**14 41 19.4**	**+0.5**
NEO	**Neokhori**	**2.08**	**137**	P		**Pn**		**14 41 18.8**	**-0.1**
NEO	**Neokhori**	**2.08**	**137**	P		**Pn**		**14 41 18.7**	**-0.3**
LKD2	**Lefkada island**	**2.12**	**195**	P		**Pb**		**14 41 20.7**	**-1.4**
LKD2	**Lefkada island**	**2.12**	**195**	P		**Pn**		**14 41 20.4**	**+1.0**
DRME	**Dracevica, Mon**	**2.13**	**310**	↓ *i* Pn		**Pn**		**14 41 20.0**	**+0.5**
DRME				*i* Sn		**Sn**		**14 41 45.6**	**-0.7**
NYDR	**Nydri-Lefkada**	**2.18**	**194**	P		**Pn**		**14 41 20.7**	**+0.5**
NYDR	**Nydri-Lefkada**	**2.18**	**194**	P		**Pn**		**14 41 21.1**	**+0.9**
PVO	**Paravola**	**2.22**	**177**	P		**Pn**		**14 41 21.4**	**+0.6**
PVO	**Paravola**	**2.22**	**177**	P		**Pb**		**14 41 22.4**	**-1.4**
PLNA	**Plana**	**2.25**	**42**	*i* P		**Pn**		**14 41 21.9**	**+0.6**
PDG	**Podgorica**	**2.25**	**316**	↑ P		**Pn**		**14 41 20.8**	**-0.4**
PDG	**Podgorica**	**2.25**	**316**	*e* Pg		**Pb**		**14 41 24.8**	**+0.4**
PDG				*e* Sg		**Sg**		**14 41 56.7**	**+1.0**
PDG	**Podgorica**	**2.25**	**316**	↑ *i* Pn		**Pn**		**14 41 22.1**	**+0.9**
PDG				*i* Sn		**Sn**		**14 41 50.2**	**+0.9**
VTS	**Vitosha**	**2.26**	**37**	P		**Pn**		**14 41 21.2**	**-0.3**
VTS	**Vitosha**	**2.26**	**37**	*e* P		**Pn**		**14 41 21.9**	**+0.4**
VTS				*e* S		**Sg**		**14 41 57.1**	**+1.1**
VTS	**Vitosha**	**2.26**	**37**	*e* Pg		**Pn**		**14 41 21.8**	**+0.3**
VTS				*e* Sg		**Sb**		**14 41 53.3**	**+0.3**
ANX	**Ano Chora**	**2.28**	**169**	P		**Pn**		**14 41 22.0**	**+0.3**
ANX	**Ano Chora**	**2.28**	**169**	P		**Pn**		**14 41 22.6**	**+0.9**
EVGI	**Lefkada island**	**2.28**	**194**	P		**Pn**		**14 41 22.1**	**+0.5**
EVGI	**Lefkada island**	**2.28**	**194**	P		**Pn**		**14 41 22.7**	**+1.1**
AXAR	**Agios Charalam**	**2.29**	**154**	P		**Pn**		**14 41 22.1**	**+0.4**
IVA	**Berane**	**2.32**	**332**	↑ *i* Pn		**Pn**		**14 41 22.8**	**+0.6**
IVA				*i* Sn		**Sn**		**14 41 49.2**	**-1.9**
BUM	**Brajici-Budva**	**2.37**	**309**	↑ *i* Pn		**Pn**		**14 41 22.6**	**-0.3**
BUM				*i* Sn		**Sn**		**14 41 53.7**	**+1.3**
KAVA	**Kavala**	**2.38**	**85**	P		**Pn**		**14 41 23.0**	**-1.0**
SELS	**Selova**	**2.39**	**356**	*e* Pn		**Pn**		**14 41 23.2**	**0.0**
EFP	**Efpalio**	**2.44**	**170**	P		**Pn**		**14 41 24.6**	**+0.9**
EFP	**Efpalio**	**2.44**	**170**	P		**Pn**		**14 41 24.9**	**+1.1**
KOME	**Kolasin**	**2.45**	**326**	↑ *i* Pn		**Pn**		**14 41 24.6**	**+0.6**
KOME				*i* Sn		**Sn**		**14 41 53.8**	**-0.5**
FSK	**Fiskardo**	**2.45**	**195**	P		**Pn**		**14 41 23.5**	**-0.5**
FSK	**Fiskardo**	**2.45**	**195**	P		**Pn**		**14 41 25.4**	**+1.5**
BLSH	**Balsha**	**2.47**	**35**	*e* P		**Pn**		**14 41 25.1**	**+0.8**
SERG	**Sergoula**	**2.48**	**168**	P		**Pn**		**14 41 23.7**	**-0.6**
AOS	**Alonnisos**	**2.54**	**130**	P		**Pn**		**14 41 24.3**	**-0.9**
THAS	**Thassos island**	**2.55**	**94**	P		**Pn**		**14 41 24.1**	**-1.2**
ZAPS	**Zavoj**	**2.61**	**21**	*e* Pn		**Pn**		**14 41 28.4**	**+0.6**
SJES	**Sjenica**	**2.64**	**337**	*e* Pn		**Pn**		**14 41 28.0**	**+1.3**
NKME	**Niksic**	**2.65**	**318**	↑ *i* Pn		**Pn**		**14 41 28.2**	**+1.5**
NKME				*i* Sn		**Sn**		**14 41 59.7**	**+0.5**
RZN	**Rozhen**	**2.68**	**70**	P		**Pn**		**14 41 27.8**	**+0.6**
RZN	**Rozhen**	**2.68**	**70**	*e* P		**Pn**		**14 41 28.2**	**+1.0**
PGB	**Panagyurishte**	**2.69**	**50**	*e* P		**Pn**		**14 41 28.4**	**+1.2**
PGB				*e* S		**Sn**		**14 42 00.8**	**+0.7**
GOCS	**Kraljevo Serbi**	**2.75**	**352**	*e* Pn		**Pn**		**14 41 28.6**	**+0.4**
BOVS	**Bovan**	**2.81**	**5**	↓ P		**Pn**		**14 41 28.9**	**0.0**
BOVS	**Bovan**	**2.81**	**5**	*e* Pn		**Pn**		**14 41 28.5**	**-0.4**
PLD	**Plovdiv**	**2.85**	**62**	*i* Pn		**Pn**		**14 41 30.3**	**+0.8**
PLD	**Plovdiv**	**2.85**	**62**	*e* Pg		**Pn**		**14 41 30.3**	**+0.8**
IVAS	**Ivanjica**	**2.89**	**342**	*e* Pn		**Pn**		**14 41 29.2**	**-0.8**
PLE	**Pljevlja**	**2.90**	**330**	↑ *i* Pn		**Pn**		**14 41 29.4**	**-0.8**
PLE				*i* Sn		**Sn**		**14 42 06.7**	**+1.2**
BLKB	**Belogradchik**	**2.95**	**19**	↑ P		**Pn**		**14 41 31.4**	**+0.6**
BLKB	**Belogradchik**	**2.95**	**19**	*e* Pn		**Pn**		**14 41 31.3**	**+0.5**
ZAGS	**Zajecar**	**3.04**	**12**	*e* Pn		**Pn**		**14 41 32.4**	**+0.3**
MPEP	**Malo Peshtene**	**3.07**	**34**	*e* P		**Pn**		**14 41 33.6**	**+1.1**
MPEP				*e* S		**Sb**		**14 42 18.8**	**+2.5**
GRUS	**Gruza**	**3.09**	**351**	*e* Pn		**Pn**		**14 41 33.1**	**+0.3**
BORS2	**Bor- Borsko je**	**3.29**	**8**	*e* Pn		**Pn**		**14 41 34.3**	**-1.2**
BBLS	**Lazi&#263i**	**3.36**	**335**	*e* Pn		**Pn**		**14 41 36.1**	**-0.5**
DIVS	**Divibare**	**3.42**	**343**	*e* Pn		**Pn**		**14 41 37.1**	**-0.2**
TRUS	**Trudelj**	**3.46**	**348**	*e* Pn		**Pn**		**14 41 37.9**	**0.0**
KUBS	**Kucevo**	**3.58**	**3**	*e* Pn		**Pn**		**14 41 37.8**	**-1.7**
EZN	**Ezine**	**3.92**	**103**	↓ P		**Pn**		**14 41 45.2**	**+1.1**
TEKS	**Tekeris**	**3.95**	**340**	*e* Pn		**Pn**		**14 41 44.2**	**-0.4**
ELND	**Elena**	**3.96**	**57**	↓ P		**Pn**		**14 41 45.5**	**+0.8**
HERR	**Herculane**	**4.12**	**10**	↓ P		**Pn**		**14 41 46.7**	**-0.1**
FRGS	**Fruska Gora**	**4.47**	**346**	*e* Pn		**Pn**		**14 41 50.7**	**-1.0**
LOT	**Lotu**	**4.93**	**20**	↑ P		**Pn**		**14 41 57.9**	**-0.2**
ARR	**Arges**	**5.12**	**27**	↑ P		**Pn**		**14 42 00.8**	**+0.1**
VOIR		**5.33**	**29**	↓ P		**Pn**		**14 42 04.3**	**+0.7**
MLR	**Muntele Rosu**	**5.73**	**34**	↓ P		**Pn**		**14 42 09.6**	**+0.4**
HARR	**Harsova**	**6.17**	**49**	↓ P		**Pn**		**14 42 16.7**	**+1.6**
PLOR	**Plostina**	**6.32**	**36**	↓ P		**Pn**		**14 42 18.1**	**+1.0**
VRI	**Vrincioaia**	**6.36**	**36**	↓ P		**Pn**		**14 42 18.3**	**+0.5**

IDC 17 14:43:29.1 ± 2.6, 5°.52N × 125°.56E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=227.9km s-min=29.0km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.74**	**161**	P		P	P	14 49 11.4	+0.8
	0.3nm,0.7s,baz=341,slow=9.6,SNR=6.3 0.3nm,0.7s								
ASAR	**Alice Springs**	**30.13**	**165**	P		P	P	14 49 40.2	-0.7
	0.1nm,0.3s,baz=340,slow=8.7,SNR=10 0.1nm,0.3s								
MKAR	**Makanchi Array**	**55.43**	**325**	P		P	P	14 53 05.4	-0.1
	0.2nm,0.4s,baz=120,slow=8.1,SNR=2.1 0.2nm,0.4s								

IDC 17 14:46:47.7 ± 5.3, 21°.60S × 171°.96W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=222.4km s-min=41.1km az=141.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.45**	**246**	P		P	P	14 54 44.4	-0.1
	0.9nm,0.5s,baz=107,slow=11,SNR=3.6 0.9nm,0.5s								
ASAR	**Alice Springs**	**49.76**	**257**	P		P	P	14 55 42.5	+0.1
	1.1nm,0.5s,baz=93,slow=7.1,SNR=51 1.1nm,0.5s								
WRA	**Warramunga Arr**	**50.03**	**262**	P		P	P	14 55 44.1	-0.3
	1.5nm,0.7s,baz=102,slow=8.0,SNR=50 1.5nm,0.7s								
ILAR	**Eielson Array**	**88.24**	**10**	P		P	P	14 59 40.3	0.0
	0.2nm,0.6s,baz=206,slow=6.0,SNR=1.7 0.2nm,0.6s								

*IDC **17** 15:20:48.1 ± 2.2, 4°.16S × 153°.66E, h0km, mb3.8/5, mbtmp3.8/6, ML1.4/1, Error ellipse: s-maj=80.7km s-min=24.6km az=120.0*

ISC 17 15:20:54.8 ± 2.0, 4°.2S ± 0°.3 × 153°.2E ± 0°.4, h35km, n6, σ 2s 69/7, mb3.8/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.96**	**229**	P		Pn	**Pn**	**15 22 49.5**	**+1.4**
	0.3nm,0.3s,baz=45,slow=17,SNR=1.5								
PMG						Sn	**Sn**	**15 24 13.0**	**-3.9**
	baz=225,slow=7.2 6.7nm,1.0s								
WRA	**Warramunga Arr**	**24.18**	**228**	P			**P**	**15 26 09.6**	**+1.5**
	1.1nm,0.4s,baz=54,slow=9.6,SNR=20 1.1nm,0.4s								
ASAR	**Alice Springs**	**26.90**	**222**	P			**P**	**15 26 34.1**	**+1.3**
	0.2nm,0.5s,baz=53,slow=8.9,SNR=13 0.2nm,0.5s								
FITZ	**Fitzroy Crossi**	**30.33**	**241**	P			**P**	**15 27 04.2**	**+0.9**
	1.7nm,0.5s,baz=58,slow=8.7,SNR=3.1 1.7nm,0.5s								
SONM	**Songino Array**	**66.00**	**327**	P			**P**	**15 31 38.7**	**+0.8**
	0.5nm,0.6s,baz=147,slow=5.3,SNR=4.1 0.5nm,0.6s								
ILAR	**Eielson Array**	**81.41**	**22**	P			**P**	**15 33 05.3**	**-2.5**
	0.6nm,0.9s,baz=239,slow=5.9,SNR=3.3 0.6nm,0.9s								

AUST 17 15:22:13.6 ± 1.2, 18°.5S ± 8°.1 × 12°.0E ± *, h10km, mb3.9/1, ML2.3/3, Error ellipse: s-maj=24.5km s-min=5.8km az=134.8, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAAN	**Eighty Mile Be**	**1.41**	**127**	P		P	Pb	15 22 40.1	+0.1
AUBRM	**Broome Senior**	**1.88**	**76**	P		Pn	Pn	15 22 44.8	-1.1
AUBRM				S		S	Sn	15 23 10.2	+0.6
MBWA	**Marble Bar**	**2.78**	**191**	P		P	Pn	15 22 59.0	+0.7
PSAD1	**Pilbara Seismi**	**3.05**	**189**	P		P	Pn	15 23 02.5	+0.5
PSAC1	**Pilbara Seismi**	**3.13**	**189**	P		P	Pn	15 23 02.7	-0.4
PSAC1				S		S	Sn	15 23 40.9	+0.4
PSAB2	**Pilbara Seismi**	**3.15**	**188**	P		P	Pn	15 23 03.7	+0.4
PSAC2	**Pilbara Seismi**	**3.15**	**187**	P		P	Pn	15 23 04.2	+0.9
PSAC2				S		S	Sn	15 23 41.9	+0.9
PSAA2	**Pilbara Seismi**	**3.15**	**188**	P		P	Pn	15 23 04.2	+0.8
PSAA2				S		S	Sn	15 23 41.9	+0.7
PSA00	**Pilbara Seismi**	**3.16**	**188**	P		P	Pn	15 23 03.8	+0.3
PSAB1	**Pilbara Seismi**	**3.16**	**188**	P		P	Pn	15 23 04.4	+0.9
PSAB1				S		S	Sn	15 23 42.2	+0.9
PSAA3	**Pilbara Seismi**	**3.17**	**188**	P		P	Pn	15 23 04.4	+0.8
PSAA3				S		S	Sn	15 23 42.2	+0.7
PSAA1	**Pilbara Seismi**	**3.17**	**188**	P		P	Pn	15 23 04.4	+0.8
PSAA1				S		S	Sn	15 23 42.2	+0.7
PSAB3	**Pilbara Seismi**	**3.18**	**188**	P		P	Pn	15 23 03.9	+0.1
PSAB3				S		S	Sn	15 23 42.6	+0.7
PSAD3	**Pilbara Seismi**	**3.24**	**189**	P		P	Pn	15 23 05.0	+0.3
PSAD3				S		S	Sn	15 23 43.5	+0.1
GIRL	**Giralia**	**7.08**	**233**	P		P	Pn	15 23 56.3	-1.0
GIRL				S		S	Sn	15 25 12.7	-5.3
MEEK	**Meekatharra**	**8.32**	**191**	P		P	Pn	15 24 14.8	+0.2
	comp=Z,17nm,2.1s,comp=Z,0.0nm								

IDC 17 15:55:28.8 ± 3.8, 4°.83S × 150°.90E, h199km ± 33km, mb3.1/3, mbtmp3.6/4, Error ellipse: s-maj=132.5km s-min=26.4km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.86**	**219**	P		Pn	Pn	15 56 54.8	+0.5
	4.1nm,0.4s,baz=40,slow=7.9,SNR=2.3								
PMG				S		Sn	Sn	15 58 02.2	+0.2
	12nm,0.4s,baz=104,slow=20,SNR=12								
WRA	**Warramunga Arr**	**22.03**	**226**	P		P	P	16 00 07.5	-0.1
	1.0nm,0.4s,baz=51,slow=9.9,SNR=18 1.0nm,0.4s								
ASAR	**Alice Springs**	**24.88**	**220**	P		P	P	16 00 33.9	+0.4
	0.3nm,0.3s,baz=53,slow=9.1,SNR=41 0.3nm,0.3s								
ILAR	**Eielson Array**	**82.91**	**22**	P		P	P	16 07 30.6	-0.4
	0.3nm,0.7s,baz=248,slow=5.3,SNR=6.8 0.3nm,0.7s								

*PLV **17** 15:58:02.1 ± 3.4, 16°.25N × 107°.30E, h13km ± 10km, ML3.8*
*IDC **17** 15:58:03.2 ± 1.2, 16°.02N × 107°.13E, h0km, mb3.6/5, mbtmp3.6/6, ML4.1/1, MS3.3/1, Error ellipse: s-maj=41.3km s-min=18.5km az=50.0*
*NEIC **17** 15:58:05.8 ± 1.8, 16°.17N ± 0°.08 × 107°.22E ± 0°.08, h13km ± 1km, mb4.6/15, Error ellipse: s-maj=11.2km s-min=10.9km az=69.0*

ISC 17 15:58:04.2 ± 0.5, 16°.15N ± 0°.05 × 107°.12E ± 0°.06, h10km, n35, σ 1s 23/35, mb4.0/11, Vietnam

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CCVB	**Con Cuong**	**3.59**	**324**	*e* Pg		**Pg**		**15 59 11.8**	**-1.3**
CCVB				*e* Sg		**Sg**		**15 59 57.5**	**-2.1**
QIZ	**Qiongzhong**	**3.86**	**42**	Pn		**Pn**		**15 59 01.7**	**-2.0**
DLV	**Lat**	**4.39**	**162**	Pn		**Pn**		**15 59 10.8**	**-0.3**
DLV	**Lat**	**4.39**	**162**	*e* Pg		**Pg**		**15 59 26.1**	**-2.2**
DLV				IAML				16 00 32.0	
	comp=N,114nm,0.5s								
DLV				IAML				16 00 33.8	
	comp=E,213nm,0.8s								
CRAI	**Chiangrai**	**7.59**	**303**	Pn		**Pn**		**15 59 55.5**	**+0.6**
CM31	**Chiang Mai Arr**	**8.14**	**288**			**Pn**		**16 00 02.6**	**0.0**
CMAR	**Chiang Mai Arr**	**8.14**	**288**	Pn		**Pn**		**16 00 03.4**	**+0.8**
	comp=E,0.7nm,0.3s,baz=109,slow=12,SNR=18								
CMAR				Sn		**Sn**		**16 01 32.6**	**-2.2**
	comp=E,0.3nm,0.3s,baz=120,slow=17,SNR=4.6								
CMAR				Lg	Lg			16 02 23.4	
	comp=E,0.4nm,0.3s,baz=105,slow=32,SNR=6.1 comp=E,1.6nm,0.5s								
CMAR	**Chiang Mai Arr**	**8.14**	**288**			**Pn**		**16 00 02.4**	**-0.2**
CHTO	**Chiang Mai**	**8.24**	**290**	Pn		**Pn**		**16 00 05.5**	**+1.5**
SSLB	**Suanglung**	**15.05**	**57**			**P**		**16 01 41.1**	**-1.5**
YHNB	**Yeheng**	**15.81**	**55**	Pn		**Pn**		**16 01 47.4**	**+0.3**
YHNB				IAmb		IAmb		16 02 02.3	
	comp=Z,28nm,1.3s								
TATO	**Taipei**	**16.05**	**55**	Pn		**Pn**		**16 01 50.5**	**+0.4**
TATO				IAmb		IAmb		16 02 09.5	
	comp=Z,44nm,1.2s								
LZDM	**Lanzhou Array**	**19.96**	**352**	P		**Pn**		**16 02 40.2**	**+1.6**
	comp=Z,2.5nm,0.3s,baz=171,slow=12,SNR=1.8 comp=Z,2.5nm,0.3s								
SONM	**Songino Array**	**31.60**	**359**	LR		LR		16 18 57.4	
	comp=Z,52nm,18.4s,baz=263,slow=40								
SAUI	**Saumlaki**	**33.88**	**133**	P		**P**		**16 04 46.9**	**-0.5**
KAAM	**Kaadhehdhoo**	**37.07**	**249**	P		**P**		**16 05 14.8**	**-0.2**
KAAM				IAmb		IAmb		16 05 19.1	
	comp=Z,65nm,0.9s								
**

BOAB	**BOACO BROADBAN**	**.66**	**52**	P		Pn	16 14 07.8	-1.8
MATN	**Matagalpa**	**1.83**	**35**	P		Pn	16 14 10.1	-1.9
MATN	**Matagalpa**	**1.83**	**35**	S		Sn	16 14 34.1	-1.1
CNCH	**Conchagua**	**2.00**	**336**	P		Pn	16 14 14.2	-0.3
CNCH	**Conchagua**	**2.00**	**336**	S		Sn	16 14 40.6	+1.1
LCND	**La Caada**	**2.05**	**335**	P		Pn	16 14 15.0	0.0
JTS	**Las Juntas de**	**2.32**	**119**	P		Pn	16 14 20.2	+1.5
JTS				S		Sb	16 14 50.8	-0.3
PACA	**Pacayal**	**2.40**	**328**	P		Pn	16 14 20.9	+1.0
PACA	**Pacayal**	**2.40**	**328**	S		Sb	16 14 51.5	-1.9
YUSH	**Yuscaran**	**2.51**	**4**	P		Pn	16 14 21.3	-0.1

IDC 17 16:17:53.1±2.9, 18°41S×167°16E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, MS3.1/1, Error ellipse: s-maj=64.7km s-min=35.3km az=59.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.71**	**190**	Pn		Pn	16 18 50.2	-1.6
	2.3nm,0.3s,baz=66,slow=8.8,SNR=208							
DZM				Sn		Sn	16 19 32.6	-3.7
	8.8nm,0.3s,baz=292,slow=22,SNR=14							
	4.1nm,0.3s							
WRA	**Warramunga Arr**	**31.01**	**262**	P		P	16 24 12.8	+0.1
	0.2nm,0.7s,baz=97,slow=9.1,SNR=1.5							
	0.2nm,0.7s							
ASAR	**Alice Springs**	**31.43**	**255**	P		P	16 24 17.0	+0.6
	0.4nm,0.5s,baz=83,slow=8.5,SNR=21							
ASAR				LR		LR	16 36 42.0	
	comp=Z,33nm,18.1s,baz=80,slow=36							
	0.4nm,0.5s							
QSPA	**South Pole Qui**	**71.64**	**180**	P		P	16 29 17.6	+1.1
	0.8nm,0.9s,baz=32,slow=2.5,SNR=2.2							
	0.8nm,0.9s							
CMAR	**Chiang Mai Arr**	**76.37**	**295**	P		P	16 29 43.8	-1.0
	0.2nm,0.3s,baz=112,slow=3.9,SNR=4.2							
	0.2nm,0.3s							

UCR 17 16:21:47.1±1.3, 7°.05N×82°.34W, h0km±55km, MW4.1
UPA 17 16:21:49.2±1.9, 7°.00N×82°.35W, h14km±23km, MW3.9
CATAC 17 16:21:49.8±0.6, 7°N±5°×8°2W±°, h1km, M4.1/12, MLv4.1/12, Error ellipse: s-maj=10.1km s-min=3.6km az=16.8, confirmed

ISC 17 16:21:47.3±1.9, 7°.0N±0°.1×82°.37W±0°.04, h10km, n91, σ1°04/99, 2C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LMNES	**Limones**	**1.22**	**337**	*eP*		**Pn**	**16 22 09.1**	**-1.3**
GMAL	**Guarumal, Vera**	**1.38**	**55**	*eP*		**Pn**	**16 22 11.9**	**-0.6**
GMAL				*eS*		**Sb**	**16 22 29.6**	**-1.2**
GMAL	**Guarumal, Vera**	**1.38**	**55**	*eP*		**Pn**	**16 22 11.8**	**-0.7**
DVID	**David**	**1.45**	**357**	*eP*		**Pn**	**16 22 12.7**	**-0.9**
PDCAN	**Manzana , Fuen**	**1.47**	**27**	*eP*		**Pn**	**16 22 11.9**	**-2.0**
CACAO	**El Cacao, Vera**	**1.54**	**76**	*eP*		**Pn**	**16 22 14.6**	**-0.3**
CACAO				*eS*		**Sn**	**16 22 34.6**	**-0.3**
CDITO	**Canoas**	**1.67**	**343**	P		**Pn**	**16 22 15.8**	**-0.8**
JEFFS	**S de V. Baru**	**1.69**	**355**	*eP*		**Pn**	**16 22 16.5**	**-0.5**
PIRO	**Carate, Puerto**	**1.71**	**326**	*iP*		**Pn**	**16 22 15.9**	**-1.3**
PIRO	**Carate, Puerto**	**1.71**	**326**	P		**Pn**	**16 22 16.0**	**-1.3**
PIRO	**Carate, Puerto**	**1.71**	**326**	S		**Sn**	**16 22 38.5**	**-0.7**
PIRO	**Carate, Puerto**	**1.71**	**326**	*eP*		**Pn**	**16 22 15.9**	**-1.3**
DMCAL	**E. de Neily**	**1.73**	**346**	*eP*		**Pn**	**16 22 17.2**	**-0.4**
NELY	**Ciudad Neily**	**1.76**	**341**	*eP*		**Pn**	**16 22 16.8**	**-1.0**
WILLF	**Boquete**	**1.77**	**358**	*eP*		**Pn**	**16 22 17.2**	**-0.9**
BQTLY	**Boquete Panama**	**1.77**	**357**	*eP*		**Pn**	**16 22 17.1**	**-1.1**
DAP26	**falda E V. Bar**	**1.80**	**358**	*eP*		**Pn**	**16 22 17.6**	**-1.0**
PTJ1	**Puerto Jimnez**	**1.81**	**329**	*eP*		**Pn**	**16 22 18.2**	**-0.3**
PTJ1	**Puerto Jimnez**	**1.81**	**329**	S		**Sn**	**16 22 41.1**	**-0.3**
BRU2	**Volcan**	**1.84**	**350**	P		**Pn**	**16 22 18.5**	**-0.5**
BRU2	**Volcan**	**1.84**	**350**	S		**Sn**	**16 22 41.6**	**-0.8**
BRU2	**Volcan**	**1.84**	**350**	*eP*		**Pn**	**16 22 18.2**	**-0.8**
EDAD	**Golfito**	**1.84**	**335**	*eP*		**Pn**	**16 22 17.6**	**-1.4**
RBALA	**Bur**	**1.91**	**7**	*eP*		**Pn**	**16 22 19.8**	**0.0**
PBNVO	**Pueblo Nuevo,**	**1.91**	**5**	*eP*		**Pn**	**16 22 19.4**	**-0.5**
KKNTU	**Kakint9**	**1.94**	**17**	*eP*		**Pn**	**16 22 20.2**	**-0.1**
CHGR2	**Aguacate**	**1.96**	**7**	*eP*		**Pn**	**16 22 21.2**	**+0.5**
CHGR2				*eS*		**Sn**	**16 22 45.2**	**-0.2**
ALCO	**Alturas Coton,**	**2.02**	**347**	*eP*		**Pn**	**16 22 20.8**	**-0.8**
EDP2	**Potrero Grande**	**2.18**	**339**	*eP*		**Pn**	**16 22 24.1**	**+0.4**
FIMO	**Fila Mora**	**2.23**	**334**	*eP*		**Pn**	**16 22 24.4**	**0.0**
AZU	**Azuero**	**2.23**	**69**	*iP*		**Pn**	**16 22 24.8**	**+0.4**
AZU				*eS*		**Sn**	**16 22 51.8**	**-0.2**
AZU	**Azuero**	**2.23**	**69**	*eP*		**Pn**	**16 22 24.6**	**+0.2**
PANP	**Palmar Norte**	**2.25**	**331**	*eP*		**Pn**	**16 22 24.2**	**-0.4**
DRK0	**Durika**	**2.43**	**339**	*iP*		**Pn**	**16 22 27.3**	**0.0**
DRK0				*eS*		**Sn**	**16 22 59.3**	**+2.0**
DRK0	**Durika**	**2.43**	**339**	P		**Pn**	**16 22 27.3**	**0.0**
DRK0	**Durika**	**2.43**	**339**	S		**Sn**	**16 22 56.6**	**+0.6**
DRK0	**Durika**	**2.43**	**339**	*eP*		**Pn**	**16 22 27.1**	**-0.2**
CNI2	**El Empalme, Bo**	**2.44**	**358**	*eP*		**Pn**	**16 22 28.5**	**+1.4**
OCHAL	**Ojochal**	**2.46**	**329**	P		**Pn**	**16 22 27.3**	**-0.1**
OCHAL	**Ojochal**	**2.46**	**329**	S		**Sn**	**16 22 57.1**	**-0.5**
EDPE	**Pejibaye, P**	**2.47**	**331**	*eP*		**Pn**	**16 22 27.6**	**-0.1**
PNME	**Penonome**	**2.52**	**53**	*eP*		**Pn**	**16 22 29.3**	**+1.0**
RGM0	**Gandoca**	**2.61**	**355**	*eP*		**Pn**	**16 22 31.7**	**+2.1**
SAJE	**San Jernim**	**2.61**	**335**	*eP*		**Pn**	**16 22 28.9**	**-0.8**
CEUA	**Cerro Uatsi, L**	**2.69**	**348**	*eP*		**Pn**	**16 22 32.5**	**+1.8**
LAES	**El Progreso Va**	**2.85**	**346**	*eP*		**Pn**	**16 22 33.5**	**+0.6**
BUS1	**Rivas**	**2.90**	**332**	*eP*		**Pn**	**16 22 34.0**	**0.0**
VERH	**Veragua Rainfo**	**3.04**	**345**	*eP*		**Pn**	**16 22 35.9**	**+0.3**
PIEC	**Cerro El Cedra**	**3.06**	**329**	*eP*		**Pn**	**16 22 36.1**	**+0.1**
ZANG	**Zanguenga, Cho**	**3.17**	**51**	*eP*		**Pn**	**16 22 37.8**	**+0.5**
ZANG				*eS*		**Sn**	**16 23 13.1**	**-2.0**
ZANG	**Zanguenga, Cho**	**3.17**	**51**	*eP*		**Pn**	**16 22 37.2**	**-0.1**
LCR2	**La Lucha 2**	**3.19**	**330**	S		**Sn**	**16 23 19.7**	**0.0**
PICV	**PH. Pirrs**	**3.19**	**326**	*eP*		**Pn**	**16 22 37.5**	**-0.1**
VTCV	**VTCV, Calle Va**	**3.28**	**336**	*eP*		**Pn**	**16 22 38.5**	**-0.4**
RESJ	**San Isidro (Tu**	**3.29**	**338**	*eP*		**Pn**	**16 22 40.0**	**+1.1**
ABRB	**Las Abras (San**	**3.29**	**336**	*eP*		**Pn**	**16 22 40.0**	**+0.8**
IRES	**Siquirres**	**3.30**	**340**	*eP*		**Pn**	**16 22 40.2**	**+1.2**
CVTV	**Tajo**	**3.31**	**336**	*eP*		**Pn**	**16 22 40.3**	**+0.9**
LCOCO	**El Coco**	**3.31**	**339**	*eP*		**Pn**	**16 22 38.4**	**-0.8**
CVTQ	**Turrialba Volc**	**3.31**	**335**	*eP*		**Pn**	**16 22 40.7**	**+1.1**
VTR0	**Volcan Turrial**	**3.32**	**336**	*eP*		**Pn**	**16 22 40.4**	**+0.6**
BCIP	**Isla Barro Col**	**3.32**	**49**	P		**Pn**	**16 22 41.5**	**+2.1**
BCIP				S		**Sn**	**16 23 20.8**	**+1.8**
BCIP	**Isla Barro Col**	**3.32**	**49**	*eP*		**Pn**	**16 22 39.8**	**+0.5**
CVTR	**Volcan Turrial**	**3.32**	**336**	*eP*		**Pn**	**16 22 40.5**	**+0.8**
VICA	**Volcano Irazu**	**3.33**	**334**	*eP*		**Pn**	**16 22 40.2**	**+0.4**
VTUN	**Crater Central**	**3.33**	**336**	*eP*		**Pn**	**16 22 40.8**	**+1.0**
RVLA	**Villa Bonita**	**3.34**	**339**	*eP*		**Pn**	**16 22 41.5**	**+1.9**
FLAM	**Flamenco Islan**	**3.41**	**55**	*eP*		**Pn**	**16 22 41.6**	**+1.1**
EGUB	**Earth Gujpi**	**3.44**	**340**	*eP*		**Pn**	**16 22 42.1**	**+1.2**
FRIJ	**El Hiral**	**3.44**	**49**	*eP*		**Pn**	**16 22 41.6**	**+0.6**
CVTG	**V. Turrialba,**	**3.44**	**336**	*eP*		**Pn**	**16 22 42.7**	**+1.6**
UPA	**Univ. de Panam**	**3.45**	**54**	*eP*		**Pn**	**16 22 42.6**	**+1.5**
UPA				*eS*		**Sn**	**16 23 21.2**	**-0.8**
VPS8	**V Poas**	**3.68**	**330**	*eP*		**Pn**	**16 22 45.6**	**+1.0**
CAZU	**Cerro Azul, Pa**	**3.70**	**52**	*eP*		**Pn**	**16 22 45.2**	**+0.6**
CBL1	**Cabuya**	**3.74**	**314**	*eP*		**Pn**	**16 22 44.7**	**-0.4**
TRT2	**Tortugero**	**3.81**	**339**	P		**Pn**	**16 22 47.0**	**+1.0**
TRT2	**Tortugero**	**3.81**	**339**	S		**Sn**	**16 23 32.5**	**+1.7**
TRT2	**Tortugero**	**3.81**	**339**	*eP*		**Pn**	**16 22 47.2**	**+1.2**
SOCE	**Pocosol**	**4.05**	**327**	P		**Pn**	**16 22 51.2**	**+1.8**
MTEVE	**Monteverde**	**4.12**	**324**	*eP*		**Pn**	**16 22 52.5**	**+2.0**
JTS	**Las Juntas de**	**4.17**	**322**	P		**Pn**	**16 22 52.4**	**+1.4**
JTS	**Las Juntas de**	**4.17**	**322**	*eP*		**Pn**	**16 22 51.0**	**0.0**
ARE1	**Arenal 1**	**4.17**	**326**	*eP*		**Pn**	**16 22 52.9**	**+1.8**
VARE2	**V. Arenal**	**4.17**	**326**	*eP*		**Pn**	**16 22 53.3**	**+2.2**
CEDE	**Laguna Cedeo**	**4.18**	**327**	*eP*		**Pn**	**16 22 52.0**	**+0.7**
INVE	**Universidad In**	**4.38**	**323**	*eP*		**Pn**	**16 22 54.7**	**+0.8**
JUD3	**Juan Diaz 3**	**4.46**	**316**	*eP*		**Pn**	**16 22 55.3**	**+0.3**
PLVR	**Palo Verde**	**4.46**	**319**	*eP*		**Pn**	**16 22 56.1**	**+0.9**
CUI	**Cuipilapa**	**4.58**	**323**	*eP*		**Pn**	**16 22 57.4**	**+0.6**
VRLE	**La Escondida,**	**4.81**	**322**	*eP*		**Pn**	**16 23 01.3**	**+1.4**
LAPC	**Finca la Perla**	**4.83**	**321**	*eP*		**Pn**	**16 23 01.0**	**+0.9**

NEIC 17 16:28:28.8±1.0, 37°.07N±0°.05×104°.95W±0°.03, h5km±2km, mb_Lg2.6/13, ML2.7/86, Error ellipse: s-maj=9.2km s-min=3.3km az=350.0, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
T25A	**Trinidad**	**0.44**	**81**	Pg		Pg	16 28 38.1	+0.8
T25A				Sg		Sg	16 28 43.7	+0.7
SDCO	**Great Sand Dun**	**0.80**	**327**	Pg		Pg	16 28 44.7	+0.5
RTBA	**Rita Blanca**	**1.89**	**109**			Pb	16 29 03.3	-0.5
RTBA					lAmb_Lg		16 29 32.7	
	comp=Z,15nm,0.9s							
Q24A	**Divide**	**1.90**	**355**			Pb	16 29 04.5	+0.5
ANMO	**Albuquerque**	**2.45**	**210**	Pn		Pn	16 29 10.0	+0.5
TASM	**ASL Pad, Albuq**	**2.45**	**210**	Pn		Pn	16 29 10.8	+1.2
TASM				lAML			16 29 45.1	
	comp=Z,12nm,0.3s							
TASM				lAML			16 30 14.9	
	comp=Z,11nm,4.9s							
TASM	**ASL Pad, Albuq**	**2.45**	**210**	Pn		Pn	16 29 10.8	+1.3
TASM	**ASL Pad, Albuq**	**2.45**	**210**	Pn		Pn	16 29 10.8	+1.2
TASM				lAML			16 29 44.7	
	comp=Z,12nm,0.4s							
TASM				lAML			16 30 42.8	
	comp=Z,9.7nm,5.0s							
ABQ	**Albuquerque**	**2.45**	**210**	Pn		Pn	16 29 10.8	+1.2
KSCO	**Kaye Shedlock'**	**2.67**	**43**	Pn		Pn	16 29 13.6	+1.1
KSCO						Sb	16 29 51.5	+1.3
ISCO	**Idaho Springs**	**2.77**	**349**			Pn	16 29 14.6	+0.5
ISCO				lAML			16 30 05.0	
	comp=Z,13nm,4.7s							
ISCO				lAML			16 30 41.1	
	comp=Z,13nm,4.2s							
PV01	**Paradox Valley**	**3.06**	**291**	lAML			16 29 44.9	
	comp=E,14nm,3.7s							
PV01				lAML			16 30 31.3	
	comp=N,15nm,5.0s							
PV15	**Paradox Valley**	**3.07**	**295**	Pn		Pn	16 29 20.8	+2.5
PV15				lAML			16 30 10.5	
	comp=N,13nm,1.5s							
PV15				lAML			16 30 12.1	
	comp=E,15nm,0.8s							
PV02	**Paradox Valley**	**3.21**	**292**	lAML			16 30 14.1	
	comp=N,36nm,4.9s							
PV02				lAML			16 30 16.8	
	comp=E,33nm,4.7s							
PV13	**Radium Mtn., P**	**3.26**	**291**	lAML			16 30 20.4	
	comp=N,21nm,3.0s							
PV13				lAML			16 31 03.6	
	comp=E,21nm,4.3s							
PV03	**Paradox Valley**	**3.31**	**292**	lAML			16 29 52.5	
	comp=E,11nm,4.1s							
PV03				lAML			16 30 24.0	
	comp=N,16nm,3.8s							
PV11	**David Mesa, Pa**	**3.34**	**293**	lAML			16 30 25.8	
	comp=E,26nm,1.2s							
PV11				lAML			16 30 26.0	
	comp=N,32nm,1.1s							
PV22	**Blue Mesa, Par**	**3.37**	**297**	lAML			16 30 17.5	
	comp=N,21nm,2.9s							
PV22				lAML			16 30 33.7	
	comp=E,16nm,4.8s							
PV16	**Nyswonger Mesa**	**3.38**	**293**	lAML			16 30 31.7	
	comp=E,16nm,3.0s							
PV16				lAML			16 30 35.3	
	comp=N,22nm,3.4s							
PV04	**Paradox Valley**	**3.40**	**294**	lAML			16 30 20.2	
	comp=N,22nm,4.5s							
PV04				lAML			16 30 31.7	
	comp=E,26nm,4.7s							
PV19	**Morning Glory**	**3.43**	**292**	lAML			16 31 21.2	
	comp=E,25nm,4.5s							
AMTX	**Amarillo**	**3.44**	**128**	lAmb_Lg			16 30 21.3	
	comp=Z,15nm,0.9s							
PV05	**Paradox Valley**	**3.44**	**288**	lAML			16 30 31.5	
	comp=N,14nm,3.0s							
PV05				lAML			16 30 43.3	
	comp=E,20nm,3.9s							
PV14	**Lion Creek, Pa**	**3.48**	**293**	lAML			16 30 24.4	
	comp=E,16nm,4.6s							
PV14				lAML			16 30 32.9	
	comp=N,18nm,3.6s							
PV10	**Paradox Valley**	**3.49**	**293**	lAML			16 30 26.1	
	comp=E,21nm,3.7s							
PV10				lAML			16 31 05.6	
	comp=N,28nm,4.3s							
PV21	**Cone Mtn., Par**	**3.52**	**296**	lAML			16 30 02.2	
	comp=N,14nm,4.7s							
PV21				lAML			16 30 37.3	
	comp=E,15nm,4.8s							
Y22A	**Socorro**	**3.53**	**208**	lAML			16 30 32.6	
	comp=N,13nm,4.8s							
Y22A				lAML			16 31 13.7	
	comp=E,19nm,4.8s							
X18A	**Snowflake**	**4.79**	**239**	lAML			16 30 32.6	
	comp=E,6.3nm,4.5s							
R32A	**Long Quarter,**	**5.13**	**73**	lAmb_Lg			16 31 19.9	
	comp=Z,15nm,1.0s							
WUAZ	**Wupatki**	**5.41**	**255**	lAmb_Lg			16 31 19.0	
APMT	**Aspermont**	**5.44**	**132**	lAmb_Lg			16 31 28.0	
	comp=Z,12nm,0.9s							

IDC 17 16:38:46.6±0.6, 13°.44S×167°.62E, h0km, mb4.2/21, mbtmp4.2/22, MS4.3/47, Error ellipse: s-maj=22.1km s-min=15.6km az=109.0
NEIC 17 16:38:49.2±2.1, 13°.66S±0°.06×167°.78E±0°.08, h10km±1km, mb4.9/71, Error ellipse: s-maj=12.8km s-min=9.9km az=85.0
GCMT 17 16:38:50.2±0.1, 13°.58S±0°.01×167°.82E±0°.01, h12km, MW5.0/117, Moment Tensor Solution. s43,c57; s117,c190; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.28±.08; Mθθ=2.36±.08; Mϕϕ=2.64±.07; Mrθ=-1.08±.19; Mrϕ=3.28±.06; Mθϕ=0.65±.21; Best double couple: M0=4.30600×10^16 NP1:ϕs=161.00000°, δ74.00000°, λ178.00000°. NP2:ϕs=251.00000°, δ88.00000°, λ16.00000°. Principal axes: T 4.5030, Plg13.0000°, Azm117.0000°; N -0.3980, Plg73.0000°, Azm257.0000°; P -4.1090, Plg10.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 17 16:38:48.6±0.4, 13°.65S±0°.06×167°.80E±0°.07, h10km, n139, σ1°23/93, mb4.8/54, MS4.3/49, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SANVU	**Saraoutou**	**1.88**	**198**	Pn		**Pn**	**16 39 17.8**	**-3.0**
SANVU				Sn		**Sn**	**16 39 43.1**	**-1.5**
DZM	**Mont Dzumac**	**8.47**	**189**	Pn		**Pn**	**16 40 52.7**	**+1.1**
	17nm,0.5s,baz=53,slow=18							
DZM				LR		LR	16 43 54.6	
	comp=Z,5µm,18.1s,baz=16,slow=36							
ONTNC	**Ouen Toro**	**8.71**	**188**	Pn		**Pn**	**16 40 55.1**	**+0.5**
HNR	**Honiara**	**8.76**	**298**	Pn		**Pn**	**16 40 55.7**	**+0.3**
	12nm,0.3s,baz=119,slow=10,SNR=16							
HNR				Sn		**Sn**	**16 42 34.6**	**+0.3**
	9.7nm,0.3s,baz=120,slow=20,SNR=4.1							
HNR				LR		LR	16 44 29.9	
	comp=Z,2µm,19.5s,baz=122,slow=40							
HNR	**Honiara**	**8.76**	**298**			**Pn**	**16 40 54.8**	**-0.6**
PINNC	**Pines Island,**	**8.92**	**182**	Pn		**Pn**	**16 40 58.4**	**+0.8**
MSVF	**Nonsavu**	**10.68**	**114**	Pn		**Pn**	**16 41 21.6**	**-0.1**
EIDS	**Eidsvold**	**19.57**	**231**	P		**P**	**16 43 17.7**	**+0.9**
AFI	**Afiamalu**	**19.84**	**93**	P		**P**	**16 43 18.4**	**-1.5**
AFI				lAmb		lAmb	16 43 21.3	
	comp=Z,120nm,1.7s							
RAO	**Raoul Island**	**20.41**	**142**	LR		LR	16 49 28.9	
	comp=Z,994nm,20.3s,baz=318,slow=31							
PMG	**Port Moresby**	**20.65**	**280**	P		**P**	**16 43 28.5**	**-0.2**
	comp=Z,8.2nm,0.8s,baz=74,slow=12,SNR=4.2							
PMG				LR		LR	16 50 24.3	
	comp=Z,2µm,20.2s,baz=74,slow=34							
URZ	**Urewera**	**25.87**	**163**	LR		LR	16 52 33.5	
	comp=Z,872nm,20.6s,baz=340,slow=32							
INKA	**Innaminka**	**28.84**	**237**	P		**P**	**16 44 47.3**	**0.0**
JAY	**Jayapura**	**28.97**	**290**	LR		LR	16 56 38.8	
	comp=Z,334nm,20.9s,baz=85,slow=37							
STKA	**Stephens Creek**	**30.08**	**229**	P		**P**	**16 44 58.7**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=47,slow=9.5,SNR=8.9							
STKA				LR		LR	16 56 40.9	
	comp=Z,1µm,18.1s,baz=54,slow=36							
	comp=Z,4.9nm,0.8s							
RPZ	**Rata Peaks**	**30.09**	**175**	LR		LR	16 56 42.7	
	comp=Z,650nm,18.1s,baz=338,slow=36							
RAR	**Rarotonga**	**31.80**	**108**	LR		LR	16 55 22.8	
	comp=Z,624nm,21.0s,baz=270,slow=31							
H11S2	**WAKE ISLAND Hy**	**31.95**	**358**	T		T	17 18 51.8	
	baz=171,slow=76,SNR=9.8							
H11S3	**WAKE ISLAND Hy**	**31.96**	**358**	T		T	17 18 52.5	
	baz=171,slow=76,SNR=6.9							
H11S1	**WAKE ISLAND Hy**	**31.97**	**358**	T		T	17 18 53.4	
	baz=171,slow=76,SNR=7.6							
WRA	**Warramunga Arr**	**32.59**	**254**	P		**P**	**16 45 18.5**	**-2.1**
	comp=Z,3.5nm,0.7s,baz=82,slow=8.3,SNR=8.2							
	comp=Z,3.5nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**33.16**	**358**	T		T	17 20 17.3	
	baz=172,slow=76,SNR=5.2							
H11N3	**WAKE ISLAND Hy**	**33.17**	**358**	T		T	17 20 22.1	
	baz=172,slow=76,SNR=5.3							
H11N2	**WAKE ISLAND Hy**	**33.18**	**358**	T		T	17 20 20.8	
	baz=172,slow=76,SNR=5.0							
AS31	**Alice Springs**	**33.54**	**248**	P		**P**	**16 45 26.8**	**-2.2**
ASAR	**Alice Springs**	**33.54**	**248**	P		**P**	**16 45 27.0**	**-1.9**
	comp=Z,3.2nm,0.7s,baz=74,slow=9.0,SNR=32							
ASAR				PcP		**PcP**	**16 48 09.7**	**0.0**
	comp=Z,0.6nm,0.8s,baz=47,slow=1.6,SNR=2.2							
	comp=Z,3.2nm,0.7s							
ASAR	**Alice Springs**	**33.54**	**248**			**P**	**16 45 27.8**	**-1.1**
GUMO	**Guam**	**35.33**	**319**	LR		LR	16 59 35.8	
	comp=Z,588nm,20.5s,baz=134,slow=36							
SWI	**Sorong**	**38.33**	**286**	P		P	16 46 16.6	+6.7
	comp=Z,16nm,1.0s							
FITZ	**Fitzroy Crossi**	**40.73**	**258**	P		**P**	**16 46 29.6**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=90,slow=7.2,SNR=3.8							
	comp=Z,3.0nm,0.6s							
PPT	**Papeete**	**41.18**	**101**	LR		LR	16 59 22.5	
	comp=Z,336nm,19.6s,baz=268,slow=30							
BATI	**Baumata**	**43.27**	**270**	LR		LR	17 04 33.7	
	comp=Z,1µm,19.5s,baz=121,slow=36							
EDFI	**Ende, Flores**	**45.44**	**271**	P		P	16 47 13.6	+5.3
	comp=Z,9.4nm,1.0s							
PSA00	**Pilbara Seismi**	**46.23**	**253**	P		**P**	**16 47 14.1**	**-0.3**
MBWA	**Marble Bar**	**46.33**	**254**	P		**P**	**16 47 15.2**	**+0.1**
DAV	**Davao City (W)**	**46.70**	**294**	LR		LR	17 03 52.2	
	comp=Z,238nm,22.0s,baz=121,slow=32							
KAPI	**Kappang**	**48.10**	**276**	LR		LR	17 07 40.0	
	comp=Z,227nm,19.8s,baz=96,slow=36							
NWAO	**Narrogin (SRO)**	**49.74**	**238**	LR		LR	17 08 03.4	
	comp=Z,290nm,19.2s,baz=40,slow=35							
TGY	**Tagaytay City**	**53.97**	**299**	LR		LR	17 10 25.2	
	comp=Z,113nm,19.3s,baz=156,slow=35							
JOW	**Kunigami**	**55.61**	**316**	LR		LR	17 11 06.5	
	comp=Z,154nm,20.3s,baz=138,slow=35							
MJAR	**Matsushiro Arr**	**57.20**	**332**	P		**P**	**16 48 34.4**	**-1.6**
	comp=Z,2.1nm,0.9s,baz=159,slow=7.6,SNR=5.0							
	comp=Z,2.1nm,0.9s							
JNU	**Nakatsue**	**58.35**	**324**	LR		LR	17 12 25.4	
	comp=Z,51nm,18.7s,baz=133,slow=35							
KSRS	**Korea Array**	**63.15**	**325**	P		**P**	**16 49 13.6**	**-3.2**
	comp=Z,2.1nm,0.9s,baz=136,slow=6.1,SNR=3.9							
	comp=Z,2.1nm,0.9s							
VNDA	**Vanda**	**63.95**	**181**	P		**P**	**16 49 22.2**	**+0.7**
	comp=Z,0.9nm,1.0s,baz=357,slow=7.0,SNR=4.4							
VNDA				LR		LR	17 13 22.6	
	comp=Z,168nm,20.5s,baz=14,slow=32							
	comp=Z,0.9nm,1.0s							
SBA	**Scott Base**	**64.21**	**180**	P		**P**	**16 49 24.3**	**+1.1**
NJ2	**Nanjing**	**65.27**	**315**	*eP*		**P**	**16 49 33.5**	**+2.7**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
QIZ	**Qiongzhong**	**65.67**	**298**	P		**P**	**16 49 35.3**	**+1.6**
QIZ				S		**S**	**16 58 23.0**	**+3.0**
QIZ				LR		LR		
	comp=N,220nm,16.3s							
QIZ				LR		LR		
	comp=E,140nm,18.8s							
QIZ				LR		LR		
	comp=Z,240nm,25.5s							
USRK	**Ussuriysk Ar.**	**66.16**	**333**	P		**P**	**16 49 33.9**	**-2.5**
	comp=Z,1.2nm,0.9s,baz

comp=Z,322nm,18.4s,baz=203,slow=32
CWC Cottonwood Cre 85.65 51 P P 16 51 28.1 +0.1
CLC China Lake 85.81 52 P P 16 51 28.8 +0.1
CLC IAmb IAmb 16 51 32.2
comp=Z,11nm,1.2s
WSHM Spangler Hills 85.81 52 P P 16 51 29.1 +0.4
WSHM IAmb IAmb 16 51 32.9
comp=Z,6.6nm,1.0s
CCCA Chr Cany lake 85.89 52 P P 16 51 29.3 +0.3
G23K Bananza Creek 85.91 16 P P 16 51 28.4 -0.1
J05D Fort Rock, OR 85.91 44 IAmb IAmb 16 51 33.4
comp=Z,7.7nm,0.9s
PFO Pinyon Flats O 85.95 54 LR LR 17 25 01.8
comp=Z,325nm,18.2s,baz=261,slow=32
LHV Little Huntoon 85.97 49 P P 16 51 30.7 +1.4
LHV IAmb IAmb 16 51 37.8
comp=Z,14nm,1.2s
MPMC Manual Prospec 85.97 52 P P 16 51 29.6 -0.1
DSP Deep Springs 86.06 50 P 16 51 30.2 +0.4
DSP IAmb IAmb 16 51 34.2
comp=Z,12nm,1.0s
NVAR Mina Array Bea 86.18 49 P P 16 51 29.6 -1.0
comp=Z,3.3nm,0.9s,baz=229,slow=9.2,SNR=14
NVAR LR LR 17 22 16.5
comp=Z,345nm,20.4s,baz=266,slow=30
comp=Z,3.3nm,0.9s
QSM Queen of Sheba 86.41 52 P P 16 51 32.4 +0.7
QSM IAmb IAmb 16 51 35.0
comp=Z,6.7nm,1.0s
BELC Belle Mtn. Jos 86.44 54 P P 16 51 32.1 +0.1
BELC IAmb IAmb 16 51 35.6
comp=Z,9.1nm,1.0s
WCT Wildcat Mounta 86.88 51 P P 16 51 34.2 +0.2
WCT IAmb IAmb 16 51 37.4
comp=Z,8.0nm,1.1s
TPNV Topopah Spring 87.21 51 P P 16 51 34.6 -1.1
TPNV IAmb IAmb 16 51 39.2
comp=Z,6.9nm,1.1s
DLBC Dease Lake 87.75 28 LR LR 17 26 02.3
comp=Z,222nm,18.0s,baz=264,slow=32
G26K Porcupine Rive 87.79 17 P P 16 51 38.4 +0.9
G26K IAmb IAmb 16 51 39.9
comp=Z,3.9nm,0.8s
SHPR Sheep Range 87.90 52 P 16 51 39.5 +0.5
SHPR IAmb IAmb 16 51 48.2
comp=Z,5.9nm,1.4s
R11B Troy Canyon, C 88.17 50 P P 16 51 40.6 +0.3
G08A Pilot Rock 88.18 43 P 16 51 39.0 -1.0
G08A IAmb IAmb 16 51 44.9
comp=Z,7.2nm,1.1s
LPIG La Paz 88.28 65 LR LR 17 27 09.3
comp=Z,89nm,18.5s,baz=248,slow=33
EVN Everest 88.54 299 P 16 51 43.4 +0.6
PALK Pallekele 88.89 278 LR LR 17 33 08.7
comp=Z,127nm,19.7s,baz=106,slow=37
BMO Blue Mountains 89.12 43 P 16 51 45.5 +1.0
BMO IAmb IAmb 16 51 47.6
comp=Z,8.7nm,1.2s
ELK Elko 89.19 48 LR LR 17 25 25.3
comp=Z,179nm,19.1s,baz=252,slow=31
ELK Elko 89.19 48 P 16 51 45.0 -0.1
ELK IAmb IAmb 16 51 48.4
comp=Z,5.9nm,1.2s
PSUT Pine Spring 89.51 50 P P 16 51 47.8 +1.2
PSUT IAmb IAmb 16 51 55.6
comp=Z,7.6nm,1.3s
LCMT Little Creek M 89.52 52 P P 16 51 47.9 +1.3
LCMT IAmb IAmb 16 51 55.0
comp=Z,8.3nm,1.2s
CCUT Cedar City 89.59 51 P 16 51 48.2 +1.2
KNB Kanab 89.84 52 P 16 51 47.3 -0.9
PLID Pearl Lake 90.07 43 P 16 51 49.3 +0.2
PLID IAmb IAmb 16 51 58.4
comp=Z,8.0nm,1.2s
NEW Newport 90.41 40 LR LR 17 30 08.0
comp=Z,185nm,18.1s,baz=266,slow=34
INK Inuvik 91.71 19 LR LR 17 29 15.3
comp=Z,327nm,18.8s,baz=252,slow=33
WMQ Urumqi 92.34 314 *eP* P 16 52 01.4 +1.9
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ LR LR
comp=Z,120nm,23.1s
PMSA Palmer Station 92.61 160 LR LR 17 27 10.5
comp=Z,106nm,19.8s,baz=230,slow=31
PDAR Pinedale Array 93.84 47 P P 16 52 06.3 -0.3
comp=Z,1.7nm,1.1s,baz=243,slow=0.3,SNR=4.3
PDAR LR LR 17 27 18.1
comp=Z,88nm,19.2s,baz=268,slow=31
comp=Z,1.7nm,1.1s
ANMO Albuquerque 94.27 55 LR LR 17 29 26.5
comp=Z,160nm,18.3s,baz=352,slow=32
SNAA Sanae 94.65 183 P P 16 52 10.6 +1.0
comp=Z,1.6nm,1.0s,baz=157,slow=4.5,SNR=3.9
SNAA LR LR 17 33 01.8
comp=Z,119nm,19.2s,baz=186,slow=34
comp=Z,1.6nm,1.0s
SNAA Sanae 94.65 183 IAmb IAmb 16 54 57.4
comp=Z,9.9nm,1.7s
TXAR Lajitas Array 95.31 61 P P 16 52 14.5 +1.0
comp=Z,0.1nm,0.5s,baz=272,slow=11,SNR=1.8
TXAR LR LR 17 28 46.2
comp=Z,120nm,19.4s,baz=264,slow=32
comp=Z,0.1nm,0.5s
YKA Yellowknife Ar 96.36 27 LR LR 17 28 28.9
comp=Z,151nm,20.8s,baz=259,slow=31
MKAR Makanchi Array 96.78 316 P P 16 52 19.4 -0.3
comp=Z,1.3nm,0.9s,baz=115,slow=5.5,SNR=4.2
MKAR LR LR 17 35 33.0
comp=Z,44nm,21.8s,baz=88,slow=35
comp=Z,1.3nm,0.9s
ZALV Zalesovo Beam 96.83 324 P P 16 52 17.9 -1.8
comp=Z,0.3nm,0.4s,baz=98,slow=8.9,SNR=2.0
ZALV LR LR 17 34 53.6
comp=Z,84nm,21.6s,baz=113,slow=35
comp=Z,0.3nm,0.4s
USHA Ushuaia 96.97 151 LR LR 17 28 36.8
comp=Z,70nm,20.1s,baz=246,slow=31
KURBB Kurchatov Arra 99.95 320 LR LR 17 36 22.5
comp=Z,144nm,21.9s,baz=158,slow=35

DJA 17 16:41:17.5±1.2,5°S±2.2×14°1E±°, h17km±9km, M4.3/7, mb4.1/7, mB4.8/2, MLv4.4/6, Mw(mB)4.1/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.97**	**347**	P	Pn	16 41 50.3	+0.2
GENI				S	Sn	16 42 15.2	+0.8
JAY	**Jayapura**	**1.99**	**2**	P	Pn	16 41 50.7	+0.2
JAY				S	Sn	16 42 15.8	+0.7
SMPI	**Sarmi**	**3.15**	**323**	P	Pn	16 42 05.5	-0.9
MMPI	**Merauke**	**3.93**	**183**	P	Pn	16 42 18.8	+1.7
MMPI				S	Sn	16 43 05.1	+2.3
BAKI	**Biak** 0.2nm34nm,1.6s	**5.59**	**306**	P	Pn	16 42 40.2	+0.3
FAKI	**Fak Fak**	**8.50**	**280**	P	Pn	16 43 19.3	-0.7
SWI	**Sorong**	**10.03**	**291**	P	Pn	16 43 39.3	-1.6

*IDC **17** 16:42:03.5±1.2,2°.14N×127°.21E, h0km, mb3.7/5, mbtmp3.8/5, Error ellipse: s-maj=79.7km s-min=22.3km az=73.0*
*NEIC **17** 16:42:09.9±1.1, 1°.87N±0°.05×126°.5E±0°.1, h35km±2km, mb4.1/7, Error ellipse: s-maj=19.4km s-min=4.8km az=64.0*

ISC 17 16:42:09.2±1.0,1°.9N±0°.1×126°.5E±0°.1, h35km, n17, σ0s87/16, mb3.9/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**143**		**Pn**	**16 42 32.4**	**+0.3**
LUWI	**Luwuk**	**4.75**	**232**	Pn	**Pn**	**16 43 19.0**	**+0.7**
TOLI2	**Tolitoli**	**5.79**	**262**	Pn	**Pn**	**16 43 32.2**	**-0.5**
MTN	**Manton Dam**	**15.33**	**163**	Pn	**Pn**	**16 45 43.0**	**-0.2**
NACB	**Ninganchiao**	**22.66**	**348**	P	**P**	**16 47 06.6**	**-1.0**
NACB				IAmb	IAmb	16 47 32.2	
	comp=Z,24nm,1.1s						
WB0	**Warramunga Arr**	**22.86**	**161**	P	**P**	**16 47 09.7**	**-0.1**
WB0				IAmb	IAmb	16 47 31.7	
	comp=Z,7.0nm,1.2s						
WRAB	**Tennant Creek**	**23.00**	**161**	P	**P**	**16 47 10.6**	**-0.7**
WRAB				IAmb	IAmb	16 47 11.9	
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**16 47 11.1**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=339,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**16 47 09.8**	**-1.4**
WR8	**Warramunga Ar**	**23.07**	**161**	P	**P**	**16 47 11.5**	**-0.4**
WR8				IAmb	IAmb	16 47 22.6	
	comp=Z,5.4nm,1.1s						
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**16 47 42.0**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=349,slow=8.2,SNR=1.3						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**16 47 42.0**	**-0.6**
USRK	**Ussuriysk Ar.**	**42.41**	**6**	P	P	16 49 56.5	-3.9
	comp=Z,4.0nm,1.0s,baz=178,slow=10,SNR=4.2						
	comp=Z,4.0nm,1.0s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**16 52 06.6**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=120,slow=7.5,SNR=8.2						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**16 52 06.2**	**+1.0**
KURBB	**Kurchatov Arra**	**63.18**	**328**	P	**P**	**16 52 33.9**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=133,slow=5.2,SNR=2.1						
	comp=Z,0.3nm,0.4s						
KURK	**Kurchatov**	**63.18**	**328**	P	**P**	**16 52 35.0**	**+1.2**
KURK				IAmb	IAmb	16 53 00.4	
	comp=Z,3.3nm,1.3s						

*IDC **17** 16:42:54.1±0.7, 1°.42N×126°.18E, h0km, mb4.0/14, mbtmp4.0/15, ML3.8/1, Error ellipse: s-maj=39.1km s-min=13.5km az=77.0*
*DJA **17** 16:42:58.6±0.4, 1°N±6°×12°6E±°, h10km, M4.3/6, MLv4.3/6*
*NEIC **17** 16:43:00.1±1.4, 1°.43N±0°.08×126°.33E±0°.07, h35km±2km, mb4.5/22, Error ellipse: s-maj=14.5km s-min=9.6km az=219.0*

ISC 17 16:42:59.7±0.5,1°.47N±0°.07×126°.46E±0°.07, h35km, n47, σ1s17/47, mb4.2/25, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**127**	Pn	**Pn**	**16 43 18.9**	**-0.3**
KMSI	**Cibinong**	**2.63**	**250**	P	**Pn**	**16 43 41.4**	**+1.7**
LUWI	**Luwuk**	**4.45**	**236**	Pn	**Pn**	**16 44 04.0**	**-0.7**
LUWI	**Luwuk**	**4.45**	**236**	P	**Pn**	**16 44 08.4**	**+3.7**
TOLI2	**Tolitoli**	**5.68**	**266**	Pn	**Pn**	**16 44 20.3**	**-1.4**
FAKI	**Fak Fak**	**7.25**	**127**	Pn	**Pn**	**16 44 45.4**	**+2.1**
KNRA	**Kununurra**	**17.19**	**172**	Pn	**Pn**	**16 46 56.4**	**-0.9**
KNRA				IAmb	IAmb	16 46 57.6	
	comp=Z,13nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.46**	**182**	P	**P**	**16 47 21.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=23,slow=5.8,SNR=1.8						
	comp=Z,2.7nm,0.7s						
YULB	**Yu-li**	**22.36**	**347**	P	**P**	**16 47 53.5**	**-1.4**
YULB				IAmb	IAmb	16 48 26.4	
	comp=Z,26nm,1.3s						
WB0	**Warramunga Arr**	**22.50**	**160**		**P**	**16 47 55.4**	**-1.0**
WB0				IAmb	IAmb	16 48 04.7	
	comp=Z,8.0nm,0.9s						
WRAB	**Tennant Creek**	**22.64**	**160**	P	**P**	**16 47 57.1**	**-0.8**
WRAB				IAmb	IAmb	16 48 04.5	
	comp=Z,5.5nm,0.7s						
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**16 47 56.9**	**-1.0**
	comp=Z,6.5nm,0.7s,baz=338,slow=11,SNR=11						
	comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**16 47 55.5**	**-2.4**
WR8	**Warramunga Arr**	**22.71**	**160**		**P**	**16 47 58.1**	**-0.5**
WR8				IAmb	IAmb	16 48 02.2	
	comp=Z,6.3nm,0.8s						
JOW	**Kunigami**	**25.28**	**4**	P	**P**	**16 48 23.4**	**+0.5**
AS31	**Alice Springs**	**26.01**	**164**	P	**P**	**16 48 29.2**	**-0.5**
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**16 48 29.5**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=344,slow=8.2,SNR=9.5						
ASAR				PcP	**PcP**	16 51 57.3	-0.1
	comp=Z,0.3nm,0.4s,baz=346,slow=1.9,SNR=2.2						
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**16 48 29.4**	**-0.2**
JSG	**Sagara**	**34.80**	**17**	P	**P**	**16 49 48.4**	**+1.3**
BBOO	**Buckleboo**	**35.28**	**166**	P	**P**	**16 49 51.3**	**0.0**
BBOO				IAmb	IAmb	16 49 58.7	
	comp=Z,7.7nm,1.1s						
KSRS	**Korea Array**	**35.83**	**2**	P	**P**	**16 49 56.1**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=183,slow=8.7,SNR=2.9						
	comp=Z,1.5nm,0.8s						
STKA	**Stephens Creek**	**36.14**	**158**	P	**P**	**16 49 59.0**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=357,slow=8.2,SNR=4.8						
	comp=Z,0.9nm,0.4s						
MJAR	**Matsushiro Arr**	**36.55**	**16**	P	**P**	**16 50 02.4**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=180,slow=10,SNR=4.3						
	comp=Z,1.5nm,0.8s						
MJAR	**Matsushiro Arr**	**36.55**	**16**	P	**P**	**16 50 02.6**	**+0.4**
MJAR				IAmb	IAmb	16 50 10.8	
	comp=Z,6.7nm,1.5s						
JMM	**Marumori**	**38.55**	**18**	P	**P**	**16 50 19.9**	**+0.9**
MGBR	**Mount Gambier**	**41.13**	**163**	P	**P**	**16 50 40.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**42.83**	**6**	P	**P**	**16 50 54.1**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=188,slow=7.7,SNR=1.4						
	comp=Z,0.6nm,0.4s						
GTA	**Gaotai**	**44.90**	**331**	P	**P**	**16 51 11.4**	**+0.2**
GTA				pP	pP	16 51 15.3	-5.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				LR	LR		
	comp=N,140nm,18.5s						
GTA				LR	LR		
	comp=E,260nm,19.6s						
GTA				LR	LR		
	comp=Z,340nm,19.3s						
HILR	**Hailar Array B**	**48.25**	**354**	P	**P**	**16 51 37.7**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=167,slow=11,SNR=3.6						
	comp=Z,0.9nm,0.5s						
PEA0B	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**16 52 47.1**	**+0.9**
PEA0B				IAmb	IAmb	16 53 10.2	
	comp=Z,17nm,1.2s						
PETK	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**16 52 47.0**	**+0.9**
	comp=Z,3.8nm,0.9s,baz=184,slow=5.7,SNR=8.2						
	comp=Z,3.8nm,0.9s						
PETK	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**16 52 47.0**	**+0.9**
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**16 52 56.7**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=121,slow=8.0,SNR=9.7						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**16 52 56.5**	**-1.2**
ZALV	**Zalesovo Beam**	**62.47**	**334**	P	**P**	**16 53 17.8**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=151,slow=9.1,SNR=2.2						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**63.49**	**328**	P	**P**	**16 53 25.3**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=127,slow=6.2,SNR=14						
	comp=Z,1.8nm,0.6s						
KURK	**Kurchatov**	**63.49**	**328**	P	**P**	**16 53 25.0**	**-1.3**
KURK				IAmb	IAmb	16 53 27.5	
	comp=Z,3.8nm,0.8s						
BVAR	**Borovoye Array**	**69.06**	**328**	P	**P**	**16 54 01.5**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=128,slow=4.4,SNR=3.3						
	comp=Z,0.6nm,0.4s						
AB31	**Akbulak array**	**73.72**	**321**	P	**P**	**16 54 29.0**	**-1.1**
ABKAR	**Akbulak array**	**73.72**	**321**	P	**P**	**16 54 28.9**	**-1.2**
ARTI	**Arti**	**76.77**	**328**	P	**P**	**16 54 46.2**	**-1.4**
ARTI				IAmb	IAmb	16 54 46.5	
	comp=Z,3.1nm,0.5s						
O15K	**Ungalikthiuk R**	**80.44**	**30**	P	**P**	**16 55 08.2**	**+0.5**
VNDA	**Vanda**	**81.23**	**173**	P	**P**	**16 55 11.6**	**0.0**
	comp=Z,0.6nm,0.8s,baz=352,slow=7.7,SNR=2.7						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**81.23**	**173**	IAmb	IAmb	16 55 14.5	
	comp=Z,2.0nm,1.2s						
D19K	**Kuna River**	**83.31**	**21**	P	**P**	**16 55 23.7**	**+1.0**
D19K				IAmb	IAmb	16 55 41.7	
	comp=Z,12nm,1.4s						
KBZ	**Khabaz**	**84.33**	**314**	P	**P**	**16 55 27.9**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=76,slow=4.2,SNR=2.5						
	comp=Z,1.1nm,0.7s						
B21K	**Ikpikpuk River**	**84.77**	**20**	P	**P**	**16 55 31.6**	**+1.5**
B21K				IAmb	IAmb	16 55 58.6	
	comp=Z,9.9nm,1.3s						

*IDC **17** 16:47:34.1±0.8, 3°.17N×127°.01E, h0km, mb3.8/11, mbtmp3.8/11, MS4.0/2, Error ellipse: s-maj=56.6km s-min=15.0km az=73.0*
*DJA **17** 16:47:39.5±0.9, 3°N±6°×12°7E±°, h31km±17km, M4.0/13, mB4.8/4, mb4.2/7, MLv4.0/13, Mw(mB)4.0/4*
*NEIC **17** 16:47:41.3±1.1, 3°.26N±0°.05×127°.19E±0°.09, h53km±8km, mb4.3/20, Error ellipse: s-maj=13.1km s-min=6.3km az=76.0*

ISC 17 16:47:40.6±0.5, 3°.30N±0°.06×127°.12E±0°.07, h48km, n54, σ1s26/53, mb4.0/18, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.64**	**284**	P	**Pn**	**16 48 04.2**	**-2.8**
SGSI				S	**Sn**	**16 48 27.8**	**+0.9**
TNTI	**Ternate**	**2.52**	**174**		**Pn**	**16 48 19.0**	**-0.2**
TNTI	**Ternate**	**2.52**	**174**	P	**Pn**	**16 48 19.1**	**-0.1**
DAV	**Davao City (W)**	**4.05**	**338**	Pn	**Pn**	**16 48 41.8**	**+1.6**
KMSI	**Cibinong**	**4.14**	**229**	P	**Pn**	**16 48 39.9**	**-1.5**
SANI	**Sanana** 0.1nm14nm,0.8s	**5.43**	**192**	P	**Pn**	**16 48 57.4**	**-1.7**
SWI	**Sorong** 0.1nm660nm17nm,0.6s	**5.85**	**135**	P	**Pn**	**16 49 06.1**	**+1.3**
MRSI	**Marisa** 0.1nm473nm36nm,1.1s	**5.89**	**242**	P	**Pn**	**16 49 07.3**	**+1.9**
LUWI	**Luwuk**	**6.12**	**225**	Pn	**Pn**	**16 49 10.6**	**+2.0**
LUWI	**Luwuk** 0.2nm1μm41nm,1.1s	**6.12**	**225**	P	**Pn**	**16 49 10.8**	**+2.2**
TOLI2	**Tolitoli**	**6.70**	**251**	Pn	**Pn**	**16 49 16.5**	**0.0**
APSI	**Ampana**	**6.88**	**233**	P	**Pn**	**16 49 20.1**	**+1.0**
FAKI	**Fak Fak**	**8.03**	**140**	Pn	**Pn**	**16 49 33.9**	**-0.8**
FAKI	**Fak Fak**	**8.03**	**140**	P	**Pn**	**16 49 36.1**	**+1.4**
SBUM	**Sibu**	**14.90**	**267**	P	**P**	**16 51 14.4**	**+1.2**
JAGI	**Jajag, Banyuwa**	**17.43**	**228**		**P**	**16 51 41.7**	**+0.4**
KNRA	**Kununurra**	**18.92**	**175**	P	**P**	**16 51 56.6**	**-1.0**
KNRA				IAmb	IAmb	16 52 40.4	
	comp=Z,21nm,1.3s						
DLV	**Lat**	**20.35**	**296**	P	**P**	**16 52 15.2**	**+1.7**
DLV				IAmb	IAmb	16 52 35.2	
	comp=Z,23nm,1.4s						
TPUB	**Ta-pu**	**20.85**	**343**	P	**P**	**16 52 18.0**	**-0.7**
TPUB				IAmb	IAmb	16 52 19.6	
	comp=Z,14nm,0.7s						
SSLB	**Suanglung**	**21.22**	**344**	P	**P**	**16 52 22.0**	**-0.7**
SSLB				IAmb	IAmb	16 52 24.9	
	comp=Z,9.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.31**	**184**	P	**P**	**16 52 21.1**	**-2.5**
	comp=Z,4.0nm,1.0s,baz=4.8,slow=12,SNR=2.3						
	comp=Z,4.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**21.31**	**184**	P	**P**	**16 52 20.9**	**-2.7**
WB0	**Warramunga Arr**	**24.01**	**163**	P	**P**	**16 52 49.5**	**-1.7**
WB0				IAmb	IAmb	16 53 02.8	
	comp=Z,6.5nm,0.6s						
WRA	**Warramunga Arr**	**24.16**	**163**	P	**P**	**16 52 50.9**	**-1.7**
	comp=Z,1.6nm,0.6s,baz=334,slow=11,SNR=8.8						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**24.16**	**163**	P	**P**	**16 52 50.0**	**-2.5**
WR8	**Warramunga Arr**	**24.22**	**163**	P	**P**	**16 52 51.7**	**-1.3**
WR8				IAmb	IAmb	16 53 01.7	
	comp=Z,6.7nm,1.1s						
AS31	**Alice Springs**	**27.60**	**166**	P	**P**	**16 53 22.5**	**-1.2**
ASAR	**Alice Springs**	**27.60**	**166**	P	**P**	**16 53 22.5**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=348,slow=7.6,SNR=13						
ASAR				PcP	**PcP**	**16 56 41.6**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=349,slow=2.5,SNR=2.6						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**27.60**	**166**	P	**P**	**16 53 22.3**	**-1.4**
ASAR					**PcP**	**16 56 39.7**	**-0.8**
JHJ	**Hachijo jima 2**	**31.95**	**20**	LR	LR	17 05 50.8	
	comp=Z,166nm,19.5s,baz=76,slow=34						
BBOO	**Buckleboo**	**36.90**	**167**	P	**P**	**16 54 44.0**	**-0.8**
NWAO	**Narrogin (SRO)**	**37.22**	**194**	P	**P**	**16 54 47.5**	**0.0**
STKA	**Stephens Creek**	**37.59**	**160**	P	**P**	**16 54 50.0**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=336,slow=9.0,SNR=3.1						
	comp=Z,1.0nm,0.4s						
EVN	**Everest**	**45.56**	**307**	P	**P**	**16 55 56.7**	**-0.2**
EVN				IAmb	IAmb	16 56 13.0	
	comp=Z,3.3nm,0.9s						
SONM	**Songino Array**	**47.83**	**341**	P	**P**	**16 56 14.0**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=123,slow=5.3,SNR=3.1						
	comp=Z,0.6nm,0.7s						
PETK	**Petropavlovsk-**	**55.68**	**22**	P	**P**	**16 57 13.1**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=210,slow=8.3,SNR=4.6						
	comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**55.68**	**22**	P	**P**	**16 57 12.4**	**+0.5**
MKAR	**Makanchi Array**	**58.13**	**325**	P	**P**	**16 57 29.7**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=129,slow=7.8,SNR=6.8						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**58.13**	**325**	P	**P**	**16 57 29.2**	**-0.3**
MAKZ	**Makanchi**	**58.32**	**325**	P	**P**	**16 57 30.4**	**-0.3**
ZAA0	**Zalesovo Array**	**61.15**	**333**	P	**P**	**16 57 49.9**	**-0.1**
ZAA0				IAmb	IAmb	16 58 05.6	
	comp=Z,2.3nm,1.1s						
ZALV	**Zalesovo Beam**	**61.15**	**333**	P	**P**	**16 57 50.3**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=123,slow=10,SNR=2.0						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**61.15**	**333**	P	**P**	**16 57 50.2**	**+0.1**
KURBB	**Kurchatov Arra**	**62.31**	**327**	P	**P**	**16 57 58.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=128,slow=6.1,SNR=7.0						
	comp=Z,0.3nm,0.3s						
KURK	**Kurchatov**	**62.31**	**327**	P	**P**	**16 57 58.5**	**+0.6**
KURK	**Kurchatov**	**62.31**	**327**	IAmb	IAmb	16 58 17.9	
	comp=Z,3.3nm,0.8s						
BVAR	**Borovoye Array**	**67.89**	**327**	P	**P**	**16 58 35.2**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=115,slow=10,SNR=3.1						
	comp=Z,0.7nm,0.8s						
TIXI	**Tiksi**	**68.27**	**1**	P	**P**	**16 58 36.4**	**+0.3**
TIXI				IAmb	IAmb	16 59 16.9	
	comp=Z,4.5nm,1.4s						
AB31	**Akbulak array**	**72.73**	**321**	P	**P**	**16 59 04.1**	**+0.4**
ABKAR	**Akbulak array**	**72.73**	**321**	P	**P**	**16 59 04.1**	**+0.3**
M13K	**Dall Lake**	**77.12**	**28**	P	**P**	**16 59 29.0**	**+0.2**
VNDA	**Vanda**	**82.95**	**173**	P	**P**	**16 59 59.8**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=339,slow=4.0,SNR=1.7						
	comp=Z,0.2nm,0.5s						
VNDA	**Vanda**	**82.95**	**173**	IAmb	IAmb	17 00 06.1	
	comp=Z,1.3nm,1.2s						
HFS	**Hagfors**	**98.58**	**332**	LR	LR	17 51 00.8	
	comp=Z,95nm,18.5s,baz=43,slow=39						

*CATAC **17** 16:48:10.5±0.3, 13°N±2°×8°9W±°, h40km±6km, M4.0/36, MLv4.0/36, Error ellipse: s-maj=5.1km s-min=1.6km az=29.6, confirmed*
*SNET **17** 16:48:11.3±3.1, 12°.91N×88°.65W, h15km, ML3.9*
*UCR **17** 16:48:11.7±1.1, 12°.98N×88°.59W, h40km±324km, MW4.2*
*GCG **17** 16:48:12.4±0.7, 12°.96N×88°.73W, h30km±4km, MD4.2*

ISC 17 16:48:08.2±1.2, 12°.85N±0°.04×88°.60W±0°.03, h7km±10km, n106, σ0s92/125, 2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECA	**Tecapa**	**0.65**	**8**	*i*P	**Pn**	**16 48 24.1**	**+0.1**
RANC	**El Ranchito**	**0.65**	**28**	*e*P	**Pn**	**16 48 24.4**	**+0.3**
VSM	**San Miguel**	**0.65**	**29**	*e*P	**Pg**	**16 48 19.9**	**-1.0**
PACA	**Pacayal**	**0.67**	**24**	*e*P	**Pn**	**16 48 24.9**	**+0.5**
PACA				*e*S	**Sn**	**16 48 35.2**	**+0.2**
PACA	**Pacayal**	**0.67**	**24**	P	**Pn**	**16 48 24.8**	**+0.5**
TECO	**Alcaldia de Te**	**0.70**	**345**	*e*P	**Pn**	**16 48 24.6**	**0.0**
TECO				*e*S	**Sn**	**16 48 34.8**	**-1.1**
TECO	**Alcald

CSGN	Cosiguina Volc	1.02	83	eP	Pn	16 48 29.5	+0.4
UTEC	Universidad Te	1.03	325	P	Pb	16 48 29.2	+0.7
UTEC	Universidad Te	1.03	325	S	Sb	16 48 42.5	+0.3
UEES	Universidad Ev	1.06	324	eP	Pb	16 48 29.8	+0.8
UEES	Universidad Ev	1.06	324	P	Pb	16 48 29.8	+0.8
UEES	Universidad Ev	1.06	324	S	Sb	16 48 43.8	+0.6
MAGS	Ministerio de	1.06	321	eP	Pg	16 48 29.2	+0.5
POTN	Potosi Cosigui	1.07	82	P	Pn	16 48 30.1	+0.4
POTN				S	Sb	16 48 44.2	+0.8
POTN	Potosi Cosigui	1.07	82	eP	Pn	16 48 30.2	+0.4
POTN				eS	Sb	16 48 44.2	+0.8
BOQS	Boqueron	1.10	323	eP	Pb	16 48 30.1	+0.3
PMON	Piamonte	1.10	321	eP	Pg	16 48 30.0	+0.5
PMON	Piamonte	1.10	321	P	Pg	16 48 29.8	+0.4
PMON	Piamonte	1.10	321	S	Sg	16 48 44.1	+0.3
JAYA	Jayaque - finc	1.15	314	eP	Pg	16 48 31.1	+0.7
JAYA	Jayaque - finc	1.15	314	eP	Pg	16 48 30.1	-0.2
JAYA				eS	Sg	16 48 44.4	-0.9
JAYA	Jayaque - finc	1.15	314	P	Pg	16 48 30.5	+0.2
CEDA	San Andres	1.22	321	S	Sg	16 48 47.1	-0.6
LLGN	La Laguna	1.34	346	P	Pg	16 48 33.3	-0.8
LLGN	La Laguna	1.34	346	S	Sg	16 48 50.6	-1.0
CEVE	Cerro Verde	1.39	314	S	Sg	16 48 52.6	-0.5
SBLS	San Blas	1.40	315	eP	Pg	16 48 34.6	-0.6
UNIC	Universidad Ca	1.45	321	P	Pn	16 48 35.3	+0.2
UNIC	Universidad Ca	1.45	321	S	Sg	16 48 52.8	-2.2
RTR	El Retiro	1.46	316	eP	Pn	16 48 35.3	+0.1
CRIN	San Cristobal	1.52	96	P	Pn	16 48 36.6	+0.7
CRIN	San Cristobal	1.52	96	S	Sg	16 48 55.8	-1.3
CRIN	San Cristobal	1.52	96	eP	Pn	16 48 36.6	+0.7
NUBE	Las Nubes	1.55	312	eP	Pn	16 48 36.3	-0.2
NUBE	Las Nubes	1.55	312	eP	Pn	16 48 36.1	-0.4
NUBE				eS	Sn	16 48 54.6	-2.4
NUBE	Las Nubes	1.55	312	P	Pn	16 48 36.0	-0.4
PKGN	Cerro Pekin	1.59	96	P	Pn	16 48 37.1	+0.2
PKGN				S	Sn	16 48 56.6	-1.1
RBDL	Robledal	1.64	320	eP	Pn	16 48 37.5	-0.2
FAME	Alcaldia de Sa	1.69	306	P	Pn	16 48 37.7	-0.6
MTO3	Montecristo	1.71	334	⇓P	Pn	16 48 38.5	-0.2
MTO3	Montecristo	1.71	334	eP	Pn	16 48 38.5	-0.2
MTO3	Montecristo	1.71	334	P	Pn	16 48 38.4	-0.2
POLN	Al Sur del Vol	1.75	96	P	Pn	16 48 38.2	-0.9
POLN				S	Sn	16 48 59.7	-2.1
TGUH	Tegucigalpa,Un	1.76	47	P	Sn	16 48 39.7	+0.4
TGUH				S	Sn	16 49 01.9	-0.2
ESQI	Esquipulas	1.84	337	eP	Pn	16 48 40.6	+0.2
ESQI	Esquipulas	1.84	337	P	Pn	16 48 40.7	+0.2
ESQI	Esquipulas	1.84	337	S	Sn	16 49 02.8	-1.4
CNGA	Al SSO del Vol	1.89	101	P	Pn	16 48 41.1	+0.1
CNGN	Cerro Negro	1.89	101	P	Pn	16 48 42.1	+1.1
CNGN	Cerro Negro	1.89	101	eP	Pn	16 48 41.0	0.0
YUSH	Yuscaran	2.03	57	P	Pn	16 48 43.3	+0.3
MOMN	Momotombo	2.06	102	P	Pn	16 48 43.0	-0.3
MOM3	MOM3	2.06	99	P	Pn	16 48 43.4	+0.1
COPN	Copaltepe	2.07	109	P	Pn	16 48 43.1	-0.3
COPN	Copaltepe	2.07	109	eP	Pn	16 48 42.7	-0.7
MOM2	El Cardon	2.10	101	P	Pn	16 48 44.2	+0.2
MOM2				S	Sn	16 49 09.4	-1.0
OCON	Estacion meteo	2.21	69	P	Pn	16 48 45.6	+0.2
APQ2	Apoyeque	2.31	106	P	Pn	16 48 46.8	0.0
APQ2				S	Sn	16 49 14.5	-1.1
UNAN	Cigeo UNAN	2.39	108	S	Sn	16 49 15.9	-1.5
RCVN	Varillal2	2.45	72	P	Pn	16 48 49.0	+0.1
WILN	Americas 2	2.45	106	P	Pn	16 48 48.1	-0.6
WILN				S	Sn	16 49 17.7	-1.3
RCON	San Juan de Ri	2.46	75	P	Pn	16 48 49.3	+0.3
RCON	San Juan de Ri	2.46	75	S	Sn	16 49 18.6	-0.5
MAS3	Al N del Volca	2.50	109	P	Pn	16 48 49.2	+0.3
MAS3				S	Sn	16 49 18.6	-1.7
RCPN	Sur Rio San Ju	2.53	74	P	Pn	16 48 51.1	+1.2
NANN	Nandasmo	2.58	110	P	Pn	16 48 50.9	+0.3
NANN	Nandasmo	2.58	110	S	Sn	16 49 19.9	-2.4
MATN	Matagalpa	2.61	88	P	Pn	16 48 50.0	-1.0
NADN	Granada	2.74	113	S	Sn	16 49 24.8	-1.2
BOAB	BOACO BROADBAN	2.89	98	P	Pn	16 48 54.3	-0.4
SAJU	San Juanillo,	3.96	134	eP	Pn	16 49 10.8	+1.3
PETF	Flores	4.22	343	P	Pn	16 49 14.4	+1.4
PICV	PH. Pirrs	5.38	126	eP	Pn	16 49 32.5	+3.4
PIEC	Cerro El Cedra	5.57	125	eP	Pn	16 49 35.0	+3.2
BUS1	Rivas	5.78	124	eP	Pn	16 49 37.8	+2.9
DRK0	Durika	6.35	124	eP	Pn	16 49 44.9	+2.4

*DNK **17** 16:57:49.3±1.7, 80°.80N×2°.19W, h22km±14km, ML1.3*
*FCIAR **17** 16:57:50.0, 80°.73N×1°.32W, h10km, station ZFI2 has station magnitude of 3.50*
*BER **17** 16:57:50.2±2.9, 80°.82N×2°.34W, h18km±22km, mb(Pn)3.2, ML2.5(DNK), Confirmed Earthquake*

ISC 17 16:57:46.2±1.1, **80.74N**±0.06×**2.19W**±0.05, **h10**km, **n20, σ1§96/34, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NOR	Nord	2.40	298	*i* P	Pn		16 58 26.2	+0.8
NOR				*i* S	Sn		16 58 53.2	-1.6
NOR	Nord	2.40	298	*i* P	Pn		16 58 26.2	+0.8
NOR				*i* S	Sn		16 58 53.2	-1.6
NOR				IAML			16 58 55.4	
	comp=Z,1.2nm,0.3s							
KBS	Kingsbay	3.09	119	eP	Pn		16 58 36.7	+1.8
KBS				eS	Sn		16 59 09.9	-1.9
KBS				IAML			16 59 15.7	
	comp=Z,3.1nm,0.9s							
KBS	Kingsbay	3.09	119	*i* P	Pn		16 58 37.2	+2.3
KBS				*i* S	Sn		16 59 11.8	0.0
BRBB	Barentsburg B	4.01	123	eP	Pn		16 58 50.7	+3.2
BRBB				eS	Sn		16 59 33.6	-0.9
BRBA	Barentsburg A	4.03	123	eP	Pn		16 58 51.4	+3.5
BRBA				eS	Sn		16 59 35.1	0.0
BRBA				IAML			16 59 41.7	
	comp=Z,3.4nm,0.7s							
SPA0	Spitsbergen Ar	4.25	118	eP	Pn		16 58 53.1	+2.3
SPA0				eS	Sn		16 59 38.8	-1.6
SPA0	Spitsbergen Ar	4.25	118	eP	Pn		16 58 53.2	+2.3
SPA0				eS	Sn		16 59 39.0	-1.3
SPA0				IAML			16 59 57.8	
	comp=Z,2.9nm,0.7s							
HSPB	Hornsund (broa	5.05	129	eP	Pn		16 59 04.4	+2.5
HSPB				S	Sn		16 59 57.8	-2.4
HSPB	Hornsund (broa	5.05	129	eP	Pn		16 59 05.1	+3.2
HSPB				IAML			17 00 01.9	
	comp=Z,3.0nm,0.9s							
DAG	Danmarks Havn	5.10	227	*i* P	Pn		16 59 03.0	+0.5
DAG				*i* S	Sn		16 59 59.6	-1.6
DAG				IAML			17 00 21.1	
	comp=Z,14nm,2.0s							
DAG	Danmarks Havn	5.10	227	*i* P	Pn		16 59 03.0	+0.5
DAG				*i* P	Pn		16 59 03.0	+0.5
DAG				IAML			16 59 59.0	
	comp=Z,3.6nm,0.2s							
DAG				*i* S	Sn		16 59 59.6	-1.6
HOPEN	Hopen	6.76	114	eP	Pn		16 59 26.8	+1.4
HOPEN				eS	Sn		17 00 38.3	-3.9
HOPEN	Hopen	6.76	114	eP	Pn		16 59 27.2	+1.9
HOPEN				eS	Sn		17 00 39.5	-2.7
HOPEN				IAML			17 00 51.2	
	comp=Z,6.9nm,0.7s							
DBG	Daneborg	7.49	220	*i* P	Pn		16 59 36.4	+1.1
DBG				*i* S	Sn		17 00 54.5	-5.6
DBG	Daneborg	7.49	220	*i* P	Pn		16 59 36.4	+1.1
DBG				*i* S	Sn		17 00 54.5	-5.6
DBG				IAML			17 01 00.7	
	comp=Z,0.6nm,0.2s							
ZFI2	Zemlya Franca-	7.80	65	eP	Pn		16 59 40.9	+1.3
ZFI2				eS	Sn		17 01 00.6	-7.0
	comp=Z,13nm,2.2s							
OMEGA	Omega	7.82	65	eP	Pn		16 59 40.9	+1.1
OMEGA				eS	Sn		17 01 00.1	-8.2
NEEM	North Greenlan	9.53	276	*i* P	Pn		17 00 02.9	-0.6
NEEM				*i* S	Sn		17 01 41.7	-8.9
NEEM	North Greenlan	9.53	276	*i* P	Pn		17 00 02.9	-0.6
NEEM				*i* S	Sn		17 01 41.7	-8.9

GCG 17 17:09:15.6±0.8, **13°.44N**×**90°.39W, h12**km±18**km, MD3.8, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NUBE	Las Nubes	0.75	53	eP	Pg		17 09 30.1	-0.1
NUBE				eS	Sb		17 09 41.1	+0.1
STG5	El Palmar, Qui	1.33	316	eP	Pg		17 09 44.6	+3.4
APG	El Apazote	1.55	357	eP	Pb		17 09 44.0	-0.5

*IDC **17** 17:14:21.2±0.6, 37°.13N×23°.25E, h0km, mb4.1/23, mbtmp4.1/34, ML3.4/9, MS3.1/7, Error ellipse: s-maj=12.9km s-min=11.1km az=30.0*
*MOS **17** 17:14:21.9±1.1, 37°.21N×23°.10E, h13km, mb4.6/9, Error ellipse: s-maj=7.3km s-min=4.1km az=73.2*
*NEIC **17** 17:14:23.0±2.2, 37°.11N±0°.04×23°.12E±0°.05, h10km±1km, mb4.6/31, Error ellipse: s-maj=7.7km s-min=6.3km az=222.0*
*ISK **17** 17:14:22.2, 37°.11N×23°.11E, h10km, ML4.0/17*
*THE **17** 17:14:24.0, 37°.1N±0°.9×2°.3E±°, h7km±2km, M3.8/50, MLh3.8/50*
*NAO **17** 17:14:23.2, 37°.13N×23°.25E, h10km, MB3.8*
*HLW **17** 17:14:24.8, 37°.00N×23°.01E, h19km±1km, Ml4.2*
*ATH **17** 17:14:24.4, 36°.99N×23°.12E, h28km, Mw4.2, Moment Tensor Solution. s5 Moment tensor: Mrr0.00; Mθθ-1.02; Mϕϕ1.02; Mrθ0.07; Mθϕ-2.03; Mϕr1.50; Fault plane solution: NP1:ϕs14.00000°, δ87.00000°, λ33.00000°. NP2: ϕs282.00000°, δ57.00000°, λ177.00000°.*
*MED_RC **17** 17:14:24.0±0.8, 37°.00N×23°.06E, h17km±2km, MW4.1/9, Moment Tensor Solution.Mantle waves: s9,c9; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr-2.09±.51; Mθθ1.24±.33; Mϕϕ0.85±.24; Mrθ-0.08±.25; Mθϕ-0.49±.20; Mϕr0.08±.20; Best double couple: Mo1.83000×10¹⁵ NP1:ϕs304.00000°, δ43.00000°, λ-91.00000°. NP2: ϕs125.00000°, δ47.00000°, λ-89.00000°. Principal axes: T 1.5700, Plg2.0000°, Azm214.0000°; N 0.5200, Plg1.0000°, Azm304.0000°; P -2.0900, Plg88.0000°, Azm50.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*AFAD **17** 17:14:25.1, 37°.71N×23°.14E, h7km±4km, MW4.1*
*GII **17** 17:14:28.4±0.0, 36°.312N±0°.003×23°.437E±0°.001, h1km, Md4.3/1, confirmed*

ISC 17 17:14:23.4±0.7, **37°.05N**±0°.02×**23°.11E**±0°.02, **h17**km±4km, **n412, σ1§75/488, mb4.4/48, 31C-17D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VLI	Veliai	0.35	203	P	Pg		17 14 30.9	+0.2
VLI				S	Sg		17 14 35.6	-0.1
VLI	Veliai	0.35	203	P	Pg		17 14 31.4	+0.7
VLI				S	Sg		17 14 36.9	+1.1
MNVA	Monemvasia	0.36	189	P	Pg		17 14 31.8	+1.0
MNVA				S	Sg		17 14 37.2	+1.3
YDRA	Hydra	0.42	43	P	Pb		17 14 32.8	+0.5
YDRA				S	Sb		17 14 40.5	+2.2
NPS1	Neapolis Lacon	0.53	184	P	Pg		17 14 34.6	+0.6
NPS1				S	Sg		17 14 41.6	+0.5
NPLA	Nafplio	0.57	335	P	Pb		17 14 36.3	+1.3
NPLA				S	Sn		17 14 46.5	+0.6
MET2	Kameni Chora,	0.59	17	P	Pn		17 14 36.6	-0.4
MET2				S	Sn		17 14 46.3	0.0
MET5	Makryloggos,Me	0.61	19	P	Pb		17 14 36.7	+1.1
MET5				S	Sn		17 14 47.0	+0.2
MET4	Agioi Theodoro	0.62	22	P	Pb		17 14 36.8	+1.0
MET4				S	Sn		17 14 47.1	+0.1
ARS1	Argos	0.66	333	P	Pn		17 14 38.4	+0.5
ARS1				S	Sn		17 14 48.2	+0.2
VLX	Vlachokerasia	0.67	299	P	Pg		17 14 36.3	-0.2
VLX				S	Sg		17 14 44.4	-1.0
KTHA	Kythira Island	0.79	183	Pg	Pg		17 14 39.0	+0.2
KTHA				Sg	Sg		17 14 51.2	+0.1
KTHA	Kythira Island	0.79	183	P	Pg		17 14 39.1	+0.3
LOUT	Loutraki	0.95	354	P	Pn		17 14 42.3	+0.3
LOUT				S	Sn		17 14 56.2	+1.1
ITM	Ithomi	0.95	278	Pg	Pg		17 14 41.1	-0.8
ITM				Sg	Sg		17 14 54.3	-0.1
ITM	Ithomi	0.95	278		Pg		17 14 41.7	-0.2
ITM				Sg	Sg		17 14 51.2	-3.2
ITM	Ithomi	0.95	278	P	Pg		17 14 41.6	-0.2
ITM				S	Sg		17 14 53.6	-0.8
ITM	Ithomi	0.95	278	P	Pg		17 14 41.9	0.0
ITM				S	Sg		17 14 54.8	+0.4
VLY	Voula,Athens	0.97	34	P	Pn		17 14 42.7	+0.4
VLY				S	Sn		17 14 56.5	+0.8
VLY	Voula,Athens	0.97	34	P	Pb		17 14 42.4	+0.6
VLY				S	Sn		17 14 56.6	+0.8
LTK	Loutraki	0.98	354	P	Pg		17 14 42.0	-0.5
LTK				S	Sn		17 14 57.1	+0.7
LTK	Loutraki	0.98	354	P	Pb		17 14 42.6	+0.6
LTK				S	Sn		17 14 56.8	+0.8
LVRA	Laurium	1.01	48	P	Pb		17 14 42.9	+0.6
LVRA				S	Sn		17 14 56.9	+0.4
KIAA	Kiato	1.01	344	P	Pn		17 14 43.4	+0.7
KIAA				S	Sn		17 14 57.7	+1.1
ATH	Athens Observa	1.04	27	P	Pn		17 14 43.8	+0.6
ATH				S	Sn		17 14 59.8	+2.3
ATH	Athens Observa	1.04	27	P	Pn		17 14 44.0	+0.7
ATH				S	Sn		17 14 58.4	+0.9
NOAC	Athens-Thissio	1.05	27	P	Pn		17 14 43.9	+0.6
NOAC				S	Sn		17 14 58.6	+1.1
ATH5	Athens Parliam	1.05	28	P	Pn		17 14 43.9	+0.5
ATH5				S	Sn		17 14 58.8	+1.1
ATHU	Athens Univers	1.07	30	P	Pb		17 14 43.7	+0.4
ATHU				S	Sn		17 14 58.0	0.0
ATHU	Athens Univers	1.07	30	P	Pb		17 14 43.8	+0.4
ATHU				S	Sn		17 14 58.4	+0.3
GUR	Goura	1.08	326	P	Pg		17 14 43.3	-1.0
GUR				S	Sg		17 14 57.4	-1.0
GUR	Goura	1.08	326	P	Pb		17 14 44.2	+0.5
GUR				S	Sn		17 14 59.0	+0.5
MAGU	Magoula	1.08	17	P	Pn		17 14 44.2	+0.4
MAGU				S	Sn		17 14 59.4	+1.0
MAGU	Magoula	1.08	17	P	Pn		17 14 44.4	+0.6
MAGU				S	Sn		17 14 59.2	+0.8
ATHP	Athens-Neo Psi	1.09	29	P	Pn		17 14 44.4	+0.5
ATHP				S	Sn		17 14 59.8	+1.1
MHLO	Agia Marina, M	1.10	108	P	Pb		17 14 44.6	+0.7
MHLO				S	Sn		17 15 01.7	+2.9
MHLO	Agia Marina, M	1.10	108	P	Pb		17 14 44.1	+0.2
MHLO				S	Sg		17 14 57.8	-1.2
VILL	Villia	1.13	8	P	Pn		17 14 44.9	+0.4
VILL				S	Sn		17 15 02.4	+2.7
PYL1	Pylos	1.14	264	P	Pb		17 14 44.7	+0.1
PYL1				S	Sb		17 15 00.1	+1.0
MTHA	Methoni	1.15	259	P	Pb		17 14 45.0	+0.3
PTL	Penteli	1.17	31	P	Pn		17 14 45.7	+0.7
PTL				S	Sn		17 15 01.4	+0.7
PTL	Penteli	1.17	31	P	Pg		17 14 45.4	-0.5
PTL				S	Sn		17 15 01.3	+0.7
VIL2	Platees	1.17	6	P	Pb		17 14 45.1	-0.1
VIL2				S	Sn		17 15 00.7	+0.1
STFN	Stefani	1.18	17	P	Pn		17 14 46.1	+0.8
STFN				S	Sn		17 15 02.5	+1.6
STFN	Stefani	1.18	17	P	Pn		17 14 46.0	+0.8
STFN				S	Sn		17 15 02.2	+1.2
ANKY	Antikythira Is	1.19	172	P	Pn		17 14 46.3	+1.2
ANKY				S	Sb		17 15 01.6	+1.1
ANKY	Antikythira Is	1.19	172	P	Pn		17 14 45.0	-0.1
ANKY				S	Sb		17 14 59.1	-1.4
AMT	Artemida-Makis	1.22	294	P	Pb		17 14 46.2	+0.2
AMT				S	Sb		17 15 01.9	+0.5
DION	Dionisos Attik	1.22	32	P	Pn		17 14 46.4	+0.7
DION				S	Sn		17 15 03.2	+1.3
DION	Dionisos Attik	1.22	32	P	Pb		17 14 46.2	+0.2
DION				S	Sn		17 15 03.0	+1.1
KLV	Kalavryta, Ach	1.25	323	P	Pb		17 14 46.3	-0.3
KLV				S	Sn		17 15 03.8	+1.0
KLV	Kalavryta, Ach	1.25	323	P	Pb		17 14 46.5	-0.1
KLV				S	Sn		17 15 03.8	+1.0
DRO	Drossia	1.43	310	P	Pn		17 14 49.6	+1.0
DRO				S	Sg		17 15 10.0	+0.4
DRO	Drossia	1.43	310	P	Pn		17 14 49.6	+1.0
KARY	Karystos	1.45	47	P	Pn		17 14 49.0	+0.2
KARY				S	Sn		17 15 07.5	+0.2
KALE	Kalithea	1.55	331	P	Pn		17 14 50.9	+0.7
KALE	Kalithea	1.55	331	P	Pn		17 14 51.2	+1.0
TRIZ	Trizonia	1.55	328	P	Pn		17 14 51.2	+0.9
SERG	Sergoula	1.60	329	P	Pn		17 14 52.2	+1.2
SERG				S	Sb		17 15 13.2	+0.8
LKR	Lokris	1.61	357	P	Pn		17 14 51.9	+1.0
LKR				S	Sb		17 15 13.0	+0.5
LKR	Lokris	1.61	357	P	Pn		17 14 51.6	+0.7
UPR	University Cam	1.62	320	P	Pb		17 14 53.5	+0.7
ATAL	Atalanti	1.65	358	P	Pn		17 14 52.2	+0.7
ATAL	Atalanti	1.65	358	P	Pn		17 14 52.3	+0.7
RLS	Riolos of Patr	1.65	308	P	Pn		17 14 53.3	+1.7
RLS	Riolos of Patr	1.65	308	P	Pn		17 14 52.9	+1.3
EFP	Efpalio	1.68	326	P	Pn		17 14 53.2	+1.3
EFP				S	Sg		17 15 16.1	-1.3
EFP	Efpalio	1.68	326	P	Pn		17 14 52.9	+1.0
AXAR	Agios Charalam	1.75	348	P	Pb		17 14 54.6	-0.5
AXAR				S	Sb		17 15 17.1	+0.2
AXAR	Agios Charalam	1.75	348	P	Pn		17 14 54.2	+1.2
KYMI	Kymi, Euboea I	1.77	26	P	Pn		17 14 53.9	+0.7
KYMI				S	Sn		17 15 16.3	+1.0
AXS	Araxos	1.79	310	P	Pb		17 14 53.7	+0.5
AXS				S	Sb		17 15 18.8	+0.9
ANX	Ano Chora	1.81	329	P	Pn		17 14 54.8	+0.9
ANX				S	Sb		17 15 18.7	+0.2
THR5	Thira Island,	1.91	109	P	Pn		17 14 56.3	+1.2
THR9	Santorini-Faro	1.93	110	P	Pn		17 14 56.7	+1.3
APE	Apeiranthos	1.94	89	Pn	Pn		17 14 55.9	+0.3
APE	Apeiranthos	1.94	89	P	Pn		17 14 56.3	+0.8
APE	Apeiranthos	1.94	89	⇑P	Pn		17 14 56.4	+0.8
APE	Apeiranthos	1.94	89	⇑P	Pn		17 14 56.4	+0.8
SNT5	Nea Kammeni, S	1.95	109	P	Pn		17 14 56.7	+1.1
THR3	Thira Island,	1.95	108	P	Pn		17 14 57.1	+1.5
THR2	Thira island,	1.96	107	P	Pn		17 14 56.9	+1.1
THR8	Santorini-Mono	2.01	108	P	Pn		17 14 57.9	+1.4
THERA	Ancient Thera,	2.02	109	P	Pn		17 14 57.8	+1.1
AGG	Agios Georgios	2.07	343	P	Pn		17 14 59.0	+1.6
MAKR	Makrakomi, Fth	2.11	339	P	Pb		17 15 00.2	-1.0
EVR	Evrytania	2.13	332	P	Pn		17 15 00.1	+1.8
AOS	Alonnisos	2.21	16	P	Pn		17 14 59.8	+0.6
NEO	Neokhori	2.26	2	P	Pn		17 15 01.4	+1.4
IDI	Anoyia	2.27	140	Pn	Pn		17 15 00.2	0.0
	52nm,0.4s,baz=272,slow=7.8,SNR=121							
IDI					Sn		17 15 29.0	+1.2
	50nm,0.3s,baz=312,slow=16,SNR=7.1							
IDI	Anoyia	2.27	140					
IDI	Anoyia	2.27	140	P	Pn		17 15 01.0	+0.8
GVD	Gavdhos	2.34	160	P	Pn		17 15 01.4	+1.2
IACM	Heraklion	2.35	137	P	Pn		17 15 04.7	+3.6
NYDR	Nydri-Lefkada	2.53	312	P	Pb		17 15 03.8	+2.5
LKD2	Lefkada island	2.60	313	P	Pb		17 15 07.0	-1.4
THL	Klokotos Trika	2.66	341	P	Pn		17 15 08.1	-1.5
CHOS	Chios island	2.69	59	Pn	Pn		17 15 07.0	+1.5
NPOL	Neapolis	2.70	131	P	Pn		17 15 06.6	+0.6
IZEY	Izmir, Urla-Ze	2.95	65	P	Pn		17 15 07.4	+1.4
ZEYE				S	Sn		17 15 08.7	-0.7
SMG	Samos	3.04	76	P	Pn		17 15 48.0	+3.6
SIGR	SIGRI	3.06	44	Pn	Pn		17 15 11.6	+0.9
SIGR	SIGRI	3.06	44	P	Pn		17 15 11.6	+0.6
KARB	zmir-Karabur	3.07	57	SPECP			17 15 11.3	+0.3
KARB				P	Pn		17 15 11.7	+0.5
KARB				S	Sb		17 15 56.9	+2.0
LIT	Litokhoron	3.09	351		Pn		17 15 13.1	+1.7
LIT	Litokhoron	3.09	351	P	Pn		17 15 12.6	+1.2
LIT	Litokhoron	3.09	351	P	Pn		17 15 13.1	+1.7
LIA	Limnos Island	3.28	29	P	Pn		17 15 14.5	+0.5
IGT	Igoumenitsa	3.31	320	P	Pn		17 15 17.1	+2.7
DDIM	Aydin, Didim	3.32	82	SPECP			17 15 20.0	
DDIM				P	Pb		17 15 20.8	-1.1
DDIM				S	Sg		17 16 09.1	-1.0
PRK	Paraskevi	3.32	48	P	Pn		17 15 14.9	+0.3
PLG	Polygyros	3.33	4	P	Pn		17 15 15.4	+0.6
GCAM	G?zlcaml?	3.35	77	P	Pn		17 15 15.3	+0.3
GCAM				S	Sn		17 15 58.4	+4.0
OUR	Ouranopolis	3.35	11	Pn	Pn		17 15 15.4	+0.4
OUR	Ouranopolis	3.35	11	P	Pn		17 15 15.5	+0.5
BODT	Bodrum	3.36	88	Pn	Pn		17 15 16.8	+1.7
BLCB	Balcova	3.39	66	Pn	Pn		17 15 16.3	+0.7
BLCB	Balcova	3.39	66	P	Pn		17 15 16.6	+1.0
KZN	Kozani	3.42	343	P	Pn		17 15 16.6	+0.6
BDRM	Kayabasi	3.47	88	P	Pn		17 15 17.9	+1.3
BDRM				S	Sb		17 16 10.8	+4.6
YAZI	Mula-Dat§a-	3.50	95	P	Pn		17 15 17.9	+0.8
YAZI				S	Sb		17 16 10.5	+3.3
HORT	Hortiatis	3.55	360	P	Pn		17 15 18.4	+0.7
DAT	Datca	3.60	94	P	Pn		17 15 20.0	+1.6
DAT				S	Sb		17 16 10.0	0.0
KARP	Karpathos	3.60	113		Pn		17 15 20.9	+2.5
KARP	Karpathos	3.60	113	P	Pn		17 15 21.0	+2.6
AYVA	Ayvalik	3.62	50	SPECP			17 15 19.0	
AYVA				P	Pn		17 15 19.7	+1.1
AYVA				S	Sb

PLD Plovdiv 5.25 13 *e*P Pn 17 15 45.7 +4.6
AKAS Kas 5.29 97 **Pn 17 15 45.4 +3.7**
PLNA Plana 5.43 2 *i* P **Pn 17 15 46.3 +2.6**
TIP Timpagrande 5.44 295 ⇑P **Pn 17 15 41.6 -2.2**
ELL Elmali 5.46 91 **Pn 17 15 48.4 +4.3**
ELL Elmali 5.46 91 P **Pn 17 15 48.4 +4.3**
EDRB Edirne 5.56 29 Pn **Pn 17 15 46.6 +1.3**
VTS Vitosha 5.57 1 *e*P **Pn 17 15 47.7 +2.1**
BRDR BURDUR-Merkez 5.58 81 P Pn 17 15 51.8 +6.2
SLUM Salum 5.81 162 P **Pn 17 15 49.2 +0.5**
SLUM S **Sn 17 16 51.9 -3.0**
BLSH Balsha 5.81 1 *e*P Pn 17 15 53.5 +4.7
CEL Celeste 5.85 284 **Pn 17 15 51.3 +1.9**
ISP Isparta 5.95 80 *i* P **Pn 17 15 51.0 +0.2**
PDG Podgorica 6.14 332 ⇑P **Pn 17 15 51.5 -1.8**
ELND Elena 6.25 19 ⇓P **Pn 17 15 54.2 -0.6**
MPEP Malo Peshtene 6.32 4 *e*P **Pn 17 15 58.0 +2.2**
BORA Eskisehir 6.42 62 **Pn 17 15 58.9 +1.7**
CUC Castrocucco 6.43 299 **Pn 17 15 59.2 +1.9**
PLVB Pleven 6.44 10 ⇓P **Pn 17 15 57.3 -0.1**
BLKB Belogradchik 6.58 357 ⇑P **Pn 17 15 58.8 -0.5**
BOVS Bovan 6.67 351 ⇓P **Pn 17 15 59.8 -0.8**
VAE Valguarnera 6.95 276 Pn **Pn 17 16 07.0 +2.5**
3.7nm,0.3s,baz=79,slow=16,SNR=11
VAE Sn **Sn 17 17 27.9 +4.8**
3.0nm,0.3s,baz=5.2,slow=11,SNR=1.6
12nm,0.7s
SAHE Sakarya_HENDEK 7.13 55 ⇑P **Pn 17 16 07.6 +0.6**
HERR Herculane 7.85 356 ⇑P **Pn 17 16 15.2 -1.4**
SWA2 8.03 165 P **Pn 17 16 19.5 +0.3**
SWA2 S **Sn 17 17 45.0 -4.5**
ARR Arges 8.39 7 ⇑P **Pn 17 16 23.4 -0.9**
LOT Lotru 8.41 3 ⇓P **Pn 17 16 22.9 -1.6**
HARR Harsova 8.46 24 ⇓P **Pn 17 16 24.9 -0.2**
HARR Harsova 8.46 24 ⇓P **Pn 17 16 24.9 -0.2**
ISR Istrita 8.47 17 ⇑P **Pn 17 16 25.0 -0.4**
ISR Istrita 8.47 17 ⇑P **Pn 17 16 25.0 -0.4**
VOIR 8.51 9 ⇑P **Pn 17 16 24.9 -1.0**
VOIR 8.51 9 ⇑P **Pn 17 16 24.9 -1.0**
CSS Mathiatis 8.54 101 P **Pn 17 16 28.8 +2.5**
CSS Mathiatis 8.54 101 S **Sn 17 18 02.2 -0.1**
BZS Buzias 8.64 353 ⇑P **Pn 17 16 25.4 -2.1**
BZS Buzias 8.64 353 ⇑P **Pn 17 16 25.4 -2.1**
BR131 Keskin Array S 8.69 69 *i* P **Pn 17 16 28.5 0.0**
BRTR Keskin Array B 8.69 69 Pn **Pn 17 16 29.8 +1.3**
0.3nm,0.3s,baz=247,slow=12,SNR=21
BRTR LR LR 17 20 06.5
comp=Z,109nm,20.6s,baz=245,slow=40
2.0nm,0.7s
BRTR Keskin Array B 8.69 69 **Pn 17 16 30.9 +2.4**
MLR Muntele Rosu 8.70 13 Pn **Pn 17 16 28.7 +0.1**
0.6nm,0.3s,baz=233,slow=10,SNR=7.6
MLR LR LR 17 19 49.7
comp=Z,101nm,20.2s,baz=199,slow=38
6.9nm,1.1s
MLR Muntele Rosu 8.70 13 ⇑P **Pn 17 16 27.3 -1.3**
MLR Muntele Rosu 8.70 13 ⇑P **Pn 17 16 27.3 -1.3**
NEHR Nehoiu 8.71 15 ⇑P **Pn 17 16 27.6 -1.0**
KIRS Kirsehir-Merke 8.77 73 ⇓P **Pn 17 16 29.7 +0.2**
BISRR Bisoca 8.92 17 ⇑P **Pn 17 16 30.4 -1.0**
CIDE Kastamonu/Cide 9.01 55 ⇓P **Pn 17 16 32.6 -0.1**
DOPR Dopca 9.08 10 ⇑P **Pn 17 16 32.3 -1.3**
COVR Voineasa-Covas 9.09 14 ⇑P **Pn 17 16 32.9 -0.9**
MDB Medias 9.14 6 ⇑P **Pn 17 16 33.2 -1.2**
MDB Medias 9.14 6 ⇑P **Pn 17 16 33.2 -1.2**
PLOR Plostina 9.19 16 ⇑P **Pn 17 16 34.1 -1.0**
PLOR Plostina 9.19 16 ⇑P **Pn 17 16 34.1 -1.0**
VRI Vrincioaia 9.22 16 ⇓P **Pn 17 16 35.5 -0.1**
VRI Vrincioaia 9.22 16 ⇓P **Pn 17 16 35.5 -0.1**
TURR Turia 9.26 13 ⇓P **Pn 17 16 35.1 -1.0**
OZUR 9.26 12 ⇓P **Pn 17 16 35.8 -0.4**
ONER Baraj Valea Uz 9.60 14 ⇑P **Pn 17 16 39.2 -1.5**
NRCA Norcia 9.61 310 Pn **Pn 17 16 43.0 +2.1**
MARR Marisel-Cluj 9.62 0 ⇓P **Pn 17 16 39.0 -2.2**
DRGR 9.74 358 ⇑P **Pn 17 16 40.7 -2.1**
DRGR 9.74 358 ⇑P **Pn 17 16 40.7 -2.1**
MORH Mrgy, Hungar 9.75 341 ⇑P **Pn 17 16 40.5 -2.3**
RYAN Fayoum 9.96 141 P **Pn 17 16 48.1 +2.4**
RYAN S **Sn 17 18 32.8 -4.3**
BURAR Bucovina Array 10.68 8 Pn **Pn 17 16 59.1 +3.5**
BUR08 Bucovina Ar. S 10.70 8 Pn **Pn 17 16 57.7 +1.8**
MMA0B Mount Meron ar 10.85 108 P **Pn 17 16 59.1 +1.1**
MMA0B Mount Meron ar 10.85 108 S **Sn 17 16 57.5 -1.6**
MMAI Mount Meron Ar 10.85 108 Pn **Pn 17 16 56.3 -1.7**
1.0nm,0.3s,baz=301,slow=12,SNR=12
MMAI Sn **Sn 17 18 55.5 -3.6**
2.1nm,0.3s,baz=333,slow=24,SNR=2.5
SLTI Sal'it 10.93 112 P **Pn 17 16 58.7 -0.3**
SLTI Sal'it 10.93 112 S **Sn 17 18 57.2 -3.8**
GEM Giv'at Ha'Em 10.97 107 P **Pn 17 17 00.4 +0.9**
PSZ Piszkesteto 11.12 349 ⇓P **Pn 17 17 01.6 0.0**
PSZ Piszkesteto 11.12 349 ⇓P **Pn 17 17 01.6 0.0**
MMLI Mount Malkishu 11.12 111 P **Pn 17 17 02.3 +0.6**
SALP Salfit 11.13 113 P **Pn 17 17 02.1 +0.3**
SALP Salfit 11.13 113 S **Sn 17 19 02.2 -3.6**
KEST Kesra 11.17 267 Pn **Pn 17 17 03.4 +1.0**
0.1nm,0.3s,baz=86,slow=19,SNR=1.7
KEST Sn **Sn 17 19 07.7 +0.7**
0.1nm,0.3s,baz=104,slow=19,SNR=2.1
KEST LR LR 17 21 54.8
comp=Z,78nm,20.1s,baz=259,slow=40
9.6nm,1.2s
KZIT Kziot 11.19 120 P **Pn 17 17 01.3 -1.2**
KZIT Kziot 11.19 120 S **Sn 17 19 02.0 -5.3**
AMAZ Amatzia 11.20 116 P **Pn 17 17 02.8 +0.1**
AMAZ Amatzia 11.20 116 S **Sn 17 19 03.5 -4.2**
HMDT Nahal Hemdat 11.29 111 P **Pn 17 17 03.9 0.0**
HMDT Nahal Hemdat 11.29 111 S **Sn 17 19 06.2 -3.4**
SOKA Soboth 11.35 331 *e*Pn **Pn 17 17 07.1 +2.4**
2.9nm,0.5s
YTIR Yattir 11.44 116 P **Pn 17 17 06.2 +0.2**
YTIR Yattir 11.44 116 S **Sn 17 19 09.5 -4.1**
BALJ Balqa 11.45 112 **Pn 17 17 05.6 -0.6**
DSI Dead Sea 11.52 115 P **Pn 17 17 06.5 -0.6**
DSI Dead Sea 11.52 115 S **Sn 17 19 11.0 -4.4**
ARSA Arzberg 11.64 334 *e*Pn **Pn 17 17 11.1 +2.4**
0.8nm,0.4s
MSBI Mazada 11.64 116 P **Pn 17 17 08.4 -0.3**
MSBI Mazada 11.64 116 S **Sn 17 19 13.2 -5.0**
GHAJ Ghor Haditha 11.80 115 **Pn 17 17 12.1 +1.2**
GHAJ Ghor Haditha 11.80 115 P **Pn 17 17 11.4 +0.6**
GHAJ Ghor Haditha 11.80 115 S **Sn 17 19 17.5 -4.6**
KRMI Paran Flat 11.89 122 P **Pn 17 17 11.7 -0.5**
KRMI Paran Flat 11.89 122 S **Sn 17 19 18.5 -6.1**
PRNI Paran 11.94 121 P **Pn 17 17 12.6 -0.2**
PRNI Paran 11.94 121 S **Sn 17 19 19.7 -6.0**
ZFRI Zfri 11.94 119 P **Pn 17 17 12.5 -0.3**
ZFRI Zfri 11.94 119 S **Sn 17 19 19.2 -6.4**
MODS Modra-Piesok 12.10 341 *e*P **Pn 17 17 16.8 +1.8**
MODS Modra-Piesok 12.10 341 *e*PN **Pn 17 17 16.8 +1.8**
HRFI Mount Harif 12.15 122 P **Pn 17 17 14.6 -1.2**
HRFI Mount Harif 12.15 122 S **Sn 17 19 24.7 -6.2**
MBRI Mt Berech 12.22 123 P **Pn 17 17 15.9 -0.8**
MBRI Mt Berech 12.22 123 S **Sn 17 19 27.2 -5.5**
EIL Elat 12.33 123 Pn **Pn 17 17 16.6 -1.5**
0.7nm,0.3s,baz=322,slow=8.1,SNR=14
EIL Sn **Sn 17 19 29.4 -5.8**
2.2nm,0.3s,baz=292,slow=19,SNR=5.3
12nm,0.8s
EIL Elat 12.33 123 P **Pn 17 17 16.6 -1.5**
EIL Elat 12.33 123 S **Sn 17 19 29.5 -5.6**
ASF Jabal al Asfar 12.35 109 Pn **Pn 17 17 17.3 -1.3**
0.6nm,0.3s,baz=267,slow=11,SNR=6.4
ASF Sn **Sn 17 19 30.8 -5.1**
0.2nm,0.3s,baz=30,slow=20,SNR=1.8
ASF LR LR 17 22 41.0
comp=Z,47nm,18.9s,baz=293,slow=41
2.1nm,0.7s
KRUC Moravsky 12.97 340 *e*PN **Pn 17 17 27.4 +0.6**
VRAC Vranov 13.14 341 *e*PN **Pn 17 17 29.9 +0.8**
WATA Walderalm 13.36 324 *e*Pn **Pn 17 17 32.4 +0.2**
1.4nm,0.3s
SQTA Sankt Quirin 13.45 323 *e*Pn **Pn 17 17 34.0 +0.6**
1.1nm,0.5s
FUORN Ofenpass-Fuorn 13.52 319 Pn **Pn 17 17 35.0 +0.4**
MOTA Moosalm 13.59 323 *e*Pn **Pn 17 17 37.1 +1.7**
0.7nm,0.4s
GERES GERESS Array B 13.64 333 Pn **Pn 17 17 36.6 +0.5**
baz=150,slow=20,SNR=2.0
0.1nm,0.3s
DAVOX Davos/Dischmat 13.82 319 Pn **Pn 17 17 38.7 0.0**
0.2nm,0.3s,baz=132,slow=15,SNR=1.7
DAVOX Sn **Sn 17 20 07.8 -4.1**
0.2nm,0.3s,baz=167,slow=19,SNR=1.8
0.8nm,0.5s
RETA Reutte 13.85 323 *e*Pn **Pn 17 17 40.3 +1.3**
0.8nm,0.5s
KHC Kasperske Hory 13.93 333 *i* P **Pn 17 17 39.3 -0.6**
KHC Kasperske Hory 13.93 333 *e*P **Pn 17 17 37.0 -2.9**
KHC *ex* x 17 17 45.2
DAVA Damuels 14.16 320 *e*P **P 17 17 50.6 -0.1**
0.4nm,0.3s
DPC Dobruska-Polom 14.17 342 *e*P **P 17 17 52.2 +1.5**
DPC Dobruska-Polom 14.17 342 *e*P **P 17 17 52.2 +1.5**
AKASG Malin Array Be 14.34 16 Pn **Pn 17 17 44.1 -1.4**
0.4nm,0.3s,baz=271,slow=21,SNR=2.0
AKASG LR LR 17 23 28.2
comp=Z,84nm,18.3s,baz=204,slow=38
0.9nm,0.7s
SENIN Lac Senin/Sane 15.01 313 **Pn 17 17 57.8 +2.9**
CLL Collm 15.97 336 *e*P **P 17 18 11.0 +0.4**
CLL Collm 15.97 336 *es*P **P 17 18 11.0 +0.4**
CLL *i* x x 17 18 13.2
comp=Z,8.0nm,0.9s
CLL *i* PP **sP 17 18 16.0 -1.3**
CLL *i* sPP 17 18 18.5
CLL AMS AMS 18 01 00.0
comp=Z,200nm,20.0s
NEUR Neytrino 16.20 61 *i* P **Pn 17 18 11.0 +0.7**
SHA1 Shidzhatmaz 16.31 60 *i* P **Pn 17 18 12.2 +0.5**
KIV Kislovodsk 16.39 59 *e*P **Pn 17 18 12.6 -0.1**
KIV pmax pmax
comp=Z,4.0nm,1.0s
KVAR Kislovodsk Arr 16.40 59 Pn **P 17 18 16.7 +1.2**
baz=258,slow=20
KBZ Khabaz 16.47 60 Pn **P 17 18 17.6 +1.4**
comp=Z,0.2nm,0.3s,baz=236,slow=7.9,SNR=9.7
KBZ Khabaz 16.47 60 *ce*P **Pn 17 18 15.5 +1.9**
GNI Garni 17.19 73 LR LR 17 26 34.1
comp=Z,17nm,21.1s,baz=232,slow=43
GNI Garni 17.19 73 *e*P **Pn 17 18 22.2 -0.6**
GNI pmax pmax
comp=Z,18nm,1.5s
MNK Minsk 17.77 9 *i* P **Pn 17 18 26.4 -3.3**
comp=E,4.0nm,0.6s
MNK *i* P **Pn 17 18 26.4 -3.3**
comp=N,13nm,1.1s
MNK *i* P **P 17 18 27.3 -3.2**
comp=Z,8.0nm,0.9s,baz=192
MNK *i* PP **PnPn 17 18 38.3 -2.1**
MNK *i* PPP PPP 17 18 47.4
MNK *i* S **Sn 17 21 45.4 -1.9**
MNK *i* SS **SnSn 17 22 03.1 +2.3**
MNK *i* SSS SSS 17 22 17.2
MNK *i* LR LR 17 24 17.9
MNK *i* LRM MLR 17 25 03.9
comp=E,487nm,22.5s
MNK *i* LRM MLR 17 25 23.9
comp=N,371nm,17.1s
MNK *i* LRM MLR 17 25 23.9
comp=Z,91nm,16.0s
MNK Minsk 17.77 9 *i* P **Pn 17 18 26.4 -3.3**
MNK *i* S **Sn 17 21 45.3 -1.9**
MNK pmax pmax
comp=N,13nm,1.1s
MNK pmax pmax
comp=E,4.0nm,0.6s
MNK pmax pmax
comp=Z,8.0nm,0.9s
MNK MLR MLR
comp=E,487nm,23.0s
MNK MLR MLR
comp=N,371nm,17.0s
MNK MLR MLR
comp=Z,91nm,16.0s
NACGM Naroch 18.04 7 *e*P **Pn 17 18 32.7 -0.3**
comp=Z,18nm,1.1s,baz=188
VORD Divnogorie 18.09 35 *e*P **Pn 17 18 34.6 +0.9**
VORD pmax pmax
comp=Z,7.0nm,1.2s
VSR Storozhevoye 18.20 34 *e*P **Pn 17 18 33.8 -1.3**
VSR pmax pmax
comp=Z,10.0nm,2.0s
PABE Paberze 18.48 2 P **P 17 18 36.7 -1.5**
BSD Bornholm Skovb 18.92 345 *i* P **P 17 18 41.9 -1.3**
BSD IAmb IAmb 17 18 52.1
comp=Z,0.9nm,0.2s
LPSR Galich'ya Gora 19.11 31 *e*P **P 17 18 45.7 +0.5**
LPSR pmax pmax
comp=Z,20nm,1.3s
VRH Novokhopyorsk 19.39 37 *e*P **P 17 18 47.8 -0.4**
VRH pmax pmax
comp=Z,10.0nm,1.1s
LUNU Lund 19.72 344 *i* P **P 17 18 53.2 +1.4**
OBN Obninsk 20.28 23 *e*P **P 17 18 57.0 -0.9**
OBN *e* 17 19 12.7
OBN *eS* Sn 17 22 47.4 -0.3
OBN pmax pmax
comp=Z,12nm,0.7s
OBN MLR MLR
comp=Z,31nm,14.0s
DEL Delary 20.40 345 *i* P **P 17 18 59.0 -0.3**
MOS Moscow 21.13 23 *e*P **P 17 19 05.6 -1.5**
MOS *e* 17 19 26.5
MOS *eS* **S 17 23 01.3 -0.1**
MOS *eSS* **SnSn 17 23 25.6 +2.4**
ESDC Sonseca Array 21.36 285 P **P 17 19 12.4 +2.6**
comp=Z,1.5nm,0.6s,baz=81,slow=10,SNR=18
comp=Z,1.5nm,0.6s
ESDC Sonseca Array 21.36 285 IAmb IAmb 17 19 20.2
comp=Z,6.6nm,1.5s
BELG Belogornoye 23.05 40 P **P 17 19 26.7 -1.0**
comp=Z,8.2nm,0.8s,baz=194,slow=4.1,SNR=5.5
comp=Z,8.2nm,0.8s
BELG Belogornoye 23.05 40 *e*P **P 17 19 27.2 -0.5**
BELG pmax pmax
comp=Z,4.0nm,1.2s
STRU Stroemstad 23.33 344 *i* P **P 17 19 29.1 -1.3**
HFS Hagfors 23.88 348 P **P 17 19 35.4 -0.4**
comp=Z,6.8nm,0.7s,baz=154,slow=7.8,SNR=15
comp=Z,6.8nm,0.7s
KONO Kongsberg 24.24 343 **P 17 19 38.8 -0.4**
KONO Kongsberg 24.24 343 *i* P **P 17 19 38.8 -0.4**
KONO pmax pmax
comp=Z,33nm,1.5s
FINES FINESS Array B 24.49 3 P **P 17 19 40.4 -1.0**
comp=Z,5.3nm,1.0s,baz=158,slow=12,SNR=9.2
FINES PcP **PcP 17 23 20.1 +0.7**
comp=Z,2.6nm,0.9s,baz=166,slow=2.8,SNR=5.9
comp=Z,5.3nm,1.0s
FINES FINESS Array B 24.49 3 P **P 17 19 42.0 +0.6**
FINES **PcP 17 23 19.9 +0.4**
NC602 NORSAR Array S 24.82 346 P **P 17 19 44.3 -0.1**
NAO01 NORSAR Array S 25.05 346 P **P 17 19 46.3 -0.2**
NAO01 IAmb IAmb 17 20 13.0
comp=Z,18nm,1.4s
NB2 NORSAR Subarra 25.17 346 P **P 17 19 47.0 -0.6**
comp=Z,1.3nm,0.8s,baz=157,slow=9.3
NOA NORSAR Array B 25.17 346 P **P 17 19 47.0 -0.6**
comp=Z,0.9nm,0.6s,baz=153,slow=9.3,SNR=15
comp=Z,0.9nm,0.6s
NOA NORSAR Array B 25.17 346 P **P 17 19 47.0 -0.6**
NC204 NORSAR Array S 25.47 346 P **P 17 19 51.0 +0.7**
NC204 IAmb IAmb 17 20 32.9
comp=Z,16nm,1.4s
EKA Eskdalemuir Ar 25.54 324 P **P 17 19 51.6 +0.6**
comp=Z,4.2nm,0.7s,baz=125,slow=8.9,SNR=14
comp=Z,4.2nm,0.7s
KLMR Klimovskoe 26.00 18 *e*P **P 17 19 53.5 -1.6**
KLMR *e* 17 20 30.1
KLMR pmax pmax
comp=Z,23nm,1.5s
AKTO Aktyubinsk 28.27 51 P **P 17 20 14.1 -1.5**
comp=Z,0.8nm,0.4s,baz=285,slow=8.2,SNR=1.8
comp=Z,0.8nm,0.4s
ARTI Arti 30.48 39 P **P 17 20 34.1 -1.0**
comp=Z,3.7nm,0.8s,baz=226,slow=7.7,SNR=7.4
comp=Z,3.7nm,0.8s
ARTI Arti 30.48 39 P **P 17 20 34.0 -1.2**
ARTI IAmb IAmb 17 20 36.4
comp=Z,4.7nm,0.6s
ARTI Arti 30.48 39 *e*P **P 17 20 34.7 -0.4**
ARTI pmax pmax
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 32.58 2 P **P 17 20 52.1 -1.3**
comp=Z,2.1nm,0.8s,baz=187,slow=9.8,SNR=6.6
ARCES PcP **PcP 17 23 39.7 +0.3**
comp=Z,7.1nm,1.1s,baz=197,slow=2.8,SNR=5.4
comp=Z,2.1nm,0.8s
CHGR Chuyangaron 36.11 73 **P 17 21 23.4 -1.1**
CHGR IAmb IAmb 17 21 32.9
comp=Z,8.6nm,0.7s
CHGR Chuyangaron 36.11 73 P **P 17 21 23.4 -1.1**
CHGR pmax pmax
comp=Z,9.0nm,0.7s
BVAR Borovoye Array 36.30 49 P **P 17 21 25.3 -0.6**
comp=Z,1.4nm,0.9s,baz=289,slow=14,SNR=4.8
BVAR LR LR 17 39 45.2
comp=Z,188nm,21.6s,baz=95,slow=42
comp=Z,1.4nm,0.9s
AAK Ala-Archa 39.35 65 *i* P **P 17 21 52.3 +0.4**
AAK pmax pmax
comp=Z,3.0nm,1.5s
DBIC Dimbokro 39.54 227 P **P 17 21 54.5 +1.0**
comp=Z,3.5nm,0.7s,baz=64,slow=7.2,SNR=5.4
comp=Z,3.5nm,0.7s
DBIC Dimbokro 39.54 227 P **P 17 21 54.5 +1.0**
DBIC pmax pmax
comp=Z,8.0nm,1.1s
KURBB Kurchatov Arra 41.27 53 P **P 17 22 06.7 -0.8**
comp=Z,1.5nm,0.5s,baz=278,slow=8.8,SNR=18
KURBB PcP **PcP 17 24 06.4 +0.4**
comp=Z,0.9nm,0.8s,baz=270,slow=4.0,SNR=4.8
comp=Z,1.5nm,0.5s
KURK Kurchatov 41.32 53 **PcP 17 24 06.4 +0.3**
KURK Kurchatov 41.32 53 **P 17 22 09.1 +1.1**
KURK Kurchatov 41.32 53 *i* P **P 17 22 06.0 -1.9**
KURK pmax pmax
comp=Z,3.0nm,1.0s
SPITS Spitsbergen Ar 41.34 358 P **P 17 22 07.7 -0.1**
comp=Z,10.0nm,1.1s,baz=131,slow=9.8,SNR=1.7
comp=Z,10.0nm,1.1s
MK31 Makanchi Array 44.15 58 *i* P **P 17 22 30.8 -0.2**
MKAR Makanchi Array 44.15 58 P **P 17 22 30.6 -0.5**
comp=Z,1.7nm,0.5s,baz=272,slow=7.2,SNR=19
comp=Z,1.7nm,0.5s
MKAR Makanchi Array 44.15 58 **P 17 22 30.9 -0.2**
ZAA0 Zalesovo Array 44.93 47 IAmb IAmb 17 22 42.1
comp=Z,5.9nm,0.6s
ZALV Zalesovo Beam 44.93 47 P **P 17 22 36.6 -0.4**
comp=Z,6.3nm,0.6s,baz=275,slow=8.7,SNR=15
comp=Z,6.3nm,0.6s
ZALV Zalesovo Beam 44.93 47 *i* P **P 17 22 36.7 -0.4**
ZALV pmax pmax
comp=Z,5.0nm,0.5s
WMQ Urumqi 48.52 61 *e*P **P 17 23 07.5 +2.1**
WMQ pmax pmax
comp=Z,11nm,0.6s
EVN Everest 53.61 80 P **P 17 23 44.0 -0.7**
EVN IAmb IAmb 17 23 46.8
comp=Z,9.1nm,1.4s
LSA Lhasa 56.22 76 P **P 17 23 59.8 -3.5**
LSA pmax pmax
comp=Z,2.0nm,0.6s
GTA Gaotai 58.55 62 *e*P **P 17 24 18.4 -0.7**
GTA pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 59.58 51 P **P 17 24 25.4 -0.8**
comp=Z,0.6nm,0.6s,baz=294,slow=7.6,SNR=4.8
comp=Z,0.6nm,0.6s
SCHQ Schefferville 60.68 318 P **P 17 24 33.8 +0.3**
comp=Z,10nm,1.0s,baz=67,slow=6.3,SNR=5.4
comp=Z,10nm,1.0s
BOSA Boshof 65.34 178 P **P 17 25 05.8 +1.1**
comp=Z,2.8nm,0.9s,baz=16,slow=10,SNR=1.7
comp=Z,2.8nm,0.9s
PZH PanZhiHua 65.95 74 P **P 17 25 10.6 +1.6**
HHC Hu-ho-hao-te 65.97 56 *e*P **P 17 25 08.4 -0.5**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,160nm,4.5s
CMAR Chiang Mai Arr 68.00 83 P **P 17 25 21.4 -0.5**
comp=Z,2.5nm,0.9s,baz=305,slow=8.3,SNR=26
comp=Z,2.5nm,0.9s
CMAR Chiang Mai Arr 68.00 83 P **P 17 25 19.6 -2.4**
CMAR Chiang Mai Arr 68.00 83 *i* P **P 17 25 21.6 -0.3**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
A36M Sachs Harbour 69.01 350 P **P 17 25 27.0 -0.4**
NJ2 Nanjing 75.59 61 *e*P **P 17 26 06.4 -1.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
E19K Redstone River 75.82 0 **P 17 26 09.1 +1.0**
G26K Porcupine Rive 75.84 355 IAmb IAmb 17 26 14.1
comp=Z,6.3nm,1.0s
H27K Steamboat Moun 76.37 354 IAmb IAmb 17 26 54.9
comp=Z,11nm,1.5s
G21K Allakaket 76.73 359 IAmb IAmb 17 26 15.7
comp=Z,5.2nm,1.0s
I30M Mount Dempster 76.81 351 IAmb IAmb 17 26 15.8
comp=Z,5.4nm,1.0s
J30M Hart River 77.43 351 P **P 17 26 16.7 -0.7**
J30M IAmb IAmb 17 26 20.0
comp=Z,8.2nm,1.1s
H21K Melozitna Rive 77.58 358 IAmb IAmb 17 26 23.5
comp=Z,5.9nm,1.0s
ILAR Eielson Array 78.21 356 P **P 17 26 22.1 +0.5**
comp=Z,1.0nm,0.9s,baz=357,slow=4.3,SNR=11
comp=Z,1.0nm,0.9s
ILAR Eielson Array 78.21 356 P **P 17 26 22.2 +0.6**
KSRS Korea Array 78.44 52 P **P 17 26 22.5 -0.8**
comp=Z,0.8nm,0.5s,baz=308,slow=4.6,SNR=4.4
comp=Z,0.8nm,0.5s
HDA Harding Lake 78.58 356 IAmb IAmb 17 26 25.9
comp=Z,9.6nm,1.3s
J19K Poorman 79.29 359 IAmb IAmb 17 26 30.3
comp=Z,6.5nm,1.0s
M29M Somme Creek 79.75 351 IAmb IAmb 17 26 32.6
comp=Z,5.7nm,0.9s
SKT Skwentna 81.22 357 P **P 17 26 37.8 -0.2**
SKT IAmb IAmb 17 26 53.2
comp=Z,7.1nm,1.0s
STLK Strandline Lak 81.72 358 IAmb IAmb 17 26 44.7
comp=Z,6.1nm,0.8s
MJAR Matsushiro Arr 85.28 47 P **P 17 26 59.2 -0.2**
comp=Z,1.2nm,0.7s,baz=322,slow=4.6,SNR=3.2
comp=Z,1.2nm,0.7s
PDAR Pinedale Array 89.63 327 P **P 17 27 20.9 +0.3**
comp=Z,0.3nm,0.6s,baz=75,slow=6.3,SNR=3.8
comp=Z,0.3nm,0.6s
WRA Warramunga Arr 118.42 94 PKP **PKPdf 17 33 10.1 -0.3**
comp=Z,0.7nm,0.6s,baz=318,slow=1.9,SNR=7.3
ASAR Alice Springs 119.99 98 PKP **PKPdf 17 33 13.2 -0.1**
comp=Z,0.8nm,0.6s,baz=318,slow=1.4,SNR=21
ASAR Alice Springs 119.99 98 **PKPdf 17 33 13.1 -0.2**
ASAR Alice Springs 119.99 98 PKIKP **PKPdf 17 33 13.1 -0.2**
QSPA South Pole Qui 126.90 180 PKP **PKiKP 17 33 27.8 +2.1**
comp=Z,0.8nm,0.7s,baz=235,slow=1.5,SNR=3.0

IDC 17 17:18:36.2±1.3, 9.13N×126.99E, h0km, mb3.5/4, mbtmp3.6/5, ML4.4/1, Error ellipse: s-maj=40.7km s-min=21.3km az=78.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.48**	**214**	Pn	Pn		17 19 17.3	-0.6
	75nm,0.3s,baz=39,slow=21,SNR=5.9							
DAV				Sn	Sn		17 19 49.9	+1.1
	16nm,0.3s,baz=37,slow=20,SNR=5.3							
	95nm,0.3s							
WRA	**Warramunga Arr**	**29.78**	**166**	P	P		17 24 44.7	-0.2
	0.4nm,0.7s,baz=347,slow=9.4,SNR=2.4							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**33.29**	**168**	P	P		17 25 15.9	+0.2
	0.2nm,0.5s,baz=353,slow=6.8,SNR=15							
ASAR				PcP	PcP		17 27 58.5	+0.3
	0.3nm,0.9s,baz=343,slow=1.9,SNR=4.0							
	0.2nm,0.5s							
H11S3	**WAKE ISLAND Hy**	**39.58**	**72**	T	T		18 09 16.1	
	baz=262,slow=75,SNR=28							
H11S1	**WAKE ISLAND Hy**	**39.59**	**72**	T	T		18 09 15.2	
	baz=262,slow=75,SNR=20							
H11S2	**WAKE ISLAND Hy**	**39.60**	**72**	T	T		18 09 18.2	
	baz=262,slow=75,SNR=19							
MKAR	**Makanchi Array**	**53.36**	**323**	P	P		17 27 57.5	0.0
	0.6nm,0.7s,baz=115,slow=8.0,SNR=2.8							
	0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**57.41**	**326**	P	P		17 28 26.1	-0.5
	0.3nm,0.4s,baz=122,slow=6.4,SNR=4.5							
	0.3nm,0.4s							

*IDC **17** 17:21:15.5±0.9, 9.45N×123.48E, h0km, mb3.7/9,*

mbtmp3.7/9,ML4.8/1,MS3.2/5,Error ellipse: s-maj=46.8km s-min=16.6km az=68.0

ISC 17 17:21:20.6±0.9,**9.4N**±0.1×**123.4E**±0.3,**h35**km,**n14,** σ0**65**/10,**mb3.6**/9,**MS3.3**/3,**Negros**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**5.27**	**333**	LR			LR	17 24 59.8	
	comp=Z,368nm,18.1s,baz=161,slow=43								
KAPI	**Kappang**	**14.76**	**194**	LR			LR	17 30 39.8	
	comp=Z,52nm,18.2s,baz=50,slow=38								
BATI	**Baumata**	**19.47**	**179**	P			**Pn**	**17 25 46.3**	**+0.3**
	3.1nm,0.3s,baz=39,slow=14,SNR=12								
CMAR	**Chiang Mai Arr**	**25.36**	**293**	P			**P**	**17 26 45.1**	**+0.4**
	0.7nm,0.9s,baz=110,slow=7.9,SNR=6.8								
CMAR				LR			LR	17 36 10.8	
	comp=Z,25nm,19.2s,baz=160,slow=35 0.7nm,0.9s								
WRA	**Warramunga Arr**	**31.07**	**160**	P			**P**	**17 27 35.3**	**-0.4**
	0.6nm,0.9s,baz=340,slow=8.3,SNR=1.2 0.6nm,0.9s								
ASAR	**Alice Springs**	**34.42**	**163**	P			**P**	**17 28 04.5**	**-0.4**
	1.9nm,0.7s,baz=338,slow=5.7,SNR=40 1.9nm,0.7s								
SONM	**Songino Array**	**40.93**	**343**	P			**P**	**17 28 59.0**	**-0.8**
	0.8nm,0.6s,baz=159,slow=9.3,SNR=5.7 0.8nm,0.6s								
MKAR	**Makanchi Array**	**51.05**	**324**	P			**P**	**17 30 18.9**	**-0.6**
	0.7nm,0.9s,baz=127,slow=7.7,SNR=3.6 0.7nm,0.9s								
DZM	**Mont Dzumac**	**52.53**	**127**	LR			LR	17 52 31.6	
	comp=Z,26nm,19.8s,baz=58,slow=36								
YAK	**Yakutsk**	**52.75**	**4**	LR			LR	17 55 09.8	
	comp=Z,32nm,18.5s,baz=255,slow=39								
ZALV	**Zalesovo Beam**	**54.08**	**333**	P			**P**	**17 30 41.3**	**-0.4**
	0.5nm,0.4s,baz=120,slow=8.5,SNR=4.9 0.5nm,0.4s								
KURBB	**Kurchatov Arra**	**55.22**	**327**	P			**P**	**17 30 50.5**	**+0.5**
	1.8nm,0.8s,baz=124,slow=7.4,SNR=12 1.8nm,0.8s								
BVAR	**Borovoye Array**	**60.80**	**326**	P			**P**	**17 31 29.5**	**+0.3**
	1.6nm,0.9s,baz=151,slow=6.5,SNR=5.0 1.6nm,0.9s								
ILAR	**Eielson Array**	**81.46**	**26**	P			**P**	**17 33 34.9**	**+0.9**
	0.2nm,0.6s,baz=255,slow=7.0,SNR=1.1 0.2nm,0.6s								

*IDC **17** 17:24:57.4±2.1,1°.21N×125°.61E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=187.2km s-min=28.0km az=65.0*

*DJA **17** 17:25:00.4±0.3,1°.N±4°×12°.6E±°,h10km,M3.0/6,MLv3.0/6*

ISC 17 17:24:59.9±1.7,**2.1N**±0.1×**127.7E**±0.4,**h35**km,**n4,** σ0**31**/5, **mb3.1**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.34**	**192**	P			**Pn**	**17 25 22.0**	**-0.1**
TNTI				S			**Sn**	**17 25 38.9**	**+0.1**
WRA	**Warramunga Arr**	**22.86**	**164**	P			**P**	**17 30 00.7**	**+0.3**
	0.3nm,0.4s,baz=337,slow=11,SNR=7.5 0.3nm,0.4s								
ASAR	**Alice Springs**	**26.32**	**167**	P			**P**	**17 30 32.3**	**-0.3**
	0.2nm,0.5s,baz=347,slow=8.2,SNR=7.7 0.2nm,0.5s								
MKAR	**Makanchi Array**	**59.41**	**325**	P			**P**	**17 34 59.1**	**+0.1**
	0.3nm,0.8s,baz=136,slow=6.9,SNR=1.3 0.3nm,0.8s								

IDC 17 17:52:34.4±2.4,**8.19S**×**130.05E,h0**km,**mb3.6**/1, **mbtmp3.5**/3,**ML3.6**/2,**Error ellipse: s-maj=132.5km s-min=33.4km az=68.0,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.40**	**161**	Pn			Pn	17 55 31.9	-0.4
	0.4nm,0.3s,baz=343,slow=13,SNR=17								
WRA				Sn			Sn	17 57 42.8	-8.6
	0.8nm,0.3s,baz=303,slow=10,SNR=9.7 0.8nm,0.5s								
ASAR	**Alice Springs**	**15.83**	**167**	Pn			Pn	17 56 19.4	+0.6
	0.3nm,0.3s,baz=342,slow=8.4,SNR=36								
ASAR				Sn			Sn	17 59 11.3	-3.7
	0.2nm,0.3s,baz=352,slow=27,SNR=5.9 0.3nm,0.3s								
MKAR	**Makanchi Array**	**69.24**	**327**	P			P	18 03 43.3	0.0
	0.2nm,0.4s,baz=116,slow=7.4,SNR=2.1 0.2nm,0.4s								

*THE **17** 17:52:59.7,35°.N±5°.2°.6E±°,h3km±6km,M2.7/8,MLh2.7/8*
*ATH **17** 17:52:59.8,34°.98N×26°.16E,h13km±1km,ML2.6/5, Manual Solution by A.Papageorgiou First location: 2019/11/17 17:54:20, This location: 2019/11/17 18:52:04 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*AFAD **17** 17:53:03.7,35°.18N×26°.25E,h6km±3km,ML2.2*

ISC 17 17:53:00.1±1.3,**35.01N**±0.06×**26.16E**±0.03,**h14**km±7km, **n48,** σ1**20**/71,**Crete**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIT2	**Siteia**	**0.20**	**349**	P			**Pg**	**17 53 04.8**	**+0.1**
SIT2				S			**Sg**	**17 53 08.4**	**+0.7**
NPS	**Neapolis**	**0.51**	**300**	P			**Pg**	**17 53 09.4**	**-0.8**
NPS				S			**Sg**	**17 53 18.1**	**+1.0**
NPS	**Neapolis**	**0.51**	**300**	P			**Pg**	**17 53 10.0**	**-0.2**
NPS				S			**Sg**	**17 53 17.9**	**+0.9**
IACM	**Heraklion**	**0.94**	**289**	P			**Pg**	**17 53 18.1**	**-0.1**
IACM				S			**Sb**	**17 53 31.5**	**+1.2**
IACM	**Heraklion**	**0.94**	**289**	P			**Pg**	**17 53 18.1**	**-0.1**
IACM				S			**Sg**	**17 53 30.8**	**+0.3**
KARP	**Karpathos**	**0.98**	**57**	P			**Pg**	**17 53 17.6**	**-1.5**
KARP				S			**Sb**	**17 53 32.1**	**+0.3**
KARP	**Karpathos**	**0.98**	**57**	P			**Pg**	**17 53 18.0**	**-1.1**
KARP				S			**Sb**	**17 53 32.5**	**+0.7**
IDI	**Anoyia**	**1.07**	**285**	P			**Pg**	**17 53 18.9**	**-2.0**
IDI				S			**Sg**	**17 53 33.9**	**-1.0**
IDI	**Anoyia**	**1.07**	**285**	P			**Pg**	**17 53 20.3**	**-0.6**
IDI				S			**Sg**	**17 53 35.3**	**+0.4**
THERA	**Ancient Thera,**	**1.46**	**338**	P			**Pn**	**17 53 25.7**	**-0.4**
THERA				S			**Sb**	**17 53 46.5**	**+0.9**
THERA	**Ancient Thera,**	**1.46**	**338**	P			**Pn**	**17 53 26.7**	**+0.6**
THERA				S			**Sn**	**17 53 45.2**	**+0.1**
THR6	**Thira Island,**	**1.48**	**336**	P			**Pn**	**17 53 26.6**	**+0.3**
THR6	**Thira Island,**	**1.48**	**336**	P			**Pn**	**17 53 27.0**	**+0.7**
THR9	**Santorini-Faro**	**1.49**	**334**	P			**Pn**	**17 53 27.1**	**+0.6**
THR9	**Santorini-Faro**	**1.49**	**334**	P			**Pn**	**17 53 26.5**	**0.0**
THR8	**Santorini-Mono**	**1.50**	**339**	P			**Pn**	**17 53 26.5**	**-0.1**
THR8	**Santorini-Mono**	**1.50**	**339**	P			**Pn**	**17 53 26.3**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.52**	**336**	P			**Pn**	**17 53 27.3**	**+0.4**
SNT5				S			**Sb**	**17 53 48.3**	**+1.1**
SNT5	**Nea Kammeni, S**	**1.52**	**336**	P			**Pn**	**17 53 27.0**	**0.0**
SNT5				S			**Sn**	**17 53 47.8**	**+1.2**
THR3	**Thira Island,**	**1.52**	**336**	P			**Pn**	**17 53 27.7**	**+0.8**
THR3	**Thira Island,**	**1.52**	**336**	P			**Pn**	**17 53 27.6**	**+0.6**
SFIR	**Foira Santorin**	**1.53**	**337**	P			**Pn**	**17 53 27.5**	**+0.5**
THR2	**Thira island,**	**1.55**	**338**	P			**Pn**	**17 53 27.4**	**+0.2**
THR2	**Thira island,**	**1.55**	**338**	P			**Pn**	**17 53 27.7**	**+0.4**
THR5	**Thira Island,**	**1.55**	**335**	P			**Pn**	**17 53 27.0**	**-0.3**
SAP3	**Santorini-Thir**	**1.57**	**335**	P			**Pn**	**17 53 27.7**	**+0.2**
SAP3				S			**Sg**	**17 53 50.3**	**+0.3**
SAP3	**Santorini-Thir**	**1.57**	**335**	P			**Pn**	**17 53 27.7**	**+0.2**
SAP3				S			**Sn**	**17 53 48.1**	**+0.5**
GVD	**Gavdhos**	**1.71**	**265**	P			**Pn**	**17 53 30.1**	**+0.6**
GVD	**Gavdhos**	**1.71**	**265**	P			**Pn**	**17 53 30.0**	**+0.6**
GVD				S			**Sn**	**17 53 51.4**	**+0.3**
NISR	**Nisiros**	**1.78**	**26**	P			**Pn**	**17 53 30.9**	**+0.4**
YAZI	**Mula-Dat§a-**	**1.97**	**32**	P			**Pn**	**17 53 34.1**	**+1.0**
YAZI				S			**Sn**	**17 53 55.6**	**-2.1**
DAT	**Datca**	**2.07**	**34**	P			**Pb**	**17 53 36.4**	**-1.1**
DAT				S			**Sn**	**17 54 00.7**	**+0.5**
DAT				*i*	IAML			17 54 50.0	
	comp=E,24nm,1.5s								
APE	**Apeiranthos**	**2.12**	**346**	P			**Pn**	**17 53 35.0**	**-0.2**
BDRM	**Kayabasi**	**2.30**	**27**	P			**Pg**	**17 53 43.5**	**-0.8**
TURN	**Turunc**	**2.44**	**43**	P			**Pb**	**17 53 42.1**	**-1.7**
TURN				S			**Sn**	**17 54 10.2**	**+0.9**
TURN				*i*	IAML			17 54 12.0	
	comp=E,14nm,1.2s								
TURN				*i*	IAML			17 54 27.0	
	comp=N,14nm,0.7s								
ANKY	**Antikythira Is**	**2.48**	**291**	P			**Pn**	**17 53 40.6**	**+0.5**
ANKY	**Antikythira Is**	**2.48**	**291**	P			**Pn**	**17 53 40.7**	**+0.5**
KTHA	**Kythira Island**	**2.81**	**297**	P			**Pn**	**17 53 45.0**	**+0.3**
MULA	**Mugla, Merkez-**	**2.84**	**37**	P			**Pb**	**17 53 49.1**	**-1.6**
IZZE	**Mula-Seydike**	**2.88**	**59**	P			**Pn**	**17 53 46.3**	**+0.8**
IZZE				*i*	IAML			17 54 24.0	
	comp=E,9.0nm,0.4s								
SABU	**Mula-Dalaman**	**2.91**	**51**	P			**Pn**	**17 53 47.7**	**+1.6**
SABU				S			**Sn**	**17 54 24.2**	**+3.3**
SABU				*i*	IAML			17 54 43.0	
	comp=E,8.5nm,1.1s								
SABU				*i*	IAML			17 54 48.0	
	comp=N,8.6nm,0.9s								
AYDN	**Tasoluk**	**2.99**	**27**	P			**Pn**	**17 53 49.7**	**+2.6**
VLI	**Veliai**	**3.12**	**304**	P			**Pn**	**17 53 49.4**	**+0.5**
DNZT	**Denizli-Tavas-**	**3.24**	**45**	P			**Pn**	**17 53 52.6**	**+1.9**
DNZT				S			**Sn**	**17 54 28.1**	**-1.0**
DNZT				*i*	IAML			17 54 44.0	
	comp=N,6.7nm,0.9s								
ESEN	**Aydn-Nazilli**	**3.30**	**32**	P			**Pn**	**17 53 53.8**	**+2.5**
ESEN				S			**Sn**	**17 54 26.9**	**-3.4**
TAVA	**DENIZLI_Tavas**	**3.31**	**41**	P			**Pn**	**17 53 55.0**	**+3.4**
TAVA				S			**Sn**	**17 54 31.0**	**+0.1**
TAVA				*i*	IAML			17 55 01.0	
	comp=N,6.1nm,2.0s								
KNIK	**Mula-Seydike**	**3.32**	**56**	P			**Pn**	**17 53 53.1**	**+1.3**
KNIK				*i*	IAML			17 55 31.0	
	comp=E,6.9nm,0.2s								
KNIK				*i*	IAML			17 55 34.0	
	comp=N,8.8nm,0.9s								
GOLH	**Golhisar**	**3.54**	**50**	P			**Pn**	**17 53 56.6**	**+1.8**
GOLH				*i*	IAML			17 55 45.0	
	comp=E,11nm,0.6s								
GOLH				*i*	IAML			17 55 46.0	
	comp=N,7.6nm,0.3s								

*TAP **17** 18:14:25.3,24°.85N×122°.14E,h13km,ML3.1,C*
*JMA **17** 18:14:26.2±0.1,24°.7N±0°.8×122°.2E±0°.3,h21km,MV2.6/9, TAIWAN REGION*

ISC 17 18:14:24.1±1.0,**24.80N**±0°.02×**122.25E**±0°.02,**h13**km±7km, **n94,** σ0**90**/167,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EGS		**0.29**	**278**	*i*	P		**Pg**	**18 14 30.2**	**+0.1**
EGS				*i*	S		**Sg**	**18 14 33.3**	**-0.8**
TWB1	**Santiao Chiao**	**0.31**	**311**	*i*	P		**Pg**	**18 14 30.3**	**-0.2**
TWB1				*i*	S		**Sg**	**18 14 33.6**	**-1.2**
TWC	**Suao**	**0.41**	**242**	*i*	P		**Pg**	**18 14 32.6**	**+0.3**
TWC				*i*	S		**Sg**	**18 14 37.2**	**-0.6**
TIPB	**Shuangxi**	**0.42**	**294**	*i*	P		**Pg**	**18 14 32.5**	**+0.1**
ESAO	**Su ao**	**0.43**	**238**	*i*	P		**Pb**	**18 14 33.6**	**0.0**
SXI1	**Grass Mountain**	**0.44**	**311**	*i*	P		**Pg**	**18 14 33.1**	**+0.1**
ILA	**Ilan**	**0.45**	**265**	*i*	P		**Pg**	**18 14 33.5**	**+0.4**
ILA				*i*	S		**Sb**	**18 14 41.2**	**+0.5**
NWF	**Wu-fen Shan**	**0.50**	**302**		P		**Pb**	**18 14 35.6**	**+0.7**
NWF				*i*	S		**Sg**	**18 14 40.4**	**-0.3**
WFSB	**Wu-fen Shan**	**0.50**	**302**		P		**Pb**	**18 14 35.5**	**+0.7**
WFSB				*i*	S		**Sg**	**18 14 40.4**	**-0.3**
NDS	**Dongshan**	**0.51**	**251**	*i*	P		**Pg**	**18 14 34.7**	**+0.6**
NDS				*i*	S		**Sg**	**18 14 41.0**	**0.0**
TWE	**Neicheng**	**0.53**	**261**	*i*	P		**Pg**	**18 14 34.6**	**+0.1**
TWE				*i*	S		**Sg**	**18 14 41.3**	**-0.3**
TNOU	**National Taiwa**	**0.55**	**309**	*i*	P		**Pg**	**18 14 35.2**	**+0.2**
TNOU					S		**Sg**	**18 14 42.9**	**+0.7**
EWUT	**Wuta**	**0.56**	**230**	*i*	P		**Pg**	**18 14 35.5**	**+0.5**
EWUT				*i*	S		**Sg**	**18 14 42.5**	**+0.1**
ENA	**Nanau**	**0.59**	**231**		P		**Pb**	**18 14 36.2**	**-0.2**
ENA					S		**Sb**	**18 14 43.2**	**-1.5**
FUSB	**Fushanzhiwuyua**	**0.60**	**266**	*i*	P		**Pb**	**18 14 36.4**	**-0.2**
FUSB				*i*	S		**Sb**	**18 14 43.6**	**-1.4**
TWA	**Mucha**	**0.63**	**287**		P		**Pg**	**18 14 37.7**	**+1.3**
TWA					eS		**Sg**	**18 14 46.1**	**+1.4**
ENTT	**Nioudou**	**0.64**	**255**		P		**Pb**	**18 14 37.0**	**-0.1**
NHY	**Taipei**	**0.66**	**291**		P		**Pn**	**18 14 38.3**	**-0.8**
NHY					eS		**Sg**	**18 14 47.4**	**+1.8**
EAHA	**Aohua**	**0.66**	**224**		eP		**Pg**	**18 14 37.8**	**+0.8**
EAHA					S		**Sb**	**18 14 46.0**	**-0.6**
NWLT	**Wulai**	**0.68**	**268**		P		**Pb**	**18 14 37.6**	**-0.2**
NWLT					S		**Sb**	**18 14 45.7**	**-1.4**
YM01	**YM01**	**0.70**	**299**		eP		**Pb**	**18 14 38.3**	**+0.5**
YM01					eS		**Sg**	**18 14 48.0**	**+0.9**
LATG	**Datong**	**0.71**	**248**		P		**Pb**	**18 14 38.2**	**-0.2**
LATG					S		**Sb**	**18 14 47.0**	**-1.0**
YM08	**YM08**	**0.71**	**303**		P		**Pb**	**18 14 38.2**	**-0.2**
YM08					eS		**Sb**	**18 14 47.5**	**-0.5**
JYNG	**Yonagunijimaku**	**0.73**	**119**		eP		**Pn**	**18 14 40.3**	**+0.1**
JYNG					eS		**Sn**	**18 14 50.9**	**-0.2**
ZUZH	**Zhuzihu**	**0.73**	**299**		eP		**Pb**	**18 14 38.7**	**0.0**
TWY	**Chenhua**	**0.75**	**309**		P		**Pg**	**18 14 39.3**	**+0.6**
TWY					S		**Sb**	**18 14 48.6**	**-0.7**
ANP	**Anpu**	**0.76**	**300**		P		**Pg**	**18 14 39.5**	**+0.6**
ANP					eS		**Sb**	**18 14 48.8**	**-0.9**
YOJ	**Yonaguni jima**	**0.78**	**116**		eP		**Pn**	**18 14 41.3**	**+0.5**
YOJ					eS		**Sn**	**18 14 52.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.78**	**116**		eP		**Pn**	**18 14 41.3**	**+0.5**
YHNB	**Yeheng**	**0.80**	**261**		P		**Pb**	**18 14 39.6**	**-0.4**
NTST	**Danshui**	**0.81**	**297**		eP		**Pn**	**18 14 40.8**	**-0.4**
NTST					eS		**Sg**	**18 14 51.7**	**+1.3**
TWS1	**Kuangyinshan**	**0.81**	**292**		eP		**Pn**	**18 14 41.6**	**+0.4**
TWS1					eS		**Sn**	**18 14 52.3**	**-0.9**
NSK	**Sanguang**	**0.82**	**261**		P		**Pb**	**18 14 39.9**	**-0.4**
NSK					eS		**Sb**	**18 14 51.2**	**0.0**
PCYT	**Pengchaiyu**	**0.84**	**349**		P		**Pb**	**18 14 40.4**	**-0.2**
PCYT					S		**Sn**	**18 14 53.0**	**-0.9**
ETL	**Fush Village**	**0.86**	**222**		P		**Pg**	**18 14 41.1**	**+0.3**
ETL					S		**Sb**	**18 14 52.1**	**-0.2**
NACB	**Ninganchiao**	**0.86**	**224**	*i*	P		**Pb**	**18 14 41.1**	**+0.1**
NACB					S		**Sb**	**18 14 51.9**	**-0.6**
NNSB	**Datong**	**0.87**	**245**		eP		**Pb**	**18 14 41.0**	**-0.2**
NNSB					eS		**Sb**	**18 14 51.7**	**-1.1**
NNS	**Nan Shan**	**0.87**	**246**		eP		**Pg**	**18 14 41.5**	**+0.4**
NNS					S		**Sb**	**18 14 52.0**	**-0.9**
ETLH	**Xiulin Townshi**	**0.92**	**230**		eP		**Pg**	**18 14 42.2**	**+0.4**
ETLH					eS		**Sb**	**18 14 53.9**	**-0.1**
TWD	**Chiawan**	**0.93**	**220**		P		**Pn**	**18 14 42.6**	**-0.4**
TWD					S		**Sb**	**18 14 54.4**	**-0.1**
KSHI	**Guanxi Townshi**	**0.97**	**269**		eP		**Pg**	**18 14 44.5**	**+1.6**
KSHI					eS		**Sn**	**18 14 56.6**	**-0.6**
NCUH	**Zhongli**	**0.98**	**280**		eP		**Pg**	**18 14 44.7**	**+1.7**
NFF	**Wufeng Townshi**	**1.04**	**261**		eP		**Pg**	**18 14 45.0**	**+0.8**
NFF					eS		**Sg**	**18 14 58.5**	**+0.7**
FUSS	**Fushou**	**1.07**	**239**		eP		**Pg**	**18 14 45.3**	**+0.6**
FUSS					eS		**Sn**	**18 14 59.2**	**-0.6**
ETM	**Tongmen**	**1.08**	**220**		P		**Pn**	**18 14 45.0**	**0.0**
ETM					S		**Sb**	**18 14 58.7**	**0.0**
LXIB	**Xiulin Townshi**	**1.09**	**224**		P		**Pn**	**18 14 45.1**	**-0.1**
LXIB					S		**Sn**	**18 14 59.8**	**-0.5**
WHF	**Hehuan Shan**	**1.11**	**234**		eP		**Pg**	**18 14 46.1**	**+0.6**
WHF					S		**Sn**	**18 15 00.2**	**-0.9**
TWT	**Tachien**	**1.12**	**241**		eP		**Pg**	**18 14 46.7**	**+1.0**
TWT					eS		**Sn**	**18 15 00.7**	**-0.3**
LIOB	**Emei**	**1.13**	**262**		eP		**Pg**	**18 14 46.5**	**+0.6**
TDCB	**Techi**	**1.13**	**241**		eP		**Pg**	**18 14 47.3**	**+1.3**
TDCB					eS		**Sn**	**18 15 00.5**	**-0.8**
NSTT	**Nanjuang**	**1.15**	**262**		eP		**Pg**	**18 14 47.3**	**+1.1**
NSTT					eS		**Sg**	**18 15 01.5**	**+0.3**
SBCB	**Hsinchu**	**1.15**	**270**		eP		**Pg**	**18 14 47.5**	**+1.3**
SBCB					eS		**Sg**	**18 15 02.5**	**+1.4**
SHUL	**Shoufeng**	**1.19**	**212**		eP		**Pg**	**18 14 48.8**	**+1.8**
SHUL					eS		**Sg**	**18 15 05.1**	**+2.6**
ESL	**Shilin**	**1.23**	**217**		eP		**Pg**	**18 14 48.0**	**+0.2**
ESL					eS		**Sg**	**18 15 04.0**	**0.0**
OWD	**Renai**	**1.29**	**229**		eP		**Pg**	**18 14 49.1**	**+0.1**
WHP	**Taichung City**	**1.29**	**246**		eP		**Pg**	**18 14 49.7**	**+0.7**
WHP					eS		**Sg**	**18 15 06.0**	**+0.1**
WUSB	**Renai**	**1.31**	**232**		P		**Pg**	**18 14 49.8**	**+0.5**
WUSB					S		**Sg**	**18 15 06.2**	**-0.1**
WARBT	**Fenglin Townsh**	**1.33**	**216**		eP		**Pg**	**18 14 49.7**	**-0.1**
WARBT					S		**Sg**	**18 15 07.4**	**+0.2**
NMLH	**Miaoli**	**1.35**	**259**		eP		**Pg**	**18 14 51.2**	**+1.1**
NMLH					eS		**Sg**	**18 15 09.3**	**+1.6**
NSY	**Sanyi**	**1.41**	**254**		eP		**Pg**	**18 14 53.0**	**+1.9**
NSY					eS		**Sg**	**18 15 11.4**	**+2.0**
TWQ1	**Liyutan**	**1.42**	**252**		P		**Pg**	**18 14 52.7**	**+1.4**
TWQ1					eS		**Sb**	**18 15 08.6**	**+0.2**
WCS	**Beigang Elemen**	**1.43**	**239**		eP		**Pg**	**18 14 53.2**	**+1.7**
WCS					eS		**Sg**	**18 15 10.2**	**+0.2**
IRIF	**Iriomote-Funau**	**1.43**	**109**		eP		**Pg**	**18 14 52.0**	**+0.4**
IRIF					eS		**Sg**	**18 15 11.4**	**+1.2**
VWDT	**VWDT**	**1.45**	**224**		eP		**Pg**	**18 14 52.2**	**+0.2**
HGSD	**Ruisui**	**1.50**	**210**		eP		**Pg**	**18 14 52.9**	**-0.2**
HGSD					eS		**Sg**	**18 15 13.8**	**+1.1**
SMLT	**Sun Moon Lake**	**1.53**	**234**		eP		**Pg**	**18 14 54.6**	**+1.0**
SMLT					eS		**Sg**	**18 15 14.3**	**+0.8**
EHY	**Hungye**	**1.54**	**213**		eP		**Pb**	**18 14 53.3**	**+0.7**
TYC	**Yuchr**	**1.55**	**235**		eP		**Pg**	**18 14 54.3**	**+0.4**
TYC					eS		**Sg**	**18 15 14.4**	**+0.3**
SSLB	**Suanglung**	**1.55**	**230**		eP		**Pg**	**18 14 53.7**	**-0.3**
SSLB					eS		**Sb**	**18 15 12.4**	**+0.1**
TCU	**Taichung**	**1.57**	**246**		eP		**Pg**	**18 14 55.4**	**+1.0**
TCU					eS		**Sg**	**18 15 16.1**	**+1.3**
YULB	**Yu-li**	**1.65**	**212**		eP		**Pb**	**18 14 53.9**	**-0.6**
YULB					eS		**Sg**	**18 15 16.5**	**-0.8**
WHYT	**Xinyi Township**	**1.68**	**229**		eP		**Pg**	**18 14 57.1**	**+0.7**
WJS	**Zhushan**	**1.69**	**235**		eP		**Pg**	**18 14 57.3**	**+0.6**
WJS					eS		**Sg**	**18 15 22.1**	**+3.4**
WNT	**Mingjian**	**1.70**	**237**		eP		**Pg**	**18 14 56.8**	**+0.1**
WNT					eS		**Sg**	**18 15 20.9**	**+2.1**
YUS	**Yu-Shan**	**1.76**	**222**		eP		**Pb**	**18 14 57.4**	**+0.8**
YUS					eS		**Sg**	**18 15 20.6**	**-0.4**
JIJ	**Ishigaki jima**	**1.78**	**104**		eP		**Pb**	**18 14 56.2**	**-0.4**
FULB	**Fuli**	**1.82**	**209**		eP		**Pb**	**18 14 57.2**	**-0.2**
ALS	**Alishan**	**1.84**	**226**		eP		**Pg**	**18 14 59.2**	**-0.3**
ALS					eS		**Sg**	**18 15 25.1**	**+1.6**
CHN5	**Tsauling**	**1.87**	**230**		eP		**Pg**	**18 14 59.8**	**-0.2**
CHN5					eS		**Sg**	**18 15 26.1**	**+1.9**
EHD	**Haiduan**	**1.90**	**210**		eP		**Pn**	**18 14 56.5**	**+0.2**
EHD					eS		**Sb**	**18 15 20.9**	**-1.6**
WDLH	**Douliu**	**1.91**	**235**		eP		**Pg**	**18 15 00.5**	**-0.4**
WDLH					eS		**Sg**	**18 15 27.2**	**+1.5**
WTK	**Tuku**	**2.03**	**237**		eP		**Pb**	**18 15 01.6**	**+0.8**
WTK					eS		**Sg**	**18 15 28.7**	**-0.6**
TPUB	**Ta-pu**	**2.10**	**225**		eP		**Pb**	**18 15 02.5**	**+0.3**
TPUB					eS		**Sg**	**18 15 31.3**	**-0.4**
STYH	**Taoyuan**	**2.11**	**220**		eP		**Pb**	**18 15 02.1**	**-0.2**
WTP	**Ta-pu**	**2.15**	**224**		eP		**Pb**	**18 15 03.7**	**+0.7**
WTP					eS		**Sg**	**18 15 32.4**	**-0.9**
TWK	**Hsinying**	**2.22**	**227**		P		**Pb**	**18 15 04.7**	**+0.6**
TWK					eS		**Sg**	**18 15 34.4**	**-1.1**
LDUT	**Ludao**	**2.24**	**199**		eP		**Pn**	**18 15 01.7**	**+0.8**
LDUT					eS		**Sn**	**18 15 28.2**	**-0.2**
WSL	**Shuilin Townsh**	**2.24**	**236**		eP		**Pb**	**18 15 02.9**	**-1.6**
TWGBT	**Beinan**	**2.25**	**209**		eP		**Pb**	**18 15 02.7**	**-1.9**
CHN1	**Nanshi**	**2.25**	**225**		eP		**Pb**	**18 15 05.1**	**+0.4**
CHN1					eS		**Sg**	**18 15 36.0**	**-0.5**
SCST	**Cishan**	**2.49**	**220**		eP		**Pb**	**18 15 09.0**	**+0.2**
SSD	**Sandimen**	**2.52**	**216**		eP		**Pb**	**18 15 09.1**	**-0.3**
MASBT	**Mashibuluo**	**2.63**	**214**		eP		**Pb**	**18 15 10.4**	**-0.8**
MASBT					eS		**Sb**	**18 15 44.5**	**+1.0**
EAST	**Anshuo**	**2.73**	**208**		eP		**Pb**	**18 15 11.0**	**-1.8**

*TAP **17** 18:16:26.3,24°.83N×122°.19E,h12km,ML3.0,C*
*JMA **17** 18:16:27.8±0.0,24°.8N±0°.3×122°.2E±0°.1,h27km,MV2.3/9, TAIWAN REGION*

ISC 17 18:16:26.7±1.0,**24.81N**±0°.02×**122.20E**±0°.02,**h8**km±8km, **n87,** σ0**78**/159,**Taiwan region**

| Code |

FUSS				*e*S		**Sb**	**18 17 00.3**	**-0.6**
ETM	**Tongmen**	**1.06 218**		P		**Pb**	**18 16 46.6**	**-0.8**
ETM				*e*S		**Sb**	**18 17 00.4**	**-1.0**
LXIB	**Xiulin Townshi**	**1.07 223**		P		**Pb**	**18 16 46.6**	**-0.9**
LXIB				*e*S		**Sb**	**18 17 01.4**	**-0.3**
WHF	**Hehuan Shan**	**1.08 232**		*e*P		**Pb**	**18 16 47.5**	**-0.4**
WHF				*e*S		**Sb**	**18 17 00.7**	**-1.7**
TWT	**Tachien**	**1.09 239**		P		**Pg**	**18 16 48.9**	**+1.2**
TWT				*e*S		**Sb**	**18 17 02.8**	**+0.5**
LIOB	**Emei**	**1.09 261**		P		**Pg**	**18 16 48.8**	**+1.1**
TDCB	**Techi**	**1.10 240**		*e*P		**Pb**	**18 16 48.3**	**+0.2**
TDCB				*e*S		**Sb**	**18 17 01.9**	**-0.7**
SBCB	**Hsinchu**	**1.11 269**		*e*P		**Pb**	**18 16 46.2**	**-1.9**
SBCB				*e*S		**Sb**	**18 17 02.8**	**+0.1**
NSTT	**Nanjuang**	**1.11 261**		P		**Pg**	**18 16 49.0**	**+1.0**
NSTT				S		**Sb**	**18 17 02.9**	**+0.2**
HSN	**Hsinchu**	**1.12 270**		*e*S		**Sb**	**18 17 01.8**	**-1.3**
ESL	**Shilin**	**1.22 215**		*e*P		**Pn**	**18 16 49.4**	**-0.6**
ESL				*e*S		**Sb**	**18 17 05.8**	**0.0**
WHP	**Taichung City**	**1.26 245**		*e*P		**Pb**	**18 16 51.1**	**+0.3**
WHP				*e*S		**Sb**	**18 17 06.3**	**-0.9**
OWD	**Renai**	**1.27 228**		P		**Pn**	**18 16 50.6**	**-0.2**
OWD				*e*S		**Sb**	**18 17 07.0**	**-0.4**
WUSB	**Renai**	**1.28 231**		*e*P		**Pn**	**18 16 51.0**	**0.0**
WUSB				*e*S		**Sb**	**18 17 07.5**	**-0.3**
NMLH	**Miaoli**	**1.31 258**		*e*P		**Pg**	**18 16 52.7**	**+0.7**
NMLH				*e*S		**Sb**	**18 17 08.3**	**-0.3**
WARBT	**Fenglin Townsh**	**1.32 214**		*e*P		**Pn**	**18 16 51.2**	**-0.3**
WARBT				*e*S		**Sn**	**18 17 08.2**	**-1.1**
TWQ1	**Liyutan**	**1.38 251**		*e*P		**Pb**	**18 16 53.3**	**+0.5**
WCS	**Beigang Elemen**	**1.40 238**		*e*P		**Pg**	**18 16 54.7**	**+1.2**
WCS				*e*S		**Sg**	**18 17 12.2**	**+0.5**
DPDB	**Guoxing**	**1.40 237**		P		**Pb**	**18 16 54.0**	**+1.0**
DPDB				S		**Sn**	**18 17 10.7**	**-0.5**
VWDT	**VWDT**	**1.43 223**		P		**Pb**	**18 16 54.1**	**+0.5**
VWDT				*e*S		**Sn**	**18 17 11.1**	**-0.8**
IRIF	**Iriomote-Funau**	**1.47 109**		*e*S		**Sn**	**18 17 12.4**	**-0.4**
HGSD	**Ruisui**	**1.50 209**		*e*P		**Pn**	**18 16 54.6**	**+0.8**
SMLT	**Sun Moon Lake**	**1.51 232**		*e*P		**Pg**	**18 16 56.7**	**+1.1**
SMLT				*e*S		**Sb**	**18 17 15.1**	**+0.9**
TYC	**Yuchr**	**1.52 234**		*e*P		**Pg**	**18 16 56.5**	**+0.5**
TYC				*e*S		**Sn**	**18 17 14.0**	**-0.2**
SSLB	**Suanglung**	**1.53 228**		*e*P		**Pb**	**18 16 55.4**	**0.0**
SSLB				*e*S		**Sn**	**18 17 13.6**	**-0.9**
TCU	**Taichung**	**1.54 245**		*e*P		**Pg**	**18 16 57.9**	**+1.6**
TCU				*e*S		**Sg**	**18 17 19.4**	**+3.1**
YULB	**Yu-li**	**1.64 211**		*e*P		**Pn**	**18 16 55.4**	**-0.4**
HATJ	**Hateruma jima**	**1.64 117**		*e*S		**Sn**	**18 17 16.3**	**-0.9**
WHYT	**Xinyi Township**	**1.66 228**		*e*P		**Pb**	**18 16 58.5**	**+0.9**
WHYT				*e*S		**Sg**	**18 17 21.5**	**+1.4**
WNT	**Mingjian**	**1.67 236**		*e*P		**Pb**	**18 16 58.8**	**+1.2**
WNT				*e*S		**Sg**	**18 17 22.6**	**+2.2**
TWF1	**Yuli**	**1.67 210**		*e*S		**Sn**	**18 17 17.1**	**-0.9**
ALS	**Alishan**	**1.82 225**		*e*P		**Pb**	**18 17 00.5**	**+0.1**
ALS				*e*S		**Sg**	**18 17 25.9**	**+0.6**
JIJ	**Ishigaki jima**	**1.82 104**		*e*S		**Sn**	**18 17 20.9**	**-0.7**
CHN5	**Tsauling**	**1.85 229**		P		**Pb**	**18 17 01.4**	**+0.7**
CHN5				*e*S		**Sg**	**18 17 26.2**	**+0.1**
TPUB	**Ta-pu**	**2.08 224**		*e*P		**Pb**	**18 17 05.3**	**+0.6**
WTP	**Ta-pu**	**2.13 223**		*e*P		**Pn**	**18 17 03.9**	**+1.3**
WTP				*e*S		**Sb**	**18 17 33.6**	**+1.4**
TWK	**Hsinying**	**2.20 226**		P		**Pb**	**18 17 06.2**	**-0.5**

DJA 17 18:18:15.0±0.5,**8°S**±4°×**12°4E**±°,**h222**km±4km,**M3.5**/12,
mb3.5/6,**MLv3.5**/12,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.44**	**242**	P	Pn	18 18 50.7	+0.5
SOEI	**Soe**	**1.94**	**158**	P	Pn	18 18 55.1	+0.3
SOEI				S	S	18 19 25.9	+0.1
EDFI	**Ende, Flores**	**1.98**	**246**	P	Pn	18 18 55.7	+0.6
BATI	**Baumata**	**2.25**	**176**	P	Pn	18 18 58.5	+0.8
BATI				S	S	18 19 31.8	+0.7
BBSI	**Bau Bau**	**2.62**	**339**	P	Pn	18 19 02.0	+0.3
WSI	**Waingapu**	**3.61**	**242**	P	Pn	18 19 12.6	-0.4
BASI	**Baing, Sumba**	**3.68**	**232**	P	Pn	18 19 13.7	0.0
WBSI	**Waikabubak, Su**	**4.41**	**247**	P	Pn	18 19 22.3	-0.4
PLAI	**Plampang**	**5.75**	**261**	P	Pn	18 19 39.2	-0.3
TWSI	**Taliwang, Sumb** 0.1nm6.8nm,0.6s	**6.62**	**263**	P	Pn	18 19 51.2	+0.7

*NEIC **17** 18:18:17.6±1.9,4°.86N±0°.07×127°.5E±0°.1,h115km±8km,*
mb4.5/20,Error ellipse: s-maj=16.0km s-min=9.3km
az=68.0
*DJA **17** 18:18:19.4±0.5,5°.N±5°×12°.7E±°,h118km±6km,M4.1/14,*
mB4.6/7,mb4.2/12,MLv4.4/14,Mw(mB)3.8/7
*IDC **17** 18:18:19.8±0.9,4°.80N×127°.61E,h124km±7km,mb3.7/15,*
mbtmp4.0/16,Error ellipse: s-maj=25.3km s-min=10.1km
az=67.0

ISC 17 18:18:17.5±0.5,**4°.78N**±0°.05×**127°.52E**±0°.08,**h108**km,**n63,**
σ1s**74**/70,**mb4.3**/25,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.26**	**241**	P	Pn	**18 18 54.9**	**+1.1**
SGSI				S	Sn	**18 19 22.5**	**+0.9**
DAV	**Davao City (W)** 108nm,0.3s,baz=221,slow=20,SNR=3.8	**2.98**	**320**	P	Pn	**18 19 05.9**	**+2.7**
DAV	226nm,0.4s,baz=94,slow=22,SNR=1.4			S	Sn	**18 19 42.8**	**+4.4**
DAV	**Davao City (W)**	**2.98**	**320**	Pn	Pn	**18 19 02.6**	**-0.6**
DAV				Sn	Sn	**18 19 41.4**	**+3.0**
TNTI	**Ternate**	**3.99**	**182**		Pn	**18 19 18.7**	**+1.9**
TNTI	**Ternate**	**3.99**	**182**	P	Pn	**18 19 19.2**	**+2.5**
KMSI	**Cibinong**	**5.47**	**220**	P	Pn	**18 19 38.5**	**+1.7**
SWI	**Sorong** 0.1nm588nm16nm,0.5s	**6.74**	**146**	P	Pn	**18 19 56.4**	**+2.4**
SANI	**Sanana** 0.1nm410nm11nm,1.0s	**6.96**	**193**	P	Pn	**18 19 56.9**	**0.0**
MRSI	**Marisa**	**7.02**	**233**	P	Pn	**18 20 00.0**	**+2.2**
LUWI	**Luwuk**	**7.48**	**219**		Pn	**18 20 06.2**	**+2.2**
LUWI	**Luwuk** 0.2nm601nm35nm,0.8s	**7.48**	**219**	P	Pn	**18 20 06.6**	**+2.6**
TOLI2	**Tolitoli**	**7.65**	**242**		Pn	**18 20 05.6**	**-0.7**
NLAI	**Namlea** 0.1nm512nm10nm,0.8s	**7.98**	**183**	P	Pn	**18 20 12.4**	**+1.6**
APSI	**Ampana** 674nm35nm,0.7s	**8.15**	**226**	P	Pn	**18 20 14.5**	**+1.5**
MPSI	**Mapaga** 11nm,0.8s	**8.80**	**240**	P	Pn	**18 20 23.8**	**+1.9**
MYLDM	**Lahad Datu**	**8.99**	**273**		Pn	**18 20 24.3**	**-0.2**
FAKI	**Fak Fak**	**8.99**	**148**	Pn	Pn	**18 20 23.8**	**-0.8**
FAKI	**Fak Fak**	**8.99**	**148**	P	Pn	**18 20 27.4**	**+2.8**
BBSI	**Bau Bau**	**11.34**	**206**	P	Pn	**18 20 57.2**	**+0.9**
SOEI	**Soe**	**14.80**	**193**	Pn	Pn	**18 21 41.3**	**-0.3**
SBUM	**Sibu**	**15.44**	**262**		Pn	**18 21 50.2**	**+0.6**
TPUB	**Ta-pu**	**19.57**	**341**	P	P	**18 22 35.1**	**-2.0**
TPUB				IAmb	IAmb	18 22 54.4	
KNRA	**Kununurra** comp=Z,29nm,1.4s	**20.37**	**177**	P	P	**18 22 43.3**	**-2.3**
KNRA				IAmb	IAmb	18 22 48.1	
YHNB	**Yeheng** comp=Z,12nm,0.8s	**20.64**	**344**	P	P	**18 22 43.6**	**-5.0**
YHNB				IAmb	IAmb	18 22 56.6	
WB0	**Warramunga Arr** comp=Z,30nm,1.3s	**25.32**	**165**		P	**18 23 33.1**	**-1.2**
WB0				IAmb	IAmb	18 23 37.4	
WRA	**Warramunga Arr** comp=Z,7.9nm,0.4s	**25.47**	**165**	P	P	**18 23 36.1**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=343,slow=10,SNR=20 comp=Z,1.3nm,0.4s						
WR8	**Warramunga Arr**	**25.53**	**165**	P	P	**18 23 35.3**	**-1.0**
NJ2	**Nanjing** comp=Z,7.0nm,0.5s	**28.32**	**344**	*e*P pmax	P pmax	**18 24 02.9**	**+1.8**
NJ2							
JNU	**Nakatsue**	**28.37**	**6**	P	P	**18 23 58.9**	**-2.7**
AS31	**Alice Springs**	**28.95**	**168**	P	P	**18 24 06.7**	**-0.2**
ASAR	**Alice Springs** comp=Z,0.9nm,0.6s,baz=356,slow=8.2,SNR=18	**28.96**	**168**	P	P	**18 24 07.8**	**+0.8**
ASAR				PcP	PcP	**18 27 13.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=350,slow=3.0,SNR=2.1 comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**28.96**	**168**	P	P	**18 24 05.3**	**-1.6**
JMN	**Monobe**	**29.40**	**11**	P	P	**18 24 08.7**	**-2.0**
LHMI	**Lhok Sumawe**	**30.45**	**272**		P	**18 24 18.0**	**-2.3**
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.4s,baz=113,slow=7.3,SNR=4.3 comp=Z,0.5nm,0.4s	**31.04**	**298**	P	P	**18 24 27.1**	**+1.7**
CHTO	**Chiang Mai**	**31.18**	**299**	P	P	**18 24 24.6**	**-2.0**
JGF	**Kuroka**	**31.98**	**15**	P	P	**18 24 31.2**	**-2.3**
JGF	comp=Z,12nm,1.2s			IAmb	IAmb	18 25 08.3	
KSRS	**Korea Array** comp=Z,1.6nm,0.8s,baz=180,slow=10.0,SNR=4.4 comp=Z,1.6nm,0.8s	**32.52**	**1**	P	P	**18 24 38.9**	**+0.8**
PZH	**PanZhiHua**	**32.76**	**314**	P	P	**18 24 40.8**	**+0.3**
MJAR	**Matsushiro Arr** comp=Z,0.7nm,0.5s,baz=184,slow=11,SNR=2.6 comp=Z,0.7nm,0.5s	**33.10**	**16**	P	P	**18 24 42.3**	**-0.9**
JMM	**Marumori**	**35.09**	**18**	P	P	**18 24 58.6**	**-1.7**
FORT	**Forrest**	**35.37**	**179**	P	P	**18 25 01.8**	**-1.0**
FORT	comp=Z,15nm,1.2s			IAmb	IAmb	18 25 26.9	
BBOO	**Buckleboo**	**38.26**	**168**	P	P	**18 25 28.1**	**+0.8**
HHC	**Hu-ho-hao-te**	**38.66**	**341**	*e*P	P	**18 25 31.9**	**+1.2**
HHC	comp=Z,9.0nm,0.8s			pmax	pmax		
HHC	comp=Z,110nm,4.9s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,2.4nm,0.4s,baz=338,slow=9.3,SNR=9.4 comp=Z,2.4nm,0.4s	**38.85**	**161**	P	P	**18 25 33.0**	**+0.7**
GTA	**Gaotai**	**42.61**	**328**	*e*P	P	**18 26 06.1**	**+2.8**
GTA	comp=Z,3.0nm,0.9s			pmax	pmax		
EVN	**Everest**	**45.01**	**305**		P	**18 26 20.5**	**-2.8**
EVN	comp=Z,4.1nm,0.5s			IAmb	IAmb	18 26 24.9	
SONM	**Songino Array** comp=Z,0.6nm,0.6s,baz=152,slow=7.8,SNR=6.0 comp=Z,0.6nm,0.6s	**46.56**	**340**	P	P	**18 26 35.3**	**+0.7**
PETK	**Petropavlovsk-** comp=Z,7.5nm,0.8s,baz=186,slow=4.5,SNR=5.6 comp=Z,7.5nm,0.8s	**54.16**	**22**	P	P	**18 27 32.9**	**+1.3**
PETK	**Petropavlovsk-**	**54.16**	**22**	P	P	**18 27 32.4**	**+0.9**
YAK	**Yakutsk** comp=Z,3.4nm,0.8s	**57.14**	**1**	P	P	**18 27 53.4**	**+0.8**
YAK				IAmb	IAmb	18 28 35.5	
MKAR	**Makanchi Array** comp=Z,0.8nm,0.4s,baz=118,slow=7.9,SNR=18	**57.15**	**325**	P	P	**18 27 54.3**	**+1.2**
MKAR	comp=Z,1.0nm,0.6s,baz=123,slow=8.5,SNR=3.2 comp=Z,0.8nm,0.4s			pP	**pwP**	**18 28 23.8**	**-0.2**
MKAR	**Makanchi Array**	**57.15**	**325**	P	P	**18 27 53.0**	**-0.1**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.3s,baz=137,slow=6.5,SNR=3.1 comp=Z,0.5nm,0.3s	**60.02**	**332**	P	P	**18 28 13.4**	**+0.6**
KURK	**Kurchatov**	**61.28**	**327**		P	**18 28 21.6**	**+0.2**
KURK	comp=Z,2.7nm,0.6s			IAmb	IAmb	18 28 26.6	
KURBB	**Kurchatov Arra** comp=Z,2.4nm,0.7s,baz=127,slow=6.5,SNR=42	**61.29**	**327**	P	P	**18 28 22.1**	**+0.6**
KURBB	comp=Z,0.9nm,0.6s,baz=125,slow=6.3,SNR=3.1 comp=Z,2.4nm,0.7s			pP	**pwP**	**18 28 52.6**	**+0.3**
TIXI	**Tiksi**	**66.79**	**0**		P	**18 28 56.1**	**-1.0**
TIXI	comp=Z,5.5nm,0.5s			IAmb	IAmb	18 28 58.1	
BVAR	**Borovoye Array** comp=Z,1.5nm,0.7s,baz=128,slow=8.0,SNR=7.9	**66.87**	**327**	P	P	**18 28 58.9**	**+1.0**
BVAR	comp=Z,1.2nm,0.8s,baz=111,slow=7.9,SNR=2.9 comp=Z,1.5nm,0.7s			pP	**pwP**	**18 29 28.7**	**-2.1**
ILAR	**Eielson Array** comp=Z,0.5nm,0.6s,baz=261,slow=5.7,SNR=9.0 comp=Z,0.5nm,0.6s	**83.82**	**25**	P	P	**18 30 34.3**	**-0.4**
ILAR	**Eielson Array**	**83.82**	**25**	P	P	**18 30 33.9**	**-0.8**
VNDA	**Vanda** comp=Z,0.4nm,0.8s,baz=264,slow=4.5,SNR=2.7 comp=Z,0.4nm,0.8s	**84.37**	**173**	P	P	**18 30 37.7**	**+0.5**
VNDA	**Vanda**	**84.37**	**173**	P	P	**18 30 37.7**	**+0.5**
ARCES	**ARCESS Array B** comp=Z,2.1nm,0.8s,baz=78,slow=4.9,SNR=4.7 comp=Z,2.1nm,0.8s	**89.73**	**340**	P	P	**18 31 02.4**	**-0.9**

*IDC **17** 18:23:25.8±1.4,6°.90N×94°.14E,h0km,mb3.6/10,*
mbtmp3.6/12,ML3.6/1,MS2.9/4,Error ellipse:
s-maj=59.7km s-min=16.0km az=57.0
*BKK **17** 18:23:26.2±0.9,7°N±7°×9°4E±°,h10km,M4.0/7,mB4.5/2,*
mb4.2/4,Mjma3.6/7,ML4.3/7,MLv4.0/6,Mw(mB)3.6/2

ISC 17 18:23:30.7±1.0,**7°.07N**±0°.10×**94°.4E**±0°.2,**h26**km,**n22,**
σ0s**92**/14,**mb3.6**/10,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKDT	**Phuket**	**3.94**	**78**	P	Pn	**18 24 29.1**	**-0.5**
RNTT	**Ranong**	**4.61**	**60**	P	Pn	**18 24 37.5**	**-1.2**
PSI	**Prapat** 2.9nm,0.4s	**6.16**	**133**	Pn	Pn	**18 25 00.1**	**0.0**
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=210,slow=14,SNR=2.2	**12.13**	**21**	Pn	Pn	**18 26 23.2**	**+1.1**
CMAR	comp=Z,24nm,19.7s,baz=165,slow=37 0.4nm,0.5s			LR	LR	18 31 00.8	
PALK	**Pallekele** comp=Z,47nm,20.5s,baz=98,slow=36	**13.64**	**272**	LR	LR	18 31 22.0	
H08S3	**Diego Garcia H** baz=56,slow=76,SNR=67	**26.32**	**237**	T	T	18 55 42.8	
H08S2	**Diego Garcia H** baz=56,slow=76,SNR=57	**26.34**	**237**	T	T	18 55 40.8	
H08S1	**Diego Garcia H** baz=56,slow=76,SNR=40	**26.34**	**237**	T	T	18 55 47.4	
KAPI	**Kappang** comp=Z,39nm,18.4s,baz=30,slow=40	**27.96**	**115**	LR	LR	18 42 24.0	
FITZ	**Fitzroy Crossi** 1.1nm,0.8s,baz=252,slow=3.2,SNR=1.5 1.1nm,0.8s	**39.67**	**129**	P	P	**18 31 00.8**	**-0.2**
MKAR	**Makanchi Array** 1.0nm,1.0s,baz=174,slow=7.7,SNR=5.2 1.0nm,1.0s	**40.93**	**347**	P	P	**18 31 10.2**	**-0.8**
SONM	**Songino Array** 0.3nm,0.5s,baz=198,slow=8.9,SNR=1.8	**41.88**	**12**	P	P	**18 31 20.4**	**+1.5**
SONM	comp=Z,21nm,19.0s,baz=316,slow=39 0.3nm,0.5s			LR	LR	18 51 00.2	
KURBB	**Kurchatov Arra** 0.2nm,0.6s,baz=173,slow=7.2,SNR=6.3 0.2nm,0.6s	**45.39**	**346**	P	P	**18 31 46.6**	**-0.3**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=187,slow=7.0,SNR=6.1 0.3nm,0.4s	**47.38**	**352**	P	P	**18 32 02.8**	**+0.2**
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=306,slow=8.6,SNR=4.7 0.2nm,0.5s	**47.55**	**125**	P	P	**18 32 04.5**	**+0.1**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=301,slow=7.9,SNR=14 0.2nm,0.4s	**49.17**	**130**	P	P	**18 32 16.9**	**0.0**
BVAR	**Borovoye Array** 0.3nm,0.4s,baz=139,slow=4.8,SNR=2.2 0.3nm,0.4s	**49.84**	**341**	P	P	**18 32 19.9**	**-1.6**
H04N2	**CROZET ISLANDS** baz=47,slow=75,SNR=9.9	**65.20**	**211**	T	T	19 44 43.1	
H04N1	**CROZET ISLANDS** baz=47,slow=75,SNR=13	**65.21**	**211**	T	T	19 44 47.9	
H04N3	**CROZET ISLANDS** baz=47,slow=75,SNR=10	**65.22**	**211**	T	T	19 44 42.3	
FINES	**FINESS Array B** 3.0nm,1.0s,baz=29,slow=3.2,SNR=4.0 3.0nm,1.0s	**73.56**	**332**	P	P	**18 35 00.6**	**-0.7**
HFS	**Hagfors** 0.9nm,0.8s,baz=86,slow=2.2,SNR=1.3 0.9nm,0.8s	**79.30**	**330**	P	P	**18 35 33.6**	**-0.2**

DJA 17 18:30:52.7±0.4,**2°N**±3°×**12°7E**±°,**h117**km±6km,**M3.6**/13,
mb3.8/4,**MLv3.6**/13,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.84**	**159**	P	Pn	18 31 14.1	+1.1
TNTI				S	Sn	18 31 30.2	+1.9
SGSI	**Sangihe**	**2.61**	**324**	P	Pn	18 31 33.4	-0.4
KMSI	**Cibinong**	**3.23**	**252**	P	Pn	18 31 42.6	+0.7
SANI	**Sanana**	**3.74**	**197**	P	Pn	18 31 48.0	-0.8
NLAI	**Namlea**	**4.77**	**180**	P	Pn	18 32 02.9	+0.4
SWI	**Sorong**	**4.84**	**120**	P	Pn	18 32 03.2	-0.3
LUWI	**Luwuk** 0.1nm16nm,0.9s	**5.01**	**239**	P	Pn	18 32 05.8	+0.1
AAI	**Ambon** 36nm,1.1s	**5.33**	**168**	P	Pn	18 32 09.8	-0.4

*DJA **17** 18:32:20.3±0.3,11°.5±4°×11°.7E±°,h10km,M4.0/16,*
mb4.0/10,MLv4.0/16
*IDC **17** 18:32:25.5±2.3,11°.71S×116°.65E,h0km,mb3.5/2,*
mbtmp3.5/5,ML3.3/3,Error ellipse: s-maj=73.3km
s-min=27.5km az=42.0

ISC 17 18:32:23.0±1.1,**11°.18S**±0°.08×**116°.55E**±0°.07,**h35**km,**n19,**
σ2s**36**/22,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**2.44**	**8**	P	Pn	**18 33 00.6**	**+0.2**
PLAI	**Plampang**	**2.63**	**27**	P	Pn	**18 33 03.6**	**+0.7**
PLAI				S	Sn	**18 33 31.0**	**-2.6**
WBSI	**Waikabubak, Su**	**3.19**	**62**	P	Pn	**18 33 11.0**	**+0.4**
WBSI				S	Sn	**18 33 45.2**	**-2.2**
JAGI	**Jajag, Banyuwa**	**3.58**	**318**	P	Pn	**18 33 15.2**	**-0.8**
JAGI				S	Sn	**18 33 53.9**	**-3.2**
WSI	**Waingapu**	**3.98**	**68**	P	Pn	**18 33 21.7**	**+0.2**
EDFI	**Ende, Flores** 0.0nm6.8nm,1.0s	**5.61**	**65**	P	Pn	**18 33 44.6**	**+0.6**
PCJI	**Pacitan**	**6.07**	**299**	P	Pn	**18 33 52.1**	**+1.8**
MMRI	**Maumere** 0.1nm8.6nm,0.6s	**6.15**	**66**	P	Pn	**18 33 51.3**	**0.0**
BSSI	**Bau Bau, Buton** 0.2nm77nm,1.8s	**6.34**	**38**	P	Pn	**18 33 54.7**	**+0.7**
UGM	**Wanagama** 70nm,1.8s	**6.77**	**298**	P	Pn	**18 34 01.5**	**+1.6**
BKSI	**Bulukumba** 0.1nm12nm,1.1s	**6.81**	**32**	P	Pn	**18 34 02.4**	**+2.0**
BATI	**Baumata** 0.8nm,0.3s,baz=95,slow=16,SNR=1.1	**7.06**	**83**	Pn	Pn	18 34 09.5	+5.6
BATI	1.7nm,0.3s,baz=165,slow=20,SNR=4.8 3.6nm,0.4s			Sn	**Sn**	**18 35 22.5**	**-0.4**
BATI	**Baumata** 0.1nm8.0nm,0.8s	**7.06**	**83**	P	Pn	**18 34 04.8**	**+0.9**
BNSI	**Bone** 0.1nm12nm,1.1s	**7.60**	**28**	P	Pn	**18 34 13.2**	**+1.9**
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=307,slow=10,SNR=12	**11.16**	**129**	Pn	Pn	**18 34 59.6**	**-0.6**
FITZ	0.5nm,0.3s,baz=308,slow=19,SNR=11 1.0nm,0.5s			Sn	Sn	18 36 52.2	-12
SANI	**Sanana**	**13.04**	**47**	P	Pn	**18 35 26.0**	**+0.2**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=294,slow=13,SNR=2.5	**19.21**	**119**	P	Pn	**18 36 47.9**	**+2.6**
WRA	0.4nm,0.9s,baz=286,slow=24,SNR=2.0 0.3nm,0.5s			S	Sn	18 40 08.8	-11
ASAR	**Alice Springs** 0.3nm,0.5s,baz=300,slow=9.6,SNR=8.3	**20.67**	**129**	P	P	**18 37 03.7**	**+3.7**
ASAR	0.3nm,0.6s,baz=304,slow=23,SNR=5.7 0.3nm,0.5s			S	**S**	**18 40 42.5**	**-6.8**
MKAR	**Makanchi Array** 1.4nm,0.5s,baz=162,slow=7.2,SNR=2.1 1.4nm,0.5s	**65.34**	**335**	P	P	18 43 12.8	+11

*IDC **17** 18:32:36.9±2.5,6°.69N×93°.60E,h0km,mb3.5/3,*
mbtmp3.4/4,ML3.6/1,Error ellipse: s-maj=95.2km
s-min=31.3km az=62.0

BKK 17 18:32:42.9±1.3,**7°N**±7°×**9°5E**±°,**h14**km±11km,**M3.7**/7,
mB4.7/1,mb3.8/3,Mjma3.1/7,MLL3.9/7,MLv3.7/7,
Mw(mB)3.9/1,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKDT	**Phuket**	**3.41**	**81**	P	Pn	18 33 34.7	-1.0
RNTT	**Ranong**	**4.03**	**60**	P	Pn	18 33 44.7	+0.4
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=198,slow=15,SNR=1.9 0.2nm,0.3s	**11.67**	**19**	Pn	Pn	18 35 40.1	+11
H08S3	**Diego Garcia H** baz=56,slow=76,SNR=7.2	**26.90**	**237**	T	T	19 04 51.3	
H08S2	**Diego Garcia H** baz=56,slow=76,SNR=5.9	**26.90**	**237**	T	T	19 04 51.3	
H08S1	**Diego Garcia H** baz=56,slow=76,SNR=5.7	**26.92**	**237**	T	T	19 04 47.6	
MKAR	**Makanchi Array** 1.1nm,0.9s,baz=164,slow=6.3,SNR=4.2 1.1nm,0.9s	**40.73**	**347**	P	P	18 40 23.0	-0.4
KURBB	**Kurchatov Arra** 0.7nm,0.8s,baz=171,slow=6.4,SNR=8.1 0.7nm,0.8s	**45.21**	**345**	P	P	18 40 58.0	-1.5
ASAR	**Alice Springs** 0.2nm,0.7s,baz=302,slow=8.1,SNR=1.9 0.2nm,0.7s	**49.01**	**130**	P	P	18 41 30.1	+0.5

*IDC **17** 18:41:23.4±1.4,1°.53N×126°.27E,h0km,mb3.4/4,*
mbtmp3.4/5,ML3.2/1,Error ellipse: s-maj=116.6km
s-min=20.0km az=68.0
*DJA **17** 18:41:26.4±0.3,1°.N±3°×12°.6E±°,h10km,M3.5/11,*
MLv3.5/11

ISC 17 18:41:28.5±1.0,**1°.48N**±0°.08×**126°.56E**±0°.08,**h35**km,**n11,**
σ1s**02**/12,**mb3.5/4**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.07**	**131**	P	Pn	**18 41 46.9**	**-0.1**
SGSI	**Sangihe**	**2.42**	**335**	P	Pn	**18 42 05.8**	**+0.2**
KMSI	**Cibinong**	**2.73**	**251**	P	Pn	**18 42 09.6**	**-0.3**
SANI	**Sanana**	**3.55**	**189**	P	Pn	**18 42 20.2**	**-1.0**
LUWI	**Luwuk**	**4.54**	**237**	P	Pn	**18 42 35.5**	**+0.7**
MRSI	**Marisa**	**4.73**	**258**	P	Pn	**18 42 37.2**	**-0.2**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=356,slow=12,SNR=1.5 1.4nm,0.7s	**19.48**	**183**	P	P	**18 45 52.7**	**+0.2**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=338,slow=10,SNR=8.8 0.4nm,0.3s	**22.61**	**161**	P	P	**18 46 26.2**	**-0.3**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=345,slow=11,SNR=9.7	**26.00**	**164**	P	P	**18 46 59.9**	**+1.6**
ASAR	0.3nm,1.0s,baz=352,slow=2.9,SNR=1.8 0.2nm,0.4s			PcP	**PcP**	**18 50 27.6**	**+1.4**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=122,slow=6.8,SNR=6.1 0.2nm,0.3s	**59.31**	**326**	P	P	**18 51 25.6**	**-1.3**
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=127,slow=6.3,SNR=5.7 0.3nm,0.5s	**63.54**	**328**	P	P	**18 51 54.3**	**-1.1**

*SSNC **17** 18:51:28.5±2.4,18°.86N×70°.43W,

NEDR			⇑eSg	Sn	18 52 07.8	+0.1	
NEDR			IAML		18 52 09.0		
	comp=N,244nm,0.3s						
PODR	Polo	1.09 234	⇑ePg	Pn	18 51 52.1	+1.8	
PODR			⇓eSg	Sn	18 52 09.2	+0.6	
PODR			IAML		18 52 12.6		
	comp=N,522nm,0.6s						
SMDR	Samana, DR	1.21 67	⇑ePg	Pn	18 51 52.1	+0.8	
SMDR			⇑eSg	Sn	18 52 09.8	-0.5	
SMDR			IAML		18 52 15.8		
	comp=N,532nm,0.5s						
LUDR	Luperon	1.21 333	⇑ePg	Pn	18 51 52.5	+1.2	
LUDR			⇑eSg	Sn	18 52 10.2	-0.3	
MIDR	Miches	1.25 82	⇑ePg	Pn	18 51 53.6	+1.9	
MIDR			⇑eSg	Sn	18 52 11.0	-0.2	
MIDR			IAML		18 52 12.5		
	comp=N,202nm,0.3s						
JIDR	Jimani	1.45 257	⇑ePg	Pn	18 51 56.2	+2.4	
JIDR			eSg	Sn	18 52 13.5	-1.4	
JIDR			IAML		18 52 18.1		
	comp=N,158nm,0.4s						
HIDR	Higuey Centro	1.57 98	⇑ePg	Pn	18 51 57.2	+2.0	
HIDR			⇓eSg	Sn	18 52 18.1	+0.7	
HIDR			IAML		18 52 20.6		
	comp=N,501nm,0.3s						
MCDR	Montecristi	1.63 311	⇑ePg	Pn	18 51 57.1	+1.3	
MCDR			⇓eSg	Sn	18 52 18.6	+0.1	
MCDR			IAML		18 52 19.4		
	comp=N,568nm,0.4s						
GRTK	Grand Turk	2.78 345	eP	Pn	18 52 11.4	+1.4	
GRTK			eS	Sn	18 52 41.5	-2.4	
GRTK			IAML		18 52 44.1		
	comp=N,550nm,0.2s						
GRTK			IAML		18 52 44.5		
	comp=N,266nm,0.2s						
MASC	Masc	3.90 291	eP	Pn	18 52 25.5	+1.0	
MASC			eS	Sn	18 53 09.5	-0.3	
MASC			IAML		18 53 12.6		
	comp=N,10nm,0.2s						
MASC			IAML		18 53 13.3		
	comp=E,18nm,0.3s						
QMBU	Quimbuelo	4.42 289	eP	Pn	18 52 32.0	+0.5	
QMBU			eS	Sn	18 53 20.4	-2.0	
QMBU			IAML		18 53 23.0		
	comp=E,20nm,0.0s						
QMBU			IAML		18 53 24.2		
	comp=N,17nm,0.4s						
GTBY	Guantanamo Bay	4.62 285	eP	Pn	18 52 35.9	+1.7	
GTBY			eS	Sn	18 53 25.1	-2.0	
GTBY			IAML		18 53 29.1		
	comp=N,12nm,0.9s						
GTBY			IAML		18 53 32.4		
	comp=N,13nm,0.4s						
MOAC	Moa	4.71 294	*i* P	Pn	18 52 35.7	+0.4	
MOAC			eS	Sn	18 53 27.0	-2.2	
MOAC			IAML		18 53 29.8		
	comp=E,11nm,0.2s						
MOAC			IAML		18 53 33.2		
	comp=N,11nm,0.6s						
MARVS	Santiago de Cu	5.36 284	eP	Pn	18 52 43.9	-0.2	
MARVS			eS	Sn	18 53 45.4	+0.5	
MARVS			IAML		18 53 46.9		
	comp=E,6.6nm,0.7s						
MARVS			IAML		18 53 50.5		
	comp=N,5.5nm,0.7s						
PINC	Pinares de May	5.38 289	eP	Pn	18 52 44.5	+0.2	
PINC			eS	Sn	18 53 40.5	-4.8	
PINC			IAML		18 53 42.4		
	comp=E,2.7nm,0.0s						
PINC			IAML		18 53 42.4		
	comp=N,4.4nm,0.2s						

IDC ***17*** *18:51:58.3±1.1, 1°.48N×126°.29E, h0km, mb3.8/9, mbtmp3.7/10, ML3.5/1, Error ellipse: s-maj=119.4km s-min=14.9km az=69.0*

DJA ***17*** *18:52:01.8±0.3, 2°.N×3°×12°.6E±°, h10km, M3.9/12, mB4.7/1, mb4.0/3, MLv3.8/12, Mw(mB)3.9/1*

ISC 17 18:52:03.3±0.8, **1°.59N**±0°.07×**126°.62E**±0°.08, **h35km, n17, g0 77/18, mb3.9/9, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.10**	**137**	P		**Pn**	**18 52 22.4**	**+0.2**
SGSI	**Sangihe**	**2.35**	**332**	P		**Pn**	**18 52 39.3**	**-0.2**
KMSI	**Cibinong**	**2.82**	**249**	P		**Pn**	**18 52 45.2**	**-0.7**
SANI	**Sanana**	**3.67**	**190**	P		**Pn**	**18 52 57.0**	**-0.6**
LUWI	**Luwuk**	**4.65**	**236**	P		**Pn**	**18 53 12.1**	**+1.0**
MRSI	**Marisa**	**4.81**	**257**	P		**Pn**	**18 53 12.4**	**-0.8**
APSI	**Ampana**	**5.55**	**244**	P		**Pn**	**18 53 25.0**	**+1.5**
FITZ	**Fitzroy Crossi**	**19.59**	**183**	P		**P**	**18 56 27.1**	**-1.4**
	0.1nm,0.3s,baz=16,slow=12,SNR=0.7							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**22.70**	**161**	P		**P**	**18 57 01.4**	**-0.6**
	2.3nm,0.4s,baz=340,slow=11,SNR=36							
	2.3nm,0.4s							
ASAR	**Alice Springs**	**26.08**	**165**	P		**P**	**18 57 33.7**	**-0.2**
	0.5nm,0.3s,baz=344,slow=9.9,SNR=24							
ASAR				PcP		**PcP**	**19 01 01.7**	**+0.6**
	0.1nm,0.5s,baz=7.1,slow=1.7,SNR=2.0							
	0.5nm,0.3s							
STKA	**Stephens Creek**	**36.19**	**158**	P		**P**	**18 59 02.9**	**+0.2**
	2.1nm,0.8s,baz=318,slow=13,SNR=3.3							
	2.1nm,0.8s							
SONM	**Songino Array**	**49.28**	**342**	P		**P**	**19 00 49.4**	**+0.6**
	0.3nm,0.6s,baz=146,slow=8.2,SNR=2.3							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**59.25**	**326**	P		**P**	**19 02 00.8**	**-0.5**
	0.5nm,0.5s,baz=121,slow=8.3,SNR=8.9							
	0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**62.44**	**334**	P		**P**	**19 02 22.5**	**-0.3**
	0.3nm,0.3s,baz=142,slow=7.3,SNR=1.9							
	0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**63.48**	**328**	P		**P**	**19 02 29.2**	**-0.6**
	1.3nm,0.6s,baz=127,slow=6.4,SNR=16							
	1.3nm,0.6s							
BVAR	**Borovoye Array**	**69.05**	**327**	P		**P**	**19 03 05.9**	**+0.5**
	0.4nm,0.4s,baz=151,slow=9.4,SNR=2.7							
	0.4nm,0.4s							
VNDA	**Vanda**	**81.33**	**173**	P		**P**	**19 04 16.1**	**+0.4**
	0.2nm,0.4s,baz=309,slow=6.4,SNR=1.8							
	0.2nm,0.4s							

IDC 17 18:54:38.4±6.1, **29°.15S**×**178°.03W, h0km, mb3.2/2, mbtmp3.2/2, Error ellipse: s-maj=347.3km s-min=85.0km az=165.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.16**	**266**	P		P	19 02 40.6	-0.5
	0.1nm,0.5s,baz=102,slow=7.4,SNR=1.2							
	0.1nm,0.5s							
WRA	**Warramunga Arr**	**44.04**	**271**	P		P	19 02 48.3	+0.2
	0.3nm,0.4s,baz=111,slow=7.9,SNR=6.0							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**143.97**	**341**	PKP		PKPdf	19 14 14.4	-0.7
	2.2nm,1.0s,baz=42,slow=3.1,SNR=7.6							

JMA ***17*** *18:56:56.2±0.2, 24°.5N±0°.6×12°.2E±°, h61km±2km, MV3.5/15, TAIWAN REGION*

TAP ***17*** *18:56:56.6, 24°.53N×121°.70E, h60km, ML4.3, B*

IDC ***17*** *18:56:59.5±3.3, 24°.51N×121°.94E, h96km±34km, mb3.1/9, mbtmp3.5/11, MS2.7/1, Error ellipse: s-maj=22.7km s-min=19.4km az=61.0*

ISC 17 18:56:56.8±0.7, **24°.54N**±0°.02×**121°.72E**±0°.02, **h63**km±3km, **n195, σ1s13/339, mb3.3/9, 9C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NDS	**Dongshan**	**0.10**	**357**	⇑*i*P		**Pn**	**18 57 06.1**	**-0.1**
NDS				*i* S		**Sn**	**18 57 12.9**	**-0.2**
EWUT	**Wuta**	**0.10**	**150**	P		**Pn**	**18 57 06.0**	**-0.3**
EWUT				*i* S		**Sn**	**18 57 12.4**	**-0.6**
ENA	**Nanau**	**0.11**	**171**	P		**Pn**	**18 57 05.9**	**-0.4**
ENA				*i* S		**Sn**	**18 57 12.5**	**-0.6**
ESAO	**Su ao**	**0.12**	**70**	*i* P		**Pn**	**18 57 06.5**	**+0.2**
ESAO				S		**Sn**	**18 57 13.9**	**+0.7**
TWC	**Suao**	**0.14**	**57**	*i* P		**Pn**	**18 57 06.5**	**+0.1**
TWC				S		**Sn**	**18 57 13.4**	**+0.1**
ENTT	**Nioudou**	**0.18**	**306**	*i* P		**Pn**	**18 57 06.4**	**-0.2**
ENTT				*i* S		**Sn**	**18 57 12.9**	**-0.8**
LATG	**Datong**	**0.18**	**270**	⇓*i*P		**Pn**	**18 57 06.5**	**-0.2**
LATG				*i* S		**Sn**	**18 57 13.4**	**-0.5**
TWE	**Neicheng**	**0.19**	**345**	*i* P		**Pn**	**18 57 06.6**	**0.0**
TWE				*i* S		**Sn**	**18 57 13.7**	**0.0**
EAHA	**Aohua**	**0.20**	**176**	*i* P		**Pn**	**18 57 06.1**	**-0.6**
EAHA				*i* S		**Sn**	**18 57 13.7**	**-0.1**
EHP	**Heping Village**	**0.22**	**176**	P		**Pn**	**18 57 06.7**	**-0.1**
EHP				*i* S		**Sn**	**18 57 14.6**	**+0.6**
ILA	**Ilan**	**0.23**	**6**	*i* P		**Pn**	**18 57 06.9**	**+0.1**
ILA				*i* S		**Sn**	**18 57 14.7**	**+0.7**
FUSB	**Fushanzhiwuyua**	**0.26**	**331**	⇑*i*P		**Pn**	**18 57 06.9**	**-0.2**
FUSB				*i* S		**Sn**	**18 57 13.7**	**-0.8**
NWLT	**Wulai**	**0.31**	**320**	⇑*i*P		**Pn**	**18 57 07.1**	**-0.4**
NWLT				*i* S		**Sn**	**18 57 13.9**	**-1.2**
NNSH	**Datong**	**0.33**	**251**	⇓*i*P		**Pn**	**18 57 07.5**	**-0.1**
NNSH				*i* S		**Sn**	**18 57 14.9**	**-0.6**
NNSB	**Datong**	**0.33**	**251**	⇓*i*P		**Pn**	**18 57 07.6**	**0.0**
NNSB				*i* S		**Sn**	**18 57 14.9**	**-0.6**
NNS	**Nan Shan**	**0.33**	**254**	⇓*i*P		**Pn**	**18 57 07.6**	**0.0**
NNS				*i* S		**Sn**	**18 57 15.1**	**-0.5**
NTC	**Toucheng**	**0.33**	**17**	*i* P		**Pn**	**18 57 07.7**	**+0.2**
NTC				*i* S		**Sn**	**18 57 15.7**	**+0.4**
YHNB	**Yeheng**	**0.34**	**293**	P		**Pn**	**18 57 07.6**	**-0.1**
YHNB	**Yeheng**	**0.34**	**293**	S		**Sn**	**18 57 14.8**	**-0.8**
YHNB	**Yeheng**	**0.34**	**293**	⇑*i*P		**Pn**	**18 57 07.3**	**-0.4**
YHNB				*i* S		**Sn**	**18 57 14.6**	**-1.1**
NSK	**Sanguang**	**0.36**	**293**	⇑*i*P		**Pn**	**18 57 07.4**	**-0.4**
NSK				*i* S		**Sn**	**18 57 14.9**	**-1.0**
EGS		**0.36**	**32**	*i* P		**Pn**	**18 57 08.5**	**+0.8**
EGS				eS		**Sn**	**18 57 17.5**	**+1.8**
NACB	**Ninganchiao**	**0.38**	**198**	P		**Pn**	**18 57 06.9**	**-1.1**
NACB	**Ninganchiao**	**0.38**	**198**	P		Pn	18 57 15.0	+7.1
NACB	**Ninganchiao**	**0.38**	**198**	⇓*i*P		**Pn**	**18 57 06.8**	**-1.1**
NACB				*i* S		**Sn**	**18 57 14.8**	**-1.5**
ETL	**Fush Village**	**0.39**	**194**	⇓*i*P		**Pn**	**18 57 07.0**	**-1.1**
ETL				*i* S		**Sn**	**18 57 14.8**	**-1.3**
ETLH	**Xiulin Townshi**	**0.39**	**214**	*i* P		**Pn**	**18 57 07.5**	**-0.6**
ETLH				S		**Sn**	**18 57 15.4**	**-1.0**
TIPB	**Shuangxi**	**0.45**	**12**	*i* P		**Pn**	**18 57 08.5**	**-0.1**
TIPB				*i* S		**Sn**	**18 57 16.7**	**-0.4**
TWA	**Mucha**	**0.46**	**344**	⇑*i*P		**Pn**	**18 57 08.3**	**-0.4**
TWA				*i* S		**Sn**	**18 57 16.5**	**-0.8**
NHDH	**Xindian Distri**	**0.46**	**337**	*i* P		**Pn**	**18 57 08.3**	**-0.4**
NHDH				*i* S		**Sn**	**18 57 16.5**	**-0.8**
TWD	**Chiawan**	**0.47**	**194**	⇓*i*P		**Pn**	**18 57 07.6**	**-1.1**
TWD				*i* S		**Sn**	**18 57 15.6**	**-1.7**
TATO	**Taipei**	**0.49**	**334**	P		**Pn**	**18 57 08.4**	**-0.6**
TATO	**Taipei**	**0.49**	**334**	S		**Sn**	**18 57 16.9**	**-0.8**
TATO	**Taipei**	**0.49**	**334**	⇑*i*P		**Pn**	**18 57 08.3**	**-0.6**
TATO				S		**Sn**	**18 57 16.6**	**-1.2**
FUSS	**Fushou**	**0.52**	**237**	*i* P		**Pn**	**18 57 09.7**	**+0.1**
FUSS				*i* S		**Sn**	**18 57 18.4**	**-0.4**
NHY	**Taipei**	**0.52**	**345**	eP		**Pn**	**18 57 09.0**	**-0.3**
NHY				S		**Sn**	**18 57 17.7**	**-0.6**
BACT	**New Taipei Cit**	**0.53**	**331**	P		**Pn**	**18 57 09.0**	**-0.4**
BACT				S		**Sn**	**18 57 18.1**	**-0.4**
TWB1	**Santiao Chiao**	**0.53**	**27**	⇑*i*P		**Pn**	**18 57 09.7**	**+0.3**
TWB1				*i* S		**Sn**	**18 57 19.0**	**+0.5**
NWF	**Wu-fen Shan**	**0.54**	**6**	P		**Pn**	**18 57 09.5**	**-0.1**
NWF				*i* S		**Sn**	**18 57 18.3**	**-0.6**
WFSB	**Wu-fen Shan**	**0.54**	**6**	*i* P		**Pn**	**18 57 09.4**	**-0.1**
WFSB				*i* S		**Sn**	**18 57 18.3**	**-0.4**
TAP	**Taipei**	**0.54**	**339**	*i* P		**Pn**	**18 57 09.1**	**-0.4**
TAP				*i* S		**Sn**	**18 57 17.9**	**-0.7**
KSHI	**Guanxi Townshi**	**0.55**	**296**	*i* P		**Pn**	**18 57 09.6**	**0.0**
KSHI				S		**Sn**	**18 57 19.0**	**0.0**
NFF	**Wufeng Townshi**	**0.56**	**280**	*i* P		**Pn**	**18 57 09.6**	**-0.2**
NFF				S		**Sn**	**18 57 18.6**	**-0.6**
HWA	**Hwalien**	**0.56**	**191**	*i* P		**Pn**	**18 57 09.3**	**-0.8**
HWA				S		**Sn**	**18 57 18.6**	**-0.6**
WHF	**Hehuan Shan**	**0.57**	**227**	*i* P		**Pn**	**18 57 10.0**	**-0.3**
WHF				*i* S		**Sn**	**18 57 19.6**	**-0.4**
TWT	**Tachien**	**0.57**	**241**	*i* P		**Pn**	**18 57 10.4**	**+0.4**
TWT				*i* S		**Sn**	**18 57 19.8**	**+0.1**
SXI1	**Grass Mountain**	**0.57**	**14**	*i* P		**Pn**	**18 57 09.8**	**-0.1**
SXI1				S		**Sn**	**18 57 18.8**	**-0.7**
LXIB	**Xiulin Townshi**	**0.58**	**209**	*i* P		**Pn**	**18 57 09.1**	**-1.0**
LXIB				S		**Sn**	**18 57 18.6**	**-1.2**
TDCB	**Techi**	**0.58**	**241**	⇓*i*P		**Pn**	**18 57 10.4**	**+0.3**
TDCB				*i* S		**Sn**	**18 57 19.6**	**-0.3**
ETM	**Tongmen**	**0.60**	**200**	eP		**Pn**	**18 57 08.9**	**-1.3**
ETM				*i* S		**Sn**	**18 57 17.9**	**-2.1**
NJD	**Zhudong**	**0.61**	**289**	P		**Pn**	**18 57 10.2**	**-0.1**
NJD				S		**Sn**	**18 57 21.6**	**+1.5**
TNOU	**National Taiwa**	**0.61**	**4**	*i* P		**Pn**	**18 57 09.9**	**-0.4**
TNOU				eS		**Sn**	**18 57 18.9**	**-1.2**
YM01	**YM01**	**0.62**	**347**	*i* P		**Pn**	**18 57 10.4**	**-0.5**
YM01				*i* S		**Sn**	**18 57 19.4**	**-1.0**
TWS1	**Kuangyinshan**	**0.63**	**334**	⇑*i*P		**Pn**	**18 57 10.2**	**-0.2**
TWS1				*i* S		**Sn**	**18 57 20.2**	**-0.2**
ZUZH	**Zhuzihu**	**0.65**	**346**	*i* P		**Pn**	**18 57 10.3**	**-0.4**
ZUZH				S		**Sn**	**18 57 19.7**	**-1.2**
NCU	**National Centr**	**0.65**	**312**	eP		**Pn**	**18 57 08.9**	**-1.8**
NCU				eS		**Sn**	**18 57 19.0**	**-1.9**
NCUH	**Zhongli**	**0.65**	**312**	*i* P		**Pn**	**18 57 10.5**	**-0.2**
NCUH				*i* S		**Sn**	**18 57 20.3**	**-0.6**
LIOB	**Emei**	**0.65**	**280**	*i* P		**Pn**	**18 57 10.6**	**-0.1**
LIOB				S		**Sn**	**18 57 20.7**	**-0.2**
YM08	**YM08**	**0.66**	**350**	*i* P		**Pn**	**18 57 10.1**	**-0.8**
YM08				eS		**Sn**	**18 57 19.3**	**-1.9**
NSTT	**Nanjuang**	**0.66**	**278**	*i* P		**Pn**	**18 57 10.7**	**-0.1**
NSTT				S		**Sn**	**18 57 20.3**	**-0.8**
TEYL	**Yanliau Villag**	**0.67**	**190**	P		**Pn**	**18 57 10.2**	**-0.8**
ANP	**Anpu**	**0.67**	**344**	*i* P		**Pn**	**18 57 10.4**	**-0.7**
ANP				*i* S		**Sn**	**18 57 20.1**	**-1.4**
NTST	**Danshui**	**0.67**	**339**	P		**Pn**	**18 57 10.8**	**-0.2**
NTST				S		**Sn**	**18 57 21.1**	**-0.3**
SBCB	**Hsinchu**	**0.72**	**291**	P		**Pn**	**18 57 11.2**	**-0.3**
SBCB				S		**Sn**	**18 57 22.0**	**-0.2**
HSN	**Hsinchu**	**0.73**	**291**	*i* P		**Pn**	**18 57 11.2**	**-0.5**
HSN				*i* S		**Sn**	**18 57 21.8**	**-0.7**
TWY	**Chenhua**	**0.75**	**351**	eP		**Pn**	**18 57 11.8**	**-0.1**
TWY				*i* S		**Sn**	**18 57 22.4**	**-0.4**
WHP	**Taichung City**	**0.75**	**250**	*i* P		**Pn**	**18 57 12.6**	**+0.6**
WHP				S		**Sn**	**18 57 23.5**	**+0.4**
SHUL	**Shoufeng**	**0.76**	**191**	*i* P		**Pn**	**18 57 11.4**	**-0.6**
SHUL				S		**Sn**	**18 57 22.9**	**-0.1**
OWD	**Renai**	**0.76**	**221**	*i* P		**Pn**	**18 57 12.0**	**-0.2**
OWD				S		**Sn**	**18 57 22.5**	**-1.0**
ESL	**Shilin**	**0.76**	**200**	eP		**Pn**	**18 57 10.4**	**-1.7**
WUSB	**Renai**	**0.77**	**226**	⇓*i*P		**Pn**	**18 57 12.5**	**+0.2**
WUSB				S		**Sn**	**18 57 23.3**	**-0.3**
TEGC	**Jichi Village**	**0.84**	**191**	P		**Pn**	**18 57 12.2**	**-0.7**
TEGC				S		**Sn**	**18 57 26.1**	**+1.3**
NMLH	**Miaoli**	**0.85**	**270**	eP		**Pn**	**18 57 13.2**	**+0.1**
NMLH				S		**Sn**	**18 57 25.2**	**+0.2**
WARBT	**Fenglin Townsh**	**0.87**	**201**	*i* P		**Pn**	**18 57 11.5**	**-1.8**
WARBT				S		**Sn**	**18 57 23.5**	**-2.1**
WCS	**Beigang Elemen**	**0.88**	**237**	*i* P		**Pn**	**18 57 14.1**	**+0.6**
WCS				*i* S		**Sn**	**18 57 26.4**	**+0.7**
NSY	**Sanyi**	**0.88**	**263**	eP		**Pn**	**18 57 13.8**	**+0.3**
NSY				*i* S		**Sn**	**18 57 26.2**	**+0.3**
TWQ1	**Liyutan**	**0.89**	**258**	P		**Pn**	**18 57 13.7**	**+0.1**
TWQ1				*i* S		**Sn**	**18 57 25.6**	**-0.3**
EGFH	**Guangfu**	**0.90**	**197**	P		**Pn**	**18 57 11.9**	**-1.9**
EGFH				S		**Sn**	**18 57 24.5**	**-1.8**
VWDT	**VWDT**	**0.94**	**214**	⇓*i*P		**Pn**	**18 57 14.3**	**0.0**
VWDT				S		**Sn**	**18 57 27.3**	**+0.2**
SMLT	**Sun Moon Lake**	**0.99**	**229**	eP		**Pn**	**18 57 15.6**	**+0.6**
SMLT				S		**Sn**	**18 57 29.6**	**+1.1**
TYC	**Yuchr**	**1.01**	**232**	*i* P		**Pn**	**18 57 15.7**	**+0.5**
TYC				S		**Sn**	**18 57 29.9**	**+1.2**
SSLB	**Suanglung**	**1.02**	**223**	P		**Pn**	**18 57 15.5**	**+0.1**
SSLB	**Suanglung**	**1.02**	**223**	P		**Pn**	**18 57 15.4**	**+0.1**
SSLB				S		**Sn**	**18 57 30.2**	**+1.2**
TCU	**Taichung**	**1.03**	**248**	eP		**Pn**	**18 57 15.5**	**+0.1**
TCU				S		**Sn**	**18 57 29.2**	**+0.1**
HGSD	**Ruisui**	**1.07**	**195**	eP		**Pn**	**18 57 14.9**	**-1.0**
HGSD				eS		**Sn**	**18 57 29.1**	**-1.0**
EHY	**Hungye**	**1.09**	**200**	*i* P		**Pn**	**18 57 14.1**	**-2.1**
EHY				S		**Sn**	**18 57 27.6**	**-2.9**
EHYH	**Wanrong**	**1.09**	**198**	*i* P		**Pn**	**18 57 14.2**	**-2.1**
EHYH				S		**Sn**	**18 57 28.3**	**-2.3**
JYNG	**Yonagunijimaku**	**1.12**	**94**	eP		**Pn**	**18 57 16.5**	**0.0**
JYNG				eS		**Sn**	**18 57 31.1**	**-0.1**
PCYT	**Pengchaiyu**	**1.14**	**16**	P		**Pn**	**18 57 16.8**	**0.0**
PCYT				eS		**Sn**	**18 57 31.2**	**-0.4**
WNT	**Mingjian**	**1.15**	**236**	eP		**Pn**	**18 57 17.5**	**+0.5**
WNT				*i* S		**Sn**	**18 57 32.7**	**+0.7**
WHYT	**Xinyi Township**	**1.15**	**224**	P		**Pn**	**18 57 18.2**	**+1.1**
WHYT				S		**Sn**	**18 57 33.6**	**+1.6**
WJS	**Zhushan**	**1.15**	**232**	eP		**Pn**	**18 57 17.6**	**+0.6**
WCHH	**Zhanghua**	**1.15**	**247**	eP		**Pn**	**18 57 16.9**	**-0.1**
WCHH				S		**Sn**	**18 57 32.2**	**+0.1**
WCH1	**Changhua City**	**1.17**	**247**	eP		**Pn**	**18 57 17.1**	**-0.1**
WCH1				S		**Sn**	**18 57 32.4**	**0.0**
YOJ	**Yonaguni jima**	**1.18**	**93**	P		**Pn**	**18 57 17.2**	**0.0**
YOJ	**Yonaguni jima**	**1.18**	**93**	eP		**Pn**	**18 57 17.3**	**0.0**
YOJ				eS		**Sn**	**18 57 32.3**	**-0.2**
YOJ	**Yonaguni jima**	**1.18**	**93**	*i* P		**Pn**	**18 57 17.3**	**0.0**
YOJ				*i* S		**Sn**	**18 57 32.7**	**+0.1**
YULB	**Yu-li**	**1.20**	**199**	P		**Pn**	**18 57 15.6**	**-2.1**
YULB	**Yu-li**	**1.20**	**199**	S		**Sn**	**18 57 32.0**	**-1.2**
YULB	**Yu-li**	**1.20**	**199**	*i* P		**Pn**	**18 57 15.6**	**-2.1**
YULB				S		**Sn**	**18 57 30.9**	**-2.3**
ECBN	**Changbin**	**1.24**	**192**	eP		**Pn**	**18 57 17.5**	**-0.6**
ECBN				*i* S		**Sn**	**18 57 34.0**	**-0.1**
EYUL	**Yuli**	**1.24**	**197**	eP		**Pn**	**18 57 16.4**	**-1.7**
TWF1	**Yuli**	**1.24**	**198**	*i* P		**Pn**	**18 57 16.1**	**-2.1**
TWF1				eS		**Sn**	**18 57 31.6**	**-2.4**
YUS	**Yu-Shan**	**1.26**	**214**	*i* P		**Pn**	**18 57 19.1**	**+0.2**
YUS				S		**Sn**	**18 57 36.0**	**+0.8**
ALS	**Alishan**	**1.32**	**220**	P		**Pn**	**18 57 20.5**	**+1.0**
ALS				*i* S		**Sn**	**18 57 38.1**	**+1.7**
CHN5	**Tsauling**	**1.33**	**226**	P		**Pn**	**18 57 20.0**	**+0.5**
CHN5				*i* S		**Sn**	**18 57 37.4**	**+0.9**
WDL	**Douliou City**	**1.35**	**233**	eP		**Pn**	**18 57 20.2**	**+0.6**
WDL				S		**Sn**	**18 57 38.0**	**+1.2**
WGK	**Gukeng**	**1.35**	**232**	*i* P		**Pn**	**18 57 20.4**	**+0.7**
WGK				S		**Sn**	**18 57 37.8**	**+1.0**
CHKH	**Chenggong**	**1.37**	**193**	P		**Pn**	**18 57 18.9**	**-1.0**
CHKH				S		**Sn**	**18 57 37.0**	**-0.2**
WDLH	**Douliu**	**1.37**	**232**	*i* P		**Pn**	**18 57 20.4**	**+0.5**
WDLH				S		**Sn**	**18 57 38.3**	**+1.1**
FULB	**Fuli**	**1.39**	**196**	eP		**Pn**	**18 57 19.0**	**-1.2**
FULB				eS		**Sn**	**18 57 38.9**	**+1.3**
EHD	**Haiduan**	**1.46**	**199**	eP		**Pn**	**18 57 20.4**	**-0.7**
EHD				S		**Sn**	**18 57 37.7**	**-1.5**
CHKT	**Chengkung**	**1.47**	**193**	eP		**Pn**	**18 57 20.1**	**-1.0**
CHKT				S		**Sn**	**18 57 39.2**	**-0.2**
WTCT	**Ta-ch'eng**	**1.48**	**243**	eP		**Pn**	**18 57 21.2**	**0.0**
WTCT				S		**Sn**	**18 57 38.9**	**-0.8**
WTK	**Tuku**	**1.48**	**236**	P		**Pn**	**18 57 21.6**	**+0.2**
WTK				S		**Sn**	**18 57 40.5**	**+0.7**
ELDTW	**Lidau**	**1.49**	**206**	eP		**Pn**	**18 57 20.5**	**-1.0**
ELDTW				eS		**Sn**	**18 57 39.5**	**-0.6**
ECS	**Chishang**	**1.50**	**198**	eP		**Pn**	**18 57 20.1**	**-1.6**
ECS				eS		**Sn**	**18 57 39.3**	**-1.1**
CHN2	**Minshiung**	**1.52**	**229**	eP		**Pn**	**18 57 22.6**	**+0.8**
CHN2				eS		**Sn**	**18 57 41.6**	**+1.0**
CHY	**Chiayi**	**1.57**	**229**	eP		**Pn**	**18 57 22.4**	**+0.6**
CHY				S		**Sn**	**18 57 42.9**	**+0.9**
TPUB	**Ta-pu**	**1.58**	**219**	P		**Pn**	**18 57 23.6**	**+0.8**
TPUB	**Ta-pu**	**1.58**	**219**	eP		**Pn**	**18 57 23.4**	**+0.6**
TPUB				*i* S		**Sn**	**18 57 44.6**	**+2.3**
EDH	**Donghe**	**1.60**	**194**	*i* P		**Pn**	**18 57 21.6**	**-1.4**
EDH				eS		**Sn**	**18 57 42.1**	**-0.6**
STYH	**Taoyuan**	**1.61**	**213**	P		**Pn**	**18 57 23.9**	**+0.8**
STYH				S		**Sn**	**18 57 44.7**	**+1.8**
WTP	**Ta-pu**	**1.64**	**219**	eP		**Pn**	**18 57 24.2**	**+0.7**
WTP				S		**Sn**	**18 57

KSRS	**Korea Array**	**13.93**	**21**	P		**Pn**	**19 00 13.2**	**+2.1**
	2.6nm,0.8s,baz=200,slow=11,SNR=15								
CMAR	**Chiang Mai Arr**	**22.03**	**258**	P		**P**	**19 01 48.6**	**+2.4**
	0.8nm,0.9s,baz=66,slow=6.9,SNR=7.3								
CMAR				LR		LR	19 10 18.5		
	comp=Z,18nm,18.0s,baz=110,slow=36								
	0.8nm,0.9s								
SONM	**Songino Array**	**26.24**	**336**	P		**P**	**19 02 25.9**	**-0.1**
	0.4nm,0.6s,baz=146,slow=9.4,SNR=3.7								
	0.4nm,0.6s								
MKAR	**Makanchi Array**	**38.43**	**315**	P		**P**	**19 04 11.9**	**-0.4**
	0.6nm,0.7s,baz=114,slow=9.8,SNR=3.4								
	0.6nm,0.7s								
KURBB	**Kurchatov Arra**	**42.16**	**319**	P		**P**	**19 04 44.8**	**+1.7**
	0.2nm,0.6s,baz=111,slow=11,SNR=2.3								
	0.2nm,0.6s								
WRA	**Warramunga Arr**	**45.88**	**163**	P		**P**	**19 05 11.1**	**-2.0**
	0.2nm,0.5s,baz=346,slow=8.7,SNR=2.0								
	0.2nm,0.5s								
ASAR	**Alice Springs**	**49.35**	**165**	P		**P**	**19 05 39.3**	**-0.7**
	0.1nm,0.5s,baz=344,slow=8.3,SNR=1.4								
	0.1nm,0.5s								
ILAR	**Eielson Array**	**68.68**	**27**	P		**P**	**19 07 52.4**	**-0.9**
	0.2nm,0.5s,baz=280,slow=5.7,SNR=2.0								
	0.2nm,0.5s								
FINES	**FINESS Array B**	**71.39**	**330**	P		**P**	**19 08 09.6**	**-0.3**
	3.2nm,1.0s,baz=84,slow=6.2,SNR=3.6								
	3.2nm,1.0s								
BRTR	**Keskin Array B**	**73.36**	**306**	P		**P**	**19 08 22.1**	**-0.1**
	0.5nm,0.7s,baz=71,slow=6.2,SNR=1.9								
	0.5nm,0.7s								

*SNET **17** 18:56:59.8±1.9, 13.51°N×90.08°W, h60km, ML3.0*
*GCG **17** 18:57:01.1±0.4, 13.58°N×90.11°W, h46km±43km, MD3.9*
ISC 17 18:57:05.4±2.2, 13.7°N±0.2°×89.9°W±0.1, h47km±16km, n15, σ1§45/20, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.23**	**21**	*eP*		**Pn**	**18 57 12.5**	**-1.3**
NUBE				*eS*		**Sn**	**18 57 20.9**	**+1.2**
NUBE	**Las Nubes**	**0.23**	**21**	*eP*		**Pn**	**18 57 12.3**	**-1.4**
NUBE				*eS*		**Sn**	**18 57 20.5**	**+0.7**
CEVE	**Cerro Verde**	**0.27**	**59**	*eP*		**Pn**	**18 57 13.6**	**-0.6**
SBLS	**San Blas**	**0.28**	**57**	*eP*		**Pn**	**18 57 13.5**	**-0.8**
RTR	**El Retiro**	**0.30**	**46**	*eP*		**Pn**	**18 57 13.2**	**-1.2**
SNJE	**San Jose**	**0.31**	**55**	*eP*		**Pn**	**18 57 13.6**	**-0.9**
SNJE				*eS*		**Sn**	**18 57 23.2**	**+2.2**
SLOZ	**Alcaldia de Sa**	**0.34**	**13**	*eP*		Pn	18 57 10.9	-3.9
SLOZ				*eS*		**Sn**	**18 57 21.3**	**-0.1**
JAYA	**Jayaque - finc**	**0.41**	**95**	*eP*		**Pn**	**18 57 13.9**	**-1.6**
JAYA				*eS*		**Sn**	**18 57 24.0**	**+1.3**
JAYA	**Jayaque - finc**	**0.41**	**95**	*eP*		**Pn**	**18 57 14.0**	**-1.6**
JAYA				*eS*		**Sn**	**18 57 23.8**	**+1.1**
RBDL	**Robledal**	**0.46**	**22**	*eP*		**Pn**	**18 57 14.8**	**-1.3**
PMON	**Piamonte**	**0.54**	**87**	*eP*		**Pn**	**18 57 16.0**	**-1.0**
PMON				*eS*		**Sn**	**18 57 27.9**	**+2.6**
BOQS	**Boqueron**	**0.57**	**85**	*eP*		**Pn**	**18 57 16.3**	**-1.2**
LOMA	**Loma Larga**	**0.68**	**94**	*eP*		**Pn**	**18 57 17.8**	**-1.0**
FG16	**Alotenango, Sa**	**0.85**	**313**	*eP*		**Pn**	**18 57 21.2**	**-0.1**
STG8	**El Palmar, Qui**	**1.63**	**298**	*eP*		Pn	18 57 31.1	-0.8

*AEIC **17** 18:57:42.8±1.0, 52.97°N±0.04°×162.51°W±0.09, h26km±4km, Error ellipse: s-maj=7.9km s-min=5.3km az=67.0*
NEIC 17 18:57:40.6±1.1, 52.89°N±0.09°×162.45°W±0.06, h10km±2km, ML2.9/12, ML2.8(AEIC), Error ellipse: s-maj=15.0km s-min=4.6km az=165.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SSLS	**Shishaldin Sou**	**2.04**	**334**			Pn	18 58 15.3	+0.2
FALS	**False Pass**	**2.05**	**344**			Pn	18 58 15.0	-0.1
FALS						Sn	18 58 39.4	-1.3
FALS	**False Pass**	**2.05**	**344**	P		Pn	18 58 15.1	0.0
ISNN	**Isanotski Nort**	**2.10**	**338**			Pn	18 58 16.3	+0.5
ISNN						Sn	18 58 41.9	-0.1
SSBA	**Shishaldin**	**2.13**	**333**			Pn	18 58 16.2	-0.1
SSBA						Sn	18 58 41.9	-0.9
DT1	**Dutton Round H**	**2.22**	**2**			Pn	18 58 17.0	-0.5
DT1						Sn	18 58 42.8	-2.1
DOL	**Dolgoi Island**	**2.29**	**8**			Pn	18 58 18.6	+0.2
DOL						Sn	18 58 45.8	-0.8
AKUT	**Akutan**	**2.34**	**303**		Pn	Pn	18 58 19.3	+0.2
AKUT					IAML		18 58 49.7	
	comp=N,69nm,0.6s							
AKUT					IAML		18 58 50.2	
	comp=E,51nm,1.0s							
AKUT	**Akutan**	**2.34**	**303**	P		Pn	18 58 19.1	0.0
AKUT	**Akutan**	**2.34**	**303**	S		Sn	18 58 45.7	-2.2
AHB	**Akutan Harbor**	**2.35**	**303**			Pn	18 58 19.3	0.0
AHB						Sn	18 58 46.0	-2.3
ZRO	**Akutan Zero**	**2.43**	**301**			Pn	18 58 20.5	+0.2
ZRO						Sn	18 58 47.8	-2.3
AKMO	**Akutan Morgan**	**2.44**	**301**			Pn	18 58 20.7	+0.2
AKLV	**Akutan Long Va**	**2.45**	**303**			Pn	18 58 20.8	+0.1
HAG	**Hague Volcano**	**2.45**	**7**			Pn	18 58 21.1	+0.4
PS1A	**Pavlof South-1**	**2.57**	**9**			Pn	18 58 23.1	+0.9
CNBA	**Chernabura Isl**	**2.57**	**40**	Pn		Pn	18 58 22.2	0.0
UNV	**Unalaska Valle**	**2.61**	**293**			Pn	18 58 22.6	-0.2
UNV	**Unalaska Valle**	**2.61**	**293**	IAML			18 59 00.7	
	comp=N,22nm,1.2s							
UNV	**Unalaska Valle**	**2.61**	**293**	P		Pn	18 58 22.5	-0.3
UNV	**Unalaska Valle**	**2.61**	**293**	S		Sn	18 58 52.3	-2.2
SDPT	**Sand Point**	**2.72**	**24**			Pn	18 58 24.7	+0.4
SDPT	**Sand Point**	**2.72**	**24**	IAML			18 58 57.0	
	comp=E,57nm,0.5s							
SDPT				IAML			18 58 58.9	
	comp=N,52nm,0.3s							
SDPT	**Sand Point**	**2.72**	**24**	P		Pn	18 58 25.0	+0.7
SDPT	**Sand Point**	**2.72**	**24**	S		Sn	18 58 55.7	-1.5
MREP	**Makushin Rep't**	**2.73**	**291**			Pn	18 58 24.8	+0.2
MSW	**Makushin Switc**	**2.79**	**293**			Pn	18 58 25.6	+0.3
S12K	**Black Hills**	**2.83**	**4**	Pn		Pn	18 58 27.1	+1.4
S12K				IAML			18 59 03.1	
	comp=N,112nm,1.1s							
OKTU	**Okmok Mt. Tuli**	**3.40**	**281**			Pn	18 58 34.1	+0.4
VNKR	**Veniaminof 5**	**3.62**	**29**			Pn	18 58 37.8	+1.0
PLK4	**Peulik 4**	**5.89**	**34**	Pn		Pn	18 59 09.0	+1.1
O14K	**Tigyukauivet M**	**6.41**	**5**	Pn		Pn	18 59 16.3	+1.4
OHAK	**Old Harbor**	**6.82**	**47**	Pn		Pn	18 59 19.9	-0.7
OHAK	**Old Harbor**	**6.82**	**47**	P		Pn	18 59 20.1	-0.5

*NEIC **17** 19:04:18.2±1.6, 33.164°N±0.004°×115.67°W±0.01, h5km±1km, Error ellipse: s-maj=2.3km s-min=1.6km az=43.0*
PAS 17 19:04:18.6±2.4, 33.161°N±0.005°×115.65°W±0.01, h2km±3km, ML3.3/73, ML3.2/42(NEIC), Error ellipse: s-maj=1.4km s-min=0.7km az=71.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CLI2	**Calipatria 2**	**0.07**	**123**			Pg	19 04 20.5	+0.5
CLI2						Sg	19 04 21.6	+0.6
WEMD	**Westmorland, C**	**0.14**	**154**			Pg	19 04 22.1	+0.9
WEMD						Sg	19 04 24.7	+1.7
BOMB	**Bombay Beach**	**0.21**	**343**			Pg	19 04 23.6	+0.9
BOMB						Sg	19 04 26.7	+1.2
FRK	**Frink**	**0.24**	**3**			Pg	19 04 23.7	+0.4
FRK						Sg	19 04 27.8	+1.4
SWSC	**Sam W. Stewart**	**0.25**	**210**			Pg	19 04 23.7	+0.4
SUP	**Superstition M**	**0.25**	**215**			Pg	19 04 23.8	+0.4
IMPE	**Imperial**	**0.27**	**163**			Pg	19 04 24.8	+1.0
IMPE						Sg	19 04 30.1	-1.1
SLVP	**Salvation Pass**	**0.30**	**75**			Pg	19 04 24.5	+0.1
SLVP						Sg	19 04 29.0	+0.7
COK2	**Cook Ranch 2**	**0.32**	**192**			Pg	19 04 25.5	+0.9
COK2						Sg	19 04 31.1	-1.3
SNR	**Schaffner Ranc**	**0.35**	**149**			Pb	19 04 26.4	-1.1
SNR						Sb	19 04 32.6	-0.8
CRR	**Carrizo Plain**	**0.38**	**224**			Pg	19 04 26.2	+0.3
CRR						Sb	19 04 32.6	-1.7
DREC	**Desert Rsrch C**	**0.40**	**154**			Pb	19 04 27.3	-0.9
DREC						Sb	19 04 34.2	-0.5
WESC	**Westside Schoo**	**0.41**	**189**			Pg	19 04 27.0	+0.6
WESC						Sb	19 04 33.8	-1.3
SLH	**Sleepy Hollow**	**0.51**	**274**			Pg	19 04 28.7	+0.4
SLH						Sg	19 04 36.4	+1.5
5053	**Calexico**	**0.51**	**165**			Pb	19 04 29.3	-0.9
SGL	**Mount Signal**	**0.51**	**187**			Pg	19 04 28.3	-0.1
SGL						Sg	19 04 35.9	+0.8
BC3	**Big Chuckawall**	**0.52**	**19**			Sg	19 04 36.1	+0.8
BC3	**Big Chuckawall**	**0.52**	**19**			Pg	19 04 28.8	+0.2
BC3					IAML		19 04 38.5	
	comp=N,959nm,0.5s							
BC3					IAML		19 04 40.7	
	comp=E,694nm,0.5s							
COA	**Coachella**	**0.54**	**124**			Pg	19 04 29.3	+0.5
HAY	**Hayfield**	**0.55**	**357**			Pg	19 04 29.5	+0.4
HAY						Sg	19 04 36.3	+0.1
CTW	**Cottonwood Mou**	**0.55**	**340**			Pg	19 04 29.3	+0.2
CTW						Sb	19 04 38.5	-0.7
YUH	**Yuha Desert**	**0.56**	**204**			Sg	19 04 37.5	+0.9
YUH	**Yuha Desert**	**0.56**	**204**			Pg	19 04 29.1	-0.2
YUH					IAML		19 04 38.4	
	comp=N,1μm,0.7s							
YUH					IAML		19 04 38.5	
	comp=E,535nm,0.4s							
CTCC	**Cactus City**	**0.57**	**330**			Pg	19 04 29.7	+0.2
CTCC						Sb	19 04 38.6	-1.2
RUN	**Ruthven**	**0.60**	**108**			Pg	19 04 30.1	+0.1
RUN						Sb	19 04 39.8	-0.8
IKP	**In-Ko-Pah, Jac**	**0.64**	**217**			Pg	19 04 30.7	-0.1
IKP						Sg	19 04 39.7	+0.6
BORC	**Borrego Spring**	**0.65**	**280**			Sg	19 04 39.8	+0.4
BORC	**Borrego Spring**	**0.65**	**280**			Pg	19 04 31.1	+0.1
BORC					IAML		19 04 41.0	
	comp=N,824nm,0.8s							
BORC					IAML		19 04 41.7	
	comp=E,581nm,0.8s							
RMX	**La Rumorosa**	**0.66**	**213**			Pg	19 04 31.4	+0.2
RMX						Sg	19 04 41.2	+1.3
EMSC	**East Mesa**	**0.70**	**127**			Pg	19 04 32.0	0.0
EMSC						Sb	19 04 43.0	-0.5
GLA	**Glamis**	**0.70**	**99**			Sb	19 04 42.5	-1.2
GLA	**Glamis**	**0.70**	**99**			Pg	19 04 31.8	-0.3
GLA					IAML		19 04 46.6	
	comp=E,972nm,0.7s							
GLA					IAML		19 04 49.0	
	comp=N,717nm,0.6s							
PMD	**Palm Desert**	**0.78**	**309**			Sg	19 04 43.8	+0.3
PMD	**Palm Desert**	**0.78**	**309**			Pg	19 04 33.0	-0.5
PMD					IAML		19 04 45.2	
	comp=E,983nm,0.6s							
PMD					IAML		19 04 46.1	
	comp=N,800nm,0.4s							
CPBX	**Cerro Prieto**	**0.80**	**158**			Pg	19 04 32.7	-1.1
JUEM	**Julian Eagle M**	**0.80**	**265**			Pg	19 04 34.0	+0.2
JUEM						Sg	19 04 44.6	+0.4
PFO	**Pinyon Flats O**	**0.81**	**304**			Sg	19 04 44.9	+0.3
PFO	**Pinyon Flats O**	**0.81**	**304**			Pg	19 04 33.7	-0.4
MATG	**Mataguay Scout**	**0.83**	**273**			Pg	19 04 34.3	-0.3
MATG						Sg	19 04 45.5	+0.1
FRD	**Ford Ranch, An**	**0.86**	**293**			Sg	19 04 46.8	+0.5
FRD	**Ford Ranch, An**	**0.86**	**293**			Pg	19 04 34.8	-0.3
FRD						Sg	19 04 47.0	+0.8
BELC	**Belle Mtn. Jos**	**0.89**	**341**			Sg	19 04 47.6	+0.5
BELC	**Belle Mtn. Jos**	**0.89**	**341**			Pg	19 04 35.1	-0.5
SNDA	**J Saunders Pla**	**0.89**	**296**			Sb	19 04 48.4	-0.8
DNR	**Dunn Ranch,Anz**	**0.91**	**297**			Pg	19 04 35.7	-0.4
DNR					IAML		19 04 50.7	
	comp=N,2μm,0.4s							
BAR	**Barrett**	**0.98**	**241**			Pg	19 04 36.1	-1.3
BAR					IAML		19 04 50.9	
	comp=N,940nm,0.3s							
BAR					IAML		19 04 51.0	
	comp=E,576nm,0.5s							
IRM	**Iron Mountain**	**1.08**	**23**			Pg	19 04 38.4	-0.9
IRM					IAML		19 04 55.7	
	comp=E,474nm,0.5s							
IRM					IAML		19 04 55.7	
	comp=N,476nm,0.5s							
DPP	**Dos Picos Cty**	**1.09**	**262**			Pg	19 04 38.0	-1.5
DPP					IAML		19 04 54.0	
	comp=N,821nm,0.3s							
DPP					IAML		19 04 54.2	
	comp=E,1μm,0.3s							
BLYC	**Blythe**	**1.11**	**58**			Pg	19 04 38.7	-1.2
BLYC					IAML		19 04 58.1	
	comp=E,523nm,0.8s							
ESJX	**Sierra Juarez**	**1.18**	**192**			Pg	19 04 39.2	-2.0
ESJX					IAML		19 04 56.3	
	comp=E,327nm,0.5s							
CBX	**Cerro Bola**	**1.20**	**225**			Pg	19 04 39.8	-1.8
CBX					IAML		19 05 07.8	
	comp=N,848nm,0.8s							
CPE	**Camp Elliot**	**1.25**	**258**	IAML			19 04 59.0	
	comp=E,979nm,0.3s							
TJX	**Tijuana**	**1.35**	**242**			Pn	19 04 42.0	-2.3
CCX	**Cicese**	**1.55**	**214**			Pn	19 04 45.3	-1.8
ELS	**Elsinore Mount**	**1.56**	**289**			Pn	19 04 44.5	-2.9
ELS					IAML		19 05 14.5	
	comp=N,216nm,0.5s							
ELS					IAML		19 05 14.8	
	comp=E,172nm,0.5s							
BFSC	**Mount Baldy Ra**	**1.99**	**303**			Pn	19 04 51.1	-2.2
PIX	**Pinacate**	**2.45**	**130**			Pn	19 04 56.3	-3.1
214A	**Organ Pipe Nat**	**2.68**	**116**			Pn	19 05 00.6	-2.2

*NNC **17** 19:04:39.9±1.6, 42.03°N×76.09°E, h21km±9km, mb3.0, mpv2.7, Error ellipse: s-maj=13.3km s-min=5.7km az=164.0*
*KNET **17** 19:04:40.8±0.7, 42.15°N×75.95°E, h0km, ml1.4, Error ellipse: s-maj=6.4km s-min=2.9km az=176.0*
*SOME **17** 19:04:40.5, 42.12°N×76.02°E, h10km*
ISC 17 19:04:40.5±1.2, 42.12°N±0.05°×76.02°E±0.02, h16km±8km, n30, σ0§98/55, 11C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.21**	**53**	⇑P		**Pg**	**19 04 45.0**	**-0.4**
	13nm,0.1s							
ULHL				⇑S		**Sg**	**19 04 48.4**	**-0.5**
	119nm,0.1s							
TKM2	**Tokmak 2**	**0.86**	**339**	⇓P		**Pg**	**19 04 57.0**	**-0.2**
	4.5nm,0.1s							
TKM2				⇑S		**Sb**	**19 05 09.1**	**+0.6**
	9.3nm,0.1s							
KST	**Kastek**	**0.92**	**358**	P		**Pb**	**19 04 58.6**	**+0.4**
	2.0nm,0.1s							
KST				S		**Sb**	**19 05 11.2**	**+1.0**
	6.0nm,0.1s							
KST	**Kastek**	**0.92**	**358**	*eP*		**Pb**	**19 04 58.6**	**+0.4**
	2.0nm,0.1s							
KST				*eS*		**Sb**	**19 05 11.2**	**+1.0**
	6.0nm,0.1s							
KBK	**Karagaybulak**	**0.96**	**304**	⇑P		**Pg**	**19 04 58.9**	**-0.1**
	1.4nm,0.1s							
KBK				⇑S		**Sb**	**19 05 12.2**	**+0.9**
	11nm,0.2s							
IZV	**Izvestkoviy**	**1.01**	**26**	P		**Pg**	**19 04 59.5**	**-0.6**
	2.7nm,0.1s							
IZV				S		**Sb**	**19 05 13.7**	**+0.7**
	5.9nm,0.3s							
IZV	**Izvestkoviy**	**1.01**	**26**	*eP*		**Pg**	**19 04 59.5**	**-0.6**
	2.7nm,0.1s							
IZV				*eS*		**Sg**	**19 05 13.1**	**-0.3**
	5.9nm,0.3s							
MTBS	**Maitube**	**1.05**	**17**	P		**Pg**	**19 05 00.4**	**-0.5**
	1.3nm,0.1s							
MTBS				S		**Sb**	**19 05 14.9**	**+0.9**
	7.1nm,0.2s							
MTBS	**Maitube**	**1.05**	**17**	*eP*		**Pg**	**19 05 00.4**	**-0.5**
	1.3nm,0.1s							
MTBS				*eS*		**Sg**	**19 05 14.6**	**0.0**
	7.1nm,0.2s							
UCH	**Uchtor**	**1.12**	**276**	⇑P		**Pg**	**19 05 02.0**	**-0.2**
	0.5nm,0.1s							
UCH				⇓S		**Sg**	**19 05 16.9**	**-0.1**
	1.6nm,0.2s							
DGS	**Degeres**	**1.13**	**351**	P		**Pb**	**19 05 02.2**	**+0.4**
	1.8nm,0.1s							
DGS				S		**Sb**	**19 05 17.7**	**+1.3**
	2.9nm,0.2s							
DGS	**Degeres**	**1.13**	**351**	*eP*		**Pb**	**19 05 02.2**	**+0.4**
	1.8nm,0.1s							
DGS				*eS*		**Sb**	**19 05 17.7**	**+1.3**
	2.9nm,0.2s							
TNSS	**Tian-Shan**	**1.14**	**37**	P		**Pg**	**19 05 02.1**	**-0.6**
	0.6nm,0.2s							
TNSS				S		**Sg**	**19 05 17.4**	**-0.3**
	1.9nm,0.2s							
TNSS	**Tian-Shan**	**1.14**	**37**	*eP*		**Pg**	**19 05 02.1**	**-0.6**
	0.6nm,0.2s							
TNSS				*eS*		**Sg**	**19 05 17.4**	**-0.3**
	1.9nm,0.2s							
AAK	**Ala-Archa**	**1.24**	**295**	⇓P		**Pn**	**19 05 03.7**	**+0.3**
	1.1nm,0.2s							
AAK				⇓S		**Sb**	**19 05 19.9**	**+0.4**
	5.2nm,0.2s							
AAK	**Ala-Archa**	**1.24**	**295**	⇑P		**Pn**	**19 05 03.2**	**-0.1**
	0.3nm,0.7s							
AAK				⇑S		**Sb**	**19 05 20.1**	**+0.6**
	1.0nm,0.4s							
MDOK	**Medeo**	**1.29**	**36**	Pg		**Pn**	**19 05 04.5**	**+0.5**
	0.9nm,0.2s							
MDOK				Lg		Lg	19 05 21.5	
	2.4nm,0.4s							
KOTS	**Kotyrbulak**	**1.37**	**36**	P		**Pb**	**19 05 06.4**	**+0.5**
	1.4nm,0.2s							
KOTS				S		**Sg**	**19 05 24.7**	**-0.1**
	11nm,0.6s							
KOTS	**Kotyrbulak**	**1.37**	**36**	*eP*		**Pb**	**19 05 06.4**	**+0.5**
	1.4nm,0.2s							
KOTS				*eS*		**Sg**	**19 05 24.7**	**-0.1**
	11nm,0.6s							
KRBS	**Karabastau**	**1.59**	**351**	P		**Pb**	**19 05 10.3**	**+0.7**
	2.3nm,0.1s							
KRBS				S		**Sg**	**19 05 31.4**	**-0.4**
	1.7nm,0.2s							
KRBS	**Karabastau**	**1.59**	**351**	*eP*		**Pb**	**19 05 10.3**	**+0.7**
KRBS				*eS*		**Sg**	**19 05 31.4**	**-0.4**
USP	**Ospenovka**	**1.60**	**316**	⇑P		**Pb**	**19 05 10.3**	**+0.6**
	0.6nm,0.1s							
USP				⇓S		**Sg**	**19 05 31.6**	**-0.5**
	3.1nm,0.2s							
KTBS	**Karatobe**	**1.66**	**17**	P		**Pb**	**19 05 11.6**	**+0.9**
	1.7nm,0.1s							
KTBS				S		**Sg**	**19 05 33.8**	**-0.3**
	3.1nm,0.3s							
SATY	**Saty**	**2.00**	**61**	Pg		**Pb**	**19 05 17.5**	**+1.0**
	0.5nm,0.1s							
SATY				Lg		Lg	19 05 43.8	
	8.1nm,0.2s							
KPKS	**Kokpek**	**2.38**	**55**	Pg		**Pb**	**19 05 23.6**	**+0.6**
	0.4nm,0.2s							
KPKS				Lg		Lg	19 05 54.2	
	4.7nm,0.6s							
KPKS	**Kokpek**	**2.38**	**55**	*eP*		**Pb**	**19 05 23.6**	**+0.6**
	0.4nm,0.2s							
KPKS				*eS*		**Sb**	**19 05 54.2**	**+2.1**
	4.7nm,0.6s							
ARXS	**Arharly**	**2.47**	**32**	Pg		**Pb**	**19 05 25.2**	**+0.6**
	1.7nm,0.2s							
ARXS				Lg		Lg	19 05 57.1	
	7.3nm,0.6s							
ARXS	**Arharly**	**2.47**	**32**	*eP*		**Pb**	**19 05 25.2**	**+0.6**
	1.7nm,0.2s							
ARXS				*eS*		**Sb**	**19 05 57.1**	**+2.2**
	7.3nm,0.6s							
BLB	**Baldybastay**	**2.67**	**42**	Pg		**Pb**	**19 05 29.2**	**+1.2**
	2.0nm,0.2s							
BLB				Lg		Lg	19 06 03.9	
	5.1nm,0.2s							
PDGK	**Podgornoye**	**2.83**	**64**	⇓Pg		**Pb**	**19 05 32.2**	**+1.5**
	2.6nm,1.3s							
PDGK				⇑Sn		**Sn**	**19 05 54.7**	**-4.3**
	2.1nm,1.1s							
PDGK				⇑Lg		Lg	19 06 07.7	
	1.3nm,0.6s							

*SDD **17** 19:14:22.6±2.8, 20.33°N×73.00°W, h146km±36km, MD3.3, ML3.0, MW3.0*
*SSNC **17** 19:14:25.9±1.6, 19.98°N×73.08°W, h8km±10km, ML2.3*
ISC 17 19:14:19.8±1.7, 20.7°N±0.1°×73.02°W±0.05, h19km±4km, n12, σ1§52/22, 5C-2D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MCDR	**Montecristi**	**1.50**	**121**	⇑*e*Pg		**Pg**	**19 14 49.1**	**+0.4**
MCDR				⇑*e*Sg		**Sg**	**19 15 08.6**	**+0.4**
MCDR				IAML			19 15 16.2	
	comp=N,105nm,0.6s							
QMBU	**Quimbuelo**	**1.75**	**255**	⇓*e*Pg		**Pg**	**19 14 53.0**	**-0.5**
QMBU				⇑*e*Sg		**Sg**	**19 15 15.1**	**-1.2**
QMBU				IAML			19 15 16.9	
	comp=N,92nm,0.3s							
QMBU	**Quimbuelo**	**1.75**	**255**	*eP*		**Pg**	**19 14 52.2**	**-1.3**
QMBU				*e*Pg		Pg	19 14 52.9	-0.6
QMBU				*eS*		**Sn**	**19 15 11.5**	**+0.5**
QMBU				*e*Sg		Sg	19 15 14.2	-2.0
QMBU				IAML			19 15 15.7	
	comp=E,122nm,0.4s							
QMBU				IAML			19 15 16.9	
	comp=N,93nm,0.3s							
MOAC	**Moa**	**1.82**	**270**	*eP*		**Pg**	**19 14 54.9**	**0.0**
MOAC				*eS*		**Sg**	**19 15 18.7**	**+0.2**
MOAC				IAML			19 15 27.2	
	comp=E,18nm,0.1s							
MOAC				IAML			19 15 27.4	
	comp=N,16nm,0.1s							
GTBY	**Guantanamo Bay**	**2.10**	**250**	*eP*		**Pn**	**19 14 55.5**	**+1.5**
GTBY				*eS*		**Sn**	**19 15 18.1**	**-1.5**
GTBY				IAML			19 15 23.1	
	comp=N,14nm,0.1s							
GTBY				IAML			19 15 23.5	
	comp=N,14nm,0.2s							
REDR	**Restauracion**	**2.14**	**134**	⇑*e*Pg		Pn	19 14 49.9	-4.6
REDR				⇑*e*Sg		Sn	19 15 11.9	-8.7
REDR				IAML			19 15 14.6	
	comp=N,371nm,0.2s							
SDDR	**Presa de Saban**	**2.34**	**136**	⇓*e*Pg		**Pn**	**19 14 57.6**	**+0.3**

MASI	**Maura Aman, Be** 0.2nm39nm,1.6s	**5.45**	**140**	P		**Pn**	**19 20 44.5**	**+1.3**
KSI	**Kapahiang** 19nm,0.6s	**6.06**	**141**	P		**Pn**	**19 20 53.1**	**+1.5**
MNAI	**Manna** 110nm,1.8s	**6.84**	**142**	P		**Pn**	**19 21 01.9**	**-0.2**
MDSI	**Maura Dua** 0.1nm462nm6.3nm,1.0s	**7.74**	**136**	P		**Pn**	**19 21 14.3**	**0.0**
LWLI	**Liwa**	**8.04**	**139**	P		**Pn**	**19 21 18.7**	**+0.1**
H08S2	**Diego Garcia H** baz=72,slow=76,SNR=3.6	**27.59**	**251**	T		T	19 52 13.8	
H08S3	**Diego Garcia H** baz=72,slow=76,SNR=4.2	**27.59**	**251**	T		T	19 52 39.2	
H08S1	**Diego Garcia H** baz=72,slow=76,SNR=4.0	**27.60**	**251**	T		T	19 52 33.9	
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=299,slow=8.6,SNR=1.0 0.1nm,0.3s	**40.66**	**123**	P		**P**	**19 26 53.3**	**-1.8**
SONM	**Songino Array** 0.4nm,0.4s,baz=189,slow=9.4,SNR=5.7 0.4nm,0.4s	**47.05**	**7**	P		**P**	**19 27 46.2**	**+0.3**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=157,slow=9.5,SNR=6.5 0.4nm,0.5s	**47.76**	**345**	P		**P**	**19 27 51.7**	**+0.4**
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=159,slow=7.1,SNR=3.8 0.4nm,0.5s	**52.27**	**344**	P		**P**	**19 28 25.6**	**+0.3**
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=181,slow=7.2,SNR=3.6 0.8nm,0.5s	**53.94**	**350**	P		**P**	**19 28 37.5**	**0.0**
H04N2	**CROZET ISLANDS** baz=57	**62.55**	**215**	T		T	20 36 52.8	
H04N1	**CROZET ISLANDS** baz=57	**62.56**	**215**	T		T	20 36 54.8	
H04N3	**CROZET ISLANDS** baz=57	**62.57**	**215**	T		T	20 36 50.4	

*IDC **17** 19:36:39.4±0.6,3.76S×128.79E,h0km,mb4.3/14, mbtmp4.3/17,ML3.4/3,MS3.4/12,Error ellipse: s-maj=29.6km s-min=12.7km az=71.0*
*DJA **17** 19:36:42.1±0.1,4.°S×12.°9E,°,h10km,M4.6/29, mB5.0/12,mb4.7/29,MLv4.8/23,Mw(mB)4.4/12*
*NEIC **17** 19:36:42.7±2.5,3.84S±0.05×128.87E±0.05,h27km±6km, mb4.6/26,Error ellipse: s-maj=10.7km s-min=3.0km az=224.0*

ISC 17 19:36:43.6±0.4,**3.77S**±0.05×**128.84E**±0.04,**h32**km,**n93,** σ**2s03/91,mb4.5/23,MS3.3/9,Seram**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSAI	**Masohi**	**0.43**	**13**	P		**Pb**	**19 36 50.1**	**-2.9**
MSAI				S		**Sb**	**19 36 55.1**	**-4.4**
AAI	**Ambon**	**0.64**	**277**	P		**Pb**	**19 36 53.6**	**-2.8**
AAI				S		**Sb**	**19 37 00.9**	**-4.3**
BNDI	**Bandanaira**	**1.30**	**125**	P		**Pn**	**19 37 06.9**	**+1.3**
NLAI	**Namlea**	**1.81**	**287**	P		**Pn**	**19 37 12.8**	**+0.3**
SANI	**Sanana**	**3.31**	**301**	P		**Pn**	**19 37 32.3**	**-0.9**
FAKI	**Fak Fak**	**3.51**	**76**			**Pn**	**19 37 36.0**	**0.0**
FAKI				Sn		**Sn**	**19 38 13.6**	**-2.9**
FAKI	**Fak Fak**	**3.51**	**76**	P		**Pn**	**19 37 38.8**	**+2.9**
SWI	**Sorong**	**3.77**	**40**	P		**Pn**	**19 37 41.2**	**+1.7**
TNTI	**Ternate**	**4.74**	**342**			**Pn**	**19 37 53.5**	**+0.6**
TNTI	**Ternate**	**4.74**	**342**	P		**Pn**	**19 37 53.4**	**+0.6**
SAUI	**Saumlaki**	**4.85**	**150**	P		**Pn**	**19 37 56.6**	**+2.2**
KMPI	**Kaimana, Papua**	**4.86**	**89**	P		**Pn**	**19 37 57.0**	**+2.5**
RKPI	**Ransiki, Papua**	**5.79**	**67**	P		**Pn**	**19 38 09.1**	**+1.8**
BBSI	**Bau Bau**	**6.47**	**254**	P		Pn	19 38 24.4	+7.7
KMSI	**Cibinong**	**6.49**	**312**	P		**Pn**	**19 38 21.6**	**+4.7**
LUWI	**Luwuk**	**6.63**	**294**			**Pn**	**19 38 19.2**	**+0.3**
LUWI	**Luwuk**	**6.63**	**294**	P		**Pn**	**19 38 19.7**	**+0.8**
SOEI	**Soe**	**7.48**	**217**			**Pn**	**19 38 34.0**	**+3.4**
BAKI	**Biak** 0.6nm2μm168nm,0.8s	**7.70**	**71**	P		**Pn**	**19 38 36.4**	**+2.8**
APSI	**Ampana**	**7.72**	**291**	P		**Pn**	**19 38 33.9**	**+0.1**
MRSI	**Marisa** 0.2nm546nm45nm,0.5s	**8.08**	**301**	P		**Pn**	**19 38 39.5**	**+0.8**
SGSI	**Sangihe**	**8.11**	**336**	P		**Pn**	**19 38 37.3**	**-1.8**
MMRI	**Maumere**	**8.15**	**233**	Pn		**Pn**	**19 38 39.0**	**-0.8**
MMRI	**Maumere**	**8.15**	**233**	P		Pn	19 38 50.1	+10
BATI	**Baumata** 2.3nm,0.3s,baz=61,slow=5.4,SNR=7.5	**8.20**	**218**	Pn		**Pn**	**19 38 43.9**	**+3.4**
BATI				LR		LR	19 42 07.6	
	comp=Z,512nm,19.8s,baz=48,slow=40							
BATI	**Baumata** 44nm,0.8s	**8.20**	**218**	P		**Pn**	**19 38 42.6**	**+2.1**
KAPI	**Kappang** 5.7nm,0.3s,baz=86,slow=4.9,SNR=8.1	**9.14**	**262**	Pn		**Pn**	**19 38 57.0**	**+3.7**
KAPI				LR		LR	19 42 19.1	
	comp=Z,277nm,21.8s,baz=68,slow=37							
TOLI2	**Tolitoli**	**9.39**	**301**			**Pn**	**19 38 55.9**	**-0.9**
PCI	**Palu**	**9.43**	**287**	P		**Pn**	**19 38 58.9**	**+1.6**
MPSI	**Mapaga** 22nm,1.1s	**9.82**	**294**	P		**Pn**	**19 39 04.6**	**+2.0**
SMPI	**Sarmi** 28nm,0.8s	**10.02**	**80**	P		**Pn**	**19 39 06.2**	**+0.8**
WSI	**Waingapu** 89nm,1.2s	**10.31**	**235**	P		**Pn**	**19 39 12.0**	**+2.7**
KNRA	**Kununurra**	**11.84**	**180**			**Pn**	**19 39 30.8**	**+0.6**
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=32,slow=12,SNR=8.3 2.5nm,0.7s	**14.58**	**192**	Pn		**Pn**	**19 40 06.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**14.58**	**192**			**Pn**	**19 40 04.2**	**-3.6**
WB0	**Warramunga Arr**	**16.80**	**162**			**Pn**	**19 40 34.6**	**-2.0**
WB0				IAmb		IAmb	19 40 42.5	
	comp=Z,88nm,1.4s							
WRA	**Warramunga Arr** comp=Z,0.4nm,0.3s,baz=349,slow=13,SNR=21 comp=Z,10nm,0.7s	**16.95**	**162**	Pn		**Pn**	**19 40 36.7**	**-1.7**
WR8	**Warramunga Arr**	**17.01**	**161**			**Pn**	**19 40 37.4**	**-1.9**
WR8				IAmb		IAmb	19 40 43.3	
	comp=Z,40nm,1.3s							
COEN	**Coen**	**17.40**	**126**			**Pn**	**19 40 41.6**	**-2.5**
COEN				IAmb		IAmb	19 40 49.2	
	comp=Z,66nm,1.1s							
SBUM	**Sibu**	**17.72**	**290**			**Pn**	**19 40 47.5**	**-0.5**
MANU	**Manus Island**	**18.59**	**85**	P		**P**	**19 40 54.6**	**-3.6**
MANU				IAmb		IAmb	19 41 04.0	
	comp=Z,37nm,1.4s							
PMG	**Port Moresby** comp=Z,0.5nm,0.3s,baz=312,slow=9.3,SNR=12	**19.04**	**108**	P		**Pn**	**19 41 05.6**	**+1.5**
PMG				LR		LR	19 50 36.0	
	comp=Z,251nm,19.9s,baz=336,slow=44 comp=Z,27nm,0.9s							
PMG	**Port Moresby**	**19.04**	**108**	P		**P**	**19 41 00.5**	**-2.7**
PMG				IAmb		IAmb	19 41 07.2	
	comp=Z,35nm,1.0s							
PSA00	**Pilbara Seismi**	**19.74**	**206**			**P**	**19 41 07.7**	**-3.1**
KPJI	**Karang Pucung** comp=Z,39nm,0.8s	**20.12**	**259**	P		**P**	**19 41 14.2**	**-0.8**
AS31	**Alice Springs**	**20.38**	**167**			**P**	**19 41 18.5**	**+0.7**
AS31				IAmb		IAmb	19 41 20.8	
	comp=Z,24nm,0.7s							
ASAR	**Alice Springs** comp=Z,56nm,0.7s,baz=349,slow=11,SNR=661	**20.38**	**167**	P		**P**	**19 41 19.2**	**+1.4**
ASAR				PcP		**PcP**	**19 45 29.9**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=360,slow=1.5,SNR=6.8							
ASAR				LR		LR	19 50 04.2	
	comp=Z,188nm,18.7s,baz=341,slow=40 comp=Z,56nm,0.7s							
ASAR	**Alice Springs**	**20.38**	**167**			**P**	**19 41 15.8**	**-2.0**
GUMO	**Guam** comp=Z,52nm,18.2s,baz=186,slow=41	**23.46**	**42**	LR		LR	19 52 47.2	
CTAO	**Charters Tower**	**23.48**	**135**			**P**	**19 41 50.4**	**-0.3**
CTAO				IAmb		IAmb	19 41 53.8	
	comp=Z,27nm,0.9s							
INKA	**Innaminka**	**26.41**	**156**			**P**	**19 42 16.0**	**-1.4**
FORT	**Forrest**	**26.88**	**181**	P		**P**	**19 42 19.1**	**-2.5**
IPM	**Ipoh**	**28.97**	**286**			**P**	**19 42 39.4**	**-1.1**
KULM	**Kulim**	**29.56**	**288**	P		**P**	**19 42 44.7**	**-1.0**
KULM				IAmb		IAmb	19 42 47.8	
	comp=Z,6.8nm,0.6s							
STKA	**Stephens Creek** comp=Z,7.3nm,1.1s,baz=341,slow=8.4,SNR=6.9	**30.43**	**158**	P		**P**	**19 42 53.6**	**+0.4**
STKA				LR		LR	19 55 35.5	
	comp=Z,99nm,21.5s,baz=356,slow=37 comp=Z,7.3nm,1.1s							
RPSI	**Rantau Prapat**	**30.57**	**282**	P		**P**	**19 42 53.6**	**-1.1**
RPSI				IAmb		IAmb	19 42 56.1	
	comp=Z,12nm,0.8s							
GSI	**Gunungsitoli**	**31.64**	**279**	P		**P**	**19 43 01.8**	**-2.4**
JNU	**Nakatsue** comp=Z,42nm,19.8s,baz=182,slow=33	**36.74**	**3**	LR		LR	19 56 55.6	
CMAR	**Chiang Mai Arr** comp=Z,4.0nm,1.0s,baz=139,slow=7.2,SNR=32	**36.81**	**308**	P		**P**	**19 43 50.0**	**+1.1**
CMAR				PcP		**PcP**	**19 46 12.5**	**+1.8**
	comp=Z,1.1nm,0.9s,baz=126,slow=1.7,SNR=4.5 comp=Z,4.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**36.81**	**308**	P		**P**	**19 43 48.9**	**0.0**
CMAR						**PcP**	**19 46 12.9**	**+2.2**
NJ2	**Nanjing**	**36.86**	**346**	*eP*		**P**	**19 43 52.4**	**+3.3**
NJ2				pmax		pmax		
	comp=Z,3.0nm,0.5s							
CHTO	**Chiang Mai**	**37.01**	**308**	P		**P**	**19 43 48.9**	**-1.7**
CHTO				IAmb		IAmb	19 43 53.6	
	comp=Z,15nm,1.1s							
PZH	**PanZhiHua**	**39.91**	**320**	P		**P**	**19 44 17.8**	**+2.8**
KSRS	**Korea Array** comp=Z,1.1nm,0.6s,baz=180,slow=10.0,SNR=5.4 comp=Z,1.1nm,0.6s	**41.02**	**359**	P		**P**	**19 44 25.0**	**+1.2**
MJAR	**Matsushiro Arr** comp=Z,1.9nm,0.7s,baz=183,slow=9.7,SNR=7.1 comp=Z,1.9nm,0.7s	**41.04**	**12**	P		**P**	**19 44 23.9**	**-0.2**
BRDH	**Bariadhala** comp=Z,34nm,21.3s,baz=169,slow=38	**44.83**	**308**	LR		LR	20 05 20.8	
SHL	**Shillong**	**46.19**	**311**	P		**P**	**19 45 05.5**	**-0.5**
HHC	**Hu-ho-hao-te**	**47.13**	**342**	*eP*		**P**	**19 45 17.0**	**+4.1**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,110nm,3.8s							
USRK	**Ussuriysk Ar.** comp=Z,3.0nm,0.7s,baz=198,slow=7.6,SNR=6.1 comp=Z,3.0nm,0.7s	**47.83**	**3**	P		**P**	**19 45 19.9**	**+1.7**
LSA	**Lhasa**	**49.09**	**315**	P		**P**	**19 45 29.1**	**+0.4**
LSA				IAmb		IAmb	19 45 31.1	
	comp=Z,4.8nm,0.8s							
LSA	**Lhasa**	**49.09**	**315**	P		**P**	**19 45 26.0**	**-2.7**
LSA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
GTA	**Gaotai**	**50.60**	**331**	*eP*		**P**	**19 45 41.4**	**+1.8**
GTA				pP		pP	19 45 47.3	-1.9
GTA				pmax		pmax		
	comp=Z,5.0nm,1.2s							
EVN	**Everest**	**51.29**	**311**			**P**	**19 45 43.5**	**-2.1**
SONM	**Songino Array** comp=Z,1.6nm,1.0s,baz=168,slow=7.6,SNR=7.4 comp=Z,1.6nm,1.0s	**55.03**	**342**	P		**P**	**19 46 13.0**	**+0.8**
KSH	**Kashi**	**64.87**	**317**	P		**P**	**19 47 20.8**	**+0.8**
KSH				pmax		pmax		
	comp=Z,4.0nm,0.8s							
MKAR	**Makanchi Array** comp=Z,3.8nm,0.7s,baz=117,slow=7.8,SNR=28 comp=Z,3.8nm,0.7s	**64.90**	**327**	P		**P**	**19 47 20.6**	**+0.6**
MKAR	**Makanchi Array**	**64.90**	**327**			**P**	**19 47 19.8**	**-0.2**
MAKZ	**Makanchi**	**65.08**	**326**	P		**P**	**19 47 19.8**	**-1.3**
MAKZ				IAmb		IAmb	19 47 23.0	
	comp=Z,8.1nm,1.1s							
AAK	**Ala-Archa** comp=Z,17nm,19.2s,baz=118,slow=39	**67.34**	**319**	LR		LR	20 20 28.1	
ZALV	**Zalesovo Beam** comp=Z,4.0nm,0.8s,baz=127,slow=5.4,SNR=16	**68.19**	**334**	P		**P**	**19 47 40.2**	**-0.4**
ZALV				LR		LR	20 19 14.8	
	comp=Z,19nm,19.2s,baz=340,slow=38 comp=Z,4.0nm,0.8s							
ZALV	**Zalesovo Beam**	**68.19**	**334**			**P**	**19 47 40.6**	**-0.1**
KURBB	**Kurchatov Arra** comp=Z,11nm,1.1s,baz=129,slow=5.8,SNR=34 comp=Z,11nm,1.1s	**69.17**	**328**	P		**P**	**19 47 47.5**	**+0.6**
KURK	**Kurchatov**	**69.17**	**328**			**P**	**19 47 47.3**	**+0.4**
BVAR	**Borovoye Array** comp=Z,1.5nm,0.7s,baz=126,slow=7.3,SNR=9.1 comp=Z,1.5nm,0.7s	**74.73**	**328**	P		**P**	**19 48 20.7**	**+0.5**
VNDA	**Vanda** comp=Z,1.2nm,0.6s,baz=324,slow=6.7,SNR=9.3 comp=Z,1.2nm,0.6s	**75.78**	**173**	P		**P**	**19 48 25.4**	**-0.4**
VNDA	**Vanda**	**75.78**	**173**			**P**	**19 48 25.4**	**-0.4**
QSPA	**South Pole Qui** comp=Z,1.1nm,0.3s,baz=332,slow=1.6,SNR=7.8 comp=Z,1.1nm,0.3s	**86.19**	**180**	P		**P**	**19 49 24.5**	**+2.9**
QSPA	**South Pole Qui**	**86.19**	**180**	P		**P**	**19 49 24.7**	**+3.1**
QSPA				IAmb		IAmb	19 49 26.7	
	comp=Z,4.5nm,1.1s							
ILAR	**Eielson Array** comp=Z,0.6nm,0.8s,baz=268,slow=4.8,SNR=7.5 comp=Z,0.6nm,0.8s	**90.94**	**25**	P		**P**	**19 49 43.4**	**-0.7**
ASF	**Jabal al Asfar** comp=Z,29nm,21.2s,baz=296,slow=33	**93.62**	**302**	LR		LR	20 38 39.7	
MBAR	**Mbarara** comp=Z,11nm,18.6s,baz=266,slow=40	**98.04**	**269**	LR		LR	20 29 52.2	
TXAR	**Lajitas Array** comp=Z,0.4nm,0.8s,baz=278,slow=2.3,SNR=4.0	**124.21**	**57**	PKP		**PKiKP**	**19 55 41.6**	**+1.4**
CPUP	**Villa Florida** comp=Z,0.6nm,0.7s,baz=176,slow=0.1,SNR=6.6	**149.49**	**169**	PKPbc		**PKPbc**	**19 56 30.8**	**+0.4**

*IGQ **17** 19:36:48.6±0.3,2.°S×2.°7W,h195km±3km,MLv3.2/36*
*RSNC **17** 19:36:48.8±0.8,2.°S×7.°8W,°,h178km±9km,M3.3,ML2.8*

ISC 17 19:36:47.7±1.6,**1.50S**±0.04×**77.77W**±0.06,**h197**km±9km, **n53,**σ**1s35/64,Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PKYU	**Pakayacu**	**0.23**	**130**	P		**Pn**	**19 37 14.6**	**+0.8**
PKYU				S		**Sn**	**19 37 34.4**	**+0.5**
PUYO	**Puyo, Santa Ro**	**0.25**	**271**	P		**Pn**	**19 37 14.6**	**+0.7**
ARDO	**Archidona, Ten**	**0.50**	**357**	P		**Pn**	**19 37 14.7**	**+0.1**
ARDO				S		**Sn**	**19 37 33.9**	**-1.6**
BULB	**Ulba Tungurahu**	**0.64**	**275**	P		Pn	19 37 10.5	-5.0
BULB				S		**Sn**	**19 37 31.1**	**-5.9**
BPAT	**Tungurahua Vol**	**0.66**	**269**	P		**Pn**	**19 37 16.7**	**+0.9**
PIAT	**Ana Tenorio**	**0.70**	**316**	P		**Pn**	**19 37 16.2**	**+0.3**
PIAT	**Ana Tenorio**	**0.70**	**316**	P		**Pn**	**19 37 16.2**	**+0.3**
PIAT				S		**Sn**	**19 37 36.5**	**-1.1**
BMAS	**Trigal station**	**0.70**	**270**	P		**Pn**	**19 37 14.0**	**-1.8**
PIS1	**Pisayambo**	**0.75**	**305**	P		**Pn**	**19 37 17.0**	**+0.7**
PIS1				S		**Sn**	**19 37 39.0**	**+0.7**
TAIS	**Taisha**	**0.92**	**163**	P		**Pn**	**19 37 18.4**	**+1.7**
TAIS				S		**Sn**	**19 37 40.1**	**+0.8**
VCES	**Cotopaxi**	**0.93**	**318**	P		**Pn**	**19 37 18.3**	**+1.0**
TAMH	**Tambohuasha Ch**	**1.01**	**267**	P		**Pn**	**19 37 19.1**	**+1.3**
BMOR	**Cotopaxi Volca**	**1.02**	**318**	P		**Pn**	**19 37 19.0**	**+0.9**
ANTM	**Antisana-La Mi**	**1.05**	**335**	P		**Pn**	**19 37 18.8**	**+0.6**
ANTS	**Antisana-Sarah**	**1.07**	**338**	P		**Pn**	**19 37 19.1**	**+0.7**
CHSH	**Refugio Sur-Vo**	**1.09**	**270**	P		**Pn**	**19 37 19.4**	**+0.8**
ANTG	**Antisana-Guama**	**1.10**	**334**	P		**Pn**	**19 37 19.2**	**+0.7**
JSCH	**Cashca Totoras**	**1.22**	**260**	P		**Pn**	**19 37 20.4**	**+1.2**
ILLI	**Illinizas Sur**	**1.23**	**309**	P		**Pn**	**19 37 20.3**	**+0.9**
REVS	**Reventador Sur**	**1.39**	**6**	P		**Pn**	**19 37 20.9**	**+0.4**
REVN	**San Rafael**	**1.42**	**6**	P		**Pn**	**19 37 21.1**	**+0.3**
GGPT	**Toaza - Volcan**	**1.52**	**326**	P		**Pn**	**19 37 22.3**	**+0.5**
ANGU	**Angureal**	**1.55**	**351**	P		**Pn**	**19 37 22.1**	**+0.8**
TERV	**Terraza Guagua**	**1.55**	**328**	P		**Pn**	**19 37 22.9**	**+0.6**
CASC	**Dorado de Casc**	**1.68**	**15**	P		**Pn**	**19 37 23.2**	**+0.2**
COHC	**Cochancay**	**1.77**	**237**	P		**Pn**	**19 37 24.0**	**+0.4**
COHC				S		**Sn**	**19 37 51.5**	**-0.1**
COHC	**Cochancay**	**1.77**	**237**	P		**Pn**	**19 37 23.8**	**+0.2**
COHC				S		**Sn**	**19 37 51.5**	**-0.1**
BOSC	**San Juan Bosco**	**1.79**	**204**	P		**Pn**	**19 37 25.4**	**+1.3**
BOSC				S		**Sn**	**19 37 53.8**	**+1.3**
OTAV	**Otavalo**	**1.85**	**339**	P		**Pn**	**19 37 25.3**	**+0.2**
CUSE	**Cuicocha Este**	**1.90**	**341**	P		**Pn**	**19 37 26.3**	**+0.8**
MILO	**Milagro-Astudi**	**1.94**	**246**	P		**Pn**	**19 37 24.6**	**-0.8**
BONI	**La Bonita**	**1.95**	**7**	P		**Pn**	**19 37 26.1**	**+0.2**
BONI	**La Bonita**	**1.95**	**7**	P		**Pn**	**19 37 25.9**	**+0.1**
URCU	**Urcuqui**	**1.98**	**346**	P		**Pn**	**19 37 27.2**	**+0.9**
PAC1	**Pacto, Paraso**	**2.02**	**330**	P		**Pn**	**19 37 28.3**	**+1.8**
PAC1				S		**Sn**	**19 37 56.6**	**-0.1**
BV15	**Puerto Quito-O**	**2.19**	**319**	P		**Pn**	**19 37 28.2**	**+0.2**
CHL1	**Volc¡n Chiles**	**2.28**	**356**	P		**Pn**	**19 37 31.5**	**+1.9**
CHL2	**Volc¡n Chiles**	**2.29**	**356**	P		**Pn**	**19 37 33.2**	**+3.5**
CHMA	**Chilma**	**2.36**	**353**	P		**Pn**	**19 37 31.2**	**+0.9**
PCRA	**Pucara 2**	**2.42**	**225**	P		**Pn**	**19 37 29.9**	**-1.2**
GCUF	**Volcan Galeras**	**2.74**	**9**	P		**Pn**	**19 37 35.0**	**+0.3**
JIPI	**JIPIJAPA**	**2.79**	**273**	P		**Pn**	**19 37 34.8**	**0.0**
PPLP	**Puerto Lpez**	**3.00**	**269**	P		**Pn**	**19 37 37.0**	**-0.2**
ARNL	**Arenillas**	**3.06**	**228**	P		**Pn**	**19 37 37.7**	**-0.3**
GONZ	**Gonzanam**	**3.17**	**211**	P		**Pn**	**19 37 40.4**	**+0.8**
ISPT	**Isla de la Pla**	**3.31**	**274**	P		**Pn**	**19 37 40.5**	**-0.4**
PTLC	**Puerto Leguiza**	**3.41**	**61**	P		**Pn**	**19 37 40.8**	**-1.3**
BBAC	**Balboa, Cauca**	**3.54**	**9**	P		**Pn**	**19 37 44.9**	**+1.0**
BBAC				S		**Sn**	**19 38 31.5**	**+3.5**
MCRA	**Macar, Loja**	**3.59**	**217**	P		**Pn**	**19 37 44.0**	**-0.4**
ZUMB	**Zumba**	**3.61**	**202**	P		**Pn**	**19 37 46.0**	**+1.2**
FLOC	**Florencia**	**3.72**	**35**	P		**Pn**	**19 37 46.3**	**+0.3**
FLOC	**Florencia**	**3.72**	**35**	P		**Pn**	**19 37 45.7**	**-0.3**
FLOC				S		**Sn**	**19 38 29.3**	**-2.5**
POPC	**Popayan, Colom**	**4.16**	**15**	P		**Pn**	**19 37 50.7**	**-0.9**

GUC 17 19:40:54.9±0.7,**20.52S**×**69.55W,h75**km±3km,**ML3.0, 2C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PX03	**IPOC Station P**	**0.14**	**326**	*eP*		Pn	19 41 04.7	-1.3
PX03				*i* S		Sn	19 41 13.9	-0.2
PX03				IAML			19 41 14.4	
	comp=N,1μm,0.3s							
HMBC	**Humberstone**	**0.40**	**307**	*i*P		Pn	19 41 06.7	-0.8
HMBC				*i* S		Sn	19 41 16.3	-0.4
HMBC	**Humberstone**	**0.40**	**307**	P		Pn	19 41 06.8	-0.6
PB01	**IPOC Station P**	**0.53**	**174**	*i*P		Pn	19 41 07.8	-0.8
PB01				*i* S		Sn	19 41 17.9	-0.7
PB01				IAML			19 41 19.4	
	comp=N,1μm,0.4s							
TA01	**Diego Aracena**	**0.59**	**265**	*eP*		Pn	19 41 08.1	-0.9
TA01				*i* S		Sn	19 41 18.7	-0.9
TA01				IAML			19 41 19.5	
	comp=E,422nm,0.2s							
TA02	**Huaiquique**	**0.60**	**294**	*eP*		Pn	19 41 08.4	-0.7
TA02				*i* S		Sn	19 41 19.1	-0.5
PATCX	**Punta Patache**	**0.64**	**242**	*i*P		Pn	19 41 09.0	-0.6
PATCX				*i* S		Sn	19 41 20.2	-0.4
PATCX	**Punta Patache**	**0.64**	**242**	P		Pn	19 41 09.2	-0.5
PB11	**IPOC Station P**	**0.76**	**352**	*i*P		Pn	19 41 10.5	-0.5
PB11				*i* S		Sn	19 41 22.8	-0.1
PB11				IAML			19 41 24.0	
	comp=E,2μm,0.1s							
PB11	**IPOC Station P**	**0.76**	**352**	P		Pn	19 41 10.7	-0.4
PB02	**IPOC Station P**	**0.86**	**202**	*eP*		Pn	19 41 11.4	-0.8
PB02				*i* S		Sn	19 41 24.4	-0.6
PB02				IAML			19 41 26.3	
	comp=N,2μm,0.3s							
GO01	**Chusmiza**	**0.91**	**22**	*eP*		Pn	19 41 12.8	-0.3
GO01				*i* S		Sn	19 41 26.7	+0.2
PB07	**IPOC Station P**	**1.25**	**195**	*eP*		Pn	19 41 16.5	-0.5
PB07				*i* S		Sn	19 41 33.5	0.0
PB07				IAML			19 41 35.7	
	comp=N,448nm,0.3s							
PB09	**IPOC Station P**	**1.31**	**167**	*eP*		Pn	19 41 17.8	0.0
PB09				*i* S		Sn	19 41 35.5	+0.7
PB09				IAML			19 41 38.1	
	comp=E,197nm,0.6s							
PB09	**IPOC Station P**	**1.31**	**167**	P		Pn	19 41 18.1	+0.3
PB03	**IPOC Station P**	**1.54**	**187**	*eP*		Pn	19 41 19.9	-0.8
PB03				*i* S		Sn	19 41 38.6	-1.6
PB03				IAML			19 41 42.0	
	comp=E,326nm,0.1s							
PB12	**IPOC Station P**	**2.03**	**339**	*eP*		Pn	19 41 26.5	-0.7

*IDC **17** 19:51:14.8±3.9,13.°08N×119.°94E,h58km±44km,mb3.3/5, mbtmp3.6/5,Error ellipse: s-maj=34.8km s-min=18.4km az=57.0*

ISC 17 19:51:11.9±1.1,**13.°1N**±0.°1×**120.°0E**±0.°1,**h31**km,**n6,** σ**0s91/7,mb3.7/4,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGY	**Tagaytay City** 477nm,0.3s,baz=225,slow=5.7,SNR=4.7	**1.40**	**43**	P		**Pb**	**19 51 36.9**	**-0.5**
TGY				S		**Sb**	**19 51 55.9**	**+0.9**
	2μm,0.5s,baz=32,slow=18,SNR=11							
CMAR	**Chiang Mai Arr** 1.1nm,0.8s,baz=100,slow=9.4,SNR=9.5 1.1nm,0.8s	**20.92**	**288**	P		**P**	**19 55 53.1**	**+1.0**
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=335,slow=9.5,SNR=8.3 0.7nm,0.7s	**35.73**	**156**	P		**P**	**19 58 07.6**	**-0.4**
ASAR	**Alice Springs** 0.7nm,0.7s,baz=340,slow=7.5,SNR=12 0.7nm,0.7s	**38.98**	**159**	P		**P**	**19 58 36.2**	**+0.6**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=120,slow=8.5,SNR=4.4 0.6nm,0.7s	**46.12**	**324**	P		**P**	**19 59 32.9**	**-0.5**
KURBB	**Kurchatov Arra** 1.0nm,0.9s,baz=133,slow=7.5,SNR=5.8 1.0nm,0.9s	**50.31**	**327**	P		**P**	**20 00 05.0**	**-0.7**

*THE **17** 19:53:38.5,36.°N±4.°×2.°9E±.°,h10km±9km,M2.5/7, MLh2.5/7*
*ISK **17** 19:53:38.3,36.°46N×28.°72E,h6km,ML2.6/19*
*AFAD **17** 19:53:38.4,36.°48N×28.°68E,h7km±2km,ML2.5*
*ATH **17** 19:53:41.4,36.°46N×

ESEN				S	Sg	19 54 22.5	-0.4	
ESEN				*i* IAML		19 54 26.0		
	comp=N,61nm,0.8s							
ESEN				*i* IAML		19 54 26.0		
	comp=E,66nm,0.6s							
AYDN	**Tasoluk**	**1.38**	**331**	P	**Pb**	**19 54 04.6**	**0.0**	
AYDN				S	**Sn**	**19 54 22.2**	**-0.3**	
AYDN				*i* IAML		19 54 26.0		
	comp=N,111nm,0.4s							
AYDN				*i* IAML		19 54 27.0		
	comp=E,65nm,0.5s							
KORT	**Korkueli**	**1.43**	**67**	P	**Pn**	**19 54 04.4**	**-0.3**	
KORT				*i* IAML		19 54 31.0		
	comp=N,83nm,0.4s							
KORT				*i* IAML		19 54 35.0		
	comp=E,122nm,0.6s							
INCE	**Denizli-Bozkur**	**1.44**	**28**	P	**Pg**	**19 54 06.3**	**+0.2**	
INCE				S	**Sg**	**19 54 25.5**	**+0.9**	
INCE				*i* IAML		19 54 28.0		
	comp=E,71nm,0.7s							
INCE				*i* IAML		19 54 29.0		
	comp=N,80nm,0.5s							
KARP	**Karpathos**	**1.55**	**235**	Pn	**Pb**	**19 54 07.5**	**+0.2**	
KARP	**Karpathos**	**1.55**	**235**	P	**Pn**	**19 54 05.2**	**-1.0**	
KARP	**Karpathos**	**1.55**	**235**	P	**Pg**	**19 54 08.3**	**+0.1**	
DDIM	**Aydin, Didim**	**1.55**	**311**	P	**Pg**	**19 54 08.9**	**+0.7**	
DDIM				*i* IAML		19 54 38.0		
	comp=N,63nm,0.4s							
DDIM				*i* IAML		19 54 46.0		
	comp=E,65nm,0.6s							
NAZL	**Nazilli-Aydin**	**1.55**	**348**	Pn	**Pb**	**19 54 07.2**	**-0.2**	
ANTB	**Antalya**	**1.62**	**73**	Pn	**Pb**	**19 54 07.9**	**-0.7**	
AYDB	**Zeytinkoy-Aydi**	**1.64**	**337**	Pn	**Pb**	**19 54 08.4**	**-0.5**	
BRDR	**BURDUR-Merkez**	**1.65**	**40**	P	**Pg**	**19 54 10.6**	**+0.5**	
BUCA	**Burdur, Bucak-**	**1.72**	**59**	P	**Pg**	**19 54 12.8**	**+1.3**	
KIRA	**zmir-Kiraz**	**1.76**	**352**	P	**Pb**	**19 54 10.4**	**-0.7**	
BASM	**Basmaki-Afyon**	**1.82**	**36**	Pn	**Pn**	**19 54 10.5**	**+0.5**	
ODEM	**Odemis-Izmir**	**1.90**	**345**	Pn	**Pb**	**19 54 12.1**	**-1.2**	
SMG	**Samos**	**1.96**	**311**	P	**Pn**	**19 54 11.8**	**0.0**	
SMG				S	**Sn**	**19 54 37.3**	**+0.7**	
SMG	**Samos**	**1.96**	**311**	P	**Pn**	**19 54 12.9**	**+1.0**	
ISP	**Isparta**	**1.99**	**46**	Pn	**Pn**	**19 54 13.1**	**+0.7**	
KULA	**Kula-Manisa**	**2.06**	**359**	Pn	**Pn**	**19 54 14.1**	**+0.7**	
BLCB	**Balcova**	**2.35**	**326**	Pn	**Pn**	**19 54 17.8**	**+0.6**	
GORD	**Gordes-Manisa**	**2.49**	**350**	Pn	**Pn**	**19 54 20.2**	**+0.9**	
APE	**Apeiranthos**	**2.63**	**285**	P	**Pn**	**19 54 21.4**	**+0.2**	
APE				S	**Sn**	**19 54 51.8**	**-1.4**	
CHOS	**Chios island**	**2.87**	**313**	P	**Pn**	**19 54 25.6**	**+1.1**	
CHOS				S	**Sn**	**19 55 00.8**	**+1.7**	
IDI	**Anoyia**	**3.31**	**251**	P	**Pn**	**19 54 31.4**	**+0.9**	
IDI				S	**Sn**	**19 55 09.4**	**-0.7**	
SIGR	**SIGRI**	**3.57**	**322**	P	**Pn**	**19 54 34.9**	**+0.9**	
SIGR	**SIGRI**	**3.57**	**322**	P	**Pn**	**19 54 35.9**	**+1.9**	
GADA	**Gvkgeada**	**4.34**	**330**	P	**Pn**	**19 54 45.7**	**+1.1**	
GADA				S	**Sn**	**19 55 37.1**	**+1.7**	
LIA	**Limnos Island**	**4.43**	**322**	P	**Pn**	**19 54 46.9**	**+1.1**	

IDC ***17*** *19:54:46.5±0.6, 14.°96S×173.°94W, h0km, mb4.3/11, mbtmp4.3/11, MS3.5/21, Error ellipse: s-maj=28.5km s-min=16.8km az=128.0*

NOU ***17*** *19:54:48.5, 15.°13S×173.°57W, h0km, mb4.8/7, Tonga Islands*

NEIC ***17*** *19:54:51.4±2.1, 15.°1S±0.°1×173.°7W±0.°1, h35km±2km, mb4.5/9, Error ellipse: s-maj=24.1km s-min=14.9km az=303.0*

ISC 17 19:54:50.5±0.5, 15°07'S±0.°08×173°75'W±0.°09, h30km, n62, σ1§46/41, mb4.4/15, MS3.7/21, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.23**	**59**	**Pn**	**Pn**	**19 55 25.1**	**-0.4**
AFI	**Afiamalu**	**2.23**	**59**	P	**Pn**	**19 55 25.0**	**-0.5**
NIUE	**Niue**	**5.40**	**138**	**Pn**	**Pn**	**19 56 08.2**	**-0.9**
NIUE	**Niue**	**5.40**	**138**	P	**Pn**	**19 56 07.8**	**-1.3**
RAR	**Rarotonga**	**14.61**	**117**	Pn	**Pn**	**19 58 13.2**	**-2.1**
	1.8nm,0.3s,baz=298,slow=17,SNR=3.1						
RAR	**Rarotonga**	**14.61**	**117**		**Pn**	**19 58 12.7**	**-2.6**
RAR	**Rarotonga**	**14.61**	**117**	P	**Pn**	**19 58 14.6**	**-0.6**
PPT	**Papeete**	**23.32**	**99**	LR	LR	20 06 49.6	
	comp=Z,33nm,20.2s,baz=262,slow=31						
URZ	**Urewera**	**24.47**	**198**	P	**P**	**20 00 09.0**	**+2.1**
HNR	**Honiara**	**26.30**	**279**	LR	LR	20 09 24.9	
	comp=Z,44nm,19.1s,baz=2.5,slow=34						
QRZ	**Quartz Range**	**28.30**	**202**	P	**P**	**20 00 43.8**	**+2.4**
KHZ	**Kahutara**	**29.37**	**199**	P	**P**	**20 00 52.8**	**+2.0**
JCZ	**Jackson Bay**	**32.51**	**204**	P	**P**	**20 01 21.3**	**+2.6**
H11S2	**WAKE ISLAND Hy**	**38.51**	**329**	T	T	20 42 54.4	
	baz=146,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**38.52**	**329**	T	T	20 42 39.3	
	baz=146,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**38.53**	**329**	T	T	20 42 39.6	
	baz=146,slow=76,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**39.46**	**331**	T	T	20 44 22.6	
	baz=150,slow=76,SNR=5.5						
H11N1	**WAKE ISLAND Hy**	**39.47**	**331**	T	T	20 44 41.1	
	baz=150,slow=76,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**39.48**	**331**	T	T	20 44 26.5	
	baz=150,slow=76,SNR=3.8						
STKA	**Stephens Creek**	**43.91**	**240**	P	**P**	**20 02 54.0**	**-0.7**
	0.8nm,0.4s,baz=74,slow=7.2,SNR=5.7						
	0.8nm,0.4s						
INKA	**Innaminka**	**43.97**	**246**	P	**P**	**20 02 54.2**	**-1.0**
WB0	**Warramunga Arr**	**49.55**	**257**		**P**	**20 03 38.2**	**-0.9**
WRA	**Warramunga Arr**	**49.59**	**257**	P	**P**	**20 03 38.6**	**-0.8**
	2.4nm,0.4s,baz=91,slow=7.3,SNR=72						
WRA				PcP	**PcP**	**20 05 00.5**	**-0.3**
	0.6nm,0.7s,baz=90,slow=4.3,SNR=2.6						
	2.4nm,0.4s						
WRA	**Warramunga Arr**	**49.59**	**257**	P	**P**	**20 03 39.0**	**-0.4**
GUMO	**Guam**	**49.88**	**303**	LR	LR	20 23 30.3	
	comp=Z,15nm,18.1s,baz=102,slow=35						
AS31	**Alice Springs**	**49.89**	**252**		**P**	**20 03 40.3**	**-1.3**
AS31				IAmb	IAmb	20 03 42.6	
	comp=Z,5.6nm,0.8s						
ASAR	**Alice Springs**	**49.90**	**252**	P	**P**	**20 03 41.3**	**-0.4**
	comp=Z,21nm,0.7s,baz=85,slow=8.5,SNR=207						
ASAR				PcP	**PcP**	**20 05 01.9**	**0.0**
	comp=Z,0.8nm,0.8s,baz=93,slow=4.8,SNR=1.2						
ASAR				LR	LR	20 24 01.2	
	comp=Z,25nm,18.1s,baz=86,slow=35						
	comp=Z,21nm,0.7s						
ASAR	**Alice Springs**	**49.90**	**252**		**P**	**20 03 41.5**	**-0.2**
PSA00	**Pilbara Seismi**	**62.98**	**253**	P	**P**	**20 05 10.7**	**-4.2**
PSA00				IAmb	IAmb	20 05 53.7	
	comp=Z,8.0nm,1.4s						
SBA	**Scott Base**	**63.55**	**185**	P	**P**	**20 05 19.3**	**+1.6**
SBA				IAmb	IAmb	20 05 20.0	
	comp=Z,3.6nm,0.8s						
VNDA	**Vanda**	**63.67**	**186**	P	**P**	**20 05 19.6**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=4.2,slow=6.9,SNR=27						
	comp=Z,2.1nm,0.6s						
VNDA	**Vanda**	**63.67**	**186**		**P**	**20 05 19.1**	**+0.7**
VNDA				IAmb	IAmb	20 05 20.4	
	comp=Z,2.5nm,0.8s						
SHEM	**Shemya Is, Ala**	**68.33**	**352**	LR	LR	20 28 49.3	
	comp=Z,53nm,21.9s,baz=104,slow=30						
MJAR	**Matsushiro Arr**	**68.47**	**320**	LR	LR	20 30 21.4	
	comp=Z,33nm,19.7s,baz=159,slow=31						
ASAJ	**Asahikawa**	**71.09**	**328**	LR	LR	20 30 58.1	
	comp=Z,23nm,21.3s,baz=164,slow=31						
JNU	**Nakatsue**	**71.33**	**313**	LR	LR	20 31 56.5	
	comp=Z,44nm,18.4s,baz=26,slow=31						
PETK	**Petropavlovsk-**	**72.22**	**342**	LR	LR	20 30 04.8	
	comp=Z,26nm,21.8s,baz=125,slow=29						
PFO	**Pinyon Flats O**	**72.94**	**47**	LR	LR	20 29 24.3	
	comp=Z,60nm,20.4s,baz=283,slow=28						
NVAR	**Mina Array Bea**	**74.31**	**42**	P	**P**	**20 06 26.8**	**+1.3**
	comp=Z,1.7nm,0.9s,baz=226,slow=9.9,SNR=7.3						
NVAR				LR	LR	20 30 59.2	
	comp=Z,57nm,19.9s,baz=226,slow=29						
	comp=Z,1.7nm,0.9s						
GMN	**Gold Mountain**	**74.37**	**44**	P	**P**	**20 06 25.5**	**-0.3**
GMN				IAmb	IAmb	20 06 28.7	
	comp=Z,2.1nm,0.9s						
KDAK	**Kodiak Island**	**74.67**	**12**	LR	LR	20 31 14.5	
	comp=Z,58nm,19.9s,baz=178,slow=29						
QSPA	**South Pole Qui**	**74.97**	**180**	P	**P**	**20 06 32.1**	**+3.3**
	comp=Z,5.4nm,0.8s,baz=36,slow=1.4,SNR=14						
	comp=Z,5.4nm,0.8s						
QSPA	**South Pole Qui**	**74.97**	**180**		**P**	**20 06 29.9**	**+1.1**
NEW	**Newport**	**80.63**	**34**	LR	LR	20 38 21.6	
	comp=Z,42nm,19.0s,baz=304,slow=32						
TXAR	**Lajitas Array**	**80.71**	**56**	P	**P**	**20 07 02.5**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=221,slow=7.1,SNR=8.1						
	comp=Z,0.6nm,0.6s						
ANMO	**Albuquerque**	**80.85**	**50**	LR	LR	20 34 07.0	
	comp=Z,48nm,19.8s,baz=6.0,slow=29						
DLBC	**Dease Lake**	**81.52**	**22**	LR	LR	20 34 27.9	
	comp=Z,37nm,21.9s,baz=89,slow=29						
ILAR	**Eielson Array**	**82.19**	**11**	P	**P**	**20 07 08.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=206,slow=4.8,SNR=26						
ILAR				LR	LR	20 36 19.6	
	comp=Z,33nm,19.8s,baz=145,slow=30						
	comp=Z,0.7nm,0.5s						
PDAR	**Pinedale Array**	**82.25**	**42**	P	**P**	**20 07 10.2**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=206,slow=2.8,SNR=9.9						
PDAR				LR	LR	20 36 04.4	
	comp=Z,33nm,19.9s,baz=324,slow=30						
	comp=Z,0.8nm,0.5s						
PDAR	**Pinedale Array**	**82.25**	**42**	P	**P**	**20 07 09.9**	**+0.6**
MAW	**Mawson**	**87.99**	**199**	P	**P**	**20 07 36.8**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=142,slow=9.4,SNR=13						
	comp=Z,3.0nm,0.6s						
YAK	**Yakutsk**	**88.68**	**337**	LR	LR	20 39 27.6	
	comp=Z,22nm,21.9s,baz=104,slow=30						
SNAA	**Sanae**	**93.25**	**177**	P	**P**	**20 08 01.8**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=182,slow=4.3,SNR=3.1						
	comp=Z,0.7nm,0.8s						
ATAH	**Atahualpa**	**93.30**	**98**	LR	LR	20 42 48.1	
	comp=Z,25nm,18.8s,baz=64,slow=31						
ULM	**Lac du Bonnet**	**93.89**	**39**	LR	LR	20 44 53.6	
	comp=Z,55nm,19.5s,baz=28,slow=32						
SONM	**Songino Array**	**94.38**	**318**	LR	LR	20 43 53.6	
	comp=Z,26nm,22.0s,baz=354,slow=31						
ARCES	**ARCESS Array B**	**124.24**	**352**	PKP	**PKPdf**	**20 13 45.7**	**0.0**
	comp=Z,2.8nm,0.9s,baz=0.0,slow=2.4,SNR=5.4						
FINES	**FINESS Array B**	**131.55**	**347**	PKP	**PKPdf**	**20 13 59.3**	**-0.6**
	comp=Z,3.5nm,1.0s,baz=124,slow=3.4,SNR=8.4						
HFS	**Hagfors**	**134.68**	**355**	PKP	**PKPdf**	**20 14 06.1**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=77,slow=6.2,SNR=1.1						
BRTR	**Keskin Array B**	**145.69**	**321**	PKPbc	**PKPab**	**20 14 27.2**	**0.0**
	comp=Z,2.9nm,0.7s,baz=49,slow=2.2,SNR=20						
GERES	**GERESS Array B**	**145.77**	**351**	PKPbc	**PKPab**	**20 14 27.3**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=28,slow=3.6,SNR=13						
MMAI	**Mount Meron Ar**	**148.10**	**309**	PKPbc	**PKPbc**	**20 14 34.6**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=35,slow=3.1,SNR=2.0						

GII 17 19:56:52.6±0.0, 33°19N±0.°01×35°55E±0.°01, h8km, Mws0.7, confirmed, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEM	**Giv'at Ha'Em**	**0.10**	**74**	P	Pg	19 56 55.1	+0.2
GEM	**Giv'at Ha'Em**	**0.10**	**74**	S	Sg	19 56 57.0	+0.5
NATI	**Neve Ativ**	**0.17**	**63**	P	Pg	19 56 56.5	+0.3
NATI	**Neve Ativ**	**0.17**	**63**	S	Sg	19 56 58.5	0.0
MMA0B	**Mount Meron ar**	**0.21**	**217**	P	Pg	19 56 57.4	+0.4
MMA0B	**Mount Meron ar**	**0.21**	**217**	S	Sg	19 57 00.6	+0.8
MMC7	**Mount Meron ar**	**0.21**	**220**	P	Pg	19 56 57.4	+0.4
MMC7	**Mount Meron ar**	**0.21**	**220**	S	Sg	19 57 00.9	+1.1

IDC ***17*** *20:05:23.3±9.4, 9.°28N×123.°28E, h114km±90km, mb3.4/8, mbtmp3.8/8, ML4.9/1, MS2.8/4, Error ellipse: s-maj=51.0km s-min=15.9km az=62.0*

ISC 17 20:05:21.7±0.9, 9°3N±0.°1×123°3E±0.°3, h100km, n11, σ0§44/10, mb3.9/8, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.12**	**134**	LR	LR	20 07 24.5	
	comp=Z,181nm,19.0s,baz=296,slow=38						
KAPI	**Kappang**	**14.61**	**194**	LR	LR	20 14 04.7	
	comp=Z,27nm,21.6s,baz=22,slow=36						
BATI	**Baumata**	**19.33**	**179**	P	**Pn**	**20 09 41.6**	**+0.2**
	3.5nm,0.3s,baz=321,slow=1.3,SNR=18						
BATI				LR	LR	20 17 35.7	
	comp=Z,36nm,20.1s,baz=339,slow=38						
CMAR	**Chiang Mai Arr**	**25.34**	**294**	P	**P**	**20 10 39.3**	**-0.2**
	0.3nm,0.3s,baz=115,slow=7.9,SNR=8.2						
CMAR				LR	LR	20 20 25.2	
	comp=Z,15nm,20.9s,baz=335,slow=36						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**34.31**	**163**	P	**P**	**20 11 58.5**	**-0.3**
	1.4nm,0.6s,baz=342,slow=6.9,SNR=19						
ASAR				PcP	**PcP**	**20 14 33.2**	**+0.2**
	0.2nm,0.6s,baz=350,slow=2.0,SNR=4.2						
	1.4nm,0.6s						
SONM	**Songino Array**	**41.03**	**343**	P	**P**	**20 12 55.2**	**-0.1**
	0.8nm,0.7s,baz=155,slow=8.1,SNR=6.6						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**51.12**	**325**	P	**P**	**20 14 14.5**	**+0.2**
	0.9nm,0.8s,baz=129,slow=9.6,SNR=5.3						
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**54.16**	**333**	P	**P**	**20 14 35.6**	**-0.9**
	0.7nm,0.6s,baz=142,slow=7.4,SNR=5.2						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**55.29**	**327**	P	**P**	**20 14 44.4**	**-0.3**
	1.8nm,0.8s,baz=127,slow=6.9,SNR=11						
	1.8nm,0.8s						
BVAR	**Borovoye Array**	**60.87**	**327**	P	**P**	**20 15 23.7**	**0.0**
	2.4nm,1.0s,baz=116,slow=6.6,SNR=4.1						
	2.4nm,1.0s						
ILAR	**Eielson Array**	**81.62**	**26**	P	**P**	**20 17 28.8**	**+0.3**
	0.3nm,0.8s,baz=234,slow=6.0,SNR=4.6						
	0.3nm,0.8s						

UCR ***17*** *20:07:23.5±0.8, 11.°10N×86.°61W, h5km±7km, MW4.1*

CATAC ***17*** *20:07:24.7±0.4, 11.°1N±1.°×8.°7W±.°, h20km±3km, M3.9/41, MLv3.9/41, Error ellipse: s-maj=3.9km s-min=2.3km az=53.4, confirmed*

ISC 17 20:07:24.0±1.3, 11°14N±0.°03×86°57W±0.°04, h13km±9km, n90, σ0§73/113, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIN	**Rivas**	**0.79**	**67**	P	**Pg**	**20 07 37.4**	**-1.9**
NADN	**Granada**	**0.80**	**41**	P	**Pg**	**20 07 38.6**	**-1.0**
SABN	**Sabanita**	**0.91**	**26**	P	**Pb**	**20 07 41.2**	**-0.4**
NANN	**Nandasmo**	**0.91**	**29**	P	**Pn**	**20 07 43.1**	**+0.6**
NANN	**Nandasmo**	**0.91**	**29**	S	**Sn**	**20 07 56.3**	**+0.8**
MASN	**Masaya**	**0.94**	**26**	P	**Pg**	**20 07 42.7**	**+0.5**
MASN				S	**Sn**	**20 07 56.3**	**0.0**
JAPN	**AI SSO del Vol**	**0.96**	**66**	P	**Pn**	**20 07 43.4**	**+0.2**
JAPN	**AI SSO del Vol**	**0.96**	**66**	*eP*	**Pn**	**20 07 43.4**	**+0.2**
MAS3	**AI N del Volca**	**0.96**	**24**	P	**Pb**	**20 07 42.5**	**-0.1**
MAS3				S	**Sg**	**20 07 55.8**	**+0.7**
MORN	**AI O del Volca**	**0.99**	**66**	P	**Pn**	**20 07 43.0**	**-0.1**
MORN				S	**Sn**	**20 07 57.3**	**-0.4**
ABCN	**Banco Central**	**1.01**	**15**	P	**Pg**	**20 07 43.8**	**+0.3**
ABCN	**Banco Central**	**1.01**	**15**	S	**Sn**	**20 07 58.2**	**+0.1**
UNAN	**Cigeo UNAN**	**1.01**	**17**	P	**Pg**	**20 07 43.8**	**+0.3**
UNAN				S	**Sn**	**20 07 58.1**	**+0.1**
CONN	**Concepcion**	**1.02**	**66**	P	**Pb**	**20 07 43.4**	**-0.2**
CONN				S	**Sn**	**20 07 58.4**	**+0.1**
CARN	**Rivas**	**1.03**	**87**	P	**Pb**	**20 07 43.4**	**-0.4**
CARN				S	**Sg**	**20 07 58.2**	**+0.8**
CARN	**Rivas**	**1.03**	**87**	*eP*	**Pb**	**20 07 43.2**	**-0.6**
CARN				*eS*	**Sg**	**20 07 57.9**	**+0.5**
COPN	**Copaltepe**	**1.03**	**359**	P	**Pb**	**20 07 43.7**	**-0.1**
COPN	**Copaltepe**	**1.03**	**359**	*eP*	**Pb**	**20 07 43.8**	**-0.1**
TISN	**Laguna Tiscapa**	**1.04**	**17**	P	**Pb**	**20 07 42.2**	**-1.7**
ALLN	**Telcor Managua**	**1.05**	**16**	P	**Pn**	**20 07 44.5**	**0.0**
ALLN	**Telcor Managua**	**1.05**	**16**	S	**Sn**	**20 07 59.4**	**+0.3**
MGAN	**Managua**	**1.05**	**18**	P	**Pn**	**20 07 44.3**	**+0.2**
MGAN	**Managua**	**1.05**	**18**	S	**Sn**	**20 07 59.2**	**+0.1**
MGAN	**Managua**	**1.05**	**18**	*eP*	**Pb**	**20 07 44.3**	**+0.2**
MGAN				*eS*	**Sn**	**20 07 58.9**	**-0.2**
AERN	**Aeropuerto Man**	**1.07**	**22**	S	**Sn**	**20 07 59.9**	**+0.3**
APQ2	**Apoyeque**	**1.08**	**13**	P	**Pn**	**20 07 44.9**	**0.0**
APQ2				S	**Sn**	**20 07 59.9**	**+0.2**
APQ2	**Apoyeque**	**1.08**	**13**	P	**Pb**	**20 07 44.1**	**-0.5**
APQ2				S	**Sb**	**20 07 59.1**	**+0.5**
WILN	**Americas 2**	**1.08**	**20**	P	**Pb**	**20 07 44.6**	**-0.1**
WILN				S	**Sn**	**20 08 00.4**	**+0.6**
AMTN	**Mateare**	**1.10**	**7**	P	**Pn**	**20 07 45.4**	**+0.2**
AMTN	**Mateare**	**1.10**	**7**	S	**Sn**	**20 08 00.5**	**+0.3**
APYN	**Apoyeque**	**1.11**	**11**	P	**Pb**	**20 07 45.3**	**+0.2**
APYN				S	**Sg**	**20 08 00.1**	**+0.3**
ELI1	**Hacienda Flor**	**1.12**	**116**	P	**Pb**	**20 07 45.1**	**-0.1**
ELI1	**Hacienda Flor**	**1.12**	**116**	S	**Sn**	**20 08 00.9**	**+0.3**
ELI1	**Hacienda Flor**	**1.12**	**116**	*eP*	**Pb**	**20 07 45.3**	**+0.1**
APQ3	**Volcan Apoyequ**	**1.14**	**10**	P	**Pn**	**20 07 45.9**	**+0.1**
APQ3				S	**Sn**	**20 08 01.4**	**+0.1**
ALIBA	**Liberia Airpor**	**1.15**	**118**	*eP*	**Pn**	**20 07 44.6**	**-1.2**
LAPC	**Finca la Perla**	**1.18**	**108**	*eP*	**Pn**	**20 07 45.3**	**-1.0**
LAPC				*eS*	**Sb**	**20 08 01.9**	**+0.4**
DELF	**Filadelfia**	**1.22**	**124**	*eP*	**Pb**	**20 07 47.2**	**+0.3**
VRLE	**La Escondida,**	**1.24**	**106**	*eP*	**Pn**	**20 07 46.4**	**-0.7**
GPS1	**Guardaparques**	**1.25**	**107**	*eP*	**Pn**	**20 07 47.2**	**-0.2**
MOMN	**Momotombo**	**1.26**	**1**	P	**Pn**	**20 07 46.6**	**-0.8**
MOMN				S	**Sb**	**20 08 03.9**	**0.0**
MOM2	**El Cardon**	**1.29**	**4**	P	**Pn**	**20 07 47.4**	**-0.4**
MOM2				S	**Sb**	**20 08 04.3**	**-0.4**
ALEN	**Leon**	**1.34**	**347**	P	**Pn**	**20 07 48.3**	**-0.2**
ALEN	**Leon**	**1.34**	**347**	S	**Sn**	**20 08 05.4**	**-0.8**
CNGA	**AI SSO del Vol**	**1.35**	**355**	P	**Pn**	**20 07 48.5**	**-0.2**
CNGA				S	**Sn**	**20 08 06.4**	**-0.1**
CNGN	**Cerro Negro**	**1.36**	**355**	P	**Pn**	**20 07 48.4**	**-0.3**
CNGN	**Cerro Negro**	**1.36**	**355**	S	**Sn**	**20 08 06.2**	**-0.5**
CNGN	**Cerro Negro**	**1.36**	**355**	*eP*	**Pn**	**20 07 48.5**	**-0.3**
MOM3	**MOM3**	**1.36**	**2**	P	**Pn**	**20 07 48.5**	**-0.3**
MOM3				S	**Sb**	**20 08 07.3**	**+0.5**
SAJU	**San Juanillo,**	**1.36**	**141**	*eP*	**Pb**	**20 07 49.8**	**+0.3**
JUD3	**Juan Diaz 3**	**1.40**	**134**	*eP*	**Pn**	**20 07 49.5**	**0.0**
MESS	**Mesas**	**1.41**	**106**	*eP*	**Pn**	**20 07 49.9**	**+0.4**
HORNC	**Hornillas**	**1.43**	**107**	*eP*	**Pn**	**20 07 50.2**	**+0.4**
CUI	**Cuipilapa**	**1.47**	**109**	*eP*	**Pn**	**20 07 50.0**	**-0.2**
VMAR	**Armenia, Volca**	**1.47**	**103**	*eP*	**Pn**	**20 07 50.3**	**-0.1**
POLN	**AI Sur del Vol**	**1.52**	**351**	P	**Pn**	**20 07 49.3**	**-1.7**
POLN				S	**Sn**	**20 08 08.3**	**-2.3**
MOTZ	**Rio Naranjo**	**1.54**	**107**	*eP*	**Pn**	**20 07 51.8**	**+0.5**
UPAL	**Upala**	**1.55**	**99**	P	**Pn**	**20 07 51.0**	**-0.3**
PKGN	**Cerro Pekin**	**1.57**	**345**	P	**Pn**	**20 07 51.5**	**-0.2**
PKGN				S	**Sn**	**20 08 12.2**	**+0.3**
BOAB	**BOACO BROADBAN**	**1.57**	**34**	P	**Pn**	**20 07 51.0**	**-0.7**
BOAB	**BOACO BROADBAN**	**1.57**	**34**	S	**Sn**	**20 08 12.4**	**+0.4**
CMARA	**Lajas Hojancha**	**1.59**	**134**	P	**Pn**	**20 07 53.2**	**-0.1**
CMARA	**Lajas Hojancha**	**1.59**	**134**	*eP*	**Pb**	**20 07 52.8**	**-0.5**
CRIN	**San Cristobal**	**1.62**	**343**	P	**Pn**	**20 07 52.4**	**0.0**
CRIN	**San Cristobal**	**1.62**	**343**	S	**Sn**	**20 08 13.3**	**+0.1**
TENO	**El Achiote**	**1.63**	**105**	*eP*	**Pn**	**20 07 52.9**	**+0.4**
QUEB	**Quebradon, Cot**	**1.73**	**107**	*eP*	**Pn**	**20 07 54.6**	**+0.8**
JTS	**Las Juntas de**	**1.80**	**118**	P	**Pn**	**20 07 55.3**	**+0.5**
JTS				S	**Sb**	**20 08 20.2**	**+0.7**
JTS	**Las Juntas de**	**1.80**	**118**	*eP*	**Pn**	**20 07 55.2**	**+0.3**
TABAC	**Tabacon**	**1.89**	**110**	*eP*	**Pb**	**20 07 57.6**	**-0.8**
MATN	**Matagalpa**	**1.89**	**20**	P	**Pn**	**20 07 55.0**	**-1.2**
CEDE	**Laguna Cedeo**	**1.95**	**109**	*eP*	**Pb**	**20 07 58.8**	**-0.7**
VACR	**Volcan Arenal**	**1.98**	**109**	*eP*	**Pb**	**20 07 59.0**	**-0.9**
POTN	**Potosi Cosigui**	**2.06**	**334**	P	**Pn**	**20 07 58.4**	**0.0**
POTN				S	**Sn**	**20 08 22.8**	**-1.2**
CSGN	**Cosiguina Volc**	**2.06**	**332**	P	**Pn**	**20 07 59.0**	**+0.4**
CSGN				S	**Sn**	**20 08 24.9**	**+0.7**
CSGN	**Cosiguina Volc**	**2.06**	**332**	*eP*	**Pn**	**20 07 58.5**	**0.0**
SOCE	**Pocosol**	**2.06**	**111**	P	**Pn**	**20 07 60.0**	**+1.5**
SOCE	**Pocosol**	**2.06**	**111**	*eP*	**Pn**	**20 07 59.8**	**+1.3**
RCON	**San Juan de Ri**	**2.37**	**10**	P	**Pn**	**20 08 03.2**	**+0.5**
CNCH	**Conchagua**	**2.

SNAA	**Sanae**	**49.59 192**	P	**P**		**20 43 00.5**	**-0.9**
SNAA			IAmb	IAmb		20 43 07.7	
	comp=Z,5.0nm,1.1s						
BATI	**Baumata**	**50.51 329**	LR	LR		21 03 46.0	
	comp=Z,235nm,19.5s,baz=189,slow=35						
RAR	**Rarotonga**	**52.52 69**	LR	LR		21 02 04.8	
	comp=Z,44nm,21.0s,baz=260,slow=32						
H04S1	**CROZET ISLANDS**	**54.90 237**	T	T		21 43 51.2	
	baz=140,slow=76,SNR=82						
H04S2	**CROZET ISLANDS**	**54.90 237**	T	T		21 43 52.4	
	baz=140,slow=76,SNR=77						
H04S3	**CROZET ISLANDS**	**54.92 237**	T	T		21 43 51.0	
	baz=140,slow=76,SNR=81						
PMSA	**Palmer Station**	**55.84 164**	LR	LR		21 05 44.2	
	comp=Z,91nm,18.0s,baz=195,slow=34						
KAPI	**Kappang**	**56.58 326**	LR	LR		21 06 44.3	
	comp=Z,118nm,20.1s,baz=168,slow=34						
PPT	**Papeete**	**60.83 77**	LR	LR		21 04 07.4	
	comp=Z,50nm,21.2s,baz=162,slow=30						
DAV	**Davao City (W)**	**66.66 336**	LR	LR		21 14 31.7	
	comp=Z,35nm,18.2s,baz=86,slow=36						
GUMO	**Guam**	**70.72 357**	LR	LR		21 14 52.9	
	comp=Z,35nm,20.1s,baz=144,slow=34						
PSI	**Prapat**	**71.50 308**	LR	LR		21 13 29.7	
	comp=Z,61nm,20.0s,baz=144,slow=33						
H08S2	**Diego Garcia H**	**75.52 279**	T	T		22 08 56.4	
	baz=147,slow=76,SNR=99						
H08S1	**Diego Garcia H**	**75.53 279**	T	T		22 08 54.7	
	baz=147,slow=76,SNR=93						
H08S3	**Diego Garcia H**	**75.54 279**	T	T		22 09 02.9	
	baz=147,slow=76,SNR=108						
PLCA	**Paso Flores**	**77.17 151**	LR	LR		21 13 47.9	
	comp=Z,71nm,19.0s,baz=227,slow=31						
H03S2	**Juan Fernandez**	**81.09 142**	T	T		22 16 12.1	
	baz=201,slow=74,SNR=28						
H03S1	**Juan Fernandez**	**81.09 142**	T	T		22 16 13.6	
	baz=201,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**81.11 142**	T	T		22 16 13.2	
	baz=201,slow=74,SNR=32						
BOSA	**Boshof**	**81.59 229**	LR	LR		21 18 36.4	
	comp=Z,78nm,18.3s,baz=196,slow=33						
PALK	**Pallekele**	**83.91 294**	LR	LR		21 15 42.5	
	comp=Z,33nm,20.1s,baz=142,slow=30						
LBTB	**Lobatse**	**84.62 231**	LR	LR		21 19 41.6	
	comp=Z,77nm,19.6s,baz=170,slow=32						
CMAR	**Chiang Mai Arr**	**85.64 314**	P	**P**		**20 46 51.0**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=152,slow=5.9,SNR=4.8						
CMAR			LR	LR		21 24 42.9	
	comp=Z,72nm,19.2s,baz=155,slow=35						
	comp=Z,0.2nm,0.3s						
MATP	**Matopo**	**87.41 235**	LR	LR		21 19 20.9	
	comp=Z,59nm,21.5s,baz=174,slow=31						
BRDH	**Bariadhala**	**92.36 310**	LR	LR		21 28 57.7	
	comp=Z,41nm,19.9s,baz=37,slow=36						
TSUM	**Tsumeb**	**93.08 227**	LR	LR		21 22 19.5	
	comp=Z,96nm,19.9s,baz=146,slow=31						
MJAR	**Matsushiro Arr**	**93.88 353**	LR	LR		21 27 00.4	
	comp=Z,16nm,20.9s,baz=148,slow=34						
FINES	**FINESS Array B**	**150.78 303**	PKPbc	**PKPbc**		**20 54 02.4**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=107,slow=1.5,SNR=10.0						
GERES	**GERESS Array B**	**151.48 273**	PKPbc	**PKPbc**		**20 54 04.5**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=93,slow=8.3,SNR=4.0						

*IDC **17** 20:35:22.6±1.5, 15.01N×122.82E, h0km, mb3.6/5, mbtmp3.7/6, ML4.3/1, MS2.9/2, Error ellipse: s-maj=30.2km s-min=26.2km az=78.0*

ISC 17 20:35:26.8±1.3, 15.0N±0.2×122.8E±0.1, h28km, n8, σ1§00/7, mb3.5/5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**2.03 244**		Pn	**Pn**	**20 35 59.2**	**-0.1**
	114nm,0.3s,baz=101,slow=7.3,SNR=6.6						
TGY				Sn	**Sn**	**20 36 24.4**	**+0.6**
	186nm,0.3s,baz=214,slow=4.0,SNR=6.7						
	153nm,0.3s						
DAV	**Davao City (W)**	**8.35 161**		LR	LR	20 41 23.4	
	comp=Z,42nm,18.3s,baz=337,slow=43						
JOW	**Kunigami**	**12.81 23**		LR	LR	20 42 12.4	
	comp=Z,94nm,21.1s,baz=128,slow=32						
CMAR	**Chiang Mai Arr**	**23.11 282**		P	**P**	**20 40 29.2**	**-1.5**
	0.6nm,0.6s,baz=85,slow=7.4,SNR=6.5						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**39.94 164**		P	**P**	**20 42 58.8**	**-0.1**
	0.2nm,0.3s,baz=342,slow=8.1,SNR=5.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**46.23 322**		P	**P**	**20 43 50.7**	**+1.1**
	0.5nm,0.8s,baz=114,slow=8.4,SNR=2.3						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**50.28 325**		P	**P**	**20 44 20.6**	**0.0**
	0.6nm,0.6s,baz=122,slow=8.6,SNR=5.0						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**80.14 331**		P	**P**	**20 47 34.2**	**+0.1**
	2.6nm,1.1s,baz=77,slow=6.0,SNR=1.4						
	2.6nm,1.1s						

*JMA **17** 20:37:10.2±0.2, 25.1N×122.5E±0.5, h126km±2km, MV2.2/13, NW OFF ISHIGAKIJIMA IS*
*TAP **17** 20:37:10.5, 24.94N×122.50E, h120km, ML3.2, D*

ISC 17 20:37:10.5±1.5, 24.88N±0.05×122.50E±0.03, h125km±8km, n99, σ0§79/174, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.48 286**		P	**Pn**	**20 37 28.8**	**-0.1**
JYNG	**Yonaguni jima**	**0.58 136**		P	**Pn**	**20 37 29.7**	**+0.2**
JYNG				S	**Sn**	**20 37 44.5**	**+0.6**
SXI1	**Grass Mountain**	**0.61 291**	*i*	P	**Pn**	**20 37 29.5**	**-0.3**
SXI1				*e*S	**Sn**	**20 37 45.2**	**+0.9**
TIPB	**Shuangxi**	**0.62 279**	*i*	P	**Pn**	**20 37 29.7**	**-0.1**
TIPB				*e*S	**Sn**	**20 37 44.1**	**-0.2**
YOJ	**Yonaguni jima**	**0.62 132**	*e*	P	**Pn**	**20 37 29.9**	**+0.1**
YOJ	**Yonaguni jima**	**0.62 132**	*i*	P	**Pn**	**20 37 29.8**	**+0.1**
YOJ				*e*S	**Sn**	**20 37 45.0**	**+0.7**
TWC	**Suao**	**0.65 246**		P	**Pn**	**20 37 29.8**	**-0.2**
TWC				*i* S	**Sn**	**20 37 43.1**	**-1.5**
ESAO	**Su ao**	**0.67 244**	*e*	P	**Pn**	**20 37 30.5**	**+0.4**
ESAO				S	**Sn**	**20 37 44.7**	**-0.2**
ILA	**Ilan**	**0.69 261**		S	**Sn**	**20 37 45.3**	**+0.1**
TNOU	**National Taiwa**	**0.71 293**		P	**Pn**	**20 37 30.3**	**-0.1**
NDS	**Dongshan**	**0.75 251**	*e*	P	**Pn**	**20 37 31.0**	**+0.3**
TWE	**Neicheng**	**0.77 259**	*e*	P	**Pn**	**20 37 31.0**	**+0.1**
TWE				S	**Sn**	**20 37 46.0**	**-0.3**
EWUT	**Wuta**	**0.79 237**		P	**Pn**	**20 37 31.3**	**+0.3**
EWUT				*e*S	**Sn**	**20 37 46.8**	**+0.2**
ENA	**Nanau**	**0.82 237**	*e*	P	**Pn**	**20 37 31.6**	**+0.2**
ENA				*e*S	**Sn**	**20 37 47.3**	**+0.2**
FUSB	**Fushanzhiwuyua**	**0.84 262**		P	**Pn**	**20 37 31.4**	**-0.1**
FUSB				S	**Sn**	**20 37 46.6**	**-0.9**
TWA	**Mucha**	**0.84 277**	*e*	P	**Pn**	**20 37 31.3**	**-0.2**
TWA				S	**Sn**	**20 37 47.0**	**-0.3**
PCYT	**Pengchaiyu**	**0.84 333**	*e*	P	**Pn**	**20 37 31.7**	**+0.2**
EAHA	**Aohua**	**0.88 232**	*e*	P	**Pn**	**20 37 32.2**	**+0.4**
EAHA				*e*S	**Sn**	**20 37 48.4**	**+0.4**
ENTT	**Nioudou**	**0.88 255**		P	**Pn**	**20 37 32.1**	**+0.3**
ENTT				*e*S	**Sn**	**20 37 48.4**	**+0.3**
YM08	**YM08**	**0.88 291**		S	**Sn**	**20 37 48.1**	**0.0**
YM01	**YM01**	**0.89 288**		P	**Pn**	**20 37 31.8**	**-0.1**
YM01				S	**Sn**	**20 37 47.6**	**-0.6**
NWLT	**Wulai**	**0.91 264**		P	**Pn**	**20 37 31.9**	**-0.3**
NWLT				S	**Sn**	**20 37 47.2**	**-1.4**
ZUZH	**Zhuzihu**	**0.91 288**		P	**Pn**	**20 37 32.1**	**-0.1**
ZUZH				S	**Sn**	**20 37 48.3**	**-0.3**
ANP	**Anpu**	**0.94 289**	*e*	S	**Sn**	**20 37 49.1**	**0.0**
LATG	**Datong**	**0.95 249**	*i*	P	**Pn**	**20 37 33.1**	**+0.5**
LATG				S	**Sn**	**20 37 49.9**	**+0.6**
NTST	**Danshui**	**1.00 287**		S	**Sn**	**20 37 50.1**	**+0.3**
TWS1	**Kuangyinshan**	**1.01 283**		P	**Pn**	**20 37 33.1**	**+0.1**
TWS1				*e*S	**Sn**	**20 37 50.1**	**+0.1**
YHNB	**Yeheng**	**1.04 259**		P	**Pn**	**20 37 33.5**	**+0.1**
YHNB				S	**Sn**	**20 37 50.7**	**-0.2**
NSK	**Sanguang**	**1.06 259**		P	**Pn**	**20 37 33.9**	**+0.3**
NSK				*i* S	**Sn**	**20 37 50.9**	**-0.2**
ETL	**Fush Village**	**1.07 228**	*e*	P	**Pn**	**20 37 34.0**	**+0.3**
ETL				*e*S	**Sn**	**20 37 51.1**	**-0.1**
NACB	**Ninganchiao**	**1.08 230**	*e*	P	**Pn**	**20 37 33.5**	**-0.2**
NACB				*e*S	**Sn**	**20 37 50.6**	**-0.7**
NNSB	**Datong**	**1.11 247**		P	**Pn**	**20 37 34.6**	**+0.4**
NNSB				S	**Sn**	**20 37 52.4**	**+0.2**
NNS	**Nan Shan**	**1.11 247**		P	**Pn**	**20 37 34.7**	**+0.5**
NNS				S	**Sn**	**20 37 52.4**	**+0.2**
ETLH	**Xiulin Townshi**	**1.14 235**	*e*	P	**Pn**	**20 37 34.4**	**-0.1**
ETLH				*e*S	**Sn**	**20 37 52.0**	**-0.6**
TWD	**Chiawan**	**1.14 226**	*e*	P	**Pn**	**20 37 34.3**	**-0.1**
TWD				*e*S	**Sn**	**20 37 52.3**	**-0.2**
KSHI	**Guanxi Townshi**	**1.21 266**		P	**Pn**	**20 37 35.4**	**+0.3**
KSHI				S	**Sn**	**20 37 54.0**	**+0.3**
HWA	**Hwalien**	**1.21 223**	*e*	P	**Pn**	**20 37 35.7**	**+0.6**
HWA				S	**Sn**	**20 37 54.4**	**+0.7**
IRIF	**Iriomote-Funau**	**1.24 115**		P	**Pn**	**20 37 35.4**	**0.0**
IRIF				*e*S	**Sn**	**20 37 54.3**	**0.0**
NFF	**Wufeng Townshi**	**1.28 259**		P	**Pn**	**20 37 35.8**	**-0.1**
NFF				S	**Sn**	**20 37 54.6**	**-0.5**
ETM	**Tongmen**	**1.29 226**	*e*	P	**Pn**	**20 37 35.8**	**-0.1**
ETM				S	**Sn**	**20 37 54.4**	**-0.9**
TEYL	**Yanliau Villag**	**1.30 220**		P	**Pn**	**20 37 36.1**	**+0.1**
TEYL				S	**Sn**	**20 37 55.5**	**+0.1**
FUSS	**Fushou**	**1.30 242**	*e*	P	**Pn**	**20 37 37.0**	**+0.6**
FUSS				S	**Sn**	**20 37 56.2**	**+0.3**
LXIB	**Xiulin Townshi**	**1.31 230**		P	**Pn**	**20 37 36.1**	**-0.2**
LXIB				*e*S	**Sn**	**20 37 55.3**	**-0.5**
WHF	**Hehuan Shan**	**1.34 237**	*e*	S	**Sn**	**20 37 56.9**	**-0.1**
TWT	**Tachien**	**1.36 243**	*e*	P	**Pn**	**20 37 38.1**	**+1.2**
TWT				*e*S	**Sn**	**20 37 57.3**	**+0.5**
LIOB	**Emei**	**1.37 261**	*e*	P	**Pn**	**20 37 36.9**	**+0.1**
LIOB				*e*S	**Sn**	**20 37 56.1**	**-0.7**
TDCB	**Techi**	**1.37 243**	*i*	P	**Pn**	**20 37 38.0**	**+1.0**
TDCB				*i* S	**Sn**	**20 37 57.1**	**0.0**
SBCB	**Hsinchu**	**1.38 267**	*e*	S	**Sn**	**20 37 56.7**	**-0.3**
SHUL	**Shoufeng**	**1.38 218**	*e*	P	**Pn**	**20 37 38.1**	**+1.2**
SHUL				*e*S	**Sn**	**20 37 57.3**	**+0.4**
NSTT	**Nanjuang**	**1.39 260**	*e*	P	**Pn**	**20 37 37.0**	**+0.1**
NSTT				*e*S	**Sn**	**20 37 56.5**	**-0.6**
ESL	**Shilin**	**1.44 223**	*e*	P	**Pn**	**20 37 37.1**	**-0.5**
ESL				*e*S	**Sn**	**20 37 56.7**	**-1.4**
JKRS	**Kuro-shima**	**1.51 115**	*e*	P	**Pn**	**20 37 38.9**	**+0.5**
JKRS				*e*S	**Sn**	**20 38 00.1**	**+0.5**
OWD	**Renai**	**1.52 233**	*e*	P	**Pn**	**20 37 39.0**	**+0.4**
OWD				S	**Sn**	**20 37 59.9**	**-0.1**
WHP	**Taichung City**	**1.54 247**		P	**Pn**	**20 37 39.5**	**+0.7**
WHP				S	**Sn**	**20 38 00.4**	**+0.1**
WARBT	**Fenglin Townsh**	**1.54 222**	*e*	P	**Pn**	**20 37 38.0**	**-0.8**
WARBT				S	**Sn**	**20 37 58.8**	**-1.4**
WUSB	**Renai**	**1.54 235**		P	**Pn**	**20 37 39.6**	**+0.7**
WUSB				*e*S	**Sn**	**20 38 00.8**	**+0.4**
JIJ	**Ishigaki jima**	**1.58 109**	*e*	P	**Pn**	**20 37 39.3**	**+0.1**
JIJ				*e*S	**Sn**	**20 38 00.5**	**-0.5**
NMLH	**Miaoli**	**1.59 258**	*e*	P	**Pn**	**20 37 39.5**	**+0.2**
NMLH				*e*S	**Sn**	**20 38 00.9**	**-0.3**
NSY	**Sanyi**	**1.65 254**		P	**Pn**	**20 37 40.5**	**+0.5**
NSY				*e*S	**Sn**	**20 38 02.5**	**+0.1**
TWQ1	**Liyutan**	**1.66 252**	*e*	S	**Sn**	**20 38 02.6**	**-0.1**
WCS	**Beigang Elemen**	**1.66 241**		P	**Pn**	**20 37 40.9**	**+0.7**
WCS				S	**Sn**	**20 38 03.4**	**+0.7**
JISG	**Ishigakijimahi**	**1.67 100**	*e*	P	**Pn**	**20 37 40.4**	**+0.2**
JISG				*e*S	**Sn**	**20 38 02.4**	**-0.5**
VWDT	**VWDT**	**1.67 228**	*e*	P	**Pn**	**20 37 41.1**	**+0.9**
VWDT				*e*S	**Sn**	**20 38 03.9**	**+1.0**
HGSD	**Ruisui**	**1.69 216**		P	**Pn**	**20 37 40.5**	**-0.1**
HGSD				S	**Sn**	**20 38 03.7**	**+0.3**
EHYH	**Wanrong**	**1.73 218**	*e*	P	**Pn**	**20 37 41.4**	**+0.4**
EHYH				*e*S	**Sn**	**20 38 02.9**	**-1.3**
EHY	**Hungye**	**1.74 219**	*e*	P	**Pn**	**20 37 40.5**	**-0.6**
EHY				*e*S	**Sn**	**20 38 02.7**	**-1.7**
SMLT	**Sun Moon Lake**	**1.76 236**	*e*	P	**Pn**	**20 37 42.3**	**+0.8**
SMLT				*e*S	**Sn**	**20 38 06.8**	**+1.8**
SSLB	**Suanglung**	**1.78 233**		P	**Pn**	**20 37 42.6**	**+1.0**
SSLB				*e*S	**Sn**	**20 38 06.6**	**+1.3**
TYC	**Yuchr**	**1.79 237**	*e*	P	**Pn**	**20 37 42.6**	**+1.0**
TYC				*e*S	**Sn**	**20 38 06.8**	**+1.5**
TCU	**Taichung**	**1.81 247**	*e*	S	**Sn**	**20 38 06.2**	**+0.5**
ECBN	**Changbin**	**1.83 212**	*e*	P	**Pn**	**20 37 42.5**	**+0.3**
ECBN				S	**Sn**	**20 38 05.9**	**-0.3**
YULB	**Yu-li**	**1.84 217**	*i*	P	**Pn**	**20 37 41.8**	**-0.5**
YULB				S	**Sn**	**20 38 05.3**	**-1.3**
TWF1	**Yuli**	**1.87 216**		P	**Pn**	**20 37 42.2**	**-0.5**
WHYT	**Xinyi Township**	**1.91 232**		P	**Pn**	**20 37 44.2**	**+1.1**
WHYT				*i* S	**Sn**	**20 38 09.9**	**+1.8**
WJS	**Zhushan**	**1.93 237**	*e*	S	**Sn**	**20 38 09.0**	**+0.6**
WNT	**Mingjian**	**1.93 239**	*e*	S	**Sn**	**20 38 09.6**	**+1.1**
CHKH	**Chenggong**	**1.96 211**	*e*	S	**Sn**	**20 38 07.5**	**-1.6**
FULB	**Fuli**	**2.00 214**	*e*	P	**Pn**	**20 37 44.8**	**+0.5**
FULB				*e*S	**Sn**	**20 38 10.5**	**+0.4**
JTJ	**Tarama**	**2.01 96**	*e*	S	**Sn**	**20 38 09.8**	**-0.5**
EHD	**Haiduan**	**2.09 215**	*e*	P	**Pn**	**20 37 44.0**	**-1.3**
EHD				*e*S	**Sn**	**20 38 10.0**	**-2.0**
CHN5	**Tsauling**	**2.10 233**		P	**Pn**	**20 37 46.5**	**+1.0**
CHN5				*i* S	**Sn**	**20 38 13.8**	**+1.6**
ECS	**Chishang**	**2.13 214**	*e*	S	**Sn**	**20 38 14.1**	**+1.3**
WDL	**Douliou City**	**2.13 238**		S	**Sn**	**20 38 14.8**	**+2.0**
WDLH	**Douliu**	**2.15 237**	*e*	P	**Pn**	**20 37 46.5**	**+0.4**
WDLH				*e*S	**Sn**	**20 38 14.8**	**+1.5**
ELDTW	**Lidau**	**2.16 219**	*e*	P	**Pn**	**20 37 46.1**	**-0.2**
ELDTW				S	**Sn**	**20 38 13.2**	**-0.5**
EDH	**Donghe**	**2.19 210**		P	**Pn**	**20 37 46.3**	**-0.3**
EDH				*e*S	**Sn**	**20 38 13.3**	**-0.9**
WTK	**Tuku**	**2.26 239**		S	**Sn**	**20 38 16.0**	**+0.2**
STYH	**Taoyuan**	**2.32 223**	*e*	P	**Pn**	**20 37 49.2**	**+1.0**
STYH				*e*S	**Sn**	**20 38 18.6**	**+1.5**
TPUB	**Ta-pu**	**2.32 228**	*e*	P	**Pn**	**20 37 48.8**	**+0.5**
TPUB				*e*S	**Sn**	**20 38 18.1**	**+0.9**
LONT	**Longtian**	**2.33 213**	*e*	P	**Pn**	**20 37 47.8**	**-0.6**
LONT				*e*S	**Sn**	**20 38 15.0**	**-2.4**
WTP	**Ta-pu**	**2.37 227**	*e*	P	**Pn**	**20 37 49.5**	**+0.6**
LDUT	**Ludao**	**2.39 204**		P	**Pn**	**20 37 48.4**	**-0.7**
LDUT				*e*S	**Sn**	**20 38 17.1**	**-1.6**
JIRB	**Irabujima**	**2.43 91**	*e*	S	**Sn**	**20 38 20.3**	**+0.7**
TWK	**Hsinying**	**2.44 229**	*e*	P	**Pn**	**20 37 50.4**	**+0.5**
TWK				*e*S	**Sn**	**20 38 20.6**	**+0.7**
CHN1	**Nanshi**	**2.47 227**	*e*	P	**Pn**	**20 37 50.5**	**+0.4**
CHN1				*e*S	**Sn**	**20 38 21.7**	**+1.2**
WSL	**Shuilin Townsh**	**2.48 237**	*e*	P	**Pn**	**20 37 50.0**	**-0.2**
WSL				*e*S	**Sn**	**20 38 21.3**	**+0.7**
MASBT	**Mashibuluo**	**2.83 218**		P	**Pn**	**20 37 55.3**	**+0.5**
MASBT				S	**Sn**	**20 38 30.6**	**+1.7**
PHUB	**P'eng-hu**	**3.00 244**		P	**Pn**	**20 37 55.8**	**-1.2**
PHUB				S	**Sn**	**20 38 29.9**	**-2.9**
PTMZ	**Houxiangcun**	**3.07 274**		P	**Pn**	**20 37 57.2**	**-0.7**

*IDC **17** 20:43:09.8±1.3, 1.38N×125.92E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=140.9km s-min=20.0km az=67.0*
*DJA **17** 20:43:12.5±1.4, 2.7N±3.3×12.7E±*, h12km±14km, M3.6/10, MLv3.6/10*

ISC 17 20:43:14.6±1.0, 1.73N±0.08×126.8E±0.1, h35km, n10, σ1§11/9, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.13 147**		P	**Pn**	**20 43 34.0**	**+0.1**
SGSI	**Sangihe**	**2.30 328**		P	**Pn**	**20 43 49.7**	**-0.4**
KMSI	**Cibinong**	**3.00 248**		P	**Pn**	**20 43 59.3**	**-0.4**
SANI	**Sanana**	**3.83 192**		P	Pn	20 44 05.9	-5.2
LUWI	**Luwuk**	**4.84 235**		P	**Pn**	**20 44 25.6**	**+0.6**
WRA	**Warramunga Arr**	**22.78 161**		P	**P**	**20 48 12.9**	**-1.4**
	1.8nm,0.5s,baz=338,slow=10,SNR=9.3						
	1.8nm,0.5s						
ASAR	**Alice Springs**	**26.18 165**		P	**P**	**20 48 46.0**	**-0.1**
	0.9nm,0.7s,baz=341,slow=8.3,SNR=8.1						
	0.9nm,0.7s						
SONM	**Songino Array**	**49.20 342**		P	**P**	**20 52 01.3**	**+1.9**
	0.5nm,0.8s,baz=145,slow=7.7,SNR=2.8						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**59.21 326**		P	**P**	**20 53 11.5**	**-0.8**
	0.9nm,0.8s,baz=127,slow=7.0,SNR=5.7						
	0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**63.43 328**		P	**P**	**20 53 40.0**	**-0.8**
	1.1nm,0.7s,baz=128,slow=6.8,SNR=7.1						
	1.1nm,0.7s						

IDC 17 20:51:08.2±2.1, 1.38N×126.27E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=169.1km s-min=27.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.62 160**		P	P	20 56 11.1	+0.1
	1.3nm,0.7s,baz=339,slow=11,SNR=4.9						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**25.98 164**		P	P	20 56 42.7	-0.2
	0.3nm,0.5s,baz=350,slow=15,SNR=7.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.22 326**		P	P	21 01 11.4	0.0
	0.4nm,0.7s,baz=128,slow=7.9,SNR=4.3						
	0.4nm,0.7s						

IDC 17 20:55:29.6±1.5, 57.47S×147.06E, h0km, mb3.5/4, mbtmp3.6/4, MS3.3/3, Error ellipse: s-maj=158.2km s-min=26.8km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**20.78 171**		P	P	21 00 12.2	+0.6
	0.6nm,0.8s,baz=338,slow=11,SNR=4.4						
	0.6nm,0.8s						
STKA	**Stephens Creek**	**25.86 349**		P	P	21 01 04.0	+1.4
	1.2nm,0.7s,baz=156,slow=10.0,SNR=4.4						
	1.2nm,0.7s						
H01W1	**Cape Leeuwin H**	**31.56 301**		T	T	21 35 32.3	
	baz=144,slow=75,SNR=26						
H01W2	**Cape Leeuwin H**	**31.57 301**		T	T	21 35 30.0	
	baz=144,slow=75,SNR=28						
H01W3	**Cape Leeuwin H**	**31.58 301**		T	T	21 35 33.6	
	baz=144,slow=75,SNR=25						
ASAR	**Alice Springs**	**35.09 339**		P	P	21 02 24.2	-0.1
	0.5nm,0.6s,baz=164,slow=9.3,SNR=8.3						
	0.5nm,0.6s						
MAW	**Mawson**	**37.05 219**		LR	LR	21 16 52.5	
	comp=Z,53nm,19.2s,baz=134,slow=35						
DZM	**Mont Dzumac**	**38.08 30**		LR	LR	21 14 54.1	
	comp=Z,60nm,21.4s,baz=192,slow=31						
WRA	**Warramunga Arr**	**38.63 341**		P	P	21 02 53.5	-0.9
	1.2nm,0.9s,baz=167,slow=7.4,SNR=5.1						
	1.2nm,0.9s						
H04S1	**CROZET ISLANDS**	**54.65 237**		T	T	22 05 09.0	
	baz=140,slow=75,SNR=16						
H04S2	**CROZET ISLANDS**	**54.65 237**		T	T	22 05 06.7	
	baz=140,slow=75,SNR=14						
H04S3	**CROZET ISLANDS**	**54.67 237**		T	T	22 05 07.0	
	baz=140,slow=75,SNR=16						
H08S2	**Diego Garcia H**	**75.30 279**		T	T	22 30 16.6	
	baz=147,slow=76,SNR=16						
H08S1	**Diego Garcia H**	**75.31 279**		T	T	22 30 14.3	
	baz=147,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**75.32 279**		T	T	22 30 14.1	
	baz=147,slow=76,SNR=14						
CMAR	**Chiang Mai Arr**	**85.55 315**		LR	LR	21 46 31.1	
	comp=Z,8.3nm,18.2s,baz=345,slow=36						
ILAR	**Eielson Array**	**131.78 32**		PKP	PKPdf	21 14 41.8	-1.2
	0.8nm,0.8s,baz=158,slow=2.6,SNR=7.5						

*SOME **17** 21:00:54.1, 40.65N×84.45E, h5km*
*IDC **17** 21:01:01.7±0.9, 41.16N×83.69E, h0km, mb3.7/8, mbtmp3.7/13, ML2.9/5, Error ellipse: s-maj=25.9km s-min=12.8km az=57.0*
*NNC **17** 21:01:03.6±4.4, 40.99N×83.64E, h9km±19km, mb4.0, mpv3.9, Error ellipse: s-maj=26.7km s-min=15.1km az=148.0*

ISC 17 21:01:03.2±0.9, 41.11N±0.08×83.79E±0.08, h10km, n37, σ1§72/39, mb3.9/8, 12C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.81 304**		Pg	**Pn**	**21 01 59.1**	**-3.0**
	16nm,0.1s						
SHLS				Lg	Lg	21 02 58.9	
	403nm,0.2s						
SHLS	**Shalkode**	**3.81 304**		*e*P	**Pn**	**21 01 59.2**	**-2.9**
	16nm,0.1s						
SHLS				*e*S	**Sn**	**21 02 51.7**	**+4.7**
	403nm,0.2s						
PDGK	**Podgornoye**	**3.89 306**		⇑Pn	**Pn**	**21 02 03.4**	**+0.3**
	5.6nm,0.4s						
PDGK				⇑Pg	**Pb**	**21 02 13.8**	**+1.9**
	40nm,0.8s						
PDGK				⇓Lg	Lg	21 03 05.1	
	114nm,0.7s						
SATY	**Saty**	**4.45 298**		Pg	**Pn**	**21 02 11.1**	**+0.3**
	12nm,0.1s						
SATY				Lg	Lg	21 03 19.3	
	56nm,0.3s						
KPKS	**Kokpek**	**4.46 304**		Pg	**Pn**	**21 02 10.7**	**-0.2**
	0.2nm,0.2s						
KPKS				Lg	Lg	21 03 18.5	

	3.9nm,1.1s							
BVAR	**Borovoye Array**	**14.98**	**327**	Pn	**Pn**	**21 04 33.5**	**-1.3**	
	baz=134,slow=13,SNR=4.0							
	0.5nm,0.4s							
AB31	**Akbulak array**	**18.62**	**304**	⇓Pn	**P**	**21 05 18.1**	**-2.6**	
	0.5nm,0.6s,baz=101,slow=9.8,SNR=13							
CMAR	**Chiang Mai Arr**	**26.05**	**146**	P	**P**	**21 06 37.9**	**+1.1**	
	1.1nm,0.3s,baz=326,slow=10.0,SNR=9.1							
	1.1nm,0.3s							
BRTR	**Keskin Array B**	**37.78**	**285**	P	**P**	**21 08 19.0**	**-0.6**	
	0.2nm,0.4s,baz=97,slow=6.9,SNR=1.9							
	0.2nm,0.4s							
FINES	**FINESS Array B**	**39.79**	**321**	P	**P**	**21 08 36.1**	**+0.2**	
	1.2nm,0.8s,baz=98,slow=7.2,SNR=1.4							
	1.2nm,0.8s							
HFS	**Hagfors**	**45.91**	**319**	P	**P**	**21 09 24.7**	**-0.9**	
	0.8nm,0.6s,baz=93,slow=7.2,SNR=4.9							
	0.8nm,0.6s							
NB2	**NORSAR Subarra**	**46.97**	**321**	P	**P**	**21 09 33.8**	**-0.2**	
	comp=Z,0.6nm,0.5s,baz=81,slow=7.9							
NOA	**NORSAR Array B**	**46.97**	**321**	P	**P**	**21 09 33.7**	**-0.2**	
	comp=Z,0.7nm,0.5s,baz=81,slow=7.8,SNR=6.4							
	comp=Z,0.7nm,0.5s							
EKA	**Eskdalemuir Ar**	**55.91**	**316**	P	**P**	**21 10 39.6**	**-1.3**	
	comp=Z,1.1nm,0.8s,baz=80,slow=5.9,SNR=1.6							
	comp=Z,1.1nm,0.8s							
WRA	**Warramunga Arr**	**76.73**	**132**	P	**P**	**21 12 55.3**	**+0.6**	
	comp=Z,0.5nm,0.6s,baz=327,slow=5.6,SNR=8.0							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**79.47**	**134**	P	**P**	**21 13 10.6**	**+0.7**	
	comp=Z,0.2nm,0.5s,baz=325,slow=6.6,SNR=2.4							
	comp=Z,0.2nm,0.5s							

*ISK **17** 21:11:27.4,34˚.94N×32˚.50E,h9km,ML2.5/8*
*NIC **17** 21:11:27.3,34˚.71N×32˚.57E,h53km,Ml2.0/8*
*GII **17** 21:11:28.2±0.0,34˚.65N±0˚.03×32˚.69E±0˚.04,h38km, Mwes2.1,confirmed*

ISC 17 21:11:26.9±1.6,34˚.67N±0˚.04×32˚.51E±0˚.07,h52km±8km, n26,σ0949/38,2C-2D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.12**	**24**	P	**Pn**	**21 11 35.5**	**+0.3**
NATA				S	Sn	21 11 41.9	+1.0
NATA				AML	AML	21 11 43.2	
	0.9nm,0.2s						
NATA				AML	AML	21 11 44.5	
	1.0nm,0.4s						
APOL	**The Sanctuary**	**0.29**	**89**	⇑*i*P	**Pn**	**21 11 36.4**	**+0.2**
APOL				S	**Sn**	**21 11 43.5**	**+0.7**
APOL				AML	AML	21 11 44.5	
	0.4nm,0.1s						
APOL				AML	AML	21 11 44.7	
	0.4nm,0.1s						
AKMS	**Akamas**	**0.38**	**338**	⇓*i*P	**Pn**	**21 11 36.7**	**-0.3**
AKMS				S	**Sn**	**21 11 43.8**	**-0.4**
AKMS				AML	AML	21 11 44.2	
	1.0nm,0.2s						
AKMS				AML	AML	21 11 44.8	
	1.0nm,0.2s						
TROD	**Troodos**	**0.40**	**46**	⇓*i*P	**Pn**	**21 11 37.3**	**-0.2**
TROD				S	**Sn**	**21 11 44.8**	**-0.2**
TROD				AML	AML	21 11 47.9	
	0.3nm,0.2s						
TROD				AML	AML	21 11 49.9	
	0.3nm,0.5s						
XYLS	**Xyliatos**	**0.56**	**52**	⇑*e*P	**Pn**	**21 11 38.8**	**-0.3**
XYLS				S	**Sn**	**21 11 47.9**	**+0.1**
XYLS				AML	AML	21 11 48.9	
	0.3nm,0.2s						
XYLS				AML	AML	21 11 49.3	
	0.3nm,0.2s						
ASGA	**Asgata**	**0.62**	**79**	P	**Pn**	**21 11 39.7**	**0.0**
ASGA				S	**Sn**	**21 11 49.3**	**+0.3**
ASGA				AML	AML	21 11 50.1	
	0.4nm,0.2s						
ASGA				AML	AML	21 11 50.7	
	0.2nm,0.2s						
CSS	**Mathiatis**	**0.74**	**66**	Pg	**Pn**	**21 11 40.8**	**-0.4**
CSS				Sg	**Sn**	**21 11 51.1**	**-0.6**
CSS	**Mathiatis**	**0.74**	**66**	P	**Pn**	**21 11 40.8**	**-0.4**
CSS	**Mathiatis**	**0.74**	**66**	P	**Pn**	**21 11 40.9**	**-0.4**
CSS				S	**Sn**	**21 11 51.4**	**-0.2**
CSS				AML	AML	21 11 51.8	
	0.2nm,0.3s						
CSS				AML	AML	21 11 52.2	
	0.4nm,0.4s						
MVOU	**Mavrovouni**	**0.99**	**69**	P	**Pn**	**21 11 44.6**	**+0.1**
MVOU				S	**Sn**	**21 11 58.0**	**+0.5**
MVOU				AML	AML	21 12 02.2	
	0.1nm,0.3s						
LFK	**Lefkose**	**1.04**	**54**	Pg	**Pn**	**21 11 45.7**	**+0.4**
LFK				Sg	**Sn**	**21 11 58.5**	**-0.3**
TEKE	**Tekeli-Mersin**	**1.55**	**18**	Pn	**Pn**	**21 11 52.4**	**+0.2**
TEKE				Sn	**Sn**	**21 12 10.8**	**-0.4**
BERE	**Bereket-Mersin**	**1.77**	**19**	Pn	**Pn**	**21 11 55.4**	**+0.1**
BERE				Sn	**Sn**	**21 12 16.0**	**-0.8**
TEVE	**Tevekalti-Mers**	**1.92**	**23**	Pn	**Pn**	**21 11 57.9**	**+0.6**
KEBE	**Keben-Mersin**	**2.03**	**29**	Pn	**Pn**	**21 11 59.5**	**+0.8**
KEBE				Sn	**Sn**	**21 12 22.7**	**-0.2**
SILI	**Silifke-Mersin**	**2.05**	**34**	Pn	**Pn**	**21 12 00.1**	**+1.2**
HDMB	**Hadim**	**2.29**	**360**	Pn	**Pn**	**21 12 02.6**	**+0.1**
OFRI	**`Ofer**	**2.90**	**134**	P	**Pn**	**21 12 10.9**	**+0.3**
OFRI	**`Ofer**	**2.90**	**134**	S	**Sn**	**21 12 44.1**	**-0.3**
MMC7	**Mount Meron ar**	**2.91**	**124**	P	**Pn**	**21 12 10.3**	**-0.5**
MMA0B	**Mount Meron ar**	**2.92**	**124**	P	**Pn**	**21 12 10.4**	**-0.5**
MMA0B	**Mount Meron ar**	**2.92**	**124**	S	**Sn**	**21 12 44.1**	**-0.7**
NATI	**Neve Ativ**	**3.03**	**117**	P	**Pn**	**21 12 12.0**	**-0.3**
NATI	**Neve Ativ**	**3.03**	**117**	S	**Sn**	**21 12 46.8**	**-0.5**
HMDT	**Nahal Hemdat**	**3.49**	**133**	P	**Pn**	**21 12 19.5**	**+0.9**
HMDT	**Nahal Hemdat**	**3.49**	**133**	S	**Sn**	**21 12 59.1**	**+0.5**

RSNC 17 21:12:01.2±0.0,7˚N±1˚×7˚3W±˚,h147km±1km,M2.9,mB4.6, ML2.6,Mw(mB)3.8,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**192**	P	Pn	21 12 21.1	-0.5
BARC				S	Sn	21 12 35.9	-1.1
BRJC	**Barrancabermej**	**0.63**	**283**	P	Pn	21 12 22.8	-0.1
BRJC				S	Sn	21 12 39.6	+0.2
PAMC	**Pamplona, Colo**	**0.66**	**40**	P	Pn	21 12 23.9	+0.2
PAMC				S	Sn	21 12 40.8	0.0
RUSC	**La Rusia**	**0.93**	**177**	P	Pn	21 12 25.0	-0.7
RUSC				S	Sn	21 12 43.5	-0.9
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	P	Pn	21 12 27.6	-1.4
PTBC				S	Sn	21 12 48.7	-1.5
OCAC	**Ocana**	**1.41**	**352**	P	Pn	21 12 29.7	-0.1
OCAC				S	Sn	21 12 51.7	0.0
SPBC	**San Pablo de B**	**1.50**	**219**	P	Pn	21 12 30.1	-0.6
SPBC				S	Sn	21 12 52.3	-0.9
NORC	**Norcasia**	**2.14**	**234**	P	Pn	21 12 37.0	-0.9
NORC				S	Sn	21 13 05.2	-0.8
CHIC	**Chingaza**	**2.27**	**195**	P	Pn	21 12 39.2	-0.6
CHIC				S	Sn	21 13 08.2	-1.2
ROSC	**El Rosal**	**2.30**	**211**	P	Pn	21 12 40.9	+0.7
ROSC				S	Sn	21 13 13.2	+3.0
HELC	**Santa Helena**	**2.47**	**255**	P	Pn	21 12 43.1	+1.0
HELC				S	Sn	21 13 12.6	-1.0
CVER	**Cruz Verde, Cu**	**2.48**	**202**	P	Pn	21 12 42.5	+0.1
CVER				S	Sn	21 13 15.7	+1.6
UREC	**San Jos de Ur**	**2.55**	**291**	P	Pn	21 12 42.5	-0.4
UREC				S	Sn	21 13 13.4	-1.6
GUY2C	**Guyana, Caldas**	**2.74**	**234**	P	Pn	21 12 45.7	+0.1
GUY2C				S	Sn	21 13 20.2	+0.4
VILC	**Villavicencio,**	**2.76**	**192**	P	Pn	21 12 44.6	-1.0
VILC				S	Sn	21 13 18.5	-1.3
PTGC	**Puerto Gaitan,**	**2.79**	**159**	P	Pn	21 12 44.3	-1.6
PTGC				S	Sn	21 13 16.9	-3.5
DBBC	**Dabeiba**	**3.06**	**274**	P	Pn	21 12 50.0	+0.7
DBBC				S	Sn	21 13 25.3	-1.2
SDV	**Santo Domingo**	**3.21**	**50**	P	Pn	21 12 50.9	-0.4
SDV				S	Sn	21 13 28.4	-1.7
PRAC	**Prado**	**3.56**	**210**	P	Pn	21 12 54.9	-0.8
PRAC				S	Sn	21 13 36.8	-1.1
ORTC	**Ortega, Tolima**	**3.59**	**216**	P	Pn	21 12 56.1	0.0
ORTC				S	Sn	21 13 38.3	-0.3
SJCC	**San Jacinto, C**	**3.66**	**326**	P	Pn	21 12 55.7	-1.3
SJCC				S	Sn	21 13 37.2	-3.1
URMC	**La Uribe, Meta**	**3.77**	**199**	P	Pn	21 12 58.1	-0.4
URMC				S	Sn	21 13 42.2	-0.8
YOTC	**Yotoco, Valle**	**4.27**	**229**	P	Pn	21 13 04.2	-0.9
URIC	**Uribia, Colomb**	**4.97**	**13**	P	Pn	21 13 12.0	-2.2
GARC	**Garzon, Huila**	**5.18**	**207**	P	Pn	21 13 15.7	-1.5

*IDC **17** 21:15:58.1±5.6,24˚.69S×179˚.40E,h565km±64km,mb3.1/5, mbtmp4.1/6,Error ellipse: s-maj=36.9km s-min=34.1km az=18.0*

ISC 17 21:15:56.7±1.2,24˚.7S±0˚.3×179˚.5E±0˚.2,h550km,n7, σ0893/7,mb3.8/5,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.25**	**280**	P	**P**	**21 18 38.6**	**+0.7**
	5.8nm,0.7s,baz=138,slow=22,SNR=6.2						
STKA	**Stephens Creek**	**33.97**	**249**	P	**P**	**21 21 54.1**	**-0.8**
	1.1nm,0.5s,baz=114,slow=14,SNR=4.0						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**41.43**	**262**	P	**P**	**21 22 56.0**	**+0.2**
	0.9nm,0.3s,baz=92,slow=7.4,SNR=24						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**41.87**	**267**	P	**P**	**21 22 59.4**	**0.0**
	2.5nm,0.4s,baz=103,slow=8.0,SNR=22						
	2.5nm,0.4s						
QSPA	**South Pole Qui**	**65.36**	**180**	P	**P**	**21 25 45.2**	**+0.4**
	0.9nm,0.5s,baz=321,slow=2.5,SNR=5.1						
	0.9nm,0.5s						
TXAR	**Lajitas Array**	**91.28**	**58**	P	**P**	**21 28 04.5**	**+0.4**
	0.5nm,0.8s,baz=225,slow=6.9,SNR=5.9						
	0.5nm,0.8s						
HFS	**Hagfors**	**143.25**	**348**	PKP	**PKPdf**	**21 34 26.5**	**-1.4**
	1.9nm,0.6s,baz=57,slow=5.3,SNR=11						

*ATH **17** 21:19:28.0,36˚.41N×22˚.87E,h8km±1km,ML3.1/11, Manual Solution by F.Xalaris First location: 2019/11/17 21:20:13, This location: 2019/11/18 06:14:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
*THE **17** 21:19:29.1,36˚N±2˚×2˚3E±˚,h6km±5km,M2.9/31, MLh2.9/31*
*IDC **17** 21:19:39.8±4.9,36˚.85N×23˚.02E,h86km±39km,mb3.1/6, mbtmp3.3/9,Error ellipse: s-maj=64.2km s-min=20.9km az=8.0*

ISC 17 21:19:29.4±0.8,36˚.45N±0˚.02×22˚.96E±0˚.03,h13km±5km, n88,σ0886/123,mb3.6/6,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPS1	**Neapolis Lacon**	**0.10**	**51**	P	**Pg**	**21 19 31.9**	**-0.5**
NPS1				S	**Sg**	**21 19 34.5**	**-0.1**
NPS1	**Neapolis Lacon**	**0.10**	**51**	P	**Pg**	**21 19 32.1**	**-0.3**
NPS1				S	**Sg**	**21 19 34.2**	**-0.4**
KTHA	**Kythira Island**	**0.21**	**157**	P	**Pg**	**21 19 33.2**	**-0.8**
MNVA	**Monemvasia**	**0.25**	**14**	P	**Pg**	**21 19 34.0**	**-0.6**
MNVA				S	**Sg**	**21 19 38.4**	**+0.2**
MNVA	**Monemvasia**	**0.25**	**14**	P	**Pg**	**21 19 34.0**	**-0.6**
MNVA				S	**Sg**	**21 19 38.1**	**0.0**
VLI	**Veliai**	**0.27**	**356**	P	**Pg**	**21 19 34.3**	**-0.8**
VLI				S	**Sg**	**21 19 38.3**	**-0.6**
VLI	**Veliai**	**0.27**	**356**	P	**Pg**	**21 19 34.2**	**-0.8**
VLI				S	**Sg**	**21 19 38.6**	**-0.3**
VLI	**Veliai**	**0.27**	**356**	P	**Pg**	**21 19 34.4**	**-0.7**
VLI				S	**Sg**	**21 19 38.6**	**-0.3**
ANKY	**Antikythira Is**	**0.64**	**154**	P	**Pg**	**21 19 40.9**	**-0.9**
ANKY				S	**Sg**	**21 19 50.0**	**-0.3**
ANKY	**Antikythira Is**	**0.64**	**154**	P	**Pg**	**21 19 40.6**	**-1.2**
ANKY				S	**Sg**	**21 19 49.4**	**-1.0**
ANKY	**Antikythira Is**	**0.64**	**154**	P	**Pg**	**21 19 40.7**	**-1.2**
ANKY				S	**Sg**	**21 19 49.6**	**-0.8**
YDRA	**Hydra**	**0.99**	**24**	P	**Pb**	**21 19 48.4**	**+0.1**
YDRA				S	**Sb**	**21 20 00.9**	**-0.4**
VLX	**Vlachokerasia**	**1.03**	**333**	P	**Pg**	**21 19 47.5**	**-1.8**
VLX				S	**Sg**	**21 20 02.8**	**0.0**
VLX	**Vlachokerasia**	**1.03**	**333**	P	**Pg**	**21 19 47.3**	**-2.0**
VLX				S	**Sg**	**21 20 02.8**	**0.0**
MTHA	**Methoni**	**1.08**	**291**	P	**Pg**	**21 19 49.2**	**-0.9**
ITM	**Ithomi**	**1.11**	**312**	P	**Pg**	**21 19 48.4**	**-2.3**
ITM				S	**Sn**	**21 20 06.5**	**+0.8**
ITM	**Ithomi**	**1.11**	**312**	P	**Pg**	**21 19 48.1**	**-2.6**
ITM				S	**Sg**	**21 20 03.0**	**-2.1**
ITM	**Ithomi**	**1.11**	**312**	P	**Pg**	**21 19 48.4**	**-2.3**
ITM				S	**Sg**	**21 20 03.9**	**-1.3**
MHLO	**Agia Marina, M**	**1.19**	**78**	P	**Pg**	**21 19 51.1**	**-1.1**
MHLO				S	**Sn**	**21 20 07.7**	**+0.1**
MHLO	**Agia Marina, M**	**1.19**	**78**	P	**Pn**	**21 19 51.9**	**+0.2**
MET2	**Kameni Chora,**	**1.20**	**14**	P	**Pn**	**21 19 52.0**	**+0.2**
MET5	**Makryloggos,Me**	**1.21**	**15**	P	**Pn**	**21 19 52.2**	**+0.1**
MET5				S	**Sn**	**21 20 09.1**	**-0.7**
MET4	**Agioi Theodoro**	**1.23**	**17**	P	**Pn**	**21 19 52.5**	**+0.3**
MET4	**Agioi Theodoro**	**1.23**	**17**	P	**Pn**	**21 19 52.6**	**+0.3**
CHNB	**Souda**	**1.31**	**137**	P	**Pg**	**21 19 54.0**	**-0.6**
CHNB				S	**Sn**	**21 20 11.1**	**+0.3**
AMT	**Artemida-Makis**	**1.48**	**318**	P	**Pn**	**21 19 55.9**	**+0.2**
AMT	**Artemida-Makis**	**1.48**	**318**	P	**Pn**	**21 19 56.3**	**+0.6**
VLY	**Voula,Athens**	**1.55**	**25**	P	**Pn**	**21 19 56.4**	**-0.4**
VLY				S	**Sn**	**21 20 15.5**	**-1.2**
VLY	**Voula,Athens**	**1.55**	**25**	P	**Pn**	**21 19 56.8**	**+0.1**
VLY	**Voula,Athens**	**1.55**	**25**	P	**Pn**	**21 19 56.3**	**-0.5**
GUR	**Goura**	**1.57**	**342**	P	**Pn**	**21 19 57.5**	**+0.5**
GUR				S	**Sn**	**21 20 17.4**	**+0.2**
GUR	**Goura**	**1.57**	**342**	P	**Pn**	**21 19 57.7**	**+0.7**
GUR	**Goura**	**1.57**	**342**	P	**Pn**	**21 19 57.0**	**0.0**
GUR				S	**Sn**	**21 20 17.4**	**+0.2**
LTK	**Loutraki**	**1.57**	**0**	P	**Pn**	**21 19 57.2**	**+0.2**
LTK				S	**Sn**	**21 20 17.0**	**-0.2**
LTK	**Loutraki**	**1.57**	**0**	P	**Pn**	**21 19 57.0**	**-0.1**
ATH	**Athens Observa**	**1.64**	**21**	P	**Pn**	**21 19 58.4**	**+0.5**
ATH				S	**Sn**	**21 20 18.8**	**0.0**
ATH	**Athens Observa**	**1.64**	**21**	P	**Pb**	**21 19 58.6**	**-0.9**
ATHU	**Athens Univers**	**1.65**	**23**	P	**Pn**	**21 19 57.4**	**-0.7**
ATHU				S	**Sn**	**21 20 18.8**	**-0.4**
ATHU	**Athens Univers**	**1.65**	**23**	P	**Pn**	**21 19 58.3**	**+0.2**
MAGU	**Magoula**	**1.69**	**15**	P	**Pn**	**21 19 59.1**	**+0.5**
MAGU				S	**Sn**	**21 20 20.2**	**+0.1**
MAGU	**Magoula**	**1.69**	**15**	P	**Pn**	**21 19 59.0**	**+0.5**
KLV	**Kalavryta, Ach**	**1.72**	**338**	P	**Pn**	**21 19 59.3**	**+0.2**
KLV				S	**Sn**	**21 20 22.2**	**+1.2**
VILL	**Villia**	**1.74**	**9**	P	**Pn**	**21 19 58.9**	**-0.4**
VILL				S	**Sn**	**21 20 21.7**	**+0.3**
PTL	**Penteli**	**1.75**	**24**	P	**Pn**	**21 19 58.9**	**-0.6**
PTL				S	**Sn**	**21 20 20.8**	**-0.9**
PTL	**Penteli**	**1.75**	**24**	P	**Pn**	**21 20 00.4**	**+0.5**
STFN	**Stefani**	**1.79**	**15**	P	**Pn**	**21 20 00.3**	**+0.3**
STFN				S	**Sn**	**21 20 22.5**	**-0.2**
STFN	**Stefani**	**1.79**	**15**	P	**Pn**	**21 20 00.8**	**+0.8**
DION	**Dionisos Attik**	**1.80**	**25**	P	**Pn**	**21 20 00.1**	**-0.1**
DION				S	**Sn**	**21 20 22.2**	**-0.8**
DION	**Dionisos Attik**	**1.80**	**25**	P	**Pn**	**21 20 00.2**	**0.0**
DRO	**Drossia**	**1.80**	**327**	P	**Pn**	**21 20 00.0**	**-0.2**
DRO				S	**Sn**	**21 20 22.9**	**0.0**
GVD	**Gavdhos**	**1.85**	**150**	P	**Pn**	**21 20 01.1**	**+0.3**
IDI	**Anoyia**	**1.95**	**126**	P	**Pn**	**21 20 01.5**	**-0.7**
IDI				S	**Sb**	**21 20 28.2**	**-0.8**
IDI	**Anoyia**	**1.95**	**126**	P	**Pn**	**21 20 01.9**	**-0.3**
IDI	**Anoyia**	**1.95**	**126**	P	**Pn**	**21 20 02.0**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.96**	**91**	P	**Pn**	**21 20 02.8**	**+0.4**
SNT5				S	**Sn**	**21 20 27.6**	**+0.8**
THR3	**Thira Island,**	**1.97**	**90**	P	**Pn**	**21 20 02.4**	**0.0**
THR6	**Thira Island,**	**1.97**	**92**	P	**Pn**	**21 20 02.6**	**+0.2**
KARY	**Karystos**	**1.97**	**36**	P	**Pn**	**21 20 01.8**	**-0.7**
KARY				S	**Sn**	**21 20 26.1**	**-1.0**
KARY	**Karystos**	**1.97**	**36**	P	**Pn**	**21 20 02.8**	**+0.3**
THR2	**Thira island,**	**2.00**	**89**	P	**Pn**	**21 20 02.9**	**+0.1**
RLS	**Riolos of Patr**	**2.00**	**324**	P	**Pn**	**21 20 03.9**	**+1.0**
THERA	**Ancient Thera,**	**2.03**	**92**	P	**Pn**	**21 20 03.3**	**0.0**
THERA				S	**Sn**	**21 20 27.4**	**-1.1**
SERG	**Sergoula**	**2.09**	**340**	P	**Pn**	**21 20 04.9**	**+0.7**
EFP	**Efpalio**	**2.15**	**337**	P	**Pn**	**21 20 04.1**	**-0.8**
APE	**Apeiranthos**	**2.15**	**73**	P	**Pn**	**21 20 04.8**	**-0.3**
APE	**Apeiranthos**	**2.15**	**73**	P	**Pn**	**21 20 05.4**	**+0.3**
LKR	**Lokris**	**2.20**	**1**	P	**Pn**	**21 20 05.4**	**-0.2**
ATAL	**Atalanti**	**2.24**	**1**	P	**Pn**	**21 20 06.0**	**-0.2**
ANX	**Ano Chora**	**2.30**	**339**	P	**Pn**	**21 20 08.0**	**+0.9**
AXAR	**Agios Charalam**	**2.33**	**354**	P	**Pn**	**21 20 07.8**	**+0.4**
KYMI	**Kymi, Euboea I**	**2.36**	**22**	P	**Pn**	**21 20 07.5**	**-0.4**
PVO	**Paravola**	**2.45**	**333**	P	**Pn**	**21 20 09.6**	**+0.5**
NPS	**Neapolis**	**2.46**	**118**	P	**Pn**	**21 20 08.8**	**-0.4**
AGG	**Agios Georgios**	**2.62**	**349**	P	**Pn**	**21 20 11.9**	**+0.5**
EVR	**Evrytania**	**2.63**	**340**	P	**Pn**	**21 20 12.8**	**+1.2**
MAKR	**Makrakomi, Fth**	**2.64**	**346**	P	**Pn**	**21 20 13.0**	**+1.3**
AOS	**Alonnisos**	**2.81**	**15**	P	**Pn**	**21 20 13.4**	**-0.7**
NEO	**Neokhori**	**2.86**	**4**	P	**Pn**	**21 20 14.1**	**-0.7**
CHOS	**Chios island**	**3.13**	**51**	P	**Pn**	**21 20 17.8**	**-0.8**
BRTR	**Keskin Array B**	**9.03**	**66**	P	Pn	21 21 45.0	+5.3
	0.5nm,0.7s,baz=234,slow=14,SNR=4.5						
GERES	**GERESS Array B**	**14.12**	**334**	P	**Pn**	**21 22 50.7**	**+1.5**
	0.2nm,0.6s,baz=163,slow=12,SNR=1.7						
KBZ	**Khabaz**	**16.88**	**58**	P	**P**	**21 23 28.2**	**+1.0**
	0.5nm,0.6s,baz=244,slow=11,SNR=1.4						
ESDC	**Sonseca Array**	**21.41**	**287**	P	**P**	**21 24 20.0**	**+3.0**
	0.3nm,0.6s,baz=90,slow=9.9,SNR=1.2						
	0.3nm,0.6s						
HFS	**Hagfors**	**24.44**	**349**	P	**P**	**21 24 46.6**	**-1.0**
	0.6nm,0.4s,baz=166,slow=13,SNR=6.5						
	0.6nm,0.4s						
NOA	**NORSAR Array B**	**25.72**	**347**	P	**P**	**21 24 57.9**	**-1.3**
	0.4nm,0.6s,baz=152,slow=9.6,SNR=3.7						
	0.4nm,0.6s						
EKA	**Eskdalemuir Ar**	**25.96**	**325**	P	**P**	**21 25 02.0**	**+0.6**
	1.0nm,0.7s,baz=128,slow=9.7,SNR=2.5						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**44.57**	**57**	P	**P**	**21 27 39.9**	**-1.1**
	0.4nm,0.4s,baz=272,slow=7.1,SNR=12						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**45.42**	**47**	P	**P**	**21 27 49.1**	**+1.5**
	0.3nm,0.3s,baz=272,slow=7.1,SNR=2.4						
	0.3nm,0.3s						

*GII **17** 21:26:33.5±0.0,33˚.220N±0˚.001×35˚.702E±0˚.001, h2km,Mws1.9,confirmed*
*GRAL **17** 21:26:34.2±0.4,33˚.23N×35˚.67E,h0km±5km,MD2.5*

ISC 17 21:26:33.1±0.9,33˚.25N±0˚.02×35˚.72E±0˚.03,h6km±5km, n51,σ0892/53,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATI	**Neve Ativ**	**0.02**	**36**	P	**Pg**	**21 26 34.8**	**+0.5**
NATI	**Neve Ativ**	**0.02**	**36**	S	**Sg**	**21 26 36.1**	**+1.1**
GEM	**Giv'at Ha'Em**	**0.06**	**234**	P	**Pg**	**21 26 34.5**	**-0.2**
GEM	**Giv'at Ha'Em**	**0.06**	**234**	S	**Sg**	**21 26 35.0**	**-0.8**
GOSH	**HaGoshrim**	**0.09**	**252**	P	**Pg**	**21 26 35.2**	**+0.1**
GOSH	**HaGoshrim**	**0.09**	**252**	S	**Sg**	**21 26 37.0**	**+0.6**
SHBL	**Chebaa**	**0.10**	**10**	*e*P	**Pg**	**21 26 36.4**	**+0.9**
SHBL				*e*S	**Sg**	**21 26 38.2**	**+1.1**
LVBS	**Lehavot Habash**	**0.12**	**210**	P	**Pg**	**21 26 35.5**	**-0.2**
LVBS	**Lehavot Habash**	**0.12**	**210**	S	**Sg**	**21 26 37.6**	**+0.2**
MTLA	**Metula**	**0.13**	**284**	P	**Pg**	**21 26 36.1**	**+0.4**
MTLA	**Metula**	**0.13**	**284**	S	**Sg**	**21 26 38.9**	**+1.3**
KIRY	**Kiryat Shemona**	**0.14**	**253**	P	**Pg**	**21 26 36.1**	**+0.2**
KIRY	**Kiryat Shemona**	**0.14**	**253**	S	**Sg**	**21 26 38.3**	**+0.5**
MSAM	**Misgav Am**	**0.15**	**270**	P	**Pg**	**21 26 36.6**	**+0.5**
MSAM	**Misgav Am**	**0.15**	**270**	S	**Sg**	**21 26 39.2**	**+1.0**
YFTH	**Yftach**	**0.19**	**230**	P	**Pg**	**21 26 36.9**	**+0.1**
KDZV	**Kedmat Zvi**	**0.22**	**186**	P	**Pn**	**21 26 37.7**	**+0.3**
KDZV	**Kedmat Zvi**	**0.22**	**186**	S	**Sg**	**21 26 41.2**	**+0.9**
RCY	**Rachaya**	**0.27**	**21**	*e*P	**Pg**	**21 26 39.5**	**+1.1**
RCY				*e*S	**Sg**	**21 26 43.5**	**+1.5**
QRWL	**Qaraoun**	**0.30**	**353**	*e*P	**Pb**	**21 26 39.9**	**-1.1**
RSPN	**Rosh Pina**	**0.31**	**208**	P	**Pg**	**21 26 39.2**	**0.0**
RSPN	**Rosh Pina**	**0.31**	**208**	S	**Sg**	**21 26 44.5**	**+1.1**
HDNS	**Had-Ness**	**0.33**	**192**	P	**Pg**	**21 26 39.9**	**+0.5**
HDNS	**Had-Ness**	**0.33**	**192**	S	**Sg**	**21 26 45.1**	**+1.4**
AMID	**Amiad**	**0.35**	**206**	P	**Pg**	**21 26 40.4**	**+0.4**
AMID	**Amiad**	**0.35**	**206**	S	**Sg**	**21 26 46.0**	**+1.3**
MMA0B	**Mount Meron ar**	**0.35**	**229**	P	**Pg**	**21 26 40.1**	**+0.1**
MMA0B	**Mount Meron ar**	**0.35**	**229**	S	**Sg**	**21 26 46.

GO07	**Milladeo Hill,**	**2.71**	**204**	*e*P		**Pn**	**21 35 01.0**	**-0.1**
GO07				*i* S		**Sn**	**21 35 30.2**	**-3.6**
GO07				IAML			21 35 35.4	
	comp=N,554nm,0.2s							
GO07	**Milladeo Hill,**	**2.71**	**204**	*e*P		**Pn**	**21 35 00.3**	**-0.7**
CANA	**Caviahue**	**2.88**	**18**	*e*P		**Pn**	**21 35 03.4**	**-0.1**
CANA				*e*S		**Sn**	**21 35 46.8**	**+8.6**
BI02	**San Fabin de**	**4.04**	**10**	*e*P		**Pn**	**21 35 17.1**	**-1.6**
BI02	**San Fabin de**	**4.04**	**10**	*e*P		**Pn**	**21 35 16.9**	**-1.8**
BI02				IAML			21 36 07.1	
	comp=Z,32nm,0.5s							
CPUP	**Villa Florida**	**18.86**	**45**	P		**Pn**	**21 38 30.9**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=88,slow=7.8,SNR=12 comp=Z,1.1nm,0.3s							
LPAZ	**La Paz**	**24.52**	**9**	P		**P**	**21 39 26.0**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=126,slow=2.7,SNR=5.7 comp=Z,1.2nm,0.5s							
QSPA	**South Pole Qui**	**49.61**	**180**	P		**P**	**21 43 00.5**	**+3.3**
	comp=Z,0.8nm,0.6s,baz=295,slow=1.6,SNR=3.3 comp=Z,0.8nm,0.6s							
TXAR	**Lajitas Array**	**75.50**	**332**	P		**P**	**21 45 48.4**	**-1.1**
	comp=Z,0.2nm,0.8s,baz=133,slow=4.3,SNR=2.5 comp=Z,0.2nm,0.8s							

IDC ***17*** *21:46:56.0±2.9, 36.92N×75.65E, h0km, mb3.7/3, mbtmp3.5/8, ML2.7/4, MS3.5/4, Error ellipse: s-maj=49.1km s-min=29.2km az=111.0*

NNC ***17*** *21:47:02.4±3.7, 37.16N×75.96E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=28.8km s-min=23.3km az=119.0*

ISC 17 21:46:58.0±2.3, 36.6N±0.2×75.8E±0.1, h35km, n22, σ1s69/22, mb3.8/3, MS3.7/3, 4C-2D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**6.15**	**351**	Pn		**Pn**	**21 48 26.0**	**-0.4**
AAK	0.7nm,0.3s,baz=158,slow=7.9,SNR=24			Sn		**Sn**	**21 49 35.9**	**+0.3**
AAK	0.2nm,0.3s,baz=334,slow=19,SNR=6.3			Lg		Lg	21 49 59.7	
	0.5nm,0.3s,baz=22,slow=16,SNR=2.0 5.4nm,0.6s							
AAK	**Ala-Archa**	**6.15**	**351**	⇓Pn		**Pn**	**21 48 26.5**	**+0.1**
AAK	2.3nm,0.6s			⇑Sn		**Sn**	**21 49 35.0**	**-0.6**
	14nm,1.2s							
KST	**Kastek**	**6.47**	**1**	Pg		**Pn**	**21 48 31.1**	**+0.3**
KST	2.6nm,0.6s			Lg		Lg	21 50 07.6	
	6.7nm,0.6s							
IZV	**Izvestkoviy**	**6.49**	**5**	Pg		**Pn**	**21 48 33.0**	**+1.9**
IZV	1.3nm,0.6s			Lg		Lg	21 50 10.7	
	8.1nm,0.6s							
TNSS	**Tian-Shan**	**6.52**	**7**	Pg		**Pn**	**21 48 31.9**	**+0.1**
TNSS	0.9nm,0.4s			Lg		Lg	21 50 08.3	
	2.7nm,1.1s							
MDOK	**Medeo**	**6.66**	**8**	Pg		**Pn**	**21 48 34.0**	**+0.6**
MDOK	1.5nm,0.9s			Lg		Lg	21 50 12.6	
	7.8nm,0.6s							
DGS	**Degeres**	**6.67**	**360**	Pg		**Pn**	**21 48 33.5**	**0.0**
DGS	1.1nm,0.3s			Lg		Lg	21 50 11.2	
	3.7nm,0.6s							
SATY	**Saty**	**6.79**	**16**	Pg		**Pn**	**21 48 36.6**	**+1.5**
SATY	5.6nm,0.9s			Lg		Lg	21 50 17.9	
	13nm,1.1s							
KRBS	**Karabastau**	**7.12**	**359**	Pg		**Pn**	**21 48 42.7**	**+3.0**
KRBS	0.8nm,0.9s			Lg		Lg	21 50 27.6	
	6.3nm,0.6s							
KTBS	**Karatobe**	**7.17**	**5**	Pg		**Pn**	**21 48 44.0**	**+3.7**
KTBS	1.3nm,1.0s			Lg		Lg	21 50 29.8	
	7.1nm,0.5s							
PDGK	**Podgornoye**	**7.32**	**22**	⇑Pn		**Pn**	**21 48 43.5**	**+1.0**
PDGK	2.6nm,0.7s			⇑Lg		Lg	21 50 37.9	
	12nm,1.4s							
KK31	**Karatay Array**	**7.70**	**330**	⇓Pn		**Pn**	**21 48 48.1**	**+0.5**
KK31	1.2nm,0.5s,baz=136,slow=13			⇑Sn		**Sn**	**21 50 14.5**	**+1.0**
	1.5nm,0.5s,baz=146,slow=20							
MKAR	**Makanchi Array**	**11.30**	**23**	Pn		**Pn**	**21 49 36.4**	**-0.5**
	0.1nm,0.3s,baz=206,slow=14,SNR=4.0 0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**14.19**	**7**	Pn		**Pn**	**21 50 12.8**	**-3.5**
	0.8nm,0.2s,baz=190,slow=12,SNR=0.9							
BVAR	**Borovoye Array**	**16.89**	**349**	Pn		**Pn**	**21 50 48.4**	**-3.1**
	baz=145,slow=10,SNR=3.1 0.1nm,0.4s							
ZALV	**Zalesovo Beam**	**18.48**	**17**	P		**P**	**21 51 10.6**	**0.0**
	0.2nm,0.3s,baz=202,slow=10,SNR=8.7							
ZALV				LR		LR	21 58 26.8	
	comp=Z,26nm,21.2s,baz=29,slow=38 0.8nm,0.5s							
FINES	**FINESS Array B**	**39.63**	**325**	P		**P**	**21 54 26.1**	**+0.3**
	1.0nm,0.6s,baz=117,slow=11,SNR=7.2 1.0nm,0.6s							
JOW	**Kunigami**	**45.20**	**87**	LR		LR	22 15 23.7	
	comp=Z,81nm,19.5s,baz=114,slow=38							
HFS	**Hagfors**	**45.42**	**322**	P		**P**	**21 55 13.2**	**+0.3**
	0.7nm,0.6s,baz=99,slow=9.2,SNR=1.4 0.7nm,0.6s							
NOA	**NORSAR Array B**	**46.67**	**323**	P		**P**	**21 55 22.3**	**-0.5**
	0.2nm,0.5s,baz=92,slow=7.8,SNR=2.6 0.2nm,0.5s							
ILAR	**Eielson Array**	**73.60**	**18**	LR		LR	22 35 12.1	
	comp=Z,41nm,21.4s,baz=98,slow=40							
KDAK	**Kodiak Island**	**77.61**	**24**	LR		LR	22 36 38.5	
	comp=Z,89nm,18.2s,baz=55,slow=39							

IDC 17 22:06:56.1±52.0, 17.34S×179.16W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=945.2km s-min=156.4km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**38.28**	**240**	P		P	22 14 19.2	+0.7
	1.2nm,0.4s,baz=59,slow=12,SNR=4.0 1.2nm,0.4s							
WRA	**Warramunga Arr**	**44.04**	**259**	P		P	22 15 05.6	-0.4
	0.8nm,0.5s,baz=95,slow=7.7,SNR=17 0.8nm,0.5s							
ASAR	**Alice Springs**	**44.26**	**254**	P		P	22 15 07.4	-0.4
	3.2nm,0.6s,baz=92,slow=8.2,SNR=40 3.2nm,0.6s							

JMA ***17*** *22:40:54.8±0.2, 24.0N±0.8×123.6E±0.5, h31km±1km, MV2.9/9, NEAR ISHIGAKIJIMA ISLAND*

ISC 17 22:40:55.0±1.3, 23.99N±0.08×123.60E±0.04, h31km±8km, n13, σ0s63/21, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.20**	**70**	P		**Pb**	**22 41 01.1**	**-0.3**
HATJ				S		**Sb**	**22 41 05.9**	**+0.2**
IRIF	**Iriomote-Funau**	**0.37**	**20**	P		**Pb**	**22 41 03.3**	**-0.2**
IRIF				S		**Sb**	**22 41 09.6**	**+0.3**
JKRS	**Kuro-shima**	**0.45**	**57**	P		**Pb**	**22 41 04.8**	**+0.1**
JKRS				S		**Sb**	**22 41 12.0**	**+0.6**
JIJ	**Ishigaki jima**	**0.63**	**53**	P		**Pb**	**22 41 07.0**	**-0.6**
JIJ				S		**Sb**	**22 41 15.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.71**	**312**	P		**Pn**	**22 41 08.4**	**-0.4**
YOJ	**Yonaguni jima**	**0.71**	**312**	P		**Pn**	**22 41 08.5**	**-0.4**
YOJ				*e*S		**Sn**	**22 41 19.2**	**+0.4**
JYNG	**Yonagunijimaku**	**0.75**	**308**	P		**Pn**	**22 41 09.1**	**-0.3**
JYNG				*e*S		**Sb**	**22 41 19.3**	**-0.3**
JISG	**Ishigakijimahi**	**0.89**	**47**	*e*P		**Pn**	**22 41 11.0**	**-0.2**
JISG				S		**Sn**	**22 41 23.0**	**-0.1**
JTJ	**Tarama**	**1.20**	**57**	*e*P		**Pb**	**22 41 17.0**	**-0.2**
JTJ				*e*S		**Sb**	**22 41 33.4**	**+1.0**
NACB	**Ninganchiao**	**1.84**	**276**	P		**Pn**	**22 41 24.0**	**-0.4**
YHNB	**Yeheng**	**2.13**	**289**	P		**Pn**	**22 41 29.5**	**+1.0**
YULB	**Yu-li**	**2.19**	**255**	P		**Pn**	**22 41 28.0**	**-1.2**
TPUB	**Ta-pu**	**2.80**	**256**	P		**Pn**	**22 41 38.8**	**+1.1**

IDC ***17*** *22:58:20.1±6.3, 8.01S×128.04E, h229km±61km, mb3.2/3, mbtmp3.9/6, Error ellipse: s-maj=71.3km s-min=20.5km az=59.0*

ISC 17 22:58:22.0±1.5, 8.1S±0.1×127.9E±0.1, h250km, n7, σ1s70/9, mb3.5/3, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**4.72**	**243**	P		**Pn**	**22 59 33.3**	**-1.1**
	36nm,0.5s,baz=116,slow=1.5,SNR=8.7							
BATI				S		**S**	**23 00 32.4**	**+0.3**
	19nm,0.3s,baz=264,slow=23,SNR=7.2							
FITZ	**Fitzroy Crossi**	**10.22**	**192**	P		**Pn**	**23 00 41.1**	**-2.3**
	4.3nm,0.3s,baz=12,slow=11,SNR=39							
FITZ				S		**S**	**23 02 38.9**	**+0.6**
	1.9nm,0.3s,baz=55,slow=18,SNR=2.3							
WRA	**Warramunga Arr**	**13.34**	**153**	P		Pn	23 01 15.6	-6.6
	0.7nm,0.3s,baz=325,slow=14,SNR=14							
WRA				S		S	23 03 38.4	-12
	2.9nm,0.6s,baz=331,slow=23,SNR=11							
ASAR	**Alice Springs**	**16.54**	**160**	P		**Pn**	**23 01 59.5**	**-1.1**
	0.8nm,0.4s,baz=341,slow=10,SNR=18							
ASAR				S		**S**	**23 05 01.6**	**+2.6**
	1.0nm,0.5s,baz=321,slow=20,SNR=6.7							
MKAR	**Makanchi Array**	**68.01**	**328**	P		**P**	**23 08 55.5**	**+1.1**
	0.2nm,0.3s,baz=127,slow=7.8,SNR=4.6 0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**71.64**	**335**	P		**P**	**23 09 15.3**	**-1.0**
	0.4nm,0.3s,baz=116,slow=6.6,SNR=2.4 0.4nm,0.3s							
KURBB	**Kurchatov Arra**	**72.36**	**330**	P		**P**	**23 09 21.1**	**+0.5**
	0.5nm,0.6s,baz=130,slow=4.9,SNR=4.6 0.5nm,0.6s							

JMA ***17*** *23:00:00.7±0.1, 36.5N±0.3×140.6E±0.5, h56km, MD3.7/36, MV4.1/36, NORTHERN IBARAKI PREF*

JMA Felt II J1 at NORTHERN IBARAKI PREF .

NIED ***17*** *23:00:00.7, 36.46N×140.60E, h56km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr5.26; Mθθ-0.22; Mϕϕ-5.04; Mrθ 0.79; Mθϕ-1.82; Mϕr4.56; Fault plane solution: M₀7.16000×10¹⁴ NP1: ϕs205.00000°, δ25.00000°, λ101.00000°. NP2: ϕs13.00000°, δ65.00000°, λ85.00000°.*

NEIC ***17*** *23:00:01.0±1.4, 36.49N±0.03×140.72E±0.10, h60km±7km, mb4.4/9 Error ellipse: s-maj=11.7km s-min=4.1km az=96.0*

IDC ***17*** *23:00:02.3±2.5, 36.43N×140.59E, h74km±20km, mb3.6/15, mbtmp3.9/18, MS4.2/1, Error ellipse: s-maj=25.5km s-min=9.8km az=66.0*

ISC 17 23:00:00.5±0.8, 36.47N±0.04×140.70E±0.07, h57km±6km, n86, σ0s91/77, mb4.0/20, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.16**	**216**	P		**Pn**	**23 00 09.4**	**+0.1**
JHYU				*e*S		**Sn**	**23 00 15.3**	**-0.4**
JHYU	**Hitachinakayam**	**0.16**	**216**	A		A	23 00 09.4	
	comp=N,33nm,0.3s,comp=E,32nm,0.7s							
JHO	**Hitachi**	**0.18**	**323**	P		**Pn**	**23 00 09.5**	**0.0**
JHO				*e*S		**Sn**	**23 00 15.4**	**-0.5**
JHO	**Hitachi**	**0.18**	**323**	A		A	23 00 09.5	
	comp=N,9.0nm,0.2s,comp=E,32nm,0.6s							
JYT	**Yasato**	**0.47**	**240**	⇓P		**Pn**	**23 00 11.4**	**-0.5**
JYT				⇓*e*S		**Sn**	**23 00 18.7**	**-1.4**
JYT	**Yasato**	**0.47**	**240**	A		A	23 00 11.4	
	comp=N,44nm,0.3s,comp=E,68nm,0.3s							
ONAJ	**Iwakimizuishiy**	**0.64**	**7**	P		**Pn**	**23 00 13.8**	**-0.1**
ONAJ				*e*S		**Sn**	**23 00 23.0**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.64**	**7**	A		A	23 00 13.8	
	comp=N,6.0nm,0.3s,comp=E,7.0nm,0.3s							
JSB	**Shiboa**	**0.80**	**309**	A		A	23 00 15.5	
	comp=N,5.0nm,0.9s,comp=E,6.0nm,0.8s							
JFK	**Kawauchi**	**0.91**	**9**	*e*P		**Pn**	**23 00 17.1**	**-0.1**
JAG	**Ashikaga**	**1.01**	**268**	⇓P		**Pn**	**23 00 17.8**	**-0.6**
JAG	**Ashikaga**	**1.01**	**268**	A		A	23 00 17.8	
	comp=N,4.0nm,0.2s,comp=E,5.0nm,0.7s							
TOK	**Tokyo**	**1.09**	**225**	A		A	23 00 19.1	
	comp=N,9.0nm,0.3s,comp=E,11nm,0.5s							
JOTO	**OTAMA OYAMA**	**1.13**	**345**	P		**Pn**	**23 00 20.4**	**+0.3**
JOTO				*e*S		**Sn**	**23 00 34.7**	**0.0**
JKT	**Katashina**	**1.21**	**285**	⇓P		**Pn**	**23 00 20.7**	**-0.5**
JKT				⇓*e*S		**Sn**	**23 00 35.9**	**-0.7**
JKT	**Katashina**	**1.21**	**285**	A		A	23 00 20.7	
	comp=N,5.0nm,1.3s,comp=E,6.0nm,0.2s							
JFY	**Yanaizu**	**1.23**	**320**	⇓P		**Pn**	**23 00 21.5**	**+0.1**
JMM	**Marumori**	**1.40**	**3**			**Pn**	**23 00 24.2**	**+0.4**
JMM				Sn		**Sn**	**23 00 41.4**	**+0.3**
JMM	**Marumori**	**1.40**	**3**	P		**Pn**	**23 00 24.1**	**+0.4**
JMM	**Marumori**	**1.40**	**3**	S		**Sn**	**23 00 41.5**	**+0.4**
MJAR	**Matsuiro Arr**	**2.01**	**273**	P		**Pn**	**23 00 31.6**	**-0.4**
	comp=E,78nm,0.4s,baz=107,slow=11,SNR=232							
MJAR				S		**Sn**	**23 00 56.3**	**+0.3**
	comp=E,35nm,0.3s,baz=100,slow=20,SNR=2.7							
MJAR				LR		LR	23 01 38.1	
	comp=E,129nm,18.6s,baz=157,slow=50							
MJAR	**Matsushiro Arr**	**2.01**	**273**			**Pn**	**23 00 32.1**	**+0.1**
MAJO	**Matsushiro**	**2.01**	**273**			**Pn**	**23 00 32.2**	**+0.2**
MAJO	**Matsushiro**	**2.01**	**273**	P		**Pn**	**23 00 32.1**	**+0.1**
MJB9	**Matsu-Tunnel**	**2.01**	**273**			**Pn**	**23 00 33.2**	**+1.2**
JSD	**Sado**	**2.50**	**310**			**Pn**	**23 00 38.5**	**-0.1**
JSD	**Sado**	**2.50**	**310**	P		**Pn**	**23 00 38.4**	**-0.3**
JSG	**Sagara**	**2.72**	**230**	Pn		**Pn**	**23 00 41.1**	**-0.6**
JGF	**Kuroka**	**2.84**	**253**			**Pn**	**23 00 44.5**	**+1.0**
JGF	**Kuroka**	**2.84**	**253**	P		**Pn**	**23 00 44.3**	**+0.9**
INU	**Inuyama**	**3.19**	**251**			**Pn**	**23 00 49.6**	**+1.4**
INU	**Inuyama**	**3.19**	**251**	P		**Pn**	**23 00 49.4**	**+1.2**
JHJ	**Hachijo jima 2**	**3.42**	**193**	P		**Pn**	**23 00 51.7**	**+0.3**
	comp=E,90nm,0.5s,baz=55,slow=19,SNR=8.3							
JHJ				S		**Sn**	**23 01 32.0**	**+1.3**
	comp=E,154nm,0.5s,baz=94,slow=21,SNR=6.3							
JHJ2	**Mitsune**	**3.43**	**192**	Pn		**Pn**	**23 00 51.6**	**+0.2**
JHJ2	**Mitsune**	**3.43**	**192**	P		**Pn**	**23 00 53.7**	**+2.3**
JHJ2	**Mitsune**	**3.43**	**192**	S		**Sn**	**23 01 33.8**	**+3.1**
JTM	**Tenmabayashi**	**4.32**	**4**	Pn		**Pn**	**23 01 05.3**	**+1.7**
JTM	**Tenmabayashi**	**4.32**	**4**	P		**Pn**	**23 01 05.6**	**+2.0**
ERM	**Erimo**	**5.86**	**18**	Pn		**Pn**	**23 01 24.5**	**-0.2**
ERM	**Erimo**	**5.86**	**18**	P		**Pn**	**23 01 25.3**	**+0.7**
ERM	**Erimo**	**5.86**	**18**	S		**Sn**	**23 02 31.6**	**+1.2**
JMN	**Monobe**	**6.22**	**246**	Pn		**Pn**	**23 01 30.0**	**+0.2**
JMN	**Monobe**	**6.22**	**246**	P		**Pn**	**23 01 31.3**	**+1.6**
JKA	**Kamikawa-asahi**	**7.78**	**10**	Pn		**Pn**	**23 01 50.3**	**-0.6**
JNU	**Nakatsue**	**8.74**	**250**	Pn		**Pn**	**23 02 06.8**	**+2.5**
USRK	**Ussuriysk Ar.**	**10.19**	**322**	P		**Pn**	**23 02 25.6**	**+1.8**
	comp=E,2.3nm,0.7s,baz=143,slow=14,SNR=2.2							
KSRS	**Korea Array**	**10.27**	**279**	P		**Pn**	**23 02 26.6**	**+1.6**
	comp=E,3.1nm,0.8s,baz=93,slow=15,SNR=2.6							
SONM	**Songino Array**	**27.63**	**305**	P		**P**	**23 05 41.8**	**-0.9**
	comp=E,1.2nm,0.7s,baz=112,slow=9.8,SNR=5.7 comp=E,1.2nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**28.36**	**119**	T		T	23 35 56.6	
	baz=312,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**28.37**	**119**	T		T	23 35 54.1	
	baz=312,slow=75,SNR=17							
H11N3	**WAKE ISLAND Hy**	**28.38**	**119**	T		T	23 35 59.0	
	baz=312,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**29.05**	**121**	T		T	23 36 41.7	
	baz=314,slow=76,SNR=44							
H11S3	**WAKE ISLAND Hy**	**29.05**	**121**	T		T	23 36 41.8	
	baz=314,slow=76,SNR=42							
H11S2	**WAKE ISLAND Hy**	**29.06**	**121**	T		T	23 36 47.8	
	baz=314,slow=76,SNR=36							
ZAA0	**Zalesovo Array**	**41.88**	**313**	P		**P**	**23 07 44.8**	**-0.1**
ZAA0						IAmb	IAmb	23 07 45.4
	comp=Z,3.5nm,0.7s							
ZALV	**Zalesovo Beam**	**41.88**	**313**	P		**P**	**23 07 44.9**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=92,slow=7.1,SNR=12 comp=Z,2.7nm,0.5s							
ZALV	**Zalesovo Beam**	**41.88**	**313**			**P**	**23 07 45.1**	**+0.3**
MKAR	**Makanchi Array**	**43.94**	**302**	P		**P**	**23 08 01.7**	**0.0**
	comp=Z,1.6nm,0.8s,baz=88,slow=9.0,SNR=8.9 comp=Z,1.6nm,0.8s							
MKAR	**Makanchi Array**	**43.94**	**302**	P		**P**	**23 08 01.9**	**+0.2**
KURK	**Kurchatov**	**45.83**	**308**	P		**P**	**23 08 16.0**	**-0.6**
EVN	**Everest**	**45.87**	**275**	P		**P**	**23 08 18.1**	**+0.1**
EVN						IAmb	IAmb	23 08 29.5
	comp=Z,3.2nm,0.8s							
KURBB	**Kurchatov Arra**	**45.90**	**308**	P		**P**	**23 08 16.5**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=80,slow=7.5,SNR=18 comp=Z,1.4nm,0.5s							
BATI	**Baumata**	**49.12**	**202**	LR		LR	23 29 01.1	
	comp=Z,256nm,22.0s,baz=296,slow=36							
ILAR	**Eielson Array**	**50.28**	**32**	P		**P**	**23 08 52.1**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=255,slow=4.9,SNR=4.6 comp=Z,0.4nm,0.8s							

BVAR	**Borovoye Array**	**50.53**	**313**	P		**P**	**23 08 51.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=82,slow=12,SNR=2.5 comp=Z,0.5nm,0.5s							
FITZ	**Fitzroy Crossi**	**56.11**	**197**	P		**P**	**23 09 34.3**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=23,slow=8.5,SNR=1.7 comp=Z,1.8nm,0.9s							
FITZ	**Fitzroy Crossi**	**56.11**	**197**	P		**P**	**23 09 34.1**	**+0.2**
WB0	**Warramunga Arr**	**56.25**	**187**	P		**P**	**23 09 33.9**	**-1.1**
WB0				IAmb		IAmb	23 10 07.2	
	comp=Z,6.3nm,1.2s							
WRA	**Warramunga Arr**	**56.43**	**187**	P		**P**	**23 09 35.6**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=2.9,slow=7.5,SNR=12 comp=Z,0.8nm,0.6s							
AB31	**Akbulak array**	**57.87**	**310**	P		**P**	**23 09 45.3**	**-0.9**
AB31				IAmb		IAmb	23 09 46.8	
	comp=Z,2.9nm,1.1s							
ASAR	**Alice Springs**	**60.15**	**187**	P		**P**	**23 10 01.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=15,slow=5.2,SNR=4.2 comp=Z,0.5nm,0.7s							
FINES	**FINESS Array B**	**69.05**	**332**	P		**P**	**23 10 59.6**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=62,slow=5.8,SNR=11 comp=Z,0.8nm,0.5s							
BPMT	**Black Pine Rid**	**74.03**	**44**	P		**P**	**23 11 30.3**	**-0.1**
NC405	**NORSAR Array S**	**74.27**	**337**	P		**P**	**23 11 31.2**	**0.0**
NC405				IAmb		IAmb	23 11 34.9	
	comp=Z,14nm,1.4s							
HFS	**Hagfors**	**74.36**	**335**	P		**P**	**23 11 31.6**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=70,slow=4.7,SNR=3.2 comp=Z,3.3nm,0.9s							
AKASG	**Malin Array Be**	**74.39**	**322**	P		**P**	**23 11 31.5**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=48,slow=6.2,SNR=5.9 comp=Z,1.9nm,0.6s							
NC204	**NORSAR Array S**	**74.44**	**337**	P		**P**	**23 11 32.4**	**+0.1**
NB201	**NORSAR Array S**	**74.45**	**337**	P		**P**	**23 11 32.1**	**-0.2**
NB2	**NORSAR Subarra**	**74.48**	**337**	P		**P**	**23 11 32.5**	**0.0**
	comp=Z,1.5nm,0.4s,baz=40,slow=6.2							
NOA	**NORSAR Array B**	**74.48**	**337**	P		**P**	**23 11 32.2**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=39,slow=5.8,SNR=7.5 comp=Z,1.1nm,0.7s							
BRTR	**Keskin Array B**	**78.80**	**311**	P		**P**	**23 11 57.7**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=48,slow=5.5,SNR=4.8 comp=Z,0.9nm,0.8s							
BRTR	**Keskin Array B**	**78.80**	**311**	P		**P**	**23 11 57.4**	**0.0**
GERES	**GERESS Array B**	**82.89**	**328**	P		**P**	**23 12 18.4**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=23,slow=4.8,SNR=4.0 comp=Z,0.4nm,0.3s							
H03N2	**Juan Fernandez**	**147.53**	**97**	T		T	02 04 47.5	
	baz=291,slow=76,SNR=16							
H03N3	**Juan Fernandez**	**147.54**	**97**	T		T	02 04 48.6	
	baz=291,slow=76,SNR=20							
H03N1	**Juan Fernandez**	**147.55**	**97**	T		T	02 04 48.8	
	baz=291,slow=76,SNR=14							

BGR ***17*** *23:05:46.5, 10.09N×93.46E, h33km, mb5.0*

MOS ***17*** *23:05:53.3±0.8, 11.19N×93.01E, h58km, mb5.2/57, Error ellipse: s-maj=7.8km s-min=4.0km az=117.7*

IDC ***17*** *23:05:55.8±0.6, 11.24N×93.03E, h62km±4km, mb4.3/31, mbtmp4.6/34, MS3.7/49, Error ellipse: s-maj=11.9km s-min=10.0km az=69.0*

NEIC ***17*** *23:05:55.7±1.9, 11.29N±0.06×92.96E±0.08, h53km±5km, mb5.1/124, Error ellipse: s-maj=12.2km s-min=6.5km az=59.0*

DJA ***17*** *23:05:55.9±0.3, 11°N±3°×9°3E±°, h48km±5km, M5.0/18, mb4.9/18, mB5.2/11, MLv5.7/3, Mw(mB)4.5/11*

BKK ***17*** *23:05:55.0±0.6, 11°N±3°×9°3E±°, h10km, M4.8/28, mB5.3/27, mb5.2/28, Mjma4.4/28, ML5.6/12, MLv5.4/12, Mw(mB)4.7/27, MwMwp3.7/4, Mwp4.3/4*

BJI ***17*** *23:05:55.2, 11.20N×92.91E, h75km, mB5.1/10, mb4.7/57, Ms4.1/20, Ms7 3.9/18*

GCMT ***17*** *23:05:57.7±0.3, 11.40N±0.02×93.00E±0.02, h27km±1km, MW5.0/77, Moment Tensor Solution. s18,c21; s77,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.42±.11; Mθθ 0.30±.08; Mϕϕ 0.12±.08; Mrθ-1.17±.15; Mθϕ 0.45±.06; Mϕr-3.29±.31; Best double couple: M₀3.54100×10¹⁶ NP1:ϕs262.00000°, δ7.00000°, λ-28.00000°. NP2: ϕs20.00000°, δ87.00000°, λ-97.00000°. Principal axes: T 3.5450, Plg41.0000°, Azm116.0000°; N -0.0060, Plg7.0000°, Azm20.0000°; P -3.5380, Plg48.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NDI ***17*** *23:05:58.4±3.2, 11.30N×92.70E, h48km±17km, mb5.0, ML5.0*

ISC 17 23:05:56.0±0.3, 11.25N±0.03×92.92E±0.04, h61km±2km, h62km:pP-P, n630, σ1s24/655, mb5.0/204, 37C-23D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PBA	**Port Blair**	**0.44**	**336**			**Pn**	**23 06 07.2**	**-0.3**
PBA	**Port Blair**	**0.44**	**336**	*e*P		**Pn**	**23 06 06.2**	**-1.4**
PBA				*e*S		**Sn**	**23 06 16.5**	**+0.7**

VIS Vishakhapatnam 11.30 306 eP Pn 23 08 34.7 -0.1
VIS eS Sn 23 10 24.6 -15
VIS IAML 23 10 31.5
comp=N,4µm,0.8s
VIS IAML 23 10 31.5
comp=E,5µm,0.8s
BWNR Bhubaneshwar 11.30 324 eP Pn 23 08 32.3 -2.5
BWNR IAmb IAmb 23 08 39.9
comp=Z,375nm,0.4s
BRDH Bariadhala 11.43 354 P Pn 23 08 35.9 -0.6
comp=Z,65nm,0.3s,baz=252,slow=19,SNR=1.3
BRDH S Sn 23 10 32.5 -10
comp=Z,104nm,0.3s,baz=307,slow=20,SNR=2.4
BRDH LR LR 23 13 37.6
comp=Z,541nm,21.6s,baz=164,slow=40
RAGD RAYAGADA 12.11 312 eP Pn 23 08 45.5 -0.3
MNSI Mandailing Nat 12.31 147 P P 23 09 01.8 +3.0
PALK Pallekele 12.69 253 P Pn 23 08 53.8 -0.1
comp=Z,15nm,0.9s,baz=69,slow=12,SNR=8.5
PALK S Sn 23 11 00.8 -13
comp=Z,109nm,0.8s,baz=344,slow=20,SNR=9.1
PALK LR LR 23 13 24.7
comp=Z,572nm,21.7s,baz=62,slow=35
PALK Pallekele 12.69 253 Pn 23 08 52.6 -1.3
IMP Imphal 13.54 4 eP Pn 23 09 03.6 -1.8
IMP IAmb IAmb 23 09 08.8
comp=Z,85nm,1.3s
PPI Padang Panjang 13.80 147 P P 23 09 18.1 +2.7
BOK Bokaro 14.16 333 eP Pn 23 09 12.6 -1.0
BOK IAmb IAmb 23 09 28.9
comp=Z,51nm,0.9s
PDSI Padang 14.22 148 P P 23 09 19.0 -1.0
SHL Shillong 14.27 356 Pn 23 09 10.4 -4.8
SHL Shillong 14.27 356 eP Pn 23 09 14.2 -1.1
SHL eS Sn 23 11 40.4 -12
SHL Shillong 14.27 356 P Pn 23 09 10.5 -4.8
MYKOM Kota Tinggi 14.35 130 Pn 23 09 16.2 +0.1
MYKOM Kota Tinggi 14.35 130 P Pn 23 09 17.0 +0.9
KOHI KOHIMA 14.44 4 eP Pn 23 09 16.8 -0.6
KOHI IAmb IAmb 23 09 22.8
comp=Z,128nm,0.7s
KOHI eS Sn 23 11 45.4 -11
SALM Salem 14.44 273 eP Pn 23 09 18.1 +0.8
SALM IAmb IAmb 23 09 35.6
comp=Z,85nm,1.1s
BTDF Bukit Timah Da 14.58 132 P Pn 23 09 20.8 +1.7
TNCH TengChong 14.70 20 P Pn 23 09 20.8 +0.1
TNCH S Sn 23 12 02.9 +0.4
TNCH sS S 23 12 22.1 +3.9
TNCH pmax pmax
comp=Z,19nm,0.5s
TNCH pmax pmax
comp=Z,160nm,3.9s
SHBG Sahibganj 14.76 341 eP Pn 23 09 21.1 -0.2
SHBG IAmb IAmb 23 09 22.6
comp=Z,186nm,0.3s
BLSP Bilaspur 14.95 318 eP Pn 23 09 23.6 -0.3
BLSP IAmb IAmb 23 09 29.8
comp=Z,131nm,0.9s
MOKO MOKOCHONG 15.07 6 eP Pn 23 09 23.9 -1.6
MOKO IAmb IAmb 23 09 29.9
comp=Z,77nm,0.8s
HYBB Hyderabad (bro 15.21 295 eP Pn 23 09 27.7 +0.4
KOD Kodaikanal 15.22 268 eP Pn 23 09 26.4 -1.4
KOD IAmb IAmb 23 09 49.5
comp=Z,46nm,0.6s
DLV Lat 15.26 86 P Pn 23 09 29.3 +1.2
DLV Lat 15.26 86 P P 23 09 32.8 +1.0
TEZP TEZPUR 15.29 360 eP Pn 23 09 29.2 +1.0
TEZP IAmb IAmb 23 09 33.3
comp=Z,46nm,0.6s
TEZP eS Sn 23 12 04.0 -13
GAYA Gaya 15.33 333 eP Pn 23 09 28.2 -0.5
TPRI Tanjung Pinang 15.43 131 P Pn 23 09 30.7 +0.6
ITAN ITANAGAR 15.83 3 eP Pn 23 09 35.7 +0.6
ITAN IAmb IAmb 23 09 41.6
comp=Z,83nm,0.7s
ITAN eS Sn 23 12 17.6 -12
ZIRO ZIRO 16.21 3 eP Pn 23 09 39.7 -0.4
ZIRO IAmb IAmb 23 09 45.7
comp=Z,53nm,0.7s
ZIRO eS Sn 23 12 26.6 -13
LKP Lekhapani 16.23 9 IAmb IAmb 23 09 43.2
comp=Z,42nm,0.7s
TAWA Tawang 16.29 357 eP Pn 23 09 41.4 +0.1
TAWA IAmb IAmb 23 09 45.0
comp=Z,76nm,1.3s
TAWA eS Sn 23 12 26.9 -14
DSRI Dabo 16.43 134 P P 23 09 45.1 +0.5
comp=Z,33nm,0.7s
KMI Kunming 16.64 33 P P 23 09 47.1 0.0
KMI pmax pmax
comp=Z,19nm,1.1s
KMI LR LR
comp=Z,130nm,9.7s
KMI LR LR
comp=Z,170nm,10.9s
MASI Maura Aman, Be 17.04 147 P P 23 09 50.9 -0.5
comp=Z,92nm,0.8s
PZH PanZhiHua 17.30 28 P P 23 09 57.3 +3.0
PZH S Sn 23 13 05.3 -0.3
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,110nm,5.7s
PZH LR LR
comp=Z,160nm,16.0s
PZH LR LR
comp=Z,180nm,14.1s
EVN Everest 17.58 342 P Pn 23 09 57.6 +0.1
KSI Kapahiang 17.66 146 P P 23 09 58.6 +0.4
AKL Akola 17.94 304 eP Pn 23 10 03.8 +2.5
AKL IAmb IAmb 23 10 23.8
comp=Z,37nm,0.9s
QIZ Qiongzhong 18.06 63 P Pn 23 10 03.8 +0.9
QIZ S Sn 23 13 23.6 -0.2
QIZ pmax pmax
comp=Z,38nm,0.9s
QIZ LR LR
comp=Z,400nm,14.3s
QIZ LR LR
comp=Z,260nm,13.2s
QIZ LR LR
comp=Z,330nm,17.7s
LSA Lhasa 18.43 355 P P 23 10 03.8 -3.3
LSA S Sn 23 13 26.4 -6.9
LSA pmax pmax
comp=Z,7.0nm,0.5s
LSA LR LR
comp=Z,180nm,23.1s
LSA LR LR
comp=Z,160nm,15.7s
LSA Lhasa 18.43 355 P Pn 23 10 07.7 -0.1
PPBI Pangkal Pinang 18.71 135 P Pn 23 10 12.4 +1.6
NRDN NARMADA NAGAR 18.88 309 eP Pn 23 10 16.7 +4.0
BHPL Bhopal 18.98 311 eP Pn 23 10 15.0 +1.0
BHPL IAmb IAmb 23 10 29.8
comp=Z,55nm,0.4s
KAD Karad 19.13 290 eP Pn 23 10 16.3 +0.6
KAD IAmb IAmb 23 10 19.4
comp=Z,57nm,0.7s
JHNI Jhansi 19.63 318 eP Pn 23 10 24.4 +2.9
POO Poona 19.79 294 eP Pn 23 10 26.5 +2.9
POO IAmb IAmb 23 10 40.0
comp=Z,96nm,1.4s
GUNA GUNA 19.91 314 eP Pn 23 10 28.1 +3.1
GUNA IAmb IAmb 23 10 39.0
comp=Z,72nm,1.1s
GYA Guiyang 19.92 39 ⇓P Pn 23 10 24.1 -1.0
GYA S S 23 14 01.3 -2.7
GYA pmax pmax
comp=Z,12nm,0.9s
GYA pmax pmax
comp=Z,170nm,3.1s
GYA LR LR
comp=Z,340nm,10.6s
GYA LR LR
comp=Z,180nm,10.1s
GYA LR LR
comp=Z,230nm,15.5s
HMDM Hanimaadhoo 20.00 259 P P 23 10 24.2 +0.4
TPI Tanjungpandan 20.21 133 P P 23 10 26.1 0.0
comp=Z,729nmcomp=Z,64nm,0.8s
SBUM Sibu 21.04 113 P P 23 10 34.9 -0.2
SBUM Sibu 21.04 113 P P 23 10 35.6 +0.5

CD2 Chengdu 21.99 26 P P 23 10 44.8 -0.4
CD2 pP pP 23 10 57.1 -1.3
CD2 pmax pmax
comp=Z,60nm,1.1s
GOMU GeErMu 24.90 4 P P 23 11 14.6 +0.9
GOMU S S 23 15 36.3 +3.4
GOMU pmax pmax
comp=Z,25nm,0.7s
GOMU LR LR
comp=Z,69nm,8.8s
GOMU LR LR
comp=Z,140nm,8.7s
LZDM Lanzhou Array 26.46 20 P P 23 11 27.2 -0.6
comp=Z,3.5nm,0.4s,baz=207,slow=12,SNR=8.5
comp=Z,3.5nm,0.4s
LZH Lanzhou 26.63 20 eP P 23 11 30.6 +1.5
LZH pP pP 23 11 43.0 -0.9
LZH sP sP 23 11 51.4 +0.3
LZH pmax pmax
comp=Z,31nm,1.3s
LZH LR LR
comp=Z,430nm,13.3s
LZH LR LR
comp=Z,340nm,15.6s
LZH LR LR
comp=Z,480nm,20.0s
TGY Tagaytay City 27.47 81 LR LR 23 21 25.4
comp=Z,244nm,19.7s,baz=320,slow=34
H08S3 Diego Garcia H 27.67 228 T T 23 40 07.1
baz=46,slow=76,SNR=89
H08S2 Diego Garcia H 27.67 228 T T 23 40 00.4
baz=46,slow=76,SNR=112
H08S1 Diego Carcia H 27.68 228 T T 23 40 00.4
baz=46,slow=76,SNR=60
GTA Gaotai 28.71 11 P P 23 11 48.9 +1.3
GTA pP sP 23 12 06.8 -2.9
GTA PcP PcP 23 14 58.1 +1.2
GTA S S 23 16 31.8 -0.7
GTA ScS ScS 23 22 26.0 -0.7
GTA pmax pmax
comp=Z,23nm,1.2s
NJ2 Nanjing 31.62 45 eP P 23 12 12.9 -0.4
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
KBL Kabul 31.80 321 P P 23 12 15.6 +0.5
KBL Kabul 31.80 321 P P 23 12 15.6 +0.5
KBL pmax pmax
comp=Z,18nm,1.0s
KSH Kashi 31.93 335 P P 23 12 15.8 -0.2
KSH pP pP 23 12 31.8 +0.7
KSH pmax pmax
comp=Z,34nm,0.7s
LUWI Luwuk 32.09 110 P P 23 12 17.1 -0.5
LUWI Luwuk 32.09 110 P P 23 12 18.0 +0.4
DAV Davao City (W) 32.49 94 LR LR 23 27 22.4
comp=Z,106nm,18.2s,baz=260,slow=40
HNS HongShan 32.57 33 ⇓P P 23 12 24.0 +2.5
HNS pmax pmax
comp=Z,14nm,0.8s
HNS LR LR
comp=Z,240nm,17.2s
WMQ Urumqi 32.77 353 eP P 23 12 22.8 -0.5
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ LR LR
comp=Z,180nm,24.1s
BTO Baotou 32.90 24 eP P 23 12 22.9 -1.7
BTO pP pP 23 12 41.0 +1.4
BTO sP sP 23 12 50.0 +3.2
BTO pmax pmax
comp=Z,10.0nm,0.8s
BTO pmax pmax
comp=Z,250nm,4.4s
TARG Taragay, Kyrgy 33.13 339 P P 23 12 26.9 0.0
TARG Taragay, Kyrgy 33.13 339 P P 23 12 26.9 0.0
TARG pmax pmax
comp=Z,36nm,0.7s
PRZ Przheval'sk 33.60 340 P P 23 12 32.4 +1.7
PRZ Przheval'sk 33.60 340 P P 23 12 32.4 +1.7
PRZ pmax pmax
comp=Z,51nm,0.8s
KDJ Kajisay 33.70 339 P P 23 12 32.4 +0.8
KDJ IAmb IAmb 23 12 34.0
comp=Z,30nm,0.8s
KDJ Kajisay 33.70 339 P P 23 12 32.4 +0.8
KDJ pmax pmax
comp=Z,30nm,0.8s
HHC Hu-ho-hao-te 33.75 26 eP P 23 12 32.4 +0.5
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,120nm,3.5s
DRK Karamyk 33.80 330 P P 23 12 34.0 +1.4
DRK Karamyk 33.80 330 P P 23 12 34.0 +1.4
DRK pmax pmax
comp=Z,67nm,0.7s
SHLS Shalkode 33.87 342 eP P 23 12 32.3 -0.8
comp=Z,11nm,0.6s
SHLS Shalkode 33.87 342 eP P 23 12 32.2 -0.8
SHLS pmax pmax
comp=Z,11nm,0.6s
SATY Saty 34.11 341 eP P 23 12 35.5 +0.3
comp=Z,12nm,0.7s
SATY eS S 23 17 58.4 +1.5
SATY Saty 34.11 341 eP P 23 12 35.4 +0.3
SATY eS S 23 17 58.3 +1.5
SATY pmax pmax
comp=Z,12nm,0.7s
ULHL Ulahol 34.15 338 P P 23 12 36.5 +1.0
SNR=7.7
GAR Garm 34.19 328 P P 23 12 36.3 +0.5
CHGR Chuyangaron 34.56 326 P P 23 12 38.9 -0.1
CHGR Chuyangaron 34.56 326 P P 23 12 38.9 -0.1
CHGR pmax pmax
comp=Z,80nm,0.8s
TNSS Tian-Shan 34.58 339 eP P 23 12 39.6 +0.2
TNSS Tian-Shan 34.58 339 eP P 23 12 39.6 +0.2
MDOK Medeo 34.66 339 eP P 23 12 40.2 +0.4
MDOK Medeo 34.66 339 eP P 23 12 40.2 +0.4
AAA Alma-Ata 34.74 339 eP P 23 12 41.0 +0.5
AAA Alma-Ata 34.74 339 eP P 23 12 40.9 +0.5
UCH Uchtor 34.80 336 P P 23 12 42.8 +1.3
SNR=18
TKM2 Tokmak 2 34.97 338 P P 23 12 43.7 +1.1
SNR=21
KBK Karagaybulak 34.99 337 P P 23 12 44.5 +1.8
SNR=40
AAK Ala-Archa 35.15 336 LR LR 23 28 57.7
comp=Z,241nm,21.2s,baz=152,slow=39
AAK Ala-Archa 35.15 336 P P 23 12 44.9 +0.8
AAK IAmb IAmb 23 12 46.8
comp=Z,24nm,0.9s
AAK Ala-Archa 35.15 336 P P 23 12 45.9 +1.7
SNR=24
AAK Ala-Archa 35.15 336 P P 23 12 46.1 +1.9
AAK Ala-Archa 35.15 336 i P P 23 12 45.5 +1.4
AAK pmax pmax
comp=Z,29nm,1.0s
AAK Ala-Archa 35.15 336 P P 23 12 45.6 +1.4
MMRI Maumere 35.22 123 P P 23 12 42.7 -2.1
MMRI IAmb IAmb 23 12 46.2
comp=Z,21nm,0.6s
FRU1 Bishkek 35.24 336 P P 23 12 45.3 +0.5
FRU1 IAmb IAmb 23 12 47.4
comp=Z,31nm,1.1s
FRU1 Bishkek 35.24 336 P P 23 12 45.3 +0.5
FRU1 pmax pmax
comp=Z,31nm,1.1s
CHMS Chumysh 35.36 337 P P 23 12 46.9 +1.1
SNR=22
EKS2 Erkin-Say 35.46 335 P P 23 12 48.6 +1.9
SNR=30
USP Ospenovka 35.68 337 P P 23 12 49.7 +1.1
SNR=46
SGDS Sogindy 35.79 337 eP P 23 12 49.9 +0.5
TDK Taldygorghan 35.87 342 eP P 23 12 50.4 +0.4
comp=Z,7.9nm,0.8s
TDK Taldyqorghan 35.87 342 eP P 23 12 50.4 +0.4
TDK pmax pmax
comp=Z,8.0nm,0.8s
HRA Herat 36.22 314 P P 23 12 53.0 -0.5
MK31 Makanchi Array 36.55 348 P 23 12 55.1 -0.7
MK31 Makanchi Array 36.55 348 ceP P 23 12 56.5 +0.6
MKAR Makanchi Array 36.55 348 P P 23 12 55.9 0.0
comp=Z,6.7nm,0.8s,baz=168,slow=8.6,SNR=38

MKAR PcP PcP 23 15 18.5 +0.2
comp=Z,4.4nm,0.7s,baz=214,slow=4.2,SNR=7.2
MKAR ScP ScP 23 18 59.0 -0.8
comp=Z,1.1nm,0.9s,baz=207,slow=5.8,SNR=3.7
MKAR LR LR 23 30 29.4
comp=Z,118nm,19.0s,baz=158,slow=40
comp=Z,6.7nm,0.8s
MKAR Makanchi Array 36.55 348 P P 23 12 55.6 -0.3
MAKZ Makanchi 36.63 347 P P 23 12 56.3 -0.2
MAKZ Makanchi 36.63 347 P P 23 12 56.3 -0.2
MAKZ pmax pmax
comp=Z,12nm,1.0s
JOW Kunigami 36.68 60 LR LR 23 30 51.5
comp=Z,113nm,18.0s,baz=288,slow=41
DZA Taraz 36.69 333 eP P 23 12 57.7 +0.6
comp=Z,6.1nm,0.8s
DZA Taraz 36.69 333 eP P 23 12 57.7 +0.6
DZA pmax pmax
comp=Z,6.0nm,0.8s
IUG luzhnay 36.71 331 eP P 23 12 57.9 +0.5
comp=Z,11nm,0.7s
IUG eS S 23 18 38.4 +1.7
IUG luzhnay 36.71 331 eP P 23 12 57.8 +0.5
IUG eS S 23 18 38.4 +1.7
IUG pmax pmax
comp=Z,11nm,0.7s
ZSN Zaisan 36.72 351 eP P 23 12 57.9 +0.7
ZSN Zaisan 36.72 351 eP P 23 12 57.9 +0.7
KK31 Karatay Array 37.23 333 P P 23 13 02.0 +0.3
KK31 IAmb IAmb 23 13 04.1
comp=Z,20nm,0.9s
KK31 Karatay Array 37.23 333 P P 23 13 02.0 +0.3
KK31 pmax pmax
comp=Z,20nm,0.9s
KKAR Karatay Array 37.23 333 P P 23 13 02.2 +0.5
KKAR Karatay Array 37.23 333 P P 23 13 02.2 +0.5
UOSS Minazif 37.33 296 P P 23 13 04.1 +1.4
UOSS IAmb IAmb 23 13 14.6
comp=Z,13nm,0.8s
UOSS Minazif 37.33 296 P P 23 13 04.8 +2.0
MDH Madha 37.34 297 P P 23 13 05.2 +2.4
HATD Hatta, Dubai 37.36 296 P P 23 13 06.2 +3.1
ASHD Ashiyiah 37.39 296 P P 23 13 06.8 +3.5
MSFE Esma-Masafi 37.48 297 P P 23 13 07.6 +3.5
BRLS Borolday 37.48 332 ⇓i P P 23 13 03.2 -0.6
BRLS Borolday 37.48 332 di P P 23 13 03.2 -0.6
BANOM Banah 37.51 298 P P 23 13 07.5 +3.2
SOEI Soe 37.51 123 P P 23 13 05.0 +0.5
SOEI IAmb IAmb 23 13 49.8
comp=Z,26nm,1.1s
SHME Shamm 37.68 298 P P 23 13 08.6 +2.9
SONM Songino Array 38.18 15 P P 23 13 09.8 0.0
comp=Z,4.2nm,0.5s,baz=198,slow=9.1,SNR=18
SONM PcP PcP 23 15 24.1 +0.7
comp=Z,2.9nm,0.6s,baz=198,slow=3.7,SNR=5.5
SONM ScP ScP 23 19 05.0 -1.1
comp=Z,1.5nm,0.8s,baz=196,slow=4.5,SNR=6.3
SONM LR LR 23 29 33.1
comp=Z,53nm,18.9s,baz=177,slow=37
comp=Z,4.2nm,0.5s
XLT XiLinHaoTe 38.19 27 eP P 23 13 12.3 +2.5
XLT pP sP 23 13 29.4 -2.3
XLT pmax pmax
comp=Z,13nm,1.3s
XLT pmax pmax
comp=Z,170nm,3.8s
AJN Ajban 38.31 295 P P 23 13 13.5 +2.5
ULN Ulaanbaatar 38.38 15 P P 23 13 11.2 -0.2
ULN Ulaanbaatar 38.38 15 ceP P 23 13 12.3 +0.8
ULN pmax pmax
comp=Z,15nm,2.5s
DGZ Jazzator, Alta 38.60 354 i P P 23 13 13.3 0.0
DGZ pmax pmax
comp=Z,9.0nm,1.5s
MZR Muzera 39.34 293 P P 23 13 22.1 +2.4
KNGR Kungurtug, Tuv 39.42 5 i P P 23 13 20.4 +0.3
KNGR pmax pmax
comp=Z,27nm,1.0s
KSRS Korea Array 40.81 44 P P 23 13 30.1 -1.4
comp=Z,1.8nm,0.4s,baz=235,slow=8.7,SNR=5.3
KSRS ScP ScP 23 19 14.7 -1.5
comp=Z,1.2nm,0.8s,baz=244,slow=2.6,SNR=7.1
comp=Z,1.8nm,0.4s
KURBB Kurchatov Arra 41.00 346 P P 23 13 33.0 0.0
comp=Z,8.0nm,0.9s,baz=162,slow=7.5,SNR=44
KURBB PcP PcP 23 15 32.4 +0.3
comp=Z,3.6nm,0.6s,baz=160,slow=2.6,SNR=11
KURBB ScP ScP 23 19 16.4 -0.3
comp=Z,3.0nm,0.7s,baz=158,slow=3.2,SNR=16
KURBB LR LR 23 33 05.9
comp=Z,182nm,21.3s,baz=157,slow=40
comp=Z,8.0nm,0.9s
JNU Nakatsue 41.01 52 LR LR 23 33 40.6
comp=Z,51nm,18.2s,baz=236,slow=41
JNU Nakatsue 41.01 52 P P 23 13 34.2 +0.8
KURK Kurchatov 41.06 346 P P 23 13 33.3 -0.2
KURK Kurchatov 41.06 346 ceP P 23 13 33.9 +0.4
KURK pmax pmax
comp=Z,24nm,1.7s
KURK Kurchatov 41.06 346 P P 23 13 33.2 -0.3
KURK pP pP 23 13 47.1 -1.8
MBWA Marble Bar 41.61 141 P P 23 13 37.1 -1.2
comp=Z,46nm,1.1s
MBWA Marble Bar 41.61 141 P P 23 13 36.4 -1.9
MBWA IAmb IAmb 23 13 37.5
comp=Z,34nm,0.8s
MBWA Marble Bar 41.61 141 P P 23 13 36.9 -1.4
PSAC1 Pilbara Seismi 41.93 141 P P 23 13 39.3 -1.7
comp=Z,105nm,0.8s
PSA00 Pilbara Seismi 41.98 141 P P 23 13 39.5 -1.9
PSA00 Pilbara Seismi 41.98 141 P P 23 13 39.2 -2.2
PSA00 IAmb IAmb 23 13 41.0
comp=Z,59nm,0.8s
CN2 Changchun 42.89 35 eP P 23 13 50.6 +2.1
CN2 epP sP 23 14 08.0 -2.6
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,100nm,3.0s
ZAA0 Zalesovo Array 43.08 353 P P 23 13 49.5 -0.3
ZALV Zalesovo Beam 43.08 353 P P 23 13 49.5 -0.4
comp=Z,2.9nm,0.3s,baz=174,slow=7.7,SNR=15
ZALV PcP PcP 23 15 37.9 -1.0
comp=Z,1.5nm,0.4s,baz=178,slow=4.3,SNR=1.5
ZALV LR LR 23 34 43.6
comp=Z,80nm,19.6s,baz=156,slow=40
comp=Z,2.9nm,0.3s
ZALV Zalesovo Beam 43.08 353 P P 23 13 49.0 -0.8
ZALV Zalesovo Beam 43.08 353 i P P 23 13 50.0 +0.2
ZALV pmax pmax
comp=Z,3.0nm,0.3s
FITZ Fitzroy Crossi 43.51 132 ScP ScP 23 19 24.9 -2.5
comp=Z,2.5nm,0.6s,baz=321,slow=5.7,SNR=7.4
FITZ Fitzroy Crossi 43.51 132 P P 23 13 52.8 -1.1
HIA Hailar 43.95 25 i P P 23 13 56.0 -1.0
HIA pmax pmax
comp=Z,8.0nm,0.8s
HILR Hailar Array B 44.17 25 P P 23 13 59.1 +0.3
comp=Z,1.1nm,0.4s,baz=173,slow=13,SNR=3.9
comp=Z,1.1nm,0.4s
KNRA Kununurra 44.44 126 P P 23 14 02.3 +1.0
MEEK Meekatharra 45.18 147 P P 23 14 06.2 -0.9
comp=Z,35nm,0.9s
BNX BinXian 45.19 34 ⇓P P 23 14 06.0 -0.9
BNX pmax pmax
comp=Z,9.0nm,1.1s
BVAR Borovoye Array 45.43 341 P P 23 14 08.7 +0.1
comp=Z,12nm,0.8s,baz=136,slow=8.5,SNR=41
BVAR PcP PcP 23 15 46.9 0.0
comp=Z,2.5nm,0.6s,baz=160,slow=5.5,SNR=2.4
BVAR ScP ScP 23 19 33.8 -0.8
comp=Z,1.9nm,0.8s,baz=162,slow=5.5,SNR=6.4
comp=Z,12nm,0.8s
BORK Borovoye 45.47 341 ceP P 23 14 09.2 +0.2
BORK pmax pmax
comp=Z,20nm,1.0s
BORK Borovoye 45.47 341 P P 23 14 08.9 -0.1
BORK pP pP 23 14 22.3 -2.3
RAYN Ar Rayn 46.67 292 P P 23 14 19.8 +0.8
RAYN IAmb IAmb 23 14 22.0
comp=Z,13nm,0.8s
RAYN Ar Rayn 46.67 292 P P 23 14 20.7 +1.6
RAYN Ar Rayn 46.67 292 P P 23 14 19.8 +0.8
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN Ar Rayn 46.67 292 P P 23 14 20.4 +1.4

AB31 Akbulak array 46.72 331 P **P** **23 14 19.5 +0.6**
AB31 IAmb IAmb 23 14 20.8
comp=Z,32nm,0.9s
ABKAR Akbulak array 46.72 331 P **P** **23 14 19.4 +0.5**
USRK Ussuriysk Ar. 46.96 38 P **P** **23 14 20.4 -0.5**
comp=Z,2.2nm,0.9s,baz=250,slow=7.7,SNR=2.5
USRK PcP **PcP** **23 15 51.1 -1.4**
comp=Z,0.6nm,0.5s,baz=253,slow=4.7,SNR=1.1
USRK ScP **ScP** **23 19 39.0 -2.2**
comp=Z,2.4nm,0.7s,baz=231,slow=4.6,SNR=4.7
comp=Z,2.2nm,0.9s
MJAR Matsushiro Arr 47.87 50 P **P** **23 14 26.2 -1.9**
comp=Z,0.8nm,0.3s,baz=239,slow=8.9,SNR=4.2
MJAR PcP **PcP** **23 15 55.6 -0.4**
comp=Z,1.1nm,0.4s,baz=218,slow=3.2,SNR=5.3
MJAR ScP **ScP** **23 19 43.9 -1.4**
comp=Z,5.4nm,0.7s,baz=239,slow=3.9,SNR=12
MJAR LR LR 23 36 07.1
comp=Z,22nm,21.0s,baz=216,slow=38
comp=Z,0.8nm,0.3s
HEH HeiHe 48.11 29 *e*P **P** **23 14 29.3 -0.4**
HEH pmax pmax
comp=Z,7.0nm,0.7s
KLBR Kellerberrin 48.80 152 P **P** **23 14 34.5 -0.7**
comp=Z,29nm,0.7s
AKT Akhty 49.66 316 *e*P **P** **23 14 41.0 -0.8**
AKT *e**PP **pP** **23 14 56.7 -1.0**
AKT *e**SP **sP** **23 15 03.9 -0.8**
AKT *e* 23 16 00.8
AKT *e*S **S** **23 21 46.4 +0.2**
AKT pmax pmax
comp=Z,31nm,1.1s
NWAO Narrogin (SRO) 49.68 153 LR LR 23 34 41.2
comp=Z,96nm,20.9s,baz=21,slow=35
WRKA Warakurna 49.91 137 P **P** **23 14 43.2 -0.7**
comp=Z,14nm,0.9s
GUMO Guam 50.71 82 LR LR 23 35 23.4
comp=Z,47nm,21.6s,baz=110,slow=35
WRA Warramunga Arr 51.21 127 P **P** **23 14 51.9 -1.8**
comp=Z,4.8nm,0.6s,baz=302,slow=10,SNR=60
WRA ScP **ScP** **23 19 57.4 -2.4**
comp=Z,0.8nm,0.6s,baz=313,slow=4.2,SNR=4.7
comp=Z,4.8nm,0.6s
WRAB Tennant Creek 51.22 127 *i* P **P** **23 14 52.0 -1.8**
WRAB pmax pmax
comp=Z,15nm,0.9s
GNI Garni 51.25 313 P **P** **23 14 55.5 +1.6**
GNI Garni 51.25 313 P **P** **23 14 56.1 +2.1**
GNI Garni 51.25 313 *ce*P **P** **23 14 53.8 -0.2**
GNI pmax pmax
comp=Z,72nm,1.3s
GNI Garni 51.25 313 P **P** **23 14 56.1 +2.1**
GNI pP **pP** **23 15 10.9 +1.0**
SVE Sverdlovsk 51.84 338 *e*P **P** **23 14 58.5 +0.7**
SVE pmax pmax
comp=Z,41nm,1.1s
ARTI Arti 52.37 337 LR LR 23 39 20.1
comp=Z,256nm,22.0s,baz=150,slow=38
ARTI Arti 52.37 337 P **P** **23 15 01.0 -0.8**
ARTI Arti 52.37 337 *di* P **P** **23 15 02.0 +0.2**
ARTI *e**PP **pP** **23 15 17.6 -0.1**
ARTI 23 16 08.1
ARTI S **S** **23 22 24.3 +1.4**
ARTI SS **SS** **23 26 01.3 -0.1**
ARTI pmax pmax
comp=Z,21nm,1.2s
GURO Guroymak-BITLI 52.73 310 P **P** **23 15 05.3 +0.3**
GURO IAmb IAmb 23 15 07.2
comp=Z,22nm,1.1s
AS31 Alice Springs 53.01 131 P **P** **23 15 06.2 -0.9**
ASAR Alice Springs 53.01 131 P **P** **23 15 05.0 -2.0**
comp=Z,9.5nm,0.6s,baz=305,slow=7.0,SNR=50
ASAR ScP **ScP** **23 20 04.0 -3.5**
comp=Z,0.9nm,0.6s,baz=310,slow=4.3,SNR=4.3
ASAR LR LR 23 38 58.5
comp=Z,38nm,21.3s,baz=287,slow=38
comp=Z,9.5nm,0.6s
MARD Mardin 53.35 308 P **P** **23 15 09.7 +0.2**
MARD IAmb IAmb 23 15 10.6
comp=Z,17nm,0.7s
FORT Forrest 53.72 142 P **P** **23 15 12.1 +0.1**
comp=Z,41nm,0.9s
FORT Forrest 53.72 142 P **P** **23 15 11.3 -0.8**
NEUR Neytrino 53.78 316 *i* P **P** **23 15 13.9 +1.3**
NEUR pmax pmax
comp=Z,22nm,1.4s
KBZ Khabaz 53.81 317 P **P** **23 15 13.2 +0.6**
comp=Z,15nm,0.9s,baz=107,slow=6.5,SNR=24
comp=Z,15nm,0.9s
KBZ Khabaz 53.81 317 *ce*P **P** **23 15 14.1 +1.5**
KBZ pmax pmax
comp=Z,28nm,1.1s
OPO Ambohidratompo 53.98 237 LR LR 23 34 14.9
comp=Z,49nm,19.8s,baz=191,slow=31
SHA1 Shidzhatmaz 53.98 316 *i* P **P** **23 15 13.8 -0.3**
KVAR Kislovodsk Arr 54.03 317 LR LR 23 41 19.9
comp=Z,70nm,19.2s,baz=286,slow=39
KIV Kislovodsk 54.04 317 P **P** **23 15 15.5 +1.0**
KIV Kislovodsk 54.04 317 P **P** **23 15 15.7 +1.2**
KIV Kislovodsk 54.04 317 *e*P **P** **23 15 15.4 +1.0**
KIV pmax pmax
comp=Z,82nm,1.1s
KIV MLR MLR
comp=Z,43nm,17.0s
KIV Kislovodsk 54.04 317 P **P** **23 15 15.6 +1.2**
KIV sP **sP** **23 15 35.4 -2.0**
KOPT Kop Dagi 54.30 311 P **P** **23 15 18.2 +1.6**
BELG Belogornoye 54.83 328 *i* P **P** **23 15 19.3 -0.5**
BELG pmax pmax
comp=Z,16nm,0.8s
ASF Jabal al Asfar 55.41 301 LR LR 23 42 08.2
comp=Z,82nm,19.8s,baz=89,slow=39
QIS Mount Isa 55.73 124 P **P** **23 15 25.9 -1.0**
comp=Z,4.7nm,0.7s
SOC Sochi 55.94 315 *e*P **P** **23 15 25.7 -2.3**
SOC *e* 23 17 34.3
SOC *e*S **S** **23 23 10.1 -1.3**
SOC *e*SS **SS** **23 26 59.5 +1.5**
SOC pmax pmax
comp=Z,26nm,0.8s
GAZ Gaziantep 56.08 307 P **P** **23 15 29.7 +0.5**
GAZ IAmb IAmb 23 15 30.9
comp=Z,24nm,0.8s
KIBK Kibwezi 56.22 260 P **P** **23 15 31.3 +0.7**
KMBO Kilima Mbogo 56.68 261 P **P** **23 15 35.1 +1.1**
comp=Z,3.3nm,0.8s,baz=58,slow=13,SNR=7.7
KMBO LR LR 23 37 25.5
comp=Z,72nm,20.5s,baz=92,slow=33
comp=Z,3.3nm,0.8s
EIL Elat 56.75 298 LR LR 23 43 11.4
comp=Z,63nm,18.8s,baz=1.0,slow=39
MMAI Mount Meron Ar 56.79 302 LR LR 23 42 55.4
comp=Z,93nm,21.8s,baz=100,slow=39
YAK Yakutsk 57.21 20 LR LR 23 43 18.6
comp=Z,66nm,19.2s,baz=217,slow=39
YAK Yakutsk 57.21 20 P **P** **23 15 36.4 -0.3**
YAK Yakutsk 57.21 20 *e*P **P** **23 15 35.6 -1.1**
YAK *e**PP **pP** **23 15 55.0 +2.4**
YAK *e* 23 16 28.3
YAK *e* 23 17 43.1
YAK *e*PPP PPP 23 19 00.8
YAK *e*S **S** **23 23 25.6 -2.0**
YAK *e* 23 25 17.3
YAK *e*SS **SS** **23 27 17.2 -0.2**
YAK pmax pmax
comp=Z,13nm,0.8s
YAK pmax pmax
comp=N,12nm,1.8s
YAK pmax pmax
comp=E,10.0nm,2.2s
YAK pmax pmax
comp=Z,149nm,3.0s
YAK pmax pmax
comp=N,178nm,2.6s
YAK pmax pmax
comp=E,466nm,3.6s
YAK smax smax
comp=N,683nm,4.2s
YAK smax smax
comp=E,529nm,3.5s
TOKA Tokat 57.35 311 P **P** **23 15 38.7 +0.6**
TOKA IAmb IAmb 23 15 39.8
comp=Z,34nm,1.6s
KIRV Kirov 57.47 335 LR LR 23 42 39.5
comp=Z,76nm,21.4s,baz=151,slow=38
KIRV Kirov 57.47 335 *ce*P **P** **23 15 38.9 +0.4**

BNN Bunyan 57.49 309 P **P** **23 15 38.8 -0.5**
VRH Novokhopyorsk 57.49 324 *e*P **P** **23 15 37.3 -1.6**
VRH pmax pmax
comp=Z,60nm,0.8s
PMG Port Moresby 57.70 109 LR LR 23 45 24.1
comp=Z,26nm,18.4s,baz=270,slow=41
VORD Divnogorie 58.80 323 *e*P **P** **23 15 45.8 -2.2**
VORD pmax pmax
comp=Z,40nm,0.9s
VSR Storozhevoye 58.97 324 *e*P **P** **23 15 45.7 -3.5**
VSR pmax pmax
comp=Z,20nm,0.9s
VORR Voronezh 59.12 324 *e*P **P** **23 15 48.6 -1.6**
VORR pmax pmax
comp=Z,50nm,0.9s
BR104 Keskin Array S 59.34 310 P **P** **23 15 51.4 -0.8**
comp=Z,74nmcomp=Z,9.5nm,0.9s
BR104 pP **pP** **23 16 07.7 -0.7**
comp=Z,74nmcomp=Z,9.5nm,0.9s
BR131 Keskin Array S 59.35 310 P **P** **23 15 51.4 -0.8**
BR131 IAmb IAmb 23 15 52.5
comp=Z,9.2nm,0.8s
BR131 Keskin Array S 59.35 310 *i* P **P** **23 15 50.4 -1.8**
BRTR Keskin Array B 59.35 310 P **P** **23 15 51.5 -0.8**
comp=Z,6.8nm,0.8s,baz=126,slow=7.6,SNR=53
BRTR pP **pP** **23 16 08.1 -0.4**
comp=Z,4.8nm,0.7s,baz=120,slow=7.2,SNR=9.9
BRTR LR LR 23 43 48.3
comp=Z,41nm,21.2s,baz=102,slow=38
comp=Z,6.8nm,0.8s
BRTR Keskin Array B 59.35 310 P **P** **23 15 51.3 -0.9**
BR105 Keskin Array S 59.36 310 P **P** **23 15 51.5 -0.8**
comp=Z,89nmcomp=Z,11nm,0.9s
BR105 pP **pP** **23 16 07.7 -0.9**
comp=Z,89nmcomp=Z,11nm,0.9s
BR106 Keskin Array S 59.37 310 P **P** **23 15 51.5 -0.8**
comp=Z,80nmcomp=Z,11nm,0.8s
BR106 pP **pP** **23 16 07.7 -0.9**
comp=Z,80nmcomp=Z,11nm,0.8s
BZK Bozkurt 59.55 312 P **P** **23 15 53.1 -0.2**
ILGA Ilgaz 59.56 311 P **P** **23 15 54.1 +0.3**
ILGA IAmb IAmb 23 15 55.0
comp=Z,26nm,1.3s
LPSR Galich'ya Gora 59.65 325 *e*P **P** **23 15 51.5 -2.3**
LPSR pmax pmax
comp=Z,30nm,1.0s
ANTO Ankara 60.01 310 P **P** **23 15 55.7 -1.0**
ANTO IAmb IAmb 23 15 57.2
comp=Z,17nm,1.4s
ANTO Ankara 60.01 310 P **P** **23 15 55.7 -1.0**
ANTO pmax pmax
comp=Z,17nm,1.4s
BBOO Buckleboo 60.11 138 P **P** **23 15 56.3 -1.0**
BBOO IAmb IAmb 23 16 18.6
comp=Z,11nm,0.8s
SIM Simferopol' 60.18 316 *e*P **P** **23 15 57.4 -0.2**
SIM *e*S **S** **23 24 09.0 +2.2**
SIM pmax pmax
comp=Z,31nm,0.8s
SIM smax smax
comp=N,32µm,18.3s
SIM MLR MLR
comp=Z,27nm,15.1s
INKA Innaminka 60.39 131 P **P** **23 15 58.3 -1.0**
MDUB Mudurnu 61.33 310 P **P** **23 16 05.0 -0.6**
MDUB IAmb IAmb 23 16 08.1
comp=Z,12nm,0.8s
ISP Isparta 61.43 307 P **P** **23 16 05.2 -1.2**
ISP IAmb IAmb 23 16 06.7
comp=Z,28nm,1.3s
ISP Isparta 61.43 307 *ce*P **P** **23 16 03.5 -2.9**
ISP pmax pmax
comp=Z,35nm,2.5s
MOS Moscow 61.59 328 *e*P **P** **23 16 05.9 -1.1**
MOS *e**PP **pP** **23 16 22.9 -0.3**
MOS *e* 23 16 45.9
MOS *e* 23 18 22.9
MOS *e* 23 24 23.4
MOS pmax pmax
comp=Z,33nm,0.8s
ELL Elmali 61.77 306 P **P** **23 16 08.4 -0.4**
ELL Elmali 61.77 306 P **P** **23 16 08.4 -0.4**
ELL pmax pmax
comp=Z,28nm,0.8s
BORA Eskisehir 61.79 309 P **P** **23 16 07.8 -1.0**
OBN Obninsk 61.91 327 P **P** **23 16 08.4 -0.7**
OBN Obninsk 61.91 327 *ce*P **P** **23 16 09.6 +0.5**
OBN pmax pmax
comp=Z,43nm,1.3s
OBN Obninsk 61.91 327 P **P** **23 16 09.1 0.0**
comp=Z,24nm,1.1s
HTT Hallett 62.38 137 P **P** **23 16 12.1 -0.6**
comp=Z,4.7nm,2.6s
QLP Quilpie 62.43 128 P **P** **23 16 13.0 -0.1**
comp=Z,29nm,0.6s
NE56 Odesa 62.78 317 P **P** **23 16 14.4 -0.7**
MBAR Mbarara 62.89 264 LR LR 23 41 26.9
comp=Z,78nm,20.9s,baz=69,slow=34
KLMR Klimovskoe 62.91 334 *e*P **P** **23 16 13.1 -2.6**
KLMR *e**PP **pP** **23 16 30.7 -1.3**
KLMR pmax pmax
comp=Z,29nm,1.4s
MANT Manisa 63.05 307 P **P** **23 16 16.6 -0.8**
STKA Stephens Creek 63.30 134 P **P** **23 16 18.5 -0.3**
comp=Z,43nm,1.3s
STKA Stephens Creek 63.30 134 P **P** **23 16 18.1 -0.7**
comp=Z,2.9nm,0.4s,baz=307,slow=8.7,SNR=11
STKA LR LR 23 45 03.6
comp=Z,63nm,21.7s,baz=271,slow=37
comp=Z,2.9nm,0.4s
KARP Karpathos 63.86 304 P **P** **23 16 21.8 -0.7**
KARP Karpathos 63.86 304 P **P** **23 16 22.3 -0.2**
comp=Z,108nm,0.9s
BAL3X Bal3x, Balta 63.92 318 P **P** **23 16 22.1 -0.5**
TIXI Tiksi 64.19 12 P **P** **23 16 22.9 -1.0**
TIXI IAmb IAmb 23 16 37.5
comp=Z,23nm,0.9s
TIXI Tiksi 64.19 12 *ce*P **P** **23 16 23.3 -0.6**
TIXI pmax pmax
comp=Z,14nm,1.0s
TIXI Tiksi 64.19 12 P **P** **23 16 23.1 -0.8**
TIXI sP **sP** **23 16 44.1 -3.0**
CFR Carcaliu 64.37 315 ⇑P **P** **23 16 25.9 +0.2**
CFR Carcaliu 64.37 315 P **P** **23 16 25.8 +0.2**
MA2 Magadan 64.37 29 LR LR 23 46 25.2
comp=Z,62nm,18.1s,baz=292,slow=38
HARR Harsova 64.43 314 ⇑P **P** **23 16 26.3 +0.2**
HARR Harsova 64.43 314 P **P** **23 16 26.2 +0.2**
VLDR Vladesti 64.52 316 ⇓P **P** **23 16 27.3 +0.7**
VARL Varlezi 64.69 316 ⇓P **P** **23 16 28.4 +0.6**
AK09 Malin Array Si 64.73 321 P **P** **23 16 27.3 -0.6**
AK10 Malin Array Si 64.74 321 P **P** **23 16 27.4 -0.6**
AK08 Malin Array Si 64.75 321 P **P** **23 16 27.3 -0.7**
AK07 Malin Array Si 64.76 321 P **P** **23 16 27.5 -0.6**
AK06 Malin Array Si 64.77 321 P **P** **23 16 27.6 -0.6**
AK05 Malin Array Si 64.78 321 P **P** **23 16 27.5 -0.7**
SORM Soroca 64.78 318 ⇑P **P** **23 16 27.8 -0.5**
SORM Soroca 64.78 318 P **P** **23 16 27.7 -0.5**
AKASG Malin Array Be 64.78 321 P **P** **23 16 27.5 -0.7**
comp=Z,3.1nm,0.5s,baz=88,slow=5.4,SNR=25
AKASG LR LR 23 48 18.2
comp=Z,51nm,18.6s,baz=106,slow=39
comp=Z,3.1nm,0.5s
AKASG Malin Array Be 64.78 321 P **P** **23 16 26.8 -1.4**
AKBB Malin Array Si 64.78 321 P **P** **23 16 27.1 -1.2**
AKBB IAmb IAmb 23 16 28.4
comp=Z,11nm,0.8s
AKBB Malin Array Si 64.78 321 *ce*P **P** **23 16 26.5 -1.7**
AKBB pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 64.78 321 P **P** **23 16 26.9 -1.3**
AK02 Malin Array Si 64.79 321 P **P** **23 16 27.4 -0.8**
AK01 Malin Array Si 64.79 321 P **P** **23 16 27.4 -0.9**
KIEV Kiev 64.79 321 P **P** **23 16 27.2 -1.1**
KIEV IAmb IAmb 23 16 28.4
comp=Z,11nm,0.8s
KIEV Kiev 64.79 321 ⇓P **P** **23 16 27.7 -0.6**
KIEV Kiev 64.79 321 P **P** **23 16 27.3 -1.1**
KIEV Kiev 64.79 321 P **P** **23 16 27.7 -0.6**
KIEV Kiev 64.79 321 P **P** **23 16 26.8 -1.5**
comp=Z,62nm,0.9s
KIEV Kiev 64.79 321 P **P** **23 16 27.5 -0.8**
GHRR 65.02 316 ⇑P **P** **23 16 31.1 +1.2**
GHRR 65.02 316 P **P** **23 16 30.5 +0.6**
PANC Panciu 65.17 315 ⇑P **P** **23 16 32.2 +1.3**

ALN Alexandroupoli 65.26 310 P **P** **23 16 31.2 -0.3**
ALN Alexandroupoli 65.26 310 P **P** **23 16 31.2 -0.3**
ALN pmax pmax
comp=Z,9.0nm,0.9s
BISRR Bisoca 65.42 315 ⇓P **P** **23 16 33.9 +1.3**
BISRR Bisoca 65.42 315 P **P** **23 16 33.5 +0.9**
comp=Z,66nm,0.9s
VRI Vrincioaia 65.46 315 ⇑P **P** **23 16 34.1 +1.3**
VRI Vrincioaia 65.46 315 P **P** **23 16 34.0 +1.3**
VRI Vrincioaia 65.46 315 P **P** **23 16 33.1 +0.3**
comp=Z,54nm,1.2s
ISR Istrita 65.47 315 ⇓P **P** **23 16 34.0 +1.0**
ISR Istrita 65.47 315 P **P** **23 16 33.9 +1.0**
PLOR Plostina 65.51 315 ⇑P **P** **23 16 34.4 +1.3**
PLOR Plostina 65.51 315 P **P** **23 16 34.4 +1.3**
LUBAR Lubar, Ukraine 65.53 320 P **P** **23 16 32.4 -0.7**
MI29 MI29, Kamyanyy 65.58 320 P **P** **23 16 32.6 -0.8**
comp=Z,213nm,0.8s
TESR Tescani 65.62 316 ⇓P **P** **23 16 34.1 +0.4**
TESR Tescani 65.62 316 P **P** **23 16 33.6 -0.2**
comp=Z,28nm,1.0s
ELND Elena 65.64 312 ⇑P **P** **23 16 33.3 -0.7**
RDO Rodhopi 65.67 310 P **P** **23 16 33.3 -0.8**
RDO IAmb IAmb 23 16 34.9
comp=Z,18nm,1.2s
IDI Anoyia 65.69 304 P **P** **23 16 34.0 -0.5**
IDI IAmb IAmb 23 16 35.1
comp=Z,14nm,0.7s
NEHR Nehoiu 65.69 315 ⇑P **P** **23 16 35.6 +1.3**
ONER Baraj Valea Uz 65.77 316 ⇑P **P** **23 16 35.8 +1.0**
COVR Voineasa-Covas 65.82 315 ⇑P **P** **23 16 35.6 +0.5**
MLR Muntele Rosu 65.94 315 LR LR 23 49 39.8
comp=Z,53nm,21.0s,baz=101,slow=40
MLR Muntele Rosu 65.94 315 P **P** **23 16 36.0 -0.1**
MLR IAmb IAmb 23 16 37.8
comp=Z,30nm,0.9s
MLR Muntele Rosu 65.94 315 ⇑P **P** **23 16 37.1 +1.0**
MLR Muntele Rosu 65.94 315 P **P** **23 16 37.0 +1.0**
MLR Muntele Rosu 65.94 315 P **P** **23 16 36.6 +0.6**
comp=Z,37nm,1.0s
TURR Turia 65.98 315 ⇓P **P** **23 16 36.4 +0.3**
PETK Petropavlovsk- 66.00 37 LR LR 23 46 54.1
comp=Z,50nm,20.9s,baz=241,slow=37
CMSA Cobar Meteorol 66.05 132 P **P** **23 16 36.3 -0.4**
comp=Z,18nm,1.6s
KMPD K-Podol'skiy 66.10 318 P **P** **23 16 35.1 -1.7**
OZUR 66.14 315 ⇓P **P** **23 16 37.2 0.0**
SEY Seymchan 66.39 25 LR LR 23 49 03.9
comp=Z,40nm,20.4s,baz=350,slow=39
HUMR Humele 66.49 314 ⇓P **P** **23 16 39.6 +0.2**
MNK Minsk 66.49 325 *i* P **P** **23 16 39.3 +0.1**
MNK *i* 23 19 05.0
MNK *i* PPP PPP 23 20 38.9
MNK *i* S **S** **23 25 30.2 +5.1**
MNK *i* SS **SS** **23 29 43.5 +0.7**
MNK pmax pmax
comp=Z,35nm,0.7s
MNK pmax pmax
comp=E,10.0nm,0.9s
MNK pmax pmax
comp=N,30nm,0.9s
MNK MLR MLR
comp=Z,104nm,18.0s
MNK MLR MLR
comp=N,532nm,21.0s
MNK MLR MLR
comp=E,804nm,23.0s
VOIR 66.56 315 ⇓P **P** **23 16 39.6 -0.4**
VOIR 66.56 315 P **P** **23 16 39.5 -0.4**
PLVB Pleven 66.60 312 ⇑P **P** **23 16 40.9 +0.8**
BURAR Bucovina Array 66.76 317 ⇑P **P** **23 16 42.0 +0.8**
BURAR Bucovina Array 66.76 317 P **P** **23 16 42.0 +0.8**
BUR08 Bucovina Ar. S 66.78 317 P **P** **23 16 41.0 -0.3**
ARR Arges 66.84 315 ⇓P **P** **23 16 41.2 -0.5**
RNPP5 Staryi Chortor 66.96 321 P **P** **23 16 41.5 -0.7**
KSV Kosov 66.97 318 P **P** **23 16 41.7 -0.7**
RNPP9 Sopachiv 66.99 321 P **P** **23 16 41.4 -1.0**
MDB Medias 67.12 315 ⇑P **P** **23 16 43.9 +0.6**
MDB Medias 67.12 315 P **P** **23 16 43.9 +0.6**
STNU Starunia 67.41 318 P **P** **23 16 45.0 -0.1**
LOT Lotru 67.45 315 ⇓P **P** **23 16 45.3 -0.3**
CBBR Cluj-Babes-Bol 67.77 316 ⇑P **P** **23 16 48.3 +0.8**
LIT Litokhoron 67.89 309 P **P** **23 16 47.2 -1.2**
LIT IAmb IAmb 23 19 09.1
comp=Z,21nm,0.8s
LIT Litokhoron 67.89 309 P **P** **23 16 47.2 -1.2**
LIT pmax pmax
comp=Z,21nm,0.8s
H04N2 CROZET ISLANDS 68.02 210 T T 00 30 44.7
baz=43,slow=75,SNR=26
MEZ Mezhgor'ye 68.03 318 P **P** **23 16 48.9 -0.1**
H04N1 CROZET ISLANDS 68.03 210 T T 00 30 45.4
baz=43,slow=75,SNR=35
BLKB Belogradchik 68.04 313 ⇑P **P** **23 16 49.1 -0.1**
H04N3 CROZET ISLANDS 68.04 210 T T 00 30 44.1
baz=43,slow=75,SNR=17
MARR Marisel-Cluj 68.05 316 ⇑P **P** **23 16 51.4 +2.1**
VSU Vasula 68.09 329 *ce*P **P** **23 16 49.2 0.0**
VSU pmax pmax
comp=Z,14nm,1.0s
DEV Deva 68.11 315 ⇑P **P** **23 16 50.1 +0.5**
DEV Deva 68.11 315 P **P** **23 16 50.0 +0.5**
SHIU Shidnytsya 68.22 319 P **P** **23 16 50.6 +0.3**
BRIU Brid 68.33 318 P **P** **23 16 51.2 +0.3**
HERR Herculane 68.34 314 ⇓P **P** **23 16 51.4 +0.3**
DRGR 68.34 316 ⇓P **P** **23 16 51.7 +0.5**
DRGR 68.34 316 P **P** **23 16 51.6 +0.5**
BERU Beregovo 68.56 317 P **P** **23 16 52.6 +0.2**
KWP Kalwaria Pacla 68.70 319 *eP* **P** **23 16 53.5 +0.3**
KWP Kalwaria Pacla 68.70 319 P **P** **23 16 53.1 -0.2**
comp=Z,27nm,0.9s
BOVS Bovan 68.74 312 ⇑P **P** **23 16 53.1 -0.4**
PABE Paberze 68.91 325 P **P** **23 16 53.4 -1.0**
SUW Suwalki 69.09 324 *eP* **P** **23 16 54.0 -1.5**
SUW Suwalki 69.09 324 P **P** **23 16 54.9 -0.6**
SUW Suwalki 69.09 324 P **P** **23 16 54.9 -0.6**
TOO Toolangi 69.14 138 P **P** **23 16 57.2 +1.0**
comp=Z,11nm,1.6s
TOO Toolangi 69.14 138 P **P** **23 16 56.7 +0.6**
TOO Toolangi 69.14 138 P **P** **23 16 56.7 +0.6**
TOO pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 69.19 332 P **P** **23 16 55.8 -0.2**
comp=Z,8.5nm,0.6s,baz=98,slow=5.7,SNR=71
FINES LR LR 23 50 18.7
comp=Z,92nm,18.5s,baz=108,slow=38
comp=Z,8.5nm,0.6s
FINES FINESS Array B 69.19 332 P **P** **23 16 56.0 +0.1**
STHS Stebnicka Huta 69.62 319 *eP* **P** **23 16 58.9 -0.1**
STHS *e* 23 17 16.9
KEK Kerkira 69.94 308 P **P** **23 16 59.8 -1.3**
KECS Kecovo 70.02 318 *eP* **P** **23 17 02.2 +0.8**
KECS pmax pmax
comp=Z,15nm,0.7s
KECS Kecovo 70.02 318 *eP* **P** **23 17 02.2 +0.8**
NIE Niedzica 70.24 319 *eP* **P** **23 17 03.9 +1.1**
PSZ Piszkesteto 70.36 317 P **P** **23 17 02.9 -0.7**
PSZ Piszkesteto 70.36 317 ⇓P **P** **23 17 03.7 +0.1**
PSZ Piszkesteto 70.36 317 P **P** **23 17 03.7 +0.1**
PDG Podgorica 70.46 311 P **P** **23 17 00.6 -3.6**
VADS Vadso 70.64 341 *eP* **P** **23 17 03.7 -1.0**
OJC Ojcow 70.64 319 *eP* **P** **23 17 05.2 0.0**
OJC Ojcow 70.64 319 P **P** **23 17 04.9 -0.3**
OJC Ojcow 70.64 319 P **P** **23 17 04.9 -0.3**
OJC Ojcow 70.64 319 P **P** **23 17 05.3 +0.1**
comp=Z,31nm,0.9s
MATP Matopo 70.73 244 LR LR 23 41 44.0
comp=Z,51nm,20.6s,baz=52,slow=30
LANS Liptovska Anna 70.75 318 *eP* **P** **23 17 06.4 +0.5**
LANS *e* 23 17 22.4
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 70.75 318 *eP* **P** **23 17 06.4 +0.5**
LANS *e* 23 17 22.4
MORH Mrgy, Hungar 71.09 315 ⇑P **P** **23 17 07.4 -0.5**
MORH Mrgy, Hungar 71.09 315 P **P** **23 17 07.1 -0.8**
OKC Ostrava-Krasne 71.67 319 *eP* **P** **23 17 11.5 +0.1**
OKC Ostrava-Krasne 71.67 319 *eP* **P** **23 17 11.5 +0.1**
ARA0 ARCESS Array S 71.70 340 *eP* **P** **23 17 10.2 -1.0**
ARCES ARCESS Array B 71.70 340 P **P** **23 17 11.4 +0.2**
comp=Z,6.5nm,0.8s,baz=99,slow=7.2,SNR=16
ARCES LR LR 23 51 16.3
comp=Z,178nm,21.9s,baz=124,slow=38

	comp=Z,6.5nm,0.8s						
ARCES	**ARCESS Array B**	**71.70**	**340**	P	**P**	**23 17 11.4**	**+0.2**
MAUC	**Maruska**	**71.84**	**318**	*e*P	**P**	**23 17 13.1**	**+0.6**
JAVC	**Velka Javorina**	**71.91**	**318**	*e*P	**P**	**23 17 14.0**	**+1.1**
STEB	**Steborice**	**71.92**	**319**	*e*P	**P**	**23 17 13.2**	**+0.3**
STEB				*ex*	x	23 17 31.7	
MORC	**Moravsky Berou**	**72.06**	**319**	P	**P**	**23 17 13.3**	**-0.5**
MORC				IAmb	IAmb	23 17 15.3	
	comp=Z,16nm,0.8s						
MORC	**Moravsky Berou**	**72.06**	**319**	⇑P	**P**	**23 17 14.7**	**+1.0**
MORC	**Moravsky Berou**	**72.06**	**319**	*e*P	**P**	**23 17 14.1**	**+0.3**
MORC	**Moravsky Berou**	**72.06**	**319**	P	**P**	**23 17 14.7**	**+1.0**
MODS	**Modra-Piesok**	**72.14**	**317**	*e*P	**P**	**23 17 14.8**	**+0.5**
MODS				*e*		23 17 32.5	
MODS				pmax	pmax		
	comp=Z,18nm,0.8s						
MODS	**Modra-Piesok**	**72.14**	**317**	*e*P	**P**	**23 17 14.8**	**+0.5**
MODS				*e*		23 17 32.5	
TIP	**Timpagrande**	**72.28**	**308**	⇓P	**P**	**23 17 15.4**	**0.0**
KTK1	**Kautokeino**	**72.33**	**339**	*e*P	**P**	**23 17 13.1**	**-1.9**
MREMI	**Moremi**	**72.40**	**242**	P	**P**	**23 17 17.2**	**+0.9**
MREMI				IAmb	IAmb	23 17 18.7	
	comp=Z,15nm,0.9s						
VRAC	**Vranov**	**72.64**	**318**	*e*P	**P**	**23 17 17.5**	**+0.3**
KOGS	**Kog**	**72.76**	**315**	*i* P	**P**	**23 17 18.0**	**+0.1**
KRUC	**Moravsky**	**72.76**	**318**	*e*P	**P**	**23 17 18.0**	**+0.1**
RONA	**Rosalia, Austr**	**72.77**	**317**	*i* P	**P**	**23 17 18.0**	**0.0**
	comp=Z,6.6nm,0.6s						
KSANE	**Kasane**	**72.85**	**247**	P	**P**	**23 17 19.6**	**+0.5**
KSANE				IAmb	IAmb	23 17 21.9	
	comp=Z,22nm,0.8s						
DPC	**Dobruska-Polom**	**72.87**	**319**	*e*P	**P**	**23 17 19.4**	**+0.8**
DPC	**Dobruska-Polom**	**72.87**	**319**	*e*P	**P**	**23 17 19.4**	**+0.8**
KSP	**Ksiaz**	**72.92**	**320**	*e*P	**P**	**23 17 19.5**	**+0.7**
OSTC	**Ostas**	**72.95**	**320**	*e*P	**P**	**23 17 19.8**	**+0.8**
OSTC	**Ostas**	**72.95**	**320**	*e*P	**P**	**23 17 19.8**	**+0.8**
CONA	**Conrad Observa**	**73.07**	**317**	*i* P	**P**	**23 17 19.8**	**-0.1**
	comp=Z,7.7nm,0.9s						
UPC	**Upice**	**73.08**	**319**	*e*P	**P**	**23 17 20.3**	**+0.5**
UPC	**Upice**	**73.08**	**319**	*e*P	**P**	**23 17 20.3**	**+0.5**
ARSA	**Arzberg**	**73.28**	**316**	P	**P**	**23 17 20.9**	**-0.2**
ARSA				IAmb	IAmb	23 19 08.0	
	comp=Z,35nm,1.7s						
ARSA	**Arzberg**	**73.28**	**316**	*i* P	**P**	**23 17 21.3**	**+0.3**
	comp=Z,4.9nm,0.6s						
SOKA	**Soboth**	**73.60**	**315**	*e*P	**P**	**23 17 23.1**	**+0.1**
	comp=Z,19nm,1.0s						
PDKS	**Podkum**	**73.62**	**315**	*i* P	**P**	**23 17 23.2**	**+0.2**
KHWEE	**KHWEE**	**73.93**	**243**	P	**P**	**23 17 25.8**	**+0.5**
KHWEE				IAmb	IAmb	23 17 27.5	
	comp=Z,35nm,0.8s						
TRO	**Tromso**	**73.96**	**340**	*e*P	**P**	**23 17 24.7**	**+0.2**
PRU	**Pruhonice**	**74.00**	**319**	*e*P	**P**	**23 17 25.8**	**+0.6**
PRU	**Pruhonice**	**74.00**	**319**	*e*P	**P**	**23 17 25.8**	**+0.6**
PRA	**Prague**	**74.08**	**319**	*e*P	**P**	**23 17 26.5**	**+0.9**
PRA	**Prague**	**74.08**	**319**	*e*P	**P**	**23 17 26.5**	**+0.9**
CKRC	**Cesky Krumlov**	**74.13**	**318**	*e*P	**P**	**23 17 26.4**	**+0.4**
CKRC	**Cesky Krumlov**	**74.13**	**318**	*e*P	**P**	**23 17 26.4**	**+0.4**
MOA	**Molln**	**74.14**	**317**	*i* P	**P**	**23 17 25.9**	**-0.2**
	comp=Z,4.2nm,0.6s						
PHDHD	**Phuduhudu**	**74.17**	**245**	P	**P**	**23 17 27.3**	**+0.6**
PHDHD				IAmb	IAmb	23 17 29.3	
	comp=Z,29nm,1.1s						
ZVC	**Zvikov**	**74.22**	**318**	*e*P	**P**	**23 17 26.8**	**+0.3**
BRG	**Berggiesshubel**	**74.41**	**320**	*e*P	**P**	**23 17 28.1**	**+0.6**
	comp=Z,12nm,0.8s,baz=89,slow=5.6						
GEC2	**GERESS Array S**	**74.53**	**318**	*e*P	**P**	**23 17 28.9**	**+0.5**
	comp=Z,21nm,0.9s,baz=89,slow=5.6						
GERES	**GERESS Array B**	**74.53**	**318**	P	**P**	**23 17 28.7**	**+0.3**
	comp=Z,14nm,0.7s,baz=84,slow=6.0,SNR=94						
GERES				pP	**pP**	**23 17 46.2**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=68,slow=4.7,SNR=4.7						
	comp=Z,14nm,0.7s						
RUE	**Ruedersdorf**	**74.55**	**321**	*e*P	**P**	**23 17 28.9**	**+0.6**
	comp=Z,47nm,0.6s,baz=89,slow=5.6						
BIOA	**Bad Ischl, Aus**	**74.57**	**316**	*e*P	**P**	**23 17 28.3**	**-0.2**
	comp=Z,8.4nm,0.6s						
KHC	**Kasperske Hory**	**74.61**	**318**	P	**P**	**23 17 28.5**	**-0.3**
KHC	**Kasperske Hory**	**74.61**	**318**	*ce*P	**P**	**23 17 29.3**	**+0.5**
KHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KHC	**Kasperske Hory**	**74.61**	**318**	*e*P	**P**	**23 17 28.7**	**-0.1**
KBA	**Koelnbreinsper**	**74.77**	**316**	*e*P	**P**	**23 17 29.3**	**-0.6**
	comp=Z,5.0nm,0.7s						
LBTB	**Lobatse**	**74.84**	**240**	LR	LR	23 44 06.8	
	comp=Z,78nm,19.3s,baz=62,slow=31						
LBTB	**Lobatse**	**74.84**	**240**	P	**P**	**23 17 30.0**	**-0.6**
LBTB	**Lobatse**	**74.84**	**240**	P	**P**	**23 17 30.0**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,13nm,1.0s						
LBTB	**Lobatse**	**74.84**	**240**	P	**P**	**23 17 31.1**	**+0.5**
FAUS	**Fauske**	**74.93**	**337**	*e*P	**P**	**23 17 29.8**	**-0.4**
HFS	**Hagfors**	**74.95**	**329**	P	**P**	**23 17 30.2**	**-0.3**
	comp=Z,6.8nm,0.5s,baz=106,slow=5.3,SNR=57						
HFS				LR	LR	23 52 55.5	
	comp=Z,122nm,19.9s,baz=76,slow=38						
	comp=Z,6.8nm,0.5s						
CLL	**Collm**	**75.01**	**320**	P	**P**	**23 17 30.7**	**-0.3**
CLL	**Collm**	**75.01**	**320**	*i* P	**P**	**23 17 30.9**	**-0.1**
CLL				*e*		23 17 50.0	
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	**Collm**	**75.01**	**320**	*e*P	**P**	**23 17 31.1**	**+0.2**
	comp=Z,6.9nm,0.7s,baz=89,slow=5.6						
CLL	**Collm**	**75.01**	**320**	*i* P	**P**	**23 17 30.9**	**-0.1**
	comp=Z,7.0nm,0.8s						
CLL				*ex*	x	23 17 50.0	
STEI	**Steigen**	**75.02**	**338**	*e*P	**P**	**23 17 29.8**	**-0.9**
WET	**Wettzell**	**75.08**	**318**	*e*P	**P**	**23 17 31.9**	**+0.4**
	comp=Z,10.0nm,0.8s,baz=89,slow=5.6						
KDWAN	**Kaudwane**	**75.09**	**242**	P	**P**	**23 17 32.4**	**+0.3**
KDWAN				IAmb	IAmb	23 17 34.5	
	comp=Z,19nm,0.9s						
MOR8	**Moi Rana**	**75.12**	**336**	*e*P	**P**	**23 17 29.9**	**-1.5**
LESA	**Schwarzleotal**	**75.22**	**316**	*e*P	**P**	**23 17 31.8**	**-0.6**
	comp=Z,8.9nm,0.5s,SNR=6.0						
RAUS	**Rausandaksla**	**75.31**	**336**	*e*P	**P**	**23 17 30.5**	**-2.0**
CIMO	**Cimolais**	**75.40**	**315**	P	**P**	**23 17 32.9**	**-0.5**
ROTZ	**Rotzenmuhle**	**75.51**	**319**	*e*P	**P**	**23 17 34.7**	**+0.8**
	comp=Z,3.7nm,1.1s,baz=89,slow=5.6						
PLN	**Plauen**	**75.54**	**319**	*e*P	**P**	**23 17 34.3**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=89,slow=5.6						
MANZ	**Manzenberg**	**75.57**	**319**	*e*P	**P**	**23 17 35.1**	**+0.8**
	comp=Z,8.8nm,1.6s,baz=89,slow=5.6						
VAGH	**Vaagaholmen**	**75.65**	**336**	*e*P	**P**	**23 17 35.3**	**+1.0**
LEIR	**Leirfjorden**	**75.66**	**336**	*e*P	**P**	**23 17 34.5**	**+0.1**
LOF	**Lofoten**	**75.67**	**338**	*e*P	**P**	**23 17 33.1**	**-1.3**
NEUB	**Neuenburg**	**75.78**	**320**	*e*P	**P**	**23 17 35.6**	**+0.2**
	comp=Z,15nm,1.0s,baz=89,slow=5.6						
WTTA	**Wattenberg**	**75.93**	**316**	*i* P	**P**	**23 17 35.9**	**-0.7**
	comp=Z,13nm,0.5s,SNR=6.2						
CTI	**Castel Tesino**	**75.95**	**315**	P	**P**	**23 17 36.4**	**-0.2**
CTI				IAmb	IAmb	23 17 37.6	
	comp=Z,25nm,0.6s						
CTI	**Castel Tesino**	**75.95**	**315**	P	**P**	**23 17 36.4**	**-0.2**
CTI				pmax	pmax		
	comp=Z,25nm,0.6s						
TEOL	**Teolo**	**75.96**	**314**	P	**P**	**23 17 35.8**	**-0.8**
TEOL				IAmb	IAmb	23 17 38.6	
	comp=Z,17nm,0.8s						
WATA	**Walderalm**	**75.97**	**316**	*i* P	**P**	**23 17 35.8**	**-0.9**
	comp=Z,7.4nm,0.5s						
NC405	**NORSAR Array S**	**75.98**	**330**	P	**P**	**23 17 35.5**	**-0.9**
NC405				IAmb	IAmb	23 17 36.9	
	comp=Z,15nm,0.9s						
NSS	**Namsos**	**76.03**	**334**	*e*P	**P**	**23 17 35.0**	**-1.5**
GMARE	**Gumare**	**76.05**	**247**	P	**P**	**23 17 38.4**	**+0.8**
GMARE				IAmb	IAmb	23 17 40.6	
	comp=Z,14nm,0.8s						
NC602	**NORSAR Array S**	**76.05**	**330**	P	**P**	**23 17 35.9**	**-0.9**
NC602	**NORSAR Array S**	**76.05**	**330**	*e*P	**P**	**23 17 34.1**	**-2.6**
FLTG	**Flechtingen**	**76.11**	**321**	*e*P	**P**	**23 17 36.8**	**-0.4**
	comp=Z,9.3nm,0.6s,baz=89,slow=5.6						
FUR	**Furstenfeldbru**	**76.15**	**317**	*e*P	**P**	**23 17 37.6**	**-0.1**
	comp=Z,18nm,0.6s,baz=89,slow=5.6						
GRA1	**Grafenberg Arr**	**76.15**	**319**	P	**P**	**23 17 37.1**	**-0.5**
GRA1				IAmb	IAmb	23 17 39.3	
	comp=Z,35nm,1.5s						
GRF	**Grafenberg Arr**	**76.15**	**319**	P	**P**	**23 17 37.1**	**-0.5**
GRF				pmax	pmax		
	comp=Z,35nm,1.5s						
NB2	**NORSAR Subarra**	**76.22**	**330**	P	**P**	**23 17 37.3**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=95,slow=5.3						
NOA	**NORSAR Array B**	**76.22**	**330**	P	**P**	**23 17 37.0**	**-0.8**
	comp=Z,4.6nm,0.7s,baz=92,slow=5.7,SNR=27						
NOA				pP	**pP**	**23 17 55.2**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=92,slow=5.7,SNR=4.6						
NOA				LR	LR	23 54 30.1	
	comp=Z,56nm,20.8s,baz=115,slow=38						
	comp=Z,4.6nm,0.7s						
SQTA	**Sankt Quirin**	**76.22**	**316**	*i* P	**P**	**23 17 37.5**	**-0.7**
	comp=Z,13nm,0.5s,SNR=6.1						
MOTA	**Moosalm**	**76.29**	**316**	*i* P	**P**	**23 17 37.8**	**-0.8**
	comp=Z,15nm,0.7s,SNR=5.8						
SPA0	**Spitsbergen Ar**	**76.31**	**348**	*e*P	**P**	**23 17 37.1**	**-0.9**
SPITS	**Spitsbergen Ar**	**76.31**	**348**	P	**P**	**23 17 37.9**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=99,slow=11,SNR=10						
SPITS				LR	LR	23 58 17.5	
	comp=Z,38nm,18.6s,baz=112,slow=41						
	comp=Z,3.5nm,0.5s						
BOSA	**Boshof**	**76.39**	**237**	P	**P**	**23 17 40.4**	**+1.0**
	comp=Z,7.4nm,0.9s,baz=50,slow=5.4,SNR=5.2						
BOSA				LR	LR	23 45 02.6	
	comp=Z,50nm,20.7s,baz=24,slow=31						
	comp=Z,7.4nm,0.9s						
ZCCA	**Zocca**	**76.49**	**313**	P	**P**	**23 17 40.2**	**+0.5**
RETA	**Reutte**	**76.52**	**316**	*i* P	**P**	**23 17 39.4**	**-0.4**
	comp=Z,11nm,0.5s,SNR=5.9						
FETA	**Feichten**	**76.55**	**316**	*i* P	**P**	**23 17 39.7**	**-0.4**
	comp=Z,17nm,0.9s						
BSEG	**Bad Segeberg**	**76.65**	**323**	*e*P	**P**	**23 17 40.9**	**+0.7**
	comp=Z,12nm,1.0s,baz=89,slow=5.6						
CLZ	**Clausthal**	**76.65**	**321**	*e*P	**P**	**23 17 40.8**	**+0.4**
	comp=Z,19nm,0.8s,baz=89,slow=5.6						
FUORN	**Ofenpass-Fuorn**	**76.89**	**315**	P	**P**	**23 17 42.2**	**0.0**
GTTG	**Gottingen**	**76.91**	**320**	*e*P	**P**	**23 17 42.2**	**+0.4**
	comp=Z,21nm,0.8s,baz=89,slow=5.6						
UBR	**Ueberruh**	**76.95**	**317**	*e*P	**P**	**23 17 42.0**	**-0.2**
	comp=Z,14nm,0.7s,baz=89,slow=5.6						
KONO	**Kongsberg**	**77.00**	**329**	*e*P	**P**	**23 17 41.1**	**-1.1**
KGCAE	**Kacgae**	**77.06**	**243**	P	**P**	**23 17 43.9**	**+0.6**
KGCAE				IAmb	IAmb	23 17 45.5	
	comp=Z,19nm,0.9s						
DAVA	**Damuels**	**77.12**	**316**	*e*P	**P**	**23 17 43.1**	**-0.2**
	comp=Z,13nm,0.5s,SNR=6.4						
RETH	**Rethem/Aller,**	**77.25**	**322**	*e*P	**P**	**23 17 44.0**	**+0.4**
	comp=Z,7.0nm,0.8s,baz=89,slow=5.6						
MUD	**Monsted U'grnd**	**77.26**	**326**	*i* P	**P**	**23 17 43.6**	**-0.1**
MUD				IAmb	IAmb	23 17 45.3	
	comp=Z,9.3nm,0.8s						
DOMB	**Dombas**	**77.27**	**331**	*e*P	**P**	**23 17 43.5**	**-0.1**
PHPEN	**Phepeng**	**77.33**	**241**	P	**P**	**23 17 45.0**	**+0.2**
PHPEN				IAmb	IAmb	23 18 09.9	
	comp=Z,29nm,1.4s						
GRTLG	**Ghanzi**	**77.48**	**245**	P	**P**	**23 17 46.1**	**+0.4**
GRTLG				IAmb	IAmb	23 18 11.3	
	comp=Z,43nm,1.9s						
TUE	**Stuetta**	**77.53**	**315**	P	**P**	**23 17 45.3**	**-0.3**
TUE				IAmb	IAmb	23 17 50.0	
	comp=Z,14nm,0.8s						
SKAR	**Skarslia**	**77.64**	**330**	*e*P	**P**	**23 17 44.0**	**-1.8**
KASTN	**Kahler Asten**	**77.89**	**320**	*e*P	**P**	**23 17 47.5**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=89,slow=5.6						
TNS	**Tanus Mts**	**77.92**	**319**	*e*P	**P**	**23 17 47.8**	**+0.2**
	comp=Z,7.9nm,0.8s,baz=89,slow=5.6						
MOL	**Molde**	**77.97**	**332**	*e*P	**P**	**23 17 45.4**	**-2.1**
BFO	**Black Forest**	**78.11**	**317**	P	**P**	**23 17 46.9**	**-1.7**
BFO	**Black Forest**	**78.11**	**317**	P	**P**	**23 17 46.9**	**-1.7**
BFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
IBBN	**Ibbenburen**	**78.24**	**321**	*e*P	**P**	**23 17 49.8**	**+0.6**
	comp=Z,17nm,0.6s,baz=89,slow=5.6						
LKGWB	**Lokgwabe**	**78.31**	**242**	P	**P**	**23 17 47.2**	**-3.1**
KEST	**Kesra**	**78.35**	**304**	P	**P**	**23 17 50.5**	**+0.2**
	comp=Z,18nm,0.7s,baz=144,slow=1.0,SNR=24						
KEST				LR	LR	23 58 02.4	
	comp=Z,35nm,18.2s,baz=326,slow=40						
	comp=Z,18nm,0.7s						
KEST	**Kesra**	**78.35**	**304**	P	**P**	**23 17 49.6**	**-0.6**
KEST				IAmb	IAmb	23 17 51.5	
	comp=Z,20nm,0.8s						
ODD1	**Odda**	**78.50**	**329**	*e*P	**P**	**23 17 50.7**	**+0.2**
BUG	**Bochum--Univer**	**78.60**	**320**	*e*P	**P**	**23 17 51.5**	**+0.4**
	comp=Z,7.9nm,0.7s,baz=89,slow=5.6						
BLS5	**Blasjo**	**78.61**	**329**	*e*P	**P**	**23 17 50.7**	**-0.4**
KOOLE	**Kule**	**78.87**	**244**	P	**P**	**23 17 53.5**	**+0.1**
KOOLE				IAmb	IAmb	23 17 55.4	
	comp=Z,19nm,1.1s						
SENIN	**Lac Senin/Sane**	**78.95**	**315**	P	**P**	**23 17 52.0**	**-1.6**
SENIN				IAmb	IAmb	23 17 55.0	
	comp=Z,14nm,0.5s						
BNI	**Bardonecchia**	**79.50**	**314**	P	**P**	**23 17 56.0**	**-0.4**
BNI				IAmb	IAmb	23 18 01.0	
	comp=Z,22nm,0.8s						
BNI	**Bardonecchia**	**79.50**	**314**	P	**P**	**23 17 56.1**	**-0.4**
BNI				pmax	pmax		
	comp=Z,22nm,0.8s						
TSUM	**Tsumeb**	**80.14**	**248**	LR	LR	23 51 23.3	
	comp=Z,40nm,19.0s,baz=148,slow=34						
BMRD	**Maredsous**	**80.27**	**319**	*d*P	**P**	**23 18 00.4**	**+0.1**
	comp=Z,4.9nm,1.1s						
SSB	**Saint Sauveur**	**80.98**	**314**	P	**P**	**23 18 03.9**	**-0.4**
SSB	**Saint Sauveur**	**80.98**	**314**	P	**P**	**23 18 03.9**	**-0.4**
SSB				pmax	pmax		
	comp=Z,12nm,0.9s						
SSB	**Saint Sauveur**	**80.98**	**314**	P	**P**	**23 18 04.3**	**0.0**
MAW	**Mawson**	**81.58**	**191**	P	**P**	**23 18 07.2**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=360,slow=6.2,SNR=7.6						
	comp=Z,1.3nm,0.6s						
NOR	**Nord**	**81.76**	**352**	*i* P	**P**	**23 18 06.5**	**-1.2**
CLF	**Chambon-Foret**	**82.18**	**317**	P	**P**	**23 18 10.5**	**0.0**
CLF				IAmb	IAmb	23 18 11.6	
	comp=Z,36nm,1.1s						
CLF	**Chambon-Foret**	**82.18**	**317**	P	**P**	**23 18 10.7**	**+0.2**
EDA	**Edea**	**82.19**	**272**	P	**P**	**23 18 10.7**	**-0.6**
EDA				IAmb	IAmb	23 18 13.2	
	comp=Z,24nm,1.2s						
TAM	**Tamanrasset**	**83.36**	**292**	P	**P**	**23 18 17.1**	**-0.2**
TAM				IAmb	IAmb	23 18 19.4	
	comp=Z,12nm,0.7s						
TAM	**Tamanrasset**	**83.36**	**292**	P	**P**	**23 18 17.1**	**-0.2**
TAM	**Tamanrasset**	**83.36**	**292**	P	**P**	**23 18 18.4**	**+1.1**
TAM				pP	**pP**	**23 18 33.5**	**-0.9**
DAG	**Danmarks Havn**	**83.94**	**348**	*i* P	**P**	**23 18 18.0**	**-1.0**
DAG				IAmb	IAmb	23 18 19.1	
	comp=Z,2.7nm,0.9s						
EKA	**Eskdalemuir Ar**	**84.28**	**325**	P	**P**	**23 18 21.1**	**0.0**
	comp=Z,6.4nm,0.7s,baz=94,slow=5.7,SNR=19						
	comp=Z,6.4nm,0.7s						
ALE	**Alert**	**85.69**	**357**	P	**P**	**23 18 27.4**	**-0.4**
D20K	**Etivluk River**	**86.83**	**20**	IAmb	IAmb	23 18 56.1	
	comp=Z,20nm,1.2s						
ESDC	**Sonseca Array**	**88.14**	**310**	P	**P**	**23 18 40.5**	**-0.1**
	comp=Z,3.7nm,0.7s,baz=62,slow=4.2,SNR=37						
ESDC				pP	**pP**	**23 18 58.3**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=61,slow=4.2,SNR=4.9						
ESDC				LR	LR	00 05 54.1	
	comp=Z,27nm,18.6s,baz=73,slow=41						
	comp=Z,3.7nm,0.7s						
ESDC	**Sonseca Array**	**88.14**	**310**	P	**P**	**23 18 40.6**	**+0.1**
CCD	**Concordia, Ant**	**88.19**	**172**	P	**P**	**23 18 41.5**	**+1.2**
SYO	**Syowa Base**	**88.27**	**197**	⇑*e*PcP	**PcP**	**23 18 43.2**	**+1.3**
TORD	**Torodi Ar. Bea**	**88.67**	**283**	P	**P**	**23 18 43.5**	**0.0**
	comp=Z,4.0nm,0.3s,baz=59,slow=5.6,SNR=4.3						
	comp=Z,4.0nm,0.3s						
NEEM	**North Greenlan**	**89.11**	**353**	*i* P	**P**	**23 18 44.1**	**-0.5**
NEEM				IAmb	IAmb	23 18 45.3	
	comp=Z,9.4nm,0.7s						
MVO	**Moncorvo**	**90.05**	**312**	*e*P	**P**	**23 18 50.5**	**+1.0**
MDT	**Midelt**	**90.21**	**303**	LR	LR	00 07 54.0	
	comp=Z,23nm,18.1s,baz=89,slow=41						
MLY	**Manley**	**90.53**	**22**	IAmb	IAmb	23 19 15.8	
	comp=Z,5.3nm,0.8s						
SUMG	**Summit**	**90.60**	**347**	*i* P	**P**	**23 18 51.0**	**-0.8**
SUMG				IAmb	IAmb	23 18 52.6	
	comp=Z,3.9nm,0.7s						
PCBR	**Castelo Branco**	**90.73**	**311**	*e*P	**P**	**23 18 53.4**	**+0.8**
PBAR	**Barrancos**	**90.83**	**309**	*e*P	**P**	**23 18 54.3**	**+1.2**
BPAW	**Bear Paw Mtn.**	**90.88**	**23**	IAmb	IAmb	23 18 54.7	
	comp=Z,18nm,1.3s						
PSARD	**Sardoal**	**91.30**	**311**	*e*P	**P**	**23 18 56.8**	**+1.5**
NEA2	**Nenana**	**91.37**	**22**	IAmb	IAmb	23 19 18.6	
	comp=Z,5.0nm,0.9s						
L22K	**Petersville**	**91.71**	**25**	IAmb	IAmb	23 19 20.1	
	comp=Z,10.0nm,1.0s						
SPU	**Mount Spurr**	**91.80**	**26**	IAmb	IAmb	23 18 58.8	
	comp=Z,7.6nm,1.0s						
ILAR	**Eielson Array**	**92.08**	**22**	P	**P**	**23 18 57.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=286,slow=5.1,SNR=11						
ILAR				PKKPbc	**PKKPbc**	**23 36 18.1**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=126,slow=1.2,SNR=6.0						
	comp=Z,1.0nm,0.7s						
A36M	**Sachs Harbour**	**93.19**	**11**	IAmb	IAmb	23 19 05.8	
	comp=Z,8.2nm,0.8s						
SCRK	**Sand Creek**	**93.57**	**22**	IAmb	IAmb	23 19 28.5	
	comp=Z,5.7nm,0.9s						
INK	**Inuvik**	**94.09**	**16**	IAmb	IAmb	23 19 32.4	
	comp=Z,7.0nm,1.2s						
DBIC	**Dimbokro**	**96.29**	**278**	LR	LR	00 01 16.9	
	comp=Z,32nm,18.5s,baz=128,slow=34						
VNDA	**Vanda**	**96.46**	**168**	P	**P**	**23 19 17.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=310,slow=5.6,SNR=4.5						
	comp=Z,0.6nm,0.7s						
SFJD	**Kangerlussuaq**	**97.58**	**346**	LR	LR	00 09 28.2	
	comp=Z,46nm,21.1s,baz=38,slow=39						
PDAR	**Pinedale Array**	**122.44**	**19**	PKP	**PKPdf**	**23 24 45.1**	**0.0**
	comp=Z,1.4nm,0.6s,baz=141,slow=0.9,SNR=6.9						
NVAR	**Mina Array Bea**	**122.61**	**29**	PKP	**PKiKP**	**23 24 46.5**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=296,slow=2.1,SNR=15						
ANMO	**Albuquerque**	**130.52**	**21**	*i* PKIKP	**PKPdf**	**23 24 58.0**	**-2.7**
TXAR	**Lajitas Array**	**136.59**	**21**	PKhKP	PKPpre	23 24 59.3	
	comp=Z,0.1nm,0.4s,baz=349,slow=3.3,SNR=1.9						
TXAR				PKP	**PKiKP**	**23 25 13.1**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=297,slow=0.3,SNR=18						
TXAR				PP	**PP**	**23 27 54.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=3.8,SNR=3.8						
TXAR				SKPbc	**SKPbc**	**23 28 39.0**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=318,slow=1.9,SNR=8.8						
PLCA	**Paso Flores**	**147.22**	**204**	PKPbc	**PKPbc**	**23 25 33.2**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=162,slow=2.3,SNR=5.2						
CPUP	**Villa Florida**	**148.20**	**238**	PKPbc	**PKPdf**	**23 25 33.1**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=339,slow=2.0,SNR=8.6						
GWJ	**Greenwich**	**149.12**	**341**	*i* P	**PKiKP**	**23 25 39.6**	**-0.3**
STH	**Stony Hill**	**149.15**	**341**	*i* P	**PKiKP**	**23 25 39.2**	**-0.6**
MTDJ	**Mount Denham**	**149.23**	**342**	⇑*i* P	**PKiKP**	**23 25 39.6**	**-0.4**
LPAZ	**La Paz**	**160.94**	**253**	PKP	**PKPdf**	**23 25 51.7**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=23,slow=5.9,SNR=5.5						
LPAZ				PKPab	**PKPab**	**23 26 33.2**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=45,slow=2.9,SNR=4.9						

GCG 17 23:06:06.0±0.4, 13°67.N×90°05.W, h55km±80km, MD3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.35**	**49**	*e*P		Pn	23 06 17.0	+0.7
NUBE				*i* S		Sn	23 06 24.9	+1.3
JAYA	**Jayaque - finc**	**0.59**	**91**	*i* P		Pn	23 06 18.5	-0.3
JAYA				*i* S		Sn	23 06 28.1	+0.1
PCG5	**San Vicente Pa**	**0.63**	**330**	*e*P		Pn	23 06 23.0	+3.7
STG8	**El Palmar, Qui**	**1.48**	**302**	*e*P		Pn	23 06 36.1	+5.6

*SKO **17**23:16:18.9, 41°.13N×19°.25E, h14km*
*BEO **17**23:16:19.9±0.6, 41°.20N×19°.65E, h5km±2km, ML2.4/11*
*TIR **17**23:16:21.5, 41°.43N×19°.59E, h29km, Ml2.6/5*
*THE **17**23:16:23.0, 41°N±5°×2°0E±°, h9km±19km, M2.6/15, MLh2.6/15*

ISC 17 23:16:21.9±1.1, 41°.38N±0°.02×19°.64E±0°.03, h13km±9km, n62, σ1°33/100, 1C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.17**	**101**	⇓Pg	**Pb**	**23 16 26.4**	**-0.7**
TIR				Sg	**Sb**	**23 16 30.5**	**+0.1**
TIR				AML	AML	23 16 31.3	
	12nm,0.2s						
PHP	**Peshkopia**	**0.68**	**63**	P	**Pg**	**23

SRS	**Serrai**	**2.99**	**94**	P		**Pn**	**23 17 09.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**3.04**	**140**	P		**Pn**	**23 17 11.5**	**+1.7**
PLG	**Polygyros**	**3.06**	**108**	P		**Pn**	**23 17 10.7**	**+0.6**
ZAGS	**Zajecar**	**3.09**	**37**	*e*Pn		**Pn**	**23 17 11.9**	**+1.4**
MMB	**Musomishta**	**3.10**	**86**	P		**Pn**	**23 17 12.0**	**+1.5**
TEKS	**Tekeris**	**3.17**	**359**	*e*Pn		**Pn**	**23 17 12.4**	**+0.9**
BORS2	**Bor- Borsko je**	**3.23**	**32**	*e*Pn		**Pn**	**23 17 12.3**	**0.0**
KUBS	**Kucevo**	**3.38**	**26**	*e*Pn		**Pn**	**23 17 15.3**	**+0.9**
FRGS	**Fruska Gora**	**3.78**	**2**	*e*Pn		**Pn**	**23 17 20.7**	**+0.8**

IDC 17 23:17:49.4±1.9,1°.66N×126°.19E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=212.5km s-min=22.2km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.91**	**160**	P	P	23 22 54.1	-0.9
	0.4nm,0.4s,baz=338,slow=10,SNR=6.2 0.4nm,0.4s						
ASAR	**Alice Springs**	**26.27**	**164**	P	P	23 23 27.3	+0.6
	0.2nm,0.4s,baz=337,slow=9.3,SNR=4.3 0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	P	23 27 50.5	-0.2
	0.2nm,0.4s,baz=117,slow=8.1,SNR=5.1 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.19**	**328**	P	P	23 28 19.5	+0.2
	0.3nm,0.4s,baz=128,slow=5.2,SNR=7.5 0.3nm,0.4s						

*VIE **17** 23:20:16.0±0.4,45°.66N×15°.86E,h11km±3km, mb2.3/1, ml2.1/5,Error ellipse: s-maj=2.9km s-min=1.5km az=130.0 19 km SW of Zagreb*
*RHSSO **17** 23:20:18.0±1.5,45°.62N×15°.90E,h5km, ML1.9/3*
*PRU **17** 23:20:21.1,45°.80N×15°.73E,h0km*

LJU 17 23:20:16.2,45°.68N×15°.89E,h9km,ML1.8,4C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAG	**Zagreb**	**0.17**	**25**	*i* Pg	Pg	23 20 20.1	+0.4
ZAG				Sg	Sg	23 20 22.8	+0.6
PTJ	**Puntijarka**	**0.24**	**14**	*i* Pg	Pg	23 20 20.8	-0.2
PTJ				Sg	Sg	23 20 24.6	+0.3
GCIS	**Gornji Cirnik**	**0.26**	**317**	⇑*i* Pg	Pg	23 20 21.5	0.0
GCIS				*e*Sg	Sg	23 20 25.5	+0.4
GCIS				IAML		23 20 26.2	
	comp=Z,52nm,0.1s						
OZLJ	**Ozalj**	**0.30**	**258**	*e*Pg	Pb	23 20 22.9	-0.8
OZLJ				Sg	Sg	23 20 26.7	+0.6
CRES	**Cresnjevec Ost**	**0.34**	**297**	⇑*i* Pg	Pg	23 20 22.8	0.0
CRES				*e*Sg	Sg	23 20 27.6	+0.3
CRES				IAML		23 20 28.7	
	comp=Z,25nm,0.1s						
CESS	**Cesta pri Krsk**	**0.42**	**315**	*i* Pg	Pg	23 20 24.6	+0.2
CESS				*e*Sg	Sg	23 20 30.4	+0.5
CESS				IAML		23 20 31.3	
	comp=Z,32nm,0.1s						
BOJS	**Bojanci**	**0.48**	**249**	*i* Pg	Pg	23 20 25.8	+0.3
BOJS				*e*Sg	Sg	23 20 32.0	+0.2
BOJS				IAML		23 20 35.5	
	comp=Z,16nm,0.1s						
LEGS	**Legarje**	**0.48**	**305**	*i* Pg	Pg	23 20 25.6	0.0
LEGS				*e*Sg	Sg	23 20 32.5	+0.6
LOBO	**Lobor**	**0.50**	**15**	*e*Pg	Pg	23 20 25.8	0.0
LOBO				Sg	Sg	23 20 32.5	+0.1
KALN	**Kalnik**	**0.60**	**41**	*i* Pg	Pg	23 20 27.5	-0.4
KALN				Sg	Sg	23 20 35.4	-0.4
MOSL	**Moslavina**	**0.61**	**96**	*i* Pg	Pg	23 20 28.4	+0.3
MOSL				Sg	Sg	23 20 36.6	+0.5
PDKS	**Podkum**	**0.73**	**302**	⇑*i* Pg	Pg	23 20 30.3	0.0
PDKS				IAML		23 20 44.2	
	comp=Z,14nm,0.1s						
VISS	**Visnje**	**0.74**	**280**	⇑*i* Pg	Pg	23 20 30.4	-0.1
VISS				IAML		23 20 44.6	
	comp=Z,26nm,0.2s						
KOGS	**Kog**	**0.81**	**18**	*i* Pg	Pg	23 20 32.0	+0.1
KOGS				*e*Sg	Sn	23 20 45.1	-1.0
KOGS				IAML		23 20 48.8	
	comp=Z,37nm,0.1s						
PLIT	**Plitvice**	**0.82**	**193**	*i* Pg	Pb	23 20 32.3	-0.3
PLIT				Sg	Sb	23 20 43.6	-0.2
VNDS	**Vrh nad Dolski**	**0.93**	**298**	*e*Pg	Pb	23 20 34.5	-0.1
ZAVS	**Zavodnje**	**0.97**	**322**	⇓*i* Pg	Pn	23 20 35.7	-0.3
BEHE	**Becsehely**	**1.01**	**38**	*e*Pg	Pn	23 20 36.6	+0.1
BEHE				*e*Sg	Sn	23 20 51.2	+0.4
RIY	**Rijeka**	**1.05**	**251**	*i* Pg	Pb	23 20 36.7	+0.2
RIY				Sg	Sn	23 20 51.1	-0.7
UDBI	**Udbina**	**1.15**	**184**	*e*Pg	Pn	23 20 39.5	+1.0
UDBI				Sg	Sn	23 20 54.9	+0.4
SOKA	**Soboth**	**1.16**	**330**	Pg	Pb	23 20 37.9	-0.7
	comp=Z,1.3nm,0.3s						
SOKA				Sg	Sb	23 20 54.2	+0.4
	comp=Z,2.9nm,0.2s						
RABC	**Rab**	**1.21**	**221**	*e*Pg	Pg	23 20 40.5	+1.1
RABC				Sg	Sn	23 20 57.4	+1.6
OBKA	**Obir**	**1.25**	**312**	Pg	Pg	23 20 40.8	+0.6
	comp=Z,4.2nm,0.2s						
OBKA				Sg	Sn	23 20 57.1	+0.1
	comp=Z,17nm,0.4s						
BLY	**Banja Luka**	**1.30**	**135**	*e*Pg	Pn	23 20 40.3	-0.3
BLY				*e*Sg	Sb	23 20 57.8	+0.1
NVLJ	**Novalja**	**1.32**	**213**	*e*Pg	Pg	23 20 42.3	+0.7
NVLJ				Sg	Sg	23 21 00.5	+1.8
VIRC	**Vir**	**1.50**	**203**	*e*Pg	Pg	23 20 45.1	+0.1
VIRC				Sg	Sg	23 21 05.9	+1.4
ARSA	**Arzberg**	**1.59**	**351**	*e*Pn	Pn	23 20 44.4	-0.2
	comp=Z,0.1nm,0.1s						
KIJV	**Kijevo**	**1.71**	**167**	*e*Pn	Pb	23 20 48.1	+0.3
KIJV				Sn	Sg	23 21 10.8	-0.3
DUGI	**Dugi Otok**	**1.78**	**200**	*e*Pn	Pb	23 20 48.7	-0.3
DUGI				Sn	Sg	23 21 13.2	-0.3
MORI	**Morici**	**1.81**	**184**	*e*Pn	Pb	23 20 49.6	+0.1
MORI				Sn	Sg	23 21 13.7	-0.7
MORH	**Mrgy, Hungar**	**2.00**	**73**	*e*Pn	Pb	23 20 52.6	-0.1
MORH				*e*Sn	Sb	23 21 17.7	0.0
RONA	**Rosalia, Austr**	**2.04**	**8**	*e*Pn	Pn	23 20 50.6	-0.2
	comp=Z,0.4nm,0.1s						
CONA	**Conrad Observa**	**2.25**	**360**	*e*Pn	Pn	23 20 53.7	-0.1
	comp=Z,0.3nm,0.2s						
RICI	**Ricice**	**2.36**	**157**	*e*Pn	Pb	23 20 57.0	-1.8
RICI				Sn	Sb	23 21 27.3	-0.7
CKRC	**Cesky Krumlov**	**3.32**	**342**	*e*SG	Sg	23 22 00.5	-2.4

*NEIC **17** 23:25:21.7±0.7,35°.854N±0°.010×96°.70W±0°.01,h5km±1km, mb_Lg2.7/30,ML2.6/28,ML2.9/66,Error ellipse: s-maj=2.8km s-min=1.7km az=104.0*

NEIC 17 23:25:21.9±0.7,35°.862N±0°.010×96°.69W±0°.01,h8km±2km, Error ellipse: s-maj=1.7km s-min=1.4km az=85.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEOK	**Depew**	**0.16**	**97**		Pg	23 25 25.5	+0.3
DEOK				Sg	Sg	23 25 27.9	+0.5
DEOK				IAML		23 25 28.3	
	comp=E,2μm,0.1s						
DEOK				IAML		23 25 28.4	
	comp=N,3μm,0.2s						
OK052	**Battle Ridge R**	**0.16**	**325**		Pg	23 25 25.6	+0.3
OK052				Sg	Sg	23 25 27.6	+0.1
OK052				IAML		23 25 28.3	
	comp=N,5μm,0.4s						
OK052				IAML		23 25 28.3	
	comp=N,5μm,0.3s						
QUOK	**Quay**	**0.31**	**357**		Pg	23 25 28.4	+0.4
OK048	**Pawnee Station**	**0.59**	**340**		Pg	23 25 33.4	+0.2
ADOK	**Arcadia Dam**	**0.59**	**249**		Pg	23 25 33.2	-0.1
OK029	**Liberty Lake**	**0.62**	**264**		Pg	23 25 34.0	+0.1
OK029				IAmb_Lg		23 25 41.2	
	comp=Z,95nm,0.8s						
OK029				Sg	Sg	23 25 42.5	+0.4
OK051	**E0350 and S346**	**0.65**	**350**		Pg	23 25 34.6	+0.1
OK051				IAML		23 25 44.0	
	comp=Z,460nm,0.2s						
OK051				IAML		23 25 50.8	
	comp=Z,467nm,0.2s						
TUL3	**Leonard**	**0.73**	**86**		Pg	23 25 36.1	+0.1
TUL3					Sg	23 25 45.6	+0.1
OKCSW	**OKLAHOMA CITY**	**0.76**	**233**		Pg	23 25 36.3	-0.2
OKCSW					Sg	23 25 46.9	+0.5
OKCSW				IAML		23 25 47.3	
	comp=E,702nm,0.2s						
OKCSW				IAML		23 25 51.2	
	comp=N,426nm,0.3s						
OKCFA	**Oklahoma City**	**0.76**	**234**		Pg	23 25 36.1	-0.4
OKCFA					Sg	23 25 47.0	+0.5
BCOK	**Bluff Creek, N**	**0.77**	**255**		Pg	23 25 36.5	-0.2
BCOK					Sg	23 25 47.4	+0.6
FNO	**Franklin**	**0.84**	**224**	Pg	Pg	23 25 37.9	0.0
FNO					Sg	23 25 49.3	+0.5
BLOK	**Blackwell**	**0.99**	**335**		Pg	23 25 40.7	-0.2
BLOK					Sb	23 25 54.2	-0.4
T35A	**Sooner Cattle**	**1.06**	**8**		Pg	23 25 41.9	-0.4
T35A				IAML		23 25 56.7	
	comp=N,302nm,0.2s						
T35A				IAML		23 25 56.8	
	comp=N,326nm,0.3s						
GC02	**Grant County #**	**1.37**	**317**		Sg	23 26 05.9	+0.1
RLO	**Rose Lookout**	**1.39**	**77**		Pn	23 25 47.6	0.0
KAN01	**Argonia South**	**1.55**	**327**		Pn	23 25 49.9	0.0
X34A	**Smith Ranch, M**	**1.57**	**217**		Pn	23 25 50.0	0.0
KAN08	**Anthony NE Sta**	**1.71**	**323**	Pg	Pg	23 25 54.1	-0.5
LOOK	**Love County**	**1.91**	**192**		Pn	23 25 55.4	+0.6
U38A	**Gravette**	**1.95**	**72**		Pn	23 25 56.4	+1.0
NOKA	**Waynoka**	**1.97**	**294**		Pn	23 25 56.1	+0.5
NOKA					Sg	23 26 24.2	-0.9
WMOK	**Wichita Mounta**	**2.04**	**237**		Pn	23 25 56.6	0.0
WMOK	**Wichita Mounta**	**2.04**	**237**	Pn	Pn	23 25 56.2	-0.4
ELIS	**Ellis County**	**2.22**	**276**		Pb	23 26 02.4	0.0
HHAR	**Hobbs**	**2.27**	**79**		Pn	23 25 58.5	-1.2
WTFS	**Witchita Falls**	**2.55**	**215**		Pn	23 26 03.9	+0.4
Z35A	**Perchaven, San**	**2.57**	**191**		Pn	23 26 03.9	+0.1
Z35A				IAmb_Lg		23 26 46.6	
	comp=Z,25nm,1.1s						
MIAR	**Mount Ida**	**2.87**	**116**	Pn	Pn	23 26 07.6	-0.3
Z38A	**Mt. Pleasant**	**2.95**	**151**		Pn	23 26 08.4	-0.7
FW06	**Azle**	**2.97**	**194**		Pn	23 26 09.1	-0.2
SMWD	**Samnorwood**	**3.00**	**256**		Pn	23 26 09.4	-0.3
X40A	**Basin Creek Fa**	**3.44**	**112**	IAmb_Lg		23 27 15.3	
	comp=Z,18nm,0.9s						
WLAR	**White Oak Lake**	**3.66**	**125**	IAmb_Lg		23 27 22.6	
	comp=Z,19nm,0.7s						
FCAR	**Ozark Folk Cen**	**3.71**	**88**	IAmb_Lg		23 27 21.7	
	comp=Z,20nm,0.7s						
R40A	**Maddies Statio**	**4.29**	**54**	IAmb_Lg		23 27 40.9	
	comp=Z,18nm,0.8s						
P38A	**Dawn**	**4.51**	**33**	IAmb_Lg		23 27 46.8	
	comp=Z,20nm,0.7s						
CCM	**Cathedral Cave**	**4.88**	**62**	IAmb_Lg		23 28 04.3	
	comp=Z,24nm,1.1s						
SGCY	**Sterling City**	**5.39**	**224**	IAmb_Lg		23 28 24.1	
	comp=Z,16nm,1.1s						
FVM	**French Village**	**5.45**	**65**	IAmb_Lg		23 28 16.7	
	comp=Z,14nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.67**	**305**	IAmb_Lg		23 28 32.5	
	comp=Z,19nm,1.0s						
JCT	**Junction City**	**5.97**	**207**	IAmb_Lg		23 28 38.5	
	comp=Z,15nm,0.9s						
HNDO	**Hondo**	**6.68**	**200**	IAmb_Lg		23 28 58.6	
	comp=Z,7.8nm,0.8s						
SAND	**Sanderson**	**7.45**	**219**	IAmb_Lg		23 29 22.6	
	comp=Z,8.4nm,1.1s						

*IDC **17** 23:36:19.2±1.1,50°.03S×120°.12E,h0km,mb3.9/7, mbtmp3.9/7,MS3.6/8,Error ellipse: s-maj=46.6km s-min=19.9km az=100.0*
*NEIC **17** 23:36:20.1±2.4,50°.05S±0°.04×120°.3E±0°.3,h10km±1km, mb4.5/13,Error ellipse: s-maj=29.0km s-min=6.8km az=263.0*

ISC 17 23:36:20.2±0.8,50°.0S±0°.1×120°.4E±0°.2,h10km,n32, σ0.94/24,mb4.1/10,MS3.5/7,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.81**	**341**	T	T	23 56 11.2	
	baz=164,slow=73,SNR=82						
H01W1	**Cape Leeuwin H**	**15.81**	**341**	T	T	23 56 13.0	
	baz=164,slow=73,SNR=63						
H01W3	**Cape Leeuwin H**	**15.82**	**341**	T	T	23 56 05.7	
	baz=164,slow=73,SNR=98						
NWAO	**Narrogin (SRO)**	**17.26**	**351**	LR	LR	23 45 16.7	
	comp=Z,214nm,21.1s,baz=24,slow=31						
NWAO	**Narrogin (SRO)**	**17.26**	**351**	Pn	**Pn**	**23 40 20.7**	**-0.5**
NWAO				IAmb	IAmb	23 40 55.7	
	comp=Z,29nm,1.3s						
TAU	**Tasmania Unive**	**19.80**	**79**	P	**P**	**23 40 50.2**	**-0.5**
TAU				IAmb	IAmb	23 40 53.6	
	comp=Z,72nm,1.2s						
STKA	**Stephens Creek**	**24.06**	**49**	P	**P**	**23 41 37.5**	**+1.9**
	comp=Z,1.7nm,0.7s,baz=182,slow=13,SNR=3.9 comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**28.37**	**27**	P	**P**	**23 42 15.4**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=199,slow=7.7,SNR=8.5						
ASAR				LR	LR	23 52 10.3	
	comp=Z,123nm,21.1s,baz=240,slow=33 comp=Z,0.9nm,0.9s						
ASAR	**Alice Springs**	**28.37**	**27**	P	**P**	**23 42 13.2**	**-1.3**
AS31	**Alice Springs**	**28.37**	**27**	P	**P**	**23 42 13.4**	**-1.2**
PSA00	**Pilbara Seismi**	**28.41**	**359**	P	**P**	**23 42 15.3**	**+0.4**
PSA00				IAmb	IAmb	23 42 24.1	
	comp=Z,28nm,1.5s						
ARMA	**Armidale**	**30.54**	**62**	P	**P**	**23 42 33.6**	**-0.2**
ARMA				IAmb	IAmb	23 42 38.9	
	comp=Z,11nm,1.1s						
VNDA	**Vanda**	**31.66**	**164**	P	**P**	**23 42 43.5**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=303,slow=8.8,SNR=7.8 comp=Z,1.2nm,0.9s						
VNDA	**Vanda**	**31.66**	**164**	P	**P**	**23 42 42.9**	**-0.2**
VNDA				IAmb	IAmb	23 42 51.5	
	comp=Z,2.8nm,1.1s						
WRA	**Warramunga Arr**	**32.02**	**25**	P	**P**	**23 42 47.2**	**+0.4**
	comp=Z,0.7nm,1.1s,baz=200,slow=9.4,SNR=4.6 comp=Z,0.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**32.14**	**9**	P	**P**	**23 42 49.3**	**+1.5**
	comp=Z,3.1nm,0.9s,baz=190,slow=11,SNR=5.1						
FITZ				LR	LR	23 54 52.3	
	comp=Z,82nm,18.7s,baz=178,slow=35 comp=Z,3.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**32.14**	**9**	P	**P**	**23 42 48.1**	**+0.3**
SBA	**Scott Base**	**32.73**	**164**	P	**P**	**23 42 52.6**	**+0.1**
SBA				IAmb	IAmb	23 43 26.5	
	comp=Z,5.7nm,1.5s						
WKZ	**Wanaka**	**32.84**	**100**	P	**P**	**23 42 52.1**	**-1.7**
MAW	**Mawson**	**32.99**	**216**	LR	LR	23 53 30.3	
	comp=Z,52nm,19.3s,baz=88,slow=31						
LTZ	**Lake Taylor**	**35.88**	**99**	P	**P**	**23 43 20.8**	**+0.6**
AMCZ	**Amberley**	**35.93**	**100**	P	**P**	**23 43 21.8**	**+1.3**
THZ	**Tophouse**	**36.81**	**98**	P	**P**	**23 43 27.3**	**-0.8**
NNZ	**Nelson**	**37.40**	**97**	P	**P**	**23 43 33.8**	**+0.8**
QSPA	**South Pole Qui**	**40.09**	**180**	LR	LR	23 59 50.1	
	comp=Z,75nm,20.4s,baz=324,slow=35						
SNAA	**Sanae**	**52.17**	**200**	P	**P**	**23 45 31.2**	**+0.8**
	comp=Z,2.3nm,1.1s,baz=144,slow=3.6,SNR=4.2						
SNAA				LR	LR	00 06 23.1	
	comp=Z,89nm,18.5s,baz=169,slow=35 comp=Z,2.3nm,1.1s						
SNAA	**Sanae**	**52.17**	**200**	P	**P**	**23 45 29.9**	**-0.5**
SNAA				IAmb	IAmb	23 45 32.5	
	comp=Z,5.3nm,1.3s						
PMSA	**Palmer Station**	**65.47**	**178**	LR	LR	00 14 04.2	
	comp=Z,65nm,21.6s,baz=164,slow=35						
CMAR	**Chiang Mai Arr**	**70.78**	**338**	P	**P**	**23 47 36.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=185,slow=5.0,SNR=5.0 comp=Z,0.5nm,0.3s						
PLCA	**Paso Flores**	**89.10**	**172**	LR	LR	00 27 58.7	
	comp=Z,33nm,18.1s,baz=138,slow=35						
PDAR	**Pinedale Array**	**145.36**	**83**	PKPbc	**PKPab**	**23 55 58.6**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=197,slow=1.5,SNR=4.0						
PDAR	**Pinedale Array**	**145.36**	**83**		**PKPdf**	**23 55 57.3**	**-0.7**

*MOS **17** 23:55:46.5±0.9,13°.49N×145°.08E,h62km,mb5.6/64, MS4.5/7,Error ellipse: s-maj=7.9km s-min=4.6km az=115.1*
*DJA **17** 23:55:46.5±0.5,14°.N±3'×14°.5E±', h77km±3km,M5.4/77, mb5.5/77,mB5.8/46,MLv5.3/1,Mw(mB)5.4/46, MwMwp5.2/4,Mwp5.4/4*
*BJI **17** 23:55:47.1,13°.24N×145°.42E,h88km,mB5.3/23,mb5.1/63, Ms4.6/39,Ms7 4.5/34*
*IDC **17** 23:55:47.3±1.1,13°.47N×145°.34E,h58km±8km,mb5.0/35, mbtmp5.3/35,MS4.1/67,Error ellipse: s-maj=15.9km s-min=10.3km az=84.0*
*NEIC **17** 23:55:49.4,13°.44N×145°.28E,h70km*
*NEIC **17** 23:55:49.4±2.0,13°.45N±0°.06×145°.28E±0°.06,h66km±3km, mb5.6/614,Mww5.0/20,Error ellipse: s-maj=9.3km s-min=8.5km az=128.0*
*NEIC **17** 23:55:49.4,13°.24N×144°.97E,h70km,Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16^Nm; Mrr2.00; Mθθ2.19; Mϕϕ-4.18; Mrθ2.16; Mθϕ-0.18; Mϕr1.83; Fault plane solution: Mo4.60000×10^16^ NP1: ϕs144.98000°,δ44.47000°,λ25.26000°. NP2:ϕs36.37000°, δ72.60000°,λ131.60000°. Principal axes: T 4.4095, Plg46.0000°, Azm349.0000°; N 0.3615, Plg39.0000°, Azm202.0000°; P -4.7710, Plg17.0000°, Azm97.0000°;*
*GCMT **17** 23:55:49.4±0.1,13°.28N±0°.01×145°.41E±0°.01,h57km±1km, MW5.2/130,Moment Tensor Solution. s98,c142; s130,c223; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.99±.15; Mθθ0.84±.12; Mϕϕ-5.83±.11; Mrθ2.85±.09; Mθϕ-0.28±.12; Mϕr2.67±.11; Best double couple: Mo6.71300×10^16^ NP1:ϕs160.00000°,δ36.00000°, λ50.00000°. NP2:ϕs26.00000°,δ63.00000°,λ115.00000°. Principal axes: T 6.8500, Plg63.0000°, Azm337.0000°; N -0.2740, Plg22.0000°, Azm194.0000°; P -6.5770, Plg15.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 23:55:48.3±0.3,13°.43N±0°.03×145°.26E±0°.04,h68km±2km, h69km:pP-P,n1324,σ1.17/1220,mb5.6/434,52C-9D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.41**	**293**	P	**Pn**	**23 56 00.2**	**0.0**
	8μm,0.4s,baz=100,slow=11,SNR=222						
GUMO	**Guam**	**0.41**	**293**		**Pn**	**23 56 00.2**	**0.0**
GUMO				Sn	**Sn**	**23 56 09.5**	**+0.7**
GUMO	**Guam**	**0.41**	**293**	P	**Pn**	**23 56 00.8**	**+0.6**
GUMO	**Guam**	**0.41**	**293**	S	**Sn**	**23 56 10.3**	**+1.4**
GUMO	**Guam**	**0.41**	**293**	P	**Pn**	**23 56 00.2**	**0.0**
GUMO						23 56 09.5	
MANU	**Manus Island**	**15.51**	**172**		**Pn**	**23 59 23.6**	**+0.5**
JAY	**Jayapura**	**16.47**	**196**	P	**P**	**23 59 38.8**	**+2.0**
	18nm,0.8s,baz=5.3,slow=11,SNR=2.3						
JAY				S	**Sn**	**00 02 30.5**	**-7.0**
	23nm,1.0s,baz=194,slow=17,SNR=2.6						
JAY	**Jayapura**	**16.47**	**196**	P	**P**	**23 59 37.7**	**+0.9**
SMPI	**Sarmi**	**16.64**	**203**	P	P	23 59 57.3	+19
GENI	**Genyem**	**16.70**	**198**	P	**P**	**23 59 42.3**	**+3.0**
	95nm,0.8s						
BAKI	**Biak**	**17.13**	**213**	P	**P**	**23 59 48.4**	**+4.4**
JMZ	**Minamidaito 2**	**18.06**	**315**	P	**Pn**	**23 59 55.1**	**+0.5**
JMZ				IAmb	IAmb	23 59 58.6	
	comp=Z,374nm,0.9s						
SWI	**Sorong**	**19.86**	**225**	P	**Pn**	**00 00 16.8**	**+0.7**
	comp=Z,2μmcomp=Z,172nm,1.0s						
JHJ2	**Mitsune**	**20.22**	**347**	P	**P**	**00 00 17.0**	**-0.7**
JHJ2	**Mitsune**	**20.22**	**347**	P	Pn	00 00 19.7	-0.5
JHJ	**Hachijo jima 2**	**20.23**	**347**	P	**P**	**00 00 18.8**	**+0.9**
	comp=Z,94nm,0.5s,baz=108,slow=3.8,SNR=3.6						
JHJ				LR	LR	00 07 21.8	
	comp=Z,940nm,21.4s,baz=131,slow=34 comp=Z,94nm,0.5s						
DAV	**Davao City (W)**	**20.36**	**254**	P	Pn	00 00 21.8	-0.3
	comp=Z,105nm,0.3s,baz=74,slow=19,SNR=3.6						
DAV				LR	LR	00 06 58.8	
	comp=Z,560nm,21.7s,baz=80,slow=33 comp=Z,105nm,0.3s						
DAV	**Davao City (W)**	**20.36**	**254**	P	Pn	00 00 21.1	-1.0
DAV				S	Sn	00 04 12.4	+1.2
FAKI	**Fak Fak**	**20.75**	**219**		**P**	**00 00 24.5**	**+0.9**
FAKI				IAmb	IAmb	00 00 29.3	
	comp=Z,254nm,0.9s						
FAKI	**Fak Fak**	**20.75**	**219**	P	Pn	00 00 25.6	-1.0
FAKI	**Fak Fak**	**20.75**	**219**	S	**S**	**00 04 12.3**	**+0.7**
FAKI	**Fak Fak**	**20.75**	**219**	P	**P**	**00 00 24.7**	**+1.1**
	comp=Z,2μmcomp=Z,3μmcomp=Z,342nm,0.9s						
JOW	**Kunigami**	**20.76**	**313**	P	Pn	00 00 25.6	-1.1
	comp=Z,107nm,0.8s,baz=143,slow=8.3,SNR=14						
JOW				LR	LR	00 06 53.5	
	comp=Z,988nm,20.9s,baz=146,slow=32 comp=Z,107nm,0.8s						
JOW	**Kunigami**	**20.76**	**313**		**P**	**00 00 22.2**	**-1.4**
JOW	**Kunigami**	**20.76**	**313**	P	Pn	00 00 25.5	-1.1
JOW	**Kunigami**	**20.76**	**313**	S	**S**	**00 04 14.1**	**+2.5**
H11S3	**WAKE ISLAND Hy**	**21.20**	**73**	T	T	00 23 04.9	
	baz=260,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**21.21**	**73**	T	T	00 23 14.1	
	baz=260,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**21.22**	**73**	T	T	00 22 53.7	
	baz=260,slow=75,SNR=10						
WAKE	**Wake Island**	**21.33**	**71**	P	**P**	**00 00 30.0**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**21.64**	**70**	P	**P**	**00 00 32.7**	**-0.2**
	baz=244,slow=12,SNR=5.7						
H11N1				T	T	00 23 26.7	
	baz=257,slow=75,SNR=32						
H11N2	**WAKE ISLAND Hy**	**21.65**	**70**	P	**P**	**00 00 32.8**	**-0.2**
	baz=244,slow=12,SNR=4.0						
H11N2				T	T	00 23 27.9	
	baz=257,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**21.66**	**70**	P	**P**	**00 00 32.9**	**-0.2**
	baz=244,slow=12,SNR=4.6						
H11N3				T	T	00 23 28.2	
	baz=257,slow=75,SNR=33						
TNTI	**Ternate**	**21.73**	**236**		**P**	**00 00 34.3**	**+0.2**
TNTI	**Ternate**	**21.73**	**236**	P	**P**	**00 00 35.8**	**+1.7**
SGSI	**Sangihe**	**21.76**	**245**	P	**P**	**00 00 34.7**	**+0.2**
	comp=Z,220nm

SAUI IAmb IAmb 00 01 41.2
comp=Z,327nm,1.2s
SAUI Saumlaki 25.39 214 P **P** **00 01 09.7 +0.2**
comp=Z,176nm,0.8s
JTU Tsushima 25.45 328 P **P** **00 01 11.4 +1.6**
MRSI Marisa 26.44 243 P **P** **00 01 18.1 -0.9**
LUWI Luwuk 26.53 239 P **P** **00 01 18.5 -1.3**
LUWI Luwuk 26.53 239 P **P** **00 01 20.3 +0.5**
LUWI Luwuk 26.53 239 P **P** **00 01 17.1 -2.7**
SAVO Savo Central 26.68 146 P **P** **00 01 20.1 -1.0**
HNR Honiara 26.99 147 LR LR 00 13 21.2
comp=Z,278nm,18.1s,baz=326,slow=39
TOLI2 Tolitoli 27.15 245 P **P** **00 01 25.0 -0.4**
COEN Coen 27.29 184 P **P** **00 01 27.0 +0.4**
comp=Z,40nm,0.9s
COEN Coen 27.29 184 P **P** **00 01 26.4 -0.1**
COEN Coen 27.29 184 P **P** **00 01 26.1 -0.4**
APSI Ampana 27.40 240 P **P** **00 01 26.8 -0.9**
comp=Z,2µmcomp=Z,112nm,0.7s
TJN Taejon 27.93 328 *i* P **P** **00 01 31.7 -0.4**
MPSI Mapaga 28.29 245 P **P** **00 01 34.1 -1.5**
comp=Z,2µmcomp=Z,71nm,1.1s
KSRS Korea Array 28.49 330 P **P** **00 01 36.4 -0.8**
comp=Z,18nm,0.8s,baz=149,slow=9.6,SNR=34
KSRS PcP **PcP** **00 04 49.2 +1.7**
comp=Z,14nm,0.9s,baz=156,slow=2.7,SNR=17
comp=Z,18nm,0.8s
KSAR Wonju Array Be 28.50 330 P **P** **00 01 37.1 -0.1**
KSAR Wonju Array Be 28.50 330 P **P** **00 01 37.1 -0.1**
KS19 Wonju Array Si 28.56 330 P **P** **00 01 37.6 -0.1**
KS19 IAmb IAmb 00 02 08.4
comp=Z,274nm,1.9s
KDU Kakadu 28.88 207 P **P** **00 01 40.4 -0.3**
comp=Z,15nm,0.8s
BBSI Bau Bau 29.34 232 P P 00 01 53.1 +8.2
MTN Manton Dam 29.62 209 P **P** **00 01 47.2 -0.1**
comp=Z,33nm,0.9s
MTN Manton Dam 29.62 209 P **P** **00 01 47.0 -0.3**
NJ2 Nanjing 30.47 312 *e*P **P** **00 01 56.3 +1.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
BNSI Bone 30.62 236 P **P** **00 01 55.2 -1.0**
comp=Z,773nmcomp=Z,89nm,1.1s
SPSI Sidrap Palu 30.64 237 P **P** **00 01 57.6 +1.2**
comp=Z,1µmcomp=Z,56nm,0.8s
SOEI Soe 31.06 223 P **P** **00 01 59.7 -0.5**
SOEI IAmb IAmb 00 02 24.7
comp=Z,124nm,1.0s
SOEI Soe 31.06 223 P **P** **00 02 00.9 +0.7**
SOEI Soe 31.06 223 P **P** **00 01 58.5 -1.7**
comp=Z,1µmcomp=Z,139nm,0.9s
BKSI Bulukumba 31.15 235 P **P** **00 02 01.3 +0.5**
comp=Z,26nm,0.9s
KAPI Kappang 31.26 236 LR LR 00 15 13.2
comp=Z,156nm,20.8s,baz=56,slow=37
KAPI Kappang 31.26 236 P **P** **00 02 02.1 +0.3**
KAPI Kappang 31.26 236 P **P** **00 02 01.5 -0.4**
KAPI Kappang 31.26 236 *i* P **P** **00 02 00.5 -1.4**
KAPI pmax pmax
comp=Z,48nm,0.6s
KAPI Kappang 31.26 236 P **P** **00 02 01.5 -0.4**
MTSU Mount Surprise 31.37 182 P **P** **00 02 03.8 +1.0**
comp=Z,16nm,1.0s
MMRI Maumere 31.67 227 P **P** **00 02 05.2 -0.2**
MMRI IAmb IAmb 00 02 06.9
comp=Z,71nm,0.9s
MMRI Maumere 31.67 227 P **P** **00 02 06.1 +0.6**
BATI Baumata 31.79 223 P **P** **00 02 06.7 +0.1**
comp=Z,98nm,0.8s
EDFI Ende, Flores 32.14 228 P **P** **00 02 06.7 -3.0**
comp=Z,785nmcomp=Z,40nm,0.9s
USRK Ussuriysk Ar. 32.71 342 P **P** **00 02 14.5 +0.3**
comp=Z,10nm,0.7s,baz=151,slow=9.9,SNR=18
USRK PcP **PcP** **00 05 00.3 +1.8**
comp=Z,2.7nm,0.7s,baz=222,slow=4.6,SNR=4.9
comp=Z,10nm,0.7s
DL2 Dalian 32.88 325 P **P** **00 02 18.1 +2.3**
DL2 pP **sP** **00 02 36.8 -3.0**
DL2 PcP **PcP** **00 05 00.8 +1.7**
DL2 *e*S **S** **00 07 30.5 +2.0**
DL2 pmax pmax
comp=Z,88nm,1.2s
DL2 pmax pmax
comp=Z,450nm,6.8s
DL2 LR LR
comp=Z,870nm,18.2s
DL2 LR LR
comp=Z,1µm,21.1s
DL2 LR LR
comp=Z,950nm,21.6s
WHN Wuhan 33.19 306 P **P** **00 02 18.8 +0.2**
WHN PcP **PcP** **00 05 01.9 +1.8**
KNRA Kununurra 33.20 210 P **P** **00 02 19.4 +0.6**
comp=Z,30nm,0.9s
KNRA Kununurra 33.20 210 P **P** **00 02 18.9 +0.1**
CTA Charters Tower 33.32 178 LR LR 00 16 32.5
comp=Z,5.3nm,19.4s,baz=26,slow=37
CTAO Charters Tower 33.32 178 P **P** **00 02 20.2 +0.4**
CTAO Charters Tower 33.32 178 P **P** **00 02 20.2 +0.4**
CTAO pmax pmax
comp=Z,46nm,1.5s
YSS Yuzhno-Sakhali 33.49 357 *e*P **P** **00 02 20.4 -0.6**
YSS *e* 00 03 32.9
YSS *e*S **S** **00 07 35.8 -2.0**
YSS *e*SS **SnSn** **00 09 39.7 -6.6**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,600nm,13.0s
WSI Waingapu 33.77 228 P P 00 02 30.7 +6.9
TIA Tai'an 33.94 317 P **P** **00 02 25.6 +0.5**
TIA PcP **PcP** **00 05 03.6 +1.4**
TIA pmax pmax
comp=Z,21nm,0.8s
TIA LR LR
comp=Z,770nm,18.9s
TIA LR LR
comp=Z,830nm,24.9s
TIA LR LR
comp=Z,1µm,24.4s
BASI Baing, Sumba 33.94 227 P **P** **00 02 21.9 -3.4**
comp=Z,2µmcomp=Z,194nm,1.4s
QIS Mount Isa 34.23 189 P **P** **00 02 28.0 +0.3**
comp=Z,25nm,1.7s
QIS Mount Isa 34.23 189 P **P** **00 02 28.3 +0.6**
QIZ Qiongzhong 34.42 284 P **P** **00 02 30.6 +1.2**
QIZ pP **pP** **00 02 45.4 -0.6**
QIZ S **S** **00 07 55.0 +2.1**
WBSI Waikabubak, Su 34.42 230 P **P** **00 02 26.7 -2.8**
comp=Z,66nm,0.7s
SBUM Sibu 34.44 254 P **P** **00 02 29.9 +0.2**
SBUM Sibu 34.44 254 P **P** **00 02 30.2 +0.5**
CN2 Changchun 34.72 334 P **P** **00 02 34.6 +2.9**
CN2 PcP **PcP** **00 05 04.5 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
WRAB Tennant Creek 34.85 198 P **P** **00 02 33.0 0.0**
WRAB Tennant Creek 34.85 198 P **P** **00 02 32.9 -0.2**
WRAB Tennant Creek 34.85 198 *ce*P **P** **00 02 33.4 +0.4**
WRAB pmax pmax
comp=Z,35nm,0.8s
WRAB Tennant Creek 34.85 198 P **P** **00 02 32.8 -0.2**
WRAB PcP **PcP** **00 05 06.2 +1.3**
WRA Warramunga Arr 34.86 198 P **P** **00 02 32.6 -0.5**
comp=Z,20nm,0.7s,baz=353,slow=4.1,SNR=131
comp=Z,20nm,0.7s
GULI GuiLin 34.87 295 P P 00 02 27.4 -5.8
PLAI Plampang 35.12 232 P **P** **00 02 35.9 +0.4**
PLAI Plampang 35.12 232 P **P** **00 02 32.5 -3.0**
comp=Z,46nm,0.8s
BNX BinXian 35.58 338 ⇓P **P** **00 02 40.5 +1.4**
BNX pmax pmax
comp=Z,82nm,0.8s
TWSI Taliwang, Sumb 35.76 234 P **P** **00 02 38.2 -2.8**
comp=Z,36nm,0.8s
DLV Lat 35.89 272 P **P** **00 02 42.2 -0.2**
DLV IAmb IAmb 00 02 43.8
comp=Z,56nm,1.0s
HNS HongShan 36.21 317 ⇓P **P** **00 02 45.6 +1.0**
HNS PcP **PcP** **00 05 10.3 +1.6**
HNS pmax pmax
comp=Z,150nm,0.8s
HNS LR LR
comp=Z,520nm,17.8s
HNS LR LR
comp=Z,390nm,17.4s
HNS LR LR
comp=Z,640nm,20.1s
BJT Baijiatuan 36.80 321 P **P** **00 02 50.1 +0.5**
BJT pP **pP** **00 03 06.1 0.0**
BJI Beijing 36.81 321 P **P** **00 02 50.3 +0.7**
BJI PcP **PcP** **00 05 11.4 +0.9**
BJI S **S** **00 08 31.3 +2.3**
BJI pmax pmax
comp=Z,13nm,0.8s
BJI LR LR
comp=Z,220nm,19.3s
BJI LR LR
comp=Z,150nm,17.7s
BJI LR LR
comp=Z,210nm,16.8s
FITZ Fitzroy Crossi 36.82 212 LR LR 00 19 42.6
comp=Z,84nm,18.6s,baz=31,slow=39
FITZ Fitzroy Crossi 36.82 212 P **P** **00 02 50.1 +0.2**
KMMI Kalianget 37.15 239 P P 00 02 59.6 +6.8
ABJI Asem Bagus 37.34 237 P **P** **00 02 57.2 +2.8**
JAGI Jajag, Banyuwa 37.78 237 P **P** **00 02 58.4 +0.2**
JAGI Jajag, Banyuwa 37.78 237 P **P** **00 02 56.1 -2.1**
BLJI Banyuglugur 37.83 238 P **P** **00 02 57.9 -0.7**
comp=Z,132nm,1.5s
TIY Taiyuan 37.91 316 P **P** **00 02 59.9 +0.8**
TIY PcP **PcP** **00 05 15.5 +1.5**
TIY S **S** **00 08 45.5 -0.5**
TIY pmax pmax
comp=Z,54nm,0.7s
TIY pmax pmax
comp=Z,210nm,3.6s
TIY LR LR
comp=Z,450nm,19.2s
TIY LR LR
comp=Z,440nm,17.1s
TIY LR LR
comp=Z,620nm,17.7s
GYA Guiyang 38.38 296 P **P** **00 03 04.6 +1.4**
GYA pP pP 00 03 23.8 +3.9
GYA PcP **PcP** **00 05 17.3 +1.5**
GYA S **S** **00 08 50.5 -2.9**
GYA pmax pmax
comp=Z,22nm,0.9s
ASAR Alice Springs 38.50 197 P **P** **00 03 04.3 +0.2**
comp=Z,7.8nm,0.7s,baz=19,slow=11,SNR=97
ASAR PcP **PcP** **00 05 15.8 -0.2**
comp=Z,6.2nm,0.9s,baz=44,slow=2.3,SNR=4.4
ASAR PKiKP **PKiKP** **00 12 30.4 0.0**
comp=Z,0.5nm,0.8s,baz=78,slow=1.3,SNR=4.2
ASAR LR LR 00 18 45.4
comp=Z,321nm,21.9s,baz=338,slow=36
comp=Z,7.8nm,0.7s
ASAR Alice Springs 38.50 197 P **P** **00 03 04.1 -0.1**
XAN Xi'an 38.79 308 ⇑P **P** **00 03 06.4 -0.2**
XAN PcP **PcP** **00 05 17.6 +0.8**
XAN S **S** **00 08 59.3 -0.1**
XAN pmax pmax
comp=Z,20nm,1.0s
XAN pmax pmax
comp=Z,210nm,4.6s
XAN LR LR
comp=Z,480nm,18.5s
XAN LR LR
comp=Z,630nm,17.2s
XAN LR LR
comp=Z,890nm,20.6s
EIDS Eidsvold 38.98 172 P **P** **00 03 07.4 -0.6**
XLT XiLinHaoTe 39.33 326 *e*P **P** **00 03 11.8 +0.9**
XLT PcP **PcP** **00 05 19.6 +1.3**
XLT pmax pmax
comp=Z,400nm,0.7s
XLT pmax pmax
comp=Z,400nm,4.0s
NGJI Ngawi 39.41 240 P **P** **00 03 15.1 +3.2**
HEH HeiHe 39.52 342 *e*P **P** **00 03 12.3 +0.1**
HEH pmax pmax
comp=Z,38nm,1.3s
QLP Quilpie 39.78 181 P **P** **00 03 14.3 -0.4**
comp=Z,77nm,1.0s
QLP Quilpie 39.78 181 P **P** **00 03 16.3 +1.6**
PCJI Pacitan 40.09 239 P **P** **00 03 14.9 -2.5**
comp=Z,3µmcomp=Z,184nm,0.7s
SMRI Semarang 40.12 242 P **P** **00 03 17.0 -0.7**
SMRI IAmb IAmb 00 04 14.8
comp=Z,50nm,0.7s
HHC Hu-ho-hao-te 40.14 319 ⇓*i*P **P** **00 03 18.8 +1.0**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,190nm,4.1s
HHC LR LR
comp=Z,290nm,16.0s
HHC LR LR
comp=Z,380nm,19.3s
UGM Wanagama 40.49 240 P **P** **00 03 20.9 +0.1**
UGM Wanagama 40.49 240 P **P** **00 03 16.7 -4.1**
comp=Z,142nm,1.2s
TPI Tanjungpandan 40.63 249 P **P** **00 03 17.3 -4.7**
comp=Z,999nmcomp=Z,117nm,0.9s
YOGI Yogyakarta 40.63 241 P **P** **00 03 20.0 -2.0**
comp=Z,246nm,1.0s
PEA0B Petropavlovsk- 40.81 11 P **P** **00 03 22.6 -0.3**
PEA0B IAmb IAmb 00 04 48.4
comp=Z,225nm,1.9s
PEA0B Petropavlovsk- 40.81 11 *ce*P **P** **00 03 23.8 +0.9**
PETK Petropavlovsk- 40.81 11 P **P** **00 03 22.8 -0.1**
comp=Z,16nm,0.8s,baz=181,slow=6.7,SNR=22
PETK PcP **PcP** **00 05 23.1 +0.4**
comp=Z,32nm,0.8s,baz=191,slow=5.3,SNR=13
PETK LR LR 00 24 21.1
comp=Z,47nm,18.1s,baz=195,slow=42
comp=Z,16nm,0.8s
PETK Petropavlovsk- 40.81 11 P **P** **00 03 22.2 -0.7**
PETK **PcP** **00 05 23.2 +0.4**
BTO Baotou 41.01 318 *e*P **P** **00 03 26.5 +1.6**
BTO pmax pmax
comp=Z,140nm,0.8s
BTO pmax pmax
comp=Z,560nm,5.5s
BTO LR LR
comp=Z,880nm,21.7s
BTO LR LR
comp=Z,780nm,19.0s
BTO LR LR
comp=Z,2µm,23.9s
ONTNC Ouen Toro 41.14 149 P **P** **00 03 25.6 -0.4**
INKA Innaminka 41.16 186 P **P** **00 03 25.2 -0.8**
HIA Hailar 41.45 335 P **P** **00 03 30.0 +1.7**
HIA Hailar 41.45 335 *i* P **P** **00 03 28.1 -0.2**
HIA pmax pmax
comp=Z,41nm,0.7s
HIA Hailar 41.45 335 P **P** **00 03 29.9 +1.6**
HIA pP **pwP** **00 03 46.2 -0.5**
HIA PcP **PcP** **00 05 25.8 +0.8**
KPJI Karang Pucung 41.56 242 P **P** **00 03 27.6 -2.0**
comp=Z,120nm,0.7s
KMI Kunming 41.63 293 P **P** **00 03 31.8 +1.5**
KMI pP pP 00 03 50.4 +3.2
KMI PcP **PcP** **00 05 27.9 +1.6**
KMI pmax pmax
comp=Z,17nm,0.7s
KMI LR LR
comp=Z,290nm,20.5s
KMI LR LR
comp=Z,380nm,23.7s
WRKA Warakurna 41.66 203 P **P** **00 03 30.5 +0.2**
comp=Z,35nm,0.7s
HILR Hailar Array B 41.67 335 P **P** **00 03 30.3 +0.2**
comp=Z,19nm,0.5s,baz=136,slow=8.8,SNR=56
HILR PcP **PcP** **00 05 26.6 +0.9**
comp=Z,9.2nm,0.6s,baz=139,slow=7.0,SNR=6.9
HILR ScP **ScP** **00 09 11.4 +1.3**
comp=Z,0.4nm,0.4s,baz=133,slow=8.7,SNR=3.5
HILR LR LR 00 20 20.2
comp=Z,311nm,19.7s,baz=75,slow=35
comp=Z,19nm,0.5s
CD2 Chengdu 41.91 301 P **P** **00 03 32.3 0.0**
CD2 S **S** **00 09 46.3 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,750nm,13.9s
CD2 LR LR
comp=Z,2µm,21.6s
CD2 LR LR
comp=Z,610nm,21.4s
MBWA Marble Bar 42.55 217 P **P** **00 03 38.0 +0.6**
comp=Z,73nm,1.1s
MBWA Marble Bar 42.55 217 P **P** **00 03 37.6 +0.1**
MBWA Marble Bar 42.55 217 P **P** **00 03 38.1 +0.6**
MBWA Marble Bar 42.55 217 P **P** **00 03 38.3 +0.8**
MYKOM Kota Tinggi 42.56 258 IAmb IAmb 00 03 39.1
comp=Z,76nm,0.8s
DSRI Dabo 42.62 254 P **P** **00 03 37.9 -0.3**
PZH PanZhiHua 42.72 295 P **P** **00 03 39.1 0.0**
PZH sP **sP** **00 04 06.6 +2.8**
PZH S **S** **00 10 00.5 +2.4**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,150nm,5.8s
PZH LR LR
comp=Z,260nm,19.6s
PZH LR LR
comp=Z,280nm,20.4s
BBJI Bungbulang 42.73 243 P **P** **00 03 37.5 -1.7**
PSAC2 Pilbara Seismi 42.77 216 P **P** **00 03 39.8 +0.6**
comp=Z,93nm,1.1s
PSA00 Pilbara Seismi 42.80 216 P **P** **00 03 40.0 +0.4**
PSA00 IAmb IAmb 00 03 41.4
comp=Z,97nm,1.1s
PSA00 Pilbara Seismi 42.80 216 P **P** **00 03 39.7 +0.1**
PSA00 IAmb IAmb 00 03 41.3
comp=Z,57nm,1.2s
PSA00 Pilbara Seismi 42.80 216 P **P** **00 03 40.2 +0.6**
LZH Lanzhou 43.42 309 *e*P **P** **00 03 45.5 +0.8**
LZH pP pP 00 04 03.8 +2.2
LZH PcP **PcP** **00 05 33.8 +1.8**
LZH pmax pmax
comp=Z,37nm,1.7s
LZH LR LR
comp=Z,430nm,19.9s
LZH LR LR
comp=Z,340nm,19.5s
LZH LR LR
comp=Z,370nm,21.5s
LZDM Lanzhou Array 43.49 309 P **P** **00 03 45.9 +0.5**
comp=Z,4.4nm,0.3s,baz=134,slow=6.4,SNR=13
LZDM PcP **PcP** **00 05 33.6 +1.1**
comp=Z,21nm,0.8s,baz=101,slow=1.5,SNR=6.7
LZDM LR LR 00 23 33.1
comp=Z,178nm,18.6s,baz=100,slow=38
comp=Z,4.4nm,0.3s
MDSI Maura Dua 44.50 249 P **P** **00 03 50.7 -2.6**
comp=Z,1µmcomp=Z,169nm,0.8s
IPM Ipoh 44.52 263 P **P** **00 03 53.2 -0.4**
KASI Kota Agung 44.64 248 P **P** **00 03 51.6 -2.9**
comp=Z,1µmcomp=Z,104nm,0.8s
KULM Kulim 44.69 264 P **P** **00 03 54.8 -0.1**
KULM Kulim 44.69 264 P **P** **00 03 55.9 +1.0**
CHTO Chiang Mai 44.72 283 P **P** **00 03 54.5 -0.7**
CHTO Chiang Mai 44.72 283 P **P** **00 03 55.4 +0.3**
CHTO Chiang Mai 44.72 283 P **P** **00 03 54.5 -0.7**
CHTO pmax pmax
comp=Z,32nm,1.1s
CM31 Chiang Mai Arr 44.73 283 P **P** **00 03 54.9 -0.2**
CMAR Chiang Mai Arr 44.73 283 P **P** **00 03 55.7 +0.5**
comp=Z,26nm,0.6s,baz=85,slow=6.3,SNR=115
CMAR PcP **PcP** **00 05 38.5 +1.9**
comp=Z,23nm,0.8s,baz=84,slow=1.9,SNR=18
CMAR ScP **ScP** **00 09 26.8 +3.7**
comp=Z,0.6nm,0.3s,baz=101,slow=4.5,SNR=1.7
comp=Z,26nm,0.6s
CMAR Chiang Mai Arr 44.73 283 P **P** **00 03 55.2 0.0**
CMAR Chiang Mai Arr 44.73 283 *i* P **P** **00 03 55.7 +0.5**
CMAR pmax pmax
comp=Z,29nm,0.6s
MSVF Nonsavu 44.78 133 P **P** **00 03 57.3 +1.7**
MSVF Nonsavu 44.78 133 *i* P **P** **00 03 54.9 -0.7**
MSVF pmax pmax
comp=Z,54nm,2.0s
LWLI Liwa 44.82 249 P **P** **00 03 55.8 -0.3**
LHSI Lahat 44.83 250 P **P** **00 03 51.9 -4.1**
comp=Z,2µmcomp=Z,140nm,1.0s
STKA Stephens Creek 45.18 184 P **P** **00 03 58.4 -0.1**
comp=Z,64nm,0.8s
STKA Stephens Creek 45.18 184 P **P** **00 03 58.3 -0.1**
comp=Z,8.4nm,0.8s,baz=338,slow=10.0,SNR=14
STKA LR LR 00 24 48.2
comp=Z,275nm,18.2s,baz=21,slow=38
comp=Z,8.4nm,0.8s
STKA Stephens Creek 45.18 184 P **P** **00 03 58.7 +0.2**
STKA Stephens Creek 45.18 184 *i* P **P** **00 03 58.0 -0.5**
SHEM Shemya Is, Ala 45.45 24 LR LR 00 22 56.6
comp=Z,160nm,19.2s,baz=242,slow=36
SMY Shemya 45.45 24 P **P** **00 04 01.3 +1.0**
SMY Shemya 45.45 24 P **P** **00 04 01.5 +1.2**
SMY Shemya 45.45 24 P **P** **00 04 01.3 +1.0**
SMY pmax pmax
comp=Z,956nm,1.6s
MNAI Manna 45.56 250 P **P** **00 04 00.2 -1.6**
MNAI Manna 45.56 250 P **P** **00 04 01.5 -0.3**
MNAI Manna 45.56 250 P **P** **00 03 59.1 -2.7**
KSI Kapahiang 45.62 251 P **P** **00 04 01.0 -1.3**
MASI Maura Aman, Be 45.75 252 P **P** **00 04 01.3 -2.1**
MA2 Magadan 46.25 4 LR LR 00 22 31.4
comp=Z,163nm,20.2s,baz=188,slow=35
MA2 Magadan 46.25 4 P **P** **00 04 06.2 -0.4**
MA2 IAmb IAmb 00 04 07.7
comp=Z,45nm,0.8s
MA2 Magadan 46.25 4 *ce*P **P** **00 04 07.4 +0.9**
MA2 pmax pmax
comp=Z,50nm,1.3s
MA2 Magadan 46.25 4 P **P** **00 04 06.0 -0.5**
comp=Z,74nm,0.7s
PPI Padang Panjang 46.54 256 P **P** **00 04 08.5 -1.0**
comp=Z,979nmcomp=Z,25nm,0.4s
PDSI Padang 46.63 256 P **P** **00 04 05.5 -4.8**
comp=Z,47nm,0.7s
ULN Ulaanbaatar 46.73 325 P **P** **00 04 10.7 0.0**
ULN IAmb IAmb 00 05 45.8
comp=Z,42nm,0.8s
ULN Ulaanbaatar 46.73 325 P **P** **00 04 11.9 +1.1**
ULN Ulaanbaatar 46.73 325 *ce*P **P** **00 04 11.9 +1.1**
ULN pmax pmax
comp=Z,27nm,0.7s
ULN Ulaanbaatar 46.73 325 P **P** **00 04 11.3 +0.6**
ULN x x 00 04 26.3
ULN PcP **PcP** **00 05 44.0 +0.8**
AMKA Amchitka 46.76 29 P **P** **00 04 11.2 +0.6**
BBOO Buckleboo 46.81 191 P **P** **00 04 11.4 +0.1**
comp=Z,74nm,0.8s
BBOO Buckleboo 46.81 191 P **P** **00 04 11.0 -0.2**
BBOO IAmb IAmb 00 04 12.4
comp=Z,55nm,0.9s
BBOO Buckleboo 46.81 191 P **P** **00 04 12.0 +0.7**
FORT Forrest 46.96 200 P **P** **00 04 12.9 +0.5**
comp=Z,36nm,0.9s
FORT Forrest 46.96 200 P **P** **00 04 12.6 +0.2**
HTT Hallett 46.98 187 P **P** **00 04 13.0 +0.4**
comp=Z,8.9nm,1.3s
HTT Hallett 46.98 187 P **P** **00 04 12.2 -0.5**
PSI Prapat 46.98 261 LR LR 00 25 11.0
comp=Z,89nm,20.9s,baz=65,slow=38
PSI Prapat 46.98 261 P **P** **00 04 13.6 +0.5**
PSI Prapat 46.98 261 P **P** **00 04 12.1 -1.1**
PSI pmax pmax
comp=Z,28nm,0.7s
RPSI Rantau Prapat 47.01 261 P **P** **00 04 12.1 -1.1**
SONM Songino Array 47.08 325 P **P** **00 04 14.4 +0.9**
comp=Z,30nm,0.7s,baz=140,slow=7.9,SNR=134
SONM PcP **PcP** **00 05 45.4 +0.9**
comp=Z,23nm,0.6s,baz=146,slow=3.2,SNR=16
SONM PKiKP **PKiKP** **00 12 38.1 +0.3**
comp=Z,0.9nm,0.7s,baz=156,slow=1.3,SNR=4.0
SONM LR LR 00 24 03.9
comp=Z,356nm,20.6s,baz=135,slow=36
comp=Z,30nm,0.7s
MEEK Meekatharra 47.51 213 P **P** **00 04 16.9 +0.1**
comp=Z,23nm,1.3s
MEEK Meekatharra 47.51 213 P **P** **00 04 16.5 -0.3**
GTA Gaotai 47.57 312 P **P** **00 04 18.1 +0.8**
GTA PcP **PcP** **00 05 47.8 +1.5**
GTA PcS **PcS** **00 09 41.0 -0.9**
GTA S **S** **00 11 08.8 +1.0**
GTA pmax pmax
comp=Z,28nm,1.0s
GTA LR LR
comp=Z,160nm,17.4s
GTA LR LR

comp=Z,310nm,17.8s
GTA LR LR
comp=Z,390nm,21.1s
KCSI Kotacane, Aceh 47.91 263 P **P** **00 04 17.3 -2.9**
comp=Z,467nmcomp=Z,46nm,1.1s
SISI Saibi 48.06 256 P **P** **00 04 20.6 -0.7**
LHMI Lhok Sumawe 48.29 265 P **P** **00 04 23.9 +0.8**
LHMI Lhok Sumawe 48.29 265 P **P** **00 04 23.9 +0.8**
LHMI Lhok Sumawe 48.29 265 P **P** **00 04 24.8 +1.7**
GSI Gunungsitoli 48.69 260 P **P** **00 04 24.4 -1.8**
GSI IAmb IAmb 00 05 52.9
comp=Z,69nm,0.7s
GSI Gunungsitoli 48.69 260 P **P** **00 04 25.7 -0.5**
GSI Gunungsitoli 48.69 260 P **P** **00 04 22.2 -4.0**
comp=Z,2µmcomp=Z,84nm,0.9s
KIWB Kanaga Island 48.76 30 P **P** **00 04 26.9 +0.8**
ADK Adak 49.01 30 P **P** **00 04 28.1 +0.1**
ADK Adak 49.01 30 P **P** **00 04 29.1 +1.1**
ADK Adak 49.01 30 P **P** **00 04 28.1 +0.1**
ADK pmax pmax
comp=Z,259nm,0.8s
ADK Adak 49.01 30 P **P** **00 04 29.1 +1.1**
MLSI Meulaboh, Aceh 49.04 264 P **P** **00 04 25.8 -3.1**
comp=Z,45nm,0.8s
GSTR Great Sitkin T 49.44 30 P **P** **00 04 31.6 +0.2**
SNSI Sinabang, Aceh 49.59 262 P **P** **00 04 32.5 -0.6**
comp=Z,172nm,1.0s
SEY Seymchan 49.70 4 LR LR 00 24 41.4
comp=Z,136nm,21.6s,baz=200,slow=35
SEY Seymchan 49.70 4*ce*P **P** **00 04 33.5 +0.4**
SEY pmax pmax
comp=Z,31nm,1.3s
YAK Yakutsk 49.81 350 LR LR 00 24 20.8
comp=Z,188nm,21.5s,baz=153,slow=34
YAK Yakutsk 49.81 350 P **P** **00 04 33.6 -0.3**
YAK Yakutsk 49.81 350 *e*P **P** **00 04 33.8 -0.1**
YAK *e* 00 05 54.4
YAK *e* 00 06 28.1
YAK *e*PPP PPP 00 07 22.6
YAK *e*S **S** **00 11 41.2 +3.0**
YAK *e**SS sS 00 11 58.1 -8.4
YAK *e* 00 14 22.6
YAK *e*SSS SSS 00 16 38.2
YAK pmax pmax
comp=Z,80nm,0.9s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,7.0nm,0.6s
YAK pmax pmax
comp=Z,513nm,4.0s
YAK pmax pmax
comp=N,244nm,3.5s
YAK pmax pmax
comp=E,217nm,2.5s
YAK smax smax
comp=N,341nm,2.6s
YAK smax smax
comp=E,176nm,2.6s
YAK MLR MLR
comp=Z,128nm,23.0s
YAK MLR MLR
comp=N,90nm,18.0s
YAK MLR MLR
comp=E,31nm,19.0s
YAK Yakutsk 49.81 350 P **P** **00 04 33.2 -0.8**
KMBL Kambalda 49.87 206 P **P** **00 04 34.7 -0.2**
comp=Z,16nm,1.9s
ARPS Mount Arapiles 50.03 184 P **P** **00 04 37.2 +1.3**
comp=Z,27nm,1.0s
ZAK Zakamensk 50.19 326 *e*P **P** **00 04 36.6 -0.6**
ZAK pmax pmax
comp=Z,20nm,0.8s
BOD Bodaibo 50.20 339 *e*P **P** **00 04 37.8 +0.8**
BOD pmax pmax
comp=Z,117nm,1.8s
ATKA Atka Island 50.44 31 P **P** **00 04 39.4 +0.5**
ATKA Atka Island 50.44 31 P **P** **00 04 39.6 +0.7**
TLY Talaya 50.70 328 P **P** **00 04 41.3 +0.4**
TLY Talaya 50.70 328 P **P** **00 04 42.3 +1.4**
TLY Talaya 50.70 328*ce*P **P** **00 04 40.3 -0.6**
TLY pmax pmax
comp=Z,26nm,0.8s
TOO Toolangi 50.73 180 P **P** **00 04 41.9 +0.6**
TOO Toolangi 50.73 180 P **P** **00 04 41.9 +0.6**
TOO pmax pmax
comp=Z,8.0nm,1.0s
MORW Morawa 50.81 213 P **P** **00 04 42.1 +0.1**
comp=Z,63nm,1.2s
MORW Morawa 50.81 213 P **P** **00 04 42.1 +0.1**
MORW IAmb IAmb 00 04 43.2
comp=Z,71nm,1.1s
MORW Morawa 50.81 213 P **P** **00 04 42.0 +0.1**
PBA Port Blair 51.22 274 P **P** **00 04 45.3 0.0**
SHL Shillong 51.44 292 P **P** **00 04 46.2 -0.9**
SHL IAmb IAmb 00 06 02.4
comp=Z,49nm,1.0s
SHL Shillong 51.44 292 P **P** **00 04 46.3 -0.8**
SHL Shillong 51.44 292 P **P** **00 04 46.2 -0.9**
SHL pmax pmax
comp=Z,49nm,1.0s
BRDH Bariadhala 51.57 288 PcP **PcP** **00 06 02.9 +1.7**
comp=Z,89nm,0.3s,baz=54,slow=4.6,SNR=5.1
BRDH LR LR 00 28 50.7
comp=Z,185nm,18.2s,baz=214,slow=38
BLDU Ballidu 51.69 212 P **P** **00 04 48.5 -0.1**
comp=Z,61nm,0.8s
BLDU Ballidu 51.69 212 P **P** **00 04 48.5 -0.1**
KLBR Kellerberrin 51.96 210 P **P** **00 04 50.7 +0.1**
comp=Z,74nm,0.7s
KLBR Kellerberrin 51.96 210 P **P** **00 04 50.7 +0.1**
LSA Lhasa 52.41 297 P **P** **00 04 51.5 -3.1**
CLES Cleveland East 52.98 32 P **P** **00 04 57.7 -0.1**
MUN Mundaring 53.04 211 P **P** **00 04 58.7 +0.1**
comp=Z,36nm,1.1s
MUN Mundaring 53.04 211 P **P** **00 04 58.6 +0.1**
NWAO Narrogin (SRO) 53.31 210 P **P** **00 05 00.9 +0.4**
comp=Z,43nm,1.4s
NWAO Narrogin (SRO) 53.31 210 LR LR 00 29 43.2
comp=Z,88nm,18.3s,baz=298,slow=38
NWAO Narrogin (SRO) 53.31 210 P **P** **00 05 00.8 +0.3**
NWAO Narrogin (SRO) 53.31 210 P **P** **00 05 00.5 +0.1**
NWAO Narrogin (SRO) 53.31 210 P **P** **00 05 00.3 -0.2**
NWAO Narrogin (SRO) 53.31 210 P **P** **00 05 00.8 +0.3**
NWAO pmax pmax
comp=Z,55nm,1.4s
KNGR Kungurtug, Tuv 53.51 324 *i* P **P** **00 05 00.9 -1.0**
KNGR pmax pmax
comp=Z,16nm,0.8s
NIKH Nikolski High 53.60 33 P **P** **00 05 02.6 +0.3**
NIKH Nikolski High 53.60 33 P **P** **00 05 02.4 0.0**
baz=240
RKGY Rocky Gully 54.81 209 P **P** **00 05 12.3 +0.9**
comp=Z,72nm,1.3s
SPIA Saint Paul Isl 55.14 28 P **P** **00 05 13.5 +0.1**
SPIA Saint Paul Isl 55.14 28 P **P** **00 05 15.1 +1.6**
SPIA Saint Paul Isl 55.14 28 P **P** **00 05 14.1 +0.6**
baz=236
UNV Unalaska Valle 55.26 33 P **P** **00 05 14.4 0.0**
UNV Unalaska Valle 55.26 33 P **P** **00 05 14.8 +0.4**
UNV Unalaska Valle 55.26 33 P **P** **00 05 14.5 +0.2**
baz=242,SNR=16
RAO Raoul Island 55.35 140 LR LR 00 25 44.9
comp=Z,96nm,21.2s,baz=332,slow=32
AKUT Akutan 55.77 32 P **P** **00 05 18.4 +0.3**
AKUT Akutan 55.77 32 P **P** **00 05 18.9 +0.8**
EVN Everest 56.08 295 P **P** **00 05 20.7 -0.8**
EVN PcP **PcP** **00 06 19.9 +0.9**
EVN IAmb IAmb 00 06 21.1
comp=Z,53nm,0.6s
BILL Bilibino 56.26 9 P **P** **00 05 20.6 -0.7**
BILL IAmb IAmb 00 05 21.4
comp=Z,36nm,0.8s
BILL Bilibino 56.26 9*ce*P **P** **00 05 20.6 -0.7**
BILL pmax pmax
comp=Z,52nm,1.0s
BILL Bilibino 56.26 9 P **P** **00 05 20.6 -0.7**
BILL pP **pP** **00 05 37.4 -1.0**
BILL PcP **PcP** **00 06 18.6 +0.5**
FALS False Pass 57.33 32 P **P** **00 05 28.9 -0.1**
FALS False Pass 57.33 32 P **P** **00 05 30.3 +1.2**
FALS False Pass 57.33 32 P **P** **00 05 29.2 +0.2**
baz=244,SNR=19
WMQ Urumqi 57.53 314 *e*P **P** **00 05 32.0 +1.2**
WMQ PcP **PcP** **00 06 25.1 +1.4**
WMQ S **S** **00 13 24.3 +0.8**
WMQ pmax pmax
comp=Z,33nm,0.9s
WMQ pmax pmax
comp=Z,200nm,5.1s
WMQ LR LR
comp=Z,350nm,24.5s
WMQ LR LR
comp=Z,360nm,24.2s
S12K Black Hills 58.39 32 P **P** **00 05 36.7 +0.1**
S12K Black Hills 58.39 32 P **P** **00 05 36.6 +0.1**
baz=245,SNR=11
GAMB Gambell 58.49 21 P **P** **00 05 37.1 +0.1**
baz=231
M11K Mekoryuk 58.65 26 P **P** **00 05 39.2 +1.0**
M11K IAmb IAmb 00 06 53.5
comp=Z,106nm,1.2s
M11K Mekoryuk 58.65 26 P **P** **00 05 38.6 +0.4**
baz=239
TIXI Tiksi 59.03 354 LR LR 00 32 02.8
comp=Z,44nm,21.2s,baz=200,slow=37
TIXI Tiksi 59.03 354 P **P** **00 05 39.7 -1.0**
TIXI Tiksi 59.03 354*ce*P **P** **00 05 39.7 -1.0**
TIXI pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 59.03 354 PcP **PcP** **00 06 30.3 +1.4**
SDPT Sand Point 59.07 33 P **P** **00 05 41.3 0.0**
SDPT Sand Point 59.07 33 P **P** **00 05 42.0 +0.8**
SDPT Sand Point 59.07 33 P **P** **00 05 41.6 +0.3**
baz=247,SNR=37
DGZ Jazzator, Alta 59.21 320 *i* P **P** **00 05 43.2 +0.6**
DGZ pmax pmax
comp=Z,20nm,0.7s
CNBA Chernabura Isl 59.34 34 P **P** **00 05 43.4 +0.3**
CHNA Chernabura Isl 59.34 34 P **P** **00 05 44.2 +1.1**
CHNA Chernabura Isl 59.34 34 P **P** **00 05 43.5 +0.3**
baz=248,SNR=11
URZ Urewera 59.44 151 LR LR 00 30 17.4
comp=Z,108nm,19.3s,baz=314,slow=35
RTZ Ruatahuna 59.67 151 P **P** **00 05 46.2 +0.5**
M13K Dall Lake 59.89 27 P **P** **00 05 48.0 +1.2**
baz=242,SNR=23
TKNZ Takaka Hill 59.94 156 P **P** **00 05 49.2 +1.8**
K13K Kusilvak Mount 60.09 25 P **P** **00 05 48.9 +0.8**
baz=239
ZSN Zaisan 60.28 317 *e*P **P** **00 05 50.2 +0.3**
ZSN *e*S **S** **00 13 58.9 -0.1**
ZSN Zaisan 60.28 317 *e*P **P** **00 05 50.1 +0.3**
ZSN *e*S **S** **00 13 58.8 -0.2**
O14K Tigyukauivet M 60.30 28 P **P** **00 05 50.3 +0.7**
baz=244
N14K Kuskokwak Cree 60.40 28 P **P** **00 05 51.0 +0.7**
baz=243
L14K Kuka Creek 60.62 26 P **P** **00 05 52.5 +0.8**
baz=242,SNR=54
TCW Tory Channel 60.62 155 P **P** **00 05 54.1 +2.1**
M14K Bethel 60.66 27 P **P** **00 05 52.5 +0.5**
M14K Bethel 60.66 27 P **P** **00 05 53.0 +1.0**
baz=243,SNR=36
MRZ Mangatainoka R 60.71 154 P **P** **00 05 53.7 +1.0**
MRZ IAmb IAmb 00 06 53.5
comp=Z,63nm,1.3s
TNA Tin City 60.87 20 P **P** **00 05 53.9 +0.6**
baz=234
O15K Ungalikthiuk R 60.94 29 P **P** **00 05 54.8 +0.8**
baz=246,SNR=32
J14K Nanvaranak Lak 60.95 24 P **P** **00 05 54.7 +0.8**
baz=240
M15K Kasigluk River 61.19 27 P **P** **00 05 56.1 +0.4**
baz=244,SNR=25
ANM Nome 61.20 22 P **P** **00 05 56.1 +0.4**
ANM IAmb IAmb 00 05 57.2
comp=Z,37nm,0.7s
ANM Nome 61.20 22 P **P** **00 05 56.1 +0.4**
ANM pmax pmax
comp=Z,37nm,0.7s
ANM Nome 61.20 22 P **P** **00 05 56.1 +0.4**
baz=237
N15K Kwethluk River 61.23 28 P **P** **00 05 56.7 +0.7**
baz=245,SNR=43
L15K Ungalak Mounta 61.29 26 P **P** **00 05 56.7 +0.4**
baz=243,SNR=24
KHZ Kahutara 61.35 156 P **P** **00 05 56.7 -0.2**
F14K Arctic Creek 61.36 21 P **P** **00 05 57.0 +0.2**
baz=236
R16K Pilot Point 61.40 31 P **P** **00 05 57.5 +0.4**
baz=249
K15K Wolf Creek Mou 61.55 25 P **P** **00 05 58.8 +0.7**
baz=242,SNR=24
P16K Nushagak River 61.75 29 P **P** **00 05 59.8 +0.4**
P16K Nushagak River 61.75 29 P **P** **00 06 00.4 +1.0**
baz=248,SNR=11
CHIR Chirikof Islan 61.81 33 P **P** **00 06 00.5 +0.6**
CHIR Chirikof Islan 61.81 33 P **P** **00 06 00.8 +0.9**
CHIR Chirikof Islan 61.81 33 P **P** **00 06 01.1 +1.2**
baz=251,SNR=6.9
MK31 Makanchi Array 61.87 316 *i* P **P** **00 06 00.7 +0.1**
MKAR Makanchi Array 61.87 316 P **P** **00 06 01.0 +0.4**
comp=Z,20nm,0.5s,baz=91,slow=7.9,SNR=92
MKAR PcP **PcP** **00 06 41.5 +0.6**
comp=Z,19nm,0.7s,baz=99,slow=5.6,SNR=9.3
MKAR PKiKP **PKiKP** **00 12 53.4 -1.1**
comp=Z,0.5nm,0.6s,baz=223,slow=2.4,SNR=5.3
MKAR LR LR 00 34 19.1
comp=Z,163nm,19.2s,baz=90,slow=37
MKAR PKP2bc **P'P'bc** **00 35 17.2 -3.1**
comp=Z,2.0nm,1.0s,baz=242,slow=2.6,SNR=5.7
comp=Z,20nm,0.5s
MKAR Makanchi Array 61.87 316 P **P** **00 06 00.6 0.0**
MKAR PcP **PcP** **00 06 41.8 +0.9**
G15K Niukluk 61.91 22 P **P** **00 06 01.1 +0.6**
baz=239
O16K Kokvok River B 61.92 29 P **P** **00 06 01.2 +0.6**
baz=247,SNR=31
N16K Nishlik Lake 61.96 28 P **P** **00 06 01.8 +0.9**
baz=246
ZAA0 Zalesovo Array 61.98 324 P **P** **00 06 01.0 -0.1**
ZAA0 IAmb IAmb 00 06 41.6
comp=Z,38nm,0.7s
ZALV Zalesovo Beam 61.98 324 P **P** **00 06 01.1 0.0**
comp=Z,13nm,0.6s,baz=104,slow=6.3,SNR=55
ZALV PKiKP **PKiKP** **00 12 53.6 -0.7**
comp=Z,0.8nm,0.4s,baz=259,slow=2.3,SNR=4.2
ZALV LR LR 00 34 20.6
comp=Z,194nm,18.2s,baz=116,slow=37
ZALV PKP2bc **P'P'bc** **00 35 15.8 -3.9**
comp=Z,0.7nm,0.5s,baz=267,slow=2.7,SNR=5.0
comp=Z,13nm,0.6s
R17L Mt. Peulik Vol 62.03 31 P **P** **00 06 01.5 0.0**
baz=250,SNR=26
PLK4 Peulik 4 62.04 31 P **P** **00 06 01.1 -0.5**
F15K North Star Dit 62.08 21 P **P** **00 06 01.7 +0.2**
F15K IAmb IAmb 00 06 03.0
comp=Z,26nm,0.7s
F15K North Star Dit 62.08 21 P **P** **00 06 01.8 +0.3**
baz=238,SNR=6.7
MAKZ Makanchi 62.09 316 P **P** **00 06 02.0 0.0**
MAKZ IAmb IAmb 00 06 04.4
comp=Z,36nm,0.7s
MAKZ Makanchi 62.09 316 P **P** **00 06 02.0 0.0**
MAKZ pmax pmax
comp=Z,36nm,0.7s
MAKZ Makanchi 62.09 316 P **P** **00 06 02.6 +0.6**
MAKZ pP **pP** **00 06 20.0 +0.3**
MAKZ PcP **PcP** **00 06 41.9 +0.1**
M16K Timber Creek 62.10 27 P **P** **00 06 02.3 +0.5**
baz=246,SNR=26
L16K Owhat River 62.16 26 P **P** **00 06 02.7 +0.5**
L16K IAmb IAmb 00 06 03.6
comp=Z,52nm,0.8s
L16K Owhat River 62.16 26 P **P** **00 06 02.5 +0.4**
baz=245,SNR=24
Q16K King Salmon 62.26 30 P **P** **00 06 02.2 -0.7**
baz=248,SNR=6.2
J16K Anvik River 62.39 24 P **P** **00 06 04.1 +0.4**
baz=243
H16K Elim 62.40 23 P **P** **00 06 03.4 -0.3**
baz=241,SNR=7.0
O17K Koliganek Bris 62.45 29 P **P** **00 06 05.0 +0.9**
baz=248,SNR=62
Q17K Contact Creek 62.49 31 P **P** **00 06 04.0 -0.6**
baz=250,SNR=17
P17K Kvichak River 62.55 30 P **P** **00 06 05.5 +0.7**
baz=249,SNR=9.0
I17K Unalakleet 62.63 24 P **P** **00 06 05.8 +0.6**
I17K IAmb IAmb 00 06 08.0
comp=Z,64nm,0.9s
I17K Unalakleet 62.63 24 P **P** **00 06 05.9 +0.6**
baz=242,SNR=22
N17K Nushagak Hills 62.70 28 P **P** **00 06 07.0 +1.2**
baz=248,SNR=46
ACHA Angle Creek He 62.75 31 IAmb IAmb 00 06 06.8
comp=Z,40nm,0.9s
SII Sitkinak Islan 62.81 33 P **P** **00 06 07.7 +1.1**
baz=252,SNR=22
L17K Donlin 62.84 26 P **P** **00 06 07.6 +0.9**
baz=246
M17K Holitna River 62.92 27 P **P** **00 06 08.3 +1.1**
M17K Holitna River 62.92 27 P **P** **00 06 08.4 +1.1**
baz=247,SNR=50
R18K Karluk 62.98 32 P **P** **00 06 07.6 -0.1**
baz=252
J17K VABM Dome 63.05 25 IAmb IAmb 00 06 10.9
comp=Z,85nm,1.0s
J17K VABM Dome 63.05 25 P **P** **00 06 09.2 +1.1**
baz=244,SNR=29
Q18K Katmai Hardscr 63.06 30 P **P** **00 06 07.8 -0.6**
baz=250,SNR=26
K17K Iditarod 63.09 26 P **P** **00 06 09.2 +0.8**
baz=245
P18K Big Mountain, 63.20 30 P **P** **00 06 08.5 -0.7**
P18K IAmb IAmb 00 06 09.8
comp=Z,53nm,1.1s
P18K Big Mountain, 63.20 30 P **P** **00 06 08.6 -0.7**
baz=250
C16K Lisburne Hills 63.26 18 IAmb IAmb 00 06 10.4
comp=Z,50nm,0.8s
C16K Lisburne Hills 63.26 18 P **P** **00 06 09.2 -0.2**
baz=236,SNR=8.9
SHLS Shalkode 63.31 312 *e*P **P** **00 06 08.3 -2.1**
SHLS Shalkode 63.31 312 *e*P **P** **00 06 08.2 -2.1**
N18K Kilae Creek 63.35 28 P **P** **00 06 11.0 +0.9**
N18K Kilae Creek 63.35 28 P **P** **00 06 11.1 +0.9**
baz=249,SNR=28
O18K Koktuh Hills 63.37 29 P **P** **00 06 10.9 +0.6**
baz=250,SNR=24
G17K Kiwalik Mounta 63.40 22 P **P** **00 06 10.6 +0.2**
baz=242,SNR=15
H17K Granite Mounta 63.42 23 IAmb IAmb 00 06 12.5
comp=Z,38nm,0.8s
H17K Granite Mounta 63.42 23 P **P** **00 06 11.0 +0.5**
baz=243,SNR=25
OHAK Old Harbor 63.48 32 P **P** **00 06 12.0 +1.0**
OHAK Old Harbor 63.48 32 P **P** **00 06 11.9 +1.0**
baz=253,SNR=28
L18K Granite Mounta 63.57 26 IAmb IAmb 00 06 13.8
comp=Z,110nm,1.1s
L18K Granite Mounta 63.57 26 P **P** **00 06 12.7 +1.1**
baz=247,SNR=45
PALK Pallekele 63.66 272 LR LR 00 32 39.2
comp=Z,124nm,20.4s,baz=76,slow=35
PALK Pallekele 63.66 272 P **P** **00 06 12.8 -0.2**
PALK Pallekele 63.66 272 P **P** **00 06 13.2 +0.2**
PALK P **P** **00 06 13.3 +0.2**
PALK Pallekele 63.66 272 P **P** **00 06 12.8 -0.2**
PALK pmax pmax
comp=Z,52nm,1.7s
D17K Noatak River 63.66 20 P **P** **00 06 12.1 0.0**
baz=238,SNR=23
M18K Stony River 63.67 27 P **P** **00 06 13.2 +0.9**
baz=248
E17K Hotham Inlet 63.76 20 P **P** **00 06 13.0 +0.3**
baz=240,SNR=17
SEM Semipalatinsk 63.88 320 *e*P **P** **00 06 13.2 -0.9**
SEM Semipalatinsk 63.88 320 *e*P **P** **00 06 13.1 -0.9**
RDOG Red Dog Mine 63.91 19 IAmb IAmb 00 06 15.2
comp=Z,40nm,0.8s
RDOG Red Dog Mine 63.91 19 P **P** **00 06 13.6 -0.1**
baz=238,SNR=11
KDAK Kodiak Island 64.00 32 LR LR 00 33 20.9
comp=Z,62nm,19.8s,baz=230,slow=35
KDAK Kodiak Island 64.00 32 P **P** **00 06 14.8 +0.3**
KDAK Kodiak Island 64.00 32 *i* P **P** **00 06 13.1 -1.4**
KDAK pmax pmax
comp=Z,164nm,0.9s
KDAK Kodiak Island 64.00 32 P **P** **00 06 15.1 +0.7**
baz=253
RAR Rarotonga 64.01 122 LR LR 00 28 53.0
comp=Z,112nm,21.9s,baz=278,slow=31
PRZ Przheval'sk 64.02 311 P **P** **00 06 15.8 +0.7**
PRZ IAmb IAmb 00 06 19.2
comp=Z,47nm,0.9s
PRZ Przheval'sk 64.02 311 P **P** **00 06 15.8 +0.7**
PRZ pmax pmax
comp=Z,47nm,0.9s
N19K Bonanza Creek 64.04 28 P **P** **00 06 15.8 +1.1**
baz=250,SNR=60
C17K DeLong Mountai 64.04 19 P **P** **00 06 15.3 +0.7**
baz=238
J18K Innoko River 64.05 25 P **P** **00 06 14.8 +0.1**
baz=247,SNR=17
SATY Saty 64.07 311 *e*P **P** **00 06 15.5 +0.1**
SATY Saty 64.07 311 *e*P **P** **00 06 15.5 +0.1**
H18K Honhosa River 64.10 23 P **P** **00 06 15.0 0.0**
baz=244,SNR=35
HYBB Hyderabad (bro 64.15 283 *e*P **P** **00 06 16.3 +0.1**
P19K Oil Pt 64.25 30 P **P** **00 06 16.1 0.0**
baz=252,SNR=25
F18K Selawik 64.28 21 P **P** **00 06 16.0 -0.1**
baz=242,SNR=11
TDK Taldyqorghan 64.28 314 *e*P **P** **00 06 16.9 +0.3**
comp=Z,27nm,0.7s
TDK Taldyqorghan 64.28 314 *e*P **P** **00 06 16.9 +0.3**
TDK pmax pmax
comp=Z,27nm,0.7s
G18K Tagagawik 64.32 22 P **P** **00 06 16.4 0.0**
baz=244,SNR=29
Q20K Shuyak Island 64.34 31 P **P** **00 06 17.0 +0.3**
baz=253,SNR=15
E18K Tukpahlearik C 64.34 20 IAmb IAmb 00 06 18.2
comp=Z,44nm,0.7s
E18K Tukpahlearik C 64.34 20 P **P** **00 06 16.8 +0.3**
baz=241,SNR=27
SYI Shuyak Island 64.34 31 P **P** **00 06 16.1 -0.5**
L19K White Mountain 64.36 27 IAmb IAmb 00 06 19.2
comp=Z,121nm,1.0s
L19K White Mountain 64.36 27 P **P** **00 06 17.5 +0.8**
baz=249,SNR=58
ILSW Iliamna Southw 64.40 29 IAmb IAmb 00 06 19.0
comp=Z,63nm,0.8s
M19K Big River Lodg 64.46 27 P **P** **00 06 18.1 +0.7**
baz=250
GCSA Galena City Sc 64.50 24 P **P** **00 06 17.4 -0.1**
baz=246,SNR=6.3
O20K Slope Mountain 64.67 29 P **P** **00 06 18.7 -0.2**
baz=252
J19K Poorman 64.70 25 IAmb IAmb 00 06 21.2
comp=Z,61nm,0.6s
J19K Poorman 64.70 25 P **P** **00 06 19.5 +0.5**
baz=247,SNR=59
C18K Utukok River 64.76 19 P **P** **00 06 18.9 -0.4**
baz=240
L20K Farewell, AK 64.89 27 IAmb IAmb 00 06 22.2
comp=Z,63nm,0.8s
L20K Farewell, AK 64.89 27 P **P** **00 06 20.9 +0.7**
baz=250,SNR=31
B18K Kokolik River 64.94 18 P **P** **00 06 20.7 +0.4**
baz=239
KURK Kurchatov 64.95 320 P **P** **00 06 20.5 -0.2**
KURK IAmb IAmb 00 06 23.1
comp=Z,41nm,0.8s
KURK Kurchatov 64.95 320 P **P** **00 06 20.9 +0.1**
KURK Kurchatov 64.95 320*ce*P **P** **00 06 20.9 +0.1**
KURK pmax pmax
comp=Z,42nm,0.7s
KURK Kurchatov 64.95 320 P **P** **00 06 20.6 -0.2**
KURK pP **pP** **00 06 37.5 -1.1**
H19K Roundabout Mou 64.99 23 P **P** **00 06 21.3 +0.5**
baz=246
KURBB Kurchatov Arra 64.99 320 P **P** **00 06 20.9 -0.1**
comp=Z,42nm,0.6s,baz=103,slow=6.9,SNR=256
KURBB LR LR 00 34 34.7
comp=Z,385nm,21.6s,baz=164,slow=36
KURBB PKP2bc **P'P'bc** **00 35 09.3 -2.6**
comp=Z,2.2nm,0.9s,baz=287,slow=3.3,SNR=13
comp=Z,42nm,0.6s
G19K Purcell Mounta 65.00 22 P **P** **00 06 21.0 +0.1**
baz=245,SNR=5.3
M20K Styx River 65.01 27 P **P** **00 06 21.9 +0.8**
baz=251
HOM Homer 65.02 30 P **P** **00 06 20.9 -0.1**
baz=253
F19K Shaleruckit Mo 65.05 21 P **P** **00 06 20.6 -0.6**

baz=244
MDOK Medeo 65.07 311 *e*P **P** 00 06 22.0 +0.1
MDOK *e*S **S** 00 14 58.8 -0.6
MDOK Medeo 65.07 311 *e*P **P** 00 06 22.0 +0.1
MDOK *e*S **S** 00 14 58.8 -0.6
K20K Telida 65.11 26 IAmb IAmb 00 06 24.3
comp=Z,88nm,0.8s
K20K Telida 65.11 26 P **P** 00 06 22.7 +1.1
baz=249,SNR=64
TNSS Tian-Shan 65.13 311 *e*P **P** 00 06 22.4 -0.2
TNSS Tian-Shan 65.13 311 *e*P **P** 00 06 22.4 -0.2
AAA Alma-Ata 65.17 312 *e*P **P** 00 06 22.6 +0.1
comp=Z,28nm,0.6s
AAA Alma-Ata 65.17 312 *e*P **P** 00 06 22.5 +0.1
AAA pmax pmax
comp=Z,28nm,0.6s
N20K Mount Spurr 65.22 28 P **P** 00 06 22.4 0.0
baz=252
SPCR Spurr Chakacha 65.22 28 P **P** 00 06 22.3 -0.1
baz=252,SNR=11
J20K Nowinta River 65.38 25 IAmb IAmb 00 06 25.6
comp=Z,88nm,0.7s
J20K Nowinta River 65.38 25 P **P** 00 06 24.1 +0.8
baz=249,SNR=84
I20K Naaghedeneel 65.47 24 P **P** 00 06 24.7 +0.8
baz=248,SNR=18
STLK Strandline Lak 65.48 28 IAmb IAmb 00 06 25.5
comp=Z,53nm,1.0s
BRSE Bradley Lake S 65.48 30 P **P** 00 06 24.1 0.0
baz=254,SNR=22
C19K Lookout Ridge 65.49 19 IAmb IAmb 00 06 25.9
comp=Z,47nm,0.7s
C19K Lookout Ridge 65.49 19 P **P** 00 06 24.4 +0.4
baz=241
E19K Redstone River 65.52 21 P **P** 00 06 24.5 +0.3
baz=244,SNR=35
H20K Anotleneega Mo 65.58 23 P **P** 00 06 24.8 +0.2
baz=248,SNR=38
CAPN Captain Cook N 65.58 29 P **P** 00 06 24.7 +0.1
baz=253
D19K Kuna River 65.68 20 P **P** 00 06 25.1 -0.2
baz=243
PPLA Purkeypile 65.76 26 P **P** 00 06 26.6 +0.6
PPLA Purkeypile 65.76 26 P **P** 00 06 26.4 +0.4
baz=251,SNR=28
SKT Skwentna 65.76 28 P **P** 00 06 25.1 -0.8
SKT IAmb IAmb 00 06 26.5
comp=Z,116nm,1.0s
SKT Skwentna 65.76 28 P **P** 00 06 25.4 -0.4
baz=252,SNR=41
F20K Avaraart Lake 65.88 22 P **P** 00 06 26.8 +0.3
baz=246
SUA Susitna One 65.97 28 P **P** 00 06 26.7 -0.6
SUA IAmb IAmb 00 06 28.5
comp=Z,79nm,0.8s
SUA Susitna One 65.97 28 P **P** 00 06 26.7 -0.6
baz=253,SNR=26
CHUM Lake Minchumin 66.03 25 P **P** 00 06 28.3 +0.8
baz=251,SNR=51
FIS Fire Island 66.12 29 P **P** 00 06 28.7 +0.6
O22K Cooper Landing 66.17 29 P **P** 00 06 28.4 0.0
O22K Cooper Landing 66.17 29 P **P** 00 06 28.8 +0.3
baz=255,SNR=66
IMAR Indian Mountai 66.19 23 P **P** 00 06 29.0 +0.5
SEW Seward 66.20 30 P **P** 00 06 28.4 -0.3
SEW Seward 66.20 30 P **P** 00 06 28.9 +0.3
baz=255,SNR=37
E20K Nigu River 66.22 20 P **P** 00 06 28.9 +0.2
baz=245
D20K Etivluk River 66.27 20 P **P** 00 06 28.9 -0.1
D20K IAmb IAmb 00 06 30.8
comp=Z,83nm,1.1s
D20K Etivluk River 66.27 20 P **P** 00 06 29.1 +0.1
baz=244,SNR=30
RC01 Rabbit Creek A 66.33 29 P **P** 00 06 29.5 0.0
baz=254,SNR=57
M22K Willow 66.34 28 P **P** 00 06 28.9 -0.5
M22K Willow 66.34 28 P **P** 00 06 29.0 -0.5
baz=254,SNR=32
H21K Melozitna Rive 66.44 24 IAmb IAmb 00 06 32.6
comp=Z,41nm,0.8s
H21K Melozitna Rive 66.44 24 P **P** 00 06 30.4 +0.2
baz=250,SNR=38
CUT Chulitna 66.45 27 P **P** 00 06 29.7 -0.5
baz=253,SNR=23
G21K Allakaket 66.48 23 P **P** 00 06 30.5 +0.2
baz=248
I21K Tanana 66.60 24 P **P** 00 06 31.7 +0.6
baz=250
BPAW Bear Paw Mtn. 66.65 25 IAmb IAmb 00 06 33.5
comp=Z,72nm,0.8s
BPAW Bear Paw Mtn. 66.65 25 P **P** 00 06 31.7 +0.1
baz=252,SNR=43
B20K Meade River 66.67 18 P **P** 00 06 31.3 -0.2
baz=243
CTZ Chatham Island 66.68 151 P **P** 00 06 32.3 +0.4
CTZ IAmb IAmb 00 06 35.6
comp=Z,94nm,1.2s
PMR Palmer 66.75 28 P **P** 00 06 31.9 -0.2
PMR Palmer 66.75 28 P **P** 00 06 32.0 -0.2
baz=255,SNR=49
F21K Alatna River 66.75 22 P **P** 00 06 32.0 -0.1
baz=248
TRF Thorofare Moun 66.75 26 IAmb IAmb 00 06 33.1
comp=Z,73nm,0.9s
TRF Thorofare Moun 66.75 26 P **P** 00 06 32.0 -0.4
baz=253,SNR=49
SGDS Segindy 66.85 312 *e*P **P** 00 06 33.4 +0.1
GHO Glory Hole Cre 66.89 28 P **P** 00 06 32.6 -0.5
AAK Ala-Archa 66.91 311 LR LR 00 37 55.2
comp=Z,166nm,19.6s,baz=92,slow=38
AAK Ala-Archa 66.91 311 P **P** 00 06 33.1 -0.7
AAK Ala-Archa 66.91 311 *i* P **P** 00 06 34.2 +0.5
AAK pmax pmax
comp=Z,7.0nm,0.8s
PWL Port Wells 66.93 29 P **P** 00 06 33.6 +0.2
baz=256,SNR=146
KNK Knik Glacier 67.01 29 P **P** 00 06 34.1 +0.2
baz=255,SNR=85
E21K Killik River 67.04 21 P **P** 00 06 33.9 -0.1
baz=247
MLY Manley 67.05 24 P **P** 00 06 34.4 +0.4
baz=252,SNR=91
C21K Knifeblade Rid 67.06 20 P **P** 00 06 34.3 +0.3
baz=246,SNR=8.9
H22K Ishtalitna Cre 67.07 23 P **P** 00 06 34.6 +0.5
baz=251,SNR=16
SML Sawmill 67.17 28 P **P** 00 06 35.2 +0.3
baz=255,SNR=115
P23K Montague Islan 67.18 30 P **P** 00 06 35.5 +0.6
P23K Montague Islan 67.18 30 P **P** 00 06 35.7 +0.8
baz=257,SNR=12
B21K Ikpikpuk River 67.30 19 P **P** 00 06 35.4 0.0
baz=246
F22K John River 67.33 22 P **P** 00 06 36.3 +0.6
baz=249
WAT1 Susitna Watana 67.34 27 P **P** 00 06 35.5 -0.4
baz=255
RND Reindeer 67.36 26 IAmb IAmb 00 06 37.3
comp=Z,62nm,0.9s
MCK McKinley 67.41 26 IAmb IAmb 00 06 37.0
comp=Z,64nm,1.1s
MCK McKinley 67.41 26 P **P** 00 06 35.7 -0.7
baz=254,SNR=20
A21K Barrow 67.42 17 P **P** 00 06 36.0 -0.2
baz=244
M23K Glacier View 67.44 28 P **P** 00 06 36.8 +0.2
baz=256,SNR=56
GLI Glacier Island 67.53 29 P **P** 00 06 36.7 -0.4
GLI Glacier Island 67.53 29 P **P** 00 06 37.4 +0.3
baz=257,SNR=10
Q23K Middleton Isla 67.57 31 P **P** 00 06 37.5 +0.1
baz=258
NEA2 Nenana 67.60 25 P **P** 00 06 37.1 -0.4
baz=254,SNR=40
WAT6 Susitna Watana 67.63 27 P **P** 00 06 37.9 0.0
baz=256,SNR=77
SCM Sheep Creek Mo 67.64 28 P **P** 00 06 38.5 +0.6
baz=256,SNR=87
I23K Minto, Yukon-K 67.64 25 P **P** 00 06 38.2 +0.5
baz=253,SNR=58
D22K Ayikyak River 67.65 20 P **P** 00 06 38.4 +0.6
baz=248
E22K Anaktuvuk Pass 67.68 21 IAmb IAmb 00 06 40.1
comp=Z,55nm,0.8s
E22K Anaktuvuk Pass 67.68 21 P **P** 00 06 38.2 +0.2
baz=250,SNR=48

HIN Hinchinbrook I 67.70 30 P **P** 00 06 38.5 +0.3
A22K Sinclair Lake 67.76 18 P **P** 00 06 38.5 +0.1
baz=245
H23K Yukon River 67.77 24 P **P** 00 06 38.7 +0.2
baz=253
G23K Bananza Creek 67.86 23 P **P** 00 06 39.7 +0.6
baz=252
DHY Denali Highway 67.92 27 IAmb IAmb 00 06 41.6
comp=Z,115nm,1.4s
DHY Denali Highway 67.92 27 P **P** 00 06 39.7 0.0
baz=256,SNR=35
COLD Coldfoot 67.95 22 IAmb IAmb 00 06 41.9
comp=Z,43nm,0.7s
COLD Coldfoot 67.95 22 P **P** 00 06 40.1 +0.4
baz=251,SNR=42
B22K Teshekpuk Lake 67.97 19 IAmb IAmb 00 06 41.4
comp=Z,77nm,0.9s
B22K Teshekpuk Lake 67.97 19 P **P** 00 06 39.4 -0.2
baz=247,SNR=17
WRH Wood River Hil 67.97 25 IAmb IAmb 00 06 40.8
comp=Z,82nm,0.7s
EYAK Cordova Ski Ar 68.10 30 P **P** 00 06 41.4 +0.7
EYAK Cordova Ski Ar 68.10 30 P **P** 00 06 41.6 +0.9
EYAK Cordova Ski Ar 68.10 30 P **P** 00 06 41.1 +0.4
baz=258,SNR=16
COLA College 68.18 25 P **P** 00 06 40.9 -0.2
COLA IAmb IAmb 00 06 44.1
comp=Z,46nm,0.6s
COLA College 68.18 25 P **P** 00 06 41.8 +0.7
COLA College 68.18 25 *i* P **P** 00 06 40.5 -0.6
COLA pmax pmax
comp=Z,35nm,0.7s
COLA College 68.18 25 P **P** 00 06 40.6 -0.5
baz=255
COLA College 68.18 25 P **P** 00 06 40.8 -0.3
COLA pP **pP** 00 06 58.6 +0.1
KLU Klutina 68.22 29 P **P** 00 06 42.2 +0.7
baz=258,SNR=56
M24K Tolsona, Glenn 68.23 28 P **P** 00 06 41.1 -0.5
M24K Tolsona, Glenn 68.23 28 P **P** 00 06 42.3 +0.7
baz=257,SNR=25
D23K Nanushuk River 68.36 20 P **P** 00 06 43.0 +0.8
baz=250
POKR Poker Plat Res 68.41 25 P **P** 00 06 41.8 -0.8
baz=255,SNR=13
H24K Noodor Dome 68.43 24 IAmb IAmb 00 06 44.5
comp=Z,74nm,1.2s
H24K Noodor Dome 68.43 24 P **P** 00 06 43.1 +0.4
baz=254
E23K Chandalar 68.43 22 P **P** 00 06 43.5 +0.8
baz=252
HDA Harding Lake 68.43 26 IAmb IAmb 00 06 43.4
comp=Z,40nm,0.8s
HDA Harding Lake 68.43 26 P **P** 00 06 41.8 -0.9
baz=256,SNR=39
IL31 68.55 25 IAmb IAmb 00 06 43.5
comp=Z,143nm,1.4s
ILAR Eielson Array 68.55 25 P **P** 00 06 42.4 -1.0
comp=Z,28nm,0.6s,baz=251,slow=5.9,SNR=506
ILAR PKPPKP **P'P'df** 00 34 58.5 -1.6
comp=Z,0.5nm,1.0s,baz=116,slow=2.1,SNR=4.2
ILAR LR LR 00 35 10.0
comp=Z,158nm,20.8s,baz=257,slow=34
comp=Z,28nm,0.6s
ILAR Eielson Array 68.55 25 P **P** 00 06 41.9 -1.5
TOLK Toolik Lake Re 68.63 21 P **P** 00 06 44.3 +0.4
baz=252,SNR=18
KAIM Kayak Island 68.63 31 P **P** 00 06 45.1 +1.1
KAIM Kayak Island 68.63 31 P **P** 00 06 44.9 +0.9
baz=260,SNR=12
BRZS Berezniki 68.64 319 *e*P **P** 00 06 44.9 +0.5
BRZS Berezniki 68.64 319 *e*P **P** 00 06 44.8 +0.5
C23K Itkillik River 68.67 20 IAmb IAmb 00 06 46.9
comp=Z,72nm,0.9s
C23K Itkillik River 68.67 20 P **P** 00 06 44.5 +0.3
baz=250,SNR=32
BMRM Bremner River 68.73 29 P **P** 00 06 45.3 +0.6
baz=259,SNR=34
PAX Paxson 68.74 27 IAmb IAmb 00 06 46.1
comp=Z,97nm,0.8s
PAX Paxson 68.74 27 P **P** 00 06 45.0 +0.3
baz=258,SNR=89
HARP HAARP 68.76 28 P **P** 00 06 45.4 +0.6
baz=258,SNR=63
K24K Donnelly Dome 68.79 26 IAmb IAmb 00 06 46.5
comp=Z,92nm,0.8s
K24K Donnelly Dome 68.79 26 P **P** 00 06 44.8 -0.1
baz=257,SNR=38
G24K Hadweenzic Riv 68.82 23 P **P** 00 06 45.6 +0.5
baz=254
E24K Your Creek 68.84 22 P **P** 00 06 45.8 +0.5
baz=253
N25K Chitina, Valde 68.86 29 IAmb IAmb 00 06 47.5
comp=Z,79nm,0.8s
N25K Chitina, Valde 68.86 29 P **P** 00 06 46.5 +0.9
baz=259,SNR=33
F24K Squaw Lake 68.89 22 P **P** 00 06 46.2 +0.7
baz=254
SUCK Suckling Hills 68.97 31 P **P** 00 06 47.1 +1.0
D24K Happy Valley 69.05 20 P **P** 00 06 47.1 +0.6
baz=252
J25K Salcha River, 69.15 26 P **P** 00 06 46.2 -1.0
baz=257
RIDG Independent Ri 69.18 27 IAmb IAmb 00 06 48.6
comp=Z,107nm,1.0s
RIDG Independent Ri 69.18 27 P **P** 00 06 47.5 +0.1
baz=258,SNR=56
BGLC Bering Glacier 69.23 31 P **P** 00 06 47.9 +0.3
baz=261
DZA Taraz 69.24 311 *e*P **P** 00 06 48.3 +0.1
DZA Taraz 69.24 311 *e*P **P** 00 06 48.3 +0.1
C24K Franklin Bluff 69.27 20 P **P** 00 06 48.1 +0.4
baz=252
H25L Birch Creek 69.35 24 P **P** 00 06 48.8 +0.4
baz=256,SNR=25
G25K Bearman Lake 69.36 23 P **P** 00 06 49.0 +0.5
baz=256,SNR=13
CRQE Cirque 69.42 30 P **P** 00 06 49.8 +0.7
baz=261,SNR=39
SNH Sunshine Point 69.46 30 P **P** 00 06 50.1 +0.9
DOT Dot Lake 69.50 27 IAmb IAmb 00 06 51.0
comp=Z,87nm,0.8s
MENT Mentasta 69.52 27 P **P** 00 06 49.8 +0.3
MENT IAmb IAmb 00 06 51.2
comp=Z,56nm,0.9s
TGL Tana Glacier 69.55 30 IAmb IAmb 00 06 51.6
comp=Z,128nm,1.0s
MCARA McCarthy VSAT 69.56 29 P **P** 00 06 50.3 +0.5
baz=260,SNR=39
SCRK Sand Creek 69.60 26 IAmb IAmb 00 06 51.2
comp=Z,71nm,1.1s
SCRK Sand Creek 69.60 26 P **P** 00 06 50.0 -0.1
baz=258,SNR=51
L26K Log Cabin Wild 69.70 27 IAmb IAmb 00 06 52.3
comp=Z,84nm,0.8s
L26K Log Cabin Wild 69.70 27 P **P** 00 06 51.2 +0.6
baz=260,SNR=67
F25K Christian Rive 69.75 22 P **P** 00 06 51.8 +0.9
baz=256,SNR=43
M26K Nabesna, AK 69.75 28 P **P** 00 06 51.1 +0.1
baz=260
KK31 Karatay Array 69.85 311 P **P** 00 06 52.2 +0.3
KK31 Karatay Array 69.85 311 P **P** 00 06 52.2 +0.3
KK31 pmax pmax
comp=Z,27nm,0.9s
KKAR Karatay Array 69.85 311 P **P** 00 06 51.6 -0.3
KKAR Karatay Array 69.85 311 P **P** 00 06 51.6 -0.3
J26L Joseph Creek 69.89 26 IAmb IAmb 00 06 53.0
comp=Z,141nm,1.4s
J26L Joseph Creek 69.89 26 P **P** 00 06 51.9 0.0
baz=259
MESA MESA 69.89 31 P **P** 00 06 53.2 +1.1
baz=262,SNR=25
E25K Arctic Village 69.90 22 P **P** 00 06 52.6 +0.8
baz=256,SNR=22
D25K Kavik River 69.93 21 IAmb IAmb 00 06 55.2
comp=Z,57nm,0.8s
D25K Kavik River 69.93 21 P **P** 00 06 52.3 +0.3
baz=254
BMAR Burnt Mountain 70.10 23 P **P** 00 06 53.4 +0.4
BARN Barnard Glacie 70.16 30 IAmb IAmb 00 06 55.6
comp=Z,76nm,0.8s
IUG luzhnay 70.20 310 *e*P **P** 00 06 54.5 +0.3
IUG luzhnay 70.20 310 *e*P **P** 00 06 54.5 +0.3
I26K Coal Creek Min 70.21 25 P **P** 00 06 52.9 -0.8
baz=259,SNR=18
M27K Edge Creek, AK 70.25 28 IAmb IAmb 00 06 55.9

comp=Z,84nm,0.8s
M27K Edge Creek, AK 70.25 28 P **P** 00 06 54.6 +0.5
baz=261
BVAR Borovoye Array 70.29 322 P **P** 00 06 54.9 +0.5
comp=Z,40nm,0.4s,baz=104,slow=7.5,SNR=112
BVAR LR LR 00 38 07.9
comp=Z,260nm,21.8s,baz=92,slow=36
comp=Z,40nm,0.4s
G26K Porcupine Rive 70.30 23 P **P** 00 06 54.9 +0.8
baz=258
CTG Chitna Glacier 70.30 30 P **P** 00 06 55.5 +1.0
baz=262,SNR=69
F26K Sheenjek River 70.33 22 P **P** 00 06 55.3 +0.9
baz=257,SNR=36
BORK Borovoye 70.33 322 *ce*P **P** 00 06 54.8 +0.1
BORK pmax pmax
comp=Z,37nm,0.6s
BORK Borovoye 70.33 322 P **P** 00 06 54.5 -0.2
BORK pP **pP** 00 07 11.8 -0.6
BORK PcP **PcP** 00 07 15.8 -0.1
BRLS Borolday 70.34 311 *e*P **P** 00 06 55.8 +0.9
BRLS Borolday 70.34 311 *e*P **P** 00 06 55.8 +0.9
L27K Beaver Creek, 70.39 28 P **P** 00 06 55.5 +0.6
baz=261
BCAR Beaver Creek A 70.41 28 P **P** 00 06 55.3 +0.3
K27K Chicken 70.44 26 P **P** 00 06 55.9 +0.8
baz=260
CHM Chimkent 70.52 310 *e*P **P** 00 06 56.4 +0.3
CHM Chimkent 70.52 310 *e*P **P** 00 06 56.3 +0.3
C26K Camden Bay 70.58 20 P **P** 00 06 57.1 +1.2
baz=256
PINM Pinnacle 70.73 31 P **P** 00 06 57.8 +0.8
baz=263,SNR=18
BVCY Beaver Creek 70.73 28 P **P** 00 06 57.8 +0.9
baz=262,SNR=43
YUK3 Moose Creek 70.83 29 P **P** 00 06 58.5 +0.7
baz=263,SNR=67
O28M Mount Upton 70.84 30 P **P** 00 06 58.9 +1.0
baz=264
I27K Kandik River 70.90 25 P **P** 00 06 58.1 +0.1
baz=260
C27K Jago River 70.92 21 P **P** 00 06 58.5 +0.6
baz=257
CHGR Chuyangaron 70.94 306 P **P** 00 06 58.6 -0.2
CHGR IAmb IAmb 00 07 19.9
comp=Z,64nm,0.9s
CHGR Chuyangaron 70.94 306 P **P** 00 06 58.6 -0.2
CHGR pmax pmax
comp=Z,65nm,0.9s
BCPM Bancas Point 71.02 31 P **P** 00 06 59.2 +0.6
BCPM IAmb IAmb 00 07 00.7
comp=Z,113nm,1.0s
H27K Steamboat Moun 71.04 24 IAmb IAmb 00 07 00.6
comp=Z,192nm,1.5s
H27K Steamboat Moun 71.04 24 P **P** 00 06 59.5 +0.7
baz=260,SNR=65
G27K Doyon Strip 71.10 24 P **P** 00 06 59.7 +0.6
baz=260,SNR=18
YUK8 Steele Glacier 71.10 30 P **P** 00 07 00.7 +1.2
baz=263,SNR=50
PNL Peninsula 71.11 31 P **P** 00 07 00.4 +1.1
baz=264,SNR=8.8
KBL Kabul 71.24 302 P **P** 00 07 02.0 +1.2
KBL Kabul 71.24 302 P **P** 00 07 02.4 +1.6
KBL Kabul 71.24 302 P **P** 00 07 02.0 +1.2
KBL pmax pmax
comp=Z,20nm,0.7s
PPT Papeete 71.30 114 LR LR 00 31 06.1
comp=Z,161nm,20.8s,baz=267,slow=30
E27K Coleen River 71.37 22 P **P** 00 07 01.3 +0.6
baz=259,SNR=33
I28M Miner Creek 71.57 25 P **P** 00 07 02.5 +0.5
baz=262
O29M Mount Kennedy 71.58 31 P **P** 00 07 03.2 +1.0
O29M Mount Kennedy 71.58 31 P **P** 00 07 03.8 +1.5
baz=265,SNR=44
DAWY Dawson 71.61 27 IAmb IAmb 00 07 04.1
comp=Z,83nm,1.1s
DAWY Dawson 71.61 27 P **P** 00 07 03.1 +0.8
baz=263,SNR=51
YUK4 Talbot Arm 71.65 30 P **P** 00 07 04.4 +1.7
baz=264,SNR=57
YUK6 Outpost Mounta 71.75 30 P **P** 00 07 04.6 +1.3
baz=265,SNR=20
D27M Malcolm River 71.79 21 P **P** 00 07 03.9 +0.7
baz=260
M29M Somme Creek 71.84 28 P **P** 00 07 04.9 +1.2
baz=264,SNR=68
F28M Old Crow 71.92 23 P **P** 00 07 04.6 +0.6
baz=261,SNR=34
P29M Windy Craggy 71.94 31 P **P** 00 07 05.9 +1.6
baz=266
L29M L29M 72.06 28 P **P** 00 07 06.3 +1.3
baz=264,SNR=89
HYT Haines Junctio 72.15 30 P **P** 00 07 07.0 +1.3
baz=266,SNR=76
E28M Babbage River 72.19 22 P **P** 00 07 06.5 +0.9
baz=261,SNR=26
H29M Whitestone 72.31 24 P **P** 00 07 06.8 +0.5
baz=263
P30M Million Dollar 72.37 31 P **P** 00 07 08.4 +1.5
baz=266
N30M Aishikik Lake 72.40 29 P **P** 00 07 08.2 +1.2
baz=266
K29M Barlow Dome 72.41 27 IAmb IAmb 00 07 09.3
comp=Z,93nm,0.9s
K29M Barlow Dome 72.41 27 P **P** 00 07 08.2 +1.1
baz=265,SNR=81
G29M Pine Creek 72.53 24 P **P** 00 07 08.5 +0.8
baz=263
D28M Stokes Point 72.59 21 P **P** 00 07 08.3 +0.4
baz=262
M30M Minto, Yukon 72.63 28 IAmb IAmb 00 07 10.5
comp=Z,63nm,0.9s
M30M Minto, Yukon 72.63 28 P **P** 00 07 09.3 +1.0
baz=266,SNR=40
S31K Pelican 72.63 33 P **P** 00 07 09.3 +1.0
S31K IAmb IAmb 00 07 14.1
comp=Z,220nm,1.7s
S31K Pelican 72.63 33 P **P** 00 07 08.6 +0.3
baz=268
PLBC Pleasant Camp 72.63 32 P **P** 00 07 09.8 +1.5
baz=267,SNR=28
E29M Blow River 72.76 22 P **P** 00 07 09.2 +0.3
baz=263
O30N Mennenhall 72.84 30 P **P** 00 07 10.6 +0.9
baz=267,SNR=14
EPYK Eagle Plains 72.99 24 IAmb IAmb 00 07 13.0
comp=Z,116nm,1.4s
EPYK Eagle Plains 72.99 24 P **P** 00 07 10.8 +0.4
baz=264,SNR=22
J30M Hart River 72.99 26 IAmb IAmb 00 07 14.1
comp=Z,56nm,1.0s
J30M Hart River 72.99 26 P **P** 00 07 11.5 +0.9
baz=265,SNR=41
I30M Mount Dempster 73.03 26 P **P** 00 07 11.1 +0.3
baz=265,SNR=15
N31M Braeburn, Yuko 73.03 29 IAmb IAmb 00 07 13.2
comp=Z,131nm,1.0s
N31M Braeburn, Yuko 73.03 29 P **P** 00 07 12.1 +1.3
baz=267,SNR=30
SIT Sitka 73.09 34 P **P** 00 07 12.2 +1.2
baz=269
MAYO Mayo, Yukon 73.11 27 P **P** 00 07 12.0 +0.9
MAYO Mayo, Yukon 73.11 27 P **P** 00 07 12.4 +1.2
baz=266,SNR=16
SKAG Skagway 73.16 32 P **P** 00 07 12.6 +1.2
SKAG IAmb IAmb 00 07 14.0
comp=Z,80nm,0.9s
SKAG Skagway 73.16 32 P **P** 00 07 13.0 +1.6
baz=268,SNR=9.0
G30M tAoh Zraii Nji 73.24 24 P **P** 00 07 12.1 +0.2
baz=265
BESE Bessie Mountai 73.38 33 P **P** 00 07 13.6 +0.7
BESE IAmb IAmb 00 07 15.3
comp=Z,134nm,1.1s
WHY Whitehorse 73.43 30 P **P** 00 07 14.3 +1.1
WHY Whitehorse 73.43 30 P **P** 00 07 14.5 +1.3
baz=268,SNR=40
F30M Barrier River 73.47 23 P **P** 00 07 13.7 +0.5
baz=265
S32K Killisnoo 73.50 34 P **P** 00 07 13.9 +0.5
S32K IAmb IAmb 00 07 15.9
comp=Z,98nm,1.1s
S32K Killisnoo 73.50 34 P **P** 00 07 14.7 +1.2
baz=269,SNR=6.4
R32K Eaglecrest 73.55 33 P **P** 00 07 14.6 +0.8

R32K IAmb IAmb 00 07 16.2
comp=Z,94nm,0.9s
R32K Eaglecrest 73.55 33 P P 00 07 15.1 +1.3
baz=269,SNR=16
JIS Juneau Island 73.62 33 P P 00 07 15.9 +1.8
M31M Drury Creek, Y 73.72 29 IAmb IAmb 00 07 16.6
comp=Z,58nm,0.8s
M31M Drury Creek, Y 73.72 29 P P 00 07 15.6 +0.8
baz=268,SNR=29
H31M Peel River 73.91 25 P P 00 07 16.3 +0.5
baz=267
P32M Atlin 73.99 32 IAmb IAmb 00 07 18.7
comp=Z,106nm,1.0s
P32M Atlin 73.99 32 P P 00 07 17.4 +1.0
baz=269,SNR=18
G31M Satah River 74.00 24 IAmb IAmb 00 07 19.2
comp=Z,117nm,1.1s
G31M Satah River 74.00 24 P P 00 07 16.5 +0.2
baz=267,SNR=48
F31M Tsiigehtchic 74.24 23 P P 00 07 17.6 -0.1
baz=267,SNR=15
U33K Whale Pass 74.30 35 P P 00 07 18.9 +0.7
U33K Whale Pass 74.30 35 P P 00 07 19.7 +1.6
baz=271,SNR=9.5
CRAG Craig 74.31 36 P P 00 07 19.8 +1.6
baz=271
N32M Quiet Lake 74.32 30 P P 00 07 19.4 +1.1
baz=269
INK Inuvik 74.37 22 LR LR 00 41 20.0
comp=Z,32nm,19.4s,baz=325,slow=37
INK Inuvik 74.37 22 P P 00 07 18.3 -0.1
baz=267,SNR=26
T33K Petersburg 74.39 34 P P 00 07 19.6 +0.9
baz=271
P33M Teslin, Yukon 74.44 31 P P 00 07 18.6 -0.5
P33M IAmb IAmb 00 07 21.2
comp=Z,60nm,1.0s
P33M Teslin, Yukon 74.44 31 P P 00 07 20.1 +1.0
baz=270,SNR=27
Q32M Nakina River 74.73 32 IAmb IAmb 00 07 23.6
comp=Z,172nm,1.4s
Q32M Nakina River 74.73 32 P P 00 07 22.3 +1.4
baz=271,SNR=12
WRAK Wrangell Islan 74.73 35 P P 00 07 21.5 +0.8
WRAK Wrangell Islan 74.73 35 P P 00 07 22.3 +1.6
baz=271,SNR=11
DIB Dawson Inlet, 74.75 38 P P 00 07 21.3 +0.5
DIB IAmb IAmb 00 07 23.4
comp=Z,128nm,1.0s
V35K Ketchikan 75.17 36 P P 00 07 24.1 +0.8
V35K IAmb IAmb 00 07 25.6
comp=Z,90nm,1.1s
V35K Ketchikan 75.17 36 P P 00 07 24.4 +1.2
baz=272,SNR=5.2
S34M Telegraph Cree 75.35 33 P P 00 07 26.1 +1.8
baz=272,SNR=39
R33M Jennings River 75.39 32 P P 00 07 26.2 +1.6
baz=272,SNR=55
T35M Bob Quinn 75.86 34 P P 00 07 28.9 +1.6
baz=273,SNR=34
DLBC Dease Lake 75.91 33 LR LR 00 35 26.0
comp=Z,93nm,21.3s,baz=252,slow=31
DLBC Dease Lake 75.91 33 P P 00 07 29.3 +1.7
baz=273,SNR=52
SVE Sverdlovsk 75.95 326 *eP* **P 00 07 27.8 +0.1**
SVE pmax pmax
comp=Z,45nm,1.0s
WTLY Watson Lake, Y 76.46 31 P P 00 07 32.1 +1.5
baz=273,SNR=57
HRA Herat 76.85 303 P P 00 07 34.3 +0.8
A36M Sachs Harbour 77.18 19 IAmb IAmb 00 07 35.4
comp=Z,43nm,0.7s
A36M Sachs Harbour 77.18 19 P P 00 07 34.1 -0.2
baz=274,SNR=39
ARTI Arti 77.22 325 LR LR 00 44 12.9
comp=Z,173nm,18.5s,baz=82,slow=38
ARTI Arti 77.22 325 P P 00 07 34.7 -0.2
ARTI Arti 77.22 325 *c i*P **P 00 07 34.5 -0.4**
ARTI *PP **pP 00 07 54.9 +2.0**
ARTI S **S 00 17 19.3 +0.3**
ARTI SS **SS 00 22 11.8 -5.9**
ARTI pmax pmax
comp=Z,26nm,0.7s
ARTI Arti 77.22 325 P **P 00 07 34.4 -0.5**
ARTI PcP **PcP 00 07 44.8 -0.6**
BBB Bella Bella 77.46 39 LR LR 00 34 40.7
comp=Z,171nm,21.7s,baz=254,slow=30
C36M Paulatuk 77.78 21 P P 00 07 37.4 -0.3
baz=275,SNR=32
LIRD Liard River Hi 77.87 32 P P 00 07 39.8 +1.3
baz=276,SNR=12
AKTO Aktyubinsk 78.04 319 P P 00 07 38.7 -0.8
comp=Z,15nm,0.7s,baz=64,slow=5.0,SNR=14
AKTO LR LR 00 43 01.4
comp=Z,258nm,20.3s,baz=92,slow=36
comp=Z,15nm,0.7s
TOAD Toad River Com 78.38 32 P P 00 07 41.9 +0.5
baz=277,SNR=22
WRGLY Wrigley 78.70 27 P P 00 07 43.6 +0.7
WRGLY Wrigley 78.70 27 P P 00 07 43.8 +0.9
baz=277,SNR=30
KOTAN Kotaneelee Air 78.82 31 P P 00 07 44.7 +1.0
baz=277,SNR=78
CBB Campbell River 79.44 41 P P 00 07 48.2 +1.0
CBB IAmb IAmb 00 07 50.2
comp=Z,100nm,1.3s
NLWA Neilton Lookou 80.84 43 P P 00 07 56.6 +1.7
NLWA IAmb IAmb 00 07 58.1
comp=Z,85nm,0.8s
PGC Sidney 80.90 42 P P 00 07 56.1 +1.0
PGC IAmb IAmb 00 07 57.7
comp=Z,61nm,0.8s
WISH Wishkah 80.95 44 P P 00 07 56.2 +0.8
B04A Port Angeles 80.97 43 P P 00 07 55.5 0.0
B04A IAmb IAmb 00 07 58.5
comp=Z,68nm,0.7s
E03A Lebam 81.19 44 P P 00 07 58.0 +1.3
KEBM Edson Butte 81.29 48 P P 00 07 58.5 +1.0
KEBM IAmb IAmb 00 08 00.6
comp=Z,112nm,1.0s
F03A Seaside 81.30 45 P P 00 07 58.5 +1.1
A04D Lummi Island 81.37 42 P P 00 07 59.0 +1.4
A04D IAmb IAmb 00 10 02.0
comp=Z,71nm,0.9s
I02E Swisshome, OR 81.42 47 P P 00 07 58.9 +0.9
I02E IAmb IAmb 00 08 01.0
comp=Z,97nm,0.9s
KBO Bosley Butte 81.49 49 P P 00 07 59.4 +0.8
KBO IAmb IAmb 00 08 01.8
comp=Z,68nm,1.1s
GNW Green Mountain 81.50 43 P P 00 08 00.4 +2.0
GNW IAmb IAmb 00 08 01.3
comp=Z,70nm,0.8s
J01E Myrtle Point 81.53 48 P P 00 07 59.5 +0.8
LLLB Lillooet 81.55 40 P P 00 07 59.0 +0.3
LLLB IAmb IAmb 00 08 01.3
comp=Z,88nm,1.3s
G03D McMinnville, O 81.63 46 P P 00 08 00.5 +1.4
G03D IAmb IAmb 00 08 01.9
comp=Z,83nm,0.8s
F04D Rainier, OR 81.65 45 P P 00 07 59.9 +0.7
F04D IAmb IAmb 00 08 02.0
comp=Z,73nm,1.0s
KIRV Kirov 81.68 328 LR LR 00 46 34.8
comp=Z,196nm,19.8s,baz=78,slow=37
KIRV Kirov 81.68 328 *i*P **P 00 07 58.8 -0.2**
COR Corvallis 81.72 46 P P 00 08 00.6 +1.0
COR Corvallis 81.72 46 P P 00 08 00.6 +1.0
COR pmax pmax
comp=Z,339nm,1.8s
COR Corvallis 81.72 46 P P 00 08 01.8 +2.2
KSXB Camp Six Broad 81.81 49 P P 00 08 01.5 +1.2
KSXB IAmb IAmb 00 08 03.4
comp=Z,70nm,1.2s
KRPM Rodgers 81.83 50 P P 00 08 01.3 +1.0
KRPM IAmb IAmb 00 08 03.8
comp=Z,75nm,1.1s
I03D Drain, OR 81.85 47 P P 00 08 01.0 +0.7
I03D IAmb IAmb 00 08 03.2
comp=Z,91nm,1.1s
KMPM Mount Pierce 81.89 50 P P 00 08 02.6 +1.9
KMPM IAmb IAmb 00 08 04.1
comp=Z,81nm,1.0s
L02F Cave Junction 81.99 49 P P 00 08 02.4 +1.3
L02F IAmb IAmb 00 08 04.0
comp=Z,51nm,1.0s

BUCK Buck Mountain 82.02 47 P P 00 08 02.5 +1.3
KHMM Horse Mountain 82.10 50 P P 00 08 02.4 +0.6
KHMM IAmb IAmb 00 08 05.2
comp=Z,70nm,0.9s
H04D Lebanon 82.13 46 P P 00 08 02.7 +1.0
H04D IAmb IAmb 00 08 04.7
comp=Z,91nm,1.0s
D05A Enumclaw 82.13 43 P P 00 08 02.6 +0.9
D05A IAmb IAmb 00 08 04.6
comp=Z,59nm,0.8s
G04A Mulino 82.18 45 P P 00 08 03.4 +1.4
KMRM Mail Ridge 82.24 51 P P 00 08 03.0 +0.5
KMRM IAmb IAmb 00 08 06.0
comp=Z,80nm,1.2s
SMDO Samad 82.33 292 P P 00 08 03.0 -0.3
LON Longmire 82.34 44 P P 00 08 03.4 +0.5
LON Longmire 82.34 44 P P 00 08 03.4 +0.5
LON pmax pmax
comp=Z,60nm,1.5s
KCPM Cahto Peak 82.44 51 P P 00 08 04.8 +1.1
KCPM IAmb IAmb 00 08 06.7
comp=Z,79nm,0.7s
H04A Detroit Lake 82.48 46 P P 00 08 04.4 +0.8
H04A IAmb IAmb 00 08 05.9
comp=Z,74nm,0.8s
BBOR Butler Butte 82.49 48 P P 00 08 05.0 +1.1
I04A Tendick Farm, 82.50 47 P P 00 08 04.8 +1.0
I04A IAmb IAmb 00 08 06.1
comp=Z,75nm,1.0s
KHBM Hayfork Bally 82.52 50 P P 00 08 05.5 +1.3
M02C Callahan 82.65 49 P P 00 08 05.6 +0.9
M02C IAmb IAmb 00 08 07.8
comp=Z,63nm,1.1s
DCMP DeCamp, Califo 82.67 51 P P 00 08 05.5 +0.8
DCMP IAmb IAmb 00 08 12.4
comp=Z,65nm,1.3s
YBH Yreka Blue Hor 82.69 49 LR LR 00 38 02.3
comp=Z,12nm,21.2s,baz=284,slow=31
YBH Yreka Blue Hor 82.69 49 IAmb IAmb 00 08 07.8
comp=Z,62nm,0.9s
HOOD Mount Hood Mea 82.73 45 P P 00 08 06.4 +1.3
HOOD IAmb IAmb 00 08 07.5
comp=Z,65nm,0.9s
YKAW3 Yellowknife Wh 82.81 27 IAmb IAmb 00 08 06.2
comp=Z,82nm,0.8s
MHTO MHTO 82.81 290 P P 00 08 05.3 -0.4
SNR=7.3
YKA Yellowknife Ar 82.83 27 P P
comp=Z,47nm,0.7s,baz=240,slow=8.2,SNR=143
YKA LR LR 00 44 00.6
comp=Z,128nm,21.1s,baz=294,slow=35
comp=Z,47nm,0.7s
YKA Yellowknife Ar 82.83 27 P P 00 08 05.0 0.0
N02D Trinity Center 82.84 50 IAmb IAmb 00 08 08.7
comp=Z,144nm,1.6s
YKAW1 Yellowknife Wh 82.88 27 IAmb IAmb 00 08 06.7
comp=Z,83nm,0.8s
L04D Klamath Falls 82.89 48 IAmb IAmb 00 08 08.5
comp=Z,102nm,1.0s
HOQ Hoqain 82.89 292 P P 00 08 06.7 +0.5
O02D Mt. Diablo Mer 82.94 50 IAmb IAmb 00 08 09.5
comp=Z,116nm,1.4s
HOPS Hopland Field 82.96 52 IAmb IAmb 00 08 09.6
comp=Z,59nm,1.0s
G05A Wamic 82.98 45 IAmb IAmb 00 08 08.7
comp=Z,56nm,0.8s
LTY Liberty 83.00 43 IAmb IAmb 00 08 08.3
comp=Z,39nm,0.8s
BSY Bisya 83.16 292 P P 00 08 09.9 +2.4
GDXM Geysers 83.21 52 P P 00 08 08.9 +1.3
GDXM IAmb IAmb 00 08 10.8
comp=Z,60nm,1.2s
MCCM Marconi Confer 83.28 53 P P 00 08 07.3 -0.5
BANOM Banah 83.33 295 P P 00 08 10.1 +1.7
MXC Moxie City 83.39 44 P P 00 08 09.0 +0.7
MXC IAmb IAmb 00 08 10.7
comp=Z,46nm,0.9s
SHME Shamm 83.44 295 P P 00 08 11.2 +2.3
MNRC McLaughlin Min 83.47 52 IAmb IAmb 00 08 12.6
comp=Z,107nm,1.2s
SOHO SOHO 83.48 293 P P 00 08 10.0 +0.8
CVS Carmenet Viney 83.56 52 IAmb IAmb 00 08 11.8
comp=Z,104nm,1.1s
MASF Masafi 83.56 294 P P 00 08 11.4 +1.8
UOSS Minazif 83.61 294 P P 00 08 10.7 +0.9
UOSS Minazif 83.61 294 P P 00 08 10.7 +0.9
B08A Colville Reser 83.64 42 IAmb IAmb 00 08 11.6
comp=Z,71nm,0.7s
ARQ Araqi 83.65 292 P P 00 08 10.9 +0.8
SNR=7.2
O03E Paynes Creek 83.66 50 IAmb IAmb 00 08 12.1
comp=Z,78nm,1.1s
E07A Sunnyside 83.69 44 IAmb IAmb 00 08 12.3
comp=Z,66nm,0.9s
HATD Hatta, Dubai 83.70 294 P P 00 08 11.7 +1.4
HOPEN Hopen 83.73 348 *eP* **P 00 08 09.7 +0.3**
F07A Phinny Hill Vi 83.79 44 IAmb IAmb 00 08 12.8
comp=Z,34nm,0.7s
ASHO Ashiyiah 83.79 294 P P 00 08 12.4 +1.6
ASHO P **P 00 08 12.4 +1.6**
HATC Hat Creek Radi 83.80 50 IAmb IAmb 00 08 13.2
comp=Z,138nm,1.3s
K05A Summer Lake 83.81 48 IAmb IAmb 00 08 13.5
comp=Z,106nm,1.0s
JRSC Jasper Ridge 83.93 53 IAmb IAmb 00 08 14.7
comp=Z,44nm,0.9s
HAWA Hanford 83.95 44 IAmb IAmb 00 08 13.5
comp=Z,57nm,0.8s
BELG Belogornoye 84.08 322 *i*P **P 00 08 10.2 -1.4**
BELG pmax pmax
comp=Z,34nm,1.4s
FAQ Al Faqa, Dubai 84.19 294 P P 00 08 13.7 +0.9
ALNE Al Ain 84.20 293 P P 00 08 14.0 +1.2
D08A Wollman Farm, 84.21 43 IAmb IAmb 00 08 14.6
comp=Z,43nm,0.7s
SPA0 Spitsbergen Ar 84.27 351 *eP* **P 00 08 13.0 +0.8**
SPITS Spitsbergen Ar 84.27 351 P **P 00 08 12.5 +0.4**
comp=Z,9.2nm,0.7s,baz=101,slow=6.4,SNR=30
SPITS LR LR 00 45 33.7
comp=Z,107nm,21.9s,baz=39,slow=35
comp=Z,9.2nm,0.7s
MHC Mount Hamilton 84.41 53 IAmb IAmb 00 08 16.5
comp=Z,87nm,1.3s
YPT Yellepit 84.41 44 IAmb IAmb 00 08 16.0
comp=Z,46nm,0.8s
KBS Kingsbay 84.42 352 *eP* **P 00 08 13.2 +0.4**
KBS Kingsbay 84.42 352 *i*P **P 00 08 13.5 +0.7**
C09A Chrisman Ranch 84.46 42 IAmb IAmb 00 08 15.8
comp=Z,45nm,0.6s
NOR Nord 84.71 357 *i*P **P 00 08 14.2 -0.1**
NOR IAmb IAmb 00 08 15.9
comp=Z,22nm,1.2s
AJN Ajban 84.77 294 P P 00 08 16.6 +1.0
BEKR Beckworth 84.83 50 IAmb IAmb 00 08 18.1
comp=Z,48nm,0.8s
HULI Fort Hunter Li 85.02 54 IAmb IAmb 00 08 19.9
comp=Z,92nm,1.1s
BBGB Big Mountain B 85.05 54 IAmb IAmb 00 08 25.7
comp=Z,52nm,0.9s
LVZ Lovozero 85.18 339 P P 00 08 16.5 -0.4
LVZ IAmb IAmb 00 08 17.6
comp=Z,39nm,0.9s
LVZ Lovozero 85.18 339 P P 00 08 16.5 -0.4
LVZ pmax pmax
comp=Z,39nm,0.9s
LVZ Lovozero 85.18 339 P P 00 08 16.5 -0.4
comp=Z,54nm,1.0s
MPK Martis Peak 85.21 51 IAmb IAmb 00 08 21.3
comp=Z,77nm,1.1s
PMPB Monarch Peak 85.31 54 IAmb IAmb 00 08 21.9
comp=Z,51nm,1.1s
WVOR Wild Horse Val 85.50 48 IAmb IAmb 00 08 21.6
comp=Z,36nm,0.9s
PKD Bear Valley Ra 85.58 54 IAmb IAmb 00 08 22.3
comp=Z,50nm,0.8s
PNTR Pine Nut 85.58 51 P P 00 08 21.5 +1.8
PNTR IAmb IAmb 00 08 23.6
comp=Z,44nm,0.6s
SHAO Shalim 85.59 287 P P 00 08 20.9 +1.0
PAHR Pah Rah Range 85.60 50 IAmb IAmb 00 08 22.2
comp=Z,53nm,1.2s
APA Apatity 85.75 339 *i*P **P 00 08 17.5 -2.2**
APA *i* 00 11 35.5
WAKR Walker 85.84 52 IAmb IAmb 00 08 24.2
comp=Z,116nm,1.8s
KLMR Klimovskoe 85.87 332 *eP* **P 00 08 18.7 -1.7**

KLMR pmax pmax
comp=Z,53nm,0.8s
KLMR MLR MLR
comp=Z,300nm,17.0s
VADS Vadso 85.91 342 *eP* **P 00 08 19.7 -0.7**
MZR Muzera 86.46 293 P **P 00 08 24.8 +0.7**
RYN Ryan 86.51 51 IAmb IAmb 00 08 26.9
comp=Z,80nm,1.7s
MAK Makhachkala 86.55 313 *eP* **P 00 08 21.9 -2.2**
MAK *e*PP **pP 00 08 42.0 -0.4**
MAK *e*SP **sP 00 08 51.0 +1.4**
MAK *e* 00 11 47.8
MAK *e* 00 18 41.0
MAK *e*SSS SSS 00 28 09.1
MAK pmax pmax
comp=Z,192nm,1.0s
MAK MLR MLR
comp=Z,211nm,18.0s
LHV Little Huntoon 86.61 52 IAmb IAmb 00 08 27.8
comp=Z,75nm,1.6s
NVAR Mina Array Bea 86.72 51 P P 00 08 26.6 +1.2
comp=Z,21nm,0.6s,baz=271,slow=5.4,SNR=140
NVAR PKKPbc **PKKPbc 00 26 21.2 +0.6**
comp=Z,0.6nm,0.5s,baz=50,slow=2.3,SNR=6.1
NVAR LR LR 00 46 21.9
comp=Z,42nm,18.8s,baz=278,slow=35
comp=Z,21nm,0.6s
AKT Akhty 86.77 312 *eP* **P 00 08 22.6 -2.8**
AKT *e*PP **pP 00 08 43.0 -0.7**
AKT *e*SP **sP 00 08 51.6 +0.7**
AKT *e* 00 11 47.1
AKT pmax pmax
comp=Z,29nm,0.7s
GHWR Ruwais 86.78 294 P P 00 08 26.0 +0.4
KEV Kevo 86.79 342 P P 00 08 24.7 0.0
KEV IAmb IAmb 00 08 25.7
comp=Z,52nm,0.8s
KEV Kevo 86.79 342 P P 00 08 24.7 0.0
KEV pmax pmax
comp=Z,52nm,0.8s
KEV Kevo 86.79 342 P P 00 08 24.4 -0.3
DOK Doka 86.85 288 P P 00 08 25.9 -0.2
RBK Rabkut 87.03 287 P P 00 08 27.9 +0.9
TIN Tinemaha, Big 87.12 53 P P 00 08 29.1 +1.9
TIN IAmb IAmb 00 08 30.1
comp=Z,52nm,1.1s
TIN Tinemaha, Big 87.12 53 P P 00 08 29.1 +1.9
TIN pmax pmax
comp=Z,52nm,1.1s
DSP Deep Springs 87.24 52 P P 00 08 28.9 +1.2
DSP IAmb IAmb 00 08 30.7
comp=Z,51nm,1.5s
HAMF Hammerfest 87.27 343 *eP* **P 00 08 26.7 -0.3**
OSI Osito Audit: C 87.34 55 P P 00 08 29.1 +0.9
ARA0 ARCESS Array S 87.36 342 *eP* **P 00 08 27.6 0.0**
ARCES ARCESS Array B 87.36 342 P P 00 08 27.2 -0.3
comp=Z,47nm,0.7s,baz=58,slow=4.7,SNR=101
ARCES PKiKP **PKiKP 00 13 31.4 +0.1**
comp=Z,2.9nm,0.8s,baz=87,slow=1.3,SNR=7.3
ARCES PKKPbc **PKKPbc 00 26 17.5 -2.3**
comp=Z,5.8nm,1.1s,baz=243,slow=4.0,SNR=3.8
ARCES LR LR 00 51 60.0
comp=Z,87nm,18.6s,baz=56,slow=39
comp=Z,47nm,0.7s
ARCES ARCESS Array B 87.36 342 P P 00 08 27.7 +0.2
ARCES IAmb IAmb 00 08 28.7
comp=Z,52nm,0.8s
ARCES ARCESS Array B 87.36 342 P P 00 08 27.7 +0.2
ARCES pmax pmax
comp=Z,52nm,0.9s
CWC Cottonwood Cre 87.39 53 P P 00 08 29.2 +0.6
Q09A Carvers 87.47 51 P P 00 08 30.1 +1.2
Q09A IAmb IAmb 00 08 31.6
comp=Z,73nm,1.3s
TPO Tropico Hills 87.67 55 P P 00 08 31.3 +1.4
TPO IAmb IAmb 00 08 32.7
comp=Z,115nm,1.5s
GRAC Grapevine Rang 87.81 53 P P 00 08 31.8 +1.3
PASC Pasadena Art C 87.88 56 P P 00 08 31.8 +1.0
PASC IAmb IAmb 00 08 33.0
comp=Z,98nm,1.8s
ABTO Aybut 87.91 287 P P 00 08 31.4 +0.2
SNR=9.5
CLC China Lake 87.93 54 P P 00 08 32.0 +1.0
CLC IAmb IAmb 00 08 33.6
comp=Z,33nm,1.1s
CLC China Lake 87.93 54 P P 00 08 32.0 +1.0
CLC pmax pmax
comp=Z,33nm,1.1s
VRH Novokhopyorsk 87.94 322 *eP* **P 00 08 28.7 -1.9**
VRH pmax pmax
comp=Z,125nm,0.7s
LRMC Laurel Mtn Rad 87.95 54 P P 00 08 32.7 +1.4
LRMC IAmb IAmb 00 08 33.8
comp=Z,103nm,1.6s
MPMC Manual Prospec 87.95 54 P P 00 08 32.3 +0.9
MPMC IAmb IAmb 00 08 33.9
comp=Z,62nm,1.3s
TULEG Thule 87.97 8 *i*P **P 00 08 30.3 0.0**
TULEG IAmb IAmb 00 08 32.5
comp=Z,37nm,1.1s
MWC Mount Wilson 87.97 55 P P 00 08 32.0 +0.5
MWC IAmb IAmb 00 08 34.6
comp=Z,65nm,1.4s
MWC Mount Wilson 87.97 55 P P 00 08 32.0 +0.5
MWC pmax pmax
comp=Z,65nm,1.5s
HLID Hailey 88.19 46 IAmb IAmb 00 08 34.8
comp=Z,62nm,0.9s
CCCA Chr Cany lake 88.19 54 P P 00 08 33.4 +1.1
CCCA IAmb IAmb 00 08 35.0
comp=Z,30nm,0.8s
BFSC Mount Baldy Ra 88.29 55 P P 00 08 33.5 +0.6
KTK1 Kautokeino 88.32 342 *eP* **P 00 08 31.2 -0.9**
FURC Furnace Creek, 88.33 53 IAmb IAmb 00 08 35.6
comp=Z,44nm,0.9s
WCT Wildcat Mounta 88.43 53 IAmb IAmb 00 08 36.0
comp=Z,102nm,1.6s
QSM Queen of Sheba 88.46 54 IAmb IAmb 00 08 36.0
comp=Z,27nm,0.8s
GWY Greenwater Val 88.56 53 IAmb IAmb 00 08 36.6
comp=Z,61nm,1.4s
MOS Moscow 88.65 327 *eP* **P 00 08 32.3 -1.6**
MOS *e* 00 08 59.1
MOS pmax pmax
comp=Z,59nm,0.7s
BCYI Bear Canyon 88.66 45 IAmb IAmb 00 08 37.3
comp=Z,49nm,1.0s
TPNV Topopah Spring 88.68 52 IAmb IAmb 00 08 37.3
comp=Z,42nm,1.1s
GSC Goldstone, Bar 88.69 54 IAmb IAmb 00 08 37.3
comp=Z,31nm,0.8s
NEEM North Greenlan 88.81 4 *i*P **P 00 08 34.1 -0.5**
NEEM IAmb IAmb 00 08 34.9
comp=Z,28nm,0.7s
R11B Troy Canyon, C 88.81 51 IAmb IAmb 00 08 38.1
comp=Z,49nm,1.3s
JETT Jettan, Norway 88.82 343 *eP* **P 00 08 34.4 -0.1**
S11A Rachel 88.88 52 IAmb IAmb 00 08 38.4
comp=Z,45nm,1.0s
DLMT Dillon 88.89 44 IAmb IAmb 00 08 37.6
comp=Z,72nm,1.6s
SHOC Shoshone, Teco 88.94 53 IAmb IAmb 00 08 38.4
comp=Z,45nm,1.0s
CPE Camp Elliot 89.09 57 IAmb IAmb 00 08 38.8
comp=Z,41nm,0.8s
LPSR Galich'ya Gora 89.09 324 *eP* **P 00 08 34.7 -1.3**
LPSR pmax pmax
comp=Z,204nm,0.8s
TRO Tromso 89.18 344 *eP* **P 00 08 35.3 -0.8**
DPP Dos Picos Cty 89.19 56 IAmb IAmb 00 08 39.2
comp=Z,26nm,0.8s
VORR Voronezh 89.26 323 *eP* **P 00 08 35.8 -1.0**
VORR pmax pmax
comp=Z,162nm,0.7s
DNR Dunn Ranch,Anz 89.29 56 P **P 00 08 38.7 +1.1**
GNI Garni 89.31 311 LR LR 00 52 36.2
comp=Z,88nm,20.1s,baz=76,slow=38
GNI Garni 89.31 311 P **P 00 08 37.7 +0.1**
GNI IAmb IAmb 00 08 39.4
comp=Z,83nm,1.9s
GNI Garni 89.31 311 *i*P **P 00 08 36.3 -1.3**
GNI pmax pmax
comp=Z,38nm,1.5s
GNI Garni 89.31 311 P **P 00 08 36.9 -0.7**
comp=Z,21nm,1.6s

CCD Concordia, Ant 89.40 186 P **P** **00 08 38.6 +1.2**
PFO Pinyon Flats O 89.42 56 LR LR 00 48 26.1
comp=Z,76nm,18.5s,baz=278,slow=35
PFO Pinyon Flats O 89.42 56 P **P** **00 08 39.4 +1.2**
PFO IAmb IAmb 00 08 40.6
comp=Z,34nm,1.4s
PFO Pinyon Flats O 89.42 56 P **P** **00 08 39.4 +1.2**
PFO pmax pmax
comp=Z,34nm,1.4s
VSR Storozhevoye 89.44 323 *e*P **P** **00 08 34.0 -3.7**
VSR pmax pmax
comp=Z,80nm,0.9s
OBN Obninsk 89.45 327 LR LR 00 51 10.8
comp=Z,205nm,19.5s,baz=134,slow=37
OBN Obninsk 89.45 327 P **P** **00 08 36.4 -1.2**
OBN Obninsk 89.45 327 *c i*P **P** **00 08 36.1 -1.5**
OBN *e**PP **pP** **00 08 56.8 +0.7**
OBN *e**SP **sP** **00 09 02.4 -1.0**
OBN *e* 00 12 08.0
OBN *e*S **SKSac** **00 18 57.4 -4.5**
OBN *e*SS **SS** **00 25 17.2 -1.1**
OBN pmax pmax
comp=Z,61nm,0.7s
OBN MLR MLR
comp=Z,209nm,22.0s
OBN Obninsk 89.45 327 P **P** **00 08 36.8 -0.8**
comp=Z,86nm,1.1s
OBN Obninsk 89.45 327 P **P** **00 08 36.3 -1.2**
VORD Divnogorie 89.46 323 *e*P **P** **00 08 35.1 -2.7**
VORD pmax pmax
comp=Z,60nm,0.9s
BOZ Bozeman (W) 89.46 43 P **P** **00 08 38.7 +0.5**
BOZ Bozeman (W) 89.46 43 P **P** **00 08 38.7 +0.5**
BOZ pmax pmax
comp=Z,19nm,1.0s
PMD Palm Desert 89.47 56 P **P** **00 08 39.0 +0.7**
PMD IAmb IAmb 00 08 40.7
comp=Z,78nm,1.7s
DAG Danmarks Havn 89.47 356 *i*P **P** **00 08 36.3 -1.1**
DAG IAmb IAmb 00 08 37.8
comp=Z,9.3nm,0.7s
PRN Pahroc Range 89.47 52 P **P** **00 08 39.3 +0.9**
PRN IAmb IAmb 00 08 41.4
comp=Z,47nm,1.3s
BAR Barrett 89.49 57 P **P** **00 08 39.5 +1.1**
BORC Borrego Spring 89.54 56 P **P** **00 08 39.2 +0.6**
KBZ Khabaz 89.55 315 P **P** **00 08 37.4 -0.9**
comp=Z,17nm,1.1s,baz=72,slow=2.2,SNR=20
KBZ LR LR 00 53 22.7
comp=Z,81nm,19.0s,baz=62,slow=39
comp=Z,17nm,1.1s
KBZ Khabaz 89.55 315 *i*P **P** **00 08 37.2 -1.2**
KBZ pmax pmax
comp=Z,30nm,1.1s
SPR3 Spring Creek 3 89.56 50 P **P** **00 08 40.1 +1.1**
SPR3 IAmb IAmb 00 08 42.6
comp=Z,47nm,1.0s
CBX Cerro Bola 89.60 57 P **P** **00 08 39.5 +0.4**
CBX IAmb IAmb 00 08 55.7
comp=Z,41nm,1.1s
KVAR Kislovodsk Arr 89.62 315 LR LR 00 50 21.2
comp=Z,94nm,22.0s,baz=270,slow=36
KIV Kislovodsk 89.62 315 P **P** **00 08 38.2 -0.7**
KIV IAmb IAmb 00 08 39.6
comp=Z,39nm,0.9s
KIV Kislovodsk 89.62 315 ⇑P **P** **00 08 38.1 -0.7**
KIV Kislovodsk 89.62 315 *e*P **P** **00 08 37.5 -1.4**
KIV pmax pmax
comp=Z,35nm,1.0s
KIV MLR MLR
comp=Z,75nm,20.0s
KIV Kislovodsk 89.62 315 P **P** **00 08 37.9 -1.0**
comp=Z,35nm,1.1s
MTPC Mountain Pass 89.62 54 P **P** **00 08 40.4 +1.2**
MTPC IAmb IAmb 00 08 41.8
comp=Z,77nm,1.7s
SHPR Sheep Range 89.64 53 P **P** **00 08 40.5 +1.3**
SHPR IAmb IAmb 00 08 42.3
comp=Z,47nm,1.6s
BELC Belle Mtn. Jos 89.68 55 P **P** **00 08 40.0 +0.6**
BELC IAmb IAmb 00 08 43.7
comp=Z,20nm,0.6s
SHA1 Shidzhatmaz 89.71 315 *i*P **P** **00 08 38.0 -1.5**
BLKN Baker Lake 89.78 22 IAmb IAmb 00 08 40.0
comp=Z,58nm,1.1s
QLMT Earthquake Lak 89.84 44 P **P** **00 08 41.3 +1.2**
HVU Hansel Valley 89.87 47 P **P** **00 08 41.4 +1.2**
HVU IAmb IAmb 00 08 43.0
comp=Z,50nm,1.0s
HVU Hansel Valley 89.87 47 P **P** **00 08 41.4 +1.2**
HVU pmax pmax
comp=Z,50nm,1.0s
EGMT Eagleton 89.88 40 IAmb IAmb 00 08 42.1
comp=Z,74nm,1.8s
BGU Big Grassy Mou 89.95 48 P **P** **00 08 40.9 +0.4**
DANC Danby, Needles 89.99 54 P **P** **00 08 42.3 +1.5**
DANC IAmb IAmb 00 08 43.6
comp=Z,46nm,0.8s
YHL Hebgen Lake 90.00 44 P **P** **00 08 42.4 +1.5**
YHB Horse Butte 90.03 44 P **P** **00 08 42.4 +1.5**
YHB IAmb IAmb 00 08 44.0
comp=Z,42nm,0.9s
PSUT Pine Spring 90.05 50 P **P** **00 08 41.9 +0.7**
PSUT IAmb IAmb 00 08 43.7
comp=Z,33nm,1.0s
V12A Nelson 90.10 53 P **P** **00 08 42.2 +0.9**
V12A IAmb IAmb 00 08 44.3
comp=Z,41nm,0.9s
YMR Madison River 90.21 44 IAmb IAmb 00 08 45.0
comp=Z,38nm,0.8s
BC3 Big Chuckawall 90.21 55 IAmb IAmb 00 08 45.5
comp=Z,50nm,1.3s
ESJX Sierra Juarez 90.27 57 P **P** **00 08 43.1 +0.9**
IRM Iron Mountain 90.32 55 P **P** **00 08 42.8 +0.6**
IRM IAmb IAmb 00 08 44.9
comp=Z,28nm,1.1s
DUG Dugway, Tooele 90.33 49 IAmb IAmb 00 08 45.4
comp=Z,46nm,0.8s
YNM Yellowstone No 90.37 44 P **P** **00 08 44.9 +2.4**
YFT Old Faithful 90.37 44 P **P** **00 08 45.2 +2.7**
YFT IAmb IAmb 00 08 48.3
comp=Z,35nm,0.9s
YNR Norris Junctio 90.39 44 P **P** **00 08 44.6 +2.0**
YPP Pitchstone Pla 90.45 44 P **P** **00 08 44.2 +1.2**
FXWY Fox Creek 90.50 45 P **P** **00 08 44.5 +1.3**
NEE2 Needles Airpor 90.56 54 P **P** **00 08 44.9 +1.6**
NEE2 IAmb IAmb 00 08 46.1
comp=Z,40nm,0.9s
H17A Grant Village 90.56 44 P **P** **00 08 44.7 +1.3**
H17A IAmb IAmb 00 08 47.8
comp=Z,32nm,1.0s
VTX Valle De La Tr 90.57 58 P **P** **00 08 44.0 +0.5**
FLWY Flagg Ranch 90.58 44 P **P** **00 08 45.1 +1.6**
LKWY Lake 90.62 44 P **P** **00 08 45.6 +1.8**
LKWY IAmb IAmb 00 08 48.2
comp=Z,31nm,1.0s
LKWY Lake 90.62 44 P **P** **00 08 45.6 +1.8**
LKWY pmax pmax
comp=Z,31nm,1.0s
CCUT Cedar City 90.72 51 P **P** **00 08 46.0 +1.7**
CCUT IAmb IAmb 00 08 47.4
comp=Z,38nm,1.4s
YMP Mirror Lake Pl 90.73 44 P **P** **00 08 45.1 +0.8**
AHID Auburn Hatcher 90.74 46 P **P** **00 08 45.0 +0.7**
AHID IAmb IAmb 00 08 46.6
comp=Z,31nm,0.8s
YNE Yellowstone No 90.74 43 P **P** **00 08 45.1 +0.9**
YNE IAmb IAmb 00 11 08.3
comp=Z,23nm,0.9s
SNOW Snow King Moun 90.75 45 P **P** **00 08 45.5 +1.1**
HWUT Hardware Ranch 90.78 47 P **P** **00 08 45.4 +0.9**
HWUT IAmb IAmb 00 08 46.8
comp=Z,55nm,1.1s
LOHW Long Hollow 90.80 45 P **P** **00 08 45.7 +1.2**
MSEY Mahe Island 90.86 265 P **P** **00 08 44.6 -0.6**
MSEY Mahe Island 90.86 265 P **P** **00 08 44.6 -0.6**
MSEY pmax pmax
comp=Z,121nm,2.0s
GLA Glamis 90.88 56 P **P** **00 08 46.3 +1.4**
GLA IAmb IAmb 00 08 47.7
comp=Z,30nm,0.8s
GLA Glamis 90.88 56 P **P** **00 08 46.3 +1.4**
GLA pmax pmax
comp=Z,30nm,0.8s
SZCU Shurtz Canyon 90.91 51 P **P** **00 08 46.1 +0.9**
SZCU IAmb IAmb 00 08 48.0
comp=Z,48nm,1.6s
BLYC Blythe 90.93 55 P **P** **00 08 46.2 +1.2**
BLYC IAmb IAmb 00 08 47.7
comp=Z,26nm,0.8s
CTU Camp Tracy 90.94 48 P **P** **00 08 46.2 +1.0**
CTU IAmb IAmb 00 08 47.5
comp=Z,33nm,1.1s
LCMT Little Creek M 90.97 52 P **P** **00 08 46.9 +1.6**
LCMT IAmb IAmb 00 08 48.4
comp=Z,49nm,1.4s
W13A Hualapai Mount 91.04 54 P **P** **00 08 47.4 +1.5**
W13A IAmb IAmb 00 08 48.7
comp=Z,21nm,1.0s
TCUT Toone Canyon 91.05 47 IAmb IAmb 00 08 48.8
comp=Z,23nm,0.7s
TCRU Three Creeks R 91.08 50 P **P** **00 08 46.5 +0.5**
TCRU IAmb IAmb 00 08 48.8
comp=Z,23nm,1.2s
MPU Maple Canyon 91.24 48 IAmb IAmb 00 08 49.1
comp=Z,33nm,1.3s
VNDA Vanda 91.28 176 P **P** **00 08 46.0 +0.4**
comp=Z,2.7nm,0.9s,baz=313,slow=5.9,SNR=18
VNDA PKKPbc **PKKPdf** **00 26 07.5 -0.3**
comp=Z,1.3nm,0.9s,baz=198,slow=3.2,SNR=7.0
VNDA LR LR 00 50 05.1
comp=Z,30nm,18.3s,baz=339,slow=36
comp=Z,2.7nm,0.9s
STEI Steigen 91.31 343 *e*P **P** **00 08 45.3 -0.8**
SFX San Felipe 91.44 58 P **P** **00 08 48.8 +1.4**
SFX IAmb IAmb 00 08 52.7
comp=Z,23nm,0.9s
MTPU Mount Pierson 91.46 50 P **P** **00 08 49.6 +1.7**
FINES FINESS Array B 91.47 335 P **P** **00 08 45.6 -1.3**
comp=Z,38nm,0.6s,baz=63,slow=4.8,SNR=225
FINES LR LR 00 52 58.8
comp=Z,87nm,18.1s,baz=48,slow=38
comp=Z,38nm,0.6s
FINES FINESS Array B 91.47 335 P **P** **00 08 45.4 -1.5**
FINES FINESS Array B 91.47 335 *i*P **P** **00 08 45.5 -1.4**
FINES pmax pmax
comp=Z,38nm,0.6s
KHAM Kharkiv 91.62 322 P **P** **00 08 46.9 -1.1**
LOF Lofoten 91.64 344 *e*P **P** **00 08 45.5 -2.1**
FAUS Fauske 91.66 343 *e*P **P** **00 08 47.0 -0.7**
FFC Flin Flon 91.74 32 P **P** **00 08 48.7 +0.3**
FFC Flin Flon 91.74 32 P **P** **00 08 48.7 +0.3**
FFC pmax pmax
comp=Z,54nm,1.0s
TMUT Trail Mountain 91.78 49 IAmb IAmb 00 10 02.5
comp=Z,18nm,0.7s
GURO Guroymak-BITLI 91.80 310 IAmb IAmb 00 08 49.9
comp=Z,31nm,0.8s
PDAR Pinedale Array 91.81 45 P **P** **00 08 49.9 +0.6**
comp=Z,6.0nm,0.7s,baz=239,slow=2.8,SNR=60
PDAR LR LR 00 43 13.1
comp=Z,50nm,20.1s,baz=294,slow=31
comp=Z,6.0nm,0.7s
U15A North Rim 91.88 52 IAmb IAmb 00 08 52.7
comp=Z,30nm,1.2s
Q16A Castle Valley 91.93 49 IAmb IAmb 00 08 52.7
comp=Z,45nm,1.3s
SBA Scott Base 91.93 176 P **P** **00 08 51.9 +3.3**
SBA IAmb IAmb 00 09 06.4
comp=Z,23nm,1.4s
SBA Scott Base 91.93 176 P **P** **00 08 51.9 +3.3**
SBA pmax pmax
comp=Z,23nm,1.4s
DBG Daneborg 91.97 356 *i*P **P** **00 08 48.4 -0.6**
DBG IAmb IAmb 00 08 54.0
comp=Z,26nm,1.7s
P17A Butcher Ranch, 92.07 49 IAmb IAmb 00 08 53.0
comp=Z,32nm,1.3s
Y14A Wickenburg 92.08 55 IAmb IAmb 00 08 53.2
comp=Z,24nm,0.8s
SRU San Rafael Swe 92.35 49 IAmb IAmb 00 08 54.8
comp=Z,17nm,0.9s
KOPT Kop Dagi 92.44 312 IAmb IAmb 00 08 53.9
comp=Z,27nm,1.0s
RDMU Red Mountain 92.55 47 IAmb IAmb 00 08 55.5
comp=Z,30nm,0.9s
HMU Henry Mountain 92.57 50 IAmb IAmb 00 08 54.9
comp=Z,29nm,1.3s
RAUS Rausandaksla 92.67 342 *e*P **P** **00 08 51.3 -1.1**
VAGH Vaagaholmen 92.69 343 *e*P **P** **00 08 52.6 +0.2**
MOR8 Moi Rana 92.73 342 *e*P **P** **00 08 50.7 -2.0**
214A Organ Pipe Nat 92.83 56 IAmb IAmb 00 08 56.9
comp=Z,17nm,0.9s
WUAZ Wupatki 92.87 53 IAmb IAmb 00 08 57.3
comp=Z,31nm,1.1s
ANN Anapa 92.87 317 *e*P **P** **00 08 51.9 -1.9**
ANN pmax pmax
comp=Z,50nm,0.8s
ANN MLR MLR
comp=Z,237nm,17.0s
STOK Stokkvaagen 93.04 343 *e*P **P** **00 08 53.4 -0.7**
MARD Mardin 93.14 309 IAmb IAmb 00 08 56.1
comp=Z,34nm,0.9s
LEIR Leirfjorden 93.16 342 *e*P **P** **00 08 54.1 -0.5**
RAYN Ar Rayn 93.43 295 P **P** **00 08 56.5 -0.4**
RAYN Ar Rayn 93.43 295 ⇑P **P** **00 08 56.3 -0.6**
O20A White River Ci 93.65 47 IAmb IAmb 00 09 00.7
comp=Z,21nm,0.9s
PV21 Cone Mtn., Par 93.67 49 IAmb IAmb 00 09 00.0
comp=Z,50nm,1.4s
PV14 Lion Creek, Pa 93.70 49 IAmb IAmb 00 09 00.1
comp=Z,38nm,1.1s
PV05 Paradox Valley 93.74 50 IAmb IAmb 00 09 00.5
comp=Z,38nm,1.4s
PV17 East Wray Mesa 93.78 49 IAmb IAmb 00 09 00.3
comp=Z,30nm,1.1s
PV04 Paradox Valley 93.78 49 IAmb IAmb 00 09 00.5
comp=Z,45nm,1.2s
PV16 Nyswonger Mesa 93.80 49 IAmb IAmb 00 09 00.5
comp=Z,37nm,1.2s
PV22 Blue Mesa, Par 93.82 49 IAmb IAmb 00 09 00.5
comp=Z,22nm,1.3s
PV11 David Mesa, Pa 93.84 49 IAmb IAmb 00 09 01.2
comp=Z,32nm,0.9s
PV03 Paradox Valley 93.87 49 IAmb IAmb 00 09 00.7
comp=Z,29nm,1.2s
PV13 Radium Mtn., P 93.92 49 IAmb IAmb 00 09 00.9
comp=Z,19nm,1.1s
PV02 Paradox Valley 93.97 49 IAmb IAmb 00 09 01.7
comp=Z,30nm,0.9s
PV01 Paradox Valley 94.12 49 IAmb IAmb 00 09 01.8
comp=Z,19nm,1.1s
SUMG Summit 94.16 1 *i*P **P** **00 08 58.5 -1.2**
SUMG IAmb IAmb 00 09 02.7
comp=Z,17nm,1.2s
MNK Minsk 94.22 329 *i*P **P** **00 08 59.0 -0.8**
MNK *i**PP **pP** **00 09 19.4 +1.1**
MNK *i* 00 12 42.8
MNK *i* PPP PPP 00 14 47.9
MNK *i*S **SKSac** **00 19 26.8 -2.0**
MNK *i* *SS **S** **00 20 04.5 -1.0**
MNK *i*SS **SS** **00 26 29.3 +2.5**
MNK *i*SSS SSS 00 30 10.2
MNK pmax pmax
comp=Z,12nm,0.8s
MNK pmax pmax
comp=E,12nm,1.1s
MNK pmax pmax
comp=N,14nm,1.1s
MNK MLR MLR
comp=N,148nm,19.0s
MNK MLR MLR
comp=Z,182nm,19.0s
MNK MLR MLR
comp=E,215nm,18.0s
X18A Snowflake 94.29 53 IAmb IAmb 00 09 03.8
comp=Z,24nm,1.3s
TUC Tucson 94.36 56 P **P** **00 09 03.2 +2.2**
TUC Tucson 94.36 56 P **P** **00 09 03.2 +2.2**
TUC pmax pmax
comp=Z,23nm,1.5s
MVCO Mesa Verde 94.49 50 IAmb IAmb 00 09 04.8
comp=Z,25nm,1.3s
NSS Namsos 94.62 342 *e*P **P** **00 09 00.4 -0.9**
SIM Simferopol' 94.98 318 *e*P **P** **00 09 01.7 -1.8**
SIM pmax pmax
comp=Z,22nm,1.0s
RSSD Black Hills 95.03 43 P **P** **00 09 04.5 +0.5**
RSSD IAmb IAmb 00 09 06.5
comp=Z,56nm,1.6s
RSSD Black Hills 95.03 43 P **P** **00 09 04.5 +0.5**
RSSD pmax pmax
comp=Z,56nm,1.7s
AK03 Malin Array Si 95.36 325 P **P** **00 09 03.5 -1.6**
AKASG Malin Array Be 95.37 325 P **P** **00 09 03.4 -1.8**
comp=Z,6.5nm,0.6s,baz=55,slow=5.1,SNR=21
AKASG LR LR 00 53 44.3
comp=Z,282nm,21.8s,baz=62,slow=36
comp=Z,6.5nm,0.6s
AKASG Malin Array Be 95.37 325 P **P** **00 09 03.7 -1.4**
AKASG Malin Array Be 95.37 325 *i*P **P** **00 09 03.7 -1.4**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 95.37 325 IAmb IAmb 00 09 04.3
comp=Z,12nm,0.7s
AKBB Malin Array Si 95.37 325 *i*P **P** **00 09 03.1 -2.0**
AKBB pmax pmax
comp=Z,12nm,0.7s
AKBB Malin Array Si 95.37 325 P **P** **00 09 03.7 -1.4**
AK09 Malin Array Si 95.38 325 P **P** **00 09 03.8 -1.3**
AK01 Malin Array Si 95.38 325 P **P** **00 09 03.4 -1.8**
KIEV Kiev 95.38 325 P **P** **00 09 03.8 -1.4**
KIEV IAmb IAmb 00 09 04.3
comp=Z,11nm,0.7s
KIEV Kiev 95.38 325 ⇑P **P** **00 09 03.8 -1.4**
KIEV Kiev 95.38 325 ⇑P **P** **00 09 03.8 -1.4**
KIEV Kiev 95.38 325 P **P** **00 09 03.7 -1.5**
comp=Z,90nm,1.9s
AK08 Malin Array Si 95.38 325 P **P** **00 09 03.3 -1.9**
AK04 Malin Array Si 95.39 325 P **P** **00 09 03.6 -1.6**
AK14 Malin Array Si 95.47 325 P **P** **00 09 04.0 -1.6**
AK20 Malin Array Si 95.47 325 P **P** **00 09 03.9 -1.7**
PABE Paberze 95.61 331 IAmb IAmb 00 09 07.8
comp=Z,13nm,0.7s
SCO Scoresbysund 95.83 356 *i*P **P** **00 09 06.3 -0.5**
SCO IAmb IAmb 00 09 07.2
comp=Z,4.8nm,0.9s
GAZ Gaziantep 95.86 310 IAmb IAmb 00 09 07.9
comp=Z,13nm,0.7s
BAL3X Bal3x, Balta 96.46 322 P **P** **00 09 08.9 -1.3**
LUBAR Lubar, Ukraine 96.57 325 P **P** **00 09 09.0 -1.6**
121A Cookes Peak, D 96.67 54 IAmb IAmb 00 09 15.0
comp=Z,36nm,1.6s
RNPP9 Sopachiy 96.83 327 P **P** **00 09 10.2 -1.6**
TASM ASL Pad, Albuq 96.84 52 IAmb IAmb 00 09 30.2
comp=Z,2.8nm,0.8s
TASM ASL Pad, Albuq 96.84 52 IAmb IAmb 00 09 30.2
comp=Z,2.8nm,0.9s
ANMO Albuquerque 96.84 52 LR LR 00 49 56.8
comp=Z,86nm,18.5s,baz=24,slow=34
ANMO Albuquerque 96.84 52 P **P** **00 09 14.1 +1.6**
ANMO Albuquerque 96.84 52 *i*P **P** **00 09 12.9 +0.4**
ANMO pmax pmax
comp=Z,9.0nm,1.9s
RNPP8 Varash 96.89 327 P **P** **00 09 10.9 -1.1**
RNPP5 Stanyi Chortor 96.93 326 P **P** **00 09 10.7 -1.5**
HFS Hagfors 97.09 338 P **P** **00 09 11.3 -1.4**
comp=Z,14nm,0.6s,baz=90,slow=4.4,SNR=73
HFS PP **PP** **00 13 06.2 -2.5**
comp=Z,1.5nm,0.6s,baz=82,slow=10,SNR=1.8
HFS LR LR 00 54 54.6
comp=Z,88nm,19.5s,baz=66,slow=36
comp=Z,14nm,0.6s
SORM Soroca 97.11 323 ⇑P **P** **00 09 12.0 -1.0**
SORM Soroca 97.11 323 ⇑P **P** **00 09 12.0 -1.0**
NC303 NORSAR Array S 97.15 339 IAmb IAmb 00 09 12.7
comp=Z,18nm,0.8s
ULM Lac du Bonnet 97.16 35 P **P** **00 09 12.8 -0.5**
comp=Z,16nm,0.8s,baz=303,slow=4.3,SNR=13
ULM LR LR 00 46 29.6
comp=Z,126nm,21.2s,baz=322,slow=31
comp=Z,16nm,0.8s
ULM Lac du Bonnet 97.16 35 IAmb IAmb 00 09 14.1
comp=Z,21nm,0.9s
NB201 NORSAR Array S 97.30 339 IAmb IAmb 00 09 13.3
comp=Z,26nm,0.8s
DOMB Dombas 97.32 341 *e*P **P** **00 09 12.4 -1.4**
NB2 NORSAR Subarra 97.34 339 P **P** **00 09 12.5 -1.4**
comp=Z,15nm,0.7s,baz=53,slow=5.1
NOA NORSAR Array B 97.34 339 P **P** **00 09 12.4 -1.4**
comp=Z,14nm,0.7s,baz=51,slow=4.2,SNR=88
NOA PP **PP** **00 13 08.4 -2.2**
comp=Z,0.8nm,0.6s,baz=42,slow=7.8,SNR=4.7
NOA PKiKP **PKiKP** **00 13 48.4 -0.2**
comp=Z,0.6nm,0.8s,baz=48,slow=2.1,SNR=3.2
NOA LR LR 00 54 35.2
comp=Z,147nm,21.8s,baz=45,slow=36
comp=Z,14nm,0.7s
LPIG La Paz 97.35 63 LR LR 00 45 07.2
comp=Z,68nm,21.0s,baz=272,slow=30
NC602 NORSAR Array S 97.44 339 IAmb IAmb 00 12 52.8
comp=Z,49nm,1.8s
BR131 Keskin Array S 97.45 314 IAmb IAmb 00 09 15.3
comp=Z,14nm,0.9s
BR131 Keskin Array S 97.45 314 *i*P **P** **00 09 14.0 -1.0**
BRTR Keskin Array B 97.45 314 P **P** **00 09 14.4 -0.6**
comp=Z,9.6nm,0.9s,baz=69,slow=3.7,SNR=46
BRTR PKiKP **PKiKP** **00 13 49.2 -0.4**
comp=Z,0.9nm,0.8s,baz=144,slow=5.5,SNR=3.6
BRTR PKKP **PKKPbc** **00 25 53.6 +0.5**
comp=Z,1.0nm,0.6s,baz=183,slow=4.4,SNR=8.6
BRTR LR LR 00 57 34.5
comp=Z,82nm,21.7s,baz=52,slow=38
comp=Z,9.6nm,0.9s
BRTR Keskin Array B 97.45 314 P **P** **00 09 13.7 -1.3**
BR104 Keskin Array S 97.45 314 P **P** **00 09 14.4 -0.6**
comp=Z,102nmcomp=Z,14nm,1.0s
BR106 Keskin Array S 97.46 314 P **P** **00 09 13.9 -1.2**
NBO00 NORSAR Array S 97.49 339 IAmb IAmb 00 09 14.2
comp=Z,15nm,0.8s
KIRS Kirsehir-Merke 97.49 313 ⇑P **P** **00 09 13.7 -1.4**
NAO01 NORSAR Array S 97.59 339 IAmb IAmb 00 09 14.8
comp=Z,15nm,0.8s
HORU Horodok 97.67 325 P **P** **00 09 14.7 -0.9**
AKN Aaknes 97.87 342 *e*P **P** **00 09 15.6 -0.7**
ASF Jabal al Asfar 97.92 306 LR LR 00 58 03.9
comp=Z,40nm,20.9s,baz=88,slow=38
EPT El Paso 97.95 55 P Pdif 00 09 17.7 +0.2
EPT IAmb IAmb 00 09 19.9
comp=Z,23nm,1.6s
ANTO Ankara 97.98 314 P **P** **00 09 16.7 -0.6**
ANTO IAmb IAmb 00 09 17.8
comp=Z,16nm,0.8s
ANTO Ankara 97.98 314 ⇑P **P** **00 09 17.0 -0.3**
ANTO Ankara 97.98 314 ⇑P **P** **00 09 17.0 -0.3**
KMPD K-Podol'skiy 97.99 324 P **PcP** **00 09 15.8 -1.2**
KMPD P **P** **00 09 14.8 -2.2**
AGMN Agassiz Nation 98.17 36 IAmb IAmb 00 09 19.2
comp=Z,16nm,1.0s
VLDR Vladesti 98.38 321 ⇑P **P** **00 09 18.1 -0.7**
EPLO Experimental L 98.64 34 IAmb IAmb 00 09 20.9
comp=Z,16nm,1.1s
TPGR Topolog 98.64 320 ⇑P **P** **00 09 19.1 -0.9**
MMAI Mount Meron Ar 98.78 307 P **P** **00 09 20.7 -0.3**
comp=Z,11nm,0.9s,baz=52,slow=4.3,SNR=8.9
MMAI LR LR 00 58 07.7
comp=Z,62nm,21.9s,baz=57,slow=38
comp=Z,11nm,0.9s
FRB Frobisher Bay 98.80 15 LR LR 00 49 24.4
comp=Z,105nm,21.7s,baz=322,slow=33
MDUB Mudurnu 98.83 315 IAmb IAmb 00 09 22.8
comp=Z,25nm,1.0s
MNTX Cornudas Mount 98.87 54 IAmb IAmb 00 09 24.0
comp=Z,23nm,1.6s
TESR Tescani 98.91 322 ⇓P **P** **00 09 20.6 -0.7**
BALJ Balqa 98.94 306 IAmb IAmb 00 09 22.5
comp=Z,23nm,1.0s
SFJD Kangerlussuaq 98.95 6 LR LR 00 51 15.7
comp=Z,70nm,21.6s,baz=343,slow=34
F33A 5 Mile Ranch, 99.15 39 IAmb IAmb 00 12 29.8
comp=Z,46nm,1.5s
ONER Baraj Valea Uz 99.16 322 ⇑P **Pdif** **00 09 22.6 +0.2**
BUR08 Bucovina Ar. S 99.18 324 IAmb IAmb 00 09 23.4
comp=Z,16nm,0.9s
BURAR Bucovina Array 99.19 324 P **Pdif** **00 09 22.2 -0.4**
BURAR IAmb IAmb 00 09 23.8
comp=Z,19nm,0.9s
BURAR Bucovina Array 99.19 324 ⇑P **Pdif** **00 09 22.6 0.0**
VRI Vrincioaia 99.19 322 ⇑P **Pdif** **00 09 22.6 +0.1**
VRI Vrincioaia 99.19 322 ⇑P **Pdif** **00 09 22.6 +0.1**
PLOR Plostina 99.25 322 ⇑P **Pdif** **00 09 22.0 -0.8**
PLOR Plostina 99.25 322 ⇑P **Pdif** **00 09 22.0 -0.8**
MAW Mawson 99.42 203 P **Pdif** **00 09 24.3 +1.5**
comp=Z,1.2nm,1.0s
MAW Mawson 99.42 203 P **Pdif** **00 09 23.6 +0.7**
comp=Z,5.1nm,0.9s,baz=90,slow=3.3,SNR=13
MAW PKKPbc **PKKPbc** **00 25 47.0 -1.7**

comp=Z,1.6nm,0.7s,baz=219,slow=3.3,SNR=8.7
MAW LR LR 00 52 50.6
comp=Z,64nm,20.9s,baz=76,slow=34
comp=Z,5.1nm,0.9s
TURR Turia 99.52 322 ⇑P **Pdif 00 09 24.5 +0.5**
MLR Muntele Rosu 99.85 322 LR LR 00 58 44.5
comp=Z,115nm,18.2s,baz=59,slow=38
BMR Baia Mare 100.14 324 ⇓P **Pdif 00 09 27.0 +0.3**
BMR Baia Mare 100.14 324 ⇓P **Pdif 00 09 27.0 +0.3**
STHS Stebnicka Huta 100.42 327 *e*P **Pdif 00 09 27.9 0.0**
MDB Medias 100.45 323 ⇑P **Pdif 00 09 28.8 +0.7**
MDB Medias 100.45 323 ⇑P **Pdif 00 09 28.8 +0.7**
CBBR Cluj-Babes-Bol 100.60 323 ⇑P **Pdif 00 09 29.1 +0.3**
ARR Arges 100.71 322 ⇑P **Pdif 00 09 29.1 -0.2**
MARR Marisel-Cluj 100.90 324 ⇑P **Pdif 00 09 31.9 +1.7**
DRGR 101.07 324 ⇑P **Pdif 00 09 30.8 -0.1**
DRGR 101.07 324 ⇑P **Pdif 00 09 30.8 -0.1**
TXAR Lajitas Array 101.13 56 P **Pdif 00 09 31.8 +0.2**
comp=Z,0.6nm,0.6s,baz=270,slow=4.1,SNR=8.9
TXAR PP **PP 00 13 38.8 -1.9**
comp=Z,0.6nm,0.9s,baz=280,slow=4.7,SNR=4.8
TXAR PKiKP **PKiKP 00 13 56.4 0.0**
comp=Z,0.5nm,0.6s,baz=7.9,slow=1.4,SNR=5.5
TXAR PKKPbc **PKKPbc 00 25 42.8 +0.4**
comp=Z,1.4nm,0.9s,baz=129,slow=5.4,SNR=12
TXAR PKPPKP **P'P'df 00 33 58.9 -2.9**
comp=Z,0.5nm,1.1s,baz=106,slow=4.0,SNR=3.5
LOT Lotru 101.18 322 ⇑P **Pdif 00 09 31.6 +0.1**
PSZ Piszkesteto 102.01 326 ⇓P **Pdif 00 09 35.0 -0.1**
PSZ Piszkesteto 102.01 326 ⇓P **Pdif 00 09 35.0 -0.1**
MAUC Maruska 102.24 328 *e*PP **PKiKP 00 13 59.5 +1.7**
HERR Herculane 102.29 322 ⇑P **Pdif 00 09 36.2 -0.1**
BZS Buzias 102.36 323 ⇑P **Pdif 00 09 35.7 -0.9**
BZS Buzias 102.36 323 ⇑P **Pdif 00 09 35.7 -0.9**
DPC Dobruska-Polom 102.39 329 *e*PP **PP 00 13 52.4 +3.1**
MDVR Moldovita 102.77 323 ⇑P **Pdif 00 09 38.6 +0.1**
QSPA South Pole Qui 103.27 180 PKKPbc PKKPbc 00 25 38.6 +0.3
comp=Z,2.0nm,0.7s,baz=172,slow=1.0,SNR=4.4
CLL Collm 103.36 331 *i* P **Pdif 00 09 40.3 -0.6**
CLL *e* 00 13 57.0
MORH Mrgy, Hungar 103.71 325 ⇑P **Pdif 00 09 42.9 +0.3**
RONA Rosalia, Austr 104.08 327 *e*Pdiff **Pdif 00 09 44.5 +0.3**
comp=Z,6.2nm,1.2s
CONA Conrad Observa 104.16 328 *i* Pdiff **Pdif 00 09 45.3 +0.6**
comp=Z,4.8nm,0.8s
CKRC Cesky Krumlov 104.38 329 *e*PP **PKiKP 00 14 02.5 +0.8**
KHC Kasperske Hory 104.54 330 *e*PP **PKiKP 00 14 02.3 +0.3**
GERES GERESS Array B 104.67 329 Pdiff **Pdif 00 09 46.0 -0.9**
comp=Z,0.9nm,0.8s,baz=19,slow=5.7,SNR=5.0
GERES PKiKP **PKiKP 00 14 03.4 +1.1**
comp=Z,1.7nm,0.5s,baz=63,slow=1.6,SNR=16
GERES GERESS Array B 104.67 329 P **Pdif 00 09 46.0 -0.9**
ARSA Arzberg 104.77 327 *i* Pdiff **Pdif 00 09 47.2 -0.1**
comp=Z,5.2nm,0.8s
SOKA Soboth 105.39 327 *i* PKiKP **PKiKP 00 14 04.5 +0.8**
comp=Z,4.7nm,0.8s
BLY Banja Luka 105.41 324 ⇑P **Pdif 00 09 50.0 -0.2**
LESA Schwarzleotal 106.12 329 *i* PKiKP **PKiKP 00 14 05.7 +0.7**
comp=Z,2.6nm,1.0s
EKA Eskdalemuir Ar 106.52 342 Pdiff **Pdif 00 09 53.9 -1.0**
comp=Z,1.6nm,0.8s,baz=46,slow=2.4,SNR=5.8
EKA PKiKP **PKiKP 00 14 06.2 +0.9**
comp=Z,0.8nm,0.5s,baz=27,slow=2.7,SNR=5.0
EKA PP **PP 00 14 19.5 0.0**
comp=Z,4.6nm,0.8s,baz=30,slow=5.8,SNR=9.0
WATA Walderalm 106.74 329 *e*PKiKP **PKiKP 00 14 07.0 +0.8**
comp=Z,1.1nm,0.6s
WTTA Wattenberg 106.75 329 *e*PKiKP **PKiKP 00 14 06.3 0.0**
comp=Z,0.8nm,0.5s
MOTA Moosalm 106.97 329 *e*PKiKP **PKiKP 00 14 07.5 +0.8**
comp=Z,2.8nm,0.7s
SQTA Sankt Quirin 107.00 329 *e*PKiKP **PKiKP 00 14 07.7 +1.0**
comp=Z,1.7nm,0.7s
FETA Feichten 107.37 329 *e*PKiKP **PKiKP 00 14 08.0 +0.6**
comp=Z,1.8nm,0.7s
SYO Syowa Base 108.05 201 ⇑ *e*PPdiff pPdif 00 10 20.0 +0.6
KEST Kesra 115.75 321 PKP **PKPdf 00 14 23.9 +0.3**
comp=Z,7.5nm,0.7s,baz=316,slow=0.7,SNR=7.4
NVL N'lazarevskaya 116.06 196 *i* PKiKP **PKPdf 00 14 25.2 +2.3**
NVL *e* 00 15 30.5
NVL *e*PPP PPP 00 17 57.8
NVL *e*SS SS 00 31 29.9 +5.0
NVL *e*SSS SSS 00 35 48.5
NVL pmax pmax
comp=Z,7.0nm,0.6s
TROLL Troll, Antarti 117.38 192 ⇑PKPdf **PKiKP 00 14 26.2 +0.5**
comp=Z,345nm,0.6s
SNAA Sanae 118.70 191 ⇑PKPdf **PKPdf 00 14 28.0 -0.1**
comp=Z,120nm,0.5s
SNAA Sanae 118.70 191 PKP **PKiKP 00 14 28.3 +0.1**
comp=Z,4.6nm,0.5s,baz=196,slow=4.0,SNR=74
PGAV Gavieira, Arco 119.73 337 *e*PKP **PKiKP 00 14 32.2 +1.1**
PCAB Cabril 119.86 337 *e*PKP **PKiKP 00 14 32.5 +1.2**
ESDC Sonseca Array 119.90 333 PKP **PKiKP 00 14 32.1 +0.6**
comp=Z,2.3nm,0.5s,baz=8.2,slow=2.6,SNR=22
ESDC PP **PP 00 15 53.1 -1.8**
comp=Z,4.6nm,1.1s,baz=25,slow=7.2,SNR=6.6
ESDC Sonseca Array 119.90 333 **PKiKP 00 14 32.5 +1.0**
MVO Moncorvo 119.94 336 *e*PKP **PKiKP 00 14 32.9 +1.4**
POLO Lamas de Olo 120.06 337 *e*PKP **PKiKP 00 14 33.1 +1.3**
PVRL Vila Real 120.11 337 *e*PKP **PKiKP 00 14 33.2 +1.4**
VNA2 Neumayer--Watz 120.14 190 ⇑PKPdf **PKiKP 00 14 31.2 +0.3**
comp=Z,24nm,0.6s,baz=127,slow=1.1
VNA3 Neumayer Olymp 120.23 189 ⇑PKPdf **PKiKP 00 14 31.1 +0.1**
comp=Z,14nm,0.8s
VNA1 Neumayer--Stat 120.52 190 ⇑PKPdf **PKiKP 00 14 31.9 +0.3**
comp=Z,5.3nm,0.6s
PVIS Viseu 120.66 336 *e*PKP **PKPdf 00 14 32.0 -0.9**
MTE Manteigas 120.80 336 *e*PKP **PKiKP 00 14 34.4 +1.2**
PCBR Castelo Branco 121.25 336 *e*PKP **PKiKP 00 14 35.0 +1.0**
PCAS Casmilo, Conde 121.47 337 *e*PKP **PKiKP 00 14 35.5 +1.0**
PSARD Sardoal 121.72 336 *e*PKP **PKiKP 00 14 36.1 +1.1**
PSBE So Bento 122.05 336 *e*PKP **PKiKP 00 14 37.0 +1.3**
PESTR Estremoz 122.12 335 *e*PKP **PKiKP 00 14 36.5 +0.7**
PMTG Montargil 122.21 336 *e*PKP **PKiKP 00 14 36.8 +0.8**
PARRA Arraiolos 122.35 335 *e*PKP **PKiKP 00 14 37.1 +0.1**
PBAR Barrancos 122.48 334 *e*PKP **PKiKP 00 14 37.4 +0.9**
BOSA Boshof 122.53 245 PKP **PKiKP 00 14 37.7 +0.7**
comp=Z,10nm,0.7s,baz=144,slow=1.0,SNR=17
EVO Evora 122.58 335 *e*PKP **PKiKP 00 14 37.5 +0.8**
MOE Montemor 122.72 336 *e*PKP **PKiKP 00 14 37.9 +0.9**
PBEJ Beja 122.95 335 *e*PKP **PKiKP 00 14 38.6 +1.2**
MESJ Messejana 123.25 335 *e*PKP **PKiKP 00 14 39.2 +1.2**
PCVE Castro Verde 123.36 335 *e*PKP **PKiKP 00 14 39.4 +1.1**
PTEC Sao Teotonio 123.71 335 *e*PKP **PKiKP 00 14 41.1 +2.2**
MORF Marmelete 123.89 335 *e*PKP **PKiKP 00 14 40.8 +1.5**
MD01 Midelt array s 125.78 329 **PKiKP 00 14 44.2 +0.8**
TSUM Tsumeb 129.60 256 PKPdf **PKPdf 00 14 50.5 -0.1**
SC01 Santiago de lo 131.82 48 PKPdf **PKiKP 00 14 56.5 +0.9**
EDA Edea 132.28 288 PKPdf **PKiKP 00 14 56.7 0.0**
BANI BANI 132.74 49 PKPdf **PKiKP 00 14 57.3 -0.4**
DR12 Loma Pena Alta 133.20 48 PKPdf **PKPdf 00 14 57.7 +0.4**
SMRC Santa Marta, M 133.83 60 PKPdf **PKPdf 00 14 58.4 -0.1**
YOTC Yotoco, Valle 135.23 70 P **PKPdf 00 15 01.4 +0.1**
TORD Torodi Ar. Bea 135.27 305 PKP **PKPdf 00 15 01.2 0.0**
comp=Z,7.6nm,0.6s,baz=88,slow=3.2,SNR=4.6
AOPR Arecibo Observ 135.35 46 PKPdf **PKPdf 00 15 01.4 +0.1**
POPC Popayan, Colom 135.47 72 P **PKPdf 00 15 00.8 -1.1**
GUY2C Guyana, Caldas 135.61 68 P **PKPdf 00 14 54.9 -7.6**
GCPR Guaynabo City 135.84 45 PKPdf **PKPdf 00 15 01.7 -0.4**
SJG San Juan 135.93 45 PKPpre 00 14 51.9
SJG PKPdf **PKPdf 00 15 03.0 +0.6**
SJG San Juan 135.93 45 PKHKP PKPpre 00 14 51.9
SJG 00 15 03.0
HUMP Col San Antoni 136.12 45 pPKPdf pPKPdf 00 15 18.3 -3.2
ORTC Ortega, Tolima 136.26 70 P **PKPdf 00 15 03.3 +0.1**
SPBC San Pablo de B 136.59 67 P **PKPdf 00 15 03.6 -0.2**
ROSC El Rosal 136.72 68 PKP **PKPdf 00 15 04.9 +0.5**
comp=Z,10nm,0.7s,baz=198,slow=20,SNR=4.7
ROSC El Rosal 136.72 68 PKPdf **PKiKP 00 15 05.4 -0.8**
FLOC Florencia 136.78 73 PKPdf **PKPdf 00 15 04.5 +0.3**
FLOC Florencia 136.78 73 P **PKPdf 00 15 04.6 +0.5**
LR04 Corral 137.04 135 PKPdf **PKPdf 00 15 02.2 -1.5**
RUSC La Rusia 137.36 66 P **PKPdf 00 15 04.9 -0.8**
SDV Santo Domingo 138.03 60 PKPpre 00 14 58.0
SDV Santo Domingo 138.03 60 *e*P **PKPdf 00 15 04.3 -2.3**
PLCA Paso Flores 138.56 138 PKhKP PKPpre 00 14 58.7
comp=Z,2.6nm,1.0s,baz=246,slow=6.1,SNR=3.7
PLCA PKP **PKPdf 00 15 07.0 +0.3**
comp=Z,11nm,1.1s,baz=259,slow=2.1,SNR=8.1
PLCA Paso Flores 138.56 138 **PKiKP 00 15 08.8 0.0**
GDSD La Dsirade Is 140.63 42 **PKPdf 00 15 11.4 +0.3**
LCO Las Campanas 143.24 121 **PKPdf 00 15 14.5 -1.2**
LCO Las Campanas 143.24 121 PKiKP **PKPdf 00 15 14.5 -1.2**

AC06 Mina Casimiro 144.00 118 **PKPdf 00 15 16.6 -0.2**
ACDV Cuesta del Vie 144.17 123 *e*P **PKPdf 00 15 17.5 +0.3**
DBIC Dimbokro 144.23 302 PKP PKPbc 00 15 16.1 +0.3
comp=Z,267nm,0.6s,baz=78,slow=3.4,SNR=393
DBIC Dimbokro 144.23 302 PKPbc 00 15 16.2 +0.4
AGUA GUANDACOL 144.92 123 *e*P **PKPdf 00 15 19.5 +1.1**
AC02 Maricunga 145.19 118 *e*P **PKPdf 00 15 20.6 +1.2**
AVFE Valle Fertil 145.34 125 *e*P **PKPab 00 15 19.5 +0.3**
VCA Vinchina 145.41 121 *e*P **PKPab 00 15 21.0 +1.4**
TRQA Tornquist 145.54 140 **PKPab 00 15 20.2 +0.5**
TRQA Tornquist 145.54 140 PKP2 **PKPab 00 15 20.2 +0.5**
TINO Tinogasta 146.15 121 *e*P **PKPab 00 15 22.3 -0.1**
AANI Anillaco 146.43 122 *e*P **PKPab 00 15 23.6 +0.1**
AANI *e*P **PKPbc 00 15 23.8 +1.4**
LPAZ La Paz 147.62 99 PKPbc **PKPbc 00 15 25.3 -1.4**
comp=Z,19nm,0.8s,baz=242,slow=1.6,SNR=30
LPAZ La Paz 147.62 99 *e*P **PKPdf 00 15 21.3 -2.6**
FSA Cafayete 148.10 118 *e*P **PKiKP 00 15 28.7 -0.3**
TEFE Tefe 148.87 74 *e*P **PKPdf 00 15 25.4 0.0**
SLA San Lorenzo 148.90 116 *e*P **PKiKP 00 15 30.4 -0.2**
AZAP Zapla 149.42 115 *e*P **PKiKP 00 15 31.6 -0.2**
SACV Santiago Islan 149.71 338 **PKiKP 00 15 33.0 +0.7**
BOAV Boa Vista 149.97 60 *e*P **PKPdf 00 15 25.4 -1.8**
MACA Manacapuru-AM 152.41 71 *e*P **PKPdf 00 15 29.4 -1.4**
PSAL Palomas, Salto 152.59 134 *e*P **PKPdf 00 15 28.6 -2.0**
PLTB Pedras Altas 154.85 140 *e*P **PKPdf 00 15 32.7 -1.2**
VILB Vilhena 155.21 92 *e*P **PKPdf 00 15 33.5 -1.3**
CPUP Villa Florida 155.23 125 PKP **PKPdf 00 15 35.5 +1.1**
comp=Z,0.8nm,1.0s,baz=195,slow=2.0,SNR=4.6
PTLB Pontes e Lacer 156.29 98 *e*P **PKPdf 00 15 34.3 -1.8**
ITTB Itaituba 157.41 68 *e*P **PKPdf 00 15 37.5 -0.1**
NPGB Novo Progresso 158.75 75 *e*P **PKPdf 00 15 39.1 -0.2**
CLDB Colider 159.26 85 *e*P **PKPdf 00 15 38.7 -1.1**
SALV Santo Antonio 159.58 100 *e*P **PKPdf 00 15 39.6 -0.6**
PRPB Parauapebas 163.50 66 *e*P **PKPdf 00 15 45.2 +0.9**
SMTB Santa Maria do 166.60 72 *e*P **PKPdf 00 15 45.6 -1.4**
SDBA SAO DESIDERIO 170.04 85 *e*P **PKPdf 00 15 47.2 -2.1**

TAP 18 00:00:41.8, 23.41N×122.01E, h144km±1km, ML2.8, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	**0.54**	**279**	*e*P	Pn	00 01 02.8	+0.2
HGSD				*e*S	Sn	00 01 18.8	+0.3
EHY	**Hungye**	**0.64**	**279**	*e*P	Pn	00 01 03.1	-0.1
EHY				*e*S	Sn	00 01 19.4	-0.1
WARBT	**Fenglin Townsh**	**0.65**	**298**	*e*P	Pn	00 01 03.3	0.0
WARBT				*e*S	Sn	00 01 18.4	-1.2
YULB	**Yu-li**	**0.65**	**269**	P	Pn	00 01 03.7	+0.4
YULB	**Yu-li**	**0.65**	**269**	*e*P	Pn	00 01 02.7	-0.6
YULB				*e*S	Sn	00 01 19.2	-0.5
YULB	**Yu-li**	**0.65**	**269**	P	Pn	00 01 03.0	-0.3
TWF1	**Yuli**	**0.66**	**265**	*e*P	Pn	00 01 03.5	+0.2
TWF1				*e*S	Sn	00 01 19.5	-0.2
LXIB	**Xiulin Townshi**	**0.82**	**318**	*e*P	Pn	00 01 03.9	-0.7
LXIB				*e*S	Sn	00 01 19.9	-2.2
VWDT	**VWDT**	**0.87**	**293**	*e*P	Pn	00 01 05.5	+0.7
VWDT				*e*S	Sn	00 01 22.3	-0.1
OWD	**Renai**	**0.94**	**306**	*e*P	Pn	00 01 05.9	+0.3
ELDTW	**Lidau**	**0.94**	**257**	*e*P	Pn	00 01 05.4	-0.1
WUSB	**Renai**	**1.00**	**306**	*e*P	Pn	00 01 06.5	+0.4
SSLB	**Suanglung**	**1.04**	**291**	IAmb	IAmb	00 01 26.3	
	comp=Z,381nm,1.2s						
SSLB	**Suanglung**	**1.04**	**291**	P	Pn	00 01 07.6	+1.3
SSLB	**Suanglung**	**1.04**	**291**	*e*P	Pn	00 01 07.2	+0.9
SSLB				*e*S	Sn	00 01 25.6	+0.5
SSLB	**Suanglung**	**1.04**	**291**	P	Pn	00 01 06.9	+0.6
ALS	**Alishan**	**1.11**	**275**	*e*P	Pn	00 01 07.8	+0.6
ALS				*e*S	Sn	00 01 27.5	+0.8
TYC	**Yuchr**	**1.17**	**295**	*e*P	Pn	00 01 08.4	+1.0
LATG	**Datong**	**1.21**	**339**	*e*P	Pn	00 01 07.8	-0.2
LATG				*e*S	Sn	00 01 29.5	+1.4
CHN5	**Tsauling**	**1.24**	**279**	*e*P	Pn	00 01 08.9	+0.7
TPUB	**Ta-pu**	**1.27**	**265**	*e*P	Pn	00 01 08.2	-0.3
WHP	**Taichung City**	**1.30**	**312**	*e*P	Pn	00 01 08.9	0.0
YHNB	**Yeheng**	**1.38**	**335**	P	Pn	00 01 09.4	-0.3
FUSB	**Fushanzhiwuyua**	**1.40**	**344**	*e*P	Pn	00 01 08.7	-1.1
TWK	**Hsinying**	**1.41**	**265**	*e*P	Pn	00 01 08.8	-1.1
TWK				*e*S	Sn	00 01 29.1	-2.3

MOS ***18*** *00:02:27.9±0.9, 37.24N×72.04E, h107km, mb4.0/2, Error ellipse: s-maj=11.4km s-min=6.1km az=84.9*
NEIC ***18*** *00:02:28.5±0.9, 37.21N±0.08×71.96E±0.1, h98km±5km, mb4.4/2, Error ellipse: s-maj=14.4km s-min=10.1km az=122.0*
IDC ***18*** *00:02:31.4±5.0, 37.37N×72.20E, h123km±34km, mb3.4/11, mbtmp3.8/14, Error ellipse: s-maj=45.4km s-min=19.5km az=167.0*
NNC ***18*** *00:02:32.4±4.6, 37.80N×71.85E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=36.5km s-min=27.5km az=162.0*

ISC 18 00:02:32.6±0.9, 37.42N±0.08×71.96E±0.06, h130km, n68, σ1s98/71, mb3.6/14, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.04**	**321**		**Pn**	**00 03 04.0**	**-3.2**
GAR				Sn	**Sn**	**00 03 30.6**	**-3.1**
DRK	**Karamyk**	**2.06**	**357**		**Pn**	**00 03 06.0**	**-1.6**
DRK	**Karamyk**	**2.06**	**357**	PN	**Pn**	**00 03 06.0**	**-1.6**
CHGR	**Chuyangaron**	**2.53**	**300**		**Pn**	**00 03 09.1**	**-4.2**
CHGR	**Chuyangaron**	**2.53**	**300**	PN	**Pn**	**00 03 09.1**	**-4.2**
KBL	**Kabul**	**3.72**	**220**		Pn	00 03 22.9	-6.1
KBL	**Kabul**	**3.72**	**220**	PN	Pn	00 03 22.9	-6.0
IUZ	**luzhnay**	**4.95**	**343**	Pg	**Pn**	**00 03 44.3**	**-0.8**
	9.0nm,0.2s						
IUG				Lg	Lg	00 04 40.5	
	47nm,0.8s						
UCH	**Uchtor**	**5.19**	**21**	P	**Pn**	**00 03 46.9**	**-1.7**
	SNR=23						
MRKS	**Merke**	**5.41**	**10**	Pg	**Pn**	**00 03 49.8**	**-1.4**
	13nm,0.6s						
MRKS				Lg	Lg	00 04 50.5	
	69nm,1.0s						
EKS2	**Erkin-Say**	**5.42**	**14**	P	**Pn**	**00 03 50.0**	**-1.3**
	SNR=23						
AAK	**Ala-Archa**	**5.56**	**20**	P	**Pn**	**00 03 51.8**	**-1.4**
	18nm,0.3s,baz=194,slow=6.7,SNR=88						
AAK				S	**Sn**	**00 04 55.3**	**-0.9**
	28nm,0.5s,baz=319,slow=20,SNR=25						
AAK	**Ala-Archa**	**5.56**	**20**		**Pn**	**00 03 51.7**	**-1.6**
AAK	**Ala-Archa**	**5.56**	**20**	P	**Pn**	**00 03 52.1**	**-1.2**
	SNR=32						
AAK	**Ala-Archa**	**5.56**	**20**	⇑P	**Pn**	**00 03 51.9**	**-1.4**
	3.5nm,0.4s						
AAK				⇓S	**Sn**	**00 04 55.3**	**-0.9**
	31nm,0.8s						
AAK	**Ala-Archa**	**5.56**	**20**	*i* PN	**Pn**	**00 03 50.7**	**-2.6**
KBK	**Karagaybulak**	**5.71**	**23**	P	**Pn**	**00 03 54.7**	**-0.6**
	SNR=13						
FRU1	**Bishkek**	**5.76**	**20**		**Pn**	**00 03 54.7**	**-1.2**
FRU1	**Bishkek**	**5.76**	**20**	PN	**Pn**	**00 03 54.7**	**-1.2**
KK31	**Karatay Array**	**5.78**	**349**		**Pn**	**00 03 54.1**	**-2.0**
KK31	**Karatay Array**	**5.78**	**349**	P	**Pn**	**00 03 54.6**	**-1.5**
	12nm,0.3s,baz=166,slow=11,SNR=385						
KK31				⇑S	**Sn**	**00 04 57.6**	**-3.8**
	4.5nm,0.2s,baz=166,slow=21						
KK31	**Karatay Array**	**5.78**	**349**	PN	**Pn**	**00 03 54.1**	**-2.0**
KKAR	**Karatay Array**	**5.78**	**349**		**Pn**	**00 03 54.4**	**-1.8**
KKAR	**Karatay Array**	**5.78**	**349**	PN	**Pn**	**00 03 54.4**	**-1.8**
ULHL	**Ulahol**	**5.83**	**33**	P	**Pn**	**00 03 55.6**	**-1.4**
	SNR=8.5						
CHMS	**Chumysh**	**5.96**	**20**	P	**Pn**	**00 03 57.3**	**-1.3**
	SNR=7.9						
USP	**Ospenovka**	**6.15**	**18**	P	**Pn**	**00 03 59.3**	**-1.9**
	SNR=11						
TKM2	**Tokmak 2**	**6.16**	**26**	P	**Pn**	**00 04 01.1**	**-0.3**
	SNR=9.9						
KDJ	**Kajisay**	**6.18**	**39**	Pn	**Pn**	**00 03 59.5**	**-2.2**
KDJ	**Kajisay**	**6.18**	**39**	PN	**Pn**	**00 03 59.5**	**-2.2**
TARG	**Taragay, Kyrgy**	**6.23**	**45**		**Pn**	**00 04 00.6**	**-2.0**
TARG	**Taragay, Kyrgy**	**6.23**	**45**	PN	**Pn**	**00 04 00.6**	**-2.0**
PRZ	**Przheval'sk**	**7.07**	**42**	Pn	**Pn**	**00 04 12.2**	**-1.5**
PRZ	**Przheval'sk**	**7.07**	**42**	PN	**Pn**	**00 04 12.2**	**-1.5**
HRA	**Herat**	**8.45**	**252**		Pn	00 04 26.2	-6.1
MK31	**Makanchi Array**	**12.09**	**36**	*i* P	**Pn**	**00 05 20.7**	**+0.1**
MKAR	**Makanchi Array**	**12.09**	**36**	P	**Pn**	**00 05 18.0**	**-2.6**
	0.9nm,0.7s,baz=221,slow=17,SNR=8.6						

KURBB Kurchatov Arra 14.01 18 P **Pn 00 05 40.6 -4.6**
2.0nm,0.8s,baz=206,slow=12,SNR=8.2
KURK Kurchatov 14.12 18 Pn **Pn 00 05 44.7 -1.9**
KURK Kurchatov 14.12 18 P **Pn 00 05 46.3 -0.3**
AB31 Akbulak array 14.69 327 P **Pn 00 05 54.7 +0.9**
1.3nm,0.6s,baz=136,slow=15,SNR=28
AB31 Akbulak array 14.69 327 P **Pn 00 05 54.7 +0.9**
BVAR Borovoye Array 15.64 356 P **Pn 00 06 03.4 -2.4**
1.6nm,0.4s,baz=161,slow=13,SNR=6.8
BORK Borovoye 15.67 356 *i* P **Pn 00 06 05.3 -0.7**
AKTO Aktyubinsk 16.40 327 P **P 00 06 15.8 +0.3**
5.8nm,0.5s,baz=129,slow=12,SNR=18
ZAA0 Zalesovo Array 18.76 24 **P 00 06 40.9 -0.5**
ZALV Zalesovo Beam 18.76 24 **P 00 06 40.7 -0.6**
ZALV Zalesovo Beam 18.76 24 P **P 00 06 40.7 -0.6**
ARTI Arti 21.05 339 *d* *i* P **P 00 07 03.8 -2.2**
ARTI 00 07 31.1
ARTI S **S 00 10 55.6 +2.8**
ARTI SS **SnSn 00 11 31.8 +4.8**
ARTI pmax pmax
comp=Z,3.0nm,0.5s
GNI Garni 21.36 286 P **P 00 07 11.4 +1.7**
comp=Z,2.5nm,0.5s,baz=59,slow=5.9,SNR=2.1
comp=Z,2.5nm,0.5s
KBZ Khabaz 22.89 295 P **P 00 07 30.4 +5.4**
comp=Z,0.9nm,0.7s,baz=98,slow=7.1,SNR=2.3
SONM Songino Array 27.18 57 P **P 00 08 03.1 -0.8**
comp=Z,0.5nm,0.6s,baz=264,slow=8.4,SNR=1.3
comp=Z,0.5nm,0.6s
PZH PanZhiHua 27.40 105 P **P 00 08 05.6 -0.5**
BRTR Keskin Array B 29.90 286 P **P 00 08 29.4 +1.2**
comp=Z,2.0nm,0.5s,baz=72,slow=11,SNR=1.7
comp=Z,2.0nm,0.5s
HHC Hu-ho-hao-te 30.73 71 *e*P **P 00 08 36.3 +0.9**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,94nm,4.0s
HHC LR LR
comp=N,340nm,13.9s
HHC LR LR
comp=E,250nm,19.3s
HHC LR LR
comp=Z,440nm,19.4s
FINES FINESS Array B 37.16 325 P **P 00 09 31.0 +0.5**
comp=Z,2.7nm,0.6s,baz=107,slow=7.5,SNR=0.7
comp=Z,2.7nm,0.6s
FINES FINESS Array B 37.16 325 P **P 00 09 31.0 +0.5**
ARCES ARCESS Array B 40.59 337 P **P 00 09 59.6 +0.5**
comp=Z,2.1nm,0.5s,baz=116,slow=8.3,SNR=11
comp=Z,2.1nm,0.5s
ARCES ARCESS Array B 40.59 337 P **P 00 09 59.5 +0.5**
ARCES IAmb IAmb 00 10 09.7
comp=Z,2.2nm,1.0s
HFS Hagfors 42.83 321 P **P 00 10 18.0 +0.7**
comp=Z,1.6nm,0.4s,baz=92,slow=10,SNR=5.7
comp=Z,1.6nm,0.4s
HFS Hagfors 42.83 321 P **P 00 10 18.0 +0.7**
NOA NORSAR Array B 44.12 322 P **P 00 10 28.0 +0.3**
comp=Z,0.3nm,0.5s,baz=93,slow=7.8,SNR=1.8
comp=Z,0.3nm,0.5s
NOA NORSAR Array B 44.12 322 P **P 00 10 28.0 +0.3**
EKA Eskdalemuir Ar 52.16 316 P **P 00 11 31.4 +1.9**
comp=Z,0.2nm,0.4s,baz=72,slow=6.5,SNR=1.7
comp=Z,0.2nm,0.4s
ESDC Sonseca Array 57.71 298 P **P 00 12 10.0 +0.3**
comp=Z,0.3nm,0.5s,baz=67,slow=7.5,SNR=1.7
comp=Z,0.3nm,0.5s
ILAR Eielson Array 73.68 16 P **P 00 13 50.5 -1.2**
comp=Z,0.4nm,0.7s,baz=326,slow=5.0,SNR=5.8
comp=Z,0.4nm,0.7s
YKA Yellowknife Ar 80.29 3 P **P 00 14 28.8 +0.2**
comp=Z,0.7nm,0.5s,baz=338,slow=8.8,SNR=5.7
comp=Z,0.7nm,0.5s
YKA Yellowknife Ar 80.29 3 *i* P **P 00 14 29.0 +0.4**
YKA pmax pmax
comp=Z,1.0nm,0.5s

TRN 18 00:03:19.6, 10.42N×61.98W, h0km, MD3.7, Gulf of Paria ., Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.50**	**57**	*e*P	Pg	00 03 29.3	+0.1
DMDM				*e*S	Sg	00 03 37.0	+1.4
PSKH	**Kent House, Po**	**0.51**	**60**	*e*P	Pg	00 03 29.4	0.0
PSGH	**Port of Spain**	**0.52**	**63**	*e*P	Pg	00 03 29.2	-0.3
PSGH				*e*S	Sg	00 03 37.0	+0.7
TPP	**Pointe-a-Pierr**	**0.53**	**101**	*e*P	Pg	00 03 30.4	+0.6
TPP				*e*S	Sb	00 03 39.0	-0.9
TRN	**Trinidad (W)**	**0.60**	**68**	*e*P	Pg	00 03 30.7	-0.5
TRN				*e*S	Sg	00 03 40.2	+1.1
GRFF	**Grenada Fort F**	**1.63**	**8**	*e*P	Pn	00 03 49.3	-0.4
GRFF				*e*S	Sg	00 04 12.1	-0.1
GRGR	**Grenville**	**1.73**	**10**	*e*P	Pn	00 03 50.9	-0.1
GRGR				*e*S	Sn	00 04 13.3	-0.5
GRW	**Mount Saint Ca**	**1.75**	**10**	*e*P	Pn	00 03 52.1	-0.6
GRW				*e*S	Sb	00 04 15.4	+0.4
GRHS	**Sauteurs**	**1.82**	**10**	*e*P	Pn	00 03 52.3	+0.1
GRHS				*e*S	Sn	00 04 16.0	0.0
GRSS	**Sisters**	**1.90**	**11**	*e*P	Pn	00 03 53.7	+0.4
GRSS				*e*S	Sb	00 04 19.3	-0.2
GCMP	**Grenada, Carri**	**2.12**	**15**	*e*P	Pn	00 03 56.8	+0.4
GCMP				*e*S	Sb	00 04 25.1	-0.7
PCRV	**Puerto La Cruz**	**2.63**	**265**	*e*P	Pn	00 04 03.0	-0.5
PCRV				*e*S	Sn	00 04 36.8	+0.7
SVB	**Belmont**	**2.92**	**14**	*e*P	Pn	00 04 07.4	0.0
SVB				*e*S	Sn	00 04 42.7	-0.5
MCLT	**Moule a Chique**	**3.42**	**17**	*e*P	Pn	00 04 15.3	+1.0
MCLT

UREC	**San Jos de Ur**	**2.56**	**290**	P		**Pn**	**00 24 22.7**	**-0.9**
UREC				S		**Sn**	**00 24 54.2**	**-1.9**
GUY2C	**Guyana, Caldas**	**2.76**	**234**	P		**Pn**	**00 24 27.9**	**+1.3**
GUY2C				S		**Sn**	**00 25 00.4**	**-1.0**
VILC	**Villavicencio,**	**2.79**	**192**	P		**Pn**	**00 24 26.1**	**-0.5**
VILC				S		**Sn**	**00 25 00.7**	**-0.8**
PTGC	**Puerto Gaitan,**	**2.82**	**160**	P		**Pn**	**00 24 26.1**	**-0.8**
PTGC				S		**Sn**	**00 24 59.4**	**-2.6**
NIZA	**Niza - Manizal**	**2.95**	**233**	P		**Pn**	**00 24 32.0**	**+3.3**
NIZA				S		**Sn**	**00 25 06.6**	**+1.4**
CBOC	**Ciudad Bolivar**	**3.04**	**251**	P		**Pn**	**00 24 30.7**	**+0.9**
CBOC				S		**Sn**	**00 25 06.8**	**-0.4**
DBBC	**Dabeiba**	**3.08**	**273**	P		**Pn**	**00 24 31.2**	**+1.1**
DBBC				S		**Sn**	**00 25 05.6**	**-2.2**
SDV	**Santo Domingo**	**3.18**	**51**	P		**Pn**	**00 24 32.4**	**+0.8**
	29nm,0.3s,baz=225,slow=11,SNR=47							
SDV				S		**Sn**	**00 25 10.2**	**-0.2**
	34nm,0.4s,baz=72,slow=19,SNR=20							
ARGC	**Ariguani, Magd**	**3.18**	**340**	P		**Pn**	**00 24 33.1**	**+1.6**
ARGC				S		**Sn**	**00 25 12.0**	**+1.8**
PRAC	**Prado**	**3.59**	**210**	P		**Pn**	**00 24 36.1**	**-0.5**
PRAC				S		**Sn**	**00 25 18.9**	**-0.6**
ORTC	**Ortega, Tolima**	**3.62**	**216**	P		**Pn**	**00 24 37.0**	**0.0**
ORTC				S		**Sn**	**00 25 19.5**	**-0.7**
SJCC	**San Jacinto, C**	**3.65**	**326**	P		**Pn**	**00 24 36.7**	**-0.7**
SJCC				S		**Sn**	**00 25 18.6**	**-2.2**
LCBC	**Los crdobas,**	**3.78**	**302**	P		**Pn**	**00 24 39.1**	**0.0**
LCBC				S		**Sn**	**00 25 20.8**	**-0.1**
URMC	**La Uribe, Meta**	**3.80**	**199**	P		**Pn**	**00 24 39.3**	**-0.2**
URMC				S		**Sn**	**00 25 23.8**	**-0.7**
CRJC	**Cerrejon, Guaj**	**4.14**	**3**	P		**Pn**	**00 24 43.4**	**-0.5**
CRJC				S		**Sn**	**00 25 30.4**	**-2.1**
YOTC	**Yotoco, Valle**	**4.30**	**229**	P		**Pn**	**00 24 45.5**	**-0.5**
SMRC	**Santa Marta, M**	**4.42**	**346**	P		**Pn**	**00 24 47.9**	**+0.5**
SMRC				S		**Sn**	**00 25 35.7**	**-3.1**
CAPC	**Capurgana**	**4.55**	**293**	P		**Pn**	**00 24 47.9**	**-1.3**
CAPC				S		**Sn**	**00 25 38.4**	**-3.5**
MACC	**Macarena, Meta**	**4.74**	**189**	P		**Pn**	**00 24 49.3**	**-2.3**
URIC	**Uribia, Colomb**	**4.94**	**13**	P		**Pn**	**00 24 53.4**	**-0.8**
URIC				S		**Sn**	**00 25 49.2**	**-1.9**
GARC	**Garzon, Huila**	**5.21**	**207**	P		**Pn**	**00 24 55.7**	**-2.4**
FLOC	**Florencia**	**5.82**	**206**	P		**Pn**	**00 25 05.4**	**-0.5**
TXAR	**Lajitas Array**	**36.44**	**312**	P		**P**	**00 30 34.6**	**+3.1**
	baz=122,slow=8.5,SNR=1.0							
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc		**PKPbc**	**00 43 11.0**	**-1.4**
	0.7nm,0.8s,baz=108,slow=3.0,SNR=4.9							
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc		**PKPbc**	**00 43 14.3**	**-1.1**
	0.6nm,0.9s,baz=110,slow=2.2,SNR=2.7							

SSNC ***18*** *00:25:41.8±2.0, 19.°03N×77.°20W, h24km±26km, MD2.7, ML1.6*
JSN ***18*** *00:25:41.9±0.8, 18.°93N×77.°34W, h52km±32km, MD3.3*
ISC 18 00:25:38.3±1.2, 19°09N±0°04×77°31W±0°07, h27km±15km, n12, σ1°42/20, 2C-2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTDJ	**Mount Denham**	**0.88**	**194**	⇑*iP*	**Pb**	**00 25 56.0**	**+0.9**
MTDJ				*i*S	**Sb**	**00 26 06.2**	**-0.3**
MTDJ	**Mount Denham**	**0.88**	**194**	*eP*	**Pb**	**00 25 55.8**	**+0.7**
MTDJ				*eS*	**Sb**	**00 26 04.1**	**-2.5**
MTDJ				IAML		00 26 09.4	
	72nm,0.3s						
MTDJ				IAML		00 26 10.0	
	comp=Z,51nm,0.1s						
LMGC	**Las Mercedes**	**1.01**	**16**	*eP*	**Pb**	**00 25 58.5**	**+1.2**
LMGC				*eS*	**Sb**	**00 26 08.4**	**-1.8**
LMGC				*e*Sg		00 26 10.6	
LMGC				IAML		00 26 14.1	
	comp=E,15nm,0.1s						
LMGC				IAML		00 26 14.8	
	comp=N,17nm,0.1s						
STH	**Stony Hill**	**1.11**	**155**	*i* P	**Pn**	**00 25 58.8**	**+0.7**
GWJ	**Greenwich**	**1.15**	**151**	⇑*i*P	**Pn**	**00 25 59.6**	**+0.9**
CHIV	**Chivirico**	**1.22**	**43**	*eP*	**Pb**	**00 26 02.5**	**+1.7**
CHIV				*eS*	**Sn**	**00 26 14.1**	**-1.1**
CHIV				IAML		00 26 18.7	
	comp=N,3.4nm,0.1s						
CHIV				IAML		00 26 19.3	
	comp=E,3.9nm,0.1s						
RCC	**Rio Carpintero**	**1.77**	**59**	*eP*	**Pn**	**00 26 08.8**	**+1.6**
RCC				⇓*eS*	**Sn**	**00 26 28.7**	**0.0**
PINC	**Pinares de May**	**2.00**	**45**	*eP*	**Pb**	**00 26 13.9**	**0.0**
PINC				*eS*	**Sn**	**00 26 33.4**	**-0.9**
CCCC	**Cccc**	**2.15**	**348**	*eP*	**Pb**	**00 26 15.6**	**-0.9**
CCCC				*eS*	**Sn**	**00 26 39.0**	**+0.9**
GTBY	**Guantanamo Bay**	**2.23**	**68**	⇓*eS*	**Sn**	**00 26 38.3**	**-2.0**
QMBU	**Quimbuelo**	**2.60**	**64**	*eP*	**Pn**	**00 26 19.5**	**+0.9**
QMBU				*eS*	**Sn**	**00 26 47.1**	**-2.2**
MOAC	**Moa**	**2.71**	**54**	*eS*	**Sn**	**00 26 51.9**	**0.0**

IDC ***18*** *00:29:25.5±1.7, 51.°14N×130.°79W, h0km, mb3.4/2, mbtmp3.4/7, ML3.4/4, Error ellipse: s-maj=21.8km s-min=14.3km az=84.0*
PGC ***18*** *00:29:26.8±0.8, 50.°83N×130.°57W, h10km, MLSn3.4/23, Mw3.9, 216km west of Port Hardy, Bc Vancouver Island, Canada Region*
ISC 18 00:29:26.5±2.6, 50°93N±0°06×130°51W±0°06, h7km±18km, n57, σ2°44/44, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEDB	**Jedway, Haida**	**1.43**	**343**	Pn	Pn	00 29 51.7	-1.3
JEDB				Sn	**Sg**	**00 30 09.3**	**-3.3**
HOLB	**Holberg**	**1.54**	**100**	Pn	Pn	00 29 52.7	-1.7
HOLB				Sn	**Sn**	**00 30 11.4**	**-3.2**
BAIB	**Barry Inlet**	**1.82**	**335**	Pn	Pn	00 29 57.6	-0.7
BAIB				Sn	**Sn**	**00 30 19.5**	**-2.2**
BPEB	**Brooks Peninsu**	**1.91**	**113**	Pn	Pn	00 29 57.3	-2.2
BPEB				Sn	**Sn**	**00 30 19.3**	**-4.5**
BBB	**Bella Bella**	**1.96**	**49**	Pn	Pn	00 29 59.5	-0.6
	18nm,0.3s,baz=237,slow=14,SNR=76						
BBB				Sn	**Sn**	**00 30 23.4**	**-1.5**
	44nm,0.3s,baz=264,slow=18,SNR=8.1						
BBB	**Bella Bella**	**1.96**	**49**	Pn	Pn	00 29 59.4	-0.7
BBB				Sn	**Sn**	**00 30 23.3**	**-1.5**
PHC	**Port Hardy**	**1.96**	**95**	Pn	Pn	00 29 58.8	-1.4
PHC				Sn	**Sn**	**00 30 21.1**	**-3.9**
PACB	**Port Alice, BC**	**1.98**	**103**	Pn	Pn	00 29 58.6	-1.8
PACB				Sn	**Sn**	**00 30 22.2**	**-3.3**
MAYB	**Maynard**	**2.19**	**103**	Pn	Pn	00 30 01.9	-1.5
MAYB				Sn	**Sn**	**00 30 27.1**	**-3.7**
HG1B	**Mitchell Dam**	**2.25**	**334**	Sn	**Sn**	**00 30 29.5**	**-2.5**
MOBC	**Moresby Island**	**2.40**	**338**	Pn	**Pn**	**00 30 06.1**	**-0.1**
MOBC				Sn	**Sn**	**00 30 34.4**	**-1.5**
EDB	**Eliza Dome**	**2.41**	**115**	Sn	**Sn**	**00 30 33.0**	**-3.1**
BUTB	**Butedale**	**2.48**	**30**	Pn	Pn	00 30 07.4	-0.1
BUTB				Sn	**Sn**	**00 30 36.9**	**-1.2**
GRIB	**Gribbell Islan**	**2.56**	**19**	Pn	Pn	00 30 08.2	-0.2
BNAB	**Bonilla**	**2.57**	**358**	Pn	Pn	00 30 08.1	-0.4
DIB	**Dawson Inlet,**	**2.58**	**333**	Pn	**Pn**	**00 30 08.5**	**-0.2**
DIB				Sn	**Sn**	**00 30 38.0**	**-2.4**
H02S2	**DAWSON INLET T**	**2.58**	**333**	Pn	Pn	00 30 06.5	-2.2
H02S2				Sn	**Sn**	**00 30 36.7**	**-3.6**
WOSB	**Woss**	**2.63**	**105**	Pn	Pn	00 30 08.2	-1.2
WOSB				Sn	**Sn**	**00 30 37.8**	**-3.8**
NTKA	**Nootka**	**2.83**	**117**	Pn	Pn	00 30 09.8	-2.3
NCSB	**Newcastle Ridg**	**2.88**	**99**	Pn	Pn	00 30 11.8	-1.2
NCSB				Sn	**Sn**	**00 30 45.0**	**-2.9**
GRNB	**Grenville Isla**	**2.94**	**6**	Pn	Pn	00 30 13.4	-0.3
GRNB				Sn	**Sn**	**00 30 47.3**	**-2.0**
PCLB	**Port Clements**	**3.05**	**337**	Pn	**Pn**	**00 30 15.1**	**-0.1**
KITB	**Kitimat**	**3.36**	**19**	Pn	Pn	00 30 19.6	+0.3
CBB	**Campbell River**	**3.41**	**103**	Pn	Pn	00 30 19.1	-1.0
MYRA	**Myra Falls**	**3.46**	**112**	Pn	Pn	00 30 19.7	-1.1
OZB	**Mount Ozzard**	**3.79**	**119**	Pn	**Pn**	**00 30 25.2**	**-0.2**
TXDB	**Texada**	**4.08**	**105**	Pn	**Pn**	**00 30 28.8**	**-0.6**
WPB	**Watts Point**	**4.85**	**102**	Pn	**Pn**	**00 30 39.6**	**-0.2**
FSJB	**Fort St James**	**5.18**	**44**	Pn	**Pn**	**00 30 45.7**	**+1.3**
LLLB	**Lillooet**	**5.49**	**90**	Pn	**Pn**	**00 30 49.2**	**+0.5**
WISH	**Wishkah**	**5.85**	**128**	Pn	**Pn**	**00 30 54.2**	**+0.7**
HDW	**Hoodsport**	**5.88**	**121**	Pn	**Pn**	**00 30 54.4**	**+0.3**
GNW	**Green Mountain**	**6.05**	**121**	Pn	**Pn**	**00 30 56.7**	**+0.3**
T35M	**Bob Quinn**	**6.07**	**1**	Pn	**Pn**	**00 30 58.3**	**+1.6**
JCW	**Jim Creek**	**6.22**	**113**	Pn	**Pn**	**00 31 00.0**	**+1.4**
CPW	**Capitol Peak**	**6.26**	**126**	Pn	**Pn**	**00 31 00.4**	**+1.1**
FMW	**Mount Fremont**	**7.06**	**121**	Pn	**Pn**	**00 31 10.2**	**-0.3**
LON	**Longmire**	**7.10**	**123**	Pn	**Pn**	**00 31 11.3**	**+0.4**
NBC8	**Simpson Ranch**	**7.42**	**37**	Pn	**Pn**	**00 31 17.0**	**+1.8**
LTY	**Liberty**	**7.43**	**116**	Pn	**Pn**	**00 31 16.2**	**+0.8**
DLBC	**Dease Lake**	**7.53**	**2**	Pn	Pn	00 31 14.3	-2.4
	0.2nm,0.3s,baz=198,slow=20,SNR=1.5						
	1.5nm,0.8s						
NBC4	**NorthernBC 4**	**7.58**	**47**	Pn	**Pn**	**00 31 18.7**	**+1.3**
NBC5	**NorthernBC 5**	**8.04**	**32**	Pn	**Pn**	**00 31 25.3**	**+1.5**
TOAD	**Toad River Com**	**8.50**	**19**	Pn	**Pn**	**00 31 33.0**	**+3.0**
NEW	**Newport**	**9.10**	**102**	Pn	**Pn**	**00 31 42.4**	**+4.3**
	0.1nm,0.3s,baz=288,slow=9.6,SNR=4.8						
	1.2nm,0.5s						
YBH	**Yreka Blue Hor**	**10.65**	**147**	Pn	Pn	00 32 04.7	+5.2
	baz=357,slow=9.5,SNR=7.1						
NVAR	**Mina Array Bea**	**15.19**	**141**	Pn	**Pn**	**00 33 05.8**	**+4.3**
	baz=331,slow=13,SNR=7.2						
	0.9nm,0.9s						
ILAR	**Eielson Array**	**16.30**	**335**	Pn	**Pn**	**00 33 13.3**	**-2.4**
	0.1nm,0.8s,baz=144,slow=10,SNR=1.3						
PDAR	**Pinedale Array**	**16.45**	**112**	Pn	**Pn**	**00 33 20.9**	**+3.0**
	0.1nm,0.3s,baz=313,slow=14,SNR=20						
	2.4nm,0.8s						
PFO	**Pinyon Flats O**	**20.13**	**144**	P	Pn	00 34 04.3	+1.4
	2.4nm,0.9s,baz=333,slow=11,SNR=3.0						
	2.4nm,0.9s						
TXAR	**Lajitas Array**	**29.49**	**127**	P	**P**	**00 35 33.2**	**+1.9**
	0.3nm,0.9s,baz=332,slow=7.3,SNR=2.1						
	0.3nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**57.71**	**262**	T	T	01 41 51.0	
	baz=42,slow=76,SNR=80						
H11N3	**WAKE ISLAND Hy**	**57.71**	**262**	T	T	01 41 54.9	
	baz=42,slow=76,SNR=84						
H11N1	**WAKE ISLAND Hy**	**57.72**	**262**	T	T	01 41 52.2	
	baz=42,slow=76,SNR=72						
H11S1	**WAKE ISLAND Hy**	**58.74**	**261**	T	T	01 43 03.9	
	baz=41,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**58.75**	**261**	T	T	01 43 06.6	
	baz=41,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**58.76**	**261**	T	T	01 43 07.6	
	baz=41,slow=76,SNR=15						

IDC ***18*** *00:29:33.5±1.9, 0.°44N×98.°32E, h0km, mb3.6/6, mbtmp3.7/7, ML4.6/1, Error ellipse: s-maj=65.8km s-min=29.7km az=55.0*
DJA ***18*** *00:29:42.1±0.3, 1.°1N±3.°×9.°9E±.°, h53km±8km, M4.0/15, mb4.1/7, MLv3.9/15*
ISC 18 00:29:40.4±0.8, 0.°56N±0.°05×98.°79E±0.°05, h35km, n26, σ2°22/22, mb3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.79**	**220**	P	**Pn**	**00 29 57.6**	**+2.5**
PBSI				S	**Sn**	**00 30 09.5**	**+3.8**
MNSI	**Mandailing Nat**	**0.83**	**74**	P	**Pn**	**00 29 58.0**	**+2.4**
MNSI				S	**Sn**	**00 30 10.0**	**+3.4**
SBSI	**Sibolga**	**0.99**	**6**	P	**Pn**	**00 30 00.9**	**+3.1**
GSI	**Gunungsitoli**	**1.42**	**301**	P	**Pn**	**00 30 06.3**	**+2.6**
SISI	**Saibi**	**1.90**	**171**	P	**Pn**	**00 30 11.6**	**+1.3**
PPI	**Padang Panjang**	**1.90**	**122**	P	**Pn**	**00 30 12.6**	**+2.2**
PDSI	**Padang**	**2.22**	**131**	P	**Pn**	**00 30 16.4**	**+1.6**
BKNI	**Bangkinang**	**2.27**	**96**	P	**Pn**	**00 30 16.3**	**+0.9**
KCSI	**Kotacane, Aceh**	**3.11**	**341**	P	**Pn**	**00 30 28.5**	**+1.4**
PPSI	**Pulau Pagai**	**3.52**	**160**	P	**Pn**	**00 30 32.7**	**+0.1**
MLSI	**Meulaboh, Aceh**	**4.38**	**327**	P	**Pn**	**00 30 46.5**	**+2.0**
DSRI	**Dabo**	**5.88**	**100**	P	**Pn**	**00 31 06.5**	**+1.3**
	0.1nm10nm,0.4s						
PBKI	**Pangkalan Bun**	**13.28**	**104**	P	**Pn**	**00 32 46.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**17.79**	**0**	P	**Pn**	**00 33 44.7**	**-0.7**
	0.7nm,0.3s,baz=184,slow=12,SNR=1.3						
	0.7nm,0.3s						
H08S2	**Diego Garcia H**	**27.46**	**252**	T	T	01 02 51.8	
	baz=73,slow=75,SNR=19						
H08S3	**Diego Garcia H**	**27.46**	**252**	T	T	01 02 52.2	
	baz=73,slow=75,SNR=31						
H08S1	**Diego Garcia H**	**27.48**	**252**	T	T	01 02 54.1	
	baz=73,slow=75,SNR=13						
WRA	**Warramunga Arr**	**40.35**	**122**	P	**P**	**00 37 16.1**	**+1.0**
	0.2nm,0.5s,baz=300,slow=8.2,SNR=1.5						
	0.2nm,0.5s						
SONM	**Songino Array**	**47.55**	**7**	P	**P**	**00 38 11.6**	**-1.0**
	1.3nm,0.7s,baz=189,slow=8.3,SNR=9.4						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**48.26**	**345**	P	**P**	**00 38 16.5**	**-1.4**
	0.8nm,0.5s,baz=155,slow=8.7,SNR=6.7						
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**52.77**	**344**	P	**P**	**00 38 49.5**	**-2.4**
	0.2nm,0.4s,baz=166,slow=6.5,SNR=1.6						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**54.45**	**350**	P	**P**	**00 39 03.4**	**-0.8**
	0.9nm,0.5s,baz=161,slow=9.2,SNR=5.8						
	0.9nm,0.5s						
H04N2	**CROZET ISLANDS**	**62.15**	**215**	T	T	01 46 23.5	
	baz=56,slow=75,SNR=7.1						
H04N1	**CROZET ISLANDS**	**62.16**	**215**	T	T	01 46 40.7	
	baz=56,slow=75,SNR=8.0						
H04N3	**CROZET ISLANDS**	**62.17**	**215**	T	T	01 46 23.9	
	baz=56,slow=75,SNR=8.4						
BRTR	**Keskin Array B**	**70.71**	**312**	P	**P**	**00 40 50.0**	**-3.2**
	0.3nm,0.6s,baz=115,slow=6.5,SNR=1.8						
	0.3nm,0.6s						

IDC ***18*** *00:30:45.8±1.5, 14.°14N×56.°23E, h0km, mb3.8/7, mbtmp3.8/7, MS3.3/6, Error ellipse: s-maj=44.7km s-min=27.2km az=35.0*
ISC 18 00:30:47.5±1.6, 14°2N±0°3×56°3E±0°2, h10km, n15, σ0°81/7, mb3.7/7, MS3.3/6, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**24.20**	**233**	LR	LR	00 46 13.5	
	comp=Z,18nm,19.4s,baz=88,slow=8						
MKAR	**Makanchi Array**	**39.13**	**29**	LR	LR	00 56 06.7	
	comp=Z,60nm,18.8s,baz=185,slow=39						
KURBB	**Kurchatov Arra**	**40.59**	**22**	P	**P**	**00 38 26.7**	**-0.6**
	1.1nm,0.8s,baz=220,slow=8.9,SNR=6.4						
	1.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.13**	**78**	P	**P**	**00 38 33.2**	**+1.0**
	0.8nm,0.4s,baz=274,slow=7.0,SNR=9.1						
CMAR				LR	LR	00 56 05.6	
	comp=Z,12nm,18.8s,baz=275,slow=37						
	0.8nm,0.4s						
PSI	**Prapat**	**43.61**	**101**	LR	LR	00 53 41.9	
	comp=Z,27nm,19.2s,baz=88,slow=32						
FINES	**FINESS Array B**	**51.94**	**342**	P	**P**	**00 39 56.4**	**+0.1**
	0.7nm,0.7s,baz=155,slow=7.2,SNR=3.6						
	0.7nm,0.7s						
BOSA	**Boshof**	**52.05**	**215**	LR	LR	01 03 04.6	
	comp=Z,16nm,18.2s,baz=36,slow=37						
SONM	**Songino Array**	**53.22**	**40**	P	**P**	**00 40 06.2**	**-0.1**
	0.6nm,0.9s,baz=254,slow=10,SNR=2.8						
	0.6nm,0.9s						
MDT	**Midelt**	**58.05**	**300**	LR	LR	01 06 54.1	
	comp=Z,75nm,18.7s,baz=28,slow=37						
ESDC	**Sonseca Array**	**58.21**	**308**	P	**P**	**00 40 42.6**	**+0.4**
	0.5nm,0.7s,baz=99,slow=6.8,SNR=4.2						
	0.5nm,0.7s						
H01W3	**Cape Leeuwin H**	**73.43**	**133**	T	T	02 02 31.5	
	baz=302,slow=75,SNR=26						
H01W2	**Cape Leeuwin H**	**73.44**	**133**	T	T	02 02 32.1	
	baz=302,slow=75,SNR=24						
H01W1	**Cape Leeuwin H**	**73.45**	**133**	T	T	02 02 32.7	
	baz=302,slow=75,SNR=28						
WRA	**Warramunga Arr**	**83.93**	**112**	P	**P**	**00 43 17.4**	**-1.0**
	0.9nm,0.8s,baz=284,slow=4.9,SNR=4.8						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**84.67**	**116**	P	**P**	**00 43 22.0**	**-0.2**
	0.4nm,0.4s,baz=303,slow=3.8,SNR=4.4						
	0.4nm,0.4s						

IDC ***18*** *00:38:37.7±0.9, 37.°71N×47.°58E, h0km, mb3.8/16, mbtmp3.9/23, ML2.5/5, MS2.4/1, Error ellipse: s-maj=13.0km s-min=9.6km az=4.0*
MOS ***18*** *00:38:38.0±1.3, 37.°73N×47.°75E, h10km, mb4.3/7, Error ellipse: s-maj=7.9km s-min=5.1km az=96.4*
TEH ***18*** *00:38:38.5, 37.°73N×47.°53E, h9km±11km*
THR ***18*** *00:38:39.0±0.0, 37.°80N×47.°56E, h14km±4km, ML4.4*
NEIC ***18*** *00:38:41.8±2.5, 37.°76N±0.°06×47.°80E±0.°09, h14km±6km, mb4.0/14, Error ellipse: s-maj=10.2km s-min=9.2km az=80.0*
NNC ***18*** *00:38:57.3±4.4, 38.°56N×49.°23E, h0km, mb4.2, Error ellipse: s-maj=83.2km s-min=35.1km az=102.0*
ISC 18 00:38:39.8±0.8, 37.78N±0.°03×47.°59E±0.°03, h12km±5km, n157, σ1°93/163, mb4.0/22, 5C-4D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISRB	**Sarab**	**0.07**	**55**	Pg	**Pg**	**00 38 42.0**	**-0.6**
ISRB				Sg	**Sg**	**00 38 44.7**	**+0.1**
IHSH	**Hashtrud**	**0.55**	**209**	Pg	**Pg**	**00 38 48.1**	**-2.5**
IHSH				Sg	**Sg**	**00 38 54.9**	**-2.9**
IHRS	**Heris**	**0.69**	**321**	Pg	**Pg**	**00 38 51.8**	**-1.4**
IHRS				Sg	**Sb**	**00 39 02.3**	**-1.2**
GRMI	**Germi**	**1.05**	**13**	*e*Pg	**Pg**	**00 38 59.2**	**-0.9**
GAS1	**Astara - Iran**	**1.15**	**58**	Pg	**Pb**	**00 39 01.4**	**-0.3**
CSN1	**Caspian**	**1.21**	**100**	Pg	**Pn**	**00 39 02.1**	**-0.5**
ITBZ	**Tabriz**	**1.23**	**292**	Pg	**Pb**	**00 39 00.7**	**-2.4**
ITBZ				Sg	**Sb**	**00 39 18.3**	**-0.7**
IAZR	**Azarshahr**	**1.28**	**266**	Pg	**Pn**	**00 39 01.7**	**-2.1**
LKRN	**Lenkeran, Azer**	**1.31**	**45**	P	**Pn**	**00 39 04.3**	**+0.3**
ZNJK	**Zanjan**	**1.41**	**142**	Pg	**Pn**	**00 39 04.4**	**-1.2**
ZNJK	**Zanjan**	**1.41**	**142**	*e*Pg	**Pn**	**00 39 04.4**	**-1.2**
ZNJK				IAML		00 40 16.2	
	comp=Z,3.9nm,1.0s						
ISHB	**Shabestar**	**1.64**	**288**	Pg	**Pn**	**00 39 07.9**	**-0.8**
IMRD	**Marand**	**1.75**	**303**	Pg	**Pn**	**00 39 11.2**	**+1.0**
MAHB	**Mahabad**	**1.82**	**237**	Pg	**Pn**	**00 39 10.7**	**-0.3**
LHJ2	**Lahijan - Gila**	**2.06**	**107**	Pn	**Pn**	**00 39 15.4**	**+1.2**
NAX	**Nakhchivan**	**2.15**	**311**	P	**Pn**	**00 39 17.2**	**+1.6**
SRSL	**SARDASHT**	**2.33**	**228**	*e*Pn	**Pn**	**00 39 19.8**	**+1.6**
SRSL				IAML		00 39 56.1	
	comp=Z,1μm,1.0s						
HGHA	**Hamedan- Ghaye**	**2.51**	**156**	Pn	**Pn**	**00 39 21.5**	**+0.8**
IGZV	**Ghazvin**	**2.52**	**123**	Pn	**Pn**	**00 39 22.1**	**+1.3**
QABG	**Abgarm-Qazvin**	**2.62**	**142**	Pn	**Pn**	**00 39 22.9**	**+0.8**
SNGE	**Sanandaj**	**2.69**	**184**	*i* P	**Pn**	**00 39 24.5**	**+1.3**
SNGE				IAML		00 40 05.0	
	comp=Z,400nm,1.0s						
SNQR	**Sonqor, Kerman**	**2.92**	**179**	Pn	**Pn**	**00 39 28.3**	**+1.9**
MNGR	**Mingechevir, A**	**3.01**	**353**	P	**Pn**	**00 39 29.9**	**+2.6**
GANJ	**Ganja**	**3.02**	**341**	P	**Pn**	**00 39 29.3**	**+1.7**
HAGD	**Aghdareh**	**3.21**	**157**	Pn	**Pn**	**00 39 30.0**	**-0.3**
IDHR	**Dehrash**	**3.23**	**198**	Pn	**Pn**	**00 39 32.2**	**+1.6**
THKV	**Tehran--Karaj**	**3.23**	**124**	*e*Pn	**Pn**	**00 39 31.8**	**+1.3**
THKV				IAML		00 40 25.3	
	comp=Z,1μm,1.0s						
GNI	**Garni**	**3.24**	**318**	Pn	**Pn**	**00 39 33.2**	**+2.5**
	comp=Z,2.3nm,0.3s,baz=129,slow=0.5,SNR=22						
GNI				Pg	**Pb**	**00 39 38.7**	**+1.2**
	comp=Z,44nm,0.3s,baz=175,slow=3.5,SNR=90						
GNI				Lg	Lg	00 40 21.7	
	comp=Z,39nm,0.3s,baz=240,slow=20,SNR=6.7						
GNI				LR	LR	00 40 47.4	
	comp=Z,60nm,18.8s,baz=112,slow=39						
	comp=Z,56nm,0.7s						
GNI	**Garni**	**3.24**	**318**		**Pn**	**00 39 33.5**	**+2.8**
GNI	**Garni**	**3.24**	**318**	*ce*P	**Pn**	**00 39 32.6**	**+1.9**
GNI				pmax	pmax		
	comp=Z,139nm,0.6s						
CHTH	**Charan**	**3.40**	**122**	*e*Pn	**Pn**	**00 39 34.7**	**+1.8**
CHTH				IAML		00 41 03.1	
	comp=Z,1.7nm,1.0s						
SEKA	**Sheki**	**3.43**	**355**	P	**Pn**	**00 39 35.0**	**+1.8**
MZPU	**Pul - Mazandar**	**3.45**	**112**	Pn	**Pn**	**00 39 34.9**	**+1.3**
KCHF	**Cheshme Sefid,**	**3.53**	**187**	Pn	**Pn**	**00 39 35.5**	**+0.9**
IGHG	**Ghaleghazi**	**3.54**	**194**	Pn	**Pn**	**00 39 36.0**	**+1.1**
AKT	**Akhty**	**3.69**	**2**	*e*P	**Pn**	**00 39 38.9**	**+2.1**
AKT				*e*S	**Sb**	**00 40 24.5**	**-5.3**
AKT				pmax	pmax		
	comp=Z,187nm,0.4s						
AKT				smax	smax		
	comp=E,112nm,0.4s						
ASAO	**Ashtian**	**3.78**	**

BRTR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
AB31	**Akbulak array**	**14.53**	**34**		**Pn**	**Pn**	**00 42 05.7**	**+0.5**
AB31	**Akbulak array**	**14.53**	**34**	⇓P	**Pn**	**Pn**	**00 42 03.8**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=218,slow=14,SNR=18							
AB31				⇓S	Sn	Sn	00 44 34.8	-11
	comp=Z,2.9nm,0.6s,baz=221,slow=24							
AB31	**Akbulak array**	**14.53**	**34**	P	**Pn**		**00 42 03.8**	**-1.3**
ABKAR	**Akbulak array**	**14.53**	**34**	Pn	**Pn**		**00 42 06.4**	**+1.2**
BELG	**Belogornoye**	**14.61**	**0**	Pn	**Pn**		**00 42 07.0**	**+0.8**
	comp=Z,6.9nm,0.5s,baz=197,slow=20,SNR=5.3							
AKTO	**Aktyubinsk**	**14.68**	**27**	Pn	**Pn**		**00 42 07.1**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=206,slow=9.0,SNR=9.3							
AKTO				Sn	**Sn**		**00 44 41.7**	**-8.0**
	comp=Z,0.4nm,0.3s,baz=280,slow=12,SNR=4.4							
AKTO	**Aktyubinsk**	**14.68**	**27**	⇑P	**Pn**		**00 42 07.5**	**+0.3**
	comp=Z,6.4nm,1.1s							
AKTO				⇓S	Sn		00 44 40.0	-10
	comp=Z,2.8nm,0.6s							
UOSS	**Minazif**	**14.75**	**148**	Pn	**Pn**		**00 42 08.7**	**+0.3**
MANT	**Manisa**	**15.00**	**279**	Pn	**Pn**		**00 42 14.8**	**+3.0**
MANT				IAmb	IAmb		00 42 18.1	
	comp=Z,16nm,1.5s							
TIRR	**Tirgusor**	**15.90**	**301**	Pn	**P**		**00 42 26.5**	**-0.5**
TIRR	**Tirgusor**	**15.90**	**301**	P	**P**		**00 42 26.5**	**-0.5**
TIRR				pmax	pmax			
	comp=Z,39nm,1.5s							
CHGR	**Chuyangaron**	**16.97**	**80**		**Pn**		**00 42 36.1**	**-1.0**
CHGR	**Chuyangaron**	**16.97**	**80**	P	**Pn**		**00 42 36.1**	**-1.0**
CHGR				pmax	pmax			
	comp=Z,5.0nm,0.7s							
RDO	**Rodhopi**	**17.35**	**288**		**Pn**		**00 42 41.2**	**-0.5**
RDO				IAmb	IAmb		00 42 49.6	
	comp=Z,11nm,1.0s							
GAR	**Garm**	**17.85**	**79**	P	**Pn**		**00 42 47.4**	**-0.7**
KK31	**Karatay Array**	**18.21**	**66**		**Pn**		**00 42 50.8**	**-1.7**
KK31				IAmb	IAmb		00 42 56.7	
	comp=Z,7.2nm,0.9s							
KK31	**Karatay Array**	**18.21**	**66**	P	**Pn**		**00 42 52.1**	**-0.4**
	comp=Z,7.6nm,0.9s,baz=254,slow=16,SNR=31							
KK31	**Karatay Array**	**18.21**	**66**	P	**Pn**		**00 42 50.8**	**-1.7**
KK31				pmax	pmax			
	comp=Z,7.0nm,0.9s							
KKAR	**Karatay Array**	**18.21**	**66**		**Pn**		**00 42 51.2**	**-1.3**
KKAR	**Karatay Array**	**18.21**	**66**	P	**Pn**		**00 42 51.2**	**-1.3**
AKASG	**Malin Array Be**	**18.37**	**321**	P	**Pn**		**00 42 51.2**	**-3.1**
	comp=Z,0.7nm,0.4s,baz=127,slow=11,SNR=3.0							
IDI	**Anoyia**	**18.41**	**269**	P	**P**		**00 42 55.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=53,slow=15,SNR=1.4							
	comp=Z,5.5nm,1.1s							
OBN	**Obninsk**	**18.88**	**340**	*e*P	**Pn**		**00 43 01.6**	**+1.2**
OBN				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BURAR	**Bucovina Array**	**19.10**	**308**	P	**Pn**		**00 43 04.0**	**+0.8**
ARTI	**Arti**	**19.96**	**18**	P	**Pn**		**00 43 13.3**	**-0.1**
	comp=Z,6.7nm,0.8s,baz=207,slow=11,SNR=7.4							
	comp=Z,6.7nm,0.8s							
ARTI	**Arti**	**19.96**	**18**		**P**		**00 43 11.9**	**+0.2**
ARTI	**Arti**	**19.96**	**18**	*d* P	**P**		**00 43 12.2**	**+0.5**
ARTI				S	**Sn**		**00 46 57.5**	**-0.1**
ARTI				pmax	pmax			
	comp=Z,19nm,1.7s							
KIRV	**Kirov**	**20.85**	**3**	P	**P**		**00 43 22.6**	**+1.3**
	comp=Z,11nm,0.6s,baz=250,slow=6.7,SNR=8.4							
	comp=Z,11nm,0.6s							
SVE	**Sverdlovsk**	**20.94**	**20**	*e*P	Pn		00 43 25.7	+0.9
AAK	**Ala-Archa**	**21.07**	**68**	P	**P**		**00 43 25.2**	**+1.2**
	comp=Z,1.7nm,0.7s,baz=230,slow=13,SNR=1.6							
	comp=Z,1.7nm,0.7s							
AAK	**Ala-Archa**	**21.07**	**68**		**P**		**00 43 23.8**	**-0.2**
AAK				IAmb	IAmb		00 43 34.1	
	comp=Z,3.2nm,0.7s							
AAK	**Ala-Archa**	**21.07**	**68**	*ce*P	**P**		**00 43 23.1**	**-0.9**
AAK				pmax	pmax			
	comp=Z,6.0nm,1.2s							
BORK	**Borovoye**	**21.94**	**39**	*ce*P	**P**		**00 43 33.0**	**0.0**
BORK				pmax	pmax			
	comp=Z,14nm,1.6s							
BVA0	**Borovoye Array**	**21.96**	**39**	P	**P**		**00 43 38.0**	**+4.7**
	comp=Z,7.4nm,0.8s,baz=236,slow=9.3,SNR=14							
BVA0	**Borovoye Array**	**21.96**	**39**	P	**P**		**00 43 38.0**	**+4.7**
BVAR	**Borovoye Array**	**21.96**	**39**	P	**P**		**00 43 33.5**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=238,slow=8.3,SNR=5.6							
BVAR				S	**S**		**00 47 37.2**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=230,slow=20,SNR=6.3							
	comp=Z,1.7nm,0.7s							
KSH	**Kashi**	**22.20**	**77**	P	**P**		**00 43 34.8**	**-1.3**
KSH				sP	sP		00 43 43.5	+1.6
KSH				pmax	pmax			
	comp=Z,6.0nm,0.8s							
NACGM	**Naroch**	**22.21**	**327**	*e*P	**P**		**00 43 35.8**	**-0.1**
	comp=Z,6.0nm,1.0s,baz=131							
STHS	**Stebnicka Huta**	**22.22**	**310**	*e*P	**P**		**00 43 40.9**	**+4.7**
STHS	**Stebnicka Huta**	**22.22**	**310**	*e*P	**P**		**00 43 40.9**	**+4.7**
TARG	**Taragay, Kyrgy**	**23.50**	**71**	P	**P**		**00 43 49.9**	**-0.1**
TARG				IAmb	IAmb		00 43 54.6	
	comp=Z,6.3nm,1.0s							
TARG	**Taragay, Kyrgy**	**23.50**	**71**	P	**P**		**00 43 49.9**	**-0.1**
TARG				pmax	pmax			
	comp=Z,6.0nm,1.0s							
KLMR	**Klimovskoe**	**23.65**	**350**	*e*P	**P**		**00 43 50.5**	**-0.2**
KLMR				pmax	pmax			
	comp=Z,30nm,1.5s							
KURBB	**Kurchatov Arra**	**25.42**	**50**	P	**P**		**00 44 08.4**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=255,slow=9.2,SNR=8.2							
	comp=Z,1.3nm,0.8s							
KURK	**Kurchatov**	**25.50**	**50**		**P**		**00 44 08.6**	**+0.8**
KURK				IAmb	IAmb		00 44 20.0	
	comp=Z,3.0nm,0.8s							
KURK	**Kurchatov**	**25.50**	**50**	*i* P	**P**		**00 44 07.8**	**0.0**
KURK				pmax	pmax			
	comp=Z,6.0nm,1.2s							
GERES	**GERESS Array B**	**26.81**	**305**	P	**P**		**00 44 19.4**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=96,slow=9.0,SNR=5.6							
	comp=Z,0.8nm,0.8s							
MK31	**Makanchi Array**	**27.02**	**59**	*i* P	**P**		**00 44 20.9**	**-0.8**
MKAR	**Makanchi Array**	**27.02**	**59**	P	**P**		**00 44 21.1**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=267,slow=8.7,SNR=5.9							
	comp=Z,0.8nm,0.9s							
MKAR	**Makanchi Array**	**27.02**	**59**	P	**P**		**00 44 22.3**	**+0.6**
FINES	**FINESS Array B**	**27.22**	**337**	P	**P**		**00 44 23.2**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=144,slow=12,SNR=3.5							
	comp=Z,1.8nm,0.9s							
ZALV	**Zalesovo Beam**	**30.11**	**45**	P	**P**		**00 44 47.7**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=263,slow=12,SNR=1.8							
	comp=Z,0.4nm,0.4s							
WMQ	**Urumqi**	**30.73**	**66**	*e*P	**P**		**00 44 57.8**	**+3.1**
DGZ	**Jazzator, Alta**	**30.79**	**54**	*i* P	**P**		**00 44 53.4**	**-2.0**
DGZ				pmax	pmax			
	comp=Z,3.0nm,1.0s							
HFS	**Hagfors**	**30.98**	**327**	P	**P**		**00 44 55.9**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=128,slow=13,SNR=6.7							
	comp=Z,0.9nm,0.5s							
NB2	**NORSAR Subarra**	**32.49**	**327**	P	**P**		**00 45 09.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=121,slow=8.6							
NOA	**NORSAR Array B**	**32.49**	**327**	P	**P**		**00 45 08.9**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=120,slow=8.2,SNR=5.3							
	comp=Z,0.7nm,0.8s							
EKA	**Eskdalemuir Ar**	**38.08**	**314**	P	**P**		**00 45 58.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=97,slow=7.8,SNR=3.6							
	comp=Z,0.6nm,0.6s							
ESDC	**Sonseca Array**	**39.81**	**289**	P	**P**		**00 46 12.7**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=87,slow=8.1,SNR=2.0							
	comp=Z,0.5nm,0.8s							
PZH	**PanZhiHua**	**46.64**	**88**	P	**P**		**00 47 08.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**47.54**	**251**	P	**P**		**00 47 15.1**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=55,slow=5.5,SNR=1.9							
	comp=Z,1.6nm,0.3s							
CMAR	**Chiang Mai Arr**	**48.57**	**99**	P	**P**		**00 47 22.7**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=305,slow=6.0,SNR=5.4							
	comp=Z,0.8nm,0.3s							
CMAR	**Chiang Mai Arr**	**48.57**	**99**	*i* P	**P**		**00 47 23.7**	**+0.4**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
HHC	**Hu-ho-hao-te**	**48.60**	**65**	*e*P	**P**		**00 47 24.1**	**+0.7**
HHC				pmax	pmax			
	comp=Z,11nm,0.8s							
HHC				pmax	pmax			
	comp=Z,130nm,5.2s							
BOSA	**Boshof**	**69.29**	**201**	P	**P**		**00 49 45.9**	**-1.0**
	comp=Z,3.5nm,1.0s,baz=30,slow=8.1,SNR=1.7							
	comp=Z,3.5nm,1.0s							

*HEL **18** 00:46:55.9±0.3, 67.84N×20.01E, h0km, ML1.7, Suspected explosion*

*UPP **18** 00:46:56.9±0.0, 67.83N×20.21E, h1km, ML2.0, Suspected explosion*
*IDC **18** 00:46:58.4±1.1, 67.78N×20.66E, h0km, mbtmp2.8/4, ML1.7/4, Error ellipse: s-maj=19.3km s-min=8.6km az=115.0*

ISC 18 00:46:56.7±0.8, **67.82N**±0.02×**20.23E**±0.02, **h0km**, **n29**, σ1§**02**/48, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**16**	P		**Pg**		**00 46 59.6**	**+0.1**
	baz=229								
KUA				S		**Sg**		**00 47 01.6**	**+0.2**
RATU	**Laukkuluspa**	**0.24**	**272**	P		**Pg**		**00 47 01.5**	**+0.1**
RATU				S		**Sg**		**00 47 04.7**	**+0.2**
NIKU	**Nikkaluokta**	**0.46**	**277**	P		**Pg**		**00 47 05.4**	**-0.1**
NIKU				S		**Sg**		**00 47 11.7**	**+0.3**
LANU	**Lannavaara**	**0.71**	**70**	P		**Pg**		**00 47 10.2**	**0.0**
LANU				S		**Sg**		**00 47 19.7**	**+0.4**
LANU	**Lannavaara**	**0.71**	**70**	PG		**Pg**		**00 47 10.0**	**-0.2**
LANU				SG		**Sg**		**00 47 19.7**	**+0.4**
DUNU	**Dundret**	**0.71**	**169**	P		**Pg**		**00 47 10.4**	**+0.1**
DUNU				S		**Sg**		**00 47 20.3**	**+0.8**
MASU	**Masugnsbyn**	**0.77**	**117**	P		**Pg**		**00 47 11.5**	**+0.2**
SALU	**Saltoluokta**	**0.79**	**237**	P		**Pg**		**00 47 11.8**	**-0.1**
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P		**Pg**		**00 47 20.1**	**+0.1**
KIF	**Kilpisjarvi**	**1.21**	**10**	PN		**Pg**		**00 47 20.0**	**+0.1**
KIF				smax	smax			00 47 33.5	
	comp=Z,11nm,0.2s								
KIF				SB		**Sg**		**00 47 35.4**	**-0.3**
PAJU	**Pajala**	**1.37**	**124**	PG		**Pg**		**00 47 22.0**	**-0.8**
	baz=303								
PAJU				SG		**Sg**		**00 47 40.8**	**+0.2**
HEF	**Hetta**	**1.42**	**64**	*e*P		**Pn**		**00 47 23.5**	**-0.2**
HEF	**Hetta**	**1.42**	**64**	PN		**Pn**		**00 47 22.9**	**-0.8**
	baz=246								
HEF				smax	smax			00 47 40.5	
	comp=Z,4.7nm,0.2s								
HEF				SN		**Sg**		**00 47 42.4**	**+0.2**
ERTU	**Ertsjaerv**	**1.48**	**148**	P		**Pn**		**00 47 24.2**	**-0.4**
ERTU	**Ertsjaerv**	**1.48**	**148**	PG		**Pn**		**00 47 24.1**	**-0.4**
ERTU				SN		**Sb**		**00 47 44.9**	**+0.6**
KTK1	**Kautokeino**	**1.64**	**41**	PG		**Pn**		**00 47 26.6**	**-0.2**
KTK1				SN		**Sg**		**00 47 49.8**	**+0.6**
HARU	**Harads**	**1.69**	**170**	P		**Pn**		**00 47 27.8**	**+0.5**
TOF	**Tornio**	**2.37**	**135**	PG		**Pn**		**00 47 38.7**	**+1.9**
	baz=316								
TOF				smax	smax			00 48 08.5	
	comp=Z,2.0nm,0.2s								
TOF				SG		**Sb**		**00 48 10.9**	**+0.8**
RNF	**Rovaniemi**	**2.56**	**116**	PB		**Pn**		**00 47 41.4**	**+2.1**
	baz=305								
RNF				SB		**Sb**		**00 48 14.6**	**-0.7**
ARA0	**ARCESS Array S**	**2.59**	**46**	PB		**Pn**		**00 47 41.1**	**+1.3**
ARA0				SB		**Sb**		**00 48 14.2**	**-2.0**
ARCES	**ARCESS Array B**	**2.59**	**46**	Pn		**Pn**		**00 47 41.0**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=226,slow=15,SNR=29								
ARCES				Sn		**Sn**		**00 48 12.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=223,slow=22,SNR=13								
	comp=Z,0.6nm,0.3s								
RAJF	**Raja-Jooseppi**	**3.09**	**74**	PN		**Pn**		**00 47 47.0**	**+0.3**
RAJF				SB		**Sb**		**00 48 29.9**	**-0.9**
KEV	**Kevo**	**3.14**	**49**	PG		**Pb**		**00 47 51.5**	**-1.8**
KEV				SN		**Sn**		**00 48 26.6**	**+1.2**
OUL	**Oulu**	**3.56**	**138**	SG		**Sg**		**00 48 48.8**	**-2.2**
VRF	**Varrio**	**3.56**	**87**	PG		**Pb**		**00 48 01.2**	**+0.6**
OLKF	**Oulanka, Finla**	**3.89**	**108**	PG		**Pb**		**00 48 08.2**	**+2.1**
FINES	**FINESS Array B**	**6.87**	**156**	Pn		**Pn**		**00 48 38.8**	**+0.3**
	baz=342,slow=13,SNR=2.0								
FINES				Sn		**Sn**		**00 49 56.1**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=346,slow=23,SNR=1.3								
FINES				Lg		Lg		00 50 32.8	
	comp=Z,0.3nm,0.3s,baz=346,slow=27,SNR=6.3								
	comp=Z,1.6nm,1.0s								
NOA	**NORSAR Array B**	**7.83**	**214**	Pn		**Pn**		**00 48 53.5**	**+1.7**
	baz=28,slow=13,SNR=1.0								
NOA				Lg		Lg		00 50 59.7	
	baz=28,slow=19,SNR=2.0								
	comp=Z,0.2nm,0.6s								
HFS	**Hagfors**	**8.22**	**203**	Pn		**Pn**		**00 48 56.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=27,slow=9.7,SNR=1.3								
HFS				Sn		**Sn**		**00 50 28.1**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=21,slow=21,SNR=2.1								
HFS				Lg		Lg		00 51 14.4	
	comp=Z,0.1nm,0.3s,baz=24,slow=28,SNR=1.8								
	comp=Z,1.3nm,0.9s								

*UPP **18** 00:49:28.6±0.0, 67.85N×20.21E, h0km, ML2.0, Suspected explosion*
*HEL **18** 00:49:28.9±0.1, 67.84N×20.16E, h0km, ML1.8, Suspected explosion*
*IDC **18** 00:49:30.6±0.9, 67.76N×20.76E, h0km, mbtmp3.2/5, ML1.9/4, Error ellipse: s-maj=15.9km s-min=7.7km az=113.0*

ISC 18 00:49:28.9±0.7, **67.85N**±0.02×**20.22E**±0.02, **h0km**, **n34**, σ1§**19**/57, **Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**22**	P		**Pg**		**00 49 31.1**	**0.0**
KUA				S		**Sg**		**00 49 32.8**	**+0.2**
RATU	**Laukkuluspa**	**0.24**	**265**	P		**Pg**		**00 49 33.3**	**-0.1**
RATU				S		**Sg**		**00 49 36.3**	**-0.2**
NIKU	**Nikkaluokta**	**0.45**	**273**	P		**Pg**		**00 49 37.2**	**-0.3**
NIKU				S		**Sg**		**00 49 43.5**	**+0.2**
LANU	**Lannavaara**	**0.70**	**72**	P		**Pg**		**00 49 41.9**	**-0.3**
LANU				S		**Sg**		**00 49 51.2**	**-0.1**
LANU	**Lannavaara**	**0.70**	**72**	PG		**Pg**		**00 49 41.8**	**-0.5**
LANU				SG		**Sg**		**00 49 51.2**	**-0.1**
DUNU	**Dundret**	**0.74**	**169**	P		**Pg**		**00 49 42.5**	**-0.5**
MASU	**Masugnsbyn**	**0.79**	**119**	P		**Pg**		**00 49 43.5**	**-0.3**
MASU				S		**Sg**		**00 49 54.4**	**+0.4**
SALU	**Saltoluokta**	**0.81**	**235**	P		**Pg**		**00 49 43.7**	**-0.6**
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*P		**Pg**		**00 49 51.2**	**-0.2**
KIF	**Kilpisjarvi**	**1.18**	**10**	PG		**Pg**		**00 49 51.3**	**-0.2**
KIF				smax	smax			00 50 06.2	
	comp=Z,13nm,0.2s								
KIF				SG		**Sg**		**00 50 06.8**	**0.0**
PAJU	**Pajala**	**1.39**	**125**	PG		**Pg**		**00 49 53.9**	**-1.5**
	baz=304								
PAJU				SG		**Sg**		**00 50 13.2**	**-0.2**
HEF	**Hetta**	**1.41**	**65**	*e*P		**Pn**		**00 49 53.8**	**-1.9**
HEF	**Hetta**	**1.41**	**65**	PG		**Pn**		**00 49 54.6**	**-1.1**
	baz=248								
HEF				smax	smax			00 50 11.9	
	comp=Z,11nm,0.2s								
HEF				SG		**Sg**		**00 50 13.2**	**-0.8**
ERTU	**Ertsjaerv**	**1.51**	**149**	P		**Pn**		**00 49 56.2**	**-1.0**
ERTU	**Ertsjaerv**	**1.51**	**149**	PG		**Pn**		**00 49 56.1**	**-1.0**
	baz=325								
ERTU				SN		**Sn**		**00 50 17.6**	**+0.2**
KTK1	**Kautokeino**	**1.62**	**42**	PG		**Pn**		**00 49 58.1**	**-0.6**
KTK1				SN		**Sn**		**00 50 19.8**	**-0.4**
HARU	**Harads**	**1.72**	**170**	P		**Pn**		**00 49 59.8**	**-0.1**
TRO	**Tromso**	**1.85**	**346**	PG		**Pn**		**00 50 02.1**	**+0.2**
TRO				SN		**Sn**		**00 50 26.6**	**+0.6**
TOF	**Tornio**	**2.40**	**136**	PB		**Pn**		**00 50 10.5**	**+1.2**
TOF				smax	smax			00 50 40.2	
	comp=Z,2.9nm,0.2s								
TOF				SG		**Sb**		**00 50 43.0**	**+0.1**
ARA0	**ARCESS Array S**	**2.57**	**46**	PB		**Pn**		**00 50 12.7**	**+0.9**
ARA0				SB		**Sb**		**00 50 46.3**	**-1.6**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn		**Pn**		**00 50 11.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=227,slow=15,SNR=12								
ARCES				Sn		**Sn**		**00 50 45.6**	**+2.0**
	comp=Z,1.4nm,0.3s,baz=222,slow=27,SNR=15								
	comp=Z,1.0nm,0.2s								
RNF	**Rovaniemi**	**2.57**	**116**	PB		**Pn**		**00 50 13.3**	**+1.5**
RNF				SG		**Sb**		**00 50 47.3**	**-0.7**
RAJF	**Raja-Jooseppi**	**3.09**	**74**	PN		**Pn**		**00 50 19.1**	**+0.2**
RAJF				SG		**Sb**		**00 51 02.8**	**0.0**
KEV	**Kevo**	**3.12**	**49**	PB		**Pb**		**00 50 22.5**	**-2.7**
KEV				SN		**Sn**		**00 50 58.1**	**+0.9**
RANF	**Ranua**	**3.17**	**122**	PG		**Pb**		**00 50 27.1**	**+1.1**
	baz=312								
RANF				SB		**Sn**		**00 51 00.1**	**+1.7**
BURU	**Burvik**	**3.31**	**171**	SB		**Sn**		**00 51 04.6**	**+2.8**
VRF	**Varrio**	**3.57**	**87**	PG		**Pb**		**00 50 32.6**	**-0.1**
	baz=276								
OLKF	**Oulanka, Finla**	**3.90**	**109**	PG		**Pb**		**00 50 40.1**	**+1.6**
KU6	**Riekki**	**4.22**	**111**	PG		**Pb**		**00 50 44.4**	**+0.5**
	baz=298								
KU1	**Kurvinen**	**4.36**	**117**	PN		**Pn**		**00 50 37.9**	**+1.6**
KU1				SN		**Sn**		**00 51 28.6**	**+0.9**
FINES	**FINESS Array B**	**6.90**	**156**	Pn		**Pn**		**00 51 11.4**	**+0.3**
	baz=342,slow=13,SNR=1.0								
FINES				Sn		**Sn**		**00 52 28.0**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=349,slow=22,SNR=1.4								
FINES				Lg		Lg		00 53 03.1	
	comp=Z,0.1nm,0.3s,baz=347,slow=24,SNR=1.5								
	comp=Z,1.4nm,1.0s								
NOA	**NORSAR Array B**	**7.86**	**214**	Pn		**Pn**		**00 51 24.4**	**+0.1**
	baz=17,slow=15,SNR=0.8								
NOA				Sn		**Sn**		**00 52 52.8**	**-1.0**
	baz=28,slow=19,SNR=1.5								
NOA				Lg		Lg		00 53 31.5	
	baz=45,slow=24,SNR=1.2								
	comp=Z,0.3nm,0.7s								
HFS	**Hagfors**	**8.25**	**203**	Pn		**Pn**		**00 51 29.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=23,slow=13,SNR=1.7								
HFS				Sn		**Sn**		**00 52 59.1**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=26,slow=27,SNR=1.7								
	comp=Z,2.1nm,0.9s								
SPITS	**Spitsbergen Ar**	**10.44**	**356**	Pn		**Pn**		**00 52 01.2**	**+1.6**
	comp=Z,9.7nm,1.0s,baz=168,slow=15,SNR=1.6								

*STR **18** 01:17:06.0±0.0, 42.5N±0.2×5.3E±0.1, h5km, MLv2.7/21, LOCSAT earthModelID haslach_taup-2.11 preliminary*
*MDD **18** 01:17:06.9±0.6, 42.41N×5.30E, h28km±6km, mb_Lg2.8/22, Error ellipse: s-maj=3.8km s-min=1.8km az=157.0*
*LDG **18** 01:17:06.7±0.2, 42.46N×5.23E, h30km, Ml2.9/19, Error ellipse: s-maj=4.1km s-min=2.3km az=150.0*

ISC 18 01:17:03.4±1.3, **42.42N**±0.03×**5.31E**±0.02, **h21**km±5km, **n57**, σ1§**97**/92, **Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LEPF	**PUYLOUBIER**	**1.14**	**14**	P		Pg	**Pb**	**01 17 25.4**	**+1.0**
LEPF				S		Sg	**Sn**	**01 17 38.9**	**-0.1**
ARTF	**Artigues**	**1.22**	**17**	Pg		Pg	**Pb**	**01 17 26.8**	**+1.1**
ARTF				Sg		Sg	**Sn**	**01 17 41.1**	**0.0**
LMR	**La Mourre**	**1.27**	**44**	*e*Pn		Pg	**Pb**	**01 17 27.1**	**+0.6**
LMR				*e*Sg		Sg	**Sn**	**01 17 41.6**	**-0.6**
	65nm,0.2s								
BSTF	**la Bastide-des**	**1.48**	**9**	Pg		Pg	**Pb**	**01 17 29.8**	**-0.4**
BSTF				Sg		Sg	**Sn**	**01 17 46.6**	**-0.9**
RUSF	**Rustrel**	**1.52**	**5**	Pg		Pg	**Pb**	**01 17 32.2**	**+1.2**
RUSF				Sg		Sg	**Sb**	**01 17 50.8**	**+1.0**
TRIGF	**Trigance**	**1.55**	**31**	Pn		Pg	**Pb**	**01 17 31.5**	**+0.1**
TRIGF				Sg		Sg	**Sb**	**01 17 51.0**	**+0.5**
SMRF	**Simiane la Rot**	**1.57**	**7**	*e*Pn		Pg	**Pb**	**01 17 31.6**	**0.0**
SMRF				*e*Sg		Sg	**Sn**	**01 17 49.3**	**-0.3**
	16nm,0.2s								
CLAF	**Gruissan**	**1.79**	**294**	Pg		Pn		**01 17 33.6**	**+0.7**
EJON	**La Jonquera**	**1.79**	**272**	P		Pn	**Pn**	**01 17 34.3**	**+1.2**
EJON				S		Sn		**01 17 52.7**	**-2.6**
EJON				*i* lVmb_Lg				01 17 57.0	
SJAF	**Saint Jean de**	**1.80**	**273**	Pg		Pn		**01 17 34.3**	**+1.2**
SJAF				Sg		Sn		**01 17 53.9**	**-1.5**
OGDI	**Digne**	**1.84**	**23**	Pn		Pb		**01 17 35.2**	**-1.1**
OGDI				Pg		Pn		**01 17 37.9**	**+4.2**
OGDI				Sg		Sn		**01 17 59.6**	**+0.8**
LASF	**Ste Croix**	**1.97**	**328**	*e*Pn		Pn		**01 17 35.9**	**+0.4**
LASF				*e*Sg		Sn		**01 17 58.0**	**-1.5**
	18nm,0.3s								
FILF	**Fillols**	**2.04**	**275**	Pg		Sg	**Pb**	**01 17 39.3**	**-0.4**
FILF				Sg		Sn		**01 18 02.3**	**+0.9**
SBF	**Sospel**	**2.12**	**46**	*e*Pn		Pg	**Pb**	**01 17 41.2**	**+0.1**
TURF	**col de Turini**	**2.17**	**44**	Pn	

PTBC				S	Sn	01 20 33.3	-0.9	
OCAC	**Ocana**	**1.41**	**354**	P	Pn	01 20 13.6	-0.8	
OCAC				S	Sn	01 20 35.5	-0.7	
SPBC	**San Pablo de B**	**1.48**	**218**	P	Pn	01 20 14.6	-0.5	
SPBC				S	Sn	01 20 37.0	-0.4	
NORC	**Norcasia**	**2.11**	**234**	P	Pn	01 20 21.7	-0.5	
NORC				S	Sn	01 20 49.8	-0.3	
CHIC	**Chingaza**	**2.26**	**195**	P	Pn	01 20 23.8	-0.5	
CHIC				S	Sn	01 20 53.1	-0.7	
ROSC	**El Rosal**	**2.29**	**210**	P	Pn	01 20 25.4	+0.7	
ROSC				S	Sn	01 20 54.5	+0.1	
HELC	**Santa Helena**	**2.44**	**255**	P	Pn	01 20 27.0	+0.6	
HELC				S	Sn	01 20 57.3	-0.3	
CVER	**Cruz Verde, Cu**	**2.47**	**202**	P	Pn	01 20 27.2	+0.3	
CVER				S	Sn	01 20 58.7	+0.2	
UREC	**San Jos de Ur**	**2.53**	**291**	P	Pn	01 20 25.3	-1.9	
UREC				S	Sn	01 20 56.8	-2.2	
GUY2C	**Guyana, Caldas**	**2.71**	**234**	P	Pn	01 20 29.7	-0.2	
GUY2C				S	Sn	01 21 04.7	+0.9	
VILC	**Villavicencio,**	**2.75**	**191**	P	Pn	01 20 29.4	-0.7	
VILC				S	Sn	01 21 03.2	-1.1	
NIZA	**Niza - Manizal**	**2.90**	**233**	P	Pn	01 20 33.9	+1.8	
CBOC	**Ciudad Bolivar**	**2.99**	**251**	P	Pn	01 20 33.3	+0.1	
CBOC				S	Sn	01 21 09.3	-0.4	
DBBC	**Dabeiba**	**3.03**	**274**	P	Pn	01 20 33.6	0.0	
DBBC				S	Sn	01 21 08.3	-2.2	
ARGC	**Ariguani, Magd**	**3.19**	**340**	P	Pn	01 20 35.8	+0.2	
ARGC				S	Sn	01 21 15.4	+1.3	
PRAC	**Prado**	**3.54**	**209**	P	Pn	01 20 39.0	-1.2	
PRAC				S	Sn	01 21 21.5	-0.7	
ORTC	**Ortega, Tolima**	**3.57**	**216**	P	Pn	01 20 40.0	-0.5	
ORTC				S	Sn	01 21 22.7	-0.1	
SJCC	**San Jacinto, C**	**3.64**	**327**	P	Pn	01 20 39.4	-2.1	
SJCC				S	Sn	01 21 21.8	-2.8	
URMC	**La Uribe, Meta**	**3.76**	**199**	P	Pn	01 20 43.0	-0.1	
URMC				S	Sn	01 21 26.2	-1.2	
LCBC	**Los crdobas,**	**3.76**	**303**	P	Pn	01 20 41.6	-1.4	
CRJC	**Cerrejon, Guaj**	**4.17**	**4**	P	Pn	01 20 45.8	-2.6	
CRJC				S	Sn	01 21 33.4	-3.7	
YOTC	**Yotoco, Valle**	**4.25**	**228**	P	Pn	01 20 47.9	-1.6	
SMRC	**Santa Marta, M**	**4.43**	**346**	P	Pn	01 20 50.3	-1.5	
SMRC				S	Sn	01 21 38.3	-4.8	
CAPC	**Capurgana**	**4.52**	**294**	P	Pn	01 20 50.3	-2.7	
CAPC				S	Sn	01 21 41.3	-3.9	
MACC	**Macarena, Meta**	**4.70**	**188**	P	Pn	01 20 52.3	-3.1	
MACC				S	Sn	01 21 43.6	-5.9	
URIC	**Uribia, Colomb**	**4.98**	**13**	P	Pn	01 20 56.1	-2.9	
URIC				S	Sn	01 21 51.6	-4.3	
JAMC	**Jamundi, Valle** 6.6nm,0.8s	**5.01**	**224**	P	Pn	01 20 58.2	-1.5	
GARC	**Garzon, Huila**	**5.17**	**207**	P	Pn	01 20 59.2	-2.5	
POPC	**Popayan, Colom** 4.7nm,1.1s	**5.52**	**220**	P	Pn	01 21 05.5	-0.9	
FLOC	**Florencia**	**5.78**	**206**	P	Pn	01 21 07.4	-2.3	

*NAO **18** 01:25:29.7,36°.34N×24°.92E,h33km,MB3.4*
*THE **18** 01:25:31.8,36°№.4°×2°.3E±°,h5km±3km,M3.3/13,*
MLh3.3/13
*ATH **18** 01:25:31.8,36°.45N×23°.02E,h11km±2km,ML3.4/19,*
Manual Solution by M.Papanikolaou First location:
2019/11/18 01:26:37, This location: 2019/11/18 01:41:13
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 1
km; Longitude uncertainty: 1 km
*IDC **18** 01:25:35.2±1.2,35°.97N×22°.78E,h86km±16km,mb3.4/10,*
mbtmp3.7/17,MS2.6/2,Error ellipse: s-maj=27.4km
s-min=10.2km az=15.0

ISC 18 01:25:31.3±0.9, 36°.43N±0°.03×22°.98E±0°.03, h13km±6km, n65, σ1§46/76, mb3.8/10, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHA	**Kythira Island**	**0.18**	**160**	P	**Pg**	**01 25 35.9**	**+0.3**
VLI	**Veliai**	**0.29**	**353**	P	**Pg**	**01 25 37.0**	**-0.4**
VLI				S	**Sg**	**01 25 41.1**	**-0.3**
VLI	**Veliai**	**0.29**	**353**	P	**Pg**	**01 25 37.0**	**-0.4**
VLI				S	**Sg**	**01 25 41.5**	**0.0**
ANKY	**Antikythira Is**	**0.62**	**155**	P	**Pg**	**01 25 43.7**	**+0.3**
ANKY				S	**Sb**	**01 25 53.4**	**+0.9**
ANKY	**Antikythira Is**	**0.62**	**155**	P	**Pg**	**01 25 43.9**	**+0.5**
ANKY				S	**Sg**	**01 25 52.3**	**+0.7**
ITM	**Ithomi**	**1.13**	**312**	P	**Pb**	**01 25 52.5**	**-0.3**
ITM				S	**Sn**	**01 26 09.1**	**+0.9**
MHLO	**Agia Marina, M**	**1.17**	**77**	P	**Pn**	**01 25 54.2**	**+0.8**
MHLO				S	**Sn**	**01 26 10.1**	**+0.9**
MHLO	**Agia Marina, M**	**1.17**	**77**	P	**Pb**	**01 25 53.5**	**+0.1**
MET2	**Kameni Chora,**	**1.21**	**13**	P	**Pn**	**01 25 54.4**	**+0.4**
MET5	**Makryloggos,Me**	**1.23**	**14**	P	**Pb**	**01 25 54.8**	**+0.4**
MET4	**Agioi Theodoro**	**1.24**	**16**	P	**Pb**	**01 25 54.9**	**+0.4**
MET4				S	**Sg**	**01 26 11.2**	**-0.1**
VLY	**Voula,Athens**	**1.56**	**24**	P	**Pn**	**01 25 59.2**	**+0.5**
VLY				S	**Sb**	**01 26 20.2**	**+0.5**
VLY	**Voula,Athens**	**1.56**	**24**	P	**Pn**	**01 25 59.3**	**+0.3**
GUR	**Goura**	**1.59**	**341**	P	**Pn**	**01 26 00.1**	**+0.9**
LTK	**Loutraki**	**1.59**	**360**	P	**Pn**	**01 25 59.8**	**+0.6**
LTK	**Loutraki**	**1.59**	**360**	P	**Pn**	**01 25 59.8**	**+0.6**
ATH	**Athens Observa**	**1.65**	**21**	P	**Pn**	**01 26 01.2**	**+1.3**
ATH	**Athens Observa**	**1.65**	**21**	P	**Pn**	**01 26 00.5**	**+0.6**
ATHU	**Athens Univers**	**1.66**	**22**	P	**Pn**	**01 26 00.8**	**+0.6**
MAGU	**Magoula**	**1.70**	**14**	P	**Pn**	**01 26 01.4**	**+0.8**
MAGU	**Magoula**	**1.70**	**14**	P	**Pn**	**01 26 01.1**	**+0.5**
KLV	**Kalavryta, Ach**	**1.74**	**338**	P	**Pn**	**01 26 02.1**	**+0.8**
KLV	**Kalavryta, Ach**	**1.74**	**338**	P	**Pn**	**01 26 02.0**	**+0.6**
VILL	**Villia**	**1.75**	**9**	P	**Pn**	**01 26 01.7**	**+0.3**
PTL	**Penteli**	**1.76**	**23**	P	**Pn**	**01 26 01.7**	**+0.1**
PTL	**Penteli**	**1.76**	**23**	P	**Pn**	**01 26 01.8**	**+0.3**
VIL2	**Platees**	**1.79**	**7**	P	**Pn**	**01 26 01.9**	**-0.1**
STFN	**Stefani**	**1.80**	**14**	P	**Pn**	**01 26 02.2**	**+0.1**
STFN	**Stefani**	**1.80**	**14**	P	**Pn**	**01 26 02.2**	**+0.1**
DION	**Dionisos Attik**	**1.81**	**24**	P	**Pn**	**01 26 02.6**	**+0.3**
DION	**Dionisos Attik**	**1.81**	**24**	P	**Pn**	**01 26 02.5**	**+0.3**
IDI	**Anoyia** 22nm,0.4s,baz=270,slow=13,SNR=37	**1.92**	**126**	P	**Pn**	**01 26 04.2**	**+0.4**
IDI				S	**Sn**	**01 26 28.7**	**+0.9**
IDI	**Anoyia** 28nm,0.3s,baz=288,slow=20,SNR=7.8	**1.92**	**126**	P	**Pn**	**01 26 04.1**	**+0.4**
KARY	**Karystos**	**1.98**	**36**	P	**Pn**	**01 26 05.0**	**+0.5**
THERA	**Ancient Thera,**	**2.01**	**91**	P	**Pn**	**01 26 06.2**	**+1.3**
TRIZ	**Trizonia**	**2.06**	**340**	P	**Pn**	**01 26 07.0**	**+1.4**
KALE	**Kalithea**	**2.07**	**341**	P	**Pn**	**01 26 07.0**	**+1.2**
APE	**Apeiranthos**	**2.14**	**72**	P	**Pn**	**01 26 07.4**	**+0.6**
EFP	**Efpalio**	**2.17**	**337**	P	**Pn**	**01 26 08.7**	**+1.6**
ATAL	**Atalanti**	**2.26**	**1**	P	**Pn**	**01 26 08.8**	**+0.4**
ANX	**Ano Chora**	**2.32**	**339**	P	**Pn**	**01 26 09.9**	**+0.6**
AXAR	**Agios Charalam**	**2.33**	**354**	P	**Pn**	**01 26 10.3**	**+0.7**
KYMI	**Kymi, Euboea I**	**2.37**	**22**	P	**Pn**	**01 26 10.1**	**+0.2**
PVO	**Paravola**	**2.47**	**332**	P	**Pn**	**01 26 11.9**	**+0.6**
AGG	**Agios Georgios**	**2.64**	**349**	P	**Pn**	**01 26 14.4**	**+0.8**
MAKR	**Makrakomi, Fth**	**2.67**	**346**	P	**Pn**	**01 26 14.7**	**+0.7**
VAE	**Valguarnera** 9.0nm,0.9s,baz=143,slow=20,SNR=2.2	**6.94**	**281**	P	**Pn**	**01 27 14.7**	**+2.0**
VAE				S	**Sn**	**01 28 33.2**	**+1.6**
BRTR	**Keskin Array B** 5.2nm,0.6s,baz=93,slow=19,SNR=1.6	**9.02**	**65**	P	Pn	01 27 48.0	+6.6
BRTR				S	**Sn**	**01 29 31.0**	**+8.1**
BRTR	2.3nm,1.1s,baz=249,slow=13,SNR=8.8 0.1nm,0.3s,baz=289,slow=9.0,SNR=1.1			LR	LR	01 31 49.6	
MLR	**Muntele Rosu** comp=Z,25nm,21.9s,baz=268,slow=40 0.9nm,0.6s,baz=204,slow=20,SNR=2.1	**9.32**	**13**	P	Pn	01 27 53.4	+8.0
MMAI	**Mount Meron Ar** 3.3nm,0.8s,baz=297,slow=11,SNR=2.4	**10.77**	**105**	P	**Pn**	**01 28 05.4**	**0.0**
MMAI				S	**Sn**	**01 30 06.2**	**+0.5**
EIL	**Elat** 2.3nm,0.6s,baz=309,slow=6.5,SNR=2.2 1.4nm,0.6s,baz=298,slow=28,SNR=1.7	**12.09**	**120**	P	**Pn**	**01 28 22.2**	**-1.0**
EIL				S	**Sn**	**01 30 33.2**	**-4.7**
GERES	**GERESS Array B** 1.7nm,0.6s,baz=93,slow=6.5,SNR=1.5 0.3nm,0.7s,baz=148,slow=9.3,SNR=1.8	**14.15**	**334**	P	**Pn**	**01 28 51.1**	**-0.3**
KVAR	**Kislovodsk Arr** 1.8nm,0.5s,baz=247,slow=18,SNR=2.0	**16.81**	**57**	P	**P**	**01 29 31.3**	**+2.8**
KBZ	**Khabaz** 1.4nm,0.7s,baz=249,slow=12,SNR=6.8	**16.87**	**58**	P	**P**	**01 29 32.3**	**+3.3**
ESDC	**Sonseca Array** 0.2nm,0.5s,baz=92,slow=11,SNR=1.5 0.2nm,0.5s	**21.44**	**287**	P	**P**	**01 30 16.4**	**-2.7**
HFS	**Hagfors** 1.1nm,0.4s,baz=163,slow=12,SNR=14	**24.46**	**349**	P	**P**	**01 30 48.8**	**-0.9**
FINES	**FINESS Array B** 3.2nm,0.9s,baz=180,slow=9.4,SNR=3.5 3.2nm,0.9s	**25.11**	**4**	P	**P**	**01 30 55.0**	**-0.5**
NB2	**NORSAR Subarra** comp=Z,0.4nm,0.5s,baz=154,slow=9.3	**25.74**	**347**	P	**P**	**01 31 00.8**	**-0.5**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.6s,baz=159,slow=9.1,SNR=9.2	**25.74**	**347**	P	**P**	**01 31 00.9**	**-0.4**
NOA				LR	LR	01 43 13.5	
EKA	**Eskdalemuir Ar** comp=Z,21nm,18.7s,baz=280,slow=40 comp=Z,0.4nm,0.6s comp=Z,1.1nm,0.6s,baz=125,slow=9.4,SNR=6.0 comp=Z,1.1nm,0.6s	**25.98**	**325**	P	**P**	**01 31 02.5**	**-1.0**
ARCES	**ARCESS Array B** comp=Z,3.3nm,1.1s,baz=186,slow=8.6,SNR=1.8 comp=Z,3.3nm,1.1s	**33.19**	**2**	P	**P**	**01 32 05.6**	**-1.7**
BVAR	**Borovoye Array** comp=Z,0.3nm,0.4s,baz=242,slow=6.2,SNR=2.8 comp=Z,0.3nm,0.4s	**36.78**	**48**	P	**P**	**01 32 38.7**	**+0.2**
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.5s,baz=277,slow=8.6,SNR=7.2 comp=Z,0.5nm,0.5s	**41.72**	**52**	P	**P**	**01 33 18.5**	**-1.2**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.4s,baz=265,slow=7.9,SNR=17 comp=Z,0.7nm,0.4s	**44.57**	**57**	P	**P**	**01 33 42.6**	**-0.3**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.4s,baz=268,slow=10,SNR=3.8 comp=Z,0.5nm,0.4s	**45.42**	**47**	P	**P**	**01 33 48.0**	**-1.4**

*GEN **18** 01:52:04.5,45°.92N×6°.93E,h5km,Ml0.8*
*ROM **18** 01:52:05.3±0.3,45°.88N±0°.01×6°.93E±0°.02,h10km,*
ML1.1/7,Error ellipse: s-maj=1.5km s-min=1.4km
az=231.0
*ZUR **18** 01:52:05.7,45°.90N×6°.92E,h-1km,MLh1.1/6,Error*
ellipse: s-maj=1559.0km s-min=533.0km az=223.0
*LDG **18** 01:52:05.5±0.1,45°.89N×6°.92E,h10km,Md1.8/2,Ml1.9/10,*
Error ellipse: s-maj=1.2km s-min=0.9km az=114.0

STR 18 01:52:06.2±0.0, 45°.88N±0°.04×6°.93E±0°.05, h2km, MLv1.6/19, 13C-15D, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLANC	**P.ta Helbronne**	**0.04**	**176**	↑Pg	Pg	01 52 07.2	+0.1
BLANC				S	Sg	01 52 08.4	+0.5
BLANC	**P.ta Helbronne**	**0.04**	**176**	↑Pg	Pg	01 52 07.2	+0.1
BLANC	**P.ta Helbronne**	**0.04**	**176**	P	Pg	01 52 07.2	+0.1
BLANC				S	Sg	01 52 08.0	+0.1
MFERR	**Prayon, Val Fe**	**0.14**	**62**	↑Pg	Pg	01 52 09.0	-0.1
MFERR				S	Sg	01 52 11.3	+0.3
MFERR	**Prayon, Val Fe**	**0.14**	**62**	↑Pg	Pg	01 52 09.0	-0.1
MFERR				S	Sg	01 52 11.3	+0.3
MRGE	**Morge**	**0.15**	**141**	↑Pg	Pg	01 52 09.3	+0.3
MRGE				S	Sg	01 52 12.1	+1.1
MRGE	**Morge**	**0.15**	**141**	↑Pg	Pg	01 52 09.3	+0.3
MRGE				S	Sg	01 52 12.1	+1.1
MRGE	**Morge**	**0.15**	**141**	P	Pg	01 52 09.3	+0.3
MRGE				S	Sg	01 52 12.1	+1.1
MRGE	**Morge**	**0.15**	**141**	P	Pg	01 52 09.3	+0.3
MRGE				S	Sg	01 52 12.1	+1.2
MRGE	comp=E,79μm,0.2s			AML	AML		
MRGE	comp=N,153μm,0.2s			AML	AML		
MRGE	comp=E,79μm,0.2s			AML	AML		
MRGE	comp=N,153μm,0.2s			AML	AML		
REMY	**Saint-Rhmy-en**	**0.16**	**106**	↑Pg	Pg	01 52 09.8	+0.3
REMY				S	Sg	01 52 12.8	+1.2
REMY	**Saint-Rhmy-en**	**0.16**	**106**	↑Pg	Pg	01 52 09.8	+0.3
REMY				S	Sg	01 52 12.8	+1.2
REMY	**Saint-Rhmy-en**	**0.16**	**106**	P	Pg	01 52 09.8	+0.3
REMY				S	Sg	01 52 12.6	+0.9
REMY	**Saint-Rhmy-en**	**0.16**	**106**	↑P	Pg	01 52 09.8	+0.3
REMY				S	Sg	01 52 12.7	+1.1
REMY	comp=E,65μm,0.5s			AML	AML		
REMY	comp=N,87μm,0.7s			AML	AML		
REMY	comp=N,92μm,3.2s			AML	AML		
REMY	comp=E,58μm,0.3s			AML	AML		
REMY	comp=N,87μm,0.7s			AML	AML		
REMY	**Saint-Rhmy-en**	**0.16**	**106**	Pg	Pg	01 52 09.7	+0.3
REMY				Sg	Sg	01 52 12.7	+1.1
SEMOS	**Emosson Stauma**	**0.18**	**1**	↓Pg	Pg	01 52 09.4	-0.4
SEMOS				S	Sg	01 52 12.0	-0.3
OGSI	**Sixt**	**0.22**	**326**	↓Pg	Pg	01 52 09.8	-0.6
OGSI				S	Sg	01 52 12.7	-0.6
OGSI	**Sixt**	**0.22**	**326**	↓Pg	Pg	01 52 09.8	-0.6
OGSI				S	Sg	01 52 12.7	-0.6
OGSI	**Sixt**	**0.22**	**326**	Pg	Pg	01 52 09.8	-0.7
OGSI				S	Sg	01 52 12.7	-0.6
SMAO	**Martigny, Rue**	**0.24**	**25**	↓Pg	Pg	01 52 10.6	-0.2
SMAO	**Martigny, Rue**	**0.24**	**25**	↓Pg	Pg	01 52 10.6	-0.2
SALAN	**Lac Salanfe**	**0.26**	**6**	↓Pg	Pg	01 52 10.9	-0.4
SALAN	**Lac Salanfe**	**0.26**	**6**	↓Pg	Pg	01 52 10.9	-0.4
SALAN				S	Sg	01 52 14.4	-0.3
RSL	**Roselend**	**0.29**	**228**	↑Pg	Pg	01 52 11.6	-0.2
RSL	**Roselend**	**0.29**	**228**	↑Pg	Pg	01 52 11.6	-0.2
RSL				S	Sg	01 52 15.5	-0.1
RSL	**Roselend**	**0.29**	**228**	P	Pg	01 52 11.6	-0.2
RSL				S	Sg	01 52 15.4	-0.1
RSL	**Roselend**	**0.29**	**228**	Pg	Pg	01 52 11.5	-0.2
RSL				Sg	Sg	01 52 15.4	-0.2
FULLY	**Reservoir Maze**	**0.31**	**28**	↓Pg	Pg	01 52 11.8	-0.4
LAVEY	**Lavey les Bain**	**0.32**	**11**	↓Pg	Pg	01 52 12.0	-0.5
ILLEZ	**Chalet Vouargn**	**0.34**	**1**	↓Pg	Pg	01 52 12.2	-0.5
ILLEZ	**Chalet Vouargn**	**0.34**	**1**	↓Pg	Pg	01 52 12.2	-0.5
RAW4	**Former Reservo**	**0.37**	**28**	Pg	Pg	01 52 13.0	-0.3
DIX	**Grande Dixence**	**0.39**	**59**	Pg	Pg	01 52 13.5	-0.2
DIX				Sg	Sg	01 52 18.9	+0.2
DIX	**Grande Dixence**	**0.39**	**59**	P	Pg	01 52 13.1	-0.5
DIX				S	Sg	01 52 18.6	-0.1
DIX	**Grande Dixence**	**0.39**	**59**	P	Pg	01 52 13.6	-0.1
DIX				S	Sg	01 52 18.9	+0.2
DIX	comp=E,79μm,0.3s			AML	AML		
DIX	comp=N,92μm,3.2s			AML	AML		
DIX	**Grande Dixence**	**0.39**	**59**	Pg	Pg	01 52 13.4	-0.3
DIX				Sg	Sg	01 52 18.9	+0.2
GRYON	**Gryon**	**0.39**	**19**	↓Pg	Pg	01 52 13.3	-0.4
LPL	**La Plagne**	**0.39**	**201**	*e*Pg	Pg	01 52 13.8	+0.1
LPL				*e*Sg	Sg	01 52 18.4	-0.5
LPG	**La Plagne** comp=N,4.7nm,0.3s	**0.41**	**198**	*e*Pg	Pg	01 52 14.0	0.0
LPG				*e*Sg	Sg	01 52 18.6	-0.7
LSD	**Lago del Serru** comp=N,3.7nm,0.2s	**0.45**	**161**	↓Pg	Pg	01 52 14.9	+0.2
LSD	**Lago del Serru**	**0.45**	**161**	P	Pg	01 52 14.9	+0.2
LSD				S	Sg	01 52 21.3	+0.7
LSD	**Lago del Serru**	**0.45**	**161**	P	Pg	01 52 15.1	+0.3
LSD				S	Sg	01 52 20.5	-0.1
LSD	comp=E,120nm,0.2s			AML	AML		
LSD	comp=N,12μm,0.3s			AML	AML		
LSD	**Lago del Serru**	**0.45**	**161**	Pg	Pg	01 52 14.9	+0.1
AIGLE	**Aigle**	**0.46**	**2**	↑Pg	Pg	01 52 14.6	-0.4
AIGLE	**Aigle**	**0.46**	**2**	Pg	Pg	01 52 14.6	-0.4
A173A	**Vacheresse, 74**	**0.48**	**339**	Pg	Pg	01 52 15.3	-0.1
A173A				Sg	Sg	01 52 22.1	+0.5
RAW2	**Sanetsch, VS**	**0.51**	**32**	↓Pg	Pg	01 52 15.6	-0.3
RAW2	**Sanetsch, VS**	**0.51**	**32**	↓Pg	Pg	01 52 15.6	-0.3
CIRO	**Champorcher**	**0.53**	**122**	Pg	Pg	01 52 16.3	-0.1
CIRO				Sg	Sg	01 52 23.5	+0.3
CIRO	**Champorcher**	**0.53**	**122**	P	Pg	01 52 16.1	-0.2
CIRO				S	Sg	01 52 23.1	-0.1
CIRO	**Champorcher**	**0.53**	**122**	P	Pg	01 52 16.3	-0.1
CIRO				S	Sg	01 52 23.6	+0.4
CIRO	**Champorcher**	**0.53**	**122**	Pg	Pg	01 52 16.2	-0.1
CIRO				Sg	Sg	01 52 23.5	+0.4
SENIN	**Lac Senin/Sane**	**0.54**	**28**	Pg	Pg	01 52 16.3	-0.3
SENIN	**Lac Senin/Sane**	**0.54**	**28**	P	Pg	01 52 16.1	-0.5
SENIN				S	Sg	01 52 23.2	-0.5
SIE01	**Sierre, Farmho**	**0.55**	**45**	↑Pg	Pg	01 52 16.7	-0.1
TRAV	**Traversella**	**0.68**	**123**	P	Pg	01 52 19.0	-0.3
TRAV				S	Sg	01 52 27.9	-0.2
TRAV	**Traversella**	**0.68**	**123**	Pg	Pg	01 52 19.1	-0.2
EMBD	**Embd, Matterta**	**0.71**	**62**	P	Pg	01 52 19.0	-0.8
EMBD				S	Sg	01 52 28.3	-0.8
EMBD	**Embd, Matterta**	**0.71**	**62**	Pg	Pg	01 52 19.6	-0.3
MMK	**Mattmark**	**0.74**	**77**	P	Pg	01 52 20.2	-0.1
MMK				S	Sg	01 52 29.4	-0.5
RSP	**Reno Superiore**	**0.77**	**162**	P	Pg	01 52 20.7	-0.3
RSP				S	Sg	01 52 31.2	+0.3
RSP	**Reno Superiore**	**0.77**	**162**	Pg	Pg	01 52 20.8	-0.1
GIMEL	**St. Georges /**	**0.80**	**325**	P	Pg	01 52 21.4	-0.1
GIMEL	**St. Georges /**	**0.80**	**325**	Pg	Pg	01 52 21.4	-0.1
GIMEL				Sg	Sn	01 52 37.2	+0.1
SIMPL	**Simplonpass**	**0.84**	**64**	P	Pg	01 52 21.5	-0.7
SIMPL				S	Sg	01 52 34.1	+1.0
TORNY	**Torny/Romont**	**0.89**	**1**	Pg	Pb	01 52 24.2	-0.2
TORNY				Sg	Sn	01 52 40.0	+0.7
OGSM	**Saint Maurice**	**0.91**	**253**	Pg	Pg	01 52 23.5	-0.1
CABF	**La Chapelle**	**0.93**	**322**	*e*Pg	Pg	01 52 24.6	+0.5
CABF	comp=N,8.2nm,0.2s			*e*Sg	Sb	01 52 37.7	-0.4
OG35	**Corcelles**	**0.96**	**280**	Pg	Pg	01 52 24.4	-0.2
OG35				Pn	Pn	01 52 26.8	0.0
OG35				Sg	Sg	01 52 37.4	+0.3
OG35				Sn	Sn	01 52 41.4	+0.4
GRN	**Grenoble**	**1.05**	**233**	Pn	Pn	01 52 29.0	+1.0
BHB	**Bricherasio**	**1.07**	**167**	Pg	Pg	01 52 26.6	-0.1
BHB				Sg	Sb	01 52 41.6	-0.2
BRANT	**Les Verrieres**	**1.10**	**343**	Pg	Pg	01 52 27.4	+0.1
BRANT				Sn	Sn	01 52 45.1	+0.5
RIVEL	**MONT RIVEL**	**1.12**	**322**	Pn	Pn	01 52 28.8	-0.2
RIVEL				Sn	Sn	01 52 45.3	+0.3
MBDF	**Montbardon**	**1.16**	**186**	*e*Pg	Pg	01 52 26.6	-1.8
MBDF	comp=N,5.0nm,0.7s			*e*Sg	Sg	01 52 41.3	-2.2
ORIF	**Oris-en-Rattie**	**1.22**	**218**	*e*Pg	Pg	01 52 28.0	-1.5
ORIF	comp=N,2.5nm,0.4s			*e*Sg	Sg	01 52 44.2	-1.0
CREF	**Crivoux**	**1.35**	**189**	Pg	Pg	01 52 32.1	0.0
CHMF	**Charmoille**	**1.38**	**352**	Pg	Pb	01 52 33.1	+0.4
CHMF				Sg	Sn	01 52 52.3	+0.9
PZZ	**Stroppo**	**1.38**	**174**	Pg	Pn	01 52 32.6	0.0
BOURR	**Bourrignon**	**1.52**	**8**	Pg	Pg	01 52 35.6	+0.2
BALST	**Balsthal**	**1.55**	**20**	Pg	Pg	01 52 35.9	+0.1
BALST				Sg	Sg	01 52 57.7	+1.8
SSB	**Saint Sauveur**	**1.78**	**251**	Pg	Pb	01 52 39.9	+0.3
SULZ	**Cheisacher**	**1.83**	**26**	Pg	Pb	01 52 40.9	+0.4
VIVF	**Saint-Julien-l**	**1.89**	**238**	*e*Pg	Pn	01 52 40.2	+0.6
VIVF	comp=N,3.4nm,0.4s			*e*Sg	Sb	01 53 05.6	0.0
ENDD	**Endenburg**	**1.91**	**17**	Pg	Pb	01 52 42.0	+0.2
HINF	**Hinteralfeld** comp=N,1.4nm,0.4s	**1.94**	**358**	*e*Sg	Sb	01 53 06.6	-0.2
SMF	**Signal de Mont**	**2.27**	**291**	*e*Pg	Pg	01 52 48.9	-0.9
SMF	comp=N,0.8nm,0.2s			*e*Sg	Sg	01 53 18.2	-1.0
LOR	**Lormes** comp=N,1.0nm,0.3s	**2.53**	**304**	*e*Sg	Sb	01 53 25.1	+1.2
TCF	**Toulx Ste Croi** comp=N,0.4nm,0.2s	**3.31**	**279**	*e*Sg	Sg	01 53 50.4	-2.1

*IDC **18** 01:52:43.7±4.0, 17°.82S×175°.06W,h208km±37km,mb3.4/6,*
mbtmp3.9/6,Error ellipse: s-maj=31.8km s-min=20.2km
az=86.0

ISC 18 01:52:42.6±1.5, 17°.8S±0°.2×175°.1W±0°.3, h200km, n6, σ1§06/7, mb3.5/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 7.2nm,0.3s,baz=0.0,slow=20,SNR=16	**21.54**	**197**	P	**P**	**01 57 15.1**	**-1.0**
URZ	8.2nm,0.8s,baz=176,slow=19,SNR=1.0 7.2nm,0.3s			S	**S**	**02 01 00.5**	**-1.1**
STKA	**Stephens Creek** 0.8nm,0.5s,baz=80,slow=11,SNR=1.6 0.8nm,0.5s	**41.49**	**242**	P	**P**	**02 00 10.3**	**+0.1**
WRA	**Warramunga Arr** 0.3nm,0.2s,baz=94,slow=7.4,SNR=12 0.3nm,0.2s	**47.78**	**259**	P	**P**	**02 01 00.1**	**0.0**
ASAR	**Alice Springs** 1.7nm,0.6s,baz=93,slow=7.5,SNR=25 1.7nm,0.6s	**47.89**	**254**	P	**P**	**02 01 01.3**	**+0.4**
VNDA	**Vanda** 0.7nm,0.7s,baz=23,slow=9.6,SNR=5.2 0.7nm,0.7s	**60.88**	**186**	P	**P**	**02 02 34.9**	**+1.4**
ILAR	**Eielson Array** 0.1nm,0.4s,baz=209,slow=4.2,SNR=4.4 0.1nm,0.4s	**85.06**	**

HUH	**Hualalai**	**0.48 253**		Pb		02 08 51.3	-1.3
HUH			Sg	Sb		02 08 58.0	-1.5
HUH			IAML			02 09 03.2	
	comp=E,295nm,0.7s						
HUH			IAML			02 09 03.4	
	comp=N,381nm,1.3s						
KNHH	**Kane Nui o Ham**	**0.48 159**		Pb		02 08 51.1	-1.4
NPOC	**North of Pu'u**	**0.49 152**		Pb		02 08 51.3	-1.4
NPOC				Sb		02 08 57.9	-1.8
STCH	**Steam Cracks**	**0.49 154**		Pb		02 08 51.1	-1.6
STCH				Sb		02 08 57.5	-2.2
JCUZ	**Jacuzzi**	**0.50 152**		Pb		02 08 51.4	-1.4
JCUZ				Sb		02 08 58.1	-1.9
JOKA	**Jonika Flow**	**0.51 140**		Pb		02 08 51.4	-1.6
JOKA			Sg	Sb		02 08 58.4	-1.8
JOKA			IAML			02 09 06.2	
	comp=N,202nm,0.9s						
HLP	**Hilina Pali**	**0.53 175**		Pb		02 08 51.5	-1.8
HLP			Sg	Sb		02 08 58.7	-2.1
HLP			IAML			02 09 03.8	
	comp=E,375nm,1.4s						
HLP			IAML			02 09 06.7	
	comp=N,375nm,1.5s						
HTC	**Hot Caves**	**0.59 184**		Pb		02 08 52.7	-1.6
KHU	**Kahuku**	**0.63 203**		Pb		02 08 53.1	-1.9
KHU				Pn		02 09 01.1	+5.5
HLK	**Haleakala**	**1.25 318**	Pn	Pn		02 09 03.2	-0.9
HLK			IAML			02 09 21.5	
	comp=E,86nm,1.1s						
HLK			IAML			02 09 26.0	
	comp=N,66nm,0.8s						

*IDC **18** 02:22:54.5±4.6, 22°.23S×179°.25W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=260.0km s-min=47.6km az=155.0*
ISC 18 02:24:01.0±4.2, 24°S±1°×179°.1E±0°.7, h600km, n7, σ0°78/7, mb3.8/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.30**	**260**	P	**P**	**02 30 55.2**	**-0.8**
	1.3nm,0.5s,baz=106,slow=8.3,SNR=14						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**41.63**	**266**	P	**P**	**02 30 58.8**	**+0.2**
	1.9nm,0.4s,baz=99,slow=7.0,SNR=34						
	1.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**50.06**	**266**	P	**P**	**02 32 03.2**	**+0.9**
	1.6nm,0.5s,baz=121,slow=7.8,SNR=9.5						
	1.6nm,0.5s						
NOA	**NORSAR Array B**	**141.59**	**351**	PKP	**PKPdf**	**02 42 24.1**	**-0.3**
	0.2nm,0.6s,baz=31,slow=4.7,SNR=2.1						
HFS	**Hagfors**	**142.02**	**348**	PKP	**PKPdf**	**02 42 25.7**	**+0.6**
	1.4nm,0.5s,baz=22,slow=4.1,SNR=15						
BRTR	**Keskin Array B**	**146.71**	**307**	PKPbc	**PKPab**	**02 42 39.2**	**-0.8**
	0.3nm,0.6s,baz=83,slow=3.5,SNR=2.0						
MMAI	**Mount Meron Ar**	**146.82**	**295**	PKPbc	**PKPab**	**02 42 40.8**	**+0.2**
	2.2nm,0.8s,baz=72,slow=5.5,SNR=5.8						

*CATAC **18** 02:45:57.0±0.5, 7°N±2°×7°.3W±°, h156km±5km, M4.1/12, mb4.0/2, mB4.5/1, MLv4.2/12, Mw(mB)3.7/1, Error ellipse: s-maj=8.1km s-min=4.2km az=87.6, confirmed*
*IDC **18** 02:45:57.2±0.7, 6°.82N×73°.00W, h164km±9km, mb3.2/4, mbtmp3.9/7, MS3.2/1, Error ellipse: s-maj=29.3km s-min=7.5km az=132.0*
*RSNC **18** 02:45:58.2±0.0, 7°N±1°×7°.3W±°, h147km±1km, M3.9, mB4.7, mb4.3, ML3.6, Mw(mB)3.9*
ISC 18 02:45:57.2±0.7, 6°.86N±0°.03×73°.15W±0°.04, h155km±5km, n67, σ1°68/106, mb3.5/4, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**186**	P	**Pn**	**02 46 18.1**	**-0.5**
BARC				S	**Sn**	**02 46 33.2**	**-1.8**
BRJC	**Barrancabermej**	**0.60**	**281**	P	**Pn**	**02 46 19.8**	**+0.2**
BRJC				S	**Sn**	**02 46 36.8**	**+0.1**
PAMC	**Pamplona, Colo**	**0.66**	**44**	P	**Pn**	**02 46 20.9**	**+0.3**
PAMC				S	**Sn**	**02 46 38.0**	**-0.4**
RUSC	**La Rusia**	**0.97**	**176**	P	**Pn**	**02 46 22.0**	**-0.8**
RUSC				S	**Sn**	**02 46 41.5**	**-0.9**
RUSC	**La Rusia**	**0.97**	**176**	P	**Pn**	**02 46 21.9**	**-0.9**
RUSC				S	**Sn**	**02 46 40.5**	**-1.8**
PTBC	**PUERTO BERRIO,**	**1.33**	**256**	P	**Pn**	**02 46 24.4**	**-1.1**
PTBC				S	**Sn**	**02 46 45.6**	**-1.6**
OCAC	**Ocana**	**1.38**	**353**	P	**Pn**	**02 46 26.0**	**-0.1**
OCAC				S	**Sn**	**02 46 48.1**	**-0.2**
SPBC	**San Pablo de B**	**1.51**	**217**	P	**Pn**	**02 46 26.7**	**-0.7**
SPBC				S	**Sn**	**02 46 48.5**	**-2.0**
NORC	**Norcasia**	**2.14**	**233**	P	**Pn**	**02 46 33.8**	**-0.5**
NORC				S	**Sn**	**02 47 01.9**	**-1.0**
CHIC	**Chingaza**	**2.29**	**195**	P	**Pn**	**02 46 35.9**	**-0.6**
CHIC				S	**Sn**	**02 47 05.3**	**-1.5**
ROSC	**El Rosal**	**2.32**	**210**	P	**Pn**	**02 46 37.8**	**+1.0**
	442nm,0.3s,baz=302,slow=18,SNR=734						
ROSC				S	**Sn**	**02 47 09.6**	**+2.3**
	652nm,0.3s,baz=353,slow=20,SNR=14						
ROSC	**El Rosal**	**2.32**	**210**	P	**Pn**	**02 46 37.5**	**+0.7**
ROSC				S	**Sn**	**02 47 08.0**	**+0.7**
HELC	**Santa Helena**	**2.45**	**254**	P	**Pn**	**02 46 39.7**	**+1.4**
HELC				S	**Sn**	**02 47 09.3**	**-0.7**
HELC	**Santa Helena**	**2.45**	**254**	P	**Pn**	**02 46 37.7**	**-0.6**
HELC				S	**Sn**	**02 47 09.2**	**-0.8**
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P	**Pn**	**02 46 39.4**	**+0.4**
CVER				S	**Sn**	**02 47 10.9**	**-0.4**
UREC	**San Jos de Ur**	**2.52**	**291**	P	**Pn**	**02 46 37.5**	**-1.3**
UREC				S	**Sn**	**02 47 09.2**	**-1.8**
GUY2C	**Guyana, Caldas**	**2.73**	**234**	P	**Pn**	**02 46 42.1**	**+0.2**
GUY2C				S	**Sn**	**02 47 15.3**	**-1.1**
VILC	**Villavicencio,**	**2.78**	**191**	P	**Pn**	**02 46 41.3**	**-0.9**
VILC				S	**Sn**	**02 47 16.3**	**-0.8**
NIZA	**Niza - Manizal**	**2.92**	**232**	P	**Pn**	**02 46 45.0**	**+1.0**
NIZA				S	**Sn**	**02 47 23.1**	**+2.9**
CBOC	**Ciudad Bolivar**	**3.01**	**251**	P	**Pn**	**02 46 45.4**	**+0.4**
CBOC				S	**Sn**	**02 47 21.7**	**-0.3**
DBBC	**Dabeiba**	**3.04**	**273**	P	**Pn**	**02 46 45.5**	**+0.2**
DBBC				S	**Sn**	**02 47 20.8**	**-1.8**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P	**Pn**	**02 46 48.0**	**+1.1**
ARGC				S	**Sn**	**02 47 26.7**	**+1.2**
SDV	**Santo Domingo**	**3.21**	**51**	P	**Pn**	**02 46 47.7**	**+0.1**
	116nm,0.4s,baz=235,slow=12,SNR=134						
SDV				S	**Sn**	**02 47 25.4**	**-1.2**
	166nm,0.5s,baz=55,slow=23,SNR=30						
SDV	**Santo Domingo**	**3.21**	**51**	P	**Pn**	**02 46 47.4**	**-0.2**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**02 46 51.9**	**-0.2**
PRAC				S	**Sn**	**02 47 35.0**	**+0.2**
PRAC	**Prado**	**3.57**	**209**	P	**Pn**	**02 46 51.3**	**-0.8**
PRAC				S	**Sn**	**02 47 33.9**	**-0.9**
ORTC	**Ortega, Tolima**	**3.60**	**215**	P	**Pn**	**02 46 51.6**	**-0.8**
ORTC				S	**Sn**	**02 47 35.7**	**+0.3**
SJCC	**San Jacinto, C**	**3.62**	**327**	P	**Pn**	**02 46 52.5**	**-0.3**
SJCC				S	**Sn**	**02 47 33.5**	**-2.4**
SJCC	**San Jacinto, C**	**3.62**	**327**	P	**Pn**	**02 46 51.6**	**-1.1**
SJCC				S	**Sn**	**02 47 32.6**	**-3.3**
LCBC	**Los crdobas,**	**3.75**	**302**	P	**Pn**	**02 46 53.8**	**-0.5**
LCBC				S	**Sn**	**02 47 38.2**	**-0.6**
URMC	**La Uribe, Meta**	**3.79**	**199**	P	**Pn**	**02 46 54.2**	**-0.8**
URMC				S	**Sn**	**02 47 38.4**	**-1.6**
CRJC	**Cerrejon, Guaj**	**4.14**	**4**	P	**Pn**	**02 46 58.2**	**-1.3**
CRJC				S	**Sn**	**02 47 45.2**	**-2.9**
YOTC	**Yotoco, Valle**	**4.27**	**228**	P	**Pn**	**02 47 00.6**	**-0.7**
YOTC				S	**Sn**	**02 47 50.0**	**-1.2**
SMRC	**Santa Marta, M**	**4.40**	**346**	P	**Pn**	**02 47 03.1**	**+0.2**
SMRC				S	**Sn**	**02 47 51.0**	**-3.1**
CAPC	**Capurgana**	**4.52**	**293**	P	**Pn**	**02 47 01.9**	**-2.4**
CAPC				S	**Sn**	**02 47 52.6**	**-4.1**
CAP2	**Capurgana**	**4.53**	**293**	P	**Pn**	**02 47 03.8**	**-0.7**
CAP2				S	**Sn**	**02 47 53.9**	**-3.1**
PTAC	**Punta Ardita,**	**4.63**	**274**	P	**Pn**	**02 47 04.5**	**-1.3**
MACC	**Macarena, Meta**	**4.74**	**188**	P	**Pn**	**02 47 04.5**	**-2.8**
MACC				S	**Sn**	**02 47 56.6**	**-5.4**
URI	**Uribia**	**4.94**	**13**	P	**Pn**	**02 47 08.6**	**-1.3**
URIC	**Uribia, Colomb**	**4.94**	**13**	P	**Pn**	**02 47 08.1**	**-1.9**
URIC				S	**Sn**	**02 48 05.6**	**-1.2**
JAMC	**Jamundi, Valle**	**5.04**	**224**	P	**Pn**	**02 47 10.7**	**-0.8**
	1µm25nm,0.5s						
JAMC				S	**Sn**	**02 48 07.7**	**-1.7**
	1µm25nm,0.5s						
GARC	**Garzon, Huila**	**5.20**	**207**	P	**Pn**	**02 47 12.1**	**-1.4**
GARC				S	**Sn**	**02 48 08.8**	**-4.4**
POPC	**Popayan, Colom**	**5.54**	**219**	P	**Pn**	**02 47 17.3**	**-0.8**
	307nm24nm,0.7s						
POPC				S	**Sn**	**02 48 18.5**	**-2.9**
	307nm24nm,0.7s						
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**02 47 21.0**	**-0.5**
FLOC				S	**Sn**	**02 48 27.3**	**-0.1**
FLOC	**Florencia**	**5.81**	**206**	P	**Pn**	**02 47 20.3**	**-1.1**
	1µm52nm,1.1s						
BBAC	**Balboa, Cauca**	**6.30**	**220**	P	**Pn**	**02 47 28.6**	**+0.4**
GWJ	**Greenwich**	**11.68**	**343**	*i* P	**Pn**	**02 48 42.0**	**+2.8**
STH	**Stony Hill**	**11.70**	**343**	*i* P	**Pn**	**02 48 41.7**	**+2.2**
MTDJ	**Mount Denham**	**12.07**	**340**	*i* P	**Pn**	**02 48 47.6**	**+3.2**
MTDJ	**Mount Denham**	**12.07**	**340**	eP	**Pn**	**02 48 46.1**	**+1.7**
MTDJ				eS	Sn	02 50 43.9	-14
JTS	**Las Juntas de**	**12.15**	**287**	P	**Pn**	**02 48 48.4**	**+3.0**
	2.3nm,0.5s,baz=338,slow=2.2,SNR=6.2						
GTBY	**Guantanamo Bay**	**13.13**	**352**	eP	**Pn**	**02 49 00.4**	**+2.6**
GTBY				eS	Sn	02 51 09.0	-14
RCC	**Rio Carpintero**	**13.29**	**350**	eP	**P**	**02 49 02.9**	**-1.1**
RCC				eS	Sn	02 51 03.1	-24
MARVS	**Santiago de Cu**	**13.33**	**349**	eP	**Pn**	**02 49 02.0**	**+1.6**
MARVS				eS	Sn	02 51 08.3	-20
QMBU	**Quimbuelo**	**13.36**	**353**	eP	**P**	**02 49 04.8**	**0.0**
LMGC	**Las Mercedes**	**13.64**	**344**	eP	**P**	**02 49 07.3**	**-0.7**
LMGC				eS	Sn	02 51 15.9	-20
PINC	**Pinares de May**	**13.78**	**350**	eP	**P**	**02 49 09.8**	**+0.2**
HLGC	**Holguin**	**14.23**	**349**	eP	**P**	**02 49 15.8**	**+1.3**
HLGC				eS	Sn	02 51 35.1	-15
CCCC	**Cccc**	**14.94**	**343**	eP	**P**	**02 49 27.0**	**+4.7**
MGV	**Manicaragua**	**16.53**	**337**	eP	Pn	02 49 49.0	+8.8
TXAR	**Lajitas Array**	**36.41**	**312**	P	**P**	**02 52 46.6**	**-0.4**
	0.1nm,0.4s,baz=126,slow=7.9,SNR=4.6						
	0.1nm,0.4s						
ULM	**Lac du Bonnet**	**47.24**	**340**	LR	LR	03 13 35.6	
	comp=Z,28nm,20.5s,baz=29,slow=35						
PDAR	**Pinedale Array**	**48.02**	**324**	P	**P**	**02 54 20.9**	**-0.1**
	0.2nm,0.5s,baz=134,slow=6.9,SNR=2.1						
	0.2nm,0.5s						
SCHQ	**Schefferville**	**48.10**	**5**	P	**P**	**02 54 20.9**	**-0.1**
	3.3nm,0.6s,baz=171,slow=6.9,SNR=3.9						
	3.3nm,0.6s						
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**02 56 08.2**	**-0.4**
	1.0nm,0.7s,baz=96,slow=12,SNR=7.6						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**03 05 26.6**	**-1.4**
	0.3nm,0.5s,baz=119,slow=3.3,SNR=5.2						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**03 05 30.0**	**-1.0**
	0.3nm,0.4s,baz=109,slow=2.5,SNR=9.6						

*SNET **18** 03:00:16.0±0.9, 13°.03N×88°.53W, h69km±8km, ML2.9*
CATAC 18 03:00:16.0±0.6, 13°N±5°×8°9W±°, h39km±7km, M3.0/13, MLv3.0/13, 1C-7D, Error ellipse: s-maj=10.9km s-min=2.9km az=24.3, confirmed, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**0.61**	**25**	eP	Pn	03 00 29.2	+0.9
RANC	**El Ranchito**	**0.62**	**25**	eP	Pn	03 00 29.4	+0.8
TECA	**Tecapa**	**0.63**	**5**	eP	Pn	03 00 29.4	+0.8
TECA				eS	Sn	03 00 39.4	+1.9
PACA	**Pacayal**	**0.64**	**21**	eP	Pn	03 00 29.8	+1.0
PACA	**Pacayal**	**0.64**	**21**	S	Sn	03 00 39.5	+1.8
PACA	**Pacayal**	**0.64**	**21**	⇓P	Pn	03 00 29.8	+1.1
BLLM	**Bellamira**	**0.65**	**29**	eP	Pn	03 00 29.7	+0.9
BLLM				eS	Sn	03 00 39.9	+2.0
TECO	**Alcaldia de Te**	**0.70**	**342**	eP	Pn	03 00 30.5	+1.0
TECO				eS	Sn	03 00 40.2	+1.2
TECO	**Alcaldia de Te**	**0.70**	**342**	⇓P	Pn	03 00 30.2	+0.8
CNRM	**Centro Naciona**	**0.71**	**32**	P	Pn	03 00 29.2	-0.4
CNRM	**Centro Naciona**	**0.71**	**32**	S	Sn	03 00 40.1	+0.8
UESV	**Universidad de**	**0.80**	**344**	P	Pn	03 00 31.2	+0.5
UESV	**Universidad de**	**0.80**	**344**	S	Sn	03 00 42.7	+1.3
CNCH	**Conchagua**	**0.81**	**60**	eP	Pn	03 00 31.9	+0.9
CNCH	**Conchagua**	**0.81**	**60**	P	Pn	03 00 31.5	+0.5
CNCH	**Conchagua**	**0.81**	**60**	S	Sn	03 00 44.2	+2.2
SCLA	**Alcaldia de Sa**	**0.85**	**349**	eP	Pn	03 00 32.0	+0.6
SCLA	**Alcaldia de Sa**	**0.85**	**349**	S	Sn	03 00 43.8	+1.1
SCLA	**Alcaldia de Sa**	**0.85**	**349**	P	Pn	03 00 31.6	+0.2
LFRS	**El Faro**	**0.90**	**327**	eP	Pn	03 00 32.6	+0.4
PAVA	**Las Pavas**	**0.92**	**336**	eP	Pn	03 00 33.2	+0.7
PAVA	**Las Pavas**	**0.92**	**336**	P	Pn	03 00 32.6	+0.1
PAVA	**Las Pavas**	**0.92**	**336**	S	Sn	03 00 45.7	+1.2
LOMA	**Loma Larga**	**0.98**	**322**	P	Pn	03 00 33.3	0.0
LOMA	**Loma Larga**	**0.98**	**322**	S	Sn	03 00 46.5	+0.6
CSGN	**Cosiguina Volc**	**0.98**	**84**	P	Pn	03 00 34.4	+1.1
CSGN				S	Sn	03 00 47.7	+1.7
PMON	**Piamonte**	**1.12**	**319**	eP	Pn	03 00 36.1	+0.9
PMON	**Piamonte**	**1.12**	**319**	S	Sn	03 00 49.7	+0.2
PMON	**Piamonte**	**1.12**	**319**	⇑P	Pn	03 00 36.1	+0.9
JAYA	**Jayaque - finc**	**1.17**	**312**	P	Pn	03 00 36.3	+0.4
JAYA	**Jayaque - finc**	**1.17**	**312**	S	Sn	03 00 50.8	+0.1
LLGN	**La Laguna**	**1.34**	**344**	P	Pn	03 00 37.6	-0.6
SBLS	**San Blas**	**1.42**	**313**	eP	Pn	03 00 40.2	+0.8
PKGN	**Cerro Pekin**	**1.56**	**97**	⇓P	Pn	03 00 41.6	+0.5
PKGN				S	Sn	03 01 01.1	+1.1
NUBE	**Las Nubes**	**1.57**	**311**	eP	Pn	03 00 42.0	+0.5
NUBE	**Las Nubes**	**1.57**	**311**	S	Sn	03 01 00.9	+0.2
NUBE	**Las Nubes**	**1.57**	**311**	⇓P	Pn	03 00 41.9	+0.4
POLN	**Al Sur del Vol**	**1.72**	**97**	⇓P	Pn	03 00 42.5	-0.8
POLN				S	Sn	03 01 02.4	-1.7
FAME	**Alcaldia de Sa**	**1.72**	**305**	S	Sn	03 01 03.8	-0.3
TGUH	**Tegucigalpa,Un**	**1.72**	**46**	⇓P	Pn	03 00 43.9	+0.4
YUSH	**Yuscaran**	**1.99**	**57**	⇓P	Pn	03 00 47.5	+0.3

*IDC **18** 03:10:47.0±0.7, 9°.79N×138°.44E, h0km, mb4.1/14, mbtmp4.1/15, ML4.7/1, MS3.2/5, Error ellipse: s-maj=31.5km s-min=15.4km az=77.0*
ISC 18 03:10:52.3±0.7, 9°.74N±0°.08×138°.4E±0°.2, h35km, n25, σ0°79/18, mb4.1/14, MS3.2/5, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**12.39**	**169**	Pn	**Pn**	**03 13 47.2**	**+0.9**
	4.8nm,0.3s,baz=243,slow=6.4,SNR=14						
JAY				Sn	**Sn**	**03 16 02.3**	**-1.0**
	0.6nm,0.3s,baz=1.4,slow=23,SNR=1.1						
	20nm,0.4s						
PMG	**Port Moresby**	**20.93**	**155**	LR	LR	03 21 57.4	
	comp=Z,90nm,20.6s,baz=328,slow=32						
BATI	**Baumata**	**24.65**	**217**	LR	LR	03 25 11.3	
	comp=Z,25nm,20.9s,baz=314,slow=35						
HNR	**Honiara**	**28.69**	**131**	LR	LR	03 27 16.2	
	comp=Z,57nm,20.4s,baz=349,slow=34						
H11S3	**WAKE ISLAND Hy**	**28.75**	**69**	T	T	03 47 12.0	
	baz=251,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.77**	**69**	T	T	03 47 13.2	
	baz=251,slow=75						
H11S2	**WAKE ISLAND Hy**	**28.77**	**69**	T	T	03 47 13.2	
	baz=251,slow=75						
H11N1	**WAKE ISLAND Hy**	**29.25**	**67**	T	T	03 47 51.2	
	baz=254,slow=75						
H11N2	**WAKE ISLAND Hy**	**29.25**	**67**	T	T	03 47 38.5	
	baz=254,slow=75						
H11N3	**WAKE ISLAND Hy**	**29.26**	**67**	T	T	03 47 52.5	
	baz=254,slow=75						
WRA	**Warramunga Arr**	**29.77**	**188**	P	**P**	**03 16 55.0**	**-0.7**
	0.8nm,0.8s,baz=6.5,slow=10,SNR=5.2						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**33.49**	**187**	P	**P**	**03 17 29.0**	**+0.5**
	0.7nm,0.5s,baz=16,slow=13,SNR=7.0						
ASAR				PcP	**PcP**	**03 20 09.7**	**+0.5**
	0.1nm,0.4s,baz=5.7,slow=3.7,SNR=4.1						
ASAR				LR	LR	03 32 36.6	
	comp=Z,44nm,18.2s,baz=94,slow=39						
	0.7nm,0.5s						
USRK	**Ussuriysk Ar.**	**34.78**	**352**	P	**P**	**03 17 39.6**	**+0.1**
	1.7nm,0.8s,baz=170,slow=12,SNR=1.5						
	1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.16**	**287**	P	**P**	**03 18 17.1**	**0.0**
	1.6nm,0.3s,baz=97,slow=7.5,SNR=5.1						
	1.6nm,0.3s						
STKA	**Stephens Creek**	**41.49**	**176**	P	**P**	**03 18 36.0**	**-0.1**
	1.0nm,0.7s,baz=352,slow=15,SNR=1.3						
STKA				LR	LR	03 35 50.3	
	comp=Z,47nm,20.4s,baz=21,slow=36						
	1.0nm,0.7s						
SONM	**Songino Array**	**46.57**	**331**	P	**P**	**03 19 17.5**	**+0.6**
	1.5nm,0.9s,baz=157,slow=4.8,SNR=6.8						
	1.5nm,0.9s						
MKAR	**Makanchi Array**	**60.01**	**319**	P	**P**	**03 20 56.7**	**+1.2**
	1.0nm,0.8s,baz=90,slow=8.5,SNR=4.9						
	1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**61.21**	**327**	P	**P**	**03 21 02.9**	**-0.6**
	0.9nm,0.6s,baz=105,slow=9.3,SNR=4.5						
	0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**63.59**	**322**	P	**P**	**03 21 19.2**	**-0.3**
	0.9nm,0.3s,baz=106,slow=6.4,SNR=10						
	0.9nm,0.3s						
BVAR	**Borovoye Array**	**69.09**	**323**	P	**P**	**03 21 55.0**	**+0.3**
	2.3nm,0.6s,baz=106,slow=7.7,SNR=12						
	2.3nm,0.6s						
ILAR	**Eielson Array**	**74.74**	**25**	P	**P**	**03 22 27.8**	**-0.6**
	1.1nm,0.7s,baz=245,slow=6.6,SNR=7.3						
	1.1nm,0.7s						
ARCES	**ARCESS Array B**	**88.71**	**341**	P	**P**	**03 23 41.2**	**-0.7**
	2.9nm,1.0s,baz=58,slow=4.6,SNR=3.8						
	2.9nm,1.0s						
FINES	**FINESS Array B**	**91.86**	**334**	P	**P**	**03 23 55.1**	**-1.6**
	2.9nm,1.1s,baz=67,slow=5.1,SNR=2.2						
	2.9nm,1.1s						
NVAR	**Mina Array Bea**	**94.25**	**50**	P	**P**	**03 24 08.8**	**+0.3**
	0.8nm,0.8s,baz=260,slow=4.3,SNR=7.7						
	0.8nm,0.8s						
LPAZ	**La Paz**	**153.37**	**107**	PKPbc	**PKiKP**	**03 30 49.7**	**+1.0**
	0.8nm,0.5s,baz=287,slow=2.0,SNR=4.1						

*IDC **18** 03:13:41.2±5.0, 1°.92N×97°.37E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=258.1km s-min=22.7km az=55.0*
*DJA **18** 03:13:52.4±0.4, 2°N±3°×9°8E±°, h27km±5km, M3.8/12, mb4.0/2, MLv3.7/12*
ISC 18 03:13:49.8±1.0, 2°.35N±0°.07×97°.88E±0°.08, h35km, n23, σ2°93/12, mb3.8/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.08**	**196**	P	**Pn**	**03 14 10.7**	**+2.2**
PSI	**Prapat**	**1.14**	**67**	LR	LR	03 14 57.5	
	comp=Z,91nm,18.9s,baz=214,slow=44						
KCSI	**Kotacane, Aceh**	**1.17**	**355**	P	**Pn**	**03 14 13.0**	**+3.2**
SNSI	**Sinabang, Aceh**	**1.55**	**272**	P	**Pn**	**03 14 18.1**	**+3.1**
MNSI	**Mandailing Nat**	**2.29**	**132**	P	**Pn**	**03 14 28.2**	**+3.0**
MLSI	**Meulaboh, Aceh**	**2.41**	**322**	P	Pn	03 14 32.1	+5.3
PBSI	**Pulau Batu**	**2.42**	**170**	P	**Pn**	**03 14 28.8**	**+1.9**
PPI	**Padang Panjang**	**3.75**	**138**	P	**Pn**	**03 14 49.1**	**+3.8**
SISI	**Saibi**	**3.84**	**162**	P	**Pn**	**03 14 49.5**	**+3.0**
H08S2	**Diego Garcia H**	**27.20**	**248**	T	T	03 47 08.8	
	baz=70,slow=74						
H08S3	**Diego Garcia H**	**27.20**	**248**	T	T	03 46 57.9	
	baz=70						
H08S1	**Diego Garcia H**	**27.22**	**248**	T	T	03 46 59.8	
	baz=70,slow=74						
WRA	**Warramunga Arr**	**42.08**	**123**	P	**P**	**03 21 36.7**	**-2.0**
	0.7nm,0.4s,baz=298,slow=8.1,SNR=14						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**43.56**	**129**	P	**P**	**03 21 48.2**	**-2.5**
	0.2nm,0.4s,baz=301,slow=7.6,SNR=1.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**46.31**	**345**	P	**P**	**03 22 11.5**	**-0.7**
	0.5nm,0.6s,baz=142,slow=7.2,SNR=2.2						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**52.55**	**350**	P	**P**	**03 22 57.6**	**-2.0**
	0.8nm,0.3s,baz=177,slow=7.2,SNR=5.0						
	0.8nm,0.3s						
BVAR	**Borovoye Array**	**55.40**	**340**	P	**P**	**03 23 19.4**	**-1.2**
	0.6nm,0.6s,baz=152,slow=6.4,SNR=1.9						
	0.6nm,0.6s						
H04N2	**CROZET ISLANDS**	**63.09**	**214**	T	T	04 32 13.9	
	baz=53,slow=75,SNR=6.2						
H04N1	**CROZET ISLANDS**	**63.11**	**214**	T	T	04 32 01.6	
	baz=53,slow=75,SNR=7.6						
H04N3	**CROZET ISLANDS**	**63.11**	**214**	T	T	04 32 08.8	
	baz=53,slow=75,SNR=6.6						
H04S1	**CROZET ISLANDS**	**63.44**	**213**	T	T	04 32 35.5	
	baz=52						
H04S3	**CROZET ISLANDS**	**63.45**	**214**	T	T	04 32 45.5	
	baz=52						
H04S2	**CROZET ISLANDS**	**63.45**	**213**	T	T	04 32 44.5	
	baz=52						

*NEIC **18** 03:20:27.4±1.1, 35°.13N±0°.02×95°.36W±0°.02, h6km±4km, Error ellipse: s-maj=3.2km s-min=1.5km az=142.0*
**NEIC 18 03:20:27.0±1.0, 35°.12ON±0°.004×95°.35W±0°.02

0.6nm,0.7s,baz=112,slow=6.4,SNR=3.6
0.6nm,0.7s
ILAR Eielson Array 87.07 23 P **P** **03 33 17.4 +0.3**
0.3nm,0.6s,baz=256,slow=4.6,SNR=5.7
0.3nm,0.6s
TORD Torodi Ar. Bea 147.15 281 PKPbc **PKPbc** **03 40 15.8 -0.1**
0.9nm,1.0s,baz=113,slow=3.3,SNR=3.5

IDC 18 03:28:46.5±5.5, 18.71S×168.85E, h130km±56km, mb3.5/4, mbtmp3.9/5, Error ellipse: s-maj=81.6km s-min=33.9km az=153.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.03**	**214**	P	Pn	03 29 48.1	+1.3
	4.4nm,0.3s,baz=138,slow=22,SNR=21						
DZM				S	Sn	03 30 33.3	-0.3
	31nm,0.5s,baz=144,slow=21,SNR=9.0						
STKA	**Stephens Creek**	**27.82**	**237**	P	P	03 34 25.0	+1.3
	1.0nm,0.7s,baz=65,slow=14,SNR=3.1						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**32.56**	**262**	P	P	03 35 04.8	-0.8
	0.5nm,0.5s,baz=94,slow=8.7,SNR=8.1						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**32.90**	**255**	P	P	03 35 08.8	+0.2
	7.1nm,0.5s,baz=84,slow=8.8,SNR=138						
	7.1nm,0.5s						
ILAR	**Eielson Array**	**89.84**	**17**	P	P	03 41 29.6	-0.5
	0.1nm,0.6s,baz=235,slow=5.0,SNR=1.3						
	0.1nm,0.6s						
ARCES	**ARCESS Array B**	**124.47**	**345**	PKP	PKPdf	03 47 29.3	-0.3
	3.3nm,0.9s,baz=68,slow=2.4,SNR=7.5						

DJA 18 03:30:39.8±0.3, 8°S±7°×11°2E±°, h120km±4km, M3.5/17, mB6.0/1, mb4.0/3, MLv3.3/17, Mw(mB)5.7/1, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**0.62**	**288**	P	Pn	03 30 59.7	+1.2
PCJI				S	Sn	03 31 14.9	+2.3
NGJI	**Ngawi**	**1.06**	**343**	P	Pn	03 31 03.6	+1.2
UGM	**Wanagama**	**1.32**	**291**	P	Pn	03 31 05.5	+0.3
SMRI	**Semarang**	**1.87**	**315**	P	Pn	03 31 12.0	+0.3
BLJI	**Banyuglugur**	**1.92**	**71**	P	Pn	03 31 12.8	+0.6
JAGI	**Jajag, Banyuwa**	**2.36**	**92**	P	Pn	03 31 17.9	+0.1
KPJI	**Karang Pucung**	**3.00**	**290**	P	Pn	03 31 26.0	-0.1
SRBI	**Singaraja**	**3.42**	**85**	P	Pn	03 31 31.4	-0.2
CNJI	**Cibinong**	**4.72**	**283**	P	Pn	03 31 49.0	0.0
TWSI	**Taliwang, Sumb**	**5.07**	**94**	P	Pn	03 31 53.4	-0.3
	0.1nm11nm,1.0s						
PLAI	**Plampang**	**5.96**	**95**	P	Pn	03 32 05.6	-0.1
	12nm,1.6s						

*NNC **18** 03:38:02.0±5.3, 51.68N×82.50E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=77.2km s-min=36.8km az=106.0, Suspected Mining explosion.*
*IDC **18** 03:38:03.3±1.7, 51.63N×82.85E, h0km, mbtmp2.6/3, ML2.2/3, Error ellipse: s-maj=17.0km s-min=14.5km az=93.0*
ISC 18 03:38:04.0±1.4, 51.61N±0.06×82.80E±0.09, h0km, n7, σ1s76/9, 2C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.65**	**27**	I	I	03 55 38.9	
	0.1nm,0.7s,baz=202,slow=288,SNR=2.4						
ZAA0	**Zalesovo Array**	**2.65**	**27**	Pn	**Pn**	**03 38 47.5**	**-0.3**
	0.2nm,0.5s,baz=217,slow=15						
ZALV	**Zalesovo Beam**	**2.65**	**27**	Pn	**Pn**	**03 38 47.2**	**-0.7**
	1.0nm,0.3s,baz=211,slow=10,SNR=13						
ZALV				Sn	**Sn**	**03 39 21.4**	**+0.8**
	1.7nm,0.3s,baz=209,slow=27,SNR=12						
	2.7nm,0.4s						
KURBB	**Kurchatov Arra**	**2.87**	**252**	Pn	**Pn**	**03 38 50.8**	**-0.1**
	0.3nm,0.3s,baz=71,slow=19,SNR=4.0						
KURBB				Sn	**Sn**	**03 39 26.2**	**+0.1**
	0.3nm,0.3s,baz=69,slow=28,SNR=8.2						
	0.8nm,0.3s						
MK31	**Makanchi Array**	**4.83**	**184**	Pn	**Pn**	**03 39 15.6**	**-2.3**
	2.8nm,1.1s,baz=11,slow=11,SNR=5.5						
MK31				⇓Lg	Lg	03 40 36.7	
	1.9nm,0.6s,baz=14,slow=29						
MKAR	**Makanchi Array**	**4.83**	**184**	Pn	**Pn**	**03 39 17.8**	**-0.2**
	0.2nm,0.3s,baz=8.4,slow=12,SNR=5.0						
MKAR				Sn	**Sn**	**03 40 17.6**	**+3.0**
	0.3nm,0.3s,baz=2.9,slow=16,SNR=6.2						
MKAR				Lg	Lg	03 40 34.5	
	0.6nm,0.3s,baz=9.1,slow=28,SNR=10						
	0.7nm,0.5s						
MAKZ	**Makanchi**	**4.83**	**187**	⇑Pn	**Pn**	**03 39 16.3**	**-1.7**
	7.3nm,1.6s						
MAKZ				⇑Lg	Lg	03 40 36.7	
	1.7nm,0.6s						

NNC 18 03:50:13.4±1.6, 53.76N×86.08E, h0km, mb3.6, mpv2.6, 5C-2D, Error ellipse: s-maj=8.9km s-min=6.2km az=88.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**0.77**	**285**	⇑P	Pg	03 50 28.3	+0.1
	0.4nm,0.4s,baz=102,slow=16						
ZAA0				⇑S	Sg	03 50 39.2	+1.1
	1.7nm,0.3s,baz=104,slow=29						
KURBB	**Kurchatov Arra**	**5.61**	**239**	⇑Pn	Pn	03 51 39.1	+1.1
	1.4nm,0.7s,baz=57,slow=12						
KURBB				⇓Lg	Lg	03 53 10.7	
	8.7nm,0.6s,baz=13,slow=20						
MK31	**Makanchi Array**	**7.38**	**201**	⇑Pn	Pn	03 52 02.7	+0.3
	2.2nm,0.9s,baz=25,slow=14,SNR=5.4						
MK31				⇑Sn	Sn	03 53 27.4	+0.5
	1.7nm,0.8s,baz=15,slow=25						
MK31				⇓Lg	Lg	03 54 06.9	
	1.8nm,0.7s,baz=16,slow=35						

*IDC **18** 03:50:46.4±1.4, 54.34N×161.27E, h0km, mb3.5/4, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=77.6km s-min=22.2km az=161.0*
*KRSC **18** 03:50:52.2±0.6, 54.23N×160.85E, h83km±10km, Ml4.0, Felt [III] at kordon Skala.*
ISC 18 03:50:54.5±0.9, 54.22N±0.04×160.86E±0.04, h73km±8km, n48, σ0s86/65, mb3.4/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.61**	**56**	eP	**Pn**	**03 51 08.9**	**+0.3**
MKZ				eS	**Sn**	**03 51 20.3**	**+1.2**
KII	**Karymskiy**	**0.85**	**258**	eP	**Pn**	**03 51 10.8**	**-0.6**
KII				eS	**Sn**	**03 51 23.7**	**-0.2**
KZV	**Kizimen**	**0.95**	**340**	eP	**Pn**	**03 51 12.0**	**-0.7**
KZV				eS	**Sn**	**03 51 25.4**	**-0.8**
TUMD	**Tumrok D**	**1.02**	**345**	eP	**Pn**	**03 51 12.3**	**-1.1**
TUMD				eS	**Sn**	**03 51 26.1**	**-1.3**
NLC	**Nalytchevo**	**1.39**	**221**	eP	**Pn**	**03 51 17.8**	**-0.2**
NLC				eS	**Sn**	**03 51 35.9**	**+0.2**
SDLR	**Sedlovina**	**1.51**	**232**	eP	**Pn**	**03 51 19.5**	**-0.2**
SDLR				eS	**Sn**	**03 51 39.1**	**+0.3**
KRER	**Koryakskii**	**1.56**	**235**	eP	**Pn**	**03 51 20.6**	**+0.2**
KRER				eS	**Sn**	**03 51 40.6**	**+0.5**
SMAR	**Somma**	**1.56**	**233**	eP	**Pn**	**03 51 20.3**	**-0.2**
SMAR				eS	**Sn**	**03 51 39.8**	**-0.2**
KRX	**Arik**	**1.57**	**237**	eP	**Pn**	**03 51 20.4**	**-0.2**
KRX				eS	**Sn**	**03 51 40.5**	**+0.1**
KMNR	**Kamenistaya**	**1.58**	**347**	eP	**Pn**	**03 51 20.4**	**-0.3**
KMNR				eS	**Sn**	**03 51 42.5**	**+2.1**
UGLR	**Uglovaya**	**1.58**	**231**	eP	**Pn**	**03 51 20.7**	**0.0**
UGLR				eS	**Sn**	**03 51 40.9**	**+0.5**
AVH	**Avacha**	**1.58**	**234**	eP	**Pn**	**03 51 20.9**	**+0.2**
AVH				eS	**Sn**	**03 51 42.1**	**+1.6**
KOK	**Koryaka**	**1.62**	**236**	eP	**Pn**	**03 51 21.2**	**+0.1**
KOK				eS	**Sn**	**03 51 41.8**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**1.72**	**357**	eP	**Pn**	**03 51 22.3**	**-0.2**
BZMR	**Bezymyannaya**	**1.73**	**353**	eP	**Pn**	**03 51 23.3**	**+0.6**
DALK	**Dalny**	**1.73**	**227**	eP	**Pn**	**03 51 22.4**	**-0.2**
DALK				eS	**Sn**	**03 51 43.8**	**-0.1**
BZWR	**Bezymyannyi-We**	**1.76**	**353**	eP	**Pn**	**03 51 23.1**	**0.0**
KIRR	**Kirishev**	**1.76**	**350**	eP	**Pn**	**03 51 22.7**	**-0.3**
KIRR				eS	**Sn**	**03 51 44.4**	**-0.3**
INSR	**Institute**	**1.77**	**230**	eP	**Pn**	**03 51 23.6**	**+0.4**
INSR				eS	**Sn**	**03 51 45.8**	**+1.0**
PET	**Petropavlovsk**	**1.78**	**228**	eP	**Pn**	**03 51 23.3**	**+0.1**
PET				eS	**Sn**	**03 51 45.0**	**0.0**
KPT	**Kopyto**	**1.79**	**348**	eP	**Pn**	**03 51 22.7**	**-0.7**
ZLN	**Zelenaya**	**1.80**	**359**	eP	**Pn**	**03 51 23.8**	**+0.2**
KOZ	**Kozyrevsk**	**1.92**	**343**	eP	**Pn**	**03 51 24.7**	**-0.4**
KOZ				eS	**Sn**	**03 51 49.1**	**+0.6**
KLY	**Klyuchi**	**2.10**	**357**	eP	**Pn**	**03 51 27.1**	**-0.3**
ESO	**Esso**	**2.11**	**325**	eP	**Pn**	**03 51 26.8**	**-0.9**
KRMR	**Karymshinskiy**	**2.15**	**231**	eP	**Pn**	**03 51 27.8**	**-0.3**
KRMR				eS	**Sn**	**03 51 53.8**	**+0.1**
PETK	**Petropavlovsk-**	**2.19**	**241**	Pn	**Pn**	**03 51 27.9**	**-0.8**
	8.4nm,0.3s,baz=71,slow=15,SNR=84						
PETK				Sn	**Sn**	**03 51 54.7**	**-0.1**
	5.5nm,0.3s,baz=64,slow=18,SNR=5.5						
	18nm,0.4s						
RUS	**Russkaya**	**2.28**	**219**	eP	**Pn**	**03 51 29.3**	**-0.6**
RUS				eS	**Sn**	**03 51 56.4**	**-0.6**
KBTR	**Krutoberegovo**	**2.28**	**29**	eP	**Pn**	**03 51 29.5**	**-0.4**
KBTR				eS	**Sn**	**03 52 00.6**	**+3.5**
KBG	**Krutoberegovo**	**2.29**	**27**	eP	**Pn**	**03 51 29.7**	**-0.4**
GRL	**Gorelyy**	**2.36**	**226**	eP	**Pn**	**03 51 31.6**	**+0.4**
MTVR	**Mutnovka**	**2.37**	**224**	eP	**Pn**	**03 51 31.4**	**+0.1**
SMKR	**Semkarok**	**2.39**	**8**	eP	**Pn**	**03 51 31.3**	**-0.2**
SRKR	**Sorokina**	**2.44**	**4**	eP	**Pn**	**03 51 32.2**	**0.0**
ASAK	**Asacha**	**2.56**	**225**	eP	**Pn**	**03 51 34.1**	**+0.4**
APC	**Apacha**	**2.56**	**241**	eP	**Pn**	**03 51 34.0**	**+0.3**
KDTR	**Khodutka, Kamc**	**2.94**	**216**	eP	**Pn**	**03 51 38.1**	**-0.8**
BKI	**Bering**	**3.12**	**70**	eP	**Pn**	**03 51 41.3**	**0.0**
BKI				eS	**Sn**	**03 52 15.5**	**-1.9**
ILAR	**Eielson Array**	**27.70**	**47**	P	**P**	**03 56 33.8**	**-1.5**
	0.5nm,0.9s,baz=273,slow=7.8,SNR=3.1						
	0.5nm,0.9s						
SONM	**Songino Array**	**34.10**	**282**	P	**P**	**03 57 34.1**	**+2.2**
	0.2nm,0.4s,baz=60,slow=8.7,SNR=1.8						
	0.2nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**34.74**	**170**	T	T	04 35 02.9	
	baz=354,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	**34.76**	**170**	T	T	04 34 53.2	
	baz=354,slow=76,SNR=32						
H11N1	**WAKE ISLAND Hy**	**34.76**	**170**	T	T	04 35 03.0	
	baz=354,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**35.93**	**171**	T	T	04 35 57.4	
	baz=353						
H11S3	**WAKE ISLAND Hy**	**35.94**	**171**	T	T	04 36 02.1	
	baz=353						
H11S2	**WAKE ISLAND Hy**	**35.95**	**171**	T	T	04 36 14.4	
	baz=353						
NVAR	**Mina Array Bea**	**54.94**	**71**	P	**P**	**04 00 17.0**	**-0.9**
	0.9nm,0.7s,baz=287,slow=9.4,SNR=8.7						
	0.9nm,0.7s						
TXAR	**Lajitas Array**	**69.78**	**68**	P	**P**	**04 01 56.6**	**-0.3**
	0.2nm,0.4s,baz=292,slow=5.2,SNR=5.3						
	0.2nm,0.4s						

*NEIC **18** 04:17:35.6±2.2, 23.05S±0.1×179.9W±0.1, h523km±9km, mb4.1/14, Error ellipse: s-maj=20.9km s-min=11.9km az=58.0*
*IDC **18** 04:17:36.2±9.9, 23.05S×179.92E, h523km±113km, mb3.0/4, mbtmp3.9/4, Error ellipse: s-maj=144.0km s-min=45.0km az=168.0*
ISC 18 04:17:35.7±0.7, 23.5S±0.1×179.9W±0.1, h532km, n30, σ0s99/29, mb3.9/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.07**	**341**	P	**P**	**04 19 13.5**	**-0.8**
BKZ	**Black Stump Fm**	**15.89**	**190**	P	**P**	**04 20 52.7**	**-1.8**
MRZ	**Mangatainoka R**	**17.50**	**191**	P	**P**	**04 21 07.6**	**-2.2**
TCW	**Tory Channel**	**18.30**	**194**	P	**P**	**04 21 17.6**	**+0.6**
QRZ	**Quartz Range**	**18.39**	**198**	P	**P**	**04 21 19.0**	**+1.2**
MLZ	**Mavora Lakes**	**23.87**	**201**	P	**P**	**04 22 08.3**	**+1.0**
MLZ				IAmb	IAmb	04 22 14.1	
	comp=Z,13nm,1.0s						
CTAO	**Charters Tower**	**31.56**	**270**	P	**P**	**04 23 15.7**	**+0.9**
CTAO				IAmb	IAmb	04 23 16.6	
	comp=Z,5.4nm,0.6s						
STKA	**Stephens Creek**	**34.94**	**248**	P	**P**	**04 23 44.0**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=105,slow=12,SNR=1.7						
	comp=Z,0.7nm,0.4s						
BBOO	**Buckleboo**	**39.67**	**246**	P	**P**	**04 24 20.8**	**-1.1**
BBOO				IAmb	IAmb	04 24 35.5	
	comp=Z,8.1nm,1.1s						
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**04 24 42.6**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=94,slow=7.9,SNR=17						
	comp=Z,1.6nm,0.7s						
WR8	**Warramunga Arr**	**42.37**	**266**	P	**P**	**04 24 43.2**	**-0.3**
WB0	**Warramunga Arr**	**42.51**	**266**	P	**P**	**04 24 44.6**	**0.0**
WB0				IAmb	IAmb	04 24 45.0	
	comp=Z,2.1nm,0.7s						
WRA	**Warramunga Arr**	**42.52**	**266**	P	**P**	**04 24 44.8**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=102,slow=8.1,SNR=66						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**42.52**	**266**	P	**P**	**04 24 44.3**	**-0.4**
FORT	**Forrest**	**46.52**	**249**	P	**P**	**04 25 15.2**	**-0.1**
FORT				IAmb	IAmb	04 25 19.2	
	comp=Z,7.5nm,1.1s						
M02C	**Callahan**	**83.45**	**39**		**P**	**04 29 08.4**	**+1.0**
I03D	**Drain, OR**	**84.63**	**37**	P	**P**	**04 29 13.3**	**+0.3**
I03D				IAmb	IAmb	04 29 34.7	
	comp=Z,3.4nm,1.1s						
K05A	**Summer Lake**	**85.42**	**39**	P	**P**	**04 29 18.3**	**+1.1**
K05A				IAmb	IAmb	04 29 22.1	
	comp=Z,3.1nm,1.2s						
K17K	**Iditarod**	**87.65**	**10**	P	**P**	**04 29 26.8**	**-0.2**
K17K				IAmb	IAmb	04 29 51.0	
	comp=Z,4.2nm,1.1s						
TXAR	**Lajitas Array**	**90.16**	**58**	P	**P**	**04 29 40.7**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=240,slow=5.1,SNR=4.4						
	comp=Z,0.3nm,0.7s						
TXAR	**Lajitas Array**	**90.16**	**58**	P	**P**	**04 29 40.2**	**+0.6**
ARCES	**ARCESS Array B**	**131.54**	**348**	PKP	**PKPdf**	**04 35 47.0**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=51,slow=1.9,SNR=3.5						
FINES	**FINESS Array B**	**138.12**	**342**	PKP	**PKPdf**	**04 35 59.7**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=15,slow=5.8,SNR=1.5						
FINES	**FINESS Array B**	**138.12**	**342**	PKPdf	**PKPdf**	**04 35 57.2**	**-2.3**
HFS	**Hagfors**	**142.19**	**349**	PKhKP	PKPpre	04 36 02.7	
	comp=Z,1.8nm,0.3s,baz=54,slow=3.1,SNR=36						
AKASG	**Malin Array Be**	**144.70**	**328**	PKP	**PKPdf**	**04 36 11.5**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=45,slow=3.7,SNR=6.3						
BRTR	**Keskin Array B**	**147.42**	**308**	PKPbc	**PKPbc**	**04 36 19.6**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=157,slow=4.7,SNR=2.5						
BRTR	**Keskin Array B**	**147.42**	**308**	PKPbc	**PKPbc**	**04 36 19.8**	**-0.3**
MMAI	**Mount Meron Ar**	**147.62**	**295**	PKPbc	**PKPbc**	**04 36 21.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=74,slow=4.4,SNR=1.9						
EKA	**Eskdalemuir Ar**	**148.14**	**4**	PKPbc	**PKPbc**	**04 36 20.5**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=332,slow=2.5,SNR=6.7						

IDC 18 04:24:01.3±7.8, 4.81S×145.72E, h0km, mb3.6/2, mbtmp3.8/4, ML3.1/2, MS2.9/1, Error ellipse: s-maj=110.2km s-min=51.3km az=33.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.79**	**163**	Pn	Pn	04 25 16.3	+1.5
	6.1nm,0.3s,baz=145,slow=23,SNR=5.3						
PMG				Sn	Sn	04 26 10.5	-0.5
	4.1nm,0.3s,baz=135,slow=22,SNR=1.8						
PMG				LR	LR	04 27 32.7	
	comp=Z,130nm,19.1s,baz=287,slow=44						
	13nm,0.3s						
WRA	**Warramunga Arr**	**18.68**	**215**	P	Pn	04 28 21.5	0.0
	0.3nm,0.3s,baz=41,slow=12,SNR=18						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**21.94**	**210**	P	P	04 28 56.6	0.0
	0.5nm,0.4s,baz=40,slow=7.9,SNR=14						
	0.5nm,0.4s						
STKA	**Stephens Creek**	**27.21**	**188**	P	P	04 29 46.3	-0.6
	2.0nm,0.8s,baz=349,slow=16,SNR=4.2						
	2.0nm,0.8s						

*CATAC **18** 04:40:31.1±0.5, 14°N±3°×91°W±°, h27km±3km, M3.9/19, MLv3.9/19, Error ellipse: s-maj=7.0km s-min=3.1km az=34.5, confirmed*
*GCG **18** 04:40:32.0±1.4, 14.14N×91.38W, h51km±11km, ML4.6, MW3.6*
ISC 18 04:40:32.9±1.5, 14.12N±0.08×91.32W±0.06, h61km, n44, σ1s86/48, Guatemala

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

STG5	**El Palmar, Qui**	**0.28**	**353**	*i* P	**Pn**	**04 40 44.3**	**+1.1**
STG8	**El Palmar, Qui**	**0.33**	**354**	*i* P	**Pn**	**04 40 45.1**	**+1.4**
STG8				*i* S	**Sn**	**04 40 55.2**	**+3.8**
ESSG	**Sabana Grande**	**0.54**	**61**	*i* P	**Pn**	**04 40 44.7**	**-0.8**
ESSG				IAML		04 40 55.2	
	comp=E,9μm,0.3s						
RTAL	**Retalhuleu**	**0.54**	**317**	P	**Pn**	**04 40 43.4**	**-2.1**
RTAL				S	**Sn**	**04 40 52.9**	**-1.7**
SOKI	**Kika Raxquin**	**0.70**	**353**	*i* P	**Pn**	**04 40 46.3**	**-1.4**
QUEO	**Labor Ovalle**	**0.77**	**345**	*eP*	**Pn**	**04 40 47.4**	**-1.0**
FG16	**Alotenango, Sa**	**0.79**	**79**	*i* P	**Pn**	**04 40 45.2**	**-3.4**
FG16				*i* S	**Sn**	**04 40 55.7**	**-4.5**
FG16				IAML		04 40 56.5	
	comp=E,75μm,0.3s						
GCG4	**OSOP**	**0.89**	**59**	*eP*	**Pn**	**04 40 49.8**	**0.0**
PCG5	**San Vicente Pa**	**0.92**	**84**	*i* P	**Pn**	**04 40 47.1**	**-3.0**
PCG5				*eS*	**Sn**	**04 40 57.0**	**-5.8**
QUIS	**Sacapulas**	**1.18**	**10**	*i* P	**Pn**	**04 40 53.2**	**-0.4**
APG	**El Apazote**	**1.20**	**43**	*i* P	**Pn**	**04 40 53.5**	**-0.4**
HUEH	**Huehuetenango**	**1.20**	**351**	*i* P	**Pn**	**04 40 53.1**	**-0.8**
HUEH	**Huehuetenango**	**1.20**	**351**	P	**Pn**	**04 40 53.4**	**-0.5**
HUEH	**Huehuetenango**	**1.20**	**351**	S	**Sn**	**04 41 10.5**	**+0.9**
THIG		**1.21**	**310**	*i* P	**Pn**	**04 40 51.5**	**-2.3**
FAME	**Alcaldia de Sa**	**1.29**	**102**	P	**Pn**	**04 40 54.2**	**-0.7**
FAME	**Alcaldia de Sa**	**1.29**	**102**	S	**Sn**	**04 41 10.5**	**-0.8**
SLOZ	**Alcaldia de Sa**	**1.49**	**93**	P	**Pn**	**04 40 55.4**	**-2.2**
SLOZ	**Alcaldia de Sa**	**1.49**	**93**	S	**Sn**	**04 41 15.7**	**-0.4**
LOAL	**Lomas de Alarc**	**1.49**	**95**	P	**Pn**	**04 40 57.8**	**+0.2**
LOAL	**Lomas de Alarc**	**1.49**	**95**	S	**Sn**	**04 41 18.4**	**+2.1**
NUBE	**Las Nubes**	**1.51**	**98**	*i* P	**Pn**	**04 40 57.8**	**-0.1**
NUBE	**Las Nubes**	**1.51**	**98**	P	**Pn**	**04 40 58.1**	**+0.2**
CEVE	**Cerro Verde**	**1.67**	**100**	P	**Pn**	**04 41 00.7**	**+0.5**
UNIC	**Universidad Ca**	**1.72**	**94**	P	**Pn**	**04 41 00.2**	**-0.5**
UNIC	**Universidad Ca**	**1.72**	**94**	S	**Sn**	**04 41 24.0**	**+2.3**
JAYA	**Jayaque - finc**	**1.87**	**104**	S	**Sn**	**04 41 26.4**	**+0.9**
JAYA	**Jayaque - finc**	**1.87**	**104**	P	**Pn**	**04 41 03.4**	**+0.6**
MTO3	**Montecristo**	**1.92**	**82**	P	**Pn**	**04 41 02.9**	**-0.6**
MTO3	**Montecristo**	**1.92**	**82**	S	**Sn**	**04 41 28.0**	**+1.4**
ZAFR2	**Estanzuela, Za**	**1.96**	**76**	*i* P	**Pn**	**04 41 02.3**	**-1.6**
ESQI	**Esquipulas**	**1.96**	**77**	S	**Sn**	**04 41 29.7**	**+2.1**
ESQI	**Esquipulas**	**1.96**	**77**	P	**Pn**	**04 41 03.9**	**-0.1**
PMON	**Piamonte**	**1.98**	**102**	P	**Pn**	**04 41 04.6**	**+0.3**
PMON	**Piamonte**	**1.98**	**102**	S	**Sn**	**04 41 30.4**	**+2.2**
UEES	**Universidad Ev**	**2.06**	**101**	S	**Sn**	**04 41 31.8**	**+1.9**
LOMA	**Loma Larga**	**2.13**	**103**	S	**Sn**	**04 41 32.6**	**+0.7**
CCIG	**Comitan**	**2.29**	**340**	*i* P	**Pn**	**04 41 08.1**	**-0.4**
CCIG	**Comitan**	**2.29**	**340**	P	**Pn**	**04 41 08.3**	**-0.3**
CCIG	**Comitan**	**2.29**	**340**	S	**Sn**	**04 41 38.1**	**+2.4**
TECO	**Alcaldia de Te**	**2.53**	**103**	P	**Pn**	**04 41 11.8**	**+0.1**
TECO	**Alcaldia de Te**	**2.53**	**103**	S	**Sn**	**04 41 42.6**	**+1.2**
SCLA	**Alcaldia de Sa**	**2.55**	**99**	P	**Pn**	**04 41 12.2**	**+0.3**
PACA	**Pacayal**	**2.98**	**102**	S	**Sn**	**04 41 54.5**	**+2.0**

IDC 18 04:41:47.1±6.9, 21.30S×148.63E, h0km, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=57.1km s-min=39.5km az=64.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**12.26**	**209**	Pn	Pn	04 44 42.0	-1.0
	0.1nm,0.3s,baz=24,slow=18,SNR=3.4						
STKA				Sn	Sn	04 47 04.0	+3.5
	0.1nm,0.3s,baz=313,slow=22,SNR=4.1						
STKA				Lg	Lg	04 48 14.7	
	0.2nm,0.3s,baz=96,slow=22,SNR=3.8						
	0.4nm,0.2s						
WRA	**Warramunga Arr**	**13.45**	**273**	Pn	Pn	04 44 59.9	+0.6
	baz=95,slow=12,SNR=2.5						
WRA				Sn	Sn	04 47 24.6	-5.0
	0.1nm,0.3s,baz=96,slow=24,SNR=2.0						
WRA				Lg	Lg	04 48 55.1	
	0.2nm,0.3s,baz=98,slow=26,SNR=4.7						
	0.1nm,0.6s						
ASAR	**Alice Springs**	**13.81**	**257**	Pn	Pn	04 45 05.0	+0.7
	0.2nm,0.3s,baz=78,slow=14,SNR=2.6						
ASAR				Sn	Sn	04 47 33.3	-5.2
	baz=83,slow=23						
ASAR				Lg	Lg	04 49 04.5	
	0.2nm,0.3s,baz=84,slow=27,SNR=7.7						
	0.2nm,0.3s						

*SOF **18** 04:49:38.2, 42.37N×23.13E, h14km±1km, MD2.6/6*
*SKO **18** 04:49:38.8, 42.38N×23.04E, h22km, ML2.0*
*BEO **18** 04:49:39.5±0.4, 42.40N×23.08E, h2km±2km, ML1.8/12*
ISC 18 04:49:38.6±0.9, 42.39N±0.02×23.11E±0.02, h10km±8km, n32, σ0s61/59, 2C-1D, Bulgaria

| Code | Station Name |

ISC 18 04:54:34.5±1.0,3°.2N±0°.1×127°.2E±0°.1,h44km,n13,
σ1$67/13,mb3.7/9,Taladu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.70**	**285**	P	**Pn**	**04 55 01.1**	**-0.6**
TNTI	**Ternate**	**2.46**	**175**	P	**Pn**	**04 55 12.8**	**+0.7**
SANI	**Sanana**	**5.38**	**193**	P	**Pn**	**04 55 53.7**	**+1.4**
MRSI	**Marisa**	**5.90**	**242**	P	**Pn**	**04 56 01.4**	**+2.0**
FITZ	**Fitzroy Crossi**	**21.25**	**184**	P	**P**	**04 59 12.9**	**-4.1**
	1.4nm,0.9s,baz=9.8,slow=9.0,SNR=1.4						
	1.4nm,0.9s						
WRA	**Warramunga Arr**	**24.09**	**163**	P	**P**	**04 59 46.0**	**-0.1**
	1.7nm,0.8s,baz=338,slow=10,SNR=8.4						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**27.54**	**167**	P	**P**	**05 00 17.0**	**-0.3**
	0.4nm,0.7s,baz=344,slow=6.6,SNR=5.2						
	0.4nm,0.7s						
STKA	**Stephens Creek**	**37.52**	**160**	P	**P**	**05 01 43.9**	**-0.4**
	1.6nm,0.7s,baz=338,slow=5.9,SNR=3.8						
	1.6nm,0.7s						
MKAR	**Makanchi Array**	**58.21**	**325**	P	**P**	**05 04 23.9**	**-0.3**
	1.2nm,0.9s,baz=115,slow=8.6,SNR=4.1						
	1.2nm,0.9s						
ZALV	**Zalesovo Beam**	**61.22**	**333**	P	**P**	**05 04 46.1**	**+1.3**
	0.3nm,0.3s,baz=126,slow=7.0,SNR=1.6						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**62.39**	**327**	P	**P**	**05 04 52.6**	**-0.1**
	0.2nm,0.4s,baz=121,slow=6.6,SNR=3.1						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**67.97**	**327**	P	**P**	**05 05 30.1**	**+1.2**
	0.6nm,0.5s,baz=101,slow=7.8,SNR=1.9						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**85.36**	**25**	P	**P**	**05 07 07.6**	**+0.8**
	0.5nm,1.0s,baz=248,slow=6.1,SNR=2.3						
	0.5nm,1.0s						

*NEIC **18** 05:16:40.5±0.6,19°.24N±0°.03×155°.46W±0°.03,h38km±4km,*
Error ellipse: s-maj=5.1km s-min=2.9km az=150.0
HVO 18 05:16:41.7±0.7,19°.2N±0°.2×155°.5W±0°.2,h34km±8km,
ML2.9/25,ML3.0/36(NEIC),Error ellipse: s-maj=31.8km
s-min=7.2km az=139.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HLP	**Hilina Pali**	**0.16**	**56**	Pg	Pb	05 16 47.6	-0.5
HLP				IAML		05 16 52.1	
	comp=N,2μm,0.2s						
HLP				IAML		05 16 52.3	
	comp=E,2μm,0.2s						
HLP				Sg	Sb	05 16 52.3	-0.1
HPO	**Honuapo**	**0.16**	**221**		Sb	05 16 51.5	-0.7
AIN	**Ainahou**	**0.16**	**356**	Pg	Pb	05 16 47.7	-0.6
AIN				Sg	Sb	05 16 52.1	-0.6
KHU	**Kahuku**	**0.17**	**283**		Sb	05 16 51.6	-1.2
SDHHI	**Sand Hill**	**0.23**	**38**		Sb	05 16 52.6	-1.1
RIM	**Rim**	**0.25**	**41**		Sn	05 16 52.9	+1.0
UWE	**Uwekahuna**	**0.26**	**34**	Pg	Pn	05 16 48.1	-0.7
UWB	**Uwekahuna Bluf**	**0.27**	**36**		Pn	05 16 48.1	-0.9
UWB					Sn	05 16 52.7	-0.3
BYL	**Byron's Ledge**	**0.27**	**41**		Sn	05 16 53.1	0.0
BYL	**Byron's Ledge**	**0.27**	**41**	Pg	Pn	05 16 48.1	-0.9
BYL				IAML		05 16 53.7	
	comp=E,1μm,0.3s						
BYL				IAML		05 16 55.3	
	comp=N,824nm,0.3s						
PUH	**Pauahi**	**0.27**	**53**		Sn	05 16 53.1	-0.2
PUH	**Pauahi**	**0.27**	**53**	Pg	Pn	05 16 48.3	-0.9
PUH				IAML		05 16 53.2	
	comp=E,1μm,0.3s						
PUH				IAML		05 16 53.3	
	comp=N,1μm,0.3s						
SBLHI	**Steaming Bluff**	**0.28**	**37**		Sn	05 16 53.3	0.0
HATHI	**Halema'uma'u T**	**0.28**	**39**		Sn	05 16 53.1	-0.3
HATHI	**Halema'uma'u T**	**0.28**	**39**	Pg	Pn	05 16 48.2	-1.0
HATHI				IAML		05 16 53.3	
	comp=N,1μm,0.3s						
HATHI				IAML		05 16 53.5	
	comp=E,2μm,0.3s						
MLH	**Mauna Loa**	**0.29**	**11**		Sn	05 16 53.8	-0.4
MLH	**Mauna Loa**	**0.29**	**11**	Pg	Pn	05 16 48.7	-0.8
MLH				IAML		05 16 54.1	
	comp=N,3μm,0.3s						
MLH				IAML		05 16 54.2	
	comp=E,1μm,0.1s						
RSD	**Rainshed**	**0.30**	**32**		Sn	05 16 53.4	-0.9
RSD	**Rainshed**	**0.30**	**32**	Pg	Pn	05 16 48.5	-1.1
RSD				IAML		05 16 53.8	
	comp=N,1μm,0.3s						
RSD				IAML		05 16 54.1	
	comp=E,1μm,0.1s						
MWH	**Mokuaweoweo**	**0.31**	**333**		Sn	05 16 54.4	-0.8
MWH	**Mokuaweoweo**	**0.31**	**333**	Pg	Pn	05 16 48.9	-1.1
MWH				IAML		05 16 54.7	
	comp=E,1μm,0.3s						
MWH				IAML		05 16 56.9	
	comp=N,888nm,0.3s						
KNHH	**Kane Nui o Ham**	**0.31**	**57**	Pg	Pb	05 16 48.8	-1.0
MLOA	**Mauna Loa Obse**	**0.35**	**339**	Pg	Pb	05 16 49.2	-1.3
STCH	**Steam Cracks**	**0.35**	**60**		Sn	05 16 54.4	-1.6
STCH	**Steam Cracks**	**0.35**	**60**	Pg	Pb	05 16 49.1	-1.1
STCH				IAML		05 16 54.8	
	comp=E,29nm,0.2s						
STCH				IAML		05 16 55.3	
	comp=N,1μm,0.1s						
JCUZ	**Jacuzzi**	**0.37**	**62**		Sn	05 16 55.0	-1.4
ALEP	**Alea Permanent**	**0.38**	**331**		Sn	05 16 55.2	-1.8
POHA	**Pohakuloa**	**0.55**	**351**		Pb	05 16 51.5	-1.9
POHA	**Pohakuloa**	**0.55**	**351**		Sb	05 16 59.0	-2.4
HUH	**Hualalai**	**0.60**	**322**		Pn	05 16 52.4	-1.6
HUH				IAML		05 17 08.4	
	comp=E,868nm,0.4s						
HUH	**Hualalai**	**0.60**	**322**		Sb	05 17 00.5	-2.1
HPAH	**Hawaii Prepara**	**0.85**	**344**	IAML		05 17 05.9	
	comp=N,438nm,0.2s						
MHA	**Mahukona**	**1.07**	**336**		Pn	05 16 58.3	-1.9
HLK	**Haleakala**	**1.72**	**334**	Pn	Pn	05 17 06.9	-2.6
KHLH	**Kahului Airpor**	**1.92**	**331**	Pn	Pn	05 17 10.2	-1.7
DHH	**Diamond Head**	**3.01**	**313**	Pn	Pn	05 17 24.0	-3.0
HON	**Honolulu**	**3.19**	**312**	Pn	Pn	05 17 26.7	-2.8

*SKHL **18** 05:59:02.0±0.8,45°.10N×146°.50E,h128km±8km,mb4.1/3,*
msha4.8/3
*JMA **18** 05:59:02.1±0.4,45°.N±2°.×14°.7E±°,h158km,MV3.2/13,*
NEAR ETOROFU ISLAND
ISC 18 05:59:01.0±3.2,45°.0N±0°.1×147°.0E±0°.2,h126km±25km,
n12,σ1$35/18,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.70**	**66**	*eP*	Pn	05 59 12.3	-8.6
KUR				*eS*	**Sn**	**05 59 35.3**	**-0.7**
SHO	**Shikotan**	**1.08**	**185**	*eP*	Pn	05 59 17.7	-6.6
SHO				AMB	AMB	05 59 20.8	
	30nm,0.4s						
SHO				*eS*	Sn	05 59 29.1	-13
SHO				A	A	05 59 32.9	
	230nm,0.5s						
SHO				A	A	05 59 32.9	
	350nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**221**	*eP*	**Pn**	**05 59 25.8**	**+0.3**
YUK				AMB	AMB	05 59 29.3	
	230nm,0.8s						
YUK				*eS*	**Sn**	**05 59 42.8**	**-1.4**
YUK				A	A	05 59 50.3	
	200nm,0.6s						
YUK				A	A	05 59 50.3	
	360nm,0.6s						
NEM2	**Nemuro 2**	**1.81**	**209**	*eP*	**Pn**	**05 59 33.1**	**+0.8**
NEM2				*eS*	**Sn**	**05 59 57.0**	**+0.7**
NMR	**Nemuro--Hokkai**	**1.81**	**210**	*eP*	**Pn**	**05 59 33.2**	**+0.8**
NMR				AMB	AMB	05 59 35.3	
	20nm,0.3s						
NMR				*eS*	**Sn**	**05 59 57.2**	**+0.8**
NMR				A	A	05 59 57.6	
	30nm,0.2s						
NMR				A	A	05 59 57.6	
	30nm,0.2s						
JTKR	**Abashiri--Toko**	**2.40**	**247**	*eP*	**Pn**	**05 59 39.9**	**+0.3**
AKK	**Akkeshi**	**2.46**	**219**	*eS*	**Sn**	**06 00 10.1**	**-0.7**
AKK				*eP*	**Pn**	**05 59 40.9**	**+0.4**
JAK	**Akkeshi**	**2.54**	**221**	*eP*	**Pn**	**05 59 41.3**	**-0.2**
JAK				*eS*	**Sn**	**06 00 11.4**	**-1.3**
JAR	**Ashorobuto**	**2.83**	**235**	*eP*	**Pn**	**05 59 46.3**	**+1.1**
JAR				*eS*	**Sn**	**06 00 21.7**	**+2.4**
JOB	**Onbets**	**3.05**	**229**	*eP*	**Pn**	**05 59 48.3**	**+0.3**
JKK2	**Kamakawa 2**	**3.21**	**252**	*eP*	**Pn**	**05 59 50.6**	**+0.5**
JCH	**Churui**	**3.50**	**229**	*eP*	**Pn**	**05 59 53.5**	**-0.5**
JCH				*eS*	**Sn**	**06 00 31.7**	**-3.2**

*CNRM **18** 06:00:01.9,32°.59N×4°.23W,h3km,ML3.5*
*MDD **18** 06:00:02.2±0.8,32°.65N×4°.14W,h0km,Mb4.3/6,*
M_mb3.7/6,Error ellipse: s-maj=8.1km s-min=5.3km
az=109.0
*INMG **18** 06:00:03.4±1.2,32°.72N×4°.22W,h9km,ML2.8,Error*
ellipse: s-maj=5.9km s-min=4.4km az=110.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez
(Marr)
*IGIL **18** 06:00:04.9,32°.68N×4°.29W,h16km*
ISC 18 06:00:01.8±0.8,32°.65N±0°.02×4°.21W±0°.03,h10km,n140,
σ1$76/165,6C,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.0**	**-0.1**
MDT	**Midelt**	**0.37**	**296**	S	**Sg**	**06 00 15.1**	**+1.1**
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.8**	**+0.7**
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.8**	**+0.7**
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.0**	**-0.1**
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.0**	**-0.1**
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.0**	**-0.1**
MDT	**Midelt**	**0.37**	**296**	P	**Pg**	**06 00 09.0**	**-0.1**
MD31	**MD31**	**0.51**	**295**	P	**Pg**	**06 00 11.9**	**+0.2**
MD31	**MD31**	**0.51**	**295**	S	**Sg**	**06 00 18.9**	**+0.5**
GOLM	**Goulmima**	**1.13**	**214**	P	**Pg**	**06 00 23.9**	**+0.4**
GOLM	**Goulmima**	**1.13**	**214**	S	**Sn**	**06 00 40.5**	**+1.0**
GOLM	**Goulmima**	**1.13**	**214**	P	**Pb**	**06 00 25.0**	**+1.4**
GOLM	**Goulmima**	**1.13**	**214**	P	**Pb**	**06 00 25.0**	**+1.4**
GOLM	**Goulmima**	**1.13**	**214**	P	**Pg**	**06 00 23.2**	**-0.4**
GOLM	**Goulmima**	**1.13**	**214**	P	**Pg**	**06 00 23.2**	**-0.4**
IFR	**Ifrane**	**1.16**	**319**	Pn	**Pb**	**06 00 25.0**	**+1.1**
IFR				Sn	**Sb**	**06 00 40.2**	**+1.1**
LCRM	**LCR**	**1.17**	**333**	P	**Pb**	**06 00 23.9**	**-0.2**
LCRM	**LCR**	**1.17**	**333**	S	**Sg**	**06 00 40.4**	**+1.0**
LCRM	**LCR**	**1.17**	**333**	P	**Pb**	**06 00 25.4**	**+1.3**
LCRM	**LCR**	**1.17**	**333**	P	**Pb**	**06 00 25.4**	**+1.3**
LCRM	**LCR**	**1.17**	**333**	P	**Pb**	**06 00 25.4**	**+1.3**
LCRM	**LCR**	**1.17**	**333**	P	**Pb**	**06 00 25.4**	**+1.3**
LCRM	**LCR**	**1.17**	**333**	P	**Pb**	**06 00 25.4**	**+1.3**
ARF	**Arif**	**1.21**	**180**	P	**Pb**	**06 00 24.1**	**-0.7**
ARF	**Arif**	**1.21**	**180**	S	**Sb**	**06 00 40.4**	**-0.2**
ARF	**Arif**	**1.21**	**180**	P	**Pb**	**06 00 24.2**	**-0.7**
ARF	**Arif**	**1.21**	**180**	S	**Sb**	**06 00 40.0**	**-0.6**
ARF	**Arif**	**1.21**	**180**	P	**Pb**	**06 00 24.2**	**-0.7**
ARF	**Arif**	**1.21**	**180**	S	**Sb**	**06 00 40.0**	**-0.6**
ARF	**Arif**	**1.21**	**180**	P	**Pb**	**06 00 24.2**	**-0.7**
ARF	**Arif**	**1.21**	**180**	S	**Sb**	**06 00 40.0**	**-0.6**
ARF	**Arif**	**1.21**	**180**	P	**Pb**	**06 00 24.3**	**-0.6**
ARF	**Arif**	**1.21**	**180**	P	**Pb**	**06 00 24.3**	**-0.6**
AKLM	**AKL**	**1.88**	**9**	P	**Pn**	**06 00 36.8**	**+2.8**
AKLM	**AKL**	**1.88**	**9**	P	**Pb**	**06 00 38.0**	**+1.8**
AKLM	**AKL**	**1.88**	**9**	P	**Pb**	**06 00 38.0**	**+1.8**
AKLM	**AKL**	**1.88**	**9**	P	**Pb**	**06 00 38.0**	**+1.8**
AKLM	**AKL**	**1.88**	**9**	P	**Pb**	**06 00 38.0**	**+1.8**
AKLM	**AKL**	**1.88**	**9**	P	**Pb**	**06 00 39.0**	**+2.8**
AKLM	**AKL**	**1.88**	**9**	P	**Pb**	**06 00 39.0**	**+2.8**
TISM	**Timmit**	**2.10**	**244**	P	**Pn**	**06 00 37.6**	**+0.5**
TISM	**Timmit**	**2.10**	**244**	S	**Sn**	**06 01 04.8**	**+1.6**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 40.0**	**0.0**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 40.0**	**0.0**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 40.0**	**0.0**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 41.0**	**+1.0**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 41.0**	**+1.0**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 41.0**	**+1.0**
TISM	**Timmit**	**2.10**	**244**	P	**Pb**	**06 00 41.0**	**+1.0**
ZHG	**ZHG**	**2.19**	**292**	P	**Pn**	**06 00 39.4**	**+1.1**
ZHG	**ZHG**	**2.19**	**292**	S	**Sb**	**06 01 09.0**	**+0.3**
ZHG	**ZHG**	**2.19**	**292**	P	**Pb**	**06 00 42.0**	**+0.5**
ZHG	**ZHG**	**2.19**	**292**	P	**Pb**	**06 00 42.0**	**+0.5**
ZHG	**ZHG**	**2.19**	**292**	P	**Pn**	**06 00 39.4**	**+1.1**
ZHG	**ZHG**	**2.19**	**292**	P	**Pn**	**06 00 39.4**	**+1.1**
ZHG	**ZHG**	**2.19**	**292**	P	**Pb**	**06 00 42.0**	**+0.5**
ZHG	**ZHG**	**2.19**	**292**	P	**Pb**	**06 00 42.0**	**+0.5**
TZRR	**Tazzarine**	**2.19**	**212**	P	**Pn**	**06 00 38.8**	**+0.5**
TZRR	**Tazzarine**	**2.19**	**212**	S	**Sn**	**06 01 06.5**	**+0.9**
TZRR	**Tazzarine**	**2.19**	**212**	P	**Pn**	**06 00 39.0**	**+0.7**
TZRR	**Tazzarine**	**2.19**	**212**	P	**Pn**	**06 00 39.0**	**+0.7**
TZRR	**Tazzarine**	**2.19**	**212**	P	**Pn**	**06 00 40.0**	**+1.7**
TZRR	**Tazzarine**	**2.19**	**212**	P	**Pn**	**06 00 40.0**	**+1.7**
FIGM	**Figuig**	**2.55**	**101**	P	**Pn**	**06 00 44.5**	**+1.2**
FIGM	**Figuig**	**2.55**	**101**	P	**Pn**	**06 00 45.0**	**+1.7**
FIGM	**Figuig**	**2.55**	**101**	P	**Pn**	**06 00 45.0**	**+1.7**
FIGM	**Figuig**	**2.55**	**101**	P	**Pn**	**06 00 45.0**	**+1.7**
FIGM	**Figuig**	**2.55**	**101**	P	**Pn**	**06 00 45.0**	**+1.7**
PALE	**Palemas**	**2.57**	**5**	P	**Pn**	**06 00 45.7**	**+2.2**
TAF	**Taforalt**	**2.63**	**34**	P	**Pn**	**06 00 45.9**	**+1.6**
TAF	**Taforalt**	**2.63**	**34**	P	**Pn**	**06 00 46.0**	**+1.6**
TAF	**Taforalt**	**2.63**	**34**	P	**Pn**	**06 00 46.0**	**+1.6**
TAF	**Taforalt**	**2.63**	**34**	P	**Pn**	**06 00 46.0**	**+1.6**
TAF	**Taforalt**	**2.63**	**34**	P	**Pn**	**06 00 46.0**	**+1.6**
OUZM	**OUZ**	**2.78**	**232**	P	**Pn**	**06 00 48.8**	**+2.4**
OUZM	**OUZ**	**2.78**	**232**	P	**Pn**	**06 00 47.6**	**+1.2**
OUZM	**OUZ**	**2.78**	**232**	P	**Pn**	**06 00 47.6**	**+1.2**
OUZM	**OUZ**	**2.78**	**232**	P	**Pb**	**06 00 54.0**	**+2.4**
OUZM	**OUZ**	**2.78**	**232**	P	**Pb**	**06 00 54.0**	**+2.4**
OUZM	**OUZ**	**2.78**	**232**	P	**Pb**	**06 00 54.0**	**+2.4**
OUZM	**OUZ**	**2.78**	**232**	P	**Pb**	**06 00 54.0**	**+2.4**
ZGR	**Zagora**	**2.80**	**206**	P	**Pn**	**06 00 47.2**	**+0.5**
ZGR	**Zagora**	**2.80**	**206**	P	**Pn**	**06 00 47.2**	**+0.5**
ZGR	**Zagora**	**2.80**	**206**	P	**Pn**	**06 00 47.2**	**+0.5**
ZGR	**Zagora**	**2.80**	**206**	P	**Pb**	**06 00 52.0**	**+0.1**
ZGR	**Zagora**	**2.80**	**206**	P	**Pb**	**06 00 52.0**	**+0.1**
ZGR	**Zagora**	**2.80**	**206**	P	**Pb**	**06 00 52.0**	**+0.1**
ZGR	**Zagora**	**2.80**	**206**	P	**Pb**	**06 00 52.0**	**+0.1**
TIO	**Tiouine**	**3.11**	**237**	Pn	**Pn**	**06 00 52.3**	**+1.3**
TIO				Sg	**Sb**	**06 01 36.8**	**+1.5**
TIO	**Tiouine**	**3.11**	**237**	P	**Pn**	**06 00 51.8**	**+0.8**
SRHM	**Skhour des Reh**	**3.12**	**268**	P	**Pn**	**06 00 53.4**	**+2.4**
OUK	**Oukaimeden**	**3.42**	**246**	P	**Pn**	**06 00 56.2**	**+0.6**
ELGU	**Los Guajares,**	**4.24**	**6**	⇑*i*Vmb_VC		06 01 06.0	
	282nm,SNR=0.8						
ELGU				Pn	**Pn**	**06 01 06.7**	**+0.3**
ELGU				Sn	**Sn**	**06 01 55.5**	**-0.5**
ESPR	**Espera**	**4.42**	**343**	Sn	**Sn**	**06 01 58.0**	**-2.4**
EMIN	**Mina Concepcio**	**5.49**	**339**	Sn	**Sn**	**06 02 22.4**	**-4.3**
EMIN	**Mina Concepcio**	**5.49**	**339**	Pn	**Pn**	**06 01 23.3**	**-0.2**
EMIN				⇑*i*Vmb_VC		06 01 23.6	
	185nm,SNR=1.9						
EMIN				Sn	**Sn**	**06 02 25.6**	**-1.1**
ECAB	**El Cabril**	**5.50**	**350**	Sn	**Sn**	**06 02 23.2**	**-3.9**
ECAB	**El Cabril**	**5.50**	**350**	Pn	**Pn**	**06 01 24.8**	**+1.1**
ECAB				⇑*i*Vmb_VC		06 01 29.5	
	101nm,SNR=1.0						
ECAB				Sn	**Sn**	**06 02 24.4**	**-2.8**
PBDV	**Barranco-do-Ve**	**5.50**	**327**	Pn	**Pn**	**06 01 23.7**	**-0.2**
PBDV				Sn	**Sn**	**06 02 23.4**	**-3.8**
PBDV	**Barranco-do-Ve**	**5.50**	**327**	*eP*	**Pn**	**06 01 23.6**	**-0.2**
PBDV				*eS*	**Sn**	**06 02 24.9**	**-2.3**
PBDV				*i* IAML		06 02 29.2	
PBDV				*i* IAML		06 02 30.1	
PBDV				*i* IAML		06 02 31.3	
EADA	**Adamuz**	**5.51**	**357**	Pn	**Pn**	**06 01 23.8**	**-0.2**
EADA				⇑*i*Vmb_VC		06 01 32.1	
	190nm,SNR=2.1						
EADA				Sn	**Sn**	**06 02 26.4**	**-1.0**
PVAQ	**Vaqueiros**	**5.54**	**330**	*eP*	**Pn**	**06 01 24.0**	**-0.3**
PVAQ				*eS*	**Sn**	**06 02 23.5**	**-4.6**
PVAQ				*i* IAML		06 02 27.0	
PVAQ				*i* IAML		06 02 27.2	
PVAQ				*i* IAML		06 02 28.0	
PVAQ	**Vaqueiros**	**5.54**	**330**	P	**Pn**	**06 01 24.0**	**-0.3**
PVAQ	**Vaqueiros**	**5.54**	**330**	P	**Pn**	**06 01 24.0**	**-0.3**
PVAQ	**Vaqueiros**	**5.54**	**330**	P	**Pn**	**06 01 24.0**	**-0.3**
EGRO	**El Granado**	**5.56**	**332**	Pn	**Pn**	**06 01 24.4**	**-0.2**
EGRO				Sn	**Sn**	**06 02 25.5**	**-3.0**
EGRO	**El Granado**	**5.56**	**332**	Pn	**Pn**	**06 01 24.4**	**-0.2**
EGRO				Sn	**Sn**	**06 02 26.1**	**-2.4**
EMUR	**La Murta**	**5.72**	**24**	Pn	**Pn**	**06 01 26.9**	**0.0**
EMUR				⇑*i*Vmb_VC		06 01 29.5	
	297nm,SNR=1.6						
PFVI	**Vila Bisbo**	**5.86**	**321**	Pn	**Pn**	**06 01 28.6**	**-0.1**
PFVI	**Vila Bisbo**	**5.86**	**321**	*eP*	**Pn**	**06 01 28.6**	**-0.1**
PFVI				*eS*	**Sn**	**06 02 34.5**	**-1.5**
PFVI				*i* IAML		06 02 36.1	
PFVI				*i* IAML		06 02 37.6	
PFVI				*i* IAML		06 02 42.1	
PCVE	**Castro Verde**	**5.87**	**329**	Pn	**Pn**	**06 01 29.3**	**+0.4**
PCVE				Sn	**Sn**	**06 02 31.8**	**-4.5**
PCVE	**Castro Verde**	**5.87**	**329**	*eP*	**Pn**	**06 01 29.3**	**+0.4**
PCVE				*eS*	**Sn**	**06 02 33.6**	**-2.7**
PCVE				*i* IAML		06 02 34.8	
PCVE				*i* IAML		06 02 36.1	
PCVE				*i* IAML		06 02 37.4	
MORF	**Marmelete**	**5.90**	**323**	*eP*	**Pn**	**06 01 28.8**	**-0.5**
PBAR	**Barrancos**	**5.97**	**338**	Pn	**Pn**	**06 01 29.9**	**-0.3**
PBAR				Sn	**Sn**	**06 02 34.7**	**-4.1**
PBAR	**Barrancos**	**5.97**	**338**	*eP*	**Pn**	**06 01 30.3**	**0.0**
PBAR				*eS*	**Sn**	**06 02 35.2**	**-3.5**
PBAR				*i* IAML		06 02 36.3	
PBAR				*i* IAML		06 02 40.4	
PBAR				*i* IAML		06 02 41.0	
PTEO	**Sao Teotonio**	**6.12**	**324**	*eP*	**Pn**	**06 01 32.2**	**-0.1**
PTEO				*eS*	**Sn**	**06 02 39.9**	**-2.5**
PTEO				*i* IAML		06 02 41.6	
PTEO				*i* IAML		06 02 43.8	
PTEO				*i* IAML		06 02 44.2	
MESJ	**Messejana**	**6.13**	**329**	*eP*	**Pn**	**06 01 31.8**	**-0.6**
MESJ	**Messejana**	**6.13**	**329**	*eP*	**Pn**	**06 01 32.4**	**0.0**
MESJ				*eS*	**Sn**	**06 02 38.9**	**-3.5**
MESJ				*i* IAML		06 02 44.1	
MESJ				*i* IAML		06 02 44.3	
MESJ				*i* IAML		06 02 44.5	
EBAD	**Badajoz**	**6.50**	**340**	Pn	**Pn**	**06 01 37.1**	**-0.4**
EBAD				Sn	**Sn**	**06 02 47.9**	**-3.9**
EBAD	**Badajoz**	**6.50**	**340**	Pn	**Pn**	**06 01 37.3**	**-0.2**
EBAD				⇑*i*Vmb_VC		06 01 42.3	
	167nm,SNR=1.4						
EBAD				Sn	**Sn**	**06 02 47.7**	**-4.0**
EVO	**Evora**	**6.63**	**333**	Pn	**Pn**	**06 01 39.5**	**+0.2**
EVO				Sn	**Sn**	**06 02 49.6**	**-5.3**
EVO	**Evora**	**6.63**	**333**	*eP*	**Pn**	**06 01 39.6**	**+0.2**
EVO				*eS*	**Sn**	**06 02 51.2**	**-3.8**
EVO				*i* IAML		06 02 52.8	
EVO				*i* IAML		06 02 53.9	
EVO				*i* IAML		06 02 55.2	
PESTR	**Estremoz**	**6.78**	**337**	Pn	**Pn**	**06 01 41.1**	**-0.3**
PESTR				Sn	**Sn**	**06 02 53.4**	**-5.3**
PESTR	**Estremoz**	**6.78**	**337**	*eP*	**Pn**	**06 01 42.2**	**+0.8**
PESTR				*eS*	**Sn**	**06 02 54.6**	**-4.1**
PESTR				*i* IAML		06 03 02.3	
PESTR				*i* IAML		06 03 03.1	
PESTR				*i* IAML		06 03 08.3	
PESTR	**Estremoz**	**6.78**	**337**	P	**Pn**	**06 01 42.0**	**+0.6**
PESTR	**Estremoz**	**6.78**	**337**	P	**Pn**	**06 01 42.0**	**+0.6**
PESTR	**Estremoz**	**6.78**	**337**	P	**Pn**	**06 01 42.0**	**+0.6**
PARRA	**Arraiolos**	**6.89**	**334**	*eP*	Pn	06 01 42.8	-5.6
PARRA				*eS*	Sn	06 02 57.7	-14
PARRA				*i* IAML		06 02 59.1	
PARRA				*i* IAML		06 02 60.0	
PARRA				*i* IAML		06 03 08.4	
PMTG	**Montargil**	**7.18**	**334**	*eP*	**Pn**	**06 01 46.7**	**-0.1**
PSARD	**Sardoal**	**7.63**	**336**	*eP*	**Pn**	**06 01 53.2**	**+0.2**
PSARD				*eS*	**Sn**	**06 03 15.2**	**-4.4**
PSARD				*i* IAML		06 03 17.7	
PSARD				*i* IAML		06 03 18.0	
PSARD				*i* IAML		06 03 18.0	
PCBR	**Castelo Branco**	**7.64**	**341**	*eP*	**Pn**	**06 01 53.5**	**+0.4**
PSBE	**So Bento**	**7.79**	**333**	*eP*	**Pn**	**06 01 55.6**	**+0.4**
MTE	**Manteigas**	**8.18**	**342**	*eP*	**Pn**	**06 02 01.2**	**+0.6**
PVIS	**Viseu**	**8.57**	**341**	*eP*	**Pn**	**06 02 06.3**	**+0.3**
MVO	**Moncorvo**	**8.79**	**346**	*eP*	**Pn**	**06 02 09.2**	**+0.2**
MVO				*eS*	**Sn**	**06 03 43.3**	**-4.8**

**ROM 18 06:04:10.

comp=N,196μm,0.8s
SCHR S. Chirico Rap 0.67 44 P Pb 06 04 23.7 -0.5
SCHR S Sb 06 04 33.7 0.0
SCHR AML AML
comp=N,229μm,0.4s
SCHR AML AML
comp=E,197μm,1.0s
SCHR AML AML
comp=N,229μm,1.6s
SCHR AML AML
comp=E,196μm,1.0s
TDS Terranova Siba 0.68 95 P Pg 06 04 23.2 +0.1
TDS AML AML
comp=N,107μm,1.0s
TDS AML AML
comp=E,125μm,1.3s
TDS AML AML
comp=N,107μm,1.0s
SLCN Sala Consilina 0.69 11 P Pb 06 04 24.2 -0.2
SLCN AML AML
comp=N,292μm,0.8s
SLCN AML AML
comp=E,380μm,0.5s
SLCN AML AML
comp=N,292μm,0.8s
CAR1 CAROLEI 0.74 128 P Pb 06 04 24.8 -0.4
CAR1 S Sg 06 04 34.7 +0.7
CAR1 AML AML
comp=E,926μm,0.4s
CAR1 AML AML
comp=N,680μm,0.6s
CAR1 AML AML
comp=N,818μm,0.6s
CAR1 AML AML
comp=N,680μm,0.7s
CAR1 AML AML
comp=E,954μm,1.4s
CDRU Civita di Ruta 0.78 351 P Pg 06 04 24.4 -0.8
CDRU S Sb 06 04 36.7 -0.2
CDRU AML AML
comp=E,596μm,0.2s
CDRU AML AML
comp=N,167μm,0.3s
SPS2 Spezzano della 0.80 122 P Pb 06 04 26.1 -0.1
SPS2 AML AML
comp=N,316μm,0.9s
SPS2 AML AML
comp=E,466μm,0.3s
SPS2 AML AML
comp=E,143μm,0.3s
SPS2 AML AML
comp=N,316μm,1.1s
ORI Oriolo Calabro 0.83 65 AML AML
comp=E,490μm,0.5s
ORI AML AML
comp=N,441μm,0.4s
CELI Celico 0.86 111 P Pg 06 04 27.1 +0.3
CELI AML AML
comp=E,528μm,1.5s
CELI AML AML
comp=N,722μm,0.4s
JOPP Joppolo 1.15 163 P Pb 06 04 32.3 0.0
GRI Girifalco 1.16 140 P Pg 06 04 31.9 -0.4

ROM 18 06:04:20.7±0.1, 39°.729N±0°.002×15°.491E±0°.002, h11km, ML2.5/29, Error ellipse: s-maj=0.3km s-min=0.1km az=52.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BULG	**Bulgheria - Ca**	**0.36**	**346**	P	Pg	06 04 27.9	-0.1
BULG				S	Sb	06 04 34.2	-0.7
BULG				AML	AML		
	comp=E,1290μm,1.4s						
BULG				AML	AML		
	comp=N,2050μm,1.3s						
BULG				AML	AML		
	comp=N,2015μm,1.3s						
BULG				AML	AML		
	comp=E,1345μm,1.5s						
BULG				AML	AML		
	comp=E,1345μm,0.5s						
BULG				AML	AML		
	comp=N,2010μm,1.3s						
BULG				AML	AML		
	comp=E,1290μm,0.6s						
CUC	**Castrocucco**	**0.36**	**43**	P	Pg	06 04 27.6	-0.4
CUC				S	Sg	06 04 33.9	+1.0
CUC				AML	AML		
	comp=E,672μm,0.2s						
CUC				AML	AML		
	comp=N,565μm,0.9s						
CUC				AML	AML		
	comp=N,540μm,0.8s						
CUC				AML	AML		
	comp=E,672μm,0.2s						
CUC				AML	AML		
	comp=E,682μm,0.3s						
CUC				AML	AML		
	comp=N,565μm,1.1s						
CUC				AML	AML		
	comp=N,540μm,1.2s						
CET2	**Cetraro**	**0.41**	**119**	P	Pg	06 04 28.6	-0.2
CET2				S	Sg	06 04 34.6	+0.3
CET2				AML	AML		
	comp=E,896μm,0.3s						
CET2				AML	AML		
	comp=N,1690μm,0.9s						
CET2				AML	AML		
	comp=N,1690μm,1.1s						
MGR	**Morigerati**	**0.41**	**7**	P	Pg	06 04 28.7	-0.2
MGR				S	Sb	06 04 35.4	-0.9
MGR				AML	AML		
	comp=N,404μm,0.4s						
MGR				AML	AML		
	comp=E,309μm,1.6s						
MGR				AML	AML		
	comp=N,406μm,0.3s						
MGR				AML	AML		
	comp=E,309μm,0.4s						
MGR				AML	AML		
	comp=N,406μm,1.7s						
MGR				AML	AML		
	comp=E,295μm,0.9s						
MMN	**Mormanno**	**0.42**	**67**	P	Pg	06 04 29.1	+0.2
MMN				S	Sb	06 04 35.9	-0.5
MMN				AML	AML		
	comp=E,1250μm,1.6s						
MMN				AML	AML		
	comp=N,1945μm,1.2s						
MMN				AML	AML		
	comp=N,1945μm,0.8s						
MMN				AML	AML		
	comp=E,1250μm,0.4s						
SIRI	**Monte Sirino -**	**0.54**	**32**	P	Pg	06 04 31.7	+0.4
SIRI				S	Sb	06 04 39.6	-0.4
SIRI				AML	AML		
	comp=N,666μm,0.4s						
SIRI				AML	AML		
	comp=N,682μm,0.4s						
SIRI				AML	AML		
	comp=E,541μm,0.4s						
SIRI				AML	AML		
	comp=E,550μm,0.3s						
CMPR	**Campora**	**0.61**	**346**	S	Sg	06 04 41.0	+0.4
CMPR				AML	AML		
	comp=N,398μm,0.2s						
CMPR				AML	AML		
	comp=N,398μm,0.2s						
CMPR				AML	AML		
	comp=E,1120μm,0.2s						
SCHR	**S. Chirico Rap**	**0.65**	**44**	S	Sb	06 04 43.0	-0.3
SCHR				AML	AML		
	comp=N,229μm,0.4s						
SCHR				AML	AML		
	comp=N,229μm,1.6s						
SCHR				AML	AML		
	comp=E,196μm,1.0s						
TDS	**Terranova Siba**	**0.66**	**96**	P	Pg	06 04 33.3	-0.2
TDS				AML	AML		
	comp=N,107μm,1.0s						
TDS				AML	AML		
	comp=E,125μm,1.3s						
TDS				AML	AML		
	comp=E,125μm,0.7s						
TDS				AML	AML		
	comp=N,107μm,1.0s						
SLCN	**Sala Consilina**	**0.67**	**9**	P	Pb	06 04 34.6	+0.1
SALB	**San Lorenzo Be**	**0.68**	**77**	P	Pg	06 04 34.1	+0.3
CAR1	**CAROLEI**	**0.73**	**130**	S	Sg	06 04 44.0	-0.5
CAR1				AML	AML		
	comp=E,926μm,0.4s						
CAR1				AML	AML		
	comp=N,680μm,0.6s						
CAR1				AML	AML		
	comp=N,818μm,0.6s						
CAR1				AML	AML		
	comp=N,954μm,1.4s						
CDRU	**Civita di Ruta**	**0.77**	**349**	P	Pg	06 04 34.8	-1.0
CDRU				S	Sg	06 04 45.7	-0.1
CDRU				AML	AML		
	comp=E,596μm,0.2s						
CDRU				AML	AML		
	comp=N,167μm,0.3s						
SPS2	**Spezzano della**	**0.79**	**123**	P	Pg	06 04 35.7	-0.2
CELI	**Celico**	**0.85**	**112**	P	Pg	06 04 36.8	-0.4
CELI				S	Sb	06 04 48.7	-0.4
CELI				AML	AML		
	comp=E,528μm,1.5s						
CELI				AML	AML		
	comp=N,722μm,0.4s						
CELI				AML	AML		
	comp=E,528μm,0.5s						
PTRP	**Pietrapertosa**	**0.90**	**29**	P	Pg	06 04 38.1	-0.1
MRLC	**Muro Lucano**	**1.03**	**360**	P	Pg	06 04 40.3	-0.2
MCRV	**Calabrutti - M**	**1.08**	**347**	P	Pb	06 04 40.8	-0.7
ACER	**Acerenza**	**1.11**	**18**	P	Pb	06 04 42.0	0.0
TIP	**Timpagrande**	**1.12**	**119**	P	Pb	06 04 41.5	-0.7
GRI	**Girifalco**	**1.16**	**141**	P	Pb	06 04 42.3	-0.5
JOPP	**Joppolo**	**1.16**	**165**	P	Pb	06 04 41.8	-1.0
SNAL	**S. Angelo Dei**	**1.22**	**350**	P	Pn	06 04 43.0	-0.8
LADO	**San Nicola del**	**1.23**	**111**	P	Pn	06 04 43.8	-0.1
MTMR	**Montemarano**	**1.25**	**343**	P	Pn	06 04 43.7	-0.5

ROM 18 06:04:53.2±0.2, 39°.693N±0°.006×15°.44E±0°.01, h12km±2km, ML2.2/29, Error ellipse: s-maj=1.0km s-min=0.5km az=239.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BULG	**Bulgheria - Ca**	**0.39**	**353**	P	Pg	06 05 01.1	+0.1
BULG				S	Sb	06 05 07.5	-0.5
BULG				AML	AML		
	comp=E,382μm,0.4s						
BULG				AML	AML		
	comp=N,713μm,0.4s						
BULG				AML	AML		
	comp=E,371μm,0.4s						
BULG				AML	AML		
	comp=N,699μm,0.4s						
BULG				AML	AML		
	comp=N,713μm,1.6s						
CUC	**Castrocucco**	**0.42**	**44**	P	Pg	06 05 01.2	-0.3
CUC				S	Sg	06 05 07.5	+0.4
CUC				AML	AML		
	comp=E,260μm,0.2s						
CUC				AML	AML		
	comp=N,165μm,0.1s						
CUC				AML	AML		
	comp=E,260μm,0.2s						
CUC				AML	AML		
	comp=N,177μm,0.2s						
CET2	**Cetraro**	**0.43**	**112**	P	Pg	06 05 01.9	+0.1
CET2				S	Sg	06 05 07.9	+0.3
CET2				AML	AML		
	comp=N,768μm,0.1s						
CET2				AML	AML		
	comp=E,351μm,0.1s						
MGR	**Morigerati**	**0.45**	**11**	P	Pg	06 05 01.6	-0.5
MGR				S	Sg	06 05 09.0	+0.8
MGR				AML	AML		
	comp=E,505μm,1.5s						
MGR				AML	AML		
	comp=N,551μm,1.3s						
MGR				AML	AML		
	comp=N,307μm,2.4s						
MGR				AML	AML		
	comp=E,132μm,0.1s						
MGR				AML	AML		
	comp=N,145μm,0.1s						
MGR				AML	AML		
	comp=E,439μm,0.6s						
MGR				AML	AML		
	comp=N,439μm,0.9s						
MMN	**Mormanno**	**0.47**	**65**	P	Pg	06 05 02.9	+0.4
MMN				S	Sg	06 05 09.1	+0.4
MMN				AML	AML		
	comp=E,542μm,0.2s						
MMN				AML	AML		
	comp=N,675μm,0.1s						
MMN				AML	AML		
	comp=E,542μm,1.8s						
SIRI	**Monte Sirino -**	**0.59**	**34**	P	Pg	06 05 04.9	+0.1
CMPR	**Campora**	**0.63**	**351**	P	Pg	06 05 05.3	-0.3
CMPR				S	Sb	06 05 14.8	-0.3
CMPR				AML	AML		
	comp=E,385μm,0.2s						
CMPR				AML	AML		
	comp=N,149μm,0.3s						
MCEL	**Monticello**	**0.69**	**24**	P	Pb	06 05 07.3	+0.1
TDS	**Terranova Siba**	**0.70**	**93**	P	Pg	06 05 06.8	+0.1
SCHR	**S. Chirico Rap**	**0.70**	**44**	P	Pb	06 05 07.3	-0.2
SLCN	**Sala Consilina**	**0.71**	**12**	P	Pg	06 05 07.1	+0.1
SALB	**San Lorenzo Be**	**0.72**	**75**	P	Pg	06 05 07.3	0.0
CAR1	**CAROLEI**	**0.74**	**126**	P	Pg	06 05 07.7	+0.1
CAR1				S	Sg	06 05 17.4	0.0
CAR1				AML	AML		
	comp=E,343μm,0.5s						
CAR1				AML	AML		
	comp=N,252μm,0.2s						
CAR1				AML	AML		
	comp=E,386μm,0.5s						
CAR1				AML	AML		
	comp=N,273μm,0.3s						
CDRU	**Civita di Ruta**	**0.80**	**353**	P	Pg	06 05 07.7	-1.1
CDRU				AML	AML		
	comp=E,213μm,0.2s						
CDRU				AML	AML		
	comp=N,72μm,2.2s						
SPS2	**Spezzano della**	**0.80**	**119**	P	Pg	06 05 08.9	+0.2
SPS2				S	Sb	06 05 19.9	0.0
SPS2				AML	AML		
	comp=E,186μm,0.3s						
SPS2				AML	AML		
	comp=N,123μm,0.3s						
SPS2				AML	AML		
	comp=E,186μm,1.7s						
CELI	**Celico**	**0.88**	**109**	P	Pg	06 05 10.0	-0.2
CELI				AML	AML		
	comp=E,167μm,0.3s						
CELI				AML	AML		
	comp=E,150μm,0.6s						
CELI				AML	AML		
	comp=N,158μm,0.8s						
CELI				AML	AML		
	comp=N,254μm,0.5s						
CELI				AML	AML		
	comp=E,167μm,1.7s						
IST3	**Stromboli F**	**0.91**	**190**	P	Pg	06 05 09.5	-1.2
ISTR	**Stromboli Gino**	**0.93**	**192**	P	Pg	06 05 09.9	-1.1
MCRV	**Calabrutti - M**	**1.11**	**349**	P	Pb	06 05 13.2	-1.1
JOPP	**Joppolo**	**1.14**	**162**	P	Pb	06 05 14.7	-0.2

IDC 18 06:09:31.3±3.1, 10°.24S×111°.57E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=162.2km s-min=28.7km az=45.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.98**	**116**	P	P	06 14 46.5	-1.3
	0.2nm,0.7s,baz=295,slow=9.8,SNR=1.6						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**25.14**	**125**	P	P	06 14 58.7	+0.3
	0.1nm,0.3s,baz=299,slow=9.9,SNR=2.5						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**62.51**	**338**	P	P	06 19 57.3	+0.5
	0.3nm,0.4s,baz=136,slow=7.2,SNR=4.6						
	0.3nm,0.4s						

*IDC **18** 06:19:02.3±33.0, 27°.38N×51°.85E, h0km, mb3.7/3, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=612.5km s-min=123.7km az=176.0*
*TEH **18** 06:19:34.8, 30°.56N×50°.87E, h14km±18km*
ISC 18 06:19:35.0±0.9, 30°.56N±0°.05×50°.84E±0°.04, h19km, n29, σ2°.09/30, mb3.3/3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.50**	**274**	Pg	**Pb**	**06 19 44.8**	**-0.4**
ABEH				Sg	**Sb**	**06 19 53.8**	**+1.6**
KLNJ	**Kolanjah**	**0.79**	**56**	Pg	**Pb**	**06 19 49.9**	**-0.4**
KAZ2	**Kazeron-Fars-I**	**1.19**	**143**	Pg	**Pb**	**06 19 57.2**	**+0.2**
SHI	**Shiraz**	**1.72**	**122**	Pg	**Pb**	**06 20 06.2**	**+0.1**
DSBU	**Dashti - Bushe**	**2.22**	**170**	Pn	**Pn**	**06 20 12.8**	**+1.9**
QAMS	**Qamsar**	**3.20**	**8**	Pn	**Pn**	**06 20 27.0**	**+2.5**
IMEH	**Mehriz**	**3.35**	**75**	Pn	**Pn**	**06 20 28.4**	**+1.8**
ICHK	**Chekchek**	**3.48**	**60**	Pn	**Pn**	**06 20 30.3**	**+1.9**
ANAR	**Anarak**	**3.59**	**42**	Pn	**Pn**	**06 20 32.1**	**+2.2**
ISFB	**Sefidab**	**3.96**	**17**	Pn	**Pn**	**06 20 36.7**	**+1.9**
IBAF	**Bafgh**	**4.19**	**75**	Pn	**Pn**	**06 20 39.7**	**+1.7**
IQOM	**Qom**	**4.27**	**3**	Pn	**Pn**	**06 20 41.4**	**+2.1**
IVRN	**Varamin**	**4.48**	**9**	Pn	**Pn**	**06 20 44.0**	**+2.0**
KHGB	**Koh Gabri**	**4.87**	**91**	Pn	**Pn**	**06 20 48.9**	**+1.4**
IDMV	**Damavand**	**5.10**	**11**	Pn	**Pn**	**06 20 52.6**	**+2.0**
IGHG	**Ghaleghazi**	**5.21**	**317**	Pn	**Pn**	**06 20 54.9**	**+2.8**
QABG	**Abgarm-Qazvin**	**5.24**	**349**	Pn	**Pn**	**06 20 54.8**	**+2.3**
IFIR	**Firoozkooh**	**5.31**	**17**	Pn	**Pn**	**06 20 55.6**	**+2.0**
TPRV	**Parvadeh(Tabas**	**5.55**	**62**	Pn	**Pn**	**06 20 58.6**	**+1.9**
IALA	**Alasht**	**5.75**	**16**	Pn	**Pn**	**06 21 02.1**	**+2.6**
MZPU	**Pul - Mazandar**	**5.89**	**6**	Pn	**Pn**	**06 21 03.9**	**+2.4**
TNSJ	**Nastanj**	**5.95**	**54**	Pn	**Pn**	**06 21 04.2**	**+2.1**
TKDS	**Koohdasht(Taba**	**6.14**	**59**	Pn	**Pn**	**06 21 06.6**	**+1.8**
IGLO	**Ghaloghah**	**6.43**	**22**	Pn	**Pn**	**06 21 11.3**	**+2.5**
TAPT	**Tabas- Tapeh t**	**6.85**	**49**	Pn	**Pn**	**06 21 16.2**	**+1.6**
BRTR	**Keskin Array B**	**16.75**	**308**	P	**P**	**06 23 31.4**	**+0.5**
	0.1nm,0.3s,baz=122,slow=10,SNR=2.4						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**25.79**	**327**	P	**P**	**06 25 02.6**	**-1.9**
	0.3nm,0.4s,baz=128,slow=8.4,SNR=1.9						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**34.91**	**339**	P	**P**	**06 26 23.8**	**-1.2**
	0.6nm,0.3s,baz=142,slow=7.6,SNR=11						
	0.6nm,0.3s						
NOA	**NORSAR Array B**	**40.06**	**331**	P	**P**	**06 27 04.7**	**-4.1**
	0.3nm,0.6s,baz=111,slow=9.6,SNR=1.6						
	0.3nm,0.6s						

*TIR **18** 06:41:19.4, 40°.87N×21°.43E, h3km±1km, Ml3.3/2*
*BEO **18** 06:41:20.6±0.8, 40°.84N×21°.48E, h0km, ML2.6/9*
*PDG **18** 06:41:20.7±0.5, 40°.87N×21°.35E, h8km±1km, ML3.1/10, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
*ATH **18** 06:41:20.2, 40°.86N×21°.30E, h8km±2km, ML2.9/8, Manual Solution by F.Xalaris First location: 2019/11/18 06:42:35, This location: 2019/11/18 11:29:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*SKO **18** 06:41:20.4, 40°.83N×21°.35E, h22km, ML3.0*
*THE **18** 06:41:21.0, 41°.N±2°×2°.1E±°, h7km±2km, M2.9/9, MLh2.9/9*
ISC 18 06:41:21.0±1.0, 40°.84N±0°.02×21°.34E±0°.02, h10km±9km, n64, σ0°.80/98, 6C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.47**	**244**	⇓Pg	**Pg**	**06 41 29.9**	**-0.3**
KBN				Sg	**Sb**	**06 41 37.9**	**-0.7**
KBN	**Korca**	**0.47**	**244**	P	**Pg**	**06 41 30.1**	**-0.1**
KBN				S	**Sg**	**06 41 36.8**	**+0.3**
NEST	**Nestorio**	**0.48**	**208**	⇓Pg	**Pg**	**06 41 30.3**	**0.0**
NEST				Sg	**Sb**	**06 41 38.3**	**-0.4**
NEST				AML	AML	06 41 40.8	
	12nm,0.2s						
NEST	**Nestorio**	**0.48**	**208**	P	**Pg**	**06 41 30.1**	**-0.2**
NEST				S	**Sg**	**06 41 37.5**	**+0.9**
NEST	**Nestorio**	**0.48**	**208**	P	**Pg**	**06 41 30.0**	**-0.3**
NEST				S	**Sg**	**06 41 36.7**	**+0.1**
OHR	**Ohrid**	**0.50**	**304**	*i* Pg	**Pg**	**06 41 30.9**	**+0.2**
OHR				*i* Sg	**Sb**	**06 41 39.2**	**0.0**
OHR				*e*Lg	Lg	06 41 39.6	
	comp=N,1μm,0.5s						
OHR				*e*Lg	Lg	06 41 40.0	
	comp=E,2μm,0.3s						
NASA	**Naoussa**	**0.59**	**110**	P	**Pg**	**06 41 32.7**	**+0.4**
NASA				S	**Sg**	**06 41 40.6**	**+0.6**
KZN	**Kozani**	**0.62**	**148**	P	**Pg**	**06 41 32.9**	**-0.1**
KZN				S	**Sb**	**06 41 42.2**	**-0.5**
KZN	**Kozani**	**0.62**	**148**	P	**Pg**	**06 41 32.9**	**-0.1**
KZN				S	**Sb**	**06 41 42.5**	**-0.4**
PENT	**Pentalofos**	**0.66**	**194**	P	**Pg**	**06 41 33.7**	**0.0**
PENT				S	**Sb**	**06 41 43.3**	**-0.6**
PENT	**Pentalofos**	**0.66**	**194**	P	**Pg**	**06 41 33.4**	**-0.3**
PENT				S	**Sb**	**06 41 43.1**	**-0.7**
VAY	**Valandovo**	**1.05**	**62**	⇓*i*Pg	**Pb**	**06 41 40.9**	**-0.3**
VAY				*i* Sg	**Sb**	**06 41 55.3**	**+0.3**
VAY				*e*Lg	Lg	06 41 55.9	
	comp=N,124nm,0.5s						
VAY				*e*Lg	Lg	06 41 57.1	
	comp=E,112nm,0.4s						
PHP	**Peshkopia**	**1.09**	**322**	⇓Pg	**Pb**	**06 41 40.2**	**-1.7**
PHP				Sg	**Sn**	**06 41 56.9**	**-0.6**
PHP				AML	AML	06 41 59.7	
	comp=E,1.9nm,0.2s						
SKO	**Skopje**	**1.14**	**4**	*i* Pg	**Pb**	**06 41 42.2**	**-0.6**
LIT	**Litokhoron**	**1.14**	**130**	P	**Pb**	**06 41 42.4**	**-0.4**
LIT	**Litokhoron**	**1.14**	**130**	*i* Pg	**Pb**	**06 41 42.5**	**-0.4**
LIT				*i* Sg	**Sn**	**06 41 59.5**	**+0.7**
LIT	**Litokhoron**	**1.14**	**130**	P	**Pb**	**06 41 42.6**	**-0.3**
LIT				S	**Sn**	**06 41 58.5**	**-0.3**
KNT	**Kendrikon**	**1.22**	**74**	⇓*i*Pg	**Pb**	**06 41 44.0**	**-0.2**
KNT				*i* Sg	**Sg**	**06 42 00.3**	**0.0**
KNT	**Kendrikon**	**1.22**	**74**	P	**Pn**	**06 41 43.9**	**-0.3**
KNT				S	**Sg**	**06 42 00.2**	**-0.1**
TIR	**Tirane**	**1.23**	**295**	P	**Pn**	**06 41 43.9**	**-0.3**
TIR	**Tirane**	**1.23**	**295**	*i* Pg	**Pb**	**06 41 44.1**	**-0.2**
THE	**Thessaloniki**	**1.25**	**99**	P	**Pn**	**06 41 44.3**	**-0.1**
THE	**Thessaloniki**	**1.25**	**99**	⇑*i*Pg	**Pn**	**06 41 44.4**	**-0.1**
THE				*i* Sg	**Sg**	**06 42 01.6**	**+0.5**
THE	**Thessaloniki**	**1.25**	**99**	P	**Pn**	**06 41 44.5**	**-0.1**
PRMD	**Pramanda**	**1.32**	**188**	P	**Pn**	**06 41 45.0**	**-0.5**
HORT	**Hortiatis**	**1.35**	**100**	P	**Pn**	**06 41 45.5**	**-0.6**
HORT	**Hortiatis**	**1.35**	**100**	P	**Pn**	**06 41 46.0**	**-0.1**
THL	**Klokotos Trika**	**1.37**	**158**	P	**Pn**	**06 41 45.7**	**-0.4**
THL	**Klokotos Trika**	**1.37**	**158**	P	**Pn**	**06 41 45.8**	**-0.3**
TETR	**Tetrakomo, Epi**	**1.49**	**182**	P	**Pn**	**06 41 48.1**	**+0.2**
IGT	**Igoumenitsa**	**1.52**	**211**	Pn	**Pg**	**06 41 49.8**	**-0.2**
IGT				Sn	**Sg**	**06 42 12.5**	**+2.8**
SOH	**Sokhos**	**1.52**	**90**	*i* Pn	**Pb**	**06 41 49.0**	**-0.4**
SOH	**Sokhos**	**1.52**	**90**	P	**Pn**	**06 41 48.7**	**+0.4**
KKB	**Krupnik**	**1.68**	**53**	*i* Pn	**Pg**	**06 41 53.4**	**+0.3**
SRS	**Serrai**	**1.73**	**80**	P	**Pn**	**06 41 51.2**	**+0.1**
BOSS	**Bosilegrad**	**1.86**	**27**	*e*Pn	**Pn**	**06 41 53.5**	**+0.5**
ULC	**Ulcinj**	**1.94**	**306**	⇓*i*Pn	**Pn**	**06 41 54.7**	**+0.6**
ULC				*i* Sn	**Sg**	**06 42 21.8**	**-1.5**
MMB	**Musomishta**	**1.95**	**68**	*i* Pn	**Pn**	**06 41 54.8**	**+0.6**
BARS	**Barje**	**2.01**	**10**	*i* Pn	**Pn**	**06 41 55.6**	**+0.6**
BARS	**Barje**	**2.01**	**10**	*e*Pn	**Pn**	**06 41 55.5**	**+0.5**
BARS				*e*Sn	**Sn**	**06 42 21.1**	**+0.9**
PVY	**Plav**	**2.04**	**330**	⇑*i*Pn	**Pb**	**06 41 58.1**	**-0.1**
PVY				*i* Sn	**Sb**	**06 42 24.2**	**+0.5**
DRME	**Dracevica, Mon**	**2.11**	**310**	*e*Pn	**Pb**	**06 41 58.8**	**-0.5**
DRME	**Dracevica, Mon**	**2.11**	**310**	⇓*i*Pn	**Pn**	**06 41 56.9**	**+0.5**
DRME				*i* Sn	**Sb**	**06 42 26.0**	**+0.4**
PDG	**Podgorica**	**2.23**	**316**	*e*Pn	**Pb**	**06 42 00.5**	**-0.9**
PDG				*e*Sn	**Sb**	**06 42 29.1**	**0.0**
PDG	**Podgorica**	**2.23**	**316**	⇑*i*Pn	**Pn**	**06 41 58.8**	**+0.8**
PDG				*i* Sn	**Sb**	**06 42 28.9**	**-0.2**
VTS	**Vitosha**	**2.27**	**38**	*e*Pn	**Pn**	**06 41 59.2**	**+0.4**
VTS				*e*Sn	**Sn**	**06 42 25.4**	**-1.6**
IVA	**Berane**	**2.31**	**332**	⇑*i*Pn	**Pn**	**06 41 59.2**	**+0.1**
IVA				*i* Sn	**Sb**	**06 42 30.1**	**-1.2**
BUM	**Brajici-Budva**	**2.35**	**309**	⇑*i*Pn	**Pn**	**06 42 00.7**	**+1.0**
BUM				*i* Sn	**Sb**	**06 42 32.2**	**-0.4**
SELS	**Selova**	**2.39**	**356**	*e*Pn	**Pn**	**06 42 00.8**	**+0.6**
KOME	**Kolasin**	**2.43**	**326**	*e*Pn	**Pn**	**06 42 01.8**	**+0.9**
KOME				*i* Sn	**Sb**	**06 42 33.8**	**-1.2**
ZAPS	**Zavoj**	**2.62**	**21**	*e*Pn	**Pn**	**06 42 03.5**	**+0.1**
ZAPS				*e*Sn	**Sn**	**06 42 35.4**	**+0.1**
SJES	**Sjenica**	**2.63**	**338**	*e*Pn	**Pn**	**06 42 04.7**	**+1.1**

SJES				*e*Sn		**Sb**	**06 42 38.4**	**-2.3**
NKME	**Niksic**		**2.63 318**	*i* Pn		**Pn**	**06 42 05.0**	**+1.4**
NKME				*i* Sn		**Sb**	**06 42 38.7**	**-1.9**
GOCS	**Kraljevo Serbi**		**2.75 353**	*e*Pn		**Pn**	**06 42 05.8**	**+0.6**
BOVS	**Bovan**		**2.81 5**	*e*Pn		**Pn**	**06 42 06.2**	**+0.2**
IVAS	**Ivanjica**		**2.88 342**	*e*Pn		**Pn**	**06 42 06.8**	**-0.2**
BRY	**Bratogost**		**2.94 316**	*e*Pn		**Pn**	**06 42 08.5**	**+0.6**
BRY				*i* Sn		**Sn**	**06 42 45.8**	**+2.4**
UPM	**Unac-Piva**		**2.98 323**	*e*Pn		**Pn**	**06 42 08.7**	**+0.2**
UPM				*i* Sn		**Sn**	**06 42 46.9**	**+2.4**
ZAGS	**Zajecar**		**3.05 12**	*e*Pn		**Pn**	**06 42 09.6**	**+0.4**
GRUS	**Gruza**		**3.09 352**	*e*Pn		**Pn**	**06 42 10.6**	**+0.8**
BBLS	**Lazi&#263i**		**3.35 335**	*e*Pn		**Pn**	**06 42 14.0**	**+0.5**
DIVS	**Divibare**		**3.41 343**	*e*Pn		**Pn**	**06 42 14.6**	**+0.3**
TRUS	**Trudelj**		**3.46 349**	*e*Pn		**Pn**	**06 42 15.5**	**+0.6**
TEKS	**Tekeris**		**3.94 341**	*e*Pn		**Pn**	**06 42 21.8**	**+0.2**

CNRM ***18*** *06:54:02.3, 35˚.53N×3˚.50W, h3km, ML2.4*
MDD ***18*** *06:54:03.7±1.1, 35˚.46N×3˚.67W, h15km±8km, mb_Lg2.7/7, Error ellipse: s-maj=9.3km s-min=7.6km az=19.0*
INMG ***18*** *06:54:04.6±1.1, 35˚.40N×3˚.55W, h39km, ML2.1, Error ellipse: s-maj=3.8km s-min=3.0km az=37.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Al Hoceima (MARR)*
SFS ***18*** *06:54:04.5, 35˚.44N×3˚.61W, h24km, ML2.8/7, ML2.5/9, MLv2.3/9*

ISC 18 06:54:02.3±1.4, 35˚.50N±0˚.02×3˚.61W±0˚.03, h13km±12km, n32, σ1§11/46, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.39**	**224**	P	**Pb**	**06 54 11.3**	**+0.2**
PALE	**Palemas**	**0.39**	**224**	S	**Sb**	**06 54 17.8**	**+0.8**
EMEL	**Melilla**	**0.57**	**110**	Pg	**Pb**	**06 54 14.7**	**+0.6**
EMEL				Sg	**Sb**	**06 54 22.3**	**+0.2**
EMEL				*i* IVmb_Lg		06 54 23.4	
EMLI	**Melilla**	**0.57**	**110**	Pg	**Pb**	**06 54 14.7**	**+0.5**
EMLI				Sg	**Sb**	**06 54 22.3**	**0.0**
EALB	**Alboran**	**0.64**	**47**	Pg	**Pn**	**06 54 17.3**	**+0.2**
EALB				Sg	**Sn**	**06 54 26.7**	**-0.4**
EALB				*i* IVmb_Lg		06 54 28.9	
AKLM	**AKL**	**1.01**	**192**	P	**Pb**	**06 54 22.1**	**+0.4**
AKLM	**AKL**	**1.01**	**192**	S	**Sb**	**06 54 35.4**	**+0.5**
TAF	**Taforalt**	**1.20**	**125**	P	**Pb**	**06 54 24.1**	**-0.8**
TAF	**Taforalt**	**1.20**	**125**	S	**Sg**	**06 54 40.3**	**-0.6**
ELGU	**Los Guajares,**	**1.36**	**359**	Pn	**Pn**	**06 54 27.7**	**+0.6**
ELGU				Sn	**Sb**	**06 54 43.5**	**-1.7**
ELGU	**Los Guajares,**	**1.36**	**359**	Pn	**Pn**	**06 54 27.8**	**+0.6**
ELGU				Sn	**Sb**	**06 54 44.8**	**-0.3**
ELGU				*i* IVmb_Lg		06 54 50.5	
EMIJ	**Mijas**	**1.42**	**319**	Pn	**Pn**	**06 54 28.3**	**+0.5**
EMIJ	**Mijas**	**1.42**	**319**	Pn	**Pn**	**06 54 28.4**	**+0.5**
EMIJ				Sn	**Sn**	**06 54 44.7**	**-1.7**
EMIJ				*i* IVmb_Lg		06 54 59.0	
ECEU	**Ceuta**	**1.49**	**286**	Sn	**Sn**	**06 54 45.9**	**-2.2**
EGOR	**Sierra Gorda,**	**1.66**	**346**	Sn	**Sn**	**06 54 51.9**	**-0.5**
EGOR				Pg	**Pg**	**06 54 33.8**	**-0.3**
EQUE	**Quentar**	**1.71**	**5**	Pn	**Pb**	**06 54 33.8**	**+0.1**
EQUE				Sn	**Sn**	**06 54 53.6**	**0.0**
EQUE				*i* IVmb_Lg		06 54 57.7	
EQTA	**Presa de Quent**	**1.71**	**5**	Pn	**Pb**	**06 54 33.9**	**+0.2**
EQTA				Sn	**Sn**	**06 54 53.8**	**+0.2**
EQES	**Quesada**	**2.34**	**11**	Pg	**Pb**	**06 54 44.1**	**-0.3**
EQES				Sg	**Sb**	**06 55 13.8**	**+0.6**
EQES				*i* IVmb_Lg		06 55 15.3	
IFR	**Ifrane**	**2.34**	**213**	Sn	**Sn**	**06 55 06.7**	**-2.7**
EADA	**Adamuz**	**2.77**	**344**	Sn	**Sn**	**06 55 19.9**	**0.0**
EADA				Pg	**Pb**	**06 54 52.0**	**+0.3**
MD31	**MD31**	**2.79**	**200**	P	**Pn**	**06 54 48.8**	**+2.0**
MD31	**MD31**	**2.79**	**200**	S	**Sb**	**06 55 24.4**	**-1.9**
MDT	**Midelt**	**2.80**	**197**	P	**Pn**	**06 54 48.9**	**+1.9**
MDT	**Midelt**	**2.80**	**197**	S	**Sb**	**06 55 25.3**	**-1.3**
PVAQ	**Vaqueiros**	**3.82**	**301**	*e*P	**Pn**	**06 55 02.0**	**+1.2**
PVAQ				*e*S	**Sn**	**06 55 44.3**	**-1.2**
PVAQ				*i* IAML		06 55 46.6	
PVAQ				*i* IAML		06 55 48.0	
PVAQ				*i* IAML		06 55 52.3	
PBAR	**Barrancos**	**3.83**	**315**	*e*P	**Pn**	**06 55 02.3**	**+1.4**
PBAR				*e*S	**Sn**	**06 55 45.5**	**-0.4**
PBAR				*i* IAML		06 55 48.2	
PBAR				*i* IAML		06 55 51.2	
PBAR				*i* IAML		06 55 51.9	
PBDV	**Barranco-do-Ve**	**3.90**	**298**	*e*P	**Pn**	**06 55 03.0**	**+1.1**
PBDV				*e*S	**Sn**	**06 55 47.9**	**+0.4**
PBDV				*i* IAML		06 55 50.2	
PBDV				*i* IAML		06 55 50.6	
PBDV				*i* IAML		06 55 51.2	
PCVE	**Castro Verde**	**4.15**	**302**	*e*P	**Pn**	**06 55 07.1**	**+1.7**
MESJ	**Messejana**	**4.38**	**304**	*e*P	**Pn**	**06 55 09.8**	**+1.2**
MESJ				*e*S	**Sn**	**06 55 58.9**	**-0.4**
MESJ				*i* IAML		06 56 04.2	
MESJ				*i* IAML		06 56 07.3	
PARRA	**Arraiolos**	**4.84**	**314**	*e*P	Pn	06 55 16.7	-6.6
PARRA				*e*S	Sn	06 56 09.1	-17
PMTG	**Montargil**	**5.12**	**315**	*e*S	**Sn**	**06 56 17.0**	**-0.7**
PSARD	**Sardoal**	**5.46**	**320**	*e*P	**Pn**	**06 55 25.5**	**+2.1**

NEIC ***18*** *07:51:47.4±1.5, 54˚.17N±0˚.08×159˚.11W±0˚.08, h10km±2km, mb3.8/11, ML3.2/22, ML2.9(AEIC), Error ellipse: s-maj=13.2km s-min=7.8km az=171.0*
AEIC ***18*** *07:51:50.3±1.6, 54˚.18N±0˚.09×159˚.06W±0˚.09, h26km±8km, Error ellipse: s-maj=12.7km s-min=7.3km az=164.0*

ISC 18 07:51:46.8±1.5, 54˚.14N±0˚.10×159˚.10W±0˚.06, h10km, n86, σ0§84/87, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.73**	**338**		**Pb**	**07 52 02.6**	**+0.9**
CNBA	**Chernabura Isl**	**0.73**	**338**		**Sb**	**07 52 11.6**	**-0.2**
CNBA				IAML		07 52 15.2	
	comp=E,656nm,0.6s						
CNBA				IAML		07 52 15.6	
	comp=N,578nm,0.5s						
CHNA	**Chernabura Isl**	**0.74**	**338**	P	**Pb**	**07 52 02.6**	**+0.7**
CHNA	**Chernabura Isl**	**0.74**	**338**	S	**Sb**	**07 52 11.8**	**-0.3**
SDPT	**Sand Point**	**1.45**	**327**	Pn	**Pn**	**07 52 12.9**	**-0.1**
SDPT				Sn	**Sn**	**07 52 30.1**	**-1.9**
SDPT	**Sand Point**	**1.45**	**327**	P	**Pn**	**07 52 12.5**	**-0.5**
SDPT	**Sand Point**	**1.45**	**327**	S	**Sn**	**07 52 29.5**	**-2.6**
DOL	**Dolgoi Island**	**1.89**	**303**		**Pn**	**07 52 19.2**	**0.0**
DOL					**Sn**	**07 52 41.5**	**-1.7**
PVV	**Pavlof Volcano**	**1.99**	**309**		**Pn**	**07 52 20.9**	**+0.5**
VNSG	**Veniaminof 6**	**1.99**	**0**		**Sn**	**07 52 45.2**	**-0.3**
PS1A	**Pavlof South-1**	**1.99**	**311**		**Pn**	**07 52 21.2**	**+0.6**
PS1A					**Sn**	**07 52 45.9**	**+0.3**
PS4A	**Pavlof South-4**	**2.00**	**308**		**Pn**	**07 52 21.5**	**+0.9**
PS4A					**Sn**	**07 52 45.3**	**-0.4**
HAG	**Hague Volcano**	**2.00**	**307**		**Pn**	**07 52 21.5**	**+0.8**
DT1	**Dutton Round H**	**2.08**	**299**		**Pn**	**07 52 21.8**	**0.0**
DT1					**Sn**	**07 52 45.8**	**-2.0**
PN7A	**Pavlof North-7**	**2.12**	**309**		**Pn**	**07 52 23.0**	**+0.7**
S12K	**Black Hills**	**2.31**	**314**		**Sn**	**07 52 53.5**	**0.0**
S12K	**Black Hills**	**2.31**	**314**	Pn	**Pn**	**07 52 26.1**	**+1.1**
S12K				IAML		07 52 57.2	
	comp=N,149nm,0.3s						
CHIR	**Chirikof Islan**	**2.62**	**49**	Pn	**Pn**	**07 52 28.0**	**-1.2**
CHIR				IAML		07 53 40.2	
	comp=E,96nm,1.3s						
CHIR				IAML		07 54 01.5	
	comp=N,109nm,2.8s						
CHIR	**Chirikof Islan**	**2.62**	**49**	P	**Pn**	**07 52 28.0**	**-1.2**
ISNN	**Isanotski Nort**	**2.81**	**286**		**Pn**	**07 52 31.1**	**-0.8**
SII	**Sitkinak Islan**	**3.71**	**47**	Pn	**Pn**	**07 52 43.5**	**-0.7**
SII				IAML		07 54 09.5	
	comp=E,67nm,1.6s						
PLBL	**Peulik Blue Cr**	**3.79**	**19**		**Pn**	**07 52 45.8**	**+0.5**
PLK4	**Peulik 4**	**3.82**	**23**		**Pn**	**07 52 46.3**	**+0.5**
PLK4				IAML		07 53 54.9	
	comp=E,34nm,2.5s						
PLK4				IAML		07 53 57.7	
	comp=N,38nm,1.2s						
AHB	**Akutan Harbor**	**3.95**	**272**		**Pn**	**07 52 47.7**	**+0.3**
PLK2	**Peulik 2**	**3.95**	**22**		**Pn**	**07 52 48.4**	**+0.9**
R18K	**Karluk**	**4.32**	**35**	Pn	**Pn**	**07 52 52.9**	**+0.4**
R18K				IAML		07 53 42.2	
	comp=E,24nm,2.1s						
R18K				IAML		07 54 57.6	
	comp=N,24nm,2.5s						
CNTC	**Contact Creek**	**4.50**	**22**		**Pn**	**07 52 54.7**	**-0.4**
OHAK	**Old Harbor**	**4.51**	**44**		**Pn**	**07 52 53.9**	**-1.2**
OHAK	**Old Harbor**	**4.51**	**44**	IAML		07 53 52.6	
	comp=E,17nm,3.7s						
OHAK	**Old Harbor**	**4.51**	**44**	P	**Pn**	**07 52 53.9**	**-1.2**
ANCK	**Angle Creek**	**4.54**	**25**		**Pn**	**07 52 55.2**	**-0.3**
O15K	**Ungalikthiuk R**	**5.06**	**356**	Pn	**Pn**	**07 53 03.3**	**+0.6**
O15K				IAML		07 54 32.3	
	comp=N,16nm,3.5s						
O15K				IAML		07 55 20.0	
	comp=E,19nm,2.8s						
KDAK	**Kodiak Island**	**5.17**	**42**	Pn	**Pn**	**07 53 03.0**	**-1.1**
KDAK				IAML		07 55 14.1	
	comp=E,23nm,2.6s						
O14K	**Tigyukauivet M**	**5.26**	**348**	Pn	**Pn**	**07 53 05.8**	**+0.4**
Q19K	**Cape Douglas,**	**5.67**	**30**	Pn	**Pn**	**07 53 11.9**	**+0.8**
SYI	**Shuyak Island**	**5.83**	**37**	Pn	**Pn**	**07 53 12.9**	**-0.2**
N14K	**Kuskokwak Cree**	**5.96**	**347**	Pn	**Pn**	**07 53 16.9**	**+1.8**
N15K	**Kwethluk River**	**6.07**	**355**	Pn	**Pn**	**07 53 15.8**	**-0.7**
N18K	**Kilae Creek**	**6.78**	**14**	Pn	**Pn**	**07 53 26.9**	**+0.6**
M16K	**Timber Creek**	**6.90**	**1**	Pn	**Pn**	**07 53 28.9**	**+1.0**
CNPM	**China Poot**	**6.91**	**35**	Pn	**Pn**	**07 53 27.6**	**-0.4**
N19K	**Bonanza Creek**	**7.13**	**19**	Pn	**Pn**	**07 53 29.6**	**-1.7**
BRLK	**Bradley Lake**	**7.20**	**35**	Pn	**Pn**	**07 53 30.8**	**-1.3**
M17K	**Holitna River**	**7.33**	**6**	Pn	**Pn**	**07 53 34.0**	**+0.1**
SLKM	**Skilak Lake**	**7.98**	**33**	Pn	**Pn**	**07 53 43.1**	**+0.3**
M19K	**Big River Lodg**	**8.17**	**16**	Pn	**Pn**	**07 53 46.5**	**+1.1**
L19K	**White Mountain**	**8.37**	**14**	Pn	**Pn**	**07 53 48.2**	**+0.1**
SUA	**Susitna One**	**8.58**	**28**	Pn	**Pn**	**07 53 51.3**	**+0.3**
PWL	**Port Wells**	**8.87**	**36**	Pn	**Pn**	**07 53 55.0**	**0.0**
KNK	**Knik Glacier**	**9.23**	**34**	Pn	**Pn**	**07 53 60.0**	**+0.1**
HIN	**Hinchinbrook I**	**9.26**	**42**	Pn	**Pn**	**07 53 59.8**	**-0.5**
GLI	**Glacier Island**	**9.33**	**39**	Pn	**Pn**	**07 54 01.3**	**0.0**
GHO	**Glory Hole Cre**	**9.36**	**31**	Pn	**Pn**	**07 54 01.2**	**-0.4**
FID	**Port Fidalgo**	**9.48**	**41**	Pn	**Pn**	**07 54 02.0**	**-1.3**
EYAK	**Cordova Ski Ar**	**9.65**	**43**	P	**Pn**	**07 54 05.4**	**-0.1**
KAIM	**Kayak Island**	**9.87**	**48**	Pn	**Pn**	**07 54 09.2**	**+0.6**
SCM	**Sheep Creek Mo**	**9.91**	**34**	Pn	**Pn**	**07 54 09.2**	**0.0**
KLU	**Klutina**	**10.16**	**38**	Pn	**Pn**	**07 54 12.4**	**-0.3**
PAX	**Paxson**	**11.33**	**33**	Pn	**Pn**	**07 54 29.3**	**+0.6**
GRNC	**Granite Creek**	**11.42**	**48**	Pn	**Pn**	**07 54 30.5**	**+0.5**
TABL	**Table Mountain**	**11.56**	**50**	Pn	**Pn**	**07 54 32.3**	**+0.3**
LOGN	**Logan Glacier**	**11.79**	**48**	Pn	**Pn**	**07 54 36.4**	**+1.4**
PCA	**Pinnacle**	**11.83**	**52**	Pn	**Pn**	**07 54 36.7**	**+1.3**
BCPM	**Bancas Point**	**12.07**	**53**	Pn	**Pn**	**07 54 39.5**	**+0.9**
L26K	**Log Cabin Wild**	**12.08**	**36**	Pn	**Pn**	**07 54 39.3**	**+0.5**
PNL	**Peninsula**	**12.08**	**55**	P	**Pn**	**07 54 38.9**	**0.0**
O28M	**Mount Upton**	**12.12**	**49**	Pn	**Pn**	**07 54 40.6**	**+0.9**
M27K	**Edge Creek, AK**	**12.21**	**41**	Pn	**Pn**	**07 54 41.6**	**+0.8**
SCRK	**Sand Creek**	**12.52**	**32**	Pn	**Pn**	**07 54 44.8**	**-0.1**
J25K	**Salcha River,**	**12.58**	**28**	Pn	**Pn**	**07 54 44.4**	**-1.3**
P29M	**Windy Craggy**	**12.88**	**56**	Pn	**Pn**	**07 54 50.5**	**+0.8**
J26L	**Joseph Creek**	**13.02**	**31**	Pn	**Pn**	**07 54 51.2**	**-0.5**
HYT	**Haines Junctio**	**13.36**	**51**	Pn	**Pn**	**07 54 57.4**	**+1.0**
M29M	**Somme Creek**	**13.62**	**44**	Pn	**Pn**	**07 55 00.5**	**+0.6**
I28M	**Miner Creek**	**14.79**	**32**	Pn	**Pn**	**07 55 16.4**	**+0.4**
B21K	**Ikpikpuk River**	**15.67**	**6**	P	**P**	**07 55 31.1**	**-0.4**
C23K	**Itkillik River**	**16.21**	**11**	P	**P**	**07 55 37.9**	**+0.3**
C23K				IAmb	IAmb	07 55 40.7	
	comp=Z,6.7nm,1.2s						
F28M	**Old Crow**	**16.32**	**27**		**Pn**	**07 55 36.5**	**+0.8**
F28M				IAmb	IAmb	07 55 41.7	
	comp=Z,8.0nm,1.5s						
G29M	**Pine Creek**	**16.35**	**30**	IAmb	IAmb	07 55 42.4	
	comp=Z,5.5nm,0.8s						
EPYK	**Eagle Plains**	**16.40**	**33**	IAmb	IAmb	07 55 42.8	
	comp=Z,7.2nm,0.9s						
H31M	**Peel River**	**16.88**	**36**	Pn	**Pn**	**07 55 42.6**	**-0.3**
H31M				IAmb	IAmb	07 56 17.8	
	comp=Z,14nm,1.4s						
G30M	**tAoh Zraii Nji**	**16.94**	**32**	IAmb	IAmb	07 55 51.2	
	comp=Z,22nm,1.5s						
F30M	**Barrier River**	**17.46**	**30**	P	**P**	**07 55 51.7**	**+0.3**
F30M				IAmb	IAmb	07 56 20.0	
	comp=Z,12nm,1.4s						
INK	**Inuvik**	**18.57**	**30**	P	**P**	**07 56 03.7**	**+0.2**
C36M	**Paulatuk**	**22.04**	**33**	P	**P**	**07 56 41.2**	**+0.1**
A36M	**Sachs Harbour**	**23.00**	**26**	P	**P**	**07 56 51.1**	**-0.2**

ASRS ***18*** *07:54:50.0±1.9, 53˚.78N×91˚.06E, h0km, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC ***18*** *07:54:58.7±3.2, 53˚.55N×90˚.57E, h0km, mbtmp3.2/3, ML2.7/3, Error ellipse: s-maj=27.3km s-min=22.1km az=48.0*
NNC ***18*** *07:55:03.9±3.4, 53˚.29N×90˚.61E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=26.7km s-min=15.7km az=82.0, Suspected Mining explosion.*

ISC 18 07:54:55.9±3.6, 53˚.8N±0˚.1×90˚.8E±0˚.2, h0km, n8, σ2§50/13, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.53**	**276**	⇑Pn	**Pb**	**07 55 59.0**	**-0.3**
ZAA0	2.7nm,0.9s,baz=105,slow=12			⇓Sn	**Sb**	**07 56 43.7**	**+1.1**
	6.2nm,0.7s,baz=98,slow=27						
ZALV	**Zalesovo Beam**	**3.53**	**276**	Pn	**Pn**	**07 55 51.8**	**-0.2**
ZALV	1.2nm,0.3s,baz=98,slow=16,SNR=20			Pg	**Pb**	**07 55 58.0**	**-1.3**
ZALV	1.2nm,0.3s,baz=97,slow=16,SNR=20			Lg	Lg	07 56 48.5	
	3.1nm,0.3s,baz=95,slow=26,SNR=13						
KURBB	**Kurchatov Arra**	**8.15**	**252**	Pn	**Pn**	**07 56 55.4**	**+0.1**
KURBB	0.7nm,0.4s 0.1nm,0.3s,baz=66,slow=14,SNR=9.6			Sn	**Sn**	**07 58 24.8**	**-3.2**
KURBB	0.1nm,0.3s,baz=68,slow=26,SNR=15			Lg	Lg	07 59 11.7	
	0.1nm,0.3s,baz=70,slow=33,SNR=9.1						
KURBB	2.1nm,0.6s **Kurchatov Arra**	**8.15**	**252**	⇓Pn	Pn	07 57 00.6	+5.3
KURBB	4.1nm,0.6s			⇑Sn	**Sn**	**07 58 33.1**	**+5.1**
KURBB	14nm,0.7s			⇓Lg	Lg	07 59 14.8	
	35nm,0.9s						
MK31	**Makanchi Array**	**8.82**	**221**	Pn	**Pn**	**07 57 07.0**	**+2.3**
MK31	0.7nm,0.5s,baz=41,slow=13,SNR=8.5 1.7nm,0.7s,baz=33,slow=24			⇑Sn	**Sn**	**07 58 43.9**	**-0.9**
MK31				⇑Lg	Lg	07 59 30.7	
	11nm,1.1s,baz=32,slow=25						
MKAR	**Makanchi Array**	**8.82**	**221**	Pn	**Pn**	**07 57 05.6**	**+0.9**
MKAR	0.2nm,0.3s,baz=40,slow=14,SNR=12			Sn	**Sn**	**07 58 41.2**	**-3.6**
MKAR	0.1nm,0.3s,baz=34,slow=24,SNR=3.1			Lg	Lg	07 59 31.1	
	0.2nm,0.3s,baz=38,slow=29,SNR=5.5						
MAKZ	1.0nm,0.6s **Makanchi**	**8.94**	**223**	⇑Pn	**Pn**	**07 57 07.7**	**+1.4**
MAKZ	8.3nm,1.9s			⇓Sn	**Sn**	**07 58 46.5**	**-1.0**
MAKZ	8.4nm,1.7s			⇑Lg	Lg	07 59 34.7	
	14nm,1.6s						
I34MN	**SONGINO INFRAS**	**11.54**	**115**	I	I	09 01 00.0	
	baz=309,slow=322,SNR=1.3						

DNK ***18*** *07:57:46.5±1.3, 80˚.52N×1˚.94W, h36km±12km, ML1.3*
KOLA ***18*** *07:57:49.3, 81˚.53N×8˚.97E, h0km, ML1.9, Error ellipse: s-maj=149.7km s-min=24.8km az=60.0, Arctic Ocean*

BER 18 07:57:45.1±2.2, 80˚.49N×2˚.38W, h10km, mb(Pn)2.8, ML1.3(DNK), Confirmed Earthquake, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.50**	**303**	*i* P		07 58 24.0	-1.6
NOR				*i* S	Sn	07 58 51.9	-4.1
NOR				IAML		07 58 59.8	
	comp=Z,1.8nm,0.2s						
NOR	**Nord**	**2.50**	**303**	*i* P	Pn	07 58 24.0	-1.6
NOR				*i* S	Sn	07 58 51.9	-4.1
NOR				IAML		07 58 59.8	
	comp=Z,1.8nm,0.2s						
KBS	**Kingsbay**	**3.01**	**114**	P	Pn	07 58 30.5	-2.1
KBS				S	Sn	07 59 02.5	-6.1
KBS	**Kingsbay**	**3.01**	**114**	*e*P	Pn	07 58 30.6	-2.1
KBS				*e*S	Sn	07 59 03.8	-4.9
KBS				IAML		07 59 06.7	
	comp=Z,3.4nm,0.7s						
KBS	**Kingsbay**	**3.01**	**114**	*i* P	Pn	07 58 30.2	-2.4
KBS				*i* S	Sn	07 59 01.2	-7.4
BRBB	**Barentsburg B**	**3.91**	**120**	P	Pn	07 58 44.6	-0.4
BRBB				S	Sn	07 59 26.1	-4.7
BRBB	**Barentsburg B**	**3.91**	**120**	*e*P	Pn	07 58 44.9	-0.1
BRBB				*e*S	Sn	07 59 27.2	-3.6
SPA0	**Spitsbergen Ar**	**4.17**	**114**	*e*P	Pn	07 58 47.4	-1.3
SPA0				*e*S	Sn	07 59 31.0	-6.3
SPA0				IAML		07 59 46.2	
	comp=Z,4.4nm,0.8s						
SPITS	**Spitsbergen Ar**	**4.17**	**114**	P	Pn	07 58 47.1	-1.5
DAG	**Danmarks Havn**	**4.91**	**229**	*i* P	Pn	07 58 57.3	-1.5
DAG				*i* S	Sn	07 59 48.9	-6.6
DAG				IAML		07 59 50.7	
	comp=Z,1.8nm,0.7s						
DAG	**Danmarks Havn**	**4.91**	**229**	*i* P	Pn	07 58 57.3	-1.5
DAG				*i* S	Sn	07 59 48.9	-6.6
DAG				IAML		07 59 50.7	
	comp=Z,1.8nm,0.7s						
HOPEN	**Hopen**	**6.70**	**112**	*e*P	Pn	07 59 21.2	-2.0
DBG	**Daneborg**	**7.28**	**221**	*i* P	Pn	07 59 29.7	-1.6
DBG				*i* S	Sn	08 00 44.4	-9.5
DBG				IAML		08 00 49.6	
	comp=Z,1.2nm,0.4s						
DBG	**Daneborg**	**7.28**	**221**	*i* P	Pn	07 59 29.7	-1.6
DBG				*i* S	Sn	08 00 44.4	-9.5
DBG				IAML		08 00 49.6	
	comp=Z,1.2nm,0.4s						

DJA ***18*** *08:08:14.6±1.0, 6˚.N±7˚.×12˚.7E±˚, h101km±15km, M4.5/12, mB5.0/7, mb4.4/8, MLv4.7/12, Mw(mB)4.3/7, MwMwp4.4/1, Mwp4.8/1*
IDC ***18*** *08:08:22.2±1.2, 5˚.49N×126˚.35E, h123km±11km, mb3.3/9, mbtmp3.7/9, Error ellipse: s-maj=63.1km s-min=12.4km az=69.0*

ISC 18 08:08:19.7±1.8, 5˚.5N±0˚.2×126˚.7E±0˚.1, h100km, n18, σ1§02/16, mb3.6/9, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.89**	**325**	P	Pn	08 08 52.9	+2.0
DAV	219nm,0.3s,baz=268,slow=23,SNR=4.9			S	Sn	08 09 16.5	+1.9
	569nm,0.4s,baz=76,slow=19,SNR=6.5						
DAV				LR	LR	08 09 43.0	
	comp=Z,86nm,18.4s,baz=176,slow=46						
SGSI	**Sangihe**	**2.15**	**212**	P	**Pn**	**08 08 53.7**	**-0.6**
TNTI	**Ternate**	**4.77**	**172**	P	**Pn**	**08 09 29.3**	**0.0**
	0.4nm2µm71nm,1.0s						
KMSI	**Cibinong**	**5.60**	**209**	P	**Pn**	**08 09 40.9**	**+0.2**
	144nm,0.7s						
MRSI	**Marisa**	**6.89**	**224**	P	**Pn**	**08 09 57.3**	**-0.9**
SANI	**Sanana**	**7.55**	**185**	P	**Pn**	**08 10 05.7**	**-1.5**
	0.3nm1µm14nm,0.5s						
APSI	**Ampana**	**8.13**	**218**	P	**Pn**	**08 10 15.7**	**+0.7**
	944nm41nm,0.6s						
MPSI	**Mapaga**	**8.51**	**233**	P	**Pn**	**08 10 19.7**	**-0.4**
	968nm8.8nm,0.7s						
NLAI	**Namlea**	**8.71**	**177**	P	**Pn**	**08 10 22.2**	**-0.7**
WRA	**Warramunga Arr**	**26.40**	**164**	P	**P**	**08 13 47.2**	**+0.2**
	0.4nm,0.4s,baz=344,slow=10,SNR=13						
WRA				PcP	**PcP**	**08 17 10.5**	**+0.1**
	0.1nm,0.4s,baz=342,slow=2.6,SNR=1.3						
WRA				ScP	**ScP**	**08 20 39.4**	**-1.9**
	0.3nm,1.0s,baz=343,slow=2.7,SNR=2.3						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**29.86**	**167**	P	**P**	**08 14 18.6**	**+0.7**
	0.6nm,0.6s,baz=346,slow=6.9,SNR=13						
ASAR				PcP	**PcP**	**08 17 19.4**	**+0.6**
	0.3nm,0.5s,baz=3.4,slow=2.4,SNR=5.8						
ASAR				ScP	**ScP**	**08 20 50.2**	**-1.8**
	0.1nm,0.6s,baz=332,slow=2.2,SNR=1.0						
	0.6nm,0.6s						
STKA	**Stephens Creek**	**39.82**	**160**	P	**P**	**08 15 44.3**	**+1.0**
	2.6nm,0.6s,baz=342,slow=9.9,SNR=9.0						
	2.6nm,0.6s						
MKAR	**Makanchi Array**	**56.07**	**325**	P	P	08 17 48.0	-0.5
	0.2nm,0.3s,baz=127,slow=7.8,SNR=5.1						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**58.98**	**333**	P	P	08 18 06.8	-1.9
	0.2nm,0.3s,baz=120,slow=8.5,SNR=1.2

BSY	**Bisya**	**5.36**	**186**	P	**Pn**	**08 10 16.8**	**-2.1**
BSY				S	**Sn**	**08 11 19.5**	**-1.3**
JRN	**Qarnain Island**	**5.42**	**236**	P	**Pn**	**08 10 18.1**	**-1.7**
JRN				S	**Sn**	**08 11 22.0**	**-0.2**
TKDS	**Koohdasht(Taba**	**5.53**	**354**	Pn	**Pn**	**08 10 23.4**	**+2.0**
WBK	**Wadi Bani Khal**	**5.57**	**169**	P	Pn	08 10 18.7	-3.2
WBK				S	**Sn**	**08 11 22.8**	**-3.3**
JMDO	**Jabal Madar**	**5.71**	**177**	P	Pn	08 10 21.1	-2.8
JMDO				S	**Sn**	**08 11 27.5**	**-2.0**
UMZA	**Um Al Zommool**	**5.86**	**204**	P	**Pn**	**08 10 24.5**	**-1.4**
UMZA				S	**Sn**	**08 11 32.9**	**-0.2**
TNSJ	**Nastanj**	**5.93**	**351**	Pn	**Pn**	**08 10 28.9**	**+1.9**
IRAM	**Ramesheh**	**5.97**	**310**	Pn	**Pn**	**08 10 26.9**	**-0.6**
GHWR	**Ruwais**	**6.03**	**228**	P	**Pn**	**08 10 29.8**	**-2.3**
JLN	**Jalan Bani Buh**	**6.10**	**166**	P	Pn	08 10 25.9	-3.3
JLN				S	**Sn**	**08 11 35.4**	**-3.7**
KLNJ	**Kolanjah**	**6.12**	**300**	Pn	**Pn**	**08 10 28.2**	**-1.6**
MZR	**Muzera**	**6.39**	**218**	P	**Pn**	**08 10 31.4**	**-1.7**
MZR				S	**Sn**	**08 11 45.9**	**-0.3**
SHMA	**Al-Shehemyia** SNR=7.4	**6.48**	**251**	P	**Pn**	**08 10 31.8**	**-2.5**
TRNA	**Turayna**	**6.77**	**242**	P	**Pn**	**08 10 35.8**	**-2.6**
SMRA	**Abu-Samra**	**7.07**	**243**	P	**Pn**	**08 10 39.9**	**-2.6**
MHTO	**MHTO**	**7.08**	**179**	P	**Pn**	**08 10 40.1**	**-2.5**
MHTO				S	**Sn**	**08 12 02.3**	**-1.0**
KBD	**Kabd**	**8.93**	**279**	P	**Pn**	**08 11 04.9**	**-3.0**
DOK	**Doka**	**10.01**	**200**	P	**Pn**	**08 11 20.6**	**-2.2**
SHAO	**Shalim**	**10.22**	**192**	P	**Pn**	**08 11 24.0**	**-1.7**
DMTO	**DMTO**	**10.65**	**195**	P	**Pn**	**08 11 29.8**	**-1.9**
WHFO	**Wadi Hawf**	**10.78**	**201**	P	**Pn**	**08 11 30.8**	**-2.6**
ABTO	**Aybut**	**11.46**	**202**	P	**Pn**	**08 11 40.2**	**-2.6**

*UCR **18** 08:10:49.7±1.2,6˚.19N×82˚.66W, h9km±19km, MW3.6*
*CATAC **18** 08:10:53.9±0.7,7˚.N±4˚×8˚.3W±˚, h2km, M3.8/13, MLv3.8/13, Error ellipse: s-maj=10.2km s-min=4.5km az=22.8, confirmed*

ISC 18 08:10:50.9±2.7, 6˚.3N±0˚.1×82˚.67W±0˚.06, h10km, n85, σ1s09/100, 6C-8D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	**Carate, Puerto**	**2.16**	**342**	P	**Pn**	**08 11 27.4**	**+0.5**
PIRO	**Carate, Puerto**	**2.16**	**342**	S	**Sn**	**08 11 53.6**	**-0.3**
CDITO	**Canoas**	**2.23**	**355**	S	**Sn**	**08 11 54.7**	**-0.9**
CDITO	**Canoas**	**2.23**	**355**	P	**Pn**	**08 11 27.6**	**-0.3**
PTJ1	**Puerto Jimnez**	**2.28**	**344**	P	**Pn**	**08 11 29.6**	**+1.0**
PTJ1	**Puerto Jimnez**	**2.28**	**344**	S	**Sn**	**08 11 56.2**	**-0.5**
BQTLY	**Boquete Panama**	**2.42**	**5**	*eP*	**Pn**	**08 11 30.0**	**-0.6**
BRU2	**Volcan**	**2.44**	**359**	P	**Pn**	**08 11 30.7**	**-0.3**
BRU2	**Volcan**	**2.44**	**359**	*eP*	**Pn**	**08 11 30.7**	**-0.3**
BRU2				*eS*	**Sn**	**08 12 00.2**	**-0.8**
RBALA	**Bur**	**2.58**	**11**	⇑*eP*	**Pn**	**08 11 33.1**	**+0.4**
RBALA				*eS*	**Sn**	**08 12 05.3**	**+1.1**
PBNVO	**Pueblo Nuevo,**	**2.58**	**10**	*eP*	**Pn**	**08 11 32.3**	**-0.5**
PBNVO				*eS*	**Sn**	**08 12 03.1**	**-1.2**
ALCO	**Alturas Coton,**	**2.60**	**356**	⇓*iP*	**Pn**	**08 11 33.1**	**-0.2**
EDP2	**Potrero Grande**	**2.71**	**349**	⇓*iP*	**Pn**	**08 11 35.3**	**+0.7**
FIMO	**Fila Mora**	**2.73**	**346**	*eP*	**Pn**	**08 11 35.2**	**+0.3**
PANP	**Palmar Norte**	**2.73**	**343**	*eP*	**Pn**	**08 11 35.1**	**+0.4**
BURE	**Buenos Aires**	**2.90**	**347**	*eP*	**Pn**	**08 11 37.6**	**+0.4**
BURE				*eS*	**Sn**	**08 12 13.3**	**+1.3**
EDPE	**Pejibaye, P**	**2.95**	**342**	*eP*	**Pn**	**08 11 38.1**	**+0.3**
SAJE	**San Jernim**	**3.11**	**344**	*eP*	**Pn**	**08 11 40.3**	**+0.2**
RGM0	**Gandoca**	**3.24**	**1**	P	**Pn**	**08 11 43.4**	**+1.7**
BRIBI	**Bribri**	**3.27**	**357**	⇑*iP*	**Pn**	**08 11 44.8**	**+2.6**
CEUA	**Cerro Uatsi, L**	**3.28**	**355**	⇑*iP*	**Pn**	**08 11 45.1**	**+2.7**
CEUA				*eS*	**Sb**	**08 12 27.2**	**-2.0**
BUS1	**Rivas**	**3.37**	**342**	⇑*eP*	**Pn**	**08 11 44.2**	**+0.1**
QUEP	**Quepos**	**3.42**	**334**	P	**Pn**	**08 11 45.0**	**+0.8**
QUEP	**Quepos**	**3.42**	**334**	S	**Sn**	**08 12 24.6**	**-0.2**
LLNJ	**Naranjito**	**3.43**	**336**	*eP*	**Pn**	**08 11 44.2**	**-0.2**
PIEC	**Cerro El Cedra**	**3.51**	**339**	*eP*	**Pn**	**08 11 46.0**	**+0.2**
RAZU	**San Marcos de**	**3.57**	**338**	*eP*	**Pn**	**08 11 47.3**	**+0.8**
PITB	**Pirrs, San**	**3.57**	**338**	*eP*	**Pn**	**08 11 46.9**	**+0.4**
PICV	**PH. Pirrs**	**3.60**	**335**	*eP*	**Pn**	**08 11 47.0**	**+0.1**
LCR2	**La Lucha 2**	**3.64**	**339**	S	**Sn**	**08 12 30.1**	**-0.5**
LCR2	**La Lucha 2**	**3.64**	**339**	P	**Pn**	**08 11 48.3**	**+0.8**
REPA	**Paraso**	**3.67**	**341**	*eP*	**Pn**	**08 11 48.7**	**+0.8**
TURIB	**Turrialba**	**3.69**	**344**	*eP*	**Pn**	**08 11 48.8**	**+0.8**
VINA	**Juan Vinas**	**3.70**	**343**	*eP*	**Pn**	**08 11 48.5**	**+1.3**
PCAYA	**Pacayas**	**3.74**	**342**	*eP*	**Pn**	**08 11 50.1**	**+1.3**
ACOS	**Acosta**	**3.75**	**337**	⇓*iP*	**Pn**	**08 11 49.1**	**+0.2**
VTCV	**VTCV, Calle Va**	**3.77**	**344**	*eP*	**Pn**	**08 11 50.3**	**+1.0**
RAFA	**San Farael, Vo**	**3.77**	**343**	*eP*	**Pn**	**08 11 50.4**	**+1.0**
ABRB	**Las Abras (San**	**3.79**	**344**	⇑*iP*	**Pn**	**08 11 51.4**	**+1.8**
RESJ	**San Isidro (Tu**	**3.80**	**345**	*eP*	**Pn**	**08 11 51.2**	**+1.6**
CVTV	**Tajo**	**3.80**	**344**	*eP*	**Pn**	**08 11 51.2**	**+1.4**
CVTQ	**Turrialba Volc**	**3.81**	**343**	*eP*	**Pn**	**08 11 51.5**	**+1.6**
ZANG	**Zanguenga, Cho**	**3.81**	**47**	⇓*iP*	**Pn**	**08 11 50.7**	**+1.0**
VICA	**Volcano Irazu**	**3.81**	**342**	⇓*eP*	**Pn**	**08 11 51.0**	**+1.0**
VTR0	**Volcan Turrial**	**3.82**	**344**	*eP*	**Pn**	**08 11 51.4**	**+1.2**
CVTR	**Volcan Turrial**	**3.82**	**344**	*eP*	**Pn**	**08 11 50.9**	**+0.7**
VTUN	**Crater Central**	**3.82**	**344**	*eP*	**Pn**	**08 11 51.8**	**+1.6**
LCOCO	**El Coco**	**3.83**	**347**	*eP*	**Pn**	**08 11 51.3**	**+1.4**
IRES	**Siquirres**	**3.83**	**348**	*eP*	**Pn**	**08 11 51.3**	**+1.4**
LUJA	**Lujan**	**3.83**	**339**	*eP*	**Pn**	**08 11 50.4**	**+0.4**
LUJA				*eS*	**Sn**	**08 12 36.1**	**+0.8**
ECI	**Escuela Centro**	**3.83**	**339**	*eP*	**Pn**	**08 11 51.0**	**+0.3**
ECI				*eS*	**Sn**	**08 12 34.8**	**+0.6**
SJS3	**Mercedes San J**	**3.83**	**339**	*eP*	**Pn**	**08 11 51.0**	**+0.9**
SJS	**Escuela Geolog**	**3.84**	**339**	*eP*	**Pn**	**08 11 51.0**	**+0.8**
LUPE	**Guadalupe**	**3.84**	**339**	⇓*iP*	**Pn**	**08 11 51.2**	**+1.0**
CORON	**Coronado**	**3.85**	**340**	*eP*	**Pn**	**08 11 51.6**	**+1.3**
CORON				*eS*	**Sn**	**08 12 37.0**	**+1.2**
PURI	**Puriscal**	**3.85**	**335**	*eP*	**Pn**	**08 11 50.8**	**+0.4**
CVIMO	**Finca Echandi**	**3.88**	**341**	*eP*	**Pn**	**08 11 52.2**	**+1.4**
CVIMO				*eS*	**Sn**	**08 12 36.8**	**+0.2**
SANTA	**Santa Ana**	**3.88**	**337**	*eP*	**Pn**	**08 11 50.9**	**+0.2**
DOMI	**Santo Domingo**	**3.89**	**339**	*eP*	**Pn**	**08 11 51.3**	**+0.4**
DOMI				*eS*	**Sn**	**08 12 38.0**	**+1.2**
HDC	**Heredia**	**3.92**	**339**	⇑*iP*	**Pn**	**08 11 52.0**	**+0.7**
HDC				*eS*	**Sn**	**08 12 37.8**	**+0.4**
HEME	**Heredia, Merce**	**3.92**	**338**	*eP*	**Pn**	**08 11 53.1**	**+1.9**
BELE	**Belen**	**3.92**	**338**	⇓*eP*	**Pn**	**08 11 51.9**	**+0.7**
CVG	**V. Turrialba,**	**3.94**	**344**	*eP*	**Pn**	**08 11 52.2**	**+1.7**
CVTG				*eS*	**Sn**	**08 12 39.7**	**+1.8**
EGUB	**Earth Gujpi**	**3.96**	**347**	*eP*	**Pn**	**08 11 53.2**	**+1.5**
BCIP	**Isla Barro Col**	**3.97**	**45**	P	**Pn**	**08 11 52.7**	**+0.9**
BCIP				S	**Sn**	**08 12 37.6**	**-1.0**
BCIP	**Isla Barro Col**	**3.97**	**45**	*eP*	**Pn**	**08 11 52.5**	**+0.6**
ATEO	**Atenas**	**4.00**	**335**	⇓*iP*	**Pn**	**08 11 52.5**	**+0.2**
ATEO				*eS*	**Sn**	**08 12 38.0**	**-1.3**
CBL1	**Cabuya**	**4.03**	**324**	*eP*	**Pn**	**08 11 51.7**	**-1.0**
CBL1				*eS*	**Sn**	**08 12 39.1**	**-0.8**
PAQE	**Paquera**	**4.13**	**327**	*eP*	**Pn**	**08 11 53.4**	**-0.6**
SRA1	**San Ramn**	**4.14**	**334**	*eP*	**Pn**	**08 11 54.4**	**+0.1**
ARTO	**Ro Cuarto**	**4.27**	**339**	*eP*	**Pn**	**08 11 57.1**	**+1.1**
VPL3	**V. Platanar**	**4.31**	**338**	*eP*	**Pn**	**08 11 57.8**	**+1.3**
CAZU	**Cerro Azul, Pa**	**4.33**	**48**	*eP*	**Pn**	**08 11 57.0**	**+0.1**
INDI	**Punta indio, G**	**4.49**	**322**	*eP*	**Pn**	**08 11 58.8**	**-0.3**
JUNT	**Juntas**	**4.53**	**330**	*eP*	**Pn**	**08 12 01.7**	**+2.1**
JTS	**Las Juntas de**	**4.54**	**330**	*eP*	**Pn**	**08 11 59.7**	**+0.1**
CEDE	**Laguna Cedeo**	**4.59**	**334**	*eP*	**Pn**	**08 12 01.9**	**+1.4**
CNAS	**Canas**	**4.72**	**330**	*eP*	**Pn**	**08 12 04.3**	**+2.1**
JUD3	**Juan Diaz 3**	**4.75**	**323**	*eP*	**Pn**	**08 12 03.0**	**+0.3**
SAJU	**San Juanillo,**	**4.78**	**321**	*eP*	**Pn**	**08 12 02.5**	**-0.5**
CUI	**Cuipilapa**	**4.96**	**330**	*eP*	**Pn**	**08 12 06.4**	**+1.0**
COLC	**Colonia**	**4.98**	**330**	*eP*	**Pn**	**08 12 07.0**	**+1.2**
ALIBA	**Liberia Airpor**	**5.10**	**326**	*eP*	**Pn**	**08 12 08.7**	**+1.3**
LAPC	**Finca la Perla**	**5.18**	**328**	*eP*	**Pn**	**08 12 10.0**	**+1.4**
BUAI	**Buenos Aires**	**5.23**	**330**	*eP*	**Pn**	**08 12 11.6**	**+2.4**

*IDC **18** 08:25:18.6±1.5, 1˚.46N×125˚.99E, h0km, mb3.6/4, mbtmp3.5/5, ML3.4/1, MS3.2/1, Error ellipse: s-maj=117.5km s-min=21.4km az=68.0*
*DJA **18** 08:25:22.1±0.3, 1˚.N±3˚×12˚.6E±˚, h10km, M3.9/13, mB4.9/1, mb4.0/3, MLv3.8/13, Mw(mB)4.2/1*

ISC 18 08:25:24.0±1.0, 1˚.44N±0˚.07×126˚.44E±0˚.08, h35km, n11, σ1s21/12, mb3.7/4, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.14**	**126**	P	**Pn**	**08 25 43.7**	**+0.2**
SGSI	**Sangihe**	**2.41**	**338**	P	**Pn**	**08 26 01.9**	**+1.0**
KMSI	**Cibinong**	**2.60**	**251**	P	**Pn**	**08 26 04.5**	**+0.9**
SANI	**Sanana**	**3.50**	**187**	P	**Pn**	**08 26 16.1**	**+0.2**
LUWI	**Luwuk**	**4.42**	**236**	P	**Pn**	**08 26 28.6**	**0.0**
APSI	**Ampana** 0.2nm1µm26nm,0.7s	**5.33**	**244**	P	**Pn**	**08 26 41.1**	**0.0**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=6.0,slow=9.6,SNR=1.3 0.7nm,0.5s	**19.43**	**182**	P	**P**	**08 29 48.1**	**+0.6**
WRA	**Warramunga Arr** 1.2nm,0.4s,baz=337,slow=11,SNR=19 1.2nm,0.4s	**22.62**	**160**	P	**P**	**08 30 22.1**	**+0.1**
ASAR	**Alice Springs** 0.6nm,0.7s,baz=345,slow=12,SNR=12	**25.99**	**164**	P	**P**	**08 30 54.4**	**+0.7**
ASAR	0.2nm,0.6s,baz=336,slow=2.5,SNR=1.5 0.6nm,0.7s			PcP	**PcP**	**08 34 23.4**	**+1.7**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=116,slow=7.4,SNR=2.5	**59.27**	**326**	P	**P**	**08 35 20.4**	**-1.7**
MKAR	comp=Z,20nm,19.4s,baz=327,slow=38 0.3nm,0.5s			LR	LR	09 02 29.4	
KURBB	**Kurchatov Arra** 0.4nm,0.6s,baz=129,slow=6.3,SNR=2.8 0.4nm,0.6s	**63.50**	**328**	P	**P**	**08 35 48.5**	**-2.1**

*SOME **18** 08:45:49.3, 40˚.70N×79˚.85E, h15km*
*NNC **18** 08:45:54.4±7.0, 40˚.89N×80˚.73E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=66.5km s-min=44.6km az=43.0*

KRNET 18 08:45:44.7±0.1, 40˚.41N×79˚.93E, mb3.0, 13C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**2.08**	**310**	⇑*eP*	**Pn**	**08 46 21.8**	**+0.6**
TARG				⇑*eS*	Sn	08 46 49.0	+1.0
PRZ	**Przheval'sk**	**2.37**	**331**	⇑*iP*	Pn	08 46 26.1	+1.1
PRZ				⇑*iS*	Sn	08 46 56.2	+1.3
KDJ	**Kajisay**	**2.69**	**311**	⇑*iP*	Pn	08 46 30.1	+0.7
KDJ				⇑*iS*	Sn	08 47 03.3	+0.5
SHLS	**Shalkode** 21nm,0.4s	**2.77**	**353**	*eP*	Pb	08 46 35.5	+0.4
SHLS	12nm,0.7s			*eS*	Sb	08 47 08.5	-1.1
UZB	**Uzynbulak** 3.3nm,0.4s	**2.82**	**346**	Pg	Pb	08 46 35.5	-0.5
UZB	5.8nm,0.7s			Lg	Lg	08 47 08.8	
UZB	**Uzynbulak** 3.3nm,0.4s	**2.82**	**346**	*eP*	Pb	08 46 35.5	-0.5
UZB	5.8nm,0.7s			*eS*	Sb	08 47 08.8	-2.3
SATY	**Saty** 12nm,0.5s	**2.88**	**337**	Lg	Lg	08 47 11.6	
PDGK	**Podgornoye** 6.6nm,0.4s	**2.94**	**354**	⇓Pn	Pb	08 46 37.6	-0.3
PDGK	9.3nm,0.6s			⇑Sn	Sb	08 47 12.0	-2.4
KTMS	**Ketmen** 4.9nm,0.5s	**3.05**	**6**	Pg	Pb	08 46 37.8	-2.2
KTMS	**Ketmen** 4.9nm,0.5s	**3.05**	**6**	*eP*	Pb	08 46 37.8	-2.2
KTMS	3.3nm,0.3s			*eS*	Sn	08 47 12.5	+0.9
KPKS	**Kokpek** 0.3nm,0.5s	**3.19**	**343**	Pg	Pb	08 46 41.8	-0.5
KPKS	20nm,0.8s			Lg	Lg	08 47 19.9	
JNKS	**Jany-Kuch**	**3.31**	**283**	⇓*iP*	Pn	08 46 39.0	+1.0
JNKS				⇓*eS*	Sn	08 47 18.8	+0.6
ULHL	**Ulahol**	**3.33**	**305**	⇓*iP*	Pn	08 46 39.2	+1.0
ULHL				⇓*iS*	Sn	08 47 18.9	+0.4
KURS	**Kuram** 2.3nm,0.5s	**3.34**	**337**	Pg	Pb	08 46 45.2	+0.3
KURS	11nm,0.6s			Lg	Lg	08 47 25.7	
TNSS	**Tian-Shan** 2.0nm,0.9s	**3.45**	**321**	Lg	Lg	08 47 29.8	
TNSS	**Tian-Shan** 1.5nm,0.8s	**3.45**	**321**	*eP*	Pb	08 46 47.9	+1.1
TNSS	2.0nm,0.9s			*eS*	Sb	08 47 29.8	+0.4
MDOK	**Medeo** 1.6nm,0.4s	**3.50**	**323**	Pg	Pb	08 46 48.3	+0.8
MDOK	4.1nm,0.6s			Lg	Lg	08 47 30.5	
IZV	**Izvestkoviy** 2.3nm,0.6s	**3.61**	**318**	Pg	Pb	08 46 48.1	-1.4
IZV	**Izvestkoviy** 2.3nm,0.6s	**3.61**	**318**	*eP*	Pb	08 46 48.0	-1.5
IZV	4.8nm,0.8s			*eS*	Sb	08 47 30.7	-3.3
BOOM	**Boomskoye usch**	**3.65**	**306**	⇑*iP*	Pn	08 46 43.6	+1.1
BOOM				⇑*iS*	Sn	08 47 26.4	0.0
BLB	**Baldybastay** 1.9nm,0.3s	**3.84**	**344**	Pg	Pb	08 46 52.9	-0.5
BLB	3.2nm,0.8s			Lg	Lg	08 47 39.0	
KST	**Kastek** 0.9nm,0.5s	**3.97**	**313**	Pg	Pb	08 46 55.7	+0.2
KST	3.3nm,0.7s			Lg	Lg	08 47 43.5	
KST	**Kastek** 0.9nm,0.5s	**3.97**	**313**	*eP*	Pb	08 46 55.7	+0.2
KST	3.3nm,0.7s			*eS*	Sb	08 47 43.5	-0.6
KNOS	**Konyrlen** 1.4nm,0.5s	**3.99**	**352**	Pg	Pb	08 46 55.7	-0.1
KNOS	0.8nm,0.3s			Lg	Lg	08 47 43.8	
KTBS	**Karatobe** 1.6nm,0.6s	**4.09**	**325**	Pg	Pb	08 46 58.0	+0.5
KTBS	3.4nm,0.6s			Lg	Lg	08 47 47.4	
TKM2	**Tokmak 2**	**4.10**	**309**	⇑*iP*	Pn	08 46 49.9	+1.1
TKM2				⇑*iS*	Sn	08 47 37.4	-0.2
UCH	**Uchtor**	**4.46**	**296**	⇓*eP*	Pn	08 46 55.0	+1.0
UCH				⇓*eS*	Sn	08 47 46.4	-0.5
KRBS	**Karabastau** 0.8nm,0.5s	**4.56**	**317**	Pg	Pb	08 47 07.0	+1.4
KRBS	0.6nm,1.0s			Lg	Lg	08 48 02.8	
MAKZ	**Makanchi** 3.1nm,1.1s	**6.57**	**12**	⇑Pn	Pn	08 47 24.6	+2.1
MK31	**Makanchi Array** 0.4nm,0.6s,baz=202,slow=14,SNR=4.2	**6.61**	**14**	Pn	Pn	08 47 24.8	+1.8
MK31	2.4nm,1.2s,baz=196,slow=24			⇑Sn	Sn	08 48 33.5	-5.6

*AEIC **18** 08:57:34.8±1.6, 52˚.4N±0˚.2×174˚.0W±0˚.2, h181km±4km, Error ellipse: s-maj=36.1km s-min=8.9km az=163.0*

NEIC 18 08:57:32.5±1.6, 52˚.3N±0˚.2×174˚.0W±0˚.1, h195km±3km, mb3.7/6, ML3.4/10, ML2.9(AEIC), Error ellipse: s-maj=30.3km s-min=9.2km az=161.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.06**	**256**		Pn	08 57 58.6	+0.5
KOFP					Sn	08 58 17.5	-0.2
KOKL	**Mount Kliuchef**	**0.12**	**286**		Sn	08 58 17.9	0.0
ATKA	**Atka Island**	**0.14**	**233**		Pn	08 57 58.0	0.0
ATKA					Sn	08 58 16.7	-1.0
KOWE	**Korovin West**	**0.17**	**297**		Pn	08 57 58.4	+0.3
GSIG	**Igitkin Island**	**1.22**	**256**		Pn	08 58 03.4	0.0
GSIG					Sn	08 58 25.9	-1.3
GSMY	**Great Sitkin M**	**1.28**	**260**		Pn	08 58 03.9	0.0
GSMY					Sn	08 58 27.3	-0.8
GSTD	**Great Sitkin T**	**1.34**	**261**		Pn	08 58 04.4	+0.1
GSCK	**Great Sitkin C**	**1.36**	**259**		Pn	08 58 04.6	+0.2
GSCK					Sn	08 58 28.5	-0.6
ETKA	**Kagalaska Isla**	**1.54**	**255**		Pn	08 58 06.4	+0.3
ETKA					Sn	08 58 31.1	-0.9
ADK	**Adak**	**1.70**	**257**		Sn	08 58 33.7	-1.0
ADK	**Adak**	**1.70**	**257**		Pn	08 58 08.0	+0.4
ADK	150nm,4.2s			IAML		08 58 31.8	
ADK	103nm,1.8s			IAML		08 58 39.0	
KIRH	**Kanaga Island**	**1.94**	**260**		Pn	08 58 10.8	+0.8
KIWB	**Kanaga Island**	**1.99**	**259**		Pn	08 58 11.2	+0.8
KIWB					Sn	08 58 39.8	-0.2
KIWB	**Kanaga Island** comp=E,97nm,3.5s	**1.99**	**259**	IAML		08 59 13.0	
KIWB	comp=N,126nm,3.8s			IAML		08 59 35.4	
KIKV	**Kanaga Island**	**1.99**	**259**		Pn	08 58 11.3	+0.8
KIKV					Sn	08 58 39.8	-0.3
KIMD	**Kanaga Island**	**2.06**	**256**		Pn	08 58 12.0	+0.8
TAFL	**Tanaga Flats**	**2.46**	**259**		Pn	08 58 16.3	+0.7
TAFP	**Tanaga Falls P**	**2.48**	**263**		Pn	08 58 16.4	+0.5
GANE	**Gareloi Northe**	**2.98**	**263**		Pn	08 58 22.4	+0.9
GAKI	**Gareloi-Kavalg**	**3.06**	**258**		Pn	08 58 23.0	+0.4
NIKH	**Nikolski High**	**3.21**	**76**		Pn	08 58 24.2	-0.1
NIKH	comp=E,183nm,2.2s			IAML		08 59 44.5	
AMKA	**Amchitka**	**4.25**	**260**	Pn	Pn	08 58 37.6	+0.5
MREP	**Makushin Rep't**	**4.64**	**68**		Pn	08 58 42.2	+0.1
UNV	**Unalaska Valle**	**4.79**	**68**		Pn	08 58 43.9	-0.1
UNV	comp=E,57nm,3.3s			IAML		09 00 09.6	
SDPT	**Sand Point**	**8.57**	**64**	Pn	Pn	08 59 31.2	-1.8
M19K	**Big River Lodg**	**14.30**	**40**	Pn	Pn	09 00 45.2	-0.9
CNPM	**China Poot**	**14.63**	**51**		Pn	09 00 50.0	-0.2
BRLK	**Bradley Lake**	**14.88**	**51**		Pn	09 00 52.7	-0.5
HDA	**Harding Lake**	**18.49**	**39**	P	P	09 01 33.8	+0.1
HDA	comp=Z,3.9nm,1.3s			IAmb	IAmb	09 02 11.8	
IL31		**18.69**	**38**	P	P	09 01 35.0	-0.7
IL31	comp=Z,5.3nm,1.5s			IAmb	IAmb	09 01 48.0	
ILAR	**Eielson Array**	**18.69**	**38**	P	P	09 01 34.9	-0.8
J25K	**Salcha River,**	**19.19**	**39**	P	P	09 01 40.6	-0.6
DOT	**Dot Lake**	**19.32**	**42**	P	P	09 01 42.2	-0.4
SCRK	**Sand Creek**	**19.48**	**41**	P	P	09 01 43.7	-0.7
SCRK	comp=Z,2.0nm,0.8s			IAmb	IAmb	09 01 44.5	
J26L	**Joseph Creek**	**19.85**	**40**	P	P	09 01 48.3	-0.1
J26L	comp=Z,2.9nm,1.3s			IAmb	IAmb	09 02 20.9	

*IDC **18** 09:03:17.7±1.4, 2˚.75S×128˚.96E, h0km, mb3.9/5, mbtmp3.9/7, ML4.0/2, MS3.2/9, Error ellipse: s-maj=86.0km s-min=19.0km az=72.0*
*DJA **18** 09:03:21.1±0.3, 3˚.S±2˚×12˚.9E±˚, h10km, M4.3/10, MLv4.3/10*

ISC 18 09:03:22.7±0.8, 2˚.75S±0˚.05×128˚.89E±0˚.06, h35km, n22, σ2s07/18, mb3.8/5, MS3.2/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.59**	**176**	P	**Pn**	**09 03 34.6**	**-0.1**
AAI	**Ambon**	**1.16**	**217**	P	**Pn**	**09 03 44.9**	**+2.5**
NLAI	**Namlea**	**1.85**	**255**	P	**Pn**	**09 03 53.6**	**+1.7**
BNDI	**Bandanaira**	**2.03**	**150**	P	**Pn**	**09 03 57.5**	**+3.1**
SANI	**Sanana**	**2.98**	**283**	P	**Pn**	**09 04 06.0**	**-1.5**
SWI	**Sorong**	**3.02**	**52**	P	**Pn**	**09 04 08.6**	**+0.6**
SWI				S	**Sn**	**09 04 44.0**	**+1.0**
FAKI	**Fak Fak**	**3.36**	**93**	P	**Pn**	**09 04 13.2**	**+0.5**
KAPI	**Kappang** comp=Z,128nm,18.6s,baz=78,slow=43	**9.39**	**256**	LR	LR	09 10 01.0	
DAV	**Davao City (W)** comp=Z,98nm,18.1s,baz=46,slow=42	**10.30**	**341**	LR	LR	09 10 29.9	
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=18,slow=13,SNR=6.3	**15.58**	**192**	Pn	**Pn**	**09 07 00.7**	**+0.9**
FITZ	0.1nm,0.3s,baz=98,slow=21,SNR=1.2			Sn	**Sn**	**09 09 52.3**	**+0.8**
FITZ	comp=Z,132nm,20.8s,baz=36,slow=38 1.0nm,0.5s			LR	LR	09 13 15.2	
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=344,slow=12,SNR=61	**17.90**	**163**	P	**Pn**	**09 07 27.9**	**-1.2**
WRA	0.6nm,0.7s,baz=328,slow=25,SNR=2.5 1.7nm,0.3s			S	**Sn**	**09 10 42.2**	**-5.4**
ASAR	**Alice Springs** 6.1nm,0.3s,baz=349,slow=12,SNR=161	**21.35**	**167**	P	**P**	**09 08 06.9**	**-0.2**
ASAR	0.7nm,0.7s,baz=349,slow=24,SNR=4.4 6.1nm,0.3s			S	**S**	**09 11 59.6**	**-2.8**
GUMO	**Guam** comp=Z,22nm,21.5s,baz=172,slow=34	**22.69**	**44**	LR	LR	09 15 59.3	
PSI	**Prapat** comp=Z,50nm,18.2s,baz=84,slow=40	**30.46**	**280**	LR	LR	09 23 32.2	
STKA	**Stephens Creek** 0.4nm,0.3s,baz=301,slow=12,SNR=2.9 0.4nm,0.3s	**31.35**	**159**	P	**P**	**09 09 39.3**	**-0.7**
CMAR	**Chiang Mai Arr** comp=Z,15nm,20.3s,baz=130,slow=39	**36.24**	**307**	LR	LR	09 26 39.7	
PALK	**Pallekele** comp=Z,29nm,19.2s,baz=92,slow=38	**49.10**	**282**	LR	LR	09 34 38.1	
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=126,slow=8.4,SNR=5.5 0.6nm,0.7s	**64.09**	**326**	P	**P**	**09

0.1nm,0.3s,baz=209,slow=10,SNR=9.0
2.1nm,1.0s

NEW	**Newport**	**23.05**	**0**	LR	LR	09 26 03.7	
	comp=Z,61nm,18.7s,baz=50,slow=35						
ILAR	**Eielson Array**	**43.99**	**342**	P	**P**	**09 20 43.1**	**-0.9**
	0.6nm,0.7s,baz=137,slow=8.7,SNR=9.7						
	0.6nm,0.7s						
LPAZ	**La Paz**	**63.09**	**126**	P	**P**	**09 23 05.3**	**-0.2**
	1.2nm,0.8s,baz=323,slow=6.2,SNR=6.3						
LPAZ				LR	LR	09 48 00.8	
	comp=Z,20nm,18.9s,baz=40,slow=34						
	1.2nm,0.8s						
H03N2	**Juan Fernandez**	**68.71**	**146**	T	T	10 38 40.9	
	baz=325,slow=77,SNR=5.4						
H03N1	**Juan Fernandez**	**68.72**	**146**	T	T	10 38 42.0	
	baz=325,slow=77,SNR=4.7						
H03N3	**Juan Fernandez**	**68.73**	**146**	T	T	10 38 43.7	
	baz=325,slow=77,SNR=6.9						

*IDC **18** 09:14:50.8±4.2,34°.24N×140°.51E, h0km, mb3.3/2, mbtmp3.3/3, ML2.4/1, Error ellipse: s-maj=144.7km s-min=29.8km az=66.0*
*JMA **18** 09:14:56.0±0.2,34°.4N±0°.6×140°.4E±0°.7, h38km±2km, MV2.6/34, FAR S OFF BOSO PENINSULA*

ISC 18 09:14:53.6±1.7,34°.33N±0°.05×140°.41E±0°.06, h17km±13km, n15, σ0s97/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.48**	**10**	*i* P	**Pn**	**09 15 06.1**	**+0.7**
BSO3				X		09 15 14.4	
BSO1	**Boso 1**	**0.57**	**55**	P	**Pn**	**09 15 07.0**	**+0.5**
BSO1				*eX*		09 15 15.0	
BSO4	**Boso 4**	**0.66**	**355**	P	**Pn**	**09 15 08.9**	**+0.8**
JMYK	**Miyake Tsubota**	**0.76**	**250**	S	**Sn**	**09 15 21.2**	**+0.6**
JMKN	**Mikurajimanish**	**0.81**	**238**	*eP*	**Pn**	**09 15 11.2**	**+1.1**
JMKN				*eS*	**Sn**	**09 15 21.9**	**+0.1**
TATJ	**Tateyama 2**	**0.82**	**329**	*eP*	**Pn**	**09 15 11.3**	**+1.0**
TATJ				*eS*	**Sn**	**09 15 22.6**	**+0.5**
JKUC	**kamogawauchiur**	**0.85**	**348**	*eP*	**Pn**	**09 15 11.2**	**+0.5**
JIM2	**Oshima 3**	**0.90**	**296**	S	**Sb**	**09 15 22.4**	**+0.1**
KTJ3	**Kamata3**	**1.26**	**299**	*eP*	**Pn**	**09 15 16.7**	**+0.3**
KTJ3				S	**Sn**	**09 15 30.8**	**-2.1**
JHJ2	**Mitsune**	**1.31**	**202**	*eP*	**Pg**	**09 15 19.0**	**+0.1**
JHJ2				S	**Sg**	**09 15 35.2**	**-0.9**
JIZS	**Izushimoda**	**1.32**	**287**	*eS*	**Sn**	**09 15 33.9**	**-0.6**
JOD2	**Odawara 2**	**1.43**	**311**	P	**Pn**	**09 15 19.4**	**+0.6**
JOD2				S	**Sn**	**09 15 35.7**	**-1.5**
MJAR	**Matsushiro Arr**	**2.85**	**321**	Pn	**Pn**	**09 15 40.1**	**+1.9**
	0.5nm,0.3s,baz=136,slow=14,SNR=20						
MJAR				Sn	**Sn**	**09 16 12.0**	**-0.1**
	0.3nm,0.3s,baz=134,slow=12,SNR=6.9						
	3.7nm,0.3s						
MKAR	**Makanchi Array**	**44.91**	**304**	P	**P**	**09 23 07.1**	**-0.1**
	0.2nm,0.5s,baz=87,slow=12,SNR=2.1						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**54.28**	**187**	P	**P**	**09 24 18.4**	**-0.5**
	0.5nm,1.0s,baz=3.9,slow=7.6,SNR=5.9						
	0.5nm,1.0s						

*DNK **18** 09:22:51.6±2.5,59°.87N×24°.40E, h0km±78km, ML3.5*
*HEL **18** 09:22:51.3±0.0,59°.96N×24°.22E, h0km, ML1.4, Explosion*
*EST **18** 09:22:51.3,59°.97N×24°.22E, h0km, ML1.3(HEL), Explosion*
*IDC **18** 09:22:52.7±1.1,60°.07N×24°.20E, h0km, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=13.1km s-min=6.8km az=142.0*

ISC 18 09:22:50.1±0.8,59°.95N±0°.03×24°.21E±0°.03, h0km, n23, σ1s41/35, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.28**	**19**	*eP*	**Pg**	**09 22 56.2**	**+0.7**
MEF				*eS*	**Sg**	**09 22 59.7**	**+0.6**
HEL5	**Espoo, Suvisaa**	**0.31**	**58**	*eP*	**Pg**	**09 22 56.5**	**+0.5**
HEL3	**Helsinki**	**0.38**	**54**	*eP*	**Pg**	**09 22 57.9**	**+0.5**
HEL3				*eS*	**Sg**	**09 23 02.6**	**+0.3**
HEL2	**Helsinki**	**0.39**	**52**	*eS*	**Sg**	**09 23 03.0**	**+0.4**
HEL1	**Helsinki**	**0.40**	**56**	*eP*	**Pg**	**09 22 58.3**	**+0.5**
TVF	**Tvarminne**	**0.50**	**258**	*eP*	**Pg**	**09 23 00.9**	**+1.2**
TVF				smax	smax	09 23 08.4	
	comp=Z,6.1nm,0.1s						
NUR	**Nurmijarvi**	**0.60**	**21**	*eP*	**Pg**	**09 23 01.8**	**+0.2**
NUR				*eS*	**Sg**	**09 23 09.5**	**+0.2**
NUR				smax	smax	09 23 09.9	
	comp=Z,7.5nm,0.1s						
EE02	**Kiisa, Saku**	**0.80**	**162**	*eP*	**Pg**	**09 23 06.2**	**+0.7**
EE02				*eS*	**Sg**	**09 23 16.3**	**+0.4**
EE01	**Perakula, Nova**	**0.81**	**202**	*eP*	**Pg**	**09 23 06.1**	**+0.5**
EE01				*eS*	**Sg**	**09 23 16.2**	**+0.2**
EE06	**Soera, Palade,**	**1.21**	**216**	*eP*	**Pg**	**09 23 13.1**	**-0.1**
EE06				*eSB*	**Sg**	**09 23 29.3**	**+0.5**
EE08	**Sarghaua, Vand**	**1.40**	**158**	*eP*	**Pn**	**09 23 16.6**	**-0.3**
EE08				*eS*	**Sg**	**09 23 34.5**	**-0.6**
EE03	**Tooma soojaam,**	**1.51**	**135**	*eP*	**Pn**	**09 23 18.6**	**+0.2**
EE03				*eS*	**Sg**	**09 23 38.5**	**-0.1**
FINES	**FINESS Array B**	**1.75**	**31**	Pn	**Pn**	**09 23 22.6**	**+0.9**
	comp=Z,2.6nm,0.3s,baz=215,slow=16,SNR=20						
FINES				Lg	Lg	09 23 44.8	
	comp=Z,6.6nm,0.3s,baz=212,slow=29,SNR=22						
VSU	**Vasula**	**1.98**	**138**	*i* P	**Pn**	**09 23 24.9**	**+0.1**
HFS	**Hagfors**	**5.28**	**277**	Pn	**Pn**	**09 24 11.6**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=93,slow=15,SNR=4.1						
HFS				Sn	**Sn**	**09 25 10.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=92,slow=25,SNR=1.9						
HFS				Lg	Lg	09 25 27.3	
	comp=Z,0.7nm,0.3s,baz=97,slow=34,SNR=5.4						
	comp=Z,0.7nm,0.3s						
BORU	**Boraas**	**6.39**	**254**	*i* P	**Pn**	**09 24 29.7**	**+4.4**
BORU				*i* S	**Sn**	**09 25 38.4**	**-0.5**
DEL	**Delary**	**6.48**	**242**	*i* P	**Pn**	**09 24 26.9**	**+0.3**
DEL				*i* S	**Sn**	**09 25 39.0**	**-2.3**
NOA	**NORSAR Array B**	**6.51**	**285**	Pn	**Pn**	**09 24 25.4**	**-1.8**
	baz=45,slow=8.7,SNR=1.3						
NOA				Sn	**Sn**	**09 25 38.3**	**-3.9**
	baz=112,slow=14,SNR=3.9						
	comp=Z,0.1nm,0.3s						
STRU	**Stroemstad**	**6.70**	**268**	*i* P	**Pn**	**09 24 30.7**	**+1.1**
TJOU	**Tjoern**	**6.78**	**259**	*eP*	**Pn**	**09 24 32.6**	**+1.9**
ONAU	**Onsala**	**6.90**	**254**	*i* S	**Sn**	**09 25 48.7**	**-2.8**
ARCES	**ARCESS Array B**	**9.64**	**3**	Pn	**Pn**	**09 25 10.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=182,slow=13,SNR=26						
	comp=Z,0.5nm,0.3s						
AKASG	**Malin Array Be**	**9.70**	**161**	Pn	**Pn**	**09 25 10.7**	**0.0**
	comp=Z,0.6nm,0.3s,baz=341,slow=12,SNR=1.9						
	comp=Z,0.3nm,0.3s						

NEIC 18 09:33:40.7±0.5,37°.03N±0°.01×104°.96W±0°.01, h8km±10km, ML1.3/10, Error ellipse: s-maj=1.8km s-min=1.4km az=173.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T25A	**Trinidad**	**0.45**	**76**		Pg	09 33 50.0	+0.5
T25A				Sg	Sg	09 33 56.0	+0.6
T25A				IAML		09 33 56.4	
	comp=N,27nm,0.3s						
T25A				IAML		09 33 56.5	
	comp=E,25nm,0.2s						
SDCO	**Great Sand Dun**	**0.84**	**329**	Pg	Pg	09 33 56.5	-0.3
SDCO				Sg	Sg	09 34 07.0	-0.7
SDCO				IAML		09 34 07.5	
	comp=E,6.9nm,0.1s						
S22A	**4UR Ranch, Cre**	**1.66**	**296**	Pn	Pn	09 34 08.8	-1.5
RTBA	**Rita Blanca**	**1.88**	**108**	Pn	Pn	09 34 12.7	-0.5

*NIED **18** 09:34:37.7, 36°.12N×139°.85E, h48km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr1.99; Mθθ-1.17; Mφφ-0.82; Mrθ1.36; Mθφ-0.77; Mφr2.09; Fault plane solution: M0 3.12000×10^14 NP1: φs240.00000°, δ20.00000°, λ112.00000°. NP2: φs37.00000°, δ72.00000°, λ82.00000°.*
*IDC **18** 09:34:37.2±2.6, 36°.05N×139°.83E, h51km±23km, mb3.4/6, mbtmp3.7/7, ML3.7/1 Error ellipse: s-maj=36.6km s-min=11.6km az=70.0*
*JMA **18** 09:34:37.7±0.1, 36°.1N±0°.2×139°.9E±0°.3, h48km, MD3.5/40, MV3.5/40, SW IBARAKI PREF*
JMA Felt II J1 at SW IBARAKI PREF .

ISC 18 09:34:37.3±0.9, 36°.12N±0°.04×139°.88E±0°.06, h53km±8km, n20, σ0s81/22, mb3.6/6, 6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.27**	**66**	*i* P	**Pn**	**09 34 46.7**	**+0.2**
JYT				*eS*	**Sn**	**09 34 53.1**	**0.0**
JYT	**Yasato**	**0.27**	**66**	A	A	09 34 46.7	
	comp=N,11nm,0.5s,comp=E,9.0nm,0.4s						
TOK	**Tokyo**	**0.44**	**193**	A	A	09 34 48.1	
	comp=N,19nm,0.3s,comp=E,15nm,0.6s						
JAG	**Ashikaga**	**0.46**	**312**	*i* P	**Pn**	**09 34 48.2**	**-0.2**
JAG	**Ashikaga**	**0.46**	**312**	A	A	09 34 48.2	
	comp=N,4.0nm,0.7s,comp=E,4.0nm,0.6s						
JRY	**Ryogami san**	**0.80**	**263**	*i* P	**Pn**	**09 34 52.3**	**-0.2**
JRY				*eS*	**Sn**	**09 35 03.1**	**-0.6**
JKT	**Katashina**	**0.82**	**322**	*i* P	**Pn**	**09 34 52.5**	**-0.4**
JOD2	**Odawara 2**	**1.07**	**217**	*eP*	**Pn**	**09 34 56.8**	**+0.7**
JOD2				S	**Sn**	**09 35 11.0**	**+1.0**
JYN	**Shimob**	**1.25**	**241**	*i* P	**Pn**	**09 34 59.6**	**+1.1**
JUON	**Uonuma**	**1.27**	**329**	P	**Pn**	**09 34 58.8**	**-0.1**
JFY	**Yanaizu**	**1.29**	**354**	*i* P	**Pn**	**09 34 59.4**	**+0.3**
JFY				*eS*	**Sn**	**09 35 16.3**	**+0.9**
MJAR	**Matsushiro Arr**	**1.42**	**288**	P	**Pn**	**09 35 00.5**	**-0.2**
	comp=E,70nm,0.3s,baz=87,slow=9.2,SNR=248						
MJAR				LR	LR	09 35 48.2	
	comp=E,104nm,20.6s,baz=156,slow=51						
MAT	**Matsushiro**	**1.42**	**288**	P	**Pn**	**09 35 01.1**	**+0.3**
JHJ	**Hachijo jima 2**	**2.99**	**182**	P	**Pn**	**09 35 22.1**	**-0.2**
	comp=E,27nm,0.3s,baz=319,slow=23,SNR=17						
JHJ				S	**Sn**	**09 35 55.1**	**-1.8**
	comp=E,166nm,0.3s,baz=76,slow=23,SNR=16						
	comp=E,54nm,0.3s						
ZALV	**Zalesovo Beam**	**41.63**	**313**	P	**P**	**09 42 19.2**	**-0.9**
	comp=E,0.8nm,0.5s,baz=96,slow=6.0,SNR=4.7						
	comp=E,0.8nm,0.5s						
MKAR	**Makanchi Array**	**43.57**	**303**	P	**P**	**09 42 35.8**	**-0.1**
	comp=E,0.3nm,0.6s,baz=87,slow=8.0,SNR=2.5						
	comp=E,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**45.60**	**309**	P	**P**	**09 42 51.0**	**-1.0**
	comp=E,1.8nm,0.2s,baz=82,slow=7.9,SNR=3.5						
	comp=E,1.8nm,0.2s						
ILAR	**Eielson Array**	**50.92**	**32**	P	**P**	**09 43 33.3**	**+0.5**
	comp=E,0.3nm,0.6s,baz=272,slow=6.7,SNR=4.8						
	comp=E,0.3nm,0.6s						
WRA	**Warramunga Arr**	**56.00**	**186**	P	**P**	**09 44 09.8**	**-0.7**
	comp=E,0.3nm,0.4s,baz=3.4,slow=7.3,SNR=12						
	comp=E,0.3nm,0.4s						
ASAR	**Alice Springs**	**59.73**	**186**	P	**P**	**09 44 37.9**	**+1.4**
	comp=E,0.1nm,0.6s,baz=16,slow=11,SNR=5.5						
	comp=E,0.1nm,0.6s						

IDC 18 09:35:43.6±2.1, 4°.84S×127°.67E, h0km, mb3.2/1, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=129.2km s-min=30.9km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.36**	**157**	Pn	Pn	09 39 34.3	-0.5
	0.1nm,0.3s,baz=335,slow=13,SNR=6.0						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**19.66**	**163**	P	P	09 40 14.6	+0.3
	0.1nm,0.3s,baz=349,slow=12,SNR=20						
	0.9nm,0.6s						
MKAR	**Makanchi Array**	**65.16**	**327**	P	P	09 46 26.6	0.0
	0.1nm,0.4s,baz=133,slow=8.1,SNR=1.7						
	0.1nm,0.4s						

*JMA **18** 09:40:28.1±0.3, 23°.0N±0°.6×12°.1E±°, h4km, TAIWAN REGION*
*TAP **18** 09:40:28.7, 23°.05N×121°.34E, h20km, ML3.2, C*

ISC 18 09:40:28.3±0.9, 23°.02N±0°.02×121°.40E±0°.03, h18km±3km, n63, σ0s96/110, 3C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.09**	**341**	*i* P	**Pg**	**09 40 32.8**	**+0.9**
CHKT				*i* S	**Sg**	**09 40 35.5**	**+1.2**
EDH	**Donghe**	**0.10**	**243**	*i* P	**Pg**	**09 40 32.7**	**+0.8**
EDH				S	**Sg**	**09 40 35.0**	**+0.6**
CHKH	**Chenggong**	**0.17**	**360**	P	**Pg**	**09 40 33.2**	**+0.9**
CHKH				S	**Sg**	**09 40 37.2**	**+1.2**
ECS	**Chishang**	**0.18**	**296**	*i* P	**Pg**	**09 40 33.7**	**+0.7**
ECS				*i* S	**Sg**	**09 40 38.2**	**+2.0**
FULB	**Fuli**	**0.20**	**333**	P	**Pb**	**09 40 33.8**	**+0.3**
FULB				*i* S	**Sg**	**09 40 37.9**	**+1.1**
EHD	**Haiduan**	**0.22**	**307**	*i* P	**Pb**	**09 40 33.4**	**-0.3**
EHD				*i* S	**Sb**	**09 40 37.0**	**-0.3**
LONT	**Longtian**	**0.27**	**246**	*i* P	**Pg**	**09 40 34.9**	**+0.6**
LONT				S	**Sb**	**09 40 39.4**	**+0.6**
ECBN	**Changbin**	**0.30**	**10**	P	**Pb**	**09 40 35.9**	**+0.7**
ECBN				S	**Sg**	**09 40 41.2**	**+1.8**
EYUL	**Yuli**	**0.34**	**348**	P	**Pb**	**09 40 36.4**	**+0.5**
EYUL				S	**Sb**	**09 40 42.2**	**+1.2**
TWF1	**Yuli**	**0.35**	**345**	*i* P	**Pg**	**09 40 35.9**	**+0.2**
TWF1				*i* S	**Sg**	**09 40 40.8**	**+0.1**
LDUT	**Ludao**	**0.35**	**169**	P	**Pb**	**09 40 37.0**	**+1.0**
LDUT				S	**Sn**	**09 40 43.5**	**-1.5**
TTN	**Taitung**	**0.35**	**221**	*i* P	**Pb**	**09 40 36.5**	**+0.4**
TTN				*i* S	**Sb**	**09 40 42.7**	**+1.0**
TWGBT	**Beinan**	**0.35**	**236**	P	**Pg**	**09 40 36.0**	**+0.2**
TWGBT				S	**Sg**	**09 40 40.8**	**-0.1**
TWG	**Pinlang**	**0.36**	**237**	*i* P	**Pg**	**09 40 36.0**	**+0.1**
TWG				*i* S	**Sg**	**09 40 41.4**	**+0.4**
YULB	**Yu-li**	**0.39**	**346**	*i* P	**Pg**	**09 40 36.3**	**-0.1**
YULB				*i* S	**Sg**	**09 40 41.5**	**-0.4**
ELDTW	**Lidau**	**0.39**	**296**	*i* P	**Pg**	**09 40 35.7**	**-0.8**
ELDTW				*i* S	**Sg**	**09 40 40.3**	**-1.7**
HGSD	**Ruisui**	**0.47**	**3**	P	**Pb**	**09 40 38.6**	**+0.4**
HGSD				S	**Sb**	**09 40 46.5**	**+1.6**
EHYH	**Wanrong**	**0.48**	**354**	P	**Pb**	**09 40 37.9**	**-0.4**
EHYH				S	**Sg**	**09 40 44.0**	**-0.6**
EHY	**Hungye**	**0.49**	**352**	*i* P	**Pb**	**09 40 38.0**	**-0.5**
EHY				*i* S	**Sg**	**09 40 44.3**	**-0.7**
ECL	**Taimali**	**0.58**	**224**	P	**Pb**	**09 40 39.0**	**-1.0**
ECL				*eS*	**Sb**	**09 40 47.4**	**-0.6**
STYH	**Taoyuan**	**0.59**	**285**	*i* P	**Pb**	**09 40 39.3**	**-0.8**
STYH				S	**Sb**	**09 40 46.7**	**-1.5**
YUS	**Yu-Shan**	**0.62**	**319**	*i* P	**Pb**	**09 40 40.3**	**-0.7**
YUS				*i* S	**Sb**	**09 40 47.8**	**-1.8**
WARBT	**Fenglin Townsh**	**0.70**	**359**	P	**Pb**	**09 40 41.1**	**-0.9**
WARBT				S	**Sb**	**09 40 50.0**	**-1.3**
ALS	**Alishan**	**0.73**	**312**	*i* P	**Pb**	**09 40 42.4**	**-0.4**
ALS				*i* S	**Sb**	**09 40 52.1**	**-0.5**
SSD	**Sandimen**	**0.76**	**249**	P	**Pb**	**09 40 42.3**	**-0.7**
SSD				S	**Sb**	**09 40 50.7**	**-2.2**
WTP	**Ta-pu**	**0.76**	**288**	P	**Pb**	**09 40 42.7**	**-0.3**
WTP				S	**Sb**	**09 40 53.0**	**0.0**
TSMG	**Majia**	**0.76**	**246**	*eP*	**Pb**	**09 40 42.0**	**-1.0**
TPUB	**Ta-pu**	**0.76**	**292**	*i* P	**Pb**	**09 40 42.9**	**-0.2**
TPUB				*i* S	**Sb**	**09 40 53.0**	**-0.1**
VWDT	**VWDT**	**0.77**	**342**	P	**Pb**	**09 40 43.0**	**-0.2**
VWDT				S	**Sb**	**09 40 52.4**	**-0.9**
EAST	**Anshuo**	**0.81**	**219**	*eP*	**Pb**	**09 40 43.1**	**-0.8**
MASBT	**Mashibuluo**	**0.81**	**240**	*i* P	**Pb**	**09 40 43.1**	**-0.8**
MASBT				S	**Sb**	**09 40 52.8**	**-1.8**
CHN1	**Nanshi**	**0.82**	**282**	*eP*	**Pb**	**09 40 44.2**	**+0.2**
CHN1				*i* S	**Sb**	**09 40 55.6**	**+0.8**
TAWH	**Dawu Township**	**0.82**	**215**	*eP*	**Pb**	**09 40 43.3**	**-0.8**
TAWH				*eS*	**Sb**	**09 40 53.8**	**-1.0**
WHYT	**Xinyi Township**	**0.84**	**324**	*i* P	**Pb**	**09 40 44.5**	**0.0**
WHYT				S	**Sb**	**09 40 54.7**	**-0.7**
SCST	**Cishan**	**0.84**	**261**	P	**Pb**	**09 40 44.9**	**+0.4**
SCST				*eS*	**Sb**	**09 40 56.2**	**+0.7**
SNST	**Tainan City**	**0.85**	**284**	*eP*	**Pb**	**09 40 45.3**	**+0.7**
SNST				S	**Sb**	**09 40 56.4**	**+0.7**
TEYL	**Yanliau Villag**	**0.87**	**12**	*eP*	**Pn**	**09 40 46.2**	**+0.5**
SSLB	**Suanglung**	**0.87**	**332**	P	**Pb**	**09 40 44.7**	**-0.3**
SSLB				*eS*	**Sb**	**09 40 55.9**	**-0.4**
TWK	**Hsinying**	**0.87**	**287**	*i* P	**Pb**	**09 40 44.6**	**-0.4**
TWK				S	**Sg**	**09 40 57.5**	**+0.5**
CHN5	**Tsauling**	**0.88**	**311**	*i* P	**Pb**	**09 40 45.5**	**+0.4**
CHN5				S	**Sg**	**09 40 58.1**	**+1.0**
TWM1	**Shoushan**	**0.92**	**258**	P	**Pb**	**09 40 46.1**	**+0.3**
TWM1				*eS*	**Sn**	**09 41 01.1**	**+2.0**
CHN3	**Shinhua**	**0.95**	**274**	*eP*	**Pg**	**09 40 47.9**	**+1.0**
CHN3				*eS*	**Sg**	**09 41 02.7**	**+3.3**
OWD	**Renai**	**0.95**	**348**	*eP*	**Pb**	**09 40 45.9**	**-0.6**
OWD				*eS*	**Sb**	**09 40 57.5**	**-1.3**
SCZT	**Fangliau**	**0.96**	**228**	*eP*	**Pb**	**09 40 45.9**	**-0.6**
SCZT				*eS*	**Sn**	**09 41 00.0**	**-0.2**
SHHT	**Tainan City**	**0.97**	**270**	*eP*	**Pn**	**09 40 47.6**	**+0.6**
SMLT	**Sun Moon Lake**	**0.97**	**332**	P	**Pb**	**09 40 46.3**	**-0.5**
SMLT				*eS*	**Sb**	**09 40 59.0**	**-0.4**
LXIB	**Xiulin Townshi**	**1.00**	**1**	*eP*	**Pb**	**09 40 46.2**	**-1.1**
LXIB				*eS*	**Sn**	**09 41 01.1**	**-0.3**
WUSB	**Renai**	**1.00**	**345**	*eP*	**Pb**	**09 40 47.0**	**-0.3**
WUSB				S	**Sb**	**09 40 59.9**	**-0.3**
TYC	**Yuchr**	**1.01**	**331**	*i* P	**Pg**	**09 40 48.8**	**+0.8**
TYC				*eS*	**Sg**	**09 41 02.1**	**+0.7**
CHY	**Chiayi**	**1.01**	**298**	*eP*	**Pg**	**09 40 48.6**	**+0.6**
CHY				*i* S	**Sn**	**09 41 01.8**	**+0.3**
WGK	**Gukeng**	**1.02**	**311**	*eP*	**Pb**	**09 40 46.8**	**-0.7**
LYUB	**Lan-yu**	**1.02**	**170**	*i* P	**Pb**	**09 40 46.5**	**-1.1**
WDLH	**Douliu**	**1.03**	**310**	*eP*	**Pg**	**09 40 49.0**	**+0.6**
WNT	**Mingjian**	**1.08**	**323**	P	**Pg**	**09 40 49.5**	**+0.2**
SCLT	**Jiali**	**1.12**	**278**	*eS*	**Sg**	**09 41 06.4**	**+1.7**
WCS	**Beigang Elemen**	**1.13**	**337**	*eP*	**Pn**	**09 40 50.6**	**+0.4**
WHF	**Hehuan Shan**	**1.13**	**354**	*eP*	**Pn**	**09 40 49.5**	**-0.2**
CHN8	**Yiju**	**1.14**	**287**	*eS*	**Sn**	**09 41 05.5**	**+0.9**
NACB	**Ninganchiao**	**1.17**	**9**	*eP*	**Pn**	**09 40 48.0**	**-1.9**
ETLH	**Xiulin Townshi**	**1.19**	**4**	*eP*	**Pb**	**09 40 50.8**	**+0.3**
WDGT	**Dungji**	**1.62**	**279**	*eS*	**Sn**	**09 41 15.3**	**-1.0**
IRIF	**Iriomote-Funau**	**2.51**	**58**	P	**Pn**	**09 41 10.4**	**+2.1**
JISG	**Ishigakijimahi**	**3.09**	**59**	*eP*	**Pn**	**09 41 16.7**	**+0.4**
JISG				*eS*	**Sn**	**09 41 52.0**	**-0.9**

*MEX **18** 09:57:53.8±0.9, 14°.80N×93°.74W, h10km, MD4.1*
*GCG **18** 09:57:53.8±2.2, 14°.69N×93°.64W, h38km±999km, MD4.2*

ISC 18 09:57:47.5±1.7, 14°.76N±0°.07×93°.72W±0°.04, h17km±11km, n19, σ1s83/31, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.41**	**84**	*eP*	**Pg**	**09 58 15.9**	**+1.2**
THIG				*eS*	**Sg**	**09 58 33.4**	**+0.2**
THIG		**1.41**	**84**	*eP*	**Pg**	**09 58 16.0**	**+1.3**
PATR	**El Naranjo**	**1.48**	**76**	*eP*	**Pg**	**09 58 16.6**	**+0.5**
PATR				*eS*	**Sb**	**09 58 33.5**	**+0.2**
PAVE	**Pavencul**	**1.55**	**74**	*eP*	**Pg**	**09 58 17.8**	**+0.4**
PAVE				*eS*	**Sg**	**09 58 36.5**	**-1.2**
CHUJ	**Union Juarez**	**1.59**	**78**	*eP*	**Pg**	**09 58 18.6**	**+0.4**
CHUJ				*i* S	**Sg**	**09 58 38.3**	**-0.7**
TGIG		**2.09**	**16**	*eP*	**Pb**	**09 58 26.0**	**+0.9**
TGIG				*eS*	**Sb**	**09 58 50.5**	**-0.2**
TGIG		**2.09**	**16**	*eP*	**Pb**	**09 58 26.4**	**+1.4**
CCIG	**Comitan**	**2.15**	**45**	*eP*	**Pg**	**09 58 28.6**	**-0.2**
CCIG				*eS*	**Sg**	**09 58 54.7**	**-2.1**
CCIG	**Comitan**	**2.15**	**45**	*eP*	**Pg**	**09 58 28.7**	**-0.2**
HUEH	**Huehuetenango**	**2.21**	**75**	*eP*	**Pg**	**09 58 30.2**	**+0.2**
HUEH				*eS*	**Sg**	**09 58 58.0**	**-0.8**
STG2	**El Palmar, Qui**	**2.29**	**98**	*eP*	**Pn**	**09 58 24.7**	**0.0**
STG8	**El Palmar, Qui**	**2.31**	**97**	*eP*	**Pn**	**09 58 25.2**	**+0.1**
STG8				*eS*	**Sn**	**09 58 50.0**	**-3.3**
STG5	**El Palmar, Qui**	**2.32**	**98**	*eP*	**Pn**	**09 58 25.3**	**+0.2**
HUIG	**Huatulco**	**2.52**	**294**	*eP*	**Pn**	**09 58 28.7**	**+1.0**
HUIG				*eS*	**Sn**	**09 58 54.5**	**-3.5**
UXUV	**UXUV**	**2.58**	**351**	*eP*	**Pb**	**09 58 32.4**	**-0.9**
UXUV				*eS*	**Sn**	**09 59 01.7**	**+2.1**
QUIS	**Sacapulas**	**2.59**	**78**	*eP*	**Pb**	**09 58 35.6**	**+1.9**
PEIG	**Puerto Escondi**	**3.53**	**291**	*e*	**Pn**	**09 58 44.5**	**+2.8**
PEIG				*e*		09 59 18.0	
NEUV	**Arroyo Zacate**	**3.56**	**326**	*eP*	**Pn**	**09 58 42.9**	**+0.9**
NEUV				*eS*	**Sn**	**09 59 20.9**	**-2.8**
PETF	**Flores**	**4.28**	**59**	*eP*	**Pb**	**09 58 59.1**	**-3.3**
PETF				*eS*	**Sn**	**09 59 45.7**	**+4.1**

NOU 18 10:00:32.0, 15°.55S×168°.17E, h0km, MLv4.2/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.94**	**276**	P	Pg	10 00 49.2	-0.8
SANVU	**Saraoutou**	**0.94**	**

ESPN	**Las Esperanzas**	**1.57**	**32**	S		**Sn**	**10 04 45.0**	**+0.6**
LCR2	**La Lucha 2**	**1.57**	**134**	P		**Pn**	**10 04 25.3**	**+1.0**
CVTQ	**Turrialba Volc**	**1.60**	**122**	*e*P		**Pn**	**10 04 25.1**	**+0.3**
ABRB	**Las Abras (San**	**1.64**	**121**	*e*P		**Pn**	**10 04 25.2**	**0.0**
EGUB	**Earth Gujpi**	**1.66**	**112**	*e*P		**Pn**	**10 04 26.2**	**+1.0**
BOAB	**BOACO BROADBAN**	**1.67**	**342**	P		**Pn**	**10 04 25.1**	**-0.4**
BOAB	**BOACO BROADBAN**	**1.67**	**342**	S		**Sn**	**10 04 46.7**	**0.0**
PIEC	**Cerro El Cedra**	**1.69**	**136**	*e*P		**Pn**	**10 04 25.7**	**-0.3**
LCOCO	**El Coco**	**1.74**	**116**	*e*P		**Pn**	**10 04 26.2**	**-0.2**
BUS1	**Rivas**	**1.89**	**133**	*e*P		**Pn**	**10 04 29.2**	**+0.4**

*SOME **18** 10:04:06.4, 40°.65N × 78°.17E, h10km*
*KRNET **18** 10:04:07.1 ± 0.1, 40°.60N × 78°.14E, h30km, mb3.3*
*NNC **18** 10:04:08.0 ± 1.0, 40°.68N × 78°.06E, h0km, mb3.3, mpv2.9,*
Error ellipse: s-maj=6.7km s-min=5.5km az=164.0

ISC 18 10:04:07.1 ± 1.6, **40°.64N** ± 0°.07 × **78°.11E** ± 0°.04, **h10**km, **n36**, **σ1§47/56, 13C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.11**	**348**	⇑	*i*P		**Pb**	**10 04 28.5**	**-0.1**
TARG				⇑	*i*S		**Sn**	**10 04 44.2**	**-0.5**
KDJ	**Kajisay**	**1.64**	**335**	⇓	*i*P		**Pb**	**10 04 37.6**	**0.0**
KDJ				⇓	*i*S		**Sg**	**10 04 59.8**	**-0.1**
PRZ	**Przheval'sk**	**1.85**	**7**	⇑	*i*P		**Pb**	**10 04 40.9**	**-0.2**
PRZ				⇑	*i*S		**Sb**	**10 05 05.4**	**+1.0**
JNKS	**Jany-Kuch**	**1.91**	**283**	⇓	*i*P		**Pb**	**10 04 41.2**	**-1.0**
JNKS				⇓	*i*S		**Sb**	**10 05 06.4**	**+0.2**
ULHL	**Ulahol**	**2.13**	**319**	⇓	*i*P		**Pb**	**10 04 44.6**	**-1.3**
ULHL				⇓	*i*S		**Sb**	**10 05 11.9**	**-0.6**
SATY	**Saty**	**2.42**	**5**	Pg			**Pg**	**10 04 52.1**	**-1.5**
	2.8nm,0.6s								
SATY				Lg		Lg	Lg	10 05 24.4	
	10.0nm,0.4s								
BOOM	**Boomskoye usch**	**2.46**	**319**	⇓	*i*P		**Pb**	**10 04 49.2**	**-2.3**
BOOM				⇓	*i*S		**Sb**	**10 05 19.8**	**-2.2**
TNSS	**Tian-Shan**	**2.55**	**340**	Pg			**Pb**	**10 04 54.2**	**+1.1**
	6.8nm,0.7s								
TNSS				Lg		Lg	Lg	10 05 28.5	
	4.9nm,0.6s								
TNSS	**Tian-Shan**	**2.55**	**340**	*e*P			**Pb**	**10 04 54.2**	**+1.1**
	6.8nm,0.7s								
TNSS				*e*S			**Sg**	**10 05 28.5**	**-0.4**
	4.9nm,0.6s								
UZB	**Uzynbulak**	**2.59**	**15**	Pg			**Pb**	**10 04 54.6**	**+0.8**
	1.7nm,0.6s								
UZB				Lg		Lg	Lg	10 05 28.7	
	12nm,0.5s								
UZB	**Uzynbulak**	**2.59**	**15**	*e*P			**Pb**	**10 04 54.6**	**+0.8**
	1.7nm,0.6s								
UZB				*e*S			**Sg**	**10 05 28.7**	**-1.7**
	12nm,0.5s								
IZV	**Izvestkoviy**	**2.64**	**335**	Pg			**Pb**	**10 04 53.8**	**-0.7**
	9.3nm,0.7s								
IZV				Lg		Lg	Lg	10 05 27.9	
	17nm,0.9s								
IZV	**Izvestkoviy**	**2.64**	**335**	*e*P			**Pb**	**10 04 53.8**	**-0.7**
	9.3nm,0.7s								
IZV				*e*S			**Sb**	**10 05 27.9**	**+0.8**
	17nm,0.9s								
MDOK	**Medeo**	**2.64**	**343**	Pg			**Pg**	**10 04 55.9**	**-1.8**
	6.1nm,1.0s								
MDOK				Lg		Lg	Lg	10 05 31.0	
	14nm,0.8s								
KOTS	**Kotyrbulak**	**2.69**	**344**	Pg			**Pg**	**10 04 57.1**	**-1.6**
	5.3nm,0.3s								
KOTS				Lg		Lg	Lg	10 05 33.4	
	41nm,0.6s								
KOTS	**Kotyrbulak**	**2.69**	**344**	*e*P			**Pg**	**10 04 57.1**	**-1.6**
	5.3nm,0.3s								
KOTS				*e*S			**Sg**	**10 05 33.4**	**-0.2**
	41nm,0.6s								
MTBS	**Maitube**	**2.79**	**334**	Pg			**Pb**	**10 04 58.4**	**+1.5**
	11nm,0.5s								
MTBS				Lg		Lg	Lg	10 05 35.2	
	4.1nm,0.4s								
MTBS	**Maitube**	**2.79**	**334**	*e*P			**Pb**	**10 04 58.4**	**+1.5**
	11nm,0.5s								
MTBS				*e*S			**Sg**	**10 05 35.2**	**-1.3**
	4.1nm,0.4s								
KURS	**Kuram**	**2.84**	**1**	Pg			**Pg**	**10 04 59.6**	**-2.0**
	3.5nm,0.5s								
KURS				Lg		Lg	Lg	10 05 37.3	
	5.0nm,0.6s								
KPKS	**Kokpek**	**2.85**	**8**	Pg			**Pg**	**10 04 59.7**	**-2.1**
	0.4nm,0.4s								
KPKS				Lg		Lg	Lg	10 05 37.7	
	24nm,0.6s								
PDGK	**Podgornoye**	**2.88**	**20**	⇓	Pn		**Pg**	**10 05 00.4**	**-1.7**
	3.6nm,0.5s								
PDGK				⇑	Sn		**Sg**	**10 05 36.9**	**-2.5**
	9.8nm,0.6s								
TKM2	**Tokmak 2**	**2.95**	**321**	⇓	*i*P		**Pn**	**10 04 56.0**	**+1.8**
TKM2				⇓	*i*S		**Sn**	**10 05 31.7**	**+1.9**
ARLS	**Aral**	**3.10**	**294**	⇑	*i*P		**Pn**	**10 04 57.7**	**+1.4**
ARLS				⇑	*i*S		**Sn**	**10 05 34.8**	**+1.3**
DGS	**Degeres**	**3.13**	**327**	Pg			**Pb**	**10 05 03.9**	**+1.0**
	2.7nm,0.5s								
DGS				Lg		Lg	Lg	10 05 44.8	
	5.2nm,0.4s								
KTBS	**Karatobe**	**3.25**	**341**	Pg			**Pb**	**10 05 06.4**	**+1.6**
	2.3nm,0.3s								
KTBS				Lg		Lg	Lg	10 05 48.8	
	2.9nm,0.6s								
KTMS	**Ketmen**	**3.26**	**30**	Pg			**Pb**	**10 05 04.8**	**-0.3**
	0.9nm,0.3s								
KTMS				Lg		Lg	Lg	10 05 46.2	
	2.8nm,0.2s								
KTMS	**Ketmen**	**3.26**	**30**	*e*P			**Pb**	**10 05 04.8**	**-0.3**
	0.9nm,0.3s								
KTMS				*e*S			**Sb**	**10 05 46.2**	**+1.3**
	2.8nm,0.2s								
SALK	**Salom-Alik**	**3.27**	**276**	⇓	*i*P		**Pn**	**10 05 00.0**	**+1.5**
SALK				⇓	*i*S		**Sn**	**10 05 38.6**	**+1.1**
AAK	**Ala-Archa**	**3.36**	**308**	⇑	Pn		**Pb**	**10 05 07.0**	**+0.1**
	3.1nm,0.8s								
AAK				⇑	Sn		**Sg**	**10 05 53.2**	**-1.9**
	2.3nm,0.7s								
AAK	**Ala-Archa**	**3.36**	**308**	⇑	*i*P		**Pn**	**10 05 01.5**	**+1.7**
AAK				⇑	*i*S		**Sn**	**10 05 41.5**	**+1.6**
BLB	**Baldybastay**	**3.46**	**4**	Pg			**Pg**	**10 05 10.9**	**-2.6**
	7.0nm,0.9s								
BLB				Lg		Lg	Lg	10 05 56.7	
	14nm,0.5s								
KRBS	**Karabastau**	**3.55**	**330**	Pg			**Pb**	**10 05 11.2**	**+1.3**
	3.8nm,0.5s								
KRBS				Lg		Lg	Lg	10 05 57.3	
	0.6nm,0.6s								
ARXS	**Arharly**	**3.57**	**357**	Pg			**Pb**	**10 05 12.6**	**+2.2**
	1.1nm,0.4s								
ARXS				Lg		Lg	Lg	10 05 59.8	
	10nm,0.5s								
ARXS	**Arharly**	**3.57**	**357**	*e*P			**Pb**	**10 05 12.6**	**+2.2**
ARXS				*e*S			**Sg**	**10 05 59.8**	**-2.0**
USP	**Ospenovka**	**3.76**	**315**	⇑	*i*P		**Pn**	**10 05 07.1**	**+2.0**
USP				⇑	*i*S		**Sn**	**10 05 50.8**	**+1.3**
SGDS	**Sogindy**	**3.82**	**318**	Pg			**Pb**	**10 05 16.2**	**+1.6**
	1.3nm,0.5s								
SGDS				Lg		Lg	Lg	10 06 05.7	
	2.7nm,0.7s								

*CATAC **18** 10:26:31.3 ± 0.4, 13°.N × 3°.8°.9W ±°, h33km ± 3km, M3.0/18,*
MLv3.0/18, Error ellipse: s-maj=7.0km s-min=3.5km
az=31.5, confirmed
*SNET **18** 10:26:32.0 ± 0.8, 13°.21N × 89°.33W, h54km ± 5km, ML3.0*
*GCG **18** 10:26:33.5 ± 0.8, 13°.31N × 89°.35W, h47km ± 6km, MD3.5*

ISC 18 10:26:31.0 ± 1.6, **13°.11N** ± 0°.08 × **89°.37W** ± 0°.05, **h49**km ± 12km, **n61**, **σ0§67/69, 1C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.38**	**7**	*e*P			**Pn**	**10 26 41.3**	**+0.4**
LALI				*e*S			**Sn**	**10 26 47.9**	**-0.1**
LALI	**Alcalda de L**	**0.38**	**7**	*i*P			**Pn**	**10 26 41.3**	**+0.4**
LALI				*e*S			**Sn**	**10 26 47.0**	**-1.0**
LALI	**Alcalda de L**	**0.38**	**7**	P			**Pn**	**10 26 41.3**	**+0.4**
PANCS	**Alcalda de**	**0.54**	**20**	P			**Pn**	**10 26 42.8**	**0.0**
PANCS	**Alcalda de**	**0.54**	**20**	S			**Sn**	**10 26 50.7**	**-0.5**
JAYA	**Jayaque - finc**	**0.55**	**352**	*e*P			**Pn**	**10 26 43.1**	**+0.1**
JAYA				*e*S			**Sn**	**10 26 51.1**	**-0.5**
JAYA	**Jayaque - finc**	**0.55**	**352**	*e*P			**Pn**	**10 26 43.1**	**+0.1**
JAYA	**Jayaque - finc**	**0.55**	**352**	P			**Pn**	**10 26 43.1**	**+0.1**
LOMA	**Loma Larga**	**0.57**	**20**	*e*P			**Pn**	**10 26 43.1**	**-0.2**
LOMA	**Loma Larga**	**0.57**	**20**	P			**Pn**	**10 26 43.1**	**-0.2**
LOMA	**Loma Larga**	**0.57**	**20**	S			**Sn**	**10 26 52.0**	**0.0**
LFRS	**El Faro**	**0.60**	**30**	⇑	*e*P		**Pn**	**10 26 43.6**	**+0.1**
LFRS					*e*S		**Sn**	**10 26 52.2**	**-0.4**
PMON	**Piamonte**	**0.61**	**5**	*e*P			**Pn**	**10 26 43.9**	**+0.2**
PMON	**Piamonte**	**0.61**	**5**	P			**Pn**	**10 26 43.7**	**0.0**
PMON	**Piamonte**	**0.61**	**5**	S			**Sn**	**10 26 52.9**	**+0.2**
UEES	**Universidad Ev**	**0.62**	**12**	P			**Pn**	**10 26 44.0**	**+0.1**
UEES	**Universidad Ev**	**0.62**	**12**	S			**Sn**	**10 26 53.2**	**+0.1**
BOQS	**Boqueron**	**0.63**	**8**	*e*P			**Pn**	**10 26 44.3**	**+0.2**
BOQS				*e*S			**Sn**	**10 26 53.5**	**0.0**
PIC2	**El Picacho**	**0.65**	**10**	*e*P			**Pn**	**10 26 44.8**	**+0.5**
LBRS	**Las Brisas**	**0.71**	**27**	*e*P			**Pn**	**10 26 45.3**	**+0.4**
TECO	**Alcalda de Te**	**0.72**	**53**	*e*P			**Pn**	**10 26 44.6**	**-0.4**
TECO	**Alcaldia de Te**	**0.72**	**53**	P			**Pn**	**10 26 44.6**	**-0.4**
TECO	**Alcaldia de Te**	**0.72**	**53**	S			**Sn**	**10 26 54.7**	**-0.4**
PAVA	**Las Pavas**	**0.74**	**35**	*e*P			**Pn**	**10 26 45.5**	**+0.1**
PAVA	**Las Pavas**	**0.74**	**35**	P			**Pn**	**10 26 45.5**	**+0.1**
PAVA	**Las Pavas**	**0.74**	**35**	S			**Sn**	**10 26 55.8**	**0.0**
CEVE	**Cerro Verde**	**0.76**	**341**	*e*P			**Pn**	**10 26 46.4**	**+0.7**
CEVE	**Cerro Verde**	**0.76**	**341**	P			**Pn**	**10 26 46.8**	**+1.0**
CEVE	**Cerro Verde**	**0.76**	**341**	S			**Sn**	**10 26 57.2**	**+0.8**
SBLS	**San Blas**	**0.77**	**341**	*e*P			**Pn**	**10 26 46.2**	**+0.3**
UESV	**Universidad de**	**0.78**	**47**	P			**Pn**	**10 26 45.8**	**+0.1**
UESV	**Universidad de**	**0.78**	**47**	S			**Sn**	**10 26 56.2**	**-0.3**
RTR	**El Retiro**	**0.83**	**341**	*e*P			**Pn**	**10 26 47.3**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.86**	**46**	*e*P			**Pn**	**10 26 47.1**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.86**	**46**	P			**Pn**	**10 26 47.1**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.86**	**46**	S			**Sn**	**10 26 58.8**	**+0.3**
NUBE	**Las Nubes**	**0.89**	**333**	*e*P			**Pn**	**10 26 47.5**	**+0.1**
NUBE	**Las Nubes**	**0.89**	**333**	*e*P			**Pn**	**10 26 47.5**	**+0.1**
NUBE				*e*S			**Sn**	**10 26 59.3**	**0.0**
NUBE	**Las Nubes**	**0.89**	**333**	P			**Pn**	**10 26 47.5**	**+0.1**
TECA	**Tecapa**	**0.93**	**65**	*e*P			**Pn**	**10 26 48.0**	**0.0**
FAME	**Alcaldia de Sa**	**0.96**	**320**	P			**Pn**	**10 26 48.3**	**0.0**
FAME	**Alcaldia de Sa**	**0.96**	**320**	S			**Sn**	**10 27 00.6**	**-0.4**
PACA	**Pacayal**	**1.08**	**70**	*e*P			**Pn**	**10 26 50.8**	**+0.9**
PACA	**Pacayal**	**1.08**	**70**	P			**Pn**	**10 26 50.6**	**+0.7**
PACA	**Pacayal**	**1.08**	**70**	S			**Sn**	**10 27 04.8**	**+0.9**
LCY	**Lacayo**	**1.09**	**73**	*e*P			**Pn**	**10 26 50.8**	**+0.7**
RANC	**El Ranchito**	**1.10**	**73**	*e*P			**Pn**	**10 26 50.8**	**+0.5**
BLLM	**Bellamira**	**1.15**	**73**	*e*P			**Pn**	**10 26 51.7**	**+0.8**
MTO3	**Montecristo**	**1.29**	**0**	*e*P			**Pn**	**10 26 52.6**	**-0.2**
MTO3	**Montecristo**	**1.29**	**0**	*i*P			**Pn**	**10 26 52.6**	**-0.2**
MTO3	**Montecristo**	**1.29**	**0**	P			**Pn**	**10 26 52.6**	**-0.2**
MTO3	**Montecristo**	**1.29**	**0**	S			**Sn**	**10 27 08.5**	**-0.6**
ESQI	**Esquipulas**	**1.45**	**1**	P			**Pn**	**10 26 55.1**	**+0.2**
ESQI	**Esquipulas**	**1.45**	**1**	S			**Sn**	**10 27 12.3**	**-0.5**
CNCH	**Conchagua**	**1.51**	**83**	P			**Pn**	**10 26 56.2**	**+0.5**
CNCH	**Conchagua**	**1.51**	**83**	S			**Sn**	**10 27 15.5**	**+1.3**
CSGN	**Cosiguina Volc**	**1.77**	**94**	P			**Pn**	**10 27 00.1**	**+0.8**
POLN	**Al Sur del Vol**	**2.54**	**100**	P			**Pn**	**10 27 09.6**	**-0.1**
POLN				S			**Sn**	**10 27 36.0**	**-3.4**
CNGA	**Al SSO del Vol**	**2.67**	**103**	P			**Pn**	**10 27 12.1**	**+0.5**
CNGA				S			**Sn**	**10 27 41.5**	**-1.3**
CNGN	**Cerro Negro**	**2.67**	**103**	P			**Pn**	**10 27 13.4**	**+1.7**
COPN	**Copaltepe**	**2.86**	**108**	P			**Pn**	**10 27 14.5**	**+0.3**

*TRN **18** 10:30:36.5, 10°.72N × 62°.35W, h85km, MD3.7, North of the*
Paria peninsula.
*FUNV **18** 10:30:38.0, 10°.75N × 62°.38W, h28km, MW3.8*

ISC 18 10:30:34.8 ± 1.8, **10°.67N** ± 0°.07 × **62°.33W** ± 0°.07,
h104km ± 19km, **n29**, **σ1§63/46, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSKH	**Kent House, Po**	**0.80**	**89**	*e*S			**Sn**	**10 31 06.3**	**-1.2**
PSGH	**Port of Spain**	**0.81**	**91**	*e*P			**Pn**	**10 30 55.0**	**+1.4**
PSGH				*e*S			**Sn**	**10 31 06.3**	**-1.5**
TRN	**Trinidad (W)**	**0.91**	**91**	*e*P			**Pn**	**10 30 56.1**	**+1.4**
TRN				*e*S			**Sn**	**10 31 08.5**	**-1.0**
TPP	**Pointe-a-Pierr**	**0.94**	**112**	*e*P			**Pn**	**10 30 54.7**	**-0.2**
TPP				*e*S			**Sn**	**10 31 10.2**	**+0.2**
GRFF	**Grenada Fort F**	**1.49**	**23**	*e*P			**Pn**	**10 31 01.6**	**+0.4**
GRFF				*e*S			**Sn**	**10 31 19.4**	**-1.7**
GRGR	**Grenville**	**1.60**	**25**	*e*P			**Pn**	**10 31 02.9**	**+0.4**
GRGR				*e*S			**Sn**	**10 31 22.1**	**-1.4**
GRW	**Mount Saint Ca**	**1.62**	**24**	*e*P			**Pn**	**10 31 04.4**	**+1.6**
GRW				*e*S			**Sn**	**10 31 23.3**	**-0.8**
GRHS	**Sauteurs**	**1.68**	**24**	*e*P			**Pn**	**10 31 03.9**	**+0.3**
GRHS				*e*S			**Sn**	**10 31 24.1**	**-1.3**
GRSS	**Sisters**	**1.76**	**24**	*e*P			**Pn**	**10 31 05.5**	**+0.9**
GRSS				*e*S			**Sn**	**10 31 26.9**	**-0.3**
GCMP	**Grenada, Carri**	**2.01**	**26**	*e*P			**Pn**	**10 31 08.7**	**+1.0**
GCMP				*e*S			**Sn**	**10 31 31.8**	**-1.0**
PCRV	**Puerto La Cruz**	**2.32**	**258**	*e*P			**Pn**	**10 31 13.3**	**+1.6**
PCRV				*e*S			**Sn**	**10 31 38.5**	**-1.5**
PCRV	**Puerto La Cruz**	**2.32**	**258**	*e*P			**Pn**	**10 31 13.6**	**+1.9**
PCRV				*e*S			**Sn**	**10 31 40.5**	**+0.5**
SVB	**Belmont**	**2.79**	**22**	*e*S			**Sn**	**10 31 50.5**	**-0.6**
MCLT	**Moule a Chique**	**3.31**	**24**	*e*P			**Pn**	**10 31 26.2**	**+1.3**
MCLT				*e*S			**Sn**	**10 32 01.4**	**-2.1**
SLAC	**Saint Lucia, A**	**3.50**	**24**	*e*P			**Pn**	**10 31 27.8**	**+0.4**
SLAC				*e*S			**Sn**	**10 32 07.0**	**-1.0**
SLBI	**Saint Lucia, B**	**3.58**	**22**	*e*P			**Pn**	**10 31 30.2**	**+1.7**
SLBI				*e*S			**Sn**	**10 32 07.8**	**-2.2**
BIM	**Bigot**	**4.01**	**18**	*e*P			**Pn**	**10 31 36.2**	**+1.9**
BIM				*e*S			**Sn**	**10 32 19.1**	**-1.3**
SVN	**Savane Anatole**	**4.30**	**15**	*e*P			**Pn**	**10 31 39.4**	**+1.2**
SVN				*e*S			**Sn**	**10 32 25.9**	**-1.4**
FUNV	**FUNVISIS**	**4.41**	**268**	*e*P			**Pn**	**10 31 40.7**	**+1.0**
TACV	**Tcata**	**4.65**	**264**	*e*P			**Pn**	**10 31 44.7**	**+1.9**
DSLB	**Salisbury**	**4.82**	**11**	*e*P			**Pn**	**10 31 47.3**	**+2.2**
CACV	**CAICARA DEL OR**	**5.18**	**234**	*e*P			Pn	10 31 46.2	-3.8
CACV				*e*S			Sn	10 32 37.8	-11
BENV	**Beln**	**5.23**	**263**	*e*P			**Pn**	**10 31 52.8**	**+2.0**
TURV	**Turiamo**	**5.42**	**268**	*e*P			**Pn**	**10 31 54.9**	**+1.6**
BAUV	**El Baul**	**5.88**	**254**	*e*P			**Pn**	**10 32 01.0**	**+1.4**
BAUV				*e*S			**Sn**	**10 33 03.1**	**-2.6**
BAUV	**El Baul**	**5.88**	**254**	*e*P			**Pn**	**10 32 00.9**	**+1.4**
BAUV				*e*S			**Sn**	**10 33 02.0**	**-3.7**
BAUV	**El Baul**	**5.88**	**254**	*e*S			**Sn**	**10 33 02.0**	**-3.7**
MAPV	**Macapo**	**6.09**	**263**	*e*P			**Pn**	**10 32 04.1**	**+1.7**
TEPV	**Terepaima**	**6.79**	**265**	*e*P			**Pn**	**10 32 12.4**	**+0.5**

*JMA **18** 10:31:41.2 ± 0.2, 23°.5N ± 0°.8 × 122°.3E ± 0°.8, h34km, MV2.9/11,*
TAIWAN REGION
*TAP **18** 10:31:41.8, 23°.52N × 122°.27E, h38km ± 1km, ML3.4, D*

ISC 18 10:31:38.1 ± 1.0, **23°.48N** ± 0°.02 × **122°.33E** ± 0°.02, **h15**km ± 8km, **n115**, **σ0§73/206, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.76**	**288**	*e*P			**Pb**	**10 31 53.9**	**+0.9**
TEGC				S			**Sb**	**10 32 04.5**	**+1.3**
SHUL	**Shoufeng**	**0.77**	**294**	P			**Pn**	**10 31 54.7**	**+0.3**
SHUL				S			**Sb**	**10 32 04.6**	**+1.1**
TEYL	**Yanliau Villag**	**0.78**	**300**	*e*P			**Pn**	**10 31 55.4**	**+0.9**
ECBN	**Changbin**	**0.82**	**259**	P			**Pn**	**10 31 55.6**	**+0.4**
ECBN				*e*S			**Sb**	**10 32 05.3**	**+0.3**
HWA	**Hwalien**	**0.83**	**307**	*e*P			**Pn**	**10 31 55.9**	**+0.6**
HGSD	**Ruisui**	**0.83**	**271**	P			**Pn**	**10 31 55.2**	**-0.1**
HGSD				*e*S			**Sg**	**10 32 04.7**	**-0.6**
EGFH	**Guangfu**	**0.85**	**283**	P			**Pn**	**10 31 55.7**	**+0.2**
EGFH				*e*S			**Sb**	**10 32 05.9**	**+0.1**
ESL	**Shilin**	**0.89**	**292**	*e*P			**Pb**	**10 31 55.8**	**+0.6**
ESL				S			**Sg**	**10 32 06.1**	**-1.0**
WARBT	**Fenglin Townsh**	**0.90**	**286**	*i*P			**Pn**	**10 31 56.2**	**0.0**
WARBT				S			**Sg**	**10 32 06.6**	**-0.7**
TWD	**Chiawan**	**0.90**	**312**	*i*P			**Pn**	**10 31 56.4**	**+0.2**
TWD				*i*S			**Sg**	**10 32 07.2**	**-0.3**
CHKH	**Chenggong**	**0.91**	**252**	*i*P			**Pn**	**10 31 56.3**	**+0.1**
CHKH				*e*S			**Sg**	**10 32 06.3**	**-1.2**
EHYH	**Wanrong**	**0.91**	**271**	*e*P			**Pn**	**10 31 56.8**	**+0.6**
EHYH				*e*S			**Sb**	**10 32 07.8**	**+0.5**
ETM	**Tongmen**	**0.91**	**303**	*e*P			**Pn**	**10 31 56.2**	**-0.1**
EHY	**Hungye**	**0.93**	**272**	P			**Pn**	**10 31 57.0**	**+0.4**
EHY				S			**Sg**	**10 32 07.8**	**-0.4**
ETL	**Fush Village**	**0.94**	**316**	*e*P			**Pn**	**10 31 57.1**	**+0.3**
ETL				*e*S			**Sg**	**10 32 08.2**	**-0.4**
YULB	**Yu-li**	**0.95**	**265**	*e*P			**Pn**	**10 31 57.5**	**+0.5**
YULB				S			**Sg**	**10 32 09.0**	**0.0**
TWF1	**Yuli**	**0.96**	**263**	*e*P			**Pn**	**10 31 57.4**	**+0.4**
TWF1				S			**Sb**	**10 32 09.5**	**+0.6**
CHKT	**Chengkung**	**0.96**	**247**	*i*P			**Pg**	**10 31 57.1**	**+0.4**
CHKT				S			**Sb**	**10 32 08.0**	**-1.0**
NACB	**Ninganchiao**	**0.97**	**316**	P			**Pn**	**10 31 57.3**	**+0.2**
NACB				S			**Sb**	**10 32 08.6**	**-0.6**
FULB	**Fuli**	**0.99**	**254**	*e*P			**Pn**	**10 31 57.7**	**+0.2**
FULB				*e*S			**Sb**	**10 32 09.0**	**-0.9**
LXIB	**Xiulin Townshi**	**1.00**	**303**	P			**Pn**	**10 31 57.8**	**+0.1**
LXIB				S			**Sb**	**10 32 10.6**	**+0.3**
EAHA	**Aohua**	**1.01**	**328**	*i*P			**Pn**	**10 31 58.6**	**+0.9**
EAHA				S			**Sg**	**10 32 10.8**	**0.0**
ETLH	**Xiulin Townshi**	**1.06**	**313**	*i*P			**Pn**	**10 31 58.9**	**+0.4**
ETLH				S			**Sb**	**10 32 11.9**	**-0.1**
EDH	**Donghe**	**1.07**	**242**	P			**Pb**	**10 31 58.7**	**+0.4**
EDH				*e*S			**Sb**	**10 32 10.8**	**-1.3**
EHD	**Haiduan**	**1.08**	**253**	*e*P			**Pg**	**10 32 00.4**	**+1.4**
EHD				*e*S			**Sg**	**10 32 13.5**	**+0.2**
EWUT	**Wuta**	**1.09**	**332**	*e*P			**Pn**	**10 31 60.0**	**+1.2**
EWUT				S			**Sg**	**10 32 13.2**	**-0.1**
ECS	**Chishang**	**1.09**	**250**	*e*P			**Pg**	**10 31 60.0**	**+0.8**
ECS				*e*S			**Sg**	**10 32 13.9**	**+0.5**
ENA	**Nanau**	**1.09**	**330**	P			**Pn**	**10 31 60.0**	**+1.1**
ENA				*e*S			**Sg**	**10 32 13.2**	**-0.2**
VWDT	**VWDT**	**1.13**	**284**	P			**Pg**	**10 32 00.2**	**+0.3**
VWDT				*e*S			**Sb**	**10 32 12.5**	**-1.2**
LDUT	**Ludao**	**1.13**	**225**	*i*P			**Pb**	**10 31 59.7**	**+0.5**
LDUT				*e*S			**Sb**	**10 32 12.7**	**-1.0**
OWD	**Renai**	**1.16**	**294**	P			**Pg**	**10 32 00.5**	**0.0**
OWD				S			**Sb**	**10 32 13.7**	**-1.2**
ESAO	**Su ao**	**1.18**	**338**	*e*P			**Pg**	**10 32 00.6**	**-0.3**
WHF	**Hehuan Shan**	**1.18**	**304**	P			**Pg**	**10 32 00.9**	**0.0**
WHF				S			**Sb**	**10 32 15.2**	**-0.6**
TWC	**Suao**	**1.21**	**339**	*e*P			**Pg**	**10 32 01.9**	**+0.4**
TWC				*e*S			**Sb**	**10 32 16.1**	**-0.1**
WUSB	**Renai**	**1.23**	**295**	P			**Pg**	**10 32 01.7**	**0.0**
WUSB				*i*S			**Sb**	**10 32 16.0**	**-0.7**
ELDTW	**Lidau**	**1.24**	**257**	*e*P			**Pb**	**10 32 01.9**	**+0.4**
ELDTW				S			**Sb**	**10 32 15.7**	**-1.4**
LONT	**Longtian**	**1.24**	**243**	P			**Pb**	**10 32 01.9**	**+0.7**
LONT				*e*S			**Sb**	**10 32 16.5**	**-0.6**
FUSS	**Fushou**	**1.26**	**308**	*e*P			**Pg**

JISG	**Ishigakijimahi**	**2.12**	**58**	*eP*	**Pb**	**10 32 15.9**	**-0.3**
JISG				*eS*	**Sn**	**10 32 39.8**	**+0.7**
PHUB	**P'eng-hu**	**2.53**	**271**	*eP*	**Pb**	**10 32 21.3**	**-2.0**
PHUB				*eS*	**Sn**	**10 32 49.1**	**-0.1**
PTMZ	**Houxiangcun**	**3.32**	**299**	*eP*	**Pn**	**10 32 31.4**	**+1.9**
PTMZ				*eS*	**Sn**	**10 33 08.4**	**-0.3**
KNMB	**Chin-men Tao**	**3.74**	**286**	*eP*	**Pn**	**10 32 36.4**	**+1.2**
KNMB				*eS*	**Sn**	**10 33 17.2**	**-1.8**
XPSS	**Dashiqiu**	**3.95**	**331**	*eP*	**Pn**	**10 32 38.8**	**+0.7**
XPSS				*eS*	**Sn**	**10 33 22.1**	**-2.1**
AXDP	**Jialang**	**4.23**	**290**	*eP*	**Pn**	**10 32 44.2**	**+2.2**
AXDP				S	**Sn**	**10 33 30.0**	**-1.0**

*HEL **18** 10:49:44.5±0.1, 62°.88N×24°.26E, h0km, ML1.3, Explosion*
*IDC **18** 10:49:46.1±1.8, 62°.91N×24°.62E, h0km, mbtmp3.4/1, ML2.2/1, Error ellipse: s-maj=28.3km s-min=9.3km az=74.0*

ISC 18 10:49:43.5±0.8, **62°.89N**±0°.02×**24°.27E**±0°.03, **h0km**, **n27,** σ**0**§**98**/**35**, **Finland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAF	**Ylistaro**	**0.75**	**282**	PG	**Pg**	**10 49 58.0**	**+0.2**
	baz=104						
VAF				SB	**Sg**	**10 50 07.6**	**+0.2**
VAF				smax	smax	10 50 07.8	
	comp=Z,2.3nm,0.2s						
KEF	**Keuruu**	**0.78**	**159**	PG	**Pg**	**10 49 58.4**	**0.0**
KEF				smax	smax	10 50 08.4	
	comp=Z,3.0nm,0.2s						
KEF				SG	**Sg**	**10 50 08.5**	**+0.1**
SUF	**Sumiainen**	**0.88**	**100**	PG	**Pg**	**10 50 00.6**	**+0.2**
	baz=279						
SUF				smax	smax	10 50 11.7	
	comp=Z,1.3nm,0.2s						
SUF				SB	**Sg**	**10 50 12.8**	**+1.1**
KPF	**Kankaanpaa**	**1.48**	**225**	PG	**Pn**	**10 50 11.1**	**-0.2**
KPF				smax	smax	10 50 28.3	
	comp=Z,1.8nm,0.2s						
KPF				SN	**Sn**	**10 50 31.3**	**0.0**
OBF8	**Ulkokalla**	**1.49**	**346**	PG	**Pb**	**10 50 12.0**	**-0.1**
OBF8				smax	smax	10 50 29.6	
	comp=Z,1.3nm,0.2s						
OBF8				SN	**Sb**	**10 50 31.5**	**0.0**
OUF	**Merijarvi**	**1.50**	**8**	PN	**Pg**	**10 50 12.2**	**0.0**
OUF				smax	smax	10 50 29.9	
	comp=Z,1.6nm,0.2s						
OUF				SN	**Sn**	**10 50 32.3**	**+0.5**
OBF0	**Syolatti, Pyha**	**1.61**	**359**	smax	smax	10 50 33.2	
	comp=Z,2.9nm,0.2s						
OBF0				SN	**Sg**	**10 50 35.9**	**+0.6**
FIA0	**FINESS Array S**	**1.68**	**149**	PG	**Pn**	**10 50 14.4**	**+0.3**
FIA0				smax	smax	10 50 34.5	
	comp=Z,3.6nm,0.2s						
FIA0				SG	**Sn**	**10 50 36.1**	**-0.2**
FINES	**FINESS Array B**	**1.68**	**149**	Pg	**Pb**	**10 50 14.8**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=337,slow=17,SNR=23						
FINES				Lg	Lg	10 50 37.0	
	comp=Z,1.5nm,0.3s,baz=335,slow=29,SNR=31						
NIF	**Nilsia**	**1.68**	**71**	PG	**Pb**	**10 50 15.1**	**-0.2**
	baz=249						
NIF				smax	smax	10 50 35.0	
	comp=Z,1.3nm,0.2s						
UMAU	**Umeaa**	**1.90**	**303**	PG	**Pb**	**10 50 18.9**	**-0.1**
UMAU				SG	**Sb**	**10 50 43.2**	**0.0**
OBF4	**Vikkela, Lumij**	**1.96**	**10**	smax	smax	10 50 43.3	
	comp=Z,1.2nm,0.2s						
OBF4				SG	**Sg**	**10 50 46.2**	**-0.4**
BURU	**Burvik**	**2.13**	**324**	SG	**Sb**	**10 50 50.0**	**+0.1**
RAF	**Rauma**	**2.22**	**213**	smax	smax	10 50 49.8	
	comp=Z,1.5nm,0.2s						
RAF				SG	**Sb**	**10 50 52.6**	**+0.2**
OUL	**Oulu**	**2.32**	**17**	PG	**Pg**	**10 50 27.1**	**-0.8**
HUSU	**Husum**	**2.34**	**283**	SG	**Sg**	**10 50 57.5**	**-1.1**
NUR	**Nurmijarvi**	**2.40**	**176**	smax	smax	10 50 55.0	
	comp=Z,2.4nm,0.2s						
NUR				SG	**Sb**	**10 50 57.9**	**+0.3**
RUF	**Ruokolahti**	**2.64**	**122**	smax	smax	10 51 02.2	
	comp=Z,1.2nm,0.2s						
RUF				SG	**Sb**	**10 51 05.2**	**+0.6**
MEF	**Metsahovi**	**2.68**	**179**	smax	smax	10 51 03.3	
	comp=Z,2.1nm,0.2s						
MEF				SG	**Sb**	**10 51 05.3**	**-0.5**
RMF	**Romuvaara**	**2.86**	**60**	PB	**Pb**	**10 50 33.6**	**-1.8**
RMF				smax	smax	10 51 09.0	
	comp=Z,0.6nm,0.2s						
HEMU	**Hemsoen**	**2.87**	**268**	PB	**Pn**	**10 50 33.0**	**+2.5**
HEMU				SB	**Sb**	**10 51 09.6**	**-1.6**
KALU	**Kalix**	**3.01**	**353**	SG	**Sb**	**10 51 16.8**	**+1.7**
TOF	**Tornio**	**3.20**	**0**	SG	**Sb**	**10 51 21.0**	**+0.3**
ERTU	**Ertsjaerv**	**3.79**	**347**	PG	**Pb**	**10 50 50.6**	**-0.5**
RNF	**Rovaniemi**	**3.81**	**11**	SN	**Sn**	**10 51 25.8**	**-3.0**
ARCES	**ARCESS Array B**	**6.69**	**4**	Pn	**Pn**	**10 51 24.2**	**+1.3**
	baz=176,slow=14,SNR=2.4						
	comp=Z,3.1nm,1.0s						
I43RU	**DUBNA INFRASON**	**8.98**	**128**	I	I	11 44 40.0	
	baz=321,slow=318,SNR=4.4						

*IDC **18** 10:58:19.1±0.5, 1°.75N×126°.56E, h0km, mb4.3/19, mbtmp4.3/21, ML4.5/2, MS3.4/5, Error ellipse: s-maj=26.8km s-min=11.4km az=80.0*
*DJA **18** 10:58:22.5±0.2, 2°.N±3°.×12°.7E±°, h10km, M4.5/16, mB5.0/7, mb4.8/12, MLv4.5/16, Mw(mB)4.3/7*
*NEIC **18** 10:58:24.4±2.3, 1°.75N±0°.06×126°.60E±0°.05, h31km±4km, mb4.6/29, Error ellipse: s-maj=9.0km s-min=6.3km az=163.0*

ISC 18 10:58:24.5±0.4, **1°.77N**±0°.05×**126°.57E**±0°.07, **h35km**, **n95,** σ**1**§**07**/**89**, **mb4.4**/**32**, **MS3.3**/**4**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.27**	**141**		**Pn**	**10 58 45.9**	**+0.1**
TNTI	**Ternate**	**1.27**	**141**	P	**Pn**	**10 58 46.0**	**+0.2**
TNTI	**Ternate**	**1.27**	**141**	P	**Pn**	**10 58 45.9**	**+0.1**
SGSI	**Sangihe**	**2.17**	**331**	P	**Pn**	**10 58 57.5**	**-0.7**
KMSI	**Cibinong**	**2.85**	**245**	P	**Pn**	**10 59 08.0**	**+0.5**
SANI	**Sanana**	**3.84**	**189**	P	**Pn**	**10 59 21.4**	**+0.3**
SANI	**Sanana**	**3.84**	**189**	P	**Pn**	**10 59 21.4**	**+0.3**
LUWI	**Luwuk**	**4.72**	**234**		**Pn**	**10 59 34.6**	**+1.4**
LUWI	**Luwuk**	**4.72**	**234**	P	**Pn**	**10 59 33.7**	**+0.5**
MRSI	**Marisa**	**4.81**	**255**	P	**Pn**	**10 59 35.4**	**+1.0**
NLAI	**Namlea**	**5.00**	**174**	P	**Pn**	**10 59 38.5**	**+1.3**
	0.4nm2μm36nm,0.5s						
APSI	**Ampana**	**5.60**	**242**	P	**Pn**	**10 59 47.5**	**+2.2**
TOLI2	**Tolitoli**	**5.83**	**264**		**Pn**	**10 59 46.8**	**-1.7**
TOLI2	**Tolitoli**	**5.83**	**264**	P	**Pn**	**10 59 47.0**	**-1.5**
MPSI	**Mapaga**	**6.83**	**258**	P	**Pn**	**11 00 04.1**	**+1.9**
	0.2nm900nm64nm,1.0s						
TTSI	**Tana Toraja**	**8.28**	**235**	P	**Pn**	**11 00 22.5**	**+0.4**
	510nm37nm,0.7s						
MYLDM	**Lahad Datu**	**8.74**	**293**		**Pn**	**11 00 30.1**	**+1.6**
SPSI	**Sidrap Palu**	**8.87**	**230**	P	**Pn**	**11 00 30.8**	**+0.5**
	2μm42nm,0.9s						
BNSI	**Bone**	**8.91**	**226**	P	**Pn**	**11 00 31.4**	**+0.6**
	34nm,0.5s						
BKSI	**Bulukumba**	**9.55**	**222**	P	**Pn**	**11 00 40.2**	**+0.6**
	362nm21nm,0.5s						
KAPI	**Kappang**	**9.59**	**225**	Pn	**Pn**	**11 00 40.1**	**0.0**
	7.9nm,0.3s,baz=51,slow=14,SNR=4.7						
	18nm,0.3s						
BSSI	**Bau Bau, Buton**	**9.94**	**218**	P	**Pn**	**11 00 47.3**	**+2.4**
	48nm,0.5s						
EDFI	**Ende, Flores**	**11.53**	**205**	P	**Pn**	**11 01 07.7**	**+0.9**
TGY	**Tagaytay City**	**13.46**	**336**	LR	LR	11 08 10.4	
	comp=Z,133nm,19.0s,baz=166,slow=44						
PLAI	**Plampang**	**13.70**	**220**	P	**Pn**	**11 01 35.3**	**-1.1**
PLAI	**Plampang**	**13.70**	**220**	P	**Pn**	**11 01 38.3**	**+1.9**
TWSI	**Taliwang, Sumb**	**14.22**	**223**	P	**P**	**11 01 50.1**	**-0.3**
SBUM	**Sibu**	**14.36**	**273**		**P**	**11 01 51.2**	**-0.7**
SBUM	**Sibu**	**14.36**	**273**	P	**Pn**	**11 01 44.4**	**-1.0**
MTN	**Manton Dam**	**15.21**	**163**	P	**Pn**	**11 01 57.2**	**+0.4**
MTN				IAmb	IAmb	11 02 15.0	
	comp=Z,27nm,1.4s						
KNRA	**Kununurra**	**17.47**	**173**		**Pn**	**11 02 24.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.77**	**183**	P	**P**	**11 02 51.0**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=7.0,slow=12,SNR=13						
	comp=Z,6.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.77**	**183**	P	**P**	**11 02 51.0**	**-0.7**
GUMO	**Guam**	**21.57**	**56**	LR	LR	11 11 17.6	
	comp=Z,59nm,19.6s,baz=210,slow=36						
YULB	**Yu-li**	**22.09**	**347**	P	**P**	**11 03 13.9**	**-2.9**
YULB				IAmb	IAmb	11 03 54.0	
	comp=Z,34nm,1.2s						
TPUB	**Ta-pu**	**22.16**	**345**	P	**P**	**11 03 15.8**	**-1.7**
TPUB	**Ta-pu**	**22.16**	**345**	P	**P**	**11 03 16.4**	**-1.2**
COEN	**Coen**	**22.69**	**134**	P	**P**	**11 03 22.5**	**-0.8**
COEN	**Coen**	**22.69**	**134**	P	**P**	**11 03 23.4**	**+0.1**
WB0	**Warramunga Arr**	**22.74**	**161**		**P**	**11 03 22.6**	**-1.1**
WB0				IAmb	IAmb	11 03 24.1	
	comp=Z,26nm,0.9s						
WRAB	**Tennant Creek**	**22.88**	**161**	P	**P**	**11 03 24.1**	**-1.1**
WRAB				IAmb	IAmb	11 03 25.6	
	comp=Z,25nm,0.9s						
WRAB	**Tennant Creek**	**22.88**	**161**	P	**P**	**11 03 23.8**	**-1.4**
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**11 03 23.6**	**-1.7**
	comp=Z,20nm,0.8s,baz=337,slow=11,SNR=95						
WRA				PcP	**PcP**	**11 07 15.3**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=316,slow=2.8,SNR=4.8						
	comp=Z,20nm,0.8s						
WB1	**Warramunga Ar.**	**22.90**	**161**	P	**P**	**11 03 24.2**	**-1.2**
WR8	**Warramunga Arr**	**22.95**	**161**		**P**	**11 03 24.6**	**-1.3**
WR8				IAmb	IAmb	11 03 26.8	
	comp=Z,19nm,0.7s						
PMG	**Port Moresby**	**23.32**	**119**	LR	LR	11 13 38.9	
	comp=Z,112nm,18.3s,baz=328,slow=39						
MBWA	**Marble Bar**	**23.75**	**196**	P	**P**	**11 03 32.9**	**-0.9**
MBWA				IAmb	IAmb	11 03 38.3	
	comp=Z,13nm,1.1s						
PSA00	**Pilbara Seismi**	**24.12**	**195**	P	**P**	**11 03 35.3**	**-1.9**
PSA00				IAmb	IAmb	11 03 41.1	
	comp=Z,7.7nm,0.7s						
QIS	**Mount Isa**	**25.60**	**151**	P	**P**	**11 03 51.1**	**+0.4**
AS31	**Alice Springs**	**26.27**	**165**		**P**	**11 03 56.9**	**+0.1**
ASAR	**Alice Springs**	**26.27**	**165**	P	**P**	**11 03 57.0**	**+0.2**
	comp=Z,6.9nm,0.8s,baz=344,slow=11,SNR=68						
ASAR				PcP	**PcP**	**11 07 22.9**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=350,slow=2.9,SNR=4.7						
	comp=Z,6.9nm,0.8s						
ASAR	**Alice Springs**	**26.27**	**165**		**P**	**11 03 56.2**	**-0.5**
MEEK	**Meekatharra**	**29.27**	**195**	P	**P**	**11 04 23.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**31.77**	**303**	P	**P**	**11 04 46.1**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=117,slow=9.3,SNR=1.9						
CMAR				PcP	**PcP**	**11 07 37.4**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=133,slow=2.6,SNR=1.2						
	comp=Z,0.7nm,0.3s						
INKA	**Innaminka**	**32.35**	**156**	P	**P**	**11 04 51.0**	**+0.3**
FORT	**Forrest**	**32.40**	**178**	P	**P**	**11 04 50.5**	**-0.6**
KSRS	**Korea Array**	**35.53**	**2**	P	**P**	**11 05 19.1**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=180,slow=11,SNR=4.5						
	comp=Z,1.3nm,0.8s						
BBOO	**Buckleboo**	**35.55**	**166**	P	**P**	**11 05 17.9**	**-0.5**
BBOO				IAmb	IAmb	11 05 24.8	
	comp=Z,9.3nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.62**	**194**	P	**P**	**11 05 18.6**	**-0.5**
MJAR	**Matsushiro Arr**	**36.23**	**16**	P	**P**	**11 05 24.1**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=185,slow=10,SNR=4.3						
MJAR				LR	LR	11 19 34.6	
	comp=Z,63nm,20.1s,baz=171,slow=35						
	comp=Z,1.9nm,0.8s						
MJAR	**Matsushiro Arr**	**36.23**	**16**	IAmb	IAmb	11 05 26.4	
	comp=Z,3.1nm,1.1s						
STKA	**Stephens Creek**	**36.37**	**158**	P	**P**	**11 05 24.6**	**-0.9**
	comp=Z,2.0nm,0.4s,baz=316,slow=7.2,SNR=10						
STKA				LR	LR	11 21 51.3	
	comp=Z,45nm,19.7s,baz=26,slow=39						
	comp=Z,2.0nm,0.4s						
ARMA	**Armidale**	**39.94**	**145**	P	**P**	**11 05 55.7**	**0.0**
ARMA				IAmb	IAmb	11 06 19.3	
	comp=Z,19nm,1.5s						
CAN	**Canberra**	**42.45**	**152**	P	**P**	**11 06 15.9**	**-0.2**
USRK	**Ussuriysk Ar.**	**42.52**	**6**	P	**P**	**11 06 16.5**	**0.0**
	comp=Z,1nm,0.7s,baz=123,slow=5.3,SNR=4.4						
	comp=Z,2.1nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**42.68**	**64**	T	T	11 52 21.3	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**42.70**	**64**	T	T	11 52 08.2	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**42.70**	**64**	T	T	11 52 11.6	
	baz=252						
HILR	**Hailar Array B**	**47.96**	**354**	P	**P**	**11 07 00.9**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=138,slow=9.4,SNR=2.9						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**49.10**	**342**	P	**P**	**11 07 09.2**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=150,slow=11,SNR=8.2						
	comp=Z,1.3nm,0.6s						
PETK	**Petropavlovsk-**	**57.29**	**22**	P	**P**	**11 08 09.6**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=219,slow=7.3,SNR=7.8						
	comp=Z,2.3nm,0.6s						
MKAR	**Mainchi Array**	**59.07**	**326**	P	**P**	**11 08 20.1**	**-1.2**
	comp=Z,2.2nm,0.4s,baz=119,slow=7.7,SNR=42						
	comp=Z,2.2nm,0.4s						
MKAR	**Makanchi Array**	**59.07**	**326**		**P**	**11 08 20.3**	**-1.0**
TARG	**Taragay, Kyrgy**	**59.10**	**319**		**P**	**11 08 21.5**	**-0.5**
TARG				IAmb	IAmb	11 08 26.5	
	comp=Z,2.7nm,0.7s						
MAKZ	**Makanchi**	**59.26**	**326**	P	**P**	**11 08 21.2**	**-1.3**
MAKZ				IAmb	IAmb	11 08 51.7	
	comp=Z,4.2nm,0.9s						
KDJ	**Kajisay**	**59.71**	**319**	P	**P**	**11 08 25.6**	**-0.3**
KDJ				IAmb	IAmb	11 08 27.9	
	comp=Z,5.4nm,0.7s						
ZALV	**Zalesovo Beam**	**62.26**	**334**	P	**P**	**11 08 41.5**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=130,slow=6.1,SNR=4.1						
	comp=Z,0.6nm,0.3s						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**11 08 49.0**	**-0.8**
	comp=Z,3.5nm,0.4s,baz=130,slow=6.6,SNR=28						
	comp=Z,3.5nm,0.4s						
KURK	**Kurchatov**	**63.30**	**328**		**P**	**11 08 49.0**	**-0.8**
BVAR	**Borovoye Array**	**68.87**	**327**	P	**P**	**11 09 25.6**	**0.0**
	comp=Z,2.0nm,0.5s,baz=99,slow=7.8,SNR=6.8						
	comp=Z,2.0nm,0.5s						
AB31	**Akbulak array**	**73.56**	**321**	P	**P**	**11 09 53.2**	**-0.8**
ABKAR	**Akbulak array**	**73.56**	**321**	P	**P**	**11 09 53.1**	**-0.9**
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**11 10 37.5**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=327,slow=6.5,SNR=12						
	comp=Z,1.6nm,0.6s						
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**11 10 37.7**	**-0.1**
VNDA				IAmb	IAmb	11 10 39.5	
	comp=Z,4.7nm,1.2s						
MAW	**Mawson**	**81.88**	**200**	P	**P**	**11 10 40.1**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=56,slow=3.1,SNR=7.9						
	comp=Z,2.6nm,0.8s						
E19K	**Redstone River**	**83.09**	**22**	P	**P**	**11 10 46.9**	**+0.5**
E19K				IAmb	IAmb	11 10 50.8	
	comp=Z,7.4nm,0.9s						
D20K	**Etivluk River**	**83.58**	**21**	P	**P**	**11 10 50.3**	**+1.5**
KBZ	**Khabaz**	**84.21**	**314**	P	**P**	**11 10 52.8**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=80,slow=6.1,SNR=3.9						
	comp=Z,1.6nm,0.9s						
ILAR	**Eielson Array**	**86.93**	**25**	P	**P**	**11 11 04.5**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=250,slow=4.4,SNR=6.5						
	comp=Z,0.3nm,0.7s						
QSPA	**South Pole Qui**	**91.69**	**180**	P	**P**	**11 11 31.4**	**+3.2**
	comp=Z,0.6nm,0.5s,baz=351,slow=7.7,SNR=9.4						
QSPA	**South Pole Qui**	**91.69**	**180**	IAmb	IAmb	11 11 48.6	
	comp=Z,2.6nm,1.2s						
ARCES	**ARCESS Array B**	**92.22**	**340**	P	**P**	**11 11 31.6**	**+1.2**
	comp=Z,5.5nm,1.1s,baz=99,slow=6.7,SNR=3.9						
	comp=Z,5.5nm,1.1s						
ARCES	**ARCESS Array B**	**92.22**	**340**	IAmb	IAmb	11 11 37.8	
	comp=Z,20nm,1.4s						
TXAR	**Lajitas Array**	**122.90**	**53**	PKP	**PKPdf**	**11 17 17.8**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=330,slow=2.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**123.36**	**287**	PKP	**PKPdf**	**11 17 18.4**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=74,slow=4.0,SNR=2.9						

*IDC **18** 11:07:27.2±5.5, 8°.30S×128°.24E, h147km±61km, mb3.1/2, mbtmp3.8/6, Error ellipse: s-maj=55.0km s-min=18.5km az=42.0*

ISC 18 11:07:27.1±1.1, **8°.29S**±0°.09×**128°.3E**±0°.1, **h150km**, **n6,** σ**1**§**10**/**10**, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.93**	**247**	P	**Pn**	**11 08 39.0**	**-0.8**
	18nm,0.4s,baz=111,slow=6.9,SNR=2.2						
BATI				S	**Sn**	**11 09 36.0**	**-0.3**
	15nm,0.3s,baz=87,slow=18,SNR=1.7						
FITZ	**Fitzroy Crossi**	**10.08**	**194**	P	**Pn**	**11 09 48.5**	**+0.3**
	6.3nm,0.5s,baz=32,slow=12,SNR=31						
FITZ				S	**Sn**	**11 11 40.7**	**+0.8**
	1.3nm,0.3s,baz=295,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**12.99**	**154**	P	**Pn**	**11 10 25.9**	**-0.3**
	2.0nm,0.7s,baz=324,slow=14,SNR=22						
WRA				S	**Sn**	**11 12 47.9**	**-2.0**
	3.8nm,0.7s,baz=330,slow=23,SNR=9.8						
ASAR	**Alice Springs**	**16.21**	**161**	P	**P**	**11 11 08.4**	**+1.6**
	0.9nm,0.6s,baz=329,slow=10,SNR=25						
ASAR				S	**S**	**11 14 07.2**	**+0.4**
	0.6nm,0.5s,baz=342,slow=23,SNR=5.3						
SONM	**Songino Array**	**59.14**	**343**	P	**P**	**11 17 12.3**	**+0.2**
	0.5nm,0.8s,baz=164,slow=5.7,SNR=2.5						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**72.73**	**329**	P	**P**	**11 18 39.0**	**+0.3**
	0.3nm,0.6s,baz=122,slow=4.9,SNR=4.6						
	0.3nm,0.6s						

*IDC **18** 11:08:19.6±2.4, 31°.27S×177°.48W, h0km, mb4.0/3, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=58.1km s-min=29.2km az=115.0*
*NEIC **18** 11:08:22.7±2.2, 31°.11S±0°.06×177°.7W±0°.2, h10km±2km, mb4.3/9, Error ellipse: s-maj=28.1km s-min=10.5km az=95.0*

ISC 18 11:08:23.7±1.4, **31°.04S**±0°.08×**177°.7W**±0°.2, **h27km**, **n26,** σ**1**§**82**/**20**, **mb4.2**/**8**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.79**	**355**	Pn	**Pb**	**11 08 54.6**	**-1.2**
	81nm,0.3s,baz=156,slow=19,SNR=5.2						
RAO				Sn	**Sn**	**11 09 13.8**	**-0.9**
	214nm,0.3s,baz=143,slow=20,SNR=9.2						
	210nm,0.2s						
URZ	**Urewera**	**8.36**	**209**	Pn	**Pn**	**11 10 19.2**	**-3.9**
	0.8nm,0.3s,baz=14,slow=8.3,SNR=7.7						
URZ				Sn	Sn	11 11 45.9	-11
	0.4nm,0.3s,baz=24,slow=20,SNR=1.4						
	6.3nm,0.9s						
RTZ	**Ruatahuna**	**8.72**	**208**	Pn	**Pn**	**11 10 24.9**	**-3.1**
BKZ	**Black Stump Fm**	**9.38**	**209**	Pn	**Pn**	**11 10 34.6**	**-2.6**
MRZ	**Mangatainoka R**	**11.02**	**208**	Pn	**Pn**	**11 10 59.2**	**-0.4**
STKA	**Stephens Creek**	**34.56**	**258**	P	**P**	**11 15 11.9**	**+1.8**
	3.6nm,1.2s,baz=49,slow=5.4,SNR=2.0						
	3.6nm,1.2s						
INKA	**Innaminka**	**36.18**	**264**	P	**P**	**11 15 24.8**	**+0.7**
BBOO	**Buckleboo**	**39.02**	**255**	P	**P**	**11 15 48.8**	**+0.7**
AS31	**Alice Springs**	**43.31**	**267**	P	**P**	**11 16 25.4**	**+1.9**
AS31				IAmb	IAmb	11 16 34.6	
	comp=Z,1.4nm,0.5s						
ASAR	**Alice Springs**	**43.31**	**267**	P	**P**	**11 16 25.0**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=107,slow=7.4,SNR=5.7						
	comp=Z,0.7nm,0.5s						
WR8	**Warramunga Arr**	**44.21**	**273**	P	**P**	**11 16 32.3**	**+1.5**
WR8				IAmb	IAmb	11 16 38.1	
	comp=Z,5.1nm,1.3s						
WRAB	**Tennant Creek**	**44.35**	**273**	P	**P**	**11 16 31.9**	**+0.1**
WRAB				IAmb	IAmb	11 16 42.9	
	comp=Z,2.3nm,0.7s						
WRA	**Warramunga Arr**	**44.35**	**273**	P	**P**	**11 16 33.5**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=111,slow=8.1,SNR=8.4						
	comp=Z,0.8nm,0.3s						
WB0	**Warramunga Arr**	**44.38**	**273**	P	**P**	**11 16 34.0**	**+1.9**
WB0				IAmb	IAmb	11 17 11.0	
	comp=Z,11nm,1.4s						
KNRA	**Kununurra**	**50.98**	**275**	P	**P**	**11 17 23.3**	**0.0**
FITZ	**Fitzroy Crossi**	**52.59**	**270**	P	**P**	**11 17 35.7**	**+0.4**
QSPA	**South Pole Qui**	**59.07**	**180**	P	P	11 18 28.4	+7.1
	comp=Z,0.8nm,0.5s,baz=0.0,slow=6.1,SNR=13						
QSPA	**South Pole Qui**	**59.07**	**180**	P	**P**	**11 18 22.8**	**+1.5**
QSPA				IAmb	IAmb	11 19 01.7	
	comp=Z,4.4nm,1.2s						
H03S2	**Juan Fernandez**	**79.92**	**123**	T	T	12 49 47.1	
	baz=238,slow=74,SNR=11						
H03S1	**Juan Fernandez**	**79.93**	**123**	T	T	12 49 45.2	
	baz=238,slow=74,SNR=8.2						
H03S3	**Juan Fernandez**	**79.94**	**123**	T	T	12 49 43.2	
	baz=238,slow=74,SNR=10						
H03N3	**Juan Fernandez**	**80.12**	**123**	T	T	12 49 48.5	
	baz=233						
H03N2	**Juan Fernandez**	**80.12**	**123**	T	T	12 49 59.9	
	baz=233						
H03N1	**Juan Fernandez**	**80.13**	**123**	T	T	12 49 55.8	
	baz=233						
KURBB	**Kurchatov Arra**	**121.69**	**313**	PKP	**PKiKP**	**11 27 15.8**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=104,slow=2.0,SNR=1.8						
FINES	**FINESS Array B**	**145.82**	**340**	PKPbc	**PKPab**	**11 28 00.1**	**0.0

BOQS	**Boqueron**	**0.05**	**293**	⇓*i*P	**Pg**	**11 21 57.2**	**+0.4**
MAGS	**Ministerio de**	**0.06**	**241**	*e*P	**Pg**	**11 21 57.2**	**+0.4**
UDBS	**Universidad Do**	**0.07**	**89**	⇑*e*P	**Pg**	**11 21 57.3**	**+0.4**
UDBS	**Universidad Do**	**0.07**	**89**	S	**Sg**	**11 21 59.1**	**+0.7**
UDBS	**Universidad Do**	**0.07**	**89**	P	**Pg**	**11 21 57.3**	**+0.4**
PMON	**Piamonte**	**0.08**	**269**	⇓*i*P	**Pg**	**11 21 57.6**	**+0.6**
PMON	**Piamonte**	**0.08**	**269**	P	**Pg**	**11 21 57.6**	**+0.6**
PMON	**Piamonte**	**0.08**	**269**	S	**Sg**	**11 21 59.4**	**+0.8**
LOMA	**Loma Larga**	**0.09**	**140**	⇓*i*P	**Pg**	**11 21 57.2**	**0.0**
LOMA	**Loma Larga**	**0.09**	**140**	P	**Pg**	**11 21 57.1**	**0.0**
LOMA	**Loma Larga**	**0.09**	**140**	S	**Sg**	**11 21 59.4**	**+0.5**
PANCS	**Alcalda de**	**0.11**	**154**	*e*P	**Pg**	**11 21 57.6**	**+0.1**
PANCS	**Alcalda de**	**0.11**	**154**	P	**Pg**	**11 21 57.6**	**+0.1**
PANCS	**Alcalda de**	**0.11**	**154**	S	**Sg**	**11 21 59.4**	**+0.1**
LFU	**La Fuente**	**0.12**	**73**	⇑*i*P	**Pg**	**11 21 58.2**	**+0.6**
QUEZ	**Alcaldia de Qu**	**0.13**	**342**	*e*P	**Pg**	**11 21 58.4**	**+0.7**
CEDA	**San Andres**	**0.18**	**299**	*e*P	**Pg**	**11 21 59.4**	**+0.8**
CEDA	**San Andres**	**0.18**	**299**	P	**Pg**	**11 21 59.2**	**+0.6**
LBRS	**Las Brisas**	**0.18**	**83**	*e*P	**Pg**	**11 21 59.2**	**+0.5**
LFRS	**El Faro**	**0.19**	**119**	⇑*i*P	**Pg**	**11 21 59.2**	**+0.4**
JAYA	**Jayaque - finc**	**0.22**	**254**	*e*P	**Pg**	**11 21 59.9**	**+0.6**
JAYA	**Jayaque - finc**	**0.22**	**254**	*i* P	**Pg**	**11 21 59.9**	**+0.6**
JAYA				*e*S	**Sg**	**11 22 03.5**	**+1.1**
JAYA	**Jayaque - finc**	**0.22**	**254**	P	**Pg**	**11 21 59.9**	**+0.6**
LALI	**Alcalda de L**	**0.24**	**201**	⇑*i*P	**Pg**	**11 22 00.4**	**+0.7**
LALI	**Alcalda de L**	**0.24**	**201**	*i* P	**Pg**	**11 22 00.4**	**+0.7**
LALI	**Alcalda de L**	**0.24**	**201**	P	**Pg**	**11 22 00.3**	**+0.7**
LALI	**Alcalda de L**	**0.24**	**201**	S	**Sg**	**11 22 04.5**	**+1.5**
PAVA	**Las Pavas**	**0.29**	**90**	⇓*e*P	**Pg**	**11 22 01.3**	**+0.7**
PAVA	**Las Pavas**	**0.29**	**90**	P	**Pg**	**11 22 01.3**	**+0.7**
PAVA	**Las Pavas**	**0.29**	**90**	S	**Sg**	**11 22 05.8**	**+1.4**
SNJE	**San Jose**	**0.40**	**293**	⇓*e*P	**Pg**	**11 22 03.3**	**+0.8**
CEVE	**Cerro Verde**	**0.40**	**287**	*e*P	**Pb**	**11 22 03.7**	**-0.6**
CEVE	**Cerro Verde**	**0.40**	**287**	P	**Pb**	**11 22 03.7**	**-0.6**
SBLS	**San Blas**	**0.40**	**288**	⇓*i*P	**Pg**	**11 22 03.7**	**+0.9**
UNIC	**Universidad Ca**	**0.41**	**311**	P	**Pg**	**11 22 03.5**	**+0.7**
UNIC	**Universidad Ca**	**0.41**	**311**	S	**Sg**	**11 22 09.5**	**+1.3**
UESV	**Universidad de**	**0.44**	**100**	P	**Pg**	**11 22 03.9**	**+0.5**
UESV	**Universidad de**	**0.44**	**100**	S	**Sg**	**11 22 10.4**	**+1.2**
RTR	**El Retiro**	**0.44**	**294**	*e*P	**Pb**	**11 22 04.5**	**-0.5**
TECO	**Alcaldia de Te**	**0.47**	**112**	*e*P	**Pg**	**11 22 04.2**	**+0.2**
TECO	**Alcaldia de Te**	**0.47**	**112**	P	**Pg**	**11 22 04.2**	**+0.2**
TECO	**Alcaldia de Te**	**0.47**	**112**	S	**Sg**	**11 22 10.9**	**+0.7**
SCLA	**Alcaldia de Sa**	**0.49**	**91**	*e*P	**Pg**	**11 22 05.0**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.49**	**91**	P	**Pg**	**11 22 04.9**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.49**	**91**	S	**Sb**	**11 22 12.3**	**-0.8**
LLGN	**La Laguna**	**0.53**	**32**	*e*P	**Pg**	**11 22 05.2**	**+0.1**
LLGN	**La Laguna**	**0.53**	**32**	P	**Pg**	**11 22 05.1**	**+0.1**
LLGN	**La Laguna**	**0.53**	**32**	S	**Sg**	**11 22 12.8**	**+0.8**
NUBE	**Las Nubes**	**0.56**	**289**	*e*P	**Pg**	**11 22 06.2**	**+0.4**
NUBE	**Las Nubes**	**0.56**	**289**	*i* P	**Pg**	**11 22 06.2**	**+0.4**
NUBE				*e*S	**Sb**	**11 22 14.5**	**-0.9**
NUBE	**Las Nubes**	**0.56**	**289**	P	**Pg**	**11 22 06.3**	**+0.4**
RBDL	**Robledal**	**0.59**	**312**	*e*P	**Pg**	**11 22 06.5**	**+0.2**
LOAL	**Lomas de Alarc**	**0.60**	**298**	P	**Pg**	**11 22 06.5**	**0.0**
MTO3	**Montecristo**	**0.69**	**350**	Pg	**Pg**	**11 22 08.2**	**0.0**
MTO3				Sg	**Sg**	**11 22 17.9**	**+0.6**
MTO3				IAML		11 22 23.6	
	comp=E,1μm,0.3s						
MTO3	**Montecristo**	**0.69**	**350**	*e*P	**Pg**	**11 22 08.2**	**0.0**
MTO3	**Montecristo**	**0.69**	**350**	*i* P	**Pg**	**11 22 08.2**	**0.0**
MTO3	**Montecristo**	**0.69**	**350**	P	**Pg**	**11 22 08.3**	**0.0**
MTO3	**Montecristo**	**0.69**	**350**	S	**Sg**	**11 22 17.9**	**+0.6**
TECA	**Tecapa**	**0.74**	**107**	*e*P	**Pg**	**11 22 09.4**	**+0.3**
JUAM	**Asuncion Mita**	**0.77**	**323**	*i* P	**Pg**	**11 22 09.8**	**+0.1**
FAME	**Alcalda de Sa**	**0.77**	**280**	P	**Pg**	**11 22 09.7**	**0.0**
ESQI	**Esquipulas**	**0.85**	**353**		**Pg**	**11 22 11.2**	**+0.1**
ESQI				Sg	**Sb**	**11 22 23.4**	**-0.1**
ESQI				IAML		11 22 23.8	
	comp=E,1μm,0.4s						
ESQI				IAML		11 22 23.9	
	comp=N,657nm,0.4s						
ESQI	**Esquipulas**	**0.85**	**353**	*e*P	**Pg**	**11 22 11.2**	**+0.1**
ESQI	**Esquipulas**	**0.85**	**353**	P	**Pg**	**11 22 11.2**	**+0.1**
PACA	**Pacayal**	**0.92**	**105**	*e*P	**Pb**	**11 22 13.2**	**+0.2**
CNCH	**Conchagua**	**1.43**	**108**	*e*P	**Pn**	**11 22 21.4**	**+0.2**
CNCH	**Conchagua**	**1.43**	**108**	P	**Pn**	**11 22 21.3**	**+0.1**
APG	**El Apazote**	**1.75**	**317**	*e*P	**Pb**	**11 22 26.9**	**-0.5**
CSGN	**Cosiguina Volc**	**1.79**	**114**	P	**Pn**	**11 22 26.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.93**	**80**	Pn	**Pn**	**11 22 27.4**	**-0.7**
TGUH				IAML		11 22 57.9	
	comp=N,392nm,0.7s						
TGUH				IAML		11 22 59.8	
	comp=N,372nm,0.9s						
HERN	**Volcan Telica**	**2.58**	**115**	Pn	**Pn**	**11 22 35.7**	**-1.3**
HERN				IAML		11 23 25.4	
	comp=N,2μm,0.3s						
HERN				IAML		11 23 26.6	
	comp=E,824nm,0.4s						
CNGN	**Cerro Negro**	**2.75**	**116**	Pn	**Pn**	**11 22 37.8**	**-1.5**
PETF	**Flores**	**3.24**	**349**		**Pb**	**11 22 54.0**	**+1.3**
PETF				IAML		11 23 39.9	
	comp=N,219nm,0.6s						
PETF				IAML		11 23 43.1	
	comp=E,286nm,0.5s						
BOAB	**BOACO BROADBAN**	**3.69**	**109**	Pn	**Pn**	**11 22 51.1**	**-1.2**
BOAB				IAML		11 24 08.7	
	comp=E,48nm,1.4s						
CCIG	**Comitan**	**3.79**	**313**	Pn	**Pn**	**11 22 52.9**	**-1.0**

IDC ***18*** *11:22:38.6±0.8, 1°.42N×126°.16E, h0km, mb3.9/8, mbtmp3.9/9, ML4.0/1, Error ellipse: s-maj=73.3km s-min=16.2km az=72.0*

DJA ***18*** *11:22:42.3±0.3, 1°.N±3°×12°.6E±°, h10km, M4.6/14, mB4.7/2, mb4.1/5, MLv4.8/14, Mw(mB)4.0/2*

NEIC ***18*** *11:22:44.7±1.5, 1°.50N±0°.08×126°.53E±0°.08, h35km±2km, mb4.0/10, Error ellipse: s-maj=18.1km s-min=6.2km az=226.0*

ISC 18 11:22:44.2±0.7,1°.43N±0°.06×126°.43E±0°.07,h35km,n34, σ1ş21/32,mb4.0/12,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.14**	**125**		**Pn**	**11 23 04.9**	**+1.1**
TNTI	**Ternate**	**1.14**	**125**	P	**Pn**	**11 23 04.7**	**+1.0**
SGSI	**Sangihe**	**2.42**	**338**	P	**Pn**	**11 23 21.7**	**+0.5**
KMSI	**Cibinong**	**2.59**	**251**	P	**Pn**	**11 23 22.7**	**-0.9**
SANI	**Sanana**	**3.48**	**187**	P	**Pn**	**11 23 36.2**	**+0.3**
LUWI	**Luwuk**	**4.40**	**236**	Pn	**Pn**	**11 23 51.9**	**+3.3**
LUWI	**Luwuk**	**4.40**	**236**	P	**Pn**	**11 23 47.8**	**-0.8**
MRSI	**Marisa**	**4.58**	**258**	P	**Pn**	**11 23 50.1**	**-1.0**
NLAI	**Namlea**	**4.69**	**172**	P	**Pn**	**11 23 53.1**	**+0.6**
APSI	**Ampana**	**5.31**	**244**	P	**Pn**	**11 24 03.2**	**+2.1**
TOLI2	**Tolitoli**	**5.65**	**267**		**Pn**	**11 24 06.4**	**+0.6**
MPSI	**Mapaga**	**6.62**	**261**	P	**Pn**	**11 24 18.1**	**-0.9**
MYLDM	**Lahad Datu**	**8.75**	**295**		**Pn**	**11 24 51.5**	**+3.3**
MTN	**Manton Dam**	**14.93**	**162**	Pn	**Pn**	**11 26 12.7**	**-0.1**
KNRA	**Kununurra**	**17.15**	**172**	Pn	**Pn**	**11 26 41.8**	**+0.6**
KNRA				IAmb	IAmb	11 26 57.1	
	comp=Z,178nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.42**	**182**	Pn	**P**	**11 27 07.3**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=4.9,slow=10,SNR=12						
	comp=Z,1.1nm,0.4s						
WB0	**Warramunga Arr**	**22.47**	**160**		**P**	**11 27 40.5**	**-0.1**
COEN	**Coen**	**22.57**	**133**	P	**P**	**11 27 41.5**	**-0.2**
COEN				IAmb	IAmb	11 28 13.7	
	comp=Z,5.5nm,0.9s						
WRAB	**Tennant Creek**	**22.61**	**160**	P	**P**	**11 27 42.2**	**+0.2**
WRAB				IAmb	IAmb	11 27 44.3	
	comp=Z,6.8nm,0.9s						
WRA	**Warramunga Arr**	**22.61**	**160**	P	**P**	**11 27 41.7**	**-0.4**
	comp=Z,6.4nm,0.8s,baz=340,slow=11,SNR=51						
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**22.61**	**160**	P	**P**	**11 27 41.2**	**-0.9**
WR8	**Warramunga Arr**	**22.68**	**160**		**P**	**11 27 42.8**	**-0.1**
WR8				IAmb	IAmb	11 27 44.7	
	comp=Z,5.9nm,0.8s						
AS31	**Alice Springs**	**25.98**	**164**		**P**	**11 28 14.4**	**+0.5**
AS31				IAmb	IAmb	11 28 19.8	
	comp=Z,1.5nm,0.9s						
ASAR	**Alice Springs**	**25.98**	**164**	P	**P**	**11 28 14.4**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=340,slow=9.0,SNR=34						
	comp=Z,1.1nm,0.4s						
STKA	**Stephens Creek**	**36.11**	**158**	P	**P**	**11 29 43.1**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=334,slow=6.5,SNR=6.5						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**49.38**	**342**	P	**P**	**11 31 30.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=140,slow=9.1,SNR=1.5						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**62.50**	**334**	P	**P**	**11 33 02.9**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=141,slow=4.8,SNR=2.2						
	comp=Z,0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	**P**	**11 33 09.4**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=127,slow=6.4,SNR=15						
	comp=Z,1.4nm,0.5s						
KURK	**Kurchatov**	**63.52**	**328**	P	**P**	**11 33 09.4**	**-1.5**
KURK	**Kurchatov**	**63.52**	**328**	IAmb	IAmb	11 33 15.1	
	comp=Z,3.8nm,0.7s						
VNDA	**Vanda**	**81.20**	**173**	P	**P**	**11 34 55.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=332,slow=6.3,SNR=5.5						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**81.20**	**173**	IAmb	IAmb	11 35 34.7	
	comp=Z,2.7nm,1.2s						
ILAR	**Eielson Array**	**87.30**	**25**	P	**P**	**11 35 26.8**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=258,slow=4.9,SNR=4.2						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**123.22**	**53**	PKP	**PKiKP**	**11 41 39.7**	**+1.3**
	comp=Z,0.2nm,0.8s,baz=278,slow=2.2,SNR=2.3						

IDC ***18*** *11:23:59.7±0.4, 1°.67N×126°.55E, h0km, mb4.8/31, mbtmp4.8/33, ML4.8/2, MS3.8/18, Error ellipse: s-maj=21.3km s-min=7.9km az=76.0*

BJI ***18*** *11:24:00.9, 1°.19N×126°.43E, h39km, mB5.3/11, mb4.9/49, Ms4.5/17, Ms7 4.3/19*

MOS ***18*** *11:24:00.8±1.2, 1°.83N×126°.51E, h14km, mb5.1/39, Error ellipse: s-maj=10.9km s-min=5.4km az=118.7*

DJA ***18*** *11:24:06.7±0.2, 2°.N±2°×12°.7E±°, h48km±2km, M4.7/61, mB5.2/24, mb5.0/61, MLv5.1/22, Mw5.0/25, Mw(mB)4.6/24, MwMwp4.7/8, Mwp5.0/8*

NEIC ***18*** *11:24:06.4±2.3, 1°.81N±0°.06×126°.48E±0°.06, h35km±1km, mb5.0/136, Error ellipse: s-maj=10.9km s-min=8.4km az=42.0*

GCMT ***18*** *11:24:07.4±0.2, 1°.89N±0°.02×126°.22E±0°.02, h31km, MW5.0/79, Moment Tensor Solution. s62,c83; s79,c114; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.07±.13; Mθθ0.44±.09; Mϕϕ-3.51±.10; Mrθ-1.10±.17; Mrϕ-0.62±.08; Mθϕ-1.81±.14; Best double couple: Mo3.96800×10^16 NP1:ϕs354.00000°,δ31.00000°,λ.66.00000°. NP2: ϕs202.00000°,δ62.00000°,λ104.00000°. Principal axes: T 3.7900, Plg70.0000°, Azm142.0000°; N 0.3580, Plg12.0000°, Azm15.0000°; P -4.1460, Plg15.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 11:24:06.4±0.5,1°.75N±0°.03×126°.49E±0°.04,h40km±4km, n376,σ1ş27/333,mb5.0/144,MS3.9/26,9C-8D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**138**	Pn	**Pn**	**11 24 27.3**	**-0.9**
TNTI	**Ternate**	**1.31**	**138**	P	**Pn**	**11 24 27.5**	**-0.7**
TNTI	**Ternate**	**1.31**	**138**	P	**Pn**	**11 24 27.1**	**-1.1**
SGSI	**Sangihe**	**2.15**	**334**	P	**Pn**	**11 24 38.8**	**-1.0**
KMSI	**Cibinong**	**2.76**	**245**	P	**Pn**	**11 24 49.8**	**+1.6**
SANI	**Sanana**	**3.80**	**188**	P	**Pn**	**11 25 02.3**	**-0.2**
SANI	**Sanana**	**3.80**	**188**	S	**Sn**	**11 25 46.8**	**+0.8**
SANI	**Sanana**	**3.80**	**188**	P	**Pn**	**11 25 02.1**	**-0.4**
LUWI	**Luwuk**	**4.63**	**233**	Pn	**Pn**	**11 25 16.6**	**+2.7**
LUWI	**Luwuk**	**4.63**	**233**	S	**Sn**	**11 26 06.9**	**+0.4**
LUWI	**Luwuk**	**4.63**	**233**	P	**Pn**	**11 25 16.6**	**+2.7**
MRSI	**Marisa**	**4.72**	**255**	P	**Pn**	**11 25 16.3**	**+1.2**
NLAI	**Namlea**	**4.99**	**173**	P	**Pn**	**11 25 19.6**	**+0.8**
	1.2nm2μm196nm,0.7s						
DAV	**Davao City (W)**	**5.37**	**350**	Pn	**Pn**	**11 25 22.8**	**-1.1**
	61nm,0.3s,baz=234,slow=19,SNR=2.1						
DAV				Sn	**Sn**	**11 26 29.8**	**+5.2**
	47nm,0.3s,baz=255,slow=23,SNR=1.9						
	97nm,0.3s						
SWI	**Sorong**	**5.43**	**118**	P	**Pn**	**11 25 24.9**	**+0.1**
	0.3nm4μm94nm,0.9s						
APSI	**Ampana**	**5.51**	**241**	P	**Pn**	**11 25 28.8**	**+2.8**
MSAI	**Masohi**	**5.62**	**154**	P	**Pn**	**11 25 26.8**	**-0.6**
	0.9nm3μm221nm,0.7s						
AAI	**Ambon**	**5.66**	**162**	P	**Pn**	**11 25 30.0**	**+2.0**
	2μm152nm,0.8s						
TOLI2	**Tolitoli**	**5.74**	**264**		**Pn**	**11 25 28.6**	**-0.6**
TOLI2	**Tolitoli**	**5.74**	**264**	P	**Pn**	**11 25 28.0**	**-1.1**
TOLI2	**Tolitoli**	**5.74**	**264**	S	**Sn**	**11 26 34.6**	**+0.8**
MPSI	**Mapaga**	**6.74**	**258**	P	**Pn**	**11 25 44.9**	**+2.1**
	0.7nm5μm3μm230nm,0.9s						
KDI	**Kendari**	**6.86**	**214**	P	**Pn**	**11 25 45.4**	**+0.9**
PCI	**Palu**	**7.15**	**248**	P	**Pn**	**11 25 49.3**	**+0.7**
	1.0nm237nm,1.0s						
FAKI	**Fak Fak**	**7.39**	**129**		**Pn**	**11 25 53.8**	**+1.9**
FAKI	**Fak Fak**	**7.39**	**129**	P	**Pn**	**11 25 52.8**	**+1.0**
	0.2nm2μm793nm80nm,0.8s						
BBSI	**Bau Bau**	**8.18**	**209**	P	**Pn**	**11 26 05.8**	**+3.1**
	2μm223nm,0.9s						
TTSI	**Tana Toraja**	**8.19**	**234**	P	**Pn**	**11 26 03.8**	**+1.0**
	2μm148nm,0.7s						
MYLDM	**Lahad Datu**	**8.67**	**293**		**Pn**	**11 26 11.8**	**+2.4**
SPSI	**Sidrap Palu**	**8.79**	**230**	P	**Pn**	**11 26 13.3**	**+2.3**
	2μm159nm,0.7s						
BNSI	**Bone**	**8.83**	**226**	P	**Pn**	**11 26 13.4**	**+1.9**
	1μm110nm,0.5s						
BKSI	**Bulukumba**	**9.47**	**222**	P	**Pn**	**11 26 22.7**	**+2.3**
	1μm100nm,0.6s						
KAPI	**Kappang**	**9.51**	**225**	Pn	**Pn**	**11 26 23.0**	**+2.2**
	7.7nm,0.3s,baz=30,slow=4.7,SNR=14						
KAPI				Sn	**Sn**	**11 28 06.1**	**-0.4**
	baz=60,slow=20						
KAPI	**Kappang**	**9.51**	**225**		**Pn**	**11 26 23.2**	**+2.3**
KAPI	**Kappang**	**9.51**	**225**	P	**Pn**	**11 26 20.5**	**-0.3**
KAPI	**Kappang**	**9.51**	**225**	S	**Sn**	**11 28 07.1**	**+0.6**
KAPI	**Kappang**	**9.51**	**225**	*d* i P	**Pn**	**11 26 22.9**	**+2.1**
KAPI				pmax	pmax		
	comp=Z,44nm,0.6s						
BSSI	**Bau Bau, Buton**	**9.86**	**217**	P	**Pn**	**11 26 27.9**	**+2.2**
EDFI	**Ende, Flores**	**11.47**	**205**	P	**Pn**	**11 26 49.5**	**+1.7**
	comp=Z,34nm,1.0s						
SOEI	**Soe**	**11.64**	**191**	Pn	**Pn**	**11 26 53.5**	**+3.4**
SOEI	**Soe**	**11.64**	**191**	P	**Pn**	**11 26 50.0**	**-0.1**
	comp=Z,1μmcomp=Z,167nm,1.0s						
BATI	**Baumata**	**12.20**	**193**	Pn	**Pn**	**11 27 02.4**	**+4.6**
	comp=Z,5.2nm,0.3s,baz=46,slow=19,SNR=4.3						
BATI				LR	LR	11 32 37.3	
	comp=Z,534nm,20.2s,baz=10.0,slow=43						
BATI	**Baumata**	**12.20**	**193**	P	**Pn**	**11 26 58.3**	**+0.5**
	comp=Z,69nm,0.9s						
SMPI	**Sarmi**	**12.77**	**107**	P	**Pn**	**11 27 05.9**	**+0.4**
	comp=Z,59nm,1.1s						
BASI	**Baing, Sumba**	**13.26**	**206**	P	**Pn**	**11 27 11.1**	**-1.1**
	comp=Z,109nm,1.0s						
WBSI	**Waikabubak, Su**	**13.34**	**212**	P	**Pn**	**11 27 15.4**	**+2.1**
	comp=Z,65nm,0.7s						
PLAI	**Plampang**	**13.63**	**219**	P	**Pn**	**11 27 16.8**	**-0.4**
PLAI	**Plampang**	**13.63**	**219**	P	**Pn**	**11 27 18.3**	**+1.1**
	comp=Z,884nmcomp=Z,103nm,1.1s						
SBUM	**Sibu**	**14.28**	**273**		**P**	**11 27 29.8**	**-2.7**
SBUM	**Sibu**	**14.28**	**273**	P	**Pn**	**11 27 25.2**	**-0.9**
DRS	**Darwin Rock St**	**14.75**	**163**	P	**Pn**	**11 27 32.6**	**+0.2**
JAY	**Jayapura**	**14.83**	**107**	Pn	**P**	**11 27 39.3**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=282,slow=11,SNR=12						
SRBI	**Singaraja**	**14.89**	**229**	P	**P**	**11 27 37.8**	**-1.6**
	comp=Z,80nm,0.8s						
MTN	**Manton Dam**	**15.21**	**162**		**Pn**	**11 27 37.7**	**-0.8**
JAGI	**Jajag, Banyuwa**	**15.95**	**230**		**P**	**11 27 51.0**	**-0.1**
JAGI				IAmb	IAmb	11 27 57.9	
	comp=Z,99nm,1.1s						
JAGI	**Jajag, Banyuwa**	**15.95**	**230**	P	**Pn**	**11 27 47.9**	**-0.1**
KNRA	**Kununurra**	**17.46**	**173**		**Pn**	**11 28 06.6**	**-0.3**
PCJI	**Pacitan**	**18.18**	**237**	P	**Pn**	**11 28 16.4**	**+0.5**
	comp=Z,100nm,1.0s						
UGM	**Wanagama**	**18.59**	**239**	P	**Pn**	**11 28 20.7**	**-0.2**
UGM	**Wanagama**	**18.59**	**239**	P	**Pn**	**11 28 20.8**	**-0.2**
	comp=Z,50nm,1.3s						
TPI	**Tanjungpandan**	**19.35**	**257**	P	**P**	**11 28 29.1**	**+0.4**
KPJI	**Karang Pucung**	**19.70**	**243**	P	**P**	**11 28 32.0**	**-0.6**
	comp=Z,114nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.74**	**182**	P	**P**	**11 28 31.9**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=31,slow=10,SNR=19						
	comp=Z,12nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.74**	**182**	IAmb	IAmb	11 28 40.6	
	comp=Z,4.8nm,0.8s						
BBJI	**Bungbulang**	**20.90**	**244**	P	**P**	**11 28 45.8**	**+0.1**
CNJI	**Cibinong**	**21.31**	**245**	P	**P**	**11 28 49.5**	**-0.4**
TWG	**Pinlang**	**21.60**	**346**	P	**P**	**11 28 50.7**	**-2.2**
DSRI	**Dabo**	**22.02**	**264**	P	**P**	**11 28 57.5**	**-0.1**
	comp=Z,1μmcomp=Z,30nm,0.9s						
YULB	**Yu-li**	**22.10**	**347**	IAmb	IAmb	11 28 56.7	
	comp=Z,135nm,1.7s						
TPUB	**Ta-pu**	**22.17**	**346**	IAmb	IAmb	11 29 04.3	
	comp=Z,68nm,0.8s						
SSLB	**Suanglung**	**22.56**	**347**	IAmb	IAmb	11 29 08.9	
	comp=Z,38nm,0.7s						
SSLB	**Suanglung**	**22.56**	**347**	P	**P**	**11 29 02.8**	**-0.5**
MYKOM	**Kota Tinggi**	**22.63**	**270**	P	**P**	**11 29 03.4**	**-0.8**
MYKOM				IAmb	IAmb	11 29 08.2	
	comp=Z,69nm,1.5s						
COEN	**Coen**	**22.74**	**134**		**P**	**11 29 05.3**	**0.0**
COEN	**Coen**	**22.74**	**134**	P	**P**	**11 29 05.4**	**+0.2**
WB0	**Warramunga Arr**	**22.74**	**160**	P	**P**	**11 29 04.0**	**-1.3**
WRAB	**Tennant Creek**	**22.88**	**161**	P	**P**	**11 29 05.6**	**-1.2**
WRAB	**Tennant Creek**	**22.88**	**161**	P	**P**	**11 29 05.5**	**-1.2**
WRAB	**Tennant Creek**	**22.88**	**161**	*c i* P	**P**	**11 29 05.0**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,112nm,0.9s						
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**11 29 05.0**	**-1.7**
	comp=Z,75nm,0.7s,baz=339,slow=11,SNR=31						
WRA				PcP	**PcP**	**11 32 57.0**	**+0.3**
	comp=Z,3.4nm,0.6s,baz=333,slow=2.1,SNR=6.0						
WRA				S	**S**	**11 33 11.3**	**-2.6**
	comp=Z,7.5nm,0.9s,baz=335,slow=18,SNR=5.2						
	comp=Z,75nm,0.7s						
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**11 29 05.3**	**-1.5**
WR8	**Warramunga Arr**	**22.95**	**160**	P	**P**	**11 29 06.3**	**-1.2**
KASI	**Kota Agung**	**23.12**	**252**	P	**P**	**11 29 08.6**	**-0.6**
	comp=Z,863nmcomp=Z,87nm,0.8s						
MDSI	**Maura Dua**	**23.14**	**254**	P	**P**	**11 29 09.9**	**+0.5**
	comp=Z,37nm,0.6s						
YHNB	**Yeheng**	**23.32**	**348**	P	**P**	**11 29 09.7**	**-1.4**
PMG	**Port Moresby**	**23.38**	**119**	P	**P**	**11 29 11.2**	**-0.6**
PMG	**Port Moresby**	**23.38**	**119**	⇓*i* P	**P**	**11 29 10.4**	**-1.4**
PMG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
QIZ	**Qiongzhong**	**23.68**	**318**	P	**P**	**11 29 15.5**	**+0.9**
QIZ				S	**S**	**11 33 30.8**	**+3.8**
QIZ				sS	**sS**	**11 33 46.1**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,240nm,5.9s						
QIZ				LR	LR		
	comp=Z,460nm,22.5s						
QIZ				LR	LR		
	comp=Z,350nm,20.5s						
QIZ				LR	LR		
	comp=Z,800nm,22.4s						
MBWA	**Marble Bar**	**23.70**	**196**	P	**P**	**11 29 13.6**	**-1.1**
MBWA	**Marble Bar**	**23.70**	**196**	P	**P**	**11 29 13.7**	**-1.1**
PSA00	**Pilbara Seismi**	**24.07**	**195**		**P**	**11 29 17.7**	**-0.5**
PSA00	**Pilbara Seismi**	**24.07**	**195**	P	**P**	**11 29 17.6**	**-0.5**
PSA00				IAmb	IAmb	11 29 20.2	
	comp=Z,15nm,1.1s						
PSA00	**Pilbara Seismi**	**24.07**	**195**	P	**P**	**11 29 18.4**	**+0.3**
MNAI	**Manna**	**24.29**	**255**	P	**P**	**11 29 20.0**	**-0.3**
JOW	**Kunigami**	**25.00**	**4**	P	**P**	**11 29 26.8**	**+0.2**
	comp=Z,114nm,0.9s,baz=192,slow=7.3,SNR=10		

MAJO pmax pmax
comp=Z,16nm,1.0s
MAJO Matsushiro 36.28 16 P **P** **11 31 04.5 -1.6**
MAJO PcP **PcP** **11 33 29.7 -0.8**
STKA Stephens Creek 36.38 158 P **P** **11 31 05.4 -1.5**
comp=Z,38nm,1.1s,baz=327,slow=8.1,SNR=24
STKA LR LR 11 48 08.9
comp=Z,142nm,20.6s,baz=2.7,slow=40
comp=Z,38nm,1.1s
STKA Stephens Creek 36.38 158 P **P** **11 31 06.4 -0.6**
STKA Stephens Creek 36.38 158 ⇓*i*P **P** **11 31 06.3 -0.7**
HTT Hallett 36.90 163 P **P** **11 31 11.8 +0.4**
HNS HongShan 37.10 344 ⇓P **P** **11 31 13.0 0.0**
HNS pmax pmax
comp=Z,10.0nm,0.9s
DL2 Dalian 37.25 354 P **P** **11 31 15.3 +1.1**
DL2 pmax pmax
comp=Z,64nm,1.0s
CMSA Cobar Meteorol 37.79 153 P **P** **11 31 19.1 +0.1**
JMM Marumori 38.27 18 P **P** **11 31 23.1 +0.2**
BJI Beijing 39.25 347 P **P** **11 31 30.8 -0.3**
BJI pmax pmax
comp=Z,6.0nm,0.8s
BRDH Bariadhala 39.71 304 LR LR 11 50 11.2
comp=Z,174nm,19.8s,baz=126,slow=40
ARMA Armidale 39.97 145 P **P** **11 31 37.7 +0.3**
ARMA IAmb IAmb 11 31 45.0
comp=Z,16nm,0.8s
LZDM Lanzhou Array 40.06 331 P **P** **11 31 36.9 -1.4**
comp=Z,2.1nm,0.4s,baz=145,slow=8.6,SNR=1.7
comp=Z,2.1nm,0.4s
LZH Lanzhou 40.10 331 *e*P **P** **11 31 38.0 -0.4**
LZH pP pP 11 31 45.1 -4.0
LZH sP pwP 11 31 51.8 +0.4
LZH pmax pmax
comp=Z,15nm,1.3s
LZH LR LR
comp=Z,340nm,17.2s
LZH LR LR
comp=Z,320nm,18.5s
LZH LR LR
comp=Z,570nm,18.8s
SHL Shillong 40.88 308 **P** **11 31 43.8 -1.3**
SHL Shillong 40.88 308 P **P** **11 31 43.8 -1.3**
JTM Tenmabayashi 41.04 17 P **P** **11 31 45.7 -0.2**
HHC Hu-ho-hao-te 41.20 343 *e*P **P** **11 31 50.3 +2.9**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,160nm,3.8s
HHC LR LR
comp=Z,230nm,17.7s
HHC LR LR
comp=Z,170nm,19.3s
HHC LR LR
comp=Z,240nm,21.0s
CN2 Changchun 41.88 359 P **P** **11 31 55.0 +2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CAN Canberra 42.47 152 P **P** **11 31 58.6 +0.9**
USRK Ussuriysk Ar. 42.55 6 P **P** **11 31 57.6 -0.6**
comp=Z,14nm,0.8s,baz=192,slow=6.7,SNR=17
comp=Z,14nm,0.8s
CNB Canberra Magne 42.63 152 P **P** **11 31 59.3 +0.2**
H11S3 WAKE ISLAND Hy 42.77 64 T T 12 17 45.4
baz=252,slow=75,SNR=21
H11S2 WAKE ISLAND Hy 42.79 64 T T 12 17 48.3
baz=252,slow=75,SNR=9.9
H11S1 WAKE ISLAND Hy 42.79 64 T T 12 18 12.6
baz=252,slow=75,SNR=7.8
XLT XiLinHaoTe 42.98 349 *e*P **P** **11 32 00.8 -1.0**
XLT pmax pmax
comp=Z,19nm,0.9s
LSA Lhasa 43.59 313 P **P** **11 32 03.1 -4.3**
BNX BinXian 43.82 1 ⇓P **P** **11 32 08.6 +0.2**
BNX pmax pmax
comp=Z,8.0nm,0.9s
GTA Gaotai 44.68 330 *e*P **P** **11 32 15.4 -0.2**
GTA PcP **PcP** **11 33 59.0 +1.3**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA LR LR
comp=Z,250nm,19.3s
GTA LR LR
comp=Z,280nm,20.7s
GTA LR LR
comp=Z,380nm,20.4s
PALK Pallekele 45.95 278 LR LR 11 53 24.5
comp=Z,138nm,21.9s,baz=108,slow=38
HILR Hailar Array B 47.98 354 P **P** **11 32 41.5 +0.3**
comp=Z,3.7nm,0.5s,baz=186,slow=10,SNR=9.2
comp=Z,3.7nm,0.5s
ULN Ulaanbaatar 48.92 343 **P** **11 32 49.0 +0.3**
ULN IAmb IAmb 11 32 55.3
comp=Z,7.9nm,0.6s
ULN Ulaanbaatar 48.92 343 ⇑*i*P **P** **11 32 49.0 +0.3**
ULN pmax pmax
comp=Z,3.0nm,0.7s
ULN Ulaanbaatar 48.92 343 PP **PP** **11 34 41.8 -0.6**
SONM Songino Array 49.09 342 P **P** **11 32 49.7 -0.2**
comp=Z,5.6nm,0.6s,baz=162,slow=7.7,SNR=17
comp=Z,5.6nm,0.6s
HYBB Hyderabad (bro 49.59 291 *e*P **P** **11 32 55.0 +0.9**
ZEA Zeya 51.82 1 *e*P **P** **11 33 09.6 -0.7**
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,1.4s
WMQ Urumqi 54.21 326 *e*P **P** **11 33 29.1 +0.9**
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ LR LR
comp=Z,220nm,24.1s
MSVF Nonsavu 54.33 113 **P** **11 33 30.1 +0.6**
MSVF IAmb IAmb 11 33 49.3
comp=Z,16nm,1.1s
MSVF Nonsavu 54.33 113 ⇓*i*P **P** **11 33 29.9 +0.4**
MSVF pmax pmax
comp=Z,12nm,1.3s
PETK Petropavlovsk- 57.35 22 P **P** **11 33 50.1 -0.3**
comp=Z,5.5nm,0.8s,baz=191,slow=4.9,SNR=7.4
comp=Z,5.5nm,0.8s
SHLS Shalkode 58.72 321 *e*P **P** **11 33 58.4 -2.0**
comp=Z,6.1nm,0.9s
SHLS Shalkode 58.72 321 *e*P **P** **11 33 58.4 -2.0**
SHLS pmax pmax
comp=Z,6.0nm,0.9s
UZB Uzynbulak 58.99 321 *e*P **P** **11 34 02.2 -0.1**
comp=Z,4.0nm,0.8s
UZB Uzynbulak 58.99 321 *e*P **P** **11 34 02.2 -0.1**
UZB pmax pmax
comp=Z,4.0nm,0.8s
MK31 Makanchi Array 59.05 326 *i*P **P** **11 34 01.0 -1.4**
MK31 pmax pmax
comp=Z,5.0nm,0.4s
MKAR Makanchi Array 59.05 326 P **P** **11 34 01.6 -0.8**
comp=Z,13nm,0.5s,baz=122,slow=8.7,SNR=27
comp=Z,13nm,0.5s
MKAR Makanchi Array 59.05 326 **P** **11 34 01.4 -1.0**
TARG Taragay, Kyrgy 59.07 319 **P** **11 34 02.6 -0.6**
TARG IAmb IAmb 11 34 08.7
comp=Z,12nm,0.7s
TARG Taragay, Kyrgy 59.07 319 P **P** **11 34 02.6 -0.6**
TARG pmax pmax
comp=Z,12nm,0.7s
MAKZ Makanchi 59.23 326 **P** **11 34 02.9 -0.8**
MAKZ IAmb IAmb 11 34 07.5
comp=Z,9.5nm,0.6s
MAKZ Makanchi 59.23 326 P **P** **11 34 02.9 -0.8**
MAKZ pmax pmax
comp=Z,9.0nm,0.6s
KSH Kashi 59.28 316 P **P** **11 34 05.5 +1.2**
KSH pmax pmax
comp=Z,6.0nm,0.8s
SATY Saty 59.34 321 *e*P **P** **11 34 04.7 +0.1**
comp=Z,7.9nm,0.7s
SATY Saty 59.34 321 *e*P **P** **11 34 04.7 +0.1**
SATY pmax pmax
comp=Z,8.0nm,0.7s
KDJ Kajisay 59.67 319 **P** **11 34 06.7 -0.3**
KDJ Kajisay 59.67 319 P **P** **11 34 06.7 -0.3**
KDJ pmax pmax
comp=Z,16nm,0.6s
YAK Yakutsk 60.19 2 **P** **11 34 10.0 +0.1**
YAK Yakutsk 60.19 2 *e*P **P** **11 34 09.3 -0.6**
YAK *e**PP **pP** **11 34 19.9 -1.2**
YAK *e* 11 34 54.5
YAK *e* 11 36 22.1
YAK *e*PPP PPP 11 37 45.0
YAK *e*S **S** **11 42 20.8 +0.3**
YAK *e**SS **sS** **11 42 38.9 -0.2**
YAK *e* 11 43 56.8
YAK *e*SS **SS** **11 46 19.5 +1.3**
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.7s
YAK pmax pmax
comp=E,5.0nm,1.9s
YAK pmax pmax
comp=Z,284nm,4.8s
YAK pmax pmax
comp=N,160nm,2.7s
YAK pmax pmax
comp=E,269nm,4.9s
YAK smax smax
comp=N,327nm,3.8s
YAK smax smax
comp=E,117nm,4.4s
MDOK Medeo 60.25 320 *e*P **P** **11 34 11.0 0.0**
MDOK Medeo 60.25 320 *e*P **P** **11 34 10.9 0.0**
TNSS Tian-Shan 60.26 320 *e*P **P** **11 34 11.0 -0.3**
TNSS Tian-Shan 60.26 320 *e*P **P** **11 34 11.0 -0.3**
AAA Alma-Ata 60.36 320 *e*P **P** **11 34 11.8 +0.1**
AAA Alma-Ata 60.36 320 *e*P **P** **11 34 11.7 +0.1**
MA2 Magadan 60.67 14 P **P** **11 34 13.4 +0.1**
comp=E,9.4nm,0.8s,baz=184,slow=12,SNR=4.4
comp=E,9.4nm,0.8s
AAK Ala-Archa 61.67 319 LR LR 12 03 18.5
comp=E,125nm,21.9s,baz=104,slow=38
AAK Ala-Archa 61.67 319 ⇑*i*P **P** **11 34 22.6 +2.0**
AAK pmax pmax
comp=Z,4.0nm,0.9s
SGDS Sogindy 61.95 320 *e*P **P** **11 34 22.5 +0.1**
ZAA0 Zalesovo Array 62.24 334 **P** **11 34 24.2 +0.2**
ZALV Zalesovo Beam 62.24 334 P **P** **11 34 22.2 -1.8**
comp=Z,2.6nm,0.4s,baz=135,slow=6.7,SNR=12
comp=Z,2.6nm,0.4s
ZALV Zalesovo Beam 62.24 334 **P** **11 34 22.8 -1.2**
ZALV Zalesovo Beam 62.24 334 *i*P **P** **11 34 22.7 -1.3**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
KBL Kabul 62.54 308 **P** **11 34 26.6 -0.1**
KBL IAmb IAmb 11 34 29.2
comp=Z,12nm,0.8s
KBL Kabul 62.54 308 P **P** **11 34 26.6 -0.1**
KBL pmax pmax
comp=Z,12nm,0.8s
BTLS Baital 63.04 321 *e*P **P** **11 34 29.8 +0.2**
BTLS Baital 63.04 321 *e*P **P** **11 34 29.8 +0.2**
KURBB Kurchatov Arra 63.28 328 P **P** **11 34 30.3 -0.7**
comp=Z,13nm,0.4s,baz=129,slow=6.2,SNR=128
comp=Z,13nm,0.4s
KURK Kurchatov 63.28 328 P **P** **11 34 30.3 -0.6**
KURK Kurchatov 63.28 328 *i*P **P** **11 34 29.8 -1.2**
KURK pmax pmax
comp=Z,8.0nm,0.5s
KURK Kurchatov 63.28 328 P **P** **11 34 30.8 -0.2**
CHGR Chuyangaron 63.82 313 **P** **11 34 34.6 -0.3**
CHGR IAmb IAmb 11 34 37.8
comp=Z,20nm,1.0s
CHGR Chuyangaron 63.82 313 P **P** **11 34 34.6 -0.3**
CHGR pmax pmax
comp=Z,20nm,1.0s
SEY Seymchan 64.01 13 *e*P **P** **11 34 39.6 +4.1**
SEY pmax pmax
comp=Z,12nm,1.2s
IUG luzhnay 64.47 317 *e*P **P** **11 34 39.4 +0.2**
comp=Z,7.4nm,0.7s
IUG luzhnay 64.47 317 *e*P **P** **11 34 39.4 +0.2**
IUG pmax pmax
comp=Z,7.0nm,0.7s
KK31 Karatay Array 64.52 318 **P** **11 34 38.3 -1.0**
KK31 Karatay Array 64.52 318 *i*P **P** **11 34 38.4 -0.9**
KKAR Karatay Array 64.52 318 P **P** **11 34 38.4 -0.9**
KKAR Karatay Array 64.52 318 P **P** **11 34 38.4 -0.9**
BVA0 Borovoye Array 68.85 327 P **P** **11 35 05.8 -0.9**
BVAR Borovoye Array 68.85 327 P **P** **11 35 06.1 -0.6**
comp=Z,7.1nm,0.6s,baz=115,slow=6.3,SNR=16
comp=Z,7.1nm,0.6s
BORK Borovoye 68.89 327 *c i*P **P** **11 35 06.8 -0.2**
BORK pmax pmax
comp=Z,9.0nm,0.9s
BORK Borovoye 68.89 327 P **P** **11 35 06.6 -0.4**
TIXI Tiksi 69.82 1 **P** **11 35 11.7 -0.6**
TIXI IAmb IAmb 11 35 14.2
comp=Z,15nm,1.3s
TIXI Tiksi 69.82 1 ⇑*i*P **P** **11 35 11.5 -0.8**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
AB31 Akbulak array 73.53 321 *e*P **P** **11 35 34.0 -1.1**
ABKAR Akbulak array 73.53 321 **P** **11 35 34.1 -1.0**
AKTO Aktyubinsk 75.06 322 LR LR 12 12 22.6
comp=Z,136nm,20.2s,baz=54,slow=39
AKTO Aktyubinsk 75.06 322 P **P** **11 35 43.2 -0.8**
SVE Sverdlovsk 75.52 329 *e*P **P** **11 35 47.8 +1.3**
ARTI Arti 76.56 328 LR LR 12 13 06.3
comp=Z,64nm,18.2s,baz=112,slow=38
ARTI Arti 76.56 328 **P** **11 35 51.2 -1.3**
ARTI Arti 76.56 328 P **P** **11 35 51.2 -1.3**
ARTI pmax pmax
comp=Z,14nm,0.5s
ARTI Arti 76.56 328 P **P** **11 35 51.1 -1.3**
CCD Concordia, Ant 76.77 181 P **P** **11 35 54.4 +0.7**
L14K Kuka Creek 79.35 28 IAmb IAmb 11 36 11.5
comp=Z,15nm,0.9s
K15K Wolf Creek Mou 80.14 27 IAmb IAmb 11 36 16.9
comp=Z,16nm,1.0s
ABPO Ambohimpanom 80.42 251 **P** **11 36 16.1 +1.4**
ABPO IAmb IAmb 11 36 20.2
comp=Z,9.6nm,0.7s
ABPO Ambohimpanom 80.42 251 P **P** **11 36 16.1 +1.4**
ABPO pmax pmax
comp=Z,10.0nm,0.7s
AKT Akhty 80.42 312 *e*P **P** **11 36 13.9 -0.3**
AKT pmax pmax
comp=Z,13nm,0.8s
J16K Anvik River 80.81 26 IAmb IAmb 11 36 20.6
comp=Z,18nm,0.9s
I17K Unalakleet 80.92 25 IAmb IAmb 11 36 20.3
comp=Z,12nm,0.9s
L16K Owhat River 80.93 28 IAmb IAmb 11 36 20.2
comp=Z,12nm,1.0s
RAYN Ar Rayn 81.04 293 **P** **11 36 17.5 -0.3**
RAYN IAmb IAmb 11 36 21.8
comp=Z,10.0nm,0.7s
RAYN Ar Rayn 81.04 293 P **P** **11 36 17.5 -0.3**
RAYN pmax pmax
comp=Z,10.0nm,0.7s
VOI Vohitsoka 81.09 248 **P** **11 36 17.8 -0.4**
VOI IAmb IAmb 11 36 26.1
comp=Z,16nm,0.8s
VNDA Vanda 81.50 173 P **P** **11 36 18.8 -0.3**
comp=Z,8.6nm,0.8s,baz=314,slow=6.0,SNR=33
comp=Z,8.6nm,0.8s
VNDA Vanda 81.50 173 **P** **11 36 19.1 0.0**
VNDA IAmb IAmb 11 36 20.0
comp=Z,13nm,1.1s
VNDA Vanda 81.50 173 P **P** **11 36 19.1 0.0**
H17K Granite Mounta 81.51 24 IAmb IAmb 11 36 26.2
comp=Z,41nm,2.0s
K17K Iditarod 81.69 27 IAmb IAmb 11 36 27.9
comp=Z,20nm,0.9s
KIRV Kirov 81.78 329 ⇑*i*P **P** **11 36 21.3 +0.4**
MAW Mawson 81.82 200 P **P** **11 36 20.9 0.0**
comp=Z,11nm,0.9s,baz=70,slow=6.2,SNR=26
comp=Z,11nm,0.9s
BELG Belogornoye 81.82 323 *e*P **P** **11 36 20.9 -0.3**
BELG pmax pmax
comp=Z,3.0nm,0.9s
E18K Tukpahlearik C 81.87 22 IAmb IAmb 11 36 28.6
comp=Z,12nm,1.0s
G18K Tagagawik 82.25 24 IAmb IAmb 11 36 29.5
comp=Z,15nm,1.4s
L18K Granite Mounta 82.33 27 IAmb IAmb 11 36 31.5
comp=Z,25nm,1.4s
SBA Scott Base 82.42 172 P **P** **11 36 26.3 +2.4**
SBA Scott Base 82.42 172 P **P** **11 36 26.3 +2.4**
SBA pmax pmax
comp=Z,9.0nm,1.0s
J18K Innoko River 82.55 26 IAmb IAmb 11 36 31.2
comp=Z,11nm,0.9s
GNI Garni 82.56 310 LR LR 12 16 29.2
comp=Z,40nm,21.9s,baz=79,slow=38
N19K Bonanza Creek 83.13 29 IAmb IAmb 11 36 33.2
comp=Z,18nm,0.9s
J19K Poorman 83.13 26 IAmb IAmb 11 36 32.0
comp=Z,17nm,0.9s
L19K White Mountain 83.17 28 IAmb IAmb 11 36 35.8
comp=Z,17nm,1.2s
M19K Big River Lodg 83.34 28 IAmb IAmb 11 36 33.6
comp=Z,13nm,1.0s
F20K Avaraart Lake 83.64 23 IAmb IAmb 11 36 37.2
comp=Z,10nm,0.9s
L20K Farewell, AK 83.66 27 IAmb IAmb 11 36 35.2
comp=Z,12nm,1.0s
KDAK Kodiak Island 83.69 32 LR LR 12 10 37.5
comp=Z,59nm,20.1s,baz=241,slow=33
K20K Telida 83.71 26 IAmb IAmb 11 36 35.1
comp=Z,8.4nm,0.9s
J20K Nowinta River 83.80 26 IAmb IAmb 11 36 35.5
comp=Z,10nm,1.0s
M20K Styx River 83.93 28 IAmb IAmb 11 37 00.5
comp=Z,10nm,0.9s
KBZ Khabaz 84.16 314 P **P** **11 36 33.0 -0.5**
comp=Z,3.6nm,0.7s,baz=97,slow=7.9,SNR=7.1
comp=Z,3.6nm,0.7s
KBZ Khabaz 84.16 314 *c i*P **P** **11 36 34.8 +1.3**
IMAR Indian Mountai 84.24 24 P **P** **11 36 34.2 +0.6**
KIV Kislovodsk 84.33 314 *e*P **P** **11 36 36.4 +1.8**
KIV pmax pmax
comp=Z,12nm,0.9s
SHA1 Shidzhatmaz 84.34 314 ⇓*i*P **P** **11 36 34.9 +0.1**
G21K Allakaket 84.42 23 IAmb IAmb 11 36 58.8
comp=Z,12nm,1.2s
E21K Kilik River 84.54 21 IAmb IAmb 11 36 39.2
comp=Z,7.8nm,0.8s
H21K Melozitna Rive 84.58 24 IAmb IAmb 11 39 00.4
comp=Z,14nm,1.6s
SKT Skwentna 84.69 28 **P** **11 36 36.0 +0.1**
SKT IAmb IAmb 11 36 38.7
comp=Z,10nm,0.9s
L22K Petersville 85.10 28 P **P** **11 36 37.7 -0.3**
L22K IAmb IAmb 11 36 40.9
comp=Z,14nm,1.0s
E22K Anaktuvuk Pass 85.29 22 IAmb IAmb 11 36 45.4
comp=Z,7.8nm,0.9s
VRH Novokhopyorsk 85.36 321 *e*P **P** **11 36 36.5 -2.9**
VRH pmax pmax
comp=Z,20nm,0.9s
MARD Mardin 85.53 307 IAmb IAmb 11 36 44.8
comp=Z,10nm,0.7s
COLD Coldfoot 85.80 23 **P** **11 36 43.0 +1.7**
COLD IAmb IAmb 11 36 45.3
comp=Z,7.6nm,0.8s
RND Reindeer 86.05 27 P **P** **11 36 42.9 +0.2**
RND IAmb IAmb 11 38 56.8
comp=Z,18nm,1.5s
RND Reindeer 86.05 27 P **P** **11 36 42.9 +0.2**
RND pmax pmax
comp=Z,18nm,1.5s
E23K Chandalar 86.10 22 IAmb IAmb 11 36 46.5
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 86.17 21 IAmb IAmb 11 36 46.6
comp=Z,9.6nm,1.0s
D24K Happy Valley 86.48 21 IAmb IAmb 11 36 48.2
comp=Z,9.8nm,0.8s
E24K Your Creek 86.53 22 IAmb IAmb 11 36 52.3
comp=Z,8.7nm,1.2s
CCB Clear Creek Bu 86.59 25 **P** **11 36 44.1 -1.1**
SCM Sheep Creek Mo 86.66 28 P **P** **11 36 47.5 +1.7**
SCM Sheep Creek Mo 86.66 28 P **P** **11 36 47.5 +1.7**
SCM pmax pmax
comp=Z,31nm,1.2s
F24K Squaw Lake 86.72 23 IAmb IAmb 11 36 48.6
comp=Z,7.1nm,1.1s
VORD Divnogorie 86.88 321 *e*P **P** **11 36 45.9 -1.0**
VORD pmax pmax
comp=Z,20nm,0.8s
HDA Harding Lake 86.95 26 IAmb IAmb 11 36 48.5
comp=Z,6.7nm,1.0s
VORR Voronezh 86.95 321 *e*P **P** **11 36 46.7 -0.6**
VORR pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 86.97 321 *e*P **P** **11 36 45.6 -1.8**
VSR pmax pmax
comp=Z,20nm,0.8s
ILAR Eielson Array 86.99 25 P **P** **11 36 45.9 -1.3**
comp=Z,0.7nm,0.7s,baz=252,slow=4.6,SNR=8.1
comp=Z,0.7nm,0.7s
KLMR Klimovskoe 87.00 331 *e*P **P** **11 36 45.6 -1.7**
KLMR pmax pmax
comp=Z,27nm,1.6s
LPSR Galich'ya Gora 87.14 322 *e*P **P** **11 36 46.7 -1.5**
LPSR pmax pmax
comp=Z,20nm,0.9s
D25K Kavik River 87.36 21 IAmb IAmb 11 36 54.3
comp=Z,16nm,1.5s
MOS Moscow 87.93 326 *e*P **P** **11 36 53.0 +1.1**
BMAR Burnt Mountain 87.99 23 **P** **11 36 52.9 +0.9**
G26K Porcupine Rive 88.30 23 **P** **11 36 53.9 +0.5**
C27K Jago River 88.31 21 IAmb IAmb 11 36 55.9
comp=Z,4.9nm,0.8s
MENT Mentasta 88.36 27 P **P** **11 36 54.6 +0.8**
MENT IAmb IAmb 11 37 35.6
comp=Z,10nm,1.3s
J26L Joseph Creek 88.41 26 **P** **11 36 54.3 +0.1**
OBN Obninsk 88.53 325 *e*P **P** **11 36 53.6 -1.1**
OBN *e* 11 40 23.2
OBN *e*PPP PPP 11 42 15.6
OBN *e*S **SKSac** **11 47 20.8 +0.1**
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,127nm,21.0s
ASF Jabal al Asfar 88.73 302 P **P** **11 36 56.7 +0.3**
comp=Z,8.7nm,0.7s,baz=186,slow=1.0,SNR=7.4
ASF LR LR 12 20 06.3
comp=Z,61nm,22.0s,baz=111,slow=38
comp=Z,8.7nm,0.7s
K27K Chicken 89.08 26 IAmb IAmb 11 36 60.0
comp=Z,7.4nm,1.0s
I27K Kandik River 89.21 25 IAmb IAmb 11 37 01.1
comp=Z,4.7nm,0.9s
L27K Beaver Creek, 89.22 27 IAmb IAmb 11 37 01.2
comp=Z,5.6nm,0.9s
BCAR Beaver Creek A 89.24 27 P **P** **11 36 58.2 +0.2**
KMBO Kilima Mbogo 89.27 269 P **P** **11 36 59.7 +0.2**
comp=Z,1.0nm,0.3s,baz=72,slow=8.5,SNR=3.6
comp=Z,1.0nm,0.3s
MMAI Mount Meron Ar 89.97 303 P **P** **11 37 00.8 -1.3**
comp=Z,0.9nm,0.3s,baz=96,slow=4.3,SNR=2.3
comp=Z,0.9nm,0.3s
SYO Syowa Base 90.50 201 ⇓*e*P **P** **11 37 04.2 +0.6**
L29M L29M 90.90 27 IAmb IAmb 11 37 09.6
comp=Z,6.9nm,0.8s
BRTR Keskin Array B 91.09 310 P **P** **11 37 06.8 -0.6**
comp=Z,1.8nm,0.8s,baz=121,slow=6.4,SNR=6.5
comp=Z,1.8nm,0.8s
BRTR Keskin Array B 91.09 310 **P** **11 37 05.8 -1.5**
BRTR Keskin Array B 91.09 310 *ce*P **P** **11 37 09.3 +2.0**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
QSPA South Pole Qui 91.67 180 P **P** **11 37 12.1 +2.8**
comp=Z,2.2nm,0.8s,baz=244,slow=1.3,SNR=14
QSPA LR LR 12 20 30.1
comp=Z,28nm,18.3s,baz=356,slow=37
QSPA South Pole Qui 91.67 180 **P** **11 37 12.2 +2.9**
ARCES ARCESS Array B 92.22 340 P **P** **11 37 10.8 -0.9**
comp=Z,8.4nm,0.8s,baz=102,slow=5.5,SNR=15
comp=Z,8.4nm,0.8s
SPITS Spitsbergen Ar 92.37 349 P **P** **11 37 11.5 -0.7**
comp=Z,7.7nm,0.8s,baz=95,slow=8.5,SNR=7.0
comp=Z,7.7nm,0.8s
AKASG Malin Array Be 93.27 321 P **P** **11 37 15.9 -1.0**
comp=Z,0.9nm,0.4s,baz=62,slow=4.8,SNR=2.3
comp=Z,0.9nm,0.4s
FINES FINESS Array B 93.45 332 P **P** **11 37 15.7 -1.8**
comp=Z,1.2nm,0.4s,baz=74,slow=4.1,SNR=9.9
comp=Z,1.2nm,0.4s
FINES FINESS Array B 93.45 332 *i*P **P** **11 37 16.3 -1.2**
FINES pmax pmax
comp=Z,2.0nm,0.5s
MNK Minsk 93.59 325 *i*P P 11 37 10.3 -8.0
MNK pmax pmax
comp=E,35nm,0.9s

MNK				pmax	pmax			
	comp=Z,20nm,0.8s							
MNK				pmax	pmax			
	comp=N,19nm,0.9s							
MNK				MLR	MLR			
	comp=E,1μm,19.0s							
MNK				MLR	MLR			
	comp=N,1μm,20.0s							
MNK				MLR	MLR			
	comp=Z,148nm,19.0s							
C36M	**Paulatuk**	**95.15**	**20**		**P**		**11 37 24.8**	**-0.3**
BURAR	**Bucovina Array**	**96.31**	**318**		**P**		**11 37 30.7**	**-0.3**
BURAR				IAmb	IAmb		11 37 34.5	
	comp=Z,3.7nm,0.8s							
BUR08	**Bucovina Ar. S**	**96.32**	**318**	IAmb	IAmb		11 37 36.6	
	comp=Z,5.6nm,0.7s							
NVL	**N'lazarevskaya**	**99.60**	**198**	*e*P	**Pdif**		**11 37 43.2**	**-1.9**
NVL				*e*			11 41 48.3	
NVL				*e*PPP	PPP		11 43 53.8	
NVL				*e*S	**SKSac**		**11 48 19.4**	**-0.8**
NVL				*e*SS	**SS**		**11 56 08.2**	**+2.4**
NVL				*e*SSS	SSS		11 59 58.4	
NVL				pmax	pmax			
	comp=Z,8.0nm,1.1s							
NVL				smax	smax			
	comp=N,242nm,23.0s							
NVL				MLR	MLR			
	comp=Z,179nm,21.0s							
HFS	**Hagfors**	**99.65**	**332**	P	**Pdif**		**11 37 45.5**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=30,slow=3.5,SNR=1.6							
	comp=Z,1.4nm,0.7s							
RES	**Resolute Bay**	**99.79**	**10**	LR	LR		12 27 35.6	
	comp=Z,17nm,19.9s,baz=5.0,slow=38							
CLL	**Collm**	**103.09**	**324**	*e*P	**Pdif**		**11 38 01.0**	**-0.1**
CLL	**Collm**	**103.09**	**324**	*e*Pdif	**Pdif**		**11 38 01.0**	**-0.1**
NVAR	**Mina Array Bea**	**108.40**	**48**	PKKP			11 53 54.9	
	comp=Z,0.4nm,0.6s,baz=68,slow=3.9,SNR=4.4							
PDAR	**Pinedale Array**	**112.99**	**42**	PKKPbc	PKKPbc		11 53 26.2	-1.8
	comp=Z,0.4nm,0.6s,baz=107,slow=4.4,SNR=4.1							
ECSD	**EROS Data Cent**	**120.54**	**35**		**PKiKP**		**11 42 54.2**	**0.0**
SCHQ	**Schefferville**	**122.55**	**9**	PKP	**PKiKP**		**11 42 57.8**	**0.0**
	comp=Z,3.2nm,0.7s,baz=339,slow=4.5,SNR=1.8							
TXAR	**Lajitas Array**	**122.99**	**53**	PKP	**PKiKP**		**11 42 59.6**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=280,slow=1.5,SNR=13							
L40A	**Anamosa**	**124.66**	**34**		**PKPdf**		**11 43 01.5**	**-0.5**
R40A	**Maddies Statio**	**126.49**	**38**		**PKPdf**		**11 43 05.8**	**+0.2**
DBIC	**Dimbokro**	**130.72**	**280**	PKP	**PKPdf**		**11 43 14.7**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=108,slow=6.4,SNR=2.4							
PLCA	**Paso Flores**	**138.24**	**160**	PKhKP	PKPpre		11 43 18.5	
	comp=Z,2.6nm,1.1s,baz=238,slow=3.5,SNR=3.6							
PLCA				PKP	**PKPdf**		**11 43 28.2**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=195,slow=4.3,SNR=9.9							
LCO	**Las Campanas**	**148.32**	**150**		**PKPbc**		**11 43 49.6**	**+0.1**
LCO	**Las Campanas**	**148.32**	**150**	PKP2	**PKPbc**		**11 43 49.6**	**+0.1**
CPUP	**Villa Florida**	**155.28**	**172**	PKP	**PKPdf**		**11 43 56.9**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=164,slow=4.8,SNR=1.7							
CPUP				PKPab	**PKPab**		**11 44 21.0**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=215,slow=1.3,SNR=4.7							
ROSC	**El Rosal**	**158.21**	**72**	PKPab	**PKPab**		**11 44 32.8**	**-2.1**
	comp=Z,5.2nm,0.4s,baz=309,slow=5.5,SNR=1.5							
LPAZ	**La Paz**	**159.60**	**136**	PKP	**PKPdf**		**11 44 03.3**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=224,slow=1.7,SNR=7.8							
LPAZ	**La Paz**	**159.60**	**136**		**PKPdf**		**11 44 03.5**	**+0.9**
SDV	**Santo Domingo**	**159.93**	**58**	PKPdf	**PKPdf**		**11 44 02.3**	**-0.2**
AQDB	**Aquidauana**	**161.26**	**174**	PKPdf	**PKPdf**		**11 44 04.3**	**+0.7**

TAP 18 11:28:17.3,21.2°N×121.7°E,h151km,ML3.3,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	**Lan-yu**	**0.89**	**349**	P	Pn	11 28 41.1	-0.2
LYUB				S	Sn	11 28 58.4	-1.3
LAY	**Lan-yu**	**0.94**	**348**	*e*P	Pn	11 28 41.3	-0.3
LAY				S	Sn	11 28 59.1	-1.2
TWKBT	**Hengchun**	**1.21**	**313**	P	Pn	11 28 44.2	+0.2
HEN	**Hengchun**	**1.30**	**313**	P	Pn	11 28 44.4	-0.5
TAWH	**Dawu Township**	**1.46**	**326**	P	Pn	11 28 46.8	+0.3
EAST	**Anshuo**	**1.52**	**326**	*e*P	Pn	11 28 47.9	+0.7
SCZT	**Fangliau**	**1.64**	**320**	*e*P	Pn	11 28 49.4	+1.0
MASBT	**Mashibuluo**	**1.82**	**325**	*e*P	Pn	11 28 51.3	+0.9
TSMG	**Majia**	**1.89**	**327**	*e*P	Pn	11 28 51.8	+0.6
SSD	**Sandimen**	**1.93**	**327**	P	Pn	11 28 52.3	+0.6
EHD	**Haiduan**	**2.08**	**346**	*e*P	Pn	11 28 52.7	-0.8
FULB	**Fuli**	**2.12**	**348**	P	Pn	11 28 54.6	+0.7
STYH	**Taoyuan**	**2.24**	**336**	*e*P	Pn	11 28 55.2	-0.1
TWF1	**Yuli**	**2.26**	**349**	*e*P	Pn	11 28 54.9	-0.8
YULB	**Yu-li**	**2.30**	**349**	P	Pn	11 28 57.4	+1.3
YULB	**Yu-li**	**2.30**	**349**	*e*P	Pn	11 28 54.7	-1.4
YULB	**Yu-li**	**2.30**	**349**	P	Pn	11 28 54.1	-2.0
CHN1	**Nanshi**	**2.35**	**331**	*e*P	Pn	11 28 57.3	+0.6
WTP	**Ta-pu**	**2.37**	**333**	*e*P	Pn	11 28 56.2	-0.7
HGSD	**Ruisui**	**2.38**	**352**	P	Pn	11 28 56.4	-0.6
HGSD				S	Sn	11 29 28.4	+0.6
TPUB	**Ta-pu**	**2.41**	**334**	P	Pn	11 28 57.0	-0.4
TPUB	**Ta-pu**	**2.41**	**334**	P	Pn	11 28 56.5	-0.9
TPUB				*e*S	Sn	11 29 28.2	-0.2
TPUB	**Ta-pu**	**2.41**	**334**		Pn	11 28 56.9	-0.5
TWK	**Hsinying**	**2.44**	**331**	*e*P	Pn	11 28 58.2	+0.4
ALS	**Alishan**	**2.54**	**340**	P	Pn	11 28 58.8	-0.4
TSCK	**Chigu Township**	**2.55**	**325**	*e*P	Pn	11 28 59.9	+0.8
WARBT	**Fenglin Townsh**	**2.61**	**352**	*e*P	Pn	11 28 59.5	-0.3
CHN5	**Tsauling**	**2.66**	**338**	P	Pn	11 29 01.2	+0.6
VWDT	**VWDT**	**2.68**	**348**	P	Pn	11 29 01.1	+0.4
SSLB	**Suanglung**	**2.76**	**344**	*e*P	Pn	11 29 02.0	+0.2
SSLB	**Suanglung**	**2.76**	**344**		Pn	11 29 02.1	+0.4
OWD	**Renai**	**2.87**	**349**	*e*P	Pn	11 29 02.3	-1.0
LXIB	**Xiulin Townshi**	**2.91**	**354**	*e*P	Pn	11 29 01.8	-1.8
WUSB	**Renai**	**2.92**	**348**	P	Pn	11 29 03.5	-0.4
VCHM	**Qimei**	**3.00**	**314**	S	Sn	11 29 42.0	+0.5
NACB	**Ninganchiao**	**3.04**	**357**	P	Pn	11 29 05.1	-0.1
NACB	**Ninganchiao**	**3.04**	**357**	P	Pn	11 29 04.4	-0.9
ETLH	**Xiulin Townshi**	**3.08**	**355**	*e*P	Pn	11 29 05.5	-0.4
WHP	**Taichung City**	**3.23**	**347**	*e*P	Pn	11 29 07.1	-0.7
NNSB	**Datong**	**3.31**	**354**	*e*P	Pn	11 29 07.8	-1.0
LATG	**Datong**	**3.41**	**356**	*e*P	Pn	11 29 08.5	-1.5

*IDC **18** 11:30:40.0±0.7,37.1°N×23.5°E,h0km,mb4.0/14, mbtmp4.0/20,ML3.3/5,MS3.3/2,Error ellipse: s-maj=15.9km s-min=13.6km az=51.0*
*ISK **18** 11:30:40.3,37.1°N×23.1°E,h5km,ML3.7/12*
*NEIC **18** 11:30:41.7±1.8,37.10°N±0.05×23.27°E±0.05,h10km±1km, mb4.5/12,Error ellipse: s-maj=7.8km s-min=6.8km az=349.0*
*THE **18** 11:30:42.4,37°N±1.1°×2.3°E±1.1°,h8km±4km,M3.5/11, MLh3.5/11*
*ATH **18** 11:30:42.0,37.1°N×23.2°E,h14km,ML3.6/30,Manual Solution by P.Lantzouraki First location: 2019/11/18 11:31:42, This location: 2021/06/18 20:00:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

ISC 18 11:30:41.4±1.0,37.07N±0.02×23.14E±0.02,h10km±7km, n152,σ1§28/176,mb4.2/19,3C-5D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YDRA	**Hydra**	**0.38**	**43**	P	**Pb**	**11 30 50.2**	**-0.1**
YDRA				S	**Sb**	**11 30 56.5**	**+0.2**
VLI	**Veliai**	**0.39**	**204**	P	**Pg**	**11 30 49.1**	**+0.1**
VLI				S	**Sg**	**11 30 54.0**	**-0.1**
VLI	**Veliai**	**0.39**	**204**	P	**Pg**	**11 30 49.1**	**+0.1**
VLI				S	**Sg**	**11 30 53.8**	**-0.2**
MNVA	**Monemvasia**	**0.39**	**192**	P	**Pg**	**11 30 49.4**	**+0.4**
MNVA				S	**Sg**	**11 30 54.7**	**+0.5**
NPS1	**Neapolis Lacon**	**0.56**	**186**	P	**Pg**	**11 30 52.7**	**+0.5**
NPS1				S	**Sg**	**11 30 59.7**	**+0.1**
NPLA	**Nafplio**	**0.56**	**332**	P	**Pb**	**11 30 53.3**	**-0.1**
NPLA				S	**Sb**	**11 31 01.8**	**+0.3**
MET2	**Kameni Chora,**	**0.56**	**16**	P	**Pb**	**11 30 53.5**	**+0.1**
MET2				S	**Sb**	**11 31 02.4**	**+0.9**
MET5	**Makryloggos,Me**	**0.58**	**18**	P	**Pb**	**11 30 53.9**	**+0.2**
MET5				S	**Sb**	**11 31 02.8**	**+0.8**
MET4	**Agioi Theodoro**	**0.59**	**21**	P	**Pb**	**11 30 54.1**	**+0.2**
MET4				S	**Sb**	**11 31 03.2**	**+0.9**
ARS1	**Argos**	**0.65**	**330**	P	**Pb**	**11 30 55.0**	**+0.2**
ARS1				S	**Sb**	**11 31 04.4**	**+0.4**
KTHA	**Kythira Island**	**0.81**	**184**	Pg	**Pg**	**11 30 57.6**	**+0.5**
KTHA				Sg	**Sb**	**11 31 10.5**	**+1.8**
KTHA	**Kythira Island**	**0.81**	**184**	P	**Pg**	**11 30 57.3**	**+0.3**
KTHA	**Kythira Island**	**0.81**	**184**	P	**Pg**	**11 30 56.7**	**-0.4**
VLY	**Voula,Athens**	**0.94**	**34**	P	**Pn**	**11 31 00.6**	**-0.1**
VLY				S	**Sn**	**11 31 16.0**	**+1.7**
VLY	**Voula,Athens**	**0.94**	**34**	P	**Pb**	**11 31 00.1**	**+0.3**
VLY				S	**Sn**	**11 31 14.3**	**0.0**
LTK	**Loutraki**	**0.96**	**352**	P	**Pn**	**11 31 00.8**	**-0.2**
LTK				S	**Sn**	**11 31 14.7**	**-0.1**
LTK	**Loutraki**	**0.96**	**352**	P	**Pb**	**11 31 00.1**	**0.0**
LTK				S	**Sn**	**11 31 14.6**	**-0.2**
ITM	**Ithomi**	**0.97**	**277**	Pg	**Pg**	**11 30 59.9**	**-0.2**
ITM	**Ithomi**	**0.97**	**277**		**Pg**	**11 31 00.1**	**-0.1**
ITM	**Ithomi**	**0.97**	**277**	P	**Pg**	**11 30 59.6**	**-0.5**
ITM				S	**Sg**	**11 31 12.2**	**-0.5**
ITM	**Ithomi**	**0.97**	**277**	P	**Pg**	**11 30 59.6**	**-0.5**
LVRA	**Laurium**	**0.97**	**49**	P	**Pn**	**11 31 01.3**	**+0.1**
LVRA				S	**Sn**	**11 31 14.7**	**-0.3**
KIAA	**Kiato**	**0.99**	**342**	P	**Pn**	**11 31 01.7**	**+0.3**
KIAA				S	**Sb**	**11 31 14.5**	**+0.7**
ATH	**Athens Observa**	**1.01**	**27**	P	**Pn**	**11 31 02.2**	**+0.5**
ATH				S	**Sn**	**11 31 18.4**	**+2.4**
ATH	**Athens Observa**	**1.01**	**27**	P	**Pn**	**11 31 02.0**	**+0.4**
ATH				S	**Sn**	**11 31 16.4**	**+0.4**
NOAC	**Athens-Thissio**	**1.01**	**27**	P	**Pn**	**11 31 02.4**	**+0.6**
NOAC				S	**Sn**	**11 31 16.3**	**+0.2**
ATH5	**Athens Parliam**	**1.02**	**28**	P	**Pn**	**11 31 02.0**	**+0.2**
ATH5				S	**Sn**	**11 31 16.7**	**+0.5**
ATHU	**Athens Univers**	**1.03**	**30**	P	**Pn**	**11 31 02.1**	**+0.1**
ATHU	**Athens Univers**	**1.03**	**30**	P	**Pb**	**11 31 01.6**	**+0.2**
MAGU	**Magoula**	**1.05**	**17**	P	**Pn**	**11 31 02.8**	**+0.5**
MAGU				S	**Sn**	**11 31 19.3**	**+2.4**
MAGU	**Magoula**	**1.05**	**17**	P	**Pn**	**11 31 02.5**	**+0.3**
ATHP	**Athens-Neo Psi**	**1.06**	**28**	P	**Pn**	**11 31 03.2**	**+0.8**
GUR	**Goura**	**1.07**	**324**	P	**Pg**	**11 31 01.8**	**-0.3**
MHLO	**Agia Marina, M**	**1.08**	**110**	P	**Pg**	**11 31 02.8**	**+0.5**
MHLO				S	**Sn**	**11 31 20.1**	**+2.4**
MHLO	**Agia Marina, M**	**1.08**	**110**	P	**Pg**	**11 31 02.4**	**+0.1**
VILL	**Villia**	**1.10**	**7**	P	**Pn**	**11 31 03.2**	**+0.2**
VILL				S	**Sn**	**11 31 20.9**	**+2.6**
ACHAR	**Athens-Acharne**	**1.11**	**25**	P	**Pn**	**11 31 03.9**	**+0.8**
PTL	**Penteli**	**1.14**	**30**	P	**Pn**	**11 31 04.2**	**+0.8**
PTL				S	**Sn**	**11 31 21.7**	**+2.5**
PTL	**Penteli**	**1.14**	**30**	P	**Pb**	**11 31 03.5**	**+0.3**
VIL2	**Platees**	**1.15**	**5**	P	**Pg**	**11 31 02.8**	**-0.6**
STFN	**Stefani**	**1.15**	**16**	P	**Pn**	**11 31 04.8**	**+1.1**
STFN				S	**Sn**	**11 31 21.8**	**+2.2**
STFN	**Stefani**	**1.15**	**16**	P	**Pn**	**11 31 04.4**	**+0.8**
PYL1	**Pylos**	**1.16**	**263**	P	**Pg**	**11 31 03.2**	**-0.5**
MTHA	**Methoni**	**1.17**	**258**	P	**Pg**	**11 31 04.2**	**+0.3**
DION	**Dionisos Attik**	**1.19**	**32**	P	**Pn**	**11 31 04.5**	**+0.4**
ANKY	**Antikythira Is**	**1.21**	**174**	P	**Pn**	**11 31 04.9**	**+0.5**
ANKY				S	**Sb**	**11 31 20.5**	**+0.5**
ANKY	**Antikythira Is**	**1.21**	**174**	P	**Pn**	**11 31 04.0**	**-0.3**
AMT	**Artemida-Makis**	**1.23**	**293**	P	**Pb**	**11 31 04.4**	**-0.4**
KLV	**Kalavryta, Ach**	**1.25**	**321**	P	**Pb**	**11 31 04.6**	**-0.5**
ZARO	**Zacharo**	**1.26**	**290**	P	**Pg**	**11 31 05.7**	**+0.2**
KLV1	**Kalavrita**	**1.26**	**320**	P	**Pg**	**11 31 05.8**	**+0.2**
KARY	**Karystos**	**1.41**	**47**	P	**Pn**	**11 31 07.4**	**+0.2**
DRO	**Drossia**	**1.44**	**308**	P	**Pn**	**11 31 08.0**	**+0.5**
DLFA	**Delphi**	**1.50**	**340**	P	**Pb**	**11 31 09.2**	**-0.1**
KALE	**Kalithea**	**1.54**	**329**	P	**Pn**	**11 31 09.3**	**+0.4**
TRIZ	**Trizonia**	**1.54**	**327**	P	**Pn**	**11 31 09.1**	**+0.1**
LKR	**Lokris**	**1.58**	**356**	P	**Pn**	**11 31 10.0**	**+0.5**
SERG	**Sergoula**	**1.59**	**328**	P	**Pn**	**11 31 10.3**	**+0.6**
ATAL	**Atalanti**	**1.62**	**357**	P	**Pn**	**11 31 10.7**	**+0.6**
RLS	**Riolos of Patr**	**1.65**	**307**	P	**Pb**	**11 31 11.8**	**-0.2**
EFP	**Efpalio**	**1.67**	**325**	P	**Pn**	**11 31 11.5**	**+0.7**
TNSA	**Tinos**	**1.68**	**73**	P	**Pn**	**11 31 11.1**	**+0.2**
CH01	**Chania**	**1.71**	**155**	P	**Pn**	**11 31 11.7**	**+0.5**
KYMI	**Kymi, Euboea I**	**1.74**	**26**	P	**Pn**	**11 31 12.2**	**+0.5**
ANX	**Ano Chora**	**1.80**	**328**	P	**Pn**	**11 31 13.2**	**+0.6**
SAP3	**Santorini-Thir**	**1.89**	**109**	P	**Pn**	**11 31 14.4**	**+0.8**
APE	**Apeiranthos**	**1.92**	**89**	Pn	**Pn**	**11 31 14.4**	**+0.2**
APE	**Apeiranthos**	**1.92**	**89**	⇓P	**Pn**	**11 31 14.3**	**+0.2**
APE	**Apeiranthos**	**1.92**	**89**	P	**Pn**	**11 31 14.1**	**-0.1**
THERA	**Ancient Thera,**	**2.01**	**110**	P	**Pn**	**11 31 16.3**	**+0.9**
AGG	**Agios Georgios**	**2.05**	**342**	P	**Pn**	**11 31 17.4**	**+1.4**
MAKR	**Makrakomi, Fth**	**2.10**	**338**	P	**Pb**	**11 31 18.2**	**-1.3**
EVR	**Evrytania**	**2.12**	**331**	P	**Pn**	**11 31 17.7**	**+0.6**
SKY	**Skiros Island**	**2.12**	**31**	P	**Pn**	**11 31 17.9**	**+0.9**
AOS2	**Alonissos-2**	**2.15**	**15**	P	**Pn**	**11 31 17.8**	**+0.4**
NEO	**Neokhori**	**2.23**	**2**	P	**Pn**	**11 31 19.0**	**+0.5**
IDI	**Anoyia**	**2.27**	**141**	Pn	**Pn**	**11 31 19.5**	**+0.4**
	46nm,0.3s,baz=316,slow=16,SNR=61						
IDI					Sn	**11 31 46.3**	**-0.9**
	29nm,0.3s,baz=7.1,slow=16,SNR=7.0						
IDI	**Anoyia**	**2.27**	**141**	Pn	**Pn**	**11 31 20.7**	**+1.6**
IDI	**Anoyia**	**2.27**	**141**		**Pn**	**11 31 19.1**	**0.0**
IDI	**Anoyia**	**2.27**	**141**	P	**Pn**	**11 31 18.6**	**-0.6**
GVD	**Gavdhos**	**2.36**	**161**	Pn	**Pn**	**11 31 22.3**	**+2.1**
GVD	**Gavdhos**	**2.36**	**161**	P	**Pn**	**11 31 20.6**	**+0.4**
CHOS	**Chios island**	**2.66**	**60**	Pn	**Pn**	**11 31 25.9**	**+1.4**
SIGR	**SIGRI**	**3.03**	**44**	Pn	**Pn**	**11 31 30.9**	**+1.5**
LIT	**Litokhoron**	**3.07**	**351**		**Pn**	**11 31 31.5**	**+1.5**
BODT	**Bodrum**	**3.34**	**89**	Pn	**Pn**	**11 31 36.3**	**+2.6**
BLCB	**Balcova**	**3.37**	**66**	Pn	**Pn**	**11 31 35.7**	**+1.7**
DAT	**Datca**	**3.58**	**94**	Pn	**Pn**	**11 31 39.6**	**+2.5**
KARP	**Karpathos**	**3.59**	**114**	Pn	**Pn**	**11 31 39.6**	**+2.4**
KARP	**Karpathos**	**3.59**	**114**		**Pn**	**11 31 39.7**	**+0.3**
KEK	**Kerkira**	**3.72**	**316**	Pn	**Pn**	**11 31 42.8**	**+3.9**
EZN	**Ezine**	**3.72**	**41**	⇑P	**Pn**	**11 31 43.2**	**+4.3**
AYDB	**Zeytinkoy-Aydi**	**3.88**	**76**	Pn	**Pn**	**11 31 43.4**	**+2.1**
YAYO	**Edremit-Balk**	**4.00**	**49**	Pn	**Pn**	**11 31 44.4**	**+1.6**
ODEM	**Odemis-Izmir**	**4.10**	**71**	Pn	**Pn**	**11 31 46.2**	**+2.0**
ARG	**Arkhangelos**	**4.10**	**100**	Pn	**Pn**	**11 31 47.2**	**+3.0**
VAY	**Valandovo**	**4.27**	**354**	*i* Pn	**Pn**	**11 31 49.4**	**+2.9**
GORD	**Gordes-Manisa**	**4.39**	**64**	Pn	**Pn**	**11 31 50.5**	**+2.4**
RDO	**Rodhopi**	**4.48**	**24**	Pn	**Pn**	**11 31 49.2**	**-0.1**
MANT	**Manisa**	**4.52**	**70**		**Pn**	**11 31 50.9**	**+0.7**
BAND	**Balkesir-Ban**	**5.08**	**48**	⇓P	**Pn**	**11 31 59.8**	**+2.1**
TIP	**Timpagrande**	**5.45**	**295**		**Pn**	**11 32 04.0**	**+1.2**
TIP	**Timpagrande**	**5.45**	**295**	⇓P	**Pn**	**11 32 04.5**	**+1.7**
CEL	**Celeste**	**5.87**	**284**		**Pn**	**11 32 09.6**	**+1.1**
PDG	**Podgorica**	**6.13**	**332**	⇑P	Pn	11 32 19.1	+7.0
CUC	**Castrocucco**	**6.44**	**299**		**Pn**	**11 32 18.5**	**+2.2**
BLKB	**Belogradchik**	**6.55**	**357**	⇑P	Pn	11 32 24.8	+6.9
ACER	**Acerenza**	**6.72**	**306**	Pn	**Pn**	**11 32 21.8**	**+1.5**
VAE	**Valguarnera**	**6.97**	**276**	Pn	**Pn**	**11 32 26.1**	**+2.5**
	9.1nm,0.3s,baz=25,slow=19,SNR=2.8						
	18nm,0.4s						
RAFF	**Raffo Rosso**	**7.01**	**274**		**Pn**	**11 32 24.8**	**+0.7**
SGRT	**San Giovanni R**	**7.39**	**312**	Pn	**Pn**	**11 32 30.2**	**+0.8**
VOIR		**8.48**	**9**	⇓P	**Pn**	**11 32 46.9**	**+2.6**
BR131	**Keskin Array S**	**8.66**	**69**	Pn	**Pn**	**11 32 46.7**	**-0.3**
BRTR	**Keskin Array B**	**8.66**	**69**	Pn	**Pn**	**11 32 46.1**	**-0.8**
	0.1nm,0.3s,baz=244,slow=14,SNR=1.8						
BRTR					LR	LR	11 36 51.3	
	comp=Z,64nm,18.3s,baz=270,slow=44							
BRTR	**Keskin Array B**	**8.66**	**69**		**Pn**	**11 32 45.0**	**-1.9**
MLR	**Muntele Rosu**	**8.68**	**13**	Pn	**Pn**	**11 32 46.6**	**-0.4**
	0.2nm,0.3s,baz=185,slow=16,SNR=1.7						
	2.7nm,1.0s						
MLR	**Muntele Rosu**	**8.68**	**13**	⇓P	**Pn**	**11 32 51.2**	**+4.1**
NRCA	**Norcia**	**9.61**	**310**	Pn	**Pn**	**11 33 01.8**	**+2.1**
FDMO	**Fiordimonte**	**9.73**	**311**	Pn	**Pn**	**11 33 04.0**	**+2.5**
MMAI	**Mount Meron Ar**	**10.84**	**108**	Pn	**Pn**	**11 33 14.8**	**-1.8**
	1.4nm,0.3s,baz=285,slow=15,SNR=2.8						
EIL	**Elat**	**12.32**	**123**	Pn	**Pn**	**11 33 35.4**	**-1.6**
	1.1nm,0.3s,baz=268,slow=4.2,SNR=6.2						
	4.2nm,0.7s						
CLL	**Collm**	**15.96**	**336**	*e*pP	**P**	**11 34 29.0**	**-0.5**
CLL				*e*PP	**PnPn**	**11 34 34.0**	**-0.5**
KBZ	**Khabaz**	**16.44**	**60**	Pn	**Pn**	**11 34 31.2**	**-0.8**
	0.1nm,0.3s,baz=229,slow=9.3,SNR=1.2						
	0.5nm,0.4s						
ESDC	**Sonseca Array**	**21.38**	**285**	P	**P**	**11 35 32.7**	**+3.6**
	0.7nm,0.7s,baz=78,slow=10,SNR=4.7						
	1.7nm,0.7s						
HFS	**Hagfors**	**23.86**	**348**	P	**P**	**11 35 53.9**	**-0.8**
	1.7nm,0.6s,baz=149,slow=8.3,SNR=12						
	1.7nm,0.6s						
FINES	**FINESS Array B**	**24.47**	**3**	P	**P**	**11 35 59.1**	**-1.2**
	0.7nm,0.4s,baz=168,slow=12,SNR=6.2						
	0.7nm,0.4s						
NOA	**NORSAR Array B**	**25.15**	**346**	P	**P**	**11 36 05.9**	**-0.6**
	0.5nm,0.6s,baz=156,slow=8.9,SNR=4.0						
	0.5nm,0.6s						
EKA	**Eskdalemuir Ar**	**25.54**	**324**	P	**P**	**11 36 09.8**	**-0.2**
	2.4nm,0.7s,baz=128,slow=9.7,SNR=6.6						
	2.4nm,0.7s						
ESK	**Eskdalemuir**	**25.55**	**324**	P	**P**	**11 36 11.0**	**+0.9**
DBIC	**Dimbokro**	**39.57**	**227**	P	**P**	**11 38 14.6**	**+1.7**
	1.0nm,0.3s,baz=53,slow=4.5,SNR=1.8						
	1.0nm,0.3s						
DBIC	**Dimbokro**	**39.57**	**227**	IAmb	IAmb	11 38 20.4	
	comp=Z,16nm,1.4s						
KURBB	**Kurchatov Arra**	**41.23**	**53**	P	**P**	**11 38 24.8**	**-1.6**
	comp=Z,4.7nm,0.2s,baz=274,slow=8.5,SNR=1.9						
	comp=Z,4.7nm,0.2s						
KURK	**Kurchatov**	**41.29**	**53**	P	**P**	**11 38 24.8**	**-2.0**
SPITS	**Spitsbergen Ar**	**41.32**	**358**	P	**P**	**11 38 26.0**	**-0.7**
	comp=Z,18nm,1.1s,baz=170,slow=9.6,SNR=2.6						
	comp=Z,18nm,1.1s						
MKAR	**Makanchi Array**	**44.12**	**58**	P	**P**	**11 38 48.8**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=275,slow=7.9,SNR=9.2						
	comp=Z,0.5nm,0.4s						
ZAA0	**Zalesovo Array**	**44.90**	**47**	IAmb	IAmb	11 39 02.7	
	comp=Z,2.9nm,0.6s						
ZALV	**Zalesovo Beam**	**44.90**	**47**	P	**P**	**11 38 55.1**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=277,slow=7.7,SNR=13						
	comp=Z,1.8nm,0.3s						
ZALV	**Zalesovo Beam**	**44.90**	**47**		**P**	**11 38 55.9**	**-0.1**
SONM	**Songino Array**	**59.55**	**51**	P	**P**	**11 40 43.5**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=291,slow=9.1,SNR=1.5						
	comp=Z,0.2nm,0.4s						
SCHQ	**Schefferville**	**60.67**	**318**	P	**P**	**11 40 52.9**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=77,slow=8.7,SNR=2.4						
	comp=Z,5.1nm,0.8s						
SCHQ	**Schefferville**	**60.67**	**318**	IAmb	IAmb	11 40 54.1	
	comp=Z,160nm,1.2s						
BOSA	**Boshof**	**65.37**	**178**	P	**P**	**11 41 24.1**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=357,slow=8.5,SNR=1.3						
	comp=Z,1.1nm,0.6s						
CMAR	**Chiang Mai Ar**	**67.97**	**83**	P	**P**	**11 41 39.4**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=290,slow=6.6,SNR=4.9						
	comp=Z,0.3nm,0.3s						
E28M	**Babbage River**	**73.85**	**353**	P	**P**	**11 42 15.6**	**-0.2**
E29M	**Blow River**	**73.90**	**353**	P	**P**	**11 42 16.8**	**+0.6**
E29M				IAmb	IAmb	11 42 17.8	
	comp=Z,2.6nm,0.7s						
D23K	**Nanushuk River**	**74.18**	**358**	P	**P**	**11 42 18.6**	**+0.8**
D23K				IAmb	IAmb	11 42 48.4	
	comp=Z,9.0nm,1.4s	

NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
JNU	**Nakatsue**	**31.45**	**7**	P	**P**	**11 40 21.6**	**-0.3**	
	comp=Z,14nm,0.9s,baz=270,slow=5.1,SNR=3.9							
	comp=Z,14nm,0.9s							
CMAR	**Chiang Mai Arr**	**31.75**	**303**	P	**P**	**11 40 24.4**	**-0.4**	
	comp=Z,0.7nm,0.4s,baz=124,slow=6.6,SNR=8.0							
CMAR				PcP	**PcP**	**11 43 16.4**	**+0.5**	
	comp=Z,0.6nm,0.5s,baz=197,slow=2.6,SNR=5.4							
	comp=Z,0.7nm,0.4s							
FORT	**Forrest**	**32.41**	**178**	P	**P**	**11 40 30.0**	**-0.4**	
FORT				IAmb	IAmb	11 40 44.5		
	comp=Z,9.6nm,0.9s							
KSRS	**Korea Array**	**35.53**	**2**	P	**P**	**11 40 57.4**	**+0.1**	
	comp=Z,1.8nm,0.7s,baz=180,slow=9.0,SNR=4.6							
	comp=Z,1.8nm,0.7s							
BBOO	**Buckleboo**	**35.55**	**166**	P	**P**	**11 40 57.3**	**-0.4**	
BBOO				IAmb	IAmb	11 41 00.4		
	comp=Z,16nm,1.3s							
MJAR	**Matsushiro Arr**	**36.23**	**16**	P	**P**	**11 41 02.8**	**-0.7**	
	comp=Z,5.1nm,0.9s,baz=183,slow=9.5,SNR=8.2							
	comp=Z,5.1nm,0.9s							
STKA	**Stephens Creek**	**36.39**	**158**	P	**P**	**11 41 03.6**	**-1.3**	
	comp=Z,2.7nm,0.7s,baz=331,slow=11,SNR=7.1							
	comp=Z,2.7nm,0.7s							
HNS	**HongShan**	**37.09**	**344**	*e*P	**P**	**11 41 13.8**	**+3.1**	
BJI	**Beijing**	**39.24**	**347**	P	**P**	**11 41 33.0**	**+4.2**	
BJI				pmax	pmax			
	comp=Z,5.0nm,1.6s							
SHL	**Shillong**	**40.91**	**308**	P	**P**	**11 41 41.5**	**-1.7**	
SHL				IAmb	IAmb	11 41 48.3		
	comp=Z,8.8nm,0.7s							
HHC	**Hu-ho-hao-te**	**41.19**	**343**	*e*P	**P**	**11 41 47.1**	**+1.9**	
HHC				pmax	pmax			
	comp=Z,10.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,180nm,5.2s							
USRK	**Ussuriysk Ar.**	**42.52**	**6**	P	**P**	**11 41 54.8**	**-1.0**	
	comp=Z,5.8nm,0.8s,baz=202,slow=6.1,SNR=8.4							
	comp=Z,5.8nm,0.8s							
ASAJ	**Asahikawa**	**44.50**	**16**	P	**P**	**11 42 10.8**	**-1.0**	
	comp=Z,10nm,0.9s,baz=18,slow=16,SNR=1.7							
	comp=Z,10nm,0.9s							
GTA	**Gaotai**	**44.68**	**330**	*e*P	**P**	**11 42 13.1**	**-0.4**	
GTA				PcP	**PcP**	**11 43 55.6**	**-0.1**	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.0s							
EVN	**Everest**	**46.03**	**308**	P	**P**	**11 42 24.1**	**-0.9**	
HILR	**Hailar Array B**	**47.96**	**354**	P	**P**	**11 42 39.5**	**+0.5**	
	comp=Z,0.9nm,0.4s,baz=181,slow=12,SNR=5.4							
	comp=Z,0.9nm,0.4s							
ULN	**Ulaanbaatar**	**48.91**	**343**	P	**P**	**11 42 47.4**	**+0.9**	
ULN				IAmb	IAmb	11 42 49.2		
	comp=Z,6.5nm,1.1s							
SONM	**Songino Array**	**49.09**	**342**	P	**P**	**11 42 47.3**	**-0.5**	
	comp=Z,2.5nm,0.8s,baz=162,slow=8.3,SNR=9.7							
	comp=Z,2.5nm,0.8s							
PEA0B	**Petropavlovsk-**	**57.30**	**22**	P	**P**	**11 43 48.4**	**+0.5**	
PETK	**Petropavlovsk-**	**57.30**	**22**	P	**P**	**11 43 45.7**	**-2.3**	
	comp=Z,3.2nm,0.6s,baz=192,slow=5.8,SNR=9.3							
	comp=Z,3.2nm,0.6s							
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**11 43 59.2**	**-1.2**	
	comp=Z,3.0nm,0.4s,baz=121,slow=7.7,SNR=32							
	comp=Z,3.0nm,0.4s							
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**11 43 59.4**	**-1.0**	
TARG	**Taragay, Kyrgy**	**59.09**	**319**	P	**P**	**11 44 02.4**	**+1.2**	
TARG				IAmb	IAmb	11 44 04.7		
	comp=Z,3.4nm,0.7s							
MAKZ	**Makanchi**	**59.24**	**326**	P	**P**	**11 44 00.6**	**-1.1**	
MAKZ				IAmb	IAmb	11 44 02.8		
	comp=Z,4.3nm,0.7s							
KSH	**Kashi**	**59.30**	**316**	P	**P**	**11 44 06.3**	**+3.9**	
KSH				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ARSB	**Arslanbob**	**62.14**	**317**	IAmb	IAmb	11 44 24.8		
	comp=Z,6.1nm,1.2s							
ZALV	**Zalesovo Beam**	**62.24**	**334**	P	**P**	**11 44 20.5**	**-1.5**	
	comp=Z,1.0nm,0.4s,baz=123,slow=9.8,SNR=4.7							
	comp=Z,1.0nm,0.4s							
GAR	**Garm**	**63.12**	**313**	P	**P**	**11 44 28.0**	**-0.3**	
KURBB	**Kurchatov Arra**	**63.28**	**328**	P	**P**	**11 44 27.6**	**-1.3**	
	comp=Z,4.7nm,0.5s,baz=129,slow=6.2,SNR=39							
	comp=Z,4.7nm,0.5s							
KURK	**Kurchatov**	**63.29**	**328**	P	**P**	**11 44 28.2**	**-0.8**	
KKAR	**Karatay Array**	**64.54**	**318**	P	**P**	**11 44 37.3**	**-0.1**	
BVAR	**Borovoye Array**	**68.86**	**327**	P	**P**	**11 45 03.9**	**-0.8**	
	comp=Z,3.6nm,0.6s,baz=139,slow=8.9,SNR=15							
	comp=Z,3.6nm,0.6s							
AB31	**Akbulak array**	**73.55**	**321**	P	**P**	**11 45 33.1**	**-0.1**	
ABKAR	**Akbulak array**	**73.55**	**321**	P	**P**	**11 45 32.0**	**-1.1**	
ARTI	**Arti**	**76.57**	**328**	P	**P**	**11 45 49.7**	**-0.8**	
ARTI				IAmb	IAmb	11 45 53.5		
	comp=Z,6.8nm,0.7s							
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**11 46 16.7**	**-0.5**	
	comp=Z,2.0nm,0.8s,baz=320,slow=6.1,SNR=11							
	comp=Z,2.0nm,0.8s							
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**11 46 17.0**	**-0.1**	
MAW	**Mawson**	**81.87**	**200**	P	**P**	**11 46 18.8**	**-0.4**	
	comp=Z,2.2nm,0.8s,baz=68,slow=8.8,SNR=8.1							
	comp=Z,2.2nm,0.8s							
J19K	**Poorman**	**83.08**	**26**	P	**P**	**11 46 27.3**	**+1.7**	
E19K	**Redstone River**	**83.09**	**22**	P	**P**	**11 46 27.4**	**+1.8**	
KBZ	**Khabaz**	**84.19**	**314**	P	**P**	**11 46 31.2**	**-0.4**	
	comp=Z,2.8nm,1.0s,baz=1.7,slow=5.0,SNR=4.4							
	comp=Z,2.8nm,1.0s							
COLD	**Coldfoot**	**85.75**	**23**	P	**P**	**11 46 41.5**	**+2.5**	
COLD				IAmb	IAmb	11 46 46.0		
	comp=Z,5.3nm,1.0s							
ILAR	**Eielson Array**	**86.93**	**25**	P	**P**	**11 46 43.5**	**-1.4**	
	comp=Z,0.2nm,0.6s,baz=232,slow=4.8,SNR=5.5							
	comp=Z,0.2nm,0.6s							
BRTR	**Keskin Array B**	**91.12**	**310**	P	**P**	**11 47 06.1**	**+0.7**	
	comp=Z,0.5nm,0.6s,baz=111,slow=7.9,SNR=2.0							
	comp=Z,0.5nm,0.6s							
QSPA	**South Pole Qui**	**91.70**	**180**	P	**P**	**11 47 08.2**	**+0.8**	
	comp=Z,0.8nm,0.6s,baz=156,slow=1.6,SNR=7.0							
	comp=Z,0.8nm,0.6s							
ARCES	**ARCESS Array B**	**92.21**	**340**	P	**P**	**11 47 09.6**	**0.0**	
	comp=Z,3.5nm,0.9s,baz=61,slow=9.9,SNR=2.9							
	comp=Z,3.5nm,0.9s							
SPITS	**Spitsbergen Ar**	**92.35**	**349**	P	**P**	**11 47 09.6**	**-0.5**	
	comp=Z,13nm,1.1s,baz=70,slow=9.3,SNR=2.0							
	comp=Z,13nm,1.1s							
AKASG	**Malin Array Be**	**93.28**	**321**	P	**P**	**11 47 14.6**	**-0.4**	
	comp=Z,0.2nm,0.3s,baz=83,slow=2.9,SNR=1.1							
	comp=Z,0.2nm,0.3s							
FINES	**FINESS Array B**	**93.46**	**332**	P	**P**	**11 47 14.7**	**-0.8**	
	comp=Z,1.4nm,0.7s,baz=27,slow=5.8,SNR=3.8							
	comp=Z,1.4nm,0.7s							
SCHQ	**Schefferville**	**122.51**	**9**	PKP	**PKPdf**	**11 52 53.0**	**-2.5**	
	comp=Z,2.1nm,0.7s,baz=243,slow=4.5,SNR=1.6							
TXAR	**Lajitas Array**	**122.92**	**53**	PKhKP	PKPpre	11 52 51.4		
	comp=Z,0.6nm,0.9s,baz=72,slow=4.3,SNR=4.8							
PLCA	**Paso Flores**	**138.24**	**160**	PKP	**PKPdf**	**11 53 26.3**	**+0.5**	
	comp=Z,1.3nm,0.9s,baz=244,slow=5.3,SNR=3.2							
LPAZ	**La Paz**	**159.58**	**136**	PKP	**PKPdf**	**11 54 00.3**	**-0.3**	
	comp=Z,1.1nm,0.9s,baz=228,slow=1.3,SNR=3.7							

*SSNC **18** 11:42:28.9±1.4, 19°.42N×70°.42W, h87km±14km, MD3.5, ML3.3*
*SDD **18** 11:42:31.9±2.5, 19°.69N×70°.63W, h22km±18km, MD3.4, ML3.2, MW3.5*
ISC 18 11:42:31.0±1.1**, 19°.70N**±0°.03×**70°.61W**±0°.03**, h23**km±11km**, n21**, σ1°48/37**, 22C-7D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SC01	**Santiago de lo**	**0.30**	**203**	↓*e*Pg		**Pb**	**11 42 37.2**	**-0.6**
SC01				↑*e*Sg		**Sb**	**11 42 43.9**	**+1.5**
SC01				IAML			11 42 52.7	
	comp=N,2μm,0.6s							
LUDR	**Luperon**	**0.38**	**300**	↑*e*Pg		**Pn**	**11 42 39.7**	**-1.4**
ABDR	**Alto Bandera**	**0.89**	**181**	↑*e*Pg		**Pb**	**11 42 46.8**	**-1.2**
ABDR				↑*e*Sg		**Sb**	**11 42 58.7**	**-0.7**
ABDR				IAML			11 43 23.1	
	comp=N,0.4nm,0.6s							
REDR	**Restauracion**	**0.91**	**234**	↓*e*Pg		**Pn**	**11 42 50.5**	**+2.0**
REDR				↑*e*Sg		**Sn**	**11 43 05.5**	**+4.6**
REDR				IAML			11 43 07.2	
	comp=N,2μm,0.2s							
DR08	**Loma La Naviza**	**0.92**	**143**	↑*e*Pg		**Pb**	**11 42 47.4**	**-1.0**
DR08				↑*e*Sg		**Sn**	**11 43 00.9**	**-0.4**
DR08				IAML			11 43 03.1	
	comp=N,9μm,0.1s							
SDDR	**Presa de Saban**	**0.96**	**222**	↑*e*Sg		**Sb**	**11 42 47.7**	**-1.6**
SDDR				↑*e*Sg		**Sb**	**11 42 59.8**	**-1.6**
SDDR				IAML			11 43 05.7	
	comp=N,284nm,0.5s							
SDDR	**Presa de Saban**	**0.96**	**222**	*e*P		**Pn**	**11 42 47.6**	**-1.6**
SDDR				*e*S		**Sb**	**11 42 59.9**	**-1.5**
SDDR				IAML			11 43 05.1	
	comp=N,178nm,0.4s							
SDDR				IAML			11 43 05.7	
	comp=N,276nm,0.5s							
MCDR	**Montecristi**	**1.01**	**281**	↓*e*Pg		**Pb**	**11 42 50.1**	**+0.3**
MCDR				IAML			11 43 12.6	
	comp=N,629nm,0.2s							
BANI	**BANI**	**1.32**	**170**	↑*e*Pg		**Pn**	**11 42 53.5**	**-0.8**
BANI				↓*e*Sg		**Sb**	**11 43 13.5**	**+1.6**
BANI				IAML			11 43 15.0	
	comp=N,1μm,0.5s							
SMDR	**Samana, DR**	**1.40**	**107**	↑*e*Pg		**Pb**	**11 42 56.7**	**+0.2**
SMDR				↑*e*Sg		**Sb**	**11 43 16.0**	**+2.0**
SMDR				IAML			11 43 18.1	
	comp=N,380nm,0.5s							
SDD	**Santo Domingo**	**1.40**	**152**	↓*e*Pg		**Pb**	**11 42 55.5**	**-1.0**
SDD				↑*e*Sg		**Sb**	**11 43 14.0**	**+0.1**
SDD				IAML			11 43 19.2	
	comp=N,53nm,0.8s							
HATOM	**Hato Mayor del**	**1.47**	**128**	↓*e*Pg		**Pb**	**11 42 56.6**	**-1.1**
HATOM				↑*e*Sg		**Sb**	**11 43 16.5**	**+0.4**
HATOM				IAML			11 43 18.5	
	comp=N,368nm,0.3s							
MIDR	**Miches**	**1.64**	**116**	↑*e*Pg		**Pb**	**11 42 59.8**	**-0.8**
MIDR				↑*e*Sg		**Sb**	**11 43 22.6**	**+1.9**
MIDR				IAML			11 43 24.0	
	comp=N,215nm,0.3s							
PODR	**Polo**	**1.66**	**203**	↑*e*Pg		**Pb**	**11 43 00.4**	**-0.6**
PODR				IAML			11 43 27.3	
	comp=N,410nm,0.5s							
JIDR	**Jimani**	**1.68**	**225**	↑*e*Pg		**Pb**	**11 43 00.6**	**-0.7**
JIDR				↑*e*Sg		**Sb**	**11 43 24.1**	**+2.0**
JIDR				IAML			11 43 24.7	
	comp=N,734nm,0.6s							
GRTK	**Grand Turk**	**1.87**	**345**	↑*e*Pg		**Pb**	**11 43 03.3**	**-1.2**
GRTK				↓*e*Sg		**Sb**	**11 43 29.1**	**+1.8**
GRTK				IAML			11 43 29.4	
	comp=N,238nm,0.3s							
GRTK	**Grand Turk**	**1.87**	**345**	*e*P		**Pb**	**11 43 03.3**	**-1.2**
GRTK				*e*S		**Sb**	**11 43 27.5**	**+0.1**
GRTK				IAML			11 43 29.9	
	comp=N,409nm,0.2s							
GRTK				IAML			11 43 31.1	
	comp=N,293nm,0.4s							
HIDR	**Higuey Centro**	**2.10**	**121**	↑*e*Pg		**Pb**	**11 43 07.4**	**-1.0**
HIDR				↑*e*Sg		**Sb**	**11 43 35.5**	**+1.4**
HIDR				IAML			11 43 37.0	
	comp=N,753nm,0.2s							
MASC	**Masc**	**3.44**	**278**	*e*P		**Pn**	**11 43 22.4**	**-0.9**
MASC				*e*S		**Sn**	**11 44 03.5**	**+0.2**
QMBU	**Quimbuelo**	**3.99**	**278**	*e*P		**Pn**	**11 43 29.7**	**-1.1**
GTBY	**Guantanamo Bay**	**4.25**	**274**	*e*P		**Pn**	**11 43 33.8**	**-0.6**

*PRE **18** 11:44:11.9±1.2, 25°.91S×29°.51E, h0km, ML2.3, Suspected explosion*
*BGSI **18** 11:44:20.7±1.0, 25°.77S×29°.66E, h59km±28km, ML2.5*
ISC 18 11:44:13.0±1.0**, 25°.92S**±0°.03×**29°.54E**±0°.03**, h0km**, n20**, σ1°57/37, South Africa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRLN	**Carolina, Mapu**	**0.44**	**100**	*e*P		**Pg**	**11 44 22.0**	**+0.5**
CRLN				*e*S		**Sg**	**11 44 28.6**	**+1.3**
CRLN				IAML			11 44 36.5	
	comp=Z,133nm,0.5s							
PILG	**Pilgrimsrest,**	**1.45**	**47**	*e*P		**Pn**	**11 44 40.4**	**-0.3**
PILG				*e*S		**Sg**	**11 44 60.0**	**+0.5**
PILG				IAML			11 45 01.2	
	comp=Z,99nm,0.4s							
HRAO	**HartRAO**	**1.67**	**271**	*e*P		**Pn**	**11 44 43.1**	**-0.5**
HRAO				*e*S		**Sn**	**11 45 04.7**	**-1.1**
HRAO				IAML			11 45 05.0	
	comp=Z,75nm,0.2s							
NWCL	**Newcastle**	**1.84**	**170**	*e*P		**Pn**	**11 44 45.6**	**-0.3**
NWCL				*e*S		**Sn**	**11 45 09.7**	**-0.3**
NWCL				IAML			11 45 14.5	
	comp=Z,31nm,0.3s							
PRYS	**Parys**	**2.19**	**242**	*e*P		**Pn**	**11 44 50.9**	**0.0**
PRYS				*e*S		**Sn**	**11 45 17.2**	**-1.7**
PRYS				IAML			11 45 17.5	
	comp=Z,7.4nm,0.3s							
POGA	**Pongola**	**2.41**	**127**	*e*P		**Pn**	**11 44 54.2**	**+0.6**
POGA				*e*S		**Sn**	**11 45 23.4**	**-0.5**
POGA				IAML			11 45 37.9	
	comp=Z,22nm,0.5s							
TEMBE	**Tembe Elephant**	**2.82**	**114**	*e*P		**Pn**	**11 44 59.2**	**-0.2**
TEMBE				*e*S		**Sn**	**11 45 34.2**	**+0.1**
TEMBE				IAML			11 45 46.7	
	comp=Z,35nm,0.5s							
SNKL	**Senekal, Frees**	**2.83**	**213**	*e*P		**Pn**	**11 44 59.1**	**-0.5**
SNKL				*e*S		**Sn**	**11 45 33.3**	**-1.2**
SNKL				IAML			11 45 44.9	
	comp=N,40nm,0.4s							
MOPA	**Mopani**	**2.93**	**36**	*e*P		**Pn**	**11 45 00.0**	**-0.8**
MOPA				*e*S		**Sn**	**11 45 35.6**	**-1.2**
MOPA				IAML			11 45 47.5	
	comp=Z,41nm,0.3s							
MUSN	**Musina, Limpop**	**3.63**	**5**	*e*P		**Pn**	**11 45 10.6**	**+0.1**
MUSN				*e*S		**Sn**	**11 45 52.4**	**-1.6**
MUSN				IAML			11 46 05.7	
	comp=Z,24nm,0.4s							
LBTB	**Lobatse**	**3.67**	**283**	*e*P		**Pn**	**11 45 11.1**	**-0.1**
LBTB				*e*S		**Sn**	**11 45 53.6**	**-1.7**
LBTB				IAML			11 46 03.0	
	comp=Z,12nm,0.5s							
PMBG	**Pietermaritzbu**	**3.68**	**167**	*e*P		**Pn**	**11 45 11.5**	**+0.2**
PMBG				*e*S		**Sn**	**11 45 53.8**	**-1.6**
PMBG				IAML			11 46 13.1	
	comp=Z,8.6nm,0.3s							
MREMI	**Moremi**	**3.84**	**330**	*i* P		**Pn**	**11 45 14.3**	**+0.9**
MREMI				*i* S		**Sn**	**11 45 55.4**	**-4.0**
MREMI				IAML			11 46 09.2	
	comp=N,80nm,0.4s							
SWZ	**Schweizer**	**3.97**	**251**	*e*P		**Pn**	**11 45 15.1**	**-0.2**
SWZ				*e*S		**Sn**	**11 46 00.5**	**-2.1**
SWZ				IAML			11 46 14.4	
	comp=Z,9.4nm,0.3s							
LPHEP	**Lephephe**	**4.20**	**306**	*i* P		**Pn**	**11 45 21.4**	**+3.0**
LPHEP				IAML			11 46 23.9	
	comp=E,10nm,0.4s							
MAKGR	**Makgori**	**4.27**	**270**	*i* P		**Pn**	**11 45 23.6**	**+4.2**
MAKGR				*i* S		**Sn**	**11 46 09.4**	**-0.5**
BOSA	**Boshof**	**4.66**	**234**	*e*P		**Pn**	**11 45 25.0**	**+0.3**
BOSA				*e*S		**Sn**	**11 46 17.6**	**-2.0**
BOSA				IAML			11 46 35.6	
	comp=Z,6.4nm,0.5s							
KSTD	**Kokstad**	**4.69**	**182**	*e*P		**Pn**	**11 45 26.1**	**+0.9**
KSTD				*e*S		**Sn**	**11 46 18.5**	**-1.8**
KSTD				IAML			11 46 47.4	
	comp=Z,3.0nm,0.3s							
BROLN	**Tlhalogang**	**5.21**	**337**	*i* P		**Pn**	**11 45 33.2**	**+0.9**
BROLN				IAML			11 46 52.3	
	comp=E,9.9nm,0.5s							
SKOMA	**Sekoma**	**5.26**	**284**	*i* P		**Pn**	**11 45 35.8**	**+2.7**

*IDC **18** 11:45:36.0±8.6, 38°.10N×73°.06E, h156km±71km, mb3.4/5, mbtmp3.7/9, Error ellipse: s-maj=68.5km s-min=26.4km az=36.0*
*NNC **18** 11:45:37.6±7.3, 38°.76N×72°.84E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=57.4km s-min=39.2km az=163.0*
ISC 18 11:45:30.3±1.3**, 38°.1N**±0°.1×**72°.9E**±0°.1**, h100**km**, n15**, σ1°63/16**, mb3.9/5, 1C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IUG	**Iuzhnay**	**4.61**	**333**	Pg		**Pn**	**11 46 40.0**	**+2.2**
	87nm,0.4s							
IUG				Lg		Lg	11 47 30.3	
	120nm,0.6s							
MRKS	**Merke**	**4.67**	**3**	Lg		Lg	11 47 29.0	
	29nm,0.6s							
AAK	**Ala-Archa**	**4.72**	**15**	↓P		**Pn**	**11 46 41.1**	**+1.7**
	3.0nm,0.5s							
AAK				↑S		**Sn**	**11 47 31.8**	**-1.2**
	7.4nm,0.5s							
KK31	**Karatay Array**	**5.33**	**341**	P		**Pn**	**11 46 49.2**	**+1.7**
	60nm,0.6s,baz=155,slow=12,SNR=207							
KK31				↓S		**Sn**	**11 47 44.9**	**-2.7**
	54nm,0.5s,baz=151,slow=23							
KST	**Kastek**	**5.50**	**24**	Pg		**Pn**	**11 46 50.8**	**+1.0**
	9.7nm,0.6s							
KST				Lg		Lg	11 47 50.1	
	14nm,0.7s							
MKAR	**Makanchi Array**	**11.15**	**36**	P		**Pn**	**11 48 09.2**	**+2.8**
	0.5nm,0.7s,baz=210,slow=14,SNR=2.7							
KURBB	**Kurchatov Arra**	**13.18**	**16**	P		**P**	**11 48 38.0**	**-1.5**
	0.4nm,0.6s,baz=204,slow=11,SNR=4.1							
AB31	**Akbulak array**	**14.55**	**324**	P		**P**	**11 48 55.5**	**+0.7**
	0.3nm,0.3s,baz=130,slow=14,SNR=19							
BVAR	**Borovoye Array**	**15.05**	**354**	P		**P**	**11 49 00.8**	**+0.4**
	0.7nm,0.3s,baz=181,slow=10.0,SNR=6.1							
ZALV	**Zalesovo Beam**	**17.87**	**24**	P		**P**	**11 49 30.6**	**-1.0**
	1.2nm,0.5s,baz=213,slow=11,SNR=6.1							
FINES	**FINESS Array B**	**37.04**	**324**	P		**P**	**11 52 30.5**	**+0.4**
	2.3nm,1.0s,baz=123,slow=7.0,SNR=3.6							
	2.3nm,1.0s							
ARCES	**ARCESS Array B**	**40.28**	**336**	P		**P**	**11 52 57.5**	**+0.4**
	1.8nm,0.8s,baz=117,slow=9.4,SNR=1.1							
	1.8nm,0.8s							
HFS	**Hagfors**	**42.77**	**321**	P		**P**	**11 53 18.0**	**+0.5**
	1.6nm,0.8s,baz=81,slow=9.2,SNR=4.1							
	1.6nm,0.8s							
YKA	**Yellowknife Ar**	**79.60**	**4**	P		**P**	**11 57 25.6**	**-0.3**
	1.1nm,0.8s,baz=27,slow=11,SNR=4.2							
	1.1nm,0.8s							
WRA	**Warramunga Arr**	**81.58**	**123**	P		**P**	**11 57 35.9**	**-1.2**
	0.4nm,0.7s,baz=314,slow=5.8,SNR=4.6							
	0.4nm,0.7s							

*NOU **18** 11:50:32.6, 41°.27S×172°.71E, h171km, MLv3.6/8, South Island, New Zealand*
*WEL **18** 11:50:34.1±0.9, 41°.5±6°×17°.3E±°, h152km±6km, M2.5/6, MLv2.5/6, Error ellipse: s-maj=9.0km s-min=7.6km az=132.4, confirmed*
ISC 18 11:50:31.4±1.7**, 41°.25S**±0°.05×**172°.70E**±0°.05**, h177**km±9km**, n59, σ1°92/67, South Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MRNZ	**Matariki Terra**	**0.15**	**164**	P		**Pn**	**11 50 55.9**	**+1.0**
MRNZ				S		**Sn**	**11 51 12.2**	**-0.9**
TKNZ	**Takaka Hill**	**0.29**	**42**	P		**Pn**	**11 50 56.0**	**+0.7**
TKNZ				S		**Sn**	**11 51 12.3**	**-1.1**
QRZ	**Quartz Range**	**0.45**	**343**	P		**Pn**	**11 50 56.5**	**+0.8**
QRZ	**Quartz Range**	**0.45**	**343**	P		**Pn**	**11 50 56.7**	**+1.0**
QRZ				S		**Sn**	**11 51 13.2**	**-1.2**
NNZ	**Nelson**	**0.51**	**86**	P		**Pn**	**11 50 56.7**	**+0.8**
NNZ				S		**Sn**	**11 51 13.8**	**-0.9**
THZ	**Tophouse**	**0.53**	**163**	P		**Pn**	**11 50 57.2**	**+1.1**
DSZ	**Denniston Nort**	**0.83**	**234**	P		**Pn**	**11 50 58.6**	**+0.9**
DSZ				S		**Sn**	**11 51 16.0**	**-2.0**
TUWZ	**Tuamarina**	**0.95**	**101**	P		**Pn**	**11 51 00.1**	**+1.6**
TUWZ				S		**Sn**	**11 51 18.2**	**-1.1**
BSWZ	**Blackbirch Sta**	**1.00**	**118**	P		**Pn**	**11 50 59.9**	**+1.1**
BSWZ				S		**Sn**	**11 51 19.7**	**-0.3**
DUWZ	**D'Urville Isla**	**1.03**	**64**	P		**Pn**	**11 51 00.3**	**+1.2**
DUWZ				S		**Sn**	**11 51 20.0**	**-0.4**
TCW	**Tory Channel**	**1.19**	**89**	P		**Pn**	**11 51 01.4**	**+1.1**
TCW				S		**Sn**	**11 51 21.0**	**-1.6**
KHZ	**Kahutara**	**1.32**	**152**	P		**Pn**	**11 51 02.5**	**+1.1**
KHZ	**Kahutara**	**1.32**	**152**	P		**Pn**	**11 51 02.5**	**+1.1**
LTZ	**Lake Taylor**	**1.56**	**192**	P		**Pn**	**11 51 04.9**	**+1.2**
BHW	**Baring Head**	**1.64**	**96**	P		**Pn**	**11 51 05.1**	**+0.6**
KIW	**Kapiti Island**	**1.71**	**78**	P		**Pn**	**11 51 06.2**	**+0.9**
GVZ	**Greta Valley S**	**1.73**	**172**	P		**Pn**	**11 51 06.6**	**+1.2**
INZ	**Inchbonnie**	**1.75**	**212**	P		**Pn**	**11 51 06.8**	**+1.0**
CAW	**Cannon Point**	**1.79**	**86**	P		**Pn**	**11 51 06.9**	**+0.8**
OGWZ	**Otaki Gorge**	**1.92**	**78**	P		**Pn**	**11 51 08.5**	**+1.1**
MSWZ	**Moikau Station**	**1.93**	**96**	P		**Pn**	**11 51 08.2**	**+0.7**
PLWZ	**Palliser**	**1.95**	**100**	P		**Pn**	**11 51 08.6**	**+0.8**
PAWZ	**Paruwai Farm**	**2.06**	**95**	P		**Pn**	**11 51 09.7**	**+0.8**
MTW	**Mount Morrison**	**2.12**	**88**	P		**Pn**	**11 51 10.4**	**+0.8**
OXZ	**Oxford**	**2.13**	**193**	P		**Pn**	**11 51 10.5**	**+0.9**
HOWZ	**Holdsworth Sta**	**2.16**	**81**	P		**Pn**	**11 51 10.8**	**+0.8**
KHEZ	**Kahui Hut**	**2.20**	**28**	P		**Pn

baz=158,slow=15,SNR=1.8
comp=Z,5.4nm,1.1s

IDC 18 12:11:27.4±2.5, 19.67S×179.92W, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=139.6km s-min=27.0km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.54**	**243**	P	P	12 18 33.2	-1.7
	1.0nm,0.4s,baz=77,slow=11,SNR=2.8						
	1.0nm,0.4s						
WRA	**Warramunga Arr**	**42.93**	**262**	P	P	12 19 28.7	+0.4
	0.4nm,0.3s,baz=95,slow=7.9,SNR=38						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**42.96**	**256**	P	P	12 19 28.9	+0.3
	0.6nm,0.7s,baz=90,slow=8.5,SNR=15						
	0.6nm,0.7s						
NVAR	**Mina Array Bea**	**81.68**	**44**	P	P	12 23 48.2	+0.2
	0.3nm,0.7s,baz=241,slow=7.3,SNR=3.7						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**87.92**	**14**	P	P	12 24 18.3	-0.3
	0.3nm,0.8s,baz=198,slow=4.7,SNR=2.1						
	0.3nm,0.8s						

IDC 18 12:17:04.4±30.0, 20.97S×177.24W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=568.4km s-min=157.4km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.23**	**245**	P	P	12 24 28.0	+1.7
	0.8nm,0.4s,baz=70,slow=12,SNR=3.1						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**45.11**	**257**	P	P	12 25 21.6	-1.2
	1.0nm,0.5s,baz=99,slow=7.8,SNR=36						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**45.24**	**262**	P	P	12 25 23.8	-0.2
	1.8nm,0.6s,baz=103,slow=7.9,SNR=58						
	1.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.67**	**263**	P	P	12 26 28.3	-0.1
	2.2nm,0.8s,baz=117,slow=6.8,SNR=5.8						
	2.2nm,0.8s						

*IDC **18** 12:25:42.6±1.9, 1.87N×126.50E, h0km, mb3.4/3, mbtmp3.4/4, ML3.0/1, MS2.8/1, Error ellipse: s-maj=119.6km s-min=24.7km az=68.0*
*DJA **18** 12:25:46.6±3.0, 2.2N±4.2×12.6E±.2, h20km±31km, M3.2/7, MLv3.2/7*
ISC 18 12:25:47.5±1.5, 1.8N±0.2×126.5E±0.2, h35km, n7, σ0.46/6, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.32**	**139**	P	**Pn**	**12 26 09.2**	**-0.3**
SANI	**Sanana**	**3.84**	**188**	P	**Pn**	**12 26 43.9**	**-0.3**
BATI	**Baumata**	**12.24**	**193**	LR	LR	12 33 19.4	
	comp=Z,41nm,19.4s,baz=127,slow=37						
FITZ	**Fitzroy Crossi**	**19.77**	**182**	P	**Pn**	**12 30 16.4**	**-0.1**
	baz=4.4,slow=13,SNR=1.8						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**12 30 49.1**	**+0.5**
	0.7nm,0.5s,baz=338,slow=11,SNR=19						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.30**	**165**	P	**P**	**12 31 20.5**	**+0.4**
	0.4nm,0.7s,baz=344,slow=11,SNR=12						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**12 35 43.9**	**-0.1**
	0.3nm,0.6s,baz=129,slow=6.9,SNR=5.0						
	0.3nm,0.6s						

RSNC 18 12:36:30.4±1.8, 4.1N×103.2W±1.0, h3km±6km, M2.5, mb3.8, mB4.6, ML2.5, Mw(mB)3.8, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAPC	**Malpelo**	**0.70**	**85**	P	Pg	12 36 42.4	-1.5
MAPC				S	Sb	12 36 54.5	-1.0
OTAV	**Otavalo**	**5.33**	**134**	P	Pn	12 37 50.3	-1.0
	4.9nm,2.8s						
POPC	**Popayan, Colom**	**5.79**	**104**	P	Pn	12 37 58.6	+1.0
	2.8nm,1.2s						
YOTC	**Yotoco, Valle**	**5.95**	**89**	P	Pn	12 37 59.6	0.0
	5.0nm,1.1s						
YOTC				S	Sn	12 39 08.5	+0.1
	5.0nm,1.1s						
GUY2C	**Guyana, Caldas**	**7.04**	**79**	P	Pn	12 38 14.7	-0.2
	4.0nm,0.6s						
NORC	**Norcasia**	**7.59**	**77**	P	Pn	12 38 22.1	0.0
	343nm11nm,0.7s						
PTBC	**PUERTO BERRIO,**	**8.24**	**71**	P	Pn	12 38 30.0	-0.9
CHIC	**Chingaza**	**8.58**	**85**	P	Pn	12 38 38.6	+2.6

*IDC **18** 12:37:32.5±1.6, 1.73N×126.35E, h0km, mb3.6/4, mbtmp3.6/5, ML2.8/1, Error ellipse: s-maj=119.6km s-min=20.8km az=69.0*
*DJA **18** 12:37:36.7±0.4, 2.5N±5.2×12.7E±.2, h10km, M3.9/12, mB6.4/1, mb4.2/3, MLv3.7/12, Mw(mB)6.2/1, MwMwp4.6/1, Mwp5.0/1*
ISC 18 12:37:37.5±1.3, 1.9N±0.1×126.59E±0.09, h35km, n12, σ1.17/12, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**144**	P	**Pn**	**12 38 00.4**	**+0.7**
KMSI	**Cibinong**	**2.90**	**244**	P	**Pn**	**12 38 22.4**	**+1.1**
SANI	**Sanana**	**3.93**	**189**	P	**Pn**	**12 38 36.5**	**+1.1**
LUWI	**Luwuk**	**4.78**	**233**	P	**Pn**	**12 38 47.4**	**+0.3**
MRSI	**Marisa**	**4.84**	**254**	P	**Pn**	**12 38 48.6**	**+0.6**
APSI	**Ampana**	**5.65**	**241**	P	**Pn**	**12 38 59.6**	**+0.5**
	22nm,0.7s						
BNDI	**Bandanaira**	**7.15**	**152**	P	**Pn**	**12 39 21.3**	**+1.6**
FITZ	**Fitzroy Crossi**	**19.85**	**183**	P	**P**	**12 42 04.0**	**-1.7**
	baz=354,slow=10,SNR=1.3						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**12 42 37.3**	**-1.8**
	1.2nm,0.5s,baz=338,slow=11,SNR=23						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**26.35**	**165**	P	**P**	**12 43 10.7**	**+0.1**
	0.4nm,0.5s,baz=344,slow=7.7,SNR=10						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**12 47 34.1**	**+0.3**
	0.3nm,0.4s,baz=112,slow=7.4,SNR=2.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**12 48 02.4**	**0.0**
	0.5nm,0.5s,baz=130,slow=6.2,SNR=4.8						
	0.5nm,0.5s						

*IDC **18** 12:42:00.6±2.0, 2.22N×127.13E, h0km, mb3.3/4, mbtmp3.4/4, Error ellipse: s-maj=122.4km s-min=24.8km az=69.0*
DJA 18 12:42:10.1±0.4, 2.1N±4.4×12.7E±.2, h10km, M3.7/6, mb4.3/1, MLv3.4/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.71**	**177**	P	Pn	12 42 40.3	+0.3
SANI	**Sanana**	**4.69**	**196**	P	Pn	12 43 21.3	+0.3
MRSI	**Marisa**	**5.70**	**250**	P	Pn	12 43 35.2	+0.3
FITZ	**Fitzroy Crossi**	**20.52**	**184**	P	P	12 46 38.4	-10
	0.8nm,0.7s,baz=4.8,slow=12,SNR=1.4						
	0.8nm,0.7s						
WRA	**Warramunga Arr**	**23.34**	**163**	P	P	12 47 08.6	-10
	0.3nm,0.3s,baz=340,slow=11,SNR=18						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**26.79**	**166**	P	P	12 47 40.4	-10
	0.1nm,0.3s,baz=346,slow=12,SNR=6.9						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**58.88**	**325**	P	P	12 52 02.2	-7.1
	0.5nm,0.5s,baz=124,slow=6.7,SNR=5.2						
	0.5nm,0.5s						

*IDC **18** 12:47:58.1±1.0, 1.61N×126.05E, h0km, mb3.9/7, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=96.9km s-min=15.6km az=68.0*
*DJA **18** 12:48:01.7±0.3, 2.2N±4.2×12.6E±.2, h10km, M4.0/12, mB5.2/1, mb4.2/4, MLv4.0/12, Mw(mB)4.6/1*
*NEIC **18** 12:48:03.9±1.1, 1.54N±0.08×125.99E±0.07, h35km±2km, mb4.2/11, Error ellipse: s-maj=15.5km s-min=9.1km az=220.0*

ISC 18 12:48:03.1±0.8, 1.74N±0.09×126.39E±0.09, h35km, n27, σ1.91/25, mb4.1/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.37**	**134**		**Pn**	**12 48 25.6**	**-0.1**
TNTI	**Ternate**	**1.37**	**134**	P	**Pn**	**12 48 25.4**	**-0.3**
SGSI	**Sangihe**	**2.12**	**336**	P	Pn	12 48 33.4	-2.7
KMSI	**Cibinong**	**2.67**	**244**	P	**Pn**	**12 48 46.7**	**+3.1**
SANI	**Sanana**	**3.78**	**186**	P	**Pn**	**12 49 01.1**	**+2.2**
LUWI	**Luwuk**	**4.55**	**233**	Pn	Pn	12 49 04.2	-5.3
LUWI	**Luwuk**	**4.55**	**233**	P	**Pn**	**12 49 12.0**	**+2.5**
MRSI	**Marisa**	**4.62**	**254**	P	**Pn**	**12 49 13.3**	**+2.8**
TOLI2	**Tolitoli**	**5.64**	**264**	Pn	Pn	12 49 17.4	-7.1
MYLDM	**Lahad Datu**	**8.59**	**294**	Pn	**Pn**	**12 50 03.1**	**-1.8**
MTN	**Manton Dam**	**15.23**	**162**	Pn	**Pn**	**12 51 35.7**	**0.0**
MTN				IAmb	IAmb	12 52 07.6	
	comp=Z,18nm,1.2s						
KNRA	**Kununurra**	**17.46**	**172**		**Pn**	**12 52 03.1**	**-0.9**
KNRA				IAmb	IAmb	12 52 05.1	
	comp=Z,25nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	**P**	**12 52 27.7**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=356,slow=9.2,SNR=6.5						
	comp=Z,1.6nm,0.9s						
PMBI	**Palembang**	**22.10**	**258**	P	**P**	**12 52 49.9**	**-5.6**
WB0	**Warramunga Arr**	**22.77**	**160**		**P**	**12 53 01.8**	**-0.9**
WB0				IAmb	IAmb	12 53 07.4	
	comp=Z,7.2nm,0.7s						
WRAB	**Tennant Creek**	**22.91**	**160**	P	**P**	**12 53 03.3**	**-0.8**
WRAB				IAmb	IAmb	12 53 05.2	
	comp=Z,5.6nm,0.7s						
WRA	**Warramunga Arr**	**22.91**	**160**	P	**P**	**12 53 02.9**	**-1.3**
	comp=Z,5.4nm,0.7s,baz=338,slow=11,SNR=40						
	comp=Z,5.4nm,0.7s						
WR8	**Warramunga Arr**	**22.98**	**160**		**P**	**12 53 04.1**	**-0.7**
WR8				IAmb	IAmb	12 53 05.7	
	comp=Z,6.6nm,0.9s						
AS31	**Alice Springs**	**26.29**	**164**		**P**	**12 53 35.6**	**+0.1**
AS31				IAmb	IAmb	12 53 39.6	
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**26.29**	**164**	P	**P**	**12 53 36.0**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=345,slow=12,SNR=24						
ASAR				PcP	**PcP**	**12 57 02.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=348,slow=2.5,SNR=5.4						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	**36.41**	**158**	P	**P**	**12 55 04.8**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=355,slow=12,SNR=2.9						
	comp=Z,0.7nm,0.4s						
SONM	**Songino Array**	**49.07**	**342**	P	**P**	**12 56 47.4**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=152,slow=8.3,SNR=2.8						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**12 57 59.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=119,slow=8.0,SNR=12						
	comp=Z,0.9nm,0.6s						
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**12 58 27.6**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=132,slow=6.3,SNR=19						
	comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**63.24**	**328**		**P**	**12 58 27.7**	**-0.2**
BVAR	**Borovoye Array**	**68.80**	**328**	P	**P**	**12 59 03.6**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=114,slow=7.0,SNR=2.3						
	comp=Z,0.7nm,0.6s						
D19K	**Kuna River**	**83.09**	**21**	P	**P**	**13 00 27.5**	**+2.5**
D19K				IAmb	IAmb	13 01 11.5	
	comp=Z,2.8nm,1.1s						

*SSNC **18** 12:49:53.7±0.8, 19.65N×75.54W, h33km±5km, MD3.3, ML3.3, MW3.4*
*JSN **18** 12:49:55.2±0.9, 19.59N×75.77W, h27km±999km, MD4.0*
ISC 18 12:49:51.5±1.2, 19.65N±0.06×75.54W±0.04, h33km±13km, n16, σ1.00/22, 3D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARVS	**Santiago de Cu**	**0.48**	**316**	*e*P	**Pn**	**12 50 02.9**	**+0.7**
MARVS				*e*S	**Sb**	**12 50 09.7**	**+0.8**
MARVS				IAML		12 50 10.3	
	comp=E,1µm,0.2s						
MARVS				IAML		12 50 10.5	
	comp=N,3µm,0.2s						
GTBY	**Guantanamo Bay**	**0.49**	**56**	*e*P	**Pn**	**12 50 03.0**	**+0.7**
GTBY				*e*S	**Sn**	**12 50 10.1**	**+0.3**
GTBY				IAML		12 50 10.4	
	comp=N,3µm,0.3s						
GTBY				IAML		12 50 10.6	
	comp=N,994nm,0.2s						
QMBU	**Quimbuelo**	**0.88**	**51**	*e*P	**Pb**	**12 50 08.2**	**-0.2**
QMBU				*e*S	**Sb**	**12 50 19.0**	**-0.9**
QMBU				IAML		12 50 19.6	
	comp=E,4µm,0.2s						
QMBU				IAML		12 50 20.2	
	comp=N,5µm,0.2s						
CHIV	**Chivirico**	**0.88**	**292**	*e*P	**Pb**	**12 50 08.0**	**-0.4**
CHIV				*e*P		12 50 08.5	
CHIV				IAML		12 50 25.7	
	comp=E,352nm,0.1s						
CHIV				IAML		12 50 26.2	
	comp=N,379nm,0.2s						
MOAC	**Moa**	**1.15**	**29**	*e*P	**Pn**	**12 50 12.1**	**+0.8**
MOAC				*e*S	**Sb**	**12 50 25.9**	**-1.6**
MOAC				IAML		12 50 29.5	
	comp=E,646nm,0.4s						
MOAC				IAML		12 50 29.7	
	comp=N,608nm,0.3s						
HLGC	**Holguin**	**1.33**	**339**	*e*P	**Pb**	**12 50 16.4**	**+0.5**
MASC	**Masc**	**1.34**	**67**	*e*P	**Pn**	**12 50 14.8**	**+0.8**
MASC				*e*S	**Sn**	**12 50 30.4**	**-0.3**
MASC				IAML		12 50 36.1	
	comp=E,309nm,0.4s						
MASC				IAML		12 50 36.2	
	comp=N,178nm,0.5s						
LMGC	**Las Mercedes**	**1.44**	**287**	*e*P	**Pn**	**12 50 15.6**	**+0.3**
LMGC				IAML		12 50 32.3	
	comp=E,320nm,0.1s						
LMGC				IAML		12 50 32.4	
	comp=N,454nm,0.1s						
GWJ	**Greenwich**	**1.93**	**216**	↓*i*P	**Pn**	**12 50 23.0**	**+0.9**
STH	**Stony Hill**	**1.97**	**218**	*i* P	**Pn**	**12 50 23.5**	**+0.9**
STH	**Stony Hill**	**1.97**	**218**	*e*P	**Pn**	**12 50 23.6**	**+0.9**
HOJ	**Hope**	**1.99**	**215**	↓*i*P	**Pn**	**12 50 24.0**	**+1.0**
MTDJ	**Mount Denham**	**2.36**	**233**	↓*i*P	**Pn**	**12 50 28.7**	**+0.7**
MTDJ				*i* S	**Sn**	**12 50 53.8**	**-2.1**
MTDJ	**Mount Denham**	**2.36**	**233**	*e*P	**Pn**	**12 50 28.7**	**+0.7**
CCCC	**Cccc**	**2.59**	**307**	*e*P	**Pn**	**12 50 31.0**	**-0.2**
CBCY	**The Bluff, Cay**	**3.97**	**272**	*e*P	**Pn**	**12 50 51.8**	**+1.6**

HEL 18 12:51:28.9±0.2, 61.00N×24.53E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.78**	**185**	smax	smax	12 51 53.3	
	comp=Z,3.2nm,0.2s						
MEF				SB	Sg	12 51 53.8	-0.2
PVF	**Pernaja**	**0.79**	**124**	PG	Pg	12 51 43.4	-0.7
PVF				smax	smax	12 51 53.5	
	comp=Z,3.5nm,0.2s						
FIA0	**FINESS Array S**	**0.87**	**58**	PG	Pg	12 51 43.9	-1.7
	baz=237						
FIA0				SG	Sg	12 51 52.5	-4.4
FIA0				smax	smax	12 51 55.9	
	comp=Z,2.1nm,0.2s						
KEF	**Keuruu**	**1.19**	**8**	PG	Pg	12 51 50.4	-1.3
KEF				smax	smax	12 52 04.9	
	comp=Z,1.3nm,0.2s						
KEF				SB	Sg	12 52 06.0	-1.0
RAF	**Rauma**	**1.35**	**272**	PN	Pg	12 51 54.5	-0.2
RAF				smax	smax	12 52 09.6	
	comp=Z,1.3nm,0.2s						
RAF				SN	Sb	12 52 12.8	0.0
KPF	**Kankaanpaa**	**1.45**	**307**	PN	Pn	12 51 56.2	-0.1
KPF				smax	smax	12 52 12.4	
	comp=Z,0.8nm,0.2s						
VJF	**Virojoki**	**1.55**	**106**	smax	smax	12 52 15.6	
	comp=Z,2.2nm,0.2s						
VJF				SN	Sn	12 52 18.6	0.0
SUF	**Sumiainen**	**1.89**	**23**	smax	smax	12 52 25.1	
	comp=Z,1.0nm,0.2s						
SUF				SG	Sn	12 52 27.5	+0.5
RUF	**Ruokolahti**	**2.18**	**77**	smax	smax	12 52 33.4	
	comp=Z,1.7nm,0.2s						
RUF				SG	Sn	12 52 34.9	+0.9
VAF	**Ylistaro**	**2.23**	**338**	PG	Pb	12 52 09.0	-1.1
VAF				smax	smax	12 52 35.2	
	comp=Z,1.9nm,0.2s						
VAF				SG	Sb	12 52 37.8	-0.4
AAL	**Aland**	**2.38**	**252**	SG	Sb	12 52 42.9	+0.4
VSU	**Vasula**	**2.78**	**155**	PN	Pn	12 52 12.8	-1.7
BURU	**Burvik**	**3.88**	**339**	SG	Sg	12 53 30.4	-3.0

*IDC **18** 12:52:03.5±1.6, 1.91N×126.68E, h0km, mb3.6/4, mbtmp3.6/5, ML3.0/1, Error ellipse: s-maj=121.1km s-min=19.5km az=69.0*
*DJA **18** 12:52:07.7±0.3, 2.7N±3.2×12.6E±.2, h10km, M3.5/10, MLv3.5/10*
ISC 18 12:52:09.2±1.1, 1.78N±0.08×126.54E±0.10, h35km, n10, σ0.67/10, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.30**	**140**	P	**Pn**	**12 52 31.5**	**+0.7**
SGSI	**Sangihe**	**2.15**	**332**	P	**Pn**	**12 52 43.3**	**+0.8**
KMSI	**Cibinong**	**2.82**	**245**	P	**Pn**	**12 52 52.4**	**+0.6**
SANI	**Sanana**	**3.84**	**188**	P	**Pn**	**12 53 06.4**	**+0.6**
LUWI	**Luwuk**	**4.69**	**233**	P	**Pn**	**12 53 17.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.77**	**183**	P	**Pn**	**12 56 38.3**	**+0.2**
	baz=1.3,slow=14,SNR=3.1						
	1.8nm,0.9s						
WRA	**Warramunga Arr**	**22.90**	**161**	P	**P**	**12 57 09.4**	**-0.7**
	1.0nm,0.5s,baz=338,slow=10,SNR=11						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.29**	**165**	P	**P**	**12 57 41.4**	**-0.2**
	0.3nm,0.5s,baz=345,slow=12,SNR=11						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**13 02 05.2**	**-0.6**
	0.2nm,0.4s,baz=122,slow=8.2,SNR=5.5						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.28**	**328**	P	**P**	**13 02 33.8**	**-0.5**
	0.5nm,0.5s,baz=130,slow=6.4,SNR=10						
	0.5nm,0.5s						

*IDC **18** 12:56:39.2±1.5, 1.57N×126.04E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=171.4km s-min=20.1km az=66.0*
*DJA **18** 12:56:43.2±0.3, 2.7N±3.7×12.7E±.2, h10km, M3.5/12, mb3.5/2, MLv3.5/12*
ISC 18 12:56:44.7±1.1, 1.85N±0.10×126.53E±0.09, h35km, n11, σ1.81/11, mb3.5/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**142**	P	**Pn**	**12 57 06.8**	**-0.4**
SGSI	**Sangihe**	**2.08**	**331**	P	**Pn**	**12 57 18.5**	**+1.4**
KMSI	**Cibinong**	**2.85**	**244**	P	**Pn**	**12 57 28.4**	**+0.7**
SANI	**Sanana**	**3.92**	**188**	P	**Pn**	**12 57 42.8**	**+0.4**
MRSI	**Marisa**	**4.79**	**253**	P	**Pn**	**12 57 55.1**	**+0.7**
FAKI	**Fak Fak**	**7.42**	**130**	P	**Pn**	**12 58 34.6**	**+4.0**
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**13 01 44.5**	**-1.9**
	0.7nm,0.5s,baz=338,slow=11,SNR=8.5						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.36**	**165**	P	**P**	**13 02 16.1**	**-1.7**
	0.2nm,0.4s,baz=347,slow=12,SNR=8.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**13 06 40.3**	**-0.5**
	0.2nm,0.4s,baz=122,slow=7.7,SNR=5.3						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**62.16**	**334**	P	**P**	**13 07 02.7**	**+0.4**
	0.3nm,0.4s,baz=142,slow=7.3,SNR=1.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.21**	**328**	P	**P**	**13 07 09.1**	**-0.2**
	0.2nm,0.5s,baz=131,slow=6.6,SNR=8.5						
	0.2nm,0.5s						

NDI 18 13:03:35.9±1.2, 26.72N×92.05E, h33km±6km, ML2.7, MW2.6, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEZP	**TEZPUR**	**0.68**	**98**	*e*P	Pb	13 03 49.4	0.0
TEZP				*e*S	Sn	13 03 59.2	+0.5
TEZP				IAML		13 04 00.4	
	comp=E,202nm,0.1s						
TEZP				IAML		13 04 01.5	
	comp=N,206nm,0.2s						
SHL	**Shillong**	**1.15**	**187**	*e*P	Pn	13 03 56.1	+0.2
SHL				*e*S	Sn	13 04 11.2	+0.5
SHL				IAML		13 04 12.5	
	comp=E,266nm,0.1s						
SHL				IAML		13 04 13.0	
	comp=N,148nm,0.2s						
ITAN	**ITANAGAR**	**1.55**	**74**	*e*P	Pn	13 04 01.4	+0.1
ITAN				*e*S	Sn	13 04 19.9	-0.4
ITAN				IAML		13 04 21.6	
	comp=E,90nm,0.2s						
ZIRO	**ZIRO**	**1.80**	**63**	*e*S	Sn	13 04 27.2	+0.6
ZIRO				IAML		13 04 27.9	
	comp=E,49nm,0.3s						
ZIRO				IAML		13 04 31.3	
	comp=N,55nm,0.2s						
KOHI	**KOHIMA**	**2.10**	**118**	IAML		13 04 11.5	
	comp=N,74nm,0.3s						
KOHI				IAML		13 04 12.7	
	comp=E,69nm,0.5s						

*SJA **18** 13:12:06.1±0.7, 20.60S×69.08W, h116km±4km, ML3.9, MW3.8*
*GUC **18** 13:12:08.0±0.7, 20.58S×69.08W, h101km±4km, ML3.8*
ISC 18 13:12:07.1±1.4, 20.60S±0.03×69.12W±0.06, h116km±9km, n29, σ0.77/50, 5C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.46**	**356**	↑*e*P	**Pn**	**13 12 24.5**	**-0.3**
PB08				*e*S	**Sn**	**13 12 36.9**	**-1.2**
PB08				IAML		13 12 37.2	
	comp=N,10µm,0.3s						
PB08	**IPOC Station P**	**0.46**	**356**	*e*P	**Pn**	**13 12 24.3**	**-0.5**
PB08				*e*S	**Sn**	**13 12 37.1**	**-1.0**
PB08				IAML		13 12 37.5	
	comp=Z,4µm,0.2s						
PB01	**IPOC Station P**	**0.56**	**218**	↑*e*P	**Pn**	**13 12 25.0**	**-0.1**
PB01				*e*S	**Sn**	**13 12 38.0**	**-0.6**
PB01				IAML		13 12 40.0	
	comp=N,5µm,0.2s						
PB01	**IPOC Station P**	**0.56**	**218**	*e*P	**Pn**	**13 12 24.9**	**-0.1**
PB01				*e*S	**Sn**	**13 12 38.5**	**-0.1**
PB01				IAML		13 12 39.2	
	comp=Z,3µm,0.3s						
GO01	**Chusmiza**	**0.93**	**356**	↓*e*P	**Pn**	**13 12 28.5**	**-0.2**
GO01				*e*S	**Sn**	**13 12 44.5**	**-0.3**
GO01	**Chusmiza**	**0.93**	**356**	*e*P	**Pn**	**13 12 28.4**	**-0.2**
GO01				*e*S	**Sn**	**13 12 45.4**	**+0.6**
GO01				IAML		13 12 46.5	
	comp=Z,2µm,0.2s						
PB11	**IPOC Station P**	**0.98**	**329**	↓*e*P	**Pn**	**13 12 28.8**	**+0.1**
PB11				*e*S	**Sn**	**13 12 44.8**	**-0.2**
PB11	**IPOC Station P**	**0.98**	**329**	*e*P	Pn	13 12 23.0	-5.7
PB11				*e*P		13 12 28.6	
PB11				*e*S	**Sn**	**13

PB09 IAML 13 12 50.3
comp=N,2μm,0.3s
PB09 IPC Station P 1.20 186 *eP* Pn 13 12 25.9 -5.1
PB09 IAML 13 12 52.9
comp=Z,2μm,0.5s
PB07 IPC Station P 1.33 212⇑ *eP* **Pn 13 12 32.9 +0.4**
PB07 *eS* **Sn 13 12 51.6 -0.1**
PB07 IAML 13 12 52.6
comp=N,3μm,0.4s
PB07 IPC Station P 1.33 212 *eP* **Pn 13 12 32.8 +0.4**
PB07 *eS* **Sn 13 12 51.9 +0.2**
PB07 IAML 13 12 55.5
comp=Z,1μm,0.3s
PB03 IPC Station P 1.56 202 *eP* **Pn 13 12 35.0 -0.1**
PB03 *eS* **Sn 13 12 56.0 -0.4**
PB03 IAML 13 12 57.9
comp=Z,2μm,0.6s
PB06 IPC Station P 2.14 191 *eP* **Pn 13 12 42.8 +0.5**
PB06 *eS* **Sn 13 13 06.5 -2.6**
PB06 IAML 13 13 16.6
comp=Z,678nm,0.3s
PB12 IPC Station P 2.28 330⇓ *eP* **Pn 13 12 43.7 -0.3**
PB12 IAML 13 13 18.0
comp=E,605nm,0.4s
PB12 IPC Station P 2.28 330 *eP* **Pn 13 12 43.8 -0.3**
PB12 *eS* **Sn 13 13 11.9 -0.4**
PB12 IAML 13 13 17.3
comp=Z,316nm,0.3s
PB05 IPC Station P 2.46 204 *eP* **Pn 13 12 46.4 +0.1**
PB05 *eS* **Sn 13 13 14.4 -1.9**
PB05 IAML 13 13 18.4
comp=Z,253nm,0.3s
AF01 San Pedro de A 2.50 160 *eP* Pn 13 12 39.4 -7.6
AF01 *eS* **Sn 13 13 17.5 -0.1**
AF01 IAML 13 13 54.0
comp=Z,313nm,0.5s
AP01 Chacalluta 2.50 332 *eP* **Pn 13 12 47.0 +0.3**
AP01 IAML 13 13 27.3
comp=Z,465nm,0.9s
PB14 IPC Station P 4.18 196 *eP* **Pn 13 13 08.3 -1.0**
PB14 *eS* **Sn 13 13 56.5 -0.9**
PB14 IAML 13 13 57.3
comp=Z,76nm,0.4s
HJA Humahuaca 4.31 128 *eP* **Pn 13 13 13.1 +2.0**
GO02 Mina Guanaco 4.56 185 *eP* **Pn 13 13 14.1 -0.3**
GO02 *eS* **Sn 13 14 07.5 +1.0**
GO02 IAML 13 14 08.7
comp=Z,103nm,0.1s
AZAP Zapla 5.20 135 *eP* **Pn 13 13 23.0 +0.1**

NEIC ***18*** *13:13:58.6±1.9,0.˚40N±0.˚07×122.˚05E±0.˚07,h193km±5km, mb4.7/58, Error ellipse: s-maj=11.2km s-min=8.9km az=217.0*
DJA ***18*** *13:13:58.7±0.1,0.˚N±2.˚×12.˚2E±.˚, h187km±2km, M4.4/51, mB4.9/24, mb4.7/51, MLv4.7/24, Mw(mB)4.2/24*
IDC ***18*** *13:14:00.3±0.8, 0.˚29N×122.˚09E, h218km±7km, mb3.9/22, mbtmp4.5/25, Error ellipse: s-maj=18.1km s-min=6.4km az=66.0*

ISC 18 13:13:58.5±0.5, 0.˚33N±0.˚04×122.˚07E±0.˚05, h199km±4km, n199, σ1°19/212, mb4.6/72, 3C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MRSI	**Marisa**	**0.19**	**317**	P		**Pn**	**13 14 23.3**	**-1.4**
MRSI				S		**Sn**	**13 14 41.3**	**-3.6**
APSI	**Ampana**	**1.31**	**199**	P		**Pn**	**13 14 30.3**	**-0.2**
TOLI2	**Tolitoli**	**1.50**	**301**			**Pn**	**13 14 30.8**	**-1.4**
TOLI2	**Tolitoli**	**1.50**	**301**	P		**Pn**	**13 14 30.8**	**-1.4**
LUWI	**Luwuk**	**1.54**	**153**	Pn		**Pn**	**13 14 32.4**	**-0.1**
LUWI	**Luwuk**	**1.54**	**153**	P		**Pn**	**13 14 32.3**	**-0.1**
LUWI	**Luwuk**	**1.54**	**153**	S		**Sn**	**13 14 58.2**	**-0.7**
LUWI	**Luwuk**	**1.54**	**153**	P		**Pn**	**13 14 32.6**	**+0.1**
LUWI				S		**Sn**	**13 14 57.4**	**-1.5**
KMSI	**Cibinong**	**1.92**	**83**	P		**Pn**	**13 14 37.2**	**+1.0**
MPSI	**Mapaga**	**2.17**	**270**	P		**Pn**	**13 14 37.4**	**-1.4**
PCI	**Palu**	**2.55**	**241**	P		**Pn**	**13 14 41.8**	**-1.2**
TTSI	**Tana Toraja**	**4.04**	**214**	P		**Pn**	**13 15 01.0**	**+0.2**
KDI	**Kendari**	**4.30**	**173**	P		**Pn**	**13 15 04.8**	**+0.8**
SANI	**Sanana**	**4.58**	**121**	P		**Pn**	**13 15 06.3**	**-1.2**
SANI	**Sanana**	**4.58**	**121**	P		**Pn**	**13 15 05.6**	**-1.9**
SGSI	**Sangihe**	**4.80**	**46**	P		**Pn**	**13 15 10.0**	**-0.4**
SPSI	**Sidrap Palu**	**4.85**	**208**	P		**Pn**	**13 15 10.8**	**-0.2**
BNSI	**Bone**	**5.10**	**203**	P		**Pn**	**13 15 15.0**	**+0.8**
TNTI	**Ternate**	**5.31**	**85**			**Pn**	**13 15 16.0**	**-1.0**
BKB	**Balikpapan**	**5.41**	**253**	Pn		**Pn**	**13 15 17.2**	**-1.0**
BKB	**Balikpapan**	**5.41**	**253**	P		**Pn**	**13 15 17.8**	**-0.4**
	0.8nm280nm,0.8s							
KAPI	**Kappang**	**5.80**	**204**	P		**Pn**	**13 15 23.6**	**+0.5**
	88nm,0.9s,baz=46,slow=6.8,SNR=23							
KAPI	**Kappang**	**5.80**	**204**			**Pn**	**13 15 22.8**	**-0.4**
BBSI	**Bau Bau**	**5.80**	**175**	P		**Pn**	**13 15 22.1**	**-1.2**
	0.4nm81nm,1.0s							
BKSI	**Bulukumba**	**5.95**	**199**	P		**Pn**	**13 15 25.0**	**-0.1**
	0.3nm1μm115nm,1.1s							
MYLDM	**Lahad Datu**	**5.99**	**324**	P		**Pn**	**13 15 25.6**	**-0.1**
NLAI	**Namlea**	**6.15**	**125**	P		**Pn**	**13 15 29.0**	**+1.2**
	57nm,1.0s							
BSSI	**Bau Bau, Buton**	**6.62**	**194**	P		**Pn**	**13 15 34.9**	**+1.0**
	0.2nm964nm67nm,1.3s							
MSAI	**Masohi**	**7.77**	**118**	P		**Pn**	**13 15 50.4**	**+1.6**
	38nm,0.7s							
EDFI	**Ende, Flores**	**9.03**	**182**	P		**Pn**	**13 16 06.0**	**+0.6**
BNDI	**Bandanaira**	**9.19**	**122**	P		**Pn**	**13 16 09.6**	**+2.2**
	176nm,0.8s							
PLAI	**Plampang**	**10.06**	**205**	P		**Pn**	**13 16 19.6**	**+1.0**
	661nm70nm,0.7s							
WBSI	**Waikabubak, Su**	**10.26**	**195**	P		**Pn**	**13 16 22.0**	**+0.7**
	24nm,0.7s							
TWSI	**Taliwang, Sumb**	**10.39**	**210**	P		**Pn**	**13 16 24.3**	**+1.4**
	59nm,0.7s							
FAKI	**Fak Fak**	**10.67**	**108**	Pn		**Pn**	**13 16 26.9**	**+0.3**
JAGI	**Jajag, Banyuwa**	**11.78**	**222**	P		**P**	**13 16 46.6**	**+0.7**
SMRI	**Semarang**	**13.73**	**237**	P		**P**	**13 17 07.7**	**+0.2**
PCJI	**Pacitan**	**13.77**	**232**	P		**Pn**	**13 17 06.6**	**+0.8**
	82nm,0.9s							
UGM	**Wanagama**	**14.13**	**234**	Pn		**Pn**	**13 17 10.2**	**-0.1**
TPI	**Tanjungpandan**	**14.74**	**258**	P		**P**	**13 17 19.1**	**+0.4**
KPJI	**Karang Pucung**	**15.16**	**240**	P		**P**	**13 17 23.6**	**+0.2**
	2μm166nm,0.7s							
DRS	**Darwin Rock St**	**15.41**	**146**	P		**P**	**13 17 26.2**	**0.0**
MTN	**Manton Dam**	**15.88**	**146**			**P**	**13 17 31.2**	**-0.1**
BBJI	**Bungbulang**	**16.34**	**241**	P		**P**	**13 17 35.3**	**-1.2**
CNJI	**Cibinong**	**16.73**	**243**	P		**P**	**13 17 40.7**	**0.0**
	933nm96nm,1.0s							
KNRA	**Kununurra**	**17.23**	**158**	P		**Pn**	**13 17 47.0**	**-0.7**
KNRA					IAmb	IAmb	13 18 17.0	
	comp=Z,32nm,1.4s							
MYKOM	**Kota Tinggi**	**18.28**	**275**	P		**P**	**13 17 57.6**	**0.0**
MYKOM	**Kota Tinggi**	**18.28**	**275**	P		**P**	**13 17 58.0**	**+0.4**
KASI	**Kota Agung**	**18.49**	**251**	P		**P**	**13 18 00.2**	**+0.3**
	comp=Z,53nm,0.8s							
MDSI	**Maura Dua**	**18.51**	**255**	P		**P**	**13 18 00.8**	**+0.7**
	comp=Z,1μmcomp=Z,98nm,1.0s							
FITZ	**Fitzroy Crossi**	**18.65**	**169**	P		**P**	**13 18 01.5**	**-0.1**
	comp=Z,14nm,0.7s,baz=8.9,slow=7.6,SNR=55							
FITZ	**Fitzroy Crossi**	**18.65**	**169**			**P**	**13 18 01.6**	**0.0**
JAY	**Jayapura**	**18.84**	**99**	P		**P**	**13 18 05.0**	**+1.2**
	comp=Z,12nm,0.9s,baz=278,slow=15,SNR=4.0							
LHSI	**Lahat**	**18.99**	**257**	P		**P**	**13 18 06.5**	**+1.1**
	comp=Z,62nm,1.1s							
MNAI	**Manna**	**19.66**	**256**	P		**P**	**13 18 12.4**	**-0.2**
MNAI	**Manna**	**19.66**	**256**	P		**P**	**13 18 13.2**	**+0.6**
MASI	**Maura Aman, Be**	**20.12**	**260**	P		**P**	**13 18 18.5**	**+0.9**
IPM	**Ipoh**	**21.42**	**281**	P		**P**	**13 18 30.9**	**-0.4**
IPM					IAmb	IAmb	13 18 36.2	
	comp=Z,26nm,0.8s							
IPM	**Ipoh**	**21.42**	**281**	P		**P**	**13 18 31.4**	**+0.1**
MBWA	**Marble Bar**	**21.48**	**186**	P		**P**	**13 18 29.7**	**-2.0**
MBWA					IAmb	IAmb	13 18 31.4	
	comp=Z,9.3nm,0.7s							
MBWA	**Marble Bar**	**21.48**	**186**	P		**P**	**13 18 30.3**	**-1.5**
PDSI	**Padang**	**21.65**	**267**	P		**P**	**13 18 34.0**	**+0.4**
	comp=Z,821nmcomp=Z,54nm,0.9s							
PPI	**Padang Panjang**	**21.69**	**268**	P		**P**	**13 18 34.1**	**+0.1**
	comp=Z,894nmcomp=Z,51nm,0.7s							
PSA00	**Pilbara Seismi**	**21.88**	**186**	P		**P**	**13 18 33.7**	**-2.1**
PSA00					IAmb	IAmb	13 18 35.0	
	comp=Z,10nm,0.6s							
PSA00	**Pilbara Seismi**	**21.88**	**186**	P		**P**	**13 18 34.9**	**-0.9**
KULM	**Kulim**	**21.95**	**283**	P		**P**	**13 18 36.0**	**-0.6**
KULM					IAmb	IAmb	13 18 37.7	
	comp=Z,21nm,0.8s							
KULM	**Kulim**	**21.95**	**283**	P		**P**	**13 18 36.2**	**-0.4**
MNSI	**Mandailing Nat**	**22.50**	**271**	P		**P**	**13 18 42.3**	**+0.6**
	comp=Z,81nm,0.9s							
SISI	**Saibi**	**23.04**	**266**	P		**P**	**13 18 46.5**	**-0.1**
RPSI	**Rantau Prapat**	**23.26**	**276**			**P**	**13 18 48.9**	**+0.3**
PSI	**Prapat**	**23.27**	**276**	P		**P**	**13 18 49.0**	**+0.2**
WB0	**Warramunga Arr**	**23.34**	**150**			**P**	**13 18 48.9**	**-0.4**
WB0					IAmb	IAmb	13 18 50.4	
	comp=Z,11nm,0.6s							
WRAB	**Tennant Creek**	**23.46**	**150**	P		**P**	**13 18 50.0**	**-0.3**
WRAB					IAmb	IAmb	13 18 51.6	
	comp=Z,7.7nm,0.6s							
WRAB	**Tennant Creek**	**23.46**	**150**	P		**P**	**13 18 50.7**	**+0.4**
WRA	**Warramunga Arr**	**23.46**	**150**	P		**P**	**13 18 50.1**	**-0.2**
	comp=Z,7.3nm,0.7s,baz=326,slow=11,SNR=111							
WRA					pP	**pP**	**13 19 29.3**	**+2.2**
	comp=Z,5.2nm,0.8s,baz=332,slow=9.7,SNR=5.4							
WRA					S	**S**	**13 22 42.9**	**-6.2**
	comp=Z,1.3nm,1.1s,baz=325,slow=16,SNR=5.0							
WRA					ScP	**ScP**	**13 25 48.4**	**-1.8**
	comp=Z,0.8nm,0.9s,baz=321,slow=2.7,SNR=6.4							
	comp=Z,7.3nm,0.7s							
WRA	**Warramunga Arr**	**23.46**	**150**	P		**P**	**13 18 49.7**	**-0.6**
WR8	**Warramunga Arr**	**23.56**	**150**			**P**	**13 18 50.8**	**-0.4**
WR8					IAmb	IAmb	13 18 52.9	
	comp=Z,19nm,0.7s							
PBSI	**Pulau Batu**	**23.80**	**269**	P		**P**	**13 18 54.4**	**+1.0**
	comp=Z,82nm,0.9s							
GIRL	**Giralia**	**24.08**	**198**	P		**P**	**13 18 56.0**	**+0.1**
KCSI	**Kotacane, Aceh**	**24.49**	**278**	P		**P**	**13 18 59.3**	**-0.5**
GSI	**Gunungsitoli**	**24.51**	**272**	P		**P**	**13 18 59.2**	**-0.8**
GSI	**Gunungsitoli**	**24.51**	**272**	P		**P**	**13 18 59.4**	**-0.6**
GSI	**Gunungsitoli**	**24.51**	**272**	P		**P**	**13 18 59.7**	**-0.3**
	comp=Z,84nm,0.8s							
MLSI	**Meulaboh, Aceh**	**25.94**	**279**	P		**P**	**13 19 12.5**	**-0.3**
AS31	**Alice Springs**	**26.48**	**155**			**P**	**13 19 17.3**	**-0.3**
ASAR	**Alice Springs**	**26.48**	**155**	P		**P**	**13 19 17.8**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=342,slow=11,SNR=145							
ASAR					pP	**pP**	**13 20 00.8**	**+3.0**
	comp=Z,1.8nm,0.8s,baz=339,slow=10,SNR=2.9							
ASAR					PcP	**PcP**	**13 22 37.0**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=347,slow=2.2,SNR=15							
ASAR					S	**S**	**13 23 35.8**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=334,slow=17,SNR=6.9							
ASAR					ScP	**ScP**	**13 25 57.1**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=339,slow=2.7,SNR=15							
	comp=Z,4.1nm,0.6s							
ASAR	**Alice Springs**	**26.48**	**155**	P		**P**	**13 19 17.2**	**-0.4**
QIS	**Mount Isa**	**26.93**	**141**	P		**P**	**13 19 22.0**	**+0.3**
MEEK	**Meekatharra**	**27.02**	**187**	P		**P**	**13 19 21.4**	**-1.0**
CMBY	**CAMPBELL BAY**	**28.84**	**284**	*eS*		**S**	**13 24 20.1**	**+5.9**
CMAR	**Chiang Mai Arr**	**28.99**	**310**	P		**P**	**13 19 41.0**	**+1.1**
	comp=Z,3.2nm,0.6s,baz=136,slow=7.3,SNR=30							
CMAR					PcP	**PcP**	**13 22 44.2**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=159,slow=1.3,SNR=11							
CMAR					ScP	**ScP**	**13 26 04.6**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=121,slow=3.4,SNR=4.4							
	comp=Z,3.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**28.99**	**310**	P		**P**	**13 19 39.3**	**-0.6**
CMAR						**PcP**	**13 22 44.2**	**+0.6**
CHTO	**Chiang Mai**	**29.20**	**310**	P		**P**	**13 19 43.0**	**+1.2**
MORW	**Morawa**	**29.80**	**191**	P		**P**	**13 19 46.2**	**-0.7**
MORW					IAmb	IAmb	13 19 46.6	
	comp=Z,9.0nm,0.7s							
MORW	**Morawa**	**29.80**	**191**	P		**P**	**13 19 46.2**	**-0.7**
BLDU	**Ballidu**	**31.20**	**189**	P		**P**	**13 19 58.0**	**-1.2**
FORT	**Forrest**	**31.46**	**170**	P		**P**	**13 20 01.3**	**-0.2**
FORT					IAmb	IAmb	13 20 02.0	
	comp=Z,12nm,0.7s							
NJ2	**Nanjing**	**31.69**	**355**	*eP*		**P**	**13 20 05.5**	**+2.0**
NJ2					pmax	pmax		
	comp=Z,9.0nm,0.5s							
KLBR	**Kellerberrin**	**32.02**	**187**	P		**P**	**13 20 05.4**	**-0.9**
PZH	**PanZhiHua**	**32.56**	**325**	P		**P**	**13 20 13.6**	**+2.3**
JCJ	**Chichijima**	**32.89**	**34**	P		**P**	**13 20 13.4**	**-0.6**
INKA	**Innaminka**	**33.18**	**149**			**P**	**13 20 17.2**	**+0.8**
NWAO	**Narrogin (SRO)**	**33.40**	**187**	P		**P**	**13 20 17.9**	**-0.4**
NWAO					IAmb	IAmb	13 20 24.4	
	comp=Z,20nm,1.2s							
NWAO	**Narrogin (SRO)**	**33.40**	**187**	P		**P**	**13 20 18.2**	**-0.1**
LYN	**LuoYang**	**35.21**	**346**	*eP*		**P**	**13 20 34.9**	**+1.1**
LYN					pmax	pmax		
	comp=Z,20nm,0.9s							
BBOO	**Buckleboo**	**35.51**	**159**	P		**P**	**13 20 36.6**	**+0.1**
BBOO					IAmb	IAmb	13 20 41.9	
	comp=Z,13nm,1.2s							
BBOO	**Buckleboo**	**35.51**	**159**	P		**P**	**13 20 36.1**	**-0.4**
IMP	**Imphal**	**36.51**	**314**	*eP*		**P**	**13 20 45.0**	**-0.2**
IMP					IAmb	IAmb	13 20 46.9	
	comp=Z,8.9nm,0.6s							
STKA	**Stephens Creek**	**36.98**	**152**	P		**P**	**13 20 49.9**	**+0.9**
	comp=Z,11nm,0.8s,baz=329,slow=7.8,SNR=23							
	comp=Z,11nm,0.8s							
STKA	**Stephens Creek**	**36.98**	**152**	P		**P**	**13 20 49.3**	**+0.3**
MOKO	**MOKOCHONG**	**37.04**	**316**	*eP*		**P**	**13 20 50.7**	**+1.0**
HTT	**Hallett**	**37.14**	**156**	P		**P**	**13 20 50.9**	**+0.6**
KSRS	**Korea Array**	**37.33**	**8**	P		**P**	**13 20 53.3**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=184,slow=10,SNR=2.0							
	comp=Z,0.8nm,0.7s							
INU	**Inuyama**	**37.52**	**20**	P		**P**	**13 20 53.0**	**-0.4**
INU					IAmb	IAmb	13 21 28.5	
	comp=Z,23nm,1.1s							
JGF	**Kuroka**	**37.87**	**20**	P		**P**	**13 20 55.9**	**-0.4**
JGF					IAmb	IAmb	13 21 19.3	
	comp=Z,24nm,1.2s							
ZIRO	**ZIRO**	**38.27**	**317**	*eP*		**P**	**13 21 00.7**	**+0.7**
ZIRO					IAmb	IAmb	13 21 02.7	
	comp=Z,21nm,0.4s							
TEZP	**TEZPUR**	**38.42**	**315**	*eP*		**P**	**13 21 01.6**	**+0.5**
TEZP					IAmb	IAmb	13 21 02.3	
	comp=Z,18nm,0.8s							
SHL	**Shillong**	**38.45**	**313**			**P**	**13 21 01.7**	**+0.2**
SHL					IAmb	IAmb	13 21 03.1	
	comp=Z,26nm,0.8s							
SHL	**Shillong**	**38.45**	**313**	*eP*		**P**	**13 21 02.1**	**+0.5**
SHL					IAmb	IAmb	13 21 03.8	
	comp=Z,20nm,0.9s							
CMSA	**Cobar Meteorol**	**38.80**	**147**	P		**P**	**13 21 05.5**	**+1.3**
MJAR	**Matsushiro Arr**	**39.01**	**21**	P		**P**	**13 21 04.8**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=184,slow=8.2,SNR=4.6							
	comp=Z,2.8nm,0.7s							
LZDM	**Lanzhou Array**	**39.35**	**336**	P		**P**	**13 21 08.1**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=170,slow=8.8,SNR=1.4							
	comp=Z,1.9nm,0.4s							
LZH	**Lanzhou**	**39.40**	**336**	*eP*		**P**	**13 21 11.1**	**+1.8**
LZH					pP	pP	13 21 50.8	+0.3
LZH					pmax	pmax		
	comp=Z,21nm,1.5s							
BJI	**Beijing**	**39.88**	**353**	P		**P**	**13 21 13.8**	**+0.8**
BJI					pmax	pmax		
	comp=Z,4.0nm,1.0s							
JMM	**Marumori**	**41.14**	**23**	P		**P**	**13 21 23.5**	**+0.2**
HHC	**Hu-ho-hao-te**	**41.44**	**348**	*eP*		**P**	**13 21 28.5**	**+2.6**
HHC					pmax	pmax		
	comp=Z,4.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,210nm,5.1s							
LSA	**Lhasa**	**41.48**	**318**	P		**P**	**13 21 27.5**	**+0.8**
LSA					IAmb	IAmb	13 21 29.7	
	comp=Z,24nm,0.6s							
LSA	**Lhasa**	**41.48**	**318**	P		**P**	**13 21 24.8**	**-2.0**
PALK	**Pallekele**	**41.82**	**280**	P		**P**	**13 21 29.4**	**+0.1**
PALK					IAmb	IAmb	13 21 42.5	
	comp=Z,19nm,1.2s							
GAYA	**Gaya**	**43.13**	**307**	*eP*		**P**	**13 21 40.1**	**+0.4**
CAN	**Canberra**	**43.47**	**147**	P		**P**	**13 21 43.8**	**+1.6**
CAN					IAmb	IAmb	13 21 49.3	
	comp=Z,39nm,1.5s							
CAN	**Canberra**	**43.47**	**147**	P		**P**	**13 21 41.9**	**-0.3**
TOO	**Toolangi**	**43.48**	**153**	P		**P**	**13 21 43.8**	**+1.5**
EVN	**Everest**	**43.53**	**312**			**P**	**13 21 44.6**	**+1.1**
GTA	**Gaotai**	**43.89**	**335**	P		**P**	**13 21 48.1**	**+2.5**
GTA					PcP	**PcP**	**13 23 28.3**	**+0.1**
GTA					pmax	pmax		
	comp=Z,37nm,1.5s							
USRK	**Ussuriysk Ar.**	**44.56**	**10**	P		**P**	**13 21 50.0**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=194,slow=5.0,SNR=5.0							
USRK					pP	**pwP**	**13 22 37.1**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=154,slow=7.0,SNR=3.3							
	comp=Z,1.0nm,0.5s							
SALM	**Salem**	**44.98**	**286**	*eP*		**P**	**13 21 55.4**	**+0.9**
KOD	**Kodaikanal**	**45.43**	**284**⇑	*eP*		**P**	**13 21 57.7**	**-0.6**
KOD					IAmb	IAmb	13 21 59.0	
	comp=Z,9.2nm,0.8s							
AKL	**Akola**	**48.44**	**298**	*eP*		**P**	**13 22 21.2**	**-0.1**
JHNI	**Jhansi**	**48.87**	**304**	*eP*		**P**	**13 22 22.4**	**-2.1**
BHPL	**Bhopal**	**48.95**	**301**	*eP*		**P**	**13 22 25.2**	**0.0**
NRDN	**NARMADA NAGAR**	**48.99**	**300**	*eP*		**P**	**13 22 26.2**	**+0.8**
NRDN					IAmb	IAmb	13 22 29.3	
	comp=Z,33nm,0.9s							
HILR	**Hailar Array B**	**49.08**	**358**	P		**P**	**13 22 25.9**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=191,slow=5.9,SNR=1.9							
	comp=Z,0.9nm,0.4s							
ULN	**Ulaanbaatar**	**49.11**	**347**			**P**	**13 22 27.1**	**+1.0**
ULN					IAmb	IAmb	13 22 27.9	
	comp=Z,17nm,0.7s							
SONM	**Songino Array**	**49.24**	**346**	P		**P**	**13 22 27.9**	**+0.9**
	comp=Z,14nm,0.7s,baz=167,slow=8.9,SNR=86							
	comp=Z,14nm,0.7s							
LGTI	**Lohaghat**	**49.25**	**310**	*eP*		**P**	**13 22 27.4**	**+0.2**
LGTI					IAmb	IAmb	13 22 28.9	
	comp=Z,27nm,0.9s							
PTH	**Pithoragarh**	**49.32**	**310**⇑	*eP*		**P**	**13 22 27.6**	**-0.4**
PTH					IAmb	IAmb	13 22 33.3	
	comp=Z,12nm,0.7s							
GUNA	**GUNA**	**49.55**	**303**	*eP*		**P**	**13 22 29.0**	**-0.7**
KAD	**Karad**	**50.04**	**292**⇑	*eP*		**P**	**13 22 32.6**	**-0.9**
NDI	**New Delhi**	**51.27**	**307**	*eP*		**P**	**13 22 41.5**	**-0.9**
NPLP	**NPLP New Delhi**	**51.29**	**307**	*eP*		**P**	**13 22 41.7**	**-0.9**
KUDL	**Kundal**	**51.63**	**306**	*eP*		**P**	**13 22 44.2**	**-0.9**
KUDL					IAmb	IAmb	13 22 45.4	
	comp=Z,38nm,0.9s							
SMLA	**Simla**	**52.39**	**310**	*eP*		**P**	**13 22 50.9**	**+0.3**
SMLA					IAmb	IAmb	13 22 52.0	
	comp=Z,120nm,0.8s							
UDPR	**Udaipur**	**52.60**	**301**	*eP*		**P**	**13 22 52.3**	**-0.1**
WMQ	**Urumqi**	**53.03**	**329**	P		**P**	**13 22 57.0**	**+1.8**
WMQ					pmax	pmax		
	comp=Z,29nm,0.9s							
WMQ					LR	LR		
	comp=N,15μm,17.3s							
WMQ					LR	LR		
	comp=E,8μm,17.3s							
WMQ					LR	LR		
	comp=Z,6μm,20.3s							
BHK	**Bhakra**	**53.09**	**310**	*eP*		**P**	**13 22 55.2**	**-0.6**
DHRM	**DHARAMSHALA**	**53.55**	**311**	*eP*		**P**	**13 22 59.4**	**0.0**
DHRM					IAmb	IAmb	13 23 01.2	
	comp=Z,115nm,1.2s							
ALCI	**Alchi Leh**	**53.82**	**314**	*eP*		**P**	**13 23 00.7**	**-0.7**
KSH	**Kashi**	**57.31**	**319**	P		**P**	**13 23 27.3**	**+1.3**
KSH					pmax	pmax		
	comp=Z,11nm,1.1s							
TARG	**Taragay, Kyrgy**	**57.33**	**322**	P		**P**	**13 23 26.6**	**+0.2**
TARG					IAmb	IAmb	13 23 39.0	
	comp=Z,14nm,1.4s							
MKAR	**Makanchi Array**	**57.85**	**329**	P		**P**	**13 23 30.0**	**+0.6**
	comp=Z,8.7nm,0.4s,baz=126,slow=8.9,SNR=154							
	comp=Z,8.7nm,0.4s							
KDJ	**Kajisay**	**57.94**	**322**	P		**P**	**13 23 30.8**	**+0.5**
KDJ					IAmb	IAmb	13 23 32.0	
	comp=Z,7.3nm,0.6s							
MAKZ	**Makanchi**	**58.02**	**329**			**P**	**13 23 30.9**	**+0.3**
MAKZ					IAmb	IAmb	13 23 31.6	
	comp=Z,9.4nm,0.6s							
BOOM	**Boomskoye usch**	**58.91**	**321**	P		**P**	**13 23 37.4**	**+0.3**
AAK	**Ala-Archa**	**59.89**	**321**	P		**P**	**13 23 44.7**	**+1.0**
	comp=Z,5.8nm,0.6s,baz=113,slow=6.6,SNR=10							
	comp=Z,5.8nm,0.6s							
AAK	**Ala-Archa**	**59.89**	**321**	P		**P**	**13 23 45.0**	**+1.2**
AAK					IAmb	IAmb	13 23 45.2	
	comp=Z,6.4nm,0.7s							
KBL	**Kabul**	**60.02**	**310**			**P**	**13 23 45.0**	**+0.1**
CHGR	**Chuyangaron**	**61.59**	**315**			**P**	**13 23 55.0**	**-0.3**
CHGR					IAmb	IAmb	13 23 55.3	
	comp=Z,12nm,0.6s							
ZAA0	**Zalesovo Array**	**61.63**	**336**			**P**	**13 23 55.1**	**+0.1**
ZAA0					IAmb	IAmb	13 23 56.0	
	comp=Z,8.2nm,0.8s							
ZALV	**Zalesovo Beam**	**61.63**	**336**	P		**P**	**13 23 54.3**	**-0.7**
	comp=Z,7.0nm,0.7s,baz=123,slow=5.9,SNR=32							
	comp=Z,7.0nm,0.7s							
ZALV	**Zalesovo Beam**	**61.63**	**336**			**P**	**13 23 54.7**	**-0.3**
KURBB	**Kurchatov Arra**	**62.21**	**330**	P		**P**	**13 23 58.7**	**-0.

VWDT	**VWDT**	**2.49 351**	*e*P	Pn	13 18 51.2 +0.8
SSLB	**Suanglung**	**2.56 347**	P	Pn	13 18 50.6 -0.5
OWD	**Renai**	**2.68 352**	*e*P	Pn	13 18 52.0 -0.8

*IDC **18** 13:22:06.3±0.3,7.˙50N×124.˙92E,h0km,mb5.2/33, mbtmp5.2/35,ML4.7/2,MS5.3/71,Error ellipse: s-maj=11.7km s-min=7.5km az=60.0*

*MOS **18** 13:22:07.5±1.0,7.˙61N×124.˙98E,h16km,mb5.7/76, MS5.5/43,Error ellipse: s-maj=7.5km s-min=3.9km az=116.0*

*MAN **18** 13:22:08.7,7.˙67N×124.˙89E,h6km,mb6.2,ML5.3,MS5.9*

MAN INTENSITY VI - DON CARLOS KADINGILAN KALILANGAN KITAOTAO KIBAWE MARAMAG AND SAN FERNANDO BUKIDNON; INTENSITY V -VALENCIA CITY DAMULOG DANGCAGAN PANGANTUCAN QUEZON AND TALAKAG BUKIDNON; KIDAPAWAN CITY MIDSAYAP AND PIGCAWAYAN COTABATO; MARAWI CITY AND ; WAO LANAO DEL SUR; INTENSITY IV - MALAYBALAY CITY CABANGLASAN AND IMPASUG-ONG BUKIDNON; ANTIPAS COTABATO; CAGAYAN DE ORO CITY; EL SALVADOR CITY TAGALOAN AND VILLANUEVA MISAMIS ; ORIENTAL; COTABATO CITY; DAVAO CITY; BANSALAN DAVAO DEL SUR; KORONADAL CITY SOUTH COTABATO; MALUNGON SARANGANI; ROSARIO AGUSAN DEL SUR; ; INTENSITY III -LIBONA MALITBOG AND MANOLO FORTICH BUKIDNON; GINGOOG CITY BALINGASAG JASAAN MAGSAYSAY MANTICAO AND MEDINA MISAMIS ORIENTAL; ILIGAN CITY; BACOLOD ; AND TUBOD LANAO DEL NORTE; PAGADIAN CITY ZAMBOANGA DEL SUR; TALAINGOD DAVAO DEL NORTE; HAGONOY AND SANTA CRUZ DAVAO DEL SUR; TUPI SOUTH COTABATO; ALABEL ; SARANGANI; INTENSITY II - GENERAL SANTOS CITY; LAKE SEBU POLOMOLOK AND TAMPAKAN SOUTH COTABATO; ALEOSAN AND PIKIT COTABATO; KIAMBA SARANGANI; MAMBAJAO CAMIGUIN; DIPOLOG ; CITY POLANCO AND SINDANGAN ZAMBOANGA DEL NORTE; MOLAVE ZAMBOANGA DEL SUR; INTENSITY I - ZAMBOANGA CITY.

*BJI **18** 13:22:08.8,7.˙68N×125.˙16E,h25km,mB5.7/63,mb5.4/88, Ms5.9/95,Ms7 5.6/91*

*NEIC **18** 13:22:09.8,7.˙63N×124.˙91E,h20km*

*NEIC **18** 13:22:09.8,7.˙73N×125.˙01E,h20km,Moment Tensor Solution. Duration: 4s2 Moment tensor: Scale 10^17^Nm; Mrr-2.72; Mθθ7.56; Mφφ-4.84; Mrθ1.07; Mθφ-4.99; Mφr2.22; Fault plane solution: M0 8.66000×10^17^ NP1: φs151.52000°,δ71.09000°,λ-17.94000°. NP2: φs247.51000°,δ73.06000°,λ-160.20000°. Principal axes: T 9.3263, Plg1.0000°, Azm19.0000°; N -1.5449, Plg64.0000°, Azm286.0000°; P -7.7814, Plg26.0000°, Azm110.0000°;*

*ISC-PP **18** 13:22:10,7.˙62N×124.˙91E,h19km,Mwppsm6.0,Moment Tensor Solution. s44 Moment tensor: Scale 10^18^Nm; Mrr-0.32±.07; Mθθ0.48±.18; Mφφ-0.15±.11; Mrθ0.41±.14; Mθφ0.17±.13; Mφr-0.35±.15; Fault plane solution: M0 1.43000×10^18^ NP1:φs150.10000°,δ42.50000°, λ333.10000°. NP2:φs260.60000°,δ72.20000°, λ-129.30000°.*

*NEIC **18** 13:22:10.1±1.5,7.˙62N±0.˙06×124.˙91E±0.˙05,h14km±3km, mb5.7/309,Ms_20 5.6/328,Mwb5.8/85,Mww5.9/23 Error ellipse: s-maj=8.5km s-min=7.5km az=159.0,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr0.73; Mθθ6.92; Mφφ-7.65; Mrθ0.08; Mθφ-0.12; Mφr0.69; Fault plane solution: M0 7.35000×10^17^ NP1: φs135.36000°,δ86.22000°,λ-2.86000°. NP2:φs225.55000°, δ87.14000°,λ-176.22000°. Principal axes: T 6.9224, Plg1.0000°, Azm0.0000°; N 0.7891, Plg85.0000°, Azm263.0000°; P -7.7115, Plg5.0000°, Azm90.0000°;*

*NEIC **18** 13:22:10.1,7.˙62N×124.˙92E,h14km*

*IPGP **18** 13:22:12.0,7.˙62N×124.˙99E,h12km,Mw5.9,Fault plane solution: NP1:φs232.00000°,δ85.00000°,λ-173.00000°. NP2:φs141.00000°,δ83.00000°,λ-5.00000°.*

*GCMT **18** 13:22:12.1±0.1,7.˙69N×124.˙87E,h15km,MW5.9/157, Moment Tensor Solution. s152,c321; s157,c508; Duration: 2s2 Moment tensor: Scale 10^18^Nm; Mrr-0.16±.01; Mθθ0.93±.01; Mφφ-0.76±.01; Mrθ-0.17±.02; Mθφ-0.26±.01; Mφr0.02±.02; Best double couple: M0 0.89800×10^18^ NP1:φs324.00000°,δ84.00000°, λ6.00000°. NP2:φs233.00000°,δ84.00000°,λ174.00000°. Principal axes: T 0.9910, Plg9.0000°, Azm189.0000°; N -0.1850, Plg81.0000°, Azm11.0000°; P -0.8060, Plg0.0000°, Azm279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*DJA **18** 13:22:13.8±0.3,8.˙N±2.˙×12.˙5E±.˙,h40km±3km,M5.8/122, mB6.2/120,mb5.8/122,MLv6.4/10,Mw5.9/4, Mw(mB)5.9/120,MwMwp5.6/102,Mwp5.8/102*

ISC 18 13:22:11.9±0.3,7.˙61N±0.˙02×124.˙99E±0.˙03,h30km±2km, **h31**km:**pP-P,n1355,σ1§49**/1218,**mb5.6**/327,**MS5.6**/311, **55C-9D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.80**	**132**	Pg		**Pn**		**13 22 26.7**	**-0.3**
	20μm,0.3s,baz=338,slow=2.2,SNR=393								
DAV				Lg		Lg		13 22 40.4	
	20μm,0.3s,baz=55,slow=9.1,SNR=19								
DAV	**Davao City (W)**	**0.80**	**132**	P		**Pn**		**13 22 27.6**	**+0.6**
DAV	**Davao City (W)**	**0.80**	**132**	P		**Pn**		**13 22 27.0**	**0.0**
SGSI	**Sangihe**	**3.93**	**172**	P		**Pn**		**13 23 10.5**	**+0.3**
MYLDM	**Lahad Datu**	**6.88**	**250**			**Pn**		**13 23 50.9**	**+0.2**
MYLDM	**Lahad Datu**	**6.88**	**250**	P		**Pn**		**13 23 52.9**	**+2.1**
KMSI	**Cibinong**	**7.06**	**188**	P		**Pn**		**13 23 53.3**	**+0.1**
TNTI	**Ternate**	**7.19**	**161**			**Pn**		**13 23 55.5**	**+0.5**
TNTI	**Ternate**	**7.19**	**161**	P		**Pn**		**13 23 55.8**	**+0.8**
TNTI	**Ternate**	**7.19**	**161**	P		**Pn**		**13 23 56.0**	**+1.0**
	24μm12μm1μm,1.0s								
TGY	**Tagaytay City**	**7.58**	**329**	Pn		**Pn**		**13 24 02.9**	**+2.5**
	73nm,0.3s,baz=251,slow=2.7,SNR=9.0								
TGY				Sn		**Sn**		**13 25 31.4**	**+6.0**
	63nm,0.3s,baz=93,slow=23,SNR=3.3								
TOLI2	**Tolitoli**		**7.70 213**			**Pn**		**13 23 58.2**	**-3.8**
MRSI	**Marisa**		**7.71 203**	P		**Pn**		**13 24 00.7**	**-1.4**
MRSI				S		**Sn**		**13 25 29.4**	**+1.0**
MPSI	**Mapaga**		**8.83 215**	P		**Pn**		**13 24 14.9**	**-2.5**
LUWI	**Luwuk**		**8.87 195**	P		**Pn**		**13 24 18.8**	**+0.7**
LUWI	**Luwuk**		**8.87 195**			**Pn**		**13 24 18.4**	**+0.3**
LUWI	**Luwuk**		**8.87 195**	P		**Pn**		**13 24 20.3**	**+2.2**
LUWI	**Luwuk**		**8.87 195**	P		**Pn**		**13 24 19.8**	**+1.7**
APSI	**Ampana**		**9.09 202**	P		**Pn**		**13 24 23.6**	**+2.5**
I39PW	**PALAU INFRASON**	**9.48**	**90**	I		I		14 11 00.0	
	baz=272,slow=306,SNR=1.4								
SANI	**Sanana**		**9.65 174**	S		**Sn**		**13 26 13.7**	**-2.4**
SANI				P		**Pn**		**13 24 25.9**	**-2.7**
SANI	**Sanana**		**9.65 174**	P		**Pn**		**13 24 27.3**	**-1.4**
SANI	**Sanana**		**9.65 174**	S		**Sn**		**13 26 17.0**	**+0.9**
SANI	**Sanana**		**9.65 174**	P		**Pn**		**13 24 27.3**	**-1.4**
	11μm869nm,0.8s								
PCI	**Palu**		**9.89 211**	P		**Pn**		**13 24 32.2**	**+0.1**
	9μm833nm,1.0s								
SWI	**Sorong**	**10.49**	**143**	P		**Pn**		**13 24 41.0**	**+0.8**
	10μm6μm323nm,1.3s								
SZP	**Santa**	**10.82**	**336**	P		**Pn**		**13 24 45.8**	**+1.0**
NLAI	**Namlea**	**10.98**	**169**	P		**Pn**		**13 24 45.5**	**-1.5**
	32μm8μm809nm,0.9s								
MSAI	**Masohi**	**11.57**	**160**	P		**Pn**		**13 24 55.8**	**+0.7**
	20μm9μm604nm,1.6s								
AAI	**Ambon**	**11.67**	**164**	P		**Pn**		**13 24 56.9**	**+0.5**
	22μm7μm562nm,1.2s								
TTSI	**Tana Toraja**	**11.77**	**206**	P		**Pn**		**13 24 58.4**	**+0.6**
	31μm11μm1μm,1.5s								
BKB	**Balikpapan**	**11.95**	**223**	P		**Pn**		**13 24 59.8**	**-0.4**
BKB	**Balikpapan**	**11.95**	**223**	S		**Sn**		**13 27 10.7**	**-1.9**
BKB	**Balikpapan**	**11.95**	**223**	P		**Pn**		**13 25 04.4**	**+4.2**
	32μm9μm572nm,1.0s								
SPSI	**Sidrap Palu**	**12.62**	**205**	P		**Pn**		**13 25 10.5**	**+1.1**
	33μm12μm312nm,1.0s								
FAKI	**Fak Fak**		**12.72 145**			**Pn**		**13 25 11.3**	**+0.5**
FAKI	**Fak Fak**		**12.72 145**	P		**Pn**		**13 25 11.9**	**+1.1**
FAKI	**Fak Fak**		**12.72 145**	P		**Pn**		**13 25 12.1**	**+1.3**
	11μm9μm527nm,1.2s								
BNSI	**Bone**		**12.88 202**	P		**Pn**		**13 25 14.3**	**+1.3**
	19μm935nm,1.8s								
RKPI	**Ransiki, Papua**		**12.89 134**	P		**Pn**		**13 25 16.1**	**+3.0**
	16μm1μm,2.0s								
BNDI	**Bandanaira**	**13.01**	**158**	P		**Pn**		**13 25 15.8**	**+1.0**
BNDI	**Bandanaira**	**13.01**	**158**	P		**Pn**		**13 25 18.5**	**+3.7**
	16μm2μm,1.7s								
BBSI	**Bau Bau**		**13.23 191**	P		**Pn**		**13 25 17.6**	**-0.2**
	26μm13μm454nm,1.2s								
KAPI	**Kappang**		**13.58 203**	Pn		**Pn**		**13 25 22.8**	**+0.3**
	3.9nm,0.3s,baz=10,slow=8.3,SNR=53								
KAPI				Sn		**Sn**		**13 27 58.0**	**+5.4**
	1.1nm,0.3s,baz=134,slow=23,SNR=0.8								
KAPI				LR		LR		13 30 41.7	
	comp=Z,18μm,20.8s,baz=62,slow=38								
KAPI	**Kappang**		**13.58 203**			**Pn**		**13 25 22.2**	**-0.4**
KAPI	**Kappang**		**13.58 203**	P		**Pn**		**13 25 25.3**	**+2.7**
KAPI				P		**Pn**		**13 25 25.3**	**+2.7**
KAPI				S		Sn		13 28 01.6	+9.0
KAPI				S		Sn		13 28 01.6	+9.0
KAPI	**Kappang**		**13.58 203**	P		**Pn**		**13 25 25.3**	**+2.7**
KAPI	**Kappang**		**13.58 203**	P		**Pn**		**13 25 22.2**	**-0.4**
KAPI								13 27 58.0	
SBUM	**Sibu**		**13.71 249**			**Pn**		**13 25 22.4**	**-1.9**
SBUM	**Sibu**		**13.71 249**	P		**Pn**		**13 25 25.1**	**+0.8**
BKSI	**Bulukumba**		**13.73 201**	P		**Pn**		**13 25 26.5**	**+1.9**
	30μm12μm337nm,1.6s								
KMPI	**Kaimana, Papua**		**14.18 142**	P		**Pn**		**13 25 31.8**	**+1.1**
	9μm14μm861nm,1.5s								
BSSI	**Bau Bau, Butuon**		**14.38 198**	P		**Pn**		**13 25 35.0**	**+1.6**
	29μm17μm569nm,2.5s								
BBKI	**Banjar Baru**		**14.95 223**	P		**Pn**		**13 25 44.2**	**+3.0**
	24μm19μm638nm,1.4s								
TWGBT	**Beinan**		**15.58 346**	P		**Pn**		**13 25 50.7**	**+1.2**
TWG	**Pinlang**		**15.59 346**			**Pn**		**13 25 49.1**	**-0.4**
KSM	**Kuching**		**15.84 248**	Pn		**Pn**		**13 25 52.3**	**-0.5**
KSM	**Kuching**		**15.84 248**	P		**Pn**		**13 25 53.3**	**+0.4**
YULB	**Yu-li**		**16.09 348**			**Pn**		**13 25 55.2**	**-0.7**
YULB	**Yu-li**		**16.09 348**	P		**Pn**		**13 25 57.0**	**+1.0**
TPUB	**Ta-pu**		**16.16 345**	Pn		**Pn**		**13 25 56.5**	**-0.3**
TPUB	**Ta-pu**		**16.16 345**	P		**Pn**		**13 25 58.4**	**+1.6**
MMRI	**Maumere**		**16.37 190**			**Pn**		**13 26 00.1**	**+0.5**
MMRI	**Maumere**		**16.37 190**	P		**Pn**		**13 26 00.5**	**+0.9**
MMRI	**Maumere**		**16.37 190**	P		**Pn**		**13 26 00.1**	**+0.5**
	22μm23μm1μm,1.5s								
SSLB	**Suanglung**		**16.55 347**			**Pn**		**13 26 01.6**	**-0.2**
SSLB	**Suanglung**		**16.55 347**	P		**Pn**		**13 26 03.0**	**+1.2**
EDFI	**Ende, Flores**		**16.58 191**	P		**Pn**		**13 26 02.7**	**+0.4**
	20μm14μm514nm,2.0s								
SMPI	**Sarmi**		**16.68 124**	P		**P**		**13 26 07.1**	**+1.4**
	19μm11μm755nm,1.6s								
SAUI	**Saumlaki**		**16.72 158**			**Pn**		**13 26 03.9**	**-0.1**
SAUI						IAmb	IAmb	13 26 12.7	
	comp=Z,434nm,0.6s								
SAUI	**Saumlaki**		**16.72 158**	P		**Pn**		**13 26 05.0**	**+1.0**
SAUI	**Saumlaki**		**16.72 158**	P		**Pn**		**13 26 03.9**	**-0.1**
	comp=Z,15μmcomp=Z,22μmcomp=Z,581nm,0.6s								
NACB	**Ninganchiao**		**16.79 349**	P		**P**		**13 26 06.9**	**+0.1**
NACB	**Ninganchiao**		**16.79 349**	P		**P**		**13 26 06.2**	**-0.6**
DLV	**Lat**		**16.82 286**	P		**Pn**		**13 26 06.5**	**+1.0**
DLV	**Lat**		**16.82 286**	P		**Pn**		**13 26 06.6**	**+1.1**
SOEI	**Soe**		**17.26 182**	P		**Pn**		**13 26 11.7**	**+0.8**
SOEI	**Soe**		**17.26 182**			**Pn**		**13 26 11.5**	**+0.5**
SOEI						IAmb	IAmb	13 26 15.1	
	comp=Z,909nm,1.2s								
SOEI	**Soe**		**17.26 182**	P		**Pn**		**13 26 11.6**	**+0.7**
SOEI	**Soe**		**17.26 182**	P		**Pn**		**13 26 11.8**	**+0.8**
	comp=Z,1μm,1.0s								
YHNB	**Yeheng**		**17.31 349**	P		**P**		**13 26 12.3**	**-0.4**
BATI	**Baumata**		**17.75 184**	P		**Pn**		**13 26 17.2**	**+0.4**
	comp=Z,919nm,0.8s,baz=173,slow=1.4,SNR=65								
BATI				LR		LR		13 34 26.2	
	comp=Z,15μm,21.0s,baz=354,slow=42								
BATI	**Baumata**		**17.75 184**	P		**Pn**		**13 26 17.3**	**+0.4**
	comp=Z,22μmcomp=Z,17μmcomp=Z,1μm,0.9s								
WSI	**Waingapu**		**17.79 195**	P		**P**		**13 26 18.2**	**+0.3**
	comp=Z,1μm,1.8s								
PLAI	**Plampang**		**17.84 204**	P		**P**		**13 26 19.8**	**+1.4**
PLAI	**Plampang**		**17.84 204**	P		**P**		**13 26 20.1**	**+1.7**
HKPS	**Hong Kong Po S**		**17.94 326**	P		**P**		**13 26 20.4**	**+0.9**
HKC	**Hong Kong Obse**		**17.94 326**	⇑P		**P**		**13 26 22.0**	**+2.5**
WBSI	**Waikabubak, Su**		**18.02 198**	P		**Pn**		**13 26 19.9**	**-0.3**
	comp=Z,18μmcomp=Z,810nm,2.0s								
TWSI	**Taliwang, Sumb**		**18.14 207**	P		**P**		**13 26 22.8**	**+1.1**
	comp=Z,22μmcomp=Z,19μmcomp=Z,755nm,1.3s								
MCO	**Taipa Grande**		**18.15 324**	P		**P**		**13 26 25.0**	**+3.1**
GENI	**Genyem**		**18.22 123**	P		**Pn**		**13 26 25.2**	**+2.5**
GENI	**Genyem**		**18.22 123**	P		**Pn**		**13 26 25.7**	**+3.0**
	comp=Z,18μmcomp=Z,11μmcomp=Z,477nm,1.8s								
KMMI	**Kalianget**		**18.24 217**	P		**Pn**		**13 26 25.1**	**+2.2**
	comp=Z,25μmcomp=Z,1μm,1.3s								
BASI	**Baing, Sumba**		**18.25 194**	P		**P**		**13 26 22.6**	**-0.3**
	comp=Z,23μmcomp=Z,18μmcomp=Z,1μm,1.6s								
QZH	**Quanzhou**		**18.29 341**	P		**Pn**		**13 26 23.6**	**+0.2**
QZH				S		**Sn**		**13 29 48.3**	**+1.5**
QZH				pmax		pmax			
	comp=Z,290nm,1.5s								
QZH				LR		LR			
	comp=Z,17μm,22.7s								
QZH				LR		LR			
	comp=Z,49μm,24.0s								
QZH				LR		LR			
	comp=Z,26μm,19.7s								
SRBI	**Singaraja**		**18.38 212**	P		**Pn**		**13 26 26.0**	**+1.4**
	comp=Z,23μmcomp=Z,11μmcomp=Z,443nm,1.3s								
QIZ	**Qiongzhong**		**18.58 309**	P		**P**		**13 26 25.7**	**-0.9**
QIZ				IAmb		IAmb		13 26 29.7	
	comp=Z,828nm,1.9s								
QIZ	**Qiongzhong**		**18.58 309**	P		**P**		**13 26 26.8**	**+0.2**
QIZ				S		**Sn**		**13 29 54.0**	**0.0**
QIZ				pmax		pmax			
	comp=Z,190nm,1.7s								
QIZ				pmax		pmax			
	comp=Z,2μm,3.1s								
QIZ				LR		LR			
	comp=Z,32μm,17.4s								
QIZ				LR		LR			
	comp=Z,14μm,16.8s								
QIZ				LR		LR			
	comp=Z,25μm,18.6s								
QIZ	**Qiongzhong**		**18.58 309**	P		**Pn**		**13 26 28.0**	**+1.0**
JAY	**Jayapura**		**18.63 122**	P		**P**		**13 26 26.4**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=288,slow=4.3,SNR=8.8								
JAY				S		**Sn**		**13 29 54.1**	**-1.2**
	comp=Z,8.3nm,0.8s,baz=149,slow=19,SNR=1.2								
JAY				LR		LR		13 32 23.5	
	comp=Z,15μm,21.0s,baz=287,slow=33								
	comp=Z,27nm,0.8s								
JAY	**Jayapura**		**18.63 122**	P		**Pn**		**13 26 28.4**	**+0.7**
ABJI	**Asem Bagus**		**18.68 215**	P		**Pn**		**13 26 29.9**	**+1.6**
	comp=Z,21μmcomp=Z,11μmcomp=Z,378nm,1.6s								
DNP	**Denpasar**		**18.89 211**	P		**Pn**		**13 26 34.0**	**+3.3**
	comp=Z,21μmcomp=Z,1μm,2.2s								
BLJI	**Banyuglugur**		**19.02 217**	P		**P**		**13 26 31.3**	**-0.1**
	comp=Z,21μmcomp=Z,10μmcomp=Z,475nm,1.2s								
GZH	**Guangzhou**		**19.03 325**	P		**Pn**		**13 26 36.8**	**+4.4**
GZH				S		**S**		**13 30 10.4**	**+4.6**
GZH				pmax		pmax			
	comp=Z,120nm,0.9s								
GZH				LR		LR			
	comp=Z,15μm,14.5s								
GZH				LR		LR			
	comp=Z,16μm,15.1s								
GZH				LR		LR			
	comp=Z,22μm,16.7s								
GRJI	**Gresik**		**19.07 221**	P		**Pn**		**13 26 35.0**	**+2.0**
JAGI	**Jajag, Banyuwa**		**19.28 214**	P		**P**		**13 26 34.4**	**0.0**
JAGI				IAmb		IAmb		13 26 43.9	
	comp=Z,530nm,1.2s								
JAGI	**Jajag, Banyuwa**		**19.28 214**	P		**P**		**13 26 35.3**	**+1.0**
JAGI	**Jajag, Banyuwa**		**19.28 214**	P		**Pn**		**13 26 35.4**	**-0.1**
	comp=Z,16μmcomp=Z,9μmcomp=Z,406nm,1.3s								
JOW	**Kunigami**		**19.37 9**	P		**P**		**13 26 35.8**	**+0.5**
	comp=Z,4.3nm,0.3s,baz=219,slow=7.5,SNR=8.8								
JOW				LR		LR		13 34 12.7	
	comp=Z,9μm,20.8s,baz=156,slow=37								
	comp=Z,392nm,1.1s								
JOW	**Kunigami**		**19.37 9**	P		**P**		**13 26 35.5**	**+0.3**
JOW				IAmb		IAmb		13 26 41.7	
	comp=Z,499nm,1.1s								
JOW	**Kunigami**		**19.37 9**	P		**Pn**		**13 26 36.2**	**-0.3**
TBJI	**Tambak Boyo**		**19.42 223**	P		**Pn**		**13 26 39.5**	**+2.4**
	comp=Z,1μm,1.3s								
NGJI	**Ngawi**		**20.08 223**	P		Pn		13 26 46.5	+1.5
	comp=Z,5μmcomp=Z,427nm,1.2s								
TPI	**Tanjungpandan**		**20.13 240**	P		**P**		**13 26 44.5**	**+0.9**
	comp=Z,6μmcomp=Z,5μmcomp=Z,270nm,0.9s								
GUMO	**Guam**	**20.42**	**71**	P		**P**		**13 26 47.4**	**+0.6**
	comp=Z,180nm,0.8s,baz=214,slow=12,SNR=7.1								
GUMO				S		Sn		13 30 41.0	+2.6
	comp=Z,58nm,0.9s,baz=189,slow=14,SNR=1.6								
GUMO				LR		LR		13 33 35.4	
	comp=Z,3μm,21.3s,baz=250,slow=34								
	comp=Z,180nm,0.8s								
GUMO	**Guam**	**20.42**	**71**	P		**P**		**13 26 47.4**	**+0.6**
GUMO	**Guam**	**20.42**	**71**	P		Pn		13 26 48.3	-0.7
SMRI	**Semarang**	**20.55**	**225**	P		Pn		13 26 50.6	+0.1
SMRI	**Semarang**	**20.55**	**225**	P		Pn		13 26 50.9	+0.4
	comp=Z,21μmcomp=Z,18μmcomp=Z,669nm,1.4s								
AUDHS	**Darwin High Sc**	**20.75**	**164**	P		**P**		**13 26 49.6**	**-0.6**
DRS	**Darwin Rock St**	**20.76**	**164**	P		**P**		**13 26 50.2**	**-0.2**
PCJI	**Pacitan**	**20.88**	**222**	P		**P**		**13 26 53.0**	**+1.3**
	comp=Z,12μmcomp=Z,10μmcomp=Z,732nm,1.3s								
UGM	**Wanagama**	**21.11**	**223**	P		**P**		**13 26 54.3**	**0.0**
UGM	**Wanagama**	**21.11**	**223**	P		**P**		**13 26 56.5**	**+2.2**
UGM	**Wanagama**	**21.11**	**223**	P		**P**		**13 26 56.4**	**+2.2**
	comp=Z,11μmcomp=Z,15μmcomp=Z,1μm,1.6s								
PPBI	**Pangkal Pinang**	**21.16**	**243**	P		**P**		**13 26 56.7**	**+1.9**
YOGI	**Yogyakarta**	**21.20**	**224**	P		**P**		**13 26 57.2**	**+2.0**
	comp=Z,13μmcomp=Z,18μmcomp=Z,1μm,1.5s								
MTN	**Manton Dam**	**21.22**	**163**	P		**P**		**13 26 52.6**	**-2.7**
	comp=Z,269nm,1.2s,comp=Z,0.0nm								
MTN	**Manton Dam**	**21.22**	**163**	P		**P**		**13 26 54.1**	**-1.2**
MTN				IAmb		IAmb		13 27 04.5	
	comp=Z,422nm,1.2s								
KDU	**Kakadu**	**21.49**	**160**	P		**P**		**13 26 56.0**	**-2.3**
	comp=Z,240nm,1.2s,comp=Z,0.0nm								
KPJI	**Karang Pucung**	**21.83**	**228**	P		**P**		**13 27 04.5**	**+2.6**
	comp=Z,12μmcomp=Z,8μmcomp=Z,521nm,1.4s								
MYKOM	**Kota Tinggi**	**21.84**	**256**	P		**P**		**13 27 01.8**	**-0.3**
MYKOM	**Kota Tinggi**	**21.84**	**256**	P		**P**		**13 27 03.1**	**+1.1**
DSRI	**Dabo**	**21.88**	**249**	P		**P**		**13 27 03.3**	**+0.8**
BTDF	**Bukit Timah Da**	**22.03**	**255**	P		**P**		**13 27 05.3**	**+1.2**
MMPI	**Merauke**	**22.15**	**136**	P		**P**		**13 27 08.1**	**+2.8**
	comp=Z,6μmcomp=Z,16μmcomp=Z,640nm,2.2s								
GULI	**GuiLin**	**22.45**	**323**	P		**P**		**13 27 01.8**	**-6.7**
GULI				S		**S**		**13 31 05.8**	**-7.5**
GULI				pmax		pmax			
	comp=Z,140nm,1.1s								
GULI				pmax		pmax			
	comp=Z,2μm,7.6s								
GULI				LR		LR			
	comp=N,17μm,21.6s								
GULI				LR		LR			
	comp=E,17μm,19.1s								
GULI				LR		LR			
	comp=Z,13μm,21.5s								
PMBI	**Palembang**	**22.72**	**243**	P		**P**		**13 27 13.9**	**+2.4**
BBJI	**Bungbulang**	**22.87**	**229**	P		**P**		**13 27 13.6**	**+0.5**
DBJI	**Dramaga**	**23.00**	**233**	P		**P**		**13 27 17.1**	**+2.7**
	comp=Z,8μmcomp=Z,18μmcomp=Z,502nm,1.3s								
CNJI	**Cibinong**	**23.17**	**231**	P		**P**		**13 27 16.3**	**+0.2**
	comp=Z,3μmcomp=Z,310nm,1.2s								
SBJI	**Serang**	**23.23**	**235**	P		**P**		**13 27 18.4**	**+1.7**
SKJI	**Sukabumi**	**23.42**	**232**	P		**P**		**13 27 19.7**	**+1.1**
	comp=Z,9μmcomp=Z,1μm,2.1s								
CNSH	**ChangSha**	**23.42**	**332**	P		**P**		**13 27 19.9**	**+1.4**
CNSH				S		**S**		**13 31 30.4**	**+0.5**
CNSH				LR		LR			
	comp=Z,18μm,19.2s								
CNSH				LR		LR			
	comp=Z,31μm,19.2s								
CNSH				LR		LR			
	comp=Z,6μm,21.3s								
KNRA	**Kununurra**	**23.43**	**171**	P		**P**		**13 27 16.8**	**-1.8**
	comp=Z,487nm,0.9s,comp=Z,0.0nm								
KNRA	**Kununurra**	**23.43**	**171**	P		**P**		**13 27 17.5**	**-1.1**
KNRA				IAmb		IAmb		13 27 29.8	
	comp=Z,317nm,0.9s								
BLSI	**Bandar Lampung**	**23.54**	**237**	P		**P**		**13 27 22.0**	**+2.2**
KLI	**Kotabumi**	**23.60**	**239**	P		**P**		**13 27 22.1**	**+1.8**
SSE	**Sheshan**	**23.64**	**352**	P		**P**		**13 27 19.6**	**-0.9**
SSE				S		**S**		**13 31 33.0**	**-0.2**
SSE				pmax		pmax			
	comp=Z,63nm,1.2s								
SSE				pmax		pmax			
	comp=Z,1μm,4.5s								
SSE				LR		LR			
	comp=Z,3μm,19.2s								
SSE				LR		LR			
	comp=Z,8μm,19.1s								
MDSI	**Maura Dua**	**

comp=Z,6µmcomp=Z,4µmcomp=Z,189nm,1.2s
PDSI Padang 25.88 252 P **P** **13 27 41.8 +0.5**
comp=Z,5µmcomp=Z,3µmcomp=Z,182nm,1.1s
JNU Nakatsue 25.97 11 LR LR 13 37 20.6
comp=Z,4µm,21.4s,baz=194,slow=35
JNU Nakatsue 25.97 11 IAmb IAmb 13 28 03.4
comp=Z,172nm,1.3s
JNU Nakatsue 25.97 11 P **P** **13 27 40.9 -1.0**
MNSI Mandailing Nat 26.21 256 P **P** **13 27 45.4 +1.1**
comp=Z,5µmcomp=Z,156nm,1.1s
XMI Christmas Isla 26.29 227 P **P** **13 27 47.2 +2.3**
PSI Prapat 26.38 261 LR LR 13 41 48.7
comp=Z,8µm,18.1s,baz=82,slow=45
PSI Prapat 26.38 261 P **P** **13 27 46.6 +0.6**
PSI Prapat 26.38 261 P **P** **13 27 45.5 -0.5**
PSI pmax pmax
comp=Z,203nm,1.2s
RPSI Rantau Prapat 26.40 261 P **P** **13 27 45.5 -0.5**
RPSI IAmb IAmb 13 27 54.2
comp=Z,203nm,1.2s
ENH Enshi 26.83 329 P **P** **13 27 49.2 -0.5**
ENH IAmb IAmb 13 28 01.5
comp=Z,244nm,1.1s
ENH IAMs_20 IAMs_20 13 39 06.2
comp=Z,14µm,20.0s
ENH Enshi 26.83 329 P **P** **13 27 49.6 -0.1**
PPSI Pulau Pagai 26.97 248 P **P** **13 27 51.9 +0.8**
comp=Z,6µmcomp=Z,244nm,1.0s
JMN Monobe 27.26 16 P **P** **13 27 53.7 +0.1**
SISI Saibi 27.31 252 P **P** **13 27 54.6 +0.4**
comp=Z,6µmcomp=Z,3µmcomp=Z,219nm,1.1s
KCSI Kotacane, Aceh 27.38 263 P **P** **13 27 53.5 -1.4**
comp=Z,125nm,1.0s
KMI Kunming 27.47 312 ⇑P **P** **13 27 56.8 +1.0**
KMI S **S** **13 32 34.6 -0.3**
KMI pmax pmax
comp=Z,66nm,1.8s
KMI pmax pmax
comp=Z,910nm,11.5s
KMI LR LR
comp=Z,18µm,15.5s
KMI LR LR
comp=Z,10µm,15.6s
KMI LR LR
comp=Z,18µm,20.2s
CM31 Chiang Mai Arr 27.53 296 IAmb IAmb 13 28 20.0
comp=Z,145nm,1.1s
CMAR Chiang Mai Arr 27.53 296 P **P** **13 27 55.9 -0.2**
comp=Z,6.9nm,0.8s,baz=121,slow=7.7,SNR=50
comp=Z,6.9nm,0.8s
CMAR Chiang Mai Arr 27.53 296 P **P** **13 27 55.5 -0.6**
CMAR Chiang Mai Arr 27.53 296 *i* P **P** **13 27 56.2 +0.1**
CMAR pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 27.65 296 P **P** **13 27 56.3 -0.9**
CHTO IAMs_20 IAMs_20 13 39 26.8
comp=Z,12µm,20.0s
CHTO Chiang Mai 27.65 296 P **P** **13 27 56.9 -0.3**
CHTO P **P** **13 27 56.9 -0.3**
CHTO S **S** **13 32 39.7 +2.3**
CHTO S **S** **13 32 39.7 +2.3**
CHTO Chiang Mai 27.65 296 P **P** **13 27 57.2 0.0**
CHTO Chiang Mai 27.65 296 P **P** **13 27 56.3 -0.9**
CHTO pmax pmax
comp=Z,110nm,1.3s
CHTO MLR MLR
comp=Z,12µm,20.0s
PMG Port Moresby 27.81 127 P **P** **13 27 57.7 -1.0**
comp=Z,85nm,1.0s,baz=330,slow=7.9,SNR=17
PMG LR LR 13 40 25.7
comp=Z,5µm,18.7s,baz=303,slow=40
comp=Z,85nm,1.0s
PMG Port Moresby 27.81 127 P **P** **13 27 58.3 -0.3**
PMG Port Moresby 27.81 127 P **P** **13 27 59.3 +0.6**
PMG Port Moresby 27.81 127 *ce* P **P** **13 27 59.3 +0.6**
PMG pmax pmax
comp=Z,77nm,1.0s
PMG MLR MLR
comp=Z,5µm,19.0s
LHMI Lhok Sumawe 27.96 267 P **P** **13 28 01.4 +1.4**
LHMI Lhok Sumawe 27.96 267 P **P** **13 28 01.8 +1.8**
comp=Z,7µmcomp=Z,5µmcomp=Z,369nm,1.2s
COEN Coen 28.02 140 P **P** **13 27 59.3 -1.1**
comp=Z,158nm,1.1s,comp=Z,0.0nm
COEN Coen 28.02 140 P **P** **13 27 59.3 -1.1**
COEN IAmb IAmb 13 28 25.2
comp=Z,212nm,1.1s
COEN Coen 28.02 140 P **P** **13 27 59.7 -0.8**
GSI Gunungsitoli 28.02 258 IAmb IAmb 13 28 08.0
comp=Z,192nm,0.9s
GSI Gunungsitoli 28.02 258 P **P** **13 28 00.1 -0.5**
GSI Gunungsitoli 28.02 258 P **P** **13 27 59.9 -0.7**
comp=Z,6µmcomp=Z,4µmcomp=Z,229nm,1.0s
MLSI Meulaboh, Aceh 28.62 265 P **P** **13 28 05.2 -0.7**
comp=Z,5µmcomp=Z,4µmcomp=Z,195nm,0.9s
WB0 Warramunga Arr 28.74 161 IAmb IAmb 13 28 24.8
comp=Z,158nm,0.9s
JHJ Hachijo jima 2 28.85 26 LR LR 13 39 25.2
comp=Z,10µm,20.3s,baz=260,slow=36
WRAB Tennant Creek 28.88 162 P **P** **13 28 06.3 -1.7**
WRAB IAmb IAmb 13 28 26.8
comp=Z,171nm,1.1s
WRAB Tennant Creek 28.88 162 P **P** **13 28 06.4 -1.7**
WRAB Tennant Creek 28.88 162 *ce* P **P** **13 28 06.1 -2.0**
WRAB pmax pmax
comp=Z,126nm,1.0s
WRAB MLR MLR
comp=Z,10µm,19.0s
WRA Warramunga Arr 28.88 162 P **P** **13 28 06.2 -2.0**
comp=Z,30nm,0.8s,baz=331,slow=11,SNR=80
WRA LR LR 13 41 45.0
comp=Z,11µm,20.7s,baz=360,slow=41
comp=Z,30nm,0.8s
WRA Warramunga Arr 28.88 162 P **P** **13 28 05.1 -3.0**
WRA Warramunga Arr 28.88 162 *i* P **P** **13 28 06.1 -2.0**
WRA pmax pmax
comp=Z,25nm,0.7s
WR8 Warramunga Arr 28.95 161 IAmb IAmb 13 28 35.5
comp=Z,188nm,1.2s
PZH PanZhiHua 29.00 313 P **P** **13 28 09.8 +0.5**
PZH S **S** **13 33 00.4 +1.6**
PZH pmax pmax
comp=Z,60nm,1.3s
PZH pmax pmax
comp=Z,250nm,5.1s
PZH LR LR
comp=Z,10µm,23.9s
PZH LR LR
comp=Z,11µm,20.4s
PZH LR LR
comp=Z,11µm,17.1s
SNSI Sinabang, Aceh 29.00 261 P **P** **13 28 09.2 -0.1**
comp=Z,5µmcomp=Z,3µmcomp=Z,208nm,1.0s
MBWA Marble Bar 29.05 190 P **P** **13 28 07.5 -2.1**
comp=Z,106nm,1.3s,comp=Z,0.0nm
MBWA Marble Bar 29.05 190 P **P** **13 28 07.8 -1.7**
MBWA IAmb IAmb 13 28 28.9
comp=Z,225nm,1.4s
MBWA Marble Bar 29.05 190 P **P** **13 28 07.9 -1.6**
MBWA P **P** **13 28 07.9 -1.6**
MBWA S **S** **13 32 56.5 -2.8**
MBWA S **S** **13 32 56.5 -2.8**
MBWA Marble Bar 29.05 190 P **P** **13 28 09.1 -0.5**
LYN LuoYang 29.19 338 P **P** **13 28 09.8 -0.9**
LYN pP pP 13 28 17.9 -1.8
LYN PP **PnPn** **13 29 07.3 +3.1**
LYN S **S** **13 33 01.8 +0.6**
LYN sS pS 13 33 12.9 +1.2
LYN pmax pmax
comp=Z,83nm,1.4s
LYN pmax pmax
comp=Z,1µm,3.6s
LYN LR LR
comp=Z,21µm,25.4s
LYN LR LR
comp=Z,44µm,25.1s
LYN LR LR
comp=Z,22µm,21.6s
TIA Tai'an 29.36 347 P **P** **13 28 11.6 -0.6**
TIA S **S** **13 33 04.8 +0.8**
TIA pmax pmax
comp=Z,54nm,1.0s
TIA pmax pmax
comp=Z,820nm,6.7s
TIA LR LR
comp=Z,7µm,22.0s
TIA LR LR
comp=Z,21µm,22.4s
TIA LR LR
comp=Z,12µm,19.4s
PSAC1 Pilbara Seismi 29.40 190 P **P** **13 28 11.1 -1.6**
comp=Z,184nm,1.1s
PSA00 Pilbara Seismi 29.43 190 P **P** **13 28 12.5 -0.5**
PSA00 Pilbara Seismi 29.43 190 P **P** **13 28 11.2 -1.7**
PSA00 IAmb IAmb 13 28 21.1
comp=Z,143nm,1.0s
PSA00 Pilbara Seismi 29.43 190 P **P** **13 28 12.1 -0.9**
RABL Rabaul 29.54 112 P **P** **13 28 13.7 -0.4**
RABL IAmb IAmb 13 28 20.6
comp=Z,139nm,1.0s
INU Inuyama 29.73 20 IAMs_20 IAMs_20 13 39 21.9
comp=Z,12µm,19.0s
INU Inuyama 29.73 20 P **P** **13 28 14.8 -0.7**
KSAR Wonju Array Be 29.82 5 P **P** **13 28 14.7 -1.5**
KSAR Wonju Array Be 29.82 5 P **P** **13 28 14.7 -1.5**
KSRS Korea Array 29.83 5 P **P** **13 28 14.8 -1.5**
comp=Z,12nm,0.8s,baz=182,slow=9.7,SNR=28
comp=Z,12nm,0.8s
KS19 Wonju Array Si 29.87 5 IAmb IAmb 13 28 55.9
comp=Z,238nm,1.9s
JGF Kuroka 30.08 20 P **P** **13 28 17.0 -1.6**
XAN Xi'an 30.20 333 ⇑P **P** **13 28 18.4 -1.3**
XAN pP pP 13 28 25.4 -3.3
XAN S **S** **13 33 15.8 -1.4**
XAN pmax pmax
comp=Z,55nm,1.0s
XAN pmax pmax
comp=Z,530nm,4.4s
XAN LR LR
comp=Z,20µm,19.9s
XAN LR LR
comp=Z,31µm,22.0s
XAN LR LR
comp=Z,21µm,14.4s
CD2 Chengdu 30.52 322 P **P** **13 28 22.5 -0.1**
CD2 pP pP 13 28 26.0 -5.6
CD2 PP **PP** **13 29 26.6 -5.3**
CD2 S **S** **13 33 22.0 -0.4**
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,750nm,10.6s
CD2 LR LR
comp=Z,20µm,18.6s
CD2 LR LR
comp=Z,30µm,16.9s
CD2 LR LR
comp=Z,17µm,17.5s
TNCH TengChong 30.64 308 P **P** **13 28 25.0 +1.1**
TNCH S **S** **13 33 26.4 +1.7**
TNCH pmax pmax
comp=Z,96nm,1.6s
TNCH pmax pmax
comp=Z,480nm,4.2s
TNCH LR LR
comp=Z,5µm,17.4s
TNCH LR LR
comp=Z,7µm,16.1s
TNCH LR LR
comp=Z,12µm,19.3s
CMBY CAMPBELL BAY 30.81 271 *e*P **P** **13 28 25.4 +0.2**
CMBY IAMs_20 IAMs_20 13 44 12.7
comp=Z,9µm,18.0s
HNS HongShan 31.09 344 ⇑P **P** **13 28 27.0 -0.5**
HNS S **S** **13 33 30.4 -0.6**
HNS pmax pmax
comp=Z,100nm,1.3s
HNS LR LR
comp=Z,7µm,20.7s
HNS LR LR
comp=Z,24µm,22.6s
HNS LR LR
comp=Z,10µm,20.7s
MAJO Matsushiro 31.23 21 P **P** **13 28 26.7 -2.0**
MAJO Matsushiro 31.23 21 IAMs_20 IAMs_20 13 40 20.2
comp=Z,15µm,20.0s
MAJO Matsushiro 31.23 21 P **P** **13 28 27.0 -1.7**
MAJO Matsushiro 31.23 21 *i* P **P** **13 28 26.3 -2.4**
MAJO pmax pmax
comp=Z,40nm,1.0s
MAJO MLR MLR
comp=Z,14µm,18.0s
MJAR Matsushiro Arr 31.23 21 P **P** **13 28 26.8 -1.9**
comp=Z,30nm,0.9s,baz=194,slow=8.8,SNR=41
MJAR LR LR 13 40 31.4
comp=Z,14µm,20.2s,baz=211,slow=35
comp=Z,30nm,0.9s
MJAR Matsushiro Arr 31.23 21 P **P** **13 28 26.4 -2.3**
MJAR Matsushiro Arr 31.23 21 P **P** **13 28 26.4 -2.3**
MJAR pmax pmax
comp=Z,37nm,1.0s
DL2 Dalian 31.31 355 P **P** **13 28 28.3 -1.0**
DL2 S **S** **13 33 33.8 -0.5**
DL2 pmax pmax
comp=Z,110nm,1.0s
DL2 pmax pmax
comp=Z,2µm,4.1s
DL2 LR LR
comp=Z,5µm,19.6s
DL2 LR LR
comp=Z,8µm,18.3s
DL2 LR LR
comp=Z,12µm,17.5s
QIS Mount Isa 31.46 153 P **P** **13 28 29.3 -1.7**
comp=Z,139nm,1.0s,comp=Z,0.0nm
QIS Mount Isa 31.46 153 P **P** **13 28 29.9 -1.1**
MTSU Mount Surprise 31.91 143 P **P** **13 28 35.1 +0.2**
MTSU Mount Surprise 31.91 143 P **P** **13 28 34.8 -0.2**
DGPR DIGLIPUR 31.99 283 *e*P **P** **13 28 34.6 -1.1**
DGPR IAMs_20 IAMs_20 13 45 09.0
comp=Z,7µm,16.1s
PBA Port Blair 32.03 280 P **P** **13 28 35.1 -0.9**
PBA Port Blair 32.03 280 *e*P **P** **13 28 36.0 -0.1**
TIY Taiyuan 32.06 341 *e*P **P** **13 28 37.1 +1.0**
TIY S **S** **13 33 47.0 +0.7**
TIY pmax pmax
comp=Z,67nm,0.7s
TIY pmax pmax
comp=Z,560nm,3.5s
TIY LR LR
comp=Z,14µm,22.0s
TIY LR LR
comp=Z,9µm,18.6s
TIY LR LR
comp=Z,17µm,22.0s
ASAR Alice Springs 32.28 165 P **P** **13 28 37.0 -1.1**
comp=Z,21nm,0.6s,baz=342,slow=7.0,SNR=65
ASAR LR LR 13 43 30.0
comp=Z,7µm,20.9s,baz=354,slow=40
comp=Z,21nm,0.6s
AUALC St Philip's Co 32.30 165 P **P** **13 28 37.5 -0.8**
WRKA Warakurna 32.61 174 P **P** **13 28 39.4 -1.5**
comp=Z,107nm,1.0s,comp=Z,0.0nm
BJT Baijiatuau 33.22 348 P **P** **13 28 45.2 -0.9**
BJT IAmb IAmb 13 28 47.4
comp=Z,112nm,0.9s
BJT Baijiatuau 33.22 348 P **P** **13 28 46.2 0.0**
BJT Baijiatuau 33.22 348 P **P** **13 28 45.3 -0.9**
BJT pmax pmax
comp=Z,112nm,0.9s
BJI Beijing 33.24 348 P **P** **13 28 45.5 -0.8**
BJI pP **pP** **13 28 49.6 -5.8**
BJI S **S** **13 34 00.0 -4.5**
BJI pmax pmax
comp=Z,66nm,1.0s
BJI pmax pmax
comp=Z,350nm,3.8s
BJI LR LR
comp=Z,2µm,23.0s
BJI LR LR
comp=Z,8µm,22.9s
BJI LR LR
comp=Z,3µm,23.6s
JMM Marumori 33.35 23 P **P** **13 28 47.0 -0.3**
LKP Lekhapani 33.87 309 IAmb IAmb 13 29 06.4
comp=Z,539nm,2.9s
SNY Shenyang 34.10 358 ⇑P **P** **13 28 52.6 -1.2**
SNY S **S** **13 34 15.9 -1.8**
SNY pmax pmax
comp=Z,81nm,1.0s
SNY pmax pmax
comp=Z,590nm,3.9s
SNY LR LR
comp=Z,5µm,14.9s
SNY LR LR
comp=Z,7µm,15.5s
SNY LR LR
comp=Z,4µm,13.9s
IMP Imphal 34.24 304 *e*P **P** **13 28 53.5 -1.8**
IMP IAmb IAmb 13 29 00.2
comp=Z,63nm,0.3s
TV1H Townsville Har 34.27 141 P **P** **13 28 56.7 +1.2**
LZDM Lanzhou Array 34.28 328 P **P** **13 28 55.1 -0.7**
comp=Z,36nm,1.0s,baz=163,slow=12,SNR=11
LZDM LR LR 13 42 49.0
comp=Z,6µm,19.5s,baz=105,slow=36
comp=Z,36nm,1.0s
LZH Lanzhou 34.30 329 *e*P **P** **13 28 56.5 +0.6**
LZH pP pP 13 29 00.1 -4.8
LZH PP **PP** **13 30 14.8 +0.9**
LZH S **S** **13 34 22.5 +1.1**
LZH pmax pmax
comp=Z,96nm,1.6s
LZH pmax pmax
comp=Z,660nm,4.4s
LZH LR LR
comp=Z,20µm,16.8s
LZH LR LR
comp=Z,14µm,16.2s
LZH LR LR
comp=Z,10µm,17.8s
MOKO MOKOCHONG 34.43 306 *e*P **P** **13 28 56.7 -0.3**
MOKO IAmb IAmb 13 29 15.3
comp=Z,82nm,1.1s
KOHI KOHIMA 34.49 305 *e*P **P** **13 28 56.8 -0.7**
KOHI IAmb IAmb 13 29 13.0
comp=Z,80nm,0.7s
CTA Charters Tower 34.58 143 LR LR 13 45 09.8
comp=Z,194nm,18.9s,baz=319,slow=40
CTA Charters Tower 34.58 143 P **P** **13 28 59.0 +0.8**
CTAO Charters Tower 34.58 143 P **P** **13 28 58.4 +0.2**
CTAO IAmb IAmb 13 29 14.0
comp=Z,94nm,1.2s
CTAO Charters Tower 34.58 143 P **P** **13 28 58.9 +0.8**
CTAO Charters Tower 34.58 143 P **P** **13 28 58.4 +0.2**
CTAO pmax pmax
comp=Z,94nm,1.2s
CTAO MLR MLR
comp=Z,7µm,19.0s
MEEK Meekatharra 34.60 190 P **P** **13 28 56.0 -2.3**
comp=Z,156nm,1.0s,comp=Z,0.0nm
MEEK Meekatharra 34.60 190 P **P** **13 28 57.4 -0.9**
JORH JORHAT 34.83 307 *e*P **P** **13 28 59.2 -1.1**
JORH IAmb IAmb 13 29 04.5
comp=Z,185nm,0.8s
SILR SILCHAR 35.17 303 *e*P **P** **13 29 04.4 +1.2**
HHC Hu-ho-hao-te 35.20 342 ⇑*i*P **P** **13 29 03.3 -0.1**
HHC sP pP 13 29 10.3 -2.2
HHC PP **PnPn** **13 30 21.1 -0.6**
HHC S **S** **13 34 35.9 +0.9**
HHC pmax pmax
comp=Z,75nm,1.0s
HHC pmax pmax
comp=Z,790nm,5.3s
HHC LR LR
comp=Z,14µm,21.0s
HHC LR LR
comp=Z,6µm,20.2s
HHC LR LR
comp=Z,22µm,21.6s
MSHR Mys Shultsa 35.25 8 *ce*P **P** **13 29 04.6 +0.9**
MSHR pmax pmax
comp=Z,89nm,1.0s
MSHR MLR MLR
comp=Z,80µm,23.0s
PSTR Posyet 35.28 7 *i* P **P** **13 29 03.8 -0.1**
BRDH Bariadhala 35.38 299 LR LR 13 44 29.1
comp=Z,11µm,21.0s,baz=110,slow=38
BTO Baotou 35.47 340 *e*P **P** **13 29 08.3 +2.5**
BTO pP **pP** **13 29 14.0 -0.8**
BTO sP **sP** **13 29 17.3 -1.3**
BTO PP **PP** **13 30 29.4 +2.8**
BTO S **S** **13 34 40.3 +1.2**
BTO sS **sS** **13 34 54.1 -0.5**
BTO pmax pmax
comp=Z,61nm,2.2s
BTO pmax pmax
comp=Z,1µm,6.8s
BTO LR LR
comp=Z,33µm,20.9s
BTO LR LR
comp=Z,53µm,21.6s
BTO LR LR
comp=Z,40µm,21.2s
ZIRO ZIRO 35.51 308 *e*P **P** **13 29 07.2 +0.8**
ZIRO IAmb IAmb 13 29 15.9
comp=Z,64nm,0.8s
BELO BELONIA 35.75 300 *e*P **P** **13 29 09.4 +1.1**
VLA Vladivostok 35.89 9 *i* P **P** **13 29 10.4 +1.3**
VLA pmax pmax
comp=Z,149nm,1.0s
VLA MLR MLR
comp=Z,7µm,18.0s
TEZP TEZPUR 35.94 306 *e*P **P** **13 29 09.9 +0.1**
TEZP IAmb IAmb 13 29 38.0
comp=Z,65nm,1.0s
CN2 Changchun 36.05 1 P **P** **13 29 10.4 -0.2**
CN2 pP pP 13 29 16.3 -3.5
CN2 PP **PP** **13 30 33.8 +0.9**
CN2 PcP **PcP** **13 31 37.3 +0.8**
CN2 S **S** **13 34 49.3 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,4µm,19.0s
CN2 LR LR
comp=Z,6µm,19.0s
CN2 LR LR
comp=Z,5µm,20.0s
AGT Agartala 36.14 300 *e*P **P** **13 29 13.6 +2.0**
SHL Shillong 36.25 303 P **P** **13 29 12.0 -0.7**
SHL Shillong 36.25 303 P **P** **13 29 13.2 +0.4**
SNR=66
SHL Shillong 36.25 303 *e*P **P** **13 29 12.1 -0.7**
SHL IAmb IAmb 13 29 19.6
comp=Z,184nm,1.0s
SHL IAMs_20 IAMs_20 13 47 46.6
comp=Z,8µm,19.7s
SHL Shillong 36.25 303 P **P** **13 29 12.0 -0.7**
SHL pmax pmax
comp=Z,181nm,0.9s
USRK Ussuriysk Ar. 36.96 8 P **P** **13 29 18.4 +0.1**
comp=Z,162nm,0.8s,baz=191,slow=7.7,SNR=112
comp=Z,162nm,0.8s
XLT XiLinHaoTe 36.98 349 *e*P **P** **13 29 18.3 -0.3**
XLT pP pP 13 29 23.9 -3.8
XLT sP sP 13 29 27.4 -4.0
XLT S **S** **13 35 01.1 -1.0**
XLT sS pS 13 35 14.5 +1.6
XLT pmax pmax
comp=Z,64nm,1.0s
XLT pmax pmax
comp=Z,940nm,4.0s
XLT LR LR
comp=Z,8µm,17.4s
XLT LR LR
comp=Z,5µm,20.0s
MDJ Mudanjiang 37.08 5 IAmb IAmb 13 29 24.9
comp=Z,128nm,1.1s
MDJ Mudanjiang 37.08 5 P **P** **13 29 19.4 0.0**
MDJ sP sP 13 29 32.9 +0.7
MDJ S **S** **13 35 09.1 +5.6**
MDJ pmax pmax
comp=Z,49nm,1.3s
MDJ LR LR
comp=Z,9µm,21.0s
MDJ LR LR
comp=Z,7µm,23.4s
MDJ Mudanjiang 37.08 5 P **P** **13 29 19.4 0.0**
TAWA Tawang 37.11 307 *e*P **P** **13 29 21.6 +1.3**
TAWA IAmb IAmb 13 29 37.4
comp=Z,134nm,1.0s
MORW Morawa 37.47 193 P **P** **13 29 21.2 -1.6**
comp=Z,138nm,1.3s,comp=Z,0.0nm
MORW Morawa 37.47 193 P **P** **13 29 22.5 -0.3**
MORW Morawa 37.47 193 P **P** **13 29 22.8 0.0**

ERM Erimo 37.85 22 IAMs_20 IAMs_20 13 45 08.6
comp=Z,10µm,18.0s
BNX BinXian 38.05 3 ⇓P **P** **13 29 26.4 -1.1**
BNX pP **pP** **13 29 34.1 -2.5**
BNX S **S** **13 35 16.9 -1.2**
BNX pmax pmax
comp=Z,29nm,1.5s
BNX pmax pmax
comp=Z,840nm,6.4s
BNX LR LR
comp=Z,5µm,20.2s
BNX LR LR
comp=Z,4µm,19.9s
BNX LR LR
comp=Z,6µm,20.6s
CAL Calcutta 38.24 297 *e*P **P** **13 29 30.9 +1.4**
FORT Forrest 38.28 176 P **P** **13 29 29.5 -0.1**
FORT Forrest 38.28 176 P **P** **13 29 29.1 -0.5**
FORT IAmb IAmb 13 29 36.5
comp=Z,146nm,0.9s
INKA Innaminka 38.31 157 P **P** **13 29 29.6 -0.2**
SAVO Savo Central 38.49 115 P **P** **13 29 33.3 +1.7**
COBR COOCHBEHAR 38.54 303 *e*P **P** **13 29 31.5 -0.4**
LSA Lhasa 38.62 309 P **P** **13 29 30.5 -2.7**
LSA S **S** **13 35 24.4 -3.8**
LSA pmax pmax
comp=Z,44nm,1.5s
LSA LR LR
comp=Z,3µm,19.8s
LSA LR LR
comp=Z,3µm,19.2s
LSA LR LR
comp=Z,4µm,19.9s
LSA Lhasa 38.62 309 *i* P **P** **13 29 35.6 +2.5**
SNR=17
TEY Ternei 38.63 13⇑ *e*P **P** **13 29 31.5 -0.9**
TEY pmax pmax
comp=N,90nm,0.9s
TEY pmax pmax
comp=E,30nm,0.9s
TEY pmax pmax
comp=Z,150nm,0.9s
HNR Honiara 38.72 115 LR LR 13 45 30.1
comp=Z,1µm,19.5s,baz=287,slow=36
HNR Honiara 38.72 115 P **P** **13 29 32.8 -0.8**
HNR IAmb IAmb 13 30 26.4
comp=Z,140nm,1.1s
HNR Honiara 38.72 115 P **P** **13 29 35.0 +1.4**
HNR Honiara 38.72 115 P **P** **13 29 32.8 -0.8**
HNR pmax pmax
comp=Z,140nm,1.1s
QLP Quilpie 38.78 152 P **P** **13 29 32.8 -1.1**
QLP Quilpie 38.78 152 P **P** **13 29 33.0 -0.9**
BLDU Ballidu 38.83 191 P **P** **13 29 34.0 -0.2**
BLDU Ballidu 38.83 191 P **P** **13 29 33.4 -0.8**
KMBL Kambalda 38.87 184 P **P** **13 29 34.0 -0.5**
GTA Gaotai 38.90 328 P **P** **13 29 36.0 +1.0**
GTA pP pP 13 29 40.4 -3.7
GTA PP **PnPn** **13 31 11.8 +4.9**
GTA S **S** **13 35 32.5 +1.0**
GTA pmax pmax
comp=Z,55nm,1.7s
GTA pmax pmax
comp=Z,690nm,5.3s
GTA LR LR
comp=Z,18µm,20.4s
GTA LR LR
comp=Z,14µm,19.3s
GTA LR LR
comp=Z,9µm,20.0s
ASAJ Asahikawa 39.49 20 LR LR 13 44 31.6
comp=Z,5µm,21.1s,baz=205,slow=34
KLBR Kellerberrin 39.59 190 P **P** **13 29 40.3 -0.3**
KLBR Kellerberrin 39.59 190 P **P** **13 29 40.3 -0.3**
GOMU GeErMu 39.60 320 P **P** **13 29 42.4 +1.3**
GOMU pP pP 13 29 46.0 -4.3
GOMU sP sP 13 29 49.4 -4.6
GOMU S **S** **13 35 40.9 -1.6**
GOMU pmax pmax
comp=Z,40nm,1.4s
GOMU LR LR
comp=Z,5µm,16.3s
GOMU LR LR
comp=Z,5µm,16.8s
GOMU LR LR
comp=Z,10µm,16.8s
AUNRC North Rockhamp 39.63 142 P **P** **13 29 42.5 +1.5**
SHBG Sahibganj 39.66 301 *e*P **P** **13 29 43.2 +1.9**
BWNR Bhubaneshwar 39.95 293 *e*P **P** **13 29 43.7 -0.1**
MUN Mundaring 40.25 192 P **P** **13 29 44.8 -1.2**
comp=Z,155nm,1.0s,comp=Z,0.0nm
MUN Mundaring 40.25 192 P **P** **13 29 45.9 -0.1**
AUMAZ Mazenod Senior 40.31 192 P **P** **13 29 47.0 +0.4**
YUK Yuzh-Kuril'sk 40.61 23 P P 13 29 34.3 -15
YUK *e* 13 31 25.0
YUK *e*S **S** **13 35 48.7 -7.9**
YUK *e*SS **SS** **13 38 54.1 -3.3**
YUK pmax pmax
comp=Z,977nm,1.3s
BOK Bokaro 40.76 298 *e*P **P** **13 29 50.9 +0.4**
BOK IAmb IAmb 13 29 58.7
comp=Z,144nm,1.6s
BOK IAMs_20 IAMs_20 13 49 23.0
comp=Z,6µm,18.4s
NWAO Narrogin (SRO) 40.98 190 P **P** **13 29 51.9 -0.2**
NWAO Narrogin (SRO) 40.98 190 P **P** **13 29 50.7 -1.4**
comp=Z,55nm,0.8s,baz=8.1,slow=9.3,SNR=19
NWAO LR LR 13 50 47.0
comp=Z,3µm,18.3s,baz=16,slow=42
comp=Z,55nm,0.8s
NWAO Narrogin (SRO) 40.98 190 P **P** **13 29 51.2 -0.8**
NWAO Narrogin (SRO) 40.98 190 P **P** **13 29 52.4 +0.4**
NWAO S **S** **13 36 03.5 +1.2**
NWAO Narrogin (SRO) 40.98 190 P **P** **13 29 51.7 -0.4**
EVN Everest 41.34 304 P **P** **13 29 54.6 -1.4**
EVN IAmb IAmb 13 30 04.7
comp=Z,93nm,0.7s
AUHAR St Anne's Scho 41.39 192 P **P** **13 29 56.1 +0.7**
EIDS Eidsvold 41.47 143 P **P** **13 29 55.0 -1.2**
EIDS Eidsvold 41.47 143 P **P** **13 29 54.6 -1.6**
EIDS Eidsvold 41.47 143 P **P** **13 29 55.3 -0.9**
BBOO Buckleboo 41.55 166 P **P** **13 29 56.7 -0.1**
BBOO Buckleboo 41.55 166 P **P** **13 29 56.0 -0.8**
BBOO IAmb IAmb 13 30 09.7
comp=Z,224nm,0.9s
BBOO Buckleboo 41.55 166 P **P** **13 29 56.2 -0.6**
GAYA Gaya 41.63 299 *e*P **P** **13 29 58.2 +0.6**
GAYA IAmb IAmb 13 30 05.1
comp=Z,41nm,0.8s
HIA Hailar 41.75 355 IAMs_20 IAMs_20 13 50 06.0
comp=Z,6µm,19.0s
HIA Hailar 41.75 355 P **P** **13 29 58.7 +0.4**
VIS Vishakhapatnam 41.78 288 *e*P **P** **13 30 00.8 +1.9**
VIS IAMs_20 IAMs_20 13 49 54.0
comp=Z,8µm,20.6s
RAGD RAYAGADA 41.91 290 *e*P **P** **13 30 00.6 +0.6**
HILR Hailar Array B 42.04 355 P **P** **13 29 60.0 -0.7**
comp=Z,22nm,0.7s,baz=171,slow=10,SNR=20
HILR LR LR 13 50 18.2
comp=Z,5µm,18.1s,baz=115,slow=40
comp=Z,22nm,0.7s
AUBUS Georgiana Moll 42.04 192 P **P** **13 30 01.6 +0.9**
YSS Yuzhno-Sakhali 42.05 18 *e*P **P** **13 30 03.8 +3.1**
YSS *e**SP **sP** **13 30 13.8 +0.2**
YSS *e*S S **13 36 24.1 +6.1**
YSS *e*SSS SSS 13 39 57.1
YSS pmax pmax
comp=Z,1µm,3.0s
YSS smax smax
comp=N,3µm,19.0s
YSS smax smax
comp=E,3µm,13.0s
YSS MLR MLR
comp=Z,6µm,20.0s
YSS MLR MLR
comp=N,3µm,15.0s
YSS MLR MLR
comp=E,3µm,17.0s
JHSG JHARSUGUGA 42.12 294 *e*P **P** **13 30 01.2 -0.5**
WHYH Whyalla 42.15 164 P **P** **13 30 02.0 +0.3**
STMR SITAMARHI 42.20 302 *e*P **P** **13 30 03.6 +1.4**
STKA Stephens Creek 42.35 159 P **P** **13 30 03.2 -0.1**
STKA Stephens Creek 42.35 159 P **P** **13 30 02.5 -0.8**
comp=E,98nm,1.1s,baz=336,slow=8.2,SNR=54
STKA LR LR 13 49 51.6
comp=E,5µm,19.7s,baz=330,slow=39
comp=E,98nm,1.1s
STKA Stephens Creek 42.35 159 P **P** **13 30 03.2 -0.1**
HEH HeiHe 42.55 2 *e*P **P** **13 30 03.4 -1.3**
HEH pP **pP** **13 30 08.4 -5.5**
HEH S **S** **13 36 25.1 -0.2**
HEH pmax pmax
comp=E,56nm,1.0s
HEH LR LR
comp=E,4µm,20.0s
HEH LR LR
comp=E,5µm,16.5s
HEH LR LR
comp=E,8µm,19.7s
AUJCS Jamestown Cent 42.60 163 P **P** **13 30 05.8 +0.4**
RKGY Rocky Gully 42.67 190 P **P** **13 30 07.1 +1.2**
AUCAS Cummins Area S 42.86 167 P **P** **13 30 08.9 +1.5**
AUALB St Joseph's Co 42.90 189 P **P** **13 30 09.1 +1.4**
HTT Hallett 42.91 163 P **P** **13 30 08.3 +0.4**
HTT Hallett 42.91 163 P **P** **13 30 08.2 +0.4**
ULN Ulaanbaatar 42.92 342 P **P** **13 30 07.0 -1.0**
ULN Ulaanbaatar 42.92 342 P **P** **13 30 06.1 -1.8**
ULN S **S** **13 36 29.9 -1.1**
ULN Ulaanbaatar 42.92 342 *ce*P **P** **13 30 07.9 -0.1**
ULN pmax pmax
comp=Z,119nm,1.5s
ULN MLR MLR
comp=Z,17µm,21.0s
AULRC Lightning Ridg 42.96 150 P **P** **13 30 07.6 -0.7**
SONM Songino Array 43.09 342 P **P** **13 30 08.9 -0.5**
comp=Z,38nm,1.1s,baz=163,slow=7.8,SNR=100
SONM LR LR 13 49 11.7
comp=Z,20µm,22.0s,baz=156,slow=38
comp=Z,38nm,1.1s
TW1H Toowoomba 1 Ha 43.62 144 P **P** **13 30 14.4 +0.6**
CMSA Cobar Meteorol 43.67 154 P **P** **13 30 13.3 -0.8**
comp=Z,68nm,1.5s
CMSA Cobar Meteorol 43.67 154 P **P** **13 30 14.1 +0.1**
BLSP Bilaspur 43.69 294 *e*P **P** **13 30 14.1 -0.3**
BLSP IAmb IAmb 13 30 28.5
comp=Z,88nm,1.2s
VAR Varanasi 43.69 299 *e*P **P** **13 30 15.2 +0.9**
PALK Pallekele 43.90 273 LR LR 13 51 59.7
comp=Z,3µm,18.2s,baz=88,slow=41
PALK Pallekele 43.90 273 P **P** **13 30 14.7 -1.5**
PALK Pallekele 43.90 273 P **P** **13 30 16.8 +0.6**
PALK P **P** **13 30 16.8 +0.6**
PALK S **S** **13 36 48.1 +2.0**
PALK S **S** **13 36 48.1 +2.0**
PALK Pallekele 43.90 273 P **P** **13 30 14.7 -1.5**
PALK pmax pmax
comp=Z,81nm,1.5s
MALK Mahakanadarawa 44.00 274 P **P** **13 30 17.0 0.0**
GRNR Gornyy 44.06 10⇑ *i*P **P** **13 30 16.7 -0.2**
GRNR pmax pmax
comp=Z,40nm,1.0s
GRNR MLR MLR
comp=E,2µm,21.0s
GRNR MLR MLR
comp=N,3µm,22.0s
GRNR MLR MLR
comp=Z,4µm,19.0s
AUWSH Wavell State H 44.14 143 P **P** **13 30 16.9 -1.0**
VJD Vijayawada 44.17 286 *e*P **P** **13 30 20.9 +2.7**
AUMAR Marden Senior 44.19 164 P **P** **13 30 18.5 +0.3**
GHSS Government Hou 44.21 164 P **P** **13 30 19.3 +1.0**
MDRS Chennai 44.30 281 *e*P **P** **13 30 22.3 +2.9**
AUMBR Murray Bridge 44.60 163 P **P** **13 30 22.0 +0.6**
CIT Chita 45.27 350 *e*P **P** **13 30 26.0 -0.6**
CIT *e* 13 30 31.0
CIT *e* 13 32 06.4
CIT *e* 13 32 55.2
CIT pmax pmax
comp=Z,248nm,2.8s
TYV Tymovskoe 45.55 16 *e*P **P** **13 30 29.2 +0.5**
TYV *e*S **S** **13 37 12.3 +3.5**
TYV pmax pmax
comp=Z,1µm,5.2s
TYV pmax pmax
comp=Z,40nm,1.2s
TYV smax smax
comp=N,1µm,7.4s
TYV smax smax
comp=E,2µm,7.4s
TYV MLR MLR
comp=Z,4µm,19.0s
BRCI Bahraich 45.58 301 *e*P **P** **13 30 29.8 +0.4**
BRCI IAmb IAmb 13 30 32.7
comp=Z,194nm,1.3s
AUDCS Dubbo College 45.59 152 P **P** **13 30 29.5 +0.2**
AUPHS Peel High Scho 45.79 148 P **P** **13 30 32.6 +1.6**
LKN LUCKNOW 45.95 300⇑ *e*P **P** **13 30 32.6 +0.4**
ZEA Zeya 46.03 2 *e*P **P** **13 30 32.1 -0.4**
ZEA *e* 13 32 02.3
ZEA *e* 13 32 19.4
ZEA *e*S **S** **13 37 17.2 +1.4**
ZEA pmax pmax
comp=Z,500nm,5.1s
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,30nm,0.8s
ZEA pmax pmax
comp=Z,600nm,4.5s
ZEA smax smax
comp=N,400nm,5.5s
ZEA MLR MLR
comp=N,2µm,17.0s
ZEA MLR MLR
comp=Z,2µm,19.0s
HYBB Hyderabad (bro 46.26 287 *e*P **P** **13 30 34.4 -0.6**
HYBB IVmB_BB 13 30 35.7
comp=Z,836nm,2.5s
HYBB *es*P **pP** **13 30 40.9 -3.4**
HYBB *e*PcP **PcP** **13 32 09.9 -0.4**
HYBB *e*PP **PP** **13 32 22.8 -1.1**
HYBB *e*S **S** **13 37 20.9 +0.8**
HYBB IVMs_BB IVMs_BB 13 54 02.9
comp=Z,2µm,19.0s
SALM Salem 46.26 279 *e*P **P** **13 30 38.4 +3.5**
ZAK Zakamensk 46.32 341 *e*P **P** **13 30 34.0 -1.0**
ZAK pmax pmax
comp=Z,44nm,1.6s
ARPS Mount Arapiles 46.89 161 P **P** **13 30 38.8 -0.6**
comp=Z,93nm,1.3s
KOD Kodaikanal 46.99 277 *e*P **P** **13 30 41.4 +0.4**
NKL Nikolayevsk 47.17 13 *e*P **P** **13 30 39.7 -1.7**
NKL *e*S **S** **13 37 33.3 +1.3**
NKL pmax pmax
comp=N,133nm,0.9s
NKL pmax pmax
comp=E,172nm,1.0s
NKL pmax pmax
comp=Z,532nm,1.0s
NKL smax smax
comp=N,523nm,3.2s
NKL smax smax
comp=E,380nm,3.2s
NKL MLR MLR
comp=E,8µm,22.0s
NKL MLR MLR
comp=N,12µm,19.0s
NKL MLR MLR
comp=Z,21µm,22.0s
YNG Young 47.21 153 P **P** **13 30 43.2 +1.2**
LGTI Lohaghat 47.27 303 *e*P **P** **13 30 43.9 +1.3**
AUMAG Moama Anglican 47.28 158 P **P** **13 30 44.5 +2.0**
TLY Talaya 47.33 342 P P 13 30 38.0 -4.8
TLY P P 13 30 38.0 -4.8
TLY S **S** **13 37 32.4 -2.1**
TLY S **S** **13 37 32.4 -2.1**
TLY Talaya 47.33 342 *ce*P **P** **13 30 42.7 -0.1**
TLY pmax pmax
comp=Z,73nm,1.0s
TLY MLR MLR
comp=Z,11µm,21.0s
PTH Pithoragarh 47.33 303 *e*P **P** **13 30 42.9 -0.5**
TRD Trivandrum 47.54 275 *e*P **P** **13 30 45.9 +0.9**
TRD IAMs_20 IAMs_20 13 49 08.1
comp=Z,6µm,19.8s
IRK Irkutsk 47.63 343 *e*P **P** **13 30 44.7 -0.4**
IRK *e* 13 32 33.9
IRK pmax pmax
comp=Z,189nm,2.8s
JHNI Jhansi 47.65 298 *e*P **P** **13 30 43.5 -2.1**
SANVU Saraoutou 47.69 119 P **P** **13 30 46.2 +0.2**
SANVU Saraoutou 47.69 119 P **P** **13 30 48.0 +2.0**
SYDH Sydney Hard Ro 47.85 151 P **P** **13 30 48.4 +1.4**
AKL Akola 48.12 291 *e*P **P** **13 30 49.7 +0.3**
AKL IAmb IAmb 13 30 52.0
comp=Z,162nm,1.1s
MOY Mondy 48.17 340 *e*P **P** **13 30 50.0 +0.6**
MOY pmax pmax
comp=Z,205nm,3.0s
BHPL Bhopal 48.17 294 *e*P **P** **13 30 49.3 -0.5**
BHPL IAmb IAmb 13 30 57.2
comp=Z,124nm,1.2s
BHPL IAMs_20 IAMs_20 13 50 39.3
comp=Z,6µm,22.3s
JOSI Joshimath 48.19 304 *e*P **P** **13 30 48.8 -1.2**
BRAT Ballarat 48.29 160 P **P** **13 30 51.6 +1.3**
NRDN NARMADA NAGAR 48.31 294 *e*P **P** **13 30 54.8 +3.9**
AUMTC Mt Clear Colle 48.32 160 P **P** **13 30 52.1 +1.5**
AUMTS Mt Stromlo 48.33 154 P **P** **13 30 51.9 +1.1**
CAN Canberra 48.33 154 P **P** **13 30 51.6 +0.8**
CAN Canberra 48.33 154 P **P** **13 30 51.1 +0.3**
CAN Canberra 48.33 154 P **P** **13 30 52.3 +1.5**
CAN Canberra 48.33 154 P **P** **13 30 51.1 +0.3**
CAN pmax pmax
comp=Z,132nm,1.1s
AUDAR Daramalan Coll 48.34 153 P **P** **13 30 52.4 +1.6**
AUSIS Research Schoo 48.35 153 P **P** **13 30 52.1 +1.2**
WOLH Wollongong Har 48.44 151 P **P** **13 30 53.5 +2.0**
CNB Canberra Magne 48.49 153 P **P** **13 30 53.3 +1.3**
GUNA GUNA 48.53 296 *e*P **P** **13 30 52.2 -0.4**
KNGR Kungurtug, Tuv 48.56 337 *i* P **P** **13 30 52.9 +0.5**
KNGR pmax pmax
comp=Z,166nm,1.3s
KNGR MLR MLR
comp=Z,5µm,16.0s
WMQ Urumqi 48.58 324 *e*P **P** **13 30 54.0 +1.4**
WMQ S **S** **13 37 55.5 +3.0**
WMQ pmax pmax
comp=Z,29nm,1.5s
WMQ LR LR
comp=Z,15µm,15.1s
WMQ LR LR
comp=Z,8µm,13.7s
WMQ LR LR
comp=Z,5µm,17.1s
AGRA Agra 48.59 300 *e*P **P** **13 30 51.1 -1.8**
TOO Toolangi 48.86 158 P **P** **13 30 56.3 +1.5**
TOO Toolangi 48.86 158 P **P** **13 30 55.4 +0.6**
TOO Toolangi 48.86 158 P **P** **13 30 55.4 +0.6**
TOO pmax pmax
comp=Z,29nm,0.9s
UGON Onchagaon 48.91 301 *e*P **P** **13 30 54.0 -1.3**
AUSMG Snowy Mountain 49.09 155 P **P** **13 30 58.3 +1.6**
MERT Meerut 49.23 302 *e*P **P** **13 30 57.1 -0.7**
BISR Bishrakh 49.38 301 *e*P **P** **13 30 59.3 +0.4**
JMIU JAMIA UNIVERSI 49.50 301 *e*P **P** **13 30 59.3 -0.6**
LDR Lodi Road 49.57 301 *e*P **P** **13 30 59.8 -0.5**
MNGI Mangalore 49.58 280 *e*P **P** **13 31 01.0 +0.4**
NDI New Delhi 49.59 301 *e*P **P** **13 30 59.7 -0.9**
AYAN Aya Nagar 49.62 301 *e*P **P** **13 30 59.7 -1.0**
NPLP NPLP New Delhi 49.62 301 *e*P **P** **13 30 59.5 -1.3**
BHGR Bahadurgarh 49.83 301 *e*P **P** **13 31 01.3 -1.0**
KUDL Kundal 50.07 300 *e*P **P** **13 31 02.8 -1.4**
DZM Mont Dzumac 50.21 127 LR LR 13 51 30.4
comp=Z,3µm,21.7s,baz=309,slow=35
SMLA Simla 50.32 304 *e*P **P** **13 31 06.2 +0.1**
SMLA IAmb IAmb 13 31 08.7
comp=Z,156nm,0.9s
SMLA IAMs_20 IAMs_20 13 49 49.5
comp=Z,6µm,22.2s
ONTNC Ouen Toro 50.34 127 IAmb IAmb 13 31 47.8
comp=Z,113nm,1.2s
ONTNC Ouen Toro 50.34 127 P **P** **13 31 07.8 +1.5**
RTK Rohtak 50.36 302 *e*P **P** **13 31 05.9 -0.5**
KAD Karad 50.40 286 *e*P **P** **13 31 05.9 -1.0**
CGRH CHANDIGARH 50.52 304 *e*P **P** **13 31 09.5 +1.9**
YATNC Mamie plateau, 50.56 127 P **P** **13 31 09.4 +1.5**
GOA Goa 50.63 284 *e*P **P** **13 31 08.3 -0.3**
GOA IAMs_20 IAMs_20 13 48 22.2
comp=Z,7µm,21.0s
OUENC Ouen Island, N 50.70 127 P **P** **13 31 09.9 +0.9**
BOD Bodaibo 50.81 352 *e*P **P** **13 31 09.0 -0.3**
BOD pmax pmax
comp=Z,117nm,1.8s
POO Poona 50.82 288 *e*P **P** **13 31 10.5 +0.4**
POO IAMs_20 IAMs_20 13 44 47.9
comp=Z,6µm,20.1s
BHK Bhakra 51.02 304 *e*P **P** **13 31 08.9 -2.4**
MARNC Mare, Loyalty 51.18 125 P **P** **13 31 14.4 +1.8**
PINNC Pines Island, 51.28 127 P **P** **13 31 14.7 +1.3**
ALCI Alchi Leh 51.29 308 *e*P **P** **13 31 13.1 -0.7**
DHRM DHARAMSHALA 51.36 305 *e*P **P** **13 31 13.2 -1.0**
DHRM IAmb IAmb 13 31 20.1
comp=Z,138nm,1.0s
DHRM IAMs_20 IAMs_20 13 46 56.4
comp=Z,8µm,19.7s
HMDM Hanimaadhoo 51.38 273 P **P** **13 31 15.7 +1.4**
TLWR Talawar 51.55 305 *e*P **P** **13 31 16.3 +0.9**
UDPR Udaipur 51.76 295⇑ *e*P **P** **13 31 16.1 -0.9**
ZSN Zaisan 52.33 326 *e*P **P** **13 31 21.2 +0.3**
ZSN *e*S **S** **13 38 46.0 +1.4**
ZSN Zaisan 52.33 326 *e*P **P** **13 31 21.2 +0.3**
ZSN *e*S **S** **13 38 45.9 +1.4**
DGZ Jazzator, Alta 52.39 330⇑ *i*P **P** **13 31 21.7 +0.3**
DGZ pmax pmax
comp=Z,159nm,1.7s
DGZ MLR MLR
comp=Z,6µm,20.0s
PEA0B Petropavlovsk- 52.57 24 *ce*P **P** **13 31 24.9 +2.4**
PETK Petropavlovsk- 52.57 24 P **P** **13 31 22.7 +0.2**
comp=Z,67nm,0.9s,baz=180,slow=1.5,SNR=27
PETK LR LR 13 53 04.2
comp=Z,5µm,20.7s,baz=223,slow=35
comp=Z,67nm,0.9s
JMU Jammu 52.63 306 *e*P **P** **13 31 25.1 +1.8**
SRGN SRI GANGA NAGA 52.72 302 *e*P **P** **13 31 24.9 +0.8**
BKNR BIKANER 52.80 299 *e*P **P** **13 31 24.7 0.0**
PET Petropavlovsk 52.90 25 P **P** **13 31 25.3 +0.4**
PET Petropavlovsk 52.90 25 P **P** **13 31 26.5 +1.6**
PET Petropavlovsk 52.90 25 *e*P **P** **13 31 26.8 +1.9**
PET *e* 13 33 31.6
PET *e*S **S** **13 38 52.1 +0.2**
PET pmax pmax
comp=Z,120nm,1.3s
PET pmax pmax
comp=Z,1µm,6.5s
PET pmax pmax
comp=Z,2µm,5.1s
PET MLR MLR
comp=Z,3µm,18.0s
PET MLR MLR
comp=Z,3µm,17.0s
SHLS Shalkode 53.28 319⇑ *i*P **P** **13 31 26.6 -1.6**
comp=Z,95nm,1.3s
SHLS *e*S **S** **13 38 55.0 -2.9**
SHLS Shalkode 53.28 319 *c i*P **P** **13 31 26.5 -1.6**
SHLS *e*S **S** **13 38 54.9 -2.9**
SHLS pmax pmax
comp=Z,95nm,1.3s
MK31 Makanchi Array 53.41 325 *i* P **P** **13 31 29.2 +0.3**
MK31 pmax pmax
comp=Z,118nm,1.0s
MKAR Makanchi Array 53.41 325 P **P** **13 31 29.2 +0.4**
comp=Z,89nm,1.0s,baz=128,slow=8.0,SNR=134
MKAR LR LR 13 53 14.3
comp=Z,5µm,21.5s,baz=112,slow=35
comp=Z,89nm,1.0s
MKAR Makanchi Array 53.41 325 P **P** **13 31 29.1 +0.2**
UZB Uzynbulak 53.56 319⇑ *i*P **P** **13 31 30.6 +0.4**
UZB *e*S **S** **13 39 02.2 +0.5**
UZB Uzynbulak 53.56 319 *c i*P **P** **13 31 30.6 +0.4**
UZB *e*S **S** **13 39 02.2 +0.5**
MAKZ Makanchi 53.59 324 P **P** **13 31 30.3 +0.1**
MAKZ IAmb IAmb 13 31 37.6
comp=Z,143nm,1.1s
MAKZ Makanchi 53.59 324 P **P** **13 31 30.3 +0.1**
MAKZ pmax pmax
comp=Z,143nm,1.1s
MAKZ MLR MLR
comp=Z,7µm,18.0s
PRZ Przheval'sk 53.67 318 IAmb IAmb 13 31 45.2
comp=Z,90nm,1.0s
TARG Taragay, Kyrgy 53.73 317 IAmb IAmb 13 32 13.9
comp=Z,94nm,1.3s

SATY Saty 53.92 319⇑ *i*P P 13 31 33.2 +0.4
comp=Z,38nm,1.0s
SATY eS S 13 39 07.1 +0.5
SATY Saty 53.92 319*c i*P P 13 31 33.2 +0.4
SATY eS S 13 39 07.0 +0.5
SATY pmax pmax
comp=Z,38nm,1.0s
KSH Kashi 54.10 314 P P 13 31 36.1 +1.9
KSH sP pP 13 31 43.1 -0.6
KSH S S 13 39 13.0 +3.9
KSH pmax pmax
comp=Z,35nm,1.2s
KSH LR LR
comp=Z,9µm,16.5s
KSH LR LR
comp=Z,4µm,19.6s
KSH LR LR
comp=Z,5µm,18.8s
KDJ Kajisay 54.33 317 IAmb IAmb 13 31 47.7
comp=Z,168nm,1.6s
YAK Yakutsk 54.42 3 LR LR 13 55 58.3
comp=Z,3µm,21.5s,baz=190,slow=37
YAK Yakutsk 54.42 3 P P 13 31 35.7 -0.2
YAK Yakutsk 54.42 3 IAMs_20 IAMs_20 13 55 49.9
comp=Z,4µm,21.0s
YAK Yakutsk 54.42 3*c i*P P 13 31 34.8 -1.1
YAK *e**PP **pP** 13 31 41.9 -3.4
YAK *e* 13 32 39.2
YAK *e* 13 33 36.5
YAK *e*PPP PPP 13 34 44.9
YAK *e*S **S** 13 39 11.4 -0.9
YAK *e**SS **sS** 13 39 30.3 +2.5
YAK *e* 13 41 23.1
YAK *e*SS **SS** 13 42 54.7 -0.2
YAK pmax pmax
comp=Z,49nm,0.9s
YAK pmax pmax
comp=N,36nm,1.3s
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=Z,451nm,3.7s
YAK pmax pmax
comp=N,432nm,4.1s
YAK pmax pmax
comp=E,90nm,3.5s
YAK smax smax
comp=N,349nm,2.4s
YAK smax smax
comp=E,258nm,2.5s
YAK MLR MLR
comp=Z,5µm,30.0s
YAK MLR MLR
comp=N,4µm,23.0s
YAK MLR MLR
comp=E,2µm,24.0s
DGAR Diego Garcia 54.47 255 IAMs_20 IAMs_20 13 56 10.0
comp=Z,4µm,20.0s
JASL Jaisalmer 54.66 298 *e*P P 13 31 39.4 +1.0
ARXS Arharly 54.82 320 *e*P P 13 31 39.2 -0.1
TDK Taldyqorghan 54.82 321 *e*P P 13 31 39.7 +0.5
comp=Z,62nm,0.9s
TDK LR LR 13 56 19.1
comp=Z,3µm,16.6s
TDK Taldyqorghan 54.82 321 *e*P P 13 31 39.7 +0.5
TDK pmax pmax
comp=Z,62nm,0.9s
TDK MLR MLR
comp=Z,3µm,17.0s
MDOK Medeo 54.86 318 *e*P P 13 31 40.0 +0.3
MDOK *e*S S 13 39 19.9 +0.7
MDOK LR LR 13 56 17.6
MDOK Medeo 54.86 318 *e*P P 13 31 40.0 +0.3
MDOK *e*S S 13 39 19.9 +0.7
TNSS Tian-Shan 54.87 318 *e*P P 13 31 40.0 -0.1
TNSS Tian-Shan 54.87 318 *e*P P 13 31 40.0 -0.1
AAA Alma-Ata 54.97 318 *e*P P 13 31 40.9 +0.5
comp=Z,55nm,0.8s
AAA Alma-Ata 54.97 318 *e*P P 13 31 40.8 +0.5
AAA pmax pmax
comp=Z,55nm,0.8s
MA2 Magadan 55.42 16 P P 13 31 43.6 +0.3
MA2 IAmb IAmb 13 31 50.9
comp=Z,87nm,1.2s
MA2 IAMs_20 IAMs_20 13 54 13.7
comp=Z,5µm,22.0s
MA2 Magadan 55.42 16 P P 13 31 44.9 +1.7
MA2 Magadan 55.42 16 *i* P P 13 31 44.6 +1.4
MA2 pmax pmax
comp=Z,91nm,1.3s
KUU Kurty 55.64 319 *e*P P 13 31 45.6 +0.4
KUU LR LR 13 56 31.1
comp=Z,1µm,17.2s
KUU Kurty 55.64 319 *e*P P 13 31 45.5 +0.4
KUU MLR MLR
comp=Z,1µm,17.0s
TKM2 Tokmak 2 55.72 318 P P 13 31 46.6 +0.7
SNR=19
KBK Karagaybulak 56.05 317 P P 13 31 49.2 +0.9
SNR=16
UCH Uchtor 56.17 316 P P 13 31 50.7 +1.2
SNR=38
AAK Ala-Archa 56.35 317 P P 13 31 50.2 -0.2
comp=Z,10nm,0.8s,baz=118,slow=9.1,SNR=10
AAK LR LR 13 59 41.9
comp=Z,5µm,18.7s,baz=107,slow=40
comp=Z,10nm,0.8s
AAK Ala-Archa 56.35 317 P P 13 31 49.8 -0.6
AAK IAmb IAmb 13 32 22.5
comp=Z,83nm,1.4s
AAK Ala-Archa 56.35 317 IAMs_20 IAMs_20 13 59 30.7
comp=Z,6µm,19.0s
AAK Ala-Archa 56.35 317 P P 13 31 51.2 +0.8
AAK S S 13 39 38.9 -0.2
AAK Ala-Archa 56.35 317 *i* P P 13 31 51.8 +1.4
SNR=13
AAK Ala-Archa 56.35 317*ce*P P 13 31 51.3 +0.9
AAK pmax pmax
comp=Z,41nm,1.1s
AAK MLR MLR
comp=Z,5µm,18.0s
FUNA Funafuti 56.36 105 P P 13 31 51.5 +0.8
ZAA0 Zalesovo Array 56.37 333 IAmb IAmb 13 31 55.7
comp=Z,157nm,1.6s
ZALV Zalesovo Beam 56.37 333 P P 13 31 49.8 -0.3
comp=Z,17nm,0.8s,baz=120,slow=6.3,SNR=43
ZALV LR LR 13 58 42.9
comp=Z,5µm,18.6s,baz=134,slow=39
ZALV PKP2bc **P'P'bc** 14 01 57.4 -3.5
comp=Z,1.6nm,0.8s,baz=316,slow=4.1,SNR=6.3
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 56.37 333 P P 13 31 49.1 -1.0
ZALV Zalesovo Beam 56.37 333 *i* P P 13 31 49.7 -0.4
ZALV pmax pmax
comp=Z,17nm,0.8s
SGDS Sogindy 56.58 318⇑ *i*P P 13 31 52.0 +0.1
USP Ospenovka 56.59 318 P P 13 31 52.5 +0.5
SNR=38
EKS2 Erkin-Say 56.84 317 P P 13 31 54.8 +0.9
SNR=20
DRK Karamyk 57.11 312 IAmb IAmb 13 32 35.4
comp=Z,68nm,0.9s
KURBB Kurchatov Arra 57.56 327 P P 13 31 58.5 -0.1
comp=Z,33nm,0.8s,baz=126,slow=6.2,SNR=125
KURBB S S 13 39 58.2 +3.8
comp=Z,0.2nm,0.7s,baz=123,slow=10,SNR=4.3
KURBB LR LR 13 58 16.1
comp=Z,4µm,18.9s,baz=129,slow=38
KURBB PKPPKP P'P'df 14 01 37.9 -8.7
comp=Z,0.4nm,0.8s,baz=267,slow=3.6,SNR=4.5
comp=Z,33nm,0.8s
KURBB Kurchatov Arra 57.56 327 P P 13 31 58.3 -0.3
KURK Kurchatov 57.56 327 P P 13 31 58.3 -0.3
KURK Kurchatov 57.56 327 IAMs_20 IAMs_20 13 58 14.6
comp=Z,4µm,20.0s
KURK Kurchatov 57.56 327 P P 13 31 56.9 -1.7
KURK S S 13 39 55.9 +1.5
KURK Kurchatov 57.56 327*ce*P P 13 31 58.7 +0.1
KURK pmax pmax
comp=Z,100nm,1.3s
KURK MLR MLR
comp=Z,4µm,18.0s
BTLS Baital 57.61 319 *e*P P 13 31 59.3 +0.2
comp=Z,52nm,1.2s
BTLS Baital 57.61 319 *e*P P 13 31 59.3 +0.2
BTLS pmax pmax
comp=Z,52nm,1.2s
KBU Kabul Universi 57.74 306 P P 13 32 00.8 +0.3
KBL Kabul 57.83 306 P P 13 32 00.3 -0.7
KBL IAmb IAmb 13 32 07.7
comp=Z,58nm,0.9s
KBL Kabul 57.83 306 P P 13 32 00.9 -0.1
SNR=40
KBL S S 13 40 00.1 +1.2
KBL Kabul 57.83 306 P P 13 32 00.3 -0.7
KBL pmax pmax
comp=Z,58nm,1.0s
MSVF Nonsavu 58.13 116 P P 13 32 03.5 +0.2
MSVF IAmb IAmb 13 32 28.8
comp=Z,107nm,0.9s
MSVF Nonsavu 58.13 116 P P 13 32 05.8 +2.5
MSVF Nonsavu 58.13 116 P P 13 32 03.5 +0.2
MSVF pmax pmax
comp=Z,107nm,1.0s
DZA Taraz 58.60 316 *e*P P 13 32 06.2 +0.1
DZA Taraz 58.60 316 *e*P P 13 32 06.2 +0.1
SEY Seymchan 58.70 14 LR LR 13 56 53.5
comp=Z,3µm,21.6s,baz=216,slow=36
SEY Seymchan 58.70 14*ce*P P 13 32 08.4 +2.1
SEY pmax pmax
comp=Z,159nm,2.5s
SEY MLR MLR
comp=Z,3µm,20.0s
KK31 Karatay Array 59.24 316 IAmb IAmb 13 32 13.9
comp=Z,43nm,0.8s
KK31 Karatay Array 59.24 316 *i* P P 13 32 10.3 -0.2
KKAR Karatay Array 59.24 316 P P 13 32 10.2 -0.3
KKAR Karatay Array 59.24 316 P P 13 32 10.2 -0.3
IUG luzhnay 59.25 315⇑ *i*P P 13 32 11.2 +0.4
comp=Z,40nm,1.0s
IUG *e*S S 13 40 17.5 +0.4
IUG luzhnay 59.25 315*c i*P P 13 32 11.1 +0.4
IUG *e*S S 13 40 17.4 +0.4
IUG pmax pmax
comp=Z,40nm,1.0s
CHM Chimkent 59.61 315 *e*P P 13 32 13.5 +0.3
CHM LR LR 13 58 37.4
comp=Z,1µm,18.8s
CHM Chimkent 59.61 315 *e*P P 13 32 13.4 +0.3
CHM MLR MLR
comp=Z,1µm,19.0s
BRLS Boroldaу 59.68 316⇑ *i*P P 13 32 13.9 +0.3
BRLS Boroldaу 59.68 316*c i*P P 13 32 13.9 +0.3
SHEM Shemya Is, Ala 60.06 32 LR LR 13 58 51.4
comp=Z,829nm,18.8s,baz=234,slow=37
SMY Shemya 60.06 32 P P 13 32 18.1 +2.2
BRZS Berezniki 60.55 324 *e*P P 13 32 19.5 +0.1
BRZS Berezniki 60.55 324 *e*P P 13 32 19.5 +0.1
OUZ Omahuta 62.54 136 IAMs_20 IAMs_20 13 59 23.8
comp=Z,4µm,20.0s
BVA0 Borovoye Array 63.15 327 P P 13 32 35.6 -1.2
BVAR Borovoye Array 63.15 327 P P 13 32 36.5 -0.3
comp=Z,54nm,1.0s,baz=116,slow=6.6,SNR=53
BVAR LR LR 14 01 43.8
comp=Z,4µm,20.6s,baz=115,slow=38
comp=Z,54nm,1.0s
BORK Borovoye 63.19 327*ce*P P 13 32 37.0 -0.1
BORK pmax pmax
comp=Z,87nm,1.0s
BORK MLR MLR
comp=Z,3µm,17.0s
HRA Herat 63.29 305 P P 13 32 38.0 -0.4
TIXI Tiksi 64.02 1 LR LR 14 02 36.3
comp=Z,5µm,20.8s,baz=203,slow=38
TIXI Tiksi 64.02 1 P P 13 32 40.9 -1.3
TIXI Tiksi 64.02 1 *i* P P 13 32 40.6 -1.6
TIXI pmax pmax
comp=Z,140nm,1.3s
TIXI MLR MLR
comp=Z,6µm,21.0s
JLN Jalan Bani Buh 64.58 291 P P 13 32 47.4 +0.7
MKAZ Moumakai 64.62 137 P P 13 32 49.5 +2.8
ADK Adak 64.80 36 P P 13 32 47.9 +0.3
ADK Adak 64.80 36 P P 13 32 48.8 +1.2
ADK Adak 64.80 36 P P 13 32 47.9 +0.3
ADK pmax pmax
comp=Z,109nm,1.0s
KUZ Kuaotunu 64.81 137 P P 13 32 49.5 +1.6
KUZ Kuaotunu 64.81 137 P P 13 32 48.9 +0.9
JCZ Jackson Bay 64.88 147 P P 13 32 50.2 +1.8
JCZ Jackson Bay 64.88 147 P P 13 32 50.4 +2.0
DCZ Deep Cove 64.94 149 IAMs_20 IAMs_20 14 01 04.8
comp=Z,4µm,21.0s
QRZ Quartz Range 65.03 142 P P 13 32 49.3 0.0
QRZ IAMs_20 IAMs_20 14 02 29.5
comp=Z,5µm,19.0s
QRZ Quartz Range 65.03 142 P P 13 32 49.7 +0.4
DSZ Denniston Nort 65.14 143 IAMs_20 IAMs_20 14 05 58.4
comp=Z,3µm,18.0s
DSZ Denniston Nort 65.14 143 P P 13 32 54.0 +3.9
TOZ Tahuroa Road 65.19 138 P P 13 32 51.3 +0.9
TOZ IAmb IAmb 13 33 28.9
comp=Z,82nm,1.4s
TOZ IAMs_20 IAMs_20 13 58 37.9
comp=Z,4µm,21.0s
TOZ Tahuroa Road 65.19 138 P P 13 32 53.2 +2.8
WSAR Wadi Sarin 65.34 292 LR LR 14 04 05.5
comp=Z,9.5nm,20.4s,baz=114,slow=39
TKNZ Takaka Hill 65.42 142 P P 13 32 51.8 -0.1
INZ Inchbonnie 65.52 144 IAmb IAmb 13 33 37.2
comp=Z,107nm,1.4s
INZ IAMs_20 IAMs_20 14 00 45.5
comp=Z,4µm,22.0s
INZ Inchbonnie 65.52 144 P P 13 32 54.0 +1.6
NNZ Nelson 65.78 142 IAMs_20 IAMs_20 14 03 02.3
comp=Z,4µm,20.0s
NNZ Nelson 65.78 142 P P 13 32 53.6 -0.6
JMDO Jabal Madar 65.79 291 P P 13 32 54.1 -0.6
SNR=5.3
THZ Tophouse 65.81 143 IAMs_20 IAMs_20 14 03 04.1
comp=Z,5µm,20.0s
THZ Tophouse 65.81 143 P P 13 32 54.0 -0.4
LBZ Lake Benmore 65.85 146 IAMs_20 IAMs_20 13 59 16.0
comp=Z,4µm,21.0s
LBZ Lake Benmore 65.85 146 P P 13 32 54.3 -0.3
SMDO Samad 65.86 292 P P 13 32 55.8 +0.5
SNR=8.1
MHTO MHTO 65.89 290 P P 13 32 54.7 -0.6
SNR=6.4
MHTO P P 13 32 54.7 -0.6
SNR=6.4
MHTO S S 13 41 40.3 -0.6
MHTO S S 13 41 40.3 -0.6
RPZ Rata Peaks 65.91 145 LR LR 14 02 51.9
comp=Z,3µm,20.0s,baz=305,slow=37
RPZ Rata Peaks 65.91 145 IAMs_20 IAMs_20 14 02 49.7
comp=Z,4µm,21.0s
RPZ Rata Peaks 65.91 145 P P 13 32 59.0 +4.0
RAO Raoul Island 66.00 127 LR LR 13 58 09.3
comp=Z,693nm,20.9s,baz=288,slow=33
NNVZ North Ngauruho 66.02 139 P P 13 32 57.5 +1.6
LTZ Lake Taylor 66.04 144 IAmb IAmb 13 33 11.4
comp=Z,83nm,1.1s
LTZ IAMs_20 IAMs_20 14 02 04.2
comp=Z,4µm,19.0s
LTZ Lake Taylor 66.04 144 P P 13 32 56.4 +0.5
OXZ Oxford 66.24 144 IAmb IAmb 13 33 11.4
comp=Z,43nm,0.7s
OXZ IAMs_20 IAMs_20 14 02 58.3
comp=Z,4µm,20.0s
OXZ Oxford 66.24 144 P P 13 32 56.6 -0.4
AFI Afiamalu 66.29 109 P P 13 33 00.0 +2.0
BILL Bilibino 66.29 16 P P 13 32 56.4 -0.6
BILL IAMs_20 IAMs_20 14 03 32.8
comp=Z,3µm,21.0s
BILL Bilibino 66.29 16*ce*P P 13 32 57.2 +0.2
BILL pmax pmax
comp=Z,85nm,2.5s
BILL MLR MLR
comp=Z,3µm,20.0s
TMZ Timaru 66.30 146 P P 13 32 59.5 +2.0
ATKA Atka Island 66.35 36 P P 13 32 57.8 +0.2
ODZ Otahua Downs 66.52 146 IAMs_20 IAMs_20 14 02 11.7
comp=Z,3µm,20.0s
URZ Urewera 66.55 137 LR LR 14 00 18.2
comp=Z,2µm,21.7s,baz=300,slow=34
URZ Urewera 66.55 137 P P 13 33 00.2 +1.1
URZ Urewera 66.55 137 P P 13 32 59.8 +0.7
HOQ Hoqain 66.56 292 P P 13 32 58.9 -0.7
SNR=9.1
KHZ Kahutara 66.58 143 IAmb IAmb 13 33 07.6
comp=Z,36nm,0.7s
KHZ Kahutara 66.58 143 P P 13 32 58.6 -0.6
KHZ Kahutara 66.58 143 P P 13 32 58.3 -0.9
GVZ Greta Valley S 66.60 144 IAMs_20 IAMs_20 14 02 22.1
comp=Z,3µm,19.0s
BKZ Black Stump Fm 66.61 138 IAMs_20 IAMs_20 13 59 05.5
comp=Z,3µm,21.0s
BKZ Black Stump Fm 66.61 138 P P 13 32 59.6 0.0
BKZ Black Stump Fm 66.61 138 P P 13 32 59.7 +0.1
RTZ Ruatahuna 66.64 138 IAMs_20 IAMs_20 13 59 37.4
comp=Z,5µm,22.0s
RTZ Ruatahuna 66.64 138 P P 13 32 59.8 -0.1
SNZO South Karori 66.65 141 IAMs_20 IAMs_20 14 04 24.4
comp=Z,3µm,19.0s
MTHZ Maungataniwha 66.68 138 P P 13 33 00.3 +0.3
HAZ Te Kaha 66.74 137 P P 13 33 00.8 +0.4
TSZ Takapari Road 66.75 140 P P 13 33 00.5 +0.1
RUGZ Raukumara Rang 66.78 137 P P 13 33 01.6 +0.9
KRHZ Kereru 66.79 139 P P 13 33 00.7 0.0
MQZ McQueen's Vall 66.82 144 P P 13 33 01.0 +0.2
MRZ Mangatainoka R 66.83 140 IAMs_20 IAMs_20 14 01 14.3
comp=Z,3µm,20.0s
MWZ Matawai 66.86 137 P P 13 33 01.3 +0.1
MCHZ McNeill Hill 66.90 139 P P 13 33 03.0 +1.6
MXZ Matakaoa Point 67.00 136 IAMs_20 IAMs_20 14 01 01.9
comp=Z,4µm,22.0s
RIGZ Rimuhau 67.21 137 P P 13 33 05.5 +2.1
BFZ Birch Farm 67.27 140 IAmb IAmb 13 33 11.2
comp=Z,99nm,1.3s
BFZ IAMs_20 IAMs_20 14 00 33.9
comp=Z,4µm,22.0s
BFZ Birch Farm 67.27 140 P P 13 33 05.0 +1.3
ARQ Araqi 67.28 292 P P 13 33 05.2 +1.0
ARQ S S 13 41 56.3 -1.5
SOHO SOHO 67.29 293 P P 13 33 04.9 +0.7
SOHO S S 13 41 56.3 -1.4
SOHO SOHO 67.29 293 *i* P P 13 33 04.0 -0.2
SNR=11
MDH Madha 67.54 294 P P 13 33 05.3 -0.5
MDH Madha 67.54 294 P P 13 33 05.1 -0.6
BANOM Banah 67.56 295 P P 13 33 06.3 +0.3
BANOM Banah 67.56 295 *i* P P 13 33 06.5 +0.6
SNR=6.6
UOSS Minazif 67.61 294 P P 13 33 06.2 -0.1
UOSS Minazif 67.61 294 P P 13 33 03.0 -3.2
UOSS S S 13 41 58.9 -2.8
MSFE Esma-Masafi 67.67 294 *i* P P 13 33 07.2 +0.6
SNR=6.6
MASF Masafi 67.67 294 P P 13 33 07.5 +0.8
MASF S S 13 42 03.6 +1.2
HATD Hatta, Dubai 67.67 294 P P 13 33 07.2 +0.6
SNR=6.0
HATD S S 13 42 00.4 -2.1
HATD Hatta, Dubai 67.67 294 *i* P P 13 33 06.6 -0.1
SNR=9.4
SHME Shamm 67.71 295 P P 13 33 07.1 +0.2
SHME S S 13 42 03.3 +0.5
SHME Shamm 67.71 295 P P 13 33 06.7 -0.2
ASHO Ashiyiah 67.74 293 P P 13 33 07.3 +0.2
ASHO Ashiyiah 67.74 293 *i* P P 13 33 06.3 -0.7
SNR=11
ALNE Al Ain 68.00 293 P P 13 33 08.7 0.0
ALNE S S 13 42 05.2 -1.2
ALNE Al Ain 68.00 293 *i* P P 13 33 08.2 -0.5
SNR=8.7
AB31 Akbulak array 68.07 320 P P 13 33 07.7 -0.9
AB31 Akbulak array 68.07 320 *i* P P 13 33 08.1 -0.6
ABKAR Akbulak array 68.07 320 P P 13 33 07.8 -0.8
SHAO Shalim 68.10 286 P P 13 33 10.2 +0.7
SNR=5.6
SHAO S S 13 42 08.2 +0.5
SHAO Shalim 68.10 286 *i* P P 13 33 10.2 +0.7
SNR=8.8
ASUD Al Ashush, Dub 68.40 293 P P 13 33 11.6 +0.4
UMZA Um Al Zommool 68.52 291 P P 13 33 11.0 -1.0
UMZA S S 13 42 11.2 -1.3
DMTO DMTO 68.75 286 P P 13 33 14.6 +1.1
RBK Rabkut 69.47 286 P P 13 33 18.9 +0.9
SNR=6.5
RBK S S 13 42 22.2 -1.8
DOK Doka 69.51 287 P P 13 33 17.5 -0.7
SNR=8.6
DOK S S 13 42 22.4 -2.0
AKTO Aktyubinsk 69.57 321 LR LR 14 06 15.0
comp=Z,5µm,20.2s,baz=103,slow=38
AKTO Aktyubinsk 69.57 321 P P 13 33 15.9 -2.1
NIKH Nikolski High 69.69 36 P P 13 33 19.8 +1.1
baz=255
MZWR Madinat Zayed 69.71 292 P P 13 33 20.5 +1.2
SVE Sverdlovsk 69.77 328 *e*P P 13 33 19.7 +0.6
SVE *e*S S 13 42 25.8 -0.3
SVE pmax pmax
comp=Z,140nm,1.3s
SVE MLR MLR
comp=Z,4µm,19.0s
WHFO Wadi Hawf 69.87 286 P P 13 33 20.1 -0.4
SNR=5.2
WHFO S S 13 42 28.5 -0.2
MZR Muzera 70.07 292 P P 13 33 21.5 -0.1
SNR=6.9
MZR Muzera 70.07 292 *i* P P 13 33 21.4 -0.2
SNR=12
MZR P P 13 33 22.3 +0.7
SPIA Saint Paul Isl 70.09 32 P P 13 33 22.5 +1.5
baz=252
ABTO Aybut 70.34 286 P P 13 33 24.1 +0.7
SNR=7.0
ABTO S S 13 42 34.7 +0.4
MSEY Mahe Island 70.41 262 IAMs_20 IAMs_20 14 03 16.5
comp=Z,4µm,21.0s
MSEY Mahe Island 70.41 262 P P 13 33 23.2 -0.6
GHWR Ruwais 70.63 293 P P 13 33 25.4 +0.5
JRN Qarnain Island 70.66 294 P P 13 33 24.9 -0.3
ARTI Arti 70.84 327 LR LR 14 05 24.2
comp=Z,3µm,21.4s,baz=97,slow=37
ARTI Arti 70.84 327 P P 13 33 24.4 -1.2
ARTI IAmb IAmb 13 33 52.1
comp=Z,59nm,1.1s
ARTI IAMs_20 IAMs_20 14 05 11.7
comp=Z,3µm,21.0s
ARTI Arti 70.84 327*d i*P P 13 33 25.5 -0.1
ARTI 13 33 49.5
ARTI 13 35 57.6
ARTI PPP PPP 13 37 41.2
ARTI S S 13 42 38.3 -0.3
ARTI pmax pmax
comp=Z,42nm,1.6s
ARTI MLR MLR
comp=Z,3µm,19.0s
UNV Unalaska Valle 71.27 36 P P 13 33 28.1 -0.1
baz=257
GAMB Gambell 71.60 25 P P 13 33 30.8 +0.8
baz=249
SMRA Abu-Samra 72.50 293 P P 13 33 37.1 +0.9
M11K Mekoryuk 73.02 29 P P 13 33 39.2 +0.7
baz=255
FALS False Pass 73.25 35 P P 13 33 40.0 0.0
FALS False Pass 73.25 35 P P 13 33 39.9 -0.1
baz=259
TNA Tin City 73.73 24 P P 13 33 42.7 0.0
baz=252
K13K Kusilvak Mount 74.13 28 IAmb IAmb 13 33 53.6
comp=Z,197nm,1.9s
K13K Kusilvak Mount 74.13 28 P P 13 33 45.9 +0.9
baz=256
S12K Black Hills 74.16 34 P P 13 33 45.3 -0.2
baz=260
F14K Arctic Creek 74.34 24 P P 13 33 46.9 +0.6
baz=254
M13K Dall Lake 74.40 29 P P 13 33 47.9 +1.2
baz=258
CASY Casey 74.45 186 P P 13 33 48.3 +1.5
CASY IAmb IAmb 13 34 05.5
comp=Z,106nm,1.6s
ANM Nome 74.48 25 P P 13 33 48.2 +1.1
baz=255
J14K Nanvaranak Lak 74.82 27 IAMs_20 IAMs_20 14 09 30.4
comp=Z,2µm,20.0s
J14K Nanvaranak Lak 74.82 27 P P 13 33 49.9 +0.9
baz=257
L14K Kuka Creek 74.91 28 IAmb IAmb 13 33 54.8
comp=Z,82nm,1.0s
L14K Kuka Creek 74.91 28 P P 13 33 50.9 +1.3
baz=258
SDPT Sand Point 74.99 35 P P 13 33 49.8 -0.4

SDPT	**Sand Point**	74.99	35	P		**P**		13 33 50.8	+0.5
	baz=262,SNR=5.0								
F15K	**North Star Dit**	75.08	24	IAmb		IAmb		13 34 10.6	
	comp=Z,85nm,1.3s								
F15K	**North Star Dit**	75.08	24	P		**P**		13 33 51.3	+0.8
	baz=255								
N14K	**Kuskokwak Cree**	75.12	30	IAmb		IAmb		13 34 02.7	
	comp=Z,77nm,0.9s								
N14K	**Kuskokwak Cree**	75.12	30	P		**P**		13 33 51.7	+0.8
	baz=259								
M14K	**Bethel**	75.14	29	IAmb		IAmb		13 33 55.3	
	comp=Z,72nm,0.9s								
M14K	**Bethel**	75.14	29	P		**P**		13 33 52.0	+1.1
	baz=259								
G15K	**Niukluk**	75.14	25	P		**P**		13 33 51.4	+0.5
	baz=256								
O14K	**Tigyukauivet M**	75.20	31	IAmb		IAmb		13 34 06.4	
	comp=Z,88nm,1.4s								
O14K	**Tigyukauivet M**	75.20	31	P		**P**		13 33 51.8	+0.5
	baz=260								
CHNA	**Chernabura Isl**	75.43	35	P		**P**		13 33 53.1	+0.4
	baz=262								
AKT	**Akhty**	75.46	311	*e*P		**P**		13 33 51.1	-2.3
AKT				*e*				13 34 03.2	
AKT				*e*S		**S**		13 43 26.7	-5.2
AKT				*e*				13 43 58.9	
AKT				pmax		pmax			
	comp=Z,46nm,1.0s								
C16K	**Lisburne Hills**	75.50	21	IAmb		IAmb		13 34 03.3	
	comp=Z,83nm,1.1s								
C16K	**Lisburne Hills**	75.50	21	P		**P**		13 33 54.0	+1.0
	baz=254,SNR=6.7								
L15K	**Ungalak Mounta**	75.54	28	P		**P**		13 33 54.1	+0.8
	baz=259								
K15K	**Wolf Creek Mou**	75.64	28	IAmb		IAmb		13 34 10.3	
	comp=Z,175nm,1.8s								
K15K	**Wolf Creek Mou**	75.64	28	P		**P**		13 33 54.9	+1.0
	baz=259								
MAK	**Makhachkala**	75.70	312	*e*P		**P**		13 33 52.4	-2.1
MAK				*e*				13 36 46.5	
MAK				*e*PPP		PPP		13 38 29.5	
MAK				*e*S		**S**		13 43 31.2	-3.0
MAK				*e*SS		**SS**		13 48 28.3	+2.3
MAK				*e*SSS		SSS		13 51 44.1	
MAK				pmax		pmax			
	comp=Z,199nm,1.0s								
MAK				MLR		MLR			
	comp=Z,4µm,20.0s								
M15K	**Kasigluk River**	75.74	29	P		**P**		13 33 55.0	+0.6
	baz=260								
H16K	**Elim**	75.81	25	P		**P**		13 33 55.5	+0.8
	baz=258,SNR=7.1								
O15K	**Ungalikthiuk R**	75.92	31	P		**P**		13 33 56.0	+0.5
	baz=261								
N15K	**Kwethluk River**	75.95	30	IAmb		IAmb		13 34 04.6	
	comp=Z,53nm,0.8s								
N15K	**Kwethluk River**	75.95	30	P		**P**		13 33 56.7	+1.1
	baz=261,SNR=9.6								
KIRV	**Kirov**	76.03	328	LR		LR		14 09 41.9	
	comp=Z,3µm,20.5s,baz=100,slow=38								
KIRV	**Kirov**	76.03	328	*ce*P		**P**		13 33 56.1	0.0
D17K	**Noatak River**	76.18	22	P		**P**		13 33 58.4	+1.6
	baz=256,SNR=21								
J16K	**Anvik River**	76.25	27	IAmb		IAmb		13 34 13.7	
	comp=Z,141nm,1.6s								
J16K				IAMs_20		IAMs_20		14 10 44.7	
	comp=Z,3µm,20.0s								
J16K	**Anvik River**	76.25	27	P		**P**		13 33 58.1	+0.8
	baz=260								
BELG	**Belogornoye**	76.30	322	*i* P		**P**		13 33 58.1	+0.4
BELG				pmax		pmax			
	comp=Z,27nm,1.0s								
BELG				MLR		MLR			
	comp=Z,328nm,17.0s								
I17K	**Unalakleet**	76.32	26	P		**P**		13 33 58.2	+0.6
	baz=259,SNR=8.2								
RDOG	**Red Dog Mine**	76.33	22	IAmb		IAmb		13 34 17.0	
	comp=Z,126nm,1.3s								
RDOG	**Red Dog Mine**	76.33	22	P		**P**		13 33 58.3	+0.6
	baz=256,SNR=10								
C17K	**DeLong Mountai**	76.33	21	P		**P**		13 33 58.3	+0.6
	baz=256								
L16K	**Owhat River**	76.49	28	IAmb		IAmb		13 34 15.7	
	comp=Z,111nm,1.4s								
L16K	**Owhat River**	76.49	28	P		**P**		13 33 59.4	+0.7
	baz=261,SNR=12								
E17K	**Hotham Inlet**	76.51	23	P		**P**		13 33 59.9	+1.2
	baz=257,SNR=23								
M16K	**Timber Creek**	76.63	29	P		**P**		13 34 00.9	+1.4
	baz=262,SNR=8.7								
N16K	**Nishlik Lake**	76.64	30	P		**P**		13 34 00.5	+0.8
	baz=262,SNR=11								
G17K	**Kiwalik Mounta**	76.65	24	P		**P**		13 34 00.8	+1.3
	baz=259,SNR=13								
P16K	**Nushagak River**	76.84	31	P		**P**		13 34 01.8	+1.1
	baz=263								
H17K	**Granite Mounta**	76.85	25	IAmb		IAmb		13 34 20.9	
	comp=Z,133nm,1.5s								
H17K	**Granite Mounta**	76.85	25	P		**P**		13 34 01.0	+0.4
	baz=260,SNR=16								
O16K	**Kokwok River B**	76.86	31	IAmb		IAmb		13 34 12.0	
	comp=Z,57nm,1.1s								
O16K	**Kokwok River B**	76.86	31	P		**P**		13 34 01.2	+0.4
	baz=263,SNR=6.9								
R16K	**Pilot Point**	76.88	33	P		**P**		13 34 01.5	+0.5
	baz=264								
J17K	**VABM Dome**	76.94	27	IAMs_20		IAMs_20		14 11 05.8	
	comp=Z,3µm,22.0s								
J17K	**VABM Dome**	76.94	27	P		**P**		13 34 01.6	+0.3
	baz=261,SNR=10								
B18K	**Kokolik River**	77.03	20	P		**P**		13 34 01.8	+0.2
	baz=257								
E18K	**Tukpahlearik C**	77.05	22	IAmb		IAmb		13 34 21.8	
	comp=Z,80nm,1.1s								
E18K	**Tukpahlearik C**	77.05	22	P		**P**		13 34 02.2	+0.5
	baz=258,SNR=21								
C18K	**Utukok River**	77.08	21	IAmb		IAmb		13 34 11.7	
	comp=Z,88nm,1.1s								
C18K	**Utukok River**	77.08	21	P		**P**		13 34 02.9	+0.9
	baz=258								
L17K	**Donlin**	77.11	28	P		**P**		13 34 03.2	+1.0
	baz=262,SNR=12								
K17K	**Iditarod**	77.19	27	IAmb		IAmb		13 34 37.9	
	comp=Z,70nm,1.1s								
K17K	**Iditarod**	77.19	27	P		**P**		13 34 03.2	+0.6
	baz=262,SNR=14								
F18K	**Selawik**	77.25	23	P		**P**		13 34 03.9	+1.0
	baz=260,SNR=15								
O17K	**Koliganek Bris**	77.38	30	P		**P**		13 34 04.6	+0.9
	baz=263								
RAYN	**Ar Rayn**	77.39	292	P		**P**		13 34 04.0	-0.6
RAYN				IAmb		IAmb		13 34 09.1	
	comp=Z,134nm,1.4s								
RAYN	**Ar Rayn**	77.39	292	P		**P**		13 34 04.7	+0.1
RAYN	**Ar Rayn**	77.39	292	*i* P		**P**		13 34 04.3	-0.3
	SNR=43								
RAYN	**Ar Rayn**	77.39	292	P		**P**		13 34 04.0	-0.6
RAYN				pmax		pmax			
	comp=Z,134nm,1.4s								
RAYN				MLR		MLR			
	comp=Z,2µm,20.0s								
M17K	**Holitna River**	77.41	29	IAmb		IAmb		13 34 14.5	
	comp=Z,39nm,0.8s								
M17K	**Holitna River**	77.41	29	P		**P**		13 34 04.2	+0.3
	baz=263,SNR=9.4								
N17K	**Nushagak Hills**	77.43	30	IAmb		IAmb		13 34 43.7	
	comp=Z,60nm,1.2s								
N17K	**Nushagak Hills**	77.43	30	P		**P**		13 34 04.4	+0.4
	baz=263,SNR=6.8								
A19K	**Wainwright**	77.46	20	P		**P**		13 34 05.3	+1.4
	baz=258								
Q16K	**King Salmon**	77.49	32	P		**P**		13 34 04.4	+0.1
	baz=264								
G18K	**Tagagawik**	77.53	24	IAMs_20		IAMs_20		14 06 31.9	
	comp=Z,2µm,22.0s								
G18K	**Tagagawik**	77.53	24	P		**P**		13 34 05.3	+0.8
	baz=261,SNR=12								
H18K	**Honhosa River**	77.53	25	IAMs_20		IAMs_20		14 07 09.5	
	comp=Z,2µm,22.0s								
H18K	**Honhosa River**	77.53	25	P		**P**		13 34 04.7	+0.2
	baz=261								
R17L	**Mt. Peulik Vol**	77.54	33	P		**P**		13 34 04.3	-0.4
	baz=265								
PLK4	**Peulik 4**	77.54	33	IAmb		IAmb		13 34 55.6	
	comp=Z,78nm,1.2s								
P17K	**Kvichak River**	77.65	31	P		**P**		13 34 05.6	+0.4
	baz=264,SNR=12								
GNI	**Garni**	77.69	309	LR		LR		14 11 33.4	
	comp=Z,2µm,21.9s,baz=78,slow=38								
GNI	**Garni**	77.69	309	*i* P		**P**		13 34 05.8	-0.3
GNI				pmax		pmax			
	comp=Z,256nm,1.7s								
GNI				MLR		MLR			
	comp=Z,2µm,20.0s								
GNI	**Garni**	77.69	309	P		**P**		13 34 06.3	+0.2
	comp=Z,2µmcomp=Z,137nm,1.8s								
C19K	**Lookout Ridge**	77.75	21	IAmb		IAmb		13 34 16.1	
	comp=Z,108nm,1.0s								
C19K	**Lookout Ridge**	77.75	21	P		**P**		13 34 06.1	+0.4
	baz=259,SNR=8.4								
CHIR	**Chirikof Islan**	77.78	35	P		**P**		13 34 06.1	0.0
	baz=266								
Q17K	**Contact Creek**	77.85	32	P		**P**		13 34 05.8	-0.7
	baz=265,SNR=8.4								
L18K	**Granite Mounta**	77.87	28	IAMs_20		IAMs_20		14 02 17.3	
	comp=Z,3µm,21.0s								
L18K	**Granite Mounta**	77.87	28	P		**P**		13 34 07.7	+1.3
	baz=263,SNR=9.0								
J18K	**Innoko River**	78.01	27	IAmb		IAmb		13 34 17.5	
	comp=Z,79nm,1.6s								
J18K	**Innoko River**	78.01	27	P		**P**		13 34 07.7	+0.5
	baz=263								
STCH	**Steam Cracks**	78.01	72	P		**P**		13 34 08.0	-0.1
STCH				IAmb		IAmb		13 34 25.5	
	comp=Z,87nm,0.9s								
F19K	**Shaleruckik Mo**	78.03	23	P		**P**		13 34 07.4	+0.2
	baz=261								
N18K	**Kilae Creek**	78.08	30	IAmb		IAmb		13 34 24.9	
	comp=Z,68nm,1.4s								
N18K	**Kilae Creek**	78.08	30	P		**P**		13 34 07.8	+0.1
	baz=264								
GCSA	**Galena City Sc**	78.10	25	P		**P**		13 34 07.7	+0.1
	baz=263,SNR=15								
D19K	**Kuna River**	78.16	22	IAmb		IAmb		13 34 17.8	
	comp=Z,95nm,1.1s								
D19K	**Kuna River**	78.16	22	P		**P**		13 34 08.7	+0.7
	baz=261,SNR=16								
M18K	**Stony River**	78.19	29	P		**P**		13 34 09.0	+0.7
	baz=264,SNR=13								
G19K	**Purcell Mounta**	78.20	24	P		**P**		13 34 08.8	+0.6
	baz=262								
P18K	**Big Mountain,**	78.29	31	P		**P**		13 34 08.6	-0.3
	baz=265								
E19K	**Redstone River**	78.33	23	P		**P**		13 34 09.5	+0.6
	baz=262,SNR=22								
O18K	**Koktuh Hills**	78.34	30	P		**P**		13 34 10.1	+0.9
	baz=265,SNR=12								
Q18K	**Katmai Hardscr**	78.34	32	P		**P**		13 34 09.1	-0.1
	baz=266								
H19K	**Roundabout Mou**	78.38	25	IAmb		IAmb		13 34 19.9	
	comp=Z,99nm,1.1s								
H19K	**Roundabout Mou**	78.38	25	P		**P**		13 34 10.0	+0.8
	baz=263								
J19K	**Poorman**	78.55	26	P		**P**		13 34 11.0	+0.9
	baz=264,SNR=17								
R18K	**Karluk**	78.56	33	IAMs_20		IAMs_20		14 03 37.2	
	comp=Z,2µm,21.0s								
R18K	**Karluk**	78.56	33	P		**P**		13 34 10.4	+0.2
	baz=266								
NCK	**Nalchik**	78.57	313	*i* P		**P**		13 34 11.2	+0.5
NCK				pmax		pmax			
	comp=Z,33nm,1.2s								
SII	**Sitkinak Islan**	78.64	34	IAMs_20		IAMs_20		14 05 06.0	
	comp=Z,3µm,22.0s								
SII	**Sitkinak Islan**	78.64	34	P		**P**		13 34 11.1	+0.3
	baz=267								
L19K	**White Mountain**	78.72	28	P		**P**		13 34 11.8	+0.7
	baz=265,SNR=8.1								
B20K	**Meade River**	78.74	20	IAmb		IAmb		13 34 21.1	
	comp=Z,104nm,1.1s								
B20K				IAMs_20		IAMs_20		14 12 34.2	
	comp=Z,3µm,21.0s								
B20K	**Meade River**	78.74	20	P		**P**		13 34 11.7	+0.6
	baz=261								
D20K	**Etivluk River**	78.74	21	IAmb		IAmb		13 34 21.1	
	comp=Z,86nm,0.9s								
D20K	**Etivluk River**	78.74	21	P		**P**		13 34 11.5	+0.3
	baz=262								
N19K	**Bonanza Creek**	78.78	30	IAmb		IAmb		13 34 29.0	
	comp=Z,98nm,1.2s								
N19K	**Bonanza Creek**	78.78	30	P		**P**		13 34 12.6	+1.0
	baz=266								
E20K	**Nigu River**	78.83	22	P		**P**		13 34 12.6	+0.8
	baz=262								
F20K	**Avaraart Lake**	78.86	23	P		**P**		13 34 12.2	+0.5
	baz=263,SNR=15								
M19K	**Big River Lodg**	78.91	28	P		**P**		13 34 12.7	+0.5
	baz=265								
GOF	**Gofitskoye**	78.97	314	*ce*P		**P**		13 34 11.3	-1.6
H20K	**Anotlenegga Mo**	79.02	25	P		**P**		13 34 13.2	+0.4
	baz=262,SNR=31								
Q19K	**Cape Douglas,**	79.07	31	IAmb		IAmb		13 34 20.5	
	comp=Z,45nm,0.7s								
KBZ	**Khabaz**	79.08	313	P		**P**		13 34 13.7	+0.2
	comp=Z,11nm,1.0s,baz=128,slow=4.5,SNR=17								
KBZ				LR		LR		14 14 13.5	
	comp=Z,2µm,18.2s,baz=76,slow=40								
	comp=Z,11nm,1.0s								
KBZ	**Khabaz**	79.08	313	*ce*P		**P**		13 34 14.2	+0.8
KBZ				pmax		pmax			
	comp=Z,52nm,1.3s								
A21K	**Barrow**	79.12	19	P		**P**		13 34 14.0	+0.9
	baz=262								
I20K	**Naaghedeneel**	79.13	25	IAmb		IAmb		13 34 24.2	
	comp=Z,104nm,1.1s								
I20K	**Naaghedeneel**	79.13	25	P		**P**		13 34 13.5	+0.2
	baz=265,SNR=11								
RAR	**Rarotonga**	79.14	113	LR		LR		14 05 52.5	
	comp=Z,483nm,20.2s,baz=276,slow=33								
OHAK	**Old Harbor**	79.17	33	P		**P**		13 34 15.2	+1.6
OHAK	**Old Harbor**	79.17	33	P		**P**		13 34 13.9	+0.2
	baz=267								
K20K	**Telida**	79.18	27	IAmb		IAmb		13 34 30.9	
	comp=Z,126nm,1.6s								
K20K				IAMs_20		IAMs_20		14 12 47.2	
	comp=Z,3µm,22.0s								
K20K	**Telida**	79.18	27	P		**P**		13 34 14.6	+0.9
	baz=265								
L20K	**Farewell, AK**	79.20	28	P		**P**		13 34 14.3	+0.5
	baz=266								
J20K	**Nowinta River**	79.21	26	IAmb		IAmb		13 34 31.0	
	comp=Z,88nm,1.3s								
J20K	**Nowinta River**	79.21	26	P		**P**		13 34 14.5	+0.7
	baz=265								
NEUR	**Neytrino**	79.22	313	*i* P		**P**		13 34 14.2	-0.3
NEUR				pmax		pmax			
	comp=Z,44nm,1.4s								
KIV	**Kislovodsk**	79.23	313	P		**P**		13 34 14.4	-0.1
KIV				IAmb		IAmb		13 34 27.1	
	comp=Z,109nm,1.3s								
KIV				IAMs_20		IAMs_20		14 14 58.2	
	comp=Z,2µm,18.0s								
KIV	**Kislovodsk**	79.23	313	⇓P		**P**		13 34 15.0	+0.6
KIV	**Kislovodsk**	79.23	313	*i* P		**P**		13 34 15.0	+0.6
	SNR=23								
KIV	**Kislovodsk**	79.23	313	*e*P		**P**		13 34 14.2	-0.2
KIV				*e*S		**S**		13 44 12.2	-0.5
KIV				pmax		pmax			
	comp=Z,38nm,1.0s								
KIV				pmax		pmax			
	comp=Z,45nm,3.3s								
KIV	**Kislovodsk**	79.23	313	P		**P**		13 34 15.1	+0.6
	comp=Z,1µmcomp=Z,42nm,1.0s								
SHA1	**Shidzhatmaz**	79.25	313	*i* P		**P**		13 34 14.4	-0.3
P19K	**Oil Pt**	79.32	31	P		**P**		13 34 15.2	+0.6
	baz=267								
C21K	**Knifeblade Rid**	79.45	21	P		**P**		13 34 15.5	+0.4
	baz=264								
M20K	**Styx River**	79.50	28	IAmb		IAmb		13 34 36.3	
	comp=Z,138nm,1.6s								
M20K	**Styx River**	79.50	28	P		**P**		13 34 16.1	+0.6
	baz=266								
IMAR	**Indian Mountai**	79.54	24	P		**P**		13 34 15.8	+0.2
B21K	**Ikpikpuk River**	79.57	21	IAmb		IAmb		13 34 26.1	
	comp=Z,88nm,0.9s								
B21K	**Ikpikpuk River**	79.57	21	P		**P**		13 34 16.0	+0.4
	baz=264								
KDAK	**Kodiak Island**	79.57	33	LR		LR		14 05 02.2	
	comp=Z,2µm,21.4s,baz=248,slow=32								
KDAK	**Kodiak Island**	79.57	33	P		**P**		13 34 16.3	+0.4
KDAK				IAmb		IAmb		13 34 31.5	
	comp=Z,208nm,1.8s								
KDAK	**Kodiak Island**	79.57	33	IAMs_20		IAMs_20		14 04 18.5	
	comp=Z,3µm,22.0s								
KDAK	**Kodiak Island**	79.57	33	P		**P**		13 34 16.3	+0.4
KDAK				pmax		pmax			
	comp=Z,208nm,1.8s								
KDAK	**Kodiak Island**	79.57	33	P		**P**		13 34 16.5	+0.7
	baz=268								
A22K	**Sinclair Lake**	79.61	19	P		**P**		13 34 16.2	+0.4
	baz=263								
O20K	**Slope Mountain**	79.65	30	P		**P**		13 34 15.7	-0.7
	baz=267								
E21K	**Kilik River**	79.67	22	P		**P**		13 34 16.2	-0.1
	baz=264								
G21K	**Allakaket**	79.68	24	IAmb		IAmb		13 34 26.3	
	comp=Z,84nm,1.1s								
G21K	**Allakaket**	79.68	24	P		**P**		13 34 16.9	+0.6
	baz=265								
Q20K	**Shuyak Island**	79.70	32	P		**P**		13 34 16.7	+0.1
	baz=268								
SYI	**Shuyak Island**	79.71	32	IAmb		IAmb		13 34 25.7	
	comp=Z,45nm,0.8s								
F21K	**Alatna River**	79.75	23	P		**P**		13 34 17.2	+0.5
	baz=265								
H21K	**Melozitna Rive**	79.90	25	IAmb		IAmb		13 34 48.3	
	comp=Z,82nm,1.4s								
H21K	**Melozitna Rive**	79.90	25	P		**P**		13 34 18.2	+0.7
	baz=266								
VRH	**Novokhopyorsk**	79.90	321	*e*P		**P**		13 34 15.9	-1.9
VRH				pmax		pmax			
	comp=Z,120nm,1.6s								
N20K	**Mount Spurr**	79.91	29	P		**P**		13 34 17.9	+0.1
	baz=267								
SPCR	**Spurr Chakacha**	79.91	29	P		**P**		13 34 17.5	-0.2
	baz=267								
CHUM	**Lake Minchumin**	80.00	26	P		**P**		13 34 18.8	+0.7
	baz=267,SNR=10								
PPLA	**Purkeypile**	80.00	27	IAmb		IAmb		13 34 34.9	
	comp=Z,79nm,1.3s								
PPLA	**Purkeypile**	80.00	27	P		**P**		13 34 18.6	+0.3
	baz=267								
B22K	**Teshekpuk Lake**	80.05	20	IAmb		IAmb		13 34 28.5	
	comp=Z,79nm,1.0s								
B22K	**Teshekpuk Lake**	80.05	20	P		**P**		13 34 19.4	+1.3
	baz=265,SNR=9.8								
HOM	**Homer**	80.13	31	P		**P**		13 34 19.4	+0.5
	baz=268								
D22K	**Ayikyak River**	80.18	21	P		**P**		13 34 20.1	+1.1
	baz=266								
SKT	**Skwentna**	80.27	28	P		**P**		13 34 19.8	+0.2
	baz=268,SNR=15								
F22K	**John River**	80.27	23	P		**P**		13 34 20.7	+1.2
	baz=266								
CAPN	**Captain Cook N**	80.41	30	P		**P**		13 34 21.9	+1.6
	baz=268								
E22K	**Anaktuvuk Pass**	80.45	22	P		**P**		13 34 21.3	+0.8
	baz=267								
H22K	**Ishtalitna Cre**	80.50	24	P		**P**		13 34 21.9	+1.1
	baz=267								
BRLK	**Bradley Lake**	80.52	31	IAmb		IAmb		13 34 30.9	
	comp=Z,55nm,1.0s								
BRSE	**Bradley Lake S**	80.59	31	P		**P**		13 34 21.6	+0.3
	baz=269								
BPAW	**Bear Paw Mtn.**	80.59	26	IAmb		IAmb		13 34 31.0	
	comp=Z,88nm,1.0s								
BPAW	**Bear Paw Mtn.**	80.59	26	P		**P**		13 34 21.6	+0.3
	baz=268,SNR=32								
KTH	**Kantishna Hill**	80.60	27	IAMs_20		IAMs_20		14 13 51.3	
	comp=Z,2µm,20.0s								
SUA	**Susitna One**	80.62	29	IAmb		IAmb		13 34 30.6	
	comp=Z,94nm,0.8s								
SUA	**Susitna One**	80.62	29	P		**P**		13 34 21.7	0.0
	baz=269,SNR=16								
LABN	**Labinsk**	80.63	314	*e*P		**P**		13 34 18.0	-3.9
LABN				*e*				13 37 25.4	
LABN				*e*S		**S**		13 44 21.2	-6.0
LABN				pmax		pmax			
	comp=Z,37nm,0.7s								
LABN				MLR		MLR			
	comp=Z,3µm,17.0s								
LABN				MLR		MLR			
	comp=N,2µm,21.0s								
LABN				MLR		MLR			
	comp=E,3µm,16.0s								
L22K	**Petersville**	80.64	28	IAmb		IAmb		13 34 30.6	
	comp=Z,55nm,1.0s								
MLY	**Manley**	80.73	25	P		**P**		13 34 22.3	+0.3
	baz=268,SNR=18								
ERBR	**Yeremizino-Bor**	80.77	315	*e*P		**P**		13 34 23.6	+1.0
ERBR				*e**PP		**pP**		13 34 34.3	+1.9
ERBR				*e*S		**S**		13 44 33.0	+4.3
ERBR				pmax		pmax			
	comp=Z,43nm,1.3s								
MARD	**Mardin**	80.84	307	IAmb		IAmb		13 34 36.5	
	comp=Z,186nm,1.7s								
ATD	**Arta Tunnel**	80.85	280	LR		LR		14 08 41.1	
	comp=Z,34nm,22.0s,baz=68,slow=35								
SLKM	**Skilak Lake**	80.86	30	IAmb		IAmb		13 34 34.0	
	comp=Z,59nm,1.0s								
CUT	**Chulitna**	80.87	28	P		**P**		13 34 22.1	-0.7
	baz=269								
TRF	**Thorofare Moun**	80.88	27	IAmb		IAmb		13 34 55.5	
	comp=Z,216nm,1.8s								
TRF	**Thorofare Moun**	80.88	27	P		**P**		13 34 22.9	-0.1
	baz=269,SNR=9.2								
D23K	**Nanushuk River**	80.91	21	P		**P**		13 34 23.4	+0.5
	baz=268								
M22K	**Willow**	80.93	29	P		**P**		13 34 22.8	-0.2
	baz=269,SNR=10								
C23K	**Itkillik River**	80.97	20	IAMs_20		IAMs_20		14 10 06.8	
	comp=Z,3µm,22.0s								
C23K	**Itkillik River**	80.97	20	P		**P**		13 34 23.7	+0.5
	baz=268								
ABPO	**Ambohimpanom**	81.01	249	P		**P**		13 34 23.6	-1.0
ABPO	**Ambohimpanom**	81.01	249	IAMs_20		IAMs_20		14 08 34.3	
	comp=Z,2µm,20.0s								
ABPO	**Ambohimpanom**	81.01	249	P		**P**		13 34 23.6	-1.0
AB

baz=270,SNR=34
VSR Storozhevoye 81.51 321 *e*P P 13 34 25.2 -1.2
VSR pmax pmax
comp=Z,40nm,1.6s
RND Reindeer 81.53 27 IAmb IAmb 13 34 59.3
comp=Z,85nm,1.2s
D24K Happy Valley 81.58 21 IAMs_20 IAMs_20 14 12 07.3
comp=Z,3µm,20.0s
D24K Happy Valley 81.58 21 P P 13 34 27.2 +0.7
baz=269
LPSR Galich'ya Gora 81.62 322 *e*P P 13 34 24.3 -2.6
LPSR pmax pmax
comp=Z,50nm,1.4s
C24K Franklin Bluff 81.63 21 IAMs_20 IAMs_20 14 12 35.5
comp=Z,2µm,20.0s
C24K Franklin Bluff 81.63 21 P P 13 34 27.3 +0.6
baz=269
WAT1 Susitna Watana 81.67 28 P P 13 34 26.9 -0.2
baz=270
E24K Your Creek 81.69 22 P P 13 34 28.0 +0.8
baz=270
KNK Knik Glacier 81.72 29 IAmb IAmb 13 35 06.7
comp=Z,69nm,1.0s
KNK Knik Glacier 81.72 29 P P 13 34 27.5 +0.1
baz=271,SNR=11
SML Sawmill 81.78 29 IAmb IAmb 13 34 36.0
comp=Z,65nm,0.8s
SML Sawmill 81.78 29 P P 13 34 27.4 -0.3
baz=271,SNR=11
PWL Port Wells 81.79 30 P P 13 34 28.3 +0.6
baz=271
WRH Wood River Hil 81.86 26 IAmb IAmb 13 34 47.0
comp=Z,75nm,1.3s
F24K Squaw Lake 81.92 23 P P 13 34 28.8 +0.5
baz=270
H24K Noodor Dome 81.94 25 P P 13 34 29.3 +0.8
baz=271
COLA College 81.96 26 P P 13 34 29.5 +1.0
COLA College 81.96 26 *i* P P 13 34 27.4 -1.1
COLA pmax pmax
comp=Z,19nm,0.9s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 81.96 26 P P 13 34 28.6 +0.1
baz=271
VOI Vohitsoka 81.98 247 IAMs_20 IAMs_20 14 11 49.9
comp=Z,2µm,20.0s
CCB Clear Creek Bu 81.98 26 P P 13 34 28.6 0.0
CCB IAMs_20 IAMs_20 14 12 53.7
comp=Z,2µm,22.0s
WAT6 Susitna Watana 82.04 28 P P 13 34 29.0 -0.2
baz=271,SNR=44
M23K Glacier View 82.07 29 P P 13 34 29.6 +0.5
baz=271,SNR=11
G24K Hadweenzic Riv 82.09 24 P P 13 34 30.1 +0.9
baz=271
POKR Poker Plat Res 82.13 25 P P 13 34 29.3 -0.2
baz=271
DHY Denali Highway 82.20 27 P P 13 34 30.3 +0.3
baz=271,SNR=12
SCM Sheep Creek Mo 82.25 29 P P 13 34 30.4 +0.2
baz=272,SNR=10
P23K Montague Islan 82.27 30 P P 13 34 30.3 0.0
baz=272
MOS Moscow 82.28 325 *e*P P 13 34 32.7 +2.4
MOS *e* 13 37 42.0
MOS *e* 13 44 45.0
MOS pmax pmax
comp=Z,40nm,0.7s
MOS MLR MLR
comp=Z,2µm,18.0s
HDA Harding Lake 82.36 26 P P 13 34 30.4 -0.2
baz=272,SNR=18
ILAR Eielson Array 82.37 26 P P 13 34 29.7 -1.0
comp=Z,4.8nm,0.6s,baz=249,slow=4.9,SNR=44
ILAR LR LR 14 09 34.9
comp=Z,2µm,21.8s,baz=258,slow=34
comp=Z,4.8nm,0.6s
ILAR Eielson Array 82.37 26 P P 13 34 30.2 -0.4
GLI Glacier Island 82.40 30 P P 13 34 30.7 -0.2
baz=272
FOMA Nahampoana Res 82.43 244 IAMs_20 IAMs_20 14 09 54.9
comp=Z,3µm,19.0s
D25K Kavik River 82.45 21 P P 13 34 31.3 +0.2
baz=272,SNR=15
G25K Bearman Lake 82.64 24 P P 13 34 33.5 +1.5
baz=272
ARPR Arapgir-MALATY 82.67 308 IAMs_20 IAMs_20 14 15 26.8
comp=Z,2µm,21.0s
H25L Birch Creek 82.77 24 P P 13 34 33.5 +0.8
baz=272
F25K Christian Rive 82.78 23 IAMs_20 IAMs_20 14 14 03.6
comp=Z,2µm,20.0s
F25K Christian Rive 82.78 23 P P 13 34 34.1 +1.3
baz=272
E25K Arctic Village 82.79 22 P P 13 34 33.9 +1.1
baz=272
M24K Tolsona, Glenn 82.79 28 P P 13 34 34.3 +1.3
baz=273
K24K Donnelly Dome 82.89 27 IAmb IAmb 13 34 59.1
comp=Z,70nm,1.0s
K24K IAMs_20 IAMs_20 14 05 28.8
comp=Z,3µm,22.0s
K24K Donnelly Dome 82.89 27 P P 13 34 33.8 +0.3
baz=273,SNR=10
OBN Obninsk 82.91 325 *d* *i*P P 13 34 33.8 +0.2
OBN *e* 13 34 37.7
OBN *e**PP **pP** 13 34 44.4 +0.9
OBN *e*PPP PPP 13 39 33.1
OBN *e*S **S** 13 44 50.8 +0.5
OBN *e*SS **SS** 13 50 14.6 +1.1
OBN *e*SSS SSS 13 53 42.4
OBN pmax pmax
comp=Z,32nm,0.9s
OBN MLR MLR
comp=Z,3µm,19.0s
KLU Klutina 82.94 29 IAmb IAmb 13 35 08.7
comp=Z,50nm,1.2s
KLU Klutina 82.94 29 P P 13 34 34.2 +0.4
baz=273,SNR=7.8
C26K Camden Bay 82.94 20 P P 13 34 35.0 +1.5
baz=273,SNR=16
ANN Anapa 82.96 314 *e*PP **P** 13 34 32.8 -1.3
ANN *e**PP **pP** 13 34 42.4 -1.6
ANN *e*PPP PPP 13 39 38.7
ANN *e*S **S** 13 44 50.6 -0.7
ANN pmax pmax
comp=Z,27nm,0.7s
J25K Salcha River, 83.03 26 P P 13 34 34.6 +0.4
baz=273,SNR=11
EYAK Cordova Ski Ar 83.07 30 IAMs_20 IAMs_20 14 07 38.8
comp=Z,3µm,21.0s
EYAK Cordova Ski Ar 83.07 30 P P 13 34 35.1 +0.7
baz=273
PAX Paxson 83.07 27 IAmb IAmb 13 35 12.3
comp=Z,80nm,1.4s
PAX IAMs_20 IAMs_20 14 15 00.7
comp=Z,2µm,22.0s
PAX Paxson 83.07 27 P P 13 34 35.4 +1.0
baz=273,SNR=12
LVZ Lovozero 83.13 338 IAMs_20 IAMs_20 14 10 03.6
comp=Z,3µm,22.0s
LVZ Lovozero 83.13 338 P P 13 34 35.1 +0.5
BMAR Burnt Mountain 83.20 23 P P 13 34 35.9 +1.0
HARP HAARP 83.25 28 P P 13 34 35.4 +0.1
baz=274
RIDG Independent Ri 83.31 27 P P 13 34 35.5 -0.2
baz=274,SNR=15
F26K Sheenjek River 83.35 23 P P 13 34 37.4 +1.6
baz=274
C27K Jago River 83.38 21 IAmb IAmb 13 35 11.6
comp=Z,90nm,1.4s
C27K IAMs_20 IAMs_20 14 11 42.2
comp=Z,3µm,21.0s
C27K Jago River 83.38 21 P P 13 34 37.1 +1.3
baz=274,SNR=16
G26K Porcupine Rive 83.54 23 P P 13 34 38.3 +1.7
baz=274
N25K Chitina, Valde 83.56 29 IAmb IAmb 13 35 10.6
comp=Z,58nm,1.1s
N25K IAMs_20 IAMs_20 14 08 58.8
comp=Z,2µm,22.0s
N25K Chitina, Valde 83.56 29 P P 13 34 38.2 +1.1
baz=274,SNR=13
BMRM Bremner River 83.61 29 P P 13 34 37.9 +0.7
baz=274
APA Apatity 83.63 337 ⇓ *i*P P 13 34 36.6 -0.5
APA *i* 13 37 49.1
APA *i* S **S** 13 44 55.5 -1.7
APA *i* SS **SS** 13 50 20.9 -2.6
DOT Dot Lake 83.66 27 IAmb IAmb 13 35 12.8
comp=Z,80nm,1.3s
DOT IAMs_20 IAMs_20 14 05 27.1
comp=Z,2µm,21.0s
SCRK Sand Creek 83.67 26 IAmb IAmb 13 35 14.4
comp=Z,59nm,1.3s
SCRK Sand Creek 83.67 26 P P 13 34 37.3 -0.3
baz=274,SNR=9.9
GAZ Gaziantep 83.69 307 IAmb IAmb 13 35 07.1
comp=Z,80nm,1.3s
KAIM Kayak Island 83.77 30 P P 13 34 39.2 +1.2
baz=274
J26L Joseph Creek 83.82 26 IAmb IAmb 13 34 46.4
comp=Z,31nm,0.8s
J26L Joseph Creek 83.82 26 P P 13 34 38.7 +0.5
baz=275
MENT Mentasta 83.87 27 IAmb IAmb 13 35 12.0
comp=Z,47nm,1.0s
MENT Mentasta 83.87 27 P P 13 34 40.2 +1.7
I26K Coal Creek Min 83.92 25 IAmb IAmb 13 34 47.0
comp=Z,55nm,0.9s
I26K IAMs_20 IAMs_20 14 13 51.0
comp=Z,2µm,20.0s
I26K Coal Creek Min 83.92 25 P P 13 34 39.0 +0.4
baz=275
GLB Gilahina Butte 83.95 29 IAmb IAmb 13 35 04.2
comp=Z,61nm,1.0s
TOKA Tokat 84.00 310 IAmb IAmb 13 34 53.4
comp=Z,56nm,1.0s
L26K Log Cabin Wild 84.04 27 IAmb IAmb 13 35 04.7
comp=Z,62nm,1.2s
L26K IAMs_20 IAMs_20 14 16 11.1
comp=Z,2µm,20.0s
L26K Log Cabin Wild 84.04 27 P P 13 34 40.4 +1.1
baz=275,SNR=9.2
VRDI Verde Repeater 84.14 29 IAmb IAmb 13 35 06.7
comp=Z,68nm,1.4s
M26K Nabesna, AK 84.25 28 IAmb IAmb 13 35 15.8
comp=Z,83nm,1.2s
M26K IAMs_20 IAMs_20 14 13 23.5
comp=Z,2µm,20.0s
M26K Nabesna, AK 84.25 28 P P 13 34 41.5 +1.0
baz=275,SNR=15
E27K Coleen River 84.27 22 P P 13 34 41.7 +1.2
baz=276
BGLC Bering Glacier 84.33 30 P P 13 34 42.3 +1.5
baz=275
MCARA McCarthy VSAT 84.33 29 P P 13 34 41.7 +0.9
baz=276
CRQM Cirque 84.34 30 IAmb IAmb 13 34 50.1
comp=Z,62nm,1.0s
CRQE Cirque 84.36 30 P P 13 34 41.9 +0.7
baz=276
D27M Malcolm River 84.38 21 IAMs_20 IAMs_20 14 18 52.7
comp=Z,2µm,20.0s
D27M Malcolm River 84.38 21 P P 13 34 42.0 +1.0
baz=277,SNR=22
G27K Doyon Strip 84.39 23 IAmb IAmb 13 35 07.0
comp=Z,69nm,1.4s
G27K Doyon Strip 84.39 23 P P 13 34 42.6 +1.6
baz=276
ASF Jabal al Asfar 84.39 302 LR LR 14 17 59.8
comp=Z,1µm,20.2s,baz=73,slow=40
H27K Steamboat Moun 84.50 24 P P 13 34 43.3 +1.7
baz=276
K27K Chicken 84.51 26 P P 13 34 43.1 +1.5
baz=276
I27K Kandik River 84.53 25 P P 13 34 42.9 +1.1
baz=276,SNR=50
BNN Bunyan 84.62 308 IAmb IAmb 13 34 56.6
comp=Z,104nm,1.4s
L27K Beaver Creek, 84.72 27 P P 13 34 44.0 +1.2
baz=276,SNR=14
BCAR Beaver Creek A 84.74 27 P P 13 34 43.6 +0.7
M27K Edge Creek, AK 84.78 28 IAmb IAmb 13 35 21.2
comp=Z,64nm,1.2s
M27K IAMs_20 IAMs_20 14 09 46.0
comp=Z,3µm,22.0s
M27K Edge Creek, AK 84.78 28 P P 13 34 43.8 +0.6
baz=276,SNR=14
E28M Babbage River 84.97 22 IAMs_20 IAMs_20 14 17 47.4
comp=Z,2µm,21.0s
E28M Babbage River 84.97 22 P P 13 34 44.6 +0.7
baz=278,SNR=18
F28M Old Crow 84.98 23 IAMs_20 IAMs_20 14 15 51.7
comp=Z,2µm,20.0s
F28M Old Crow 84.98 23 P P 13 34 44.8 +0.8
baz=278,SNR=14
MESA MESA 84.98 30 P P 13 34 45.7 +1.3
baz=276
D28M Stokes Point 85.16 21 P P 13 34 46.2 +1.4
baz=279
CTG Chitna Glacier 85.19 29 P P 13 34 46.8 +1.5
baz=277,SNR=18
BVCY Beaver Creek 85.24 28 P P 13 34 46.7 +1.3
baz=277,SNR=13
I28M Miner Creek 85.25 25 IAMs_20 IAMs_20 14 11 24.9
comp=Z,3µm,22.0s
I28M Miner Creek 85.25 25 P P 13 34 46.7 +1.2
baz=278,SNR=52
SIM Simferopol' 85.30 315 *e*P P 13 34 45.7 -0.4
SIM pmax pmax
comp=Z,73nm,1.1s
SIM MLR MLR
comp=Z,2µm,20.0s
LOGN Logan Glacier 85.37 29 IAmb IAmb 13 34 57.5
comp=Z,58nm,1.0s
YUK3 Moose Creek 85.51 28 P P 13 34 47.9 +0.9
baz=278
MMAI Mount Meron Ar 85.56 303 P P 13 34 47.4 -0.4
comp=Z,16nm,1.0s,baz=66,slow=8.4,SNR=7.3
comp=Z,16nm,1.0s
E29M Blow River 85.60 22 P P 13 34 47.9 +0.8
baz=280
DAWY Dawson 85.67 26 P P 13 34 47.6 0.0
baz=278,SNR=23
KEV Kevo 85.68 340 IAMs_20 IAMs_20 14 18 01.8
comp=Z,3µm,20.0s
BZK Bozkurt 85.70 312 IAmb IAmb 13 35 17.4
comp=Z,100nm,1.4s
BZK Bozkurt 85.70 312 ⇑P P 13 34 49.6 +1.5
H29M Whitestone 85.77 24 IAmb IAmb 13 35 06.1
comp=Z,80nm,1.1s
H29M Whitestone 85.77 24 P P 13 34 48.5 +0.5
baz=279
O28M Mount Upton 85.77 29 IAmb IAmb 13 35 20.6
comp=Z,79nm,1.2s
O28M Mount Upton 85.77 29 P P 13 34 49.2 +0.8
baz=278
G29M Pine Creek 85.80 23 P P 13 34 49.0 +0.9
baz=280,SNR=15
PINM Pinnacle 85.84 30 P P 13 34 49.6 +1.1
baz=278
YUK8 Steele Glacier 85.91 29 P P 13 34 50.2 +1.2
baz=278
ILGA Ilgaz 86.02 311 IAmb IAmb 13 35 32.1
comp=Z,42nm,1.1s
KIRS Kirsehir-Merke 86.08 309 ⇓P P 13 34 52.0 +1.8
BR104 Keskin Array S 86.23 309 P P 13 34 51.3 +0.3
comp=Z,135nmcomp=Z,15nm,1.0s
BR131 Keskin Array S 86.23 309 P P 13 34 50.2 -0.8
SNR=17
BR131 Keskin Array S 86.23 309 *i* P P 13 34 50.5 -0.5
BRTR Keskin Array B 86.23 309 P P 13 34 50.1 -0.8
comp=Z,5.9nm,0.9s,baz=101,slow=5.3,SNR=18
BRTR LR LR 14 19 18.1
comp=Z,1µm,21.4s,baz=60,slow=40
comp=Z,5.9nm,0.9s
BRTR Keskin Array B 86.23 309 P P 13 34 48.1 -2.9
ARCES ARCESS Array B 86.23 340 P P 13 34 49.5 -0.7
comp=Z,5.5nm,0.9s,baz=59,slow=2.0,SNR=8.3
ARCES LR LR 14 18 38.0
comp=Z,3µm,18.7s,baz=82,slow=39
comp=Z,5.5nm,0.9s
BR106 Keskin Array S 86.25 309 P P 13 34 51.3 +0.2
comp=Z,131nmcomp=Z,12nm,1.0s
BR105 Keskin Array S 86.25 309 P P 13 34 51.3 +0.2
comp=Z,173nmcomp=Z,16nm,1.0s
EIL Elat 86.32 299 LR LR 14 20 06.4
comp=Z,2µm,19.1s,baz=66,slow=40
PNL Peninsula 86.33 30 P P 13 34 52.4 +1.5
baz=279
M29M Somme Creek 86.34 28 IAmb IAmb 13 35 21.2
comp=Z,135nm,1.8s
M29M IAMs_20 IAMs_20 14 18 31.2
comp=Z,2µm,22.0s
M29M Somme Creek 86.34 28 P P 13 34 52.2 +1.2
baz=279
SPITS Spitsbergen Ar 86.36 349 P P 13 34 49.1 -1.6
comp=Z,16nm,1.1s,baz=91,slow=7.2,SNR=5.6
SPITS LR LR 14 19 50.3
comp=Z,3µm,18.1s,baz=60,slow=40
comp=Z,16nm,1.1s
L29M L29M 86.38 27 P P 13 34 52.4 +1.3
baz=280,SNR=25
EPYK Eagle Plains 86.40 24 P P 13 34 51.7 +0.6
baz=281,SNR=8.0
YUK4 Talbot Arm 86.43 29 P P 13 34 52.4 +0.8
baz=279
G30M tAoh Zraii Nji 86.48 23 IAmb IAmb 13 35 17.1
comp=Z,88nm,1.4s
G30M IAMs_20 IAMs_20 14 16 15.4
comp=Z,2µm,20.0s
G30M tAoh Zraii Nji 86.48 23 P P 13 34 51.3 -0.2
baz=281
F30M Barrier River 86.53 22 IAmb IAmb 13 35 27.1
comp=Z,87nm,1.1s
F30M IAMs_20 IAMs_20 14 13 52.5
comp=Z,2µm,22.0s
F30M Barrier River 86.53 22 P P 13 34 51.6 0.0
baz=282
K29M Barlow Dome 86.53 26 P P 13 34 53.0 +1.1
baz=280,SNR=11
YUK6 Outpost Mounta 86.63 29 P P 13 34 53.0 +0.4
baz=280
O29M Mount Kennedy 86.63 30 P P 13 34 52.8 +0.3
baz=279
I30M Mount Dempster 86.76 25 P P 13 34 52.9 -0.1
I30M IAmb IAmb 13 35 45.6
comp=Z,47nm,1.2s
I30M Mount Dempster 86.76 25 P P 13 34 53.5 +0.4
baz=281,SNR=12
MAW Mawson 86.78 200 P P 13 34 48.3 -4.4
comp=Z,2.5nm,0.7s,baz=58,slow=9.5,SNR=12
MAW LR LR 14 09 10.4
comp=Z,2µm,21.9s,baz=52,slow=33
J30M Hart River 86.90 25 IAmb IAmb 13 35 29.5
comp=Z,51nm,1.2s
J30M IAMs_20 IAMs_20 14 15 37.3
comp=Z,2µm,21.0s
J30M Hart River 86.90 25 P P 13 34 54.5 +0.8
baz=281
CSS Mathiatis 87.05 305 IAMs_20 IAMs_20 14 21 40.7
comp=Z,2µm,21.0s
HYT Haines Junctio 87.07 29 P P 13 34 55.5 +0.9
baz=280,SNR=7.9
M30M Minto, Yukon 87.08 27 IAmb IAmb 13 35 24.6
comp=Z,106nm,1.6s
M30M Minto, Yukon 87.08 27 P P 13 34 55.8 +1.3
baz=281,SNR=9.7
N30M Aishikik Lake 87.15 28 IAMs_20 IAMs_20 14 11 00.5
comp=Z,2µm,21.0s
N30M Aishikik Lake 87.15 28 P P 13 34 56.1 +1.2
baz=281,SNR=7.3
P29M Windy Craggy 87.16 30 P P 13 34 55.8 +0.8
baz=280
INK Inuvik 87.21 21 LR LR 14 15 00.1
comp=Z,981nm,22.0s,baz=285,slow=36
INK Inuvik 87.21 21 IAmb IAmb 13 35 20.8
comp=Z,60nm,1.4s
INK Inuvik 87.21 21 P P 13 34 55.2 +0.3
baz=284,SNR=16
G31M Satah River 87.25 23 IAmb IAmb 13 35 27.2
comp=Z,94nm,1.4s
G31M IAMs_20 IAMs_20 14 19 27.6
comp=Z,2µm,20.0s
G31M Satah River 87.25 23 P P 13 34 55.4 +0.2
baz=283,SNR=12
KIBK Kibwezi 87.28 267 P P 13 34 56.8 +0.2
KIBK Kibwezi 87.28 267 P P 13 34 55.7 -0.8
KIBK Kibwezi 87.28 267 P P 13 34 57.3 +0.8
SNR=8.1
MAYO Mayo, Yukon 87.28 26 IAmb IAmb 13 35 46.5
comp=Z,42nm,0.9s
MAYO Mayo, Yukon 87.28 26 P P 13 34 56.0 +0.6
baz=282,SNR=7.1
F31M Tsiigehtchic 87.33 22 IAmb IAmb 13 35 04.1
comp=Z,46nm,1.1s
F31M Tsiigehtchic 87.33 22 P P 13 34 55.6 +0.1
baz=283,SNR=26
P30M Million Dollar 87.46 30 P P 13 34 56.8 +0.3
baz=281
H31M Peel River 87.47 24 IAmb IAmb 13 35 28.6
comp=Z,47nm,1.2s
H31M Peel River 87.47 24 P P 13 34 56.3 0.0
baz=283
VNDA Vanda 87.47 172 P P 13 34 53.7 -2.3
comp=Z,5.0nm,0.8s,baz=325,slow=6.0,SNR=21
VNDA LR LR 14 13 02.7
comp=Z,2µm,21.3s,baz=336,slow=35
comp=Z,5.0nm,0.8s
FINES FINESS Array B 87.62 332 P P 13 34 54.8 -2.2
comp=Z,8.5nm,0.9s,baz=104,slow=4.7,SNR=15
FINES LR LR 14 18 12.8
comp=Z,5µm,20.6s,baz=74,slow=38
comp=Z,8.5nm,0.9s
FINES FINESS Array B 87.62 332 P P 13 34 55.8 -1.2
O30N Mendenhall 87.76 29 P P 13 34 58.3 +0.5
baz=282
N31M Braeburn, Yuko 87.76 28 IAmb IAmb 13 35 28.7
comp=Z,38nm,1.1s
N31M IAMs_20 IAMs_20 14 11 19.7
comp=Z,2µm,22.0s
N31M Braeburn, Yuko 87.76 28 P P 13 34 58.5 +0.7
baz=282,SNR=8.9
AK09 Malin Array Si 87.79 321 P P 13 34 57.0 -1.1
AK08 Malin Array Si 87.80 321 P P 13 34 57.0 -1.1
AK10 Malin Array Si 87.81 321 P P 13 34 57.0 -1.2
AKASG Malin Array Be 87.81 321 P P 13 34 56.5 -1.7
AKASG comp=Z,3.6nm,0.8s,baz=72,slow=4.3,SNR=7.7
AKASG LR LR 14 17 42.1
comp=Z,3µm,21.4s,baz=69,slow=38
comp=Z,3.6nm,0.8s
AKASG Malin Array Be 87.81 321 P P 13 34 57.2 -0.9
AKASG IAmb IAmb 13 35 27.7
comp=Z,56nm,1.6s
AKASG Malin Array Be 87.81 321 *i* P P 13 34 57.0 -1.2
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 87.81 321 IAmb IAmb 13 35 31.2
comp=Z,62nm,1.4s
AKBB Malin Array Si 87.81 321 *i* P P 13 34 58.3 +0.1
AKBB pmax pmax
AKBB comp=Z,43nm,1.3s MLR MLR
comp=Z,5µm,22.0s
KIEV Kiev 87.82 321 P P 13 34 57.2 -1.0
KIEV IAmb IAmb 13 35 31.2
comp=Z,55nm,1.4s
KIEV Kiev 87.82 321 ⇑P P 13 34 58.4 +0.2
KIEV Kiev 87.82 321 P P 13 34 57.2 -1.0
KIEV pmax pmax
comp=Z,55nm,1.5s
KIEV MLR MLR
comp=Z,4µm,21.0s
AK02 Malin Array Si 87.83 321 P P 13 34 57.3 -1.0
AK07 Malin Array Si 87.85 321 P P 13 34 57.2 -1.2
VSU Vasula 87.87 329 *i* P P 13 34 57.3 -1.0
VSU pmax pmax
comp=Z,53nm,1.4s
VSU MLR MLR
comp=Z,5µm,21.0s
PLBC Pleasant Camp 87.88 30 P P 13 34 58.9 +0.5
baz=281
KMBO Kilima Mbogo 87.90 269 P P 13 34 59.2 -0.5
comp=Z,8.8nm,0.2s,baz=64,slow=4.1,SNR=13
KMBO LR LR 14 13 02.3
comp=Z,1µm,20.2s,baz=98,slow=35
comp=Z,8.8nm,0.2s
PPT Papeete 87.95 108 LR LR 14 11 11.4
comp=Z,619nm,18.2s,baz=266,slow=34
MNK Minsk 87.97 325 *i* P P 13 34 56.6 -2.3
MNK *i* S **SKSac** 13 45 21.8 -3.4
MNK *i* SS **SS** 13 51 26.4 -1.5
MNK *i* SSS SSS 13 55 02.2
MNK pmax pmax
comp=Z,25nm,0.8s
MNK MLR MLR
comp=E,3µm,21.0s
MNK MLR MLR
comp=Z,3µm,21.0s
MNK MLR MLR
comp=N,3µm,21.0s

SAHE	Sakarya_HENDEK	88.19	311	⇑P		P		13 35 02.1	+1.8	
S31K	Pelican	88.25	32	P		P		13 35 00.2	+0.1	
	baz=282									
M31M	Drury Creek, Y	88.25	27	IAMs_20	IAMs_20			14 13 23.6		
	comp=Z,3µm,21.0s									
M31M	Drury Creek, Y	88.25	27	P		P		13 35 00.0	-0.1	
	baz=283									
WHY	Whitehorse	88.36	29	P		P		13 35 01.1	+0.4	
	baz=283,SNR=9.4									
SBA	Scott Base	88.39	172	P		P		13 35 01.3	+1.0	
SBA				IAmb		IAmb		13 35 39.6		
	comp=Z,58nm,1.4s									
SBA	Scott Base	88.39	172	P		P		13 35 01.3	+1.0	
SBA				pmax		pmax				
	comp=Z,58nm,1.4s									
SBA				MLR		MLR				
	comp=Z,1µm,21.0s									
SKAG	Skagway	88.40	30	P		P		13 35 01.3	+0.5	
	baz=282									
R31K	City Hall, Gus	88.41	31	P		P		13 35 01.2	+0.3	
	baz=282									
KIS	Kishinev	88.68	317	eP		P		13 35 04.0	+1.6	
KIS				eL		L		14 08 24.0		
KIS				LRM		MLR		14 21 28.0		
	comp=Z,500nm,18.5s									
MILM	Milestii Mici	88.70	317	eP		P		13 35 04.0	+1.5	
SORM	Soroca	88.80	318	⇑P		P		13 35 03.0	+0.1	
SORM	Soroca	88.80	318	P		P		13 35 03.0	+0.1	
A36M	Sachs Harbour	88.81	17	IAmb		IAmb		13 35 15.0		
	comp=Z,42nm,0.9s									
A36M	Sachs Harbour	88.81	17	P		P		13 35 02.8	+0.3	
	baz=291,SNR=31									
SIT	Sitka	88.91	33	P		P		13 35 03.1	-0.2	
	baz=282									
R32K	Eaglecrest	89.07	31	P		P		13 35 04.5	+0.5	
	baz=283									
NOR	Nord	89.10	355	i P		P		13 35 01.6	-2.2	
NOR				IAmb		IAmb		13 35 08.6		
	comp=Z,16nm,1.2s									
N32M	Quiet Lake	89.11	28	IAMs_20	IAMs_20			14 08 45.7		
	comp=Z,2µm,21.0s									
P32M	Atlin	89.17	30	P		P		13 35 04.9	+0.4	
	baz=284									
LODK	Lodwar	89.18	273	P		P		13 35 04.6	-1.0	
LODK				IAMs_20	IAMs_20			14 19 19.7		
	comp=Z,2µm,18.0s									
S32K	Killisnoo	89.22	32	P		P		13 35 05.2	+0.5	
	baz=283									
TIRR	Tirgusor	89.40	315	IAMs_20	IAMs_20			14 22 07.2		
	comp=Z,2µm,21.0s									
P33M	Teslin, Yukon	89.46	29	P		P		13 35 05.8	-0.1	
	baz=284									
CFR	Carcaliu	89.46	315	⇑P		P		13 35 07.8	+1.7	
CFR	Carcaliu	89.46	315	P		P		13 35 07.8	+1.7	
RNPP9	Sopachiv	89.75	322	P		P		13 35 06.8	-0.5	
Q32M	Nakina River	90.05	30	P		P		13 35 09.1	+0.3	
	baz=285									
C36M	Paulatuk	90.16	19	IAmb		IAmb		13 35 32.2		
	comp=Z,34nm,1.0s									
C36M	Paulatuk	90.16	19	P		P		13 35 09.4	+0.6	
	baz=292									
T33K	Petersburg	90.23	33	P		P		13 35 10.0	+0.6	
	baz=284									
TESR	Tescani	90.24	317	⇑P		P		13 35 09.6	-0.2	
VRI	Vrincioaia	90.31	316	⇑P		P		13 35 10.5	+0.4	
VRI	Vrincioaia	90.31	316	P		P		13 35 10.5	+0.4	
U33K	Whale Pass	90.31	33	P		P		13 35 10.3	+0.5	
	baz=284									
PLOR	Plostina	90.37	316	⇑P		P		13 35 10.7	+0.3	
PLOR	Plostina	90.37	316	P		P		13 35 10.7	+0.3	
BISRR	Bisoca	90.38	316	⇑P		P		13 35 12.2	+1.6	
ONER	Baraj Valea Uz	90.45	317	⇓P		P		13 35 11.8	+1.0	
CRAG	Craig	90.47	34	P		P		13 35 10.4	-0.1	
	baz=284									
R33M	Jennings River	90.58	30	P		P		13 35 11.1	-0.1	
	baz=286									
WRAK	Wrangell Islan	90.66	33	P		P		13 35 11.7	+0.3	
	baz=285									
NEHR	Nehoiu	90.69	316	⇑P		P		13 35 12.4	+0.5	
SUW	Suwalki	90.78	325	eP		P		13 35 11.7	-0.4	
SUW				ePP		PP		13 39 00.5	+13	
S34M	Telegraph Cree	90.90	31	P		P		13 35 13.4	+0.9	
	baz=286									
MLR	Muntele Rosu	90.92	316	LR		LR		14 21 34.4		
	comp=Z,3µm,20.5s,baz=62,slow=39									
MLR	Muntele Rosu	90.92	316	⇑P		P		13 35 13.8	+0.6	
MLR	Muntele Rosu	90.92	316	P		P		13 35 13.7	+0.6	
BURAR	Bucovina Array	90.97	318	⇓P		P		13 35 15.0	+1.7	
BURAR	Bucovina Array	90.97	318	P		P		13 35 14.9	+1.7	
DLBC	Dease Lake	91.32	31	LR		LR		14 13 21.6		
	comp=Z,1µm,20.8s,baz=274,slow=34									
DLBC	Dease Lake	91.32	31	P		P		13 35 15.1	+0.5	
	baz=287									
V35K	Ketchikan	91.34	34	P		P		13 35 14.6	0.0	
	baz=285									
WTLY	Watson Lake, Y	91.42	29	IAmb		IAmb		13 35 20.0		
	comp=Z,33nm,1.1s									
WTLY	Watson Lake, Y	91.42	29	P		P		13 35 15.5	+0.5	
	baz=288									
VOIR		91.55	316	⇑P		P		13 35 17.3	+1.3	
VOIR		91.55	316	P		P		13 35 17.2	+1.3	
T35M	Bob Quinn	91.62	32	P		P		13 35 16.4	+0.4	
	baz=287									
ARR	Arges	91.85	316	⇑P		P		13 35 18.0	+0.6	
U35K	Hyder	92.04	33	P		P		13 35 17.5	-0.4	
	baz=287									
KWP	Kalwaria Pacla	92.13	321	eP		P		13 35 23.2	+4.8	
MARR	Marisel-Cluj	92.58	318	⇑P		P		13 35 21.5	+0.8	
WRGLY	Wrigley	92.73	25	IAmb		IAmb		13 35 49.3		
	comp=Z,27nm,1.0s									
WRGLY	Wrigley	92.73	25	P		P		13 35 21.0	+0.1	
	baz=293									
DRGR		92.82	318	⇑P		P		13 35 21.7	-0.2	
DRGR		92.82	318	P		P		13 35 21.6	-0.2	
LIRD	Liard River Hi	92.94	29	P		P		13 35 22.2	+0.2	
	baz=290									
STHS	Stebnicka Huta	93.11	321	eP		P		13 35 25.7	+2.7	
STHS				e				13 39 08.4		
STHS	Stebnicka Huta	93.11	321	eP		P		13 35 25.7	+2.7	
STHS				ePP		PP		13 39 08.4	+2.3	
DAG	Danmarks Havn	93.20	352	i P		P		13 35 19.4	-3.5	
DAG				IAmb		IAmb		13 35 28.0		
	comp=Z,29nm,1.3s									
TOAD	Toad River Com	93.56	29	P		P		13 35 24.8	-0.1	
	baz=291									
BLKB	Belogradchik	93.62	315	⇓P		P		13 35 24.7	-0.8	
NIE	Niedzica	93.70	321	eP		P		13 35 20.0	-5.8	
NIE				ePP		PP		13 39 19.4	+8.7	
OJC	Ojcow	93.79	322	eP		P		13 35 26.4	+0.3	
OJC				ePP		PP		13 39 11.2	-0.1	
HFS	Hagfors	93.80	332	P		P		13 35 23.3	-2.6	
	comp=Z,4.1nm,0.8s,baz=123,slow=7.4,SNR=4.8									
HFS				LR		LR		14 21 40.9		
	comp=Z,4µm,22.0s,baz=58,slow=38									
IDI	Anoyia	93.81	306	P		P		13 35 26.8	+0.2	
IDI	Anoyia	93.81	306	LR		LR		14 22 39.2		
	comp=Z,732nm,20.4s,baz=60,slow=39									
BBB	Bella Bella	94.23	36	LR		LR		14 15 12.3		
	comp=Z,330nm,19.6s,baz=294,slow=34									
MBAR	Mbarara	94.29	270	LR		LR		14 16 35.3		
	comp=Z,844nm,21.1s,baz=75,slow=35									
LANS	Liptovska Anna	94.30	321	eP		P		13 35 29.6	+1.1	
LANS	Liptovska Anna	94.30	321	eP		P		13 35 29.6	+1.1	
NC405	NORSAR Array S	94.31	333	IAmb		IAmb		13 36 13.3		
	comp=Z,30nm,1.1s									
RES	Resolute Bay	94.32	10	LR		LR		14 20 08.7		
	comp=Z,967nm,20.9s,baz=344,slow=37									
NB2	NORSAR Subarra	94.56	333	P		P		13 35 26.6	-2.9	
	comp=Z,5.3nm,0.9s,baz=63,slow=4.6									
NOA	NORSAR Array B	94.56	333	P		P		13 35 26.7	-2.7	
	comp=Z,2.8nm,0.8s,baz=65,slow=4.6,SNR=9.3									
NOA				PP		PP		13 39 17.3	+0.2	
	comp=Z,4.3nm,1.2s,baz=64,slow=7.0,SNR=3.3									
NOA				LR		LR		14 21 08.0		
	comp=Z,4µm,20.5s,baz=65,slow=37									
OKC	Ostrava-Krasne	94.92	322	eSKKS		SKKSac		13 46 27.5	+0.3	
OKC				AMS		AMS		14 22 50.0		
	comp=Z,2µm,19.8s									
NEEM	North Greenlan	95.05	359	i P		P		13 35 31.0	-0.7	
NEEM				IAmb		IAmb		13 35 37.4		
	comp=Z,33nm,1.0s									
MORC	Moravsky Berou	95.31	322	eP		P		13 35 32.7	-0.4	
SYO	Syowa Base	95.39	201	⇑epP		P		13 35 38.2	+5.3	
SYO	Syowa Base	95.39	201	⇑i PP		PP		13 39 26.6	+3.0	
DBG	Daneborg	95.45	351	i P		P		13 35 31.3	-1.9	
DBG				IAmb		IAmb		13 35 38.8		
	comp=Z,26nm,1.4s									
KRLC	Kraliky	95.68	322	AMS		AMS		14 26 00.0		
	comp=Z,3µm,16.8s									
JMIC	Jan Mayen	95.70	346	LR		LR		14 23 57.2		
	comp=Z,2µm,19.9s,baz=49,slow=39									
KSP	Ksiaz	95.72	323	eP		P		13 35 35.0	+0.1	
KSP				ePP		PP		13 39 20.4	-6.0	
KSP	Ksiaz	95.72	323	P		P		13 35 34.7	-0.2	
OSTC	Ostas	95.86	323	eS		S		13 46 59.1	+7.4	
OSTC				AMS		AMS		14 22 50.0		
	comp=Z,2µm,19.3s									
DPC	Dobruska-Polom	95.87	322	epP		pP		13 35 56.4	+11	
DPC				eS		S		13 46 52.5	+0.7	
DPC				AMS		AMS		14 22 50.0		
	comp=Z,3µm,17.2s									
MODS	Modra-Piesok	95.91	320	ePP		PP		13 39 30.6	+2.6	
CHVC	Chvalec	95.95	323	AMS		AMS		14 23 30.0		
	comp=Z,2µm,17.5s									
UPC	Upice	96.00	323	eP		P		13 35 54.7	+18	
UPC				eS		S		13 46 52.5	-0.4	
UPC				AMS		AMS		14 22 50.0		
	comp=Z,3µm,20.3s									
VRAC	Vranov	96.04	321	eP		P		13 35 36.7	+0.2	
KRUC	Moravsky	96.25	321	eP		P		13 35 36.0	-1.4	
PDG	Podgorica	96.35	314	IAMs_20	IAMs_20			14 23 56.1		
	comp=Z,2µm,22.0s									
YKAW3	Yellowknife Wh	96.65	24	IAmb		IAmb		13 36 34.3		
	comp=Z,76nm,1.9s									
YKA	Yellowknife Ar	96.69	24	P		P		13 35 39.2	+0.2	
	comp=Z,6.2nm,0.8s,baz=302,slow=5.5,SNR=18									
YKA				PP		PP		13 39 34.2	+0.8	
	comp=Z,1.7nm,1.0s,baz=297,slow=9.1,SNR=3.8									
YKA				LR		LR		14 20 08.8		
	comp=Z,1µm,21.5s,baz=306,slow=36									
	comp=Z,6.2nm,0.8s									
YKA	Yellowknife Ar	96.69	24	P		P		13 35 39.8	+0.7	
YKA	Yellowknife Ar	96.69	24	i P		P		13 35 40.5	+1.5	
YKA				pmax		pmax				
	comp=Z,7.0nm,0.8s									
TREC	Trest	96.73	322	AMS		AMS		14 22 00.0		
	comp=Z,3µm,20.6s									
YKAW1	Yellowknife Wh	96.74	24	IAmb		IAmb		13 36 34.5		
	comp=Z,50nm,1.6s									
PVCC	Panska Ves	96.86	323	AMS		AMS		14 24 10.0		
	comp=Z,3µm,17.7s									
PRU	Pruhonice	97.07	322	ePP		PP		13 39 52.6	+16	
PRU				eS		S		13 47 00.1	-2.0	
PRU				AMS		AMS		14 14 50.0		
PRA	Prague	97.11	323	AMS		AMS		14 24 20.0		
	comp=Z,3µm,16.4s									
RICC	Richard	97.14	323	AMS		AMS		14 24 20.0		
	comp=Z,4µm,18.0s									
ZVC	Zvikov	97.47	322	eP		Pdif		13 36 03.8	+21	
ZVC				eS		S		13 46 59.1	-6.5	
ZVC				AMS		AMS		14 23 20.0		
	comp=Z,2µm,19.1s									
QSPA	South Pole Qui	97.49	180	P		P		13 35 42.8	+0.1	
	comp=Z,2.4nm,1.1s,baz=315,slow=2.3,SNR=8.5									
QSPA				PP		PP		13 39 39.2	-0.7	
	comp=Z,8.3nm,1.0s,baz=335,slow=5.9,SNR=4.9									
QSPA				LR		LR		14 21 48.6		
	comp=Z,1µm,19.4s,baz=348,slow=37									
	comp=Z,2.4nm,1.1s									
QSPA	South Pole Qui	97.49	180	P		Pdif		13 35 43.4	+0.7	
QSPA				IAmb		IAmb		13 36 38.0		
	comp=Z,64nm,2.0s									
QSPA				IAMs_20	IAMs_20			14 20 25.3		
	comp=Z,2µm,20.0s									
CLL	Collm	97.50	324	eP		P		13 35 43.0	0.0	
CLL				e				13 46 25.0		
CLL				eS		S		13 47 08.0	+2.3	
HSKC	Hora Svate Kat	97.51	323	epP		pP		13 35 59.6	+6.6	
HSKC				ePP		PP		13 39 41.6	+1.4	
HSKC				eS		S		13 47 03.0	-2.9	
HSKC				AMS		AMS		14 24 50.0		
	comp=Z,3µm,17.0s									
CKRC	Cesky Krumlov	97.62	321	epP		pP		13 36 00.5	+6.9	
CKRC				ePP		PP		13 39 43.1	+2.0	
CKRC				eS		S		13 47 09.5	+2.6	
CKRC				AMS		AMS		14 24 10.0		
	comp=Z,3µm,22.1s									
KHC	Kasperske Hory	97.96	322	epP		pP		13 35 59.7	+4.6	
KHC				ePP		PP		13 39 35.1	-8.6	
KHC				eS		S		13 47 13.6	+3.8	
KHC				AMS		AMS		14 19 40.0		
	comp=Z,3µm,21.2s									
GERES	GERESS Array B	97.99	322	P		P		13 35 43.3	-2.1	
	comp=Z,1.3nm,0.9s,baz=19,slow=6.2,SNR=4.7									
GERES				LR		LR		14 20 50.0		
	comp=Z,2µm,21.9s,baz=68,slow=36									
	comp=Z,1.3nm,0.9s									
LLLB	Lillooet	98.44	36	P		Pdif		13 35 47.8	+0.5	
LLLB				IAmb		IAmb		13 35 55.6		
	comp=Z,11nm,0.8s									
LSZ	Lusaka	98.49	256	LR		LR		14 20 14.3		
	comp=Z,2µm,19.1s,baz=88,slow=35									
LSZ	Lusaka	98.49	256	IAMs_20	IAMs_20			14 20 11.7		
	comp=Z,2µm,20.0s									
MATP	Matopo	98.67	250	LR		LR		14 16 38.2		
	comp=Z,978nm,21.5s,baz=80,slow=33									
CUC	Castrocucco	99.55	313	IAMs_20	IAMs_20			14 27 45.0		
	comp=Z,2µm,21.0s									
CEL	Celeste	100.03	311	IAMs_20	IAMs_20			14 29 18.9		
	comp=Z,2µm,22.0s									
KMRM	Mail Ridge	101.02	47	IAMs_20	IAMs_20			14 21 39.1		
	comp=Z,2µm,21.0s									
KCPM	Cahto Peak	101.29	47	IAMs_20	IAMs_20			14 17 01.2		
	comp=Z,2µm,21.0s									
O02D	Mt. Diablo Mer	101.70	46	IAMs_20	IAMs_20			14 17 28.8		
	comp=Z,2µm,20.0s									
HOPS	Hopland Field	101.90	48	IAMs_20	IAMs_20			14 14 29.3		
	comp=Z,2µm,21.0s									
MCCM	Maroni Confer	102.33	48	IAMs_20	IAMs_20			14 14 58.8		
	comp=Z,2µm,20.0s									
FARB	Farallon Islan	102.39	49	IAMs_20	IAMs_20			14 14 15.5		
	comp=Z,2µm,19.0s									
MNRC	McLaughlin Min	102.40	48	IAMs_20	IAMs_20			14 15 37.5		
	comp=Z,2µm,21.0s									
CVS	Carmenet Viney	102.58	48	IAMs_20	IAMs_20			14 14 57.2		
	comp=Z,2µm,21.0s									
WELL	Weller Preserv	103.82	47	IAMs_20	IAMs_20			14 15 39.0		
	comp=Z,2µm,21.0s									
CMB	Columbia Colle	104.21	48	IAMs_20	IAMs_20			14 15 49.5		
	comp=Z,2µm,20.0s									
NVAR	Mina Array Bea	105.58	47	Pdiff		Pdif		13 36 18.3	-1.2	
	comp=Z,0.8nm,0.8s,baz=273,slow=5.6,SNR=6.9									
NVAR				PKiKP		PKiKP		13 40 33.7	+0.8	
	comp=Z,1.1nm,0.7s,baz=293,slow=4.0,SNR=4.0									
NVAR				PKKPbc		PKKPbc		13 51 55.8	-2.4	
	comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=5.7									
CWC	Cottonwood Cre	106.52	49	IAMs_20	IAMs_20			14 16 54.6		
	comp=Z,2µm,22.0s									
ISA	Isabella, Lake	106.52	49	IAMs_20	IAMs_20			14 16 17.8		
	comp=Z,2µm,21.0s									
OSI	Osito Audit: C	106.72	51	IAMs_20	IAMs_20			14 15 47.3		
	comp=Z,2µm,22.0s									
WSHM	Spangler Hills	107.28	49	IAMs_20	IAMs_20			14 16 42.9		
	comp=Z,2µm,21.0s									
SNAA	Sanae	108.49	195	PKKPbc	PKKPbc			13 51 46.9	-3.1	
	comp=Z,2.2nm,0.8s,baz=233,slow=2.3,SNR=7.8									
TSUM	Tsumeb	108.86	252	IAMs_20	IAMs_20			14 25 07.3		
	comp=Z,2µm,20.0s									
BELC	Belle Mtn. Jos	109.04	50	IAMs_20	IAMs_20			14 17 42.6		
	comp=Z,2µm,21.0s									
DANC	Danby, Needles	109.25	49	IAMs_20	IAMs_20			14 17 42.1		
	comp=Z,2µm,22.0s									
PDAR	Pinedale Array	109.54	40	PKiKP		PKiKP		13 40 40.0	-0.1	
	comp=Z,0.6nm,0.7s,baz=313,slow=1.1,SNR=3.9									
PDAR				PKKPbc		PKKPbc		13 51 47.4	+1.4	
	comp=Z,0.6nm,0.8s,baz=66,slow=3.6,SNR=4.3									
BC3	Big Chuckawall	109.59	50	IAMs_20	IAMs_20			14 21 15.3		
	comp=Z,2µm,21.0s									
IRM	Iron Mountain	109.63	50	IAMs_20	IAMs_20			14 18 03.1		
	comp=Z,2µm,22.0s									
WUAZ	Wupatki	111.83	47	IAMs_20	IAMs_20			14 20 54.8		
	comp=Z,1µm,20.0s									
ETOB	Tobarra	112.35	317	PKP		PKiKP		13 40 44.2	-1.1	
MVCO	Mesa Verde	113.06	44	IAMs_20	IAMs_20			14 22 17.2		
	comp=Z,1µm,21.0s									
TUC	Tucson	113.72	50	IAMs_20	IAMs_20			14 35 06.0		
	comp=Z,1µm,20.0s									
PAB	San Pablo	113.73	319	IAMs_20	IAMs_20			14 34 37.2		
	comp=Z,2µm,20.0s									
EDA	Edea	114.00	278	IAMs_20	IAMs_20			14 28 54.9		
	comp=Z,1µm,22.0s									
ANMO	Albuquerque	115.63	45	IAMs_20	IAMs_20			14 26 20.1		
	comp=Z,2µm,20.0s									
EYMN	Ely	116.01	26	IAMs_20	IAMs_20			14 31 29.6		
	comp=Z,2µm,22.0s									
SPMN	Marine on St.	117.42	29	IAMs_20	IAMs_20			14 37 10.4		
	comp=Z,2µm,18.0s									
MSTX	Muleshoe	118.73	45	IAMs_20	IAMs_20			14 35 42.1		
	comp=Z,2µm,19.0s									
I40A	Norwalk	119.46	29	IAMs_20	IAMs_20			14 28 06.4		
	comp=Z,1µm,20.0s									
OK038	West end E0370	119.97	40	IAMs_20	IAMs_20			14 36 36.4		
	comp=Z,1µm,20.0s									
TORD	Torodi Ar. Bea	120.02	290	PKP		PKPdf		13 40 57.5	-3.1	
	comp=Z,2.5nm,0.5s,baz=51,slow=3.4,SNR=3.5									
N38A	Joes South For	120.38	33	IAMs_20	IAMs_20			14 37 14.2		
	comp=Z,2µm,20.0s									
TXAR	Lajitas Array	120.51	50	PKP		PKPdf		13 41 00.8	-0.6	
	comp=Z,3.4nm,0.9s,baz=221,slow=1.1,SNR=23									
TXAR				PKKPbc		PKKPbc		13 51 07.3	-0.3	
	comp=Z,0.7nm,1.0s,baz=101,slow=3.2,SNR=3.5									
OK048	Pawnee Station	121.14	39	IAMs_20	IAMs_20			14 43 42.2		
	comp=Z,2µm,21.0s									
ABTX	Abilene, Hawle	121.65	44	IAMs_20	IAMs_20			14 33 30.5		
	comp=Z,1µm,20.0s									
M44A	Midewin, Midew	122.60	29	IAMs_20	IAMs_20			14 40 34.4		
	comp=Z,2µm,21.0s									
JCT	Junction City	122.75	46	IAMs_20	IAMs_20			14 26 37.9		
	comp=Z,942nm,19.0s									
I49A	Point Hope	122.85	24	IAMs_20	IAMs_20			14 40 47.4		
	comp=Z,2µm,21.0s									
WHTX	Lake Whitney,	123.52	43	IAMs_20	IAMs_20			14 31 36.9		
	comp=Z,2µm,21.0s									
S44A	Carbondale	124.75	33	IAMs_20	IAMs_20			14 35 44.9		
	comp=Z,2µm,22.0s									
N49A	Columbus Grove	124.76	27	IAMs_20	IAMs_20			14 38 33.2		
	comp=Z,2µm,22.0s									
LONY	Lake Ozonia	125.10	17	IAMs_20	IAMs_20			14 39 45.1		
	comp=Z,2µm,20.0s									
R49A	Shelbyville	126.39	29	IAMs_20	IAMs_20			14 37 09.8		
	comp=Z,2µm,22.0s									
OXF	Oxford	126.96	36	IAMs_20	IAMs_20			14 30 42.9		
	comp=Z,1µm,22.0s									
Q52A	Bidwell	127.21	27	IAMs_20	IAMs_20			14 38 22.0		
	comp=Z,2µm,22.0s									
DBIC	Dimbokro	128.00	285	PKP		PKPdf		13 41 15.6	-0.3	
	comp=Z,6.4nm,1.0s,baz=126,slow=4.0,SNR=5.0									
BCX	Boston College	128.15	15	IAMs_20	IAMs_20			14 48 10.7		
	comp=Z,1µm,18.0s									
UNM	Universidad Na	128.92	58	IAMs_20	IAMs_20			14 30 32.0		
	comp=Z,1µm,21.0s									
U54A	Nelsons Funny	129.41	28	IAMs_20	IAMs_20			14 41 53.4		
	comp=Z,2µm,20.0s									
X51A	Calhoun	129.44	32	IAMs_20	IAMs_20			14 39 11.0		
	comp=Z,2µm,21.0s									
T57A	Hurt	130.16	25	IAMs_20	IAMs_20			14 40 31.9		
	comp=Z,2µm,22.0s									
U56A	King	130.21	27	IAMs_20	IAMs_20			14 44 13.4		
	comp=Z,1µm,20.0s									
Y52A	Lilburn	130.40	32	IAMs_20	IAMs_20			14 32 12.4		
	comp=Z,1µm,21.0s									
250A	Grady	130.61	36	IAMs_20	IAMs_20			14 35 28.3		
	comp=Z,2µm,21.0s									
154A	Montrose	131.88	32	IAMs_20	IAMs_20			14 50 24.4		
	comp=Z,1µm,19.0s									
PLCA	Paso Flores	144.22	160	PKP		PKPab		13 41 42.7	-0.4	
	comp=Z,10nm,0.9s,baz=236,slow=4.1,SNR=18									
JTS	Las Juntas de	145.29	60	IAMs_20	IAMs_20			14 56 10.1		
	comp=Z,813nm,20.0s									
MTDJ	Mount Denham	146.04	41	IAMs_20	IAMs_20			14 58 02.0		
	comp=Z,1µm,21.0s									
BI02	San Fabin de	147.50	155	IAMs_20	IAMs_20			14 44 13.4		
	comp=Z,1µm,22.0s									
BCIP	Isla Barro Col	150.18	56	IAMs_20	IAMs

PALK				S		Sn	13 38 52.8	-4.7	
	comp=Z,3.2nm,0.5s,baz=353,slow=19,SNR=1.0								
	comp=Z,3.4nm,0.9s								
AAK	**Ala-Archa**	**19.52**	**9**	P		**Pn**	**13 35 34.8**	**-0.6**	
	comp=Z,0.8nm,0.3s,baz=194,slow=7.4,SNR=5.4								
	comp=Z,6.1nm,0.8s								
AAK	**Ala-Archa**	**19.52**	**9**	P		**Pn**	**13 35 33.4**	**-2.0**	
LSA	**Lhasa**	**19.59**	**67**	P		**P**	**13 35 34.6**	**-0.8**	
LSA				IAmb		IAmb	13 35 40.3		
	comp=Z,11nm,0.8s								
KK31	**Karatay Array**	**19.68**	**0**	P		**Pn**	**13 35 36.8**	**-0.5**	
KKAR	**Karatay Array**	**19.68**	**0**	P		**Pn**	**13 35 36.6**	**-0.6**	
MKAR	**Makanchi Array**	**25.26**	**19**	P		**P**	**13 36 32.4**	**-0.4**	
	comp=Z,2.2nm,0.8s,baz=212,slow=9.8,SNR=4.0								
	comp=Z,2.2nm,0.8s								
CMAR	**Chiang Mai Arr**	**27.08**	**95**	P		**P**	**13 36 50.5**	**+0.9**	
	comp=Z,0.5nm,0.3s,baz=286,slow=9.4,SNR=4.6								
	comp=Z,0.5nm,0.3s								
AB31	**Akbulak array**	**27.12**	**345**	P		**P**	**13 36 49.7**	**+0.1**	
AB31				IAmb		IAmb	13 36 54.0		
	comp=Z,6.2nm,1.1s								
ABKAR	**Akbulak array**	**27.12**	**345**	P		**P**	**13 36 50.7**	**+1.2**	
KURBB	**Kurchatov Arra**	**27.93**	**11**	P		**P**	**13 36 58.2**	**+1.5**	
	comp=Z,0.3nm,0.4s,baz=204,slow=8.4,SNR=1.3								
	comp=Z,0.3nm,0.4s								
KURK	**Kurchatov**	**28.04**	**11**	P		**P**	**13 36 57.6**	**-0.1**	
KURK				IAmb		IAmb	13 37 01.3		
	comp=Z,11nm,1.1s								
ZALV	**Zalesovo Beam**	**32.41**	**16**	P		**P**	**13 37 37.0**	**+0.6**	
	comp=Z,1.5nm,0.5s,baz=213,slow=8.6,SNR=5.1								
	comp=Z,1.5nm,0.5s								
ZALV	**Zalesovo Beam**	**32.41**	**16**	P		**P**	**13 37 36.5**	**+0.1**	
AKAS	**Kas**	**37.39**	**300**	P		**P**	**13 38 18.9**	**-0.8**	
SONM	**Songino Array**	**37.59**	**40**	P		**P**	**13 38 23.9**	**+2.6**	
	comp=Z,2.6nm,0.8s,baz=238,slow=8.4,SNR=8.4								
	comp=Z,2.6nm,0.8s								
MILM	**Milestii Mici**	**40.69**	**316**	ePP		PP	13 40 25.0	+4.2	
MILM				eSKS		S	13 45 42.0	+45	
MILM				eS		S	13 45 48.0	+51	
AKBB	**Malin Array Si**	**41.91**	**321**	P		**P**	**13 38 56.9**	**-0.1**	
AKBB				IAmb		IAmb	13 39 11.1		
	comp=Z,9.1nm,1.1s								
KIEV	**Kiev**	**41.91**	**321**	P		**P**	**13 38 56.9**	**-0.1**	
KIEV				IAmb		IAmb	13 39 11.1		
	comp=Z,9.1nm,1.2s								
BURAR	**Bucovina Array**	**43.23**	**316**	P		**P**	**13 39 08.6**	**+0.7**	
ITM	**Ithomi**	**43.62**	**300**	P		**P**	**13 39 11.7**	**+0.5**	
ITM				IAmb		IAmb	13 39 44.2		
	comp=Z,32nm,1.3s								
PSZ	**Piszkesteto**	**46.77**	**315**	P		**P**	**13 39 36.2**	**+0.2**	
FINES	**FINESS Array B**	**48.57**	**333**	P		**P**	**13 39 50.3**	**+0.6**	
	comp=Z,1.5nm,0.7s,baz=104,slow=5.9,SNR=3.9								
	comp=Z,1.5nm,0.7s								
KEV	**Kevo**	**52.98**	**343**	P		**P**	**13 40 23.1**	**+0.3**	
FUORN	**Ofenpass-Fuorn**	**53.05**	**312**	P		**P**	**13 40 24.4**	**+0.3**	
FUORN				IAmb		IAmb	13 40 31.3		
	comp=Z,11nm,1.0s								
ARCES	**ARCESS Array B**	**53.26**	**342**	P		**P**	**13 40 25.4**	**+0.5**	
	comp=Z,2.9nm,0.9s,baz=111,slow=6.8,SNR=5.9								
	comp=Z,2.9nm,0.9s								
ARCES	**ARCESS Array B**	**53.26**	**342**	P		**P**	**13 40 25.0**	**+0.1**	
ARCES				IAmb		IAmb	13 40 30.9		
	comp=Z,22nm,1.5s								
HFS	**Hagfors**	**53.57**	**329**	P		**P**	**13 40 27.9**	**+0.6**	
	comp=Z,3.6nm,0.8s,baz=129,slow=11,SNR=2.4								
	comp=Z,3.6nm,0.8s								
NOA	**NORSAR Array B**	**55.00**	**329**	P		**P**	**13 40 37.1**	**-0.6**	
	comp=Z,1.0nm,0.8s,baz=103,slow=7.4,SNR=2.0								
	comp=Z,1.0nm,0.8s								
EKA	**Eskdalemuir Ar**	**61.82**	**322**	P		**P**	**13 41 25.3**	**-0.1**	
	comp=Z,1.8nm,0.8s,baz=88,slow=7.8,SNR=1.7								
	comp=Z,1.8nm,0.8s								
GMARE	**Gumare**	**63.41**	**232**	P		P	13 41 40.8	+4.1	
ESDC	**Sonseca Array**	**63.77**	**304**	P		**P**	**13 41 38.5**	**-0.4**	
	comp=Z,3.6nm,1.0s,baz=60,slow=6.9,SNR=8.4								
	comp=Z,3.6nm,1.0s								
WRA	**Warramunga Arr**	**75.75**	**119**	P		**P**	**13 42 54.2**	**+1.4**	
	comp=Z,1.2nm,1.0s,baz=314,slow=5.1,SNR=11								
	comp=Z,1.2nm,1.0s								
ASAR	**Alice Springs**	**77.38**	**123**	P		**P**	**13 43 03.5**	**+1.5**	
	comp=Z,1.3nm,0.6s,baz=304,slow=5.7,SNR=21								
	comp=Z,1.3nm,0.6s								

IDC 18 13:35:13.5±916.0, 54°30N×0°12E, h0km, Error ellipse: s-maj=424.2km s-min=159.1km az=112.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**10.06**	**117**	I	I	14 33 47.6	
	baz=307,slow=322,SNR=5.1						
I48TN	**KESRA INFRASON**	**19.57**	**157**	I	I	15 36 17.4	
	baz=342,slow=297,SNR=4.1						
I43RU	**DUBNA INFRASON**	**20.98**	**68**	I	I	15 39 52.3	
	baz=277,slow=320,SNR=5.8						
I31KZ	**AKTYUBINSK INF**	**34.73**	**72**	I	I	17 07 20.0	
	baz=302,slow=322,SNR=1.0						

*IDC **18** 13:49:43.5±1.7, 1°.67N×126°.20E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=183.4km s-min=20.7km az=66.0*
*DJA **18** 13:49:47.2±0.2, 2°N±2°×12°.7E±°, h10km, M3.7/9, mb4.0/1, MLv3.6/9*

ISC 18 13:49:48.8±1.1, 1°.76N±0°.07×126°.68E±0°.08, h35km, n8, σ1§31/11, mb3.6/4, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**145**	P	**Pn**	**13 50 08.1**	**-0.9**
TNTI				S	**Sn**	**13 50 27.0**	**+3.0**
SGSI	**Sangihe**	**2.23**	**329**	P	**Pn**	**13 50 24.1**	**+0.8**
KMSI	**Cibinong**	**2.95**	**246**	P	**Pn**	**13 50 33.6**	**+0.5**
KMSI				S	**Sn**	**13 51 07.6**	**+0.3**
SANI	**Sanana**	**3.85**	**190**	P	**Pn**	**13 50 45.3**	**-0.2**
SANI				S	**Sn**	**13 51 30.1**	**+0.6**
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**13 54 48.9**	**-0.1**
	1.2nm,0.5s,baz=338,slow=10,SNR=11						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**13 55 21.0**	**+0.3**
	0.5nm,0.7s,baz=346,slow=12,SNR=16						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**13 59 44.7**	**-1.3**
	0.2nm,0.4s,baz=111,slow=6.7,SNR=5.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.37**	**328**	P	**P**	**14 00 13.6**	**-0.9**
	0.4nm,0.6s,baz=130,slow=6.2,SNR=8.2						
	0.4nm,0.6s						

IDC 18 13:51:16.7±14.0, 15°.21S×165°.67E, h0km, mb3.6/3, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=239.9km s-min=36.9km az=55.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.86**	**174**	Pn	Pn	13 52 58.7	-0.1
	0.9nm,0.3s,baz=303,slow=21,SNR=25						
DZM				Sn	Sn	13 54 20.0	+2.3
	1.3nm,0.3s,baz=138,slow=23,SNR=8.4						
	2.3nm,0.4s						
STKA	**Stephens Creek**	**27.51**	**229**	P	P	13 57 04.8	-0.2
	1.3nm,0.7s,baz=31,slow=12,SNR=3.7						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**30.21**	**256**	P	P	13 57 29.0	-0.2
	0.3nm,0.7s,baz=84,slow=7.5,SNR=2.3						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**31.06**	**249**	P	P	13 57 36.9	+0.2
	0.4nm,0.6s,baz=84,slow=9.0,SNR=6.6						
	0.4nm,0.6s						

*IDC **18** 13:56:01.4±0.8, 7°.39N×124°.72E, h0km, mb3.8/10, mbtmp3.8/11, ML4.7/1, Error ellipse: s-maj=21.1km s-min=9.8km az=31.0*
*NEIC **18** 13:56:03.2±1.1, 7°.42N±0°.07×124°.77E±0°.05, h10km±5km, mb4.5/18, Error ellipse: s-maj=12.0km s-min=4.4km az=208.0*
*DJA **18** 13:56:10.0±0.7, 7°N±8°×12°5E±°, h31km±11km, M4.6/7, mb4.7/7, mB5.1/1, MLv4.6/7, Mw(mB)4.4/1*

ISC 18 13:56:06.3±0.5, 7°.48N±0°.06×124°.82E±0°.10, h35km, n43, σ1§40/42, mb4.0/16, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.85**	**118**	Pg	**Pn**	**13 56 20.3**	**-1.6**
	391nm,0.3s,baz=283,slow=7.6,SNR=9.4						
DAV				Lg	Lg	13 56 31.0	
	1µm,0.3s,baz=290,slow=10,SNR=8.7						
DAV	**Davao City (W)**	**0.85**	**118**		**Pn**	**13 56 20.0**	**-1.8**
SGSI	**Sangihe**	**3.83**	**169**	P	**Pn**	**13 57 04.9**	**+2.1**
SGSI				S	**Sn**	**13 57 46.9**	**+0.2**
KMSI	**Cibinong**	**6.91**	**187**	P	**Pn**	**13 57 49.1**	**+4.0**
TNTI	**Ternate**	**7.13**	**159**	P	**Pn**	**13 57 49.5**	**+1.3**
TOLI2	**Tolitoli**	**7.50**	**213**	Pn	**Pn**	**13 57 51.8**	**-1.5**
MRSI	**Marisa**	**7.52**	**203**	P	**Pn**	**13 57 56.7**	**+3.1**
	0.2nm37nm,0.6s						
LUWI	**Luwuk**	**8.71**	**194**	Pn	**Pn**	**13 58 06.8**	**-3.0**
LUWI	**Luwuk**	**8.71**	**194**	P	**Pn**	**13 58 13.2**	**+3.4**
	76nm,0.6s						
APSI	**Ampana**	**8.91**	**201**	P	Pn	13 58 17.6	+4.9
	25nm,1.1s						
SANI	**Sanana**	**9.53**	**173**	P	**Pn**	**13 58 21.6**	**+0.4**
	14nm,0.6s						
I39PW	**PALAU INFRASON**	**9.64**	**89**	I	I	14 57 20.0	
	baz=271,slow=301,SNR=0.7						
YULB	**Yu-li**	**16.18**	**348**	Pn	**Pn**	**13 59 51.5**	**+0.2**
YULB				IAmb	IAmb	13 59 58.4	
	comp=Z,32nm,1.2s						
TPUB	**Ta-pu**	**16.24**	**346**	Pn	**Pn**	**13 59 52.0**	**+0.1**
TPUB				IAmb	IAmb	14 00 09.3	
	comp=Z,81nm,1.3s						
NACB	**Ninganchiao**	**16.89**	**350**	P	**P**	**14 00 02.1**	**+0.3**
NACB				IAmb	IAmb	14 00 17.0	
	comp=Z,67nm,1.4s						
BATI	**Baumata**	**17.60**	**184**	P	**Pn**	**14 00 08.8**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=352,slow=7.1,SNR=4.3						
	comp=Z,7.3nm,0.3s						
KNRA	**Kununurra**	**23.33**	**170**	P	**P**	**14 01 10.8**	**-0.8**
KNRA				IAmb	IAmb	14 01 42.2	
	comp=Z,10nm,0.9s						
FITZ	**Fitzroy Crossi**	**25.42**	**178**	P	**P**	**14 01 30.8**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=358,slow=7.9,SNR=6.9						
	comp=Z,3.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**25.42**	**178**	P	**P**	**14 01 30.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**27.44**	**296**	P	**P**	**14 01 49.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=83,slow=8.0,SNR=1.6						
	comp=Z,0.3nm,0.3s						
WB0	**Warramunga Arr**	**28.66**	**161**	P	**P**	**14 01 58.9**	**-1.2**
WB0				IAmb	IAmb	14 02 35.0	
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**28.81**	**161**	P	**P**	**14 02 00.3**	**-1.1**
	comp=Z,1.6nm,0.9s,baz=329,slow=11,SNR=7.5						
	comp=Z,1.6nm,0.9s						
WRA	**Warramunga Arr**	**28.81**	**161**	P	**P**	**14 02 00.0**	**-1.3**
WR8	**Warramunga Arr**	**28.88**	**161**	P	**P**	**14 02 00.7**	**-1.2**
WR8				IAmb	IAmb	14 02 44.3	
	comp=Z,3.3nm,0.8s						
JHJ2	**Mitsune**	**29.05**	**27**	P	**P**	**14 02 03.6**	**+0.3**
INCN	**Inchon**	**29.92**	**3**	P	**P**	**14 02 10.7**	**-0.3**
INCN				IAmb	IAmb	14 02 50.6	
	comp=Z,53nm,1.4s						
AS31	**Alice Springs**	**32.20**	**164**	P	**P**	**14 02 29.8**	**-1.5**
ASAR	**Alice Springs**	**32.20**	**164**	P	**P**	**14 02 30.4**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=342,slow=7.1,SNR=39						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**32.20**	**164**	P	**P**	**14 02 30.3**	**-1.0**
EVN	**Everest**	**41.28**	**304**	P	**P**	**14 03 48.5**	**-0.9**
BBOO	**Buckleboo**	**41.47**	**166**	P	**P**	**14 03 49.4**	**-0.5**
BBOO				IAmb	IAmb	14 04 29.7	
	comp=Z,19nm,1.3s						
STKA	**Stephens Creek**	**42.28**	**159**	P	**P**	**14 03 56.7**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=308,slow=4.7,SNR=4.6						
	comp=Z,1.5nm,0.6s						
PET	**Petropavlovsk**	**53.09**	**25**	P	**P**	**14 05 20.9**	**+0.7**
MKAR	**Makanchi Array**	**53.42**	**325**	P	**P**	**14 05 23.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=120,slow=7.2,SNR=6.1						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**53.42**	**325**	P	**P**	**14 05 22.4**	**-0.4**
KURBB	**Kurchatov Arra**	**57.58**	**327**	P	**P**	**14 05 53.5**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=126,slow=6.6,SNR=5.1						
	comp=Z,0.6nm,0.8s						
BVAR	**Borovoye Array**	**63.17**	**327**	P	**P**	**14 06 31.1**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=108,slow=9.3,SNR=2.5						
	comp=Z,0.6nm,0.8s						
RPZ	**Rata Peaks**	**65.90**	**145**	P	**P**	**14 06 49.3**	**+0.6**
SNZO	**South Karori**	**66.65**	**141**	P	**P**	**14 06 53.5**	**0.0**
ILAR	**Eielson Array**	**82.56**	**26**	P	**P**	**14 08 26.1**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=246,slow=5.0,SNR=5.9						
	comp=Z,0.2nm,0.8s						
E25K	**Arctic Village**	**82.97**	**22**	P	**P**	**14 08 28.8**	**+1.2**
E25K				IAmb	IAmb	14 08 49.0	
	comp=Z,3.7nm,1.4s						
VNDA	**Vanda**	**87.36**	**172**	P	**P**	**14 08 48.9**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=293,slow=7.7,SNR=2.4						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**87.36**	**172**	P	**P**	**14 08 48.9**	**-0.3**
VNDA				IAmb	IAmb	14 09 10.1	
	comp=Z,4.0nm,1.5s						

*IDC **18** 14:02:22.5±1.2, 11°.53N×86°.36W, h0km, mb3.5/4, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=109.0km s-min=18.2km az=45.0*
*CATAC **18** 14:02:24.4±0.3, 11°N±1°×8°7W±°, h20km±2km, M4.2/50, MLv4.2/50, Error ellipse: s-maj=3.2km s-min=1.9km az=38.2, confirmed*
*UCR **18** 14:02:24.8±1.4, 11°.04N×86°.76W, h15km±5km, MW4.4*
*NEIC **18** 14:02:25.7±1.4, 11°.12N±0°.06×86°.68W±0°.07, h20km±3km, mb4.3/15, Error ellipse: s-maj=11.8km s-min=6.5km az=52.0*
*SNET **18** 14:02:33.6±0.9, 11°.62N×86°.90W, h35km±999km, ML3.5*

ISC 18 14:02:25.9±2.1, 11°.04N±0°.03×86°.79W±0°.03, h30km±16km, n179, σ1§21/216, mb4.2/12, 29C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**1.06**	**27**	P	**Pn**	**14 02 44.5**	**-0.3**
SABN	**Sabanita**	**1.10**	**34**	P	**Pn**	**14 02 44.6**	**-0.8**
NANN	**Nandasmo**	**1.11**	**36**	S	**Sn**	**14 03 00.2**	**+0.4**
NANN	**Nandasmo**	**1.11**	**36**	P	**Pn**	**14 02 45.7**	**+0.2**
MASN	**Masaya**	**1.14**	**34**	P	**Pn**	**14 02 45.5**	**-0.3**
MASN				S	**Sn**	**14 03 00.7**	**+0.3**
MASN	**Masaya**	**1.14**	**34**	eP	**Pn**	**14 02 45.0**	**-0.8**
LCRUZ	**La Cruz**	**1.14**	**88**	P	**Pn**	**14 02 44.3**	**-1.5**
LCRUZ				eS	**Sn**	**14 02 59.1**	**-1.4**
MAS3	**Al N del Volca**	**1.15**	**32**	P	**Pn**	**14 02 45.0**	**-1.1**
MAS3				S	**Sn**	**14 03 01.3**	**+0.5**
COPN	**Copaltepe**	**1.16**	**10**	P	**Pn**	**14 02 45.6**	**-0.4**
COPN	**Copaltepe**	**1.16**	**10**	P	**Pn**	**14 02 45.5**	**-0.4**
COPN				eS	**Sb**	**14 03 02.0**	**0.0**
ABCN	**Banco Central**	**1.18**	**24**	P	**Pn**	**14 02 46.0**	**-0.4**
UNAN	**Cigeo UNAN**	**1.19**	**25**	P	**Pn**	**14 02 45.8**	**-0.6**
UNAN				S	**Sn**	**14 03 02.1**	**+0.6**
USIM	**UNAN**	**1.19**	**25**	Pn	**Pn**	**14 02 46.1**	**-0.3**
JAPN	**AI SSO del Vol**	**1.20**	**66**	P	**Pn**	**14 02 45.9**	**-0.7**
JAPN	**AI SSO del Vol**	**1.20**	**66**	eP	**Pn**	**14 02 45.9**	**-0.7**
TISN	**Laguna Tiscapa**	**1.21**	**25**	P	**Pn**	**14 02 46.2**	**-0.6**
ALLN	**Telcor Managua**	**1.22**	**24**	P	**Pn**	**14 02 46.7**	**-0.3**
MGAN	**Managua**	**1.23**	**26**		**Pn**	**14 02 46.3**	**-0.7**
MGAN	**Managua**	**1.23**	**26**	P	**Pn**	**14 02 46.6**	**-0.4**
MGAN	**Managua**	**1.23**	**26**	S	**Sn**	**14 03 03.2**	**+0.7**
MGAN	**Managua**	**1.23**	**26**	eP	**Pn**	**14 02 46.3**	**-0.7**
MORN	**AI O del Volca**	**1.23**	**66**	P	**Pn**	**14 02 45.8**	**-1.2**
MORN				S	**Sn**	**14 03 03.0**	**+0.3**
APQ2	**Apoyeque**	**1.24**	**22**	P	**Pn**	**14 02 46.8**	**-0.4**
APQ2				S	**Sn**	**14 03 02.7**	**-0.3**
APQ2	**Apoyeque**	**1.24**	**22**	P	**Pn**	**14 02 46.6**	**-0.6**
APQ2				S	**Sn**	**14 03 03.9**	**+0.9**
AMTN	**Mateare**	**1.25**	**16**	P	**Pn**	**14 02 47.1**	**-0.1**
AMTN	**Mateare**	**1.25**	**16**	S	**Sn**	**14 03 03.8**	**+0.9**
CARN	**Rivas**	**1.25**	**83**	P	**Pn**	**14 02 46.4**	**-1.0**
CARN				S	**Sn**	**14 03 03.3**	**+0.1**
CARN	**Rivas**	**1.25**	**83**	P	**Pn**	**14 02 46.2**	**-1.1**
CARN				eS	**Sn**	**14 03 02.9**	**-0.3**
CONN	**Concepcion**	**1.26**	**65**	P	**Pn**	**14 02 46.0**	**-1.4**
CONN				S	**Sn**	**14 03 03.8**	**+0.5**
AERN	**Aeropuerto Man**	**1.26**	**29**	P	**Pn**	**14 02 46.4**	**-1.0**
AERN	**Aeropuerto Man**	**1.26**	**29**	S	**Sn**	**14 03 03.8**	**+0.4**
WILN	**Americas 2**	**1.27**	**28**	P	**Pn**	**14 02 46.6**	**-0.9**
WILN				S	**Sn**	**14 03 04.0**	**+0.5**
APYN	**Apoyeque**	**1.27**	**20**	P	**Pn**	**14 02 47.1**	**-0.5**
APYN				S	**Sn**	**14 03 04.1**	**+0.5**
ELI1	**Hacienda Flor**	**1.28**	**108**	P	**Pn**	**14 02 47.3**	**-0.4**
ELI1	**Hacienda Flor**	**1.28**	**108**	eP	**Pn**	**14 02 47.2**	**-0.4**
APQ3	**Volcan Apoyequ**	**1.30**	**19**	P	**Pn**	**14 02 48.0**	**+0.1**
APQ3				S	**Sn**	**14 03 05.2**	**+0.9**
ALIBA	**Liberia Airpor**	**1.30**	**110**	eP	**Pn**	**14 02 47.7**	**-0.3**
ALIBA				eS	**Sn**	**14 03 04.3**	**0.0**
DELF	**Filadelfia**	**1.35**	**115**	eP	**Pn**	**14 02 48.2**	**-0.5**
LAPC	**Finca la Perla**	**1.36**	**101**	P	**Pn**	**14 02 47.6**	**-1.2**
MOMN	**Momotombo**	**1.39**	**10**	P	**Pn**	**14 02 48.5**	**-0.7**
ALEN	**Leon**	**1.42**	**357**	P	**Pn**	**14 02 49.3**	**-0.3**
ALEN	**Leon**	**1.42**	**357**	S	**Sn**	**14 03 08.0**	**+0.7**
VRLE	**La Escondida,**	**1.42**	**100**	eP	**Pn**	**14 02 48.9**	**-0.9**
MOM2	**El Cardon**	**1.43**	**12**	P	**Pn**	**14 02 49.0**	**-0.7**
MOM2				S	**Sn**	**14 03 08.4**	**+0.9**
GPS3	**Bodega del ICE**	**1.43**	**101**	eP	**Pn**	**14 02 49.4**	**-0.4**
GPS1	**Guardaparques**	**1.44**	**100**	eP	**Pn**	**14 02 49.0**	**-1.0**
BUAI	**Buenos Aires**	**1.44**	**96**	eP	**Pn**	**14 02 49.5**	**-0.5**
CNGA	**AI SSO del Vol**	**1.45**	**3**	P	**Pn**	**14 02 49.7**	**-0.4**
CNGA				S	**Sn**	**14 03 09.1**	**+0.9**
PACN	**AI O del Volca**	**1.46**	**360**	P	**Pn**	**14 02 50.2**	**0.0**
PACN				S	**Sn**	**14 03 09.4**	**+1.1**
CNGN	**Cerro Negro**	**1.46**	**4**		**Pn**	**14 02 49.7**	**-0.5**
CNGN	**Cerro Negro**	**1.46**	**4**	P	**Pn**	**14 02 49.8**	**-0.5**
CNGN	**Cerro Negro**	**1.46**	**4**	P	**Pn**	**14 02 49.5**	**-0.7**
CNGN				eS	**Sn**	**14 03 09.4**	**+1.1**
ROCN	**Rota Cerro Neg**	**1.48**	**2**	P	**Pn**	**14 02 50.0**	**-0.4**
MOM3	**MOM3**	**1.49**	**10**	P	**Pn**	**14 02 50.0**	**-0.7**
MOM3				S	**Sn**	**14 03 09.7**	**+0.7**
JUD3	**Juan Diaz 3**	**1.50**	**125**		**Pn**	**14 02 49.6**	**-1.3**
JUD3	**Juan Diaz 3**	**1.50**	**125**	eP	**Pn**	**14 02 49.4**	**-1.5**
HERN	**Volcan Telica**	**1.56**	**359**		**Pn**	**14 02 50.4**	**-1.4**
HERN	**Volcan Telica**	**1.56**	**359**	S	**Sn**	**14 03 12.4**	**+1.4**
HERN	**Volcan Telica**	**1.56**	**359**	P	**Pn**	**14 02 50.3**	**-1.4**
MESS	**Mesas**	**1.60**	**100**	eP	**Pn**	**14 02 51.8**	**-0.4**
NICO	**Nicoya**	**1.60**	**124**	eP	**Pn**	**14 02 51.4**	**-0.7**
POLN	**AI Sur del Vol**	**1.60**	**359**	P	**Pn**	**14 02 52.0**	**-0.2**
POLN				S	**Sn**	**14 03 12.8**	**+0.8**
HORNC	**Hornillas**	**1.62**	**101**	eP	**Pn**	**14 02 51.8**	**-0.7**
PKGN	**Cerro Pekin**	**1.63**	**354**	P	**Pn**	**14 02 52.5**	**-0.1**
PKGN				S	**Sn**	**14 03 13.5**	**+0.9**
CUI	**Cuipilapa**	**1.64**	**103**	eP	**Pn**	**14 02 51.6**	**-1.2**
VMAR	**Armenia, Volca**	**1.66**	**97**	eP	**Pn**	**14 02 52.4**	**-0.6**
CRIN	**San Cristobal**	**1.67**	**351**		**Pn**	**14 02 53.2**	**0.0**
CRIN	**San Cristobal**	**1.67**	**351**	S	**Sn**	**14 03 14.5**	**+0.8**
CRIN	**San Cristobal**	**1.67**	**351**	P	**Pn**	**14 02 53.2**	**0.0**
CRIN	**San Cristobal**	**1.67**	**351**	P	**Pn**	**14 02 53.1**	**-0.1**
CMARA	**Lajas Hojancha**	**1.68**	**127**	P	**Pn**	**14 02 52.2**	**-1.1**
CMARA	**Lajas Hojancha**	**1.68**	**127**	eP	**Pn**	**14 02 52.2**	**-1.1**
INDI	**Punta indio, G**	**1.72**	**132**	eP	**Pn**	**14 02 52.3**	**-1.5**
MOTZ	**Rio Naranjo**	**1.73**	**101**	eP	**Pn**	**14 02 54.5**	**+0.6**
UPAL	**Upala**	**1.75**	**94**	P	**Pn**	**14 02 53.5**	**-0.7**
UPAL	**Upala**	**1.75**	**94**	eP	**Pn**	**14 02 53.6**	**-0.7**
UPAL				eS	**Sn**	**14 03 16.9**	**+1.3**
CNAS	**Canas**	**1.77**	**110**	eP	**Pn**	**14 02 55.8**	**+1.3**
BOAB	**BOACO BROADBAN**	**1.79**	**38**		**Pn**	**14 02 53.5**	**-1.2**
BOAB	**BOACO BROADBAN**	**1.79**	**38**	P	**Pn**	**14 02 53.5**	**-1.2**
INVE	**Universidad In**	**1.79**	**108**	eP	**Pn**	**14 02 54.9**	**+0.2**
TIMP	**Tierras Morena**	**1.80**	**104**	eP	**Pn**	**14 02 55.4**	**+0.5**
TENO	**El Achiote**	**1.81**	**100**	eP	**Pn**	**14 02 54.2**	**-1.0**
TILA	**Tilaran**	**1.88**	**107**	eP	**Pn**	**14 02 56.8**	**+0.8**
QUEB	**Quebradon, Cot**	**1.91**	**102**	eP	**Pn**	**14 02 56.0**	**-0.4**
CHIK	**Chiripa**	**1.94**	**107**	eP	**Pn**	**14 02 57.4**	**+0.4**
JTS	**Las Juntas de**	**1.95**	**112**	Pn	**Pn**	**14 02 56.6**	**-0.4**
	30nm,0.3s,baz=319,slow=8.4,SNR=65						
JTS				Sn	**Sn**	**14 03 19.8**	**-0.7**
	41nm,0.3s,baz=237,slow=12,SNR=5.8						
JTS	**Las Juntas de**

comp=Z,5.5nm,0.9s
CPCT Cooper Cave 24.39 4 P **P** **14 07 40.8 -0.8**
CPCT IAmb IAmb 14 08 19.1
comp=Z,14nm,1.4s
WHAR Wooly Hollow 24.66 349 P **P** **14 07 42.3 -1.7**
WHAR IAmb IAmb 14 07 43.9
comp=Z,6.6nm,0.8s
T57A Hurt 26.73 14 P **P** **14 08 01.8 -1.0**
WCI Wyandotte Cave 27.08 1 P **P** **14 08 06.0 +0.1**
WCI IAmb IAmb 14 08 48.5
comp=Z,23nm,1.5s
M57A Sunshine Farm, 31.36 14 P **P** **14 08 43.3 -0.5**
PV03 Paradox Valley 33.53 328 P **P** **14 09 04.1 +0.9**
PV03 IAmb IAmb 14 09 05.7
comp=Z,1.3nm,0.7s
PV12 Saucer Basin, 33.55 328 P **P** **14 09 04.0 +0.6**
PV12 IAmb IAmb 14 09 06.2
comp=Z,2.6nm,0.7s
PV18 Skein Mesa, Pa 33.55 328 P **P** **14 09 03.9 +0.5**
BW06 Boulder Array 37.32 332 P **P** **14 09 35.4 -0.3**
PD31 Pinedale Array 37.32 332 P **P** **14 09 35.3 -0.4**
PDAR Pinedale Array 37.32 332 P **P** **14 09 34.8 -0.9**
comp=Z,0.2nm,0.6s,baz=135,slow=8.2,SNR=2.0
PDAR PcP **PcP** **14 11 54.3 -0.3**
comp=Z,0.4nm,0.9s,baz=129,slow=2.8,SNR=2.1
comp=Z,0.2nm,0.6s
NVAR Mina Array Bea 39.19 319 P **P** **14 09 52.4 +0.9**
comp=Z,0.6nm,0.7s,baz=129,slow=6.6,SNR=6.5
NVAR PcP **PcP** **14 12 01.3 +0.8**
comp=Z,1.1nm,0.7s,baz=132,slow=4.5,SNR=13
comp=Z,0.6nm,0.7s
ILAR Eielson Array 67.57 336 P **P** **14 13 17.8 -1.4**
comp=Z,0.5nm,0.8s,baz=141,slow=4.3,SNR=4.4
comp=Z,0.5nm,0.8s
F21K Alatna River 70.95 338 P **P** **14 13 40.8 +0.6**
F21K IAmb IAmb 14 14 07.4
comp=Z,3.4nm,0.8s
ASAR Alice Springs 139.32 247 PKP **PKPdf** **14 21 52.0 +1.0**
comp=Z,0.2nm,0.7s,baz=93,slow=2.0,SNR=6.1
WRA Warramunga Arr 139.48 252 PKP **PKPdf** **14 21 51.1 -0.2**
comp=Z,0.4nm,0.9s,baz=94,slow=2.6,SNR=2.7
CMAR Chiang Mai Arr 150.15 349 PKPbc **PKiKP** **14 22 15.1 -0.6**
comp=Z,0.4nm,0.3s,baz=6.7,slow=2.4,SNR=4.5

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*IDC **18** 15:02:06.2±10.0, 3.97S×127.84E, h234km±109km, mb3.2/4, mbtmp4.0/7, Error ellipse: s-maj=115.0km s-min=17.9km az=49.0*
*DJA **18** 15:02:09.2±0.5, 5.5S±7.7×127.7E±°, h272km±5km, M3.8/13, mB4.8/1, mb3.9/5, MLv3.8/13, Mw(mB)4.0/1*
*NEIC **18** 15:02:11.8±1.3, 4.3S±0.1×127.5E±0.1, h287km±10km, mb4.0/10, Error ellipse: s-maj=14.9km s-min=14.2km az=208.0*
ISC 18 15:02:09.8±0.6, 4.33S±0.07×127.35E±0.06, h272km, n40, σ1.9s80/38, mb3.7/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**1.06**	**53**	P	**Pn**	**15 02 49.8**	**+2.3**
AAI				S	**S**	**15 03 19.2**	**+1.9**
NLAI	**Namlea**	**1.11**	**347**	P	**Pn**	**15 02 50.2**	**+2.4**
NLAI				S	**S**	**15 03 19.3**	**+1.5**
MSAI	**Masohi**	**1.86**	**58**	P	**Pn**	**15 02 55.2**	**+2.3**
BNDI	**Bandanaira**	**2.56**	**94**	P	**Pn**	**15 03 01.6**	**+2.4**
SANI	**Sanana**	**2.64**	**329**	P	**Pn**	**15 03 00.6**	**+0.6**
SANI	**Sanana**	**2.64**	**329**	P	**Pn**	**15 03 00.6**	**+0.6**
KDI	**Kendari**	**4.73**	**274**	P	**Pn**	**15 03 19.5**	**-3.6**
FAKI	**Fak Fak**	**5.09**	**74**	Pn	**Pn**	**15 03 28.9**	**+1.5**
FAKI				Sn	**S**	**15 04 26.2**	**-3.3**
FAKI	**Fak Fak**	**5.09**	**74**	P	**Pn**	**15 03 28.8**	**+1.4**
FAKI	**Fak Fak**	**5.09**	**74**	P	**Pn**	**15 03 29.2**	**+1.8**
SWI	**Sorong**	**5.21**	**49**	P	**Pn**	**15 03 30.7**	**+1.9**
	0.2nm13nm,0.6s						
SAUI	**Saumlaki**	**5.35**	**133**	Pn	**Pn**	**15 03 32.6**	**+2.1**
SOEI	**Soe**	**6.20**	**209**	Pn	Pn	15 03 44.0	+3.1
BATI	**Baumata**	**6.89**	**212**	P	Pn	15 03 52.5	+3.1
	38nm,0.5s,baz=37,slow=4.5,SNR=9.4						
MTN	**Manton Dam**	**9.25**	**156**	Pn	**P**	**15 04 20.8**	**-3.9**
PLAI	**Plampang**	**10.50**	**244**	P	**P**	**15 04 38.0**	**-0.6**
KNRA	**Kununurra**	**11.36**	**173**	Pn	**P**	**15 04 46.4**	**-1.7**
FITZ	**Fitzroy Crossi**	**13.79**	**187**	P	**P**	**15 05 16.3**	**+1.3**
	1.6nm,0.4s,baz=15,slow=9.4,SNR=8.0						
FITZ	**Fitzroy Crossi**	**13.79**	**187**		**P**	**15 05 16.1**	**+1.1**
WB0	**Warramunga Arr**	**16.81**	**156**	P	**Pn**	**15 05 48.5**	**-2.1**
WB0				IAmb	IAmb	15 05 53.0	
comp=Z,8.5nm,1.4s							
WRAB	**Tennant Creek**	**16.95**	**157**	P	**Pn**	**15 05 49.8**	**-2.3**
WRAB				IAmb	IAmb	15 06 10.4	
comp=Z,12nm,1.5s							
WRAB	**Tennant Creek**	**16.95**	**157**	P	**Pn**	**15 05 52.2**	**+0.1**
WRA	**Warramunga Arr**	**16.95**	**157**	P	**Pn**	**15 05 50.9**	**-1.3**
comp=Z,1.7nm,0.3s,baz=338,slow=11,SNR=20							
WR8	**Warramunga Arr**	**17.02**	**156**	P	**Pn**	**15 05 50.8**	**-2.2**
WR8				IAmb	IAmb	15 05 58.2	
comp=Z,10.0nm,1.5s							
QIS	**Mount Isa**	**20.06**	**145**	P	Pn	15 06 25.9	-2.6
AS31	**Alice Springs**	**20.24**	**162**	P	Pn	15 06 26.0	-4.5
ASAR	**Alice Springs**	**20.24**	**162**	P	Pn	15 06 26.0	-4.5
comp=Z,1.8nm,0.6s,baz=344,slow=12,SNR=26							
comp=Z,1.8nm,0.6s							
ASAR	**Alice Springs**	**20.24**	**162**	P	**P**	**15 06 25.6**	**+0.5**
BBOO	**Buckleboo**	**29.48**	**165**	P	**P**	**15 07 50.6**	**+1.6**
BBOO				IAmb	IAmb	15 07 54.1	
comp=Z,12nm,1.2s							
CMAR	**Chiang Mai Arr**	**36.00**	**310**	P	**P**	**15 08 46.8**	**+1.2**
comp=Z,1.0nm,0.5s,baz=133,slow=6.8,SNR=11							
comp=Z,1.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**36.00**	**310**	P	**P**	**15 08 46.3**	**+0.8**
CHTO	**Chiang Mai**	**36.21**	**310**	P	**P**	**15 08 47.9**	**+0.6**
CHTO				IAmb	IAmb	15 09 20.8	
comp=Z,3.1nm,1.2s							
TOO	**Toolangi**	**37.02**	**156**	P	**P**	**15 08 54.6**	**+0.7**
TOO				IAmb	IAmb	15 09 37.3	
comp=Z,6.3nm,1.2s							
WKZ	**Wanaka**	**54.36**	**144**	P	**P**	**15 11 08.5**	**-0.2**
MKAR	**Makanchi Array**	**64.56**	**327**	P	**P**	**15 12 18.3**	**+0.1**
comp=Z,0.6nm,0.4s,baz=113,slow=8.6,SNR=8.7							
comp=Z,0.6nm,0.4s							
MKAR	**Makanchi Array**	**64.56**	**327**	P	**P**	**15 12 18.1**	**-0.1**
KURBB	**Kurchatov Arra**	**68.87**	**329**	P	**P**	**15 12 44.9**	**-0.2**
comp=Z,0.4nm,0.4s,baz=132,slow=6.1,SNR=3.9							
comp=Z,0.4nm,0.4s							
KURK	**Kurchatov**	**68.88**	**329**	P	**P**	**15 12 44.9**	**-0.3**
ABKAR	**Akbulak array**	**78.79**	**322**	P	**P**	**15 13 42.2**	**-0.3**
M14K	**Bethel**	**84.46**	**28**	P	**P**	**15 14 10.6**	**-1.2**

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*NEIC **18** 15:10:25.9±1.3, 40.05N±0.01×111.74W±0.01, h5km±1km, Error ellipse: s-maj=1.9km s-min=1.5km az=157.0*
UUSS 18 15:10:26.1±0.8, 40.05N±0.01×111.75W±0.01, h3km±4km, ML1.9/7, ML2.1/72(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=166.0, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMUT	**West Mountain**	**0.07**	**295**		Pg	15 10 27.9	+0.2
MPU	**Maple Canyon**	**0.09**	**109**		Pg	15 10 28.3	+0.3
MPU					Sg	15 10 30.0	+0.8
MPU	**Maple Canyon**	**0.09**	**109**	IAML		15 10 30.1	
comp=N,1µm,0.3s							
MPU				IAML		15 10 31.0	
comp=E,722nm,0.3s							
NLU	**North Lily Min**	**0.27**	**250**		Pg	15 10 31.7	+0.4
NLU	**North Lily Min**	**0.27**	**250**		Sg	15 10 36.1	+1.3
CWU	**Camp Williams**	**0.48**	**326**		Pg	15 10 36.0	+0.6
DAU	**Daniels Canyon**	**0.52**	**45**		Pg	15 10 36.3	+0.2
LEVU	**Levan**	**0.54**	**186**		Pg	15 10 36.6	+0.2
ELU	**Electric Lake**	**0.58**	**134**		Pg	15 10 37.9	+0.6
CTU	**Camp Tracy**	**0.65**	**360**		Pg	15 10 38.6	+0.1
NOQ	**North Oquirrh**	**0.67**	**335**		Pg	15 10 39.5	+0.6
FLU	**Fool Peak**	**0.74**	**206**		Pg	15 10 40.7	+0.4
HTU	**Hoyt Peak**	**0.75**	**32**		Pg	15 10 41.0	+0.7
DUG	**Dugway, Tooele**	**0.83**	**281**		Pg	15 10 42.4	+0.4
DUG	**Dugway, Tooele**	**0.83**	**281**	IAML		15 10 57.3	
comp=E,37nm,0.5s							
TMUT	**Trail Mountain**	**0.85**	**151**		Pg	15 10 42.8	+0.4
TMUT	**Trail Mountain**	**0.85**	**151**	IAML		15 11 01.9	
comp=E,48nm,0.6s							
TMUT				IAML		15 11 02.1	
comp=N,40nm,0.6s							
SGU	**Sterling**	**0.87**	**175**		Pb	15 10 43.4	-0.5
BSUT	**Blindstream Ca**	**0.90**	**57**		Pg	15 10 43.4	+0.1
P17A	**Butcher Ranch,**	**0.96**	**126**	Pg	Pg	15 10 44.7	+0.2
P17A				IAML		15 11 03.5	
comp=E,39nm,0.7s							
NAIU	**Northern Antel**	**1.04**	**339**		Pg	15 10 46.0	+0.1
TCUT	**Toone Canyon**	**1.10**	**13**	Pg	Pg	15 10 47.0	-0.2
TCUT				IAML		15 11 15.9	
comp=E,37nm,0.6s							
TCUT				IAML		15 11 16.5	
comp=N,56nm,0.8s							
WCU	**Willow Creek**	**1.11**	**194**		Pb	15 10 47.8	-0.3
Q16A	**Castle Valley**	**1.21**	**158**	Pg	Pg	15 10 48.4	-0.9
P18A	**Preston Nutter**	**1.23**	**109**		Pg	15 10 49.6	+0.1
BGU	**Big Grassy Mou**	**1.32**	**312**		Pg	15 10 50.2	-1.1
SRU	**San Rafael Swe**	**1.33**	**134**		Pg	15 10 51.2	-0.3
SRU	**San Rafael Swe**	**1.33**	**134**		Pg	15 10 50.9	-0.6
SRU				IAML		15 11 13.7	
SRU	comp=E,27nm,0.7s			IAML		15 11 17.2	
comp=N,21nm,0.9s							
HWUT	**Hardware Ranch**	**1.56**	**5**		Pn	15 10 54.8	-0.1
HWUT				IAML		15 11 28.0	
comp=N,11nm,4.0s							
HWUT				IAML		15 11 29.8	
comp=N,10nm,3.5s							
RDMU	**Red Mountain**	**1.74**	**72**		Pn	15 10 56.7	-0.7
RDMU				IAML		15 11 12.9	
RDMU	comp=E,11nm,4.6s			IAML		15 11 38.0	
comp=N,14nm,4.2s							
HVU	**Hansel Valley**	**1.90**	**336**		Pn	15 10 58.6	-0.9
HVU				IAML		15 11 45.2	
comp=E,7.3nm,3.3s							
MTPU	**Mount Pierson**	**2.03**	**190**	Pn	Pn	15 11 01.1	-0.3
MTPU				IAML		15 11 31.5	
comp=N,9.5nm,4.7s							
MTPU				IAML		15 11 56.7	
comp=E,7.0nm,4.9s							
PSUT	**Pine Spring**	**2.23**	**228**	Pn	Pn	15 11 04.0	0.0
PSUT				IAML		15 11 39.8	
comp=E,9.9nm,4.8s							
PSUT				IAML		15 11 59.7	
comp=N,5.9nm,4.9s							
HMU	**Henry Mountain**	**2.25**	**159**		Pb	15 11 08.0	+0.6
HMU				IAML		15 11 45.8	
comp=N,17nm,0.8s							
HMU				IAML		15 12 04.2	
comp=E,14nm,3.4s							
SPR3	**Spring Creek 3**	**2.26**	**243**	Pn	Pn	15 11 03.4	-1.2
PV21	**Cone Mtn., Par**	**2.61**	**124**	IAML		15 11 55.0	
comp=E,20nm,3.2s							
PV23	**Carpenter Ridg**	**2.65**	**126**	Pn	Pn	15 11 09.8	-0.2
PV14	**Lion Creek, Pa**	**2.69**	**127**	IAML		15 11 56.4	
comp=E,19nm,0.5s							
PV20	**West Nyswonger**	**2.75**	**127**	Pn	Pn	15 11 10.7	-0.5
PV04	**Paradox Valley**	**2.75**	**126**	Pn	Pn	15 11 10.6	-0.7
PV04				IAML		15 11 36.5	
comp=E,19nm,4.5s							
PV19	**Morning Glory**	**2.76**	**128**	IAML		15 12 00.0	
comp=E,17nm,2.6s							
PV18	**Skein Mesa, Pa**	**2.84**	**128**	Pn	Pn	15 11 12.7	+0.1
PV03	**Paradox Valley**	**2.88**	**128**	IAML		15 11 56.8	
comp=N,11nm,0.9s							
PV03				IAML		15 12 15.1	
comp=E,12nm,4.4s							
PV13	**Radium Mtn., P**	**2.95**	**129**	IAML		15 11 47.0	
comp=E,15nm,4.6s							
PV13				IAML		15 12 00.7	
comp=N,14nm,3.6s							
U15A	**North Rim**	**3.64**	**187**	IAML		15 11 56.3	
comp=E,5.7nm,4.9s							
U15A				IAML		15 12 36.4	
comp=N,5.5nm,4.7s							

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*IDC **18** 15:12:44.8±2.1, 1.83N×126.21E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=186.1km s-min=25.8km az=65.0*
*DJA **18** 15:12:49.5±0.8, 2.1N±2.2×12.6E±°, h12km±6km, M3.4/7, MLv3.4/7*
ISC 18 15:12:51.1±1.1, 1.78N±0.07×126.49E±0.07, h35km, n6, σ2s00/9, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**139**	P	**Pn**	**15 13 13.9**	**+0.7**
TNTI				S	**Sn**	**15 13 31.4**	**+1.6**
SGSI	**Sangihe**	**2.12**	**333**	P	**Pn**	**15 13 23.9**	**-0.2**
SGSI				S	**Sn**	**15 13 52.8**	**+3.6**
KMSI	**Cibinong**	**2.78**	**244**	P	**Pn**	**15 13 33.4**	**+0.3**
KMSI				S	**Sn**	**15 14 06.8**	**+1.4**
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**15 17 51.7**	**-0.6**
	1.3nm,1.0s,baz=339,slow=11,SNR=11						
	1.3nm,1.0s						
ASAR	**Alice Springs**	**26.30**	**165**	P	**P**	**15 18 23.6**	**0.0**
	0.4nm,0.9s,baz=341,slow=8.5,SNR=5.2						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**15 22 45.1**	**-2.4**
	0.1nm,0.3s,baz=123,slow=8.3,SNR=5.6						
	0.1nm,0.3s						

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*NEIC **18** 15:20:37.6±2.2, 3.84S±0.08×141.41E±0.09, h35km±1km, mb4.7/43, Error ellipse: s-maj=15.4km s-min=13.9km az=268.0*
*IDC **18** 15:20:43.5±1.3, 3.88S×141.54E, h97km±10km, mb3.9/16, mbtmp4.4/19, Error ellipse: s-maj=21.4km s-min=10.5km az=82.0*
*DJA **18** 15:20:43.6±1.0, 4.1S±3.1×14.1E±°, h19km±9km, M4.8/7, mb4.5/7, mB5.5/2, MLv4.9/6, Mw(mB)5.0/2*
ISC 18 15:20:34.1±0.4, 3.96S±0.04×141.63E±0.05, h10km, n106, σ2s39/103, mb4.7/36, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.71**	**327**	P	**Pg**	**15 21 11.0**	**+4.1**
	241nm,0.3s,baz=181,slow=10,SNR=271						
JAY				S	**Sg**	**15 21 31.4**	**+2.3**
	659nm,0.4s,baz=274,slow=23,SNR=12						
JAY	**Jayapura**	**1.71**	**327**	P	**Pg**	**15 21 11.0**	**+4.1**
JAY				S	**Sg**	**15 21 31.2**	**+2.1**
GENI	**Genyem**	**1.99**	**313**	P	**Pg**	**15 21 15.1**	**+2.7**
GENI	**Genyem**	**1.99**	**313**	S	**Sg**	**15 21 38.4**	**+0.1**
GENI	**Genyem**	**1.99**	**313**	P	**Pg**	**15 21 14.8**	**+2.4**
GENI				S	**Sg**	**15 21 38.6**	**+0.3**
SMPI	**Sarmi**	**3.51**	**304**	P	**Pb**	**15 21 35.3**	**-1.1**
SMPI				S	**Sn**	**15 22 15.3**	**+4.9**
MMPI	**Merauke**	**4.65**	**195**	P	**Pb**	**15 21 53.2**	**-2.6**
MMPI				S	**Sn**	**15 22 45.8**	**+7.3**
MANU	**Manus Island**	**6.03**	**72**	Pn	**Pn**	**15 22 07.9**	**+4.4**
PMG	**Port Moresby**	**7.71**	**135**	P	Pn	15 22 35.3	+8.8
	23nm,0.7s,baz=319,slow=12,SNR=12						
PMG	**Port Moresby**	**7.71**	**135**		**Pn**	**15 22 30.1**	**+3.6**
PMG	**Port Moresby**	**7.71**	**135**	P	Pn	15 22 37.0	+11
RKPI	**Ransiki, Papua**	**7.83**	**288**	P	Pn	15 22 34.4	+6.2
	4µm25nm,0.7s						
FAKI	**Fak Fak**	**9.42**	**276**	Pn	**Pn**	**15 22 52.4**	**+2.3**
FAKI	**Fak Fak**	**9.42**	**276**	P	**Pn**	**15 22 54.0**	**+3.9**
	21nm,0.8s						
COEN	**Coen**	**10.05**	**171**		Pn	15 23 07.4	+8.7
COEN	**Coen**	**10.05**	**171**	P	Pn	15 23 07.9	+9.2
SWI	**Sorong**	**10.81**	**286**	P	Pn	15 23 14.8	+5.8
	19nm,0.6s						
DRS	**Darwin Rock St**	**13.55**	**231**	P	**Pn**	**15 23 50.2**	**+3.7**
AUDHS	**Darwin High Sc**	**13.61**	**231**	P	**Pn**	**15 23 49.2**	**+1.9**
MTN	**Manton Dam**	**13.62**	**229**		**Pn**	**15 23 48.1**	**+0.6**
QIS	**Mount Isa**	**16.62**	**187**	P	**P**	**15 24 31.6**	**+1.8**
KNRA	**Kununurra**	**17.20**	**227**		**Pn**	**15 24 35.3**	**+0.6**
KNRA				IAmb	IAmb	15 24 39.5	
comp=Z,63nm,0.6s							
WB0	**Warramunga Arr**	**17.23**	**204**		**Pn**	**15 24 37.1**	**+2.0**
WRAB	**Tennant Creek**	**17.39**	**204**	P	**Pn**	**15 24 38.8**	**+1.7**
WRAB				IAmb	IAmb	15 24 42.3	
comp=Z,27nm,0.6s							
WRAB	**Tennant Creek**	**17.39**	**204**	P	**P**	**15 24 40.4**	**+2.0**
WRA	**Warramunga Arr**	**17.41**	**204**	P	**P**	**15 24 39.7**	**+1.2**
comp=Z,17nm,0.6s,baz=23,slow=12,SNR=81							
WRA				S	**Sn**	**15 27 43.7**	**-7.5**
comp=Z,4.2nm,0.9s,baz=20,slow=22,SNR=4.7							
WRA	**Warramunga Arr**	**17.41**	**204**	P	**Pn**	**15 24 37.4**	**+0.1**
SOEI	**Soe**	**18.17**	**251**	P	**Pn**	**15 24 45.7**	**-1.2**
SOEI				IAmb	IAmb	15 25 23.2	
comp=Z,33nm,0.6s							
SOEI	**Soe**	**18.17**	**251**	P	**P**	**15 24 49.6**	**+2.4**
SOEI	**Soe**	**18.17**	**251**	S	**Sn**	**15 28 06.5**	**-3.5**
BATI	**Baumata**	**18.87**	**250**	P	**Pn**	**15 24 56.9**	**+1.6**
comp=Z,27nm,0.6s,baz=261,slow=2.5,SNR=6.4							
AS31	**Alice Springs**	**20.96**	**200**		**P**	**15 25 18.3**	**+0.7**
ASAR	**Alice Springs**	**20.97**	**200**	P	**P**	**15 25 18.3**	**+0.7**
comp=Z,9.9nm,0.8s,baz=32,slow=10,SNR=112							
ASAR				S	S	15 29 02.3	-9.1
comp=Z,0.7nm,0.7s,baz=170,slow=39,SNR=1.5							
comp=Z,9.9nm,0.8s							
ASAR	**Alice Springs**	**20.97**	**200**	P	**P**	**15 25 18.4**	**+0.8**
AUALC	**St Philip's Co**	**21.00**	**200**	P	**P**	**15 25 20.2**	**+2.3**
FITZ	**Fitzroy Crossi**	**21.04**	**227**	P	**P**	**15 25 19.6**	**+1.2**
comp=Z,8.3nm,0.5s,baz=47,slow=12,SNR=22							
FITZ				S	S	15 29 00.6	-12
comp=Z,11nm,0.7s,baz=212,slow=15,SNR=7.7							
comp=Z,8.3nm,0.5s							
FITZ	**Fitzroy Crossi**	**21.04**	**227**		**P**	**15 25 18.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.04**	**227**	P	**P**	**15 25 19.7**	**+1.4**
QLP	**Quilpie**	**22.64**	**174**	P	**P**	**15 25 37.4**	**+2.0**
EIDS	**Eidsvold**	**23.14**	**158**	P	**P**	**15 25 43.6**	**+2.8**
EIDS				IAmb	IAmb	15 25 46.3	
comp=Z,19nm,0.8s							
EIDS	**Eidsvold**	**23.14**	**158**	P	**P**	**15 25 44.6**	**+3.9**
INKA	**Innaminka**	**23.67**	**182**		**P**	**15 25 46.1**	**+0.2**
TW1H	**Toowoomba 1 Ha**	**25.45**	**158**	P	**P**	**15 26 07.4**	**+5.0**
AULRC	**Lightning Ridg**	**26.04**	**167**	P	**P**	**15 26 09.7**	**+2.0**
PSA00	**Pilbara Seismi**	**27.46**	**229**	P	**P**	**15 26 19.1**	**-1.5**
CMSA	**Cobar Meteorol**	**27.70**	**173**	P	**P**	**15 26 25.2**	**+2.6**
BBOO	**Buckleboo**	**29.17**	**190**	P	**P**	**15 26 37.0**	**+1.3**
BBOO				IAmb	IAmb	15 26 47.0	
comp=Z,14nm,1.2s							
FORT	**Forrest**	**29.59**	**204**	P	**P**	**15 26 39.4**	**-0.1**
FORT				IAmb	IAmb	15 26 44.6	
comp=Z,7.2nm,0.8s							
TPUB	**Ta-pu**	**33.97**	**324**	P	**P**	**15 27 15.1**	**-2.9**
MORW	**Morawa**	**34.83**	**221**	P	**P**	**15 27 24.9**	**-0.6**
MORW				IAmb	IAmb	15 27 27.4	
comp=Z,14nm,1.1s							
JMN	**Monobe**	**38.19**	**350**	P	**P**	**15 27 53.4**	**-0.7**
MJAR	**Matsushiro Arr**	**40.42**	**356**	P	**P**	**15 28 10.9**	**-1.7**
comp=Z,1.2nm,0.6s,baz=178,slow=9.0,SNR=2.1							
comp=Z,1.2nm,0.6s							
NJ2	**Nanjing**	**41.85**	**330**	*eP*	**P**	**15 28 23.8**	**-0.7**
NJ2				pmax	pmax		
comp=Z,9.0nm,0.5s							
KSRS	**Korea Array**	**43.13**	**344**	P	**P**	**15 28 34.0**	**-0.8**
comp=Z,1.5nm,0.6s,baz=158,slow=9.0,SNR=6.7							
comp=Z,1.5nm,0.6s							
RTZ	**Ruatahuna**	**47.15**	**142**	P	**P**	**15 29 07.8**	**+0.8**
TUWZ	**Tuamarina**	**47.22**	**147**	P	**P**	**15 29 08.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**47.59**	**299**	P	**P**	**15 29 09.2**	**-1.3**
comp=Z,0.6nm,0.3s,baz=117,slow=8.1,SNR=1.6							
comp=Z,0.6nm,0.3s							
MRZ	**Mangatainoka R**	**47.62**	**145**	P	**P**	**15 29 10.6**	**+0.2**
USRK	**Ussuriysk Ar.**	**48.72**	**351**	P	**P**	**15 29 18.4**	**-0.4**
comp=Z,3.4nm,0.7s,baz=166,slow=7.8,SNR=5.5							
comp=Z,3.4nm,0.7s							
PZH	**PanZhiHua**	**49.04**	**310**	P	**P**	**15 29 21.4**	**-0.4**
HHC	**Hu-ho-hao-te**	**52.39**	**331**	*eP*	**P**	**15 29 49.0**	**+2.2**
HHC				pmax	pmax		
comp=Z,8.0nm,0.7s							
HHC				pmax	pmax		
comp=Z,180nm,4.5s							
PEA0B	**Petropavlovsk-**	**58.45**	**11**	P	**P**	**15 30 29.4**	**-0.7**
PETK	**Petropavlovsk-**	**58.45**	**11**	P	**P**	**15 30 29.7**	**-0.4**
comp=Z,9.2nm,0.8s,baz=189,slow=7.5,SNR=5.7							
comp=Z,9.2nm,0.8s							
PETK	**Petropavlovsk-**	**58.45**	**11**	P	**P**	**15 30 29.1**	**-0.9**
SONM	**Songino Array**	**60.11**	**333**	P	**P**	**15 30 39.3**	**-2.5**
comp=Z,0.7nm,0.7s,baz=123,slow=5.3,SNR=3.8							
comp=Z,0.7nm,0.7s							
EVN	**Everest**	**61.54**	**305**	P	**P**	**15 30 50.4**	**-2.2**
EVN				IAmb	IAmb	15 30 52.0	
comp=Z,4.5nm,0.6s							
MA2	**Magadan**	**63.75**	**5**	P	**P**	**15 31 05.0**	**-0.9**
MKAR	**Makanchi Array**	**72.56**	**322**	P	**P**	**15 31 59.8**	**-1.8**
comp=Z,4.0nm,0.8s,baz=110,slow=7.7,SNR=28							
comp=Z,4.0nm,0.8s							
MKAR	**Makanchi Array**	**72.56**	**322**	P	**P**	**15 31 58.5**	**-3.1**
MAKZ	**Makanchi**	**72.76**	**322**		**P**	**15 32 00.4**	**-2.4**
MAKZ				IAmb	IAmb	15 32 01.9	
comp=Z,7.3nm,1.0s							
BILL	**Bilibino**	**73.89**	**9**	P	**P**	**15 32 07.5**	**-1.4**
BILL				IAmb	IAmb	15 32 37.2	
comp=Z,11nm,1.5s							
VNDA	**Vanda**	**74.30**	**176**	P	**P**	**15 32 10.1**	**-1.2**
comp=Z,0.7nm,0.7s,baz=336,slow=8.0,SNR=2.3							
comp=Z,0.7nm,0.7s							
VNDA	**Vanda**	**74.30**	**176**	P	**P**	**15 32 10.3**	**-0.9**
ZALV	**Zalesovo Beam**	**74.48**	**329**	P	**P**	**15 32 09.9**	**-2.8**
comp=Z,2.3nm,0.5s,baz=104,slow=6.6,SNR=10							
comp=Z,2.3nm,0.5s							
ZALV	**Zalesovo Beam**	**74.48**	**329**	P	**P**	**15 32 08.9**	**-3.8**
BOOM	**Boomskoye usch**	**75.07**	**316**	P	**P**	**15 32 13.3**	**-3.2**
BOOM				IAmb	IAmb	15 32 51.9	
comp=Z,15nm,1.2s							
KURK	**Kurchatov**	**76.42**	**324**	P	**P**	**15 32 21.4**	**-2.4**
KURK				IAmb	IAmb	15 32 23.0	
comp=Z,11nm,1.4s							
KURBB	**Kurchatov Arra**	**76.43**	**324**

Error ellipse: s-maj=4.7km s-min=3.6km az=0.0
*NEIC **18** 15:43:23.1±1.3,22°.11S±0'.07×67°.56W±0'.08,h195km±9km, mb4.1/6,ML4.3(GUC),Error ellipse: s-maj=11.8km s-min=8.5km az=53.0*
*GUC **18** 15:43:24.0±0.8,22°.11S×67°.60W,h202km±7km,ML4.3*
*VAO **18** 15:43:24.8±0.9,21°.99S×67°.29W,h189km±8km,mb4.0*

ISC 18 15:43:22.3±0.6,**22°.10S**±0'.04×**67°.42W**±0'.04,**h189**km±6km, **n123,**σ1ᵽ54/160,**mb3.8**/4,**1C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AF01	**San Pedro de A**	**1.10**	**219**			**Pn**	**15 43 53.1**	**+1.1**
AF01					Sn	**Sn**	**15 44 14.8**	**-0.2**
AF01	**San Pedro de A**	**1.10**	**219**	*eP*		Pn	15 43 53.2	**+1.3**
AF01	**San Pedro de A**	**1.10**	**219**	*eP*		Pn	15 44 04.3	+12
AF01				*eS*		**Sn**	**15 44 14.9**	**-0.1**
PB09	**IPOC Station P**	**1.72**	**280**			**Pn**	**15 43 58.0**	**+0.7**
PB09	**IPOC Station P**	**1.72**	**280**	*eP*		**Pn**	**15 43 58.3**	**+1.0**
PB09				*i* S		**Sn**	**15 44 24.3**	**-0.1**
PB09				IAML			15 44 29.6	
	comp=N,599nm,0.4s							
PB09	**IPOC Station P**	**1.72**	**280**	Pg		**Pn**	**15 43 57.9**	**+0.7**
PB09	**IPOC Station P**	**1.72**	**280**	*eP*		**Pn**	**15 43 57.6**	**+0.3**
PB09				*eS*		**Sn**	**15 44 25.4**	**+1.0**
PB09				IAML			15 44 29.3	
	comp=Z,471nm,0.2s							
YJA	**Yavi**	**1.77**	**93**	*eP*		**Pn**	**15 43 58.7**	**+0.7**
YJA	**Yavi**	**1.77**	**93**	Pg		**Pn**	**15 43 58.4**	**+0.3**
YJA	**Yavi**	**1.77**	**93**	*eP*		**Pn**	**15 43 58.8**	**+0.7**
YJA				*eS*		**Sn**	**15 44 25.5**	**-0.3**
MOCB	**Mochara**	**1.86**	**63**	Pg		**Sn**	**15 43 59.6**	**+0.5**
MOCB				Sg		**Sn**	**15 44 26.5**	**-1.0**
MOCB				IAML			15 44 27.9	
	comp=Z,940nm,1.0s							
PB06	**IPOC Station P**	**2.08**	**253**			**Pn**	**15 44 01.2**	**+0.2**
PB06	**IPOC Station P**	**2.08**	**253**	*eP*		**Pn**	**15 44 01.6**	**+0.6**
PB06				*i* S		**Sn**	**15 44 29.9**	**-1.1**
PB06				IAML			15 44 32.5	
	comp=E,2μm,0.3s							
PB06	**IPOC Station P**	**2.08**	**253**	Pg		**Pn**	**15 44 01.5**	**+0.6**
PB06	**IPOC Station P**	**2.08**	**253**	*eP*		**Pn**	**15 44 01.3**	**+0.2**
PB06				*eS*		**Sn**	**15 44 31.6**	**+0.6**
PB06				IAML			15 44 32.4	
	comp=Z,618nm,0.3s							
HJA	**Humahuaca**	**2.16**	**121**	*eP*		**Pn**	**15 44 03.1**	**+1.0**
HJA				*eS*		**Sn**	**15 44 27.7**	**-5.4**
PB03	**IPOC Station P**	**2.16**	**271**			**Pn**	**15 44 02.2**	**+0.3**
PB03	**IPOC Station P**	**2.16**	**271**	*eP*		**Pn**	**15 44 02.1**	**+0.2**
PB03				*i* S		**Sn**	**15 44 31.4**	**-1.2**
PB03				IAML			15 44 32.6	
	comp=E,2μm,0.1s							
PB03	**IPOC Station P**	**2.16**	**271**	*eP*		**Pn**	**15 44 02.0**	**+0.1**
PB03				*eS*		**Sn**	**15 44 32.1**	**-0.6**
PB03				IAML			15 44 33.7	
	comp=Z,1μm,0.2s							
PB01	**IPOC Station P**	**2.19**	**298**			**Pn**	**15 44 02.5**	**+0.4**
PB01	**IPOC Station P**	**2.19**	**298**	*eP*		**Pn**	**15 44 02.6**	**+0.4**
PB01				*i* S		**Sn**	**15 44 32.5**	**-0.7**
PB01				IAML			15 44 33.4	
	comp=E,2μm,0.3s							
PB01	**IPOC Station P**	**2.19**	**298**	Pg		**Pn**	**15 44 02.8**	**+0.6**
PB01				Sg		**Sn**	**15 44 32.4**	**-0.7**
PB01				IAML			15 44 33.4	
	comp=E,1μm,0.4s							
PB01	**IPOC Station P**	**2.19**	**298**	*eP*		**Pn**	**15 44 01.9**	**-0.2**
PB01				*eS*		**Sn**	**15 44 32.8**	**-0.3**
PB01				IAML			15 44 34.6	
	comp=Z,565nm,0.4s							
PB07	**IPOC Station P**	**2.32**	**279**			**Pn**	**15 44 03.8**	**+0.2**
PB07	**IPOC Station P**	**2.32**	**279**	*eP*		**Pn**	**15 44 04.0**	**+0.4**
PB07				*i* S		**Sn**	**15 44 34.1**	**-1.6**
PB07				IAML			15 44 36.1	
	comp=N,2μm,0.2s							
PB07	**IPOC Station P**	**2.32**	**279**	*eP*		**Pn**	**15 44 04.0**	**+0.4**
PB07				*eS*		**Sn**	**15 44 34.6**	**-1.1**
PB07				IAML			15 44 37.0	
	comp=Z,992nm,0.2s							
SALTA		**2.33**	**155**	*eP*		**Pn**	**15 44 05.6**	**+1.4**
SALTA		**2.33**	**155**	*eP*		**Pn**	**15 44 00.1**	**-4.1**
PB02	**IPOC Station P**	**2.43**	**288**			**Pn**	**15 44 04.9**	**+0.1**
PB02	**IPOC Station P**	**2.43**	**288**	*eP*		**Pn**	**15 44 05.0**	**+0.1**
PB02				*i* S		**Sn**	**15 44 36.2**	**-1.6**
PB02				IAML			15 44 37.1	
	comp=N,2μm,0.2s							
PB02	**IPOC Station P**	**2.43**	**288**	Pg		**Pn**	**15 44 05.2**	**+0.4**
PB02				Sg		**Sn**	**15 44 36.1**	**-1.8**
PB02				IAML			15 44 36.7	
	comp=N,883nm,0.4s							
PB02	**IPOC Station P**	**2.43**	**288**	*eP*		**Pn**	**15 44 05.0**	**+0.2**
PB02				*eS*		**Sn**	**15 44 36.7**	**-1.1**
PB02				IAML			15 44 38.5	
	comp=Z,2μm,0.2s							
PB08	**IPOC Station P**	**2.53**	**320**			**Pn**	**15 44 07.6**	**+1.2**
PB08	**IPOC Station P**	**2.53**	**320**	*eP*		**Pn**	**15 44 07.9**	**+1.5**
PB08				*i* S		**Sn**	**15 44 41.0**	**+0.4**
PB08				IAML			15 44 44.5	
	comp=N,271nm,0.2s							
PB08	**IPOC Station P**	**2.53**	**320**	Pg		**Pn**	**15 44 07.7**	**+1.4**
PB08	**IPOC Station P**	**2.53**	**320**	*eP*		**Pn**	**15 44 07.9**	**+1.5**
AOVT	**TarijaAcel**	**2.59**	**78**	Pg		**Pn**	**15 44 07.3**	**+0.5**
PB05	**IPOC Station P**	**2.68**	**253**			**Pn**	**15 44 07.7**	**0.0**
PB05	**IPOC Station P**	**2.68**	**253**	*eP*		**Pn**	**15 44 07.7**	**0.0**
PB05				*i* S		**Sn**	**15 44 40.7**	**-2.3**
PB05				IAML			15 44 41.5	
	comp=N,588nm,0.2s							
PB05	**IPOC Station P**	**2.68**	**253**	*eP*		**Pn**	**15 44 08.0**	**+0.3**
PB05				*eS*		**Sn**	**15 44 41.7**	**-1.4**
PB05				IAML			15 44 44.2	
	comp=Z,469nm,0.3s							
PATCX	**Punta Patache**	**2.84**	**296**			**Pn**	**15 44 09.4**	**-0.2**
PATCX	**Punta Patache**	**2.84**	**296**	*eP*		**Pn**	**15 44 09.6**	**-0.1**
PATCX				*i* S		**Sn**	**15 44 44.2**	**-2.2**
PATCX	**Punta Patache**	**2.84**	**296**	*eP*		**Pn**	**15 44 09.8**	**+0.2**
PATCX				*eS*		**Sn**	**15 44 45.5**	**-1.0**
PATCX				IAML			15 44 46.2	
	comp=Z,748nm,0.3s							
HMBC	**Humberstone**	**2.93**	**308**			**Pn**	**15 44 10.1**	**-0.6**
HMBC	**Humberstone**	**2.93**	**308**	*eP*		**Pn**	**15 44 10.4**	**-0.3**
HMBC				*i* S		**Sn**	**15 44 46.1**	**-2.3**
HMBC				IAML			15 44 49.4	
	comp=N,1μm,0.5s							
HMBC	**Humberstone**	**2.93**	**308**	*eP*		**Pn**	**15 44 10.4**	**-0.3**
HMBC				IAML			15 44 49.3	
	comp=Z,705nm,0.3s							
GO01	**Chusmiza**	**2.93**	**325**			**Pn**	**15 44 11.9**	**+0.8**
GO01	**Chusmiza**	**2.93**	**325**	*eP*		**Pn**	**15 44 11.9**	**+0.8**
GO01				*i* S		**Sn**	**15 44 49.2**	**+0.1**
GO01				IAML			15 44 53.6	
	comp=E,1μm,0.1s							
GO01	**Chusmiza**	**2.93**	**325**	Pg		**Pn**	**15 44 12.1**	**+1.0**
GO01	**Chusmiza**	**2.93**	**325**	*eP*		**Pn**	**15 44 12.5**	**+1.4**
GO01				*eS*		**Sn**	**15 44 51.9**	**+2.7**
GO01				IAML			15 44 53.0	
	comp=Z,175nm,0.2s							
TA01	**Diego Aracena**	**2.99**	**300**			**Pn**	**15 44 10.8**	**-0.4**
TA01	**Diego Aracena**	**2.99**	**300**	*eP*		**Pn**	**15 44 10.9**	**-0.4**
TA01				*i* S		**Sn**	**15 44 47.1**	**-2.4**
TA01	**Diego Aracena**	**2.99**	**300**	*eP*		**Pn**	**15 44 11.1**	**-0.2**
TA01				*eS*		**Sn**	**15 44 47.7**	**-1.8**
TA01				IAML			15 44 47.9	
	comp=Z,436nm,0.6s							
AZAP	**Zapla**	**3.03**	**135**	*eP*		**Pn**	**15 44 12.5**	**+0.6**
AZAP				*eS*		**Sn**	**15 44 50.6**	**-0.2**
TA02	**Huaiquique**	**3.12**	**305**	*eP*		**Pn**	**15 44 12.3**	**-0.4**
TA02				*i* S		**Sn**	**15 44 49.4**	**-2.8**
TA02	**Huaiquique**	**3.12**	**305**	*eP*		**Pn**	**15 44 12.7**	**-0.1**
TA02				IAML			15 45 00.5	
	comp=Z,338nm,0.1s							
PB11	**IPOC Station P**	**3.13**	**318**			**Pn**	**15 44 12.9**	**-0.2**
PB11	**IPOC Station P**	**3.13**	**318**	*eP*		**Pn**	**15 44 12.9**	**-0.2**
PB11				*i* S		**Sn**	**15 44 50.9**	**-1.8**
PB11	**IPOC Station P**	**3.13**	**318**	Pg		**Pn**	**15 44 13.3**	**+0.2**
PB11				Sg		**Sn**	**15 44 51.3**	**-1.5**
PB11				IAML			15 44 56.1	
	comp=Z,305nm,0.3s							
PB11	**IPOC Station P**	**3.13**	**318**	*eP*		**Pn**	**15 44 11.4**	**-1.7**
PB11				*eS*		**Sn**	**15 44 51.5**	**-1.3**
PB11				IAML			15 44 54.0	
	comp=Z,261nm,0.2s							
SLA	**San Lorenzo**	**3.15**	**146**	*iP*		**Pn**	**15 44 14.5**	**+1.2**
SLA	**San Lorenzo**	**3.15**	**146**	*eP*		**Pn**	**15 44 14.5**	**+1.2**
SOEO	**Opoqueri**	**3.55**	**353**	Pg		**Pn**	**15 44 20.7**	**+2.1**
GO02	**Mina Guanaco**	**3.64**	**213**			**Pn**	**15 44 19.2**	**-0.2**
GO02	**Mina Guanaco**	**3.64**	**213**	*eP*		**Pn**	**15 44 20.0**	**+0.6**
GO02				*i* S		**Sn**	**15 45 02.5**	**-1.8**
GO02	**Mina Guanaco**	**3.64**	**213**	Pg		**Pn**	**15 44 20.0**	**+0.6**
PB14	**IPOC Station P**	**3.72**	**227**			**Pn**	**15 44 20.0**	**-0.5**
PB14	**IPOC Station P**	**3.72**	**227**	Pg		**Pn**	**15 44 20.5**	**+0.1**
PB14	**IPOC Station P**	**3.72**	**227**	*eP*		**Pn**	**15 44 20.7**	**+0.2**
PB14				*eS*		**Sn**	**15 45 03.9**	**-2.1**
PB14				IAML			15 45 06.4	
	comp=Z,202nm,0.4s							
FSA	**Cafayete**	**4.20**	**162**	*eP*		Pn	15 44 11.3	-15
SOET	**ToroToro**	**4.25**	**21**	Pg		**Pn**	**15 44 27.8**	**+0.6**
AOEA	**Aiquile**	**4.41**	**28**	Pg		**Pn**	**15 44 29.9**	**+0.6**
PB12	**IPOC Station P**	**4.41**	**321**			**Pn**	**15 44 27.6**	**-1.5**
PB12	**IPOC Station P**	**4.41**	**321**	*eP*		**Pn**	**15 44 27.8**	**-1.3**
PB12				*i* S		**Sn**	**15 45 17.0**	**-4.5**
PB12	**IPOC Station P**	**4.41**	**321**	*eP*		**Pn**	**15 44 27.7**	**-1.3**
PB12				*eS*		**Sn**	**15 45 18.6**	**-2.9**
PB12				IAML			15 45 21.8	
	comp=Z,115nm,0.4s							
AC02	**Maricunga**	**4.96**	**198**			**Pn**	**15 44 36.7**	**+0.3**
AC01	**Pan de Azucar**	**4.96**	**215**			**Pn**	**15 44 35.0**	**-1.0**
AC01	**Pan de Azucar**	**4.96**	**215**	*eP*		**Pn**	**15 44 35.2**	**-0.8**
AC01				*eS*		**Sn**	**15 45 30.5**	**-3.5**
AC01				IAML			15 45 34.0	
	comp=Z,90nm,0.2s							
BBOJ	**La Paz, Jacagu**	**5.15**	**352**	Pg		**Pn**	**15 44 41.0**	**+2.0**
BBOE	**La Paz, Chanca**	**5.29**	**354**	Pg		**Pn**	**15 44 42.7**	**+1.9**
BBOD	**La Paz, Gloria**	**5.55**	**348**	Pg		**Pn**	**15 44 45.8**	**+1.7**
LPAZ	**La Paz**	**5.82**	**353**	P		**Pn**	**15 44 49.4**	**+1.6**
	comp=Z,11nm,0.4s,baz=165,slow=6.2,SNR=93							
LPAZ				S		**Sn**	**15 45 55.5**	**+0.5**
	comp=Z,8.0nm,0.6s,baz=347,slow=15,SNR=6.3							
LPAZ	**La Paz**	**5.82**	**353**			**Pn**	**15 44 49.0**	**+1.2**
LPAZ	**La Paz**	**5.82**	**353**	Pg		**Pn**	**15 44 49.4**	**+1.6**
LPAZ	**La Paz**	**5.82**	**353**	*eP*		**Pn**	**15 44 49.2**	**+1.5**
GO03	**Copiapo**	**6.03**	**204**			**Pn**	**15 44 48.3**	**-1.6**
SIV	**San Ignacio**	**8.54**	**46**	P		**Pn**	**15 45 20.3**	**-2.5**
	comp=Z,76nm,0.4s,baz=226,slow=10.0,SNR=268							
SIV				S		**Sn**	**15 46 50.3**	**-8.4**
	comp=Z,6.3nm,0.2s,baz=163,slow=10.0,SNR=4.1							
MURT	**Porto Murtinho**	**9.12**	**89**	*eP*		**Pn**	**15 45 30.4**	**+0.1**
CFA	**Coronel Fontan**	**9.49**	**184**	P		Pn	15 45 34.7	-0.4
	comp=Z,0.8nm,0.3s,baz=20,slow=18,SNR=12							
CFA				S		**Sn**	**15 47 15.8**	**-5.3**
	comp=Z,1.8nm,0.3s,baz=241,slow=20,SNR=8.4							
BDQN	**Bodoquena, MS**	**10.09**	**83**	*eP*		**Pn**	**15 45 44.0**	**+1.1**
CPUP	**Villa Florida**	**10.13**	**117**	P		Pn	15 45 35.9	-7.4
	comp=Z,0.4nm,0.5s,baz=143,slow=1.3,SNR=3.3							
PTLB	**Pontes e Lacer**	**10.26**	**51**	*eP*		**Pn**	**15 45 44.4**	**-0.8**
VILB	**Vilhena**	**11.41**	**38**			**Pn**	**15 45 59.5**	**-0.5**
VILB	**Vilhena**	**11.41**	**38**	*eP*		**Pn**	**15 45 59.3**	**-0.7**
PP1B	**Ponte de Pedra**	**12.62**	**71**	*eP*		**Pn**	**15 46 16.4**	**+0.9**
SALV	**Santo Antonio**	**12.69**	**63**	*eP*		**Pn**	**15 46 16.3**	**0.0**
PTGB	**Pitanga**	**14.34**	**103**	*eP*		**P**	**15 46 41.3**	**+2.6**
PDRB	**Porto dos Gac**	**14.60**	**46**	*eP*		**P**	**15 46 41.3**	**-0.3**
ITAB	**Concordia**	**14.81**	**113**	P		**P**	**15 46 44.9**	**+1.1**
ITAB	**Concordia**	**14.81**	**113**	*eP*		**P**	**15 46 44.9**	**+1.1**
CPSB	**Cacapava Do Su**	**15.02**	**126**	*eP*		**P**	**15 46 46.4**	**+0.4**
PLTB	**Pedras Altas**	**15.62**	**131**	P		**Pn**	**15 46 52.6**	**+0.1**
PLTB				IAmb		IAmb	15 46 54.9	
	comp=Z,12nm,1.3s							
PLTB	**Pedras Altas**	**15.62**	**131**	*eP*		**Pn**	**15 46 53.0**	**+0.5**
ARAG	**Araguaiana, MT**	**16.08**	**69**	*eP*		**Pn**	**15 46 58.5**	**+0.3**
FRTB	**Fartura**	**16.53**	**98**	*eP*		**Pn**	**15 47 03.8**	**+0.2**
TRQA	**Tornquist**	**16.58**	**165**			**P**	**15 47 02.0**	**-1.3**
TRQA				IAmb		IAmb	15 47 05.4	
	comp=Z,11nm,1.4s							
BB19B	**Bebedouro**	**17.61**	**90**	*eP*		**Pn**	**15 47 17.0**	**+0.6**
SNDB	**Serra Nova Dou**	**18.40**	**59**	*eP*		**P**	**15 47 23.9**	**+0.5**
IPMB	**Ipameri, GO**	**18.51**	**81**	*eP*		**P**	**15 47 25.5**	**+0.9**
PLCA	**Paso Flores**	**18.76**	**187**	P		**P**	**15 47 25.9**	**-1.3**
PLCA				IAmb		IAmb	15 47 26.6	
	comp=Z,5.3nm,1.4s							
VAO	**Valinhos**	**18.92**	**97**	P		**P**	**15 47 30.0**	**+0.9**
VAO	**Valinhos**	**18.92**	**97**	*eP*		**P**	**15 47 29.9**	**+0.9**
NPGB	**Novo Progresso**	**18.96**	**40**	*eP*		**P**	**15 47 29.2**	**-0.3**
PMNB	**Patos De Minas**	**20.00**	**84**	*eP*		**P**	**15 47 41.7**	**+1.1**
ITTB	**Ituituba**	**20.96**	**34**	*eP*		**P**	**15 47 50.7**	**-0.1**
SNAA	**Sanae**	**61.26**	**161**	P		**P**	**15 53 19.3**	**+2.1**
	comp=Z,1.0nm,0.6s,baz=262,slow=8.4,SNR=8.1							
	comp=Z,1.0nm,0.6s							
SNAA	**Sanae**	**61.26**	**161**	P		**P**	**15 53 19.3**	**+2.1**
TXAR	**Lajitas Array**	**61.92**	**324**	P		P	15 53 29.7	+7.6
	comp=Z,0.1nm,0.3s,baz=156,slow=5.6,SNR=2.6							
	comp=Z,0.1nm,0.3s							
DBIC	**Dimbokro**	**67.59**	**72**	P		**P**	**15 53 59.3**	**+0.3**
DBIC				IAmb		IAmb	15 54 01.0	
	comp=Z,4.4nm,0.8s							
QSPA	**South Pole Qui**	**68.09**	**180**	P		P	15 54 07.6	+6.1
	comp=Z,1.0nm,0.5s,baz=231,slow=0.3,SNR=16							
	comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**130.00**	**206**	PKP		**PKiKP**	**16 02 12.9**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=130,slow=1.6,SNR=5.0							
WRA	**Warramunga Arr**	**133.11**	**209**	PKP		**PKiKP**	**16 02 19.0**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=148,slow=1.8,SNR=1.4							
MKAR	**Makanchi Array**	**145.29**	**37**	PKPbc		**PKiKP**	**16 02 40.2**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=333,slow=3.6,SNR=9.4							

IDC 18 15:50:17.4±1.9,**1°.52N**×**125°.93E,h0**km,**mb3.2**/4, **mbtmp3.3**/4,**Error ellipse: s-maj=203.4km s-min=22.4km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**22.87**	**159**	P		P	15 55 22.0	-0.7
	0.4nm,0.5s,baz=338,slow=11,SNR=9.6							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**26.21**	**163**	P		P	15 55 54.5	+0.4
	0.2nm,0.6s,baz=345,slow=12,SNR=8.9							
	0.2nm,0.6s							
MKAR	**Makanchi Array**	**58.92**	**326**	P		P	16 00 16.8	-1.6
	0.2nm,0.7s,baz=119,slow=6.9,SNR=4.3							
	0.2nm,0.7s							
KURBB	**Kurchatov Arra**	**63.17**	**328**	P		P	16 00 48.9	+1.8
	0.3nm,0.5s,baz=129,slow=6.0,SNR=3.0							
	0.3nm,0.5s							

NOU 18 16:05:42.9,17°.36S×167°.68E,h0km,**mb3.7/6,Vanuatu Islands,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SANVU	**Saraoutou**	**1.96**	**346**	P		Pn	16 06 17.2	-0.2
YATNC	**Mamie plateau,**	**4.73**	**189**	P		Pn	16 06 54.4	-1.2
ONTNC	**Ouen Toro**	**5.05**	**193**	P		Pn	16 06 59.5	-0.5
OUENC	**Ouen Island, N**	**5.09**	**189**	P		Pn	16 07 01.3	+0.8
PINNC	**Pines Island,**	**5.23**	**182**	P		Pn	16 07 02.8	+0.4

*MOS **18** 16:08:15.9±0.8,48°.36N×152°.19E,h380km,mb4.2/1,Error ellipse: s-maj=21.3km s-min=8.5km az=62.2*
*SKHL **18** 16:08:17.6±0.9,48°.50N×151°.70E,h342km±4km,mb4.7/4, msha5.2/4*
*IDC **18** 16:08:20.3±1.7,49°.20N×151°.09E,h318km±17km, mb3.1/15,mbtmp3.8/18,Error ellipse: s-maj=14.9km s-min=11.9km az=154.0*

ISC 18 16:08:17.6±0.8,**48°.54N**±0°.10×**151°.88E**±0°.10,**h350**km,**n49,** σ2ᵽ17/54,**mb3.3**/15,**1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.49**	**50**	PN		**Pn**	**16 09 21.6**	**+0.2**
SKR				S		**S**	**16 10 10.1**	**-2.7**
SKR	**Severo-Kuril's**	**3.49**	**50**	*eP*		**Pn**	**16 09 21.8**	**+0.4**
SKR				AMB		AMB	16 09 21.8	
	50nm,0.7s							
SKR				*eS*		**S**	**16 10 11.2**	**-1.6**
SKR				A		A	16 10 12.2	
	50nm,0.4s							
SKR				A		A	16 10 12.2	
	60nm,0.4s							
KUR	**Kuril'sk**	**4.30**	**221**	PN		**Pn**	**16 09 31.0**	**+1.3**
KUR				S		**S**	**16 10 33.9**	**+6.0**
KUR	**Kuril'sk**	**4.30**	**221**	*eP*		**Pn**	**16 09 31.0**	**+1.3**
PAU	**Pauzhetka**	**4.32**	**45**	*eP*		**Pn**	**16 09 30.7**	**+0.9**
PAU				AMB		AMB	16 09 33.8	
	20nm,0.6s							
PAU				*eS*		**S**	**16 10 28.4**	**+0.3**
PAU				A		A	16 10 31.5	
	40nm,0.3s							
PAU				A		A	16 10 31.5	
	40nm,0.3s							
KDTR	**Khodutka, Kamc**	**5.15**	**48**	PN		**Pn**	**16 09 38.0**	**-0.7**
KDTR	**Khodutka, Kamc**	**5.15**	**48**	*eP*		**Pn**	**16 09 38.0**	**-0.7**
MTVR	**Mutnovka**	**5.63**	**43**	PN		**Pn**	**16 09 44.3**	**+0.1**
SHO	**Shikotan**	**5.84**	**219**	*eP*		Pn	16 09 53.5	+6.9
SHO				AMB		AMB	16 09 54.1	
	170nm,0.3s							
SHO				*eS*		**S**	**16 11 00.5**	**+1.8**
SHO				A		A	16 11 01.6	
	70nm,0.5s							
PETK	**Petropavlovsk-**	**5.87**	**37**	P		**Pn**	**16 09 45.9**	**-0.9**
	2.9nm,0.6s,baz=231,slow=7.7,SNR=22							
YUK	**Yuzh-Kuril'sk**	**6.14**	**225**	PN		**Pn**	**16 09 49.2**	**-0.8**
YUK				S		**S**	**16 10 59.1**	**-5.8**
YUK				pmax		pmax		
	comp=N,27nm,0.2s							
YUK				pmax		pmax		
	comp=Z,152nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**6.14**	**225**	*eP*		**Pn**	**16 09 49.2**	**-0.8**
YUK				AMB		AMB	16 09 51.4	
	comp=Z,370nm,0.8s							
YUK				*eS*		**S**	**16 11 02.3**	**-2.6**
YUK				A		A	16 11 06.5	
	comp=Z,400nm,0.8s							
YUK				A		A	16 11 06.5	
	comp=Z,400nm,0.8s							
PET	**Petropavlovsk**	**6.21**	**41**	*eP*		**Pn**	**16 09 51.8**	**+1.2**
PET				*eS*		**S**	**16 11 05.5**	**-0.6**
KOK	**Koryaka**	**6.39**	**39**	PN		**Pn**	**16 09 54.0**	**+1.2**
KOK	**Koryaka**	**6.39**	**39**	*eP*		**Pn**	**16 09 54.0**	**+1.2**
UGLR	**Uglovaya**	**6.41**	**41**	PN		**Pn**	**16 09 53.3**	**+0.2**
KRX	**Arik**	**6.45**	**39**	PN		**Pn**	**16 09 54.0**	**+0.5**
KRER	**Koryakskii**	**6.45**	**40**	PN		**Pn**	**16 09 54.3**	**+0.7**
GLVR	**Golovnino**	**6.53**	**225**	PN		**Pn**	**16 09 55.9**	**+1.5**
GLVR	**Golovnino**	**6.53**	**225**	*eP*		**Pn**	**16 09 55.9**	**+1.5**
NMR	**Nemuro--Hokkai**	**6.72**	**222**	*i* PN		**Pn**	**16 09 55.0**	**-1.6**
NMR				*eS*		**S**	**16 11 10.5**	**-6.6**
NMR	**Nemuro--Hokkai**	**6.72**	**222**	*i* P		**Pn**	**16 09 55.4**	**-1.2**
AKK	**Akkeshi**	**7.39**	**224**	*eP*		**Pn**	**16 10 03.5**	**-1.1**
JKA	**Kamikawa-asahi**	**7.80**	**239**	*eP*		**Pn**	**16 10 11.4**	**+2.1**
ASAJ	**Asahikawa**	**7.80**	**239**	P		**Pn**	**16 10 11.4**	**+2.0**
	comp=Z,7.4nm,0.5s,baz=55,slow=12,SNR=7.4							
KZV	**Kizimen**	**8.39**	**35**	PN		**Pn**	**16 10 16.8**	**+0.5**
NKL	**Nikolayevsk**	**8.46**	**307**	*eP*		**Pn**	**16 10 15.6**	**-1.3**
MKZ	**Mys Kozlova**	**8.60**	**42**	PN		**Pn**	**16 10 17.3**	**-1.2**
MKZ	**Mys Kozlova**	**8.60**	**42**	*eP*		**Pn**	**16 10 17.3**	**-1.2**
KBG	**Krutoberegovo**	**10.16**	**36**	*eP*		**Pn**	**16 10 36.9**	**-0.3**
MJAR	**Matsushiro Arr**	**15.63**	**225**	P		**Pn**	**16 11 45.9**	**+4.1**
	comp=Z,0.8nm,0.5s,baz=22,slow=12,SNR=4.4							
HILR	**Hailar Array B**	**21.01**	**285**	P		**P**	**16 12 34.1**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=81,slow=8.9,SNR=3.9							
	comp=Z,1.0nm,0.3s							
SONM	**Songino Array**	**30.00**	**286**	P		**P**	**16 13 53.0**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=72,slow=9.3,SNR=2.5							
	comp=Z,0.5nm,0.7s							
SONM	**Songino Array**	**30.00**	**286**	P		**P**	**16 13 53.0**	**-2.0**
ILAR	**Eielson Array**	**35.69**	**40**	P		**P**	**16 14 47.3**	**+3.9**
	comp=Z,0.7nm,0.9s,baz=277,slow=9.1,SNR=13							
	comp=Z,0.7nm,0.9s						

DZM	**Mont Dzumac**	**11.34**	**178**	P		**Pn**	**16 21 34.1**	**+2.3**
	5.7nm,0.4s,baz=336,slow=18,SNR=31							
DZM				S		**Sn**	**16 23 34.9**	**-2.5**
	3.1nm,0.3s,baz=323,slow=20,SNR=5.6							
YATNC	**Mamie plateau,**	**11.35**	**176**	P		**Pn**	**16 21 33.1**	**+1.2**
OUENC	**Ouen Island, N**	**11.70**	**176**	P		**Pn**	**16 21 38.7**	**+2.2**
PINNC	**Pines Island,**	**11.94**	**174**	P		**Pn**	**16 21 41.9**	**+2.3**
MSVF	**Nonsavu**	**13.56**	**122**	P		**P**	**16 22 03.3**	**-0.9**
PMG	**Port Moresby**	**18.67**	**272**	P		**P**	**16 23 00.9**	**+0.2**
	13nm,1.0s,baz=79,slow=16,SNR=3.4							
PMG				S		**S**	**16 26 22.8**	**-2.5**
	3.6nm,0.8s,baz=96,slow=19,SNR=1.6							
PMG	**Port Moresby**	**18.67**	**272**	P		**P**	**16 23 00.8**	**+0.2**
PMG				IAmb		IAmb	16 23 15.6	
	comp=Z,29nm,1.2s							
CTAO	**Charters Tower**	**21.26**	**242**	P		**P**	**16 23 28.0**	**-0.4**
CTAO				IAmb		IAmb	16 23 53.5	
	comp=Z,13nm,1.3s							
ARMA	**Armidale**	**23.80**	**212**	P		**P**	**16 23 53.1**	**+0.1**
ARMA				IAmb		IAmb	16 24 07.0	
	comp=Z,18nm,1.5s							
MXZ	**Matakaoa Point**	**28.94**	**160**	P		**P**	**16 24 38.7**	**-0.2**
MXZ	**Matakaoa Point**	**28.94**	**160**	P		**P**	**16 24 39.0**	**0.0**
HAZ	**Te Kaha**	**28.94**	**161**	P		**P**	**16 24 39.7**	**+0.8**
RUGZ	**Raukumara Rang**	**29.10**	**161**	P		**P**	**16 24 40.8**	**+0.3**
URZ	**Urewera**	**29.19**	**162**	P		**P**	**16 24 41.4**	**+0.3**
WMGZ	**Waiomatatini S**	**29.21**	**160**	P		**P**	**16 24 40.8**	**-0.5**
MUGZ	**Murupara**	**29.29**	**163**	P		**P**	**16 24 43.2**	**+1.1**
PUZ	**Puketiti**	**29.39**	**160**	P		**P**	**16 24 40.9**	**-2.0**
MWZ	**Matawai**	**29.39**	**161**	P		**P**	**16 24 43.3**	**+0.3**
RTZ	**Ruatahuna**	**29.48**	**162**	P		**P**	**16 24 43.6**	**-0.2**
RTZ	**Ruatahuna**	**29.48**	**162**	P		**P**	**16 24 43.9**	**+0.1**
RAGZ	**Rawiri**	**29.50**	**162**	P		**P**	**16 24 44.3**	**+0.3**
MRHZ	**Matea Rd**	**29.52**	**163**	P		**P**	**16 24 45.5**	**+1.4**
WTVZ	**West Tongariro**	**29.57**	**165**	P		**P**	**16 24 48.3**	**+3.7**
NNVZ	**North Ngauruho**	**29.59**	**165**	P		**P**	**16 24 48.6**	**+3.7**
TKGZ	**Te Karaka**	**29.59**	**161**	P		**P**	**16 24 44.0**	**-0.6**
TMVZ	**Te Maari**	**29.59**	**165**	P		**P**	**16 24 48.4**	**+3.5**
ETVZ	**East Tongariro**	**29.61**	**165**	P		**P**	**16 24 48.4**	**+3.4**
NGZ	**Ngauruhoe**	**29.62**	**165**	P		**P**	**16 24 48.3**	**+3.1**
MTHZ	**Maungataniwha**	**29.66**	**163**	P		**P**	**16 24 45.9**	**+0.6**
SNGZ	**Shannon Statio**	**29.74**	**162**	P		**P**	**16 24 45.7**	**-0.4**
WNVZ	**Wahianoa**	**29.77**	**165**	P		**P**	**16 24 49.6**	**+3.2**
BKZ	**Black Stump Fm**	**29.85**	**164**	P		**P**	**16 24 47.0**	**-0.1**
BKZ				IAmb		IAmb	16 24 50.2	
	comp=Z,20nm,1.2s							
BKZ	**Black Stump Fm**	**29.85**	**164**	P		**P**	**16 24 47.2**	**+0.2**
NMHZ	**Naumai**	**29.88**	**163**	P		**P**	**16 24 47.5**	**+0.2**
KNZ	**Kokohu**	**30.07**	**162**	P		**P**	**16 24 48.1**	**-0.7**
KRHZ	**Kereru**	**30.27**	**164**	P		**P**	**16 24 51.1**	**+0.4**
CKHZ	**Cape Kidnapper**	**30.48**	**163**	P		**P**	**16 24 52.9**	**+0.4**
TUWZ	**Tuamarina**	**31.40**	**169**	P		**P**	**16 25 00.4**	**-0.2**
WRB	**Warramunga Arr**	**31.77**	**249**	P		**P**	**16 25 03.7**	**-0.4**
PLWZ	**Palliser**	**31.81**	**167**	P		**P**	**16 25 03.9**	**-0.3**
WB0	**Warramunga Arr**	**31.83**	**250**	P		**P**	**16 25 04.3**	**-0.3**
WB0				IAmb		IAmb	16 25 05.8	
	comp=Z,5.6nm,1.2s							
WRAB	**Tennant Creek**	**31.90**	**249**	P		**P**	**16 25 04.9**	**-0.4**
WRA	**Warramunga Arr**	**31.91**	**249**	P		**P**	**16 25 04.7**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=77,slow=8.5,SNR=12							
WRA				PcP		**PcP**	**16 27 52.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=76,slow=3.3,SNR=9.3							
	comp=Z,0.9nm,0.5s							
AS31	**Alice Springs**	**33.24**	**243**	P		**P**	**16 25 16.2**	**-0.8**
ASAR	**Alice Springs**	**33.25**	**243**	P		**P**	**16 25 15.9**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=76,slow=8.4,SNR=7.2							
ASAR				PcP		**PcP**	**16 27 55.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=74,slow=2.9,SNR=19							
	comp=Z,0.4nm,0.7s							
KNRA	**Kununurra**	**36.63**	**258**	P		**P**	**16 25 46.0**	**0.0**
KNRA				IAmb		IAmb	16 26 19.1	
	comp=Z,16nm,1.4s							
FITZ	**Fitzroy Crossi**	**39.79**	**255**	P		**P**	**16 26 11.3**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=90,slow=4.0,SNR=2.0							
	comp=Z,1.3nm,0.6s							
FITZ	**Fitzroy Crossi**	**39.79**	**255**	P		**P**	**16 26 12.5**	**0.0**
AIN	**Ainahou**	**48.25**	**52**	P		**P**	**16 27 19.0**	**-1.0**
JGF	**Kuroka**	**53.43**	**331**	P		**P**	**16 27 57.3**	**-1.0**
JMN	**Monobe**	**53.74**	**327**	P		**P**	**16 28 00.0**	**-0.6**
CASY	**Casey**	**66.84**	**201**	P		**P**	**16 29 29.1**	**0.0**
CMAR	**Chiang Mai Arr**	**72.26**	**293**	P		**P**	**16 30 04.1**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=110,slow=6.8,SNR=6.8							
	comp=Z,0.5nm,0.5s							
CMAR	**Chiang Mai Arr**	**72.26**	**293**	P		**P**	**16 30 02.5**	**-0.7**
ACHA	**Angle Creek He**	**75.50**	**20**	P		**P**	**16 30 21.1**	**-0.2**
ACHA				IAmb		IAmb	16 30 38.6	
	comp=Z,10.0nm,1.3s							
Q19K	**Cape Douglas,**	**76.61**	**20**	P		**P**	**16 30 28.0**	**+0.5**
K15K	**Wolf Creek Mou**	**76.99**	**15**	P		**P**	**16 30 30.5**	**+1.0**
K15K				IAmb		IAmb	16 30 57.3	
	comp=Z,16nm,1.4s							
YAK	**Yakutsk**	**77.84**	**343**	P		**P**	**16 30 34.7**	**+0.5**
YAK				IAmb		IAmb	16 31 13.8	
	comp=Z,18nm,1.4s							
SONM	**Songino Array**	**78.56**	**324**	P		**P**	**16 30 39.4**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=133,slow=6.2,SNR=4.3							
	comp=Z,0.5nm,0.5s							
L19K	**White Mountain**	**78.73**	**18**	P		**P**	**16 30 39.4**	**+0.2**
L19K				IAmb		IAmb	16 31 10.0	
	comp=Z,6.7nm,1.2s							
L20K	**Farewell, AK**	**79.25**	**18**	P		**P**	**16 30 42.6**	**+0.6**
QSPA	**South Pole Qui**	**79.32**	**180**	P		**P**	**16 30 45.2**	**+2.6**
	comp=Z,2.0nm,0.7s,baz=21,slow=3.1,SNR=27							
	comp=Z,2.0nm,0.7s							
QSPA	**South Pole Qui**	**79.32**	**180**	P		**P**	**16 30 45.2**	**+2.6**
SUA	**Susitna One**	**79.47**	**20**	P		**P**	**16 30 43.6**	**+0.3**
KLU	**Klutina**	**81.14**	**21**	P		**P**	**16 30 52.9**	**+0.7**
KLU				IAmb		IAmb	16 31 21.5	
	comp=Z,13nm,1.3s							
N25K	**Chitina, Valde**	**81.69**	**21**	P		**P**	**16 30 55.8**	**+0.7**
N25K				IAmb		IAmb	16 30 56.1	
	comp=Z,8.7nm,1.2s							
GLB	**Gilahina Butte**	**81.87**	**22**	P		**P**	**16 30 56.6**	**+0.6**
GLB				IAmb		IAmb	16 31 19.1	
	comp=Z,19nm,1.5s							
E19K	**Redstone River**	**82.30**	**13**	P		**P**	**16 30 59.0**	**+1.0**
E19K				IAmb		IAmb	16 31 00.1	
	comp=Z,4.8nm,0.7s							
F20K	**Avaraart Lake**	**82.32**	**14**	P		**P**	**16 30 58.6**	**+0.5**
C18K	**Utukok River**	**82.44**	**12**	P		**P**	**16 30 59.5**	**+0.7**
C18K				IAmb		IAmb	16 31 27.2	
	comp=Z,13nm,1.4s							
CTGM	**Chitina Glacie**	**82.50**	**23**	P		**P**	**16 30 59.9**	**+0.5**
CTGM				IAmb		IAmb	16 31 02.4	
	comp=Z,20nm,1.4s							
CCB	**Clear Creek Bu**	**82.69**	**18**	P		**P**	**16 31 00.4**	**+0.3**
HDA	**Harding Lake**	**82.79**	**19**	P		**P**	**16 31 00.7**	**+0.1**
HDA				IAmb		IAmb	16 31 02.7	
	comp=Z,7.3nm,0.8s							
D19K	**Kuna River**	**82.95**	**13**	P		**P**	**16 31 02.2**	**+0.8**
D19K				IAmb		IAmb	16 31 05.5	
	comp=Z,15nm,1.2s							
ILAR	**Eielson Array**	**83.06**	**18**	P		**P**	**16 31 01.9**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=228,slow=5.7,SNR=32							
	comp=Z,1.5nm,0.6s							
C19K	**Lookout Ridge**	**83.15**	**12**	P		**P**	**16 31 03.4**	**+0.9**
C19K				IAmb		IAmb	16 31 06.6	
	comp=Z,10nm,1.2s							
J25K	**Salcha River,**	**83.43**	**19**	P		**P**	**16 31 04.4**	**+0.3**
J25K				IAmb		IAmb	16 31 05.1	
	comp=Z,3.6nm,0.8s							
BCAR	**Beaver Creek A**	**83.64**	**21**	P		**P**	**16 31 05.3**	**+0.2**
K27K	**Chicken**	**84.14**	**20**	P		**P**	**16 31 08.3**	**+0.8**
K27K				IAmb		IAmb	16 31 10.1	
	comp=Z,13nm,1.4s							
G24K	**Hadweenzic Riv**	**84.23**	**17**	P		**P**	**16 31 08.7**	**+0.7**
B20K	**Meade River**	**84.38**	**12**	P		**P**	**16 31 09.2**	**+0.6**
TOLK	**Toolik Lake Re**	**85.06**	**15**	P		**P**	**16 31 12.6**	**+0.5**
TOLK				IAmb		IAmb	16 31 53.7	
	comp=Z,4.3nm,1.2s							
DAWY	**Dawson**	**85.10**	**21**	P		**P**	**16 31 13.4**	**+1.0**
MAW	**Mawson**	**85.18**	**202**	P		**P**	**16 31 13.0**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=114,slow=12,SNR=4.0							
	comp=Z,1.2nm,0.6s							
NVAR	**Mina Array Bea**	**85.54**	**50**	P		**P**	**16 31 15.3**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=263,slow=8.2,SNR=4.4							
	comp=Z,1.1nm,0.8s							
E28M	**Babbage River**	**87.78**	**17**	P		**P**	**16 31 25.7**	**+0.4**
ZALV	**Zalesovo Beam**	**93.45**	**324**	P		**P**	**16 31 51.5**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=95,slow=5.1,SNR=1.7							
	comp=Z,0.4nm,0.4s							
MKAR	**Makanchi Array**	**93.48**	**317**	P		**P**	**16 31 52.4**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=100,slow=6.1,SNR=13							
	comp=Z,1.8nm,0.8s							
SNAA	**Sanae**	**97.50**	**184**	P		**P**	**16 32 09.5**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=192,slow=16,SNR=6.9							
	comp=Z,0.5nm,0.7s							
SNAA	**Sanae**	**97.50**	**184**	P		**P**	**16 32 09.4**	**-0.8**
ARCES	**ARCESS Array B**	**116.06**	**346**	PKP		**PKPdf**	**16 37 17.8**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=44,slow=2.0,SNR=9.6							

*IDC **18** 16:35:50.0±0.6, 60.95N×11.54E, h0km, mbtmp3.4/2, ML2.4/2, Error ellipse: s-maj=4.0km s-min=2.5km az=121.0*
*DNK **18** 16:35:49.4±1.8, 60.91N×11.35E, h0km±10km*
*UPP **18** 16:35:50.0±1.6, 60.86N×11.34E, h3km±8km, ML2.0, Presumed earthquake*
*BER **18** 16:35:51.3±2.5, 60.94N×11.41E, h0km, ML1.8, Suspected explosion*

ISC 18 16:35:48.8±0.7, 60.91N±0.02×11.47E±0.03, h0km, n48, σ1§19/68, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NB201	**NORSAR Array S**	**0.17**	**330**	*e*P		**Pg**	**16 35 52.9**	**+0.9**
NB201				*e*S		**Sg**	**16 35 55.3**	**+1.2**
NC602	**NORSAR Array S**	**0.18**	**168**	*e*P		**Pg**	**16 35 53.7**	**+1.5**
NC602				*e*S		**Sg**	**16 35 56.6**	**+2.2**
NOA	**NORSAR Array B**	**0.18**	**318**	Pg		**Pg**	**16 35 52.7**	**+0.4**
	2.4nm,0.3s,baz=64,slow=19,SNR=41							
NOA				Lg		Lg	16 35 56.1	
	2.2nm,0.3s,baz=119,slow=22,SNR=262							
NAO01	**NORSAR Array S**	**0.29**	**258**	*e*P		**Pg**	**16 35 55.0**	**+0.7**
NAO01				IAML			16 36 03.9	
	comp=Z,85nm,0.9s							
NC303	**NORSAR Array S**	**0.32**	**352**	*e*P		**Pg**	**16 35 55.8**	**+0.8**
NC303				*e*S		**Sg**	**16 36 00.3**	**+1.1**
NC303				IAML			16 36 06.7	
	comp=Z,83nm,0.5s							
NBO00	**NORSAR Array S**	**0.36**	**291**	*e*P		**Pg**	**16 35 56.5**	**+0.8**
NBO00				IAML			16 36 06.6	
	comp=Z,57nm,0.8s							
OSL	**Oslo**	**1.04**	**201**	*e*S		**Sb**	**16 36 23.8**	**0.0**
UDD	**Uddeholm**	**1.34**	**127**	P		**Pg**	**16 36 14.9**	**+0.5**
UDD				S		**Sb**	**16 36 33.0**	**+0.6**
UDD	**Uddeholm**	**1.34**	**127**	P		**Pg**	**16 36 14.9**	**+0.5**
UDD				S		**Sb**	**16 36 33.0**	**+0.6**
HFS	**Hagfors**	**1.35**	**124**	Pg		**Pg**	**16 36 14.9**	**+0.3**
	comp=Z,4.7nm,0.3s,baz=308,slow=16,SNR=131							
HFS				Lg		Lg	16 36 32.4	
	comp=Z,1.5nm,0.3s,baz=309,slow=30,SNR=6.1							
SKAR	**Skarslia**	**1.57**	**263**	*e*P		**Pn**	**16 36 18.1**	**+0.2**
SKAR				*e*S		**Sn**	**16 36 38.4**	**-0.5**
SKAR				IAML			16 36 41.7	
	comp=Z,22nm,0.4s							
KONO	**Kongsberg**	**1.57**	**217**	*e*P		**Pn**	**16 36 18.1**	**+0.3**
KONO				*e*S		**Sg**	**16 36 39.2**	**+0.2**
KONO				IAML			16 36 43.9	
	comp=Z,14nm,0.4s							
FINU	**Finntorp**	**1.59**	**161**	P		**Pb**	**16 36 19.0**	**0.0**
FINU	**Finntorp**	**1.59**	**161**	P		**Pb**	**16 36 19.0**	**0.0**
DOMB	**Dombas**	**1.62**	**316**	*e*P		**Pn**	**16 36 19.2**	**+0.5**
DOMB				*e*S		**Sb**	**16 36 41.1**	**+0.6**
DOMB				IAML			16 36 42.7	
	comp=Z,50nm,0.3s							
STRU	**Stroemstad**	**1.88**	**184**	P		**Pn**	**16 36 22.5**	**+0.3**
STRU	**Stroemstad**	**1.88**	**184**	*i* P		**Pb**	**16 36 24.1**	**+0.1**
STRU				*i* S		**Sb**	**16 36 47.7**	**-0.3**
STRU	**Stroemstad**	**1.88**	**184**	P		**Pn**	**16 36 22.5**	**+0.3**
STRU				*i* P		**Pb**	**16 36 24.1**	**+0.1**
STRU				*i* S		**Sb**	**16 36 47.7**	**-0.3**
NASU	**Vaermlandsnaes**	**2.17**	**156**	P		**Pn**	**16 36 26.4**	**+0.4**
NASU	**Vaermlandsnaes**	**2.17**	**156**	P		**Pn**	**16 36 26.4**	**+0.4**
ROTU	**Roteberg**	**2.17**	**74**	P		**Pn**	**16 36 28.1**	**+2.0**
ROTU	**Roteberg**	**2.17**	**74**	P		**Pn**	**16 36 28.1**	**+2.0**
NRAU	**Nora**	**2.23**	**125**	P		**Pb**	**16 36 29.0**	**-0.9**
NRAU	**Nora**	**2.23**	**125**	P		**Pb**	**16 36 29.0**	**-0.9**
AKN	**Aaknes**	**2.49**	**303**	*e*P		**Pn**	**16 36 30.9**	**+0.3**
AKN				IAML			16 37 08.8	
	comp=Z,7.8nm,0.5s							
MOL	**Molde**	**2.50**	**314**	*e*P		**Pn**	**16 36 32.3**	**+1.6**
MOL				*e*Sg		**Sb**	**16 37 06.0**	**+0.2**
MOL				IAML			16 37 07.3	
	comp=Z,18nm,0.3s							
ODD1	**Odda**	**2.60**	**250**	*e*P		**Pn**	**16 36 32.6**	**+0.5**
ASKU	**Askersund**	**2.64**	**139**	P		**Pn**	**16 36 33.4**	**+0.9**
ASKU	**Askersund**	**2.64**	**139**	P		**Pn**	**16 36 33.4**	**+0.9**
TJOU	**Tjoern**	**2.88**	**178**	P		**Pn**	**16 36 36.6**	**+0.6**
TJOU	**Tjoern**	**2.88**	**178**	*i* P		**Pn**	**16 36 37.0**	**+1.1**
TJOU				*i* S		**Sn**	**16 37 10.5**	**-0.8**
TJOU	**Tjoern**	**2.88**	**178**	P		**Pn**	**16 36 36.6**	**+0.6**
TJOU				*i* P		**Pn**	**16 36 37.0**	**+1.1**
TJOU				*i* S		**Sn**	**16 37 10.5**	**-0.8**
BLS5	**Blasjo**	**2.91**	**241**	*e*P		**Pn**	**16 36 37.1**	**+0.7**
HOMB	**Homborsund**	**3.04**	**211**	*i* S		**Sn**	**16 37 15.2**	**+0.1**
HOMB	**Homborsund**	**3.04**	**211**	*i* S		**Sn**	**16 37 15.2**	**+0.1**
BORU	**Boraas**	**3.35**	**168**	P		**Pn**	**16 36 43.0**	**+0.7**
BORU	**Boraas**	**3.35**	**168**	*i* P		**Pn**	**16 36 41.7**	**-0.6**
BORU				*i* S		**Sn**	**16 37 23.7**	**+0.9**
BORU	**Boraas**	**3.35**	**168**	*i* P		**Pn**	**16 36 41.7**	**-0.6**
BORU				P		Pb	16 36 43.0	-5.9
BORU				*i* S		**Sn**	**16 37 23.7**	**+0.9**
SNART	**Snartemo**	**3.36**	**222**	*i* S		**Sn**	**16 37 21.8**	**-1.2**
SNART	**Snartemo**	**3.36**	**222**	*i* S		**Sn**	**16 37 21.8**	**-1.2**
ONAU	**Onsala**	**3.53**	**176**	*i* P		**Pn**	**16 36 45.3**	**+0.6**
ONAU				*e*S		**Sn**	**16 37 26.2**	**-0.9**
ONAU	**Onsala**	**3.53**	**176**	*i* P		**Pn**	**16 36 45.3**	**+0.6**
ONAU				*e*S		**Sn**	**16 37 26.2**	**-0.9**
DEL	**Delary**	**4.62**	**163**	*i* S		**Sn**	**16 37 54.2**	**+0.1**
DEL	**Delary**	**4.62**	**163**	*i* S		**Sn**	**16 37 54.2**	**+0.1**
BJUU	**Bjuv**	**4.92**	**170**	*i* S		**Sn**	**16 38 00.3**	**-1.0**
BJUU	**Bjuv**	**4.92**	**170**	*i* S		**Sn**	**16 38 00.3**	**-1.0**
FINES	**FINESS Array B**	**7.09**	**79**	Pn		**Pn**	**16 37 34.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=4.7							
FINES				Sn		**Sn**	**16 38 48.3**	**-6.5**
	comp=Z,0.1nm,0.3s,baz=267,slow=25,SNR=2.0							
FINES				Lg		Lg	16 39 27.3	
	comp=Z,0.2nm,0.3s,baz=270,slow=27,SNR=1.8							
	comp=Z,0.6nm,0.4s							
ARCES	**ARCESS Array B**	**10.44**	**28**	Pn		**Pn**	**16 38 17.3**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=6.6							
ARCES				Sn		Sn	16 40 08.1	-8.9
	baz=223,slow=24,SNR=1.9							
	comp=Z,3.3nm,1.1s							

*NEIC **18** 16:48:55.8±1.8, 47.83N±0.01×119.19W±0.02, h5km±1km, Error ellipse: s-maj=3.0km s-min=2.2km az=88.0*
*PNSN **18** 16:48:57.5, 47.83N×119.27W, h6km, MD3.5, Fault plane solution: NP1:φs=155.00000°, δ15.00000°, λ-140.00000°.*
*SEA **18** 16:48:57.5±1.4, 47.83N±0.01×119.27W±0.02, h6km±5km, ML3.5/4, ML3.1/56(NEIC), Error ellipse: s-maj=2.1km s-min=1.8km az=90.0*
*PGC **18** 16:48:57.5±0.0, 47.84N×119.23W, h9km, ML3.0/6, ML3.5(SEA), 68km south of Omak, Wa Washington*

ISC 18 16:48:56.1±1.2, 47.84N±0.02×119.24W±0.02, h8km±10km, n69, σ0§91/77, Washington

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DHW2	**Dyer Hill 2**	**0.39**	**292**			**Pg**	**16 49 04.5**	**+0.8**
WTV	**Waterville**	**0.51**	**254**			**Pg**	**16 49 06.4**	**+0.5**
B08A	**Colville Reser**	**0.52**	**353**			**Pg**	**16 49 07.0**	**+0.8**
B08A						**Sb**	**16 49 14.3**	**-1.1**
B08A	**Colville Reser**	**0.52**	**353**	IAML			16 49 15.4	
	comp=E,800nm,0.2s							
B08A				IAML			16 49 19.9	
	comp=N,975nm,0.3s							
B08A	**Colville Reser**	**0.52**	**353**	P		**Pg**	**16 49 07.0**	**+0.8**
B08A				S		**Sb**	**16 49 14.2**	**-1.1**
CBSW	**Chelan Butte S**	**0.54**	**267**			**Pb**	**16 49 07.1**	**-0.9**
CBSW						**Sb**	**16 49 14.3**	**-1.6**
OD2	**Odessa Site #2**	**0.57**	**141**			**Pb**	**16 49 07.8**	**-0.5**
C09A	**Chrisman Ranch**	**0.65**	**93**	S		**Sb**	**16 49 18.1**	**-0.8**
ETW	**Entiat**	**0.78**	**253**			**Pb**	**16 49 11.3**	**-0.6**
NLW	**Nelson Butte**	**0.78**	**288**			**Pb**	**16 49 11.5**	**-0.5**
D08A	**Wollman Farm,**	**0.81**	**165**			**Pb**	**16 49 12.0**	**-0.4**
D08A						**Sn**	**16 49 25.8**	**-0.3**
SLFW	**Sugar Loaf**	**0.88**	**265**			**Pb**	**16 49 13.1**	**-0.6**
FHE	**Frenchman Hill**	**0.91**	**191**			**Pb**	**16 49 14.0**	**0.0**
CRF	**Corfu**	**1.02**	**186**			**Pb**	**16 49 16.2**	**+0.2**
WAH2	**Wahluke Slope**	**1.11**	**192**			**Pn**	**16 49 17.5**	**-0.4**
WRW	**Wenatchee Ridg**	**1.11**	**272**			**Pb**	**16 49 17.5**	**-0.6**
BVW	**Beverly**	**1.12**	**203**			**Pb**	**16 49 18.2**	**+0.5**
LOCW	**Locke Island**	**1.13**	**187**			**Pn**	**16 49 18.2**	**0.0**
LTY	**Liberty**	**1.13**	**240**			**Pn**	**16 49 17.9**	**-0.5**
LTY				IAML			16 49 35.5	
	comp=N,302nm,0.4s							
LTY	**Liberty**	**1.13**	**240**	P		**Pn**	**16 49 18.0**	**-0.4**
LTY				Sn		**Sb**	**16 49 32.8**	**-0.1**
OT3	**Othello 3**	**1.17**	**180**			**Pn**	**16 49 18.5**	**-0.3**
GBB	**Gable Butte**	**1.26**	**192**			**Pn**	**16 49 20.0**	**0.0**
GBB						**Sb**	**16 49 37.7**	**+1.2**
E07A	**Sunnyside**	**1.35**	**198**			**Pn**	**16 49 21.3**	**0.0**
MXC	**Moxie City**	**1.45**	**210**			**Pn**	**16 49 23.1**	**+0.4**
MXC				IAML			16 49 44.4	
	comp=N,279nm,0.5s							
HAWA	**Hanford**	**1.46**	**188**			**Pn**	**16 49 22.4**	**-0.4**
NEW	**Newport**	**1.48**	**73**			**Pn**	**16 49 22.9**	**-0.2**
PNT	**Penticton**	**1.50**	**350**			**Pb**	**16 49 24.6**	**+0.3**
PNT	**Penticton**	**1.50**	**350**	Pn		**Pb**	**16 49 24.5**	**+0.3**
PNT				Sn		**Sg**	**16 49 44.3**	**0.0**
E09A	**Wood Farm, Sta**	**1.52**	**150**			**Pn**	**16 49 23.2**	**-0.4**
YPT	**Yellepit**	**1.80**	**174**			**Pn**	**16 49 26.8**	**-0.7**
YPT				IAML			16 50 00.4	
	comp=N,171nm,0.6s							
YPT				IAML			16 50 01.7	
	comp=E,286nm,0.7s							
JCW	**Jim Creek**	**1.84**	**282**	Pn		**Pb**	**16 49 30.0**	**-0.1**
FMW	**Mount Fremont**	**1.89**	**242**	Pn		**Pn**	**16 49 29.5**	**+0.6**
SHUK	**Shuksan-Mt. Ba**	**1.92**	**303**			**Pb**	**16 49 32.4**	**+1.0**
D05A	**Enumclaw**	**1.98**	**252**			**Pn**	**16 49 30.6**	**+0.7**
D05A				IAML			16 50 00.7	
	comp=N,221nm,0.6s							
D05A				IAML			16 50 02.0	
	comp=E,199nm,0.6s							
D05A	**Enumclaw**	**1.98**	**252**	Pn		**Pn**	**16 49 30.9**	**+1.0**
D05A				Sn		**Sb**	**16 49 56.2**	**-0.9**
F07A	**Phinny Hill Vi**	**2.00**	**194**			**Pn**	**16 49 30.7**	**+0.4**
F07A				IAML			16 50 00.5	
	comp=N,226nm,0.5s							
F07A				IAML			16 50 12.1	
	comp=E,209nm,0.7s							
BLTW	**Bickleton**	**2.03**	**199**			**Pn**	**16 49 31.3**	**+0.6**
LON	**Longmire**	**2.06**	**239**			**Pn**	**16 49 31.9**	**+0.7**
LON	**Longmire**	**2.06**	**239**	Pn		**Pn**	**16 49 32.1**	**+0.9**
LON				Sn		**Sb**	**16 49 58.2**	**-1.5**
LNOR	**Lincton Mounta**	**2.07**	**161**			**Pn**	**16 49 31.2**	**-0.1**
LNOR				IAML			16 50 08.3	
	comp=N,197nm,0.5s							
LNOR				IAML			16 50 09.0	
	comp=E,142nm,0.5s							
HOPB	**Hope**	**2.12**	**318**	Pn		**Pb**	**16 49 33.5**	**-1.3**
HOPB				Sn		**Sb**	**16 49 59.4**	**-1.9**
F10A	**Beach Ranch, E**	**2.32**	**143**			**Pn**	**16 49 34.5**	**-0.1**
GMW	**Gold Mountain**	**2.42**	**264**			**Pn**	**16 49 37.2**	**+1.2**
GNW	**Green Mountain**	**2.44**	**265**	Pn		**Pn**	**16 49 37.0**	**+0.8**
GNW	**Green Mountain**	**2.44**	**265**	Pn		**Pn**	**16 49 37.0**	**+0.8**
GNW				Sn		**Sn**	**16 50 06.9**	**+0.6

TGS	**TashGRES**	**0.79**	**282**	S		**Sn**	**16 54 37.1**	**+2.5**
NAM	**Namangan**	**0.88**	**108**	P		**Pn**	**16 54 22.7**	**-0.7**
NAM				S		**Sn**	**16 54 37.6**	**+0.8**
IUG	**Iuzhnay**	**0.96**	**336**	S		**Sn**	**16 54 43.7**	**+4.7**
NZBK	**Nazarbek**	**1.08**	**268**	S		**Sn**	**16 54 43.6**	**+1.8**
ARK	**Arkit**	**1.19**	**63**	⇑*i*P		**Pb**	**16 54 25.9**	**-1.3**
ARK				⇑*i*S		**Sb**	**16 54 42.3**	**-0.8**
CHMI	**Chimion**	**1.24**	**143**	P		**Pg**	**16 54 29.0**	**+1.3**
CHM	**Chimkent**	**1.27**	**326**	*e*P		**Pn**	**16 54 27.7**	**-1.0**
CHM	66nm,0.3s			*e*S		**Sg**	**16 54 45.5**	**+0.8**
	76nm,0.5s							
FRG	**Fergana**	**1.29**	**133**	S		**Sg**	**16 54 47.6**	**+2.1**
TSTA	**Tashata**	**1.61**	**115**	P		**Pb**	**16 54 34.7**	**+0.2**
TSTA				S		**Sg**	**16 54 58.6**	**+2.8**
DZA	**Taraz**	**1.72**	**19**	*e*P		**Pb**	**16 54 36.0**	**-0.4**
DZA	45nm,0.2s			*e*S		**Sg**	**16 55 00.1**	**+0.8**
	54nm,0.6s							
ARSB	**Arslanbob**	**1.83**	**87**	⇑*e*P		**Pn**	**16 54 37.0**	**+0.4**
ARSB				⇑*e*S		**Sb**	**16 55 01.3**	**-0.4**
KK31	**Karatay Array**	**1.83**	**359**	⇑Pn		**Pg**	**16 54 42.7**	**+3.6**
KK31	4.6nm,0.2s,baz=156,slow=11,SNR=8.7			⇓Sn		**Sb**	**16 55 01.1**	**-0.6**
	29nm,0.3s,baz=145,slow=25							
BRLS	**Borolday**	**1.84**	**343**	*e*P		**Pn**	**16 54 35.0**	**-1.6**
BRLS	11nm,0.5s			*e*S		**Sn**	**16 54 58.4**	**-2.1**
	72nm,0.3s							
OHH	**Osh**	**1.85**	**113**	⇓*i*P		**Pn**	**16 54 35.9**	**-0.9**
OHH				⇓*i*S		**Sn**	**16 54 59.9**	**-0.9**
DRK	**Karamyk**	**2.02**	**151**	⇑*i*P		**Pn**	**16 54 38.7**	**-0.7**
DRK				⇑*i*S		**Sn**	**16 55 04.6**	**-0.8**
GAR	**Garm**	**2.27**	**185**	⇑*i*P		**Pn**	**16 54 42.4**	**-0.3**
GAR				⇑*i*S		**Sn**	**16 55 10.9**	**-0.4**
DZI	**Dzhizak**	**2.37**	**242**	P		**Pn**	**16 54 44.0**	**+0.1**
DZI				S		**Sb**	**16 55 17.8**	**+0.6**
MRKS	**Merke**	**2.48**	**53**	Pg		**Pb**	**16 54 49.6**	**+0.2**
MRKS	18nm,0.5s			Lg		Lg	16 55 23.0	
	142nm,0.6s							
MRKS	**Merke**	**2.48**	**53**	*e*P		**Pb**	**16 54 49.6**	**+0.2**
MRKS	18nm,0.5s			*e*S		**Sg**	**16 55 23.0**	**-0.6**
	142nm,0.6s							
BXML	**Bakhmal**	**2.49**	**231**	P		**Pg**	**16 54 50.7**	**-0.9**
BXML				S		**Sg**	**16 55 27.7**	**+3.8**
SALK	**Salom-Alik**	**2.50**	**98**	⇓*i*P		**Sn**	**16 54 46.1**	**+0.3**
SALK				⇓*i*S		**Sn**	**16 55 17.3**	**+0.3**
SFK	**Sufi-Kurgan**	**2.57**	**118**	⇓*i*P		**Pn**	**16 54 46.7**	**-0.2**
SFK				⇓*i*S		**Sn**	**16 55 18.4**	**-0.4**
EKS2	**Erkin-Say**	**2.78**	**59**	⇑*e*P		**Pn**	**16 54 50.8**	**+1.2**
EKS2				⇑*i*S		**Sn**	**16 55 25.4**	**+1.6**
CHGR	**Chuyangaron**	**2.82**	**203**	⇑*i*P		**Pn**	**16 54 50.2**	**+0.1**
CHGR				⇑*i*S		**Sn**	**16 55 24.5**	**-0.2**
ARLS	**Aral**	**2.89**	**77**	⇑*i*P		**Pn**	**16 54 51.9**	**+0.7**
ARLS				⇑*i*S		**Sn**	**16 55 27.5**	**+0.9**
UCH	**Uchtor**	**3.12**	**71**	⇑*e*P		**Pn**	**16 54 55.4**	**+0.8**
UCH				⇑*i*S		**Sn**	**16 55 33.5**	**+0.9**
AAK	**Ala-Archa**	**3.24**	**64**	⇑Pn		**Pb**	**16 55 02.8**	**+0.5**
AAK	6.9nm,0.8s			⇑Sn		**Sn**	**16 55 35.0**	**-0.4**
	11nm,0.7s							
AAK	**Ala-Archa**	**3.24**	**64**	⇑*i*P		**Pn**	**16 54 57.1**	**+1.1**
AAK				⇑*i*S		**Sn**	**16 55 36.5**	**+1.2**
FRU1	**Bishkek**	**3.41**	**62**	⇑*i*P		**Pn**	**16 54 59.4**	**+1.2**
FRU1				⇑*i*S		**Sn**	**16 55 40.4**	**+1.2**
KTAB	**Kitab**	**3.53**	**234**	S		**Sg**	**16 55 54.0**	**-3.2**
USP	**Ospenovka**	**3.55**	**54**	⇓*i*P		**Pn**	**16 55 01.4**	**+1.3**
USP				⇓*i*S		**Sn**	**16 55 44.0**	**+1.4**
KBK	**Karagaybulak**	**3.56**	**66**	⇑*e*P		**Pn**	**16 55 01.4**	**+1.0**
KBK				⇑*i*S		**Sn**	**16 55 44.0**	**+0.8**
CHMS	**Chumysh**	**3.57**	**60**	⇑*i*P		**Pn**	**16 55 01.7**	**+1.3**
CHMS				⇑*i*S		**Sn**	**16 55 44.3**	**+1.1**
SGDS	**Sogindy**	**3.73**	**53**	Pg		**Pb**	**16 55 11.6**	**+1.0**
SGDS	2.3nm,0.5s			Lg		Lg	16 56 00.7	
	9.5nm,0.4s							
NUT	**Nurota**	**3.76**	**261**	P		**Pn**	**16 55 02.2**	**-0.8**
JNKS	**Jany-Kuch**	**3.86**	**91**	⇓*e*P		**Pn**	**16 55 05.1**	**+0.5**
JNKS				⇓*i*S		**Sn**	**16 55 50.3**	**-0.3**
TKM2	**Tokmak 2**	**4.10**	**65**	⇓*i*P		**Pn**	**16 55 09.1**	**+1.2**
TKM2				⇓*i*S		**Sn**	**16 55 57.1**	**+0.5**
BOOM	**Boomskoye usch**	**4.20**	**71**	⇓*i*P		**Pn**	**16 55 10.3**	**+1.0**
BOOM				⇓*i*S		**Sn**	**16 55 59.3**	**+0.3**
DGS	**Degeres**	**4.35**	**61**	Pg		**Pb**	**16 55 23.3**	**+2.2**
DGS	4.2nm,0.7s			Lg		Lg	16 56 21.3	
	19nm,0.9s							
ULHL	**Ulahol**	**4.37**	**75**	⇓*i*P		**Pn**	**16 55 12.6**	**+1.1**
ULHL				⇓*i*S		**Sn**	**16 56 03.0**	**-0.1**
KST	**Kastek**	**4.40**	**64**	Pg		**Pb**	**16 55 24.0**	**+2.0**
KST	1.8nm,0.6s			Lg		Lg	16 56 22.0	
	16nm,0.5s							
KST	**Kastek**	**4.40**	**64**	*e*P		**Pb**	**16 55 24.0**	**+2.0**
KST	1.8nm,0.6s			*e*S		**Sg**	**16 56 22.0**	**-3.2**
	16nm,0.5s							
KRBS	**Karabastau**	**4.50**	**56**	Lg		Lg	16 56 24.1	
	1.9nm,1.0s							
BTLS	**Baital**	**4.56**	**33**	Pg		**Pg**	**16 55 29.5**	**-1.7**
BTLS	12nm,0.1s			Lg		Lg	16 56 31.5	
	22nm,0.6s							
BTLS	**Baital**	**4.56**	**33**	*e*P		**Pg**	**16 55 29.5**	**-1.7**
BTLS	12nm,0.1s			*e*S		**Sg**	**16 56 31.5**	**+1.2**
	22nm,0.6s							
MTBS	**Maitube**	**4.75**	**65**	Pg		**Pb**	**16 55 31.4**	**+3.4**
	0.9nm,0.5s							
MTBS	**Maitube**	**4.75**	**65**	*e*P		**Pb**	**16 55 31.4**	**+3.4**
MTBS	0.9nm,0.5s			*e*S		**Sg**	**16 56 34.9**	**-1.5**
	9.9nm,0.5s							
IZV	**Izvestkoviy**	**4.84**	**67**	Pg		**Pb**	**16 55 31.2**	**+1.6**
	1.9nm,0.7s							
IZV				Lg		Lg	16 56 35.1	
	7.7nm,0.6s							
IZV	**Izvestkoviy**	**4.84**	**67**	*e*P		**Pb**	**16 55 31.2**	**+1.6**
	1.9nm,0.7s							
IZV				*e*S		**Sg**	**16 56 35.1**	**-4.3**
	7.7nm,0.6s							
TNSS	**Tian-Shan**	**5.07**	**67**	Pg		**Pb**	**16 55 37.1**	**+3.4**
	0.6nm,0.6s							
TNSS	**Tian-Shan**	**5.07**	**67**	*e*P		**Pb**	**16 55 37.1**	**+3.4**
	0.6nm,0.6s							
TNSS				*e*S		**Sg**	**16 56 44.5**	**-2.4**
	2.1nm,0.9s							
KTBS	**Karatobe**	**5.15**	**60**	Lg		Lg	16 56 44.5	
	6.5nm,1.0s							
MDOK	**Medeo**	**5.18**	**66**	Pg		**Pb**	**16 55 38.9**	**+3.5**
	2.5nm,1.3s							
KOTS	**Kotyrbulak**	**5.25**	**66**	Pg		**Pb**	**16 55 40.5**	**+4.0**
	1.6nm,0.5s							
KOTS	**Kotyrbulak**	**5.25**	**66**	*e*P		**Pb**	**16 55 40.5**	**+4.0**
	1.6nm,0.5s							
KOTS				*e*S		**Sg**	**16 56 51.1**	**-1.4**
	10nm,0.6s							
TARG	**Taragay, Kyrgy**	**5.47**	**83**	⇑*e*P		**Pn**	**16 55 27.5**	**+0.7**
TARG				⇑*i*S		**Sn**	**16 56 29.1**	**-1.4**
AB31	**Akbulak array**	**10.93**	**321**	P		**Pn**	**16 56 39.1**	**-2.2**
	0.3nm,0.4s,baz=133,slow=15,SNR=14							

*IDC **18** 17:17:33.2±1.8, 1°.63N×126°.05E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=192.9km s-min=21.1km az=66.0*
*DJA **18** 17:17:37.3±1.1, 2°.N±2°×12°.7E±°, h16km±9km, M3.4/10, MLv3.4/10*
ISC 18 17:17:38.6±1.0, 1°.79N±0°.07×126°.55E±0°.09, h35km, n9, σ1°19/11, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TNTI	**Ternate**	**1.30**	**141**	P		**Pn**	**Pn**	**17 18 00.8**	**+0.5**
TNTI				S		**Sn**	**Sn**	**17 18 18.2**	**+1.7**
SGSI	**Sangihe**	**2.14**	**332**	P		**Pn**	**Pn**	**17 18 11.9**	**+0.1**
SGSI				S		**Sn**	**Sn**	**17 18 39.1**	**+1.9**
KMSI	**Cibinong**	**2.83**	**245**	P		**Pn**	**Pn**	**17 18 22.0**	**+0.6**
SANI	**Sanana**	**3.85**	**188**	P		**Pn**	**Pn**	**17 18 35.1**	**-0.3**
LUWI	**Luwuk**	**4.71**	**233**	P		**Pn**	**Pn**	**17 18 47.5**	**+0.4**
WRA	**Waramunga Arr**	**22.91**	**161**	P		**P**	**P**	**17 22 38.3**	**-1.3**
	1.0nm,0.5s,baz=338,slow=10,SNR=8.4								
	1.0nm,0.5s								
ASAR	**Alice Springs**	**26.30**	**165**	P		**P**	**P**	**17 23 11.0**	**-0.1**
	0.3nm,0.4s,baz=344,slow=11,SNR=16								
	0.3nm,0.4s								
MKAR	**Makanchi Array**	**59.04**	**326**	P		**P**	**P**	**17 27 33.7**	**-1.4**
	0.2nm,0.4s,baz=116,slow=8.3,SNR=5.2								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**63.27**	**328**	P		**P**	**P**	**17 28 03.3**	**-0.4**
	0.3nm,0.5s,baz=128,slow=6.1,SNR=6.5								
	0.3nm,0.5s								

*IDC **18** 17:29:46.8±5.8, 24°.21S×179°.91E, h564km±66km, mb2.7/5, mbtmp3.7/6, Error ellipse: s-maj=39.3km s-min=33.3km az=36.0*
ISC 18 17:29:45.4±1.2, 24°.3S±0°.3×180°.0E±0°.2, h550km, n7, σ0°82/7, mb3.0/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
DZM	**Mont Dzumac**	**12.64**	**277**	P		**P**	**P**	**17 32 31.5**	**+0.8**
	5.3nm,0.7s,baz=95,slow=18,SNR=6.0								
STKA	**Stephens Creek**	**34.57**	**249**	P		**P**	**P**	**17 35 48.0**	**-0.7**
	0.7nm,0.5s,baz=94,slow=16,SNR=1.4								
	0.7nm,0.5s								
ASAR	**Alice Springs**	**41.96**	**261**	P		**P**	**P**	**17 36 48.9**	**+0.1**
	0.2nm,0.4s,baz=96,slow=7.1,SNR=20								
	0.2nm,0.4s								
WRA	**Warramunga Arr**	**42.37**	**267**	P		**P**	**P**	**17 36 51.7**	**-0.3**
	0.8nm,0.4s,baz=99,slow=7.9,SNR=23								
	0.8nm,0.4s								
VNDA	**Vanda**	**54.01**	**185**	P		**P**	**P**	**17 38 18.0**	**+0.4**
	0.5nm,0.6s,baz=36,slow=5.0,SNR=4.0								
	0.5nm,0.6s								
TXAR	**Lajitas Array**	**90.64**	**58**	P		**P**	**P**	**17 41 50.3**	**+0.4**
	0.1nm,0.6s,baz=236,slow=4.6,SNR=2.2								
	0.1nm,0.6s								
HFS	**Hagfors**	**142.91**	**349**	PKP		**PKPdf**	**PKPdf**	**17 48 15.0**	**-1.1**
	1.7nm,0.5s,baz=11,slow=0.7,SNR=9.2								

*IDC **18** 17:38:15.3±0.7, 26°.51N×127°.99E, h0km, mb3.6/11, mbtmp3.7/14, ML3.3/3, MS2.9/8, Error ellipse: s-maj=18.7km s-min=13.1km az=120.0*
*JMA **18** 17:38:21.6±0.1, 26°.6N±0°.4×128°.3E±0°.6, h40km, MD3.9/17, MV3.9/17, NEAR OKINAWAJIMA ISLAND*
JMA Felt I J1 at NEAR OKINAWAJIMA ISLAND .
ISC 18 17:38:19.9±0.7, 26°.52N±0°.04×128°.41E±0°.04, h39km±1km, n49, σ1°13/53, mb3.6/11, MS3.1/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JOW	**Kunigami**	**0.33**	**339**	Pn		**Pn**	**Pn**	**17 38 28.9**	**+0.6**
	2μm,0.3s,baz=158,slow=9.5,SNR=1630								
JOW				Sn		**Sn**	**Sn**	**17 38 34.1**	**-0.8**
	2μm,0.3s,baz=225,slow=20,SNR=42								
JOW				LR		LR	LR	17 38 46.6	
	comp=Z,2μm,18.6s,baz=130,slow=76								
JOW	**Kunigami**	**0.33**	**339**	P		**Pn**	**Pn**	**17 38 28.9**	**+0.6**
JOW	**Kunigami**	**0.33**	**339**	S		**Sn**	**Sn**	**17 38 34.3**	**-0.6**
JOW	**Kunigami**	**0.33**	**339**	*i* P		**Pn**	**Pn**	**17 38 29.0**	**+0.6**
JOW				*e*S		**Sn**	**Sn**	**17 38 34.2**	**-0.8**
JOW	**Kunigami**	**0.33**	**339**	A		A	A	17 38 29.0	
	comp=N,33nm,0.6s,comp=E,43nm,1.4s								
JNTH	**Nagotoyohara**	**0.35**	**269**	*i* P		**Pn**	**Pn**	**17 38 29.7**	**+1.3**
JNTH				S		**Sn**	**Sn**	**17 38 35.4**	**+0.4**
JNTH	**Nagotoyohara**	**0.35**	**269**	A		A	A	17 38 29.7	
	comp=N,38nm,0.3s,comp=E,24nm,0.8s								
JYRO	**Yoronjima**	**0.50**	**4**	*i* P		**Pn**	**Pn**	**17 38 31.2**	**+0.7**
JYRO				*e*S		**Sn**	**Sn**	**17 38 37.7**	**-0.3**
JYRO	**Yoronjima**	**0.50**	**4**	A		A	A	17 38 31.2	
	comp=N,10.0nm,0.9s,comp=E,16nm,0.8s								
JIH	**Iheya**	**0.64**	**322**	*i* P		**Pn**	**Pn**	**17 38 32.9**	**+0.2**
JIH				*e*S		**Sn**	**Sn**	**17 38 40.9**	**-0.7**
JJT3	**Tamagusuku3**	**0.68**	**236**	*i* P		**Pn**	**Pn**	**17 38 35.1**	**+2.1**
JOKE	**Okinoerabujima**	**0.85**	**10**	*i* P		**Pn**	**Pn**	**17 38 35.9**	**+0.5**
JOKE				*e*S		**Sn**	**Sn**	**17 38 46.4**	**-0.2**
JAGN	**Aguni-jima**	**1.05**	**274**	*i* P		**Pn**	**Pn**	**17 38 39.3**	**+1.2**
JAGN				*e*S		**Sn**	**Sn**	**17 38 51.7**	**+0.3**
JTK	**Tokunoshima**	**1.35**	**21**	*i* P		**Pn**	**Pn**	**17 38 43.0**	**+0.8**
JTK				*e*S		**Sn**	**Sn**	**17 38 58.6**	**-0.2**
JKE	**Kume jima 2**	**1.47**	**263**	*i* P		**Pn**	**Pn**	**17 38 44.5**	**+0.7**
JAMN	**Amaminishikomi**	**1.84**	**22**	P		**Pn**	**Pn**	**17 38 49.8**	**+0.8**
JAMN				*e*S		**Sn**	**Sn**	**17 39 11.4**	**+0.3**
JAM	**Amami Oshima**	**2.16**	**29**	*i* P		**Pn**	**Pn**	**17 38 54.1**	**+0.7**
JAM				*e*S		**Sn**	**Sn**	**17 39 18.4**	**-0.5**
JZK	**Kikaishima**	**2.26**	**38**	P		**Pn**	**Pn**	**17 38 56.1**	**+1.4**
JZK				*e*S		**Sn**	**Sn**	**17 39 22.7**	**+1.3**
JMZ	**Minamidaito 2**	**2.63**	**105**	P		**Pn**	**Pn**	**17 39 00.3**	**+0.6**
JMZ	**Minamidaito 2**	**2.63**	**105**	S		**Sn**	**Sn**	**17 39 28.9**	**-1.5**
JMZ	**Minamidaito 2**	**2.63**	**105**	*e*P		**Pn**	**Pn**	**17 39 00.2**	**+0.4**
JMZ				*e*S		**Sn**	**Sn**	**17 39 28.3**	**-2.1**
JKDJ	**Kitadaitoujima**	**2.66**	**102**	P		**Pn**	**Pn**	**17 39 00.8**	**+0.6**
JKDJ				*e*S		**Sn**	**Sn**	**17 39 30.2**	**-1.0**
JMJ	**Miyako jima 2**	**3.29**	**239**	P		**Pn**	**Pn**	**17 39 10.4**	**+1.6**
TATO	**Taipei**	**6.43**	**258**	P		**Pn**	**Pn**	**17 39 54.4**	**+2.4**
JNU	**Nakatsue**	**6.92**	**17**	Pn		**Pn**	**Pn**	**17 40 00.3**	**+1.6**
	comp=E,1.8nm,0.3s,baz=202,slow=5.4,SNR=22								
JNU				Sn		**Sn**	**Sn**	**17 41 16.5**	**+0.3**
	comp=E,0.4nm,0.3s,baz=215,slow=18,SNR=1.1								
	comp=E,30nm,0.8s								
YULB	**Yu-li**	**7.17**	**246**	P		**Pn**	**Pn**	**17 39 59.6**	**-2.6**
JMN	**Monobe**	**8.60**	**32**	P		**Pn**	**Pn**	**17 40 22.1**	**+0.3**
KSRS	**Korea Array**	**10.90**	**358**	Pn		**Pn**	**Pn**	**17 40 53.5**	**+0.2**
	comp=E,0.1nm,0.3s,baz=176,slow=13,SNR=1.4								
	comp=E,1.7nm,0.9s								
JCJ	**Chichijima**	**12.32**	**84**	LR		LR	LR	17 45 21.1	
	comp=E,28nm,21.2s,baz=130,slow=34								
MJAR	**Matsushiro Arr**	**13.01**	**38**	Pn		**Pn**	**Pn**	**17 41 23.9**	**+1.7**
	baz=231,slow=7.7,SNR=0.9								
	comp=E,0.8nm,0.7s								
DAV	**Davao City (W)**	**19.53**	**188**	LR		LR	LR	17 49 53.1	
	comp=E,31nm,21.1s,baz=339,slow=36								
CMAR	**Chiang Mai Arr**	**28.33**	**260**	P		**P**	**P**	**17 44 08.5**	**-1.8**
	comp=E,0.3nm,0.3s,baz=73,slow=8.0,SNR=5.6								
CMAR				LR		LR	LR	17 55 01.0	
	comp=E,10nm,21.6s,baz=75,slow=36								
	comp=E,0.3nm,0.3s								
KAPI	**Kappang**	**32.45**	**196**	LR		LR	LR	17 57 18.6	
	comp=E,16nm,19.6s,baz=25,slow=35								
BRDH	**Bariadhala**	**33.57**	**272**	LR		LR	LR	17 59 39.8	
	comp=E,42nm,20.2s,baz=230,slow=39								
H11N1	**WAKE ISLAND Hy**	**35.94**	**93**	T		T	T	18 23 33.6	
	baz=290,slow=75,SNR=3.5								
H11N2	**WAKE ISLAND Hy**	**35.94**	**93**	T		T	T	18 23 33.9	
	baz=290,slow=75,SNR=8.7								
H11N3	**WAKE ISLAND Hy**	**35.95**	**93**	T		T	T	18 23 36.1	
	baz=290,slow=75,SNR=4.3								
MKAR	**Makanchi Array**	**41.46**	**312**	P		**P**	**P**	**17 46 02.7**	**-0.3**
	comp=E,0.3nm,0.6s,baz=102,slow=10,SNR=4.7								
	comp=E,0.3nm,0.6s								
ZALV	**Zalesovo Beam**	**42.11**	**323**	P		**P**	**P**	**17 46 06.8**	**-1.3**
	comp=E,0.6nm,0.5s,baz=120,slow=10,SNR=1.8								
ZALV				LR		LR	LR	18 04 44.0	
	comp=E,24nm,20.2s,baz=40,slow=38								
	comp=E,0.6nm,0.5s								
KURBB	**Kurchatov Arra**	**44.75**	**316**	P		**P**	**P**	**17 46 28.3**	**-1.1**
	comp=E,0.3nm,0.5s,baz=105,slow=9.4,SNR=2.0								
	comp=E,0.3nm,0.5s								
WRA	**Warramunga Arr**	**46.55**	**172**	P		**P**	**P**	**17 46 45.6**	**+1.7**
	comp=E,0.6nm,0.7s,baz=354,slow=8.1,SNR=7.0								
WRA				PcP		**PcP**	**PcP**	**17 48 18.5**	**+0.7**
	comp=E,0.4nm,0.7s,baz=356,slow=4.4,SNR=2.7								
	comp=E,0.6nm,0.7s								
PALK	**Pallekele**	**49.16**	**256**	LR		LR	LR	18 08 48.4	
	comp=E,19nm,19.0s,baz=36,slow=38								
BVAR	**Borovoye Array**	**50.16**	**318**	P		**P**	**P**	**17 47 12.0**	**+0.6**
	comp=E,0.6nm,0.6s,baz=81,slow=8.9,SNR=2.9								
BVAR				LR		LR	LR	18 11 18.2	
	comp=E,37nm,18.2s,baz=62,slow=40								
	comp=E,0.6nm,0.6s								
ASAR	**Alice Springs**	**50.18**	**173**	P		**P**	**P**	**17 47 13.0**	**+1.2**
	comp=E,0.3nm,0.5s,baz=4.9,slow=13,SNR=13								
ASAR				PcP		**PcP**	**PcP**	**17 48 32.2**	**+1.4**
	comp=E,0.3nm,0.9s,baz=4.8,slow=3.3,SNR=6.2								
	comp=E,0.3nm,0.5s								
FINES	**FINESS Array B**	**72.69**	**331**	P		**P**	**P**	**17 49 42.7**	**-0.7**
	comp=E,2.8nm,0.9s,baz=61,slow=5.5,SNR=7.6								
	comp=E,2.8nm,0.9s								
AKASG	**Malin Array Be**	**75.41**	**320**	P		**P**	**P**	**17 49 58.9**	**-0.7**
	comp=E,0.4nm,0.4s,baz=64,slow=6.4,SNR=2.3								
	comp=E,0.4nm,0.4s								
BRTR	**Keskin Array B**	**76.98**	**308**	P		**P**	**P**	**17 50 09.0**	**+0.1**
	comp=E,0.1nm,0.3s,baz=83,slow=4.8,SNR=1.8								
	comp=E,0.1nm,0.3s								
NB2	**NORSAR Subarra**	**79.12**	**334**	P		P	P	17 50 31.4	+11
	comp=Z,0.7nm,0.6s,baz=55,slow=5.6								
NOA	**NORSAR Array B**	**79.12**	**334**	P		**P**	**P**	**17 50 18.9**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=59,slow=5.1,SNR=1.9								
	comp=Z,0.3nm,0.7s								

TAP 18 17:39:46.1, 24°.03N×121°.87E, h36km±1km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TWD	**Chiawan**	**0.26**	**281**	*e*P		**Pn**	**Pn**	**17 39 53.5**	**-0.7**
TWD				*e*S		**Sn**	**Sn**	**17 39 59.0**	**-2.2**
NACB	**Ninganchiao**	**0.29**	**299**	P		**Pn**	**Pn**	**17 39 53.3**	**-0.8**
NACB	**Ninganchiao**	**0.29**	**299**	*e*P		**Pn**	**Pn**	**17 39 53.2**	**-0.9**
NACB				*e*S		**Sn**	**Sn**	**17 39 58.9**	**-2.0**
ETM	**Tongmen**	**0.35**	**259**	*e*P		**Pn**	**Pn**	**17 39 54.9**	**+0.4**
ETM				*e*S		**Sn**	**Sn**	**17 40 01.2**	**+0.1**
SHUL	**Shoufeng**	**0.37**	**229**	*e*P		**Pn**	**Pn**	**17 39 55.2**	**+0.5**
SHUL				*e*S		**Sn**	**Sn**	**17 40 01.8**	**+0.5**
ETLH	**Xiulin Townshi**	**0.40**	**296**	*e*P		**Pn**	**Pn**	**17 39 55.2**	**0.0**
ETLH				*e*S		**Sn**	**Sn**	**17 40 02.6**	**+0.7**
LXIB	**Xiulin Townshi**	**0.42**	**269**	*e*P		**Pn**	**Pn**	**17 39 55.9**	**+0.3**
LXIB				*e*S		**Sn**	**Sn**	**17 40 02.5**	**0.0**
ESL	**Shilin**	**0.46**	**242**	*e*P		**Pn**	**Pn**	**17 39 55.9**	**-0.1**
ESL				*e*S		**Sn**	**Sn**	**17 40 02.8**	**-0.2**
WARBT	**Fenglin Townsh**	**0.54**	**235**	*e*P		**Pn**	**Pn**	**17 39 56.7**	**-0.7**
WARBT				*e*S		**Sn**	**Sn**	**17 40 03.5**	**-1.8**
NNS	**Nan Shan**	**0.61**	**312**	*e*P		**Pn**	**Pn**	**17 39 57.6**	**-0.9**
YHNB	**Yeheng**	**0.78**	**325**	P		**Pn**	**Pn**	**17 39 56.7**	**-3.9**
SSLB	**Suanglung**	**0.87**	**254**	P		**Pn**	**Pn**	**17 40 02.5**	**+0.6**
TPUB	**Ta-pu**	**1.35**	**238**	P		**Pn**	**Pn**	**17 40 09.7**	**+1.3**

TAP 18 17:39:52.1, 24°.13N×121°.42E, h28km±1km, ML1.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
WHF	**Hehuan Shan**	**0.14**	**277**	*e*P		**Pn**	**Pb**	**17 39 58.1**	**+0.1**
WHF				*e*S		**Sn**	**Sb**	**17 40 02.5**	**+0.5**
FUSS	**Fushou**	**0.20**	**307**	P		**Pn**	**Pb**	**17 39 58.8**	**+0.3**
FUSS				S		**Sn**	**Sb**	**17 40 03.5**	**+0.8**
TWT	**Tachien**	**0.25**	**300**	*e*P		**Pn**	**Pn**	**17 39 59.8**	**-0.5**
TWT				*e*S		**Sn**	**Sb**	**17 40 03.9**	**+0.3**
TDCB	**Techi**	**0.27**	**298**	*e*P		**Pn**	**Pb**	**17 39 59.6**	**+0.5**
TDCB				*e*S		**Sn**	**Sb**	**17 40 03.0**	**-0.9**
OWD	**Renai**	**0.28**	**232**	*e*P		**Pn**	**Pb**	**17 39 59.0**	**-0.3**
OWD				*e*S		**Sn**	**Sb**	**17 40 04.6**	**+0.5**

*IGIL **18** 17:44:46.7, 35°.75N×4°.54W, h30km, ML1.6*
*MDD **18** 17:44:46.2±1.0, 35°.75N×4°.54W, h97km±7km, Mb2.1/13, Error ellipse: s-maj=7.8km s-min=4.5km az=160.0*
*SFS **18** 17:44:46.6, 35°.71N×4°.58W, h71km, ML3.0/9, ML2.5/15, MLv2.3/15*
*CNRM **18** 17:44:46.3, 35°.52N×4°.95W, h14km, ML2.3*
*INMG **18** 17:44:47.4±1.4, 35°.85N×4°.55W, h88km±4km, ML2.0, Error ellipse: s-maj

MESJ	**Messejana**	**3.65**	**306**	*e*P		**Pn**	**17 45 39.6**	**+1.4**
MESJ				*e*S		**Sn**	**17 46 18.8**	**-1.6**
MESJ				*i* IAML			17 46 20.9	
MESJ				*i* IAML			17 46 21.3	
MESJ				*i* IAML			17 46 21.4	
MORF	**Marmelete**	**3.69**	**297**	*e*P		**Pn**	**17 45 40.0**	**+1.2**
MORF	**Marmelete**	**3.69**	**297**	*e*S		**Sn**	**17 46 20.6**	**-0.8**
PFVI	**Vila Bisbo**	**3.75**	**293**	Pn		**Pn**	**17 45 40.8**	**+1.1**
PFVI	**Vila Bisbo**	**3.75**	**293**	*e*P		**Pn**	**17 45 40.9**	**+1.3**
PFVI				*e*S		**Sn**	**17 46 21.9**	**-1.0**
PAB	**San Pablo**	**3.81**	**2**	Pn		**Pn**	**17 45 41.1**	**+0.5**
PAB	comp=N,63nm,SNR=0.8			⇑*i*Vmb_VC			17 45 45.3	
PAB				Sn		**Sn**	**17 46 22.2**	**-2.5**
EVO	**Evora**	**3.96**	**316**	Sn		**Sn**	**17 46 26.4**	**-1.5**
EVO	**Evora**	**3.96**	**316**	*e*P		**Pn**	**17 45 44.5**	**+2.1**
EVO				*e*S		**Sn**	**17 46 26.4**	**-1.5**
EVO				*i* IAML			17 46 28.1	
EVO				*i* IAML			17 46 28.1	
EVO				*i* IAML			17 46 28.2	
PESTR	**Estremoz**	**3.98**	**323**	Sn		**Sn**	**17 46 26.9**	**-1.6**
PESTR	**Estremoz**	**3.98**	**323**	*e*P		**Pn**	**17 45 45.2**	**+2.5**
PESTR				*e*S		**Sn**	**17 46 26.9**	**-1.6**
PESTR				*i* IAML			17 46 27.8	
PESTR				*i* IAML			17 46 28.4	
PESTR				*i* IAML			17 46 29.9	
PARRA	**Arraiolos**	**4.17**	**319**	*e*P		Pn	17 45 47.0	-6.0
PARRA				*e*S		Sn	17 46 31.3	-16
PARRA				*i* IAML			17 46 32.1	
PARRA				*i* IAML			17 46 34.2	
PARRA				*i* IAML			17 46 34.4	
PMTG	**Montargil**	**4.46**	**320**	*e*P		**Pn**	**17 45 51.0**	**+1.9**
PMTG				*e*S		**Sn**	**17 46 38.4**	**-1.6**
PMTG				*i* IAML			17 46 41.3	
PMTG				*i* IAML			17 46 42.0	
PMTG				*i* IAML			17 46 44.0	
EPLA	**Plasencia**	**4.50**	**345**	⇑*i*Vmb_VC			17 45 53.0	
EPLA	comp=N,68nm,SNR=0.5			Sn		**Sn**	**17 46 39.4**	**-1.8**
PSARD	**Sardoal**	**4.83**	**324**	*e*P		**Pn**	**17 45 56.5**	**+2.3**
PSARD				*e*S		**Sn**	**17 46 47.1**	**-1.9**
PSARD				*i* IAML			17 46 48.2	
PSARD				*i* IAML			17 46 50.2	
PSARD				*i* IAML			17 46 50.5	
TIO	**Tiouine**	**5.31**	**206**	Sn		**Sn**	**17 46 58.6**	**-2.3**

IGQ 18 19:02:49.1±0.1, 3°S±2°×8°0W±°, h38km±2km, MLv3.9/38, 30C-6D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACH2	**Ecuador-Machal**	**0.15**	**213**	P	Pn	19 02 57.5	-1.4
ACH2				S	Sn	19 03 05.3	-2.6
PCRA	**Pucara 2**	**0.24**	**108**	⇓P	Pn	19 02 57.5	-0.5
PCRA				S	Sn	19 03 04.7	-0.8
ACH1	**Ecuador-Univer**	**0.24**	**230**	⇓P	Pn	19 02 57.5	+0.1
ACH1				S	Sn	19 03 05.7	+1.0
PU03	**PU03**	**0.24**	**341**	⇓P	Pn	19 02 57.4	-0.1
PU02	**PU02**	**0.45**	**313**	⇑P	Pn	19 02 60.0	+1.0
ISPG	**Isla Puna-Puer**	**0.47**	**290**	⇑P	Pn	19 03 01.5	+2.1
PU01	**PU01**	**0.60**	**303**	⇑P	Pn	19 03 04.2	+3.0
PU06	**PU06**	**0.71**	**8**	⇑P	Pn	19 03 02.4	-0.3
MORR	**Playas El Morr**	**0.78**	**309**	⇑P	Pn	19 03 04.1	+0.5
ACUE	**Ecuador-Cuenca**	**0.80**	**74**	S	Sn	19 03 16.3	+1.3
ACUE				⇑P	Pn	19 03 04.2	+0.1
COHC	**Cochancay**	**0.81**	**35**	S	Sn	19 03 15.1	+0.2
COHC				⇑P	Pn	19 03 03.3	-0.8
PU07	**PU07**	**0.83**	**20**	⇑P	Pn	19 03 03.3	-1.0
MILO	**Milagro-Astudi**	**0.86**	**11**	⇑P	Pn	19 03 05.4	+0.6
GYE1	**Ecuador-Trinit**	**0.90**	**348**	⇓P	Pn	19 03 04.9	-0.3
LAMO	**ALAMOR**	**0.92**	**198**	P	Pn	19 03 06.0	+0.3
AZOG	**Ecuador-Azogue**	**0.95**	**67**	⇑P	Pn	19 03 06.0	-0.3
ALJ1	**Ecuador-Loja-U**	**1.00**	**148**	⇓P	Pn	19 03 07.1	+0.2
AC07	**Ecuador-Guayaq**	**1.01**	**345**	P	Pn	19 03 06.1	-0.7
GONZ	**Gonzanam**	**1.15**	**163**	⇓P	Pn	19 03 08.9	-0.1
BOSC	**San Juan Bosco**	**1.23**	**91**	⇑P	Pn	19 03 09.9	0.0
AMCR	**Ecuador-Macara**	**1.25**	**190**	P	Pn	19 03 09.9	-0.2
MCRA	**Macar, Loja**	**1.25**	**190**	⇑P	Pn	19 03 09.8	-0.3
SALI	**Salinas**	**1.57**	**307**	P	Pn	19 03 14.1	-0.4
JSCH	**Cashca Totoras**	**1.59**	**28**	P	Pn	19 03 14.4	-0.7
SANGA	**Volcan Sangay**	**1.73**	**52**	⇑P	Pn	19 03 16.8	-0.3
ZUMB	**Zumba**	**1.81**	**161**	P	Pn	19 03 19.0	+1.1
CHSH	**Refugio Sur-Vo**	**1.84**	**28**	P	Pn	19 03 17.2	-1.5
TAMH	**Tambohuasha Ch**	**1.84**	**31**	⇑P	Pn	19 03 17.6	-1.0
PPLP	**Puerto Lpez**	**1.89**	**326**	P	Pn	19 03 18.9	0.0
IGUA	**Igualata**	**1.96**	**34**	⇑P	Pn	19 03 19.6	-0.7
BMAS	**Trigal station**	**2.04**	**38**	⇑P	Pn	19 03 19.6	-1.7
BIL2	**Estacion Bilba**	**2.07**	**36**	P	Pn	19 03 22.5	+0.9
BPAT	**Tungurahua Vol**	**2.07**	**39**	⇑P	Pn	19 03 21.9	+0.1
BBIL	**Ulba Tungurahu**	**2.08**	**37**	⇑P	Pn	19 03 22.0	+0.2
BULB	**Ulba Tungurahu**	**2.14**	**38**	⇑P	Pn	19 03 16.9	-5.7
ISPT	**Isla de la Pla**	**2.29**	**324**	P	Pn	19 03 23.7	-0.7
TAIS	**Taisha**	**2.35**	**71**	P	Pn	19 03 24.6	-0.6
PKYU	**Pakayacu**	**2.59**	**55**	⇑P	Pn	19 03 28.0	-0.6
ILLI	**Illinizas Sur**	**2.60**	**23**	⇑P	Pn	19 03 29.5	+0.4
VCES	**Cotopaxi**	**2.67**	**30**	⇑P	Pn	19 03 30.1	0.0
SLOR	**San Lorenzo -**	**2.69**	**27**	P	Pn	19 03 30.4	+0.1
BMOR	**Cotopaxi Volca**	**2.70**	**28**	P	Pn	19 03 30.9	+0.4
CAMI	**Rancho Maria**	**2.73**	**27**	P	Pn	19 03 30.8	0.0
CAB1	**Cabo Pasado-Ma**	**2.82**	**346**	P	Pn	19 03 30.8	-0.8
ARDO	**Archidona, Ten**	**2.87**	**42**	⇑P	Pn	19 03 31.5	-0.8
ANTM	**Antisana-La Mi**	**2.98**	**30**	P	Pn	19 03 34.6	+0.2
ANTG	**Antisana-Guama**	**3.00**	**29**	⇑P	Pn	19 03 34.4	-0.2
ANTS	**Antisana-Sarah**	**3.04**	**31**	⇑P	Pn	19 03 35.3	0.0
GGPT	**Toaza - Volcan**	**3.09**	**21**	P	Pn	19 03 36.1	+0.3
JUA2	**San Juan 2**	**3.11**	**21**	⇑P	Pn	19 03 36.5	+0.4
TERV	**Terraza Guagua**	**3.15**	**21**	P	Pn	19 03 37.1	+0.5
PINO	**Pino**	**3.16**	**21**	⇑P	Pn	19 03 37.4	+0.5
YANA	**Yana**	**3.21**	**21**	⇑P	Pn	19 03 37.6	+0.1
BV15	**Puerto Quito-O**	**3.31**	**9**	P	Pn	19 03 36.0	-2.4
PAC1	**Pacto, Paraso**	**3.50**	**15**	P	Pn	19 03 40.6	-0.6
CAYR	**Refugio Cayamb**	**3.57**	**29**	P	Pn	19 03 42.8	+0.3
OTAV	**Otavalo**	**3.58**	**21**	⇑P	Pn	19 03 42.4	-0.2
ANGU	**Angureal**	**3.59**	**29**	P	Pn	19 03 43.3	+0.4
REVS	**Reventador Sur**	**3.67**	**35**	P	Pn	19 03 43.3	-0.3
CUIC	**Cuicocha-Domo**	**3.68**	**22**	P	Pn	19 03 44.6	+0.8
REVN	**San Rafael**	**3.69**	**35**	P	Pn	19 03 43.4	-0.5
COTA	**Cotacachi**	**3.71**	**22**	P	Pn	19 03 45.9	+1.5
CASC	**Dorado de Casc**	**4.03**	**36**	⇑P	Pn	19 03 47.7	-0.7
BONI	**La Bonita**	**4.18**	**32**	P	Pn	19 03 50.3	-0.3
RVRD	**Rio Verde**	**4.19**	**5**	P	Pn	19 03 49.3	-1.1
CHL1	**Volcn Chiles**	**4.29**	**25**	P	Pn	19 03 52.7	+0.4
ECEN	**Cerro Negro**	**4.30**	**24**	P	Pn	19 03 52.8	+0.2
FLOC	**Florencia**	**6.21**	**41**	P	Pn	19 04 15.2	-3.0

*IDC **18** 19:18:20.2±2.5, 28°.95N×139°.33E, h472km±34km, mb3.0/8, mbtmp3.8/10, Error ellipse: s-maj=68.2km s-min=13.4km az=73.0*
*JMA **18** 19:18:20.4±0.2, 29°N±2°×14°0E±°, h481km, MV3.3/21, NEAR TORISHIMA IS*
ISC 18 19:18:19.7±0.8, 28°.91N±0°.09×139°.2E±0°.1, h450km, n20, σ2°09/22, mb3.4/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.23**	**123**	*e*P	**P**	**19 19 29.7**	**+1.1**
CBIJ				*e*S	**S**	**19 20 25.6**	**+1.2**
JHJ2	**Mitsune**	**4.22**	**8**	*e*P	**P**	**19 19 39.3**	**+2.6**
JIE	**Ise**	**5.85**	**340**	*e*P	**P**	**19 19 56.8**	**+4.4**
BSO1	**Boso 1**	**5.93**	**15**	*e*P	**P**	**19 19 54.4**	**+1.8**
BSO4	**Boso 4**	**6.14**	**9**	*e*P	**P**	**19 19 57.8**	**+2.5**
JOD2	**Odawara 2**	**6.33**	**359**	*e*P	**P**	**19 19 59.5**	**+2.1**
JNY	**Yasuok**	**6.52**	**351**	*e*P	**P**	**19 20 02.2**	**+2.8**
JRY	**Ryogami san**	**7.09**	**358**	*e*P	**P**	**19 20 06.9**	**+1.7**
JWT	**Wachi**	**7.11**	**334**	*e*P	**P**	**19 20 09.4**	**+4.0**
JAG	**Ashikaga**	**7.50**	**2**	*e*P	**P**	**19 20 09.9**	**+0.3**
JAG				*e*S	**S**	**19 21 37.4**	**-2.3**
MJAR	**Matsushiro Arr**	**7.65**	**354**	P	**P**	**19 20 11.9**	**+0.6**
	1.4nm,0.5s,baz=170,slow=11,SNR=7.3						
KSRS	**Korea Array**	**12.69**	**315**	P	**P**	**19 21 06.3**	**+0.4**
	1.8nm,0.8s,baz=121,slow=9.4,SNR=4.2						
SONM	**Songino Array**	**31.56**	**316**	P	**P**	**19 24 04.0**	**+0.4**
	0.5nm,0.4s,baz=124,slow=8.8,SNR=3.8 0.5nm,0.4s						
MKAR	**Makanchi Array**	**47.26**	**308**	P	**P**	**19 26 09.8**	**-1.0**
	0.7nm,0.7s,baz=90,slow=8.9,SNR=6.1 0.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**48.52**	**197**	P	**P**	**19 26 20.1**	**-0.4**
	1.6nm,0.8s,baz=17,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**48.79**	**186**	P	**P**	**19 26 21.0**	**-1.4**
	0.7nm,0.5s,baz=2.0,slow=7.8,SNR=19 0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**49.86**	**313**	P	**P**	**19 26 29.0**	**-1.0**
	2.2nm,0.2s,baz=90,slow=8.1,SNR=4.7 2.2nm,0.2s						
ASAR	**Alice Springs**	**52.52**	**186**	P	**P**	**19 26 49.2**	**-0.6**
	0.2nm,0.6s,baz=15,slow=12,SNR=12 0.2nm,0.6s						
BVAR	**Borovoye Array**	**54.90**	**317**	P	**P**	**19 27 05.8**	**-0.6**
	1.1nm,0.6s,baz=81,slow=7.2,SNR=3.5 1.1nm,0.6s						
FINES	**FINESS Array B**	**75.13**	**333**	P	**P**	**19 29 12.8**	**-1.4**
	1.3nm,0.8s,baz=64,slow=4.8,SNR=3.9 1.3nm,0.8s						

*IDC **18** 19:23:32.8±1.0, 7°.70N×136°.98E, h0km, mb3.9/10, mbtmp3.9/11, ML4.0/1, MS2.9/4, Error ellipse: s-maj=41.4km s-min=17.2km az=78.0*
*NEIC **18** 19:23:35.2±1.8, 7°.7N±0°.1×136°.8E±0°.2, h10km±1km, mb4.3/19, Error ellipse: s-maj=27.1km s-min=17.5km az=86.0*
ISC 18 19:23:35.9±0.7, 7°.59N±0°.08×136°.8E±0°.1, h22km, n41, σ1ş36/32, mb4.2/19, MS3.0/3, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**10.78**	**159**	Pn	**Pn**	**19 26 10.6**	**+1.6**
	1.0nm,0.3s,baz=321,slow=13,SNR=10 7.7nm,0.6s						
DAV	**Davao City (W)**	**11.12**	**268**	LR	LR	19 30 31.1	
	comp=Z,34nm,20.1s,baz=171,slow=37						
FAKI	**Fak Fak**	**11.38**	**204**	Pn	**Pn**	**19 26 19.1**	**+1.8**
LUWI	**Luwuk**	**16.40**	**239**		**Pn**	**19 27 24.1**	**-0.7**
LUWI				IAmb	IAmb	19 27 41.4	
	comp=Z,20nm,0.9s						
TOLI2	**Tolitoli**	**17.20**	**249**	Pn	**Pn**	**19 27 32.4**	**-2.5**
KNRA	**Kununurra**	**24.45**	**199**	P	**P**	**19 28 54.0**	**+0.7**
KNRA				IAmb	IAmb	19 29 12.3	
	comp=Z,17nm,1.4s						
JMN	**Monobe**	**26.15**	**355**	P	**P**	**19 29 09.6**	**+0.9**
WR8	**Warramunga Arr**	**27.47**	**185**	P	**P**	**19 29 21.4**	**+0.8**
WR8				IAmb	IAmb	19 29 40.5	
	comp=Z,5.2nm,1.4s						
WRA	**Warramunga Arr**	**27.47**	**185**	P	**P**	**19 29 21.3**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=4.8,slow=10,SNR=6.9 comp=Z,0.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**27.80**	**203**	P	**P**	**19 29 22.6**	**-1.0**
HNR	**Honiara**	**28.61**	**126**	LR	LR	19 40 22.0	
	comp=Z,88nm,18.7s,baz=360,slow=35						
MJAR	**Matsushiro Arr**	**28.84**	**2**	P	**P**	**19 29 30.5**	**-2.3**
	comp=Z,1.6nm,0.8s,baz=178,slow=9.8,SNR=2.3 comp=Z,1.6nm,0.8s						
MJAR	**Matsushiro Arr**	**28.84**	**2**	IAmb	IAmb	19 30 00.0	
	comp=Z,4.5nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**31.03**	**67**	T	T	20 02 09.1	
	baz=253,slow=75,SNR=86						
H11S2	**WAKE ISLAND Hy**	**31.05**	**67**	T	T	20 02 10.7	
	baz=253,slow=75,SNR=89						
H11S1	**WAKE ISLAND Hy**	**31.05**	**67**	T	T	20 02 05.1	
	baz=253,slow=75,SNR=58						
AS31	**Alice Springs**	**31.19**	**185**	P	**P**	**19 29 51.0**	**-2.6**
ASAR	**Alice Springs**	**31.20**	**185**	P	**P**	**19 29 54.8**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=18,slow=12,SNR=8.3						
ASAR				LR	LR	19 43 23.2	
	comp=Z,30nm,18.3s,baz=40,slow=38 comp=Z,0.2nm,0.5s						
ASAR	**Alice Springs**	**31.20**	**185**	P	**P**	**19 29 50.6**	**-3.0**
H11N1	**WAKE ISLAND Hy**	**31.58**	**64**	T	T	20 02 44.7	
	baz=240,slow=78,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**31.59**	**64**	T	T	20 02 50.4	
	baz=240,slow=78,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**31.59**	**65**	T	T	20 02 48.0	
	baz=240,slow=78,SNR=8.0						
CM31	**Chiang Mai Arr**	**38.33**	**290**	P	**P**	**19 30 54.4**	**-1.1**
CM31				IAmb	IAmb	19 30 58.4	
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**38.33**	**290**	P	**P**	**19 30 57.5**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=96,slow=7.1,SNR=4.9						
CMAR				LR	LR	19 49 12.2	
	comp=Z,7.9nm,18.0s,baz=80,slow=40 comp=Z,0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.33**	**290**	P	**P**	**19 30 55.5**	**0.0**
SONM	**Songino Array**	**47.69**	**333**	P	**P**	**19 32 11.5**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=156,slow=8.9,SNR=4.5 comp=Z,0.8nm,0.8s						
EVN	**Everest**	**51.30**	**300**	P	**P**	**19 32 40.9**	**+1.5**
EVN				IAmb	IAmb	19 33 00.5	
	comp=Z,2.3nm,1.0s						
MK31	**Makanchi Array**	**60.59**	**320**	P	**P**	**19 33 45.9**	**+0.9**
MK31				IAmb	IAmb	19 33 46.8	
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**60.59**	**320**	P	**P**	**19 33 46.1**	**+1.1**
	comp=Z,3.6nm,0.6s,baz=104,slow=8.7,SNR=38 comp=Z,3.6nm,0.6s						
MKAR	**Makanchi Array**	**60.59**	**320**	P	**P**	**19 33 45.2**	**+0.2**
MAKZ	**Makanchi**	**60.80**	**320**	P	**P**	**19 33 47.3**	**+0.9**
MAKZ				IAmb	IAmb	19 33 48.2	
	comp=Z,2.3nm,0.8s						
ZAA0	**Zalesovo Array**	**62.16**	**328**	P	**P**	**19 33 56.0**	**+0.6**
ZAA0				IAmb	IAmb	19 34 18.3	
	comp=Z,4.6nm,1.5s						
ZALV	**Zalesovo Beam**	**62.16**	**328**	P	**P**	**19 33 55.8**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=112,slow=7.0,SNR=6.0 comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**64.29**	**323**		**P**	**19 34 10.3**	**+0.7**
KURBB	**Kurchatov Arra**	**64.31**	**323**	P	**P**	**19 34 10.4**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=112,slow=5.6,SNR=11 comp=Z,1.5nm,0.4s						
BVAR	**Borovoye Array**	**69.85**	**324**	P	**P**	**19 34 45.2**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=93,slow=8.9,SNR=9.6 comp=Z,2.4nm,0.7s						
C23K	**Itkillik River**	**76.95**	**20**	P	**P**	**19 35 25.7**	**-0.6**
ILAR	**Eielson Array**	**77.35**	**25**	P	**P**	**19 35 29.3**	**+0.6**
	comp=Z,0.5nm,1.0s,baz=275,slow=7.5,SNR=2.4 comp=Z,0.5nm,1.0s						
G30M	**tAoh Zraii Nji**	**81.89**	**23**	P	**P**	**19 35 53.6**	**+0.2**
G30M				IAmb	IAmb	19 35 60.0	
	comp=Z,5.8nm,1.4s						
F30M	**Barrier River**	**82.05**	**23**	P	**P**	**19 35 53.4**	**-0.9**
C36M	**Paulatuk**	**86.17**	**21**	P	**P**	**19 36 14.6**	**-0.5**
C36M				IAmb	IAmb	19 36 54.1	
	comp=Z,1.4nm,0.9s						

*IDC **18** 19:25:29.9±2.4, 7°.70N×136°.91E, h0km, mb3.8/7, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=139.1km s-min=19.3km az=74.0*
ISC 18 19:25:33.0±1.5, 7°.7N±0°.3×137°.0E±0°.6, h22km, n14, σ1ş40/9, mb4.0/7, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**10.76**	**160**	Pn	**Pn**	**19 28 07.9**	**+2.0**
	1.5nm,0.3s,baz=333,slow=9.0,SNR=19						
JAY				Sn	**Sn**	**19 30 03.1**	**-2.6**
	0.2nm,0.3s,baz=330,slow=20,SNR=1.1 3.9nm,0.2s						
WRA	**Warramunga Arr**	**27.54**	**185**	P	**P**	**19 31 18.5**	**+0.1**
	0.3nm,0.5s,baz=5.0,slow=9.3,SNR=2.3 0.3nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**30.83**	**67**	T	T	20 04 09.3	
	baz=253,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**30.84**	**67**	T	T	20 04 11.7	
	baz=253,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**30.84**	**67**	T	T	20 04 13.3	
	baz=253,slow=75,SNR=31						
ASAR	**Alice Springs**	**31.27**	**185**	P	**P**	**19 31 51.7**	**+0.2**
	0.3nm,0.6s,baz=15,slow=13,SNR=4.4 0.3nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**31.37**	**64**	T	T	20 04 50.2	
	baz=240,slow=78,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	**31.38**	**64**	T	T	20 04 51.2	
	baz=240,slow=78,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**31.39**	**64**	T	T	20 04 53.1	
	baz=240,slow=78,SNR=6.9						
SONM	**Songino Array**	**47.73**	**332**	P	**P**	**19 34 07.8**	**-0.6**
	0.5nm,0.8s,baz=146,slow=8.0,SNR=2.8 0.5nm,0.8s						
MKAR	**Makanchi Array**	**60.68**	**320**	P	**P**	**19 35 43.1**	**+0.4**
	2.2nm,0.6s,baz=104,slow=8.3,SNR=16 2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**62.22**	**328**	P	**P**	**19 35 52.5**	**-0.4**
	0.4nm,0.3s,baz=104,slow=6.1,SNR=2.5 0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**64.39**	**323**	P	**P**	**19 36 07.0**	**-0.3**
	0.6nm,0.3s,baz=115,slow=5.6,SNR=7.5 0.6nm,0.3s						
BVAR	**Borovoye Array**	**69.93**	**324**	P	**P**	**19 36 42.5**	**0.0**
	0.9nm,0.5s,baz=91,slow=6.2,SNR=4.0 0.9nm,0.5s						

*IDC **18** 19:26:38.2±1.8, 1°.87N×126°.74E, h0km, mb3.6/4, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=124.0km s-min=21.6km az=69.0*
*DJA **18** 19:26:43.2±0.7, 2°N±2°×12°6E±°, h12km±5km, M3.7/12, mb4.1/1, MLv3.5/12*
ISC 18 19:26:45.0±1.0, 1°.67N±0°.05×126°.48E±0°.06, h35km, n12, σ1ş48/15, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**135**	P	**Pn**	**19 27 06.7**	**+0.6**
TNTI				S	**Sn**	**19 27 23.3**	**+1.5**
SGSI	**Sangihe**	**2.22**	**335**	P	**Pn**	**19 27 20.0**	**+0.7**
SGSI				S	**Sn**	**19 27 47.9**	**+2.4**
KMSI	**Cibinong**	**2.72**	**247**	P	**Pn**	**19 27 27.1**	**+0.9**
KMSI				S	**Sn**	**19 27 59.7**	**+1.8**
SANI	**Sanana**	**3.72**	**188**	S	**Sn**	**19 28 23.5**	**+0.8**
LUWI	**Luwuk**	**4.58**	**234**	P	**Pn**	**19 27 51.4**	**-0.4**
MRSI	**Marisa**	**4.69**	**255**	P	**Pn**	**19 27 53.1**	**-0.1**
NLAI	**Namlea**	**4.91**	**173**	S	**Sn**	**19 28 54.3**	**+2.3**
FITZ	**Fitzroy Crossi**	**19.66**	**182**	P	**P**	**19 31 10.8**	**-0.2**
	0.1nm,0.3s,baz=12,slow=9.6,SNR=1.0 0.4nm,0.4s						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**19 31 43.6**	**-1.5**
	0.5nm,0.4s,baz=340,slow=10,SNR=15 0.5nm,0.4s						
ASAR	**Alice Springs**	**26.20**	**164**	P	**P**	**19 32 16.3**	**-0.3**
	0.2nm,0.4s,baz=344,slow=8.6,SNR=7.8 0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**19 36 40.5**	**-1.5**
	0.3nm,0.6s,baz=124,slow=6.9,SNR=1.6 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**19 37 08.9**	**-1.7**
	1.4nm,0.2s,baz=136,slow=6.3,SNR=1.2 1.4nm,0.2s						

*FUNV **18** 19:34:58.2, 9°.03N×71°.02W, h4km, MW3.3*
*RSNC **18** 19:34:59.3±0.6, 9°N±3°×7°1W±°, h99km±19km, M2.6, mb3.4, ML2.4*
ISC 18 19:34:58.8±1.5, 9°.17N±0°.04×71°.07W±0°.03, h26km±16km, n19, σ1ş52/38, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQV	**Machiques**	**1.69**	**301**	*e*P	**Pb**	**19 35 29.3**	**+0.1**
MCQV				*e*S	**Sb**	**19 35 52.6**	**+2.6**
CAPV	**Capacho**	**1.79**	**224**	*e*P	**Pn**	**19 35 29.3**	**+1.1**
CAPV				*e*S	**Sn**	**19 35 51.1**	**+0.8**
TEPV	**Terepaima**	**2.01**	**67**	*e*P	**Pn**	**19 35 32.9**	**+1.8**
TEPV				*e*S	**Sb**	**19 35 58.4**	**-1.0**
OCAC	**Ocana**	**2.41**	**248**	P	**Pb**	**19 35 39.9**	**-1.7**
OCAC				S	**Sn**	**19 36 08.0**	**+2.5**
PAMC	**Pamplona, Colo**	**2.43**	**222**	P	**Pn**	**19 35 37.8**	**+0.5**
PAMC				S	**Sn**	**19 36 09.0**	**+2.5**
CRJC	**Cerrejon, Guaj**	**2.56**	**316**	P	**Pn**	**19 35 38.3**	**-0.4**
CRJC				S	**Sn**	**19 36 09.3**	**+0.2**
MAPV	**Macapo**	**2.66**	**76**	*e*P	**Pn**	**19 35 41.4**	**+1.3**
MAPV				*e*S	**Sn**	**19 36 12.2**	**+0.8**
URIC	**Uribia, Colomb**	**2.67**	**340**	P	**Pn**	**19 35 38.4**	**-1.8**
URIC				S	**Sn**	**19 36 10.2**	**-1.6**
BAUV	**El Baul**	**3.00**	**94**	*e*P	**Pn**	**19 35 45.0**	**+0.3**
BAUV				*e*S	**Sn**	**19 36 18.8**	**-1.0**
ARGC	**Ariguani, Magd**	**3.21**	**283**	P	**Pn**	**19 35 48.7**	**+1.2**
ARGC				S	**Sn**	**19 36 19.5**	**-1.5**
TURV	**Turiamo**	**3.43**	**68**	*e*P	**Pn**	**19 35 51.7**	**+1.1**
TURV				*e*S	**Sn**	**19 36 31.0**	**+0.6**
BENV	**Beln**	**3.51**	**77**	*e*P	**Pn**	**19 35 52.7**	**+1.0**
BENV				*e*S	**Sn**	**19 36 32.5**	**0.0**
RUSC	**La Rusia**	**3.82**	**212**

ZALV	**Zalesovo Beam**	**19.82**	**25**	P		**P**	**19 43 01.7**	**0.0**
	comp=E,1.4nm,0.3s,baz=214,slow=10,SNR=11							
AKASG	**Malin Array Be**	**32.90**	**309**	LR		LR	20 02 22.0	
	comp=E,26nm,18.2s,baz=355,slow=43							
FINES	**FINESS Array B**	**37.41**	**326**	P		**P**	**19 45 39.4**	**-0.5**
	comp=E,1.6nm,0.9s,baz=110,slow=7.7,SNR=3.4							
	comp=E,1.6nm,0.9s							
ARCES	**ARCESS Array B**	**41.06**	**338**	P		**P**	**19 46 10.1**	**+0.1**
	comp=E,1.9nm,0.8s,baz=116,slow=8.5,SNR=5.4							
	comp=E,1.9nm,0.8s							

ANF ***18*** *19:51:27.8±0.2,66°.30N×157°.25W,h5km±1km,ML4.3/86, Error ellipse: s-maj=1.0km s-min=1.0km az=116.0*

NEIC ***18*** *19:51:27.9±1.5,66°.32N±0°.02×157°.16W±0°.03,h6km±3km, Error ellipse: s-maj=2.7km s-min=1.7km az=196.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.20; Mθθ1.28; Mϕϕ-0.08; Mrθ-0.17; Mθϕ-0.72; Mϕr0.71; Fault plane solution: M₀1.61000×10¹⁵ NP1: ϕs137.14000°,δ59.07000°,λ-59.68000°. NP2: ϕs268.45000°,δ42.23000°,λ-130.11000°. Principal axes: T 1.6586, Plg9.0000°, Azm206.0000°; N -0.1086, Plg26.0000°, Azm300.0000°; P -1.5500, Plg63.0000°, Azm98.0000°;*

NEIC ***18*** *19:51:28.3,66°.30N×157°.17W,h10km*

AEIC ***18*** *19:51:28.0±2.0,66°.32N±0°.03×157°.23W±0°.04,h13km±4km, ML3.9,mb4.2/2(NEIC),ML4.0/170(NEIC),Mwr4.1/99(NEIC), Error ellipse: s-maj=4.4km s-min=1.6km az=209.0*

IDC ***18*** *19:51:29.3±0.7,66°.64N×157°.27W,h0km,mb3.7/11, mbtmp3.8/16,ML3.6/5,MS3.4/4,Error ellipse: s-maj=18.7km s-min=11.4km az=28.0*

ISC 18 19:51:27.7±1.1,66°.33N±0°.01×157°.18W±0°.02,h2km±7km, n424,σ0s88/437,mb3.7/11,MS3.2/3,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
G19K	**Purcell Mounta**	**0.19**	**168**		**Pg**		**19 51 31.7**	**+0.4**
G19K					**Sg**		**19 51 34.5**	**+0.7**
G19K	**Purcell Mounta**	**0.19**	**168**	IAML			19 51 35.4	
	comp=N,77µm,0.5s							
G19K				IAML			19 51 35.4	
	comp=E,114µm,0.3s							
G19K	**Purcell Mounta**	**0.19**	**168**	P		**Pg**	**19 51 31.8**	**+0.4**
	baz=349							
G19K				S		**Sg**	**19 51 34.5**	**+0.7**
	baz=349							
F19K	**Shaleruckik Mo**	**0.56**	**335**			**Pg**	**19 51 39.0**	**+0.6**
F19K						**Sb**	**19 51 47.3**	**-1.4**
F19K	**Shaleruckik Mo**	**0.56**	**335**	P		**Pg**	**19 51 39.0**	**+0.6**
	baz=155							
F19K				S		**Sg**	**19 51 47.0**	**+1.3**
	baz=155							
G18K	**Tagagawik**	**0.74**	**235**			**Pg**	**19 51 41.6**	**-0.2**
G18K						**Sg**	**19 51 51.8**	**+0.4**
G18K	**Tagagawik**	**0.74**	**235**	P		**Pg**	**19 51 41.6**	**-0.2**
	baz=55							
G18K				S		**Sg**	**19 51 51.7**	**+0.3**
	baz=55							
H19K	**Roundabout Mou**	**0.86**	**159**			**Pg**	**19 51 43.4**	**-0.7**
H19K				IAML			19 52 00.4	
	comp=N,7µm,0.3s							
H19K	**Roundabout Mou**	**0.86**	**159**			**Sg**	**19 51 55.9**	**+0.7**
H19K	**Roundabout Mou**	**0.86**	**159**	P		**Pg**	**19 51 43.8**	**-0.3**
	baz=340							
H19K				S		**Sg**	**19 51 55.9**	**+0.7**
	baz=340							
F20K	**Avaraart Lake**	**0.93**	**38**			**Pg**	**19 51 45.8**	**+0.3**
F20K	**Avaraart Lake**	**0.93**	**38**	P		**Pg**	**19 51 45.8**	**+0.3**
	baz=218							
F20K				S		**Sb**	**19 51 59.0**	**-0.3**
	baz=218							
F18K	**Selawik**	**1.03**	**287**			**Pg**	**19 51 47.0**	**-0.4**
F18K						**Pb**	**19 51 47.4**	**-0.8**
F18K						**Sb**	**19 52 01.2**	**-0.9**
F18K						**Sg**	**19 52 01.7**	**+1.0**
F18K	**Selawik**	**1.03**	**287**	P		**Pg**	**19 51 47.0**	**-0.4**
	baz=106							
F18K				S		**Sb**	**19 52 01.3**	**-0.9**
	baz=106							
E19K	**Redstone River**	**1.14**	**359**			**Pg**	**19 51 49.6**	**+0.2**
E19K						**Sg**	**19 52 04.7**	**+0.5**
E19K	**Redstone River**	**1.14**	**359**	IAML			19 52 07.7	
	comp=N,3µm,0.6s							
E19K				IAML			19 52 08.2	
	comp=E,3µm,0.5s							
E19K	**Redstone River**	**1.14**	**359**	P		**Pg**	**19 51 49.7**	**+0.2**
	baz=179							
E19K				S		**Sg**	**19 52 04.6**	**+0.5**
	baz=179							
H20K	**Anotleneega Mo**	**1.26**	**131**			**Pg**	**19 51 51.3**	**-0.6**
H20K						**Pb**	**19 51 51.7**	**-0.5**
H20K						**Sg**	**19 52 07.7**	**-0.6**
H20K						**Sb**	**19 52 08.8**	**-0.1**
H20K	**Anotleneega Mo**	**1.26**	**131**	P		**Pg**	**19 51 51.1**	**-0.8**
	baz=312							
H20K				S		**Sg**	**19 52 08.7**	**+0.5**
	baz=312							
H18K	**Honhosa River**	**1.28**	**203**			**Pg**	**19 51 50.8**	**-1.4**
H18K	**Honhosa River**	**1.28**	**203**	P		**Pg**	**19 51 50.7**	**-1.4**
	baz=23							
IM04	**Indian Mountai**	**1.43**	**103**			**Sb**	**19 52 12.3**	**-1.3**
IMAR	**Indian Mountai**	**1.44**	**102**			**Pn**	**19 51 53.2**	**-1.6**
G21K	**Allakaket**	**1.49**	**81**			**Pn**	**19 51 54.9**	**-0.6**
G21K	**Allakaket**	**1.49**	**81**	P		**Pn**	**19 51 54.9**	**-0.6**
	baz=263							
G21K				S		**Sn**	**19 52 15.5**	**0.0**
	baz=263							
GCSA	**Galena City Sc**	**1.59**	**175**			**Pn**	**19 51 56.1**	**-0.8**
GCSA						**Sn**	**19 52 18.0**	**0.0**
GCSA	**Galena City Sc**	**1.59**	**175**	P		**Pn**	**19 51 55.9**	**-0.9**
	baz=356							
GCSA				S		**Sn**	**19 52 17.5**	**-0.5**
	baz=356							
F17K	**Baldwin Pennin**	**1.64**	**276**			**Pn**	**19 51 56.5**	**-1.0**
F17K	**Baldwin Pennin**	**1.64**	**276**	P		**Pn**	**19 51 56.4**	**-1.1**
	baz=93							
G17K	**Kiwalik Mounta**	**1.65**	**241**			**Pn**	**19 51 56.1**	**-1.6**
G17K	**Kiwalik Mounta**	**1.65**	**241**	P		**Pn**	**19 51 56.0**	**-1.6**
	baz=59							
F21K	**Alatna River**	**1.72**	**57**			**Pn**	**19 51 58.4**	**-0.3**
F21K	**Alatna River**	**1.72**	**57**	IAML			19 52 26.4	
	comp=E,2µm,0.7s							
F21K				IAML			19 52 30.6	
	comp=N,1µm,0.5s							
F21K	**Alatna River**	**1.72**	**57**	P		**Pn**	**19 51 58.0**	**-0.7**
	baz=239							
F21K				S		**Sb**	**19 52 22.0**	**0.0**
	baz=239							
E18K	**Tukpahlearik C**	**1.74**	**311**			**Pn**	**19 51 58.9**	**0.0**
E18K	**Tukpahlearik C**	**1.74**	**311**	P		**Pn**	**19 51 58.6**	**-0.3**
	baz=128							
E18K				S		**Sn**	**19 52 21.8**	**+0.1**
	baz=128							
H17K	**Granite Mounta**	**1.80**	**220**			**Pn**	**19 51 58.3**	**-1.4**
H17K	**Granite Mounta**	**1.80**	**220**	IAML			19 52 25.3	
	comp=E,2µm,0.7s							
H17K				IAML			19 52 26.7	
	comp=N,1µm,0.5s							
H17K	**Granite Mounta**	**1.80**	**220**	P		**Pn**	**19 51 58.4**	**-1.4**
	baz=38							
I20K	**Naaghedeneel**	**1.91**	**143**			**Pn**	**19 52 00.9**	**-0.2**
I20K	**Naaghedeneel**	**1.91**	**143**	P		**Pn**	**19 52 00.4**	**-0.8**
	baz=325							
H21K	**Melozitna Rive**	**1.91**	**109**			**Pn**	**19 52 00.3**	**-1.0**
H21K				IAML			19 52 30.5	
	comp=E,1µm,0.3s							
H21K				IAML			19 52 35.9	
	comp=N,1µm,1.1s							
H21K	**Melozitna Rive**	**1.91**	**109**	P		**Pn**	**19 52 00.6**	**-0.8**
	baz=292							
E20K	**Nigu River**	**1.98**	**11**			**Pb**	**19 52 03.4**	**-1.0**
E20K	**Nigu River**	**1.98**	**11**	P		**Pb**	**19 52 03.6**	**-0.8**
	baz=191							
E20K				S		**Sn**	**19 52 28.4**	**+0.8**
	baz=191							
E17K	**Hotham Inlet**	**2.00**	**294**			**Pn**	**19 52 01.9**	**-0.5**
E17K						**Pb**	**19 52 02.1**	**-2.6**
E17K						**Sn**	**19 52 28.4**	**+0.4**
E17K						**Sb**	**19 52 30.2**	**+0.2**
E17K	**Hotham Inlet**	**2.00**	**294**	P		**Pn**	**19 52 02.0**	**-0.5**
	baz=111							
E17K				Sb		**Sg**	**19 52 30.8**	**-0.9**
	baz=111							
D19K	**Kuna River**	**2.21**	**351**			**Pn**	**19 52 05.8**	**+0.4**
D19K	**Kuna River**	**2.21**	**351**	IAML			19 52 45.3	
	comp=E,863nm,0.8s							
D19K				IAML			19 52 45.8	
	comp=N,733nm,0.9s							
D19K	**Kuna River**	**2.21**	**351**	P		**Pn**	**19 52 06.4**	**+1.1**
	baz=170							
F22K	**John River**	**2.30**	**57**			**Pn**	**19 52 06.7**	**+0.1**
F22K	**John River**	**2.30**	**57**	P		**Pn**	**19 52 06.7**	**+0.1**
	baz=241							
F22K				Sb		**Sg**	**19 52 41.2**	**-0.3**
	baz=241							
G16K	**Koyuk River**	**2.32**	**249**			**Pn**	**19 52 05.0**	**-2.0**
G16K	**Koyuk River**	**2.32**	**249**	IAML			19 52 43.8	
	comp=N,835nm,0.8s							
G16K				IAML			19 52 47.5	
	comp=E,680nm,0.9s							
G16K	**Koyuk River**	**2.32**	**249**	P		**Pn**	**19 52 04.9**	**-2.1**
	baz=64							
G16K				Sb		**Sb**	**19 52 40.1**	**+0.7**
	baz=64							
H22K	**Ishtalitna Cre**	**2.40**	**98**			**Pn**	**19 52 06.7**	**-1.3**
H22K				IAML			19 52 51.4	
	comp=N,834nm,1.1s							
H22K	**Ishtalitna Cre**	**2.40**	**98**	P		**Pn**	**19 52 07.6**	**-0.5**
	baz=282							
H22K				Sb		**Sb**	**19 52 42.6**	**+0.9**
	baz=282							
D20K	**Etivluk River**	**2.41**	**5**			**Pn**	**19 52 07.5**	**-0.7**
D20K				IAML			19 52 49.3	
	comp=E,624nm,0.9s							
D20K				IAML			19 52 50.2	
	comp=N,591nm,0.8s							
D20K	**Etivluk River**	**2.41**	**5**			**Sb**	**19 52 41.2**	**-0.6**
D20K	**Etivluk River**	**2.41**	**5**	P		**Pn**	**19 52 09.0**	**+0.9**
	baz=185							
D20K				Sb		**Sg**	**19 52 44.0**	**-0.9**
	baz=185							
J19K	**Poorman**	**2.44**	**164**			**Pn**	**19 52 08.0**	**-0.5**
J19K	**Poorman**	**2.44**	**164**	IAML			19 52 45.6	
	comp=N,693nm,0.5s							
J19K				IAML			19 52 46.7	
	comp=E,946nm,0.8s							
J19K	**Poorman**	**2.44**	**164**	P		**Pn**	**19 52 07.9**	**-0.6**
	baz=345							
J19K				Sb		**Sb**	**19 52 43.2**	**+0.6**
	baz=345							
E21K	**Killik River**	**2.46**	**29**			**Pn**	**19 52 09.3**	**+0.4**
E21K	**Killik River**	**2.46**	**29**	IAML			19 52 51.7	
	comp=E,655nm,0.8s							
E21K	**Killik River**	**2.46**	**29**	P		**Pn**	**19 52 09.3**	**+0.4**
	baz=211							
J20K	**Nowinta River**	**2.51**	**148**			**Pn**	**19 52 08.8**	**-0.7**
J20K	**Nowinta River**	**2.51**	**148**	IAML			19 52 55.6	
	comp=E,899nm,0.6s							
J20K				IAML			19 52 55.9	
	comp=N,748nm,0.6s							
J20K	**Nowinta River**	**2.51**	**148**	P		**Pn**	**19 52 08.1**	**-1.4**
	baz=331,SNR=47							
J20K				Sb		**Sb**	**19 52 46.3**	**+1.6**
	baz=331							
D17K	**Noatak River**	**2.69**	**303**			**Pn**	**19 52 11.9**	**-0.1**
D17K	**Noatak River**	**2.69**	**303**	P		**Pn**	**19 52 11.7**	**-0.3**
	baz=118,SNR=18							
D17K				Sb		**Sb**	**19 52 51.2**	**+1.1**
	baz=118							
H16K	**Elim**	**2.71**	**234**	P		**Pn**	**19 52 09.8**	**-2.3**
	baz=49							
H16K				Sb		**Sb**	**19 52 51.1**	**+0.7**
	baz=49							
E22K	**Anaktuvuk Pass**	**2.77**	**47**			**Pn**	**19 52 14.0**	**+1.0**
E22K	**Anaktuvuk Pass**	**2.77**	**47**	P		**Pn**	**19 52 14.0**	**+1.0**
	baz=231							
C18K	**Utukok River**	**2.80**	**328**			**Pn**	**19 52 13.4**	**-0.1**
C18K	**Utukok River**	**2.80**	**328**	P		**Pn**	**19 52 13.4**	**-0.1**
	baz=145							
RDOG	**Red Dog Mine**	**2.83**	**310**			**Pn**	**19 52 14.3**	**+0.5**
RDOG	**Red Dog Mine**	**2.83**	**310**	P		**Pn**	**19 52 13.8**	**-0.1**
	baz=126,SNR=18							
I17K	**Unalakleet**	**2.87**	**213**			**Pn**	**19 52 13.5**	**-0.9**
I17K	**Unalakleet**	**2.87**	**213**	P		**Pn**	**19 52 13.5**	**-0.9**
	baz=30,SNR=125							
I17K				Sb		**Sb**	**19 52 56.1**	**+1.1**
	baz=30							
J18K	**Innoko River**	**2.88**	**176**			**Pn**	**19 52 13.7**	**-0.9**
J18K	**Innoko River**	**2.88**	**176**	P		**Pn**	**19 52 13.8**	**-0.9**
	baz=356							
J18K				Sb		**Sb**	**19 52 56.8**	**+1.3**
	baz=356							
G23K	**Bananza Creek**	**2.89**	**79**			**Pn**	**19 52 13.8**	**-1.0**
G23K	**Bananza Creek**	**2.89**	**79**	IAML			19 53 04.0	
	comp=N,598nm,0.5s							
G23K				IAML			19 53 04.7	
	comp=E,409nm,0.5s							
G23K	**Bananza Creek**	**2.89**	**79**	P		**Pn**	**19 52 13.6**	**-1.2**
	baz=265,SNR=298							
G23K				Sb		**Sb**	**19 52 58.0**	**+2.2**
	baz=265							
COLD	**Coldfoot**	**2.91**	**69**			**Pn**	**19 52 14.4**	**-0.6**
COLD	**Coldfoot**	**2.91**	**69**	IAML			19 53 06.9	
	comp=N,502nm,0.8s							
COLD				IAML			19 53 08.2	
	comp=E,422nm,1.0s							
COLD	**Coldfoot**	**2.91**	**69**	P		**Pn**	**19 52 14.4**	**-0.6**
	baz=255							
COLD				Sb		**Sb**	**19 52 58.8**	**+2.5**
	baz=255							
C19K	**Lookout Ridge**	**2.94**	**343**			**Pn**	**19 52 15.9**	**+0.5**
C19K	**Lookout Ridge**	**2.94**	**343**	IAML			19 53 08.0	
	comp=N,604nm,0.8s							
C19K	**Lookout Ridge**	**2.94**	**343**	P		**Pn**	**19 52 15.9**	**+0.5**
	baz=161,SNR=12							
C19K				Sb		**Sb**	**19 52 59.3**	**+2.2**
	baz=161							
MLY	**Manley**	**2.97**	**113**			**Pn**	**19 52 15.0**	**-0.9**
MLY	**Manley**	**2.97**	**113**	P		**Pn**	**19 52 15.1**	**-0.8**
	baz=299							
MLY				Sb		**Sb**	**19 52 60.0**	**+2.0**
	baz=299							
C21K	**Knifeblade Rid**	**2.98**	**17**			**Pn**	**19 52 16.3**	**+0.2**
C21K	**Knifeblade Rid**	**2.98**	**17**	P		**Pn**	**19 52 16.1**	**+0.1**
	baz=199							
J17K	**VABM Dome**	**3.05**	**196**			**Pn**	**19 52 15.7**	**-1.3**
J17K				IAML			19 53 11.0	
	comp=E,428nm,0.7s							
J17K				IAML			19 53 12.5	
	comp=N,422nm,0.5s							
J17K	**VABM Dome**	**3.05**	**196**	P		**Pn**	**19 52 16.3**	**-0.7**
	baz=15							
J17K				S		**Sn**	**19 52 53.8**	**-0.3**
	baz=15							
D22K	**Ayikyak River**	**3.09**	**32**			**Pn**	**19 52 17.9**	**+0.4**
D22K	**Ayikyak River**	**3.09**	**32**	P		**Pn**	**19 52 18.2**	**+0.7**
	baz=216							
D22K				S		**Sn**	**19 52 55.9**	**+1.0**
	baz=216							
F15K	**North Star Dit**	**3.11**	**262**			**Pn**	**19 52 16.2**	**-1.6**
F15K	**North Star Dit**	**3.11**	**262**	IAML			19 53 09.4	
	comp=E,356nm,0.7s							
F15K				IAML			19 53 12.9	
	comp=N,330nm,0.6s							
F15K	**North Star Dit**	**3.11**	**262**	P		**Pn**	**19 52 16.1**	**-1.7**
	baz=76							
F15K				Sb		**Sb**	**19 53 03.7**	**+1.6**
	baz=76							
G15K	**Niukluk**	**3.14**	**248**			**Pn**	**19 52 15.8**	**-2.4**
G15K	**Niukluk**	**3.14**	**248**	P		**Pn**	**19 52 15.7**	**-2.4**
	baz=62							
H23K	**Yukon River**	**3.15**	**96**			**Pn**	**19 52 18.3**	**-0.1**
H23K	**Yukon River**	**3.15**	**96**	IAML			19 53 20.2	
	comp=E,530nm,1.1s							
H23K	**Yukon River**	**3.15**	**96**	P		**Pn**	**19 52 17.7**	**-0.6**
	baz=282							
C17K	**DeLong Mountai**	**3.16**	**316**			**Pn**	**19 52 18.5**	**0.0**
C17K						**Pn**	**19 52 18.7**	**+0.2**
C17K	**DeLong Mountai**	**3.16**	**316**	P		**Pn**	**19 52 18.5**	**0.0**
	baz=130							
CHUM	**Lake Minchumin**	**3.20**	**138**			**Pn**	**19 52 18.8**	**-0.2**
CHUM	**Lake Minchumin**	**3.20**	**138**	P		**Pn**	**19 52 18.7**	**-0.3**
	baz=322,SNR=22							
CHUM				Sb		**Sb**	**19 53 06.7**	**+2.0**
	baz=322							
K20K	**Telida**	**3.27**	**155**			**Pn**	**19 52 19.6**	**-0.3**
K20K	**Telida**	**3.27**	**155**	IAML			19 53 21.6	
	comp=N,294nm,1.0s							
K20K	**Telida**	**3.27**	**155**	P		**Pn**	**19 52 19.4**	**-0.5**
	baz=337							
K20K				Sb		**Sb**	**19 53 08.7**	**+2.2**
	baz=337							
J16K	**Anvik River**	**3.39**	**207**			**Pn**	**19 52 20.2**	**-1.3**
J16K	**Anvik River**	**3.39**	**207**	P		**Pn**	**19 52 20.8**	**-0.7**
	baz=24							
J16K				Sb		**Sb**	**19 53 11.0**	**+1.0**
	baz=24							
E23K	**Chandalar**	**3.42**	**56**			**Pn**	**19 52 22.3**	**+0.2**
E23K	**Chandalar**	**3.42**	**56**	IAML			19 53 24.7	
	comp=E,401nm,0.8s							
E23K	**Chandalar**	**3.42**	**56**	P		**Pn**	**19 52 22.3**	**+0.2**
	baz=243							
BPAW	**Bear Paw Mtn.**	**3.44**	**128**			**Pn**	**19 52 21.7**	**-0.5**
BPAW	**Bear Paw Mtn.**	**3.44**	**128**	IAML			19 53 19.3	
	comp=N,270nm,0.9s							
BPAW				IAML			19 53 20.8	
	comp=E,365nm,1.1s							
BPAW	**Bear Paw Mtn.**	**3.44**	**128**	P		**Pn**	**19 52 21.9**	**-0.3**
	baz=313							
BPAW				S		**Sn**	**19 53 03.2**	**-0.3**
	baz=313							
I23K	**Minto, Yukon-K**	**3.44**	**107**			**Pn**	**19 52 21.4**	**-0.8**
I23K	**Minto, Yukon-K**	**3.44**	**107**	P		**Pn**	**19 52 21.5**	**-0.8**
	baz=293							
I23K				Sb		**Sb**	**19 53 13.6**	**+2.1**
	baz=293							
B21K	**Ikpikpuk River**	**3.45**	**15**			**Pn**	**19 52 21.8**	**-0.5**
B21K	**Ikpikpuk River**	**3.45**	**15**	IAML			19 53 26.4	
	comp=N,443nm,0.9s							
B21K	**Ikpikpuk River**	**3.45**	**15**	P		**Pn**	**19 52 21.9**	**-0.5**
	baz=197							
B18K	**Kokolik River**	**3.52**	**332**			**Pn**	**19 52 23.5**	**+0.2**
B18K	**Kokolik River**	**3.52**	**332**	P		**Pn**	**19 52 23.2**	**-0.1**
	baz=148							
D23K	**Nanushuk River**	**3.63**	**40**			**Pn**	**19 52 25.7**	**+0.8**
D23K	**Nanushuk River**	**3.63**	**40**	P		**Pn**	**19 52 25.7**	**+0.8**
	baz=226							
K17K	**Iditarod**	**3.66**	**188**			**Pn**	**19 52 24.1**	**-1.1**
K17K	**Iditarod**	**3.66**	**188**	IAML			19 53 31.1	
	comp=N,236nm,1.0s							
K17K				IAML			19 53 39.0	
	comp=E,278nm,1.0s							
K17K	**Iditarod**	**3.66**	**188**	P		**Pn**	**19 52 24.3**	**-1.0**
	baz=7.2							
B20K	**Meade River**	**3.70**	**0**			**Pn**	**19 52 26.2**	**+0.5**
B20K	**Meade River**	**3.70**	**0**	IAML			19 53 33.6	
	comp=E,288nm,0.9s							
B20K				IAML			19 53 39.3	
	comp=N,212nm,1.0s							
B20K	**Meade River**	**3.70**	**0**	P		**Pn**	**19 52 26.0**	**+0.3**
	baz=180							
C16K	**Lisburne Hills**	**3.72**	**305**			**Pn**	**19 52 26.4**	**+0.4**
C16K	**Lisburne Hills**	**3.72**	**305**	IAML			19 53 31.6	
	comp=E,198nm,1.0s							
C16K	**Lisburne Hills**	**3.72**	**305**	P		**Pn**	**19 52 26.4**	**+0.4**
	baz=118							
TOLK	**Toolik Lake Re**	**3.74**	**48**			**Pn**	**19 52 27.1**	**+0.7**
TOLK	**Toolik Lake Re**	**3.74**	**48**	IAML			19 53 32.9	
	comp=E,294nm,0.7s							
TOLK				IAML			19 53 38.2	
	comp=N,318nm,0.9s							
TOLK	**Toolik Lake Re**	**3.74**	**48**	P		**Pn**	**19 52 26.8**	**+0.4**
	baz=235							
NEA2	**Nenana**	**3.81**	**113**			**Pn**	**19 52 26.7**	**-0.6**
NEA2				IAML			19 53 32.7	
	comp=N,222nm,1.0s							
NEA2	**Nenana**	**3.81**	**113**	P		**Pn**	**19 52 27.3**	**0.0**
	baz=301							
E24K	**Your Creek**	**3.81**	**59**			**Pn**	**19 52 27.7**	**+0.3**
E24K	**Your Creek**	**3.81**	**59**	IAML			19 53 33.5	
	comp=E,187nm,0.7s							
E24K				IAML			19 53 36.5	
	comp=N,288nm,1.1s							
E24K	**Your Creek**	**3.81**	**59**	P		**Pn**	**19 52 27.4**	**-0.1**
	baz=246							
H24K	**Noodor Dome**	**3.82**	**93**			**Pn**	**19 52 27.0**	**-0.6**
H24K				IAML			19 53 39.6	
	comp=E,254nm,1.0s							
H24K	**Noodor Dome**	**3.82**	**93**	P		**Pn**	**19 52 27.3**	**-0.3**
	baz=281							
F14K	**Arctic Creek**	**3.85**	**261**			**Pn**	**19 52 26.5**	**-1.3**
ANM	**Nome**	**3.85**	**246**			**Pb**	**19 52 36.7**	**+0.4**
ANM				IAML			19 53 38.5	
	comp=N,259nm,1.0s							
ANM	**Nome**	**3.85**	**246**			**Pn**	**19 52 25.6**	**-2.4**
ANM	**Nome**	**3.85**	**246**	Pb		**Pb**	**19 52 36.0**	**-0.3**
	baz=59							
F24K	**Squaw Lake**	**3.85**	**68**			**Pn**	**19 52 27.2**	**-0.8**
F24K	**Squaw Lake**	**3.85**	**68**	IAML			19 53 36.4	
	comp=E,282nm,0.8s							
F24K				IAML			19 53 39.2	
	comp=N,288nm,0.9s							
F24K	**Squaw Lake**	**3.85**	**68**	P		**Pn**	**19 52 27.5**	**-0.5**
	baz=256							
KTH	**Kantishna Hill**	**3.85**	**133**			**Pn**	**19 52 27.9**	**-0.2**
KTH	**Kantishna Hill**	**3.85**	**133**	IAML			19 53 40.7	
	comp=E,195nm,0.8s							
KTH				IAML			19 53 48.0	
	comp=N,239nm,1.0s							
BWN	**Browne**	**3.90**	**120**			**Pn**	**19 52 27.1**	**-1.5**
G24K	**Hadweenzic Riv**	**3.90**	**80**			**Pn**	**19 52 27.6**	**-1.1**
G24K	**Hadweenzic Riv**	**3.90**	**80**	P		**Pn**	**19 52 27.8**	**-0.8**
	baz=269,SNR=10							
PPLA	**Purkeypile**	**4.06**	**146**			**Pn**	**19 52 30.7**	**-0.3**
PPLA	**Purkeypile**	**4.06**	**146**	IAML			19 53 39.3	
	comp=E,208nm,1.1s							
PPLA				IAML			19 53 51.8	
	comp=N,170nm,0.9s							
PPLA	**Purkeypile**	**4.06**	**146**	P		**Pn**	**19 52 31.6**	**+0.6**
	baz=330							
TRF	**Thorofare Moun**	**4.12**	**131**			**Pn**	**19 52 31.7**	**0.0**
TRF	**Thorofare Moun**	**4.12**	**131**	IAML			19 53 44.5	
	comp=N,263nm,1.1s							
TRF	**Thorofare Moun**	**4.12**	**131**	P		**Pn**	**19 52 32.1**	**+0.3**
	baz=317							
L20K	**Farewell, AK**	**4.12**	**158**			**Pn**	**19 52 31.4**	**-0.3**
L20K				IAML			19 53 42.8	
	comp=N,223nm,1.0s							
L20K	**Farewell, AK**	**4.12**	**158**	P		**Pn**	**19 52 31.8**	**+0.1**
	baz=341							
L18K	**Granite Mounta**	**4.13**	**177**	IAML			19 53 43.9	
	comp=N,161nm,0.9s							
L18K				IAML			19 53 47.7	
	comp=E,148nm,1.2s

	comp=E,140nm,0.8s								
L19K	**White Mountain**	**4.29**	**165**	P		**Pn**	**19 52 33.7**	**-0.2**
	baz=347,SNR=24								
C23K	**Itkillik River**	**4.30**	**32**			**Pn**	**19 52 33.7**	**-0.2**
C23K	**Itkillik River**	**4.30**	**32**	IAML			19 53 58.0		
	comp=E,247nm,0.8s								
C23K	**Itkillik River**	**4.30**	**32**	P		**Pn**	**19 52 33.8**	**-0.2**
	baz=218								
MCK	**McKinley**	**4.36**	**123**			**Pn**	**19 52 34.6**	**-0.3**
MCK	**McKinley**	**4.36**	**123**	P		**Pn**	**19 52 34.5**	**-0.5**
	baz=310								
G25K	**Bearman Lake**	**4.45**	**79**			**Pn**	**19 52 35.6**	**-0.5**
G25K	**Bearman Lake**	**4.45**	**79**	P		**Pn**	**19 52 35.8**	**-0.3**
	baz=269								
TNA	**Tin City**	**4.46**	**265**			**Pn**	**19 52 34.9**	**-1.4**
TNA	**Tin City**	**4.46**	**265**	IAML			19 53 58.2		
	comp=E,144nm,1.2s								
TNA	**Tin City**	**4.46**	**265**	P		**Pn**	**19 52 35.7**	**-0.6**
	baz=76								
K15K	**Wolf Creek Mou**	**4.47**	**207**			**Pn**	**19 52 36.2**	**-0.2**
K15K	**Wolf Creek Mou**	**4.47**	**207**	IAML			19 53 59.1		
	comp=E,166nm,1.0s								
K15K				IAML			19 54 02.8		
	comp=N,142nm,1.2s								
K15K	**Wolf Creek Mou**	**4.47**	**207**	P		**Pn**	**19 52 36.1**	**-0.3**
	baz=23								
J14K	**Nanvaranak Lak**	**4.52**	**220**			**Pn**	**19 52 35.5**	**-1.6**
J14K	**Nanvaranak Lak**	**4.52**	**220**	IAML			19 53 58.9		
	comp=N,215nm,0.7s								
J14K	**Nanvaranak Lak**	**4.52**	**220**	P		**Pn**	**19 52 35.0**	**-2.1**
	baz=35								
IL01		**4.55**	**105**			**Pn**	**19 52 37.2**	**-0.4**
IL31		**4.55**	**105**			**Pn**	**19 52 37.4**	**-0.2**
ILAR	**Eielson Array**	**4.55**	**105**	Pn		**Pn**	**19 52 37.0**	**-0.6**
	comp=N,12nm,0.3s,baz=290,slow=13,SNR=635								
ILAR				Sn		**Sn**	**19 53 28.1**	**-3.0**
	comp=N,5.0nm,0.3s,baz=291,slow=23,SNR=10.0								
ILAR				Lg	Lg		19 53 51.1		
	comp=N,6.8nm,0.3s,baz=281,slow=23,SNR=4.5								
	comp=N,60nm,0.6s								
ILAR	**Eielson Array**	**4.55**	**105**			**Pn**	**19 52 36.4**	**-1.2**
H25L	**Birch Creek**	**4.59**	**86**			**Pn**	**19 52 37.9**	**-0.1**
H25L	**Birch Creek**	**4.59**	**86**	P		**Pn**	**19 52 37.9**	**-0.1**
	baz=276								
RND	**Reindeer**	**4.61**	**126**			**Pn**	**19 52 38.4**	**0.0**
C24K	**Franklin Bluff**	**4.66**	**39**			**Pn**	**19 52 38.8**	**-0.2**
C24K	**Franklin Bluff**	**4.66**	**39**	IAML			19 54 20.7		
	comp=E,158nm,1.1s								
C24K	**Franklin Bluff**	**4.66**	**39**	P		**Pn**	**19 52 38.7**	**-0.2**
	baz=227								
HDA	**Harding Lake**	**4.70**	**109**			**Pn**	**19 52 38.5**	**-1.0**
HDA	**Harding Lake**	**4.70**	**109**	IAML			19 53 58.4		
	comp=N,146nm,0.7s								
HDA	**Harding Lake**	**4.70**	**109**	P		**Pn**	**19 52 38.5**	**-1.0**
	baz=299								
F25K	**Christian River**	**4.71**	**69**	P		**Pn**	**19 52 39.2**	**-0.6**
	baz=259								
L22K	**Petersville**	**4.72**	**141**			**Pn**	**19 52 41.0**	**+1.1**
L22K				IAML			19 53 36.7		
	comp=E,100nm,0.9s								
L22K				IAML			19 53 37.2		
	comp=N,115nm,0.3s								
L16K	**Owhat River**	**4.74**	**193**			**Pn**	**19 52 38.8**	**-1.4**
L16K	**Owhat River**	**4.74**	**193**	P		**Pn**	**19 52 38.9**	**-1.2**
	baz=11								
A22K	**Sinclair Lake**	**4.77**	**9**			**Pn**	**19 52 39.2**	**-1.2**
A22K						**Pn**	**19 52 40.1**	**-0.3**
A22K	**Sinclair Lake**	**4.77**	**9**	P		**Pn**	**19 52 40.2**	**-0.3**
	baz=191								
FYU	**Fort Yukon**	**4.80**	**82**			**Pn**	**19 52 39.4**	**-1.5**
M20K	**Styx River**	**4.80**	**156**			**Pn**	**19 52 41.4**	**+0.3**
M20K	**Styx River**	**4.80**	**156**	IAML			19 53 39.9		
	comp=E,98nm,0.9s								
M20K	**Styx River**	**4.80**	**156**	P		**Pn**	**19 52 41.7**	**+0.6**
	baz=340								
E25K	**Arctic Village**	**4.86**	**63**			**Pn**	**19 52 41.3**	**-0.5**
E25K	**Arctic Village**	**4.86**	**63**	IAML			19 54 09.7		
	comp=E,112nm,0.9s								
E25K				IAML			19 54 10.4		
	comp=N,133nm,0.8s								
E25K	**Arctic Village**	**4.86**	**63**	P		**Pn**	**19 52 41.2**	**-0.5**
	baz=253								
M18K	**Stony River**	**4.89**	**172**			**Pn**	**19 52 41.8**	**-0.4**
M18K	**Stony River**	**4.89**	**172**	P		**Pn**	**19 52 41.6**	**-0.6**
	baz=354								
M17K	**Holitna River**	**4.95**	**181**			**Pn**	**19 52 42.5**	**-0.5**
M17K	**Holitna River**	**4.95**	**181**	P		**Pn**	**19 52 42.8**	**-0.2**
	baz=1.3								
SKT	**Skwentna**	**5.01**	**148**			**Pn**	**19 52 44.3**	**+0.4**
SKT				IAML			19 54 15.8		
	comp=E,112nm,0.9s								
SKT	**Skwentna**	**5.01**	**148**	P		**Pn**	**19 52 44.5**	**+0.6**
	baz=333								
WAT7	**Susitna Watana**	**5.02**	**130**			**Pn**	**19 52 44.3**	**+0.3**
A21K	**Barrow**	**5.02**	**2**			**Pn**	**19 52 43.4**	**-0.6**
A21K						**Pn**	**19 52 43.5**	**-0.5**
A21K	**Barrow**	**5.02**	**2**	P		**Pn**	**19 52 43.5**	**-0.5**
	baz=182								
L15K	**Ungalak Mounta**	**5.04**	**204**			**Pn**	**19 52 43.2**	**-0.9**
L15K	**Ungalak Mounta**	**5.04**	**204**	P		**Pn**	**19 52 43.7**	**-0.5**
	baz=20,SNR=8.6								
D25K	**Kavik River**	**5.08**	**49**			**Pn**	**19 52 44.1**	**-0.7**
D25K	**Kavik River**	**5.08**	**49**	IAML			19 54 15.8		
	comp=N,81nm,0.7s								
D25K				IAML			19 54 19.9		
	comp=E,101nm,0.9s								
D25K	**Kavik River**	**5.08**	**49**	P		**Pn**	**19 52 44.4**	**-0.4**
	baz=239								
BMAR	**Burnt Mountain**	**5.09**	**72**			**Pn**	**19 52 44.1**	**-0.9**
BM01	**Burnt Mountain**	**5.11**	**72**			**Pn**	**19 52 43.9**	**-1.3**
WAT1	**Susitna Watana**	**5.11**	**129**	P		**Pn**	**19 52 45.5**	**+0.2**
	baz=317								
J25K	**Salcha River,**	**5.21**	**104**			**Pn**	**19 52 45.9**	**-0.8**
J25K	**Salcha River,**	**5.21**	**104**	IAML			19 54 11.8		
	comp=E,73nm,0.9s								
J25K				IAML			19 54 21.5		
	comp=N,106nm,1.1s								
J25K	**Salcha River,**	**5.21**	**104**	P		**Pn**	**19 52 46.4**	**-0.3**
	baz=294								
F26K	**Sheenjek River**	**5.29**	**69**			**Pn**	**19 52 47.3**	**-0.4**
F26K	**Sheenjek River**	**5.29**	**69**	IAML			19 54 24.0		
	comp=N,100nm,0.8s								
F26K				IAML			19 54 32.1		
	comp=E,110nm,1.1s								
F26K	**Sheenjek River**	**5.29**	**69**	P		**Pn**	**19 52 47.4**	**-0.3**
	baz=261								
DHY	**Denali Highway**	**5.32**	**123**			**Pn**	**19 52 48.3**	**+0.1**
DHY	**Denali Highway**	**5.32**	**123**	P		**Pn**	**19 52 48.3**	**+0.1**
	baz=312								
SPNN	**North Nagishla**	**5.36**	**156**			**Pn**	**19 52 49.3**	**+0.5**
G26K	**Porcupine Rive**	**5.37**	**77**			**Pn**	**19 52 48.5**	**-0.2**
G26K	**Porcupine Rive**	**5.37**	**77**	P		**Pn**	**19 52 48.5**	**-0.2**
	baz=269								
M16K	**Timber Creek**	**5.38**	**189**			**Pn**	**19 52 48.0**	**-1.0**
M16K	**Timber Creek**	**5.38**	**189**	IAML			19 54 17.7		
	comp=N,59nm,0.9s								
M16K				IAML			19 54 23.7		
	comp=E,58nm,0.8s								
M16K	**Timber Creek**	**5.38**	**189**	P		**Pn**	**19 52 48.0**	**-1.0**
	baz=7.8								
STLK	**Strandline Lak**	**5.39**	**152**			**Pn**	**19 52 49.5**	**+0.4**
K24K	**Donnelly Dome**	**5.45**	**112**			**Pn**	**19 52 49.4**	**-0.5**
K24K	**Donnelly Dome**	**5.45**	**112**	P		**Pn**	**19 52 49.5**	**-0.4**
	baz=303								
SPWE	**Spurr West**	**5.47**	**156**			**Pn**	**19 52 50.9**	**+0.6**
K13K	**Kusilvak Mount**	**5.49**	**220**			**Pn**	**19 52 49.3**	**-1.1**
K13K	**Kusilvak Mount**	**5.49**	**220**	P		**Pn**	**19 52 49.4**	**-1.1**
	baz=34								
M22K	**Willow**	**5.54**	**143**	P		**Pn**	**19 52 50.5**	**-0.5**
	baz=329								
SPCG	**Spurr Capps Gl**	**5.55**	**153**			**Pn**	**19 52 51.5**	**+0.2**
WAT6	**Susitna Watana**	**5.55**	**128**			**Pn**	**19 52 51.3**	**-0.1**
WAT6						**Pn**	**19 52 51.5**	**0.0**
WAT6	**Susitna Watana**	**5.55**	**128**	P		**Pn**	**19 52 51.6**	**+0.2**
	baz=317								
L14K	**Kuka Creek**	**5.56**	**208**	P		**Pn**	**19 52 51.0**	**-0.4**
	baz=24								
L14K				Pb		**Pb**	**19 53 05.2**	**-0.2**
	baz=24,SNR=9.4								
CKL	**Chakachamna La**	**5.58**	**155**			**Pn**	**19 52 52.2**	**+0.5**
SPCR	**Spurr Chakacha**	**5.60**	**155**	P		**Pn**	**19 52 51.9**	**-0.1**
	baz=339								
SUA	**Susitna One**	**5.65**	**147**			**Pn**	**19 52 53.1**	**+0.4**
SUA	**Susitna One**	**5.65**	**147**	P		**Pn**	**19 52 53.0**	**+0.3**
	baz=333								
N19K	**Bonanza Creek**	**5.67**	**166**	P		**Pn**	**19 52 52.9**	**-0.1**
	baz=349								
N18K	**Kilae Creek**	**5.70**	**174**			**Pn**	**19 52 53.1**	**-0.2**
N18K	**Kilae Creek**	**5.70**	**174**	P		**Pn**	**19 52 53.3**	**0.0**
	baz=355								
N17K	**Nushagak Hills**	**5.82**	**180**			**Pn**	**19 52 55.1**	**+0.1**
N17K	**Nushagak Hills**	**5.82**	**180**	P		**Pn**	**19 52 55.1**	**+0.1**
	baz=0.1								
C26K	**Camden Bay**	**5.83**	**46**	P		**Pn**	**19 52 54.9**	**-0.1**
	baz=237								
GHO	**Glory Hole Cre**	**5.83**	**138**			**Pn**	**19 52 55.8**	**+0.6**
RIDG	**Independent Ri**	**5.83**	**111**			**Pn**	**19 52 54.8**	**-0.4**
RIDG	**Independent Ri**	**5.83**	**111**	P		**Pn**	**19 52 54.8**	**-0.4**
	baz=302								
I26K	**Coal Creek Min**	**5.86**	**94**	P		**Pn**	**19 52 55.0**	**-0.5**
	baz=286								
M15K	**Kasigluk River**	**5.87**	**197**			**Pn**	**19 52 54.7**	**-0.8**
M15K						**Pn**	**19 52 55.0**	**-0.6**
M15K	**Kasigluk River**	**5.87**	**197**	P		**Pn**	**19 52 54.8**	**-0.8**
	baz=14								
N16K	**Nishlik Lake**	**5.92**	**188**			**Pn**	**19 52 55.5**	**-0.9**
N16K	**Nishlik Lake**	**5.92**	**188**	P		**Pn**	**19 52 55.3**	**-1.1**
	baz=6.3								
PMR	**Palmer**	**5.93**	**140**			**Pn**	**19 52 55.4**	**-1.0**
PMR	**Palmer**	**5.93**	**140**	P		**Pn**	**19 52 56.4**	**0.0**
	baz=327								
SML	**Sawmill**	**5.97**	**135**			**Pn**	**19 52 57.0**	**0.0**
SML	**Sawmill**	**5.97**	**135**	P		**Pn**	**19 52 57.0**	**0.0**
	baz=323								
J26L	**Joseph Creek**	**5.97**	**102**			**Pn**	**19 52 56.9**	**-0.2**
J26L	**Joseph Creek**	**5.97**	**102**	P		**Pn**	**19 52 57.0**	**-0.2**
	baz=294								
M14K	**Bethel**	**5.99**	**203**	P		**Pn**	**19 52 56.4**	**-0.9**
	baz=19								
SCRK	**Sand Creek**	**6.04**	**107**			**Pn**	**19 52 57.4**	**-0.7**
SCRK	**Sand Creek**	**6.04**	**107**	P		**Pn**	**19 52 57.4**	**-0.7**
	baz=299								
C27K	**Jago River**	**6.05**	**51**			**Pn**	**19 52 58.7**	**+0.7**
C27K	**Jago River**	**6.05**	**51**	P		**Pn**	**19 52 58.8**	**+0.7**
	baz=243								
PAX	**Paxson**	**6.05**	**118**			**Pn**	**19 52 57.9**	**-0.3**
PAX	**Paxson**	**6.05**	**118**	P		**Pn**	**19 52 58.3**	**+0.1**
	baz=309								
NCT	**North Crescent**	**6.09**	**160**			**Pn**	**19 52 59.0**	**+0.2**
DFR	**Drift River**	**6.10**	**159**			**Pn**	**19 52 59.3**	**+0.4**
M23K	**Glacier View**	**6.15**	**133**	P		**Pn**	**19 52 59.1**	**-0.4**
	baz=322								
DOT	**Dot Lake**	**6.18**	**110**			**Pn**	**19 52 59.7**	**-0.2**
RDWB	**Redoubt West**	**6.18**	**160**			**Pn**	**19 52 59.9**	**-0.1**
G27K	**Doyon Strip**	**6.21**	**78**			**Pn**	**19 52 59.9**	**-0.4**
G27K	**Doyon Strip**	**6.21**	**78**	P		**Pn**	**19 53 00.0**	**-0.3**
	baz=272								
SCM	**Sheep Creek Mo**	**6.24**	**132**			**Pn**	**19 53 01.6**	**+0.8**
SCM	**Sheep Creek Mo**	**6.24**	**132**	P		**Pn**	**19 53 00.5**	**-0.3**
	baz=320								
RED	**Redoubt Volcan**	**6.25**	**159**			**Pn**	**19 53 01.4**	**+0.4**
KNK	**Knik Glacier**	**6.25**	**138**			**Pn**	**19 53 01.9**	**+1.0**
KNK	**Knik Glacier**	**6.25**	**138**	P		**Pn**	**19 53 00.3**	**-0.6**
	baz=326,SNR=6.7								
H27K	**Steamboat Moun**	**6.32**	**84**	P		**Pn**	**19 53 02.0**	**+0.2**
	baz=278								
N15K	**Kwethluk River**	**6.32**	**193**			**Pn**	**19 53 01.5**	**-0.3**
N15K	**Kwethluk River**	**6.32**	**193**	P		**Pn**	**19 53 01.6**	**-0.2**
	baz=11								
E27K	**Coleen River**	**6.32**	**66**	P		**Pn**	**19 53 01.1**	**-0.7**
	baz=260								
M24K	**Tolsona, Glenn**	**6.40**	**126**			**Pn**	**19 53 03.1**	**+0.1**
M24K						**Pn**	**19 53 03.8**	**+0.8**
M24K	**Tolsona, Glenn**	**6.40**	**126**	P		**Pn**	**19 53 03.0**	**+0.1**
	baz=316								
I27K	**Kandik River**	**6.40**	**89**			**Pn**	**19 53 02.4**	**-0.6**
I27K	**Kandik River**	**6.40**	**89**	P		**Pn**	**19 53 02.6**	**-0.4**
	baz=283								
HARP	**HAARP**	**6.54**	**121**			**Pn**	**19 53 04.9**	**+0.1**
HARP	**HAARP**	**6.54**	**121**	P		**Pn**	**19 53 06.0**	**+1.2**
	baz=312								
O18K	**Koktuh Hills**	**6.56**	**171**			**Pn**	**19 53 04.5**	**-0.6**
O18K	**Koktuh Hills**	**6.56**	**171**	P		**Pn**	**19 53 04.5**	**-0.6**
	baz=353								
O17K	**Koliganek Bris**	**6.58**	**180**			**Pn**	**19 53 04.8**	**-0.5**
O17K	**Koliganek Bris**	**6.58**	**180**	P		**Pn**	**19 53 04.5**	**-0.8**
	baz=360								
IVE	**Iliamna Volcan**	**6.61**	**162**			**Pn**	**19 53 06.5**	**+0.6**
ILSW	**Iliamna Southw**	**6.62**	**162**			**Pn**	**19 53 06.6**	**+0.5**
N14K	**Kuskokwak Cree**	**6.74**	**200**			**Pn**	**19 53 07.4**	**-0.2**
N14K	**Kuskokwak Cree**	**6.74**	**200**	P		**Pn**	**19 53 07.7**	**+0.1**
	baz=16								
PWL	**Port Wells**	**6.75**	**140**	P		**Pn**	**19 53 08.5**	**+0.8**
	baz=328								
K27K	**Chicken**	**6.76**	**103**			**Pn**	**19 53 07.8**	**-0.1**
K27K	**Chicken**	**6.76**	**103**	P		**Pn**	**19 53 07.7**	**-0.1**
	baz=296								
O16K	**Kokwok River B**	**6.77**	**184**			**Pn**	**19 53 07.4**	**-0.6**
O16K	**Kokwok River B**	**6.77**	**184**	P		**Pn**	**19 53 07.3**	**-0.7**
	baz=3.2								
D27M	**Malcolm River**	**6.80**	**57**			**Pn**	**19 53 08.8**	**+0.4**
D27M	**Malcolm River**	**6.80**	**57**	P		**Pn**	**19 53 10.0**	**+1.5**
	baz=252								
F28M	**Old Crow**	**6.91**	**71**			**Pn**	**19 53 09.7**	**-0.2**
F28M	**Old Crow**	**6.91**	**71**	P		**Pn**	**19 53 09.5**	**-0.4**
	baz=267								
KLU	**Klutina**	**6.94**	**129**			**Pn**	**19 53 10.3**	**0.0**
KLU	**Klutina**	**6.94**	**129**	P		**Pn**	**19 53 11.0**	**+0.7**
	baz=319								
P18K	**Big Mountain,**	**7.02**	**172**			**Pn**	**19 53 11.3**	**-0.2**
P18K	**Big Mountain,**	**7.02**	**172**	P		**Pn**	**19 53 11.4**	**-0.1**
	baz=354								
I28M	**Miner Creek**	**7.12**	**89**			**Pn**	**19 53 12.4**	**-0.4**
I28M	**Miner Creek**	**7.12**	**89**	P		**Pn**	**19 53 12.7**	**-0.1**
	baz=285								
E28M	**Babbage River**	**7.15**	**63**			**Pn**	**19 53 12.6**	**-0.5**
E28M	**Babbage River**	**7.15**	**63**	P		**Pn**	**19 53 12.8**	**-0.4**
	baz=260,SNR=7.6								
P17K	**Kvichak River**	**7.17**	**177**	P		**Pn**	**19 53 12.7**	**-0.7**
	baz=358								
N25K	**Chitina, Valde**	**7.28**	**125**			**Pn**	**19 53 14.6**	**-0.5**
N25K	**Chitina, Valde**	**7.28**	**125**	P		**Pn**	**19 53 15.6**	**+0.6**
	baz=316								
O15K	**Ungalikthiuk R**	**7.28**	**191**			**Pn**	**19 53 14.5**	**-0.4**
M26K	**Nabesna, AK**	**7.30**	**116**	P		**Pn**	**19 53 14.0**	**-1.3**
	baz=309								
O14K	**Tigyukauivet M**	**7.34**	**197**			**Pn**	**19 53 15.3**	**-0.5**
L27K	**Beaver Creek,**	**7.34**	**109**			**Pn**	**19 53 14.6**	**-1.3**
L27K	**Beaver Creek,**	**7.34**	**109**	P		**Pn**	**19 53 15.2**	**-0.7**
	baz=303								
BCAR	**Beaver Creek A**	**7.36**	**109**			**Pn**	**19 53 14.9**	**-1.2**
D28M	**Stokes Point**	**7.58**	**58**	P		**Pn**	**19 53 20.5**	**+1.4**
	baz=255								
H29M	**Whitestone**	**7.58**	**82**			**Pn**	**19 53 18.8**	**-0.4**
H29M	**Whitestone**	**7.58**	**82**	P		**Pn**	**19 53 19.6**	**+0.5**
	baz=279								
G29M	**Pine Creek**	**7.64**	**77**			**Pn**	**19 53 19.9**	**+0.1**
G29M	**Pine Creek**	**7.64**	**77**	P		**Pn**	**19 53 20.2**	**+0.3**
	baz=274								
E29M	**Blow River**	**7.71**	**66**			**Pn**	**19 53 20.7**	**-0.2**
E29M	**Blow River**	**7.71**	**66**	P		**Pn**	**19 53 20.7**	**-0.2**
	baz=263								
M27K	**Edge Creek, AK**	**7.74**	**114**			**Pn**	**19 53 21.3**	**-0.1**
M27K	**Edge Creek, AK**	**7.74**	**114**	P		**Pn**	**19 53 21.8**	**+0.4**
	baz=308								
BMRM	**Bremner River**	**7.75**	**128**	P		**Pn**	**19 53 21.8**	**+0.3**
	baz=319								
KAHC	**Katmai Hardscr**	**7.77**	**172**			**Pn**	**19 53 21.6**	**-0.2**
DAWY	**Dawson**	**7.81**	**99**			**Pn**	**19 53 21.8**	**-0.5**
DAWY	**Dawson**	**7.81**	**99**	P		**Pn**	**19 53 21.5**	**-0.8**
	baz=295,SNR=12								
BVCY	**Beaver Creek**	**8.08**	**111**			**Pn**	**19 53 25.2**	**-0.7**
BVCY	**Beaver Creek**	**8.08**	**111**	P		**Pn**	**19 53 25.1**	**-0.9**
	baz=306								
Q17K	**Contact Creek**	**8.12**	**175**	P		**Pn**	**19 53 25.9**	**-0.6**
	baz=356								
G30M	**tAoh Zraii Nji**	**8.34**	**76**			**Pn**	**19 53 28.6**	**-0.9**
G30M	**tAoh Zraii Nji**	**8.34**	**76**	P		**Pn**	**19 53 29.0**	**-0.5**
	baz=275								
CRQE	**Cirque**	**8.40**	**125**	P		**Pn**	**19 53 30.5**	**0.0**
	baz=318								
F30M	**Barrier River**	**8.47**	**72**	P		**Pn**	**19 53 32.2**	**+0.9**
	baz=271								
I30M	**Mount Dempster**	**8.62**	**88**			**Pn**	**19 53 33.1**	**-0.3**
I30M	**Mount Dempster**	**8.62**	**88**	P		**Pn**	**19 53 33.5**	**+0.1**
	baz=287								
YUK3	**Moose Creek**	**8.62**	**114**	P		**Pn**	**19 53 33.1**	**-0.5**
	baz=309								
K29M	**Barlow Dome**	**8.65**	**98**			**Pn**	**19 53 33.2**	**-0.7**
K29M	**Barlow Dome**	**8.65**	**98**	P		**Pn**	**19 53 33.4**	**-0.5**
	baz=295								
L29M	**L29M**	**8.75**	**103**	P		**Pn**	**19 53 35.2**	**-0.1**
	baz=300								
KDAK	**Kodiak Island**	**8.84**	**164**	Pn		**Pn**	**19 53 38.4**	**+2.1**
	comp=E,0.8nm,0.3s,baz=21,slow=6.8,SNR=10								
KDAK				Lg	Lg		19 56 17.5		
	comp=E,0.1nm,0.3s,baz=204,slow=20,SNR=2.3								
	comp=E,9.8nm,1.0s								
KDAK	**Kodiak Island**	**8.84**	**164**	P		**Pn**	**19 53 35.7**	**-0.6**
	baz=348								
J30M	**Hart River**	**8.84**	**92**	P		**Pn**	**19 53 36.5**	**0.0**
	baz=291								
CTG	**Chitna Glacier**	**8.85**	**120**	P		**Pn**	**19 53 36.5**	**0.0**
	baz=314								
M29M	**Somme Creek**	**8.98**	**107**	P		**Pn**	**19 53 38.0**	**-0.3**
	baz=304								
G31M	**Satah River**	**9.11**	**76**	P		**Pn**	**19 53 39.0**	**-1.0**
	baz=277								
YUK8	**Steele Glacier**	**9.19**	**115**	P		**Pn**	**19 53 40.0**	**-1.4**
	baz=311								
F31M	**Tsiigehtchic**	**9.27**	**72**	P		**Pn**	**19 53 41.3**	**-0.8**
	baz=274								
H31M	**Peel River**	**9.28**	**83**	P		**Pn**	**19 53 42.3**	**0.0**
	baz=284								
INK	**Inuvik**	**9.33**	**67**	Pn		**Pn**	**19 53 42.9**	**-0.1**
	comp=E,0.3nm,0.3s,baz=277,slow=15,SNR=16								
INK				Sn		**Sn**	**19 55 22.1**	**-6.1**
	comp=E,0.2nm,0.3s,baz=219,slow=18,SNR=1.4								
INK				Lg	Lg		19 56 22.9		
	comp=E,0.1nm,0.3s,baz=133,slow=20,SNR=1.6								
	comp=E,3.9nm,0.7s								
INK	**Inuvik**	**9.33**	**67**	P		**Pn**	**19 53 43.2**	**+0.3**
	baz=269,SNR=5.3								
O28M	**Mount Upton**	**9.38**	**118**	P		**Pn**	**19 53 44.3**	**+0.2**
	baz=314								
YUK4	**Talbot Arm**	**9.57**	**113**	P		**Pn**	**19 53 46.5**	**0.0**
	baz=309								
A36M	**Sachs Harbour**	**12.56**	**49**			**Pn**	**19 54 25.2**	**-2.0**
A36M	**Sachs Harbour**	**12.56**	**49**	P		**Pn**	**19 54 26.2**	**-1.0**
	baz=259								
C36M	**Paulatuk**	**12.75**	**61**			**Pn**	**19 54 28.9**	**-0.8**
C36M	**Paulatuk**	**12.75**	**61**	P		**Pn**	**19 54 28.9**	**-0.8**
	baz=272								
DLBC	**Dease Lake**	**14.75**	**109**	Pn		**P**	**19 55 01.6**	**-1.8**
	comp=E,0.2nm,0.3s,baz=317,slow=19,SNR=7.5								
DLBC				Lg	Lg		19 59 16.4		
	comp=E,0.7nm,0.3s,baz=213,slow=25,SNR=3.6								
DLBC				LR	LR		20 00 55.3		
	comp=E,102nm,18.8s,baz=269,slow=38								
	comp=E,3.7nm,0.7s								
YKA	**Yellowknife Ar**	**18.50**	**82**	P		**Pn**	**19 55 47.8**	**+3.0**
	comp=E,0.1nm,0.3s,baz=300,slow=13,SNR=4.6								
	comp=E,4.4nm,1.1s								
RES	**Resolute Bay**	**21.27**	**40**	P		**P**	**19 56 14.9**	**+0.1**
	comp=E,1.3nm,1.0s,baz=278,slow=14,SNR=1.7								
RES				LR	LR		20 06 59.8		
	comp=E,105nm,18.6s,baz=340,slow=44								
	comp=E,1.3nm,1.0s								
RES	**Resolute Bay**	**21.27**	**40**	IAmb	IAmb		19 56 38.1		
	comp=Z,9.8nm,1.2s								
SEY	**Seymchan**	**21.38**	**285**	P		**P**	**19 56 18.0**	**+1.9**
	comp=Z,6.2nm,0.8s,baz=92,slow=10,SNR=5.5								
SEY				LR	LR		20 05 31.1		
	comp=Z,100nm,18.7s,baz=68,slow=40								
	comp=Z,2.6nm,0.8s								
MA2	**Magadan**	**23.95**	**279**	LR	LR		20 05 40.2		
	comp=Z,82nm,18.2s,baz=104,slow=36								
TXAR	**Lajitas Array**	**49.04**	**112**	P		**P**	**20 00 17.1**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=324,slow=6.2,SNR=4.6								
	comp=Z,0.6nm,0.9s								
SONM	**Songjino Array**	**49.79**	**299**	P		**P**	**20 00 21.0**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=31,slow=6.6,SNR=4.1	

λ-6.93000°.
UPA ***18*** *20:09:50.0±1.1,8°.39N×82°.92W, h3km±4km, ML4.3, MW4.1*
CATAC ***18*** *20:09:52.1±0.3,8°.N±2°×8°.3W×°, h3km±1km, M4.1/19, MLv4.1/19, Error ellipse: s-maj=5.2km s-min=2.2km az=11.8, confirmed*

ISC 18 20:09:49.4±1.0, 8°.30N±0°.03×82°.94W±0°.02, h13km±7km, n86, σ1§33/103, 13C-13D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMNES	**Limones**	**0.21**	**158**	⇑*eP*	**Pb**	**20 09 55.7**	**+0.5**
CDITO	**Canoas**	**0.28**	**14**	*eP*	**Pb**	**20 09 56.0**	**-0.4**
CDITO	**Canoas**	**0.28**	**14**	S	**Sb**	**20 10 00.6**	**-0.5**
NELY	**Ciudad Neily**	**0.35**	**359**	⇑*eP*	**Pb**	**20 09 57.1**	**-0.5**
NELY				*eS*	**Sb**	**20 10 02.6**	**-0.5**
FITO	**Golfito**	**0.39**	**327**	⇑*eP*	**Pg**	**20 09 57.1**	**-0.1**
DMCAL	**E. de Neily**	**0.40**	**22**	⇓*eP*	**Pb**	**20 09 58.2**	**-0.3**
PIRO	**Carate, Puerto**	**0.41**	**285**	*eP*	**Pb**	**20 09 58.4**	**-0.2**
PIRO				*eS*	**Sn**	**20 10 06.2**	**-2.2**
PIRO	**Carate, Puerto**	**0.41**	**285**	P	**Pb**	**20 09 58.8**	**+0.3**
PIRO	**Carate, Puerto**	**0.41**	**285**	S	**Sb**	**20 10 05.8**	**+1.2**
PIRO	**Carate, Puerto**	**0.41**	**285**	*eP*	**Pb**	**20 09 58.3**	**-0.2**
EDAD	**Golfito**	**0.42**	**328**	⇑*eP*	**Pg**	**20 09 57.6**	**-0.2**
EDAD				*eS*	**Sb**	**20 10 04.0**	**-1.1**
PTJ1	**Puerto Jimnez**	**0.43**	**304**	*eP*	**Pb**	**20 09 58.7**	**-0.2**
PTJ1	**Puerto Jimnez**	**0.43**	**304**	P	**Pb**	**20 09 58.8**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.43**	**304**	S	**Sb**	**20 10 06.6**	**+1.3**
PTJ1	**Puerto Jimnez**	**0.43**	**304**	*eP*	**Pb**	**20 09 58.8**	**-0.1**
DVD	**David**	**0.51**	**74**	⇓*iP*	**Pg**	**20 09 59.8**	**+0.4**
DVD				AMP		20 09 59.9	
	comp=E,23μm,0.1s						
VITO	**San Vito**	**0.52**	**357**	*eP*	**Pb**	**20 10 00.4**	**-0.1**
RSRNO	**Rio Sereno**	**0.52**	**9**	*eP*	**Pb**	**20 10 00.6**	**0.0**
JEFFS	**S de V. Baru**	**0.55**	**47**	⇓*eP*	**Pb**	**20 10 00.8**	**-0.2**
BRU2	**Volcan**	**0.55**	**27**	⇓*iP*	**Pb**	**20 10 00.9**	**-0.2**
BRU2				*eS*	**Sb**	**20 10 09.1**	**+0.1**
BRU2	**Volcan**	**0.55**	**27**	P	**Pb**	**20 10 00.9**	**-0.2**
BRU2	**Volcan**	**0.55**	**27**	⇓*eP*	**Pb**	**20 10 00.9**	**-0.2**
BRU2				*eS*	**Sb**	**20 10 08.9**	**-0.1**
SCLRA	**Santa Clara, W**	**0.56**	**16**	⇓*eP*	**Pb**	**20 10 01.1**	**-0.1**
TBS2		**0.57**	**30**	⇓*eP*	**Pb**	**20 10 02.1**	**+0.7**
ALCO	**Alturas Coton,**	**0.66**	**9**	⇑*eP*	**Pg**	**20 10 02.3**	**0.0**
ALCO				*eS*	**Sg**	**20 10 11.2**	**+0.1**
BQTLY	**Boquete Panama**	**0.66**	**46**	⇓*eP*	**Pg**	**20 10 02.3**	**-0.1**
WILLF	**Boquete**	**0.67**	**48**	⇓*eP*	**Pg**	**20 10 02.5**	**-0.2**
DAP26	**falda E V. Bar**	**0.71**	**46**	⇓*eP*	**Pg**	**20 10 02.8**	**-0.4**
EDP2	**Potrero Grande**	**0.75**	**342**	*eP*	**Pb**	**20 10 04.1**	**-0.3**
FIMO	**Fila Mora**	**0.80**	**329**	⇑*eP*	**Pg**	**20 10 04.7**	**-0.3**
PANP	**Palmar Norte**	**0.83**	**322**	⇑*eP*	**Pg**	**20 10 04.9**	**-0.7**
PANP				*eS*	**Sb**	**20 10 16.5**	**-0.5**
PBNVO	**Pueblo Nuevo,**	**0.95**	**51**	⇓*eP*	**Pb**	**20 10 06.6**	**-1.2**
BURE	**Buenos Aires**	**0.96**	**336**	*eP*	**Pb**	**20 10 07.5**	**-0.4**
RBALA	**Bur**	**0.97**	**53**	⇓*eP*	**Pb**	**20 10 07.2**	**-0.9**
DRK0	**Durika**	**1.01**	**343**	⇑*iP*	**Pb**	**20 10 08.1**	**-0.8**
DRK0				*eS*	**Sg**	**20 10 22.4**	**+0.3**
DRK0	**Durika**	**1.01**	**343**	⇑*eP*	**Pb**	**20 10 08.0**	**-0.8**
CHGR2	**Aguacate**	**1.01**	**51**	⇓*iP*	**Pb**	**20 10 07.8**	**-1.1**
CHGR2				*eS*	**Sb**	**20 10 21.4**	**-0.8**
OCHAL	**Ojochal**	**1.06**	**319**	S	**Sn**	**20 10 25.6**	**+1.0**
EDPE	**Pejibaye, P**	**1.06**	**324**	⇑*eP*	**Pb**	**20 10 08.8**	**-0.9**
SAJE	**San Jernim**	**1.19**	**332**	⇑*eP*	**Pn**	**20 10 10.6**	**-1.3**
PDCAN	**Manzana , Fuen**	**1.23**	**90**	*eP*	**Pn**	**20 10 11.0**	**-1.4**
ZEDO	**Perez Zeledon**	**1.28**	**325**	*eP*	**Pb**	**20 10 12.8**	**-0.3**
CEUA	**Cerro Uatsi, L**	**1.32**	**0**	*eP*	**Pg**	**20 10 14.5**	**-0.3**
BRIBI	**Bribri**	**1.32**	**5**	*eP*	**Pb**	**20 10 14.4**	**+0.2**
RGM0	**Gandoca**	**1.33**	**14**	*eP*	**Pn**	**20 10 12.7**	**-1.0**
RGM0	**Gandoca**	**1.33**	**14**	S	**Sg**	**20 10 34.8**	**+2.5**
RGM0	**Gandoca**	**1.33**	**14**	P	**Pg**	**20 10 15.8**	**+0.8**
LAES	**El Progreso Va**	**1.46**	**356**	⇑*eP*	**Pn**	**20 10 15.8**	**+0.2**
BUS1	**Rivas**	**1.48**	**328**	*eP*	**Pn**	**20 10 15.8**	**-0.4**
VERH	**Veragua Rainfo**	**1.64**	**351**	*eP*	**Pn**	**20 10 18.6**	**+0.5**
QUEP	**Quepos**	**1.65**	**313**	P	**Pb**	**20 10 19.7**	**-0.1**
QUEP	**Quepos**	**1.65**	**313**	S	**Sg**	**20 10 42.4**	**-0.3**
PIEC	**Cerro El Cedra**	**1.66**	**323**	*eP*	**Pn**	**20 10 18.4**	**-0.1**
GMAL	**Guarumal, Vera**	**1.77**	**107**	*eP*	**Pn**	**20 10 19.0**	**-0.8**
GMAL				*eS*	**Sn**	**20 10 43.2**	**+1.0**
GMAL	**Guarumal, Vera**	**1.77**	**107**	*eP*	**Pn**	**20 10 18.7**	**-1.1**
LCR2	**La Lucha 2**	**1.78**	**324**	S	**Sg**	**20 10 46.5**	**-0.3**
PICV	**PH. Pirrs**	**1.81**	**317**	*eP*	**Pn**	**20 10 20.9**	**+0.5**
VTCV	**VTCV, Calle Va**	**1.85**	**335**	*eP*	**Pn**	**20 10 21.8**	**+0.8**
RESJ	**San Isidro (Tu**	**1.86**	**338**	⇑*eP*	**Pb**	**20 10 22.1**	**-1.2**
ABRB	**Las Abras (San**	**1.86**	**336**	*eP*	**Pb**	**20 10 22.2**	**-1.3**
CVTV	**Tajo**	**1.88**	**335**	*eP*	**Pb**	**20 10 22.5**	**-1.3**
CVTQ	**Turrialba Volc**	**1.88**	**334**	*eP*	**Pn**	**20 10 22.5**	**+0.8**
VTR0	**Volcan Turrial**	**1.89**	**335**	*eP*	**Pn**	**20 10 22.5**	**+0.7**
CVTR	**Volcan Turrial**	**1.89**	**335**	*eP*	**Pn**	**20 10 22.4**	**+0.6**
ACOS	**Acosta**	**1.92**	**321**	*eP*	**Pn**	**20 10 22.8**	**+0.9**
CACAO	**El Cacao, Vera**	**2.27**	**114**	*eP*	**Pb**	**20 10 28.6**	**-1.7**
CACAO				*eS*	**Sb**	**20 10 57.5**	**-0.8**
TRT2	**Tortugero**	**2.38**	**341**	S	**Sb**	**20 11 01.6**	**+0.1**
SOCE	**Pocosol**	**2.65**	**322**	P	**Pb**	**20 10 35.6**	**-1.3**
SOCE	**Pocosol**	**2.65**	**322**	S	**Sb**	**20 11 07.9**	**-1.6**
AZU	**Azuero**	**2.69**	**101**	*eP*	**Pn**	**20 10 34.3**	**+1.9**
AZU				*eS*	**Sn**	**20 11 07.5**	**+2.6**
JTS	**Las Juntas de**	**2.81**	**315**	*eP*	**Pn**	**20 10 35.2**	**+1.1**
JTS				*eS*	**Sn**	**20 11 09.1**	**+1.2**
JTS	**Las Juntas de**	**2.81**	**315**	P	**Pn**	**20 10 36.1**	**+2.0**
JTS				S	**Sb**	**20 11 11.4**	**-2.4**
COVE	**Coope Vega, Sa**	**2.81**	**329**	P	**Pb**	**20 10 36.8**	**-2.7**
CMARA	**Lajas Hojancha**	**2.99**	**305**	P	**Pn**	**20 10 38.6**	**+1.9**
ZANG	**Zanguenga, Cho**	**3.11**	**78**	*eP*	**Pn**	**20 10 38.4**	**+0.2**
ZANG				*eS*	**Sn**	**20 11 14.9**	**-0.4**
BCIP	**Isla Barro Col**	**3.19**	**74**	*eP*	**Pn**	**20 10 40.0**	**+0.7**
BCIP				*eS*	**Sn**	**20 11 18.0**	**+0.8**
BCIP	**Isla Barro Col**	**3.19**	**74**	P	**Pb**	**20 10 44.8**	**-1.2**
BCIP				S	**Sb**	**20 11 22.9**	**-1.9**
UPAL	**Upala**	**3.29**	**322**	S	**Sb**	**20 11 25.9**	**-1.9**
GAMB1	**Gamboa**	**3.30**	**75**	*eP*	**Pn**	**20 10 41.8**	**+1.0**
FRIJ	**El Hiral**	**3.31**	**74**	*eP*	**Pn**	**20 10 42.0**	**+1.0**
FLAM	**Flamenco Islan**	**3.42**	**79**	*eP*	**Pn**	**20 10 43.4**	**+0.9**
ELI1	**Hacienda Flor**	**3.48**	**312**	P	**Pb**	**20 10 47.1**	**-3.8**
ELI1	**Hacienda Flor**	**3.48**	**312**	S	**Sb**	**20 11 29.5**	**-3.6**
CARN	**Rivas**	**3.84**	**319**	S	**Sb**	**20 11 39.0**	**-4.5**
BOAB	**BOACO BROADBAN**	**3.92**	**327**	P	**Pn**	**20 11 06.6**	**+3.4**
BOAB	**BOACO BROADBAN**	**3.92**	**327**	S	**Sn**	**20 12 04.2**	**+4.2**

BJI ***18*** *20:14:16.9,28°.23N×100°.62E, h14km, mb4.4/12, ML3.9/13, Ms4.0/4, Ms7 3.8/6*
MOS ***18*** *20:14:17.5±1.1,28°.17N×100°.72E, h11km, mb4.6/25, Error ellipse: s-maj=12.3km s-min=5.7km az=128.0*
IDC ***18*** *20:14:17.3±0.7,28°.14N×100°.70E, h0km, mb4.1/16, mbtmp4.1/16, MS3.3/10, Error ellipse: s-maj=36.7km s-min=15.0km az=54.0*
NEIC ***18*** *20:14:19.8±1.5,28°.31N±0°.07×100°.79E±0°.09, h10km±1km, mb4.6/29, Error ellipse: s-maj=13.1km s-min=12.1km az=105.0*

ISC 18 20:14:19.0±0.4, 28°.28N±0°.04×100°.76E±0°.05, h10km, n103, σ1§16/101, mb4.5/42, MS3.3/12, 8C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZH	**PanZhiHua**	**1.97**	**154**	Pg	**Pn**	**20 14 54.8**	**+2.2**
PZH				Sg	**Sg**	**20 15 23.8**	**+1.3**
PZH				*smax*	*smax*		
	comp=N,890nm,1.3s						
PZH				*smax*	*smax*		
	comp=E,990nm,1.2s						
CD2	**Chengdu**	**3.70**	**44**	Pg	**Pg**	**20 15 29.4**	**-0.5**
CD2				Sg	**Sg**	**20 16 16.6**	**-1.2**
CD2				*smax*	*smax*		
	comp=E,370nm,1.2s						
TNCH	**TengChong**	**3.81**	**212**	Pn	**Pn**	**20 15 18.4**	**+0.5**
TNCH				Sg	**Sg**	**20 16 21.5**	**+0.1**
TNCH				*smax*	*smax*		
	comp=N,960nm,1.4s						
TNCH				*smax*	*smax*		
	comp=E,670nm,1.7s						
TNCH				LR	LR		
	comp=Z,1μm,7.4s						
ENH	**Enshi**	**7.88**	**73**	Pn	**Pn**	**20 16 14.3**	**+0.6**
CRAI	**Chiangrai**	**8.02**	**183**	Pn	**Pn**	**20 16 16.1**	**+0.4**
SHL	**Shillong**	**8.37**	**253**		**Pn**	**20 16 18.5**	**-2.1**
SHL	**Shillong**	**8.37**	**253**	P	**Pn**	**20 16 18.5**	**-2.1**
LSA	**Lhasa**	**8.54**	**282**		**Pn**	**20 16 23.7**	**+0.6**
LSA	**Lhasa**	**8.54**	**282**	P	Pn	20 16 19.3	-3.8
LSA				LR	LR		
	comp=N,520nm,11.8s						
LSA				LR	LR		
	comp=E,270nm,5.9s						
LSA				LR	LR		
	comp=Z,220nm,8.0s						
LSA	**Lhasa**	**8.54**	**282**	P	**Pn**	**20 16 23.7**	**+0.6**
CHTO	**Chiang Mai**	**9.57**	**190**	Pn	**Pn**	**20 16 38.8**	**+1.9**
CHTO	**Chiang Mai**	**9.57**	**190**	P	**Pn**	**20 16 38.8**	**+1.9**
CMAR	**Chiang Mai Arr**	**9.92**	**190**	Pn	Pn	20 16 47.6	+5.9
	0.1nm,0.3s,baz=359,slow=12,SNR=6.8						
CMAR				Pg		20 17 23.1	
	0.1nm,0.3s,baz=6.8,slow=15,SNR=8.7						
CMAR				Lg	Lg	20 19 32.3	
	baz=12,slow=29						
EVN	**Everest**	**12.31**	**272**		**Pn**	**20 17 13.4**	**-1.6**
QIZ	**Qiongzhong**	**12.41**	**136**	P	**Pn**	**20 17 13.9**	**-1.8**
QIZ				S	**Sn**	**20 19 34.1**	**0.0**
QIZ				LR	LR		
	comp=N,500nm,10.7s						
QIZ				LR	LR		
	comp=E,380nm,7.2s						
QIZ				LR	LR		
	comp=Z,590nm,9.9s						
SONM	**Songino Array**	**20.01**	**11**	P	**Pn**	**20 18 53.8**	**+0.2**
	5.3nm,1.0s,baz=197,slow=8.8,SNR=22						
SONM				LR	LR	20 28 03.9	
	comp=Z,71nm,19.6s,baz=199,slow=41						
	5.3nm,1.0s						
ULN	**Ulaanbaatar**	**20.16**	**12**		**P**	**20 18 54.1**	**+0.5**
ULN	**Ulaanbaatar**	**20.16**	**12**	*ceP*	**P**	**20 18 54.8**	**+1.3**
ULN				pmax	pmax		
	comp=Z,15nm,1.3s						
ZAK	**Zakamensk**	**22.16**	**4**	*eP*	**P**	**20 19 15.8**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,23nm,1.4s						
TARG	**Taragay, Kyrgy**	**23.01**	**312**		**P**	**20 19 24.9**	**+0.4**
TARG				IAmb	IAmb	20 19 28.4	
	comp=Z,13nm,0.9s						
TARG	**Taragay, Kyrgy**	**23.01**	**312**	P	**P**	**20 19 25.0**	**+0.4**
TARG				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH	**Kashi**	**23.35**	**305**	P	**P**	**20 19 30.5**	**+2.8**
KSH				pP	sP	20 19 34.1	+0.7
KSH				pmax	pmax		
	comp=Z,14nm,1.0s						
MK31	**Makanchi Array**	**23.48**	**327**	*ceP*	**P**	**20 19 28.5**	**-0.3**
MKAR	**Makanchi Array**	**23.48**	**327**	P	**P**	**20 19 29.8**	**+1.0**
	comp=Z,6.9nm,0.9s,baz=132,slow=8.8,SNR=33						
MKAR				PcP	**PcP**	**20 23 13.9**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=163,slow=3.0,SNR=4.4						
MKAR				LR	LR	20 29 46.9	
	comp=Z,71nm,20.2s,baz=116,slow=39						
	comp=Z,6.9nm,0.9s						
MKAR	**Makanchi Array**	**23.48**	**327**		**P**	**20 19 28.6**	**-0.2**
KDJ	**Kajisay**	**23.61**	**312**	P	**P**	**20 19 31.5**	**+1.2**
KDJ				IAmb	IAmb	20 19 34.4	
	comp=Z,14nm,0.9s						
KDJ	**Kajisay**	**23.61**	**312**	P	**P**	**20 19 31.5**	**+1.2**
KDJ				pmax	pmax		
	comp=Z,14nm,0.9s						
MAKZ	**Makanchi**	**23.64**	**327**		**P**	**20 19 32.1**	**+1.7**
MAKZ	**Makanchi**	**23.64**	**327**	P	**P**	**20 19 32.1**	**+1.7**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IPM	**Ipoh**	**23.67**	**179**	P	**P**	**20 19 30.5**	**-0.4**
IPM				IAmb	IAmb	20 19 32.5	
	comp=Z,23nm,1.3s						
NIL	**Nilore**	**24.15**	**290**	P	**P**	**20 19 33.8**	**-1.6**
NIL				IAmb	IAmb	20 19 35.6	
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**24.15**	**290**	P	**P**	**20 19 33.8**	**-1.6**
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**24.51**	**61**	LR	LR	20 31 30.5	
	comp=Z,9μm,19.3s,baz=255,slow=42						
BOOM	**Boomskoye usch**	**24.59**	**312**	P	**P**	**20 19 41.1**	**+1.7**
BOOM				IAmb	IAmb	20 19 43.3	
	comp=Z,15nm,1.0s						
BOOM	**Boomskoye usch**	**24.59**	**312**	P	**P**	**20 19 41.2**	**+1.7**
BOOM				pmax	pmax		
	comp=Z,15nm,1.0s						
FRU1	**Bishkek**	**25.60**	**311**	P	**P**	**20 19 49.1**	**+0.6**
FRU1	**Bishkek**	**25.60**	**311**	P	**P**	**20 19 49.1**	**+0.6**
FRU1				pmax	pmax		
	comp=Z,28nm,0.8s						
AAK	**Ala-Archa**	**25.62**	**311**		**P**	**20 19 49.9**	**+1.1**
AAK				IAmb	IAmb	20 19 53.3	
	comp=Z,13nm,0.9s						
AAK	**Ala-Archa**	**25.62**	**311**	*ceP*	**P**	**20 19 50.0**	**+1.2**
AAK				pmax	pmax		
	comp=Z,27nm,1.7s						
ARSB	**Arslanbob**	**26.13**	**307**		**P**	**20 19 54.1**	**+0.6**
ARSB	**Arslanbob**	**26.13**	**307**	P	**P**	**20 19 54.1**	**+0.6**
DRK	**Karamyk**	**26.40**	**303**	P	**P**	**20 19 56.6**	**+0.6**
DRK	**Karamyk**	**26.40**	**303**	P	**P**	**20 19 56.6**	**+0.6**
DRK				pmax	pmax		
	comp=Z,23nm,1.0s						
GAR	**Garm**	**27.39**	**301**	P	**P**	**20 20 04.6**	**-0.2**
KBL	**Kabul**	**27.71**	**291**		**P**	**20 20 07.5**	**-0.3**
KBL				IAmb	IAmb	20 20 08.8	
	comp=Z,5.1nm,0.8s						
KBL	**Kabul**	**27.71**	**291**	P	**P**	**20 20 07.5**	**-0.3**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	**Kurchatov Arra**	**27.95**	**329**	P	**P**	**20 20 10.2**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=143,slow=9.0,SNR=15						
KURBB				PcP	**PcP**	**20 23 23.7**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=135,slow=1.6,SNR=4.4						
	comp=Z,1.1nm,0.3s						
KURK	**Kurchatov**	**27.97**	**329**		**P**	**20 20 10.2**	**+0.5**
KURK				IAmb	IAmb	20 20 11.7	
	comp=Z,7.5nm,0.8s						
KURK	**Kurchatov**	**27.97**	**329**		**PcP**	**20 23 23.7**	**-0.9**
KURK	**Kurchatov**	**27.97**	**329**	*ceP*	**P**	**20 20 10.7**	**+1.0**
KURK				pmax	pmax		
	comp=Z,19nm,1.7s						
ZAA0	**Zalesovo Araya**	**28.18**	**340**		**P**	**20 20 12.2**	**+0.7**
ZAA0				IAmb	IAmb	20 20 13.6	
	comp=Z,7.3nm,1.0s						
ZALV	**Zalesovo Beam**	**28.18**	**340**	P	**P**	**20 20 12.2**	**+0.7**
	comp=Z,4.3nm,0.9s,baz=146,slow=9.0,SNR=21						
ZALV				PcP	**PcP**	**20 23 24.1**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=123,slow=4.0,SNR=1.8						
ZALV				LR	LR	20 31 36.9	
	comp=Z,52nm,18.2s,baz=148,slow=37						
	comp=Z,4.3nm,0.9s						
ZALV	**Zalesovo Beam**	**28.18**	**340**	*iP*	**P**	**20 20 12.8**	**+1.3**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHGR	**Chuyangaron**	**28.20**	**300**		**P**	**20 20 12.2**	**+0.2**
CHGR	**Chuyangaron**	**28.20**	**300**	P	**P**	**20 20 12.2**	**+0.2**
CHGR				pmax	pmax		
	comp=Z,24nm,1.1s						
KK31	**Karatay Array**	**28.49**	**309**	P	**P**	**20 20 14.6**	**+0.2**
KK31	**Karatay Array**	**28.49**	**309**	P	**P**	**20 20 14.6**	**+0.2**
KK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KKAR	**Karatay Array**	**28.49**	**309**	P	**P**	**20 20 14.9**	**+0.5**
KKAR	**Karatay Array**	**28.49**	**309**	P	**P**	**20 20 14.9**	**+0.5**
MJAR	**Matsushiro Arr**	**32.51**	**66**	LR	LR	20 35 11.6	
	comp=Z,57nm,19.9s,baz=258,slow=38						
BVAR	**Borovoye Array**	**33.36**	**326**	P	**P**	**20 20 58.1**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=128,slow=11,SNR=3.6						
BVAR				LR	LR	20 36 47.1	
	comp=Z,44nm,19.6s,baz=47,slow=40						
	comp=Z,1.7nm,0.8s						
BORK	**Borovoye**	**33.40**	**326**	*ceP*	**P**	**20 20 59.6**	**+2.0**
BORK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ABKAR	**Akbulak array**	**37.50**	**315**	P	**P**	**20 21 33.4**	**+0.6**
AKTO	**Aktyubinsk**	**39.05**	**316**	P	**P**	**20 21 46.2**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=108,slow=10.0,SNR=3.7						
AKTO				PcP	**PcP**	**20 23 56.1**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=177,slow=2.8,SNR=1.9						
	comp=Z,1.0nm,0.5s						
SVE	**Sverdlovsk**	**40.14**	**327**	*eP*	**P**	**20 21 56.6**	**+1.7**
ARTI	**Arti**	**41.06**	**325**	P	**P**	**20 22 02.7**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=111,slow=6.8,SNR=4.9						
	comp=Z,2.5nm,0.6s						
ARTI	**Arti**	**41.06**	**325**	IAmb	IAmb	20 22 03.7	
	comp=Z,5.9nm,1.1s						
ARTI	**Arti**	**41.06**	**325**	*diP*	**P**	**20 22 02.9**	**+0.4**
ARTI						20 23 34.4	
ARTI						20 24 05.2	
ARTI				S	**S**	**20 28 16.0**	**+1.1**
ARTI				SS	**SS**	**20 31 16.5**	**-0.4**
ARTI				pmax	pmax		
	comp=Z,9.0nm,1.9s						
AKT	**Akhty**	**44.80**	**302**	*eP*	**P**	**20 22 32.3**	**-0.9**
AKT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BELG	**Belogornoye**	**45.84**	**317**	P	**P**	**20 22 42.5**	**+1.4**
	comp=Z,17nm,0.9s,baz=139,slow=9.3,SNR=4.4						
	comp=Z,17nm,0.9s						
BELG	**Belogornoye**	**45.84**	**317**	*iP*	**P**	**20 22 42.0**	**+0.9**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIRV	**Kirov**	**46.37**	**326**	*ceP*	**P**	**20 22 47.0**	**+1.9**
GNI	**Garni**	**47.11**	**300**	*iP*	**P**	**20 22 52.0**	**+0.5**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	**Khabaz**	**48.34**	**305**	P	**P**	**20 23 02.5**	**+1.8**
	comp=Z,1.6nm,0.9s,baz=90,slow=6.1,SNR=3.8						
	comp=Z,1.6nm,0.9s						
KIV	**Kislovodsk**	**48.48**	**305**	*eP*	**P**	**20 23 03.0**	**+1.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SHA1	**Shidzhatmaz**	**48.51**	**305**	*iP*	**P**	**20 23 03.5**	**+1.1**
GURO	**Guroymak-BITLI**	**49.34**	**298**		**P**	**20 23 10.2**	**+1.4**
MARD	**Mardin**	**50.49**	**297**	P	**P**	**20 23 17.5**	**0.0**
MARD				IAmb	IAmb	20 23 19.2	
	comp=Z,4.9nm,0.8s						
KLMR	**Klimovskoe**	**51.78**	**327**	*eP*	**P**	**20 23 25.3**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
OBN	**Obninsk**	**52.67**	**319**	*eP*	**P**	**20 23 35.1**	**+1.8**
OBN				*e*		20 24 43.6	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MMAI	**Mount Meron Ar**	**55.63**	**292**	LR	LR	20 50 04.5	
	comp=Z,31nm,20.1s,baz=70,slow=39						
BRTR	**Keskin Array B**	**55.63**	**301**	P	**P**	**20 23 55.0**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=90,slow=6.2,SNR=3.2						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**57.22**	**314**	P	**P**	**20 24 06.2**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=82,slow=6.0,SNR=5.8						
	comp=Z,2.9nm,0.8s						
AKBB	**Malin Array Si**	**57.22**	**314**	*ceP*	**P**	**20 24 06.0**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WB0	**Warramunga Arr**	**57.78**	**142**		**P**	**20 24 09.7**	**-0.9**
WB0				IAmb	IAmb	20 24 12.4	
	comp=Z,8.6nm,1.2s						
WRAB	**Tennant Creek**	**57.90**	**142**	P	**P**	**20 24 10.6**	**-0.8**
WRAB				IAmb	IAmb	20 24 14.0	
	comp=Z,4.4nm,0.8s						
WRAB	**Tennant Creek**	**57.90**	**142**	*ceP*	**P**	**20 24 13.7**	**+2.3**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRA	**Warramunga Arr**	**57.90**	**142**	P	**P**	**20 24 11.0**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=330,slow=7.7,SNR=19						
	comp=Z,3.2nm,0.7s						
WR8	**Warramunga Arr**	**57.99**	**142**	IAmb	IAmb	20 24 17.4	
	comp=Z,6.6nm,1.1s						
MLR	**Muntele Rosu**	**60.16**	**309**		**P**	**20 24 27.3**	**+0.2**
MLR				IAmb	IAmb	20 24 29.3	
	comp=Z,7.1nm,1.0s						
MLR	**Muntele Rosu**	**60.16**	**309**	P	**P**	**20 24 27.3**	**+0.2**
MLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BURAR	**Bucovina Array**	**60.26**	**311**	P	**P**	**20 24 25.8**	**-1.9**
ASAR	**Alice Springs**	**60.73**	**145**	P	**P**	**20 24 30.6**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=332,slow=6.8,SNR=14						
	comp=Z,1.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**61.38**	**346**	LR	LR	20 57 28.4	
	comp=Z,4.4nm,19.2s,baz=313,slow=42						
NOA	**NORSAR Array B**	**65.47**	**328**	LR	LR	20 55 01.6	
	comp=Z,39nm,18.9s,baz=285,slow=37						
CLL	**Collm**	**67.14**	**317**	*ep*	**P**	**20 25 15.0**	**+2.2**

REMY					Sg		Sg	20 26 12.9	+0.8
MFERR	**Prayon, Val Fe**	**0.11**	**37**	⇓Pg		Pg		20 26 10.7	-0.1
MFERR					Sg		Sg	20 26 12.2	-0.1
SEMOS	**Emosson Stauma**	**0.21**	**344**	⇑Pg		Pg		20 26 12.4	-0.3
SEMOS					Sg		Sg	20 26 15.0	-0.4
SMAO	**Martigny, Rue**	**0.24**	**10**	Pg		Pg		20 26 13.0	-0.1
OGSI	**Sixt**	**0.27**	**318**	⇑Pg		Pg		20 26 13.3	-0.5
OGSI					Sg		Sg	20 26 16.8	-0.6
OGSI	**Sixt**	**0.27**	**318**	Pg		Pg		20 26 13.3	-0.5
OGSI					Sg		Sg	20 26 16.9	-0.5
SALAN	**Lac Salanfe**	**0.28**	**354**	⇑Pg		Pg		20 26 13.7	-0.3
SALAN					Sg		Sg	20 26 17.3	-0.5
FULLY	**Reservoir Maze**	**0.30**	**16**	⇑Pg		Pg		20 26 14.2	-0.2
FULLY					Sg		Sg	20 26 18.0	-0.4
RSL	**Roselend**	**0.33**	**237**	⇓Pg		Pg		20 26 14.6	-0.2
RSL					Sg		Sg	20 26 18.6	-0.4
RSL	**Roselend**	**0.33**	**237**	Pg		Pg		20 26 14.6	-0.2
RSL					Sg		Sg	20 26 18.6	-0.4
LAVEY	**Lavey les Bain**	**0.34**	**1**	Pg		Pg		20 26 14.6	-0.3
DIX	**Grande Dixence**	**0.35**	**51**	⇑Pg		Pg		20 26 15.2	-0.1
DIX					Sg		Sg	20 26 19.8	-0.1
DIX	**Grande Dixence**	**0.35**	**51**	P		Pg		20 26 15.2	-0.1
DIX					S		Sg	20 26 19.9	0.0
DIX	**Grande Dixence**	**0.35**	**51**	P		Pg		20 26 15.2	-0.1
DIX					S		Sg	20 26 20.2	+0.3
DIX	**Grande Dixence**	**0.35**	**51**	Pg		Pg		20 26 15.2	-0.1
DIX					Sg		Sg	20 26 19.7	-0.2
ILLEZ	**Chalet Vouargn**	**0.36**	**351**	⇑Pg		Pg		20 26 15.1	-0.4
ILLEZ					Sg		Sg	20 26 19.8	-0.4
RAW4	**Former Reservo**	**0.36**	**18**	⇑Pg		Pg		20 26 15.3	-0.2
GRYON	**Gryon**	**0.39**	**10**	⇑Pg		Pg		20 26 15.8	-0.3
GRYON					Sg		Sg	20 26 20.8	-0.5
LPL	**La Plagne**	**0.40**	**210**	*e*Pg		Pg		20 26 16.2	-0.5
LPL				*e*Sg		Sg		20 26 20.3	-1.2
	comp=E,6.3nm,0.4s								
LPG	**La Plagne**	**0.41**	**207**	*e*Pg		Pg		20 26 16.3	-0.1
LPG				*e*Sg		Sg		20 26 20.8	-1.0
	comp=E,4.2nm,0.2s								
LSD	**Lago del Serru**	**0.41**	**168**	⇓Pg		Pg		20 26 16.4	0.0
LSD	**Lago del Serru**	**0.41**	**168**	P		Pg		20 26 16.5	0.0
LSD					S		Sg	20 26 21.7	-0.2
LSD	**Lago del Serru**	**0.41**	**168**	⇑P		Pg		20 26 16.5	0.0
LSD					S		Sg	20 26 22.1	+0.3
LSD					AML		AML		
	comp=E,14μm,0.2s								
LSD					AML		AML		
	comp=N,12μm,0.2s								
LSD	**Lago del Serru**	**0.41**	**168**	Pg		Pg		20 26 16.4	-0.1
LSD					Sg		Sg	20 26 22.1	+0.3
CIRO	**Champorcher**	**0.47**	**124**	⇓Pg		Pg		20 26 17.4	0.0
CIRO					Sg		Sg	20 26 23.6	0.0
CIRO	**Champorcher**	**0.47**	**124**	P		Pg		20 26 17.3	-0.2
CIRO					S		Sg	20 26 23.5	-0.1
CIRO	**Champorcher**	**0.47**	**124**	⇑P		Pg		20 26 17.5	0.0
CIRO					S		Sg	20 26 23.6	0.0
CIRO					AML		AML		
	comp=E,6μm,1.2s								
CIRO					AML		AML		
	comp=N,34μm,1.8s								
CIRO	**Champorcher**	**0.47**	**124**	Pg		Pg		20 26 17.5	0.0
CIRO					Sg		Sg	20 26 23.5	0.0
AIGLE	**Aigle**	**0.48**	**355**	Pg		Pg		20 26 17.3	-0.4
AIGLE					Sg		Sg	20 26 23.6	-0.3
RAW2	**Sanetsch, VS**	**0.50**	**25**	⇑Pg		Pg		20 26 17.9	-0.1
A173A	**Vacheresse, 74**	**0.52**	**333**	Pg		Pg		20 26 18.4	-0.1
SENIN	**Lac Senin/Sane**	**0.54**	**21**	⇑Pg		Pg		20 26 18.4	-0.4
SENIN					Sg		Sg	20 26 25.5	-0.3
SENIN	**Lac Senin/Sane**	**0.54**	**21**	P		Pg		20 26 18.4	-0.4
SENIN					S		Sg	20 26 25.6	-0.2
SATI	**Passo dei Sala**	**0.59**	**89**	Pg		Pg		20 26 20.1	+0.1
SATI					Sg		Sg	20 26 27.8	+0.2
TRAV	**Traversella**	**0.62**	**124**	P		Pg		20 26 20.2	-0.2
TRAV	**Traversella**	**0.62**	**124**	Pg		Pg		20 26 20.1	-0.2
RAW1	**Lenk, BE**	**0.63**	**28**	⇓Pg		Pg		20 26 20.2	-0.4
RAW1					Sg		Sg	20 26 28.3	-0.4
LKBD2	**Leukerbad 2**	**0.67**	**40**	Pg		Pg		20 26 21.3	-0.1
RSP	**Reno Superiore**	**0.74**	**166**	Pg		Pg		20 26 22.9	+0.3
GIMEL	**St. Georges /**	**0.85**	**322**	P		Pg		20 26 24.5	-0.3
GIMEL	**St. Georges /**	**0.85**	**322**	Pg		Pg		20 26 24.7	-0.1
GIMEL					Sn		Sn	20 26 40.7	+0.3
TORNY	**Torny/Romont**	**0.91**	**357**	Pg		Pg		20 26 26.2	+0.2
TORNY					Pg		Pn	20 26 28.3	+0.1
TORNY					Sn		Sn	20 26 42.3	+0.5
FIESA	**Fiescheralp**	**0.95**	**53**	Pg		Pg		20 26 26.6	-0.2
RRL	**Rocca Remolon**	**0.96**	**190**	Pg		Pg		20 26 26.6	-0.2
OGSM	**Saint Maurice**	**0.96**	**255**	Pg		Pg		20 26 26.9	0.0
OGSM					Sg		Sg	20 26 39.7	+0.4
CABF	**La Chapelle**	**0.99**	**320**	*e*Pg		Pg		20 26 26.6	-0.8
CABF	**La Chapelle**	**0.99**	**320**	*e*P		Pb		20 26 28.7	+0.4
CABF				*e*Sg		Sg		20 26 39.3	-0.9
	comp=N,4.0nm,0.3s								
OG35	**Corcelles**	**1.02**	**281**	Pg		Pg		20 26 28.3	+0.2
OG35					Sn		Sn	20 26 45.0	+0.4
BRANT	**Les Verrieres**	**1.14**	**341**	Pg		Pg		20 26 30.4	+0.1
BRANT					Sn		Sn	20 26 47.9	+0.3
MBDF	**Montbardon**	**1.15**	**189**	*e*Pg		Pg		20 26 29.5	-1.0
MBDF				*e*Sg		Sg		20 26 44.9	-0.5
	comp=N,1.1nm,0.2s								
RIVEL	**MONT RIVEL**	**1.17**	**320**	Pn		Pn		20 26 32.1	+0.3
ORIF	**Oris-en-Rattie**	**1.24**	**221**	*e*Sg		Sg		20 26 46.8	-1.5
	comp=N,2.7nm,0.2s								
A215A	**Commelle, 3812**	**1.32**	**252**	Pg		Pb		20 26 34.8	+0.9
A215A					Sg		Sn	20 26 52.7	+0.7
PZZ	**Stroppo**	**1.36**	**177**	Pn		Pn		20 26 34.0	-0.4
CHMF	**Charmoille**	**1.41**	**350**	Pn		Pn		20 26 34.6	-0.5
CHMF	**Charmoille**	**1.41**	**350**	Pn		Pn		20 26 34.3	-0.8
CHMF					Sn		Sb	20 26 53.9	+0.1
BOUC	**Bouclans**	**1.48**	**339**	Pg		Pg		20 26 36.9	0.0
BOUC					Sn		Sg	20 26 56.3	+0.3
BOURR	**Bourrignon**	**1.54**	**5**	Pg		Pg		20 26 37.8	-0.1
VIVF	**Saint-Julien-l**	**1.94**	**239**	*e*Pg		Pn		20 26 43.1	+0.8
VIVF				*e*Sg		Sb		20 27 08.4	-0.5
	comp=N,2.5nm,0.2s								
HINF	**Hinteralfeld**	**1.96**	**357**	*e*Pn		Pn		20 26 39.9	-2.7
HINF	**Hinteralfeld**	**1.96**	**357**	*e*Pg		Pb		20 26 44.0	-0.8
HINF				*e*Sg		Sb		20 27 09.5	0.0
	comp=N,1.2nm,0.3s								
HAU	**Haudompre**	**2.19**	**348**	*e*Pn		Pn		20 26 42.7	-3.1
HAU	**Haudompre**	**2.19**	**348**	*e*Pg		Pb		20 26 48.1	-0.6
HAU				*e*Sn		Sn		20 27 08.5	-4.9
HAU				*e*Sg		Sb		20 27 16.2	-0.1
	comp=N,0.7nm,0.2s								
SMF	**Signal de Mont**	**2.34**	**291**	*e*Sg		Sb		20 27 20.1	-0.4
	comp=N,0.9nm,0.3s								
CDF	**Champ du Feu**	**2.56**	**4**	*e*Pn		Pn		20 26 48.3	-2.5
CDF	**Champ du Feu**	**2.56**	**4**	*e*Pg		Pb		20 26 55.0	0.0
CDF				*e*Sn		Sn		20 27 18.3	-4.2
CDF				*e*Sg		Sb		20 27 28.0	+1.2
	comp=N,0.7nm,0.2s								
LOR	**Lormes**	**2.59**	**304**	*e*Pn		Pn		20 26 48.1	-3.2
LOR	**Lormes**	**2.59**	**304**	*e*Pg		Pb		20 26 55.7	+0.1
LOR				*e*Sn		Sn		20 27 18.9	-4.4
LOR				*e*Sg		Sb		20 27 28.6	+0.8
	comp=N,0.9nm,0.3s								
AVF	**Avril sur Loir**	**2.70**	**291**	*e*Sg		Sb		20 27 31.6	+0.7
	comp=N,0.7nm,0.3s								
TCF	**Toulx Ste Croi**	**3.37**	**279**	*e*Sg		Sb		20 27 51.9	+1.7
	comp=N,0.4nm,0.2s								

IDC 18 20:30:10.4±2.5, 7°08N×94°99E, h0km, mb3.7/6, mbtmp3.7/6, MS2.7/3, Error ellipse: s-maj=141.2km s-min=22.0km az=56.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.79**	**137**	LR	LR	20 34 18.1	
	comp=Z,51nm,20.6s,baz=320,slow=42						
CMAR	**Chiang Mai Arr**	**11.95**	**18**	LR	LR	20 37 21.4	
	comp=Z,27nm,18.1s,baz=5.0,slow=36						
PALK	**Pallekele**	**14.17**	**272**	LR	LR	20 38 23.3	
	comp=Z,50nm,18.3s,baz=82,slow=35						
H08S3	**Diego Garcia H**	**26.78**	**237**	T	T	21 02 25.5	
	baz=56,slow=76,SNR=24						
H08S2	**Diego Garcia H**	**26.78**	**237**	T	T	21 02 29.9	
	baz=56,slow=76,SNR=14						
H08S1	**Diego Garcia H**	**26.79**	**237**	T	T	21 02 34.5	
	baz=56,slow=76,SNR=7.6						
MKAR	**Makanchi Array**	**41.04**	**347**	P	P	20 37 55.6	0.0
	1.0nm,0.7s,baz=164,slow=7.7,SNR=8.1						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**45.52**	**345**	P	P	20 38 31.9	+0.3
	1.1nm,0.8s,baz=171,slow=7.1,SNR=3.4						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**47.12**	**126**	P	P	20 38 44.4	-0.3
	0.3nm,0.7s,baz=306,slow=8.3,SNR=2.8						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**47.45**	**352**	P	P	20 38 46.2	-0.5
	1.1nm,0.7s,baz=176,slow=8.1,SNR=6.1						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**48.77**	**130**	P	P	20 38 57.5	0.0
	0.5nm,0.8s,baz=302,slow=8.3,SNR=5.8						
	0.5nm,0.8s						
H04N2	**CROZET ISLANDS**	**65.48**	**212**	T	T	21 51 28.2	
	baz=47,slow=75,SNR=4.4						
H04N1	**CROZET ISLANDS**	**65.50**	**212**	T	T	21 51 43.1	
	baz=47,slow=75,SNR=4.3						
H04N3	**CROZET ISLANDS**	**65.50**	**212**	T	T	21 51 42.4	
	baz=47,slow=75,SNR=4.2						
FINES	**FINESS Array B**	**73.80**	**332**	P	P	20 41 46.5	0.0
	0.6nm,0.4s,baz=97,slow=5.7,SNR=6.3						
	0.6nm,0.4s						

IDC 18 20:35:14.5±8.5, 36°84N×70°86E, h217km±54km, mb3.4/3, mbtmp3.8/8, Error ellipse: s-maj=86.4km s-min=42.6km az=171.0
NNC 18 20:35:14.1±3.7, 37°07N×70°85E, h0km, mb3.9, mpv3.9, Error ellipse: s-maj=30.0km s-min=23.8km az=155.0
ISC 18 20:35:13.2±2.2, 36°8N±0°2×70°8E±0°1, h200km, n19, σ0s91/21, mb3.6/3, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**5.37**	**354**	Pg	**Pn**	**20 36 34.0**	**+1.8**
	14nm,0.2s						
IUG				Lg	Lg	20 37 36.1	
	25nm,0.7s						
UCH	**Uchtor**	**6.15**	**27**	P	**Pn**	**20 36 43.1**	**+0.4**
	SNR=28						
MRKS	**Merke**	**6.24**	**17**	Pg	**Pn**	**20 36 43.8**	**+0.4**
	9.2nm,0.5s						
MRKS				Lg	Lg	20 37 54.2	
	12nm,0.5s						
KK31	**Karatay Array**	**6.30**	**358**	⇓P	**Pn**	**20 36 45.1**	**+0.9**
	1.1nm,0.2s,baz=176,slow=12,SNR=66						
KK31				⇑S	**Sn**	**20 37 55.1**	**-1.2**
	11nm,0.6s,baz=175,slow=21						
EKS2	**Erkin-Say**	**6.30**	**21**	P	**Pn**	**20 36 45.2**	**+0.9**
	SNR=6.5						
AAK	**Ala-Archa**	**6.50**	**25**	P	**Pn**	**20 36 47.6**	**+0.6**
	9.6nm,0.3s,baz=202,slow=16,SNR=22						
AAK				S	**Sn**	**20 38 01.2**	**-0.2**
	2.4nm,0.5s,baz=294,slow=21,SNR=1.8						
AAK	**Ala-Archa**	**6.50**	**25**	P	**Pn**	**20 36 47.8**	**+0.8**
	SNR=10						
AAK	**Ala-Archa**	**6.50**	**25**	⇓P	**Pn**	**20 36 47.4**	**+0.4**
	2.1nm,0.4s						
AAK				⇑S	**Sn**	**20 38 00.6**	**-0.8**
	1.2nm,0.6s						
KBK	**Karagaybulak**	**6.68**	**28**	P	**Pn**	**20 36 50.0**	**+0.7**
	SNR=6.1						
USP	**Ospenovka**	**7.07**	**23**	P	**Pn**	**20 36 54.8**	**+0.5**
	SNR=6.0						
TKM2	**Tokmak 2**	**7.16**	**30**	P	**Pn**	**20 36 55.7**	**+0.1**
	SNR=7.8						
MKAR	**Makanchi Array**	**13.17**	**37**	P	**Pn**	**20 38 13.7**	**+1.1**
	0.5nm,0.7s,baz=219,slow=13,SNR=2.2						
AB31	**Akbulak array**	**14.72**	**331**	P	P	20 38 38.9	+6.1
	0.4nm,0.5s,baz=142,slow=12,SNR=11						
BVAR	**Borovoye Array**	**16.23**	**359**	P	**Pn**	**20 38 51.1**	**+1.2**
	0.3nm,0.3s,baz=174,slow=12,SNR=1.4						
AKTO	**Aktyubinsk**	**16.42**	**330**	P	**P**	**20 38 52.6**	**+1.1**
	1.2nm,0.4s,baz=144,slow=11,SNR=5.5						
ZALV	**Zalesovo Beam**	**19.73**	**25**	P	**P**	**20 39 26.5**	**-0.8**
	0.7nm,0.3s,baz=218,slow=9.0,SNR=4.6						
FINES	**FINESS Array B**	**37.12**	**326**	P	**P**	**20 42 03.9**	**-0.3**
	1.0nm,0.6s,baz=111,slow=7.4,SNR=4.6						
	1.0nm,0.6s						
ARCES	**ARCESS Array B**	**40.79**	**338**	P	**P**	**20 42 34.1**	**-0.3**
	1.7nm,0.8s,baz=111,slow=7.5,SNR=9.7						
	1.7nm,0.8s						
HFS	**Hagfors**	**42.71**	**322**	P	**P**	**20 42 49.0**	**-1.1**
	2.2nm,0.8s,baz=86,slow=6.4,SNR=2.3						
	2.2nm,0.8s						

NNC 18 20:40:36.6±2.2, 37°04N×69°87E, h0km, mb4.1, mpv4.2, 1C-1D, Error ellipse: s-maj=20.6km s-min=15.7km az=127.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**5.10**	**1**	Pg	Pn	20 41 56.2	+1.7
	14nm,0.2s						
IUG				Lg	Lg	20 42 58.6	
	14nm,0.3s						
KK31	**Karatay Array**	**6.08**	**4**	P	Pn	20 42 08.0	+0.3
	7.1nm,0.4s,baz=184,slow=13,SNR=116						
KK31				⇑S	Sn	20 43 19.2	+1.2
	1.8nm,0.3s,baz=185,slow=24						
MRKS	**Merke**	**6.26**	**23**	Pg	Pn	20 42 06.3	-4.0
	3.9nm,0.2s						
MRKS				Lg	Lg	20 43 16.5	
	9.5nm,0.4s						
AB31	**Akbulak array**	**14.18**	**333**	⇓P	Pn	20 43 58.0	-0.6
	0.3nm,0.5s,baz=147,slow=12,SNR=11						

JMA 18 21:04:45.5±0.2, 24°1N±0°8×123°7E±0°5, h15km±1km, MV3.7/9, NEAR ISHIGAKIJIMA ISLAND
JMA Felt I J1 at NEAR ISHIGAKIJIMA ISLAND.
ISC 18 21:04:45.6±1.0, 24°06N±0°06×123°68E±0°02, h13km±7km, n23, σ0s85/30, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.11**	**94**	*e*P	**Pg**	**21 04 48.7**	**0.0**
HATJ				*e*S	**Sg**	**21 04 51.3**	**+0.4**
IRIF	**Iriomote-Funau**	**0.27**	**9**	*i* P	**Pg**	**21 04 51.6**	**+0.2**
IRIF				S	**Sg**	**21 04 55.9**	**+0.7**
IRIF	**Iriomote-Funau**	**0.27**	**9**	A	A	21 04 51.6	
	comp=N,18nm,0.4s,comp=E,31nm,0.3s						
JKRS	**Kuro-shima**	**0.34**	**60**	*i* P	**Pg**	**21 04 53.0**	**+0.4**
JKRS				*e*S	**Sb**	**21 04 58.5**	**-0.5**
JIJ	**Ishigaki jima**	**0.52**	**55**	*i* P	**Pg**	**21 04 55.4**	**-0.3**
JIJ				S	**Sg**	**21 05 02.3**	**-0.3**
YOJ	**Yonaguni jima**	**0.73**	**303**	P	**Pb**	**21 05 00.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.73**	**303**	S	**Sg**	**21 05 09.7**	**+0.3**
YOJ	**Yonaguni jima**	**0.73**	**303**	*e*P	**Pg**	**21 04 59.9**	**+0.1**
YOJ				*e*S	**Sg**	**21 05 09.3**	**-0.1**
JISG	**Ishigakijimahi**	**0.77**	**48**	P	**Pg**	**21 04 59.9**	**-0.7**
JISG				*e*S	**Sg**	**21 05 10.7**	**-0.2**
JYNG	**Yonagunijimaku**	**0.78**	**300**	*e*P	**Pg**	**21 05 00.6**	**-0.1**
JYNG				*e*S	**Sg**	**21 05 10.8**	**0.0**
JTJ	**Tarama**	**1.09**	**58**	*i* P	**Pb**	**21 05 05.8**	**-0.5**
JTJ				*e*S	**Sg**	**21 05 21.1**	**+0.2**
JMJ	**Miyako jima 2**	**1.65**	**63**	P	**Pb**	**21 05 15.3**	**-0.5**
JMJ	**Miyako jima 2**	**1.65**	**63**	S	**Sg**	**21 05 39.0**	**+0.3**
NACB	**Ninganchiao**	**1.91**	**274**	P	**Pn**	**21 05 18.3**	**+0.4**
YHNB	**Yeheng**	**2.19**	**286**	P	**Pb**	**21 05 23.3**	**-1.8**
TATO	**Taipei**	**2.20**	**295**	P	**Pb**	**21 05 23.6**	**-1.6**
TATO	**Taipei**	**2.20**	**295**	S	**Sb**	**21 05 52.4**	**+0.1**
YULB	**Yu-li**	**2.29**	**253**	P	**Pn**	**21 05 22.6**	**-0.5**
SSLB	**Suanglung**	**2.51**	**264**	P	**Pn**	**21 05 27.4**	**+1.2**
SSLB	**Suanglung**	**2.51**	**264**	S	**Sb**	**21 05 59.8**	**-1.7**
TWGBT	**Beinan**	**2.69**	**243**	P	**Pn**	**21 05 29.6**	**+1.0**
TPUB	**Ta-pu**	**2.90**	**255**	P	**Pn**	**21 05 32.0**	**+0.5**
TPUB	**Ta-pu**	**2.90**	**255**	S	**Sn**	**21 06 08.4**	**+2.1**

GCG 18 21:05:51.4±0.6, 15°65N×91°06W, h13km±17km, MD3.6, ML3.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUIS	**Sacapulas**	**0.36**	**186**	*i* P	Pb	21 05 59.4	-0.4
QUIS				*e*S	Sb	21 06 05.3	-0.1
QUIS				IAML		21 06 08.6	
	comp=E,794nm,0.4s						
APG	**El Apazote**	**0.86**	**138**	*i* P	Pg	21 06 07.8	-0.3
PETF	**Flores**	**1.70**	**42**	*i* P	Pn	21 06 20.4	-0.3
PETF				*e*S	Sn	21 06 42.6	+0.3
PETF				IAML		21 06 44.6	
	comp=N,344nm,0.4s						
MTO3	**Montecristo**	**2.06**	**127**	*e*P	Pb	21 06 27.8	-0.9

NEIC 18 21:15:02.1±0.8, 40°05N±0°01×111°74W±0°01, h5km±1km, Error ellipse: s-maj=2.7km s-min=1.8km az=204.0
UUSS 18 21:15:02.2±0.9, 40°04N±0°01×111°74W±0°01, h7km±4km, ML2.4/16, ML2.4/50(NEIC), Error ellipse: s-maj=2.3km s-min=1.2km az=205.0, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMUT	**West Mountain**	**0.08**	**296**		Pg	21 15 04.6	+0.1
WMUT	**West Mountain**	**0.08**	**296**		Sg	21 15 06.1	+0.1
MPU	**Maple Canyon**	**0.09**	**108**		Pg	21 15 04.8	+0.2
MPU					Sg	21 15 06.3	+0.2
MPU				IAML		21 15 07.7	
	comp=E,2μm,0.2s						
SUU	**Santaquin Cany**	**0.16**	**194**		Pg	21 15 06.0	+0.4
NLU	**North Lily Min**	**0.27**	**251**	Pg	Pg	21 15 08.0	+0.3
DCU	**Deer Creek Res**	**0.41**	**24**		Pg	21 15 10.3	+0.1
WTU	**Western Traver**	**0.44**	**339**		Pg	21 15 11.3	+0.4
CWU	**Camp Williams**	**0.49**	**326**		Pg	21 15 12.0	+0.3
DAU	**Daniels Canyon**	**0.52**	**45**		Pg	21 15 13.0	+0.6
GMU	**Granite Mounta**	**0.53**	**358**		Pg	21 15 12.4	-0.2
LEVU	**Levan**	**0.54**	**186**		Pg	21 15 12.8	+0.1
CTU	**Camp Tracy**	**0.65**	**359**	Pg	Pg	21 15 14.6	-0.2
NOQ	**North Oquirrh**	**0.68**	**335**		Pg	21 15 15.5	+0.2
RBU	**Red Butte Cany**	**0.74**	**356**		Pg	21 15 16.3	-0.2
FLU	**Fool Peak**	**0.74**	**207**		Pg	21 15 16.7	+0.1
HTU	**Hoyt Peak**	**0.75**	**32**		Pb	21 15 17.3	-0.4
DUG	**Dugway, Tooele**	**0.84**	**281**	Pg	Pg	21 15 18.2	-0.1
TMUT	**Trail Mountain**	**0.85**	**151**	Pg	Pg	21 15 18.8	+0.2
TMUT				IAML		21 15 32.9	
	comp=E,135nm,0.5s						
TMUT				IAML		21 15 33.9	
	comp=N,133nm,0.5s						
BSUT	**Blindstream Ca**	**0.90**	**56**	Pg	Pg	21 15 19.7	+0.2
BSUT				IAML		21 15 36.8	
	comp=E,87nm,0.4s						
P17A	**Butcher Ranch,**	**0.96**	**126**	Pg	Pg	21 15 20.1	-0.6
P17A				IAML		21 15 33.6	
	comp=N,100nm,0.5s						
NAIU	**Northern Antel**	**1.04**	**339**		Pg	21 15 21.8	-0.5
TCUT	**Toone Canyon**	**1.10**	**13**	Pg	Pg	21 15 23.2	-0.3
Q16A	**Castle Valley**	**1.21**	**158**	Pg	Pg	21 15 24.9	-0.5
Q16A				IAML		21 15 41.5	
	comp=N,53nm,0.5s						
Q16A				IAML		21 15 45.2	
	comp=E,59nm,0.9s						
P18A	**Preston Nutter**	**1.22**	**109**	Pg	Pg	21 15 25.4	-0.3
FSU	**Fish Springs**	**1.31**	**256**		Pn	21 15 26.6	-0.5
SRU	**San Rafael Swe**	**1.32**	**134**		Pn	21 15 27.0	-0.3
SRU				IAML		21 15 49.0	
	comp=N,53nm,0.6s						
SRU				IAML		21 15 53.6	
	comp=E,75nm,0.9s						
EPU	**East Promontor**	**1.44**	**340**		Pn	21 15 28.2	-0.6
TCRU	**Three Creeks R**	**1.53**	**201**		Pn	21 15 30.2	0.0
TCRU				IAML		21 15 53.9	
	comp=N,76nm,0.4s						
HWUT	**Hardware Ranch**	**1.57**	**5**		Pn	21 15 30.2	-0.5
HWUT				IAML		21 15 38.0	
	comp=N,37nm,0.7s						
LTU	**Little Mountai**	**1.59**	**346**		Pn	21 15 30.7	-0.3
RDMU	**Red Mountain**	**1.74**	**72**	Pn	Pn	21 15 33.3	+0.2
RDMU				IAML		21 16 01.6	
	comp=N,45nm,0.9s						
RDMU				IAML		21 16 01.7	
	comp=E,52nm,0.6s						
HVU	**Hansel Valley**	**1.90**	**336**	Pn	Pn	21 15 34.6	-0.7
HVU				IAML		21 16 07.2	
	comp=N,25nm,0.6s						
HVU				IAML		21 16 13.9	
	comp=E,24nm,0.6s						
AHID	**Auburn Hatcher**	**2.76**	**10**	Pn	Pn	21 15 47.2	+0.1
CCUT	**Cedar City**	**2.79**	**207**		Pg	21 15 55.4	-0.4
PV13	**Radium Mtn., P**	**2.95**	**129**	Pn	Pn	21 15 49.6	-0.1
PD31	**Pinedale Array**	**3.18**	**30**	Pn	Pn	21 15 51.7	-1.2
LOHW	**Long Hollow**	**3.67**	**13**	Pn	Pn	21 16 00.3	+0.8
LOHW				IAML		21 17 14.8	
	comp=E,9.0nm,4.7s						
LOHW				IAML		21 17 50.7	
	comp=E,9.7nm,3.8s						
MOOW	**Moose Ponds**	**3.78**	**11**	Pn	Pn	21 16 01.4	+0.3
MOOW				IAML		21 16 28.6	
	comp=E,5.4nm,4.9s						
MOOW				IAML		21

PV16	**Nyswonger Mesa**	**2.80**	**127**	Pn	Pn	21	19 34.1	-1.5
PV11	**David Mesa, Pa**	**2.83**	**127**	Pn	Pn	21	19 34.7	-1.3
PV03	**Paradox Valley**	**2.88**	**127**	Pn	Pn	21	19 35.6	-1.0
LKWY	**Lake**	**4.63**	**12**	Pn	Pn	21	19 59.1	-1.7

SDD ***18*** *21:32:21.3±2.4, 19.˙39N×68.˙17W, h22km±267km, MD3.4, ML1.8, MW2.1*

RSPR ***18*** *21:32:21.4, 19.˙65N×68.˙14W, h37km±18km, MD2.8/4*

ISC 18 21:32:22.1±2.3, 19.˙4N±0.˙2×68.˙20W±0.˙05, h21km, n13, σ0°60/16, 11C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.86**	**191**	⇑*e*P		**Sb**	**21 32 49.0**	**-0.3**
PCDR				IAML			21 32 52.0	
	comp=N,54nm,2.3s							
MIDR	**Miches**	**0.88**	**245**	⇑*e*P		**Pb**	**21 32 38.6**	**-0.1**
MIDR	**Miches**	**0.88**	**245**	*e*S		**Sn**	**21 32 52.7**	**+1.2**
HATOM	**Hato Mayor del**	**1.25**	**243**	⇑*e*P		**Pn**	**21 32 44.4**	**0.0**
HATOM				⇑*e*Sg		**Sn**	**21 33 00.0**	**-0.6**
HATOM				IAML			21 33 41.4	
	comp=N,8.9nm,4.8s							
LSP	**Las Mesas**	**1.58**	**138**	⇑*e*P		**Pn**	**21 32 48.9**	**-0.1**
LSP	**Las Mesas**	**1.58**	**138**	*e*S		**Sn**	**21 33 09.4**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.70**	**142**	⇑*e*Pg		**Pn**	**21 32 50.4**	**-0.1**
CRPR				⇑*e*Sg		**Sb**	**21 33 14.1**	**+0.6**
CRPR				IAML			21 33 50.0	
	comp=N,17nm,1.2s							
CRPR	**Cabo Rojo, PR**	**1.70**	**142**	⇑*e*P		**Pn**	**21 32 50.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.70**	**142**	*e*S		**Sn**	**21 33 12.7**	**+1.1**
AOPR	**Arecibo Observ**	**1.70**	**126**	⇑*e*Sg		**Sb**	**21 33 13.3**	**-0.4**
AOPR				IAML			21 33 31.6	
	comp=N,18nm,4.8s							
MLPR	**Magueyes Islan**	**1.77**	**141**	⇑*e*Pg		**Pn**	**21 32 51.4**	**-0.1**
MLPR				*e*Sg		**Sn**	**21 33 12.6**	**-0.7**
MLPR				IAML			21 33 39.0	
	comp=N,4.6nm,1.8s							
MLPR	**Magueyes Islan**	**1.77**	**141**	⇑*e*P		**Pn**	**21 32 51.4**	**-0.1**
MLPR	**Magueyes Islan**	**1.77**	**141**	*e*S		**Sb**	**21 33 15.1**	**-0.4**

NNC 18 21:33:32.8±2.8, 38.˙02N×71.˙79E, h0km, mb3.9, mpv3.6, 4C, Error ellipse: s-maj=22.1km s-min=16.4km az=165.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**4.34**	**342**	Pg		Pn	21 34 41.5	+1.4
	4.4nm,0.2s							
IUG				Lg		Lg	21 35 35.4	
	34nm,0.3s							
MRKS	**Merke**	**4.85**	**13**	Pg		Pn	21 34 47.2	+0.1
	5.2nm,0.3s							
MRKS				Lg		Lg	21 35 45.4	
	28nm,0.3s							
AAK	**Ala-Archa**	**5.06**	**23**	⇑P		Pn	21 34 49.6	-0.3
	3.0nm,0.6s							
AAK				⇑S		Sn	21 35 50.7	+1.5
	3.3nm,0.5s							
KK31	**Karatay Array**	**5.17**	**350**	⇑P		Pn	21 34 52.0	+0.5
	1.9nm,0.6s,baz=166,slow=12,SNR=5.9							
KK31				⇑S		Sn	21 35 52.6	+0.8
	3.4nm,0.3s,baz=167,slow=23							
AB31	**Akbulak array**	**14.11**	**327**	P		Pn	21 36 52.7	-1.1
	0.3nm,0.4s,baz=138,slow=13,SNR=26							

IDC ***18*** *21:40:07.5±0.4, 0.˙60S×134.˙01E, h0km, mb4.7/21, mbtmp4.7/27, ML4.5/5, MS3.9/42, Error ellipse: s-maj=19.8km s-min=10.5km az=77.0*

MOS ***18*** *21:40:08.2±0.9, 0.˙61S×133.˙96E, h14km, mb5.4/47, Error ellipse: s-maj=10.4km s-min=5.5km az=126.3*

NEIC ***18*** *21:40:09.3, 0.˙65S×133.˙99E, h18km*

BJI ***18*** *21:40:09.1, 0.˙90S×134.˙28E, h37km, mB5.4/13, mb5.0/66, Ms5.3/1, Ms7 5.1/1*

NEIC ***18*** *21:40:09.3, 0.˙85S×134.˙09E, h18km, Moment Tensor Solution. Duration: 1ŧ5 Moment tensor: Scale 10^16Nm; Mrr3.89; Mθθ-3.16; Mϕϕ-0.73; Mrθ0.81; Mθϕ 1.04; Mϕr-1.63; Fault plane solution: M0 4.15000×10^16 NP1: ϕs277.68000°, δ36.59000°, λ66.86000°. NP2: ϕs125.71000°, δ56.76000°, λ106.27000°. Principal axes: T 4.4349, Plg73.0000°, Azm78.0000°; N -0.6438, Plg14.0000°, Azm297.0000°; P -3.7911, Plg10.0000°, Azm204.0000°;*

NEIC ***18*** *21:40:10.2±1.9, 0.˙65S±0.˙03×133.˙99E±0.˙06, h13km±3km, mb5.2/173, Mww5.0/21 Error ellipse: s-maj=9.6km s-min=3.4km az=74.0*

GCMT ***18*** *21:40:11.3±0.2, 0.˙58S±0.˙01×133.˙98E±0.˙02, h17km, MW5.0/119, Moment Tensor Solution. s68,c86; s119,c186; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.12±.14; Mθθ-3.71±.09; Mϕϕ-0.41±.09; Mrθ-0.48±.21; Mθϕ 1.09±.06; Mϕr-0.23±.25; Best double couple: M0 4.11300×10^16 NP1:ϕs112.00000°, δ42.00000°, λ97.00000°. NP2:ϕs282.00000°, δ48.00000°, λ84.00000°. Principal axes: T 4.1690, Plg84.0000°, Azm136.0000°; N -0.1160, Plg5.0000°, Azm286.0000°; P -4.0560, Plg3.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***18*** *21:40:11.6±0.3, 1.˚S±2.˚×13.˚4E±.˚, h29km±3km, M4.8/73, mb5.1/73, mB5.4/40, MLv5.3/17, Mw(mB)4.8/40, MwMwp4.8/8, Mwp5.1/8*

ISC 18 21:40:13.0±0.4, 0.˙72S±0.˙04×134.˙02E±0.˙04, h38km±1km, h34km:pP-P, n653, σ1ŧ21/573, mb5.2/169, MS3.9/39, 18C-6D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.80**	**168**	P		**Pn**	**21 40 26.4**	**-1.4**
SWI	**Sorong**	**2.76**	**267**	P		**Pn**	**21 40 53.4**	**-1.2**
FAKI	**Fak Fak**	**2.81**	**219**			**Pn**	**21 40 55.2**	**-0.1**
FAKI	**Fak Fak**	**2.81**	**219**	P		**Pn**	**21 40 56.8**	**+1.4**
FAKI	**Fak Fak**	**2.81**	**219**	P		**Pn**	**21 40 55.6**	**+0.2**
KMPI	**Kaimana, Papua**	**2.94**	**186**	P		**Pn**	**21 40 58.9**	**+1.8**
SMPI	**Sarmi**	**4.86**	**105**	P		**Pn**	**21 41 22.6**	**-1.0**
BNDI	**Bandanaira**	**5.58**	**227**	P		**Pn**	**21 41 36.1**	**+2.6**
BNDI	**Bandanaira**	**5.58**	**227**	S		**Sn**	**21 42 38.8**	**+2.5**
BNDI	**Bandanaira**	**5.58**	**227**	P		**Pn**	**21 41 35.1**	**+1.6**
MSAI	**Masohi**	**5.71**	**243**	P		**Pn**	**21 41 36.5**	**+1.2**
GENI	**Genyem**	**6.43**	**107**	P		**Pn**	**21 41 44.6**	**-0.5**
	0.9nm2µm2µm127nm,0.8s							
AAI	**Ambon**	**6.52**	**243**	P		**Pn**	**21 41 48.9**	**+2.5**
TNTI	**Ternate**	**6.81**	**283**	Pn		**Pn**	**21 41 48.1**	**-2.3**
TNTI	**Ternate**	**6.81**	**283**	P		**Pn**	**21 41 49.6**	**-0.8**
JAY	**Jayapura**	**6.92**	**105**	Pn		**Pn**	**21 41 51.3**	**-0.7**
	1.5nm,0.3s,baz=201,slow=12,SNR=5.0							
JAY				Sn		**Sn**	**21 43 07.4**	**-2.1**
	1.0nm,0.3s,baz=111,slow=22,SNR=1.4 14nm,0.9s							
JAY	**Jayapura**	**6.92**	**105**	P		**Pn**	**21 41 51.2**	**-0.7**
NLAI	**Namlea**	**7.35**	**250**	P		**Pn**	**21 41 59.7**	**+1.9**
	0.7nm3µm2µm138nm,0.5s							
SAUI	**Saumlaki**	**7.71**	**200**	Pn		**Pn**	**21 42 03.1**	**+0.5**
SAUI	**Saumlaki**	**7.71**	**200**	P		**Pn**	**21 42 04.4**	**+1.7**
SANI	**Sanana**	**8.13**	**261**	P		**Pn**	**21 42 10.9**	**+2.4**
	49nm,0.7s							
KMSI	**Cibinong**	**10.12**	**277**	P		**Pn**	**21 42 37.8**	**+2.1**
	221nm,1.0s							
LUWI	**Luwuk**	**11.25**	**268**	Pn		**Pn**	**21 42 50.1**	**-1.1**
LUWI	**Luwuk**	**11.25**	**268**	P		**Pn**	**21 42 52.6**	**+1.4**
	117nm,1.0s							
DAV	**Davao City (W)**	**11.43**	**313**	LR		LR	21 48 15.2	
	comp=Z,221nm,18.2s,baz=158,slow=43							
DAV	**Davao City (W)**	**11.43**	**313**	Pn		**Pn**	**21 42 52.4**	**-1.4**
KDU	**Kakadu**	**11.99**	**187**	P		**Pn**	**21 42 59.8**	**-1.5**
	comp=Z,59nm,0.8s							
DRS	**Darwin Rock St**	**12.04**	**195**	P		**Pn**	**21 43 01.6**	**-0.5**
APSI	**Ampana**	**12.37**	**269**	P		**Pn**	**21 43 07.5**	**+0.9**
	comp=Z,1µmcomp=Z,113nm,0.9s							
BBSI	**Bau Bau**	**12.37**	**247**	P		**Pn**	**21 43 06.6**	**0.0**
	comp=Z,2µmcomp=Z,1µmcomp=Z,63nm,1.2s							
MTN	**Manton Dam**	**12.38**	**193**	P		**Pn**	**21 43 05.7**	**-1.0**
	comp=Z,194nm,0.7s,comp=Z,0.0nm							
MTN	**Manton Dam**	**12.38**	**193**	Pn		**Pn**	**21 43 05.3**	**-1.4**
SOEI	**Soe**	**13.21**	**227**	Pn		**Pn**	**21 43 19.0**	**+0.7**
SOEI	**Soe**	**13.21**	**227**	P		**Pn**	**21 43 20.2**	**+1.9**
	comp=Z,2µmcomp=Z,165nm,1.5s							
TOLI2	**Tolitoli**	**13.36**	**278**	Pn		**Pn**	**21 43 20.2**	**+0.1**
TOLI2	**Tolitoli**	**13.36**	**278**	P		**P**	**21 43 26.5**	**-2.6**
BATI	**Baumata**	**13.96**	**227**	Pn		**Pn**	**21 43 29.1**	**+0.8**
	comp=Z,3.7nm,0.3s,baz=332,slow=0.8,SNR=11							
BATI				Sn		**Sn**	**21 46 02.2**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=262,slow=23,SNR=1.4							
BATI				LR		LR	21 50 30.5	
	comp=Z,1µm,18.4s,baz=52,slow=44 comp=Z,37nm,0.7s							
BATI	**Baumata**	**13.96**	**227**	P		**Pn**	**21 43 29.3**	**+1.0**
	comp=Z,1µmcomp=Z,128nm,1.0s							
MMRI	**Maumere**	**14.12**	**236**			**P**	**21 43 36.7**	**-0.9**
MMRI	**Maumere**	**14.12**	**236**	P		**Pn**	**21 43 33.7**	**+3.2**
	comp=Z,3µmcomp=Z,140nm,1.1s							
MPSI	**Mapaga**	**14.16**	**274**	P		**Pn**	**21 43 30.5**	**-0.5**
PCI	**Palu**	**14.18**	**269**	P		**Pn**	**21 43 32.4**	**+1.1**
	comp=Z,59nm,0.9s							
BNSI	**Bone**	**14.37**	**255**	P		**P**	**21 43 40.1**	**-0.2**
	comp=Z,1µmcomp=Z,142nm,1.1s							
TTSI	**Tana Toraja**	**14.37**	**261**	P		**P**	**21 43 37.2**	**-3.2**
	comp=Z,62nm,0.9s							
SPSI	**Sidrap Palu**	**14.59**	**257**	P		**P**	**21 43 41.3**	**-1.5**
	comp=Z,38nm,0.9s							
BKSI	**Bulukumba**	**14.60**	**251**	P		**Pn**	**21 43 39.7**	**+2.6**
	comp=Z,779nmcomp=Z,69nm,1.1s							
EDFI	**Ende, Flores**	**14.64**	**237**	P		**P**	**21 43 40.9**	**-2.5**
	comp=Z,827nmcomp=Z,75nm,1.0s							
KAPI	**Kappang**	**14.87**	**253**	Pn		**Pn**	**21 43 40.6**	**0.0**
	comp=Z,21nm,0.3s,baz=76,slow=9.9,SNR=4.1 comp=Z,7.1nm,0.4s							
KAPI	**Kappang**	**14.87**	**253**	Pn		**Pn**	**21 43 42.0**	**+1.4**
KAPI	**Kappang**	**14.87**	**253**	*i* P		**Pn**	**21 43 41.5**	**+0.9**
PMG	**Port Moresby**	**15.67**	**124**	Pn		**Pn**	**21 43 52.7**	**+1.5**
	comp=Z,31nm,1.0s,baz=322,slow=9.3,SNR=7.1							
PMG				LR		LR	21 52 11.8	
	comp=Z,690nm,19.0s,baz=308,slow=46							
PMG	**Port Moresby**	**15.67**	**124**			**Pn**	**21 43 53.1**	**+1.9**
PMG	**Port Moresby**	**15.67**	**124**	*ce* P		**Pn**	**21 43 53.0**	**+1.9**
PMG				pmax		pmax		
	comp=Z,51nm,1.3s							
KNRA	**Kununurra**	**15.74**	**199**	Pn		**Pn**	**21 43 50.1**	**-1.9**
COEN	**Coen**	**15.97**	**146**	P		**Pn**	**21 43 53.4**	**-1.6**
COEN	**Coen**	**15.97**	**146**	Pn		**Pn**	**21 43 53.5**	**-1.6**
COEN	**Coen**	**15.97**	**146**	P		**Pn**	**21 43 52.7**	**-2.3**
WSI	**Waingapu**	**16.29**	**236**	P		**P**	**21 44 02.2**	**+0.6**
	comp=Z,199nm,1.0s							
BASI	**Baing, Sumba**	**16.36**	**234**	P		**P**	**21 44 03.0**	**+0.6**
	comp=Z,158nm,1.3s							
MYLDM	**Lahad Datu**	**16.57**	**291**			**P**	**21 44 05.3**	**+0.6**
WBSI	**Waikabubak, Su**	**17.04**	**238**	P		**P**	**21 44 12.1**	**+2.1**
	comp=Z,1µmcomp=Z,124nm,1.0s							
GUMO	**Guam**	**17.83**	**37**	LR		LR	21 49 52.1	
	comp=Z,139nm,20.1s,baz=187,slow=33							
PLAI	**Plampang**	**18.06**	**243**	P		**Pn**	**21 44 24.7**	**+3.5**
PLAI	**Plampang**	**18.06**	**243**	P		**Pn**	**21 44 22.2**	**+1.0**
	comp=Z,1µmcomp=Z,116nm,0.9s							
RABL	**Rabaul**	**18.45**	**101**	P		**P**	**21 44 26.2**	**+0.5**
TWSI	**Taliwang, Sumb**	**18.83**	**244**	P		**Pn**	**21 44 31.9**	**+1.4**
	comp=Z,795nmcomp=Z,88nm,1.0s							
WB0	**Warramunga Arr**	**18.93**	**179**	P		**P**	**21 44 28.7**	**-2.1**
WRAB	**Tennant Creek**	**19.10**	**179**	P		**P**	**21 44 31.2**	**-1.4**
WRAB				IAmb		IAmb	21 44 42.9	
	comp=Z,77nm,0.8s							
WRAB	**Tennant Creek**	**19.10**	**179**	P		**P**	**21 44 31.5**	**-1.2**
WRAB	**Tennant Creek**	**19.10**	**179**	S		**S**	**21 48 04.2**	**-3.2**
WRAB	**Tennant Creek**	**19.10**	**179**	*ce* P		**P**	**21 44 31.2**	**-1.4**
WRAB				pmax		pmax		
	comp=Z,25nm,1.0s							
WRA	**Warramunga Arr**	**19.11**	**179**	P		**P**	**21 44 31.5**	**-1.3**
	comp=Z,2.6nm,0.3s,baz=357,slow=12,SNR=112							
WRA				S		**S**	**21 48 03.2**	**-4.4**
	comp=Z,17nm,1.0s,baz=360,slow=21,SNR=6.4							
WRA				LR		LR	21 52 51.9	
	comp=Z,2µm,18.5s,baz=354,slow=40 comp=Z,13nm,0.5s							
WRA	**Warramunga Arr**	**19.11**	**179**	P		**P**	**21 44 31.5**	**-1.3**
WRA	**Warramunga Arr**	**19.11**	**179**	*i* P		**P**	**21 44 31.0**	**-1.8**
WRA				pmax		pmax		
	comp=Z,13nm,0.6s							
WR8	**Warramunga Arr**	**19.12**	**179**	P		**P**	**21 44 31.3**	**-1.7**
WB1	**Warramunga Ar.**	**19.12**	**179**	P		**P**	**21 44 31.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.13**	**205**	P		**P**	**21 44 33.4**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=33,slow=9.2,SNR=38							
FITZ				S		S	21 47 54.1	-14
	comp=Z,44nm,1.0s,baz=106,slow=12,SNR=6.6							
FITZ				LR		LR	21 53 33.4	
	comp=Z,659nm,18.4s,baz=28,slow=42 comp=Z,20nm,0.6s							
FITZ	**Fitzroy Crossi**	**19.13**	**205**	P		**P**	**21 44 33.7**	**+0.7**
TGY	**Tagaytay City**	**19.61**	**319**	P		**P**	**21 44 37.1**	**-1.2**
	comp=Z,85nm,0.3s,baz=157,slow=7.6,SNR=4.1							
MTSU	**Mount Surprise**	**20.05**	**150**	P		**P**	**21 44 43.8**	**+0.7**
	comp=Z,59nm,1.0s							
QIS	**Mount Isa**	**20.46**	**165**	P		**P**	**21 44 46.2**	**-1.4**
	comp=Z,67nm,0.8s							
QIS	**Mount Isa**	**20.46**	**165**	P		**P**	**21 44 46.8**	**-0.7**
ABJI	**Asem Bagus**	**20.93**	**250**	P		**P**	**21 44 53.1**	**+0.5**
	comp=Z,2µmcomp=Z,96nm,1.6s							
KMMI	**Kalianget**	**20.96**	**252**	P		Pn	21 44 57.1	+1.4
	comp=Z,4µmcomp=Z,126nm,1.1s							
JAGI	**Jajag, Banyuwa**	**21.23**	**248**	P		**P**	**21 44 56.6**	**+0.8**
JAGI				IAmb		IAmb	21 45 10.5	
	comp=Z,84nm,1.1s							
JAGI	**Jajag, Banyuwa**	**21.23**	**248**	P		**P**	**21 44 56.9**	**+1.0**
	comp=Z,69nm,1.0s							
SBUM	**Sibu**	**22.02**	**278**	P		**P**	**21 45 05.8**	**+1.5**
CTA	**Charters Tower**	**22.67**	**149**	LR		LR	21 54 34.1	
	comp=Z,7.4nm,21.6s,baz=317,slow=38							
CTAO	**Charters Tower**	**22.67**	**149**	P		**P**	**21 45 12.9**	**+1.6**
CTAO	**Charters Tower**	**22.67**	**149**	P		**P**	**21 45 10.1**	**-1.2**
CTAO	**Charters Tower**	**22.67**	**149**	P		**P**	**21 45 12.9**	**+1.6**
CTAO				pmax		pmax		
	comp=Z,39nm,1.0s							
AS31	**Alice Springs**	**22.81**	**180**	P		**P**	**21 45 11.3**	**-1.4**
ASAR	**Alice Springs**	**22.81**	**180**	P		**P**	**21 45 12.1**	**-0.6**
	comp=Z,22nm,0.8s,baz=4.3,slow=11,SNR=130							
ASAR				S		**S**	**21 49 17.9**	**-1.6**
	comp=Z,10nm,0.9s,baz=5.7,slow=20,SNR=5.1 comp=Z,22nm,0.8s							
ASAR	**Alice Springs**	**22.81**	**180**			**P**	**21 45 11.4**	**-1.3**
PCJI	**Pacitan**	**23.93**	**251**	P		**P**	**21 45 22.6**	**-1.2**
	comp=Z,39nm,0.9s							
MBWA	**Marble Bar**	**24.64**	**214**	P		**P**	**21 45 31.4**	**+1.2**
	comp=Z,52nm,1.1s							
MBWA	**Marble Bar**	**24.64**	**214**	P		**P**	**21 45 31.0**	**+0.9**
MBWA				IAmb		IAmb	21 45 47.6	
	comp=Z,48nm,0.9s							
MBWA	**Marble Bar**	**24.64**	**214**	P		**P**	**21 45 31.5**	**+1.3**
YOGI	**Yogyakarta**	**24.67**	**253**	P		**P**	**21 45 31.6**	**+1.1**
WRKA	**Warakurna**	**24.80**	**192**	P		**P**	**21 45 32.3**	**+0.7**
	comp=Z,42nm,0.9s							
PSAC2	**Pilbara Seismi**	**24.87**	**213**	P		**P**	**21 45 33.2**	**+0.9**
	comp=Z,94nm,1.1s							
PSA00	**Pilbara Seismi**	**24.91**	**213**	P		**P**	**21 45 34.0**	**+1.3**
PSA00				IAmb		IAmb	21 45 46.0	
	comp=Z,77nm,1.0s							
PSA00	**Pilbara Seismi**	**24.91**	**213**	P		**P**	**21 45 34.2**	**+1.6**
KPJI	**Karang Pucung**	**25.86**	**255**	P		**P**	**21 45 42.2**	**+0.9**
	comp=Z,972nmcomp=Z,43nm,1.0s							
TPI	**Tanjungpandan**	**26.43**	**265**	P		**P**	**21 45 46.6**	**+0.1**
	comp=Z,20nm,0.8s							
SSLB	**Suanglung**	**27.47**	**333**	P		**P**	**21 45 55.5**	**-0.3**
SSLB				IAmb		IAmb	21 46 04.3	
	comp=Z,78nm,1.0s							
QLP	**Quilpie**	**27.53**	**160**	P		**P**	**21 45 56.3**	**+0.1**
	comp=Z,58nm,0.8s							
INKA	**Innaminka**	**27.63**	**167**	P		**P**	**21 45 57.1**	**0.0**
JOW	**Kunigami**	**27.95**	**349**	LR		LR	21 54 54.5	
	comp=Z,294nm,21.2s,baz=295,slow=32							
EIDS	**Eidsvold**	**29.53**	**147**	P		**P**	**21 46 15.7**	**+1.6**
EIDS				IAmb		IAmb	21 46 29.1	
	comp=Z,51nm,1.6s							
MDSI	**Maura Dua**	**30.03**	**262**	P		**P**	**21 46 19.1**	**+0.4**
	comp=Z,1µmcomp=Z,29nm,1.0s							
MYKOM	**Kota Tinggi**	**30.26**	**275**	P		**P**	**21 46 21.4**	**+0.7**
FORT	**Forrest**	**30.43**	**190**	P		**P**	**21 46 22.0**	**+0.1**
	comp=Z,18nm,0.9s							
FORT	**Forrest**	**30.43**	**190**	P		**P**	**21 46 21.1**	**-0.8**
FORT				IAmb		IAmb	21 47 06.7	
	comp=Z,21nm,0.8s							
QIZ	**Qiongzhong**	**30.80**	**311**	P		**P**	**21 46 25.8**	**+0.4**
QIZ				S		**S**	**21 51 31.5**	**+5.0**
QIZ				pmax		pmax		
	comp=Z,350nm,5.3s							
STKA	**Stephens Creek**	**31.81**	**168**	P		**P**	**21 46 34.5**	**+0.4**
	comp=Z,59nm,0.9s							
STKA	**Stephens Creek**	**31.81**	**168**	P		**P**	**21 46 33.7**	**-0.3**
	comp=Z,7.5nm,0.9s,baz=345,slow=8.8,SNR=12							
STKA				LR		LR	22 00 38.7	
	comp=Z,790nm,18.6s,baz=346,slow=39 comp=Z,7.5nm,0.9s							
STKA	**Stephens Creek**	**31.81**	**168**	P		**P**	**21 46 33.8**	**-0.3**
STKA	**Stephens Creek**	**31.81**	**168**	*i* P		**P**	**21 46 33.6**	**-0.5**
MASI	**Maura Aman, Be**	**31.85**	**265**	P		**P**	**21 46 34.9**	**+0.2**
BBOO	**Buckleboo**	**31.98**	**177**	P		**P**	**21 46 35.9**	**+0.3**
BBOO	**Buckleboo**	**31.98**	**177**	P		**P**	**21 46 35.7**	**+0.1**
CMSA	**Cobar Meteorol**	**32.58**	**161**	P		**P**	**21 46 41.0**	**+0.1**
HTT	**Hallett**	**32.87**	**172**	P		**P**	**21 46 42.8**	**-0.6**
MORW	**Morawa**	**33.00**	**210**	P		**P**	**21 46 45.6**	**+1.0**
MORW				IAmb		IAmb	21 47 41.3	
	comp=Z,34nm,1.4s							
MORW	**Morawa**	**33.00**	**210**	P		**P**	**21 46 46.0**	**+1.4**
IPM	**Ipoh**	**33.36**	**279**	P		**P**	**21 46 46.9**	**-1.1**
JNU	**Nakatsue**	**33.79**	**355**	LR		LR	22 02 45.5	
	comp=Z,71nm,18.0s,baz=179,slow=40							
JNU	**Nakatsue**	**33.79**	**355**	P		**P**	**21 46 50.2**	**-1.3**
JNU	**Nakatsue**	**33.79**	**355**	P		P	21 46 56.6	+5.1
KULM	**Kulim**	**33.85**	**281**	P		**P**	**21 46 51.4**	**-0.9**
ARMA	**Armidale**	**33.95**	**152**	P		**P**	**21 46 53.5**	**+0.5**
ARMA				IAmb		IAmb	21 47 08.8	
	comp=Z,43nm,1.6s							
BLDU	**Ballidu**	**33.97**	**207**	P		**P**	**21 46 53.2**	**+0.2**
JHJ	**Hachijo jima 2**	**34.09**	**9**	LR		LR	21 57 18.9	
	comp=Z,384nm,21.6s,baz=132,slow=30							
KLBR	**Kellerberrin**	**34.34**	**205**	P		**P**	**21 46 56.9**	**+0.6**
RPSI	**Rantau Prapat**	**35.24**	**276**	P		**P**	**21 47 03.4**	**-0.9**
RPSI				IAmb		IAmb	21 47 05.1	
	comp=Z,31nm,0.9s							
PSI	**Prapat**	**35.25**	**276**	P		**P**	**21 47 03.4**	**-1.1**
PSI				pmax		pmax		
	comp=Z,31nm,0.9s							
NJ2	**Nanjing**	**35.61**	**338**	⇓P		**P**	**21 47 08.4**	**+1.2**
NJ2				pP		**pP**	**21 47 15.9**	**-1.1**
NJ2				pmax		pmax		
	comp=Z,18nm,0.5s							
NWAO	**Narrogin (SRO)**	**35.72**	**205**	LR		LR	22 03 13.2	
	comp=Z,274nm,21.1s,baz=334,slow=39							
WHN	**Wuhan**	**36.29**	**331**	P		**P**	**21 47 14.4**	**+1.4**
WHN				pmax		pmax		
	comp=Z,120nm,1.3s							
KCSI	**Kotacane, Aceh**	**36.47**	**277**	P		**P**	**21 47 13.3**	**-1.5**
	comp=Z,18nm,1.1s							
MJAR	**Matsushiro Arr**	**37.28**	**6**	P		**P**	**21 47 18.4**	**-2.9**
	comp=Z,1.3nm,0.6s,baz=189,slow=8.1,SNR=14							
MJAR				LR		LR	21 59 13.1	
	comp=Z,338nm,21.4s,baz=182,slow=31 comp=Z,1.3nm,0.6s							
MJAR	**Matsushiro Arr**	**37.28**	**6**	P		**P**	**21 47 20.9**	**-0.4**
MJAR	**Matsushiro Arr**	**37.28**	**6**	P		**P**	**21 47 20.9**	**-0.4**
MJAR				pmax		pmax		
	comp=Z,8.0nm,0.9s							
H11S3	**WAKE ISLAND Hy**	**37.36**	**58**	T		T	22 27 11.9	
	baz=244							
H11S2	**WAKE ISLAND Hy**	**37.37**	**58**	T		T	22 27 11.9	
	baz=244,slow=74							
H11S1	**WAKE ISLAND Hy**	**37.38**	**58**	T		T	22 27 12.6	
	baz=244,slow=74							
LHMI	**Lhok Sumawe**	**37.49**	**279**	P		**P**	**21 47 23.1**	**-0.4**
LHMI	**Lhok Sumawe**	**37.49**	**279**	P		**P**	**21 47 23.9**	**+0.4**
MLSI	**Meulaboh, Aceh**	**37.91**	**278**	P		**P**	**21 47 25.4**	**-1.6**
MLSI				pP		**pP**	**21 47 32.5**	**-5.2**
H11N1	**WAKE ISLAND Hy**	**38.10**	**56**	T		T	22 28 03.2	
	baz=243,slow=75,SNR=48							
H11N2	**WAKE ISLAND Hy**	**38.11**	**56**	T		T	22 28 06.2	
	baz=243,slow=75,SNR=28							
H11N3	**WAKE ISLAND Hy**	**38.11**	**56**	T		T	22 28 04.6	
	baz=243,slow=75,SNR=52							
KSRS	**Korea Array**	**38.40**	**352**	P		**P**	**21 47 28.7**	**-2.0**
	comp=Z,3.8nm,0.9s,baz=165

YSS Yuzhno-Sakhali 48.09 8 *i* P P 21 48 49.1 +0.2
YSS pmax pmax
comp=Z,47nm,0.7s
SHL Shillong 48.36 306 P P 21 48 50.7 -0.9
SHL Shillong 48.36 306 P P 21 48 50.7 -0.9
SHL pmax pmax
comp=Z,55nm,0.9s
GTA Gaotai 50.74 326 P P 21 49 10.8 +1.4
GTA pmax pmax
comp=Z,38nm,1.4s
LSA Lhasa 50.84 310 P P 21 49 10.1 -0.6
LSA Lhasa 50.84 310 P P 21 49 07.3 -3.4
LSA pmax pmax
comp=Z,10.0nm,0.9s
LSA Lhasa 50.84 310 P P 21 49 10.1 -0.6
LSA pmax pmax
comp=Z,12nm,0.7s
HEH HeiHe 51.09 355 *e*P P 21 49 11.3 -0.4
HEH pmax pmax
comp=Z,20nm,1.1s
HILR Hailar Array B 51.56 348 P P 21 49 15.3 0.0
comp=Z,6.6nm,0.8s,baz=152,slow=13,SNR=4.7
comp=Z,6.6nm,0.8s
GOMU GeErMu 51.73 319 P P 21 49 18.3 +1.1
GOMU pmax pmax
comp=Z,4.0nm,1.0s
EVN Everest 53.47 306 P P 21 49 29.9 -0.7
EVN IAmb IAmb 21 49 43.4
comp=Z,29nm,1.1s
PALK Pallekele 53.77 280 LR LR 22 14 03.4
comp=Z,52nm,20.8s,baz=102,slow=38
ULN Ulaanbaatar 53.78 338 P P 21 49 32.8 +1.0
ULN IAmb IAmb 21 49 42.1
comp=Z,44nm,1.4s
ULN Ulaanbaatar 53.78 338 *ce*P P 21 49 32.1 +0.2
ULN pmax pmax
comp=Z,31nm,1.4s
RAO Raoul Island 53.84 126 LR LR 22 11 25.6
comp=Z,68nm,19.0s,baz=92,slow=35
SONM Songino Array 54.01 337 P P 21 49 33.3 -0.2
comp=Z,3.7nm,1.0s,baz=160,slow=10,SNR=16
SONM PcP PcP 21 50 37.8 -0.5
comp=Z,1.3nm,0.7s,baz=145,slow=5.3,SNR=3.9
SONM LR LR 22 13 30.9
comp=Z,89nm,18.3s,baz=148,slow=37
comp=Z,3.7nm,1.0s
TUWZ Tuamarina 54.21 143 P P 21 49 35.0 +0.1
URZ Urewera 54.37 139 LR LR 22 13 17.4
comp=Z,292nm,19.5s,baz=312,slow=36
RTZ Ruatahuna 54.48 139 P P 21 49 37.5 +0.4
ZEA Zeya 54.56 355 *e*P P 21 49 43.8 +6.6
ZEA *e* 21 49 53.9
ZEA pmax pmax
comp=Z,20nm,0.8s
PETK Petropavlovsk- 57.17 17 P P 21 49 55.6 -0.4
comp=Z,9.3nm,1.0s,baz=210,slow=8.0,SNR=4.4
PETK LR LR 22 11 20.5
comp=Z,45nm,21.7s,baz=206,slow=33
comp=Z,9.3nm,1.0s
PETK Petropavlovsk- 57.17 17 P P 21 49 55.5 -0.5
ZAK Zakamensk 57.27 337 *e*P P 21 49 57.5 +0.6
ZAK pmax pmax
comp=Z,23nm,1.7s
HYBB Hyderabad (bro 57.48 291 *e*P P 21 49 58.5 -0.4
HYBB *es*P pP 21 50 04.3 -5.3
MOY Mondy 59.18 337 *e*P P 21 50 10.4 +0.2
MOY pmax pmax
comp=Z,54nm,1.5s
WMQ Urumqi 60.58 323 ⇑P P 21 50 21.1 +1.2
WMQ pP pP 21 50 30.4 -0.6
WMQ pmax pmax
comp=Z,32nm,0.9s
MA2 Magadan 61.54 10 LR LR 22 15 03.5
comp=Z,42nm,21.8s,baz=188,slow=34
YAK Yakutsk 62.67 358 LR LR 22 15 37.2
comp=Z,38nm,21.1s,baz=168,slow=34
YAK Yakutsk 62.67 358 P P 21 50 33.1 -0.4
YAK Yakutsk 62.67 358 *e*P P 21 50 33.6 +0.1
YAK *e**PP pP 21 50 41.2 -2.8
YAK *e* 21 51 12.5
YAK *e* 21 52 51.5
YAK *e*PPP PPP 21 54 18.4
YAK *e*S S 21 59 59.7 +0.6
YAK *e**SS sS 21 59 24.6 +8.4
YAK *e* 22 00 23.6
YAK *e*SS SS 22 03 05.1 +0.9
YAK pmax pmax
comp=Z,39nm,1.3s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=Z,231nm,3.8s
YAK pmax pmax
comp=N,130nm,2.2s
YAK pmax pmax
comp=E,160nm,4.0s
YAK smax smax
comp=N,467nm,4.4s
YAK smax smax
comp=E,91nm,3.6s
SHEM Shemya Is, Ala 62.91 26 LR LR 22 12 43.5
comp=E,149nm,20.4s,baz=286,slow=31
ZSN Zaisan 64.23 325 *e*P P 21 50 44.7 +0.5
ZSN Zaisan 64.23 325 *e*P P 21 50 44.7 +0.5
SEY Seymchan 64.97 9 LR LR 22 19 04.3
comp=E,29nm,18.2s,baz=205,slow=36
SEY Seymchan 64.97 9 *ce*P P 21 50 50.0 +1.3
SEY pmax pmax
comp=Z,43nm,1.3s
MK31 Makanchi Array 65.39 324 *ce*P P 21 50 52.4 +0.6
MKAR Makanchi Array 65.39 324 P P 21 50 51.5 -0.3
comp=Z,17nm,0.8s,baz=117,slow=7.6,SNR=104
comp=Z,17nm,0.8s
MKAR Makanchi Array 65.39 324 P P 21 50 52.0 +0.2
MKAR Makanchi Array 65.39 324 *ce*P P 21 50 52.0 +0.2
MKAR pmax pmax
comp=Z,17nm,0.8s
SHLS Shalkode 65.43 319 ⇑*i*P P 21 50 50.5 -1.7
comp=Z,14nm,1.0s
SHLS Shalkode 65.43 319 *c i*P P 21 50 50.5 -1.7
SHLS pmax pmax
comp=Z,14nm,1.0s
MAKZ Makanchi 65.58 324 P P 21 50 52.7 -0.3
MAKZ Makanchi 65.58 324 P P 21 50 52.7 -0.3
MAKZ pmax pmax
comp=Z,37nm,0.9s
UZB Uzynbulak 65.71 319 *e*P P 21 50 54.3 +0.1
comp=Z,12nm,1.0s
UZB Uzynbulak 65.71 319 *e*P P 21 50 54.2 +0.1
UZB pmax pmax
comp=Z,12nm,1.0s
TARG Taragay, Kyrgy 65.92 317 P P 21 50 56.4 +0.6
TARG IAmb IAmb 21 51 14.4
comp=Z,13nm,1.0s
TARG Taragay, Kyrgy 65.92 317 P P 21 50 56.4 +0.6
TARG pmax pmax
comp=Z,13nm,1.0s
SATY Saty 66.08 319 ⇑*i*P P 21 50 56.6 +0.1
comp=Z,17nm,0.9s
SATY Saty 66.08 319 *c i*P P 21 50 56.5 +0.1
SATY pmax pmax
comp=Z,17nm,0.9s
KSH Kashi 66.33 314 P P 21 50 59.8 +1.7
KSH pP pP 21 51 09.3 +0.2
KSH pmax pmax
comp=Z,23nm,1.1s
NIL Nilore 66.39 307 P P 21 50 58.3 -0.2
NIL IAmb IAmb 21 51 15.1
comp=Z,18nm,0.8s
NIL Nilore 66.39 307 P P 21 50 58.3 -0.2
NIL pmax pmax
comp=Z,18nm,0.9s
KDJ Kajisay 66.51 317 IAmb IAmb 21 51 01.5
comp=Z,18nm,0.9s
TDK Taldyqorghan 66.93 320 *e*P P 21 51 02.3 +0.6
TDK Taldyqorghan 66.93 320 *e*P P 21 51 02.2 +0.6
MDOK Medeo 67.02 318 *e*P P 21 51 02.6 +0.1
MDOK Medeo 67.02 318 *e*P P 21 51 02.6 +0.1
TNSS Tian-Shan 67.04 318 *e*P P 21 51 02.8 -0.2
TNSS Tian-Shan 67.04 318 *e*P P 21 51 02.7 -0.2
AAA Alma-Ata 67.13 318 *e*P P 21 51 03.2 +0.1
comp=Z,26nm,0.9s

AAA Alma-Ata 67.13 318 *e*P P 21 51 03.2 +0.1
AAA pmax pmax
comp=Z,26nm,0.9s
RAR Rarotonga 67.62 113 LR LR 22 20 11.6
comp=Z,37nm,18.3s,baz=272,slow=36
ZAA0 Zalesovo Array 67.90 331 P P 21 51 06.3 -1.3
ZAA0 IAmb IAmb 21 51 16.8
comp=Z,13nm,0.9s
ZALV Zalesovo Beam 67.90 331 P P 21 51 06.8 -0.8
comp=Z,4.4nm,0.7s,baz=125,slow=6.5,SNR=25
comp=Z,4.4nm,0.7s
ZALV Zalesovo Beam 67.90 331 P P 21 51 06.2 -1.4
AAK Ala-Archa 68.54 317 P P 21 51 13.7 +1.6
AAK Ala-Archa 68.54 317 P P 21 51 13.7 +1.6
AAK pmax pmax
comp=Z,9.0nm,1.0s
KURK Kurchatov 69.43 326 P P 21 51 16.8 -0.4
KURK Kurchatov 69.43 326 *ce*P P 21 51 17.3 +0.1
KURK pmax pmax
comp=Z,38nm,1.3s
KURBB Kurchatov Arra 69.43 326 P P 21 51 17.1 -0.1
comp=Z,20nm,0.9s,baz=118,slow=5.6,SNR=128
comp=Z,20nm,0.9s
BTLS Baital 69.76 319 *e*P P 21 51 19.3 0.0
BTLS Baital 69.76 319 *e*P P 21 51 19.3 0.0
KBL Kabul 69.99 307 P P 21 51 20.7 -0.6
KBL IAmb IAmb 21 51 22.6
comp=Z,15nm,0.9s
KBL Kabul 69.99 307 P P 21 51 20.7 -0.6
KBL pmax pmax
comp=Z,15nm,0.9s
NIKH Nikolski High 71.44 32 P P 21 51 30.2 +0.8
baz=242
KK31 Karatay Array 71.44 316 P P 21 51 29.4 -0.3
KK31 IAmb IAmb 21 51 31.5
comp=Z,24nm,1.1s
KK31 Karatay Array 71.44 316 P P 21 51 29.4 -0.3
KK31 pmax pmax
comp=Z,25nm,1.2s
KKAR Karatay Array 71.44 316 P P 21 51 29.3 -0.4
KKAR Karatay Array 71.44 316 P P 21 51 29.3 -0.4
IUG luzhnay 71.47 315 *e*P P 21 51 30.2 +0.1
comp=Z,27nm,1.3s
IUG luzhnay 71.47 315 *e*P P 21 51 30.1 +0.1
IUG pmax pmax
comp=Z,27nm,1.3s
CHM Chimkent 71.82 315 *e*P P 21 51 32.1 +0.1
CHM Chimkent 71.82 315 *e*P P 21 51 32.1 +0.1
BRLS Boroldav 71.89 316 *e*P P 21 51 32.5 +0.1
BRLS Boroldav 71.89 316 *e*P P 21 51 32.5 +0.1
TIXI Tiksi 72.33 358 P P 21 51 33.7 -0.6
TIXI Tiksi 72.33 358 *ce*P P 21 51 34.2 -0.2
TIXI pmax pmax
comp=Z,12nm,1.7s
BRZS Berezniki 72.54 324 *e*P P 21 51 36.6 +0.4
BRZS Berezniki 72.54 324 *e*P P 21 51 36.5 +0.4
SPIA Saint Paul Isl 72.77 28 P P 21 51 38.7 +1.4
baz=240
UNV Unalaska Valle 73.09 32 P P 21 51 39.8 +0.6
UNV Unalaska Valle 73.09 32 P P 21 51 40.6 +1.4
baz=244
BVAR Borovoye Array 75.03 326 P P 21 51 50.3 -0.3
comp=Z,16nm,0.9s,baz=121,slow=6.0,SNR=49
BVAR LR LR 22 27 47.4
comp=Z,39nm,18.1s,baz=98,slow=38
comp=Z,16nm,0.9s
BORK Borovoye 75.07 326 *ce*P P 21 51 51.0 +0.1
BORK pmax pmax
comp=Z,27nm,1.0s
FALS False Pass 75.16 32 P P 21 51 52.3 +1.0
baz=247
GAMB Gambell 75.63 22 P P 21 51 54.9 +1.1
baz=237
M11K Mekoryuk 76.17 26 P P 21 51 57.5 +0.6
baz=243
S12K Black Hills 76.20 32 P P 21 51 58.0 +0.7
baz=248
PPT Papeete 76.83 108 LR LR 22 22 51.4
comp=Z,45nm,20.0s,baz=316,slow=33
SDPT Sand Point 76.91 32 P P 21 52 02.5 +1.3
baz=249
CHNA Chernabura Isl 77.20 33 P P 21 52 04.0 +1.1
baz=250
M13K Dall Lake 77.45 27 P P 21 52 05.6 +1.4
baz=245
K13K Kusilvak Mount 77.53 25 P P 21 52 06.2 +1.6
baz=244
S14K Fog Glacier 77.72 32 P P 21 52 07.4 +1.5
baz=250
TNA Tin City 77.95 21 P P 21 52 08.4 +1.5
baz=240
O14K Tigyukauivet M 77.95 28 P P 21 52 07.8 +0.8
baz=248
N14K Kuskokwak Cree 78.02 28 P P 21 52 09.0 +1.6
baz=247
L14K Kuka Creek 78.13 26 P P 21 52 09.6 +1.7
baz=246
VNDA Vanda 78.20 174 P P 21 52 08.8 +0.7
comp=Z,12nm,0.9s,baz=317,slow=6.1,SNR=41
VNDA LR LR 22 25 42.4
comp=Z,258nm,20.0s,baz=354,slow=35
comp=Z,12nm,0.9s
VNDA Vanda 78.20 174 P P 21 52 09.0 +0.9
VNDA Vanda 78.20 174 P P 21 52 09.0 +0.9
VNDA pmax pmax
comp=Z,12nm,0.9s
M14K Bethel 78.22 27 P P 21 52 10.0 +1.5
baz=247
J14K Nanvaranak Lak 78.35 25 P P 21 52 10.5 +1.4
baz=245
ANM Nome 78.42 23 P P 21 52 11.2 +1.7
baz=243
O15K Ungalikthiuk R 78.61 29 P P 21 52 12.1 +1.4
baz=249
M15K Kasigluk River 78.77 27 P P 21 52 12.4 +0.9
baz=248
L15K Ungalak Mounta 78.79 26 P P 21 52 12.9 +1.3
baz=247
N15K Kwethluk River 78.85 28 P P 21 52 13.2 +1.2
baz=248
K15K Wolf Creek Mou 79.02 25 IAmb IAmb 21 52 27.3
comp=Z,23nm,1.1s
K15K Wolf Creek Mou 79.02 25 P P 21 52 14.1 +1.3
baz=247
G15K Niukluk 79.13 22 P P 21 52 14.7 +1.3
baz=244
R16K Pilot Point 79.18 31 P P 21 52 14.9 +1.1
baz=251
F15K North Star Dit 79.22 22 P P 21 52 15.1 +1.2
baz=243
P16K Nushagak River 79.45 29 P P 21 52 16.5 +1.2
baz=251
N16K Nishlik Lake 79.57 28 P P 21 52 16.9 +0.9
baz=250
O16K Kokwok River B 79.59 29 P P 21 52 17.2 +1.2
baz=250
CHIR Chirikof Islan 79.67 33 P P 21 52 17.7 +1.2
baz=253
H16K Elim 79.67 23 P P 21 52 17.6 +1.2
baz=246
M16K Timber Creek 79.68 27 P P 21 52 18.0 +1.5
baz=249
L16K Owhat River 79.69 26 P P 21 52 17.1 +0.5
L16K Owhat River 79.69 26 P P 21 52 17.8 +1.2
baz=249
J16K Anvik River 79.80 25 P P 21 52 18.1 +1.0
baz=247
R17L Mt. Peulik Vol 79.82 31 P P 21 52 18.4 +1.1
baz=252
G16K Koyuk River 79.94 22 P P 21 52 19.0 +1.2
baz=246
I17K Unalakleet 79.99 24 IAmb IAmb 21 52 29.1
comp=Z,35nm,1.2s
I17K Unalakleet 79.99 24 P P 21 52 19.5 +1.4
baz=247
O17K Koliganek Bris 80.13 29 P P 21 52 20.2 +1.3
baz=251
C16K Lisburne Hills 80.16 19 P P 21 52 20.4 +1.5
baz=242
ABKAR Akbulak array 80.19 320 P P 21 52 18.2 -1.3
Q17K Contact Creek 80.25 30 P P 21 52 20.9 +1.1
baz=252
P17K Kvichak River 80.26 29 P P 21 52 20.9 +1.3
baz=252
N17K Nushagak Hills 80.33 28 P P 21 52 21.4 +1.4
baz=251
L17K Donlin 80.36 26 P P 21 52 21.7 +1.6
baz=250

J17K VABM Dome 80.48 25 IAmb IAmb 21 52 35.8
comp=Z,23nm,1.0s
J17K VABM Dome 80.48 25 P P 21 52 22.4 +1.7
baz=249
M17K Holitna River 80.50 27 P P 21 52 22.2 +1.3
baz=251
K17K Iditarod 80.57 26 IAmb IAmb 21 52 32.1
comp=Z,28nm,0.9s
K17K Iditarod 80.57 26 P P 21 52 22.7 +1.4
baz=250
G17K Kiwalik Mounta 80.64 23 P P 21 52 22.7 +1.2
baz=247
SII Sitkinak Islan 80.65 32 P P 21 52 23.3 +1.5
baz=254
D17K Noatak River 80.66 20 P P 21 52 22.9 +1.2
baz=244
H17K Granite Mounta 80.71 23 IAmb IAmb 21 52 26.8
comp=Z,28nm,1.3s
H17K Granite Mounta 80.71 23 P P 21 52 23.2 +1.3
baz=248
R18K Karluk 80.78 31 P P 21 52 23.4 +0.9
baz=254
F17K Baldwin Pennin 80.79 22 P P 21 52 23.6 +1.3
baz=246
Q18K Katmai Hardscr 80.81 30 P P 21 52 23.5 +0.7
baz=253
E17K Hotham Inlet 80.84 21 P P 21 52 23.3 +0.8
baz=246,SNR=6.6
RDOG Red Dog Mine 80.87 20 IAmb IAmb 21 52 25.7
comp=Z,24nm,1.2s
RDOG Red Dog Mine 80.87 20 P P 21 52 24.1 +1.3
baz=245
P18K Big Mountain, 80.91 29 P P 21 52 24.4 +1.2
baz=253
C17K DeLong Mountai 80.97 19 P P 21 52 24.2 +1.0
baz=244
N18K Kilae Creek 80.98 28 P P 21 52 24.6 +1.0
baz=252
O18K Koktuh Hills 81.06 29 P P 21 52 24.8 +0.9
baz=253
L18K Granite Mounta 81.11 26 IAmb IAmb 21 52 34.4
comp=Z,20nm,1.0s
L18K Granite Mounta 81.11 26 P P 21 52 25.0 +0.8
baz=251
M18K Stony River 81.26 27 P P 21 52 26.0 +1.1
baz=252
OHAK Old Harbor 81.30 32 P P 21 52 26.4 +1.2
baz=255
H18K Honhosa River 81.40 23 P P 21 52 26.6 +1.0
baz=249
E18K Tukpahlearik C 81.41 21 P P 21 52 27.2 +1.5
baz=247,SNR=7.3
F18K Selawik 81.44 22 P P 21 52 27.1 +1.3
baz=248
J18K Innoko River 81.50 25 IAmb IAmb 21 52 38.0
comp=Z,22nm,1.1s
J18K Innoko River 81.50 25 P P 21 52 27.0 +0.8
baz=251
G18K Tagagawik 81.55 23 P P 21 52 27.6 +1.1
baz=249,SNR=5.3
SVE Sverdlovsk 81.56 328 *e*P P 21 52 25.6 -1.0
SVE pmax pmax
comp=Z,17nm,1.5s
AKTO Aktyubinsk 81.66 321 LR LR 22 30 29.5
comp=Z,44nm,19.8s,baz=56,slow=37
N19K Bonanza Creek 81.68 28 IAmb IAmb 21 52 29.9
comp=Z,40nm,1.2s
N19K Bonanza Creek 81.68 28 P P 21 52 28.5 +1.1
baz=253
C18K Utukok River 81.70 20 P P 21 52 28.3 +1.1
baz=246
B18K Kokolik River 81.80 19 P P 21 52 28.6 +1.0
baz=245
KDAK Kodiak Island 81.81 31 LR LR 22 23 13.3
comp=Z,152nm,21.0s,baz=234,slow=32
KDAK Kodiak Island 81.81 31 P P 21 52 29.2 +1.3
KDAK IAmb IAmb 21 52 38.2
comp=Z,26nm,1.1s
KDAK Kodiak Island 81.81 31 P P 21 52 29.2 +1.3
KDAK pmax pmax
comp=Z,26nm,1.1s
KDAK Kodiak Island 81.81 31 P P 21 52 29.1 +1.3
baz=256
GCSA Galena City Sc 81.85 24 P P 21 52 29.0 +1.0
baz=251
L19K White Mountain 81.91 27 IAmb IAmb 21 52 31.0
comp=Z,31nm,1.2s
L19K White Mountain 81.91 27 P P 21 52 29.9 +1.4
baz=253
P19K Oil Pt 81.96 29 P P 21 52 29.6 +0.8
baz=255
M19K Big River Lodg 82.04 27 IAmb IAmb 21 52 31.8
comp=Z,28nm,1.2s
M19K Big River Lodg 82.04 27 P P 21 52 30.6 +1.5
baz=253
Q20K Shuyak Island 82.11 30 P P 21 52 30.6 +1.1
baz=256
J19K Poorman 82.13 25 IAmb IAmb 21 52 40.1
comp=Z,32nm,1.4s
J19K Poorman 82.13 25 P P 21 52 30.7 +1.2
baz=252
F19K Shaleruckik Mo 82.22 22 P P 21 52 30.7 +0.8
baz=250
MAW Mawson 82.22 201 P P 21 52 30.8 +0.9
comp=Z,4.6nm,1.1s,baz=67,slow=8.0,SNR=6.5
MAW LR LR 22 29 04.2
comp=Z,102nm,18.4s,baz=70,slow=36
comp=Z,4.6nm,1.1s
G19K Purcell Mounta 82.24 23 P P 21 52 31.0 +1.0
baz=250
H19K Roundabout Mou 82.28 23 IAmb IAmb 21 52 40.3
comp=Z,18nm,0.9s
H19K Roundabout Mou 82.28 23 P P 21 52 31.0 +0.8
baz=251
O20K Slope Mountain 82.37 29 P P 21 52 31.5 +0.5
baz=255
A19K Wainwright 82.37 18 P P 21 52 31.7 +1.1
baz=246
C19K Lookout Ridge 82.42 19 P P 21 52 32.1 +1.1
baz=248,SNR=6.6
L20K Farewell, AK 82.43 26 IAmb IAmb 21 52 43.2
comp=Z,16nm,1.0s
L20K Farewell, AK 82.43 26 P P 21 52 31.9 +0.7
baz=254
K20K Telida 82.60 26 IAmb IAmb 21 52 42.2
comp=Z,21nm,1.0s
K20K Telida 82.60 26 P P 21 52 33.1 +1.1
baz=253
M20K Styx River 82.61 27 IAmb IAmb 21 52 47.1
comp=Z,30nm,1.0s
M20K Styx River 82.61 27 P P 21 52 32.8 +0.7
baz=254
E19K Redstone River 82.63 21 IAmb IAmb 21 52 34.6
comp=Z,42nm,1.4s
E19K Redstone River 82.63 21 P P 21 52 32.9 +0.8
baz=250,SNR=8.4
ARTI Arti 82.67 327 LR LR 22 33 55.5
comp=Z,21nm,18.2s,baz=78,slow=39
ARTI Arti 82.67 327 P P 21 52 30.9 -1.6
ARTI Arti 82.67 327 *d i*P P 21 52 31.9 -0.6
ARTI S S 22 02 46.7 -0.5
ARTI pmax pmax
comp=Z,21nm,1.8s
D19K Kuna River 82.69 20 P P 21 52 33.5 +1.1
baz=249,SNR=6.8
HOM Homer 82.75 30 P P 21 52 33.5 +0.7
baz=256
J20K Nowinta River 82.80 25 IAmb IAmb 21 52 35.6
comp=Z,21nm,1.2s
J20K Nowinta River 82.80 25 P P 21 52 33.4 +0.4
baz=253,SNR=9.7
I20K Naaghedeneel 82.85 24 IAmb IAmb 21 52 43.8
comp=Z,18nm,0.8s
I20K Naaghedeneel 82.85 24 P P 21 52 33.9 +0.8
baz=253
N20K Mount Spurr 82.86 28 P P 21 52 34.2 +0.8
baz=255
SPCR Spurr Chakacha 82.86 28 P P 21 52 34.4 +1.0
baz=255
H20K Anotleneega Mo 82.89 23 P P 21 52 34.6 +1.2
baz=252
F20K Avaraart Lake 83.05 22 P P 21 52 35.5 +1.2
baz=252
STLK Strandline Lak 83.11 28 P P 21 52 34.3 -0.5
BRSE Bradley Lake S 83.21 30 P P 21 52 36.1 +0.9
baz=257
CAPN Captain Cook N 83.25 28 P P 21 52 36.1 +0.8

baz=256
E20K **Nigu River** 83.28 21 P P 21 52 36.8 +1.4
baz=251
D20K **Etivluk River** 83.28 20 P P 21 52 36.6 +1.2
baz=250
PPLA **Purkeypile** 83.30 26 P P 21 52 36.6 +0.8
baz=255
SKT **Skwentna** 83.36 27 IAmb IAmb 21 52 44.9
comp=Z,22nm,1.0s
SKT **Skwentna** 83.36 27 P P 21 52 36.8 +0.8
baz=256,SNR=5.6
IMAR **Indian Mountai** 83.48 23 P P 21 52 37.0 +0.5
CHUM **Lake Minchumin** 83.50 25 P P 21 52 37.2 +0.6
baz=255,SNR=12
B20K **Meade River** 83.54 19 P P 21 52 37.6 +1.0
baz=250
SUA **Susitna One** 83.60 28 IAmb IAmb 21 52 42.8
comp=Z,26nm,1.1s
SUA **Susitna One** 83.60 28 P P 21 52 37.7 +0.3
baz=257
G21K **Allakaket** 83.73 23 P P 21 52 38.8 +1.0
baz=254
H21K **Melozitna Rive** 83.77 24 IAmb IAmb 21 52 41.2
comp=Z,36nm,1.4s
H21K **Melozitna Rive** 83.77 24 P P 21 52 38.9 +0.9
baz=254
O22K **Cooper Landing** 83.87 29 P P 21 52 39.6 +1.1
baz=258
SEW **Seward** 83.92 29 P P 21 52 40.0 +1.2
baz=258
F21K **Alatna River** 83.94 22 P P 21 52 39.8 +0.9
baz=254
M22K **Willow** 83.96 28 P P 21 52 39.7 +0.8
baz=257
RC01 **Rabbit Creek A** 84.00 28 P P 21 52 39.9 +0.7
baz=258
KTH **Kantishna Hill** 84.02 26 IAmb IAmb 21 52 43.0
comp=Z,21nm,1.1s
CUT **Chulitna** 84.04 27 P P 21 52 40.6 +1.2
baz=257
C21K **Knifeblade Rid** 84.05 20 P P 21 52 40.5 +1.2
baz=252
E21K **Killik River** 84.11 21 IAmb IAmb 21 52 49.4
comp=Z,12nm,1.0s
E21K **Killik River** 84.11 21 P P 21 52 40.6 +0.9
baz=253
BPAW **Bear Paw Mtn.** 84.12 25 IAmb IAmb 21 52 41.9
comp=Z,27nm,1.5s
BPAW **Bear Paw Mtn.** 84.12 25 P P 21 52 40.8 +1.0
baz=256
A21K **Barrow** 84.16 18 P P 21 52 40.8 +1.0
baz=250
B21K **Ikpikpuk River** 84.25 19 P P 21 52 41.0 +0.7
baz=252
TRF **Thorofare Moun** 84.27 26 IAmb IAmb 21 53 09.0
comp=Z,14nm,1.1s
TRF **Thorofare Moun** 84.27 26 P P 21 52 41.6 +0.9
baz=257
PMR **Palmer** 84.39 28 P P 21 52 41.7 +0.5
PMR IAmb IAmb 21 52 50.4
comp=Z,19nm,0.9s
PMR **Palmer** 84.39 28 P P 21 52 41.7 +0.5
PMR pmax pmax
comp=Z,19nm,0.9s
PMR **Palmer** 84.39 28 P P 21 52 41.7 +0.5
baz=258
H22K **Ishtalitna Cre** 84.40 23 IAmb IAmb 21 52 53.4
comp=Z,35nm,1.4s
H22K **Ishtalitna Cre** 84.40 23 P P 21 52 42.1 +0.9
baz=256
MLY **Manley** 84.44 24 IAmb IAmb 21 52 43.6
comp=Z,20nm,1.1s
MLY **Manley** 84.44 24 P P 21 52 42.0 +0.5
baz=256,SNR=10
F22K **John River** 84.50 22 P P 21 52 42.7 +1.0
baz=255
A22K **Sinclair Lake** 84.56 18 P P 21 52 42.4 +0.6
baz=252
PWL **Port Wells** 84.62 29 P P 21 52 42.5 +0.1
baz=259,SNR=5.9
KNK **Knik Glacier** 84.67 28 P P 21 52 43.0 +0.3
baz=259,SNR=7.2
D22K **Ayikyak River** 84.69 20 P P 21 52 43.2 +0.6
baz=254
E22K **Anaktuvuk Pass** 84.80 21 IAmb IAmb 21 52 45.7
comp=Z,22nm,1.3s
E22K **Anaktuvuk Pass** 84.80 21 P P 21 52 44.0 +0.8
baz=255
SML **Sawmill** 84.80 28 P P 21 52 44.1 +0.7
baz=259,SNR=6.6
B22K **Teshekpuk Lake** 84.86 19 P P 21 52 44.1 +0.8
baz=253
WAT1 **Susitna Watana** 84.91 27 P P 21 52 44.0 +0.2
baz=258
P23K **Montague Islan** 84.91 30 P P 21 52 44.2 +0.3
baz=260
MCK **McKinley** 84.92 26 P P 21 52 44.0 +0.1
MCK **McKinley** 84.92 26 P P 21 52 44.0 +0.1
MCK pmax pmax
comp=Z,78nm,1.5s
MCK **McKinley** 84.92 26 P P 21 52 44.3 +0.5
baz=258,SNR=8.7
I23K **Minto, Yukon-K** 85.04 24 P P 21 52 45.3 +0.9
baz=258,SNR=14
NEA2 **Nenana** 85.04 25 P P 21 52 45.2 +0.7
baz=258
M23K **Glacier View** 85.08 28 P P 21 52 45.5 +0.8
baz=259
H23K **Yukon River** 85.11 24 IAmb IAmb 21 52 54.7
comp=Z,15nm,1.0s
H23K **Yukon River** 85.11 24 P P 21 52 45.8 +0.9
baz=257,SNR=11
G23K **Bananza Creek** 85.12 23 IAmb IAmb 21 52 54.9
comp=Z,17nm,1.0s
G23K **Bananza Creek** 85.12 23 P P 21 52 45.7 +0.8
baz=257
COLD **Coldfoot** 85.17 22 P P 21 52 45.3 +0.3
COLD IAmb IAmb 21 52 55.1
comp=Z,12nm,1.0s
COLD **Coldfoot** 85.17 22 P P 21 52 45.8 +0.8
baz=257
GLI **Glacier Island** 85.22 29 P P 21 52 45.9 +0.5
baz=260
WAT6 **Susitna Watana** 85.22 27 P P 21 52 45.7 +0.1
baz=259,SNR=9.4
SCM **Sheep Creek Mo** 85.28 28 P P 21 52 46.3 +0.6
baz=260,SNR=6.3
Q23K **Middleton Isla** 85.34 30 P P 21 52 46.6 +0.6
baz=261
D23K **Nanushuk River** 85.41 21 P P 21 52 46.9 +0.7
baz=256
DHY **Denali Highway** 85.48 27 P P 21 52 47.2 +0.4
baz=260,SNR=9.6
E23K **Chandalar** 85.58 21 IAmb IAmb 21 52 50.7
comp=Z,25nm,1.2s
E23K **Chandalar** 85.58 21 P P 21 52 48.1 +0.9
baz=257
COLA **College** 85.61 25 *i* P P 21 52 47.0 -0.2
COLA pmax pmax
comp=Z,10.0nm,1.1s
COLA **College** 85.61 25 P P 21 52 48.4 +1.2
baz=259
C23K **Itkillik River** 85.65 20 P P 21 52 48.2 +0.8
baz=256
TOLK **Toolik Lake Re** 85.73 21 P P 21 52 48.8 +1.0
baz=257
H24K **Noodor Dome** 85.79 24 IAmb IAmb 21 52 58.6
comp=Z,25nm,1.1s
H24K **Noodor Dome** 85.79 24 P P 21 52 49.5 +1.3
baz=259
POKR **Poker Plat Res** 85.83 25 P P 21 52 49.2 +0.8
baz=259
M24K **Tolsona, Glenn** 85.86 28 P P 21 52 49.5 +0.9
M24K **Tolsona, Glenn** 85.86 28 P P 21 52 49.3 +0.7
baz=261
KLU **Klutina** 85.88 28 IAmb IAmb 21 52 59.0
comp=Z,26nm,1.1s
KLU **Klutina** 85.88 28 P P 21 52 49.3 +0.5
baz=261
HDA **Harding Lake** 85.91 25 IAmb IAmb 21 52 57.5
comp=Z,18nm,0.9s
HDA **Harding Lake** 85.91 25 P P 21 52 48.3 -0.4
baz=260,SNR=6.3
IL31 86.00 25 IAmb IAmb 21 52 57.6
comp=Z,14nm,1.0s
ILAR **Eielson Array** 86.00 25 P P 21 52 48.4 -0.8
comp=Z,7.6nm,1.0s,baz=256,slow=4.8,SNR=35
ILAR LR LR 22 24 42.4
comp=Z,111nm,20.4s,baz=246,slow=31
comp=Z,7.6nm,1.0s
ILAR **Eielson Array** 86.00 25 P P 21 52 47.8 -1.4
E24K **Your Creek** 86.00 22 P P 21 52 49.8 +0.6
baz=258
D24K **Happy Valley** 86.11 20 P P 21 52 50.0 +0.3
baz=258
F24K **Squaw Lake** 86.11 22 P P 21 52 50.2 +0.5
baz=259
G24K **Hadweenzic Riv** 86.11 23 IAmb IAmb 21 52 52.3
comp=Z,27nm,1.4s
G24K **Hadweenzic Riv** 86.11 23 P P 21 52 50.6 +0.8
baz=259
C24K **Franklin Bluff** 86.27 20 P P 21 52 51.1 +0.7
baz=258
K24K **Donnelly Dome** 86.31 26 IAmb IAmb 21 53 00.6
comp=Z,26nm,1.0s
K24K **Donnelly Dome** 86.31 26 P P 21 52 51.1 +0.3
baz=261,SNR=6.1
PAX **Paxson** 86.32 27 P P 21 52 51.6 +0.6
baz=261,SNR=7.6
HARP **HAARP** 86.38 27 P P 21 52 51.5 +0.4
baz=262
KAIM **Kayak Island** 86.38 30 P P 21 52 51.8 +0.6
baz=262
BMRM **Bremner River** 86.43 29 P P 21 52 51.7 +0.2
baz=262,SNR=6.3
N25K **Chitina, Valde** 86.52 28 IAmb IAmb 21 52 54.4
comp=Z,26nm,1.2s
N25K **Chitina, Valde** 86.52 28 P P 21 52 52.0 +0.1
baz=262,SNR=6.0
J25K **Salcha River,** 86.61 25 IAmb IAmb 21 52 54.2
comp=Z,36nm,1.7s
J25K **Salcha River,** 86.61 25 P P 21 52 52.4 0.0
baz=261
G25K **Bearman Lake** 86.66 23 P P 21 52 53.0 +0.6
baz=260
H25L **Birch Creek** 86.69 24 P P 21 52 52.7 +0.2
baz=261,SNR=10
RIDG **Independent Ri** 86.71 26 IAmb IAmb 21 53 02.1
comp=Z,19nm,1.0s
RIDG **Independent Ri** 86.71 26 P P 21 52 52.9 +0.1
baz=262,SNR=5.6
ABPO **Ambohimpanom** 86.73 251 P P 21 52 53.0 -1.0
ABPO IAmb IAmb 21 53 00.4
comp=Z,15nm,1.2s
ABPO **Ambohimpanom** 86.73 251 P P 21 52 53.0 -1.0
ABPO pmax pmax
comp=Z,15nm,1.2s
BGLC **Bering Glacier** 86.97 30 P P 21 52 54.6 +0.6
baz=263
F25K **Christian Rive** 86.97 22 P P 21 52 54.8 +0.8
baz=261
D25K **Kavik River** 87.00 20 P P 21 52 55.0 +0.9
baz=260
VRDI **Verde Repeater** 87.02 29 IAmb IAmb 21 52 56.5
comp=Z,30nm,1.2s
DOT **Dot Lake** 87.05 26 IAmb IAmb 21 53 05.2
comp=Z,35nm,1.5s
E25K **Arctic Village** 87.09 22 IAmb IAmb 21 52 58.7
comp=Z,34nm,1.9s
E25K **Arctic Village** 87.09 22 P P 21 52 55.8 +1.3
baz=261
MENT **Mentasta** 87.11 27 IAmb IAmb 21 53 13.4
comp=Z,12nm,1.0s
SCRK **Sand Creek** 87.12 26 P P 21 52 55.6 +0.7
baz=262
CRQE **Cirque** 87.14 29 P P 21 52 55.5 +0.4
baz=264,SNR=6.7
MCARA **McCarthy VSAT** 87.25 29 IAmb IAmb 21 53 18.8
comp=Z,23nm,1.0s
MCARA **McCarthy VSAT** 87.25 29 P P 21 52 56.2 +0.8
baz=264
L26K **Log Cabin Wild** 87.29 27 IAmb IAmb 21 52 57.9
comp=Z,15nm,1.3s
L26K **Log Cabin Wild** 87.29 27 P P 21 52 56.2 +0.6
baz=263
BMAR **Burnt Mountain** 87.35 22 P P 21 52 56.0 +0.1
J26L **Joseph Creek** 87.37 25 IAmb IAmb 21 53 02.5
comp=Z,8.9nm,0.9s
J26L **Joseph Creek** 87.37 25 P P 21 52 56.7 +0.6
baz=263,SNR=9.3
M26K **Nabesna, AK** 87.37 28 IAmb IAmb 21 52 58.3
comp=Z,26nm,1.6s
M26K **Nabesna, AK** 87.37 28 P P 21 52 57.0 +1.0
baz=264
F26K **Sheenjek River** 87.56 22 P P 21 52 58.0 +1.2
baz=262
G26K **Porcupine Rive** 87.59 23 P P 21 52 58.0 +1.1
baz=263
C26K **Camden Bay** 87.60 20 P P 21 52 58.0 +1.1
baz=261
MESA **MESA** 87.64 30 P P 21 52 58.3 +0.8
baz=264
I26K **Coal Creek Min** 87.64 25 IAmb IAmb 21 53 44.9
comp=Z,17nm,1.4s
I26K **Coal Creek Min** 87.64 25 P P 21 52 58.3 +1.1
baz=263
AKT **Akhty** 87.68 311 *e* P P 21 52 56.0 -2.1
AKT pmax pmax
comp=Z,14nm,0.9s
KIRV **Kirov** 87.78 329 *ce* P P 21 52 58.3 +0.4
M27K **Edge Creek, AK** 87.89 28 P P 21 52 59.8 +1.2
baz=264
K27K **Chicken** 87.96 26 P P 21 52 59.8 +1.1
baz=264
C27K **Jago River** 87.97 20 P P 21 53 00.1 +1.4
baz=262
L27K **Beaver Creek,** 87.98 27 P P 21 53 00.0 +1.1
baz=264
BCAR **Beaver Creek A** 88.00 27 P P 21 53 00.5 +1.4
CTG **Chitna Glacier** 88.02 29 P P 21 53 00.1 +0.8
baz=265,SNR=6.1
I27K **Kandik River** 88.31 24 P P 21 53 01.3 +0.8
baz=265
BVCY **Beaver Creek** 88.36 28 P P 21 53 01.9 +1.2
baz=265
H27K **Steamboat Moun** 88.41 24 IAmb IAmb 21 53 05.5
comp=Z,26nm,1.7s
H27K **Steamboat Moun** 88.41 24 P P 21 53 02.3 +1.4
baz=265
G27K **Doyon Strip** 88.41 23 P P 21 53 02.3 +1.4
baz=264
PINM **Pinnacle** 88.48 30 P P 21 53 02.4 +1.0
baz=266
YUK3 **Moose Creek** 88.50 28 P P 21 53 02.6 +0.9
baz=266
O28M **Mount Upton** 88.56 29 P P 21 53 02.6 +0.6
baz=266
E27K **Coleen River** 88.57 22 P P 21 53 02.6 +1.0
baz=264
YUK8 **Steele Glacier** 88.80 29 P P 21 53 03.6 +0.5
baz=266
PNL **Peninsula** 88.89 30 P P 21 53 04.1 +0.9
baz=267
D27M **Malcolm River** 88.89 21 P P 21 53 03.6 +0.5
baz=265
RAYN **Ar Rayn** 88.92 293 P P 21 53 04.1 -0.1
RAYN **Ar Rayn** 88.92 293 P P 21 53 04.1 -0.1
RAYN pmax pmax
comp=Z,8.0nm,1.0s
I28M **Miner Creek** 89.00 25 IAmb IAmb 21 53 07.3
comp=Z,36nm,1.9s
I28M **Miner Creek** 89.00 25 P P 21 53 04.6 +0.8
baz=266
DAWY **Dawson** 89.14 26 IAmb IAmb 21 53 06.4
comp=Z,13nm,1.1s
DAWY **Dawson** 89.14 26 P P 21 53 05.2 +0.8
baz=267
F28M **Old Crow** 89.17 22 IAmb IAmb 21 53 14.5
comp=Z,17nm,1.8s
F28M **Old Crow** 89.17 22 P P 21 53 05.4 +1.0
baz=266
QSPA **South Pole Qui** 89.21 180 P P 21 53 07.4 +2.6
comp=Z,14nm,0.9s,baz=317,slow=2.3,SNR=30
QSPA LR LR 22 34 02.8
comp=Z,320nm,18.6s,baz=6.0,slow=36
comp=Z,14nm,0.9s
QSPA **South Pole Qui** 89.21 180 P P 21 53 07.8 +3.1
QSPA IAmb IAmb 21 53 14.8
comp=Z,17nm,0.9s
O29M **Mount Kennedy** 89.33 30 P P 21 53 06.2 +0.8
baz=267
YUK4 **Talbot Arm** 89.34 29 P P 21 53 06.0 +0.4
baz=267
E28M **Babbage River** 89.36 21 P P 21 53 06.0 +0.8
baz=266
YUK6 **Outpost Mounta** 89.46 29 P P 21 53 07.1 +0.9
baz=268
M29M **Somme Creek** 89.48 28 P P 21 53 06.8 +0.7
baz=268
L29M **L29M** 89.66 27 IAmb IAmb 21 53 27.4
comp=Z,17nm,1.4s
L29M **L29M** 89.66 27 P P 21 53 07.7 +0.8
baz=268
H29M **Whitestone** 89.69 24 P P 21 53 07.3 +0.5
baz=268
D28M **Stokes Point** 89.69 21 P P 21 53 07.3 +0.6
baz=267
P29M **Windy Craggy** 89.72 31 P P 21 53 07.7 +0.5
baz=268
G29M **Pine Creek** 89.85 23 IAmb IAmb 21 53 17.1
comp=Z,18nm,1.1s
G29M **Pine Creek** 89.85 23 P P 21 53 08.4 +0.8
baz=268
HYT **Haines Junctio** 89.88 29 P P 21 53 08.3 +0.3
baz=268
E29M **Blow River** 89.95 22 P P 21 53 08.8 +0.8
baz=268
K29M **Barlow Dome** 89.96 26 P P 21 53 09.2 +0.8
baz=268
N30M **Aishikik Lake** 90.10 29 P P 21 53 09.9 +1.0
baz=269
P30M **Million Dollar** 90.13 30 P P 21 53 09.9 +0.8
baz=269
M30M **Minto, Yukon** 90.26 28 P P 21 53 10.2 +0.6
baz=269
EPYK **Eagle Plains** 90.36 24 P P 21 53 10.7 +0.6
baz=269
PLBC **Pleasant Camp** 90.42 31 P P 21 53 10.6 +0.2
baz=269
S31K **Pelican** 90.47 32 P P 21 53 11.1 +0.5
baz=269
I30M **Mount Dempster** 90.48 25 P P 21 53 11.5 +0.7
baz=269
J30M **Hart River** 90.50 26 IAmb IAmb 21 53 21.9
comp=Z,29nm,1.6s
J30M **Hart River** 90.50 26 P P 21 53 11.1 +0.3
baz=269
G30M **tAoh Zraii Nji** 90.56 23 P P 21 53 11.1 +0.2
baz=270
O30N **Mendenhall** 90.57 29 P P 21 53 11.3 +0.2
baz=270
N31M **Braeburn, Yuko** 90.72 29 P P 21 53 12.4 +0.5
baz=270
F30M **Barrier River** 90.74 23 P P 21 53 12.3 +0.6
baz=270
SIT **Sitka** 90.96 33 P P 21 53 12.9 0.0
baz=270
WHY **Whitehorse** 91.17 30 P P 21 53 14.2 +0.2
baz=271
H31M **Peel River** 91.33 24 P P 21 53 14.8 +0.3
baz=271
G31M **Satah River** 91.33 23 P P 21 53 15.0 +0.6
baz=271
S32K **Killisnoo** 91.36 33 P P 21 53 15.4 +0.7
baz=271
M31M **Drury Creek, Y** 91.38 28 P P 21 53 15.2 +0.4
baz=271
R32K **Eaglecrest** 91.38 32 P P 21 53 15.0 +0.2
baz=271
KIV **Kislovodsk** 91.45 314 *e* P P 21 53 12.4 -3.3
KIV pmax pmax
comp=Z,2.0nm,1.1s
F31M **Tsiigehtchic** 91.52 23 P P 21 53 15.3 0.0
baz=272
INK **Inuvik** 91.58 22 LR LR 22 29 21.2
comp=Z,49nm,20.0s,baz=351,slow=32
INK **Inuvik** 91.58 22 IAmb IAmb 21 53 24.2
comp=Z,14nm,1.3s
INK **Inuvik** 91.58 22 P P 21 53 15.8 +0.3
baz=272
P32M **Atlin** 91.77 31 P P 21 53 16.7 0.0
baz=272
VRH **Novokhopyorsk** 92.00 321 *e* P P 21 53 16.1 -1.8
VRH pmax pmax
comp=Z,9.0nm,0.6s
U33K **Whale Pass** 92.20 34 P P 21 53 18.8 +0.2
baz=272
CRAG **Craig** 92.22 35 P P 21 53 18.7 -0.1
baz=272
Q32M **Nakina River** 92.54 31 P P 21 53 20.3 -0.1
baz=273
WRAK **Wrangell Islan** 92.61 34 P P 21 53 20.8 +0.2
baz=273
KLMR **Klimovskoe** 92.82 331 *e* P P 21 53 18.7 -2.8
KLMR *e** PP PcP 21 53 28.1 +6.0
KLMR *e* 21 57 01.7
KLMR pmax pmax
comp=Z,18nm,1.4s
V35K **Ketchikan** 93.08 35 P P 21 53 23.2 +0.4
baz=273
S34M **Telegraph Cree** 93.19 32 P P 21 53 23.6 +0.3
baz=274
VORD **Divnogorie** 93.54 321 *e* P P 21 53 21.3 -3.7
VORD pmax pmax
comp=Z,6.0nm,1.0s
VORR **Voronezh** 93.55 322 *e* P P 21 53 23.3 -1.7
VORR pmax pmax
comp=Z,24nm,0.4s
VSR **Storozhevoye** 93.60 321 *e* P P 21 53 21.3 -4.0
VSR pmax pmax
comp=Z,5.0nm,1.0s
LPSR **Galich'ya Gora** 93.67 322 *e* P P 21 53 23.9 -1.6
LPSR pmax pmax
comp=Z,15nm,1.0s
DLBC **Dease Lake** 93.74 32 LR LR 22 28 39.1
comp=Z,58nm,21.5s,baz=290,slow=31
A36M **Sachs Harbour** 94.00 18 IAmb IAmb 21 53 44.7
comp=Z,12nm,1.0s
A36M **Sachs Harbour** 94.00 18 P P 21 53 26.8 +0.1
baz=280
APA **Apatity** 94.71 338 ‖ *e* P P 21 53 34.0 +4.0
APA MLR MLR
comp=Z,1μm,3.8s
OBN **Obninsk** 94.86 325 *e* P P 21 53 29.8 -1.1
OBN *e* 21 57 19.6
OBN *e* PPP PPP 21 59 21.5
OBN pmax pmax
comp=Z,9.0nm,0.7s
OBN MLR MLR
comp=Z,34nm,12.0s
C36M **Paulatuk** 94.87 20 IAmb IAmb 21 53 31.1
comp=Z,15nm,1.2s
C36M **Paulatuk** 94.87 20 P P 21 53 30.7 0.0
baz=281
BBB **Bella Bella** 95.40 38 LR LR 22 27 50.8
comp=Z,60nm,21.8s,baz=244,slow=30
SPITS **Spitsbergen Ar** 96.19 349 LR LR 22 38 28.8
comp=Z,26nm,21.6s,baz=56,slow=36
ASF **Jabal al Asfar** 96.41 302 LR LR 22 44 32.6
comp=Z,29nm,18.6s,baz=74,slow=40
KOTAN **Kotaneelee Air** 96.56 30 P P 21 53 38.7 +0.1
baz=280
KMBO **Kilima Mbogo** 96.75 269 P P 21 53 41.1 +0.3
comp=Z,0.7nm,0.3s,baz=180,slow=2.6,SNR=4.0
comp=Z,0.7nm,0.3s
ARCES **ARCESS Array B** 97.08 340 P P 21 53 38.9 -1.9
comp=Z,2.6nm,0.8s,baz=56,slow=5.6,SNR=4.9
ARCES LR LR 22 40 34.2
comp=Z,46nm,21.8s,baz=75,slow=37
comp=Z,2.6nm,0.8s
ARCES **ARCESS Array B** 97.08 340 P P 21 53 40.4 -0.4
ARCES **ARCESS Array B** 97.08 340 P P 21 53 40.4 -0.4
ARCES pmax pmax
comp=Z,62nm,1.8s
EIL **Elat** 98.23 300 LR LR 22 45 05.0
comp=Z,22nm,18.0s,baz=174,slow=40
BRTR **Keskin Array B** 98.44 310 P P 21 53 46.2 -1.6
comp=Z,0.7nm,0.8s,baz=100,slow=4.8,SNR=4.4
BRTR LR LR 22 43 18.1
comp=Z,20nm,18.9s,baz=66,slow=38
comp=Z,0.7nm,0.8s
BRTR **Keskin Array B** 98.44 310 P P 21 53 45.6 -2.2
BRTR **Keskin Array B** 98.44 310 *i* P P 21 53 45.2 -2.6
BRTR pmax pmax
comp=Z,1.0nm,0.8s
FINES **FINESS Array B** 99.14 332 LR LR 22 40 50.1
comp=Z,76nm,20.2s,baz=48,slow=37
FINES **FINESS Array B** 99.14 332 *i* P Pdif 21 53 49.5 -0.7
FINES pmax pmax
comp=Z,5.0nm,1.0s
YKA **Yellowknife Ar** 100.39 26 P Pdif 21 53 56.0 +0.3
comp=Z,2.0nm,0.9s,baz=291,slow=6.8,SNR=3.4
YKA **Yellowknife Ar** 100.39 26 P Pdif 21 53 56.0 +0.3
NVAR **Mina Array Bea** 104.25 51 Pdiff Pdif 21 54 15.7 +1.9

comp=Z,1.2nm,1.0s,baz=254,slow=5.8,SNR=5.6
NVAR Mina Array Bea 104.25 51 Pdif Pdif 21 54 14.7 +0.9
CLL Collm 109.46 325 *e*PKiKP **PKiKP 21 58 39.0 -0.5**
MEM Membach 113.70 327 *d*PKiKP **PKiKP 21 58 47.6 +0.1**
TXAR Lajitas Array 118.22 57 PKP **PKiKP 21 58 57.3 +0.2**
comp=Z,0.2nm,0.5s,baz=344,slow=3.2,SNR=3.9
ESDC Sonseca Array 125.54 321 PKP **PKiKP 21 59 10.8 -0.3**
comp=Z,0.3nm,0.5s,baz=73,slow=1.7,SNR=3.0
ESDC Sonseca Array 125.54 321 PKPdf 21 59 10.0 -0.7
PLCA Paso Flores 133.08 154 PKP **PKiKP 21 59 26.6 +0.3**
comp=Z,3.0nm,0.9s,baz=186,slow=3.1,SNR=5.3
CPUP Villa Florida 150.97 159 PKPbc **PKiKP 22 00 03.4 +0.2**
comp=Z,9.2nm,0.9s,baz=181,slow=0.3,SNR=6.3
ROSC El Rosal 151.41 81 PKPbc **PKiKP 22 00 05.3 +0.4**
comp=Z,18nm,0.4s,baz=178,slow=5.0,SNR=9.7
LPAZ La Paz 152.37 129 PKP **PKPdf 22 00 01.9 +1.9**
comp=Z,2.5nm,0.9s,baz=260,slow=1.2,SNR=7.4
LPAZ PKPbc **PKiKP 22 00 08.7 +1.6**
comp=Z,13nm,0.9s,baz=225,slow=4.5,SNR=29

*SDD **18** 21:50:26.4±1.6, 18°.05N×68°.31W, h140km±12km, MD3.5, ML2.3,MW3.1*
*NEIC **18** 21:50:27.6±1.9, 17°.8N±0°.2×68°.24W±0°.03, h104km±21km, ML2.3/10,Md3.3/9(RSPR),Error ellipse: s-maj=31.0km s-min=2.2km az=186.0*
*RSPR **18** 21:50:28.2, 18°.14N×68°.26W, h118km±2km, MD3.3/9*
ISC 18 21:50:27.9±1.8, 18°.2N±0°.1×68°.23W±0°.05, h119km±13km, n39,σ1°09/53, 20C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.38**	**338**	‖*e*Pg	**Pn**	**21 50 44.6**	**-0.5**
PCDR				⇑*e*Sg	**Sn**	**21 50 58.8**	**+0.8**
PCDR				IAML		21 51 30.0	
	comp=N,54nm,4.6s						
HIDR	**Higuey Centro**	**0.63**	**313**	⇑*e*Sg	**Sn**	**21 51 01.4**	**+0.7**
HIDR				IAML		21 51 03.2	
	comp=N,136nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.08**	**98**		**Pn**	**21 50 48.8**	**-1.8**
CRPR					**Sn**	**21 51 03.7**	**-4.1**
CRPR				IAML		21 51 10.1	
	comp=E,17nm,1.7s						
CRPR	**Cabo Rojo, PR**	**1.08**	**98**	*e*Pg	**Pn**	**21 50 50.5**	**-0.2**
CRPR				⇑*e*Sg	**Sn**	**21 51 08.4**	**+0.6**
CRPR				IAML		21 51 14.3	
	comp=N,14nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.08**	**98**	⇑*e*P	**Pn**	**21 50 50.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.08**	**98**	*e*S	**Sn**	**21 51 07.4**	**-0.4**
LSP	**Las Mesas**	**1.09**	**89**		**Pn**	**21 50 50.7**	**-0.1**
LSP					**Sn**	**21 51 09.2**	**+1.1**
LSP	**Las Mesas**	**1.09**	**89**	⇑*e*P	**Pn**	**21 50 50.7**	**-0.1**
LSP	**Las Mesas**	**1.09**	**89**	*e*S	**Sn**	**21 51 09.2**	**+1.1**
AGPR	**Aguadilla, PR**	**1.11**	**74**		**Pn**	**21 50 51.6**	**+0.6**
AGPR					**Sn**	**21 51 09.8**	**+1.4**
AGPR	**Aguadilla, PR**	**1.11**	**74**	⇑*e*Pg	**Pn**	**21 50 50.7**	**-0.2**
AGPR				⇑*e*Sg	**Sn**	**21 51 09.6**	**+1.2**
AGPR				IAML		21 51 12.1	
	comp=N,39nm,0.2s						
AGPR	**Aguadilla, PR**	**1.11**	**74**	⇑*e*P	**Pn**	**21 50 51.6**	**+0.6**
AGPR	**Aguadilla, PR**	**1.11**	**74**	*e*S	**Sn**	**21 51 09.8**	**+1.4**
MLPR	**Magueyes Islan**	**1.15**	**100**	‖*e*Pg	**Pn**	**21 50 50.8**	**-0.5**
MLPR				⇑*e*Sg	**Sn**	**21 51 08.8**	**-0.3**
MLPR				IAML		21 51 18.6	
	comp=N,4.3nm,0.9s						
MLPR	**Magueyes Islan**	**1.15**	**100**	⇑*e*P	**Pn**	**21 50 51.6**	**+0.3**
MLPR	**Magueyes Islan**	**1.15**	**100**	*e*S	**Sn**	**21 51 09.8**	**+0.7**
DR12	**Loma Pena Alta**	**1.25**	**300**	Pn	**Pn**	**21 50 51.2**	**-1.4**
HATOM	**Hato Mayor del**	**1.25**	**300**	⇑*e*Pg	**Pn**	**21 50 51.3**	**-1.2**
HATOM				⇑*e*Sg	**Sn**	**21 51 11.5**	**+0.3**
HATOM				IAML		21 51 12.7	
	comp=N,22nm,0.3s						
AOPR	**Arecibo Observ**	**1.42**	**82**	Pn	**Pn**	**21 50 53.6**	**-0.7**
AOPR				Sn	**Sn**	**21 51 14.2**	**-0.3**
AOPR	**Arecibo Observ**	**1.42**	**82**	‖*e*Pg	**Pn**	**21 50 54.5**	**+0.1**
AOPR				⇑*e*Sg	**Sn**	**21 51 15.1**	**+0.6**
AOPR				IAML		21 51 18.1	
	comp=N,80nm,0.2s						
AOPR	**Arecibo Observ**	**1.42**	**82**	‖*e*P	**Pn**	**21 50 54.5**	**+0.1**
AOPR	**Arecibo Observ**	**1.42**	**82**	*e*S	**Sn**	**21 51 14.7**	**+0.2**
SMDR	**Samana, DR**	**1.44**	**321**	⇑*e*Sg	**Sn**	**21 51 13.3**	**-1.6**
SMDR				IAML		21 51 22.5	
	comp=N,46nm,0.7s						
UUPR	**Utuado, UPR, P**	**1.44**	**86**		**Pn**	**21 50 55.7**	**+1.1**
UUPR					**Sn**	**21 51 16.0**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.44**	**86**	⇑*e*P	**Pn**	**21 50 55.7**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.44**	**86**	*e*S	**Sn**	**21 51 16.0**	**+1.1**
OBIP	**Obispado Ponce**	**1.55**	**94**	Pn	**Pn**	**21 50 54.5**	**-1.4**
OBIP				Sn	**Sn**	**21 51 17.3**	**+0.1**
OBIP				IAML		21 51 17.4	
	comp=N,16nm,2.2s						
OBIP	**Obispado Ponce**	**1.55**	**94**	⇑*e*P	**Pn**	**21 50 56.2**	**+0.3**
OBIP	**Obispado Ponce**	**1.55**	**94**	*e*S	**Sn**	**21 51 18.1**	**+0.9**
EMPR	**Esperanza - Ma**	**1.65**	**79**		**Pn**	**21 50 55.1**	**-1.9**
EMPR					**Sn**	**21 51 19.2**	**0.0**
EMPR	**Esperanza - Ma**	**1.65**	**79**	⇑*e*P	**Pn**	**21 50 55.1**	**-1.9**
EMPR	**Esperanza - Ma**	**1.65**	**79**	*e*S	**Sn**	**21 51 19.2**	**0.0**
ECPR	**Experimental S**	**1.78**	**85**	⇑*e*P	**Pn**	**21 50 58.7**	**0.0**
ECPR	**Experimental S**	**1.78**	**85**	*e*S	**Sn**	**21 51 22.6**	**+0.4**
BANI	**BANI**	**2.03**	**277**	Pn	**Pn**	**21 51 01.9**	**+0.1**
HUMP	**Col San Antoni**	**2.27**	**90**	Pn	**Pn**	**21 51 04.2**	**-0.5**
HUMP				Sn	**Sn**	**21 51 31.8**	**-1.0**
HUMP				IAML		21 51 37.2	
	comp=E,23nm,0.2s						
HUMP				IAML		21 51 40.1	
	comp=N,14nm,0.2s						
HUMP	**Col San Antoni**	**2.27**	**90**	⇑*e*P	**Pn**	**21 51 05.0**	**+0.4**
HUMP	**Col San Antoni**	**2.27**	**90**	*e*S	**Sn**	**21 51 32.3**	**-0.6**
SDDR	**Presa de Saban**	**3.01**	**286**	Pn	**Pn**	**21 51 15.9**	**+1.6**
SDDR				IAML		21 52 19.8	
	comp=N,15nm,4.5s						
SDDR				IAML		21 52 36.6	
	comp=N,12nm,4.0s						

*CATAC **18** 21:53:10.9±0.7, 14°.N±3°×9°.1W±°, h16km±4km, M3.3/7, MLv3.3/7, Error ellipse: s-maj=7.7km s-min=2.8km az=31.0, confirmed*
*GCG **18** 21:53:12.0±0.9, 13°.64N×91°.00W, h31km±5km, MD3.7, ML3.6*
*SNET **18** 21:53:14.6±0.6, 13°.37N×90°.70W, h16km±8km, ML3.2*
ISC 18 21:53:09.9±1.9, 13°.63N±0°.08×90°.98W±0°.06, h13km±10km, n41,σ0°73/45, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.76**	**11**	*e*P	**Pn**	**21 53 26.4**	**+0.1**
FG16	**Alotenango, Sa**	**0.78**	**36**	*e*P	**Pn**	**21 53 28.1**	**+1.3**
PCG5	**San Vicente Pa**	**0.82**	**45**	*e*P	**Pn**	**21 53 27.5**	**+0.2**
STG5	**El Palmar, Qui**	**0.84**	**335**	*e*P	Pn	21 53 32.2	+4.7
STG8	**El Palmar, Qui**	**0.89**	**336**	*e*P	Pn	21 53 33.1	+4.9
FAME	**Alcaldia de Sa**	**0.96**	**77**	P	**Pg**	**21 53 29.6**	**+1.1**
FAME	**Alcaldia de Sa**	**0.96**	**77**	S	**Sn**	**21 53 42.6**	**0.0**
RTAL	**Retalhuleu**	**1.12**	**322**	S	**Sg**	**21 53 46.5**	**+0.3**
NUBE	**Las Nubes**	**1.20**	**77**	*e*P	**Pg**	**21 53 33.2**	**+0.2**
NUBE				*e*S	**Sn**	**21 53 47.5**	**-1.2**
NUBE	**Las Nubes**	**1.20**	**77**	*e*P	**Pg**	**21 53 33.1**	**+0.2**
NUBE				*e*S	**Sg**	**21 53 48.5**	**-0.2**
NUBE	**Las Nubes**	**1.20**	**77**	P	**Pg**	**21 53 33.2**	**+0.2**
LOAL	**Lomas de Alarc**	**1.22**	**73**	P	**Pg**	**21 53 34.0**	**+0.6**
LOAL	**Lomas de Alarc**	**1.22**	**73**	S	**Sg**	**21 53 50.4**	**+1.0**
RTR	**El Retiro**	**1.32**	**78**	*e*P	**Pg**	**21 53 35.6**	**+0.2**
CEVE	**Cerro Verde**	**1.33**	**82**	*e*P	**Pg**	**21 53 35.5**	**-0.1**
CEVE				*e*S	**Sb**	**21 53 51.9**	**-0.1**
CEVE				IAML		21 53 55.1	
	comp=Z,670nm,0.2s						
CEVE	**Cerro Verde**	**1.33**	**82**	P	**Pg**	**21 53 35.7**	**+0.1**
CEVE	**Cerro Verde**	**1.33**	**82**	S	**Sg**	**21 53 53.9**	**+0.9**
SBLS	**San Blas**	**1.34**	**81**	*e*P	**Pg**	**21 53 35.2**	**-0.5**
SNJE	**San Jose**	**1.36**	**80**	*e*P	**Pg**	**21 53 35.9**	**-0.2**
SNJE				*e*S	**Sb**	**21 53 52.6**	**-0.1**
UNIC	**Universidad Ca**	**1.44**	**76**	S	**Sg**	**21 53 55.7**	**-0.5**
APG	**El Apazote**	**1.45**	**20**	*i*P	**Pg**	**21 53 37.4**	**-0.4**
APG				*e*S	**Sg**	**21 53 56.7**	**-0.1**
JAYA	**Jayaque - finc**	**1.49**	**89**	*e*P	**Pb**	**21 53 36.7**	**-0.8**
JAYA				IAML		21 53 56.9	
	comp=Z,397nm,0.3s						
JAYA	**Jayaque - finc**	**1.49**	**89**	S	**Sb**	**21 53 56.3**	**-0.1**
JAYA	**Jayaque - finc**	**1.49**	**89**	P	**Pg**	**21 53 37.8**	**-0.7**
LALI	**Alcalda de L**	**1.62**	**95**	P	**Pb**	**21 53 39.4**	**-0.3**
LALI	**Alcalda de L**	**1.62**	**95**	S	**Sb**	**21 53 59.9**	**-0.2**
PMON	**Piamonte**	**1.62**	**87**	*e*P	**Pb**	**21 53 39.6**	**-0.2**
PMON				*e*S	**Sn**	**21 53 58.6**	**-0.5**
PMON	**Piamonte**	**1.62**	**87**	P	**Pb**	**21 53 39.6**	**-0.2**
PMON	**Piamonte**	**1.62**	**87**	S	**Sg**	**21 54 01.2**	**-1.0**
BOQS	**Boqueron**	**1.66**	**86**	*e*P	**Pb**	**21 53 40.3**	**-0.1**
UEES	**Universidad Ev**	**1.70**	**87**	S	**Sb**	**21 54 02.3**	**0.0**
MTO3	**Montecristo**	**1.75**	**64**	*e*P	**Pb**	**21 53 41.0**	**-0.9**
MTO3	**Montecristo**	**1.75**	**64**	P	**Pb**	**21 53 41.0**	**-0.9**
MTO3	**Montecristo**	**1.75**	**64**	S	**Sb**	**21 54 04.3**	**+0.4**
PANCS	**Alcalda de**	**1.75**	**91**	S	**Sb**	**21 54 03.3**	**-0.6**
LOMA	**Loma Larga**	**1.76**	**89**	S	**Sb**	**21 54 03.9**	**-0.2**
UDBS	**Universidad Do**	**1.78**	**87**	S	**Sb**	**21 54 04.6**	**0.0**
ESQI	**Esquipulas**	**1.84**	**60**	S	**Sb**	**21 54 07.4**	**+1.0**
PAVA	**Las Pavas**	**1.99**	**87**	S	**Sb**	**21 54 10.0**	**-0.8**
TECO	**Alcaldia de Te**	**2.14**	**92**	S	**Sb**	**21 54 13.7**	**-1.4**
CSGN	**Cosiguina Volc**	**3.40**	**101**	S	**Sn**	**21 54 45.2**	**+2.4**

SJA 18 21:55:07.1±0.6, 28°.26S×69°.13W, h113km±3km, ML3.4, MW3.5, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCA	**Vinchina**	**0.94**	**121**	*e*P	Pn	21 55 29.0	+0.9
VCA				*e*S	Sn	21 55 45.0	+0.9
VCA				IAML		21 55 47.1	
	comp=Z,543nm,0.3s						
AC05	**El Transito**	**1.16**	**240**	*e*P	Pn	21 55 31.4	+1.0
AC05				*e*S	Sn	21 55 49.1	+1.1
AC05				IAML		21 55 49.9	
	comp=Z,322nm,0.2s						
GO03	**Copiapo**	**1.18**	**304**	*e*P	Pn	21 55 31.4	+0.8
GO03				*e*S	Sn	21 55 49.0	+0.7
GO03				IAML		21 55 49.1	
	comp=Z,744nm,0.1s						
AGUA	**GUANDACOL**	**1.35**	**156**	*e*P	Pn	21 55 33.4	+1.0
AGUA				*e*S	Sn	21 55 53.8	+2.1
AGUA				IAML		21 55 55.6	
	comp=Z,218nm,0.2s						
TINO	**Tinogasta**	**1.39**	**82**	*e*P	Pn	21 55 33.2	+0.3
AC02	**Maricunga**	**1.42**	**360**	*e*P	Pn	21 55 34.9	+1.3
AC02				*e*S	Sn	21 55 56.5	+2.8
AC02				IAML		21 55 57.2	
	comp=Z,208nm,0.2s						
LCO	**Las Campanas**	**1.57**	**241**	*e*P	Pn	21 55 36.2	+0.9
LCO				IAML		21 55 57.8	
	comp=Z,1μm,0.5s						
LCO				*e*S	Sn	21 55 57.9	+1.3
AC04	**Llanos de Chal**	**1.72**	**271**	*e*P	Pn	21 55 37.4	+0.6
AC04				*e*S	Sn	21 55 58.8	-0.6
AC04				IAML		21 56 00.9	
	comp=Z,134nm,0.5s						
ACDV	**Cuesta del Vie**	**1.91**	**180**	*e*P	Pn	21 55 34.2	-5.0
ACDV				IAML		21 56 35.8	
	comp=Z,98nm,0.6s						
CO01	**Juntas del Tor**	**1.91**	**206**	*e*P	Pn	21 55 41.4	+2.0
CO01				*e*S	Sn	21 56 06.7	+2.7
AROD	**Rodeo**	**1.93**	**189**	*e*P	Pn	21 55 41.8	+2.2
AANI	**Anillaco**	**2.00**	**107**	*e*P	Pn	21 55 41.8	+1.3
AANI				IAML		21 56 12.7	
	comp=Z,211nm,0.5s						
ACCO	**Cerro Coronel**	**2.32**	**179**	*e*P	Pn	21 55 46.4	+1.7
ACCO				*e*S	Sn	21 56 16.4	+3.0
GO04	**Tololo Observa**	**2.40**	**217**	*e*P	Pn	21 55 46.9	+1.2
GO04				*e*S	Sn	21 56 16.3	+1.2
GO04				IAML		21 56 22.8	
	comp=Z,449nm,0.3s						
AC01	**Pan de Azucar**	**2.48**	**328**	*e*P	Pn	21 55 47.3	+0.9
AC01				*e*S	Sn	21 56 15.5	-1.0
AC01				IAML		21 56 26.2	
	comp=Z,68nm,0.5s						
AVFE	**Valle Fertil**	**2.80**	**149**	*e*P	Pn	21 55 51.6	+0.9
AVFE				*e*S	Sn	21 56 15.1	-9.1
AVFE				IAML		21 56 24.8	
	comp=Z,184nm,0.4s						
CO03	**El Pedregal**	**2.91**	**208**	*e*P	Pn	21 55 53.2	+1.1
CO03				*e*S	Sn	21 56 27.6	+0.9
CO03				IAML		21 56 29.6	
	comp=Z,101nm,0.1s						
GO02	**Mina Guanaco**	**3.11**	**352**	*e*P	Pn	21 55 56.9	+1.9
GO02				*e*S	Sn	21 56 34.6	+2.8
GO02				IAML		21 56 38.9	
	comp=Z,87nm,0.2s						
RTLL	**Cerro Villicun**	**3.11**	**170**	*e*P	Pn	21 55 56.0	+1.3
RTLL				*e*S	Sn	21 56 31.9	+0.5
RTLL				IAML		21 56 35.4	
	comp=Z,149nm,0.3s						
SJA	**San Juan**	**3.29**	**172**	*e*P	Pn	21 56 00.3	+3.2
SJA				*e*S	Sn	21 56 41.5	+5.7
SJA				IAML		21 56 42.6	
	comp=Z,56nm,0.1s						
ZON	**Zonda**	**3.30**	**173**	*e*P	Pn	21 55 58.5	+1.3
ZON				*e*S	Sn	21 56 37.3	+1.4
CO02	**Combarbal**	**3.36**	**209**	*e*P	Pn	21 55 58.1	0.0
CO02				*e*S	Sn	21 56 37.9	+0.5
CO02				IAML		21 56 43.3	
	comp=Z,104nm,0.3s						
CFA	**Coronel Fontan**	**3.42**	**167**	*e*P	Pn	21 55 59.9	+1.0
CFA				*e*S	Sn	21 56 39.0	+0.2
FSA	**Cafayete**	**3.53**	**53**	*e*P	Pn	21 56 02.7	+2.3
RTLS	**Leoncito**	**3.53**	**182**	*e*P	Pn	21 55 58.6	-1.9
RTLS				*e*S	Sn	21 56 42.3	+0.5
RTLS				IAML		21 56 49.2	
	comp=Z,121nm,0.5s						
ACHE	**Chepes**	**3.60**	**144**	*e*S	Sn	21 56 42.9	-0.3
PB14	**IPOC Station P**	**3.79**	**342**	*e*P	Pn	21 56 05.4	+1.3
ACAN	**Cantantal**	**4.34**	**158**	IAML		21 57 02.9	
	comp=Z,156nm,0.4s						
ARCO	**CERRO ARCO**	**4.57**	**178**	*e*P	Pn	21 56 15.8	+1.5
AAGR	**Agrelo**	**4.82**	**177**	*e*P	Pn	21 56 18.9	+1.4
AAGR				*e*S	Sn	21 57 18.6	+6.2
TCA	**Tanti**	**4.99**	**129**	*e*P	Pn	21 56 21.1	+1.2
TCA				*e*S	Sn	21 57 12.4	-4.2
TCA				IAML		21 57 15.4	
	comp=Z,8.3nm,1.8s						
MRA	**San Martin**	**5.09**	**145**	*e*S	Sn	21 57 06.8	-12

*IDC **18** 21:59:12.0±1.0, 18°.43S×120°.36E, h0km, mb3.7/5, mbtmp4.0/10, ML4.0/5, MS3.2/2, Error ellipse: s-maj=30.5km s-min=21.4km az=52.0*
*AUST **18** 21:59:12.4±0.3, 18°.5S±3°×12°.0E±°, h10km, mb4.4/12, ML3.8/6, Error ellipse: s-maj=8.0km s-min=6.0km az=123.1*
*NEIC **18** 21:59:13.3±2.3, 18°.31S±0°.07×120°.40E±0°.08, h10km±1km, mb4.3/8, Error ellipse: s-maj=14.4km s-min=10.3km az=119.0*
ISC 18 21:59:12.4±0.5, 18°.28S±0°.04×120°.33E±0°.04, h10km, n76, σ2°.21/80, mb4.1/9, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAAN	**Eighty Mile Be**	**1.49**	**131**	P	**Pg**	**21 59 42.9**	**+1.8**
CAAN				S	**Sg**	**22 00 03.8**	**+3.3**
AUBRM	**Broome Senior**	**1.84**	**80**	P	**Pg**	**21 59 47.7**	**0.0**
AUBRM				S	**Sg**	**22 00 13.1**	**+1.6**
MBWA	**Marble Bar**	**2.92**	**191**	P	**Pn**	**22 00 00.7**	**+1.7**
MBWA				S	**Sn**	**22 00 34.1**	**-0.2**
MBWA	**Marble Bar**	**2.92**	**191**		**Pn**	**22 00 00.1**	**+1.1**
PSAC1	**Pilbara Seismi**	**3.28**	**189**	P	**Pn**	**22 00 05.4**	**+1.4**
PSAC1				S	**Sn**	**22 00 42.8**	**-0.2**
PSAC2	**Pilbara Seismi**	**3.29**	**187**	P	**Pn**	**22 00 05.5**	**+1.4**
PSAC2				S	**Sn**	**22 00 43.5**	**0.0**
PSA00	**Pilbara Seismi**	**3.31**	**188**	P	**Pn**	**22 00 05.9**	**+1.5**
PSA00				S	**Sn**	**22 00 43.6**	**-0.3**
PSA00	**Pilbara Seismi**	**3.31**	**188**	Pn	**Pn**	**22 00 05.2**	**+0.8**
PSA00	**Pilbara Seismi**	**3.31**	**188**	Pn	**Pn**	**22 00 04.5**	**+0.1**
PSAB3	**Pilbara Seismi**	**3.33**	**188**	P	**Pn**	**22 00 06.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**5.05**	**89**	P	**Pn**	**22 00 29.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**5.05**	**89**	Pn	**Pn**	**22 00 29.1**	**+0.8**
	4.8nm,0.3s,baz=264,slow=12,SNR=107						
FITZ				Sn	**Sn**	**22 01 22.8**	**-4.0**
	27nm,0.3s,baz=360,slow=19,SNR=4.1 11nm,0.3s						
FITZ	**Fitzroy Crossi**	**5.05**	**89**	Pn	**Pn**	**22 00 28.9**	**+0.6**
GIRL	**Giralia**	**7.18**	**232**	P	**Pn**	**22 00 58.1**	**+0.6**
GIRL				S	**Sn**	**22 02 13.5**	**-5.6**
GIRL	**Giralia**	**7.18**	**232**	Pn	**Pn**	**22 00 58.3**	**+0.8**
CVQOZ	**Cooralya Stati**	**8.46**	**222**	P	**Pn**	**22 01 15.3**	**+0.2**
	comp=Z,215nm,0.5s,comp=Z,1.5nm						
CVQOZ				S	**Sn**	**22 02 44.2**	**-6.6**
KNRA	**Kununurra**	**8.47**	**74**	P	**Pn**	**22 01 16.6**	**+1.3**
	comp=Z,0.2nmcomp=Z,32nm,0.5s						
KNRA	**Kununurra**	**8.47**	**74**	Pn	**Pn**	**22 01 15.1**	**-0.2**
MEEK	**Meekatharra**	**8.47**	**190**	P	**Pn**	**22 01 14.9**	**-0.5**
	comp=Z,0.4nmcomp=Z,30nm,0.6s						
BATI	**Baumata**	**8.65**	**22**	Pn	**Pn**	**22 01 22.1**	**+4.4**
	comp=Z,5.0nm,0.3s,baz=186,slow=10,SNR=2.6						
BATI				Sn	**Sn**	**22 02 55.2**	**-0.2**
	comp=Z,6.6nm,0.3s,baz=123,slow=19,SNR=5.9 comp=Z,8.3nm,0.3s						
SOEI	**Soe**	**9.29**	**25**	Pn	**Pn**	**22 01 25.8**	**-0.8**
WRKA	**Warakurna**	**10.01**	**134**	P	**Pn**	**22 01 37.1**	**+0.7**
	comp=Z,0.0nmcomp=Z,5.4nm,0.4s						
TWSI	**Taliwang, Sumb**	**10.05**	**340**	P	**Pn**	**22 01 36.4**	**-0.7**
	comp=Z,13nm,0.7s,comp=Z,0.0nm						
MORW	**Morawa**	**11.44**	**199**	P	**Pn**	**22 01 54.0**	**-2.0**
MORW	**Morawa**	**11.44**	**199**	Pn	**Pn**	**22 01 54.0**	**-2.0**
JAGI	**Jajag, Banyuwa**	**11.45**	**328**	P	**Pn**	**22 01 54.4**	**-1.7**
	comp=Z,16nm,1.0s						
JAGI	**Jajag, Banyuwa**	**11.45**	**328**	Pn	**Pn**	**22 01 53.8**	**-2.4**
MTN	**Manton Dam**	**11.72**	**64**	P	**Pn**	**22 01 59.2**	**-0.7**
MTN	**Manton Dam**	**11.72**	**64**	Pn	**Pn**	**22 01 59.4**	**-0.5**
DRS	**Darwin Rock St**	**11.73**	**62**	P	**Pn**	**22 02 01.6**	**+1.7**
BLDU	**Ballidu**	**12.72**	**194**	P	**Pn**	**22 02 11.4**	**-2.0**
KDU	**Kakadu**	**12.95**	**66**	P	**Pn**	**22 02 15.3**	**-1.4**
KMBL	**Kambalda**	**13.11**	**174**	P	**Pn**	**22 02 16.8**	**-2.0**
WRA	**Warramunga Arr**	**13.35**	**99**	Pn	**Pn**	**22 02 21.2**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=270,slow=14,SNR=28						
WRA				Sn	**Sn**	**22 04 42.4**	**-8.2**
	comp=Z,3.6nm,0.3s,baz=290,slow=24,SNR=12						
WRA				Lg	Lg	22 06 17.3	
	baz=276,slow=32 comp=Z,1.8nm,0.5s						
WRAB	**Tennant Creek**	**13.36**	**99**	Pn	**Pn**	**22 02 20.1**	**-2.2**
WB0	**Warramunga Arr**	**13.38**	**99**	Pn	**Pn**	**22 02 20.9**	**-1.7**
KLBR	**Kellerberrin**	**13.46**	**189**	P	**Pn**	**22 02 22.0**	**-1.6**
	comp=Z,75nm,0.5s						
WR8	**Warramunga Arr**	**13.50**	**99**	Pn	**Pn**	**22 02 22.3**	**-1.8**
ASAR	**Alice Springs**	**13.76**	**115**	Pn	**Pn**	**22 02 26.5**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=292,slow=12,SNR=18						
ASAR				Sn	**Sn**	**22 04 54.8**	**-6.1**
	comp=Z,1.9nm,0.3s,baz=305,slow=24,SNR=18						
ASAR				Lg	Lg	22 06 29.8	
	baz=297,slow=29 comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**13.76**	**115**	Pn	**Pn**	**22 02 27.3**	**-0.5**
AS31	**Alice Springs**	**13.77**	**115**	Pn	**Pn**	**22 02 27.6**	**-0.2**
UGM	**Wanagama**	**14.04**	**316**	Pn	**Pn**	**22 02 29.9**	**-1.7**
MUN	**Mundaring**	**14.14**	**194**	P	**Pn**	**22 02 31.0**	**-1.9**
	comp=Z,14nm,0.6s						
FORT	**Forrest**	**14.29**	**152**	Pn	**Pn**	**22 02 32.8**	**-2.1**
DNDOZ	**Balladonia**	**14.48**	**168**	P	**Pn**	**22 02 35.2**	**-2.3**
NWAO	**Narrogin (SRO)**	**14.85**	**190**	P	**Pn**	**22 02 39.8**	**-2.8**
NWAO	**Narrogin (SRO)**	**14.85**	**190**	Pn	**Pn**	**22 02 40.1**	**-2.5**
	comp=Z,10nm,0.3s,baz=16,slow=12,SNR=50						
NWAO				Sn	Sn	22 05 11.7	-16
	comp=Z,4.9nm,0.3s,baz=88,slow=4.8,SNR=6.0						
NWAO				Lg	Lg	22 06 55.1	
	comp=Z,0.7nm,0.3s,baz=101,slow=24,SNR=0.9 comp=Z,25nm,0.4s						
NWAO	**Narrogin (SRO)**	**14.85**	**190**	Pn	**Pn**	**22 02 40.0**	**-2.6**
OOD	**Oodnadatta**	**17.00**	**127**	P	**Pn**	**22 03 08.7**	**-1.7**
MULG	**Mulgathing**	**17.29**	**136**	P	**P**	**22 03 17.0**	**+1.5**
QIS	**Mount Isa**	**18.32**	**100**	P	**P**	**22 03 28.8**	**+1.8**
	comp=Z,8.4nm,0.5s						
BBOO	**Buckleboo**	**20.23**	**139**	P	Pn	22 03 48.9	-0.8
	comp=Z,15nm,0.6s						
BBOO	**Buckleboo**	**20.23**	**139**		Pn	22 03 48.4	-1.4
BBOO				IAmb	IAmb	22 03 49.8	
	comp=Z,9.8nm,0.6s						
LCRK	**Leigh Creek**	**20.27**	**130**	P	Pn	22 03 49.4	-0.8
	comp=Z,6.3nm,1.7s						

IDE					Sg	22 20 26.4	+0.5		
IDE	**Isla Desecheo**	**0.82 201**	⇑	*e*P	**Pb**	**22 20 14.9**	**0.0**		
IDE	**Isla Desecheo**	**0.82 201**		*e*S	**Sg**	**22 20 26.4**	**+0.5**		
AOPR	**Arecibo Observ**	**0.89 154**			**Pb**	**22 20 15.8**	**-0.3**		
AOPR					**Sb**	**22 20 27.6**	**-0.2**		
AOPR	**Arecibo Observ**	**0.89 154**	⇑	*e*Pg	**Pb**	**22 20 16.1**	**-0.1**		
AOPR			⇑	*e*Sg	**Sn**	**22 20 29.1**	**-0.4**		
AOPR				IAML		22 20 30.8			
	comp=N,131nm,0.4s								
AOPR	**Arecibo Observ**	**0.89 154**	⇑	*e*P	**Pg**	**22 20 16.2**	**-0.2**		
AOPR	**Arecibo Observ**	**0.89 154**		*e*S	**Sg**	**22 20 28.7**	**+0.6**		
EMPR	**Esperanza - Ma**	**0.90 138**			**Pn**	**22 20 17.9**	**+0.9**		
EMPR					**Sn**	**22 20 30.2**	**+0.5**		
EMPR	**Esperanza - Ma**	**0.90 138**	⇑	*e*P	**Pn**	**22 20 17.9**	**+0.9**		
EMPR	**Esperanza - Ma**	**0.90 138**		*e*S	**Sn**	**22 20 30.2**	**+0.5**		
LSP	**Las Mesas**	**0.97 176**			**Pb**	**22 20 17.6**	**0.0**		
LSP					**Sb**	**22 20 30.6**	**+0.4**		
LSP	**Las Mesas**	**0.97 176**	⇓	*e*P	**Pb**	**22 20 17.6**	**0.0**		
LSP	**Las Mesas**	**0.97 176**		*e*S	**Sb**	**22 20 30.6**	**+0.4**		
UUPR	**Utuado, UPR, P**	**0.99 155**			**Pn**	**22 20 18.9**	**+0.6**		
UUPR					**Sn**	**22 20 31.8**	**-0.1**		
UUPR	**Utuado, UPR, P**	**0.99 155**	⇓	*e*P	**Pn**	**22 20 18.9**	**+0.6**		
UUPR	**Utuado, UPR, P**	**0.99 155**		*e*S	**Sn**	**22 20 31.8**	**-0.1**		
ECPR	**Experimental S**	**1.12 138**	⇓	*e*P	**Pg**	**22 20 20.5**	**-0.3**		
ECPR	**Experimental S**	**1.12 138**		*e*S	**Sg**	**22 20 35.4**	**-0.1**		
CRPR	**Cabo Rojo, PR**	**1.14 178**			**Pn**	**22 20 19.5**	**-0.9**		
CRPR					**Sb**	**22 20 32.4**	**-2.6**		
CRPR				IAML		22 20 37.1			
	comp=N,69nm,0.2s								
CRPR				IAML		22 20 39.7			
	comp=E,53nm,0.2s								
CRPR	**Cabo Rojo, PR**	**1.14 178**	⇑	*e*Pg	**Pn**	**22 20 19.6**	**-0.7**		
CRPR			⇑	*e*Sg	**Sb**	**22 20 35.2**	**+0.2**		
CRPR				IAML		22 20 37.0			
	comp=N,82nm,0.2s								
CRPR	**Cabo Rojo, PR**	**1.14 178**	⇓	*e*P	**Pn**	**22 20 20.1**	**-0.3**		
CRPR	**Cabo Rojo, PR**	**1.14 178**		*e*S	**Sb**	**22 20 35.3**	**+0.3**		
MLPR	**Magueyes Islan**	**1.18 175**	⇑	*e*Pg	**Pn**	**22 20 20.3**	**-0.6**		
MLPR			⇑	*e*Sg	**Sb**	**22 20 35.9**	**-0.3**		
MLPR				IAML		22 20 45.2			
	comp=N,15nm,0.2s								
MLPR	**Magueyes Islan**	**1.18 175**	⇓	*e*P	**Pn**	**22 20 20.4**	**-0.5**		
MLPR	**Magueyes Islan**	**1.18 175**		*e*S	**Sb**	**22 20 36.0**	**-0.2**		
GBPR	**Guanica, Bosqu**	**1.20 167**			**Pg**	**22 20 21.9**	**-0.4**		
GBPR	**Guanica, Bosqu**	**1.20 167**	⇓	*e*P	**Pg**	**22 20 21.9**	**-0.4**		
OBIP	**Obispado Ponce**	**1.22 154**		Pn	**Pn**	**22 20 21.2**	**-0.3**		
OBIP				Sn	**Sb**	**22 20 37.1**	**-0.2**		
OBIP				IAML		22 20 39.3			
	comp=N,64nm,0.3s								
OBIP				IAML		22 20 41.9			
	comp=E,54nm,0.4s								
OBIP	**Obispado Ponce**	**1.22 154**	⇑	*e*P	**Pn**	**22 20 21.4**	**-0.1**		
OBIP	**Obispado Ponce**	**1.22 154**		*e*S	**Sn**	**22 20 37.8**	**+0.1**		
PCPR	**Punta Cana, DR**	**1.32 241**	⇑	*e*Pg	**Pn**	**22 20 22.3**	**-0.5**		
PCDR			⇑	*e*Sg	**Sb**	**22 20 40.9**	**+0.8**		
PCDR				IAML		22 20 42.9			
	comp=N,82nm,0.4s								
GCPR	**Guaynabo City**	**1.32 129**		Pn	**Pb**	**22 20 22.9**	**-0.6**		
GCPR	**Guaynabo City**	**1.32 129**	⇓	*e*P	**Pb**	**22 20 23.1**	**-0.4**		
GCPR	**Guaynabo City**	**1.32 129**		*e*S	**Sn**	**22 20 39.8**	**-0.3**		
HIDR	**Higuey Centro**	**1.58 250**	⇑	*e*Pg	**Pn**	**22 20 24.9**	**-1.5**		
HIDR			⇑	*e*Sg	**Sb**	**22 20 48.3**	**+0.7**		
HIDR				IAML		22 21 08.8			
	comp=N,85nm,0.2s								
HUMP	**Col San Antoni**	**1.60 129**		Pn	**Pn**	**22 20 26.5**	**-0.1**		
HUMP				IAML		22 20 54.3			
	comp=N,32nm,0.2s								
HUMP				IAML		22 20 56.2			
	comp=E,49nm,0.2s								
MIDR	**Miches**	**1.79 265**	⇑	*e*Pg	**Pn**	**22 20 29.6**	**+0.2**		
DR12	**Loma Pena Alta**	**2.13 261**		Pn	**Pn**	**22 20 34.4**	**+0.3**		
HATOM	**Hato Mayor del**	**2.13 261**	⇑	*e*Pg	**Pn**	**22 20 34.6**	**+0.5**		
HATOM				*e*Sg	**Sn**	**22 20 60.0**	**-0.3**		
HATOM				IAML		22 21 08.4			
	comp=N,20nm,0.8s								

*NNC **18** 22:33:18.4±0.4,43.03N×72.40E,h0km,mb3.6,mpv3.4,*
Error ellipse: s-maj=7.3km s-min=2.4km az=6.0
*KRNET **18** 22:33:19.8±0.1,43.02N×72.49E,h22km,mb3.4*
*SOME **18** 22:33:19.9,43.00N×72.43E,h10km*
*KNET **18** 22:33:20.4±0.3,43.01N×72.56E,h15km±1km,ml2.5,Error ellipse: s-maj=2.8km s-min=2.1km az=17.0*

ISC 18 22:33:18.4±1.1,**43.11N**±0.03×**72.51E**±0.02,**h13**km±9km,
n65,σ1°**33**/103,**41C-16D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**0.64 124**		P	**Pb**	**22 33 31.3**	**-0.2**	
	10nm,0.1s							
MRKS				S	**Sg**	**22 33 39.5**	**+0.1**	
	101nm,0.1s							
MRKS	**Merke**	**0.64 124**		*e*P	**Pb**	**22 33 31.3**	**-0.2**	
MRKS				*e*S	**Sg**	**22 33 39.6**	**+0.1**	
MRKS	**Merke**	**0.64 124**		*e*P	**Pb**	**22 33 31.3**	**-0.2**	
	10nm,0.1s							
MRKS				*e*S	**Sg**	**22 33 39.5**	**+0.1**	
	101nm,0.1s							
EKS2	**Erkin-Say**	**1.04 115**	⇓	P	**Pn**	**22 33 38.7**	**+0.1**	
	15nm,0.1s,SNR=21							
EKS2			⇓	S	**Sn**	**22 33 53.4**	**+0.3**	
	55nm,0.2s							
EKS2	**Erkin-Say**	**1.04 115**	⇑	*i*P	**Pn**	**22 33 38.8**	**+0.1**	
EKS2			⇑	*i*S	**Sn**	**22 33 52.8**	**-0.3**	
ARK	**Arkit**	**1.37 197**	⇑	*i*P	**Pn**	**22 33 43.2**	**-0.1**	
ARK			⇑	*i*S	**Sb**	**22 33 58.0**	**-0.9**	
KK31	**Karatay Array**	**1.46 270**		P	**Pn**	**22 33 44.5**	**+0.1**	
	3.4nm,0.2s,baz=96,slow=17,SNR=168							
KK31			⇑	S	**Sn**	**22 34 02.4**	**-1.0**	
	27nm,0.3s,baz=90,slow=24							
USP	**Ospenovka**	**1.47 83**	⇑	P	**Pg**	**22 33 47.1**	**+0.5**	
	13nm,0.2s,SNR=16							
USP			⇓	S	**Sg**	**22 34 07.7**	**+2.0**	
	52nm,0.1s							
USP	**Ospenovka**	**1.47 83**	⇑	*i*P	**Pg**	**22 33 46.9**	**+0.3**	
USP			⇑	*i*S	**Sg**	**22 34 06.9**	**+1.3**	
AAK	**Ala-Archa**	**1.54 107**	⇑	P	**Pg**	**22 33 48.0**	**+0.1**	
	15nm,0.2s,SNR=39							
AAK			⇓	S	**Sg**	**22 34 08.6**	**+0.7**	
	34nm,0.2s							
AAK	**Ala-Archa**	**1.54 107**	⇓	P	**Pg**	**22 33 48.3**	**+0.4**	
	1.2nm,0.3s							
AAK			⇓	S	**Sg**	**22 34 09.3**	**+1.4**	
	5.9nm,0.4s							
AAK	**Ala-Archa**	**1.54 107**	⇑	*i*P	**Pg**	**22 33 47.6**	**-0.3**	
AAK			⇑	*i*S	**Sg**	**22 34 08.2**	**+0.3**	
FRU1	**Bishkek**	**1.59 100**	⇑	*i*P	**Pg**	**22 33 48.4**	**-0.5**	
FRU1			⇑	*i*S	**Sg**	**22 34 09.5**	**0.0**	
SGDS	**Sogindy**	**1.59 77**		P	**Sg**	**22 33 49.3**	**+0.4**	
SGDS				S	**Sg**	**22 34 10.4**	**+0.9**	
CHMS	**Chumysh**	**1.65 93**	⇑	P	**Pg**	**22 33 49.8**	**-0.2**	
	15nm,0.2s,SNR=26							
CHMS			⇓	S	**Sg**	**22 34 12.9**	**+1.4**	
	46nm,0.2s							
CHMS	**Chumysh**	**1.65 93**	⇑	*i*P	**Pg**	**22 33 49.7**	**-0.3**	
CHMS			⇑	*i*S	**Sg**	**22 34 11.8**	**+0.3**	
UCH	**Uchtor**	**1.72 120**	⇑	P	**Pg**	**22 33 50.9**	**-0.6**	
	7.7nm,0.1s,SNR=27							
UCH			⇓	S	**Sg**	**22 34 14.0**	**+0.1**	
	36nm,0.2s							
UCH	**Uchtor**	**1.72 120**	⇓	*i*P	**Pb**	**22 33 50.6**	**+0.5**	
UCH			⇓	*i*S	**Sg**	**22 34 13.3**	**-0.6**	
ARSB	**Arslanbob**	**1.82 169**	⇑	*i*P	**Pb**	**22 33 50.8**	**-0.8**	
ARSB			⇑	*i*S	**Sb**	**22 34 13.9**	**-0.4**	
KBK	**Karagaybulak**	**1.85 103**	⇑	P	**Pg**	**22 33 53.3**	**-0.6**	
	20nm,0.2s,SNR=13							
KBK			⇓	S	**Sg**	**22 34 18.8**	**+0.9**	
	48nm,0.2s							
KBK	**Karagaybulak**	**1.85 103**	⇑	*i*P	**Pb**	**22 33 52.5**	**+0.3**	
KBK			⇑	*i*S	**Sb**	**22 34 16.6**	**+1.3**	
TRKS	**Terek-Say**	**1.88 213**	⇑	*i*P	**Pb**	**22 33 52.1**	**-0.4**	
TRKS			⇑	*i*S	**Sb**	**22 34 15.8**	**-0.1**	
BRLS	**Borolday**	**1.96 269**		Pg	**Pg**	**22 33 56.2**	**+0.3**	
	3.6nm,0.2s							
BRLS				Lg	Lg	22 34 22.2		
	29nm,0.2s							
BRLS	**Borolday**	**1.96 269**		*e*P	**Pg**	**22 33 56.2**	**+0.3**	
	3.6nm,0.2s							
BRLS				*e*S	**Sg**	**22 34 22.2**	**+1.0**	
	29nm,0.2s							
IUG	**luzhnay**	**2.06 243**		Pg	**Pb**	**22 33 55.7**	**0.0**	
	60nm,0.2s							
IUG				Lg	Lg	22 34 21.5		
	61nm,0.3s							
IUG	**luzhnay**	**2.06 243**		*e*P	**Pb**	**22 33 55.7**	**0.0**	
IUG				*e*S	**Sb**	**22 34 21.5**	**+0.2**	
BTLS	**Baital**	**2.23 29**		Pg	**Pg**	**22 34 01.9**	**+0.8**	
	2.5nm,0.1s							
BTLS				Lg	Lg	22 34 31.4		
	14nm,0.2s							
BTLS	**Baital**	**2.23 29**		*e*P	**Pg**	**22 34 01.9**	**+0.8**	
	2.5nm,0.1s							
BTLS				*e*S	**Sg**	**22 34 31.4**	**+1.5**	
	14nm,0.2s							
TKM2	**Tokmak 2**	**2.27 94**	⇑	P	**Pb**	**22 33 59.6**	**+0.2**	
	17nm,0.3s,SNR=31							
TKM2			⇑	S	**Sg**	**22 34 30.7**	**-0.9**	
	30nm,0.1s							
TKM2	**Tokmak 2**	**2.27 94**	⇑	*i*P	**Pb**	**22 33 58.6**	**-0.8**	
TKM2			⇑	*i*S	**Sb**	**22 34 27.2**	**-0.3**	
KRBS	**Karabastau**	**2.38 75**		Pg	**Pg**	**22 34 03.6**	**-0.4**	
	2.0nm,0.1s							
KRBS				Lg	Lg	22 34 34.9		
	9.0nm,0.3s							
KRBS	**Karabastau**	**2.38 75**		*e*P	**Pg**	**22 34 03.6**	**-0.4**	
KRBS				*e*S	**Sg**	**22 34 34.9**	**-0.1**	
DGS	**Degeres**	**2.39 86**		Pg	**Pg**	**22 34 03.9**	**-0.4**	
	11nm,0.2s							
DGS				Lg	Lg	22 34 35.3		
	19nm,0.3s							
DGS	**Degeres**	**2.39 86**		*e*P	**Pg**	**22 34 03.9**	**-0.4**	
	11nm,0.2s							
DGS				*e*S	**Sg**	**22 34 35.3**	**0.0**	
	19nm,0.3s							
SALK	**Salom-Alik**	**2.43 156**	⇑	*e*P	**Pn**	**22 33 59.6**	**+1.7**	
SALK			⇑	*i*S	**Sn**	**22 34 29.0**	**+1.4**	
KST	**Kastek**	**2.54 90**		Pg	**Pg**	**22 34 06.3**	**-0.7**	
	5.6nm,0.2s							
KST				Lg	Lg	22 34 39.3		
	38nm,0.5s							
KST	**Kastek**	**2.54 90**		*e*P	**Pg**	**22 34 06.3**	**-0.7**	
	5.6nm,0.2s							
KST				*e*S	**Sg**	**22 34 39.3**	**-0.5**	
	38nm,0.5s							
BOOM	**Boomskoye usch**	**2.60 103**	⇑	*i*P	**Pb**	**22 34 02.9**	**-2.1**	
BOOM			⇑	*i*S	**Sb**	**22 34 34.8**	**-2.1**	
MTBS	**Maitube**	**2.87 88**		Lg	Lg	22 34 49.3		
	11nm,0.3s							
MTBS	**Maitube**	**2.87 88**		*e*P	**Pg**	**22 34 12.2**	**-1.2**	
	2.2nm,0.6s							
MTBS				*e*S	**Sg**	**22 34 49.3**	**-1.4**	
	11nm,0.3s							
ULHL	**Ulahol**	**2.89 106**	⇑	P	**Pb**	**22 34 08.3**	**-1.6**	
	3.2nm,0.2s							
ULHL	**Ulahol**	**2.89 106**		*i*P	**Pn**	**22 34 07.0**	**+2.8**	
ULHL				*i*S	**Sn**	**22 34 41.5**	**+2.6**	
IZV	**Izvestkoviy**	**3.01 90**		Pg	**Pg**	**22 34 15.0**	**-1.0**	
	1.9nm,0.1s							
IZV				Lg	Lg	22 34 54.4		
	9.9nm,0.2s							
IZV	**Izvestkoviy**	**3.01 90**		*e*P	**Pg**	**22 34 15.0**	**-1.0**	
	1.9nm,0.1s							
IZV				*e*S	**Sg**	**22 34 54.4**	**-0.7**	
	9.9nm,0.2s							
KTBS	**Karatobe**	**3.10 77**		Lg	Lg	22 34 57.3		
	10nm,0.3s							
JNKS	**Jany-Kuch**	**3.11 130**	⇑	*e*P	**Pn**	**22 34 09.8**	**+2.4**	
JNKS			⇑	*e*S	**Sn**	**22 34 46.0**	**+1.5**	
SFK	**Sufi-Kurgan**	**3.18 166**	⇓	*i*P	**Pn**	**22 34 10.0**	**+1.7**	
SFK			⇓	*i*S	**Sn**	**22 34 46.7**	**+0.5**	
TNSS	**Tian-Shan**	**3.26 90**		Lg	Lg	22 35 01.4		
	3.1nm,0.3s							
TNSS	**Tian-Shan**	**3.26 90**		*e*P	**Pg**	**22 34 19.3**	**-1.4**	
	0.5nm,0.1s							
TNSS				*e*S	**Sg**	**22 35 01.4**	**-1.5**	
	3.1nm,0.3s							
MDOK	**Medeo**	**3.33 88**		Lg	Lg	22 35 03.7		
	6.5nm,0.3s							
KOTS	**Kotyrbulak**	**3.37 86**		Pg	**Pg**	**22 34 23.6**	**+0.7**	
	3.1nm,0.2s							
KOTS	**Kotyrbulak**	**3.37 86**		*e*P	**Pg**	**22 34 23.6**	**+0.7**	
	3.1nm,0.2s							
KOTS				*e*S	**Sg**	**22 35 08.8**	**+2.1**	
	7.5nm,0.2s							
KDJ	**Kajisay**	**3.59 104**	⇑	*e*P	**Pn**	**22 34 16.7**	**+2.9**	
KDJ			⇑	*i*S	**Sn**	**22 34 58.5**	**+2.4**	
ARXS	**Arharly**	**4.02 72**		Pg	**Pg**	**22 34 35.1**	**-0.2**	
	1.5nm,0.2s							
ARXS	**Arharly**	**4.02 72**		*e*P	**Pg**	**22 34 35.1**	**-0.2**	
	1.5nm,0.2s							
ARXS				*e*S	**Sg**	**22 35 28.6**	**+1.3**	
	9.3nm,0.3s							
KURS	**Kuram**	**4.15 83**		Lg	Lg	22 35 30.5		
	5.1nm,0.4s							
TARG	**Taragay, Kyrgy**	**4.16 108**	⇓	*e*P	**Pn**	**22 34 24.7**	**+2.8**	
TARG			⇓	*i*S	**Sn**	**22 35 12.2**	**+1.7**	
SATY	**Saty**	**4.32 89**		Pg	**Pg**	**22 34 40.2**	**-0.9**	
	0.5nm,0.1s							
BLB	**Baldybastay**	**4.45 75**		Pg	**Pg**	**22 34 42.3**	**-1.3**	
	3.4nm,0.2s							
KPKS	**Kokpek**	**4.53 83**		Pg	**Pg**	**22 34 44.0**	**-1.1**	
	0.2nm,0.1s							
KPKS	**Kokpek**	**4.53 83**		*e*P	**Pg**	**22 34 44.0**	**-1.1**	
	0.2nm,0.1s							
KPKS				*e*S	**Sg**	**22 35 43.6**	**0.0**	
	8.4nm,0.3s							
UZB	**Uzynbulak**	**4.77 87**		Lg	Lg	22 35 48.1		
	6.1nm,0.3s							
UZB	**Uzynbulak**	**4.77 87**		*e*P	**Pg**	**22 34 46.5**	**-3.2**	
	2.5nm,0.3s							
UZB				*e*S	**Sg**	**22 35 48.1**	**-3.4**	
	6.1nm,0.3s							
MAKZ	**Makanchi**	**7.67 58**	⇑	Pn	Pn	22 35 20.6	+11	
	16nm,3.2s							
MAKZ			⇑	Sn	**Sb**	**22 36 58.2**	**-4.2**	
	2.4nm,1.2s							
MAKZ			⇑	Lg	Lg	22 37 45.8		
	7.8nm,1.8s							
MK31	**Makanchi Array**	**7.86 59**		Pn	Pn	22 35 23.0	+11	
	0.5nm,0.7s,baz=237,slow=13,SNR=4.8							
MK31			⇑	Sn	**Sb**	**22 37 03.2**	**-4.6**	
	0.9nm,0.4s,baz=200,slow=24							
MK31			⇓	Lg	Lg	22 37 51.4		
	1.5nm,0.5s,baz=233,slow=29							

*GCG **18** 22:41:36.0±2.1,14.66N×93.04W,h50km±195km,MD3.9*
*MEX **18** 22:41:37.0±0.8,14.73N×92.88W,h84km±40km,MD4.0*

ISC 18 22:41:32.1±2.3,**14.5N**±0.1×**93.03W**±0.10,**h81**km±35km,
n12,σ2°**18**/21,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PATR	**El Naranjo**	**0.97**	**52**	*e*P		**Pn**	**22 41 52.0**	**+1.0**
PATR				*e*S		**Sn**	**22 42 04.5**	**-0.8**
SMCA	**Catarina**	**0.98**	**70**	*i*P		**Pn**	**22 41 53.3**	**+2.3**
CHUJ	**Union Juarez**	**1.06**	**57**	*e*P		**Pn**	**22 41 53.5**	**+1.3**
CHUJ				*e*S		**Sn**	**22 42 05.2**	**-1.9**
PAVE	**Pavencul**	**1.06**	**51**	*e*P		**Pn**	**22 41 53.6**	**+1.4**
PAVE				*e*S		**Sn**	**22 42 06.0**	**-1.1**
STG8	**El Palmar, Qui**	**1.63**	**92**	*e*P		**Pn**	**22 41 59.4**	**+0.1**
CCIG	**Comitan**	**1.95**	**26**	*e*P		**Pn**	**22 42 04.4**	**+0.9**
CCIG				*e*S		**Sn**	**22 42 24.4**	**-3.0**
CCIG	**Comitan**	**1.95**	**26**	*e*P		**Pn**	**22 42 07.3**	**+3.8**
TGIG		**2.25**	**358**	*e*P		**Pn**	**22 42 08.8**	**+1.5**
TGIG				*e*S		**Sn**	**22 42 31.0**	**-3.3**
TGIG		**2.25**	**358**	*i*P		**Pn**	**22 42 09.1**	**+1.7**
TGIG				*e*S		**Sn**	**22 42 33.9**	**-0.4**
UXUV	**UXUV**	**2.98**	**339**	*e*P		**Pn**	**22 42 19.2**	**+2.0**
UXUV				*e*S		**Sn**	**22 42 52.2**	**+0.3**
NEUV	**Arroyo Zacate**	**4.14**	**320**	*e*P		**Pn**	**22 42 33.0**	**0.0**
NEUV				*e*S		**Sn**	**22 43 16.9**	**-3.3**
TXIG	**Tlaxiaco**	**5.30**	**301**	*e*P		**Pn**	**22 42 51.4**	**+2.3**
TXIG				*e*S		**Sn**	**22 43 47.0**	**-2.1**

IDC 18 22:43:03.5±3.0,**0.69S**×**135.60E**,**h0**km,**mb3.5**/4,
mbtmp3.4/5,**ML3.4**/1,**Error ellipse: s-maj=162.6km**
s-min=22.7km az=81.0,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.18**	**184**	P	P		22 47 28.4	-0.5
	0.1nm,0.3s,baz=3.8,slow=11,SNR=7.2							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**22.90**	**184**	P	P		22 48 09.4	+0.4
	1.0nm,0.6s,baz=10,slow=11,SNR=10							
	1.0nm,0.6s							
SONM	**Songino Array**	**54.60**	**336**	P	P		22 52 35.0	+1.1
	0.7nm,0.8s,baz=134,slow=6.2,SNR=4.4							
	0.7nm,0.8s							
MKAR	**Makanchi Array**	**66.31**	**323**	P	P		22 53 51.9	-2.0
	0.5nm,0.9s,baz=102,slow=8.7,SNR=4.3							
	0.5nm,0.9s							
KURBB	**Kurchatov Arra**	**70.30**	**325**	P	P		22 54 19.9	+1.1
	0.2nm,0.5s,baz=108,slow=6.0,SNR=2.3							
	0.2nm,0.5s							

*NSSP **18** 22:44:34.4,38.37N×44.67E,h10km,Ms3.3*
*ISK **18** 22:44:35.9,38.25N×44.47E,h9km,ML3.2/9*
*AFAD **18** 22:44:37.4,38.50N×44.52E,h8km±1km,MW3.8*
*TEH **18** 22:44:41.5,38.43N×44.83E,h6km±52km*
*AZER **18** 22:44:44.5,38.63N×44.91E,h46km,ml3.0*

ISC 18 22:44:38.0±1.1,**38.43N**±0.02×**44.62E**±0.02,**h13**km±9km,
n74,σ1°**68**/124,**5C-3D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.80**	**100**	Pg		**Pn**	**22 44 53.8**	**-1.5**
NAX	**Nakhchivan**	**1.01**	**42**	P		**Pn**	**22 44 57.8**	**-0.2**
NAX				S		**Sn**	**22 45 13.5**	**+1.3**
HAKT	**HAKKARI**	**1.12**	**220**	P		**Pg**	**22 44 57.5**	**-2.2**
HAKT				S		**Sn**	**22 45 15.8**	**+0.7**
ERCV	**ERCIS-VAN**	**1.16**	**301**	Pn		**Pb**	**22 44 59.1**	**-1.0**
ERCV				Sn		**Sg**	**22 45 15.4**	**-0.2**
ORD	**Ordubad**	**1.19**	**65**	P		**Pn**	**22 45 01.2**	**+0.7**
ORD				S		**Sn**	**22 45 19.8**	**+3.3**
SBZ	**Shahbuz**	**1.22**	**37**	P		**Pn**	**22 45 00.6**	**-0.2**
SBZ				S		**Sn**	**22 45 18.3**	**+1.1**
ITBZ	**Tabriz**	**1.22**	**99**	Pg		**Pn**	**22 45 01.1**	**+0.2**
AKDM	**Akdamar-Van**	**1.29**	**266**	Pn		**Pn**	**22 44 58.9**	**-3.0**
HYR	**Heyderabad**	**1.30**	**8**	P		**Pg**	**22 45 03.3**	**+0.2**
HYR				S		**Sn**	**22 45 19.5**	**+0.2**
IAZR	**Azarshahr**	**1.31**	**124**	Pg		**Pg**	**22 45 03.8**	**+0.6**
VAYK	**Vayk**	**1.42**	**26**	*i* P		**Pb**	**22 45 03.7**	**-0.7**
VAYK				*i* S		**Sg**	**22 45 24.4**	**+0.8**
IGDI	**IGDIR**	**1.50**	**344**	SPECP			22 45 04.0	
IGDI				P		**Pn**	**22 45 04.2**	**-0.5**
IGDI				S		**Sn**	**22 45 24.0**	**-0.1**
IGDI				*i* IAML			22 45 28.0	
	comp=N,144nm,1.0s							
IGDI				*i* IAML			22 45 31.0	
	comp=E,175nm,0.8s							
IGDI	**IGDIR**	**1.50**	**344**	P		**Pb**	**22 45 05.8**	**+0.1**
IGDI				S		**Sg**	**22 45 26.1**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.53**	**285**	SPECP			22 45 04.0	
ADCV				P		**Pn**	**22 45 04.2**	**-1.0**
ADCV				*i* IAML			22 45 27.0	
	comp=N,193nm,0.4s							
ADCV				S		**Sb**	**22 45 27.2**	**+1.4**
ADCV				*i* IAML			22 45 28.0	
	comp=E,238nm,0.5s							
NRKZ	**NAREK**	**1.57**	**1**	*e*P		**Pn**	**22 45 06.0**	**+0.3**
NRKZ				*e*S		**Sg**	**22 45 28.7**	**+0.1**
TASB	**TASBURUN-IGDIR**	**1.58**	**349**	Pn		**Pb**	**22 45 07.0**	**-0.2**
PERV	**Siirt/Pervari-**	**1.70**	**254**	SPECP			22 45 08.0	
PERV				P		**Pb**	**22 45 09.0**	**-0.3**
PERV				S		**Sb**	**22 45 32.4**	**+1.7**
PERV				*i* IAML			22 45 40.0	
	comp=E,417nm,0.5s							
PERV				*i* IAML			22 45 48.0	
	comp=N,429nm,0.7s							
EGVZ	**Egvard**	**1.70**	**61**	⇑ *i* P		**Pg**	**22 45 09.5**	**-1.3**
EGVZ				⇑ *i* S		**Sg**	**22 45 34.9**	**+2.0**
AGRB	**Hanur-Agry**	**1.71**	**313**	Pn		**Pn**	**22 45 06.8**	**-0.9**
AGRB				Sn		**Sn**	**22 45 30.6**	**+1.1**
GRS	**Goris**	**1.72**	**51**	⇓ *i* P		**Pg**	**22 45 10.0**	**-0.9**
GRS				⇑ *i* S		**Sg**	**22 45 37.0**	**+3.8**
DORK	**Agr/Tutak/Do**	**1.72**	**304**	P		**Pn**	**22 45 06.6**	**-1.3**
DORK				S		**Sn**	**22 45 31.4**	**+1.5**
GNI	**Garni**	**1.73**	**3**	Pn		**Pb**	**22 45 09.5**	**-0.1**
GNI

IML	**Ismayilli**	**3.63**	**48**	P		**Pn**	**22 45 35.9**	**+2.0**
IML				S		**Sn**	**22 46 14.6**	**-2.1**
ALIB	**&Aumlli-Bayram**	**3.74**	**64**	S		**Sn**	**22 46 16.8**	**-2.4**
XNQ	**Khinaliq**	**3.86**	**44**	P		**Pn**	**22 45 39.9**	**+2.6**
XNQ				S		**Sn**	**22 46 20.1**	**-2.5**
PQL	**Pirkuli**	**3.87**	**51**	P		**Pn**	**22 45 40.2**	**+2.8**
PQL				S		**Sn**	**22 46 20.9**	**-2.0**
GBS	**Qobustan**	**3.96**	**56**	P		**Pn**	**22 45 40.8**	**+2.4**
GBS				S		**Sn**	**22 46 22.6**	**-2.1**
ATGJ	**Altiaghaj**	**4.13**	**53**	P		**Pn**	**22 45 44.2**	**+3.4**
ATGJ				S		**Sn**	**22 46 26.5**	**-2.5**
QSAR	**Qusar**	**4.17**	**41**	P		**Pn**	**22 45 42.9**	**+1.6**
QSAR				S		**Sn**	**22 46 27.6**	**-2.3**
QUBA	**Quba, Azerbaij**	**4.18**	**44**	P		**Pn**	**22 45 44.0**	**+2.5**
QUBA				S		**Sn**	**22 46 28.4**	**-1.7**
SIZA	**Siyzn**	**4.23**	**50**	P		**Pn**	**22 45 44.0**	**+1.8**
SIZA				S		**Sn**	**22 46 29.3**	**-2.2**
GOBA	**Gobu**	**4.43**	**62**	S		**Sn**	**22 46 34.3**	**-2.0**
NDR	**Nardaran**	**4.68**	**61**	S		**Sn**	**22 46 40.1**	**-2.4**
GALA	**Gala**	**4.72**	**63**	S		**Sn**	**22 46 41.0**	**-2.6**

NIED ***18*** *22:49:48.1, 39˚.85N × 143˚.59E, h22km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr 1.43; Mθθ -0.02; Mφφ -1.41; Mrθ 0.17; Mθφ -0.52; Mrφ 0.51; Fault plane solution: M₀ 1.60000 × 10¹⁴ NP1: φs 199.00000°, δ 35.00000°, λ 90.00000°. NP2: φs 18.00000°, δ 55.00000°, λ 90.00000°.*

JMA 18 22:49:48.1±0.3, 39˚.9N±0˚.8 × 14˚4E±˚, h22km, MV3.5/31, FAR E OFF SANRIKU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.33**	**275**	P	Pn	22 50 11.6	+0.2
JTH				eS	Sn	22 50 28.4	0.0
MIYJ	**Miyakonagasawa**	**1.39**	**259**	P	Pn	22 50 12.6	+0.5
JKEN	**Kujiedanarisaw**	**1.48**	**285**	P	Pn	22 50 13.9	+0.4
JANG	**Nango**	**1.67**	**289**	P	Pn	22 50 16.6	+0.5
JOM	**Ohasama**	**1.81**	**259**	P	Pb	22 50 19.3	-1.3
JOM				eS	Sb	22 50 43.1	+0.4
JMK	**Ichinoseki**	**2.04**	**245**	P	Pn	22 50 21.9	+0.8
JTM	**Tenmabayashi**	**2.14**	**297**	eP	Pn	22 50 24.0	+1.5
JIO	**Ouri**	**2.23**	**232**	P	Pn	22 50 24.0	+0.3
JNBK	**Urakawa-nobuka**	**2.51**	**346**	eP	Pb	22 50 30.9	-1.7
JYK	**Kaneyama**	**2.67**	**251**	P	Pn	22 50 31.6	+1.9
JCH	**Churui**	**2.77**	**357**	S	Sn	22 51 05.8	+1.8

IDC 18 22:58:59.6±2.3, 19˚.95S × 178˚.44W, h0km, mb3.8/4, mbtmp3.8/4, MS3.4/5, Error ellipse: s-maj=94.5km s-min=33.5km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.27**	**259**	LR	LR	23 07 06.4	
	comp=Z,138nm,18.8s,baz=141,slow=34						
HNR	**Honiara**	**23.34**	**293**	LR	LR	23 12 29.9	
	comp=Z,97nm,18.4s,baz=130,slow=35						
PPT	**Papeete**	**27.42**	**90**	LR	LR	23 14 41.0	
	comp=Z,54nm,18.1s,baz=228,slow=34						
STKA	**Stephens Creek**	**37.66**	**243**	LR	LR	23 19 56.2	
	comp=Z,46nm,19.6s,baz=32,slow=33						
ASAR	**Alice Springs**	**44.24**	**256**	P	P	23 07 10.4	-0.8
	1.5nm,1.0s,baz=96,slow=7.9,SNR=6.8						
ASAR				LR	LR	23 24 38.8	
	comp=Z,68nm,19.4s,baz=104,slow=35 1.5nm,1.0s						
WRA	**Warramunga Arr**	**44.27**	**262**	P	P	23 07 12.2	+0.8
	0.8nm,0.9s,baz=101,slow=8.0,SNR=4.9 0.8nm,0.9s						
PETK	**Petropavlovsk-**	**75.63**	**345**	P	P	23 10 45.8	-0.5
	5.9nm,1.0s,baz=163,slow=10,SNR=3.5 5.9nm,1.0s						
TXAR	**Lajitas Array**	**87.11**	**58**	P	P	23 11 48.2	+0.4
	0.2nm,0.7s,baz=294,slow=4.7,SNR=3.0 0.2nm,0.7s						

IDC 18 23:07:40.3±6.8, 20˚.19S × 175˚.57E, h0km, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=316.2km s-min=57.8km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.66**	**263**	P	P	23 15 05.6	-0.3
	0.2nm,0.5s,baz=97,slow=8.7,SNR=1.7 0.2nm,0.5s						
ASAR	**Alice Springs**	**38.71**	**257**	P	P	23 15 06.4	0.0
	0.4nm,0.6s,baz=87,slow=8.6,SNR=9.1 0.4nm,0.6s						
GERES	**GERESS Array B**	**147.92**	**337**	PKPbc	PKPbc	23 27 26.9	-0.7
	0.1nm,0.3s,baz=32,slow=3.8,SNR=2.2						

SFS ***18*** *23:15:23.6, 35˚.44N × 3˚.61W, h24km, ML2.6/4, ML2.1/7, MLv1.8/7*
MDD ***18*** *23:15:23.1±0.9, 35˚.36N × 3˚.69W, h0km, mb_Lg2.2/8, Error ellipse: s-maj=7.7km s-min=3.7km az=35.0*
CNRM ***18*** *23:15:27.2, 35˚.42N × 4˚.11W, h6km, ML1.9*

ISC 18 23:15:21.3±1.3, 35˚.49N±0˚.03 × 3˚.69W±0˚.03, h12km±11km, n24, σ1°05/32, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.34**	**217**	P	**Pn**	**23 15 31.4**	**-0.6**
PALE	**Palemas**	**0.34**	**217**	S	**Sb**	**23 15 35.6**	**+0.9**
WMELI	**Melilla**	**0.62**	**106**	Pg	**Pb**	**23 15 34.4**	**+0.3**
WMELI				Sg	**Sb**	**23 15 41.8**	**-1.0**
EMEL	**Melilla**	**0.63**	**107**	Pg	**Pb**	**23 15 34.0**	**-0.2**
EMEL				Sg	**Sb**	**23 15 42.3**	**-0.5**
EMLI	**Melilla**	**0.63**	**107**	Pg	**Pb**	**23 15 34.0**	**-0.2**
EMLI				Sg	**Sb**	**23 15 42.3**	**-0.7**
EALB	**Alboran**	**0.69**	**50**	Sg	**Sb**	**23 15 45.5**	**+0.6**
EALB	**Alboran**	**0.69**	**50**	Pg	**Pn**	**23 15 37.6**	**+0.7**
EALB				Sg	**Sn**	**23 15 47.3**	**-0.3**
EALB				*i* lVmb_Lg		23 15 47.6	
AKLM	**AKL**	**0.99**	**188**	P	**Pn**	**23 15 42.9**	**+1.8**
AKLM	**AKL**	**0.99**	**188**	S	**Sb**	**23 15 54.6**	**+1.2**
ELGU	**Los Guajares,**	**1.38**	**2**	Pn	**Pg**	**23 15 47.5**	**-0.2**
ELGU				Sn	**Sg**	**23 16 04.0**	**-1.6**
ELGU	**Los Guajares,**	**1.38**	**2**	Pn	**Pg**	**23 15 48.1**	**+0.4**
ELGU				Sn	**Sg**	**23 16 04.4**	**-1.2**
ELGU				*i* lVmb_Lg		23 16 05.9	
EMIJ	**Mijas**	**1.39**	**321**	Pn	**Pg**	**23 15 47.8**	**-0.2**
EMIJ	**Mijas**	**1.39**	**321**	Pg	**Pg**	**23 15 48.3**	**+0.4**
ECEU	**Ceuta**	**1.43**	**287**	Sn	**Sb**	**23 16 05.7**	**-0.4**
EXAGE	**Algeciras**	**1.57**	**295**	Pn	**Pg**	**23 15 51.8**	**+0.4**
EGOR	**Sierra Gorda,**	**1.65**	**348**	Sn	**Sg**	**23 16 17.4**	**+2.9**
EGOR				*i* lVmb_Lg		23 16 20.8	
EQTA	**Presa de Quent**	**1.72**	**6**	Sn	**Sn**	**23 16 12.7**	**-0.5**
E0803	**Jimena (Jaen)**	**2.35**	**4**	Sn	**Sg**	**23 16 35.6**	**-1.1**
EQES	**Quesada**	**2.36**	**12**	Pn	**Pb**	**23 16 04.2**	**+0.4**
EQES				Sn	**Sb**	**23 16 34.0**	**+1.1**
EQES				*i* lVmb_Lg		23 16 35.5	
MD31	**MD31**	**2.76**	**199**	P	**Pb**	**23 16 10.2**	**-0.5**
MD31	**MD31**	**2.76**	**199**	S	**Sb**	**23 16 43.4**	**-1.1**
EADA	**Adamuz**	**2.77**	**345**	Pn	**Pb**	**23 16 09.8**	**-0.9**
EADA				Sn	**Sb**	**23 16 43.7**	**-0.8**
EADA				*i* lVmb_Lg		23 16 50.8	
MDT	**Midelt**	**2.78**	**196**	P	**Pb**	**23 16 10.9**	**0.0**
MDT	**Midelt**	**2.78**	**196**	S	**Sb**	**23 16 43.3**	**-1.6**

RSNC 18 23:31:17.5±0.0, 7˚N±1˚ × 7˚3W±˚, h154km±2km, M3.0, mB4.6, ML2.7, Mw(mB)3.9, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**194**	P	Pn	23 31 38.4	-0.3
BARC				S	Sn	23 31 47.8	-7.1
BRJC	**Barrancabermej**	**0.63**	**282**	P	Pn	23 31 40.0	0.0
BRJC				S	Sn	23 31 57.2	0.0
PAMC	**Pamplona, Colo**	**0.65**	**40**	P	Pn	23 31 41.1	+0.4
PAMC				S	Sn	23 31 58.2	-0.2
RUSC	**La Rusia**	**0.94**	**178**	P	Pn	23 31 42.1	-0.7
RUSC				S	Sn	23 32 00.7	-1.4
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	P	Pn	23 31 44.9	-1.1
PTBC				S	Sn	23 32 06.2	-1.6
OCAC	**Ocana**	**1.40**	**352**	P	Pn	23 31 46.3	-0.3
OCAC				S	Sn	23 32 09.3	+0.4
SPBC	**San Pablo de B**	**1.51**	**219**	P	Pn	23 31 47.2	-0.4
SPBC				S	Sn	23 32 09.5	-1.2
NORC	**Norcasia**	**2.15**	**234**	P	Pn	23 31 54.3	-0.4
NORC				S	Sn	23 32 22.6	-0.8
CHIC	**Chingaza**	**2.28**	**196**	P	Pn	23 31 56.4	-0.2
CHIC				S	Sn	23 32 25.6	-1.1
ROSC	**El Rosal**	**2.32**	**211**	P	Pn	23 31 57.8	+0.8
ROSC				S	Sn	23 32 26.2	-1.3
HELC	**Santa Helena**	**2.48**	**255**	P	Pn	23 32 00.1	+1.2
HELC				S	Sn	23 32 30.1	-0.7
CVER	**Cruz Verde, Cu**	**2.49**	**202**	P	Pn	23 31 59.6	+0.4
CVER				S	Sn	23 32 31.0	-0.4
UREC	**San Jos de Ur**	**2.56**	**291**	P	Pn	23 31 58.4	-1.2
UREC				S	Sn	23 32 29.5	-2.5
GUY2C	**Guyana, Caldas**	**2.75**	**234**	P	Pn	23 32 03.3	+0.9
GUY2C				S	Sn	23 32 37.0	0.0
VILC	**Villavicencio,**	**2.77**	**192**	P	Pn	23 32 02.0	-0.3
VILC				S	Sn	23 32 35.5	-1.5
PTGC	**Puerto Gaitan,**	**2.80**	**159**	P	Pn	23 32 01.2	-1.4
PTGC				S	Sn	23 32 34.0	-3.5
CBOC	**Ciudad Bolivar**	**3.03**	**252**	P	Pn	23 32 06.6	+1.0
CBOC				S	Sn	23 32 43.6	+0.8
DBBC	**Dabeiba**	**3.07**	**273**	P	Pn	23 32 07.2	+1.2
DBBC				S	Sn	23 32 41.2	-2.4
SDV	**Santo Domingo**	**3.19**	**50**	P	Pn	23 32 07.6	-0.1
SDV				S	Sn	23 32 44.5	-2.1
PRAC	**Prado**	**3.57**	**210**	P	Pn	23 32 11.5	-0.9
PRAC				S	Sn	23 32 53.4	-1.6
ORTC	**Ortega, Tolima**	**3.60**	**216**	P	Pn	23 32 12.4	-0.4
ORTC				S	Sn	23 32 55.2	-0.5
SJCC	**San Jacinto, C**	**3.66**	**326**	P	Pn	23 32 12.3	-1.2
SJCC				S	Sn	23 32 53.6	-3.4
URMC	**La Uribe, Meta**	**3.78**	**199**	P	Pn	23 32 14.8	-0.4
URMC				S	Sn	23 32 58.9	-1.1
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	P	Pn	23 32 18.7	-1.4
CRJC				S	Sn	23 33 06.9	-1.9
CAPC	**Capurgana**	**4.56**	**293**	P	Pn	23 32 24.5	-0.7
MACC	**Macarena, Meta**	**4.72**	**189**	P	Pn	23 32 25.1	-2.3
URIC	**Uribia, Colomb**	**4.96**	**13**	P	Pn	23 32 28.5	-1.9
URIC				S	Sn	23 33 25.5	-1.9
GARC	**Garzon, Huila**	**5.19**	**207**	P	Pn	23 32 32.0	-1.8

IDC ***18*** *23:41:18.4±1.7, 4˚.59S × 128˚.39E, h0km, mb4.1/2, mbtmp4.2/4, ML4.3/2, MS3.9/1, Error ellipse: s-maj=143.4km s-min=25.6km az=68.0*
DJA ***18*** *23:41:22.0±0.5, 1˚S ± 4˚ × 13˚4E±˚, h10km, M4.5/6, mB5.8/1, mb5.0/1, MLv4.2/6, Mw(mB)5.4/1*

ISC 18 23:41:21.2±1.2, 0˚.62S±0˚.08 × 134˚.04E±0˚.06, h10km, n8, σ0°73/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.90**	**171**	P	**Pg**	**23 41 38.0**	**-0.6**
RKPI				S	**Sb**	**23 41 50.4**	**-0.6**
BAKI	**Biak**	**2.15**	**106**	P	**Pn**	**23 41 57.3**	**+0.3**
BAKI				S	**Sn**	**23 42 24.5**	**+0.8**
SWI	**Sorong**	**2.79**	**265**	P	**Pn**	**23 42 06.6**	**+0.7**
FAKI	**Fak Fak**	**2.91**	**218**	P	**Pn**	**23 42 07.7**	**+0.2**
FAKI				S	**Sn**	**23 42 42.8**	**+0.2**
KMPI	**Kaimana, Papua**	**3.04**	**186**	P	**Pn**	**23 42 10.7**	**+1.3**
MJAR	**Matsushiro Arr**	**37.17**	**6**	LR	LR	00 06 22.7	
	comp=Z,139nm,19.4s,baz=178,slow=36						
MKAR	**Makanchi Array**	**65.32**	**324**	P	**P**	**23 52 03.3**	**-0.3**
	1.8nm,0.6s,baz=117,slow=7.8,SNR=22 1.8nm,0.6s						
KURBB	**Kurchatov Arra**	**69.36**	**326**	P	**P**	**23 52 28.6**	**-0.5**
	1.1nm,0.7s,baz=119,slow=5.7,SNR=8.8 1.1nm,0.7s						

BJI ***18*** *23:41:31.2, 2˚.54S × 139˚.03E, h17km, mB5.3/5, mb4.7/37, Ms4.8/8, Ms7 4.5/11*
IDC ***18*** *23:41:32.0±0.5, 2˚.40S × 138˚.93E, h0km, mb4.5/13, mbtmp4.5/17, ML4.3/1, MS3.9/25, Error ellipse: s-maj=12.1km s-min=10.6km az=50.0*
DJA ***18*** *23:41:32.4±0.4, 2˚S ± 5˚ × 13˚9E±˚, h10km, M5.0/6, mB5.7/1, mb5.4/1, MLv4.8/6, Mw(mB)5.2/1*
MOS ***18*** *23:41:33.6±0.7, 2˚.42S × 138˚.87E, h24km, mb4.9/31, Error ellipse: s-maj=12.1km s-min=6.5km az=121.0*
GCMT ***18*** *23:41:36.5±0.3, 2˚.25S±0˚.01 × 138˚.88E±0˚.02, h12km, MW4.7/82, Moment Tensor Solution. s14,c14; s82,c106; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 0.22±.07; Mθθ 0.83±.07; Mφφ -0.60±.06; Mrθ 0.15±.19; Mθφ 1.40±.05; Mrφ 0.34±.18; Best double couple: M₀ 1.61600 × 10¹⁶ NP1: φs 104.00000°, δ 77.00000°, λ -1.00000°. NP2: φs 194.00000°, δ 89.00000°, λ -167.00000°. Principal axes: T 1.7310, Plg 9.0000°, Azm 328.0000°; N -0.2320, Plg 77.0000°, Azm 196.0000°; P -1.5000, Plg 10.0000°, Azm 60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***18*** *23:41:37.5±2.0, 2˚.51S±0˚.03 × 138˚.74E±0˚.06, h35km±1km, mb4.9/115 Error ellipse: s-maj=11.0km s-min=4.9km az=103.0*

ISC 18 23:41:33.6±0.3, 2˚.49S±0˚.04 × 138˚.74E±0˚.06, h10km, n245, σ1°25/188, mb4.9/97, MS3.9/24, 11C-1D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.50**	**357**	P	**Pg**	**23 41 41.7**	**-1.7**
GENI	**Genyem**	**1.43**	**94**	P	**Pn**	**23 41 55.7**	**-4.0**
JAY	**Jayapura**	**1.96**	**91**	Pg	**Pn**	**23 42 03.8**	**-3.2**
	72nm,0.3s,baz=240,slow=10,SNR=101						
JAY				Lg	Lg	23 42 28.6	
	86nm,0.3s,baz=117,slow=21,SNR=12						
JAY	**Jayapura**	**1.96**	**91**	P	Pn	23 42 02.9	-4.2
KMPI	**Kaimana, Papua**	**5.16**	**257**	P	**Pn**	**23 42 52.7**	**+1.7**
MANU	**Manus Island**	**8.63**	**87**		**Pn**	**23 43 40.0**	**+1.3**
PMG	**Port Moresby**	**10.83**	**130**	Pn	**Pn**	**23 44 08.6**	**-0.2**
	4.7nm,0.3s,baz=322,slow=8.8,SNR=10						
PMG	**Port Moresby**	**10.83**	**130**		**Pn**	**23 44 09.0**	**+0.2**
PMG	**Port Moresby**	**10.83**	**130**	*i* P	**Pn**	**23 44 09.4**	**+0.6**
TNTI	**Ternate**	**11.82**	**286**	Pn	**Pn**	**23 44 22.6**	**+0.1**
COEN	**Coen**	**12.21**	**159**		**Pn**	**23 44 28.3**	**+0.6**
MTN	**Manton Dam**	**12.74**	**216**		**Pn**	**23 44 34.0**	**-1.1**
LUWI	**Luwuk**	**16.02**	**275**		**Pn**	**23 45 19.7**	**+0.4**
LUWI				IAmb	IAmb	23 45 37.8	
	comp=Z,171nm,1.4s						
SOEI	**Soe**	**16.09**	**243**		**Pn**	**23 45 20.6**	**+0.4**
SOEI				IAmb	IAmb	23 45 40.0	
	comp=Z,111nm,1.1s						
DAV	**Davao City (W)**	**16.21**	**306**	LR	LR	23 52 38.1	
	comp=Z,668nm,18.1s,baz=144,slow=41						
KNRA	**Kununurra**	**16.38**	**216**		**Pn**	**23 45 23.4**	**-0.4**
BATI	**Baumata**	**16.82**	**242**	P	**P**	**23 45 32.5**	**+0.9**
	comp=Z,21nm,0.5s,baz=92,slow=4.8,SNR=9.8						
MMRI	**Maumere**	**17.51**	**249**	Pn	**Pn**	**23 45 33.2**	**-5.0**
WB0	**Warramunga Arr**	**17.68**	**194**		**Pn**	**23 45 39.0**	**-1.3**
WR0	**Warramunga Arr**	**17.84**	**193**	P	**Pn**	**23 45 41.0**	**-1.1**
WR8	**Warramunga Arr**	**17.84**	**193**	P	**Pn**	**23 45 42.4**	**+0.2**
WRAB	**Tennant Creek**	**17.86**	**194**	P	**Pn**	**23 45 41.3**	**-1.1**
WRAB	**Tennant Creek**	**17.86**	**194**	*ce*P	**P**	**23 45 44.1**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,14nm,0.6s						
WB2	**Warramunga Arr**	**17.86**	**194**	P	**Pn**	**23 45 41.7**	**-0.8**
WRA	**Warramunga Arr**	**17.87**	**194**	P	**P**	**23 45 43.9**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=16,slow=12,SNR=24						
WRA				S	**Sn**	**23 48 58.1**	**-3.8**
	comp=Z,4.8nm,0.7s,baz=1.4,slow=24,SNR=4.7 comp=Z,5.5nm,0.6s						
WRA	**Warramunga Arr**	**17.87**	**194**	P	**Pn**	**23 45 40.3**	**-2.2**
WRA	**Warramunga Arr**	**17.87**	**194**	*i* P	**P**	**23 45 44.0**	**+0.8**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TOLI2	**Tolitoli**	**18.31**	**281**		**Pn**	**23 45 47.5**	**-0.4**
CTA	**Charters Tower**	**18.96**	**158**	LR	LR	23 53 40.2	
	comp=Z,37nm,21.3s,baz=340,slow=38						
CTAO	**Charters Tower**	**18.96**	**158**		**P**	**23 45 54.8**	**-0.5**
CTAO	**Charters Tower**	**18.96**	**158**	P	**P**	**23 45 54.8**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,11nm,0.9s						
KAPI	**Kappang**	**19.11**	**262**	P	**Pn**	**23 46 00.6**	**+2.9**
	comp=Z,5.7nm,0.2s,baz=53,slow=3.9,SNR=3.8						
KAPI				LR	LR	23 55 48.0	
	comp=Z,178nm,19.6s,baz=84,slow=44						
KAPI	**Kappang**	**19.11**	**262**	P	**P**	**23 45 55.8**	**-1.1**
KAPI	**Kappang**	**19.11**	**262**	P	**P**	**23 45 55.8**	**-1.1**
KAPI				pmax	pmax		
	comp=Z,29nm,1.3s						
FITZ	**Fitzroy Crossi**	**20.14**	**219**	P	Pn	23 46 11.4	+1.5
	comp=Z,6.2nm,0.8s,baz=21,slow=16,SNR=8.7						
FITZ				S	**S**	**23 49 53.4**	**-1.0**
	comp=Z,6.0nm,0.7s,baz=162,slow=15,SNR=3.8 comp=Z,6.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.14**	**219**	P	**P**	**23 46 08.2**	**+0.1**
AS31	**Alice Springs**	**21.56**	**192**	P	**P**	**23 46 23.9**	**+0.4**
ASAR	**Alice Springs**	**21.56**	**192**	P	**P**	**23 46 24.4**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=7.2,slow=11,SNR=23						
ASAR				S	**S**	**23 50 24.9**	**+2.3**
	comp=Z,3.2nm,0.8s,baz=19,slow=28,SNR=4.7 comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**21.56**	**192**	P	**P**	**23 46 23.5**	**0.0**
ASAR	**Alice Springs**	**21.56**	**192**	P	**P**	**23 46 23.5**	**0.0**
MYLDM	**Lahad Datu**	**21.61**	**291**	P	**P**	**23 46 24.8**	**+0.8**
MYLDM				IAmb	IAmb	23 46 41.5	
	comp=Z,75nm,1.3s						
BKB	**Balikpapan**	**21.86**	**273**	P	**P**	**23 46 26.5**	**-0.3**
HNR	**Honiara**	**22.18**	**109**	LR	LR	23 56 21.7	
	comp=Z,389nm,18.1s,baz=296,slow=40						
INKA	**Innaminka**	**25.18**	**176**	P	**P**	**23 46 59.5**	**+0.1**
EIDS	**Eidsvold**	**25.66**	**153**	P	**P**	**23 47 04.6**	**+0.8**
EIDS				IAmb	IAmb	23 47 08.6	
	comp=Z,27nm,0.9s						
MBWA	**Marble Bar**	**26.21**	**223**	P	**P**	**23 47 08.3**	**-0.5**
MBWA				IAmb	IAmb	23 47 16.1	
	comp=Z,21nm,1.1s						
PSA00	**Pilbara Seismi**	**26.41**	**223**	P	**P**	**23 47 10.4**	**-0.3**
PSA00				IAmb	IAmb	23 47 17.7	
	comp=Z,18nm,1.0s						
PSA00	**Pilbara Seismi**	**26.41**	**223**	P	**P**	**23 47 11.5**	**+0.9**
PSA00				IAmb	IAmb	23 47 29.8	
	comp=Z,8.7nm,1.0s						
SBUM	**Sibu**	**26.96**	**280**	P	**P**	**23 47 14.9**	**-0.8**
STKA	**Stephens Creek**	**29.35**	**175**	P	**P**	**23 47 37.9**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=343,slow=11,SNR=6.4 comp=Z,2.4nm,0.6s						
STKA	**Stephens Creek**	**29.35**	**175**	*i* P	**P**	**23 47 39.4**	**+2.6**
JCJ	**Chichijima**	**29.61**	**6**	LR	LR	23 57 44.0	
	comp=Z,166nm,20.7s,baz=146,slow=33						
JOW	**Kunigami**	**30.86**	**342**	LR	LR	00 00 03.8	
	comp=Z,382nm,18.8s,baz=78,slow=36						
NACB	**Ninganchiao**	**31.31**	**329**	P	**P**	**23 47 55.8**	**+1.5**
JHJ	**Hachijo jima 2**	**35.43**	**2**	LR	LR	00 01 23.7	
	comp=Z,177nm,19.8s,baz=131,slow=34						
JNU	**Nakatsue**	**36.19**	**349**	LR	LR	00 02 56.0	
	comp=Z,280nm,18.3s,baz=170,slow=36						
KULM	**Kulim**	**38.83**	**282**	P	**P**	**23 48 59.2**	**0.0**
MJAR	**Matsushiro Arr**	**38.84**	**359**	P	**P**	**23 49 01.0**	**+2.0**
MJAR	**Matsushiro Arr**	**38.84**	**359**	P	**P**	**23 49 01.0**	**+2.0**
MJAR				pmax	pmax		
	comp=Z,11nm,1.5s						
NJ2	**Nanjing**	**39.20**	**333**	*e*P	**P**	**23 49 03.6**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GSI	**Gunungsitoli**	**41.33**	**275**	P	**P**	**23 49 17.4**	**-2.6**
LYN	**LuoYang**	**44.35**	**328**	P	**P**	**23 49 44.3**	**+0.1**
LYN				pmax	pmax		
	comp=Z,17nm,1.0s						
CMAR	**Chiang Mai Arr**	**44.35**	**300**	P	**P**	**23 49 45.0**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=118,slow=6.2,SNR=19						
CMAR				LR	LR	00 09 50.4	
	comp=Z,97nm,18.4s,baz=120,slow=38 comp=Z,1.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**44.35**	**300**	P	**P**	**23 49 44.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**44.35**	**300**	*ce*P	**P**	**23 49 45.0**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMI	**Kunming**	**44.40**	**310**	P	**P**	**23 49 46.5**	**+1.4**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				LR	LR		
	comp=Z,400nm,24.4s						
KMI				LR	LR		
	comp=Z,250nm,22.8s						
KMI				LR	LR		
	comp=Z,340nm,24.6s						
CHTO	**Chiang Mai**	**44.50**	**300**	P	**P**	**23 49 44.6**	**-1.1**
CHTO	**Chiang Mai**	**44.50**	**300**	P	**P**	**23 49 44.6**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PZH	**PanZhiHua**	**45.91**	**311**	P	**P**	**23 49 58.6**	**+1.7**
CD2	**Chengdu**	**47.04**	**318**	P	**P**	**23 50 05.8**	**+0.1**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
BNX	**BinXian**	**49.07**	**350**	∥P	**P**	**23 50 21.1**	**+0.1**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
URZ	**Urewera**	**49.97**	**140**	LR	LR	00 12 50.0	
	comp=Z,220nm,18.7s,baz=299,slow=38						
LZH	**Lanzhou**	**50.33**	**323**	*e*P	**P**	**23 50 30.5**	**-0.5**
LZH				sP	sP	23 50 37.3	+1.5
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZDM	**Lanzhou Array**	**50.33**	**323**	P	**P**	**23 50 32.5**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=134,slow=13,SNR=4.1 comp=Z,0.9

SHLS	**Shalkode**	**69.88**	**318**	*eP*		**P**	**23 52 43.1**	**-2.0**
	comp=Z,4.8nm,0.9s							
SHLS	**Shalkode**	**69.88**	**318**	*eP*		**P**	**23 52 43.0**	**-2.0**
SHLS					pmax	pmax		
	comp=Z,5.0nm,0.9s							
UZB	**Uzynbulak**	**70.17**	**318**	*eP*		**P**	**23 52 46.8**	**-0.1**
	comp=Z,7.4nm,1.0s							
UZB	**Uzynbulak**	**70.17**	**318**	*eP*		**P**	**23 52 46.7**	**-0.1**
UZB					pmax	pmax		
	comp=Z,7.0nm,1.0s							
TARG	**Taragay, Kyrgy**	**70.45**	**316**	P		**P**	**23 52 48.7**	**-0.3**
TARG	**Taragay, Kyrgy**	**70.45**	**316**	P		**P**	**23 52 48.7**	**-0.3**
TARG					pmax	pmax		
	comp=Z,6.0nm,1.0s							
SATY	**Saty**	**70.55**	**318**	*eP*		**P**	**23 52 49.1**	**-0.1**
	comp=Z,4.6nm,0.8s							
SATY	**Saty**	**70.55**	**318**	*eP*		**P**	**23 52 49.0**	**-0.1**
SATY					pmax	pmax		
	comp=Z,5.0nm,0.8s							
KSH	**Kashi**	**70.96**	**313**	P		**P**	**23 52 52.8**	**+1.1**
KSH					pmax	pmax		
	comp=Z,9.0nm,1.0s							
TDK	**Taldyqorghan**	**71.31**	**319**	*eP*		**P**	**23 52 53.7**	**0.0**
	comp=Z,10.0nm,1.0s							
TDK	**Taldyqorghan**	**71.31**	**319**	*eP*		**P**	**23 52 53.7**	**0.0**
TDK					pmax	pmax		
	comp=Z,10.0nm,1.0s							
MDOK	**Medeo**	**71.50**	**317**	*eP*		**P**	**23 52 55.0**	**0.0**
MDOK	**Medeo**	**71.50**	**317**	*eP*		**P**	**23 52 55.0**	**0.0**
TNSS	**Tian-Shan**	**71.53**	**317**	*eP*		**P**	**23 52 55.1**	**-0.4**
TNSS	**Tian-Shan**	**71.53**	**317**	*eP*		**P**	**23 52 55.1**	**-0.4**
AAA	**Alma-Ata**	**71.61**	**317**	*eP*		**P**	**23 52 55.6**	**0.0**
	comp=Z,5.8nm,0.5s							
AAA	**Alma-Ata**	**71.61**	**317**	*eP*		**P**	**23 52 55.5**	**0.0**
AAA					pmax	pmax		
	comp=Z,6.0nm,0.5s							
ZAA0	**Zalesovo Array**	**71.76**	**330**			**P**	**23 52 54.8**	**-1.3**
ZALV	**Zalesovo Beam**	**71.76**	**330**	P		**P**	**23 52 55.2**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=116,slow=5.9,SNR=19							
	comp=Z,3.8nm,0.7s							
ZALV	**Zalesovo Beam**	**71.76**	**330**			**P**	**23 52 54.9**	**-1.2**
PPT	**Papeete**	**71.79**	**108**	LR		LR	00 20 57.3	
	comp=Z,33nm,21.9s,baz=267,slow=33							
BOOM	**Boomskoye usch**	**72.02**	**316**	P		**P**	**23 52 57.6**	**-0.6**
BOOM					IAmb	IAmb	23 53 06.4	
	comp=Z,7.6nm,0.8s							
BOOM	**Boomskoye usch**	**72.02**	**316**	P		**P**	**23 52 57.6**	**-0.6**
BOOM					pmax	pmax		
	comp=Z,8.0nm,0.8s							
AAK	**Ala-Archa**	**73.07**	**316**	P		**P**	**23 53 04.8**	**+0.4**
AAK	**Ala-Archa**	**73.07**	**316**	*ce*P		**P**	**23 53 04.2**	**-0.2**
AAK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
KURK	**Kurchatov**	**73.56**	**325**			**P**	**23 53 06.5**	**-0.4**
KURK					IAmb	IAmb	23 53 08.0	
	comp=Z,15nm,1.0s							
KURK	**Kurchatov**	**73.56**	**325**	*ce*P		**P**	**23 53 06.8**	**-0.1**
KURK					pmax	pmax		
	comp=Z,22nm,1.3s							
KURK	**Kurchatov**	**73.56**	**325**	P		**P**	**23 53 06.5**	**-0.4**
KURK	**Kurchatov**	**73.56**	**325**	pP		pP	23 53 17.5	+7.1
KURBB	**Kurchatov Arra**	**73.57**	**325**	P		**P**	**23 53 06.5**	**-0.4**
	comp=Z,11nm,1.0s,baz=113,slow=5.6,SNR=36							
	comp=Z,11nm,1.0s							
ARSB	**Arslanbob**	**73.71**	**314**		IAmb	IAmb	23 53 09.8	
	comp=Z,16nm,1.0s							
DRK	**Karamyk**	**74.01**	**312**		IAmb	IAmb	23 53 11.8	
	comp=Z,11nm,1.1s							
BTLS	**Baital**	**74.20**	**318**	*eP*		**P**	**23 53 10.7**	**-0.1**
BTLS	**Baital**	**74.20**	**318**	*eP*		**P**	**23 53 10.6**	**-0.1**
TIXI	**Tiksi**	**74.29**	**357**	*ce*P		**P**	**23 53 09.9**	**-0.8**
TIXI					pmax	pmax		
	comp=Z,7.0nm,1.7s							
KBL	**Kabul**	**74.82**	**307**			**P**	**23 53 13.9**	**-1.0**
KBL	**Kabul**	**74.82**	**307**	P		**P**	**23 53 13.9**	**-1.0**
KBL					pmax	pmax		
	comp=Z,7.0nm,1.0s							
GAR	**Garm**	**74.98**	**311**	P		**P**	**23 53 15.7**	**+0.1**
DZA	**Taraz**	**75.36**	**315**	*eP*		**P**	**23 53 17.7**	**0.0**
DZA	**Taraz**	**75.36**	**315**	*eP*		**P**	**23 53 17.6**	**0.0**
CHGR	**Chuyangaron**	**75.76**	**311**	P		**P**	**23 53 19.6**	**-0.4**
CHGR	**Chuyangaron**	**75.76**	**311**	P		**P**	**23 53 19.6**	**-0.4**
CHGR					pmax	pmax		
	comp=Z,31nm,0.9s							
VNDA	**Vanda**	**75.99**	**175**	P		**P**	**23 53 21.5**	**+0.9**
	comp=Z,3.2nm,0.8s,baz=330,slow=6.1,SNR=15							
	comp=Z,3.2nm,0.8s							
VNDA	**Vanda**	**75.99**	**175**			**P**	**23 53 21.4**	**+0.9**
VNDA	**Vanda**	**75.99**	**175**	P		**P**	**23 53 21.4**	**+0.9**
VNDA					pmax	pmax		
	comp=Z,4.0nm,0.9s							
KK31	**Karatay Array**	**76.00**	**315**			**P**	**23 53 20.6**	**-0.7**
KK31	**Karatay Array**	**76.00**	**315**	P		**P**	**23 53 20.6**	**-0.7**
KK31					pmax	pmax		
	comp=Z,9.0nm,1.3s							
KKAR	**Karatay Array**	**76.00**	**315**			**P**	**23 53 20.6**	**-0.6**
KKAR	**Karatay Array**	**76.00**	**315**	P		**P**	**23 53 20.6**	**-0.6**
IUG	**luzhnay**	**76.06**	**314**	*eP*		**P**	**23 53 21.6**	**-0.1**
	comp=Z,12nm,1.3s							
IUG	**luzhnay**	**76.06**	**314**	*eP*		**P**	**23 53 21.6**	**-0.1**
IUG					pmax	pmax		
	comp=Z,12nm,1.3s							
CHM	**Chimkent**	**76.41**	**315**	*eP*		**P**	**23 53 23.6**	**-0.1**
	comp=Z,10nm,1.1s							
CHM	**Chimkent**	**76.41**	**315**	*eP*		**P**	**23 53 23.5**	**-0.1**
CHM					pmax	pmax		
	comp=Z,10.0nm,1.1s							
BRLS	**Borolday**	**76.45**	**315**	*eP*		**P**	**23 53 24.0**	**+0.2**
BRLS	**Borolday**	**76.45**	**315**	*eP*		**P**	**23 53 24.0**	**+0.2**
BRZS	**Berezniki**	**76.78**	**323**	*eP*		**P**	**23 53 25.4**	**-0.1**
BRZS	**Berezniki**	**76.78**	**323**	*eP*		**P**	**23 53 25.4**	**-0.1**
BVAR	**Borovoye Array**	**79.15**	**325**	P		**P**	**23 53 39.0**	**+0.4**
	comp=Z,12nm,0.7s,baz=108,slow=6.8,SNR=40							
	comp=Z,12nm,0.7s							
BVAR	**Borovoye Array**	**79.15**	**325**	P		**P**	**23 53 39.0**	**+0.4**
BORK	**Borovoye**	**79.20**	**325**	*ce*P		**P**	**23 53 39.0**	**+0.1**
BORK					pmax	pmax		
	comp=Z,15nm,0.7s							
BORK	**Borovoye**	**79.20**	**325**	P		**P**	**23 53 38.7**	**-0.2**
J17K	**VABM Dome**	**80.14**	**24**		IAmb	IAmb	23 53 45.4	
	comp=Z,19nm,1.2s							
K17K	**Iditarod**	**80.16**	**25**		IAmb	IAmb	23 53 45.9	
	comp=Z,21nm,1.1s							
HRA	**Herat**	**80.29**	**305**			**P**	**23 53 44.5**	**-1.0**
L18K	**Granite Mounta**	**80.63**	**25**		IAmb	IAmb	23 53 49.6	
	comp=Z,27nm,1.5s							
KDAK	**Kodiak Island**	**80.90**	**30**		LR	LR	00 23 16.1	
	comp=Z,86nm,20.3s,baz=220,slow=31							
N19K	**Bonanza Creek**	**81.06**	**27**		IAmb	IAmb	23 53 54.1	
	comp=Z,15nm,1.0s							
L19K	**White Mountain**	**81.41**	**26**	P		**P**	**23 53 50.7**	**+0.1**
L19K					IAmb	IAmb	23 53 52.4	
	comp=Z,13nm,1.1s							
E18K	**Tukpahlearik C**	**81.42**	**20**		IAmb	IAmb	23 53 53.7	
	comp=Z,15nm,1.2s							
J19K	**Poorman**	**81.79**	**24**		IAmb	IAmb	23 53 53.8	
	comp=Z,9.2nm,1.1s							
L20K	**Farewell, AK**	**81.94**	**26**		IAmb	IAmb	23 53 54.2	
	comp=Z,16nm,1.1s							
MAW	**Mawson**	**82.33**	**202**	LR		LR	00 30 31.0	
	comp=Z,77nm,18.0s,baz=80,slow=36							
J20K	**Nowinta River**	**82.45**	**24**		IAmb	IAmb	23 54 01.4	
	comp=Z,21nm,1.3s							
E19K	**Redstone River**	**82.60**	**20**		IAmb	IAmb	23 54 03.3	
	comp=Z,7.6nm,1.1s							
SLKM	**Skilak Lake**	**82.93**	**28**			**P**	**23 53 57.5**	**-1.2**
SEW	**Seward**	**83.18**	**29**	P		**P**	**23 54 00.7**	**+0.8**
PMR	**Palmer**	**83.76**	**27**	P		**P**	**23 54 01.6**	**-1.2**
PMR					IAmb	IAmb	23 54 02.2	
	comp=Z,9.5nm,0.9s							
PMR	**Palmer**	**83.76**	**27**	P		**P**	**23 54 01.6**	**-1.2**
PMR					pmax	pmax		
	comp=Z,9.0nm,0.9s							
MLY	**Manley**	**84.13**	**24**	P		**P**	**23 54 04.5**	**-0.2**
MLY					IAmb	IAmb	23 54 06.5	
	comp=Z,5.6nm,0.9s							
SML	**Sawmill**	**84.19**	**27**			**P**	**23 54 04.7**	**-0.4**
RND	**Reindeer**	**84.42**	**26**		IAmb	IAmb	23 54 06.0	
	comp=Z,17nm,1.2s							
MCK	**McKinley**	**84.48**	**25**	P		**P**	**23 54 05.6**	**-0.9**
MCK					IAmb	IAmb	23 54 10.2	
	comp=Z,21nm,1.5s							
MCK	**McKinley**	**84.48**	**25**	P		**P**	**23 54 05.6**	**-0.9**
MCK					pmax	pmax		
	comp=Z,21nm,1.5s							
AB31	**Akbulak array**	**84.58**	**320**		IAmb	IAmb	23 54 07.8	
	comp=Z,6.9nm,0.9s							
ABKAR	**Akbulak array**	**84.58**	**320**			**P**	**23 54 06.5**	**-0.7**
NEA2	**Nenana**	**84.67**	**24**	P		**P**	**23 54 07.0**	**-0.4**
NEA2					IAmb	IAmb	23 54 08.7	
	comp=Z,5.5nm,1.0s							
I23K	**Minto, Yukon-K**	**84.72**	**24**	P		**P**	**23 54 07.2**	**-0.4**
I23K					IAmb	IAmb	23 54 12.3	
	comp=Z,8.3nm,0.9s							
DHY	**Denali Highway**	**84.97**	**26**	P		**P**	**23 54 08.5**	**-0.7**
DHY					IAmb	IAmb	23 54 10.0	
	comp=Z,18nm,1.2s							
WRH	**Wood River Hil**	**85.05**	**25**		IAmb	IAmb	23 54 10.0	
	comp=Z,12nm,1.0s							
CCB	**Clear Creek Bu**	**85.21**	**24**		IAmb	IAmb	23 54 13.5	
	comp=Z,12nm,0.9s							
KLU	**Klutina**	**85.22**	**28**		IAmb	IAmb	23 54 11.1	
	comp=Z,14nm,1.2s							
COLA	**College**	**85.26**	**24**	P		**P**	**23 54 08.8**	**-1.4**
COLA					IAmb	IAmb	23 54 10.9	
	comp=Z,7.9nm,0.8s							
COLA	**College**	**85.26**	**24**	P		**P**	**23 54 08.9**	**-1.4**
COLA					pmax	pmax		
	comp=Z,8.0nm,0.9s							
COLA	**College**	**85.26**	**24**	P		**P**	**23 54 08.4**	**-1.9**
HDA	**Harding Lake**	**85.50**	**25**		IAmb	IAmb	23 54 12.2	
	comp=Z,11nm,1.0s							
H24K	**Noodor Dome**	**85.52**	**23**		IAmb	IAmb	23 54 12.6	
	comp=Z,6.8nm,1.1s							
IL31		**85.63**	**24**		IAmb	IAmb	23 54 12.1	
	comp=Z,9.2nm,0.9s							
ILAR	**Eielson Array**	**85.63**	**24**	P		**P**	**23 54 10.0**	**-2.2**
	comp=Z,6.9nm,0.9s,baz=262,slow=4.7,SNR=33							
	comp=Z,6.9nm,0.9s							
ILAR	**Eielson Array**	**85.63**	**24**	P		**P**	**23 54 09.5**	**-2.7**
ILAR	**Eielson Array**	**85.63**	**24**	P		**P**	**23 54 09.5**	**-2.7**
TOLK	**Toolik Lake Re**	**85.71**	**20**		IAmb	IAmb	23 54 19.2	
	comp=Z,7.7nm,1.2s							
N25K	**Chitina, Valde**	**85.86**	**28**	P		**P**	**23 54 13.9**	**+0.3**
N25K					IAmb	IAmb	23 54 16.4	
	comp=Z,4.9nm,0.8s							
F24K	**Squaw Lake**	**85.98**	**22**		IAmb	IAmb	23 54 19.0	
	comp=Z,4.3nm,0.9s							
GLB	**Gilahina Butte**	**86.19**	**28**		IAmb	IAmb	23 54 16.6	
	comp=Z,6.7nm,0.8s							
RIDG	**Independent Ri**	**86.23**	**26**		IAmb	IAmb	23 54 19.0	
	comp=Z,9.6nm,0.9s							
DOT	**Dot Lake**	**86.56**	**26**		IAmb	IAmb	23 54 17.3	
	comp=Z,7.9nm,1.1s							
ARTI	**Arti**	**86.72**	**327**			**P**	**23 54 16.4**	**-1.4**
ARTI					IAmb	IAmb	23 54 16.8	
	comp=Z,5.3nm,0.8s							
ARTI	**Arti**	**86.72**	**327**	P		**P**	**23 54 16.1**	**-1.7**
L26K	**Log Cabin Wild**	**86.74**	**27**		IAmb	IAmb	23 54 20.6	
	comp=Z,3.9nm,0.8s							
J26L	**Joseph Creek**	**86.95**	**25**		IAmb	IAmb	23 54 22.8	
	comp=Z,7.3nm,1.2s							
BARN	**Barnard Glacie**	**87.14**	**29**		IAmb	IAmb	23 54 23.2	
	comp=Z,8.2nm,0.7s							
BMAR	**Burnt Mountain**	**87.19**	**22**			**P**	**23 54 20.1**	**+0.2**
M27K	**Edge Creek, AK**	**87.27**	**27**		IAmb	IAmb	23 54 25.0	
	comp=Z,15nm,1.4s							
CTGM	**Chitina Glacie**	**87.28**	**29**	P		**P**	**23 54 21.0**	**+0.4**
TABL	**Table Mountain**	**87.28**	**29**	P		**P**	**23 54 19.3**	**-1.4**
G26K	**Porcupine Rive**	**87.39**	**23**		IAmb	IAmb	23 54 22.2	
	comp=Z,12nm,1.0s							
F26K	**Sheenjek River**	**87.42**	**22**		IAmb	IAmb	23 54 23.0	
	comp=Z,13nm,1.1s							
BCAR	**Beaver Creek A**	**87.44**	**27**			**P**	**23 54 21.0**	**-0.3**
QSPA	**South Pole Qui**	**87.45**	**180**	P		**P**	**23 54 21.8**	**+0.5**
	comp=Z,5.7nm,1.0s,baz=325,slow=0.3,SNR=14							
QSPA					LR	LR	00 32 56.6	
	comp=Z,216nm,20.9s,baz=7.5,slow=35							
	comp=Z,5.7nm,1.0s							
QSPA	**South Pole Qui**	**87.45**	**180**	P		**P**	**23 54 24.6**	**+3.3**
QSPA					IAmb	IAmb	23 54 28.4	
	comp=Z,9.8nm,1.1s							
I28M	**Miner Creek**	**88.64**	**24**		IAmb	IAmb	23 54 31.4	
	comp=Z,6.8nm,0.9s							
DAWY	**Dawson**	**88.67**	**26**			**P**	**23 54 26.3**	**-0.7**
L29M	**L29M**	**89.09**	**27**		IAmb	IAmb	23 54 30.7	
	comp=Z,7.8nm,0.9s							
HYT	**Haines Junctio**	**89.11**	**29**			**P**	**23 54 28.6**	**-0.7**
HYT					IAmb	IAmb	23 54 31.0	
	comp=Z,6.0nm,0.9s							
S31K	**Pelican**	**89.45**	**32**	P		**P**	**23 54 30.2**	**-0.5**
K29M	**Barlow Dome**	**89.45**	**26**		IAmb	IAmb	23 54 36.2	
	comp=Z,12nm,1.2s							
J30M	**Hart River**	**90.05**	**25**		IAmb	IAmb	23 54 34.5	
	comp=Z,4.0nm,0.9s							
I30M	**Mount Dempster**	**90.09**	**25**		IAmb	IAmb	23 54 34.1	
	comp=Z,5.6nm,1.2s							
WHY	**Whitehorse**	**90.38**	**29**	P		**P**	**23 54 35.1**	**0.0**
DLBC	**Dease Lake**	**92.76**	**32**	LR		LR	00 30 20.6	
	comp=Z,53nm,20.6s,baz=288,slow=32							
BBB	**Bella Bella**	**93.89**	**38**	LR		LR	00 28 19.7	
	comp=Z,77nm,21.5s,baz=251,slow=30							
GNI	**Garni**	**94.65**	**310**	*ce*P		**P**	**23 54 55.1**	**-0.4**
GNI					pmax	pmax		
	comp=Z,3.0nm,0.8s							
YBH	**Yreka Blue Hor**	**98.04**	**48**	LR		LR	00 31 03.5	
	comp=Z,12nm,22.0s,baz=284,slow=30							
OBN	**Obninsk**	**99.00**	**325**	*eP*		**P**	**23 55 12.8**	**-1.7**
OBN				*e*			23 59 21.1	
OBN					pmax	pmax		
	comp=Z,3.0nm,1.0s							
YKA	**Yellowknife Ar**	**99.86**	**27**	LR		LR	00 34 53.1	
	comp=Z,119nm,21.1s,baz=304,slow=32							
CPUP	**Villa Florida**	**147.41**	**153**	PKPbc		**PKPbc**	**00 01 19.7**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=68,slow=3.3,SNR=5.1							
LPAZ	**La Paz**	**147.55**	**126**	PKPbc		**PKPbc**	**00 01 20.1**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=183,slow=7.2,SNR=3.7							

CATAC ***18*** *23:50:44.9±0.8, 13°N±6°×8°9W±°, h30km±6km, M2.8/9, MLv2.8/9, Error ellipse: s-maj=12.8km s-min=5.0km az=16.9, confirmed*
SNET ***18*** *23:50:45.3±1.1, 13°.03N×89°.46W, h33km, ML3.1*
GCG ***18*** *23:50:46.4±0.3, 13°.13N×89°.54W, h53km±9km, MD3.7*
ISC 18 23:50:44.5±2.1, 12°.99N±0°.10×89°.48W±0°.06, h32km±13km, n27, σ0°36/32, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**0.66**	**3**	*eP*		**Pn**	**23 50 58.2**	**+0.3**
JAYA	**Jayaque - finc**	**0.66**	**3**	*i* P		**Pn**	**23 50 58.1**	**+0.3**
JAYA				*eS*		**Sn**	**23 51 07.2**	**-0.1**
JAYA	**Jayaque - finc**	**0.66**	**3**	P		**Pn**	**23 50 57.9**	**0.0**
LOMA	**Loma Larga**	**0.72**	**25**	*eP*		**Pb**	**23 50 58.8**	**+0.1**
LOMA				*eS*		**Sn**	**23 51 09.0**	**+0.4**
LOMA	**Loma Larga**	**0.72**	**25**	S		**Sn**	**23 51 08.6**	**0.0**
LOMA	**Loma Larga**	**0.72**	**25**	P		**Pb**	**23 50 58.6**	**-0.1**
PMON	**Piamonte**	**0.74**	**13**	S		**Sn**	**23 51 08.6**	**-0.5**
PMON	**Piamonte**	**0.74**	**13**	P		**Pn**	**23 50 58.5**	**-0.4**
CEVE	**Cerro Verde**	**0.85**	**351**	P		**Pb**	**23 51 00.9**	**0.0**
SBLS	**San Blas**	**0.86**	**351**	*eP*		**Pb**	**23 51 01.0**	**-0.1**
SBLS				*eS*		**Sb**	**23 51 12.7**	**+0.3**
LBRS	**Las Brisas**	**0.86**	**30**	*eP*		**Pb**	**23 51 01.2**	**+0.1**
TECO	**Alcaldia de Te**	**0.88**	**51**	S		**Sb**	**23 51 12.9**	**+0.2**
TECO	**Alcaldia de Te**	**0.88**	**51**	P		**Pn**	**23 51 00.3**	**-0.3**
PAVA	**Las Pavas**	**0.90**	**36**	P		**Pn**	**23 51 00.3**	**-0.7**
UESV	**Universidad de**	**0.94**	**46**	P		**Pn**	**23 51 01.4**	**-0.1**
NUBE	**Las Nubes**	**0.95**	**342**	*eP*		**Pn**	**23 51 02.1**	**+0.2**
NUBE				*eS*		**Sb**	**23 51 14.6**	**-0.4**
NUBE	**Las Nubes**	**0.95**	**342**	*eP*		**Pn**	**23 51 02.1**	**+0.2**
NUBE	**Las Nubes**	**0.95**	**342**	P		**Pn**	**23 51 01.9**	**0.0**
FAME	**Alcaldia de Sa**	**1.00**	**329**	P		**Pn**	**23 51 02.4**	**+0.1**
FAME	**Alcaldia de Sa**	**1.00**	**329**	S		**Sn**	**23 51 15.1**	**-0.2**
PACA	**Pacayal**	**1.23**	**67**	S		**Sn**	**23 51 21.2**	**+0.1**
MTO3	**Montecristo**	**1.41**	**5**	*i* P		**Pn**	**23 51 08.7**	**+0.5**
LCND	**La Caada**	**1.58**	**78**	S		**Sn**	**23 51 29.8**	**+0.1**
CNCH	**Conchagua**	**1.63**	**80**	*eP*		**Pn**	**23 51 11.5**	**+0.4**
CNCH	**Conchagua**	**1.63**	**80**	P		**Pn**	**23 51 11.5**	**+0.4**
CNCH	**Conchagua**	**1.63**	**80**	S		**Sn**	**23 51 32.0**	**+0.9**
CSGN	**Cosiguina Volc**	**1.88**	**90**	P		**Pn**	**23 51 14.0**	**-0.4**
CSGN				S		**Sn**	**23 51 36.5**	**-0.6**

SNET ***18*** *23:52:56.5±2.1, 13°.20N×89°.35W, h61km, ML2.9*
CATAC 18 23:52:56.5±0.5, 13°N±4°×8°9W±°, h31km±4km, M2.8/12, MLv2.8/12, Error ellipse: s-maj=8.0km s-min=3.7km az=22.1, confirmed, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**0.51**	**354**	*i* P		**Pn**	23 53 08.3	+0.5
JAYA				*eS*		Sn	23 53 16.7	+1.1
JAYA	**Jayaque - finc**	**0.51**	**354**	S		Sn	23 53 17.1	+1.5
JAYA	**Jayaque - finc**	**0.51**	**354**	P		Pn	23 53 08.2	+0.4
LOMA	**Loma Larga**	**0.54**	**24**	*eS*		Sn	23 53 17.3	+0.9
PMON	**Piamonte**	**0.57**	**8**	S		Sn	23 53 18.3	+1.3
PMON	**Piamonte**	**0.57**	**8**	P		Pn	23 53 09.0	+0.4
LFRS	**El Faro**	**0.58**	**34**	*eP*		Pn	23 53 10.8	+2.1
UEES	**Universidad Ev**	**0.59**	**15**	S		Sn	23 53 18.8	+1.4
UEES	**Universidad Ev**	**0.59**	**15**	P		Pn	23 53 09.6	+0.8
BOQS	**Boqueron**	**0.60**	**11**	*eP*		Pn	23 53 09.6	+0.5
LFU	**La Fuente**	**0.66**	**25**	*eP*		Pn	23 53 10.2	+0.4
CEVE	**Cerro Verde**	**0.71**	**342**	P		Pn	23 53 11.0	+0.3
TECO	**Alcaldia de Te**	**0.72**	**57**	S		Sn	23 53 20.6	+0.1
PAVA	**Las Pavas**	**0.72**	**38**	S		Sn	23 53 21.8	+1.0
SBLS	**San Blas**	**0.72**	**342**	*eP*		Pn	23 53 11.1	+0.3
UESV	**Universidad de**	**0.77**	**50**	P		Pb	23 53 11.7	+0.3
UESV	**Universidad de**	**0.77**	**50**	S		Sn	23 53 22.4	+0.5
NUBE	**Las Nubes**	**0.84**	**334**	*i* P		Pb	23 53 12.6	-0.1
NUBE				*eS*		Sb	23 53 24.8	+1.0
NUBE	**Las Nubes**	**0.84**	**334**	P		Pb	23 53 12.5	-0.2
NUBE	**Las Nubes**	**0.84**	**334**	S		Sb	23 53 23.9	+0.2
SCLA	**Alcaldia de Sa**	**0.86**	**50**	P		Pn	23 53 12.3	-0.1
SCLA	**Alcaldia de Sa**	**0.86**	**50**	S		Sb	23 53 24.5	+0.4
FAME	**Alcaldia de Sa**	**0.92**	**319**	P		Pn	23 53 13.3	0.0
FAME	**Alcaldia de Sa**	**0.92**	**319**	S		Sn	23 53 25.5	+0.1
LOAL	**Lomas de Alarc**	**0.93**	**336**	S		Sb	23 53 26.8	+0.7
LOAL	**Lomas de Alarc**	**0.93**	**336**	P		Pn	23 53 13.7	+0.2
TECA	**Tecapa**	**0.94**	**68**	*eP*		Pn	23 53 13.2	-0.5
SLOZ	**Alcaldia de Sa**	**0.95**	**337**	*eP*		Pn	23 53 13.0	-2.2
PACA	**Pacayal**	**1.09**	**73**	*eP*		Pb	23 53 16.4	-0.5
PACA				*eS*		Sb	23 53 31.0	0.0
PACA	**Pacayal**	**1.09**	**73**	S		Sb	23 53 30.9	-0.1
PACA	**Pacayal**	**1.09**	**73**	P		Pn	23 53 16.0	+0.2
LLGN	**La Laguna**	**1.10**	**23**	S		Sb	23 53 30.9	-0.3
LCY	**Lacayo**	**1.11**	**75**	*eP*		Pn	23 53 16.0	0.0
MTO3	**Montecristo**	**1.25**	**2**	*i* P		Pn	23 53 17.5	-0.5
MTO3	**Montecristo**	**1.25**	**2**	P		Pn	23 53 17.8	-0.2
MTO3	**Montecristo**	**1.25**	**2**	S		Sn	23 53 34.2	+0.2
ESQI	**Esquipulas**	**1.41**	**2**	P		Pn	23 53 19.7	-0.4
LCND	**La Caada**	**1.48**	**83**	P		Pn	23 53 20.8	-0.1
LCND	**La Caada**	**1.48**	**83**	S		Sn	23 53 39.5	+0.2
CNCH	**Conchagua**	**1.53**	**85**	S		Sn	23 53 41.7	+1.0
CNCH	**Conchagua**	**1.53**	**85**	P		Pn	23 53 21.1	-0.7
CSGN	**Cosiguina Volc**	**1.80**	**95**	P		Pn	23 53 25.4	-0.1
CSGN				S		Sn	23 53 47.7	+0.4

GCG 19 00:01:16.8±1.0, 14°.05N×91°.08W, h72km±19km, MD3.7, ML3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.41**	**36**	*eP*		Pn	00 01 29.2	0.0
STG5	**El Palmar, Qui**	**0.44**	**323**	*eP*		Pn	00 01 33.2	+3.7
STG8	**El Palmar, Qui**	**0.48**	**327**	*i* P		Pn	00 01 34.5	+4.5
STG8				*i* S		Sn	00 01 47.6	+8.1
FG16	**Alotenango, Sa**	**0.59**	**68**	*i* P		Pn	00 01 30.4	-0.6
FG16				IAML			00 01 42.0	
	comp=E,4μm,0.2s							
PCG5	**San Vicente Pa**	**0.70**	**76**	*i* P		Pn	00 01 31.3	-0.8
PCG5				*i* P		Pn

CHOS	**Chios island**	**2.64**	**318**	P	**Pn**	**00 04 46.0 -0.7**
CHOS				S	**Sn**	**00 05 15.6 -1.9**
CHOS	**Chios island**	**2.64**	**318**	P	**Pn**	**00 04 47.1 +0.4**
IDI	**Anoyia**	**3.01**	**248**	P	**Pn**	**00 04 52.1 +0.4**
IDI	**Anoyia**	**3.01**	**248**	P	**Pn**	**00 04 52.1 +0.4**

IDC ***19*** *00:06:19.0±2.0, 3°.63S×127°.86E, h0km, mb3.7/2, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=141.6km s-min=20.4km az=67.0*

DJA ***19*** *00:06:20.8±0.2, 3°.2S×12°.9E±°, h10km, M4.0/11, mB5.5/2, mb4.3/2, MLv3.8/11, Mw(mB)4.9/2*

ISC 19 00:06:22.2±0.9, **2°.96S**±0°.06×**129°.48E**±0°.05, **h35**km, **n13, σ2s44**/19, **Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.67**	**235**	P	**Pn**	**00 06 35.0**	**-0.2**
MSAI				S	**Sn**	**00 06 44.8**	**+0.3**
AAI	**Ambon**	**1.47**	**241**	P	**Pn**	**00 06 48.9**	**+2.7**
AAI				S	**Sn**	**00 07 07.2**	**+2.9**
BNDI	**Bandanaira**	**1.61**	**165**	P	**Pn**	**00 06 50.3**	**+2.2**
NLAI	**Namlea**	**2.39**	**263**	P	**Pn**	**00 07 00.7**	**+1.8**
SWI	**Sorong**	**2.74**	**41**	P	**Pn**	**00 07 04.1**	**+0.4**
SWI				S	**Sn**	**00 07 36.8**	**+1.2**
FAKI	**Fak Fak**	**2.77**	**89**	P	**Pn**	**00 07 04.1**	**0.0**
FAKI				S	**Sn**	**00 07 40.3**	**+4.0**
SANI	**Sanana**	**3.60**	**284**	P	**Pn**	**00 07 15.4**	**-0.2**
SOEI	**Soe**	**8.51**	**217**	P	**Pn**	**00 08 25.9**	**+2.8**
MMRI	**Maumere**	**9.14**	**232**	P	**Pn**	**00 08 34.4**	**+2.6**
FITZ	**Fitzroy Crossi**	**15.51**	**194**	Pn	**Pn**	**00 09 54.5**	**-3.8**
	baz=5.2,slow=11,SNR=1.7						
WRA	**Warramunga Arr**	**17.53**	**165**	P	**Pn**	**00 10 22.7**	**-1.4**
	0.4nm,0.3s,baz=343,slow=13,SNR=15						
WRA				S	**Sn**	**00 13 37.8**	**-0.5**
	0.2nm,0.4s,baz=334,slow=26,SNR=2.1						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**21.02**	**169**	P	**P**	**00 11 02.9**	**-0.1**
	6.5nm,0.8s,baz=346,slow=10,SNR=50						
ASAR				S	**S**	**00 14 50.7**	**-4.7**
	0.6nm,0.7s,baz=346,slow=18,SNR=7.1						
	6.5nm,0.8s						
MKAR	**Makanchi Array**	**64.59**	**326**	P	**P**	**00 16 55.8**	**-0.3**
	0.2nm,0.4s,baz=123,slow=7.7,SNR=5.7						
	0.2nm,0.4s						

SOME ***19*** *00:08:01.4, 37°.70N×72°.55E, h15km*

NNC ***19*** *00:08:03.6±7.5, 38°.16N×72°.10E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=58.7km s-min=44.7km az=172.0*

ISC 19 00:08:04.2±3.7, **38°.1N**±0°.2×**72°.2E**±0°.1, **h10**km, **n6, σ1s66**/10, **1C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRKS	**Merke**	**4.72**	**9**	*eP*	**Pn**	**00 09 17.6**	**+2.0**
	28nm,0.5s						
MRKS				*eS*	**Sn**	**00 10 10.2**	**-0.3**
	12nm,0.4s						
AAK	**Ala-Archa**	**4.88**	**21**	⇑P	**Pn**	**00 09 18.5**	**+0.7**
	2.3nm,0.4s						
AAK				⇓S	**Sn**	**00 10 14.6**	**+0.1**
	8.5nm,0.6s						
KK31	**Karatay Array**	**5.17**	**346**	⇓P	**Pn**	**00 09 20.5**	**-1.2**
	17nm,0.3s,baz=152,slow=12,SNR=246						
KK31				⇓S	**Sn**	**00 10 22.9**	**+1.5**
	24nm,0.6s,baz=176,slow=24,SNR=6.0						
BRLS	**Borolday**	**5.25**	**341**	*eP*	**Pn**	**00 09 23.6**	**+0.9**
	54nm,0.2s						
BRLS				*eS*	Sn	00 10 20.2	-3.2
	29nm,0.4s						
KST	**Kastek**	**5.73**	**29**	*eP*	**Pn**	**00 09 30.7**	**+1.3**
	3.5nm,0.5s						
KST				*eS*	**Sn**	**00 10 32.5**	**-2.8**
	8.0nm,1.0s						
AB31	**Akbulak array**	**14.23**	**326**	P	**Pn**	**00 11 24.9**	**-0.8**
	0.5nm,0.3s,baz=132,slow=13,SNR=29						
AB31				S	Sn	00 13 58.6	-4.8
	0.9nm,0.5s,baz=146,slow=22,SNR=9.2						

TRN ***19*** *00:10:45.2, 12°.46N×60°.33W, h60km, MD4.9, South-west of Barbados.*

NEIC ***19*** *00:10:46.0±1.0, 12°.41N±0°.06×60°.26W±0°.05, h58km±7km, mb4.7/207, Error ellipse: s-maj=9.5km s-min=5.6km az=142.0*

IDC ***19*** *00:10:48.0±0.8, 12°.41N×60°.52W, h73km±6km, mb3.9/10, mbtmp4.4/12, MS3.4/13, Error ellipse: s-maj=18.7km s-min=13.8km az=80.0*

RSNC ***19*** *00:10:56.1±0.9, 13°.8°×6°.1W±°, h133km±10km, M4.2, mB4.9, mb4.5, Mw(mB)4.2*

ISC 19 00:10:46.8±0.6, **12°.43N**±0°.03×**60°.37W**±0°.04, **h72**km±5km, **n353, σ1s35**/380, **mb4.7**/107, **5C-3D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCMP	**Grenada, Carri**	**1.03**	**273**	⇑*i*P	**Pn**	**00 11 05.2**	**-0.6**
GCMP				*e*S	**Sn**	**00 11 20.3**	**+0.4**
BBGH	**Gun Hill**	**1.06**	**48**		**Pn**	**00 11 03.8**	**-2.4**
BBGH				Sn	**Sn**	**00 11 18.0**	**-2.6**
BBGH	**Gun Hill**	**1.06**	**48**	*e*P	**Pn**	**00 11 04.2**	**-2.0**
BBGH				*e*S	**Sn**	**00 11 19.1**	**-1.6**
SVB	**Belmont**	**1.20**	**314**	*e*P	**Pn**	**00 11 06.5**	**-1.4**
SVB				*e*S	**Sn**	**00 11 23.4**	**-0.3**
GRSS	**Sisters**	**1.22**	**264**	⇓*i*P	**Pn**	**00 11 07.3**	**-0.8**
GRSS				*e*S	**Sn**	**00 11 25.1**	**+1.0**
GRHS	**Sauteurs**	**1.26**	**261**	*i*P	**Pn**	**00 11 07.9**	**-0.7**
GRHS				*e*S	**Sn**	**00 11 25.3**	**+0.3**
GRGR	**Grenville**	**1.29**	**257**		**Pn**	**00 11 08.6**	**-0.4**
GRGR				Sn	**Sn**	**00 11 27.4**	**+1.7**
GRGR	**Grenville**	**1.29**	**257**	*e*P	**Pn**	**00 11 08.3**	**-0.7**
GRGR				*e*S	**Sn**	**00 11 26.8**	**+1.1**
GRW	**Mount Saint Ca**	**1.29**	**258**	⇑*i*P	**Pn**	**00 11 09.8**	**+0.7**
GRW				*e*S	**Sn**	**00 11 27.1**	**+1.3**
MCLT	**Moule a Chique**	**1.39**	**337**	*e*P	**Pn**	**00 11 09.0**	**-1.3**
MCLT				*e*S	**Sn**	**00 11 27.2**	**-0.9**
GRFF	**Grenada Fort F**	**1.39**	**254**	*e*P	**Pn**	**00 11 09.8**	**-0.6**
GRFF				*e*S	**Sn**	**00 11 29.6**	**+1.6**
SLAC	**Saint Lucia, A**	**1.54**	**341**	*e*P	**Pn**	**00 11 11.1**	**-1.3**
SLAC				*e*S	**Sn**	**00 11 30.3**	**-1.4**
SLCP	**Castries, St.**	**1.68**	**339**	*e*P	**Pn**	**00 11 13.2**	**-1.0**
SLCP				*e*S	**Sn**	**00 11 35.0**	**0.0**
SLBI	**Saint Lucia, B**	**1.69**	**340**	*e*P	**Pn**	**00 11 12.7**	**-1.6**
SLBI				*e*S	**Sn**	**00 11 34.2**	**-0.9**
TRN	**Trinidad (W)**	**2.04**	**210**	⇓*i*P	**Pn**	**00 11 19.4**	**+0.4**
MPOM	**Morne Pois Mar**	**2.06**	**347**		**Pn**	**00 11 17.8**	**-1.4**
MPOM				Sn	**Sn**	**00 11 42.4**	**-1.6**
DMDM	**Guralp CMG5TDE**	**2.08**	**214**	*e*P	**Pn**	**00 11 20.4**	**+0.9**
DMDM				*e*S	**Sn**	**00 11 45.6**	**+1.1**
BIM	**Bigot**	**2.18**	**342**		**Pn**	**00 11 20.1**	**-0.9**
BIM				Sn	**Sn**	**00 11 47.2**	**+0.1**
BIM	**Bigot**	**2.18**	**342**	*e*P	**Pn**	**00 11 19.8**	**-1.1**
BIM				*e*S	**Sn**	**00 11 46.1**	**-0.9**
TPP	**Pointe-a-Pierr**	**2.35**	**207**	*e*P	**Pn**	**00 11 24.8**	**+1.6**
ILAM	**Ilet Lapin Mar**	**2.38**	**348**		**Pn**	**00 11 22.4**	**-1.2**
ILAM	**Ilet Lapin Mar**	**2.38**	**348**	⇓*i*P	**Pn**	**00 11 22.3**	**-1.3**
ILAM				*e*S	**Sn**	**00 11 49.9**	**-1.8**
SVN	**Savane Anatole**	**2.52**	**342**		**Pn**	**00 11 25.3**	**-0.2**
SVN				Sn	**Sn**	**00 11 54.9**	**-0.3**
SVN	**Savane Anatole**	**2.52**	**342**	*e*P	**Pn**	**00 11 24.9**	**-0.6**
SVN				*e*S	**Sn**	**00 11 54.1**	**-1.1**
DLPL	**La Plaine**	**3.00**	**344**	*e*P	**Pn**	**00 11 32.1**	**-0.1**
DLPL				*e*S	**Sn**	**00 12 06.0**	**-1.1**
DSLB	**Salisbury**	**3.16**	**341**	*e*P	**Pn**	**00 11 33.7**	**-0.4**
DSLB				*e*S	**Sn**	**00 12 10.3**	**-0.4**
DWS	**Wesley**	**3.25**	**344**	*e*P	**Pn**	**00 11 34.5**	**-0.8**
DWS				*e*S	**Sn**	**00 12 12.3**	**-0.6**
MAGL	**Barre de l'ile**	**3.61**	**346**		**Pn**	**00 11 39.1**	**-1.2**
TDBA	**Terre de Bas,**	**3.61**	**340**		**Pn**	**00 11 40.7**	**+0.3**
TDBA				Sn	**Sn**	**00 12 23.2**	**+1.4**
TBG	**Guadaloupe-3**	**3.62**	**340**	*e*P	**Pn**	**00 11 40.4**	**0.0**
TBG				*e*S	**Sn**	**00 12 22.8**	**+0.9**
MMLZ	**Guadeloupe Bro**	**3.81**	**341**	*e*P	**Pn**	**00 11 43.6**	**+0.6**
MMLZ				*e*S	**Sn**	**00 12 26.5**	**0.0**
CBE	**Ff, Capester**	**3.81**	**342**		**Pn**	**00 11 43.1**	**0.0**
ATGZ	**Broadband at L**	**3.87**	**340**	*e*P	**Pn**	**00 11 44.0**	**+0.1**
DSDZ	**La Diserade, G**	**3.92**	**350**	*e*P	**Pn**	**00 11 43.0**	**-1.5**
DSDZ				*e*S	**Sn**	**00 12 27.4**	**-1.9**
GDSD	**La Dsirade Is**	**3.92**	**350**		**Pn**	**00 11 42.4**	**-2.1**
DHSZ	**Broadband at M**	**4.05**	**341**	*e*P	**Pn**	**00 11 46.9**	**+0.6**
DHSZ				*e*S	**Sn**	**00 12 31.3**	**-1.2**
GDHS	**Morne Mazeau,**	**4.05**	**341**		**Pn**	**00 11 46.0**	**-0.4**
ABD	**La Joyeuse, An**	**4.16**	**345**		**Pn**	**00 11 46.5**	**-1.4**
MBWH	**Windy Hill**	**4.63**	**338**	*e*P	**Pn**	**00 11 54.7**	**+0.4**
MBFL	**Flemmings, Mon**	**4.65**	**338**	*e*P	**Pn**	**00 11 54.8**	**+0.4**
PCRV	**Puerto La Cruz**	**4.74**	**242**	*e*P	**Pn**	**00 11 56.3**	**+0.4**
PCRV				*e*S	**Sn**	**00 12 47.8**	**-1.9**
ANWB	**Willy Bob**	**5.38**	**345**		**Pn**	**00 12 03.5**	**-1.1**
ANWB	**Willy Bob**	**5.38**	**345**	*e*P	**Pn**	**00 12 04.8**	**+0.3**
ANWB				*e*S	**Sn**	**00 13 02.0**	**-3.2**
SKI	**Saint Kitts**	**5.38**	**335**	*e*P	**Pn**	**00 12 04.2**	**-0.4**
SKI				*e*S	**Sn**	**00 13 05.1**	**-0.1**
SEUS	**St. Eustatius**	**5.63**	**334**		**Pn**	**00 12 08.1**	**+0.2**
SABA	**Saba**	**5.86**	**332**		**Pn**	**00 12 11.2**	**+0.1**
HUMP	**Col San Antoni**	**7.75**	**318**		**Pn**	**00 12 36.6**	**-0.4**
SJG	**San Juan**	**7.93**	**316**	P	**Pn**	**00 12 39.9**	**+0.5**
	74nm,0.6s,baz=118,slow=12,SNR=66						
SJG				S	**Sn**	**00 14 04.3**	**-3.3**
	59nm,0.4s,baz=292,slow=9.8,SNR=7.6						
SJG				LR	LR	00 16 40.2	
	comp=Z,77nm,18.9s,baz=138,slow=45						
SJG	**San Juan**	**7.93**	**316**	Pn	**Pn**	**00 12 38.9**	**-0.5**
SJG	**San Juan**	**7.93**	**316**	*e*P	**Pn**	**00 12 39.6**	**+0.2**
SJG	**San Juan**	**7.93**	**316**	P	**Pn**	**00 12 39.2**	**-0.2**
	648nm26nm,0.5s						
GCPR	**Guaynabo City**	**8.03**	**317**		**Pn**	**00 12 41.1**	**+0.4**
OBIP	**Obispado Ponce**	**8.20**	**314**		**Pn**	**00 12 43.5**	**+0.4**
BAUV	**El Baul**	**8.29**	**246**		**Pn**	**00 12 44.0**	**-0.3**
BAUV	**El Baul**	**8.29**	**246**	*e*P	**Pn**	**00 12 43.6**	**-0.8**
BAUV				*e*S	**Sn**	**00 14 12.3**	**-4.3**
BAUV	**El Baul**	**8.29**	**246**	*e*S	**Sn**	**00 14 12.3**	**-4.3**
AOPR	**Arecibo Observ**	**8.51**	**314**		**Pn**	**00 12 47.7**	**+0.4**
AOPR	**Arecibo Observ**	**8.51**	**314**	*e*P	**Pn**	**00 12 47.9**	**+0.6**
CRPR	**Cabo Rojo, PR**	**8.54**	**311**		**Pn**	**00 12 47.6**	**-0.1**
BOAV	**Boa Vista**	**9.97**	**181**		Pn	00 13 03.2	-4.2
BOAV	**Boa Vista**	**9.97**	**181**	*e*P	Pn	00 13 00.7	-6.6
MDP	**Montagnes des**	**10.55**	**133**	P	Pn	00 13 05.4	-10
	12nm,0.3s,baz=331,slow=16,SNR=52						
MDP				S	Sn	00 14 54.4	-17
	329nm,0.4s,baz=232,slow=22,SNR=35						
SDV	**Santo Domingo**	**10.68**	**252**	P	**Pn**	**00 13 17.3**	**+0.1**
	39nm,0.7s,baz=86,slow=9.5,SNR=64						
SDV				S	**Sn**	**00 15 12.6**	**-2.7**
	21nm,0.4s,baz=70,slow=22,SNR=6.5						
SDV				LR	LR	00 18 27.9	
	comp=Z,83nm,18.5s,baz=74,slow=44						
SDV	**Santo Domingo**	**10.68**	**252**		**Pn**	**00 13 16.9**	**-0.3**
SDV	**Santo Domingo**	**10.68**	**252**	*e*P	**Pn**	**00 13 17.3**	**+0.1**
SDV	**Santo Domingo**	**10.68**	**252**	P	**Pn**	**00 13 17.3**	**+0.1**
	572nm32nm,0.8s						
DR12	**Loma Pena Alta**	**10.73**	**307**		**Pn**	**00 13 17.4**	**-0.3**
BANI	**BANI**	**11.30**	**303**		**Pn**	**00 13 26.1**	**+0.5**
URIC	**Uribia, Colomb**	**11.39**	**268**	P	**Pn**	**00 13 24.0**	**-2.6**
	15nm,0.6s						
SC01	**Santiago de lo**	**12.14**	**306**		**Pn**	**00 13 37.5**	**+0.6**
CRJC	**Cerrejon, Guaj**	**12.33**	**265**	P	**Pn**	**00 13 38.8**	**-0.8**
	1μm41nm,0.7s						
SDDR	**Presa de Saban**	**12.36**	**303**		**Pn**	**00 13 40.2**	**+0.3**
SDDR	**Presa de Saban**	**12.36**	**303**	P	**Pn**	**00 13 41.0**	**+1.1**
	39nm,0.8s						
PAMC	**Pamplona, Colo**	**13.15**	**249**	P	**Pn**	**00 13 48.7**	**-2.4**
	241nm19nm,0.6s						
SMRC	**Santa Marta, M**	**13.62**	**266**	P	Pn	00 13 53.1	-3.7
	14nm,0.7s						
ARGC	**Ariguani, Magd**	**13.85**	**261**	P	**Pn**	**00 13 58.9**	**-1.0**
	35nm,0.8s						
BARC	**Barichara**	**13.90**	**246**	P	**Pn**	**00 14 03.0**	**+2.3**
	30nm,0.7s						
RUSC	**La Rusia**	**14.12**	**244**		**Pn**	**00 14 02.9**	**-1.0**
RUSC	**La Rusia**	**14.12**	**244**	P	**Pn**	**00 14 03.3**	**-0.6**
	31nm,0.5s						
PTGC	**Puerto Gaitan,**	**14.22**	**236**	P	**P**	**00 14 10.8**	**+0.9**
	35nm,0.6s						
BRJC	**Barrancabermej**	**14.25**	**249**	P	**P**	**00 14 09.6**	**-0.7**
	30nm,0.8s						
SJCC	**San Jacinto, C**	**14.74**	**262**	P	Pn	00 14 07.5	-4.1
	20nm,0.6s						
SJCC				S	**Sn**	**00 16 51.8**	**-2.2**
	20nm,0.6s						
PTBC	**PUERTO BERRIO,**	**15.07**	**248**	P	**Pn**	**00 14 13.2**	**-2.6**
	11nm,0.7s						
SPBC	**San Pablo de B**	**15.11**	**245**	P	**Pn**	**00 14 15.4**	**-0.9**
	21nm,0.8s						
CHIC	**Chingaza**	**15.31**	**241**	P	**Pn**	**00 14 18.4**	**-0.8**
	6.4nm,0.7s						
MACA	**Manacapuru-AM**	**15.49**	**181**		**Pn**	**00 14 16.8**	**-4.3**
MACA	**Manacapuru-AM**	**15.49**	**181**	*e*P	**Pn**	**00 14 16.6**	**-4.5**
VILC	**Villavicencio,**	**15.55**	**239**	P	**Pn**	**00 14 24.1**	**+2.1**
	33nm,0.5s						
MAL2	**Monte Alegre,**	**15.62**	**156**	Pn	**Pn**	**00 14 21.6**	**-1.2**
UREC	**San Jose de Ur**	**15.63**	**254**	P	**Pn**	**00 14 21.4**	**-1.5**
	42nm29nm,0.7s						
CVER	**Cruz Verde, Cu**	**15.66**	**241**	P	**P**	**00 14 26.4**	**0.0**
ROSC	**El Rosal**	**15.71**	**243**	P	**P**	**00 14 27.3**	**+0.4**
	18nm,0.5s,baz=114,slow=18,SNR=6.0						
ROSC				S	Sn	00 17 04.4	-13
	5.4nm,0.4s,baz=226,slow=23,SNR=0.9						
ROSC				LR	LR	00 21 12.9	
	comp=Z,251nm,20.3s,baz=56,slow=40						
ROSC	**El Rosal**	**15.71**	**243**		**Pn**	**00 14 23.7**	**-0.5**
ROSC	**El Rosal**	**15.71**	**243**	P	**P**	**00 14 27.9**	**+1.0**
NORC	**Norcasia**	**15.85**	**246**	P	**Pn**	**00 14 26.4**	**+0.6**
	24nm,0.7s						
HELC	**Santa Helena**	**16.18**	**249**	P	**Pn**	**00 14 31.4**	**+1.2**
TEFE	**Tefe**	**16.39**	**195**	*e*P	**Pn**	**00 14 28.9**	**-3.6**
GUY2C	**Guyana, Caldas**	**16.45**	**245**	P	**Pn**	**00 14 32.9**	**-0.7**
	380nm28nm,0.6s						
GUY2C				S	**Sn**	**00 17 32.3**	**-3.5**
	380nm28nm,0.6s						
DBBC	**Dabeiba**	**16.51**	**252**	P	**Pn**	**00 14 31.8**	**-2.2**
DBBC				S	**Sn**	**00 17 30.3**	**-6.4**
URMC	**La Uribe, Meta**	**16.59**	**238**	P	**Pn**	**00 14 35.6**	**+0.5**
	14nm,1.0s						
CBOC	**Ciudad Bolivar**	**16.76**	**248**	P	**Pn**	**00 14 36.6**	**-0.6**
	2μm16nm,0.8s						
PRAC	**Prado**	**16.77**	**240**	P	**Pn**	**00 14 36.0**	**-1.2**
	15nm,0.7s						
PRAC				S	**Sn**	**00 17 36.1**	**-6.9**
	15nm,0.7s						
MACC	**Macarena, Meta**	**16.81**	**234**	P	**Pn**	**00 14 38.3**	**+0.6**
	35nm,0.6s						
ORTC	**Ortega, Tolima**	**16.97**	**241**	P	**Pn**	**00 14 40.7**	**+1.0**
	9.4nm,0.9s						
ORTC				S	**Sn**	**00 17 42.3**	**-5.6**
	9.4nm,0.9s						
CAPC	**Capurgana**	**17.11**	**259**	P	**Pn**	**00 14 40.4**	**-1.0**
	11nm,2.0s						
YOTC	**Yotoco, Valle**	**17.89**	**243**	P	**P**	**00 14 49.1**	**-1.6**
	10nm,0.7s						
GARC	**Garzon, Huila**	**18.11**	**237**	P	**Pn**	**00 14 55.1**	**+1.3**
JAMC	**Jamundi, Valle**	**18.11**	**242**	P	**P**	**00 14 58.0**	**-0.1**
	996nm11nm,0.6s						
FLOC	**Florencia**	**18.59**	**236**	P	**P**	**00 14 58.6**	**+0.3**
FLOC	**Florencia**	**18.59**	**236**	P	**P**	**00 14 59.2**	**+0.9**
	21nm,1.1s						
FLOC				S	**S**	**00 18 17.9**	**-8.3**
	21nm,1.1s						
PTLC	**Puerto Leguiza**	**18.79**	**231**	P	**Pn**	**00 15 02.8**	**+1.0**
POPC	**Popayan, Colom**	**18.90**	**240**	P	**P**	**00 14 59.9**	**-2.1**
	1μm8.5nm,0.8s						
TMAB	**Tom-Au,PA,Br**	**19.11**	**140**	*e*P	**P**	**00 15 03.3**	**-0.7**
BCIP	**Isla Barro Col**	**19.39**	**262**	P	**P**	**00 15 04.7**	**-2.4**
	69nm,1.1s						
BBAC	**Balboa, Cauca**	**19.66**	**240**	P	**P**	**00 15 09.7**	**-0.5**
	12nm,0.7s						
NPGB	**Novo Progresso**	**19.98**	**165**	*e*P	**P**	**00 15 11.3**	**-2.2**
GCUF	**Volcan Galeras**	**20.18**	**238**	P	**P**	**00 15 14.8**	**-1.3**
	19nm,0.7s						
TULM	**Tulcn-Chalpat**	**20.83**	**237**	P	**P**	**00 15 23.5**	**+0.3**
	19nm,0.9s						
PRPB	**Parauapebas**	**21.25**	**150**	*e*P	**P**	**00 15 26.1**	**-1.2**
OTAV	**Otavalo**	**21.64**	**237**		**P**	**00 15 31.4**	**-0.5**
OTAV	**Otavalo**	**21.64**	**237**	*e*P	**P**	**00 15 31.7**	**-0.2**
OTAV				*e*S	**S**	**00 19 28.0**	**-0.1**
OTAV	**Otavalo**	**21.64**	**237**	P	**P**	**00 15 30.9**	**-1.0**
	12nm,0.8s						
PAC1	**Pacto, Paraso**	**21.91**	**238**	P	**P**	**00 15 33.3**	**-1.1**
CLDB	**Colider**	**23.59**	**169**	*e*P	**P**	**00 15 50.9**	**-0.4**
PDRB	**Porto dos Gac**	**24.16**	**171**	*e*P	**P**	**00 15 55.7**	**-0.6**
SMTB	**Santa Maria do**	**24.68**	**148**	*e*P	**P**	**00 16 00.9**	**-0.2**
BOAB	**BOACO BROADBAND**	**24.70**	**273**	P	**P**	**00 16 00.8**	**-0.5**
VILB	**Vilhena**	**25.22**	**180**		**P**	**00 16 06.0**	**-0.1**
VILB					IAmb	IAmb	00 16 08.4
	comp=Z,16nm,0.7s						
VILB	**Vilhena**	**25.22**	**180**	*e*P	**P**	**00 16 05.6**	**-0.5**
MCRA	**Macar, Loja**	**25.64**	**231**	P	**P**	**00 16 09.4**	**-0.6**
SNDB	**Serra Nova Dou**	**25.87**	**159**	*e*P	**P**	**00 16 12.2**	**+0.3**
ATAH	**Atahualpa**	**26.43**	**224**	LR	LR	00 28 36.4	
	comp=Z,60nm,19.3s,baz=39,slow=41						
PTLB	**Pontes e Lacer**	**27.73**	**177**	P	**P**	**00 16 27.8**	**-0.7**
SIV	**San Ignacio**	**28.25**	**181**	LR	LR	00 28 21.0	
	comp=Z,84nm,20.1s,baz=287,slow=37						
MTO3	**Montecristo**	**28.26**	**277**	P	**P**	**00 16 34.5**	**+0.9**
MTO3				IAmb	IAmb	00 16 36.2	
	comp=Z,11nm,0.8s						
SALV	**Santo Antonio**	**28.53**	**171**	*e*P	**P**	**00 16 35.7**	**-0.1**
ARAG	**Araguaiana, MT**	**29.21**	**163**	*e*P	**P**	**00 16 42.5**	**+0.7**
NNA	**Nana**	**29.25**	**215**		**P**	**00 16 42.1**	**-0.2**
NNA				IAmb	IAmb	00 16 46.0	
	comp=Z,18nm,0.7s						
LPAZ	**La Paz**	**29.55**	**195**	P	**P**	**00 16 46.6**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=1.0,slow=9.0,SNR=7.5						
LPAZ				LR	LR	00 29 16.3	
	comp=Z,125nm,19.7s,baz=28,slow=38						
	comp=Z,2.1nm,0.8s						
LPAZ	**La Paz**	**29.55**	**195**		**P**	**00 16 45.4**	**-0.1**
LPAZ	**La Paz**	**29.55**	**195**	*e*P	**P**	**00 16 44.5**	**-0.9**
LPAZ	**La Paz**	**29.55**	**195**	P	**P**	**00 16 47.0**	**+1.5**
152A	**Waverly Hall**	**30.05**	**316**	P	**P**	**00 16 50.2**	**+1.0**
152A				IAmb	IAmb	00 16 51.0	
	comp=Z,11nm,0.6s						
CCIG	**Comitan**	**30.99**	**281**	P	**P**	**00 16 58.0**	**+0.2**
TKL	**Tuckaleechee C**	**31.33**	**222**	LR	LR	00 33 01.8	
	comp=Z,36nm,18.1s,baz=98,slow=43						
IPMB	**Ipameri, GO**	**32.52**	**158**	*e*P	**P**	**00 17 11.8**	**+0.8**
X48A	**Hartselle**	**32.67**	**317**		**P**	**00 17 13.0**	**+0.9**
X48A				IAmb	IAmb	00 17 13.9	
	comp=Z,9.4nm,0.7s						
PB11	**IPOC Station P**	**33.27**	**196**	P	**P**	**00 17 16.7**	**-1.0**
PB11				IAmb	IAmb	00 17 17.7	
	comp=Z,23nm,1.4s						
PLAL	**Pickwick Lake**	**33.67**	**316**	P	**P**	**00 17 21.7**	**+0.9**
PLAL				IAmb	IAmb	00 17 22.9	
	comp=Z,9.4nm,0.7s						
VBMS	**Vicksburg**	**33.95**	**310**	P	**P**	**00 17 24.5**	**+1.2**
OXF	**Oxford**	**34.32**	**315**	P	**P**	**00 17 27.2**	**+0.7**
PB01	**IPOC Station P**	**34.45**	**195**	P	**P**	**00 17 26.8**	**-1.0**
PB01				IAmb	IAmb	00 17 29.1	
	comp=Z,6.6nm,0.7s						
PB02	**IPOC Station P**	**34.82**	**196**	P	**P**	**00 17 31.3**	**+0.3**
143A	**Socs Landing,**	**34.84**	**310**	P	**P**	**00 17 32.0**	**+1.0**
PB07	**IPOC Station P**	**35.21**	**195**	P	**P**	**00 17 34.1**	**-0.3**
SADO	**Sadowa**	**36.01**	**337**	LR	LR	00 35 14.2	
	comp=Z,25nm,18.3s,baz=144,slow=41						
SIUC	**Southern Illin**	**36.01**	**319**	P	**P**	**00 17 42.0**	**+1.0**
S44A	**Carbondale**	**36.02**	**319**	P	**P**	**00 17 42.2**	**+1.1**
CGM3	**Cape Girardeau**	**36.05**	**318**	P	**P**	**00 17 41.9**	**+0.6**
CGM3				IAmb	IAmb	00 17 42.5	
	comp=Z,7.2nm,0.8s						
PBMO	**Poplar Bluff**	**36.26**	**317**	P	**P**	**00 17 42.7**	**-0.4**
PBMO				IAmb	IAmb	00 17 44.4	
	comp=Z,7.5nm,0.8s						
WLAR	**White Oak Lake**	**36.56**	**311**	P	**P**	**00 17 45.5**	**-0.2**
X40A	**Basin Creek Fa**	**36.74**	**312**	P	**P**	**00 17 47.7**	**+0.5**
X40A				IAmb	IAmb	00 17 49.0	
	comp=Z,14nm,0.9s						
WHAR	**Wooly Hollow**	**36.74**	**314**		**P**	**00 17 47.6**	**+0.4**
WHAR				IAmb	IAmb	00 18 06.7	
	comp=Z,7.7nm,0.7s						
FCAR	**Ozark Folk Cen**	**36.93

TASM	ASL Pad, Albuq	47.27 306	P	P	00 19 14.0	+0.7
TASM	ASL Pad, Albuq	47.27 306		P	00 19 13.5	+0.2
TASM			IAmb	IAmb	00 19 15.8	
	comp=Z,5.1nm,0.8s					
TASM	ASL Pad, Albuq	47.27 306	P	P	00 19 13.5	+0.2
TASM			IAmb	IAmb	00 19 15.8	
	comp=Z,5.1nm,0.8s					
Y22A	Socorro	47.39 305		P	00 19 14.8	+0.6
SDCO	Great Sand Dun	47.41 310	P	P	00 19 14.1	-0.3
SDCO			IAmb	IAmb	00 19 15.4	
	comp=Z,4.3nm,0.7s					
LENM	Lemitar	47.46 305	P	P	00 19 15.5	+0.7
SBM	South Baldy	47.58 305	P	P	00 19 16.4	+0.5
ULM	Lac du Bonnet	47.58 330	P	P	00 19 15.1	-0.1
	comp=Z,7.3nm,0.7s,baz=134,slow=9.8,SNR=5.2					
ULM			LR	LR	00 40 27.0	
	comp=Z,90nm,21.0s,baz=318,slow=37					
	comp=Z,7.3nm,0.7s					
121A	Cookes Peak, D	47.71 303		P	00 19 17.7	+1.0
121A			IAmb	IAmb	00 19 18.7	
	comp=Z,7.1nm,0.7s					
ISCO	Idaho Springs	48.22 313		P	00 19 21.1	+0.4
ISCO			IAmb	IAmb	00 19 22.2	
	comp=Z,6.4nm,0.8s					
S22A	4UR Ranch, Cre	48.41 310	P	P	00 19 22.6	+0.4
DUN6	Lazy B Ranch	48.79 302	P	P	00 19 26.0	+1.1
PV15	Paradox Valley	49.83 310	P	P	00 19 33.6	+0.6
PV15			IAmb	IAmb	00 19 34.9	
	comp=Z,8.9nm,0.9s					
PV01	Paradox Valley	49.83 310	P	P	00 19 33.8	+0.8
PV01			IAmb	IAmb	00 19 35.0	
	comp=Z,7.5nm,0.9s					
H10N3	ASCENSION HYDR	49.84 111	T	T	01 12 40.2	
	baz=294,slow=75,SNR=17					
H10N2	ASCENSION HYDR	49.85 111	T	T	01 12 40.0	
	baz=294,slow=75,SNR=21					
H10N1	ASCENSION HYDR	49.86 111	T	T	01 12 42.3	
	baz=294,slow=75,SNR=26					
K22A	Casper	49.93 316	P	P	00 19 34.3	+0.8
K22A			IAmb	IAmb	00 19 36.0	
	comp=Z,9.9nm,0.9s					
X18A	Snowflake	49.94 305	P	P	00 19 34.9	+1.2
X18A			IAmb	IAmb	00 19 35.7	
	comp=Z,8.0nm,0.8s					
PV02	Paradox Valley	49.98 310	P	P	00 19 34.7	+0.6
PV07	Paradox Valley	49.98 310	P	P	00 19 34.3	+0.2
PV07			IAmb	IAmb	00 19 35.6	
	comp=Z,5.2nm,0.9s					
PV13	Radium Mtn., P	50.03 310	P	P	00 19 35.4	+1.0
PV12	Saucer Basin,	50.06 310	P	P	00 19 35.5	+0.8
PV03	Paradox Valley	50.08 310	P	P	00 19 35.0	+0.2
PV03			IAmb	IAmb	00 19 36.5	
	comp=Z,5.9nm,0.9s					
PV22	Blue Mesa, Par	50.12 310	P	P	00 19 35.5	+0.4
PV18	Skein Mesa, Pa	50.12 310		P	00 19 35.8	+0.7
TUC	Tucson	50.14 302		P	00 19 35.9	+0.7
H10S3	ASCENSION HYDR	50.15 113	T	T	01 13 02.9	
	baz=295,slow=74,SNR=10					
PV16	Nyswonger Mesa	50.15 310	P	P	00 19 36.0	+0.7
PV16			IAmb	IAmb	00 19 54.8	
	comp=Z,5.1nm,0.9s					
H10S2	ASCENSION HYDR	50.16 113	T	T	01 13 04.3	
	baz=285,slow=74,SNR=10					
PV17	East Wray Mesa	50.17 310	P	P	00 19 35.2	-0.2
PV17			IAmb	IAmb	00 19 36.7	
	comp=Z,7.2nm,0.8s					
PV20	West Nyswonger	50.19 310	P	P	00 19 35.7	+0.1
PV05	Paradox Valley	50.21 309	P	P	00 19 36.1	+0.2
PV14	Lion Creek, Pa	50.24 310	P	P	00 19 36.4	+0.3
PV14			IAmb	IAmb	00 19 55.5	
	comp=Z,4.3nm,0.7s					
X16A	Lo Mia Camp, P	51.11 304		P	00 19 43.3	+0.7
WUAZ	Wupatki	51.30 306		P	00 19 44.6	+0.6
RDMU	Red Mountain	51.33 312	P	P	00 19 44.4	+0.2
RDMU			IAmb	IAmb	00 19 45.7	
	comp=Z,5.8nm,0.8s					
HMU	Henry Mountain	51.42 309	P	P	00 19 45.9	+0.9
HMU			IAmb	IAmb	00 19 47.9	
	comp=Z,4.7nm,0.8s					
P18A	Preston Nutter	51.53 311	P	P	00 19 46.7	+0.9
P18A			IAmb	IAmb	00 19 47.7	
	comp=Z,7.0nm,0.8s					
SRU	San Rafael Swe	51.58 310	P	P	00 19 46.6	+0.6
SRU			IAmb	IAmb	00 19 47.8	
	comp=Z,7.8nm,0.7s					
P17A	Butcher Ranch,	51.85 311	P	P	00 19 48.9	+0.9
P17A			IAmb	IAmb	00 19 49.9	
	comp=Z,7.4nm,0.8s					
Q16A	Castle Valley	52.01 310	P	P	00 19 49.4	+0.1
BW06	Boulder Array	52.05 315	P	P	00 19 50.1	+0.5
PD31	Pinedale Array	52.05 315		P	00 19 50.1	+0.5
PDAR	Pinedale Array	52.05 315	P	P	00 19 50.2	+0.6
	comp=Z,8.8nm,0.5s,baz=116,slow=9.7,SNR=103					
PDAR			pP	pP	00 20 09.0	+1.9
	comp=Z,6.3nm,0.6s,baz=118,slow=9.8,SNR=7.8					
	comp=Z,8.8nm,0.5s					
PDAR	Pinedale Array	52.05 315		P	00 19 49.4	-0.2
TMUT	Trail Mountain	52.15 310	IAmb	IAmb	00 19 52.2	
	comp=Z,8.9nm,0.7s					
BSUT	Blindstream Ca	52.18 312		P	00 19 51.6	+0.9
BSUT			IAmb	IAmb	00 19 52.6	
	comp=Z,12nm,1.1s					
U15A	North Rim	52.24 307		P	00 19 51.9	+0.8
Y14A	Wickenburg	52.28 303		P	00 19 52.0	+0.8
PKCU	Pink Cliffs	52.49 308	P	P	00 19 53.8	+0.8
MTPU	Mount Pierson	52.55 309		P	00 19 53.9	+0.4
KNB	Kanab	52.79 307	IAmb	IAmb	00 19 57.3	
	comp=Z,4.5nm,0.8s					
CTU	Camp Tracy	52.95 312	P	P	00 19 57.1	+1.0
CTU			IAmb	IAmb	00 19 58.0	
	comp=Z,9.7nm,0.9s					
LOHW	Long Hollow	53.06 316	P	P	00 19 57.8	+0.8
LOHW			IAmb	IAmb	00 19 59.0	
	comp=Z,5.2nm,0.7s					
HWUT	Hardware Ranch	53.09 313		P	00 19 57.2	+0.1
HWUT			IAmb	IAmb	00 19 59.0	
	comp=Z,9.6nm,0.8s					
SNOW	Snow King Moun	53.12 315	P	P	00 19 58.0	+0.6
SNOW			IAmb	IAmb	00 20 14.0	
	comp=Z,8.5nm,1.1s					
AHID	Auburn Hatcher	53.12 315	P	P	00 19 57.9	+0.5
YNE	Yellowstone No	53.16 318	P	P	00 19 59.1	+1.4
YNE			IAmb	IAmb	00 20 18.5	
	comp=Z,7.7nm,1.2s					
W13A	Hualapai Mount	53.22 305		P	00 19 59.2	+0.9
W13A			IAmb	IAmb	00 20 00.5	
	comp=Z,5.0nm,0.8s					
FXWY	Fox Creek	53.36 316	P	P	00 20 00.3	+1.1
FXWY			IAmb	IAmb	00 20 01.7	
	comp=Z,7.4nm,1.2s					
DUG	Dugway, Tooele	53.58 311		P	00 20 01.5	+0.7
DUG			IAmb	IAmb	00 20 02.7	
	comp=Z,8.5nm,0.8s					
YHH	Holmes Hill	53.64 317	P	P	00 20 02.3	+1.0
YMR	Madison River	53.67 317	P	P	00 20 03.0	+1.6
YMR			IAmb	IAmb	00 20 05.0	
	comp=Z,5.0nm,0.9s					
PLCA	Paso Flores	53.73 190	P	P	00 20 02.9	+1.3
	comp=Z,6.3nm,0.8s,baz=5.1,slow=7.8,SNR=17					
	comp=Z,6.3nm,0.8s					
PLCA	Paso Flores	53.73 190	P	P	00 20 02.2	+0.6
PLCA			IAmb	IAmb	00 20 03.5	
	comp=Z,6.8nm,0.8s					
PLCA	Paso Flores	53.73 190	eP	P	00 20 02.7	+1.1
YHB	Horse Butte	53.86 317	P	P	00 20 04.4	+1.6
YHL	Hebgen Lake	53.88 317		P	00 20 03.9	+0.9
PSUT	Pine Spring	53.94 309	P	P	00 20 04.2	+0.7
PSUT			IAmb	IAmb	00 20 06.0	
	comp=Z,8.1nm,0.8s					
BGU	Big Grassy Mou	53.94 312		P	00 20 03.8	+0.4
HVU	Hansel Valley	54.00 313	P	P	00 20 04.4	+0.5
HVU			IAmb	IAmb	00 20 05.2	
	comp=Z,8.6nm,0.8s					
QLMT	Earthquake Lak	54.04 317	P	P	00 20 04.9	+0.8
IRM	Iron Mountain	54.07 303		P	00 20 04.9	+0.6
IRM			IAmb	IAmb	00 20 06.3	
	comp=Z,5.3nm,0.9s					
V12A	Nelson	54.12 305		P	00 20 05.7	+1.0
EGMT	Eagleton	54.16 321		P	00 20 05.6	+0.8
EGMT			IAmb	IAmb	00 20 07.3	
	comp=Z,12nm,1.1s					
BC3	Big Chuckawall	54.24 303		P	00 20 06.0	+0.4
SPR3	Spring Creek 3	54.41 309		P	00 20 07.7	+0.6
SPR3			IAmb	IAmb	00 20 09.2	
	comp=Z,8.8nm,1.3s					
BOZ	Bozeman (W)	54.44 318	P	P	00 20 07.5	+0.6
MDT	Midelt	54.68 59	LR	LR	00 40 16.3	
	comp=Z,51nm,21.6s,baz=53,slow=32					
BCYI	Bear Canyon	55.20 316	P	P	00 20 14.0	+1.4
TPNV	Topopah Spring	55.46 306	P	P	00 20 14.9	+0.5
TPNV			IAmb	IAmb	00 20 16.8	
	comp=Z,6.7nm,0.8s					
ELK	Elko	55.51 311		P	00 20 15.4	+0.5
ELK			IAmb	IAmb	00 20 34.7	
	comp=Z,4.0nm,0.8s					
GWY	Greenwater Val	55.65 305		P	00 20 16.4	+0.6
GWY			IAmb	IAmb	00 20 17.7	
	comp=Z,4.6nm,0.8s					
HLID	Hailey	55.68 315		P	00 20 16.9	+1.0
HLID			IAmb	IAmb	00 20 36.8	
	comp=Z,6.6nm,0.6s					
WCT	Wildcat Mounta	55.72 306	P	P	00 20 17.8	+1.5
WCT			IAmb	IAmb	00 20 18.6	
	comp=Z,6.0nm,0.8s					
QSM	Queen of Sheba	55.77 305	P	P	00 20 17.0	+0.5
ESDC	Sonseca Array	56.42 51	P	P	00 20 23.8	+2.7
	comp=Z,0.7nm,0.6s,baz=261,slow=6.9,SNR=6.8					
ESDC			pP	pP	00 20 41.9	+3.0
	comp=Z,0.8nm,0.7s,baz=257,slow=7.6,SNR=2.8					
	comp=Z,0.7nm,0.6s					
MFID	Camas Ranch	56.62 314		P	00 20 23.5	+0.9
MFID			IAmb	IAmb	00 20 43.2	
	comp=Z,5.7nm,1.1s					
CWC	Cottonwood Cre	56.81 305	P	P	00 20 23.8	-0.3
DSP	Deep Springs	56.88 307		P	00 20 25.6	+1.2
DSP			IAmb	IAmb	00 20 26.9	
	comp=Z,3.9nm,0.8s					
JTMT	Jette	56.89 319	P	P	00 20 25.1	+0.6
PLID	Pearl Lake	57.20 316		P	00 20 26.7	-0.1
PLID			IAmb	IAmb	00 20 29.1	
	comp=Z,4.4nm,0.9s					
NV11	Mina Array Sit	57.22 308	P	P	00 20 27.6	+0.7
NV11			IAmb	IAmb	00 20 33.7	
	comp=Z,6.7nm,1.4s					
NVAR	Mina Array Bea	57.33 308	P	P	00 20 28.2	+0.4
	comp=Z,1.1nm,0.6s,baz=99,slow=6.4,SNR=5.8					
NVAR			pP	pP	00 20 47.6	+2.0
	comp=Z,1.3nm,0.7s,baz=62,slow=7.1,SNR=4.5					
	comp=Z,1.1nm,0.6s					
NVAR	Mina Array Bea	57.33 308	P	P	00 20 28.5	+0.7
RYN	Ryan	57.54 308	P	P	00 20 29.7	+0.5
RYN			IAmb	IAmb	00 20 31.1	
	comp=Z,3.5nm,0.8s					
MDPB	Devils Postpil	57.80 307	P	P	00 20 31.2	+0.1
MDPB			IAmb	IAmb	00 20 33.3	
	comp=Z,5.0nm,0.8s					
BMO	Blue Mountains	58.03 315		P	00 20 32.3	-0.1
WVOR	Wild Horse Val	58.39 312	P	P	00 20 36.0	+1.0
WVOR			IAmb	IAmb	00 20 36.8	
	comp=Z,5.5nm,1.0s					
NEW	Newport	58.87 319		P	00 20 38.2	0.0
NEW			IAmb	IAmb	00 20 39.7	
	comp=Z,6.0nm,0.9s					
LNOR	Lincton Mounta	58.96 316	P	P	00 20 39.1	+0.2
LNOR			IAmb	IAmb	00 20 40.9	
	comp=Z,7.0nm,0.8s					
G08A	Pilot Rock	59.27 316		P	00 20 41.7	+0.6
I07A	Izee	59.37 314		P	00 20 42.4	+0.6
I07A			IAmb	IAmb	00 20 44.5	
	comp=Z,9.1nm,1.0s					
K05A	Summer Lake	60.08 312		P	00 20 48.2	+1.4
M03C	McCloud	60.72 310	P	P	00 20 52.2	+1.2
LTY	Liberty	60.90 317	P	P	00 20 53.0	+0.8
LTY			IAmb	IAmb	00 20 53.5	
	comp=Z,4.8nm,0.8s					
L04D	Klamath Falls	61.01 311		P	00 20 53.9	+0.8
LLLB	Lillooet	62.50 321		P	00 21 03.0	+0.2
YKA	Yellowknife Ar	62.96 335	P	P	00 21 06.0	+0.4
	comp=Z,3.1nm,0.6s,baz=110,slow=6.8,SNR=16					
YKA			pP	pP	00 21 24.4	+0.8
	comp=Z,3.1nm,0.7s,baz=111,slow=6.6,SNR=6.1					
	comp=Z,3.1nm,0.6s					
CLL	Collm	70.00 40	eP	P	00 21 51.0	+0.3
CLL			ex	x	00 22 00.0	
CLL			ePP	PP	00 24 23.0	-3.3
CLL			ex	x	00 24 33.0	
A36M	Sachs Harbour	70.59 343		P	00 21 53.4	-0.5
M31M	Drury Creek, Y	71.64 332	P	P	00 22 02.3	+1.8
WHY	Whitehorse	71.66 330	P	P	00 22 01.1	+0.4
WHY			IAmb	IAmb	00 22 10.8	
	comp=Z,14nm,1.5s					
BCPM	Bancas Point	73.95 329	P	P	00 22 12.8	-1.4
DAWY	Dawson	74.10 333	P	P	00 22 16.3	+1.3
K27K	Chicken	75.28 333	P	P	00 22 23.4	+1.6
K27K			IAmb	IAmb	00 22 24.7	
	comp=Z,10nm,1.4s					
TGL	Tana Glacier	75.56 330	P	P	00 22 23.8	+0.2
MCARA	McCarthy VSAT	75.66 330	P	P	00 22 24.7	+0.7
MCARA			IAmb	IAmb	00 22 27.0	
	comp=Z,21nm,1.4s					
CRQM	Cirque	75.72 330	P	P	00 22 22.6	-2.0
D25K	Kavik River	77.05 339	P	P	00 22 33.1	+1.3
D25K			IAmb	IAmb	00 22 52.6	
	comp=Z,10nm,1.4s					
KLU	Klutina	77.05 331	P	P	00 22 30.6	-1.4
KLU			IAmb	IAmb	00 22 33.8	
	comp=Z,7.5nm,1.2s					
M24K	Tolsona, Glenn	77.15 331	P	P	00 22 31.0	-1.5
ILAR	Eielson Array	77.37 334	P	P	00 22 34.4	+0.8
	comp=Z,0.6nm,0.6s,baz=106,slow=4.4,SNR=12					
	comp=Z,0.6nm,0.6s					
TRF	Thorofare Moun	78.95 333		P	00 22 43.9	+1.4
IDI	Anoyia	79.11 56	LR	LR	00 55 02.9	
	comp=Z,75nm,20.8s,baz=120,slow=34					
D22K	Ayikyak River	79.33 338	P	P	00 22 45.9	+1.5
D22K			IAmb	IAmb	00 22 45.9	
	comp=Z,14nm,1.5s					
B22K	Teshekpuk Lake	79.41 340	P	P	00 22 45.1	+0.3
B21K	Ikpikpuk River	79.92 339	P	P	00 22 48.9	+1.5
B21K			IAmb	IAmb	00 23 02.6	
	comp=Z,19nm,1.4s					
D20K	Etivluk River	80.77 338	P	P	00 22 53.8	+1.6
D20K			IAmb	IAmb	00 22 59.8	
	comp=Z,15nm,1.5s					
D19K	Kuna River	81.36 338	P	P	00 22 57.5	+2.2
D19K			IAmb	IAmb	00 23 05.9	
	comp=Z,16nm,1.5s					
C19K	Lookout Ridge	81.75 339	P	P	00 22 59.8	+2.4
C19K			IAmb	IAmb	00 23 09.9	
	comp=Z,17nm,1.4s					
N18K	Kilae Creek	81.95 330	P	P	00 22 59.8	+1.2
N18K			IAmb	IAmb	00 23 03.6	
	comp=Z,6.1nm,1.0s					
G18K	Tagagawik	82.11 336	P	P	00 23 00.6	+1.3
C18K	Utukok River	82.42 339	P	P	00 23 02.0	+1.1
C18K			IAmb	IAmb	00 23 13.2	
	comp=Z,14nm,1.4s					
VNA3	Neumayer Olymp	90.13 166	⇑P	P	00 23 43.5	+5.0
	comp=Z,1.8nm,0.8s					
VNA2	Neumayer--Watz	90.50 165	⇑P	P	00 23 45.2	+5.1
	comp=Z,1.4nm,0.6s,baz=185,slow=4.0					
SNAA	Sanae	92.12 165	⇑P	P	00 23 42.2	-5.6
	comp=Z,9.8nm,0.4s					
WRA	Warramunga Arr	164.03 240	PKPab	PKPab	00 31 37.3	+1.2
	comp=Z,1.2nm,1.1s,baz=106,slow=3.9,SNR=4.8					

IDC ***19*** *00:11:29.2±7.0, 16°.20S×179°.94W, h511km±83km, mb3.2/6, mbtmp4.1/7, Error ellipse: s-maj=104.0km s-min=31.7km az=149.0*

ISC 19 00:11:28.4±2.1, 16°.1S±0°.6×179°.9W±0°.5, h500km, n7, σ0°.93/7, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	14.18	243	P	P	00 14 31.0	+0.9
	3.8nm,0.6s,baz=95,slow=16,SNR=2.9						
STKA	Stephens Creek	38.27	239	P	P	00 18 04.7	-0.6
	0.9nm,0.3s,baz=71,slow=8.8,SNR=4.5						
	0.9nm,0.3s						
WRA	Warramunga Arr	43.55	258	P	P	00 18 46.4	-1.3
	0.6nm,0.4s,baz=90,slow=6.9,SNR=14						
	0.6nm,0.4s						
ASAR	Alice Springs	43.90	252	P	P	00 18 50.1	-0.3
	5.7nm,0.4s,baz=86,slow=8.6,SNR=122						
	5.7nm,0.4s						
FITZ	Fitzroy Crossi	51.90	259	P	P	00 19 51.1	+0.7
	1.6nm,0.6s,baz=105,slow=3.2,SNR=9.4						
	1.6nm,0.6s						
ILAR	Eielson Array	84.46	14	P	P	00 23 07.7	+0.2
	0.5nm,0.6s,baz=231,slow=5.6,SNR=6.8						
	0.5nm,0.6s						
PDAR	Pinedale Array	87.06	44	P	P	00 23 20.8	0.0
	0.3nm,0.6s,baz=202,slow=2.6,SNR=2.2						
	0.3nm,0.6s						

NSSP ***19*** *00:11:53.5, 38°.35N×44°.57E, h10km, Ms3.9*
ISK ***19*** *00:11:54.5, 38°.32N×44°.51E, h5km, ML3.8/7*
AFAD ***19*** *00:11:55.9, 38°.50N×44°.53E, h6km±1km, MW3.9*
TIF ***19*** *00:11:55.2, 38°.47N×44°.50E, h1km±1km*
IDC ***19*** *00:11:58.6±1.0, 38°.64N×44°.41E, h0km, mb3.9/9, mbtmp3.7/16, ML2.9/5, Error ellipse: s-maj=15.1km s-min=10.8km az=144.0*
NEIC ***19*** *00:12:01.1±2.7, 38°.73N±0°.04×44°.44E±0°.06, h10km±2km, mb4.0/11, Error ellipse: s-maj=9.3km s-min=4.5km az=58.0*
AZER ***19*** *00:12:04.0, 38°.72N×44°.91E, h29km, ml3.7*

ISC 19 00:11:57.2±1.1, 38°.46N±0°.02×44°.53E±0°.02, h3km±8km, n112, σ1°.81/162, mb3.9/11, 6C, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.47	295	SPECP		00 12 05.0	
OZAP				P	Pg	00 12 05.1	-1.2
OZAP				S	Sg	00 12 12.0	-0.4
OZAP				*i* IAML		00 12 14.0	
	comp=E,6μm,0.9s						
OZAP				*i* IAML		00 12 22.0	
	comp=N,6μm,0.7s						
TVAN	Van	0.89	275	P	Pg	00 12 12.0	-2.2
YOVA	Hakkari_Yksek	0.89	193	SPECP		00 12 13.0	
YOVA				P	Pg	00 12 14.0	-0.4
YOVA				S	Sb	00 12 27.5	-0.4
YOVA				*i* IAML		00 12 30.0	
	comp=E,2μm,0.9s						
YOVA				*i* IAML		00 12 34.0	
	comp=N,2μm,0.6s						
VMUR	Van-Muradiye	0.92	305	SPECP		00 12 13.0	
VMUR				P	Pg	00 12 13.3	-1.5
VMUR				S	Sb	00 12 27.9	-0.7
VMUR				*i* IAML		00 12 30.0	
	comp=E,1μm,0.6s						
VMUR				*i* IAML		00 12 45.0	
	comp=N,1μm,0.7s						
NAX	Nakhchivan	1.03	46	P	Pg	00 12 16.6	-0.5
NAX				S	Sg	00 12 30.4	-0.1
ERCV	ERCIS-VAN	1.09	301	Pn	Pg	00 12 17.3	-0.8
ERCV				Sn	Sn	00 12 34.6	-0.7
HAKT	HAKKARI	1.11	216	SPECP		00 12 17.0	
HAKT				P	Pg	00 12 17.2	-1.3
HAKT				S	Sn	00 12 34.5	-1.4
HAKT				*i* IAML		00 12 36.0	
	comp=E,2μm,0.9s						
HAKT				*i* IAML		00 12 37.0	
	comp=N,1μm,0.5s						
HAKT	HAKKARI	1.11	216	P	Pg	00 12 17.5	-1.1
HAKT				S	Sn	00 12 37.4	+1.5
SBZ	Shahbuz	1.23	40	P	Pn	00 12 20.6	-0.8
SBZ				S	Sb	00 12 36.2	-1.3
AKDM	Akdamar-Van	1.23	264	Pn	Pb	00 12 17.9	-3.3
AKDM				Sn	Sb	00 12 36.5	-1.0
ORD	Ordubad	1.23	67	P	Pg	00 12 21.1	+0.2
ORD				S	Sb	00 12 36.4	-1.2
DYDN	Diyadin	1.27	329	SPECP		00 12 20.0	
DYDN				P	Pn	00 12 20.2	-1.8
DYDN				S	Sb	00 12 36.9	-1.8
DYDN				*i* IAML		00 12 46.0	
	comp=E,1μm,0.7s						
DYDN				*i* IAML		00 12 56.0	
	comp=N,1μm,0.7s						
HYR	Heyderabad	1.28	11	P	Pg	00 12 23.4	+1.6
HYR				S	Sn	00 12 38.8	-1.1
VAYK	Vayk	1.41	29	*i* P	Pn	00 12 22.9	-1.1
VAYK				*i* S	Sg	00 12 45.1	+2.5
IGDI	IGDIR	1.45	346	P	Pn	00 12 23.9	-0.5
IGDI				S	Sg	00 12 44.6	+0.9
IGDI	IGDIR	1.45	346	P	Pg	00 12 25.4	+0.4
IGDI				S	Sg	00 12 47.8	+4.0
ADCV	BITLIS_Adilcev	1.46	284	SPECP		00 12 23.0	
ADCV				P	Pn	00 12 23.4	-1.3
ADCV				S	Sg	00 12 44.9	+0.8
ADCV				*i* IAML		00 12 47.0	
	comp=E,695nm,0.6s						
ADCV				*i* IAML		00 12 51.0	
	comp=N,679nm,0.9s						
TASB	TASBURUN-IGDIR	1.54	352	Pn	Pb	00 12 26.1	-0.3
NRKZ	NAREK	1.54	4	*e*P	Pb	00 12 25.8	-0.6
NRKZ				*e*S	Sg	00 12 49.0	+2.3
AGRB	Hanur-Agry	1.64	313	Pn	Pn	00 12 26.7	-0.4
DORK	Agr/Tutak/Do	1.65	305	SPECP		00 12 26.0	
DORK				P	Pn	00 12 26.4	-0.9
DORK				S	Sg	00 12 50.6	+0.4
DORK				*i* IAML		00 12 55.0	
	comp=N,663nm,0.9s						
DORK				*i* IAML		00 13 00.0	
	comp=E,511nm,1.1s						
PERV	Siirt/Pervari-	1.65	252	SPECP		00 12 26.0	
PERV				P	Pn	00 12 26.7	-0.6
PERV				S	Sg	00 12 51.8	+1.6
PERV				*i* IAML		00 13 00.0	
	comp=E,2μm,0.7s						
PERV				*i* IAML		00 13 08.0	
	comp=N,2μm,0.7s						
KOTA	Agri, Merkez-K	1.69	323	SPECP		00 12 27.0	
KOTA				P	Pb	00 12 27.9	-1.2
KOTA				S	Sg	00 12 52.6	+1.1
KOTA				*i* IAML		00 12 56.0	
	comp=N,184nm,0.9s						
KOTA				*i* IAML		00 13 11.0	
	comp=E,197nm,1.1s						
GNI	Garni	1.69	5	Pg	Pb	00 12 28.3	-0.9
	19nm,0.3s,baz=234,slow=2.7,SNR=182						
GNI				Lg	Lg	00 12 46.3	
	34nm,0.3s,baz=215,slow=21,SNR=7.6						
GNI	Garni	1.69	5	Pn	Pb	00 12 28.4	-0.7
GNI	Garni	1.69	5		Pb	00 12 27.9	-1.2
GNI	Garni	1.69	5	⇑*i*P	Pb	00 12 28.6	-0.6
GNI				⇑*i*S	Sg	00 12 54.9	+3.3
METS	Metsamor	1.72	348	*e*P	Pb	00 12 28.3	-1.3
METS				*e*S	Sg	00 12 53.4	+0.8
VNNZ	Vanand	1.73	342	*e*P	Pb	00 12 29.2	-0.5
VNNZ				*e*S	Sg	00 12 55.3	+2.5
EGVZ	Egvard	1.75	63	⇑*i*P	Pb	00 12 28.8	-1.1
EGVZ				⇑*i*S	Sg	00 12 54.4	+1.1
ARUZ	Aruch	1.85	349	*e*P	Pb	00 12 30.3	-1.5
ARUZ				*e*S	Sg	00 12 57.1	+0.4
KAPZ	Kaputan	1.86	4	*e*P	Pb	00 12 30.8	-1.2
KAPZ				*e*S	Sg	00 12 57.9	+0.9
BLIS	Bitlis-Merkez	1.90	269	P	Pn	00 12 30.2	-0.5
BLIS				S	Sg	00 12 58.2	-0.1
AYRK	Ayrk	1.92	30	⇑*i*P	Pb	00 12 31.7	-1.3
AYRK

BRDA				S		**Sn**	**00 13 12.4**	**-3.0**
YRD	**Yardimli**	**2.94**	**80**	P		**Pb**	**00 12 47.3**	**-3.0**
YRD				S		**Sn**	**00 13 18.2**	**-2.7**
LRK	**Lerik**	**2.99**	**85**	P		**Pn**	**00 12 48.0**	**+2.3**
LRK				S		**Sn**	**00 13 19.6**	**-2.6**
MNGR	**Mingechevir, A**	**3.04**	**40**	P		**Pn**	**00 12 48.0**	**+1.9**
MNGR				S		**Sn**	**00 13 20.6**	**-2.4**
ZRD	**Zardab**	**3.04**	**52**	P		**Pn**	**00 12 48.1**	**+1.9**
ZRD				S		**Sn**	**00 13 21.3**	**-1.9**
DGRG	**David-gareji**	**3.06**	**12**	P		**Pb**	**00 12 49.4**	**-2.8**
TRLG	**Trialeti**	**3.09**	**354**	P		**Pb**	**00 12 51.2**	**-1.8**
GLBA	**Clilabad**	**3.11**	**74**	P		**Pn**	**00 12 48.9**	**+1.7**
GLBA				S		**Sn**	**00 13 23.3**	**-1.6**
VSHL	**Vashlovani**	**3.12**	**27**	P		**Pn**	**00 12 50.6**	**-2.7**
MARD	**Mardin**	**3.18**	**250**	Pn		**Pn**	**00 12 48.8**	**+0.4**
SAAT	**Saatly**	**3.33**	**64**	P		**Pn**	**00 12 51.8**	**+1.6**
SAAT				S		**Sn**	**00 13 27.8**	**-2.5**
LKRN	**Lenkeran, Azer**	**3.34**	**84**	P		**Pb**	**00 12 53.2**	**-3.8**
LKRN				S		**Sn**	**00 13 29.0**	**-1.4**
ASTR	**Astara**	**3.34**	**87**	P		**Pn**	**00 12 53.0**	**+2.6**
ASTR				S		**Sn**	**00 13 28.6**	**-2.0**
KDMR	**Kurdemir**	**3.41**	**55**	P		**Pn**	**00 12 51.7**	**+0.4**
KDMR				S		**Sn**	**00 13 29.6**	**-2.7**
SEKA	**Sheki**	**3.43**	**36**	P		**Pn**	**00 12 54.2**	**+2.5**
SEKA				S		**Sn**	**00 13 31.1**	**-1.7**
KOPT	**Kop Dagi**	**3.50**	**298**			**Pn**	**00 12 54.8**	**+2.0**
ZKTA	**Zakatala**	**3.56**	**26**	P		**Pn**	**00 12 55.1**	**+1.8**
ZKTA				S		**Sn**	**00 13 32.8**	**-3.1**
QBL	**Gabala**	**3.56**	**45**	P		**Pn**	**00 12 54.8**	**+1.5**
QBL				S		**Sn**	**00 13 33.3**	**-2.7**
IML	**Ismayilli**	**3.66**	**49**	P		**Pn**	**00 12 56.0**	**+1.3**
IML				S		**Sn**	**00 13 35.6**	**-2.8**
ALIB	**&Aumlli-Bayram**	**3.78**	**65**	S		**Pn**	**00 13 39.0**	**-2.5**
XNQ	**Khinaliq**	**3.88**	**45**	P		**Pn**	**00 12 59.7**	**+1.7**
XNQ				S		**Sn**	**00 13 40.8**	**-3.3**
PQL	**Pirkuli**	**3.90**	**52**	P		**Pn**	**00 12 59.3**	**+1.1**
PQL				S		**Sn**	**00 13 42.1**	**-2.5**
GBS	**Qobustan**	**3.99**	**57**	P		**Pn**	**00 13 01.3**	**+2.0**
GBS				S		**Sn**	**00 13 44.4**	**-2.3**
ATGJ	**Altiaghaj**	**4.16**	**53**	P		**Pn**	**00 13 03.8**	**+2.1**
ATGJ				S		**Sn**	**00 13 48.4**	**-2.5**
QSAR	**Qusar**	**4.18**	**42**	P		**Pn**	**00 13 02.8**	**+0.8**
QSAR				S		**Sn**	**00 13 48.6**	**-2.8**
QUBA	**Quba, Azerbaij**	**4.20**	**45**	P		**Pn**	**00 13 03.9**	**+1.7**
QUBA				S		**Sn**	**00 13 49.3**	**-2.5**
SIZA	**Siyzn**	**4.26**	**51**	P		**Pn**	**00 13 04.3**	**+1.3**
SIZA				S		**Sn**	**00 13 50.5**	**-2.8**
GOBA	**Gobu**	**4.47**	**63**	S		**Sn**	**00 13 55.6**	**-2.7**
NDR	**Nardaran**	**4.72**	**62**	S		**Sn**	**00 14 02.6**	**-1.9**
GALA	**Gala**	**4.77**	**64**	S		**Sn**	**00 14 02.8**	**-2.9**
KBZ	**Khabaz**	**5.41**	**347**	Pn		**Pn**	**00 13 20.8**	**+2.1**
	baz=180,slow=16,SNR=1.7 0.7nm,0.8s							
KIV	**Kislovodsk**	**5.66**	**346**	Pn		**Pn**	**00 13 21.8**	**-0.5**
GAZ	**Gaziantep**	**5.94**	**260**			Pn	00 13 31.8	+5.6
BRTR	**Keskin Array B**	**8.57**	**282**	Pn		**Pn**	**00 14 06.0**	**+3.8**
	baz=104,slow=13,SNR=8.3 1.2nm,0.9s							
ASF	**Jabal al Asfar**	**8.85**	**227**	Pn		**Pn**	**00 14 08.0**	**+1.9**
	0.1nm,0.3s,baz=56,slow=6.0,SNR=3.5 1.4nm,0.5s							
MMAI	**Mount Meron Ar**	**9.20**	**237**	Pn		**Pn**	**00 14 13.1**	**+2.3**
	0.9nm,0.6s,baz=320,slow=14,SNR=2.0							
AKTO	**Aktyubinsk**	**15.33**	**34**	Pn		**Pn**	**00 15 34.0**	**-0.5**
	0.2nm,0.3s,baz=217,slow=8.5,SNR=13 2.9nm,1.1s							
MLR	**Muntele Rosu**	**15.49**	**303**	Pn		**Pn**	**00 15 37.4**	**+0.7**
	0.6nm,0.3s,baz=104,slow=19,SNR=2.7							
AKASG	**Malin Array Be**	**16.35**	**323**	Pn		**Pn**	**00 15 46.9**	**-0.8**
	0.3nm,0.3s,baz=135,slow=12,SNR=4.2 0.2nm,0.2s							
BURAR	**Bucovina Array**	**16.79**	**309**			**Pn**	**00 15 51.8**	**-1.6**
BURAR					IAmb	IAmb	00 16 00.5	
	comp=Z,5.4nm,0.8s							
BUR08	**Bucovina Ar. S**	**16.81**	**309**			**Pn**	**00 15 52.2**	**-1.5**
KBL	**Kabul**	**20.07**	**94**	P		Pn	00 16 35.5	+1.8
GAR	**Garm**	**20.11**	**80**	P		Pn	00 16 36.2	+2.2
GAR					IAmb	IAmb	00 16 58.3	
	comp=Z,9.9nm,1.2s							
ARTI	**Arti**	**20.16**	**23**	P		Pn	00 16 33.8	-0.6
	comp=Z,3.8nm,0.6s,baz=232,slow=7.0,SNR=7.4 comp=Z,3.8nm,0.6s							
ARTI	**Arti**	**20.16**	**23**			Pn	00 16 32.6	-1.8
ARTI					IAmb	IAmb	00 16 36.1	
	comp=Z,6.7nm,0.6s							
KK31	**Karatay Array**	**20.18**	**68**			Pn	00 16 35.2	+0.5
KK31					IAmb	IAmb	00 16 44.7	
	comp=Z,4.4nm,0.8s							
KKAR	**Karatay Array**	**20.18**	**68**			Pn	00 16 34.9	+0.2
DRK	**Karamyk**	**21.20**	**79**	P		**P**	**00 16 46.6**	**+2.3**
DRK					IAmb	IAmb	00 16 51.1	
	comp=Z,6.8nm,1.0s							
SUW	**Suwalki**	**21.32**	**324**	P		**P**	**00 16 44.5**	**-0.6**
ARSB	**Arslanbob**	**21.97**	**74**			**P**	**00 16 53.5**	**+1.1**
ARSB					IAmb	IAmb	00 17 02.1	
	comp=Z,8.2nm,1.0s							
BVAR	**Borovoye Array**	**23.02**	**42**	P		**P**	**00 17 04.9**	**+1.6**
	comp=Z,1.4nm,0.6s,baz=238,slow=8.2,SNR=2.8 comp=Z,1.4nm,0.6s							
KSH	**Kashi**	**24.40**	**78**	P		**P**	**00 17 16.6**	**-0.4**
GERES	**GERESS Array B**	**24.45**	**305**	P		**P**	**00 17 16.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=97,slow=13,SNR=0.8 comp=Z,0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**26.86**	**52**	P		**P**	**00 17 40.7**	**+1.7**
	comp=Z,3.8nm,0.2s,baz=262,slow=9.3,SNR=8.1 comp=Z,3.8nm,0.2s							
MKAR	**Makanchi Array**	**28.77**	**61**	P		**P**	**00 17 58.0**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=268,slow=7.6,SNR=7.9 comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**28.77**	**61**	P		**P**	**00 17 57.1**	**+0.9**
ZALV	**Zalesovo Beam**	**31.39**	**47**	P		**P**	**00 18 19.2**	**0.0**
	comp=Z,0.7nm,0.4s,baz=254,slow=11,SNR=4.1 comp=Z,0.7nm,0.4s							
WMQ	**Urumqi**	**32.66**	**67**	*e*P		P	00 18 35.0	+4.4
WMQ					PP	**PP**	**00 19 40.8**	**-3.3**
WMQ					LR	LR		
	comp=Z,300nm,23.7s							
CEST	**Esterri de Car**	**32.89**	**291**	P		**P**	**00 18 33.2**	**+0.6**
CART	**Cartagena**	**35.60**	**283**	P		**P**	**00 18 57.6**	**+1.5**
EKA	**Eskdalemuir Ar**	**35.88**	**314**	P		**P**	**00 18 57.6**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=104,slow=10,SNR=2.1 comp=Z,1.1nm,0.7s							
ESDC	**Sonseca Array**	**37.31**	**288**	P		**P**	**00 19 09.4**	**-1.3**
	comp=Z,0.9nm,1.0s,baz=76,slow=9.0,SNR=4.3 comp=Z,0.9nm,1.0s							
PZH	**PanZhiHua**	**49.01**	**86**	P		P	00 20 49.8	+4.2
HHC	**Hu-ho-hao-te**	**50.51**	**65**	*e*P		**P**	**00 20 58.8**	**+2.0**
HHC					pmax	pmax		
	comp=Z,22nm,0.8s							
HHC					pmax	pmax		
	comp=Z,250nm,4.9s							
CMAR	**Chiang Mai Arr**	**51.05**	**97**	P		**P**	**00 21 03.7**	**+2.7**
	comp=Z,1.1nm,0.3s,baz=296,slow=9.7,SNR=4.4 comp=Z,1.1nm,0.3s							

NAO ***19*** *00:14:05.3, 36°.75N×43°.55E, h33km, MB4.6*
NSSP ***19*** *00:14:08.3, 38°.35N×44°.48E, h10km, Ms5.0*
AFAD ***19*** *00:14:10.6, 38°.50N×44°.52E, h6km±3km, MW4.7*
DSN ***19*** *00:14:11.2±0.5, 38°.26N×43°.96E, h10km, mb4.9/13, Error ellipse: s-maj=14.6km s-min=5.3km az=69.0*
TEH ***19*** *00:14:11.4, 38°.45N×44°.49E, h9km±23km*
MOS ***19*** *00:14:11.5±1.3, 38°.41N×44°.46E, h11km, mb4.9/44, Error ellipse: s-maj=4.6km s-min=3.1km az=104.0*
IDC ***19*** *00:14:11.3±0.5, 38°.39N×44°.44E, h0km, mb4.5/27, mbtmp4.4/35, ML4.4/4, MS4.0/31, Error ellipse: s-maj=9.9km s-min=8.9km az=149.0*
TIF ***19*** *00:14:11.4, 38°.41N×44°.40E, h11km±3km*
MCSM ***19*** *00:14:12.7±0.4, 39°.N±5°.×4°.4E±°., h10km±2km, mb4.8, mB4.8, MLv4.7, Mw(mB)4.1*
NEIC ***19*** *00:14:13.4, 38°.53N×44°.49E, h10km*
AZER ***19*** *00:14:13.6, 38°.65N×44°.59E, h10km, ml4.8*
GCMT ***19*** *00:14:13.6±0.2, 38°.37N±0°.02×44°.51E±0°.01, h19km, MW5.0/96, Moment Tensor Solution. s47,c58; s96,c138; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~3.00±. 14; Mθθ~0.19±.10; Mφφ3.20±.10; Mrθ~0.04±.23; Mθφ~1.17±.07; Mφr~1.55±.18; Best double couple: M₀3.63900×10¹⁶ NP1:φs152.00000°, δ34.00000°, λ-107.00000°. NP2: φs352.00000°, δ58.00000°, λ-79.00000°. Principal axes: T 3.8800, Plg12.0000°, Azm74.0000°; N -0.4750, Plg9.0000°, Azm166.0000°; P -3.3980, Plg75.0000°, Azm293.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***19*** *00:14:13.6±1.4, 38°.54N±0°.05×44°.40E±0°.07, h10km±1km, mb4.8/178, Mwr4.7/14 Error ellipse: s-maj=9.0km s-min=7.8km az=72.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr~1.36; Mθθ0.13; Mφφ1.23; Mrθ0.29; Mθφ~0.84; Mφr0.24; Fault plane solution: M₀1.59000×10¹⁶ NP1:φs168.32000°, δ48.95000°, λ-66.40000°. NP2:φs314.68000°, δ46.29000°, λ-114.69000°. Principal axes: T 1.6866, Plg1.0000°, Azm242.0000°; N -0.2066, Plg18.0000°, Azm332.0000°; P -1.4800, Plg72.0000°, Azm147.0000°;*
THR ***19*** *00:14:14.9±0.0, 38°.45N×44°.61E, h10km±22km, ML4.5*
GII ***19*** *00:14:14.8±0.0, 38°.54N×44°.40E, h10km, confirmed*

ISC 19 00:14:12.7±0.6, 38°.46N±0°.02×44°.49E±0°.02, h9km±3km, n1010, σ1ᵠ48/1064, mb4.8/163, MS3.9/29, 60C-39D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OZAP	**Van, Ozalp-Mer**	**0.44**	**297**	SPECP			00 14 19.0	
OZAP				P		**Pg**	**00 14 19.9**	**-1.5**
OZAP				S		**Sg**	**00 14 26.7**	**-0.5**
OZAP				*i* IAML			00 14 33.0	
	comp=N,10μm,0.8s							
OZAP				*i* IAML			00 14 33.0	
	comp=E,9μm,0.8s							
TVAN	**Van**	**0.86**	**275**	SPECP			00 14 27.0	
TVAN				P		**P**	**00 14 27.0**	**-2.2**
TVAN				S		**Sg**	**00 14 40.3**	**-0.1**
TVAN				*i* IAML			00 14 51.0	
	comp=N,3μm,1.0s							
TVAN				*i* IAML			00 14 54.0	
	comp=E,3μm,0.6s							
YOVA	**Hakkari_Yksek**	**0.89**	**191**	SPECP			00 14 28.0	
YOVA				P		**Pg**	**00 14 28.8**	**-1.1**
YOVA				S		**Sn**	**00 14 44.3**	**-0.3**
YOVA				*i* IAML			00 14 45.0	
	comp=E,1μm,1.1s							
YOVA				*i* IAML			00 14 46.0	
	comp=N,9μm,0.4s							
VMUR	**Van-Muradiye**	**0.89**	**306**	SPECP			00 14 28.0	
VMUR				P		**Pg**	**00 14 28.5**	**-1.4**
VMUR				S		**Sg**	**00 14 39.8**	**-1.7**
VMUR				*i* IAML			00 14 44.0	
	comp=E,3μm,0.5s							
VMUR				*i* IAML			00 14 49.0	
	comp=N,2μm,0.7s							
ISHB	**Shabestar**	**0.90**	**101**	Pg		**Pg**	**00 14 28.4**	**-1.6**
IMRD	**Marand**	**0.98**	**75**	Pg		**Pg**	**00 14 30.0**	**-1.5**
NAX	**Nakhchivan**	**1.05**	**48**	Pg		**Pg**	**00 14 31.7**	**-1.3**
NAX	**Nakhchivan**	**1.05**	**48**	P		**Pg**	**00 14 31.7**	**-1.3**
NAX				S		**Sb**	**00 14 47.3**	**+0.2**
NAX	**Nakhchivan**	**1.05**	**48**	PG		**Pg**	**00 14 31.7**	**-1.3**
ERCV	**ERCIS-VAN**	**1.06**	**302**	Pg		**Pg**	**00 14 31.9**	**-1.2**
HAKT	**HAKKARI**	**1.10**	**215**	SPECP			00 14 32.0	
HAKT				P		**Pg**	**00 14 32.1**	**-1.7**
HAKT				*i* IAML			00 14 51.0	
	comp=N,1μm,0.5s							
HAKT				*i* IAML			00 15 00.0	
	comp=E,1μm,0.6s							
HAKT	**HAKKARI**	**1.10**	**215**	Pg		**Pg**	**00 14 31.7**	**-2.1**
HAKT	**HAKKARI**	**1.10**	**215**	P		**Pg**	**00 14 31.8**	**-2.1**
HAKT				S		**Sn**	**00 14 51.3**	**+1.5**
SBZ	**Shahbuz**	**1.25**	**41**	Pg		**Pn**	**00 14 34.7**	**-1.7**
SBZ	**Shahbuz**	**1.25**	**41**	P		**Pn**	**00 14 35.1**	**-1.2**
SBZ				S		**Sn**	**00 14 53.8**	**+0.5**
DYDN	**Diyadin**	**1.25**	**330**	SPECP			00 14 33.0	
DYDN				P		**Pn**	**00 14 33.8**	**-2.7**
DYDN				S		**Sb**	**00 14 50.6**	**-2.2**
DYDN				*i* IAML			00 14 57.0	
	comp=E,2μm,0.6s							
DYDN				*i* IAML			00 14 59.0	
	comp=N,2μm,0.8s							
ORD	**Ordubad**	**1.26**	**68**	P		**Pn**	**00 14 35.6**	**-1.0**
ORD				S		**Sn**	**00 14 54.1**	**+0.4**
HYR	**Heyderabad**	**1.28**	**12**	P		**Pn**	**00 14 36.5**	**-0.3**
HYR				S		**Sb**	**00 14 53.3**	**-0.4**
ITBZ	**Tabriz**	**1.32**	**100**	Pg		**Pn**	**00 14 35.8**	**-1.0**
IAZR	**Azarshahr**	**1.41**	**123**	Pg		**Pn**	**00 14 37.8**	**-1.0**
VAYK	**Vayk**	**1.43**	**30**	*i* P		**Pn**	**00 14 38.1**	**-0.7**
VAYK				*i* S		**Sg**	**00 14 59.3**	**+0.7**
ADCV	**BITLIS_Adilcev**	**1.43**	**284**	SPECP			00 14 38.0	
ADCV				P		**Pn**	**00 14 38.0**	**-0.9**
ADCV				S		**Sg**	**00 14 58.8**	**+0.1**
ADCV				*i* IAML			00 15 02.0	
	comp=E,2μm,0.6s							
ADCV				*i* IAML			00 15 06.0	
	comp=N,1μm,1.9s							
IGDI	**IGDIR**	**1.44**	**347**	P		**Pn**	**00 14 38.8**	**-0.2**
IGDI				S		**Sg**	**00 15 00.7**	**+1.7**
IGDI	**IGDIR**	**1.44**	**347**	Pg		**Pn**	**00 14 38.8**	**-0.2**
IGDI	**IGDIR**	**1.44**	**347**	P		**Pb**	**00 14 39.4**	**-0.3**
IGDI				S		**Sg**	**00 15 00.1**	**+1.1**
NRKZ	**NAREK**	**1.54**	**5**	*e*P		**Pn**	**00 14 39.7**	**-0.7**
NRKZ				*e*S		**Sg**	**00 15 02.3**	**+0.1**
AGRB	**Hanur-Agry**	**1.61**	**314**	Pg		**Pn**	**00 14 41.4**	**-0.1**
PERV	**Siirt/Pervari-**	**1.62**	**252**	SPECP			00 14 41.0	
PERV				P		**Pn**	**00 14 41.7**	**+0.1**
PERV				S		**Sg**	**00 15 08.5**	**+3.6**
PERV				*i* IAML			00 15 13.0	
	comp=N,2μm,0.8s							
PERV				*i* IAML			00 15 14.0	
	comp=E,3μm,0.6s							
DORK	**Agr/Tutak/Do**	**1.62**	**305**	SPECP			00 14 40.0	
DORK				P		**Pn**	**00 14 40.8**	**-0.8**
DORK				*i* IAML			00 15 12.0	
	comp=N,7μm,1.1s							
DORK				*i* IAML			00 15 14.0	
	comp=E,7μm,0.9s							
KOTA	**Agri, Merkez-K**	**1.67**	**324**	SPECP			00 14 41.0	
KOTA				P		**Pn**	**00 14 41.8**	**-0.5**
KOTA				S		**Sn**	**00 15 03.6**	**-0.3**
KOTA				*i* IAML			00 15 11.0	
	comp=N,4μm,0.8s							
KOTA				*i* IAML			00 15 29.0	
	comp=E,3μm,1.4s							
GNI	**Garni**	**1.69**	**6**	Pg		**Pb**	**00 14 44.5**	**+0.5**
	182nm,0.3s,baz=171,slow=12,SNR=31							
GNI	**Garni**	**1.69**	**6**	Pn		**Pn**	**00 14 42.4**	**-0.2**
GNI	**Garni**	**1.69**	**6**	P		**Pb**	**00 14 44.6**	**+0.5**
GNI				S		**Sg**	**00 15 08.3**	**+1.1**
GNI	**Garni**	**1.69**	**6**	*i* P		**Pb**	**00 14 43.4**	**-0.7**
GNI				⇓ *i* S		**Sg**	**00 15 08.1**	**+0.9**
GNI	**Garni**	**1.69**	**6**	P		**Pb**	**00 14 43.5**	**-0.6**
GNI	**Garni**	**1.69**	**6**	*i* PN		**Pn**	**00 14 43.1**	**+0.5**
GNI	**Garni**	**1.69**	**6**	Pn		**Pn**	**00 14 41.6**	**-1.0**
METS	**Metsamor**	**1.71**	**349**	*e*P		**Pn**	**00 14 42.8**	**0.0**
METS				*e*S		**Sg**	**00 15 08.2**	**+0.5**
VNNZ	**Vanand**	**1.72**	**343**	*e*P		**Pb**	**00 14 43.9**	**-0.6**
VNNZ				*e*S		**Sg**	**00 15 09.5**	**+1.6**
EGVZ	**Egvard**	**1.77**	**64**	*e*P		**Pn**	**00 14 43.5**	**-0.1**
EGVZ				*e*S		**Sg**	**00 15 09.1**	**+0.6**
ARUZ	**Aruch**	**1.84**	**350**	*e*P		**Pn**	**00 14 45.3**	**+0.7**
ARUZ				*e*S		**Sg**	**00 15 11.9**	**0.0**
KAPZ	**Kaputan**	**1.86**	**5**	*e*P		**Pn**	**00 14 45.5**	**+0.6**
KAPZ				*e*S		**Sg**	**00 15 13.4**	**+0.8**
BLIS	**Bitlis-Merkez**	**1.87**	**269**	P		**Pn**	**00 14 45.2**	**+0.3**
BLIS				S		**Sg**	**00 15 15.0**	**+2.2**
SIRN	**Sirnak**	**1.91**	**240**	SPECP			00 14 47.0	
SIRN				P		**Pb**	**00 14 47.0**	**-0.7**
SIRN				S		**Sg**	**00 15 18.0**	**+4.0**
SIRN				*i* IAML			00 15 21.0	
	comp=E,1μm,0.7s							
SIRN				*i* IAML			00 15 22.0	
	comp=N,1μm,0.9s							
AYRK	**Ayrk**	**1.93**	**31**	*e*P		**Pb**	**00 14 47.0**	**-1.1**
AYRK				*e*S		**Sg**	**00 15 13.8**	**-0.9**
GURO	**Guroymak-BITLI**	**1.93**	**273**	Pn		**Pn**	**00 14 45.4**	**-0.4**
GURO	**Guroymak-BITLI**	**1.93**	**273**	Pn		**Pn**	**00 14 45.1**	**-0.7**
MAHB	**Mahabad**	**1.95**	**150**	Pn		**Pb**	**00 14 47.9**	**-0.6**
IHRS	**Heris**	**2.01**	**93**	Pn		**Pn**	**00 14 48.0**	**+1.0**
EATA	**Eleskirt**	**2.09**	**313**	SPECP			00 14 48.0	
EATA				P		**Pn**	**00 14 48.7**	**+0.5**
EATA				*i* IAML			00 15 28.0	
	comp=N,2μm,1.2s							
EATA				*i* IAML			00 15 28.0	
	comp=E,2μm,0.7s							
SRSL	**SARDASHT**	**2.37**	**161**	*e*Pn		**Pb**	**00 14 54.2**	**-1.4**
SRSL					IAML		00 15 45.0	
	comp=Z,2μm,1.0s							
QRD	**Qoradiz**	**2.42**	**65**	P		**Pn**	**00 14 54.2**	**+1.9**
QRD				S		**Sb**	**00 15 25.7**	**-0.5**
GDB	**GEDABAY**	**2.46**	**23**	P		**Pn**	**00 14 54.0**	**+0.9**
GDB				S		**Sb**	**00 15 25.5**	**-2.0**
VRTB	**Varto-Mus**	**2.47**	**287**	Pn		**Pn**	**00 14 53.2**	**-0.1**
IHSH	**Hashtrud**	**2.48**	**117**	Pn		**Pn**	**00 14 54.2**	**+0.8**
LSVT	**Lusahovit**	**2.51**	**12**	*e*P		**Pn**	**00 14 55.3**	**+1.7**
LSVT				*e*S		**Sg**	**00 15 32.0**	**-1.2**
ISRB	**Sarab**	**2.58**	**103**	Pn		**Pn**	**00 14 56.2**	**+1.4**
GANJ	**Ganja**	**2.60**	**32**	P		**Pn**	**00 14 56.0**	**+1.2**
GANJ				S		**Sb**	**00 15 29.7**	**-1.7**
GANJ	**Ganja**	**2.60**	**32**	PN		**Pn**	**00 14 56.0**	**+1.2**
SRTK	**Saratovka**	**2.60**	**357**	*e*P		**Pn**	**00 14 56.6**	**+1.6**
SRTK				*e*S		**Sb**	**00 15 31.7**	**0.0**
AGDM	**Agdam**	**2.61**	**50**	P		**Pn**	**00 14 56.1**	**+1.0**
AGDM				S		**Sb**	**00 15 30.1**	**-1.7**
SENK	**Senkaya-Erzuru**	**2.67**	**322**	Pn		**Pn**	**00 14 56.9**	**+0.8**
QZX	**Qazax, Azerbai**	**2.68**	**14**	P		**Pn**	**00 14 57.9**	**+1.9**
QZX				S		**Sn**	**00 15 28.9**	**+0.3**
GRMI	**Germi**	**2.68**	**82**	Pn		**Pn**	**00 14 57.4**	**+1.3**
GRMI	**Germi**	**2.68**	**82**	*e*Pn		**Pn**	**00 14 58.3**	**+2.1**
GRMI					IAML		00 15 55.2	
	comp=Z,1μm,1.0s							
BLQ	**Beylaqan**	**2.69**	**61**	P		**Pn**	**00 14 57.2**	**+1.0**
BLQ				S		**Sb**	**00 15 31.7**	**-2.5**
BRDA	**Brd**	**2.75**	**48**	P		**Pn**	**00 14 58.5**	**+1.6**
BRDA				S		**Sn**	**00 15 31.5**	**+1.3**
BGD	**Bogdanovka**	**2.88**	**346**	*e*PN		**Pn**	**00 15 00.7**	**+1.8**
KZR	**Kazreti**	**2.91**	**359**	P		**Pb**	**00 15 04.9**	**0.0**
KZRT	**Kazreti**	**2.92**	**359**	*e*PN		**Pb**	**00 15 04.8**	**-0.1**
YRD	**Yardimli**	**2.97**	**80**	P		**Pn**	**00 15 02.6**	**+2.6**
YRD				S		**Sn**	**00 15 37.8**	**+1.9**
LRK	**Lerik**	**3.02**	**85**	P		**Pn**	**00 15 03.1**	**+2.3**
LRK				S		**Sb**	**00 15 43.1**	**-0.7**
MNGR	**Mingechevir, A**	**3.05**	**40**	P		**Pn**	**00 15 03.1**	**+2.0**
MNGR				S		**Sn**	**00 15 40.6**	**+2.9**
MNGR	**Mingechevir, A**	**3.05**	**40**	PN		**Pn**	**00 15 03.0**	**+2.0**
DGRG	**David-gareji**	**3.06**	**12**	P		**Pn**	**00 15 04.0**	**+2.8**
DGRG				S		**Sg**	**00 15 54.6**	**+3.7**
DGRG	**David-gareji**	**3.06**	**12**	*e*PN		**Pn**	**00 15 04.0**	**+2.8**
ZRD	**Zardab**	**3.06**	**53**	P		**Pn**	**00 15 03.5**	**+2.3**
ZRD				S		**Sb**	**00 15 41.7**	**-3.1**
TRLG	**Trialeti**	**3.09**	**355**	P		**Pn**	**00 15 03.0**	**+1.2**
TRLG	**Trialeti**	**3.09**	**355**	*e*PN		**Pn**	**00 15 02.9**	**+1.2**
VSHL	**Vashlovani**	**3.13**	**27**	P		**Pb**	**00 15 05.6**	**-2.9**
GLBA	**Clilabad**	**3.14**	**74**	P		**Pn**	**00 15 04.2**	**+1.9**
GLBA				S		**Sb**	**00 15 44.0**	**-3.0**
MARD	**Mardin**	**3.16**	**250**	Pn		**Pn**	**00 15 03.3**	**+0.7**
SAAT	**Saatly**	**3.36**	**64**	P		**Pn**	**00 15 07.2**	**+1.9**
SAAT				S		**Sn**	**00 15 48.2**	**+3.0**
LKRN	**Lenkeran, Azer**	**3.37**	**84**	P		**Pn**	**00 15 08.0**	**+2.6**
LKRN				S		**Sn**	**00 15 49.2**	**+3.8**
LKRN	**Lenkeran, Azer**	**3.37**	**84**	PN		**Pn**	**00 15 07.9**	**+2.6**
ASTR	**Astara**	**3.37**	**87**	P		**Pn**	**00 15 08.0**	**+2.5**
ASTR				S		**Sb**	**00 15 50.7**	**-3.0**
GAS1	**Astara - Iran**	**3.41**	**90**	Pn		**Pn**	**00 15 07.8**	**+1.8**
KDMR	**Kurdemir**	**3.44**	**55**	P		**Pn**	**00 15 08.5**	**+2.2**
KDMR				S		**Sn**	**00 15 49.1**	**+1.9**
SEKA	**Sheki**	**3.44**	**36**	P		**Pn**	**00 15 08.2**	**+1.7**
SEKA				S		**Sn**	**00 15 49.1**	**+1.7**
SEKA	**Sheki**	**3.44**	**36**	PN		**Pn**	**00 15 08.2**	**+1.7**
KOPT	**Kop Dagi**	**3.47**	**298**			**Pn**	**00 15 15.1**	**+0.6**
ZKTA	**Zakatala**	**3.57**	**27**	P		**Pn**	**00 15 10.4**	**+2.2**
ZKTA				S		**Sn**	**00 15 50.6**	**+0.2**
QBL	**Gabala**	**3.58**	**45**	P		**Pn**	**00 15 09.0**	**+0.7**
QBL				S		**Sn**	**00 15 52.2**	**+1.5**
LGD	**Lagodekhi**	**3.62**	**21**

SOC *e* 00 16 56.8
SOC pmax pmax
comp=Z,34nm,0.7s
SOC MLR MLR
comp=Z,2µm,12.0s
KHMZ Khomeyn 6.46 135 IAML 00 18 16.7
comp=Z,130nm,1.0s
TOKA Tokat 6.48 289 Pn Pn 00 15 50.5 +2.2
DAMV Damavand 6.61 113 *e*Pn **Pn 00 15 53.4 +3.1**
DAMV IAML 00 16 37.2
comp=Z,4.1nm,1.0s
GOF Gofitskoye 6.68 351 *ce*P Pb 00 16 01.1 -7.8
GHVR GHOM 6.77 124 *e*Pn **Pn 00 15 56.9 +4.6**
GHVR IAML 00 18 14.0
comp=Z,230nm,1.0s
BNN Bunyan 6.78 276 Pn **Pn 00 15 54.7 +2.2**
LABN Labinsk 6.79 337 *e*P Pn 00 15 43.1 -9.3
LABN pmax pmax
comp=Z,11nm,0.9s
LABN MLR MLR
comp=N,3µm,10.0s
IKIA Kiasar 7.66 104 Pn **Pn 00 16 06.3 +1.7**
BEIL Beino 7.75 242 *e*P **Pn 00 16 07.3 +1.6**
FKH Fakeheh 7.76 240 *e*P **Pn 00 16 07.0 +1.1**
ERBR Yeremizino-Bor 7.83 339 *e*P **Pn 00 16 10.1 +3.4**
ERBR *e*S **Sn 00 17 42.2 +6.7**
ERBR pmax pmax
comp=Z,12nm,0.9s
ERBR MLR MLR
comp=N,1µm,9.0s
HWQ Hawqa 8.06 241 *e*P **Pn 00 16 13.7 +3.7**
ANN Anapa 8.24 322 *e*P **Pn 00 16 11.8 -0.6**
ANN *e*S **Sn 00 17 47.6 +2.0**
ANN pmax pmax
comp=Z,23nm,0.9s
ANN MLR MLR
comp=E,1µm,12.0s
ANN MLR MLR
comp=Z,2µm,15.0s
ANN MLR MLR
comp=N,1µm,13.0s
ZAHL Zahle 8.34 239 *e*P **Pn 00 16 17.6 +3.8**
BHL Bhannes 8.47 240 *e*P Pn 00 16 20.8 +5.2
BR131 Keskin Array S 8.54 282 Pn 00 16 16.4 -0.2
BR131 Keskin Array S 8.54 282 P Pn 00 16 21.6 +5.1
SNR=10
BR131 Keskin Array S 8.54 282 *i* P **Pn 00 16 15.4 -1.1**
BRTR Keskin Array B 8.54 282 Pn **Pn 00 16 19.9 +3.4**
comp=N,4.3nm,0.8s,baz=106,slow=13,SNR=17
BRTR LR LR 00 19 31.7
comp=N,838nm,19.4s,baz=96,slow=38
BRTR Keskin Array B 8.54 282 Pn 00 16 17.3 +0.8
BRTR Keskin Array B 8.54 282 *i* P Pn 00 16 24.0 +7.5
BRTR pmax pmax
comp=Z,6.0nm,0.7s
RCY Rachaya 8.59 237 *e*P **Pn 00 16 18.9 +1.7**
QRWL Qaraoun 8.66 238 *e*P **Pn 00 16 19.2 +1.0**
ILGA Ilgaz 8.69 291 Pn **Pn 00 16 18.0 -0.8**
IMND Minoodasht 8.72 95 Pn **Pn 00 16 19.7 +0.9**
SHBL Chebaa 8.74 237 *e*P **Pn 00 16 16.8 -2.5**
BZK Bozkurt 8.75 297 Pn **Pn 00 16 20.7 +1.3**
NATI Neve Ativ 8.80 237 P **Pn 00 16 21.6 +1.6**
NASN Na'in 8.81 127 IAML_BB 00 17 18.5
comp=Z,340nm,1.0s
ASF Jabal al Asfar 8.83 227 Pn **Pn 00 16 21.6 +1.1**
comp=Z,1.4nm,0.3s,baz=41,slow=11,SNR=9.2
ASF Lg Lg 00 18 50.2
comp=Z,0.9nm,0.3s,baz=222,slow=20,SNR=2.7
ASF LR LR 00 20 02.1
comp=Z,1µm,20.5s,baz=38,slow=40
GEM Giv'at Ha'Em 8.88 236 P **Pn 00 16 22.6 +1.5**
KSHT Keshet 8.93 235 P **Pn 00 16 23.9 +2.0**
MMA0B Mount Meron ar 9.17 236 P **Pn 00 16 27.1 +1.9**
MMAI Mount Meron Ar 9.17 236 Pn **Pn 00 16 25.1 -0.1**
comp=Z,3.4nm,0.3s,baz=64,slow=15,SNR=14
MMAI Lg Lg 00 19 05.8
comp=Z,0.8nm,0.3s,baz=293,slow=41,SNR=2.1
MMAI LR LR 00 20 23.1
comp=Z,3µm,18.9s,baz=50,slow=41
comp=Z,3.8nm,0.6s
MRVT Maraveh tapeh 9.18 91 Pn **Pn 00 16 26.3 +1.0**
MRVT Maraveh tapeh 9.18 91 IAML 00 16 28.3
comp=Z,41nm,0.8s
ANTO Ankara 9.20 282 Pn **Pn 00 16 26.5 +1.0**
ANTO Ankara 9.20 282 P **Pn 00 16 30.3 +4.8**
ANTO Ankara 9.20 282 P **Pn 00 16 26.5 +1.0**
HNTI Hanita 9.28 237 P **Pn 00 16 28.7 +2.1**
KLNJ Kolanjah 9.45 140 *e*Pn **Pn 00 16 31.4 +2.1**
KLNJ IAML 00 16 52.8
comp=Z,8.8nm,0.6s
BLGI Bet Lehem HaGe 9.49 236 P **Pn 00 16 31.8 +2.3**
SHRO Shahrood 9.51 102 IAML_BB 00 16 51.9
comp=Z,540nm,1.0s
MMLI Mount Malkishu 9.53 234 P **Pn 00 16 31.8 +1.7**
HMDT Nahal Hemdat 9.59 232 P **Pn 00 16 32.9 +2.0**
BALJ Balqa 9.63 231 Pn 00 16 35.7 +4.2
OFRI `Ofer 9.69 236 P **Pn 00 16 34.1 +1.8**
SLTI Sal'it 9.90 234 P **Pn 00 16 37.1 +1.9**
SIM Simferopol' 10.10 313 *e*P **Pn 00 16 41.0 +3.1**
SIM pmax pmax
comp=Z,11nm,0.9s
SIM MLR MLR
comp=Z,300nm,15.8s
BJRD Bojnurd 10.21 90 IAML_BB 00 16 52.9
comp=Z,360nm,1.0s
YZKH Yazd 10.22 123 *e*Pn Pn 00 16 44.7 +5.1
YZKH IAML 00 16 59.5
comp=Z,8.8nm,1.9s
GHAJ Ghor Haditha 10.23 228 Pn **Pn 00 16 42.8 +3.1**
GHAJ Ghor Haditha 10.23 228 P **Pn 00 16 41.8 +2.1**
MSBI Mazada 10.35 229 P **Pn 00 16 43.6 +2.4**
YTIR Yattir 10.46 230 P **Pn 00 16 45.2 +2.3**
AMAZ Amatzia 10.46 231 P **Pn 00 16 44.9 +2.1**
MDUB Mudurnu 10.47 285 Pn 00 16 43.6 +0.5
ISFR Sfrayin 10.79 93 Pn **Pn 00 16 49.1 +1.6**
BORA Eskisehir 10.99 282 Pn 00 16 51.3 +1.2
ZFRI Zfri 11.01 227 P **Pn 00 16 53.0 +2.7**
KZIT Kziot 11.21 231 P **Pn 00 16 55.5 +2.4**
IEMG Emamgholi 11.23 91 Pn **Pn 00 16 55.2 +1.5**
PRNI Paran 11.26 227 P **Pn 00 16 55.9 +2.1**
TABS Tabas 11.29 111 *e*Pn **Pn 00 16 58.4 +4.2**
TABS IAML 00 17 00.5
comp=Z,27nm,1.5s
HRFI Mount Harif 11.48 226 P **Pn 00 16 59.8 +3.1**
IAKL Akhelmad 11.48 95 Pn **Pn 00 16 58.7 +1.7**
KRMI Paran Flat 11.59 227 P **Pn 00 17 01.5 +3.2**
ELL Elmali 11.70 266 Pn 00 17 02.9 +3.1
ELL Elmali 11.70 266 P **Pn 00 17 02.9 +3.1**
IPAY Payeh 11.70 95 Pn **Pn 00 17 02.0 +2.0**
MBRI Mt Berech 11.73 225 P **Pn 00 17 02.6 +2.3**
EIL Elat 11.81 225 Pn **Pn 00 17 04.7 +3.5**
comp=Z,0.3nm,0.3s,baz=346,slow=4.7,SNR=3.5
EIL LR LR 00 22 06.2
comp=Z,1µm,18.8s,baz=8.0,slow=40
EIL Elat 11.81 225 P **Pn 00 17 02.5 +1.3**
IKRD Kardeh 12.03 93 Pn **Pn 00 17 06.0 +1.5**
MANT Manisa 12.49 275 Pn 00 17 13.0 +2.2
IMYA Miami 12.59 95 Pn **Pn 00 17 13.9 +1.8**
VRH Novokhopyorsk 12.89 352 *e*P **Pn 00 17 19.2 +3.3**
VRH pmax pmax
comp=Z,28nm,1.0s
JRKH Jarkhoshk 12.90 97 Pn **Pn 00 17 18.4 +2.1**
VORD Divnogorie 13.03 345 *e*P **Pn 00 17 18.7 +0.9**
VORD pmax pmax
comp=Z,30nm,1.0s
VSR Storozhevoye 13.29 345 *e*P **Pn 00 17 21.2 -0.2**
VSR pmax pmax
comp=Z,20nm,0.9s
TIRR Tirgusor 13.46 302 Pn 00 17 27.8 +4.1
TIRR Tirgusor 13.46 302 P **Pn 00 17 27.8 +4.1**
VORR Voronezh 13.72 346 *e*P **Pn 00 17 30.0 +2.8**
VORR pmax pmax
comp=Z,40nm,0.9s
TLBR Topalu 13.73 301 ⇓P **P 00 17 37.7 +1.6**
ICOR Ion Corvin 13.76 300 ⇑P **P 00 17 36.5 +0.1**
HARR Harsova 13.86 302 ⇑P **P 00 17 38.8 +1.2**
HARR Harsova 13.86 302 ⇑P **P 00 17 38.8 +1.2**
CFR Carcaliu 13.91 304 ⇑P **P 00 17 38.5 +0.4**
CFR Carcaliu 13.91 304 ⇑P **P 00 17 38.5 +0.4**
BELG Belogornoye 14.10 8 Pn **Pn 00 17 35.5 +3.1**
comp=Z,0.7nm,0.3s,baz=7.3,slow=7.0,SNR=11
BELG Belogornoye 14.10 8 *i* P **Pn 00 17 32.4 0.0**
KARP Karpathos 14.15 263 P **P 00 17 40.0 -0.9**
MILM Milestii Mici 14.28 311 *i* P **P 00 17 40.7 -1.5**
comp=Z,80nm,1.5s
MILM *i* S **Sn 00 20 22.0 +8.7**
MILM *e*L L 00 22 39.0
MILM LRM MLR 00 24 30.0
comp=Z,400nm,14.0s
LPSR Galich'ya Gora 14.66 346 *e*P **Pn 00 17 40.0 -0.1**
LPSR pmax pmax
comp=Z,120nm,0.8s
BIR Birlad 14.69 307 ⇓P **P 00 17 47.0 +0.2**
SMRA Abu-Samra 14.70 157 P **Pn 00 17 42.3 +1.6**
GHRR 14.74 306 ⇑P **P 00 17 49.1 +1.8**
SZH Strazhitsa 14.80 295 P **P 00 17 48.5 +0.4**
ELND Elena 14.81 293 ⇑P **P 00 17 49.9 +1.8**
RDO Rodhopi 14.82 286 Pn 00 17 43.3 +1.0
TRNA Turayna 14.83 155 P **P 00 17 46.2 -2.2**
TRNA S **Sn 00 20 26.0 -0.9**
ODBI Odobesti 14.84 305 ⇑P **P 00 17 51.2 +2.8**
HRA Herat 14.86 100 Pn 00 17 45.1 +2.0
RAYN Ar Rayn 14.92 176 P **Pn 00 17 39.4 -4.4**
RAYN Ar Rayn 14.92 176 ⇑P **Pn 00 17 39.8 -4.0**
ISR Istrita 14.94 302 ⇑P **P 00 17 48.5 -1.1**
ISR Istrita 14.94 302 ⇑P **P 00 17 48.5 -1.1**
ISR Istrita 14.94 302 P **Pn 00 17 42.7 -1.2**
comp=Z,46nm,1.7s
BISRR Bisoca 14.98 304 ⇓P **P 00 17 49.8 -0.3**
BISRR Bisoca 14.98 304 P **Pn 00 17 43.3 -1.2**
comp=Z,74nm,1.2s
KDZ Kurdzhali 15.01 288 P **P 00 17 50.3 -0.1**
VRI Vrincioaia 15.09 305 ⇓P **P 00 17 49.1 -2.2**
VRI Vrincioaia 15.09 305 ⇓P **P 00 17 49.1 -2.2**
VRI Vrincioaia 15.09 305 P **Pn 00 17 44.8 -1.2**
comp=Z,774nmcomp=Z,24nm,1.1s
PLOR Plostina 15.13 305 ⇑P **Pn 00 17 45.6 -1.0**
PLOR Plostina 15.13 305 ⇑P **Pn 00 17 45.6 -1.0**
IASR Iasi 15.14 311 ⇓P **P 00 17 53.0 +1.2**
SORM Soroca 15.19 315 ⇑P **Pn 00 17 46.2 -1.0**
SORM Soroca 15.19 315 ⇑P **Pn 00 17 46.2 -1.0**
NEHR Nehoiu 15.21 303 ⇑P **P 00 17 55.3 +2.7**
AKTO Aktyubinsk 15.35 34 Pn **Pn 00 17 51.0 +1.7**
comp=Z,0.4nm,0.3s,baz=227,slow=13,SNR=16
AKTO LR LR 00 25 17.6
comp=Z,416nm,20.5s,baz=246,slow=43
AKTO Aktyubinsk 15.35 34 P **Pn 00 17 46.4 -2.9**
PVL Pavlikeni 15.35 294 P **P 00 17 55.3 +1.2**
TESR Tescani 15.40 307 ⇑P **Pn 00 17 51.2 +1.1**
COVR Voineasa-Covas 15.42 304 ⇓P **P 00 17 55.6 +0.6**
MLR Muntele Rosu 15.46 303 Pn **Pn 00 17 51.4 +0.4**
comp=Z,0.3nm,0.3s,baz=131,slow=0.4,SNR=12
comp=Z,11nm,1.2s
MLR Muntele Rosu 15.46 303 Pn 00 17 51.4 +0.4
MLR IAmb IAmb 00 18 01.3
comp=Z,34nm,1.0s
MLR Muntele Rosu 15.46 303 ⇓P **P 00 17 54.9 -0.6**
MLR Muntele Rosu 15.46 303 ⇓P **P 00 17 54.9 -0.6**
MLR Muntele Rosu 15.46 303 P **Pn 00 17 49.7 -1.3**
comp=Z,34nm,1.4s
RZN Rozhen 15.46 288 P **P 00 17 54.5 -1.1**
AB31 Akbulak array 15.48 41 Pn 00 17 49.3 -1.7
AB31 Akbulak array 15.48 41 *e*P **Pn 00 17 49.7 -1.3**
ABKAR Akbulak array 15.48 41 Pn 00 17 49.7 -1.3
ONER Baraj Valea Uz 15.49 306 ⇑P **Pn 00 17 53.2 +2.0**
TURR Turia 15.62 305 ⇓P **Pn 00 17 53.9 +1.0**
GIRR Girov 15.69 308 ⇑P **P 00 17 59.5 +1.7**
OZUR 15.78 305 ⇑P **P 00 18 00.5 +1.5**
SHME Shamm 15.80 138 P **P 00 17 59.1 -0.1**
HUMR Humele 15.81 299 ⇑P **P 00 18 01.4 +2.1**
BIZ Bicaz 15.93 308 ⇑P **P 00 18 03.4 +2.9**
BANOM Banah 15.99 138 P **P 00 18 00.3 -1.0**
BANOM Banah 15.99 138 P **Pn 00 17 58.1 +0.3**
DOPR Dopca 15.99 304 ⇑P **P 00 18 03.5 +2.2**
IDI Anoyia 16.00 265 Pn **Pn 00 17 58.6 +0.6**
comp=Z,8.8nm,0.8s,baz=205,slow=18,SNR=5.6
IDI Sn **Sn 00 20 59.2 +3.6**
comp=Z,0.1nm,0.3s,baz=59,slow=19,SNR=1.5
IDI LR LR 00 25 21.3
comp=Z,399nm,19.9s,baz=78,slow=42
IDI Anoyia 16.00 265 Pn 00 17 57.7 -0.3
VOIR 16.04 302 ⇑P **P 00 18 03.5 +1.7**
VLAD Vladila 16.08 296 ⇓P **P 00 18 03.5 +1.3**
GHWR Ruwais 16.12 151 P **P 00 18 02.9 +0.1**
MMB Musomishta 16.19 288 P **Pn 00 18 00.4 +0.1**
AK07 Malin Array Si 16.24 323 P **Pn 00 17 59.8 -1.0**
AK09 Malin Array Si 16.24 323 P **Pn 00 17 59.9 -1.0**
AK10 Malin Array Si 16.25 323 P **Pn 00 18 00.0 -1.0**
AK06 Malin Array Si 16.26 323 P **Pn 00 18 00.2 -1.0**
AK08 Malin Array Si 16.27 323 P **Pn 00 18 00.3 -0.9**
ARR Arges 16.29 301 ⇓P **P 00 18 06.4 +1.7**
AKASG Malin Array Be 16.33 323 Pn **Pn 00 18 02.4 +0.4**
comp=Z,1.1nm,0.3s,baz=134,slow=12,SNR=47
AKASG LR LR 00 25 11.7
comp=Z,444nm,19.1s,baz=139,slow=40
comp=Z,15nm,0.8s
AKASG Malin Array Be 16.33 323 Pn 00 18 01.2 -0.8
AKASG Malin Array Be 16.33 323 *ce*P **Pn 00 18 01.2 -0.8**
AKASG pmax pmax
comp=Z,13nm,0.7s
AKBB Malin Array Si 16.33 323 Pn 00 18 01.7 -0.3
AKBB Malin Array Si 16.33 323 *ce*P **Pn 00 18 02.1 +0.1**
AKBB pmax pmax
comp=Z,43nm,1.1s
AKBB Malin Array Si 16.33 323 P **Pn 00 18 01.0 -1.0**
KIEV Kiev 16.33 323 Pn 00 18 01.1 -1.0
KIEV Kiev 16.33 323 ⇑P **Pn 00 18 02.3 +0.3**
KIEV Kiev 16.33 323 P **Pn 00 17 58.8 -3.2**
KIEV Kiev 16.33 323 ⇑P **Pn 00 18 02.3 +0.3**
KIEV Kiev 16.33 323 P **Pn 00 18 01.0 -1.0**
comp=Z,106nm,1.1s
AK14 Malin Array Si 16.34 323 P **Pn 00 18 01.1 -1.0**
MASF Masafi 16.36 140 P **Pn 00 18 04.0 +1.3**
MASF S **Sn 00 21 04.5 +0.2**
MPEP Malo Peshtene 16.42 294 P **P 00 18 06.1 +0.1**
NAZ Nazwa, Dubai 16.43 142 P **Pn 00 18 04.7 +1.2**
SNR=5.5
NAZ S **Sn 00 21 06.7 +0.7**
NAZ Nazwa, Dubai 16.43 142 *i* P **Pn 00 18 04.1 +0.6**
SNR=7.5
KMPD K-Podol'skiy 16.48 314 P **P 00 18 02.6 -4.1**
KMPD P **Pn 00 18 02.3 -1.7**
MDH Madha 16.50 139 P **Pn 00 18 05.3 +1.0**
SNR=7.3
MDH S **Sn 00 21 07.3 -0.2**
MDH Madha 16.50 139 *i* P **Pn 00 18 04.1 -0.2**
SNR=8.4
PLNA Plana 16.52 291 P **P 00 18 07.3 0.0**
LUBAR Lubar, Ukraine 16.55 319 P **Pn 00 18 03.7 -1.1**
ASUD Al Ashush, Dub 16.58 143 P **P 00 18 08.2 +0.3**
ASUD Al Ashush, Dub 16.58 143 P **Pn 00 18 05.4 0.0**
FAQ Al Faqa, Dubai 16.61 142 P **P 00 18 09.6 +1.4**
FAQ S **Sn 00 21 09.7 -0.5**
TNR Turnu Rosu 16.62 302 ⇓P **P 00 18 10.4 +2.1**
TNR Turnu Rosu 16.62 302 ⇓P **P 00 18 10.4 +2.1**
KKB Krupnik 16.67 288 P **P 00 18 08.7 -0.2**
BLSH Balsha 16.68 292 P **P 00 18 10.9 +2.0**
VTS Vitosha 16.68 291 P **P 00 18 10.2 +1.2**
MDB Medias 16.71 304 ⇓P **P 00 18 12.4 +3.1**
MDB Medias 16.71 304 ⇓P **P 00 18 12.4 +3.1**
UOSS Minazif 16.74 140 Pn 00 18 07.7 +0.3
UOSS Minazif 16.74 140 P **P 00 18 08.9 -0.8**
UOSS S **Sn 00 21 11.7 -1.7**
BURAR Bucovina Array 16.76 309 Pn 00 18 07.8 +0.1
BURAR IAmb IAmb 00 18 12.7
comp=Z,76nm,0.7s
BURAR Bucovina Array 16.76 309 ⇑P **P 00 18 11.7 +1.8**
BURAR Bucovina Array 16.76 309 ⇑P **P 00 18 11.7 +1.8**
BUR08 Bucovina Ar. S 16.79 309 Pn 00 18 06.4 -1.6
BUR08 IAmb IAmb 00 18 13.1
comp=Z,59nm,0.8s
HATD Hatta, Dubai 16.80 141 P **P 00 18 09.9 -0.4**
SNR=12
HATD S **Sn 00 21 13.4 -1.6**
HATD Hatta, Dubai 16.80 141 *i* P **Pn 00 18 08.8 +0.6**
SNR=7.2
MI29 MI29, Kamyanyy 16.81 321 P **Pn 00 18 07.6 -0.5**
HORU Horodok 16.85 315 P **Pn 00 18 07.5 -1.1**
MI30 MI30,Zelenitsa 16.85 322 P **Pn 00 18 07.0 -1.6**
comp=Z,86nm,0.7s
ASHO Ashiyiah 16.89 141 P **Pn 00 18 10.0 +0.7**
SNR=11
ASHO S **Sn 00 21 16.2 -0.8**
ASHO Ashiyiah 16.89 141 *i* P **Pn 00 18 09.6 +0.3**
SNR=5.9
LOT Lotru 16.90 301 ⇑P **P 00 18 12.6 +1.2**
KSV Kosov 17.17 311 P **Pn 00 18 11.6 -1.1**
MZR Muzera 17.22 151 P **Pn 00 18 13.8 +0.3**
MZR Muzera 17.22 151 *i* P **Pn 00 18 13.7 +0.3**
SNR=7.4
BLKB Belogradchik 17.23 294 ⇑P **P 00 18 17.5 +2.5**
ALNE Al Ain 17.27 143 P **Pn 00 18 14.7 +0.7**
ALNE S **Sn 00 21 25.5 -0.7**
ALNE Al Ain 17.27 143 P **Pn 00 18 14.2 +0.1**
CJR Cluj-Napoca 17.42 305 ⇑P **P 00 18 18.7 +1.6**
CJR Cluj-Napoca 17.42 305 ⇑P **P 00 18 18.7 +1.6**
CBBR Cluj-Babes-Bol 17.47 305 ⇓P **P 00 18 20.2 +2.6**
OBN Obninsk 17.50 345 P **Pn 00 18 16.4 -0.2**
comp=Z,2.4nm,0.3s,baz=343,slow=22,SNR=18
comp=Z,28nm,0.8s
OBN Obninsk 17.50 345 Pn 00 18 15.2 -1.4
OBN IAmb IAmb 00 18 16.4
comp=Z,48nm,0.8s
OBN Obninsk 17.50 345 ⇑P **Pn 00 18 16.0 -0.7**
OBN Obninsk 17.50 345 *d* P **Pn 00 18 15.1 -1.5**
OBN *e*S **Sn 00 21 24.2 -7.1**
OBN pmax pmax
comp=Z,57nm,0.9s
OBN MLR MLR
comp=Z,338nm,13.0s
OBN Obninsk 17.50 345 P **Pn 00 18 15.8 -0.8**
comp=Z,60nm,1.3s
GZR Gura Zlata 17.55 300 ⇓P **P 00 18 20.2 +1.6**
GZR Gura Zlata 17.55 300 ⇓P **P 00 18 20.2 +1.6**
SOHO SOHO 17.58 141 P **Pn 00 18 18.0 +0.1**
SOHO S **Sn 00 21 35.2 +1.5**
SOHO SOHO 17.58 141 *i* P **Pn 00 18 18.2 +0.3**
SNR=12
HERR Herculane 17.67 298 ⇑P **P 00 18 20.9 +1.0**
MARR Marisel-Cluj 17.72 304 ⇑P **P 00 18 24.2 +3.8**
BMR Baia Mare 17.84 308 ⇑P **P 00 18 23.8 +2.0**
BMR Baia Mare 17.84 308 ⇑P **P 00 18 23.8 +2.0**
MOS Moscow 17.89 347 *e*P **Pn 00 18 19.1 -2.4**
MOS pmax pmax
comp=Z,110nm,1.1s
MOS MLR MLR
comp=Z,400nm,14.0s
BOVS Bovan 17.93 294 ⇓P **P 00 18 24.8 +2.1**
MESR Meseseni 17.99 306 ⇓P **P 00 18 25.3 +1.9**
DRGR 18.02 304 ⇓P **P 00 18 24.9 +1.1**
DRGR 18.02 304 ⇓P **P 00 18 24.9 +1.1**
SURR Surduc 18.09 301 ⇓P **P 00 18 25.5 +1.0**
MDVR Moldovita 18.14 298 ⇑P **P 00 18 26.6 +1.5**
UMZA Um Al Zommool 18.16 147 P **Pn 00 18 25.1 0.0**
UMZA S **Sn 00 21 50.0 +2.1**
ARQ Araqi 18.25 142 P **P 00 18 26.8 +0.4**
SNR=12
KORU Korolevo 18.26 309 P **Pn 00 18 25.1 -1.1**
RNPP5 Staryi Chortor 18.29 320 P **Pn 00 18 25.4 -1.1**
BZS Buzias 18.40 300 ⇑P **Pn 00 18 27.2 -0.7**
BZS Buzias 18.40 300 ⇑P **Pn 00 18 27.2 -0.7**
RNPP9 Sopachiv 18.40 321 P **Pn 00 18 26.8 -1.0**
BRIU Brid 18.41 309 P **P 00 18 26.9 -1.0**
HOQ Hoqain 18.43 140 P **P 00 18 28.3 0.0**
SNR=8.6
SIRR Siria 18.55 302 ⇑P **Pn 00 18 31.4 +1.7**
BSY Bisya 19.07 142 P **Pn 00 18 35.9 -0.3**
KWP Kalwaria Pacla 19.16 313 *e*P **Pn 00 18 37.8 +0.7**
SMDO Samad 19.24 139 P **Pn 00 18 38.3 0.0**
SNR=19
CHGR Chuyangaron 19.28 82 Pn 00 18 38.8 +0.1
CHGR Chuyangaron 19.28 82 P **Pn 00 18 38.8 +0.1**
CHGR pmax pmax
comp=Z,34nm,1.0s
PDG Podgorica 19.59 290 P **P 00 18 41.6 +0.7**
MNK Minsk 19.62 330 *i* P **P 00 18 39.2 -2.0**
comp=E,28nm,0.8s
MNK *i* P **P 00 18 39.2 -2.0**
comp=N,37nm,1.0s
MNK *i* P **P 00 18 39.2 -2.0**
comp=Z,48nm,0.9s,baz=138
MNK *i* PP **PnPn 00 18 53.7 -2.2**
MNK *i* PPP PPP 00 19 01.5
MNK *i* S **S 00 22 19.5 -3.0**
MNK *i* SS **SnSn 00 22 35.8 -1.1**
MNK *i* SSS SSS 00 22 48.7
MNK *i* LQ LQ 00 24 31.2
MNK *i* LR LR 00 26 00.3
MNK *i* LRM MLR 00 27 16.5
comp=Z,420nm,17.6s
MNK *i* LRM MLR 00 27 30.2
comp=E,483nm,17.5s
MNK *i* LRM MLR 00 27 32.5
comp=N,317nm,16.2s
MNK Minsk 19.62 330 *i* P **P 00 18 39.1 -2.0**
MNK *i* S **S 00 22 19.4 -3.0**
MNK pmax pmax
comp=Z,48nm,0.9s
MNK pmax pmax
comp=N,37nm,1.0s
MNK pmax pmax
comp=E,28nm,0.8s
MNK MLR MLR
comp=Z,420nm,18.0s
MNK MLR MLR
comp=E,483nm,17.0s
MNK MLR MLR
comp=N,317nm,16.0s
BRLS Boroldav 19.70 69 *e*P **P 00 18 41.9 -0.4**
IUG Iuzhnay 19.80 71 *e*P **Pn 00 18 45.1 +0.2**
JMDO Jabal Madar 19.84 140 P **P 00 18 44.3 +0.5**
SNR=9.2
STHS Stebnicka Huta 19.92 311 *e*P **Pn 00 18 46.8 +0.6**
STHS Stebnicka Huta 19.92 311 *e*P **Pn 00 18 46.8 +0.6**
KECS Kecovo 20.02 308 *e*P Pn 00 18 48.1 +0.8
KECS pmax pmax
comp=Z,24nm,1.1s
KECS Kecovo 20.02 308 *e*P Pn 00 18 48.1 +0.8
WBK Wadi Bani Khal 20.09 138 P Pn 00 18 47.4 -0.9
KBL Kabul 20.10 94 Pn 00 18 49.3 +0.7
KBL Kabul 20.10 94 P Pn 00 18 51.0 +2.3
SNR=12
KBL Kabul 20.10 94 P Pn 00 18 49.3 +0.7
KBL pmax pmax
comp=Z,20nm,1.1s
GAR Garm 20.14 80 P Pn 00 18 49.0 0.0
GAR IAmb IAmb 00 18 56.3
comp=Z,73nm,1.0s
ARTI Arti 20.17 23 P **P 00 18 47.9 +0.7**
comp=Z,24nm,0.6s,baz=216,slow=7.2,SNR=22
ARTI LR LR 00 28 19.8
comp=Z,475nm,20.2s,baz=217,slow=42
comp=Z,24nm,0.6s
ARTI Arti 20.17 23 P 00 18 47.4 +0.2
ARTI Arti 20.17 23 P **P 00 18 47.4 +0.2**
ARTI pmax pmax
comp=Z,47nm,0.6s
PSZ Piszkesteto 20.20 306 P 00 18 47.8 +0.1
PSZ IAmb IAmb 00 19 05.3
comp=Z,51nm,1.1s
PSZ Piszkesteto 20.20 306 ⇓P Pn 00 18 49.0 -0.6
PSZ Piszkesteto 20.20 306 *e*P Pn 00 18 48.8 -0.7
PSZ Piszkesteto 20.20 306 ⇓P Pn 00 18 49.0 -0.5
KK31 Karatay Array 20.20 68 P 00 18 48.4 +0.7
KK31 Karatay Array 20.20 68 *i* P Pn 00 18 48.7 -0.9
KKAR Karatay Array 20.20 68 P 00 18 48.3 +0.6
KKAR Karatay Array 20.20 68 P **P 00 18 48.3 +0.6**
NACGM Naroch 20.35 330 ⇓*i* P **P 00 18 49.0 -0.1**
comp=Z,29nm,0.7s,baz=136
KIRV Kirov 20.39 7 P **P 00 18 50.4 +1.0**
comp=Z,26nm,0.8s,baz=199,slow=9.2,SNR=19
KIRV LR LR 00 27 38.1
comp=Z,342nm,18.4s,baz=199,slow=39
comp=Z,26nm,0.8s
KIRV Kirov 20.39 7 *ce*P **P 00 18 49.4 -0.1**
NIE Niedzica 20.49 310 *e*P Pn 00 18 52.4 -0.5
MORH Mrgy, Hungar 20.56 300 ⇓P Pn 00 18 52.8 -0.8
MORH Mrgy, Hungar 20.56 300 P **P 00 18 50.6 -0.8**
comp=Z,24nm,1.4s
JLN Jalan Bani Buh 20.70 138 P **P 00 18 54.0 +0.8**
SNR=10.0
LANS Liptovska Anna 20.89 309 *e*P **P 00 18 56.3 +1.2**
LANS pmax pmax
comp=Z,8.0nm,1.4s
LANS Liptovska Anna 20.89 309 *e*P **P 00 18 56.3 +1.2**
IIGN Ignalina 20.89 330 *e*P **P 00 18 51.9 -3.2**
MHTO MHTO 20.94 142 P **P 00 18 56.4 +0.7**
ISAL Salakas 21.09 330 *e*P **P 00 18 56.8 -0.3**
OJC Ojcow 21.11 312 *e*P **P 00 18 57.4 0.0**
OJC Ojcow 21.11 312 P 00 18 56.7 -0.7
OJC Ojcow 21.11 312 P **P 00 18 56.7 -0.7**

OJC Ojcow 21.11 312 P P 00 18 56.5 -0.9
comp=Z,16nm,0.9s
DRK Karamyk 21.23 79 P P 00 19 01.4 +2.3
DRK IAmb IAmb 00 19 05.8
comp=Z,50nm,1.0s
DRK Karamyk 21.23 79 P P 00 19 01.4 +2.3
DRK pmax pmax
comp=Z,50nm,1.0s
SVE Sverdlovsk 21.25 25 *e*P P 00 18 59.7 +0.9
SVE *e*S S 00 22 52.9 -2.0
SVE pmax pmax
comp=Z,75nm,1.3s
BEL Belsk 21.28 317 *e*P P 00 19 02.8 +3.6
R9F13 Warsaw-Wawer 21.29 318 *e*P P 00 19 00.0 +0.7
SUW Suwalki 21.30 324 *e*P P 00 18 59.5 +0.1
SUW Suwalki 21.30 324 P 00 18 59.1 -0.3
SUW Suwalki 21.30 324 *e*P P 00 18 59.9 +0.5
SUW Suwalki 21.30 324 P P 00 18 59.1 -0.3
DOK Doka 21.48 154 P P 00 19 01.5 -0.1
SNR=5.5
TIP Timpagrande 21.59 281 P P 00 19 01.6 -1.2
TIP Timpagrande 21.59 281 ⇑P P 00 19 02.2 -0.6
TIP Timpagrande 21.59 281 P P 00 19 02.0 -0.8
comp=Z,27nm,1.2s
DQM DQM 21.66 145 P P 00 19 03.4 0.0
JAVC Velka Javorina 21.90 307 *e*P P 00 19 07.6 +1.6
PABE Paberze 21.92 328 P 00 19 04.8 -1.2
PABE Paberze 21.92 328 *e*P P 00 19 05.4 -0.6
SMOL Smolenice 21.95 306 *e*P P 00 19 06.7 +0.2
SMOL pmax pmax
comp=Z,25nm,0.8s
MAUC Maruska 21.97 308 *e*P P 00 19 07.9 +1.2
ARSB Arslanbob 22.00 74 P P 00 19 08.2 +0.9
ARSB IAmb IAmb 00 19 16.5
comp=Z,49nm,0.9s
ARSB Arslanbob 22.00 74 P P 00 19 08.2 +0.9
ARSB pmax pmax
comp=Z,49nm,0.9s
MODS Modra-Piesok 22.01 306 *e*P P 00 19 09.8 +2.7
MODS pmax pmax
comp=Z,51nm,1.3s
MODS Modra-Piesok 22.01 306 *e*P P 00 19 09.8 +2.7
WHFO Wadi Hawf 22.02 156 P P 00 19 07.1 -0.3
SNR=7.9
ACER Acerenza 22.07 285 P P 00 19 06.5 -1.4
ACER IAmb IAmb 00 19 18.9
comp=Z,44nm,0.9s
STEB Steborice 22.20 310 *e*P P 00 19 10.6 +1.5
MORC Moravsky Berou 22.29 309 P P 00 19 08.7 -1.4
MORC Moravsky Berou 22.29 309 ⇑P P 00 19 11.6 +1.5
MORC Moravsky Berou 22.29 309 *e*P P 00 19 10.9 +0.8
MORC Moravsky Berou 22.29 309 ⇑P P 00 19 11.6 +1.5
ABTO Aybut 22.40 157 P P 00 19 10.9 -0.6
SNR=7.0
RONA Rosalia, Austr 22.46 303 P P 00 19 12.6 +0.6
comp=Z,41nm,1.4s,SNR=10
RBK Rabkut 22.55 155 P P 00 19 12.8 -0.3
SNR=6.3
SHAO Shalim 22.57 151 P P 00 19 13.1 -0.2
SHAO Shalim 22.57 151 P P 00 19 12.7 -0.6
EKS2 Erkin-Say 22.58 70 P P 00 19 15.7 +2.3
SNR=12
DMTO DMTO 22.60 153 P P 00 19 13.4 -0.2
KLMR Klimovskoe 22.63 354 *e*P P 00 19 19.6 +6.0
KLMR pmax pmax
comp=Z,79nm,1.5s
KLMR MLR MLR
comp=Z,208nm,10.0s
VRAC Vranov 22.72 308 ⇓P P 00 19 16.0 +1.4
VRAC Vranov 22.72 308 *e*P P 00 19 15.1 +0.4
VRAC Vranov 22.72 308 ⇓P P 00 19 16.0 +1.4
KRUC Moravsky 22.77 307 *e*P P 00 19 15.8 +0.6
CONA Conrad Observa 22.80 304 *e*P P 00 19 15.9 +0.2
comp=Z,26nm,1.5s,SNR=6.0
KRLC Kraliky 22.85 310 *e*P P 00 19 17.1 +1.0
KRLC Kraliky 22.85 310 *e*P P 00 19 17.1 +1.0
ARSA Arzberg 22.88 302 P P 00 19 15.0 -1.3
ARSA Arzberg 22.88 302 *e*P P 00 19 16.5 +0.1
comp=Z,28nm,1.7s
BTLS Baital 22.92 64 *e*P P 00 19 17.6 +0.7
BORK Borovoye 23.01 42 *ce*P P 00 19 18.5 +0.9
BORK pmax pmax
comp=Z,38nm,1.5s
BVA0 Borovoye Array 23.04 42 P P 00 19 18.4 +0.5
BVAR Borovoye Array 23.04 42 P P 00 19 19.1 +1.1
comp=Z,7.4nm,0.7s,baz=252,slow=10,SNR=21
BVAR LR LR 00 29 49.4
comp=Z,221nm,18.7s,baz=236,slow=41
comp=Z,7.4nm,0.7s
VSU Vasula 23.08 336 *e*P P 00 19 16.5 -1.8
VSU Vasula 23.08 336 *ce*P P 00 19 17.1 -1.2
VSU pmax pmax
comp=Z,39nm,0.8s
SOKA Soboth 23.09 300 *e*P P 00 19 18.4 -0.3
comp=Z,21nm,1.5s
AAK Ala-Archa 23.11 70 LR LR 00 30 16.5
comp=Z,268nm,19.5s,baz=274,slow=42
AAK Ala-Archa 23.11 70 P 00 19 20.1 +1.1
AAK IAmb IAmb 00 19 28.4
comp=Z,41nm,1.1s
AAK Ala-Archa 23.11 70 P P 00 19 20.7 +1.7
AAK Ala-Archa 23.11 70 P P 00 19 20.4 +1.4
SNR=18
AAK Ala-Archa 23.11 70 *i* P P 00 19 21.2 +2.2
SNR=24
AAK Ala-Archa 23.11 70 *ce*P P 00 19 20.0 +1.0
AAK pmax pmax
comp=Z,59nm,1.3s
USP Ospenovka 23.13 68 P P 00 19 21.2 +2.2
SNR=7.0
UCH Uchtor 23.13 71 P P 00 19 20.8 +1.3
SNR=8.3
FRU1 Bishkek 23.21 70 P P 00 19 22.1 +2.2
FRU1 IAmb IAmb 00 19 33.1
comp=Z,38nm,1.0s
FRU1 Bishkek 23.21 70 P P 00 19 22.1 +2.2
FRU1 pmax pmax
comp=Z,38nm,1.0s
DPC Dobruska-Polom 23.22 310 *e*P P 00 19 20.1 +0.2
DPC *e* 00 19 27.2
DPC MLR MLR
comp=Z,500nm,13.8s
DPC Dobruska-Polom 23.22 310 *e*P P 00 19 20.1 +0.2
DPC *ex* x 00 19 27.2
DPC AMS AMS 00 30 50.0
comp=Z,500nm,13.8s
DPC Dobruska-Polom 23.22 310 P P 00 19 18.8 -1.1
comp=Z,12nm,1.2s
OSTC Ostas 23.36 310 *e*P P 00 19 21.8 +0.5
OSTC MLR MLR
comp=Z,500nm,15.8s
OSTC Ostas 23.36 310 *e*P P 00 19 21.8 +0.5
OSTC AMS AMS 00 30 50.0
comp=Z,500nm,15.8s
TREC Trest 23.40 307 *e*P P 00 19 22.1 +0.4
TREC Trest 23.40 307 *e*P P 00 19 22.1 +0.4
KSP Ksiaz 23.41 311 *e*P P 00 19 21.8 +0.1
KSP Ksiaz 23.41 311 P P 00 19 20.8 -1.0
comp=Z,18nm,1.6s
KBK Karagaybulak 23.45 70 P P 00 19 24.5 +2.1
SNR=22
UPC Upice 23.46 310 *e*P P 00 19 23.0 +0.7
UPC MLR MLR
comp=Z,500nm,13.8s
UPC Upice 23.46 310 *e*P P 00 19 23.0 +0.7
UPC AMS AMS 00 31 00.0
comp=Z,500nm,13.8s
CHVC Chvalec 23.46 310 *e*P P 00 19 22.4 +0.1
CHVC MLR MLR
comp=Z,500nm,14.6s
CHVC Chvalec 23.46 310 *e*P P 00 19 22.4 +0.1
CHVC AMS AMS 00 31 00.0
comp=Z,500nm,14.6s
VAE Valguarnera 23.69 277 LR LR 00 29 20.6
comp=Z,375nm,18.4s,baz=174,slow=38
MOA Molln 23.83 303 *e*P P 00 19 26.5 +0.5
comp=Z,25nm,1.0s,SNR=13
CAMP Campotosto 23.91 290 P P 00 19 26.1 -0.8
CAMP IAmb IAmb 00 19 37.6
comp=Z,45nm,1.1s
AQU L'Aquila 23.92 289 P P 00 19 26.0 -0.9
comp=Z,38nm,1.0s
TKM2 Tokmak 2 23.92 69 P P 00 19 29.0 +1.9
SNR=23
CKRC Cesky Krumlov 24.02 305 *e*P P 00 19 28.1 +0.3
CKRC Cesky Krumlov 24.02 305 *e*P P 00 19 28.1 +0.3
MYKA Terra Mystica 24.03 300 *i* P P 00 19 27.2 -0.8
comp=Z,33nm,1.8s
ARBE Arbavere 24.09 337 *e*P P 00 19 28.0 -0.2
NRCA Norcia 24.13 290 P P 00 19 27.0 -1.8
FDMO Fiordimonte 24.15 291 P P 00 19 27.8 -1.2
FDMO IAmb IAmb 00 19 30.3
comp=Z,21nm,1.0s
BOOM Boomskoye usch 24.18 70 P P 00 19 31.0 +1.5
BOOM IAmb IAmb 00 19 36.0
comp=Z,26nm,0.8s
BOOM Boomskoye usch 24.18 70 P P 00 19 31.0 +1.5
BOOM pmax pmax
comp=Z,26nm,0.8s
PRU Pruhonice 24.19 308 *e*P P 00 19 29.5 +0.2
PRU Pruhonice 24.19 308 *e*P P 00 19 29.5 +0.2
BIOA Bad Ischl, Aus 24.22 302 *e*P P 00 19 29.2 -0.4
comp=Z,24nm,1.2s,SNR=4.3
ZVC Zvikov 24.26 307 *e*P P 00 19 30.3 +0.4
KBA Koelnbreinsper 24.30 301 *i* P P 00 19 31.0 +0.5
comp=Z,36nm,1.5s,SNR=7.6
PVCC Panska Ves 24.34 309 *e*P P 00 19 32.0 +1.4
PVCC Panska Ves 24.34 309 *e*P P 00 19 32.0 +1.4
ULHL Ulahol 24.41 71 P P 00 19 35.0 +3.4
SNR=7.0
GEC2 GERESS Array S 24.42 305 P P 00 19 31.0 -0.5
GERES GERESS Array B 24.42 305 P P 00 19 31.9 +0.4
comp=Z,5.4nm,0.7s,baz=90,slow=9.3,SNR=34
GERES LR LR 00 30 46.5
comp=Z,216nm,18.6s,baz=125,slow=41
comp=Z,5.4nm,0.7s
KSH Kashi 24.43 78 P P 00 19 31.9 +0.2
KSH pP pP 00 19 35.9 +0.7
KSH S S 00 23 53.0 +1.3
KSH pmax pmax
comp=Z,12nm,0.9s
CESX Cesi 24.52 290 P P 00 19 31.2 -1.2
MURB Monte Urbino 24.56 291 P P 00 19 32.8 0.0
KHC Kasperske Hory 24.57 306 P 00 19 31.6 -1.1
KHC Kasperske Hory 24.57 306 *ce*P P 00 19 32.3 -0.5
KHC pmax pmax
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 24.57 306 *e*P P 00 19 32.9 +0.1
KHC Kasperske Hory 24.57 306 P P 00 19 31.7 -1.1
comp=Z,18nm,1.8s
LESA Schwarzleotal 24.81 301 *e*P P 00 19 35.3 +0.3
comp=Z,20nm,1.0s,SNR=6.2
HSKC Hora Svate Kat 25.05 309 *e*P P 00 19 35.9 -1.2
KDJ Kajisay 25.11 71 P P 00 19 37.9 0.0
KDJ Kajisay 25.11 71 P P 00 19 37.9 0.0
KDJ pmax pmax
comp=Z,33nm,0.9s
TEOL Teolo 25.26 296 P P 00 19 38.2 -0.8
CTI Castel Tesino 25.33 298 P P 00 19 39.9 +0.2
CTI IAmb IAmb 00 19 40.6
comp=Z,13nm,0.7s
CTI Castel Tesino 25.33 298 P P 00 19 39.9 +0.2
CTI pmax pmax
comp=Z,13nm,0.7s
WTTA Wattenberg 25.48 301 *e*P P 00 19 41.3 +0.1
comp=Z,34nm,1.2s,SNR=4.4
CLL Collm 25.52 310 P P 00 19 40.9 -0.3
CLL Collm 25.52 310 *e*P P 00 19 41.0 -0.3
CLL *i* 00 19 48.9
CLL *e*S S 00 24 05.0 -3.7
CLL pmax pmax
comp=Z,11nm,1.0s
CLL Collm 25.52 310 P P 00 19 40.4 -0.9
comp=Z,13nm,1.3s
CLL Collm 25.52 310 *e*P P 00 19 41.0 -0.3
comp=Z,11nm,1.0s
CLL *i* x x 00 19 48.9
CLL *ex* x 00 20 04.0
CLL *i* (PP) **PnPn** 00 20 13.4 -3.3
CLL *e*PPP PPP 00 20 26.0
CLL *e*S S 00 24 05.0 -3.7
CLL *e*(SS) **SnSn** 00 24 55.0 -6.5
CLL AMS AMS 00 31 00.0
comp=N,500nm,18.9s
CLL AMS AMS 00 31 00.0
comp=E,400nm,21.2s
WATA Walderalm 25.54 301 *i* P P 00 19 41.5 -0.1
comp=E,29nm,1.5s
ARXS Arharly 25.56 66 *e*P P 00 19 41.6 -0.3
TARG Taragay, Kyrgy 25.60 72 P 00 19 45.0 +2.4
TARG IAmb IAmb 00 19 51.7
comp=Z,15nm,0.9s
TARG Taragay, Kyrgy 25.60 72 P P 00 19 45.0 +2.4
TARG pmax pmax
comp=Z,15nm,0.9s
FIA1 FINESS Array S 25.69 340 P 00 19 42.2 -0.5
FINES FINESS Array B 25.69 340 P P 00 19 42.4 -0.3
comp=Z,14nm,0.8s,baz=138,slow=12,SNR=17
comp=Z,14nm,0.8s
FINES FINESS Array B 25.69 340 P 00 19 41.6 -1.1
JOF Joensuu 25.76 346 *e*P P 00 19 43.0 -0.4
SQTA Sankt Quirin 25.77 301 *e*P P 00 19 43.6 -0.1
comp=Z,25nm,1.0s,SNR=9.0
CASP Castiglione de 25.78 290 P P 00 19 40.4 -3.4
MOTA Moosalm 25.85 301 *i* P P 00 19 44.1 -0.5
comp=Z,27nm,1.0s,SNR=14
BSD Bornholm Skovb 25.94 320 *i* P P 00 19 44.5 -0.6
BSD IAmb IAmb 00 19 46.7
comp=Z,31nm,0.9s
FETA Feichten 26.07 300 *e*P P 00 19 46.0 -0.5
comp=Z,11nm,0.7s,SNR=8.5
RETA Reutte 26.10 301 *i* P P 00 19 46.3 -0.4
comp=Z,24nm,1.7s
FUORN Ofenpass-Fuorn 26.34 299 P 00 19 48.4 -0.7
KEF Keuruu 26.61 339 *e*P P 00 19 50.4 -0.7
DAVOX Davos/Dischmat 26.62 299 LR LR 00 31 29.2
comp=Z,320nm,21.1s,baz=82,slow=39
DAVA Damuels 26.67 301 *i* P P 00 19 51.6 -0.3
comp=Z,19nm,0.9s
KURBB Kurchatov Arra 26.89 52 P P 00 19 55.5 +1.9
comp=Z,7.5nm,0.6s,baz=264,slow=9.7,SNR=30
KURBB PcP **PcP** 00 23 15.4 -0.3
comp=Z,1.1nm,0.2s,baz=275,slow=2.6,SNR=4.1
KURBB LR LR 00 32 42.7
comp=Z,254nm,19.1s,baz=69,slow=41
comp=Z,7.5nm,0.6s
LUNU Lund 26.92 320 *i* P P 00 19 54.6 +0.7
TUE Stuetta 26.96 299 P 00 19 53.4 -1.2
KURK Kurchatov 26.96 52 P 00 19 55.1 +0.7
KURK IAmb IAmb 00 20 01.5
comp=Z,25nm,1.0s
KURK Kurchatov 26.96 52 *ce*P P 00 19 56.1 +1.8
KURK pmax pmax
comp=Z,32nm,1.1s
DEL Delary 27.10 322 *i* P P 00 19 55.0 -0.5
STU Stuttgart 27.33 304 P P 00 19 57.0 -0.7
STU Stuttgart 27.33 304 P P 00 19 57.0 -0.7
STU pmax pmax
comp=Z,12nm,1.0s
BJUU Bjuv 27.33 320 *i* P P 00 19 57.9 +0.3
FABU Falkenberg 27.91 322 *i* P P 00 20 02.7 -0.1
KEST Kesra 28.07 275 P P 00 20 05.3 +0.8
comp=Z,19nm,0.9s,baz=354,slow=5.0,SNR=9.9
comp=Z,19nm,0.9s
KEST Kesra 28.07 275 P P 00 20 05.1 +0.6
KEST IAmb IAmb 00 20 07.0
comp=Z,25nm,1.0s
KEST Kesra 28.07 275 P P 00 20 05.2 +0.8
BORU Boraas 28.19 323 *i* P P 00 20 05.2 0.0
SENIN Lac Senin/Sane 28.36 298 P P 00 20 06.6 -0.7
ONAU Onsala 28.48 322 *i* P P 00 20 06.5 -1.3
MAKZ Makanchi 28.59 61 P 00 20 10.9 +1.9
MAKZ Makanchi 28.59 61 P P 00 20 10.9 +1.9
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
MK31 Makanchi Array 28.80 61 P P 00 20 12.3 +1.5
MK31 Makanchi Array 28.80 61 *ce*P P 00 20 12.9 +2.0
MKAR Makanchi Array 28.80 61 P P 00 20 12.5 +1.6
comp=Z,4.1nm,0.6s,baz=258,slow=10,SNR=18
MKAR LR LR 00 33 07.1
comp=Z,252nm,20.5s,baz=246,slow=39
comp=Z,4.1nm,0.6s
MKAR Makanchi Array 28.80 61 P 00 20 12.1 +1.2
HFS Hagfors 29.10 328 P P 00 20 13.6 +0.3
comp=Z,9.8nm,0.8s,baz=134,slow=8.5,SNR=9.4
HFS LR LR 00 33 13.8
comp=Z,463nm,18.3s,baz=122,slow=39
comp=Z,9.8nm,0.8s
WLF Walferdange 29.43 305 *d*P P 00 20 16.5 +0.1
comp=Z,8.3nm,1.1s
MEM Membach 29.66 307 *d*P P 00 20 19.9 +1.5
APA Apatity 29.81 351 ⇓*e*P P 00 20 17.4 -2.1
APA *e* 00 21 11.9
APA MLR MLR
comp=Z,752nm,4.5s
SSB Saint Sauveur 30.28 296 P P 00 20 23.4 -0.6
SSB Saint Sauveur 30.28 296 P P 00 20 23.4 -0.6
SSB pmax pmax
comp=Z,8.0nm,0.9s
NB2 NORSAR Subarra 30.62 328 P P 00 20 25.5 -1.3
comp=Z,14nm,1.4s,baz=125,slow=9.3
NOA NORSAR Array B 30.62 328 P P 00 20 26.7 -0.1
comp=Z,1.3nm,0.7s,baz=140,slow=19,SNR=4.9
NOA LR LR 00 34 11.0
comp=Z,324nm,18.8s,baz=125,slow=39
comp=Z,1.3nm,0.7s
ZAA0 Zalesovo Array 31.41 47 P 00 20 34.5 +0.6
ZALV Zalesovo Beam 31.41 47 P P 00 20 35.1 +1.3
comp=Z,1.5nm,0.4s,baz=265,slow=10.0,SNR=13
ZALV LR LR 00 34 30.6
comp=Z,285nm,19.4s,baz=254,slow=39
comp=Z,1.5nm,0.4s
ZALV Zalesovo Beam 31.41 47 P 00 20 34.3 +0.5
WMQ Urumqi 32.69 67 *e*P P 00 20 47.4 +2.1
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ LR LR
comp=Z,260nm,20.1s
EKA Eskdalemuir Ar 35.85 314 P P 00 21 12.2 -0.2
comp=Z,14nm,0.8s,baz=102,slow=8.5,SNR=28
comp=Z,14nm,0.8s
EVN Everest 36.65 94 P P 00 21 22.4 +2.1
EVN IAmb IAmb 00 21 30.1
comp=Z,15nm,0.8s
TAM Tamanrasset 36.69 256 P P 00 21 21.2 +1.0
TAM IAmb IAmb 00 21 21.7
comp=Z,19nm,0.8s
TAM Tamanrasset 36.69 256 P P 00 21 21.2 +1.0
TAM pmax pmax
comp=Z,19nm,0.8s
ESBB Sonseca Array 37.28 288 P P 00 21 23.8 -1.1
ESBB IAmb IAmb 00 21 28.9
comp=Z,12nm,0.9s
ESDC Sonseca Array 37.28 287 P P 00 21 23.5 -1.4
comp=Z,13nm,1.0s,baz=66,slow=8.4,SNR=40
comp=Z,13nm,1.0s
ESDC Sonseca Array 37.28 287 P P 00 21 24.1 -0.8
DSB Dublin 37.55 310 P P 00 21 25.0 -1.9
DSB IAmb IAmb 00 21 38.8
comp=Z,28nm,1.1s
PAB San Pablo 37.60 287 P P 00 21 26.4 -1.2
PAB San Pablo 37.60 287 P P 00 21 26.4 -1.2
PAB pmax pmax
comp=Z,13nm,1.1s
PBRG Braganca 38.84 292 *e*P P 00 21 37.1 -1.0
MVO Moncorvo 39.20 291 *e*P P 00 21 40.2 -0.8
LSA Lhasa 39.27 88 P P 00 21 36.8 -5.4
LSA pmax pmax
comp=Z,5.0nm,0.4s
PVRL Vila Real 39.68 291 *e*P P 00 21 44.5 -0.5
POLO Lamas de Olo 39.71 291 *e*P P 00 21 44.6 -0.8
MTE Manteigas 39.76 290 P P 00 21 44.5 -1.3
MTE IAmb IAmb 00 21 46.1
comp=Z,22nm,0.9s
MTE Manteigas 39.76 290 *e*P P 00 21 45.4 -0.3
PCAB Cabril 39.80 292 *e*P P 00 21 45.6 -0.4
PCBR Castelo Branco 39.86 289 *e*P P 00 21 44.6 -1.9
PGAV Gavieira, Arco 39.92 292 *e*P P 00 21 46.7 -0.4
PVIS Viseu 39.94 290 *e*P P 00 21 46.9 -0.3
PBAR Barrancos 39.99 286 *e*P P 00 21 46.4 -1.2
MD01 Midelt array s 40.02 277 P P 00 21 47.0 -1.1
MD01 pP 00 21 48.1 -3.6
MD31 MD31 40.02 277 P P 00 21 46.4 -1.6
PESTR Estremoz 40.21 287 P P 00 21 48.5 -0.9
PESTR IAmb IAmb 00 21 49.2
comp=Z,17nm,0.8s
PESTR Estremoz 40.21 287 *e*P P 00 21 48.6 -0.8
PSARD Sardoal 40.43 289 *e*P P 00 21 50.6 -0.6
PMTG Montargil 40.62 288 *e*P P 00 21 52.2 -0.6
PBEJ Beja 40.66 286 *e*P P 00 21 52.7 -0.4
PVAQ Vaqueiros 40.73 285 P P 00 21 52.6 -1.2
PVAQ IAmb IAmb 00 21 53.7
comp=Z,18nm,0.8s
PVAQ Vaqueiros 40.73 285 *e*P P 00 21 53.1 -0.6
PVAQ *i* IAmb IAmb 00 21 53.6
comp=Z,40nm,1.9s
MBAR Mbarara 40.89 201 LR LR 00 38 15.3
comp=Z,154nm,18.4s,baz=30,slow=35
PCVE Castro Verde 40.91 286 *e*P P 00 21 54.5 -0.7
PSBE So Bento 40.92 289 *e*P P 00 21 55.1 -0.2
MORF Marmelete 41.47 286 *e*P P 00 21 57.2 -2.7
MORF *i* IAmb IAmb 00 21 58.6
comp=Z,65nm,1.6s
SPITS Spitsbergen Ar 41.50 352 P P 00 22 01.0 +1.4
comp=Z,1.7nm,0.5s,baz=128,slow=12,SNR=4.6
comp=Z,1.7nm,0.5s
GTA Gaotai 42.46 71 *e*P P 00 22 12.0 +3.9
GTA pmax pmax
comp=Z,7.0nm,1.2s
ZAK Zakamensk 42.58 54 *e*P P 00 22 09.8 +0.9
ZAK pmax pmax
comp=Z,13nm,1.9s
SONM Songino Array 45.02 57 P P 00 22 28.4 -0.1
comp=Z,1.2nm,0.8s,baz=281,slow=8.9,SNR=7.5
SONM PcP **PcP** 00 24 09.3 -0.1
comp=Z,1.0nm,0.9s,baz=276,slow=2.6,SNR=2.8
SONM LR LR 00 43 01.5
comp=Z,230nm,18.6s,baz=304,slow=38
comp=Z,1.2nm,0.8s
PALK Pallekele 45.07 124 LR LR 00 42 33.4
comp=Z,108nm,18.4s,baz=322,slow=38
ULN Ulaanbaatar 45.45 57 P P 00 22 33.2 +1.3
ULN Ulaanbaatar 45.45 57 *ce*P P 00 22 34.1 +2.1
ULN pmax pmax
comp=Z,35nm,1.7s
TORD Torodi Ar. Bea 45.48 248 P P 00 22 30.9 -1.5
comp=Z,1.4nm,0.3s,baz=35,slow=6.2,SNR=3.8
comp=Z,1.4nm,0.3s
SCO Scoresbysund 46.46 335 *i* P P 00 22 41.0 +1.6
DBG Daneborg 46.58 340 *i* P P 00 22 41.0 +0.7
DAG Danmarks Havn 46.81 344 *i* P P 00 22 41.4 -0.6
BOD Bodaibo 47.91 42 *e*P P 00 22 50.8 -0.1
BOD pmax pmax
comp=Z,29nm,1.6s
NOR Nord 48.06 350 *i* P P 00 22 52.0 +0.2
NOR IAmb IAmb 00 22 53.1
comp=Z,6.4nm,0.7s
CD2 Chengdu 48.59 80 P P 00 22 56.1 -0.5
PZH PanZhiHua 49.04 86 P P 00 23 01.4 +1.2
PZH PKP 00 30 01.8
PZH pmax pmax
comp=Z,10.0nm,0.5s
BTO Baotou 49.52 66 *e*P P 00 23 05.0 +1.3
BTO pP **sP** 00 23 09.5 +0.7
BTO sP **pP** 00 23 12.0 +4.7
BTO pmax pmax
comp=Z,29nm,1.9s
BTO pmax pmax
comp=Z,570nm,4.8s
KMI Kunming 50.50 87 P P 00 23 12.8 +1.3
KMI pmax pmax
comp=Z,15nm,1.2s
HHC Hu-ho-hao-te 50.53 65 *e*P P 00 23 11.5 +0.1
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,190nm,4.6s
CHTO Chiang Mai 50.88 97 P P 00 23 14.2 +0.1
CHTO Chiang Mai 50.88 97 P P 00 23 14.2 +0.1
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 51.08 97 P P 00 23 16.4 +0.8
comp=Z,7.3nm,0.9s,baz=298,slow=8.3,SNR=36
comp=Z,7.3nm,0.9s
SUMG Summit 51.70 338 P P 00 23 20.1 0.0
SUMG Summit 51.70 338 P P 00 23 20.1 0.0
SUMG Summit 51.70 338 *i* P P 00 23 20.4 +0.3
SUMG IAmb IAmb 00 23 21.5
comp=Z,19nm,0.9s
TIXI Tiksi 52.27 23 P P 00 23 22.9 -0.9
TIXI Tiksi 52.27 23 *ce*P P 00 23 24.9 +1.1
TIXI pmax pmax
comp=Z,22nm,1.7s
HILR Hailar Array B 53.12 52 P P 00 23 32.2 +1.8
comp=Z,1.7nm,0.6s,baz=285,slow=5.8,SNR=5.8

NEEM North Greenlan 54.00 344 *i* P P 00 23 36.8 0.0
DBIC Dimbokro 54.59 248 P P 00 23 40.1 -1.4
comp=Z,7.0nm,0.8s,baz=78,slow=8.6,SNR=6.5
comp=Z,7.0nm,0.8s
DBIC Dimbokro 54.59 248 P P 00 23 40.2 -1.4
DBIC IAmb IAmb 00 23 40.9
comp=Z,9.4nm,0.9s
DBIC Dimbokro 54.59 248 P P 00 23 40.2 -1.4
DBIC pmax pmax
comp=Z,9.0nm,1.0s
UPNV Upernavik 56.76 340 *i* P P 00 23 53.9 -2.4
UPNV IAmb IAmb 00 23 54.6
comp=Z,60nm,1.0s
OPO Ambohidratompo 56.79 177 LR LR 00 50 28.9
comp=Z,87nm,18.3s,baz=176,slow=38
SFJD Kangerlussuaq 57.17 332 LR LR 00 50 14.6
comp=Z,165nm,18.6s,baz=112,slow=38
SFJD Kangerlussuaq 57.17 332 *i* P P 00 23 57.6 -1.7
ABPO Ambohimpanom 57.23 177 P P 00 24 00.3 -0.2
ABPO IAmb IAmb 00 24 02.3
comp=Z,9.0nm,0.9s
ABPO Ambohimpanom 57.23 177 P P 00 24 00.3 -0.2
ABPO pmax pmax
comp=Z,9.0nm,1.0s
GDH Godhavn 57.34 335 *i* P P 00 23 59.9 -0.6
GDH IAmb IAmb 00 24 01.1
comp=Z,109nm,1.5s
HEH HeiHe 57.51 49 *e* P P 00 24 06.1 +4.0
HEH pmax pmax
comp=Z,13nm,1.0s
TULEG Thule 58.03 345 P P 00 24 04.5 -0.8
TULEG IAmb IAmb 00 24 12.4
comp=Z,10nm,0.9s
IVI Ivigtut 58.38 325 P P 00 24 07.8 -0.1
NJ2 Nanjing 59.54 72 *e* P P 00 24 16.3 -0.2
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
PSI Prapat 60.91 112 LR LR 00 52 23.2
comp=Z,59nm,20.5s,baz=309,slow=38
IPM Ipoh 61.34 109 P P 00 24 26.8 -2.2
POIN Pond Inlet 62.29 343 P P 00 24 33.9 -0.5
KHWEE KHWEE 62.70 200 P P 00 24 37.1 -0.8
USRK Ussuriysk Ar. 62.93 54 P P 00 24 40.7 +1.4
comp=Z,1.0nm,0.3s,baz=45,slow=2.6,SNR=4.5
comp=Z,1.0nm,0.3s
KSRS Korea Array 63.47 62 P P 00 24 43.8 +0.8
comp=Z,4.2nm,0.9s,baz=285,slow=6.2,SNR=6.0
comp=Z,4.2nm,0.9s
SEY Seymchan 63.86 29 *ce* P P 00 24 47.3 +2.2
SEY pmax pmax
comp=Z,32nm,1.7s
BILL Bilibino 65.26 21 P P 00 24 53.2 -1.0
BILL IAmb IAmb 00 24 55.6
comp=Z,7.6nm,1.1s
BILL Bilibino 65.26 21 *i* P P 00 24 55.5 +1.3
BILL pmax pmax
comp=Z,5.0nm,1.0s
ILON Igloolik, Nuna 65.51 342 P P 00 24 55.3 -0.5
BOSA Boshof 69.11 198 P P 00 25 19.7 +0.5
comp=Z,2.4nm,0.5s,baz=42,slow=6.3,SNR=9.7
comp=Z,2.4nm,0.5s
A36M Sachs Harbour 69.61 357 P 00 25 21.4 -0.2
A36M Sachs Harbour 69.61 357 P P 00 25 22.0 +0.4
baz=8.6,SNR=15
A22K Sinclair Lake 69.94 7 P P 00 25 24.3 +0.6
baz=344
A19K Wainwright 70.05 9 P P 00 25 25.2 +0.8
baz=339
SCHQ Schefferville 70.12 325 P P 00 25 23.6 -1.5
comp=Z,7.2nm,0.9s,baz=20,slow=4.3,SNR=6.6
comp=Z,7.2nm,0.9s
B20K Meade River 70.69 8 P P 00 25 28.8 +0.6
baz=342
B22K Teshekpuk Lake 70.72 6 P P 00 25 29.2 +0.7
baz=345
B18K Kokolik River 70.75 10 P P 00 25 29.6 +0.9
baz=338
MJAR Matsushiro Arr 70.96 58 P P 00 25 30.3 -0.3
comp=Z,4.4nm,1.0s,baz=301,slow=5.5,SNR=4.6
comp=Z,4.4nm,1.0s
C16K Lisburne Hills 71.25 11 P P 00 25 31.9 +0.2
baz=336
C19K Lookout Ridge 71.27 9 P P 00 25 32.3 +0.4
baz=340
B21K Ikpikpuk River 71.31 7 P P 00 25 32.8 +0.8
baz=344
C17K DeLong Mountai 71.39 10 P P 00 25 33.0 +0.4
baz=338
C23K Itkillik River 71.44 5 P P 00 25 34.3 +1.5
C23K Itkillik River 71.44 5 P P 00 25 33.6 +0.8
baz=348
C18K Utukok River 71.50 10 P P 00 25 33.5 +0.2
baz=339
C24K Franklin Bluff 71.69 5 P P 00 25 35.0 +0.7
baz=349
C26K Camden Bay 71.71 3 P P 00 25 34.8 +0.3
baz=352
C21K Knifeblade Rid 71.75 7 P P 00 25 35.6 +0.9
baz=344
RDOG Red Dog Mine 71.82 10 P P 00 25 35.5 +0.3
baz=338
D20K Etivluk River 71.98 8 P P 00 25 36.6 +0.4
baz=343
D19K Kuna River 72.03 9 P P 00 25 37.2 +0.7
baz=342
C27K Jago River 72.05 3 P P 00 25 37.3 +0.8
baz=353
PETK Petropavlovsk- 72.08 36 LR LR 01 04 46.4
comp=Z,74nm,18.7s,baz=297,slow=42
D17K Noatak River 72.12 11 P P 00 25 37.3 +0.3
baz=338
C36M Paulatuk 72.17 356 P 00 25 37.0 -0.2
C36M Paulatuk 72.17 356 P P 00 25 36.9 -0.3
baz=9.5,SNR=7.9
D22K Ayikyak River 72.21 6 P P 00 25 38.5 +1.0
D22K IAmb IAmb 00 25 42.0
comp=Z,8.0nm,0.9s
D22K Ayikyak River 72.21 6 P P 00 25 38.2 +0.6
baz=346
D25K Kavik River 72.23 4 P P 00 25 38.5 +0.9
D25K Kavik River 72.23 4 P P 00 25 38.2 +0.6
baz=351,SNR=17
D24K Happy Valley 72.24 5 P P 00 25 37.7 0.0
baz=349
D23K Nanushuk River 72.29 6 P P 00 25 38.5 +0.5
baz=348
E20K Nigu River 72.47 8 P P 00 25 39.4 +0.2
baz=343,SNR=5.6
D28M Stokes Point 72.50 1 P P 00 25 39.7 +0.5
baz=357
E21K Killik River 72.52 7 P P 00 25 39.5 +0.1
baz=345
D27M Malcolm River 72.53 2 P P 00 25 40.0 +0.5
baz=356
TOLK Toolik Lake Re 72.70 5 P P 00 25 41.4 +1.0
TOLK Toolik Lake Re 72.70 5 P P 00 25 41.2 +0.7
baz=349,SNR=6.4
E18K Tukpahlearik C 72.73 10 P 00 25 41.3 +0.7
E18K Tukpahlearik C 72.73 10 P P 00 25 40.8 +0.2
baz=340
E17K Hotham Inlet 72.88 10 P P 00 25 41.8 +0.3
baz=339
BLKN Baker Lake 72.92 343 P P 00 25 42.0 +0.2
BLKN IAmb IAmb 00 25 42.8
comp=Z,11nm,0.9s
E22K Anaktuvuk Pass 73.02 6 P P 00 25 42.6 +0.2
baz=347
E19K Redstone River 73.12 9 P P 00 25 43.1 +0.2
baz=342
E28M Babbage River 73.21 2 P 00 25 43.9 +0.5
E28M IAmb IAmb 00 25 45.0
comp=Z,9.2nm,0.8s
E28M Babbage River 73.21 2 P P 00 25 43.7 +0.3
baz=357
E23K Chandalar 73.27 5 P P 00 25 44.2 +0.3
baz=349
TNA Tin City 73.28 13 P P 00 25 43.0 -0.9
E24K Your Creek 73.33 5 P P 00 25 44.6 +0.3
baz=350
E29M Blow River 73.45 1 P P 00 25 45.3 +0.4
baz=358
E25K Arctic Village 73.47 4 P P 00 25 45.8 +0.8
E25K IAmb IAmb 00 25 46.5
comp=Z,11nm,0.9s
E25K Arctic Village 73.47 4 P P 00 25 45.2 +0.2
baz=352,SNR=9.0

INK Inuvik 73.54 359 P P 00 25 44.8 -0.5
INK Inuvik 73.54 359 P P 00 25 44.8 -0.5
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 73.54 359 P P 00 25 44.8 -0.5
baz=1.7
F17K Baldwin Pennin 73.56 10 P P 00 25 45.7 +0.3
baz=339
E27K Coleen River 73.57 2 P 00 25 46.4 +0.8
E27K Coleen River 73.57 2 P P 00 25 46.2 +0.5
baz=355,SNR=13
F22K John River 73.59 7 P P 00 25 46.5 +0.7
baz=346
F18K Selawik 73.63 10 P P 00 25 46.3 +0.4
baz=341
F14K Arctic Creek 73.65 13 P P 00 25 46.4 +0.3
baz=335
F19K Shaleruckik Mo 73.65 9 P P 00 25 45.9 -0.1
baz=342
F20K Avaraart Lake 73.68 8 P P 00 25 46.7 +0.5
baz=344
F15K North Star Dit 73.72 12 P P 00 25 46.9 +0.4
baz=337
F21K Alatna River 73.75 7 P P 00 25 47.4 +0.7
baz=346
SUR Sutherland 73.85 201 P P 00 25 48.7 +0.9
SUR IAmb IAmb 00 26 06.1
comp=Z,16nm,1.1s
F24K Squaw Lake 73.92 5 P P 00 25 48.6 +0.9
baz=350
F26K Sheenjek River 73.96 3 P P 00 25 48.7 +0.8
F26K Sheenjek River 73.96 3 P P 00 25 48.6 +0.7
baz=353,SNR=5.1
F25K Christian Rive 73.99 4 P P 00 25 49.1 +1.0
F25K Christian Rive 73.99 4 P P 00 25 49.0 +0.9
baz=352,SNR=6.1
COLD Coldfoot 74.04 6 P 00 25 49.2 +0.9
COLD IAmb IAmb 00 25 50.3
comp=Z,7.3nm,0.8s
COLD Coldfoot 74.04 6 P P 00 25 48.9 +0.5
baz=348,SNR=7.1
F28M Old Crow 74.19 2 P 00 25 49.9 +0.6
F28M IAmb IAmb 00 25 50.5
comp=Z,6.8nm,0.8s
F28M Old Crow 74.19 2 P P 00 25 49.6 +0.3
baz=356,SNR=8.8
BMAR Burnt Mountain 74.20 4 P 00 25 50.2 +0.8
F30M Barrier River 74.25 0 P P 00 25 49.8 +0.2
baz=360
G16K Koyuk River 74.38 11 P P 00 25 50.8 +0.5
baz=338
G19K Purcell Mounta 74.39 9 P P 00 25 50.6 +0.2
baz=343,SNR=7.7
F31M Tsiigehtchic 74.41 359 P P 00 25 50.6 +0.1
F31M Tsiigehtchic 74.41 359 P P 00 25 50.3 -0.2
baz=1.5,SNR=6.3
G18K Tagagawik 74.43 10 P P 00 25 50.8 +0.2
baz=341
G21K Alakaket 74.43 7 P P 00 25 51.1 +0.4
baz=346
G17K Kiwalik Mounta 74.53 11 P P 00 25 51.4 +0.2
baz=340
G23K Bananza Creek 74.56 6 P 00 25 52.1 +0.7
G23K Bananza Creek 74.56 6 P P 00 25 52.2 +0.8
baz=348
G26K Porcupine Rive 74.72 3 P P 00 25 53.2 +1.0
G26K IAmb IAmb 00 25 54.3
comp=Z,11nm,0.8s
G26K Porcupine Rive 74.72 3 P P 00 25 53.3 +1.0
baz=353,SNR=9.6
G24K Hadweenzic Riv 74.76 5 P P 00 25 53.2 +0.7
G24K Hadweenzic Riv 74.76 5 P P 00 25 53.2 +0.7
baz=350
G30M tAoh Zraii Nji 74.88 0 P P 00 25 53.2 -0.1
baz=360
IMAR Indian Mountai 74.93 8 P P 00 25 53.5 0.0
G29M Pine Creek 74.93 1 P P 00 25 53.8 +0.2
G29M Pine Creek 74.93 1 P P 00 25 53.7 +0.1
baz=358,SNR=8.2
G31M Satah River 74.94 359 P P 00 25 53.3 -0.2
G31M IAmb IAmb 00 25 54.1
comp=Z,11nm,0.8s
G31M Satah River 74.94 359 P P 00 25 53.2 -0.2
baz=1.1,SNR=7.7
G27K Doyon Strip 74.95 3 P P 00 25 54.2 +0.5
G27K IAmb IAmb 00 25 55.7
comp=Z,10nm,1.1s
G27K Doyon Strip 74.95 3 P P 00 25 54.5 +0.9
baz=355,SNR=9.8
H19K Roundabout Mou 75.06 9 P P 00 25 54.6 +0.3
H19K Roundabout Mou 75.06 9 P P 00 25 54.9 +0.7
baz=343
H16K Elim 75.10 12 P P 00 25 55.0 +0.5
baz=339
H17K Granite Mounta 75.17 10 P P 00 25 55.0 +0.1
baz=340
H18K Honhosa River 75.18 10 P P 00 25 55.2 +0.2
baz=342
H22K Ishtalitna Cre 75.25 7 P P 00 25 56.7 +1.3
baz=347
H20K Anotleneega Mo 75.28 8 P P 00 25 56.1 +0.5
baz=344,SNR=6.5
H25L Birch Creek 75.29 4 P P 00 25 56.4 +0.9
baz=352
H21K Melozitna Rive 75.34 7 P P 00 25 56.7 +0.8
H21K IAmb IAmb 00 25 57.8
comp=Z,10nm,1.0s
H21K Melozitna Rive 75.34 7 P P 00 25 56.9 +1.0
baz=346,SNR=6.4
H23K Yukon River 75.47 6 P P 00 25 57.7 +1.0
baz=349
EPYK Eagle Plains 75.49 1 P P 00 25 56.5 -0.3
EPYK Eagle Plains 75.49 1 P P 00 25 56.5 -0.3
baz=359,SNR=7.0
H27K Steamboat Moun 75.53 3 P P 00 25 58.1 +1.0
H27K IAmb IAmb 00 25 59.0
comp=Z,7.5nm,0.9s
H27K Steamboat Moun 75.53 3 P P 00 25 57.3 +0.3
baz=355,SNR=5.4
H24K Noodor Dome 75.59 5 P P 00 25 57.7 +0.3
baz=350
H29M Whitestone 75.62 1 P P 00 25 57.6 +0.1
H29M IAmb IAmb 00 25 58.7
comp=Z,8.9nm,0.7s
H29M Whitestone 75.62 1 P P 00 25 57.8 +0.2
baz=358,SNR=9.0
GCSA Galena City Sc 75.76 9 P P 00 25 58.5 +0.3
baz=343
I20K Naaghedeneel 76.00 8 P P 00 26 00.4 +0.8
I20K Naaghedeneel 76.00 8 P P 00 26 00.2 +0.6
baz=345
I17K Unalakleet 76.05 11 P P 00 26 00.1 +0.2
baz=340
PRP Porcupine Dome 76.06 4 P P 00 26 00.4 +0.2
baz=352
H31M Peel River 76.06 360 P 00 25 59.9 -0.1
H31M IAmb IAmb 00 26 00.7
comp=Z,8.4nm,1.0s
H31M Peel River 76.06 360 P P 00 26 00.0 0.0
baz=1.0
MLY Manley 76.15 7 P 00 26 01.2 +0.6
MLY IAmb IAmb 00 26 02.3
comp=Z,8.4nm,0.8s
MLY Manley 76.15 7 P P 00 26 01.2 +0.6
baz=348,SNR=7.9
I23K Minto, Yukon-K 76.15 6 P P 00 26 01.1 +0.6
I23K Minto, Yukon-K 76.15 6 P P 00 26 01.2 +0.6
baz=349
I27K Kandik River 76.16 3 IAmb IAmb 00 26 02.0
comp=Z,5.5nm,0.8s
I27K Kandik River 76.16 3 P P 00 26 01.0 +0.4
baz=355
POKR Poker Plat Res 76.33 5 P P 00 26 02.1 +0.5
POKR IAmb IAmb 00 26 03.3
comp=Z,10nm,0.9s
POKR Poker Plat Res 76.33 5 P P 00 26 02.3 +0.7
baz=350
I28M Miner Creek 76.36 2 P P 00 26 01.9 +0.1
baz=356
I26K Coal Creek Min 76.39 3 P P 00 26 01.8 -0.1
I26K IAmb IAmb 00 26 03.2
comp=Z,9.1nm,0.8s
I26K Coal Creek Min 76.39 3 P P 00 26 02.2 +0.3
baz=354,SNR=7.0
COLA College 76.54 5 P P 00 26 02.7 0.0
COLA College 76.54 5 P P 00 26 02.7 0.0
COLA pmax pmax
comp=Z,20nm,1.0s
COLA College 76.54 5 P P 00 26 03.2 +0.4
baz=350
J16K Anvik River 76.63 11 P P 00 26 04.0 +0.7
J16K Anvik River 76.63 11 P P 00 26 03.4 +0.1
baz=340
J20K Nowinta River 76.64 8 P P 00 26 03.9 +0.6
J20K Nowinta River 76.64 8 P P 00 26 03.9 +0.6
baz=345
J19K Poorman 76.64 9 P 00 26 03.7 +0.4
J19K IAmb IAmb 00 26 05.2
comp=Z,9.9nm,1.0s
J19K Poorman 76.64 9 P P 00 26 04.0 +0.6
baz=344
J14K Nanvaranak Lak 76.64 13 P P 00 26 03.7 +0.4
baz=338
I30M Mount Dempster 76.64 0 P 00 26 03.3 -0.2
I30M Mount Dempster 76.64 0 P P 00 26 03.4 -0.1
baz=359,SNR=21
IL31 76.71 5 P P 00 26 02.9 -0.8
ILAR Eielson Array 76.71 5 P P 00 26 03.6 -0.1
comp=Z,1.8nm,0.9s,baz=331,slow=5.2,SNR=18
ILAR PP PP 00 28 53.7 -1.7
comp=Z,1.1nm,1.2s,baz=346,slow=7.4,SNR=5.8
comp=Z,1.8nm,0.9s
NEA2 Nenana 76.72 6 P P 00 26 03.7 -0.1
NEA2 IAmb IAmb 00 26 04.9
comp=Z,5.7nm,0.9s
NEA2 Nenana 76.72 6 P P 00 26 03.9 +0.1
baz=349
J17K VABM Dome 76.75 11 P P 00 26 04.0 +0.1
baz=341
CCB Clear Creek Bu 76.77 5 P 00 26 03.8 -0.2
CCB IAmb IAmb 00 26 04.9
comp=Z,7.4nm,1.0s
WRH Wood River Hil 76.92 6 P P 00 26 05.2 +0.2
J25K Salcha River, 76.97 4 P P 00 26 05.5 +0.3
J25K Salcha River, 76.97 4 P P 00 26 05.2 0.0
baz=352
J18K Innoko River 77.01 10 P P 00 26 06.0 +0.5
baz=343
BPAW Bear Paw Mtn. 77.04 7 P P 00 26 05.9 +0.3
BPAW IAmb IAmb 00 26 13.7
comp=Z,5.9nm,0.9s
BPAW Bear Paw Mtn. 77.04 7 P P 00 26 05.6 -0.1
baz=348
HDA Harding Lake 77.07 5 P P 00 26 05.3 -0.4
HDA IAmb IAmb 00 26 06.2
comp=Z,9.5nm,0.9s
HDA Harding Lake 77.07 5 P P 00 26 05.3 -0.4
baz=351,SNR=8.0
CHUM Lake Minchumin 77.12 8 P P 00 26 06.3 +0.3
baz=347,SNR=5.4
J26L Joseph Creek 77.17 4 P 00 26 06.2 -0.2
J26L IAmb IAmb 00 26 07.2
comp=Z,5.1nm,0.8s
J26L Joseph Creek 77.17 4 P P 00 26 06.3 -0.2
baz=354,SNR=6.1
J30M Hart River 77.30 0 P 00 26 07.5 +0.3
J30M IAmb IAmb 00 26 13.7
comp=Z,9.2nm,0.8s
J30M Hart River 77.30 0 P P 00 26 07.4 +0.2
baz=359,SNR=15
K15K Wolf Creek Mou 77.41 12 P P 00 26 07.8 +0.1
baz=339
K20K Telida 77.44 8 P P 00 26 07.8 -0.1
K20K Telida 77.44 8 P P 00 26 08.2 +0.4
baz=345,SNR=6.6
K17K Iditarod 77.51 11 P P 00 26 08.8 +0.5
baz=342
KTH Kantishna Hill 77.58 7 P P 00 26 09.0 +0.3
MCK McKinley 77.58 6 P P 00 26 07.8 -0.9
MCK IAmb IAmb 00 26 09.4
comp=Z,14nm,1.2s
MCK McKinley 77.58 6 P P 00 26 07.8 -0.9
MCK pmax pmax
comp=Z,14nm,1.2s
MCK McKinley 77.58 6 P P 00 26 09.2 +0.5
baz=349
SCRK Sand Creek 77.68 4 P P 00 26 10.0 +0.7
SCRK IAmb IAmb 00 26 10.9
comp=Z,11nm,1.1s
SCRK Sand Creek 77.68 4 P P 00 26 09.8 +0.5
baz=353,SNR=6.4
K27K Chicken 77.71 3 P P 00 26 10.0 +0.6
baz=355
TRF Thorofare Moun 77.74 7 P P 00 26 10.1 +0.3
TRF IAmb IAmb 00 26 13.0
comp=Z,5.3nm,0.9s
TRF Thorofare Moun 77.74 7 P P 00 26 09.9 +0.2
baz=348
K24K Donnelly Dome 77.75 5 P P 00 26 09.9 +0.3
K24K Donnelly Dome 77.75 5 P P 00 26 09.8 +0.2
baz=352,SNR=12
DAWY Dawson 77.76 2 P P 00 26 09.8 +0.1
DAWY IAmb IAmb 00 26 10.8
comp=Z,8.8nm,0.9s
DAWY Dawson 77.76 2 P P 00 26 10.2 +0.5
baz=357,SNR=8.7
RIDG Independent Ri 77.86 4 P P 00 26 10.7 +0.4
RIDG IAmb IAmb 00 26 11.5
comp=Z,10nm,0.9s
RIDG Independent Ri 77.86 4 P P 00 26 10.6 +0.3
baz=353
RND Reindeer 77.91 6 P P 00 26 09.9 -0.7
RND IAmb IAmb 00 26 10.7
comp=Z,12nm,1.0s
RND Reindeer 77.91 6 P P 00 26 09.9 -0.7
RND pmax pmax
comp=Z,12nm,1.0s
YKAW3 Yellowknife Wh 77.92 350 P P 00 26 08.8 -1.7
YKAW3 IAmb IAmb 00 26 13.1
comp=Z,7.7nm,1.0s
YKA Yellowknife Ar 77.99 350 P P 00 26 10.8 -0.1
comp=Z,2.8nm,0.9s,baz=9.6,slow=6.0,SNR=6.8
comp=Z,2.8nm,0.9s
L15K Ungalak Mounta 78.00 12 P P 00 26 11.4 +0.4
baz=340
DOT Dot Lake 78.00 4 P P 00 26 11.8 +0.7
DOT IAmb IAmb 00 26 12.4
comp=Z,8.5nm,0.8s
K29M Barlow Dome 78.02 1 P P 00 26 11.7 +0.4
baz=358
L17K Donlin 78.07 11 P P 00 26 11.6 +0.3
baz=342
PPLA Purkeypile 78.10 8 P P 00 26 11.7 0.0
PPLA IAmb IAmb 00 26 25.2
comp=Z,13nm,1.2s
PPLA Purkeypile 78.10 8 P P 00 26 11.9 +0.2
baz=347
L14K Kuka Creek 78.11 13 P P 00 26 12.1 +0.5
L14K Kuka Creek 78.11 13 P P 00 26 12.0 +0.5
baz=339
WRGLY Wrigley 78.19 354 P P 00 26 12.5 +0.5
baz=9.7
L18K Granite Mounta 78.21 10 P P 00 26 13.4 +1.3
L18K Granite Mounta 78.21 10 P P 00 26 12.6 +0.4
baz=343
MAYO Mayo, Yukon 78.28 0 P P 00 26 13.1 +0.6
baz=360
L16K Owhat River 78.29 11 P P 00 26 13.1 +0.5
baz=341
L20K Farewell, AK 78.32 9 P P 00 26 13.3 +0.5
L20K Farewell, AK 78.32 9 P P 00 26 12.9 +0.2
baz=346,SNR=5.5
M11K Mekoryuk 78.32 15 P P 00 26 13.1 +0.4
baz=336
DHY Denali Highway 78.36 5 P P 00 26 13.2 +0.1
DHY IAmb IAmb 00 26 15.6
comp=Z,6.0nm,0.9s
DHY Denali Highway 78.36 5 P P 00 26 13.1 -0.1
baz=351
L19K White Mountain 78.49 9 P 00 26 14.3 +0.5
L19K White Mountain 78.49 9 P P 00 26 14.3 +0.5
baz=345
TOLI2 Tolitoli 78.58 98 P P 00 26 14.2 -0.8
TOLI2 IAmb IAmb 00 26 15.2
comp=Z,6.2nm,0.8s
PAX Paxson 78.59 5 P P 00 26 14.7 +0.4
baz=352
L26K Log Cabin Wild 78.66 4 P P 00 26 15.0 +0.3
L26K IAmb IAmb 00 26 16.3
comp=Z,5.9nm,0.8s
L26K Log Cabin Wild 78.66 4 P P 00 26 15.6 +0.9
baz=354
DAV Davao City (W) 78.67 90 LR LR 01 05 47.9
comp=Z,50nm,18.7s,baz=332,slow=39

BCAR	Beaver Creek A	78.69	3	P	P	00 26 14.2	-0.6
L27K	Beaver Creek,	78.69	3		P	00 26 15.2	+0.3
L27K				IAmb	IAmb	00 26 16.0	
	comp=Z,5.8nm,0.8s						
L27K	Beaver Creek,	78.69	3	P	P	00 26 15.5	+0.7
	baz=355,SNR=5.8						
MENT	Mentasta	78.73	4	P	P	00 26 15.7	+0.6
MENT				IAmb	IAmb	00 26 16.6	
	comp=Z,11nm,0.8s						
L29M	L29M	78.75	1	P	P	00 26 16.0	+0.9
	baz=358						
M14K	Bethel	78.79	13	P	P	00 26 15.8	+0.5
	baz=339						
M19K	Big River Lodg	78.81	9	P	P	00 26 16.0	+0.5
	baz=345						
WAT6	Susitna Watana	78.82	6	P	P	00 26 15.6	-0.1
	baz=350,SNR=6.5						
M17K	Holitna River	78.89	11	P	P	00 26 16.2	+0.3
	baz=343						
M20K	Styx River	78.98	8	P	P	00 26 16.7	+0.2
	baz=346						
M18K	Stony River	79.03	10	P	P	00 26 16.8	+0.2
	baz=344						
M15K	Kasigluk River	79.06	12	P	P	00 26 16.8	-0.1
	baz=340						
SKT	Skwentna	79.06	8	P	P	00 26 16.5	-0.4
SKT				IAmb	IAmb	00 26 17.8	
	comp=Z,11nm,0.9s						
SKT	Skwentna	79.06	8	P	P	00 26 16.4	-0.5
	baz=347,SNR=5.4						
HARP	HAARP	79.18	5	P	P	00 26 17.7	+0.2
	baz=352						
M26K	Nabesna, AK	79.30	4	P	P	00 26 18.6	+0.4
M26K				IAmb	IAmb	00 26 20.5	
	comp=Z,7.3nm,1.0s						
M26K	Nabesna, AK	79.30	4	P	P	00 26 18.6	+0.4
	baz=354						
M30M	Minto, Yukon	79.30	1		P	00 26 17.9	-0.3
M30M	Minto, Yukon	79.30	1	P	P	00 26 18.5	+0.3
	baz=359						
BVCY	Beaver Creek	79.37	3	P	P	00 26 18.8	+0.2
	baz=356						
M27K	Edge Creek, AK	79.39	3	P	P	00 26 19.0	+0.2
M27K				IAmb	IAmb	00 26 20.7	
	comp=Z,9.8nm,1.0s						
M27K	Edge Creek, AK	79.39	3	P	P	00 26 19.3	+0.5
	baz=355,SNR=6.4						
M24K	Tolsona, Glenn	79.40	5		P	00 26 19.1	+0.3
M24K	Tolsona, Glenn	79.40	5	P	P	00 26 19.5	+0.7
	baz=352						
M29M	Somme Creek	79.41	1		P	00 26 19.6	+0.7
M29M	Somme Creek	79.41	1	P	P	00 26 19.3	+0.4
	baz=358						
M22K	Willow	79.43	7	P	P	00 26 19.0	+0.2
	baz=348						
GHO	Glory Hole Cre	79.52	6	P	P	00 26 19.7	+0.3
GHO				IAmb	IAmb	00 26 21.8	
	comp=Z,10nm,1.0s						
SML	Sawmill	79.53	6		P	00 26 19.6	+0.1
SML				IAmb	IAmb	00 26 26.5	
	comp=Z,12nm,0.8s						
SML	Sawmill	79.53	6	P	P	00 26 19.4	-0.1
	baz=350						
SCM	Sheep Creek Mo	79.59	6		P	00 26 20.1	+0.3
SCM	Sheep Creek Mo	79.59	6	P	P	00 26 20.1	+0.3
SCM				pmax	pmax		
	comp=Z,12nm,0.7s						
SCM	Sheep Creek Mo	79.59	6	P	P	00 26 20.2	+0.4
	baz=351						
M23K	Glacier View	79.60	6	P	P	00 26 20.2	+0.3
	baz=350						
N14K	Kuskokwak Cree	79.61	13	P	P	00 26 20.3	+0.5
	baz=340						
SUA	Susitna One	79.65	7	P	P	00 26 20.3	+0.1
SUA				IAmb	IAmb	00 26 21.5	
	comp=Z,12nm,0.8s						
SUA	Susitna One	79.65	7	P	P	00 26 20.3	+0.1
	baz=348						
M31M	Drury Creek, Y	79.68	359	P	P	00 26 19.8	-0.5
M31M				IAmb	IAmb	00 26 21.7	
	comp=Z,9.7nm,1.0s						
M31M	Drury Creek, Y	79.68	359	P	P	00 26 20.5	+0.3
	baz=1.0						
PMR	Palmer	79.68	7	P	P	00 26 20.1	0.0
PMR				IAmb	IAmb	00 26 22.5	
	comp=Z,8.0nm,0.8s						
PMR	Palmer	79.68	7	P	P	00 26 20.1	0.0
PMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SPU	Mount Spurr	79.79	8	P	P	00 26 22.1	+1.2
N18K	Kilae Creek	79.80	10	P	P	00 26 21.7	+0.8
	baz=344						
N19K	Bonanza Creek	79.86	9	P	P	00 26 21.6	+0.3
N19K	Bonanza Creek	79.86	9	P	P	00 26 21.9	+0.6
	baz=345,SNR=6.8						
KNK	Knik Glacier	79.91	6	P	P	00 26 21.9	+0.3
KNK				IAmb	IAmb	00 26 22.8	
	comp=Z,12nm,0.9s						
KNK	Knik Glacier	79.91	6	P	P	00 26 21.4	-0.1
	baz=350						
YUK3	Moose Creek	80.03	2	P	P	00 26 22.5	+0.1
	baz=356,SNR=6.5						
RC01	Rabbit Creek A	80.12	7	P	P	00 26 22.1	-0.5
RC01				IAmb	IAmb	00 26 31.0	
	comp=Z,11nm,0.8s						
RC01	Rabbit Creek A	80.12	7	P	P	00 26 22.7	+0.1
	baz=349						
CAPN	Captain Cook N	80.29	8	P	P	00 26 24.0	+0.5
	baz=348						
MCARA	McCarthy VSAT	80.31	4		P	00 26 23.9	+0.2
MCARA				IAmb	IAmb	00 26 27.5	
	comp=Z,11nm,1.1s						
N31M	Braeburn, Yuko	80.40	0	P	P	00 26 24.1	0.0
	baz=360						
N30M	Aishikik Lake	80.42	1	P	P	00 26 24.3	0.0
	baz=359						
PWL	Port Wells	80.47	6	P	P	00 26 24.2	-0.3
	baz=350						
O17K	Koliganek Bris	80.50	11	P	P	00 26 24.1	-0.6
	baz=343						
YUK4	Talbot Arm	80.51	2	P	P	00 26 24.5	-0.5
	baz=358,SNR=7.5						
O16K	Kokwok River B	80.52	11	P	P	00 26 25.0	+0.2
	baz=342						
YUK8	Steele Glacier	80.54	2	P	P	00 26 24.9	-0.3
	baz=357						
GLI	Glacier Island	80.55	6	P	P	00 26 24.4	-0.5
	baz=351						
BMRM	Bremner River	80.64	4	P	P	00 26 25.3	-0.2
BMRM				IAmb	IAmb	00 26 29.9	
	comp=Z,7.7nm,1.0s						
BMRM	Bremner River	80.64	4	P	P	00 26 24.7	-0.8
	baz=353						
O15K	Ungalikthiuk R	80.64	12	P	P	00 26 25.0	-0.5
	baz=341						
N32M	Quiet Lake	80.72	359	P	P	00 26 25.4	-0.4
	baz=2.0						
CTG	Chitna Glacier	80.81	3	P	P	00 26 26.1	-0.4
	baz=355						
CRQE	Cirque	80.94	4	P	P	00 26 27.0	-0.2
	baz=354						
LOGN	Logan Glacier	80.96	3	P	P	00 26 27.9	+0.6
LOGN				IAmb	IAmb	00 26 31.4	
	comp=Z,11nm,1.0s						
GRNC	Granite Creek	81.02	3	P	P	00 26 27.1	-0.7
HYT	Haines Junctio	81.05	1		P	00 26 28.1	+0.3
HYT				IAmb	IAmb	00 26 29.3	
	comp=Z,11nm,0.9s						
HYT	Haines Junctio	81.05	1	P	P	00 26 27.6	-0.1
	baz=358,SNR=6.4						
SEW	Seward	81.11	7	P	P	00 26 27.2	-0.7
	baz=349						
O30N	Mendenhall	81.12	0	P	P	00 26 28.3	+0.3
O30N				IAmb	IAmb	00 26 28.6	
	comp=Z,6.2nm,0.8s						
O30N	Mendenhall	81.12	0	P	P	00 26 27.5	-0.6
	baz=360						
P18K	Big Mountain,	81.14	10	P	P	00 26 28.9	+0.8
P18K				IAmb	IAmb	00 26 41.2	
	comp=Z,14nm,1.1s						
P17K	Kvichak River	81.15	11	P	P	00 26 27.6	-0.5
	baz=344						
RAGM	Ragged Mountai	81.21	5	P	P	00 26 29.0	+0.4
WHY	Whitehorse	81.23	360	P	P	00 26 29.6	+0.9
WHY				IAmb	IAmb	00 26 40.7	
	comp=Z,12nm,1.2s						
WHY	Whitehorse	81.23	360	P	P	00 26 28.4	-0.3
	baz=0.6						
P23K	Montague Islan	81.40	6	P	P	00 26 29.3	-0.2
	baz=351						
O29M	Mount Kennedy	81.55	2	P	P	00 26 29.7	-0.7
	baz=358						
BGLC	Bering Glacier	81.56	4	P	P	00 26 30.3	+0.1
	baz=354						
Q16K	King Salmon	81.62	11	P	P	00 26 30.4	-0.2
	baz=344						
WTLY	Watson Lake, Y	81.62	357	P	P	00 26 30.7	0.0
	baz=5.4						
P33M	Teslin, Yukon	81.65	359	P	P	00 26 30.8	-0.1
	baz=2.2						
KAIM	Kayak Island	81.69	5	P	P	00 26 31.1	+0.1
	baz=353						
Q17K	Contact Creek	82.13	11	P	P	00 26 33.4	-0.1
	baz=344						
PNL	Peninsula	82.17	2	P	P	00 26 33.6	0.0
	baz=357						
P29M	Windy Craggy	82.24	1	P	P	00 26 34.3	+0.3
	baz=358						
Q20K	Shuyak Island	82.26	9	P	P	00 26 34.3	+0.3
	baz=347						
R33M	Jennings River	82.42	358	P	P	00 26 35.4	+0.3
	baz=3.7						
PLBC	Pleasant Camp	82.43	0	P	P	00 26 35.4	+0.5
	baz=359						
R16K	Pilot Point	82.54	12	P	P	00 26 36.1	+0.7
	baz=343						
TOAD	Toad River Com	82.67	355	P	P	00 26 36.4	+0.2
	baz=8.2						
FFC	Flin Flon	82.82	341	P	P	00 26 36.8	-0.2
FFC				IAmb	IAmb	00 26 37.7	
	comp=Z,7.2nm,0.8s						
FFC	Flin Flon	82.82	341	P	P	00 26 36.8	-0.2
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
Q32M	Nakina River	82.90	358	P	P	00 26 37.7	+0.1
	baz=2.6						
R18K	Karluk	83.01	10	P	P	00 26 38.2	+0.3
	baz=345						
KDAK	Kodiak Island	83.05	9	LR	LR	01 07 29.4	
	comp=Z,50nm,21.2s,baz=337,slow=38						
KDAK	Kodiak Island	83.05	9	P	P	00 26 38.4	+0.3
	baz=347						
DLBC	Dease Lake	83.35	357	P	P	00 26 40.1	+0.3
	baz=4.4						
S12K	Black Hills	83.50	15	P	P	00 26 40.8	+0.3
	baz=339						
S34M	Telegraph Cree	83.91	358	P	P	00 26 43.2	+0.6
	baz=3.5						
TBO	Thunder Bay	84.11	331	P	P	00 26 42.9	-0.9
EPLO	Experimental L	84.80	334	P	P	00 26 47.0	-0.3
EPLO				IAmb	IAmb	00 26 47.6	
	comp=Z,6.1nm,0.8s						
ULM	Lac du Bonnet	85.02	336	P	P	00 26 47.9	-0.5
	comp=Z,5.9nm,0.9s,baz=29,slow=4.5,SNR=4.5						
ULM				LR	LR	01 04 06.3	
	comp=Z,89nm,19.1s,baz=23,slow=35						
	comp=Z,5.9nm,0.9s						
G40A	Rib Lake	87.21	330	P	P	00 26 59.4	+0.1
NEW	Newport	92.11	348	IAmb	IAmb	00 27 24.0	
	comp=Z,4.0nm,0.8s						
TROLL	Troll, Antarti	114.04	193	⇓P	PKPdf	00 32 50.2	-0.9
	comp=Z,11nm,0.2s						
SNAA	Sanae	114.79	195	⇓P	PKPdf	00 32 51.2	-1.3
	comp=Z,20nm,0.8s						
SNAA	Sanae	114.79	195	PKP	PKPdf	00 32 51.2	-1.3
	comp=Z,1.1nm,0.9s,baz=38,slow=1.4,SNR=4.8						
VNA2	Neumayer--Watz	115.20	197	⇓P	PKPdf	00 32 52.0	-1.2
	comp=Z,1.7nm,0.8s,baz=11,slow=2.9						
VNA3	Neumayer Olymp	115.94	197	⇓P	PKPdf	00 32 53.0	-1.6
	comp=Z,2.2nm,0.8s						

HEL ***19*** *00:16:08.6±0.2, 67.77N×20.20E, h0km, ML1.4, Suspected explosion*
UPP 19 00:16:08.7±0.3, **67.83N×20.19E, h1**km±2km, **ML2.4, Suspected explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	23	P	Pg	00 16 11.5	+0.1
	baz=230						
KUA				S	Sg	00 16 13.6	+0.4
KUA	Kurravaara	0.14	23	P	Pg	00 16 11.8	+0.4
	baz=229						
KUA				S	Sg	00 16 13.8	+0.6
RATU	Laukkuluspa	0.23	270	P	Pg	00 16 13.1	0.0
RATU	Laukkuluspa	0.23	270	P	Pg	00 16 13.5	+0.4
RATU				S	Sg	00 16 16.6	+0.6
NIKU	Nikkaluokta	0.44	276	P	Pg	00 16 17.1	0.0
NIKU				S	Sg	00 16 23.3	+0.5
NIKU	Nikkaluokta	0.44	276	P	Pg	00 16 17.6	+0.5
NIKU				S	Sg	00 16 23.3	+0.5
LANU	Lannavaara	0.72	71	P	Pg	00 16 22.2	-0.2
LANU				S	Sg	00 16 31.7	0.0
LANU	Lannavaara	0.72	71	P	Pb	00 16 23.2	-0.8
LANU	Lannavaara	0.72	71	PB	Pg	00 16 22.2	-0.2
LANU				SG	Sg	00 16 31.9	+0.2
DUNU	Dundret	0.72	168	P	Pg	00 16 22.1	-0.4
DUNU				S	Sg	00 16 31.9	0.0
DUNU	Dundret	0.72	168	P	Pb	00 16 24.2	+0.1
MASU	Masugnsbyn	0.78	117	P	Pg	00 16 23.4	-0.3
MASU	Masugnsbyn	0.78	117	P	Pb	00 16 24.9	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	00 16 23.5	-0.2
SALU	Saltoluokta	0.79	236	P	Pb	00 16 24.6	-0.6
KIF	Kilpisjarvi	1.21	10	eP	Pg	00 16 31.5	-0.3
KIF	Kilpisjarvi	1.21	10	PG	Pg	00 16 31.8	0.0
	baz=194						
KIF				smax	smax	00 16 47.8	
	comp=Z,5.3nm,0.2s						
KIF				SG	Sb	00 16 48.0	-0.3
PAJU	Pajala	1.39	124	P	Pn	00 16 33.9	-1.3
PAJU	Pajala	1.39	124	P	Pb	00 16 35.9	+0.5
PAJU	Pajala	1.39	124	PN	Pn	00 16 33.6	-1.6
PAJU				SN	Sg	00 16 52.1	-1.0
HEF	Hetta	1.43	64	eP	Pn	00 16 35.0	-0.8
HEF	Hetta	1.43	64	PG	Pn	00 16 34.8	-1.0
HEF				smax	smax	00 16 52.1	
	comp=Z,2.4nm,0.2s						
HEF				SG	Sg	00 16 53.6	-0.8
ERTU	Ertsjaerv	1.50	148	P	Pn	00 16 36.0	-0.7
ERTU	Ertsjaerv	1.50	148	PN	Pn	00 16 35.7	-0.9
ERTU				SN	Sg	00 16 55.9	-0.8
KLF	Kolari	1.57	110	PN	Pn	00 16 37.0	-0.6
KLF				smax	smax	00 16 55.0	
	comp=Z,2.6nm,0.2s						
KLF				SN	Sn	00 16 58.3	-0.2
KTK1	Kautokeino	1.64	42	PG	Pn	00 16 38.6	-0.1
KTK1				SN	Sg	00 17 02.3	+1.0
HARU	Harads	1.70	169	P	Pn	00 16 39.5	+0.1
TRO	Tromso	1.87	346	PG	Pb	00 16 43.1	-0.6
	baz=167						
TRO				SG	Sb	00 17 07.8	+0.2
KALU	Kalix	2.34	146	PG	Pn	00 16 49.3	+1.1
KALU				SG	Sb	00 17 19.3	-1.5
TOF	Tornio	2.39	135	PG	Pn	00 16 50.2	+1.3
TOF				smax	smax	00 17 18.3	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sb	00 17 22.6	+0.2
RNF	Rovaniemi	2.57	116	PB	Pn	00 16 53.1	+1.6
	baz=304						
RNF				SG	Sb	00 17 26.4	-1.3
ARA0	ARCESS Array S	2.59	46	PB	Pn	00 16 53.3	+1.6
	baz=227						
ARA0				SB	Sb	00 17 26.4	-1.8
RAJF	Raja-Jooseppi	3.11	74	PB	Pn	00 17 01.5	+2.7
RAJF				SB	Sb	00 17 41.5	-1.5
KEV	Kevo	3.15	49	SN	Sn	00 17 39.4	+2.0
RANF	Ranua	3.17	122	PG	Pb	00 17 06.3	+0.6
RANF				SG	Sb	00 17 47.2	+2.4
BURU	Burvik	3.29	171	SG	Sb	00 17 45.5	-2.8
VRF	Varrio	3.58	87	PB	Pb	00 17 09.6	-3.1
VRF				SG	Sb	00 18 00.0	+3.4
KU6	Riekki	4.22	111	SG	Sg	00 18 19.6	-4.5

ISK ***19*** *00:23:59.6, 38.30N×44.49E, h5km, ML2.4/8*
AZER ***19*** *00:24:00.1, 38.42N×44.47E, h10km, ml2.6*
AFAD ***19*** *00:24:01.6, 38.46N×44.45E, h7km±1km, ML2.5*
TEH ***19*** *00:24:02.2, 38.41N×44.46E, h10km±60km*
ISC 19 00:24:02.1±1.1, **38.42N**±0.03×**44.47E**±0.02, **h12**km±9km, **n32**, σ1§**40**/51, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.45	303	P	Pg	00 24 09.9	-1.0
OZAP				*i*	IAML	00 24 18.0	
	comp=N,549nm,0.7s						
OZAP				S	Sb	00 24 18.1	-0.7
OZAP				*i*	IAML	00 24 20.0	
	comp=E,516nm,1.2s						
TVAN	Van	0.84	278	P	Pg	00 24 16.9	-1.5
TVAN				S	Sb	00 24 29.6	-0.5
TVAN				*i*	IAML	00 24 38.0	
	comp=N,188nm,0.7s						
TVAN				*i*	IAML	00 24 45.0	
	comp=E,186nm,0.8s						
YOVA	Hakkari_Yksek	0.84	190	P	Pb	00 24 18.8	-0.1
YOVA				S	Sn	00 24 33.0	+0.5
YOVA				*i*	IAML	00 24 35.0	
	comp=E,214nm,0.6s						
YOVA				*i*	IAML	00 24 36.0	
	comp=N,181nm,0.6s						
VMUR	Van-Muradiye	0.90	309	P	Pg	00 24 18.4	-1.1
VMUR				S	Sb	00 24 32.3	+0.4
VMUR				*i*	IAML	00 24 35.0	
	comp=E,172nm,0.6s						
VMUR				*i*	IAML	00 24 38.0	
	comp=N,165nm,0.6s						
ISHB	Shabestar	0.91	98	Pg	Pg	00 24 19.2	-0.5
IMRD	Marand	1.01	73	Pg	Pb	00 24 21.3	-0.3
HAKT	HAKKARI	1.05	215	P	Pb	00 24 22.2	-0.2
HAKT				S	Sn	00 24 38.0	+0.3
HAKT				*i*	IAML	00 24 40.0	
	comp=N,261nm,0.3s						
HAKT				*i*	IAML	00 24 41.0	
	comp=E,161nm,0.4s						
HAKT	HAKKARI	1.05	215	P	Pn	00 24 22.4	-0.5
HAKT				S	Sn	00 24 37.8	+0.1
ERCV	ERCIS-VAN	1.07	304	Pn	Pn	00 24 22.8	-0.3
ERCV				Sn	Sn	00 24 39.8	+1.8
NAX	Nakhchivan	1.10	46	P	Pn	00 24 23.5	+0.1
NAX				S	Sn	00 24 39.0	+0.4
AKDM	Akdamar-Van	1.18	266	Pn	Pb	00 24 23.0	-1.5
AKDM				Sn	Sn	00 24 41.3	+0.7
SBZ	Shahbuz	1.29	41	P	Pg	00 24 26.4	-0.5
SBZ				S	Sn	00 24 45.0	+1.6
ORD	Ordubad	1.30	67	P	Pg	00 24 26.9	-0.1
ORD				S	Sg	00 24 45.9	+2.0
HYR	Heyderabad	1.33	13	P	Pg	00 24 27.2	-0.5
HYR				S	Sg	00 24 47.9	+2.9
ITBZ	Tabriz	1.33	98	Pg	Pn	00 24 27.4	-0.3
ITBZ				Sg	Sg	00 24 46.3	+1.3
ADCV	BITLIS_Adilcev	1.42	286	P	Pb	00 24 28.3	-0.4
ADCV				S	Sg	00 24 50.4	+2.5
ADCV				*i*	IAML	00 24 52.0	
	comp=E,69nm,0.5s						
ADCV				*i*	IAML	00 24 53.0	
	comp=N,61nm,0.8s						
IGDI	IGDIR	1.48	348	P	Pg	00 24 30.0	-0.5
IGDI				S	Sg	00 24 52.0	+2.3
TASB	TASBURUN-IGDIR	1.57	353	Pn	Pg	00 24 31.4	-0.9
AGRB	Hanur-Agry	1.63	315	Pn	Pb	00 24 31.9	-0.3
DORK	Agr/Tutak/Do	1.63	307	P	Pb	00 24 31.7	-0.6
DORK				S	Sg	00 24 54.1	-0.6
DORK				*i*	IAML	00 24 56.0	
	comp=E,36nm,0.6s						
DORK				*i*	IAML	00 25 01.0	
	comp=N,43nm,0.7s						
GNI	Garni	1.74	7	Pn	Pb	00 24 33.9	-0.2
GURO	Guroymak-BITLI	1.92	275	Pn	Pn	00 24 35.0	+0.3
IHRS	Heris	2.02	92	Pn	Pb	00 24 38.9	-0.1
GDB	GEDABAY	2.50	23	P	Pb	00 24 45.0	-2.1
GDB				S	Sb	00 25 16.7	-1.2
ISRB	Sarab	2.59	102	Pn	Pb	00 24 46.8	-1.8
GANJ	Ganja	2.64	32	P	Pb	00 24 47.0	-2.4
GANJ				S	Sb	00 25 20.2	-1.6
SENK	Senkaya-Erzuru	2.69	323	Pn	Pn	00 24 47.4	+1.9
GRMI	Germi	2.71	81	Pn	Pb	00 24 48.2	-2.4
QZX	Qazax, Azerbai	2.72	14	P	Pb	00 24 48.7	-2.1
QZX				S	Sb	00 25 21.1	-3.0
YRD	Yardimli	2.99	79	P	Pn	00 24 51.7	+2.1
BNGB	Bingl	3.02	282	Pn	Pn	00 24 51.2	+1.3
LRK	Lerik	3.04	85	P	Pn	00 24 51.6	+1.3

AZER ***19*** *00:29:00.6, 38.42N×44.45E, h10km, ml2.8*
ISK ***19*** *00:29:00.5, 38.28N×44.41E, h9km, ML2.6/8*
AFAD ***19*** *00:29:00.5, 38.48N×44.55E, h7km±2km, ML2.5*
TEH ***19*** *00:29:04.4, 38.27N×44.59E, h10km±71km*
ISC 19 00:29:01.7±1.1, **38.39N**±0.02×**44.48E**±0.02, **h9**km±10km, **n37**, σ1§**61**/63, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.47	305	P	Pg	00 29 09.6	-1.2
OZAP				S	Sg	00 29 17.0	-0.1
OZAP				*i*	IAML	00 29 18.0	
	comp=N,826nm,0.6s						
OZAP				*i*	IAML	00 29 21.0	
	comp=E,715nm,0.6s						
YOVA	Hakkari_Yksek	0.82	191	P	Pg	00 29 18.3	+0.9
YOVA				S	Sn	00 29 32.3	+0.4
YOVA				*i*	IAML	00 29 34.0	
	comp=N,110nm,0.6s						
YOVA				*i*	IAML	00 29 34.0	
	comp=E,152nm,0.4s						
TVAN	Van	0.86	280	P	Pg	00 29 16.6	-1.6
TVAN				S	Sg	00 29 31.1	+1.8
ISHB	Shabestar	0.90	97	Pg	Pn	00 29 19.4	-1.3
VMUR	Van-Muradiye	0.93	310	P	Pg	00 29 18.6	-1.0
VMUR				S	Sg	00 29 32.7	+1.0
VMUR				*i*	IAML	00 29 34.0	
	comp=E,186nm,0.3s						
VMUR				*i*	IAML	00 29 35.0	
	comp=N,235nm,0.4s						
IMRD	Marand	1.01	71	Pg	Pn	00 29 22.2	0.0
IMRD				Sg	Sn	00 29 37.3	+0.7
HAKT	HAKKARI	1.03	217	P	Pg	00 29 21.0	-0.5
HAKT				S	Sb	00 29 37.8	+2.1
HAKT	HAKKARI	1.03	217	P	Pg	00 29 21.6	+0.1
HAKT				S	Sg	00 29 37.2	+2.2
ERCV	ERCIS-VAN	1.09	305	Pn	Pg	00 29 22.2	-0.5
ERCV				Sn	Sb	00 29 38.7	+1.3
NAX	Nakhchivan	1.11	45	P	Pn	00 29 24.0	+0.5
NAX				S	Sn	00 29 40.2	+1.2
AKDM	Akdamar-Van	1.18	267	Pn	Pn	00 29 22.4	-2.2
ORD	Ordubad	1.30	65	P	Pg	00 29 27.6	+1.0
ORD				S	Sn	00 29 46.8	+3.2
SBZ	Shahbuz	1.30	39	P	Pg	00 29 27.0	+0.3
SBZ				S	Sn	00 29 46.0	+2.1
DYDN	Diyadin	1.31	332	P	Pg	00 29 27.2	+0.4
DYDN				S	Sb	00 29 42.3	-1.2
ITBZ	Tabriz	1.32	96	Pg	Pg	00 29 27.0	+0.1
HYR	Heyderabad	1.36	12	P	Pg	00 29 27.9	+0.2
HYR				S	Sg	00 29 48.2	+2.9
ADCV	BITLIS_Adilcev	1.44	287	P	Pn	00 29 28.2	+0.1
ADCV				*i*	IAML	00 29 50.0	
	comp=N,74nm,0.5s						
ADCV				*i*	IAML	00 29 50.0	
	comp=E,76nm,0.5s						
ADCV				S	Sg	00 29 50.6	+2.6
IGDI	IGDIR	1.51	348	P	Pg	00 29 30.5	-0.1
IGDI				S	Sg	00 29 52.5	+2.3
TASB	TASBURUN-IGDIR	1.60	353	Pn	Pb	00 29 31.

GRMI	**Germi**	**2.70**	**80**	Pn		**Pb**	**00 29 49.5**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.73**	**323**	Pn		**Pn**	**00 29 46.7**	**+0.9**
QZX	**Qazax, Azerbai**	**2.75**	**14**	P		**Pb**	**00 29 48.3**	**-2.7**
QZX				S		**Sb**	**00 30 23.5**	**-1.3**
YRD	**Yardimli**	**2.99**	**79**	P		**Pb**	**00 29 52.3**	**-2.8**
YRD				S		**Sb**	**00 30 28.6**	**-3.2**
LRK	**Lerik**	**3.04**	**84**	P		**Pb**	**00 29 53.3**	**-2.7**
LRK				S		**Sb**	**00 30 31.6**	**-1.6**
BNGB	**Bingl**	**3.04**	**283**	Pn		**Pn**	**00 29 49.9**	**-0.1**
LKRN	**Lenkeran, Azer**	**3.38**	**83**	P		**Pn**	**00 29 56.6**	**+2.0**
LKRN				S		**Sb**	**00 30 40.0**	**-3.0**
ASTR	**Astara**	**3.38**	**86**	P		**Pn**	**00 29 55.9**	**+1.2**
ASTR				S		**Sb**	**00 30 40.9**	**-2.2**

*CNRM **19** 00:31:22.7, 34°.47N× 13°.64W, h52km*
*INMG **19** 00:31:29.4±1.6, 34°.55N× 13°.74W, h10km±22km, ML2.2, Error ellipse: s-maj=10.0km s-min=2.7km az=137.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NE Porto Santo (Madeira)*
*MDD **19** 00:31:30.0±1.3, 34°.56N× 13°.36W, h23km±20km, Mb4.3/8, M_mb3.7/8, Error ellipse: s-maj=22.6km s-min=6.1km az=76.0*
*IGIL **19** 00:31:31.2, 34°.56N× 13°.36W, h26km, ML1.9*

ISC 19 00:31:17.9±0.9, 34°.53N±0°.04× 13°.66W±0°.05, h10km, n77, σ1§62/81, 7C, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMPST	**Porto Santo, M**	**2.65**	**238**	*e*P		**Pb**	**00 32 06.3**	**+0.8**
PMPST				*e*S		**Sn**	**00 32 32.8**	**-0.2**
PMPS	**Porto Santo**	**2.67**	**237**	*e*P		**Pb**	**00 32 05.1**	**-0.6**
PMPS				*e*S		**Sn**	**00 32 33.0**	**-0.3**
PMAR	**Madeira**	**3.26**	**237**	*e*P		**Pb**	**00 32 14.5**	**-1.4**
PMAR				*e*S		**Sn**	**00 32 48.3**	**+0.2**
PMAR				*i* IAML			00 32 49.9	
PMAR				*i* IAML			00 32 50.1	
PMAR				*i* IAML			00 32 53.4	
PMAR	**Madeira**	**3.26**	**237**	P		**Pn**	**00 32 10.5**	**+1.3**
PMAR	**Madeira**	**3.26**	**237**	S		**Sn**	**00 32 49.6**	**+1.5**
FUL	**Funchal**	**3.29**	**236**	*e*S		**Sn**	**00 32 48.2**	**-0.3**
PMOZ	**Porto Moniz, M**	**3.40**	**241**	*e*P		**Pb**	**00 32 18.3**	**0.0**
PMOZ				*e*S		**Sn**	**00 32 52.2**	**+0.6**
PFVI	**Vila Bisbo**	**4.71**	**55**	Pn		Pb	00 32 35.0	-5.6
PFVI				Sn		**Sn**	**00 33 22.0**	**-1.6**
PFVI	**Vila Bisbo**	**4.71**	**55**	*e*P		Pb	00 32 35.4	-5.2
PFVI				*e*S		**Sn**	**00 33 22.9**	**-0.8**
PFVI				*i* IAML			00 33 24.3	
MORF	**Marmelete**	**4.92**	**54**	*e*P		Pb	00 32 38.8	-5.4
MORF				*e*S		**Sn**	**00 33 28.1**	**-0.8**
MORF				IAML			00 33 31.2	
	comp=N,4.1nm,0.1s							
MORF	**Marmelete**	**4.92**	**54**	*e*P		Pb	00 32 38.4	-5.7
MORF				*e*S		**Sn**	**00 33 28.1**	**-0.8**
MORF				*i* IAML			00 33 33.4	
PTEO	**Sao Teotonio**	**5.01**	**52**	*e*P		Pb	00 32 39.8	-5.9
PTEO				*e*S		**Sn**	**00 33 30.1**	**-0.9**
SRHM	**Skhour des Reh**	**5.23**	**111**	P		**Pn**	**00 32 38.1**	**+1.9**
SRHM	**Skhour des Reh**	**5.23**	**111**	S		**Sn**	**00 33 36.8**	**+0.1**
PBDV	**Barranco-do-Ve**	**5.38**	**58**	Pn		Pn	00 32 44.8	+6.5
PBDV				Sn		**Sn**	**00 33 38.7**	**-1.6**
PBDV	**Barranco-do-Ve**	**5.38**	**58**	*e*P		Pb	00 32 45.3	-6.7
PBDV				*e*S		**Sn**	**00 33 39.3**	**-1.0**
PBDV				*i* IAML			00 33 46.8	
MESJ	**Messejana**	**5.50**	**52**	*e*P		Pb	00 32 46.8	-7.3
MESJ				*e*S		**Sn**	**00 33 42.1**	**-1.1**
MESJ				IAML			00 33 47.2	
	comp=E,1.0nm,0.2s							
MESJ	**Messejana**	**5.50**	**52**	*e*P		Pb	00 32 47.4	-6.7
MESJ				*e*S		**Sn**	**00 33 42.1**	**-1.1**
MESJ				*i* IAML			00 33 49.8	
PCVE	**Castro Verde**	**5.51**	**54**	Pn		Pn	00 32 46.8	+6.8
PCVE				Sn		**Sn**	**00 33 43.0**	**-0.4**
PCVE	**Castro Verde**	**5.51**	**54**	*e*P		Pb	00 32 47.2	-6.9
PCVE				*e*S		**Sn**	**00 33 42.9**	**-0.4**
PCVE				*i* IAML			00 33 43.6	
PCVE				*i* IAML			00 33 43.9	
PVAQ	**Vaqueiros**	**5.61**	**58**	*e*P		Pn	00 32 48.3	+7.0
PVAQ				*e*S		**Sn**	**00 33 44.7**	**-1.2**
PVAQ				*i* IAML			00 33 46.7	
PVAQ				*i* IAML			00 33 48.6	
PVAQ				*i* IAML			00 33 49.7	
PVAQ	**Vaqueiros**	**5.61**	**58**	P		**Pn**	**00 32 43.8**	**+2.5**
PVAQ	**Vaqueiros**	**5.61**	**58**	S		**Sn**	**00 33 47.1**	**+1.2**
PMAFR	**Mafra**	**5.65**	**37**	*e*S		**Sn**	**00 33 46.0**	**-0.7**
EGRO	**El Granado**	**5.83**	**57**	Pn		Pn	00 32 51.3	+6.8
EGRO				Sn		**Sn**	**00 33 50.4**	**-1.0**
EGRO	**El Granado**	**5.83**	**57**	P		Pn	00 32 51.5	+7.1
EGRO				⇑*i*Vmb_VC			00 32 53.3	
	comp=E,63nm,SNR=0.8							
EGRO				S		**Sn**	**00 33 50.4**	**-1.0**
MOE	**Montemor**	**5.85**	**45**	*e*P		Pb	00 32 52.4	-7.5
MOE				*e*S		**Sn**	**00 33 50.8**	**-0.9**
MOE				*i* IAML			00 33 53.6	
MOE				*i* IAML			00 34 05.5	
OUK	**Oukaimeden**	**5.89**	**123**	P		**Pn**	**00 32 47.3**	**+1.8**
OUK	**Oukaimeden**	**5.89**	**123**	S		**Sn**	**00 33 53.9**	**+0.5**
ZHG	**ZHG**	**5.93**	**99**	P		**Pn**	**00 32 46.6**	**+0.7**
ZHG	**ZHG**	**5.93**	**99**	S		**Sn**	**00 33 53.5**	**-0.4**
EVO	**Evora**	**6.05**	**47**	Sn		**Sn**	**00 33 55.2**	**-1.6**
EVO	**Evora**	**6.05**	**47**	*e*P		**Pn**	**00 32 51.2**	**+3.8**
EVO				*e*S		**Sn**	**00 33 57.0**	**+0.2**
ARNO	**Arenosillo**	**6.19**	**64**	Pn		Pn	00 32 56.8	+7.6
PARRA	**Arraiolos**	**6.22**	**45**	*e*P		**Pb**	**00 32 58.2**	**+1.4**
PARRA				*e*S		**Sb**	**00 34 04.7**	**-4.7**
PARRA				*i* IAML			00 34 04.7	
PARRA				*i* IAML			00 34 05.2	
PMTG	**Montargil**	**6.29**	**42**	*e*P		Pn	00 32 58.4	+7.7
PMTG				*e*S		**Sn**	**00 34 01.6**	**-1.0**
PBAR	**Barrancos**	**6.46**	**54**	Pn		Pn	00 32 59.6	+6.4
PBAR	**Barrancos**	**6.46**	**54**	*e*P		Pn	00 32 60.0	+6.8
PBAR				*e*S		**Sn**	**00 34 05.7**	**-1.3**
PBAR				*i* IAML			00 34 07.2	
PBAR				*i* IAML			00 34 09.3	
RSA	**Sarsar**	**6.47**	**85**	P		**Pn**	**00 32 55.6**	**+2.4**
RSA	**Sarsar**	**6.47**	**85**	S		**Sn**	**00 34 08.9**	**+1.8**
TIO	**Tiouine**	**6.48**	**122**	Pn		Pn	00 33 00.7	+7.2
TIO				Sn		**Sn**	**00 34 05.7**	**-1.8**
TIO	**Tiouine**	**6.48**	**122**	P		Pn	**00 32 54.7**	**+1.3**
TIO	**Tiouine**	**6.48**	**122**	S		**Sn**	**00 34 08.2**	**+0.7**
PESTR	**Estremoz**	**6.52**	**47**	Sn		**Sn**	**00 34 06.9**	**-1.5**
PESTR	**Estremoz**	**6.52**	**47**	*e*S		**Sn**	**00 34 07.2**	**-1.2**
PESTR	**Estremoz**	**6.52**	**47**	P		**Pn**	**00 32 57.5**	**+3.6**
PESTR	**Estremoz**	**6.52**	**47**	S		**Sn**	**00 34 09.4**	**+1.1**
TISM	**Timmit**	**6.67**	**113**	P		**Pn**	**00 32 57.8**	**+1.8**
TISM	**Timmit**	**6.67**	**113**	S		**Sn**	**00 34 10.9**	**-1.1**
PSARD	**Sardoal**	**6.70**	**39**	*e*S		**Sn**	**00 34 11.6**	**-1.3**
EBAD	**Badajoz**	**6.81**	**50**	Pn		Pn	00 33 04.5	+6.7
EBAD				Sn		**Sn**	**00 34 12.7**	**-2.7**
EBAD	**Badajoz**	**6.81**	**50**	P		Pn	00 33 04.6	+6.8
EBAD				⇑*i*Vmb_VC			00 33 05.3	
	comp=E,85nm,SNR=1.3							
EBAD				S		**Sn**	**00 34 13.9**	**-1.5**
OUZM	**OUZ**	**6.84**	**120**	P		**Pn**	**00 32 58.7**	**+0.2**
OUZM	**OUZ**	**6.84**	**120**	S		**Sn**	**00 34 15.9**	**-0.6**
IFR	**Ifrane**	**7.16**	**96**	Pn		Pn	00 33 08.9	+6.1
IFR				Sn		**Sn**	**00 34 20.4**	**-3.9**
LCRM	**LCR**	**7.35**	**94**	P		**Pn**	**00 33 06.9**	**+1.5**
LCRM	**LCR**	**7.35**	**94**	S		**Sn**	**00 34 26.6**	**-2.4**
ECAB	**El Cabril**	**7.54**	**60**	P		Pn	00 33 13.7	+5.8
ECAB				⇑*i*Vmb_VC			00 33 17.9	
	comp=E,90nm,SNR=1.3							
ECAB				S		**Sn**	**00 34 29.9**	**-3.5**
MD31	**MD31**	**7.60**	**100**	P		**Pn**	**00 33 10.8**	**+1.9**
MD31	**MD31**	**7.60**	**100**	S		**Sn**	**00 34 34.4**	**-0.7**
MDT	**Midelt**	**7.74**	**100**	P		**Pn**	**00 33 12.3**	**+1.6**
MDT	**Midelt**	**7.74**	**100**	S		**Sn**	**00 34 38.5**	**+0.1**
TZRR	**Tazzarine**	**7.77**	**116**	P		**Pn**	**00 33 13.0**	**+1.8**
TZRR	**Tazzarine**	**7.77**	**116**	S		**Sn**	**00 34 40.2**	**+0.8**
GOLM	**Goulmima**	**7.83**	**109**	P		**Pn**	**00 33 13.8**	**+1.9**
GOLM	**Goulmima**	**7.83**	**109**	S		**Sn**	**00 34 42.1**	**+1.4**
AKLM	**AKL**	**8.09**	**87**	P		**Pn**	**00 33 16.2**	**+0.7**
AKLM	**AKL**	**8.09**	**87**	S		**Sn**	**00 34 46.0**	**-1.0**
ZGR	**Zagora**	**8.10**	**121**	P		**Pn**	**00 33 17.2**	**+1.5**
ZGR	**Zagora**	**8.10**	**121**	S		**Sn**	**00 34 48.1**	**+0.7**
EADA	**Adamuz**	**8.18**	**61**	P		Pn	00 33 23.6	+6.9
EADA				⇑*i*Vmb_VC			00 33 27.7	
	comp=E,120nm,SNR=1.7							
EADA				S		**Sn**	**00 34 47.6**	**-1.6**
EPLA	**Plasencia**	**8.19**	**45**	⇑*i*Vmb_VC			00 33 24.9	
	comp=E,135nm,SNR=1.1							
EPLA				S		**Sn**	**00 34 48.2**	**-1.1**
ARF	**Arif**	**8.51**	**109**	P		**Pn**	**00 33 22.6**	**+1.3**
ARF	**Arif**	**8.51**	**109**	S		**Sn**	**00 34 59.1**	**+1.6**
ELOB	**Lobios**	**8.55**	**29**	⇑*i*Vmb_VC			00 33 30.1	
	comp=E,150nm,SNR=1.1							
ELOB				S		**Sn**	**00 34 56.1**	**-2.2**
PSIM	**Granatula de C**	**9.03**	**59**	S		**Sn**	**00 35 08.0**	**-2.3**
ECAL	**Calabor**	**9.19**	**34**	⇑*i*Vmb_VC			00 33 41.6	
	comp=E,157nm,SNR=1.2							
ECAL				S		**Sn**	**00 35 13.7**	**-0.3**

*KRNET **19** 00:34:54.0±0.1, 39°.07N× 74°.36E, h18km, mb3.2*
*SOME **19** 00:34:55.3, 39°.43N× 73°.52E, h15km*
*NNC **19** 00:34:56.2±8.4, 39°.09N× 74°.51E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=62.6km s-min=33.4km az=169.0*

ISC 19 00:34:56.4±1.4, 39°.03N±0°.07× 74°.30E±0°.04, h10km, n24, σ1§45/44, 27C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**1.16**	**328**	⇑*i*P		**Pb**	**00 35 16.1**	**-2.6**
SFK				⇑*i*S		**Sg**	**00 35 32.4**	**-1.5**
SALK	**Salom-Alik**	**1.89**	**349**	⇑*i*P		**Pn**	**00 35 28.7**	**-0.2**
SALK				⇑*i*S		**Sn**	**00 35 54.0**	**+1.1**
OHH	**Osh**	**1.90**	**322**	⇑*i*P		**Pn**	**00 35 29.3**	**+0.4**
OHH				⇑*i*S		**Sb**	**00 35 54.9**	**0.0**
DRK	**Karamyk**	**1.99**	**284**	⇑*i*P		**Pb**	**00 35 31.7**	**-1.2**
DRK				⇑*i*S		**Sg**	**00 35 59.3**	**-1.2**
JNKS	**Jany-Kuch**	**2.28**	**27**	⇑*i*P		**Pn**	**00 35 34.2**	**-0.1**
JNKS				⇑*i*S		**Sn**	**00 36 03.6**	**+1.0**
ARSB	**Arslanbob**	**2.50**	**337**	⇑*i*P		**Pn**	**00 35 38.0**	**+0.6**
ARSB				⇑*i*S		**Sn**	**00 36 09.9**	**+1.8**
GAR	**Garm**	**3.10**	**271**	⇓*i*P		**Pn**	**00 35 47.0**	**+1.4**
GAR				⇓*i*S		**Sb**	**00 36 25.8**	**-3.9**
UCH	**Uchtor**	**3.20**	**3**	⇓*i*P		**Pn**	**00 35 47.5**	**+0.3**
UCH				⇓*i*S		**Sn**	**00 36 26.2**	**+0.6**
ARK	**Arkit**	**3.29**	**328**	⇑*i*P		**Pn**	**00 35 48.9**	**+0.8**
ARK				⇑*i*S		**Sn**	**00 36 29.1**	**+1.7**
TRKS	**Terek-Say**	**3.48**	**317**	⇓*i*P		**Pn**	**00 35 50.9**	**+0.2**
TRKS				⇓*i*S		**Sn**	**00 36 32.4**	**+0.4**
ULHL	**Ulahol**	**3.54**	**24**	⇑*e*P		**Pn**	**00 35 51.5**	**-0.1**
ULHL				⇑*i*S		**Sn**	**00 36 33.6**	**0.0**
AAK	**Ala-Archa**	**3.61**	**2**	⇓*i*P		**Pn**	**00 35 52.7**	**+0.2**
AAK				⇓*i*S		**Sn**	**00 36 35.9**	**+0.6**
KBK	**Karagaybulak**	**3.66**	**8**	⇑*e*P		**Pn**	**00 35 53.5**	**+0.3**
KBK				⇑*i*S		**Sn**	**00 36 36.7**	**+0.2**
BOOM	**Boomskoye usch**	**3.67**	**19**	⇑*i*P		**Pn**	**00 35 53.6**	**+0.1**
BOOM				⇑*i*S		**Sn**	**00 36 37.2**	**+0.2**
KDJ	**Kajisay**	**3.79**	**34**	⇑*e*P		**Pn**	**00 35 55.1**	**0.0**
KDJ				⇑*e*S		**Sn**	**00 36 40.2**	**+0.3**
MRKS	**Merke**	**3.80**	**348**	Pg		**Pn**	**00 35 57.1**	**+2.0**
	3.0nm,0.3s							
MRKS				Lg		Lg	00 36 40.5	
	2.9nm,0.5s							
MRKS	**Merke**	**3.80**	**348**	*e*P		**Pn**	**00 35 57.1**	**+2.0**
	3.0nm,0.3s							
MRKS				*e*S		**Sn**	**00 36 40.5**	**+0.6**
	2.9nm,0.5s							
TARG	**Taragay, Kyrgy**	**3.80**	**44**	⇓*i*P		**Pn**	**00 35 55.3**	**-0.1**
TARG				⇓*i*S		**Sn**	**00 36 40.3**	**-0.1**
TKM2	**Tokmak 2**	**4.01**	**14**	⇑*e*P		**Pn**	**00 35 58.2**	**+0.1**
TKM2				⇑*i*S		**Sn**	**00 36 45.4**	**+0.1**
CHGR	**Chuyangaron**	**4.03**	**266**	⇑*e*P		**Pn**	**00 36 00.1**	**+1.8**
CHGR				⇑*i*S		**Sn**	**00 36 48.1**	**+2.5**
MDOK	**Medeo**	**4.62**	**26**	Pg		**Pb**	**00 36 18.6**	**+0.9**
	2.7nm,0.4s							
MDOK				Lg		Lg	00 37 17.3	
	3.6nm,0.8s							
KRBS	**Karabastau**	**4.78**	**12**	Pg		**Pb**	**00 36 21.1**	**+0.8**
	1.8nm,0.4s							
KRBS				Lg		Lg	00 37 22.1	
	0.8nm,0.8s							
KK31	**Karatay Array**	**4.98**	**326**	⇑Pn		**Pn**	**00 36 13.3**	**+2.1**
	0.2nm,0.3s,baz=156,slow=15,SNR=7.0							
KK31				⇓Sn		**Sn**	**00 37 13.2**	**+4.4**
	0.6nm,0.5s							
KK31				⇓Lg		Lg	00 37 35.3	
	1.3nm,0.5s,baz=155,slow=27,SNR=3.6							
KTBS	**Karatobe**	**5.01**	**20**	Pg		**Pb**	**00 36 25.9**	**+1.7**
	1.3nm,0.4s							
KTBS				Lg		Lg	00 37 30.6	
	5.0nm,0.6s							

*IDC **19** 00:39:10.7±0.9, 8°.21N× 127°.07E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=30.5km s-min=17.7km az=87.0*

ISC 19 00:39:17.4±0.9, 8°.1N±0°.1× 127°.0E±0°.2, h46km, n16, σ1§12/12, mb4.1/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**1.78**	**234**	Pn		**Pn**	**00 39 45.4**	**-0.4**
	156nm,0.3s,baz=262,slow=1.3,SNR=7.7							
DAV				Sn		**Sn**	**00 40 08.5**	**+1.3**
	118nm,0.3s,baz=284,slow=21,SNR=9.9							
WRA	**Warramunga Arr**	**28.81**	**166**	P		**P**	**00 45 11.7**	**+0.4**
	0.3nm,0.7s,baz=344,slow=9.4,SNR=1.5							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**32.31**	**168**	P		**P**	**00 45 42.1**	**-0.2**
	0.3nm,0.4s,baz=345,slow=7.0,SNR=6.9							
ASAR				PcP		**PcP**	**00 48 29.0**	**-0.7**
	0.3nm,0.5s,baz=345,slow=2.5,SNR=4.5							
	0.3nm,0.4s							
USRK	**Usurisyk Ar.**	**36.19**	**6**	P		**P**	**00 46 17.5**	**+1.9**
	4.8nm,0.7s,baz=170,slow=6.4,SNR=5.7							
H11S3	**WAKE ISLAND Hy**	**39.86**	**71**	T		T	01 29 55.4	
	baz=262,slow=74,SNR=5.5							
H11S1	**WAKE ISLAND Hy**	**39.87**	**71**	T		T	01 29 55.6	
	baz=262,slow=74,SNR=4.3							
H11S2	**WAKE ISLAND Hy**	**39.87**	**71**	T		T	01 30 01.6	
	baz=262,slow=74,SNR=4.3							
H11N1	**WAKE ISLAND Hy**	**40.26**	**69**	T		T	01 30 38.0	
	baz=265,slow=75							
H11N2	**WAKE ISLAND Hy**	**40.27**	**69**	T		T	01 30 47.9	
	baz=265,slow=75							
H11N3	**WAKE ISLAND Hy**	**40.28**	**69**	T		T	01 30 51.3	
	baz=265,slow=75							
MKAR	**Makanchi Array**	**54.17**	**323**	P		**P**	**00 48 37.9**	**-0.3**
	1.2nm,0.6s,baz=110,slow=7.8,SNR=11							
	1.2nm,0.6s							
ZALV	**Zalesovo Beam**	**56.85**	**332**	P		**P**	**00 48 55.7**	**-1.5**
	0.5nm,0.4s,baz=134,slow=6.2,SNR=2.0							
	0.5nm,0.4s							
KURBB	**Kurchatov Arra**	**58.25**	**326**	P		**P**	**00 49 06.6**	**-0.6**
	0.8nm,0.3s,baz=125,slow=6.4,SNR=6.7							
	0.8nm,0.3s							
TIXI	**Tiksi**	**63.47**	**1**	P		**P**	**00 49 43.0**	**+0.8**
	1.3nm,0.2s,baz=210,slow=3.6,SNR=6.9							
	1.3nm,0.2s							
BVAR	**Borovoye Array**	**63.84**	**326**	P		**P**	**00 49 44.5**	**-0.6**
	0.4nm,0.4s,baz=122,slow=6.7,SNR=4.9							
	0.4nm,0.4s							
FINES	**FINESS Array B**	**88.12**	**332**	P		**P**	**00 52 01.7**	**-1.3**
	0.9nm,0.5s,baz=77,slow=5.8,SNR=9.8							
	0.9nm,0.5s							

*PLV **19** 00:44:02.0±1.1, 23°.20N× 103°.90E, h21km±104km, ML3.7*

ISC 19 00:43:57.9±1.2, 23°.10N±0°.07× 103°.62E±0°.09, h10km, n5, σ1§06/8, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HGVB	**Ha Giang**	**1.30**	**102**	*e*Pg		**Pg**	**00 44 23.3**	**+0.6**
HGVB				*e*Sg		**Sb**	**00 44 37.9**	**-1.2**
HGVB				IAML			00 44 40.6	
	comp=N,2μm,0.5s							
HGVB				IAML			00 44 42.3	
	comp=E,1μm,0.4s							
VTVB	**Vinh Tuy**	**1.46**	**125**	*e*Pg		**Pg**	**00 44 27.3**	**+1.4**
VTVB				IAML			00 44 49.4	
	comp=N,1μm,0.7s							
VTVB				IAML			00 44 49.4	
	comp=E,1μm,0.3s							
MLVB	**It Ong**	**1.64**	**166**	*e*Pg		**Pb**	**00 44 27.9**	**-0.2**
MLVB				*e*Sg		**Sn**	**00 44 46.9**	**-0.9**
MLVB				IAML			00 44 50.4	
	comp=N,741nm,1.8s							
MLVB				IAML			00 44 50.6	
	comp=E,948nm,0.5s							
BGV	**Bac-Giang**	**3.02**	**126**	*e*Pg		**Pg**	**00 44 56.5**	**+0.8**
PZH	**PanZhiHua**	**3.79**	**334**	Pg		**Pg**	**00 45 11.0**	**+0.5**
PZH				Sg		**Sg**	**00 45 59.8**	**+0.2**
PZH				smax	smax			
	comp=N,30nm,0.6s							
PZH				smax	smax			
	comp=E,40nm,0.7s							

*CATAC **19** 01:04:34.1±0.6, 13°.N±4°.×8°.9W±°., h27km±3km, M3.4/19, MLv3.4/19, Error ellipse: s-maj=8.1km s-min=3.0km az=21.2, confirmed*
*SNET **19** 01:04:34.4±0.8, 13°.00N× 89°.05W, h32km, ML3.4*
*GCG **19** 01:04:35.8±0.4, 13°.14N× 89°.05W, h55km±7km, MD4.0*

ISC 19 01:04:34.2±1.5, 12°.97N±0°.07× 89°.05W±0°.04, h30km±12km, n58, σ0§32/69, 2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LALI	**Alcalda de L**	**0.57**	**333**	*i* P		**Pn**	**01 04 46.5**	**+0.2**
LALI	**Alcalda de L**	**0.57**	**333**	S		**Sn**	**01 04 55.9**	**+1.2**
LALI	**Alcalda de L**	**0.57**	**333**	P		**Pn**	**01 04 46.5**	**+0.2**
TECO	**Alcaldia de Te**	**0.62**	**25**	⇓*i*P		**Pn**	**01 04 46.6**	**-0.3**
TECO				*e*S		**Sn**	**01 04 55.8**	**-0.1**
TECO	**Alcaldia de Te**	**0.62**	**25**	P		**Pn**	**01 04 46.7**	**-0.3**
LFRS	**El Faro**	**0.65**	**359**	*i* P		**Pb**	**01 04 47.1**	**0.0**
LOMA	**Loma Larga**	**0.68**	**350**	⇓*i*P		**Pb**	**01 04 47.4**	**-0.2**
LOMA				*e*S		**Sn**	**01 04 56.9**	**-0.5**
LOMA	**Loma Larga**	**0.68**	**350**	S		**Sn**	**01 04 57.3**	**-0.2**
LOMA	**Loma Larga**	**0.68**	**350**	P		**Pb**	**01 04 47.4**	**-0.2**
UESV	**Universidad de**	**0.71**	**21**	*i* P		**Pn**	**01 04 47.9**	**-0.2**
UESV				*e*S		**Sn**	**01 04 58.1**	**0.0**
UESV	**Universidad de**	**0.71**	**21**	P		**Pn**	**01 04 48.0**	**-0.2**
PAVA	**Las Pavas**	**0.74**	**9**	S		**Sn**	**01 04 59.3**	**+0.2**
PAVA	**Las Pavas**	**0.74**	**9**	P		**Pn**	**01 04 48.6**	**-0.2**
UDBS	**Universidad Do**	**0.74**	**352**	S		**Sn**	**01 04 59.3**	**+0.2**
IGN	**Direccin Gen**	**0.74**	**351**	*e*P		**Pb**	**01 04 48.6**	**-0.1**
IGN	**Direccin Gen**	**0.74**	**351**	S		**Sn**	**01 04 59.2**	**+0.2**
IGN	**Direccin Gen**	**0.74**	**351**	P		**Pb**	**01 04 48.7**	**-0.1**
UEES	**Universidad Ev**	**0.76**	**346**	S		**Sn**	**01 04 59.5**	**+0.1**
UEES	**Universidad Ev**	**0.76**	**346**	P		**Pn**	**01 04 48.8**	**-0.1**
PMON	**Piamonte**	**0.78**	**341**	*i* P		**Pn**	**01 04 49.2**	**-0.1**
PMON				*e*S		**Sn**	**01 04 60.0**	**+0.1**
PMON	**Piamonte**	**0.78**	**341**	S		**Sn**	**01 05 00.1**	**+0.1**
PMON	**Piamonte**	**0.78**	**341**	P		**Pn**	**01 04 49.1**	**-0.1**
JAYA	**Jayaque - finc**	**0.78**	**330**	*i* P		**Pn**	**01 04 49.2**	**-0.1**
JAYA				*e*S		**Sn**	**01 05 00.2**	**+0.1**
JAYA	**Jayaque - finc**	**0.78**	**330**	*i* P		**Pn**	**01 04 49.1**	**-0.2**
JAYA				*e*S		**Sb**	**01 04 59.2**	**-0.5**
JAYA	**Jayaque - finc**	**0.78**	**330**	P		**Pn**	**01 04 49.1**	**-0.2**
BOQS	**Boqueron**	**0.79**	**344**	*i* P		**Pn**	**01 04 49.4**	**-0.1**
SCLA	**Alcaldia de Sa**	**0.79**	**23**	P		**Pb**	**01 04 49.3**	**-0.2**
SCLA	**Alcaldia de Sa**	**0.79**	**23**	S		**Sn**	**01 05 00.8**	**+0.7**
LCY	**Lacayo**	**0.86**	**59**	*e*P		**Pn**	**01 04 50.4**	**0.0**
PACA	**Pacayal**	**0.86**	**55**	*e*P		**Pb**	**01 04 50.6**	**-0.1**
PACA				*e*S		**Sb**	**01 05 02.4**	**+0.3**
PACA	**Pacayal**	**0.86**	**55**	P		**Pn**	**01 04 50.5**	**+0.1**
RANC	**El Ranchito**	**0.87**	**58**	*e*P		**Pn**	**01 04 50.5**	**0.0**
RANC				*e*S		**Sb**	**01 05 03.2**	**+0.8**
CEDA	**San Andres**	**0.89**	**338**	*i* P		**Pn**	**01 04 50.6**	**-0.1**
CEDA	**San Andres**	**0.89**	**338**	P		**Pn**	**01 04 50.5**	**-0.1**
CEDA	**San Andres**	**0.

WRA				S	S	01 39 02.6	+2.0	
	comp=Z,2.6nm,0.9s,baz=333,slow=19,SNR=14							
	comp=Z,4.2nm,0.6s							
WRA	**Warramunga Arr**	**22.90**	**161**	P	**P**	**01 34 50.6**	**-2.4**	
WRA					**PcP**	**01 38 43.1**	**+0.1**	
WR8	**Warramunga Arr**	**22.97**	**161**		**P**	**01 34 52.0**	**-1.7**	
WR8				IAmb	IAmb	01 34 58.4		
	comp=Z,3.7nm,0.7s							
MBWA	**Marble Bar**	**23.79**	**196**	P	**P**	**01 35 00.8**	**-0.9**	
MBWA				IAmb	IAmb	01 35 37.1		
	comp=Z,23nm,1.5s							
PSA00	**Pilbara Seismi**	**24.15**	**196**	P	**P**	**01 35 05.9**	**+0.9**	
PSA00				IAmb	IAmb	01 35 22.5		
	comp=Z,18nm,1.2s							
AS31	**Alice Springs**	**26.29**	**165**		**P**	**01 35 23.8**	**-0.7**	
ASAR	**Alice Springs**	**26.29**	**165**	P	**P**	**01 35 24.9**	**+0.4**	
	comp=Z,1.0nm,0.5s,baz=345,slow=8.0,SNR=14							
ASAR				PcP	**PcP**	**01 38 50.0**	**-0.4**	
	comp=Z,0.6nm,0.5s,baz=350,slow=2.5,SNR=7.0							
ASAR				S	**S**	**01 40 02.9**	**+7.8**	
	comp=Z,1.2nm,1.0s,baz=347,slow=19,SNR=4.9							
	comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**26.29**	**165**	P	**P**	**01 35 24.4**	**-0.2**	
ASAR					**PcP**	**01 38 50.4**	**0.0**	
RPSI	**Rantau Prapat**	**27.67**	**272**	P	**P**	**01 35 38.4**	**+1.4**	
PSI	**Prapat**	**27.68**	**273**	P	**P**	**01 35 38.4**	**+1.2**	
	comp=Z,4.7nm,0.4s,baz=161,slow=10,SNR=3.6							
	comp=Z,4.7nm,0.4s							
BBOO	**Buckleboo**	**35.57**	**166**	P	**P**	**01 36 46.2**	**+0.1**	
EIDS	**Eidsvold**	**35.94**	**140**	P	**P**	**01 36 48.0**	**-1.4**	
STKA	**Stephens Creek**	**36.39**	**158**	P	**P**	**01 36 53.6**	**+0.4**	
	comp=Z,0.9nm,0.3s,baz=341,slow=13,SNR=4.8							
	comp=Z,0.9nm,0.3s							
SONM	**Songino Array**	**49.08**	**342**	P	**P**	**01 38 36.2**	**+0.2**	
	comp=Z,0.3nm,0.3s,baz=165,slow=6.0,SNR=1.7							
	comp=Z,0.3nm,0.3s							
PETK	**Petropavlovsk-**	**57.25**	**22**	P	**P**	**01 39 35.4**	**-0.5**	
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**01 39 48.3**	**-0.5**	
	comp=Z,0.8nm,0.4s,baz=118,slow=8.5,SNR=7.2							
	comp=Z,0.8nm,0.4s							
MAKZ	**Makanchi**	**59.25**	**326**	P	**P**	**01 39 48.8**	**-1.2**	
MAKZ				IAmb	IAmb	01 40 09.3		
	comp=Z,7.0nm,1.4s							
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	**P**	**01 40 16.4**	**-0.9**	
	comp=Z,1.5nm,0.6s,baz=133,slow=6.4,SNR=22							
	comp=Z,1.5nm,0.6s							
KURK	**Kurchatov**	**63.30**	**328**	P	**P**	**01 40 16.6**	**-0.7**	
BVAR	**Borovoye Array**	**68.86**	**327**	P	**P**	**01 40 53.0**	**-0.1**	
	comp=Z,0.8nm,0.6s,baz=111,slow=8.1,SNR=4.7							
	comp=Z,0.8nm,0.6s							
AB31	**Akbulak array**	**73.56**	**321**	P	**P**	**01 41 21.1**	**-0.4**	
AB31				IAmb	IAmb	01 41 51.5		
	comp=Z,1.0nm,0.7s							
VNDA	**Vanda**	**81.54**	**173**	P	**P**	**01 42 05.8**	**+0.3**	
	comp=Z,0.7nm,0.5s,baz=330,slow=6.3,SNR=4.6							
	comp=Z,0.7nm,0.5s							
VNDA	**Vanda**	**81.54**	**173**	P	**P**	**01 42 05.8**	**+0.3**	
VNDA				IAmb	IAmb	01 42 06.0		
	comp=Z,2.9nm,1.1s							

*IDC **19** 01:46:22.5±1.6,2°.26N×127°.39E,h0km,mb3.4/5, mbtmp3.5/5,Error ellipse: s-maj=111.2km s-min=19.4km az=71.0*

*DJA **19** 01:46:26.1±0.4,2°.N±6°×12°.7E±°,h10km,M3.5/6,MLv3.5/6*

ISC 19 01:46:27.9±1.6,2°.2N±0°.2×127°.3E±0°.3,h35km,n8,σ1§12/8, mb3.7/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.46**	**178**	P	Pn	01 46 46.3	-5.4
SGSI	**Sangihe**	**2.29**	**309**	P	**Pn**	**01 47 04.5**	**+1.3**
SGSI				S	**Sn**	**01 47 28.6**	**-1.7**
FITZ	**Fitzroy Crossi**	**20.28**	**185**	P	**P**	**01 51 01.1**	**+0.5**
	0.8nm,0.6s,baz=10,slow=11,SNR=2.0						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**23.09**	**163**	P	**P**	**01 51 29.8**	**-0.9**
	0.6nm,0.5s,baz=339,slow=11,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.54**	**166**	P	**P**	**01 52 01.8**	**-0.7**
	0.2nm,0.4s,baz=355,slow=16,SNR=5.8						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.11**	**325**	P	**P**	**01 56 25.1**	**+0.2**
	0.3nm,0.4s,baz=117,slow=7.6,SNR=5.3						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**62.17**	**333**	P	**P**	**01 56 45.3**	**-0.3**
	0.2nm,0.3s,baz=148,slow=8.5,SNR=1.3						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**01 56 53.4**	**+0.2**
	0.5nm,0.2s,baz=129,slow=6.4,SNR=1.9						

DJA 19 02:11:20.9±2.0,7°S±4°×10°5E±°,h13km±17km,M3.9/10, mB5.5/1,mb4.3/2,MLv3.6/10,Mw(mB)5.0/1,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**1.29**	**44**	P	Pn	02 11 44.5	-0.2
SBJI				S	Sn	02 12 01.8	0.0
SKJI	**Sukabumi**	**1.32**	**88**	P	Pn	02 11 44.9	-0.1
SKJI				S	Sb	02 12 02.3	0.0
DBJI	**Dramaga**	**1.59**	**72**	P	Pn	02 11 48.3	-0.5
TNG	**Tangerang**	**1.66**	**58**	P	Pn	02 11 49.8	+0.1
BLSI	**Bandar Lampung**	**1.68**	**1**	P	Pn	02 11 49.9	-0.1
KASI	**Kota Agung**	**1.69**	**334**	P	Pn	02 11 50.0	-0.2
CNJI	**Cibinong**	**1.90**	**98**	P	Pn	02 11 52.4	-0.6
PCJI	**Pacitan**	**6.00**	**101**	P	Pn	02 12 50.2	+0.7
	0.1nm19nm,1.4s						
PPSI	**Pulau Pagai**	**6.73**	**309**	P	Pn	02 12 59.8	+0.3

*NEIC **19** 02:18:44.9±1.5, 18°.49S±0°.10×169°.1E±0°.1,h209km±10km, mb4.4/17,Error ellipse: s-maj=16.3km s-min=11.6km az=130.0*

*IDC **19** 02:18:45.4±5.0, 18°.31S×168°.87E,h209km±54km,mb3.5/4, mbtmp4.0/5,Error ellipse: s-maj=109.2km s-min=52.4km az=132.0*

ISC 19 02:18:44.0±0.6,18°.50S±0°.09×169°.05E±0°.09,h201km,n26, σ0§94/28,mb4.4/12,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**3.12**	**198**		**Pn**	**02 19 35.7**	**+0.6**
MARNC				Sn	**S**	**02 20 13.7**	**-0.9**
DZM	**Mont Dzumac**	**4.32**	**214**	P	**Pn**	**02 19 52.3**	**+2.4**
	4.4nm,0.5s,baz=42,slow=18,SNR=12						
DZM				S	**S**	**02 20 39.2**	**-1.9**
	baz=319,slow=20						
PINNC	**Pines Island,**	**4.36**	**200**		**Pn**	**02 19 51.3**	**+1.0**
MSVF	**Nonsavu**	**8.59**	**86**		**Pn**	**02 20 46.1**	**+1.0**
LHI	**Lord Howe Isla**	**15.80**	**213**		**Pn**	**02 22 17.0**	**+1.2**
RAO	**Raoul Island**	**16.01**	**134**	P	**P**	**02 22 17.4**	**-0.5**
EIDS	**Eidsvold**	**18.01**	**245**	P	**P**	**02 22 41.1**	**+1.3**
EIDS				IAmb	IAmb	02 22 47.9	
	comp=Z,10nm,1.5s						
DSZ	**Denniston Nort**	**23.29**	**175**	P	**P**	**02 23 32.6**	**-1.3**
STKA	**Stephens Creek**	**28.10**	**236**	P	**P**	**02 24 16.9**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=78,slow=9.3,SNR=3.5						
	comp=Z,1.1nm,0.4s						
RAR	**Rarotonga**	**29.43**	**101**	P	**P**	**02 24 28.9**	**-0.1**
RAR				IAmb	IAmb	02 24 40.2	
	comp=Z,19nm,1.0s						
WR8	**Warramunga Arr**	**32.62**	**262**	P	**P**	**02 24 56.0**	**-1.1**
WB0	**Warramunga Arr**	**32.73**	**262**	P	**P**	**02 24 57.4**	**-0.6**
WRA	**Warramunga Arr**	**32.77**	**262**	P	**P**	**02 24 57.8**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=87,slow=8.3,SNR=10						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**32.77**	**262**	P	**P**	**02 24 58.0**	**-0.4**
AS31	**Alice Springs**	**33.14**	**255**	P	**P**	**02 25 01.3**	**-0.2**
AS31				IAmb	IAmb	02 25 01.6	
	comp=Z,5.5nm,0.3s						
ASAR	**Alice Springs**	**33.14**	**255**	P	**P**	**02 25 01.2**	**-0.3**
	comp=Z,5.8nm,0.4s,baz=88,slow=8.3,SNR=102						
	comp=Z,5.8nm,0.4s						
MTN	**Manton Dam**	**36.89**	**273**	P	**P**	**02 25 33.5**	**-0.1**
MTN				IAmb	IAmb	02 25 47.5	
	comp=Z,13nm,1.4s						
FITZ	**Fitzroy Crossi**	**41.14**	**263**	P	**P**	**02 26 08.8**	**0.0**
PETK	**Petropavlovsk-**	**71.98**	**353**	P	**P**	**02 29 45.4**	**+0.1**
UNV	**Unalaska Valle**	**75.05**	**15**	P	**P**	**02 30 02.4**	**-0.8**
P18K	**Big Mountain,**	**82.92**	**18**	P	**P**	**02 30 45.1**	**-0.7**
P18K				IAmb	IAmb	02 30 55.9	
	comp=Z,26nm,1.4s						
L18K	**Granite Mounta**	**84.90**	**15**	P	**P**	**02 30 56.3**	**+0.5**
L18K				IAmb	IAmb	02 31 06.5	
	comp=Z,8.9nm,1.4s						
J16K	**Anvik River**	**84.90**	**13**	P	**P**	**02 30 55.8**	**+0.1**
J16K				IAmb	IAmb	02 31 01.8	
	comp=Z,13nm,1.4s						
J17K	**VABM Dome**	**85.34**	**14**	P	**P**	**02 30 57.1**	**-0.8**
J17K				IAmb	IAmb	02 31 02.8	
	comp=Z,11nm,1.3s						
ULN	**Ulaanbaatar**	**86.16**	**323**	P	**P**	**02 31 02.8**	**+0.2**
ULN				IAmb	IAmb	02 31 02.9	
	comp=Z,3.6nm,1.2s						
SONM	**Songino Array**	**86.52**	**323**	P	**P**	**02 31 04.0**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=103,slow=6.2,SNR=2.6						
	comp=Z,0.7nm,0.9s						

*NEIC **19** 02:40:42.7±1.5,35°.652N±0°.010×117°.47W±0°.01, h10km±1km,Error ellipse: s-maj=2.8km s-min=1.7km az=200.0*

PAS 19 02:40:43.3±1.8,35°.646N±0°.005×117°.48W±0°.01, h9km±5km,ML3.1/149,ML2.8/154(NEIC),Error ellipse: s-maj=1.4km s-min=0.6km az=69.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSHM	**Spangler Hills**	**0.05**	**196**		Pg	02 40 45.1	-0.1
WSHM				Sg	Sg	02 40 46.5	0.0
CCCA	**Chr Cany lake**	**0.15**	**143**	Pg	Pg	02 40 47.0	+0.4
CCCA				Sg	Sg	02 40 49.8	+0.9
GPO	**China Lake**	**0.15**	**272**		Pg	02 40 46.7	+0.1
GPO					Sg	02 40 49.7	+0.8
CLC	**China Lake**	**0.20**	**330**		Pg	02 40 47.3	-0.1
CLC				IAML		02 40 50.7	
	comp=N,4μm,0.2s						
SRTC	**Snort**	**0.23**	**282**		Pg	02 40 48.2	+0.3
SRTC					Sg	02 40 52.1	+1.0
LRMC	**Laurel Mtn Rad**	**0.23**	**225**		Pg	02 40 48.0	-0.1
TOW	**Tower One**	**0.28**	**305**		Pg	02 40 49.3	+0.2
WNMM	**Nine Mile Cany**	**0.40**	**300**		Pg	02 40 51.0	-0.1
WVPM	**Volcano Peak E**	**0.41**	**318**		Pg	02 40 51.1	-0.3
WVPM					Sg	02 40 56.8	0.0
JRC2	**Joshua Ridge**	**0.43**	**321**		Pg	02 40 51.6	-0.2
JRC2					Sg	02 40 57.9	+0.4
WCSM	**Coso Springs S**	**0.45**	**328**		Pg	02 40 51.7	-0.4
WCSM					Sg	02 40 58.1	+0.1
DTP	**Desert Tortois**	**0.48**	**219**		Pg	02 40 52.2	-0.5
DTP					Sg	02 40 58.8	-0.3
WRVM	**Rose V. Centra**	**0.49**	**317**		Pg	02 40 52.6	-0.3
WRVM					Sg	02 40 59.4	0.0
WBSM	**Bird Springs**	**0.55**	**259**		Pg	02 40 53.6	-0.4
WBSM					Sg	02 41 00.8	-0.5
MFS	**McCloud Flat S**	**0.56**	**327**		Pg	02 40 54.0	-0.3
MFS					Sg	02 41 01.5	-0.2
WORM	**Onyx Ranch**	**0.62**	**275**		Pg	02 40 54.9	-0.6
WORM					Sg	02 41 03.0	-0.6
GSC	**Goldstone, Bar**	**0.65**	**122**		Pg	02 40 55.4	-0.5
GSC				IAML		02 41 08.1	
	comp=E,579nm,0.3s						
GSC				IAML		02 41 08.1	
	comp=N,726nm,0.3s						
CCAC	**Calif City Air**	**0.66**	**222**		Pg	02 40 55.6	-0.4
CCAC					Sg	02 41 04.9	+0.1
WHFM	**Hanning Flat**	**0.71**	**274**		Pg	02 40 56.5	-0.6
WHFM					Sg	02 41 05.8	-0.5
HYS	**Haystack Butte**	**0.78**	**186**		Pg	02 40 57.8	-0.6
HYS					Sg	02 41 08.1	-0.5
ISA	**Isabella, Lake**	**0.81**	**272**		Sg	02 41 09.4	-0.2
ISA	**Isabella, Lake**	**0.81**	**272**		Pg	02 40 58.3	-0.7
ISA				IAML		02 41 12.0	
	comp=N,353nm,0.2s						
GWY	**Greenwater Val**	**0.85**	**50**		Pn	02 41 10.7	+9.0
GWY	**Greenwater Val**	**0.85**	**50**		Pg	02 40 59.4	-0.3
GWY				IAML		02 41 13.2	
	comp=N,402nm,0.3s						
GWY				IAML		02 41 14.2	
	comp=E,564nm,0.3s						
RRX	**Edison Barstow**	**0.86**	**153**		Pg	02 40 59.3	-0.6
RRX					Sb	02 41 11.9	-0.3
EDW2	**Edwards Air Fo**	**0.87**	**209**		Pg	02 40 59.2	-0.9
EDW2					Sg	02 41 10.7	-0.7
WASM	**Alta Sierra Ca**	**0.88**	**276**		Pg	02 40 59.7	-0.7
WASM					Pn	02 41 11.3	+9.1
CWC	**Cottonwood Cre**	**0.93**	**329**		Pg	02 41 00.8	-0.5
CWC	**Cottonwood Cre**	**0.93**	**329**		Sg	02 41 13.4	-0.1
CGO	**Cerro Gordo**	**0.94**	**344**		Pg	02 41 00.7	-0.8
CGO					Sb	02 41 14.4	-0.4
FURC	**Furnace Creek,**	**0.96**	**31**		Pg	02 41 01.6	-0.2
FURC				IAML		02 41 16.7	
	comp=E,320nm,0.4s						
FURC				IAML		02 41 29.3	
	comp=N,208nm,0.6s						
FURC	**Furnace Creek,**	**0.96**	**31**		Sb	02 41 14.8	-0.2
TPO	**Tropico Hills**	**0.98**	**219**		Pg	02 41 02.2	0.0
TPO				IAML		02 41 21.6	
	comp=E,394nm,0.6s						
SBB	**Saddle Back Bu**	**1.00**	**197**		Pg	02 41 01.9	-0.6
SHOC	**Shoshone, Teco**	**1.01**	**75**		Pg	02 41 02.0	-0.7
TEJ	**El Tejon**	**1.07**	**248**		Pg	02 41 02.7	-1.2
VTV	**Victorville**	**1.09**	**174**		Pb	02 41 04.5	+0.1
VTV					Sb	02 41 19.2	+0.4
ADO	**Adelanto Recei**	**1.09**	**178**		Sn	02 41 20.2	0.0
ALPC	**Antelope**	**1.17**	**215**		Sb	02 41 21.4	+0.3
SPG2	**Springville 2**	**1.18**	**298**		Pb	02 41 04.8	-1.2
SPG2					Sg	02 41 20.9	-0.5
LRRC	**Littlerock Res**	**1.21**	**202**		Pb	02 41 05.1	-1.2
LEOC	**Leona Valley**	**1.22**	**214**		Pb	02 41 05.3	-1.3
HOLC	**Holcomb Ridge**	**1.22**	**194**		Pb	02 41 05.4	-1.4
HOLC					Sn	02 41 23.3	-0.2
DSCC	**Desert Studies**	**1.23**	**114**		Pn	02 41 05.0	-1.7
DSCC					Sb	02 41 22.4	-0.4
CJV	**Casa Juvan**	**1.24**	**206**		Pn	02 41 06.7	-0.3
CJV					Sg	02 41 23.3	0.0
HEC	**Hector,Ludlow**	**1.24**	**131**		Pn	02 41 05.5	-1.5
HEC					Sg	02 41 23.5	+0.2
JNH	**Juniper Hills**	**1.26**	**198**		Pn	02 41 06.0	-1.2
JNH					Sn	02 41 24.4	0.0
TUQ	**Turquoise Moun**	**1.28**	**99**		Pn	02 41 06.4	-1.2
BTPC	**Burnt Peak**	**1.32**	**223**		Sn	02 41 26.5	+0.6
VES	**Vestal, Richgr**	**1.32**	**279**		Sb	02 41 25.6	+0.1
VES	**Vestal, Richgr**	**1.32**	**279**		Pn	02 41 07.8	-0.3
WCT	**Wildcat Mounta**	**1.34**	**31**		Pn	02 41 07.3	-1.0
GRAC	**Grapevine Rang**	**1.35**	**4**		Pn	02 41 08.1	-0.4
GRAC				IAML		02 41 32.9	
	comp=N,262nm,0.9s						
GRAC				IAML		02 41 34.1	
	comp=E,178nm,0.8s						
SGV	**South Grapevin**	**1.38**	**15**		Pn	02 41 08.0	-1.0
SGV					Sg	02 41 27.6	-0.1
CHFC	**Chilao Flat St**	**1.38**	**199**		Sn	02 41 27.6	0.0
SIL	**Silver Peak**	**1.40**	**157**		Pn	02 41 09.2	-0.1
BFSC	**Mount Baldy Ra**	**1.41**	**186**		Sn	02 41 28.4	+0.2
BFSC	**Mount Baldy Ra**	**1.41**	**186**		Pn	02 41 08.2	-1.2
BFSC				IAML		02 41 28.6	
	comp=E,143nm,0.6s						
BFSC				IAML		02 41 30.2	
	comp=N,157nm,0.2s						
SS2	**San Sevaine**	**1.44**	**181**		Pb	02 41 10.4	+0.1
OSI	**Osito Audit: C**	**1.45**	**225**	Pn	Pb	02 41 10.7	+0.1
OSI				IAML		02 41 31.7	
	comp=N,153nm,0.7s						
OSI				IAML		02 41 32.0	
	comp=E,164nm,0.6s						
BBRC	**Big Bear Solar**	**1.45**	**162**		Pb	02 41 10.5	-0.2
MWC	**Mount Wilson**	**1.50**	**199**		Pn	02 41 09.6	-1.0
MWC				IAML		02 41 32.0	
	comp=N,178nm,0.5s						
MWC				IAML		02 41 32.5	
	comp=E,201nm,0.4s						
DECC	**Green Verdugo**	**1.56**	**207**		Sg	02 41 33.4	0.0
SVD	**Seven Oaks Dam**	**1.57**	**168**		Pb	02 41 12.7	+0.1
MTPC	**Mountain Pass**	**1.58**	**95**		Pn	02 41 10.0	-1.7
MTPC				IAML		02 41 33.4	
	comp=N,99nm,0.2s						
MTPC				IAML		02 41 36.8	
	comp=E,109nm,0.3s						
PASC	**Pasadena Art C**	**1.58**	**202**		Pn	02 41 10.8	-0.8
PASC				IAML		02 41 37.4	
	comp=E,88nm,0.4s						
PASC				IAML		02 41 39.3	
	comp=N,70nm,0.5s						
GTM	**Goat Mountain**	**1.63**	**145**		Pb	02 41 13.4	-0.2
GTM					Sg	02 41 35.3	-0.5
TPNV	**Topopah Spring**	**1.64**	**37**		Pn	02 41 11.8	-0.7
TPNV				IAML		02 41 39.9	
	comp=N,70nm,0.5s						
GMN	**Gold Mountain**	**1.66**	**6**	Pn	Pn	02 41 12.4	-0.6
GMRC	**Granite Mounta**	**1.72**	**119**		Pn	02 41 11.7	-1.9
DSP	**Deep Springs**	**1.77**	**347**		Pn	02 41 14.1	0.0
BLAC	**Blackrock camp**	**1.81**	**150**		Pn	02 41 14.0	-0.9
TPC	**Twentynine Pal**	**1.93**	**142**		Pn	02 41 15.6	-0.9
HMTC	**Hemet**	**1.97**	**168**		Pn	02 41 16.2	-0.8
DANC	**Danby, Needles**	**1.99**	**120**		Pn	02 41 17.4	+0.1
DANC				IAML		02 41 56.7	
	comp=N,106nm,0.7s						
ELS	**Elsinore Mount**	**1.99**	**179**		Pn	02 41 16.8	-0.5
ELS				IAML		02 41 47.6	
	comp=E,71nm,0.3s						
ELS				IAML		02 41 54.4	
	comp=N,46nm,0.6s						
POB	**Polly Butte**	**2.01**	**167**		Pn	02 41 16.8	-0.7
BELC	**Belle Mtn. Jos**	**2.04**	**143**		Pn	02 41 17.8	-0.3
BELC				IAML		02 41 49.4	
	comp=N,70nm,0.5s						
BELC				IAML		02 41 51.0	
	comp=E,96nm,0.5s						
SHPR	**Sheep Range**	**2.06**	**65**		Pn	02 41 18.4	0.0
V12A	**Nelson**	**2.14**	**87**		Pn	02 41 18.2	-1.2
DNR	**Dunn Ranch,Anz**	**2.19**	**161**		Pn	02 41 20.3	+0.2
PMD	**Palm Desert**	**2.19**	**155**		Pn	02 41 18.8	-1.2
PMD				IAML		02 41 58.8	
	comp=E,44nm,0.7s						
PFO	**Pinyon Flats O**	**2.20**	**157**	Pn	Pn	02 41 20.0	-0.1
PFO				IAML		02 41 55.5	
	comp=E,39nm,0.7s						
MDPB	**Devils Postpil**	**2.37**	**327**		Pn	02 41 22.7	0.0
MDPB				IAML		02 42 00.7	
	comp=N,30nm,0.8s						
MDPB				IAML		02 42 02.6	
	comp=E,33nm,0.8s						
IRM	**Iron Mountain**	**2.42**	**127**		Pn	02 41 23.3	+0.1
IRM				IAML		02 42 00.8	
	comp=N,38nm,0.3s						
IRM				IAML		02 42 01.4	
	comp=E,39nm,0.4s						
S11A	**Rachel**	**2.43**	**34**	Pn	Pn	02 41 23.7	+0.2
S11A				IAML		02 42 13.4	
	comp=N,33nm,0.9s						
S11A				IAML		02 42 24.6	
	comp=E,35nm,0.9s						
NEE2	**Needles Airpor**	**2.50**	**110**	Pn	Pn	02 41 24.2	0.0
NEE2				IAML		02 42 07.6	
	comp=N,64nm,0.6s						
NEE2				IAML		02 42 10.9	
	comp=E,57nm,0.4s						
PKD	**Bear Valley Ra**	**2.51**	**278**		Pn	02 41 24.8	+0.4
BORC	**Borrego Spring**	**2.53**	**159**	Pn	Pn	02 41 24.3	-0.3
BORC				IAML		02 42 06.3	
	comp=N,35nm,0.3s						
BORC				IAML		02 42 09.2	
	comp=E,30nm,0.6s						
BC3	**Big Chuckawall**	**2.59**	**139**		Pn	02 41 24.3	-1.4
BC3				IAML		02 42 09.2	
	comp=E,28nm,0.4s						
BC3				IAML		02 42 21.2	
	comp=N,30nm,0.6s						
PRN	**Pahroc Range**	**2.63**	**47**	Pn	Pn	02 41 25.3	-0.8
PRN				IAML		02 42 15.4	
	comp=E,38nm,0.6s						
PRN				IAML		02 42 22.1	
	comp=N,45nm,0.6s						
DPP	**Dos Picos Cty**	**2.68**	**170**		Pn	02 41 25.9	-0.8
DPP				IAML		02 42 08.1	
	comp=E,53nm,0.6s						
DPP				IAML		02 42 08.3	
	comp=N,23nm,0.5s						
LHV	**Little Huntoon**	**2.73**	**343**	Pn	Pn	02 41 27.2	-0.2
PMPB	**Monarch Peak**	**2.76**	**283**	Pn	Pn	02 41 27.7	-0.1
PMPB				IAML		02 42 09.8	
	comp=E,52nm,0.8s						
PMPB				IAML		02 42 17.9	
	comp=N,43nm,0.8s						
NV11	**Mina Array Sit**	**2.83**	**349**	Pn	Pn	02 41 28.4	-0.6
NVAR	**Mina Array Bea**	**2.86**	**347**	Pn	Pn	02 41 28.0	-1.4
BAR	**Barrett**	**3.03**	**167**	Pn	Pn	02 41 30.4	-1.2
BLYC	**Blythe**	**3.08**	**127**		Pn	02 41 29.9	-2.3
BLYC				IAML		02 42 07.4	
	comp=E,23nm,0.5s						
BLYC				IAML		02 42 25.8	
	comp=N,20nm,0.6s						
RYN	**Ryan**	**3.09**	**345**	Pn	Pn	02 41 31.0	-1.5
R11B	**Troy Canyon, C**	**3.09**	**29**	Pn	Pn	02 41 31.7	-0.9
YUH	**Yuha Desert**	**3.26**	**156**	Pn	Pn	02 41 33.3	-1.3
CMB	**Columbia Colle**	**3.34**	**316**	Pn	Pn	02 41 34.7	-1.1
CMB				IAML		02 42 31.4	
	comp=E,13nm,0.8s						
CMB				IAML		02 42 31.7	
	comp=N,14nm,0.7s						
GLA	**Glamis**	**3.39**	**139**	Pn	Pn	02 41 35.3	-1.2
GLA				IAML		02 42 35.1	
	comp=N,35nm,0.6s						
CCUT	**Cedar City**	**3.82**	**59**	Pn	Pn	02 41 42.2	-0.4
CCUT				IAML		02 43 53.5	
	comp=E,8.5nm,4.7s						
ESJX	**Sierra Juarez**	**3.85**	**160**	Pn	Pn	02 41 42.3	-0.6
KNB	**Kanab**	**4.00**	**69**	Pn	Pn	02 41 44.6	-0.4
KNB				IAML		02 43 18.2	
	comp=E,8.5nm,3.8s						
KNB				IAML		02 43 46.1	
	comp=N,9.3nm,4.9s						
Y14A	**Wickenburg**	**4.05**	**114**	Pn	Pn	02 41 45.4	-0.3
Y14A				IAML		02

NLAI Namlea 4.32 346 P Pn 02 47 50.9 +4.6
SOEI Soe 4.49 239 Pn **02 47 45.8 -2.8**
SOEI Soe 4.49 239 P Pn **02 47 51.6 +3.0**
SOEI Soe 4.49 239 P Pn **02 47 51.9 +3.3**
BATI Baumata 5.23 238 P Pn **02 48 01.4 +3.1**
1µm,0.5s,baz=121,slow=1.8,SNR=142
BATI S Sn **02 48 57.3 -0.7**
525nm,0.5s,baz=300,slow=23,SNR=12
BATI Baumata 5.23 238 P Pn **02 48 01.6 +3.3**
DRS Darwin Rock St 5.63 152 P Pn **02 48 05.0 +1.5**
DRS Darwin Rock St 5.63 152 S Sn **02 49 06.6 -0.9**
SANI Sanana 5.79 338 P Pn 02 48 10.1 +4.3
SANI Sanana 5.79 338 P Pn 02 48 10.0 +4.2
MMRI Maumere 6.00 258 Pn **02 48 04.4 -4.0**
MMRI Maumere 6.00 258 P Pn **02 48 12.1 +3.6**
MMRI Maumere 6.00 258 S Sn **02 49 18.9 +2.7**
MMRI Maumere 6.00 258 P Pn **02 48 12.0 +3.6**
0.8nm5µm184nm,0.7s
FAKI Fak Fak 6.06 42 Pn **02 48 08.6 -0.8**
FAKI Fak Fak 6.06 42 P Pn **02 48 09.0 -0.4**
0.9nm3µm235nm,0.7s
MTN Manton Dam 6.10 152 Pn **02 48 09.7 -0.1**
EDFI Ende, Flores 6.55 258 P Pn **02 48 19.3 +3.4**
0.4nm1µm130nm,1.1s
KMPI Kaimana, Papua 6.67 56 P Pn **02 48 19.1 +1.7**
SWI Sorong 7.23 25 P Pn **02 48 25.9 +0.9**
BASI Baing, Sumba 7.99 249 P Pn **02 48 36.1 +1.0**
2µm203nm,0.7s
WSI Waingapu 8.10 254 P Pn **02 48 38.6 +2.1**
KNRA Kununurra 8.19 176 Pn **02 48 36.7 -1.1**
BKSI Bulukumba 8.28 284 P Pn 02 48 43.3 +4.4
RKPI Ransiki, Papua 8.40 46 P Pn **02 48 40.6 0.0**
WBSI Waikabubak, Su 8.95 255 P Pn **02 48 50.6 +2.6**
1µm128nm,0.7s
BAKI Biak 10.06 52 P Pn **02 49 04.9 +2.2**
2µm161nm,0.6s
PLAI Plampang 10.38 262 P Pn **02 49 08.2 +1.3**
PLAI Plampang 10.38 262 P Pn **02 49 07.7 +0.8**
647nm53nm,0.7s
FITZ Fitzroy Crossi 10.87 193 P Pn **02 49 11.7 -1.5**
110nm,0.5s,baz=27,slow=11,SNR=184
FITZ S Sn **02 51 06.3 -7.1**
69nm,0.3s,baz=107,slow=21,SNR=8.4
FITZ Fitzroy Crossi 10.87 193 Pn **02 49 11.8 -1.4**
FITZ Fitzroy Crossi 10.87 193 P Pn **02 49 14.0 +0.8**
TWSI Taliwang, Sumb 11.25 263 P Pn **02 49 21.1 +2.7**
26nm,1.0s
TOLI2 Tolitoli 11.26 319 Pn **02 49 15.0 -3.5**
TOLI2 Tolitoli 11.26 319 P P **02 49 23.7 -2.8**
SMPI Sarmi 11.82 63 P Pn **02 49 28.2 +2.5**
68nm,0.8s
GENI Genyem 12.88 69 P P **02 49 43.4 -1.2**
GENI Genyem 12.88 69 P Pn **02 49 41.3 +1.7**
96nm,0.9s
JAY Jayapura 13.41 69 P Pn **02 49 47.5 +1.1**
14nm,0.5s,baz=216,slow=7.3,SNR=8.1
JAY Jayapura 13.41 69 P P **02 49 50.2 -0.3**
18nm,0.6s
WB0 Warramunga Arr 13.65 154 Pn Pn **02 49 47.7 -1.6**
WRAB Tennant Creek 13.78 155 Pn Pn **02 49 49.3 -1.7**
WRA Warramunga Arr 13.78 155 P Pn **02 49 49.9 -1.1**
14nm,0.4s,baz=322,slow=14,SNR=101
WRA S Sn 02 52 13.7 -10
99nm,0.7s,baz=327,slow=24,SNR=18
WRA Warramunga Arr 13.78 155 Pn Pn **02 49 49.1 -1.9**
WR8 Warramunga Ar 13.86 154 Pn Pn **02 49 49.5 -2.5**
JAGI Jajag, Banyuwa 13.93 265 P P **02 49 54.2 -1.9**
JAGI Jajag, Banyuwa 13.93 265 P P **02 49 55.2 -1.0**
MYLDM Lahad Datu 15.83 322 P P **02 50 16.1 -1.2**
MYLDM IAmb IAmb 02 50 35.6
comp=Z,36nm,1.0s
MYLDM Lahad Datu 15.83 322 P P **02 50 21.9 +4.6**
MBWA Marble Bar 15.88 210 Pn Pn **02 50 16.7 -0.4**
MBWA IAmb IAmb 02 50 18.1
comp=Z,21nm,0.8s
MBWA Marble Bar 15.88 210 P P **02 50 17.5 -0.3**
COEN Coen 16.09 115 P P **02 50 19.9 -0.3**
COEN Coen 16.09 115 P P **02 50 21.0 +0.8**
PSA00 Pilbara Seismi 16.18 209 P P **02 50 20.9 -0.1**
PSA00 IAmb IAmb 02 50 38.0
comp=Z,51nm,0.8s
PSA00 Pilbara Seismi 16.18 209 P Pn **02 50 19.7 -1.1**
PSA00 IAmb IAmb 02 50 38.4
comp=Z,13nm,0.8s
PSA00 Pilbara Seismi 16.18 209 P P **02 50 21.3 +0.2**
PCJI Pacitan 16.86 266 P P **02 50 27.2 -1.4**
comp=Z,46nm,1.4s
AS31 Alice Springs 17.03 162 P **02 50 30.4 -0.1**
ASAR Alice Springs 17.03 162 P Pn **02 50 32.8 +1.6**
comp=Z,52nm,0.6s,baz=345,slow=11,SNR=648
ASAR S S 02 53 29.2 -11
comp=Z,3.6nm,0.5s,baz=322,slow=14,SNR=4.4
ASAR Alice Springs 17.03 162 Pn **02 50 30.9 -0.3**
ASAR P **02 50 31.2 +0.7**
AUALC St Philip's Co 17.05 162 P Pn **02 50 33.3 +2.0**
QIS Mount Isa 17.09 141 P Pn **02 50 32.5 +0.6**
SBUM Sibu 18.71 301 Pn **02 50 52.2 +1.2**
SBUM Sibu 18.71 301 P Pn **02 50 52.3 +1.2**
PMG Port Moresby 18.88 97 P Pn **02 50 54.2 +1.1**
comp=Z,30nm,0.7s,baz=11,slow=1.7,SNR=9.8
PMG LR LR 02 58 31.9
comp=Z,48nm,18.2s,baz=178,slow=38
PMG Port Moresby 18.88 97 Pn **02 50 55.9 +2.8**
PMG IAmb IAmb 02 50 56.4
comp=Z,35nm,0.8s
PMG Port Moresby 18.88 97 P Pn **02 50 55.3 +2.2**
MTSU Mount Surprise 18.97 126 P Pn **02 50 53.3 -0.8**
BBJI Bungbulang 20.35 269 P Pn 02 51 10.3 -0.1
TPI Tanjungpandan 20.96 282 P P **02 51 14.7 +1.5**
comp=Z,33nm,0.9s
MEEK Meekatharra 21.14 204 P P **02 51 17.9 +2.9**
DBJI Dramaga 21.28 271 P P **02 51 18.3 +1.6**
INKA Innaminka 23.43 151 P P **02 51 41.0 +3.5**
INKA IAmb IAmb 02 51 41.4
comp=Z,14nm,0.7s
QLP Quilpie 24.39 143 P P **02 51 47.6 +1.3**
STKA Stephens Creek 27.33 155 P P **02 52 13.8 +1.1**
comp=Z,2.4nm,0.4s,baz=328,slow=8.9,SNR=9.6
comp=Z,2.4nm,0.4s
IPM Ipoh 29.57 293 P P **02 52 34.1 +1.3**
IPM IAmb IAmb 02 52 34.5
comp=Z,16nm,0.7s
KULM Kulim 30.24 294 P P **02 52 38.6 -0.1**
KULM IAmb IAmb 02 52 40.0
comp=Z,9.2nm,0.7s
RPSI Rantau Prapat 30.88 288 P P **02 52 44.2 -0.1**
RPSI IAmb IAmb 02 52 45.5
comp=Z,12nm,0.7s
CMAR Chiang Mai Arr 38.66 312 P P **02 53 51.7 +0.7**
comp=Z,2.6nm,0.3s,baz=147,slow=7.3,SNR=20
CMAR PcP **PcP 02 56 01.0 +0.8**
comp=Z,1.6nm,0.3s,baz=133,slow=4.0,SNR=5.0
comp=Z,2.6nm,0.3s
CHTO Chiang Mai 38.88 313 P **02 53 53.8 +0.9**
CHTO IAmb IAmb 02 53 55.2
comp=Z,9.2nm,0.9s
WHN Wuhan 40.04 341 ⇓P P **02 54 02.9 +0.7**
WHN pmax pmax
comp=Z,74nm,0.8s
NJ2 Nanjing 40.28 348 *e*P P **02 54 06.1 +1.9**
NJ2 pmax pmax
comp=Z,39nm,0.5s
PZH PanZhiHua 42.39 324 P P **02 54 22.6 +0.9**
LYN LuoYang 44.34 341 P P **02 54 38.3 +1.3**
LYN pmax pmax
comp=Z,31nm,0.8s
KSRS Korea Array 44.67 360 P P **02 54 39.4 -0.2**
comp=Z,4.1nm,0.6s,baz=177,slow=9.1,SNR=12
comp=Z,4.1nm,0.6s
MJAR Matsushiro Arr 44.76 11 P P **02 54 38.3 -2.1**
comp=Z,3.5nm,0.8s,baz=192,slow=9.6,SNR=4.8
comp=Z,3.5nm,0.8s
XAN Xi'an 45.12 337 ⇓P P **02 54 42.4 -0.9**
XAN pmax pmax
comp=Z,41nm,1.0s
XAN LR LR
comp=Z,2µm,17.9s
HNS HongShan 46.36 345 ⇑P P **02 54 52.0 -0.9**
HNS pmax pmax
comp=Z,24nm,1.0s
SHL Shillong 48.19 314 P **02 55 07.5 0.0**
SHL IAmb IAmb 02 55 08.1
comp=Z,12nm,0.8s
BJI Beijing 48.54 348 P P **02 55 08.5 -1.1**
BJI pmax pmax
comp=Z,5.0nm,1.2s
LZDM Lanzhou Array 48.93 334 P P **02 55 13.4 +0.3**
comp=Z,2.5nm,0.4s,baz=146,slow=12,SNR=5.7
comp=Z,2.5nm,0.4s
LZH Lanzhou 48.98 334 *e*P P **02 55 14.0 +0.7**
LZH pmax pmax
comp=Z,23nm,1.5s
HHC Hu-ho-hao-te 50.44 344 *e*P P **02 55 27.6 +3.4**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,130nm,4.1s
USRK Ussuriysk Ar. 51.53 4 P P **02 55 31.3 -0.8**
comp=Z,4.7nm,0.6s,baz=184,slow=7.0,SNR=9.5
comp=Z,4.7nm,0.6s
EVN Everest 53.25 313 P **02 55 46.1 +0.2**
GTA Gaotai 53.52 333 P P **02 55 47.8 +0.7**
GTA sP pwP 02 56 30.1 +4.2
GTA PcP **PcP 02 56 52.3 +0.3**
GTA pmax pmax
comp=Z,14nm,1.5s
HILR Hailar Array B 57.25 353 P P **02 56 13.3 -0.1**
comp=Z,3.3nm,0.6s,baz=148,slow=8.4,SNR=2.0
comp=Z,3.3nm,0.6s
ULN Ulaanbaatar 58.16 343 P **02 56 20.9 +1.0**
SONM Songino Array 58.32 343 P P **02 56 21.7 +0.7**
comp=Z,4.0nm,0.5s,baz=168,slow=7.9,SNR=28
SONM PcP **sP 02 57 10.0 -0.6**
comp=Z,1.1nm,0.5s,baz=153,slow=3.3,SNR=2.4
comp=Z,4.0nm,0.5s
PETK Petropavlovsk- 65.33 19 P P **02 57 07.0 -0.6**
comp=Z,1.7nm,0.5s,baz=194,slow=6.1,SNR=9.6
comp=Z,1.7nm,0.5s
KSH Kashi 67.14 318 P P **02 57 19.8 +0.1**
KSH pmax pmax
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 67.62 328 P P **02 57 22.1 -0.3**
comp=Z,4.4nm,0.5s,baz=121,slow=7.9,SNR=79
MKAR PcP **PcP 02 57 48.1 -0.3**
comp=Z,3.9nm,0.7s,baz=129,slow=5.1,SNR=5.5
comp=Z,4.4nm,0.5s
MKAR Makanchi Array 67.62 328 P **02 57 21.9 -0.5**
MAKZ Makanchi 67.80 328 P **02 57 23.2 -0.3**
ZAA0 Zalesovo Array 71.20 335 IAmb IAmb 02 57 44.1
comp=Z,15nm,1.1s
ZALV Zalesovo Beam 71.20 335 P P **02 57 43.1 -1.1**
comp=Z,5.2nm,0.6s,baz=123,slow=4.7,SNR=27
comp=Z,5.2nm,0.6s
ZALV Zalesovo Beam 71.20 335 P **02 57 42.9 -1.3**
CHGR Chuyangaron 71.36 315 P **02 57 45.3 -0.4**
CHGR IAmb IAmb 02 57 46.9
comp=Z,8.4nm,0.7s
KURBB Kurchatov Arra 71.96 329 P P **02 57 48.6 -0.2**
comp=Z,16nm,0.7s,baz=132,slow=5.0,SNR=150
comp=Z,16nm,0.7s
KURK Kurchatov 71.97 329 P **02 57 48.6 -0.3**
KK31 Karatay Array 72.50 320 P **02 57 53.0 +0.8**
KKAR Karatay Array 72.50 320 P **02 57 52.3 +0.1**
SEY Seymchan 72.59 11 P P **02 57 51.7 -0.6**
comp=Z,7.9nm,0.7s,baz=198,slow=4.4,SNR=11
comp=Z,7.9nm,0.7s
MAW Mawson 73.87 201 P P **02 58 01.1 +1.4**
comp=Z,2.1nm,0.5s,baz=71,slow=6.2,SNR=4.7
comp=Z,2.1nm,0.5s
BVAR Borovoye Array 77.49 328 P P **02 58 20.1 -0.5**
comp=Z,3.1nm,0.6s,baz=122,slow=8.8,SNR=40
comp=Z,9.1nm,0.6s
TIXI Tiksi 78.94 0 P P **02 58 26.9 -1.2**
comp=Z,3.6nm,0.4s,baz=218,slow=2.3,SNR=7.8
comp=Z,3.6nm,0.4s
TIXI Tiksi 78.94 0 P **02 58 27.1 -1.1**
QSPA South Pole Qui 82.53 180 P P **02 58 51.0 +3.4**
comp=Z,2.5nm,0.5s,baz=302,slow=1.8,SNR=9.4
AKTO Akhtubinsk 83.33 323 LR LR 03 38 06.8
comp=Z,23nm,21.1s,baz=71,slow=37
TROLL Troll, Antarti 93.27 195 ⇑P P **02 59 40.5 +1.2**
comp=Z,44nm,0.8s
ILAR Eielson Array 94.53 25 P P **02 59 42.2 -2.6**
comp=Z,0.6nm,0.8s,baz=254,slow=5.5,SNR=6.8
comp=Z,0.6nm,0.8s
SNAA Sanae 94.80 194 ⇑P P **02 59 47.0 +0.9**
SNAA Sanae 94.80 194 P P **02 59 47.0 +0.9**
comp=Z,2.3nm,0.8s,baz=151,slow=4.4,SNR=22
comp=Z,2.3nm,0.8s
VNA2 Neumayer--Watz 96.38 193 ⇑P P **02 59 54.0 +0.8**
baz=34,slow=36
ARCES ARCESS Array B 101.37 340 P Pdif **03 00 13.4 -2.1**
comp=Z,2.0nm,0.8s,baz=78,slow=4.9,SNR=6.1
FINES FINESS Array B 102.29 331 PKiKP **PKiKP 03 04 40.3 -0.5**
comp=Z,2.0nm,0.9s,baz=151,slow=4.4,SNR=4.7
YKA Yellowknife Ar 108.95 26 PKiKP **PKiKP 03 04 52.0 -1.0**
comp=Z,0.3nm,0.7s,baz=265,slow=3.8,SNR=4.0
CLL Collm 111.41 322 *e*PKiKP **PKiKP 03 04 58.0 -0.1**
GERES GERESS Array B 111.60 320 PKiKP **PKiKP 03 04 57.7 -1.0**
comp=Z,0.5nm,0.5s,baz=66,slow=2.4,SNR=5.0
NVAR Mina Array Bea 112.99 51 PKiKP **PKiKP 03 05 02.1 +0.3**
comp=Z,0.3nm,0.7s,baz=298,slow=3.1,SNR=3.9
WTTA Wattenberg 113.33 318 *i* PKiKP **PKiKP 03 05 01.6 -0.5**
comp=Z,3.4nm,0.4s
DAVA Damuels 114.48 319 *i* PKP **PKiKP 03 05 03.8 -0.5**
comp=Z,12nm,1.2s
KEST Kesra 117.64 306 PKP **PKPdf 03 05 08.6 -2.0**
comp=Z,2.7nm,0.9s,baz=11,slow=5.2,SNR=5.4
PDAR Pinedale Array 118.49 45 PKP **PKPdf 03 05 11.4 -0.8**
comp=Z,0.9nm,0.7s,baz=320,slow=2.2,SNR=7.8
PDAR PKKPbc **PKKPbc 03 15 29.6 -1.4**
comp=Z,0.4nm,0.7s,baz=101,slow=4.7,SNR=5.1
TXAR Lajitas Array 126.71 59 PKP **PKiKP 03 05 28.2 -0.5**
comp=Z,0.5nm,0.4s,baz=201,slow=2.9,SNR=20
TORD Torodi Ar. Bea 127.12 281 PKP **PKPdf 03 05 28.4 -0.8**
comp=Z,2.2nm,0.4s,baz=46,slow=4.8,SNR=2.2
DBIC Dimbokro 133.40 272 PKP **PKiKP 03 05 41.4 -1.0**
comp=Z,2.7nm,0.9s,baz=52,slow=3.0,SNR=5.2
CPUP Villa Florida 146.00 171 PKPbc **PKPab 03 06 04.9 -0.5**
comp=Z,1.0nm,0.4s,baz=41,slow=1.7,SNR=12
LPAZ La Paz 151.42 146 PKPbc **PKiKP 03 06 20.3 +0.2**
comp=Z,5.0nm,0.4s,baz=23,slow=1.6,SNR=41

IDC 19 02:58:10.2±5.7, 15°78S×66°47E, h0km, mb3.7/3, mbtmp3.7/3, MS3.5/16, Error ellipse: s-maj=544.2km s-min=36.4km az=29.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.99**	**37**	T	T	03 09 44.2	
	baz=217,slow=75,SNR=397						
H08S2	**Diego Garcia H**	**10.00**	**37**	T	T	03 09 45.0	
	baz=217,slow=75,SNR=464						
H08S3	**Diego Garcia H**	**10.01**	**37**	T	T	03 09 49.6	
	baz=217,slow=75,SNR=428						
PALK	**Pallekele**	**26.89**	**33**	LR	LR	03 11 26.4	
	comp=Z,129nm,21.6s,baz=204,slow=30						
KMBO	**Kilima Mbogo**	**32.28**	**294**	LR	LR	03 15 29.8	
	comp=Z,48nm,20.1s,baz=96,slow=32						
H04N2	**CROZET ISLANDS**	**32.69**	**199**	T	T	03 40 23.5	
	baz=28,slow=75,SNR=127						
H04N1	**CROZET ISLANDS**	**32.69**	**199**	T	T	03 40 26.3	
	baz=28,slow=75,SNR=127						
H04N3	**CROZET ISLANDS**	**32.71**	**199**	T	T	03 40 24.2	
	baz=28,slow=75,SNR=176						
MATP	**Matopo**	**36.33**	**257**	LR	LR	03 19 19.9	
	comp=Z,68nm,18.0s,baz=60,slow=35						
PSI	**Prapat**	**37.03**	**63**	LR	LR	03 17 34.1	
	comp=Z,96nm,19.4s,baz=216,slow=32						
MBAR	**Mbarara**	**38.34**	**290**	LR	LR	03 19 27.9	
	comp=Z,69nm,18.7s,baz=124,slow=33						
LBTB	**Lobatse**	**39.27**	**250**	LR	LR	03 20 50.7	
	comp=Z,78nm,18.1s,baz=74,slow=35						
BOSA	**Boshof**	**40.05**	**244**	LR	LR	03 19 48.1	
	comp=Z,108nm,18.1s,baz=38,slow=32						
BRDH	**Bariadhala**	**45.47**	**33**	LR	LR	03 24 49.2	
	comp=Z,51nm,18.7s,baz=240,slow=35						
H01W3	**Cape Leeuwin H**	**46.62**	**123**	T	T	03 56 50.7	
	baz=282,slow=75,SNR=18						
H01W2	**Cape Leeuwin H**	**46.62**	**123**	T	T	03 56 50.9	
	baz=282,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**46.63**	**123**	T	T	03 56 52.0	
	baz=282,slow=75,SNR=17						
TSUM	**Tsumeb**	**46.63**	**258**	LR	LR	03 25 27.0	
	comp=Z,65nm,18.9s,baz=140,slow=35						
CMAR	**Chiang Mai Arr**	**46.69**	**44**	LR	LR	03 23 23.8	
	comp=Z,45nm,21.1s,baz=220,slow=32						
KAPI	**Kappang**	**53.35**	**84**	LR	LR	03 27 30.0	
	comp=Z,35nm,20.1s,baz=254,slow=33						
ASAR	**Alice Springs**	**63.47**	**109**	P	P	03 08 44.0	+1.5
	0.4nm,0.8s,baz=273,slow=5.3,SNR=4.2						
ASAR				LR	LR	03 33 30.5	
	comp=Z,26nm,18.4s,baz=272,slow=33						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**63.89**	**12**	LR	LR	03 32 37.5	
	comp=Z,29nm,18.6s,baz=320,slow=32						
WRA	**Warramunga Arr**	**64.35**	**105**	P	P	03 08 46.8	-1.6
	1.3nm,1.0s,baz=258,slow=6.1,SNR=4.4						
	1.3nm,1.0s						
KURBB	**Kurchatov Arra**	**66.95**	**8**	LR	LR	03 35 42.4	
	comp=Z,46nm,20.7s,baz=176,slow=34						
SONM	**Songino Array**	**72.67**	**27**	LR	LR	03 39 12.5	
	comp=Z,44nm,21.1s,baz=340,slow=34						
DBIC	**Dimbokro**	**74.03**	**282**	LR	LR	03 40 41.1	
	comp=Z,37nm,18.8s,baz=28,slow=34						
ESDC	**Sonseca Array**	**85.58**	**313**	P	P	03 10 50.2	-0.5
	0.5nm,0.7s,baz=124,slow=4.6,SNR=3.4						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**152.88**	**354**	PKPbc	PKiKP	03 18 10.4	+0.3
	0.7nm,0.8s,baz=356,slow=6.9,SNR=4.6						

*IDC **19** 03:01:18.3±2.0,8°19S×124°69E, h0km, mb3.2/1, mbtmp3.4/5, ML3.4/4, Error ellipse: s-maj=55.0km s-min=27.1km az=76.0*

*DJA **19** 03:01:29.5±0.4,9°S±4°×12°4E±°, h10km, M3.0/7, MLv3.0/7*

ISC 19 03:01:20.1±1.4, 8°4S±0°1×124°3E±0°1, h10km, n8, σ1°29/8, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.31**	**181**	P	Pg	03 01 51.5	+6.2
BATI	**Baumata**	**1.87**	**200**	Pn	**Pg**	**03 01 56.9**	**+1.0**
	25nm,0.3s,baz=293,slow=2.5,SNR=14						
BATI				Sn	**Sn**	**03 02 13.5**	**-2.3**
	22nm,0.3s,baz=255,slow=23,SNR=8.6						
	65nm,0.3s						
BATI	**Baumata**	**1.87**	**200**	P	**Pg**	**03 01 56.8**	**+0.9**
MMRI	**Maumere**	**2.05**	**264**	P	**Pn**	**03 01 54.7**	**0.0**
FITZ	**Fitzroy Crossi**	**9.69**	**172**	Pn	**Pn**	**03 03 40.3**	**+0.6**
	0.2nm,0.3s,baz=350,slow=11,SNR=7.5						
FITZ				Sn	Sn	03 05 16.4	-12
	0.9nm,0.3s,baz=104,slow=20,SNR=14						
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**15.01**	**141**	Pn	**Pn**	**03 04 51.7**	**-0.7**
	0.1nm,0.3s,baz=321,slow=12,SNR=5.9						
WRA				Sn	Sn	03 07 24.9	-14
	0.1nm,0.3s,baz=316,slow=23,SNR=3.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**17.72**	**150**	P	**P**	**03 05 28.4**	**+0.4**
	0.2nm,0.3s,baz=332,slow=14,SNR=7.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**66.48**	**330**	P	**P**	**03 12 09.6**	**-0.3**
	0.1nm,0.4s,baz=151,slow=9.2,SNR=1.3						
	0.1nm,0.4s						

GCG 19 03:04:01.4±1.2, 14°06N×91°45W, h41km±46km, MD3.5, ML3.3, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.35**	**16**	*i* P	Pn	03 04 14.4	+4.0
STG2	**El Palmar, Qui**	**0.38**	**11**	*i* P	Pn	03 04 15.1	+4.3
STG8	**El Palmar, Qui**	**0.40**	**14**	*i* P	Pn	03 04 15.3	+4.2
STG8				*e*S	Sn	03 04 25.6	+7.8
STG8				IAML		03 04 27.6	
	comp=N,1µm,0.2s						
ESSG	**Sabana Grande**	**0.68**	**62**	*e*P	Pn	03 04 14.6	0.0
ESSG				*i* S	Sn	03 04 25.3	+1.1
SOKI	**Kika Raxquin**	**0.75**	**3**	*i* P	Pn	03 04 16.9	+0.8
SOKI				*e*S	Sn	03 04 28.2	+1.7
FG16	**Alotenango, Sa**	**0.93**	**77**	*e*P	Pn	03 04 15.7	-2.5
PCG5	**San Vicente Pa**	**1.05**	**82**	*e*P	Pn	03 04 17.1	-2.7
PCG5				*e*S	Sn	03 04 29.0	-4.3
APG	**El Apazote**	**1.33**	**45**	*e*P	Pn	03 04 24.7	+0.9
NUBE	**Las Nubes**	**1.63**	**95**	*e*P	Pn	03 04 27.3	-0.4

*UPP **19** 03:11:17.5±0.7, 64°00N×22°84E, h0km, ML1.7, Presumed earthquake*

*IDC **19** 03:11:18.3±1.0, 63°94N×23°31E, h0km, mbtmp2.7/4, ML1.6/4, Error ellipse: s-maj=14.8km s-min=8.5km az=72.0*

*HEL **19** 03:11:18.0±0.0, 64°00N×22°88E, h0km, ML1.3, Explosion*

ISC 19 03:11:17.2±0.9, 64°01N±0°03×22°86E±0°02, h0km, n21, σ0°61/34, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBF8	**Ulkokalla**	**0.41**	**38**	*e*P	**Pg**	**03 11 25.5**	**+0.4**
OBF8				*e*S	**Sg**	**03 11 30.8**	**+0.3**
OBF0	**Syolatti, Pyha**	**0.78**	**50**	*e*P	**Pg**	**03 11 31.9**	**-0.2**
OBF0				*e*S	**Sg**	**03 11 41.9**	**-0.3**
BURU	**Burvik**	**0.87**	**313**	P	**Pg**	**03 11 33.8**	**+0.1**
BURU	**Burvik**	**0.87**	**313**	*e*P	**Pg**	**03 11 33.9**	**+0.1**
BURU				*e*S	**Sg**	**03 11 44.9**	**-0.1**
OUF	**Merijarvi**	**0.90**	**65**	*e*P	**Pg**	**03 11 34.1**	**-0.2**
OUF				*e*S	**Sg**	**03 11 45.1**	**-0.8**
UMAU	**Umeaa**	**0.97**	**264**	P	**Pg**	**03 11 35.5**	**-0.1**
UMAU	**Umeaa**	**0.97**	**264**	*e*P	**Pg**	**03 11 35.6**	**-0.1**
UMAU				*e*S	**Sg**	**03 11 47.8**	**-0.4**
VAF	**Ylistaro**	**0.97**	**185**	*e*P	**Pg**	**03 11 35.3**	**-0.4**
VAF				*e*S	**Sg**	**03 11 47.3**	**-1.0**
ODEU	**Stanfors**	**1.02**	**294**	P	**Pg**	**03 11 36.5**	**-0.2**
OBF4	**Vikkela, Lumij**	**1.27**	**49**	*e*P	**Pg**	**03 11 40.8**	**-0.6**
OBF4				*e*S	**Sg**	**03 11 56.9**	**-0.9**
SJUU	**Sjulsmark**	**1.60**	**341**	P	**Pn**	**03 11 47.0**	**+0.4**
OUL	**Oulu**	**1.70**	**49**	*e*P	**Pn**	**03 11 48.4**	**+0.3**
OUL				*e*S	**Sn**	**03 12 10.2**	**-0.3**
OUL				smax	smax	03 12 12.8	
	comp=Z,0.9nm,0.1s						
HUSU	**Husum**	**1.75**	**249**	P	**Pn**	**03 11 49.3**	**+0.6**
HUSU	**Husum**	**1.75**	**249**	*e*P	**Pn**	**03 11 49.1**	**+0.4**
HUSU				*e*S	**Sn**	**03 12 11.2**	**-0.5**
HUSU				smax	smax	03 12 13.8	
	comp=Z,0.9nm,0.1s						
KALU	**Kalix**	**1.87**	**6**	*e*PN	**Pn**	**03 11 51.2**	**+0.8**
KALU				*e*S	**Sn**	**03 12 15.1**	**+0.4**
KALU				smax	smax	03 12 18.7	
	comp=Z,1.9nm,0.1s						
SUF	**Sumiainen**	**1.97**	**130**	*e*P	**Pn**	**03 11 52.2**	**+0.5**
SUF				*e*S	**Sn**	**03 12 17.1**	**+0.1**
SUF				smax	smax	03 12 20.7	
	comp=Z,2.0nm,0.1s						
KEF	**Keuruu**	**2.06**	**153**	*e*P	**Pn**	**03 11 53.6**	**+0.6**
KEF				*e*SB	**Sn**	**03 12 19.8**	**+0.5**
KEF				smax	smax	03 12 23.1	
	comp=Z,1.3nm,0.1s						
FINES	**FINESS Array B**	**2.97**	**149**	Pn	**Pn**	**03 12 07.1**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=336,slow=15,SNR=14						
FINES				Lg	Lg	03 12 45.2	
	comp=Z,0.9nm,0.3s,baz=335,slow=26,SNR=21						
	comp=Z,0.6nm,0.3s						
ARCES	**ARCESS Array B**	**5.65**	**10**	Pn	**Pn**	**03 12 42.3**	**+0.1**
	baz=193,slow=12,SNR=5.0						
ARCES				Sn	**Sn**	**03 13 46.8**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=24,SNR=2.0						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**5.80**	**232**	Pn	**Pn**	**03 12 45.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=50,slow=13,SNR=2.3						
	comp=Z,3.9nm,1.0s						
NOA	**NORSAR Array B**	**6.15**	**246**	Pn	**Pn**	**03 12 49.2**	**-0.1**
	baz=50,slow=20,SNR=1.4						
	comp=Z,0.2nm,0.5s						

*NOU **19** 03:21:49.1, 37°46S×176°64E, h239km, MLv4.0/18, North Island, New Zealand*

*NEIC **19** 03:21:50.7±1.1, 37°56S±0°09×176°6E±0°1, h231km±8km, mb4.1/14, Error ellipse: s-maj=16.6km s-min=10.9km az=124.0*

*IDC **19** 03:21:50.1±5.5, 37°08S×175°34E, h132km±117km, mb3.6/3, mbtmp4.1/4, ML4.3/1, Error ellipse: s-maj=119.7km s-min=25.0km az=136.0*

*WEL **19** 03:21:51.9±0.9, 37°S±6°×17°7E±°, h211km±7km, M3.3/34, ML3.1/8, MLv3.3/34, Error ellipse: s-maj=9.0km s-min=6.3km az=32.5, confirmed*

ISC 19 03:21:50.6±0.7, 37°46S±0°05×176°67E±0°05, h240km±5km, n171, σ1°46/193, mb3.9/11, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYRZ	**Mayor Island**	**0.39**	**298**	P	**Pn**	**03 22 20.7**	**-1.4**
OPRZ	**Ohinepanea**	**0.39**	**194**	P	**Pn**	**03 22 20.9**

OPRZ			S	S	03 22 45.7	-0.9	
TGRZ	Tauranga	0.42 231	P	Pn	03 22 21.1	-0.9	
WHRZ	Whale Island	0.46 149	P	Pn	03 22 22.6	+0.4	
MARZ	Manawahe	0.52 180	P	Pn	03 22 21.8	-0.6	
KARZ	Kaharoa	0.65 211	P	Pn	03 22 22.4	-0.5	
OMRZ	Omania	0.69 200	P	Pn	03 22 22.6	-0.4	
OMRZ			S	S	03 22 48.6	+0.1	
KMRZ	Kaimai	0.69 236	P	Pn	03 22 22.5	-0.5	
MKRZ	Makatiti	0.69 193	P	Pn	03 22 23.4	+0.3	
NGRZ	Ngongotaha	0.74 211	P	Pn	03 22 23.1	-0.1	
TARZ	Mount Tarawera	0.78 190	P	Pn	03 22 23.5	0.0	
HLRZ	Highlands Stat	0.83 198	P	Pn	03 22 23.7	+0.1	
URZ	Urewera	0.87 157	P	Pn	03 22 25.5	-1.2	
	106nm,0.3s,baz=268,slow=4.0,SNR=242						
URZ			S	S	03 22 47.0	-2.9	
	506nm,0.4s,baz=187,slow=23,SNR=116						
URZ	Urewera	0.87 157	P	Pn	03 22 22.0	-1.7	
URZ	Urewera	0.87 157	P	Pn	03 22 22.5	-1.2	
URZ			S	S	03 22 46.9	-2.9	
RRRZ	Republican Roa	0.88 188	P	Pn	03 22 23.5	-0.4	
HSRZ	Hossack Road	0.91 202	P	Pn	03 22 24.2	+0.2	
HAZ	Te Kaha	0.93 109	P	Pn	03 22 23.3	-1.7	
HAZ			S	S	03 22 46.7	-3.6	
RUGZ	Raukumara Rang	0.94 122	P	Pn	03 22 22.2	-2.1	
RUGZ			S	S	03 22 46.3	-4.5	
TOZ	Tahuroa Road	0.97 254		Pn	03 22 23.7	-0.6	
TOZ	Tahuroa Road	0.97 254	P	Pn	03 22 23.7	-0.6	
HRRZ	Handcock Road	0.97 198	P	Pn	03 22 24.2	-0.2	
GRRZ	Galatos Road	0.99 206	P	Pn	03 22 24.7	+0.2	
MUGZ	Murupara	1.02 176	P	Pn	03 22 23.9	-0.7	
MUGZ			S	S	03 22 49.1	-2.2	
KUZ	Kuaotunu	1.04 313	P	Pn	03 22 22.1	-2.7	
KUZ	Kuaotunu	1.04 313	P	Pn	03 22 22.6	-2.2	
PRRZ	Plateau Road	1.06 192	P	Pn	03 22 24.7	-0.1	
MWZ	Matawai	1.10 142	P	Pn	03 22 24.2	-1.0	
MWZ			S	S	03 22 50.0	-2.3	
ALRZ	Allen Road	1.13 193	P	Pn	03 22 25.1	-0.1	
RTZ	Ruatahuna	1.18 168		Pn	03 22 24.9	-0.8	
RTZ			Sn	S	03 22 50.5	-2.7	
RTZ	Ruatahuna	1.18 168	P	Pn	03 22 25.1	-0.5	
RTZ			S	S	03 22 51.4	-1.9	
RAGZ	Rawiri	1.19 151	P	Pn	03 22 25.6	-0.1	
RAGZ			S	S	03 22 51.8	-1.6	
PKGZ	Pakihiroa	1.19 110	P	Pn	03 22 24.8	-0.9	
PKGZ			S	S	03 22 50.7	-2.5	
KUTZ	Kaahu Road	1.23 213	P	Pn	03 22 26.3	+0.4	
TLZ	Tolley Road	1.25 226	P	Pn	03 22 26.2	+0.2	
MKAZ	Moumakai	1.26 286	P	Pn	03 22 24.9	-1.2	
MXZ	Matakaoa Point	1.30 95		Pn	03 22 24.9	-1.5	
MXZ	Matakaoa Point	1.30 95	P	Pn	03 22 24.6	-1.8	
MXZ	Matakaoa Point	1.30 95	P	Pn	03 22 25.0	-1.5	
WHTZ	Whakaora	1.33 205	P	Pn	03 22 27.4	+0.8	
TKGZ	Te Karaka	1.35 137	P	Pn	03 22 26.3	-0.4	
TKGZ			S	S	03 22 53.2	-1.9	
MRHZ	Matea Rd	1.38 188	P	Pn	03 22 26.8	-0.2	
MTHZ	Maungataniwha	1.39 175	P	Pn	03 22 26.9	-0.2	
PUZ	Puketiti	1.40 116	P	Pn	03 22 26.1	-1.0	
PUZ			S	S	03 22 52.5	-3.3	
WIAZ	Waiheke Island	1.40 298	P	Pn	03 22 25.5	-1.6	
SNGZ	Shannon Statio	1.42 158	P	Pn	03 22 27.4	+0.1	
WMGZ	Waiomatatini S	1.43 105	P	Pn	03 22 26.5	-0.9	
WMGZ			S	S	03 22 53.8	-2.4	
WATZ	Wairara	1.45 210	P	Pn	03 22 27.9	+0.4	
RAHZ	Arahi	1.49 167	P	Pn	03 22 28.1	+0.3	
HATZ	Hinemaiaia	1.50 198	P	Pn	03 22 27.9	0.0	
RIGZ	Rimuhau	1.51 146	P	Pn	03 22 28.2	+0.2	
GRZ	Great Barrier	1.55 321	P	Pn	03 22 26.3	-2.0	
RATZ	Rangitukua	1.57 207	P	Pn	03 22 28.7	+0.3	
CNGZ	Carnagh Statio	1.58 130	P	Pn	03 22 28.7	+0.1	
NMHZ	Naumai	1.64 176	P	Pn	03 22 29.7	+0.6	
RITZ	Rihia Road	1.64 203	P	Pn	03 22 29.7	+0.7	
AWAZ	Awhitu Peninsu	1.67 283	P	Pn	03 22 28.2	-1.0	
WHHZ	Waihua	1.67 165	P	Pn	03 22 29.8	+0.5	
KATZ	Kakaramea	1.69 207	P	Pn	03 22 30.6	+1.1	
BKZ	Black Stump Fm	1.71 185		Pn	03 22 29.0	-0.6	
BKZ			Sn	S	03 22 58.5	-1.9	
BKZ	Black Stump Fm	1.71 185	P	Pn	03 22 29.0	-0.6	
BKZ	Black Stump Fm	1.71 185	P	Pn	03 22 29.3	-0.3	
KNZ	Kokohu	1.75 153	P	Pn	03 22 29.8	-0.1	
WTAZ	Waiatarua	1.76 287	P	Pn	03 22 28.7	-1.3	
HIZ	Hauiti	1.78 233		Pn	03 22 30.5	-0.5	
HIZ	Hauiti	1.78 233	P	Pn	03 22 30.5	+0.4	
HIZ	Hauiti	1.78 233	P	Pn	03 22 30.7	+0.6	
NTVZ	North Tongarir	1.81 205	P	Pn	03 22 30.8	+0.2	
ARHZ	Aropaoanui	1.82 172	P	Pn	03 22 31.0	+0.5	
TMVZ	Te Maari	1.82 204	P	Pn	03 22 30.8	+0.1	
KRVZ	Karewarewa	1.82 206	P	Pn	03 22 30.8	+0.1	
ETVZ	East Tongariro	1.83 204	P	Pn	03 22 30.9	+0.1	
WTVZ	West Tongariro	1.86 207	P	Pn	03 22 31.1	+0.2	
NNVZ	North Ngauruho	1.86 206	P	Pn	03 22 31.3	+0.2	
OTVZ	Oturere	1.87 205	P	Pn	03 22 31.6	+0.5	
TWVZ	Taurewa	1.88 211	P	Pn	03 22 31.4	+0.3	
SNVZ	South Ngauruho	1.90 205	P	Pn	03 22 31.7	+0.3	
NGZ	Ngauruhoe	1.91 206	P	Pn	03 22 31.8	+0.3	
MHGZ	Mahia Peninsul	1.95 150	P	Pn	03 22 31.8	+0.2	
COVZ	Chateau Observ	1.95 207	P	Pn	03 22 32.0	+0.2	
KWHZ	Kaweka Forest	1.97 186	P	Pn	03 22 32.4	+0.5	
TUVZ	Tukino	1.97 204	P	Pn	03 22 32.3	+0.3	
MCHZ	McNeill Hill	1.98 179	P	Pn	03 22 32.5	+0.6	
FWVZ	Far West T-bar	1.99 206	P	Pn	03 22 32.6	+0.2	
MAVZ	Matarangi	2.00 205	P	Pn	03 22 32.8	+0.3	
WHVZ	Whangaehu Hut	2.01 205	P	Pn	03 22 32.7	+0.2	
TRVZ	Turoa	2.04 205	P	Pn	03 22 33.0	+0.2	
WNVZ	Wahianoa	2.04 204	P	Pn	03 22 32.8	0.0	
MOVZ	Moawhango	2.07 200	P	Pn	03 22 32.5	-0.4	
PKVZ	Pokaka	2.10 209	P	Pn	03 22 33.3	+0.1	
MTVZ	Mangateitei	2.14 206	P	Pn	03 22 33.7	+0.2	
KRHZ	Kereru	2.19 186	P	Pn	03 22 34.1	+0.1	
CKHZ	Cape Kidnapper	2.21 172	P	Pn	03 22 34.5	+0.4	
VRZ	Vera Road	2.24 222	P	Pn	03 22 35.4	+1.0	
KAHZ	Kahuranaki	2.33 176	P	Pn	03 22 35.7	+0.3	
WCZ	Waipu Caves	2.41 308	P	Pn	03 22 34.4	-1.8	
PNHZ	Pukenui	2.48 188	P	Pn	03 22 36.6	-0.2	
PXZ	Pawanui	2.57 177	P	Pn	03 22 37.7	0.0	
WPHZ	Waipukurau	2.60 184	P	Pn	03 22 38.2	+0.1	
WAZ	Wanganui	2.64 209	P	Pn	03 22 38.9	+0.4	
TSZ	Takapari Road	2.65 192	P	Pn	03 22 38.4	-0.3	
LREZ	Lake Rotokare	2.67 221	P	Pn	03 22 40.2	+1.4	
PREZ	Palmer Road	2.72 226	P	Pn	03 22 40.8	+1.4	
PKE	Pukeiti	2.73 230	P	Pn	03 22 41.1	+1.6	
KHEZ	Kahui Hut	2.78 228	P	Pn	03 22 40.2	+0.2	
KHEZ	Kahui Hut	2.78 228	P	Pn	03 22 41.7	+1.7	
PRHZ	Porangahau	2.80 181	P	Pn	03 22 40.0	-0.2	
DVHZ	Dannevirke	2.86 188	P	Pn	03 22 40.5	-0.4	
NMEZ	Namu Road	2.93 228	P	Pn	03 22 43.5	+1.9	
OHWZ	Ohakea	2.94 201	P	Pn	03 22 41.9	+0.3	
ANWZ	Angora Road	3.00 183	P	Pn	03 22 42.3	0.0	
POWZ	Post Office Ro	3.01 193	P	Pn	03 22 42.1	-0.4	
BFZ	Birch Farm	3.23 186		Pn	03 22 42.9	-2.0	
BFZ	Birch Farm	3.23 186	P	Pn	03 22 43.2	-1.8	
BFZ	Birch Farm	3.23 186	P	S	03 23 27.6	-0.3	
BFZ	Birch Farm	3.23 186	P	Pn	03 22 43.1	-1.8	
MRZ	Mangatainoka R	3.31 195		Pn	03 22 44.9	-0.8	
OUZ	Omahuta	3.34 311	P	Pn	03 22 44.1	-2.2	
OUZ	Omahuta	3.34 311	P	Pn	03 22 44.0	-2.2	
MSWZ	Moikau Station	4.10 195		Pn	03 22 53.5	-1.5	
SNZO	South Karori	4.13 201	Pn	Pn	03 22 53.3	-2.0	
SNZO				S	03 23 44.7	-2.1	
SNZO	South Karori	4.13 201	P	Pn	03 22 53.8	-1.6	
SNZO	South Karori	4.13 201	S	S	03 23 44.7	-2.1	
TCW	Tory Channel	4.18 206		Pn	03 22 54.7	-1.3	
BHW	Baring Head	4.18 199	Pn	Pn	03 22 54.5	-1.5	
PLWZ	Palliser	4.25 195		Pn	03 22 55.4	-1.4	
TUWZ	Tuamarina	4.49 207		Pn	03 22 58.8	-0.9	
NNZ	Nelson	4.54 213		Pn	03 22 58.6	-1.7	
TKNZ	Takaka Hill	4.58 218		Pn	03 22 59.1	-1.8	
QRZ	Quartz Range	4.65 223	Pn	Pn	03 23 00.1	-1.6	
QRZ	Quartz Range	4.65 223	P	Pn	03 22 59.9	-1.8	
QRZ	Quartz Range	4.65 223	S	S	03 23 56.6	-1.6	
CMWZ	Cape Campbell	4.68 203	Pn	Pn	03 22 59.7	-2.3	
BSWZ	Blackbirch Sta	4.76 206		Pn	03 23 01.8	-1.3	
BSWZ				S	03 23 58.8	-1.8	
MRNZ	Matariki Terra	4.96 216		Pn	03 23 04.1	-1.4	
MRNZ				S	03 24 03.3	-1.8	
THZ	Tophouse	5.19 213		Pn	03 23 06.9	-1.4	
KHZ	Kahutara	5.50 205		Pn	03 23 11.1	-1.0	
KHZ	Kahutara	5.50 205	P	Pn	03 23 10.9	-1.2	
KHZ	Kahutara	5.50 205	S	S	03 24 14.5	-2.6	
DSZ	Denniston Nort	5.69 220	Pn	Pn	03 23 12.2	-2.4	
GVZ	Greta Valley S	6.16 206	Pn	Pn	03 23 18.9	-1.5	
AMCZ	Amberley	6.48 207	Pn	Pn	03 23 22.9	-1.5	
OXZ	Oxford	6.84 210		Pn	03 23 26.8	-2.2	
MQZ	McQueen's Vall	6.95 205		Pn	03 23 27.8	-2.5	
RPZ	Rata Peaks	7.57 213	P	Pn	03 23 35.9	-2.3	
	4.7nm,0.3s,baz=233,slow=2.5,SNR=13						
RPZ			S	S	03 24 57.5	-7.1	
	23nm,0.5s,baz=65,slow=17,SNR=15						
	11nm,0.3s						
RPZ	Rata Peaks	7.57 213		Pn	03 23 36.5	-1.7	
RPZ	Rata Peaks	7.57 213	P	Pn	03 23 36.4	-1.8	
FOZ	Fox Glacier	8.00 219	Pn	Pn	03 23 42.8	-0.9	
LBZ	Lake Benmore	8.48 213	Pn	Pn	03 23 48.4	-1.4	
ODZ	Otahua Downs	8.83 209	Pn	Pn	03 23 53.1	-1.1	
ODZ	Otahua Downs	8.83 209	P	Pn	03 23 53.6	-0.6	
JCZ	Jackson Bay	8.91 220	P	Pn	03 23 52.9	-2.5	
WKZ	Wanaka	9.35 216	Pn	Pn	03 23 58.0	-2.8	
STKA	Stephens Creek	29.27 270	P	P	03 27 30.0	-0.7	
	1.6nm,0.8s,baz=135,slow=8.6,SNR=2.1						
	1.6nm,0.8s						
INKA	Innaminka	31.62 277	P	P	03 27 51.6	+0.3	
INKA			IAmb	IAmb	03 27 57.5		
	comp=Z,7.3nm,0.6s						
BBOO	Buckleboo	33.35 266	P	P	03 28 05.8	-0.5	
COEN	Coen	37.87 299	P	P	03 28 45.2	+0.5	
COEN			IAmb	IAmb	03 29 24.0		
	comp=Z,12nm,1.4s						
AS31	Alice Springs	38.98 278	P	P	03 28 54.4	+0.4	
ASAR	Alice Springs	38.98 278	P	P	03 28 54.5	+0.6	
	comp=Z,1.1nm,0.5s,baz=125,slow=8.5,SNR=17						
	comp=Z,1.1nm,0.5s						
ASAR	Alice Springs	38.98 278	P	P	03 28 54.3	+0.3	
FORT	Forrest	40.43 265	P	P	03 29 06.8	+1.0	
FORT			IAmb	IAmb	03 29 39.6		
	comp=Z,10nm,0.9s						
WR8	Warramunga Arr	40.51 284	P	P	03 29 06.6	+0.1	
WR8			IAmb	IAmb	03 29 41.1		
	comp=Z,4.5nm,1.4s						
WR8			pP	pP	03 29 59.6	+3.3	
WB2	Warramunga Arr	40.64 283	P	P	03 29 07.7	+0.2	
WB2			IAmb	IAmb	03 29 08.3		
	comp=Z,7.9nm,1.5s						
WRA	Warramunga Arr	40.65 283	P	P	03 29 07.8	+0.1	
	comp=Z,0.9nm,0.3s,baz=121,slow=7.8,SNR=8.5						
	comp=Z,0.9nm,0.3s						
WRA	Warramunga Arr	40.65 283	P	P	03 29 07.7	0.0	
WB0	Warramunga Arr	40.70 284	P	P	03 29 08.1	0.0	
WB0			IAmb	IAmb	03 29 09.9		
	comp=Z,5.2nm,1.4s						
WB0			pP	pP	03 30 01.1	+3.2	
CASY	Casey	46.83 210	P	P	03 29 58.2	+2.1	
FITZ	Fitzroy Crossi	48.47 279	P	P	03 30 09.6	+0.2	
MBWA	Marble Bar	51.50 272	P	P	03 30 31.7	-0.3	
MBWA			IAmb	IAmb	03 31 05.0		
	comp=Z,9.6nm,1.1s						
PMSA	Palmer Station	67.64 156	P	P	03 32 22.1	+0.9	
SNAA	Sanae	71.17 180	P	P	03 32 43.0	+0.3	
SNAA			IAmb	IAmb	03 32 59.9		
	comp=Z,4.3nm,1.5s						

*UCR **19** 03:34:32.7±0.8, 11.07N×85.73W, h0km±6km, MW3.7*
*CATAC **19** 03:34:32.8±0.2, 11.1°N±2.°×8.°6W±.°, h5km±1km, M3.1/16, MLv3.1/16, Error ellipse: s-maj=4.9km s-min=2.0km az=51.2, confirmed*

ISC 19 03:34:32.5±1.0, 11.15N±0.03×85.74W±0.04, h16km±8km, n40, σ0.65/50, 7C-1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCRUZ	La Cruz	0.13	121	⇑iP		Pb		03 34 36.6	0.0
LCRUZ				eS		Sb		03 34 39.5	+0.1
CARN	Rivas	0.22	80	⇑iP		Pb		03 34 38.6	+0.5
ARIN	Rivas	0.32	344	P		Pg		03 34 38.5	-0.7
ARIN				S		Sg		03 34 42.9	-0.9
BUAI	Buenos Aires	0.48	124	eP		Pb		03 34 43.0	+0.3
LAPC	Finca la Perla	0.48	141	⇑eP		Pb		03 34 42.5	-0.3
LAPC				eS		Sb		03 34 49.8	+0.2
PEJA	Penjamo Buenos	0.49	121	⇑iP		Pb		03 34 43.0	+0.2
VRLE	La Escondida,	0.52	134	⇑iP		Pb		03 34 43.4	+0.1
VRLE				eS		Sb		03 34 50.8	+0.3
ELI1	Hacienda Flor	0.53	159	P		Pb		03 34 44.2	+0.7
ELI1	Hacienda Flor	0.53	159	S		Sn		03 34 52.5	-1.7
GPS1	Guardaparques	0.54	134	eP		Pb		03 34 43.8	+0.2
GPS3	Bodega del ICE	0.54	136	eP		Pn		03 34 44.7	-0.9
ALIBA	Liberia Airpor	0.58	160	eP		Pb		03 34 44.8	+0.5
VMAR	Armenia, Volca	0.70	118	eP		Pb		03 34 46.7	+0.3
CUI	Cuipilapa	0.75	130	eP		Pb		03 34 47.4	+0.2
UPAL	Upala	0.76	109	P		Pg		03 34 47.8	+0.5
UPAL	Upala	0.76	109	S		Sn		03 34 58.9	-0.9
TENO	El Achiote	0.87	120	eP		Pg		03 34 49.6	+0.1
SABN	Sabanita	0.90	333	P		Pb		03 34 49.6	-0.2
MAS3	Al N del Volca	0.97	334	P		Pb		03 34 51.3	+0.3
MAS3				S		Sn		03 35 05.4	+0.4
QUEB	Quebradon, Cot	0.98	122	eP		Pn		03 34 51.7	0.0
JUD3	Juan Diaz 3	0.99	168	⇓eP		Pb		03 34 51.2	-0.2
UNAN	Cigeo UNAN	1.09	332	S		Sg		03 35 08.4	+0.6
WILN	Americas 2	1.10	337	P		Pb		03 34 51.4	-1.7
WILN				S		Sg		03 35 09.0	+0.9
TISN	Laguna Tiscapa	1.11	333	P		Pn		03 34 52.7	-0.8
JTS	Las Juntas de	1.15	137	P		Pn		03 34 53.8	-0.3
JTS				S		Sg		03 35 10.7	+0.9
JTS	Las Juntas de	1.15	137	eP		Pn		03 34 53.6	-0.5
TABAC	Tabacon	1.16	124	eP		Pg		03 34 55.0	+0.2
CMARA	Lajas Hojancha	1.16	164	P		Pb		03 34 54.4	+0.1
CMARA	Lajas Hojancha	1.16	164	S		Sg		03 35 11.0	+0.8
APQ2	Apoyeque	1.19	331	P		Pb		03 34 55.0	+0.3
APQ2				S		Sg		03 35 12.0	+1.0
COPN	Copaltepe	1.32	321	P		Pb		03 34 57.1	+0.2
COPN	Copaltepe	1.32	321	eP		Pb		03 34 57.7	+0.7
SOCE	Pocosol	1.34	124	P		Pg		03 34 58.1	-0.3
COVE	Coope Vega, Sa	1.39	108	P		Pb		03 34 57.9	-0.2
COVE	Coope Vega, Sa	1.39	108	S		Sg		03 35 17.5	+0.2
MOM2	El Cardon	1.47	331	P		Pb		03 34 59.8	+0.3
MOM2				S		Sg		03 35 19.6	-0.5
MOM3	MOM3	1.55	331	P		Pn		03 35 00.3	+0.8
MOM3				S		Sb		03 35 21.8	+1.4
CNGN	Cerro Negro	1.64	325	P		Pb		03 35 02.1	-0.3
MATN	Matagalpa	1.78	354	S		Sb		03 35 27.7	+0.7
MATN	Matagalpa	1.78	354	P		Pn		03 35 02.4	-0.4

IDC 19 03:57:23.2±10.0, 13.28S×67.65E, h0km, mb3.6/2, mbtmp3.6/2, MS3.4/10, Error ellipse: s-maj=784.8km s-min=50.6km az=35.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	7.34	41	T		T		04 08 58.3	
	baz=217,slow=75,SNR=183								
H08S2	Diego Garcia H	7.35	41	T		T		04 09 01.2	
	baz=217,slow=75,SNR=196								
H08S3	Diego Garcia H	7.36	41	T		T		04 08 57.0	
	baz=217,slow=75,SNR=229								
PSI	Prapat	34.91	65	LR		LR		04 15 38.0	
	comp=Z,66nm,18.3s,baz=222,slow=31								
H04N2	CROZET ISLANDS	35.41	199	T		T		04 39 27.9	
	baz=28,slow=75,SNR=33								
H04N1	CROZET ISLANDS	35.41	199	T		T		04 39 29.0	
	baz=28,slow=75,SNR=43								
H04N3	CROZET ISLANDS	35.43	199	T		T		04 39 27.7	
	baz=28,slow=75,SNR=38								
MATP	Matopo	38.06	254	LR		LR		04 18 10.8	
	comp=Z,50nm,18.6s,baz=28,slow=33								
MBAR	Mbarara	38.66	286	LR		LR		04 18 39.2	
	comp=Z,56nm,18.9s,baz=131,slow=33								
LBTB	Lobatse	41.25	247	LR		LR		04 20 11.4	
	comp=Z,49nm,18.2s,baz=64,slow=33								
BOSA	Boshof	42.19	242	LR		LR		04 19 28.9	
	comp=Z,60nm,19.2s,baz=26,slow=31								
BRDH	Bariadhala	42.77	34	LR		LR		04 24 09.9	
	comp=Z,26nm,19.1s,baz=213,slow=38								
CMAR	Chiang Mai Arr	44.12	45	LR		LR		04 23 04.1	
	comp=Z,32nm,19.6s,baz=225,slow=35								
H01W3	Cape Leeuwin H	47.08	125	T		T		04 55 50.9	
	baz=282,slow=75,SNR=10								
H01W2	Cape Leeuwin H	47.08	126	T		T		04 55 53.0	
	baz=282,slow=75,SNR=9.3								
H01W1	Cape Leeuwin H	47.09	125	T		T		04 55 47.6	
	baz=282,slow=75,SNR=8.7								
KAPI	Kappang	52.01	86	LR		LR		04 25 55.9	
	comp=Z,22nm,21.8s,baz=255,slow=33								
ASAR	Alice Springs	63.22	110	P		P		04 07 53.6	-0.4
	0.5nm,0.8s,baz=288,slow=6.2,SNR=4.6								
ASAR				LR		LR		04 33 24.1	
	comp=Z,34nm,18.2s,baz=266,slow=34								
	0.5nm,0.8s								
WRA	Warramunga Arr	63.91	106	P		P		04 07 58.9	+0.3
	0.7nm,0.9s,baz=267,slow=6.1,SNR=4.7								
	0.7nm,0.9s								
DBIC	Dimbokro	74.67	281	LR		LR		04 39 28.7	
	comp=Z,36nm,19.3s,baz=338,slow=34								
PDAR	Pinedale Array	150.52	356	PKPbc		PKPbc		04 17 17.2	-0.3
	0.2nm,0.6s,baz=9.7,slow=3.3,SNR=2.4								

*NEIC **19** 04:02:57.1±1.9, 39.161N×0.005×123.15W±0.02, h4km±3km, Error ellipse: s-maj=1.8km s-min=0.7km az=73.0*

NCEDC 19 04:02:57.5±2.3, 39.153N×0.007×123.18W±0.01, h4km±2km, Md2.7/68, ML2.7/(NEIC), Error ellipse: s-maj=1.6km s-min=0.5km az=53.0, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GWRM	Wonder Ranch	0.11	300			Pg		04 03 00.1	+0.3
GWRM						Sg		04 03 02.4	+1.1
HOPS	Hopland Field	0.18	153			Pg		04 03 01.4	+0.4
HOPS				Sg		Sg		04 03 04.7	+1.4
BONV	Boonville, CA	0.21	219			Pg		04 03 02.2	+0.6
BONV						Sg		04 03 06.0	+1.6
GSNM	Snow Mountain	0.21	183			Pg		04 03 02.2	+0.6
GHGM	Hogback Ridge	0.28	95			Pg		04 03 03.5	+0.7
GALB	Galbreath Wild	0.30	192			Pg		04 03 03.8	+0.5
GALB						Sg		04 03 08.8	+1.7
GHOM	Hamilton Openi	0.30	249			Pg		04 03 04.1	+0.7
GHOM						Sb		04 03 09.2	-1.7
DCMP	DeCamp, Califo	0.34	339			Pg		04 03 04.1	0.0
DCMP				Sg		Sg		04 03 09.2	+0.7
DCMP				IAML				04 03 11.9	
	comp=N,756nm,0.2s								
GPMM	Pine Mountain	0.35	149			Pg		04 03 04.9	+0.6
GTC	Three Chop Rid	0.38	310			Pg		04 03 05.6	+0.6
GCVM	Cloverdale	0.40	162			Pg		04 03 06.1	+0.8
KRKM	Rackout Spring	0.41	359			Pb		04 03 06.5	-1.0
GRTM	Round Top Moun	0.45	118			Pg		04 03 06.7	+0.5
GDXM	Geysers	0.46	139			Pg		04 03 06.4	+0.1
GDXM				Sg		Sg		04 03 12.7	+0.5
GDXM				IAML				04 03 21.0	
	comp=N,698nm,1.4s								
GDXM				IAML				04 03 21.4	
	comp=E,721nm,0.9s								
MNDO	Woodland Fire	0.47	290			Pg		04 03 07.3	+0.7
GBGM	Boggs Mountain	0.52	131			Pg		04 03 08.2	+0.8
GAXM	Alexander Vall	0.55	143			Pg		04 03 08.3	+0.2
INGLE	Inglenook, Smi	0.55	313			Pb		04 03 09.0	-0.8
KCPM	Cahto Peak	0.62	330			Pg		04 03 10.2	+0.8
KCPM				Sg		Sb		04 03 19.4	-0.7
FTR	Fort Ross	0.63	179			Pb		04 03 10.5	-0.6
MNRC	McLaughlin Min	0.63	115			Pb		04 03 10.5	-0.7
MNRC	McLaughlin Min	0.63	115	IAML				04 03 25.3	
	comp=N,391nm,1.0s								
MNRC				IAML				04 03 28.8	
	comp=E,513nm,1.0s								
NMTM	Middletown	0.67	121			Pg		04 03 10.9	+0.6
KIPM	Iron Peak	0.70	340			Pb		04 03 11.8	-0.5
GFC	Funks Creek	0.71	76			Pb		04 03 13.3	+0.8
GVV	Valley View	0.73	32			Pb		04 03 12.8	-0.2
GROM	Round Mountain	0.86	27			Pb		04 03 15.1	0.0
NTYM	Taylor	0.86	152			Pb		04 03 14.9	-0.1
OAKV	Oakville Exper	0.94	140			Pg		04 03 14.9	-0.6
CVS	Carmenet Viney	0.98	145			Pg		04 03 15.4	-1.0
CVS	Carmenet Viney	0.98	145	IAML				04 03 39

L04D					IAML		04 05 06.6	
	comp=E,29nm,2.8s							
L04D					IAML		04 05 14.1	
	comp=N,24nm,3.4s							
MDPB	**Devils Postpil**	**3.56**	**114**			Pn	04 03 53.3	-0.5
MDPB					IAML		04 04 56.2	
	comp=N,13nm,1.0s							
RYN	**Ryan**	**3.67**	**97**			Pn	04 03 55.5	+0.3
RYN					IAML		04 05 01.9	
	comp=E,11nm,1.5s							
LHV	**Little Huntoon**	**3.77**	**102**			Pn	04 03 56.7	+0.4
LHV					IAML		04 05 16.1	
	comp=E,20nm,4.0s							
LHV					IAML		04 05 26.1	
	comp=N,14nm,1.7s							
NVAR	**Mina Array Bea**	**3.88**	**99**	Pn	Pn		04 03 57.7	-0.5
NV11	**Mina Array Sit**	**3.99**	**99**	Pn	Pn		04 03 59.4	-0.2
NV11					IAML		04 05 13.0	
	comp=E,10nm,3.8s							
NV11					IAML		04 05 19.4	
	comp=N,10nm,4.7s							
WVOR	**Wild Horse Val**	**4.75**	**45**	Pn	Pn		04 04 10.1	0.0
WVOR					IAML		04 04 54.7	
	comp=N,8.3nm,4.8s							
WVOR					IAML		04 06 05.8	
	comp=N,7.3nm,4.4s							

CNRM ***19*** *04:20:34.5, 36°.69N×5°.31W, h88km*
MDD ***19*** *04:20:37.8±0.3, 36°.47N×5°.56W, h34km±1km, mb_Lg2.6/30, Error ellipse: s-maj=2.7km s-min=1.8km az=6.0*
INMG ***19*** *04:20:38.5±1.5, 36°.52N×5°.55W, h34km±7km, ML2.1, Error ellipse: s-maj=3.1km s-min=2.0km az=20.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Gibraltar (ESP)*
SFS ***19*** *04:20:38.1, 36°.47N×5°.57W, h55km, ML2.6/15, ML2.6/20, MLv2.1/20*
IGIL ***19*** *04:20:38.6, 36°.47N×5°.56W, h34km, ML2.1*

ISC 19 04:20:36.8±2.0, 36°.50N×0°.02×5°.51W×0°.02, h38km±2km, n86, σ1ᵖ56/153, 1C-3D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EJIF	**Jimena Fronter**	**0.06**	**149**	Pg	**Pn**	**04 20 44.3**	**+1.3**
EJIF				Sg	**Sn**	**04 20 47.9**	**+0.5**
ESPR	**Espera**	**0.46**	**323**	Pn	**Pn**	**04 20 48.7**	**+1.9**
ESPR				Sn	**Sn**	**04 20 56.9**	**+2.9**
ESPR	**Espera**	**0.46**	**323**	⇓Pg	**Pn**	**04 20 48.7**	**+1.9**
ESPR				Sg	**Sn**	**04 20 54.6**	**+0.6**
ESPR				*i* lVmb_Lg		04 20 58.0	
CNIL	**Conil**	**0.46**	**253**	Pn	**Pn**	**04 20 48.3**	**+1.5**
SFS	**San Fernando**	**0.56**	**266**	Pn	**Pn**	**04 20 50.1**	**+1.7**
SFS	**San Fernando**	**0.56**	**266**	P	**Pn**	**04 20 50.5**	**+2.1**
SFS	**San Fernando**	**0.56**	**266**	S	**Sn**	**04 21 04.7**	**+8.2**
EMIJ	**Mijas**	**0.59**	**84**	Pn	**Pn**	**04 20 49.4**	**+0.5**
EMIJ	**Mijas**	**0.59**	**84**	⇑Pg	**Pn**	**04 20 49.4**	**+0.5**
EMIJ				⇓Pg	**Pn**	**04 20 49.5**	**+0.5**
EMIJ				Sg	**Sn**	**04 20 58.1**	**+0.8**
EMIJ				Sg		04 20 58.3	
EMIJ				*i* lVmb_Lg		04 20 59.7	
UMV12	**Villanueva de**	**0.60**	**26**	Pg	**Pn**	**04 20 50.2**	**+1.1**
UMV12				Sg	**Sn**	**04 20 60.0**	**+2.3**
ECEU	**Ceuta**	**0.61**	**170**	Pn	**Pn**	**04 20 50.1**	**+0.9**
ECEU				Sn	**Sn**	**04 20 59.1**	**+1.3**
ECEU	**Ceuta**	**0.61**	**170**	⇓Pg	**Pn**	**04 20 50.1**	**+0.9**
ECEU				Sg	**Sn**	**04 20 56.7**	**-1.1**
ECEU				*i* lVmb_Lg		04 21 01.6	
EGOR	**Sierra Gorda,**	**1.27**	**61**	Pn	**Pn**	**04 21 00.3**	**+2.1**
EGOR				Sn	**Sn**	**04 21 17.4**	**+3.2**
EGOR	**Sierra Gorda,**	**1.27**	**61**	Pg	**Pn**	**04 20 59.8**	**+1.6**
EGOR				Sg	**Sn**	**04 21 15.4**	**+1.2**
EGOR				*i* lVmb_Lg		04 21 17.2	
ELGU	**Los Guajares,**	**1.56**	**76**	Pn	**Pn**	**04 21 02.4**	**+0.4**
ELGU				Sn	**Sn**	**04 21 23.6**	**+2.7**
ELGU	**Los Guajares,**	**1.56**	**76**	Pn	**Pn**	**04 21 03.0**	**+1.0**
ELGU				Pg		04 21 03.3	
ELGU				Sn	**Sn**	**04 21 21.9**	**+1.0**
ELGU				*i* lVmb_Lg		04 21 28.9	
EMIN	**Mina Concepcio**	**1.57**	**324**	Pn	**Pn**	**04 21 02.6**	**+0.5**
EMIN	**Mina Concepcio**	**1.57**	**324**	Pn	**Pn**	**04 21 02.7**	**+0.6**
EMIN				Sn	**Sn**	**04 21 20.5**	**-0.6**
EMIN				*i* lVmb_Lg		04 21 25.9	
EXCBR	**El Cabril**	**1.57**	**3**	Pn	**Pn**	**04 21 03.4**	**+1.3**
EXCBR				Sn	**Sn**	**04 21 23.3**	**+2.0**
ECAB	**El Cabril**	**1.57**	**3**	Pn	**Pn**	**04 21 03.1**	**+0.9**
ECAB				Sn	**Sn**	**04 21 23.7**	**+2.4**
ECAB	**El Cabril**	**1.57**	**3**	Pn	**Pn**	**04 21 03.1**	**+0.9**
ECAB				Pg		04 21 04.8	
ECAB				Sn	**Sn**	**04 21 23.9**	**+2.6**
ECAB				*i* lVmb_Lg		04 21 27.9	
EXAYA	**Ayamonte**	**1.68**	**296**	Pn	**Pn**	**04 21 03.9**	**+0.2**
EXAYA				Sn	**Sn**	**04 21 23.1**	**-0.9**
EQUE	**Quentar**	**1.80**	**66**	Pn	**Pn**	**04 21 03.3**	**+1.9**
EQUE				Sn	**Sn**	**04 21 28.4**	**+1.4**
EQUE				*i* lVmb_Lg		04 21 37.2	
PALE	**Palemas**	**1.81**	**135**	P	**Pn**	**04 21 04.4**	**-1.0**
PALE	**Palemas**	**1.81**	**135**	S	**Sn**	**04 21 27.6**	**+0.5**
EADA	**Adamuz**	**1.82**	**24**	Pn	**Pn**	**04 21 07.0**	**+1.4**
EADA				Sn	**Sn**	**04 21 27.3**	**-0.1**
EADA	**Adamuz**	**1.82**	**24**	Pn	**Pn**	**04 21 07.0**	**+1.4**
EADA				Sn	**Sn**	**04 21 26.9**	**-0.5**
EADA				*i* lVmb_Lg		04 21 28.4	
EGRO	**El Granado**	**1.89**	**304**	Pn	**Pn**	**04 21 07.2**	**+0.8**
EGRO				Sn	**Sn**	**04 21 28.4**	**-0.6**
EGRO	**El Granado**	**1.89**	**304**	Pn	**Pn**	**04 21 07.2**	**+0.8**
EGRO				Pn	**Pn**	**04 21 07.2**	**+0.8**
EGRO				Sn	**Sn**	**04 21 27.6**	**-1.4**
EGRO				Sn	Sn	04 21 27.9	-1.1
EGRO				*i* lVmb_Lg		04 21 30.3	
PVAQ	**Vaqueiros**	**1.98**	**298**	*e*P	**Pn**	**04 21 08.4**	**+0.6**
PVAQ				*e*S	**Sn**	**04 21 30.8**	**-0.6**
PVAQ				*i* IAML		04 21 31.2	
PVAQ				*i* IAML		04 21 31.4	
PVAQ				*i* IAML		04 21 32.0	
PVAQ	**Vaqueiros**	**1.98**	**298**	P	**Pn**	**04 21 08.5**	**+0.6**
PVAQ	**Vaqueiros**	**1.98**	**298**	S	**Sn**	**04 21 32.0**	**+0.6**
PBAR	**Barrancos**	**2.07**	**324**	Pn	**Pn**	**04 21 09.9**	**+0.9**
PBAR				Sn	**Sn**	**04 21 32.3**	**-1.2**
PBAR	**Barrancos**	**2.07**	**324**	*e*P	**Pn**	**04 21 09.9**	**+0.9**
PBAR				*e*S	**Sn**	**04 21 33.1**	**-0.4**
PBAR				*i* IAML		04 21 34.1	
PBAR				*i* IAML		04 21 34.6	
PBAR				*i* IAML		04 21 35.7	
PBDV	**Barranco-do-Ve**	**2.08**	**292**	Pn	**Pn**	**04 21 09.9**	**+0.8**
PBDV				Sn	**Sn**	**04 21 33.1**	**-0.7**
PBDV	**Barranco-do-Ve**	**2.08**	**292**	*e*P	**Pn**	**04 21 09.9**	**+0.8**
PBDV				*e*S	**Sn**	**04 21 33.4**	**-0.4**
PBDV				*i* IAML		04 21 33.8	
PBDV				*i* IAML		04 21 34.3	
PBDV				*i* IAML		04 21 34.7	
E0803	**Jimena (Jaen)**	**2.10**	**50**	Pn	**Pn**	**04 21 11.0**	**+1.5**
E0803				Sn	**Sn**	**04 21 34.5**	**+0.1**
E0802	**Ubeda,Jaen**	**2.28**	**48**	Sn	**Sn**	**04 21 38.1**	**-0.8**
PCVE	**Castro Verde**	**2.32**	**300**	Sn	**Sn**	**04 21 38.0**	**-1.7**
PCVE				Pn	**Pn**	**04 21 13.0**	**+0.7**
PCVE	**Castro Verde**	**2.32**	**300**	*e*P	**Pn**	**04 21 13.1**	**+0.7**
PCVE				*e*S	**Sn**	**04 21 38.6**	**-1.0**
PCVE				*i* IAML		04 21 39.7	
PCVE				*i* IAML		04 21 40.3	
PCVE				*i* IAML		04 21 40.9	
EQES	**Quesada**	**2.34**	**56**	Pn	**Pn**	**04 21 14.1**	**+1.3**
EQES				Sn	**Sn**	**04 21 40.8**	**+0.4**
EQES				*i* lVmb_Lg		04 21 46.7	
AKLM	**AKL**	**2.40**	**146**	P	**Pn**	**04 21 11.4**	**-2.2**
AKLM	**AKL**	**2.40**	**146**	S	**Sn**	**04 21 40.5**	**-1.3**
PBEJ	**Beja**	**2.42**	**310**	*e*P	**Pn**	**04 21 14.6**	**+0.8**
PBEJ				*e*S	**Sn**	**04 21 41.2**	**-0.9**
PBEJ				*i* IAML		04 21 42.9	
PBEJ				*i* IAML		04 21 43.1	
PBEJ				*i* IAML		04 21 43.4	
MESJ	**Messejana**	**2.54**	**302**	*e*P	**Pn**	**04 21 16.3**	**+0.8**
MESJ				*e*S	**Sn**	**04 21 43.7**	**-1.5**
MESJ				IAML		04 21 46.0	
	comp=N,7.8nm,0.2s						
MESJ	**Messejana**	**2.54**	**302**	*e*P	**Pn**	**04 21 16.3**	**+0.8**
MESJ				*e*S	**Sn**	**04 21 44.3**	**-0.9**
MESJ				*i* IAML		04 21 45.2	
MESJ				*i* IAML		04 21 45.3	
MESJ				*i* IAML		04 21 45.4	
EBAD	**Badajoz**	**2.55**	**332**	Pn	**Pn**	**04 21 16.5**	**+0.9**
EBAD				Sn	**Sn**	**04 21 44.2**	**-1.0**
EBAD	**Badajoz**	**2.55**	**332**	Pn	**Pn**	**04 21 16.5**	**+0.9**
EBAD				Sn	**Sn**	**04 21 44.7**	**-0.6**
EBAD				*i* lVmb_Lg		04 21 46.7	
MORF	**Marmelete**	**2.64**	**289**	*e*P	**Pn**	**04 21 17.3**	**+0.4**
MORF				*e*S	**Sn**	**04 21 46.0**	**-1.7**
MORF				IAML		04 21 47.8	
	comp=E,8.5nm,0.1s						
MORF	**Marmelete**	**2.64**	**289**	*e*P	**Pn**	**04 21 17.3**	**+0.4**
MORF				*e*S	**Sn**	**04 21 46.9**	**-0.9**
MORF				*i* IAML		04 21 47.9	
MORF				*i* IAML		04 21 48.1	
MORF				*i* IAML		04 21 50.3	
PSIM	**Granatula de C**	**2.70**	**30**	Pn	**Pn**	**04 21 19.0**	**+1.3**
PSIM				Sn	**Sn**	**04 21 47.3**	**-1.8**
PFVI	**Vila Bisbo**	**2.74**	**284**	Pn	**Pn**	**04 21 18.5**	**+0.4**
PFVI				Sn	**Sn**	**04 21 47.9**	**-2.1**
PFVI	**Vila Bisbo**	**2.74**	**284**	*e*P	**Pn**	**04 21 18.6**	**+0.4**
PFVI				*e*S	**Sn**	**04 21 49.0**	**-0.9**
PFVI				*i* IAML		04 21 52.6	
PFVI				*i* IAML		04 21 53.3	
PTEO	**Sao Teotonio**	**2.78**	**293**	*e*P	**Pn**	**04 21 20.0**	**+1.3**
PTEO				*e*S	**Sn**	**04 21 50.3**	**-0.6**
PTEO				*i* IAML		04 21 54.5	
PTEO				*i* IAML		04 21 55.0	
EVO	**Evora**	**2.84**	**316**	Pn	**Pn**	**04 21 20.8**	**+1.2**
EVO				Sn	**Sn**	**04 21 51.1**	**-1.4**
EVO	**Evora**	**2.84**	**316**	*e*P	**Pn**	**04 21 21.0**	**+1.4**
EVO				*e*S	**Sn**	**04 21 51.4**	**-1.2**
EVO				*i* IAML		04 21 52.1	
EVO				*i* IAML		04 21 53.3	
EVO				*i* IAML		04 21 55.3	
PESTR	**Estremoz**	**2.88**	**326**	Sn	**Sn**	**04 21 52.1**	**-1.4**
PESTR				Pn	**Pn**	**04 21 21.3**	**+1.1**
PESTR	**Estremoz**	**2.88**	**326**	*e*P	**Pn**	**04 21 21.3**	**+1.1**
PESTR				*e*S	**Sn**	**04 21 52.4**	**-1.1**
PESTR				*i* IAML		04 21 54.9	
PESTR				*i* IAML		04 21 55.0	
PESTR				*i* IAML		04 21 57.1	
MOE	**Montemor**	**3.03**	**313**	*e*P	**Pn**	**04 21 23.7**	**+1.5**
MOE				*e*S	**Sn**	**04 21 55.9**	**-1.2**
MOE				*i* IAML		04 21 58.9	
MOE				*i* IAML		04 21 59.1	
MOE				*i* IAML		04 22 01.7	
PARRA	**Arraiolos**	**3.06**	**320**	*e*P	Pn	04 21 23.8	-6.7
PARRA				*e*S	Sn	04 21 56.6	-15
PARRA				*i* IAML		04 21 58.5	
PARRA				*i* IAML		04 21 59.0	
PARRA				*i* IAML		04 21 59.3	
PAB	**San Pablo**	**3.17**	**16**	Pn	**Pn**	**04 21 24.8**	**+0.6**
PAB				Sn	**Sn**	**04 21 59.3**	**-1.6**
PAB				*i* lVmb_Lg		04 22 01.2	
PMTG	**Montargil**	**3.35**	**321**	*e*P	**Pn**	**04 21 27.6**	**+1.1**
PMTG				*e*S	**Sn**	**04 22 04.2**	**-0.8**
PMTG				*i* IAML		04 22 04.9	
PMTG				*i* IAML		04 22 05.3	
PMTG				*i* IAML		04 22 05.3	
EPLA	**Plasencia**	**3.58**	**353**	Pn	**Pn**	**04 21 31.0**	**+1.1**
EPLA				Sn	**Sn**	**04 22 10.0**	**-1.0**
EPLA				*i* lVmb_Lg		04 22 13.6	
PCBR	**Castelo Branco**	**3.67**	**336**	*e*P	**Pn**	**04 21 33.2**	**+2.1**
PCBR				*e*S	**Sn**	**04 22 11.3**	**-1.8**
PCBR				*i* IAML		04 22 12.7	
PCBR				*i* IAML		04 22 13.3	
PCBR				*i* IAML		04 22 13.8	
MD31	**MD31**	**3.68**	**170**	P	**Pn**	**04 21 32.3**	**+0.1**
MD31	**MD31**	**3.68**	**170**	S	**Sn**	**04 22 16.2**	**+2.8**
PSARD	**Sardoal**	**3.73**	**327**	*e*P	**Pn**	**04 21 33.1**	**+1.2**
PSARD				*e*S	**Sn**	**04 22 13.7**	**-1.0**
PSARD				*i* IAML		04 22 14.9	
PSARD				*i* IAML		04 22 15.5	
PSARD				*i* IAML		04 22 15.8	
MDT	**Midelt**	**3.75**	**168**	P	**Pn**	**04 21 32.3**	**+0.1**
MDT	**Midelt**	**3.75**	**168**	S	**Sn**	**04 22 18.2**	**+2.9**
ETOB	**Tobarra**	**3.80**	**55**	Pn	**Pn**	**04 21 33.7**	**+0.8**
ETOB				Sn	**Sn**	**04 22 16.0**	**-0.4**
ETOB	**Tobarra**	**3.80**	**55**	Pn	**Pn**	**04 21 33.5**	**+0.6**
ETOB				Sn	**Sn**	**04 22 14.9**	**-1.5**
ETOB				*i* lVmb_Lg		04 22 16.6	
PMAFR	**Mafra**	**3.87**	**310**	*e*P	**Pn**	**04 21 35.0**	**+1.3**
PMAFR				*e*S	**Sn**	**04 22 16.4**	**-1.5**
PSBE	**So Bento**	**3.97**	**320**	*e*P	**Pn**	**04 21 37.2**	**+2.0**
PSBE				*e*S	**Sn**	**04 22 21.3**	**+0.8**
MTE	**Manteigas**	**4.21**	**338**	*e*P	**Pn**	**04 21 33.2**	**+1.8**
MTE				*e*S	**Sn**	**04 22 25.3**	**-1.0**
MTE				*i* IAML		04 22 26.4	
MTE				*i* IAML		04 22 26.5	
PCAS	**Casmilo, Conde**	**4.25**	**327**	*e*P	**Pn**	**04 21 40.7**	**+1.7**
PCAS				*e*S	**Sn**	**04 22 26.5**	**-0.9**
PCAS				*i* IAML		04 22 27.5	
PCAS				*i* IAML		04 22 30.7	
GUD	**Guadarrama**	**4.27**	**14**	Pn	**Pn**	**04 21 40.3**	**+1.0**
GUD				Sn	**Sn**	**04 22 24.6**	**-3.3**
MVO	**Moncorvo**	**4.80**	**346**	*e*P	**Pn**	**04 21 48.4**	**+1.8**
MVO				*e*S	**Sn**	**04 22 39.9**	**-1.2**
PVRL	**Vila Real**	**5.07**	**341**	*e*P	**Pn**	**04 21 51.5**	**+1.3**
PVRL				*e*S	**Sn**	**04 22 45.5**	**-2.0**
PVRL				*i* IAML		04 22 46.9	
PVRL				*i* IAML		04 22 47.0	
PVRL				*i* IAML		04 22 47.7	
ETOR	**Torete**	**5.09**	**31**	Pn	**Pn**	**04 21 51.0**	**+0.5**
ETOR				Sn	**Sn**	**04 22 45.5**	**-2.5**
ETOR				*i* lVmb_Lg		04 22 47.5	
POLO	**Lamas de Olo**	**5.18**	**341**	*e*P	**Pn**	**04 21 53.3**	**+1.5**
POLO				*e*S	**Sn**	**04 22 49.2**	**-1.2**
PBRG	**Braganca**	**5.38**	**350**	*e*P	**Pn**	**04 21 56.2**	**+1.6**
PBRG				*e*S	**Sn**	**04 22 52.8**	**-2.4**
ECAL	**Calabor**	**5.51**	**350**	Pn	**Pn**	**04 21 58.1**	**+1.7**
ECAL	**Calabor**	**5.51**	**350**	Pn	**Pn**	**04 21 57.6**	**+1.2**
ECAL				Sn	**Sn**	**04 22 56.2**	**-2.3**
ECAL				*i* lVmb_Lg		04 22 58.2	
PCAB	**Cabril**	**5.56**	**340**	*e*P	**Pn**	**04 21 58.8**	**+1.9**
PCAB				*e*S	**Sn**	**04 22 57.5**	**-2.0**
ELOB	**Lobios**	**5.71**	**340**	Pn	**Pn**	**04 21 59.5**	**+0.4**
ELOB				Sn	**Sn**	**04 23 00.1**	**-3.3**
ELOB				*i* lVmb_Lg		04 23 03.1	
PGAV	**Gavieira, Arco**	**5.86**	**339**	*e*P	**Pn**	**04 22 03.3**	**+2.2**

SJA 19 04:24:17.8±0.8, 31°.18S×68°.50W, h107km±2km, ML3.4, MW3.5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.15**	**171**	*e*P	Pn	04 24 33.5	+0.6
RTLL				*e*S	Sn	04 24 45.0	+0.9
RTLL				IAML		04 24 47.5	
	comp=E,843nm,0.3s						
SJA	**San Juan**	**0.35**	**188**	*e*P	Pn	04 24 34.4	+0.8
SJA				IAML		04 24 47.6	
	comp=E,672nm,0.1s						
ZON	**Zonda**	**0.39**	**203**	*e*P	Pn	04 24 34.2	+0.5
ZON				*e*S	Sn	04 24 46.8	+1.1
CFA	**Coronel Fontan**	**0.48**	**152**	*e*P	Pn	04 24 34.9	+0.6
CFA				*e*S	Sn	04 24 47.4	+0.7
ACCO	**Cerro Coronel**	**0.77**	**321**	*e*P	Pn	04 24 37.8	+0.9
ACCO				*e*S	Sn	04 24 52.8	+1.6
RTLS	**Leoncito**	**0.91**	**228**	*e*P	Pn	04 24 39.2	+1.0
RTLS				*e*S	Sn	04 24 55.1	+1.5
RTLS				IAML		04 25 01.4	
	comp=E,793nm,0.7s						
AVFE	**Valle Fertil**	**1.04**	**60**	*e*P	Pn	04 24 40.1	+0.8
AVFE				*e*S	Sn	04 24 56.7	+1.2
AVFE				IAML		04 24 58.4	
	comp=E,657nm,0.6s						
ACDV	**Cuesta del Vie**	**1.14**	**332**	*e*P	Pn	04 24 41.5	+1.0
ACDV				IAML		04 24 59.4	
	comp=Z,392nm,0.5s						
AROD	**Rodeo**	**1.31**	**320**	*e*P	Pn	04 24 43.7	+1.1
AROD				*e*S	Sn	04 25 02.5	+1.2
ACAN	**Cantantal**	**1.56**	**134**	*e*P	Pn	04 24 46.0	+0.8
ACHE	**Chepes**	**1.58**	**90**	*e*P	Pn	04 24 46.6	+1.0
ACHE				*e*S	Sn	04 25 08.2	+1.7
AGUA	**GUANDACOL**	**1.69**	**0**	*e*P	Pn	04 24 48.2	+1.2
AGUA				*e*S	Sn	04 25 10.7	+1.6
AGUA				IAML		04 25 12.1	
	comp=Z,322nm,0.2s						
ARCO	**CERRO ARCO**	**1.69**	**192**	*e*P	Pn	04 24 48.2	+1.3
ARCO				*e*S	Sn	04 25 11.4	+2.2
ARCO				IAML		04 25 13.3	
	comp=Z,669nm,0.3s						
CO01	**Juntas del Tor**	**1.82**	**311**	*e*P	Pn	04 24 50.4	+1.6
CO01				*e*S	Sn	04 25 14.2	+1.9
CO01				IAML		04 25 14.8	
	comp=Z,249nm,0.2s						
CO03	**El Pedregal**	**1.91**	**280**	*e*P	Pn	04 24 50.9	+1.3
CO03				*e*S	Sn	04 25 16.1	+2.2
CO03				IAML		04 25 16.5	
	comp=Z,291nm,0.3s						
AAGR	**Agrelo**	**1.92**	**188**	*e*P	Pn	04 24 51.1	+1.4
AAGR				*e*S	Sn	04 25 12.8	-1.3
AAGR				IAML		04 25 18.0	
	comp=Z,414nm,0.2s						
CO02	**Combarbal**	**2.14**	**269**	*e*P	Pn	04 24 53.4	+0.8
CO02				*e*S	Sn	04 25 21.1	+2.0
CO02				IAML		04 25 21.3	
	comp=Z,303nm,0.3s						
GO04	**Tololo Observa**	**2.22**	**296**	*e*P	Pn	04 24 54.6	+0.9
GO04				*e*S	Sn	04 25 22.1	+0.9
GO04				IAML		04 25 25.3	
	comp=Z,565nm,0.4s						
AVIZ	**Vizcacheras**	**2.28**	**180**	*e*P	Pn	04 24 55.9	+1.5
VA03	**San Esteban**	**2.35**	**227**	*e*P	Pn	04 24 56.7	+1.5
VA03				*e*S	Sn	04 25 28.2	+4.3
VA03				IAML		04 25 29.6	
	comp=Z,82nm,0.5s						
VCA	**Vinchina**	**2.45**	**6**	*e*P	Pn	04 24 58.2	+1.4
VCA				*e*S	Sn	04 25 29.1	+2.6
VCA				IAML		04 25 33.1	
	comp=Z,315nm,0.3s						
MT04	**Ro Olivares**	**2.61**	**212**	*e*P	Pn	04 25 00.5	+1.7
MT04				*e*S	Sn	04 25 28.4	-1.8
MT04				IAML		04 25 37.5	
	comp=Z,56nm,2.2s						
MRA	**San Martin**	**2.67**	**118**	*e*P	Pn	04 25 00.4	+0.9
MRA				*e*S	Sn	04 25 27.1	-4.4
MRA				IAML		04 25 33.8	
	comp=Z,189nm,0.2s						
AANI	**Anillaco**	**2.73**	**30**	*e*P	Pn	04 25 01.3	+1.0
AANI				IAML		04 25 36.2	
	comp=Z,257nm,0.2s						
ROC1	**El Roble**	**2.78**	**229**	*e*P	Pn	04 25 01.3	+0.2
ROC1				*e*S	Sn	04 25 34.9	+0.6
AC05	**El Transito**	**2.80**	**326**	*e*P	Pn	04 25 02.8	+1.6
AC05				*e*S	Sn	04 25 37.1	+2.5
AC05				IAML		04 25 38.0	
	comp=E,63nm,0.4s						
MT03	**Universidad Ad**	**2.86**	**216**	*e*P	Pn	04 25 03.5	+1.6
MT03				*e*S	Sn	04 25 38.3	+2.3
MT03				IAML		04 25 39.4	
	comp=Z,92nm,0.3s						
LCO	**Las Campanas**	**2.88**	**318**	*e*P	Pn	04 25 02.8	+0.4
LCO				*e*S	Sn	04 25 39.9	+3.1
LCO				IAML		04 25 41.0	
	comp=Z,312nm,0.2s						
MT05	**Renca**	**2.90**	**220**	*e*P	Pn	04 25 03.9	+1.4
MT05				*e*S	Sn	04 25 39.8	+2.9
MT13	**San Alfonso**	**2.96**	**210**	*e*P	Pn	04 25 05.9	+2.6
MT13				*e*S	Sn	04 25 42.4	+4.0
MT13				IAML		04 25 49.6	
	comp=Z,45nm,0.9s						
LMEL	**Las Melosas**	**3.02**	**208**	*e*P	Pn	04 25 05.9	+1.8
LMEL				*e*S	Sn	04 25 40.8	+1.0
LMEL				IAML		04 25 49.8	
	comp=Z,40nm,0.6s						
MT02	**Curacav**	**3.04**	**226**	*e*P	Pn	04 25 04.4	+0.1
MT02				*e*S	Sn	04 25 45.3	+5.1
TINO	**Tinogasta**	**3.21**	**15**	*e*P	Pn	04 25 08.2	+1.5
TINO				*e*S	Sn	04 25 45.9	+1.4
TCA	**Tanti**	**3.35**	**94**	*e*P	Pn	04 25 09.2	+0.8
TCA				*e*S	Sn	04 25 35.5	-12
TCA				IAML		04 25 47.8	
	comp=E,60nm,0.9s						
MT01	**Popeta**	**3.54**	**220**	*e*P	Pn	04 25 09.3	-1.6
MT01				*e*S	Sn	04 25 50.9	-1.1
MT01				IAML		04 25 52.0	
	comp=Z,33nm,0.9s						
RFA	**San Rafael**	**3.58**	**180**	*e*P	Pn	04 25 11.6	+0.1
RFA				*e*S	Sn	04 25 38.6	-14
RFA				IAML		04 25 50.3	
	comp=Z,92nm,0.3s						
AC04	**Llanos de Chal**	**3.72**	**322**	*e*P	Pn	04 25 13.3	-0.1
AC04				*e*S	Sn	04 25 57.7	+1.4
AC04				IAML		04 26 03.3	
	comp=Z,42nm,0.6s						
BO01	**Tunca**	**3.87**	**214**	*e*P	Pn	04 25 13.9	-1.3
BO01				IAML		04 26 04.6	
	comp=Z,31nm,1.8s						
GO03	**Copiapo**	**3.88**	**337**	*e*P	Pn	04 25 16.2	+0.6
GO03				*e*S	Sn	04 26 00.3	-0.1
GO03				IAML		04 26 03.3	
	comp=Z,45nm,0.4s						
AC02	**Maricunga**	**4.37**	**353**	*e*P	Pn	04 25 24.1	+1.6
AC02				*e*S	Sn	04 26 13.7	+1.0
AC02				IAML		04 26 20.5	
	comp=Z,24nm,0.7s						
EDS3	**Malargue**	**4.63**	**189**	*e*P	Pn	04 25 26.3	+0.5
EDS3				*e*S	Sn	04 26 08.3	-10
AC01	**Pan de Azucar**	**5.34**	**339**	*e*P	Pn	04 25 35.1	-0.2
AC01				IAML		04 27 17

AKTO 2.9nm,1.2s ⇓S Sn 05 02 13.1 -11
1.8nm,1.0s

SJA ***19*** *04:58:10.8±2.0, 21°.83S×68°.77W, h132km, ML3.4, MW3.5*
NEIC ***19*** *04:58:12.1±1.3, 21°.87S±0°.05×68°.5W±0°.1, h99km±13km, mb3.9/5, ML3.6(GUC), Error ellipse: s-maj=14.2km s-min=6.6km az=97.0*
IDC ***19*** *04:58:12.4±2.4, 21°.99S×67°.99W, h97km±24km, mb3.5/1, mbtmp3.7/5, MS2.4/1, Error ellipse: s-maj=45.5km s-min=19.2km az=112.0*
GUC ***19*** *04:58:13.7±0.9, 21°.84S×68°.67W, h106km±4km, ML3.6*
ISC 19 04:58:12.0±0.6, 21°.84S±0°.03×68°.70W±0°.04, h118km±6km, n75, σ1§13/103, mb3.9/3, 10C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.51**	**275**		**Pn**	**04 58 30.0**	**+0.1**
PB09				Sn	**Sn**	**04 58 42.9**	**-0.5**
PB09	**IPOC Station P**	**0.51**	**275**	⇑*i*P	**Pn**	**04 58 30.5**	**+0.6**
PB09				*i*S	**Sn**	**04 58 43.3**	**-0.1**
PB09				IAML		04 58 46.2	
	comp=E,2μm,0.6s						
PB03	**IPOC Station P**	**1.00**	**258**		**Pn**	**04 58 34.4**	**+0.4**
PB03				Sn	**Sn**	**04 58 49.5**	**-1.2**
PB03	**IPOC Station P**	**1.00**	**258**	⇑*i*P	**Pn**	**04 58 34.7**	**+0.7**
PB03				*e*S	**Sn**	**04 58 51.5**	**+0.9**
PB03				IAML		04 58 52.8	
	comp=E,1μm,0.4s						
PB01	**IPOC Station P**	**1.08**	**317**		**Pn**	**04 58 35.2**	**+0.4**
PB01					**Sn**	**04 58 50.5**	**-1.5**
PB01	**IPOC Station P**	**1.08**	**317**	⇑*e*P	**Pn**	**04 58 35.2**	**+0.4**
PB01				*i*S	**Sn**	**04 58 52.2**	**+0.2**
PB01				IAML		04 58 54.5	
	comp=E,1μm,0.2s						
PB07	**IPOC Station P**	**1.11**	**276**		**Pn**	**04 58 35.8**	**+0.7**
PB07				Sn	**Sn**	**04 58 51.8**	**-0.9**
PB07	**IPOC Station P**	**1.11**	**276**	⇑*i*P	**Pn**	**04 58 35.8**	**+0.7**
PB07				IAML		04 58 57.2	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	**1.11**	**276**	*i*P	**Pn**	**04 58 33.5**	**-1.7**
PB07				*e*S	**Sn**	**04 58 55.0**	**+2.3**
PB07				IAML		04 58 56.0	
	comp=Z,986nm,0.3s						
PB06	**IPOC Station P**	**1.18**	**223**		**Pn**	**04 58 36.6**	**+0.7**
PB06				Sn	**Sn**	**04 58 53.5**	**-0.5**
PB06	**IPOC Station P**	**1.18**	**223**	⇑*i*P	**Pn**	**04 58 36.7**	**+0.8**
PB06				*i*S	**Sn**	**04 58 54.7**	**+0.7**
PB06				IAML		04 58 55.8	
	comp=E,921nm,0.3s						
PB06	**IPOC Station P**	**1.18**	**223**	*i*P	**Pn**	**04 58 36.0**	**+0.1**
PB06				*e*S	**Sn**	**04 58 55.0**	**+1.0**
PB06				IAML		04 58 55.8	
	comp=Z,729nm,0.3s						
AF01	**San Pedro de A**	**1.21**	**157**		**Pn**	**04 58 36.6**	**+0.3**
AF01	**San Pedro de A**	**1.21**	**157**	⇑*e*P	**Pn**	**04 58 36.7**	**+0.4**
AF01				*e*S	**Sn**	**04 58 54.7**	**+0.1**
AF01	**San Pedro de A**	**1.21**	**157**	*i*P	**Pn**	**04 58 36.2**	**-0.1**
AF01				IAML		04 59 30.0	
	comp=Z,400nm,0.8s						
PB02	**IPOC Station P**	**1.23**	**295**		**Pn**	**04 58 36.9**	**+0.5**
PB02				Sn	**Sn**	**04 58 55.5**	**+0.7**
PB02	**IPOC Station P**	**1.23**	**295**	⇑*i*P	**Pn**	**04 58 37.0**	**+0.6**
PB02				*i*S	**Sn**	**04 58 54.8**	**0.0**
PB02				IAML		04 58 58.0	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**1.23**	**295**	*i*P	**Pn**	**04 58 34.7**	**-1.6**
PB02				IAML		04 59 05.7	
	comp=Z,2μm,0.3s						
PATCX	**Punta Patache**	**1.69**	**307**		**Pn**	**04 58 42.2**	**+0.5**
PATCX				Sn	**Sn**	**04 59 05.0**	**+0.7**
PATCX	**Punta Patache**	**1.69**	**307**	*i*P	**Pn**	**04 58 42.5**	**+0.8**
PATCX				*i*S	**Sn**	**04 59 05.2**	**+0.9**
PATCX				IAML		04 59 11.9	
	comp=N,1μm,0.3s						
PATCX	**Punta Patache**	**1.69**	**307**	*i*P	**Pn**	**04 58 42.0**	**+0.4**
PATCX				IAML		04 59 09.2	
	comp=Z,521nm,0.5s						
PB05	**IPOC Station P**	**1.72**	**234**		**Pn**	**04 58 42.6**	**+0.6**
PB05				Sn	**Sn**	**04 59 05.3**	**+0.4**
PB05	**IPOC Station P**	**1.72**	**234**	⇑*i*P	**Pn**	**04 58 42.6**	**+0.6**
PB05				*i*S	**Sn**	**04 59 04.7**	**-0.1**
PB05	**IPOC Station P**	**1.72**	**234**	*i*P	**Pn**	**04 58 42.0**	**0.0**
PB05				IAML		04 59 11.7	
	comp=Z,292nm,0.4s						
PB08	**IPOC Station P**	**1.74**	**346**		**Pn**	**04 58 44.0**	**+1.4**
PB08				Sn	**Sn**	**04 59 05.3**	**-0.5**
PB08	**IPOC Station P**	**1.74**	**346**	*i*P	**Pn**	**04 58 44.1**	**+1.4**
PB08				*i*S	**Sn**	**04 59 07.4**	**+1.5**
PB08				IAML		04 59 09.3	
	comp=E,570nm,0.4s						
PB08	**IPOC Station P**	**1.74**	**346**	*i*P	**Pn**	**04 58 43.6**	**+1.0**
PB08				*e*S	**Sn**	**04 59 07.5**	**+1.6**
PB08				IAML		04 59 11.2	
	comp=Z,259nm,0.4s						
TA01	**Diego Aracena**	**1.88**	**312**		**Pn**	**04 58 44.4**	**+0.5**
TA01				Sn	**Sn**	**04 59 09.7**	**+1.6**
TA01	**Diego Aracena**	**1.88**	**312**	⇑*i*P	**Pn**	**04 58 44.3**	**+0.5**
TA01				*i*S	**Sn**	**04 59 07.8**	**-0.3**
TA01				IAML		04 59 10.2	
	comp=E,2μm,0.3s						
TA01	**Diego Aracena**	**1.88**	**312**	*i*P	**Pn**	**04 58 43.7**	**-0.1**
TA01				*e*S	**Sn**	**04 59 07.9**	**-0.3**
TA01				IAML		04 59 10.2	
	comp=Z,329nm,0.4s						
TA02	**Huaiquique**	**2.06**	**319**	*e*P	**Pn**	**04 58 46.3**	**+0.3**
TA02	**Huaiquique**	**2.06**	**319**	*i*P	**Pn**	**04 58 46.7**	**+0.6**
TA02				IAML		04 59 23.2	
	comp=Z,333nm,1.1s						
GO01	**Chusmiza**	**2.21**	**348**		**Pn**	**04 58 49.7**	**+1.2**
GO01				Sn	**Sn**	**04 59 15.7**	**-0.7**
GO01	**Chusmiza**	**2.21**	**348**	*e*P	**Pn**	**04 58 49.6**	**+1.1**
GO01				*e*S	**Sn**	**04 59 16.9**	**+0.6**
GO01				IAML		04 59 20.3	
	comp=N,784nm,0.2s						
GO01	**Chusmiza**	**2.21**	**348**	*i*P	**Pn**	**04 58 49.2**	**+0.7**
GO01				IAML		04 59 23.7	
	comp=Z,158nm,0.6s						
PB11	**IPOC Station P**	**2.26**	**336**		**Pn**	**04 58 49.1**	**+0.4**
PB11				Sn	**Sn**	**04 59 18.0**	**+1.1**
PB11	**IPOC Station P**	**2.26**	**336**	⇑*i*P	**Pn**	**04 58 49.2**	**+0.4**
PB11				*i*S	**Sn**	**04 59 17.0**	**+0.1**
PB11				IAML		04 59 19.3	
	comp=E,692nm,0.2s						
PB11	**IPOC Station P**	**2.26**	**336**	*i*P	**Pn**	**04 58 48.6**	**-0.1**
PB11				*e*S	**Sn**	**04 59 15.5**	**-1.4**
PB11				IAML		04 59 19.1	
	comp=Z,316nm,0.4s						
YJA	**Yavi**	**2.97**	**97**	*e*P	**Pn**	**04 58 59.3**	**+1.0**
YJA	**Yavi**	**2.97**	**97**	*i*P	**Pn**	**04 59 00.3**	**+2.1**
YJA				IAML		04 59 38.6	
	comp=Z,12nm,0.7s						
PB14	**IPOC Station P**	**3.19**	**209**		**Pn**	**04 59 01.6**	**+0.6**
PB14	**IPOC Station P**	**3.19**	**209**	*e*P	**Pn**	**04 59 01.4**	**+0.4**
PB14	**IPOC Station P**	**3.19**	**209**	*i*P	**Pn**	**04 59 01.5**	**+0.5**
PB14				IAML		04 59 47.8	
	comp=Z,235nm,0.9s						
SALTA		**3.22**	**138**	*i*P	**Pn**	**04 59 03.4**	**+1.9**
SALTA				IAML		04 59 47.6	
	comp=Z,15nm,0.8s						
HJA	**Humahuaca**	**3.33**	**115**	*i*P	**Pn**	**04 59 04.7**	**+1.7**
HJA				IAML		04 59 49.9	
	comp=Z,4.1nm,0.5s						
GO02	**Mina Guanaco**	**3.41**	**194**		**Pn**	**04 59 04.0**	**+0.1**
GO02	**Mina Guanaco**	**3.41**	**194**	*e*P	**Pn**	**04 59 03.5**	**-0.3**
GO02	**Mina Guanaco**	**3.41**	**194**	*i*P	**Pn**	**04 59 03.8**	**-0.1**
GO02				IAML		04 59 59.8	
	comp=Z,96nm,0.3s						
PB12	**IPOC Station P**	**3.56**	**334**		**Pn**	**04 59 04.8**	**-1.0**
PB12	**IPOC Station P**	**3.56**	**334**	⇓*e*P	**Pn**	**04 59 04.7**	**-1.0**
PB12	**IPOC Station P**	**3.56**	**334**	*i*P	**Pn**	**04 59 04.4**	**-1.3**
PB12				IAML		05 00 01.6	
	comp=Z,86nm,0.8s						
PB16	**IPOC Station P**	**3.57**	**348**		**Pn**	**04 59 07.1**	**+0.7**
PB16	**IPOC Station P**	**3.57**	**348**	*e*P	**Pn**	**04 59 07.8**	**+1.5**
PB18	**Visviri**	**4.29**	**350**	Pn	**Pn**	**04 59 17.7**	**+1.7**
AC01	**Pan de Azucar**	**4.63**	**202**		**Pn**	**04 59 18.8**	**-1.1**
FSA	**Cafayete**	**4.92**	**150**	*i*P	**Pn**	**04 59 25.6**	**+1.5**
AC02	**Maricunga**	**4.99**	**184**		**Pn**	**04 59 25.5**	**+0.3**
AC02	**Maricunga**	**4.99**	**184**	*i*P	**Pn**	**04 59 25.0**	**-0.2**
AC02				IAML		05 00 53.6	
	comp=Z,18nm,0.6s						
LPAZ	**La Paz**	**5.55**	**6**	P	**Pn**	**04 59 35.5**	**+2.6**
	comp=Z,2.1nm,0.3s,baz=186,slow=4.5,SNR=17						
LPAZ				LR	LR	05 02 24.6	
	comp=Z,34nm,20.4s,baz=2.0,slow=44						
LPAZ	**La Paz**	**5.55**	**6**		**Pn**	**04 59 32.4**	**-0.6**
SIV	**San Ignacio**	**9.27**	**52**	P	**Pn**	**05 00 18.9**	**-3.8**
	comp=Z,5.8nm,0.5s,baz=240,slow=8.0,SNR=69						
SIV				S	Sn	05 01 54.9	-10
	comp=Z,0.5nm,0.4s,baz=271,slow=18,SNR=3.2						
CFA	**Coronel Fontan**	**9.73**	**178**	P	**Pn**	**05 00 25.9**	**-3.0**
	comp=Z,0.4nm,0.3s,baz=356,slow=13,SNR=5.6						
PTLB	**Pontes e Lacer**	**11.07**	**57**		**Pn**	**05 00 44.3**	**-2.7**
VILB	**Vilhena**	**11.99**	**44**		**Pn**	**05 00 58.3**	**-0.9**
AQDB	**Aquidauana**	**12.20**	**86**		**Pn**	**05 01 00.7**	**-1.3**
ITAB	**Concordia**	**16.00**	**113**		**P**	**05 01 50.7**	**-0.8**
ITAB				IAmb	IAmb	05 02 04.7	
	comp=Z,8.0nm,1.2s						
TRQA	**Tornquist**	**17.17**	**162**		**Pn**	**05 02 04.7**	**+0.1**
PLCA	**Paso Flores**	**18.90**	**184**	P	**P**	**05 02 23.2**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=15,slow=16,SNR=3.9						
LL05	**Los Muermos**	**19.92**	**191**	P	**P**	**05 02 35.5**	**+1.2**
MACA	**Manacapuru-AM**	**20.14**	**24**	P	**P**	**05 02 38.0**	**+1.1**
MACA				IAmb	IAmb	05 02 38.6	
	comp=Z,11nm,0.8s						
BOAV	**Boa Vista**	**25.38**	**19**	P	**P**	**05 03 29.3**	**+0.9**
BOAV				IAmb	IAmb	05 03 38.7	
	comp=Z,2.5nm,1.1s						
SNAA	**Sanae**	**61.89**	**161**	P	**P**	**05 08 20.0**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=271,slow=10,SNR=14						
	comp=Z,0.8nm,0.6s						
QSPA	**South Pole Qui**	**68.35**	**180**	P	P	05 09 06.3	+5.7
	comp=Z,1.2nm,0.6s,baz=213,slow=1.1,SNR=9.5						
TORD	**Torodi Ar. Bea**	**77.28**	**70**	P	**P**	**05 09 52.3**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=260,slow=5.7,SNR=0.9						
WRA	**Warramunga Arr**	**132.76**	**210**	PKP	**PKPdf**	**05 17 15.9**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=135,slow=1.8,SNR=1.5						

BJI ***19*** *06:10:22.6, 29°.16N×142°.34E, h16km, mB5.3/20, mb5.0/61, Ms4.9/52, Ms7 4.7/54*
IDC ***19*** *06:10:24.0±0.4, 29°.24N×142°.23E, h0km, mb4.9/34, mbtmp4.9/38, ML3.9/4, MS4.3/47, Error ellipse: s-maj=14.3km s-min=11.4km az=71.0*
MOS ***19*** *06:10:24.0±0.9, 29°.24N×142°.18E, h11km, mb5.4/54, MS4.7/11, Error ellipse: s-maj=9.3km s-min=4.2km az=119.5*
NEIC ***19*** *06:10:26.5±1.8, 29°.29N±0°.05×142°.3E±0°.1, h10km±1km, mb5.1/350, Mww5.0/10, Error ellipse: s-maj=16.4km s-min=8.9km az=262.0*
NEIC ***19*** *06:10:26.5, 29°.29N×142°.28E, h20km*
NEIC ***19*** *06:10:26.5, 29°.19N×142°.97E, h20km, Moment Tensor Solution. Duration: 1§5 Moment tensor: Scale 10¹⁶Nm; Mrr2.49; Mθθ0.62; Mϕϕ-3.10; Mrθ0.42; Mrϕ-0.16; Mθϕ1.97; Fault plane solution: M₀3.49000×10¹⁶ NP1: ϕs173.49000°, δ27.87000°, λ75.95000°. NP2:ϕs9.30000°, δ63.03000°, λ97.32000°. Principal axes: T 3.1578, Plg71.0000°, Azm295.0000°; N 0.5842, Plg7.0000°, Azm186.0000°; P -3.7420, Plg18.0000°, Azm94.0000°;*
NIED ***19*** *06:10:26.9, 29°.30N×142°.17E, h52km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.53; Mθθ0.08; Mϕϕ-1.61; Mrθ0.88; Mrϕ-0.66; Mθϕ3.12; Fault plane solution: M₀3.65000×10¹⁶ NP1: ϕs203.00000°, δ14.00000°, λ97.00000°. NP2:ϕs16.00000°, δ76.00000°, λ88.00000°.*
JMA ***19*** *06:10:26.9±0.2, 29°.3N±0°.9×14°.2E±°, h52km, MV4.8/31, MW4.9/31, NEAR TORISHIMA IS*
GCMT ***19*** *06:10:28.5±0.2, 29°.10N±0°.02×142°.38E±0°.01, h19km, MW5.0/113, Moment Tensor Solution. s57,c67; s113,c166; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.30±.15; Mθθ0.45±.09; Mϕϕ-3.76±.11; Mrθ0.95±.21; Mθϕ0.18±.07; Mrϕ1.54±.19; Best double couple: M₀3.98600×10¹⁶ NP1:ϕs161.00000°, δ36.00000°, λ63.00000°. NP2:ϕs13.00000°, δ59.00000°, λ108.00000°. Principal axes: T 3.8910, Plg71.0000°, Azm324.0000°; N 0.1820, Plg15.0000°, Azm184.0000°; P -4.0810, Plg12.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 06:10:25.5±0.5, 29°.23N±0°.03×142°.24E±0°.04, h10km±2km, h10km:pP-P, n911, σ1§09/795, mb5.1/301, MS4.4/73, 50C-20D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.13**	**181**	*e*P	**Pn**	**06 11 02.0**	**+0.8**
CBIJ				*e*S	**Sn**	**06 11 27.6**	**-0.1**
CBIJ	**Chichi jima**	**2.13**	**181**	A	A	06 11 02.0	
	comp=N,12nm,1.5s,comp=E,18nm,1.5s						
JCJ	**Chichijima**	**2.13**	**181**	Pn	Pn	06 10 54.6	-6.6
	comp=E,29nm,0.3s,baz=355,slow=20,SNR=17						
JCJ				Sn	Sn	06 11 08.9	-19
	comp=E,152nm,0.3s,baz=273,slow=18,SNR=8.7						
JCJ	**Chichijima**	**2.13**	**181**		**Pn**	**06 11 02.2**	**+1.0**
JHH2	**Haha-jima-NKT2**	**2.59**	**181**	*e*S	**Sn**	**06 11 38.2**	**-0.9**
JHH2	**Haha-jima-NKT2**	**2.59**	**181**	A	A	06 11 38.2	
	comp=N,11nm,3.5s,comp=E,13nm,1.2s						
JAOM	**Aogashimamukai**	**3.86**	**327**	*e*S	**Sn**	**06 12 07.6**	**-2.8**
JHCJ	**Hachijojimakas**	**4.36**	**332**	*e*P	**Pn**	**06 11 31.3**	**-0.6**
JHJ2	**Mitsune**	**4.39**	**332**		**Pn**	**06 11 32.2**	**0.0**
JHJ2	**Mitsune**	**4.39**	**332**	P	**Pn**	**06 11 31.8**	**-0.4**
JHJ2	**Mitsune**	**4.39**	**332**	*e*P	**Pn**	**06 11 31.9**	**-0.3**
JHJ2				*e*S	**Sn**	**06 12 20.8**	**-2.6**
JHJ	**Hachijo jima 2**	**4.41**	**332**	Pn	**Pn**	**06 11 31.6**	**-1.0**
	comp=E,48nm,0.3s,baz=35,slow=19,SNR=15						
JHJ				Sn	**Sn**	**06 12 21.4**	**-2.6**
	comp=E,122nm,0.3s,baz=78,slow=22,SNR=7.3						
JHJ				LR	LR	06 13 17.9	
	comp=E,6μm,18.9s,baz=186,slow=40						
	comp=E,88nm,0.3s						
JMYK	**Miyake Tsubota**	**5.33**	**335**	*e*S	**Sn**	**06 12 44.8**	**-1.9**
BSO1	**Boso 1**	**5.51**	**349**	*e*P	**Pn**	**06 11 46.3**	**-0.9**
BSO1				*e*S	**Sn**	**06 12 48.0**	**-2.4**
BSO3	**Boso 3**	**5.74**	**346**	*e*P	**Pn**	**06 11 49.9**	**-0.7**
BSO4	**Boso 4**	**5.96**	**345**	*e*P	**Pn**	**06 11 53.7**	**-0.1**
JOD2	**Odawara 2**	**6.58**	**337**	*e*P	**Pn**	**06 12 02.5**	**+0.1**
JHMK	**Hamakita**	**6.74**	**327**	*e*P	**Pn**	**06 12 05.8**	**+1.3**
INU	**Inuyama**	**7.53**	**325**		**Pn**	**06 12 15.5**	**+0.1**
INU	**Inuyama**	**7.53**	**325**	P	**Pn**	**06 12 17.1**	**+1.7**
JGF	**Kuroka**	**7.57**	**328**		**Pn**	**06 12 17.1**	**+1.1**
JGF	**Kuroka**	**7.57**	**328**	P	**Pn**	**06 12 18.0**	**+2.0**
MJAR	**Matsushiro Arr**	**8.04**	**336**	Pn	**Pn**	**06 12 23.0**	**+0.6**
	comp=E,3.5nm,0.3s,baz=157,slow=10,SNR=116						
MJAR				Sn	**Sn**	**06 13 53.4**	**+0.1**
	comp=E,1.0nm,0.3s,baz=300,slow=22,SNR=2.9						
MJAR				LR	LR	06 15 41.5	
	comp=E,2μm,18.8s,baz=146,slow=40						
	comp=E,92nm,0.6s						
MJAR	**Matsushiro Arr**	**8.04**	**336**		**Pn**	**06 12 22.9**	**+0.5**
MAJO	**Matsushiro**	**8.04**	**336**		**Pn**	**06 12 22.6**	**+0.2**
MAJO	**Matsushiro**	**8.04**	**336**	P	**Pn**	**06 12 22.9**	**+0.5**
MAJO	**Matsushiro**	**8.04**	**336**	*c* *i*P	**Pn**	**06 12 22.8**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,72nm,0.4s						
MJB9	**Matsu-Tunnel**	**8.04**	**336**		**Pn**	**06 12 23.8**	**+1.3**
JWT	**Wachi**	**8.36**	**318**	*e*P	**Pn**	**06 12 29.0**	**+2.3**
JMM	**Marumori**	**8.69**	**352**		**Pn**	**06 12 29.8**	**-1.5**
JMM	**Marumori**	**8.69**	**352**	P	**Pn**	**06 12 29.9**	**-1.5**
JSD	**Sado**	**9.38**	**340**	P	**Pn**	**06 12 40.2**	**-0.6**
JNU	**Nakatsue**	**10.47**	**295**	Pn	**Pn**	**06 12 57.4**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=109,slow=7.9,SNR=7.4						
JNU				LR	LR	06 16 52.5	
	comp=Z,3μm,18.5s,baz=114,slow=37						
	comp=Z,24nm,1.0s						
JTM	**Tenmabayashi**	**11.57**	**356**	P	**Pn**	**06 13 09.3**	**-1.4**
JOW	**Kunigami**	**12.56**	**262**	LR	LR	06 17 40.5	
	comp=Z,3μm,20.8s,baz=117,slow=35						
NMR	**Nemuro--Hokkai**	**14.38**	**10**	*e*P	**Pn**	**06 13 45.5**	**-3.7**
TJN	**Taejon**	**14.38**	**304**		**Pn**	**06 13 50.3**	**+1.0**
TJN	**Taejon**	**14.38**	**304**	*e*P	**Pn**	**06 13 49.1**	**-0.2**
TJN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS	**Korea Array**	**14.49**	**308**	Pn	**Pn**	**06 13 53.2**	**+2.5**
	comp=Z,0.8nm,0.3s,baz=117,slow=12,SNR=18						
KSAR	**Wonju Array Be**	**14.51**	**308**		**Pn**	**06 13 51.6**	**+0.6**
KSAR	**Wonju Array Be**	**14.51**	**308**	P	**Pn**	**06 13 51.6**	**+0.6**
KS19	**Wonju Array Si**	**14.55**	**308**	P	**Pn**	**06 13 53.5**	**+2.0**
ASAJ	**Asahikawa**	**14.86**	**1**	Pn	**Pn**	**06 13 52.7**	**-3.0**
ASAJ				LR	LR	06 21 24.8	
	comp=Z,3.5nm,0.3s,baz=176,slow=8.8,SNR=7.5						
	comp=Z,605nm,20.8s,baz=170,slow=44						
JKA	**Kamikawa-asahi**	**14.86**	**1**		**Pn**	**06 13 52.7**	**-3.0**
RUSJ	**Misakicho**	**15.04**	**8**	*e*P	**Pn**	**06 13 54.5**	**-3.6**
YUK	**Yuzh-Kuril'sk**	**15.05**	**10**	P	**Pn**	**06 13 54.5**	**-3.8**
YUK				pmax	pmax		
	comp=E,81nm,0.3s						
YUK				pmax	pmax		
	comp=E,46nm,0.1s						
YUK				pmax	pmax		
	comp=N,32nm,0.3s						
INCN	**Inchon**	**15.40**	**306**		**P**	**06 14 06.6**	**-1.0**
INCN				IAmb	IAmb	06 14 09.0	
	comp=E,129nm,0.9s						
INCN	**Inchon**	**15.40**	**306**	P	**P**	**06 14 06.6**	**-1.0**
INCN				P	**P**	**06 14 06.6**	**-1.0**
INCN				S	**S**	**06 17 03.8**	**-6.2**
INCN				S	**S**	**06 17 03.8**	**-6.2**
INCN	**Inchon**	**15.40**	**306**	P	**P**	**06 14 06.6**	**-1.0**
INCN				pmax	pmax		
	comp=E,129nm,0.9s						
TEY	**Ternei**	**16.39**	**346**	*e*P	**Pn**	**06 14 16.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**17.03**	**334**	P	**Pn**	**06 14 21.6**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=163,slow=11,SNR=10						
	comp=Z,17nm,0.9s						
YSS	**Yuzhno-Sakhali**	**17.70**	**1**	*e*P	**P**	**06 14 33.1**	**+0.2**
YSS				*e*S	**Sn**	**06 17 49.3**	**+0.1**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				MLR	MLR		
	comp=N,2μm,15.0s						
YSS				MLR	MLR		
	comp=Z,2μm,15.0s						
YSS				MLR	MLR		
	comp=E,4μm,14.0s						
SSE	**Sheshan**	**18.30**	**281**	P	**P**	**06 14 39.8**	**+0.1**
SSE				S	**Sn**	**06 18 03.4**	**-0.6**
SSE				pmax	pmax		
	comp=E,21nm,0.7s						
SSE				pmax	pmax		
	comp=E,350nm,3.9s						
SSE				LR	LR		
	comp=E,430nm,19.6s						
SSE				LR	LR		
	comp=E,620nm,19.4s						
MDJ	**Mudanjiang**	**18.35**	**330**	P	**Pn**	**06 14 38.6**	**-1.5**
MDJ	**Mudanjiang**	**18.35**	**330**	P	**Pn**	**06 14 40.0**	**0.0**
MDJ				pmax	pmax		
	comp=Z,49nm,1.5s						
MDJ	**Mudanjiang**	**18.35**	**330**	P	**Pn**	**06 14 40.1**	**0.0**
MDJ				pmax	pmax		
	comp=Z,50nm,1.6s						
TATO	**Taipei**	**18.95**	**262**	P	**Pn**	**06 14 49.0**	**+1.5**
NACB	**Ninganchiao**	**19.11**	**260**	P	**P**	**06 14 49.0**	**+0.3**
NACB				IAmb	IAmb	06 14 59.5	
	comp=E,185nm,1.5s						
YHNB	**Yeheng**	**19.14**	**261**		**Pn**	**06 14 50.3**	**+0.4**
YHNB				IAmb	IAmb	06 15 01.1	
	comp=Z,129nm,1.1s						
DL2	**Dalian**	**19.57**	**305**	P	**P**	**06 14 53.6**	**0.0**
DL2				S	**Sn**	**06 18 36.5**	**+1.8**
DL2				pmax	pmax		
	comp=Z,82nm,1.1s						
DL2				pmax	pmax		
	comp=Z,520nm,4.2s						
DL2				LR	LR		
	comp=Z,2μm,19.7s						
DL2				LR	LR		
	comp=Z,3μm,15.2s						
DL2				LR	LR		
	comp=Z,4μm,16.5s						
YULB	**Yu-li**	**19.64**	**258**	P	**Pn**	**06 14 55.9**	**0.0**
SNY	**Shenyang**	**19.66**	**315**	⇓P	**P**	**06 14 49.5**	**-5.0**
SNY				S	**Sn**	**06 18 41.4**	**+4.7**
SNY				pmax	pmax		
	comp=Z,23nm,1.2s						
SNY				pmax	pmax		
	comp=Z,250nm,4.7s						
SNY				LR	LR		
	comp=N,890nm,12.2s						
SNY				LR	LR		
	comp=E,870nm,19.2s						
SNY				LR	LR		
	comp=Z,1μm,19.2s						
CN2	**Changchun**	**19.78**	**322**	*e*P	**P**	**06 14 50.1**	**-5.8**
CN2				*e*sP	Pn	06 14 57.0	-0.4
CN2				*e*S	S	06 18 26.0	-13
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,30nm,4.0s						
CN2				LR	LR		
	comp=N,700nm,11.0s						
CN2				LR	LR		
	comp=E,1μm,11.0s						
CN2				LR	LR		
	comp=Z,1μm,12.0s						
SSLB	**Suanglung**	**19.79**	**259**		**Pn**	**06 14 57.9**	**+0.2**
TWG	**Pinlang**	**20.05**	**256**	P	Pn	06 15 00.7	0.0
BNX	**BinXian**	**20.19**	**329**	⇓P	**P**	**06 15 00.3**	**0.0**
BNX				pmax	pmax		
	comp=Z,180nm,1.0s						
TPUB	**Ta-pu**	**20.25**	**258**		Pn	06 15 03.5	+0.5
NJ2	**Nanjing**	**20.31**	**284**	⇓*i*P	**P**	**06 15 02.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,40n

H11N1 WAKE ISLAND Hy 24.32 107 T T 06 41 23.5
baz=297,slow=75,SNR=25
H11N3 WAKE ISLAND Hy 24.33 107 T T 06 41 43.4
baz=297,slow=75,SNR=33
HNS HongShan 24.34 297 ⇑P **P** **06 15 42.6 -1.0**
HNS pmax pmax
comp=Z,14nm,1.3s
HNS LR LR
comp=Z,1μm,17.2s
HNS LR LR
comp=Z,2μm,14.7s
HNS LR LR
comp=Z,2μm,14.3s
H11S3 WAKE ISLAND Hy 24.73 110 T T 06 41 48.1
baz=304,slow=74,SNR=4.0
H11S1 WAKE ISLAND Hy 24.74 110 T T 06 41 52.2
baz=304,slow=74,SNR=3.9
H11S2 WAKE ISLAND Hy 24.75 110 T T 06 41 52.4
baz=304,slow=74,SNR=3.1
TGY Tagaytay City 24.80 237 LR LR 06 25 19.2
comp=Z,749nm,18.4s,baz=34,slow=36
CNSH ChangSha 25.70 275 P **P** **06 15 55.6 -0.4**
CNSH S **S** **06 20 26.1 +1.3**
CNSH pmax pmax
comp=Z,41nm,1.5s
CNSH LR LR
comp=Z,740nm,6.9s
CNSH LR LR
comp=Z,1μm,14.2s
CNSH LR LR
comp=Z,1μm,15.3s
LYN LuoYang 25.77 290 P **P** **06 15 57.8 +1.2**
LYN pmax pmax
comp=Z,13nm,0.7s
LYN LR LR
comp=Z,750nm,16.1s
LYN LR LR
comp=Z,1μm,16.5s
LYN LR LR
comp=Z,2μm,17.9s
HIA Hailar 26.35 326 P **P** **06 16 02.0 +0.2**
HIA Hailar 26.35 326 P **P** **06 16 02.0 +0.2**
HIA pmax pmax
comp=Z,69nm,0.8s
PETK Petropavlovsk- 26.43 21 P **P** **06 16 01.8 -0.5**
comp=Z,1.4nm,0.5s,baz=218,slow=9.1,SNR=5.3
PETK LR LR 06 29 05.4
comp=Z,277nm,18.7s,baz=204,slow=42
comp=Z,1.4nm,0.5s
HILR Hailar Array B 26.54 326 P **P** **06 16 04.4 +1.0**
comp=Z,23nm,0.6s,baz=133,slow=11,SNR=24
comp=Z,23nm,0.6s
ZEA Zeya 26.82 340 *e*P **P** **06 16 06.5 +0.6**
ZEA *e* 06 26 55.2
ZEA pmax pmax
comp=N,40nm,0.8s
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,80nm,0.7s
DAV Davao City (W) 27.07 219 LR LR 06 26 36.9
comp=Z,454nm,20.2s,baz=4.5,slow=36
HHC Hu-ho-hao-te 27.52 303 ⇓*i*P **P** **06 16 11.4 -1.1**
HHC sP sP 06 16 18.0 +3.5
HHC S **S** **06 20 51.1 -2.5**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,280nm,5.0s
HHC LR LR
comp=Z,1μm,16.2s
HHC LR LR
comp=Z,2μm,14.7s
HHC LR LR
comp=Z,2μm,15.7s
ENH Enshi 28.40 280 IAmb IAmb 06 16 20.8
comp=Z,30nm,0.9s
BTO Baotou 28.60 302 *e*P **P** **06 16 21.4 -0.7**
BTO pP **sP** **06 16 25.6 +1.4**
BTO sP **pwP** **06 16 28.4 -1.5**
BTO PP **PnPn** **06 17 13.6 +1.8**
BTO pmax pmax
comp=Z,36nm,1.1s
BTO pmax pmax
comp=Z,540nm,8.1s
BTO LR LR
comp=Z,3μm,14.8s
BTO LR LR
comp=Z,5μm,16.8s
BTO LR LR
comp=Z,6μm,15.7s
XAN Xi'an 28.69 288 P **P** **06 16 21.3 -1.6**
XAN pP sP 06 16 28.3 +3.0
XAN pmax pmax
comp=Z,48nm,0.8s
XAN LR LR
comp=Z,2μm,17.9s
MA2 Magadan 30.89 8 ⇑*e*P **P** **06 16 44.4 +2.4**
MA2 pmax pmax
comp=Z,39nm,1.0s
QIZ Qiongzhong 31.17 258 P **P** **06 16 45.3 +0.4**
QIZ S **S** **06 21 52.8 +1.8**
QIZ LR LR
comp=Z,490nm,17.1s
QIZ LR LR
comp=Z,690nm,19.9s
QIZ LR LR
comp=Z,640nm,16.0s
GYA Guiyang 31.50 274 ⇑P **P** **06 16 46.8 -1.2**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA LR LR
comp=Z,1μm,16.8s
SWI Sorong 31.71 201 P P 06 16 39.3 -10
MYLDM Lahad Datu 32.81 228 **P** **06 17 01.8 +2.5**
ULN Ulaanbaatar 32.84 314 **P** **06 16 59.8 +0.3**
ULN Ulaanbaatar 32.84 314 P **P** **06 16 59.8 +0.3**
ULN P **P** **06 16 59.8 +0.3**
ULN S **S** **06 22 23.7 +6.8**
ULN S **S** **06 22 23.7 +6.8**
ULN Ulaanbaatar 32.84 314 *d*/P **P** **06 16 59.9 +0.3**
ULN pmax pmax
comp=Z,41nm,1.1s
LZH Lanzhou 32.88 292 *e*P **P** **06 16 58.1 -1.9**
LZH sP pwP 06 17 05.8 -1.3
LZH pmax pmax
comp=Z,22nm,1.2s
LZH LR LR
comp=Z,1μm,13.0s
LZH LR LR
comp=Z,2μm,15.2s
LZH LR LR
comp=Z,2μm,15.9s
LZDM Lanzhou Array 33.00 292 P **P** **06 16 59.1 -2.1**
comp=Z,3.0nm,0.4s,baz=142,slow=5.1,SNR=6.8
LZDM LR LR 06 32 13.3
comp=Z,566nm,18.7s,baz=110,slow=40
comp=Z,3.0nm,0.4s
SHEM Shemya Is, Ala 33.16 36 LR LR 06 29 55.4
comp=Z,188nm,18.6s,baz=293,slow=35
CD2 Chengdu 33.23 283 P **P** **06 17 02.8 -0.2**
CD2 S **S** **06 22 23.4 +0.2**
CD2 LR LR
comp=Z,1μm,15.1s
CD2 LR LR
comp=Z,2μm,15.9s
CD2 LR LR
comp=Z,2μm,14.7s
SONM Songino Array 33.24 314 P **P** **06 17 03.1 +0.2**
comp=Z,23nm,0.8s,baz=122,slow=6.5,SNR=63
comp=Z,23nm,0.8s
FAKI Fak Fak 33.37 198 P **P** **06 17 02.2 -2.0**
comp=Z,54nm,0.6s
YAK Yakutsk 33.83 349 LR LR 06 32 01.7
comp=Z,315nm,19.1s,baz=146,slow=38
YAK Yakutsk 33.83 349 *e*P **P** **06 17 07.0 -0.7**
YAK *e**PP **sP** **06 17 12.5 +2.6**
YAK *e* 06 18 20.5
YAK *e*S **S** **06 22 30.7 -0.8**
YAK pmax pmax
comp=Z,27nm,0.9s
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK pmax pmax
comp=Z,281nm,3.4s
YAK pmax pmax
comp=E,471nm,4.7s
YAK pmax pmax
comp=N,245nm,3.3s
YAK smax smax
comp=N,552nm,3.8s
YAK smax smax
comp=E,178nm,2.8s
YAK MLR MLR
comp=Z,415nm,15.0s
YAK MLR MLR
comp=N,253nm,14.0s
YAK MLR MLR
comp=E,73nm,13.0s
SEY Seymchan 34.35 8 ⇓*i*P **P** **06 17 13.1 +0.9**
SEY pmax pmax
comp=Z,13nm,0.9s
MRSI Marisa 34.54 218 P **P** **06 17 15.3 +1.0**
comp=Z,1μmcomp=Z,94nm,1.0s
TOLI2 Tolitoli 34.65 220 **P** **06 17 15.2 -0.1**
TOLI2 IAmb IAmb 06 17 35.3
comp=Z,19nm,0.8s
BOD Bodaibo 34.66 334 *e*P **P** **06 17 14.5 -0.5**
BOD pmax pmax
comp=Z,42nm,1.1s
KMI Kunming 35.26 273 P **P** **06 17 20.0 -0.9**
KMI pmax pmax
comp=Z,18nm,0.9s
KMI LR LR
comp=Z,530nm,18.4s
KMI LR LR
comp=Z,600nm,19.7s
KMI LR LR
comp=Z,740nm,19.5s
MPSI Mapaga 35.78 221 P **P** **06 17 25.6 +0.5**
PZH PanZhiHua 35.78 276 P **P** **06 17 24.1 -1.1**
PZH S **S** **06 23 05.3 +2.6**
PZH pmax pmax
comp=Z,30nm,1.0s
PZH LR LR
comp=Z,340nm,16.2s
PZH LR LR
comp=Z,410nm,14.7s
PZH LR LR
comp=Z,480nm,17.5s
ZAK Zakamensk 36.06 317 *e*P **P** **06 17 27.7 +0.4**
ZAK pmax pmax
comp=Z,51nm,1.4s
GTA Gaotai 36.19 298 P **P** **06 17 27.1 -1.5**
GTA pP pP 06 17 30.3 +0.2
GTA pmax pmax
comp=Z,11nm,1.0s
GTA LR LR
comp=Z,790nm,15.6s
GTA LR LR
comp=Z,490nm,14.9s
GTA LR LR
comp=Z,1μm,16.0s
TLY Talaya 36.34 319 **P** **06 17 30.3 +0.8**
TLY IAmb IAmb 06 17 31.8
comp=Z,34nm,0.8s
TLY Talaya 36.34 319 P **P** **06 17 30.0 +0.4**
TLY P **P** **06 17 30.0 +0.4**
TLY Talaya 36.34 319 *c*e**P** **P** **06 17 31.1 +1.5**
TLY pmax pmax
comp=Z,91nm,1.7s
MOY Mondy 37.87 318 *e*P **P** **06 17 43.0 +0.3**
MOY pmax pmax
comp=Z,64nm,1.6s
SBUM Sibu 39.03 233 **P** **06 17 52.8 +0.1**
SPSI Sidrap Palu 39.43 217 P **P** **06 17 55.9 -0.1**
comp=Z,1μmcomp=Z,27nm,0.6s
GOMU GeErMu 40.18 293 P **P** **06 18 01.1 -1.4**
GOMU pP pP 06 18 04.5 +0.2
GOMU sP pwP 06 18 08.8 -0.9
GOMU S **S** **06 24 08.3 -1.4**
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU LR LR
comp=Z,220nm,10.3s
GOMU LR LR
comp=Z,520nm,10.8s
GOMU LR LR
comp=Z,780nm,10.6s
KAPI Kappang 40.33 216 LR LR 06 34 25.8
comp=Z,142nm,20.6s,baz=36,slow=36
CHTO Chiang Mai 40.68 265 **P** **06 18 05.7 -0.8**
CHTO Chiang Mai 40.68 265 P **P** **06 18 06.0 -0.5**
CHTO P **P** **06 18 06.0 -0.5**
CHTO S **S** **06 24 19.8 +3.0**
CHTO S **S** **06 24 19.8 +3.0**
CHTO Chiang Mai 40.68 265 P **P** **06 18 05.7 -0.8**
CHTO pmax pmax
comp=Z,60nm,0.9s
CM31 Chiang Mai Arr 40.82 265 IAmb IAmb 06 18 08.6
comp=Z,24nm,0.8s
CMAR Chiang Mai Arr 40.82 265 P **P** **06 18 07.5 -0.1**
comp=Z,13nm,0.8s,baz=50,slow=8.5,SNR=74
CMAR PcP **PcP** **06 20 09.1 +0.4**
comp=Z,1.9nm,0.4s,baz=17,slow=0.9,SNR=4.2
CMAR LR LR 06 35 35.9
comp=Z,716nm,20.1s,baz=75,slow=37
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 40.82 265 **P** **06 18 07.1 -0.5**
BILL Bilibino 41.37 13 **P** **06 18 11.2 -0.3**
BILL IAmb IAmb 06 18 27.2
comp=Z,22nm,0.8s
BILL Bilibino 41.37 13 ⇑*i*P **P** **06 18 11.0 -0.5**
BILL pmax pmax
comp=Z,7.0nm,0.7s
HNR Honiara 42.06 153 LR LR 06 34 58.5
comp=Z,345nm,19.5s,baz=358,slow=35
SOEI Soe 42.46 207 P **P** **06 18 20.7 -0.4**
NIKH Nikolski High 42.75 42 P **P** **06 18 22.6 -0.3**
baz=256
COEN Coen 42.95 179 **P** **06 18 25.9 +1.1**
COEN IAmb IAmb 06 18 39.9
comp=Z,35nm,0.9s
TIXI Tiksi 43.10 354 LR LR 06 37 39.0
comp=Z,144nm,21.6s,baz=188,slow=38
TIXI Tiksi 43.10 354 **P** **06 18 24.7 -0.8**
TIXI Tiksi 43.10 354 ⇑*i*P **P** **06 18 24.9 -0.6**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
MTN Manton Dam 43.18 196 **P** **06 18 26.3 -0.5**
SPIA Saint Paul Isl 43.20 36 P **P** **06 18 26.6 +0.1**
baz=250
TEZP TEZPUR 43.50 279 *e*P **P** **06 18 27.8 -1.6**
TEZP IAmb IAmb 06 18 34.0
comp=Z,30nm,1.1s
UNV Unalaska Valle 44.32 41 P **P** **06 18 36.0 +0.5**
baz=257
SHL Shillong 44.58 278 P **P** **06 18 37.8 -0.5**
PLAI Plampang 44.58 216 P **P** **06 18 37.0 -1.1**
comp=Z,48nm,0.9s
TWSI Taliwang, Sumb 44.97 217 P **P** **06 18 40.6 -0.6**
comp=Z,36nm,0.9s
GAMB Gambell 45.19 27 P **P** **06 18 42.8 +0.5**
baz=242
WMQ Urumqi 45.39 304 *e*P **P** **06 18 45.0 +0.6**
WMQ PP **PP** **06 20 32.3 +1.9**
WMQ pmax pmax
comp=Z,23nm,1.3s
WMQ LR LR
comp=Z,470nm,19.5s
WMQ LR LR
comp=Z,600nm,17.1s
WMQ LR LR
comp=Z,440nm,19.5s
ABJI Asem Bagus 45.64 221 P **P** **06 18 47.0 +0.6**
comp=Z,73nm,1.0s
BRDH Bariadhala 45.68 274 LR LR 06 40 14.0
comp=Z,339nm,18.1s,baz=109,slow=39
DGZ Jazzator, Alta 45.84 312 *c*/P **P** **06 18 48.5 +0.5**
DGZ pmax pmax
comp=Z,47nm,0.7s
JAGI Jajag, Banyuwa 46.23 220 **P** **06 18 50.6 -0.6**
JAGI Jajag, Banyuwa 46.23 220 P **P** **06 18 50.7 -0.5**
comp=Z,1μmcomp=Z,37nm,0.9s
M11K Mekoryuk 46.25 33 P **P** **06 18 50.9 +0.1**
baz=251
KNRA Kununurra 46.51 198 **P** **06 18 53.1 -0.1**
KNRA IAmb IAmb 06 18 59.1
comp=Z,11nm,0.7s
S12K Black Hills 47.21 40 P **P** **06 18 58.8 +0.4**
baz=260
ZSN Zaisan 47.41 309 *e*P **P** **06 18 59.7 -0.5**
ZSN Zaisan 47.41 309 *e*P **P** **06 18 59.6 -0.5**
K13K Kusilvak Mount 47.45 31 P **P** **06 19 00.6 +0.5**
baz=252
M13K Dall Lake 47.61 33 P **P** **06 19 01.7 +0.3**
baz=254
ZAA0 Zalesovo Array 47.92 318 **P** **06 19 03.9 -0.1**
ZALV Zalesovo Beam 47.92 318 P **P** **06 19 03.9 -0.1**
comp=Z,46nm,1.0s,baz=102,slow=6.2,SNR=109
ZALV PcP **PcP** **06 20 31.6 -0.6**
comp=Z,7.4nm,0.8s,baz=89,slow=3.0,SNR=4.1
comp=Z,46nm,1.0s
ZALV Zalesovo Beam 47.92 318 *i*P **P** **06 19 03.9 -0.1**
ZALV pmax pmax
comp=Z,47nm,1.0s
F14K Arctic Creek 48.01 26 P **P** **06 19 05.0 +0.5**
baz=247
SDPT Sand Point 48.04 40 P **P** **06 19 05.0 +0.2**
baz=262
ANM Nome 48.04 27 P **P** **06 19 05.5 +0.8**
ANM Nome 48.04 27 P **P** **06 19 05.6 +0.8**
ANM pmax pmax
comp=Z,43nm,1.0s
ANM Nome 48.04 27 P **P** **06 19 05.3 +0.6**
baz=249
L14K Kuka Creek 48.17 32 P **P** **06 19 06.1 +0.3**
baz=254
J14K Nanvaranak Lak 48.19 30 P **P** **06 19 06.0 +0.1**
baz=252
N14K Kuskokwak Cree 48.29 34 P **P** **06 19 06.6 0.0**
baz=256
EVN Everest 48.29 283 IAmb IAmb 06 20 50.5
comp=Z,11nm,0.6s
DGPR DIGLIPUR 48.31 261 *e*P **P** **06 19 07.1 -0.3**
DGPR IAmb IAmb 06 19 09.8
comp=Z,23nm,0.8s
O14K Tigyukauivet M 48.34 35 P **P** **06 19 06.9 -0.2**
baz=257
M14K Bethel 48.36 33 P **P** **06 19 07.1 0.0**
baz=255
KPJI Karang Pucung 48.47 227 P **P** **06 19 08.2 -0.4**
S14K Fog Glacier 48.70 39 P **P** **06 19 09.6 -0.4**
baz=262
F15K North Star Dit 48.75 26 P **P** **06 19 10.1 -0.1**
baz=248
PSI Prapat 48.79 246 LR LR 06 39 46.3
comp=Z,244nm,18.0s,baz=50,slow=36
L15K Ungalak Mounta 48.82 32 P **P** **06 19 10.8 +0.1**
baz=255
M15K Kasigluk River 48.95 33 P **P** **06 19 12.0 +0.3**
baz=257
K15K Wolf Creek Mou 48.96 31 P **P** **06 19 12.2 +0.4**
baz=254
O15K Ungalikthiuk R 49.05 35 P **P** **06 19 13.1 +0.6**
baz=259
N15K Kwethluk River 49.12 34 P **P** **06 19 13.6 +0.4**
baz=258
MK31 Makanchi Array 49.17 308 *c*/P **P** **06 19 13.2 -0.6**
MKAR Makanchi Array 49.17 308 P **P** **06 19 13.5 -0.3**
comp=Z,22nm,0.8s,baz=92,slow=9.4,SNR=116
MKAR LR LR 06 40 59.8
comp=Z,646nm,18.3s,baz=87,slow=37
comp=Z,22nm,0.8s
MKAR Makanchi Array 49.17 308 **P** **06 19 13.7 -0.1**
MKAR Makanchi Array 49.17 308 P **P** **06 19 13.7 -0.1**
KCSI Kotacane, Aceh 49.29 247 P **P** **06 19 14.4 -0.6**
H16K Elim 49.34 28 P **P** **06 19 15.3 +0.6**
baz=252
MAKZ Makanchi 49.39 308 **P** **06 19 15.5 +0.1**
MAKZ IAmb IAmb 06 19 18.4
comp=Z,16nm,0.9s
MAKZ Makanchi 49.39 308 P **P** **06 19 15.5 +0.1**
MAKZ pmax pmax
comp=Z,15nm,1.0s
WRAB Tennant Creek 49.47 190 P **P** **06 19 16.2 +0.1**
WRAB Tennant Creek 49.47 190 *c*/P **P** **06 19 16.0 -0.1**
WRAB pmax pmax
comp=Z,52nm,0.9s
WRA Warramunga Arr 49.48 190 P **P** **06 19 16.1 -0.1**
comp=Z,43nm,0.8s,baz=10.0,slow=8.1,SNR=111
WRA PcP **PcP** **06 20 38.7 +0.4**
comp=Z,8.4nm,0.8s,baz=3.5,slow=3.8,SNR=5.0
WRA S **S** **06 26 20.4 -3.4**
comp=Z,2.5nm,1.2s,baz=18,slow=15,SNR=6.4
WRA LR LR 06 40 11.5
comp=Z,161nm,18.5s,baz=36,slow=36
comp=Z,43nm,0.8s
WRA Warramunga Arr 49.48 190 **P** **06 19 15.6 -0.6**
MNSI Mandailing Nat 49.50 243 P P 06 19 27.8 +11
C16K Lisburne Hills 49.50 23 P **P** **06 19 16.4 +0.5**
baz=246
G16K Koyuk River 49.53 27 P **P** **06 19 16.1 -0.1**
baz=251
MDSI Maura Dua 49.58 234 P **P** **06 19 17.0 -0.1**
LHSI Lahat 49.59 235 P P 06 19 25.3 +8.1
J16K Anvik River 49.64 30 P **P** **06 19 17.2 +0.2**
baz=254
FITZ Fitzroy Crossi 49.71 201 P **P** **06 19 18.1 +0.1**
comp=Z,5.1nm,0.7s,baz=8.7,slow=6.5,SNR=14
comp=Z,5.1nm,0.7s
L16K Owhat River 49.76 32 P **P** **06 19 17.9 0.0**
baz=257
I17K Unalakleet 49.76 29 P **P** **06 19 17.9 0.0**
baz=254
N16K Nishlik Lake 49.83 34 P **P** **06 19 18.8 +0.3**
baz=259
M16K Timber Creek 49.85 33 P **P** **06 19 19.2 +0.6**
baz=258
R16K Pilot Point 49.95 38 P **P** **06 19 19.9 +0.4**
baz=262
P16K Nushagak River 49.95 36 P **P** **06 19 19.6 +0.1**
baz=261
O16K Kokwok River B 50.00 35 P **P** **06 19 19.8 0.0**
baz=260
D17K Noatak River 50.06 24 P **P** **06 19 20.4 +0.3**
baz=248
G17K Kiwalik Mounta 50.24 27 P **P** **06 19 22.1 +0.5**
baz=253
RDOG Red Dog Mine 50.26 24 P **P** **06 19 22.1 +0.5**
baz=248
E17K Hotham Inlet 50.30 25 P **P** **06 19 22.4 +0.5**
baz=250
F17K Baldwin Pennin 50.30 26 IAmb IAmb 06 19 39.4
comp=Z,15nm,0.8s
F17K Baldwin Pennin 50.30 26 P **P** **06 19 22.0 0.0**
baz=251
C17K DeLong Mountai 50.32 23 P **P** **06 19 22.3 +0.1**
baz=248
J17K VABM Dome 50.33 30 P **P** **06 19 22.5 +0.3**
baz=256
H17K Granite Mounta 50.38 28 P **P** **06 19 22.8 +0.2**
baz=254
L17K Donlin 50.39 32 P **P** **06 19 23.3 +0.6**
baz=258
K17K Iditarod 50.52 31 P **P** **06 19 24.3 +0.6**
baz=257
O17K Koliganek Bris 50.53 35 P **P** **06 19 23.5 -0.2**
baz=261
Q16K King Salmon 50.59 36 P **P** **06 19 24.3 +0.1**
baz=262
N17K Nushagak Hills 50.61 34 IAmb IAmb 06 19 43.4
comp=Z,26nm,1.1s
N17K Nushagak Hills 50.61 34 P **P** **06 19 24.5 +0.1**
baz=260
R17L Mt. Peulik Vol 50.61 38 P **P** **06 19 24.4 -0.1**
baz=263
M17K Holitna River 50.65 33 P **P** **06 19 24.5 -0.1**
baz=259
P17K Kvichak River 50.77 36 P **P** **06 19 26.1 +0.4**
baz=262
CHIR Chirikof Islan 50.83 40 P **P** **06 19 25.8 -0.3**
baz=265
E18K Tukpahlearik C 50.86 25 IAmb IAmb 06 19 41.6
comp=Z,40nm,1.6s
E18K Tukpahlearik C 50.86 25 P **P** **06 19 26.3 +0.1**
baz=251
Q17K Contact Creek 50.94 37 P **P** **06 19 26.8 -0.2**
baz=263
F18K Selawik 50.96 26 P **P** **06 19 27.2 +0.3**
baz=253
C18K Utukok River 51.06 23 P **P** **06 19 28.1 +0.3**
baz=250
H18K Honhosa River 51.07 28 IAmb IAmb 06 19 46.9
comp=Z,20nm,1.2s
H18K Honhosa River 51.07 28 P **P** **06 19 28.0 +0.1**
baz=255
SNSI Sinabang, Aceh 51.10 247 P **P** **06 19 28.8 +0.1**
comp=Z,103nm,1.2s

B18K **Kokolik River** 51.12 22 P P 06 19 28.5 +0.4
baz=248
L18K **Granite Mounta** 51.15 32 P P 06 19 28.8 +0.3
baz=259
G18K **Tagagawik** 51.15 27 IAmb IAmb 06 19 45.4
comp=Z,15nm,0.8s
G18K **Tagagawik** 51.15 27 P P 06 19 29.0 +0.6
baz=254,SNR=6.4
N18K **Kilae Creek** 51.26 34 IAmb IAmb 06 19 48.2
comp=Z,20nm,1.1s
N18K **Kilae Creek** 51.26 34 P P 06 19 29.9 +0.5
baz=261
J18K **Innoko River** 51.38 30 P P 06 19 30.3 +0.1
baz=258
SHLS **Shalkode** 51.41 304 *eP* P 06 19 27.8 -3.2
SHLS **Shalkode** 51.41 304 *eP* P 06 19 27.7 -3.2
P18K **Big Mountain,** 51.41 36 P P 06 19 30.9 +0.3
baz=263
M18K **Stony River** 51.42 33 P P 06 19 30.7 +0.2
baz=261
Q18K **Katmai Hardscr** 51.44 36 P P 06 19 30.7 -0.1
baz=264
O18K **Koktuh Hills** 51.48 35 P P 06 19 31.2 +0.1
baz=262
KURK **Kurchatov** 51.54 313 P 06 19 32.0 +0.5
KURK **Kurchatov** 51.54 313 P P 06 19 31.6 +0.1
KURK P P 06 19 31.6 +0.1
KURK S S 06 26 54.9 +3.0
KURK S S 06 26 54.9 +3.0
KURK **Kurchatov** 51.54 313 *c i* P P 06 19 31.5 0.0
KURK pmax pmax
comp=Z,146nm,0.9s
GCSA **Galena City Sc** 51.59 29 P P 06 19 31.6 0.0
baz=257
KURBB **Kurchatov Arra** 51.60 313 P P 06 19 32.0 0.0
comp=Z,86nm,0.8s,baz=89,slow=7.2,SNR=371
comp=Z,86nm,0.8s
KURBB **Kurchatov Arra** 51.60 313 P P 06 19 31.9 0.0
R18K **Karluk** 51.62 38 P P 06 19 32.0 0.0
baz=265
SII **Sitkinak Islan** 51.69 39 P P 06 19 32.5 -0.1
baz=266
UZB **Uzynbulak** 51.73 304 *eP* P 06 19 32.6 -0.7
UZB **Uzynbulak** 51.73 304 *eP* P 06 19 32.6 -0.7
C19K **Lookout Ridge** 51.77 23 P P 06 19 33.2 +0.2
baz=251
G19K **Purcell Mounta** 51.83 27 P P 06 19 34.0 +0.5
baz=256
H19K **Roundabout Mou** 51.94 28 P P 06 19 34.6 +0.3
baz=257
J19K **Poorman** 51.96 30 P P 06 19 35.0 +0.5
J19K IAmb IAmb 06 20 00.3
comp=Z,27nm,1.4s
J19K **Poorman** 51.96 30 P P 06 19 34.9 +0.3
baz=259
N19K **Bonanza Creek** 51.97 34 P P 06 19 34.9 +0.2
baz=262
TDK **Taldyqorghan** 51.98 306 *eP* P 06 19 34.6 -0.5
TDK **Taldyqorghan** 51.98 306 *eP* P 06 19 34.5 -0.5
L19K **White Mountain** 51.99 32 P P 06 19 35.3 +0.5
baz=261
D19K **Kuna River** 52.09 24 P P 06 19 35.2 -0.2
baz=253
E19K **Redstone River** 52.12 25 IAmb IAmb 06 19 54.6
comp=Z,21nm,0.9s
E19K **Redstone River** 52.12 25 P P 06 19 36.1 +0.5
baz=255
SATY **Saty** 52.19 304 *eP* P 06 19 35.9 -0.8
SATY **Saty** 52.19 304 *eP* P 06 19 35.9 -0.8
OHAK **Old Harbor** 52.23 38 P P 06 19 36.5 -0.1
baz=266
P19K **Oil Pt** 52.45 35 P P 06 19 37.9 -0.3
baz=264
L20K **Farewell, AK** 52.48 32 P P 06 19 38.0 -0.4
baz=262
K20K **Telida** 52.53 31 P P 06 19 39.4 +0.6
baz=261
H20K **Anotleneega Mo** 52.57 28 P P 06 19 39.4 +0.3
baz=258
F20K **Avaraart Lake** 52.58 26 P P 06 19 39.1 +0.1
baz=256
I20K **Naaghedeneel** 52.60 29 P P 06 19 39.2 -0.1
baz=259
J20K **Nowinta River** 52.63 30 IAmb IAmb 06 19 47.0
comp=Z,13nm,0.8s
J20K **Nowinta River** 52.63 30 P P 06 19 39.6 +0.1
baz=260,SNR=6.6
KDAK **Kodiak Island** 52.64 38 LR LR 06 40 44.0
comp=Z,356nm,21.0s,baz=250,slow=35
KDAK **Kodiak Island** 52.64 38 P P 06 19 39.6 0.0
KDAK **Kodiak Island** 52.64 38 P P 06 19 39.6 0.0
KDAK pmax pmax
comp=Z,53nm,1.2s
KDAK **Kodiak Island** 52.64 38 P P 06 19 39.4 -0.2
baz=266
D20K **Etivluk River** 52.68 24 IAmb IAmb 06 19 54.1
comp=Z,25nm,0.8s
D20K **Etivluk River** 52.68 24 P P 06 19 39.9 +0.2
baz=254
E20K **Nigu River** 52.71 24 P P 06 19 40.0 0.0
baz=255
M20K **Styx River** 52.75 33 P P 06 19 40.6 +0.1
baz=263
Q20K **Shuyak Island** 52.80 37 P P 06 19 40.7 -0.1
baz=266
TARG **Taragay, Kyrgy** 52.80 302 IAmb IAmb 06 19 43.5
comp=Z,24nm,1.0s
B20K **Meade River** 52.86 22 P P 06 19 41.0 -0.1
baz=253
SPCR **Spurr Chakacha** 53.11 33 P P 06 19 43.3 +0.2
baz=264
N20K **Mount Spurr** 53.11 33 P P 06 19 43.2 +0.1
baz=264
IMAR **Indian Mountai** 53.13 27 P P 06 19 43.8 +0.6
MDOK **Medeo** 53.16 304 *eP* P 06 19 43.3 -0.6
MDOK **Medeo** 53.16 304 *eP* P 06 19 43.3 -0.6
ASAR **Alice Springs** 53.20 190 P P 06 19 43.7 -0.4
comp=Z,5.9nm,0.7s,baz=2.0,slow=5.2,SNR=89
ASAR S S 06 27 12.2 -3.0
comp=Z,1.4nm,1.1s,baz=17,slow=18,SNR=5.2
ASAR LR LR 06 41 41.6
comp=Z,172nm,20.2s,baz=11,slow=35
comp=Z,5.9nm,0.7s
ASAR **Alice Springs** 53.20 190 P P 06 19 44.2 +0.1
ASAR **Alice Springs** 53.20 190 P P 06 19 44.2 +0.1
AAA **Alma-Ata** 53.25 304 *eP* P 06 19 43.9 -0.6
comp=Z,34nm,1.0s
AAA **Alma-Ata** 53.25 304 *eP* P 06 19 43.8 -0.7
AAA pmax pmax
comp=Z,34nm,1.0s
TNSS **Tian-Shan** 53.25 304 *eP* P 06 19 44.0 -0.9
TNSS **Tian-Shan** 53.25 304 *eP* P 06 19 44.0 -0.9
HOM **Homer** 53.26 35 P P 06 19 43.5 -0.7
baz=266
PPLA **Purkeypile** 53.31 31 P P 06 19 44.6 -0.1
baz=263
G21K **Allakaket** 53.33 27 IAmb IAmb 06 20 01.8
comp=Z,11nm,0.8s
G21K **Allakaket** 53.33 27 P P 06 19 44.7 +0.1
baz=259
CHUM **Lake Minchumin** 53.39 30 P P 06 19 45.4 +0.3
baz=262
C21K **Knifeblade Rid** 53.43 23 P P 06 19 45.7 +0.4
baz=256
PTH **Pithoragarh** 53.44 287 *eP* P 06 19 45.3 -0.9
PTH IAmb IAmb 06 19 48.8
comp=Z,61nm,1.2s
LGTI **Lohaghat** 53.44 287 *eP* P 06 19 46.0 0.0
LGTI IAmb IAmb 06 19 47.1
comp=Z,15nm,0.8s
H21K **Melozitna Rive** 53.45 28 IAmb IAmb 06 19 58.8
comp=Z,17nm,1.1s
H21K **Melozitna Rive** 53.45 28 P P 06 19 45.6 +0.1
baz=260,SNR=7.7
F21K **Alatna River** 53.47 26 P P 06 19 46.1 +0.4
baz=258
SKT **Skwentna** 53.51 33 P P 06 19 46.1 0.0
baz=264
E21K **Killik River** 53.55 24 IAmb IAmb 06 20 06.8
comp=Z,18nm,1.1s
E21K **Killik River** 53.55 24 P P 06 19 46.6 +0.3
baz=257
CAPN **Captain Cook N** 53.59 34 P P 06 19 46.6 +0.1
baz=265
B21K **Ikpikpuk River** 53.60 23 P P 06 19 47.1 +0.6
baz=256
HNLY **HANLEY** 53.63 291 *eP* P 06 19 48.2 +0.2
HNLY *eP* P 06 19 48.8 +0.8
HNLY IAmb IAmb 06 19 50.4
comp=Z,42nm,1.3s
HNLY IAML 06 20 07.5
comp=E,7.2nm,0.8s
HNLY IAML 06 20 08.2
comp=N,5.9nm,0.8s
JOSI **Joshimath** 53.71 288 *eP* P 06 19 47.7 -0.6
JOSI *eP* pP 06 19 48.4 -1.6
JOSI IAmb IAmb 06 19 49.1
comp=Z,69nm,1.1s
I21K **Tanana** 53.72 29 IAmb IAmb 06 20 02.6
comp=Z,30nm,1.2s
I21K **Tanana** 53.72 29 P P 06 19 47.9 +0.5
baz=261
BRSE **Bradley Lake S** 53.72 35 P P 06 19 47.8 +0.2
baz=267
SUA **Susitna One** 53.84 33 P P 06 19 48.6 0.0
baz=265
A22K **Sinclair Lake** 53.85 21 P P 06 19 48.6 +0.4
baz=254
L22K **Petersville** 53.92 32 IAmb IAmb 06 20 02.7
comp=Z,11nm,0.8s
BPAW **Bear Paw Mtn.** 53.99 30 P P 06 19 49.8 +0.3
baz=263
F22K **John River** 54.02 26 P P 06 19 50.5 +0.8
baz=260,SNR=9.2
RAGD **RAYAGADA** 54.04 273 *eP* P 06 19 50.4 -0.1
RAGD IAmb IAmb 06 19 52.5
comp=Z,23nm,1.0s
BOOM **Boomskoye usch** 54.06 303 IAmb IAmb 06 19 53.3
comp=Z,16nm,0.8s
H22K **Ishtalitna Cre** 54.07 28 IAmb IAmb 06 20 11.1
comp=Z,13nm,1.0s
H22K **Ishtalitna Cre** 54.07 28 P P 06 19 50.1 +0.1
baz=262
D22K **Ayikyak River** 54.10 24 IAmb IAmb 06 20 06.8
comp=Z,28nm,1.1s
D22K **Ayikyak River** 54.10 24 P P 06 19 50.6 +0.4
baz=258
CUT **Chulitna** 54.14 32 P P 06 19 51.0 +0.4
baz=265
M22K **Willow** 54.16 33 P P 06 19 50.7 0.0
baz=266
B22K **Teshekpuk Lake** 54.18 22 P P 06 19 51.4 +0.7
baz=256
MLY **Manley** 54.22 29 P P 06 19 51.3 +0.1
baz=263
TRF **Thorofare Moun** 54.23 31 P P 06 19 52.0 +0.5
baz=264
TKM2 **Tokmak 2** 54.25 304 P P 06 19 52.2 +0.3
SNR=14
O22K **Cooper Landing** 54.27 34 P P 06 19 52.3 +0.7
baz=267
E22K **Anaktuvuk Pass** 54.27 25 IAmb IAmb 06 20 11.2
comp=Z,20nm,1.0s
E22K **Anaktuvuk Pass** 54.27 25 P P 06 19 52.2 +0.6
baz=260
RC01 **Rabbit Creek A** 54.30 34 P P 06 19 51.4 -0.3
baz=266
SEW **Seward** 54.39 35 P P 06 19 52.1 -0.3
baz=267
MBWA **Marble Bar** 54.60 206 P P 06 19 52.6 -1.7
PMR **Palmer** 54.62 33 P P 06 19 54.0 -0.1
PMR IAmb IAmb 06 19 58.0
comp=Z,16nm,1.0s
PMR **Palmer** 54.62 33 P P 06 19 54.0 -0.1
PMR pmax pmax
comp=Z,16nm,1.0s
PMR **Palmer** 54.62 33 P P 06 19 54.1 +0.1
baz=267,SNR=6.6
G23K **Bananza Creek** 54.73 27 IAmb IAmb 06 20 03.4
comp=Z,21nm,0.8s
G23K **Bananza Creek** 54.73 27 P P 06 19 54.8 -0.1
baz=262
ALCI **Alchi Leh** 54.73 293 *eP* P 06 19 55.3 -0.5
ALCI *eP* pP 06 19 56.4 -1.2
ALCI IAmb IAmb 06 19 57.2
comp=Z,25nm,0.7s
COLD **Coldfoot** 54.73 26 P P 06 19 54.6 -0.2
baz=262
VIS **Vishakhapatnam** 54.75 272 *eP* P 06 19 55.9 +0.3
KBK **Karagaybulak** 54.76 304 P P 06 19 55.9 +0.2
SNR=17
H23K **Yukon River** 54.81 28 P P 06 19 55.7 +0.3
baz=263
I23K **Minto, Yukon-K** 54.81 29 IAmb IAmb 06 20 00.6
comp=Z,30nm,1.5s
I23K **Minto, Yukon-K** 54.81 29 P P 06 19 55.2 -0.2
baz=264
D23K **Nanushuk River** 54.83 24 P P 06 19 55.9 +0.4
baz=260,SNR=8.4
MCK **McKinley** 54.86 30 IAmb IAmb 06 20 16.8
comp=Z,32nm,1.3s
MCK **McKinley** 54.86 30 P P 06 19 56.0 +0.1
baz=265,SNR=5.5
RND **Reindeer** 54.87 31 IAmb IAmb 06 20 20.2
comp=Z,12nm,0.8s
NEA2 **Nenana** 54.88 29 IAmb IAmb 06 20 13.5
comp=Z,16nm,1.0s
NEA2 **Nenana** 54.88 29 P P 06 19 56.1 +0.2
baz=265,SNR=6.1
PSA00 **Pilbara Seismi** 54.93 206 P 06 19 56.4 -0.3
KNK **Knik Glacier** 54.93 33 P P 06 19 56.4 0.0
baz=267
EIDS **Eidsvold** 54.95 170 P 06 19 58.0 +1.1
EIDS IAmb IAmb 06 20 11.8
comp=Z,16nm,0.8s
WAT1 **Susitna Watana** 54.97 32 P P 06 19 56.5 -0.1
baz=266
PWL **Port Wells** 54.97 34 P P 06 19 56.5 -0.1
PWL IAmb IAmb 06 20 01.1
comp=Z,18nm,0.8s
PWL **Port Wells** 54.97 34 P P 06 19 56.5 -0.1
baz=268
USP **Ospenovka** 54.99 304 P P 06 19 56.8 -0.3
SNR=7.8
C23K **Itkillik River** 55.01 23 P P 06 19 57.1 +0.3
baz=259
SML **Sawmill** 55.01 33 P 06 19 57.5 +0.4
SML IAmb IAmb 06 20 01.8
comp=Z,27nm,1.0s
SML **Sawmill** 55.01 33 P P 06 19 57.2 +0.2
baz=267,SNR=5.6
E23K **Chandalar** 55.07 25 IAmb IAmb 06 20 18.7
comp=Z,25nm,0.9s
E23K **Chandalar** 55.07 25 P P 06 19 57.4 0.0
baz=262
AAK **Ala-Archa** 55.10 304 P P 06 19 57.0 -1.0
comp=Z,9.8nm,0.8s,baz=129,slow=5.4,SNR=18
AAK LR LR 06 45 59.9
comp=Z,348nm,18.4s,baz=75,slow=39
comp=Z,9.8nm,0.8s
AAK **Ala-Archa** 55.10 304 P 06 19 57.9 -0.2
AAK IAmb IAmb 06 19 58.9
comp=Z,16nm,1.1s
AAK **Ala-Archa** 55.10 304 P P 06 19 57.5 -0.6
AAK P P 06 19 57.5 -0.6
AAK **Ala-Archa** 55.10 304 P P 06 19 57.9 -0.2
SNR=10
AAK **Ala-Archa** 55.10 304 *c i* P P 06 19 57.7 -0.4
AAK pmax pmax
comp=Z,15nm,1.0s
UCH **Uchtor** 55.15 303 P P 06 19 59.4 +0.6
SNR=19
TOLK **Toolik Lake Re** 55.18 24 IAmb IAmb 06 20 17.2
comp=Z,19nm,0.9s
TOLK **Toolik Lake Re** 55.18 24 P P 06 19 58.5 +0.4
baz=261
M23K **Glacier View** 55.30 33 P P 06 19 58.7 -0.4
baz=268
WAT6 **Susitna Watana** 55.33 32 P P 06 19 59.3 -0.1
baz=267
P23K **Montague Islan** 55.41 35 P P 06 20 00.0 +0.2
baz=269
COLA **College** 55.42 29 P P 06 19 59.9 +0.1
baz=266
CCB **Clear Creek Bu** 55.42 29 P 06 20 00.7 +0.9
CCB IAmb IAmb 06 20 39.3
comp=Z,25nm,1.7s
SCM **Sheep Creek Mo** 55.49 33 P P 06 20 00.7 +0.2
baz=268,SNR=7.8
H24K **Noodor Dome** 55.49 28 P P 06 20 00.6 +0.2
baz=265,SNR=6.6
E24K **Your Creek** 55.50 25 IAmb IAmb 06 20 15.9
comp=Z,13nm,0.9s
E24K **Your Creek** 55.50 25 P P 06 20 01.0 +0.6
baz=263
DHY **Denali Highway** 55.52 31 P P 06 20 00.7 -0.1
baz=267
D24K **Happy Valley** 55.52 24 P P 06 20 01.1 +0.6
baz=262
SMLA **Simla** 55.54 289 *eP* P 06 19 59.8 -1.3
SMLA IAmb IAmb 06 20 01.7
comp=Z,30nm,0.9s
GLI **Glacier Island** 55.58 34 P P 06 20 01.6 +0.6
baz=269
EKS2 **Erkin-Say** 55.61 304 P P 06 20 01.7 -0.1
SNR=6.9
POKR **Poker Plat Res** 55.62 29 P P 06 20 02.1 +0.8
baz=266
C24K **Franklin Bluff** 55.65 23 P P 06 20 02.3 +1.0
baz=261
F24K **Squaw Lake** 55.66 26 IAmb IAmb 06 20 16.4
comp=Z,14nm,0.8s
F24K **Squaw Lake** 55.66 26 P P 06 20 02.4 +0.8
baz=264,SNR=12
G24K **Hadweenzic Riv** 55.73 27 IAmb IAmb 06 20 29.3
comp=Z,14nm,0.9s
G24K **Hadweenzic Riv** 55.73 27 P P 06 20 02.6 +0.5
baz=265
HDA **Harding Lake** 55.78 30 P P 06 20 02.7 +0.3
baz=267
ILAR **Eielson Array** 55.83 29 P P 06 20 02.4 -0.4
comp=Z,5.8nm,0.7s,baz=257,slow=6.2,SNR=35
ILAR LR LR 06 41 31.5
comp=Z,105nm,21.3s,baz=260,slow=34
comp=Z,5.8nm,0.7s
DHRM **DHARAMSHALA** 55.94 291 *eP* P 06 20 03.2 -1.2
DHRM IAmb IAmb 06 20 06.8
comp=Z,17nm,0.8s
Q23K **Middleton Isla** 55.95 36 P P 06 20 03.7 +0.1
baz=271
M24K **Tolsona, Glenn** 56.04 33 IAmb IAmb 06 20 19.1
comp=Z,25nm,1.0s
M24K **Tolsona, Glenn** 56.04 33 P P 06 20 04.7 +0.3
baz=269
JHNI **Jhansi** 56.09 282 *eP* P 06 20 02.7 -2.5
KLU **Klutina** 56.15 33 P P 06 20 05.7 +0.5
baz=270
EYAK **Cordova Ski Ar** 56.24 34 P P 06 20 06.0 +0.2
baz=270
K24K **Donnelly Dome** 56.27 30 P P 06 20 06.4 +0.4
baz=268
G25K **Bearman Lake** 56.28 27 P P 06 20 06.3 +0.3
baz=266
H25L **Birch Creek** 56.36 28 P P 06 20 07.0 +0.4
baz=266
THN **Thein Dam** 56.37 291 *eP* P 06 20 05.6 -1.5
THN IAmb IAmb 06 20 07.6
comp=Z,37nm,0.8s
PAX **Paxson** 56.38 32 P 06 20 07.2 +0.3
PAX IAmb IAmb 06 20 34.1
comp=Z,16nm,1.2s
PAX **Paxson** 56.38 32 P P 06 20 07.2 +0.3
PAX pmax pmax
comp=Z,16nm,1.2s
PAX **Paxson** 56.38 32 P P 06 20 07.0 +0.1
baz=269
D25K **Kavik River** 56.41 24 IAmb IAmb 06 20 21.4
comp=Z,15nm,0.8s
D25K **Kavik River** 56.41 24 P P 06 20 06.7 -0.2
baz=264
PRP **Porcupine Dome** 56.44 28 P P 06 20 06.9 -0.5
baz=267
J25K **Salcha River,** 56.47 30 P P 06 20 07.4 -0.1
baz=268
BVA0 **Borovoye Array** 56.52 317 P P 06 20 08.4 +0.5
BVAR **Borovoye Array** 56.52 317 P P 06 20 08.7 +0.8
comp=Z,30nm,0.5s,baz=92,slow=7.2,SNR=100
comp=Z,30nm,0.5s
HARP **HAARP** 56.52 32 P P 06 20 07.6 -0.1
baz=270
F25K **Christian Rive** 56.52 26 IAmb IAmb 06 20 23.1
comp=Z,17nm,0.8s
F25K **Christian Rive** 56.52 26 P P 06 20 08.0 +0.2
baz=266,SNR=16
BORK **Borovoye** 56.56 317 *c i* P P 06 20 08.5 +0.3
BORK pmax pmax
comp=Z,82nm,1.0s
E25K **Arctic Village** 56.59 25 IAmb IAmb 06 20 23.4
comp=Z,21nm,0.9s
E25K **Arctic Village** 56.59 25 P P 06 20 08.5 +0.3
baz=266,SNR=11
RIDG **Independent Ri** 56.68 31 IAmb IAmb 06 20 34.4
comp=Z,28nm,1.4s
RIDG **Independent Ri** 56.68 31 P P 06 20 09.2 +0.3
baz=269
N25K **Chitina, Valde** 56.79 33 P P 06 20 10.2 +0.4
baz=271
BMRM **Bremner River** 56.79 34 P P 06 20 10.5 +0.7
BMRM **Bremner River** 56.79 34 P P 06 20 09.6 -0.2
baz=271
BMAR **Burnt Mountain** 56.92 26 P P 06 20 12.2 +1.6
KUDL **Kundal** 56.97 286 *eP* P 06 20 09.9 -1.6
KUDL IAmb IAmb 06 20 12.0
comp=Z,26nm,1.0s
C26K **Camden Bay** 56.98 23 P P 06 20 11.1 +0.3
baz=265,SNR=11
DOT **Dot Lake** 57.03 31 P P 06 20 11.6 +0.2
SCRK **Sand Creek** 57.06 30 P P 06 20 11.7 0.0
baz=270,SNR=11
F26K **Sheenjek River** 57.10 26 IAmb IAmb 06 20 27.7
comp=Z,15nm,0.8s
F26K **Sheenjek River** 57.10 26 P P 06 20 12.3 +0.5
baz=267,SNR=19
NGP **Nagpur** 57.16 277 *eP* P 06 20 12.1 -0.8
NGP IAmb IAmb 06 20 12.8
comp=Z,37nm,0.9s
GLB **Gilahina Butte** 57.17 33 IAmb IAmb 06 20 33.9
comp=Z,13nm,1.0s
MENT **Mentasta** 57.18 32 IAmb IAmb 06 20 45.1
comp=Z,15nm,1.1s
G26K **Porcupine Rive** 57.21 27 IAmb IAmb 06 20 22.8
comp=Z,12nm,0.8s
G26K **Porcupine Rive** 57.21 27 P P 06 20 13.1 +0.5
baz=268,SNR=9.1
J26L **Joseph Creek** 57.25 30 IAmb IAmb 06 20 31.1
comp=Z,11nm,0.8s
J26L **Joseph Creek** 57.25 30 P P 06 20 13.7 +0.7
baz=270,SNR=12
DZA **Taraz** 57.34 304 *eP* P 06 20 13.6 -0.4
comp=Z,14nm,0.8s
DZA **Taraz** 57.34 304 *eP* P 06 20 13.5 -0.4
DZA pmax pmax
comp=Z,14nm,0.8s
L26K **Log Cabin Wild** 57.35 31 P P 06 20 14.3 +0.6
baz=271,SNR=6.0
C27K **Jago River** 57.37 24 P P 06 20 14.6 +0.9
baz=266,SNR=19
I26K **Coal Creek Min** 57.43 29 P P 06 20 14.8 +0.7
baz=270
BGLC **Bering Glacier** 57.48 35 P P 06 20 14.5 0.0
baz=273
M26K **Nabesna, AK** 57.53 32 IAmb IAmb 06 20 33.0
comp=Z,21nm,1.7s
M26K **Nabesna, AK** 57.53 32 P P 06 20 15.0 0.0
baz=272
CRQE **Cirque** 57.54 34 P P 06 20 14.8 -0.3
baz=272
MCARA **McCarthy VSAT** 57.55 33 P P 06 20 15.5 +0.4
MCARA IAmb IAmb 06 20 39.3
comp=Z,19nm,0.9s
MCARA **McCarthy VSAT** 57.55 33 P P 06 20 15.5 +0.4
baz=272
BHPL **Bhopal** 57.81 280 *eP* P 06 20 15.9 -1.6
KK31 **Karatay Array** 57.89 305 *i P* P 06 20 17.6 -0.2
KKAR **Karatay Array** 57.89 305 P 06 20 18.1 +0.3
KKAR **Karatay Array** 57.89 305 P P 06 20 18.1 +0.3
K27K **Chicken** 57.90 30 P P 06 20 17.1 -0.3
baz=271
NIL **Nilore** 58.03 293 P P 06 20 19.3 +0.4
NIL **Nilore** 58.03 293 P P 06 20 19.3 +0.4
NIL pmax pmax
comp=Z,24nm,0.7s
L27K **Beaver Creek,** 58.04 31 P P 06 20 18.4 -0.2
baz=272
G27K **Doyon Strip** 58.05 27 P P 06 20 18.5 0.0
baz=270
M27K **Edge Creek, AK** 58.05 32 P P 06 20 19.0 +0.2
baz=273
BCAR **Beaver Creek A** 58.06 31 P 06 20 19.5 +0.8
I27K **Kandik River** 58.07 28 P P 06 20 19.0 +0.3
baz=271

E27K	**Coleen River**	**58.08**	**25**	IAmb	IAmb	06 20 33.7			
	comp=Z,12nm,0.9s								
E27K	**Coleen River**	**58.08**	**25**	P	**P**	**06 20 19.3**	**+0.6**		
	baz=269								
H27K	**Steamboat Moun**	**58.10**	**28**	IAmb	IAmb	06 20 34.4			
	comp=Z,16nm,0.8s								
H27K	**Steamboat Moun**	**58.10**	**28**	P	**P**	**06 20 19.2**	**+0.3**		
	baz=270,SNR=14								
MESA	**MESA**	**58.14**	**35**	P	**P**	**06 20 19.3**	**-0.2**		
	baz=274								
NRDN	**NARMADA NAGAR**	**58.21**	**280**	*e*P	**P**	**06 20 20.2**	**-0.2**		
NRDN				IAmb	IAmb	06 20 26.2			
	comp=Z,31nm,1.0s								
D27M	**Malcolm River**	**58.33**	**24**	IAmb	IAmb	06 20 35.5			
	comp=Z,15nm,0.8s								
D27M	**Malcolm River**	**58.33**	**24**	P	**P**	**06 20 20.9**	**+0.4**		
	baz=269,SNR=23								
CTG	**Chitna Glacier**	**58.38**	**34**	P	**P**	**06 20 21.3**	**+0.2**		
	baz=274								
BRLS	**Borolday**	**58.39**	**305**	*e*P	**P**	**06 20 22.1**	**+0.7**		
BRLS	**Borolday**	**58.39**	**305**	*e*P	**P**	**06 20 22.0**	**+0.7**		
IUG	**luzhnay**	**58.44**	**304**	*e*P	**P**	**06 20 21.2**	**-0.5**		
	comp=Z,17nm,0.7s								
IUG	**luzhnay**	**58.44**	**304**	*e*P	**P**	**06 20 21.2**	**-0.5**		
IUG				pmax	pmax				
	comp=Z,17nm,0.7s								
BVCY	**Beaver Creek**	**58.52**	**32**	P	**P**	**06 20 21.9**	**0.0**		
	baz=273								
CHM	**Chimkent**	**58.71**	**304**	*e*P	**P**	**06 20 23.1**	**-0.5**		
	comp=Z,18nm,0.7s								
CHM	**Chimkent**	**58.71**	**304**	*e*P	**P**	**06 20 23.0**	**-0.5**		
CHM				pmax	pmax				
	comp=Z,18nm,0.7s								
F28M	**Old Crow**	**58.73**	**26**	P	**P**	**06 20 23.6**	**+0.4**		
	baz=271								
YUK3	**Moose Creek**	**58.75**	**33**	P	**P**	**06 20 23.7**	**0.0**		
	baz=274								
I28M	**Miner Creek**	**58.77**	**29**	IAmb	IAmb	06 20 40.6			
	comp=Z,12nm,0.8s								
I28M	**Miner Creek**	**58.77**	**29**	P	**P**	**06 20 23.9**	**+0.2**		
	baz=272								
E28M	**Babbage River**	**58.84**	**25**	IAmb	IAmb	06 20 39.7			
	comp=Z,23nm,1.1s								
E28M	**Babbage River**	**58.84**	**25**	P	**P**	**06 20 24.4**	**+0.4**		
	baz=271								
O28M	**Mount Upton**	**58.96**	**34**	P	**P**	**06 20 25.3**	**0.0**		
	baz=275								
PINM	**Pinnacle**	**58.99**	**35**	P	**P**	**06 20 25.2**	**-0.1**		
	baz=275								
DAWY	**Dawson**	**59.08**	**30**	IAmb	IAmb	06 20 41.6			
	comp=Z,10nm,0.9s								
DAWY	**Dawson**	**59.08**	**30**	P	**P**	**06 20 26.1**	**+0.4**		
	baz=274,SNR=6.0								
AKL	**Akola**	**59.09**	**278**	*e*P	**P**	**06 20 26.1**	**-0.4**		
AKL				IAmb	IAmb	06 20 27.8			
	comp=Z,41nm,0.9s								
D28M	**Stokes Point**	**59.12**	**24**	P	**P**	**06 20 26.6**	**+0.8**		
	baz=271								
YUK8	**Steele Glacier**	**59.12**	**33**	P	**P**	**06 20 26.4**	**+0.1**		
	baz=275								
H29M	**Whitestone**	**59.38**	**28**	IAmb	IAmb	06 20 46.0			
	comp=Z,13nm,0.9s								
H29M	**Whitestone**	**59.38**	**28**	P	**P**	**06 20 28.6**	**+0.8**		
	baz=273								
E29M	**Blow River**	**59.45**	**25**	IAmb	IAmb	06 20 43.7			
	comp=Z,13nm,1.1s								
E29M	**Blow River**	**59.45**	**25**	P	**P**	**06 20 28.8**	**+0.6**		
	baz=272								
PNL	**Peninsula**	**59.46**	**35**	P	**P**	**06 20 28.6**	**+0.1**		
	baz=276								
G29M	**Pine Creek**	**59.48**	**27**	IAmb	IAmb	06 20 40.9			
	comp=Z,22nm,1.1s								
G29M	**Pine Creek**	**59.48**	**27**	P	**P**	**06 20 28.7**	**+0.2**		
	baz=273,SNR=10.0								
M29M	**Somme Creek**	**59.63**	**32**	IAmb	IAmb	06 20 50.4			
	comp=Z,11nm,1.1s								
M29M	**Somme Creek**	**59.63**	**32**	P	**P**	**06 20 29.6**	**-0.1**		
	baz=276								
YUK4	**Talbot Arm**	**59.65**	**33**	P	**P**	**06 20 30.0**	**+0.1**		
	baz=276,SNR=5.6								
L29M	**L29M**	**59.72**	**31**	IAmb	IAmb	06 20 35.9			
	comp=Z,18nm,1.0s								
L29M	**L29M**	**59.72**	**31**	P	**P**	**06 20 30.3**	**+0.1**		
	baz=275,SNR=14								
O29M	**Mount Kennedy**	**59.80**	**34**	P	**P**	**06 20 31.0**	**+0.1**		
	baz=277								
YUK6	**Outpost Mounta**	**59.83**	**34**	P	**P**	**06 20 31.5**	**+0.2**		
	baz=276								
K29M	**Barlow Dome**	**59.92**	**30**	IAmb	IAmb	06 20 37.5			
	comp=Z,12nm,0.9s								
K29M	**Barlow Dome**	**59.92**	**30**	P	**P**	**06 20 31.7**	**0.0**		
	baz=276								
ARMA	**Armidale**	**59.99**	**171**	P	**P**	**06 20 34.1**	**+1.7**		
ARMA				IAmb	IAmb	06 20 46.8			
	comp=Z,13nm,0.9s								
EPYK	**Eagle Plains**	**60.03**	**27**	P	**P**	**06 20 32.4**	**+0.1**		
	baz=275,SNR=16								
G30M	**tAoh Zraii Nji**	**60.18**	**27**	P	**P**	**06 20 33.1**	**-0.2**		
	baz=275								
HYT	**Haines Junctio**	**60.26**	**34**	P	**P**	**06 20 35.4**	**+1.3**		
HYT				IAmb	IAmb	06 20 40.0			
	comp=Z,12nm,1.0s								
HYT	**Haines Junctio**	**60.26**	**34**	P	**P**	**06 20 33.7**	**-0.4**		
	baz=277								
I30M	**Mount Dempster**	**60.28**	**29**	IAmb	IAmb	06 20 51.8			
	comp=Z,31nm,1.4s								
I30M	**Mount Dempster**	**60.28**	**29**	P	**P**	**06 20 33.8**	**-0.3**		
	baz=276,SNR=10								
F30M	**Barrier River**	**60.30**	**26**	P	**P**	**06 20 33.8**	**-0.2**		
	baz=275								
P29M	**Windy Craggy**	**60.30**	**35**	P	**P**	**06 20 33.9**	**-0.4**		
	baz=278								
J30M	**Hart River**	**60.37**	**29**	P	**P**	**06 20 34.1**	**-0.6**		
	baz=276								
N30M	**Aishikik Lake**	**60.38**	**33**	P	**P**	**06 20 34.3**	**-0.5**		
	baz=277								
M30M	**Minto, Yukon**	**60.39**	**32**	P	**P**	**06 20 36.0**	**+1.3**		
M30M	**Minto, Yukon**	**60.39**	**32**	P	**P**	**06 20 34.4**	**-0.3**		
	baz=277								
UDPR	**Udaipur**	**60.51**	**283**	*e*P	**P**	**06 20 34.7**	**-1.5**		
P30M	**Million Dollar**	**60.63**	**35**	P	**P**	**06 20 36.2**	**-0.3**		
	baz=276								
MAYO	**Mayo, Yukon**	**60.67**	**31**	P	**P**	**06 20 36.6**	**-0.1**		
	baz=277								
STKA	**Stephens Creek**	**60.78**	**181**	P	**P**	**06 20 37.6**	**0.0**		
	comp=Z,4.2nm,0.6s,baz=349,slow=8.3,SNR=9.5								
	comp=Z,4.2nm,0.6s								
STKA	**Stephens Creek**	**60.78**	**181**	*i*P	**P**	**06 20 38.2**	**+0.6**		
G31M	**Satah River**	**60.95**	**27**		**P**	**06 20 39.1**	**+0.7**		
G31M				IAmb	IAmb	06 20 50.6			
	comp=Z,26nm,1.2s								
G31M	**Satah River**	**60.95**	**27**	P	**P**	**06 20 38.6**	**+0.2**		
	baz=277,SNR=12								
O30N	**Mendenhall**	**60.96**	**34**	P	**P**	**06 20 38.3**	**-0.4**		
	baz=278								
N31M	**Braeburn, Yuko**	**61.00**	**33**		**P**	**06 20 40.4**	**+1.4**		
N31M				IAmb	IAmb	06 20 45.3			
	comp=Z,17nm,0.9s								
N31M	**Braeburn, Yuko**	**61.00**	**33**	P	**P**	**06 20 39.1**	**+0.1**		
	baz=278								
PLBC	**Pleasant Camp**	**61.02**	**35**	P	**P**	**06 20 39.3**	**+0.3**		
	baz=279								
H31M	**Peel River**	**61.06**	**28**	P	**P**	**06 20 39.7**	**+0.4**		
	baz=277								
INK	**Inuvik**	**61.08**	**25**	P	**P**	**06 20 39.5**	**+0.2**		
	baz=276								
F31M	**Tsiigehtchic**	**61.09**	**26**	IAmb	IAmb	06 20 52.1			
	comp=Z,34nm,1.6s								
F31M	**Tsiigehtchic**	**61.09**	**26**	P	**P**	**06 20 39.2**	**-0.2**		
	baz=277								
KBL	**Kabul**	**61.13**	**296**		**P**	**06 20 39.9**	**-0.6**		
KBL				IAmb	IAmb	06 20 40.7			
	comp=Z,17nm,0.8s								
KBL	**Kabul**	**61.13**	**296**	P	**P**	**06 20 39.5**	**-1.0**		
	SNR=6.2								
KBL				P	**P**	**06 20 39.5**	**-1.0**		
	SNR=6.2								
KBL	**Kabul**	**61.13**	**296**	P	**P**	**06 20 39.9**	**-0.6**		
KBL				pmax	pmax				
	comp=Z,17nm,0.9s								
FORT	**Forrest**	**61.19**	**194**		**P**	**06 20 40.9**	**+0.5**		
S31K	**Pelican**	**61.34**	**37**	P	**P**	**06 20 40.9**	**-0.3**		
	baz=280								
R31K	**City Hall, Gus**	**61.51**	**36**	P	**P**	**06 20 42.8**	**+0.4**		
	baz=280								
SKAG	**Skagway**	**61.54**	**35**	P	**P**	**06 20 43.1**	**+0.5**		
	baz=280								
M31M	**Drury Creek, Y**	**61.55**	**32**	IAmb	IAmb	06 20 59.6			
	comp=Z,11nm,0.9s								
M31M	**Drury Creek, Y**	**61.55**	**32**	P	**P**	**06 20 42.8**	**+0.1**		
	baz=279								
WHY	**Whitehorse**	**61.56**	**34**	P	**P**	**06 20 43.1**	**+0.2**		
	baz=280								
SVE	**Sverdlovsk**	**61.57**	**322**	*e*P	**P**	**06 20 43.6**	**+0.7**		
SVE				pmax	pmax				
	comp=Z,59nm,1.1s								
SVE				MLR	MLR				
	comp=Z,425nm,18.0s								
PALK	**Pallekele**	**61.68**	**262**	LR	LR	06 47 38.1			
	comp=Z,139nm,20.7s,baz=57,slow=36								
PALK	**Pallekele**	**61.68**	**262**	P	**P**	**06 20 43.5**	**-0.8**		
SIT	**Sitka**	**61.98**	**38**	P	**P**	**06 20 46.4**	**+0.8**		
	baz=281								
BBOO	**Buckleboo**	**61.98**	**186**		**P**	**06 20 46.4**	**+0.6**		
R32K	**Eaglecrest**	**62.17**	**36**	P	**P**	**06 20 47.7**	**+0.8**		
	baz=281								
S32K	**Kilisnoo**	**62.30**	**37**	P	**P**	**06 20 48.3**	**+0.6**		
	baz=281								
P32M	**Atlin**	**62.33**	**35**	P	**P**	**06 20 48.9**	**+1.0**		
	baz=281								
N32M	**Quiet Lake**	**62.34**	**33**	P	**P**	**06 20 48.5**	**+0.4**		
	baz=281								
P33M	**Teslin, Yukon**	**62.65**	**34**	P	**P**	**06 20 50.5**	**+0.4**		
	baz=281								
ARTI	**Arti**	**62.88**	**322**	P	**P**	**06 20 51.5**	**-0.1**		
	comp=Z,56nm,0.7s,baz=106,slow=2.3,SNR=53								
	comp=Z,56nm,0.7s								
ARTI	**Arti**	**62.88**	**322**	IAmb	IAmb	06 20 52.5			
	comp=Z,82nm,0.7s								
ARTI	**Arti**	**62.88**	**322**	*c i*P	**P**	**06 20 51.6**	**-0.1**		
ARTI				pmax	pmax				
	comp=Z,59nm,0.7s								
KAD	**Karad**	**62.89**	**275**	*e*P	**P**	**06 20 51.3**	**-1.0**		
KOD	**Kodaikanal**	**63.10**	**267**	*e*P	**P**	**06 20 52.8**	**-1.3**		
KOD				IAmb	IAmb	06 20 55.4			
	comp=Z,24nm,0.5s								
Q32M	**Nakina River**	**63.18**	**35**	P	**P**	**06 20 53.8**	**0.0**		
	baz=282								
A36M	**Sachs Harbour**	**63.27**	**20**	P	**P**	**06 20 54.4**	**+0.4**		
	baz=282,SNR=13								
U33K	**Whale Pass**	**63.37**	**39**	P	**P**	**06 20 55.1**	**+0.2**		
	baz=283								
CRAG	**Craig**	**63.52**	**39**	P	**P**	**06 20 55.6**	**-0.2**		
	baz=284								
AB31	**Akbulak array**	**63.65**	**314**	*i*P	**P**	**06 20 57.1**	**+0.2**		
ABKAR	**Akbulak array**	**63.65**	**314**		**P**	**06 20 57.4**	**+0.5**		
WRAK	**Wrangell Islan**	**63.72**	**38**	P	**P**	**06 20 57.1**	**-0.1**		
	baz=284								
R33M	**Jennings River**	**63.74**	**35**	P	**P**	**06 20 57.4**	**-0.1**		
	baz=283								
S34M	**Telegraph Cree**	**64.01**	**36**	P	**P**	**06 20 59.3**	**+0.2**		
	baz=284								
C36M	**Paulatuk**	**64.26**	**23**	IAmb	IAmb	06 21 15.6			
	comp=Z,15nm,0.9s								
C36M	**Paulatuk**	**64.26**	**23**	P	**P**	**06 21 00.5**	**0.0**		
	baz=284,SNR=7.1								
V35K	**Ketchikan**	**64.39**	**39**	P	**P**	**06 21 01.7**	**+0.1**		
	baz=285								
DLBC	**Dease Lake**	**64.44**	**36**	LR	LR	06 46 20.4			
	comp=Z,158nm,21.9s,baz=290,slow=34								
DLBC	**Dease Lake**	**64.44**	**36**	P	**P**	**06 21 02.2**	**+0.2**		
	baz=285								
AKTO	**Aktyubinsk**	**64.54**	**315**	P	**P**	**06 21 02.5**	**-0.3**		
	comp=Z,32nm,0.7s,baz=87,slow=5.5,SNR=70								
	comp=Z,32nm,0.7s								
WTLY	**Watson Lake, Y**	**64.63**	**34**	IAmb	IAmb	06 21 49.2			
	comp=Z,21nm,1.5s								
WTLY	**Watson Lake, Y**	**64.63**	**34**	P	**P**	**06 21 03.4**	**+0.2**		
	baz=285								
T35M	**Bob Quinn**	**64.70**	**37**	P	**P**	**06 21 03.9**	**+0.3**		
	baz=285								
LIRD	**Liard River Hi**	**66.14**	**34**	P	**P**	**06 21 13.3**	**+0.4**		
	baz=287								
WRGLY	**Wrigley**	**66.20**	**30**	P	**P**	**06 21 14.1**	**+0.8**		
	baz=288,SNR=8.3								
NWAO	**Narrogin (SRO)**	**66.21**	**203**	P	**P**	**06 21 12.8**	**-0.7**		
NWAO				P	**P**	**06 21 12.8**	**-0.7**		
HRA	**Herat**	**66.50**	**297**	IAmb	IAmb	06 21 17.1			
	comp=Z,14nm,0.9s								
TOO	**Toolangi**	**66.52**	**177**	P	**P**	**06 21 16.6**	**+1.1**		
TOO	**Toolangi**	**66.52**	**177**	P	**P**	**06 21 16.6**	**+1.1**		
TOO				pmax	pmax				
	comp=Z,8.0nm,1.1s								
TOAD	**Toad River Com**	**66.73**	**34**	P	**P**	**06 21 17.0**	**+0.2**		
	baz=286								
KIRV	**Kirov**	**66.96**	**325**	P	**P**	**06 21 18.5**	**+0.4**		
	comp=Z,69nm,0.7s,baz=87,slow=3.0,SNR=19								
KIRV				LR	LR	06 53 14.1			
	comp=Z,618nm,18.1s,baz=74,slow=38								
	comp=Z,69nm,0.7s								
BBB	**Bella Bella**	**67.29**	**42**	LR	LR	06 49 05.5			
	comp=Z,74nm,19.5s,baz=249,slow=34								
SPITS	**Spitzbergen Ar**	**68.30**	**350**	P	**P**	**06 21 26.7**	**+0.4**		
	comp=Z,6.9nm,0.8s,baz=134,slow=4.2,SNR=2.4								
	comp=Z,6.9nm,0.8s								
KBS	**Kingsbay**	**68.44**	**351**	*i*P	**P**	**06 21 27.8**	**+0.6**		
NOR	**Nord**	**68.86**	**357**	*i*P	**P**	**06 21 30.3**	**+0.5**		
NOR				IAmb	IAmb	06 21 31.1			
	comp=Z,8.2nm,1.2s								
LVZ	**Lovozero**	**69.53**	**337**	P	**P**	**06 21 33.5**	**-0.6**		
	comp=Z,65nm,2.3s								
RES	**Resolute Bay**	**69.98**	**14**	IAmb	IAmb	06 21 51.0			
	comp=Z,10nm,0.8s								
BELG	**Belogornoye**	**70.07**	**319**	*c i*P	**P**	**06 21 37.9**	**+0.2**		
BELG				pmax	pmax				
	comp=Z,19nm,0.9s								
APA	**Apatity**	**70.10**	**337**	⇓*e*P	**P**	**06 21 36.6**	**-1.0**		
APA				*e*		06 24 08.0			
APA				MLR	MLR				
	comp=Z,740nm,4.0s								
YKA	**Yellowknife Ar**	**70.25**	**29**	P	**P**	**06 21 38.6**	**0.0**		
	comp=Z,3.6nm,0.7s,baz=299,slow=6.8,SNR=23								
	comp=Z,3.6nm,0.7s								
YKA	**Yellowknife Ar**	**70.25**	**29**	*i*P	**P**	**06 21 38.9**	**+0.3**		
YKA				pmax	pmax				
	comp=Z,4.0nm,0.7s								
KLMR	**Klimovskoe**	**70.76**	**330**	*e*P	**P**	**06 21 40.3**	**-1.5**		
KLMR				*e*		06 21 59.3			
KLMR				*e*		06 24 15.8			
KLMR				pmax	pmax				
	comp=Z,33nm,1.2s								
KLMR				MLR	MLR				
	comp=Z,438nm,19.0s								
ARCES	**ARCESS Array B**	**71.55**	**341**	P	**P**	**06 21 46.0**	**-0.4**		
	comp=Z,12nm,0.9s,baz=57,slow=8.8,SNR=14								
ARCES				LR	LR	06 58 13.7			
	comp=Z,406nm,18.9s,baz=61,slow=40								
	comp=Z,12nm,0.9s								
ARCES	**ARCESS Array B**	**71.55**	**341**	P	**P**	**06 21 47.0**	**+0.6**		
ARCES				IAmb	IAmb	06 21 51.0			
	comp=Z,20nm,1.1s								
ARCES	**ARCESS Array B**	**71.55**	**341**	P	**P**	**06 21 47.0**	**+0.6**		
ARCES				pmax	pmax				
	comp=Z,20nm,1.2s								
TULEG	**Thule**	**72.73**	**7**	*i*P	**P**	**06 21 53.1**	**-0.2**		
TULEG				IAmb	IAmb	06 21 56.7			
	comp=Z,33nm,1.3s								
JOF	**Joensuu**	**73.19**	**333**	*e*P	**P**	**06 21 56.0**	**-0.3**		
NEEM	**North Greenlan**	**73.26**	**3**	*i*P	**P**	**06 21 56.9**	**0.0**		
NEEM				IAmb	IAmb	06 22 01.6			
	comp=Z,41nm,1.4s								
JLN	**Jalan Bani Buh**	**73.54**	**286**	P	**P**	**06 21 58.0**	**-1.1**		
JLN				P	**P**	**06 21 58.0**	**-1.1**		
DAG	**Danmarks Havn**	**73.58**	**355**	*i*P	**P**	**06 21 57.4**	**-1.1**		
DAG				IAmb	IAmb	06 22 00.3			
	comp=Z,22nm,1.0s								
WBK	**Wadi Bani Khal**	**73.72**	**287**	P	**P**	**06 21 58.7**	**-1.5**		
H04A	**Detroit Lake**	**73.75**	**48**	IAmb	IAmb	06 22 04.6			
	comp=Z,18nm,1.1s								
VRH	**Novokhopyorsk**	**73.90**	**320**	*e*P	**P**	**06 21 59.6**	**-1.1**		
VRH				pmax	pmax				
	comp=Z,23nm,0.9s								
MAK	**Makhachkala**	**73.92**	**310**	*c i*P	P	06 21 55.9	-5.0		
MAK				*e*PPP	PPP	06 26 28.9			
MAK				*e*S	**SKiKP**	**06 31 25.8**	**-4.2**		
MAK				*e*SSS	SSS	06 39 32.2			
MAK				pmax	pmax				
	comp=Z,254nm,1.1s								
MAK				MLR	MLR				
	comp=Z,1µm,18.0s								
B08A	**Colville Reser**	**73.95**	**43**	P	**P**	**06 22 02.0**	**+0.9**		
MOS	**Moscow**	**73.98**	**325**	*e*P	**P**	**06 21 59.3**	**-1.8**		
MOS				*e*		06 22 20.2			
MOS				pmax	pmax				
	comp=Z,48nm,0.7s								
MOS				MLR	MLR				
	comp=Z,900nm,20.0s								
WIFE	**Three Sisters-**	**74.25**	**48**	IAmb	IAmb	06 22 08.6			
	comp=Z,16nm,0.9s								
SMDO	**Samad**	**74.29**	**288**	P	**P**	**06 22 02.3**	**-1.3**		
SMDO				P	**P**	**06 22 02.3**	**-1.3**		
AKT	**Akhty**	**74.39**	**309**	*e*P	**P**	**06 22 02.7**	**-1.2**		
AKT				*e*		06 22 15.8			
AKT				pmax	pmax				
	comp=Z,51nm,0.7s								
AKT				MLR	MLR				
	comp=Z,1µm,23.0s								
G06A	**Carlson Farm,**	**74.50**	**47**	IAmb	IAmb	06 22 50.5			
	comp=Z,26nm,1.6s								
BANOM	**Banah**	**74.51**	**291**	P	**P**	**06 22 03.5**	**-1.2**		
JMDO	**Jabal Madar**	**74.54**	**287**	P	**P**	**06 22 04.7**	**-0.3**		
JMDO				P	**P**	**06 22 04.7**	**-0.3**		
SHME	**Shamm**	**74.59**	**291**	P	**P**	**06 22 04.3**	**-0.9**		
SHME				P	**P**	**06 22 04.3**	**-0.9**		
YBH	**Yreka Blue Hor**	**74.66**	**51**	LR	LR	06 47 53.5			
	comp=Z,17nm,21.1s,baz=299,slow=30								
HOQ	**Hoqain**	**74.68**	**289**	P	**P**	**06 22 04.9**	**-0.9**		
	SNR=8.4								
HOQ				P	**P**	**06 22 04.9**	**-0.9**		
	SNR=8.4								
HAWA	**Hanford**	**74.69**	**45**	IAmb	IAmb	06 22 25.1			
	comp=Z,28nm,1.8s								
LPSR	**Galich'ya Gora**	**74.79**	**322**	*e*P	**P**	**06 22 05.4**	**-0.5**		
LPSR				pmax	pmax				
	comp=Z,44nm,1.1s								
OBN	**Obninsk**	**74.81**	**325**	LR	LR	06 58 00.2			
	comp=Z,843nm,18.0s,baz=22,slow=38								
OBN	**Obninsk**	**74.81**	**325**	⇓*e*P	**P**	**06 22 06.1**	**+0.2**		
OBN				*e*		06 22 19.1			
OBN				*e*		06 24 56.6			
OBN				pmax	pmax				
	comp=Z,20nm,1.1s								
OBN				MLR	MLR				
	comp=Z,830nm,17.0s								
MASF	**Masafi**	**74.86**	**291**	P	**P**	**06 22 05.6**	**-1.3**		
MASF				P	**P**	**06 22 05.6**	**-1.3**		
PINE	**Pine Mountain**	**74.94**	**48**	IAmb	IAmb	06 22 12.9			
	comp=Z,25nm,1.0s								
UOSS	**Minazif**	**75.01**	**290**	P	**P**	**06 22 06.8**	**-0.9**		
RAR	**Rarotonga**	**75.08**	**125**	LR	LR	06 48 38.6			
	comp=Z,166nm,19.4s,baz=267,slow=31								
VORR	**Voronezh**	**75.08**	**321**	*e*P	**P**	**06 22 07.2**	**-0.3**		
VORR				pmax	pmax				
	comp=Z,25nm,0.8s								
SOHO	**SOHO**	**75.08**	**289**	P	**P**	**06 22 07.3**	**-0.8**		
SOHO				P	**P**	**06 22 07.3**	**-0.8**		
HATD	**Hatta, Dubai**	**75.12**	**290**	P	**P**	**06 22 07.7**	**-0.6**		
	SNR=6.1								
HATD				P	**P**	**06 22 07.7**	**-0.6**		
	SNR=6.1								
BSY	**Bisya**	**75.13**	**288**	P	**P**	**06 22 07.7**	**-0.7**		
ASHO	**Ashiyiah**	**75.24**	**290**	P	**P**	**06 22 08.0**	**-1.1**		
MHTO	**MHTO**	**75.25**	**286**	P	**P**	**06 22 07.9**	**-1.1**		
MHTO				P	**P**	**06 22 07.9**	**-1.1**		
M03C	**McCloud**	**75.25**	**51**	IAmb	IAmb	06 22 25.3			
	comp=Z,22nm,1.0s								
NEW	**Newport**	**75.31**	**43**	LR	LR	06 49 49.1			
	comp=Z,83nm,19.8s,baz=315,slow=31								
VSR	**Storozhevoye**	**75.32**	**321**	*e*P	**P**	**06 22 06.7**	**-2.2**		
VSR				pmax	pmax				
	comp=Z,20nm,0.9s								
VORD	**Divnogorie**	**75.37**	**320**	*e*P	**P**	**06 22 06.9**	**-2.3**		
VORD				pmax	pmax				
	comp=Z,20nm,1.0s								
ARQ	**Araqi**	**75.44**	**289**	P	**P**	**06 22 09.1**	**-1.1**		
ARQ				P	**P**	**06 22 09.1**	**-1.1**		
K05A	**Summer Lake**	**75.44**	**49**	IAmb	IAmb	06 22 16.2			
	comp=Z,19nm,0.9s								
ALNE	**Al Ain**	**75.76**	**290**	P	**P**	**06 22 10.7**	**-1.4**		
ALNE				P	**P**	**06 22 10.7**	**-1.4**		
GOF	**Gofitskoye**	**75.89**	**314**	*ce*P	**P**	**06 22 12.9**	**+0.6**		
O03E	**Paynes Creek**	**75.90**	**52**	P	**P**	**06 22 12.7**	**0.0**		
O03E				IAmb	IAmb	06 22 17.4			
	comp=Z,16nm,1.1s								
FINES	**FINESS Array B**	**76.06**	**334**	P	**P**	**06 22 12.9**	**-0.1**		
	comp=Z,11nm,0.7s,baz=60,slow=5.6,SNR=32								
	comp=Z,11nm,0.7s								
FINES	**FINESS Array B**	**76.06**	**334**	P	**P**	**06 22 13.1**	**+0.1**		
FINES	**FINESS Array B**	**76.06**	**334**	*i*P	**P**	**06 22 13.0**	**+0.1**		
FINES				pmax	pmax				
	comp=Z,11nm,0.7s								
DBG	**Daneborg**	**76.07**	**355**	*i*P	**P**	**06 22 13.3**	**+0.4**		
DBG				IAmb	IAmb	06 22 14.0			
	comp=Z,20nm,1.2s								
KEF	**Keuruu**	**76.09**	**335**	*e*P	**P**	**06 22 13.1**	**0.0**		
VAF	**Ylistaro**	**76.35**	**336**	*e*P	**P**	**06 22 14.8**	**+0.2**		
SUTB	**Sutter Butte**	**76.39**	**53**	IAmb	IAmb	06 22 30.9			
	comp=Z,12nm,0.8s								
**

MNK *i* S **S** 06 32 31.6 -0.7
MNK *i* SS **SS** 06 37 39.9 +1.6
MNK *i* SSS SSS 06 41 05.5
MNK pmax pmax
comp=E,16nm,0.7s
MNK pmax pmax
comp=N,15nm,0.9s
MNK pmax pmax
comp=Z,37nm,0.7s
MNK MLR MLR
comp=E,463nm,19.0s
MNK MLR MLR
comp=Z,575nm,17.0s
MNK MLR MLR
comp=N,592nm,18.0s
DLMT Dillon 79.44 44 IAmb IAmb 06 22 41.7
comp=Z,19nm,1.5s
SMRA Abu-Samra 79.47 292 P **P** **06 22 31.4 -1.3**
ANN Anapa 79.50 316 *e*P **P** **06 22 31.4 -1.1**
ANN *e**PP **sP** **06 22 36.5 +1.5**
ANN pmax pmax
comp=Z,57nm,1.1s
DOK Doka 79.54 285 P **P** **06 22 31.8 -1.3**
ISAL Salakas 79.55 329 *e*P **P** **06 22 34.4 +1.9**
GURO Guroymak-BITLI 79.62 308 IAmb IAmb 06 22 35.9
comp=E,26nm,1.1s
EGMT Eagleton 79.70 40 IAmb IAmb 06 22 42.9
comp=Z,14nm,0.9s
VES Vestal, Richgr 79.86 55 IAmb IAmb 06 22 48.8
comp=Z,22nm,0.9s
FFC Flin Flon 79.91 32 P **P** **06 22 35.3 +0.8**
FFC IAmb IAmb 06 22 49.3
comp=Z,23nm,0.8s
FFC Flin Flon 79.91 32 P **P** **06 22 35.3 +0.8**
FFC pmax pmax
comp=Z,23nm,0.9s
KBD Kabd 79.92 298 P **P** **06 22 33.4 -1.7**
KOPT Kop Dagi 79.94 310 IAmb IAmb 06 22 59.9
comp=Z,14nm,0.8s
RBK Rabkut 79.99 284 P **P** **06 22 34.6 -1.0**
ELK Elko 80.10 49 LR LR 06 55 40.8
comp=Z,252nm,18.6s,baz=327,slow=34
WHFO Waid Hawf 80.16 285 P **P** **06 22 35.2 -1.4**
PABE Paberze 80.56 329 *e*P **P** **06 22 38.1 +0.2**
PPT Papeete 80.56 116 LR LR 06 50 18.0
comp=Z,109nm,21.4s,baz=270,slow=30
YHB Horse Butte 80.60 44 IAmb IAmb 06 22 49.5
comp=Z,15nm,1.0s
ABTO Aybut 80.82 285 P **P** **06 22 39.1 -1.1**
AKASG Malin Array Be 80.93 324 P **P** **06 22 39.5 -0.5**
AKASG LR LR 07 01 03.4
comp=Z,8.8nm,0.8s,baz=48,slow=5.8,SNR=24
AKASG LR LR 07 01 03.4
comp=Z,605nm,19.5s,baz=46,slow=38
comp=Z,8.8nm,0.8s
AKASG Malin Array Be 80.93 324 P **P** **06 22 39.6 -0.5**
AKASG Malin Array Be 80.93 324 *i* P **P** **06 22 39.5 -0.5**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 80.93 324 IAmb IAmb 06 22 40.7
comp=Z,17nm,0.9s
AK01 Malin Array Si 80.94 324 P **P** **06 22 39.6 -0.5**
KIEV Kiev 80.94 324 P **P** **06 22 39.4 -0.8**
KIEV IAmb IAmb 06 22 40.6
comp=Z,16nm,0.9s
KIEV Kiev 80.94 324 ⇑P **P** **06 22 39.5 -0.6**
KIEV Kiev 80.94 324 ⇑P **P** **06 22 39.5 -0.6**
AK04 Malin Array Si 80.94 324 P **P** **06 22 39.6 -0.5**
AK09 Malin Array Si 80.95 324 P **P** **06 22 39.6 -0.6**
AK02 Malin Array Si 80.96 324 P **P** **06 22 39.7 -0.5**
AK11 Malin Array Si 80.97 324 P **P** **06 22 39.8 -0.5**
AK22 Malin Array Si 80.97 324 P **P** **06 22 39.8 -0.5**
AK10 Malin Array Si 80.97 324 P **P** **06 22 39.6 -0.7**
AK21 Malin Array Si 80.98 324 P **P** **06 22 39.6 -0.7**
AK05 Malin Array Si 80.98 324 P **P** **06 22 39.3 -1.1**
AK18 Malin Array Si 81.00 324 P **P** **06 22 39.6 -0.8**
AK12 Malin Array Si 81.00 324 P **P** **06 22 39.6 -0.8**
AK16 Malin Array Si 81.01 324 P **P** **06 22 39.7 -0.8**
FURC Furnace Creek, 81.12 53 IAmb IAmb 06 22 56.0
comp=Z,13nm,0.9s
CCCA Chr Cany lake 81.24 54 IAmb IAmb 06 22 57.0
comp=Z,11nm,0.9s
FLWY Flagg Ranch 81.26 44 IAmb IAmb 06 23 02.7
comp=Z,16nm,0.9s
TPNV Topopah Spring 81.31 53 IAmb IAmb 06 22 57.4
comp=Z,13nm,0.8s
QSM Queen of Sheba 81.37 54 IAmb IAmb 06 22 57.5
comp=Z,14nm,0.9s
GWY Greenwater Val 81.40 53 IAmb IAmb 06 22 57.8
comp=Z,12nm,0.8s
SIM Simferopol' 81.43 317 *e*P **P** **06 22 43.7 +0.9**
SIM *e* 06 22 53.2
SIM pmax pmax
comp=Z,42nm,0.9s
SIM MLR MLR
comp=Z,150nm,16.8s
NC405 NORSAR Array S 81.43 338 IAmb IAmb 06 22 43.5
comp=Z,31nm,1.1s
HFS Hagfors 81.49 337 P **P** **06 22 42.2 -0.6**
comp=Z,5.1nm,0.5s,baz=91,slow=5.9,SNR=21
comp=Z,5.1nm,0.5s
NB2 NORSAR Subarra 81.65 338 P **P** **06 22 43.3 -0.5**
comp=Z,2.0nm,0.6s,baz=43,slow=5.3
NOA NORSAR Array B 81.65 338 P **P** **06 22 43.4 -0.3**
comp=Z,6.6nm,0.9s,baz=42,slow=5.3,SNR=9.5
comp=Z,6.6nm,0.9s
SUW Suwalki 81.85 329 *e*P **P** **06 22 44.6 -0.3**
SUW Suwalki 81.85 329 *e*P **P** **06 22 45.6 +0.7**
PRN Pahroc Range 81.91 52 IAmb IAmb 06 23 02.8
comp=Z,20nm,0.9s
DUG Dugway, Tooele 81.97 48 IAmb IAmb 06 23 06.5
comp=Z,21nm,1.4s
HWUT Hardware Ranch 82.04 47 IAmb IAmb 06 23 03.1
comp=Z,11nm,0.9s
PSUT Pine Spring 82.14 50 IAmb IAmb 06 23 00.8
comp=Z,13nm,0.9s
LUBAR Lubar, Ukraine 82.15 324 P **P** **06 22 45.2 -1.3**
RNPP9 Sopachiv 82.19 325 P **P** **06 22 45.9 -0.8**
RNPP8 Varash 82.26 325 P **P** **06 22 46.6 -0.5**
RNPP5 Staryi Chortor 82.31 325 P **P** **06 22 46.9 -0.4**
PDAR Pinedale Array 82.67 45 P **P** **06 22 49.2 -0.5**
comp=Z,4.4nm,0.9s,baz=318,slow=2.0,SNR=15
PDAR LR LR 06 55 08.0
comp=Z,59nm,20.1s,baz=305,slow=32
comp=Z,4.4nm,0.9s
PDAR Pinedale Array 82.67 45 P **P** **06 22 50.1 +0.4**
PFO Pinyon Flats O 82.83 56 LR LR 06 56 18.0
comp=Z,114nm,19.3s,baz=274,slow=33
SORM Soroca 82.90 322 ⇓P **P** **06 22 50.3 -0.2**
SORM Soroca 82.90 322 ⇓P **P** **06 22 50.3 -0.2**
BELC Belle Mtn. Jos 82.97 55 IAmb IAmb 06 22 56.6
comp=Z,9.0nm,0.9s
CCUT Cedar City 82.99 51 IAmb IAmb 06 23 08.6
comp=Z,10.0nm,1.1s
BSUT Blindstream Ca 83.12 47 IAmb IAmb 06 23 28.6
comp=Z,20nm,1.7s
BZK Bozkurt 83.13 314 ⇑P **P** **06 22 52.0 +0.2**
IRM Iron Mountain 83.50 55 IAmb IAmb 06 23 10.2
comp=Z,9.4nm,1.1s
BC3 Big Chuckawall 83.54 55 IAmb IAmb 06 23 08.9
comp=Z,9.3nm,0.8s
KNB Kanab 83.63 51 IAmb IAmb 06 23 00.8
comp=Z,17nm,0.9s
P17A Butcher Ranch, 83.71 48 IAmb IAmb 06 23 11.6
comp=Z,9.3nm,1.0s
Q16A Castle Valley 83.73 49 IAmb IAmb 06 23 10.6
comp=Z,13nm,1.1s
RDMU Red Mountain 83.86 47 IAmb IAmb 06 23 13.0
comp=Z,12nm,0.8s
SRU San Rafael Swe 84.05 48 IAmb IAmb 06 23 17.0
comp=Z,11nm,1.0s
U15A North Rim 84.31 51 IAmb IAmb 06 23 14.7
comp=Z,7.7nm,1.0s
RAYN Ar Rayn 84.33 294 P **P** **06 22 59.1 +0.7**
RAYN Ar Rayn 84.33 294 P **P** **06 22 57.6 -0.8**
RAYN Ar Rayn 84.33 294 ⇑P **P** **06 22 59.1 +0.7**
BIR Birlad 84.41 321 ⇓P **P** **06 22 58.4 +0.1**
BIR Birlad 84.41 321 ⇓P **P** **06 22 58.4 +0.1**
HMU Henry Mountain 84.54 49 IAmb IAmb 06 23 14.1
comp=Z,9.3nm,0.8s
K22A Casper 84.58 44 IAmb IAmb 06 23 20.8
comp=Z,11nm,0.9s
BR131 Keskin Array S 84.59 313 P **P** **06 22 58.8 -0.8**
BRTR Keskin Array B 84.59 313 P **P** **06 22 59.5 0.0**
comp=Z,23nm,0.9s,baz=101,slow=3.9,SNR=89
comp=Z,23nm,0.9s
BRTR Keskin Array B 84.59 313 P **P** **06 22 59.8 +0.3**
BRTR pmax pmax
comp=Z,24nm,0.9s
KIRS Kirsehir-Merke 84.74 312 ⇑P **P** **06 23 00.3 +0.1**
TESR Tescani 84.80 321 ⇓P **P** **06 23 00.0 -0.2**
TPGR Topolog 84.81 319 ⇓P **P** **06 23 00.8 +0.5**
BUR08 Bucovina Ar. S 84.88 323 IAmb IAmb 06 23 17.7
comp=Z,7.2nm,0.9s
BURAR Bucovina Array 84.89 323 P **P** **06 23 00.6 -0.3**
BURAR IAmb IAmb 06 23 07.3
comp=Z,7.3nm,0.9s
BURAR Bucovina Array 84.89 323 ⇑P **P** **06 23 00.5 -0.3**
BURAR Bucovina Array 84.89 323 ⇑P **P** **06 23 00.5 -0.3**
KWP Kalwaria Pacla 84.89 325 *e*P **P** **06 23 00.7 0.0**
O20A White River Ci 84.95 47 IAmb IAmb 06 23 07.7
comp=Z,11nm,0.9s
ONER Baraj Valea Uz 85.05 321 ⇑P **P** **06 23 01.8 +0.3**
ANTO Ankara 85.05 313 P **P** **06 23 02.6 +0.8**
ANTO Ankara 85.05 313 P **P** **06 23 00.4 -1.4**
ANTO Ankara 85.05 313 ⇑P **P** **06 23 02.6 +0.8**
ANTO Ankara 85.05 313 ⇑P **P** **06 23 02.6 +0.8**
Y14A Wickenburg 85.13 54 IAmb IAmb 06 23 17.1
comp=Z,8.9nm,0.9s
VRI Vrincioaia 85.15 321 ⇑P **P** **06 23 01.4 -0.7**
VRI Vrincioaia 85.15 321 ⇑P **P** **06 23 01.4 -0.7**
HARR Harsova 85.19 319 ⇑P **P** **06 23 03.0 +0.8**
HARR Harsova 85.19 319 ⇑P **P** **06 23 03.0 +0.8**
RSSD Black Hills 85.19 41 P **P** **06 23 01.3 -1.3**
RSSD IAmb IAmb 06 23 19.2
comp=Z,31nm,1.8s
RSSD Black Hills 85.19 41 P **P** **06 23 01.3 -1.3**
RSSD pmax pmax
comp=Z,31nm,1.8s
PLOR Plostina 85.20 321 ⇑P **P** **06 23 01.1 -1.3**
PLOR Plostina 85.20 321 ⇑P **P** **06 23 01.1 -1.3**
HAYD Hayden 85.35 46 IAmb IAmb 06 23 10.6
comp=Z,9.4nm,0.8s
BISRR Bisoca 85.35 320 ⇑P **P** **06 23 03.2 0.0**
PV21 Cone Mtn., Par 85.36 48 IAmb IAmb 06 23 09.9
comp=Z,14nm,0.8s
WUAZ Wupatki 85.42 52 IAmb IAmb 06 23 18.9
comp=Z,18nm,1.0s
TURR Turia 85.42 321 ⇑P **P** **06 23 04.2 +0.7**
PV04 Paradox Valley 85.50 48 IAmb IAmb 06 23 26.8
comp=Z,17nm,1.1s
OZUR 85.53 321 ⇑P **P** **06 23 04.4 +0.5**
PV16 Nyswonger Mesa 85.54 48 IAmb IAmb 06 23 13.4
comp=Z,14nm,0.8s
PV05 Paradox Valley 85.55 49 IAmb IAmb 06 23 10.0
comp=Z,13nm,0.8s
PV03 Paradox Valley 85.61 48 IAmb IAmb 06 23 20.0
comp=Z,12nm,0.9s
ULM Lac du Bonnet 85.64 33 P **P** **06 23 04.2 -0.2**
comp=Z,4.5nm,0.7s,baz=333,slow=12,SNR=3.9
ULM LR LR 06 59 29.9
comp=Z,99nm,21.9s,baz=312,slow=34
comp=Z,4.5nm,0.7s
ULM Lac du Bonnet 85.64 33 IAmb IAmb 06 23 18.6
comp=Z,9.8nm,0.9s
PV13 Radium Mtn., P 85.68 48 IAmb IAmb 06 23 19.8
comp=Z,12nm,0.8s
PV02 Paradox Valley 85.71 48 IAmb IAmb 06 23 16.9
comp=Z,16nm,0.9s
STHS Stebnicka Huta 85.75 326 *e*P **P** **06 23 06.9 +1.9**
STHS pmax pmax
comp=Z,7.0nm,0.9s
STHS Stebnicka Huta 85.75 326 *e*P **P** **06 23 06.9 +1.9**
MLR Muntele Rosu 85.81 321 ⇑P **P** **06 23 04.8 -0.7**
MLR Muntele Rosu 85.81 321 ⇑P **P** **06 23 04.8 -0.7**
DOPR Dopca 85.82 321 ⇑P **P** **06 23 05.8 +0.4**
PV01 Paradox Valley 85.86 48 IAmb IAmb 06 23 14.8
comp=Z,7.5nm,0.8s
OJC Ojcow 85.92 327 *e*P **P** **06 23 04.8 -0.9**
PIX Pinacate 86.06 56 IAmb IAmb 06 23 21.5
comp=Z,9.1nm,0.9s
NIE Niedzica 86.22 326 *e*P P 06 23 12.6 +5.3
NUUK Nuuk 86.25 6 *i* P **P** **06 23 08.7 +1.6**
NUUK IAmb IAmb 06 23 09.7
comp=Z,28nm,0.9s
VOIR 86.34 321 ⇑P **P** **06 23 06.1 -2.0**
VOIR 86.34 321 ⇑P **P** **06 23 06.1 -2.0**
MVCO Mesa Verde 86.43 49 IAmb IAmb 06 25 54.3
comp=Z,25nm,1.7s
ASF Jabal al Asfar 86.48 305 LR LR 07 06 36.7
comp=Z,97nm,18.8s,baz=320,slow=39
BORA Eskisehir 86.52 314 IAmb IAmb 06 23 27.6
comp=Z,8.2nm,0.9s
ARR Arges 86.61 321 ⇑P **P** **06 23 09.5 +0.1**
ISCO Idaho Springs 86.80 46 IAmb IAmb 06 23 28.2
comp=Z,16nm,1.4s
LANS Liptovska Anna 86.80 326 *e*P **P** **06 23 11.5 +1.3**
LANS pmax pmax
comp=Z,3.0nm,1.0s
LANS Liptovska Anna 86.80 326 *e*P **P** **06 23 11.4 +1.3**
AGMN Agassiz Nation 86.95 35 IAmb IAmb 06 23 25.2
comp=Z,14nm,1.1s
MMAI Mount Meron Ar 87.09 306 P **P** **06 23 12.4 +0.5**
comp=Z,8.7nm,0.7s,baz=58,slow=7.9,SNR=12
MMAI LR LR 07 06 47.9
comp=Z,257nm,18.3s,baz=30,slow=39
comp=Z,8.7nm,0.7s
KSP Ksiaz 87.11 329 *e*P **P** **06 23 11.2 -0.4**
S22A 4UR Ranch, Cre 87.21 48 IAmb IAmb 06 23 14.9
comp=Z,12nm,1.4s
MORC Moravsky Berou 87.28 328 *e*P **P** **06 23 11.7 -0.8**
SURR Surduc 87.71 323 ⇑P **P** **06 23 13.6 -1.0**
JAVC Velka Javorina 87.86 327 *e*P **P** **06 23 15.5 +0.2**
VRAC Vranov 88.05 328 *e*P **P** **06 23 15.6 -0.6**
CLL Collm 88.21 331 *i* P **P** **06 23 16.0 -0.9**
CLL pmax pmax
comp=Z,13nm,1.1s
CLL Collm 88.21 331 *i* P **P** **06 23 16.0 -0.9**
comp=Z,13nm,1.1s
CLL *ex* x 06 23 22.0
CLL *e*PP **PP** **06 26 44.0 +0.8**
CLL AMS AMS 07 03 00.0
comp=N,300nm,19.1s
CLL AMS AMS 07 03 00.0
comp=E,100nm,21.0s
SMOL Smolenice 88.22 327 *e*P **P** **06 23 17.2 +0.2**
SMOL pmax pmax
comp=Z,5.0nm,0.8s
KRUC Moravsky 88.32 328 *e*P **P** **06 23 16.6 -0.8**
MODS Modra-Piesok 88.39 327 *e*P **P** **06 23 17.4 -0.4**
MODS Modra-Piesok 88.39 327 *e*P **P** **06 23 17.4 -0.4**
ANMO Albuquerque 89.07 50 LR LR 06 59 45.2
comp=Z,163nm,19.6s,baz=36,slow=33
EZN Ezine 89.09 316 ⇓P **P** **06 23 21.1 -0.2**
EZN Ezine 89.09 316 ⇓P **P** **06 23 21.1 -0.2**
EIL Elat 89.24 304 LR LR 07 08 40.8
comp=Z,199nm,18.2s,baz=0.0,slow=39
EYMN Ely 89.31 33 IAmb IAmb 06 23 37.3
comp=Z,17nm,1.1s
RONA Rosalia, Austr 89.33 327 *e*P **P** **06 23 20.9 -1.4**
comp=Z,8.9nm,1.1s
ECSD EROS Data Cent 89.60 38 IAmb IAmb 06 23 38.2
comp=Z,17nm,1.2s
GERES GERESS Array B 89.71 329 P **P** **06 23 23.1 -1.0**
comp=Z,1.7nm,0.8s,baz=32,slow=7.8,SNR=7.9
GERES LR LR 07 07 59.1
comp=Z,513nm,18.2s,baz=57,slow=38
comp=Z,1.7nm,0.8s
TBO Thunder Bay 89.77 31 IAmb IAmb 06 23 31.2
comp=Z,13nm,1.1s
ARSA Arzberg 90.02 327 *e*PcP **P** **06 23 25.7 +0.2**
comp=Z,11nm,1.4s
BIOA Bad Ischl, Aus 90.58 328 *i* PcP **P** **06 23 28.3 +0.2**
comp=Z,5.6nm,0.8s
EKA Eskdalemuir Ar 90.71 341 P **P** **06 23 28.5 0.0**
comp=Z,3.4nm,0.9s,baz=36,slow=4.4,SNR=4.9
comp=Z,3.4nm,0.9s
LESA Schwarzleotal 91.22 328 *e*P **P** **06 23 29.4 -1.8**
comp=Z,7.2nm,0.9s
MOTA Moosalm 91.99 329 *e*P **P** **06 23 33.3 -1.5**
comp=Z,5.4nm,0.9s
RETA Reutte 92.04 329 *i* PcP **P** **06 23 34.8 -0.1**
comp=Z,9.8nm,1.1s
FETA Feichten 92.41 329 *e*PcP **P** **06 23 36.5 -0.2**
comp=Z,7.7nm,1.0s
LPIG La Paz 92.42 61 LR LR 06 59 14.8
comp=Z,135nm,20.1s,baz=298,slow=32
VHRN Van Horn 92.51 53 IAmb IAmb 06 23 52.6
comp=Z,6.5nm,1.0s
DAVA Damuels 92.58 330 *i* PcP **P** **06 23 37.4 -0.1**
comp=Z,9.1nm,0.8s
SCHQ Schefferville 92.62 16 P **P** **06 23 37.5 +0.2**
comp=Z,6.1nm,0.9s,baz=27,slow=3.9,SNR=4.3
SCHQ LR LR 07 10 21.7
comp=Z,81nm,19.2s,baz=347,slow=39
comp=Z,6.1nm,0.9s
SMWD Samnorwood 93.04 47 IAmb IAmb 06 24 02.2
comp=Z,9.3nm,0.9s
WMOK Wichita Mounta 94.20 46 IAmb IAmb 06 24 06.9
comp=Z,7.1nm,1.0s
APMT Aspermont 94.23 48 IAmb IAmb 06 23 51.5
comp=Z,6.3nm,0.8s
TX31 Lajitas Ar. Si 94.29 53 IAmb IAmb 06 24 01.1
comp=Z,7.4nm,0.9s
TXAR Lajitas Array 94.29 53 P **P** **06 23 47.1 +1.4**
comp=Z,5.6nm,0.9s,baz=301,slow=2.8,SNR=30
TXAR LR LR 07 05 13.3
comp=Z,96nm,18.5s,baz=298,slow=35
comp=Z,5.6nm,0.9s
TXAR Lajitas Array 94.29 53 P **P** **06 23 47.0 +1.3**
TXAR Lajitas Array 94.29 53 P **P** **06 23 47.0 +1.3**
ABTX Abilene, Hawle 94.99 48 IAmb IAmb 06 24 10.9
comp=Z,8.7nm,1.0s
BRDY Brady 96.26 49 IAmb IAmb 06 24 08.7
comp=Z,7.3nm,1.3s
SADO Sadowa 97.25 28 LR LR 07 10 57.8
comp=Z,67nm,18.8s,baz=352,slow=37
QSPA South Pole Qui 119.00 180 PKP **PKiKP** **06 29 17.0 +3.2**
comp=Z,3.5nm,0.7s,baz=285,slow=1.7,SNR=22
QSPA South Pole Qui 119.00 180 **PKiKP** **06 29 16.8 +3.0**
SYO Syowa Base 121.48 204 ‖ *e*PpPdiff pPdif 06 25 52.5 +4.9
SDV Santo Domingo 130.61 45 **PKPdf** **06 29 38.1 +0.3**
RUSC La Rusia 131.29 50 **PKPdf** **06 29 39.5 +0.1**
TROLL Troll, Antarti 131.99 196 ⇑P **PKiKP** **06 29 39.3 -0.3**
comp=Z,171nm,0.7s
SNAA Sanae 133.44 194 ⇑P **PKPdf** **06 29 41.5 +0.2**
comp=Z,40nm,0.8s
SNAA Sanae 133.44 194 PKhKP PKPpre 06 29 37.4
comp=Z,2.2nm,0.9s,baz=190,slow=11,SNR=9.4
SNAA PKP **PKPdf** **06 29 40.9 -0.3**
comp=Z,1.8nm,0.8s,baz=31,slow=3.7,SNR=5.9
VNA2 Neumayer--Watz 134.97 194 ⇑P **PKPdf** **06 29 44.1 +0.1**
comp=Z,6.4nm,0.7s,baz=105,slow=1.6
VNA3 Neumayer Olymp 135.17 192 ⇑P **PKPdf** **06 29 43.0 -1.4**
comp=Z,3.4nm,0.7s
PB18 Visviri 148.77 75 **PKiKP** **06 30 16.5 +0.5**
LPAZ La Paz 149.28 72 PKPbc **PKPdf** **06 30 13.2 +1.5**
comp=Z,5.7nm,0.8s,baz=0.3,slow=5.7,SNR=12
LPAZ La Paz 149.28 72 PKPbc **PKPdf** **06 30 12.9 +1.2**
LPAZ **PKiKP** **06 30 17.8 +0.6**
LPAZ La Paz 149.28 72 PKIKP **PKPdf** **06 30 12.9 +1.2**
LPAZ 06 30 17.8
LPAZ La Paz 149.28 72 *e*P **PKPdf** **06 30 10.2 -1.5**
PLCA Paso Flores 150.95 122 PKPbc **PKiKP** **06 30 20.0 +0.7**
comp=Z,9.6nm,0.9s,baz=213,slow=4.0,SNR=20
PLCA Paso Flores 150.95 122 **PKiKP** **06 30 20.1 +0.8**
PLCA Paso Flores 150.95 122 PKIKP **PKiKP** **06 30 20.0 +0.7**
VA03 San Esteban 151.74 106 **PKiKP** **06 30 21.8 +0.6**

IDC 19 06:19:05.6±1.5, 38.01N×101.89E, h0km, mb3.4/3, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=49.0km s-min=24.2km az=76.0, Gansu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**2.51**	**144**	Pn	Pb	06 19 52.2	+0.5
	baz=318,slow=13						
LZDM				Lg	Lg	06 20 26.7	
	baz=323,slow=31						
SONM	**Songino Array**	**10.36**	**17**	Pn	Pn	06 21 37.0	+1.5
	0.3nm,0.3s,baz=200,slow=14,SNR=4.9						
SONM				Lg	Lg	06 24 32.4	
	0.2nm,0.3s,baz=208,slow=27,SNR=5.2						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**20.83**	**315**	P	P	06 23 48.5	-0.1
	0.7nm,0.5s,baz=130,slow=9.7,SNR=6.0						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**65.22**	**146**	P	P	06 29 48.6	-0.3
	0.4nm,0.8s,baz=340,slow=6.7,SNR=2.5						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**68.33**	**148**	P	P	06 30 08.8	+0.1
	0.2nm,0.6s,baz=337,slow=7.5,SNR=3.8						
	0.2nm,0.6s						

NEIC 19 06:24:21.6±0.7, 37.04N±0.01×104.96W±0.01, h8km±8km, ML1.4/10, Error ellipse: s-maj=1.9km s-min=1.7km az=158.0, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T25A	**Trinidad**	**0.45**	**77**		Pg	06 24 31.1	+0.5
T25A				Sg	Sg	06 24 37.1	+0.6
T25A				IAML		06 24 37.5	
	comp=N,39nm,0.2s						
T25A				IAML		06 24 37.5	
	comp=E,54nm,0.3s						
SDCO	**Great Sand Dun**	**0.83**	**329**	Pg	Pg	06 24 37.4	-0.2
SDCO				Sg	Sg	06 24 48.2	-0.3
S22A	**4UR Ranch, Cre**	**1.65**	**296**	Pn	Pn	06 24 51.1	0.0
RTBA	**Rita Blanca**	**1.88**	**108**	Pn	Pn	06 24 53.7	-0.5
ABQ	**Albuquerque**	**2.42**	**211**	Pn	Pn	06 25 00.8	-0.8

*DMN **19** 06:35:27.6±0.0, 26.74N×89.33E, h60km, Ml4.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NDI **19** 06:35:29.2±3.2, 26.92N×89.07E, h10km, ML3.2, MW3.1*
ISC 19 06:35:26.8±1.3, 26.98N±0.05×89.19E±0.03, h16km±10km, n30, σ1 8 23/52, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JPG	**JALPAIGURI**	**0.60**	**225**	*e*P	**Pg**	**06 35 38.9**	**+0.2**
JPG				*e*S	**Sb**	**06 35 48.1**	**+0.9**
JPG				IAML		06 35 48.6	
	comp=E,729nm,0.2s						
JPG				IAML		06 35 51.0	
	comp=N,805nm,0.1s						
GTK	**Tadong**	**0.62**	**303**	*e*P	**Pb**	**06 35 39.0**	**-0.4**
GTK				*e*S	**Sb**	**06 35 47.7**	**-0.4**
GTK				IAML		06 35 49.1	
	comp=E,862nm,0.2s						
GTK				IAML		06 35 49.3	
	comp=N,443nm,0.2s						
COBR	**COOCHBEHAR**	**0.72**	**160**	*e*S	**Sg**	**06 35 50.7**	**+0.3**
COBR				IAML		06 35 55.5	
	comp=N,1μm,0.4s						
COBR				IAML		06 35 55.9	
	comp=E,1μm,0.3s						
ODAN	**Odare**	**1.61**	**266**	Pg	**Pb**	**06 35 56.1**	**-0.2**
	baz=275,slow=0.0						
ODAN				Sg	**Sg**	**06 36 17.9**	**-0.9**
	comp=E,2μm,0.4s,baz=275,slow=0.0						
ODAN	**Odare**	**1.61**	**266**	Pg	**Pb**	**06 35 55.8**	**-0.5**
	baz=275,slow=0.0						
ODAN				Sg	**Sb**	**06 36 16.8**	**+0.2**
	comp=E,2μm,0.4s,baz=275,slow=0.0						
SHBG	**Sahibganj**	**2.23**	**218**	*e*P	**Pb**	**06 36 05.6**	**-1.0**
SHBG				*e*S	**Sn**	**06 36 31.8**	**+1.6**
SHBG				IAML		06 36 34.0	
	comp=N,318nm,0.3s						
SHBG				IAML		06 36 34.6	
	comp=E,233nm,0.3s						
RAMN	**Ramite**	**2.31**	**270**	Pg	**Pn**	**06 36 05.5**	**+1.0**
	baz=276,slow=0.0						
RAMN				Sg	**Sn**	**06 36 34.6**	**+1.8**
	comp=E,552nm,0.3s,baz=276,slow=0.0						
RAMN	**Ramite**	**2.31**	**270**	Pn	**Pn**	**06 36 05.5**	**+1.0**
	baz=276,slow=0.0						
RAMN				Sn	**Sn**	**06 36 33.5**	**+0.7**
	comp=E,552nm,0.3s,baz=276,slow=0.0						
TAWA	**Tawang**	**2.46**	**75**	*e*P	**Pb**	**06 36 11.3**	**+0.4**
TAWA				*e*S	**Sb**	**06 36 43.3**	**+2.1**
TAWA				IAML		06 36 47.4	
	comp=N,212nm,0.4s						
TAWA				IAML		06 36 49.4	
	comp=E,162nm,0.4s						
SHL	**Shillong**	**2.80**	**120**	*e*P	**Pb**	**06 36 15.3**	**-1.2**
SHL				*e*S	**Sb**	**06 36 49.2**	**-1.5**
GUN	**Gumba**	**3.08**	**288**	Pg	**Pn**	**06 36 16.9**	**+1.7**
	baz=292,slow=0.0						
GUN				Sg	**Sn**	**06 36 52.9**	**+0.9**
	comp=E,152nm,0.3s,baz=292,slow=0.0						
GUN	**Gumba**	**3.08**	**288**	Pg	**Pn**	**06 36 16.8**	**+1.6**
	baz=292,slow=0.0						
GUN				Sn	**Sn**	**06 36 52.2**	**+0.2**
	comp=E,217nm,0.3s,baz=292,slow=0.0						
TEZP	**TEZPUR**	**3.25**	**96**	*e*P	**Pb**	**06 36 23.4**	**-0.7**

TEZP eS Sb 06 37 01.8 -1.6
TEZP IAML 06 37 08.7
comp=N,124nm,0.2s
TEZP IAML 06 37 09.4
comp=E,118nm,0.2s
PKI Pulchoki 3.42 281 Pg Pn **06 36 20.4 +0.6**
baz=284,slow=0.0
PKI Pulchoki 3.42 281 Pn Pn **06 36 20.4 +0.6**
baz=285,slow=0.0
PKI Sn Sn **06 37 00.2 0.0**
comp=E,68nm,0.3s,baz=285,slow=0.0
PKIN Phulchoki 3.43 281 Pg Pn **06 36 20.5 +0.6**
baz=284,slow=0.0
PKIN Phulchoki 3.43 281 Pn Pn **06 36 20.3 +0.4**
baz=285,slow=0.0
PKIN Sn Sn **06 37 00.6 +0.2**
comp=E,133nm,0.3s,baz=285,slow=0.0
KKN Kakani 3.57 284 Pg Pn **06 36 23.2 +1.4**
baz=287,slow=0.0
KKN Sg Sn **06 37 03.8 0.0**
baz=287,slow=0.0
KKN Kakani 3.57 284 Pn Pn **06 36 23.2 +1.4**
baz=288,slow=0.0
DMN Daman 3.69 281 Pg Pn **06 36 25.1 +1.7**
baz=284,slow=0.0
DMN Daman 3.69 281 Pn Pn **06 36 25.1 +1.7**
baz=284,slow=0.0
DMN Sn Sn **06 37 05.9 -0.9**
comp=E,62nm,0.3s,baz=284,slow=0.0
GAYA Gaya 4.17 240 *ex* Sn **06 37 18.5 +0.2**
GKN Gorkha 4.17 285 Pg Pn **06 36 31.3 +1.3**
baz=288,slow=0.0
GKN Sg Sn **06 37 18.8 +0.2**
comp=E,58nm,0.3s,baz=288,slow=0.0
GKN Gorkha 4.17 285 Pn Pn **06 36 31.4 +1.4**
baz=288,slow=0.0
GKN Sn Sn **06 37 17.1 -1.5**
comp=E,127nm,0.3s,baz=288,slow=0.0
DANN Dangsing 5.01 287 Pg Pn **06 36 42.6 +1.0**
baz=289,slow=0.0
DANN Sg Sn **06 37 38.9 -0.4**
comp=E,23nm,0.3s,baz=289,slow=0.0
DANN Dangsing 5.01 287 Pn Pn **06 36 42.5 +1.0**
baz=290,slow=0.0
DANN Sn Sn **06 37 37.2 -2.1**
comp=E,34nm,0.2s,baz=290,slow=0.0
KOLN Koldanda 5.03 280 Sg Sn **06 37 37.3 -2.6**
comp=E,29nm,0.2s,baz=283,slow=0.0
KOLN Koldanda 5.03 280 Pn Pn **06 36 42.9 +1.0**
baz=283,slow=0.0
KOLN Sn Sn **06 37 37.5 -2.4**
comp=E,29nm,0.2s,baz=283,slow=0.0
PYUN Piuthan 5.62 283 Pg Pn **06 36 49.5 -0.4**
baz=285,slow=0.0
PYUN Piuthan 5.62 283 Pn Pn **06 36 49.5 -0.4**
baz=285,slow=0.0
PYUN Sn Sn **06 37 51.9 -2.4**
baz=285,slow=0.0

IDC 19 07:00:07.3±5.1, 20°.79S×168°.34E, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=213.4km s-min=39.0km az=150.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.85**	**265**	P	P	07 06 34.5	+0.1
	0.9nm,0.5s,baz=97,slow=7.6,SNR=26						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**31.96**	**258**	P	P	07 06 35.0	-0.2
	2.6nm,0.7s,baz=88,slow=7.9,SNR=32						
	2.6nm,0.7s						
ILAR	**Eielson Array**	**91.96**	**18**	P	P	07 13 17.4	0.0
	0.8nm,0.9s,baz=229,slow=5.4,SNR=4.3						
	0.8nm,0.9s						

*IDC **19** 07:00:54.8±0.8, 6°.68N×125°.01E, h0km, mb4.0/8, mbtmp4.0/8, MS3.3/9, Error ellipse: s-maj=15.8km s-min=8.9km az=138.0*
*NEIC **19** 07:00:57.0±1.8, 6°.80N±0°.08×125°.06E±0°.05, h10km±2km, mb4.3/14, Error ellipse: s-maj=15.6km s-min=3.3km az=151.0*
*DJA **19** 07:01:02.6±0.3, 7°.N±2°×12°.6E±°, h10km, M4.7/6, mB5.1/4, mb4.8/5, MLv4.7/6, Mw(mB)4.5/4*
ISC 19 07:00:55.3±0.8, 7°.03N±0°.07×126°.1E±0°.1, h10km, n36, σ1s33/28, mb4.2/14, MS3.6/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.47**	**275**	Pg	**Pn**	**07 01 08.7**	**+0.5**
	2μm,0.3s,baz=63,slow=0.6,SNR=88						
DAV				Lg	Lg	07 01 17.1	
	8μm,0.3s,baz=139,slow=19,SNR=27						
DAV				LR	LR	07 01 38.4	
	comp=Z,4μm,18.1s,baz=149,slow=64						
DAV	**Davao City (W)**	**0.47**	**275**		**Pn**	**07 01 08.3**	**+0.1**
SGSI	**Sangihe**	**3.36**	**189**	P	**Pn**	**07 01 51.7**	**+3.7**
SGSI				S	**Sn**	**07 02 28.1**	**+0.1**
TNTI	**Ternate**	**6.35**	**168**	P	**Pb**	**07 02 43.4**	**-2.7**
MRSI	**Marisa**	**7.69**	**212**	P	**Pn**	**07 02 50.1**	**+2.6**
TGY	**Tagaytay City**	**8.64**	**325**	LR	LR	07 07 13.6	
	comp=Z,178nm,18.3s,baz=45,slow=45						
SANI	**Sanana**	**9.02**	**180**	P	**Pn**	**07 03 05.7**	**0.0**
FAKI	**Fak Fak**	**11.66**	**148**	Pn	Pn	07 03 49.3	+7.4
BATI	**Baumata**	**17.29**	**188**	LR	LR	07 11 35.9	
	comp=Z,52nm,21.3s,baz=302,slow=38						
NACB	**Ninganchiao**	**17.57**	**346**	Pn	**P**	**07 05 01.4**	**-0.2**
NACB				IAmb	IAmb	07 05 37.3	
	comp=Z,32nm,1.1s						
GUMO	**Guam**	**19.62**	**69**	LR	LR	07 15 14.5	
	comp=Z,15nm,18.6s,baz=80,slow=42						
MTN	**Manton Dam**	**20.38**	**166**	P	**P**	**07 05 33.8**	**+1.4**
MTN				IAmb	IAmb	07 05 35.3	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	**22.72**	**173**	P	**P**	**07 05 58.0**	**+0.4**
KNRA				IAmb	IAmb	07 06 15.3	
	comp=Z,11nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.97**	**181**	P	**P**	**07 06 18.9**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=345,slow=6.7,SNR=21						
	comp=Z,2.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.97**	**181**	P	**P**	**07 06 18.7**	**-0.6**
COEN	**Coen**	**26.90**	**141**	P	**P**	**07 06 38.7**	**+1.8**
COEN				IAmb	IAmb	07 06 47.8	
	comp=Z,6.7nm,1.1s						
WB0	**Warramunga Arr**	**27.86**	**163**	P	**P**	**07 06 45.5**	**0.0**
WB0				IAmb	IAmb	07 07 15.6	
	comp=Z,4.3nm,0.9s						
WRAB	**Tennant Creek**	**28.01**	**163**	P	**P**	**07 06 47.0**	**+0.3**
WRAB				IAmb	IAmb	07 07 06.0	
	comp=Z,2.7nm,0.7s						
WRA	**Warramunga Arr**	**28.02**	**163**	P	**P**	**07 06 46.5**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=333,slow=11,SNR=15						
	comp=Z,0.8nm,0.4s						
WR8	**Warramunga Arr**	**28.07**	**163**	P	**P**	**07 06 47.5**	**+0.2**
WR8				IAmb	IAmb	07 07 28.0	
	comp=Z,5.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.73**	**296**	LR	LR	07 18 42.0	
	comp=Z,46nm,19.1s,baz=105,slow=38						
PSA00	**Pilbara Seismi**	**29.07**	**192**	P	**P**	**07 06 53.8**	**-2.3**
AS31	**Alice Springs**	**31.46**	**166**	P	**P**	**07 07 17.7**	**+0.4**
ASAR	**Alice Springs**	**31.46**	**166**	P	**P**	**07 07 17.5**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=347,slow=7.3,SNR=37						
	comp=Z,1.8nm,0.5s						
FORT	**Forrest**	**37.64**	**177**	P	**P**	**07 08 10.6**	**0.0**
FORT				IAmb	IAmb	07 08 44.4	
	comp=Z,7.7nm,1.0s						
BBOO	**Buckleboo**	**40.75**	**167**	P	**P**	**07 08 37.6**	**+0.9**
STKA	**Stephens Creek**	**41.44**	**160**	P	**P**	**07 08 42.7**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=320,slow=8.0,SNR=6.7						
	comp=Z,2.7nm,0.7s						
SONM	**Songino Array**	**43.98**	**341**	P	**P**	**07 09 03.3**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=155,slow=7.9,SNR=3.8						
	comp=Z,0.4nm,0.3s						
PALK	**Pallekele**	**44.98**	**273**	LR	LR	07 28 41.5	
	comp=Z,12nm,20.6s,baz=58,slow=38						
MKAR	**Makanchi Array**	**54.49**	**324**	P	**P**	**07 10 21.8**	**-1.6**
MKAR				LR	LR	07 35 07.6	
	comp=Z,49nm,18.5s,baz=283,slow=38						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**57.37**	**332**	P	**P**	**07 10 43.0**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=138,slow=9.0,SNR=1.7						
	comp=Z,0.3nm,0.3s						
AAK	**Ala-Archa**	**57.49**	**317**	LR	LR	07 37 42.4	
	comp=Z,40nm,19.7s,baz=134,slow=39						
KURK	**Kurchatov**	**58.62**	**327**	P	**P**	**07 10 52.2**	**-0.4**
KURBB	**Kurchatov Arra**	**58.62**	**327**	P	**P**	**07 10 52.2**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=128,slow=6.0,SNR=12						
	comp=Z,1.4nm,0.8s						
HFS	**Hagfors**	**94.80**	**332**	LR	LR	08 01 14.1	
	comp=Z,67nm,18.4s,baz=256,slow=38						
IDI	**Anoyia**	**95.01**	**306**	LR	LR	08 01 30.5	
	comp=Z,84nm,21.9s,baz=293,slow=38						

*KRNET **19** 07:05:24.3±0.1, 41°.30N×72°.07E, h25km, mb2.6*
*SOME **19** 07:05:27.7, 41°.32N×72°.05E, h15km*
*NNC **19** 07:05:28.4±2.1, 41°.43N×72°.02E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=19.0km s-min=6.2km az=174.0*
ISC 19 07:05:23.4±1.1, 41°.23N±0°.03×71°.99E±0°.03, h9km±10km, n21, σ0s90/39, 21C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.57**	**358**	⇓*i*P	**Pg**	**07 05 34.3**	**-0.2**
ARK				⇓*e*S	Sg	07 05 41.5	-0.5
TRKS	**Terek-Say**	**0.71**	**295**	⇑*i*P	**Pb**	**07 05 37.9**	**-0.1**
TRKS				⇑*i*S	Sb	07 05 47.5	-0.4
ARSB	**Arslanbob**	**0.75**	**82**	⇑*i*P	**Pg**	**07 05 37.5**	**-0.3**
ARSB				⇑*i*S	Sg	07 05 47.2	-0.5
OHH	**Osh**	**0.92**	**139**	⇓*i*P	**Pb**	**07 05 42.1**	**+0.5**
OHH				⇓*i*S	Sb	07 05 54.9	+1.0
SALK	**Salom-Alik**	**1.42**	**103**	⇑*i*P	**Pn**	**07 05 49.6**	**+0.1**
SALK				⇑*i*S	Sn	07 06 08.0	-0.4
SFK	**Sufi-Kurgan**	**1.67**	**136**	⇑*i*P	**Pb**	**07 05 54.7**	**+0.3**
SFK				⇑*i*S	Sg	07 06 16.8	-0.3
IUG	**Iuzhnay**	**1.73**	**303**	P	**Pg**	**07 05 58.8**	**+2.2**
	14nm,0.3s						
IUG				S	Sg	07 06 21.3	+2.2
	17nm,0.2s						
DRK	**Karamyk**	**1.75**	**185**	⇑*i*P	**Pg**	**07 05 56.7**	**-0.3**
DRK				⇑*i*S	Sg	07 06 20.4	+0.7
MRKS	**Merke**	**1.77**	**31**	P	**Pg**	**07 05 58.1**	**+0.7**
	2.1nm,0.2s						
MRKS				S	Sg	07 06 19.6	-0.8
	8.6nm,0.3s						
MRKS	**Merke**	**1.77**	**31**	*e*P	**Pg**	**07 05 58.1**	**+0.7**
	2.1nm,0.2s						
MRKS				*e*S	Sg	07 06 19.6	-0.8
	8.6nm,0.3s						
ARLS	**Aral**	**1.86**	**69**	⇑*i*P	**Pn**	**07 05 56.3**	**+0.8**
ARLS				⇑*i*S	Sn	07 06 19.3	+0.1
EKS2	**Erkin-Say**	**1.96**	**42**	⇓*e*P	**Pn**	**07 05 57.3**	**+0.5**
EKS2				⇓*e*S	Sn	07 06 21.2	-0.3
UCH	**Uchtor**	**2.13**	**61**	⇑*i*P	**Pn**	**07 06 00.0**	**+0.5**
UCH				⇑*i*S	Sn	07 06 26.0	-0.4
KK31	**Karatay Array**	**2.17**	**330**	⇑Pg	**Pb**	**07 06 03.0**	**+0.2**
	0.5nm,0.2s,baz=145,slow=16,SNR=7.4						
KK31				⇑Lg	Lg	07 06 33.1	
	13nm,0.6s,baz=139,slow=26,SNR=17						
AAK	**Ala-Archa**	**2.34**	**52**	⇑Pg	**Pg**	**07 06 08.4**	**+0.2**
	0.8nm,0.5s						
AAK				⇓Lg	Lg	07 06 38.4	
	1.2nm,0.6s						
AAK	**Ala-Archa**	**2.34**	**52**	⇑*i*P	**Pn**	**07 06 02.7**	**+0.6**
AAK				⇑*i*S	Sn	07 06 30.5	-0.5
BRLS	**Boroldoy**	**2.41**	**319**	Pg	**Pg**	**07 06 09.3**	**-0.3**
	2.3nm,0.4s						
BRLS				Lg	Lg	07 06 38.8	
	11nm,0.3s						
BRLS	**Boroldoy**	**2.41**	**319**	*e*P	**Pg**	**07 06 09.2**	**-0.3**
	2.3nm,0.4s						
BRLS				*e*S	Sg	07 06 38.8	-2.1
	11nm,0.3s						
GAR	**Garm**	**2.57**	**211**	⇓*i*P	**Pb**	**07 06 08.1**	**-1.6**
GAR				⇓*i*S	Sb	07 06 40.0	-1.4
USP	**Ospenovka**	**2.76**	**42**	⇑*i*P	**Pn**	**07 06 08.3**	**+0.5**
USP				⇑*i*S	Sn	07 06 40.2	-1.0
JNKS	**Jany-Kuch**	**2.77**	**92**	⇓*i*P	**Pn**	**07 06 09.1**	**+1.0**
JNKS				⇓*i*S	Sn	07 06 41.7	0.0

IDC 19 07:11:40.7±1.9, 1°.86N×126°.62E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=180.9km s-min=22.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.95**	**161**	P	P	07 16 46.3	-0.6
	0.6nm,0.5s,baz=340,slow=11,SNR=9.0						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.34**	**165**	P	P	07 17 19.2	+0.6
	0.3nm,0.5s,baz=346,slow=11,SNR=8.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	07 21 41.7	-0.8
	0.2nm,0.4s,baz=108,slow=9.1,SNR=2.4						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.25**	**328**	P	P	07 22 11.5	+0.5
	0.2nm,0.5s,baz=132,slow=6.9,SNR=1.9						
	0.2nm,0.5s						

*IDC **19** 07:30:09.4±1.9, 1°.81N×126°.62E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=174.9km s-min=22.9km az=66.0*
DJA 19 07:30:12.3±0.4, 2°.N±5°×12°.7E±°, h10km, M3.2/6, MLv3.2/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**136**	P	Pn	07 30 34.0	-1.5
SGSI	**Sangihe**	**2.25**	**334**	P	Pn	07 30 50.8	+1.2
WRA	**Warramunga Arr**	**22.79**	**161**	P	P	07 35 14.5	-0.8
	0.7nm,0.5s,baz=340,slow=11,SNR=8.1						
	0.7nm,0.5s						
ASAR	**Alice Springs**	**26.17**	**164**	P	P	07 35 47.3	+0.1
	0.2nm,0.4s,baz=347,slow=11,SNR=8.9						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	P	07 40 11.2	-2.0
	0.7nm,0.8s,baz=114,slow=9.6,SNR=1.4						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**63.37**	**328**	P	P	07 40 40.1	-1.7
	0.2nm,0.3s,baz=122,slow=5.1,SNR=1.9						
	0.2nm,0.3s						

*SLM **19** 07:41:19.6±0.3, 36°.550N±0°.007×89°.60W±0°.01, h7km±3km, Error ellipse: s-maj=1.1km s-min=1.0km az=117.0*
NEIC 19 07:41:20.0±0.4, 36°.553N±0°.008×89°.50W±0°.01, h8km±2km, mb_Lg2.1/2, ML1.7/12, Md2.1/23(SLM), Error ellipse: s-maj=1.3km s-min=1.1km az=121.0, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMEM	**New Madrid Sch**	**0.02**	**21**		Pg	07 41 21.3	-0.3
NMEM					Sg	07 41 22.8	+0.2
WALK	**Watson Lake**	**0.04**	**108**		Pg	07 41 21.4	-0.3
WALK					Sg	07 41 23.0	+0.1
NMMO	**New Madrid**	**0.05**	**45**		Pg	07 41 21.6	-0.2
NMMO					Sg	07 41 23.3	+0.3
MARMO	**Marston**	**0.06**	**249**		Pg	07 41 21.6	-0.3
MARMO					Sg	07 41 23.4	+0.2
CATM	**Catron**	**0.07**	**325**		Pg	07 41 21.9	-0.1
CATM					Sg	07 41 23.8	+0.3
PENMO	**Penman**	**0.11**	**195**		Pg	07 41 22.1	-0.3
PENMO					Sg	07 41 24.3	+0.1
SJMO	**Saint John's B**	**0.12**	**52**		Pg	07 41 22.6	-0.1
SJMO					Sg	07 41 25.2	+0.5
PGVM	**Portageville**	**0.14**	**229**		Pg	07 41 22.8	-0.3
PGVM					Sg	07 41 25.4	+0.2
KEWM	**Kewanee**	**0.14**	**1**		Pg	07 41 23.0	-0.1
KEWM					Sg	07 41 25.7	+0.4
PPLM	**Point Pleasant**	**0.15**	**176**		Pg	07 41 23.0	-0.1
PPLM					Sg	07 41 25.7	+0.3
POBM	**Portage Bay**	**0.15**	**201**		Pg	07 41 23.0	-0.2
POBM					Sg	07 41 25.8	+0.3
PARMO	**Parma**	**0.17**	**311**		Pg	07 41 23.4	-0.1
PARMO					Sg	07 41 26.5	+0.5
PARMO	**Parma**	**0.17**	**311**	IAML		07 41 26.5	
	comp=E,517nm,0.2s						
PARMO				IAML		07 41 26.8	
	comp=N,296nm,0.2s						
COKM	**Charter Oak**	**0.19**	**326**		Pg	07 41 23.9	0.0
COKM					Sg	07 41 27.1	+0.6
HENM	**Henderson Moun**	**0.19**	**31**		Pg	07 41 23.8	-0.2
WYBT	**Wynnburg**	**0.22**	**159**		Pg	07 41 24.2	-0.2
WYBT					Sg	07 41 27.9	+0.5
MATM	**Matthews**	**0.22**	**358**		Pg	07 41 24.4	-0.1
MATM					Sg	07 41 28.1	+0.5
TOPM	**Tallapoosa**	**0.24**	**264**		Pg	07 41 24.5	-0.3
TOPM					Sg	07 41 28.4	+0.4
WADM	**Wardell**	**0.25**	**221**		Pg	07 41 24.7	-0.3
WADM					Sg	07 41 28.6	+0.3
EPRM	**East Prairie**	**0.25**	**49**		Pg	07 41 24.9	-0.2
EPRM					Sg	07 41 28.9	+0.5
FLPT	**Flippin**	**0.26**	**123**		Pg	07 41 25.0	-0.2
MLDM	**Malden**	**0.27**	**286**		Pg	07 41 25.2	-0.2
HICK	**Hickman**	**0.29**	**92**		Pg	07 41 25.6	-0.3
HICK					Sg	07 41 30.2	+0.4
HICK	**Hickman**	**0.29**	**92**	IAML		07 41 30.7	
	comp=N,135nm,0.2s						
HICK				IAML		07 41 31.7	
	comp=E,95nm,0.2s						
BRNM	**Bernie**	**0.37**	**298**		Pg	07 41 26.9	-0.3
GLAT	**Glass**	**0.38**	**139**		Pg	07 41 26.8	-0.5
GLAT				IAML		07 41 32.9	
	comp=E,73nm,0.5s						
GLAT				IAML		07 41 32.9	
	comp=N,76nm,0.1s						
GLST	**Glass**	**0.38**	**139**		Pg	07 41 27.1	-0.3
GLST					Sg	07 41 32.8	+0.5
BETM	**Bethany**	**0.38**	**279**		Pg	07 41 27.1	-0.3
BETM					Sg	07 41 32.3	-0.1
BRGM	**Braggadocio**	**0.41**	**212**		Pg	07 41 27.6	-0.4
GNAR	**Gosnell**	**0.68**	**210**		Pg	07 41 32.8	-0.3
GNAR	**Gosnell**	**0.68**	**210**	IAML		07 41 41.1	
	comp=N,50nm,3.2s						
GNAR				IAML		07 41 41.3	
	comp=E,125nm,4.0s						
PBMO	**Poplar Bluff**	**0.71**	**289**		Pg	07 41 32.9	-0.7
PBMO	**Poplar Bluff**	**0.71**	**289**		Pg	07 41 33.0	-0.6
PBMO				IAML		07 41 43.9	
	comp=N,18nm,0.5s						
PBMO				IAML		07 41 44.4	
	comp=E,14nm,1.3s						
LCAR	**Lake Charles**	**1.35**	**250**		Pn	07 41 43.9	-1.2
LCAR				IAML		07 42 05.3	
	comp=N,14nm,0.3s						
WVT	**Waverly**	**1.49**	**106**		Pn	07 41 46.3	-0.7
FVM	**French Village**	**1.57**	**335**		Pn	07 41 47.6	-0.6
CCM	**Cathedral Cave**	**2.00**	**319**	Pn	Pn	07 41 54.7	+0.7
PLAL	**Pickwick Lake**	**2.00**	**141**		Pn	07 41 54.0	0.0
PWLA	**Pickwick Lake**	**2.00**	**141**		Pb	07 41 55.5	-1.1
T47A	**Sharon Grove**	**2.05**	**77**	IAmb_Lg		07 42 28.3	
	comp=Z,3.6nm,0.8s						
FCAR	**Ozark Folk Cen**	**2.15**	**253**		Pn	07 41 55.9	-0.2
BLOK	**Blackwell**	**6.13**	**274**	IAmb_Lg		07 44 44.8	
	comp=Z,7.1nm,0.9s						

*IDC **19** 08:01:56.8±4.6, 6°.96S×129°.80E, h98km±43km, mb4.2/9, mbtmp4.6/12, MS3.0/1, Error ellipse: s-maj=46.2km s-min=16.4km az=62.0*
*NEIC **19** 08:02:01.6±1.7, 7°.01S±0°.07×129°.70E±0°.08, h142km±8km, mb4.6/21, Error ellipse: s-maj=11.2km s-min=10.6km az=112.0*
*DJA **19** 08:02:02.3±0.2, 7°.S±2°×13°.0E±°, h151km±3km, M4.9/32, mb4.7/32, mB5.3/17, MLv5.2/17, Mw(mB)4.8/17*
ISC 19 08:02:01.5±0.4, 7°.16S±0°.04×129°.74E±0°.05, h150km, n102, σ1s82/106, mb4.5/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.75**	**118**		**Pn**	**08 02 36.0**	**+2.1**
SAUI	**Saumlaki**	**1.75**	**118**	P	**Pn**	**08 02 36.2**	**+2.4**
SAUI	**Saumlaki**	**1.75**	**118**	P	**Pn**	**08 02 36.1**	**+2.3**
SAUI				S	**Sn**	**08 02 59.9**	**+1.3**
BNDI	**Bandanaira**	**2.62**	**4**	P	**Pn**	**08 02 45.3**	**+1.1**
BNDI	**Bandanaira**	**2.62**	**4**	P	**Pn**	**08 02 45.5**	**+0.8**
BNDI				S	**Sn**	**08 03 16.9**	**-0.3**
AAI	**Ambon**	**3.77**	**336**	P	**Pn**	**08 02 59.8**	**+0.9**
MSAI	**Masohi**	**3.87**	**348**	P	**Pn**	**08 03 00.5**	**+0.3**
NLAI	**Namlea**	**4.70**	**326**	P	**Pn**	**08 03 13.5**	**+2.5**
FAKI	**Fak Fak**	**4.90**	**31**		**Pn**	**08 03 10.8**	**-2.9**
FAKI	**Fak Fak**	**4.90**	**31**	P	**Pn**	**08 03 11.5**	**-2.1**
FAKI	**Fak Fak**	**4.90**	**31**	P	**Pn**	**08 03 10.4**	**-3.2**
KMPI	**Kaimana, Papua**	**5.26**	**49**	P	**Pn**	**08 03 17.5**	**-0.9**
DRS	**Darwin Rock St**	**5.36**	**168**	P	**Pn**	**08 03 21.3**	**+1.5**
DRS	**Darwin Rock St**	**5.36**	**168**	S	**Sn**	**08 04 21.7**	**+0.8**
MTN	**Manton Dam**	**5.81**	**166**		**Pn**	**08 03 27.0**	**+1.2**
SOEI	**Soe**	**6.00**	**244**		**Pn**	**08 03 29.2**	**+0.9**
SOEI	**Soe**	**6.00**	**244**	P	**Pn**	**08 03 30.9**	**+2.6**
SOEI	**Soe**	**6.00**	**244**	S	**Sn**	**08 04 36.1**	**-0.1**
SOEI	**Soe**	**6.00**	**244**	P	**Pn**	**08 03 30.5**	**+2.2**
	3.2nm3μm235nm,0.7s						
SWI	**Sorong**	**6.43**	**14**	P	**Pn**	**08 03 31.3**	**-2.8**
	0.8nm7μm94nm,0.5s						
BATI	**Baumata**	**6.73**	**243**	P	**Pn**	**08 03 40.6**	**+2.6**
	188nm,0.4s,baz=234,slow=1.1,SNR=52						
BATI				S	**Sn**	**08 04 52.7**	**-0.8**
	636nm,0.5s,baz=302,slow=0.9,SNR=18						
BATI	**Baumata**	**6.73**	**243**	P	**Pn**	**08 03 40.5**	**+2.6**
	5μm188nm,0.5s						
RKPI	**Ransiki, Papua**	**7.14**	**38**	P	**Pn**	**08 03 42.0**	**-1.6**
KNRA	**Kununurra**	**8.52**	**186**		**Pn**	**08 04 02.2**	**+0.3**
BAKI	**Biak**	**8.69**	**47**	P	**Pn**	**08 04 05.2**	**+1.0**
BASI	**Baing, Sumba**	**9.55**	**251**	P	**Pn**	**08 04 16.7**	**+1.0**
	2μm89nm,0.4s						
BKSI	**Bulukumba**	**9.73**	**280**	P	**Pn**	**08 04 20.2**	**+2.2**
	21nm,1.0s						
KAPI	**Kappang**	**10.16**	**282**	P	**Pn**	**08 04 26.8**	**+3.1**
	6.8nm,0.5s,baz=152,slow=8.3,SNR=3.5						
SMPI	**Sarmi**	**10.31**	**61**	P	**Pn**	**08 04 25.0**	**-0.7**
	29nm,0.9s						
WBSI	**Waikabubak, Su**	**10.53**	**256**	P	**Pn**	**08 04 29.4**	**+0.7**
	1μm87nm,0.9s						
MRSI	**Marisa**	**10.86**	**314**	P	**Pn**	**08 04 34.4**	**+1.4**
	82nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.58**	**200**	P	**Pn**	**08 04 41.1**	**-1.3**
	29nm,0.3s,baz=30,slow=11,SNR=158						
FITZ				S	**Sn**	**08 06 45.4**	**-5.2**
	27nm,0.3s,baz=286,slow=22,SNR=4.9						
FITZ	**Fitzroy Crossi**	**11.58**	**200**		**Pn**	**08 04 41.6**	**-0.8**
JAY	**Jayapura**	**11.86**	**68**	P	**Pn**	**08 04 45.9**	**-0.2**
PLAI	**Plampang**	**11.96**	**261**	P	**Pn**	**08 04 46.1**	**-1.3**
PLAI	**Plampang**	**11.96**	**261**	P	**Pn**	**08 04 45.7**	**-1.7**
	1μm80nm,0.5s						
TOLI2	**Tolitoli**	**12.14**	**312**	Pn	**Pn**	**08 04 47.5**	**-2.2**
MPSI	**Mapaga**	**12.32**	**307**	P	**Pn**	**08 04 53.8**	**+1.7**
TWSI	**Taliwang, Sumb**	**12.83**	**262**	P	**Pn

comp=Z,11nm,0.6s,baz=229,slow=2.8,SNR=4.2

PMG	**Port Moresby**	**17.38**	**99**	P	**Pn**	**08 05 56.6**	**+1.4**
PCJI	**Pacitan**	**18.42**	**266**	P	**P**	**08 06 06.5**	**+0.9**
	comp=Z,45nm,0.7s						
UGM	**Wanagama**	**19.06**	**267**	P	**Pn**	**08 06 14.8**	**-0.2**
	comp=Z,31nm,1.1s						
SBUM	**Sibu**	**19.92**	**298**		**P**	**08 06 21.2**	**-0.5**
SBUM				IAmb	IAmb	08 06 26.8	
	comp=Z,21nm,0.9s						
BBJI	**Bungbulang**	**21.91**	**268**	P	**P**	**08 06 43.5**	**+0.4**
MEEK	**Meekatharra**	**22.07**	**207**	P	**P**	**08 06 45.9**	**+1.3**
TPI	**Tanjungpandan**	**22.43**	**280**	P	**P**	**08 06 49.7**	**+1.6**
INKA	**Innaminka**	**22.98**	**154**	P	**P**	**08 06 54.9**	**+1.8**
FORT	**Forrest**	**23.55**	**184**	P	**P**	**08 06 59.7**	**+1.3**
FORT				IAmb	IAmb	08 07 01.8	
	comp=Z,11nm,0.6s						
QLP	**Quilpie**	**23.74**	**146**	P	**P**	**08 07 00.5**	**+0.4**
BBOO	**Buckleboo**	**26.19**	**168**	P	**P**	**08 07 24.0**	**+1.7**
BBOO				IAmb	IAmb	08 07 27.9	
	comp=Z,27nm,1.4s						
BBOO	**Buckleboo**	**26.19**	**168**	P	**P**	**08 07 22.5**	**+0.3**
STKA	**Stephens Creek**	**26.97**	**157**	P	**P**	**08 07 31.1**	**+1.8**
	comp=Z,2.9nm,0.4s,baz=330,slow=11,SNR=21						
	comp=Z,2.9nm,0.4s						
STKA	**Stephens Creek**	**26.97**	**157**	P	**P**	**08 07 30.6**	**+1.4**
RPSI	**Rantau Prapat**	**32.27**	**287**		**P**	**08 08 15.7**	**-0.6**
RPSI				IAmb	IAmb	08 08 19.0	
	comp=Z,10nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.63**	**310**	P	**P**	**08 09 19.0**	**+0.1**
	comp=Z,5.1nm,0.8s,baz=141,slow=7.6,SNR=23						
	comp=Z,5.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.63**	**310**	P	**P**	**08 09 18.0**	**-0.9**
CHTO	**Chiang Mai**	**39.85**	**311**	P	**P**	**08 09 20.5**	**-0.2**
CHTO				IAmb	IAmb	08 09 21.8	
	comp=Z,8.5nm,0.8s						
ULN	**Ulaanbaatar**	**58.33**	**342**		**P**	**08 11 41.3**	**+0.3**
ULN				IAmb	IAmb	08 11 42.1	
	comp=Z,4.5nm,0.7s						
SONM	**Songino Array**	**58.51**	**342**	P	**P**	**08 11 42.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=157,slow=6.9,SNR=9.1						
	comp=Z,1.6nm,0.6s						
PETK	**Petropavlovsk-**	**64.56**	**18**	P	**P**	**08 12 22.1**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=200,slow=6.5,SNR=1.6						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**68.22**	**327**	P	**P**	**08 12 46.8**	**+0.9**
	comp=Z,14nm,0.6s,baz=121,slow=7.8,SNR=129						
	comp=Z,14nm,0.6s						
MKAR	**Makanchi Array**	**68.22**	**327**		**P**	**08 12 46.3**	**+0.4**
MAKZ	**Makanchi**	**68.39**	**327**		**P**	**08 12 47.4**	**+0.4**
ARSB	**Arslanbob**	**70.83**	**318**		**P**	**08 13 01.6**	**-0.6**
GAR	**Garm**	**71.59**	**315**	IAmb	IAmb	08 13 07.7	
	comp=Z,12nm,0.7s						
ZALV	**Zalesovo Beam**	**71.61**	**334**	P	**P**	**08 13 05.2**	**-1.1**
	comp=Z,3.3nm,0.6s,baz=128,slow=6.0,SNR=14						
	comp=Z,3.3nm,0.6s						
ZALV	**Zalesovo Beam**	**71.61**	**334**		**P**	**08 13 05.7**	**-0.7**
CHGR	**Chuyangaron**	**72.27**	**314**		**P**	**08 13 10.0**	**-0.8**
KURBB	**Kurchatov Arra**	**72.51**	**329**	P	**P**	**08 13 11.9**	**+0.1**
	comp=Z,7.7nm,0.6s,baz=129,slow=4.9,SNR=78						
	comp=Z,7.7nm,0.6s						
KURK	**Kurchatov**	**72.52**	**329**		**P**	**08 13 11.7**	**-0.2**
KURK				IAmb	IAmb	08 13 12.6	
	comp=Z,6.8nm,0.8s						
KKAR	**Karatay Array**	**73.29**	**319**		**P**	**08 13 16.8**	**+0.2**
BVAR	**Borovoye Array**	**78.06**	**328**	P	**P**	**08 13 43.8**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=137,slow=7.6,SNR=9.0						
AB31	**Akbulak array**	**82.47**	**322**		**P**	**08 14 07.0**	**-0.2**
ABKAR	**Akbulak array**	**82.47**	**322**		**P**	**08 14 07.0**	**-0.2**
AKTO	**Aktyubinsk**	**84.04**	**322**	P	**P**	**08 14 15.9**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=104,slow=6.7,SNR=6.5						
	comp=Z,1.8nm,0.5s						
SNAA	**Sanae**	**95.45**	**194**	P	**P**	**08 15 10.3**	**+1.4**
	comp=Z,0.8nm,1.0s,baz=199,slow=3.1,SNR=2.1						
	comp=Z,0.8nm,1.0s						
SNAA	**Sanae**	**95.45**	**194**	IAmb	IAmb	08 15 15.0	
	comp=Z,2.7nm,1.3s						
LPAZ	**La Paz**	**150.75**	**143**	PKPbc	**PKiKP**	**08 21 39.8**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=224,slow=3.5,SNR=8.5						

CATAC 19 08:02:26.1±0.4, 12°N±3°×8°7W±°, h21km, M2.8/20, MLv2.8/20, Error ellipse: s-maj=6.1km s-min=3.2km az=29.0, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.77**	**41**	P	Pn	08 02 41.4	-0.3
UNAN	**Cigeo UNAN**	**0.96**	**58**	P	Pb	08 02 44.2	+0.1
UNAN				S	Sn	08 02 57.7	+0.2
APQ2	**Apoyeque**	**0.97**	**52**	P	Pn	08 02 44.8	+0.3
APQ2				S	Sn	08 02 58.2	+0.6
MOMN	**Momotombo**	**0.98**	**35**	P	Pn	08 02 44.6	0.0
CNGN	**Cerro Negro**	**0.98**	**24**	P	Pb	08 02 44.2	-0.2
CNGN	**Cerro Negro**	**0.98**	**24**	S	Sn	08 02 58.5	+0.6
TISN	**Laguna Tiscapa**	**0.98**	**57**	P	Pb	08 02 43.6	-0.8
MGAN	**Managua**	**1.00**	**57**	S	Sn	08 02 59.1	+0.7
MGAN	**Managua**	**1.00**	**57**	P	Pn	08 02 44.9	0.0
MAS3	**Al N del Volca**	**1.00**	**65**	P	Pn	08 02 45.1	+0.1
MAS3				S	Sn	08 02 59.1	+0.5
NANN	**Nandasmo**	**1.02**	**71**	P	Pn	08 02 46.3	+1.0
MOM2	**El Cardon**	**1.03**	**36**	P	Pb	08 02 45.1	-0.1
MOM2				S	Sn	08 02 59.7	+0.5
WILN	**Americas 2**	**1.06**	**58**	P	Pn	08 02 45.5	-0.2
WILN				S	Sn	08 03 00.5	+0.7
PKGN	**Cerro Pekin**	**1.07**	**7**	P	Pn	08 02 45.0	-0.8
PKGN				S	Sn	08 02 59.8	-0.3
MOM3	**MOM3**	**1.07**	**33**	P	Pn	08 02 45.5	-0.4
MOM3				S	Sn	08 03 00.3	+0.1
CSGN	**Cosiguina Volc**	**1.44**	**342**	P	Pn	08 02 50.7	-0.3
CSGN				S	Sb	08 03 10.3	+0.2
POTN	**Potosi Cosigui**	**1.44**	**344**	P	Pn	08 02 50.8	-0.2
POTN				S	Sb	08 03 09.8	-0.4
MATN	**Matagalpa**	**1.75**	**41**	S	Sn	08 03 16.5	-0.6
MATN	**Matagalpa**	**1.75**	**41**	P	Pn	08 02 54.3	-1.0
CNCH	**Conchagua**	**1.81**	**337**	P	Pn	08 02 56.2	+0.1
CNCH	**Conchagua**	**1.81**	**337**	S	Sn	08 03 18.3	-0.3
LCND	**La Caada**	**1.86**	**336**	S	Sn	08 03 20.2	+0.5
LCND	**La Caada**	**1.86**	**336**	P	Pn	08 02 56.6	-0.2
RCON	**San Juan de Ri**	**2.09**	**26**	P	Pn	08 03 00.5	+0.4
RCON	**San Juan de Ri**	**2.09**	**26**	S	Sn	08 03 24.5	-1.0
RCFN	**Al S de San Ju**	**2.11**	**24**	P	Pn	08 02 59.9	-0.4
OCON	**Estacion meteo**	**2.11**	**17**	P	Pn	08 03 00.5	+0.3
RCVN	**Varillal2**	**2.16**	**24**	P	Pn	08 03 01.2	+0.2
PACA	**Pacayal**	**2.20**	**328**	P	Pn	08 03 02.1	+0.5
YUSH	**Yuscaran**	**2.35**	**6**	P	Pn	08 03 04.4	+0.8
TGUH	**Tegucigalpa,Un**	**2.45**	**356**	P	Pn	08 03 05.9	+1.0
TGUH				S	Sn	08 03 35.5	+1.2

IDC 19 08:03:06.3±1.7, 54°.68N×19°.59E, h0km, mbtmp3.2/5, ML2.9/5, Error ellipse: s-maj=29.6km s-min=12.8km az=47.0
DNK 19 08:03:11.1±1.1, 54°.83N×18°.43E, h0km, Suspected explosion

ISC 19 08:03:03.1±1.1, 54°.63N±0°.08×19°.29E±0°.05, h0km, n23, σ1°73/23, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GKP	**Gorka Klasztor**	**1.82**	**222**	*e*P	**Pb**	**08 03 37.3**	**0.0**
SUW	**Suwalki**	**2.36**	**104**	*e*P	**Pb**	**08 03 46.9**	**+0.4**
BSD	**Bornholm Skovb**	**2.57**	**283**	*e*P	**Pb**	**08 03 49.5**	**-0.6**
BSD	**Bornholm Skovb**	**2.57**	**283**	*e*P	**Pn**	**08 03 47.2**	**+1.2**
PABE	**Paberze**	**2.83**	**70**	*e*P	**Pn**	**08 03 51.3**	**+1.8**
PABE				IAML		08 04 01.4	
	comp=Z,42nm,0.3s						
SLIT	**Slitere, Latvi**	**3.44**	**28**	*e*P	**Pn**	**08 03 59.4**	**+1.5**
LUNU	**Lund**	**3.50**	**289**	*i* P	**Pn**	**08 03 59.4**	**+0.7**
DEL	**Delary**	**3.59**	**303**	*i* P	**Pn**	**08 04 00.3**	**+0.4**
BJUU	**Bjuv**	**3.86**	**295**	*i* P	**Pn**	**08 04 05.1**	**+1.5**
FABU	**Falkenberg**	**4.40**	**305**	*i* P	**Pn**	**08 04 12.6**	**+1.5**
BORU	**Boraas**	**4.73**	**312**	*e*P	**Pn**	**08 04 16.4**	**+0.8**
ONAU	**Onsala**	**4.98**	**307**	*i* P	**Pn**	**08 04 20.1**	**+1.2**
TJOU	**Tjoern**	**5.46**	**312**	*i* P	**Pn**	**08 04 27.8**	**+2.3**
MEF	**Metsahovi**	**6.24**	**24**	*e*P	**Pn**	**08 04 37.4**	**+1.0**
HFS	**Hagfors**	**6.29**	**334**	Pn	**Pn**	**08 04 38.6**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=150,slow=13,SNR=17						
HFS				Lg	Lg	08 06 18.2	
	comp=Z,1.2nm,0.3s,baz=142,slow=26,SNR=2.4						
	comp=Z,1.0nm,0.3s						
RAF	**Rauma**	**6.54**	**11**	*e*P	**Pn**	**08 04 41.8**	**+1.3**
AKASG	**Malin Array Be**	**7.21**	**119**	Pn	**Pn**	**08 04 48.3**	**-1.3**
	comp=Z,1.7nm,0.3s,baz=309,slow=12,SNR=7.0						
	comp=Z,0.3nm,0.3s						

FINES	**FINESS Array B**	**7.72**	**25**	Pn	**Pn**	**08 04 57.0**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=212,slow=13,SNR=25						
	comp=Z,1.4nm,0.3s						
NOA	**NORSAR Array B**	**7.73**	**329**	Pn	**Pn**	**08 04 57.7**	**+0.9**
	baz=111,slow=17,SNR=4.6						
	comp=Z,0.2nm,0.4s						
KEF	**Keuruu**	**8.10**	**19**	*e*P	**Pn**	**08 05 02.8**	**+0.9**
VAF	**Ylistaro**	**8.62**	**10**	*e*P	**Pn**	**08 05 12.0**	**+3.2**
JOF	**Joensuu**	**10.37**	**32**	*e*P	**Pn**	**08 05 32.2**	**-0.7**
ARCES	**ARCESS Array B**	**15.22**	**8**	Pn	**Pn**	**08 06 34.5**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=192,slow=14,SNR=14						
	comp=Z,0.3nm,0.3s						

NEIC 19 08:04:17.0±0.5, 18°.97N±0°.08×155°.17W±0°.06, h44km±9km, Error ellipse: s-maj=13.3km s-min=3.9km az=143.0
HVO 19 08:04:17.2±0.7, 18°.85N±0°.01×155°.09W±0°.04, h36km±10km, ML2.2/6, ML2.6/42(NEIC), Error ellipse: s-maj=5.9km s-min=1.7km az=82.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTC	**Hot Caves**	**0.48**	**323**		Pn	08 04 26.4	-1.1
HLP	**Hilina Pali**	**0.48**	**335**		Pn	08 04 26.6	-1.0
HLP					Sn	08 04 33.5	-1.4
HPO	**Honuapo**	**0.49**	**298**		Sn	08 04 33.4	-1.7
JCUZ	**Jacuzzi**	**0.53**	**359**		Pn	08 04 26.8	-1.6
JCUZ					Sn	08 04 33.8	-2.2
KNHH	**Kane Nui o Ham**	**0.53**	**352**		Pn	08 04 26.8	-1.6
STCH	**Steam Cracks**	**0.53**	**357**		Pn	08 04 26.8	-1.6
STCH					Sn	08 04 33.8	-2.4
STCH	**Steam Cracks**	**0.53**	**357**	IAML		08 04 34.0	
	comp=E,3.8nm,0.1s						
STCH				IAML		08 04 42.2	
	comp=N,101nm,2.0s						
PUH	**Pauahi**	**0.53**	**347**		Pn	08 04 26.8	-1.6
PUH	**Pauahi**	**0.53**	**347**		Sn	08 04 33.8	-2.4
PUH	**Pauahi**	**0.53**	**347**	IAML		08 04 31.6	
	comp=N,302nm,4.1s						
NPOC	**North of Pu'u**	**0.54**	**358**		Pn	08 04 26.9	-1.6
NPOC					Sn	08 04 34.7	-1.6
KKO	**Keanakako'i**	**0.57**	**343**		Pn	08 04 27.2	-1.7
KKO					Sn	08 04 35.2	-1.8
RIM	**Rim**	**0.57**	**342**		Pn	08 04 27.2	-1.8
SDHHI	**Sand Hill**	**0.57**	**340**		Pn	08 04 27.2	-1.8
BYL	**Byron's Ledge**	**0.58**	**344**		Pn	08 04 27.3	-1.8
BYL	**Byron's Ledge**	**0.58**	**344**	IAML		08 04 35.9	
	comp=E,227nm,2.8s						
BYL				IAML		08 04 50.8	
	comp=N,186nm,4.2s						
WRMHI	**West Rim**	**0.58**	**340**		Pn	08 04 27.3	-1.9
WRMHI					Sn	08 04 35.9	-1.7
HATHI	**Halema'uma'u T**	**0.59**	**344**		Pn	08 04 27.4	-1.9
OBL	**Observatory Le**	**0.59**	**342**		Pn	08 04 27.4	-1.8
SBLHI	**Steaming Bluff**	**0.59**	**344**		Pn	08 04 27.4	-1.9
UWB	**Uwekahuna Bluf**	**0.59**	**343**		Pn	08 04 27.4	-1.9
UWE	**Uwekahuna**	**0.60**	**342**		Pn	08 04 27.5	-1.9
UWE	**Uwekahuna**	**0.60**	**342**	IAML		08 04 43.4	
	comp=N,347nm,2.6s						
AIN	**Ainahou**	**0.62**	**326**		Pn	08 04 28.2	-1.5
AIN					Sn	08 04 36.3	-2.2
AIN	**Ainahou**	**0.62**	**326**	IAML		08 04 36.9	
	comp=E,684nm,0.2s						
AIN				IAML		08 04 37.2	
	comp=N,1μm,0.1s						
KHU	**Kahuku**	**0.63**	**308**		Pn	08 04 28.0	-1.9
KHU					Sn	08 04 36.1	-2.7
RSD	**Rainshed**	**0.63**	**344**	Pn	Pn	08 04 28.1	-1.7
RSD				IAML		08 04 38.2	
	comp=N,326nm,3.4s						
RSD				IAML		08 04 47.3	
	comp=E,221nm,4.0s						
MLH	**Mauna Loa**	**0.69**	**337**		Pn	08 04 29.1	-1.7
MLH					Sn	08 04 37.6	-2.8
MLH	**Mauna Loa**	**0.69**	**337**	IAML		08 04 42.4	
	comp=N,213nm,3.4s						
MLH				IAML		08 04 46.3	
	comp=E,220nm,3.5s						
MWH	**Mokuaweoweo**	**0.79**	**323**		Pn	08 04 30.2	-2.0
MWH				IAML		08 04 48.9	
	comp=N,272nm,3.0s						
MWH	**Mokuaweoweo**	**0.79**	**323**		Sn	08 04 40.5	-2.6
MWH	**Mokuaweoweo**	**0.79**	**323**	IAML		08 04 37.6	
	comp=E,344nm,2.7s						
MLOA	**Mauna Loa Obse**	**0.82**	**326**	Pn	Pn	08 04 30.6	-2.0
MLOA				IAML		08 04 55.7	
	comp=N,268nm,3.8s						
MLOA				IAML		08 05 02.4	
	comp=E,280nm,4.5s						
HMH	**Humu'ula Sheep**	**0.83**	**334**		Pn	08 04 31.0	-1.7
HMH				IAML		08 04 55.1	
	comp=E,184nm,3.7s						
HMH	**Humu'ula Sheep**	**0.83**	**334**		Sn	08 04 41.2	-2.7
HMH	**Humu'ula Sheep**	**0.83**	**334**	IAML		08 04 38.3	
	comp=N,360nm,3.7s						
ALEP	**Alea Permanent**	**0.86**	**323**		Pn	08 04 30.9	-2.2
ALEP					Sn	08 04 41.6	-3.1
POHA	**Pohakuloa**	**0.99**	**335**		Pn	08 04 32.5	-2.3
POHA	**Pohakuloa**	**0.99**	**335**	IAML		08 04 48.5	
	comp=N,178nm,3.7s						
POHA				IAML		08 04 53.3	
	comp=N,185nm,4.3s						
HUH	**Hualalai**	**1.08**	**320**		Pn	08 04 34.6	-1.5
HUH					Sn	08 04 47.7	-2.3
HPAH	**Hawaii Prepara**	**1.30**	**334**		Pn	08 04 36.5	-2.4
HPAH	**Hawaii Prepara**	**1.30**	**334**	IAML		08 05 03.9	
	comp=N,129nm,3.5s						

MEX 19 08:13:05.3±0.5, 14°.45N×92°.62W, h46km±18km, MD4.3
CATAC 19 08:13:05.0±0.5, 14°.N±3°×9°.3W±°, h31km±3km, M4.0/20, MLv4.0/20, Error ellipse: s-maj=6.6km s-min=3.2km az=41.0, confirmed
GCG 19 08:13:06.2±2.2, 14°.58N×92°.46W, h44km±28km, MD4.2, ML3.9, MW3.4
ISC 19 08:13:03.3±1.3, 14°.40N±0°.05×92°.59W±0°.03, h31km±12km, n68, σ2°.08/97, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.59**	**32**	*i* P	**Pn**	**08 13 16.2**	**+0.6**
THIG				*e*S	**Sb**	**08 13 22.7**	**-0.9**
THIG		**0.59**	**32**	*i* P	**Pn**	**08 13 16.1**	**+0.6**
PATR	**El Naranjo**	**0.79**	**26**	*e*P	**Pn**	**08 13 17.9**	**-0.7**
PATR				*e*S	**Sb**	**08 13 28.3**	**-1.0**
CHUJ	**Union Juarez**	**0.83**	**34**	*e*P	**Pn**	**08 13 18.9**	**-0.2**
CHUJ				*e*S	**Sb**	**08 13 29.5**	**-0.9**
RTAL	**Retalhuleu**	**0.88**	**82**	*e*P	**Pb**	**08 13 20.6**	**+0.5**
RTAL				*e*S	**Sn**	**08 13 32.8**	**+1.6**
RTAL	**Retalhuleu**	**0.88**	**82**	P	**Pb**	**08 13 20.6**	**+0.5**
PAVE	**Pavencul**	**0.88**	**27**	*e*P	**Pn**	**08 13 19.5**	**-0.2**
PAVE				*e*S	**Sb**	**08 13 30.6**	**-1.2**
QUEO	**Labor Ovalle**	**1.14**	**66**	*e*P	**Pn**	**08 13 23.7**	**+0.3**
QUEO				*e*S	**Sn**	**08 13 38.1**	**0.0**
STG2	**El Palmar, Qui**	**1.18**	**88**	*i* P	**Pn**	**08 13 21.3**	**-2.5**
STG2				*e*S	**Sn**	**08 13 33.4**	**-5.4**
STG8	**El Palmar, Qui**	**1.20**	**88**	*i* P	**Pn**	**08 13 21.9**	**-2.3**
STG8				*e*S	**Sn**	**08 13 34.5**	**-5.1**
STG8	**El Palmar, Qui**	**1.21**	**90**	*i* P	**Pn**	**08 13 21.8**	**-2.3**
SOKI	**Kika Raxquin**	**1.22**	**70**	*e*P	**Pn**	**08 13 25.6**	**+1.0**
SOKI				*e*S	**Sn**	**08 13 40.9**	**+0.6**
SOKI				IAML		08 13 45.2	
	comp=N,2μm,0.6s						
HUEH	**Huehuetenango**	**1.39**	**49**	*e*P	**Pn**	**08 13 28.1**	**+1.3**
HUEH				*e*S	**Sn**	**08 13 44.8**	**+0.6**
HUEH	**Huehuetenango**	**1.39**	**49**	*i* P	**Pn**	**08 13 28.1**	**+1.3**
HUEH				*i* S	**Sn**	**08 13 43.8**	**-0.4**
HUEH				IAML		08 13 47.9	
	comp=N,5μm,0.6s						
HUEH	**Huehuetenango**	**1.39**	**49**	P	**Pn**	**08 13 28.0**	**+1.3**
QUIS	**Sacapulas**	**1.70**	**58**	*e*P	**Pn**	**08 13 33.1**	**+2.2**
QUIS				*e*S	**Sn**	**08 13 54.1**	**+2.4**
ESSG	**Sabana Grande**	**1.71**	**90**	*e*P	**Pn**	**08 13 31.8**	**+0.8**
ESSG				IAML		08 13 51.6	
	comp=N,886nm,0.2s						
CCIG	**Comitan**	**1.92**	**13**	*e*P	**Pn**	**08 13 35.7**	**+1.7**
CCIG				*e*S	**Sn**	**08 13 56.0**	**-1.2**
CCIG	**Comitan**	**1.92**	**13**	*e*P	**Pn**	**08 13 35.7**	**+1.7**
CCIG				IAML		08 14 03.9	
	comp=E,921nm,0.4s						
CCIG	**Comitan**	**1.92**	**13**	P	**Pn**	**08 13 35.7**	**+1.7**
CCIG	**Comitan**	**1.92**	**13**	S	**Sn**	**08 13 59.2**	**+2.0**
APG	**El Apazote**	**2.14**	**74**	*e*P	**Pn**	**08 13 38.2**	**+1.0**

PCG5	**San Vicente Pa**	**2.15**	**95**	*e*P	**Pn**	**08 13 35.1**	**-2.1**
PCG5				*e*S	**Sn**	**08 13 56.6**	**-6.4**
TGIG		**2.42**	**348**	*e*P	**Pn**	**08 13 40.8**	**+0.1**
TGIG				*e*S	**Sn**	**08 14 07.4**	**-1.9**
TGIG		**2.42**	**348**	*e*P	**Pn**	**08 13 40.7**	**-0.1**
TGIG				*i* S	**Sn**	**08 14 07.2**	**-2.1**
FAME	**Alcaldia de Sa**	**2.56**	**102**	P	**Pn**	**08 13 44.0**	**+1.4**
FAME	**Alcaldia de Sa**	**2.56**	**102**	S	**Sn**	**08 14 12.3**	**-0.5**
SLOZ	**Alcaldia de Sa**	**2.75**	**97**	S	**Sn**	**08 14 17.5**	**0.0**
LOAL	**Lomas de Alarc**	**2.76**	**98**	P	**Pn**	**08 13 48.1**	**+2.7**
LOAL	**Lomas de Alarc**	**2.76**	**98**	S	**Sn**	**08 14 19.0**	**+1.3**
NUBE	**Las Nubes**	**2.77**	**100**	*e*P	**Pn**	**08 13 47.4**	**+1.7**
NUBE	**Las Nubes**	**2.77**	**100**	S	**Sn**	**08 14 18.5**	**+0.3**
NUBE	**Las Nubes**	**2.77**	**100**	P	**Pn**	**08 13 47.2**	**+1.5**
JUAM	**Asuncion Mita**	**2.80**	**91**	*e*S	**Sn**	**08 14 22.1**	**+3.4**
CEVE	**Cerro Verde**	**2.94**	**101**	P	**Pn**	**08 13 50.4**	**+2.4**
CEVE	**Cerro Verde**	**2.94**	**101**	S	**Sn**	**08 14 24.0**	**+1.6**
UNIC	**Universidad Ca**	**2.98**	**98**	P	**Pn**	**08 13 51.4**	**+2.9**
MTO3	**Montecristo**	**3.13**	**90**	P	**Pn**	**08 13 52.2**	**+1.5**
JAYA	**Jayaque - finc**	**3.14**	**103**	*e*P	**Pn**	**08 13 52.4**	**+1.7**
JAYA	**Jayaque - finc**	**3.14**	**103**	S	**Sn**	**08 14 29.6**	**+2.3**
JAYA	**Jayaque - finc**	**3.14**	**103**	P	**Pn**	**08 13 52.5**	**+1.7**
ESQI	**Esquipulas**	**3.15**	**87**	P	**Pn**	**08 13 53.9**	**+3.0**
PMON	**Piamonte**	**3.25**	**102**	S	**Sn**	**08 14 31.9**	**+1.9**
LALI	**Alcalda de L**	**3.30**	**106**	*e*P	**Pn**	**08 13 55.2**	**+2.3**
LALI	**Alcalda de L**	**3.30**	**106**	S	**Sn**	**08 14 32.7**	**+1.6**
LALI	**Alcalda de L**	**3.30**	**106**	P	**Pn**	**08 13 55.1**	**+2.3**
UEES	**Universidad Ev**	**3.32**	**101**	P	**Pn**	**08 13 55.2**	**+2.0**
PAVA	**Las Pavas**	**3.61**	**100**	P	**Pn**	**08 13 59.2**	**+2.0**
PETF	**Flores**	**3.62**	**46**	*e*P	**Pn**	**08 13 57.9**	**+0.6**
PETF				*e*S	**Sn**	**08 14 35.7**	**-3.3**
PETF	**Flores**	**3.62**	**46**	P	**Pn**	**08 13 57.7**	**+0.5**
PETF	**Flores**	**3.62**	**46**	P	**Pn**	**08 13 58.1**	**+0.8**
HUIG	**Huatulco**	**3.66**	**292**	*e*P	**Pn**	**08 13 57.9**	**+0.2**
HUIG				*e*S	**Sn**	**08 14 36.0**	**-3.8**
TECO	**Alcaldia de Te**	**3.80**	**103**	S	**Sn**	**08 14 45.4**	**+2.0**
TECO	**Alcaldia de Te**	**3.80**	**103**	P	**Pn**	**08 14 01.6**	**+1.9**
SCLA	**Alcaldia de Sa**	**3.81**	**100**	P	**Pn**	**08 14 01.5**	**+1.6**
SCLA	**Alcaldia de Sa**	**3.81**	**100**	S	**Sn**	**08 14 47.7**	**+3.9**
NEUV	**Arroyo Zacate**	**4.51**	**317**	*e*P	**Pn**	**08 14 10.1**	**+0.6**
NEUV				*e*S	**Sn**	**08 15 00.7**	**-0.2**
PEIG	**Puerto Escondi**	**4.67**	**290**	*e*P	**Pn**	**08 14 13.0**	**+1.2**
PEIG				*e*S	**Sn**	**08 15 02.6**	**-2.4**
SCIG	**Sabancuy**	**4.73**	**16**	*e*P	**Pn**	**08 14 13.3**	**+0.7**
SCIG				*e*S	**Sn**	**08 15 01.2**	**-5.2**
VHO	**Vista Hermosa**	**4.79**	**304**	*e*P	**Pn**	**08 14 16.9**	**+3.4**
VHO				*e*S	**Sn**	**08 15 09.2**	**+1.1**
YOIG	**Yosondua**	**5.36**	**298**	*e*P	**Pn**	**08 14 24.3**	**+2.9**
YOIG				*e*S	**Sn**	**08 15 20.6**	**-1.7**
TOIG	**Toxpalan**	**5.65**	**311**	*e*P	**Pn**	**08 14 26.6**	**+1.3**
TOIG				*e*S	**Sn**	**08 15 29.3**	**+0.1**
PNIG	**Pinotepa**	**5.69**	**291**	*e*P	**Pn**	**08 14 27.5**	**+1.7**
PNIG				*e*S	**Sn**	**08 15 29.4**	**-0.7**
TXIG	**Tlaxiaco**	**5.73**	**300**	*e*P	**Pn**	**08 14 27.4**	**+0.9**
TXIG				*e*S	**Sn**	**08 15 30.1**	**-1.3**
HLIG	**Huajuapan de L**	**6.06**	**305**	*e*P	**Pn**	**08 14 31.5**	**+0.6**
JAUV	**Jalcomulco**	**6.37**	**321**	*e*P	**Pn**	**08 14 34.0**	**-1.2**
JAUV				*e*S	**Sn**	**08 15 42.5**	**-4.4**
TLIG	**Tlapa**	**6.55**	**299**	*e*P	**Pn**	**08 14 39.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEM	**Giv'at Ha'Em**	**0.09**	**117**	P	Pg	08 18 51.8	+0.6
GEM	**Giv'at Ha'Em**	**0.09**	**117**	S	Sg	08 18 53.9	+1.5
NATI	**Neve Ativ**	**0.14**	**87**	P	Pg	08 18 52.9	+0.7
NATI	**Neve Ativ**	**0.14**	**87**	S	Sg	08 18 55.4	+1.4
MMC7	**Mount Meron ar**	**0.27**	**212**	P	Pb	08 18 56.5	-0.7
MMA0B	**Mount Meron ar**	**0.27**	**210**	P	Pg	08 18 55.6	+1.0
MMA0B	**Mount Meron ar**	**0.27**	**210**	S	Sg	08 19 00.2	+2.1

RHSSO ***19*** *08:56:11.2±0.6, 43.°04N×17.°41E, h8km±5km, ML3.6/5*
PDG ***19*** *08:56:11.5±0.3, 42.°94N×17.°43E, h20km, MD3.9/10, ML3.8/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
BEO ***19*** *08:56:12.2±0.3, 43.°13N×17.°48E, h3km±2km, ML3.5/25*
PRU ***19*** *08:56:13.7, 43.°16N×17.°73E, h10km*
IDC ***19*** *08:56:13.6±3.3, 43.°34N×17.°54E, h0km, mb3.8/1, mbtmp3.8/5, ML3.3/4, Error ellipse: s-maj=40.9km s-min=13.7km az=18.0*

ISC 19 08:56:11.4±1.0, 43.°07N±0.°02×17.°44E±0.°02, h8km±8km, n126, σ1s06/217, 30C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.27**	**136**	*i* Pg	**Pg**	**08 56 16.8**	**0.0**
STON				Sg	**Sg**	**08 56 21.3**	**+1.0**
STON	**Ston**	**0.27**	**136**	*e*Pg	**Pg**	**08 56 16.6**	**-0.1**
STON				*e*Sg	**Sg**	**08 56 21.2**	**+0.9**
MAKA	**Makarska**	**0.38**	**306**	*i* Pg	**Pg**	**08 56 18.6**	**-0.3**
MAKA				Sg	**Sg**	**08 56 23.9**	**0.0**
RICI	**Ricice**	**0.49**	**332**	*i* Pg	**Pg**	**08 56 20.1**	**-0.8**
RICI				Sg	**Sg**	**08 56 27.2**	**0.0**
LSTV	**Lastovo**	**0.50**	**234**	*i* Pg	**Pg**	**08 56 20.4**	**-0.8**
LSTV				Sg	**Sg**	**08 56 27.9**	**+0.2**
DBRK	**Dubrovnik**	**0.65**	**127**	*e*Pg	**Pg**	**08 56 24.6**	**+0.7**
DBRK				Sg	**Sb**	**08 56 34.4**	**+0.1**
HVAR	**Hvar**	**0.74**	**279**	*e*Pg	**Pg**	**08 56 24.6**	**-1.1**
HVAR				Sg	**Sg**	**08 56 35.9**	**+0.7**
TREB	**Trebinje**	**0.75**	**117**	⇑*i*Pg	**Pg**	**08 56 24.7**	**-1.2**
TREB				*e*Sg	**Sb**	**08 56 36.8**	**-0.4**
TREB	**Trebinje**	**0.75**	**117**	*e*Pg	**Pg**	**08 56 25.0**	**-0.9**
TREB				*e*Sg	**Sb**	**08 56 37.8**	**+0.6**
BRY	**Bratogost**	**0.82**	**101**	⇑*i*Pg	**Pg**	**08 56 25.9**	**-1.3**
BRY				*i* Sg	**Sb**	**08 56 39.9**	**+0.6**
KLINJ	**Klinje**	**0.84**	**82**	*e*Pg	**Pg**	**08 56 26.1**	**-1.5**
KLINJ				*e*Sg	**Sb**	**08 56 39.5**	**-0.4**
UPM	**Unac-Piva**	**1.08**	**82**	⇓*i*Pg	**Pg**	**08 56 32.3**	**+0.2**
UPM				*i* Sg	**Sn**	**08 56 49.5**	**+1.2**
NKME	**Niksic**	**1.15**	**105**	⇓*i*Pg	**Pg**	**08 56 33.0**	**-0.5**
NKME				*i* Sg	**Sn**	**08 56 50.1**	**+0.3**
KIJV	**Kijevo**	**1.21**	**322**	*e*Pg	**Pg**	**08 56 33.9**	**-0.7**
KIJV				Sg	**Sb**	**08 56 50.6**	**+0.3**
BUM	**Brajici-Budva**	**1.31**	**125**	⇑*i*Pg	**Pn**	**08 56 35.2**	**-1.0**
BUM				*i* Sg	**Sb**	**08 56 53.1**	**-0.4**
ZIRJ	**Zirje**	**1.44**	**295**	*e*Pg	**Pn**	**08 56 37.7**	**-0.2**
ZIRJ				Sg	**Sg**	**08 56 57.6**	**-0.1**
PLE	**Pljevlja**	**1.45**	**79**	⇑*i*Pg	**Pn**	**08 56 38.1**	**0.0**
PLE				*i* Sg	**Sg**	**08 56 58.3**	**+0.4**
PDG	**Podgorica**	**1.48**	**115**	⇑P	**Pn**	**08 56 38.6**	**+0.3**
PDG				⇑S	**Sg**	**08 56 59.4**	**+0.5**
PDG	**Podgorica**	**1.48**	**115**	*e*Pg	**Pn**	**08 56 38.8**	**+0.4**
PDG				*e*Sg	**Sg**	**08 56 59.2**	**+0.3**
PDG	**Podgorica**	**1.48**	**115**	⇓*i*Pg	**Pn**	**08 56 37.6**	**-0.8**
PDG				*i* Sg	**Sn**	**08 56 57.6**	**-0.3**
MORI	**Morici**	**1.50**	**303**	*i* Pg	**Pb**	**08 56 39.4**	**-0.1**
MORI				Sg	**Sg**	**08 56 59.5**	**-0.1**
RUDO	**Rudo**	**1.51**	**68**	*e*Pn	**Pn**	**08 56 38.3**	**-0.6**
RUDO				*e*Sn	**Sg**	**08 56 59.9**	**-0.1**
RUDO	**Rudo**	**1.51**	**68**	*e*Pn	**Pn**	**08 56 38.2**	**-0.6**
KOME	**Kolasin**	**1.54**	**97**	*e*Pn	**Pg**	**08 56 41.0**	**+0.1**
KOME				*e*Sg	**Sg**	**08 57 02.5**	**+1.7**
KOME	**Kolasin**	**1.54**	**97**	⇑*i*Pg	**Pg**	**08 56 40.8**	**-0.1**
KOME				*i* Sg	**Sn**	**08 56 59.6**	**+0.1**
DRME	**Dracevica, Mon**	**1.56**	**124**	*e*Pg	**Pn**	**08 56 40.1**	**+0.6**
DRME				*e*Sg	**Sg**	**08 57 03.1**	**+1.7**
DRME	**Dracevica, Mon**	**1.56**	**124**	⇑*i*Pg	**Pn**	**08 56 37.8**	**-1.7**
DRME				*i* Sg	**Sn**	**08 56 58.9**	**-0.9**
BBLS	**Lazi&#263i**	**1.64**	**60**	*e*Pg	**Pb**	**08 56 41.5**	**-0.4**
BBLS				*e*Sg	**Sg**	**08 57 03.6**	**-0.4**
BLY	**Banja Luka**	**1.69**	**354**	*e*Pn	**Pn**	**08 56 41.5**	**+0.1**
BLY				*e*Sn	**Sn**	**08 57 03.6**	**+0.3**
BLY	**Banja Luka**	**1.69**	**354**	⇑P	**Pb**	**08 56 42.5**	**-0.4**
BLY				⇑S	**Sb**	**08 57 04.3**	**0.0**
BLY	**Banja Luka**	**1.69**	**354**	*e*Pn	**Pb**	**08 56 42.4**	**-0.5**
BLY				*e*Sg	**Sg**	**08 57 05.3**	**-0.6**
ULC	**Ulcinj**	**1.73**	**129**	⇓*i*Pn	**Pn**	**08 56 41.9**	**+0.1**
ULC				*i* Sn	**Sn**	**08 57 02.7**	**-1.4**
IVA	**Berane**	**1.81**	**95**	⇑*i*Pn	**Pb**	**08 56 44.7**	**-0.2**
IVA				*i* Sn	**Sn**	**08 57 06.6**	**+0.4**
SJES	**Sjenica**	**1.86**	**83**	*e*Pn	**Pb**	**08 56 45.1**	**-0.7**
SJES				*e*Sg	**Sb**	**08 57 10.0**	**+0.7**
UDBI	**Udbina**	**1.90**	**321**	*i* Pn	**Pb**	**08 56 46.0**	**-0.5**
UDBI				Sn	**Sg**	**08 57 11.5**	**-1.0**
PVY	**Plav**	**1.91**	**103**	⇑*i*Pn	**Pb**	**08 56 46.3**	**-0.3**
PVY				*i* Sn	**Sn**	**08 57 08.2**	**-0.5**
DUGI	**Dugi Otok**	**1.97**	**299**	*e*Pn	**Pn**	**08 56 46.1**	**+1.0**
DUGI				Sn	**Sb**	**08 57 12.0**	**-0.3**
IVAS	**Ivanjica**	**2.04**	**75**	*e*Pn	**Pn**	**08 56 46.6**	**+0.4**
IVAS				*e*Sn	**Sb**	**08 57 13.4**	**-1.0**
TEKS	**Tekeris**	**2.12**	**45**	*e*Pn	**Pn**	**08 56 47.2**	**0.0**
TEKS				*e*Sn	**Sn**	**08 57 13.2**	**-0.5**
DIVS	**Divibare**	**2.12**	**60**	*e*Pn	**Pn**	**08 56 47.6**	**+0.3**
DIVS				*e*Sn	**Sn**	**08 57 14.7**	**+0.8**
VIRC	**Vir**	**2.12**	**306**	*e*Pn	**Pn**	**08 56 48.5**	**+1.3**
VIRC				Sn	**Sb**	**08 57 15.8**	**-0.9**
PLIT	**Plitvice**	**2.24**	**325**	*e*Pn	**Pn**	**08 56 50.5**	**+1.6**
PLIT				Sn	**Sb**	**08 57 20.0**	**-0.1**
NVLJ	**Novalja**	**2.39**	**310**	*e*Pn	**Pn**	**08 56 52.0**	**+1.1**
NVLJ				Sn	**Sb**	**08 57 23.1**	**-1.2**
TRUS	**Trudelj**	**2.44**	**61**	*e*Pn	**Pn**	**08 56 52.0**	**+0.3**
TRUS				*e*Sn	**Sn**	**08 57 21.9**	**+0.2**
MATE	**Matera**	**2.48**	**193**	⇑P	**Pn**	**08 56 50.0**	**-2.1**
MATE				⇑S	**Sn**	**08 57 19.7**	**-2.8**
GRUS	**Gruza**	**2.52**	**70**	*e*Pn	**Pn**	**08 56 53.2**	**+0.5**
GRUS				*e*Sn	**Sn**	**08 57 25.0**	**+1.4**
GOCS	**Kraljevo Serbi**	**2.55**	**78**	*e*Pn	**Pn**	**08 56 53.8**	**+0.6**
GOCS				*e*Sn	**Sn**	**08 57 24.8**	**+0.2**
RABC	**Rab**	**2.56**	**312**	*e*Pn	**Pn**	**08 56 53.9**	**+0.7**
RABC				Sn	**Sn**	**08 57 26.7**	**+2.2**
MOSL	**Moslavina**	**2.60**	**349**	*i* Pn	**Pn**	**08 56 54.2**	**+0.4**
MOSL				Sn	**Sn**	**08 57 26.9**	**+1.4**
SELS	**Selova**	**2.69**	**85**	*e*Pn	**Pn**	**08 56 56.0**	**+0.9**
SELS				*e*Sn	**Sn**	**08 57 29.7**	**+1.7**
FRGS	**Fruska Gora**	**2.70**	**38**	*e*Pn	**Pn**	**08 56 54.8**	**-0.4**
FRGS				*e*Sn	**Sn**	**08 57 28.3**	**+0.2**
AVAS	**Avala Beograd**	**2.75**	**53**	*e*Pn	**Pn**	**08 56 55.6**	**-0.3**
AVAS				*e*Sn	**Sn**	**08 57 28.2**	**-1.2**
BOJS	**Bojanci**	**2.90**	**328**	*e*Pn	**Pn**	**08 56 59.1**	**+1.1**
BOJS	**Bojanci**	**2.90**	**328**	*i* Pn	**Pn**	**08 56 58.9**	**+0.9**
BOJS				*e*Sn	**Sn**	**08 57 35.3**	**+2.2**
OZLJ	**Ozalj**	**2.92**	**332**	*e*Pn	**Pn**	**08 57 00.1**	**+1.9**
OZLJ				Sn	**Sn**	**08 57 35.7**	**+2.3**
PTJ	**Puntijarka**	**3.03**	**340**	*i* Pn	**Pn**	**08 57 00.5**	**+0.7**
PTJ				Sn	**Sn**	**08 57 38.0**	**+1.6**
AQU	**L'Aquila**	**3.06**	**258**	*e*Pn	**Pn**	**08 57 00.2**	**0.0**
AQU				*e*Sn	**Sn**	**08 57 35.0**	**-2.1**
RIY	**Rijeka**	**3.10**	**318**	*e*Pg	**Pb**	**08 57 07.8**	**+0.9**
RIY				Sn	**Sn**	**08 57 39.7**	**+1.7**
RIY	**Rijeka**	**3.10**	**318**	*e*Pn	**Pn**	**08 57 02.3**	**+1.6**
RIY				*e*Sn	**Sn**	**08 57 39.3**	**+1.2**
KALN	**Kalnik**	**3.15**	**347**	*i* Pn	**Pn**	**08 57 01.6**	**+0.3**
KALN				Sn	**Sn**	**08 57 40.6**	**+1.5**
BOVS	**Bovan**	**3.16**	**78**	⇑P	**Pn**	**08 57 02.0**	**+0.5**
BOVS				⇑S	**Sn**	**08 57 41.0**	**+1.6**
BOVS	**Bovan**	**3.16**	**78**	*e*Pn	**Pn**	**08 57 01.9**	**+0.4**
BOVS				*e*Sn	**Sn**	**08 57 40.1**	**+0.7**
OHR	**Ohrid**	**3.17**	**127**	*i* Pn	**Pn**	**08 57 03.6**	**+1.9**
BARS	**Barje**	**3.22**	**93**	*e*Pn	**Pn**	**08 57 03.3**	**+1.0**
BARS				*e*Sn	**Sn**	**08 57 41.0**	**+0.1**
LOBO	**Lobor**	**3.24**	**343**	*i* Pn	**Pn**	**08 57 03.5**	**+0.9**
LOBO				Sn	**Sn**	**08 57 43.6**	**+2.2**
MORH	**Mrgy, Hungar**	**3.26**	**15**	⇑*i*Pn	**Pn**	**08 57 02.5**	**-0.4**
MORH				*e*Sn	**Sn**	**08 57 41.5**	**-0.5**
MORH	**Mrgy, Hungar**	**3.26**	**15**	⇑P	**Pn**	**08 57 02.7**	**-0.2**
KUBS	**Kucevo**	**3.35**	**65**	*e*Pn	**Pn**	**08 57 02.7**	**-1.4**
KUBS				*e*Sn	**Sn**	**08 57 43.9**	**-0.2**
BEHE	**Becsehely**	**3.44**	**352**	⇑*i*Pn	**Pn**	**08 57 05.9**	**+0.6**
BEHE				*e*Sn	**Sn**	**08 57 46.3**	**0.0**
CEY	**Cerknica**	**3.44**	**322**	*e*Pn	**Pn**	**08 57 06.2**	**+0.8**
VRSS	**Vrsac**	**3.47**	**52**	*e*Pn	**Pn**	**08 57 05.6**	**-0.2**
VRSS				*e*Sn	**Sn**	**08 57 46.0**	**-1.1**
BORS2	**Bor- Borsko je**	**3.48**	**71**	*e*Pn	**Pn**	**08 57 05.2**	**-0.7**
BORS2				*e*Sn	**Sn**	**08 57 47.4**	**+0.1**
SKDS	**Skadanscina**	**3.50**	**316**	*e*Pn	**Pn**	**08 57 07.3**	**+1.1**
MDVR	**Moldovita**	**3.53**	**59**	⇑P	**Pn**	**08 57 07.0**	**+0.4**
ZAGS	**Zajecar**	**3.57**	**76**	*e*Pn	**Pn**	**08 57 08.0**	**+0.9**
ZAGS				*e*Sn	**Sn**	**08 57 50.0**	**+0.6**
LJU	**Ljubljana**	**3.64**	**326**	*e*Pn	**Pn**	**08 57 08.7**	**+0.6**
BOSS	**Bosilegrad**	**3.75**	**97**	*e*Pn	**Pn**	**08 57 10.6**	**+1.0**
BOSS				*e*Sn	**Sn**	**08 57 54.5**	**+0.5**
ZAPS	**Zavoj**	**3.80**	**85**	*e*Pn	**Pn**	**08 57 11.3**	**+0.9**
ZAPS				*e*Sn	**Sn**	**08 57 55.5**	**+0.2**
BLKB	**Belogradchik**	**3.86**	**80**	⇑P	**Pn**	**08 57 12.1**	**+1.0**
TIP	**Timpagrande**	**3.92**	**188**	⇑P	**Pn**	**08 57 11.2**	**-0.8**
BZS	**Buzias**	**3.93**	**48**	⇑P	**Pn**	**08 57 12.2**	**0.0**
SOKA	**Soboth**	**4.00**	**335**	*i* Pn	**Pn**	**08 57 13.6**	**+0.5**
SOKA	18nm,0.2s,SNR=18						
				i Sn	**Sn**	**08 58 00.2**	**0.0**
SOKA	19nm,0.4s						
OBKA	**Obir**	**4.01**	**330**	*i* Pn	**Pn**	**08 57 14.7**	**+1.4**
OBKA	15nm,0.2s						
				i Sn	**Sn**	**08 58 00.9**	**+0.3**
OBKA	19nm,0.3s						
HERR	**Herculane**	**4.02**	**61**	⇑P	**Pn**	**08 57 14.0**	**+0.7**
VAY	**Valandovo**	**4.19**	**113**	*i* Pn	**Pn**	**08 57 16.0**	**+0.4**
VTS	**Vitosha**	**4.28**	**94**	*e*Pn	**Pn**	**08 57 18.3**	**+1.2**
SURR	**Surduc**	**4.30**	**50**	⇑P	**Pn**	**08 57 16.9**	**-0.2**
SIRR	**Siria**	**4.39**	**42**	⇓P	**Pn**	**08 57 18.4**	**-0.1**
SIRR	**Siria**	**4.39**	**42**	*e*Pn	**Pn**	**08 57 17.6**	**-0.9**
ARSA	**Arzberg**	**4.40**	**343**	*i* Pn	**Pn**	**08 57 19.3**	**+0.7**
ARSA	72nm,0.3s,SNR=25						
				i Sn	**Sn**	**08 58 10.7**	**+0.6**
ARSA	23nm,0.4s						
ARSA	**Arzberg**	**4.40**	**343**	*e*Pn	**Pn**	**08 57 19.5**	**+0.9**
GZR	**Gura Zlata**	**4.48**	**57**	⇑P	**Pn**	**08 57 19.9**	**+0.2**
RONA	**Rosalia, Austr**	**4.71**	**351**	*i* Pn	**Pn**	**08 57 23.4**	**+0.6**
RONA	12nm,0.2s,SNR=28						
				i Sn	**Sn**	**08 58 16.7**	**-0.8**
RONA	19nm,0.4s						
KBA	**Koelnbreinsper**	**4.95**	**326**	*i* Pn	**Pn**	**08 57 27.0**	**+0.7**
KBA	3.5nm,0.3s						
				i Sn	**Sn**	**08 58 23.9**	**0.0**
KBA	11nm,0.4s						
CONA	**Conrad Observa**	**4.99**	**348**	*i* Pn	**Pn**	**08 57 27.7**	**+0.9**
CONA	9.0nm,0.2s,SNR=13						
				i Sn	**Sn**	**08 58 23.6**	**-1.0**
CONA	15nm,0.4s						
LOT	**Lotru**	**5.13**	**60**	⇑P	**Pn**	**08 57 29.7**	**+1.0**
PSZ	**Piszkesteto**	**5.15**	**19**	⇓P	**Pn**	**08 57 28.9**	**0.0**
MOA	**Molln**	**5.28**	**336**	*i* Pn	**Pn**	**08 57 32.4**	**+1.8**
MOA	15nm,0.2s,SNR=33						
				*e*Sn	**Sn**	**08 58 32.4**	**+0.7**
MOA	25nm,0.3s						
MOA	**Molln**	**5.28**	**336**	*e*Pn	**Pn**	**08 57 32.5**	**+1.8**
MODS	**Modra-Piesok**	**5.31**	**359**	*e*PN	**Pn**	**08 57 32.1**	**+1.0**
MODS				*e*SN	**Sn**	**08 58 30.3**	**-2.2**
BIOA	**Bad Ischl, Aus**	**5.35**	**331**	*i* Pn	**Pn**	**08 57 32.9**	**+1.3**
BIOA	13nm,0.3s,SNR=7.7						
				i Sn	**Sn**	**08 58 36.4**	**+3.0**
BIOA	25nm,0.5s						
MARR	**Marisel-Cluj**	**5.41**	**46**	⇑P	**Pn**	**08 57 34.3**	**+1.7**
LESA	**Schwarzleotal**	**5.51**	**324**	*e*Pn	**Pn**	**08 57 35.8**	**+2.0**
LESA	5.7nm,0.2s						
				i Sn	**Sn**	**08 58 36.2**	**-1.2**
LESA	16nm,0.5s						
JAVC	**Velka Javorina**	**5.80**	**1**	*e*PN	**Pn**	**08 57 39.2**	**+1.4**
KECS	**Kecovo**	**5.82**	**20**	*e*PN	**Pn**	**08 57 38.7**	**+0.6**
KECS				*e*SN	**Sn**	**08 58 43.5**	**-1.5**
WTTA	**Wattenberg**	**5.87**	**318**	*i* Pn	**Pn**	**08 57 39.5**	**+0.6**
WTTA	6.0nm,0.3s						
				*e*Sn	**Sn**	**08 58 46.9**	**+0.4**
WTTA	16nm,0.3s						
WATA	**Walderalm**	**5.95**	**318**	*i* Pn	**Pn**	**08 57 40.7**	**+0.7**
WATA	5.2nm,0.2s						
				i Sn	**Sn**	**08 58 49.2**	**+0.8**
WATA	8.5nm,0.3s						
VOIR		**5.96**	**64**	⇓P	**Pn**	**08 57 41.5**	**+1.5**
KRUC	**Moravsky**	**6.04**	**353**	*e*PN	**Pn**	**08 57 41.5**	**+0.4**
KRUC				*e*SN	**Sn**	**08 58 48.2**	**-2.3**
SQTA	**Sankt Quirin**	**6.06**	**315**	*i* Pn	**Pn**	**08 57 42.6**	**+1.2**
SQTA	3.0nm,0.2s						
				i Sn	**Sn**	**08 58 51.1**	**+0.1**
SQTA	20nm,0.6s						
CKRC	**Cesky Krumlov**	**6.16**	**340**	*e*PN	**Pn**	**08 57 43.7**	**+1.0**
CKRC				*e*SN	**Sn**	**08 58 51.4**	**-1.9**
FETA	**Feichten**	**6.19**	**312**	*i* Pn	**Pn**	**08 57 45.2**	**+2.0**
	1.4nm,0.2s						
MOTA	**Moosalm**	**6.19**	**316**	*i* Pn	**Pn**	**08 57 44.0**	**+0.7**
MOTA	1.3nm,0.2s						
				i Sn	**Sn**	**08 58 53.9**	**-0.5**
MOTA	14nm,0.6s						
LANS	**Liptovska Anna**	**6.25**	**12**	*e*PN	**Pn**	**08 57 43.2**	**-0.8**
VRAC	**Vranov**	**6.27**	**355**	*e*PN	**Pn**	**08 57 44.5**	**+0.2**
VRAC				*e*SN	**Sn**	**08 58 53.9**	**-2.2**
MAUC	**Maruska**	**6.31**	**2**	*e*PN	**Pn**	**08 57 45.8**	**+1.0**
GERES	**GERESS Array B**	**6.34**	**337**	Pn	**Pn**	**08 57 46.4**	**+1.1**
	0.3nm,0.3s,baz=154,slow=14,SNR=23						
GERES				Sn	**Sn**	**08 58 56.3**	**-1.7**
	0.3nm,0.3s,baz=140,slow=23,SNR=14						
	2.8nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.53**	**307**	Pn	**Pn**	**08 57 50.9**	**+2.9**
	1.0nm,0.3s,baz=119,slow=18,SNR=3.4						
	2.1nm,0.3s						
MLR	**Muntele Rosu**	**6.57**	**65**	Pn	**Pn**	**08 57 49.6**	**+1.1**
	0.4nm,0.3s,baz=138,slow=16,SNR=1.7						
MLR				Sn	**Sn**	**08 59 04.6**	**+1.0**
	0.6nm,0.3s,baz=294,slow=20,SNR=2.5						
	1.2nm,0.3s						
MLR	**Muntele Rosu**	**6.57**	**65**	⇑P	**Pn**	**08 57 50.0**	**+1.6**
KHC	**Kasperske Hory**	**6.63**	**337**	*e*PN	**Pn**	**08 57 50.4**	**+1.1**
KHC				*e*SN	**Sn**	**08 59 03.7**	**-1.4**
MORC	**Moravsky Berou**	**6.71**	**1**	⇓P	**Pn**	**08 57 51.5**	**+1.1**
ZVC	**Zvikov**	**6.76**	**342**	*e*SN	**Sn**	**08 59 05.3**	**-2.9**
BURAR	**Bucovina Array**	**7.12**	**48**	⇑P	**Pn**	**08 57 56.7**	**+0.7**
FINES	**FINESS Array B**	**19.12**	**13**	P	**P**	**09 00 33.3**	**-1.3**
	0.2nm,0.3s,baz=191,slow=14,SNR=5.8						
	5.1nm,0.9s						
ARCES	**ARCESS Array B**	**26.86**		6 P	**P**	**09 01 54.0**	**+1.8**
	1.3nm,0.8s,baz=180,slow=9.4,SNR=1.4						
	1.3nm,0.8s						

IDC ***19*** *08:56:36.5±1.0, 30.°92N×70.°09E, h0km, mb3.9/7, mbtmp3.9/9, ML3.8/2, MS3.0/2, Error ellipse: s-maj=30.0km s-min=21.8km az=50.0*
NDI ***19*** *08:56:36.4±3.3, 30.°84N×69.°76E, h10km, ML4.1, MW3.9*
NEIC ***19*** *08:56:38.2±1.3, 30.°9N±0.°1×70.°12E±0.°05, h10km±1km, mb4.4/5, Error ellipse: s-maj=18.4km s-min=7.2km az=185.0*

ISC 19 08:56:38.0±0.8, 30.°87N±0.°08×70.°13E±0.°05, h10km, n36, σ1s78/38, mb3.9/8, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.77**	**346**		**Pn**	**08 57 37.0**	**+0.5**
NIL	**Nilore**	**3.83**	**43**		**Pn**	**08 57 37.8**	**+0.7**
JMU	**Jammu**	**4.46**	**64**	*ex*	**Pg**	**08 58 03.6**	**+0.2**
THN	**Thein Dam**	**5.01**	**70**	*e*P	**Pn**	**08 57 55.8**	**+2.6**
THN				*e*S	**Sn**	**08 58 55.3**	**+4.1**
BHK	**Bhakra**	**5.42**	**83**	*e*P	Pn	08 58 05.4	+6.6
BHK				IAML		08 59 05.8	
	comp=E,1μm,0.3s						
BHK				IAML		08 59 08.1	
	comp=N,2μm,0.4s						
BHK				*e*S	**Sb**	**08 59 12.2**	**-5.6**
DHRM	**DHARAMSHALA**	**5.44**	**74**	*e*P	**Pn**	**08 58 02.5**	**+3.2**
DHRM				*e*S	**Sn**	**08 59 01.8**	**-0.3**
DHRM				IAML		08 59 10.2	
	comp=N,124nm,0.6s						
DHRM				IAML		08 59 10.8	
	comp=E,173nm,0.6s						
TSSA	**Tissa**	**5.48**	**67**	*e*P	**Pn**	**08 58 01.9**	**+2.0**
SMLA	**Simla**	**6.05**	**86**	*e*P	**Pn**	**08 58 10.0**	**+2.6**
SMLA				*e*S	**Sn**	**08 59 19.2**	**+5.5**
SMLA				IAML		08 59 23.2	
	comp=N,98nm,0.4s						
SMLA				IAML		08 59 26.1	
	comp=E,105nm,0.5s						
KUDL	**Kundal**	**6.17**	**115**	*e*P	**Pn**	**08 58 11.3**	**+2.1**
KUDL				*e*S	**Sn**	**08 59 19.3**	**-0.5**
AYAN	**Aya Nagar**	**6.54**	**110**	*e*S	**Sn**	**08 59 29.1**	**+0.4**
ALCI	**Alchi Leh**	**6.82**	**59**	*e*P	**Pn**	**08 58 18.4**	**-0.1**
ALCI				*e*S	**Sn**	**08 59 38.6**	**+2.1**
ALCI				IAML		08 59 40.6	
	comp=E,132nm,0.9s						
ALCI				IAML		08 59 43.0	
	comp=N,127nm,0.9s						
HNLY	**HANLEY**	**7.76**	**74**	*e*P	**Pn**	**08 58 33.5**	**+2.0**
HNLY				*e*S	**Sn**	**09 00 00.9**	**+1.2**
HNLY				IAML		09 00 24.0	
	comp=E,116nm,0.9s						
HNLY				IAML		09 00 30.8	
	comp=N,106nm,0.9s						
CHGR	**Chuyangaron**	**7.81**	**354**		**Pn**	**08 58 32.4**	**+0.7**
JOSI	**Joshimath**	**8.12**	**90**	*e*P	**Pn**	**08 58 38.0**	**+1.8**
LGTI	**Lohaghat**	**8.87**	**97**	*e*P	**Pn**	**08 58 46.5**	**+0.3**
BHPL	**Bhopal**	**10.00**	**138**	*e*P	**Pn**	**08 59 04.0**	**+2.2**
ARSB	**Arslanbob**	**10.68**	**12**	Pn	**Pn**	**08 59 10.9**	**-0.3**
KKAR	**Karatay Array**	**12.21**	**1**	Pn	**Pn**	**08 59 31.6**	**-0.4**
AAK	**Ala-Archa**	**12.25**	**15**	Pn	**Pn**	**08 59 32.2**	**-0.4**
	comp=N,1.1nm,0.3s,baz=156,slow=6.9,SNR=5.8						
	comp=N,2.7nm,0.5s						
BOOM	**Boomskoye usch**	**12.49**	**20**		**Pn**	**08 59 36.3**	**+0.3**
EVN	**Everest**	**14.83**	**97**		**Pn**	**09 00 07.3**	**-1.1**
MKAR	**Makanchi Array**	**18.47**	**27**	P	**P**	**09 00 53.1**	**-0.9**
	comp=N,0.1nm,0.3s,baz=211,slow=14,SNR=6.1						
	comp=N,1.0nm,0.7s						
AB31	**Akbulak array**	**19.92**	**340**	P	**P**	**09 01 09.4**	**-0.3**
ABKAR	**Akbulak array**	**19.92**	**340**	P	**P**	**09 01 10.2**	**+0.5**
BVAR	**Borovoye Array**	**22.14**	**0**	P	**P**	**09 01 33.0**	**-0.7**
	comp=N,1.0nm,0.5s,baz=169,slow=8.4,SNR=4.3						
	comp=N,1.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**28.86**	**109**	LR	LR	09 15 17.2	
	comp=N,14nm,18.2s,baz=30,slow=39						
BRTR	**Keskin Array B**	**30.89**	**297**	P	**P**	**09 02 54.9**	**0.0**
	comp=N,0.4nm,0.5s,baz=126,slow=11,SNR=3.6						
	comp=N,0.4nm,0.5s						
AKASG	**Malin Array Be**	**36.17**	**315**	P	**P**	**09 03 40.1**	**-0.4**
	comp=N,1.2nm,0.7s,baz=103,slow=7.2,SNR=2.3						
	comp=N,1.2nm,0.7s						
AKASG	**Malin Array Be**	**36.17**	**315**	IAmb	IAmb	09 03 46.5	
	comp=Z,3.4nm,1.2s						
KMBO	**Kilima Mbogo**	**44.60**	**231**	LR	LR	09 23 43.6	
	comp=Z,31nm,18.1s,baz=95,slow=36						
ARCES	**ARCESS Array B**	**46.12**	**340**	P	**P**	**09 05 02.0**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=125,slow=8.0,SNR=4.4						
	comp=Z,2.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**64.96**	**271**	P	**P**	**09 07 17.6**

comp=Z,7μm,0.7s
TA01 Diego Aracena 1.11 315 ⇑*i* P **Pn 09 18 15.9 +0.3**
TA01 *i* S **Sn 09 18 32.5 +0.6**
TA01 IAML 09 18 34.5
comp=N,5μm,0.2s
TA01 Diego Aracena 1.11 315 *e*P **Pn 09 18 15.8 +0.3**
TA01 *e*S **Sn 09 18 33.1 +1.2**
TA01 IAML 09 18 34.7
comp=Z,2μm,0.3s
HMBC Humberstone 1.19 335 ⇑*i* P **Pn 09 18 16.7 +0.1**
HMBC *i* S **Sn 09 18 33.4 -0.4**
HMBC IAML 09 18 34.4
comp=N,5μm,0.3s
HMBC Humberstone 1.19 335 *e*P **Pn 09 18 16.6 +0.1**
HMBC *e*S **Sn 09 18 33.8 0.0**
HMBC IAML 09 18 35.4
comp=Z,4μm,0.2s
PB08 IPOC Station P 1.23 9 *i* P **Pn 09 18 17.3 0.0**
PB08 *i* S **Sn 09 18 34.3 -0.7**
PB08 IAML 09 18 35.7
comp=E,2μm,0.6s
PB08 IPOC Station P 1.23 9 *e*P **Pn 09 18 17.3 0.0**
PB08 *e*S **Sn 09 18 35.4 +0.5**
PB08 IAML 09 18 39.3
comp=Z,1μm,0.5s
TA02 Huaiquique 1.31 326 *e*P **Pn 09 18 17.9 0.0**
TA02 *i* S **Sn 09 18 36.2 +0.3**
TA02 Huaiquique 1.31 326 *e*P **Pn 09 18 17.6 -0.3**
TA02 *e*S **Sn 09 18 37.4 +1.4**
TA02 IAML 09 18 38.7
comp=Z,3μm,0.1s
PB06 IPOC Station P 1.35 189 ⇓*i* P **Pn 09 18 19.1 +0.5**
PB06 *i* S **Sn 09 18 37.3 0.0**
PB06 IAML 09 18 39.2
comp=E,1μm,0.3s
PB06 IPOC Station P 1.35 189 *e*P **Pn 09 18 18.5 -0.1**
PB06 *e*S **Sn 09 18 38.5 +1.2**
PB06 IAML 09 18 39.4
comp=Z,1μm,0.4s
PB11 IPOC Station P 1.62 350 ⇓*i* P **Pn 09 18 21.6 -0.2**
PB11 *i* S **Sn 09 18 42.4 -0.6**
PB11 IAML 09 18 46.5
comp=E,3μm,0.5s
PB11 IPOC Station P 1.62 350 *e*P **Pn 09 18 21.7 -0.2**
PB11 *e*S **Sn 09 18 37.4 -5.6**
PB11 *e*S 09 18 42.6
PB11 IAML 09 18 46.3
comp=Z,2μm,0.3s
PB05 IPOC Station P 1.68 208 ⇓*i* P **Pn 09 18 23.3 +0.7**
PB05 *i* S **Sn 09 18 43.5 -0.9**
PB05 IAML 09 18 45.1
comp=E,970nm,0.5s
PB05 IPOC Station P 1.68 208 *e*P **Pn 09 18 22.8 +0.2**
PB05 *e*S **Sn 09 18 44.0 -0.4**
PB05 IAML 09 18 48.7
comp=Z,524nm,0.7s
GO01 Chusmiza 1.69 5 *i* P **Pn 09 18 23.1 0.0**
GO01 *i* S **Sn 09 18 44.8 -0.4**
GO01 IAML 09 18 49.2
comp=N,3μm,0.1s
GO01 Chusmiza 1.69 5 *e*P **Pn 09 18 22.9 -0.1**
GO01 *e*S **Sn 09 18 46.3 +1.2**
GO01 IAML 09 18 50.4
comp=Z,810nm,0.1s
AF01 San Pedro de A 1.92 146 *i* P **Pn 09 18 27.3 +1.5**
AF01 *i* S **Sn 09 18 49.7 -0.3**
AF01 IAML 09 19 04.9
comp=E,1μm,0.4s
AF01 San Pedro de A 1.92 146 *e*P **Pn 09 18 24.3 -1.5**
AF01 *e*S Sn 09 18 59.6 +10
AF01 IAML 09 19 11.8
comp=Z,762nm,0.5s
PX02 IPOC Station P 2.51 341 *e*P **Pn 09 18 32.0 -1.3**
PB12 IPOC Station P 2.88 341 *e*P **Pn 09 18 37.2 -1.0**
PB12 IPOC Station P 2.88 341 *e*P **Pn 09 18 37.4 -0.8**
PB12 *e*S Sn 09 18 57.5 -15
PB12 IAML 09 19 32.0
comp=Z,354nm,0.5s
PB16 IPOC Station P 3.01 357 *i* P **Pn 09 18 41.2 +0.8**
PB16 IPOC Station P 3.01 357 *e*P **Pn 09 18 41.2 +0.8**
PB16 *e*S **Sn 09 19 13.5 -2.6**
PB16 IAML 09 19 23.0
comp=Z,162nm,0.4s
PB14 IPOC Station P 3.39 196 *e*P **Pn 09 18 44.6 -0.6**
PB14 *e*S Sn 09 19 06.6 -18
PB14 IAML 09 19 47.7
comp=Z,106nm,0.5s
YJA Yavi 3.66 104 *e*P **Pn 09 18 50.3 +1.4**
YJA Yavi 3.66 104 *e*P Pn 09 18 33.8 -15
PB18 Visviri 3.75 358 *e*P **Pn 09 18 52.9 +2.6**
GO02 Mina Guanaco 3.79 183 *i* P **Pn 09 18 50.0 -0.6**
GO02 Mina Guanaco 3.79 183 *e*P **Pn 09 18 50.2 -0.4**
GO02 *e*S **Sn 09 19 35.7 +1.3**
GO02 IAML 09 20 07.4
comp=Z,202nm,0.5s
HJA Humahuaca 4.09 117 *e*P **Pn 09 18 56.7 +2.1**
AC01 Pan de Azucar 4.90 193 *e*P **Pn 09 19 03.4 -1.9**
AC01 *e*S **Sn 09 19 57.2 -3.6**
AC01 IAML 09 20 21.8
comp=Z,34nm,1.0s
LPAZ La Paz 5.18 13 *e*P **Pn 09 19 11.3 +1.7**

NIED ***19*** *09:39:00.7, 40.69N×142.25E, h45km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}=4.16; $M_{\theta\theta}$2.08; $M_{\phi\phi}$2.08; $M_{r\theta}$=2.27; $M_{\theta\phi}$2.16; $M_{r\phi}$0.36; Fault plane solution: M_{rr}4.76000×10^{14} NP1: ϕ_s=207.00000°, δ39.00000°, λ=-122.00000°. NP2: ϕ_s=65.00000°, δ58.00000°, λ=-67.00000°.*
JMA 19 09:39:00.7±0.2, 40.7N±0.4×14.2E±°, h45km±2km, MV3.6/35, 12D, E OFF AOMORI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.63**	**221**	*i* P	Pn	09 39 13.4	0.0
JKEN				S	Sn	09 39 22.1	-0.3
JANG	**Nango**	**0.64**	**241**	⇓P	Pn	09 39 13.6	+0.1
JANG				⇓S	Sn	09 39 22.3	-0.4
JARK	**Aomorirokkasho**	**0.74**	**296**	⇓P	Pn	09 39 14.7	-0.1
JARK				⇓S	Sn	09 39 24.4	-0.6
JTH	**Tanohata**	**0.80**	**202**	*i* P	Pn	09 39 15.5	-0.1
JTH				S	Sn	09 39 25.5	-0.9
JTM	**Tenmabayashi**	**0.90**	**277**	⇓*i* P	Pn	09 39 16.8	-0.2
JTM				⇓S	Sn	09 39 28.1	-0.7
JKZ	**Kuzumaki**	**0.99**	**225**	⇓*i* P	Pn	09 39 18.7	+0.5
JKZ				⇓S	Sn	09 39 31.0	-0.1
JOT	**Ohata**	**1.14**	**308**	⇓P	Pn	09 39 20.0	-0.2
JOT				⇓S	Sn	09 39 34.3	-0.4
JAH	**Hinai**	**1.33**	**248**	⇓*i* P	Pn	09 39 23.0	+0.3
JAH				⇓S	Sn	09 39 38.9	-0.3
JOM	**Ohasama**	**1.42**	**211**	P	Pn	09 39 24.5	+0.5
JOM				*e*S	Sn	09 39 41.4	-0.1
JKB	**Kayabe**	**1.51**	**323**	P	Pn	09 39 25.4	+0.2
JKB				S	Sn	09 39 43.8	+0.1
JSR	**Shiriuchi**	**1.62**	**302**	P	Pn	09 39 27.2	+0.5
JIW	**Iwasaki**	**1.71**	**268**	P	Pn	09 39 28.6	+0.6

TAP 19 09:40:33.0, 24.45N×121.82E, h18km, ML2.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.04**	**258**	*i* P	Pg	09 40 36.4	+0.2
EWUT				S	Sg	09 40 38.3	0.0
ENA	**Nanau**	**0.08**	**251**	*i* P	Pg	09 40 36.6	+0.1
ENA				S	Sg	09 40 38.7	0.0
ESAO	**Su ao**	**0.12**	**9**	P	Pg	09 40 37.2	+0.3
ESAO				S	Sg	09 40 39.5	0.0
EAHA	**Aohua**	**0.14**	**211**	P	Pg	09 40 37.3	+0.2
EAHA				S	Sg	09 40 40.2	+0.3
TWC	**Suao**	**0.16**	**9**	*i* P	Pg	09 40 37.6	+0.3
TWC				S	Sg	09 40 40.2	0.0
NDS	**Dongshan**	**0.20**	**332**	*i* P	Pb	09 40 38.4	+0.2
NDS				S	Sb	09 40 41.6	+0.1
LATG	**Datong**	**0.28**	**287**	*i* P	Pb	09 40 39.7	+0.1
LATG				S	Sb	09 40 43.9	-0.1
ENTT	**Nioudou**	**0.30**	**309**	*i* P	Pb	09 40 39.8	-0.1
ENTT				S	Sb	09 40 44.4	-0.1
TWE	**Neicheng**	**0.30**	**332**	*i* P	Pb	09 40 39.9	0.0
TWE				S	Sg	09 40 44.1	+0.1
ILA	**Ilan**	**0.32**	**348**	*e*S	Sb	09 40 45.3	+0.3
ETL	**Fush Village**	**0.34**	**212**	*i* P	Pg	09 40 40.3	0.0
ETL				S	Sg	09 40 45.5	+0.2
ETL	**Fush Village**	**0.34**	**212**	*e*P	Pg	09 40 40.4	+0.1
NACB	**Ninganchiao**	**0.35**	**217**	P	Pg	09 40 40.5	+0.2
NACB	**Ninganchiao**	**0.35**	**217**	*i* P	Pg	09 40 40.2	-0.2
NACB				*i* S	Sg	09 40 45.2	-0.1
NACB	**Ninganchiao**	**0.35**	**217**	P	Pg	09 40 40.4	0.0
FUSB	**Fushanzhiwuyua**	**0.37**	**325**	*i* P	Pb	09 40 41.2	0.0
FUSB				*i* S	Sg	09 40 46.3	+0.2
ETLH	**Xiulin Townshi**	**0.40**	**232**	*i* P	Pg	09 40 41.3	0.0
ETLH				*e*S	Sg	09 40 46.7	-0.1
ETLH	**Xiulin Townshi**	**0.40**	**232**	P	Pg	09 40 41.2	0.0
NNSB	**Datong**	**0.40**	**266**	*i* P	Pb	09 40 41.7	0.0
NNS	**Nan Shan**	**0.41**	**268**	*i* P	Pb	09 40 41.8	0.0
NWLT	**Wulai**	**0.43**	**318**	P	Pb	09 40 42.1	-0.1
NWLT				S	Sg	09 40 47.8	-0.1
YHNB	**Yeheng**	**0.46**	**298**	P	Pb	09 40 43.0	+0.3
YHNB	**Yeheng**	**0.46**	**298**	*i* P	Pb	09 40 42.8	+0.1
YHNB				*i* S	Sb	09 40 49.0	-0.2
NSK	**Sanguang**	**0.48**	**298**	*i* P	Pb	09 40 43.1	+0.1
NSK				*i* S	Sg	09 40 49.2	0.0
TIPB	**Shuangxi**	**0.52**	**0**	*e*P	Pb	09 40 44.3	+0.7
TIPB				S	Sg	09 40 50.5	+0.1
TWB1	**Santiao Chiao**	**0.57**	**15**	*e*S	Sg	09 40 51.8	-0.4
WFSB	**Wu-fen Shan**	**0.61**	**357**	*e*S	Sb	09 40 53.9	+0.3

TAP 19 09:40:33.5, 23.73N×121.54E, h8km, ML2.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.02**	**169**	*i* P	Pg	09 40 35.4	+0.5
TEGC				*i* S	Sg	09 40 37.1	+1.2
SHUL	**Shoufeng**	**0.06**	**25**	P	Pg	09 40 36.1	+0.8
SHUL				S	Sg	09 40 38.3	+1.8
EGFH	**Guangfu**	**0.12**	**237**	*e*P	Pg	09 40 36.2	+0.2
ESL	**Shilin**	**0.12**	**311**	*i* P	Pg	09 40 36.5	+0.3
ESL				S	Sg	09 40 38.5	+0.5
WARBT	**Fenglin Townsh**	**0.14**	**264**	*i* P	Pg	09 40 36.1	+0.1
WARBT				*i* S	Sg	09 40 39.0	+0.6
TEYL	**Yanliau Villag**	**0.15**	**23**	*e*P	Pg	09 40 37.5	+1.0
TEYL				*e*S	Sg	09 40 42.4	+3.7
ETM	**Tongmen**	**0.23**	**351**	*i* P	Pg	09 40 38.7	+0.5
ETM				*e*S	Sg	09 40 42.3	+0.9
HGSD	**Ruisui**	**0.26**	**203**	P	Pb	09 40 39.6	-0.9
EHYH	**Wanrong**	**0.29**	**216**	*e*P	Pg	09 40 39.8	+0.5
EHY	**Hungye**	**0.30**	**221**	P	Pg	09 40 39.5	+0.1
EHY				*e*S	Sg	09 40 44.6	+1.3
LXIB	**Xiulin Townshi**	**0.31**	**339**	*i* P	Pg	09 40 40.1	+0.5
LXIB				S	Sg	09 40 44.5	+0.7
TWD	**Chiawan**	**0.35**	**9**	*i* P	Pb	09 40 41.7	-0.3
TWD				*e*S	Sb	09 40 46.6	-1.1
TWD	**Chiawan**	**0.35**	**9**	*i* P	Pb	09 40 41.3	-0.6
TWD				*e*S	Sb	09 40 46.6	-1.1
VWDT	**VWDT**	**0.36**	**273**	P	Pg	09 40 41.2	+0.7
VWDT				S	Sg	09 40 46.5	+1.2
OWD	**Renai**	**0.40**	**304**	*i* P	Pg	09 40 41.7	+0.5
OWD				S	Sg	09 40 46.8	+0.4
YULB	**Yu-li**	**0.40**	**213**	P	Pb	09 40 42.8	-0.1
YULB	**Yu-li**	**0.40**	**213**	P	Pg	09 40 41.6	+0.3
YULB				*e*S	Sb	09 40 48.0	-1.2
TWF1	**Yuli**	**0.44**	**210**	*e*P	Pg	09 40 42.3	+0.4
WUSB	**Renai**	**0.46**	**304**	*i* P	Pb	09 40 43.2	-0.7
WUSB				S	Sg	09 40 49.6	+1.1
WHF	**Hehuan Shan**	**0.48**	**329**	*e*P	Pg	09 40 43.2	+0.3
SSLB	**Suanglung**	**0.54**	**276**	P	Pg	09 40 44.1	+0.3
SSLB	**Suanglung**	**0.54**	**276**	*i* P	Pg	09 40 44.4	+0.6
SSLB				*i* S	Sg	09 40 51.6	+0.7
FUSS	**Fushou**	**0.58**	**333**	P	Pg	09 40 44.7	0.0
FUSS	**Fushou**	**0.58**	**333**	P	Pg	09 40 44.8	+0.1
FUSS				*i* S	Sg	09 40 52.3	0.0
YUS	**Yu-Shan**	**0.59**	**246**	*e*P	Pb	09 40 45.6	-0.7
YUS				*e*S	Sg	09 40 53.6	+0.9
SMLT	**Sun Moon Lake**	**0.60**	**285**	*e*P	Pg	09 40 45.6	+0.5
SMLT				*e*S	Sg	09 40 53.8	+0.8
TWT	**Tachien**	**0.61**	**328**	*e*S	Sg	09 40 54.1	+0.7
TDCB	**Techi**	**0.62**	**326**	*e*S	Sg	09 40 53.6	0.0
WHYT	**Xinyi Township**	**0.63**	**267**	*e*P	Pb	09 40 46.5	-0.2
WHYT				S	Sb	09 40 55.0	-0.7
TYC	**Yuchr**	**0.64**	**285**	*e*P	Pb	09 40 46.5	-0.5
EHD	**Haiduan**	**0.66**	**208**	*e*P	Pg	09 40 46.4	+0.3
EHD				*e*S	Sb	09 40 56.2	-0.3
WCS	**Beigang Elemen**	**0.66**	**300**	P	Pb	09 40 47.1	-0.1
WCS				S	Sb	09 40 55.7	-0.8
ALS	**Alishan**	**0.70**	**252**	*i* P	Pb	09 40 48.1	-0.1
ALS				*i* S	Sb	09 40 57.8	-0.4
NNSB	**Datong**	**0.71**	**349**	*e*P	Pg	09 40 47.0	-0.1
NNSB				*e*S	Sb	09 40 57.7	-0.3
NNS	**Nan Shan**	**0.72**	**348**	*e*P	Pg	09 40 47.4	0.0
ELDTW	**Lidau**	**0.72**	**221**	*e*P	Pg	09 40 47.4	0.0
ELDTW				*e*S	Sg	09 40 57.2	+0.5
WHP	**Taichung City**	**0.76**	**315**	*e*P	Pb	09 40 49.1	0.0
WHP				*e*S	Sb	09 40 59.2	-0.5
CHN5	**Tsauling**	**0.80**	**260**	*e*P	Pb	09 40 49.9	+0.3
TPUB	**Ta-pu**	**0.94**	**243**	P	Pn	09 40 52.6	-0.4

AZER ***19*** *09:44:41.2, 38.44N×44.52E, h7km, ml2.5*
ISK ***19*** *09:44:42.3, 38.47N×44.42E, h5km, ML2.6/4*
TEH ***19*** *09:44:44.1, 38.36N×44.55E, h8km, 86km*
ISC 19 09:44:43.1±1.2, 38.41N±0.03×44.54E±0.03, h8km±11km, n17, σ1§64/30, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.86**	**98**	Pg	**Pb**	**09 44 59.8**	**-0.6**
ISHB				Sg	**Sn**	**09 45 13.6**	**-0.9**
IMRD	**Marand**	**0.96**	**71**	Pg	**Pn**	**09 45 02.5**	**-0.6**
IMRD				Sg	**Sn**	**09 45 17.4**	**+0.3**
NAX	**Nakhchivan**	**1.07**	**44**	P	**Pn**	**09 45 03.7**	**-0.7**
NAX				S	**Sn**	**09 45 19.9**	**+0.4**
HAKT	**HAKKARI**	**1.07**	**218**	P	**Pn**	**09 45 04.6**	**0.0**
HAKT				S	**Sn**	**09 45 22.1**	**+2.3**
AKDM	**Akdamar-Van**	**1.23**	**267**	Pn	**Pg**	**09 45 04.8**	**-1.9**
AKDM				Sn	**Sb**	**09 45 22.2**	**-0.4**
ORD	**Ordubad**	**1.25**	**65**	P	**Pg**	**09 45 07.7**	**+0.5**
ORD				S	**Sn**	**09 45 26.3**	**+2.2**
SBZ	**Shahbuz**	**1.27**	**38**	P	**Pn**	**09 45 07.2**	**0.0**
SBZ				S	**Sn**	**09 45 26.9**	**+2.4**
ITBZ	**Tabriz**	**1.28**	**97**	Pg	**Pg**	**09 45 08.4**	**+0.7**
HYR	**Heyderabad**	**1.33**	**11**	P	**Pg**	**09 45 08.7**	**-0.1**
HYR				S	**Sn**	**09 45 30.2**	**+4.2**
CUKT	**Cukurca**	**1.37**	**213**	Pn	**Pg**	**09 45 09.7**	**+0.2**
CUKT				Sn	**Sg**	**09 45 29.9**	**+2.6**
IGDI	**IGDIR**	**1.50**	**346**	P	**Pg**	**09 45 11.7**	**-0.3**
IGDI				S	**Sg**	**09 45 33.8**	**+2.4**
AGRB	**Hanur-Agry**	**1.68**	**315**	Pn	**Pb**	**09 45 12.5**	**-1.8**
AGRB				Sn	**Sb**	**09 45 34.6**	**-1.0**
GNI	**Garni**	**1.75**	**5**	Pn	**Pb**	**09 45 14.4**	**-1.1**
IHRS	**Heris**	**1.97**	**92**	Pn	**Pg**	**09 45 20.4**	**-0.6**
GDB	**GEDABAY**	**2.50**	**22**	P	**Pb**	**09 45 27.0**	**-1.2**
GDB				S	**Sb**	**09 45 58.6**	**-0.6**
GRMI	**Germi**	**2.66**	**80**	Pn	**Pb**	**09 45 29.7**	**-1.4**
YRD	**Yardimli**	**2.94**	**79**	P	**Pb**	**09 45 33.8**	**-2.2**
YRD				S	**Sb**	**09 46 10.6**	**-1.5**

SDD ***19*** *09:45:58.6±1.2, 18.51N×73.24W, h15km±999km, MD3.2, ML2.6, MW3.0*
SSNC ***19*** *09:46:06.5±1.7, 18.79N×72.61W, h7km±15km, MD3.2, ML1.8*
ISC 19 09:46:04.3±1.9, 18.9N±0.2×72.68W±0.06, h1km±18km, n8, σ1§33/16, 3C-2D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIDR	**Jimani**	**0.88**	**117**	⇑*e*Pg	**Pg**	**09 46 20.6**	**-0.6**
JIDR				IAML		09 46 40.6	
	comp=N,59nm,0.3s						
REDR	**Restauracion**	**1.25**	**77**	⇓*e*Pg	**Pb**	**09 46 27.2**	**-1.4**
REDR				IAML		09 46 47.7	
	comp=N,103nm,0.2s						
REDR				⇑*e*Sg	**Sn**	**09 46 48.1**	**+1.8**
PODR	**Polo**	**1.51**	**118**	⇑*e*Pg	**Pn**	**09 46 31.9**	**-0.8**
PODR				⇓*e*Sg	**Sg**	**09 46 55.3**	**+2.5**
PODR				IAML		09 47 04.1	
	comp=N,44nm,1.1s						
MASC	**Masc**	**1.94**	**311**	*e*P	**Pn**	**09 46 38.8**	**+0.4**
MASC				*e*S	**Sn**	**09 47 02.5**	**-1.0**
MASC				IAML		09 47 12.0	
	comp=N,1.7nm,0.2s						
MASC				IAML		09 47 12.1	
	comp=E,2.3nm,0.1s						
QMBU	**Quimbuelo**	**2.40**	**303**	*e*P	**Pn**	**09 46 45.5**	**+0.8**
QMBU				*e*S	**Sn**	**09 47 14.2**	**-0.6**
QMBU				IAML		09 47 23.6	
	comp=E,3.4nm,0.2s						
QMBU				IAML		09 47 23.8	
	comp=N,6.3nm,0.3s						
GTBY	**Guantanamo Bay**	**2.52**	**295**	*e*P	**Pn**	**09 46 46.4**	**+0.1**
GTBY				*e*S	**Sn**	**09 47 19.9**	**+2.2**
GTBY				*e*Sg	**Sb**	**09 47 22.2**	**+0.4**
GTBY				IAML		09 47 25.2	
	comp=N,2.7nm,0.1s						
GTBY				IAML		09 47 25.5	
	comp=N,3.5nm,0.1s						
MARVS	**Santiago de Cu**	**3.23**	**291**	*e*P	**Pn**	**09 46 56.1**	**-0.1**
MARVS				*e*S	**Sn**	**09 47 35.0**	**-0.4**
MARVS				IAML		09 47 44.2	
	comp=E,2.8nm,0.2s						
MARVS				IAML		09 47 44.7	
	comp=N,3.0nm,0.3s						
PINC	**Pinares de May**	**3.33**	**299**	*e*P	**Pn**	**09 46 58.4**	**+0.8**
PINC				*e*S	**Sn**	**09 47 37.1**	**-0.8**
PINC				IAML		09 47 48.1	
	comp=N,1.4nm,0.1s						
PINC				IAML		09 47 48.1	
	comp=E,1.4nm,0.1s						

LJU 19 09:50:04.2, 46.00N×14.31E, h0km, ML0.5, Suspected explosion, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRNS	**Crni Vrh**	**0.09**	**339**	*i* Pg	Pg	09 50 06.3	+0.4
CRNS				*i* Sg	Sg	09 50 07.4	+0.2
CRNS				IAML		09 50 07.7	
	comp=Z,9.5nm,0.1s						
GBAS	**Gorenja Brezov**	**0.11**	**123**	*i* Pg	Pg	09 50 06.6	+0.3
GBAS				IAML		09 50 09.6	
	comp=Z,15nm,0.1s						
JAVS	**Javornik**	**0.20**	**239**	*i* Pg	Pg	09 50 08.2	+0.2
JAVS				*i* Sg	Sg	09 50 11.4	+0.8
JAVS				IAML		09 50 12.1	
	comp=Z,3.0nm,0.1s						
CEY	**Cerknica**	**0.27**	**162**	*i* Pg	Pg	09 50 09.1	-0.3
CEY				*i* Sg	Sg	09 50 13.7	+0.9
CEY				IAML		09 50 13.8	
	comp=Z,7.0nm,0.1s						
VOJS	**Vojsko**	**0.30**	**277**	*i* Pg	Pg	09 50 09.8	-0.1
VOJS				IAML		09 50 18.0	
	comp=Z,3.2nm,0.1s						

NAO ***19*** *09:50:05.1, 37.46N×26.06E, h10km, MB4.1*
ATH ***19*** *09:50:17.7, 37.79N×20.29E, h20km±1km, ML3.9/15, Manual Solution by K.Orfanogiannaki First location: 2019/11/19 09:51:21, This location: 2019/11/19 10:04:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
PDG ***19*** *09:50:18.1±0.5, 37.85N×20.25E, h15km, ML4.0/10, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
THE ***19*** *09:50:19.1, 38°N±1°×2°0E±°, h5km±2km, M4.1/54, mb4.6/4, MLh3.7/54*
BEO ***19*** *09:50:20.0±0.6, 38.01N×20.18E, h0km, ML4.3/8*
NEIC ***19*** *09:50:20.8±1.7, 37.76N±0.04×20.30E±0.03, h35km±2km, mb4.4/16, Error ellipse: s-maj=7.3km s-min=3.9km az=169.0*
MCSM ***19*** *09:50:21.3±0.6, 38°N±6'×2°0E±°, h42km±5km, mb4.3, mB4.8, MLv3.7, Mw(mB)4.1*
IDC ***19*** *09:50:21.8±2.5, 37.89N×20.45E, h47km±27km, mb3.9/10, mbtmp4.0/14, ML3.6/3, MS3.4/7, Error ellipse: s-maj=21.8km s-min=19.0km az=31.0*
ISC 19 09:50:18.7±1.0, 37.82N±0.03×20.31E±0.04, h23km±7km, n253, σ1§52/300, mb4.3/15, MS3.5/3, 16C-9D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORTH	**Orthonies,Zaky**	**0.31**	**84**	P	**Pb**	**09 50 25.7**	**-0.1**
ORTH				S	**Sb**	**09 50 29.9**	**-0.7**
PSDA	**Pessada-Kefalo**	**0.36**	**37**	P	**Pb**	**09 50 26.1**	**-0.5**
PSDA				S	**Sb**	**09 50 31.3**	**-0.7**
ARG2	**Argostoli**	**0.38**	**22**	P	**Pb**	**09 50 26.7**	**-0.2**
ARG2				S	**Sb**	**09 50 32.7**	**+0.2**
ARG2	**Argostoli**	**0.38**	**22**	P	**Pb**	**09 50 26.7**	**-0.2**
ARG2				S	**Sb**	**09 50 32.7**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.39**	**15**	P	**Pb**	**09 50 27.0**	**-0.1**
LXR1				S	**Sb**	**09 50 32.9**	**+0.2**
KYPS	**Kipseli, Zakin**	**0.41**	**90**	P	**Pb**	**09 50 26.8**	**-0.6**
KYPS				S	**Sb**	**09 50 33.2**	**+0.1**
DMLN	**Damoulianata-K**	**0.42**	**7**	P	**Pb**	**09 50 27.4**	**-0.2**
DMLN				S	**Sb**	**09 50 34.0**	**+0.4**
DMLN	**Damoulianata-K**	**0.42**	**7**	P	**Pb**	**09 50 27.4**	**-0.2**
DMLN				S	**Sb**	**09 50 34.0**	**+0.9**
VLS	**Valsamata**	**0.42**	**32**	P	**Pb**	**09 50 26.9**	**-0.6**
VLS				S	**Sb**	**09 50 33.2**	**-0.4**
VLS	**Valsamata**	**0.42**	**32**	P	**Pb**	**09 50 26.9**	**-0.6**
VLS				S	**Sb**	**09 50 33.5**	**-0.1**
LTHK	**Lithakia**	**0.43**	**105**	P	**Pb**	**09 50 26.9**	**-0.9**
LTHK				S	**Sb**	**09 50 32.3**	**-1.6**
LTHK	**Lithakia**	**0.43**	**105**	P	**Pb**	**09 50 26.8**	**-1.0**
LTHK				S	**Sb**	**09 50 32.8**	**-1.1**
RTZL	**Ratzakli, Kefa**	**0.45**	**55**	S	**Sb**	**09 50 34.2**	**-0.1**
ZAK2	**Zakynthos**	**0.47**	**94**	P	**Pb**	**09 50 28.0**	**-0.4**
ZAK2				S	**Sb**	**09 50 34.0**	**-0.9**
VSK1	**VASILIKIADES**	**0.62**	**19**	P	**Pb**	**09 50 30.5**	**-0.4**
VSK1				S	**Sb**	**09 50 39.1**	**-0.2**
CLEM	**Kyllini,Ilia,G**	**0.66**	**84**	P	**Pb**	**09 50 30.8**	**-0.7**
CLEM				S	**Sb**	**09 50 39.4**	**-0.9**
FSK	**Fiskardo**	**0.67**	**17**	P	**Pb**	**09 50 31.4**	**-0.3**
FSK				S	**Sb**	**09 50 40.7**	**+0.1**
FSK	**Fiskardo**	**0.67**	**17**	P	**Pb**	**09 50 31.2**	**-0.6**
FSK				S	**Sb**	**09 50 41.2**	**+0.6**
EVGI	**Lefkada island**	**0.84**	**19**	P	**Pb**	**09 50 34.4**	**-0.4**
EVGI				S	**Sn**	**09 50 48.4**	**+1.5**
EVGI	**Lefkada island**	**0.84**	**19**	P	**Pb**	**09 50 34.3**	**-0.4**
AXS	**Araxos**	**0.92**	**66**	P	**Pb**	**09 50 35.8**	**-0.3**
AXS	**Araxos**	**0.92**	**66**	P	**Pb**	**09 50 35.4**	**-0.7**
NYDR	**Nydri-Lefkada**	**0.94**	**19**	P	**Pb**	**09 50 36.0**	**-0.4**
NYDR				S	**Sn**	**09 50 52.5**	**+3.3**
NYDR	**Nydri-Lefkada**	**0.94**	**19**	P	**Pb**	**09 50 35.9**	**-0.5**
AST1	**Astakos**	**0.95**	**40**	P	**Pb**	**09 50 36.3**	**-0.2**
AST1				S	**Sn**	**09 50 51.0**	**+1.7**
RLS	**Riolos of Pat

TETR	**Tetrakomo, Epi**	**1.70**	**26**	P		**Pb**	**09 50 48.7**	**-0.7**
VLX	**Vlachokerasia**	**1.71**	**105**	P		**Pb**	**09 50 49.1**	**-0.3**
IGT	**Igoumenitsa**	**1.71**	**1**	P		**Pb**	**09 50 48.3**	**-1.2**
PRMD	**Pramanda**	**1.81**	**20**	P		**Pb**	**09 50 50.8**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.86**	**50**	P		**Pb**	**09 50 52.4**	**+0.3**
JAN	**Janina**	**1.88**	**13**	P		**Pb**	**09 50 51.8**	**-0.6**
KEK	**Kerkira**	**1.93**	**348**			**Pb**	**09 50 52.2**	**-1.0**
KEK					Sn	**Sb**	**09 51 16.1**	**-0.8**
KEK	**Kerkira**	**1.93**	**348**	P		**Pb**	**09 50 54.5**	**+1.3**
AGG	**Agios Georgios**	**1.99**	**52**	P		**Pb**	**09 50 53.9**	**-0.4**
AXAR	**Agios Charalam**	**2.08**	**62**	P		**Pn**	**09 50 53.3**	**+1.1**
LTK	**Loutraki**	**2.11**	**84**	P		**Pn**	**09 50 54.1**	**+1.4**
THL	**Klokotos Trika**	**2.19**	**37**	P		**Pb**	**09 50 56.3**	**-1.4**
LKR	**Lokris**	**2.27**	**68**	P		**Pn**	**09 50 55.9**	**+1.0**
ATAL	**Atalanti**	**2.31**	**67**	P		**Pn**	**09 50 56.9**	**+1.6**
VLI	**Veliai**	**2.37**	**117**	P		**Pn**	**09 50 58.1**	**+1.9**
VILL	**Villia**	**2.40**	**81**	P		**Pn**	**09 50 58.1**	**+1.5**
PENT	**Pentalofos**	**2.46**	**15**	P		**Pb**	**09 51 00.5**	**-1.8**
MAGU	**Magoula**	**2.55**	**83**	P		**Pn**	**09 50 59.8**	**+1.2**
STFN	**Stefani**	**2.58**	**81**	P		**Pn**	**09 51 00.6**	**+1.5**
NEST	**Nestorio**	**2.65**	**12**	P		**Pb**	**09 51 03.2**	**-2.4**
ATH	**Athens Observa**	**2.70**	**86**	P		**Pn**	**09 51 01.7**	**+0.9**
KTHA	**Kythira Island**	**2.70**	**125**	P		**Pn**	**09 51 03.1**	**+2.4**
NEO	**Neokhori**	**2.72**	**56**	P		**Pn**	**09 51 02.6**	**+1.5**
KZN	**Kozani**	**2.73**	**24**	P		**Pn**	**09 51 01.7**	**+0.4**
ATHU	**Athens Univers**	**2.75**	**86**	P		**Pn**	**09 51 02.3**	**+0.8**
VLY	**Voula,Athens**	**2.76**	**88**	P		**Pn**	**09 51 02.4**	**+0.9**
PTL	**Penteli**	**2.82**	**84**	P		**Pn**	**09 51 03.0**	**+0.6**
LIT	**Litokhoron**	**2.84**	**36**			**Pn**	**09 51 04.9**	**+2.2**
LIT	**Litokhoron**	**2.84**	**36**	P		**Pn**	**09 51 04.4**	**+1.7**
DION	**Dionisos Attik**	**2.88**	**84**	P		**Pn**	**09 51 04.3**	**+1.1**
ANKY	**Antikythira Is**	**3.09**	**128**	P		**Pn**	**09 51 07.7**	**+1.6**
KYMI	**Kymi, Euboea I**	**3.09**	**74**	P		**Pn**	**09 51 06.9**	**-0.3**
TIP	**Timpagrande**	**3.10**	**297**			**Pn**	**09 51 07.5**	**+1.2**
TIP	**Timpagrande**	**3.10**	**297**	P		**Pn**	**09 51 07.1**	**+0.9**
AOS	**Alonnisos**	**3.11**	**63**	P		**Pn**	**09 51 07.0**	**+0.7**
OHR	**Ohrid**	**3.31**	**6**	*i* Pn		**Pn**	**09 51 12.3**	**+3.2**
THE	**Thessaloniki**	**3.48**	**35**	P		**Pn**	**09 51 13.2**	**+1.8**
SKY	**Skiros Island**	**3.50**	**71**	P		**Pn**	**09 51 11.8**	**+0.1**
CEL	**Celeste**	**3.51**	**278**			**Pn**	**09 51 12.9**	**+0.9**
CEL	**Celeste**	**3.51**	**278**	P		**Pn**	**09 51 12.8**	**+0.9**
HORT	**Hortiatis**	**3.52**	**37**	P		**Pn**	**09 51 13.3**	**+1.3**
PLG	**Polygyros**	**3.53**	**43**	P		**Pn**	**09 51 13.4**	**+1.2**
OUR	**Ouranopolis**	**3.80**	**48**	P		**Pn**	**09 51 17.3**	**+1.4**
VAY	**Valandovo**	**3.91**	**26**	*i* Pn		**Pn**	**09 51 20.1**	**+2.8**
MATE	**Matera**	**3.98**	**316**	⇑P		**Pn**	**09 51 21.1**	**+2.9**
CUC	**Castrocucco**	**4.12**	**303**			**Pn**	**09 51 23.0**	**+2.7**
SRS	**Serrai**	**4.16**	**37**	P		**Pn**	**09 51 21.9**	**+1.1**
ULC	**Ulcinj**	**4.22**	**349**	⇓*i* Pn		**Pn**	**09 51 21.7**	**+0.1**
ULC				*i* Sn		**Sn**	**09 52 06.6**	**-3.5**
APE	**Apeiranthos**	**4.22**	**99**	P		**Pn**	**09 51 21.6**	**-0.1**
APE	**Apeiranthos**	**4.22**	**99**	⇑P		Pn	09 51 26.7	+5.0
SKO	**Skopje**	**4.24**	**11**	*i* Pn		**Pn**	**09 51 23.5**	**+1.7**
LIA	**Limnos Island**	**4.33**	**60**	P		**Pn**	**09 51 23.8**	**+0.7**
THAS	**Thassos island**	**4.41**	**50**	P		**Pn**	**09 51 24.6**	**+0.4**
DRME	**Dracevica, Mon**	**4.44**	**349**	*e*Pn		**Pn**	**09 51 25.3**	**+0.6**
DRME	**Dracevica, Mon**	**4.44**	**349**	⇓*i* Pn		**Pn**	**09 51 25.4**	**+0.7**
DRME				*i* Sn		**Sn**	**09 52 16.2**	**+0.5**
IDI	**Anoyia**	**4.47**	**123**	P		**Pn**	**09 51 27.2**	**+2.1**
	3.4nm,0.4s,baz=258,slow=5.4,SNR=12							
IDI				S		**Sn**	**09 52 14.5**	**-2.0**
	42nm,0.3s,baz=50,slow=19,SNR=18							
IDI	**Anoyia**	**4.47**	**123**	P		**Pn**	**09 51 25.8**	**+0.7**
ACER	**Acerenza**	**4.50**	**313**	Pn		**Pn**	**09 51 27.6**	**+2.2**
KAVA	**Kavala**	**4.54**	**44**	P		**Pn**	**09 51 27.2**	**+1.1**
KKB	**Krupnik**	**4.56**	**28**	P		**Pn**	**09 51 27.8**	**+1.5**
KKB	**Krupnik**	**4.56**	**28**	P		**Pn**	**09 51 28.3**	**+1.9**
CHOS	**Chios island**	**4.57**	**81**	P		**Pn**	**09 51 27.4**	**+1.0**
MMB	**Musomishta**	**4.57**	**34**	P		**Pn**	**09 51 28.5**	**+2.0**
MMB	**Musomishta**	**4.57**	**34**	P		**Pn**	**09 51 28.8**	**+2.3**
BUM	**Brajici-Budva**	**4.60**	**347**	⇑*i* Pn		**Pn**	**09 51 27.4**	**+0.5**
BUM				*i* Sn		**Sn**	**09 52 19.8**	**+0.1**
PDG	**Podgorica**	**4.67**	**350**			**Pn**	**09 51 28.3**	**+0.5**
PDG	**Podgorica**	**4.67**	**350**	⇓P		**Pn**	**09 51 28.6**	**+0.8**
PDG				⇑S		**Sn**	**09 52 21.2**	**-0.1**
PDG	**Podgorica**	**4.67**	**350**	*e*Pn		**Pn**	**09 51 28.4**	**+0.5**
PDG	**Podgorica**	**4.67**	**350**	⇑*i* Pn		**Pn**	**09 51 27.7**	**-0.1**
PDG				*i* Sn		**Sn**	**09 52 21.8**	**+0.5**
RAFF	**Raffo Rosso**	**4.76**	**265**	Pn		**Pn**	**09 51 29.3**	**+0.2**
PVY	**Plav**	**4.78**	**357**	⇓*i* Pn		**Pn**	**09 51 30.2**	**+0.8**
PVY				*i* Sn		**Sn**	**09 52 24.7**	**+0.7**
BOSS	**Bosilegrad**	**4.96**	**19**	*e*Pn		**Pn**	**09 51 33.1**	**+1.4**
NKME	**Niksic**	**5.05**	**349**	⇓*i* Pn		**Pn**	**09 51 34.6**	**+1.6**
NKME				*i* Sn		**Sn**	**09 52 31.1**	**+0.5**
IVA	**Berane**	**5.05**	**357**	⇑*i* Pn		**Pn**	**09 51 34.5**	**+1.3**
IVA				*i* Sn		**Sn**	**09 52 31.4**	**+0.6**
KOME	**Kolasin**	**5.06**	**353**	⇓*i* Pn		**Pn**	**09 51 33.7**	**+0.5**
KOME				*i* Sn		**Sn**	**09 52 31.0**	**0.0**
EZN	**Ezine**	**5.11**	**65**	⇑P		**Pn**	**09 51 34.7**	**+0.9**
TREB	**Trebinje**	**5.11**	**344**	*e*Pn		**Pn**	**09 51 33.4**	**-0.5**
BARS	**Barje**	**5.12**	**13**	*e*Pn		**Pn**	**09 51 34.9**	**+0.9**
RZN	**Rozhen**	**5.16**	**40**	P		**Pn**	**09 51 35.4**	**+0.8**
	0.1nm78nm,0.6s							
RZN	**Rozhen**	**5.16**	**40**	P		**Pn**	**09 51 36.5**	**+1.8**
SMG	**Samos**	**5.17**	**89**	P		**Pn**	**09 51 35.2**	**+0.4**
	0.1nm24nm,0.9s							
PLNA	**Plana**	**5.23**	**26**	P		**Pn**	**09 51 38.1**	**+2.5**
RDO	**Rodhopi**	**5.23**	**49**			**Pn**	**09 51 36.9**	**+1.4**
RDO	**Rodhopi**	**5.23**	**49**	P		**Pn**	**09 51 34.7**	**-0.8**
BRY	**Bratogost**	**5.25**	**346**	⇓*i* Pn		**Pn**	**09 51 35.5**	**-0.4**
BRY				*i* Sn		**Sn**	**09 52 35.5**	**-0.3**
SGRT	**San Giovanni R**	**5.27**	**320**	Pn		**Pn**	**09 51 37.7**	**+1.5**
VTS	**Vitosha**	**5.29**	**24**	P		**Pn**	**09 51 37.7**	**+1.3**
	18nm,0.5s							
VTS	**Vitosha**	**5.29**	**24**	P		**Pn**	**09 51 38.2**	**+1.8**
VTS	**Vitosha**	**5.29**	**24**	*e*Pn		**Pn**	**09 51 38.0**	**+1.6**
VTS				*e*Sn		**Sn**	**09 52 35.9**	**-0.8**
SELS	**Selova**	**5.43**	**6**	*e*Pn		**Pn**	**09 51 38.6**	**+0.4**
SELS				*e*Sn		**Sn**	**09 52 38.8**	**-1.1**
KDZ	**Kurdzhali**	**5.43**	**44**	P		**Pn**	**09 51 39.6**	**+1.4**
KDZ	**Kurdzhali**	**5.43**	**44**	P		**Pn**	**09 51 40.0**	**+1.7**
SJES	**Sjenica**	**5.44**	**357**	*e*Pn		**Pn**	**09 51 39.6**	**+1.1**
SJES				*e*Sn		**Sn**	**09 52 37.6**	**-2.8**
PLD	**Plovdiv**	**5.50**	**37**	*e*Pn		**Pn**	**09 51 41.2**	**+2.0**
PLE	**Pljevlja**	**5.55**	**353**	⇑*i* Pn		**Pn**	**09 51 40.9**	**+1.0**
PLE				*i* Sn		**Sn**	**09 52 43.2**	**+0.2**
ZAPS	**Zavoj**	**5.73**	**17**	*e*Pn		**Pn**	**09 51 43.9**	**+1.6**
IVAS	**Ivanjica**	**5.75**	**359**	*e*Pn		**Pn**	**09 51 42.4**	**-0.3**
IVAS				*e*Sn		**Sn**	**09 52 46.4**	**-1.5**
GOCS	**Kraljevo Serbi**	**5.75**	**4**	*e*Pn		**Pn**	**09 51 43.8**	**+1.1**
GOCS				*e*Sn		**Sn**	**09 52 46.4**	**-1.6**
RUDO	**Rudo**	**5.83**	**353**	*e*Pn		**Pn**	**09 51 44.9**	**+1.1**
BOVS	**Bovan**	**5.90**	**10**	⇑P		**Pn**	**09 51 45.0**	**+0.2**
BOVS	**Bovan**	**5.90**	**10**	*e*Pn		**Pn**	**09 51 44.9**	**+0.2**
KARP	**Karpathos**	**5.96**	**110**	Pn		**Pn**	**09 51 48.0**	**+2.5**
BLKB	**Belogradchik**	**6.07**	**16**	⇓P		**Pn**	**09 51 48.1**	**+1.0**
BLKB	**Belogradchik**	**6.07**	**16**	*e*Pn		**Pn**	**09 51 48.3**	**+1.3**
GRUS	**Gruza**	**6.07**	**3**	*e*Pn		**Pn**	**09 51 47.0**	**0.0**
BBLS	**Lazi&#263i**	**6.08**	**354**	*e*Pn		**Pn**	**09 51 47.5**	**+0.3**
BBLS				*e*Sn		**Sn**	**09 52 54.7**	**-1.3**
ZAGS	**Zajecar**	**6.16**	**13**	*e*Pn		**Pn**	**09 51 48.5**	**+0.3**
ZAGS				*e*Sn		**Sn**	**09 52 56.8**	**-1.1**
DIVS	**Divibare**	**6.28**	**358**	*e*Pn		**Pn**	**09 51 50.0**	**+0.1**
DIVS				*e*Sn		**Sn**	**09 52 57.4**	**-3.5**
TRUS	**Trudelj**	**6.40**	**1**	*e*Pn		**Pn**	**09 51 51.6**	**+0.1**
TRUS				*e*Sn		**Sn**	**09 53 01.8**	**-2.0**
PLVB	**Pleven**	**6.45**	**29**	⇑P		**Pn**	**09 51 53.9**	**+1.6**
ELND	**Elena**	**6.64**	**38**	⇑P		**Pn**	**09 51 56.1**	**+1.3**
TEKS	**Tekeris**	**6.75**	**355**	*e*Pn		**Pn**	**09 51 55.7**	**-0.6**
FRGS	**Fruska Gora**	**7.34**	**357**	*e*Pn		**Pn**	**09 52 03.9**	**-0.6**
FRGS				*e*Sn		**Sn**	**09 53 22.7**	**-4.3**
NRCA	**Norcia**	**7.43**	**315**			**Pn**	**09 52 09.0**	**+3.2**
FDMO	**Fiordimonte**	**7.58**	**316**	Pn		**Pn**	**09 52 10.0**	**+2.2**
AKAS	**Kas**	**7.60**	**99**	Pn		**Pn**	**09 52 10.6**	**+2.4**
GZR	**Gura Zlata**	**7.79**	**13**	⇑P		**Pn**	**09 52 11.0**	**+0.4**
ARR	**Arges**	**8.21**	**22**	⇑P		**Pn**	**09 52 18.2**	**+1.8**
VOIR		**8.39**	**23**	⇑P		**Pn**	**09 52 20.9**	**+1.9**
VOIR		**8.39**	**23**	P		**Pn**	**09 52 20.5**	**+1.5**
	11nm,0.9s							
BOJS	**Bojanci**	**8.56**	**335**	*e*Pn		**Pn**	**09 52 21.9**	**+0.8**
ISR	**Istrita**	**8.66**	**31**	P		**Pn**	**09 52 24.6**	**+2.0**
MLR	**Muntele Rosu**	**8.74**	**27**	P		**Pn**	**09 52 26.5**	**+2.7**
	9.4nm,0.6s,baz=238,slow=5.3,SNR=9.2							
MLR				LR		LR	09 56 50.5	
	comp=Z,207nm,18.7s,baz=107,slow=45							
MLR	**Muntele Rosu**	**8.74**	**27**			**Pn**	**09 52 26.7**	**+2.9**
MLR	**Muntele Rosu**	**8.74**	**27**	⇓P		**Pn**	**09 52 25.8**	**+2.0**
SKDS	**Skadanscina**	**9.04**	**331**	*e*Pn		**Pn**	**09 52 27.7**	**-0.1**
CEY	**Cerknica**	**9.05**	**333**	*e*Pn		**Pn**	**09 52 28.8**	**+0.9**
PLOR	**Plostina**	**9.31**	**28**	⇑P		**Pn**	**09 52 33.4**	**+1.9**

VRI	**Vrincioaia**	**9.35**	**29**	⇑P		**Pn**	**09 52 33.5**	**+1.5**
VRI	**Vrincioaia**	**9.35**	**29**	P		**Pn**	**09 52 34.4**	**+2.3**
	14nm,0.8s							
OBKA	**Obir**	**9.67**	**336**	*i* Pn		**Pn**	**09 52 37.3**	**+0.8**
	3.0nm,0.2s							
OBKA				*i* Sn		**Sn**	**09 54 21.7**	**-2.8**
	27nm,0.5s							
SOKA	**Soboth**	**9.67**	**338**	*i* Pn		**Pn**	**09 52 36.2**	**-0.3**
	7.3nm,0.5s							
SOKA				*i* Sn		**Sn**	**09 54 20.0**	**-4.4**
	6.8nm,0.6s							
MYKA	**Terra Mystica**	**10.09**	**333**	*e*Sn		**Sn**	**09 54 30.5**	**-4.1**
	5.5nm,0.3s							
KBA	**Koelnbreinsper**	**10.58**	**333**	*i* Sn		**Sn**	**09 54 41.9**	**-4.9**
	7.7nm,0.5s							
BRTR	**Keskin Array B**	**10.58**	**76**	P		**Pn**	**09 52 52.7**	**+3.7**
	0.5nm,0.6s,baz=267,slow=14,SNR=2.8							
BRTR				LR		LR	09 57 47.1	
	comp=Z,140nm,18.8s,baz=256,slow=43							
MEZ	**Mezhgor'ye**	**10.94**	**11**	P		**Pn**	**09 52 54.7**	**+0.9**
MOA	**Molln**	**10.96**	**338**	*i* Pn		**Pn**	**09 52 55.3**	**+1.3**
	11nm,0.4s							
LESA	**Schwarzleotal**	**11.12**	**332**	*i* Pn		**Pn**	**09 52 57.4**	**+1.1**
	3.1nm,0.4s							
LESA				*i* Sn		**Sn**	**09 54 54.7**	**-5.1**
	14nm,0.6s							
WTTA	**Wattenberg**	**11.39**	**329**	*e*Sn		**Sn**	**09 55 03.1**	**-3.6**
	28nm,0.7s							
WATA	**Walderalm**	**11.47**	**329**	*e*Sn		**Sn**	**09 55 05.1**	**-3.5**
	8.5nm,0.6s							
SQTA	**Sankt Quirin**	**11.54**	**327**	*e*Sn		**Sn**	**09 55 06.3**	**-3.8**
	14nm,0.7s							
FETA	**Feichten**	**11.59**	**325**	*e*Sn		**Sn**	**09 55 09.9**	**-1.7**
	3.1nm,0.7s							
NE56	**Odesa**	**11.82**	**38**	P		**Pn**	**09 53 07.8**	**+2.1**
TUE	**Stuetta**	**11.86**	**320**	Pn		**Pn**	**09 53 06.7**	**+0.2**
NDNU	**Novodnistrovsk**	**11.93**	**23**	P		**Pn**	**09 53 09.1**	**+1.8**
GERES	**GERESS Array B**	**12.02**	**339**	P		**Pn**	**09 53 08.1**	**-0.5**
	baz=157,slow=13,SNR=4.9							
GERES				S		**Sn**	**09 55 13.3**	**-8.5**
	1.7nm,0.5s,baz=150,slow=25,SNR=7.1							
	0.5nm,0.3s							
LUBAR	**Lubar, Ukraine**	**13.22**	**21**	P		**Pn**	**09 53 26.8**	**+1.8**
RNPP5	**Staryi Chortor**	**13.98**	**15**	P		**Pn**	**09 53 36.8**	**+1.6**
RNPP1	**Kostyukhnivka**	**14.07**	**14**	P		**Pn**	**09 53 38.0**	**+1.6**
RNPP8	**Varash**	**14.07**	**14**	P		**Pn**	**09 53 38.3**	**+1.8**
AK13	**Malin Array Si**	**14.23**	**23**	P		**Pn**	**09 53 39.3**	**+0.6**
AK06	**Malin Array Si**	**14.25**	**24**	P		**Pn**	**09 53 39.1**	**+0.2**
AK14	**Malin Array Si**	**14.26**	**23**	P		**Pn**	**09 53 39.3**	**+0.2**
AK10	**Malin Array Si**	**14.28**	**24**	P		**Pn**	**09 53 39.5**	**+0.2**
AK05	**Malin Array Si**	**14.28**	**24**	P		**Pn**	**09 53 39.2**	**-0.2**
AK12	**Malin Array Si**	**14.29**	**23**	P		**Pn**	**09 53 39.0**	**-0.4**
AK16	**Malin Array Si**	**14.29**	**23**	P		**Pn**	**09 53 39.1**	**-0.4**
AK09	**Malin Array Si**	**14.30**	**24**	P		**Pn**	**09 53 39.3**	**-0.4**
AK08	**Malin Array Si**	**14.31**	**24**	P		**Pn**	**09 53 39.3**	**-0.4**
AK19	**Malin Array Si**	**14.31**	**23**	P		**Pn**	**09 53 39.3**	**-0.5**
AK11	**Malin Array Si**	**14.32**	**23**	P		**Pn**	**09 53 39.5**	**-0.4**
AKASG	**Malin Array Be**	**14.36**	**23**	P		**Pn**	**09 53 40.0**	**-0.4**
	1.0nm,0.3s,baz=216,slow=12,SNR=6.1							
AKASG				LR		LR	10 00 29.3	
	comp=Z,179nm,18.4s,baz=290,slow=43							
	1.2nm,0.5s							
ESDC	**Sonsa Array**	**19.01**	**283**	P		**Pn**	**09 54 41.3**	**+1.6**
	0.1nm,0.3s,baz=83,slow=9.8,SNR=2.1							
	0.4nm,0.7s							
GNI	**Garni**	**19.12**	**75**	LR		LR	10 03 35.4	
	comp=Z,61nm,18.5s,baz=294,slow=42							
HFS	**Hagfors**	**22.73**	**351**	P		**P**	**09 55 18.9**	**+0.2**
	5.8nm,0.6s,baz=156,slow=11,SNR=14							
	5.8nm,0.6s							
NC602	**NORSAR Array S**	**23.59**	**349**	P		**P**	**09 55 28.3**	**+0.8**
NC602				IAmb		IAmb	09 55 54.8	
	comp=Z,24nm,1.4s							
EKA	**Eskdalemuir Ar**	**23.62**	**325**	P		**P**	**09 55 27.4**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=124,slow=11,SNR=4.5							
	comp=Z,2.3nm,0.7s							
NAO01	**NORSAR Array S**	**23.80**	**349**	P		**P**	**09 55 29.8**	**+0.3**
NAO01				IAmb		IAmb	09 55 31.1	
	comp=Z,11nm,0.8s							
FINES	**FINESS Array B**	**23.92**	**7**	P		**P**	**09 55 30.6**	**0.0**
	comp=Z,5.3nm,0.5s,baz=176,slow=9.2,SNR=46							
	comp=Z,5.3nm,0.5s							
FINES	**FINESS Array B**	**23.92**	**7**	P		**P**	**09 55 30.1**	**-0.5**
FIA1	**FINESS Array S**	**23.92**	**7**	P		**P**	**09 55 30.3**	**-0.3**
NC405	**NORSAR Array S**	**23.93**	**350**	P		**P**	**09 55 31.5**	**+0.8**
NC405				IAmb		IAmb	09 56 10.3	
	comp=Z,15nm,1.1s							
NB2	**NORSAR Subarra**	**23.93**	**349**	P		**P**	**09 55 31.7**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=152,slow=9.3							
NOA	**NORSAR Array B**	**23.93**	**349**	P		**P**	**09 55 31.6**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=162,slow=8.0,SNR=11							
	comp=Z,1.9nm,0.7s							
NC303	**NORSAR Array S**	**24.09**	**349**	P		**P**	**09 55 32.8**	**+0.6**
NC303				IAmb		IAmb	09 55 33.8	
	comp=Z,11nm,0.7s							
TORD	**Torodi Ar. Bea**	**29.65**	**219**	P		**P**	**09 56 23.8**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=33,slow=12,SNR=2.6							
	comp=Z,1.0nm,0.3s							
AB31	**Akbulak array**	**30.58**	**55**	P		**P**	**09 56 29.2**	**-1.3**
ABKAR	**Akbulak array**	**30.58**	**55**	P		**P**	**09 56 29.1**	**-1.4**
ARCES	**ARCESS Array B**	**31.90**	**3**	P		**P**	**09 56 42.2**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=189,slow=11,SNR=21							
	comp=Z,1.2nm,0.5s							
ARCES	**ARCESS Array B**	**31.90**	**3**	P		**P**	**09 56 42.3**	**+0.4**
KEV	**Kevo**	**32.20**	**4**	P		**P**	**09 56 45.1**	**+0.6**
KK31	**Karatay Array**	**38.09**	**66**	P		**P**	**09 57 35.6**	**-0.1**
KKAR	**Karatay Array**	**38.09**	**66**	P		**P**	**09 57 35.4**	**-0.3**
DBIC	**Dimbokro**	**38.52**	**223**	LR		LR	10 14 13.8	
	comp=Z,46nm,19.4s,baz=3.5,slow=37							
KURBB	**Kurchatov Arra**	**42.58**	**53**	P		**P**	**09 58 11.4**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=280,slow=8.5,SNR=6.2							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**45.63**	**58**	P		**P**	**09 58 36.4**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=277,slow=7.5,SNR=13							
	comp=Z,1.8nm,0.6s							
MKAR	**Makanchi Array**	**45.63**	**58**	P		**P**	**09 58 36.9**	**-0.3**
ZAA0	**Zalesovo Array**	**46.05**	**48**	P		**P**	**09 58 39.7**	**-0.7**
ZALV	**Zalesovo Beam**	**46.05**	**48**	P		**P**	**09 58 39.1**	**-1.3**
	comp=Z,2.4nm,0.4s,baz=274,slow=8.8,SNR=12							
	comp=Z,2.4nm,0.4s							
ZALV	**Zalesovo Beam**	**46.05**	**48**	P		**P**	**09 58 39.8**	**-0.6**
SONM	**Songino Array**	**60.81**	**50**	P		**P**	**10 00 27.2**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=273,slow=5.8,SNR=3.6							
	comp=Z,0.5nm,0.4s							
YAK	**Yakutsk**	**65.50**	**29**	LR		LR	10 30 38.2	
	comp=Z,28nm,19.0s,baz=276,slow=37							
BOSA	**Boshof**	**66.25**	**175**	LR		LR	10 31 23.7	
	comp=Z,38nm,18.3s,baz=25,slow=37							
I30M	**Mount Dempster**	**75.68**	**350**	P		**P**	**10 02 03.1**	**+1.3**
I30M				IAmb		IAmb	10 02 10.9	
	comp=Z,2.8nm,0.9s							
I28M	**Miner Creek**	**75.91**	**352**	P		**P**	**10 02 03.7**	**+0.6**
J30M	**Hart River**	**76.29**	**350**	P		**P**	**10 02 06.1**	**+0.8**
DAWY	**Dawson**	**77.18**	**351**	P		**P**	**10 02 11.4**	**+1.1**
DAWY				IAmb		IAmb	10 02 52.4	
	comp=Z,5.1nm,1.3s							

*IDC **19** 09:51:01.2±8.6,20°.26S×177°.61W,h469km±100km, mb3.5/7,mbtmp4.3/8,Error ellipse: s-maj=55.6km s-min=25.7km az=179.0*

*NEIC **19** 09:51:04.7±0.8,20°.3S±0°.2×177°.5W±0°.1,h517km±11km, mb4.1/17,Error ellipse: s-maj=22.4km s-min=16.8km az=158.0*

ISC 19 09:51:04.1±0.6,**20°.3S**±0°.1×**177°.58W**±0°.10,**h500**km,**n32,**
σ1=**25**/32,**mb4.1**/17,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.88**	**301**	P	**P**		**09 52 31.9**	**+1.8**
NIUE	**Niue**	**7.32**	**81**	P	**P**		**09 52 53.0**	**-0.5**
FUNA	**Funafuti**	**12.15**	**345**	P	**P**		**09 53 44.5**	**+0.1**
PINNC	**Pines Island,**	**14.12**	**258**	P	**P**		**09 54 06.0**	**+1.0**
URZ	**Urewera**	**18.44**	**193**	P	**P**		**09 54 46.8**	**-1.5**
	9.1nm,0.9s,baz=236,slow=3.9,SNR=6.3							
BKZ	**Black Stump Fm**	**19.44**	**194**	P	**P**		**09 54 55.6**	**-1.9**
ARMA	**Armidale**	**29.49**	**244**	P	**P**		**09 56 27.7**	**+0.5**
ARMA				IAmb	IAmb		09 56 45.5	
	comp=Z,4.6nm,1.0s							
CTAO	**Charters Tower**	**33.90**	**264**	P	**P**		**09 57 04.6**	**-0.3**
CTAO				IAmb	IAmb		09 57 05.5	
	comp=Z,4.3nm,0.7s							
STKA	**Stephens Creek**	**38.21**	**244**	P	**P**		**09 57 40.3**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=87,slow=10.0,SNR=9.4							
	comp=Z,2.0nm,0.5s							
WR8	**Warramunga Arr**	**44.86**	**262**	P	**P**		**09 58 32.2**	**-1.3**

AS31	**Alice Springs**	**44.94**	**257**			**P**	**09 58 33.1**	**-0.9**
AS31				IAmb		IAmb	09 58 33.8	
	comp=Z,3.3nm,0.5s							
ASAR	**Alice Springs**	**44.94**	**257**	P		**P**	**09 58 33.2**	**-0.9**
	comp=Z,10nm,0.5s,baz=96,slow=7.5,SNR=261							
ASAR				PcP		**PcP**	**10 00 04.1**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=89,slow=3.8,SNR=4.7							
	comp=Z,10nm,0.5s							
ASAR	**Alice Springs**	**44.94**	**257**			**P**	**09 58 33.4**	**-0.7**
WB0	**Warramunga Arr**	**44.99**	**262**	P		**P**	**09 58 33.2**	**-1.3**
WB0				IAmb		IAmb	09 58 33.8	
	comp=Z,6.0nm,0.8s							
WB2	**Warramunga Arr**	**45.00**	**262**	P		**P**	**09 58 33.5**	**-1.1**
WB2				IAmb		IAmb	09 58 34.0	
	comp=Z,6.5nm,0.9s							
WRAB	**Tennant Creek**	**45.00**	**262**	P		**P**	**09 58 33.4**	**-1.2**
WRAB				IAmb		IAmb	09 58 33.9	
	comp=Z,5.7nm,0.9s							
WRA	**Warramunga Arr**	**45.01**	**262**	P		**P**	**09

SUF				smax	smax	10 02 00.1
	comp=Z,3.1nm,0.2s					
TOF	**Tornio**	**2.92**	**301**	PB	**Pn**	**10 01 26.5 +2.2**
TOF				smax	smax	10 02 05.2
	comp=Z,2.6nm,0.2s					
TOF				SG	**Sb**	**10 02 06.3 +0.6**
VRF	**Varrio**	**3.09**	**354**	PN	**Pn**	**10 01 27.3 +0.7**
VRF				smax	smax	10 02 07.3
	comp=Z,2.6nm,0.2s					
VRF				SG	**Sb**	**10 02 12.3 +1.7**
APA0	**Apatity Array**	**3.10**	**18**	P	**Pn**	**10 01 27.2 +0.5**
APA0				S	**Sn**	**10 02 04.2 -0.3**
KALU	**Kalix**	**3.21**	**295**	PB	**Pn**	**10 01 31.0 +2.8**
RUF	**Ruokolahti**	**3.35**	**192**	PN	**Pn**	**10 01 31.3 +1.1**
	baz=14					
KEF	**Keuruu**	**3.56**	**227**	PB	**Pn**	**10 01 36.4 +3.3**
	baz=47					
LVZ	**Lovozero**	**3.64**	**26**	S	**Sn**	**10 02 16.2 -1.6**
LVZ	**Lovozero**	**3.64**	**26**	PB	**Pn**	**10 01 36.8 +2.6**
KLF	**Kolari**	**3.68**	**317**	PN	**Pn**	**10 01 37.2 +2.4**
KLF				SG	**Sg**	**10 02 33.7 -1.2**
FINES	**FINESS Array B**	**3.82**	**213**	Pn	**Pn**	**10 01 37.6 +1.0**
	comp=Z,0.2nm,0.3s,baz=35,slow=14,SNR=8.8					
FINES				Sn	**Sn**	**10 02 25.4 +3.3**
	comp=Z,0.3nm,0.3s,baz=33,slow=23,SNR=3.5					
FINES				Lg	Lg	10 02 34.8
	comp=Z,1.0nm,0.3s,baz=24,slow=28,SNR=8.8					
	comp=Z,1.8nm,0.9s					
VAF	**Ylistaro**	**3.82**	**248**	PB	**Pb**	**10 01 41.3 -3.5**
RAJF	**Raja-Jooseppi**	**3.90**	**348**	PN	**Pn**	**10 01 38.3 +0.7**
RAJF				SN	**Sn**	**10 02 24.5 +0.5**
ERTU	**Ertsjaerv**	**3.90**	**302**	PN	**Pn**	**10 01 40.2 +2.4**
UMAU	**Umeaa**	**4.34**	**264**	PN	**Pn**	**10 01 44.5 +0.8**
VJF	**Virojoki**	**4.38**	**199**	SG	**Sb**	**10 02 52.0 +4.4**
HEF	**Hetta**	**4.61**	**327**	PN	**Pn**	**10 01 49.5 +2.0**
TERR	**Teriberka**	**4.88**	**20**	S	**Sn**	**10 02 45.4 -3.0**
ARCES	**ARCESS Array B**	**5.23**	**341**	Pn	**Pn**	**10 01 56.4 +0.3**
	comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=29					
ARCES				Sn	**Sn**	**10 02 54.4 -2.6**
	comp=Z,0.2nm,0.3s,baz=161,slow=23,SNR=5.0					
ARCES				Lg	Lg	10 03 19.7
	comp=Z,0.3nm,0.3s,baz=159,slow=28,SNR=5.8					
	comp=Z,0.5nm,0.3s					
ARCES	**ARCESS Array B**	**5.23**	**341**	P	**Pn**	**10 01 56.4 +0.3**
ARCES				S	**Sn**	**10 02 54.8 -2.2**
VADS	**Vadso**	**5.47**	**356**	S	**Sn**	**10 03 01.2 -1.6**
FAUS	**Fauske**	**6.74**	**300**	S	**Sn**	**10 03 34.9 +0.9**
I43RU	**DUBNA INFRASON**	**8.65**	**154**	I	I	10 52 40.0
	baz=344,slow=325,SNR=3.2					
HFS	**Hagfors**	**9.01**	**247**	Pn	**Pn**	**10 02 47.1 -0.6**
	comp=Z,0.2nm,0.3s,baz=56,slow=13,SNR=4.1					
HFS				Sn	**Sn**	**10 04 25.8 -3.9**
	comp=Z,0.2nm,0.3s,baz=56,slow=25,SNR=1.6					
	comp=Z,0.5nm,0.3s					
NOA	**NORSAR Array B**	**9.51**	**256**	Pn	**Pn**	**10 02 55.8 +1.2**
	baz=66,slow=12,SNR=1.7					
NOA				Sn	**Sn**	**10 04 38.4 -3.6**
	baz=39,slow=19,SNR=1.8					
	comp=Z,0.6nm,0.7s					

*HEL **19** 10:02:14.7±0.0,64.49N×20.88E,h6km,ML1.4, ML1.8(UPP),Confirmed Earthquake*

UPP 19 10:02:14.6±0.0,64.49N×20.87E,h9km±4km,ML1.8,2C-4D, Confirmed Earthquake,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODEU	**Stanfors**	**0.11**	**220**	⇓P	Pg	10 02 16.8	-0.4
ODEU				S	Sg	10 02 18.5	-0.5
ODEU	**Stanfors**	**0.11**	**220**	⇓*i*P	Pg	10 02 16.8	-0.4
ODEU				*i* S	Sg	10 02 18.5	-0.5
BURU	**Burvik**	**0.24**	**66**	⇓P	Pg	10 02 19.1	-0.3
BURU				S	Sg	10 02 22.4	-0.3
BURU	**Burvik**	**0.24**	**66**	SN	Sg	10 02 22.3	-0.4
BURU	**Burvik**	**0.24**	**66**	⇓*i*P	Pg	10 02 19.1	-0.3
BURU				*i* S	Sg	10 02 22.4	-0.3
UMAU	**Umeaa**	**0.61**	**188**	⇑P	Pg	10 02 25.8	-0.7
UMAU				S	Sg	10 02 33.4	-1.0
UMAU	**Umeaa**	**0.61**	**188**	⇑*i*P	Pg	10 02 25.8	-0.7
UMAU				*i* S	Sg	10 02 33.4	-1.0
UMAU	**Umeaa**	**0.61**	**188**	SN	Sg	10 02 33.3	-1.2
SJUU	**Sjulsmark**	**1.07**	**17**	P	Pg	10 02 34.5	-0.6
SJUU				S	Sg	10 02 48.3	-0.7
SJUU	**Sjulsmark**	**1.07**	**17**	*e*P	Pg	10 02 34.5	-0.6
SJUU				*e*S	Sg	10 02 48.3	-0.7
BREU	**Bredtraesk**	**1.17**	**240**	P	Pb	10 02 35.8	-1.2
BREU				S	Sb	10 02 50.8	-1.3
BREU	**Bredtraesk**	**1.17**	**240**	*e*P	Pb	10 02 35.8	-1.2
BREU				*e*S	Sb	10 02 50.8	-1.3
OBF0	**Syolatti, Pyha**	**1.46**	**88**	*e*PG	Pn	10 02 40.7	-0.3
OBF0				*e*SG	Sn	10 02 59.4	-0.7
OUF	**Merijarvi**	**1.68**	**92**	*e*PN	Pn	10 02 44.4	+0.3
OUF				*e*SG	Sn	10 03 06.0	+0.3
OUF				smax	smax	10 03 07.0	
	comp=Z,1.2nm,0.1s						
HARU	**Harads**	**1.68**	**1**	P	Pn	10 02 44.5	+0.4
HARU				S	Sb	10 03 06.4	-0.5
HARU	**Harads**	**1.68**	**1**	*e*PN	Pn	10 02 44.5	+0.4
HARU				*e*SN	Sb	10 03 06.4	-0.5
OBF4	**Vikkela, Lumij**	**1.85**	**78**	*e*PN	Pn	10 02 47.4	+1.0
OBF4				*e*SB	Sb	10 03 10.8	-0.9
TOF	**Tornio**	**2.16**	**41**	*e*SB	Sb	10 03 19.4	-1.1
TOF				smax	smax	10 03 22.7	
	comp=Z,1.9nm,0.1s						
OUL	**Oulu**	**2.23**	**72**	*e*S	Sn	10 03 20.4	+1.1
OUL				smax	smax	10 03 24.7	
	comp=Z,1.9nm,0.1s						

TAP 19 10:07:03.7,24.20N×122.09E,h49km,ML2.6,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EAHA	**Aohua**	**0.34**	**292**	*e*P	Pn	10 07 13.5	+0.4
EAHA				*e*S	Sn	10 07 20.6	+0.7
EWUT	**Wuta**	**0.37**	**311**	P	Pn	10 07 13.6	+0.1
EWUT				*e*S	Sn	10 07 20.8	+0.4
ENA	**Nanau**	**0.39**	**306**	P	Pn	10 07 14.0	+0.4
ENA				S	Sn	10 07 21.4	+0.7
ETL	**Fush Village**	**0.43**	**264**	*e*P	Pn	10 07 14.0	-0.1
ETL				*e*S	Sn	10 07 21.8	+0.3
ESAO	**Su ao**	**0.43**	**329**	*e*P	Pn	10 07 14.1	0.0
ESAO				*e*S	Sn	10 07 21.6	+0.1
NACB	**Ninganchiao**	**0.45**	**267**	P	Pn	10 07 14.2	-0.1
NACB				S	Sn	10 07 21.7	-0.2
TWC	**Suao**	**0.46**	**332**	*e*P	Pn	10 07 14.6	+0.1
TWC				*e*S	Sn	10 07 21.8	-0.3
TWD	**Chiawan**	**0.47**	**255**	P	Pn	10 07 14.4	-0.1
TWD				S	Sn	10 07 22.0	-0.1
NDS	**Dongshan**	**0.55**	**322**	*e*P	Pn	10 07 16.1	+0.6
ETLH	**Xiulin Townshi**	**0.55**	**271**	*e*P	Pn	10 07 15.5	-0.1
ETLH				*e*S	Sn	10 07 24.5	+0.3
ETM	**Tongmen**	**0.59**	**247**	P	Pn	10 07 15.7	-0.3
ETM				*e*S	Sn	10 07 25.0	+0.1
LATG	**Datong**	**0.61**	**303**	*i* P	Pn	10 07 16.7	+0.3
LXIB	**Xiulin Townshi**	**0.64**	**254**	*e*P	Pn	10 07 17.0	+0.2
LXIB				*i* S	Sn	10 07 26.3	0.0
TWE	**Neicheng**	**0.64**	**324**	*i* P	Pn	10 07 17.2	+0.5
ENTT	**Nioudou**	**0.65**	**313**	P	Pn	10 07 17.1	+0.4
NNSB	**Datong**	**0.68**	**290**	*i* P	Pn	10 07 17.5	+0.2
NNSB				S	Sn	10 07 27.7	+0.6
NNS	**Nan Shan**	**0.69**	**290**	P	Pn	10 07 18.0	+0.6
NNS				*e*S	Sn	10 07 28.3	+0.9
TEGC	**Jichi Village**	**0.70**	**226**	*e*S	Sn	10 07 26.9	-0.4
ESL	**Shilin**	**0.71**	**237**	*e*P	Pn	10 07 17.4	-0.1
ESL				*e*S	Sn	10 07 27.6	0.0
FUSB	**Fushanzhiwuyua**	**0.72**	**321**	*i* P	Pn	10 07 18.1	+0.3
FUSB				*i* S	Sn	10 07 29.0	+1.1
WHF	**Hehuan Shan**	**0.75**	**266**	*e*P	Pn	10 07 18.9	+0.4
WHF				*e*S	Sn	10 07 29.0	-0.2
FUSS	**Fushou**	**0.77**	**274**	*e*P	Pn	10 07 19.4	+0.8
FUSS				S	Sn	10 07 30.4	+1.0
NWLT	**Wulai**	**0.78**	**317**	*e*P	Pn	10 07 19.5	+1.0
NWLT				*e*S	Sn	10 07 30.3	+0.9
YHNB	**Yeheng**	**0.80**	**306**	*i* P	Pn	10 07 19.7	+0.9
YHNB				S	Sn	10 07 30.6	+0.8
WARBT	**Fenglin Townsh**	**0.80**	**233**	*e*P	Pn	10 07 18.6	-0.1
WARBT				S	Sn	10 07 29.6	-0.1
TIPB	**Shuangxi**	**0.80**	**343**	*e*S	Sn	10 07 31.3	+1.5
NSK	**Sanguang**	**0.82**	**306**	*i* P	Pn	10 07 19.6	+0.6
NSK				S	Sn	10 07 30.7	+0.6
OWD	**Renai**	**0.87**	**254**	*e*P	Pn	10 07 20.1	+0.3
OWD				*e*S	Sn	10 07 31.4	-0.1
SXI1	**Grass Mountain**	**0.91**	**348**	*i* P	Pn	10 07 20.6	+0.4
SXI1				S	Sn	10 07 33.2	+0.8
WUSB	**Renai**	**0.91**	**257**	P	Pn	10 07 20.8	+0.4
WUSB				*e*S	Sn	10 07 32.6	+0.1
VWDT	**VWDT**	**0.97**	**243**	P	Pn	10 07 21.4	+0.3
VWDT				*e*S	Sn	10 07 34.3	+0.5
NFF	**Wufeng Townshi**	**0.98**	**296**	*e*P	Pn	10 07 23.3	+2.1
WHP	**Taichung City**	**1.04**	**274**	*e*P	Pn	10 07 24.5	+2.4
WHP				*e*S	Sn	10 07 37.4	+1.7
YULB	**Yu-li**	**1.08**	**222**	P	Pn	10 07 22.1	-0.5

JMA 19 10:07:29.0±0.3,23.8N±0.9×122.9E±0.6,h21km±4km, MV3.8/12,NEAR ISHIGAKIJIMA ISLAND,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.64**	**1**	P	Pb	10 07 41.3	-0.2
JYNG				S	Sb	10 07 50.1	+0.2
YOJ	**Yonaguni jima**	**0.65**	**6**	P	Pb	10 07 41.5	-0.2
YOJ				S	Sb	10 07 50.5	+0.1
HATJ	**Hateruma jima**	**0.83**	**73**	*i* P	Pb	10 07 44.3	-0.4
HATJ				S	Sb	10 07 55.5	0.0
IRIF	**Iriomote-Funau**	**0.89**	**54**	*i* P	Pb	10 07 45.5	-0.3
JKRS	**Kuro-shima**	**1.07**	**66**	*i* P	Pb	10 07 48.9	+0.1
JKRS				S	Sn	10 08 02.9	-0.1
JIJ	**Ishigaki jima**	**1.23**	**63**	P	Pn	10 07 50.9	-0.1
JIJ				*e*S	Sb	10 08 07.0	0.0
JISG	**Ishigakijimahi**	**1.47**	**58**	P	Pn	10 07 54.6	+0.3
JISG				S	Sn	10 08 13.1	+0.2
JTJ	**Tarama**	**1.81**	**63**	*e*P	Pb	10 08 00.3	-1.1

*NEIC **19** 10:11:09.7±1.0,19.0S±0.2×177.60W±0.02,h539km±13km, mb4.1/18,Error ellipse: s-maj=25.8km s-min=3.1km az=177.0*
*IDC **19** 10:11:11.0±5.1,19.38S×177.55W,h563km±61km,mb3.1/6, mbtmp4.1/8,Error ellipse: s-maj=32.8km s-min=25.7km az=3.0*

ISC 19 10:11:11.1±0.7,19.2S±0.1×177.6W±0.1,h570km,n35, σ1s29/34,mb4.0/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.42**	**289**	P	P	10 12 33.3	-4.4
NIUE	**Niue**	**7.23**	**90**	P	**P**	**10 12 58.8**	**-3.3**
MARNC	**Mare, Loyalty**	**13.69**	**258**	P	**P**	**10 14 04.7**	**-2.5**
PINNC	**Pines Island,**	**14.39**	**254**	P	**P**	**10 14 12.6**	**-1.7**
SANVU	**Saraoutou**	**15.02**	**282**	P	**P**	**10 14 18.5**	**-2.0**
DZM	**Mont Dzumac**	**15.22**	**257**	P	**P**	**10 14 23.7**	**+1.2**
	3.6nm,0.7s,baz=49,slow=14,SNR=1.8						
URZ	**Urewera**	**19.51**	**193**	P	**P**	**10 14 59.8**	**-1.8**
	2.5nm,0.3s,baz=293,slow=3.0,SNR=8.2						
WHZ	**Wether Hill Ro**	**29.15**	**201**	P	**P**	**10 16 29.1**	**+2.2**
CTAO	**Charters Tower**	**34.03**	**262**	P	**P**	**10 17 08.5**	**-0.4**
CTAO				IAmb	IAmb	10 17 23.9	
	comp=Z,4.2nm,0.9s						
STKA	**Stephens Creek**	**38.71**	**243**	P	**P**	**10 17 47.9**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=84,slow=7.3,SNR=2.9						
	comp=Z,1.0nm,0.4s						
BBOO	**Buckleboo**	**43.48**	**242**	P	**P**	**10 18 25.6**	**+0.7**
BBOO				IAmb	IAmb	10 18 36.0	
	comp=Z,16nm,1.4s						
WR8	**Warramunga Arr**	**45.03**	**261**	P	**P**	**10 18 37.1**	**0.0**
WB0	**Warramunga Arr**	**45.16**	**261**	P	**P**	**10 18 38.3**	**+0.2**
WB0				IAmb	IAmb	10 18 56.0	
	comp=Z,5.6nm,1.4s						
WRAB	**Tennant Creek**	**45.18**	**261**	P	**P**	**10 18 38.2**	**0.0**
WRAB				IAmb	IAmb	10 18 43.5	
	comp=Z,5.3nm,1.3s						
WRA	**Warramunga Arr**	**45.19**	**261**	P	**P**	**10 18 38.0**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=97,slow=7.4,SNR=54						
WRA				PcP	**PcP**	**10 20 07.5**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=95,slow=3.3,SNR=1.3						
	comp=Z,1.3nm,0.4s						
WRA	**Warramunga Arr**	**45.19**	**261**	P	**P**	**10 18 38.2**	**0.0**
AS31	**Alice Springs**	**45.21**	**255**	P	**P**	**10 18 38.5**	**+0.1**
ASAR	**Alice Springs**	**45.21**	**255**	P	**P**	**10 18 38.5**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=88,slow=8.1,SNR=30						
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**45.21**	**255**	P	**P**	**10 18 37.4**	**-1.0**
MAJO	**Matsushiro**	**69.45**	**323**	P	**P**	**10 21 21.7**	**-1.2**
PETK	**Petropavlovsk-**	**75.17**	**345**	P	**P**	**10 21 56.4**	**+1.0**
	comp=Z,5.2nm,1.1s,baz=160,slow=6.0,SNR=3.5						
	comp=Z,5.2nm,1.1s						
GHO	**Glory Hole Cre**	**83.91**	**13**	P	**P**	**10 22 41.9**	**+0.6**
N25K	**Chitina, Valde**	**84.77**	**15**	P	**P**	**10 22 46.2**	**+0.7**
N25K				IAmb	IAmb	10 22 50.4	
	comp=Z,10nm,1.4s						
GLB	**Gilahina Butte**	**84.83**	**16**	P	**P**	**10 22 46.1**	**+0.3**
GLB				IAmb	IAmb	10 23 08.3	
	comp=Z,10.0nm,1.4s						
TRF	**Thorofare Moun**	**85.14**	**12**	P	**P**	**10 22 46.9**	**-0.5**
TRF				IAmb	IAmb	10 22 48.5	
	comp=Z,5.2nm,1.0s						
TXAR	**Lajitas Array**	**86.04**	**57**	P	**P**	**10 22 55.0**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=221,slow=5.9,SNR=6.4						
	comp=Z,0.4nm,0.7s						
WRH	**Wood River Hil**	**86.49**	**12**	P	**P**	**10 22 54.0**	**+0.4**
WRH				IAmb	IAmb	10 23 04.8	
	comp=Z,5.6nm,1.3s						
CCB	**Clear Creek Bu**	**86.71**	**12**	P	**P**	**10 22 54.9**	**+0.3**
CCB				IAmb	IAmb	10 23 08.9	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**87.00**	**13**	P	**P**	**10 22 55.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=228,slow=4.9,SNR=13						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**87.00**	**13**	P	**P**	**10 22 57.0**	**+1.0**
E19K	**Redstone River**	**87.75**	**8**	P	**P**	**10 23 00.3**	**+0.9**
E19K				IAmb	IAmb	10 23 28.2	
	comp=Z,6.6nm,1.1s						
F26K	**Sheenjek River**	**90.10**	**12**		**P**	**10 23 10.1**	**-0.3**
F31M	**Tsiigehtchic**	**92.25**	**16**	P	**P**	**10 23 21.2**	**+1.0**
ARCES	**ARCESS Array B**	**127.76**	**350**	PKP	**PKPdf**	**10 29 12.7**	**+1.0**
	comp=Z,3.9nm,0.9s,baz=30,slow=2.7,SNR=2.4						
EKA	**Eskdalemuir Ar**	**143.72**	**5**	PKP	PKPab	10 29 40.2	-0.4
	comp=Z,0.8nm,0.4s,baz=324,slow=3.0,SNR=5.3						

*LDG **19** 10:19:35.6±0.1,47.13N×0.35W,h2km,Md2.1/1,Ml2.6/14, Error ellipse: s-maj=2.1km s-min=1.4km az=37.0*
*STR **19** 10:19:36.3±0.0,47.1N±0.4×0.4W±0.3,h2km,MLv2.3/7, LOCSAT earthModelID haslach_taup-2.11 preliminary*

ISC 19 10:19:35.0±1.1,47.11N±0.02×0.33W±0.03,h8km±10km, n21,σ0s87/39,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GIZF	**Gizeux - Indre**	**0.47**	**50**	Pg	**Pb**	**10 19 45.8**	**+0.2**
MFF	**Saint Martin d**	**0.52**	**166**	*e*Pg	**Pb**	**10 19 45.8**	**-0.6**
MFF	**Saint Martin d**	**0.52**	**166**	*e*Pg	**Pb**	**10 19 45.9**	**-0.5**
	baz=346						
MFF				*e*Sg	**Sg**	**10 19 52.8**	**+0.9**
	4.6nm,0.2s						
MFF				*e*Sg	**Sg**	**10 19 52.8**	**+0.9**
	6.4nm,0.2s						
SDOF	**Saint-Denis-d'**	**1.29**	**215**	Pg	**Pg**	**10 20 00.6**	**+0.7**
SDOF				Sg	**Sn**	**10 20 17.1**	**+0.2**
GRR	**Gorron**	**1.33**	**345**	*e*Pg	**Pg**	**10 20 00.4**	**-0.2**
GRR				*e*Sg	**Sb**	**10 20 16.4**	**-1.1**
	21nm,0.2s						
BEGF	**Beganne - 5601**	**1.41**	**292**	Pg	**Pg**	**10 20 01.6**	**-0.4**
BEGF				Sg	**Sb**	**10 20 19.3**	**-0.3**
LDF	**La Druitiere**	**1.50**	**5**	*e*Pg	**Pb**	**10 20 03.2**	**+0.1**
LDF				*e*Sg	**Sn**	**10 20 21.6**	**-0.3**
	15nm,0.2s						
FLN	**La Foliniere**	**1.66**	**357**	*e*Pg	**Pg**	**10 20 06.7**	**-0.2**
	baz=184						
FLN				*e*Sg	**Sb**	**10 20 27.1**	**+0.1**
	14nm,0.2s						
LOUF	**Saint-Loup**	**1.70**	**338**	Pg	**Pg**	**10 20 07.3**	**-0.2**
LOUF				Sg	**Sg**	**10 20 29.2**	**-0.4**
CLEV	**Clevilliers**	**1.85**	**38**	Sg	**Sg**	**10 20 35.1**	**+0.6**
SGMF	**Saint Gilles**	**1.89**	**308**	*e*Pg	**Pb**	**10 20 09.5**	**-0.3**
SGMF				*e*Sg	**Sb**	**10 20 32.9**	**-0.7**
	5.3nm,0.3s						
TCF	**Toulx Ste Croi**	**1.93**	**114**	*e*Pg	**Pg**	**10 20 12.2**	**+0.1**
TCF				*e*Sg	**Sg**	**10 20 36.3**	**-0.8**
	15nm,0.4s						
QUIF	**Quistinic**	**2.08**	**294**	*e*Pg	**Pb**	**10 20 13.6**	**+0.5**
QUIF				*e*Sg	**Sb**	**10 20 38.6**	**-0.5**
	5.3nm,0.2s						
RJF	**Les Rejaudoux**	**2.21**	**144**	*e*Pg	**Pg**	**10 20 16.8**	**-0.6**
RJF				*e*Sg	**Sg**	**10 20 45.5**	**-0.6**
	3.5nm,0.2s						
LFF	**La Frestale**	**2.29**	**161**	*e*Sg	**Sg**	**10 20 48.0**	**-0.6**
	4.4nm,0.2s						
ROSF	**Rostrenen**	**2.34**	**303**	*e*P	**Pn**	**10 20 14.8**	**+1.1**
ROSF				*e*Sg	**Sb**	**10 20 46.7**	**+0.3**
AVF	**Avril sur Loir**	**2.54**	**96**	*e*Pg	**Pg**	**10 20 23.0**	**-0.8**
AVF				*e*Sg	**Sb**	**10 20 53.9**	**+1.5**
	1.5nm,0.1s						
SSF	**Saint Saulge**	**2.62**	**90**	*e*Pg	**Pg**	**10 20 24.6**	**-0.7**
SSF				*e*Sg	**Sg**	**10 20 57.9**	**-1.4**
	2.3nm,0.2s						
CAF	**Calviac**	**2.75**	**142**	*e*Pg	**Pg**	**10 20 27.2**	**-0.4**
CAF				*e*Sn	**Sn**	**10 20 51.1**	**-1.7**
CAF				*e*Sg	**Sg**	**10 21 02.1**	**-1.1**
	2.4nm,0.2s						
LOR	**Lormes**	**2.86**	**85**	*e*Pg	**Pg**	**10 20 29.7**	**-0.2**
	baz=266						
LOR				*e*Sg	**Sb**	**10 21 04.3**	**+2.7**
	3.0nm,0.3s						
SMF	**Signal de Mont**	**2.90**	**98**	*e*Pg	**Pg**	**10 20 30.4**	**-0.2**

*IDC **19** 10:22:38.8±4.7,4.67S×151.89E,h152km±41km,mb3.3/5, mbtmp3.7/6,Error ellipse: s-maj=60.7km s-min=26.7km az=122.0*

ISC 19 10:22:39.0±1.2,4.7S±0.3×151.9E±0.3,h153km,n7, σ1s04/8,mb3.6/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.64**	**224**	P	**Pn**	**10 24 15.2**	**+0.8**
	4.0nm,0.4s,baz=32,slow=16,SNR=2.4						
PMG				S	**Sn**	**10 25 28.2**	**-0.9**
	15nm,0.5s,baz=192,slow=22,SNR=6.5						
WRA	**Warramunga Arr**	**22.86**	**227**	P	**P**	**10 27 29.2**	**-0.1**
	1.5nm,0.3s,baz=50,slow=10,SNR=77						
	1.5nm,0.3s						
ASAR	**Alice Springs**	**25.64**	**221**	P	**P**	**10 27 55.1**	**+0.4**
	0.3nm,0.4s,baz=53,slow=9.1,SNR=7.9						
	0.3nm,0.4s						
SONM	**Songino Array**	**65.71**	**328**	P	**P**	**10 33 08.1**	**+0.7**
	0.7nm,0.7s,baz=145,slow=5.3,SNR=3.6						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**82.38**	**22**	P	**P**	**10 34 42.8**	**-0.8**
	0.3nm,0.6s,baz=241,slow=5.0,SNR=7.8						
	0.3nm,0.6s						
NVAR	**Mina Array Bea**	**92.73**	**52**	P	**P**	**10 35 35.0**	**+0.6**
	0.3nm,0.6s,baz=297,slow=4.1,SNR=2.2						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.38**	**288**	PKPbc	**PKPbc**	**10 42 09.6**	**-1.5**
	1.5nm,0.3s,baz=58,slow=4.8,SNR=1.6						

*IDC **19** 10:41:06.6±1.2,1.71N×126.42E,h0km,mb4.0/7, mbtmp3.9/8,ML3.8/1,MS3.3/1,Error ellipse: s-maj=124.1km s-min=16.3km az=70.0*
*DJA **19** 10:41:10.4±0.3,2.1N±3.3×12.6E±1.1,h10km,M3.9/8,MLv3.9/8*
*NEIC **19** 10:41:12.2±1.1,1.72N±0.06×126.50E±0.09,h35km±1km, mb4.1/12,Error ellipse: s-maj=17.5km s-min=5.1km az=236.0*

ISC 19 10:41:12.0±0.7,1.69N±0.07×126.52E±0.07,h35km,n33, σ0s94/34,mb4.1/11,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**137**		**Pn**	**10 41 33.2**	**+0.3**
TNTI	**Ternate**	**1.25**	**137**	P	**Pn**	**10 41 33.4**	**+0.5**
TNTI				S	**Sn**	**10 41 50.1**	**+1.6**
SGSI	**Sangihe**	**2.22**	**334**	P	**Pn**	**10 41 48.1**	**+1.8**
KMSI	**Cibinong**	**2.77**	**246**	P	**Pn**	**10 41 55.4**	**+1.5**
LUWI	**Luwuk**	**4.62**	**234**	Pn	**Pn**	**10 42 20.0**	**+0.5**
TOLI2	**Tolitoli**	**5.76**	**264**	Pn	**Pn**	**10 42 34.4**	**-0.7**
FAKI	**Fak Fak**	**7.33**	**129**	Pn	**Pn**	**10 42 57.0**	**+0.3**
MTN	**Manton Dam**	**15.15**	**163**	Pn	**Pn**	**10 44 43.4**	**-0.1**
MTN				IAmb	IAmb	10 44 44.5	
	comp=Z,18nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P	**P**	**10 45 37.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=13,slow=9.0,SNR=5.8						
	comp=Z,1.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P	**P**	**10 45 38.2**	**-0.1**
WB0	**Warramunga Arr**	**22.68**	**160**	P	**P**	**10 46 09.8**	**-0.9**
WB0				IAmb	IAmb	10 46 16.4	
	comp=Z,8.3nm,0.9s						
WRAB	**Tennant Creek**	**22.82**	**161**	P	**P**	**10 46 11.1**	**-1.0**
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**10 46 10.9**	**-1.3**

PB01 IAML 10 45 05.2
comp=Z,85nm,0.3s
PB01 IPOC Station P 2.55 280 *i* P **Pn** **10 44 28.9 +0.5**
PB01 ⇓*e*S **S** **10 45 03.7 0.0**
PB01 IAML 10 45 06.6
comp=Z,79nm,0.1s
PB08 IPOC Station P 2.59 301 Pg **Pn** **10 44 31.1 +1.9**
PB08 IPOC Station P 2.59 301 *i* P **Pn** **10 44 30.3 +1.2**
PB08 *e*S **S** **10 45 04.4 -0.6**
PB08 IAML 10 45 10.9
comp=Z,26nm,0.1s
SALTA 2.74 171 *i* P **Pn** **10 44 33.6 +2.6**
SALTA IAML 10 45 46.4
comp=Z,9.0nm,2.0s
PB03 IPOC Station P 2.80 258 *i* P **Pn** **10 44 31.6 +0.4**
PB03 *e*S **S** **10 45 07.4 -1.4**
PB03 IAML 10 45 09.6
comp=Z,66nm,0.1s
PB06 IPOC Station P 2.83 245 Pg **Pn** **10 44 32.8 +1.1**
PB06 IPOC Station P 2.83 245 *i* P **Pn** **10 44 33.3 +1.6**
PB06 *e*S **S** **10 45 10.0 +0.4**
PB06 IAML 10 45 13.5
comp=Z,39nm,0.2s
PB07 IPOC Station P 2.88 265 *i* P **Pn** **10 44 32.4 +0.2**
PB07 *e*S **S** **10 45 08.5 -2.0**
PB07 IAML 10 45 11.0
comp=Z,92nm,0.2s
PB02 IPOC Station P 2.89 273 Pg **Pn** **10 44 33.1 +0.9**
PB02 Sg **S** **10 45 09.0 -1.6**
PB02 IAML 10 45 10.1
comp=Z,227nm,0.3s
PB02 IPOC Station P 2.89 273 *i* P **Pn** **10 44 32.4 +0.2**
PB02 *e*S **S** **10 45 10.0 -0.6**
PB02 IAML 10 45 11.0
comp=Z,175nm,0.3s
GO01 Chusmiza 2.89 309 Pg **Pn** **10 44 34.8 +2.1**
GO01 Chusmiza 2.89 309 *i* P **Pn** **10 44 34.1 +1.4**
GO01 IAML 10 45 20.6
comp=Z,34nm,0.1s
SOEO Opoqueri 3.10 341 Pg **Pn** **10 44 37.5 +2.4**
AZAP Zapla 3.14 150 *i* P **Pn** **10 44 36.2 +1.0**
AZAP IAML 10 45 18.5
comp=Z,23nm,0.3s
PB11 IPOC Station P 3.19 302 Pg **Pn** **10 44 36.5 +0.8**
PB11 IPOC Station P 3.19 302 *i* P **Pn** **10 44 35.8 +0.1**
PB11 *e*S **S** **10 45 16.7 -0.2**
PB11 IAML 10 45 18.2
comp=Z,92nm,0.2s
PATCX Punta Patache 3.20 282 *i* P **Pn** **10 44 35.9 +0.1**
PATCX IAML 10 45 19.9
comp=Z,38nm,0.3s
TA01 Diego Aracena 3.29 286 *i* P **Pn** **10 44 36.4 -0.4**
TA01 IAML 10 45 21.5
comp=Z,23nm,0.5s
PB05 IPOC Station P 3.43 246 *i* P **Pn** **10 44 38.9 +0.5**
PB05 *e*S **S** **10 45 18.9 -2.9**
PB05 IAML 10 45 23.2
comp=Z,22nm,0.4s
PB16 IPOC Station P 4.05 321 Pg **Pn** **10 44 48.5 +2.0**
PB16 IPOC Station P 4.05 321 *i* P **Pn** **10 44 47.8 +1.3**
PB16 IAML 10 45 42.3
comp=Z,11nm,0.4s
PB12 IPOC Station P 4.39 310 *i* P **Pn** **10 44 49.7 -0.5**
PB12 IAML 10 45 42.0
comp=Z,33nm,0.1s
GO02 Mina Guanaco 4.45 215 Pg **Pn** **10 44 51.1 0.0**
GO02 Mina Guanaco 4.45 215 *i* P **Pn** **10 44 51.2 +0.1**
GO02 IAML 10 45 45.2
comp=Z,80nm,0.1s
PB14 IPOC Station P 4.55 226 Pg **Pn** **10 44 52.7 +0.4**
PB14 IPOC Station P 4.55 226 *i* P **Pn** **10 44 52.2 0.0**
PB14 IAML 10 45 47.6
comp=Z,46nm,0.1s
BBOJ La Paz, Jacaqu 4.69 343 Pg **Pn** **10 44 57.4 +3.0**
BBOE La Paz, Chanca 4.80 346 Pg **Pn** **10 44 58.3 +2.5**
BBOD La Paz, Gloria 5.13 340 Pg **Pn** **10 45 01.9 +2.0**
LPAZ La Paz 5.34 346 P **Pn** **10 45 04.0 +1.3**
comp=Z,3.0nm,0.4s,baz=153,slow=13,SNR=29
LPAZ S **S** **10 46 04.7 -0.8**
comp=Z,0.6nm,0.5s,baz=331,slow=19,SNR=0.8
SIV San Ignacio 7.71 46 P **Pn** **10 45 31.1 -1.5**
comp=Z,1.4nm,0.4s,baz=247,slow=11,SNR=8.8
SIV S **S** **10 46 54.4 -5.7**
comp=Z,0.2nm,0.3s,baz=315,slow=22,SNR=1.0
CFA Coronel Fontan 10.14 187 P **Pn** **10 46 02.9 -0.8**
comp=Z,0.6nm,0.4s,baz=25,slow=17,SNR=1.7
TORD Torodi Ar. Bea 75.51 69 P **P** **10 55 03.3 -0.6**
comp=Z,1.1nm,0.3s,baz=255,slow=4.6,SNR=1.6
comp=Z,1.1nm,0.3s
MKAR Makanchi Array 144.46 37 PKP **PKPab** **11 02 53.9 +1.7**
comp=Z,0.4nm,0.7s,baz=300,slow=2.8,SNR=2.6

*IDC **19** 10:47:47.7±1.7, 1.76N×126.54E, h0km, mb3.5/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=119.8km s-min=21.1km az=69.0*
*DJA **19** 10:47:51.0±0.4, 2.7N±4.4×12.6E±.4, h10km, M3.4/5, MLv3.4/5*
ISC 19 10:47:52.8±1.8, 1.7N±0.2×126.5E±0.5, h35km, n6, σ0s67/6, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**3.79**	**188**	P	**Pn**	**10 48 48.8**	**0.0**
FITZ	**Fitzroy Crossi**	**19.72**	**183**	P	**P**	**10 52 19.2**	**-0.3**
	0.1nm,0.3s,baz=8.8,slow=12,SNR=1.5						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**22.86**	**161**	P	**P**	**10 52 52.7**	**-0.6**
	1.1nm,0.5s,baz=340,slow=11,SNR=24						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**26.24**	**165**	P	**P**	**10 53 25.5**	**+0.7**
	0.3nm,0.4s,baz=335,slow=8.7,SNR=8.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**10 57 49.2**	**-0.5**
	0.1nm,0.3s,baz=117,slow=7.4,SNR=2.2						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**63.32**	**328**	P	**P**	**10 58 18.6**	**+0.4**
	0.3nm,0.5s,baz=128,slow=6.3,SNR=4.2						
	0.3nm,0.5s						

IDC 19 10:48:35.8±2.0, 1.78N×126.59E, h0km, mb3.5/4, mbtmp3.6/4, Error ellipse: s-maj=192.2km s-min=24.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.89**	**161**	P	P	10 53 40.3	-1.1
	1.4nm,0.6s,baz=339,slow=11,SNR=7.0						
	1.4nm,0.6s						
ASAR	**Alice Springs**	**26.28**	**165**	P	P	10 54 14.2	+1.0
	0.4nm,0.5s,baz=346,slow=11,SNR=2.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	10 58 38.1	+0.2
	0.3nm,0.5s,baz=111,slow=6.2,SNR=2.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	P	10 59 06.3	-0.2
	0.3nm,0.5s,baz=126,slow=7.2,SNR=1.6						
	0.3nm,0.5s						

*CATAC **19** 11:02:49.6±1.7, 4.1N±8.3×7.7W±1.1, h377km±19km, M3.9/6, mb3.6/2, mB4.6/2, MLv4.1/6, Mw(mB)3.8/2, Error ellipse: s-maj=23.3km s-min=16.3km az=59.9, confirmed*
*RSNC **19** 11:03:17.5±0.0, 5.1N±1.1×7.6W±.1, h11km±2km, M2.8, mb3.8, ML2.6*
ISC 19 11:03:16.5±1.1, 4.64N±0.02×75.97W±0.03, h10km±9km, n44, σ1s55/58, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAN1	**Manizales, Cal**	**0.61**	**46**	P	**Pg**	**11 03 29.5**	**+1.1**
CMAN1				S	**Sg**	**11 03 38.4**	**+1.9**
NIZA	**Niza - Manizal**	**0.64**	**50**	P	**Pg**	**11 03 29.2**	**+0.2**
NIZA				S	**Sg**	**11 03 37.9**	**+0.4**
YOTC	**Yotoco, Valle**	**0.76**	**210**	P	**Pg**	**11 03 31.0**	**-0.1**
YOTC				S	**Sg**	**11 03 42.6**	**+1.6**
GUY2C	**Guyana, Caldas**	**0.83**	**46**	P	**Pg**	**11 03 32.0**	**-0.6**
GUY2C				S	**Sg**	**11 03 42.5**	**-1.0**
ORTC	**Ortega, Tolima**	**1.02**	**135**	P	**Pg**	**11 03 35.0**	**-1.2**
ORTC				S	**Sg**	**11 03 48.5**	**-1.0**
CBOC	**Ciudad Bolivar**	**1.22**	**358**	P	**Pg**	**11 03 38.3**	**-1.6**
CBOC				S	**Sg**	**11 03 54.0**	**-1.7**
PRAC	**Prado**	**1.42**	**131**	P	**Pn**	**11 03 41.6**	**-0.9**
PRAC	**Prado**	**1.42**	**131**	P	**Pn**	**11 03 41.5**	**-0.9**
PRAC				S	**Sg**	**11 04 00.1**	**-2.0**
JAMC	**Jamundi, Valle**	**1.58**	**207**	P	**Pn**	**11 03 44.7**	**-0.2**
JAMC				S	**Sn**	**11 04 07.3**	**+1.7**
HELC	**Santa Helena**	**1.60**	**16**	P	**Pn**	**11 03 44.8**	**-0.5**
HELC	**Santa Helena**	**1.60**	**16**	P	**Pn**	**11 03 44.6**	**-0.6**
HELC				S	**Sn**	**11 04 04.8**	**-1.4**
ROSC	**El Rosal**	**1.65**	**83**	P	**Pn**	**11 03 46.6**	**+0.6**
ROSC	**El Rosal**	**1.65**	**83**	P	**Pn**	**11 03 45.6**	**-0.4**
ROSC				S	**Sn**	**11 04 08.2**	**+0.7**
CVER	**Cruz Verde, Cu**	**1.89**	**94**	P	**Pn**	**11 03 49.3**	**0.0**
CVER				S	**Sn**	**11 04 14.5**	**+1.0**
BETC	**Betania**	**2.02**	**165**	P	**Pn**	**11 03 49.6**	**-1.1**
BETC				S	**Sn**	**11 04 15.3**	**-0.8**
URMC	**La Uribe, Meta**	**2.10**	**131**	P	**Pn**	**11 03 50.5**	**-1.4**
URMC				S	**Sn**	**11 04 16.0**	**-2.2**
SOLC	**Bahia Solano**	**2.13**	**318**	P	Pn	11 03 50.5	-1.7
SOLC				S	**Sn**	**11 04 18.9**	**+0.1**
SPBC	**San Pablo de B**	**2.14**	**62**	P	**Pn**	**11 03 51.0**	**-1.4**
POPC	**Popayan, Colom**	**2.21**	**199**	P	**Pn**	**11 03 53.1**	**-0.4**
POPC				S	**Sn**	**11 04 19.1**	**-1.9**
CHIC	**Chingaza**	**2.23**	**90**	P	**Pn**	**11 03 54.1**	**+0.2**
CHIC				S	**Sn**	**11 04 21.7**	**0.0**
VILC	**Villavicencio,**	**2.33**	**103**	P	**Pn**	**11 03 55.6**	**+0.6**
VILC				S	**Sn**	**11 04 26.2**	**+2.4**
DBBC	**Dabeiba**	**2.37**	**354**	P	**Pn**	**11 03 57.1**	**+1.5**
DBBC				S	**Sn**	**11 04 26.5**	**+1.6**
PTBC	**PUERTO BERRIO,**	**2.41**	**38**	P	**Pn**	**11 03 55.3**	**-0.8**
PTBC				S	**Sn**	**11 04 24.4**	**-1.3**
GARC	**Garzon, Huila**	**2.48**	**169**	P	**Pn**	**11 03 56.9**	**-0.4**
GARC				S	**Sn**	**11 04 27.5**	**-0.4**
BBAC	**Balboa, Cauca**	**2.90**	**206**	P	**Pn**	**11 04 03.8**	**+0.8**
FLOC	**Florencia**	**3.06**	**174**	S	**Sb**	**11 04 54.3**	**+5.9**
FLOC	**Florencia**	**3.06**	**174**	P	Pn	11 04 01.6	-3.4
PTAC	**Punta Ardita,**	**3.09**	**324**	P	**Pn**	**11 04 04.1**	**-1.4**
UREC	**San Jos de Ur**	**3.12**	**8**	P	**Pn**	**11 04 05.9**	**0.0**
RUSC	**La Rusia**	**3.13**	**66**	P	**Pn**	**11 04 05.9**	**-0.5**
BRJC	**Barrancabermej**	**3.20**	**44**	P	Pn	11 04 04.4	-2.6
BRJC				S	**Sn**	**11 04 43.2**	**-2.0**
MACC	**Macarena, Meta**	**3.26**	**139**	P	**Pn**	**11 04 06.4**	**-1.4**
MACC				S	**Sn**	**11 04 43.8**	**-2.9**
BARC	**Barichara**	**3.38**	**55**	P	**Pn**	**11 04 09.4**	**-0.2**
GCUF	**Volcan Galeras**	**3.66**	**202**	P	**Pn**	**11 04 14.9**	**+1.1**
PTGC	**Puerto Gaitan,**	**3.84**	**96**	P	**Pn**	**11 04 15.5**	**-0.3**
PAMC	**Pamplona, Colo**	**4.21**	**50**	P	Pn	11 04 16.0	-5.3
OCAC	**Ocana**	**4.44**	**36**	P	Pn	11 04 21.7	-2.4
OTAV	**Otavalo**	**5.03**	**210**	P	**Pn**	**11 04 31.7**	**-0.8**
	3.6nm,0.5s						
OTAV				S	**Sn**	**11 05 27.4**	**-3.6**
	3.6nm,0.5s						
PAC1	**Pacto, Paraso**	**5.18**	**213**	P	Pn	11 04 32.6	-1.8
PAC1				S	**Sn**	**11 05 32.8**	**-1.6**
SJCC	**San Jacinto, C**	**5.28**	**8**	P	Pn	11 04 43.3	+7.7
BCIP	**Isla Barro Col**	**5.91**	**320**	P	**Pn**	**11 04 42.9**	**-1.4**
SDV	**Santo Domingo**	**6.77**	**51**	P	Pn	11 04 53.5	-2.7
CRJC	**Cerrejon, Guaj**	**7.03**	**26**	P	Pn	11 04 57.2	-2.6
URIC	**Uribia, Colomb**	**8.04**	**29**	P	Pn	11 05 10.1	-3.4

*LDG **19** 11:09:37.3±0.0, 46.15N×2.96E, h2km, Md3.4/2, Ml3.6/49, Error ellipse: s-maj=0.8km s-min=0.8km az=93.0*
*STR **19** 11:09:37.3±0.1, 46.1N±1.1×.2±.1, h6km, MLv3.3/14, LOCSAT earthModelID auvergne_taup-2.11 preliminary*
*PRU **19** 11:09:38.0, 46.25N×2.91E, h10km*
*BGR **19** 11:09:38.9±0.7, 46.19N×3.06E, h5km, ML3.6/9, Error ellipse: s-maj=8.9km s-min=6.7km az=142.0*
ISC 19 11:09:36.6±0.9, 46.19N±0.01×2.95E±0.01, h12km±7km, n159, σ1s54/292, 27D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGO	**Saint Agoulin**	**0.18**	**137**	Pg	**Pg**	**11 09 40.3**	**-0.3**
AGO				Sg	**Sg**	**11 09 42.4**	**-1.1**
BGF	**Bois d'Agland**	**0.38**	**349**	*e*Pg	**Pb**	**11 09 45.4**	**+0.1**
BGF				*e*Sg	**Sb**	**11 09 50.7**	**-0.4**
	681nm,0.2s						
CFF	**Clermont-Ferra**	**0.44**	**165**	P	**Pg**	**11 09 45.3**	**0.0**
CFF				Sg	**Sg**	**11 09 50.9**	**-0.2**
PLDF	**La Plantade**	**0.51**	**115**	Pg	**Pg**	**11 09 46.9**	**+0.2**
PLDF				Sg	**Sg**	**11 09 53.5**	**0.0**
TCF	**Toulx Ste Croi**	**0.53**	**281**	*e*Pg	**Pg**	**11 09 47.4**	**+0.6**
TCF				*e*Sg	**Sg**	**11 09 54.5**	**+0.7**
	267nm,0.2s						
VERF	**Verneugheol**	**0.55**	**217**	Pg	**Pg**	**11 09 47.1**	**-0.1**
VERF				Sg	**Sg**	**11 09 53.8**	**-0.7**
AVF	**Avril sur Loir**	**0.67**	**25**	*e*Pg	**Pb**	**11 09 50.5**	**+0.4**
AVF	**Avril sur Loir**	**0.67**	**25**	*e*P	**Pn**	**11 09 52.2**	**+0.4**
AVF				*e*Sg	**Sb**	**11 09 59.8**	**+0.5**
	277nm,0.2s						
SMF	**Signal de Mont**	**0.77**	**53**	*e*Pg	**Pb**	**11 09 52.1**	**+0.2**
SMF	**Signal de Mont**	**0.77**	**53**	*e*P	**Pn**	**11 09 54.1**	**+0.8**
SMF				*e*Sg	**Sb**	**11 10 02.4**	**+0.1**
	660nm,0.2s						
FRNF	**Fournols**	**0.84**	**199**	Pg	**Pg**	**11 09 52.6**	**-0.3**
FRNF				Sg	**Sg**	**11 10 02.8**	**-1.1**
COLF	**Collangettes**	**0.85**	**142**	Pg	**Pg**	**11 09 52.9**	**-0.1**
COLF				Sg	**Sg**	**11 10 03.7**	**-0.3**
SSF	**Saint Saulge**	**0.95**	**23**	*e*Pg	**Pb**	**11 09 55.7**	**+0.6**
SSF	**Saint Saulge**	**0.95**	**23**	*e*P	**Pn**	**11 09 57.5**	**+1.7**
SSF				*e*Sg	**Sb**	**11 10 08.6**	**+0.9**
	320nm,0.2s						
LBL	**Lubilhac**	**0.98**	**168**	Pg	**Pg**	**11 09 55.0**	**-0.4**
LBL				Sg	**Sg**	**11 10 07.1**	**-1.0**
HYF	**Humbligny**	**1.10**	**349**	*e*Pg	**Pn**	**11 09 59.1**	**+1.2**
HYF	**Humbligny**	**1.10**	**349**	*e*P	**Pn**	**11 10 00.6**	**+2.7**
HYF				*e*Sg	**Sn**	**11 10 13.6**	**+0.5**
	2μm,0.3s						
LOR	**Lormes**	**1.25**	**30**	*e*Pg	**Pg**	**11 10 01.2**	**+0.6**
	baz=216						
LOR	**Lormes**	**1.25**	**30**	*e*Pn	**Pg**	**11 10 01.2**	**+0.6**
LOR				*e*Sg	**Sn**	**11 10 17.5**	**+0.8**
	1μm,0.3s						
LOR	**Lormes**	**1.25**	**30**	P	**Pg**	**11 10 01.2**	**+0.6**
LOR				Sg	**Sn**	**11 10 17.7**	**+1.1**
RJF	**Les Rejaudoux**	**1.34**	**229**	*e*Pg	**Pn**	**11 10 01.8**	**+0.7**
RJF				*e*Sg	**Sb**	**11 10 19.0**	**+0.3**
	468nm,0.2s						
CAF	**Calviac**	**1.41**	**207**	*e*Pg	**Pb**	**11 10 03.1**	**+0.3**
CAF				*e*Sg	**Sb**	**11 10 20.3**	**-0.4**
	403nm,0.2s						
SSB	**Saint Sauveur**	**1.44**	**129**	Pn	**Pn**	**11 10 02.0**	**-0.5**
SSB				Sg	**Sn**	**11 10 22.1**	**+0.8**
LEUC	**Leucamp**	**1.45**	**191**	P	**Pn**	**11 10 02.7**	**0.0**
LEUC				Sg	**Sb**	**11 10 23.1**	**+1.1**
PLYF	**Puligny Montra**	**1.46**	**57**	Pn	**Pn**	**11 10 03.0**	**+0.3**
PLYF				Sg	**Sg**	**11 10 23.9**	**+0.4**
VIVF	**Saint-Julien-l**	**1.80**	**137**	*e*Pn	**Pn**	**11 10 07.2**	**-0.2**
VIVF	**Saint-Julien-l**	**1.80**	**137**	*e*Pg	**Pb**	**11 10 10.0**	**+0.5**
VIVF				*e*Sg	**Sn**	**11 10 31.7**	**+1.5**
	65nm,0.2s						
OG35	**Corcelles**	**1.83**	**94**	Pn	**Pn**	**11 10 08.2**	**+0.3**
OG35				Sg	**Sg**	**11 10 35.3**	**-0.1**
CLF	**Chambon-Foret**	**1.90**	**346**	Pn	**Pg**	**11 10 13.9**	**+0.9**
CLF				Sg	**Sg**	**11 10 39.6**	**+1.9**
LFF	**La Frestale**	**1.99**	**232**	*e*Pg	**Pb**	**11 10 13.8**	**+1.1**
LFF				*e*Sg	**Sg**	**11 10 39.7**	**-0.9**
	143nm,0.2s						
OGSM	**Saint Maurice**	**2.00**	**106**	Pn	**Pn**	**11 10 10.3**	**0.0**
OGSM				Sg	**Sb**	**11 10 39.6**	**+1.7**
OGMY	**Moye**	**2.07**	**97**	Pn	**Pn**	**11 10 11.4**	**+0.2**
OGMY				Sg	**Sb**	**11 10 41.7**	**+1.9**
SLVF	**La Salvetat-Pe**	**2.07**	**196**	Pn	**Pn**	**11 10 11.0**	**-0.2**
SLVF				Sg	**Sb**	**11 10 41.7**	**+1.9**
RIVEL	**MONT RIVEL**	**2.13**	**73**	Pn	**Pn**	**11 10 12.4**	**+0.4**
RIVEL				Sg	**Sg**	**11 10 45.0**	**-0.1**
GRN	**Grenoble**	**2.17**	**115**	Pn	**Pn**	**11 10 13.8**	**+1.2**
GRN				Sg	**Sb**	**11 10 44.8**	**+2.0**
MFF	**Saint Martin d**	**2.18**	**282**	*e*Pn	**Pn**	**11 10 13.8**	**+1.1**
MFF	**Saint Martin d**	**2.18**	**282**	*e*Pn	**Pn**	**11 10 13.9**	**+1.2**
MFF	**Saint Martin d**	**2.18**	**282**	*e*Pg	**Pb**	**11 10 17.3**	**+1.3**
MFF	**Saint Martin d**	**2.18**	**282**	*e*Pg	**Pb**	**11 10 17.4**	**+1.4**
MFF				*e*Sn	**Sn**	**11 10 38.7**	**-1.0**
MFF				*e*Sg	**Sb**	**11 10 44.6**	**+1.6**
	86nm,0.2s						
MFF				*e*Sg	**Sg**	**11 10 45.2**	**-1.5**
	66nm,0.2s						
MONQ	**Montcuq**	**2.20**	**215**	Pn	**Pn**	**11 10 12.6**	**-0.4**
MONQ				Sg	**Sg**	**11 10 46.2**	**-1.1**
LASF	**Ste Croix**	**2.21**	**163**	*e*Pn	**Pn**	**11 10 13.3**	**+0.3**
LASF	**Ste Croix**	**2.21**	**163**	*e*Pg	**Pb**	**11 10 17.8**	**+1.4**
LASF				*e*Sg	**Sb**	**11 10 44.6**	**+0.9**
	41nm,0.2s						
CABF	**La Chapelle**	**2.21**	**78**	*e*Pn	**Pn**	**11 10 13.6**	**+0.4**
CABF	**La Chapelle**	**2.21**	**78**	*e*Pg	**Pg**	**11 10 19.0**	**0.0**
CABF				*e*Sg	**Sg**	**11 10 46.7**	**-0.9**
	89nm,0.2s						
LAJAS	**L'Hospitalet-d**	**2.23**	**175**	P	**Pb**	**11 10 17.9**	**+1.2**
LAJAS				Sg	**Sb**	**11 10 46.6**	**+2.3**
GIZF	**Gizeux - Indre**	**2.25**	**304**	Sg	**Sg**	**11 10 49.3**	**+0.4**
TSDF	**Thoir-sur-Di**	**2.32**	**313**	Pn	**Pb**	**11 10 17.5**	**-0.8**
TSDF				Sg	**Sg**	**11 10 50.3**	**-0.6**
GIMEL	**St. Georges /**	**2.32**	**80**	P	**Pn**	**11 10 15.3**	**+0.6**
GIMEL				Sg	**Sb**	**11 10 49.6**	**+2.5**
CHIF	**Chize**	**2.33**	**270**	Pn	**Pn**	**11 10 15.8**	**+1.1**
CHIF				Sg	**Sg**	**11 10 51.1**	**-0.5**
ORIF	**Oris-en-Rattie**	**2.42**	**121**	*e*Pn	**Pn**	**11 10 15.9**	**-0.1**
ORIF				*e*Sg	**Sb**	**11 10 51.6**	**+1.8**
	43nm,0.3s						
SFTF	**Sexfontaines**	**2.47**	**34**	*e*Pg	**Pg**	**11 10 23.8**	**-0.1**
SFTF				*e*Sg	**Sg**	**11 10 55.5**	**-0.4**
	71nm,0.2s						
BRANT	**Les Verrieres**	**2.54**	**72**	Pn	**Pn**	**11 10 18.0**	**+0.3**
BRANT				Sg	**Sg**	**11 10 57.7**	**-0.6**
LRVF	**chteau la Riv**	**2.60**	**243**	P	**Pn**	**11 10 19.2**	**+0.8**
LRVF				Sg	**Sg**	**11 11 00.5**	**+0.3**
RSL	**Roselend**	**2.61**	**100**	Pn	**Pn**	**11 10 19.6**	**+0.9**
MEZF	**Maizieres J'vi**	**2.72**	**31**	*e*Pg	**Pg**	**11 10 28.7**	**0.0**
	baz=209						
MEZF				*e*Sg	**Sg**	**11 11 02.8**	**-1.2**
	127nm,0.2s						
LPL	**La Plagne**	**2.73**	**103**	*e*Pn	**Pn**	**11 10 22.2**	**+1.8**
LPL	**La Plagne**	**2.73**	**103**	*e*Pg	**Pg**	**11 10 28.3**	**-0.5**
LPL				*e*Sg	**Sg**	**11 11 02.5**	**-1.6**
	13nm,0.2s						
LPG	**La Plagne**	**2.74**	**103**	*e*Pn	**Pn**	**11 10 22.9**	**+2.2**
LPG	**La Plagne**	**2.74**	**103**	*e*Pg	**Pg**	**11 10 28.4**	**-0.8**
LPG				*e*Sg	**Sb**	**11 11 02.5**	**+3.1**
	30nm,0.2s						
CHMF	**Charmoille**	**2.76**	**66**	P	**Pn**	**11 10 20.5**	**-0.2**
CHMF				Sg	**Sg**	**11 11 04.9**	**-0.2**
AIGLE	**Aigle**	**2.78**	**85**	Pn	**Pn**	**11 10 21.7**	**+0.7**
AIGLE				Sg	**Sg**	**11 11 05.3**	**-0.5**
TORNY	**Torny/Romont**	**2.83**	**77**	P	**Pn**	**11 10 22.2**	**+0.5**
TORNY				Sg	**Sg**	**11 11 06.8**	**-0.7**
SAVF	**Savonnieres en**	**2.84**	**30**	*e*Pn	**Pn**	**11 10 23.7**	**+1.9**
SAVF	**Savonnieres en**	**2.84**	**30**	*e*Pg	**Pg**	**11 10 30.3**	**-0.7**
SAVF	**Savonnieres en**	**2.84**	**30**	*e*Pg	**Pg**	**11 10 31.0**	**0.0**
SAVF				*e*Sg	**Sg**	**11 11 06.5**	**-1.3**
	69nm,0.3s						
SAVF				*e*Sg	**Sg**	**11 11 06.6**	**-1.3**
	90nm,0.3s						
SMRF	**Simiane la Rot**	**2.89**	**139**	*e*Sg	**Sb**	**11 11 05.5**	**+2.2**
	21nm,0.3s						
MTLF	**Montolieu**	**2.89**	**191**	*e*Pn	**Pn**	**11 10 22.2**	**-0.3**
MTLF	**Montolieu**	**2.89**	**191**	*e*Pg	**Pb**	**11 10 30.3**	**+2.2**
MTLF				*e*Sg	**Sb**	**11 11 06.7**	**+3.3**
	25nm,0.2s						
HAU	**Haudompre**	**2.95**	**51**	*e*Pn	**Pn**	**11 10 23.5**	**+0.2**
HAU	**Haudompre**	**2.95**	**51**	*e*Pg	**Pg**	**11 10 32.2**	**-0.9**
HAU				*e*Sg	**Sg**	**11 11 10.3**	**-0.9**
	128nm,0.2s						
RRL	**Rocca Remolon**	**2.98**	**114**	P	**Pn**	**11 10 26.0**	**+2.1**
LSD	**Lago del Serru**	**3.01**	**102**	Pn	**Pn**	**11 10 26.3**	**+1.9**
PAGF	**Fort de Pagny**	**3.03**	**37**	*e*Pn	**Pn**	**11 10 25.0**	**+0.7**
	baz=217						
PAGF	**Fort de Pagny**	**3.03**	**37**	*e*Pg	**Pg**	**11 10 33.2**	**-1.4**
	baz=215						
PAGF				*e*Sg	**Sg**	**11 11 12.4**	**-1.4**
	74nm,0.2s						
CLAF	**Gruissan**	**3.05**	**178**	Pn	**Pn**	**11 10 26.3**	**+1.7**
MBDF	**Montbardon**	**3.06**	**117**	*e*Pn	**Pn**	**11 10 26.2**	**+1.3**
MBDF	**Montbardon**	**3.06**	**117**	*e*Pg	**Pg**	**11 10 33.8**	**-1.4**
MBDF				*e*Sg	**Sb**	**11 11 11.7**	**+3.3**
	5.2nm,0.2s						
OGAG	**Argentiere**	**3.07**	**123**	P	**Pn**	**11 10 24.6**	**-0.4**
OGAG				Sg	**Sb**	**11 11 06.7**	**-1.9**
DIX	**Grande Dixence**	**3.10**	**90**	P	**Pn**	**11 10 26.9**	**+1.4**
HINF	**Hinteralfeld**	**3.13**	**57**	*e*Pn	**Pn**	**11 10 25.9**	**+0.2**
HINF	**Hinteralfeld**	**3.13**	**57**	*e*Pg	**Pg**	**11 10 35.6**	**-0.9**
HINF				*e*Sg	**Sg**	**11 11 15.1**	**-1.9**
	61nm,0.2s						
BOURR	**Bourrignon**	**3.18**	**66**	Pn	**Pn**	**11 10 26.2**	**-0.2**
LDF	**La Druitiere**	**3.19**	**320**	*e*Pn	**Pn**	**11 10 26.3**	**-0.2**
LDF	**La Druitiere**	**3.19**	**320**	*e*P	**Pn**	**11 10 29.5**	**+3.0**
LDF	**La Druitiere**	**3.19**	**320**	*e*Pg	**Pg**	**11 10 36.9**	**-0.7**
LDF				*e*Sn	**Sn**	**11 11 01.8**	**-2.6**
LDF				*e*Sg	**Sg**	**11 11 16.8**	**-2.1**
	25nm,0.3s						
RSP	**Reno Superiore**	**3.20**	**107**	P	**Pn**	**11 10 28.8**	**+2.0**
RSP				Sg	**Sg**	**11 11 17.9**	**-1.4**
JAUF	**Jausiers**	**3.21**	**122**	Pn	**Pn**	**11 10 28.6**	**+1.7**
SURF	**Saint Ours**	**3.21**	**121**	Pn	**Pn**	**11 10 29.4**	**+2.4**
DUNF	**Dun**	**3.27**	**195**	Pn	**Pn**	**11 10 27.9**	**+0.3**
PZZ	**Stroppo**	**3.38**	**118**	Pn	**Pn**	**11 10 31.4**	**+2.1**

	40nm,0.4s									
GUEF	**Guhenno - 56**	**4.18**	**296**		Pn		**Pn**	**11 10 41.2**	**+1.1**
GUEF					Sg		**Sg**	**11 11 49.1**	**-1.7**
CANF	**Canfranc**	**4.23**	**217**		Pn		**Pn**	**11 10 40.4**	**-0.5**
BFO	**Black Forest**	**4.24**	**58**	*e*	Pn		**Pn**	**11 10 41.9**	**+0.9**
BFO				*e*	Pg		**Pg**	**11 10 57.6**	**-0.2**
BFO				*e*	Sn		**Sn**	**11 11 29.4**	**-1.1**
BFO				*e*	Sg		**Sg**	**11 11 51.2**	**-1.5**
RCHB	**Rochefort**	**4.25**	**20**	*d*	Pn		**Pn**	**11 10 42.1**	**+1.0**
RCHB				*d*	Pg		**Pg**	**11 10 56.9**	**-1.2**
RCHB				*d*	Sn		**Sn**	**11 11 30.4**	**-0.3**
PLEF	**Pleven - 22200**	**4.27**	**305**		Pn		**Pn**	**11 10 42.6**	**+1.3**
PLEF					Sg		**Sg**	**11 11 30.1**	**-3.5**
SJPF	**Ste Jean**	**4.28**	**226**	*e*	Pn		**Pn**	**11 10 39.9**	**-1.6**
SJPF	**Ste Jean**	**4.28**	**226**	*e*	Pg		**Pg**	**11 10 56.1**	**-2.4**
SJPF				*e*	Sn		**Sn**	**11 11 26.3**	**-5.1**
	2.3nm,0.1s									
SJPF				*e*	Sg		**Sg**	**11 11 50.7**	**-3.3**
	12nm,0.3s									
SGMF	**Saint Gilles**	**4.29**	**301**	*e*	Pn		**Pn**	**11 10 41.6**	**0.0**
SGMF				*e*	Sn		**Sn**	**11 11 29.9**	**-1.6**
	3.9nm,0.2s									
SGMF				*e*	Sg		**Sg**	**11 11 52.2**	**-1.9**
	8.5nm,0.2s									
BMRD	**Maredsous**	**4.29**	**16**	*d*	P		**Pb**	**11 10 51.0**	**-0.9**
BMRD				*d*	Sn		**Sn**	**11 11 31.3**	**-0.4**
BMRD				*d*	S		**Sg**	**11 11 55.8**	**+1.4**
LEMB	**Lembach**	**4.32**	**47**		Pn		**Pn**	**11 10 42.1**	**0.0**
LEMB					Sg		**Sg**	**11 11 53.9**	**-1.4**
EMING	**Emmingen-Lipti**	**4.37**	**65**	*e*	Pg		**Pg**	**11 10 59.6**	**-0.7**
EMING				*e*	Sn		**Sn**	**11 11 32.3**	**-1.5**
EMING				*e*	Sg		**Sg**	**11 11 55.6**	**-1.4**
BGES	**Gesves**	**4.44**	**18**	*d*	P		**Pg**	**11 11 01.0**	**-0.5**
BGES				*d*	Sn		**Sn**	**11 11 32.2**	**-3.0**
BGES				*d*	Sg		**Sg**	**11 11 58.4**	**-0.6**
PLONS	**Plons/SG**	**4.51**	**77**	*e*	Sg		**Sg**	**11 12 00.2**	**-1.2**
BCLA	**Clavier**	**4.52**	**19**	*d*	P		**Pg**	**11 11 02.4**	**-0.7**
BCLA				*d*	Sn		**Sn**	**11 11 37.1**	**-0.1**
BCLA				*d*	S		**Sg**	**11 12 00.8**	**-0.7**
QUIF	**Quistinic**	**4.53**	**295**	*e*	Pn		**Pn**	**11 10 45.5**	**+0.6**
QUIF	**Quistinic**	**4.53**	**295**	*e*	Pg		**Pg**	**11 11 01.0**	**-2.2**
QUIF				*e*	Sn		**Sn**	**11 11 34.8**	**-2.6**
	12nm,0.2s									
QUIF				*e*	Sg		**Sg**	**11 11 58.7**	**-3.1**
	15nm,0.3s									
BHOU	**Houvegnez**	**4.64**	**25**	*d*	Pn		**Pn**	**11 10 46.7**	**+0.3**
BHOU				*d*	P		**Pb**	**11 10 56.4**	**-1.5**
BHOU				*d*	Sn		**Sn**	**11 11 39.9**	**-0.4**
BHOU				*d*	S		**Sg**	**11 12 04.4**	**-1.1**
UCC	**Uccle**	**4.71**	**11**	*d*	Pn		**Pn**	**11 10 47.0**	**-0.4**
UCC				*d*	Sn		**Sn**	**11 11 39.2**	**-2.7**
ROSF	**Rostrenen**	**4.75**	**299**	*e*	Pn		**Pn**	**11 10 48.3**	**+0.3**
ROSF	**Rostrenen**	**4.75**	**299**	*e*	Pg		**Pg**	**11 11 05.8**	**-1.7**
ROSF				*e*	Sn		**Sn**	**11 11 39.6**	**-3.4**
	7.9nm,0.2s									
ROSF				*e*	Sg		**Sg**	**11 12 07.0**	**-2.1**
	16nm,0.3s									
ABH	**Alteburg**	**4.81**	**38**	*e*	Sg		**Sg**	**11 12 09.6**	**-1.3**
MEM	**Membach**	**4.87**	**24**	*d*	Pn		**Pn**	**11 10 51.3**	**+1.6**
MEM				*d*	Sn		**Sn**	**11 11 44.1**	**-1.8**
BTNL	**Ternell**	**4.88**	**25**	*d*	Pn		**Pn**	**11 10 51.8**	**+2.0**
BTNL				*d*	Sn		**Sn**	**11 11 46.9**	**+0.6**
DAVA	**Damuels**	**4.89**	**74**	*i*	Pn		**Pn**	**11 10 51.6**	**+1.5**
	0.7nm,0.1s									
DAVA				*e*	Sn		**Sn**	**11 11 46.3**	**-0.3**
	3.7nm,0.2s									
DAVA				*e*	Sg		**Sg**	**11 12 13.7**	**+0.2**
	15nm,0.3s									
UBR	**Ueberruh**	**5.12**	**70**	*e*	Sg		**Sg**	**11 12 20.7**	**-0.4**
LOCF	**Locquirec - 29**	**5.14**	**301**		Pn		**Pn**	**11 10 53.7**	**+0.4**
OLIV	**Plomelin**	**5.15**	**292**		Pn		**Pn**	**11 10 53.8**	**+0.4**
FETA	**Feichten**	**5.42**	**78**	*i*	Pn		**Pn**	**11 10 59.9**	**+2.5**
	3.5nm,0.2s									
FETA				*i*	Sn		**Sn**	**11 12 01.6**	**+1.8**
	0.5nm,0.2s									
FETA				*e*	Sg		**Sg**	**11 12 31.4**	**+0.8**
	1.0nm,0.2s									
TNS	**Taunus Mts**	**5.46**	**40**	*e*	Sg		**Sg**	**11 12 30.6**	**-1.1**
RETA	**Reutte**	**5.51**	**74**	*i*	Sn		**Sn**	**11 12 02.1**	**+0.2**
	1.2nm,0.2s									
MOTA	**Moosalm**	**5.72**	**75**	*i*	Pn		**Pn**	**11 11 03.4**	**+2.0**
	3.4nm,0.2s									
MOTA				*e*	Sn		**Sn**	**11 12 06.8**	**-0.3**
	2.2nm,0.2s									
SQTA	**Sankt Quirin**	**5.77**	**77**	*i*	Pn		**Pn**	**11 11 04.2**	**+2.1**
	4.4nm,0.1s									
SQTA				*i*	Sn		**Sn**	**11 12 09.9**	**+1.6**
	4.2nm,0.3s									
SQTA				*i*	Sg		**Sg**	**11 12 44.1**	**+2.3**
	3.6nm,0.3s									
WATA	**Walderalm**	**6.04**	**76**	*i*	Pn		**Pn**	**11 11 08.1**	**+2.4**
	2.8nm,0.2s									
WTTA	**Wattenberg**	**6.07**	**77**	*i*	Pn		**Pn**	**11 11 08.2**	**+1.9**
	4.0nm,0.2s									
WTTA				*i*	Sn		**Sn**	**11 12 17.2**	**+1.5**
	3.0nm,0.3s									
CCA1	**Carnmenellis**	**6.78**	**309**		Pn		**Pn**	**11 11 16.6**	**+0.9**
LESA	**Schwarzleotal**	**6.79**	**76**	*i*	Pn		**Pn**	**11 11 18.8**	**+2.7**
	1.6nm,0.2s									
LESA				*i*	Sn		**Sn**	**11 12 33.2**	**-0.1**
	5.1nm,0.3s									
KBA	**Koelnbreinsper**	**7.21**	**79**	*i*	Pn		**Pn**	**11 11 24.2**	**+2.3**
	0.8nm,0.2s									
KBA				*i*	Sn		**Sn**	**11 12 45.5**	**+1.7**
	0.5nm,0.2s									
KHC	**Kasperske Hory**	**7.76**	**64**	*e*	PN		**Pn**	**11 11 30.4**	**+1.1**
KHC				*e*	SN		**Sn**	**11 12 53.3**	**-3.7**
KHC				*e*	SG		**Sg**	**11 13 45.1**	**-0.2**
ZVC	**Zvikov**	**8.24**	**63**	*e*	SG		**Sg**	**11 13 59.1**	**-1.6**

NEIC ***19*** *11:13:09.9±1.0, 17.°9S±0.°2×178.°6W±0.°1, h580km±9km, mb4.2/30, Error ellipse: s-maj=23.5km s-min=16.8km az=157.0*

IDC ***19*** *11:13:10.0±4.6, 17.°68S×178.°74W, h580km±56km, mb3.3/12, mbtmp4.2/13, Error ellipse: s-maj=23.8km s-min=19.8km az=100.0*

ISC 19 11:13:09.7±0.6, 17.°8S±0.°1×178.°65W±0.°09, h579km, n48, σ0.°78/47, mb4.1/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.15**	**271**		**P**	**11 14 29.6**	**+1.5**
NIUE	**Niue**	**8.37**	**100**	P	**P**	**11 15 11.0**	**-0.9**
MARNC	**Mare, Loyalty**	**13.06**	**252**	P	**P**	**11 15 58.8**	**-0.5**
DZM	**Mont Dzumac**	**14.63**	**251**	P	**P**	**11 16 14.5**	**-0.6**
	5.8nm,0.9s,baz=90,slow=19,SNR=6.8						
URZ	**Urewera**	**20.69**	**189**	P	**P**	**11 17 10.6**	**+0.2**
	5.3nm,0.8s,baz=15,slow=16,SNR=1.9						
	5.3nm,0.8s						
EIDS	**Eidsvold**	**29.08**	**250**	P	**P**	**11 18 24.2**	**-0.5**
EIDS				IAmb	IAmb	11 18 30.2	
	comp=Z,9.7nm,1.4s						
ARMA	**Armidale**	**29.78**	**240**	P	**P**	**11 18 30.7**	**-0.1**
ARMA				IAmb	IAmb	11 19 05.6	
	comp=Z,9.7nm,1.2s						
COEN	**Coen**	**36.88**	**270**	P	**P**	**11 19 30.4**	**-0.1**
TOO	**Toolangi**	**37.04**	**231**	P	**P**	**11 19 32.2**	**+0.6**
TOO				IAmb	IAmb	11 19 32.9	
	comp=Z,4.7nm,0.9s						
STKA	**Stephens Creek**	**38.47**	**241**	P	**P**	**11 19 43.6**	**+0.4**
	comp=Z,5.5nm,0.5s,baz=92,slow=11,SNR=15						
	comp=Z,5.5nm,0.5s						
INKA	**Innaminka**	**38.56**	**248**		**P**	**11 19 44.7**	**+0.7**
INKA				IAmb	IAmb	11 19 45.7	
	comp=Z,3.6nm,0.8s						
JAY	**Jayapura**	**42.67**	**286**	P	**P**	**11 20 17.4**	**+0.5**
	comp=Z,7.4nm,0.8s,baz=17,slow=6.4,SNR=2.0						
	comp=Z,7.4nm,0.8s						
BBOO	**Buckleboo**	**43.24**	**241**	P	**P**	**11 20 21.1**	**0.0**
WR8	**Warramunga Arr**	**44.27**	**259**		**P**	**11 20 28.3**	**-0.8**
WR8				IAmb	IAmb	11 20 29.2	
	comp=Z,3.7nm,0.8s						
WB0	**Warramunga Arr**	**44.39**	**260**		**P**	**11 20 29.1**	**-0.9**
WRAB	**Tennant Creek**	**44.41**	**260**	P	**P**	**11 20 29.3**	**-0.9**
WRAB				IAmb	IAmb	11 20 30.1	
	comp=Z,3.2nm,0.7s						
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**11 20 29.4**	**-1.0**
	comp=Z,2.6nm,0.4s,baz=96,slow=7.0,SNR=94						
	comp=Z,2.6nm,0.4s						
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**11 20 29.7**	**-0.6**
AS31	**Alice Springs**	**44.59**	**254**		**P**	**11 20 31.4**	**-0.2**
AS31				IAmb	IAmb	11 20 32.0	
	comp=Z,7.5nm,0.8s						
ASAR	**Alice Springs**	**44.59**	**254**	P	**P**	**11 20 31.4**	**-0.2**
	comp=Z,20nm,0.5s,baz=88,slow=7.8,SNR=700						
	comp=Z,20nm,0.5s						
ASAR	**Alice Springs**	**44.59**	**254**		**P**	**11 20 31.1**	**-0.5**
FORT	**Forrest**	**49.83**	**245**	P	**P**	**11 21 10.2**	**-0.5**
FORT				IAmb	IAmb	11 21 18.0	
	comp=Z,14nm,1.4s						
PSA00	**Pilbara Seismi**	**57.71**	**255**	P	**P**	**11 22 05.9**	**-0.4**
PSA00				IAmb	IAmb	11 22 45.8	
	comp=Z,26nm,1.4s						
PSA00	**Pilbara Seismi**	**57.71**	**255**	P	**P**	**11 22 05.7**	**-0.6**
PSA00				IAmb	IAmb	11 22 45.1	
	comp=Z,6.0nm,1.4s						
JMN	**Monobe**	**68.39**	**319**	P	**P**	**11 23 14.3**	**-0.1**
QSPA	**South Pole Qui**	**72.22**	**180**	P	**P**	**11 23 39.7**	**+3.0**
	comp=Z,1.4nm,0.9s,baz=360,slow=1.4,SNR=8.8						
	comp=Z,1.4nm,0.9s						
QSPA	**South Pole Qui**	**72.22**	**180**	P	**P**	**11 23 37.4**	**+0.7**
BEKR	**Beckworth**	**78.99**	**42**	P	**P**	**11 24 14.6**	**0.0**
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**11 24 17.7**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=225,slow=8.7,SNR=6.9						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**11 24 17.4**	**-0.1**
J05D	**Fort Rock, OR**	**80.41**	**39**	P	**P**	**11 24 22.3**	**+0.4**
J05D				IAmb	IAmb	11 24 23.0	
	comp=Z,7.0nm,1.0s						
H04A	**Detroit Lake**	**80.67**	**37**	P	**P**	**11 24 23.0**	**-0.1**
L18K	**Granite Mounta**	**81.66**	**10**	P	**P**	**11 24 28.0**	**+0.3**
L18K				IAmb	IAmb	11 24 40.2	
	comp=Z,11nm,1.4s						
K17K	**Iditarod**	**81.87**	**9**	P	**P**	**11 24 29.1**	**+0.4**
I07A	**Izee**	**81.89**	**39**	P	**P**	**11 24 29.8**	**+0.3**
J16K	**Anvik River**	**82.08**	**8**	P	**P**	**11 24 30.2**	**+0.5**
SCM	**Sheep Creek Mo**	**83.21**	**14**	P	**P**	**11 24 35.0**	**-0.6**
N25K	**Chitina, Valde**	**83.69**	**16**	P	**P**	**11 24 37.7**	**-0.3**
N25K				IAmb	IAmb	11 25 12.7	
	comp=Z,13nm,1.4s						
MAW	**Mawson**	**83.85**	**200**	P	**P**	**11 24 38.2**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=170,slow=6.1,SNR=2.0						
	comp=Z,1.1nm,0.5s						
P18A	**Preston Nutter**	**85.56**	**46**	IAmb	IAmb	11 24 46.1	
	comp=Z,6.1nm,1.0s						
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**11 24 46.9**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=225,slow=5.1,SNR=11						
	comp=Z,0.4nm,0.4s						
J25K	**Salcha River,**	**86.06**	**14**	P	**P**	**11 24 48.8**	**-0.6**
J25K				IAmb	IAmb	11 24 48.9	
	comp=Z,9.6nm,1.4s						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**11 24 51.5**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=216,slow=6.6,SNR=9.1						
	comp=Z,1.0nm,0.9s						
BW06	**Boulder Array**	**87.45**	**44**	P	**P**	**11 24 56.6**	**-0.1**
BW06				IAmb	IAmb	11 25 35.4	
	comp=Z,4.0nm,1.5s						
PDAR	**Pinedale Array**	**87.45**	**44**	P	**P**	**11 24 56.2**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=222,slow=3.8,SNR=7.7						
	comp=Z,0.5nm,0.5s						
PDAR	**Pinedale Array**	**87.45**	**44**	P	**P**	**11 24 56.5**	**-0.2**
SNAA	**Sanae**	**90.68**	**179**	P	**P**	**11 25 09.8**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=193,slow=12,SNR=7.7						
	comp=Z,0.2nm,0.5s						
SNAA	**Sanae**	**90.68**	**179**	P	**P**	**11 25 10.3**	**-0.7**
SNAA				IAmb	IAmb	11 25 27.1	
	comp=Z,3.4nm,1.3s						

TRN 19 11:14:05.2, 15.°31N×61.°21W, h149km, MD3.8, Near East coast of Dominica., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSLB	**Salisbury**	**0.24**	**302**	*e*P	Pn	11 14 27.1	+1.5
DSLB				*e*S	Sn	11 14 42.6	+1.6
DWS	**Wesley**	**0.28**	**339**	*e*P	Pn	11 14 26.8	+1.1
DWS				*e*S	Sn	11 14 42.1	+0.8
SVN	**Savane Anatole**	**0.46**	**175**	*e*P	Pn	11 14 27.6	+1.1
SVN				*e*S	Sn	11 14 43.4	+0.8
TBG	**Guadaloupe-3**	**0.69**	**322**	*e*P	Pn	11 14 28.7	+1.1
TBG				*e*S	Sn	11 14 45.9	+1.2
BIM	**Bigot**	**0.80**	**171**	*e*P	Pn	11 14 29.7	+1.3
BIM				*e*S	Sn	11 14 47.0	+0.9
MMLZ	**Guadeloupe Bro**	**0.86**	**329**	*e*P	Pn	11 14 30.5	+1.7
MMLZ				*e*S	Sn	11 14 48.0	+1.2
ATGZ	**Broadband at L**	**0.93**	**328**	*e*P	Pn	11 14 31.1	+1.7
ATGZ				*e*S	Sn	11 14 50.6	+2.8
DSDZ	**La Diserade, G**	**1.01**	**8**	*e*P	Pn	11 14 31.0	+1.0
DSDZ				*e*S	Sn	11 14 49.1	+0.1
DHSZ	**Broadband at M**	**1.10**	**331**	*e*P	Pn	11 14 32.1	+1.3
DHSZ				*e*S	Sn	11 14 51.3	+0.9
SLBI	**Saint Lucia, B**	**1.29**	**170**	*e*P	Pn	11 14 33.6	+0.9
SLBI				*e*S	Sn	11 14 53.5	-0.2
SLAC	**Saint Lucia, A**	**1.43**	**168**	*e*P	Pn	11 14 35.2	+1.1
SLAC				*e*S	Sn	11 14 56.1	-0.1
MCLT	**Moule a Chique**	**1.61**	**171**	*e*P	Pn	11 14 36.9	+0.9
MCLT				*e*S	Sn	11 14 59.5	0.0
MLYT	**Lee's Yard**	**1.70**	**326**	*e*P	Pn	11 14 38.2	+1.3
MLYT				*e*S	Sn	11 15 03.1	+1.8
MBWH	**Windy Hill**	**1.71**	**327**	*e*S	Sn	11 15 02.5	+0.9
ANWB	**Willy Bob**	**2.41**	**347**	*e*P	Pn	11 14 45.4	+0.1
ANWB				*e*S	Sn	11 15 15.2	-1.0
SKI	**Saint Kitts**	**2.50**	**324**	*e*P	Pn	11 14 46.0	-0.3
SKI				*e*S	Sn	11 15 19.1	+1.1
BBGH	**Gun Hill**	**2.68**	**143**	*e*P	Pn	11 14 50.8	+2.2
BBGH				*e*S	Sn	11 15 24.2	+2.2

DJA 19 11:17:21.0±0.4, 4.°S±4.°×12.°8E±.°, h10km, M3.0/5, MLv3.0/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.17**	**215**	P	Pg	11 17 25.7	+1.1
AAI				S	Sg	11 17 28.3	+1.2
MSAI	**Masohi**	**0.67**	**72**	P	Pb	11 17 34.8	0.0
NLAI	**Namlea**	**1.23**	**285**	P	Pn	11 17 43.2	-1.0

IDC ***19*** *11:30:16.4±1.2, 8.°36N×103.°70W, h0km, mb3.9/8, mbtmp3.8/9, ML3.1/1, MS3.8/36, Error ellipse: s-maj=43.8km s-min=19.8km az=60.0*

NEIC ***19*** *11:30:19.5±1.6, 8.°3N±0.°1×103.°58W±0.°08, h10km±1km, mb4.4/97, Error ellipse: s-maj=21.0km s-min=9.7km az=212.0*

ISC 19 11:30:17.9±0.7, 8.°26N±0.°09×103.°67W±0.°09, h10km, n128, σ1.°09/61, mb4.4/51, MS3.8/34, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**10.50**	**28**		**Pn**	**11 32 49.6**	**+0.8**
MOIG	**Morelia**	**11.61**	**12**	Pn	**Pn**	**11 33 05.3**	**+1.2**
CMIG	**Matias Romero**	**12.27**	**43**	Pn	Pn	11 33 07.6	-5.2
	0.2nm,0.3s,baz=215,slow=12,SNR=6.6						
CMIG				Sn	Sn	11 35 12.1	-18
	0.5nm,0.3s,baz=235,slow=19,SNR=5.2						
CMIG				LR	LR	11 36 45.3	
	comp=Z,891nm,21.1s,baz=202,slow=32						
HUEH	**Huehuetenango**	**13.82**	**58**	Pn	**Pn**	**11 33 32.7**	**-1.6**
APG	**El Apazote**	**14.57**	**61**	Pn	**Pn**	**11 33 41.9**	**-2.6**
	0.1nm,0.3s,baz=179,slow=8.0,SNR=7.7						
APG				LR	LR	11 38 16.3	
	comp=Z,18nm,19.4s,baz=244,slow=33						
	0.6nm,0.6s						
MTO3	**Montecristo**	**15.30**	**65**	Pn	**Pn**	**11 33 52.1**	**-2.3**
PETF	**Flores**	**15.98**	**56**	P	**P**	**11 34 07.6**	**+1.0**
PETF				IAmb	IAmb	11 34 08.2	
	comp=Z,43nm,1.3s						
LPIG	**La Paz**	**16.99**	**339**	LR	LR	11 39 09.4	
	comp=Z,406nm,20.4s,baz=164,slow=32						
CNGN	**Cerro Negro**	**17.22**	**74**		**P**	**11 34 21.2**	**+0.8**
USIM	**UNAN**	**17.55**	**76**		**P**	**11 34 26.6**	**+2.6**
JTS	**Las Juntas de**	**18.59**	**82**	LR	LR	11 39 56.1	
	comp=Z,76nm,21.3s,baz=254,slow=31						
HPIG		**18.68**	**354**		**Pn**	**11 34 37.0**	**+0.1**
TEIG	**Tepich**	**19.07**	**50**		**Pn**	**11 34 42.2**	**+0.8**
HBVL	**Hebbronville**	**19.30**	**14**	P	**Pn**	**11 34 44.3**	**+0.1**
SIUN	**Universidad Ur**	**19.32**	**72**	P	**Pn**	**11 34 45.3**	**+0.7**
SIUN				IAmb	IAmb	11 34 46.6	
	comp=Z,6.8nm,1.1s						
TX31	**Lajitas Ar. Si**	**20.97**	**0**	P	**P**	**11 35 02.0**	**+0.5**
TXAR	**Lajitas Array**	**20.97**	**0**	P	**P**	**11 34 59.5**	**-1.9**
	comp=Z,1.2nm,1.0s,baz=184,slow=10,SNR=12						
TXAR				LR	LR	11 42 33.3	
	comp=Z,615nm,18.4s,baz=179,slow=35						
	comp=Z,1.2nm,1.0s						
TXAR	**Lajitas Array**	**20.97**	**0**	P	**P**	**11 35 01.9**	**+0.5**
HNDO	**Hondo**	**21.56**	**10**	P	**P**	**11 35 08.1**	**+0.4**
ALPN	**Alpine**	**22.01**	**0**		**P**	**11 35 13.2**	**+0.6**
JCT	**Junction City**	**22.41**	**9**	P	**P**	**11 35 17.4**	**+0.6**
BRDY	**Brady**	**23.33**	**10**		**P**	**11 35 25.8**	**-0.5**
MNTX	**Cornudas Mount**	**23.38**	**356**		**P**	**11 35 27.2**	**+0.3**
CLNB	**Carlsbad**	**23.89**	**360**	P	**P**	**11 35 33.0**	**+1.0**
ABTX	**Abilene, Hawle**	**24.54**	**8**	P	**P**	**11 35 37.0**	**-0.9**
ABTX				IAmb	IAmb	11 35 43.9	
	comp=Z,19nm,1.4s						
TUC	**Tucson**	**24.83**	**346**		**P**	**11 35 40.8**	**+0.1**
PIX	**Pinacate**	**24.92**	**340**		**P**	**11 35 42.3**	**+1.0**
PIX				IAmb	IAmb	11 35 48.6	
	comp=Z,7.7nm,1.1s						
PLPT	**Palo Pinto**	**24.94**	**11**	P	**P**	**11 35 41.3**	**-0.2**
PLPT				IAmb	IAmb	11 35 41.4	
	comp=Z,10nm,1.0s						
SFX	**San Felipe**	**24.95**	**337**	P	**P**	**11 35 41.9**	**+0.2**
SFX				IAmb	IAmb	11 35 43.8	
	comp=Z,7.1nm,1.0s						
APMT	**Aspermont**	**25.16**	**7**		**P**	**11 35 42.6**	**-0.9**
APMT				IAmb	IAmb	11 35 49.3	
	comp=Z,11nm,1.0s						
DKNS	**Dickens**	**25.42**	**5**	IAmb	IAmb	11 36 11.3	
	comp=Z,11nm,1.1s						
MSTX	**Muleshoe**	**25.61**	**2**	IAmb	IAmb	11 36 07.3	
	comp=Z,7.5nm,1.0s						
113A	**Mohawk Valley,**	**26.13**	**340**		**P**	**11 35 52.7**	**+0.4**
OTAV	**Otavalo**	**26.36**	**106**		**P**	**11 35 55.4**	**+0.3**
OTAV				IAmb	IAmb	11 36 08.6	
	comp=Z,8.8nm,1.1s						
ANMO	**Albuquerque**	**26.69**	**355**	LR	LR	11 46 44.1	
	comp=Z,171nm,18.2s,baz=263,slow=37						
SMWD	**Samnorwood**	**26.91**	**6**	IAmb	IAmb	11 36 05.1	
	comp=Z,14nm,1.4s						
DPP	**Dos Picos Cty**	**27.52**	**335**	IAmb	IAmb	11 36 11.3	
	comp=Z,11nm,1.3s						
PFO	**Pinyon Flats O**	**27.86**	**337**	LR	LR	11 45 33.9	
	comp=Z,116nm,19.7s,baz=144,slow=33						
PFO	**Pinyon Flats O**	**27.86**	**337**	P	**P**	**11 36 08.2**	**+0.2**
PFO				IAmb	IAmb	11 36 14.2	
	comp=Z,7.5nm,1.2s						
BFSC	**Mount Baldy Ra**	**28.89**	**336**	IAmb	IAmb	11 36 23.2	
	comp=Z,10nm,1.2s						
MWC	**Mount Wilson**	**29.04**	**335**	IAmb	IAmb	11 36 24.1	
	comp=Z,10nm,1.1s						
ROSC	**El Rosal**	**29.35**	**95**	LR	LR	11 45 18.2	
	comp=Z,223nm,19.5s,baz=254,slow=31						
ATAH	**Atahualpa**	**29.48**	**121**	LR	LR	11 45 49.3	
	comp=Z,315nm,21.6s,baz=290,slow=32						
GSC	**Goldstone, Bar**	**29.49**	**338**	IAmb	IAmb	11 36 41.2	
	comp=Z,8.9nm,1.4s						
S22A	**4UR Ranch, Cre**	**29.50**	**355**	IAmb	IAmb	11 36 28.9	
	comp=Z,6.9nm,1.3s						
KNB	**Kanab**	**29.82**	**345**		**P**	**11 36 26.0**	**+0.5**
KNB				IAmb	IAmb	11 36 32.7	
	comp=Z,7.7nm,1.3s						
CCCA	**Chr Cany lake**	**29.90**	**337**	IAmb	IAmb	11 36 33.4	
	comp=Z,5.9nm,1.1s						
WSHM	**Spangler Hills**	**30.01**	**337**	IAmb	IAmb	11 36 33.4	
	comp=Z,9.0nm,1.4s						
PV05	**Paradox Valley**	**30.09**	**351**	IAmb	IAmb	11 36 36.7	
	comp=Z,7.4nm,1.0s						
PV13	**Radium Mtn., P**	**30.13**	**352**	IAmb	IAmb	11 36 57.9	
	comp=Z,8.3nm,1.4s						
PV03	**Paradox Valley**	**30.23**	**352**	IAmb	IAmb	11 36 35.7	
	comp=Z,12nm,1.4s						
PV18	**Skein Mesa, Pa**	**30.23**	**352**	IAmb	IAmb	11 36 35.0	
	comp=Z,8.9nm,1.1s						
PV12	**Saucer Basin,**	**30.29**	**352**	IAmb	IAmb	11 36 44.5	
	comp=Z,8.4nm,1.1s						
PV16	**Nyswonger Mesa**	**30.30**	**352**	IAmb	IAmb	11 36 35.7	
	comp=Z,10nm,1.3s						
PV20	**West Nyswonger**	**30.33**	**352**	IAmb	IAmb	11 36 44.8	
	comp=Z,9.1nm,1.1s						
PV04	**Paradox Valley**	**30.38**	**352**	IAmb	IAmb	11 36 35.9	
	comp=Z,7.2nm,1.2s				

	comp=Z,158nm,18.4s,baz=288,slow=34							
MAL2	**Monte Alegre,**	**50.39**	**100**	P	**P**	**11 39 16.3**	**+0.3**	
MDP	**Montagnes des**	**50.76**	**90**	LR	LR	11 58 23.1		
	comp=Z,81nm,21.5s,baz=296,slow=33							
HPAH	**Hawaii Prepara**	**51.60**	**289**	P	**P**	**11 39 24.5**	**-0.5**	
PPT	**Papeete**	**52.10**	**240**	LR	LR	11 56 02.8		
	comp=Z,70nm,20.3s,baz=38,slow=30							
YKA	**Yellowknife Ar**	**54.72**	**354**	P	**P**	**11 39 47.2**	**0.0**	
	comp=Z,1.9nm,1.1s,baz=165,slow=8.0,SNR=2.9							
YKA				LR	LR	12 02 25.8		
	comp=Z,115nm,19.9s,baz=136,slow=35							
	comp=Z,1.9nm,1.1s							
SCHQ	**Schefferville**	**54.93**	**25**	P	**P**	**11 39 47.7**	**-1.2**	
	comp=Z,5.5nm,0.9s,baz=238,slow=9.5,SNR=2.6							
SCHQ				LR	LR	12 04 10.5		
	comp=Z,123nm,18.2s,baz=190,slow=37							
	comp=Z,5.5nm,0.9s							
CPUP	**Villa Florida**	**56.61**	**129**	P	**P**	**11 40 01.9**	**+0.5**	
	comp=Z,0.4nm,0.7s,baz=308,slow=2.6,SNR=3.7							
	comp=Z,0.4nm,0.7s							
WRGLY	**Wrigley**	**56.71**	**349**	P	**P**	**11 40 01.6**	**+0.1**	
PLCA	**Paso Flores**	**57.51**	**151**	LR	LR	11 59 00.1		
	comp=Z,99nm,21.2s,baz=315,slow=30							
L29M	**L29M**	**60.12**	**343**	P	**P**	**11 40 25.7**	**+0.3**	
FRB	**Frobisher Bay**	**60.81**	**17**	LR	LR	12 05 32.9		
	comp=Z,130nm,18.1s,baz=107,slow=35							
H31M	**Peel River**	**61.26**	**346**	P	**P**	**11 40 34.6**	**+1.5**	
RAR	**Rarotonga**	**62.37**	**241**	LR	LR	12 01 15.7		
	comp=Z,60nm,21.2s,baz=220,slow=30							
H27K	**Steamboat Moun**	**63.44**	**344**	P	**P**	**11 40 47.4**	**-0.3**	
RND	**Reindeer**	**63.81**	**339**	P	**P**	**11 40 51.2**	**+1.0**	
IL31		**64.02**	**341**		**P**	**11 40 49.9**	**-1.5**	
ILAR	**Eielson Array**	**64.02**	**341**	P	**P**	**11 40 49.6**	**-1.9**	
	comp=Z,2.2nm,0.8s,baz=121,slow=7.4,SNR=18							
	comp=Z,2.2nm,0.8s							
ILAR	**Eielson Array**	**64.02**	**341**	P	**P**	**11 40 50.4**	**-1.1**	
BMAR	**Burnt Mountain**	**65.14**	**344**	P	**P**	**11 40 59.2**	**+0.3**	
RES	**Resolute Bay**	**66.58**	**3**	LR	LR	12 09 11.6		
	comp=Z,76nm,19.9s,baz=36,slow=35							
SFJD	**Kangerlussuaq**	**68.59**	**20**	LR	LR	12 13 19.6		
	comp=Z,96nm,19.4s,baz=168,slow=38							
SHEM	**Shemya Is, Ala**	**78.78**	**322**	LR	LR	12 09 09.2		
	comp=Z,72nm,21.9s,baz=42,slow=30							
URZ	**Urewera**	**86.69**	**231**	LR	LR	12 13 13.8		
	comp=Z,39nm,20.4s,baz=142,slow=30							
AMCZ	**Amberley**	**91.00**	**227**	P	**P**	**11 43 23.6**	**+1.0**	
NOA	**NORSAR Array B**	**94.48**	**26**	LR	LR	12 26 56.0		
	comp=Z,38nm,19.2s,baz=270,slow=36							
HFS	**Hagfors**	**95.98**	**27**	LR	LR	12 26 08.9		
	comp=Z,102nm,21.0s,baz=266,slow=35							
YAK	**Yakutsk**	**98.79**	**337**	LR	LR	12 28 59.0		
	comp=Z,77nm,18.9s,baz=117,slow=36							
VNDA	**Vanda**	**98.98**	**193**	LR	LR	12 19 28.0		
	comp=Z,38nm,20.8s,baz=116,slow=30							
WRA	**Warramunga Arr**	**122.80**	**252**	PKP	**PKPdf**	**11 49 13.7**	**-1.5**	
	comp=Z,0.5nm,1.1s,baz=89,slow=2.1,SNR=2.4							
JAGI	**Jajag, Banyuwa**	**142.59**	**267**		**PKPdf**	**11 49 51.2**	**-1.2**	
CMAR	**Chiang Mai Arr**	**145.32**	**320**	PKPbc	**PKPbc**	**11 49 56.4**	**-0.4**	
	comp=Z,0.5nm,0.3s,baz=30,slow=3.8,SNR=4.7							

*IDC **19** 11:33:21.7±6.5,2°.55S×99°.85E,h0km,mb3.1/2, mbtmp3.1/2,Error ellipse: s-maj=273.2km s-min=55.7km az=55.0*

*DJA **19** 11:33:25.6±0.4,2°.5S×2°×10°.0E±°,h10km,M2.9/3,MLv2.9/3*

ISC 19 11:33:26.2±1.1,2°.48S±0°.06×99°.9E±0°.1,h30km±15, σ0s19/9,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.30**	**161**	P	**Pn**	**11 33 34.7**	**+0.1**
PPSI				S	**Sn**	**11 33 40.1**	**0.0**
SISI	**Saibi**	**1.41**	**324**	P	**Pn**	**11 33 49.7**	**-0.1**
SISI				S	**Sn**	**11 34 07.6**	**+0.3**
PDSI	**Padang**	**1.65**	**20**	P	**Pn**	**11 33 53.1**	**-0.1**
PDSI				S	**Sn**	**11 34 13.7**	**+0.3**
H08S2	**Diego Garcia H**	**27.78**	**258**	T	T	12 08 05.5	
	baz=81,slow=75,SNR=38						
H08S3	**Diego Garcia H**	**27.79**	**258**	T	T	12 08 01.6	
	baz=81,slow=75,SNR=37						
H08S1	**Diego Carcia H**	**27.80**	**258**	T	T	12 08 04.5	
	baz=81,slow=75,SNR=44						
WRA	**Warramunga Arr**	**37.83**	**120**	P	**P**	**11 40 40.3**	**-0.2**
	0.1nm,0.4s,baz=295,slow=8.7,SNR=4.6						
	0.1nm,0.4s						
ASAR	**Alice Springs**	**39.05**	**126**	P	**P**	**11 40 50.7**	**0.0**
	0.2nm,0.8s,baz=297,slow=8.4,SNR=7.3						
	0.2nm,0.8s						
H04N2	**CROZET ISLANDS**	**60.36**	**217**	T	T	12 48 56.3	
	baz=58,slow=75,SNR=2.1						
H04N1	**CROZET ISLANDS**	**60.37**	**217**	T	T	12 48 55.5	
	baz=58,slow=75,SNR=13						
H04N3	**CROZET ISLANDS**	**60.38**	**217**	T	T	12 48 47.9	
	baz=58,slow=75,SNR=12						
H04S1	**CROZET ISLANDS**	**60.65**	**216**	T	T	12 49 14.3	
	baz=56						
H04S3	**CROZET ISLANDS**	**60.66**	**216**	T	T	12 49 18.0	
	baz=56						
H04S2	**CROZET ISLANDS**	**60.67**	**216**	T	T	12 49 13.4	
	baz=56						
TXAR	**Lajitas Array**	**145.13**	**38**	PKPbc	**PKPbc**	**11 53 01.1**	**-0.1**
	0.3nm,1.0s,baz=332,slow=2.9,SNR=1.5						

*EST **19** 11:39:06.8±0.1,59°.19N×27°.94E,h0km,ML1.8(HEL), Explosion*

HEL 19 11:39:07.0±0.3,59°.20N×27°.93E,h0km,ML1.9, Suspected explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.18**	**350**	*e*P	Pg	11 39 10.1	-0.4
EE04				*e*S	Sg	11 39 12.2	-0.7
EE03	**Tooma soojaam,**	**0.92**	**250**	*e*P	Pg	11 39 23.4	-1.2
EE03				*e*S	Sg	11 39 35.1	-1.3
VSU	**Vasula**	**0.96**	**221**	*e*P	Pg	11 39 23.9	-1.6
VSU				*e*S	Sg	11 39 35.9	-2.0
ARBE	**Arbavere**	**1.03**	**284**	*e*P	Pg	11 39 25.3	-1.4
ARBE				*e*S	Sg	11 39 38.2	-1.8
VJF	**Virojoki**	**1.36**	**352**	*e*PB	Pg	11 39 31.4	-1.6
VJF				smax	smax	11 39 48.0	
	comp=Z,9.3nm,0.2s						
EE08	**Sarghaua, Vand**	**1.50**	**250**	*e*PG	Pn	11 39 33.8	-1.3
EE08				*e*SB	Sg	11 39 53.0	-2.0
EE08				*e*SN	Sn	11 39 55.8	+0.5
EE02	**Kiisa, Saku**	**1.67**	**271**	*e*P	Pn	11 39 35.8	-1.6
EE02				*e*PG	Pb	11 39 36.8	-1.7
EE02				*e*S	Sn	11 39 57.8	-1.7
PVF	**Pernaja**	**1.71**	**323**	*e*PN	Pn	11 39 37.9	-0.1
PVF				smax	smax	11 39 58.1	
	comp=Z,6.9nm,0.2s						
HEL1	**Helsinki**	**1.83**	**304**	*e*PG	Pn	11 39 39.9	+0.2
HEL1				*e*S	Sn	11 40 02.6	-1.0
HEL1				smax	smax	11 40 03.7	
	comp=Z,5.5nm,0.1s						
HEL5	**Espoo, Suvisaa**	**1.87**	**301**	*e*PG	Pn	11 39 40.5	+0.4
HEL5				smax	smax	11 40 02.5	
	comp=Z,8.4nm,0.2s						
MEF	**Metsahovi**	**2.07**	**301**	*e*PG	Pn	11 39 43.8	+1.0
NUR	**Nurmijarvi**	**2.12**	**310**	*e*PG	Pn	11 39 44.7	+1.1
NUR				smax	smax	11 40 12.4	
	comp=Z,6.5nm,0.1s						
EE01	**Perakula, Nova**	**2.22**	**272**	*e*P	Pn	11 39 45.5	+0.5
EE01				*e*PB	Pb	11 39 46.0	-1.9
EE01				*e*SB	Sn	11 40 14.2	+1.2
FIA0	**FINESS Array S**	**2.44**	**339**	smax	smax	11 40 19.0	
	comp=Z,4.8nm,0.2s						
FIA0				*e*SG	Sb	11 40 21.4	-0.8
TVF	**Tvarminne**	**2.47**	**287**	*e*PB	Pn	11 39 50.0	+1.5
TVF				smax	smax	11 40 20.1	
	comp=Z,2.2nm,0.2s						
EE06	**Soera, Palade,**	**2.63**	**267**	*e*SB	Sb	11 40 26.2	-1.6
SLIT	**Slitere, Latvi**	**3.36**	**245**	*e*SG	Sb	11 40 48.8	+0.1

*UCR **19** 11:47:00.6±1.2,8°.31N×82°.78W,h25km±2km,MW3.7*
*UPA **19** 11:47:01.8±1.9,8°.41N×82°.79W,h21km±9km,MW4.0*

ISC 19 11:46:59.8±0.9,8°.34N±0°.03×82°.80W±0°.02,h13km,n75, σ0s97/89,27C-17D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	**La Esperanza,**	**0.07**	**5**	*e*P	**Pg**	**11 47 06.2**	**+3.7**
LMNES	**Limones**	**0.24**	**195**	*i*P	**Pb**	**11 47 08.2**	**+2.1**
BAGA3	**Bagala, Chiriq**	**0.30**	**64**	*e*P	**Pn**	**11 47 08.7**	**-1.2**
DMCAL	**E. de Neily**	**0.33**	**0**	*i*P	**Pb**	**11 47 08.8**	**+1.2**
NELY	**Ciudad Neily**	**0.35**	**335**	*i*P	**Pb**	**11 47 08.7**	**+0.8**
NELY				*e*S	**Sb**	**11 47 14.8**	**+1.5**
DVD	**David**	**0.36**	**74**	*e*P	**Pb**	**11 47 09.2**	**+1.1**
DVD				*e*S	**Sn**	**11 47 15.5**	**-2.1**
LOCO3	**Loma Colorada,**	**0.38**	**79**	*e*P	**Pb**	**11 47 09.5**	**+1.1**
LOMA3	**Las Lomas, Chi**	**0.41**	**77**	*e*P	**Pb**	**11 47 09.8**	**+0.8**
JEFFS	**S de V. Baru**	**0.42**	**38**	*i*P	**Pb**	**11 47 10.2**	**+1.0**
FITO	**Golfito**	**0.46**	**309**	*i*P	**Pg**	**11 47 09.5**	**+0.6**
FITO				*e*S	**Sb**	**11 47 16.7**	**+0.2**
MLIR3	**Monte Lirio, C**	**0.46**	**357**	*e*P	**Pn**	**11 47 12.6**	**+0.4**
PTAR3	**Potrerillos Ar**	**0.46**	**40**	*i*P	**Pb**	**11 47 10.7**	**+0.7**
PTAR3				*i*S	**Sb**	**11 47 18.1**	**+1.3**
PTAR3				*e*S	**Sb**	**11 47 18.1**	**+1.3**
CHIR3	**Chiriqui UPA,**	**0.47**	**83**	*e*P	**Pb**	**11 47 10.5**	**+0.7**
BRU2	**Volcan**	**0.47**	**13**	*i*P	**Pb**	**11 47 10.6**	**+0.5**
BRU2				*e*S	**Sb**	**11 47 18.2**	**+1.3**
BRU2	**Volcan**	**0.47**	**13**	*e*P	**Pb**	**11 47 10.5**	**+0.5**
BRU2				*e*S	**Sb**	**11 47 18.0**	**+1.1**
TBS2		**0.48**	**17**	*e*P	**Pn**	**11 47 11.6**	**-0.9**
EDAD	**Golfito**	**0.48**	**311**	*i*P	**Pg**	**11 47 10.0**	**+0.7**
RSRNO	**Rio Sereno**	**0.48**	**352**	*e*P	**Pb**	**11 47 11.1**	**+0.8**
SCLRA	**Santa Clara, W**	**0.49**	**2**	*i*P	**Pb**	**11 47 11.1**	**+0.6**
VITO	**San Vito**	**0.51**	**340**	*i*P	**Pb**	**11 47 11.5**	**+0.8**
BC3P	**Paso Ancho**	**0.51**	**21**	*e*P	**Pb**	**11 47 11.2**	**+0.4**
BC3P				*e*S	**Sb**	**11 47 18.2**	**0.0**
BQTLY	**Boquete Panama**	**0.54**	**38**	*i*P	**Pb**	**11 47 11.5**	**+0.3**
PIRO	**Carate, Puerto**	**0.54**	**277**	*e*P	**Pb**	**11 47 11.5**	**+0.4**
PIRO	**Carate, Puerto**	**0.54**	**277**	*i*P	**Pb**	**11 47 11.3**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.54**	**292**	*e*P	**Pg**	**11 47 07.2**	**-3.2**
BQSF3	**Alto Boquete,**	**0.54**	**42**	*i*P	**Pb**	**11 47 11.5**	**+0.2**
BQSF3				*e*S	**Sb**	**11 47 19.1**	**+0.2**
WILLF	**Boquete**	**0.55**	**41**	*i*P	**Pb**	**11 47 11.6**	**+0.3**
LNBQ3	**Los Naranjos,**	**0.57**	**38**	*e*P	**Pb**	**11 47 11.5**	**-0.3**
LNBQ3				*e*S	**Sb**	**11 47 19.4**	**-0.5**
DAP26	**falda E V. Bar**	**0.58**	**39**	*i*P	**Pb**	**11 47 11.9**	**-0.1**
PSOM3	**Paja de Sombre**	**0.58**	**53**	*e*P	**Pb**	**11 47 11.9**	**0.0**
PSOM3				*e*S	**Sb**	**11 47 20.4**	**+0.3**
ALCO	**Alturas Coton,**	**0.61**	**357**	*i*P	**Pb**	**11 47 12.3**	**-0.2**
EDP2	**Potrero Grande**	**0.77**	**331**	*i*P	**Pb**	**11 47 15.2**	**+0.1**
PBNVO	**Pueblo Nuevo,**	**0.81**	**47**	*e*P	**Pg**	**11 47 15.2**	**-0.4**
RBALA	**Bur**	**0.83**	**50**	*i*P	**Pg**	**11 47 15.9**	**-0.1**
FIMO	**Fila Mora**	**0.85**	**320**	*i*P	**Pg**	**11 47 16.3**	**-0.1**
CHGR2	**Aguacate**	**0.88**	**47**	*e*P	**Pg**	**11 47 16.4**	**-0.5**
CHGR2				*e*S	**Sb**	**11 47 28.1**	**-0.5**
PANP	**Palmar Norte**	**0.90**	**313**	*i*P	**Pg**	**11 47 16.8**	**-0.5**
BURE	**Buenos Aires**	**0.99**	**327**	*e*P	**Pb**	**11 47 18.1**	**-0.8**
NANC3	**Nancito, Chiri**	**1.06**	**95**	*e*P	**Pb**	**11 47 19.1**	**-0.8**
PDCAN	**Manzana , Fuen**	**1.09**	**92**	*i*P	**Pb**	**11 47 19.1**	**-1.4**
EDPE	**Pejibaye, P**	**1.12**	**317**	*i*P	**Pb**	**11 47 20.0**	**-1.1**
SAJE	**San Jernim**	**1.23**	**325**	*i*P	**Pn**	**11 47 21.4**	**-1.4**
RGM0	**Gandoca**	**1.26**	**8**	*e*P	**Pg**	**11 47 24.3**	**+0.2**
RGM0	**Gandoca**	**1.26**	**8**	*e*P	**Pg**	**11 47 24.1**	**0.0**
BRIBI	**Bribri**	**1.28**	**359**	*i*P	**Pb**	**11 47 23.8**	**+0.1**
CEUA	**Cerro Uatsi, L**	**1.29**	**354**	*e*P	**Pg**	**11 47 24.6**	**0.0**
LAES	**El Progreso Va**	**1.44**	**350**	*e*P	**Pn**	**11 47 26.0**	**+0.4**
BUS1	**Rivas**	**1.53**	**322**	*i*P	**Pn**	**11 47 26.4**	**-0.9**
MESA3	**La Mesa, Verag**	**1.60**	**97**	*e*P	**Pn**	**11 47 27.6**	**-0.3**
VERH	**Veragua Rainfo**	**1.63**	**346**	*i*P	**Pn**	**11 47 28.0**	**-0.2**
GMAL	**Guarumal, Vera**	**1.65**	**110**	*e*P	**Pn**	**11 47 27.2**	**-1.3**
GMAL				*e*S	**Sb**	**11 47 50.8**	**0.0**
GMAL	**Guarumal, Vera**	**1.65**	**110**	*e*P	**Pn**	**11 47 25.8**	**-2.7**
LLNJ	**Naranjito**	**1.71**	**311**	*e*P	**Pn**	**11 47 29.8**	**+0.4**
PIEC	**Cerro El Cedra**	**1.72**	**318**	*i*P	**Pn**	**11 47 29.1**	**-0.5**
RAZU	**San Marcos de**	**1.79**	**317**	*e*P	**Pn**	**11 47 31.0**	**+0.4**
TURIB	**Turrialba**	**1.79**	**331**	*e*P	**Pn**	**11 47 30.4**	**-0.1**
VINA	**Juan Vinas**	**1.81**	**329**	*i*P	**Pn**	**11 47 31.3**	**+0.5**
VTCV	**VTCV, Calle Va**	**1.88**	**331**	*i*P	**Pn**	**11 47 32.0**	**+0.2**
RESJ	**San Isidro (Tu**	**1.88**	**334**	*e*P	**Pn**	**11 47 32.4**	**+0.6**
PICV	**PH. Pirrs**	**1.89**	**313**	*e*P	**Pn**	**11 47 31.9**	**+0.1**
ABRB	**Las Abras (San**	**1.89**	**331**	*i*P	**Pn**	**11 47 32.4**	**+0.4**
LCOCO	**El Coco**	**1.89**	**337**	*i*P	**Pn**	**11 47 32.8**	**+1.0**
RAFA	**San Farael, Vo**	**1.90**	**328**	*e*P	**Pn**	**11 47 31.8**	**-0.4**
CVTV	**Tajo**	**1.91**	**330**	*i*P	**Pn**	**11 47 32.6**	**+0.2**
CVTQ	**Turrialba Volc**	**1.92**	**330**	*i*P	**Pn**	**11 47 32.8**	**+0.3**
VTR0	**Volcan Turrial**	**1.92**	**330**	*i*P	**Pn**	**11 47 32.9**	**+0.3**
CVTR	**Volcan Turrial**	**1.93**	**330**	*i*P	**Pn**	**11 47 32.8**	**+0.1**
RVLA	**Villa Bonita**	**1.93**	**336**	*e*P	**Pn**	**11 47 33.1**	**+0.8**
VTUN	**Crater Central**	**1.93**	**330**	*i*P	**Pn**	**11 47 32.8**	**+0.1**
VICA	**Volcano Irazu**	**1.94**	**328**	*i*P	**Pn**	**11 47 32.7**	**-0.2**
ACOS	**Acosta**	**1.98**	**317**	*e*P	**Pn**	**11 47 33.0**	**-0.2**
CACAO	**El Cacao, Vera**	**2.15**	**117**	*e*P	**Pn**	**11 47 36.9**	**+1.5**
CACAO				*e*S	**Sg**	**11 48 09.2**	**+0.1**
AZU	**Azuero**	**2.56**	**102**	*e*P	**Pn**	**11 47 42.5**	**+1.6**
JTS	**Las Juntas de**	**2.88**	**313**	*e*P	**Pn**	**11 47 45.2**	**+0.5**
BCIP	**Isla Barro Col**	**3.04**	**74**	*e*P	**Pn**	**11 47 48.1**	**+0.5**

*IDC **19** 11:59:04.4±1.4,1°.74N×126°.56E,h0km,mb3.7/5, mbtmp3.7/6,ML3.8/1,Error ellipse: s-maj=106.8km s-min=19.0km az=68.0*

*DJA **19** 11:59:09.0±0.2,2°.N±2°×12°.6E±°,h10km,M4.0/11,mb4.2/3, MLv3.9/11*

ISC 19 11:59:11.2±0.9,1°.64N±0°.06×126°.49E±0°.06,h35km,n13, σ2s04/16,mb3.8/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**134**	P	**Pn**	**11 59 32.1**	**+0.2**
TNTI				S	**Sn**	**11 59 49.8**	**+2.5**
SGSI	**Sangihe**	**2.25**	**335**	P	**Pn**	**11 59 46.6**	**+0.7**
SGSI				S	**Sn**	**12 00 13.0**	**+0.6**
KMSI	**Cibinong**	**2.72**	**247**	P	**Pn**	**11 59 52.1**	**-0.3**
KMSI				S	**Sn**	**12 00 22.4**	**-1.7**
MRSI	**Marisa**	**4.69**	**256**	P	**Pn**	**12 00 20.9**	**+1.4**
APSI	**Ampana**	**5.46**	**242**	P	**Pn**	**12 00 32.1**	**+2.0**
	0.2nm61nm,1.0s						
MPSI	**Mapaga**	**6.71**	**259**	P	**Pn**	**12 00 47.9**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**12 03 35.4**	**-1.5**
	0.2nm,0.3s,baz=1.7,slow=12,SNR=2.5						
	1.6nm,0.8s						
WRA	**Warramunga Arr**	**22.79**	**161**	P	**P**	**12 04 09.1**	**-1.9**
	2.6nm,0.6s,baz=340,slow=11,SNR=31						
	2.6nm,0.6s						
MASI	**Maura Aman, Be**	**24.70**	**259**	P	**P**	**12 04 34.2**	**+4.9**
ASAR	**Alice Springs**	**26.17**	**164**	P	**P**	**12 04 41.9**	**-0.6**
	0.6nm,0.5s,baz=344,slow=7.8,SNR=16						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**36.29**	**158**	P	**P**	**12 06 10.5**	**-0.9**
	1.2nm,0.5s,baz=336,slow=12,SNR=3.2						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**12 09 06.1**	**-2.3**
	0.3nm,0.5s,baz=123,slow=8.2,SNR=4.3						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	**P**	**12 09 35.6**	**-1.3**
	0.3nm,0.4s,baz=130,slow=6.1,SNR=6.6						
	0.3nm,0.4s						

*NEIC **19** 11:59:21.4±0.5,35°.861N±0°.008×96°.70W±0°.01,h5km±1km, ML1.5/40,ML1.5,Error ellipse: s-maj=2.6km s-min=1.6km az=34.0*

NEIC 19 11:59:21±0.6,35°.863N±0°.008×96°.69W±0°.02,h7km±2km, Error ellipse: s-maj=2.0km s-min=1.1km az=82.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK052	**Battle Ridge R**	**0.16**	**326**	Pg	Pg	11 59 25.2	+0.9
OK052				Sg	Sg	11 59 27.7	+1.2
DEOK	**Depew**	**0.16**	**97**	Pg	Pg	11 59 25.2	+0.9
DEOK				Sg	Sg	11 59 27.9	+1.3
QUOK	**Quay**	**0.31**	**358**	Pg	Pg	11 59 27.9	+0.8
QUOK				Sg	Sg	11 59 32.4	+1.2
QUOK				IAML		11 59 34.3	
	comp=E,59nm,0.3s						
OK048	**Pawnee Station**	**0.59**	**340**	Pg	Pb	11 59 33.1	-0.6
OK048				Sg	Sg	11 59 41.0	+0.9
OK048				IAML		11 59 41.3	
	comp=E,31nm,0.2s						
ADOK	**Arcadia Dam**	**0.59**	**249**	Pg	Pg	11 59 30.6	-1.8
OK029	**Liberty Lake**	**0.62**	**264**		Pg	11 59 33.3	+0.3
OK029				Sg	Sb	11 59 42.1	-1.0
OK029				IAML		11 59 42.5	
	comp=E,21nm,0.4s						
OK029				IAML		11 59 54.0	
	comp=E,20nm,1.8s						
OK051	**E0350 and S346**	**0.65**	**350**	Pg	Pg	11 59 33.1	-0.5
OK051				Sg	Sg	11 59 43.0	+0.9
OK051				IAML		11 59 43.6	
	comp=E,32nm,0.2s						
OK051				IAML		11 59 47.4	
	comp=E,35nm,0.1s						
TUL3	**Leonard**	**0.73**	**86**	Pg	Pb	11 59 35.7	-0.4
FNO	**Franklin**	**0.84**	**224**	Pg	Pg	11 59 37.2	+0.2
T35A	**Sooner Cattle**	**1.06**	**8**	Pg	Pg	11 59 41.5	+0.1
T35A				IAML		11 59 56.4	
	comp=E,14nm,1.4s						
T35A				IAML		11 59 56.7	
	comp=E,10nm,0.2s						
GC02	**Grant County #**	**1.36**	**317**		Pb	11 59 46.9	0.0
RLO	**Rose Lookout**	**1.39**	**77**		Pn	11 59 46.9	+0.2
X34A	**Smith Ranch, M**	**1.57**	**217**		Pn	11 59 49.2	0.0
WMOK	**Wichita Mounta**	**2.04**	**237**	Pn	Pn	11 59 55.0	-0.9

*IDC **19** 12:03:42.5±0.6,27°.69N×129°.78E,h0km,mb4.2/26, mbtmp4.2/28,ML3.7/2,MS3.7/26,Error ellipse: s-maj=16.8km s-min=12.1km az=90.0*

*NEIC **19** 12:03:44.0±1.9,27°.54N±0°.06×129°.96E±0°.04,h10km±1km, mb4.6/25,Error ellipse: s-maj=10.1km s-min=5.2km az=12.0*

*NIED **19** 12:03:45.9,27°.73N×129°.83E,h69km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.80; $M_{\theta\theta}$-2.25; $M_{\phi\phi}$3.04; $M_{r\theta}$1.20; $M_{r\phi}$5.32; $M_{\theta\phi}$-3.78; Fault plane solution: $M_0$7.17000×10^{15} NP1: ϕ_s255.00000°,δ56.00000°,λ-6.00000°. NP2:ϕ_s349.00000°, δ85.00000°,λ-146.00000°.*

*JMA **19** 12:03:45.9±0.3,28°.N±1°×13°.0E±°,h69km±4km,MV4.1/24, NEAR AMAMI-OSHIMA ISLAND*

ISC 19 12:03:44.3±1.2,27°.58N±0°.03×129°.93E±0°.04,h15km±7km, n154,σ1s31/140,mb4.4/50,MS3.8/29,1C-1D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.73**	**3**	P	**Pb**	**12 03 59.6**	**+0.8**
JZK				*e*S	**Sb**	**12 04 10.5**	**+1.7**
JAM	**Amami Oshima**	**0.88**	**341**	P	**Pg**	**12 04 00.9**	**-0.4**
JAM				*e*S	**Sg**	**12 04 11.3**	**-1.6**
JTK	**Tokunoshima**	**0.89**	**284**	P	**Pg**	**12 04 02.0**	**+0.4**
JTK				*e*S	**Sg**	**12 04 14.1**	**+0.7**
JAMN	**Amaminishikomi**	**0.94**	**315**	P	**Pg**	**12 04 01.7**	**-0.8**
JOKE	**Okinoerabujima**	**1.23**	**260**	P	**Pn**	**12 04 07.0**	**0.0**
JYRO	**Yoronjima**	**1.43**	**248**	P	**Pn**	**12 04 09.9**	**+0.1**
JOW	**Kunigami**	**1.65**	**244**	Pn	**Pn**	**12 04 12.8**	**0.0**
	189nm,0.3s,baz=78,slow=6.4,SNR=78						
JOW				Sn	**Sn**	**12 04 34.8**	**+1.0**
	144nm,0.3s,baz=26,slow=20,SNR=7.5						
JOW	**Kunigami**	**1.65**	**244**		**Pn**	**12 04 12.9**	**+0.1**
JOW	**Kunigami**	**1.65**	**244**	P	**Pn**	**12 04 13.1**	**+0.2**
JOW	**Kunigami**	**1.65**	**244**	P	**Pn**	**12 04 12.8**	**0.0**
JTAJ	**Takarajima**	**1.69**	**338**	P	**Pn**	**12 04 12.0**	**-1.4**
JIH	**Iheya**	**1.83**	**253**	P	**Pn**	**12 04 15.4**	**+0.1**
JNTH	**Nagotoyohara**	**2.00**	**239**	P	**Pn**	**12 04 17.6**	**0.0**
JKDJ	**Kitadaitoujima**	**2.03**	**143**	P	**Pn**	**12 04 17.8**	**-0.3**
JKDJ				*e*S	**Sn**	**12 04 41.5**	**-1.7**
JMZ	**Minamidaito 2**	**2.10**	**146**		**Pn**	**12 04 18.5**	**-0.5**
JMZ				Sn	**Sn**	**12 04 42.6**	**-2.3**
JMZ	**Minamidaito 2**	**2.10**	**146**	P	**Pn**	**12 04 18.5**	**-0.5**
JMZ	**Minamidaito 2**	**2.10**	**146**	S	**Sn**	**12 04 42.8**	**-2.1**
JMZ	**Minamidaito 2**	**2.10**	**146**	P	**Pn**	**12 04 18.4**	**-0.6**
JMZ				*e

CD2 pmax pmax
comp=Z,600nm,5.4s
CD2 LR LR
comp=N,1μm,17.1s
CD2 LR LR
comp=E,2μm,13.3s
CD2 LR LR
comp=Z,990nm,13.9s
LZH Lanzhou 23.68 298 *e*P **P 12 08 55.3 -0.4**
LZH sP pwP 12 09 04.6 +2.2
LZH pmax pmax
comp=Z,13nm,1.3s
LZH LR LR
comp=N,580nm,14.0s
LZH LR LR
comp=E,650nm,15.6s
LZH LR LR
comp=Z,660nm,12.1s
LZDM Lanzhou Array 23.76 297 P **P 12 08 55.4 -1.3**
comp=Z,3.0nm,0.5s,baz=123,slow=11,SNR=6.1
comp=Z,3.0nm,0.5s
KMI Kunming 24.47 270 P **P 12 09 04.9 +1.7**
KMI pmax pmax
comp=Z,15nm,0.7s
KMI LR LR
comp=N,260nm,16.0s
KMI LR LR
comp=E,270nm,16.9s
KMI LR LR
comp=Z,260nm,13.1s
PZH PanZhiHua 25.11 274 P **P 12 09 11.9 +3.0**
PZH pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 27.30 324 P **P 12 09 28.2 -0.3**
comp=Z,0.5nm,0.4s,baz=128,slow=11,SNR=2.3
SONM LR LR 12 22 55.4
comp=Z,105nm,19.0s,baz=137,slow=42
comp=Z,0.5nm,0.4s
GTA Gaotai 27.62 303 *e*P **P 12 09 30.8 -0.7**
GTA sP pwP 12 09 39.3 +1.0
GTA pmax pmax
comp=Z,5.0nm,1.4s
GTA LR LR
comp=N,220nm,16.0s
GTA LR LR
comp=E,520nm,16.7s
GTA LR LR
comp=Z,420nm,15.6s
CHTO Chiang Mai 29.72 260 P 12 09 49.9 -0.3
CHTO IAmb IAmb 12 10 02.5
comp=Z,4.5nm,0.7s
CM31 Chiang Mai Arr 29.86 259 P **P 12 09 50.7 -0.7**
CM31 IAmb IAmb 12 10 03.6
comp=Z,3.6nm,0.6s
CMAR Chiang Mai Arr 29.86 259 P **P 12 09 51.4 -0.1**
comp=Z,1.1nm,0.4s,baz=54,slow=7.6,SNR=12
CMAR LR LR 12 23 10.4
comp=Z,86nm,18.7s,baz=70,slow=39
comp=Z,1.1nm,0.4s
CMAR Chiang Mai Arr 29.86 259 P **P 12 09 51.1 -0.3**
PETK Petropavlovsk- 32.76 31 LR LR 12 24 55.8
comp=Z,68nm,18.4s,baz=223,slow=39
KAPI Kappang 33.86 198 LR LR 12 24 25.8
comp=Z,35nm,21.6s,baz=10.0,slow=37
H11N2 WAKE ISLAND Hy 34.65 95 T T 12 47 11.1
baz=290,slow=75,SNR=30
H11N1 WAKE ISLAND Hy 34.65 95 T T 12 47 11.1
baz=290,slow=75,SNR=18
H11N3 WAKE ISLAND Hy 34.67 95 T T 12 47 12.3
baz=290,slow=75,SNR=23
H11S3 WAKE ISLAND Hy 34.91 97 T T 12 47 31.7
baz=292
BRDH Bariadhala 34.91 271 LR LR 12 26 05.3
comp=Z,140nm,18.4s,baz=167,slow=39
H11S1 WAKE ISLAND Hy 34.91 97 T T 12 47 33.8
baz=292
H11S2 WAKE ISLAND Hy 34.92 97 T T 12 47 40.9
baz=292
MA2 Magadan 35.05 18 LR LR 12 26 34.5
comp=Z,57nm,18.3s,baz=190,slow=39
WMQ Urumqi 37.49 307 *e*P P 12 11 03.4 +5.8
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ LR LR
comp=Z,120nm,18.7s
EVN Everest 38.00 281 P 12 11 03.0 +0.2
EVN IAmb IAmb 12 11 16.1
comp=Z,3.7nm,0.6s
SEY Seymchan 38.30 16 LR LR 12 28 35.8
comp=Z,79nm,18.2s,baz=190,slow=39
PSI Prapat 38.53 236 LR LR 12 28 12.6
comp=Z,53nm,18.7s,baz=13,slow=38
PMG Port Moresby 40.38 153 LR LR 12 28 31.4
comp=Z,58nm,18.2s,baz=328,slow=37
MKAR Makanchi Array 41.79 310 P **P 12 11 31.6 -1.7**
comp=Z,0.7nm,0.6s,baz=94,slow=10,SNR=5.0
MKAR PcP **PcP 12 13 31.1 +1.8**
comp=Z,0.5nm,0.8s,baz=113,slow=3.7,SNR=2.5
comp=Z,0.7nm,0.6s
MKAR Makanchi Array 41.79 310 P **P 12 11 32.5 -0.8**
ZAA0 Zalesovo Array 42.12 321 P **P 12 11 34.1 -1.7**
ZALV Zalesovo Beam 42.12 321 P **P 12 11 33.7 -2.1**
comp=Z,1.7nm,0.5s,baz=110,slow=9.6,SNR=9.0
comp=Z,1.7nm,0.5s
ZALV Zalesovo Beam 42.12 321 P **P 12 11 34.3 -1.5**
KNRA Kununurra 43.01 182 P 12 11 43.1 -0.3
TARG Taragay, Kyrgy 44.49 303 P **P 12 11 55.2 -0.5**
TARG IAmb IAmb 12 12 07.6
comp=Z,4.7nm,0.9s
KURK Kurchatov 44.91 315 P **P 12 11 59.0 +0.7**
KURBB Kurchatov Arra 44.95 315 P **P 12 11 56.5 -2.2**
KURBB LR LR 12 32 39.1
comp=Z,0.5nm,0.4s,baz=102,slow=8.9,SNR=4.8
comp=Z,143nm,18.7s,baz=180,slow=39
comp=Z,0.5nm,0.4s
FITZ Fitzroy Crossi 45.60 186 P **P 12 12 04.9 +0.9**
comp=Z,4.9nm,0.8s,baz=12,slow=6.8,SNR=10
comp=Z,4.9nm,0.8s
FITZ Fitzroy Crossi 45.60 186 P 12 12 04.5 +0.4
HNR Honiara 46.89 137 LR LR 12 28 55.9
comp=Z,36nm,21.6s,baz=136,slow=32
WB0 Warramunga Arr 47.27 174 P 12 12 17.0 -0.2
WB0 IAmb IAmb 12 12 18.4
comp=Z,7.2nm,0.6s
WRAB Tennant Creek 47.43 174 P **P 12 12 18.9 +0.5**
WRAB IAmb IAmb 12 12 19.7
comp=Z,5.2nm,0.6s
WRA Warramunga Arr 47.43 174 P **P 12 12 18.9 +0.3**
comp=Z,5.2nm,0.5s,baz=353,slow=8.5,SNR=72
comp=Z,5.2nm,0.5s
WRA Warramunga Arr 47.43 174 P 12 12 17.2 -1.3
WR8 Warramunga Arr 47.46 174 P 12 12 18.9 +0.2
WR8 IAmb IAmb 12 12 20.1
comp=Z,6.2nm,0.6s
PSA00 Pilbara Seismi 49.83 192 P 12 12 36.0 -0.9
PSA00 IAmb IAmb 12 12 48.3
comp=Z,8.8nm,1.0s
KK31 Karatay Array 49.88 304 P **P 12 12 36.2 -1.1**
KK31 IAmb IAmb 12 12 50.8
comp=Z,5.4nm,1.3s
KKAR Karatay Array 49.88 304 P 12 12 36.2 -1.1
CTAO Charters Tower 49.95 160 P **P 12 12 37.2 -0.7**
CTAO IAmb IAmb 12 12 51.1
comp=Z,6.4nm,0.8s
BVAR Borovoye Array 50.30 317 P **P 12 12 39.2 -1.0**
comp=Z,1.9nm,0.6s,baz=81,slow=9.2,SNR=10
BVAR LR LR 12 36 00.5
comp=Z,256nm,18.8s,baz=77,slow=39
comp=Z,1.9nm,0.6s
PALK Pallekele 50.73 256 LR LR 12 36 23.1
comp=Z,60nm,19.3s,baz=50,slow=39
AS31 Alice Springs 51.09 175 P 12 12 46.8 +0.3
AS31 IAmb IAmb 12 12 49.4
comp=Z,2.0nm,0.5s
ASAR Alice Springs 51.09 175 P **P 12 12 47.5 +1.0**
comp=Z,2.0nm,0.6s,baz=6.8,slow=14,SNR=90
comp=Z,2.0nm,0.6s
ASAR Alice Springs 51.09 175 P **P 12 12 46.7 +0.2**
AB31 Akbulak array 56.84 313 P 12 13 27.3 -1.0
ABKAR Akbulak array 56.84 313 P 12 13 27.1 -1.1
ARTI Arti 57.38 321 P **P 12 13 31.6 -0.4**
comp=Z,2.2nm,0.5s,baz=185,slow=6.2,SNR=3.2
ARTI LR LR 12 41 14.4
comp=Z,236nm,18.1s,baz=62,slow=39
comp=Z,2.2nm,0.5s
AKTO Aktyubinsk 57.98 314 LR LR 12 38 16.8
comp=Z,69nm,21.3s,baz=66,slow=36

STKA Stephens Creek 60.16 169 P **P 12 13 52.9 +1.4**
comp=Z,1.5nm,0.6s,baz=357,slow=4.7,SNR=5.0
comp=Z,1.5nm,0.6s
ILAR Eielson Array 62.53 29 P **P 12 14 07.4 +0.2**
comp=Z,0.4nm,0.8s,baz=274,slow=9.5,SNR=5.6
comp=Z,0.4nm,0.8s
ILAR Eielson Array 62.53 29 P **P 12 14 08.1 +0.8**
BMAR Burnt Mountain 63.14 26 P **P 12 14 11.2 -0.1**
BCAR Beaver Creek A 65.03 30 P **P 12 14 24.3 +0.5**
SPITS Spitsbergen Ar 67.82 348 P **P 12 14 40.9 -0.5**
comp=Z,3.2nm,0.5s,baz=84,slow=11,SNR=16
comp=Z,3.2nm,0.5s
A36M Sachs Harbour 68.47 19 P 12 14 47.1 +1.6
A36M IAmb IAmb 12 15 01.1
comp=Z,6.8nm,0.8s
KEV Kevo 68.74 339 P **P 12 14 47.1 0.0**
ARCES ARCESS Array B 69.31 339 P **P 12 14 49.7 -1.1**
comp=Z,1.0nm,0.4s,baz=74,slow=7.4,SNR=11
ARCES LR LR 12 51 03.9
comp=Z,108nm,18.1s,baz=237,slow=41
comp=Z,1.0nm,0.4s
KBZ Khabaz 69.48 309 P **P 12 14 53.1 +0.9**
comp=Z,4.1nm,0.9s,baz=122,slow=0.9,SNR=8.8
comp=Z,4.1nm,0.9s
FIA1 FINESS Array S 72.43 331 P **P 12 15 08.7 -1.2**
FINES FINESS Array B 72.44 331 P **P 12 15 08.9 -0.9**
comp=Z,5.5nm,0.5s,baz=67,slow=5.7,SNR=50
FINES LR LR 12 50 55.6
comp=Z,138nm,18.5s,baz=268,slow=39
comp=Z,5.5nm,0.5s
RES Resolute Bay 73.94 11 LR LR 12 50 33.5
comp=Z,35nm,18.3s,baz=22,slow=38
AKASG Malin Array Be 75.49 320 P **P 12 15 27.6 -0.3**
comp=Z,2.6nm,0.5s,baz=60,slow=6.4,SNR=6.9
AKASG LR LR 12 52 09.9
comp=Z,167nm,18.5s,baz=308,slow=39
comp=Z,2.6nm,0.5s
YKA Yellowknife Ar 76.66 26 P **P 12 15 35.2 +0.8**
comp=Z,0.4nm,0.7s,baz=299,slow=6.4,SNR=2.0
comp=Z,0.4nm,0.7s
BRTR Keskin Array B 77.40 308 P **P 12 15 39.5 +0.3**
comp=Z,1.1nm,0.7s,baz=104,slow=3.7,SNR=4.5
comp=Z,1.1nm,0.7s
BR104 Keskin Array S 77.41 308 P **P 12 15 38.9 -0.3**
comp=Z,48nmcomp=Z,5.1nm,1.0s
BR106 Keskin Array S 77.41 308 P **P 12 15 38.9 -0.4**
comp=Z,41nmcomp=Z,4.1nm,1.1s
BR105 Keskin Array S 77.42 308 P **P 12 15 38.9 -0.4**
comp=Z,4.6nm,1.0s
HFS Hagfors 78.33 333 P **P 12 15 43.0 -0.7**
comp=Z,4.0nm,0.5s,baz=74,slow=5.3,SNR=20
comp=Z,4.0nm,0.5s
NC405 NORSAR Array S 78.53 334 P 12 15 44.5 -0.4
NB201 NORSAR Array S 78.73 334 P **P 12 15 45.7 -0.3**
NB2 NORSAR Subarra 78.77 334 P **P 12 15 45.2 -1.1**
comp=Z,3.2nm,0.5s,baz=51,slow=5.9
NOA NORSAR Array B 78.77 334 P **P 12 15 45.4 -0.9**
comp=Z,2.9nm,0.6s,baz=52,slow=5.6,SNR=16
NOA LR LR 12 56 18.3
comp=Z,48nm,18.5s,baz=245,slow=40
comp=Z,2.9nm,0.6s
BUR08 Bucovina Ar. S 79.24 318 P 12 15 49.8 +0.6
BUR08 IAmb IAmb 12 16 01.2
comp=Z,4.9nm,1.2s
BURAR Bucovina Array 79.25 318 P P 12 15 49.8 +0.6
MLR Muntele Rosu 79.84 316 LR LR 12 52 26.3
comp=Z,88nm,18.7s,baz=312,slow=37
BRIU Brid 80.17 320 P **P 12 15 53.4 -0.6**
STHS Stebnicka Huta 80.62 321 *e*P **P 12 15 59.0 +2.5**
OJC Ojcow 80.98 322 P **P 12 15 58.6 +0.2**
comp=Z,12nm,0.6s
NIE Niedzica 81.14 321 P **P 12 15 59.1 -0.2**
GERES GERESS Array B 85.03 324 P **P 12 16 19.1 -0.4**
comp=Z,0.7nm,0.5s,baz=37,slow=5.7,SNR=4.9
comp=Z,0.7nm,0.5s
ITM Ithomi 86.67 310 P **P 12 16 27.7 -0.1**
EKA Eskdalemuir Ar 88.20 335 P **P 12 16 35.2 +0.5**
comp=Z,0.6nm,0.4s,baz=26,slow=5.6,SNR=5.0
comp=Z,0.6nm,0.4s
DAVOX Davos/Dischmat 88.33 323 P **P 12 16 37.8 +1.9**
comp=Z,5.0nm,0.5s,baz=46,slow=8.3,SNR=8.5
NVAR Mina Array Bea 88.48 47 P **P 12 16 38.7 +2.0**
comp=Z,0.2nm,0.6s,baz=298,slow=7.1,SNR=2.3
comp=Z,0.2nm,0.6s
PDAR Pinedale Array 91.16 39 P **P 12 16 50.7 +1.5**
comp=Z,0.4nm,0.8s,baz=225,slow=0.4,SNR=4.2
comp=Z,0.4nm,0.8s
SCHQ Schefferville 96.67 10 LR LR 13 04 12.9
comp=Z,89nm,18.9s,baz=50,slow=38

TURN S **Sn 12 12 38.6 +0.5**
TURN *i* IAML 12 12 39.0
comp=N,712nm,0.4s
TURN *i* IAML 12 12 40.0
comp=E,629nm,0.3s
TURN Turunc 0.74 101 Pg **Pb 12 12 26.6 +0.6**
GCAM G?zelcami? 0.78 354 P **Pb 12 12 26.8 +0.1**
GCAM S **Sn 12 12 39.7 +0.6**
GCAM *i* IAML 12 12 41.0
comp=E,597nm,0.4s
GCAM *i* IAML 12 12 43.0
comp=N,639nm,0.4s
GCAM G?zelcami? 0.78 354 Pg **Pn 12 12 27.7 -0.1**
YER Yerkesik 0.78 74 Pg **Pn 12 12 28.0 +0.1**
MULA Mugla, Merkez- 0.85 67 P **Pg 12 12 28.6 +0.5**
AYDN Tasoluk 0.85 30 P **Pb 12 12 28.0 0.0**
AYDN S **Sn 12 12 41.3 +0.3**
AYDN *i* IAML 12 12 47.0
comp=N,752nm,0.4s
AYDN *i* IAML 12 12 48.0
comp=E,500nm,0.5s
SMG Samos 0.88 333 P **Pg 12 12 28.7 0.0**
SMG S **Sg 12 12 40.6 +0.3**
SMG Samos 0.88 333 P **Pg 12 12 28.8 +0.2**
SMG S **Sg 12 12 40.9 +0.6**
ASTA Astypalaia 0.88 245 P **Pn 12 12 29.4 +0.2**
ASTA S **Sn 12 12 41.0 -0.6**
KUSD Kusadasi-Aydin 0.93 357 Pg **Pb 12 12 29.4 0.0**
ARG Arkhangelos 0.95 138 Pg **Pn 12 12 30.5 +0.4**
ARG Sg **Sn 12 12 44.2 +0.9**
ARG Arkhangelos 0.95 138 P **Pn 12 12 30.7 +0.5**
ARG S **Sn 12 12 43.4 +0.1**
ARG Arkhangelos 0.95 138 P **Pn 12 12 30.5 +0.4**
KRL1 Karlovasi Samo 1.00 330 P **Pb 12 12 30.5 0.0**
DALY Dalyan (Mula) 1.06 95 Pn **Pg 12 12 32.7 +0.7**
AYDB Zeytinkoy-Aydi 1.11 23 Pn **Pg 12 12 33.3 +0.3**
ESEN Aydn-Nazilli 1.18 42 P **Pb 12 12 33.8 +0.2**
ESEN *i* IAML 12 12 55.0
comp=N,109nm,1.0s
ESEN *i* IAML 12 12 55.0
comp=E,146nm,0.5s
GMLD Gumuldur 1.20 344 Pn **Pg 12 12 34.8 +0.1**
NAZL Nazilli-Aydin 1.28 36 Pn **Pg 12 12 36.2 -0.1**
KARP Karpathos 1.38 186 Pn **Pb 12 12 37.1 0.0**
KARP Karpathos 1.38 186 P **Pn 12 12 36.7 +0.5**
KARP S **Sb 12 12 54.7 +0.2**
KARP Karpathos 1.38 186 P **Pb 12 12 37.0 0.0**
FETY Fethiye 1.43 101 P Pn 12 12 30.6 -6.2
APE Apeiranthos 1.46 276 Pn **Pb 12 12 38.3 0.0**
APE Apeiranthos 1.46 276 P **Pb 12 12 38.9 +0.6**
APE S **Sn 12 12 56.2 +0.2**
APE Apeiranthos 1.46 276 P **Pb 12 12 38.4 0.0**
ODEM Odemis-Izmir 1.47 23 Pn **Pb 12 12 38.8 +0.3**
BLCB Balcova 1.48 351 Pn **Pb 12 12 38.8 +0.2**
CAME Cameli-Denizli 1.57 89 Pn **Pb 12 12 40.7 +0.4**
APMY Acipayam-Deniz 1.66 70 Pn **Pb 12 12 41.9 +0.2**
CHOS Chios island 1.78 325 Pn **Pb 12 12 43.2 -0.6**
CHOS Chios island 1.78 325 P **Pn 12 12 42.7 +1.0**
KULA Kula-Manisa 1.90 33 Pn **Pb 12 12 45.3 -0.6**
AKAS Kas 1.95 110 Pn **Pb 12 12 45.8 -0.9**
ELL Elmali 2.07 94 Pn **Pb 12 12 47.8 -0.9**
GORD Gordes-Manisa 2.09 18 Pn **Pb 12 12 47.8 -1.2**
AK13 Malin Array Si 13.74 5 P **Pn 12 15 27.2 +1.7**
AK14 Malin Array Si 13.76 5 P **Pn 12 15 27.0 +1.2**
AK08 Malin Array Si 13.77 5 P **Pn 12 15 26.3 +0.4**
AK12 Malin Array Si 13.78 5 P **Pn 12 15 26.9 +0.9**
AK02 Malin Array Si 13.79 5 P **Pn 12 15 26.8 +0.6**
AK16 Malin Array Si 13.80 5 P **Pn 12 15 26.9 +0.6**
AK17 Malin Array Si 13.81 5 P **Pn 12 15 27.1 +0.6**
AK11 Malin Array Si 13.81 5 P **Pn 12 15 26.9 +0.4**
AK01 Malin Array Si 13.83 5 P **Pn 12 15 26.3 -0.4**
KIEV Kiev 13.83 5 P **Pn 12 15 25.3 -1.4**
23nm,0.5s
AKBB Malin Array Si 13.84 5 P **Pn 12 15 25.9 -0.9**
AKBB pP **P 12 15 34.3 -0.8**
AK19 Malin Array Si 13.84 4 P **Pn 12 15 27.1 +0.2**
AK18 Malin Array Si 13.85 5 P **Pn 12 15 26.9 -0.1**
AK04 Malin Array Si 13.86 5 P **Pn 12 15 27.3 +0.2**
AK03 Malin Array Si 13.86 5 P **Pn 12 15 26.9 -0.3**
AK20 Malin Array Si 13.87 4 P **Pn 12 15 27.1 -0.1**
AK22 Malin Array Si 13.89 5 P **Pn 12 15 26.8 -0.7**
AK21 Malin Array Si 13.90 4 P **Pn 12 15 27.0 -0.7**
CLL Colim 17.64 329 *e*P **Pn 12 16 14.0 -2.4**
CLL *ex* **P 12 16 18.0 +0.7**
comp=Z,5.0nm,0.7s

*KRNET **19** 12:10:04.9±0.1, 40.°62N×69.°23E, h18km, mb2.9*
ISC 19 12:10:05.3±1.9, 40.°65N±0.°09×69.°1E±0.°2, h5km±27km, n10, σ0°62/19, 11C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
TRKS	**Terek-Say**	**1.79**	**60**	⇓*i*P	**Pn**	**12 10 36.5**	**-0.6**
TRKS				⇓*i*S	**Sn**	**12 10 59.5**	**-0.8**
GAR	**Garm**	**1.90**	**149**	⇑*e*P	**Pn**	**12 11 02.7**	**+0.2**
GAR				⇑eS	**Sn**	**12 11 03.4**	**+0.5**
CHGR	**Chuyangaron**	**1.99**	**178**	⇑*e*P	**Pb**	**12 10 41.2**	**-0.8**
CHGR				⇑eS	**Sb**	**12 11 07.5**	**+0.5**
ARK	**Arkit**	**2.46**	**61**	⇑*i*P	**Pn**	**12 10 46.9**	**+0.7**
ARK				⇑*i*S	**Sn**	**12 11 17.7**	**+0.9**
KK31	**Karatay Array**	**2.68**	**23**	⇑Pg	**Pg**	**12 10 56.9**	**+0.2**
	0.8nm,0.4s,baz=193,slow=17,SNR=5.5						
KK31				Lg	Lg	12 11 33.8	
	1.0nm,0.2s,baz=195,slow=32,SNR=9.7						
OHH	**Osh**	**2.83**	**91**	⇑*e*P	**Pn**	**12 10 51.6**	**+0.4**
OHH				⇑eS	**Sn**	**12 11 25.6**	**-0.1**
ARSB	**Arslanbob**	**3.04**	**76**	⇑*i*P	**Pn**	**12 10 54.6**	**+0.5**
ARSB				⇑*i*S	**Sn**	**12 11 30.8**	**-0.1**
SFK	**Sufi-Kurgan**	**3.44**	**99**	⇓*e*P	**Pn**	**12 11 00.1**	**+0.3**
SFK				⇓eS	**Sn**	**12 11 40.5**	**-0.6**
SALK	**Salom-Alik**	**3.61**	**85**	⇓*e*P	**Pn**	**12 11 02.6**	**+0.5**
SALK				⇓eS	**Sn**	**12 11 44.6**	**-0.6**
ARLS	**Aral**	**4.14**	**71**	⇓*i*P	**Pn**	**12 11 10.0**	**+0.7**
ARLS				⇓*i*S	**Sn**	**12 11 57.6**	**-0.5**

*ISK **19** 12:12:11.7, 36.°91N×27.°31E, h12km, ML3.0/25*
*AFAD **19** 12:12:11.6, 36.°90N×27.°33E, h7km±3km, ML2.9*
*ATH **19** 12:12:11.7, 36.°93N×27.°37E, h12km±1km, ML2.9/6,*
Manual Solution by F.Xalaris First location: 2019/11/19 12:13:45, This location: 2019/11/19 12:19:35 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km
*THE **19** 12:12:12.2, 36.°9N±0.°9×27.°7E±.°, h13km±2km, M2.9/6, MLh2.9/6*
ISC 19 12:12:11.5±0.7, 36.°93N±0.°02×27.°34E±0.°02, h16km±5km, n69, σ0°60/89, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
BODT	**Bodrum**	**0.14**	**349**	Pg	**Pb**	**12 12 15.9**	**+0.1**
BODT				Sg	**Sg**	**12 12 18.4**	**+0.2**
BODT	**Bodrum**	**0.14**	**349**	P	**Pg**	**12 12 15.8**	**+0.3**
BODT				S	**Sg**	**12 12 18.3**	**+0.2**
BDRM	**Kayabasi**	**0.16**	**30**	P	**Pg**	**12 12 15.6**	**-0.3**
BDRM				S	**Sg**	**12 12 18.4**	**-0.2**
BDRM				*i* IAML		12 12 19.0	
	comp=E,3μm,0.6s						
YKAV	**Yalikavak-Bodr**	**0.20**	**346**	Pg	**Pg**	**12 12 16.4**	**0.0**
YKAV				Sg	**Sg**	**12 12 20.1**	**+0.4**
YAZI	**Mula-Dat§a-**	**0.26**	**160**	P	**Pg**	**12 12 17.4**	**+0.1**
YAZI				S	**Sg**	**12 12 20.9**	**-0.2**
DAT	**Datca**	**0.27**	**136**	Pg	**Pg**	**12 12 17.7**	**+0.1**
DAT	**Datca**	**0.27**	**136**	S	**Sb**	**12 12 22.7**	**+0.2**
KLNA	**Kalymnos**	**0.30**	**276**	P	**Pg**	**12 12 18.1**	**+0.1**
KLNA				S	**Sg**	**12 12 22.6**	**+0.3**
DATC	**Datca-Mugla**	**0.30**	**123**	Pg	**Pb**	**12 12 18.9**	**+0.3**
NISR	**Nisiros**	**0.36**	**209**	P	**Pg**	**12 12 18.9**	**0.0**
NISR				S	**Sb**	**12 12 24.7**	**-0.1**
NISR	**Nisiros**	**0.36**	**209**	P	**Pg**	**12 12 19.2**	**+0.3**
NISR				S	**Sg**	**12 12 24.1**	**+0.2**
DIDI	**Didim-Aydin**	**0.46**	**350**	Pg	**Pg**	**12 12 21.8**	**+0.6**
DDIM	**Aydin, Didim**	**0.54**	**351**	P	**Pg**	**12 12 21.9**	**-0.3**
DDIM				S	**Sb**	**12 12 31.3**	**+1.3**
DDIM				*i* IAML		12 12 35.0	
	comp=E,915nm,0.6s						
DDIM				*i* IAML		12 12 36.0	
	comp=N,1μm,0.8s						
TURN	**Turunc**	**0.74**	**101**	P	**Pg**	**12 12 25.7**	**-0.3**

*WEL **19** 12:52:32.5±0.7, 33.°5±6.°×17.°8W±1.°5, h12km, M4.2/7, mB4.8/7, ML4.2/11, MLv4.3/7, Mw(mB)4.0/7, Error ellipse: s-maj=21.1km s-min=3.3km az=108.7, confirmed*
*IDC **19** 12:52:33.5±3.1, 32.°64S×178.°33W, h0km, mb4.0/2, mbtmp4.0/3, ML3.7/1, MS3.2/1, Error ellipse: s-maj=75.3km s-min=45.8km az=120.0*
*NOU **19** 12:53:18.3, 35.°10S×178.°94E, h4km, mb4.4/5, Off E. Coast of N. Island, N.Z.*
ISC 19 12:52:29.7±1.5, 32.°79S±0.°07×177.°6W±0.°2, h10km, n30, σ1§94/47, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
GLKZ	**Green Lake**	**3.53**	**355**	P	**Pn**	**12 53 25.5**	**+0.9**
GLKZ				S	**Sn**	**12 54 02.1**	**-4.3**
RIZ	**Raoul Island**	**3.55**	**355**	S	**Sn**	**12 54 05.6**	**-1.2**
MXZ	**Matakaoa Point**	**5.85**	**214**	P	**Pn**	**12 53 59.9**	**+3.4**
MXZ	**Matakaoa Point**	**5.85**	**214**	P	**Pn**	**12 53 56.5**	**+0.1**
MXZ				S	**Sn**	**12 55 02.9**	**-0.6**
WMGZ	**Waiomatatini S**	**6.01**	**212**	P	**Pn**	**12 54 01.2**	**+2.6**
WMGZ				S	**Sn**	**12 55 07.2**	**-0.3**
PKGZ	**Pakihiroa**	**6.20**	**214**	P	**Pn**	**12 54 03.1**	**+1.8**
PKGZ				S	**Sn**	**12 55 11.3**	**-1.0**
HAZ	**Te Kaha**	**6.25**	**216**	P	**Pn**	**12 54 03.7**	**+1.6**
HAZ				S	**Sn**	**12 55 14.5**	**+0.9**
PUZ	**Puketiti**	**6.28**	**212**	P	**Pn**	**12 54 03.6**	**+1.1**
PUZ				S	**Sn**	**12 55 14.1**	**-0.2**
RUGZ	**Raukumara Rang**	**6.47**	**216**	P	**Pn**	**12 54 06.0**	**+0.9**
RUGZ				S	**Sn**	**12 55 18.6**	**-0.5**
CNGZ	**Carnagh Statio**	**6.65**	**210**	P	**Pn**	**12 54 08.6**	**+1.1**
CNGZ				S	**Sn**	**12 55 23.3**	**0.0**
TKGZ	**Te Karaka**	**6.77**	**212**	P	**Pn**	**12 54 11.0**	**+1.8**
TKGZ				S	**Sn**	**12 55 24.3**	**-1.9**
KUZ	**Kuaotunu**	**6.80**	**233**	S	**Sn**	**12 55 23.8**	**-3.2**
MWZ	**Matawai**	**6.83**	**215**	P	**Pn**	**12 54 10.2**	**+0.1**
MWZ				S	**Sn**	**12 55 26.5**	**-1.4**
URZ	**Urewera**	**6.98**	**217**	Pn	**Pn**	**12 54 12.6**	**+0.6**
	1.6nm,0.3s,baz=18,slow=3.2,SNR=29						
URZ				Sn	**Sn**	**12 55 28.3**	**-3.1**
	8.4nm,0.3s,baz=285,slow=22,SNR=14						
	4.6nm,0.3s						
URZ	**Urewera**	**6.98**	**217**	P	**Pn**	**12 54 13.7**	**+1.7**
URZ	**Urewera**	**6.98**	**217**	P	**Pn**	**12 54 11.8**	**-0.2**
URZ				S	**Sn**	**12 55 27.9**	**-3.6**
RIGZ	**Rimuhau**	**7.03**	**212**	P	**Pn**	**12 54 14.3**	**+1.6**
RIGZ				S	**Sn**	**12 55 29.4**	**-3.3**
SNGZ	**Shannon Statio**	**7.28**	**213**	P	**Pn**	**12 54 19.1**	**+2.9**
SNGZ				S	**Sn**	**12 55 38.7**	**-0.2**
MUGZ	**Murupara**	**7.32**	**218**	P	**Pn**	**12 54 16.0**	**-0.7**
MUGZ				S	**Sn**	**12 55 37.0**	**-2.9**
RTZ	**Ruatahuna**	**7.32**	**216**	P	**Pn**	**12 54 17.9**	**+1.2**
RTZ				S	**Sn**	**12 55 37.8**	**-2.1**
KNZ	**Kokohu**	**7.33**	**211**	P	**Pn**	**12 54 16.9**	**+0.2**
KNZ				S	**Sn**	**12 55 37.7**	**-2.3**
MHGZ	**Mahia Peninsul**	**7.34**	**209**	P	**Pn**	**12 54 16.3**	**-0.7**
MHGZ				S	**Sn**	**12 55 39.2**	**-1.2**
OUZ	**Omahuta**	**7.74**	**249**	P	**Pn**	**12 54 25.6**	**+3.1**
OUZ	**Omahuta**	**7.74**	**249**	P	**Pn**	**12 54 25.5**	**+3.1**
BKZ	**Black Stump Fm**	**7.99**	**216**	P	**Pn**	**12 54 26.7**	**+0.8**
KHZ	**Kahutara**	**11.92**	**214**	P	**Pn**	**12 55 21.4**	**+1.7**
DZM	**Mont Dzumac**	**17.75**	**303**	LR	LR	13 01 36.3	
	comp=Z,85nm,19.1s,baz=152,slow=32						
ASAR	**Alice Springs**	**43.41**	**269**	P	**P**	**13 00 32.9**	**0.0**
	0.9nm,0.6s,baz=110,slow=7.6,SNR=5.1						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**44.62**	**274**	P	**P**	**13 00 42.6**	**+0.1**
	1.5nm,0.4s,baz=113,slow=7.9,SNR=4.9						
	1.5nm,0.4s						
FINES	**FINESS Array B**	**147.51**	**339**	PKPbc	**PKiKP**	**13 12 17.0**	**+1.6**
	3.8nm,0.9s,baz=38,slow=2.5,SNR=5.4						

*IDC **19** 12:54:04.1±0.6, 1.°57N×126.°06E, h0km, mb4.2/16,*

mbtmp4.2/17,ML4.1/1,MS3.5/3,Error ellipse: s-maj=39.5km s-min=13.1km az=76.0
*DJA **19** 12:54:07.9±0.2,2°N±3°×12°6E±°,h10km,M4.2/16,mB4.9/5, mb4.4/8,MLv4.2/16,Mw(mB)4.2/5*
*NEIC **19** 12:54:09.3±1.1,1°.73N±0°.03×126°.56E±0°.07,h35km±2km, mb4.4/24,Error ellipse: s-maj=11.2km s-min=4.7km az=90.0*

ISC 19 12:54:09.3±0.5,**1°.65N**±0°.06×**126°.52E**±0°.08,**h35**km,**n72,** σ1**9**08/70,**mb4.3**/26,**MS3.5**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.22**	**136**		**Pn**	**12 54 30.7**	**+0.9**
TNTI	**Ternate**	**1.22**	**136**	P	**Pn**	**12 54 30.6**	**+0.8**
SGSI	**Sangihe**	**2.25**	**334**	P		**12 54 44.4**	**+0.3**
KMSI	**Cibinong**	**2.75**	**247**	P	**Pn**	**12 54 51.8**	**+0.8**
SANI	**Sanana**	**3.71**	**188**	P	**Pn**	**12 55 02.7**	**-1.5**
LUWI	**Luwuk**	**4.60**	**234**	Pn	**Pn**	**12 55 19.0**	**+2.6**
LUWI	**Luwuk**	**4.60**	**234**	P	**Pn**	**12 55 18.0**	**+1.6**
MRSI	**Marisa**	**4.72**	**256**	P	**Pn**	**12 55 18.3**	**+0.2**
NLAI	**Namlea**	**4.89**	**173**	P	**Pn**	**12 55 21.2**	**+0.8**
APSI	**Ampana**	**5.49**	**242**	P	**Pn**	**12 55 29.8**	**+1.1**
TOLI2	**Tolitoli**	**5.76**	**265**		**Pn**	**12 55 31.9**	**-0.4**
MPSI	**Mapaga**	**6.75**	**259**	P	**Pn**	**12 55 46.5**	**+0.6**
FAKI	**Fak Fak**	**7.31**	**128**	Pn	**Pn**	**12 55 53.0**	**-0.7**
TTSI	**Tana Toraja** 876nm14nm,0.7s	**8.16**	**235**	P	**Pn**	**12 56 06.0**	**+0.7**
MYLDM	**Lahad Datu**	**8.74**	**294**	Pn	**Pn**	**12 56 13.5**	**+0.3**
SPSI	**Sidrap Palu** 17nm,0.6s	**8.75**	**230**	P	**Pn**	**12 56 13.3**	**-0.2**
BKSI	**Bulukumba** 14nm,0.8s	**9.42**	**223**	P	**Pn**	**12 56 23.5**	**+0.8**
BSSI	**Bau Bau, Buton**	**9.81**	**218**	P	**Pn**	**12 56 28.3**	**+0.4**
MTN	**Manton Dam**	**15.11**	**162**	Pn	**Pn**	**12 57 39.9**	**-0.4**
MTN	comp=Z,18nm,1.2s			IAmb	IAmb	12 57 49.1	
KNRA	**Kununurra**	**17.36**	**173**	Pn	**Pn**	**12 58 08.7**	**-0.3**
FITZ	**Fitzroy Crossi** comp=Z,0.5nm,0.3s,baz=13,slow=9.4,SNR=8.2 comp=Z,1.4nm,0.4s	**19.64**	**182**	P	**P**	**12 58 34.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	**P**	**12 58 35.1**	**0.0**
GUMO	**Guam** comp=Z,28nm,18.5s,baz=99,slow=35	**21.69**	**56**	LR	LR	13 07 05.8	
WB0	**Warramunga Arr**	**22.64**	**160**		**P**	**12 59 06.8**	**-0.7**
WB0	comp=Z,10nm,0.5s			IAmb	IAmb	12 59 14.5	
MYKOM	**Kota Tinggi**	**22.66**	**271**	P	**P**	**12 59 07.7**	**-0.1**
MYKOM	comp=Z,11nm,1.1s			IAmb	IAmb	12 59 33.0	
WRAB	**Tennant Creek**	**22.79**	**161**	P	**P**	**12 59 08.3**	**-0.7**
WRAB	comp=Z,13nm,1.1s			IAmb	IAmb	12 59 13.4	
WRA	**Warramunga Arr** comp=Z,7.0nm,0.5s,baz=339,slow=11,SNR=93 comp=Z,7.0nm,0.5s	**22.79**	**161**	P	**P**	**12 59 08.1**	**-1.0**
WRA	**Warramunga Arr**	**22.79**	**161**		**P**	**12 59 07.6**	**-1.5**
WR8	**Warramunga Arr**	**22.86**	**160**		**P**	**12 59 09.1**	**-0.7**
WR8	comp=Z,9.6nm,0.8s			IAmb	IAmb	12 59 16.8	
MBWA	**Marble Bar**	**23.62**	**196**	P	**P**	**12 59 17.1**	**-0.2**
MBWA	comp=Z,24nm,1.3s			IAmb	IAmb	12 59 41.4	
AS31	**Alice Springs**	**26.17**	**164**		**P**	**12 59 40.8**	**+0.1**
ASAR	**Alice Springs** comp=Z,1.7nm,0.4s,baz=344,slow=7.7,SNR=67	**26.17**	**165**	P	**P**	**12 59 40.8**	**+0.1**
ASAR	comp=Z,0.3nm,0.4s,baz=350,slow=2.3,SNR=2.9 comp=Z,1.7nm,0.4s			PcP	**PcP**	**13 03 07.5**	**+0.1**
ASAR	**Alice Springs**	**26.17**	**165**		**P**	**12 59 41.2**	**+0.6**
FORT	**Forrest**	**32.28**	**178**	P	**P**	**13 00 33.8**	**-1.1**
FORT	comp=Z,6.4nm,0.8s			IAmb	IAmb	13 00 44.4	
PZH	**PanZhiHua**	**34.31**	**318**	P	**P**	**13 00 54.9**	**+2.1**
KSRS	**Korea Array** comp=Z,0.7nm,0.5s,baz=178,slow=9.4,SNR=2.4 comp=Z,0.7nm,0.5s	**35.65**	**2**	P	**P**	**13 01 06.2**	**+2.2**
STKA	**Stephens Creek** comp=Z,0.7nm,0.3s,baz=331,slow=13,SNR=3.1 comp=Z,0.7nm,0.3s	**36.28**	**158**	P	**P**	**13 01 11.2**	**+1.7**
MJAR	**Matsushiro Arr** comp=Z,0.6nm,0.5s,baz=183,slow=9.8,SNR=4.3 comp=Z,0.6nm,0.5s	**36.36**	**16**	P	**P**	**13 01 10.4**	**+0.2**
HHC	**Hu-ho-hao-te**	**41.30**	**343**	*e*P	**P**	**13 01 53.8**	**+2.2**
HHC	comp=Z,22nm,0.7s			pmax	pmax		
DZM	**Mont Dzumac** comp=Z,56nm,18.2s,baz=302,slow=36	**45.54**	**123**	LR	LR	13 21 19.2	
EVN	**Everest**	**46.08**	**308**		**P**	**13 02 29.7**	**-1.2**
HILR	**Hailar Array B** comp=Z,1.9nm,0.4s,baz=178,slow=14,SNR=4.0 comp=Z,1.9nm,0.4s	**48.08**	**354**	P	**P**	**13 02 47.5**	**+2.1**
SONM	**Songino Array** comp=Z,0.9nm,0.5s,baz=157,slow=9.6,SNR=4.7 comp=Z,0.9nm,0.5s	**49.19**	**342**	P	**P**	**13 02 53.9**	**-0.2**
PETK	**Petropavlovsk-** comp=Z,1.1nm,0.5s,baz=188,slow=5.2,SNR=7.4 comp=Z,1.1nm,0.5s	**57.42**	**22**	P	**P**	**13 03 56.1**	**+1.7**
PETK	**Petropavlovsk-**	**57.42**	**22**	P	**P**	**13 03 53.2**	**-1.2**
PET	**Petropavlovsk**	**57.72**	**22**	P	**P**	**13 03 55.6**	**-0.8**
MK31	**Makanchi Array**	**59.14**	**326**	P	**P**	**13 04 05.8**	**-0.8**
MK31	comp=Z,2.9nm,1.1s			IAmb	IAmb	13 04 07.8	
MKAR	**Makanchi Array** comp=Z,2.2nm,0.4s,baz=120,slow=8.4,SNR=27 comp=Z,2.2nm,0.4s	**59.14**	**326**	P	**P**	**13 04 05.5**	**-1.1**
MKAR	**Makanchi Array**	**59.14**	**326**		**P**	**13 04 05.6**	**-1.0**
KDJ	**Kajisay**	**59.76**	**319**	P	**P**	**13 04 09.9**	**-1.3**
ZAAQ	**Zalesovo Array**	**62.34**	**334**	P	**P**	**13 04 27.3**	**-0.8**
ZALV	**Zalesovo Beam** comp=Z,1.1nm,0.4s,baz=135,slow=8.0,SNR=6.1 comp=Z,1.1nm,0.4s	**62.34**	**334**	P	**P**	**13 04 26.5**	**-1.6**
ZALV	**Zalesovo Beam**	**62.34**	**334**	P	**P**	**13 04 27.4**	**-0.7**
KURBB	**Kurchatov Arra** comp=Z,4.3nm,0.2s,baz=128,slow=6.2,SNR=20 comp=Z,4.3nm,0.2s	**63.37**	**328**	P	**P**	**13 04 33.9**	**-1.2**
KURK	**Kurchatov**	**63.38**	**328**		**P**	**13 04 34.3**	**-0.7**
BVAR	**Borovoye Array** comp=Z,1.6nm,0.5s,baz=141,slow=7.3,SNR=4.3 comp=Z,1.6nm,0.5s	**68.94**	**327**	P	**P**	**13 05 10.5**	**-0.3**
TIXI	**Tiksi**	**69.91**	**1**	P	**P**	**13 05 15.9**	**-0.5**
TIXI	comp=Z,4.3nm,1.1s			IAmb	IAmb	13 05 25.7	
AB31	**Akbulak array**	**73.62**	**321**	P	**P**	**13 05 38.1**	**-1.0**
AB31	comp=Z,1.6nm,0.6s			IAmb	IAmb	13 05 40.5	
ABKAR	**Akbulak array**	**73.62**	**321**	P	**P**	**13 05 38.0**	**-1.2**
ARTI	**Arti**	**76.65**	**328**	P	**P**	**13 05 56.0**	**-0.4**
J16K	**Anvik River**	**80.88**	**26**	P	**P**	**13 06 19.1**	**-0.4**
VNDA	**Vanda** comp=Z,0.6nm,0.5s,baz=318,slow=9.3,SNR=2.1 comp=Z,0.6nm,0.5s	**81.41**	**173**	P	**P**	**13 06 22.9**	**+0.8**
VNDA	**Vanda**	**81.41**	**173**	P	**P**	**13 06 21.4**	**-0.6**
VNDA	comp=Z,4.2nm,1.2s			IAmb	IAmb	13 06 43.3	
GNI	**Garni** comp=Z,100nm,20.2s,baz=36,slow=39	**82.65**	**310**	LR	LR	13 47 46.0	
IL31		**87.06**	**25**	P	**P**	**13 06 50.5**	**-0.5**
ILAR	**Eielson Array**	**87.06**	**25**	P	**P**	**13 06 50.9**	**-0.2**
BR131	**Keskin Array S**	**91.17**	**310**	P	**P**	**13 07 09.7**	**-1.5**
BR131	comp=Z,1.2nm,0.7s			IAmb	IAmb	13 07 12.1	
BRTR	**Keskin Array B** comp=Z,0.6nm,0.7s,baz=110,slow=6.3,SNR=3.3 comp=Z,0.6nm,0.7s	**91.17**	**310**	P	**P**	**13 07 09.2**	**-2.0**
BRTR	**Keskin Array B**	**91.17**	**310**	P	**P**	**13 07 10.1**	**-1.1**
QSPA	**South Pole Qui**	**91.57**	**180**	P	**P**	**13 07 13.2**	**+0.8**
ARCES	**ARCESS Array B** comp=Z,4.0nm,1.1s,baz=79,slow=5.2,SNR=4.3 comp=Z,4.0nm,1.1s	**92.31**	**340**	P	**P**	**13 07 14.8**	**-0.9**
FINES	**FINESS Array B** comp=Z,1.2nm,0.7s,baz=111,slow=7.7,SNR=3.9 comp=Z,1.2nm,0.7s	**93.55**	**332**	P	**P**	**13 07 19.9**	**-1.6**

*IDC **19** 13:30:53.9±0.4,29°.26N×81°.15E,h0km,mb5.0/33, mbtmp5.0/37,ML5.0/4,MS3.9/40,Error ellipse: s-maj=12.0km s-min=9.6km az=29.0*
*BGR **19** 13:30:53.2,28°.26N×81°.67E,h15km±2km,mb5.0*
*DMN **19** 13:30:54.7±0.0,29°.53N×80°.90E,h10km,Ml5.7/11,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*MOS **19** 13:30:54.2±0.9,29°.33N×81°.19E,h13km,mb5.4/57, MS4.3/10,Error ellipse: s-maj=6.1km s-min=3.1km az=114.0*
*NEIC **19** 13:30:55.9±1.3,29°.32N±0°.08×81°.14E±0°.07,h10km±1km, mb5.3/245,Mww5.0/9,Error ellipse: s-maj=14.1km s-min=10.3km az=203.0*
*BJI **19** 13:30:56.0,29°.55N×81°.40E,h8km,mB5.4/27,mb5.1/65, Ms4.7/45,Ms7 4.5/47*
*NDI **19** 13:30:57.8±3.6,29°.25N×81°.10E,h10km,mb4.9,ML4.9, MW4.6*
*GCMT **19** 13:30:57.9±0.3,29°.22N±0°.01×81°.16E±0°.02,h15km±1km, MW4.9/99,Moment Tensor Solution. s26,c27; s99,c143; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.23±.13; Mθθ-2.22±.09; Mφφ0.00±.07; Mrθ1.30±.15; Mθφ0.50±.04; Mφr0.06±.15; Best double couple: M₀2.62500×10¹⁶ NP1:ϕs290.00000°,δ31.00000°,λ103.00000°. NP2: ϕs95.00000°,δ60.00000°,λ82.00000°. Principal axes: T 2.5960, Plg74.0000°, Azm345.0000°; N 0.0600, Plg7.0000°, Azm99.0000°; P -2.6550, Plg15.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 13:30:56.6±0.3,**29°.30N**±0°.03×**81°.15E**±0°.02,**h17**km±2km, **h17**km:**pP-P,n1140,**σ1**9**46/1155,**mb5.3**/315,**MS4.2**/57, **62C-28D,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LGTI	**Lohaghat**	**0.80**	**281**	*e*P	**Pn**	**13 31 13.9**	**+0.8**
LGTI				*e*S	**Sn**	**13 31 25.4**	**+0.7**
LGTI	comp=N,9μm,0.8s			IAML		13 31 27.1	
LGTI	comp=E,6μm,0.5s			IAML		13 31 27.6	
PTH	**Pithoragarh**	**0.85**	**287**	*e*P	**Pb**	**13 31 12.9**	**-0.2**
PTH				*e*S	**Sb**	**13 31 24.3**	**0.0**
PTH				*e*S	**Sg**	**13 31 25.0**	**+0.5**
PTH	comp=N,8μm,0.2s			IAML		13 31 26.3	
PTH	comp=E,16μm,0.2s			IAML		13 31 26.6	
JOSI	**Joshimath**	**1.86**	**313**	*e*P	**Pb**	**13 31 30.1**	**-0.2**
JOSI				*e*S	**Sb**	**13 31 54.6**	**+1.1**
JOSI	comp=N,34μm,0.6s			IAML		13 31 57.5	
JOSI	comp=E,14μm,0.3s			IAML		13 31 59.1	
PYUN	**Piuthan** baz=127,slow=0.0	**2.01**	**126**	Pn	**Pb**	**13 31 32.1**	**-0.8**
PYUN	comp=E,69μm,0.6s,baz=127,slow=0.0			Sn	**Sb**	**13 31 58.4**	**+0.7**
TKRD	**Thakurdwara**	**2.01**	**266**	*e*P	**Pb**	**13 31 31.8**	**-0.9**
TKRD				*e*S	**Sb**	**13 31 58.1**	**+0.5**
TKRD	comp=E,24μm,0.5s			IAML		13 32 03.0	
DANN	**Dangsing** baz=114,slow=0.0	**2.48**	**112**	Pn	**Pn**	**13 31 38.1**	**+1.6**
DANN	comp=E,16μm,0.5s,baz=114,slow=0.0			Sn	**Sb**	**13 32 09.5**	**-1.8**
LKN	**LUCKNOW**	**2.54**	**185**	*e*P	**Pb**	**13 31 40.7**	**-1.0**
LKN	comp=E,30μm,0.4s			IAML		13 32 19.0	
LKN	comp=N,41μm,0.4s			IAML		13 32 19.4	
KOLN	**Koldanda** baz=126,slow=0.0	**2.64**	**125**	Pn	**Pn**	**13 31 39.5**	**+0.8**
KOLN	comp=N,17μm,0.6s,baz=126,slow=0.0			Sn	**Sb**	**13 32 13.6**	**-2.3**
UGON	**Onchagaon**	**3.01**	**252**	*e*P	**Pn**	**13 31 41.4**	**-2.2**
UGON	comp=N,21μm,0.7s			IAML		13 32 30.3	
UGON	comp=E,21μm,0.6s			IAML		13 32 31.5	
GKN	**Gorkha** baz=114,slow=0.0	**3.33**	**112**	Pn	**Pn**	**13 31 49.6**	**+1.5**
GKN	comp=E,19μm,0.7s,baz=114,slow=0.0			Sn	**Sn**	**13 32 29.9**	**+2.6**
BISR	**Bishrakh**	**3.33**	**258**	*e*P	**Pn**	**13 31 50.0**	**+2.0**
BISR				*e*S	**Sn**	**13 32 26.8**	**-0.4**
BISR	comp=E,15μm,0.4s			IAML		13 32 50.2	
JMIU	**JAMIA UNIVERSI**	**3.46**	**259**	*e*P	**Pn**	**13 31 51.8**	**+2.1**
JMIU				*e*S	**Sn**	**13 32 30.5**	**+0.2**
JMIU	comp=N,17μm,0.4s			IAML		13 32 52.8	
JMIU	comp=E,16μm,0.5s			IAML		13 32 53.3	
AGRA	**Agra**	**3.50**	**235**	*e*P	**Pn**	**13 31 52.5**	**+2.2**
NDI	**New Delhi**	**3.50**	**261**	*e*P	**Pn**	**13 31 51.2**	**+0.9**
NDI				*e*S	**Sn**	**13 32 30.4**	**-0.9**
NDI	comp=E,4μm,0.2s			IAML		13 32 47.6	
NDI	comp=N,3μm,0.4s			IAML		13 32 54.2	
LDR	**Lodi Road**	**3.52**	**259**	*e*P	**Pn**	**13 31 51.7**	**+1.1**
LDR				*e*S	**Sn**	**13 32 31.8**	**0.0**
LDR	comp=E,14μm,0.4s			IAML		13 32 54.9	
LDR	comp=N,20μm,0.4s			IAML		13 32 57.5	
NPLP	**NPLP New Delhi**	**3.55**	**260**	*e*P	**Pn**	**13 31 52.0**	**+1.0**
NPLP				*e*P	**Pg**	**13 32 02.9**	**-1.8**
NPLP	comp=E,5μm,0.2s			*e*S	**Sn**	**13 32 32.6**	**0.0**
NPLP	comp=E,5μm,0.2s			IAML		13 32 49.8	
NPLP	comp=N,6μm,0.2s			IAML		13 32 50.4	
GNR	**GANAUR**	**3.62**	**268**	*e*S	**Sn**	**13 32 36.2**	**+2.0**
AYAN	**Aya Nagar**	**3.62**	**258**	*e*P	**Pn**	**13 31 53.3**	**+1.4**
AYAN				*e*S	**Sn**	**13 32 34.4**	**+0.1**
AYAN	comp=E,3μm,0.4s			IAML		13 32 53.0	
AYAN	comp=N,4μm,0.8s			IAML		13 32 56.2	
BHGR	**Bahadurgarh**	**3.74**	**262**	*e*P	**Pn**	**13 31 53.6**	**0.0**
BHGR				*e*S	**Sn**	**13 32 38.4**	**+1.2**
BHGR	comp=E,7μm,0.5s			IAML		13 32 55.6	
BHGR	comp=N,6μm,0.3s			IAML		13 32 56.8	
DMN	**Daman** baz=116,slow=0.0	**3.87**	**115**	Pn	**Pn**	**13 31 56.9**	**+1.3**
DMN	comp=N,3μm,0.5s,baz=116,slow=0.0			Sn	**Sn**	**13 32 41.8**	**+1.0**
KKN	**Kakani** baz=113,slow=0.0	**3.93**	**112**	Pn	**Pn**	**13 31 57.5**	**+1.0**
KKN	comp=N,3μm,0.5s,baz=113,slow=0.0			Sn	**Sn**	**13 32 44.1**	**+1.8**
JHJR	**Jhajjar**	**4.01**	**261**	*e*S	**Sn**	**13 32 43.6**	**-0.3**
ALBI	**Allahabad**	**4.02**	**171**	*e*P	**Pn**	**13 31 58.0**	**+0.6**
CGRH	**CHANDIGARH** comp=N,5μm,0.5s	**4.05**	**292**	IAML		13 33 10.3	
CGRH	comp=E,4μm,0.4s			IAML		13 33 13.3	
PKIN	**Phulchoki** baz=115,slow=0.0	**4.12**	**114**	Pn	**Pn**	**13 31 59.3**	**+0.3**
PKIN	comp=E,3μm,0.5s,baz=115,slow=0.0			Sn	**Sn**	**13 32 49.1**	**+2.2**
PKI	**Pulchoki** baz=115,slow=0.0	**4.13**	**114**	Pn	**Pn**	**13 31 59.6**	**+0.4**
PKI	comp=E,1μm,0.4s,baz=115,slow=0.0			Sn	**Sn**	**13 32 48.7**	**+1.4**
KUDL	**Kundal**	**4.25**	**255**	*e*P	**Pn**	**13 32 00.9**	**+0.3**
KUDL				*e*S	**Sn**	**13 32 48.0**	**-1.9**
KUDL	comp=N,2μm,0.4s			IAML		13 33 12.7	
KUDL	comp=E,1μm,0.3s			IAML		13 33 15.0	
VAR	**Varanasi** comp=E,12μm,0.7s	**4.32**	**157**	IAML		13 33 17.7	
VAR	comp=N,13μm,0.6s			IAML		13 33 18.4	
GUN	**Gumba** baz=109,slow=0.0	**4.38**	**107**	Pn	**Pn**	**13 32 03.9**	**+1.1**
GUN	comp=N,3μm,0.5s,baz=109,slow=0.0			Sn	**Sn**	**13 32 53.9**	**+0.3**
JHNI	**Jhansi**	**4.47**	**212**	*e*P	**Pn**	**13 32 03.1**	**-0.6**
JHNI				*e*S	**Sn**	**13 32 52.6**	**-2.8**
JHNI	comp=E,2μm,0.3s			IAML		13 33 14.3	
JHNI	comp=N,2μm,0.7s			IAML		13 33 20.4	
BHK	**Bhakra**	**4.60**	**298**	*e*P	**Pn**	**13 32 03.5**	**-2.0**
BHK	comp=E,2μm,0.5s			IAML		13 33 23.2	
BHK	comp=N,2μm,1.0s			IAML		13 33 27.6	
DHRM	**DHARAMSHALA**	**5.10**	**306**	*e*P	**Pn**	**13 32 14.1**	**+1.6**
DHRM				*e*S	**Sn**	**13 33 11.1**	**-0.2**
DHRM	comp=E,2μm,0.4s			IAML		13 33 17.8	
DHRM	comp=N,1μm,0.5s			IAML		13 33 23.5	
EVN	**Everest**	**5.16**	**104**		**Pn**	**13 32 14.4**	**+0.7**
TLWR	**Talawar**	**5.20**	**302**	*e*P	**Pn**	**13 32 15.9**	**+2.2**
TLWR				*e*S	**Sn**	**13 33 13.6**	**+0.3**
TLWR	comp=E,703nm,0.8s			IAML		13 33 21.1	
TLWR	comp=N,691nm,0.6s			IAML		13 33 21.5	
RAMN	**Ramite** baz=116,slow=0.0	**5.35**	**115**	Pn	**Pn**	**13 32 15.6**	**-0.4**
RAMN	comp=N,3μm,0.4s,baz=116,slow=0.0			Sn	**Sn**	**13 33 16.5**	**-0.9**
TSSA	**Tissa**	**5.55**	**311**	*e*P	**Pn**	**13 32 20.0**	**+1.4**
TSSA				*e*S	**Sn**	**13 33 21.1**	**-1.1**
TSSA	comp=N,1μm,0.7s			IAML		13 33 55.1	
TSSA	comp=E,1μm,0.7s			IAML		13 33 55.9	
GUNA	**GUNA**	**5.75**	**217**	*e*P	**Pn**	**13 32 21.1**	**-0.2**
GUNA				*e*S	**Sn**	**13 33 26.0**	**-1.0**
GUNA	comp=E,3μm,0.5s			IAML		13 33 56.4	
GUNA	comp=N,3μm,0.5s			IAML		13 34 05.1	
ALCI	**Alchi Leh**	**5.95**	**326**	*e*P	**Pn**	**13 32 26.3**	**+2.0**
ALCI				*e*S	**Sn**	**13 33 31.5**	**-0.7**
ALCI	comp=E,244nm,0.5s			IAML		13 33 36.3	
ALCI	comp=N,260nm,0.7s			IAML		13 33 42.4	
ODAN	**Odare** baz=113,slow=0.0	**6.03**	**112**	Pn	**Pn**	**13 32 25.2**	**0.0**
ODAN	comp=N,1μm,0.4s,baz=113,slow=0.0			Sn	**Sn**	**13 33 34.1**	**+0.1**
JMU	**Jammu**	**6.35**	**304**	*e*P	**Pn**	**13 32 32.6**	**+3.1**
JMU				*e*S	**Sn**	**13 33 42.4**	**+0.7**
JMU	comp=E,693nm,0.7s			IAML		13 33 56.7	
JMU	comp=N,788nm,0.7s			IAML		13 33 57.8	
GTK	**Tadong**	**6.86**	**105**	*e*P	**Pn**	**13 32 38.0**	**+1.4**
GTK				*e*S	**Sn**	**13 33 51.8**	**-2.6**
GTK	comp=N,1μm,0.8s			IAML		13 33 57.6	
GTK	comp=E,524nm,0.3s			IAML		13 33 58.0	
BHPL	**Bhopal**	**6.90**	**210**	*e*P	**Pn**	**13 32 36.3**	**-0.8**
BHPL				*e*S	**Sn**	**13 33 51.7**	**-3.5**
BHPL	comp=N,2μm,0.9s			IAML		13 34 35.1	
BHPL	comp=E,2μm,0.8s			IAML		13 34 36.6	
BOK	**Bokaro**	**6.93**	**141**	*e*P	**Pn**	**13 32 38.2**	**+0.7**
BOK				*e*S	**Sn**	**13 33 52.4**	**-3.6**
BOK	comp=E,995nm,0.8s			IAML		13 34 42.1	
BOK	comp=N,889nm,0.4s			IAML		13 34 45.4	
BKNR	**BIKANER**	**7.03**	**261**	*e*S	**Sn**	**13 33 55.8**	**-2.7**
BKNR	comp=E,2μm,0.7s			IAML		13 34 52.8	
BKNR	comp=N,2μm,0.9s			IAML		13 34 53.8	
SHBG	**Sahibganj**	**7.08**	**124**	*e*P	**Pn**	**13 32 39.7**	**+0.1**
SHBG				*e*S	**Sn**	**13 33 56.5**	**-3.2**
BLSP	**Bilaspur**	**7.20**	**173**	*e*P	**Pn**	**13 32 41.5**	**+0.4**
BLSP				*e*S	**Sn**	**13 33 59.4**	**-3.2**
BLSP	comp=E,2μm,0.5s			IAML		13 34 47.0	
BLSP	comp=N,1μm,0.7s			IAML		13 34 50.6	
JHSG	**JHARSUGUGA**	**7.87**	**162**	*e*P	**Pn**	**13 32 54.4**	**+4.0**
COBR	**COOCHBEHAR**	**7.95**	**110**	*e*S	**Sn**	**13 34 18.0**	**-3.0**
NIL	**Nilore**	**8.02**	**305**		**Pn**	**13 32 52.0**	**-0.4**
NIL	**Nilore**	**8.02**	**305**	P	**Pn**	**13 32 52.6**	**+0.3**
NIL	**Nilore**	**8.02**	**305**	P	**Pn**	**13 32 52.0**	**-0.4**
UDPR	**Udaipur**	**8.13**	**236**	*e*P	**Pn**	**13 32 54.1**	**+0.1**
LSA	**Lhasa**	**8.72**	**85**		**Pn**	**13 33 02.1**	**-0.4**
LSA	**Lhasa**	**8.72**	**85**	P	**Pn**	**13 33 00.8**	**-1.7**
LSA	comp=N,33nm,0.7s			pmax	pmax		
LSA	comp=N,2μm,7.1s			LR	LR		
LSA	comp=N,2μm,8.2s			LR	LR		
LSA	comp=N,2μm,8.2s			LR	LR		
LSA	**Lhasa**	**8.72**	**85**	P	**Pn**	**13 33 05.5**	**+3.0**
LSA	**Lhasa**	**8.72**	**85**	P	**Pn**	**13 33 02.1**	**-0.4**
AKL	**Akola**	**9.35**	**205**	*e*P	**Pn**	**13 33 10.3**	**-0.3**
AKL				*e*S	**Sn**	**13 34 51.5**	**-3.9**
AKL	comp=E,343nm,0.6s			IAML		13 35 12.8	
AKL	comp=N,520nm,1.1s			IAML		13 35 13.6	
JASL	**Jaisalmer**	**9.35**	**258**	*e*P	**Pn**	**13 33 10.5**	**-0.2**
JASL				*e*S	**Sn**	**13 34 48.9**	**-6.7**
JASL	comp=N,907nm,1.5s			IAML		13 36 03.0	
JASL	comp=E,1μm,0.9s			IAML		13 36 03.4	
TAWA	**Tawang**	**9.59**	**98**	*e*P	**Pn**	**13 33 15.9**	**+1.7**
TAWA				*e*S	**Sn**	**13 34 58.0**	**-3.8**
TAWA	comp=E,420nm,0.6s			IAML		13 35 08.2	
TAWA	comp=N,534nm,0.7s			IAML		13 35 08.2	
BWNR	**Bhubaneshwar**	**9.91**	**154**	*e*P	**Pn**	**13 33 18.6**	**+0.3**
BWNR				*e*S	**Sn**	**13 35 04.2**	**-5.1**
BWNR	comp=E,888nm,0.9s			IAML		13 35 29.6	
BWNR	comp=N,476nm,0.8s			IAML		13 35 30.8	
RAGD	**RAYAGADA**	**10.23**	**168**	*e*P	**Pn**	**13 33 25.1**	**+2.3**
SHL	**Shillong**	**10.23**	**109**		**Pn**	**13 33 20.2**	**-2.7**
SHL	**Shillong** SNR=69	**10.23**	**109**	P	**Pn**	**13 33 21.6**	**-1.4**
SHL	**Shillong**	**10.23**	**109**	*e*P	**Pn**	**13 33 23.9**	**+0.9**
SHL	comp=Z,138nm,0.8s			IAmb	IAmb	13 33 28.1	
SHL	**Shillong**	**10.23**	**109**	P	**Pn**	**13 33 20.2**	**-2.7**
AGT	**Agartala**	**10.52**	**118**	*e*P	**Pn**	**13 33 30.4**	**+3.6**
AGT				*e*S	**Sn**	**13 35 20.5**	**-3.7**
TEZP	**TEZPUR**	**10.64**	**102**	*e*P	**Pn**	**13 33 27.0**	**-1.3**
TEZP				*e*S	**Sn**	**13 35 21.2**	**-5.9**
TEZP	comp=N,161nm,0.4s			IAML		13 35 24.1	
TEZP	comp=E,166nm,0.6s			IAML		13 35 24.3	
KSH	**Kashi**	**11.05**	**339**	P	**Pn**	**13 33 30.3**	**-3.7**
KSH				pP		13 33 36.3	
KSH				S	Sn	13 35 26.6	-11
KSH	comp=E,45nm,0.5s			pmax	pmax		
KSH	comp=E,1μm,15.9s			LR	LR		
KSH	comp=E,2μm,14.4s			LR	LR		
KSH	comp=E,2μm,12.4s			LR	LR		
BRDH	**Bariadhala** comp=E,67nm,0.3s,baz=246,slow=7.2,SNR=9.5	**11.51**	**123**	Pn	**Pn**	**13 33 41.1**	**+0.8**
BRDH				Sn	**Sn**	**13 35 41.8**	**-6.7**
BRDH	comp=E,36nm,0.3s,baz=264,slow=18,SNR=1.5			LR	LR	13 37 57.5	
BRDH	comp=E,109nm,20.3s,baz=314,slow=37 comp=E,176nm,0.3s						
KBL	**Kabul**	**11.53**	**300**		**Pn**	**13 33 37.8**	**-2.9**
KBL	**Kabul** SNR=42	**11.53**	**300**	P	**Pn**	**13 33 40.0**	**-0.7**
KBL				S	**Sn**	**13 35 49.0**	**-0.2**
KBL	**Kabul**	**11.53**	**300**	P	**Pn**	**13 33 37.8**	**-2.9**
VIS	**Vishakhapatnam**	**11.70**	**170**	*e*P	**Pn**	**13 33 40.8**	**-2.1**
BHUJ	**Bhuj**	**11.94**	**242**	*e*P	**Pn**	**13 33 47.5**	**+1.3**
KOHI	**KOHIMA**	**12.04

HYBB	**Hyderabad (bro**	**12.07**	**192**	*eP*		**Pn**	**13 33 48.4**	**+0.5**
HYBB				*eS*		**Sn**	**13 36 04.2**	**+2.0**
MOKO	**MOKOCHONG**	**12.20**	**101**	*eP*		**Pn**	**13 33 48.9**	**-0.9**
MOKO				*eS*		Sn	13 35 56.7	-8.8
MOKO				IAML			13 36 04.3	
	comp=E,468nm,0.5s							
MOKO				IAML			13 36 08.2	
	comp=N,397nm,0.5s							
IMP	**Imphal**	**12.24**	**108**	*eP*		**Pn**	**13 33 49.8**	**-0.5**
IMP				*eS*		**Sn**	**13 36 00.8**	**-5.6**
IMP				IAML			13 36 19.2	
	comp=N,102nm,1.2s							
IMP				IAML			13 36 21.8	
	comp=E,97nm,0.3s							
POO	**Poona**	**12.63**	**213**	*eP*		**Pn**	**13 33 52.9**	**-2.7**
POO				IAmb		IAmb	13 33 59.3	
	comp=Z,256nm,0.9s							
TARG	**Taragay, Kyrgy**	**12.69**	**349**			**Pn**	**13 33 55.3**	**-1.4**
TARG	**Taragay, Kyrgy**	**12.69**	**349**	P		**Pn**	**13 33 55.3**	**-1.4**
DRK	**Karamyk**	**12.75**	**325**			**Pn**	**13 33 55.7**	**-1.6**
DRK	**Karamyk**	**12.75**	**325**	P		**Pn**	**13 33 55.7**	**-1.6**
LKP	**Lekhapani**	**13.10**	**95**	IAML			13 36 16.9	
	comp=N,360nm,0.6s							
LKP				IAML			13 36 20.3	
	comp=E,215nm,0.5s							
OHH	**Osh**	**13.12**	**331**	P		**Pn**	**13 34 00.0**	**-2.3**
GAR	**Garm**	**13.18**	**320**			**Pn**	**13 33 58.8**	**-4.4**
KDJ	**Kajisay**	**13.20**	**347**			**Pn**	**13 34 02.0**	**-1.4**
KDJ	**Kajisay**	**13.20**	**347**	P		**Pn**	**13 34 02.0**	**-1.4**
PRZ	**Przheval'sk**	**13.34**	**351**			**Pn**	**13 34 04.0**	**-1.3**
PRZ	**Przheval'sk**	**13.34**	**351**	P		**Pn**	**13 34 04.0**	**-1.3**
GOMU	**GeErMu**	**13.39**	**56**	P		**Pn**	**13 34 06.8**	**+0.5**
GOMU				pP		P	13 34 10.0	-5.7
GOMU				sP			13 34 13.9	
GOMU				S		**Sn**	**13 36 36.8**	**+1.9**
GOMU				LR		LR		
	comp=E,710nm,10.3s							
GOMU				LR		LR		
	comp=E,750nm,10.4s							
GOMU				LR		LR		
	comp=E,1μm,10.3s							
ULHL	**Ulahol**	**13.51**	**344**	P		**Pn**	**13 34 07.4**	**-0.4**
	SNR=16							
KAD	**Karad**	**13.54**	**210**	*eP*		**Pn**	**13 34 06.7**	**-1.4**
CHGR	**Chuyangaron**	**13.63**	**316**			**Pn**	**13 34 04.6**	**-4.6**
CHGR	**Chuyangaron**	**13.63**	**316**	P		**Pn**	**13 34 04.6**	**-4.6**
ARLS	**Aral**	**13.70**	**338**	P		**Pn**	**13 34 07.9**	**-2.4**
ARSB	**Arslanbob**	**13.71**	**333**			**Pn**	**13 34 06.9**	**-3.5**
ARSB	**Arslanbob**	**13.71**	**333**	P		**Pn**	**13 34 06.9**	**-3.5**
BOOM	**Boomskoye usch**	**13.82**	**344**			**Pn**	**13 34 10.3**	**-1.6**
BOOM	**Boomskoye usch**	**13.82**	**344**	P		**Pn**	**13 34 10.3**	**-1.6**
SHLS	**Shalkode**	**13.89**	**355**	⇓	*i* P	**Pn**	**13 34 11.7**	**-1.2**
SHLS	**Shalkode**	**13.89**	**355**	*d*	*i* P	**Pn**	**13 34 11.6**	**-1.2**
SATY	**Saty**	**13.90**	**352**	⇓	*i* P	**Pn**	**13 34 12.1**	**-0.9**
SATY	**Saty**	**13.90**	**352**	*d*	*i* P	**Pn**	**13 34 12.1**	**-0.9**
UZB	**Uzynbulak**	**13.92**	**354**	⇓	*i* P	**Pn**	**13 34 12.5**	**-0.8**
UZB	**Uzynbulak**	**13.92**	**354**	*d*	*i* P	**Pn**	**13 34 12.4**	**-0.8**
UCH	**Uchtor**	**13.97**	**339**	P		**Pn**	**13 34 12.8**	**-1.5**
	SNR=13							
TNSS	**Tian-Shan**	**14.12**	**347**	*eP*		**Pn**	**13 34 15.1**	**-1.1**
TNSS	**Tian-Shan**	**14.12**	**347**	*eP*		**Pn**	**13 34 15.1**	**-1.1**
MDOK	**Medeo**	**14.22**	**348**	*eP*		**Pn**	**13 34 16.6**	**-0.8**
MDOK				*eS*		**Sn**	**13 36 55.2**	**+0.4**
MDOK	**Medeo**	**14.22**	**348**	*eP*		**Pn**	**13 34 16.5**	**-0.8**
MDOK				*eS*		**Sn**	**13 36 55.2**	**+0.4**
KBK	**Karagaybulak**	**14.23**	**341**	P		**Pn**	**13 34 18.7**	**+1.1**
	SNR=18							
AAA	**Alma-Ata**	**14.29**	**347**	*eP*		**Pn**	**13 34 17.4**	**-0.8**
AAA	**Alma-Ata**	**14.29**	**347**	*eP*		**Pn**	**13 34 17.4**	**-0.8**
TKM2	**Tokmak 2**	**14.31**	**343**	P		**Pn**	**13 34 17.7**	**-0.9**
	SNR=24							
AAK	**Ala-Archa**	**14.35**	**340**	Pn		**Pn**	**13 34 17.5**	**-1.6**
	comp=E,4.0nm,0.3s,baz=159,slow=9.8,SNR=35							
AAK				Sn		**Sn**	**13 36 49.9**	**-8.0**
	comp=E,0.2nm,0.3s,baz=212,slow=21,SNR=1.4							
AAK				LR		LR	13 40 24.9	
	comp=E,1μm,20.6s,baz=156,slow=40							
	comp=E,13nm,0.4s							
AAK	**Ala-Archa**	**14.35**	**340**			**Pn**	**13 34 17.1**	**-2.1**
AAK	**Ala-Archa**	**14.35**	**340**	P		**Pn**	**13 34 18.3**	**-0.8**
AAK	**Ala-Archa**	**14.35**	**340**	P		**Pn**	**13 34 19.2**	**+0.1**
	SNR=6.6							
AAK	**Ala-Archa**	**14.35**	**340**	*i* P		**Pn**	**13 34 17.9**	**-1.3**
	SNR=8.8							
AAK	**Ala-Archa**	**14.35**	**340**	*ce*	*eP*	**Pn**	**13 34 18.3**	**-0.8**
AAK				pmax	pmax			
	comp=Z,65nm,1.3s							
EKS2	**Erkin-Say**	**14.60**	**338**	P		**Pn**	**13 34 22.9**	**+0.4**
	SNR=16							
USP	**Ospenovka**	**14.92**	**341**	P		**Pn**	**13 34 26.2**	**-0.7**
	SNR=19							
ARXS	**Arharly**	**15.12**	**351**	*eP*		**Pn**	**13 34 28.8**	**-0.6**
WMQ	**Urumqi**	**15.41**	**18**	*eP*		**P**	**13 34 39.8**	**+2.0**
WMQ				PP		**sP**	**13 34 49.3**	**+3.8**
WMQ				pmax	pmax			
	comp=Z,55nm,0.9s							
WMQ				LR		LR		
	comp=N,1μm,13.1s							
WMQ				LR		LR		
	comp=E,650nm,7.3s							
WMQ				LR		LR		
	comp=Z,500nm,17.5s							
IUG	**luzhnay**	**15.66**	**328**	*eP*		**Pn**	**13 34 33.1**	**-3.5**
DZA	**Taraz**	**15.70**	**332**	*eP*		**Pn**	**13 34 36.4**	**-0.6**
DZA	**Taraz**	**15.70**	**332**	*eP*		**Pn**	**13 34 36.4**	**-0.6**
TDK	**Taldyqorghan**	**15.82**	**353**	*eP*		**Pn**	**13 34 38.3**	**-0.3**
TDK	**Taldyqorghan**	**15.82**	**353**	*eP*		**Pn**	**13 34 38.3**	**-0.3**
CHM	**Chimkent**	**15.99**	**327**	*eP*		**Pn**	**13 34 40.7**	**-0.1**
CHM	**Chimkent**	**15.99**	**327**	*eP*		**Pn**	**13 34 40.7**	**-0.1**
TNCH	**TengChong**	**16.03**	**101**	P		**Pn**	**13 34 40.8**	**-0.8**
TNCH				PP		**sP**	**13 34 54.3**	**+1.7**
TNCH				S		**Sn**	**13 37 39.8**	**+0.7**
TNCH				pmax	pmax			
	comp=Z,44nm,0.8s							
TNCH				pmax	pmax			
	comp=Z,190nm,3.8s							
TNCH				LR		LR		
	comp=Z,800nm,12.5s							
TNCH				LR		LR		
	comp=Z,970nm,12.4s							
TNCH				LR		LR		
	comp=Z,1μm,12.5s							
KK31	**Karatay Array**	**16.21**	**331**			**Pn**	**13 34 38.7**	**-4.9**
KK31	**Karatay Array**	**16.21**	**331**	*i* P		**Pn**	**13 34 38.9**	**-4.7**
KKAR	**Karatay Array**	**16.21**	**331**			**Pn**	**13 34 38.1**	**-5.5**
KKAR	**Karatay Array**	**16.21**	**331**	P		**Pn**	**13 34 38.1**	**-5.5**
BTLS	**Baital**	**16.69**	**342**	*eP*		**Pn**	**13 34 46.4**	**-3.2**
HRA	**Herat**	**16.84**	**292**			**Pn**	**13 34 49.4**	**-2.5**
MK31	**Makanchi Array**	**17.49**	**3**	*ce*	P	**Pn**	**13 34 58.3**	**-1.3**
MKAR	**Makanchi Array**	**17.49**	**3**	P		**Pn**	**13 34 58.2**	**-1.4**
	comp=Z,3.2nm,0.3s,baz=186,slow=9.8,SNR=64							
MKAR				S		**Sn**	**13 38 06.5**	**-7.4**
	comp=Z,10.0nm,0.8s,baz=184,slow=20,SNR=5.8							
MKAR				LR		LR	13 42 41.9	
	comp=Z,451nm,19.4s,baz=184,slow=40							
	comp=Z,32nm,0.6s							
MKAR	**Makanchi Array**	**17.49**	**3**	P		**Pn**	**13 34 57.0**	**-2.7**
MAKZ	**Makanchi**	**17.49**	**2**	P		**Pn**	**13 34 57.1**	**-2.6**
MAKZ	**Makanchi**	**17.49**	**2**	P		**P**	**13 35 01.0**	**+0.2**
ZSN	**Zaisan**	**18.35**	**8**	*eP*		**Pn**	**13 35 09.6**	**-0.7**
ZSN	**Zaisan**	**18.35**	**8**	*eP*		**Pn**	**13 35 09.5**	**-0.7**
GTA	**Gaotai**	**18.38**	**52**	P		**P**	**13 35 08.3**	**-2.5**
GTA				sP		sP	13 35 19.4	+0.7
GTA				PcP		**PcP**	**13 39 42.8**	**+1.2**
GTA				ScS		ScS	13 47 02.4	+5.1
GTA				pmax	pmax			
	comp=Z,18nm,1.6s							
GTA				LR		LR		
	comp=Z,1μm,13.1s							
GTA				LR		LR		
	comp=Z,820nm,12.7s							
GTA				LR		LR		
	comp=Z,1μm,11.6s							
PZH	**PanZhiHua**	**18.41**	**94**	P		**P**	**13 35 11.0**	**-0.2**
PZH				S		**Sn**	**13 38 31.8**	**-4.9**
PZH				pmax	pmax			
	comp=Z,50nm,1.3s							
PZH				LR		LR		
	comp=Z,390nm,11.6s							
PZH				LR		LR		
	comp=Z,770nm,12.0s							
PZH				LR		LR		
	comp=Z,830nm,15.3s							
KOD	**Kodaikanal**	**19.28**	**191**	*eP*		**Pn**	**13 35 24.2**	**+2.2**
KOD				IAmb		IAmb	13 35 39.7	
	comp=Z,59nm,0.8s							
KOD				*eS*		Sn	13 38 40.3	-18
CHTO	**Chiang Mai**	**19.29**	**119**			**P**	**13 35 20.0**	**-0.7**
CHTO	**Chiang Mai**	**19.29**	**119**	P		**P**	**13 35 19.9**	**-0.8**
CHTO	**Chiang Mai**	**19.29**	**119**	P		**P**	**13 35 21.0**	**+0.2**
CHTO	**Chiang Mai**	**19.29**	**119**	P		**P**	**13 35 20.0**	**-0.8**
CHTO				pmax	pmax			
	comp=Z,94nm,1.8s							
CM31	**Chiang Mai Arr**	**19.50**	**120**	P		**P**	**13 35 23.8**	**+0.7**
	SNR=39							
CMAR	**Chiang Mai Arr**	**19.50**	**120**	P		**P**	**13 35 23.5**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=313,slow=10.0,SNR=130							
CMAR				PcP		**PcP**	**13 39 44.6**	**+1.0**
	comp=Z,8.6nm,0.7s,baz=292,slow=2.9,SNR=15							
CMAR				ScP		**ScP**	**13 43 18.6**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=294,slow=3.6,SNR=7.0							
CMAR				LR		LR	13 45 10.9	
	comp=Z,148nm,19.4s,baz=300,slow=44							
	comp=Z,34nm,0.9s							
CD2	**Chengdu**	**19.62**	**80**	P		**P**	**13 35 24.3**	**-0.1**
CD2				pP		Pn	13 35 26.1	+0.3
CD2				pmax	pmax			
	comp=Z,70nm,0.8s							
CD2				pmax	pmax			
	comp=Z,290nm,4.0s							
CD2				LR		LR		
	comp=Z,2μm,13.2s							
CD2				LR		LR		
	comp=Z,2μm,10.1s							
CD2				LR		LR		
	comp=Z,3μm,9.8s							
KMI	**Kunming**	**19.64**	**97**	P		**P**	**13 35 25.3**	**+0.5**
KMI				sP		sP	13 35 32.5	0.0
KMI				S		**S**	**13 39 05.4**	**-0.7**
KMI				pmax	pmax			
	comp=Z,73nm,0.9s							
KMI				pmax	pmax			
	comp=Z,300nm,3.5s							
KMI				LR		LR		
	comp=Z,670nm,10.1s							
KMI				LR		LR		
	comp=Z,320nm,6.8s							
KMI				LR		LR		
	comp=Z,310nm,11.0s							
LZDM	**Lanzhou Array**	**20.09**	**65**	P		**P**	**13 35 30.2**	**+0.5**
	comp=Z,112nm,0.7s,baz=255,slow=11,SNR=53							
	comp=Z,112nm,0.7s							
LZH	**Lanzhou**	**20.24**	**65**	*eP*		**P**	**13 35 31.6**	**+0.4**
LZH				pP		pP	13 35 36.8	+0.3
LZH				PcP		**PcP**	**13 39 50.3**	**+5.3**
LZH				pmax	pmax			
	comp=Z,64nm,1.8s							
LZH				pmax	pmax			
	comp=Z,390nm,4.7s							
LZH				LR		LR		
	comp=Z,980nm,14.0s							
LZH				LR		LR		
	comp=Z,1μm,15.9s							
LZH				LR		LR		
	comp=Z,1μm,16.8s							
JLN	**Jalan Bani Buh**	**20.82**	**255**	P		Pn	13 35 39.6	-0.3
	SNR=20							
DGZ	**Jazzator, Alta**	**20.93**	**11**	*c*	*i* P	**P**	**13 35 39.6**	**+1.1**
DGZ				pmax	pmax			
	comp=Z,172nm,1.1s							
WBK	**Wadi Bani Khal**	**21.01**	**257**	P		**P**	**13 35 42.3**	**+2.8**
	SNR=8.4							
KURBB	**Kurchatov Arra**	**21.39**	**355**	P		**P**	**13 35 43.0**	**-0.3**
	comp=Z,94nm,0.8s,baz=180,slow=10,SNR=364							
KURBB				S		**S**	**13 39 35.9**	**-4.1**
	comp=Z,14nm,1.2s,baz=185,slow=20,SNR=6.5							
KURBB				ScP		**ScP**	**13 43 24.5**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=166,slow=1.6,SNR=4.5							
KURBB				PKiKP		**PKiKP**	**13 47 32.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=221,slow=1.2,SNR=5.7							
	comp=Z,94nm,0.8s							
KURBB	**Kurchatov Arra**	**21.39**	**355**	P		**P**	**13 35 42.3**	**-1.0**
KURK	**Kurchatov**	**21.47**	**356**	P		**P**	**13 35 43.5**	**-0.6**
KURK				IAmb		IAmb	13 35 48.4	
	comp=Z,182nm,0.9s							
KURK	**Kurchatov**	**21.47**	**356**			**ScP**	**13 43 24.5**	**+1.4**
KURK	**Kurchatov**	**21.47**	**356**	P		**P**	**13 35 43.1**	**-1.0**
KURK				S		**S**	**13 39 39.2**	**-2.5**
KURK	**Kurchatov**	**21.47**	**356**	*ce*	P	**P**	**13 35 43.8**	**-0.4**
KURK				pmax	pmax			
	comp=Z,239nm,1.0s							
SMDO	**Samad**	**21.63**	**259**	P		**P**	**13 35 49.0**	**+2.8**
	SNR=12							
JMDO	**Jabal Madar**	**21.84**	**257**	P		**P**	**13 35 51.4**	**+3.0**
	SNR=12							
PALK	**Pallekele**	**21.92**	**181**	P		**P**	**13 35 51.6**	**+2.3**
	comp=Z,15nm,1.1s,baz=356,slow=9.7,SNR=6.0							
PALK				S		**S**	**13 39 48.9**	**-2.0**
	comp=Z,25nm,0.7s,baz=156,slow=18,SNR=4.1							
PALK				LR		LR	13 44 37.3	
	comp=Z,292nm,21.2s,baz=12,slow=38							
PALK	**Pallekele**	**21.92**	**181**	P		**P**	**13 35 50.1**	**+0.9**
PALK	**Pallekele**	**21.92**	**181**	P		**P**	**13 35 55.1**	**+5.8**
PALK				S		Sn	13 39 57.7	-3.4
PALK	**Pallekele**	**21.92**	**181**	P		**P**	**13 35 50.2**	**+0.9**
PALK				pmax	pmax			
	comp=Z,49nm,1.3s							
HOQ	**Hoqain**	**22.07**	**261**	P		**P**	**13 35 53.9**	**+3.0**
	SNR=8.7							
BANOM	**Banah**	**22.27**	**267**	P		**P**	**13 35 54.6**	**+1.6**
BANOM	**Banah**	**22.27**	**267**	P		**P**	**13 35 54.3**	**+1.3**
SHME	**Shamm**	**22.37**	**268**	P		**P**	**13 35 55.8**	**+1.7**
SHME	**Shamm**	**22.37**	**268**	P		**P**	**13 35 56.2**	**+2.2**
MDH	**Madha**	**22.43**	**266**	P		**P**	**13 35 55.8**	**+1.1**
MDH	**Madha**	**22.43**	**266**	P		**P**	**13 35 55.6**	**+0.9**
BSY	**Bisya**	**22.47**	**259**	P		**P**	**13 35 58.0**	**+2.8**
MASF	**Masafi**	**22.53**	**266**	P		**P**	**13 35 58.0**	**+2.2**
MHTO	**MHTO**	**22.53**	**254**	P		**P**	**13 35 58.1**	**+2.3**
	SNR=12							
MHTO				S		**S**	**13 40 08.0**	**+5.7**
MSFE	**Esma-Masafi**	**22.53**	**266**	*i* P		**P**	**13 35 58.1**	**+2.2**
	SNR=6.0							
SOHO	**SOHO**	**22.57**	**263**	P		**P**	**13 35 57.8**	**+1.7**
SOHO	**SOHO**	**22.57**	**263**	*i* P		**P**	**13 35 57.8**	**+1.7**
	SNR=6.4							
UOSS	**Minazif**	**22.61**	**265**	P		**P**	**13 35 55.8**	**-0.8**
UOSS	**Minazif**	**22.61**	**265**	P		**P**	**13 35 56.5**	**-0.2**
HATD	**Hatta, Dubai**	**22.70**	**265**	P		**P**	**13 36 00.5**	**+2.8**
HATD				P		**P**	**13 36 00.5**	**+2.8**
HATD	**Hatta, Dubai**	**22.70**	**265**	P		**P**	**13 36 00.6**	**+2.9**
GYA	**Guiyang**	**22.72**	**91**	⇑	P	**P**	**13 35 57.3**	**-0.6**
GYA				sP		pP	13 36 02.3	-0.9
GYA				S		**S**	**13 40 03.8**	**-2.1**
GYA				pmax	pmax			
	comp=Z,72nm,1.0s							
GYA				LR		LR		
	comp=Z,710nm,9.4s							
ASHO	**Ashiyiah**	**22.81**	**264**	P		**P**	**13 36 01.7**	**+2.9**
	SNR=10							
ASHO				P		**P**	**13 36 01.7**	**+2.9**
	SNR=10							
ASHO	**Ashiyiah**	**22.81**	**264**	*i* P		**P**	**13 36 01.9**	**+3.1**
	SNR=16							
ARQ	**Araqi**	**22.84**	**261**	P		**P**	**13 36 02.7**	**+3.6**
	SNR=7.3							
NAZ	**Nazwa, Dubai**	**23.07**	**265**	P		**P**	**13 36 06.3**	**+4.9**
FAQ	**Al Faqa, Dubai**	**23.20**	**265**	P		**P**	**13 36 06.4**	**+3.6**
FAQ				P		**P**	**13 36 06.4**	**+3.6**
FAQ	**Al Faqa, Dubai**	**23.20**	**265**	P		**P**	**13 36 05.9**	**+3.2**
ALNE	**Al Ain**	**23.27**	**263**	P		**P**	**13 36 06.2**	**+2.8**
	SNR=7.2							
ALNE	**Al Ain**	**23.27**	**263**	*i* P		**P**	**13 36 06.2**	**+2.8**
	SNR=12							
ASUD	**Al Ashush, Dub**	**23.46**	**265**	P		**P**	**13 36 08.0**	**+2.6**
ASUD	**Al Ashush, Dub**	**23.46**	**265**	P		**P**	**13 36 08.5**	**+3.1**
XAN	**Xi'an**	**24.07**	**72**	⇑	P	**P**	**13 36 10.8**	**-0.4**
XAN				pP		sP	13 36 18.1	-0.9
XAN				pmax	pmax			
	comp=Z,140nm,1.0s							
XAN				pmax	pmax			
	comp=Z,330nm,3.8s							
XAN				LR		LR		
	comp=Z,680nm,12.8s							
XAN				LR		LR		
	comp=Z,1μm,11.2s							
XAN				LR		LR		
	comp=Z,2μm,9.6s							
UMZA	**Um Al Zommool**	**24.23**	**260**	P		**P**	**13 36 15.2**	**+2.5**
ENH	**Enshi**	**24.59**	**81**			**P**	**13 36 15.5**	**-0.5**
ENH				IAmb		IAmb	13 36 19.1	
	comp=Z,60nm,0.6s							
ENH	**Enshi**	**24.59**	**81**	P		**P**	**13 36 16.3**	**+0.3**
ZAA0	**Zalesovo Array**	**24.77**	**5**	P		**P**	**13 36 17.2**	**-0.1**
ZAA0				IAmb		IAmb	13 36 20.0	
	comp=Z,110nm,1.0s							
ZALV	**Zalesovo Beam**	**24.77**	**5**	P		**P**	**13 36 17.4**	**+0.1**
	comp=Z,94nm,0.9s,baz=195,slow=9.7,SNR=227							
ZALV				PcP		**PcP**	**13 39 52.8**	**-0.8**
	comp=Z,2.2nm,0.5s,baz=170,slow=4.4,SNR=3.7							
	comp=Z,94nm,0.9s							
ZALV	**Zalesovo Beam**	**24.77**	**5**	P		**P**	**13 36 17.2**	**-0.1**
ZALV	**Zalesovo Beam**	**24.77**	**5**	*i* P		**P**	**13 36 17.3**	**0.0**
ZALV				pmax	pmax			
	comp=Z,100nm,0.9s							
MZWR	**Madinat Zayed**	**24.98**	**264**	P		**P**	**13 36 21.9**	**+2.3**
BVA0	**Borovoye Array**	**24.99**	**345**	P		**P**	**13 36 19.4**	**+0.1**
BVAR	**Borovoye Array**	**24.99**	**345**	P		**P**	**13 36 19.3**	**0.0**
	comp=Z,26nm,0.6s,baz=145,slow=8.7,SNR=93							
BVAR				LR		LR	13 46 22.6	
	comp=Z,698nm,18.1s,baz=155,slow=37							
	comp=Z,26nm,0.6s							
BORK	**Borovoye**	**25.03**	**344**	*ce*	*eP*	**P**	**13 36 20.1**	**+0.5**
BORK				pmax	pmax			
	comp=Z,54nm,1.0s							
MZR	**Muzera**	**25.58**	**262**	P		**P**	**13 36 27.2**	**+2.2**
AB31	**Akbulak array**	**25.66**	**327**	P		**P**	**13 36 26.1**	**+0.7**
AB31				IAmb		IAmb	13 36 28.7	
	comp=Z,115nm,1.1s							
AB31	**Akbulak array**	**25.66**	**327**	*i* P		**P**	**13 36 26.2**	**+0.7**
ABKAR	**Akbulak array**	**25.66**	**327**			**P**	**13 36 26.4**	**+0.9**
GHWR	**Ruwais**	**25.80**	**265**	P		**P**	**13 36 28.6**	**+1.7**
BTO	**Baotou**	**26.10**	**57**	*eP*		**P**	**13 36 30.3**	**+0.7**
BTO				pP		**pP**	**13 36 34.8**	**-0.7**
BTO				sP		**sP**	**13 36 37.5**	**+0.1**
BTO				PP		**PnPn**	**13 37 10.8**	**+2.9**
BTO				pmax	pmax			
	comp=Z,99nm,1.5s							
BTO				pmax	pmax			
	comp=Z,2μm,6.2s							
BTO				LR		LR		
	comp=Z,2μm,12.7s							
BTO				LR		LR		
	comp=Z,1μm,15.4s							
BTO				LR		LR		
	comp=Z,2μm,13.5s							
DMTO	**DMTO**	**26.59**	**250**	P		**P**	**13 36 37.1**	**+2.9**
MOY	**Mondy**	**26.79**	**28**	*eP*		**P**	**13 36 36.6**	**+0.8**
MOY				pmax	pmax			
	comp=Z,68nm,1.9s							
DOK	**Doka**	**26.82**	**253**	P		**P**	**13 36 38.1**	**+1.9**
SONM	**Songino Array**	**26.86**	**39**	P		**P**	**13 36 37.9**	**+1.4**
	comp=Z,12nm,0.8s,baz=231,slow=9.1,SNR=46							
SONM				PcP		**PcP**	**13 39 58.9**	**+0.2**
	comp=Z,5.1nm,0.8s,baz=239,slow=2.8,SNR=6.1							
	comp=Z,12nm,0.8s							
ZAK	**Zakamensk**	**26.87**	**32**	*eP*		**P**	**13 36 37.3**	**+0.8**
ZAK				pmax	pmax			
	comp=Z,31nm,2.1s							
LYN	**LuoYang**	**27.03**	**71**	P		**P**	**13 36 39.0**	**+1.0**
LYN				pmax	pmax			
	comp=Z,43nm,0.9s							
LYN				LR		LR		
	comp=Z,990nm,9.6s							
LYN				LR		LR		
	comp=Z,460nm,13.4s							
LYN				LR		LR		
	comp=Z,680nm,12.0s							
ULN	**Ulaanbaatar**	**27.25**	**40**			**P**	**13 36 40.1**	**+0.1**
ULN	**Ulaanbaatar**	**27.25**	**40**	*ce*	*eP*	**P**	**13 36 41.6**	**+1.6**
ULN				pmax	pmax			
	comp=Z,37nm,1.7s							
HHC	**Hu-ho-hao-te**	**27.29**	**57**	*eP*		**P**	**13 36 40.3**	**-0.1**
HHC				sP		sP	13 36 50.0	+1.8
HHC				pmax	pmax			
	comp=Z,29nm,1.2s							
HHC				LR		LR		
	comp=Z,370nm,10.6s							
HHC				LR		LR		
	comp=Z,750nm,12.2s							
HHC				LR		LR		
	comp=Z,800nm,11.5s							
RBK	**Rabkut**	**27.31**	**251**	P		**P**	**13 36 43.0**	**+2.3**
WHFO	**Wadi Hawf**	**27.46**	**252**	P		**P**	**13 36 43.1**	**+1.4**
ABTO	**Aybut**	**28.13**	**251**	P		**P**	**13 36 49.3**	**+1.3**
ABTO				P		**P**	**13 36 49.3**	**+1.3**
WHN	**Wuhan**	**28.75**	**79**	⇓	P	**P**	**13 36 54.3**	**+1.0**
WHN				sP		**sP**	**13 37 01.9**	**+0.7**
WHN				pmax	pmax			
	comp=Z,100nm,1.0s							
WHN				LR		LR		
	comp=Z,3μm,10.3s							
HNS	**HongShan**	**29.05**	**65**	⇑	P	**P**	**13 36 57.4**	**+1.4**
HNS				pmax	pmax			
	comp=Z,65nm,1.2s							
HNS				LR		LR		
	comp=Z,430nm,11.2s							
HNS				LR		LR		
	comp=Z,1μm,12.4s							
HNS				LR		LR		
	comp=Z,1μm,13.5s							
AKT	**Akhty**	**29.65**	**303**	*eP*		**P**	**13 37 00.6**	**-0.8**
AKT				*e*			13 37 54.2	
AKT				*e*			13 40 06.3	
AKT				pmax	pmax			
	comp=Z,40nm,0.9s							
KCSI	**Kotacane, Aceh**	**30.11**	**145**	P		**P**	**13 37 07.0**	**+1.5**
KULM	**Kulim**	**30.18**	**139**	P		**P**	**13 37 06.7**	**+0.

GSI	Gunungsitoli	31.94	148		P		P		13 37 23.7	+2.0
GSI	Gunungsitoli	31.94	148		P		P		13 37 24.1	+2.4
RAYN	Ar Rayn	32.36	268				P		13 37 25.5	+0.1
RAYN					IAmb		IAmb		13 37 27.4	
	comp=Z,31nm,1.2s									
RAYN	Ar Rayn	32.36	268		P		P		13 37 26.7	+1.3
RAYN	Ar Rayn	32.36	268	*i*	P		P		13 37 26.7	+1.3
	SNR=12									
RAYN	Ar Rayn	32.36	268		P		P		13 37 26.3	+0.9
NJ2	Nanjing	32.44	76	*eP*			P		13 37 25.3	-0.6
NJ2					pmax		pmax			
	comp=Z,15nm,0.5s									
MNSI	Mandailing Nat	33.35	145		P		P		13 37 33.0	-1.0
	comp=Z,44nm,0.7s									
PBSI	Pulau Batu	33.46	148		P		P		13 37 36.9	+1.9
KBZ	Khabaz	33.63	306		P		P		13 37 36.7	+0.5
	comp=Z,8.2nm,0.8s,baz=163,slow=8.0,SNR=20									
KBZ					PcP		PcP		13 40 18.1	+2.0
	comp=Z,6.9nm,0.8s,baz=119,slow=4.0,SNR=4.4									
	comp=Z,8.2nm,0.8s									
KBZ	Khabaz	33.63	306	*ce*	P		P		13 37 36.5	+0.3
KBZ					pmax		pmax			
	comp=Z,12nm,1.0s									
BELG	Belogornoye	33.80	323	*i*	P		P		13 37 38.2	+0.6
BELG					pmax		pmax			
	comp=Z,11nm,1.3s									
SHA1	Shidzhatmaz	33.80	306	*i*	P		P		13 37 38.4	+0.4
KIV	Kislovodsk	33.83	306		P		P		13 37 38.2	0.0
KIV					IAmb		IAmb		13 37 45.4	
	comp=Z,27nm,0.6s									
KIV	Kislovodsk	33.83	306	⇓	P		P		13 37 39.5	+1.4
KIV	Kislovodsk	33.83	306	*i*	P		P		13 37 39.4	+1.3
	SNR=5.8									
KIV	Kislovodsk	33.83	306	*eP*			P		13 37 39.0	+0.9
KIV					pmax		pmax			
	comp=Z,23nm,1.0s									
KIV					MLR		MLR			
	comp=Z,184nm,15.0s									
KIV	Kislovodsk	33.83	306		P		P		13 37 38.1	0.0
	comp=Z,327nmcomp=Z,31nm,1.2s									
GOF	Gofitskoye	33.84	308	*ce*	P		P		13 37 40.0	+2.0
MARD	Mardin	34.47	294				P		13 37 43.3	-0.4
BKNI	Bangkinang	34.50	143		P		P		13 37 44.3	+0.3
BKNI	Bangkinang	34.50	143		P		P		13 37 45.4	+1.3
DL2	Dalian	34.62	63		P		P		13 37 44.6	-0.3
DL2					S		S		13 43 11.9	-1.7
DL2					pmax		pmax			
	comp=Z,91nm,0.7s									
DL2					pmax		pmax			
	comp=Z,530nm,6.1s									
DL2					LR		LR			
	comp=Z,1μm,12.0s									
DL2					LR		LR			
	comp=Z,2μm,15.3s									
PPI	Padang Panjang	34.84	145		P		P		13 37 49.0	+2.0
	comp=Z,69nm,1.3s									
MYKOM	Kota Tinggi	34.86	138		P		P		13 37 47.4	+0.2
MYKOM					IAmb		IAmb		13 37 53.9	
	comp=Z,76nm,1.1s									
MYKOM	Kota Tinggi	34.86	138		P		P		13 37 48.3	+1.1
SISI	Saibi	34.96	147		P		P		13 37 50.0	+2.0
	comp=Z,1μmcomp=Z,101nm,1.3s									
BTDF	Bukit Timah Da	35.16	138		P		P		13 37 51.1	+1.3
PDSI	Padang	35.26	145		P		P		13 37 50.4	-0.2
	comp=Z,1μmcomp=Z,127nm,1.0s									
LABN	Labinsk	35.35	307	*eP*			P		13 37 48.4	-2.7
LABN				*eS*			S		13 43 23.8	-0.9
LABN					pmax		pmax			
	comp=Z,26nm,0.7s									
LABN					MLR		MLR			
	comp=Z,729nm,13.0s									
LABN					MLR		MLR			
	comp=E,2μm,13.0s									
HIA	Hailar	35.40	45		P		P		13 37 52.8	+1.2
HILR	Hailar Array B	35.51	44		P		P		13 37 53.8	+1.4
	comp=E,6.2nm,0.7s,baz=238,slow=8.5,SNR=8.2									
HILR					PcP		PcP		13 40 22.4	+0.9
	comp=E,1.5nm,0.5s,baz=197,slow=4.5,SNR=3.8									
	comp=E,6.2nm,0.7s									
ERBR	Yeremizino-Bor	35.75	309	*eP*			P		13 37 53.9	-0.6
ERBR				*eS*			S		13 43 32.4	+1.6
ERBR					pmax		pmax			
	comp=Z,25nm,0.8s									
SOC	Sochi	35.87	305	*eP*			P		13 37 54.0	-1.6
SOC				*e*					13 39 12.5	
SOC				*e*	PPP		PPP		13 39 33.5	
SOC				*eS*			S		13 43 32.4	-0.3
SOC				*eSS*			SnSn		13 45 59.1	+3.1
SOC				*eSSS*			SSS		13 46 15.0	
SOC					MLR		MLR			
	comp=Z,191nm,13.0s									
SNY	Shenyang	36.35	58	⇑	P		P		13 38 00.4	+0.7
SNY					pmax		pmax			
	comp=Z,60nm,0.7s									
KIRV	Kirov	36.50	332		LR		LR		13 54 19.6	
	comp=Z,613nm,19.3s,baz=137,slow=38									
KIRV	Kirov	36.50	332	*ce*	P		P		13 38 01.4	+0.7
VRH	Novokhopyorsk	36.59	318	*eP*			P		13 38 01.4	-0.2
VRH					pmax		pmax			
	comp=Z,104nm,1.5s									
DSRI	Dabo	37.12	139		P		P		13 38 09.1	+2.6
	comp=Z,82nm,0.9s									
ANN	Anapa	37.69	306	*eP*			P		13 38 09.7	-1.3
ANN				*e**PP			pP		13 38 12.9	-4.0
ANN				*eS*			S		13 44 00.9	+0.6
ANN					pmax		pmax			
	comp=Z,48nm,1.4s									
ANN					MLR		MLR			
	comp=Z,386nm,14.0s									
ASF	Jabal al Asfar	37.95	286		LR		LR		13 56 24.8	
	comp=Z,88nm,18.5s,baz=97,slow=40									
VORD	Divnogorie	37.95	317	*eP*			P		13 38 11.8	-1.3
VORD					pmax		pmax			
	comp=Z,30nm,1.1s									
CN2	Changchun	37.95	55	⇑	P		P		13 38 13.9	+0.6
CN2					pmax		pmax			
	comp=Z,40nm,0.8s									
CN2					pmax		pmax			
	comp=Z,400nm,4.0s									
MASI	Maura Aman, Be	38.07	144		P		P		13 38 15.4	+0.8
	comp=Z,129nm,1.1s									
VSR	Storozhevoye	38.10	317	*eP*			P		13 38 12.9	-1.6
VSR					pmax		pmax			
	comp=Z,30nm,1.1s									
VORR	Voronezh	38.23	318	*eP*			P		13 38 15.9	+0.4
VORR					pmax		pmax			
	comp=Z,134nm,1.2s									
INCN	Inchon	38.54	66		P		P		13 38 17.8	-0.5
INCN	Inchon	38.54	66		P		P		13 38 18.8	+0.5
INCN	Inchon	38.54	66		P		P		13 38 17.8	-0.5
INCN					pmax		pmax			
	comp=Z,190nm,1.7s									
KSI	Kapahiang	38.69	144		P		P		13 38 20.0	+0.2
LPSR	Galich'ya Gora	38.70	319	*eP*			P		13 38 19.6	+0.1
LPSR					pmax		pmax			
	comp=Z,90nm,1.1s									
MMAI	Mount Meron Ar	39.09	287		P		P		13 38 21.6	-1.6
	comp=Z,5.8nm,1.0s,baz=93,slow=5.8,SNR=2.0									
MMAI					PcP		PcP		13 40 34.4	+1.6
	comp=Z,8.8nm,0.8s,baz=156,slow=5.0,SNR=4.4									
MMAI					LR		LR		13 56 57.8	
	comp=Z,125nm,18.6s,baz=63,slow=40									
TJN	Taejon	39.17	67		P		P		13 38 23.5	-0.1
GHAJ	Ghor Haditha	39.20	285		P		P		13 38 22.9	-0.9
GHAJ					IAmb		IAmb		13 38 27.1	
	comp=Z,95nm,1.1s									
KSM	Kuching	39.20	130		P		P		13 38 22.9	-1.2
KS19	Wonju Array Si	39.52	65		P		P		13 38 25.7	-0.8
KSAR	Wonju Array Be	39.53	66				P		13 38 26.4	-0.3
KSAR	Wonju Array Be	39.53	66		P		P		13 38 26.4	-0.3
KSRS	Korea Array	39.56	66		P		P		13 38 26.5	-0.4
	comp=Z,11nm,0.7s,baz=274,slow=8.7,SNR=30									
KSRS					LR		LR		13 56 48.9	
	comp=Z,71μm,19.9s,baz=265,slow=39									
	comp=Z,11nm,0.7s									
BNX	BinXian	39.60	53	⇑	P		P		13 38 27.9	+0.8
BNX					pmax		pmax			
	comp=Z,110nm,1.0s									
SBUM	Sibu	39.81	126		P		P		13 38 29.3	+0.1
SBUM	Sibu	39.81	126		P		P		13 38 30.5	+1.3
EIL	Elat	40.01	282		LR		LR		13 58 17.4	
	comp=Z,202nm,18.6s,baz=153,slow=41									
SIM	Simferopol'	40.04	306	*eP*			P		13 38 31.1	+0.3
SIM				*eS*			S		13 44 39.0	+3.1
SIM					pmax		pmax			
	comp=Z,49nm,1.3s									
BR104	Keskin Array S	40.10	298		P		P		13 38 31.6	+0.1
	comp=Z,80nmcomp=Z,6.6nm,0.9s									
BR131	Keskin Array S	40.10	298		P		P		13 38 30.6	-0.9
BR131	Keskin Array S	40.10	298		P		P		13 38 30.9	-0.6
	SNR=6.3									
BR131	Keskin Array S	40.10	298	*i*	P		P		13 38 31.2	-0.3
BRTR	Keskin Array B	40.10	298		P		P		13 38 31.4	-0.1
	comp=Z,3.0nm,0.7s,baz=113,slow=8.2,SNR=18									
	comp=Z,3.0nm,0.7s									
BRTR	Keskin Array B	40.10	298		P		P		13 38 30.8	-0.7
BRTR	Keskin Array B	40.10	298	*i*	P		P		13 38 32.0	+0.5
BRTR					pmax		pmax			
	comp=Z,3.0nm,0.8s									
BR105	Keskin Array S	40.11	298		P		P		13 38 31.7	0.0
	comp=Z,76nmcomp=Z,6.1nm,1.0s									
BR106	Keskin Array S	40.11	298		P		P		13 38 31.7	+0.1
	comp=Z,59nmcomp=Z,6.2nm,1.1s									
MDSI	Maura Dua	40.22	143		P		P		13 38 29.2	-3.3
	comp=Z,32nm,0.9s									
HEH	HeiHe	40.45	46	*eP*			P		13 38 34.3	+0.2
HEH					pmax		pmax			
	comp=Z,9.0nm,0.9s									
MOS	Moscow	40.56	323	*eP*			P		13 38 34.0	-0.9
MOS				*e*					13 40 05.3	
MOS					pmax		pmax			
	comp=Z,53nm,1.0s									
MOS					MLR		MLR			
	comp=Z,400nm,15.0s									
LWLI	Liwa	40.60	143		P		P		13 38 33.4	-2.4
TPI	Tanjungpandan	40.76	137		P		P		13 38 38.1	+1.1
	comp=Z,592nmcomp=Z,50nm,0.8s									
OBN	Obninsk	40.89	322	⇑	P		P		13 38 38.7	+1.1
OBN	Obninsk	40.89	322	*ce*	P		P		13 38 37.5	-0.1
OBN				*e*					13 40 10.3	
OBN				*e*	SS		SnSn		13 48 28.3	+31
OBN					pmax		pmax			
	comp=Z,56nm,1.0s									
OBN					MLR		MLR			
	comp=Z,330nm,15.0s									
OBN	Obninsk	40.89	322		P		P		13 38 38.0	+0.4
MDJ	Mudanjiang	41.01	55		P		P		13 38 39.3	+0.5
MDJ					pmax		pmax			
	comp=Z,36nm,0.7s									
MDJ	Mudanjiang	41.01	55		P		P		13 38 39.7	+0.9
ZEA	Zeya	41.28	40	*eP*			P		13 38 42.0	+1.1
ZEA					pmax		pmax			
	comp=Z,10.0nm,1.5s									
KLMR	Klimovskoe	41.91	331	*eP*			P		13 38 45.0	-0.9
KLMR				*e*					13 40 39.1	
KLMR					pmax		pmax			
	comp=Z,70nm,1.4s									
SAHE	Sakarya_HENDEK	42.22	300	⇓	P		P		13 38 49.9	+1.1
JNU	Nakatsue	42.39	72		LR		LR		13 59 40.4	
	comp=Z,116nm,18.9s,baz=278,slow=41									
JNU	Nakatsue	42.39	72				P		13 38 50.5	+0.2
JNU					IAmb		IAmb		13 38 52.3	
	comp=Z,36nm,0.9s									
JNU	Nakatsue	42.39	72		P		P		13 38 51.6	+1.3
BORA	Eskisehir	42.55	298		P		P		13 38 51.2	-0.4
MYLDM	Lahad Datu	42.67	117		P		P		13 38 52.7	0.0
MYLDM	Lahad Datu	42.67	117		P		P		13 38 54.3	+1.6
USRK	Ussuriysk Ar.	42.69	55		P		P		13 38 53.4	+0.9
	comp=Z,19nm,0.7s,baz=259,slow=7.3,SNR=36									
	comp=Z,19nm,0.7s									
ELL	Elmali	43.18	294		P		P		13 38 56.2	-0.5
ELL					IAmb		IAmb		13 38 58.5	
	comp=Z,60nm,1.0s									
ELL	Elmali	43.18	294		P		P		13 38 56.2	-0.5
ELL					pmax		pmax			
	comp=Z,60nm,1.0s									
MILM	Milestii Mici	43.92	309	⇑	*i*P		P		13 39 01.0	-1.4
	comp=Z,70nm,0.9s									
AK09	Malin Array Si	44.03	314		P		P		13 39 03.1	-0.2
AK09					pP		pP		13 39 06.4	-2.9
AK10	Malin Array Si	44.05	314		P		P		13 39 03.3	-0.1
AK08	Malin Array Si	44.06	314		P		P		13 39 03.3	-0.1
TPGR	Topolog	44.07	306	⇑	P		P		13 39 03.8	+0.1
AK07	Malin Array Si	44.08	314		P		P		13 39 03.6	0.0
AK06	Malin Array Si	44.08	314		P		P		13 39 03.7	0.0
AK06					pP		pP		13 39 07.2	-2.5
AKASG	Malin Array Be	44.09	314		P		P		13 39 03.6	-0.1
	comp=Z,4.5nm,0.7s,baz=80,slow=6.6,SNR=39									
AKASG					PP		PP		13 40 45.1	-1.3
	comp=Z,2.6nm,0.7s,baz=86,slow=9.0,SNR=4.1									
	comp=Z,4.5nm,0.7s									
AKASG	Malin Array Be	44.09	314		P		P		13 39 03.1	-0.6
AKASG	Malin Array Be	44.09	314	*i*	P		P		13 39 03.7	0.0
AKASG					pmax		pmax			
	comp=Z,23nm,0.9s									
AKBB	Malin Array Si	44.09	314	*ce*	P		P		13 39 03.9	+0.2
AKBB					pmax		pmax			
	comp=Z,76nm,2.1s									
AKBB	Malin Array Si	44.09	314		P		P		13 39 03.3	-0.4
AK05	Malin Array Si	44.09	314		P		P		13 39 03.3	-0.4
AK01	Malin Array Si	44.09	314		P		P		13 39 03.4	-0.3
AK02	Malin Array Si	44.09	314		P		P		13 39 03.4	-0.3
AK03	Malin Array Si	44.09	314		P		P		13 39 03.4	-0.3
KIEV	Kiev	44.09	314				P		13 39 03.3	-0.4
KIEV	Kiev	44.09	314	⇑	P		P		13 39 03.9	+0.2
KIEV	Kiev	44.09	314	*i*	P		P		13 39 03.6	-0.2
	SNR=12									
KIEV	Kiev	44.09	314		P		P		13 39 03.9	+0.2
KIEV	Kiev	44.09	314		P		P		13 39 03.3	-0.4
	comp=Z,3μmcomp=Z,140nm,0.9s									
AK11	Malin Array Si	44.12	314		P		P		13 39 03.6	-0.3
AK12	Malin Array Si	44.12	314		P		P		13 39 03.6	-0.4
AK04	Malin Array Si	44.12	314		P		P		13 39 03.6	-0.4
AK14	Malin Array Si	44.15	314		P		P		13 39 03.8	-0.4
AK16	Malin Array Si	44.16	314		P		P		13 39 03.9	-0.4
AK18	Malin Array Si	44.19	314		P		P		13 39 03.9	-0.6
AK17	Malin Array Si	44.19	314		P		P		13 39 03.9	-0.6
AK22	Malin Array Si	44.19	314		P		P		13 39 03.9	-0.6
CFR	Carcaliu	44.28	306	⇑	P		P		13 39 05.4	0.0
CFR	Carcaliu	44.28	306		P		P		13 39 05.4	0.0
BAND	Balkesir-Ban	44.33	299	⇑	P		P		13 39 05.9	+0.1
SORM	Soroca	44.33	310	⇑	P		P		13 39 05.4	-0.4
SORM	Soroca	44.33	310		P		P		13 39 05.3	-0.4
JMN	Monobe	44.77	70		P		P		13 39 10.7	+1.2
LUBAR	Lubar, Ukraine	44.91	313		P		P		13 39 09.6	-0.7
KPJI	Karang Pucung	45.19	139		P		P		13 39 12.6	-0.2
	comp=Z,44nm,1.1s									
VRI	Vrincioaia	45.30	307	⇑	P		P		13 39 14.5	+1.0
VRI	Vrincioaia	45.30	307		P		P		13 39 14.5	+1.0
VRI	Vrincioaia	45.30	307		P		P		13 39 14.6	+1.0
	comp=Z,35nm,1.1s									
BISRR	Bisoca	45.30	306	⇑	P		P		13 39 15.7	+2.1
BISRR	Bisoca	45.30	306		P		P		13 39 14.5	+0.9
	comp=Z,8μmcomp=Z,94nm,0.8s									
PLOR	Plostina	45.35	307	⇑	P		P		13 39 15.8	+1.8
PLOR	Plostina	45.35	307		P		P		13 39 15.7	+1.8
TESR	Tescani	45.38	308	⇓	P		P		13 39 14.4	+0.3
TESR	Tescani	45.38	308		P		P		13 39 14.1	0.0
	comp=Z,15nm,0.7s									
YAK	Yakutsk	45.40	30		LR		LR		14 00 56.6	
	comp=Z,85nm,19.6s,baz=268,slow=40									
YAK	Yakutsk	45.40	30				P		13 39 13.7	-0.3
YAK					IAmb		IAmb		13 39 15.1	
	comp=Z,43nm,0.8s									
YAK	Yakutsk	45.40	30	*eP*			P		13 39 14.4	+0.4
YAK				*e**PP			pP		13 39 19.6	-0.4
YAK				*e*					13 40 53.0	
YAK				*e*	PPP		PPP		13 41 47.0	
YAK				*eS*			S		13 45 58.8	+4.6
YAK				*e**SS			sS		13 46 07.6	+3.6
YAK				*eSS			ScS		13 49 00.7	-8.9
YAK				*eSSS			SSS		13 50 08.5	
YAK					pmax		pmax			
	comp=Z,35nm,0.9s									
YAK					pmax		pmax			
	comp=E,13nm,1.2s									
YAK					pmax		pmax			
	comp=N,10.0nm,1.2s									
YAK					pmax		pmax			
	comp=Z,840nm,4.6s									
YAK					pmax		pmax			
	comp=N,638nm,4.3s									
YAK					pmax		pmax			
	comp=E,513nm,5.9s									
YAK					smax		smax			
	comp=E,905nm,4.2s									
YAK					smax		smax			
	comp=N,442nm,4.2s									
YAK					MLR		MLR			
	comp=Z,227nm,15.0s									
YAK					MLR		MLR			
	comp=N,93nm,18.0s									
YAK					MLR		MLR			
	comp=E,120nm,13.0s									
ISR	Istrita	45.41	306	⇓	P		P		13 39 16.7	+2.2
ISR	Istrita	45.41	306		P		P		13 39 16.6	+2.2
ISR	Istrita	45.41	306		P		P		13 39 15.1	+0.7
	comp=E,49nm,1.4s									
KARP	Karpathos	45.52	292	*eP*			P		13 39 16.1	+0.7
KARP	Karpathos	45.52	292		P		P		13 39 14.8	-0.7
	comp=E,84nm,0.9s									
ONER	Baraj Valea Uz	45.55	308	⇓	P		P		13 39 16.8	+1.4
MNK	Minsk	45.56	319	*i*	P		P		13 39 14.1	-1.3
	comp=E,27nm,0.8s									
MNK				*i*	P		P		13 39 14.1	-1.3
	comp=N,17nm,0.8s									
MNK				*i*	P		P		13 39 14.1	-1.3
	comp=Z,39nm,0.8s,baz=101									
MNK				*i*	PcP		PcP		13 40 52.3	-1.4
MNK				*i*	PP		PP		13 41 00.9	-1.0
MNK				*i*	PPP		PPP		13 41 40.4	
MNK				*i*	S		S		13 45 57.2	+0.6
MNK				*i*	ScS		ScS		13 49 10.6	-0.3
MNK				*i*	SS		SS		13 49 22.5	+2.2
MNK				*i*	SSS		SSS		13 50 10.4	
MNK				*i*	LQ		LQ		13 55 02.4	
MNK				*i*	LR		LR		13 58 48.0	
MNK				*i*	LRM		MLR		13 59 41.9	
	comp=E,66nm,12.6s									
MNK				*i*	LRM		MLR		13 59 50.2	
	comp=Z,289nm,15.4s									
MNK				*i*	LRM		MLR		13 59 54.7	
	comp=N,229nm,14.7s									
MNK	Minsk	45.56	319	*i*	P		P		13 39 14.0	-1.3
MNK				*i*					13 40 52.2	
MNK				*i*					13 41 00.9	
MNK				*i*	PPP		PPP		13 41 40.3	
MNK				*i*	S		S		13 45 57.2	+0.6
MNK				*i*					13 49 10.5	
MNK				*i*	SSS		SSS		13 50 10.3	
MNK					pmax		pmax			
	comp=N,17nm,0.8s									
MNK					pmax		pmax			
	comp=Z,39nm,0.8s									
MNK					pmax		pmax			
	comp=E,27nm,0.8s									
MNK					MLR		MLR			
	comp=E,66nm,13.0s									
MNK					MLR		MLR			
	comp=Z,289nm,15.0s									
MNK					MLR		MLR			
	comp=N,229nm,15.0s									
NEHR	Nehoiu	45.59	306	⇑	P		P		13 39 17.7	+1.8
EZN	Ezine	45.73	298	⇑	P		P		13 39 17.3	+0.3
EZN	Ezine	45.73	298		P		P		13 39 17.2	+0.3
TURR	Turia	45.80	307	⇑	P		P		13 39 19.0	+1.5
MLR	Muntele Rosu	45.84	306	⇑	P		P		13 39 19.6	+1.6
MLR	Muntele Rosu	45.84	306		P		P		13 39 19.5	+1.6
BBKI	Banjar Baru	45.88	130		P		P		13 39 20.4	+2.1
	comp=N,92nm,1.1s									
DOPR	Dopca	46.24	307	⇑	P		P		13 39 22.3	+1.4
RNPP5	Staryi Chortor	46.25	314		P		P		13 39 21.0	+0.1
NACGM	Naroch	46.26	319	*eP*			P		13 39 21.4	+0.4
	comp=E,34nm,1.2s									
RNPP9	Sopachiy	46.27	315		P		P		13 39 21.1	+0.1
RNPP8	Varash	46.28	314		P		P		13 39 21.2	+0.1
JOF	Joensuu	46.31	331	*eP*			P		13 39 22.3	+1.1
BURAR	Bucovina Array	46.40	309				P		13 39 22.0	-0.3
BURAR					IAmb		IAmb		13 39 30.3	
	comp=Z,17nm,0.8s									
BURAR	Bucovina Array	46.40	309	⇑	P		P		13 39 23.3	+1.0
BURAR	Bucovina Array	46.40	309		P		P		13 39 23.3	+1.0
VOIR		46.47	306	⇑	P		P		13 39 23.6	+0.8
VOIR		46.47	306		P		P		13 39 23.6	+0.8
VOIR		46.47	306		P		P		13 39 22.9	+0.1
KSV	Kosov	46.54	310		P		P		13 39 22.0	-1.2
ARR	Arges	46.76	306	⇑	P		P		13 39 26.0	+0.9
MPSI	Mapaga	46.84	121		P		P		13 39 25.7	-0.2
	comp=Z,21nm,1.0s									
STNU	Starunia	46.93	311		P		P		13 39 26.4	+0.1
VSU	Vasula	47.05	324	*ce*	P		P		13 39 27.1	+0.1
VSU					pmax		pmax			
	comp=Z,47nm,1.7s									
LVZ	Lovozero	47.29	338	*ce*	P		P		13 39 30.3	+1.4
LVZ					pmax		pmax			
	comp=Z,39nm,1.0s									
LOT	Lotru	47.37	306	⇑	P		P		13 39 30.5	+0.6
APA	Apatity	47.54	337	⇓	*eP*		P		13 39 29.3	-1.5
APA					MLR		MLR			
	comp=Z,825nm,3.9s									
MARR	Marisel-Cluj	47.81	308	⇑	P		P		13 39 35.5	+2.2
MJAR	Matsushiro Arr	47.84	66		P		P		13 39 33.6	0.0
	comp=Z,4.7nm,0.8s,baz=275,slow=9.5,SNR=5.7									
MJAR					LR		LR		14 01 22.6	
	comp=Z,160nm,18.2s,baz=232,slow=38									
	comp=Z,4.7nm,0.8s									
MJAR	Matsushiro Arr	47.84	66		IAmb		IAmb		13 39 35.3	
	comp=Z,28nm,1.7s									
PABE	Paberze

comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,5µm,16.0s
ASAJ Asahikawa 50.32 55 LR LR 14 02 45.9
comp=Z,219nm,18.4s,baz=157,slow=38
KAPI Kappang 50.38 126 P **P** **13 39 52.3 -0.9**
comp=Z,14nm,0.8s,baz=352,slow=1.0,SNR=4.4
KAPI LR LR 14 04 24.2
comp=Z,41nm,20.5s,baz=294,slow=40
comp=Z,14nm,0.8s
KAPI Kappang 50.38 126 IAmb IAmb 13 39 59.3
comp=Z,27nm,1.1s
KAPI Kappang 50.38 126 P **P** **13 39 53.9 +0.8**
LODK Lodwar 50.44 248 P **P** **13 39 55.8 +2.0**
SNR=8.2
KEV Kevo 50.61 339 P **P** **13 39 54.2 0.0**
KEV IAmb IAmb 13 39 59.4
comp=Z,30nm,0.8s
KEV Kevo 50.61 339 P **P** **13 39 54.2 0.0**
KEV pmax pmax
comp=Z,30nm,0.8s
ARA0 ARCESS Array S 51.01 338 *e*P **P** **13 39 57.1 -0.2**
ARCES ARCESS Array B 51.01 338 P **P** **13 39 57.7 +0.4**
comp=Z,26nm,0.7s,baz=99,slow=7.8,SNR=59
comp=Z,26nm,0.7s
ARCES ARCESS Array B 51.01 338 **P** **13 39 57.7 +0.4**
ARCES IAmb IAmb 13 39 59.0
comp=Z,85nm,1.4s
MAUC Maruska 51.33 312 *e*P **P** **13 40 01.1 +1.1**
JAVC Velka Javorina 51.45 311 *e*P **P** **13 40 02.2 +1.3**
MORC Moravsky Berou 51.51 312 IAmb IAmb 13 40 03.5
comp=Z,43nm,1.3s
MORC Moravsky Berou 51.51 312 ⇑P **P** **13 40 02.0 +0.7**
MORC Moravsky Berou 51.51 312 *e*P **P** **13 40 02.1 +0.7**
MORC Moravsky Berou 51.51 312 P **P** **13 40 02.0 +0.7**
KTK1 Kautokeino 51.58 337 *e*P **P** **13 40 02.0 +0.4**
SMOL Smolenice 51.62 310 *e*P **P** **13 40 03.1 +0.9**
SMOL pmax pmax
comp=Z,8.0nm,1.0s
GKP Gorka Klasztor 51.69 317 *e*P **P** **13 40 02.8 +0.3**
KMBO Kilima Mbogo 51.70 242 P **P** **13 40 04.0 +0.5**
comp=Z,9.2nm,0.8s,baz=47,slow=10,SNR=14
KMBO LR LR 14 01 59.4
comp=Z,99nm,18.1s,baz=97,slow=36
comp=Z,9.2nm,0.8s
KMBO Kilima Mbogo 51.70 242 *i* P **P** **13 40 04.4 +0.9**
KMBO pmax pmax
comp=Z,10.0nm,0.9s
MODS Modra-Piesok 51.73 310 *e*P **P** **13 40 03.9 +0.9**
MODS pmax pmax
comp=Z,39nm,1.2s
MODS Modra-Piesok 51.73 310 *e*P **P** **13 40 03.9 +0.9**
KIBK Kibwezi 51.87 240 **P** **13 40 04.8 +0.2**
KIBK Kibwezi 51.87 240 P **P** **13 40 05.3 +0.8**
HAMF Hammerfest 52.00 339 *e*P **P** **13 40 05.7 +1.1**
VRAC Vranov 52.14 312 ⇑P **P** **13 40 06.8 +0.8**
VRAC Vranov 52.14 312 *e*P **P** **13 40 06.9 +0.8**
VRAC Vranov 52.14 312 P **P** **13 40 06.8 +0.8**
DPC Dobruska-Polom 52.27 313 *e*P **P** **13 40 08.3 +1.2**
DPC Dobruska-Polom 52.27 313 *e*P **P** **13 40 08.3 +1.2**
KSP Ksiaz 52.28 313 *e*P **P** **13 40 07.7 +0.6**
KRUC Moravsky 52.28 311 *e*P **P** **13 40 07.8 +0.7**
TNTI Ternate 52.35 114 P **P** **13 40 09.6 +1.6**
TNTI Ternate 52.35 114 P **P** **13 40 07.8 -0.2**
RONA Rosalia, Austr 52.43 310 *i* P **P** **13 40 08.9 +0.6**
comp=Z,30nm,1.0s,SNR=7.9
CHVC Chvalec 52.44 313 *e*P **P** **13 40 09.4 +1.2**
CHVC Chvalec 52.44 313 *e*P **P** **13 40 09.4 +1.2**
UPC Upice 52.47 313 *e*P **P** **13 40 09.9 +1.5**
UPC Upice 52.47 313 *e*P **P** **13 40 09.9 +1.5**
KOGS Kog 52.56 308 *i* P **P** **13 40 10.0 +0.8**
CONA Conrad Observa 52.70 310 *i* pP **P** **13 40 11.2 +0.8**
comp=Z,47nm,0.9s,SNR=14
JETT Jettan, Norway 52.71 337 *e*P **P** **13 40 10.9 +0.9**
TREC Trest 52.86 312 *e*P **P** **13 40 12.4 +1.0**
TREC Trest 52.86 312 *e*P **P** **13 40 12.4 +1.0**
ARSA Arzberg 52.99 309 IAmb IAmb 13 40 18.0
comp=Z,33nm,1.0s
ARSA Arzberg 52.99 309 *e*P **P** **13 40 13.0 +0.7**
comp=Z,14nm,0.8s,SNR=8.0
SANI Sanana 53.01 118 P **P** **13 40 12.0 -0.9**
SANI Sanana 53.01 118 P **P** **13 40 12.4 -0.5**
comp=Z,46nm,0.9s
TIP Timpagrande 53.15 299 ⇑P **P** **13 40 12.9 -0.8**
TRO Tromso 53.23 337 *e*P **P** **13 40 14.1 +0.4**
JCJ Chichijima 53.30 77 LR LR 14 04 28.1
comp=Z,89nm,18.1s,baz=125,slow=38
PERS Pernice 53.32 308 *i* P **P** **13 40 15.7 +0.9**
SOKA Soboth 53.37 308 *e*pP **P** **13 40 16.1 +0.8**
comp=Z,55nm,1.0s,SNR=15
PRU Pruhonice 53.44 312 *e*P **P** **13 40 16.5 +0.9**
PRU *e* 13 40 20.7
PRU Pruhonice 53.44 312 *e*P **P** **13 40 16.5 +0.9**
PRU *e*pP **pP** **13 40 20.7 -1.0**
CKRC Cesky Krumlov 53.67 311 *e*P **P** **13 40 18.2 +0.9**
CKRC Cesky Krumlov 53.67 311 *e*P **P** **13 40 18.2 +0.9**
DEL Delary 53.68 321 *i* P **P** **13 40 18.5 +1.3**
ZVC Zvikov 53.70 312 *e*P **P** **13 40 18.6 +1.1**
OBKA Obir 53.72 308 *i* pP **P** **13 40 18.7 +0.9**
comp=Z,52nm,0.9s,SNR=5.9
BRG Berggiesshubel 53.77 314 *e*P **P** **13 40 18.8 +0.8**
comp=Z,31nm,0.8s,baz=84,slow=7.1
BRG *e*pP **pP** **13 40 22.7 -1.4**
baz=84,slow=7.1
MOA Molln 53.78 310 *e*P **P** **13 40 18.6 +0.4**
comp=Z,15nm,0.6s,SNR=9.3
HFS Hagfors 53.90 325 P **P** **13 40 19.0 +0.2**
comp=Z,21nm,0.6s,baz=108,slow=8.0,SNR=52
comp=Z,21nm,0.6s
LUNU Lund 53.92 320 *i* P **P** **13 40 19.7 +0.8**
CEL Celeste 53.98 298 IAmb IAmb 13 40 21.8
comp=Z,35nm,1.0s
FAUS Fauske 54.04 334 *e*P **P** **13 40 19.6 -0.1**
GEC2 GERESS Array S 54.07 311 *e*P **P** **13 40 20.9 +0.5**
comp=Z,11nm,0.7s,baz=84,slow=7.1
GERES GERESS Array B 54.07 311 P **P** **13 40 20.7 +0.4**
comp=Z,8.0nm,0.7s,baz=86,slow=6.8,SNR=44
comp=Z,8.0nm,0.7s
KHC Kasperske Hory 54.12 311 *ce*P **P** **13 40 21.7 +1.0**
KHC pmax pmax
comp=Z,15nm,0.8s
KHC Kasperske Hory 54.12 311 *e*P **P** **13 40 21.5 +0.8**
KHC *e*pP **pP** **13 40 25.3 -1.5**
STEI Steigen 54.16 335 *e*P **P** **13 40 18.7 -1.9**
MOR8 Moi Rana 54.18 333 *e*P **P** **13 40 19.9 -0.9**
BIOA Bad Ischl, Aus 54.22 310 *i* P **P** **13 40 21.6 +0.2**
comp=Z,28nm,1.1s
BORU Boraas 54.30 322 *i* P **P** **13 40 21.9 +0.2**
CADS Cadrg 54.31 308 *i* P **P** **13 40 22.5 +0.4**
FABU Falkenberg 54.32 321 *i* P **P** **13 40 21.9 0.0**
CLL Collm 54.33 314 *i* P **P** **13 40 22.3 +0.2**
CLL *i* *PP **pP** **13 40 26.2 -2.0**
CLL pmax pmax
comp=Z,31nm,1.4s
CLL Collm 54.33 314 *e*P **P** **13 40 22.2 +0.1**
comp=Z,9.1nm,0.8s,baz=84,slow=7.1
CLL *e*pP **pP** **13 40 26.2 -2.0**
baz=84,slow=7.1
CLL Collm 54.33 314 *i* P **P** **13 40 22.3 +0.2**
comp=Z,31nm,1.4s
CLL *i* pP **pP** **13 40 26.2 -2.0**
CLL *i* sP **sP** **13 40 27.9 -2.2**
CLL *e*PP **PP** **13 42 27.0 +3.1**
MYKA Terra Mystica 54.33 308 *i* P **P** **13 40 22.8 +0.5**
comp=Z,18nm,1.0s
RAUS Rausandaksla 54.38 333 *e*P **P** **13 40 21.9 -0.2**
KBA Koelnbreinsper 54.48 309 *i* P **P** **13 40 23.6 +0.1**
comp=Z,10nm,0.6s
NLAI Namlea 54.62 118 P **P** **13 40 24.7 +0.1**
comp=Z,47nm,0.7s
LEIR Leirfjorden 54.71 332 *e*P **P** **13 40 24.2 -0.3**
VAGH Vaagaholmen 54.72 333 *e*P **P** **13 40 23.7 -1.0**
TANN Tannenbergstha 54.74 313 *e*P **P** **13 40 25.6 +0.5**
comp=Z,9.3nm,0.7s,baz=84,slow=7.1
TANN *e*pP **pP** **13 40 29.7 -1.6**
baz=84,slow=7.1
STOK Stokkvaagen 54.77 333 *e*P **P** **13 40 23.6 -1.4**
LOF Lofoten 54.82 335 *e*P **P** **13 40 23.7 -1.7**
LESA Schwarzleotal 54.90 309 *e*P **P** **13 40 26.1 -0.2**
comp=Z,34nm,0.9s,SNR=8.3
NC405 NORSAR Array S 54.92 326 IAmb IAmb 13 40 27.5
comp=Z,45nm,0.9s
PLN Plauen 54.93 313 *e*P **P** **13 40 27.1 +0.7**
baz=84,slow=7.1
PLN *e*pP **pP** **13 40 31.2 -1.4**
baz=84,slow=7.1
ROTZ Rotzenmuhle 54.96 312 *e*P **P** **13 40 27.9 +1.2**
comp=Z,8.0nm,1.0s,baz=84,slow=7.1
MA2 Magadan 54.97 36 LR LR 14 05 45.1
comp=Z,251nm,18.0s,baz=286,slow=38
MA2 Magadan 54.97 36 *ce*P **P** **13 40 27.1 +0.5**
MA2 pmax pmax
comp=Z,16nm,0.8s
NC602 NORSAR Array S 55.00 326 IAmb IAmb 13 40 27.8
comp=Z,35nm,1.2s
NC602 NORSAR Array S 55.00 326 *e*P **P** **13 40 25.7 -1.0**
MANZ Manzenberg 55.00 313 *e*P **P** **13 40 28.3 +1.3**
comp=Z,7.9nm,1.1s,baz=84,slow=7.1
NSS Namsos 55.02 330 *e*P **P** **13 40 26.6 -0.3**
NC303 NORSAR Array S 55.10 326 IAmb IAmb 13 40 28.7
comp=Z,42nm,1.1s
NB201 NORSAR Array S 55.13 326 IAmb IAmb 13 40 28.7
comp=Z,36nm,1.2s
NB2 NORSAR Subarra 55.17 326 P **P** **13 40 27.5 -0.6**
comp=Z,36nm,1.0s,baz=91,slow=7.4
NOA NORSAR Array B 55.17 326 P **P** **13 40 27.6 -0.4**
comp=Z,21nm,0.9s,baz=91,slow=6.9,SNR=33
comp=Z,21nm,0.9s
MOX Moxa 55.26 313 *e*P **P** **13 40 29.5 +0.7**
comp=Z,17nm,0.9s,baz=84,slow=7.1
MOX *e*pP **pP** **13 40 33.2 -1.8**
baz=84,slow=7.1
GORT1 Trebel 55.26 316 *e*P **P** **13 40 28.9 +0.2**
baz=84,slow=7.1
NAO01 NORSAR Array S 55.32 326 IAmb IAmb 13 40 29.9
comp=Z,30nm,1.1s
FLTG Flechtingen 55.35 316 *e*P **P** **13 40 29.3 -0.1**
comp=Z,19nm,0.7s,baz=84,slow=7.1
NBO00 NORSAR Array S 55.38 326 IAmb IAmb 13 40 30.5
comp=Z,37nm,1.1s
WTTA Wattenberg 55.62 309 *i* P **P** **13 40 31.3 -0.4**
comp=Z,13nm,0.5s,SNR=8.0
WATA Walderalm 55.65 309 *e*P **P** **13 40 31.3 -0.6**
comp=Z,12nm,0.6s,SNR=6.0
CTI Castel Tesino 55.77 308 IAmb IAmb 13 40 34.0
comp=Z,31nm,0.9s
BSEG Bad Segeberg 55.79 318 *e*P **P** **13 40 33.4 +0.8**
comp=Z,16nm,0.8s,baz=84,slow=7.1
SEY Seymchan 55.84 32 LR LR 14 05 29.4
comp=Z,152nm,18.2s,baz=296,slow=37
SEY Seymchan 55.84 32 *ce*P **P** **13 40 34.1 +1.3**
SEY pmax pmax
comp=Z,22nm,1.7s
SQTA Sankt Quirin 55.91 309 *i* P **P** **13 40 33.3 -0.5**
comp=Z,19nm,0.5s,SNR=8.7
CLZ Clausthal 55.92 315 *e*P **P** **13 40 34.4 +0.7**
comp=Z,44nm,0.9s,baz=84,slow=7.1
CLZ *e*pP **pP** **13 40 38.7 -1.1**
baz=84,slow=7.1
KONO Kongsberg 55.96 324 *e*P **P** **13 40 34.1 +0.5**
KONO Kongsberg 55.96 324 *ce*P **P** **13 40 34.2 +0.5**
KONO pmax pmax
comp=Z,23nm,1.3s
MOTA Moosalm 55.97 310 *e*P **P** **13 40 33.6 -0.6**
comp=Z,22nm,0.7s,SNR=13
MSAI Masohi 56.10 117 P **P** **13 40 36.0 +0.7**
comp=Z,31nm,0.7s
RETA Reutte 56.18 310 *i* P **P** **13 40 35.3 -0.3**
comp=Z,16nm,0.8s,SNR=5.4
DOMB Dombas 56.22 327 *e*P **P** **13 40 35.0 -0.6**
FETA Feichten 56.26 309 *e*P **P** **13 40 35.9 -0.4**
comp=Z,12nm,0.6s,SNR=8.0
SPA0 Spitsbergen Ar 56.41 347 *e*P **P** **13 40 36.7 0.0**
SPITS Spitsbergen Ar 56.41 347 P **P** **13 40 37.0 +0.3**
comp=Z,17nm,0.8s,baz=128,slow=11,SNR=7.7
SPITS LR LR 14 08 33.2
comp=Z,87nm,19.4s,baz=138,slow=40
comp=Z,17nm,0.8s
SWI Sorong 56.44 113 P **P** **13 40 37.8 0.0**
comp=Z,8nm,1.2s
RETH Rethem/Aller, 56.46 316 *e*P **P** **13 40 37.6 +0.3**
baz=84,slow=7.1
OSSC Osservatorio P 56.47 305 IAmb IAmb 13 40 56.5
comp=Z,48nm,1.0s
MBAR Mbarara 56.53 247 LR LR 14 05 12.8
comp=Z,78nm,18.2s,baz=28,slow=36
MBAR Mbarara 56.53 247 P **P** **13 40 38.5 -0.1**
MBAR Mbarara 56.53 247 P **P** **13 40 39.3 +0.7**
MBAR Mbarara 56.53 247 *ce*P **P** **13 40 39.3 +0.7**
MBAR pmax pmax
comp=Z,22nm,1.3s
UBR Ueberruh 56.59 310 *e*P **P** **13 40 38.4 -0.1**
comp=Z,15nm,0.7s,baz=84,slow=7.1
FUORN Ofenpass-Fuorn 56.64 309 IAmb IAmb 13 40 51.1
comp=Z,25nm,0.8s
BATI Baumata 56.77 127 LR LR 14 09 55.9
comp=Z,41nm,18.8s,baz=255,slow=41
DAVA Damuels 56.80 310 *e*P **P** **13 40 40.0 -0.1**
comp=Z,76nm,0.9s,SNR=12
SOEI Soe 56.87 126 **P** **13 40 38.1 -2.9**
SOEI Soe 56.87 126 P **P** **13 40 41.8 +0.9**
SOEI Soe 56.87 126 P **P** **13 40 40.1 -0.8**
comp=Z,74nm,1.1s
MOL Molde 56.92 328 *e*P **P** **13 40 41.2 +0.7**
STU Stuttgart 57.03 311 IAmb IAmb 13 40 43.2
comp=Z,31nm,0.8s
AKN Aaknes 57.19 328 *e*P **P** **13 40 42.3 -0.1**
KASTN Kahler Asten 57.21 314 *e*P **P** **13 40 43.7 +0.9**
comp=Z,7.4nm,0.8s,baz=84,slow=7.1
SNART Snartemo 57.24 323 *e*P **P** **13 40 42.4 -0.5**
SNART Snartemo 57.24 323 *i* P **P** **13 40 43.4 +0.6**
TUE Stuetta 57.29 309 IAmb IAmb 13 41 11.2
comp=Z,28nm,1.1s
TNS Taunus Mts 57.32 313 *e*P **P** **13 40 43.7 +0.1**
comp=Z,19nm,1.0s,baz=84,slow=7.1
TNS *e*pP **pP** **13 40 48.4 -1.4**
baz=84,slow=7.1
BUG Bochum-Univer 57.89 315 *e*P **P** **13 40 48.1 +0.6**
comp=Z,14nm,0.6s,baz=84,slow=7.1
ABPO Ambohimpanom 58.13 218 **P** **13 40 49.1 -0.7**
ABPO IAmb IAmb 13 40 54.9
comp=Z,24nm,1.3s
ABPO Ambohimpanom 58.13 218 P **P** **13 40 49.1 -0.7**
ABPO pmax pmax
comp=Z,24nm,1.3s
FAKI Fak Fak 58.45 114 P **P** **13 40 50.6 -1.4**
FAKI IAmb IAmb 13 40 51.7
comp=Z,19nm,0.9s
FAKI Fak Fak 58.45 114 P **P** **13 40 53.4 +1.4**
FAKI Fak Fak 58.45 114 P **P** **13 40 52.6 +0.6**
comp=Z,22nm,0.9s
ECH Echery 58.46 311 IAmb IAmb 13 40 52.9
comp=Z,36nm,1.5s
BTNL Ternell 58.73 314 *d*P **P** **13 40 53.8 +0.4**
MEM Membach 58.80 314 *d*P **P** **13 40 54.5 +0.6**
WLF Walferdange 58.87 313 *d*P **P** **13 40 55.3 +0.9**
comp=Z,16nm,1.1s
PETK Petropavlovsk- 59.27 43 P **P** **13 40 56.3 -0.9**
comp=Z,5.8nm,0.8s,baz=255,slow=2.8,SNR=6.2
PETK LR LR 14 08 54.2
comp=Z,196nm,19.0s,baz=283,slow=38
comp=Z,5.8nm,0.8s
BCLA Clavier 59.28 314 *d*P **P** **13 40 57.7 +0.5**
comp=Z,14nm,1.0s
BCLA *d*PcP **PcP** **13 41 44.6 -0.7**
BCLA *d*PP **PP** **13 43 05.4 -2.5**
RCHB Rochefort 59.37 314 *d*P **P** **13 40 58.3 +0.4**
comp=Z,20nm,1.0s
BGES Gesves 59.42 314 *d*P **P** **13 40 58.5 +0.3**
comp=Z,13nm,1.2s
BMRD Maredsous 59.64 314 *d*P **P** **13 40 59.8 +0.1**
KEST Kesra 59.67 296 P **P** **13 41 00.6 +0.3**
comp=Z,33nm,0.8s,baz=2.5,slow=1.7,SNR=23
comp=Z,33nm,0.8s
DOU Dourbes 59.78 314 *d*P **P** **13 41 01.2 +0.5**
comp=Z,10nm,1.2s
VOI Vohitsoka 60.73 217 **P** **13 41 07.2 -0.3**
VOI IAmb IAmb 13 41 12.6
comp=Z,32nm,1.3s
SSB Saint Sauveur 60.81 308 P **P** **13 41 07.8 -0.1**
SSB IAmb IAmb 13 41 13.0
comp=Z,30nm,0.9s
SSB Saint Sauveur 60.81 308 P **P** **13 41 07.8 -0.1**
SSB pmax pmax
comp=Z,30nm,0.9s
LRW Lerwick 61.32 326 *e*P **P** **13 41 11.0 0.0**
LRW IAmb IAmb 13 41 12.0
comp=Z,17nm,0.7s
BILL Bilibino 61.37 25 **P** **13 41 11.7 +0.5**
BILL IAmb IAmb 13 41 13.3
comp=Z,23nm,1.0s
BILL Bilibino 61.37 25 *ce*P **P** **13 41 12.5 +1.2**
BILL pmax pmax
comp=Z,19nm,1.0s
BILL MLR MLR
comp=Z,145nm,14.0s
NOR Nord 62.35 351 *i* P **P** **13 41 17.7 +0.1**
NOR IAmb IAmb 13 41 18.2
comp=Z,19nm,0.8s
DRUM Mains of Drumt 62.60 322 *e*P **P** **13 41 19.3 -0.4**
DRUM IAmb IAmb 13 41 21.3
comp=Z,33nm,0.7s
EDMD Edmundbyers 62.76 320 *e*P **P** **13 41 20.4 -0.4**
MCD Coleburn Disti 62.86 323 *e*P **P** **13 41 21.6 +0.1**
MCD IAmb IAmb 13 41 23.1
comp=Z,67nm,0.8s
EDI Edinburgh 63.20 321 *e*P **P** **13 41 23.7 +0.1**
EDI IAmb IAmb 13 41 25.6
comp=Z,37nm,1.0s
EKA Eskdalemuir Ar 63.31 320 P **P** **13 41 24.4 -0.1**
comp=Z,20nm,0.7s,baz=88,slow=7.0,SNR=39
comp=Z,20nm,0.7s
ESK Eskdalemuir 63.34 320 P **P** **13 41 24.6 -0.1**
ESK Eskdalemuir 63.34 320 *e*P **P** **13 41 23.8 -0.9**
ESK IAmb IAmb 13 41 26.5
comp=Z,27nm,0.9s
ESK Eskdalemuir 63.34 320 P **P** **13 41 24.6 -0.1**
ESK pmax pmax
comp=Z,53nm,1.0s
KESW Keswick, Cumbr 63.46 320 *e*P **P** **13 41 25.7 +0.2**
KESW IAmb IAmb 13 41 27.8
comp=Z,48nm,0.9s
INVG Invergeldie, C 63.55 322 *e*P **P** **13 41 25.4 -0.5**
INVG IAmb IAmb 13 41 28.3
comp=Z,6.9nm,0.7s
LINV Loch Inver, As 63.75 324 *e*P **P** **13 41 27.3 0.0**
LINV IAmb IAmb 13 41 29.0
comp=Z,29nm,0.9s
FITZ Fitzroy Crossi 63.75 132 P **P** **13 41 29.4 +1.6**
DAG Danmarks Havn 63.92 345 *i* P **P** **13 41 27.4 -0.7**
DAG IAmb IAmb 13 41 28.7
comp=Z,25nm,0.9s
PGBU Glenifferbraes 63.93 321 *e*P **P** **13 41 28.9 +0.3**
PGBU IAmb IAmb 13 41 30.2
comp=Z,80nm,0.8s
FOEL Foel Wylfa 63.93 318 *e*P **P** **13 41 28.9 +0.3**
FOEL IAmb IAmb 13 41 29.8
comp=Z,30nm,0.8s
NEWG New Galloway 63.96 320 *e*P **P** **13 41 29.0 +0.2**
NEWG IAmb IAmb 13 41 30.5
comp=Z,22nm,0.9s
MCH1 Michaelchurch 64.04 317 *e*P **P** **13 41 28.4 -0.9**
MCH1 IAmb IAmb 13 41 29.9
comp=Z,27nm,0.7s
KNRA Kununurra 64.12 128 IAmb IAmb 13 41 36.1
comp=Z,20nm,0.8s
KPL Plockton 64.18 323 *e*P **P** **13 41 30.0 -0.1**
KPL IAmb IAmb 13 41 31.4
comp=Z,26nm,0.8s
LAWE Loch Awe, Argy 64.32 322 *e*P **P** **13 41 31.3 +0.3**
LAWE IAmb IAmb 13 41 32.6
comp=Z,31nm,0.9s
DBG Daneborg 65.06 343 *i* P **P** **13 41 35.5 -0.1**
DBG IAmb IAmb 13 41 37.0
comp=Z,17nm,0.9s
ILTH Belurgan, Co L 65.43 320 P **P** **13 41 38.0 -0.3**
IDGL Inch Island, C 65.79 321 P **P** **13 41 41.1 +0.5**
IDGL Inch Island, C 65.79 321 *e*P **P** **13 41 40.9 +0.2**
IWEX Carrickbyrne, 66.17 318 P **P** **13 41 43.4 +0.3**
IWEX Carrickbyrne, 66.17 318 *e*P **P** **13 41 43.1 0.0**
SCO Scoresbysund 66.92 339 *i* P **P** **13 41 48.5 +0.9**
MORW Morawa 66.93 147 IAmb IAmb 13 41 52.9
comp=Z,32nm,0.9s
MORW Morawa 66.93 147 P **P** **13 41 50.0 +1.8**
TAM Tamanrasset 67.19 284 P **P** **13 41 49.7 -0.7**
TAM Tamanrasset 67.19 284 P **P** **13 41 49.7 -0.7**
TAM pmax pmax
comp=Z,88nm,0.3s
IGLA Glengowla, Co 67.34 320 P **P** **13 41 49.8 -0.7**
ESBB Sonseca Array 68.47 304 IAmb IAmb 13 42 03.0
comp=Z,27nm,1.1s
ESDC Sonseca Array 68.47 304 **P** **13 41 57.7 -0.2**
comp=Z,13nm,1.0s,baz=56,slow=6.9,SNR=48
comp=Z,13nm,1.0s
ESDC Sonseca Array 68.47 304 **P** **13 41 57.8 -0.2**
ESDC IAmb IAmb 13 42 02.9
comp=Z,23nm,1.1s
PAB San Pablo 68.79 304 P **P** **13 42 00.1 0.0**
PAB IAmb IAmb 13 42 05.1
comp=Z,32nm,1.1s
PAB San Pablo 68.79 304 P **P** **13 42 00.1 0.0**
PAB pmax pmax
comp=Z,32nm,1.1s
SHEM Shemya Is, Ala 68.95 41 LR LR 14 13 51.3
comp=Z,69nm,19.7s,baz=310,slow=37
BORG Borgarnes 68.97 333 LR LR 14 11 03.8
comp=Z,97nm,19.1s,baz=117,slow=35
NEEM North Greenlan 69.71 350 *i* P **P** **13 42 05.5 +0.1**
NEEM IAmb IAmb 13 42 10.2
comp=Z,47nm,0.8s
KLBR Kellerberrin 69.85 147 P **P** **13 42 08.7 +2.3**
MVO Moncorvo 70.11 307 *e*P **P** **13 42 08.0 -0.2**
MVO *i* IAmb IAmb 13 42 14.3
comp=Z,42nm,1.3s
SUMG Summit 70.47 344 **P** **13 42 10.4 +0.2**
SUMG IAmb IAmb 13 42 18.4
comp=Z,35nm,1.0s
SUMG Summit 70.47 344 P **P** **13 42 10.4 +0.2**
SUMG pmax pmax
comp=Z,35nm,1.0s
SUMG Summit 70.47 344 *i* P **P** **13 42 10.8 +0.5**
SUMG IAmb IAmb 13 42 11.5
comp=Z,25nm,0.8s
POLO Lamas de Olo 70.57 307 *i* IAmb IAmb 13 43 02.3
comp=Z,27nm,2.1s
PGAV Gavieira, Arco 70.67 308 *e*P **P** **13 42 11.6 0.0**
PGAV *i* IAmb IAmb 13 42 17.4
comp=Z,69nm,1.5s
NWAO Narrogin (SRO) 70.72 148 P **P** **13 42 13.5 +1.9**
NWAO Narrogin (SRO) 70.72 148 P **P** **13 42 13.6 +1.9**
MTE Manteigas 70.76 306 *e*P **P** **13 42 11.8 -0.4**
MTE *i* IAmb IAmb 13 42 22.9
comp=Z,56nm,1.5s
WB0 Warramunga Arr 70.82 127 IAmb IAmb 13 42 12.7
comp=Z,16nm,0.6s
MATP Matopo 70.85 232 LR LR 14 13 08.5
comp=Z,95nm,18.1s,baz=26,slow=36
PVIS Viseu 70.89 306 *e*P **P** **13 42 13.4 +0.5**
WRA Warramunga Arr 70.90 127 P **P** **13 42 12.3 -0.8**
comp=Z,11nm,0.6s,baz=323,slow=6.1,SNR=192
WRA PKPPKP **P'P'df** **14 10 09.9 +2.5**
comp=Z,0.4nm,0.7s,baz=121,slow=3.2,SNR=6.0
comp=Z,11nm,0.6s
WRA Warramunga Arr 70.90 127 **P** **13 42 11.4 -1.7**
WRAB Tennant Creek 70.90 127 P **P** **13 42 12.2 -0.9**
WRAB IAmb IAmb 13 42 19.0
comp=Z,20nm,0.9s
WRAB Tennant Creek 70.90 127 P **P** **13 42 13.3 +0.2**
WRAB Tennant Creek 70.90 127 *ce*P **P** **13 42 12.7 -0.4**
WRAB pmax pmax
comp=Z,32nm,1.3s
PCBR Castelo Branco 70.92 305 *e*P **P** **13 42 13.5 +0.4**
PCBR *i* IAmb IAmb 13 43 01.1
comp=Z,32nm,1.7s
PCBR *e*PP **PP** **13 44 48.8 -1.2**
WR8 Warramunga Arr 71.02 127 IAmb IAmb 13 42 19.6
comp=Z,34nm,1.4s
C16K Lisburne Hills 71.20 21 P **P** **13 42 14.5 +0.3**
baz=302
GAMB Gambell 71.23 27 P **P** **13 42 14.3 -0.1**
baz=298
PBAR Barrancos 71.25 304 *e*P **P** **13 42 15.3 +0.2**
PBAR *i* IAmb IAmb 13 42 21.8
comp=Z,65nm,1.9s
PESTR Estremoz 71.38 305 *e*P **P** **13 42 15.5 -0.4**
PESTR *i* IAmb IAmb 13 42 17.8
comp=Z,24nm,1.9s
A19K Wainwright 71.39 19 P **P** **13 42 15.3 0.0**
baz=305
KSANE Kasane 71.49 236 IAmb IAmb 13 42 18.2
comp=Z,13nm,0.7s
PSARD Sardoal 71.50 305 *e*P **P** **13 42 17.0 +0.3**
PSARD *i* IAmb IAmb 13 42 22.7
comp=Z,58nm,1.3s
EDA Edea 71.60 264 **P** **13 42 16.8 -0.7**
EDA IAmb IAmb 13 42 18.3
comp=Z,15nm,0.8s

MD01	**Midelt array s**	71.61	298			P		13 42 17.0	-0.6
B18K	**Kokolik River**	71.67	19	P		P		13 42 17.1	0.0
	baz=305								
TNA	**Tin City**	71.76	24	P		P		13 42 17.5	-0.1
	baz=301								
A21K	**Barrow**	71.89	17	P		P		13 42 18.3	0.0
	baz=309								
PBEJ	**Beja**	71.91	304	*e*P		P		13 42 19.7	+0.7
PBEJ				*i* IAmb		IAmb		13 42 25.1	
	comp=Z,22nm,1.2s								
PVAQ	**Vaqueiros**	72.05	303	*e*P		P		13 42 20.1	+0.2
PVAQ				*i* IAmb		IAmb		13 42 24.1	
	comp=Z,39nm,1.4s								
MOE	**Montemor**	72.06	304	*e*P		P		13 42 20.4	+0.4
MOE				*i* IAmb		IAmb		13 42 26.9	
	comp=Z,46nm,1.8s								
RDOG	**Red Dog Mine**	72.09	21	P		P		13 42 20.0	+0.4
	baz=304								
PCVE	**Castro Verde**	72.19	304	*e*P		P		13 42 20.6	-0.1
PCVE				*i* IAmb		IAmb		13 42 20.8	
	comp=Z,20nm,1.4s								
D17K	**Noatak River**	72.23	21	P		P		13 42 20.7	+0.2
	baz=304,SNR=6.5								
MESJ	**Messejana**	72.24	304	*e*P		P		13 42 21.2	+0.1
MESJ				IAmb		IAmb		13 42 26.3	
	comp=Z,11nm,0.9s								
MESJ	**Messejana**	72.24	304	*e*P		P		13 42 21.4	+0.3
MESJ				*i* IAmb		IAmb		13 42 27.1	
	comp=Z,15nm,1.3s								
MESJ	**Messejana**	72.24	304	*e*P		P		13 42 21.2	+0.1
C18K	**Utukok River**	72.26	20	P		P		13 42 20.9	+0.1
	baz=306								
PBDV	**Barranco-do-Ve**	72.27	303	*e*P		P		13 42 21.7	+0.4
PBDV				*i* IAmb		IAmb		13 42 27.6	
	comp=Z,62nm,1.4s								
F14K	**Arctic Creek**	72.37	24	P		P		13 42 22.0	+0.7
	baz=302								
C19K	**Lookout Ridge**	72.46	19	P		P		13 42 22.5	+0.6
	baz=307								
A22K	**Sinclair Lake**	72.50	17	P		P		13 42 22.1	+0.1
	baz=310								
B20K	**Meade River**	72.58	18	P		P		13 42 23.0	+0.5
	baz=309								
PTEO	**Sao Teotonio**	72.72	304	*e*P		P		13 42 24.4	+0.5
PTEO				*i* IAmb		IAmb		13 42 30.9	
	comp=Z,73nm,1.8s								
MORF	**Marmelete**	72.77	303	*e*P		P		13 42 25.4	+1.2
MORF				*i* IAmb		IAmb		13 43 04.3	
	comp=Z,41nm,1.6s								
TULEG	**Thule**	72.77	353	*i* P		P		13 42 22.6	-0.9
TULEG				IAmb		IAmb		13 42 23.7	
	comp=Z,44nm,1.0s								
F15K	**North Star Dit**	72.83	23	P		P		13 42 24.7	+0.6
	baz=304								
PFVI	**Vila Bisbo**	72.97	303	*e*P		P		13 42 25.9	+0.6
PFVI				*i* IAmb		IAmb		13 42 33.3	
	comp=Z,66nm,1.4s								
E17K	**Hotham Inlet**	72.99	21	P		P		13 42 25.5	+0.6
	baz=306,SNR=5.6								
MREMI	**Moremi**	73.02	231		IAmb	IAmb		13 42 30.5	
	comp=Z,68nm,1.6s								
ASAR	**Alice Springs**	73.12	130	P		P		13 42 25.5	-0.9
	comp=Z,9.6nm,0.7s,baz=315,slow=5.7,SNR=148								
ASAR				PKiKP		PKiKP		13 48 24.2	-1.2
	comp=Z,0.5nm,0.6s,baz=306,slow=1.9,SNR=7.8								
ASAR				LR		LR		14 17 24.6	
	comp=Z,37nm,21.0s,baz=308,slow=38 comp=Z,9.6nm,0.7s								
ASAR	**Alice Springs**	73.12	130	P		P		13 42 25.4	-1.0
AUALC	**St Philip's Co**	73.12	130	P		P		13 42 25.5	-0.9
E18K	**Tukpahlearik C**	73.17	21	IAmb		IAmb		13 42 27.9	
	comp=Z,29nm,1.2s								
E18K	**Tukpahlearik C**	73.17	21	P		P		13 42 26.6	+0.6
	baz=306,SNR=8.2								
ANM	**Nome**	73.21	24	P		P		13 42 27.3	+1.0
	baz=303								
D19K	**Kuna River**	73.26	19	P		P		13 42 26.8	+0.2
	baz=308								
B22K	**Teshekpuk Lake**	73.33	17	P		P		13 42 27.2	+0.3
	baz=312								
G15K	**Niukluk**	73.44	24	P		P		13 42 27.8	+0.1
	baz=304								
PHDHD	**Phuduhudu**	73.48	235		IAmb	IAmb		13 42 29.9	
	comp=Z,62nm,1.8s								
B21K	**Ikpikpuk River**	73.50	18	P		P		13 42 28.5	+0.6
	baz=311								
F17K	**Baldwin Pennin**	73.55	22	P		P		13 42 28.6	+0.4
	baz=306								
D20K	**Etivluk River**	73.55	19	P		P		13 42 28.4	+0.1
	baz=310								
C21K	**Kniveblade Rid**	73.77	18	P		P		13 42 29.1	-0.5
	baz=311								
G16K	**Koyuk River**	73.80	23	P		P		13 42 29.2	-0.6
	baz=306								
E20K	**Nigu River**	73.97	19	P		P		13 42 31.0	+0.2
	baz=310								
F18K	**Selawik**	73.97	21	P		P		13 42 31.2	+0.5
	baz=308,SNR=5.3								
KHWEE	**KHWEE**	73.98	233		IAmb	IAmb		13 42 32.1	
	comp=Z,28nm,0.8s								
E19K	**Redstone River**	74.17	20	IAmb		IAmb		13 42 33.5	
	comp=Z,36nm,1.4s								
E19K	**Redstone River**	74.17	20	P		P		13 42 32.4	+0.4
	baz=309								
H16K	**Elim**	74.28	24	P		P		13 42 32.9	+0.3
	baz=306,SNR=5.4								
G17K	**Kiwalik Mounta**	74.31	22	P		P		13 42 33.2	+0.4
	baz=307								
C23K	**Itkillik River**	74.38	16	P		P		13 42 33.3	+0.2
	baz=315								
F19K	**Shaleruckik Mo**	74.41	21	P		P		13 42 33.3	0.0
	baz=309								
E21K	**Killik River**	74.46	18	P		P		13 42 33.5	-0.2
	baz=312								
NUUG	**Nuugaatsiaq**	74.51	346	*i* P		P		13 42 33.7	-0.1
NUUG				IAmb		IAmb		13 42 34.4	
	comp=Z,11nm,0.7s								
D22K	**Ayikyak River**	74.52	18	P		P		13 42 34.4	+0.5
	baz=313								
TORD	**Torodi Ar. Bea**	74.59	277	P		P		13 42 35.1	-0.2
	comp=Z,11nm,0.8s,baz=55,slow=7.2,SNR=4.0 comp=Z,11nm,0.8s								
TORD	**Torodi Ar. Bea**	74.59	277	P		P		13 42 34.6	-0.6
G18K	**Tagagawik**	74.72	22	P		P		13 42 34.9	-0.3
	baz=308								
F20K	**Avaraart Lake**	74.89	20	P		P		13 42 36.0	0.0
	baz=311								
H17K	**Granite Mounta**	74.90	23	P		P		13 42 37.2	+1.0
	baz=308								
J14K	**Nanvaranak Lak**	74.90	26	IAmb		IAmb		13 42 38.3	
	comp=Z,51nm,1.2s								
J14K	**Nanvaranak Lak**	74.90	26	P		P		13 42 36.6	+0.4
	baz=305								
C24K	**Franklin Bluff**	74.93	16	P		P		13 42 36.5	+0.3
	baz=316								
K13K	**Kusilvak Mount**	74.95	27	P		P		13 42 37.2	+0.7
	baz=304								
D23K	**Nanushuk River**	74.98	17	P		P		13 42 37.4	+0.8
	baz=315								
QIS	**Mount Isa**	75.03	124	P		P		13 42 37.5	-0.1
G19K	**Purcell Mounta**	75.06	21	P		P		13 42 37.5	+0.4
	baz=310								
M11K	**Mekoryuk**	75.19	28	P		P		13 42 38.6	+0.7
	baz=304								
E22K	**Anaktuvuk Pass**	75.26	18	P		P		13 42 38.6	+0.3
	baz=314,SNR=6.4								
I17K	**Unalakleet**	75.27	24	IAmb		IAmb		13 42 40.9	
	comp=Z,33nm,1.1s								
I17K	**Unalakleet**	75.27	24	P		P		13 42 39.1	+0.8
	baz=307								
H18K	**Honhosa River**	75.28	22	P		P		13 42 38.9	+0.5
	baz=309								
D24K	**Happy Valley**	75.31	16	P		P		13 42 38.8	+0.3
	baz=316								
F21K	**Alatna River**	75.42	19	P		P		13 42 39.6	+0.4
	baz=313								
KDWAN	**Kaudwane**	75.47	232		IAmb	IAmb		13 42 40.9	
	comp=Z,16nm,0.7s								
TOLK	**Toolik Lake Re**	75.49	17		IAmb	IAmb		13 42 41.1	
	comp=Z,24nm,1.1s								
TOLK	**Toolik Lake Re**	75.49	17	P		P		13 42 40.0	+0.4
	baz=316,SNR=12								
F22K	**John River**	75.60	19	P		P		13 42 40.9	+0.7
	baz=314								
H19K	**Roundabout Mou**	75.66	21		IAmb	IAmb		13 42 42.6	
	comp=Z,37nm,1.1s								
H19K	**Roundabout Mou**	75.66	21	P		P		13 42 41.1	+0.6
	baz=310								
C26K	**Camden Bay**	75.66	15	P		P		13 42 41.4	+0.9
	baz=320								
J16K	**Anvik River**	75.67	24	P		P		13 42 40.9	+0.3
	baz=308								
D25K	**Kavik River**	75.78	16	P		P		13 42 41.6	+0.4
	baz=318,SNR=15								
G21K	**Allakaket**	75.90	20	P		P		13 42 41.5	-0.4
	baz=313								
E23K	**Chandalar**	75.90	17	P		P		13 42 42.3	+0.3
	baz=316								
LBTB	**Lobatse**	75.91	230		LR	LR		14 12 47.8	
	comp=Z,44nm,19.9s,baz=20,slow=33								
LBTB	**Lobatse**	75.91	230			P		13 42 42.6	0.0
LBTB					IAmb	IAmb		13 42 43.6	
	comp=Z,26nm,0.8s								
LBTB	**Lobatse**	75.91	230	P		P		13 42 42.6	0.0
K15K	**Wolf Creek Mou**	75.93	25	P		P		13 42 42.4	+0.3
	baz=307								
GCSA	**Galena City Sc**	76.03	22	P		P		13 42 43.3	+0.7
	baz=310								
L14K	**Kuka Creek**	76.06	26	P		P		13 42 43.7	+0.9
	baz=306								
J17K	**VABM Dome**	76.14	24	IAmb		IAmb		13 42 45.7	
	comp=Z,50nm,1.3s								
J17K	**VABM Dome**	76.14	24	P		P		13 42 44.0	+0.7
	baz=309,SNR=7.7								
C27K	**Jago River**	76.16	15	P		P		13 42 43.9	+0.6
	baz=321								
H20K	**Anotleneega Mo**	76.17	21	P		P		13 42 43.9	+0.4
	baz=312								
E24K	**Your Creek**	76.18	17	P		P		13 42 43.9	+0.3
	baz=317								
IMAR	**Indian Mountai**	76.19	20	P		P		13 42 43.4	-0.2
RES	**Resolute Bay**	76.24	359			P		13 42 43.3	-0.4
RES	**Resolute Bay**	76.24	359	P		P		13 42 43.3	-0.4
RES				pmax		pmax			
	comp=Z,8.0nm,1.0s								
L15K	**Ungalak Mounta**	76.32	26	P		P		13 42 45.1	+0.7
	baz=307								
COLD	**Coldfoot**	76.34	18	P		P		13 42 45.1	+0.7
	baz=315,SNR=8.9								
M13K	**Dall Lake**	76.34	27	P		P		13 42 45.3	+0.9
	baz=306								
GDH	**Godhavn**	76.35	345	*i* P		P		13 42 42.2	-2.1
GDH				IAmb		IAmb		13 42 45.4	
	comp=Z,102nm,1.3s								
M14K	**Bethel**	76.69	27	P		P		13 42 47.5	+1.0
	baz=307								
H21K	**Melozitna Rive**	76.70	20	P		P		13 42 47.5	+1.0
	baz=314,SNR=16								
F24K	**Squaw Lake**	76.75	17	P		P		13 42 47.3	+0.6
	baz=317								
G23K	**Bananza Creek**	76.76	19	P		P		13 42 47.2	+0.3
	baz=316								
I20K	**Naaghedeneel**	76.77	21	P		P		13 42 47.0	+0.2
	baz=312								
KGCAE	**Kacgae**	76.84	234		IAmb	IAmb		13 42 53.4	
	comp=Z,54nm,1.4s								
K17K	**Iditarod**	76.85	24	P		P		13 42 48.2	+0.8
	baz=310								
E25K	**Arctic Village**	76.88	16	P		P		13 42 48.0	+0.5
	baz=319,SNR=6.5								
J18K	**Innoko River**	76.92	23	IAmb		IAmb		13 42 50.0	
	comp=Z,19nm,1.0s								
J18K	**Innoko River**	76.92	23	P		P		13 42 48.8	+1.0
	baz=311,SNR=5.6								
J19K	**Poorman**	76.94	22	IAmb		IAmb		13 42 50.2	
	comp=Z,17nm,0.9s								
J19K	**Poorman**	76.94	22	P		P		13 42 48.8	+1.0
	baz=311,SNR=9.2								
H22K	**Ishtalitna Cre**	76.96	20	IAmb		IAmb		13 42 50.0	
	comp=Z,20nm,1.1s								
H22K	**Ishtalitna Cre**	76.96	20	P		P		13 42 48.7	+0.7
	baz=315,SNR=8.9								
MTSU	**Mount Surprise**	77.04	119	P		P		13 42 49.8	+0.7
L16K	**Owhat River**	77.06	25	P		P		13 42 49.7	+1.2
	baz=309								
D27M	**Malcolm River**	77.06	14	P		P		13 42 49.3	+0.8
	baz=323								
L17K	**Donlin**	77.22	25	P		P		13 42 51.1	+1.6
	baz=310,SNR=8.2								
M15K	**Kasigluk River**	77.22	26	P		P		13 42 50.4	+1.0
	baz=308								
POIN	**Pond Inlet**	77.26	354			P		13 42 49.4	-0.1
POIN					IAmb	IAmb		13 42 50.5	
	comp=Z,20nm,1.2s								
F25K	**Christian Rive**	77.26	17	P		P		13 42 50.5	+0.8
	baz=319								
I21K	**Tanana**	77.28	20	IAmb		IAmb		13 45 42.0	
	comp=Z,24nm,0.7s								
I21K	**Tanana**	77.28	20	P		P		13 42 50.6	+0.9
	baz=314,SNR=5.6								
J20K	**Nowinta River**	77.29	22	IAmb		IAmb		13 42 52.0	
	comp=Z,22nm,1.0s								
J20K	**Nowinta River**	77.29	22	P		P		13 42 50.8	+1.0
	baz=313								
N14K	**Kuskokwak Cree**	77.30	27	P		P		13 42 51.0	+1.1
	baz=307								
A36M	**Sachs Harbour**	77.33	8	IAmb		IAmb		13 42 51.0	
	comp=Z,38nm,0.9s								
A36M	**Sachs Harbour**	77.33	8	P		P		13 42 49.8	0.0
	baz=336,SNR=35								
SFJD	**Kangerlussuaq**	77.35	343		LR	LR		14 18 08.6	
	comp=Z,144nm,21.6s,baz=75,slow=37								
SFJD	**Kangerlussuaq**	77.35	343	*i* P		P		13 42 49.8	-0.3
SFJD				IAmb		IAmb		13 42 50.3	
	comp=Z,14nm,0.6s								
D28M	**Stokes Point**	77.45	13	P		P		13 42 51.6	+1.0
	baz=325,SNR=14								
G24K	**Hadweenzic Riv**	77.46	18	P		P		13 42 51.4	+0.6
	baz=318								
H23K	**Yukon River**	77.53	19	P		P		13 42 52.3	+1.1
	baz=316								
F26K	**Sheenjek River**	77.56	16	P		P		13 42 51.6	+0.4
	baz=320								
BMAR	**Burnt Mountain**	77.65	16			P		13 42 52.5	+0.7
M16K	**Timber Creek**	77.68	26	P		P		13 42 53.1	+1.0
	baz=309								
L18K	**Granite Mounta**	77.74	24	P		P		13 42 53.5	+1.2
	baz=311								
MLY	**Manley**	77.76	20	IAmb		IAmb		13 42 54.2	
	comp=Z,17nm,0.9s								
MLY	**Manley**	77.76	20	P		P		13 42 52.9	+0.4
	baz=315,SNR=9.5								
E27K	**Coleen River**	77.77	15	P		P		13 42 52.9	+0.5
	baz=323								
G25K	**Bearman Lake**	77.78	17	P		P		13 42 53.3	+0.9
	baz=319								
N15K	**Kwethluk River**	77.78	27	P		P		13 42 53.2	+0.6
	baz=308								
K20K	**Telida**	77.88	22	P		P		13 42 54.1	+0.9
	baz=313								
E28M	**Babbage River**	77.88	14	P		P		13 42 53.9	+0.8
	baz=324,SNR=9.7								
O14K	**Tigyukauivet M**	77.88	28	P		P		13 42 54.1	+1.0
	baz=308								
TSUM	**Tsumeb**	77.98	240		LR	LR		14 17 43.7	
	comp=Z,112nm,19.6s,baz=337,slow=36								
TSUM	**Tsumeb**	77.98	240			P		13 42 54.4	0.0
H24K	**Noodor Dome**	77.99	19	P		P		13 42 54.4	+0.6
	baz=318								
M17K	**Holitna River**	78.01	25	IAmb		IAmb		13 42 56.8	
	comp=Z,31nm,0.8s								
M17K	**Holitna River**	78.01	25	P		P		13 42 54.7	+0.9
	baz=310								
NIKH	**Nikolski High**	78.04	36	P		P		13 42 54.8	+0.6
	baz=303								
I23K	**Minto, Yukon-K**	78.08	19	IAmb		IAmb		13 43 05.4	
	comp=Z,59nm,1.6s								
I23K	**Minto, Yukon-K**	78.08	19	P		P		13 42 54.9	+0.8
	baz=316								
CHUM	**Lake Minchumin**	78.08	21	P		P		13 42 55.2	+1.0
	baz=314,SNR=5.3								
N16K	**Nishlik Lake**	78.10	26	P		P		13 42 55.4	+1.0
	baz=310								
FYU	**Fort Yukon**	78.15	17	IAmb		IAmb		13 42 57.0	
	comp=Z,54nm,1.4s								
G26K	**Porcupine Rive**	78.22	17	P		P		13 42 55.8	+0.9
	baz=321								
H25L	**Birch Creek**	78.23	18	P		P		13 42 55.8	+0.8
	baz=319								
BPAW	**Bear Paw Mtn.**	78.35	21	P		P		13 42 56.2	+0.4
	baz=315								
KOOLE	**Kule**	78.37	235	P		P		13 42 56.6	0.0
KOOLE					IAmb	IAmb		13 43 01.3	
	comp=Z,26nm,0.9s								
E29M	**Blow River**	78.41	14	P		P		13 42 56.6	+0.7
	baz=326,SNR=16								
L19K	**White Mountain**	78.41	23	IAmb		IAmb		13 42 58.8	
	comp=Z,46nm,1.1s								
L19K	**White Mountain**	78.41	23	P		P		13 42 57.6	+1.5
	baz=312,SNR=10.0								
O15K	**Ungalikthiuk R**	78.51	27	P		P		13 42 57.8	+1.1
	baz=309								
M18K	**Stony River**	78.53	24	P		P		13 42 57.6	+0.9
	baz=312								
L20K	**Farewell, AK**	78.54	23	IAmb		IAmb		13 42 59.2	
	comp=Z,31nm,1.0s								
L20K	**Farewell, AK**	78.54	23	P		P		13 42 58.0	+1.2
	baz=313,SNR=8.2								
BOSA	**Boshof**	78.54	228	P		P		13 42 56.9	-0.5
	comp=Z,17nm,0.8s,baz=51,slow=5.0,SNR=19								
BOSA				LR		LR		14 17 19.6	
	comp=Z,114nm,18.2s,baz=25,slow=36 comp=Z,17nm,0.8s								
BOSA	**Boshof**	78.54	228	IAmb		IAmb		13 42 57.9	
	comp=Z,18nm,0.8s								
NEA2	**Nenana**	78.57	20	IAmb		IAmb		13 42 58.2	
	comp=Z,40nm,1.0s								
NEA2	**Nenana**	78.57	20	P		P		13 42 57.2	+0.3
	baz=317,SNR=16								
F28M	**Old Crow**	78.62	15	P		P		13 42 57.8	+0.6
	baz=324,SNR=12								
POKR	**Poker Plat Res**	78.66	19	IAmb		IAmb		13 42 59.1	
	comp=Z,30nm,0.9s								
POKR	**Poker Plat Res**	78.66	19	P		P		13 42 58.2	+0.8
	baz=318,SNR=6.6								
N17K	**Nushagak Hills**	78.67	25	P		P		13 42 59.0	+1.4
	baz=311								
COLA	**College**	78.72	19	P		P		13 42 57.5	-0.2
COLA				IAmb		IAmb		13 42 59.0	
	comp=Z,37nm,1.1s								
COLA	**College**	78.72	19	P		P		13 42 58.3	+0.6
COLA	**College**	78.72	19	P		P		13 42 57.5	-0.2
COLA				pmax		pmax			
	comp=Z,37nm,1.1s								
COLA	**College**	78.72	19	P		P		13 42 58.1	+0.4
	baz=318								
KTH	**Kantishna Hill**	78.76	21	IAmb		IAmb		13 42 59.5	
	comp=Z,22nm,1.1s								
M19K	**Big River Lodg**	78.76	23	P		P		13 42 59.4	+1.4
	baz=313								
PPLA	**Purkeypile**	78.81	22	P		P		13 42 59.0	+0.5
	baz=314								
G27K	**Doyon Strip**	78.85	16	P		P		13 42 59.1	+0.6
	baz=323								
PRP	**Porcupine Dome**	78.88	18	P		P		13 42 59.3	+0.6
	baz=320,SNR=9.6								
CCB	**Clear Creek Bu**	78.90	19	IAmb		IAmb		13 44 12.2	
	comp=Z,53nm,2.0s								
O16K	**Kokwok River B**	78.93	26	P		P		13 43 00.1	+1.2
	baz=310								
TRF	**Thorofare Moun**	79.03	21	P		P		13 43 00.3	+0.7
	baz=316								
N18K	**Kilae Creek**	79.05	25	P		P		13 43 00.6	+1.0
	baz=312								
IL31		79.07	19	IAmb		IAmb		13 43 00.3	
	comp=Z,20nm,1.1s								
ILAR	**Eielson Array**	79.07	19	P		P		13 42 59.0	-0.6
	comp=Z,13nm,1.0s,baz=304,slow=4.7,SNR=65								
ILAR				PP		PP		13 45 54.7	-3.5
	comp=Z,1.9nm,0.9s,baz=308,slow=7.1,SNR=5.6 comp=Z,13nm,1.0s								
ILAR	**Eielson Array**	79.07	19	P		P		13 42 58.8	-0.9
O17K	**Koliganek Bris**	79.20	26	P		P		13 43 01.6	+1.2
	baz=311								
M20K	**Styx River**	79.21	23	P		P		13 43 01.6	+1.0
	baz=314								
MCK	**McKinley**	79.24	20	IAmb		IAmb		13 43 10.3	
	comp=Z,26nm,1.2s								
MCK	**McKinley**	79.24	20	P		P		13 43 00.7	+0.1
	baz=317								
HDA	**Harding Lake**	79.32	19	P		P		13 43 01.2	+0.1
	baz=319								
P16K	**Nushagak River**	79.33	27	P		P		13 43 01.5	+0.4
	baz=310								
INK	**Inuvik**	79.34	12	LR		LR		14 21 21.7	
	comp=Z,37nm,19.3s,baz=330,slow=38								
INK	**Inuvik**	79.34	12	P		P		13 43 01.3	+0.3
	baz=330,SNR=17								
H27K	**Steamboat Moun**	79.35	16	P		P		13 43 01.9	+0.7
	baz=323								
N19K	**Bonanza Creek**	79.47	24	IAmb		IAmb		13 43 06.3	
	comp=Z,28nm,0.8s								
N19K	**Bonanza Creek**	79.47	24	P		P		13 43 02.6	+0.6
	baz=313								
F30M	**Barrier River**	79.50	14	IAmb		IAmb		13 43 03.6	
	comp=Z,35nm,1.1s								
F30M	**Barrier River**	79.50	14	P		P		13 43 02.2	+0.2
	baz=328,SNR=12								
G29M	**Pine Creek**	79.61	15	P		P		13 43 03.2	+0.6
	baz=326								
J25K	**Salcha River,**	79.61	19	P		P		13 43 02.4	-0.3
	baz=320,SNR=5.9								
CTA	**Charters Tower**	79.67	120	P		P		13 43 03.7	+0.1
CTAO	**Charters Tower**	79.67	120			P		13 43 03.1	-0.5
CTAO	**Charters Tower**	79.67	120	P		P		13 43 03.7	+0.1
CTAO	**Charters Tower**	79.67	120	P		P		13 43 03.1	-0.5
CTAO				pmax		pmax			
	comp=Z,19nm,1.0s								
I26K	**Coal Creek Min**	79.67	17	P		P		13 43 03.4	+0.4
	baz=322								
SKT	**Skwentna**	79.68	22	P		P		13 43 03.3	+0.2
	baz=315,SNR=16								
NUUK	**Nuuk**	79.78	341	*i* P		P		13 43 03.6	+0.1
CUT	**Chulitna**	79.79	22	P		P		13 43 04.2	+0.6
	baz=316								
I27K	**Kandik River**	79.83	17	P		P		13 43 04.3	+0.4
	baz=323								
P17K	**Kvichak River**	79.83	26	P		P		13 43 04.7	+0.8
	baz=312								
O18K	**Koktuh Hills**	79.86	25	P		P		13 43 03.6	-0.4
	baz=312								
C36M	**Paulatuk**	79.93	9	IAmb		IAmb		13 43 04.7	
	comp=Z,45nm,0.9s								
C36M	**Paulatuk**	79.93	9	P		P		13 43 03.6	-0

baz=318
SCRK Sand Creek 80.49 18 P 13 43 07.4 -0.2
SCRK IAmb IAmb 13 43 08.9
comp=Z,27nm,1.0s
SCRK Sand Creek 80.49 18 P P 13 43 07.7 +0.1
baz=321,SNR=13
SDPT Sand Point 80.64 31 P P 13 43 07.8 -0.5
baz=309
O20K Slope Mountain 80.64 24 P P 13 43 07.9 -0.5
baz=314
CAPN Captain Cook N 80.67 23 P P 13 43 07.9 -0.4
baz=316
GHO Glory Hole Cre 80.69 22 IAmb IAmb 13 43 10.2
comp=Z,38nm,1.2s
P19K Oil Pt 80.72 25 P P 13 43 08.6 -0.2
baz=314
DOT Dot Lake 80.73 19 IAmb IAmb 13 43 09.6
comp=Z,19nm,0.9s
Q18K Katmai Hardscr 80.75 26 P P 13 43 09.2 +0.2
baz=313
PMR Palmer 80.75 22 IAmb IAmb 13 43 09.5
comp=Z,32nm,1.1s
PMR Palmer 80.75 22 P P 13 43 09.0 +0.2
PMR Palmer 80.75 22 P P 13 43 08.9 +0.1
baz=317,SNR=7.1
BBOO Buckleboo 80.78 136 IAmb IAmb 13 43 14.0
comp=Z,33nm,1.4s
BBOO Buckleboo 80.78 136 P P 13 43 11.2 +1.9
PAX Paxson 80.85 20 P P 13 43 09.4 0.0
baz=320
SML Sawmill 80.85 21 P P 13 43 09.6 +0.2
baz=318,SNR=12
R17L Mt. Peulik Vol 80.90 27 P P 13 43 10.0 +0.3
baz=312
IVI Ivigtut 80.91 338 *i* P P **13 43 07.8 -1.8**
RC01 Rabbit Creek A 80.92 22 IAmb IAmb 13 43 11.1
comp=Z,55nm,1.1s
RC01 Rabbit Creek A 80.92 22 P P 13 43 09.8 +0.1
baz=317
K27K Chicken 80.97 18 P P 13 43 10.2 +0.2
baz=323
M23K Glacier View 81.05 21 P P 13 43 10.8 +0.3
baz=318
KNK Knik Glacier 81.10 22 IAmb IAmb 13 43 13.0
comp=Z,27nm,1.0s
KNK Knik Glacier 81.10 22 P P 13 43 11.2 +0.4
baz=318,SNR=6.1
SCM Sheep Creek Mo 81.15 21 IAmb IAmb 13 43 14.0
comp=Z,34nm,0.8s
SCM Sheep Creek Mo 81.15 21 P P 13 43 10.9 -0.1
baz=319
HOM Homer 81.29 24 P P 13 43 11.5 -0.2
baz=315
M24K Tolsona, Glenn 81.30 20 P P 13 43 11.5 -0.3
baz=320
H31M Peel River 81.34 14 P P 13 43 11.6 -0.3
H31M IAmb IAmb 13 43 12.9
comp=Z,56nm,1.4s
H31M Peel River 81.34 14 P P 13 43 11.7 -0.3
baz=329
O22K Cooper Landing 81.37 23 P P 13 43 12.2 +0.1
baz=317
MENT Mentasta 81.38 19 IAmb IAmb 13 44 09.2
comp=Z,28nm,1.5s
MENT Mentasta 81.38 19 P P 13 43 13.8 +1.6
HARP HAARP 81.38 20 P P 13 43 12.7 +0.5
baz=320,SNR=11
I30M Mount Dempster 81.39 15 P P 13 43 12.3 0.0
baz=328
L26K Log Cabin Wild 81.42 19 P P 13 43 12.7 +0.4
baz=322,SNR=7.4
BRSE Bradley Lake S 81.55 24 P P 13 43 13.1 -0.1
baz=316
PWL Port Wells 81.55 22 P P 13 43 13.1 0.0
baz=318
DAWY Dawson 81.64 17 IAmb IAmb 13 43 14.9
comp=Z,22nm,1.2s
DAWY Dawson 81.64 17 P P 13 43 13.7 +0.2
baz=325,SNR=9.9
R18K Karluk 81.70 27 P P 13 43 13.9 0.0
R18K Karluk 81.70 27 P P 13 43 13.5 -0.4
baz=313
SEW Seward 81.74 23 P P 13 43 14.2 +0.1
baz=317
Q20K Shuyak Island 81.77 25 P P 13 43 14.8 +0.6
baz=315
L27K Beaver Creek, 81.81 18 IAmb IAmb 13 43 16.5
comp=Z,19nm,1.1s
L27K Beaver Creek, 81.81 18 P P 13 43 15.2 +0.7
baz=323,SNR=12
BCAR Beaver Creek A 81.82 18 P 13 43 14.5 0.0
KLU Klutina 81.85 21 IAmb IAmb 13 43 16.5
comp=Z,19nm,1.0s
KLU Klutina 81.85 21 P P 13 43 15.4 +0.7
baz=320
WHYH Whyalla 81.86 135 P P 13 43 16.1 +1.1
GLI Glacier Island 81.94 22 P P 13 43 15.6 +0.4
baz=319
J30M Hart River 81.95 15 IAmb IAmb 13 43 16.7
comp=Z,20nm,0.9s
J30M Hart River 81.95 15 P P 13 43 15.6 +0.3
baz=328
M26K Nabesna, AK 82.01 19 P P 13 43 16.2 +0.7
baz=322
QLP Quilpie 82.11 126 P P 13 43 16.4 -0.1
N25K Chitina, Valde 82.16 20 P P 13 43 17.5 +1.1
baz=321,SNR=13
DIV Divide 82.17 21 IAmb IAmb 13 43 18.1
comp=Z,29nm,1.0s
KDAK Kodiak Island 82.28 26 LR LR 14 23 14.7
comp=Z,138nm,19.7s,baz=313,slow=38
KDAK Kodiak Island 82.28 26 P 13 43 17.4 +0.5
KDAK Kodiak Island 82.28 26 P P 13 43 17.4 +0.5
KDAK pmax pmax
comp=Z,70nm,0.8s
KDAK Kodiak Island 82.28 26 P P 13 43 17.8 +0.8
baz=315
K29M Barlow Dome 82.29 16 IAmb IAmb 13 43 18.7
comp=Z,22nm,1.1s
K29M Barlow Dome 82.29 16 P P 13 43 17.6 +0.5
baz=327,SNR=17
M27K Edge Creek, AK 82.36 19 P P 13 43 18.3 +0.8
baz=323
OHAK Old Harbor 82.40 27 P P 13 43 18.0 +0.4
OHAK Old Harbor 82.40 27 P P 13 43 19.1 +1.6
baz=314,SNR=5.8
CHIR Chirikof Islan 82.42 28 P P 13 43 18.6 +0.9
baz=313
SII Sitkinak Islan 82.51 27 P P 13 43 19.2 +0.9
baz=314
P23K Montague Islan 82.51 22 P P 13 43 19.1 +1.0
baz=319
GLB Gilahina Butte 82.53 20 IAmb IAmb 13 43 20.0
comp=Z,14nm,1.0s
BVCY Beaver Creek 82.60 18 P P 13 43 19.2 +0.6
baz=324,SNR=10.0
EYAK Cordova Ski Ar 82.62 21 P P 13 43 19.0 +0.3
baz=320
BMRM Bremner River 82.66 21 IAmb IAmb 13 43 20.7
comp=Z,35nm,1.0s
BMRM Bremner River 82.66 21 P P 13 43 19.8 +0.8
baz=321,SNR=6.4
L29M L29M 82.75 17 IAmb IAmb 13 43 21.2
comp=Z,30nm,1.2s
L29M L29M 82.75 17 P P 13 43 20.2 +0.8
baz=326
MCARA McCarthy VSAT 82.81 20 P P 13 43 20.8 +1.1
baz=322,SNR=16
MAYO Mayo, Yukon 82.89 16 P P 13 43 20.9 +0.9
baz=328
M29M Somme Creek 83.22 17 P P 13 43 22.5 +0.6
baz=326
YUK3 Moose Creek 83.23 19 P P 13 43 22.6 +0.5
baz=324
CRQE Cirque 83.29 20 P P 13 43 22.9 +0.6
baz=322,SNR=6.3
DBIC Dimbokro 83.30 274 P P 13 43 23.4 +0.4
comp=Z,38nm,1.1s,baz=88,slow=6.3,SNR=24
comp=Z,38nm,1.1s
DBIC Dimbokro 83.30 274 P P 13 43 22.9 -0.2
DBIC Dimbokro 83.30 274 P P 13 43 22.9 -0.2
DBIC pmax pmax
comp=Z,59nm,1.2s
KAIM Kayak Island 83.53 21 P P 13 43 24.1 +0.6
baz=321
M30M Minto, Yukon 83.53 17 P P 13 43 23.8 +0.4
baz=327
CTG Chitna Glacier 83.64 19 P P 13 43 24.7 +0.5
baz=324,SNR=5.8
CTGM Chitina Glacie 83.64 19 IAmb IAmb 13 43 26.3
comp=Z,25nm,1.1s
STKA Stephens Creek 83.65 132 P P 13 43 22.5 -1.8
comp=Z,2.6nm,0.5s,baz=311,slow=5.1,SNR=8.5
STKA LR LR 14 26 49.8
comp=Z,20nm,18.7s,baz=325,slow=40
comp=Z,2.6nm,0.5s
STKA Stephens Creek 83.65 132 P P 13 43 25.4 +1.0
GRNC Granite Creek 83.70 20 IAmb IAmb 13 43 29.1
comp=Z,25nm,1.0s
BGLC Bering Glacier 83.73 21 P P 13 43 24.7 +0.3
baz=322
AUMAR Marden Senior 83.76 136 P P 13 43 26.9 +2.0
YUK8 Steele Glacier 83.82 19 P P 13 43 25.5 +0.3
baz=325
YUK4 Talbot Arm 84.08 18 P P 13 43 26.6 +0.1
baz=326
MESA MESA 84.09 20 P P 13 43 27.4 +0.8
baz=323
O28M Mount Upton 84.12 19 P P 13 43 27.5 +0.7
baz=325
FRB Frobisher Bay 84.22 347 LR LR 14 26 50.0
comp=Z,137nm,18.5s,baz=82,slow=40
N30M Aishikik Lake 84.40 17 P P 13 43 28.8 +0.9
baz=327
M31M Drury Creek, Y 84.44 16 P P 13 43 28.4 +0.3
baz=329,SNR=18
YUK6 Outpost Mounta 84.49 18 P P 13 43 29.4 +0.8
baz=326
PINM Pinnacle 84.66 19 P P 13 43 30.1 +0.9
baz=325
N31M Braeburn, Yuko 84.71 17 P P 13 43 30.2 +0.8
baz=328,SNR=23
HYT Haines Junctio 84.82 18 P P 13 43 30.9 +0.8
baz=327,SNR=15
O29M Mount Kennedy 84.97 19 P P 13 43 31.0 +0.1
baz=326
O30N Mendenhall 85.24 17 P P 13 43 32.9 +0.7
baz=328,SNR=16
PNL Peninsula 85.26 19 P P 13 43 32.9 +0.7
baz=325
P30M Million Dollar 85.56 18 P P 13 43 34.2 +0.4
baz=327
WHY Whitehorse 85.65 17 P P 13 43 34.2 0.0
baz=329,SNR=8.9
N32M Quiet Lake 85.67 16 P P 13 43 34.4 +0.1
baz=330
WRGLY Wrigley 85.73 11 P P 13 43 34.9 +0.5
baz=339,SNR=9.9
P29M Windy Craggy 85.76 19 P P 13 43 35.3 +0.6
baz=327,SNR=6.4
CMSA Cobar Meteorol 86.15 129 P P 13 43 36.6 -0.3
PLBC Pleasant Camp 86.28 18 P P 13 43 38.0 +0.7
baz=328,SNR=8.5
EIDS Eidsvold 86.35 122 P P 13 43 38.9 +0.8
P33M Teslin, Yukon 86.55 16 IAmb IAmb 13 43 39.9
comp=Z,27nm,0.9s
P33M Teslin, Yukon 86.55 16 P P 13 43 38.8 +0.1
baz=331,SNR=7.6
SKAG Skagway 86.56 18 P P 13 43 40.2 +1.6
SKAG Skagway 86.56 18 P P 13 43 39.9 +1.2
baz=329,SNR=6.4
P32M Atlin 86.87 17 IAmb IAmb 13 43 41.9
comp=Z,22nm,1.2s
P32M Atlin 86.87 17 P P 13 43 40.7 +0.5
baz=330
WTLY Watson Lake, Y 87.57 14 IAmb IAmb 13 43 44.6
comp=Z,14nm,1.1s
WTLY Watson Lake, Y 87.57 14 P P 13 43 44.4 +0.9
baz=334,SNR=5.6
S31K Pelican 87.59 19 P P 13 43 44.5 +0.9
baz=328
YKA Yellowknife Ar 87.65 7 P P 13 43 43.4 -0.5
comp=Z,12nm,0.8s,baz=337,slow=5.2,SNR=40
comp=Z,12nm,0.8s
R33M Jennings River 87.72 16 IAmb IAmb 13 43 46.0
comp=Z,17nm,0.9s
R33M Jennings River 87.72 16 P P 13 43 45.1 +0.7
baz=332
Q32M Nakina River 87.78 17 P P 13 43 45.2 +0.3
baz=331
R32K Eaglecrest 87.80 18 P P 13 43 46.0 +1.3
baz=329,SNR=10.0
JIS Juneau Island 87.83 18 P P 13 43 45.8 +1.0
S32K Killisnoo 88.48 18 P P 13 43 48.6 +0.7
baz=329
KOTAN Kotaneelee Air 88.51 12 P P 13 43 48.4 +0.4
baz=338
SIT Sitka 88.62 19 P P 13 43 49.2 +0.6
baz=329
LIRD Liard River Hi 88.78 14 P P 13 43 49.8 +0.4
baz=336
DLBC Dease Lake 88.79 16 P P 13 43 50.6 +1.1
baz=333,SNR=16
S34M Telegraph Cree 88.99 17 P P 13 43 51.4 +1.1
baz=332,SNR=17
TOAD Toad River Com 89.47 13 P P 13 43 53.1 +0.5
baz=337,SNR=25
T33K Petersburg 89.49 18 P P 13 43 53.7 +1.1
baz=331
WRAK Wrangell Islan 90.00 18 IAmb IAmb 13 43 57.2
comp=Z,27nm,0.9s
WRAK Wrangell Islan 90.00 18 P P 13 43 56.0 +0.9
baz=331,SNR=5.9
T35M Bob Quinn 90.04 17 IAmb IAmb 13 43 57.8
comp=Z,24nm,1.1s
T35M Bob Quinn 90.04 17 P P 13 43 56.3 +1.0
baz=333,SNR=6.6
U33K Whale Pass 90.05 18 P P 13 43 56.2 +0.9
baz=331
CRAG Craig 90.62 19 P P 13 43 58.2 +0.3
baz=331
V35K Ketchikan 91.15 18 P P 13 44 00.8 +0.4
baz=332
BBB Bella Bella 94.90 18 LR LR 14 31 16.9
comp=Z,67nm,18.7s,baz=52,slow=38
FFC Flin Flon 96.28 2 P 13 44 23.2 -0.8
FFC IAmb IAmb 13 44 24.5
comp=Z,18nm,1.3s
FFC Flin Flon 96.28 2 P P 13 44 23.2 -0.8
FFC pmax pmax
comp=Z,19nm,1.3s
MAW Mawson 97.58 187 P P 13 44 28.4 -0.9
comp=Z,2.2nm,0.7s,baz=28,slow=17,SNR=6.1
MAW LR LR 14 22 60.0
comp=Z,43nm,18.4s,baz=12,slow=32
comp=Z,2.2nm,0.7s
SYO Syowa Base 102.63 194 *e*Pdiff **Pdif 13 44 53.6 +1.8**
PDAR Pinedale Array 107.61 8 Pdiff **Pdif 13 45 14.7 -0.5**
comp=Z,0.2nm,0.4s,baz=348,slow=6.1,SNR=1.7
PDAR PKiKP **PKiKP 13 49 22.6 -0.5**
comp=Z,0.5nm,0.6s,baz=75,slow=1.4,SNR=6.3
ELIB Princess Elisa 108.52 196 *d*PKP **PKiKP 13 49 27.3 +3.8**
ELIB *d*PP **PP 13 49 48.8 -0.5**
NVAR Mina Array Bea 110.21 16 Pdiff **Pdif 13 45 28.5 +1.7**
comp=Z,1.2nm,1.0s,baz=340,slow=5.4,SNR=4.6
NVAR PKiKP **PKiKP 13 49 28.9 +0.8**
comp=Z,0.6nm,0.7s,baz=321,slow=0.9,SNR=4.6
NVL N'lazarevskaya 110.93 199 *i* PKiKP **PKiKP 13 49 30.3 +2.4**
NVL *e* 13 50 05.7
NVL *e*PPP PPP 13 52 31.4
NVL *e*SS SS 14 05 42.0 +5.5
NVL *e*SSS SSS 14 09 50.5
NVL pmax pmax
comp=Z,17nm,1.4s
NVL MLR MLR
comp=Z,101nm,17.0s
TROLL Troll, Antarti 114.16 200 ⇑P **PKiKP 13 49 34.5 +0.3**
comp=Z,290nm,0.8s
SNAA Sanae 115.66 200 ⇑P **PKiKP 13 49 36.3 -0.7**
comp=Z,30nm,0.6s
SNAA Sanae 115.66 200 PKP **PKiKP 13 49 36.1 -0.9**
comp=Z,0.8nm,0.7s,baz=82,slow=1.9,SNR=7.3
VNDA Vanda 116.39 166 PKhKP PKPpre 13 49 33.0
comp=Z,1.2nm,1.1s,baz=310,slow=2.1,SNR=2.1
VNA2 Neumayer--Watz 116.91 202 ⇑P **PKPdf 13 49 39.1 -0.3**
comp=Z,6.7nm,0.7s,baz=23,slow=3.4
VNA3 Neumayer Olymp 117.70 201 ⇑P **PKPdf 13 49 40.0 -0.9**
comp=Z,9.6nm,0.7s
QSPA South Pole Qui 119.11 180 PKP **PKiKP 13 49 45.8 +2.0**
comp=Z,3.6nm,0.9s,baz=251,slow=1.3,SNR=12
QSPA PKKPbc **PKKPbc 14 00 00.8 +1.1**
comp=Z,1.6nm,0.8s,baz=132,slow=2.0,SNR=10
TXAR Lajitas Array 121.51 5 PKP **PKPdf 13 49 49.9 +0.1**
comp=Z,2.2nm,0.9s,baz=171,slow=0.4,SNR=15
TXAR PKKPbc **PKKPbc 13 59 48.9 -0.9**
comp=Z,0.8nm,0.9s,baz=153,slow=7.0,SNR=4.4
BOAV Boa Vista 131.64 304 *e*P **PKPdf 13 50 09.0 -0.4**
SDV Santo Domingo 133.30 320 *e*P **PKPdf 13 50 12.0 -0.8**
NPGB Novo Progresso 133.49 290 *e*P **PKPdf 13 50 12.6 -0.3**
CLDB Colider 135.91 285 *e*P **PKPdf 13 50 16.0 -1.3**
ROSC El Rosal 138.68 321 PKhKP PKPpre 13 50 14.4
comp=Z,7.7nm,0.4s,baz=16,slow=16,SNR=1.8
CPUP Villa Florida 143.29 264 PKhKP PKPpre 13 50 27.2
comp=Z,2.4nm,0.8s,baz=348,slow=4.0,SNR=14
OTAV Otavalo 144.75 323 PKPab 13 50 32.1 -0.5
OTAV Otavalo 144.75 323 PKIKP **PKPab 13 50 32.2 -0.5**
USHA Ushuaia 146.40 212 PKPbc **PKPbc 13 50 36.6 +0.4**
comp=Z,28nm,1.0s,baz=95,slow=2.6,SNR=8.4
LPAZ La Paz 148.97 288 PKP **PKPdf 13 50 41.3 +0.3**
comp=Z,22nm,0.9s,baz=26,slow=6.8,SNR=32
LPAZ PKPbc **PKPbc 13 50 44.9 -0.2**
comp=Z,22nm,0.9s,baz=29,slow=5.3,SNR=41
PLCA Paso Flores 154.28 236 PKP **PKPdf 13 50 48.7 +0.9**
comp=Z,8.4nm,0.9s,baz=147,slow=8.2,SNR=9.0
PLCA PKPbc **PKiKP 13 50 57.3 +1.3**
comp=Z,4.2nm,0.8s,baz=167,slow=4.7,SNR=5.3

*IDC **19** 13:31:19.8±1.2,5°.87N×125°.65E,h116km±9km, mb3.5/6, mbtmp3.9/6, Error ellipse: s-maj=60.6km s-min=15.3km az=83.0*
*NEIC **19** 13:31:20.6±1.3,5°.93N±0°.07×125°.8E±0°.1,h113km±8km, mb4.3/16, Error ellipse: s-maj=18.7km s-min=9.6km az=86.0*
ISC 19 13:31:20.9±0.6,5°.95N±0°.05×125°.9E±0°.1,h127km,n28, σ0°.95/30,mb4.1/11,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.14**	**347**	P	**Pn**	**13 31 43.6**	**-1.4**
	209nm,0.3s,baz=261,slow=9.1,SNR=2.0						
DAV				S	**Sn**	**13 32 01.6**	**-1.7**
	699nm,0.4s,baz=55,slow=19,SNR=12						
DAV	**Davao City (W)**	**1.14**	**347**		**Pn**	**13 31 43.5**	**-1.5**
TNTI	**Ternate**	**5.37**	**164**		**Pn**	**13 32 37.1**	**-1.8**
TOLI2	**Tolitoli**	**6.97**	**227**		**Pn**	**13 32 58.6**	**-2.1**
MYLDM	**Lahad Datu**	**7.35**	**264**	Pn	**Pn**	**13 33 06.4**	**+0.7**
SOEI	**Soe**	**15.68**	**186**	P	**P**	**13 34 56.6**	**+0.1**
SOEI				IAmb	IAmb	13 35 24.0	
	comp=Z,21nm,1.4s						
JAGI	**Jajag, Banyuwa**	**18.47**	**219**	P	**P**	**13 35 27.9**	**+0.7**
JAGI				IAmb	IAmb	13 35 32.8	
	comp=Z,12nm,0.9s						
MTN	**Manton Dam**	**19.40**	**164**	P	**P**	**13 35 37.3**	**+0.1**
MTN				IAmb	IAmb	13 35 56.2	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**21.68**	**172**	P	**P**	**13 36 01.3**	**-0.4**
KNRA				IAmb	IAmb	13 36 30.6	
	comp=Z,18nm,1.3s						
FITZ	**Fitzroy Crossi**	**23.90**	**180**	P	**P**	**13 36 22.9**	**-0.2**
COEN	**Coen**	**26.21**	**139**	P	**P**	**13 36 43.6**	**-0.5**
COEN				IAmb	IAmb	13 37 26.5	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**26.91**	**162**	P	**P**	**13 36 49.8**	**-0.5**
WB0				IAmb	IAmb	13 37 30.1	
	comp=Z,5.0nm,1.2s						
WRA	**Warramunga Arr**	**27.05**	**162**	P	**P**	**13 36 50.7**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=342,slow=10.0,SNR=12						
	comp=Z,0.6nm,0.8s						
WRA	**Warramunga Arr**	**27.05**	**162**	P	**P**	**13 36 50.6**	**-1.0**
WR8	**Warramunga Arr**	**27.12**	**162**	P	**P**	**13 36 52.7**	**+0.5**
MBWA	**Marble Bar**	**27.60**	**192**	P	**P**	**13 36 57.1**	**+0.6**
MBWA				IAmb	IAmb	13 37 33.7	
	comp=Z,22nm,1.3s						
PSA00	**Pilbara Seismi**	**27.98**	**192**	P	**P**	**13 36 59.5**	**-0.4**
PSA00				IAmb	IAmb	13 37 26.8	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**30.47**	**165**	P	**P**	**13 37 22.3**	**+0.4**
ASAR	**Alice Springs**	**30.47**	**165**	P	**P**	**13 37 22.3**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=345,slow=7.6,SNR=18						
ASAR				PcP	**PcP**	**13 40 18.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=338,slow=2.8,SNR=4.6						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**30.47**	**165**	P	**P**	**13 37 22.5**	**+0.6**
KSRS	**Korea Array**	**31.41**	**3**	P	**P**	**13 37 31.1**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=186,slow=9.7,SNR=1.4						
	comp=Z,0.5nm,0.5s						
JMM	**Marumori**	**34.56**	**21**	P	**P**	**13 37 58.2**	**+0.9**
MORW	**Morawa**	**36.07**	**195**	P	**P**	**13 38 10.3**	**-0.1**
USRK	**Ussuriysk Ar.**	**38.48**	**7**	P	**P**	**13 38 31.6**	**+1.0**
	comp=Z,3.2nm,0.7s,baz=175,slow=7.0,SNR=5.3						
	comp=Z,3.2nm,0.7s						
NWAO	**Narrogin (SRO)**	**39.52**	**191**	P	**P**	**13 38 38.5**	**-0.9**
BBOO	**Buckleboo**	**39.75**	**166**	P	**P**	**13 38 41.4**	**+0.1**
PETK	**Petropavlovsk-**	**53.73**	**23**	P	**P**	**13 40 30.6**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=207,slow=8.9,SNR=5.7						
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**55.24**	**325**	P	**P**	**13 40 40.3**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=123,slow=9.3,SNR=1.2						
	comp=Z,0.8nm,0.5s						

*TAP **19** 13:32:16.6,24°.48N×122°.41E,h56km,ML2.9,C*
*JMA **19** 13:32:16.5±0.1,24°.4N±0°.9×122°.4E±0°.3,h58km±1km, MV2.7/11,TAIWAN REGION*
ISC 19 13:32:17.3±1.2,24°.45N±0°.03×122°.42E±0°.02,h47km±9km, n86,σ0°.99/154,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS2	**EOS2**	**0.17**	**260**	*e*P	**Pn**	**13 32 25.7**	**+0.7**
JYNG	**Yonagunijimaku**	**0.48**	**90**	*e*P	**Pn**	**13 32 28.4**	**+0.2**
JYNG				*e*S	**Sn**	**13 32 36.7**	**+0.7**
ESAO	**Su ao**	**0.54**	**284**	*e*P	**Pn**	**13 32 29.3**	**+0.4**
ESAO				*i* S	**Sn**	**13 32 37.1**	**0.0**
TWC	**Suao**	**0.54**	**287**	*i* P	**Pn**	**13 32 28.6**	**-0.4**
TWC				*i* S	**Sn**	**13 32 36.8**	**-0.5**
YOJ	**Yonaguni jima**	**0.54**	**88**	*e*P	**Pn**	**13 32 29.1**	**+0.1**
YOJ				*e*S	**Sn**	**13 32 37.8**	**+0.6**
YOJ	**Yonaguni jima**	**0.54**	**88**	P	**Pn**	**13 32 29.0**	**+0.1**
YOJ				*i* S	**Sn**	**13 32 37.9**	**+0.6**
EWUT	**Wuta**	**0.58**	**270**	P	**Pn**	**13 32 29.2**	**-0.3**
EWUT				S	**Sn**	**13 32 38.0**	**-0.2**
ENA	**Nanau**	**0.62**	**268**	*e*P	**Pn**	**13 32 30.2**	**+0.3**
ENA				*e*S	**Sn**	**13 32 37.7**	**-1.3**
EAHA	**Aohua**	**0.63**	**259**	P	**Pn**	**13 32 30.3**	**+0.3**
EAHA				S	**Sn**	**13 32 40.4**	**+1.2**
NDS	**Dongshan**	**0.66**	**286**	P	**Pn**	**13 32 30.3**	**-0.3**
NDS				S	**Sn**	**13 32 40.0**	**0.0**
TWB1	**Santiao Chiao**	**0.68**	**325**	P	**Pn**	**13 32 30.2**	**-0.6**
TWB1				*e*S	**Sn**	**13 32 39.0**	**-1.4**
ILA	**Ilan**	**0.69**	**298**	*e*S	**Sn**	**13 32 39.9**	**-0.6**
TWE	**Neicheng**	**0.73**	**292**	P	**Pn**	**13 32 31.2**	**-0.2**
TWE				S	**Sn**	**13 32 41.5**	**-0.1**
TIPB	**Shuangxi**	**0.75**	**314**	P	**Pn**	**13 32 31.0**	**-0.7**
TIPB				S	**Sn**	**13 32 41.2**	**-0.9**
ETL	**Fush Village**	**0.78**	**248**	*e*P	**Pn**	**13 32 32.1**	**0.0**
ETL				*e*S	**Sn**	**13 32 41.0**	**-1.8**
ENTT	**Nioudou**	**0.80**	**284**	P	**Pn**	**13 32 32.6**	**+0.3**
ENTT				S	**Sn**	**13 32 43.7**	**+0.5**
NACB	**Ninganchiao**	**0.80**	**250**	P	**Pn**	**13 32 31.7**	**-0.6**
NACB				S	**Sn**	**13 32 42.8**	**-0.4**
SXI1	**Grass Mountain**	**0.81**	**323**	*i* P	**Pn**	**13 32 32.0**	**-0.5**
SXI1				*i* S	**Sn**	**13 32 42.9**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.82**	**293**	*i* P	**Pn**	**13 32 32.4**	**-0.2**
FUSB				S	**Sn**	**13 32 43.2**	**-0.5**
LATG	**Datong**	**0.82**	**276**	*i* P	**Pn**	**13 32 32.7**	**+0.1**
LATG				S	**Sn**	**13 32 44.5**	**+0.7**
TWD	**Chiawan**	**0.83**	**244**	S	**Sn**	**13 32 43.4**	**-0.6**
NWF	**Wu-fen Shan**	**0.85**	**317**	P	**Pn**	**13 32 32.6**	**-0.5**
NWF				*e*S	**Sn**	**13 32 42.7**	**-1.8**
WFSB	**Wu-fen Shan**	**0.85**	**317**	P	**Pn**	**13 32 32.6**	**-0.4**
WFSB				*e*S	**Sn**	**13 32 42.8**	**-1.6**
ETLH	**Xiulin Townshi**	**0.89**	**254**	*e*P	**Pn**	**13 32 33.0**	**-0.6**
ETLH				S	**Sn**	**13 32 44.5**	**-0.9**
NWLT	**Wulai**	**0.89**	**292**	P	**Pn**	**13 32 33.6**	**0.0**
NWLT				S	**Sn**	**13 32 45.1**	**-0.4**
TWA	**Mucha**	**0.92**	**305**	P	**Pn**	**13 32 33.6**	**-0.4**
TWA				S	**Sn**	**13 32 46.0**	**-0.2**
NNSB	**Datong**	**0.94**	**269**	*i* P	**Pn**	**13 32 34.1**	**-0.2**
NNSB				S	**Sn**	**13 32 46.9**	**0.0**
NNS	**Nan Shan**	**0.95**	**270**	P	**Pn**	**13 32 34.3**	**-0.1**
NHDH	**Xindian Distri**	**0.96**	**302**	P	**Pn**	**13 32 34.3**	**-0.1**
NHDH				*e*S	**Sn**	**13 32 47.1**	**0.0**
ETM	**Tongmen**	**0.97**	**241**	*e*S	**Sn**	**13 32 46.2**	**-1.1**
YHNB	**Yeheng**	**0.97**	**283**	P	**Pn**	**13 32 35.0**	**+0.2**
YHNB				*e*S	**Sn**	**13 32 47.6**	**+0.1**
NSK	**Sanguang**	**0.99**	**283**	*i* P	**Pn**	**13 32 35.1**	**+0.1**
NSK				S	**Sn**	**13 32 48.2**	**+0.3**

LXIB	**Xiulin Townshi**	**1.01 245**	P		**Pn**	**13 32 34.6**	**-0.7**
LXIB			S		**Sn**	**13 32 47.5**	**-1.0**
SHUL	**Shoufeng**	**1.02 230**	*eP*		**Pn**	**13 32 35.2**	**0.0**
SHUL			S		**Sn**	**13 32 48.0**	**-0.4**
YM01	**YM01**	**1.04 312**	P		**Pn**	**13 32 35.1**	**-0.5**
YM01			S		**Sn**	**13 32 47.9**	**-1.1**
YM08	**YM08**	**1.05 315**	P		**Pn**	**13 32 35.0**	**-0.8**
YM08			S		**Sn**	**13 32 47.8**	**-1.6**
ZUZH	**Zhuzihu**	**1.06 312**	*i* P		**Pn**	**13 32 35.1**	**-0.8**
ZUZH			S		**Sn**	**13 32 48.4**	**-1.3**
FUSS	**Fushou**	**1.09 260**	P		**Pn**	**13 32 36.3**	**-0.2**
WHF	**Hehuan Shan**	**1.09 254**	P		**Pn**	**13 32 36.3**	**-0.4**
WHF			*eS*		**Sn**	**13 32 50.0**	**-0.9**
ESL	**Shilin**	**1.10 235**	*eP*		**Pn**	**13 32 35.2**	**-0.9**
TWS1	**Kuangyinshan**	**1.12 306**	P		**Pn**	**13 32 36.3**	**-0.3**
TWS1			S		**Sn**	**13 32 50.4**	**-0.4**
NTST	**Danshui**	**1.13 309**	*eP*		**Sn**	**13 32 36.5**	**-0.3**
NTST			S		**Sn**	**13 32 51.2**	**0.0**
TWT	**Tachien**	**1.15 261**	*eP*		**Sn**	**13 32 37.8**	**+0.6**
TWT			*eS*		**Sn**	**13 32 52.3**	**+0.5**
TDCB	**Techi**	**1.16 261**	P		**Sn**	**13 32 37.6**	**+0.3**
TDCB			S		**Sn**	**13 32 51.8**	**-0.5**
KSHI	**Guanxi Townshi**	**1.18 286**	P		**Sn**	**13 32 38.2**	**+0.8**
KSHI			*eS*		**Sn**	**13 32 54.2**	**+1.9**
WARBT	**Fenglin Townsh**	**1.19 233**	*eP*		**Sn**	**13 32 36.7**	**-0.9**
WARBT			*eS*		**Sn**	**13 32 50.8**	**-1.9**
EGFH	**Guangfu**	**1.19 230**	*eP*		**Sn**	**13 32 37.1**	**-0.6**
EGFH			*eS*		**Sn**	**13 32 50.4**	**-2.3**
NFF	**Wufeng Townshi**	**1.20 279**	P		**Sn**	**13 32 37.9**	**+0.2**
NFF			*i S*		**Sn**	**13 32 53.5**	**+0.5**
IRIF	**Iriomote-Funau**	**1.20 95**	*eP*		**Sn**	**13 32 37.5**	**-0.3**
IRIF			*eS*		**Sn**	**13 32 53.0**	**+0.1**
NCUH	**Zhongli**	**1.23 295**	*eP*		**Sn**	**13 32 38.1**	**-0.1**
OWD	**Renai**	**1.23 247**	P		**Sn**	**13 32 37.8**	**-0.6**
OWD			S		**Sn**	**13 32 52.8**	**-1.1**
WUSB	**Renai**	**1.27 249**	P		**Sn**	**13 32 38.7**	**-0.1**
WUSB			*eS*		**Sn**	**13 32 53.8**	**-1.0**
LIOB	**Emei**	**1.29 279**	P		**Sn**	**13 32 39.4**	**+0.4**
LIOB			*eS*		**Sn**	**13 32 55.9**	**+0.7**
NSTT	**Nanjuang**	**1.30 278**	*i* P		**Sn**	**13 32 39.5**	**+0.3**
NSTT			S		**Sn**	**13 32 55.8**	**+0.5**
HGSD	**Ruisui**	**1.32 224**	P		**Sn**	**13 32 38.4**	**-0.9**
WHP	**Taichung City**	**1.35 263**	*eP*		**Sn**	**13 32 40.8**	**+0.9**
WHP			*eS*		**Sn**	**13 32 57.4**	**+0.6**
VWDT	**VWDT**	**1.35 240**	*eP*		**Sn**	**13 32 39.9**	**+0.1**
VWDT			*eS*		**Sn**	**13 32 55.9**	**-0.7**
EHYH	**Wanrong**	**1.36 226**	*eP*		**Sn**	**13 32 39.3**	**-0.7**
EHYH			*eS*		**Sn**	**13 32 54.8**	**-2.1**
JKRS	**Kuro-shima**	**1.47 98**	*eP*		**Sn**	**13 32 41.6**	**+0.2**
JKRS			*eS*		**Sn**	**13 32 59.8**	**+0.4**
YULB	**Yu-li**	**1.47 224**	*eP*		**Sn**	**13 32 40.3**	**-1.1**
YULB			*eS*		**Sn**	**13 32 57.2**	**-2.3**
SSLB	**Suanglung**	**1.49 244**	*eP*		**Sn**	**13 32 42.6**	**+0.8**
SMLT	**Sun Moon Lake**	**1.50 248**	*eP*		**Sn**	**13 32 43.2**	**+1.3**
SMLT			*eS*		**Sn**	**13 33 00.5**	**+0.2**
TWF1	**Yuli**	**1.50 223**	*eP*		**Pn**	**13 32 41.0**	**-0.8**
TYC	**Yuchr**	**1.52 249**	*eP*		**Pn**	**13 32 43.2**	**+1.0**
TYC			*eS*		**Sn**	**13 33 01.6**	**+0.8**
JIJ	**Ishigaki jima**	**1.58 93**	*eP*		**Sn**	**13 32 42.3**	**-0.5**
JIJ			*eS*		**Sn**	**13 33 01.4**	**-0.7**
WHYT	**Xinyi Township**	**1.61 243**	*eP*		**Sn**	**13 32 43.8**	**+0.3**
WHYT			*eS*		**Sn**	**13 33 03.2**	**+0.1**
FULB	**Fuli**	**1.61 220**	*eP*		**Sn**	**13 32 42.8**	**-0.7**
FULB			*eS*		**Sn**	**13 33 00.5**	**-2.6**
YUS	**Yu-Shan**	**1.65 235**	*eP*		**Sn**	**13 32 44.3**	**0.0**
CHKT	**Chengkung**	**1.65 216**	*eS*		**Sn**	**13 32 59.7**	**-4.2**
WJS	**Zhushan**	**1.66 248**	*eP*		**Sn**	**13 32 45.1**	**+1.4**
WJS			*eS*		**Sn**	**13 33 06.4**	**+2.2**
WNT	**Mingjian**	**1.68 251**	*eP*		**Pn**	**13 32 45.5**	**+1.2**
WNT			S		**Sn**	**13 33 06.6**	**+1.9**
EHD	**Haiduan**	**1.70 221**	*eP*		**Pn**	**13 32 43.9**	**-0.7**
JISG	**Ishigakijimahi**	**1.73 85**	P		**Pn**	**13 32 44.6**	**-0.4**
JISG			*eS*		**Sn**	**13 33 05.9**	**0.0**
ALS	**Alishan**	**1.75 238**	*eP*		**Pn**	**13 32 46.5**	**+1.1**
ELDTW	**Lidau**	**1.79 226**	*eP*		**Pn**	**13 32 45.3**	**-0.6**
CHN5	**Tsauling**	**1.80 242**	*eS*		**Sn**	**13 33 09.4**	**+1.7**
WDLH	**Douliu**	**1.88 247**	*eP*		**Pn**	**13 32 48.0**	**+1.0**
WDLH			*eS*		**Sn**	**13 33 11.0**	**+1.5**
LONT	**Longtian**	**1.94 218**	*eS*		**Sn**	**13 33 08.5**	**-2.5**
STYH	**Taoyuan**	**1.97 230**	*eP*		**Pn**	**13 32 48.7**	**+0.5**
STYH			*eS*		**Sn**	**13 33 11.7**	**-0.1**
TPUB	**Ta-pu**	**2.00 235**	*eP*		**Sn**	**13 32 50.4**	**+1.7**
TPUB			*eS*		**Sn**	**13 33 13.5**	**+1.0**
JTJ	**Tarama**	**2.09 84**	*eP*		**Sn**	**13 32 50.2**	**+0.3**
JTJ			*eS*		**Sn**	**13 33 14.9**	**+0.2**
TWK	**Hsinying**	**2.12 237**	*eP*		**Sn**	**13 32 51.9**	**+1.5**
TWK			*eS*		**Sn**	**13 33 16.6**	**+1.0**
CHN1	**Nanshi**	**2.14 234**	*eP*		**Pn**	**13 32 52.7**	**+2.1**
CHN1			*eS*		**Sn**	**13 33 17.4**	**+1.4**
WSL	**Shuilin Townsh**	**2.20 246**	*eP*		**Pn**	**13 32 51.9**	**+0.4**
WSL			*eS*		**Sn**	**13 33 19.0**	**+1.5**
SSD	**Sandimen**	**2.36 224**	*eP*		**Pn**	**13 32 55.3**	**+1.7**
SSD			*eS*		**Sn**	**13 33 21.7**	**+0.4**
MASBT	**Mashibuluo**	**2.45 222**	*eP*		**Pn**	**13 32 55.2**	**+0.3**
MASBT			*eS*		**Sn**	**13 33 24.9**	**+1.2**

*AZER **19** 13:45:08.5, 38.°78N×48.°58E, h22km, ml3.5*
*TEH **19** 13:45:09.3, 38.°73N×48.°59E, h28km±18km*
ISC 19 13:45:09.9±0.8, 38.°75N±0.°03×48.°64E±0.°03, h31km±6km, n57, σ1§31/87, 1C-3D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	**Lenkeran, Azer**	**0.12**	**109**	Pg	**Pb**	**13 45 15.2**	**-0.3**
LKRN	**Lenkeran, Azer**	**0.12**	**109**	P	**Pb**	**13 45 15.2**	**-0.3**
LKRN				S	**Sb**	**13 45 19.6**	**+0.3**
ASTR	**Astara**	**0.23**	**147**	Pg	**Pb**	**13 45 16.2**	**-0.3**
ASTR	**Astara**	**0.23**	**147**	P	**Pb**	**13 45 16.3**	**-0.3**
ASTR				S	**Sb**	**13 45 21.5**	**+0.5**
LRK	**Lerik**	**0.25**	**245**	Pg	**Pb**	**13 45 16.5**	**-0.6**
LRK	**Lerik**	**0.25**	**245**	P	**Pb**	**13 45 16.5**	**-0.6**
LRK				S	**Sb**	**13 45 21.9**	**-0.1**
YRD	**Yardimli**	**0.35**	**298**	Pg	**Pb**	**13 45 17.3**	**-1.0**
YRD	**Yardimli**	**0.35**	**298**	P	**Pb**	**13 45 17.3**	**-1.0**
YRD				S	**Sb**	**13 45 23.3**	**-0.7**
GAS1	**Astara - Iran**	**0.40**	**156**	Pg	**Pb**	**13 45 18.2**	**-0.6**
GLBA	**Clilabad**	**0.53**	**339**	Pg	**Pb**	**13 45 20.0**	**-0.8**
GLBA	**Clilabad**	**0.53**	**339**	P	**Pb**	**13 45 20.0**	**-0.8**
GLBA				S	**Sb**	**13 45 28.6**	**+0.3**
SAAT	**Saatly**	**1.12**	**352**	Pg	**Pn**	**13 45 29.9**	**+0.5**
SAAT	**Saatly**	**1.12**	**352**	P	**Pn**	**13 45 29.9**	**+0.5**
SAAT				S	**Sn**	**13 45 46.5**	**+2.7**
ISRB	**Sarab**	**1.20**	**220**	Pg	**Pn**	**13 45 31.1**	**+0.4**
CSN1	**Caspian**	**1.24**	**163**	Pg	**Pn**	**13 45 30.9**	**-0.1**
ALIB	**&Aumlli-Bayram**	**1.24**	**13**	Pg	**Pn**	**13 45 32.4**	**+1.3**
ALIB	**&Aumlli-Bayram**	**1.24**	**13**	P	**Pn**	**13 45 32.2**	**+1.2**
ALIB				S	**Sn**	**13 45 47.8**	**+1.0**
QRD	**Qoradiz**	**1.25**	**305**	P	**Pn**	**13 45 30.4**	**-0.7**
QRD				S	**Sn**	**13 45 46.9**	**0.0**
BLQ	**Beylaqan**	**1.28**	**320**	P	**Pn**	**13 45 31.3**	**-0.4**
BLQ				S	**Sn**	**13 45 48.6**	**+0.8**
IHRS	**Heris**	**1.32**	**251**	Pg	**Pn**	**13 45 32.7**	**+0.3**
ZRD	**Zardab**	**1.69**	**335**	Pn	**Pn**	**13 45 37.5**	**+0.2**
ZRD				Sn	**Sb**	**13 46 00.7**	**-0.6**
GBS	**Qobustan**	**1.80**	**7**	Pn	**Pn**	**13 45 40.6**	**+1.8**
GBS				Sg	**Sb**	**13 46 06.3**	**+1.9**
AGDM	**Agdam**	**1.80**	**319**	Pn	**Pn**	**13 45 39.0**	**+0.2**
AGDM				Sn	**Sn**	**13 46 03.2**	**+2.6**
IHSH	**Hashtrud**	**1.80**	**217**	Pg	**Pn**	**13 45 39.6**	**+0.5**
BRDA	**Brd**	**1.89**	**324**	Pn	**Pn**	**13 45 40.5**	**+0.5**
BRDA				Sg	**Sb**	**13 46 07.0**	**+0.2**
ITBZ	**Tabriz**	**2.02**	**256**	Pn	**Pn**	**13 45 41.9**	**-0.1**
PQL	**Pirkuli**	**2.04**	**359**	Pn	**Pn**	**13 45 40.7**	**-1.5**
PQL				Sn	**Sb**	**13 46 10.1**	**-1.2**
IML	**Ismayilli**	**2.07**	**350**	Pn	**Pn**	**13 45 43.1**	**+0.5**
IML				Sn	**Sn**	**13 46 09.5**	**+2.2**
ORD	**Ordubad**	**2.07**	**276**	Pn	**Pn**	**13 45 43.1**	**+0.5**
ORD				Sn	**Sb**	**13 46 10.7**	**-1.5**
ATQJ	**Altiaghaj**	**2.12**	**6**	Pn	**Pn**	**13 45 45.0**	**+1.7**
ATQJ				Sn	**Sb**	**13 46 12.6**	**-1.1**
QBL	**Gabala**	**2.28**	**345**	Pn	**Pn**	**13 45 46.6**	**+1.2**
QBL				Sn	**Sn**	**13 46 13.5**	**+1.1**
SIZA	**Siyzn**	**2.33**	**5**	Pg	**Pb**	**13 45 50.0**	**-1.3**
MNGR	**Mingechevir, A**	**2.35**	**330**	Pn	**Pn**	**13 45 47.8**	**+1.5**
MNGR				Sn	**Sn**	**13 46 15.9**	**+1.8**
IAZR	**Azarshahr**	**2.35**	**244**	Pn	**Pn**	**13 45 46.4**	**-0.1**
ISHB	**Shabestar**	**2.41**	**260**	Pn	**Pn**	**13 45 47.1**	**-0.3**
XNQ	**Khinaliq**	**2.45**	**351**	Pn	**Pn**	**13 45 48.0**	**+0.1**
XNQ				Sn	**Sn**	**13 46 18.6**	**+1.7**
NAX	**Nakhchivan**	**2.48**	**281**	Pg	**Pn**	**13 45 51.5**	**+3.3**
NAX				Sg	**Sb**	**13 46 23.9**	**-0.1**
SBZ	**Shahbuz**	**2.48**	**286**	Pg	**Pn**	**13 45 50.7**	**+2.4**
SBZ				Sg	**Sb**	**13 46 23.2**	**-0.9**
GANJ	**Ganja**	**2.60**	**317**	Pn	**Pn**	**13 45 50.6**	**+0.7**
GANJ				Sn	**Sn**	**13 46 21.4**	**+1.0**
QUBA	**Quba, Azerbaij**	**2.60**	**358**	Pg	**Pb**	**13 45 54.2**	**-1.7**
QUBA				Sg	**Sb**	**13 46 28.8**	**+1.3**
IGZV	**Ghazvin**	**2.67**	**151**	Pn	**Pn**	**13 45 50.9**	**-0.1**
SEKA	**Sheki**	**2.69**	**336**	Pn	**Pn**	**13 45 51.3**	**+0.1**
SEKA				Sn	**Sn**	**13 46 23.2**	**+0.5**
QSAR	**Qusar**	**2.78**	**354**	Pn	**Pn**	**13 45 53.6**	**+1.3**
QSAR				Sn	**Sn**	**13 46 28.0**	**+3.3**
GDB	**GEDABAY**	**2.97**	**312**	Pn	**Pn**	**13 45 55.6**	**+0.6**
GDB				Sn	**Sn**	**13 46 32.6**	**+3.0**
HYR	**Heyderabad**	**3.09**	**289**	Pg	**Pb**	**13 46 03.9**	**-0.4**
HYR				Sg	**Sb**	**13 46 43.2**	**+1.7**
HGHA	**Hamedan- Ghaye**	**3.26**	**177**	Pn	**Pn**	**13 46 00.1**	**+1.0**
ZKTA	**Zakatala**	**3.27**	**333**	Pn	**Pn**	**13 46 00.1**	**+1.0**
ZKTA				Sn	**Sn**	**13 46 38.1**	**+1.2**
MZPU	**Pul - Mazandar**	**3.28**	**134**	Pn	**Pn**	**13 45 59.0**	**-0.3**
QZX	**Qazax, Azerbai**	**3.41**	**314**	Pn	**Pn**	**13 45 58.9**	**-2.1**
QZX				Sn	**Sn**	**13 46 42.9**	**+2.7**
IPRN	**Peran**	**3.87**	**129**	Pn	**Pn**	**13 46 07.0**	**-0.3**
HAKT	**HAKKARI**	**4.06**	**254**	Sn	**Sn**	**13 46 59.5**	**+2.7**
IALA	**Alasht**	**4.26**	**127**	Pn	**Pn**	**13 46 12.9**	**0.0**
IGLO	**Ghaloghah**	**4.69**	**117**	Pn	**Pn**	**13 46 18.9**	**+0.1**
IKIA	**Kiasar**	**4.75**	**121**	Pn	**Pn**	**13 46 19.8**	**+0.2**
ISFB	**Sefidab**	**5.26**	**145**	Pn	**Pn**	**13 46 27.4**	**+0.9**
AB31	**Akbulak array**	**13.27**	**34**	⇓P	**Pn**	**13 48 13.3**	**-2.7**
	0.4nm,0.5s,baz=212,slow=14,SNR=5.7						
AB31				⇑S	Sn	13 50 26.8	-16
	0.3nm,0.3s,baz=215,slow=23,SNR=4.0						
AKTO	**Aktyubinsk**	**13.45**	**27**	⇓P	**Pn**	**13 48 17.4**	**-1.0**
	1.5nm,0.8s						
AKTO				⇓S	Sn	13 50 36.1	-11
	1.1nm,0.6s						

IDC 19 13:47:04.3±2.5, 6.°14N×93.°11E, h0km, mb3.3/3, mbtmp3.4/4, Error ellipse: s-maj=97.7km s-min=28.9km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.50**	**24**	Pn	Pn	13 50 17.4	+0.2
	0.3nm,0.3s,baz=207,slow=12,SNR=1,1						
H08S3	**Diego Garcia H**	**24.70**	**237**	T	T	14 19 30.3	
	baz=55,slow=76,SNR=8.7						
H08S2	**Diego Garcia H**	**24.71**	**237**	T	T	14 19 28.7	
	baz=55,slow=76,SNR=21						
H08S1	**Diego Carcia H**	**24.72**	**237**	T	T	14 19 23.4	
	baz=55,slow=76,SNR=8.2						
MKAR	**Makanchi Array**	**41.56**	**349**	P	P	13 54 53.4	-0.4
	0.6nm,0.8s,baz=161,slow=8.6,SNR=2.6						
	0.6nm,0.8s						
KURBB	**Kurhatov Arra**	**45.98**	**347**	P	P	13 55 29.1	-0.1
	0.2nm,0.3s,baz=168,slow=7.3,SNR=6.0						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**49.62**	**128**	P	P	13 55 57.9	0.0
	0.2nm,0.9s,baz=301,slow=8.3,SNR=6.5						
	0.2nm,0.9s						

*JSN **19** 14:03:53.8±0.7, 17.°91N×79.°50W, h0km±390km, MD3.9*
*SSNC **19** 14:03:55.8±1.6, 18.°45N×79.°55W, h16km±14km, MD3.8, ML2.6, MW2.5*
ISC 19 14:03:53.5±2.2, 18.°55N±0.°10×79.°46W±0.°09, h10km, n10, σ1§57/21, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBCY	**The Bluff, Cay**	**1.22**	**346**	*eP*	**Pn**	**14 04 17.4**	**+0.9**
CBCY				*eS*	**Sb**	**14 04 31.4**	**-1.0**
CBCY				IAML		14 04 34.5	
	comp=N,105nm,0.4s						
CBCY				IAML		14 04 34.6	
	comp=E,54nm,0.3s						
MTDJ	**Mount Denham**	**1.85**	**100**	*eP*	**Pn**	**14 04 25.3**	**-0.1**
MTDJ				*eS*	**Sn**	**14 04 48.3**	**-0.7**
MTDJ				*eSg*	**Sb**	**14 04 51.5**	**+0.7**
MTDJ				IAML		14 04 52.8	
	comp=E,155nm,0.5s						
MTDJ				IAML		14 04 53.4	
	comp=E,111nm,0.5s						
LMGC	**Las Mercedes**	**2.76**	**57**	*eP*	**Pn**	**14 04 39.4**	**+1.6**
LMGC				*eS*	**Sn**	**14 05 11.9**	**+0.6**
LMGC				IAML		14 05 15.9	
	comp=E,12nm,0.0s						
LMGC				IAML		14 05 16.2	
	comp=N,22nm,0.1s						
CCCC	**Cccc**	**3.08**	**31**	*eP*	**Pb**	**14 04 48.1**	**-0.3**
CCCC				*eS*	**Sb**	**14 05 26.7**	**+0.6**
CCCC				IAML		14 05 29.3	
	comp=N,1.6nm,0.5s						
CCCC				IAML		14 05 30.7	
	comp=E,2.6nm,0.4s						
CHIV	**Chivirico**	**3.20**	**63**	*eP*	**Pn**	**14 04 44.7**	**+0.8**
CHIV				*eS*	**Sn**	**14 05 19.6**	**-2.6**
CHIV				IAML		14 05 25.4	
	comp=E,4.0nm,0.2s						
CHIV				IAML		14 05 25.8	
	comp=N,5.7nm,0.1s						
MGV	**Manicaragua**	**3.58**	**352**	*eP*	**Pn**	**14 04 50.1**	**+1.0**
MGV				*eS*	**Sn**	**14 05 30.5**	**-0.9**
MGV				IAML		14 05 33.5	
	comp=E,6.7nm,0.2s						
MGV				IAML		14 05 34.6	
	comp=N,8.3nm,0.2s						
MARVS	**Santiago de Cu**	**3.66**	**66**	*eP*	**Pn**	**14 04 50.6**	**+0.4**
MARVS				*eS*	**Sn**	**14 05 32.0**	**-1.4**
MARVS				IAML		14 05 36.2	
	comp=N,13nm,0.1s						
MARVS				IAML		14 05 36.5	
	comp=E,6.0nm,0.1s						
PINC	**Pinares de May**	**3.96**	**60**	*eP*	**Pn**	**14 04 56.6**	**+2.3**
PINC				*eS*	**Sn**	**14 05 39.7**	**-1.1**
PINC				IAML		14 05 47.1	
	comp=E,10nm,0.1s						
PINC				IAML		14 05 47.4	
	comp=N,8.2nm,0.1s						
GTBY	**Guantanamo Bay**	**4.33**	**71**	*eP*	**Pn**	**14 05 02.2**	**+2.8**
GTBY				*eS*	**Sn**	**14 05 46.5**	**-3.4**
GTBY				IAML		14 05 54.4	
	comp=N,4.4nm,0.1s						
GTBY				IAML		14 05 54.6	
	comp=N,3.7nm,0.1s						
QMBU	**Quimbuelo**	**4.68**	**69**	*eP*	**Pn**	**14 05 05.0**	**+0.7**
QMBU				*eS*	**Sn**	**14 05 58.2**	**-0.5**
QMBU				IAML		14 06 03.6	
	comp=E,12nm,0.3s						
QMBU				IAML		14 06 03.9	
	comp=N,7.1nm,0.3s						

WEL 19 14:09:57.1±0.9, 34.°5±7.°×17.°9W±1.°4, h12km, M4.1/8, mB4.5/3, ML3.9/12, MLv4.2/8, Mw(mB)3.7/3, Error ellipse: s-maj=19.4km s-min=7.0km az=107.3, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.19**	**209**	P	Pn	14 11 01.6	+0.7
MXZ				S	Sn	14 11 48.9	-0.8
WMGZ	**Waiomatatini S**	**4.37**	**207**	P	Pn	14 11 03.9	+0.6
WMGZ				S	Sn	14 11 53.5	-0.7
PKGZ	**Pakihiroa**	**4.54**	**209**	P	Pn	14 11 06.4	+0.7
HAZ	**Te Kaha**	**4.58**	**213**	P	Pn	14 11 06.2	0.0
PUZ	**Puketiti**	**4.65**	**207**	P	Pn	14 11 06.6	-0.7
PUZ				S	Sn	14 12 01.8	+0.6
GLKZ	**Green Lake**	**4.76**	**13**	P	Pn	14 11 07.2	-1.5
RUGZ	**Raukumara Rang**	**4.80**	**212**	P	Pn	14 11 10.4	+1.0
CNGZ	**Carnagh Statio**	**5.04**	**205**	P	Pn	14 11 12.7	+0.2
KUZ	**Kuaotunu**	**5.08**	**235**	P	Pn	14 11 14.2	+1.2
TKGZ	**Te Karaka**	**5.13**	**208**	P	Pn	14 11 13.2	-0.6
MWZ	**Matawai**	**5.17**	**211**	P	Pn	14 11 15.0	+0.6
URZ	**Urewera**	**5.30**	**214**	P	Pn	14 11 16.0	0.0
RIGZ	**Rimuhau**	**5.40**	**207**	P	Pn	14 11 18.7	+1.2
SNGZ	**Shannon Statio**	**5.63**	**210**	P	Pn	14 11 21.3	+0.6
MUGZ	**Murupara**	**5.63**	**215**	P	Pn	14 11 20.9	+0.3
RTZ	**Ruatahuna**	**5.64**	**213**	P	Pn	14 11 20.9	0.0
WCZ	**Waipu Caves**	**5.74**	**248**	P	Pn	14 11 22.5	+0.4
MRHZ	**Matea Rd**	**6.08**	**215**	P	Pn	14 11 26.2	-0.7
OUZ	**Omahuta**	**6.15**	**256**	P	Pn	14 11 27.0	-0.8

AUST 19 15:33:00.3±0.5, 39.°5±4.°×14.°2E±.°, h10km, mb3.6/2, ML2.1/6, Error ellipse: s-maj=9.1km s-min=5.4km az=5.8, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEXS	**Deakin Univers**	**1.60**	**68**	S	Sn	15 33 49.7	+0.2
AUMTC	**Mt Clear Colle**	**1.67**	**45**	P	Pb	15 33 31.6	+0.5
AUMTC				S	Sb	15 33 51.8	-0.4
BRAT	**Ballarat**	**1.74**	**44**	P	Pb	15 33 32.1	-0.3
MGBR	**Mount Gambier**	**1.80**	**306**	P	Pn	15 33 30.5	-0.9
ARPS	**Mount Arapiles**	**2.08**	**348**	P	Pn	15 33 35.8	+0.6
ARPS				S	Sn	15 34 01.3	+0.1
GVL	**Greenvale**	**2.30**	**60**	P	Pn	15 33 39.6	+1.3
GVL				S	Sn	15 34 05.9	-0.8
TOO	**Toolangi**	**2.73**	**64**	P	Pn	15 33 45.8	+1.5
TOO				S	Sn	15 34 16.2	-1.2
AUBRN	**Burnie High Sc**	**3.48**	**131**	P	Pn	15 33 53.7	-0.7
AUBRN				S	Sn	15 34 30.8	-4.9
SDAN	**Sedan**	**4.95**	**329**	P	Pn	15 34 15.1	+0.4
KELC	**Kelly Hill Cav**	**5.20**	**301**	P	Pn	15 34 16.9	-1.2
	comp=Z,0.0nmcomp=Z,36nm,1.5s						
HTT	**Hallett**	**6.06**	**331**	P	Pn	15 34 30.4	+0.4
	comp=Z,0.0nmcomp=Z,3.1nm,1.7s						

*IDC **19** 16:23:07.9±2.6, 3.°41S×77.°71W, h105km±25km, mb3.2/4, mbtmp3.9/8, MS3.1/2, Error ellipse: s-maj=39.8km s-min=18.2km az=81.0*
*NEIC **19** 16:23:08.3±1.1, 3.°43S±0.°06×77.°61W±0.°10, h104km±8km, mb4.4/41, Error ellipse: s-maj=13.9km s-min=9.1km az=82.0*
*RSNC **19** 16:23:12.9±0.9, 3.°5S±7.°×77.°7W±.°, h0km, M3.6, mB5.0, mb4.6, ML3.2, Mw(mB)4.3*
ISC 19 16:23:07.8±0.5, 3.°36S±0.°05×77.°58W±0.°06, h106km, n77, σ1§40/81, mb4.4/19, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**1.90**	**298**		**Pn**	**16 23 37.6**	**-1.7**
COHC				Sn	**Sn**	**16 23 59.9**	**-3.5**
COHC	**Cochancay**	**1.90**	**298**	P	**Pn**	**16 23 37.6**	**-1.7**
COHC				S	**Sn**	**16 23 59.3**	**-4.1**
SLOR	**San Lorenzo -**	**2.77**	**341**		**Pn**	**16 23 52.0**	**+0.8**
CASC	**Dorado de Casc**	**3.49**	**4**	P	**Pn**	**16 24 00.4**	**+0.1**
CASC				S	**Sn**	**16 24 34.9**	**-6.0**
OTAV	**Otavalo**	**3.68**	**346**		**Pn**	**16 24 04.1**	**+0.9**
OTAV	**Otavalo**	**3.68**	**346**	P	**Pn**	**16 24 05.3**	**+2.0**
CUSE	**Cuicocha Este**	**3.74**	**347**	P	**Pn**	**16 24 07.7**	**+3.7**
BONI	**La Bonita**	**3.79**	**1**	P	**Pn**	**16 24 05.1**	**+0.6**
ATAH	**Atahualpa**	**3.83**	**192**	P	**Pn**	**16 24 05.0**	**-0.3**
	177nm,0.7s,baz=15,slow=8.6,SNR=103						
ATAH				S	**Sn**	**16 24 48.5**	**-1.1**
	314nm,0.9s,baz=132,slow=23,SNR=24						
TULM	**Tulcn-Chalpat**	**4.06**	**357**	P	**Pn**	**16 24 10.6**	**+2.3**
PTLC	**Puerto Leguiza**	**4.48**	**38**	P	**Pn**	**16 24 10.6**	**-3.0**
GCUF	**Volcan Galeras**	**4.56**	**3**	P	**Pn**	**16 24 16.5**	**+1.3**
CRUC	**La Cruz**	**4.94**	**7**	P	**Pn**	**16 24 20.2**	**+0.1**
FLOC	**Florencia**	**5.28**	**21**		**Pn**	**16 24 24.6**	**+0.2**
FLOC	**Florencia**	**5.28**	**21**	P	**Pn**	**16 24 24.1**	**-0.3**
FLOC				S	**Sn**	**16 25 21.3**	**-2.7**
BBAC	**Balboa, Cauca**	**5.36**	**4**	P	**Pn**	**16 24 27.8**	**+2.1**
GARC	**Garzon, Huila**	**5.89**	**21**	P	**Pn**	**16 24 33.2**	**+0.2**
GARC				S	**Sn**	**16 25 38.6**	**-0.7**
POPC	**Popayan, Colom**	**5.93**	**9**	P	**Pn**	**16 24 35.7**	**+2.2**
	10nm,0.7s						
URMC	**La Uribe, Meta**	**7.30**	**26**	P	**P

TRF	**Thorofare Moun**	**85.34**	**334**	P	**P**	**16 35 33.4**	**+0.3**
TRF				IAmb	IAmb	16 35 58.0	
	comp=Z,6.5nm,1.3s						
PPLA	**Purkeypile**	**86.01**	**334**	P	**P**	**16 35 36.5**	**+0.1**
D23K	**Nanushuk River**	**87.11**	**340**	P	**P**	**16 35 42.1**	**+0.7**
D23K				IAmb	IAmb	16 36 16.7	
	comp=Z,11nm,1.5s						
B22K	**Teshekpuk Lake**	**88.41**	**341**	P	**P**	**16 35 48.1**	**+0.6**
B21K	**Ikpikpuk River**	**88.63**	**340**	P	**P**	**16 35 49.2**	**+0.6**
F19K	**Shaleruckik Mo**	**89.21**	**337**	P	**P**	**16 35 51.7**	**+0.4**
F19K				IAmb	IAmb	16 35 53.9	
	comp=Z,3.6nm,0.9s						
ARCES	**ARCESS Array B**	**97.70**	**20**	P	Pdif	16 36 32.0	+1.6
ZALV	**Zalesovo Beam**	**127.55**	**13**	PKP	**PKiKP**	**16 42 00.9**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=345,slow=4.5,SNR=2.7						
KURK	**Kurchatov**	**128.73**	**19**		**PKPdf**	**16 42 03.0**	**+0.3**
KURBB	**Kurchatov Arra**	**128.78**	**19**	PKP	**PKPdf**	**16 42 03.0**	**+0.2**
	comp=Z,0.2nm,0.2s,baz=315,slow=2.5,SNR=4.1						
MKAR	**Makanchi Array**	**133.34**	**19**	PKP	**PKPdf**	**16 42 11.8**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=295,slow=2.3,SNR=1.7						
ASAR	**Alice Springs**	**139.23**	**227**	PKP	**PKiKP**	**16 42 22.6**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=134,slow=1.4,SNR=5.4						
WRA	**Warramunga Arr**	**141.03**	**232**	PKP	**PKPdf**	**16 42 25.9**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=128,slow=1.7,SNR=5.6						

*IDC **19** 16:25:53.0±1.0, 7.47N×95.25E, h0km, mb3.7/10, mbtmp3.6/12, ML3.6/2, MS3.2/7, Error ellipse: s-maj=44.4km s-min=16.2km az=57.0*

ISC 19 16:25:58.9±0.9, 7.6N±0.1°×95.3E±0.2, h35km, n19, σ1§41/13, mb3.6/10, MS3.5/3, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.96**	**143**	Pn	**Pn**	**16 27 24.7**	**-0.1**
	1.2nm,0.3s,baz=306,slow=14,SNR=2.9						
PSI				Sn	**Sn**	**16 28 33.7**	**+1.7**
	1.0nm,0.3s,baz=335,slow=12,SNR=1.5						
PSI				LR	LR	16 30 35.2	
	comp=Z,121nm,18.8s,baz=304,slow=47 2.6nm,0.4s						
CMAR	**Chiang Mai Arr**	**11.37**	**18**	Pn	**Pn**	**16 28 39.0**	**0.0**
	0.2nm,0.3s,baz=205,slow=15,SNR=1.0						
CMAR				LR	LR	16 33 22.3	
	comp=Z,70nm,19.6s,baz=205,slow=39 0.2nm,0.3s						
PALK	**Pallekele**	**14.49**	**270**	LR	LR	16 34 06.5	
	comp=Z,112nm,20.7s,baz=96,slow=34						
BRDH	**Bariadhala**	**15.41**	**347**	LR	LR	16 37 21.8	
	comp=Z,139nm,19.0s,baz=153,slow=44						
H08S3	**Diego Garcia H**	**27.32**	**237**	T	T	16 57 59.1	
	baz=56,slow=76						
H08S2	**Diego Garcia H**	**27.33**	**237**	T	T	16 58 02.8	
	baz=56,slow=76						
H08S1	**Diego Carcia H**	**27.34**	**237**	T	T	16 58 05.1	
	baz=56,slow=76						
KAPI	**Kappang**	**27.41**	**116**	LR	LR	16 42 38.3	
	comp=Z,38nm,21.9s,baz=288,slow=37						
BATI	**Baumata**	**33.31**	**122**	LR	LR	16 47 38.1	
	comp=Z,81nm,18.2s,baz=295,slow=39						
MKAR	**Makanchi Array**	**40.63**	**346**	P	**P**	**16 33 35.1**	**-0.4**
	1.0nm,0.7s,baz=158,slow=12,SNR=3.8 1.0nm,0.7s						
SONM	**Songino Array**	**41.20**	**11**	P	**P**	**16 33 40.6**	**+0.2**
	0.3nm,0.7s,baz=199,slow=7.6,SNR=7.8 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**45.12**	**345**	P	**P**	**16 34 09.7**	**-2.1**
	0.2nm,0.3s,baz=161,slow=7.1,SNR=4.7 0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**47.00**	**352**	P	**P**	**16 34 26.7**	**+0.1**
	0.8nm,0.6s,baz=181,slow=7.1,SNR=6.0 0.8nm,0.6s						
WRA	**Warramunga Arr**	**47.15**	**126**	P	**P**	**16 34 26.1**	**-2.1**
	0.2nm,0.6s,baz=303,slow=7.3,SNR=5.5 0.2nm,0.6s						
ASAR	**Alice Springs**	**48.84**	**131**	P	**P**	**16 34 40.6**	**-0.8**
	0.2nm,0.6s,baz=301,slow=7.9,SNR=8.7						
ASAR				LR	LR	16 57 48.3	
	comp=Z,48nm,18.6s,baz=294,slow=39 0.2nm,0.6s						
BVAR	**Borovoye Array**	**49.64**	**340**	P	**P**	**16 34 48.4**	**+1.4**
	1.3nm,0.7s,baz=121,slow=5.6,SNR=6.2 1.3nm,0.7s						
BRTR	**Keskin Array B**	**63.50**	**311**	P	**P**	**16 36 24.1**	**-1.8**
	0.6nm,0.8s,baz=114,slow=9.6,SNR=4.4 0.6nm,0.8s						
GERES	**GERESS Array B**	**78.81**	**318**	P	**P**	**16 37 59.2**	**+0.8**
	0.2nm,0.4s,baz=97,slow=5.6,SNR=3.6 0.2nm,0.4s						
HFS	**Hagfors**	**79.29**	**330**	P	**P**	**16 38 01.9**	**+1.2**
	5.8nm,1.0s,baz=99,slow=7.4,SNR=3.1 5.8nm,1.0s						

*IPEC **19** 16:30:14.5±0.2, 51.47N×16.19E, h1km, ML2.2/6, Error ellipse: s-maj=2.9km s-min=1.4km az=72.0*
*PRU **19** 16:30:15.8, 51.45N×16.15E, h0km*
*DNK **19** 16:30:15.1±2.4, 51.57N×16.41E, h30km, ML3.1*

ISC 19 16:30:12.3±0.8, 51.58N±0.03°×16.14E±0.03, h0km, n26, σ1§63/52, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**173**	*e*Pg	**Pg**	**16 30 27.0**	**+0.4**
KSP				*e*Sg	**Sg**	**16 30 35.8**	**-0.3**
CHVC	**Chvalec**	**1.00**	**183**	*e*PG	**Pg**	**16 30 31.8**	**+0.5**
CHVC				*e*SG	**Sg**	**16 30 43.8**	**-0.4**
UPC	**Upice**	**1.08**	**184**	*e*PG	**Pg**	**16 30 33.3**	**+0.4**
UPC				*e*SG	**Sg**	**16 30 46.4**	**-0.5**
	comp=Z,74nm,0.6s						
DPC	**Dobruska-Polom**	**1.24**	**175**	*e*PG	**Pg**	**16 30 36.0**	**0.0**
DPC				*e*SG	**Sg**	**16 30 50.3**	**-1.7**
	comp=Z,19nm,0.3s						
PIVO	**Bartosovice**	**1.42**	**169**	*e*Pg	**Pn**	**16 30 39.4**	**0.0**
	baz=350						
PIVO				*e*Sg	**Sg**	**16 30 55.2**	**-2.7**
	46nm,0.3s,baz=350						
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG	**Pg**	**16 30 40.5**	**+0.5**
PVCC				*e*SG	**Sb**	**16 30 59.7**	**+0.6**
	comp=Z,63nm,0.2s						
RICC	**Richard**	**1.66**	**232**	*e*PG	**Pn**	**16 30 43.1**	**+0.5**
RICC				*e*SG	**Sb**	**16 31 05.9**	**+0.8**
RYBC	**Ceska Rybna**	**1.78**	**182**	*e*Pn	**Pn**	**16 30 44.7**	**+0.5**
	baz=2.7						
RYBC				*e*Sg	**Sn**	**16 31 06.5**	**-1.0**
	27nm,0.2s,baz=2.7						
PRU	**Pruhonice**	**1.89**	**213**	*e*PG	**Pb**	**16 30 47.7**	**0.0**
PRU				*e*SG	**Sb**	**16 31 12.3**	**+0.5**
	comp=Z,21nm,0.6s						
STEB	**Steborice**	**1.95**	**147**	*e*PG	**Pg**	**16 30 49.0**	**-0.6**
STEB				*e*SG	**Sb**	**16 31 13.3**	**-0.1**
HSKC	**Hora Svate Kat**	**1.97**	**241**	*e*PG	**Pb**	**16 30 49.2**	**+0.2**
HSKC				*e*SG	**Sb**	**16 31 15.2**	**+1.1**
	comp=Z,22nm,0.3s						
CLL	**Collm**	**1.98**	**263**	*e*Pn	**Pn**	**16 30 47.0**	**-0.1**
CLL				*e*Pg	**Pg**	**16 30 51.0**	**+0.7**
CLL				*ex*	x	16 30 54.0	
CLL				*e*Sg	**Sb**	**16 31 16.0**	**+1.5**
	comp=Z,11nm,0.4s						
MORC	**Moravsky Berou**	**2.01**	**153**	*e*Pn	**Pn**	**16 30 47.9**	**+0.3**
	baz=334						
MORC				*e*Sg	**Sb**	**16 31 14.0**	**-1.4**
	comp=Z,15nm,0.3s,baz=334						
VRAC	**Vranov**	**2.29**	**173**	*e*Pn	**Pn**	**16 30 51.6**	**+0.2**
	baz=353						
VRAC				*e*Sg	**Sb**	**16 31 22.6**	**-0.8**
	comp=Z,10.0nm,0.3s,baz=353						
KRUC	**Moravsky**	**2.53**	**176**	*e*Pn	**Pn**	**16 30 55.1**	**+0.5**
	baz=357						
KRUC				*e*Sg	**Sb**	**16 31 30.1**	**0.0**
	comp=Z,5.8nm,0.3s,baz=357						
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**16 31 04.3**	**+0.5**
OJC				*e*Sg	**Sg**	**16 31 39.2**	**+0.7**
KHC	**Kasperske Hory**	**2.95**	**215**	*e*PN	**Pn**	**16 31 01.0**	**+0.6**
KHC				*e*PG	**Pb**	**16 31 06.9**	**+1.1**
KHC				*e*SN	**Sn**	**16 31 36.0**	**-0.6**
KHC				*e*SG	**Sg**	**16 31 47.3**	**+0.2**
	comp=Z,8.7nm,0.5s						
CKRC	**Cesky Krumlov**	**3.00**	**204**	*e*PN	**Pn**	**16 31 01.5**	**+0.3**
CKRC				*e*PG	**Pb**	**16 31 08.1**	**+1.4**
CKRC				*e*SG	**Sg**	**16 31 47.4**	**-1.4**
	comp=Z,8.3nm,0.4s						
LANS	**Liptovska Anna**	**3.23**	**138**	*e*SG	**Sg**	**16 31 55.3**	**-0.8**
MODS	**Modra-Piesok**	**3.29**	**167**	*e*SG	**Sg**	**16 31 59.7**	**+1.7**
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P	**Pn**	**16 31 10.4**	**+0.9**
BSD				*i* S	**Sn**	**16 31 51.0**	**-1.8**
BSD				IAML		16 31 51.2	
	comp=Z,27nm,0.9s						
STHS	**Stebnicka Huta**	**3.91**	**122**	*e*SG	**Sg**	**16 32 22.7**	**+4.8**
LUNU	**Lund**	**4.36**	**339**	*i* P	**Pn**	**16 31 23.2**	**+3.5**
LUNU				*i* S	**Sn**	**16 32 10.3**	**-1.0**
BJUU	**Bjuv**	**4.87**	**339**	*i* P	**Pn**	**16 31 26.7**	**+0.1**
BJUU				*i* S	**Sn**	**16 32 19.8**	**-3.8**
DEL	**Delary**	**5.08**	**346**	*i* P	**Pn**	**16 31 30.5**	**+0.9**
DEL				*i* S	**Sn**	**16 32 23.6**	**-5.2**
FABU	**Falkenberg**	**5.79**	**341**	*i* S	**Sn**	**16 32 42.5**	**-3.8**

*IDC **19** 16:31:37.2±2.4, 0.65S×134.18E, h0km, mb3.5/4, mbtmp3.5/6, ML3.7/2, Error ellipse: s-maj=85.6km s-min=20.9km az=77.0*
*DJA **19** 16:31:39.6±0.6, 1.4S×13.4E±*, h10km, M4.1/8, mb4.3/4, MLv4.0/8*

ISC 19 16:31:41.3±1.0, 0.69S±0.08×134.16E±0.09, h32km, n12, σ2§52/14, mb3.6/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.81**	**179**	P	**Pn**	**16 31 56.2**	**-0.4**
RKPI				S	**Sn**	**16 32 10.2**	**+2.6**
BAKI	**Biak**	**2.01**	**104**	P	**Pb**	**16 32 16.1**	**-1.2**
SWI	**Sorong**	**2.90**	**267**	P	**Pn**	**16 32 23.8**	**-1.5**
FAKI	**Fak Fak**	**2.92**	**221**	P	**Pn**	**16 32 26.7**	**+1.1**
BNDI	**Bandanaira**	**5.70**	**228**	P	**Pn**	**16 33 05.0**	**+1.1**
	47nm,0.5s						
AAI	**Ambon**	**6.66**	**243**	P	**Pn**	**16 33 17.4**	**+0.4**
WRA	**Warramunga Arr**	**19.13**	**179**	P	**P**	**16 36 01.7**	**-0.3**
	0.2nm,0.3s,baz=352,slow=12,SNR=23 0.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.22**	**205**	P	**P**	**16 36 04.4**	**+1.5**
	0.2nm,0.3s,baz=44,slow=12,SNR=6.6						
FITZ				S	**S**	**16 39 31.7**	**-7.2**
	1.9nm,0.8s,baz=311,slow=12,SNR=2.6 1.3nm,0.5s						
ASAR	**Alice Springs**	**22.84**	**181**	P	**P**	**16 36 42.9**	**+0.8**
	0.4nm,0.5s,baz=2.1,slow=12,SNR=11 0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**39.50**	**301**	P	**P**	**16 39 09.6**	**+0.2**
	0.5nm,0.5s,baz=110,slow=8.9,SNR=7.2 0.5nm,0.5s						
MKAR	**Makanchi Array**	**65.45**	**324**	P	**P**	**16 42 22.1**	**+0.8**
	0.5nm,0.6s,baz=118,slow=7.0,SNR=3.5 0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**69.49**	**326**	P	**P**	**16 42 47.5**	**+0.8**
	0.2nm,0.2s,baz=106,slow=5.9,SNR=5.3 0.2nm,0.2s						

IDC 19 16:39:41.6±3.4, 32.93S×177.89W, h0km, mb3.5/2, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=79.4km s-min=47.7km az=123.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.70**	**216**	Pn	Pn	16 41 20.2	-1.0
	0.7nm,0.3s,baz=251,slow=3.3,SNR=8.0						
URZ				Sn	Sn	16 42 33.4	-4.7
	0.8nm,0.3s,baz=210,slow=8.7,SNR=6.3 3.6nm,0.6s						
ASAR	**Alice Springs**	**43.12**	**270**	P	P	16 47 44.1	+0.1
	0.3nm,0.7s,baz=100,slow=7.0,SNR=6.1 0.3nm,0.7s						
WRA	**Warramunga Arr**	**44.34**	**275**	P	P	16 47 53.6	-0.1
	0.4nm,0.4s,baz=114,slow=7.7,SNR=12 0.4nm,0.4s						
FINES	**FINESS Array B**	**147.54**	**339**	PKPbc	PKPbc	16 59 26.2	-0.7
	3.8nm,1.0s,baz=46,slow=4.0,SNR=3.6						

*IDC **19** 16:49:38.6±2.7, 25.08N×90.00E, h0km, mb3.2/4, mbtmp3.3/4, Error ellipse: s-maj=105.5km s-min=26.3km az=71.0*
*NDI **19** 16:49:51.6±2.5, 26.40N×92.84E, h28km±7km, ML3.3, MW3.3*

ISC 19 16:49:51.0±1.0, 26.42N±0.04×92.81E±0.04, h35km, n15, σ1§69/21, mb3.1/4, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEZP	**TEZPUR**	**0.20**	**358**	*e*P	**Pn**	**16 49 57.6**	**-0.2**
TEZP				*e*S	**Sn**	**16 50 03.0**	**+0.5**
TEZP				IAML		16 50 03.3	
	comp=Z,830nm,0.1s						
TEZP				IAML		16 50 03.5	
	comp=N,858nm,0.1s						
SHL	**Shillong**	**1.19**	**225**	*e*P	**Pn**	**16 50 11.4**	**+0.2**
SHL				*e*S	**Sn**	**16 50 27.9**	**+1.6**
SHL				IAML		16 50 30.1	
	comp=N,943nm,0.2s						
SHL				IAML		16 50 30.4	
	comp=E,889nm,0.2s						
JORH	**JORHAT**	**1.33**	**76**	*e*S	**Sn**	**16 50 30.4**	**+0.8**
KOHI	**KOHIMA**	**1.36**	**120**	*e*P	**Pn**	**16 50 13.8**	**+0.2**
KOHI				*e*S	**Sn**	**16 50 31.4**	**+0.9**
KOHI				IAML		16 50 44.5	
	comp=E,823nm,0.4s						
KOHI				IAML		16 50 45.0	
	comp=N,953nm,0.5s						
TAWA	**Tawang**	**1.44**	**325**	*e*P	**Pn**	**16 50 17.6**	**+2.7**
TAWA				*e*S	**Sn**	**16 50 35.7**	**+2.9**
TAWA				IAML		16 50 36.9	
	comp=N,771nm,0.2s						
TAWA				IAML		16 50 37.6	
	comp=E,846nm,0.1s						
MOKO	**MOKOCHONG**	**1.54**	**93**	*e*P	**Pn**	**16 50 16.2**	**+0.2**
MOKO				*e*S	**Sn**	**16 50 38.1**	**+3.2**
SILR	**SILCHAR**	**1.63**	**180**	*e*P	**Pn**	**16 50 20.5**	**+3.3**
IMP	**Imphal**	**1.89**	**147**	*e*P	**Pn**	**16 50 21.8**	**+1.0**
IMP				*e*S	**Sn**	**16 50 44.1**	**+0.8**
IMP				IAML		16 50 59.2	
	comp=E,120nm,0.5s						
IMP				IAML		16 51 01.3	
	comp=N,140nm,0.2s						
LKP	**Lekhapani**	**2.87**	**71**	IAML		16 51 25.2	
	comp=E,396nm,0.6s						
LKP				IAML		16 51 32.4	
	comp=N,387nm,1.0s						
BELO	**BELONIA**	**3.39**	**202**	*e*P	**Pn**	**16 50 41.7**	**+0.4**
BELO				*e*S	**Sn**	**16 51 20.1**	**-0.2**
GTK	**Tadong**	**3.86**	**284**	*e*P	**Pn**	**16 50 48.5**	**+0.5**
GTK				*e*S	**Sn**	**16 51 31.6**	**-0.7**
GTK				IAML		16 51 59.3	
	comp=E,108nm,0.5s						
GTK				IAML		16 52 01.0	
	comp=N,101nm,0.3s						
MKAR	**Makanchi Array**	**21.98**	**340**	P	**P**	**16 54 39.9**	**-1.9**
	comp=N,0.5nm,0.6s,baz=146,slow=11,SNR=10 comp=N,0.5nm,0.6s						
SONM	**Songino Array**	**23.90**	**23**	P	P	16 55 14.9	+13
	comp=N,0.4nm,0.7s,baz=202,slow=7.3,SNR=2.3 comp=N,0.4nm,0.7s						
WRA	**Warramunga Arr**	**61.22**	**135**	P	**P**	**17 00 01.4**	**-1.2**
	comp=N,0.4nm,0.7s,baz=320,slow=6.9,SNR=2.9 comp=N,0.4nm,0.7s						
ASAR	**Alice Springs**	**63.70**	**138**	P	**P**	**17 00 17.6**	**-1.6**
	comp=N,0.1nm,0.5s,baz=318,slow=6.0,SNR=4.2 comp=N,0.1nm,0.5s						

*IDC **19** 17:02:26.3±0.6, 13.78N×120.89E, h134km±7km, mb3.1/7, mbtmp3.5/7, MS3.7/1, Error ellipse: s-maj=44.5km s-min=14.6km az=60.0*

ISC 19 17:02:27.1±1.0, 13.9N±0.2°×121.0E±0.3, h152km, n9, σ1§62/10, mb3.4/7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.24**	**344**	P	**Pn**	**17 02 46.5**	**-1.4**
	380nm,0.3s,baz=199,slow=4.1,SNR=8.8						
TGY				S	**Sn**	**17 03 00.6**	**-3.1**
	766nm,0.4s,baz=202,slow=2.1,SNR=9.7						
CMAR	**Chiang Mai Arr**	**21.67**	**285**	P	**P**	**17 07 05.3**	**-0.7**
	1.1nm,0.6s,baz=97,slow=7.9,SNR=11 1.1nm,0.6s						
JHJ	**Hachijo jima 2**	**25.68**	**39**	LR	LR	17 17 06.8	
	comp=Z,200nm,21.5s,baz=80,slow=34						
SONM	**Songino Array**	**35.98**	**343**	P	**P**	**17 09 14.4**	**+0.9**
	0.2nm,0.4s,baz=150,slow=9.2,SNR=1.8 0.2nm,0.4s						
WRA	**Warramunga Arr**	**36.07**	**158**	P	**P**	**17 09 14.0**	**-0.3**
	0.4nm,0.7s,baz=336,slow=8.6,SNR=9.0 0.4nm,0.7s						
ASAR	**Alice Springs**	**39.38**	**161**	P	**P**	**17 09 42.8**	**+0.7**
	0.2nm,0.3s,baz=334,slow=7.5,SNR=16						
ASAR				PcP	**PcP**	**17 11 48.9**	**+1.4**
	0.3nm,1.0s,baz=336,slow=3.1,SNR=2.0 0.2nm,0.3s						
MKAR	**Makanchi Array**	**46.08**	**323**	P	**P**	**17 10 37.0**	**+1.2**
	0.4nm,0.8s,baz=104,slow=9.6,SNR=2.1 0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**49.05**	**332**	P	**P**	**17 10 59.0**	**+0.5**
	0.5nm,0.4s,baz=118,slow=7.0,SNR=2.3 0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**50.22**	**326**	P	**P**	**17 11 08.6**	**+1.1**
	0.6nm,0.3s,baz=130,slow=8.3,SNR=4.9 0.6nm,0.3s						

*IDC **19** 17:22:40.2±8.6, 18.50S×168.31E, h104km±73km, mb3.6/3, mbtmp3.9/4, ML3.4/1, Error ellipse: s-maj=159.6km s-min=61.2km az=109.0*
*NOU **19** 17:22:40.3, 19.23S×169.06E, h0km, MLv3.6/8, Vanuatu Islands*

ISC 19 17:22:34.0±3.0, 18.7S±0.1×169.2E±0.3, h100km, n11, σ2§28/12, mb3.7/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.99**	**202**	P	**Pn**	**17 23 21.2**	**+1.6**
MARNC	**Mare, Loyalty**	**2.99**	**202**	S	**Sn**	**17 23 52.0**	**-2.7**
YATNC	**Mamie plateau,**	**4.00**	**213**	P	**Pn**	**17 23 34.4**	**+1.2**
PINNC	**Pines Island,**	**4.24**	**203**	P	**Pn**	**17 23 38.1**	**+1.7**
DZM	**Mont Dzumac**	**4.25**	**218**	P	**Pn**	**17 23 39.6**	**+2.9**
	2.7nm,0.3s,baz=34,slow=5.6,SNR=56						
DZM				S	**Sn**	**17 24 24.7**	**-0.7**
	24nm,0.7s,baz=312,slow=21,SNR=7.3 5.7nm,0.3s						
OUENC	**Ouen Island, N**	**4.33**	**211**	P	**Pn**	**17 23 40.5**	**+2.9**
OUENC	**Ouen Island, N**	**4.33**	**211**	S	**Sn**	**17 24 25.9**	**-1.0**
ONTNC	**Ouen Toro**	**4.44**	**216**	P	**Pn**	**17 23 42.4**	**+3.3**
STKA	**Stephens Creek**	**28.14**	**237**	P	**P**	**17 28 16.0**	**-0.7**
	1.2nm,0.6s,baz=67,slow=11,SNR=3.7 1.2nm,0.6s						
WRA	**Warramunga Arr**	**32.93**	**262**	P	**P**	**17 28 57.8**	**-1.4**
	0.3nm,0.5s,baz=87,slow=8.4,SNR=6.4 0.3nm,0.5s						
ASAR	**Alice Springs**	**33.26**	**255**	P	**P**	**17 29 01.4**	**-0.6**
	2.6nm,0.6s,baz=84,slow=8.8,SNR=56 2.6nm,0.6s						

*NEIC **19** 17:34:46.8±2.5, 15.5S±0.3°×175.0W±0.2, h10km±2km, mb4.5/9, Error ellipse: s-maj=46.3km s-min=19.9km az=335.0*
*IDC **19** 17:34:52.7±5.4, 15.77S×176.12W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=170.7km s-min=106.8km az=155.0*

ISC 19 17:34:46.6±0.9, 15.4S±0.3°×175.1W±0.2, h10km, n14, σ1§58/15, mb4.5/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.52**	**65**	Pn	**Pn**	**17 35 40.8**	**-0.7**
STKA	**Stephens Creek**	**42.64**	**240**	P	**P**	**17 42 42.0**	**-1.5**
	1.3nm,0.7s,baz=80,slow=11,SNR=3.4 1.3nm,0.7s						
BBOO	**Buckleboo**	**47.42**	**239**	P	**P**	**17 43 19.2**	**-2.3**
WB0	**Warramunga Arr**	**48.23**	**257**	P	**P**	**17 43 27.5**	**-0.6**
WB0				IAmb	IAmb	17 43 53.0	
	comp=Z,7.8nm,1.5s						
WRA	**Warramunga Arr**	**48.27**	**257**	P	**P**	**17 43 28.1**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=91,slow=7.8,SNR=19 comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**48.27**	**257**	P	**P**	**17 43 27.5**	**-0.9**
AS31	**Alice Springs**	**48.58**	**252**	P	**P**	**17 43 29.8**	**-0.9**
AS31				IAmb	IAmb	17 43 30.9	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**48.58**	**252**	P	**P**	**17 43 29.9**	**-0.8**
	comp=Z,3.7nm,0.6s,baz=88,slow=8.5,SNR=76						
ASAR				PcP	**PcP**	**17 44 59.9**	**+3.4**
	comp=Z,0.2nm,0.9s,baz=79,slow=3.8,SNR=1.6 comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**48.58**	**252**	P	**P**	**17 43 29.0**	**-1.7**
MTN	**Manton Dam**	**52.13**	**266**	P	**P**	**17 43 58.7**	**+1.1**
MTN				IAmb	IAmb	17 44 35.3	
	comp=Z,16nm,1.5s						
KNRA	**Kununurra**	**53.97**	**262**	P	**P**	**17 44 11.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**56.63**	**258**	P	**P**	**17 44 30.6**	**+0.2**
SOEI	**Soe**	**59.32**	**268**	P	**P**	**17 44 51.0**	**+1.5**
SOEI				IAmb	IAmb	17 44 55.4	
	comp=Z,8.8nm,1.2s						
VNDA	**Vanda**	**63.20**	**185**	P	**P**	**17 45 15.6**	**+1.0**
VNDA				IAmb	IAmb	17 45 55.6	
	comp=Z,3.0nm,1.2s						

*AEIC **19** 18:03:00.6±0.9, 53.18N±0.09×160.6W±0.1, h30km±9km, Error ellipse: s-maj=14.8km s-min=7.6km az=145.0*

NEIC 19 18:02:57.4±1.7, 53.19N±0.06×160.6W±0.1, h10km±2km, ML3.4/18, ML3.2(AEIC), Error ellipse: s-maj=14.3km s-min=3.1km az=134.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.74**	**20**		Pn	18 03 27.0	-0.6
CNBA					IAML	18 03 49.8	
	comp=E,219nm,0.6s						
CNBA	**Chernabura Isl**	**1.74**	**20**		Sn	18 03 48.2	-1.5
DOL	**Dolgoi Island**	**2.10**	**340**		Pn	18 03 32.7	+0.1
DOL					Pb	18 03 33.0	-2.5
DOL					Sn	18 03 58.5	-0.2
DT1	**Dutton Round H**	**2.16**	**333**		Pn	18 03 33.5	+0.1
DT1					Sn	18 03 59.5	-0.7
SDPT	**Sand Point**	**2.16**	**2**		Pn	18 03 32.1	-1.3
SDPT					Sn	18 03 58.7	-1.6
PS4A	**Pavlof South-4**	**2.28**	**342**		Pn	18 03 35.5	+0.4
PS4A					Sn	18 04 02.6	-0.6
PS1A	**Pavlof South-1**	**2.33**	**344**		Pn	18 03 36.5	+0.8
FALS	**False Pass**	**2.36**	**316**		Sn	18 04 03.8	-1.3
FALS	**False Pass**	**2.36**	**316**		Pn	18 03 35.7	-0.4
PN7A	**Pavlof North-7**	**2.39**	**340**		Pn	18 03 37.8	+1.2
PN7A					Sn	18 04 06.1	+0.1
S12K	**Black Hills**	**2.66**	**342**		Pn	18 03 40.7	+0.5
S12K					Sn	18 04 12.6	+0.1
VNKR	**Veniaminof 5**	**2.93**	**14**		Pn	18 03

	comp=N,38nm,1.1s								
OHAK	**Old Harbor**	**5.81**	**43**			**Pn**	18 04 22.9	-0.6	
ACHA	**Angle Creek He**	**5.84**	**29**		Pn	**Pn**	18 04 22.8	-1.3	
O15K	**Ungalikthiuk R**	**6.02**	**4**		Pn	**Pn**	18 04 26.7	+0.4	
O14K	**Tigyukauivet M**	**6.09**	**357**		Pn	**Pn**	18 04 27.2	-0.1	
KDAK	**Kodiak Island**	**6.47**	**41**		Pn	**Pn**	18 04 31.8	-0.8	
N14K	**Kuskokwak Cree**	**6.78**	**355**		Pn	**Pn**	18 04 37.9	+1.1	
P18K	**Big Mountain,**	**6.89**	**23**		Pn	**Pn**	18 04 37.9	-0.5	
N17K	**Nushagak Hills**	**7.59**	**13**		Pn	**Pn**	18 04 49.5	+1.6	
M16K	**Timber Creek**	**7.90**	**6**		Pn	**Pn**	18 04 53.5	+1.3	
ILSW	**Iliamna Southw**	**7.95**	**28**		Pn	**Pn**	18 04 53.3	+0.4	
CNPM	**China Poot**	**8.20**	**36**		Pn	**Pn**	18 04 55.7	-0.5	
L14K	**Kuka Creek**	**8.25**	**353**		Pn	**Pn**	18 04 56.5	-0.4	
ATKA	**Atka Island**	**8.32**	**269**		Pn	**Pn**	18 04 59.0	+1.1	
SEW	**Seward**	**9.24**	**37**		Pn	**Pn**	18 05 10.5	0.0	
SLKM	**Skilak Lake**	**9.27**	**34**		Pn	**Pn**	18 05 09.8	-1.1	
L19K	**White Mountain**	**9.52**	**16**		Pn	**Pn**	18 05 14.2	-0.2	
STLK	**Strandline Lak**	**9.57**	**26**		Pn	**Pn**	18 05 15.2	+0.1	
M20K	**Styx River**	**9.59**	**22**		Pn	**Pn**	18 05 14.4	-0.9	
FIS	**Fire Island**	**9.75**	**31**		Pn	**Pn**	18 05 15.5	-2.0	
RC01	**Rabbit Creek A**	**9.86**	**32**		Pn	**Pn**	18 05 19.1	0.0	
SKT	**Skwentna**	**10.05**	**25**		Pn	**Pn**	18 05 21.6	-0.1	
J16K	**Anvik River**	**10.12**	**360**		Pn	**Pn**	18 05 21.7	-0.9	
PWL	**Port Wells**	**10.17**	**36**		Pn	**Pn**	18 05 21.9	-1.4	
HIN	**Hinchinbrook I**	**10.56**	**41**		Pn	**Pn**	18 05 28.8	+0.2	
GHO	**Glory Hole Cre**	**10.63**	**31**		Pn	**Pn**	18 05 28.1	-1.6	
PPLA	**Purkeypile**	**10.69**	**21**		Pn	**Pn**	18 05 28.9	-1.6	
L22K	**Petersville**	**10.71**	**25**		Pn	**Pn**	18 05 28.3	-2.3	
FID	**Port Fidalgo**	**10.78**	**40**		Pn	**Pn**	18 05 30.2	-1.5	
SCM	**Sheep Creek Mo**	**11.20**	**34**		Pn	**Pn**	18 05 35.5	-1.9	
KLU	**Klutina**	**11.46**	**38**		Pn	**Pn**	18 05 41.5	+0.5	
TRF	**Thorofare Moun**	**11.61**	**24**		Pn	**Pn**	18 05 42.8	-0.3	

*CNRM **19** 18:10:54.0,36˚48N×8˚18W,h81km,ML3.1*
*INMG **19** 18:10:57.7±1.4,36˚46N×8˚03W,h32km±7km,ML2.7, Error ellipse: s-maj=3.2km s-min=2.8km az=28.0, #DIST_RANGE: LOCAL #IPMA_REGION: S Faro*
*SFS **19** 18:10:57.0,36˚46N×8˚03W,h40km,mb3.8/5,ML3.2/19, ML3.9/25,MLv2.9/25*
*IGIL **19** 18:10:58.0,36˚45N×8˚05W,h31km,ML2.7*
*MDD **19** 18:10:58.1±0.4,36˚53N×7˚97W,h34km±1km,mb_Lg3.5/42, Error ellipse: s-maj=4.0km s-min=2.3km az=28.0*

ISC 19 18:10:55.4±1.1,36˚52N±0˚03×7˚95W±0˚03,h30km±12km, n122,σ1§77/197,7C-4D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFARO	**Faro**	**0.51**	**3**	*eS*	**Sn**	**18 11 16.5**	**+2.1**
PFARO				*i* IAML		18 11 16.9	
PFARO				*i* IAML		18 11 18.9	
PFARO				*i* IAML		18 11 20.6	
PALBU	**Albufeira**	**0.62**	**338**	*eP*	**Pn**	**18 11 09.6**	**+1.4**
PALBU				*eS*	**Sn**	**18 11 18.4**	**+1.2**
PALBU				*i* IAML		18 11 19.0	
PALBU				*i* IAML		18 11 19.2	
PALBU				*i* IAML		18 11 19.6	
PTAV	**Tavira**	**0.65**	**21**	*eP*	**Pn**	**18 11 10.6**	**+2.0**
PTAV				*eS*	**Sn**	**18 11 20.0**	**+2.1**
PBDV	**Barranco-do-Ve**	**0.73**	**1**	Sn	**Sn**	**18 11 21.3**	**+1.6**
PBDV				Pn	**Pn**	**18 11 11.1**	**+1.4**
PBDV	**Barranco-do-Ve**	**0.73**	**1⇑**	*iP*	**Pn**	**18 11 11.1**	**+1.4**
PBDV				*eS*	**Sn**	**18 11 21.3**	**+1.6**
PBDV				*i* IAML		18 11 25.0	
PBDV				*i* IAML		18 11 26.9	
PBDV				*i* IAML		18 11 27.0	
PPOR	**Portimao**	**0.77**	**323**	*eS*	**Sn**	**18 11 21.7**	**+0.9**
PLAGO	**Lagos**	**0.83**	**315**	*eP*	**Pn**	**18 11 11.9**	**+0.9**
PLAGO				*eS*	**Sn**	**18 11 22.5**	**+0.4**
PLAGO				*i* IAML		18 11 23.5	
PLAGO				*i* IAML		18 11 23.6	
PLAGO				*i* IAML		18 11 24.0	
PVAQ	**Vaqueiros**	**0.91**	**12⇑**	*eP*	**Pn**	**18 11 13.6**	**+1.5**
PVAQ				*eS*	**Sn**	**18 11 25.8**	**+1.7**
PVAQ				*i* IAML		18 11 26.2	
PVAQ				*i* IAML		18 11 28.2	
PVAQ				*i* IAML		18 11 29.8	
PVAQ	**Vaqueiros**	**0.91**	**12**	P	**Pn**	**18 11 13.1**	**+1.0**
PVAQ	**Vaqueiros**	**0.91**	**12**	S	**Sn**	**18 11 27.2**	**+3.0**
PFVI	**Vila Bisbo**	**0.93**	**312**	Sn	**Sb**	**18 11 24.7**	**-0.4**
PFVI				Pn	**Pb**	**18 11 12.7**	**-0.3**
PFVI	**Vila Bisbo**	**0.93**	**312⇓**	*eP*	**Pb**	**18 11 12.7**	**-0.3**
PFVI				*eS*	**Sb**	**18 11 24.8**	**-0.3**
PFVI				*i* IAML		18 11 25.4	
PFVI				*i* IAML		18 11 25.4	
PFVI				*i* IAML		18 11 28.4	
PFVI	**Vila Bisbo**	**0.93**	**312**	P	**Pb**	**18 11 12.5**	**-0.5**
MORF	**Marmelete**	**0.97**	**325**	*eP*	**Pn**	**18 11 13.6**	**+0.6**
MORF				*eS*	**Sb**	**18 11 24.8**	**-1.3**
MORF				IAML		18 11 28.0	
	comp=N,162nm,0.2s						
MORF	**Marmelete**	**0.97**	**325⇓**	*eP*	**Pn**	**18 11 13.6**	**+0.6**
MORF				*eS*	**Sb**	**18 11 25.7**	**-0.4**
MORF				*i* IAML		18 11 27.0	
MORF				*i* IAML		18 11 27.0	
MORF				*i* IAML		18 11 27.5	
PALJ	**Aljezur**	**1.05**	**320**	*eS*	**Sb**	**18 11 27.8**	**-0.5**
EGRO	**El Granado**	**1.08**	**20**	Sn	**Sn**	**18 11 30.1**	**+1.6**
EGRO	**El Granado**	**1.08**	**20**	Pg	**Pb**	**18 11 16.3**	**+0.7**
EGRO				Sg	**Sn**	**18 11 30.7**	**+2.2**
EGRO				*i* IVmb_Lg		18 11 31.5	
PCVE	**Castro Verde**	**1.12**	**357**	Sn	**Sn**	**18 11 30.3**	**+0.9**
PCVE				Pn	**Pb**	**18 11 16.6**	**+0.5**
PCVE	**Castro Verde**	**1.12**	**357⇑**	*iP*	**Pb**	**18 11 16.6**	**+0.5**
PCVE				*eS*	**Sn**	**18 11 30.6**	**+1.3**
PCVE				*i* IAML		18 11 31.1	
PCVE				*i* IAML		18 11 31.3	
PCVE				*i* IAML		18 11 31.4	
ARNO	**Arenosillo**	**1.14**	**59**	Sn	**Sn**	**18 11 32.2**	**+2.3**
ARNO				Pn	**Pb**	**18 11 17.4**	**+0.9**
PTEO	**Sao Teotonio**	**1.20**	**329⇓**	*eP*	**Pb**	**18 11 17.1**	**-0.4**
PTEO				*eS*	**Sn**	**18 11 32.0**	**+0.7**
PTEO				*i* IAML		18 11 33.0	
PTEO				*i* IAML		18 11 33.2	
PTEO				*i* IAML		18 11 33.4	
MESJ	**Messejana**	**1.34**	**351**	*eP*	**Pb**	**18 11 19.4**	**-0.5**
MESJ				*eS*	**Sn**	**18 11 35.0**	**+0.2**
MESJ				IAML		18 11 36.5	
	comp=E,69nm,0.1s						
MESJ	**Messejana**	**1.34**	**351⇑**	*eP*	**Pb**	**18 11 19.4**	**-0.5**
MESJ				*eS*	**Sn**	**18 11 36.1**	**+1.2**
MESJ				*i* IAML		18 11 36.6	
MESJ				*i* IAML		18 11 36.7	
MESJ				*i* IAML		18 11 36.9	
PBEJ	**Beja**	**1.51**	**3**	*eP*	**Pb**	**18 11 21.9**	**-0.9**
PBEJ				*eS*	**Sn**	**18 11 40.1**	**+1.0**
PBEJ				*i* IAML		18 11 41.9	
PBEJ				*i* IAML		18 11 43.0	
PBEJ				*i* IAML		18 11 43.0	
EMIN	**Mina Concepcio**	**1.62**	**39**	Sn	**Sn**	**18 11 42.0**	**+0.4**
EMIN				Pn	**Pn**	**18 11 23.3**	**+1.5**
EMIN	**Mina Concepcio**	**1.62**	**39**	Pg	**Pn**	**18 11 23.3**	**+1.5**
EMIN				Sg	**Sb**	**18 11 44.9**	**+0.3**
ESPR	**Espera**	**1.72**	**78**	Pn	**Pn**	**18 11 25.1**	**+1.8**
ESPR				Sn	**Sn**	**18 11 45.1**	**+0.9**
ESPR	**Espera**	**1.72**	**78**	Pg	**Pb**	**18 11 25.3**	**-1.1**
ESPR				Sg	**Sn**	**18 11 45.5**	**+1.3**
ESPR				*i* IVmb_Lg		18 11 47.1	
PBAR	**Barrancos**	**1.81**	**23**	Sn	**Sn**	**18 11 48.2**	**+1.8**
PBAR				Pn	**Pn**	**18 11 26.0**	**+1.5**
PBAR	**Barrancos**	**1.81**	**23**	*eP*	**Pn**	**18 11 26.0**	**+1.5**
PBAR				*eS*	**Sn**	**18 11 47.8**	**+1.4**
PBAR				*i* IAML		18 11 58.3	
PBAR				*i* IAML		18 12 00.2	
PBAR				*i* IAML		18 12 00.5	
EJIF	**Jimena Fronter**	**2.00**	**91**	Pn	**Pn**	**18 11 29.3**	**+2.1**
EJIF				Sn	**Sn**	**18 11 51.4**	**+0.2**
EVO	**Evora**	**2.01**	**359**	Sn	**Sn**	**18 11 51.4**	**0.0**
EVO				Pn	**Pn**	**18 11 28.7**	**+1.4**
EVO	**Evora**	**2.01**	**359⇓**	*eP*	**Pn**	**18 11 28.7**	**+1.4**
EVO				*eS*	**Sn**	**18 11 51.9**	**+0.5**
EVO				*i* IAML		18 11 52.5	
EVO				*i* IAML		18 11 55.4	
EVO				*i* IAML		18 11 59.0	
MOE	**Montemor**	**2.03**	**351**	*eP*	**Pn**	**18 11 29.0**	**+1.5**
MOE				*eS*	**Sn**	**18 11 52.1**	**+0.3**
MOE				*i* IAML		18 11 53.4	
MOE				*i* IAML		18 11 53.4	
MOE				*i* IAML		18 11 53.6	

ECEU	**Ceuta**	**2.17**	**106**		Pn	**Pn**	**18 11 31.4**	**+1.9**	
ECEU	**Ceuta**	**2.17**	**106**		Pn	**Pn**	**18 11 31.4**	**+1.9**	
PARRA	**Arraiolos**	**2.30**	**358⇑**		*iP*	**Pn**	**18 11 32.5**	**-0.8**	
PARRA					*eS*	**Sn**	**18 11 58.2**	**-4.1**	
PARRA					*i* IAML		18 11 59.6		
PARRA					*i* IAML		18 11 59.8		
PARRA					*i* IAML		18 11 59.9		
EBAD	**Badajoz**	**2.36**	**18**		Pn	**Pn**	**18 11 33.4**	**+1.4**	
EBAD	**Badajoz**	**2.36**	**18**		Pn	**Pn**	**18 11 33.4**	**+1.4**	
EBAD					Sn	**Sn**	**18 12 00.6**	**+0.6**	
EBAD					*i* IVmb_Lg		18 12 02.1		
PESTR	**Estremoz**	**2.37**	**7**		Pn	**Pn**	**18 11 33.4**	**+1.2**	
PESTR					Sn	**Sn**	**18 11 59.7**	**-0.5**	
PESTR	**Estremoz**	**2.37**	**7**		*eP*	**Pn**	**18 11 33.5**	**+1.2**	
PESTR					*eS*	**Sn**	**18 12 00.8**	**+0.7**	
PESTR					*i* IAML		18 12 03.2		
PESTR					*i* IAML		18 12 15.0		
PESTR					*i* IAML		18 12 19.3		
PESTR	**Estremoz**	**2.37**	**7**		P	**Pn**	**18 11 33.4**	**+1.2**	
ECAB	**El Cabril**	**2.55**	**52**		Sn	**Sn**	**18 12 03.9**	**-0.9**	
ECAB					Pn	**Pn**	**18 11 36.1**	**+1.3**	
ECAB	**El Cabril**	**2.55**	**52**		Pn	**Pn**	**18 11 36.1**	**+1.3**	
ECAB					Sn	**Sn**	**18 12 03.8**	**-1.0**	
PMTG	**Montargil**	**2.56**	**355⇑**		*eP*	**Pn**	**18 11 36.0**	**+1.3**	
PMTG					*eS*	**Sn**	**18 12 05.1**	**+0.2**	
PMTG					*i* IAML		18 12 06.2		
PMTG					*i* IAML		18 12 06.3		
PMTG					*i* IAML		18 12 06.3		
EMIJ	**Mijas**	**2.56**	**88**		Pn	**Pn**	**18 11 36.9**	**+2.0**	
EMIJ	**Mijas**	**2.56**	**88**		Pn	**Pn**	**18 11 37.0**	**+2.1**	
EMIJ					Sn	**Sn**	**18 12 04.3**	**-0.7**	
PMAFR	**Mafra**	**2.65**	**337**		Pn	**Pn**	**18 11 37.9**	**+1.8**	
PMAFR					Sn	**Sn**	**18 12 07.4**	**+0.1**	
PMAFR	**Mafra**	**2.65**	**337**		*eP*	**Pn**	**18 11 38.0**	**+1.8**	
PMAFR					*eS*	**Sn**	**18 12 07.3**	**+0.1**	
PMAFR					*i* IAML		18 12 08.8		
PMAFR					*i* IAML		18 12 08.8		
PMAFR					*i* IAML		18 12 10.6		
PSBE	**So Bento**	**3.07**	**348**		*eP*	**Pn**	**18 11 43.3**	**+1.5**	
PSBE					*eS*	**Sn**	**18 12 16.5**	**-0.9**	
PSBE					*i* IAML		18 12 18.6		
PSBE					*i* IAML		18 12 18.9		
PSBE					*i* IAML		18 12 20.4		
PSARD	**Sardoal**	**3.08**	**357⇑**		*eP*	**Pn**	**18 11 43.5**	**+1.4**	
PSARD					*eS*	**Sn**	**18 12 17.0**	**-0.9**	
PSARD					*i* IAML		18 12 18.9		
PSARD					*i* IAML		18 12 19.3		
PSARD					*i* IAML		18 12 20.4		
EGOR	**Sierra Gorda,**	**3.14**	**78**		Pn	**Pn**	**18 11 46.2**	**+3.3**	
EGOR					Sn	**Sn**	**18 12 19.0**	**-0.5**	
EGOR	**Sierra Gorda,**	**3.14**	**78**		Pn	**Pn**	**18 11 46.3**	**+3.4**	
EGOR					Sn	**Sn**	**18 12 17.9**	**-1.6**	
EADA	**Adamuz**	**3.16**	**57**		Pn	**Pn**	**18 11 44.8**	**+1.7**	
EADA					Sn	**Sn**	**18 12 18.6**	**-1.1**	
EADA					*i* IVmb_Lg		18 12 21.7		
ZHG	**ZHG**	**3.25**	**160**		P	**Pn**	**18 11 44.4**	**0.0**	
ZHG	**ZHG**	**3.25**	**160**		S	**Sn**	**18 12 23.8**	**+1.8**	
PCBR	**Castelo Branco**	**3.34**	**6**		*eP*	**Pn**	**18 11 47.1**	**+1.6**	
PCBR					*eS*	**Sn**	**18 12 24.2**	**+0.1**	
PCBR					*i* IAML		18 12 25.4		
PCBR					*i* IAML		18 12 25.9		
PCBR					*i* IAML		18 12 26.2		
ELGU	**Los Guajares,**	**3.50**	**83**		Pn	**Pn**	**18 11 49.5**	**+1.8**	
ELGU					Sn	**Sn**	**18 12 28.9**	**+0.8**	
ELGU	**Los Guajares,**	**3.50**	**83**		Pn	**Pn**	**18 11 49.5**	**+1.8**	
ELGU					Sn	**Sn**	**18 12 26.5**	**-1.6**	
ELGU					*i* IVmb_Lg		18 12 32.2		
PALE	**Palemas**	**3.51**	**110**		P	**Pn**	**18 11 48.2**	**+0.3**	
PALE	**Palemas**	**3.51**	**110**		S	**Sn**	**18 12 31.1**	**+2.7**	
PCAS	**Casmilo, Conde**	**3.56**	**353**		*eP*	**Pn**	**18 11 50.0**	**+1.5**	
PCAS					*eS*	**Sn**	**18 12 28.4**	**-1.2**	
PCAS					*i* IAML		18 12 30.4		
PCAS					*i* IAML		18 12 30.6		
PCAS					*i* IAML		18 12 33.6		
EQUE	**Quentar**	**3.69**	**78**		Pn	**Pn**	**18 11 53.0**	**+2.6**	
EQUE					Sn	**Sn**	**18 12 31.8**	**-1.1**	
IFR	**Ifrane**	**3.79**	**141**		Pn	**Pn**	**18 11 51.2**	**-0.7**	
LCRM	**LCR**	**3.80**	**137**		P	**Pn**	**18 11 52.5**	**+0.6**	
LCRM	**LCR**	**3.80**	**137**		S	**Sn**	**18 12 38.1**	**+2.4**	
E0803	**Jimena (Jaen)**	**3.81**	**68**		Pn	**Pn**	**18 11 53.6**	**+1.5**	
E0803					Sn	**Sn**	**18 12 34.9**	**-1.1**	
EPLA	**Plasencia**	**3.84**	**22**		Pn	**Pn**	**18 11 53.7**	**+1.3**	
EPLA					*i* IVmb_Lg		18 11 54.9		
EPLA					Sn	**Sn**	**18 12 35.4**	**-1.1**	
AKLM	**AKL**	**3.89**	**120**		P	**Pn**	**18 11 57.1**	**+1.5**	
AKLM	**AKL**	**3.89**	**120**		S	**Sn**	**18 12 37.6**	**-0.3**	
MTE	**Manteigas**	**3.89**	**5**		*eP*	**Pn**	**18 11 54.5**	**+1.3**	
MTE					*eS*	**Sn**	**18 12 37.3**	**-0.6**	
MTE					*i* IAML		18 12 38.6		
MTE					*i* IAML		18 12 38.7		
MTE					*i* IAML		18 12 39.1		
SRHM	**Skhour des Reh**	**4.04**	**179**		P	**Pn**	**18 11 56.7**	**+1.5**	
SRHM	**Skhour des Reh**	**4.04**	**179**		S	**Sn**	**18 12 45.6**	**+4.2**	
PSIM	**Granatula de C**	**4.05**	**54**		Pn	**Pn**	**18 11 57.0**	**+1.7**	
PSIM					Sn	**Sn**	**18 12 39.1**	**-2.6**	
EQES	**Quesada**	**4.11**	**70**		Pn	**Pn**	**18 11 57.9**	**+1.8**	
EQES					Sn	**Sn**	**18 12 41.7**	**-1.5**	
PAB	**San Pablo**	**4.15**	**42**		Pn	**Pn**	**18 11 58.7**	**+1.9**	
PAB					*i* IVmb_Lg		18 11 59.2		
PAB					Sn	**Sn**	**18 12 42.0**	**-2.4**	
PVIS	**Viseu**	**4.19**	**1**		*eP*	**Pn**	**18 11 59.0**	**+1.7**	
PVIS					*eS*	**Sn**	**18 12 45.7**	**+0.3**	
ESDC	**Sonseca Array**	**4.46**	**44**		Pn	**Pn**	**18 12 02.6**	**+1.7**	
ESDC					*i* IVmb_Lg		18 12 02.9		
ESDC					Sn	**Sn**	**18 12 48.3**	**-3.5**	
ESBB	**Sonseca Array**	**4.46**	**44**		Pn	**Pn**	**18 12 02.6**	**+1.7**	
ESBB					*i* IVmb_Lg		18 12 03.2		
ESBB					Sn	**Sn**	**18 12 48.8**	**-3.1**	
MD31	**MD31**	**4.49**	**143**		P	**Pn**	**18 12 00.8**	**-0.6**	
MD31	**MD31**	**4.49**	**143**		S	**Sn**	**18 12 53.8**	**+1.1**	
MDT	**Midelt**	**4.61**	**142**		P	**Pn**	**18 12 02.3**	**-0.8**	
MDT	**Midelt**	**4.61**	**142**		S	**Sn**	**18 12 56.2**	**+0.6**	
MVO	**Moncorvo**	**4.70**	**9**		*eP*	**Pn**	**18 12 05.5**	**+1.2**	
MVO					*eS*	**Sn**	**18 12 55.8**	**-1.9**	
MVO					*i* IAML		18 12 58.6		
MVO					*i* IAML		18 12 59.6		
MVO					*i* IAML		18 12 59.6		
EJUZ	**Juzbado, Salam**	**4.84**	**19**		Pn	**Pn**	**18 12 07.4**	**+1.2**	
POLO	**Lamas de Olo**	**4.85**	**1**		*eP*	**Pn**	**18 12 07.6**	**+1.2**	
POLO					*eS*	**Sn**	**18 12 58.8**	**-1.9**	
POLO					*i* IAML		18 13 02.1		
POLO					*i* IAML		18 13 02.2		
POLO					*i* IAML		18 13 02.3		
JBK	**JBK**	**4.91**	**115**		P	**Pn**	**18 12 06.3**	**-0.9**	
JBK	**JBK**	**4.91**	**115**		S	**Sn**	**18 13 03.2**	**+0.1**	
TISM	**Timmit**	**4.94**	**165**		P	**Pn**	**18 12 06.3**	**-1.3**	
TISM	**Timmit**	**4.94**	**165**		S	**Sn**	**18 13 03.0**	**-0.7**	
PCAB	**Cabril**	**5.19**	**359**		*eP*	**Pn**	**18 12 12.2**	**+1.3**	
PCAB					*eS*	**Sn**	**18 13 08.1**	**-1.7**	
PCAB					*i* IAML		18 13 10.3		
PCAB					*i* IAML		18 13 10.3		
PCAB					*i* IAML		18 13 22.1		
UCM	**Universidad Co**	**5.29**	**43**		Sn	**Sn**	**18 13 10.1**	**-2.2**	
UCM					Pn	**Pn**	**18 12 14.9**	**+2.5**	
OUK	**Oukaimeden**	**5.29**	**179**		P	**Pn**	**18 12 11.2**	**-1.5**	
OUK	**Oukaimeden**	**5.29**	**179**		S	**Sn**	**18 13 10.3**	**-2.6**	
ELOB	**Lobios**	**5.34**	**359**		Pn	**Pn**	**18 12 14.3**	**+1.1**	
ELOB					Sn	**Sn**	**18 13 11.6**	**-3.1**	
ELOB					*i* IVmb_Lg		18 13 14.2		
PBRG	**Braganca**	**5.37**	**10**		*eP*	**Pn**	**18 12 14.7**	**+1.3**	
PBRG					*eS*	**Sn**	**18 13 12.2**	**-2.0**	
PBRG					*i* IAML		18 13 15.2		
PBRG					*i* IAML		18 13 15.6		
PBRG					*i* IAML		18 13 15.7		
ECAL	**Calabor**	**5.50**	**10**		Pn	**Pn**	**18 12 16.7**	**+1.4**	
ECAL					Sn	**Sn**	**18 13 15.8**	**-1.7**	
ECAL	**Calabor**	**5.50**	**10**		Pn	**Pn**	**18 12 16.5**	**+1.2**	
ECAL					*i* IVmb_Lg		18 13 03.3		
ECAL					Sn	**Sn**	**18 13 15.3**	**-2.2**	
ETOB	**Tobarra**	**5.51**	**65**		Pn	**Pn**	**18 12 16.1**	**+0.6**	
ETOB					Sn	**Sn**	**18 13 14.9**	**-3.0**	
ETOB	**Tobarra**	**5.51**	**65**		Pn	**Pn**	**18 12 16.2**	**+0.7**	
ETOB					Sn	**Sn**	**18 13 13.8**	**-4.1**	
ETOB					*i* IVmb_Lg		18 13 18.0		
EMUR	**La Murta**	**5.52**	**74**		Sn	**Sn**	**18 13 16.5**	**-1.5**	
EMUR	**La Murta**	**5.52**	**74**		Sn	**Sn**	**18 13 14.3**	**-3.8**	
YEBES	**Yebes (Guadala**	**5.53**	**42**		Pn	**Pn**	**18 12 18.1**	**+2.4**	
TIO	**Tiouine**	**5.60**	**174**		Pn	**Pn**	**18 12 15.5**	**-1.3**	
TIO	**Tiouine**	**5.60**	**174**		P	**Pn**	**18 12 15.1**	**-1.7**	

TIO	**Tiouine**	**5.60**	**174**		S	**Sn**	**18 13 18.4**	**-1.8**	
OUZM	**OUZ**	**5.68**	**170**		P	**Pn**	**18 12 17.3**	**-0.6**	
OUZM	**OUZ**	**5.68**	**170**		S	**Sn**	**18 13 23.3**	**+1.2**	
EVIV	**Cofrentes, Val**	**6.06**	**61**		Pn	**Pn**	**18 12 23.2**	**+0.2**	
EVIV					Sn	**Sn**	**18 13 27.2**	**-4.2**	
EVIV					*i* IVmb_Lg		18 16 43.5		
EAGO	**Agolada(Pontev**	**6.28**	**359**		Pn	**Pn**	**18 12 27.2**	**+1.3**	
EAGO					Sn	**Sn**	**18 13 33.5**	**-3.2**	
EAGO					*i* IVmb_Lg		18 16 26.2		
ETOR	**Torete**	**6.30**	**45**		Pn	**Pn**	**18 12 28.2**	**+1.8**	
ETOR					*i* IVmb_Lg		18 12 30.9		
ETOR					Sn	**Sn**	**18 13 33.2**	**-4.2**	
ECHE	**Chera**	**6.31**	**59**		Pn	**Pn**	**18 12 28.0**	**+1.6**	
ECHE	**Chera**	**6.31**	**59**		Pn	**Pn**	**18 12 27.8**	**+1.5**	
ECHE					Sn	**Sn**	**18 13 33.6**	**-3.8**	
ECHE					*i* IVmb_Lg		18 13 43.1		
EMAZ	**Mazaricos**	**6.47**	**353**		Pn	**Pn**	**18 12 30.0**	**+1.4**	
EMAZ					Sn	**Sn**	**18 13 36.9**	**-4.5**	
EMAZ					*i* IVmb_Lg		18 16 51.4		
E0901	**Celadas (Terue**	**6.66**	**51**		Pn	**Pn**	**18 12 33.9**	**+2.7**	
E0901					*i* IVmb_Lg		18 12 36.1		
E0901					Sn	**Sn**	**18 13 42.1**	**-4.0**	
EPON	**Pontenova**	**6.83**	**5**		Pn	**Pn**	**18 12 35.6**	**+2.1**	
EPON					*i* IVmb_Lg		18 14 44.6		
EMOS	**Mosqueruela**	**7.02**	**55**		Pn	**Pn**	**18 12 38.6**	**+2.4**	
EMOS					Sn	**Sn**	**18 13 51.5**	**-3.5**	
EMOS					*i* IVmb_Lg		18 15 52.0		
ELAN	**Lanestosa**	**7.55**	**26**		Pn	**Pn**	**18 12 44.9**	**+1.4**	
ESAC	**San Caprasio**	**7.80**	**46**		Pn	**Pn**	**18 12 48.8**	**+1.9**	
ESAC					Sn	**Sn**	**18 14 11.5**	**-2.6**	
EORO	**Oroz-Betelu**	**8.17**	**37**		Pn	**Pn**	**18 12 54.8**	**+2.9**	
EPOB	**Poblet**	**8.53**	**53**		Pn	**Pn**	**18 12 58.5**	**+1.6**	
EPOB					*i* IVmb_Lg		18 18 00.6		

IDC 19 18:11:52.4±5.4,16˚50S×175˚64W,h0km,mb4.1/3, mbtmp4.1/3,Error ellipse: s-maj=178.0km s-min=107.7km az=156.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.62**	**240**	P	P	18 19 43.0	+0.5
	1.2nm,0.5s,baz=90,slow=13,SNR=3.1						
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**47.50**	**258**	P	P	18 20 29.3	-0.4
	0.7nm,0.7s,baz=95,slow=6.9,SNR=12						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**47.73**	**253**	P	P	18 20 31.1	-0.3
	3.8nm,0.5s,baz=88,slow=8.4,SNR=111						
ASAR				PcP	PcP	18 22 00.7	-0.2
	0.2nm,0.6s,baz=87,slow=3.4,SNR=1.5						
	3.8nm,0.5s						

**IDC 19 18:18:39.0±2.1,18˚22N×142˚17E,h0km,mb3.9/2, mbtmp3.9/4,ML3.6/2,Error ellipse: s-maj=68.8km s-min=28.8km

FORT	**Forrest**	**49.81**	**249**	P		**P**	**18 27 48.8**	**-2.4**
FORT				IAmb		IAmb	18 27 53.4	
	comp=Z,11nm,1.1s							
MTN	**Manton Dam**	**51.07**	**272**	P		**P**	**18 27 59.5**	**-1.4**
MTN				IAmb		IAmb	18 28 08.1	
	comp=Z,8.8nm,1.1s							
KNRA	**Kununurra**	**52.33**	**268**	P		**P**	**18 28 08.4**	**-1.8**
FITZ	**Fitzroy Crossi**	**54.48**	**264**	P		**P**	**18 28 24.6**	**-1.4**
KAPI	**Kappang**	**64.40**	**276**	LR		LR	18 58 17.9	
	comp=Z,25nm,18.9s,baz=116,slow=37							
JCJ	**Chichijima**	**64.58**	**319**	LR		LR	18 50 44.2	
	comp=Z,22nm,21.4s,baz=44,slow=30							
QSPA	**South Pole Qui**	**66.47**	**180**	P		**P**	**18 29 50.5**	**+3.1**
	comp=Z,1.6nm,0.7s,baz=20,slow=2.2,SNR=14							
QSPA				LR		LR	18 53 33.7	
	comp=Z,27nm,21.9s,baz=20,slow=31							
	comp=Z,1.6nm,0.7s							
QSPA	**South Pole Qui**	**66.47**	**180**	P		**P**	**18 29 49.8**	**+2.4**
QSPA				IAmb		IAmb	18 30 11.1	
	comp=Z,3.5nm,0.7s							
MJAR	**Matsushiro Arr**	**73.78**	**323**	P		**P**	**18 30 32.5**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=163,slow=5.1,SNR=1.6							
	comp=Z,1.2nm,0.7s							
SHEM	**Shemya Is, Ala**	**76.50**	**354**	LR		LR	18 59 22.9	
	comp=Z,100nm,21.8s,baz=90,slow=32							
MAW	**Mawson**	**79.26**	**200**	LR		LR	19 05 22.3	
	comp=Z,32nm,19.7s,baz=91,slow=35							
PETK	**Petropavlovsk-**	**79.74**	**344**	P		**P**	**18 31 06.0**	**+0.4**
	comp=Z,7.8nm,1.0s,baz=144,slow=13,SNR=4.1							
PETK				LR		LR	19 00 03.5	
	comp=Z,32nm,20.4s,baz=82,slow=31							
	comp=Z,7.8nm,1.0s							
PETK	**Petropavlovsk-**	**79.74**	**344**	P		**P**	**18 31 05.2**	**-0.4**
GMN	**Gold Mountain**	**82.02**	**44**	P		**P**	**18 31 17.6**	**-0.9**
NVAR	**Mina Array Bea**	**82.06**	**42**	P		**P**	**18 31 21.0**	**+2.3**
	comp=Z,1.8nm,0.8s,baz=220,slow=9.5,SNR=9.3							
	comp=Z,1.8nm,0.8s							
NVAR	**Mina Array Bea**	**82.06**	**42**	P		**P**	**18 31 17.7**	**-0.9**
NV11	**Mina Array Sit**	**82.15**	**42**	P		**P**	**18 31 16.9**	**-2.1**
NV11				IAmb		IAmb	18 31 22.5	
	comp=Z,4.4nm,1.1s							
H03S2	**Juan Fernandez**	**82.74**	**124**	T		T	20 02 59.9	
	baz=245,slow=75,SNR=378							
H03S1	**Juan Fernandez**	**82.76**	**124**	T		T	20 03 01.0	
	baz=245,slow=75,SNR=360							
H03S3	**Juan Fernandez**	**82.76**	**124**	T		T	20 02 59.8	
	baz=245,slow=75,SNR=306							
H03N2	**Juan Fernandez**	**82.90**	**123**	T		T	20 03 19.1	
	baz=251,slow=73,SNR=105							
H03N3	**Juan Fernandez**	**82.90**	**123**	T		T	20 03 14.0	
	baz=251,slow=73,SNR=123							
H03N1	**Juan Fernandez**	**82.91**	**123**	T		T	20 03 12.9	
	baz=251,slow=73,SNR=132							
PRN	**Pahroc Range**	**83.49**	**44**	P		**P**	**18 31 25.1**	**-0.8**
PRN				IAmb		IAmb	18 31 29.7	
	comp=Z,4.0nm,1.0s							
WVOR	**Wild Horse Val**	**84.37**	**39**	P		**P**	**18 31 31.1**	**+0.8**
TROLL	**Troll, Antarti**	**84.63**	**180**	⇑P		**P**	**18 31 33.2**	**+1.9**
	comp=Z,122nm,0.6s							
U15A	**North Rim**	**84.73**	**47**			**P**	**18 31 32.5**	**0.0**
VNA3	**Neumayer Olymp**	**84.92**	**176**	⇑P		**P**	**18 31 34.2**	**+1.5**
	comp=Z,1.4nm,0.4s							
ELK	**Elko**	**85.35**	**42**	LR		LR	19 01 33.5	
	comp=Z,55nm,20.4s,baz=36,slow=30							
ELK	**Elko**	**85.35**	**42**	P		**P**	**18 31 35.8**	**+0.3**
ELK				IAmb		IAmb	18 31 38.7	
	comp=Z,4.5nm,1.2s							
VNA2	**Neumayer--Watz**	**85.38**	**176**	⇑P		**P**	**18 31 36.9**	**+2.0**
	comp=Z,1.5nm,0.5s,baz=181,slow=4.0							
TXAR	**Lajitas Array**	**87.22**	**56**	P		**P**	**18 31 47.6**	**+2.9**
	comp=Z,1.2nm,0.8s,baz=216,slow=8.1,SNR=16							
	comp=Z,1.2nm,0.8s							
TXAR	**Lajitas Array**	**87.22**	**56**	P		**P**	**18 31 44.7**	**0.0**
NEW	**Newport**	**88.84**	**35**	LR		LR	19 03 01.7	
	comp=Z,84nm,19.7s,baz=42,slow=30							
TRF	**Thorofare Moun**	**89.11**	**11**	P		**P**	**18 31 52.8**	**-0.1**
SEY	**Seymchan**	**89.81**	**346**	LR		LR	19 07 01.3	
	comp=Z,46nm,19.6s,baz=52,slow=32							
PDAR	**Pinedale Array**	**89.99**	**42**	P		**P**	**18 31 59.5**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=236,slow=2.7,SNR=4.9							
	comp=Z,0.7nm,0.9s							
PDAR	**Pinedale Array**	**89.99**	**42**	P		**P**	**18 31 57.7**	**0.0**
ILAR	**Eielson Array**	**90.95**	**12**	P		**P**	**18 32 02.4**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=219,slow=6.2,SNR=12							
	comp=Z,1.2nm,0.8s							
ILAR	**Eielson Array**	**90.95**	**12**	P		**P**	**18 32 01.6**	**+0.3**
F19K	**Shaleruckik Mo**	**91.21**	**7**	P		**P**	**18 32 03.2**	**+0.8**
J26L	**Joseph Creek**	**91.38**	**13**	P		**P**	**18 32 05.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**92.86**	**289**	P		**P**	**18 32 12.8**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=133,slow=3.7,SNR=4.8							
	comp=Z,0.3nm,0.4s							
CMAR	**Chiang Mai Arr**	**92.86**	**289**	P		**P**	**18 32 09.9**	**-1.3**
KURBB	**Kurchatov Arra**	**117.55**	**316**	PKP		**PKPdf**	**18 37 43.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=100,slow=2.2,SNR=4.6							
ARCES	**ARCESS Array B**	**132.29**	**350**	PKP		**PKiKP**		
	comp=Z,2.2nm,0.9s,baz=60,slow=2.2,SNR=1.5						**18 38 13.5**	**+1.2**
FINES	**FINESS Array B**	**139.26**	**344**	PKP		**PKiKP**	**18 38 26.5**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=22,slow=7.0,SNR=4.0							
AKASG	**Malin Array Be**	**146.61**	**330**	PKPbc		**PKPbc**	**18 38 39.6**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=43,slow=4.1,SNR=13							
EKA	**Eskdalemuir Ar**	**147.88**	**8**	PKPbc		**PKPbc**	**18 38 43.0**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=1.3,slow=3.2,SNR=4.2							
BRTR	**Keskin Array B**	**150.25**	**310**	PKPbc		**PKPbc**	**18 38 49.3**	**0.0**
	comp=Z,0.7nm,0.7s,baz=52,slow=2.4,SNR=4.0							
BRTR	**Keskin Array B**	**150.25**	**310**			**PKPdf**	**18 38 46.0**	**+1.8**
MMAI	**Mount Meron Ar**	**150.87**	**296**	PKPbc		**PKiKP**	**18 38 52.4**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=64,slow=3.4,SNR=4.5							

*NEIC **19** 18:23:01.6±2.9,27.°09N±0.°07×57.°82E±0.°09,h10km±1km, mb4.0/24,Error ellipse: s-maj=15.2km s-min=10.6km az=121.0*

*IDC **19** 18:23:02.5±1.3,27.°27N×57.°92E,h0km,mb3.8/16, mbtmp3.8/17,ML4.0/1,MS3.2/2,Error ellipse: s-maj=26.9km s-min=17.7km az=179.0*

*THR **19** 18:23:03.5±0.0,27.°00N×57.°85E,h14km,ML4.0*

*TEH **19** 18:23:04.9,27.°05N×57.°99E,h60km*

*DSN **19** 18:23:04.5±2.4,26.°99N×58.°15E,h10km,ML3.4/10,Error ellipse: s-maj=36.0km s-min=14.7km az=169.0*

*OMAN **19** 18:23:06.8±0.1,26.°90N×58.°08E,h10km,mb4.3/3, ml3.7/20,Error ellipse: s-maj=1.3km s-min=0.8km az=359.0*

ISC 19 18:23:02.8±1.3**,27.°05N**±0.°03×**57.°89E**±0.°05**,h15**km±9km**, n120,σ2°07**/136**,mb3.9**/19**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.27**	**288**	Pg	**Pg**	**18 23 28.5**	**+1.2**
GENO	**Geno**	**1.57**	**283**	Pg	**Pg**	**18 23 33.1**	**+0.1**
BANOM	**Banah**	**1.82**	**232**	P	**Pg**	**18 23 37.1**	**-0.6**
BANOM				S	**Sg**	**18 24 03.4**	**+2.1**
BANOM	**Banah**	**1.82**	**232**	*e*P	**Pg**	**18 23 36.9**	**-0.8**
	SNR=37						
BANOM				S	**Sg**	**18 24 03.6**	**+2.2**
SHME	**Shamm**	**1.86**	**238**	P	**Pg**	**18 23 38.7**	**+0.2**
	SNR=14						
SHME				S	**Sg**	**18 24 07.2**	**+4.5**
SHME	**Shamm**	**1.86**	**238**	*e*P	**Pg**	**18 23 38.4**	**-0.1**
	SNR=11						
MDH	**Madha**	**2.26**	**220**	P	**Pb**	**18 23 41.6**	**-1.6**
	SNR=12						
MDH				S	**Sb**	**18 24 11.5**	**+0.5**
MDH	**Madha**	**2.26**	**220**	*e*P	**Pb**	**18 23 41.4**	**-1.9**
	SNR=12						
MASF	**Masafi**	**2.29**	**223**	P	**Pb**	**18 23 44.6**	**+0.8**
	SNR=5.8						
MASF				S	**Sg**	**18 24 14.1**	**-2.2**
MSFE	**Esma-Masafi**	**2.29**	**223**	*e*P	**Pg**	**18 23 45.0**	**-1.8**
	SNR=9.4						
UMQ	**Umm Al-Quwin**	**2.51**	**233**	P	**Pb**	**18 23 49.0**	**+1.4**
UMQ				S	**Sg**	**18 24 21.5**	**-2.2**
UOSS	**Minazif**	**2.59**	**216**	Pn	**Pn**	**18 23 46.3**	**+2.2**
UOSS	**Minazif**	**2.59**	**216**		**Pn**	**18 23 41.9**	**-2.2**
UOSS				Sn	**Sn**	**18 24 14.3**	**-1.0**
UOSS	**Minazif**	**2.59**	**216**	P	**Pb**	**18 23 46.6**	**-2.3**
UOSS				S	**Sb**	**18 24 19.2**	**-1.4**
HATD	**Hatta, Dubai**	**2.73**	**216**	P	**Pb**	**18 23 51.3**	**0.0**
HATD				S	**Sb**	**18 24 22.7**	**-1.8**
HATD	**Hatta, Dubai**	**2.73**	**216**	P	**Pb**	**18 23 50.5**	**-0.7**
CHBR	**Chabahar**	**2.74**	**121**	Pn	**Pn**	**18 23 46.7**	**+0.5**
CHBR	**Chabahar**	**2.74**	**121**	*e*Pn	**Pn**	**18 23 49.0**	**+2.8**
CHBR				IAML		18 25 11.5	
	comp=Z,140nm,1.0s						
CHMN	**Cheshme madani**	**2.81**	**354**	Pn	**Pn**	**18 23 49.0**	**+1.4**
ASHO	**Ashiyiah**	**2.88**	**215**	P	**Pb**	**18 23 52.7**	**-1.2**
ASHO				S	**Sb**	**18 24 28.5**	**-0.4**
ASHO	**Ashiyiah**	**2.88**	**215**	*e*P	**Pb**	**18 23 52.7**	**-1.2**
	SNR=18						
KRBR	**Kerman**	**3.08**	**341**	Pn	**Pn**	**18 23 53.9**	**+2.7**
KRBR	**Kerman**	**3.08**	**341**	*e*Pn	**Pb**	**18 23 56.0**	**-1.5**
KRBR				IAML		18 24 48.5	
	comp=Z,290nm,1.0s						
FAQ	**Al Faqa, Dubai**	**3.09**	**223**	P	**Pb**	**18 23 56.0**	**-1.5**
FAQ				S	**Sb**	**18 24 35.9**	**+0.8**
FAQ	**Al Faqa, Dubai**	**3.09**	**223**	P	**Pb**	**18 23 55.8**	**-1.7**
SOHO	**SOHO**	**3.15**	**203**	P	**Pn**	**18 23 53.3**	**+1.4**
SOHO				S	**Sn**	**18 24 31.8**	**+2.5**
SOHO	**SOHO**	**3.15**	**203**	*i* P	**Pn**	**18 23 53.3**	**+1.4**
	SNR=8.8						
ASUD	**Al Ashush, Dub**	**3.34**	**224**	P	**Pb**	**18 24 00.1**	**-1.6**
NGCH	**Negor - Chabah**	**3.37**	**119**	Pn	**Pn**	**18 23 54.8**	**0.0**
NGCH	**Negor - Chabah**	**3.37**	**119**	P	**Pn**	**18 23 56.6**	**+1.8**
KRM1	**Kerman Provinc**	**3.48**	**351**	Pn	**Pn**	**18 23 58.9**	**+2.3**
HOQ	**Hoqain**	**3.50**	**189**	Pn	**Pn**	**18 23 58.3**	**+1.6**
HOQ	**Hoqain**	**3.50**	**189**	P	**Pn**	**18 23 58.2**	**+1.6**
	SNR=74						
HOQ				S	**Sn**	**18 24 40.9**	**+3.2**
KHGB	**Koh Gabri**	**3.54**	**340**	Pn	**Pn**	**18 23 59.9**	**+2.6**
ALNE	**Al Ain**	**3.56**	**213**	P	**Pn**	**18 24 00.7**	**+3.2**
	SNR=6.2						
ALNE				S	**Sb**	**18 24 47.1**	**-1.3**
ALNE	**Al Ain**	**3.56**	**213**	*i* P	**Pb**	**18 24 01.6**	**-3.8**
	SNR=5.4						
WSAR	**Wadi Sarin**	**3.85**	**170**	P	**Pn**	**18 24 03.8**	**+2.3**
WSAR				S	**Sn**	**18 24 49.3**	**+2.7**
ARQ	**Araqi**	**3.90**	**199**	P	**Pn**	**18 24 06.6**	**+4.4**
	SNR=48						
ARQ				S	**Sb**	**18 24 52.6**	**-5.8**
SMDO	**Samad**	**3.98**	**178**	P	**Pn**	**18 24 05.8**	**+2.5**
	SNR=7.2						
SMDO				S	**Sn**	**18 24 52.9**	**+3.1**
SRVN	**Saravan**	**4.03**	**84**	Pn	**Pn**	**18 24 04.9**	**+0.9**
SRVN	**Saravan**	**4.03**	**84**	*i* P	**Pn**	**18 24 07.7**	**+3.7**
SRVN				IAML		18 25 25.3	
	comp=Z,26nm,1.0s						
BSY	**Bisya**	**4.33**	**188**	P	Pn	18 24 13.0	+4.8
	SNR=26						
BSY				S	**Sn**	**18 25 02.0**	**+3.5**
WBK	**Wadi Bani Khal**	**4.53**	**167**	Pn	**Pn**	**18 24 12.5**	**+1.6**
WBK	**Wadi Bani Khal**	**4.53**	**167**	P	**Pn**	**18 24 12.7**	**+1.8**
	SNR=73						
WBK				S	**Sn**	**18 25 03.9**	**+0.6**
JMDO	**Jabal Madar**	**4.67**	**178**	P	**Pn**	**18 24 16.0**	**+3.3**
JMDO				P	Pb	18 24 16.1	-8.3
NHDN	**Nehbandan**	**4.72**	**23**	Pn	**Pn**	**18 24 14.7**	**+1.2**
UMZA	**Um Al Zommool**	**4.98**	**210**	P	**Pn**	**18 24 20.6**	**+3.6**
BSRN	**Basiran**	**5.01**	**12**	*i* P	**Pn**	**18 24 20.1**	**+2.5**
BSRN				IAML		18 25 51.8	
	comp=Z,52nm,1.0s						
JLN	**Jalan Bani Buh**	**5.07**	**164**	P	**Pn**	**18 24 20.1**	**+1.8**
IMEH	**Mehriz**	**5.19**	**327**	Pn	**Pn**	**18 24 22.3**	**+2.3**
ITEG	**Tejag**	**5.87**	**7**	Pn	**Pn**	**18 24 30.7**	**+1.3**
MHTO	**MHTO**	**6.04**	**179**	P	**Pn**	**18 24 34.7**	**+3.1**
YZKH	**Yazd**	**6.04**	**332**	*i* P	**Pn**	**18 24 34.3**	**+2.6**
YZKH				IAML		18 26 39.7	
	comp=Z,19nm,1.0s						
TPRV	**Parvadeh(Tabas**	**6.05**	**350**	Pn	**Pn**	**18 24 34.1**	**+2.3**
KLNJ	**Kolanjah**	**6.78**	**307**	Pn	**Pn**	**18 24 44.6**	**+2.5**
KLNJ	**Kolanjah**	**6.78**	**307**	*i* P	**Pn**	**18 24 44.5**	**+2.5**
KLNJ				IAML		18 26 08.6	
	comp=Z,35nm,1.0s						
SHRT	**Shahrakht**	**6.89**	**17**	*e*Pn	**Pn**	**18 24 46.7**	**+3.4**
SHRT				IAML		18 26 58.5	
	comp=Z,13nm,1.0s						
IZEF	**Zefreh**	**7.56**	**322**	Pn	**Pn**	**18 24 55.0**	**+2.3**
ZNGN	**Zangian**	**7.94**	**311**	Pn	**Pn**	**18 25 00.1**	**+2.2**
HRA	**Herat**	**8.21**	**26**		**Pn**	**18 24 59.2**	**-2.4**
DOK	**Doka**	**9.08**	**203**	P	**Pn**	**18 25 15.3**	**+1.9**
SHAO	**Shalim**	**9.23**	**194**	P	**Pn**	**18 25 17.2**	**+1.8**
GTMR	**Gotvand**	**9.35**	**307**	*e*Pn	**Pn**	**18 25 19.1**	**+2.1**
GTMR				IAML		18 25 32.9	
	comp=Z,16nm,0.6s						
DMTO	**DMTO**	**9.68**	**197**	P	**Pn**	**18 25 23.4**	**+1.8**
WHFO	**Wadi Hawf**	**9.86**	**204**	P	**Pn**	**18 25 25.0**	**+1.0**
	SNR=13						
RAYN	**Ar Rayn**	**11.75**	**255**		**Pn**	**18 25 48.7**	**-1.2**
KBL	**Kabul**	**12.14**	**49**	Pn	**Pn**	**18 25 54.2**	**-1.2**
NIL	**Nilore**	**14.79**	**60**	Pn	**Pn**	**18 26 29.3**	**-2.2**
GAR	**Garm**	**15.81**	**38**	Pn	**Pn**	**18 26 45.8**	**+0.9**
GNI	**Garni**	**17.02**	**323**	Pn	**Pn**	**18 26 57.4**	**-3.0**
GURO	**Guroymak-BITLI**	**17.56**	**315**	Pn	**Pn**	**18 27 04.7**	**-2.4**
MARD	**Mardin**	**17.71**	**310**	P	**Pn**	**18 27 06.7**	**-2.2**
MARD				IAmb	IAmb	18 27 12.7	
	comp=Z,19nm,0.8s						
ASF	**Jabal al Asfar**	**18.95**	**291**	P	**Pn**	**18 27 24.9**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=81,slow=11,SNR=3.2						
ASF				S	**Sn**	**18 30 50.4**	**-5.6**
	comp=Z,0.7nm,0.4s,baz=120,slow=20,SNR=1.5						
ASF				LR	LR	18 36 24.8	
	comp=Z,64nm,20.5s,baz=290,slow=42						
	comp=Z,1.8nm,0.4s						
KK31	**Karatay Array**	**19.02**	**29**		**P**	**18 27 22.8**	**-1.2**
KKAR	**Karatay Array**	**19.02**	**29**		**P**	**18 27 22.9**	**-1.1**
ARPR	**Arapgir-MALATY**	**20.27**	**311**	P	**P**	**18 27 35.1**	**-2.7**
ARPR				IAmb	IAmb	18 27 58.2	
	comp=Z,10.0nm,1.1s						
MMAI	**Mount Meron Ar**	**20.34**	**292**	P	**P**	**18 27 40.2**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=109,slow=12,SNR=3.9						
	comp=Z,0.8nm,0.4s						
EIL	**Elat**	**20.35**	**283**	P	Pn	18 27 40.9	+0.1
	comp=Z,5.6nm,0.6s,baz=111,slow=4.6,SNR=6.8						
	comp=Z,5.6nm,0.6s						
AAK	**Ala-Archa**	**20.61**	**37**	P	**P**	**18 27 41.9**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=203,slow=15,SNR=1.8						
	comp=Z,2.3nm,0.7s						
AAK	**Ala-Archa**	**20.61**	**37**	P	**P**	**18 27 40.8**	**-0.8**
AAK				IAmb	IAmb	18 27 58.4	
	comp=Z,3.0nm,0.7s						
BOOM	**Boomskoye usch**	**21.31**	**39**	P	**P**	**18 27 48.3**	**-0.8**
BOOM				IAmb	IAmb	18 28 14.2	
	comp=Z,6.2nm,1.3s						
KDJ	**Kajisay**	**21.80**	**41**	P	**P**	**18 27 54.0**	**-0.4**
KDJ				IAmb	IAmb	18 28 02.9	
	comp=Z,5.3nm,1.0s						
BNN	**Bunyan**	**21.86**	**308**	P	**P**	**18 27 52.1**	**-3.0**
BNN				IAmb	IAmb	18 28 03.2	
	comp=Z,4.2nm,0.9s						
AB31	**Akbulak array**	**22.23**	**4**		**P**	**18 27 57.0**	**-1.7**
AB31				IAmb	IAmb	18 28 04.3	
	comp=Z,5.7nm,1.0s						
ABKAR	**Akbulak array**	**22.23**	**4**		**P**	**18 27 57.2**	**-1.5**
AKTO	**Aktyubinsk**	**23.35**	**0**	P	**P**	**18 28 10.2**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=161,slow=8.1,SNR=14						
	comp=Z,3.8nm,0.6s						
BR131	**Keskin Array S**	**23.79**	**308**	P	**P**	**18 28 12.8**	**-2.2**
BR131				IAmb	IAmb	18 28 18.4	
	comp=Z,6.4nm,1.1s						
BRTR	**Keskin Array B**	**23.79**	**308**	P	**P**	**18 28 15.6**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=120,slow=10,SNR=12						
	comp=Z,1.8nm,0.7s						
BRTR	**Keskin Array B**	**23.79**	**308**		**P**	**18 28 13.1**	**-1.9**
BORA	**Eskisehir**	**26.11**	**306**	P	**P**	**18 28 33.8**	**-2.4**
BELG	**Belogornoye**	**26.46**	**346**	P	**P**	**18 28 38.6**	**-0.3**
	comp=Z,18nm,0.7s,baz=141,slow=5.2,SNR=10						
MKAR	**Makanchi Array**	**27.54**	**38**	P	**P**	**18 28 49.6**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=229,slow=10,SNR=2.8						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**27.54**	**38**	P	**P**	**18 28 49.0**	**+0.1**
BVAR	**Borovoye Array**	**27.57**	**16**	P	**P**	**18 28 49.2**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=204,slow=6.0,SNR=4.9						
	comp=Z,1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**28.32**	**28**	P	**P**	**18 28 55.8**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=225,slow=8.3,SNR=7.0						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**28.42**	**28**	P	**P**	**18 28 55.8**	**-0.9**
KURK	**Kurchatov**	**28.42**	**28**	IAmb	IAmb	18 28 59.1	
	comp=Z,1.1nm,0.8s						
ZALV	**Zalesovo Beam**	**33.40**	**29**	P	**P**	**18 29 40.6**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=239,slow=8.9,SNR=5.4						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**33.40**	**29**	P	**P**	**18 29 38.8**	**-1.7**
GERES	**GERESS Array B**	**40.35**	**315**	P	**P**	**18 30 40.3**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=99,slow=8.1,SNR=5.2						
	comp=Z,0.8nm,0.7s						
FIA1	**FINESS Array S**	**40.46**	**337**	P	**P**	**18 30 38.0**	**-2.4**
FINES	**FINESS Array B**	**40.46**	**337**	P	**P**	**18 30 40.3**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=129,slow=11,SNR=8.4						
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**40.46**	**337**	P	**P**	**18 30 38.6**	**-1.8**
KHC	**Kasperske Hory**	**40.51**	**315**	*e*P	**P**	**18 30 43.2**	**+2.1**
TUE	**Stuetta**	**42.69**	**310**	P	**P**	**18 30 58.4**	**-0.8**
TUE				IAmb	IAmb	18 31 03.1	
	comp=Z,6.4nm,1.1s						
SENIN	**Lac Senin/Sane**	**44.08**	**310**	P	**P**	**18 31 09.2**	**-1.2**
BNI	**Bardonecchia**	**44.35**	**308**	P	**P**	**18 31 11.3**	**-1.2**
HFS	**Hagfors**	**44.63**	**330**	P	**P**	**18 31 16.7**	**+2.3**
	comp=Z,1.7nm,0.7s,baz=133,slow=10,SNR=7.0						
	comp=Z,1.7nm,0.7s						
PSI	**Prapat**	**46.06**	**114**	LR	LR	18 54 20.1	
	comp=Z,24nm,18.3s,baz=302,slow=41						
ARCES	**ARCESS Array B**	**46.50**	**345**	P	**P**	**18 31 29.8**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=139,slow=7.9,SNR=4.0						
	comp=Z,2.4nm,0.9s						
ARCES	**ARCESS Array B**	**46.50**	**345**	P	**P**	**18 31 29.0**	**0.0**
CEST	**Esterni de Car**	**48.15**	**304**	P	**P**	**18 31 40.9**	**-1.6**
ESBB	**Sonseca Array**	**52.24**	**301**	P	**P**	**18 32 12.2**	**-1.2**
ESDC	**Sonseca Array**	**52.24**	**301**	P	**P**	**18 32 14.6**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=70,slow=7.4,SNR=9.3						
	comp=Z,1.0nm,0.6s						
ESDC	**Sonseca Array**	**52.24**	**301**	P	**P**	**18 32 12.8**	**-0.6**
ESDC				IAmb	IAmb	18 32 24.7	
	comp=Z,1.4nm,1.1s						
MD01	**Midelt array s**	**53.90**	**292**	P	**P**	**18 32 25.4**	**-0.5**
LBTB	**Lobatse**	**60.41**	**214**	P	**P**	**18 33 10.9**	**-0.9**
WRA	**Warramunga Arr**	**87.52**	**114**	P	**P**	**18 35 53.7**	**+3.3**
	comp=Z,0.3nm,0.8s,baz=306,slow=4.6,SNR=2.1						
	comp=Z,0.3nm,0.8s						
ASAR	**Alice Springs**	**89.02**	**117**	P	**P**	**18 35 59.4**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=302,slow=5.4,SNR=4.4						
	comp=Z,0.3nm,0.8s						
ASAR	**Alice Springs**	**89.02**	**117**	P	**P**	**18 35 59.7**	**+2.2**

*TIR **19** 18:34:31.7,41.°72N×20.°72E,h37km,Md3.0/9,Ml3.1/4*

*SKO **19** 18:34:34.2,41.°61N×20.°80E,h6km,ML3.0*

*BEO **19** 18:34:35.2±0.5,41.°58N×20.°86E,h3km±2km,ML2.6/7*

*PDG **19** 18:34:35.4±0.7,41.°64N×20.°77E,h11km±1km,ML2.8/9, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*

*THE **19** 18:34:36.0,42.°1N±6.°×21.°1E±.°,h0km±50km,M2.5/13, MLh2.5/13*

ISC 19 18:34:34.3±1.0**,41.°58N**±0.°02×**20.°77E**±0.°02**,h9**km±9km**, n73,σ1°01**/113**,7C-4D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.47**	**177**	⇓*i*Pg	**Pg**	**18 34 44.0**	**+0.6**
OHR				*i* Sg	**Sb**	**18 34 52.0**	**+0.3**
OHR				*e*Lg	Lg	18 34 52.2	
	comp=N,475nm,0.8s						
OHR				*e*Lg	Lg	18 34 52.2	
	comp=E,818nm,0.4s						
SKO	**Skopje**	**0.64**	**52**	⇑*i*Pg	**Pg**	**18 34 46.0**	**-0.7**
SKO				*i* Sg	**Sg**	**18 34 55.4**	**+0.3**
TIR	**Tirane**	**0.72**	**252**	Pg	**Pg**	**18 34 46.3**	**-1.8**
TIR				Sg	**Sg**	**18 34 57.4**	**0.0**
TIR				AML	AML	18 35 01.1	
	comp=E,1.0nm,0.3s						
TIR				AML	AML	18 35 04.5	
	comp=E,1.0nm,0.4s						
TIR				AMd		18 35 42.7	
KBN	**Korca**	**0.95**	**179**	Pg	**Pg**	**18 34 51.8**	**

MMB	Musomishta	2.24	90	P	Pn	18 35 12.2	+0.6	
MMB	Musomishta	2.24	90	*i* Pn	Pb	18 35 14.4	-0.5	
TETR	Tetrakomo, Epi	2.26	170	P	Pb	18 35 14.3	-1.1	
RUDO	Rudo	2.29	334	*e*Pn	Pb	18 35 14.6	-1.1	
GRUS	Gruza	2.31	359	*e*Pn	Pn	18 35 14.1	+1.6	
GRUS				*e*Sn	Sb	18 35 43.8	-1.0	
ZAGS	Zajecar	2.48	25	*e*Pn	Pb	18 35 17.3	-1.7	
BBLS	Lazi&#263i	2.50	337	*e*Pn	Pn	18 35 16.1	+0.9	
STON	Ston	2.62	301	*e*Pn	Pn	18 35 19.0	+2.3	
TRUS	Trudelj	2.66	354	*e*Pn	Pb	18 35 20.9	-1.2	
TSLK	Tsoukalades, L	2.75	182	P	Pn	18 35 20.8	+2.3	
LKD2	Lefkada island	2.79	182	Pn	Pn	18 35 19.5	+0.4	
LKD2				Sn	Sn	18 35 55.1	+2.2	
LKD2				AMd		18 36 57.5		
NOCI	Noci	2.90	255	Pn	Pn	18 35 19.4	-1.3	
NOCI				Sn	Sn	18 35 55.2	-0.5	
NOCI				AML	AML	18 36 12.9		
	comp=E,0.2nm,0.4s							
NOCI				AMd		18 37 00.6		
TEKS	Tekeris	3.11	343	*e*Pn	Pn	18 35 24.3	+0.8	
PLVB	Pleven	3.38	56	⇑P	Pn	18 35 22.2	-4.9	
TIP	Timpagrande	3.89	233	⇑P	Pn	18 35 30.7	-3.6	
GZR	Gura Zlata	4.08	20	⇑P	Pn	18 35 37.8	+0.8	
LOT	Lotru	4.44	28	⇓P	Pn	18 35 40.7	-1.3	
ARR	Arges	4.72	35	⇓P	Pn	18 35 40.0	-5.7	
VOIR		4.96	37	⇑P	Pn	18 35 41.6	-7.4	
MARR	Marisel-Cluj	5.37	18	⇑P	Pn	18 35 52.6	-2.1	
DRGR		5.40	14	⇑P	Pn	18 35 54.6	-0.5	
MODS	Modra-Piesok	7.23	341	*e*PN	Pn	18 36 13.2	-6.9	

IDC ***19*** *18:49:46.4±1.7,27.02N×58.03E, h0km, mb3.7/15, mbtmp3.8/16, ML4.0/1, MS3.8/3, Error ellipse: s-maj=38.1km s-min=14.4km az=2.0*
OMAN ***19*** *18:49:50.2±0.8,26.96N×58.06E, h10km, mb4.0/3, ml3.5/15, Error ellipse: s-maj=8.7km s-min=5.7km az=157.0*
DSN ***19*** *18:49:50.0±2.5,26.99N×58.07E, h10km, ML3.2/10, Error ellipse: s-maj=36.2km s-min=13.8km az=171.0*
TEH ***19*** *18:49:51.1,27.03N×57.89E, h60km*
ISC 19 18:49:47.4±3.4, 27.07N±0.05×58.03E±0.05, h3km±23km, n72, σ1$47/80, mb3.7/13, MS3.6/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	1.38	286	Pg	Pn	18 50 14.0	+0.4
GENO	Geno	1.69	282	Pg	Pn	18 50 18.7	+0.7
BANOM	Banah	1.93	234	P	Pn	18 50 22.5	+1.3
BANOM				S	Sb	18 50 48.5	+0.7
BANOM	Banah	1.93	234	P	Pn	18 50 22.4	+1.3
BANOM				S	Sb	18 50 48.9	+1.2
SHME	Shamm SNR=21	1.98	240	P	Pn	18 50 24.0	+2.2
SHME	Shamm	1.98	240	P	Pn	18 50 23.4	+1.6
SHME				S	Sn	18 50 47.4	+0.4
MDH	Madha SNR=6.4	2.35	222	P	Pn	18 50 26.7	-0.2
MDH				S	Sn	18 50 57.0	+0.6
MDH	Madha	2.35	222	P	Pn	18 50 26.6	-0.4
MASF	Masafi	2.38	225	P	Pn	18 50 29.6	+2.2
MSFE	Esma-Masafi	2.39	225	P	Pn	18 50 29.5	+1.9
CHBR	Chabahar	2.64	123	Pn	Pb	18 50 34.2	-1.2
UOSS	Minazif	2.68	218	P	Pn	18 50 32.4	+0.9
UOSS				S	Sn	18 51 03.7	-0.8
HATD	Hatta, Dubai	2.81	218	P	Pn	18 50 35.7	+2.4
CHMN	Cheshme madani	2.82	351	Pn	Pn	18 50 35.5	+1.8
ASHO	Ashiyiah SNR=17	2.97	217	P	Pn	18 50 37.7	+2.2
ASHO				S	Sn	18 51 13.5	+1.9
ASHO	Ashiyiah	2.97	217	P	Pn	18 50 37.3	+1.8
NAZ	Nazwa, Dubai	2.97	226	P	Pn	18 50 37.6	+2.0
KRBR	Kerman	3.11	339	Pn	Pn	18 50 39.4	+1.7
FAQ	Al Faqa, Dubai	3.19	224	P	Pn	18 50 40.1	+1.6
FAQ				P	Pn	18 50 40.1	+1.6
FAQ				S	Sn	18 51 18.6	+1.5
FAQ	Al Faqa, Dubai	3.19	224	P	Pn	18 50 39.5	+1.0
SOHO	SOHO	3.22	205	P	Pn	18 50 38.6	-0.3
SOHO				S	Sn	18 51 17.6	-0.2
SOHO	SOHO	3.22	205	P	Pn	18 50 38.3	-0.6
NGCH	Negor - Chabah	3.27	121	Pn	Pn	18 50 42.3	+2.8
NGCH	Negor - Chabah	3.27	121	P	Pn	18 50 41.3	+1.8
LAR1	LAR	3.31	281	Pn	Pn	18 50 39.7	-0.5
KRM1	Kerman Provinc	3.49	349	Pn	Pn	18 50 45.1	+2.3
HOQ	Hoqain	3.53	191	Pn	Pn	18 50 43.6	+0.3
HOQ	Hoqain SNR=20	3.53	191	P	Pn	18 50 43.5	+0.2
KHGB	Koh Gabri	3.57	338	Pn	Pn	18 50 45.3	+1.4
ALNE	Al Ain	3.64	215	P	Pn	18 50 47.5	+2.8
ALNE	Al Ain	3.64	215	P	Pn	18 50 46.8	+2.1
WSAR	Wadi Sarin SNR=47	3.85	172	P	Pn	18 50 49.2	+1.6
SRVN	Saravan	3.90	84	Pn	Pn	18 50 52.4	+4.0
ARQ	Araqi SNR=28	3.96	201	P	Pn	18 50 52.5	+3.4
ARQ				S	Sn	18 51 37.4	+1.3
SMDO	Samad SNR=22	3.99	180	P	Pn	18 50 50.9	+1.3
ZRDN	Zarand Kerman	4.10	342	Pn	Pn	18 50 53.2	+1.9
LMD1	Lamerd	4.34	275	Pn	Pn	18 50 54.8	+0.4
BSY	Bisya SNR=9.1	4.37	190	P	Pn	18 50 57.4	+2.6
WBK	Wadi Bani Khal	4.52	169	Pn	Pn	18 50 58.1	+1.2
WBK	Wadi Bani Khal SNR=23	4.52	169	P	Pn	18 50 58.1	+1.2
NHDN	Nehbandan	4.66	22	Pn	Pn	18 51 01.0	+2.2
JLN	Jalan Bani Buh SNR=23	5.05	165	P	Pn	18 51 05.3	+1.1
IMEH	Mehriz	5.24	326	Pn	Pn	18 51 08.0	+1.0
MHTO	MHTO	6.05	181	P	Pn	18 51 20.1	+2.2
AFRZ	Afriz	6.39	7	Pn	Pn	18 51 24.1	+1.4
SHMA	Al-Shehemyia SNR=6.5	6.45	261	P	Pn	18 51 24.3	+1.0
KLNJ	Kolanjah	6.87	306	Pn	Pn	18 51 29.5	+0.1
SMRA	Abu-Samra	6.89	252	P	Pn	18 51 30.4	+1.0
DOK	Doka	9.15	204	P	Pn	18 52 00.9	+0.5
SHAO	Shalim	9.27	194	P	Pn	18 52 02.7	+0.6
DMTO	DMTO	9.73	198	P	Pn	18 52 08.7	+0.2
WHFO	Wadi Hawf SNR=9.5	9.92	204	P	Pn	18 52 10.1	-0.9
ABTO	Aybut	10.61	205	P	Pn	18 52 20.0	-0.5
ASF	Jabal al Asfar 0.5nm,0.3s,baz=67,slow=7.7,SNR=2.6	19.06	291	P	P	18 54 10.1	-0.9
ASF				S	Sn	18 57 46.7	+1.0
	0.8nm,0.5s,baz=252,slow=13,SNR=1.2 1.4nm,0.4s						
MMAI	Mount Meron Ar 2.0nm,0.7s,baz=96,slow=15,SNR=1.6 2.0nm,0.7s	20.45	292	P	P	18 54 26.0	-0.2
EIL	Elat 4.0nm,0.7s,baz=127,slow=5.1,SNR=2.8 4.0nm,0.7s	20.47	283	P	P	18 54 26.9	+0.6
BRTR	Keskin Array B 1.5nm,0.7s,baz=123,slow=11,SNR=9.8 1.5nm,0.7s	23.88	308	P	P	18 55 01.8	-0.6
MKAR	Makanchi Array 0.6nm,0.9s,baz=230,slow=11,SNR=2.3 0.6nm,0.9s	27.45	38	P	P	18 55 35.0	+0.4
BVAR	Borovoye Array 0.6nm,0.5s,baz=221,slow=8.6,SNR=3.4 0.6nm,0.5s	27.52	16	P	P	18 55 35.3	+0.2
KURBB	Kurchatov Arra 0.2nm,0.6s,baz=225,slow=9.1,SNR=5.0 0.2nm,0.6s	28.24	28	P	P	18 55 40.6	-1.0
ARTI	Arti comp=Z,139nm,18.2s,baz=304,slow=41	29.30	0	LR	LR	19 09 57.8	
BRDH	Bariadhala comp=Z,86nm,18.4s,baz=262,slow=42	30.75	91	LR	LR	19 11 12.7	
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=222,slow=11,SNR=2.8 0.6nm,0.4s	33.32	29	P	P	18 56 26.4	+0.1
GERES	GERESS Array B 0.6nm,0.7s,baz=104,slow=10,SNR=4.9 0.6nm,0.7s	40.43	315	P	P	18 57 27.3	+0.2
FINES	FINESS Array B 2.1nm,0.6s,baz=127,slow=7.4,SNR=8.5 2.1nm,0.6s	40.49	337	P	P	18 57 26.8	-0.4
HFS	Hagfors 2.3nm,0.8s,baz=130,slow=13,SNR=6.3 2.3nm,0.8s	44.68	330	P	P	18 58 01.3	0.0
ARCES	ARCESS Array B 2.9nm,1.1s,baz=129,slow=8.5,SNR=1.4 2.9nm,1.1s	46.52	345	P	P	18 58 14.4	-1.4
HILR	Hailar Array B	51.78	47	LR	LR	19 25 45.4	
	comp=Z,152nm,19.4s,baz=90,slow=42						
EKA	Eskdalemuir Ar 1.4nm,0.7s,baz=100,slow=7.6,SNR=2.2 1.4nm,0.7s	51.91	320	P	P	18 58 56.6	-0.6
ESDC	Sonseca Array 0.6nm,0.5s,baz=70,slow=7.5,SNR=5.9 0.6nm,0.5s	52.34	301	P	P	18 58 60.0	-0.8
ILAR	Eielson Array 0.2nm,0.6s,baz=335,slow=5.6,SNR=2.1 0.2nm,0.6s	86.42	10	P	P	19 02 31.2	+0.2
WRA	Warramunga Arr 0.3nm,0.8s,baz=303,slow=4.7,SNR=2.4 0.3nm,0.8s	87.41	114	P	P	19 02 35.6	-1.0

IDC ***19*** *19:01:03.8±6.0,25.64N×123.08E, h212km±70km, mb3.2/5, mbtmp3.7/7, Error ellipse: s-maj=81.7km s-min=16.4km az=64.0*
JMA ***19*** *19:01:06.5±0.2,25.N±2.×123.1E±0.6, h218km±2km, MV3.9/23, NW OFF ISHIGAKIJIMA IS*
ISC 19 19:01:04.1±0.8, 25.72N±0.09×123.14E±0.05, h219km±9km, n33, σ1$61/46, mb3.3/5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.26	185	*e*P	Pn	19 01 38.2	+0.5
YOJ				*e*S	S	19 02 02.4	-1.4
JYNG	Yonagunijimaku	1.28	188	*e*S	S	19 02 02.3	-1.7
IRIF	Iriomote-Funau	1.48	159	*e*P	Pn	19 01 39.6	+0.1
IRIF				*e*S	S	19 02 05.2	-1.6
JISG	Ishigakijimahi	1.55	136	P	Pn	19 01 40.5	+0.5
JISG				*e*S	S	19 02 07.2	-0.7
JIJ	Ishigaki jima	1.63	146	*e*P	Pn	19 01 40.9	+0.2
JIJ				*e*S	S	19 02 07.6	-1.4
JKRS	Kuro-shima	1.68	152	*e*P	Pn	19 01 41.6	+0.5
JKRS				*e*S	S	19 02 08.1	-1.7
HATJ	Hateruma jima	1.77	160	*e*P	Pn	19 01 42.6	+0.7
HATJ				*e*S	S	19 02 09.3	-2.0
JTJ	Tarama	1.78	127	*e*P	Pn	19 01 43.2	+1.2
JTJ				*e*S	S	19 02 10.9	-0.5
YHNB	Yeheng	1.91	237	P	Pn	19 01 44.3	+1.0
YHNB	Yeheng	1.91	237	S	S	19 02 12.6	-1.1
JIRB	Irabujima	2.05	115	*e*P	Pn	19 01 45.6	+1.0
JIRB				*e*S	S	19 02 15.9	0.0
JIKM	Ikemajima	2.07	112	*e*P	Pn	19 01 46.5	+1.7
JIKM				*e*S	S	19 02 16.6	+0.3
NACB	Ninganchiao	2.08	223	P	Pn	19 01 44.7	-0.2
NACB	Ninganchiao	2.08	223	S	S	19 02 15.0	-1.6
JMJ	Miyako jima 2	2.15	114	P	Pn	19 01 47.8	+2.2
JMJ2	Miyako jima3	2.21	116	P	Pn	19 01 47.8	+1.6
JMJ2				*e*S	S	19 02 18.8	-0.1
JOGS	Gusukube	2.27	114	*e*P	Pn	19 01 48.5	+1.7
SSLB	Suanglung	2.76	226	P	Pn	19 01 52.7	+0.5
SSLB	Suanglung	2.76	226	S	S	19 02 27.9	-1.7
YULB	Yu-li	2.86	216	P	Pn	19 01 52.4	-0.9
TPUB	Ta-pu	3.32	224	P	Pn	19 01 58.6	0.0
TWGBT	Beinan	3.45	213	P	Pn	19 01 59.4	-0.6
JNTH	Nagotoyohara	4.46	79	*e*P	Pn	19 02 13.0	+0.7
JNTH				*e*S	S	19 03 03.0	-3.0
JIH	Iheya	4.53	72	*e*S	S	19 03 04.8	-2.5
JOW	Kunigami 15nm,0.2s,baz=136,slow=19,SNR=6.7	4.75	75	P	Pn	19 02 16.2	+0.4
JOW				S	S	19 03 06.9	-5.4
	26nm,0.3s,baz=116,slow=24,SNR=12						
JOW	Kunigami	4.75	75	P	Pn	19 02 16.5	+0.7
JOW	Kunigami	4.75	75	*e*P	Pn	19 02 16.2	+0.4
JOW				*e*S	S	19 03 07.9	-4.4
KSRS	Korea Array 0.6nm,0.7s,baz=198,slow=12,SNR=5.5	12.38	18	P	Pn	19 03 54.1	+0.9
MKAR	Makanchi Array 0.5nm,0.4s,baz=98,slow=9.1,SNR=10 0.5nm,0.4s	38.51	314	P	P	19 08 05.7	+0.4
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=104,slow=6.1,SNR=1.9 0.3nm,0.3s	39.96	325	P	P	19 08 17.7	+0.7
WRA	Warramunga Arr 0.3nm,0.4s,baz=348,slow=8.7,SNR=6.2 0.3nm,0.4s	46.68	165	P	P	19 09 10.4	-0.7
ASAR	Alice Springs 0.7nm,1.1s,baz=349,slow=5.4,SNR=2.8 0.7nm,1.1s	50.19	167	P	P	19 09 38.2	+0.3
FINES	FINESS Array B 4.4nm,1.1s,baz=66,slow=4.8,SNR=4.5 4.4nm,1.1s	71.02	330	P	P	19 11 58.5	+0.7

IDC ***19*** *19:13:22.5±0.9,38.19S×93.71W, h0km, mb4.0/8, mbtmp4.0/8, MS3.9/26, Error ellipse: s-maj=34.0km s-min=21.5km az=80.0*
NEIC ***19*** *19:13:23.1±1.3,38.18S±0.09×94.0W±0.2, h10km±1km, mb4.4/19, Error ellipse: s-maj=25.0km s-min=7.1km az=237.0*
GCMT ***19*** *19:13:25.1±0.4,38.22S±0.04×93.81W±0.03, h14km±1km, MW4.8/80, Moment Tensor Solution. s13,c15; s80,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.72±.16; $M_{\theta\theta}$0.18±.09; $M_{\phi\phi}$ 1.54±.12; $M_{r\theta}$0.88±.28; $M_{r\phi}$-0.30±.06; $M_{\theta\phi}$-0.73±.27; Best double couple: M=2.00300×10^{16} NP1:ϕ_s182.00000°, δ32.00000°, λ-62.00000°. NP2: ϕ_s329.00000°, δ62.00000°, λ-107.00000°. Principal axes: T 1.8500, Plg15.0000°, Azm72.0000°; N 0.3070, Plg15.0000°, Azm338.0000°; P -2.1560, Plg69.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 19:13:25.5±0.9, 38.1S±0.1×93.8W±0.2, h25km, n63, σ0$98/35, mb4.4/17, MS4.0/24, 5C, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez baz=244,slow=74,SNR=2785	12.76	75	T	T	19 29 42.6	
H03S1	Juan Fernandez baz=244,slow=74,SNR=5096	12.78	75	T	T	19 29 41.9	
H03S3	Juan Fernandez baz=244,slow=74,SNR=4685	12.78	75	T	T	19 29 42.4	
H03N2	Juan Fernandez baz=250,slow=72,SNR=630	12.92	73	T	T	19 29 53.0	
H03N3	Juan Fernandez baz=250,slow=72,SNR=768	12.92	73	T	T	19 29 51.0	
H03N1	Juan Fernandez baz=250,slow=72,SNR=1576	12.94	73	T	T	19 29 47.9	
RPN	Rapa Nui comp=Z,576nm,19.4s,baz=136,slow=30	17.06	305	LR	LR	19 21 58.1	
PLCA	Paso Flores comp=Z,493nm,19.6s,baz=261,slow=31	18.13	106	LR	LR	19 22 49.1	
ZON	Zonda	21.58	80	P	P	19 18 14.2	+0.8
ZON				IAmb	IAmb	19 18 17.9	
	comp=Z,16nm,1.2s						
GO02	Mina Guanaco	24.22	65	P	P	19 18 40.5	-0.1
NNA	Nana comp=Z,274nm,18.0s,baz=182,slow=31	30.09	35	LR	LR	19 28 44.1	
LPAZ	La Paz comp=Z,10nm,1.1s,baz=194,slow=5.4,SNR=17	31.32	53	P	P	19 19 45.6	+1.0
LPAZ				LR	LR	19 29 26.2	
	comp=Z,224nm,21.3s,baz=230,slow=31 comp=Z,10nm,1.1s						
LPAZ	La Paz	31.32	53		P	19 19 45.6	+1.0
LPAZ				IAmb	IAmb	19 19 49.5	
	comp=Z,6.6nm,0.9s						
PMSA	Palmer Station comp=Z,102nm,19.0s,baz=328,slow=28	31.91	156	LR	LR	19 28 29.5	
CPUP	Villa Florida comp=Z,0.2nm,0.4s,baz=180,slow=5.1,SNR=2.9	32.80	80	P	P	19 19 57.0	+0.2
CPUP				LR	LR	19 31 44.0	
	comp=Z,75nm,19.1s,baz=104,slow=34 comp=Z,0.2nm,0.4s						
PLTB	Pedras Altas	33.34	91	P	P	19 20 01.2	-0.4
ATAH	Atahualpa comp=Z,287nm,19.1s,baz=234,slow=30	33.84	28	LR	LR	19 30 31.5	
SIV	San Ignacio comp=Z,121nm,21.9s,baz=278,slow=34	36.23	62	LR	LR	19 34 09.1	
AQDB	Aquidauana AQDB	37.26	73	P	P IAmb	19 20 35.3 19 20 39.5	0.0
	comp=Z,6.9nm,0.9s						
COHC	Cochancay	37.89	24	P	P	19 20 41.1	+0.4
PTLB	Pontes e Lacer	37.95	63	P	P	19 20 41.6	+0.5
OTAV	Otavalo OTAV	40.69	24	P IAmb	P IAmb	19 21 04.3 19 21 07.8	-0.3
	comp=Z,9.3nm,1.2s						
SPB	Sao Paulo	41.91	84	P	P	19 21 13.8	-0.3
FLOC	Florencia FLOC	42.90	27	P IAmb	P IAmb	19 21 22.8 19 21 30.6	+0.6
	comp=Z,5.7nm,0.6s						

RUSC	La Rusia	47.83	28	P	P	19 22 01.4	-0.3	
JTS	Las Juntas de comp=Z,124nm,20.8s,baz=190,slow=30	48.85	12	LR	LR	19 37 33.5		
SDV	Santo Domingo comp=Z,258nm,19.5s,baz=236,slow=34	51.51	30	LR	LR	19 42 34.3		
SDV	Santo Domingo comp=Z,5.7nm,1.2s	51.51	30	P IAmb	P IAmb	19 22 29.4 19 22 33.7	0.0	
QSPA	South Pole Qui comp=Z,1.7nm,0.7s,baz=128,slow=6.5,SNR=5.9	52.11	180	P	P	19 22 34.5	+1.1	
QSPA				LR	LR	19 41 16.6		
	comp=Z,41nm,20.2s,baz=138,slow=32 comp=Z,1.7nm,0.7s							
QSPA	South Pole Qui comp=Z,2.2nm,0.8s	52.11	180	P IAmb	P IAmb	19 22 33.6 19 22 39.4	+0.3	
VNA3	Neumayer Olymp comp=Z,4.9nm,0.8s	52.57	156	⇑P	P	19 22 35.4	-1.1	
PPT	Papeete comp=Z,150nm,18.1s,baz=118,slow=29	52.60	277	LR	LR	19 38 34.8		
BAUV	El Baul	52.62	33	P	P	19 22 37.9	+0.4	
VNA1	Neumayer--Stat comp=Z,6.8nm,1.0s	53.12	155	⇑P	P	19 22 40.8	+0.2	
VNA2	Neumayer--Watz comp=Z,3.7nm,0.8s,baz=262,slow=7.1	53.36	156	⇑P	P	19 22 42.2	0.0	
SNAA	Sanae comp=Z,60nm,0.8s	54.62	157	⇑P	P	19 22 50.0	-1.6	
SNAA	Sanae comp=Z,2.4nm,0.8s,baz=260,slow=4.9,SNR=13 comp=Z,2.4nm,0.8s	54.62	157	P	P	19 22 50.7	-0.9	
SNAA	Sanae	54.62	157	P	P	19 22 50.2	-1.3	
CMIG	Matias Romero comp=Z,71nm,19.9s,baz=37,slow=30	54.92	359	LR	LR	19 40 32.2		
VNDA	Vanda comp=Z,34nm,18.9s,baz=126,slow=32	56.13	195	LR	LR	19 42 50.1		
TROLL	Troll, Antarti comp=Z,330nm,0.7s	56.13	158	⇑P	P	19 23 02.6	+0.1	
MDP	Montagnes des comp=Z,156nm,19.4s,baz=156,slow=34	57.49	51	LR	LR	19 45 25.8		
RAR	Rarotonga comp=Z,68nm,21.4s,baz=112,slow=28	58.63	267	LR	LR	19 40 32.7		
CAMR	Camarioca CAMR	61.96	13	P IAmb	P IAmb	19 23 40.3 19 23 52.7	-2.9	
	comp=Z,689nm,1.0s							
URZ	Urewera comp=Z,166nm,19.8s,baz=112,slow=30	67.13	239	LR	LR	19 47 22.2		
TX31	Lajitas Ar. Si TX31	67.73	351	P IAmb	P IAmb	19 24 20.4 19 24 38.1	-0.5	
	comp=Z,4.8nm,1.4s							
TXAR	Lajitas Array comp=Z,0.9nm,0.9s,baz=163,slow=9.2,SNR=4.8	67.73	351	P	P	19 24 21.4	+0.5	
TXAR				LR	LR	19 46 01.6		
	comp=Z,51nm,20.7s,baz=56,slow=29 comp=Z,0.9nm,0.9s							
TXAR	Lajitas Array	67.73	351	P	P	19 24 20.2	-0.6	
RAO	Raoul Island comp=Z,141nm,21.3s,baz=58,slow=28	68.33	249	LR	LR	19 45 50.4		
ANMO	Albuquerque comp=Z,98nm,18.5s,baz=142,slow=32	73.64	349	LR	LR	19 52 59.6		
NVAR	Mina Array Bea comp=Z,1.0nm,0.8s,baz=169,slow=8.6,SNR=4.3 comp=Z,1.0nm,0.8s	79.45	341	P	P	19 25 31.9	+2.2	
NVAR	Mina Array Bea	79.45	341	P	P	19 25 30.1	+0.4	
ELK	Elko comp=Z,0.6nm,0.6s,baz=175,slow=16,SNR=4.0 comp=Z,0.6nm,0.6s	80.90	344	P	P	19 25 38.8	+1.3	
ELK	Elko	80.90	344	P	P	19 25 38.2	+0.7	
PDAR	Pinedale Array comp=Z,0.9nm,0.7s,baz=158,slow=5.7,SNR=11 comp=Z,0.9nm,0.7s	81.77	348	P	P	19 25 43.5	+1.4	
PDAR	Pinedale Array	81.77	348	P	P	19 25 42.7	+0.6	
SADO	Sadowa comp=Z,191nm,18.7s,baz=112,slow=32	83.56	10	LR	LR	19 58 07.7		
BOSA	Boshof comp=Z,52nm,18.6s,baz=360,slow=32	92.51	130	LR	LR	20 01 57.2		
DBIC	Dimbokro comp=Z,69nm,18.7s,baz=348,slow=34	93.22	84	LR	LR	20 06 15.9		
TSUM	Tsumeb comp=Z,39nm,18.2s,baz=337,slow=33	94.05	118	LR	LR	20 04 57.7		
LBTB	Lobatse comp=Z,58nm,19.1s,baz=334,slow=32	95.31	127	LR	LR	20 04 18.1		
HNR	Honiara comp=Z,42nm,18.6s,baz=212,slow=30	96.78	253	LR	LR	20 02 35.2		
KBZ	Khabaz comp=Z,2.2nm,0.8s,baz=302,slow=3.7,SNR=4.9	147.07	66	PKPbc	PKPab	19 33 06.9	-0.5	

IDC 19 19:18:48.6±2.0, 1.88N×63.28E, h0km, mb3.7/4, mbtmp3.7/4, MS3.4/8, Error ellipse: s-maj=94.0km s-min=29.2km az=49.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele comp=Z,94nm,21.4s,baz=334,slow=29	18.17	72	LR	LR	19 27 39.3	
OPO	Ambohidratompo comp=Z,30nm,18.8s,baz=186,slow=33	25.75	217	LR	LR	19 32 51.6	
BRDH	Bariadhala comp=Z,103nm,18.2s,baz=337,slow=38	34.44	51	LR	LR	19 40 25.1	
PSI	Prapat comp=Z,24nm,19.6s,baz=316,slow=33	35.63	88	LR	LR	19 38 35.7	
CMAR	Chiang Mai Arr comp=Z,8.4nm,18.0s,baz=255,slow=35	38.65	62	LR	LR	19 41 08.2	
BRTR	Keskin Array B 0.3nm,0.5s,baz=140,slow=11,SNR=2.9 0.3nm,0.5s	46.32	328	P	P	19 27 15.5	-1.0
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=210,slow=11,SNR=2.6 0.4nm,0.4s	54.85	15	P	P	19 28 20.7	+0.1
KIRV	Kirov comp=Z,120nm,19.9s,baz=284,slow=36	57.59	351	LR	LR	19 52 56.2	
WRA	Warramunga Arr 1.4nm,0.9s,baz=290,slow=5.3,SNR=6.6 1.4nm,0.9s	72.90	111	P	P	19 30 20.4	+0.2
ASAR	Alice Springs 0.6nm,0.8s,baz=289,slow=5.8,SNR=7.1 0.6nm,0.8s	73.08	115	P	P	19 30 20.9	-0.4
MJAR	Matsushiro Arr comp=Z,45nm,18.0s,baz=75,slow=39	76.79	53	LR	LR	20 08 17.6	
PMG	Port Moresby comp=Z,53nm,18.2s,baz=110,slow=37	84.27	100	LR	LR	20 10 55.3	
TXAR	Lajitas Array 1.4nm,0.9s,baz=29,slow=2.8,SNR=11	146.54	339	PKPbc	PKPbc	19 38 32.9	0.0

IDC ***19*** *19:36:36.8±1.9, 10.18S×154.66E, h0km, mb3.9/6, mbtmp3.9/6, MS3.3/12, Error ellipse: s-maj=56.0km s-min=25.6km az=113.0*
ISC 19 19:36:39.6±1.8, 10.2S±0.2×154.7E±0.3, h18km, n14, σ0$58/6, mb3.8/6, MS3.1/9, D'Entrecasteaux Islands region

| Code | Station Name | Δ°

SONM	**Songino Array**	**71.85**	**328**	P	**P**	**19 48 01.9**	**+0.4**
	0.8nm,0.9s,baz=142,slow=7.2,SNR=4.0						
	0.8nm,0.9s						
ILAR	**Eielson Array**	**86.46**	**21**	P	**P**	**19 49 20.5**	**-0.4**
	0.6nm,0.8s,baz=232,slow=5.6,SNR=2.7						
ILAR				LR	LR	20 19 47.1	
	comp=Z,44nm,22.0s,baz=308,slow=30						
	0.6nm,0.8s						

IDC ***19*** *19:40:42.9±11.0, 26.79N×58.06E, h0km, mb3.7/6, mbtmp3.7/6, MS3.5/1, Error ellipse: s-maj=206.9km s-min=69.9km az=145.0*
DSN ***19*** *19:40:47.1±2.0, 27.01N×58.20E, h10km, ML3.0/8, Error ellipse: s-maj=29.1km s-min=11.1km az=173.0*
OMAN ***19*** *19:40:47.9±0.1, 26.99N×58.06E, h10km, mb4.0/3, ml3.3/17, Error ellipse: s-maj=2.0km s-min=1.4km az=31.0*
TEH ***19*** *19:40:49.7, 26.98N×57.92E, h60km*

ISC 19 19:40:46.6±1.9, 27.06N±0.05×57.96E±0.06, h6km±11km, n53, σ1s44/64, mb3.6/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**1.32**	**287**	Pg	**Pn**	**19 41 12.9**	**+1.3**
GENO	**Geno**	**1.63**	**283**	Pg	**Pg**	**19 41 17.3**	**-0.5**
BANOM	**Banah**	**1.87**	**233**	P	**Pb**	**19 41 21.0**	**-0.1**
BANOM				S	**Sg**	**19 41 46.7**	**0.0**
BANOM	**Banah**	**1.87**	**233**	P	**Pb**	**19 41 20.8**	**-0.3**
BANOM				S	**Sg**	**19 41 47.6**	**+0.9**
SHME	**Shamm**	**1.91**	**239**	P	**Pb**	**19 41 22.3**	**+0.5**
	SNR=19						
SHME				S	**Sg**	**19 41 48.2**	**+0.1**
SHME	**Shamm**	**1.91**	**239**	P	**Pb**	**19 41 22.0**	**+0.1**
SHME				S	**Sg**	**19 41 48.5**	**+0.4**
MDH	**Madha**	**2.30**	**221**	P	**Pn**	**19 41 25.8**	**+0.7**
MDH				S	**Sn**	**19 41 55.1**	**+1.5**
MDH	**Madha**	**2.30**	**221**	P	**Pn**	**19 41 25.2**	**+0.2**
MASF	**Masafi**	**2.33**	**224**	P	**Pb**	**19 41 28.4**	**-0.7**
	SNR=6.2						
MASF				S	**Sb**	**19 41 58.0**	**-0.1**
MSFE	**Esma-Masafi**	**2.34**	**224**	P	**Pb**	**19 41 28.2**	**-0.9**
UOSS	**Minazif**	**2.63**	**217**	P	**Pn**	**19 41 30.4**	**+0.8**
UOSS				S	**Sn**	**19 42 02.6**	**+0.8**
CHBR	**Chabahar**	**2.69**	**122**	Pn	**Pn**	**19 41 31.8**	**+1.4**
HATD	**Hatta, Dubai**	**2.77**	**217**	P	**Pn**	**19 41 32.4**	**+1.0**
HATD				S	**Sn**	**19 42 06.8**	**+1.6**
HATD	**Hatta, Dubai**	**2.77**	**217**	P	**Pn**	**19 41 33.7**	**+2.2**
CHMN	**Cheshme madani**	**2.82**	**353**	Pn	**Pn**	**19 41 34.8**	**+2.3**
ASHO	**Ashiyiah**	**2.92**	**216**	P	**Pn**	**19 41 36.1**	**+2.5**
	SNR=16						
ASHO	**Ashiyiah**	**2.92**	**216**	P	**Pn**	**19 41 35.3**	**+1.7**
KRBR	**Kerman**	**3.10**	**340**	Pn	**Pn**	**19 41 39.2**	**+2.8**
SOHO	**SOHO**	**3.18**	**204**	P	**Pn**	**19 41 37.0**	**-0.1**
SOHO	**SOHO**	**3.18**	**204**	P	**Pn**	**19 41 37.0**	**-0.1**
NGCH	**Negor - Chabah**	**3.31**	**120**	Pn	**Pn**	**19 41 40.4**	**+1.4**
KRM1	**Kerman Provinc**	**3.49**	**350**	Pn	**Pn**	**19 41 44.1**	**+2.5**
HOQ	**Hoqain**	**3.51**	**190**	Pn	**Pn**	**19 41 41.9**	**+0.3**
HOQ	**Hoqain**	**3.51**	**190**	P	**Pn**	**19 41 42.0**	**+0.3**
	SNR=64						
HOQ				S	**Sn**	**19 42 24.0**	**+0.5**
KHGB	**Koh Gabri**	**3.56**	**339**	Pn	**Pn**	**19 41 45.6**	**+3.1**
ALNE	**Al Ain**	**3.59**	**214**	P	**Pn**	**19 41 45.0**	**+2.2**
	SNR=7.7						
ALNE	**Al Ain**	**3.59**	**214**	P	**Pn**	**19 41 45.2**	**+2.4**
WSAR	**Wadi Sarin**	**3.85**	**171**	P	**Pn**	**19 41 47.7**	**+1.4**
ARQ	**Araqi**	**3.93**	**200**	P	**Pn**	**19 41 50.3**	**+2.8**
	SNR=31						
SRVN	**Saravan**	**3.96**	**84**	Pn	**Pn**	**19 41 50.7**	**+2.7**
SMDO	**Samad**	**3.98**	**179**	P	**Pn**	**19 41 49.7**	**+1.5**
	SNR=13						
SMDO				S	**Sn**	**19 42 36.0**	**+0.7**
BSY	**Bisya**	**4.35**	**189**	P	**Pn**	**19 41 55.5**	**+2.2**
	SNR=20						
WBK	**Wadi Bani Khal**	**4.52**	**168**	Pn	**Pn**	**19 41 56.5**	**+0.9**
WBK	**Wadi Bani Khal**	**4.52**	**168**	P	**Pn**	**19 41 56.3**	**+0.7**
	SNR=38						
WBK				S	**Sn**	**19 42 48.8**	**+0.3**
JMDO	**Jabal Madar**	**4.67**	**178**	P	**Pn**	**19 41 59.9**	**+2.3**
JMDO				S	**Sn**	**19 42 52.4**	**+0.3**
NHDN	**Nehbandan**	**4.69**	**22**	Pn	**Pn**	**19 42 00.2**	**+2.2**
UMZA	**Um Al Zommool**	**5.02**	**211**	P	**Pn**	**19 42 04.3**	**+1.9**
JLN	**Jalan Bani Buh**	**5.06**	**165**	P	**Pn**	**19 42 03.8**	**+0.8**
	SNR=32						
IMEH	**Mehriz**	**5.22**	**327**	Pn	**Pn**	**19 42 07.4**	**+2.0**
MHTO	**MHTO**	**6.04**	**180**	P	**Pn**	**19 42 18.5**	**+2.0**
KLNJ	**Kolanjah**	**6.83**	**307**	Pn	**Pn**	**19 42 27.9**	**+0.3**
DOK	**Doka**	**9.11**	**204**	P	**Pn**	**19 42 58.9**	**+0.3**
SHAO	**Shalim**	**9.25**	**194**	P	**Pn**	**19 43 01.0**	**+0.5**
DMTO	**DMTO**	**9.70**	**197**	P	**Pn**	**19 43 07.1**	**+0.3**
WHFO	**Wadi Hawf**	**9.88**	**204**	P	**Pn**	**19 43 08.8**	**-0.5**
	SNR=11						
ABTO	**Aybut**	**10.58**	**205**	P	**Pn**	**19 43 18.4**	**-0.4**
KVAR	**Kislovodsk Arr**	**20.89**	**328**	LR	LR	19 54 14.2	
	comp=Z,124nm,20.3s,baz=268,slow=38						
BRTR	**Keskin Array B**	**23.83**	**308**	P	**P**	**19 45 59.5**	**-1.1**
	0.9nm,0.7s,baz=117,slow=7.6,SNR=7.1						
	0.9nm,0.7s						
GERES	**GERESS Array B**	**40.40**	**315**	P	**P**	**19 48 24.8**	**-0.6**
	0.4nm,0.7s,baz=105,slow=10,SNR=4.2						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**40.48**	**337**	P	**P**	**19 48 25.2**	**-0.6**
	1.1nm,0.7s,baz=116,slow=7.9,SNR=5.7						
	1.1nm,0.7s						
HFS	**Hagfors**	**44.66**	**330**	P	**P**	**19 49 00.1**	**+0.4**
	0.5nm,0.4s,baz=129,slow=10.0,SNR=4.4						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**46.51**	**345**	P	**P**	**19 49 13.4**	**-0.9**
	4.6nm,1.0s,baz=142,slow=8.6,SNR=2.6						
	4.6nm,1.0s						
ESDC	**Sonseca Array**	**52.29**	**301**	P	**P**	**19 49 57.9**	**-1.1**
	0.3nm,0.5s,baz=67,slow=6.7,SNR=5.5						
	0.3nm,0.5s						

DJA ***19*** *19:54:33.4±0.3, 0.7S×12.3E±°, h90km±7km, M3.9/19, mB4.6/1, mb4.1/10, MLv3.8/19, Mw(mB)3.8/1*

ISC 19 19:54:32.5±1.2, 0.22S±0.08×123.34E±0.07, h100km, n26, σ1s27/28, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.99**	**215**	P	**Pn**	**19 54 53.0**	**+0.1**
LUWI	**Luwuk**	**0.99**	**215**	S	**Sn**	**19 55 08.3**	**+0.1**
LUWI	**Luwuk**	**0.99**	**215**	P	**Pn**	**19 54 52.9**	**+0.1**
LUWI				S	**Sn**	**19 55 08.2**	**+0.1**
KMSI	**Cibinong**	**1.02**	**39**	P	**Pn**	**19 54 54.8**	**+1.7**
MRSI	**Marisa**	**1.56**	**296**	P	**Pn**	**19 54 59.1**	**-0.5**
MRSI				S	**Sn**	**19 55 18.1**	**-2.0**
APSI	**Ampana**	**1.82**	**248**	P	**Pn**	**19 55 02.8**	**0.0**
TOLI2	**Tolitoli**	**2.88**	**297**	P	**Pn**	**19 55 16.3**	**-0.4**
SANI	**Sanana**	**3.21**	**124**	P	**Pn**	**19 55 20.1**	**-1.0**
SANI	**Sanana**	**3.21**	**124**	P	**Pn**	**19 55 20.1**	**-1.0**
MPSI	**Mapaga**	**3.49**	**279**	P	**Pn**	**19 55 26.4**	**+1.6**
KDI	**Kendari**	**3.78**	**191**	P	**Pn**	**19 55 29.2**	**+0.4**
TNTI	**Ternate**	**4.14**	**76**	P	**Pn**	**19 55 35.4**	**+1.7**
TTSI	**Tana Toraja**	**4.50**	**231**	P	**Pn**	**19 55 38.8**	**+0.3**
NLAI	**Namlea**	**4.80**	**129**	P	**Pn**	**19 55 44.1**	**+1.5**
SPSI	**Sidrap Palu**	**5.15**	**224**	P	**Pn**	**19 55 47.9**	**+0.6**
	0.1nm727nm25nm,0.5s						
BNSI	**Bone**	**5.26**	**218**	P	**Pn**	**19 55 49.7**	**+0.9**
	0.1nm23nm,0.7s						
BBSI	**Bau Bau**	**5.29**	**188**	P	**Pn**	**19 55 50.9**	**+1.7**
	0.1nm22nm,0.6s						
KAPI	**Kappang**	**5.96**	**217**	P	**Pn**	**19 55 58.9**	**+0.6**
BKSI	**Bulukumba**	**6.00**	**212**	P	**Pn**	**19 55 59.4**	**+0.6**
	0.0nm6.4nm,0.6s						
BSSI	**Bau Bau, Buton**	**6.53**	**206**	P	**Pn**	**19 56 07.6**	**+1.5**
	28nm,0.7s						
MYLDM	**Lahad Datu**	**7.22**	**318**	P	**Pn**	**19 56 17.5**	**+2.0**
FAKI	**Fak Fak**	**9.30**	**107**	P	**Pn**	**19 56 43.2**	**-0.5**
FAKI	**Fak Fak**	**9.30**	**107**	P	**Pn**	**19 56 43.4**	**-0.3**
SOEI	**Soe**	**9.51**	**174**	P	**Pn**	**19 56 44.6**	**-2.2**
PLAI	**Plampang**	**10.19**	**213**	P	**Pn**	**19 56 53.5**	**-2.3**
RKPI	**Ransiki, Papua**	**10.91**	**97**	P	**Pn**	**19 57 07.0**	**+1.3**

GCG 19 20:02:08.2±0.9, 13.68N×91.07W, h35km±999km, MD3.5, ML3.3, MW2.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.73**	**18**	*eP*	Pn	20 02 22.1	0.0
FG16	**Alotenango, Sa**	**0.80**	**43**	*eP*	Pn	20 02 23.6	+0.5
STG8	**El Palmar, Qui**	**0.81**	**340**	*eP*	Pn	20 02 28.7	+5.4
PCG5	**San Vicente Pa**	**0.86**	**52**	*eP*	Pn	20 02 22.9	-1.0
SOKI	**Kika Raxquin**	**1.18**	**344**	*eP*	Pn	20 02 29.6	+1.1
SOKI				*eS*	Sn	20 02 45.9	+2.3
APG	**El Apazote**	**1.44**	**24**	*eP*	Pn	20 02 33.3	+1.3

IDC ***19*** *20:05:42.5±3.5, 19.88N×72.64E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=86.5km s-min=33.7km az=78.0*
NDI ***19*** *20:05:44.7±1.9, 19.97N×72.78E, h12km±14km, ML3.5, MW3.5*

ISC 19 20:05:44.9±1.0, 19.97N±0.06×72.85E±0.09, h10km, n10, σ1s17/15, mb3.3/5, Southern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POO	**Poona**	**1.72**	**146**	*eP*	**Pn**	**20 06 16.0**	**+1.1**
POO				*eS*	**Sb**	**20 06 38.3**	**0.0**
POO				IAML		20 06 38.8	
	comp=N,416nm,0.2s						
POO				IAML		20 06 41.4	
	comp=E,664nm,0.2s						
BHV	**Bhavnagar**	**1.89**	**340**	*eP*	**Pn**	**20 06 16.8**	**-0.4**
BHV				*eS*	**Sn**	**20 06 40.1**	**-1.0**
BHV				IAML		20 06 45.4	
	comp=N,255nm,0.4s						
BHV				IAML		20 06 46.0	
	comp=E,378nm,0.4s						
KAD	**Karad**	**2.94**	**154**	*eP*	**Pn**	**20 06 31.6**	**-0.1**
KAD				*eS*	**Sn**	**20 07 06.6**	**-0.5**
KAD				IAML		20 07 18.4	
	comp=E,340nm,0.3s						
KAD				IAML		20 07 19.1	
	comp=N,206nm,0.3s						
LATR	**Latur**	**3.83**	**113**	*eP*	**Pn**	**20 06 43.2**	**-0.8**
LATR				*eS*	**Sn**	**20 07 26.2**	**-3.0**
LATR				IAML		20 07 42.3	
	comp=E,136nm,0.3s						
LATR				IAML		20 07 42.4	
	comp=N,239nm,0.5s						
AKL	**Akola**	**3.98**	**79**	*eP*	**Pn**	**20 06 47.1**	**+1.0**
AKL				*eS*	**Sn**	**20 07 32.5**	**-0.2**
AKL				IAML		20 07 45.1	
	comp=N,408nm,0.3s						
AKL				IAML		20 07 46.0	
	comp=E,125nm,0.2s						
CMAR	**Chiang Mai Arr**	**24.68**	**89**	P	**P**	**20 11 07.2**	**+0.9**
	comp=E,0.7nm,0.8s,baz=280,slow=10,SNR=9.5						
	comp=E,0.7nm,0.8s						
MKAR	**Makanchi Array**	**27.85**	**14**	P	**P**	**20 11 34.9**	**+0.3**
	comp=E,0.4nm,0.9s,baz=192,slow=7.4,SNR=1.6						
	comp=E,0.4nm,0.9s						
SONM	**Songino Array**	**38.83**	**36**	P	**P**	**20 13 10.9**	**+0.7**
	comp=E,0.4nm,0.7s,baz=243,slow=9.5,SNR=3.1						
	comp=E,0.4nm,0.7s						
WRA	**Warramunga Arr**	**72.11**	**120**	P	**P**	**20 17 08.8**	**-1.2**
	comp=E,0.2nm,0.7s,baz=302,slow=6.6,SNR=1.3						
	comp=E,0.2nm,0.7s						
ASAR	**Alice Springs**	**73.63**	**123**	P	**P**	**20 17 19.7**	**+0.7**
	comp=E,0.3nm,0.6s,baz=301,slow=5.4,SNR=6.2						
	comp=E,0.3nm,0.6s						

IDC ***19*** *20:18:39.9±1.2, 41.08S×89.97W, h0km, mb3.8/5, mbtmp3.8/6, ML3.9/1, MS4.0/24, Error ellipse: s-maj=41.3km s-min=24.7km az=91.0*
GCMT ***19*** *20:18:42.0±0.3, 41.20S±0.01×90.48W±0.02, h12km, MW4.9/108, Moment Tensor Solution. s28,c30; s108,c145; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.81±.10; Mθθ 0.14±.09; Mϕϕ 0.66±.11; Mrθ-0.57±.25; Mθϕ-2.69±.06; Mϕr-1.11±.27; Best double couple: M☐3.05400×10¹⁶ NP1:ϕs96.00000°, δ65.00000°, λ-163.00000°. NP2:ϕs359.00000°, δ75.00000°, λ-26.00000°. Principal axes: T 3.1600, Plg7.0000°, Azm49.0000°; N -0.2130, Plg60.0000°, Azm151.0000°; P -2.9470, Plg29.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 19 20:18:41.3±1.1, 41.1S±0.1×89.8W±0.2, h10km, n39, σ1s36/10, mb4.1/8, MS4.1/22, 4C, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**11.30**	**53**	T	T	20 33 43.8	
	baz=227,slow=73,SNR=2729						
H03S1	**Juan Fernandez**	**11.30**	**53**	T	T	20 33 37.1	
	baz=227,slow=73,SNR=3792						
H03S3	**Juan Fernandez**	**11.31**	**53**	T	T	20 33 36.9	
	baz=227,slow=73,SNR=3540						
H03N3	**Juan Fernandez**	**11.56**	**52**	T	T	20 33 54.6	
	baz=228,slow=71,SNR=1278						
H03N2	**Juan Fernandez**	**11.57**	**52**	T	T	20 33 51.9	
	baz=228,slow=71,SNR=2509						
H03N1	**Juan Fernandez**	**11.58**	**52**	T	T	20 34 06.2	
	baz=228,slow=71,SNR=2228						
PLCA	**Paso Flores**	**14.57**	**95**	LR	LR	20 26 33.7	
	comp=Z,447nm,20.3s,baz=260,slow=32						
CFA	**Coronel Fontan**	**19.76**	**68**	P	**Pn**	**20 23 13.2**	**+0.4**
	0.3nm,0.3s,baz=221,slow=14,SNR=3.9						
CFA				LR	LR	20 29 42.9	
	comp=Z,317nm,19.7s,baz=337,slow=33						
	0.7nm,0.4s						
RPN	**Rapa Nui**	**21.29**	**305**	LR	LR	20 29 02.8	
	comp=Z,588nm,21.5s,baz=153,slow=29						
PMSA	**Palmer Station**	**27.92**	**157**	LR	LR	20 32 33.4	
	comp=Z,372nm,19.2s,baz=300,slow=30						
CPUP	**Villa Florida**	**30.58**	**71**	LR	LR	20 36 13.8	
	comp=Z,114nm,18.8s,baz=102,slow=34						
LPAZ	**La Paz**	**31.04**	**43**	P	**P**	**20 25 00.3**	**+0.3**
	0.4nm,0.5s,baz=213,slow=7.5,SNR=5.2						
LPAZ				LR	LR	20 34 56.3	
	comp=Z,356nm,18.5s,baz=220,slow=31						
	0.4nm,0.5s						
NNA	**Nana**	**31.18**	**25**	LR	LR	20 34 14.3	
	comp=Z,244nm,20.9s,baz=188,slow=30						
SIV	**San Ignacio**	**35.27**	**53**	LR	LR	20 38 33.8	
	comp=Z,388nm,21.7s,baz=268,slow=34						
ATAH	**Atahualpa**	**35.35**	**20**	LR	LR	20 36 33.9	
	comp=Z,505nm,20.9s,baz=310,slow=30						
ROSC	**El Rosal**	**47.89**	**21**	LR	LR	20 45 33.4	
	comp=Z,151nm,18.4s,baz=216,slow=34						
VNA3	**Neumayer Olymp**	**48.56**	**155**	⇑P	**P**	**20 27 21.8**	**-2.4**
	comp=Z,2.2nm,0.8s						
VNA1	**Neumayer--Stat**	**49.10**	**154**	⇑P	**P**	**20 27 26.1**	**-2.1**
	comp=Z,4.6nm,1.0s						
QSPA	**South Pole Qui**	**49.10**	**180**	P	**P**	**20 27 30.0**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=132,slow=1.0,SNR=3.9						
QSPA				LR	LR	20 45 27.4	
	comp=Z,113nm,19.1s,baz=129,slow=33						
	comp=Z,0.5nm,0.3s						
VNA2	**Neumayer--Watz**	**49.34**	**155**	⇑P	**P**	**20 27 30.2**	**0.0**
	comp=Z,2.7nm,0.9s,baz=278,slow=8.7						
SNAA	**Sanae**	**50.64**	**156**	⇑P	**P**	**20 27 40.4**	**+0.3**
	comp=Z,47nm,1.0s						
SNAA	**Sanae**	**50.64**	**156**	P	**P**	**20 27 40.2**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=246,slow=5.1,SNR=6.2						
SNAA				LR	LR	20 46 03.7	
	comp=Z,123nm,18.9s,baz=269,slow=32						
	comp=Z,2.4nm,1.0s						
JTS	**Las Juntas de**	**51.36**	**6**	LR	LR	20 44 09.8	
	comp=Z,208nm,19.7s,baz=180,slow=30						
SDV	**Santo Domingo**	**52.81**	**24**	LR	LR	20 48 30.2	
	comp=Z,216nm,20.4s,baz=224,slow=34						
VNDA	**Vanda**	**53.99**	**195**	LR	LR	20 45 59.2	
	comp=Z,118nm,21.5s,baz=40,slow=30						
MDP	**Montagnes des**	**57.20**	**46**	LR	LR	20 50 50.2	
	comp=Z,166nm,21.4s,baz=211,slow=34						
SJG	**San Juan**	**62.90**	**25**	LR	LR	20 55 26.3	
	comp=Z,139nm,18.8s,baz=162,slow=35						
TXAR	**Lajitas Array**	**71.27**	**347**	P	**P**	**20 30 00.9**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=160,slow=7.7,SNR=6.3						
	comp=Z,1.1nm,1.0s						
TKL	**Tuckaleechee C**	**76.61**	**5**	LR	LR	20 59 06.0	
	comp=Z,106nm,18.2s,baz=129,slow=32						
ANMO	**Albuquerque**	**77.24**	**346**	LR	LR	20 57 21.9	
	comp=Z,124nm,21.1s,baz=153,slow=30						
PDAR	**Pinedale Array**	**85.40**	**346**	P	**P**	**20 31 18.0**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=150,slow=4.5,SNR=4.3						
	comp=Z,0.6nm,0.9s						
SADO	**Sadowa**	**86.05**	**8**	LR	LR	21 04 19.5	
	comp=Z,162nm,18.4s,baz=130,slow=32						
BBTS	**Babate**	**87.39**	**68**	LR	LR	21 09 52.2	
	comp=Z,113nm,18.4s,baz=81,slow=35						
TSUM	**Tsumeb**	**89.95**	**116**	LR	LR	21 07 08.3	
	comp=Z,31nm,18.6s,baz=350,slow=32						
LBTB	**Lobatse**	**91.06**	**125**	LR	LR	21 10 14.3	
	comp=Z,50nm,18.1s,baz=262,slow=34						
HNR	**Honiara**	**98.70**	**249**	LR	LR	21 08 22.3	
	comp=Z,78nm,18.6s,baz=198,slow=30						
H11S2	**WAKE ISLAND Hyl**	**11.94**	**276**	T	T	22 38 07.2	
	baz=126						
H11S1	**WAKE ISLAND Hyl**	**11.96**	**276**	T	T	22 38 00.6	
	baz=126						
H11S3	**WAKE ISLAND Hyl**	**11.96**	**276**	T	T	22 38 02.2	
	baz=126						

IDC ***19*** *20:22:20.8±6.3, 4.35N×122.69E, h489km±91km, mb3.1/10, mbtmp4.0/11, Error ellipse: s-maj=45.9km s-min=18.9km az=62.0*
NEIC ***19*** *20:22:25.9±2.7, 4.3N±0.1×122.9E±0.2, h555km±12km, mb4.1/15, Error ellipse: s-maj=24.8km s-min=15.4km az=66.0*

ISC 19 20:22:24.8±0.6, 4.36N±0.08×123.0E±0.1, h550km, n34, σ1s24/35, mb3.7/18, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**4.56**	**281**	P	**P**	**20 23 52.4**	**+1.3**
LUWI	**Luwuk**	**5.37**	**182**	P	**P**	**20 24 00.6**	**+2.7**
LUWI					**S**	**20 25 13.9**	**+0.1**
TNTI	**Ternate**	**5.63**	**129**	P	**P**	**20 23 59.6**	**-0.6**
FAKI	**Fak Fak**	**11.73**	**128**	P	**P**	**20 24 59.5**	**-1.2**
SOEI	**Soe**	**14.08**	**175**	P	**P**	**20 25 25.0**	**0.0**
BATI	**Baumata**	**14.48**	**177**	P	**P**	**20 25 26.6**	**-2.5**
	11nm,0.6s,baz=287,slow=0.9,SNR=4.1						
MTN	**Manton Dam**	**18.90**	**155**	P	**P**	**20 26 11.4**	**+0.4**
MTN				IAmb	IAmb	20 26 16.0	
	comp=Z,18nm,1.4s						
KNRA	**Kununurra**	**20.71**	**164**	P	**P**	**20 26 27.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**22.46**	**173**	P	**P**	**20 26 41.8**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=355,slow=11,SNR=1.3						
	comp=Z,0.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**22.46**	**173**	P	**P**	**20 26 41.3**	**-1.8**
JOW	**Kunigami**	**22.91**	**12**	P	**P**	**20 26 48.4**	**+1.3**
WB0	**Warramunga Arr**	**26.46**	**155**	P	**P**	**20 27 18.7**	**+0.1**
WB0				IAmb	IAmb	20 27 59.6	
	comp=Z,7.0nm,1.4s						
WRAB	**Tennant Creek**	**26.59**	**156**	P	**P**	**20 27 20.0**	**+0.3**
WRAB				IAmb	IAmb	20 27 20.3	
	comp=Z,3.5nm,0.3s						
WRA	**Warramunga Arr**	**26.60**	**156**	P	**P**	**20 27 19.8**	**0.0**
	comp=Z,1.4nm,0.4s,baz=331,slow=10.0,SNR=51						
	comp=Z,1.4nm,0.4s						
AS31	**Alice Springs**	**29.81**	**160**	P	**P**	**20 27 49.0**	**+1.2**
AS31				IAmb	IAmb	20 28 32.5	
	comp=Z,1.9nm,1.5s						
ASAR	**Alice Springs**	**29.82**	**160**	P	**P**	**20 27 48.9**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=340,slow=7.6,SNR=31						
	comp=Z,1.1nm,0.3s						
ASAR	**Alice Springs**	**29.82**	**160**	P	**P**	**20 27 48.7**	**+0.9**
CTAO	**Charters Tower**	**33.35**	**138**	P	**P**	**20 28 17.0**	**-1.0**
CTAO				IAmb	IAmb	20 28 33.7	
	comp=Z,13nm,1.5s						
BBOO	**Buckleboo**	**38.99**	**162**	P	**P**	**20 29 05.5**	**+1.2**
BBOO				IAmb	IAmb	20 29 46.3	
	comp=Z,18nm,1.3s						
STKA	**Stephens Creek**	**40.15**	**155**	P	**P**	**20 29 14.7**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=328,slow=16,SNR=1.8						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**45.61**	**344**	P	**P**	**20 29 55.1**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=144,slow=3.2,SNR=4.2						
	comp=Z,0.3nm,0.3s						
MK31	**Makanchi Array**	**54.96**	**327**	P	**P**	**20 31 04.8**	**+0.5**
MKAR	**Makanchi Array**	**54.96**	**327**	P	**P**	**20 31 04.8**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=120,slow=7.9,SNR=25						
	comp=Z,0.8nm,0.3s						
MKAR	**Makanchi Array**	**54.96**	**327**	PcP	**PcP**	**20 31 55.6**	**-2.2**
MAKZ	**Makanchi**	**55.14**	**327**	P	**P**	**20 31 05.7**	**+0.1**
MAKZ				IAmb	IAmb	20 31 07.7	
	comp=Z,3.4nm,1.0s						
KDJ	**Kajisay**	**55.43**	**320**	P	**P**	**20 31 09.1**	**+1.2**
KDJ				IAmb	IAmb	20 31 11.8	
	comp=Z,4.3nm,0.9s						
PETK	**Petropavlovsk-**	**56.33**	**24**	P	**P**	**20 31 15.7**	**+2.0**
	comp=Z,17nm,1.2s,baz=222,slow=7.7,SNR=3.6						
	comp=Z,17nm,1.2s						
ZALV	**Zalesovo Beam**	**58.39**	**335**	P	**P**	**20 31 25.6**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=186,slow=5.8,SNR=2.3						
	comp=Z,0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**59.24**	**329**	P	**P**	**20 31 33.3**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=140,slow=6.1,SNR=7.1						
	comp=Z,0.5nm,0.3s						
KURK	**Kurchatov**	**59.25**	**329**	P	**P**	**20 31 33.0**	**-0.5**
KURK				IAmb	IAmb	20 31 33.8	
	comp=Z,2.1nm,0.4s						
KKAR	**Karatay Array**	**60.26**	**318**	P	**P**	**20 31 40.6**	**+0.1**
BVAR	**Borovoye Array**	**64.79**	**328**	P	**P**	**20 32 09.

PLAI Plampang 5.82 49 P Pn 20 28 50.7 +0.2
6.0nm6µm518nm,0.8s
SMRI Semarang 6.26 333 Pn 20 28 54.6 -2.0
SMRI Semarang 6.26 333 P Pn 20 28 56.1 -0.5
SMRI Semarang 6.26 333 P Pn 20 28 57.1 +0.5
1.5nm4µm190nm,0.8s
WBSI Waikabubak, Su 6.68 64 P Pn 20 29 02.6 +0.2
2µm5µm465nm,0.7s
KPJI Karang Pucung 6.83 320 P Pn 20 29 05.2 +0.7
1.4nm4µm296nm,0.5s
WSI Waingapu 7.48 67 P Pn 20 29 13.9 +0.6
BASI Baing, Sumba 7.53 72 P Pn 20 29 14.8 +0.8
BBJI Bungbulang 7.60 312 P Pn 20 29 13.5 -1.6
XMI Christmas Isla 7.79 286 P Pn 20 29 14.3 -3.3
CNJI Cibinong 8.09 311 P Pn 20 29 20.4 -1.3
1µm110nm,1.0s
SKJI Sukabumi 8.71 310 P Pn 20 29 29.6 -0.7
5µm428nm,0.9s
DBJI Dramaga 8.87 313 P Pn 20 29 33.5 +1.0
2µm118nm,0.8s
BBKI Banjar Baru 9.27 10 P Pn 20 29 39.1 +1.1
BSSI Bau Bau, Buton 9.60 48 P Pn 20 29 43.5 +1.0
3µm184nm,0.5s
MMRI Maumere 9.65 66 Pn 20 29 43.3 +0.2
MMRI Sn Sn 20 31 26.1 -5.5
MMRI Maumere 9.65 66 P Pn 20 29 45.1 +2.0
MMRI Maumere 9.65 66 P Pn 20 29 44.3 +1.2
KAPI Kappang 9.91 40 Pn Pn 20 29 47.8 +1.0
16nm,0.3s,baz=191,slow=8.8,SNR=44
KAPI Sn Sn 20 31 31.7 -6.6
7.9nm,0.3s,baz=246,slow=20,SNR=7.9
KAPI LR LR 20 33 39.8
comp=Z,785nm,21.8s,baz=204,slow=38
28nm,0.3s
KAPI Kappang 9.91 40 Pn 20 29 46.7 -0.1
KAPI Kappang 9.91 40 P Pn 20 29 48.0 +1.2
BKSI Bulukumba 9.93 43 P Pn 20 29 47.8 +0.9
1µm125nm,0.8s
GIRL Giralia 9.96 175 Pn Pn 20 29 44.3 -3.0
MBWA Marble Bar 10.44 145 Pn 20 29 51.4 -2.6
MBWA Marble Bar 10.44 145 P Pn 20 29 52.4 -1.6
BATI Baumata 10.44 78 Pn Pn 20 29 55.7 +1.7
30nm,0.3s,baz=267,slow=7.1,SNR=29
BATI Sn Sn 20 31 44.2 -6.9
85nm,0.3s,baz=339,slow=18,SNR=13
BATI LR LR 20 33 52.5
comp=Z,673nm,22.0s,baz=314,slow=38
BATI Baumata 10.44 78 P Pn 20 29 54.8 +0.8
BNSI Bone 10.61 40 P Pn 20 29 59.0 +2.7
900nm89nm,1.3s
SPSI Sidrap Palu 10.75 37 P Pn 20 29 59.4 +1.2
54nm,1.0s
PSA00 Pilbara Seismi 10.83 146 Pn 20 29 57.2 -2.2
PSA00 Pilbara Seismi 10.83 146 Pn 20 29 56.2 -3.1
PSA00 Pilbara Seismi 10.83 146 P Pn 20 29 57.7 -1.7
SOEI Soe 11.13 76 Pn 20 30 04.5 +0.9
SOEI Soe 11.13 76 P Pn 20 30 05.8 +2.2
SOEI Soe 11.13 76 P Pn 20 30 04.2 +0.6
3µm343nm,0.9s
KASI Kota Agung 11.23 308 P Pn 20 30 03.6 -1.2
1µm94nm,1.1s
TTSI Tana Toraja 11.53 34 P Pn 20 30 11.7 +2.8
2µm60nm,1.1s
BBSI Bau Bau 11.60 53 P Pn 20 30 12.2 +2.4
1µm102nm,0.8s
MTKI Muara Teweh, K 11.76 8 P Pn 20 30 13.0 +1.0
42nm,0.7s
LWLI Liwa 11.88 309 P Pn 20 30 12.3 -1.6
3µm149nm,0.7s
MDSI Maura Dua 12.14 311 P Pn 20 30 15.9 -1.4
53nm,1.0s
FITZ Fitzroy Crossi 13.05 116 Pn Pn 20 30 29.3 -0.5
12nm,0.3s,baz=292,slow=8.0,SNR=296
FITZ Sn Sn 20 32 41.6 -14
17nm,0.3s,baz=360,slow=19,SNR=9.8
FITZ LR LR 20 35 29.5
comp=Z,916nm,21.0s,baz=308,slow=37
FITZ Fitzroy Crossi 13.05 116 Pn 20 30 28.0 -1.8
FITZ Fitzroy Crossi 13.05 116 P Pn 20 30 29.1 -0.7
PCI Palu 13.36 29 P Pn 20 30 34.8 +0.9
KSI Kapahiang 13.88 309 P Pn 20 30 40.0 -1.1
2µm220nm,0.9s
MASI Maura Aman, Be 14.48 310 P Pn 20 30 47.4 -1.9
2µm267nm,1.0s
MPSI Mapaga 14.48 27 P Pn 20 30 50.2 +0.9
MEEK Meekatharra 14.76 161 P Pn 20 30 50.2 -2.9
LUWI Luwuk 14.88 40 Pn Pn 20 30 53.8 -1.0
SBUM Sibu 15.06 356 Pn 20 30 56.3 -0.8
KNRA Kununurra 15.28 103 Pn 20 30 59.8 -0.2
TOLI2 Tolitoli 15.57 29 Pn 20 31 04.7 +0.9
TOLI2 Tolitoli 15.57 29 P Pn 20 31 06.4 +2.5
MRSI Marisa 15.62 34 P Pn 20 31 05.3 +0.8
KRJI Kerinci 15.75 311 P Pn 20 31 04.7 -1.6
240nm,0.8s
SANI Sanana 16.40 51 P Pn 20 31 16.3 +1.7
PPSI Pulau Pagai 16.44 306 P Pn 20 31 13.5 -1.5
2µm164nm,0.8s
MORW Morawa 16.52 172 Pn 20 31 10.5 -5.4
NLAI Namlea 16.55 57 P Pn 20 31 16.9 +0.4
779nm46nm,0.7s
KMSI Cibinong 16.89 40 P Pn 20 31 23.2 +2.4
3µm345nm,0.8s
MYKOM Kota Tinggi 17.16 326 Pn 20 31 24.7 +0.5
DRS Darwin Rock St 17.17 91 P Pn 20 31 26.0 +1.7
AAI Ambon 17.21 60 P P 20 31 27.2 +0.8
MTN Manton Dam 17.39 93 P Pn 20 31 27.6 +0.6
MTN IAmb IAmb 20 31 32.5
comp=Z,71nm,0.6s
BKNI Bangkinang 17.75 316 P Pn 20 31 30.3 -1.2
BKNI IAmb IAmb 20 31 41.5
comp=Z,109nm,1.3s
BLDU Ballidu 18.13 171 P Pn 20 31 33.9 -2.3
SAUI Saumlaki 18.30 77 P Pn 20 31 36.5 -1.7
MYLDM Lahad Datu 18.47 17 P P 20 31 36.8 -3.4
MYLDM IAmb IAmb 20 31 48.6
comp=Z,64nm,1.2s
MYLDM Lahad Datu 18.47 17 P P 20 31 41.3 +1.1
KLBR Kellerberrin 19.27 168 P P 20 31 48.1 -0.9
TNTI Ternate 19.31 47 P P 20 31 46.5 -3.1
MUN Mundaring 19.40 173 P P 20 31 49.3 -1.1
NWAO Narrogin (SRO) 20.48 171 P Pn 20 32 04.2 -0.1
comp=Z,14nm,1.1s,baz=2.9,slow=12,SNR=1.8
NWAO S S 20 35 36.8 -15
comp=Z,14nm,0.5s,baz=24,slow=20,SNR=3.8
NWAO LR LR 20 40 36.8
comp=Z,938nm,18.2s,baz=350,slow=38
comp=Z,14nm,1.1s
NWAO Narrogin (SRO) 20.48 171 P P 20 32 02.4 +0.2
GSI Gunungsitoli 20.90 311 P P 20 32 05.5 -1.3
GSI IAmb IAmb 20 32 24.3
comp=Z,55nm,1.1s
RPSI Rantau Prapat 20.91 316 P P 20 32 04.9 -2.0
RPSI Rantau Prapat 20.91 316 Pn 20 32 09.0 -0.4
IPM Ipoh 20.96 324 P P 20 32 05.0 -2.5
IPM IAmb IAmb 20 32 19.6
comp=Z,45nm,1.0s
PSI Prapat 20.98 316 P P 20 32 09.0 +1.1
comp=Z,1.9nm,0.3s,baz=163,slow=17,SNR=6.7
PSI LR LR 20 41 29.8
comp=Z,610nm,20.5s,baz=132,slow=40
comp=Z,1.9nm,0.3s
FAKI Fak Fak 21.10 64 P P 20 32 06.6 -2.4
FAKI IAmb IAmb 20 32 22.3
comp=Z,60nm,1.0s
FAKI Fak Fak 21.10 64 P P 20 32 10.5 +1.5
WB0 Warramunga Arr 21.43 112 P P 20 32 12.7 +0.2
WB0 IAmb IAmb 20 32 23.6
comp=Z,89nm,0.8s
WRA Warramunga Arr 21.43 112 P P 20 32 14.3 +1.8
comp=Z,38nm,0.9s,baz=285,slow=11,SNR=135
WRA S S 20 35 59.9 -11
comp=Z,17nm,0.8s,baz=282,slow=24,SNR=6.0
WRA LR LR 20 41 22.8
comp=Z,473nm,18.6s,baz=257,slow=39
comp=Z,38nm,0.9s
WRA Warramunga Arr 21.43 112 P P 20 32 13.8 +1.2
WRAB Tennant Creek 21.43 112 P P 20 32 13.3 +0.7
WRAB IAmb IAmb 20 32 23.2
comp=Z,64nm,0.7s
WRAB Tennant Creek 21.43 112 P P 20 32 14.5 +1.9
WR8 Warramunga Arr 21.57 112 P P 20 32 15.2 +1.1
WR8 IAmb IAmb 20 32 17.7
comp=Z,93nm,0.9s
KULM Kulim 21.83 324 P P 20 32 13.7 -3.2
AS31 Alice Springs 22.39 122 P P 20 32 22.2 -0.6

ASAR Alice Springs 22.39 122 P P 20 32 25.1 +2.3
comp=Z,24nm,0.8s,baz=299,slow=9.6,SNR=244
ASAR S S 20 36 25.7 -3.3
comp=Z,19nm,0.9s,baz=292,slow=23,SNR=8.2
ASAR LR LR 20 41 03.0
comp=Z,643nm,21.8s,baz=294,slow=37
comp=Z,24nm,0.8s
ASAR Alice Springs 22.39 122 P P 20 32 23.4 +0.6
FORT Forrest 22.59 145 P P 20 32 24.8 -0.2
FORT IAmb IAmb 20 32 32.7
comp=Z,28nm,0.8s
DAV Davao City (W) 23.09 33 LR LR 20 42 51.5
comp=Z,295nm,18.2s,baz=198,slow=40
LHMI Lhok Sumawe 24.10 317 P P 20 32 41.0 +0.8
LHMI IAmb IAmb 20 33 00.8
comp=Z,54nm,1.0s
DLV Lat 24.92 349 P P 20 32 48.2 +0.4
QIS Mount Isa 26.36 111 P P 20 33 03.0 +2.3
TGY Tagaytay City 27.65 16 LR LR 20 45 39.1
comp=Z,107nm,20.3s,baz=172,slow=40
COEN Coen 29.08 96 P P 20 33 25.6 +0.4
COEN IAmb IAmb 20 34 24.8
comp=Z,14nm,0.8s
COEN Coen 29.08 96 P P 20 33 27.7 +2.6
INKA Innaminka 29.70 124 P P 20 33 31.0 +0.6
INKA IAmb IAmb 20 34 29.9
comp=Z,32nm,1.2s
STKA Stephens Creek 32.25 131 P P 20 33 55.2 +2.2
comp=Z,8.0nm,0.8s,baz=310,slow=9.6,SNR=12
STKA LR LR 20 48 04.5
comp=Z,441nm,19.1s,baz=293,slow=38
comp=Z,8.0nm,0.8s
CTA Charters Tower 32.41 108 LR LR 20 47 10.0
comp=Z,17nm,20.8s,baz=231,slow=37
CTAO Charters Tower 32.41 108 P P 20 33 55.2 +0.7
CTAO IAmb IAmb 20 34 56.2
comp=Z,14nm,0.8s
PMG Port Moresby 33.37 88 LR LR 20 48 07.4
comp=Z,226nm,21.5s,baz=252,slow=37
PMG Port Moresby 33.37 88 P P 20 34 03.2 +0.3
PMG IAmb IAmb 20 35 11.9
comp=Z,14nm,0.9s
CM31 Chiang Mai Arr 34.02 335 P P 20 34 07.9 -0.6
CM31 IAmb IAmb 20 34 20.8
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 34.02 335 P P 20 34 10.7 +2.2
comp=Z,5.9nm,0.8s,baz=153,slow=8.8,SNR=4.9
CMAR LR LR 20 51 31.0
comp=Z,104nm,18.1s,baz=165,slow=43
comp=Z,5.9nm,0.8s
CMAR Chiang Mai Arr 34.02 335 P P 20 34 08.2 -0.3
CHTO Chiang Mai 34.34 335 P P 20 34 11.1 -0.1
MANU Manus Island 35.34 75 P P 20 34 19.5 -0.5
TOO Toolangi 37.94 137 P P 20 34 40.2 -1.8
PALK Pallekele 37.98 300 LR LR 20 50 48.4
comp=Z,214nm,18.4s,baz=118,slow=37
KMI Kunming 38.95 345 P P 20 34 54.6 +3.8
KMI sP pwP 20 35 01.5 +2.4
KMI pmax pmax
comp=Z,13nm,1.5s
KMI LR LR
comp=Z,410nm,13.3s
GYA Guiyang 39.42 351 P P 20 34 56.8 +2.2
GYA pmax pmax
comp=Z,14nm,1.3s
TNCH TengChong 40.15 339 P P 20 35 02.8 +2.1
TNCH pmax pmax
comp=Z,25nm,1.4s
TNCH pmax pmax
comp=Z,160nm,4.5s
H08S2 Diego Garcia H 40.45 273 T T 21 17 46.5
baz=100,slow=75,SNR=109
H08S3 Diego Garcia H 40.47 273 T T 21 17 49.3
baz=100,slow=75,SNR=160
H08S1 Diego Carcia H 40.47 273 T T 21 17 54.0
baz=100,slow=75,SNR=130
PZH PanZhiHua 40.53 344 P P 20 35 06.0 +2.2
PZH S S 20 41 17.3 +4.2
PZH pmax pmax
comp=Z,10.0nm,1.3s
PZH pmax pmax
comp=Z,200nm,5.5s
PZH LR LR
comp=Z,360nm,9.6s
PZH LR LR
comp=Z,320nm,19.2s
BRDH Bariadhala 41.05 329 LR LR 20 55 04.5
comp=Z,250nm,19.9s,baz=168,slow=40
JOW Kunigami 41.87 20 P P 20 35 14.0 -0.7
ENH Enshi 42.85 355 P 20 35 21.6 -1.0
ENH IAmb IAmb 20 35 38.4
comp=Z,53nm,1.5s
SHL Shillong 43.36 331 P P 20 35 25.8 -1.2
SHL IAmb IAmb 20 35 33.9
comp=Z,25nm,0.9s
CD2 Chengdu 44.29 348 P P 20 35 35.4 +1.2
CD2 pP sP 20 35 38.8 +2.5
CD2 pmax pmax
comp=Z,30nm,0.9s
NJ2 Nanjing 44.78 7 eP P 20 35 40.6 +2.5
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
HNR Honiara 45.84 91 LR LR 20 55 53.1
comp=Z,67nm,19.2s,baz=224,slow=37
LYN LuoYang 46.97 359 P P 20 36 04.9 +10
LYN pmax pmax
comp=Z,22nm,0.7s
LSA Lhasa 47.23 333 P 20 35 56.7 -1.4
LSA Lhasa 47.23 333 P P 20 35 55.8 -2.3
LSA pmax pmax
comp=Z,12nm,1.1s
EVN Everest 47.85 328 P 20 36 01.7 -1.4
JCJ Chichijima 48.46 35 LR LR 20 55 52.7
comp=Z,45nm,21.9s,baz=264,slow=35
JNU Nakatsue 48.52 20 LR LR 20 58 12.8
comp=Z,73nm,20.7s,baz=175,slow=38
JNU Nakatsue 48.52 20 P P 20 36 06.5 -1.0
LZDM Lanzhou Array 49.21 350 P P 20 36 14.6 +1.6
comp=Z,2.2nm,0.3s,baz=161,slow=14,SNR=1.9
comp=Z,2.2nm,0.3s
LZH Lanzhou 49.31 350 eP P 20 36 16.6 +3.0
LZH sP pwP 20 36 23.3 +1.3
LZH pmax pmax
comp=Z,15nm,1.3s
KSAR Wonju Array Be 51.69 15 P P 20 36 30.0 -1.3
KSRS Korea Array 51.71 15 P P 20 36 33.0 +1.4
comp=Z,4.7nm,0.7s,baz=200,slow=7.9,SNR=14
comp=Z,4.7nm,0.7s
BTO Baotou 53.09 357 eP P 20 36 44.1 +2.2
BTO pP pwP 20 36 48.6 -1.6
BTO sP sP 20 36 51.3 +7.3
BTO pmax pmax
comp=Z,25nm,1.0s
BTO pmax pmax
comp=Z,430nm,4.4s
HHC Hu-ho-hao-te 53.27 358 eP P 20 36 46.8 +3.6
HHC pmax pmax
comp=Z,10.0nm,0.7s
GTA Gaotai 53.31 347 eP P 20 36 45.8 +2.2
GTA pP sP 20 36 48.8 +3.1
GTA pmax pmax
comp=Z,3.0nm,1.2s
MJAR Matsushiro Arr 54.29 25 P P 20 36 50.7 +0.1
comp=Z,2.2nm,0.7s,baz=201,slow=8.2,SNR=7.0
MJAR LR LR 21 01 00.7
comp=Z,63nm,20.0s,baz=196,slow=37
comp=Z,2.2nm,0.7s
MJAR Matsushiro Arr 54.29 25 P P 20 36 49.7 -0.9
MJAR IAmb IAmb 20 36 53.9
comp=Z,24nm,1.8s
JSD Sado 55.60 24 P P 20 36 58.1 -2.0
RPZ Rata Peaks 58.15 134 LR LR 21 03 27.2
comp=Z,206nm,18.9s,baz=137,slow=37
USRK Ussuriysk Ar. 59.10 16 P P 20 37 25.9 +1.3
comp=Z,7.3nm,0.9s,baz=177,slow=4.5,SNR=5.9
comp=Z,7.3nm,0.9s
NIL Nilore 59.81 322 P P 20 37 28.3 -1.5
NIL IAmb IAmb 20 38 04.0
comp=Z,21nm,1.3s
SONM Songino Array 60.55 355 P P 20 37 36.2 +1.5
comp=Z,3.2nm,0.7s,baz=177,slow=8.7,SNR=11
SONM LR LR 21 06 25.4
comp=Z,128nm,18.5s,baz=198,slow=39
comp=Z,3.2nm,0.7s
WMQ Urumqi 60.88 339 eP P 20 37 32.1 -4.9
WMQ pmax pmax
comp=Z,34nm,0.9s
RTZ Ruatahuna 61.67 127 P P 20 37 41.4 -1.2
URZ Urewera 61.73 127 LR LR 21 07 42.3
comp=Z,174nm,18.0s,baz=257,slow=39
HILR Hailar Array B 62.21 5 P P 20 37 46.9 +1.0
comp=Z,1.2nm,0.4s,baz=188,slow=8.7,SNR=2.9
comp=Z,1.2nm,0.4s
ASAJ Asahikawa 62.49 23 LR LR 21 06 15.7
comp=Z,53nm,21.0s,baz=341,slow=37
KBL Kabul 63.00 320 P P 20 37 50.0 -1.7
KBL IAmb IAmb 20 38 01.1
comp=Z,12nm,1.1s
TARG Taragay, Kyrgy 63.24 331 P 20 37 52.0 -1.4
TARG IAmb IAmb 20 38 12.9
comp=Z,11nm,1.0s
PRZ Przheval'sk 63.55 332 P P 20 37 53.9 -1.2
KDJ Kajisay 63.85 331 P P 20 37 55.0 -2.1
HEH HeiHe 63.86 10 eP P 20 37 58.4 +1.7
HEH pmax pmax
comp=Z,12nm,1.0s
MAW Mawson 63.93 199 P P 20 37 58.9 +1.9
comp=Z,7.9nm,0.9s,baz=46,slow=9.4,SNR=9.2
MAW LR LR 21 01 42.6
comp=Z,108nm,18.6s,baz=56,slow=32
comp=Z,7.9nm,0.9s
BOOM Boomskoye usch 64.72 330 P 20 38 01.6 -1.2
GAR Garm 65.19 324 P P 20 38 03.6 -2.2
GAR IAmb IAmb 20 38 47.5
comp=Z,14nm,1.3s
MKAR Makanchi Array 65.40 337 P P 20 38 07.9 +1.0
comp=Z,1.4nm,0.5s,baz=148,slow=7.7,SNR=19
MKAR LR LR 21 09 46.0
comp=Z,73nm,20.9s,baz=314,slow=39
comp=Z,1.4nm,0.5s
MKAR Makanchi Array 65.40 337 P P 20 38 06.0 -0.9
AAK Ala-Archa 65.54 329 LR LR 21 10 37.0
comp=Z,108nm,18.3s,baz=137,slow=40
AAK Ala-Archa 65.54 329 P P 20 38 07.0 -1.1
AAK IAmb IAmb 20 38 18.4
comp=Z,20nm,1.2s
CHGR Chuyangaron 65.63 323 P 20 38 07.6 -1.0
KK31 Karatay Array 67.91 328 P 20 38 22.3 -0.7
KKAR Karatay Array 67.91 328 P P 20 38 22.2 -0.8
VNDA Vanda 69.31 170 P P 20 38 33.7 +2.4
comp=Z,1.9nm,1.0s,baz=295,slow=9.9,SNR=5.0
VNDA LR LR 21 07 22.7
comp=Z,166nm,18.7s,baz=318,slow=34
comp=Z,1.9nm,1.0s
VNDA Vanda 69.31 170 P 20 38 31.8 +0.5
KURBB Kurchatov Arra 69.96 337 P P 20 38 36.3 +0.7
comp=Z,0.8nm,0.4s,baz=157,slow=5.0,SNR=6.4
KURBB LR LR 21 10 56.1
comp=Z,85nm,21.9s,baz=165,slow=37
comp=Z,0.8nm,0.4s
KURK Kurchatov 70.00 337 P P 20 38 35.0 -0.9
KURK IAmb IAmb 20 38 45.3
comp=Z,6.4nm,0.9s
ZAA0 Zalesovo Array 70.66 343 P 20 38 39.4 -0.4
ZALV Zalesovo Beam 70.66 343 P P 20 38 40.0 +0.2
comp=Z,1.5nm,0.5s,baz=158,slow=5.0,SNR=10
comp=Z,1.5nm,0.5s
ZALV Zalesovo Beam 70.66 343 P 20 38 39.1 -0.6
SYO Syowa Base 72.43 201⇑ eP P 20 38 51.4 +1.1
SYO Syowa Base 72.43 201⇓ epP pP 20 38 54.3 +2.5
ATD Arta Tunnel 73.94 286 LR LR 21 05 38.2
comp=Z,5.4nm,20.6s,baz=105,slow=31
BVAR Borovoye Array 75.05 335 P P 20 39 07.4 +1.5
comp=Z,1.2nm,0.6s,baz=141,slow=9.3,SNR=4.2
BVAR LR LR 21 16 46.6
comp=Z,82nm,18.8s,baz=147,slow=40
comp=Z,1.2nm,0.6s
KIBK Kibwezi 75.11 271 P P 20 39 06.8 -0.5
RAYN Ar Rayn 75.41 299 P P 20 39 08.1 -0.6
PETK Petropavlovsk- 75.72 26 P P 20 39 10.3 +0.5
comp=Z,8.1nm,1.1s,baz=214,slow=7.5,SNR=3.5
comp=Z,8.1nm,1.1s
PETK Petropavlovsk- 75.72 26 P P 20 39 09.5 -0.3
KMBO Kilima Mbogo 76.15 272 P P 20 39 17.2 +3.8
comp=Z,0.8nm,0.4s,baz=30,slow=8.4,SNR=3.0
KMBO LR LR 21 08 03.3
comp=Z,55nm,18.2s,baz=102,slow=32
comp=Z,0.8nm,0.4s
QSPA South Pole Qui 77.35 180 P P 20 39 23.6 +4.6
comp=Z,2.5nm,0.6s,baz=327,slow=2.4,SNR=6.9
comp=Z,2.5nm,0.6s
QSPA LR LR 21 12 06.1
comp=Z,147nm,19.1s,baz=330,slow=35
comp=Z,2.5nm,0.6s
QSPA South Pole Qui 77.35 180 P 20 39 19.1 +0.1
QSPA IAmb IAmb 20 39 31.2
comp=Z,15nm,1.5s
AB31 Akbulak array 77.47 327 P 20 39 19.8 +0.1
AB31 IAmb IAmb 20 39 29.5
comp=Z,25nm,1.5s
ABKAR Akbulak array 77.47 327 P 20 39 19.8 +0.1
LODK Lodwar 79.02 276 P P 20 39 28.1 -1.1
SEY Seymchan 81.21 17 P P 20 39 41.3 +1.5
comp=Z,2.1nm,0.4s,baz=200,slow=15,SNR=3.4
SEY LR LR 21 17 35.3
comp=Z,30nm,19.7s,baz=244,slow=37
comp=Z,2.1nm,0.4s
MREMI Moremi 81.47 249 P P 20 39 41.5 -0.8
MREMI IAmb IAmb 20 39 47.6
comp=Z,13nm,0.8s
BOSA Boshof 82.36 242 P P 20 39 49.5 +2.5
comp=Z,2.7nm,0.7s,baz=102,slow=3.6,SNR=5.9
comp=Z,2.7nm,0.7s
ARTI Arti 82.48 333 P P 20 39 46.6 -0.1
ARTI IAmb IAmb 20 39 56.6
comp=Z,12nm,1.1s
MBAR Mbarara 82.62 271 P P 20 39 45.8 -2.8
MBAR IAmb IAmb 20 42 36.1
comp=Z,11nm,1.1s
RAR Rarotonga 82.68 110 LR LR 21 12 42.1
comp=Z,48nm,22.0s,baz=245,slow=33
LBTB Lobatse 82.70 246 P P 20 39 47.6 -1.2
GURO Guroymak-BITLI 83.66 312 P 20 39 53.4 0.0
GURO IAmb IAmb 20 40 04.5
comp=Z,18nm,1.2s
KDWAN Kaudwane 83.85 248 P P 20 39 54.2 -0.5
MARD Mardin 84.14 310 P P 20 39 55.4 -0.4
MARD IAmb IAmb 20 40 06.5
comp=Z,20nm,1.3s
TROLL Troll, Antarti 84.29 197 ⇑P P 20 39 57.6 +1.5
comp=Z,97nm,0.8s
KSANE Kasane 84.48 253 P P 20 39 56.2 -1.7
KSANE IAmb IAmb 20 40 03.8
comp=Z,17nm,1.2s
TIXI Tiksi 84.77 5 LR LR 21 20 10.6
comp=Z,53nm,21.7s,baz=196,slow=37
TIXI Tiksi 84.77 5 P P 20 39 57.8 -0.3
TIXI IAmb IAmb 20 40 09.6
comp=Z,13nm,0.8s
KBZ Khabaz 85.00 317 P P 20 40 01.7 +1.9
comp=Z,3.1nm,1.0s,baz=104,slow=5.4,SNR=3.6
comp=Z,3.1nm,1.0s
ASF Jabal al Asfar 85.47 304 LR LR 21 18 06.6
comp=Z,55nm,19.1s,baz=114,slow=36
SNAA Sanae 85.95 197 ⇑P P 20 40 06.4 +2.1
comp=Z,35nm,0.6s
SNAA Sanae 85.95 197 P P 20 40 06.0 +1.7
comp=Z,1.5nm,0.7s,baz=187,slow=4.8,SNR=12
SNAA LR LR 21 13 04.5
comp=Z,235nm,21.3s,baz=108,slow=32
comp=Z,1.5nm,0.7s
SNAA Sanae 85.95 197 P P 20 40 03.8 -0.5
EIL Elat 86.33 301 LR LR 21 20 52.0
comp=Z,88nm,18.0s,baz=172,slow=37
MMAI Mount Meron Ar 86.93 305 P P 20 40 12.4 +2.7
comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=4.4
comp=Z,0.3nm,0.4s
VNA2 Neumayer--Watz 87.59 196 ⇑P P 20 40 14.6 +2.4
comp=Z,5.7nm,0.7s,baz=116,slow=4.2
VNA1 Neumayer--Stat 87.99 197 ⇑P P 20 40 16.7 +2.6
comp=Z,4.4nm,0.8s
VNA3 Neumayer Olymp 88.03 196 ⇑P P 20 40 16.8 +2.5
comp=Z,6.5nm,0.7s
TOKA Tokat 88.31 312 P P 20 40 13.6 -2.6
TOKA IAmb IAmb 20 40 31.1
comp=Z,7.2nm,0.8s
BR131 Keskin Array S 90.22 311 P P 20 40 23.7 -1.6
BRTR Keskin Array B 90.22 311 P P 20 40 27.6 +2.3
comp=Z,0.4nm,0.7s,baz=160,slow=7.7,SNR=4.8
comp=Z,0.4nm,0.7s
BRTR Keskin Array B 90.22 311 P 20 40 22.7 -2.6
PPT Papeete 92.86 109 LR LR 21 20 33.1
comp=Z,31nm,18.9s,baz=220,slow=34
AK14 Malin Array Si 96.04 320 P P 20 40 51.1 -0.6

AK16	**Malin Array Si**	**96.05**	**320**	P		**P**	**20 40 50.6**	**-1.1**
AK18	**Malin Array Si**	**96.08**	**321**	P		**P**	**20 40 50.7**	**-1.2**
NDNU	**Novodnistrovsk**	**96.73**	**318**	P		**P**	**20 40 53.9**	**-1.0**
LUBAR	**Lubar, Ukraine**	**96.74**	**320**	P		**P**	**20 40 53.9**	**-1.0**
YKA	**Yellowknife Ar**	**119.78**	**23**	PKP		**PKiKP**	**20 46 15.7**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=320,slow=5.8,SNR=11							
PDAR	**Pinedale Array**	**132.39**	**43**	PKP		**PKiKP**	**20 46 41.3**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=278,slow=4.0,SNR=1.6							
TXAR	**Lajitas Array**	**141.91**	**58**	PKhKP	PKPpre		20 46 53.9	
	comp=Z,0.5nm,0.7s,baz=250,slow=2.9,SNR=7.4							
P38A	**Dawn**	**144.19**	**37**			**PKPab**	**20 46 58.6**	**+0.3**
DRIO	**Del Rio**	**144.39**	**57**			**PKPab**	**20 46 59.9**	**+0.4**
JCT	**Junction City**	**144.66**	**55**			**PKPab**	**20 47 00.3**	**-0.1**
BRDY	**Brady**	**144.97**	**53**			**PKPbc**	**20 46 58.8**	**-2.7**
J47A	**Sunmer**	**145.75**	**24**	PKPdf		**PKPdf**	**20 47 01.1**	**-2.1**
SIV	**San Ignacio**	**150.99**	**191**	PKPbc		**PKiKP**	**20 47 20.4**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=163,slow=1.8,SNR=3.0							
LPAZ	**La Paz**	**151.19**	**177**	PKPbc		**PKiKP**	**20 47 22.5**	**+2.4**
	comp=Z,1.7nm,0.8s,baz=195,slow=1.8,SNR=5.3							
LPAZ	**La Paz**	**151.19**	**177**	PKPdf		**PKPdf**	**20 47 07.4**	**-6.3**
LPAZ						**sPKPbc**	**20 47 23.8**	**+2.2**

*NEIC **19** 20:40:22.8±1.8, 55°.95N±0°.05×160°.39W±0°.09, h158km±6km, Error ellipse: s-maj=8.7km s-min=6.1km az=143.0*

AEIC 19 20:40:24.3±2.5, 55°.97N±0°.05×160°.42W±0°.08, h139km±5km, ML2.6, ML2.8/29(NEIC), **Error ellipse: s-maj=7.3km s-min=5.8km az=146.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNFG	**Fog Glacier, M**	**0.58**	**56**		Pn	20 40 45.8	+0.8
VNFG					Sn	20 41 01.5	+0.9
VNFG				IAML		20 41 12.5	
	comp=N,160nm,0.6s						
VNKR	**Veniaminof 5**	**0.60**	**83**		Pn	20 40 45.8	+0.9
VNKR					Sn	20 41 02.3	+1.7
VNSS	**Veniaminof 8**	**0.60**	**64**		Pn	20 40 46.0	+0.8
VNSS					Sn	20 41 04.3	+3.2
SDPT	**Sand Point**	**0.62**	**183**		Pn	20 40 45.8	+0.7
SDPT					Sn	20 41 02.2	+1.4
SDPT	**Sand Point**	**0.62**	**183**	IAML		20 41 02.6	
	comp=E,143nm,1.1s						
SDPT				IAML		20 41 02.7	
	comp=N,170nm,0.5s						
VNSG	**Veniaminof 6**	**0.77**	**77**		Pn	20 40 46.9	+0.8
VNSG					Sn	20 41 03.9	+1.1
PS1A	**Pavlof South-1**	**0.93**	**234**		Pn	20 40 48.1	+0.8
PS1A					Sn	20 41 05.0	+0.1
S12K	**Black Hills**	**0.96**	**255**		Pn	20 40 47.8	+0.2
S12K					Sn	20 41 06.6	+1.2
S12K	**Black Hills**	**0.96**	**255**	IAML		20 41 21.1	
	comp=E,111nm,0.8s						
PS4A	**Pavlof South-4**	**1.02**	**233**		Pn	20 40 49.0	+0.8
PS4A					Sn	20 41 08.4	+2.0
PN7A	**Pavlof North-7**	**1.04**	**240**		Pn	20 40 49.3	+0.8
PN7A					Sn	20 41 07.7	+1.0
CNBA	**Chernabura Isl**	**1.25**	**157**		Pn	20 40 50.0	-0.4
CNBA					Sn	20 41 09.3	-0.8
CNBA				IAML		20 41 11.9	
	comp=N,91nm,0.4s						
CNBA				IAML		20 41 12.1	
	comp=E,85nm,0.6s						
DT1	**Dutton Round H**	**1.36**	**232**		Pn	20 40 52.6	+1.1
DT1					Sn	20 41 14.2	+1.9
CHIR	**Chirikof Islan**	**2.71**	**91**	Pn	Pn	20 41 07.2	-0.3
PLK4	**Peulik 4**	**2.79**	**52**	Pn	Pn	20 41 08.8	+0.2
PLK4				IAML		20 42 53.1	
	comp=E,22nm,1.0s						
PLK4				IAML		20 42 56.4	
	comp=N,24nm,1.1s						
O15K	**Ungalikthiuk R**	**3.23**	**5**	Pn	Pn	20 41 12.5	-1.7
SII	**Sitkinak Islan**	**3.53**	**78**	Pn	Pn	20 41 17.9	-0.2
LVA	**Lava Point**	**3.70**	**243**	Pn	Pn	20 41 19.4	-0.9
O16K	**Kokwok River B**	**3.84**	**18**	Pn	Pn	20 41 20.7	-1.4
N14K	**Kuskokwak Cree**	**4.03**	**351**	Pn	Pn	20 41 22.8	-1.6
N14K				IAML		20 43 13.1	
	comp=N,18nm,0.9s						
OHAK	**Old Harbor**	**4.14**	**69**	Pn	Pn	20 41 24.0	-2.0
OHAK				IAML		20 42 45.9	
	comp=N,18nm,0.6s						
OHAK				IAML		20 43 39.8	
	comp=E,12nm,1.2s						
KDAK	**Kodiak Island**	**4.67**	**64**	Pn	Pn	20 41 31.2	-1.8
KDAK				IAML		20 42 39.3	
	comp=E,6.6nm,0.8s						
M13K	**Dall Lake**	**4.72**	**342**	Pn	Pn	20 41 32.0	-1.6
M13K				IAML		20 44 09.5	
	comp=N,7.0nm,1.1s						
M13K				IAML		20 44 35.3	
	comp=E,7.9nm,0.8s						
SYI	**Shuyak Island**	**5.10**	**55**	Pn	Pn	20 41 36.9	-1.8
N18K	**Kilae Creek**	**5.29**	**25**	Pn	Pn	20 41 40.0	-1.3
N18K				IAML		20 43 56.0	
	comp=E,3.4nm,1.0s						
N19K	**Bonanza Creek**	**5.78**	**30**	Pn	Pn	20 41 48.0	+0.2
L18K	**Granite Mounta**	**6.56**	**16**	Pn	Pn	20 41 56.9	-1.4

*RSNC **19** 20:47:40.8±1.1, 6°.S±4°×7°.7W±°, h35km±24km, M4.4, mB5.1, mb4.7, ML3.9, Mw(mB)4.4*

*NEIC **19** 20:47:40.6±1.2, 5°.70S±0°.05×76°.85W±0°.08, h39km±6km, mb4.5/58, Error ellipse: s-maj=11.4km s-min=6.9km az=81.0*

*IDC **19** 20:47:40.2±0.6, 5°.60S×76°.86W, h34km±4km, mb4.0/17, mbtmp4.2/24, ML3.7/7, MS3.6/9, Error ellipse: s-maj=18.3km s-min=10.9km az=69.0*

*VAO **19** 20:47:47.8±0.6, 5°.36S×76°.76W, h131km±4km, mb4.2*

ISC 19 20:47:39.7±0.4, 5°.67S±0°.04×76°.86W±0°.05, h35km, n137, σ1§61/137, mb4.4/35, MS3.3/5, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.10**	**226**	Pn	**Pn**	**20 48 14.3**	**+1.5**
	130nm,0.3s,baz=28,slow=7.4,SNR=298						
ATAH				Sn	**Sn**	**20 48 39.2**	**+1.2**
	171nm,0.3s,baz=69,slow=12,SNR=7.1						
ATAH				LR	LR	20 49 15.6	
	comp=Z,847nm,21.3s,baz=67,slow=44 373nm,0.4s						
MCRA	**Macar, Loja**	**3.34**	**293**	P	**Pn**	**20 48 28.3**	**-1.2**
MCRA				S	**Sn**	**20 49 03.9**	**-4.2**
COHC	**Cochancay**	**3.98**	**323**		**Pn**	**20 48 38.2**	**0.0**
COHC	**Cochancay**	**3.98**	**323**	P	**Pn**	**20 48 38.7**	**+0.4**
COHC				S	**Sn**	**20 49 23.5**	**-0.3**
SLOR	**San Lorenzo -**	**5.18**	**342**		**Pn**	**20 48 56.1**	**+1.0**
CASC	**Dorado de Casc**	**5.79**	**355**	P	**Pn**	**20 49 04.1**	**+0.8**
	2μm60nm,0.5s						
CASC				S	**Sn**	**20 50 07.9**	**-0.7**
	2μm60nm,0.5s						
OTAV	**Otavalo**	**6.08**	**345**		**Pn**	**20 49 09.1**	**+1.6**
OTAV	**Otavalo**	**6.08**	**345**	*eP*	**Pn**	**20 49 11.8**	**+4.2**
OTAV	**Otavalo**	**6.08**	**345**	P	**Pn**	**20 49 11.9**	**+4.3**
BONI	**La Bonita**	**6.12**	**354**	P	**Pn**	**20 49 08.5**	**+0.6**
	1μm43nm,0.6s						
PTLC	**Puerto Leguiza**	**6.16**	**20**	P	**Pn**	**20 49 05.7**	**-2.6**
NNA	**Nana**	**6.27**	**180**	Pn	**Pn**	**20 49 11.2**	**+1.4**
	8.8nm,0.3s,baz=349,slow=12,SNR=8.6						
NNA					Sn	**20 50 18.1**	**-2.2**
	16nm,0.3s,baz=88,slow=22,SNR=9.6 19nm,0.3s						
NNA	**Nana**	**6.27**	**180**		**Pn**	**20 49 10.1**	**+0.2**
NNA	**Nana**	**6.27**	**180**	P	**Pn**	**20 49 11.3**	**+1.4**
	59nm,0.7s						
NNA				S	**Sn**	**20 50 16.1**	**-4.3**
	59nm,0.7s						
TULM	**Tulcn-Chalpat**	**6.42**	**352**	P	**Pn**	**20 49 14.3**	**+2.1**
	35nm,0.7s						
GCUF	**Volcan Galeras**	**6.87**	**356**	P	**Pn**	**20 49 20.5**	**+2.1**
	806nm37nm,0.5s						
GCUF				S	**Sn**	**20 50 38.8**	**+3.1**
	806nm37nm,0.5s						
FLOC	**Florencia**	**7.31**	**10**		**Pn**	**20 49 25.0**	**+0.9**
FLOC	**Florencia**	**7.31**	**10**	P	**Pn**	**20 49 25.5**	**+1.5**
FLOC				P		20 49 25.8	
FLOC				S	**Sn**	**20 50 44.2**	**-1.7**
BBAC	**Balboa, Cauca**	**7.65**	**357**	P	**Pn**	**20 49 31.5**	**+2.6**
	707nm40nm,0.8s						
TUMC	**Tumaco**	**7.68**	**346**	Pn	**Pn**	**20 49 29.2**	**+0.2**
GARC	**Garzon, Huila**	**7.93**	**10**	P	**Pn**	**20 49 33.8**	**+1.1**
POPC	**Popayan, Colom**	**8.16**	**1**	P	**Pn**	**20 49 38.4**	**+2.5**
	16nm,0.9s						
MACC	**Macarena, Meta**	**8.33**	**21**	P	**Pn**	**20 49 40.2**	**+2.1**
	2μm62nm,0.6s						
MACC				S	**Sn**	**20 51 08.4**	**-2.6**
	2μm62nm,0.6s						
BETC	**Betania**	**8.42**	**10**	P	**Pn**	**20 49 42.8**	**+3.5**
JAMC	**Jamundi, Valle**	**8.83**	**1**	P	**Pn**	**20 49 48.7**	**+3.6**
	538nm30nm,0.9s						
URMC	**La Uribe, Meta**	**9.20**	**16**	P	**Pn**	**20 49 53.0**	**+2.9**
	848nm47nm,0.7s						
YOTC	**Yotoco, Valle**	**9.61**	**3**	P	**Pn**	**20 49 57.7**	**+2.0**
	13nm,0.7s						
VILC	**Villavicencio,**	**10.22**	**18**	P	**Pn**	**20 50 07.2**	**+3.1**
	1μm82nm,0.5s						
CHIC	**Chingaza**	**10.70**	**17**	P	**Pn**	**20 50 13.7**	**+2.8**
	27nm,0.6s						
CHIC				S	Sn	20 52 23.5	+14
	27nm,0.6s						
ROSC	**El Rosal**	**10.75**	**14**	Pn	**Pn**	**20 50 11.6**	**+0.1**
	2.3nm,0.3s,baz=278,slow=21,SNR=4.1						
ROSC				LR	LR	20 55 29.6	
	comp=Z,373nm,20.8s,baz=214,slow=44 6.5nm,0.3s						
ROSC	**El Rosal**	**10.75**	**14**	Pn	**Pn**	**20 50 12.4**	**+0.9**
GUY2C	**Guyana, Caldas**	**10.93**	**8**	P	Pn	20 50 18.9	+4.8
SGC2	**Sao Gabriel da**	**11.29**	**61**	P	**Pn**	**20 50 19.7**	**+1.1**
NORC	**Norcasia**	**11.34**	**10**	P	**Pn**	**20 50 20.9**	**+1.6**
	15nm,1.0s						
RUSC	**La Rusia**	**12.09**	**18**		**Pn**	**20 50 30.6**	**+0.6**
RUSC	**La Rusia**	**12.09**	**18**	P	**Pn**	**20 50 31.5**	**+1.5**
RUSC				S	**Sn**	**20 52 43.0**	**-1.0**
LPAZ	**La Paz**	**13.58**	**142**	Pn	**Pn**	**20 50 52.6**	**+2.1**
	baz=358,slow=9.7,SNR=2.2						
LPAZ				Lg	Lg	20 54 50.2	
	0.5nm,0.3s,baz=11,slow=19,SNR=3.6 0.4nm,0.4s						
LPAZ	**La Paz**	**13.58**	**142**		**Pn**	**20 50 50.7**	**+0.1**
PB18	**Visviri**	**13.87**	**149**	Pn	**Pn**	**20 50 54.7**	**+0.4**
PAYG	**Puerto Ayora**	**14.29**	**290**	Pn	**Pn**	**20 50 56.5**	**-3.2**
PB12	**IPOC Station P**	**14.35**	**154**	Pn	**Pn**	**20 50 59.3**	**-1.3**
BRU2	**Volcan**	**15.50**	**338**	Pn	**Pn**	**20 51 13.8**	**-2.1**
SDV	**Santo Domingo**	**15.74**	**23**	Pn	**Pn**	**20 51 19.1**	**0.0**
	2.2nm,0.3s,baz=148,slow=12,SNR=6.1						
SDV				Sn	**Sn**	**20 54 13.8**	**+1.3**
	0.2nm,0.3s,baz=239,slow=17,SNR=2.2						
SDV				LR	LR	20 58 58.0	
	comp=Z,160nm,18.5s,baz=232,slow=43 5.3nm,0.4s						
SDV	**Santo Domingo**	**15.74**	**23**		**Pn**	**20 51 19.1**	**0.0**
SDV	**Santo Domingo**	**15.74**	**23**	*eS*	**Sn**	**20 54 10.5**	**-2.1**
GO01	**Chusmiza**	**15.79**	**152**		**Pn**	**20 51 18.7**	**-1.2**
HMBC	**Humberstone**	**16.02**	**156**	Pn	**Pn**	**20 51 20.8**	**-1.8**
TA01	**Diego Aracena**	**16.16**	**157**	Pn	**Pn**	**20 51 23.5**	**-0.7**
TA01				IAmb	IAmb	20 51 45.1	
	comp=Z,40nm,1.4s						
PB08	**IPOC Station P**	**16.21**	**153**		**Pn**	**20 51 24.9**	**-0.4**
PB01	**IPOC Station P**	**16.87**	**156**		**P**	**20 51 34.0**	**-1.0**
BAUV	**El Baul**	**16.98**	**31**		**Pn**	**20 51 34.4**	**-0.1**
BAUV				IAmb	IAmb	20 51 41.9	
	comp=Z,22nm,0.7s						
PB07	**IPOC Station P**	**17.33**	**158**	Pn	**Pn**	**20 51 37.9**	**-1.2**
PB09	**IPOC Station P**	**17.64**	**156**	P	**Pn**	**20 51 42.7**	**-0.3**
JTS	**Las Juntas de**	**17.79**	**333**	P	**P**	**20 51 45.3**	**+0.1**
	comp=Z,5.5nm,0.3s,baz=162,slow=20,SNR=1.9 comp=Z,2.1nm,0.4s						
BOAV	**Boa Vista**	**18.18**	**64**		**P**	**20 51 48.7**	**-0.8**
BOAV	**Boa Vista**	**18.18**	**64**	*eP*	**P**	**20 51 48.5**	**-1.0**
BOAV				*eS*	**Sn**	**20 55 08.5**	**-3.0**
SIV	**San Ignacio**	**18.57**	**125**	P	**Pn**	**20 51 55.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=296,slow=17,SNR=4.4						
SIV				Lg	Lg	20 57 32.1	
	comp=Z,0.1nm,0.3s,baz=235,slow=24,SNR=4.7						
SIV				LR	LR	20 59 16.9	
	comp=Z,97nm,20.0s,baz=308,slow=37 comp=Z,0.6nm,0.3s						
PTLB	**Pontes e Lacer**	**19.93**	**121**	P	**P**	**20 52 09.4**	**+0.7**
PDRB	**Porto dos Gac**	**20.75**	**108**	*eP*	**P**	**20 52 18.4**	**+0.8**
ITTB	**Itaituba**	**21.09**	**87**	*eP*	**P**	**20 52 21.2**	**0.0**
NPGB	**Novo Progresso**	**21.41**	**95**	*eP*	**P**	**20 52 24.4**	**-0.4**
CLDB	**Colider**	**21.47**	**105**	*eP*	**P**	**20 52 25.2**	**-0.1**
CLDB				*eS*	**S**	**20 56 17.2**	**-4.6**
MTO3	**Montecristo**	**23.48**	**328**	P	**P**	**20 52 46.4**	**-0.2**
MTO3				IAmb	IAmb	20 52 48.8	
	comp=Z,8.3nm,0.6s						
DR12	**Loma Pena Alta**	**25.40**	**17**	P	**P**	**20 53 04.3**	**+0.3**
GTBY	**Guantanamo Bay**	**25.50**	**4**	P	**P**	**20 53 10.8**	**+5.9**
SJG	**San Juan**	**25.89**	**24**	LR	LR	21 05 05.1	
	comp=Z,85nm,19.2s,baz=143,slow=40						
SJG	**San Juan**	**25.89**	**24**	P	**P**	**20 53 09.4**	**+0.9**
MDP	**Montagnes des**	**26.45**	**67**	LR	LR	21 04 30.1	
	comp=Z,75nm,19.4s,baz=264,slow=38						
CFA	**Coronel Fontan**	**27.03**	**164**	P	**P**	**20 53 20.2**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=342,slow=9.1,SNR=1.1 comp=Z,0.4nm,0.4s						
CPUP	**Villa Florida**	**27.75**	**140**	P	**P**	**20 53 26.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=339,slow=18,SNR=4.7 comp=Z,0.4nm,0.5s						
CPUP	**Villa Florida**	**27.75**	**140**	P	**P**	**20 53 25.3**	**+0.2**
RPN	**Rapa Nui**	**37.55**	**232**	LR	LR	21 06 56.4	
	comp=Z,52nm,21.1s,baz=144,slow=31						
DRIO	**Del Rio**	**41.70**	**328**		**P**	**20 55 25.2**	**-0.1**
DRIO				IAmb	IAmb	20 55 26.7	
	comp=Z,11nm,0.8s						
BRDY	**Brady**	**42.40**	**331**		**P**	**20 55 30.7**	**-0.3**
BRDY				IAmb	IAmb	20 55 32.6	
	comp=Z,3.8nm,0.7s						
SAND	**Sanderson**	**42.92**	**327**		**P**	**20 55 34.8**	**-0.5**
SAND				IAmb	IAmb	20 55 37.1	
	comp=Z,4.6nm,0.6s						
TX31	**Lajitas Ar. Si**	**43.31**	**325**	P	**P**	**20 55 38.1**	**-0.4**
TXAR	**Lajitas Array**	**43.31**	**325**	P	**P**	**20 55 38.9**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=145,slow=8.3,SNR=16 comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**43.31**	**325**	P	**P**	**20 55 38.6**	**+0.1**
PLPT	**Palo Pinto**	**43.37**	**333**		**P**	**20 55 39.1**	**+0.4**
ALPN	**Alpine**	**44.08**	**326**	P	**P**	**20 55 44.6**	**-0.1**
APMT	**Aspermont**	**44.62**	**332**	P	**P**	**20 55 49.0**	**+0.1**
MGMO	**Mountain Grove**	**44.97**	**343**	IAmb	IAmb	20 55 52.0	
	comp=Z,5.8nm,0.7s						
POST	**Post**	**45.07**	**330**	P	**P**	**20 55 53.0**	**+0.5**
POST				IAmb	IAmb	20 55 53.9	
	comp=Z,8.1nm,0.7s						
VHRN	**Van Horn**	**45.15**	**325**	IAmb	IAmb	20 55 54.6	
	comp=Z,3.5nm,0.8s						
WMOK	**Wichita Mounta**	**45.20**	**334**	IAmb	IAmb	20 56 12.4	
	comp=Z,5.7nm,1.1s						
DKNS	**Dickens**	**45.28**	**331**	P	**P**	**20 55 54.4**	**+0.3**
MNTX	**Cornudas Mount**	**46.05**	**326**	P	**P**	**20 55 59.7**	**-0.6**
MNTX				IAmb	IAmb	20 56 01.3	
	comp=Z,2.7nm,0.7s						
MSTX	**Muleshoe**	**46.43**	**330**	IAmb	IAmb	20 56 05.5	
	comp=Z,7.3nm,0.8s						
ABQ	**Albuquerque**	**49.09**	**328**	IAmb	IAmb	20 56 25.7	
	comp=Z,5.4nm,0.7s						
ANMO	**Albuquerque**	**49.09**	**328**	P	**P**	**20 56 24.3**	**+0.3**
	comp=Z,6.8nm,0.8s,baz=218,slow=6.0,SNR=11 comp=Z,6.8nm,0.8s						
ANMO	**Albuquerque**	**49.09**	**328**		**P**	**20 56 24.3**	**+0.3**
ANMO				IAmb	IAmb	20 56 25.7	
	comp=Z,5.3nm,0.7s						
TASM	**ASL Pad, Albuq**	**49.09**	**328**	IAmb	IAmb	20 56 25.7	
	comp=Z,5.8nm,0.7s						
TASM	**ASL Pad, Albuq**	**49.09**	**328**	IAmb	IAmb	20 56 25.7	
	comp=Z,5.9nm,0.7s						
TASM	**ASL Pad, Albuq**	**49.09**	**328**	IAmb	IAmb	20 56 25.7	
	comp=Z,5.8nm,0.7s						
214A	**Organ Pipe Nat**	**50.72**	**320**	P	**P**	**20 56 36.2**	**-0.1**
214A				IAmb	IAmb	20 56 37.0	
	comp=Z,7.1nm,1.1s						
SDCO	**Great Sand Dun**	**50.77**	**331**	IAmb	IAmb	20 56 38.6	
	comp=Z,6.1nm,0.9s						
X16A	**Lo Mia Camp, P**	**51.53**	**323**	IAmb	IAmb	20 56 44.4	
	comp=Z,3.4nm,0.7s						
W13A	**Hualapai Mount**	**53.47**	**322**	IAmb	IAmb	20 56 58.8	
	comp=Z,3.0nm,0.9s						
AGMN	**Agassiz Nation**	**56.27**	**345**		**P**	**20 57 16.3**	**-0.4**
PDAR	**Pinedale Array**	**56.62**	**332**	P	**P**	**20 57 19.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=133,slow=7.4,SNR=5.6						
PDAR				pP	**pP**	**20 57 31.4**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=147,slow=8.5,SNR=2.5 comp=Z,0.5nm,0.5s						
HWUT	**Hardware Ranch**	**56.73**	**329**	IAmb	IAmb	20 57 20.8	
	comp=Z,4.1nm,0.8s						
ULM	**Lac du Bonnet**	**58.08**	**346**	P	**P**	**20 57 28.0**	**-1.4**
	comp=Z,5.1nm,0.7s,baz=163,slow=4.3,SNR=4.3						
ULM				pP	**pP**	**20 57 39.0**	**-1.4**
	comp=Z,25nm,0.9s,baz=166,slow=12,SNR=12						
	comp=Z,5.1nm,0.7s						
NVAR	**Mina Array Bea**	**58.33**	**322**	P	**P**	**20 57 32.0**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=139,slow=7.3,SNR=9.4 comp=Z,1.9nm,0.7s						
NVAR	**Mina Array Bea**	**58.33**	**322**	P	**P**	**20 57 31.3**	**-0.3**
YHL	**Hebgen Lake**	**58.96**	**332**	P	**P**	**20 57 36.4**	**+0.4**
BOZ	**Bozeman (W)**	**59.73**	**332**	IAmb	IAmb	20 58 00.1	
	comp=Z,3.7nm,1.1s						
MFID	**Camas Ranch**	**60.23**	**328**		**P**	**20 57 45.0**	**+0.5**
SCHQ	**Schefferville**	**60.87**	**7**	P	**P**	**20 57 48.7**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=197,slow=6.7,SNR=3.5 comp=Z,1.9nm,0.5s						
MSO	**Missoula**	**61.72**	**332**	P	**P**	**20 57 54.8**	**+0.2**
I07A	**Izee**	**62.65**	**327**	P	**P**	**20 58 01.2**	**+0.3**
DBIC	**Dimbokro**	**72.90**	**81**	P	**P**	**20 59 06.9**	**+1.0**
	comp=Z,5.7nm,0.9s,baz=246,slow=5.4,SNR=5.8						
DBIC				LR	LR	21 30 35.9	
	comp=Z,62nm,19.8s,baz=10.0,slow=35 comp=Z,5.7nm,0.9s						
DBIC	**Dimbokro**	**72.90**	**81**	P	**P**	**20 59 04.7**	**-1.2**
DBIC				IAmb	IAmb	20 59 08.7	
	comp=Z,11nm,1.2s						
YKA	**Yellowknife Ar**	**73.84**	**343**	P	**P**	**20 59 09.2**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=160,slow=11,SNR=11						
YKA				pP	**pP**	**20 59 22.8**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=161,slow=11,SNR=2.6 comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**73.84**	**343**	P	**P**	**20 59 10.1**	**-0.4**
DLBC	**Dease Lake**	**76.69**	**334**	P	**P**	**20 59 27.4**	**+0.4**
	comp=Z,4.6nm,0.8s,baz=107,slow=8.4,SNR=8.1						
DLBC				pP	**pP**	**20 59 39.5**	**+1.2**
	comp=Z,3.4nm,1.0s,baz=151,slow=9.5,SNR=3.0 comp=Z,4.6nm,0.8s						
MDT	**Midelt**	**78.32**	**55**	LR	LR	21 32 13.8	
	comp=Z,123nm,19.3s,baz=13,slow=34						
SNAA	**Sanae**	**79.64**	**162**	P	**P**	**20 59 43.3**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=262,slow=3.6,SNR=8.5						
SNAA				pP	**pP**	**20 59 54.8**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=262,slow=9.2,SNR=3.9 comp=Z,1.7nm,0.8s						
SNAA	**Sanae**	**79.64**	**162**	IAmb	IAmb	20 59 43.9	
	comp=Z,3.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**80.20**	**76**	P	**P**	**20 59 47.7**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=224,slow=6.0,SNR=2.6 comp=Z,2.7nm,0.5s						
ESDC	**Sonseca Array**	**80.59**	**48**	P	**P**	**20 59 49.8**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=252,slow=6.8,SNR=5.6 comp=Z,0.9nm,0.9s						
A36M	**Sachs Harbour**	**83.55**	**346**	P	**P**	**21 00 03.4**	**-0.3**
INK	**Inuvik**	**83.56**	**342**	P	**P**	**21 00 03.5**	**-0.3**
INK				IAmb	IAmb	21 00 05.0	
	comp=Z,5.5nm,0.9s						
QSPA	**South Pole Qui**	**84.42**	**180**	P	**P**	**21 00 11.3**	**+2.8**
	comp=Z,0.7nm,0.3s,baz=174,slow=1.9,SNR=2.2 comp=Z,0.7nm,0.3s						
EKA	**Eskdalemuir Ar**	**85.47**	**33**	P	**P**	**21 00 14.1**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=243,slow=5.3,SNR=5.0 comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**86.73**	**336**	P	**P**	**21 00 19.4**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=133,slow=3.8,SNR=7.3 comp=Z,0.9nm,0.8s						
BVAR	**Borovoye Array**	**125.72**	**24**	PKP	**PKPdf**	**21 06 37.6**	**0.0**
	comp=Z,0.4nm,0.5s,baz=298,slow=3.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**129.62**	**14**	PKP	**PKPdf**	**21 06 45.0**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=294,slow=1.5,SNR=12						
ZALV				pPKP	**pPKPdf**	**21 06 56.1**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=343,slow=1.5,SNR=2.2						
ZALV	**Zalesovo Beam**	**129.62**	**14**		**PKPdf**	**21 06 44.2**	**-0.8**
KURBB	**Kurchatov Arra**	**130.69**	**20**	PKP	**PKiKP**	**21 06 48.1**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=315,slow=2.3,SNR=10						
KURBB				pPKP	**pPKPdf**	**21 06 57.8**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=328,slow=2.4,SNR=4.8						
USRK	**Ussuriysk Ar.**	**134.04**	**331**	PKP	**PKPdf**	**21 06 54.1**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=58,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**135.26**	**20**	PKP	**PKPdf**	**21 06 56.0**	**0.0**
	comp=Z,0.8nm,0.8

0.3nm,0.3s,baz=10,slow=12,SNR=13
2.4nm,0.7s
ASAR Alice Springs 29.28 169 P P 20 59 51.4 +8.9
4.3nm,0.6s,baz=14,slow=11,SNR=36
4.3nm,0.6s
STKA Stephens Creek 39.12 161 P **P 21 01 09.7 +2.3**
0.9nm,0.4s,baz=350,slow=6.1,SNR=1.9
0.9nm,0.4s

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*CATAC **19** 21:21:00.6±0.2, 16°N±1″×9°1W±″, h1km, M4.0/16, MLv4.0/16, Error ellipse: s-maj=3.2km s-min=2.9km az=89.9, confirmed*
*GCG **19** 21:21:02.0±2.4, 15°87N×91°28W, h6km±26km, MD4.9, ML4.5*
ISC 19 21:20:59.2±0.8, 15°95N±0°03×91°14W±0°03, h10km, n33, σ1§25/36, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
QUIS	**Sacapulas**	**0.66**	**176**	*i* P		**Pb**		**21 21 13.0**	**+0.2**
QUIS				*i* S		**Sb**		**21 21 22.6**	**+0.4**
HUEH	**Huehuetenango**	**0.72**	**209**	*i* P		**Pg**		**21 21 13.7**	**+0.5**
HUEH	**Huehuetenango**	**0.72**	**209**	P		**Pg**		**21 21 13.8**	**+0.5**
HUEH	**Huehuetenango**	**0.72**	**209**	S		**Sn**		**21 21 26.3**	**-0.6**
CCIG	**Comitan**	**1.02**	**289**	*i* P		**Pb**		**21 21 19.3**	**+0.2**
CCIG	**Comitan**	**1.02**	**289**	S		**Sg**		**21 21 32.0**	**-0.1**
CCIG	**Comitan**	**1.02**	**289**	P		**Pg**		**21 21 18.9**	**+0.1**
QUEO	**Labor Ovalle**	**1.14**	**199**	*e*P		**Pn**		**21 21 21.7**	**+0.3**
APG	**El Apazote**	**1.14**	**145**	*i* P		**Pn**		**21 21 22.3**	**+0.8**
APG				*i* S		**Sn**		**21 21 39.0**	**+1.7**
SOKI	**Kika Raxquin**	**1.15**	**193**	*i* P		**Pn**		**21 21 22.0**	**+0.2**
SMCA	**Catarina**	**1.42**	**220**	*e*P		**Pb**		**21 21 26.0**	**+0.2**
GCG4	**OSOP**	**1.48**	**157**	*e*P		**Pg**		**21 21 28.6**	**+1.0**
STG8	**El Palmar, Qui**	**1.51**	**188**	*i* P		**Pn**		**21 21 23.8**	**-2.7**
RTAL	**Retalhuleu**	**1.52**	**201**	P		**Pg**		**21 21 28.8**	**+0.4**
RTAL	**Retalhuleu**	**1.52**	**201**	S		**Sg**		**21 21 50.1**	**+2.0**
STG2	**El Palmar, Qui**	**1.52**	**189**	*i* P		**Pn**		**21 21 24.2**	**-2.2**
STG2				*e*S		**Sn**		**21 21 41.8**	**-4.8**
PETF	**Flores**	**1.55**	**52**	*i* P		**Pb**		**21 21 27.6**	**-0.4**
PETF				IAML				21 21 53.6	
	comp=E,7μm,0.4s								
PETF	**Flores**	**1.55**	**52**	S		**Sg**		**21 21 50.0**	**+1.0**
PETF	**Flores**	**1.55**	**52**	P		**Pb**		**21 21 27.6**	**-0.4**
ESSG	**Sabana Grande**	**1.59**	**169**	*e*P		**Pg**		**21 21 30.4**	**+0.7**
PCG5	**San Vicente Pa**	**1.88**	**157**	*e*P		**Pn**		**21 21 31.7**	**+0.2**
TGIG		**2.08**	**294**	*i* P		**Pn**		**21 21 34.9**	**+0.7**
ZAFR2	**Estanzuela, Za**	**2.20**	**128**	*e*P		**Pn**		**21 21 34.7**	**-1.1**
ESQI	**Esquipulas**	**2.22**	**128**	P		**Pg**		**21 21 41.7**	**0.0**
ESQI	**Esquipulas**	**2.22**	**128**	S		**Sg**		**21 22 11.2**	**+0.8**
MTO3	**Montecristo**	**2.31**	**132**	*i* P		**Pg**		**21 21 43.1**	**-0.3**
MTO3	**Montecristo**	**2.31**	**132**	P		**Pg**		**21 21 43.2**	**-0.3**
MTO3	**Montecristo**	**2.31**	**132**	S		**Sg**		**21 22 13.9**	**+0.5**
FAME	**Alcaldia de Sa**	**2.36**	**153**	P		**Pg**		**21 21 44.4**	**-0.1**
NUBE	**Las Nubes**	**2.42**	**147**	P		**Pg**		**21 21 45.0**	**-0.6**
IZABA	**Izabal, Puerto**	**2.46**	**95**	P		**Pb**		**21 21 44.4**	**+0.8**
SCIG	**Sabancuy**	**3.00**	**359**	S		**Sn**		**21 22 22.1**	**-0.7**
SCIG	**Sabancuy**	**3.00**	**359**	P		**Pn**		**21 21 46.6**	**-0.2**

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*IDC **19** 21:22:53.5±1.0, 37°63N×20°53E, h0km, mb3.8/12, mbtmp3.6/21, ML2.1/4, Error ellipse: s-maj=19.4km s-min=14.9km az=178.0*
*ATH **19** 21:22:55.0, 37°50N×20°32E, h2km, ML3.4/24, Manual Solution by M.Kolligri First location: 2019/11/19 21:24:25, This location: 2019/11/19 21:38:00 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **19** 21:22:55.6, 38°N±2°×2°0E±″, h6km±4km, M3.3/12, MLh3.3/12*
*NEIC **19** 21:22:58.4±1.3, 37°60N±0°07×20°38E±0°06, h36km±6km, mb4.2/3, Error ellipse: s-maj=11.1km s-min=6.8km az=193.0*
ISC 19 21:22:56.7±1.0, 37°59N±0°04×20°40E±0°03, h25km±7km, n98, σ1§08/112, mb3.7/13, 3C-2D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ORTH	**Orthonies,Zaky**	**0.35**	**42**	P		**Pb**		**21 23 05.0**	**+0.4**
ORTH				S		**Sn**		**21 23 10.9**	**-1.6**
ORTH	**Orthonies,Zaky**	**0.35**	**42**	P		**Pb**		**21 23 04.2**	**-0.3**
ORTH				S		**Sb**		**21 23 10.2**	**+0.3**
LTHK	**Lithakia**	**0.36**	**71**	P		**Pb**		**21 23 03.9**	**-0.8**
LTHK				S		**Sb**		**21 23 09.8**	**-0.3**
LTHK	**Lithakia**	**0.36**	**71**	P		**Pb**		**21 23 03.9**	**-0.8**
LTHK				S		**Sb**		**21 23 09.6**	**-0.6**
KYPS	**Kipseli, Zakin**	**0.41**	**55**	P		**Pb**		**21 23 05.1**	**-0.3**
KYPS				S		**Sb**		**21 23 11.5**	**+0.2**
ZAK2	**Zakynthos**	**0.44**	**63**	P		**Pb**		**21 23 05.9**	**0.0**
ZAK2				S		**Sn**		**21 23 13.5**	**-1.2**
RTZL	**Ratzakli, Kefa**	**0.57**	**31**	P		**Pb**		**21 23 08.0**	**-0.1**
RTZL				S		**Sn**		**21 23 17.4**	**-0.3**
ARG2	**Argostoli**	**0.59**	**7**	P		**Pb**		**21 23 08.3**	**-0.2**
ARG2				S		**Sn**		**21 23 17.1**	**-1.2**
VLS	**Valsamata**	**0.61**	**14**	P		**Pb**		**21 23 08.5**	**-0.2**
VLS				S		**Sn**		**21 23 18.2**	**-0.6**
VLS	**Valsamata**	**0.61**	**14**	P		**Pb**		**21 23 08.3**	**-0.4**
VLS				S		**Sn**		**21 23 17.6**	**-1.1**
DMLN	**Damoulianata-K**	**0.65**	**358**	P		**Pb**		**21 23 09.3**	**-0.2**
DMLN				S		**Sn**		**21 23 20.3**	**+0.5**
DMLN	**Damoulianata-K**	**0.65**	**358**	P		**Pb**		**21 23 09.3**	**-0.2**
DMLN				S		**Sn**		**21 23 19.9**	**+0.1**
CLEM	**Kyllini,Ilia,G**	**0.65**	**62**	P		**Pb**		**21 23 09.2**	**-0.3**
CLEM				S		**Sn**		**21 23 19.6**	**-0.3**
FSK	**Fiskardo**	**0.88**	**8**	P		**Pb**		**21 23 13.1**	**-0.3**
FSK	**Fiskardo**	**0.88**	**8**	P		**Pb**		**21 23 13.0**	**-0.3**
FSK				S		**Sn**		**21 23 25.7**	**+0.3**
RLS	**Riolos of Patr**	**0.96**	**61**	P		**Pn**		**21 23 14.7**	**0.0**
RLS	**Riolos of Patr**	**0.96**	**61**	P		**Pn**		**21 23 14.6**	**0.0**
AXS	**Araxos**	**0.98**	**51**	P		**Pn**		**21 23 15.1**	**+0.2**
AXS	**Araxos**	**0.98**	**51**	P		**Pn**		**21 23 15.2**	**+0.3**
ZARO	**Zacharo**	**1.00**	**95**	P		**Pn**		**21 23 16.1**	**+1.0**
AMT	**Artemida-Makis**	**1.04**	**93**	P		**Pb**		**21 23 16.1**	**0.0**
EVGI	**Lefkada island**	**1.05**	**11**	P		**Pb**		**21 23 16.3**	**+0.1**
EVGI	**Lefkada island**	**1.05**	**11**	P		**Pb**		**21 23 16.3**	**+0.1**
AST1	**Astakos**	**1.09**	**29**	P		**Pb**		**21 23 17.4**	**+0.5**
DRO	**Drossia**	**1.10**	**70**	P		**Pb**		**21 23 17.9**	**+0.8**
DRO	**Drossia**	**1.10**	**70**	P		**Pb**		**21 23 17.7**	**+0.7**
MSL1	**Messolongi**	**1.12**	**46**	P		**Pb**		**21 23 19.7**	**+2.2**
NYDR	**Nydri-Lefkada**	**1.15**	**12**	P		**Pb**		**21 23 18.0**	**+0.2**
NYDR	**Nydri-Lefkada**	**1.15**	**12**	P		**Pb**		**21 23 18.0**	**+0.2**
LKD2	**Lefkada island**	**1.22**	**9**	P		**Pb**		**21 23 19.4**	**+0.3**
LKD2	**Lefkada island**	**1.22**	**9**	P		**Pb**		**21 23 19.3**	**+0.3**
PYL1	**Pylos**	**1.23**	**123**	P		**Pn**		**21 23 18.5**	**+0.2**
TSLK	**Tsoukalades, L**	**1.25**	**9**	P		**Pb**		**21 23 20.5**	**+0.8**
PATC	**Patra C**	**1.27**	**57**	P		**Pb**		**21 23 21.0**	**+1.1**
ITM	**Ithomi**	**1.28**	**108**					**21 23 19.8**	**-0.4**
ITM						Sn		**Sn**	**21 23 33.6**	**-1.8**
ITM	**Ithomi**	**1.28**	**108**	P		**Pb**		**21 23 20.0**	**-0.2**
ITM	**Ithomi**	**1.28**	**108**	P		**Pb**		**21 23 19.9**	**-0.2**
PVO	**Paravola**	**1.36**	**40**	P		**Pb**		**21 23 22.4**	**+1.0**
EFP	**Efpalio**	**1.45**	**54**	P		**Pb**		**21 23 23.9**	**+0.9**
KLV	**Kalavryta, Ach**	**1.46**	**71**	P		**Pb**		**21 23 23.9**	**+0.7**
TRIZ	**Trizonia**	**1.53**	**59**	P		**Pb**		**21 23 24.7**	**+0.3**
ANX	**Ano Chora**	**1.56**	**50**	P		**Pb**		**21 23 25.8**	**+0.8**
GUR	**Goura**	**1.58**	**77**	P		**Pb**		**21 23 25.5**	**+0.2**
KALE	**Kalithea**	**1.59**	**59**	P		**Pb**		**21 23 26.5**	**+1.1**
EVR	**Evrytania**	**1.73**	**39**	P		**Pb**		**21 23 28.4**	**+0.5**
TETR	**Tetrakomo, Epi**	**1.88**	**21**	P		**Pb**		**21 23 30.9**	**+0.5**
IGT	**Igoumenitsa**	**1.94**	**358**	P		**Pb**		**21 23 30.1**	**-1.3**
MAKR	**Makrakomi, Fth**	**1.97**	**43**	P		**Pb**		**21 23 32.5**	**+0.6**
LTK	**Loutraki**	**2.08**	**77**	P		**Pb**		**21 23 32.1**	**-1.6**
AGG	**Agios Georgios**	**2.08**	**46**	P		**Pb**		**21 23 33.3**	**-0.6**
LIT	**Litokhoron**	**2.99**	**32**					**21 23 44.4**	**+1.8**
TIP	**Timpagrande**	**3.27**	**300**	Pn		**Pn**		**21 23 47.2**	**+0.7**
CEL	**Celeste**	**3.63**	**282**	Pn		**Pn**		**21 23 51.9**	**+0.6**
IDI	**Anoyia**	**4.29**	**121**	Pn		**Pn**		**21 24 00.9**	**+0.5**
	3.3nm,0.8s,baz=359,slow=14,SNR=1.2								
IDI				Sn		**Sn**		**21 24 48.8**	**-0.8**
	2.2nm,0.3s,baz=316,slow=22,SNR=11								
IDI	**Anoyia**	**4.29**	**121**			**Pn**		**21 24 02.8**	**+2.4**
CUC	**Castrocucco**	**4.31**	**305**	Pn		**Pn**		**21 24 02.7**	**+2.0**
VAE	**Valguarnera**	**4.76**	**270**	Pn		**Pn**		**21 24 07.6**	**+0.7**
	1.5nm,0.3s,baz=145,slow=12,SNR=5.5								
VAE				Sn		**Sn**		**21 25 01.1**	**-0.2**
	0.4nm,0.3s,baz=125,slow=23,SNR=1.5								
	11nm,0.9s								
PDG	**Podgorica**	**4.92**	**350**	Pn		**Pn**		**21 24 09.7**	**+0.8**
WDD	**Wied Dalam**	**5.04**	**251**	Pn		**Pn**		**21 24 10.4**	**-0.1**
RDO	**Rodhopi**	**5.33**	**47**	Pn		**Pn**		**21 24 15.0**	**+0.3**
SGRT	**San Giovanni R**	**5.50**	**321**	Pn		**Pn**		**21 24 16.9**	**-0.2**
PLVB	**Pleven**	**6.62**	**28**	⇓P		**Pn**		**21 24 34.9**	**+2.5**
AKAS	**Kas**	**7.50**	**98**	Pn		**Pn**		**21 24 46.6**	**+2.1**
NRCA	**Norcia**	**7.65**	**315**	Pn		**Pn**		**21 24 46.5**	**0.0**
FDMO	**Fiordimonte**	**7.80**	**317**	Pn		**Pn**		**21 24 48.6**	**+0.1**
VOIR		**8.58**	**22**	⇑P		Pn		21 25 05.0	+5.7
MLR	**Muntele Rosu**	**8.92**	**26**	Pn		**Pn**		**21 25 02.1**	**-2.0**
	1.8nm,0.8s,baz=176,slow=14,SNR=5.2								
MLR	**Muntele Rosu**	**8.92**	**26**			**Pn**		**21 25 03.7**	**-0.3**
MLR	**Muntele Rosu**	**8.92**	**26**	⇓P		**Pn**		**21 25 08.3**	**+4.3**
KEST	**Kesra**	**9.08**	**262**	Pn		**Pn**		**21 25 06.6**	**+0.4**
	0.1nm,0.3s,baz=78,slow=14,SNR=1.3								
	2.8nm,0.9s								
PLOR	**Plostina**	**9.48**	**27**	⇑P		Pn		21 25 16.9	+5.2
VRI	**Vrincioaia**	**9.52**	**28**	⇑P		Pn		21 25 17.1	+4.9
BRTR	**Keskin Array B**	**10.57**	**74**	Pn		**Pn**		**21 25 27.8**	**+1.1**
	0.1nm,0.3s,baz=280,slow=16,SNR=2.0								
	0.1nm,0.3s								
DAVOX	**Davos/Dischmat**	**12.04**	**323**	Sn		**Sn**		**21 27 55.1**	**-5.2**
	0.2nm,0.3s,baz=131,slow=20,SNR=1.6								
GERES	**GERESS Array B**	**12.26**	**339**	Pn		**Pn**		**21 25 51.1**	**+1.4**
	baz=200,slow=19,SNR=1.8								
	0.2nm,0.4s								
MMAI	**Mount Meron Ar**	**13.07**	**106**	Pn		**Pn**		**21 26 01.1**	**+0.3**
	0.6nm,0.6s,baz=302,slow=6.3,SNR=1.1								
PABE	**Paberze**	**18.09**	**7**			**Pn**		**21 27 05.7**	**-0.3**
PABE					IAmb	IAmb		21 27 05.7	
	comp=Z,25nm,1.4s								
KBZ	**Khabaz**	**18.11**	**63**	P		**Pn**		**21 27 06.2**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=315,slow=2.9,SNR=1.4								
ESDC	**Sonseca Array**	**19.14**	**284**	P		**Pn**		**21 27 21.1**	**+2.1**
	comp=Z,0.4nm,0.9s,baz=83,slow=9.8,SNR=1.8								
HFS	**Hagfors**	**22.97**	**351**	P		**P**		**21 28 00.3**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=166,slow=13,SNR=1.5								
	comp=Z,1.1nm,0.6s								
EKA	**Eskdalemuir Ar**	**23.86**	**326**	P		**P**		**21 28 07.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=124,slow=8.5,SNR=2.0								
	comp=Z,0.7nm,0.6s								
BELG	**Belogornoye**	**24.09**	**43**	P		**P**		**21 28 10.0**	**0.0**
	comp=Z,8.1nm,0.7s,baz=252,slow=9.6,SNR=4.2								
	comp=Z,8.1nm,0.7s								
FINES	**FINESS Array B**	**24.14**	**7**	P		**P**		**21 28 11.2**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=182,slow=9.1,SNR=17								
	comp=Z,1.2nm,0.5s								
FINES	**FINESS Array B**	**24.14**	**7**	P		**P**		**21 28 10.4**	**0.0**
FIA1	**FINESS Array S**	**24.14**	**7**	P		**P**		**21 28 10.8**	**+0.4**
FIA1					IAmb	IAmb		21 28 29.7	
	comp=Z,43nm,1.2s								
TORD	**Torodi Ar. Bea**	**29.51**	**219**	P		**P**		**21 28 59.9**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=35,slow=12,SNR=0.5								
	comp=Z,1.1nm,0.3s								
ABKAR	**Akbulak array**	**30.66**	**55**	P		**P**		**21 29 09.2**	**+0.3**
ARTI	**Arti**	**31.46**	**41**	P		**P**		**21 29 15.3**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=253,slow=10,SNR=3.7								
	comp=Z,1.4nm,0.4s								
ARCES	**ARCESS Array B**	**32.12**	**3**	P		**P**		**21 29 22.2**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=187,slow=9.4,SNR=1.4								
	comp=Z,1.4nm,0.8s								
BVAR	**Borovoye Array**	**37.57**	**49**	P		**P**		**21 30 09.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=277,slow=3.1,SNR=1.8								
	comp=Z,0.6nm,0.6s								
KKAR	**Karatay Array**	**38.12**	**66**	P		**P**		**21 30 14.0**	**+0.4**
KURBB	**Kurchatov Arra**	**42.66**	**53**	P		**P**		**21 30 50.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=276,slow=8.5,SNR=2.7								
	comp=Z,0.2nm,0.3s								
KURK	**Kurchatov**	**42.70**	**53**	P		**P**		**21 30 51.3**	**-0.1**
KURK					IAmb	IAmb		21 31 18.0	
	comp=Z,2.8nm,1.2s								
MKAR	**Makanchi Array**	**45.69**	**58**	P		**P**		**21 31 15.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=267,slow=7.3,SNR=11								
	comp=Z,0.4nm,0.5s								
MKAR	**Makanchi Array**	**45.69**	**58**	P		**P**		**21 31 14.9**	**-0.5**
ZALV	**Zalesovo Beam**	**46.16**	**48**	P		**P**		**21 31 18.4**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=278,slow=8.8,SNR=5.4								
	comp=Z,0.9nm,0.4s								
ZALV	**Zalesovo Beam**	**46.16**	**48**	P		**P**		**21 31 18.1**	**-0.8**
SONM	**Songino Array**	**60.91**	**50**	P		**P**		**21 33 05.8**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=317,slow=12,SNR=1.9								
	comp=Z,0.3nm,0.7s								

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*IDC **19** 21:24:30.9±2.1, 6°81N×94°23E, h0km, mb3.5/6, mbtmp3.5/7, ML4.1/1, Error ellipse: s-maj=67.6km s-min=23.7km az=61.0*
ISC 19 21:24:35.2±1.9, 6°9N±0°2×94°3E±0°3, h26km, n13, σ0§71/7, mb3.5/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.34**	**21**	Pn		**Pn**		**21 27 28.9**	**-0.5**
	0.4nm,0.3s,baz=196,slow=16,SNR=1.9								
	0.7nm,0.3s								
H08S3	**Diego Garcia H**	**26.13**	**237**	T		T		21 56 47.8	
	baz=56								
H08S2	**Diego Garcia H**	**26.13**	**237**	T		T		21 56 45.0	
	baz=56								
H08S1	**Diego Garcia H**	**26.15**	**237**	T		T		21 56 47.1	
	baz=56								
MKAR	**Makanchi Array**	**41.08**	**347**	P		**P**		**21 32 16.1**	**-0.7**
	0.6nm,0.7s,baz=166,slow=11,SNR=3.8								
	0.6nm,0.7s								
KSRS	**Korea Array**	**43.08**	**40**	P		**P**		**21 32 33.8**	**+0.6**
	0.5nm,0.4s,baz=237,slow=7.5,SNR=1.5								
	0.5nm,0.4s								
KURBB	**Kurchatov Arra**	**45.54**	**346**	P		**P**		**21 32 52.8**	**+0.2**
	0.8nm,0.8s,baz=166,slow=7.1,SNR=8.2								
	0.8nm,0.8s								
WRA	**Warramunga Arr**	**47.55**	**125**	P		**P**		**21 33 09.0**	**+0.1**
	0.3nm,0.8s,baz=303,slow=7.4,SNR=2.1								
	0.3nm,0.8s								
ZALV	**Zalesovo Beam**	**47.55**	**352**	P		**P**		**21 33 09.1**	**+0.8**
	0.3nm,0.4s,baz=162,slow=5.6,SNR=3.8								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**49.15**	**129**	P		**P**		**21 33 20.6**	**-0.6**
	0.2nm,0.5s,baz=300,slow=7.8,SNR=2.2								
	0.2nm,0.5s								
H04N2	**CROZET ISLANDS**	**64.99**	**211**	T		T		22 45 31.8	
	baz=45								
H04N1	**CROZET ISLANDS**	**65.00**	**211**	T		T		22 45 34.8	
	baz=45								
H04N3	**CROZET ISLANDS**	**65.01**	**211**	T		T		22 45 37.4	
	baz=45								

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*IDC **19** 21:47:58.1±1.0, 15°31S×167°62E, h99km±7km, mb4.0/18, mbtmp4.3/19, MS3.1/3, Error ellipse: s-maj=21.1km s-min=11.9km az=93.0*
*NEIC **19** 21:48:00.3±1.5, 15°38S±0°07×167°6E±0°1, h116km±5km, mb4.5/24, Error ellipse: s-maj=17.5km s-min=2.1km az=54.0*
ISC 19 21:48:00.4±0.5, 15°37S±0°06×167°57E±0°09, h124km, n77, σ1§36/80, mb4.4/28, 5C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.36**	**258**			**Pn**		**21 48 17.1**	**-1.0**
SANVU						**Sn**		**21 48 30.1**	**-1.3**
MARNC	**Mare, Loyalty**	**6.09**	**176**	Pn		**Pn**		**21 49 26.3**	**-1.8**
DZM	**Mont Dzumac**	**6.75**	**189**	P		**Pn**		**21 49 36.7**	**-0.4**
	49nm,0.6s,baz=58,slow=10,SNR=98								
DZM				S		**Sn**		**21 50 51.6**	**-1.1**
	baz=102,slow=20								
DZM				LR		LR		21 51 35.4	
	comp=Z,91nm,19.8s,baz=348,slow=32								
ONTNC	**Ouen Toro**	**6.98**	**189**			**Pn**		**21 49 40.8**	**+0.6**
PINNC	**Pines Island,**	**7.21**	**181**			**Pn**		**21 49 43.1**	**0.0**
HNR	**Honiara**	**9.50**	**308**	P		**Pn**		**21 50 14.8**	**+0.7**
	61nm,0.4s,baz=178,slow=12,SNR=12								
HNR				S		**Sn**		**21 51 58.2**	**-1.0**
	28nm,0.3s,baz=192,slow=18,SNR=1.2								
HNR				LR		LR		21 53 44.0	
	comp=Z,150nm,18.3s,baz=174,slow=36								
EIDS	**Eidsvold**	**18.36**	**235**			**Pn**		**21 52 07.5**	**+0.4**
EIDS					IAmb	IAmb		21 52 08.6	
	comp=Z,15nm,0.7s								
CTAO	**Charters Tower**	**20.83**	**254**	P		**P**		**21 52 33.6**	**+1.2**
STKA	**Stephens Creek**	**28.81**	**231**	P		**P**		**21 53 47.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=105,slow=10,SNR=3.7								
STKA					PcP	**PcP**		**21 56 53.9**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=68,slow=2.5,SNR=5.0								
	comp=Z,1.6nm,0.6s								
WB0	**Warramunga Arr**	**31.90**	**257**	P		**P**		**21 54 13.4**	**-0.9**
WRA	**Warramunga Arr**	**31.96**	**257**	P		**P**		**21 54 13.7**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=89,slow=8.5,SNR=9.6								
WRA					pP	**pP**		**21 54 38.0**	**-3.8**
	comp=Z,1.0nm,0.8s,baz=88,slow=8.3,SNR=3.4								
WRA					ScP	**ScP**		**22 00 38.2**	**+3.8**
	comp=Z,0.5nm,1.0s,baz=140,slow=2.0,SNR=2.7								
	comp=Z,0.9nm,0.6s								
WRA	**Warramunga Arr**	**31.96**	**257**	P		**P**		**21 54 13.3**	**-1.6**
AS31	**Alice Springs**	**32.72**	**250**	P		**P**		**21 54 20.2**	**-1.3**
ASAR	**Alice Springs**	**32.72**	**250**	P		**P**		**21 54 20.9**	**-0.6**
	comp=Z,4.0nm,0.8s,baz=78,slow=8.9,SNR=36								
ASAR					pP	**pP**		**21 54 44.6**	**-3.6**
	comp=Z,3.8nm,0.9s,baz=77,slow=8.6,SNR=7.0								
ASAR					ScP	**ScP**		**22 00 39.4**	**+2.4**
	comp=Z,0.6nm,0.8s,baz=83,slow=3.5,SNR=3.5								
ASAR					LR	LR		22 05 33.2	
	comp=Z,42nm,19.9s,baz=76,slow=32								
	comp=Z,4.0nm,0.8s								
ASAR	**Alice Springs**	**32.72**	**250**	P		**P**		**21 54 20.8**	**-0.8**
BBOO	**Buckleboo**	**33.42**	**233**	P		**P**		**21 54 27.8**	**+0.3**
BBOO					IAmb	IAmb		21 54 32.5	
	comp=Z,11nm,1.1s								
KNRA	**Kununurra**	**37.36**	**264**	P		**P**		**21 55 00.3**	**-1.0**
FORT	**Forrest**	**39.23**	**240**	P		**P**		**21 55 17.2**	**+0.4**
FORT					IAmb	IAmb		21 55 18.2	
	comp=Z,5.9nm,0.8s								
FITZ	**Fitzroy Crossi**	**40.19**	**260**	P		**P**		**21 55 24.8**	**-0.1**
MBWA	**Marble Bar**	**45.66**	**255**	P		**P**		**21 56 08.8**	**-0.2**
MBWA					IAmb	IAmb		21 56 29.5	
	comp=Z,10nm,1.1s								
MJAR	**Matsushiro Arr**	**58.60**	**332**	P		**P**		**21 57 43.4**	**-1.0**
	comp=Z,2.4nm,0.9s,baz=174,slow=9.0,SNR=4.1								
	comp=Z,2.4nm,0.9s								
MJAR	**Matsushiro Arr**	**58.60**	**332**	P		**P**		**21 57 44.3**	**-0.1**
MJAR					IAmb	IAmb		21 57 46.4	
	comp=Z,6.9nm,1.1s								
MAJO	**Matsushiro**	**58.61**	**332**	P		**P**		**21 57 44.4**	**0.0**
JNU	**Nakatsue**	**59.61**	**324**	P		**P**		**21 57 51.2**	**-0.2**
VNDA	**Vanda**	**62.23**	**181**	P		**P**		**21 58 09.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=3.5,slow=6.0,SNR=12								
	comp=Z,1.9nm,0.7s								
VNDA	**Vanda**	**62.23**	**181**	P		**P**		**21 58 09.0**	**+0.5**
VNDA					IAmb	IAmb		21 58 17.7	
	comp=Z,3.6nm,1.1s								
SBA	**Scott Base**	**62.50**	**180**	P		**P**		**21 58 11.3**	**+1.1**
SBA					IAmb	IAmb		21 58 14.0	
	comp=Z,4.0nm,0.8s								
KSRS	**Korea Array**	**64.43**	**326**	P		**P**		**21 58 24.6**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=119,slow=5.2,SNR=2.3								
	comp=Z,0.8nm,0.5s								
USRK	**Ussuriysk Ar.**	**67.59**	**333**	P		**P**		**21 58 44.3**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=116,slow=8.6,SNR=3.1								
	comp=Z,3.8nm,0.7s								
PETK	**Petropavlovsk-**	**68.73**	**354**	P		**P**		**21 58 50.2**	**-0.4**

HTC	**Hot Caves**	**0.04**	**109**			Pg		21 53 41.6	+1.3
AIN	**Ainahou**	**0.12**	**351**			Pg		21 53 43.3	+1.4
AIN						Sg		21 53 45.7	+2.2
AIN					IAML			21 53 46.3	
	comp=E,1μm,0.4s								
AIN					IAML			21 53 46.6	
	comp=N,2μm,0.7s								
HLP	**Hilina Pali**	**0.13**	**70**			Pg		21 53 43.2	+1.2
HLP						Sg		21 53 45.7	+1.9
HLP					IAML			21 53 48.0	
	comp=E,2μm,0.6s								
HLP					IAML			21 53 48.3	
	comp=N,2μm,0.3s								
KHU	**Kahuku**	**0.17**	**268**			Pg		21 53 43.6	+0.8
KHU						Sg		21 53 46.8	+1.8
SDHHI	**Sand Hill**	**0.19**	**45**			Pg		21 53 44.0	+0.7
SDHHI						Sg		21 53 47.4	+1.6
WRMHI	**West Rim**	**0.20**	**40**			Pg		21 53 44.1	+0.6
WRMHI						Sg		21 53 47.8	+1.7
KKO	**Keanakako'i**	**0.22**	**48**			Pg		21 53 44.4	+0.7
KKO						Sg		21 53 48.1	+1.5
UWE	**Uwekahuna**	**0.22**	**39**			Pg		21 53 44.5	+0.8
UWE					IAML			21 53 49.9	
	comp=N,892nm,0.5s								
OBL	**Observatory Le**	**0.22**	**41**			Pg		21 53 44.4	+0.6
UWB	**Uwekahuna Bluf**	**0.23**	**41**			Pg		21 53 44.5	+0.5
UWB						Sg		21 53 48.5	+1.5
BYL	**Byron's Ledge**	**0.23**	**46**			Pg		21 53 44.6	+0.6
BYL						Sg		21 53 48.4	+1.3
BYL					IAML			21 53 50.8	
	comp=E,446nm,0.5s								
BYL					IAML			21 53 52.3	
	comp=N,678nm,0.5s								
SBLHI	**Steaming Bluff**	**0.24**	**42**			Pg		21 53 45.0	+0.9
SBLHI						Sg		21 53 48.9	+1.7
HATHI	**Halema'uma'u T**	**0.24**	**44**			Pg		21 53 44.8	+0.7
HATHI						Sg		21 53 49.2	+1.9
HATHI					IAML			21 53 50.1	
	comp=E,993nm,0.5s								
HATHI					IAML			21 53 52.4	
	comp=N,868nm,0.7s								
PUH	**Pauahi**	**0.24**	**60**			Pg		21 53 44.6	+0.5
PUH					IAML			21 53 50.5	
	comp=N,575nm,0.3s								
PUH					IAML			21 53 52.8	
	comp=E,699nm,0.8s								
MLH	**Mauna Loa**	**0.25**	**11**			Pg		21 53 45.0	+0.8
MLH						Sg		21 53 49.3	+1.8
MLH					IAML			21 53 50.7	
	comp=N,658nm,0.7s								
MLH					IAML			21 53 52.8	
	comp=E,501nm,0.4s								
RSD	**Rainshed**	**0.26**	**36**	Pg		Pg		21 53 45.0	+0.4
MWH	**Mokuaweoweo**	**0.28**	**327**			Pg		21 53 45.5	+0.6
MWH					IAML			21 53 51.8	
	comp=N,484nm,0.7s								
KNHH	**Kane Nui o Ham**	**0.28**	**63**			Pg		21 53 45.4	+0.4
MLOA	**Mauna Loa Obse**	**0.31**	**335**			Pg		21 53 46.1	+0.6
MLOA					IAML			21 53 50.6	
	comp=E,312nm,3.0s								
MLOA						Sg		21 53 51.6	+2.0
STCH	**Steam Cracks**	**0.32**	**66**			Pg		21 53 46.1	+0.4
STCH						Sg		21 53 51.4	+1.5
STCH					IAML			21 53 51.7	
	comp=N,597nm,0.8s								
NPOC	**North of Pu'u**	**0.34**	**65**			Pg		21 53 46.5	+0.4
NPOC						Sg		21 53 51.8	+1.3
JCUZ	**Jacuzzi**	**0.34**	**67**			Pg		21 53 46.7	+0.6
HMH	**Humu'ula Sheep**	**0.35**	**353**			Pg		21 53 46.9	+0.6
HMH					IAML			21 53 57.1	
	comp=N,500nm,1.0s								
HUH	**Hualalai**	**0.57**	**319**			Pg		21 53 50.9	+0.4

*IDC **19** 22:08:16.8±6.2, 15°.36N×99°.14W, h0km, mb3.5/4, mbtmp3.5/6, ML3.4/2, Error ellipse: s-maj=114.9km s-min=40.5km az=11.0*
*MEX **19** 22:08:23.4±0.4, 16°.16N×99°.28W, h9km±8km, MD4.3*
ISC 19 22:08:21.8±0.9, 16°.24N±0°.04×99°.15W±0°.02, h10km, n70, σ2s 42/123, mb3.4/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.49**	**2**			*eP*	**Pn**	**22 08 33.7**	**-1.2**
CRIG						*eS*	**Sb**	**22 08 42.1**	**+2.3**
DAIG	**Los Arroyos**	**0.91**	**328**			*eP*	**Pg**	**22 08 38.8**	**-0.6**
DAIG						*eS*	**Sb**	**22 08 50.9**	**-1.0**
VNTA	**La Mica**	**0.93**	**316**			*eP*	**Pg**	**22 08 37.7**	**-1.9**
VNTA						*eS*	**Sg**	**22 08 49.3**	**-2.4**
MGIG	**Malinaltepec**	**1.10**	**27**			*eP*	**Pn**	**22 08 43.4**	**-0.1**
MGIG						*eS*	**Sn**	**22 08 58.7**	**-0.2**
CAIG	**El Cayaco**	**1.34**	**307**			*eP*	**Pn**	**22 08 44.2**	**-2.3**
CAIG						*eS*	**Sb**	**22 08 59.3**	**-4.8**
TLIG	**Tlapa**	**1.43**	**23**			*eP*	**Pg**	**22 08 48.3**	**-0.9**
TLIG						*eS*	**Sb**	**22 09 04.9**	**-2.0**
ATYC	**Atoyac**	**1.56**	**308**			*eS*	**Sn**	**22 09 08.6**	**-1.3**
HMTT	**Tlapaneco**	**1.65**	**20**			*eP*	**Pn**	**22 08 50.4**	**-0.6**
HMTT						*eS*	**Sb**	**22 09 11.9**	**-1.4**
YOIG	**Yosondua**	**1.66**	**68**			*eP*	**Pn**	**22 08 51.4**	**+0.2**
YOIG						*eS*	**Sb**	**22 09 14.0**	**+0.3**
TXIG	**Tlaxiaco**	**1.67**	**53**			*eP*	**Pn**	**22 08 51.4**	**+0.1**
TXIG						*eS*	**Sg**	**22 09 13.9**	**-1.5**
MEIG	**Mezcala**	**1.73**	**345**			*eP*	**Pn**	**22 08 52.3**	**+0.2**
MEIG						*eS*	**Sb**	**22 09 14.4**	**-1.3**
FTIG	**Fresnillo de T**	**1.92**	**30**			*eP*	**Pn**	**22 08 54.5**	**-0.3**
FTIG						*eS*	**Sb**	**22 09 20.4**	**-0.8**
PEIG	**Puerto Escondi**	**1.94**	**97**			*eP*	**Pn**	**22 08 53.4**	**-1.4**
PEIG						*eS*	**Sn**	**22 09 15.9**	**-3.5**
HLIG	**Huajuapan de L**	**2.04**	**39**			*eP*	**Pn**	**22 08 56.6**	**+0.3**
HLIG						*eS*	**Sb**	**22 09 23.8**	**-0.8**
ARIG	**Puente Sto Nin**	**2.33**	**331**			*eP*	**Pn**	**22 09 00.9**	**+0.7**
ARIG						*eS*	**Sn**	**22 09 27.8**	**-1.1**
VHO	**Vista Hermosa**	**2.46**	**70**			*eP*	**Pn**	**22 09 02.9**	**+0.7**
VHO						*eS*	**Sn**	**22 09 33.7**	**+1.3**
OXBJ	**Oaxaca**	**2.47**	**70**			*eP*	**Pn**	**22 09 03.4**	**+1.1**
OXBJ						*i*	**Sn**	**22 09 33.7**	**+1.1**
OXLC	**Oaxaca**	**2.49**	**70**			*eP*	**Pn**	**22 09 02.6**	**+0.1**
OXLC						*i*	**Sn**	**22 09 32.5**	**-0.5**
ZIIG	**Zihuatanejo**	**2.60**	**302**			*eP*	**Pn**	**22 09 02.3**	**-1.6**
ZIIG						*eS*	**Sn**	**22 09 33.6**	**-1.9**
YAIG	**Yautepec**	**2.61**	**2**			*eP*	**Pb**	**22 09 06.3**	**-2.4**
YAIG						*eS*	**Sb**	**22 09 37.0**	**-3.9**
PPCL	**Tochimilco**	**2.70**	**11**			*eP*	**Pb**	**22 09 09.3**	**-1.1**
PPCL						*eS*	**Sb**	**22 09 42.7**	**-1.1**
TOIG	**Toxpalan**	**2.72**	**47**			*eP*	**Pn**	**22 09 06.2**	**+0.6**
TOIG						*eS*	**Sb**	**22 09 41.6**	**-2.4**
MAVM	**Malinalco, Edo**	**2.72**	**353**			*e*	**Pg**	**22 09 12.8**	**-1.2**
MAVM						*e*		22 09 49.1	
TPIG	**Tehuac#an**	**2.76**	**38**			*eP*	**Pn**	**22 09 06.2**	**-0.1**
TPIG						*eS*	**Sn**	**22 09 41.0**	**+1.2**
PPPT	**Popocatepetl**	**2.76**	**10**			*eP*	**Pb**	**22 09 10.7**	**-0.9**
PPPT						*eS*	**Sb**	**22 09 43.8**	**-2.0**
PBXN	**Popocatepetl**	**2.79**	**10**			*eP*	**Pb**	**22 09 12.0**	**-0.1**
PBXN						*eS*	**Sb**	**22 09 44.9**	**-1.6**
PPM	**Popocatepetl**	**2.85**	**10**			*eP*	**Pn**	**22 09 09.8**	**+2.0**
PPM						*eS*	**Sb**	**22 09 45.2**	**-3.2**
PPSX	**Xalitzintla**	**2.89**	**12**			*eP*	**Pg**	**22 09 14.9**	**-2.4**
PPSX						*eS*	**Sb**	**22 09 47.4**	**-2.0**
AMVM	**AMECAMECA**	**2.90**	**7**			*eP*	**Pb**	**22 09 10.6**	**-3.1**
AMVM						*eS*	**Sn**	**22 09 44.0**	**+0.7**
MZVM		**2.93**	**359**			*eP*	**Pb**	**22 09 12.2**	**-0.2**
MZVM						*eS*	**Sb**	**22 09 49.8**	**-0.3**
MPVM	**San Francisco**	**2.95**	**3**			*eP*	**Pb**	**22 09 12.2**	**-2.4**
MPVM						*eS*	**Sb**	**22 09 47.0**	**-3.7**
TLVM	**San Miguel Top**	**2.95**	**360**			*eP*	**Pb**	**22 09 12.6**	**-2.1**
TLVM						*eS*	**Sn**	**22 09 45.2**	**+0.4**
HUIG	**Huatulco**	**2.97**	**99**			*eP*	**Pn**	**22 09 08.3**	**-0.6**
XCVM	**Xochimilco**	**3.00**	**1**			*eP*	**Pn**	**22 09 10.4**	**+0.8**
XCVM						*eS*	**Sg**	**22 09 55.6**	**-2.5**
AOVM	**Tlapan**	**3.01**	**357**			*eP*	**Pb**	**22 09 12.9**	**-3.0**
AOVM						*eS*	**Sg**	**22 09 54.0**	**-4.7**
INVM	**La Marquesa**	**3.04**	**356**			*eP*	**Pb**	**22 09 14.2**	**-2.0**
INVM						*eS*	**Sn**	**22 09 48.2**	**+1.2**
THVM	**De Xico**	**3.06**	**3**			*eP*	**Pg**	**22 09 19.1**	**-1.3**
THVM						*eS*	**Sb**	**22 09 53.6**	**-0.4**
MCRU	**Las Cruces**	**3.06**	**358**			*eP*	**Pn**	**22 09 07.7**	**-2.9**
MCRU						*eS*	**Sb**	**22 09 49.3**	**-5.0**
TOVM	**TOLUCA**	**3.07**	**351**			*eP*	**Pn**	**22 09 07.5**	**-3.1**
TOVM						*eS*	**Sn**	**22 09 48.4**	**+0.9**
MHVM	**Bosque de Chap**	**3.15**	**359**			*eP*	**Pb**	**22 09 15.4**	**-2.6**
MHVM						*eS*	**Sn**	**22 09 50.8**	**+1.2**
PBVM	**Pinon**	**3.18**	**1**			*eP*	**Pb**	**22 09 17.7**	**-0.7**
APVM	**Azcapotzalco**	**3.23**	**359**			*eP*	**Pn**	**22 09 11.4**	**-1.4**
APVM						*eS*	**Sb**	**22 09 56.7**	**-2.3**
PTVM	**Pico Tres Padr**	**3.33**	**1**			*eS*	**Sb**	**22 09 56.8**	**-5.1**
NEUV	**Arroyo Zacate**	**3.52**	**65**			*eP*	**Pn**	**22 09 17.0**	**+0.4**
NEUV						*eS*	**Sn**	**22 09 59.0**	**+0.6**
VTVM	**Tizayuca**	**3.53**	**6**			*eP*	**Pn**	**22 09 18.8**	**+1.9**
VTVM						*eS*	**Sn**	**22 10 00.7**	**+1.8**
ATVM	**ATLACOMULCO**	**3.56**	**350**			*eP*	**Pn**	**22 09 15.6**	**-1.8**
ATVM						*eS*	**Sb**	**22 10 02.5**	**-6.0**
ZUVM	**ZUMPANGO**	**3.57**	**1**			*eP*	**Pn**	**22 09 16.6**	**-0.8**
ZUVM						*eS*	**Sb**	**22 10 05.4**	**-3.2**
ACIG	**Acambay**	**3.78**	**350**			*eP*	**Pb**	**22 09 28.8**	**0.0**
ACIG						*eS*	**Sb**	**22 10 12.4**	**-2.4**
JAUV	**Jalcomulco**	**3.83**	**35**			*eP*	**Pn**	**22 09 21.4**	**+0.5**
JAUV						*eS*	**Sb**	**22 10 10.0**	**-6.0**
MOIG	**Morelia**	**3.93**	**331**			*eS*	**Sn**	**22 10 09.1**	**+0.3**
CMIG	**Matias Romero**	**4.18**	**78**	Pn		Pn		**22 09 25.5**	**-0.1**
	1.6nm,0.3s,baz=264,slow=9.9,SNR=8.9								
CMIG					Sn		**Sn**	**22 10 13.0**	**-1.5**
	4.1nm,0.3s,baz=150,slow=17,SNR=6.7 3.5nm,0.3s								
CXUV	**Coxquihui**	**4.18**	**21**			*eP*	**Pb**	**22 09 32.3**	**-3.2**
CXUV						*eS*	**Sb**	**22 10 18.9**	**-7.3**
LVIG	**Laguna Verde**	**4.33**	**37**			*eP*	**Pn**	**22 09 30.1**	**+2.4**
LVIG						*eS*	**Sn**	**22 10 22.4**	**+4.1**
PMUV	**Sontecomapan**	**4.48**	**59**			*eP*	**Pn**	**22 09 26.4**	**-3.4**
MMIG	**Aquila**	**4.49**	**298**			*eS*	**Sn**	**22 10 22.0**	**-0.3**
CTUV	**Llano Grande**	**5.26**	**8**			*eP*	**Pn**	**22 09 44.1**	**+3.6**
CTUV						*eS*	**Sn**	**22 10 45.4**	**+4.2**
EZ5V		**5.32**	**308**			*eP*	**Pn**	**22 09 42.1**	**+0.6**
EZ5V						*eS*	**Sn**	**22 10 42.6**	**-0.5**
MNGA	**Volcan de Coli**	**5.33**	**308**			*eP*	**Pn**	**22 09 43.9**	**+2.3**
MNGA						*eS*	**Sn**	**22 10 43.5**	**+0.2**
INCO	**Volcan de Coli**	**5.35**	**308**			*eP*	**Pn**	**22 09 45.8**	**+3.6**
INCO						*eS*	**Sn**	**22 10 43.9**	**-0.1**
CDAR	**Ciudad de Arme**	**5.36**	**301**			*eP*	**Pn**	**22 09 42.7**	**+0.9**
SOMAC	**Volcano de Col**	**5.37**	**308**			*eP*	**Pn**	**22 09 45.2**	**+2.9**
SOMAC						*eS*	**Sn**	**22 10 43.9**	**-0.5**
CEGR	**Campo Tres**	**5.47**	**306**			*eP*	**Pn**	**22 09 44.0**	**+0.5**
CEGR						*eS*	**Sn**	**22 10 45.2**	**-1.4**
RPIG	**Rio Verde**	**5.67**	**352**			*eS*	**Sn**	**22 10 56.2**	**+4.7**
TGIG		**5.81**	**84**			*eS*	**Sn**	**22 10 57.6**	**+2.7**
TEIG	**Tepich**	**11.07**	**67**	Sn		**Sn**		**22 12 58.2**	**-5.9**
	baz=311,slow=24,SNR=1.4								
TXAR	**Lajitas Array**	**13.68**	**343**		Pn	**P**		**22 11 47.4**	**+2.5**
	baz=151,slow=12,SNR=2.8 0.4nm,0.7s								
ANMO	**Albuquerque**	**19.74**	**342**		P	**Pn**		**22 12 58.2**	**+4.7**
	1.5nm,0.6s,baz=164,slow=7.4,SNR=2.9 1.5nm,0.6s								
NVAR	**Mina Array Bea**	**27.78**	**326**		P	**P**		**22 14 13.7**	**+2.5**
	0.2nm,0.3s,baz=133,slow=6.6,SNR=2.6 0.2nm,0.3s								
PDAR	**Pinedale Array**	**27.90**	**343**		P	**P**		**22 14 15.1**	**+2.9**
	0.5nm,0.8s,baz=141,slow=9.6,SNR=4.2 0.5nm,0.8s								
ILAR	**Eielson Array**	**58.13**	**338**		P	**P**		**22 18 18.9**	**+3.6**
	0.3nm,0.8s,baz=112,slow=6.7,SNR=2.9 0.3nm,0.8s								

*IDC **19** 22:14:05.3±2.9, 10°.59S×112°.41E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=168.5km s-min=21.8km az=48.0*
*DJA **19** 22:14:05.0±2.0, 11°.S±13°×11°.2E±°, h10km±25km, M4.1/13, mb4.0/4, MLv4.2/13*
ISC 19 22:14:05.1±1.2, 11°.2S±0°.1×111°.8E±0°.1, h10km, n15, σ0s 88/13, mb3.9/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**3.07**	**348**			P	**Pn**	**22 14 53.7**	**0.0**
UGM	**Wanagama**	**3.52**	**339**			P	**Pn**	**22 14 59.7**	**-0.2**
UGM						S	**Sn**	**22 15 42.5**	**+0.9**
JAGI	**Jajag, Banyuwa**	**3.58**	**41**			P	**Pn**	**22 15 00.7**	**-0.1**
BLJI	**Banyuglugur**	**3.88**	**27**			P	**Pn**	**22 15 05.6**	**+0.7**
SRBI	**Singaraja**	**4.59**	**48**			P	**Pn**	**22 15 14.6**	**0.0**
TWSI	**Taliwang, Sumb**	**5.58**	**64**			P	**Pn**	**22 15 27.4**	**-0.9**
	0.1nm15nm,0.8s								
PLAI	**Plampang**	**6.35**	**69**			P	**Pn**	**22 15 38.7**	**-0.1**
WRA	**Warramunga Arr**	**23.36**	**115**			P	**P**	**22 19 13.2**	**-0.8**
	0.6nm,0.6s,baz=291,slow=8.6,SNR=7.6 0.6nm,0.6s								
ASAR	**Alice Springs**	**24.41**	**123**		P	**P**		**22 19 23.7**	**-0.3**
	0.8nm,0.7s,baz=303,slow=9.4,SNR=10 0.8nm,0.7s								
CMAR	**Chiang Mai Arr**	**32.10**	**337**		P	**P**		**22 20 32.4**	**-0.3**
	1.1nm,0.3s,baz=148,slow=9.6,SNR=1.5 1.1nm,0.3s								
STKA	**Stephens Creek**	**34.31**	**131**		P	**P**		**22 20 53.8**	**+1.8**
	1.7nm,0.5s,baz=291,slow=7.1,SNR=4.2 1.7nm,0.5s								
H08S2	**Diego Garcia H**	**38.91**	**272**		T	T		23 02 51.4	
	baz=99,slow=75,SNR=4.7								
H08S3	**Diego Garcia H**	**38.93**	**272**		T	T		23 02 49.1	
	baz=99,slow=75,SNR=4.8								
H08S1	**Diego Carcia H**	**38.93**	**272**		T	T		23 02 51.3	
	baz=99,slow=75,SNR=4.1								
MKAR	**Makanchi Array**	**63.50**	**338**		P	**P**		**22 24 34.2**	**-1.2**
	0.9nm,0.9s,baz=143,slow=8.4,SNR=1.9 0.9nm,0.9s								

*IDC **19** 22:26:31.6±0.6, 55°.12N×156°.59W, h0km, mb4.8/31, mbtmp4.8/35, ML4.4/4, MS4.1/24, Error ellipse: s-maj=15.1km s-min=10.4km az=164.0*
*BJI **19** 22:26:31.0, 55°.20N×156°.50W, h20km, mB5.6/12, mb5.2/60, Ms5.1/13, Ms7 4.8/15*
*NEIC **19** 22:26:33.9±1.3, 55°.07N±0°.04×156°.35W±0°.09, h19km±3km, Error ellipse: s-maj=8.5km s-min=2.6km az=124.0*
*AEIC **19** 22:26:33.8±1.8, 54°.97N±0°.07×156°.36W±0°.09, h20km±3km, ML4.6, mb5.1/130(NEIC), ML4.7/48(NEIC), Mww4.6/23(NEIC), Error ellipse: s-maj=10.1km s-min=6.5km az=156.0*
*NEIC **19** 22:26:33.1, 55°.03N×156°.84W, h26km, Moment Tensor Solution. Duration: 1s2 Moment tensor: Scale 10^16Nm; Mrr0.75; Mθθ-0.73; Mφφ-0.01; Mrθ0.64; Mθφ-0.34; Mφr0.10; Fault plane solution: M0 1.04000×10^16 NP1: φ=237.86000°, δ=26.77000°, λ=72.53000°. NP2: φ=77.28000°, δ=64.55000°, λ=98.61000°. Principal axes: T 0.9859, Plg69.0000°, Azm5.0000°; N 0.1003, Plg8.0000°, Azm254.0000°; P -1.0862, Plg19.0000°, Azm161.0000°;*
*NEIC **19** 22:26:33.1, 54°.93N×156°.32W, h26km*
*MOS **19** 22:26:33.5±0.9, 55°.13N×156°.42W, h26km, mb5.2/82, MS4.3/5, Error ellipse: s-maj=10.0km s-min=4.4km az=99.1*
ISC 19 22:26:33.8±0.3, 55°.03N±0°.05×156°.39W±0°.03, h22km, n726, σ1s 16/729, mb5.1/204, MS4.2/34, 53C-19D, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.91**	**29**				**Pb**	**22 26 50.2**	**-0.7**
CHIR					Sn		**Sb**	**22 27 01.9**	**-0.7**
CHIR					IAML			22 27 09.2	
	comp=N,33μm,0.6s								
CHIR					IAML			22 27 10.9	
	comp=E,32μm,0.8s								
CHIR	**Chirikof Islan**	**0.91**	**29**	P			**Pb**	**22 26 50.0**	**-0.9**
CHIR	**Chirikof Islan**	**0.91**	**29**	S			**Sb**	**22 27 01.9**	**-0.7**
CHNA	**Chernabura Isl**	**1.85**	**265**	P			**Pn**	**22 27 03.0**	**-1.2**
CNBA	**Chernabura Isl**	**1.86**	**265**				**Pn**	**22 27 02.9**	**-1.4**
VNSG	**Veniaminof 6**	**1.88**	**307**				**Pn**	**22 27 04.3**	**-0.4**
VNKR	**Veniaminof 5**	**1.97**	**302**				**Pn**	**22 27 05.4**	**-0.5**
SII	**Sitkinak Islan**	**1.98**	**38**				**Pn**	**22 27 05.2**	**-0.8**
SII					Sn		**Sn**	**22 27 27.8**	**-2.3**
SII					IAML			22 27 54.8	
	comp=E,8μm,0.9s								
SII					IAML			22 28 03.3	
	comp=N,7μm,0.7s								
SII	**Sitkinak Islan**	**1.98**	**38**	P			**Pn**	**22 27 05.3**	**-0.7**
SII	**Sitkinak Islan**	**1.98**	**38**	S			**Sn**	**22 27 29.6**	**-0.5**
ANPK	**Aniakchak Peak**	**2.06**	**333**				**Pn**	**22 27 06.6**	**-0.7**
ANPB	**Aniakchak Plen**	**2.07**	**330**				**Pn**	**22 27 06.6**	**-0.7**
VNFG	**Fog Glacier, M**	**2.19**	**306**				**Pn**	**22 27 09.3**	**+0.3**
SDPT	**Sand Point**	**2.36**	**280**				**Pn**	**22 27 10.5**	**-0.8**
SDPT					IAML			22 27 59.6	
	comp=E,5μm,1.2s								
SDPT					IAML			22 28 15.6	
	comp=N,5μm,1.1s								
SDPT	**Sand Point**	**2.36**	**280**	P			**Pn**	**22 27 10.6**	**-0.6**
PLK4	**Peulik 4**	**2.61**	**0**	Pn			**Pn**	**22 27 14.8**	**0.0**
R16K	**Pilot Point**	**2.63**	**346**				**Pn**	**22 27 14.3**	**-0.6**
R16K					IAML			22 28 15.9	
	comp=E,5μm,1.3s								
PLK3	**Peulik 3**	**2.67**	**1**				**Pn**	**22 27 15.3**	**-0.2**
PLK3							**Sn**	**22 27 48.9**	**+1.8**
PLK2	**Peulik 2**	**2.75**	**1**				**Pn**	**22 27 16.6**	**+0.1**
PLK2							**Sn**	**22 27 50.2**	**+1.2**
PLK1	**Peulik 1**	**2.79**	**358**				**Pn**	**22 27 17.2**	**+0.1**
OHAK	**Old Harbor**	**2.81**	**37**				**Pn**	**22 27 16.5**	**-0.8**
OHAK	**Old Harbor**	**2.81**	**37**	P			**Pn**	**22 27 16.5**	**-0.8**
PS1A	**Pavlof South-1**	**3.09**	**280**				**Pn**	**22 27 20.5**	**-0.7**
CAHL	**Cahill**	**3.09**	**11**				**Pn**	**22 27 21.0**	**-0.4**
DOL	**Dolgoi Island**	**3.15**	**274**				**Pn**	**22 27 21.3**	**-0.7**
DOL							**Sn**	**22 27 58.4**	**-0.5**
PS4A	**Pavlof South-4**	**3.15**	**278**				**Pn**	**22 27 21.3**	**-0.7**
PS4A							**Sn**	**22 27 59.4**	**+0.5**
ANCK	**Angle Creek**	**3.22**	**9**				**Pn**	**22 27 22.7**	**-0.4**
ACHA	**Angle Creek He**	**3.25**	**10**				**Pn**	**22 27 23.0**	**-0.5**
CNTC	**Contact Creek**	**3.26**	**5**				**Pn**	**22 27 23.4**	**-0.2**
S12K	**Black Hills**	**3.31**	**284**				**Pn**	**22 27 24.0**	**-0.2**
S12K					IAML			22 28 44.4	
	comp=E,2μm,0.8s								
DT1	**Dutton Round H**	**3.39**	**274**				**Pn**	**22 27 24.6**	**-0.7**
DT1							**Sn**	**22 28 04.1**	**-0.6**
KDAK	**Kodiak Island**	**3.48**	**36**	Pn			**Pn**	**22 27 25.5**	**-1.1**
	comp=E,23nm,0.3s,baz=207,slow=4.6,SNR=232								
KDAK					Sn		**Sn**	**22 28 02.4**	**-4.6**
	comp=E,83nm,0.3s,baz=280,slow=9.9,SNR=7.1 comp=E,101nm,0.5s								
KDAK	**Kodiak Island**	**3.48**	**36**				**Pn**	**22 27 25.5**	**-1.1**
KDAK					IAML			22 29 00.2	
	comp=E,1μm,1.5s								
KARR	**Katmai Rainbow**	**3.60**	**14**				**Pn**	**22 27 27.8**	**-0.5**
KAHG	**Katmai Hook Gl**	**3.62**	**16**				**Pn**	**22 27 28.4**	**-0.2**
Q16K	**King Salmon**	**3.66**	**358**				**Pn**	**22 27 28.7**	**-0.4**
KAHC	**Katmai Hardscr**	**3.71**	**11**				**Pn**	**22 27 29.0**	**-0.4**
KAPH	**Katmai Pasha**	**3.75**	**17**				**Pn**	**22 27 30.3**	**-0.1**
KAPH							**Sn**	**22 28 15.0**	**+1.1**
FALS	**False Pass**	**4.05**	**270**				**Pn**	**22 27 33.8**	**-0.7**
FALS	**False Pass**	**4.05**	**270**	P			**Pn**	**22 27 34.2**	**-0.3**
P16K	**Nushagak River**	**4.11**	**348**	Pn			**Pn**	**22 27 35.3**	**0.0**
Q19K	**Cape Douglas,**	**4.19**	**20**				**Pn**	**22 27 35.9**	**-0.5**
SYI	**Shuyak Island**	**4.21**	**30**				**Pn**	**22 27 35.9**	**-0.7**
SYI					IAML			22 29 13.1	
	comp=N,666nm,1.0s								
SYI					IAML			22 29 16.4	
	comp=E,800nm,1.8s								
ISNN	**Isanotski Nort**	**4.26**	**270**				**Pn**	**22 27 36.2**	**-1.2**
P18K	**Big Mountain,**	**4.42**	**8**				**Pn**	**22 27 38.6**	**-1.0**
O15K	**Ungalikthiuk R**	**4.56**	**337**				**Pn**	**22 27 40.9**	**-0.6**
O15K					IAML			22 29 20.4	
	comp=N,732nm,0.9s								
O15K					IAML			22 29 27.6	
	comp=E,639nm,1.1s								
AUJK	**Augustine Jueg**	**4.63**	**19**				**Pn**	**22 27 42.5**	**+0.1**
O16K	**Kokwok River B**	**4.67**	**349**				**Pn**	**22 27 42.3**	**-0.6**
WEBT	**Westdahl Beart**	**4.86**	**268**				**Pn**	**22 27 45.5**	**0.0**
O18K	**Koktuh Hills**	**4.88**	**7**				**Pn**	**22 27 45.5**	**-0.4**
O18K					IAML			22 29 36.7	
	comp=E,486nm,1.0s								
O18K					IAML			22 29 37.0	
	comp=N,433nm,1.6s								
P19K	**Oil Pt**	**4.94**	**19**		

J20K Nowinta River 9.25 6 Pn Pn 22 28 45.0 -0.7
DHY Denali Highway 9.30 26 Pn Pn 22 28 46.0 -0.6
WACK Wrangell Chich 9.40 37 Pn Pn 22 28 45.5 -2.5
HARP HAARP 9.41 34 Pn Pn 22 28 46.0 -2.0
MCARA McCarthy VSAT 9.49 42 Pn Pn 22 28 48.3 -0.8
BPAW Bear Paw Mtn. 9.50 15 Pn Pn 22 28 47.8 -1.4
KIAG Kiagna River 9.50 46 Pn Pn 22 28 47.1 -2.3
BALM Baldy 9.57 45 Pn Pn 22 28 47.7 -2.5
PTPK Patty Peak 9.60 44 Pn Pn 22 28 48.2 -2.5
RKAV Rock Avalanche 9.63 51 Pn Pn 22 28 48.5 -2.6
TABL Table Mountain 9.78 50 Pn Pn 22 28 53.3 0.0
CTGM Chitina Glacie 9.95 47 Pn Pn 22 28 54.7 -0.8
LOGN Logan Glacier 10.02 48 Pn Pn 22 28 55.6 -0.8
PCA Pinnacle 10.04 53 Pn Pn 22 28 56.8 +0.3
H17K Granite Mounta 10.10 351 Pn Pn 22 28 57.1 -0.2
H18K Honhosa River 10.21 355 Pn Pn 22 28 58.1 -0.7
BCPM Bancas Point 10.27 54 Pn Pn 22 29 00.1 +0.4
PNL Peninsula 10.28 56 P Pn Pn 22 28 59.6 -0.3
M27K Edge Creek, AK 10.52 40 Pn Pn 22 29 02.8 -0.4
RIDG Independent Ri 10.52 29 Pn Pn 22 29 02.4 -0.7
ANM Nome 10.57 338 Pn Pn 22 29 03.2 -0.6
ANM Nome 10.57 338 P Pn 22 29 03.2 -0.6
COLA College 10.75 20 Pn Pn 22 29 04.8 -1.4
COLA College 10.75 20 P Pn 22 29 04.6 -1.6
COLA College 10.75 20 P Pn 22 29 04.8 -1.4
ILAR Eielson Array 10.86 22 Pn Pn 22 29 04.4 -3.4
comp=E,3.4nm,0.3s,baz=213,slow=14,SNR=95
ILAR Sn Sn 22 30 58.5 -10
comp=E,0.5nm,0.3s,baz=183,slow=25,SNR=0.9
comp=E,11nm,0.4s
O29M Mount Kennedy 10.89 54 Pn 22 29 07.8 -0.5
ATKA Atka Island 10.94 262 Pn 22 29 06.8 -2.1
ATKA Atka Island 10.94 262 P Pn 22 29 08.9 0.0
BCAR Beaver Creek A 11.00 37 Pn 22 29 09.5 -0.2
IMAR Indian Mountai 11.07 6 Pn 22 29 09.4 -1.2
P29M Windy Craggy 11.07 58 Pn 22 29 10.2 -0.5
F15K North Star Dit 11.45 343 Pn 22 29 17.4 +1.6
S31K Pelican 11.51 67 Pn 22 29 16.1 -0.6
G21K Allakaket 11.61 6 Pn 22 29 16.8 -1.2
SIT Sitka 11.95 72 Pn Pn 22 29 21.1 -1.5
SIT Sitka 11.95 72 P Pn 22 29 21.7 -0.9
SIT Sitka 11.95 72 P Pn 22 29 21.1 -1.5
N30M Aishikik Lake 12.01 50 Pn 22 29 23.3 -0.2
SKAG Skagway 12.22 60 Pn 22 29 26.7 +0.4
S32K Killisnoo 12.37 70 Pn Pn 22 29 27.8 -0.5
DAWY Dawson 12.46 37 Pn 22 29 29.2 -0.5
ADK Adak 12.49 264 Pn Pn 22 29 28.7 -1.3
ADK Adak 12.49 264 P Pn 22 29 29.3 -0.7
ADK Adak 12.49 264 P Pn 22 29 28.7 -1.3
E18K Tukpahlearik C 12.60 353 Pn 22 29 31.6 +0.2
N31M Braeburn, Yuko 12.60 51 Pn 22 29 31.9 +0.4
WHY Whitehorse 12.74 55 Pn 22 29 34.3 +0.8
KIWB Kanaga Island 12.77 264 Pn Pn 22 29 32.9 -0.9
P32M Atlin 13.05 60 Pn 22 29 36.0 -1.8
U33K Whale Pass 13.20 76 Pn Pn 22 29 37.7 -2.0
CRAG Craig 13.27 79 Pn Pn 22 29 38.3 -2.3
E23K Chandalar 13.46 11 Pn 22 29 40.6 -2.7
D20K Etivluk River 13.74 360 Pn 22 29 45.8 -1.3
C16K Lisburne Hills 13.93 346 Pn 22 29 49.6 0.0
D22K Ayikyak River 14.01 6 Pn 22 29 48.7 -2.0
H02S2 DAWSON INLET T 14.13 88 T T 22 44 15.7
SNR=39
H29M Whitestone 14.21 31 Pn 22 29 52.7 -0.8
D24K Happy Valley 14.59 11 Pn 22 29 58.3 -0.3
B21K Ikpikpuk River 14.67 2 Pn 22 29 57.8 -1.9
DLBC Dease Lake 14.82 66 Pn Pn 22 30 04.8 +2.8
comp=E,0.6nm,0.3s,baz=246,slow=14,SNR=8.9
DLBC Sn **Sn 22 32 43.2 -2.1**
comp=E,0.2nm,0.3s,baz=175,slow=16,SNR=1.7
DLBC LR LR 22 34 56.4
comp=E,525nm,21.3s,baz=267,slow=34
comp=E,3.2nm,0.5s
AMKA Amchitka 14.99 266 Pn 22 30 01.3 -2.8
H31M Peel River 15.23 36 Pn 22 30 07.4 +0.2
H31M IAmb IAmb 22 30 34.1
comp=Z,51nm,0.8s
G30M tAoh Zraii Nji 15.36 31 Pn 22 30 08.2 -0.8
G30M IAmb IAmb 22 30 20.1
comp=Z,83nm,0.8s
BBB Bella Bella 16.97 88 LR LR 22 35 54.0
comp=Z,460nm,18.1s,baz=302,slow=33
INK Inuvik 17.01 30 Pn Pn 22 30 28.8 -1.2
comp=Z,1.8nm,0.3s,baz=224,slow=14,SNR=63
INK Sn **Sn 22 33 33.7 -4.5**
comp=Z,0.2nm,0.3s,baz=226,slow=18,SNR=1.3
INK LR LR 22 37 57.1
comp=Z,1µm,18.5s,baz=258,slow=40
comp=Z,21nm,0.7s
INK Inuvik 17.01 30 Pn 22 30 29.2 -0.8
INK IAmb IAmb 22 30 35.3
comp=Z,112nm,0.8s
INK Inuvik 17.01 30 P Pn 22 30 29.2 -0.8
INK pmax pmax
comp=Z,112nm,0.9s
SHEM Shemya Is, Ala 17.49 275 P Pn 22 30 33.6 -2.4
comp=Z,193nm,0.5s,baz=87,slow=19,SNR=6.4
SMY Shemya 17.49 275 Pn Pn 22 30 35.6 -0.4
SMY Shemya 17.49 275 P P 22 30 36.9 -0.2
SMY Shemya 17.49 275 P Pn 22 30 35.6 -0.4
SMY pmax pmax
comp=Z,187nm,0.6s
C36M Paulatuk 20.44 33 P P 22 31 08.8 -0.4
C36M IAmb IAmb 22 31 19.8
comp=Z,107nm,0.9s
LLLB Lillooet 21.18 88 P P 22 31 18.8 +1.4
A36M Sachs Harbour 21.51 26 P 22 31 21.2 +0.4
BILL Bilibino 21.60 322 P P 22 31 20.6 -1.2
BILL IAmb IAmb 22 31 24.9
comp=Z,86nm,1.2s
BILL Bilibino 21.60 322 *i* P **P 22 31 21.3 -0.5**
BILL pmax pmax
comp=Z,44nm,1.0s
YKA Yellowknife Ar 22.56 54 P P 22 31 32.9 +0.8
comp=Z,4.2nm,0.7s,baz=276,slow=11,SNR=20
YKA LR LR 22 41 53.3
comp=Z,863nm,18.4s,baz=258,slow=41
comp=Z,4.2nm,0.7s
YKA Yellowknife Ar 22.56 54 P P 22 31 30.3 -1.8
YKA Yellowknife Ar 22.56 54 *ce*P **P 22 31 32.9 +0.8**
YKA pmax pmax
comp=Z,5.0nm,0.7s
YKAW1 Yellowknife Wh 22.62 54 P P 22 31 30.9 -1.8
WAH2 Wahluke Slope 24.42 94 P P 22 31 49.3 -1.2
HAWA Hanford 24.64 95 P P 22 31 52.5 0.0
F07A Phinny Hill Vi 24.69 96 P P 22 31 53.5 +0.5
NEW Newport 25.02 89 LR LR 22 40 25.4
comp=Z,190nm,19.2s,baz=296,slow=33
NEW Newport 25.02 89 P P 22 31 56.4 +0.4
NEW Newport 25.02 89 P P 22 31 56.4 +0.4
NEW pmax pmax
comp=Z,10.0nm,1.0s
YBH Yreka Blue Hor 25.73 107 LR LR 22 39 45.3
comp=Z,32nm,21.0s,baz=298,slow=31
I07A Izee 26.01 99 P P 22 32 03.9 -1.2
PET Petropavlovsk 26.14 284 P P 22 32 05.2 -0.9
PET Petropavlovsk 26.14 284 *eP* **P 22 32 06.9 +0.9**
PET *eS* **S 22 36 30.5 -5.6**
PET pmax pmax
comp=Z,139nm,1.0s
PET MLR MLR
comp=Z,200nm,18.0s
PET Petropavlovsk 26.14 284 P P 22 32 05.1 -0.9
comp=Z,152nm,1.1s
PEA0B Petropavlovsk- 26.64 285 P P 22 32 10.4 -0.1
PEA0B Petropavlovsk- 26.64 285 *ce*P **P 22 32 11.1 +0.6**
PETK Petropavlovsk- 26.64 285 P P 22 32 10.5 0.0
comp=Z,86nm,1.0s,baz=72,slow=12,SNR=32
comp=Z,86nm,1.0s
PETK Petropavlovsk- 26.64 285 P P 22 32 09.9 -0.6
SEY Seymchan 26.88 308 *ce*P **P 22 32 12.3 -0.2**
SEY pmax pmax
comp=Z,60nm,2.5s
BPMT Black Pine Rid 28.11 90 P P 22 32 24.5 +0.4
MA2 Magadan 28.26 301 LR LR 22 45 36.4
comp=Z,437nm,18.1s,baz=108,slow=41
SKR Severo-Kuril's 28.56 281 *eP* P 22 32 16.0 -12
SKR pmax pmax
comp=Z,6µm,4.1s
SKR MLR MLR
comp=Z,4µm,19.0s
NVAR Mina Array Bea 30.46 107 P P 22 32 47.6 +2.7
comp=Z,2.8nm,0.8s,baz=298,slow=8.4,SNR=12
NVAR LR LR 22 42 51.1
comp=Z,343nm,18.9s,baz=289,slow=32
comp=Z,2.8nm,0.8s
RES Resolute Bay 30.55 27 P P 22 32 45.2 +0.1
RES Resolute Bay 30.55 27 P P **22 32 45.2 +0.1**
RES pmax pmax
comp=Z,9.0nm,0.9s
YHH Holmes Hill 30.55 90 P 22 32 46.1 +0.3
BLKN Baker Lake 30.70 48 P 22 32 47.4 +0.9
H17A Grant Village 30.94 91 P **P 22 32 50.1 +0.9**
HVU Hansel Valley 31.30 97 P 22 32 52.6 +0.4
HVU Hansel Valley 31.30 97 P P **22 32 52.6 +0.4**
HVU pmax pmax
comp=Z,11nm,1.1s
PDAR Pinedale Array 32.52 92 P P 22 33 03.6 +0.5
TPNV Topopah Spring 32.65 107 P P 22 33 04.0 -0.2
TPNV Topopah Spring 32.65 107 P P 22 33 04.0 -0.2
TPNV pmax pmax
comp=Z,10.0nm,1.0s
QSM Queen of Sheba 33.03 109 P 22 33 07.8 +0.5
QSM IAmb IAmb 22 33 26.6
comp=Z,11nm,1.0s
SRU San Rafael Swe 34.35 98 P P 22 33 20.5 +1.5
SRU IAmb IAmb 22 33 31.1
comp=Z,13nm,0.9s
SRU San Rafael Swe 34.35 98 P P 22 33 20.5 +1.5
SRU pmax pmax
comp=Z,13nm,0.9s
TIXI Tiksi 34.56 327 P P 22 33 19.5 -0.7
TIXI IAmb IAmb 22 33 20.4
comp=Z,25nm,0.8s
TIXI Tiksi 34.56 327 *ce*P **P 22 33 19.6 -0.6**
TIXI pmax pmax
comp=Z,34nm,1.0s
O20A White River Ci 34.97 95 P P 22 33 25.2 +0.9
O20A IAmb IAmb 22 33 35.7
comp=Z,25nm,0.8s
PFO Pinyon Flats O 35.02 111 LR LR 22 45 22.0
comp=Z,306nm,18.1s,baz=356,slow=32
ILON Igloolik, Nuna 35.03 37 P P 22 33 25.3 +1.0
ILON IAmb IAmb 22 33 50.5
comp=Z,16nm,1.0s
W13A Hualapai Mount 35.31 107 P 22 33 27.0 -0.3
IRM Iron Mountain 35.32 109 P P 22 33 27.9 +0.7
IRM IAmb IAmb 22 33 31.6
comp=Z,14nm,0.9s
TYV Tymovskoe 35.94 289 *eP* **P 22 33 33.0 +0.7**
TYV pmax pmax
comp=Z,92nm,0.9s
TYV pmax pmax
comp=Z,2µm,3.8s
BLYC Blythe 35.97 109 P 22 33 33.5 +0.8
BLYC IAmb IAmb 22 33 37.1
comp=Z,14nm,0.9s
ULM Lac du Bonnet 36.02 72 P P 22 33 35.0 +2.0
comp=Z,2.6nm,0.6s,baz=293,slow=7.5,SNR=4.0
ULM LR LR 22 47 27.8
comp=Z,238nm,19.6s,baz=301,slow=35
comp=Z,2.6nm,0.6s
ULM Lac du Bonnet 36.02 72 P P 22 33 35.0 +2.0
ISCO Idaho Springs 36.70 93 P P 22 33 38.7 -0.6
ISCO Idaho Springs 36.70 93 P P 22 33 38.7 -0.6
ISCO pmax pmax
comp=Z,4.0nm,1.0s
YAK Yakutsk 37.23 312 LR LR 22 49 30.6
comp=Z,77nm,19.7s,baz=76,slow=37
YAK Yakutsk 37.23 312 *eP* **P 22 33 41.5 -1.6**
YAK *e* 22 36 03.1
YAK *eS* **S 22 39 26.7 -1.8**
YAK *e**SS **pS 22 39 36.0 +0.1**
YAK *eSSS SSS 22 42 24.4
YAK pmax pmax
comp=Z,68nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,13nm,1.0s
YAK pmax pmax
comp=Z,557nm,3.7s
YAK pmax pmax
comp=E,462nm,4.1s
YAK pmax pmax
comp=N,156nm,3.0s
YAK smax smax
comp=N,1µm,4.2s
YAK smax smax
comp=E,898nm,4.3s
YAK MLR MLR
comp=Z,322nm,12.0s
YAK MLR MLR
comp=N,167nm,12.0s
YAK MLR MLR
comp=E,243nm,12.0s
SDCO Great Sand Dun 38.16 95 P P 22 33 51.5 -0.1
TUC Tucson 39.10 106 P 22 33 59.6 +0.2
TUC Tucson 39.10 106 P P 22 33 59.6 +0.2
TUC pmax pmax
comp=Z,4.0nm,0.9s
ANMO Albuquerque 39.59 99 LR LR 22 48 59.8
comp=Z,245nm,18.8s,baz=61,slow=34
ANMO Albuquerque 39.59 99 *i* P **P 22 34 02.2 -1.3**
ANMO pmax pmax
comp=Z,2.0nm,0.9s
EYMN Ely 39.69 72 P 22 34 05.4 +1.3
EYMN IAmb IAmb 22 34 14.1
comp=Z,13nm,0.7s
NEEM North Greenlan 40.14 19 *i* P **P 22 34 08.3 +0.6**
NEEM IAmb IAmb 22 34 09.1
comp=Z,32nm,1.0s
NOR Nord 41.91 8 *i* P **P 22 34 22.8 +0.8**
NOR IAmb IAmb 22 34 24.4
comp=Z,25nm,1.0s
FRB Frobisher Bay 42.10 42 LR LR 22 52 59.1
comp=Z,567nm,20.2s,baz=297,slow=38
ZEA Zeya 42.41 301 *eP* P 22 34 31.1 +4.8
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
MNTX Cornudas Mount 42.58 102 P 22 34 28.4 +0.5
I42A Draeger Farm, 43.59 76 P 22 34 36.6 +0.7
I42A IAmb IAmb 22 34 45.7
comp=Z,12nm,0.6s
P38A Dawn 43.76 84 P 22 34 37.7 +0.3
P38A IAmb IAmb 22 34 49.5
comp=Z,17nm,0.7s
WMOK Wichita Mounta 44.13 93 P 22 34 41.2 +0.8
WMOK Wichita Mounta 44.13 93 P P 22 34 41.2 +0.8
WMOK pmax pmax
comp=Z,9.0nm,0.9s
HEH HeiHe 44.35 297 *eP* **P 22 34 40.6 -1.4**
HEH pmax pmax
comp=Z,12nm,1.1s
E46A Sault Ste Mari 44.56 70 P 22 34 44.7 +0.9
E46A IAmb IAmb 22 34 53.5
comp=Z,16nm,0.6s
H11N2 WAKE ISLAND Hy 44.83 233 T T 23 22 52.9
baz=29,slow=76,SNR=50
H11N3 WAKE ISLAND Hy 44.84 233 T T 23 23 03.0
baz=29,slow=76,SNR=56
H11N1 WAKE ISLAND Hy 44.85 233 T T 23 22 56.7
baz=29,slow=76,SNR=46
TXAR Lajitas Array 45.33 102 P P 22 34 53.0 +2.9
comp=Z,4.6nm,0.8s,baz=307,slow=5.6,SNR=60
TXAR PcP **PcP 22 36 31.2 +1.7**
comp=Z,1.1nm,0.6s,baz=227,slow=1.4,SNR=4.0
TXAR LR LR 22 52 44.7
comp=Z,298nm,18.4s,baz=310,slow=35
comp=Z,4.6nm,0.8s
TXAR Lajitas Array 45.33 102 P 22 34 50.9 +0.7
USRK Ussuriysk Ar. 45.68 287 P P 22 34 52.0 -0.7
comp=Z,3.1nm,0.7s,baz=54,slow=8.2,SNR=6.0
comp=Z,3.1nm,0.7s
USRK Ussuriysk Ar. 45.68 287 P P 22 34 52.0 -0.7
SUMG Summit 45.71 22 P P 22 34 52.4 -0.6
SUMG IAmb IAmb 22 34 54.5
comp=Z,11nm,0.9s
SUMG Summit 45.71 22 P P 22 34 52.4 -0.6
SUMG pmax pmax
comp=Z,11nm,0.9s
SUMG Summit 45.71 22 *i* P **P 22 34 53.6 +0.6**
SUMG IAmb IAmb 22 34 54.7
comp=Z,10nm,0.8s
DAG Danmarks Havn 45.77 12 *i* P **P 22 34 52.6 -0.4**
DAG IAmb IAmb 22 34 54.7
comp=Z,39nm,1.0s
LPIG La Paz 45.82 113 LR LR 22 51 39.2
comp=Z,88nm,19.1s,baz=9.0,slow=33
H11S1 WAKE ISLAND Hy 45.98 232 T T 23 24 18.1
baz=28,slow=76,SNR=134
H11S2 WAKE ISLAND Hy 46.00 232 T T 23 24 19.2
baz=28,slow=76,SNR=118
H11S3 WAKE ISLAND Hy 46.00 232 T T 23 24 17.8
baz=28,slow=76,SNR=108
KBS Kingsbay 46.12 3 P P 22 34 56.6 +0.9
KBS Kingsbay 46.12 3 P P **22 34 56.6 +0.9**
KBS pmax pmax
comp=Z,43nm,1.1s
SFJD Kangerlussuaq 46.35 32 LR LR 22 56 39.2
comp=Z,194nm,18.5s,baz=282,slow=39
SFJD Kangerlussuaq 46.35 32 *i* P **P 22 34 59.0 +1.5**
BRDY Brady 46.52 96 P P 22 34 59.5 +0.1
JCT Junction City 46.66 98 P P 22 35 00.7 +0.2
JCT IAmb IAmb 22 35 18.3
comp=Z,18nm,0.9s
JCT Junction City 46.66 98 P P 22 35 00.7 +0.2
JCT pmax pmax
comp=Z,18nm,0.9s
MDJ Mudanjiang 46.72 289 P P 22 35 00.1 -0.8
MDJ IAmb IAmb 22 35 01.8
comp=Z,26nm,0.9s
MDJ Mudanjiang 46.72 289 P P 22 35 00.5 -0.3
MDJ pmax pmax
comp=Z,29nm,0.8s
SPITS Spitsbergen Ar 46.98 2 P P 22 35 01.9 -0.5
comp=Z,14nm,0.5s,baz=26,slow=4.6,SNR=47
comp=Z,14nm,0.5s
SPITS Spitsbergen Ar 46.98 2 P P 22 35 02.7 +0.3
SPITS pmax pmax
comp=Z,43nm,0.9s
SPB2 Spitsbergen Ar 46.98 2 P P 22 35 02.7 +0.3
BNX BinXian 47.17 292 ⇑P **P 22 35 04.3 0.0**
BNX pmax pmax
comp=Z,36nm,0.8s
MSHR Mys Shultsa 47.20 286 *ce*P **P 22 35 04.9 +0.3**
MSHR pmax pmax
comp=Z,29nm,0.8s
MJAR Matsushiro Arr 47.33 275 P P 22 35 06.2 +0.5
comp=Z,4.0nm,0.7s,baz=36,slow=5.9,SNR=8.8
MJAR LR LR 22 54 06.1
comp=Z,122nm,21.8s,baz=56,slow=35
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 47.33 275 P P 22 35 06.4 +0.6
OLIL Olney 47.47 80 P P 22 35 06.8 +0.2
OLIL IAmb IAmb 22 35 34.6
comp=Z,24nm,1.1s
DBG Daneborg 47.65 15 *i* P **P 22 35 08.0 +0.4**
DBG IAmb IAmb 22 35 09.3
comp=Z,12nm,0.6s
NUUK Nuuk 47.84 35 *i* P **P 22 35 10.7 +1.5**
NUUK IAmb IAmb 22 35 11.9
comp=Z,12µm,7.4s
SCHQ Schefferville 47.98 51 P P 22 35 11.0 +0.5
comp=Z,7.1nm,0.9s,baz=302,slow=8.1,SNR=8.5
SCHQ LR LR 22 56 26.8
comp=Z,344nm,19.8s,baz=318,slow=37
comp=Z,7.1nm,0.9s
SCHQ Schefferville 47.98 51 P P 22 35 10.4 -0.1
SADO Sadowa 48.37 68 LR LR 22 54 45.9
comp=Z,178nm,19.0s,baz=351,slow=35
SADO Sadowa 48.37 68 P P 22 35 13.9 +0.3
JGF Kuroka 48.48 275 P P 22 35 14.8 +0.2
JGF IAmb IAmb 22 35 17.4
comp=Z,28nm,1.0s
HILR Hailar Array B 48.65 300 P P 22 35 15.3 -0.5
comp=Z,2.8nm,0.6s,baz=81,slow=9.2,SNR=4.4
comp=Z,2.8nm,0.6s
HKT Hockley 49.33 95 P P 22 35 21.7 +0.7
HKT IAmb IAmb 22 35 33.8
comp=Z,24nm,1.4s
HKT Hockley 49.33 95 P P 22 35 21.7 +0.7
HKT pmax pmax
comp=Z,24nm,1.4s
CN2 Changchun 49.50 291 *eP* **P 22 35 22.3 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
TRQ Mont Tremblant 49.82 64 P P 22 35 24.9 +0.1
Q51A Peebles 49.95 77 P P 22 35 25.7 0.0
Q51A IAmb IAmb 22 35 43.3
comp=Z,18nm,0.8s
L56A Greenwood 50.99 70 P P 22 35 33.9 +0.2
L56A IAmb IAmb 22 35 45.7
comp=Z,17nm,0.8s
ANGG Ammassalik, Gr 51.04 28 P P 22 35 32.9 -0.7
ZAIG Zacatecas 51.08 107 P P 22 35 34.2 -0.6
FRNY Flat Rock 51.26 65 P P 22 35 35.7 +0.1
FRNY IAmb IAmb 22 36 05.7
comp=Z,19nm,1.4s
JMN Monobo 51.82 276 P P 22 35 40.5 +0.6
FPAL Fort Paine 51.84 82 P P 22 35 40.0 -0.1
SSPA Standing Stone 51.85 71 P P 22 35 40.4 +0.3
SSPA IAmb IAmb 22 35 57.8
comp=Z,14nm,1.1s
JCJ Chichijima 51.98 264 LR LR 22 56 04.8
comp=Z,130nm,21.7s,baz=34,slow=34
KSRS Korea Array 52.53 284 P P 22 35 46.2 +1.2
comp=Z,11nm,0.7s,baz=47,slow=6.9,SNR=29
KSRS LR LR 22 58 28.7
comp=Z,31µm,20.9s,baz=45,slow=37
comp=Z,11nm,0.7s
KSAR Wonju Array Be 52.56 284 P 22 35 45.2 -0.1
KSAR Wonju Array Be 52.56 284 P P 22 35 45.2 -0.1
JNU Nakatsue 53.98 278 P P 22 35 56.4 +0.5
JNU IAmb IAmb 22 36 01.8
comp=Z,41nm,1.3s
XLT XiLinHaoTe 54.34 297 *eP* **P 22 35 59.5 +1.0**
XLT pmax pmax
comp=Z,49nm,0.9s
XLT pmax pmax
comp=Z,370nm,5.5s
HAMF Hammerfest 54.63 360 *eP* **P 22 36 00.2 +0.1**
TLY Talaya 54.70 311 P 22 36 00.7 -0.3
TLY IAmb IAmb 22 36 02.6
comp=Z,25nm,0.8s
TLY Talaya 54.70 311 *ce*P **P 22 36 01.5 +0.6**
TLY pmax pmax
comp=Z,27nm,1.7s
VADS Vadso 55.09 358 *eP* **P 22 36 03.8 +0.4**
KEV Kevo 55.50 359 P 22 36 06.4 +0.1
KEV Kevo 55.50 359 P P 22 36 06.4 +0.1
KEV pmax pmax
comp=Z,31nm,0.6s
TRO Tromso 55.60 2 *eP* **P 22 36 08.0 +1.0**
BORG Borgarnes 55.69 22 LR LR 23 01 36.3
comp=Z,139nm,19.1s,baz=325,slow=38
JETT Jettan, Norway 55.70 1 *eP* **P 22 36 08.7 +0.8**
ARA0 ARCESS Array S 55.74 359 *eP* **P 22 36 08.2 +0.1**
ARCES ARCESS Array B 55.74 359 P P 22 36 08.1 0.0
comp=Z,4.6nm,0.4s,baz=14,slow=7.7,SNR=87
comp=Z,4.6nm,0.4s
ARCES ARCESS Array B 55.74 359 P 22 36 07.8 -0.3
ARCES IAmb IAmb 22 36 09.1
comp=Z,23nm,1.1s
ZAK Zakamensk 55.80 310 *eP* **P 22 36 08.6 -0.4**
ZAK pmax pmax
comp=Z,15nm,1.3s
MOY Mondy 55.85 313 *eP* **P 22 36 10.0 +0.7**
MOY pmax pmax
comp=Z,16nm,1.4s
ULN Ulaanbaatar 55.93 306 P P 22 36 10.2 +0.3
ULN IAmb IAmb 22 36 11.4
comp=Z,23nm,1.2s
ULN Ulaanbaatar 55.93 306 *ce*P **P 22 36 10.5 +0.5**
ULN pmax pmax
comp=Z,18nm,1.0s
SONM Songino Array 56.26 307 P P 22 36 13.1 +0.8
comp=Z,31nm,0.8s,baz=42,slow=6.8,SNR=142
SONM LR LR 23 01 28.2
comp=Z,189nm,18.6s,baz=36,slow=37
comp=Z,31nm,0.8s
KTK1 Kautokeino 56.27 0 *eP* **P 22 36 11.4 -0.5**
BJI Beijing 57.06 294 P P 22 36 18.5 +0.6
BJI pmax pmax
comp=Z,4.0nm,0.9s
LVZ Lovozero 57.12 355 P P 22 36 18.0 +0.1
LVZ Lovozero 57.12 355 *ce*P **P 22 36 18.7 +0.7**
LVZ pmax pmax
comp=Z,47nm,1.0s
STEI Steigen 57.20 4 *eP* **P 22 36 18.7 +0.2**
APA Apatity 57.50 356 ||*eP* **P 22 36 20.1 -0.5**
APA MLR MLR
comp=Z,653nm,3.6s

FAUS Fauske 57.75 4 *e*P P 22 36 22.7 +0.4
VAGH Vaagaholmen 58.31 5 *e*P P 22 36 27.3 +1.0
RAUS Rausandaksla 58.64 4 *e*P P 22 36 29.0 +0.4
STOK Stokkvaagen 58.70 5 *e*P P 22 36 28.3 -0.6
HHC Hu-ho-hao-te 58.86 298⇓ *i*P P 22 36 31.9 +1.2
HHC pP pP 22 36 37.4 +0.2
HHC pmax pmax
comp=Z,15nm,0.9s
LEIR Leirfjorden 58.92 5 *e*P P 22 36 31.1 +0.5
TIA Tai'an 59.37 290 P P 22 36 34.3 +0.2
TIA pmax pmax
comp=Z,7.0nm,0.6s
HNS HongShan 59.78 293 ⇑P P 22 36 38.1 +1.2
HNS pmax pmax
comp=Z,29nm,0.9s
BTO Baotou 59.82 298 *e*P P 22 36 38.1 +0.8
BTO pP **pP** 22 36 42.8 -1.1
BTO sP **sP** 22 36 45.1 -1.2
BTO pmax pmax
comp=Z,32nm,1.0s
BTO pmax pmax
comp=Z,470nm,6.0s
ZAA0 Zalesovo Array 60.29 323 P 22 36 40.4 +0.3
ZALV Zalesovo Beam 60.29 323 P P 22 36 40.7 +0.5
comp=Z,18nm,0.8s,baz=30,slow=5.8,SNR=65
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 60.29 323 P 22 36 40.6 +0.4
NSS Namsos 60.44 6 *e*P P 22 36 41.3 +0.3
NJ2 Nanjing 61.54 286 *e*P P 22 36 49.5 +0.5
NJ2 pmax pmax
comp=Z,17nm,0.7s
MOL Molde 62.07 8 *e*P P 22 36 51.9 -0.1
AKN Aaknes 62.41 9 *e*P P 22 36 55.6 +1.2
DOMB Dombas 62.71 8 *e*P P 22 36 57.3 +0.8
DGZ Jazzator, Alta 62.81 319 *i*P P 22 36 57.5 0.0
DGZ pmax pmax
comp=Z,13nm,0.8s
LYN LuoYang 63.12 292 P P 22 37 00.8 +1.3
LYN pmax pmax
comp=Z,44nm,0.8s
LYN LR LR
comp=Z,480nm,21.0s
LYN LR LR
comp=Z,420nm,20.3s
LYN LR LR
comp=Z,250nm,13.1s
LRW Lerwick 63.50 14 *e*P P 22 37 02.7 +1.1
LRW IAmb IAmb 22 37 03.7
comp=Z,20nm,0.7s
NC204 NORSAR Array S 63.60 7 P P 22 37 02.6 +0.3
KLMR Klimovskoe 63.78 351 *e*P P 22 37 01.4 -2.0
KLMR *e* 22 37 37.1
KLMR pmax pmax
comp=Z,43nm,1.0s
NC405 NORSAR Array S 63.82 6 P 22 37 04.2 +0.4
FIA1 FINESS Array S 63.86 359 P 22 37 04.1 +0.1
FINES FINESS Array B 63.86 359 P P 22 37 04.2 +0.3
comp=Z,15nm,0.5s,baz=12,slow=7.8,SNR=127
comp=Z,15nm,0.5s
FINES FINESS Array B 63.86 359 P 22 37 04.1 +0.2
NB2 NORSAR Subarra 63.86 7 P P 22 37 04.5 +0.4
comp=Z,13nm,0.7s,baz=353,slow=6.9
NOA NORSAR Array B 63.86 7 P P 22 37 04.8 +0.8
comp=Z,12nm,0.8s,baz=352,slow=6.6,SNR=38
comp=Z,12nm,0.8s
SVE Sverdlovsk 64.52 338 *e*P P 22 37 08.7 +0.3
SVE pmax pmax
comp=Z,38nm,1.2s
LINV Loch Inver, As 64.81 16 *e*P P 22 37 11.5 +1.3
LINV IAmb IAmb 22 37 12.3
comp=Z,14nm,0.7s
KIRV Kirov 64.85 345 *ce*P P 22 37 10.3 -0.2
HFS Hagfors 64.92 5 P P 22 37 11.2 +0.3
comp=Z,13nm,0.7s,baz=19,slow=5.0,SNR=27
comp=Z,13nm,0.7s
KURK Kurchatov 65.09 325 P 22 37 12.8 +0.7
KURK Kurchatov 65.09 325 *ce*P P 22 37 12.1 -0.1
KURK pmax pmax
comp=Z,30nm,0.9s
KONO Kongsberg 65.13 8 P P 22 37 12.8 +0.5
KONO IAmb IAmb 22 37 14.5
comp=Z,17nm,0.8s
KONO Kongsberg 65.13 8 *ce*P P 22 37 13.6 +1.3
KONO pmax pmax
comp=Z,20nm,1.0s
WHN Wuhan 65.17 288 P P 22 37 13.5 +0.5
KURBB Kurchatov Arra 65.20 325 P P 22 37 13.5 +0.6
comp=Z,26nm,0.9s,baz=25,slow=5.9,SNR=132
comp=Z,26nm,0.9s
XAN Xi'an 65.39 294 ⇑P P 22 37 14.9 +0.4
XAN pP pP 22 37 19.1 -2.0
XAN pmax pmax
comp=Z,22nm,1.1s
ARTI Arti 65.39 340 LR LR 23 08 59.4
comp=Z,165nm,19.1s,baz=30,slow=39
ARTI Arti 65.39 340 P 22 37 14.1 +0.1
ARTI Arti 65.39 340 *c i*P P 22 37 14.0 0.0
ARTI 22 39 35.5
ARTI S **S** **22 46 00.9 +4.3**
ARTI SS **SS** **22 50 14.6 +5.9**
ARTI pmax pmax
comp=Z,44nm,1.2s
BVAR Borovoye Array 65.58 331 P P 22 37 16.0 +0.6
comp=Z,33nm,0.8s,baz=38,slow=7.3,SNR=84
comp=Z,33nm,0.8s
BVAR Borovoye Array 65.58 331 P P 22 37 16.0 +0.6
BORK Borovoye 65.58 331 *ce*P P 22 37 15.3 -0.1
BORK pmax pmax
comp=Z,32nm,1.0s
ZSN Zaisan 65.63 319 *e*P P 22 37 16.8 +1.0
comp=Z,7.3nm,0.8s
ZSN Zaisan 65.63 319 *e*P P 22 37 16.8 +1.0
ZSN pmax pmax
comp=Z,7.0nm,0.8s
MCD Coleburn Disti 65.66 15 *e*P P 22 37 17.0 +1.2
MCD IAmb IAmb 22 37 18.3
comp=Z,35nm,0.8s
GTA Gaotai 65.75 304 P P 22 37 17.0 +0.1
GTA pmax pmax
comp=Z,22nm,1.7s
GTA LR LR
comp=Z,390nm,19.6s
GTA LR LR
comp=Z,270nm,18.9s
GTA LR LR
comp=Z,380nm,18.9s
SNART Snartemo 66.22 9 *i*P P 22 37 20.8 +1.5
LZH Lanzhou 66.40 299 *e*P P 22 37 21.8 +0.7
LZH pP pP 22 37 27.5 -0.3
LZH pmax pmax
comp=Z,27nm,1.3s
DRUM Mains of Drumt 66.42 15 *e*P P 22 37 21.7 +1.0
DRUM IAmb IAmb 22 37 22.9
comp=Z,55nm,0.8s
LZDM Lanzhou Array 66.58 299 P P 22 37 22.8 +0.4
comp=Z,1.9nm,0.4s,baz=128,slow=2.4,SNR=7.9
comp=Z,1.9nm,0.4s
LAWE Loch Awe, Argy 66.58 17 *e*P P 22 37 22.3 +0.7
LAWE IAmb IAmb 22 37 23.9
comp=Z,9.2nm,0.7s
INVG Invergeldie, C 66.64 16 *e*P P 22 37 22.8 +0.6
INVG IAmb IAmb 22 37 24.4
comp=Z,12nm,0.8s
VSU Vasula 66.84 358 *ce*P P 22 37 23.6 +0.3
VSU pmax pmax
comp=Z,43nm,1.3s
TJOU Tjoern 66.88 7 *i*P P 22 37 24.3 +0.8
MK31 Makanchi Array 67.14 320 P P 22 37 25.6 +0.1
MK31 IAmb IAmb 22 37 26.6
comp=Z,9.8nm,0.8s
MK31 Makanchi Array 67.14 320 *ce*P P 22 37 26.0 +0.5
MKAR Makanchi Array 67.14 320 P P 22 37 25.6 +0.1
comp=Z,11nm,0.7s,baz=33,slow=5.6,SNR=59
MKAR PP **PP** 22 39 47.4 -5.6
comp=Z,1.1nm,0.6s,baz=54,slow=6.3,SNR=3.6
MKAR LR LR 23 09 14.8
comp=Z,259nm,18.3s,baz=15,slow=38
comp=Z,11nm,0.7s
MAKZ Makanchi 67.25 321 P 22 37 26.2 +0.1
MAKZ IAmb IAmb 22 37 26.9
comp=Z,16nm,0.8s
MAKZ Makanchi 67.25 321 P P 22 37 26.4 +0.3
EDI Edinburgh 67.27 16 *e*P P 22 37 26.9 +0.9
EDI IAmb IAmb 22 37 28.3
comp=Z,12nm,0.8s

IDGL Inch Island, C 67.33 19 *e*P P 22 37 27.5 +1.0
IDGL IAmb IAmb 22 37 29.1
comp=Z,13nm,0.8s
BORU Boraas 67.35 6 *i*P P 22 37 27.2 +0.6
ONAU Onsala 67.53 7 *i*P P 22 37 28.0 +0.3
WMQ Urumqi 67.54 315 *e*P P 22 37 29.1 +1.0
WMQ pP sP 22 37 36.8 -0.8
WMQ PcP **PcP** 22 37 52.4 -2.9
WMQ pmax pmax
comp=Z,22nm,1.1s
WMQ LR LR
comp=Z,180nm,16.3s
GOET G??ttrup 67.69 8 *i*P P 22 37 30.7 +2.1
GOET IAmb IAmb 22 37 31.5
comp=Z,36nm,0.8s
EKA Eskdalemuir Ar 67.84 16 P P 22 37 30.8 +1.1
comp=Z,15nm,0.7s,baz=320,slow=4.8,SNR=29
comp=Z,15nm,0.7s
ESK Eskdalemuir 67.85 16 P P 22 37 30.6 +0.9
ESK Eskdalemuir 67.85 16 *e*P P 22 37 30.6 +0.9
ESK IAmb IAmb 22 37 33.1
comp=Z,12nm,0.8s
ESK Eskdalemuir 67.85 16 P P 22 37 30.6 +0.9
ESK pmax pmax
comp=Z,29nm,1.0s
NEWG New Galloway 67.87 17 *e*P P 22 37 31.2 +1.3
NEWG IAmb IAmb 22 37 32.0
comp=Z,6.7nm,0.7s
FABU Falkenberg 67.98 6 *i*P P 22 37 31.1 +0.5
ENH Enshi 68.02 291 P P 22 37 30.7 -0.5
ENH IAmb IAmb 22 37 33.9
comp=Z,18nm,0.8s
GAL1 Galloway 68.03 17 *e*P P 22 37 31.1 +0.3
GAL1 IAmb IAmb 22 37 32.7
comp=Z,23nm,0.8s
MUD Monsted U'grnd 68.26 9 *i*P P 22 37 33.8 +1.5
ILTH Belurgan, Co L 68.54 18 *e*P P 22 37 35.0 +0.9
ILTH IAmb IAmb 22 37 36.4
comp=Z,15nm,0.8s
DEL Delary 68.58 6 *i*P P 22 37 34.7 +0.4
BJUU Bjuv 68.92 6 *i*P P 22 37 37.0 +0.6
OBN Obninsk 69.71 352 P P 22 37 40.6 -0.7
OBN Obninsk 69.71 352 *c i*P P 22 37 41.3 0.0
OBN *e* 22 38 07.5
OBN *e* 22 40 14.9
OBN *e*PPP PPP 22 41 57.5
OBN *e*S S 22 46 37.8 -11
OBN pmax pmax
comp=Z,19nm,0.9s
OBN MLR MLR
comp=Z,112nm,14.0s
OBN Obninsk 69.71 352 P P 22 37 41.2 0.0
comp=Z,41nm,1.1s
PABE Paberze 69.83 360 P 22 37 42.3 +0.2
TDK Taldyqorghan 70.08 322 ⇑*i*P P 22 37 44.7 +0.9
comp=Z,16nm,1.1s
TDK Taldyqorghan 70.08 322 *c i*P P 22 37 44.7 +0.9
TDK pmax pmax
comp=Z,16nm,1.1s
FOEL Foel Wylfa 70.18 17 *e*P P 22 37 45.6 +1.3
FOEL IAmb IAmb 22 37 46.9
comp=Z,20nm,0.8s
CD2 Chengdu 70.53 296 P P 22 37 47.8 +0.9
CD2 pP pP 22 37 53.8 +0.2
CD2 S **S** **22 46 56.8 -2.1**
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,310nm,7.7s
GOMU GeErMu 70.69 306 P P 22 37 47.9 -0.2
GOMU pP pP 22 37 51.3 -3.5
GOMU sP sP 22 37 55.6 -1.6
GOMU S **S** **22 47 01.4 +0.2**
GOMU pmax pmax
comp=Z,6.0nm,0.9s
GOMU LR LR
comp=Z,310nm,12.8s
GOMU LR LR
comp=Z,170nm,12.6s
GOMU LR LR
comp=Z,320nm,12.2s
MNK Minsk 70.78 357 *i*P P 22 37 48.8 +0.9
MNK *i* 22 38 09.2
MNK *i* 22 40 25.5
MNK *i*PPP PPP 22 42 08.2
MNK *i*S **S** **22 47 04.6 +3.7**
MNK *i* 22 47 52.4
MNK *i*SS **SS** **22 51 37.9 +6.0**
MNK pmax pmax
comp=Z,37nm,0.8s
MNK pmax pmax
comp=N,15nm,0.9s
MNK pmax pmax
comp=E,26nm,1.0s
MNK MLR MLR
comp=Z,144nm,18.0s
MNK MLR MLR
comp=N,113nm,17.0s
MNK MLR MLR
comp=E,69nm,12.0s
MCH1 Michaelchurch 71.08 17 *e*P P 22 37 50.6 +0.9
MCH1 IAmb IAmb 22 37 52.1
comp=Z,10.0nm,1.0s
BELG Belogornoye 71.11 345 *i*P P 22 37 50.4 +0.5
BELG pmax pmax
comp=Z,14nm,1.3s
SHLS Shalkode 71.29 320 ⇑*i*P P 22 37 51.2 -0.3
comp=Z,12nm,1.0s
SHLS Shalkode 71.29 320 *c i*P P 22 37 51.1 -0.3
SHLS pmax pmax
comp=Z,12nm,1.0s
SUW Suwalki 71.33 0 *e*P P 22 37 51.5 +0.3
SUW Suwalki 71.33 0 P P 22 37 50.9 -0.3
SUW Suwalki 71.33 0 P P 22 37 50.9 -0.3
UZB Uzynbulak 71.46 321 ⇑*i*P P 22 37 53.2 +0.8
comp=Z,9.8nm,1.2s
UZB Uzynbulak 71.46 321 *c i*P P 22 37 53.2 +0.8
UZB pmax pmax
comp=Z,10.0nm,1.2s
BTLS Baital 71.54 325 ⇓*i*P P 22 37 53.5 +0.8
comp=Z,9.2nm,0.9s
BTLS Baital 71.54 325 *d i*P P 22 37 53.5 +0.8
BTLS pmax pmax
comp=Z,9.0nm,0.9s
AB31 Akbulak array 71.71 336 P 22 37 53.6 -0.1
AB31 IAmb IAmb 22 37 55.3
comp=Z,23nm,1.1s
ABKAR Akbulak array 71.71 336 P 22 37 53.7 0.0
SATY Saty 71.76 321 *e*P P 22 37 55.0 +0.8
comp=Z,11nm,1.4s
SATY Saty 71.76 321 *e*P P 22 37 55.0 +0.8
SATY pmax pmax
comp=Z,11nm,1.4s
GKP Gorka Klasztor 71.94 4 *e*P P 22 37 56.5 +1.6
LPSR Galich'ya Gora 71.99 350 *e*P P 22 37 54.7 -0.5
LPSR pmax pmax
comp=Z,32nm,0.8s
MDOK Medeo 72.16 322 *e*P P 22 37 57.4 +0.7
MDOK Medeo 72.16 322 *e*P P 22 37 57.3 +0.7
AAA Alma-Ata 72.17 322 *e*P P 22 37 57.3 +0.6
comp=Z,22nm,1.2s
AAA Alma-Ata 72.17 322 *e*P P 22 37 57.2 +0.6
AAA pmax pmax
comp=Z,22nm,1.2s
PRZ Przheval'sk 72.27 321 P 22 37 57.5 +0.2
PRZ IAmb IAmb 22 38 12.3
comp=Z,16nm,1.0s
PRZ Przheval'sk 72.27 321 P P 22 37 57.5 +0.2
PRZ pmax pmax
comp=Z,16nm,1.0s
TNSS Tian-Shan 72.31 322 *e*P P 22 37 58.2 +0.3
TNSS Tian-Shan 72.31 322 *e*P P 22 37 58.1 +0.3
GYA Guiyang 72.55 291 ⇓P P 22 38 00.4 +1.3
GYA pmax pmax
comp=Z,46nm,0.8s
SGDS Sogindy 72.75 324 *e*P P 22 38 00.9 +0.8
comp=Z,14nm,1.5s
VORR Voronezh 72.88 350 *e*P P 22 37 59.6 -0.9
VORR pmax pmax
comp=Z,22nm,0.4s
TKM2 Tokmak 2 72.88 323 P P 22 38 02.4 +1.3
SNR=16
USP Ospenovka 72.96 324 P P 22 38 02.6 +1.4
SNR=10
KDJ Kajisay 73.02 321 P 22 38 02.0 +0.3

KDJ IAmb IAmb 22 38 03.5
comp=Z,13nm,1.0s
KDJ Kajisay 73.02 321 P P 22 38 02.1 +0.3
KDJ pmax pmax
comp=Z,13nm,1.0s
VRH Novokhopyorsk 73.07 348 *e*P P 22 38 01.2 -0.5
VRH pmax pmax
comp=Z,24nm,0.6s
CHMS Chumysh 73.11 323 P P 22 38 03.6 +1.5
SNR=6.9
DR12 Loma Pena Alta 73.13 81 P P 22 38 01.5 -1.1
TARG Taragay, Kyrgy 73.14 321 P 22 38 03.4 +0.6
TARG IAmb IAmb 22 38 05.7
comp=Z,6.2nm,0.7s
TARG Taragay, Kyrgy 73.14 321 P P 22 38 03.4 +0.6
TARG pmax pmax
comp=Z,6.0nm,0.7s
BOOM Boomskoye usch 73.14 322 P 22 38 03.1 +0.6
BOOM IAmb IAmb 22 38 04.8
comp=Z,16nm,0.9s
BOOM Boomskoye usch 73.14 322 P P 22 38 03.1 +0.6
BOOM pmax pmax
comp=Z,16nm,0.9s
ULHL Ulahol 73.25 322 P P 22 38 04.9 +1.6
SNR=7.0
FRU1 Bishkek 73.32 323 P P 22 38 04.2 +0.8
FRU1 Bishkek 73.32 323 P P 22 38 04.2 +0.8
FRU1 pmax pmax
comp=Z,39nm,1.0s
VSR Storozhevoye 73.33 350 *e*P P 22 38 00.7 -2.5
VSR pmax pmax
comp=Z,10.0nm,0.8s
KBK Karagaybulak 73.34 323 P P 22 38 05.1 +1.4
SNR=9.2
AAK Ala-Archa 73.52 323 P 22 38 04.9 +0.2
AAK IAmb IAmb 22 38 07.0
comp=Z,22nm,1.1s
AAK Ala-Archa 73.52 323 P P 22 38 06.2 +1.5
SNR=6.5
AAK Ala-Archa 73.52 323 *ce*P P 22 38 04.9 +0.2
AAK pmax pmax
comp=Z,14nm,1.0s
VORD Divnogorie 73.57 350 *e*P P 22 38 03.2 -1.4
VORD pmax pmax
comp=Z,20nm,0.8s
CLL Collm 73.67 7 P P 22 38 05.3 +0.1
CLL Collm 73.67 7 *i*P P 22 38 05.9 +0.7
CLL *i* 22 38 20.4
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 73.67 7 P P 22 38 05.6 +0.4
comp=Z,7.1nm,2.3s
CLL Collm 73.67 7 *i*P P 22 38 05.9 +0.7
comp=Z,8.0nm,1.0s
CLL *es*P **sP** 22 38 15.0 +0.3
CLL *i* PcP **PcP** 22 38 20.4 -0.5
comp=Z,5.0nm,0.8s
CLL *i* x x 22 38 40.4
CLL *e*PP **PP** **22 40 47.0 -1.8**
BSTI Sart Tilman 73.69 12 *d*P P 22 38 06.7 +1.3
MEM Membach 73.71 12 *d*P P 22 38 05.9 +0.4
EKS2 Erkin-Say 73.74 324 P P 22 38 07.5 +1.5
SNR=20
BTNL Ternell 73.75 12 *d*P P 22 38 06.7 +1.0
BGES Gesves 73.82 12 *d*P P 22 38 06.9 +0.7
BMRD Maredsous 73.86 12 *d*P P 22 38 07.3 +0.9
comp=Z,10nm,1.0s
HNR Honiara 73.87 225 LR LR 23 05 52.8
comp=Z,109nm,20.1s,baz=357,slow=32
UCH Uchtor 73.87 323 P P 22 38 08.6 +1.4
SNR=6.4
RNPP9 Sopachiv 73.91 359 P P 22 38 07.0 +0.4
RNPP8 Varash 73.99 359 P P 22 38 07.3 +0.2
DOU Dourbes 74.05 13 *d*P P 22 38 06.1 -1.4
RCHB Rochefort 74.07 12 *d*P P 22 38 08.1 +0.6
comp=Z,7.4nm,1.2s
RNPP5 Staryi Chortor 74.10 359 P P 22 38 07.7 0.0
KSP Ksiaz 74.32 5 *e*P P 22 38 09.2 +0.1
KSP Ksiaz 74.32 5 P P 22 38 09.0 -0.1
comp=Z,11nm,0.9s
DZA Taraz 74.35 326 *e*P P 22 38 10.1 +0.6
DZA Taraz 74.35 326 *e*P P 22 38 10.0 +0.6
TGY Tagaytay City 74.38 272 P P 22 38 11.2 +1.2
comp=Z,271nm,0.4s,baz=109,slow=14,SNR=3.0
HSKC Hora Svate Kat 74.39 7 *e*P P 22 38 10.5 +1.0
KK31 Karatay Array 74.42 326 P 22 38 10.1 +0.3
KK31 IAmb IAmb 22 38 11.7
comp=Z,23nm,1.0s
KK31 Karatay Array 74.42 326 P P 22 38 10.1 +0.3
KK31 pmax pmax
comp=Z,23nm,1.0s
KKAR Karatay Array 74.42 326 P 22 38 10.2 +0.4
KKAR Karatay Array 74.42 326 P P 22 38 10.2 +0.4
AK21 Malin Array Si 74.47 356 P P 22 38 09.9 0.0
AK23 Malin Array Si 74.48 356 P P 22 38 09.8 -0.2
AK22 Malin Array Si 74.48 356 P P 22 38 09.9 -0.1
AK20 Malin Array Si 74.50 356 P P 22 38 10.0 -0.1
AK03 Malin Array Si 74.51 356 P P 22 38 10.0 -0.1
AKASG Malin Array Be 74.54 356 P P 22 38 10.2 0.0
comp=Z,11nm,0.6s,baz=4.8,slow=5.7,SNR=33
comp=Z,11nm,0.6s
AKBB Malin Array Si 74.54 356 P 22 38 09.8 -0.5
AKBB IAmb IAmb 22 38 11.2
comp=Z,26nm,0.9s
AKBB Malin Array Si 74.54 356 *ce*P P 22 38 09.6 -0.7
AKBB pmax pmax
comp=Z,20nm,0.9s
PVCC Panska Ves 74.54 6 *e*P P 22 38 11.3 +0.9
PVCC Panska Ves 74.54 6 *e*P P 22 38 11.3 +0.9
KIEV Kiev 74.55 356 P P 22 38 09.8 -0.5
KIEV IAmb IAmb 22 38 11.2
comp=Z,24nm,0.9s
KIEV Kiev 74.55 356 P P 22 38 09.8 -0.5
KIEV pmax pmax
comp=Z,24nm,1.0s
CHVC Chvalec 74.57 5 *e*P P 22 38 11.5 +1.0
CHVC *e* 22 38 19.4
CHVC Chvalec 74.57 5 *e*P P 22 38 11.5 +1.0
CHVC *ex* x 22 38 19.4
WLF Walferdange 74.66 12 *d*P P 22 38 11.3 +0.3
comp=Z,7.6nm,1.1s
BRLS Borolday 74.70 327 ⇑*i*P P 22 38 13.7 +2.2
BRLS Borolday 74.70 327 *c i*P P 22 38 13.6 +2.2
DPC Dobruska-Polom 74.82 5 *e*P P 22 38 13.3 +1.3
DPC Dobruska-Polom 74.82 5 *e*P P 22 38 13.3 +1.3
OJC Ojcow 75.08 3 *e*P P 22 38 14.6 +1.1
PRU Pruhonice 75.08 6 *e*P P 22 38 14.3 +0.8
PRU Pruhonice 75.08 6 *e*P P 22 38 14.3 +0.8
PZH PanZhiHua 75.12 295 P P 22 38 14.9 +0.7
PZH pmax pmax
comp=Z,30nm,0.9s
ARSB Arslanbob 75.20 324 P 22 38 15.0 +0.5
ARSB IAmb IAmb 22 38 16.5
comp=Z,36nm,1.4s
ARSB Arslanbob 75.20 324 P P 22 38 15.0 +0.5
ARSB pmax pmax
comp=Z,36nm,1.4s
STEB Steborice 75.30 4 *e*P P 22 38 15.2 +0.5
LUBAR Lubar, Ukraine 75.37 357 P P 22 38 14.7 -0.4
OKC Ostrava-Krasne 75.41 4 *e*P P 22 38 16.1 +0.8
OKC Ostrava-Krasne 75.41 4 *e*P P 22 38 16.1 +0.8
CHM Chimkent 75.42 327 *e*P P 22 38 16.4 +0.8
comp=Z,14nm,0.6s
CHM Chimkent 75.42 327 *e*P P 22 38 16.4 +0.8
CHM pmax pmax
comp=Z,14nm,0.6s
IUG Iuzhnay 75.44 326 *e*P P 22 38 16.6 +0.7
comp=Z,8.9nm,0.8s
IUG Iuzhnay 75.44 326 *e*P P 22 38 16.5 +0.7
IUG pmax pmax
comp=Z,9.0nm,0.8s
MORC Moravsky Berou 75.44 4 *e*P P 22 38 15.9 +0.3
ZVC Zvikov 75.61 6 *e*P P 22 38 17.5 +1.0
KWP Kalwaria Pacla 75.71 1 *e*P P 22 38 18.0 +0.9
KWP Kalwaria Pacla 75.71 1 P P 22 38 16.5 -0.6
comp=Z,24nm,2.1s
KSH Kashi 75.75 321 P P 22 38 21.9 +4.2
KSH pP PcP 22 38 29.8 -0.5
KSH pmax pmax
comp=Z,24nm,0.9s
KSH LR LR
comp=Z,380nm,19.9s
KSH LR LR
comp=Z,390nm,15.8s

KSH				LR	LR			
	comp=Z,360nm,17.2s							
VRAC	**Vranov**	**75.87**	**5**	⇑P	**P**	**22 38 19.2 +1.1**		
VRAC	**Vranov**	**75.87**	**5**	*e*P	**P**	**22 38 18.8 +0.8**		
VRAC	**Vranov**	**75.87**	**5**	P	**P**	**22 38 19.1 +1.1**		
KHC	**Kasperske Hory**	**75.87**	**7**		**P**	**22 38 18.4 +0.4**		
KHC	**Kasperske Hory**	**75.87**	**7**	*ce*P	**P**	**22 38 19.8 +1.7**		
KHC				pmax	pmax			
	comp=Z,6.0nm,0.7s							
KHC	**Kasperske Hory**	**75.87**	**7**	*e*P	**P**	**22 38 19.5 +1.4**		
KHC	**Kasperske Hory**	**75.87**	**7**	P	**P**	**22 38 17.4 -0.7**		
	comp=Z,14nm,1.0s							
NIE	**Niedzica**	**75.89**	**2**	*e*P	**P**	**22 38 19.3 +1.2**		
NIE	**Niedzica**	**75.89**	**2**	P	**P**	**22 38 17.5 -0.7**		
	comp=Z,2.6nm,1.4s							
STHS	**Stebnicka Huta**	**75.91**	**2**	*e*P	**P**	**22 38 18.7 +0.4**		
STHS				pmax	pmax			
	comp=Z,10.0nm,0.7s							
STHS	**Stebnicka Huta**	**75.91**	**2**	*e*P	**P**	**22 38 18.7 +0.4**		
HORU	**Horodok**	**76.10**	**358**	P	**P**	**22 38 18.8 -0.6**		
KRUC	**Moravsky**	**76.11**	**5**	*e*P	**P**	**22 38 19.8 +0.4**		
SHIU	**Shidnytsya**	**76.12**	**0**	P	**P**	**22 38 18.9 -0.6**		
LANS	**Liptovska Anna**	**76.14**	**3**	*e*P	**P**	**22 38 21.2 +1.6**		
LANS				pmax	pmax			
	comp=Z,8.0nm,0.8s							
LANS	**Liptovska Anna**	**76.14**	**3**	*e*P	**P**	**22 38 21.2 +1.6**		
GERES	**GERESS Array B**	**76.17**	**7**	P	**P**	**22 38 20.4 +0.6**		
	comp=Z,2.5nm,0.7s,baz=7.0,slow=5.5,SNR=20							
	comp=Z,2.5nm,0.7s							
ECH	**Echery**	**76.20**	**11**	P	**P**	**22 38 20.4 +0.4**		
ECH	**Echery**	**76.20**	**11**	P	**P**	**22 38 20.4 +0.4**		
ECH				pmax	pmax			
	comp=Z,7.0nm,0.9s							
MORS	**Morshin**	**76.21**	**360**	P	**P**	**22 38 19.4 -0.6**		
CKRC	**Cesky Krumlov**	**76.23**	**6**	*e*P	**P**	**22 38 20.9 +0.8**		
CKRC	**Cesky Krumlov**	**76.23**	**6**	*e*P	**P**	**22 38 20.9 +0.8**		
JAVC	**Velka Javorina**	**76.37**	**4**	*e*P	**P**	**22 38 22.3 +1.4**		
MODS	**Modra-Piesok**	**76.83**	**4**	*e*P	**P**	**22 38 25.1 +1.5**		
MODS				*e*		22 38 32.6		
MODS				pmax	pmax			
	comp=Z,21nm,1.1s							
MODS	**Modra-Piesok**	**76.83**	**4**	*e*P	**P**	**22 38 25.0 +1.5**		
MODS				*e*		22 38 32.6		
SORM	**Soroca**	**77.13**	**357**	⇑P	**P**	**22 38 25.0 -0.1**		
SORM	**Soroca**	**77.13**	**357**	P	**P**	**22 38 25.0 -0.1**		
CONA	**Conrad Observa**	**77.21**	**5**	*ep*P	**P**	**22 38 26.9 +1.1**		
	comp=Z,2.5nm,0.7s							
DRK	**Karamyk**	**77.25**	**324**	P	**P**	**22 38 27.0 +0.6**		
DRK	**Karamyk**	**77.25**	**324**	P	**P**	**22 38 27.0 +0.6**		
DRK				pmax	pmax			
	comp=Z,23nm,0.7s							
MOTA	**Moosalm**	**77.46**	**9**	*e*P	**P**	**22 38 27.7 +0.5**		
	comp=Z,9.2nm,1.3s							
RONA	**Rosalia, Austr**	**77.46**	**5**	*ep*P	**P**	**22 38 28.6 +1.5**		
	comp=Z,4.9nm,1.1s							
WATA	**Walderalm**	**77.51**	**8**	*ep*P	**P**	**22 38 28.5 +1.0**		
	comp=Z,13nm,1.0s							
WTTA	**Wattenberg**	**77.58**	**8**	*ep*P	**P**	**22 38 29.3 +1.3**		
	comp=Z,14nm,1.4s							
SQTA	**Sankt Quirin**	**77.59**	**9**	*ep*P	**P**	**22 38 29.2 +1.3**		
	comp=Z,4.8nm,0.7s							
BUR08	**Bucovina Ar. S**	**77.69**	**359**		**P**	**22 38 28.9 +0.4**		
BURAR	**Bucovina Array**	**77.72**	**359**		**P**	**22 38 29.1 +0.5**		
BURAR	**Bucovina Array**	**77.72**	**359**	⇑P	**P**	**22 38 29.3 +0.7**		
BURAR	**Bucovina Array**	**77.72**	**359**	P	**P**	**22 38 29.3 +0.7**		
FETA	**Feichten**	**77.75**	**9**	*ep*P	**P**	**22 38 29.8 +1.0**		
	comp=Z,6.8nm,1.0s							
LSA	**Lhasa**	**77.78**	**305**	P	**P**	**22 38 30.3 +0.6**		
LSA				IAmb	IAmb	22 38 32.1		
	comp=Z,15nm,0.7s							
LSA	**Lhasa**	**77.78**	**305**	P	**P**	**22 38 26.9 -2.8**		
LSA				pmax	pmax			
	comp=Z,21nm,0.8s							
LSA	**Lhasa**	**77.78**	**305**	P	**P**	**22 38 30.3 +0.6**		
LSA				pmax	pmax			
	comp=Z,15nm,0.7s							
ARSA	**Arzberg**	**77.87**	**6**	*ep*P	**P**	**22 38 30.3 +1.0**		
	comp=Z,2.9nm,0.7s							
KBA	**Koelnbreinsper**	**77.90**	**7**	*ep*P	**P**	**22 38 31.3 +1.6**		
	comp=Z,6.9nm,0.7s							
GAR	**Garm**	**78.18**	**325**		**P**	**22 38 31.5 +0.1**		
SOKA	**Soboth**	**78.41**	**6**	*ep*P	**P**	**22 38 33.9 +1.4**		
	comp=Z,8.3nm,1.1s							
OBKA	**Obir**	**78.55**	**6**	*ep*P	**P**	**22 38 34.3 +1.1**		
	comp=Z,8.7nm,0.5s							
DRGR		**78.55**	**1**	⇑P	**P**	**22 38 33.8 +0.5**		
DRGR		**78.55**	**1**	P	**P**	**22 38 33.7 +0.5**		
ERBR	**Yeremizino-Bor**	**78.62**	**348**	*e*P	**P**	**22 38 33.9 +0.4**		
ERBR				*e*S	**S**	**22 48 29.8 +1.1**		
ERBR				pmax	pmax			
	comp=Z,40nm,0.9s							
MARR	**Marisel-Cluj**	**78.67**	**0**	⇑P	**P**	**22 38 34.7 +0.8**		
CHGR	**Chuyangaron**	**78.88**	**325**		**P**	**22 38 35.4 +0.3**		
CHGR	**Chuyangaron**	**78.88**	**325**	P	**P**	**22 38 35.4 +0.3**		
CHGR				pmax	pmax			
	comp=Z,85nm,0.8s							
GOF	**Gofitskoye**	**78.93**	**346**	*ce*P	**P**	**22 38 36.1 +0.9**		
ONER	**Baraj Valea Uz**	**78.98**	**358**	⇑P	**P**	**22 38 36.6 +1.1**		
SIRR	**Siria**	**79.07**	**1**	⇑P	**P**	**22 38 36.8 +0.9**		
OZUR		**79.23**	**358**	⇑P	**P**	**22 38 38.2 +1.3**		
GHRR		**79.23**	**357**	⇑P	**P**	**22 38 37.8 +0.9**		
DOPR	**Dopca**	**79.37**	**359**	⇓P	**P**	**22 38 38.5 +0.8**		
VRI	**Vrincioaia**	**79.45**	**358**	⇓P	**P**	**22 38 38.5 +0.5**		
VRI	**Vrincioaia**	**79.45**	**358**	P	**P**	**22 38 38.5 +0.5**		
PLOR	**Plostina**	**79.46**	**358**	⇓P	**P**	**22 38 39.2 +1.0**		
PLOR	**Plostina**	**79.46**	**358**	P	**P**	**22 38 39.1 +1.0**		
COVR	**Voineasa-Covas**	**79.48**	**358**	⇑P	**P**	**22 38 39.8 +1.6**		
SURR	**Surduc**	**79.58**	**1**	⇑P	**P**	**22 38 39.6 +0.8**		
PGAV	**Gavieira, Arco**	**79.63**	**24**	*e*P	**P**	**22 38 40.9 +1.7**		
LABN	**Labinsk**	**79.65**	**348**	*e*P	**P**	**22 38 37.4 -1.7**		
LABN				*e*S	**S**	**22 48 39.0 -0.7**		
LABN				pmax	pmax			
	comp=Z,7.0nm,0.7s							
BZS	**Buzias**	**79.72**	**1**	⇑P	**P**	**22 38 40.0 +0.5**		
BZS	**Buzias**	**79.72**	**1**	P	**P**	**22 38 40.0 +0.5**		
MLR	**Muntele Rosu**	**79.84**	**358**	P	**P**	**22 38 40.0 -0.3**		
MLR				IAmb	IAmb	22 38 43.8		
	comp=Z,14nm,1.5s							
MLR	**Muntele Rosu**	**79.84**	**358**	⇑P	**P**	**22 38 40.9 +0.5**		
MLR	**Muntele Rosu**	**79.84**	**358**	P	**P**	**22 38 40.8 +0.5**		
VOIR		**79.90**	**359**	⇓P	**P**	**22 38 41.2 +0.5**		
VOIR		**79.90**	**359**	P	**P**	**22 38 41.1 +0.5**		
PCAB	**Cabril**	**79.93**	**24**	*e*P	**P**	**22 38 42.0 +1.3**		
PCAB				*i* IAmb	IAmb	22 39 02.0		
	comp=Z,96nm,1.7s							
GZR	**Gura Zlata**	**79.95**	**1**	⇑P	**P**	**22 38 41.3 +0.4**		
GZR	**Gura Zlata**	**79.95**	**1**	P	**P**	**22 38 41.2 +0.4**		
ARR	**Arges**	**79.98**	**359**	⇑P	**P**	**22 38 42.2 +1.2**		
KIV	**Kislovodsk**	**80.06**	**346**		**P**	**22 38 42.2 +0.6**		
KIV				IAmb	IAmb	22 38 43.5		
	comp=Z,37nm,1.1s							
KIV	**Kislovodsk**	**80.06**	**346**	⇑P	**P**	**22 38 42.5 +1.0**		
KIV	**Kislovodsk**	**80.06**	**346**	*e*P	**P**	**22 38 42.1 +0.6**		
KIV				pmax	pmax			
	comp=Z,24nm,1.1s							
KIV				MLR	MLR			
	comp=Z,120nm,19.0s							
CFR	**Carcaliu**	**80.09**	**357**	⇑P	**P**	**22 38 41.2 -0.4**		
CFR	**Carcaliu**	**80.09**	**357**	P	**P**	**22 38 41.1 -0.4**		
PBRG	**Braganca**	**80.13**	**23**	*e*P	**P**	**22 38 43.6 +1.7**		
KBZ	**Khabaz**	**80.26**	**346**	P	**P**	**22 38 43.7 +1.3**		
	comp=Z,16nm,0.9s,baz=308,slow=2.1,SNR=32							
	comp=Z,16nm,0.9s							
KBZ	**Khabaz**	**80.26**	**346**	*ce*P	**P**	**22 38 42.7 +0.3**		
KBZ				pmax	pmax			
	comp=Z,18nm,0.9s							
POLO	**Lamas de Olo**	**80.30**	**23**	*e*P	**P**	**22 38 44.5 +1.6**		
PVRL	**Vila Real**	**80.41**	**23**	*e*P	**P**	**22 38 45.4 +2.0**		
HERR	**Herculane**	**80.46**	**1**	⇑P	**P**	**22 38 44.0 +0.4**		
MVO	**Moncorvo**	**80.67**	**23**	*e*P	**P**	**22 38 46.6 +1.8**		
SHL	**Shillong**	**80.88**	**302**		**P**	**22 38 45.2 -1.1**		
SHL				IAmb	IAmb	22 38 46.5		
	comp=Z,6.4nm,0.7s							
SHL	**Shillong**	**80.88**	**302**	P	**P**	**22 38 45.2 -1.1**		
SHL				pmax	pmax			
	comp=Z,6.0nm,0.7s							
PVIS	**Viseu**	**80.90**	**24**	*e*P	**P**	**22 38 47.8 +1.7**		
EVN	**Everest**	**81.27**	**307**		**P**	**22 38 49.1 +0.1**		
EVN				IAmb	IAmb	22 38 50.9		
	comp=Z,20nm,0.7s							
MTE	**Manteigas**	**81.28**	**24**	*e*P	**P**	**22 38 49.8 +1.7**		
PCAS	**Casmilo, Conde**	**81.39**	**24**	*e*P	**P**	**22 38 50.3 +1.7**		
AKT	**Akhty**	**81.68**	**342**	*e*P	**P**	**22 38 48.0 -2.2**		
AKT				*e*S	**S**	**22 48 53.6 -7.8**		
AKT				pmax	pmax			
	comp=Z,24nm,0.8s							
AKT				MLR	MLR			
	comp=Z,202nm,15.0s							
BOVS	**Bovan**	**81.70**	**1**	⇑P	**P**	**22 38 50.8 +0.6**		
BAUV	**El Baul**	**81.80**	**86**		**P**	**22 38 50.8 -0.2**		
BAUV				IAmb	IAmb	22 39 05.8		
	comp=Z,18nm,1.0s							
FAKI	**Fak Fak**	**81.81**	**253**	P	**P**	**22 38 51.1 +0.1**		
FAKI				IAmb	IAmb	22 39 02.8		
	comp=Z,21nm,0.8s							
PCBR	**Castelo Branco**	**81.83**	**24**	*e*P	**P**	**22 38 52.4 +1.5**		
NIL	**Nilore**	**81.96**	**320**	P	**P**	**22 38 53.0 +1.3**		
NIL	**Nilore**	**81.96**	**320**	P	**P**	**22 38 53.0 +1.3**		
NIL				pmax	pmax			
	comp=Z,76nm,1.1s							
PMAFR	**Mafra**	**82.24**	**25**	*e*P	**P**	**22 38 55.1 +2.0**		
PMTG	**Montargil**	**82.39**	**24**	*e*P	**P**	**22 38 56.1 +2.3**		
KBL	**Kabul**	**82.65**	**324**		**P**	**22 38 54.6 -1.0**		
KBL				IAmb	IAmb	22 38 55.9		
	comp=Z,15nm,0.8s							
KBL	**Kabul**	**82.65**	**324**	P	**P**	**22 38 54.6 -1.0**		
KBL				pmax	pmax			
	comp=Z,15nm,0.8s							
PARRA	**Arraiolos**	**82.68**	**24**	*e*P	**P**	**22 38 56.8 +2.7**		
ESBB	**Sonseca Array**	**82.76**	**21**	P	**P**	**22 38 57.1 +1.2**		
ESBB				IAmb	IAmb	22 38 58.5		
	comp=Z,20nm,0.9s							
ESDC	**Sonseca Array**	**82.76**	**21**	P	**P**	**22 38 57.4 +1.6**		
	comp=Z,16nm,0.8s,baz=340,slow=4.6,SNR=95							
	comp=Z,16nm,0.8s							
ESDC	**Sonseca Array**	**82.76**	**21**		**P**	**22 38 57.2 +1.4**		
ESDC				IAmb	IAmb	22 38 58.5		
	comp=Z,16nm,0.9s							
PAB	**San Pablo**	**82.81**	**21**	P	**P**	**22 38 57.4 +1.3**		
PAB				IAmb	IAmb	22 38 58.7		
	comp=Z,17nm,1.1s							
PAB	**San Pablo**	**82.81**	**21**	P	**P**	**22 38 57.4 +1.3**		
PAB				pmax	pmax			
	comp=Z,17nm,1.1s							
CHTO	**Chiang Mai**	**82.88**	**293**		**P**	**22 38 56.3 -0.4**		
CHTO	**Chiang Mai**	**82.88**	**293**	P	**P**	**22 38 56.3 -0.4**		
CHTO				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MOE	**Montemor**	**82.88**	**25**	*e*P	**P**	**22 38 57.9 +1.5**		
EVO	**Evora**	**82.95**	**24**	*e*P	**P**	**22 38 58.0 +1.2**		
CM31	**Chiang Mai Arr**	**83.17**	**292**	P	**P**	**22 38 58.9 +0.7**		
CM31				IAmb	IAmb	22 38 59.9		
	comp=Z,18nm,0.8s							
CMAR	**Chiang Mai Arr**	**83.17**	**292**	P	**P**	**22 38 59.0 +0.8**		
	comp=Z,12nm,0.8s,baz=12,slow=5.5,SNR=74							
	comp=Z,12nm,0.8s							
CMAR	**Chiang Mai Arr**	**83.17**	**292**		**P**	**22 38 58.6 +0.4**		
CMAR	**Chiang Mai Arr**	**83.17**	**292**	*ce*P	**P**	**22 38 59.0 +0.8**		
CMAR				pmax	pmax			
	comp=Z,13nm,0.8s							
PBEJ	**Beja**	**83.47**	**25**	*e*P	**P**	**22 39 01.0 +1.6**		
GNI	**Garni**	**83.48**	**344**		**P**	**22 39 00.3 +0.6**		
GNI				IAmb	IAmb	22 39 09.1		
	comp=Z,16nm,1.1s							
GNI	**Garni**	**83.48**	**344**	*ce*P	**P**	**22 39 01.6 +1.9**		
GNI				pmax	pmax			
	comp=Z,14nm,1.1s							
PBAR	**Barrancos**	**83.52**	**24**	*e*P	**P**	**22 39 01.2 +1.5**		
PBAR				*i* IAmb	IAmb	22 39 03.0		
	comp=Z,48nm,1.3s							
MESJ	**Messejana**	**83.56**	**25**	*e*P	**P**	**22 39 00.5 +0.6**		
MESJ				IAmb	IAmb	22 39 03.9		
	comp=Z,45nm,2.0s							
MESJ	**Messejana**	**83.56**	**25**	*e*P	**P**	**22 39 01.2 +1.3**		
MESJ				*i* IAmb	IAmb	22 39 03.4		
	comp=Z,21nm,1.7s							
MESJ	**Messejana**	**83.56**	**25**	*e*P	**P**	**22 39 00.5 +0.6**		
PCVE	**Castro Verde**	**83.80**	**25**	*e*P	**P**	**22 39 02.8 +1.6**		
ILGA	**Ilgaz**	**83.90**	**352**		**P**	**22 39 03.0 +1.1**		
ILGA				IAmb	IAmb	22 39 04.8		
	comp=Z,12nm,1.0s							
MORF	**Marmelete**	**83.96**	**25**	*e*P	**P**	**22 39 02.6 +0.6**		
MORF				IAmb	IAmb	22 39 04.2		
	comp=Z,16nm,0.9s							
MORF	**Marmelete**	**83.96**	**25**	*e*P	**P**	**22 39 03.4 +1.4**		
MORF	**Marmelete**	**83.96**	**25**	*e*P	**P**	**22 39 02.6 +0.6**		
PFVI	**Vila Bisbo**	**84.08**	**26**	*e*P	**P**	**22 39 04.0 +1.4**		
PVAQ	**Vaqueiros**	**84.10**	**25**	P	**P**	**22 39 03.4 +0.8**		
PVAQ	**Vaqueiros**	**84.10**	**25**	*e*P	**P**	**22 39 04.4 +1.8**		
PVAQ				*i* IAmb	IAmb	22 39 18.9		
	comp=Z,34nm,1.8s							
PBDV	**Barranco-do-Ve**	**84.20**	**25**	*e*P	**P**	**22 39 05.0 +1.8**		
PBDV				*i* IAmb	IAmb	22 39 15.9		
	comp=Z,52nm,1.9s							
HRA	**Herat**	**84.97**	**329**		**P**	**22 39 07.6 +0.1**		
HRA				IAmb	IAmb	22 39 09.4		
	comp=Z,8.1nm,0.9s							
ANTO	**Ankara**	**85.15**	**353**		**P**	**22 39 08.8 +0.8**		
ANTO				IAmb	IAmb	22 39 10.7		
	comp=Z,17nm,0.9s							
ANTO	**Ankara**	**85.15**	**353**	⇓P	**P**	**22 39 09.8 +1.7**		
ANTO	**Ankara**	**85.15**	**353**	P	**P**	**22 39 08.8 +0.8**		
ANTO				pmax	pmax			
	comp=Z,17nm,1.0s							
BR131	**Keskin Array S**	**85.23**	**352**	*i* P	**P**	**22 39 09.0 +0.5**		
BRTR	**Keskin Array B**	**85.23**	**352**	P	**P**	**22 39 09.6 +1.0**		
	comp=Z,5.0nm,0.8s,baz=17,slow=2.2,SNR=32							
BRTR				PP	**PP**	**22 42 25.7 +0.4**		
	comp=Z,2.0nm,1.0s,baz=20,slow=3.9,SNR=3.6							
	comp=Z,5.0nm,0.8s							
BRTR	**Keskin Array B**	**85.23**	**352**		**P**	**22 39 09.0 +0.5**		
GURO	**Guroymak-BITLI**	**85.46**	**346**		**P**	**22 39 10.5 +0.8**		
GURO				IAmb	IAmb	22 39 20.1		
	comp=Z,11nm,1.4s							
KIRS	**Kirsehir-Merke**	**85.80**	**352**	⇓P	**P**	**22 39 12.3 +1.0**		
BNN	**Bunyan**	**85.90**	**350**		**P**	**22 39 12.9 +1.0**		
MARD	**Mardin**	**86.85**	**346**		**P**	**22 39 17.1 +0.5**		
MD01	**Midelt array s**	**89.13**	**24**	P	**P**	**22 39 27.9 +0.4**		
WR8	**Warramunga Arr**	**94.83**	**242**	P	**P**	**22 39 53.5 -0.2**		
WR8				IAmb	IAmb	22 39 59.0		
	comp=Z,8.0nm,1.4s							
WRA	**Warramunga Arr**	**94.90**	**242**	P	**P**	**22 39 54.0 -0.1**		
	comp=Z,0.9nm,0.8s,baz=33,slow=5.2,SNR=7.4							
	comp=Z,0.9nm,0.8s							
WRA	**Warramunga Arr**	**94.90**	**242**	*i* P	**P**	**22 39 54.5 +0.4**		
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**97.95**	**250**	P	Pdif	22 40 08.8 +0.9		
	comp=Z,0.6nm,0.3s,baz=40,slow=7.9,SNR=1.9							
	comp=Z,0.6nm,0.3s							
ASAR	**Alice Springs**	**98.23**	**240**	P	Pdif	22 40 09.9 +0.7		
	comp=Z,0.3nm,0.8s,baz=27,slow=5.8,SNR=1.8							
	comp=Z,0.3nm,0.8s							
H03N2	**Juan Fernandez**	**110.12**	**120**	T	T	00 44 35.5		
	baz=325,slow=78,SNR=34							
H03N1	**Juan Fernandez**	**110.13**	**120**	T	T	00 44 29.6		
	baz=325,slow=78,SNR=27							
H03N3	**Juan Fernandez**	**110.13**	**120**	T	T	00 44 35.3		
	baz=325,slow=78,SNR=48							
KMBO	**Kilima Mbogo**	**125.13**	**343**	PKP	**PKiKP**	**22 45 33.8 +0.6**		
	comp=Z,0.9nm,0.4s,baz=78,slow=14,SNR=4.4							
KMBO	**Kilima Mbogo**	**125.13**	**343**	*i* PKIKP	**PKiKP**	**22 45 33.0 -0.2**		
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.4s							
QSPA	**South Pole Qui**	**144.81**	**180**	PKP	**PKiKP**	**22 46 10.2 -1.0**		
	comp=Z,4.2nm,0.7s,baz=359,slow=0.1,SNR=11							
QSPA	**South Pole Qui**	**144.81**	**180**		**PKiKP**	**22 46 09.7 -1.5**		
BOSA	**Boshof**	**153.58**	**357**	PKPbc	**PKPbc**	**22 46 29.8 -0.7**		
	comp=Z,3.2nm,0.8s,baz=50,slow=7.3,SNR=4.9							
BOSA	**Boshof**	**153.58**	**357**		**PKPbc**	**22 46 29.2 -1.2**		
BOSA	**Boshof**	**153.58**	**357**	PKIKP	**PKPbc**	**22 46 29.2 -1.2**		
MAW	**Mawson**	**157.82**	**220**	PKP	**PKPdf**	**22 46 27.8 +0.8**		
	comp=Z,1.6nm,0.9s,baz=156,slow=7.3,SNR=2.2							
SNAA	**Sanae**	**159.84**	**156**	PKPab	**PKPab**	**22 47 08.2 -0.5**		
	comp=Z,0.8nm,0.9s,baz=252,slow=3.2,SNR=2.3							

CATAC 19 22:26:45.0±0.4, 12°N±3°×8°8W±°, h26km, M3.0/12, MLv3.0/12, Error ellipse: s-maj=6.5km s-min=2.8km az=24.9, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.65**	**41**	P	Pn	22 26 58.8	+0.1
CSGN				S	Sn	22 27 09.0	+0.7
POTN	**Potosi Cosigui**	**0.71**	**43**	P	Pn	22 26 59.6	+0.2
POTN				S	Sn	22 27 09.8	+0.4
LCND	**La Caada**	**0.83**	**7**	P	Pn	22 27 01.3	+0.2
CRIN	**San Cristobal**	**0.95**	**77**	S	Sn	22 27 16.8	+1.3
CRIN	**San Cristobal**	**0.95**	**77**	P	Pb	22 27 03.3	+0.4
PKGN	**Cerro Pekin**	**1.01**	**79**	P	Pb	22 27 03.9	0.0
PKGN				S	Sn	22 27 17.7	+0.7
PACA	**Pacayal**	**1.03**	**342**	S	Sn	22 27 18.0	+0.3
PACA	**Pacayal**	**1.03**	**342**	P	Pb	22 27 04.5	+0.1
POLN	**Al Sur del Vol**	**1.17**	**82**	P	Pn	22 27 05.1	-0.6
POLN				S	Sn	22 27 20.6	-0.3
CNGA	**Al SSO del Vol**	**1.27**	**89**	P	Pn	22 27 07.1	-0.1
CNGA				S	Sn	22 27 23.0	-0.4
CNGN	**Cerro Negro**	**1.27**	**89**	P	Pn	22 27 07.0	-0.2
TECO	**Alcaldia de Te**	**1.30**	**324**	S	Sn	22 27 23.3	-0.8
TECO	**Alcaldia de Te**	**1.30**	**324**	P	Pn	22 27 07.1	-0.4
UESV	**Universidad de**	**1.38**	**326**	S	Sn	22 27 26.4	+0.2
UESV	**Universidad de**	**1.38**	**326**	P	Pn	22 27 08.7	0.0
COPN	**Copaltepe**	**1.41**	**102**	P	Pn	22 27 08.8	-0.2
SCLA	**Alcaldia de Sa**	**1.41**	**330**	S	Sb	22 27 27.7	-0.6
SCLA	**Alcaldia de Sa**	**1.41**	**330**	P	Pn	22 27 09.5	+0.4
MOMN	**Momotombo**	**1.43**	**93**	P	Pn	22 27 09.1	-0.2
MOMN				S	Sn	22 27 27.2	-0.1
LOMA	**Loma Larga**	**1.63**	**316**	S	Sn	22 27 32.2	-0.1
LOMA	**Loma Larga**	**1.63**	**316**	P	Pn	22 27 11.9	-0.2
TGUH	**Tegucigalpa,Un**	**1.72**	**24**	S	Sn	22 27 34.5	-0.2
YUSH	**Yuscaran**	**1.85**	**37**	S	Sn	22 27 37.6	-0.1
YUSH	**Yuscaran**	**1.85**	**37**	P	Pn	22 27 15.4	+0.2

IDC 19 22:31:46.5±2.2, 1°99N×126°60E, h0km, mb3.4/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=130.7km s-min=27.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.98**	**183**	P	Pn	22 36 21.6	-0.8
	0.1nm,0.3s,baz=354,slow=10,SNR=1.4						
	1.5nm,1.0s						
WRA	**Warramunga Arr**	**23.08**	**161**	P	P	22 36 52.9	-1.2
	0.8nm,0.7s,baz=338,slow=11,SNR=6.2						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**26.47**	**165**	P	P	22 37 26.3	+0.6
	0.3nm,0.5s,baz=341,slow=11,SNR=5.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	22 41 47.4	-0.2
	0.7nm,0.9s,baz=124,slow=7.2,SNR=1.4						
	0.7nm,0.9s						

*NEIC **19** 22:39:41.2±1.0, 55°0N±0°1×156°38W±0°10, h21km±18km, Error ellipse: s-maj=19.8km s-min=4.6km az=159.0*
AEIC 19 22:39:43.1±1.1, 55°01N±0°08×156°38W±0°07, h35km±8km, ML3.1, ML3.3/18(NEIC), Error ellipse: s-maj=12.0km s-min=5.1km az=63.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.93**	**28**		Pn	22 39 58.4	-1.2
CHIR					Sn	22 40 10.8	-0.8
CHIR				IAML		22 40 19.1	
	comp=E,705nm,0.8s						
CHIR				IAML		22 40 19.6	
	comp=N,752nm,0.6s						
VNSG	**Veniaminof 6**	**1.90**	**307**		Pn	22 40 12.1	-1.0
VNSG					Sn	22 40 35.4	-0.4
VNKR	**Veniaminof 5**	**1.98**	**302**		Pn	22 40 13.0	-1.2
VNKR					Sn	22 40 37.9	0.0
SII	**Sitkinak Islan**	**1.99**	**38**		Pn	22 40 12.9	-1.4
SII					Sn	22 40 36.9	-1.1
SII				IAML		22 40 58.4	
	comp=N,176nm,1.0s						
SII				IAML		22 41 03.3	
	comp=E,179nm,0.9s						
ANPB	**Aniakchak Plen**	**2.09**	**330**		Pn	22 40 15.6	-0.2
SDPT	**Sand Point**	**2.37**	**280**		Pn	22 40 18.6	-1.0
SDPT

ITM S Sb 23 04 26.5 +1.2
ITM Ithomi 0.78 41 P Pg 23 04 14.7 -0.3
ITM S Sb 23 04 26.2 +1.0
ZARO Zacharo 0.94 18 P Pb 23 04 18.1 +0.5
ZARO S Sg 23 04 30.2 -0.1
AMT Artemida-Makis 1.00 20 P Pg 23 04 18.7 -0.4
AMT S Sg 23 04 32.1 -0.1
LTHK Lithakia 1.17 342 P Pg 23 04 22.0 -0.3
LTHK S Sn 23 04 38.7 +1.8
LTHK Lithakia 1.17 342 P Pn 23 04 21.4 +0.1
VLX Vlachokerasia 1.17 48 P Pg 23 04 22.4 -0.1
VLX S Sn 23 04 39.6 +2.4
ORTH Orthonies,Zaky 1.34 340 P Pg 23 04 25.1 -0.5
ORTH Orthonies,Zaky 1.34 340 P Pn 23 04 24.5 +0.7
VLI Veliai 1.34 84 P Pg 23 04 26.3 +0.7
VLI Veliai 1.34 84 P Pg 23 04 25.0 -0.6
DRO Drossia 1.40 14 P Pb 23 04 25.6 +0.1
DRO Drossia 1.40 14 P Pn 23 04 25.3 +0.7
NPS1 Neapolis Lacon 1.44 93 P Pg 23 04 26.7 -0.7
RLS Riolos of Patr 1.47 6 P Pn 23 04 26.0 +0.5
RLS Riolos of Patr 1.47 6 P Pn 23 04 25.7 +0.2
KTHA Kythira Island 1.48 103 P Pg 23 04 28.1 -0.1
KTHA Kythira Island 1.48 103 P Pg 23 04 27.3 -0.9
RTZL Ratzakli, Kefa 1.53 345 P Pb 23 04 28.5 +0.8
RTZL S Sb 23 04 48.6 +1.7
GUR Goura 1.58 32 P Pb 23 04 28.9 +0.2
GUR Goura 1.58 32 P Pn 23 04 28.5 +1.3
AXS Araxos 1.60 3 P Pb 23 04 29.5 +0.6
AXS Araxos 1.60 3 P Pb 23 04 29.0 +0.1
KLV Kalavryta, Ach 1.60 25 P Pb 23 04 29.5 +0.5
KLV Kalavryta, Ach 1.60 25 P Pn 23 04 28.3 +0.8
VLS Valsamata 1.67 341 P Pn 23 04 29.3 +1.0
ANKY Antikythira Is 1.79 113 P Pb 23 04 32.0 -0.1
ANKY Antikythira Is 1.79 113 P Pb 23 04 31.0 -1.1
TRIZ Trizonia 1.88 19 P Pb 23 04 34.0 +0.5
EFP Efpalio 1.90 15 P Pb 23 04 33.8 -0.2
EFP Efpalio 1.90 15 P Pb 23 04 34.1 +0.2
SERG Sergoula 1.92 19 P Pb 23 04 34.6 +0.3
MET2 Kameni Chora, 1.93 58 P Pn 23 04 33.5 +1.6
MET5 Makryloggos,Me 1.95 58 P Pb 23 04 34.1 -0.8
LTK Loutraki 1.96 43 P Pb 23 04 34.8 -0.2
PVO Paravola 2.03 5 P Pb 23 04 36.2 +0.1
ANX Ano Chora 2.06 14 P Pb 23 04 36.9 +0.1
IDI Anoyia 3.21 113 Pn Pn 23 04 50.5 +1.0
2.6nm,0.3s,baz=250,slow=13,SNR=12
IDI Sn Sn 23 05 30.6 +3.3
7.1nm,0.3s,baz=299,slow=22,SNR=8.5
KEK Kerkira 3.33 340 Pn Pb 23 04 55.7 -2.6
LIT Litokhoron 3.63 15 Pn Pn 23 04 56.7 +1.5
TIP Timpagrande 4.41 307 Pn Pn 23 05 06.0 +0.1
CEL Celeste 4.60 293 Pn Pn 23 05 09.5 +0.9
KARP Karpathos 4.88 101 Pn Pn 23 05 13.6 +1.2
CUC Castrocucco 5.47 310 Pn Pn 23 05 22.5 +1.9
ARG Arkhangelos 5.54 92 Pn Pn 23 05 22.1 +0.7
VAE Valguarnera 5.56 281 Pn Pn 23 05 24.4 +2.6
10nm,0.7s,baz=153,slow=14,SNR=2.6
VAE Sn Sn 23 06 26.8 +1.3
1.2nm,0.3s,baz=184,slow=19,SNR=1.4
ACER Acerenza 5.91 317 Pn Pn 23 05 26.7 +0.1
PDG Podgorica 6.03 346 Pn Pn 23 05 27.3 -0.6
SGRT San Giovanni R 6.71 322 Pn Pn 23 05 37.0 +0.6
AKAS Kas 6.72 91 Pn Pn 23 05 38.5 +0.7
NRCA Norcia 8.85 317 Pn Pn 23 06 09.2 +2.2
GUMA Gualdo di Mace 8.89 319 Pn Pn 23 06 08.0 +0.5
FDMO Fiordimonte 9.00 318 Pn Pn 23 06 11.5 +2.5
MURB Monte Urbino 9.46 317 Pn Pn 23 06 16.8 +1.5
MLR Muntele Rosu 9.56 20 Pn Pn 23 06 15.8 -0.9
0.1nm,0.3s,baz=270,slow=20,SNR=1.9
1.0nm,0.8s
KEST Kesra 9.69 268 Pn Pn 23 06 19.5 +1.0
0.1nm,0.3s,baz=52,slow=19,SNR=2.0
4.3nm,1.0s
BRTR Keskin Array B 10.22 68 Pn Pn 23 06 24.3 -1.5
baz=266,slow=9.8,SNR=2.5
TEOL Teolo 11.37 323 Pn Pn 23 06 41.2 -0.2
DAVOX Davos/Dischmat 13.26 324 Pn Pn 23 07 07.3 0.0
0.2nm,0.3s,baz=154,slow=17,SNR=4.0
1.0nm,0.4s
TUE Stuetta 13.30 322 Pn Pn 23 07 07.6 -0.3
GERES GERESS Array B 13.44 338 Pn Pn 23 07 08.3 -1.5
baz=139,slow=13,SNR=3.2
0.2nm,0.3s
KBZ Khabaz 17.97 60 P Pn 23 08 08.4 -0.2
0.1nm,0.3s,baz=282,slow=13,SNR=3.7
1.3nm,0.8s
ESDC Sonseca Array 20.07 286 P P 23 08 32.3 -0.1
0.5nm,0.8s,baz=91,slow=10,SNR=1.8
0.5nm,0.8s
OBN Obninsk 21.28 25 P P 23 08 44.6 -0.5
HFS Hagfors 24.06 351 P P 23 09 11.4 -2.4
3.4nm,1.0s,baz=132,slow=10,SNR=4.6
3.4nm,1.0s
FINES FINESS Array B 25.05 5 P P 23 09 22.4 -0.5
4.0nm,1.0s,baz=169,slow=12,SNR=5.2
4.0nm,1.0s
FINES FINESS Array B 25.05 5 P P 23 09 22.8 -0.1
NOA NORSAR Array B 25.29 349 P P 23 09 23.3 -1.8
0.6nm,0.8s,baz=161,slow=9.3,SNR=2.1
0.6nm,0.8s
TORD Torodi Ar. Bea 29.22 222 P P 23 10 01.5 +0.7
2.8nm,0.3s,baz=47,slow=12,SNR=3.9
2.8nm,0.3s
ARCES ARCESS Array B 33.08 3 P P 23 10 33.4 -0.8
1.2nm,0.7s,baz=196,slow=12,SNR=1.1
1.2nm,0.7s
BVAR Borovoye Array 37.70 48 P P 23 11 13.2 -0.9
1.1nm,0.7s,baz=243,slow=6.3,SNR=3.4
1.1nm,0.7s
KKAR Karatay Array 37.90 65 P P 23 11 15.4 -0.7
DBIC Dimbokro 38.17 225 P P 23 11 20.9 +2.4
3.1nm,0.9s,baz=8.1,slow=7.1,SNR=2.4
3.1nm,0.9s
KURBB Kurchatov Arra 42.70 52 P P 23 11 53.8 -1.9
0.8nm,0.6s,baz=278,slow=8.6,SNR=9.0
0.8nm,0.6s
KURK Kurchatov 42.75 52 P P 23 11 53.8 -2.2
ZALV Zalesovo Beam 46.31 47 P P 23 12 22.9 -1.5
1.3nm,0.6s,baz=279,slow=8.5,SNR=5.1
1.3nm,0.6s
SONM Songino Array 61.00 50 P P 23 14 10.9 -1.4
0.3nm,0.5s,baz=342,slow=12,SNR=2.6
0.3nm,0.5s
CMAR Chiang Mai Arr 69.51 82 P P 23 15 06.6 -1.2
0.4nm,0.3s,baz=260,slow=3.8,SNR=1.5
0.4nm,0.3s
E29M Blow River 74.18 352 P P 23 15 35.4 +0.4
E29M IAmb IAmb 23 15 49.2
comp=Z,2.9nm,1.1s
G31M Satah River 75.12 350 P P 23 15 40.1 -0.3
G31M IAmb IAmb 23 15 44.8
comp=Z,8.5nm,1.5s
H29M Whitestone 76.31 352 P P 23 15 48.0 +0.7
H29M IAmb IAmb 23 16 14.2
comp=Z,5.1nm,1.4s

*GII **19** 23:04:25.8±0.0,27°.484N±0°.002×34°.546E±0°.001, h1km,Mws3.9,confirmed*
*HLW **19** 23:04:26.1,27°.39N×34°.55E,h1.4km±.2km, Ml4.2*
*IDC **19** 23:04:27.7±1.1,27°.68N×34°.55E,h0km,mb4.0/17, mbtmp4.0/22,ML3.3/5,MS3.3/2,Error ellipse: s-maj=20.8km s-min=14.4km az=136.0*
*SGS **19** 23:04:28.3,27°.50N×34°.64E,h7km,Ml3.6*
*NEIC **19** 23:04:29.2±1.6,27°.63N±0°.07×34°.6E±0°.1,h10km±2km, mb4.4/19,Error ellipse: s-maj=17.6km s-min=12.3km az=259.0*

ISC 19 23:04:27.2±0.5,27°.41N±0°.03×34°.55E±0°.03,h12km,n152, σ1ᵍ58/158,mb4.1/25,1D,Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TR1	**Tor 1**	**0.80**	**319**	P		**Pg**	**23 04 41.2**	**-1.4**
NSFG	**Safaga**	**0.84**	**220**	P		**Pg**	**23 04 42.0**	**-1.4**
NSFG				S		**Sg**	**23 04 53.6**	**-0.8**
HHRG	**Al Ghardaqah**	**0.89**	**258**	P		**Pg**	**23 04 42.5**	**-1.9**
RSHS		**0.92**	**14**	S		**Sg**	**23 04 53.8**	**-3.0**
RSHS		**0.92**	**14**	P		**Pg**	**23 04 43.1**	**-1.7**
MWLHS	**Almuwaylih**	**0.92**	**68**	P		**Pg**	**23 04 43.6**	**-1.3**
MWLHS	**Almuwaylih**	**0.92**	**68**	S		**Sg**	**23 04 54.7**	**-2.3**
KRABS	**KRABS**	**0.93**	**42**	P		**Pg**	**23 04 43.8**	**-1.4**
AYUS	**`Aynunah**	**1.01**	**39**	P		**Pg**	**23 04 44.9**	**-1.6**
AYUS	**`Aynunah**	**1.01**	**39**	S		**Sg**	**23 04 57.0**	**-2.6**
BDAS	**Al Bad`**	**1.13**	**25**	S		**Sb**	**23 05 00.5**	**-2.9**
BDAS	**Al Bad`**	**1.13**	**25**	P		**Pb**	**23 04 46.7**	**-1.9**
HKAT	**Jabal Katrina**	**1.22**	**336**	P		**Pb**	**23 04 48.4**	**-1.9**
TR2	**Tor 2**	**1.22**	**323**	P		**Pb**	**23 04 48.2**	**-1.9**
TR2				S		**Sg**	**23 05 04.0**	**-2.4**
HDHB	**Dhahab**	**1.31**	**3**	⇓P		**Pn**	**23 04 49.2**	**-2.1**
NQSR	**New Quseer**	**1.32**	**191**	P		**Pn**	**23 04 48.6**	**-2.8**
WTBKS	**WTBKS**	**1.38**	**61**	P		**Pn**	**23 04 51.2**	**-1.2**
WTBKS	**WTBKS**	**1.38**	**61**	S		**Sb**	**23 05 07.8**	**-2.9**
DESA	**DESA**	**1.44**	**86**	P		**Pn**	**23 04 52.0**	**-1.1**
DESA	**DESA**	**1.44**	**86**	S		**Sn**	**23 05 09.0**	**-2.9**
JLOS		**1.56**	**32**	P		**Pn**	**23 04 53.3**	**-1.6**
JLOS		**1.56**	**32**	S		**Sn**	**23 05 12.0**	**-3.2**
NUB	**Nuweibaa**	**1.62**	**3**	⇑P		**Pn**	**23 04 52.7**	**-2.8**
HAQS	**Haql**	**1.67**	**11**	P		Pg	23 05 05.7	+6.5
HAQS	**Haql**	**1.67**	**11**	S		**Sg**	**23 05 25.6**	**+4.7**
HRDS	**Abu Rudays**	**1.71**	**320**	P		**Pn**	**23 04 55.3**	**-1.4**
WJHS		**1.78**	**112**	P		**Pn**	**23 04 56.3**	**-1.4**
GRB	**Gharib**	**1.78**	**299**	P		**Pn**	**23 04 55.7**	**-2.1**
HBST	**Basata**	**1.81**	**5**	P		**Pn**	**23 04 56.3**	**-1.9**
JMOS	**Jabal al Moall**	**1.82**	**16**	S		**Sn**	**23 05 18.8**	**-2.6**
HQLS		**1.94**	**13**	P		**Pn**	**23 04 58.5**	**-1.5**
NADB	**Abo Dabab**	**2.06**	**181**	P		**Pn**	**23 04 59.4**	**-2.2**
BIDS	**Bi'r al Bayda'**	**2.21**	**104**	P		**Pn**	**23 05 03.2**	**-0.5**
EWJHS	**Al Wajh**	**2.26**	**123**	P		**Pn**	**23 05 02.5**	**-1.8**
EIL	**Elat**	**2.28**	**9**	Pn		**Pn**	**23 05 02.9**	**-1.7**
	19nm,0.3s,baz=152,slow=7.9,SNR=160							
EIL				Sn		**Sn**	**23 05 29.6**	**-3.2**
	29nm,0.3s,baz=243,slow=11,SNR=8.6							
	66nm,0.4s							
EIL	**Elat**	**2.28**	**9**	P		**Pn**	**23 05 02.9**	**-1.7**
EIL	**Elat**	**2.28**	**9**	S		**Sn**	**23 05 31.6**	**-1.1**
AQBJ	**Aqaba**	**2.35**	**11**	P		**Pn**	**23 05 04.2**	**-1.4**
URD10	**Hayder**	**2.38**	**71**	S		**Sn**	**23 05 33.6**	**-1.7**
URD10	**Hayder**	**2.38**	**71**	P		**Pn**	**23 05 05.9**	**-0.2**
MBRI	**Mt Berech**	**2.40**	**8**	P		**Pn**	**23 05 04.9**	**-1.5**
MBRI	**Mt Berech**	**2.40**	**8**	P		**Pn**	**23 05 04.8**	**-1.6**
MBRI	**Mt Berech**	**2.40**	**8**	S		**Sn**	**23 05 35.3**	**-0.5**
ZNM	**Zenema**	**2.45**	**323**	P		**Pn**	**23 05 06.6**	**-0.4**
URD15	**Abu Rakah**	**2.59**	**93**	P		**Pn**	**23 05 09.3**	**+0.2**
HRFI	**Mount Harif**	**2.65**	**9**	P		**Pn**	**23 05 08.3**	**-1.5**
HRFI	**Mount Harif**	**2.65**	**9**	P		**Pn**	**23 05 08.2**	**-1.7**
HRFI	**Mount Harif**	**2.65**	**9**	S		**Sn**	**23 05 41.4**	**-0.6**
ASUT		**2.66**	**270**	⇑P		**Pn**	**23 05 08.9**	**-0.9**
KRMI	**Paran Flat**	**2.70**	**3**	P		**Pn**	**23 05 09.6**	**-0.9**
KRMI	**Paran Flat**	**2.70**	**3**	P		**Pn**	**23 05 09.6**	**-0.9**
KRMI	**Paran Flat**	**2.70**	**3**	S		**Sn**	**23 05 42.6**	**-0.6**
SUZ	**Suez**	**2.85**	**328**	⇑P		**Pn**	**23 05 12.5**	**0.0**
NEDF	**New Edfo**	**2.89**	**210**	⇑P		**Pn**	**23 05 10.9**	**-2.1**
PRNI	**Paran**	**2.96**	**8**	P		**Pn**	**23 05 13.2**	**-0.8**
PRNI	**Paran**	**2.96**	**8**	P		**Pn**	**23 05 13.2**	**-0.8**
PRNI	**Paran**	**2.96**	**8**	S		**Sn**	**23 05 49.2**	**-0.3**
HSNJ	**Maan**	**3.01**	**19**	P		**Pn**	**23 05 13.7**	**-1.1**
HAGS	**Hagol**	**3.04**	**172**	P		**Pn**	**23 05 13.3**	**-1.8**
HAGS				S		**Sn**	**23 05 47.7**	**-3.8**
ZFRI	**Zfri**	**3.18**	**10**	P		**Pn**	**23 05 16.2**	**-0.8**
ZFRI	**Zfri**	**3.18**	**10**	P		**Pn**	**23 05 16.2**	**-0.8**
ZFRI	**Zfri**	**3.18**	**10**	S		**Sn**	**23 05 54.3**	**-0.6**
TAMRE	**El Minia**	**3.24**	**276**	P		**Pn**	**23 05 16.2**	**-1.5**
HHAG	**Hagoal**	**3.33**	**320**	P		**Pn**	**23 05 18.8**	**-0.3**
KZIT	**Kziot**	**3.49**	**358**	P		**Pn**	**23 05 20.9**	**-0.4**
KZIT	**Kziot**	**3.49**	**358**	P		**Pn**	**23 05 20.1**	**-1.2**
BRNS	**Bernies**	**3.56**	**186**	P		**Pn**	**23 05 21.0**	**-1.3**
LISJ	**El Lisan**	**3.91**	**12**	P		**Pn**	**23 05 26.7**	**-0.2**
MSBI	**Mazada**	**3.96**	**10**	P		**Pn**	**23 05 26.3**	**-1.3**
MSBI	**Mazada**	**3.96**	**10**	P		**Pn**	**23 05 26.7**	**-0.9**
YTIR	**Yattir**	**3.97**	**7**	P		**Pn**	**23 05 27.3**	**-0.7**
YTIR	**Yattir**	**3.97**	**7**	P		**Pn**	**23 05 28.0**	**0.0**
GHAJ	**Ghor Haditha**	**3.98**	**13**			**Pn**	**23 05 26.6**	**-1.4**
GHAJ	**Ghor Haditha**	**3.98**	**13**	P		**Pn**	**23 05 27.2**	**-0.8**
GHAJ	**Ghor Haditha**	**3.98**	**13**	P		**Pn**	**23 05 27.1**	**-0.9**
JOFS	**JOFS**	**4.10**	**60**	P		**Pn**	**23 05 29.0**	**-0.6**
AMAZ	**Amatzia**	**4.12**	**4**	P		**Pn**	**23 05 29.9**	**-0.1**
AMAZ	**Amatzia**	**4.12**	**4**	P		**Pn**	**23 05 29.1**	**-0.9**
AMAZ	**Amatzia**	**4.12**	**4**	S		**Sn**	**23 06 17.3**	**-0.9**
DSI	**Dead Sea**	**4.21**	**10**	P		**Pn**	**23 05 30.3**	**-0.9**
DSI	**Dead Sea**	**4.21**	**10**	P		**Pn**	**23 05 30.3**	**-0.9**
UJAP	**Al Uja**	**4.60**	**10**	P		**Pn**	**23 05 35.7**	**-0.8**
SALP	**Salfit**	**4.68**	**7**	P		**Pn**	**23 05 37.1**	**-0.5**
BALJ	**Balqa**	**4.76**	**11**	Pn		**Pn**	**23 05 37.4**	**-1.3**
BALJ	**Balqa**	**4.76**	**11**	P		**Pn**	**23 05 37.5**	**-1.3**
SLTI	**Sal'it**	**4.83**	**5**	P		**Pn**	**23 05 39.8**	**0.0**
SLTI	**Sal'it**	**4.83**	**5**	P		**Pn**	**23 05 39.6**	**-0.1**
HSUJ	**Al Zarqa**	**4.89**	**17**	P		**Pn**	**23 05 40.2**	**-0.4**
HMDT	**Nahal Hemdat**	**4.90**	**10**	P		**Pn**	**23 05 40.2**	**-0.5**
HMDT	**Nahal Hemdat**	**4.90**	**10**	P		**Pn**	**23 05 40.2**	**-0.5**
QRNJ	**Al-Qirein**	**4.99**	**10**	P		**Pn**	**23 05 41.7**	**-0.2**
MMLI	**Mount Malkishu**	**5.07**	**8**	P		**Pn**	**23 05 42.8**	**-0.2**
MMLI	**Mount Malkishu**	**5.07**	**8**	P		**Pn**	**23 05 42.5**	**-0.5**
ASF	**Jabal al Asfar**	**5.17**	**23**	Pn		**Pn**	**23 05 43.4**	**-1.0**
	1.1nm,0.3s,baz=198,slow=5.5,SNR=28							
ASF				Pg		**Pb**	**23 05 58.7**	**+1.1**
	7.3nm,0.3s,baz=200,slow=8.8,SNR=26							
ASF				Sn		**Sn**	**23 06 42.2**	**-1.9**
	3.3nm,0.3s,baz=168,slow=22,SNR=12							
ASF				Lg		Lg	23 07 04.0	
	15nm,0.3s,baz=180,slow=20,SNR=6.6							
ASF				LR		LR	23 07 49.9	
	comp=Z,417nm,18.6s,baz=205,slow=41							
	3.7nm,0.4s							
OFRI	**`Ofer**	**5.21**	**4**	P		**Pn**	**23 05 45.3**	**+0.3**
	50nm,0.7s							
BLGI	**Bet Lehem HaGe**	**5.34**	**6**	P		**Pn**	**23 05 46.7**	**0.0**
BLGI	**Bet Lehem HaGe**	**5.34**	**6**	P		**Pn**	**23 05 44.8**	**-1.9**
SHMJ	**Saham**	**5.41**	**11**	P		**Pn**	**23 05 47.2**	**-0.4**
	7um,0.8s							
MMAI	**Mount Meron Ar**	**5.64**	**7**	Pn		**Pn**	**23 05 50.6**	**-0.3**
	6.2nm,0.3s,baz=182,slow=15,SNR=37							
MMAI				Sn		**Sn**	**23 06 53.7**	**-1.9**
	4.6nm,0.3s,baz=203,slow=16,SNR=1.9							
MMAI				Lg		Lg	23 07 16.9	
	4.4nm,0.3s,baz=165,slow=35,SNR=1.5							
	4.3nm,0.4s							
KSHT	**Keshet**	**5.66**	**11**	P		**Pn**	**23 05 50.7**	**-0.5**
GEM	**Giv'at Ha'Em**	**5.86**	**9**	P		**Pn**	**23 05 53.8**	**-0.1**
GEM	**Giv'at Ha'Em**	**5.86**	**9**	P		**Pn**	**23 05 53.7**	**-0.2**
NATI	**Neve Ativ**	**5.92**	**10**	P		**Pn**	**23 05 54.3**	**-0.5**
	22nm,0.9s							
NATI	**Neve Ativ**	**5.92**	**10**	P		**Pn**	**23 05 54.2**	**-0.5**
CSS	**Mathiatis**	**7.60**	**352**	Pn		**Pn**	**23 06 17.1**	**-0.7**
AKAS	**Kas**	**9.75**	**336**	Pn		**Pn**	**23 06 46.4**	**-1.0**
RAYN	**Ar Rayn**	**10.63**	**109**	Pn		**Pn**	**23 07 01.6**	**+2.3**
IDI	**Anoyia**	**11.39**	**316**	Sn		**Sn**	**23 09 10.9**	**-6.1**
	0.4nm,0.3s,baz=167,slow=19,SNR=2.6							
BRTR	**Keskin Array B**	**12.31**	**357**	Pn		**Pn**	**23 07 22.6**	**+0.3**
	baz=152,slow=13,SNR=6.0							
	1.4nm,1.0s							
BR131	**Keskin Array S**	**12.31**	**357**	Pn		**Pn**	**23 07 21.3**	**-1.1**
GNI	**Garni**	**15.26**	**31**	P		**P**	**23 08 11.4**	**-5.8**
	20nm,0.9s,baz=225,slow=7.1,SNR=13							
GNI	**Garni**	**15.26**	**31**	LR		LR	23 14 24.7	
	comp=Z,74nm,18.1s,baz=264,slow=40							
GNI	**Garni**	**15.26**	**31**	P		**P**	**23 08 10.9**	**+3.5**
GNI				IAmb		IAmb	23 08 12.7	
	comp=Z,18nm,0.8s							
KBZ	**Khabaz**	**17.63**	**20**	P		**P**	**23 08 33.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=200,slow=7.9,SNR=7.2							
	comp=Z,6.3nm,1.0s							
BURAR	**Bucovina Array**	**21.46**	**343**	P		**P**	**23 09 16.4**	**+0.9**
BUR08	**Bucovina Ar. S**	**21.49**	**343**	P		**P**	**23 09 17.0**	**+1.2**
KEST	**Kesra**	**22.98**	**297**	P		**P**	**23 09 33.9**	**+2.2**
	comp=Z,5.6nm,1.0s,baz=135,slow=2.9,SNR=2.6							
	comp=Z,5.6nm,1.0s							
KIEV	**Kiev**	**23.61**	**352**	P		**P**	**23 09 37.1**	**-0.7**
AKASG	**Malin Array Be**	**23.61**	**352**	P		**P**	**23 09 35.8**	**-2.1**
	comp=Z,2.3nm,0.7s,baz=172,slow=10,SNR=7.8							
	comp=Z,2.3nm,0.7s							
AKBB	**Malin Array Si**	**23.61**	**352**	P		**P**	**23 09 37.3**	**-0.6**
AKBB				IAmb		IAmb	23 09 48.5	
	comp=Z,4.9nm,0.8s							
CIMO	**Cimolais**	**25.72**	**323**	P		**P**	**23 09 59.5**	**+2.2**
CIMO				IAmb		IAmb	23 10 00.1	
	comp=Z,5.9nm,0.9s							
GEC2	**GERESS Array S**	**26.80**	**329**	P		**P**	**23 10 08.4**	**+1.2**
GEC2				IAmb		IAmb	23 10 12.2	
	comp=Z,5.7nm,1.0s							
GERES	**GERESS Array B**	**26.80**	**329**	P		**P**	**23 10 08.0**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=134,slow=7.6,SNR=11							
	comp=Z,2.0nm,0.8s							
SENIN	**Lac Senin/Sane**	**28.64**	**319**	P		**P**	**23 10 23.2**	**-0.6**
SENIN				IAmb		IAmb	23 10 25.8	
	comp=Z,5.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**33.80**	**252**	P		**P**	**23 11 12.8**	**+3.5**
	comp=Z,1.7nm,0.3s,baz=41,slow=11,SNR=4.3							
	comp=Z,1.7nm,0.3s							
ESDC	**Sonseca Array**	**34.10**	**301**	P		**P**	**23 11 12.9**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=95,slow=7.8,SNR=8.7							
	comp=Z,1.6nm,0.9s							
FINES	**FINESS Array B**	**34.51**	**353**	P		**P**	**23 11 14.7**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=176,slow=9.0,SNR=5.5							
	comp=Z,2.6nm,0.7s							
FINES	**FINESS Array B**	**34.51**	**353**	P		**P**	**23 11 14.8**	**0.0**
HFS	**Hagfors**	**35.69**	**342**	P		**P**	**23 11 26.5**	**+1.4**
	comp=Z,2.6nm,0.8s,baz=146,slow=16,SNR=2.1							
	comp=Z,2.6nm,0.8s							
BOOM	**Boomskoye usch**	**36.73**	**55**	P		**P**	**23 11 35.5**	**+1.0**
BVAR	**Borovoye Array**	**36.85**	**36**	P		**P**	**23 11 36.0**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=224,slow=8.1,SNR=3.6							
	comp=Z,1.8nm,0.9s							
NOA	**NORSAR Array B**	**37.13**	**341**	P		**P**	**23 11 36.0**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=142,slow=8.8,SNR=3.4							
	comp=Z,1.1nm,0.9s							
EKA	**Eskdalemuir Ar**	**38.95**	**326**	P		**P**	**23 11 51.8**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=125,slow=9.5,SNR=3.4							
	comp=Z,1.4nm,0.7s							
KURBB	**Kurchatov Arra**	**40.50**	**43**	P		**P**	**23 12 07.0**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=257,slow=8.3,SNR=12							
KURBB				PcP		**PcP**	**23 14 09.1**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=247,slow=3.7,SNR=4.3							
	comp=Z,2.2nm,0.8s							
LVZ	**Lovozero**	**40.51**	**0**	P		**P**	**23 12 06.0**	**+0.2**
KURK	**Kurchatov**	**40.58**	**43**	P		**P**	**23 12 08.5**	**+2.0**
KURK				IAmb		IAmb	23 12 14.7	
	comp=Z,4.8nm,1.0s							
MKAR	**Makanchi Array**	**41.97**	**49**	P		**P**	**23 12 18.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=267,slow=7.6,SNR=7.5							
	comp=Z,0.3nm,0.3s							
MKAR	**Makanchi Array**	**41.97**	**49**	P		**P**	**23 12 17.6**	**-0.5**
ARCES	**ARCESS Array B**	**42.49**	**355**	P		**P**	**23 12 22.2**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=167,slow=7.5,SNR=18							
	comp=Z,4.2nm,0.7s							
ZALV	**Zalesovo Beam**	**45.15**	**40**	P		**P**	**23 12 44.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=255,slow=8.5,SNR=5.3							
	comp=Z,1.1nm,0.5s							
ZALV	**Zalesovo Beam**	**45.15**	**40**	P		**P**	**23 12 44.5**	**+1.0**
SPITS	**Spitsbergen Ar**	**51.52**	**355**	P		**P**	**23 13 32.9**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=154,slow=11,SNR=1.8							
	comp=Z,4.4nm,0.8s							
SONM	**Songino Array**	**58.33**	**49**	P		**P**	**23 14 23.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=266,slow=5.9,SNR=5.3							
	comp=Z,0.5nm,0.7s							
D62A	**Allapoint, All**	**78.96**	**317**	P		**P**	**23 16 32.7**	**+1.9**
D62A				IAmb		IAmb	23 16 33.2	
	comp=Z,6.1nm,0.9s							
E62A	**Clayton Lake**	**79.47**	**317**	P		**P**	**23 16 34.7**	**+1.1**
C27K	**Jago River**	**83.24**	**359**	P		**P**	**23 16 55.0**	**+1.9**
C27K				IAmb		IAmb	23 17 22.1	
	comp=Z,5.9nm,1.4s							
E28M	**Babbage River**	**84.18**	**358**	P		**P**	**23 16 59.0**	**+1.1**
E28M				IAmb		IAmb	23 17 05.2	
	comp=Z,5.7nm,1.5s							
E29M	**Blow River**	**84.33**	**357**	P		**P**	**23 17 00.5**	**+1.8**
E29M				IAmb		IAmb	23 17 14.1	
	comp=Z,3.6nm,1.2s							
F30M	**Barrier River**	**85.00**	**356**	P		**P**	**23 17 03.0**	**+0.9**
F30M				IAmb		IAmb	23 17 04.0	
	comp=Z,4.0nm,0.9s							
G29M	**Pine Creek**	**85.81**	**357**	P		**P**	**23 17 07.3**	**+1.1**
H29M	**Whitestone**	**86.52**	**357**	P		**P**	**23 17 10.3**	**+0.6**
ILAR	**Eielson Array**	**88.12**	**1**	P		**P**	**23 17 18.6**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=339,slow=1.8,SNR=6.4							
	comp=Z,0.5nm,0.7s							

*NEIC **19** 23:08:06.2±2.4,55°.10N±0°.07×156°.39W±0°.06,h10km±2km, Error ellipse: s-maj=12.8km s-min=3.0km az=158.0*

AEIC 19 23:08:10.0±1.3,55°.12N±0°.08×156°.4W±0°.1,h39km±10km, ML2.9,MLˢ3.0/24(NEIC),Error ellipse: s-maj=13.5km s-min=5.5km az=144.0,South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHIR	**Chirikof Islan**	**0.84**	**33**			Pn	23 08 24.2	-1.1
CHIR						Sn

HLW ***19*** *23:10:36.9,27˝.39N×34˝.55E,h15km±2km,Md2.8,Ml2.6*
SGS ***19*** *23:10:39.2,27˝.45N×34˝.65E,h12km,Ml2.9*

ISC 19 23:10:34.8±0.9,**27°38N**±0.03×**34°61E**±0.03,**h12**km,**n36,** σ1§54/39,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TR1	**Tor 1**	**0.86**	**317**	P		**Pn**	**23 10 52.2**	**-0.5**
MWLHS	**Almuwaylih**	**0.88**	**65**	P		**Pn**	**23 10 54.8**	**+1.7**
MWLHS	**Almuwaylih**	**0.88**	**65**	S		**Sn**	**23 11 05.9**	**+0.1**
KRABS	**KRABS**	**0.92**	**38**	S		**Sn**	**23 11 05.8**	**-0.9**
KRABS	**KRABS**	**0.92**	**38**	P		**Pn**	**23 10 54.7**	**+1.1**
RSHS		**0.93**	**10**	S		**Sb**	**23 11 04.9**	**-0.4**
RSHS				P		**Pn**	**23 10 54.2**	**+0.4**
HHRG	**Al Ghardaqah**	**0.94**	**261**	P		**Pb**	**23 10 53.4**	**+0.3**
AYUS	**`Aynunah**	**1.00**	**36**	S		**Sn**	**23 11 08.1**	**-0.5**
AYUS	**`Aynunah**	**1.00**	**36**	P		**Pn**	**23 10 56.0**	**+1.4**
BDAS	**Al Bad`**	**1.14**	**22**	S		**Sn**	**23 11 11.3**	**-0.8**
BDAS	**Al Bad`**	**1.14**	**22**	P		**Pn**	**23 10 57.6**	**+1.1**
HKAT	**Jabal Katrina**	**1.27**	**335**	P		**Pg**	**23 10 59.2**	**0.0**
HKAT				S		**Sb**	**23 11 14.7**	**-0.4**
TR2	**Tor 2**	**1.27**	**322**	P		**Pg**	**23 10 58.9**	**-0.4**
HDHB	**Dhahab**	**1.34**	**0**	P		**Pg**	**23 10 60.0**	**-0.6**
WTBKS	**WTBKS**	**1.35**	**58**	S		**Sg**	**23 11 18.4**	**0.0**
WTBKS				P		**Pg**	**23 11 02.3**	**+1.5**
JLOS		**1.56**	**30**	P		**Pg**	**23 11 04.4**	**-0.4**
JLOS		**1.56**	**30**	S		**Sg**	**23 11 22.9**	**-2.2**
NUB	**Nuweibaa**	**1.64**	**1**	P		**Pb**	**23 11 03.6**	**-1.4**
HAQS	**Haql**	**1.69**	**9**	S		**Sg**	**23 11 36.3**	**+7.1**
HAQS				P		Pg	23 11 16.5	+9.3
WJHS		**1.72**	**112**	S		**Sb**	**23 11 26.7**	**-1.1**
WJHS		**1.72**	**112**	P		**Pg**	**23 11 07.4**	**-0.4**
HRDS	**Abu Rudays**	**1.77**	**319**	P		**Pb**	**23 11 06.3**	**-0.9**
URD07	**Al Anba**	**1.79**	**80**	P		**Pg**	**23 11 10.1**	**+0.8**
JMOS	**Jabal al Moall**	**1.84**	**14**	S		**Sn**	**23 11 28.8**	**-0.6**
JMOS	**Jabal al Moall**	**1.84**	**14**	P		**Pb**	**23 11 08.0**	**-0.4**
GRB	**Gharib**	**1.84**	**299**	P		**Pn**	**23 11 06.6**	**+0.2**
URD06	**Shuwaq**	**1.91**	**87**	P		**Pg**	**23 11 11.3**	**-0.3**
HQLS		**1.96**	**12**	P		**Pb**	**23 11 09.5**	**-0.9**
HQLS		**1.96**	**12**	S		**Sb**	**23 11 32.8**	**-2.0**
NADB	**Abo Dabab**	**2.03**	**183**	P		**Pn**	**23 11 10.2**	**+1.4**
URD05	**Al Faraah**	**2.10**	**93**	P		**Pg**	**23 11 13.9**	**-1.1**
BIDS	**Bi'r al Bayda'**	**2.15**	**103**	P		**Pb**	**23 11 12.9**	**-0.8**
EWJHS	**Al Wajh**	**2.19**	**123**	P		**Pb**	**23 11 13.6**	**-0.8**
EWJHS	**Al Wajh**	**2.19**	**123**	S		**Sn**	**23 11 37.6**	**-0.6**
ZNM	**Zenema**	**2.51**	**323**	P		**Pn**	**23 11 16.2**	**+0.8**
SUZ	**Suez**	**2.91**	**328**	P		**Pn**	**23 11 22.0**	**+1.0**

SJA ***19*** *23:10:38.8±0.9,33˝.78S×66˝.91W,h14km,ML5.8,MW6.0*
IDC ***19*** *23:10:39.1±0.3,33˝.65S×66˝.82W,h0km,mb5.2/21, mbtmp5.2/26,ML5.1/5,MS5.4/36,Error ellipse: s-maj=12.9km s-min=8.1km az=87.0*
VAO ***19*** *23:10:40.8±0.3,33˝.59S×66˝.92W,h10km,mb5.7*
ISC-PP ***19*** *23:10:40,33˝.64S×66˝.87W,h9km,Mwppsm6.0,Moment Tensor Solution. s25 Moment tensor: Scale 10¹⁸Nm; Mrr0.63±.13; Mθθ0.54±.19; Mϕϕ-0.23±.12; Mrθ0.25±.16; Mθϕ0.22±.19; Mϕr0.14±.11; Fault plane solution: M₀1.24000×10¹⁸ NP1:ϕs135.90000°,δ47.30000°, λ32.10000°. NP2:ϕs22.90000°,δ67.00000°,λ132.60000°.*
NEIC ***19*** *23:10:40.6±1.8,33˝.64S±0˝.05×66˝.87W±0˝.07,h10km±1km, mb5.8/625,Ms_20 5.4/374,Mwb5.7/74,Mwr5.6/49, Mww5.7/48,Mww5.8(GUC) Error ellipse: s-maj=10.4km s-min=8.3km az=245.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.83; Mθθ-1.41; Mϕϕ-1.42; Mrθ1.99; Mθϕ-1.92; Mϕr-0.35; Fault plane solution: M₀3.71000×10¹⁷ NP1:ϕs69.81000°,δ60.88000°, λ118.66000°. NP2:ϕs201.50000°,δ39.95000°,λ49.27000°. Principal axes: T 3.8426, Plg62.0000°, Azm27.0000°; N -0.2699, Plg25.0000°, Azm235.0000°; P -3.5727, Plg11.0000°, Azm140.0000°; Moment Tensor Solution. Moment tensor: Scale 10¹⁷ Nm; Mrr3.98; Mθθ-1.24; Mϕϕ-2.74; Mrθ1.66; Mθϕ-1.40; Mϕr-0.32; Fault plane solution: M₀4.15000×10¹⁷ NP1:ϕs195.00000°,δ43.01000°, λ63.75000°. NP2:ϕs49.00000°,δ52.28000°,λ112.42000°. Principal axes: T 4.5283, Plg72.0000°, Azm18.0000°; N -0.9018, Plg18.0000°, Azm215.0000°; P -3.6265, Plg5.0000°, Azm123.0000°;*
IPGP ***19*** *23:10:40.0,33˝.64S×66˝.88W,h11km,Mw5.8,Fault plane solution: NP1:ϕs211.00000°,δ43.00000°,λ60.00000°. NP2:ϕs69.00000°,δ54.00000°,λ115.00000°.*
NEIC ***19*** *23:10:40.6,33˝.82S×67˝.23W,h20km,Moment Tensor Solution. Duration: 3ᵽ6 Moment tensor: Scale 10¹⁷Nm; Mrr4.59; Mθθ-3.07; Mϕϕ-1.52; Mrθ1.60; Mθϕ-2.24; Mϕr-0.83; Fault plane solution: M₀4.97000×10¹⁷ NP1: ϕs218.20000°,δ42.44000°,λ64.02000°. NP2:ϕs71.63000°, δ52.65000°,λ111.83000°. Principal axes: T 5.1611, Plg72.0000°, Azm40.0000°; N -0.4169, Plg17.0000°, Azm238.0000°; P -4.7442, Plg5.0000°, Azm146.0000°;*
BJI ***19*** *23:10:40.5,33˝.60S×66˝.90W,h10km,mB6.0/42,Ms5.8/49, Ms7 5.7/52*
NEIC ***19*** *23:10:40.6,33˝.64S×66˝.88W,h10km*
MOS ***19*** *23:10:40.6±1.1,33˝.66S×66˝.96W,h17km,mb5.8/39, MS5.4/13,Error ellipse: s-maj=12.8km s-min=6.7km az=107.6*
NEIC ***19*** *23:10:40.6,33˝.62S×66˝.87W,h20km*
NEIC ***19*** *23:10:40.6,33˝.64S×66˝.88W,h10km*
GUC ***19*** *23:10:41.5±0.5,33˝.72S×66˝.96W,h19km±8km,ML5.7*
GCMT ***19*** *23:10:44.6±0.1,33˝.79S±0˝.01×66˝.98W±0˝.01,h15km, MW5.7/143,Moment Tensor Solution. s132,c245; s143,c296; Duration: 1ᵽ7 Moment tensor: Scale 10¹⁷ Nm; Mrr3.20±.05; Mθθ-2.43±.04; Mϕϕ-0.76±.05; Mrθ0.66±.08; Mθϕ-2.91±.03; Mϕr-0.51±.09; Best double couple: M₀4.07400×10¹⁷ NP1:ϕs213.00000°,δ47.00000°, λ61.00000°. NP2:ϕs73.00000°,δ50.00000°,λ118.00000°. Principal axes: T 3.5190, Plg69.0000°, Azm49.0000°; N 1.1170, Plg21.0000°, Azm234.0000°; P -4.6300, Plg2.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
CATAC ***19*** *23˝10:45.9±0.7,34˝S±6˝×6˝7W±˝,h54km±7km,M5.9/13, mb5.8/12,mB6.2/13,MLv6.6/3,Mw(mB)5.8/13, MwMwp5.5/9,Mwp5.7/9 Error ellipse: s-maj=12.5km s-min=10.3km az=33.7,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.31; Mθθ0.74; Mϕϕ-0.43; Mrθ-0.64; Mθϕ1.44; Mϕr2.16; Fault plane solution: M₀2.75129×10¹⁸ NP1:ϕs89.36738°,δ37.98619°, λ-8.27698°. NP2:ϕs185.90816°,δ84.91679°, λ-127.69554°. Principal axes: T 2.1180, Plg29.6474°, Azm305.7430°; N 0.9916, Plg37.5216°, Azm189.8250°; P -3.1096, Plg38.3135°, Azm62.4690°; confirmed*

ISC 19 23:10:41.0±0.6,**33°68S**±0.03×**66°88W**±0.03,**h15**km±3km, **n1083,** σ1§42/789,**mb5.8**/337,**MS5.4**/231,**27C-24D,San Luis Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AVIZ	**Vizcacheras**	**1.38**	**278**	*eP*		**Pn**	**23 11 04.6**	**-1.3**
ACAN	**Cantantal**	**1.43**	**349**	*eP*		**Pb**	**23 11 06.8**	**-0.6**
ACAN				IAML			23 11 32.2	
	comp=Z,354μm,0.7s							
MRA	**San Martin**	**1.59**	**38**	*eP*		**Pg**	**23 11 11.7**	**+0.1**
MRA				*eS*		**Sg**	**23 11 36.8**	**+4.4**
MRA				IAML			23 11 37.9	
	comp=Z,148μm,1.0s							
RFA	**San Rafael**	**1.71**	**230**	*eP*		**Pn**	**23 11 09.2**	**-1.1**
RFA				*eS*		**Sb**	**23 11 33.3**	**-0.1**
RFA				IAML			23 11 35.0	
	comp=Z,40μm,0.3s							
AAGR	**Agrelo**	**1.74**	**289**	*eP*		**Pn**	**23 11 11.0**	**+0.3**
ARCO	**CERRO ARCO**	**1.91**	**295**	*eP*		**Pn**	**23 11 13.6**	**+0.4**
ARCO				IAML			23 11 42.9	
	comp=Z,57μm,0.5s							
ASAL	**Salagasta**	**1.97**	**303**	*eP*		**Pn**	**23 11 14.4**	**+0.5**
CFA	**Coronel Fontan**	**2.37**	**331**	Pn		**Pn**	**23 11 19.9**	**+0.5**
	comp=Z,490nm,0.3s,baz=148,slow=14,SNR=273							
CFA				Pg		**Pb**	**23 11 22.8**	**-0.5**
	comp=Z,2μm,0.3s,baz=158,slow=17,SNR=331							
CFA				Sn		**Sn**	**23 11 49.5**	**+1.3**
	comp=Z,719nm,0.3s,baz=155,slow=16,SNR=3.7							
CFA				Lg		Lg	23 11 54.3	
	comp=Z,2μm,0.3s,baz=64,slow=9.3,SNR=17							
	comp=Z,3μm,0.3s							
CFA	**Coronel Fontan**	**2.37**	**331**	*eP*		**Pn**	**23 11 19.9**	**+0.6**
CFA				*eS*		**Sg**	**23 11 56.0**	**-1.0**
ACHE	**Chepes**	**2.52**	**4**	*eP*		**Pb**	**23 11 24.1**	**-2.0**
ZON	**Zonda**	**2.62**	**324**			**Pn**	**23 11 23.3**	**+0.5**
ZON	**Zonda**	**2.62**	**324**	P		**Pn**	**23 11 23.3**	**+0.5**
ZON	**Zonda**	**2.62**	**324**	*eP*		**Pn**	**23 11 22.9**	**+0.1**
ZON				IAML			23 12 15.1	
	comp=Z,15μm,0.8s							
RTLL	**Cerro Villicun**	**2.71**	**330**	*iP*		**Pn**	**23 11 25.1**	**+1.0**
RTLL	**Cerro Villicun**	**2.71**	**330**	*eP*		**Pn**	**23 11 25.0**	**+1.0**
RTLL				IAML			23 12 14.9	
	comp=Z,25μm,0.5s							
MT04	**Ro Olivares**	**2.73**	**275**	↓*iP*		**Pn**	**23 11 24.6**	**0.0**
MT04				*i* S		**Sn**	**23 11 57.7**	**+0.2**
MT04	**Ro Olivares**	**2.73**	**275**	*eP*		**Pn**	**23 11 24.6**	**0.0**
MT04				IAML			23 12 10.4	
	comp=Z,13μm,1.1s							
RTLS	**Leoncito**	**2.77**	**312**	*eP*		**Pn**	**23 11 26.0**	**+0.8**
RTLS				*eS*		**Sg**	**23 12 13.2**	**+3.1**
RTLS				IAML			23 12 16.8	
	comp=Z,47μm,1.4s							
LMEL	**Las Melosas**	**2.77**	**266**	Pn		**Pn**	**23 11 25.1**	**+0.1**
LMEL	**Las Melosas**	**2.77**	**266**	↓*iP*		**Pn**	**23 11 25.2**	**+0.1**
LMEL				*i* S		**Sn**	**23 11 57.1**	**-1.3**
LMEL	**Las Melosas**	**2.77**	**266**	*eP*		**Pn**	**23 11 25.7**	**+0.6**
LMEL				*eS*		**Sb**	**23 12 04.1**	**-0.2**
MT13	**San Alfonso**	**2.84**	**268**	Pn		**Pn**	**23 11 25.9**	**0.0**
MT13	**San Alfonso**	**2.84**	**268**	↓*iP*		**Pn**	**23 11 26.1**	**+0.1**
MT13				*i* S		**Sn**	**23 12 00.3**	**+0.3**
MT13	**San Alfonso**	**2.84**	**268**	*eP*		**Pn**	**23 11 26.3**	**+0.3**
MT13				*eS*		**Sg**	**23 12 12.8**	**+0.5**
MT13				IAML			23 12 25.6	
	comp=Z,12μm,1.3s							
EDS3	**Malargue**	**2.94**	**224**	*eP*		**Pn**	**23 11 27.4**	**+0.1**
MT15	**Las Vizcachas**	**3.03**	**271**	↓*iP*		**Pn**	**23 11 29.0**	**+0.6**
MT15				*i* S		**Sn**	**23 12 05.1**	**+0.7**
MT15				IAML			23 12 20.7	
	comp=N,28μm,0.8s							
TCA	**Tanti**	**3.03**	**40**	*iP*		**Pn**	**23 11 30.8**	**+2.3**
TCA				*i* S		**Sb**	**23 12 08.8**	**-2.7**
TCA	**Tanti**	**3.03**	**40**	*eP*		**Pn**	**23 11 30.6**	**+2.1**
TCA				*eS*		**Sg**	**23 12 18.7**	**+0.3**
TCA				IAML			23 12 24.5	
	comp=Z,58μm,1.4s							
MT03	**Universidad Ad**	**3.04**	**273**	Pn		**Pn**	**23 11 28.8**	**+0.2**
MT03	**Universidad Ad**	**3.04**	**273**	*iP*		**Pn**	**23 11 29.2**	**+0.6**
MT03				*i* S		**Sn**	**23 12 05.4**	**+0.6**
MT03	**Universidad Ad**	**3.04**	**273**	*eP*		**Pn**	**23 11 29.5**	**+0.9**
MT03				*eS*		**Sb**	**23 12 14.3**	**+2.5**
MT03				IAML			23 12 19.9	
	comp=Z,25μm,0.9s							
MT16	**CCHEN**	**3.05**	**274**	Pn		**Pn**	**23 11 29.5**	**+0.7**
MT16	**CCHEN**	**3.05**	**274**	↓*iP*		**Pn**	**23 11 29.5**	**+0.7**
MT16				*i* S		**Sn**	**23 12 05.6**	**+0.5**
MT16				IAML			23 12 21.6	
	comp=N,11μm,0.5s							
MT12	**Pirque**	**3.06**	**268**	↓*iP*		**Pn**	**23 11 29.5**	**+0.6**
MT12				*i* S		**Sn**	**23 12 06.6**	**+1.3**
MT14	**Cerro Cal¡n**	**3.07**	**274**	↓*iP*		**Pn**	**23 11 29.8**	**+0.8**
MT14				*i* S		**Sn**	**23 12 06.2**	**+0.7**
MT14				IAML			23 12 26.9	
	comp=E,25μm,0.5s							
MT10	**Hacienda Santa**	**3.08**	**277**	*iP*		**Pn**	**23 11 29.7**	**+0.4**
MT10				*i* S		**Sn**	**23 12 04.5**	**-1.5**
MT10				IAML			23 12 18.2	
	comp=N,36μm,0.6s							
BO04	**La Punta**	**3.12**	**263**	Pn		**Pn**	**23 11 30.3**	**+0.6**
BO04	**La Punta**	**3.12**	**263**	*iP*		**Pn**	**23 11 30.6**	**+0.8**
BO04				*i* S		**Sn**	**23 12 06.9**	**+0.2**
VA03	**San Esteban**	**3.21**	**286**	Pn		**Pn**	**23 11 31.8**	**+0.8**
VA03	**San Esteban**	**3.21**	**286**	*iP*		**Pn**	**23 11 32.4**	**+1.4**
VA03				*i* S		**Sn**	**23 12 10.9**	**+1.8**
VA03				IAML			23 12 20.2	
	comp=N,30μm,0.7s							
VA03	**San Esteban**	**3.21**	**286**	*eP*		**Pn**	**23 11 32.2**	**+1.2**
VA03				*eS*		**Sb**	**23 12 18.8**	**+2.0**
VA03				IAML			23 12 24.8	
	comp=Z,32μm,1.0s							
PEL	**Peldehue**	**3.23**	**279**	Pn		**Pn**	**23 11 31.6**	**+0.4**
PEL	**Peldehue**	**3.23**	**279**	P		**Pn**	**23 11 31.6**	**+0.4**
PEL	**Peldehue**	**3.23**	**279**	↓*iP*		**Pn**	**23 11 31.9**	**+0.8**
PEL				*i* S		**Sn**	**23 12 10.6**	**+1.1**
PEL				IAML			23 12 23.9	
	comp=N,9μm,0.5s							
PEL	**Peldehue**	**3.23**	**279**	P		**Pn**	**23 11 32.0**	**+0.8**
PEL				S		**Sb**	**23 12 14.2**	**-3.0**
MT05	**Renca**	**3.24**	**274**	Pn		**Pn**	**23 11 32.0**	**+0.7**
MT05	**Renca**	**3.24**	**274**	↓*iP*		**Pn**	**23 11 32.0**	**+0.7**
MT05				*i* S		**Sn**	**23 12 10.8**	**+1.1**
MT05	**Renca**	**3.24**	**274**	*eP*		**Pn**	**23 11 32.4**	**+1.1**
MT05				IAML			23 12 25.7	
	comp=Z,12μm,1.7s							
APLL	**PUNTA DE LOS L**	**3.29**	**5**	*eP*		**Pn**	**23 11 34.3**	**+2.3**
APLL				*eS*		**Sg**	**23 12 24.5**	**-2.2**
APLL				IAML			23 12 29.9	
	comp=Z,20μm,0.9s							
BO02	**Sierra Bellavi**	**3.42**	**250**	Pn		**Pn**	**23 11 34.0**	**+0.1**
BO02	**Sierra Bellavi**	**3.42**	**250**	↑*eP*		**Pn**	**23 11 34.0**	**+0.1**
BO02	**Sierra Bellavi**	**3.42**	**250**	*eS*		**Sg**	**23 12 26.6**	**-4.2**
MT09	**Talagante**	**3.43**	**267**	Pn		**Pn**	**23 11 34.2**	**+0.2**
MT09	**Talagante**	**3.43**	**267**	↓*iP*		**Pn**	**23 11 34.2**	**+0.2**
MT09				*i* S		**Sn**	**23 12 14.5**	**0.0**
ROCH	**El Roble**	**3.53**	**280**	↓*iP*		**Pn**	**23 11 36.1**	**+0.5**
ROCH				↓*eP*		Pb	23 11 36.1	-7.2
ROCH				*i* S		**Sn**	**23 12 19.5**	**+2.3**
BO01	**Tunca**	**3.56**	**257**	Pn		**Pn**	**23 11 35.9**	**+0.2**
BO01	**Tunca**	**3.56**	**257**	↓*eP*		**Pn**	**23 11 36.1**	**+0.3**
BO01	**Tunca**	**3.56**	**257**	*eP*		**Pn**	**23 11 36.0**	**+0.2**
MT02	**Curacav**	**3.58**	**276**	Pn		**Pn**	**23 11 36.0**	**0.0**
MT02	**Curacav**	**3.58**	**276**	*iP*		**Pn**	**23 11 36.3**	**+0.3**
MT02				*i* S		**Sn**	**23 12 18.8**	**+0.6**
MT01	**Popeta**	**3.65**	**266**	Pn		**Pn**	**23 11 36.9**	**0.0**
MT01	**Popeta**	**3.65**	**266**	↓*iP*		**Pn**	**23 11 37.2**	**+0.3**
MT01				*i* S		**Sn**	**23 12 20.3**	**+0.6**
MT01				IAML			23 12 41.0	
	comp=N,7μm,0.8s							
CO04	**Los Peladeros**	**3.81**	**294**	*iP*		**Pn**	**23 11 40.3**	**+0.9**
CO04				*i* S		**Sn**	**23 12 25.7**	**+1.5**
VA06	**Catapilco**	**3.87**	**286**	Pn		**Pn**	**23 11 39.9**	**-0.1**
VA06	**Catapilco**	**3.87**	**286**	↓*iP*		**Pn**	**23 11 40.0**	**+0.1**
VA06				*eS*		**Sn**	**23 12 28.8**	**+0.6**
VA05	**Santo Domingo**	**3.95**	**269**	Pn		**Pn**	**23 11 40.7**	**-0.4**
VA01	**Torpederas**	**4.04**	**278**	Pn		**Pn**	**23 11 42.1**	**-0.3**
VA01	**Torpederas**	**4.04**	**278**	*eP*		**Pn**	**23 11 42.6**	**+0.2**
VA01				*eS*		**Sn**	**23 12 29.6**	**+0.1**
CO02	**Combarbal**	**4.27**	**304**	Pn		**Pn**	**23 11 46.7**	**+1.1**
CO02	**Combarbal**	**4.27**	**304**	↓*iP*		**Pn**	**23 11 46.9**	**+1.3**
CO02				*i* S		**Sn**	**23 12 36.8**	**+1.5**
CO02	**Combarbal**	**4.27**	**304**	*eP*		**Pn**	**23 11 46.7**	**+1.1**
ML02	**Panimavida**	**4.28**	**240**	Pn		**Pn**	**23 11 45.9**	**+0.4**
ML02	**Panimavida**	**4.28**	**240**	*eP*		**Pn**	**23 11 45.6**	**+0.1**
CO03	**El Pedregal**	**4.29**	**310**	Pn		**Pn**	**23 11 47.5**	**+1.6**
CO03	**El Pedregal**	**4.29**	**310**	↓*iP*		**Pn**	**23 11 47.8**	**+1.9**
CO03				*eS*		**Sn**	**23 12 36.1**	**+0.2**
CO03	**El Pedregal**	**4.29**	**310**	P		**Pn**	**23 11 48.1**	**+2.2**
BO03	**Pichilemu**	**4.30**	**258**	↓*eP*		**Pn**	**23 11 45.9**	**+0.1**
GO05	**Hualane**	**4.38**	**251**	*iP*		**Pn**	**23 11 46.7**	**-0.3**
GO05	**Hualane**	**4.38**	**251**	IAML			23 13 06.5	
	comp=Z,5μm,3.0s							
AGUA	**GUANDACOL**	**4.40**	**341**	*eP*		**Pn**	**23 11 49.5**	**+2.1**
AGUA				IAML			23 13 32.6	
	comp=Z,21μm,1.7s							
CO01	**Juntas del Tor**	**4.60**	**323**	Pn		**Pn**	**23 11 52.5**	**+2.3**
CO01	**Juntas del Tor**	**4.60**	**323**	*iP*		**Pn**	**23 11 52.6**	**+2.5**
BI02	**San Fabin de**	**4.67**	**229**	Pn		**Pn**	**23 11 50.9**	**-0.1**
BI02	**San Fabin de**	**4.67**	**229**	↑*eP*		**Pn**	**23 11 51.2**	**+0.2**
GO04	**Tololo Observa**	**4.83**	**315**	*eP*		**Pn**	**23 11 54.1**	**+0.7**
CO06	**Fray Jorge**	**5.03**	**305**	Pn		**Pn**	**23 11 55.5**	**-0.4**
CO06	**Fray Jorge**	**5.03**	**305**	*iP*		**Pn**	**23 11 55.5**	**-0.4**
CO06				*i* S		**Sn**	**23 12 54.6**	**+0.9**
CO05	**La Serena**	**5.28**	**314**	*iP*		**Pn**	**23 11 59.1**	**-0.2**
LCO	**Las Campanas**	**5.69**	**324**	Pn		**Pn**	**23 12 05.9**	**+0.7**
LCO	**Las Campanas**	**5.69**	**324**	P		**Pn**	**23 12 05.9**	**+0.7**
LCO	**Las Campanas**	**5.69**	**324**	↓*iP*		**Pn**	**23 12 05.9**	**+0.7**
LCO	**Las Campanas**	**5.69**	**324**	P		**Pn**	**23 12 07.1**	**+1.9**
TRQA	**Tornquist**	**5.91**	**139**			**Pn**	**23 12 09.4**	**+1.4**
TRQA	**Tornquist**	**5.91**	**139**	P		**Pn**	**23 12 09.4**	**+1.4**
BI05	**Punta Hualpn**	**6.00**	**238**	Pn		**Pn**	**23 12 10.2**	**+0.9**
BI05	**Punta Hualpn**	**6.00**	**238**	*eP*		**Pn**	**23 12 10.7**	**+1.5**
AC06	**Mina Casimiro**	**6.98**	**334**	Pn		**Pn**	**23 12 22.9**	**+0.1**
PLCA	**Paso Flores**	**7.62**	**202**	Pn		**Pn**	**23 12 32.6**	**+1.0**
	comp=Z,6.7nm,0.3s,baz=26,slow=10,SNR=86							
PLCA				Pg		Pg	23 13 00.8	-6.1
	comp=Z,26nm,0.3s,baz=22,slow=15,SNR=11							
PLCA				Lg		Lg	23 14 34.4	
	comp=Z,56nm,0.3s,baz=119,slow=19,SNR=6.2							
PLCA				LR		LR	23 16 02.7	
	comp=Z,31μm,21.6s,baz=25,slow=42 comp=Z,18nm,0.4s							
PLCA	**Paso Flores**	**7.62**	**202**	Pn		**Pn**	**23 12 32.5**	**+1.0**
PLCA	**Paso Flores**	**7.62**	**202**	*eP*		**Pn**	**23 12 33.5**	**+1.9**
PLCA	**Paso Flores**	**7.62**	**202**	*eP*		**Pn**	**23 12 32.5**	**+1.0**
AC01	**Pan de Azucar**	**8.17**	**336**	Pn		**Pn**	**23 12 40.3**	**+1.2**
AC01	**Pan de Azucar**	**8.17**	**336**	P		**Pn**	**23 12 42.8**	**+3.7**
PSAL	**Palomas, Salto**	**8.26**	**74**	*eP*		**Pn**	**23 12 41.2**	**+1.0**
PB14	**IPOC Station P**	**9.53**	**340**	S		**Sn**	**23 14 44.0**	**-1.1**
PB14				P		**Pn**	**23 12 58.2**	**+0.1**
VA04	**Juan Fernndez**	**9.96**	**267**	Pn		**Pn**	**23 13 03.4**	**-0.2**
LL02	**Futaleuf**	**10.26**	**201**	Pn		**Pn**	**23 13 10.0**	**+2.3**
CPUP	**Villa Florida**	**11.05**	**51**	Pn		**Pn**	**23 13 17.8**	**-0.7**
	comp=Z,3.2nm,0.3s,baz=88,slow=12,SNR=115							
CPUP				Pg			23 13 58.9	
	comp=Z,5.1nm,0.3s,baz=118,slow=14,SNR=6.6							
CPUP				Lg		Lg	23 16 28.8	
	comp=Z,6.7nm,0.3s,baz=135,slow=8.9,SNR=5.0 comp=Z,32nm,0.9s							
CPUP	**Villa Florida**	**11.05**	**51**	Pn		**Pn**	**23 13 17.3**	**-1.2**
I41PY	**VILLA FLORIDA** baz=231,slow=25	**11.05**	**51**	Lg		Lg	23 16 28.3	
PLTB	**Pedras Altas**	**11.34**	**84**	Pn		**Pn**	**23 13 21.7**	**-0.9**
PLTB	**Pedras Altas**	**11.34**	**84**	*eP*		**Pn**	**23 13 21.4**	**-1.2**
AY01	**Puyuhuapi**	**11.62**	**201**	Pn		**Pn**	**23 13 27.3**	**+1.1**
CPSB	**Cacapava Do Su**	**11.86**	**78**	*eP*		**Pn**	**23 13 28.9**	**-0.8**
PB03	**IPOC Station P**	**11.86**	**347**	Pn		**Pn**	**23 13 28.1**	**-1.8**
PB07	**IPOC Station P**	**12.20**	**347**	Pn		**Pn**	**23 13 32.7**	**-1.8**
COYC	**Coyhaique**	**12.53**	**197**	Pn		**Pn**	**23 13 40.8**	**+2.1**
TA01	**Diego Aracena**	**13.39**	**347**	Pn		**Pn**	**23 13 49.5**	**-1.0**
PB08	**IPOC Station P**	**13.64**	**351**	P		**Pn**	**23 13 53.7**	**-0.5**
PB11	**IPOC Station P**	**14.08**	**349**	Pn		**Pn**	**23 13 56.9**	**-3.3**
AY03	**Cochrane**	**14.23**	**196**	Pn		**Pn**	**23 14 03.0**	**+1.1**
ITAB	**Concordia**	**14.24**	**67**	Pn		**Pn**	**23 14 00.3**	**-1.9**
ITAB	**Concordia**	**14.24**	**67**	*eP*		**Pn**	**23 13 59.7**	**-2.5**
CNLB	**Canela**	**14.35**	**77**	*eP*		**Pn**	**23 14 01.2**	**-2.4**
AMBA	**Amambai (Brazi**	**14.97**	**47**	*eP*		**Pn**	**23 14 11.8**	**-0.3**
PB12	**IPOC Station P**	**15.32**	**348**	Pn		**Pn**	**23 14 13.3**	**-3.6**
PB12				IAmb		IAmb	23 14 24.3	
	comp=Z,1μm,1.7s							
PTGB	**Pitanga**	**15.71**	**59**	*eP*		**Pn**	**23 14 21.1**	**-0.7**
BDQN	**Bodoquena, MS**	**15.96**	**37**	*eP*		**Pn**	**23 14 24.6**	**-0.5**
LPAZ	**La Paz**	**17.36**	**356**	Pn		**P**	**23 14 44.0**	**-0.8**
	comp=Z,3.2nm,0.3s,baz=167,slow=8.5,SNR=67							
LPAZ				Sn		**Sn**	**23 18 00.2**	**+3.7**
	comp=Z,0.2nm,0.3s,baz=190,slow=13,SNR=1.6							
LPAZ				Lg		Lg	23 19 45.6	
	comp=Z,0.2nm,0.3s,baz=156,slow=20,SNR=0.8							
LP

OTAV Otavalo 35.45 340 *e*P P 23 17 36.9 -0.4
OTAV Otavalo 35.45 340 P P 23 17 39.0 +1.7
comp=Z,3µmcomp=Z,1µmcomp=Z,56nm,0.9s
CUSE Cuicocha Este 35.50 340 P P 23 17 40.0 +2.2
PAC1 Pacto, Paraso 35.58 339 P P 23 17 39.3 +1.2
comp=Z,2µmcomp=Z,148nm,0.9s
TULM Tulcn-Chalpat 35.72 341 P P 23 17 41.7 +2.0
comp=Z,2µmcomp=Z,132nm,0.9s
TMAB Tom-Au,PA,Br 35.76 33 *e*P P 23 17 40.0 +0.4
CMBC Cumbal 35.95 341 P P 23 17 45.3 +3.7
FLOC Florencia 36.04 345 IAmb IAmb 23 17 49.3
comp=Z,187nm,1.0s
FLOC Florencia 36.04 345 P P 23 17 42.5 +0.7
FLOC Florencia 36.04 345 P P 23 17 42.7 +0.8
comp=Z,4µmcomp=Z,2µmcomp=Z,217nm,1.1s
GCUF Volcan Galeras 36.09 342 P P 23 17 44.8 +1.9
comp=Z,1µmcomp=Z,100nm,0.9s
BOAV Boa Vista 36.38 11 P P 23 17 44.4 -0.4
BOAV Boa Vista 36.38 11 *e*P P 23 17 44.5 -0.3
BOAV Boa Vista 36.38 11 P P 23 17 44.5 -0.3
comp=Z,3µmcomp=Z,4µmcomp=Z,278nm,1.8s
GARC Garzon, Huila 36.59 345 P P 23 17 47.9 +1.0
comp=Z,3µmcomp=Z,175nm,0.8s
BBAC Balboa, Cauca 36.83 343 P P 23 17 49.8 +0.9
comp=Z,2µmcomp=Z,111nm,1.2s
NBAN Anadia - AL 36.89 57 *e*P P 23 17 48.4 -0.8
RPN Rapa Nui 37.00 269 LR LR 23 29 26.4
comp=Z,7µm,19.0s,baz=112,slow=30
RPN Rapa Nui 37.00 269 IAMs_20 IAMs_20 23 29 24.5
comp=Z,9µm,18.0s
TUMC Tumaco 37.04 340 P P 23 17 53.6 +3.2
BETC Betania 37.06 346 P P 23 17 53.0 +2.4
VA02 Isla de Pascua 37.07 268 IAMs_20 IAMs_20 23 29 44.3
comp=Z,9µm,18.0s
POPC Popayan, Colom 37.19 344 P P 23 17 52.5 +0.5
comp=Z,5µmcomp=Z,2µmcomp=Z,104nm,1.3s
URMC La Uribe, Meta 37.41 348 P P 23 17 53.7 +0.1
comp=Z,2µmcomp=Z,124nm,0.8s
JAMC Jamundi, Valle 37.84 344 P P 23 17 57.8 +0.3
comp=Z,4µmcomp=Z,1µmcomp=Z,60nm,1.0s
PRAC Prado 37.95 347 P P 23 17 58.0 -0.2
PRAC Prado 37.95 347 P P 23 17 58.6 +0.4
comp=Z,2µmcomp=Z,102nm,0.9s
PTGC Puerto Gaitan, 38.00 351 P P 23 17 57.3 -1.3
comp=Z,3µmcomp=Z,171nm,0.9s
VILC Villavicencio, 38.14 349 P P 23 18 00.9 +1.1
comp=Z,899nmcomp=Z,126nm,0.7s
ORTC Ortega, Tolima 38.21 346 P P 23 18 01.0 +0.6
comp=Z,4µmcomp=Z,3µmcomp=Z,196nm,1.1s
YOTC Yotoco, Valle 38.52 345 P P 23 18 02.5 -0.5
comp=Z,4µmcomp=Z,2µmcomp=Z,121nm,0.8s
CVER Cruz Verde, Cu 38.60 348 P P 23 18 05.1 +1.0
comp=Z,3µmcomp=Z,110nm,2.2s
CHIC Chingaza 38.65 349 P P 23 18 04.3 -0.2
comp=Z,2µmcomp=Z,117nm,1.0s
ROSC El Rosal 38.95 348 P P 23 18 08.3 +1.3
comp=Z,9.7nm,0.4s,baz=128,slow=4.9,SNR=16
ROSC S S 23 24 06.0 +0.5
comp=Z,3.9nm,0.4s,baz=114,slow=20,SNR=1.3
ROSC LR LR 23 34 26.8
comp=Z,11µm,20.8s,baz=191,slow=37
comp=Z,9.7nm,0.4s
ROSC El Rosal 38.95 348 P P 23 18 07.2 +0.2
ROSC El Rosal 38.95 348 P P 23 18 07.2 +0.2
ROSC pmax pmax
comp=Z,76nm,1.1s
ROSC El Rosal 38.95 348 P P 23 18 08.6 +1.6
comp=Z,2µmcomp=Z,58nm,2.0s
GUY2C Guyana, Caldas 39.52 347 P P 23 18 11.5 -0.3
comp=Z,3µmcomp=Z,3µmcomp=Z,159nm,0.8s
SPBC San Pablo de B 39.71 349 P P 23 18 12.3 -0.7
comp=Z,2µmcomp=Z,2µmcomp=Z,85nm,1.2s
NORC Norcasia 39.76 348 P P 23 18 12.5 -0.8
comp=Z,3µmcomp=Z,2µmcomp=Z,85nm,1.1s
RUSC La Rusia 39.79 350 P P 23 18 14.0 -0.1
RUSC La Rusia 39.79 350 P P 23 18 13.6 -0.5
comp=Z,4µmcomp=Z,4µmcomp=Z,407nm,0.8s
RCBR Riachuelo 39.92 53 P P 23 18 15.2 +0.5
RCBR IAmb IAmb 23 18 17.1
comp=Z,525nm,1.8s
RCBR Riachuelo 39.92 53 IAMs_20 IAMs_20 23 35 04.2
comp=Z,9µm,21.0s
RCBR Riachuelo 39.92 53 P P 23 18 15.3 +0.5
RCBR pmax pmax
comp=Z,525nm,1.8s
RCBR MLR MLR
comp=Z,9µm,21.0s
RCBR Riachuelo 39.92 53 P P 23 18 15.1 +0.4
RCBR Riachuelo 39.92 53 *e*P P 23 18 14.8 +0.1
CBOC Ciudad Bolivar 40.27 346 P P 23 18 17.8 +0.1
comp=Z,3µmcomp=Z,311nm,0.9s
HELC Santa Helena 40.49 347 P P 23 18 19.3 -0.5
HELC Santa Helena 40.49 347 P P 23 18 18.9 -0.9
BARC Barichara 40.50 350 P P 23 18 18.7 -1.0
comp=Z,105nm,0.7s
PTBC PUERTO BERRIO, 40.64 348 P P 23 18 17.8 -2.8
MDP Montagnes des 40.86 22 P P 23 18 22.7 +0.3
comp=Z,99nm,0.8s,baz=198,slow=10,SNR=54
MDP LR LR 23 35 57.5
comp=Z,6µm,20.5s,baz=194,slow=37
comp=Z,99nm,0.8s
PAMC Pamplona, Colo 41.17 351 P P 23 18 24.9 -0.6
DBBC Dabeiba 41.43 346 P P 23 18 28.5 +1.3
BAUV El Baul 42.40 358 *e*P P 23 18 33.4 -1.6
SDV Santo Domingo 42.48 355 P P 23 18 35.5 -0.4
comp=Z,62nm,1.0s,baz=182,slow=7.2,SNR=50
SDV S S 23 24 52.4 -5.3
comp=Z,1.6nm,0.3s,baz=158,slow=4.7,SNR=1.4
SDV LR LR 23 37 26.4
comp=Z,6µm,18.1s,baz=182,slow=38
comp=Z,62nm,1.0s
SDV Santo Domingo 42.48 355 P P 23 18 34.5 -1.4
SDV IAMs_20 IAMs_20 23 39 24.7
comp=Z,6µm,18.0s
SDV Santo Domingo 42.48 355 *e*P P 23 18 34.3 -1.6
PCRV Puerto La Cruz 43.66 3 *e*P P 23 18 44.5 -0.8
SJCC San Jacinto, C 44.05 348 P P 23 18 48.2 -0.2
TRN Trinidad (W) 44.39 8 *e*P P 23 18 51.3 +0.2
SMRC Santa Marta, M 45.14 350 P P 23 18 54.9 -2.2
SMRC IAmb IAmb 23 19 02.1
comp=Z,122nm,1.1s
GRGR Grenville 45.83 7 IAMs_20 IAMs_20 23 38 40.4
comp=Z,5µm,18.0s
GRGR Grenville 45.83 7 *e*P P 23 19 02.1 -0.4
GRW Mount Saint Ca 45.85 7 *e*P P 23 19 03.4 +0.7
GRHS Sauteurs 45.92 7 *e*P P 23 19 03.1 -0.1
GRSS Sisters 46.00 7 *e*P P 23 19 03.1 -0.7
GCMP Grenada, Carri 46.20 7 *e*P P 23 19 03.8 -1.6
HDC Heredia 46.43 336 P P 23 19 07.7 +0.3
HDC Heredia 46.43 336 *e*P P 23 19 07.7 +0.3
BELA Belgrano 2 46.48 171 P P 23 19 08.0 +0.9
BELA IAmb IAmb 23 19 46.3
comp=Z,128nm,1.8s
JTS Las Juntas de 46.99 335 P P 23 19 12.3 +0.7
JTS IAmb IAmb 23 19 19.3
comp=Z,119nm,1.5s
JTS Las Juntas de 46.99 335 *i*P P 23 19 11.7 0.0
JTS pmax pmax
comp=Z,28nm,1.0s
SVB Belmont 47.00 8 *e*P P 23 19 10.5 -1.1
BBGH Gun Hill 47.08 10 *e*P P 23 19 16.5 +4.2
MCLT Moule a Chique 47.46 8 *e*P P 23 19 15.4 +0.1
SLAC Saint Lucia, A 47.65 8 *e*P P 23 19 16.0 -0.7
SLBI Saint Lucia, B 47.77 8 *e*P P 23 19 16.6 -1.0
VNA3 Neumayer Olymp 48.06 159 ⇑P P 23 19 19.2 -0.2
comp=Z,54nm,0.7s
MPOM Morne Pois Mar 48.20 8 IAMs_20 IAMs_20 23 39 00.3
comp=Z,5µm,20.0s
BIM Bigot 48.25 8 P P 23 19 19.7 -1.7
BIM IAMs_20 IAMs_20 23 40 46.5
comp=Z,4µm,19.0s
BIM Bigot 48.25 8 *e*P P 23 19 20.4 -1.0
VNA1 Neumayer--Stat 48.30 158 ⇑P P 23 19 21.5 +0.3
comp=Z,50nm,1.0s
ILAM Ilet Lapin Mar 48.52 8 IAMs_20 IAMs_20 23 41 02.8
comp=Z,5µm,20.0s
ILAM Ilet Lapin Mar 48.52 8 *e*P P 23 19 22.3 -1.2
SVN Savane Anatole 48.56 7 IAMs_20 IAMs_20 23 40 55.7
comp=Z,5µm,18.0s
SVN Savane Anatole 48.56 7 *e*P P 23 19 22.8 -1.0
VNA2 Neumayer--Watz 48.66 158 ⇑P P 23 19 23.7 -0.3
comp=Z,32nm,0.6s,baz=292,slow=9.1
DLPL La Plaine 49.03 7 *e*P P 23 19 26.0 -1.4
DSLB Salisbury 49.12 7 *e*P P 23 19 26.7 -1.4
DWS Wesley 49.26 7 *e*P P 23 19 28.2 -0.9
TDBA Terre de Bas, 49.51 7 P P 23 19 29.5 -1.5

TBG Guadaloupe-3 49.51 7 *e*P P 23 19 29.7 -1.3
MAGL Barre de l'Ile 49.64 7 IAMs_20 IAMs_20 23 42 18.4
comp=Z,3µm,20.0s
MMLZ Guadeloupe Bro 49.70 7 *e*P P 23 19 32.0 -0.4
CBE Ff, Capester 49.73 7 IAMs_20 IAMs_20 23 42 31.6
comp=Z,4µm,19.0s
DHSZ Broadband at M 49.91 6 *e*P P 23 19 33.5 -0.5
GDHS Morne Mazeau, 49.91 6 IAmb IAmb 23 19 40.4
comp=Z,100nm,0.9s
DSDZ La Diserade, G 50.02 7 *e*P P 23 19 33.2 -1.7
GDSD La Dsirade Is 50.02 7 IAmb IAmb 23 19 41.6
comp=Z,185nm,1.3s
ABD La Joyeuse, An 50.14 7 IAMs_20 IAMs_20 23 42 44.6
comp=Z,4µm,19.0s
SNAA Sanae 50.27 158 ⇑P P 23 19 35.9 -0.5
comp=Z,642nm,0.8s
SNAA ⇑S S 23 26 45.8 -2.3
SNAA Sanae 50.27 158 P P 23 19 36.0 -0.4
comp=Z,13nm,0.7s,baz=285,slow=6.6,SNR=43
SNAA S S 23 26 43.7 -4.4
comp=Z,5.9nm,1.2s,baz=319,slow=12,SNR=1.9
SNAA LR LR 23 39 54.7
comp=Z,2µm,20.2s,baz=311,slow=35
comp=Z,13nm,0.7s
SNAA Sanae 50.27 158 P P 23 19 36.0 -0.4
SNAA IAmb IAmb 23 19 44.7
comp=Z,95nm,1.3s
SNAA Sanae 50.27 158 *c*e P P 23 19 35.8 -0.5
SNAA pmax pmax
comp=Z,34nm,1.3s
MLYT Lee's Yard 50.32 6 *e*P P 23 19 33.7 -3.5
SABA Saba 51.13 4 IAmb IAmb 23 19 50.1
comp=Z,213nm,1.2s
ANWB Willy Bob 51.29 6 IAMs_20 IAMs_20 23 43 37.2
comp=Z,4µm,20.0s
ANWB Willy Bob 51.29 6 *e*P P 23 19 42.8 -1.7
TGUH Tegucigalpa,Un 51.30 334 P P 23 19 43.5 -1.2
TGUH IAmb IAmb 23 19 53.2
comp=Z,124nm,0.8s
SJG San Juan 51.51 1 LR LR 23 44 34.6
comp=Z,6µm,18.8s,baz=178,slow=40
SJG San Juan 51.51 1 P P 23 19 44.0 -2.1
SJG San Juan 51.51 1 P P 23 19 44.0 -2.1
SJG pmax pmax
comp=Z,353nm,1.4s
SJG San Juan 51.51 1 *e*P P 23 19 44.3 -1.8
HUMP Col San Antoni 51.54 1 IAmb IAmb 23 19 46.6
comp=Z,174nm,1.4s
AOPR Arecibo Observ 51.74 0 *e*P P 23 19 45.9 -1.9
SDD Santo Domingo 51.93 356 IAmb IAmb 23 19 50.2
comp=Z,139nm,1.1s
TROLL Troll, Antarti 51.99 158 ⇑P P 23 19 49.5 +0.1
comp=Z,2µm,0.7s
TROLL ⇑S S 23 27 09.2 -2.8
MTO3 Montecristo 52.40 332 P P 23 19 51.9 -1.2
MTO3 IAmb IAmb 23 19 54.8
comp=Z,195nm,1.7s
SDDR Presa de Saban 52.54 355 IAMs_20 IAMs_20 23 44 02.2
comp=Z,4µm,19.0s
ASCN Ascension 54.67 74 P P 23 20 09.7 +0.1
PETF Flores 54.89 333 P P 23 20 09.5 -1.5
PETF IAmb IAmb 23 20 17.5
comp=Z,113nm,1.0s
NVL N'lazarevskaya 54.91 157 *e*P P 23 20 15.8 +5.2
NVL *e* 23 22 20.7
NVL *e*PPP PPP 23 23 34.7
NVL *e*S S 23 28 04.5 +13
NVL MLR MLR
comp=Z,94nm,17.0s
GRTK Grand Turk 55.03 355 IAMs_20 IAMs_20 23 45 39.4
comp=Z,3µm,19.0s
CCIG Comitan 55.22 330 P P 23 20 11.0 -2.7
QSPA South Pole Qui 56.56 180 P P 23 20 24.9 +2.2
comp=Z,25nm,0.8s,baz=153,slow=2.8,SNR=67
QSPA S S 23 28 14.1 +0.4
comp=Z,2.0nm,0.9s,baz=84,slow=7.9,SNR=1.1
QSPA LR LR 23 43 17.5
comp=Z,2µm,19.5s,baz=164,slow=35
QSPA PKPPKP P'P'df 23 50 17.3 -7.7
comp=Z,0.9nm,0.7s,baz=313,slow=2.0,SNR=3.9
comp=Z,25nm,0.8s
QSPA South Pole Qui 56.56 180 P P 23 20 25.6 +2.9
QSPA IAmb IAmb 23 20 33.3
comp=Z,129nm,1.1s
TEIG Tepich 57.36 336 P P 23 20 27.3 -1.3
SHEL Horse Pasture 57.45 88 IAMs_20 IAMs_20 23 43 13.0
comp=Z,3µm,18.0s
SOR Soroa 58.22 342 IAmb IAmb 23 20 35.7
comp=Z,209nm,1.7s
ELIB Princess Elisa 58.44 159 *d*P P 23 20 35.6 -0.2
ELIB *d*S S 23 28 36.2 -1.9
UNM Universidad Na 61.05 325 IAMs_20 IAMs_20 23 43 20.3
comp=Z,3µm,18.0s
MOIG Morelia 62.34 323 P P 23 21 03.6 +0.3
656A Willston 64.44 345 IAmb IAmb 23 22 05.9
comp=Z,115nm,1.2s
SYO Syowa Base 64.55 158 ⇑*i*P P 23 21 16.1 -0.9
SYO Syowa Base 64.55 158 ⇑*i*sP sP 23 21 21.4 -2.4
VNDA Vanda 65.22 190 P P 23 21 22.1 +0.9
comp=Z,5.1nm,0.9s,baz=102,slow=4.4,SNR=9.9
VNDA S S 23 30 02.6 -0.9
comp=Z,0.7nm,0.9s,baz=164,slow=5.4,SNR=1.5
VNDA LR LR 23 46 57.0
comp=Z,3µm,20.6s,baz=139,slow=33
comp=Z,5.1nm,0.9s
VNDA Vanda 65.22 190 P P 23 21 22.4 +1.1
VNDA Vanda 65.22 190 P P 23 21 22.4 +1.1
VNDA pmax pmax
comp=Z,68nm,1.8s
ZAIG Zacatecas 65.63 324 IAmb IAmb 23 21 27.9
comp=Z,104nm,1.8s
456A Hilliard 65.64 346 IAMs_20 IAMs_20 23 54 00.2
comp=Z,2µm,19.0s
553A Crawfordville 65.66 343 P P 23 21 24.0 -0.6
BBSR BB Station 65.73 2 P P 23 21 25.3 +0.4
257A Skidaway Islan 66.65 347 IAMs_20 IAMs_20 23 52 36.1
comp=Z,3µm,20.0s
352A Blakely 67.01 343 P P 23 21 31.7 -1.5
352A IAmb IAmb 23 21 34.0
comp=Z,76nm,1.0s
BRAL Brewton 67.25 341 P P 23 21 34.4 -0.4
HBVL Hebbronville 67.53 329 P P 23 21 36.7 +0.1
HBVL IAmb IAmb 23 21 39.0
comp=Z,45nm,0.8s
BBTS Babate 67.90 54 LR LR 23 50 46.1
comp=Z,9µm,18.5s,baz=80,slow=36
152A Waverly Hall 68.10 344 IAmb IAmb 23 21 40.7
comp=Z,169nm,1.9s
Y60A Bolivia 68.17 350 IAMs_20 IAMs_20 23 55 20.1
comp=Z,2µm,20.0s
Y58A Scranton 68.30 349 IAMs_20 IAMs_20 23 53 11.5
comp=Z,3µm,21.0s
Y57A Sumter 68.53 348 IAMs_20 IAMs_20 23 55 13.7
comp=Z,2µm,18.0s
GOGA Godfrey 68.54 345 IAMs_20 IAMs_20 23 55 58.0
comp=Z,2µm,18.0s
JSC Jenkinsville 68.94 347 P P 23 21 45.0 -0.3
JSC IAmb IAmb 23 21 46.6
comp=Z,160nm,1.9s
JSC Jenkinsville 68.94 347 P P 23 21 45.0 -0.3
JSC pmax pmax
comp=Z,160nm,1.9s
HKT Hockley 68.96 333 *i*P P 23 21 45.5 +0.1
HKT pmax pmax
comp=Z,26nm,1.4s
LRAL Lakeview Retre 69.01 342 IAmb IAmb 23 21 46.7
comp=Z,184nm,2.0s
HODGE Hodges 69.08 346 IAmb IAmb 23 21 47.4
comp=Z,116nm,1.7s
Y52A Lilburn 69.10 345 IAmb IAmb 23 21 47.2
comp=Z,39nm,0.7s
W59A Clinton 69.34 350 IAMs_20 IAMs_20 23 56 13.2
comp=Z,2µm,19.0s
Z47A Carrollton 69.45 341 IAmb IAmb 23 21 49.5
comp=Z,70nm,0.7s
PAULI Pauline 69.57 347 IAmb IAmb 23 21 50.5
comp=Z,57nm,1.1s
W57A Gilead 69.57 349 P P 23 21 48.8 -0.4
W57A IAMs_20 IAMs_20 23 53 59.3
comp=Z,2µm,20.0s
V61A Roper 69.70 352 IAMs_20 IAMs_20 23 53 50.8
comp=Z,2µm,20.0s
KMSC Kings Mountain 69.79 347 IAmb IAmb 23 21 51.8
comp=Z,191nm,1.9s
HNDO Hondo 69.95 330 IAmb IAmb 23 21 53.6
comp=Z,57nm,0.9s

BG3 Lake Jocassee 69.95 346 P P 23 21 51.4 -0.2
BG3 IAmb IAmb 23 21 52.8
comp=Z,187nm,1.8s
NATX Nacogdoches 70.17 335 IAmb IAmb 23 21 55.0
comp=Z,86nm,0.9s
SLBS Sierra La Lagu 70.25 318 P P 23 21 54.0 +0.3
SLBS IAmb IAmb 23 21 56.3
comp=Z,160nm,1.7s
X48A Hartselle 70.37 342 IAmb IAmb 23 21 55.5
comp=Z,141nm,1.4s
V55A Taylorsville 70.46 348 IAMs_20 IAMs_20 23 54 52.9
comp=Z,2µm,21.0s
W50A Signal Mountai 70.67 344 IAmb IAmb 23 21 57.0
comp=Z,64nm,0.8s
W50A IAMs_20 IAMs_20 23 57 12.3
comp=Z,2µm,19.0s
CPCT Cooper Cave 70.73 345 IAmb IAmb 23 21 57.2
comp=Z,54nm,0.9s
TKL Tuckaleechee C 70.77 345 LR LR 23 54 26.0
comp=Z,2µm,21.0s,baz=152,slow=37
T59A Double "B" Far 70.99 351 IAMs_20 IAMs_20 23 54 32.9
comp=Z,2µm,20.0s
JCT Junction City 71.00 330 P P 23 21 57.3 -0.8
JCT IAmb IAmb 23 21 59.6
comp=Z,102nm,1.3s
JCT Junction City 71.00 330 P P 23 21 57.3 -0.8
JCT pmax pmax
comp=Z,102nm,1.3s
DBIC Dimbokro 71.04 68 P P 23 21 59.1 +0.4
comp=Z,69nm,1.1s,baz=246,slow=6.0,SNR=37
DBIC S S 23 31 12.5 -2.2
comp=Z,1.9nm,0.7s,baz=281,slow=3.1,SNR=2.0
DBIC LR LR 23 50 31.3
comp=Z,5µm,19.3s,baz=242,slow=34
comp=Z,69nm,1.1s
OXF Oxford 71.05 340 IAmb IAmb 23 22 04.0
comp=Z,92nm,0.9s
CCAR Cane Creek 71.19 338 P P 23 21 59.9 +0.8
U54A Nelsons Funny 71.22 347 IAmb IAmb 23 22 07.2
comp=Z,88nm,0.8s
U54A IAMs_20 IAMs_20 23 55 17.0
comp=Z,2µm,20.0s
T57A Hurt 71.26 350 IAmb IAmb 23 22 01.1
comp=Z,163nm,1.8s
T57A IAMs_20 IAMs_20 23 58 09.0
comp=Z,2µm,18.0s
BRDY Brady 71.38 331 IAmb IAmb 23 22 01.7
comp=Z,65nm,1.2s
WHTX Lake Whitney, 71.40 333 IAmb IAmb 23 22 01.7
comp=Z,195nm,1.8s
S61A Accomac 71.47 353 IAMs_20 IAMs_20 23 54 56.5
comp=Z,2µm,19.0s
TZTN Tazewell 71.58 346 IAMs_20 IAMs_20 23 57 07.4
comp=Z,2µm,19.0s
BLA Blacksburg 71.65 349 IAMs_20 IAMs_20 23 55 12.4
comp=Z,2µm,20.0s
TXAR Lajitas Array 71.70 327 P P 23 22 02.1 -0.3
comp=Z,4.6nm,0.7s,baz=145,slow=8.0,SNR=58
TXAR S S 23 31 19.1 -2.8
comp=Z,0.1nm,0.4s,baz=152,slow=19,SNR=1.4
TXAR PKPPKP P'P'df 23 49 52.0 +4.0
comp=Z,0.4nm,0.8s,baz=199,slow=3.4,SNR=3.5
comp=Z,4.6nm,0.7s
TXAR Lajitas Array 71.70 327 P P 23 22 01.8 -0.7
TX31 Lajitas Ar. Si 71.70 327 IAmb IAmb 23 22 04.3
comp=Z,136nm,1.9s
CLTN Cedars of Leba 71.75 343 IAmb IAmb 23 22 03.4
comp=Z,133nm,1.7s
OZNA Ozona 71.94 329 P P 23 22 03.1 -0.7
OZNA IAmb IAmb 23 22 05.1
comp=Z,62nm,0.9s
S57A Dark Hollow, R 71.96 350 IAmb IAmb 23 22 12.3
comp=Z,60nm,1.0s
S57A IAMs_20 IAMs_20 23 55 28.6
comp=Z,2µm,20.0s
R58B Mineral 72.01 351 IAMs_20 IAMs_20 23 55 13.9
comp=Z,2µm,21.0s
U49A Red Boiling Sp 72.03 344 IAMs_20 IAMs_20 23 58 11.4
comp=Z,2µm,19.0s
WVT Waverly 72.16 342 P P 23 22 02.7 -2.2
WVT IAmb IAmb 23 22 05.7
comp=Z,122nm,1.0s
WVT Waverly 72.16 342 P P 23 22 02.7 -2.2
WVT pmax pmax
comp=Z,122nm,1.0s
WVT MLR MLR
comp=Z,1µm,18.0s
CBN Corbin Frederi 72.18 351 IAMs_20 IAMs_20 23 55 16.4
comp=Z,2µm,21.0s
MAW Mawson 72.21 162 P P 23 22 04.8 -0.1
comp=Z,32nm,0.8s,baz=223,slow=7.3,SNR=46
MAW S S 23 31 21.3 -5.3
comp=Z,2.0nm,0.9s,baz=161,slow=16,SNR=1.7
MAW LR LR 23 55 19.2
comp=Z,2µm,19.0s,baz=226,slow=37
comp=Z,32nm,0.8s
T50A Nancy 72.31 345 IAmb IAmb 23 22 06.7
comp=Z,235nm,1.9s
T50A IAMs_20 IAMs_20 23 58 09.8
comp=Z,2µm,19.0s
MIAR Mount Ida 72.34 337 IAmb IAmb 23 22 07.5
comp=Z,150nm,1.9s
PLPT Palo Pinto 72.46 333 P P 23 22 05.9 -0.9
PLPT IAmb IAmb 23 22 08.0
comp=Z,46nm,0.7s
Z35A Perchaven, San 72.52 334 IAmb IAmb 23 22 08.5
comp=Z,96nm,0.8s
ALPN Alpine 72.57 327 IAmb IAmb 23 22 08.6
comp=Z,125nm,2.0s
R55A Marlinton 72.65 349 IAmb IAmb 23 22 16.8
comp=Z,97nm,1.0s
GLAT Glass 72.67 341 P P 23 22 07.7 -0.2
ABTX Abilene, Hawle 72.81 331 IAmb IAmb 23 22 10.2
comp=Z,86nm,1.2s
MNHN Monahans 73.00 328 P P 23 22 09.8 -0.3
MNHN IAmb IAmb 23 22 11.6
comp=Z,61nm,0.7s
LCAR Lake Charles 73.01 340 IAmb IAmb 23 22 11.0
comp=Z,62nm,0.7s
Q56A Snyder Ridge, 73.25 350 IAMs_20 IAMs_20 23 55 56.7
comp=Z,2µm,20.0s
P61A Hammonton 73.36 354 IAMs_20 IAMs_20 23 56 33.4
comp=Z,2µm,20.0s
WTFS Witchita Falls 73.36 333 IAmb IAmb 23 22 13.3
comp=Z,185nm,1.7s
R50A Paris 73.41 346 P P 23 22 11.2 -1.1
R50A IAMs_20 IAMs_20 23 58 03.0
comp=Z,2µm,18.0s
Q54A Coxs Mills 73.45 349 IAmb IAmb 23 22 13.6
comp=Z,118nm,1.8s
PBMO Poplar Bluff 73.46 340 IAmb IAmb 23 22 13.6
comp=Z,72nm,0.7s
PECS Pecos 73.52 328 IAmb IAmb 23 22 15.3
comp=Z,171nm,1.8s
P57A Homestead Farm 73.53 351 IAmb IAmb 23 22 15.3
comp=Z,168nm,1.5s
P57A IAMs_20 IAMs_20 23 56 08.0
comp=Z,2µm,21.0s
VHRN Van Horn 73.53 326 IAmb IAmb 23 22 14.5
comp=Z,140nm,2.0s
ODSA Odessa 73.58 329 P P 23 22 12.3 -1.2
ODSA IAmb IAmb 23 22 14.7
comp=Z,84nm,0.9s
R49A Shelbyville 73.60 345 IAmb IAmb 23 22 14.1
comp=Z,207nm,1.6s
R49A IAMs_20 IAMs_20 23 57 06.0
comp=Z,2µm,20.0s
APMT Aspermont 73.62 331 IAmb IAmb 23 22 16.0
comp=Z,50nm,0.7s
Q52A Bidwell 73.67 348 IAmb IAmb 23 22 14.9
comp=Z,106nm,1.3s
Q52A IAMs_20 IAMs_20 23 56 41.9
comp=Z,2µm,20.0s
SN07 Snyder 07 73.72 331 IAmb IAmb 23 22 15.3
comp=Z,186nm,1.9s
CGM3 Cape Girardeau 73.74 341 IAmb IAmb 23 22 15.1
comp=Z,215nm,1.9s
WCI Wyandotte Cave 73.79 344 P P 23 22 12.2 -2.3
WCI Wyandotte Cave 73.79 344 IAMs_20 IAMs_20 00 00 19.0
comp=Z,2µm,18.0s
WCI Wyandotte Cave 73.79 344 P P 23 22 12.2 -2.3
WCI pmax pmax
comp=Z,346nm,2.0s
X34A Smith Ranch, M 73.87 334 IAmb IAmb 23 22 16.5
comp=Z,72nm,1.0s
Q51A Peebles 73.94 347 IAmb IAmb 23 22 16.4
comp=Z,150nm,1.5s
MCWV Mont Chateau 73.95 350 IAmb IAmb 23 22 17.3

comp=Z,225nm,1.9s
MCWV IAMs_20 IAMs_20 23 56 11.3
comp=Z,2µm,20.0s
S44A Carbondale 74.00 342 IAmb IAmb 23 22 16.3
comp=Z,45nm,0.6s
SIUC Southern Illin 74.01 342 IAmb IAmb 23 22 16.4
comp=Z,40nm,0.7s
P53A Whipple 74.03 348 IAmb IAmb 23 22 17.3
comp=Z,165nm,1.5s
ACRG Accra 74.05 72 P **P** **23 22 16.5 -0.1**
ACRG IAmb IAmb 23 22 18.6
comp=Z,134nm,1.2s
DKNS Dickens 74.24 331 P **P** **23 22 16.1 -1.2**
FNO Franklin 74.30 334 IAmb IAmb 23 22 18.6
comp=Z,171nm,1.6s
P52A Corning 74.30 348 IAmb IAmb 23 22 25.2
comp=Z,56nm,0.9s
BRNJ Basking Ridge 74.34 354 IAmb IAmb 23 22 20.0
comp=Z,51nm,0.8s
OKCSW OKLAHOMA CITY 74.44 334 IAmb IAmb 23 22 19.3
comp=Z,78nm,0.8s
MNTX Cornudas Mount 74.48 327 IAMs_20 IAMs_20 23 51 53.6
comp=Z,2µm,18.0s
PPT Papeete 74.53 259 P **P** **23 22 20.8 +1.3**
comp=Z,90nm,0.8s,baz=212,slow=5.2,SNR=9.0
PPT LR LR 23 48 09.8
comp=Z,2µm,18.0s,baz=129,slow=30
comp=Z,90nm,0.8s
O54A Avella 74.55 349 IAMs_20 IAMs_20 23 58 57.0
comp=Z,2µm,19.0s
PAL Palisades 74.60 354 IAMs_20 IAMs_20 23 55 06.4
comp=Z,2µm,21.0s
SSPA Standing Stone 74.64 351 P **P** **23 22 19.3 -0.1**
SSPA Standing Stone 74.64 351 IAMs_20 IAMs_20 23 56 58.6
comp=Z,2µm,22.0s
OLIL Olney 74.69 343 IAmb IAmb 23 22 20.2
comp=Z,188nm,1.6s
N58A Sunbury 74.71 352 IAMs_20 IAMs_20 23 57 24.2
comp=Z,2µm,19.0s
WSPT Westport, CT 74.72 355 IAMs_20 IAMs_20 23 55 54.6
comp=Z,2µm,19.0s
O52A Adamsville 74.72 348 P **P** **23 22 19.3 -0.6**
O52A IAmb IAmb 23 22 20.9
comp=Z,202nm,1.8s
BLO Bloomington 74.74 344 IAmb IAmb 23 22 21.7
comp=Z,118nm,1.3s
O53A New Philadelph 74.75 349 IAmb IAmb 23 22 21.4
comp=Z,264nm,1.9s
OK052 Battle Ridge R 74.75 335 IAmb IAmb 23 22 21.3
comp=Z,138nm,1.4s
M63A Gales Ferry 74.87 356 IAMs_20 IAMs_20 23 58 42.5
comp=Z,2µm,19.0s
QUOK Quay 74.87 335 IAmb IAmb 23 22 22.2
comp=Z,168nm,1.5s
CCM Cathedral Cave 74.88 340 P **P** **23 22 19.6 -1.3**
CCM Cathedral Cave 74.88 340 P **P** **23 22 19.6 -1.3**
CCM pmax pmax
comp=Z,223nm,1.5s
M65A Busby, Falmout 74.95 357 IAMs_20 IAMs_20 23 56 33.8
comp=Z,3µm,21.0s
ACSO Alum Creek Sta 75.04 347 IAmb IAmb 23 22 29.5
comp=Z,80nm,0.9s
ACSO IAMs_20 IAMs_20 23 57 34.0
comp=Z,2µm,22.0s
EPT El Paso 75.06 326 IAMs_20 IAMs_20 23 52 18.1
comp=Z,2µm,18.0s
Q44A Meyer Farm, Va 75.08 342 P **P** **23 22 20.6 -1.4**
Q44A IAmb IAmb 23 22 22.2
comp=Z,138nm,1.6s
TSUM Tsumeb 75.14 103 LR LR 23 49 38.2
comp=Z,3µm,21.8s,baz=196,slow=31
TSUM Tsumeb 75.14 103 P **P** **23 22 23.1 -0.1**
TSUM Tsumeb 75.14 103 IAMs_20 IAMs_20 23 49 57.6
comp=Z,3µm,20.0s
SLM Saint Louis 75.15 341 IAmb IAmb 23 22 23.3
comp=Z,394nm,1.7s
OK048 Pawnee Station 75.18 335 IAmb IAmb 23 22 24.0
comp=Z,75nm,0.9s
OK051 E0350 and S346 75.22 335 IAmb IAmb 23 22 24.2
comp=Z,68nm,0.9s
SMWD Samnorwood 75.23 332 IAmb IAmb 23 22 24.3
comp=Z,141nm,1.5s
N53A Lisbon 75.23 349 IAmb IAmb 23 22 24.4
comp=Z,94nm,1.4s
M57A Sunshine Farm, 75.25 352 IAmb IAmb 23 22 25.0
comp=Z,197nm,1.9s
M57A IAMs_20 IAMs_20 23 57 24.5
comp=Z,2µm,20.0s
PAMR Moraine State 75.25 350 IAmb IAmb 23 22 24.6
comp=Z,222nm,1.7s
MSTX Muleshoe 75.26 330 P **P** **23 22 22.3 -1.1**
MSTX IAmb IAmb 23 22 24.6
comp=Z,58nm,1.0s
KOOLE Kule 75.31 108 *i* P **P** **23 22 22.9 -1.2**
KSPA Keystone Colle 75.31 353 IAmb IAmb 23 22 25.6
comp=Z,143nm,1.6s
P46A Rosedale 75.32 344 IAmb IAmb 23 22 23.8
comp=Z,121nm,1.3s
P46A IAMs_20 IAMs_20 00 00 18.6
comp=Z,2µm,19.0s
L64A Middleborough 75.34 357 IAMs_20 IAMs_20 23 56 44.9
comp=Z,3µm,20.0s
R40A Maddies Statio 75.39 340 P **P** **23 22 23.3 -0.5**
R40A IAmb IAmb 23 22 24.9
comp=Z,96nm,0.7s
T35A Sooner Cattle 75.48 336 IAmb IAmb 23 22 25.7
comp=Z,61nm,1.0s
O48B Farmland 75.48 346 IAMs_20 IAMs_20 23 57 08.9
comp=Z,2µm,21.0s
BLOK Blackwell 75.58 335 IAmb IAmb 23 22 26.4
comp=Z,63nm,1.0s
N51A Ashland 75.59 348 IAmb IAmb 23 22 32.7
comp=Z,55nm,0.9s
AMTX Amarillo 75.60 331 IAmb IAmb 23 22 26.7
comp=Z,104nm,1.2s
CROK Carrier 75.62 335 IAmb IAmb 23 22 26.4
comp=Z,56nm,0.9s
PAOC Oil Creek Stat 75.75 350 IAmb IAmb 23 22 27.3
comp=Z,100nm,1.4s
ELIS Ellis County 75.76 333 IAmb IAmb 23 22 27.9
comp=Z,126nm,1.3s
WES Weston 75.81 357 IAmb IAmb 23 22 27.9
comp=Z,155nm,1.7s
WES IAMs_20 IAMs_20 23 57 10.3
comp=Z,2µm,19.0s
L59A Walton 75.87 354 IAMs_20 IAMs_20 23 58 01.1
comp=Z,2µm,21.0s
OK038 West end E0370 75.87 334 IAmb IAmb 23 22 28.1
comp=Z,74nm,1.0s
P43A Skaggs, Pawnee 75.91 342 IAmb IAmb 23 22 27.4
comp=Z,75nm,0.8s
HRV Adam Dziewonsk 75.94 356 P **P** **23 22 27.4 +0.6**
HRV Adam Dziewonsk 75.94 356 IAMs_20 IAMs_20 23 57 23.8
comp=Z,2µm,20.0s
HRV Adam Dziewonsk 75.94 356 P **P** **23 22 27.4 +0.6**
HRV pmax pmax
comp=Z,275nm,1.8s
HRV MLR MLR
comp=Z,2µm,20.0s
BINY Binghamton 75.97 353 IAMs_20 IAMs_20 23 58 43.7
comp=Z,2µm,20.0s
M52A Chesterland 76.03 349 IAmb IAmb 23 22 35.4
comp=Z,62nm,0.9s
M52A IAMs_20 IAMs_20 23 59 06.3
comp=Z,2µm,20.0s
319A Douglas 76.07 324 IAmb IAmb 23 22 30.5
comp=Z,78nm,1.1s
L56A Greenwood 76.08 352 P **P** **23 22 28.0 +0.3**
L56A IAMs_20 IAMs_20 23 57 59.7
comp=Z,2µm,20.0s
KAN01 Argonia South 76.12 335 IAmb IAmb 23 22 29.6
comp=Z,106nm,1.1s
K62A Royalston 76.14 356 IAmb IAmb 23 22 30.7
comp=Z,146nm,1.5s
K62A IAMs_20 IAMs_20 23 59 27.0
comp=Z,2µm,19.0s
M50A Fremont 76.18 348 IAMs_20 IAMs_20 23 58 18.4
comp=Z,2µm,20.0s
N47A Urbana 76.20 345 IAMs_20 IAMs_20 00 00 38.7
comp=Z,2µm,20.0s
121A Cookes Peak, D 76.30 325 IAmb IAmb 23 22 31.9
comp=Z,57nm,1.0s
TRY Troy 76.30 355 IAmb IAmb 23 22 31.5
comp=Z,103nm,1.0s
BOSA Boshof 76.37 115 P **P** **23 22 29.9 -0.1**
comp=Z,19nm,0.7s,baz=251,slow=3.6,SNR=51
BOSA LR LR 23 52 52.8
comp=Z,2µm,19.0s,baz=244,slow=33
comp=Z,19nm,0.7s
BOSA Boshof 76.37 115 P **P** **23 22 29.3 -0.7**
ERPA Erie 76.39 350 IAmb IAmb 23 22 30.9
comp=Z,68nm,0.9s
ERPA IAMs_20 IAMs_20 23 57 51.7
comp=Z,3µm,21.0s
K57A Scipio Center 76.55 353 IAmb IAmb 23 22 31.9
comp=Z,209nm,1.8s
K57A IAMs_20 IAMs_20 23 59 13.1
comp=Z,2µm,20.0s
HDIL Hopedale 76.71 343 IAMs_20 IAMs_20 00 01 03.5
comp=Z,2µm,20.0s
J61A Chester 76.83 356 IAMs_20 IAMs_20 23 59 30.5
comp=Z,2µm,20.0s
GRTLG Ghanzi 76.95 107 P **P** **23 22 33.4 0.0**
GRTLG Ghanzi 76.95 107 *i* P **P** **23 22 32.5 -1.0**
KGCAE Kacgae 76.97 109 *i* P **P** **23 22 31.7 -1.9**
J59A Piesco 77.09 354 IAmb IAmb 23 22 35.5
comp=Z,114nm,1.3s
AAM Ann Arbor 77.17 347 IAmb IAmb 23 22 34.8
comp=Z,183nm,1.7s
AAM IAMs_20 IAMs_20 23 58 49.4
comp=Z,2µm,21.0s
J57A Williamstown 77.17 353 IAmb IAmb 23 22 35.6
comp=Z,60nm,0.9s
HNH Hanover 77.17 356 IAmb IAmb 23 22 36.8
comp=Z,145nm,1.2s
HNH IAMs_20 IAMs_20 00 00 16.5
comp=Z,2µm,19.0s
M44A Midewin, Midew 77.20 344 IAmb IAmb 23 22 41.5
comp=Z,94nm,1.0s
M44A IAMs_20 IAMs_20 00 02 43.3
comp=Z,1µm,18.0s
J55A Hilton 77.23 352 P **P** **23 22 34.1 0.0**
J55A IAMs_20 IAMs_20 23 58 35.0
comp=Z,2µm,20.0s
I62A Tamworth 77.29 357 IAMs_20 IAMs_20 23 57 53.6
comp=Z,3µm,21.0s
RTBA Rita Blanca 77.38 331 IAmb IAmb 23 22 37.2
comp=Z,183nm,2.0s
L46A Eue Claire 77.41 345 IAMs_20 IAMs_20 23 58 17.8
comp=Z,2µm,21.0s
I63A Otisfield 77.44 357 IAMs_20 IAMs_20 23 57 13.4
comp=Z,3µm,22.0s
K50A Casco 77.44 348 IAMs_20 IAMs_20 23 58 39.7
comp=Z,2µm,20.0s
MAKGR Makgori 77.47 113 *i* P **P** **23 22 33.1 -3.2**
SKOMA Sekoma 77.47 111 *i* P **P** **23 22 34.3 -1.9**
HQIL Hanson Quary C 77.55 344 IAMs_20 IAMs_20 00 00 39.5
comp=Z,2µm,19.0s
NCB Newcomb 77.57 355 IAmb IAmb 23 22 44.8
comp=Z,80nm,1.2s
TUC Tucson 77.58 323 P **P** **23 22 36.1 -0.4**
TUC Tucson 77.58 323 IAMs_20 IAMs_20 23 54 52.8
comp=Z,2µm,18.0s
TUC Tucson 77.58 323 P **P** **23 22 36.1 -0.4**
TUC pmax pmax
comp=Z,85nm,2.0s
TUC MLR MLR
comp=Z,2µm,18.0s
R32A Long Quarter, 77.59 335 IAmb IAmb 23 22 38.0
comp=Z,62nm,0.8s
ABQ Albuquerque 77.69 328 IAmb IAmb 23 22 39.5
comp=Z,85nm,1.5s
LBNH Lisbon 77.69 356 IAmb IAmb 23 22 39.4
comp=Z,82nm,0.8s
LBNH IAMs_20 IAMs_20 23 58 19.1
comp=Z,2µm,20.0s
ANMO Albuquerque 77.69 328 P **P** **23 22 37.1 -0.1**
ANMO Albuquerque 77.69 328 IAMs_20 IAMs_20 23 54 44.6
comp=Z,2µm,18.0s
ANMO Albuquerque 77.69 328 *ce* P **P** **23 22 37.3 +0.1**
ANMO pmax pmax
comp=Z,9.0nm,0.8s
TASM ASL Pad, Albuq 77.69 328 IAmb IAmb 23 22 39.5
comp=Z,86nm,1.5s
TASM ASL Pad, Albuq 77.69 328 IAmb IAmb 23 22 39.5
comp=Z,85nm,1.5s
TASM ASL Pad, Albuq 77.69 328 IAmb IAmb 23 22 39.5
comp=Z,85nm,1.5s
QNGWA Qangwa 77.87 105 *i* P **P** **23 22 38.2 -0.4**
L44A Lake County Fo 77.92 344 IAmb IAmb 23 22 38.9
comp=Z,102nm,0.9s
L44A IAMs_20 IAMs_20 00 00 59.4
comp=Z,1µm,19.0s
H62A Milan 77.98 357 IAmb IAmb 23 22 41.4
comp=Z,216nm,1.9s
H62A IAMs_20 IAMs_20 23 58 02.9
comp=Z,3µm,21.0s
N38A Joes South For 77.99 340 P **P** **23 22 37.6 -0.8**
N38A IAmb IAmb 23 22 46.2
comp=Z,65nm,0.8s
EMMW East Machias 78.02 360 IAmb IAmb 23 22 41.2
comp=Z,65nm,1.0s
L42A Oliver, Polo 78.17 343 IAmb IAmb 23 22 40.3
comp=Z,138nm,1.4s
L42A IAMs_20 IAMs_20 00 02 02.1
comp=Z,2µm,20.0s
LONY Lake Ozonia 78.25 354 IAmb IAmb 23 22 42.0
comp=Z,197nm,1.6s
LONY IAMs_20 IAMs_20 23 57 29.9
comp=Z,2µm,22.0s
J47A Sunmer 78.29 347 IAMs_20 IAMs_20 23 58 30.1
comp=Z,2µm,21.0s
CBKS Cedar Bluff 78.31 334 IAmb IAmb 23 22 42.2
comp=Z,109nm,1.0s
EOSO Osorio 78.34 45 P **P** **23 22 40.5 -0.3**
FRNY Flat Rock 78.38 355 IAmb IAmb 23 22 42.7
comp=Z,75nm,0.8s
GGN Saint George 78.43 0 P **P** **23 22 41.5 +0.8**
DELO Deloro Mine 78.44 352 IAmb IAmb 23 22 42.6
comp=Z,146nm,1.4s
LBTB Lobatse 78.50 112 LR LR 23 53 21.9
comp=Z,2µm,19.6s,baz=240,slow=33
LBTB Lobatse 78.50 112 IAmb IAmb 23 22 53.9
comp=Z,2µm,19.9s,baz=229,slow=33
XAUDM Khaudum 78.52 105 *i* P **P** **23 22 41.6 -0.6**
K43A Burlington 78.52 344 IAMs_20 IAMs_20 00 01 17.2
comp=Z,1µm,18.0s
G62A West of Eustis 78.60 357 IAmb IAmb 23 22 44.4
comp=Z,61nm,0.8s
G62A IAMs_20 IAMs_20 00 00 14.2
comp=Z,2µm,20.0s
PKME Peaks-Kenny Pk 78.61 358 IAmb IAmb 23 22 44.2
comp=Z,72nm,1.1s
I49A Point Hope 78.61 348 IAMs_20 IAMs_20 23 59 10.5
comp=Z,2µm,21.0s
L40A Anamosa 78.62 342 IAMs_20 IAMs_20 00 02 08.0
comp=Z,2µm,18.0s
KDWAN Kaudwane 78.62 110 P **P** **23 22 42.6 -0.1**
KDWAN Kaudwane 78.62 110 *i* P **P** **23 22 41.0 -1.7**
T25A Trinidad 78.66 330 IAmb IAmb 23 22 45.0
comp=Z,60nm,0.9s
WBO Williamsburg 78.68 354 IAmb IAmb 23 22 44.2
comp=Z,93nm,0.9s
N35A Tabor 78.78 338 IAmb IAmb 23 22 43.7
comp=Z,106nm,0.8s
SADO Sadowa 78.87 351 LR LR 23 59 39.5
comp=Z,2µm,19.9s,baz=174,slow=37
SCIA State Center 79.02 340 IAmb IAmb 23 22 45.4
comp=Z,189nm,1.4s
JFWS Jewell Farm 79.17 343 IAMs_20 IAMs_20 00 00 41.6
comp=Z,2µm,21.0s
JFWS Jewell Farm 79.17 343 IAmb IAmb 23 22 53.0
comp=Z,68nm,0.8s
LMN Caledonia Moun 79.19 1 P **P** **23 22 45.3 +0.3**
LMN IAmb IAmb 23 22 47.1
comp=Z,67nm,0.8s
F64A Sherman 79.19 359 IAmb IAmb 23 22 47.5
comp=Z,206nm,1.6s
W18A Petrified Fore 79.34 325 IAmb IAmb 23 22 48.5
comp=Z,105nm,1.5s
VTX Valle De La Tr 79.48 319 IAmb IAmb 23 22 49.6
comp=Z,118nm,1.4s
BUKO Buck Lake 79.57 351 IAmb IAmb 23 22 48.8
comp=Z,159nm,1.3s
LPHEP Lephephe 79.57 111 *i* P **P** **23 22 46.3 -1.6**
SDCO Great Sand Dun 79.63 330 P **P** **23 22 47.9 0.0**
SDCO IAMs_20 IAMs_20 23 56 07.0
comp=Z,1µm,18.0s
GLMI Grayling 79.78 347 IAMs_20 IAMs_20 00 00 27.6
comp=Z,2µm,20.0s
TRQ Mont Tremblant 79.84 355 IAmb IAmb 23 22 50.2
comp=Z,90nm,0.9s
H43A Windswept, Lux 80.07 345 IAmb IAmb 23 22 51.0
comp=Z,154nm,1.5s
TORD Torodi Ar. Bea 80.10 67 P **P** **23 22 51.9 +1.3**
comp=Z,60nm,0.8s,baz=283,slow=2.7,SNR=5.1
comp=Z,60nm,0.8s
TORD Torodi Ar. Bea 80.10 67 P **P** **23 22 50.1 -0.5**
TORD IAmb IAmb 23 22 53.0
comp=Z,89nm,0.9s
I40A Norwalk 80.18 343 IAmb IAmb 23 22 51.4
comp=Z,110nm,1.4s
SLIND Selinda 80.21 106 *i* P **P** **23 22 50.3 -1.1**
GLA Glamis 80.25 321 IAmb IAmb 23 22 53.4
comp=Z,201nm,2.0s
D62A Allapoint, All 80.42 358 IAmb IAmb 23 22 53.8
comp=Z,81nm,0.9s
MVCO Mesa Verde 80.49 327 IAmb IAmb 23 22 54.7
comp=Z,156nm,1.9s
MVCO IAMs_20 IAMs_20 23 56 08.4
comp=Z,1µm,18.0s
YUH Yuha Desert 80.52 320 P **P** **23 22 52.9 +0.4**
YUH IAmb IAmb 23 22 55.0
comp=Z,154nm,1.9s
RAR Rarotonga 80.83 251 P **P** **23 22 57.0 +2.4**
comp=Z,23nm,0.8s,baz=215,slow=13,SNR=3.9
RAR LR LR 23 51 46.8
comp=Z,1µm,18.0s,baz=125,slow=30
comp=Z,23nm,0.8s
RAR Rarotonga 80.83 251 P **P** **23 22 57.0 +2.4**
LMQ La Malbaie 80.92 358 P **P** **23 22 54.6 +0.3**
PMOZ Porto Moniz, M 81.00 41 *e* LR LR 23 53 23.1
PMOZ *i* IAMs_20 IAMs_20 23 56 54.4
comp=Z,2µm,20.0s
I37A Lemond, Waseca 81.02 341 IAmb IAmb 23 23 02.9
comp=Z,99nm,0.9s
FUL Funchal 81.03 41 *e* P **P** **23 22 56.8 +1.6**
FUL *i* IAmb IAmb 23 22 57.8
comp=Z,182nm,1.6s
BC3 Big Chuckawall 81.04 321 IAMs_20 IAMs_20 23 54 07.6
comp=Z,1µm,18.0s
PMAR Madeira 81.07 41 *e* P **P** **23 22 57.6 +2.0**
E46A Sault Ste Mari 81.22 348 IAMs_20 IAMs_20 00 04 26.6
comp=Z,2µm,19.0s
MREMI Moremi 81.23 111 *i* P **P** **23 22 55.8 -1.1**
IRM Iron Mountain 81.27 321 IAmb IAmb 23 22 58.9
comp=Z,111nm,1.8s
PV01 Paradox Valley 81.28 328 IAmb IAmb 23 22 59.1
comp=Z,135nm,1.9s
EDA Edea 81.34 80 IAMs_20 IAMs_20 23 58 43.3
comp=Z,2µm,18.0s
W13A Hualapai Mount 81.36 323 P **P** **23 22 57.4 +0.2**
LDAQ Lac Daran 81.37 357 IAmb IAmb 23 22 58.6
comp=Z,191nm,1.6s
F42A Maple Grove Fa 81.38 345 IAmb IAmb 23 23 05.0
comp=Z,126nm,1.5s
G40A Rib Lake 81.38 344 IAmb IAmb 23 22 58.2
comp=Z,161nm,1.9s
PV02 Paradox Valley 81.42 328 IAmb IAmb 23 22 59.6
comp=Z,101nm,1.4s
ISCO Idaho Springs 81.42 331 IAmb IAmb 23 22 59.8
comp=Z,169nm,1.9s
PV05 Paradox Valley 81.47 328 IAmb IAmb 23 22 59.6
comp=Z,117nm,1.7s
PV12 Saucer Basin, 81.54 328 IAmb IAmb 23 23 00.2
comp=Z,163nm,1.8s
PFO Pinyon Flats O 81.55 320 LR LR 23 53 04.6
comp=Z,1µm,20.3s,baz=131,slow=31
PFO Pinyon Flats O 81.55 320 P **P** **23 22 58.9 +0.8**
PFO Pinyon Flats O 81.55 320 *i* P **P** **23 22 58.6 +0.5**
PFO pmax pmax
comp=Z,43nm,1.0s
PV11 David Mesa, Pa 81.55 328 IAmb IAmb 23 23 00.1
comp=Z,116nm,1.7s
PV17 East Wray Mesa 81.57 328 IAmb IAmb 23 23 00.1
comp=Z,125nm,1.9s
PV16 Nyswonger Mesa 81.58 328 IAmb IAmb 23 23 00.3
comp=Z,113nm,1.8s
BELC Belle Mtn. Jos 81.60 321 IAmb IAmb 23 23 00.9
comp=Z,150nm,2.0s
BELC IAMs_20 IAMs_20 23 54 31.3
comp=Z,1µm,18.0s
DNR Dunn Ranch,Anz 81.60 320 P **P** **23 22 58.9 +0.5**
DNR IAmb IAmb 23 23 05.3
comp=Z,102nm,1.1s
PV19 Morning Glory 81.61 328 IAmb IAmb 23 23 00.4
comp=Z,172nm,1.8s
PV20 West Nyswonger 81.63 328 IAmb IAmb 23 23 00.5
comp=Z,107nm,1.5s
PV04 Paradox Valley 81.64 328 IAmb IAmb 23 23 00.8
comp=Z,114nm,1.7s
ECSD EROS Data Cent 81.69 339 P **P** **23 22 57.4 -1.0**
ECSD IAmb IAmb 23 22 59.7
comp=Z,142nm,1.2s
K30B Basset 81.69 336 IAmb IAmb 23 23 04.4
comp=Z,106nm,1.0s
PV22 Blue Mesa, Par 81.71 328 IAmb IAmb 23 23 01.1
comp=Z,142nm,1.9s
PV23 Carpenter Ridg 81.74 328 IAmb IAmb 23 23 01.2
comp=Z,112nm,1.6s
BROLN Tihalogang 81.93 110 *i* P **P** **23 22 58.6 -2.0**
VLDQ Val d'Or 81.97 353 IAmb IAmb 23 23 01.7
comp=Z,111nm,1.4s
KSANE Kasane 81.98 106 IAmb IAmb 23 23 04.7
comp=Z,140nm,2.0s
KSANE Kasane 81.98 106 *i* P **P** **23 23 00.4 -0.4**
ELS Elsinore Mount 82.09 319 IAmb IAmb 23 23 02.5
comp=Z,138nm,1.9s
KNB Kanab 82.35 325 P **P** **23 23 03.2 +0.9**
KNB IAmb IAmb 23 23 04.9
comp=Z,107nm,1.4s
KNB Kanab 82.35 325 P **P** **23 23 03.2 +0.9**
KNB pmax pmax
comp=Z,107nm,1.4s
PKCU Pink Cliffs 82.44 325 IAmb IAmb 23 23 04.5
comp=Z,112nm,1.9s
O20A White River Ci 82.80 329 IAmb IAmb 23 23 06.7
comp=Z,159nm,1.8s
O20A IAMs_20 IAMs_20 23 58 13.8
comp=Z,1µm,18.0s
ICQ Pointe Anglais 82.84 360 IAmb IAmb 23 23 06.2
comp=Z,100nm,1.0s
MWC Mount Wilson 82.87 319 IAmb IAmb 23 23 07.4
comp=Z,80nm,1.3s
SZCU Shurtz Canyon 82.93 325 IAmb IAmb 23 23 08.0
comp=Z,140nm,1.9s
SRU San Rafael Swe 82.95 327 P **P** **23 23 04.9 -0.5**
SRU San Rafael Swe 82.95 327 P **P** **23 23 04.9 -0.5**
SRU pmax pmax
comp=Z,16nm,0.8s
E38A The Farm, Brul 82.96 343 IAmb IAmb 23 23 06.1
comp=Z,146nm,1.4s
DRLN Deer Lake 82.99 6 IAmb IAmb 23 23 07.2
comp=Z,84nm,0.9s
GSC Goldstone, Bar 83.02 321 IAmb IAmb 23 23 08.3
comp=Z,121nm,1.8s
CCUT Cedar City 83.03 325 IAmb IAmb 23 23 08.8
comp=Z,163nm,1.9s
SUSD Miller 83.06 337 IAmb IAmb 23 23 06.7
comp=Z,72nm,1.0s
Q16A Castle Valley 83.09 327 IAmb IAmb 23 23 08.4
comp=Z,124nm,1.8s
MATP Matopo 83.21 110 LR LR 23 57 59.9
comp=Z,2µm,18.1s,baz=240,slow=34
P17A Butcher Ranch, 83.35 327 IAmb IAmb 23 23 09.3
comp=Z,64nm,1.4s
TPO Tropico Hills 83.46 320 IAmb IAmb 23 23 10.0
comp=Z,106nm,1.6s
F33A 5 Mile Ranch, 83.51 340 IAmb IAmb 23 23 08.7
comp=Z,70nm,1.4s
F33A IAMs_20 IAMs_20 00 05 40.3
comp=Z,2µm,20.0s
OSI Osito Audit: C 83.53 319 P **P** **23 23 08.2 -0.1**
OSI IAmb IAmb 23 23 10.5
comp=Z,50nm,0.9s
WSHM Spangler Hills 83.61 321 IAmb IAmb 23 23 11.0
comp=Z,60nm,1.3s
GWY Greenwater Val 83.63 322 IAmb IAmb 23 23 11.0
comp=Z,80nm,1.6s
RDMU Red Mountain 83.73 329 IAmb IAmb 23 23 11.2
comp=Z,36nm,0.9s
PRN Pahroc Range 83.75 323 IAmb IAmb 23 23 16.3
comp=Z,41nm,1.0s
CLC China Lake 83.83 321 IAmb IAmb 23 23 12.1
comp=Z,97nm,1.7s
FURC Furnace Creek, 83.94 322 IAmb IAmb 23 23 12.9
comp=Z,152nm,1.7s
MPMC Manual Prospec 83.96 321 IAmb IAmb 23 23 12.9
comp=Z,90nm,2.0s
WCT Wildcat Mounta 84.07 322 IAmb IAmb 23 23 13.9
comp=Z,67nm,1.4s
ISA Isabella, Lake 84.18 320 P **P** **23 23 12.6 +0.9**

ISA Isabella, Lake 84.18 320 P P 23 23 12.6 +0.9
ISA pmax pmax
comp=Z,33nm,1.1s
MPU Maple Canyon 84.19 327 IAmb IAmb 23 23 13.7
comp=Z,106nm,2.0s
EYMN Ely 84.20 344 IAMs_20 IAMs_20 00 06 45.6
comp=Z,2µm,18.0s
EYMN Ely 84.20 344 IAmb IAmb 23 23 12.7
comp=Z,86nm,1.2s
BSUT Blindstream Ca 84.22 328 IAmb IAmb 23 23 14.4
comp=Z,100nm,1.8s
RSSD Black Hills 84.51 334 P P 23 23 12.8 -0.5
RSSD Black Hills 84.51 334 P **P 23 23 12.8 -0.5**
RSSD pmax pmax
comp=Z,36nm,1.0s
CWC Cottonwood Cre 84.56 321 IAmb IAmb 23 23 16.2
comp=Z,76nm,1.7s
VES Vestal, Richgr 84.64 320 IAmb IAmb 23 23 16.1
comp=Z,84nm,0.9s
R11B Troy Canyon, C 84.75 324 IAmb IAmb 23 23 17.2
comp=Z,110nm,1.6s
DUG Dugway, Tooele 84.87 326 IAMs_20 IAMs_20 23 58 34.8
comp=Z,2µm,18.0s
TCUT Toone Canyon 84.98 328 P P 23 23 15.7 -0.1
DSP Deep Springs 85.20 322 IAmb IAmb 23 23 19.1
comp=Z,73nm,1.5s
TIO Tiouine 85.40 48 P P 23 23 18.8 +0.8
PKD Bear Valley Ra 85.51 319 IAmb IAmb 23 23 20.7
comp=Z,169nm,1.9s
BW06 Boulder Array 85.53 330 IAmb IAmb 23 23 20.2
comp=Z,66nm,1.4s
BW06 IAMs_20 IAMs_20 23 59 21.1
comp=Z,1µm,18.0s
PD31 Pinedale Array 85.53 330 IAmb IAmb 23 23 20.1
comp=Z,61nm,1.4s
PDAR Pinedale Array 85.53 330 P P 23 23 18.6 +0.1
comp=Z,10nm,0.8s,baz=131,slow=5.2,SNR=52
PDAR S **SKSac 23 33 36.6 -6.5**
comp=Z,0.1nm,0.3s,baz=92,slow=6.0,SNR=1.8
PDAR PKKP **PKKPbc 23 41 21.4 -1.9**
comp=Z,0.6nm,0.7s,baz=126,slow=1.9,SNR=5.5
comp=Z,10nm,0.8s
PDAR Pinedale Array 85.53 330 P P 23 23 17.7 -0.8
BGU Big Grassy Mou 85.56 327 IAmb IAmb 23 23 20.4
comp=Z,119nm,1.8s
AGMN Agassiz Nation 85.63 341 IAMs_20 IAMs_20 00 08 22.5
comp=Z,2µm,18.0s
Q09A Carvers 85.91 323 IAmb IAmb 23 23 22.7
comp=Z,65nm,1.0s
HVU Hansel Valley 86.12 327 IAmb IAmb 23 23 22.8
comp=Z,37nm,0.8s
NVAR Mina Array Bea 86.18 322 P P 23 23 22.1 +0.3
comp=Z,8.4nm,0.7s,baz=147,slow=5.2,SNR=57
NVAR PKKPbc **PKKPbc 23 41 21.3 -0.2**
comp=Z,0.3nm,0.3s,baz=187,slow=1.0,SNR=3.5
comp=Z,8.4nm,0.7s
NVAR Mina Array Bea 86.18 322 P P 23 23 21.4 -0.3
AHID Auburn Hatcher 86.18 329 IAmb IAmb 23 23 23.4
comp=Z,96nm,1.4s
AHID IAMs_20 IAMs_20 00 00 00.3
comp=Z,2µm,19.0s
KHZ Kahutara 86.21 220 IAmb IAmb 23 23 28.0
comp=Z,58nm,0.8s
MRZ Mangatainoka R 86.28 223 IAmb IAmb 23 23 28.8
comp=Z,71nm,0.9s
MRZ IAMs_20 IAMs_20 23 58 40.3
comp=Z,1µm,18.0s
SNZO South Karori 86.33 222 IAMs_20 IAMs_20 23 54 14.6
comp=Z,1µm,20.0s
RYN Ryan 86.44 322 IAmb IAmb 23 23 25.2
comp=Z,150nm,1.8s
ELK Elko 86.44 325 LR LR 23 58 18.2
comp=Z,795nm,19.4s,baz=128,slow=33
ELK Elko 86.44 325 IAmb IAmb 23 23 24.9
comp=Z,56nm,1.2s
WHZ Wether Hill Ro 86.58 215 IAmb IAmb 23 23 29.1
comp=Z,74nm,1.1s
SNOW Snow King Moun 86.60 330 IAmb IAmb 23 23 27.5
comp=Z,85nm,1.5s
SNOW IAMs_20 IAMs_20 23 59 54.4
comp=Z,1µm,20.0s
RPZ Rata Peaks 86.61 218 LR LR 23 54 17.7
comp=Z,2µm,20.7s,baz=140,slow=30
LOHW Long Hollow 86.66 330 IAMs_20 IAMs_20 23 59 58.0
comp=Z,1µm,19.0s
BKZ Black Stump Fm 86.75 224 IAmb IAmb 23 23 33.2
comp=Z,83nm,1.5s
WAKR Walker 86.82 321 IAmb IAmb 23 23 27.8
comp=Z,86nm,1.4s
MOOW Moose Ponds 86.83 330 IAmb IAmb 23 23 32.3
comp=Z,85nm,1.9s
MOOW IAMs_20 IAMs_20 00 00 03.5
comp=Z,1µm,19.0s
RTZ Ruatahuna 86.83 225 P P 23 23 26.0 +0.9
RTZ IAmb IAmb 23 23 32.1
comp=Z,70nm,0.9s
URZ Urewera 86.99 225 P P 23 23 25.4 -0.4
comp=Z,7.6nm,0.7s,baz=70,slow=5.0,SNR=4.4
URZ LR LR 23 54 10.6
comp=Z,966nm,21.9s,baz=152,slow=30
comp=Z,7.6nm,0.7s
THZ Tophouse 87.00 220 P P 23 23 26.1 +0.3
FLWY Flagg Ranch 87.08 330 IAmb IAmb 23 23 28.3
comp=Z,63nm,0.9s
FLWY IAMs_20 IAMs_20 00 00 22.2
comp=Z,1µm,19.0s
INZ Inchbonnie 87.11 219 IAMs_20 IAMs_20 23 54 22.0
comp=Z,2µm,20.0s
MHC Mount Hamilton 87.13 319 IAmb IAmb 23 23 29.1
comp=Z,155nm,1.9s
YPP Pitchstone Pla 87.28 330 IAmb IAmb 23 23 29.6
comp=Z,93nm,2.0s
PNTR Pine Nut 87.34 322 IAmb IAmb 23 23 30.0
comp=Z,48nm,0.9s
LKWY Lake 87.35 330 IAMs_20 IAMs_20 00 06 12.3
comp=Z,2µm,19.0s
YMP Mirror Lake Pl 87.40 331 IAmb IAmb 23 23 47.2
comp=Z,57nm,0.9s
ULM Lac du Bonnet 87.42 342 P P 23 23 26.4 -0.8
comp=Z,30nm,0.7s,baz=151,slow=4.8,SNR=26
ULM LR LR 00 07 16.4
comp=Z,1µm,18.1s,baz=145,slow=39
comp=Z,30nm,0.7s
ULM Lac du Bonnet 87.42 342 IAmb IAmb 23 23 28.6
comp=Z,72nm,1.0s
ULM Lac du Bonnet 87.42 342*c iP* **P 23 23 26.8 -0.5**
YFT Old Faithful 87.44 330 IAmb IAmb 23 23 37.4
comp=Z,48nm,1.0s
YNE Yellowstone No 87.56 331 IAmb IAmb 23 23 34.2
comp=Z,35nm,0.8s
DSZ Denniston Nort 87.60 220 P P 23 23 28.6 -0.1
RTC Rabat Centre 87.76 46 P P 23 23 29.1 -0.2
YHB Horse Butte 87.83 330 IAmb IAmb 23 23 32.1
comp=Z,105nm,1.5s
SCHQ Schefferville 88.15 0 P P 23 23 30.8 +0.1
comp=Z,18nm,0.7s,baz=190,slow=4.0,SNR=18
SCHQ LR LR 00 07 17.9
comp=Z,495nm,18.8s,baz=182,slow=39
comp=Z,18nm,0.7s
HLID Hailey 88.27 328 IAmb IAmb 23 23 34.2
comp=Z,82nm,1.4s
HLID IAMs_20 IAMs_20 00 00 29.7
comp=Z,1µm,18.0s
TOZ Tahuroa Road 88.29 225 IAmb IAmb 23 23 34.2
comp=Z,65nm,1.1s
BEKR Beckworth 88.31 322 IAmb IAmb 23 23 34.2
comp=Z,64nm,1.5s
MDT Midelt 88.34 48 LR LR 00 02 22.4
comp=Z,2µm,19.6s,baz=254,slow=35
BCYI Bear Canyon 88.42 329 IAmb IAmb 23 23 35.0
comp=Z,78nm,1.3s
IFR Ifrane 88.49 47 P P 23 23 32.8 -0.2
MCMT McKenzie Canyo 88.59 329 P P 23 23 33.4 +0.1
MFID Camas Ranch 88.80 327 IAMs_20 IAMs_20 00 01 48.8
comp=Z,2µm,18.0s
PFVI Vila Bisbo 88.81 43 P P 23 23 32.0 -2.2
PFVI Vila Bisbo 88.81 43 *eP* **P 23 23 32.7 -1.5**
DLMT Dillon 88.91 330 IAMs_20 IAMs_20 00 01 52.7
comp=Z,1µm,18.0s
PTEO Sao Teotonio 89.16 42 *eP* **P 23 23 37.3 +1.5**
PTEO *i* IAmb IAmb 23 23 38.7
comp=Z,77nm,1.7s
WVOR Wild Horse Val 89.37 324 IAmb IAmb 23 23 39.0
comp=Z,95nm,1.6s
PBDV Barranco-do-Ve 89.39 43 P P 23 23 35.5 -1.4
PBDV Barranco-do-Ve 89.39 43 *eP* **P 23 23 38.5 +1.5**
PBDV *i* IAmb IAmb 23 23 40.7
comp=Z,73nm,1.7s

PCVE Castro Verde 89.60 43 P P 23 23 38.7 +0.8
PCVE Castro Verde 89.60 43 *eP* **P 23 23 39.5 +1.6**
PCVE *i* IAmb IAmb 23 24 08.2
comp=Z,46nm,1.8s
RAO Raoul Island 89.61 235 LR LR 23 55 05.0
comp=Z,311nm,20.3s,baz=128,slow=30
PVAQ Vaqueiros 89.63 43 P P 23 23 37.7 -0.3
PVAQ IAmb IAmb 23 23 41.0
comp=Z,42nm,1.1s
PVAQ Vaqueiros 89.63 43 *eP* **P 23 23 39.3 +1.3**
PVAQ *i* IAmb IAmb 23 23 41.6
comp=Z,58nm,1.8s
PVAQ *e*LR LR 23 58 15.4
PVAQ *i* IAMs_20 IAMs_20 00 02 23.0
comp=Z,4µm,20.0s
HRY Holter Researc 89.68 331 P P 23 23 39.0 +0.8
PMAFR Mafra 89.84 41 P P 23 23 40.0 +1.0
EGRO El Granado 89.85 43 P P 23 23 37.0 -2.1
SFS San Fernando 89.85 45 P P 23 23 38.4 -0.7
EGMT Eagleton 89.94 333 IAmb IAmb 23 23 40.7
comp=Z,65nm,1.2s
PBEJ Beja 89.98 43 *eP* **P 23 23 41.6 +2.0**
MOE Montemor 90.05 42 *eP* **P 23 23 41.5 +1.5**
PLID Pearl Lake 90.17 328 IAmb IAmb 23 23 42.8
comp=Z,79nm,1.2s
PLID IAMs_20 IAMs_20 00 01 41.2
comp=Z,2µm,19.0s
M03C McCloud 90.25 322 IAmb IAmb 23 23 43.7
comp=Z,82nm,1.6s
N02D Trinity Center 90.34 321 IAmb IAmb 23 23 43.0
comp=Z,117nm,1.8s
PMTG Montargil 90.50 42 *eP* **P 23 23 43.0 +0.9**
PMTG *i* IAmb IAmb 23 23 44.5
comp=Z,52nm,1.7s
PBAR Barrancos 90.55 43 *eP* **P 23 23 43.1 +0.8**
PBAR *i* IAmb IAmb 23 23 44.8
comp=Z,38nm,1.6s
BMO Blue Mountains 90.58 327 IAMs_20 IAMs_20 00 01 40.0
comp=Z,2µm,18.0s
MSO Missoula 90.65 330 IAmb IAmb 23 23 45.0
comp=Z,63nm,1.7s
K05A Summer Lake 90.69 323 IAmb IAmb 23 23 45.7
comp=Z,86nm,1.1s
PESTR Estremoz 90.72 42 *eP* **P 23 23 44.3 +1.2**
PESTR *i* IAmb IAmb 23 23 45.7
comp=Z,44nm,1.7s
M02C Callahan 90.72 321 IAmb IAmb 23 23 45.1
comp=Z,99nm,1.9s
I07A Izee 91.03 325 IAmb IAmb 23 23 46.9
comp=Z,108nm,1.7s
L04D Klamath Falls 91.03 322 IAmb IAmb 23 23 46.3
comp=Z,110nm,1.6s
PCAS Casmilo, Conde 91.05 41 *eP* **P 23 23 45.5 +0.9**
F10A Beach Ranch, E 91.41 328 P P 23 23 45.7 -0.5
KUQ Kuujjuuaa 91.45 359 IAmb IAmb 23 23 47.3
comp=Z,52nm,1.3s
PINE Pine Mountain 91.50 324 IAmb IAmb 23 23 49.5
comp=Z,55nm,1.0s
G08A Pilot Rock 91.68 326 IAmb IAmb 23 23 49.6
comp=Z,83nm,2.0s
J04A Umpqua Nationa 91.68 323 IAmb IAmb 23 23 53.9
comp=Z,77nm,1.3s
MTE Manteigas 91.81 41 *eP* **P 23 23 49.2 +1.0**
MTE *i* IAMs_20 IAMs_20 00 01 53.9
comp=Z,2µm,20.0s
PVIS Viseu 91.84 41 *eP* **P 23 23 49.2 +0.9**
WIFE Three Sisters- 92.13 324 IAmb IAmb 23 23 52.0
comp=Z,43nm,1.0s
PVRL Vila Real 92.33 40 *eP* **P 23 23 51.1 +0.6**
PVRL *i* IAmb IAmb 23 23 53.2
comp=Z,68nm,1.5s
POLO Lamas de Olo, 92.35 40 *eP* **P 23 23 51.8 +1.1**
G06A Carlson Farm, 92.42 325 IAmb IAmb 23 23 53.4
comp=Z,53nm,1.4s
PGAV Gavieira, Arco 92.51 40 *i* IAMs_20 IAMs_20 00 06 01.7
comp=Z,3µm,18.0s
MVO Moncorvo 92.62 41 *eP* **P 23 23 53.2 +1.2**
MVO *i* IAmb IAmb 23 23 58.7
comp=Z,40nm,1.6s
MVO *e*LR LR 00 00 28.8
MVO *i* IAMs_20 IAMs_20 00 02 49.3
comp=Z,2µm,20.0s
H04A Detroit Lake 92.77 324 IAmb IAmb 23 23 58.1
comp=Z,68nm,1.4s
HAWA Hanford 92.77 327 IAmb IAmb 23 23 54.4
comp=Z,38nm,1.1s
HAWA IAMs_20 IAMs_20 00 02 38.9
comp=Z,2µm,20.0s
HOOD Mount Hood Mea 92.97 325 IAmb IAmb 23 24 00.8
comp=Z,35nm,1.1s
PAB San Pablo 93.02 43 P P 23 23 53.8 0.0
PAB San Pablo 93.02 43 P P 23 23 53.8 0.0
PAB pmax pmax
comp=Z,27nm,1.4s
FFC Flin Flon 93.09 340 P P 23 23 53.1 -0.5
FFC Flin Flon 93.09 340 IAMs_20 IAMs_20 00 12 53.8
comp=Z,2µm,18.0s
FFC Flin Flon 93.09 340 P P 23 23 53.1 -0.5
FFC pmax pmax
comp=Z,12nm,1.0s
NEW Newport 93.12 329 IAMs_20 IAMs_20 00 03 58.0
comp=Z,2µm,18.0s
NEW Newport 93.12 329 IAmb IAmb 23 23 54.7
comp=Z,55nm,1.9s
PBRG Braganca 93.22 40 *eP* **P 23 23 55.8 +1.2**
PBRG *i* IAmb IAmb 23 23 57.7
comp=Z,46nm,1.6s
C09A Chrisman Ranch 93.26 328 IAmb IAmb 23 23 56.1
comp=Z,51nm,1.2s
ESDC Sonseca Array 93.32 43 P P 23 23 55.7 +0.5
comp=Z,4.5nm,1.0s,baz=230,slow=4.1,SNR=20
ESDC LR LR 00 04 14.4
comp=Z,3µm,19.8s,baz=230,slow=34
comp=Z,4.5nm,1.0s
ESDC Sonseca Array 93.32 43 P P 23 23 55.1 -0.2
FOMA Nahampoana Res 94.26 124 IAMs_20 IAMs_20 00 04 40.2
comp=Z,1µm,20.0s
FCC Fort Churchill 94.86 346 IAmb IAmb 23 24 06.7
comp=Z,31nm,1.0s
MBAR Mbarara 96.01 95 LR LR 00 03 51.5
comp=Z,3µm,19.7s,baz=238,slow=33
MBAR Mbarara 96.01 95 *i* P **P 23 24 10.4 +2.0**
MBAR pmax pmax
comp=Z,5.0nm,1.3s
VOI Vohitsoka 96.09 121 IAMs_20 IAMs_20 00 11 10.9
comp=Z,2µm,18.0s
LLLB Lillooet 96.93 328 IAmb IAmb 23 24 13.1
comp=Z,67nm,1.7s
FRB Frobisher Bay 97.11 359 LR LR 00 09 33.8
comp=Z,1µm,20.6s,baz=168,slow=36
TAU Tasmania Unive 97.60 205 IAMs_20 IAMs_20 00 02 58.9
comp=Z,1µm,19.0s
ABPO Ambohimpanom 98.25 119 IAMs_20 IAMs_20 00 08 58.1
comp=Z,2µm,18.0s
OPO Ambohidratompo 98.50 119 LR LR 00 05 21.0
comp=Z,595nm,20.0s,baz=13,slow=33
KEST Kesra 99.17 53 P Pdif 23 24 23.7 +1.7
comp=Z,4.1nm,0.7s,baz=276,slow=9.2,SNR=3.0
KEST LR LR 00 08 43.5
comp=Z,8µm,21.6s,baz=238,slow=35
comp=Z,4.1nm,0.7s
KIBK Kibwezi 101.08 100 P Pdif 23 24 27.3 -3.8
KMBO Kilima Mbogo 101.11 99 P Pdif 23 24 30.9 -0.4
comp=Z,1.0nm,0.3s,baz=249,slow=6.9,SNR=5.2
KMBO Kilima Mbogo 101.11 99 *i* P **Pdif 23 24 33.8 +2.5**
YKA Yellowknife Ar 103.21 339 Pdiff **Pdif 23 24 39.3 +0.2**
comp=Z,1.7nm,0.7s,baz=148,slow=3.7,SNR=13
U35K Hyder 104.13 329 IAMs_20 IAMs_20 00 18 06.3
comp=Z,1µm,18.0s
V35K Ketchikan 104.45 328 IAMs_20 IAMs_20 00 20 26.9
comp=Z,1µm,19.0s
T35M Bob Quinn 104.91 330 IAMs_20 IAMs_20 00 10 47.9
comp=Z,989nm,18.0s
WRAK Wrangell Islan 105.46 328 IAMs_20 IAMs_20 00 20 46.4
comp=Z,2µm,19.0s
MEM Membach 105.61 39 *d*PKiKP **PKiKP 23 29 04.5 +1.4**
DAVA Damuels 105.92 44 *ep*PKiKP **PKiKP 23 29 09.9 +5.8**
comp=Z,10nm,1.2s
RETA Reutte 106.53 44 *ep*PKiKP **PKiKP 23 29 08.9 +3.8**
comp=Z,7.5nm,1.7s
SQTA Sankt Quirin 106.65 44 *ep*PKiKP **PKiKP 23 29 12.2 +6.8**
comp=Z,8.1nm,1.3s
MOTA Moosalm 106.66 44 *ep*PKiKP **PKiKP 23 29 12.3 +6.9**
comp=Z,13nm,2.1s
R33M Jennings River 106.73 331 IAMs_20 IAMs_20 00 11 55.2
comp=Z,965nm,21.0s
Q32M Nakina River 106.99 330 IAMs_20 IAMs_20 00 18 04.7

comp=Z,1µm,21.0s
R32K Eaglecrest 107.52 329 IAMs_20 IAMs_20 00 13 21.9
comp=Z,910nm,20.0s
BESE Bessie Mountai 107.84 329 IAMs_20 IAMs_20 00 13 41.4
comp=Z,888nm,18.0s
P32M Atlin 107.96 331 IAMs_20 IAMs_20 00 13 06.5
comp=Z,1µm,20.0s
S31K Pelican 108.08 328 IAMs_20 IAMs_20 00 20 20.6
comp=Z,1µm,20.0s
BIOA Bad Ischl, Aus 108.31 45 *ep*PKiKP **PKiKP 23 29 14.7 +6.4**
comp=Z,6.2nm,1.2s
GERES GERESS Array B 108.92 44 PKiKP **PKiKP 23 29 09.5 0.0**
comp=Z,1.4nm,0.7s,baz=238,slow=1.9,SNR=10
GERES PKKPbc **PKKPbc 23 40 17.4 -0.7**
comp=Z,0.6nm,0.8s,baz=289,slow=4.9,SNR=3.7
STKA Stephens Creek 109.48 205 PKiKP **PKiKP 23 29 13.4 +2.2**
comp=Z,1.6nm,0.9s,baz=166,slow=19,SNR=3.5
O30N Mendenhall 109.61 331 IAMs_20 IAMs_20 00 13 33.2
comp=Z,1µm,20.0s
M31M Drury Creek, Y 109.76 333 IAMs_20 IAMs_20 00 21 05.9
comp=Z,2µm,19.0s
C36M Paulatuk 110.84 341 IAMs_20 IAMs_20 00 17 57.0
comp=Z,1µm,20.0s
M30M Minto, Yukon 110.90 332 IAMs_20 IAMs_20 00 21 49.9
comp=Z,1µm,19.0s
L29M L29M 111.70 332 IAMs_20 IAMs_20 00 22 22.6
comp=Z,1µm,19.0s
J30M Hart River 111.81 334 IAMs_20 IAMs_20 00 21 00.4
comp=Z,1µm,21.0s
K29M Barlow Dome 111.86 333 IAMs_20 IAMs_20 00 16 29.7
comp=Z,1µm,18.0s
KONO Kongsberg 112.12 32*c i*PKiKP **PKiKP 23 29 14.2 -0.9**
KONO pmax pmax
comp=Z,50nm,2.5s
I30M Mount Dempster 112.18 335 IAMs_20 IAMs_20 00 24 19.8
comp=Z,1µm,19.0s
A36M Sachs Harbour 112.86 343 IAMs_20 IAMs_20 00 19 04.4
comp=Z,2µm,21.0s
L27K Beaver Creek, 113.13 331 IAMs_20 IAMs_20 00 22 40.4
comp=Z,1µm,20.0s
NOA NORSAR Array B 113.48 31 PKiKP **PKiKP 23 29 18.1 +0.4**
comp=Z,1.0nm,0.7s,baz=244,slow=2.2,SNR=4.6
I28M Miner Creek 113.58 334 IAMs_20 IAMs_20 00 17 57.7
comp=Z,1µm,19.0s
HFS Hagfors 114.17 33 PKiKP PKPdf 23 29 18.2 -0.8
comp=Z,4.4nm,0.7s,baz=195,slow=4.5,SNR=9.6
I27K Kandik River 114.26 334 IAMs_20 IAMs_20 00 24 52.8
comp=Z,1µm,18.0s
DOT Dot Lake 114.29 331 IAMs_20 IAMs_20 00 17 04.9
comp=Z,1µm,19.0s
E29M Blow River 114.35 337 IAMs_20 IAMs_20 00 22 14.8
comp=Z,1µm,20.0s
SCRK Sand Creek 114.41 332 IAMs_20 IAMs_20 00 16 35.9
comp=Z,1µm,20.0s
J26L Joseph Creek 114.49 332 IAMs_20 IAMs_20 00 16 58.2
comp=Z,1µm,20.0s
KWP Kalwaria Pacla 114.55 46 *e*PKP **PKiKP 23 29 21.1 +1.0**
E28M Babbage River 114.98 337 IAMs_20 IAMs_20 00 21 52.5
comp=Z,1µm,20.0s
E27K Coleen River 115.46 336 IAMs_20 IAMs_20 00 25 34.3
comp=Z,1µm,19.0s
PRP Porcupine Dome 115.68 333 IAMs_20 IAMs_20 00 26 49.3
comp=Z,1µm,19.0s
D27M Malcolm River 115.74 338 IAMs_20 IAMs_20 00 22 27.5
comp=Z,1µm,21.0s
HDA Harding Lake 115.77 332 IAMs_20 IAMs_20 00 22 53.8
comp=Z,1µm,22.0s
CSS Mathiatis 115.87 64 IAMs_20 IAMs_20 00 20 07.6
comp=Z,1µm,22.0s
ILAR Eielson Array 115.89 332 PKP **PKPdf 23 29 22.4 +0.2**
comp=Z,1.3nm,0.5s,baz=177,slow=0.8,SNR=17
ILAR Eielson Array 115.89 332 PKPdf 23 29 21.6 -0.6
ILAR Eielson Array 115.89 332 PKiKP **PKPdf 23 29 21.6 -0.6**
CCB Clear Creek Bu 116.20 332 IAMs_20 IAMs_20 00 28 01.3
comp=Z,1µm,20.0s
MCK McKinley 116.30 331 IAMs_20 IAMs_20 00 23 32.8
comp=Z,1µm,21.0s
COLA College 116.31 332 IAMs_20 IAMs_20 00 17 53.2
comp=Z,1µm,19.0s
SUW Suwalki 116.49 41 *e*PKP **PKPdf 23 29 23.3 -0.3**
MMAI Mount Meron Ar 116.64 67 PKP **PKPdf 23 29 25.1 +0.3**
comp=Z,1.6nm,0.8s,baz=204,slow=8.8,SNR=3.9
MILM Milestii Mici 117.30 50 *i* PKP **PKPdf 23 29 24.0 -1.4**
comp=Z,45nm,1.3s
MILM *e*L L 00 12 44.0
MILM LRM MLR 00 22 00.0
comp=Z,1µm,21.0s
KIS Kishinev 117.33 50 *e*P **PKPdf 23 29 24.0 -1.5**
KIS *e*L L 00 14 58.0
KIS LRM MLR 00 22 00.0
comp=Z,500nm,19.0s
F24K Squaw Lake 117.35 335 IAMs_20 IAMs_20 00 26 40.8
comp=Z,1µm,20.0s
ANTO Ankara 117.40 59 PKPdf 23 29 26.3 +0.3
ANTO Ankara 117.40 59 IAMs_20 IAMs_20 00 24 42.0
comp=Z,1µm,20.0s
ANTO Ankara 117.40 59 P **PKiKP 23 29 27.3 +1.3**
ANTO Ankara 117.40 59 PKiKP **PKPdf 23 29 26.3 +0.3**
MLY Manley 117.51 332 IAMs_20 IAMs_20 00 27 20.9
comp=Z,1µm,20.0s
D25K Kavik River 117.52 337 IAMs_20 IAMs_20 00 22 18.1
comp=Z,1µm,19.0s
CTAO Charters Tower 117.89 216 IAMs_20 IAMs_20 00 15 08.1
comp=Z,1µm,18.0s
BR131 Keskin Array S 117.95 59 P **PKiKP 23 29 28.0 +0.8**
BR131 Keskin Array S 117.95 59 *i* PKiKP **PKiKP 23 29 27.6 +0.5**
BRTR Keskin Array B 117.95 59 PKP **PKPdf 23 29 27.2 +0.1**
comp=Z,2.4nm,0.7s,baz=206,slow=2.5,SNR=16
BRTR PP **PP 23 30 36.0 -5.9**
comp=Z,1.8nm,0.8s,baz=231,slow=7.8,SNR=5.7
BRTR PKKPbc **PKKPab 23 39 49.0 +0.2**
comp=Z,2.1nm,1.2s,baz=61,slow=7.6,SNR=4.3
BRTR Keskin Array B 117.95 59 PKPdf **PKPdf 23 29 26.1 -1.0**
BRTR Keskin Array B 117.95 59 PKiKP **PKPdf 23 29 26.1 -1.0**
H21K Melozitna Rive 118.54 332 IAMs_20 IAMs_20 00 29 09.4
comp=Z,1µm,19.0s
AKASG Malin Array Be 118.84 46 PKP **PKPdf 23 29 27.8 -0.5**
comp=Z,3.4nm,0.5s,baz=262,slow=2.8,SNR=14
AKASG PKKPbc **PKKPbc 23 39 45.6 +1.6**
comp=Z,0.3nm,0.3s,baz=61,slow=3.2,SNR=4.1
AKASG Malin Array Be 118.84 46 PKPdf **PKPdf 23 29 28.0 -0.2**
AKBB Malin Array Si 118.84 46*c i*PKiKP **PKPdf 23 29 28.1 -0.1**
E22K Anaktuvuk Pass 118.96 335 IAMs_20 IAMs_20 00 27 41.9
comp=Z,1µm,20.0s
MNK Minsk 119.26 42 *i* PKiKP **PKiKP 23 29 31.0 +2.0**
MNK *i* 23 30 51.9
MNK *i* PPP PPP 23 33 23.4
MNK *i* 23 36 43.0
MNK *i* SS SS 23 47 15.6 +4.0
MNK *i* SSS SSS 23 51 40.2
MNK pmax pmax
comp=N,11nm,0.8s
MNK pmax pmax
comp=Z,32nm,0.7s
MNK pmax pmax
comp=E,11nm,0.8s
MNK MLR MLR
comp=E,899nm,18.0s
MNK MLR MLR
comp=N,868nm,19.0s
ASAR Alice Springs 119.64 202 PKP **PKPdf 23 29 29.7 -1.2**
comp=N,1.5nm,0.8s,baz=150,slow=2.3,SNR=11
ASAR PKKPbc **PKKPbc 23 39 41.2 +0.3**
comp=N,1.4nm,0.6s,baz=340,slow=3.0,SNR=13
ASAR Alice Springs 119.64 202 PKPdf **PKPdf 23 29 29.0 -1.9**
F20K Avaraart Lake 120.08 333 IAMs_20 IAMs_20 00 30 28.7
comp=Z,1µm,20.0s
SIM Simferopol' 120.10 54 *e*PKiKP **PKiKP 23 29 31.5 +0.5**
SIM 23 30 59.0
SIM PS **PS 23 40 47.0 +0.7**
SIM pmax pmax
comp=Z,12nm,1.0s
SIM pmax pmax
comp=Z,140nm,11.0s
SIM pmax pmax
comp=E,300nm,15.0s
FINES FINESS Array B 120.31 34 PKP **PKPdf 23 29 30.8 +0.1**
comp=E,4.0nm,0.7s,baz=185,slow=1.8,SNR=14
FINES PKKPbc **PKKPab 23 39 38.3 +1.3**
comp=E,3.4nm,1.0s,baz=97,slow=6.1,SNR=7.1
G19K Purcell Mounta 120.36 332 IAMs_20 IAMs_20 00 30 12.3
comp=Z,1µm,18.0s
KBS Kingsbay 120.69 13 IAMs_20 IAMs_20 00 20 54.8
comp=Z,1µm,21.0s
RAYN Ar Rayn 120.70 81 PKPdf **PKiKP 23 29 33.4 +0.5**
RAYN Ar Rayn 120.70 81 IAMs_20 IAMs_20 00 30 24.2
comp=Z,1µm,20.0s

RAYN **Ar Rayn** 120.70 81 P PKiKP **PKiKP** 23 29 33.9 +1.0
RAYN **Ar Rayn** 120.70 81 PKiKP **PKiKP** 23 29 33.4 +0.5
SPITS **Spitsbergen Ar** 121.33 14 PKP **PKPdf** 23 29 31.8 -0.5
comp=Z,9.3nm,1.0s,baz=224,slow=5.8,SNR=4.5
ARCES **ARCESS Array B** 121.93 24 PKP **PKPdf** 23 29 34.1 +0.4
comp=Z,3.4nm,0.7s,baz=327,slow=2.0,SNR=9.3
ARCES **ARCESS Array B** 121.93 24 PKPdf **PKPdf** 23 29 33.4 -0.3
ARCES **ARCESS Array B** 121.93 24 PKiKP **PKPdf** 23 29 33.4 -0.3
ANN **Anapa** 122.30 55 *i* PKiKP **PKPdf** 23 29 35.4 +0.3
ANN *e* 23 31 08.8
ANN pmax pmax
comp=Z,183nm,3.5s
WRA **Warramunga Arr** 122.97 204 PKP **PKPdf** 23 29 36.3 -1.0
comp=Z,4.8nm,0.8s,baz=168,slow=1.6,SNR=29
WRA PKKPbc **PKKPbc** 23 39 28.1 -0.2
comp=Z,1.0nm,0.7s,baz=340,slow=3.9,SNR=6.0
WRA **Warramunga Arr** 122.97 204 PKPdf **PKPdf** 23 29 35.6 -1.7
WRAB **Tennant Creek** 122.97 204*c* *i* PKiKP **PKPdf** 23 29 37.8 +0.5
WRAB pmax pmax
comp=Z,9.0nm,0.8s
SOC **Sochi** 123.52 57 *e*PKiKP **PKPdf** 23 29 36.5 -1.0
SOC *e*PPP PPP 23 33 58.5
SOC *e*PS **PS** 23 41 19.0 +2.3
SOC *e*SSS SSS 23 52 42.0
SOC pmax pmax
comp=Z,24nm,0.8s
OBN **Obninsk** 124.28 43*d* *i* PKiKP **PKPdf** 23 29 38.9 +0.4
OBN *e* 23 31 23.8
OBN *e*PPP PPP 23 34 04.5
OBN pmax pmax
comp=Z,86nm,1.7s
OBN MLR MLR
comp=Z,2μm,19.0s
ABTO **Aybut** 124.33 91 P **PKiKP** 23 29 40.9 +0.7
LABN **Labinsk** 124.51 56 *i* PKiKP **PKiKP** 23 29 40.3 +0.6
LABN pmax pmax
comp=Z,20nm,0.7s
APA **Apatity** 124.53 27 *i* PKiKP **PKPdf** 23 29 38.2 -0.5
APA MLR MLR
comp=Z,2μm,18.9s
ERBR **Yeremizino-Bor** 124.62 54 *i* PKiKP **PKiKP** 23 29 40.4 +0.5
ERBR pmax pmax
comp=Z,24nm,0.8s
PSA00 **Pilbara Seismi** 124.68 188 PKPdf **PKPdf** 23 29 38.4 -2.1
MOS **Moscow** 124.98 42 *e*PKiKP **PKPdf** 23 29 39.2 -0.7
MOS *e* 23 31 28.4
MOS *e*PS **PS** 23 41 27.3 -1.9
MOS pmax pmax
comp=Z,46nm,0.9s
MOS MLR MLR
comp=E,1μm,21.0s
MOS MLR MLR
comp=Z,2μm,21.0s
WHFO **Wadi Hawf** 125.00 91 P **PKiKP** 23 29 42.0 +0.5
VSR **Storozhevoye** 125.04 48 *e*PKiKP **PKPdf** 23 29 37.4 -2.7
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR MLR MLR
comp=Z,2μm,27.0s
VORD **Divnogorie** 125.06 48 *e*PKiKP **PKPdf** 23 29 37.9 -2.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORR **Voronezh** 125.15 47 *e*PKiKP **PKPdf** 23 29 40.5 +0.2
VORR pmax pmax
comp=Z,27nm,0.5s
RBK **Rabkut** 125.16 92 P **PKiKP** 23 29 42.4 +0.5
LPSR **Galich'ya Gora** 125.17 46 *e*PKiKP **PKPdf** 23 29 38.5 -1.8
LPSR pmax pmax
comp=Z,30nm,0.9s
LPSR MLR MLR
comp=Z,700nm,12.0s
DOK **Doka** 125.63 90 P **PKPdf** 23 29 42.8 +0.5
KIV **Kislovodsk** 125.69 57 PKPdf **PKPdf** 23 29 40.2 -1.6
KIV **Kislovodsk** 125.69 57 P **PKiKP** 23 29 43.1 +0.9
KIV **Kislovodsk** 125.69 57 *i* PKiKP **PKPdf** 23 29 41.5 -0.3
KIV *e* 23 31 32.5
KIV *e*PS **PS** 23 41 36.3 +0.2
KIV *e*SS SS 23 48 32.5 -1.8
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,591nm,23.0s
KBZ **Khabaz** 125.78 57 PKP **PKPdf** 23 29 42.4 +0.6
comp=Z,5.7nm,0.8s,baz=239,slow=4.9,SNR=15
KBZ **Khabaz** 125.78 57*c* *i* PKiKP **PKiKP** 23 29 42.5 +0.3
DMTO **DMTO** 125.88 92 P **PKiKP** 23 29 43.9 +0.7
GNI **Garni** 126.16 62 IAMs_20 IAMs_20 00 32 25.9
comp=Z,928nm,19.0s
GNI **Garni** 126.16 62 P **PKiKP** 23 29 44.7 +1.4
GNI **Garni** 126.16 62*c* *i* PKiKP **PKiKP** 23 29 44.1 +0.8
GNI pmax pmax
comp=Z,22nm,1.3s
GOF **Gofitskoye** 126.21 56*ce* PKiKP **PKiKP** 23 29 43.6 +0.6
SHAO **Shalim** 126.59 92 P **PKiKP** 23 29 45.2 +0.6
VRH **Novokhopyorsk** 126.61 48 *e*PKiKP **PKPdf** 23 29 42.5 -0.6
VRH pmax pmax
comp=Z,19nm,0.8s
KLMR **Klimovskoe** 126.62 36 *e*PKiKP **PKPdf** 23 29 43.2 +0.3
KLMR pmax pmax
comp=Z,42nm,1.0s
MZR **Muzera** 127.07 85 P **PKiKP** 23 29 46.1 +0.6
UMZA **Um Al Zommool** 128.34 86 P **PKiKP** 23 29 48.5 +0.5
AKT **Akhty** 128.69 61 *i* PKiKP **PKPdf** 23 29 48.2 +0.6
AKT pmax pmax
comp=Z,44nm,1.2s
MAK **Makhachkala** 128.87 59*c* *i* P **Pdif** 23 26 27.7 -6.0
MAK *e* 23 36 48.3
MAK *e*SSS SSS 23 53 58.8
MAK pmax pmax
comp=Z,144nm,0.9s
DQM **DQM** 129.08 91 P **PKiKP** 23 29 49.9 +0.4
ALNE **Al Ain** 129.40 85 P **PKiKP** 23 29 50.9 +0.8
SNR=5.1
FAQ **Al Faqa, Dubai** 129.56 84 P **PKiKP** 23 29 50.6 +0.2
NAZ **Nazwa, Dubai** 129.71 84 P **PKPdf** 23 29 50.6 +0.7
ARQ **Araqi** 129.74 86 P **PKPdf** 23 29 50.4 +0.3
ASHO **Ashiyiah** 129.92 85 P **PKPdf** 23 29 51.1 +0.8
MHTO **MHTO** 129.92 90 P **PKPdf** 23 29 50.7 +0.3
HATD **Hatta, Dubai** 130.03 84 P **PKPdf** 23 29 51.1 +0.6
BSY **Bisya** 130.05 87 P **PKPdf** 23 29 49.9 -0.8
SOHO **SOHO** 130.09 85 P **PKPdf** 23 29 50.8 +0.2
UOSS **Minazif** 130.14 84 P **PKPdf** 23 29 51.1 +0.4
MASF **Masafi** 130.28 84 P **PKPdf** 23 29 51.3 +0.2
BELG **Belogornoye** 130.40 47 *i* PKiKP **PKPdf** 23 29 50.9 +0.6
HOQ **Hoqain** 130.50 86 P **PKPdf** 23 29 51.9 +0.4
SHME **Shamm** 130.53 83 P **PKiKP** 23 29 52.5 +0.2
JMDO **Jabal Madar** 130.65 88 P **PKPdf** 23 29 51.2 -0.6
SMDO **Samad** 130.90 87 P **PKPdf** 23 29 52.7 +0.3
SNR=11
WSAR **Wadi Sarin** 131.46 88 P **PKiKP** 23 29 54.5 +0.2
SNR=7.0
WBK **Wadi Bani Khal** 131.47 88 P **PKPdf** 23 29 54.2 +0.8
SNR=6.2
KIRV **Kirov** 131.58 39*c* *i* PKiKP **PKiKP** 23 29 53.7 +0.4
JLN **Jalan Bani Buh** 131.64 89 P **PKiKP** 23 29 54.6 0.0
SNR=8.2
BILL **Bilibino** 134.39 335 **PKPdf** 23 29 56.8 -0.7
BILL **Bilibino** 134.39 335*c* *i* PKiKP **PKiKP** 23 29 59.4 +0.6
BILL pmax pmax
comp=Z,44nm,1.7s
ARTI **Arti** 136.59 41 PKPdf **PKPdf** 23 30 00.8 -1.1
ARTI **Arti** 136.59 41 *i* PKiKP **PKiKP** 23 30 03.4 -0.2
ARTI MLR MLR
comp=Z,1μm,19.0s
MMRI **Maumere** 137.03 193 IAMs_20 IAMs_20 00 24 13.3
comp=Z,891nm,20.0s
TWSI **Taliwang, Sumb** 137.66 186 PKP **PKPdf** 23 30 06.2 +1.0
TWSI PKP **sPKPdf** 23 30 12.1 -0.2
SVE **Sverdlovsk** 137.75 40 *i* PKiKP **PKPdf** 23 30 05.0 +1.0
SVE pmax pmax
comp=Z,22nm,1.6s
SVE MLR MLR
comp=Z,1μm,22.0s
JAGI **Jajag, Banyuwa** 138.07 182 IAMs_20 IAMs_20 00 32 12.5
comp=Z,606nm,19.0s
ABKAR **Akbulak array** 138.11 52 PKPpre 23 29 52.8
PCJI **Pacitan** 138.31 177 PKP **PKPdf** 23 30 06.3 -0.1
RKPI **Ransiki, Papua** 139.77 214 PKP PKiKP 23 30 20.9 +9.4
KAPI **Kappang** 141.01 191 IAMs_20 IAMs_20 00 29 48.5
comp=Z,677nm,20.0s
TIXI **Tiksi** 141.06 352 PKPpre PKPpre 23 30 01.7
TIXI **Tiksi** 141.06 352 *i* PKiKP **PKPdf** 23 30 10.0 +0.4
MDSI **Maura Dua** 141.11 166 PKP **PKPdf** 23 30 11.9 +0.4
SWI **Sorong** 141.63 210 PKP **PKPdf** 23 30 10.9 -1.5

SEY **Seymchan** 141.83 332 PKhKP PKPpre 23 30 06.2
comp=Z,5.5nm,0.5s,baz=110,slow=5.5,SNR=8.9
SEY **Seymchan** 141.83 332 *i* PKiKP **PKPdf** 23 30 12.2 +1.0
SPSI **Sidrap Palu** 142.03 191 PKP **PKPdf** 23 30 14.7 +1.5
SANI **Sanana** 142.45 201 PKP **PKPdf** 23 30 07.8 -6.1
SANI **Sanana** 142.45 201 PKP **PKPdf** 23 30 12.0 -1.9
PETK **Petropavlovsk-** 142.99 315 PKhKP PKPpre 23 30 10.6
comp=Z,16nm,0.7s,baz=69,slow=5.9,SNR=18
PETK **Petropavlovsk-** 142.99 315 PKPpre 23 30 08.4
PETK **Petropavlovsk-** 142.99 315 PKHKP PKPpre 23 30 08.5
KBL **Kabul** 143.71 76 P PKPbc 23 30 13.5 +0.2
SNR=18
KBU **Kabul Universi** 143.78 76 PKP PKPab 23 30 12.2 -0.6
BORK **Borovoye** 144.04 44 *i* PKiKP PKPbc 23 30 14.0 +0.6
BVAR **Borovoye Array** 144.08 44 PKP PKPbc 23 30 14.9 +1.3
comp=Z,14nm,0.7s,baz=303,slow=2.4,SNR=41
MA2 **Magadan** 144.21 328 PKP **PKPab** 23 30 13.8 +0.4
comp=Z,35nm,0.8s,baz=137,slow=6.2,SNR=5.6
LUWI **Luwuk** 144.29 197 PKP **PKPab** 23 30 13.6 -1.4
TNTI **Ternate** 144.64 205 PKP **PKPdf** 23 30 17.6 -0.1
APSI **Ampana** 144.67 195 PKP **PKPdf** 23 30 18.5 +0.7
BKNI **Bangkinang** 144.93 159 PKP **PKPab** 23 30 14.6 -2.8
BKNI **Bangkinang** 144.93 159 IAMs_20 IAMs_20 00 35 21.1
comp=Z,772nm,20.0s
CHM **Chimkent** 144.96 63 *e*PKP **PKPab** 23 30 16.5 -0.3
CHM **Chimkent** 144.96 63 *e*PKiKP **PKPab** 23 30 16.4 -0.3
HYBB **Hyderabad (bro** 145.06 109 *e*PKPdf **PKPbc** 23 30 17.4 -0.4
HYBB *e*PKiKP pPKPbc 23 30 21.9 -1.3
BKB **Balikpapan** 145.06 187 PKP **PKPdf** 23 30 20.6 +2.1
DSRI **Dabo** 145.08 165 PKP **PKPab** 23 30 18.4 +0.5
BRLS **Borolday** 145.13 62 *e*PKP **PKPbc** 23 30 16.4 -0.9
BRLS *e*PP **PP** 23 33 35.9 -1.2
BRLS **Borolday** 145.13 62 *e*PKP2 **PKPbc** 23 30 16.3 -0.9
BRLS *e* 23 33 35.8
IUG **luzhnay** 145.27 63 *e*PKP **PKPbc** 23 30 17.2 -0.7
IUG *e*PP **PP** 23 33 37.5 -0.5
IUG **luzhnay** 145.27 63 *e*PKP2 **PKPbc** 23 30 17.1 -0.7
IUG *e* 23 33 37.4
MTKI **Muara Teweh, K** 145.52 183 PKP **PKPab** 23 30 20.3 +0.8
KMSI **Cibinong** 145.53 199 PKP **PKiKP** 23 30 25.1 +1.8
DZA **Taraz** 146.23 62 *e*PKP **PKPdf** 23 30 18.7 -1.0
DZA **Taraz** 146.23 62 *e*PKiKP **PKPdf** 23 30 18.6 -1.0
MPSI **Mapaga** 146.23 192 PKP **PKPdf** 23 30 20.9 +0.4
NIL **Nilore** 146.96 79 P **PKPbc** 23 30 23.2 0.0
BTLS **Baital** 148.02 58 *e*PKP **PKPdf** 23 30 22.9 +0.4
BTLS *e*PP **PP** 23 33 53.9 0.0
BTLS **Baital** 148.02 58 *e*PKiKP **PKPdf** 23 30 22.9 +0.4
BTLS *e* 23 33 53.9
EKS2 **Erkin-Say** 148.03 62 P **PKPbc** 23 30 25.0 -0.9
SNR=43
USP **Ospenovka** 148.52 61 P **PKPdf** 23 30 25.3 +1.9
SNR=37
AAK **Ala-Archa** 148.56 62 IAMs_20 IAMs_20 00 43 33.3
comp=Z,862nm,20.0s
AAK **Ala-Archa** 148.56 62 P **PKPbc** 23 30 26.2 -1.2
AAK **Ala-Archa** 148.56 62 P **PKiKP** 23 30 29.5 +0.6
SNR=18
AAK **Ala-Archa** 148.56 62 *i* PKiKP **PKPdf** 23 30 24.0 +0.3
UCH **Uchtor** 148.60 63 P **PKPbc** 23 30 26.5 -1.3
SNR=51
SGDS **Sogindy** 148.60 60 *e*PKP **PKPdf** 23 30 23.6 0.0
CHMS **Chumysh** 148.73 61 P **PKiKP** 23 30 29.3 +0.3
SNR=20
IPM **Ipoh** 148.84 156 IAMs_20 IAMs_20 00 38 24.8
comp=Z,726nm,20.0s
KBK **Karagaybulak** 148.90 62 P **PKiKP** 23 30 30.2 +0.7
SNR=18
SBUM **Sibu** 148.92 178 **PKPdf** 23 30 24.0 -0.9
SBUM IAMs_20 IAMs_20 00 36 56.1
comp=Z,870nm,20.0s
TKM2 **Tokmak 2** 149.35 61 P **PKPdf** 23 30 26.6 +1.6
SNR=19
KULM **Kulim** 149.46 155 IAMs_20 IAMs_20 00 37 32.4
comp=Z,797nm,20.0s
KURBB **Kurchatov Arra** 149.63 46 PKP **PKPdf** 23 30 26.3 +1.4
comp=Z,64nm,0.8s,baz=295,slow=2.9,SNR=47
KURBB PKPbc **sPKPdf** 23 30 30.5 -1.5
comp=Z,62nm,0.8s,baz=297,slow=3.1,SNR=132
KURBB PP **PP** 23 34 04.4 +1.5
comp=Z,18nm,1.1s,baz=289,slow=5.9,SNR=5.4
KURK **Kurchatov** 149.65 45 PKPdf **PKPdf** 23 30 24.1 -0.8
KURK **Kurchatov** 149.65 45 P **PKPdf** 23 30 26.9 +2.0
KURK **Kurchatov** 149.65 45 *i* PKHKP PKPpre 23 30 25.4
YAK **Yakutsk** 149.72 345 PKP **PKPdf** 23 30 24.1 -0.6
comp=Z,11nm,0.4s,baz=359,slow=2.0,SNR=5.1
YAK PKPbc **PKPbc** 23 30 29.4 0.0
comp=Z,94nm,0.8s,baz=296,slow=1.0,SNR=23
YAK **Yakutsk** 149.72 345 PKPdf **PKPdf** 23 30 24.4 -0.3
YAK **Yakutsk** 149.72 345 *e*PKHKP PKPpre 23 30 27.7
YAK *e* 23 34 06.1
YAK pmax pmax
comp=Z,119nm,0.9s
YAK pmax pmax
comp=N,25nm,1.5s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK pmax pmax
comp=N,389nm,3.5s
YAK pmax pmax
comp=Z,806nm,3.9s
YAK pmax pmax
comp=E,828nm,4.0s
KSH **Kashi** 149.76 68 PKPbc **PKPdf** 23 30 27.4 +1.7
KSH LR LR
comp=E,820nm,17.9s
KSH LR LR
comp=E,1μm,20.3s
KSH LR LR
comp=E,1μm,19.8s
ULHL **Ulahol** 149.88 63 P **PKPdf** 23 30 28.0 +2.1
SNR=52
TNSS **Tian-Shan** 150.33 61 *e*PKP **PKPdf** 23 30 26.4 -0.4
TNSS **Tian-Shan** 150.33 61 *e*PKiKP **PKPdf** 23 30 26.3 -0.5
MDOK **Medeo** 150.39 61 *e*PKP **PKPdf** 23 30 26.5 -0.1
MDOK **Medeo** 150.39 61 *e*PKiKP **PKPdf** 23 30 26.4 -0.1
TDK **Taldyqorghan** 151.08 57 *e*PKP **PKPdf** 23 30 27.5 +0.1
TDK **Taldyqorghan** 151.08 57 *e*PKiKP **PKPdf** 23 30 27.5 +0.1
SATY **Saty** 151.39 61 *e*PKP **PKPdf** 23 30 28.1 0.0
SATY **Saty** 151.39 61 *e*PKiKP **PKPdf** 23 30 28.1 0.0
ZALV **Zalesovo Beam** 151.55 36 PKP **PKPdf** 23 30 27.8 +0.1
comp=E,2.2nm,0.6s,baz=245,slow=3.1,SNR=20
ZALV PKPbc **PKiKP** 23 30 34.6 +0.2
comp=E,111nm,0.7s,baz=315,slow=2.9,SNR=207
ZALV **Zalesovo Beam** 151.55 36 PKPdf **PKPdf** 23 30 26.8 -0.9
ZALV **PKPbc** 23 30 33.8 -0.1
ZALV **Zalesovo Beam** 151.55 36 PKiKP **PKPdf** 23 30 26.8 -0.9
UZB **Uzynbulak** 151.82 60 *e*PKP **PKPdf** 23 30 28.8 0.0
UZB **Uzynbulak** 151.82 60 *e*PKiKP **PKPdf** 23 30 28.8 0.0
SHLS **Shalkode** 152.14 60 *e*PKP **PKPdf** 23 30 29.5 +0.2
SHLS **Shalkode** 152.14 60 *e*PKiKP **PKPdf** 23 30 29.4 +0.2
MAKZ **Makanchi** 153.05 52 **PKPbc** 23 30 35.8 -1.8
MAKZ **Makanchi** 153.05 52 PKiKP **PKPbc** 23 30 35.8 -1.8
MKAR **Makanchi Array** 153.25 51 PKP **PKPdf** 23 30 30.8 +0.2
comp=E,3.4nm,0.7s,baz=356,slow=0.7,SNR=18
MKAR PKPbc **PKiKP** 23 30 38.7 +0.5
comp=E,17nm,0.7s,baz=293,slow=1.8,SNR=44
MKAR **Makanchi Array** 153.25 51 **PKPdf** 23 30 30.1 -0.5
MKAR **PKPbc** 23 30 38.1 0.0
MKAR **Makanchi Array** 153.25 51 PKiKP **PKPdf** 23 30 30.1 -0.5
MKAR 23 30 38.1
YSS **Yuzhno-Sakhali** 153.98 309 *i* PKiKP **PKPbc** 23 30 39.2 -0.4
YSS *e* 23 34 27.7
YSS *e* 23 37 36.9
YSS *e*SS SS 23 54 07.3 +1.9
YSS pmax pmax
comp=Z,50nm,1.1s
ZSN **Zaisan** 154.67 49 *e*PKP **PKPdf** 23 30 32.2 -0.4
ZSN *e*PP **PP** 23 34 31.7 -0.1
ZSN **Zaisan** 154.67 49 *e*PKiKP **PKPdf** 23 30 32.2 -0.4
ZSN *e* 23 34 31.6
BOD **Bodaibo** 155.85 359 *e*PKP2 **PKPab** 23 31 00.7 +0.2
BOD pmax pmax
comp=Z,91nm,1.5s
ZEA **Zeya** 157.58 338 *e*PKP2 **PKPab** 23 31 05.0 -3.1
ZEA pmax pmax
comp=Z,20nm,1.7s
WMQ **Urumqi** 157.81 55 PKP **PKPdf** 23 30 38.3 +1.4
WMQ PKPab **PKPab** 23 31 10.9 +1.2
WMQ PP **PP** 23 34 50.3 +0.8
WMQ AMB AMB
comp=Z,1μm,8.3s
WMQ LR LR
comp=Z,1μm,22.7s
WMQ LR LR
comp=Z,910nm,17.1s
WMQ LR LR
comp=Z,840nm,23.8s
MJAR **Matsushiro Arr** 159.29 285 PKP **PKPdf** 23 30 38.6 -0.2
comp=Z,0.5nm,0.3s,baz=88,slow=3.7,SNR=1.6
MJAR PKPab **PKPab** 23 31 16.5 +0.2
comp=Z,14nm,0.9s,baz=112,slow=2.7,SNR=11
MJAR **Matsushiro Arr** 159.29 285 **PKPdf** 23 30 37.2 -1.6
MJAR **PKPab** 23 31 16.4 +0.1
MJAR **Matsushiro Arr** 159.29 285 PKIKP **PKPdf** 23 30 37.2 -1.6
MJAR 23 31 16.4
SHL **Shillong** 159.87 108 P **PKPdf** 23 30 40.7 +0.7
SNR=12
MOY **Mondy** 159.98 22 *e*PKP2 **PKPab** 23 31 20.4 +1.6
MOY pmax pmax
comp=Z,96nm,2.2s
CMAR **Chiang Mai Arr** 160.23 137 PKP **PKPdf** 23 30 41.4 +1.0
comp=Z,2.0nm,0.3s,baz=249,slow=2.4,SNR=20
CMAR PKPab **PKPab** 23 31 20.4 -0.2
comp=Z,3.9nm,0.4s,baz=233,slow=4.3,SNR=10
CMAR **Chiang Mai Arr** 160.23 137 **PKPdf** 23 30 40.0 -0.4
CMAR **PKPab** 23 31 18.9 -1.7
CMAR **Chiang Mai Arr** 160.23 137 PKIKP **PKPdf** 23 30 40.0 -0.4
CMAR 23 31 18.9
HEH **HeiHe** 160.38 332 PKP **PKPdf** 23 30 45.6 +6.1
HEH PKPab **PKPab** 23 31 19.4 -1.0
CHTO **Chiang Mai** 160.52 136 PKPdf **PKPdf** 23 30 38.5 -2.2
CHTO PKPab **PKPab** 23 31 19.8 -2.1
CHTO **Chiang Mai** 160.52 136 PKIKP **PKPdf** 23 30 38.5 -2.2
CHTO 23 31 19.8
LSA **Lhasa** 160.89 96 P **PKPdf** 23 30 43.5 +2.1
ZAK **Zakamensk** 161.81 21 *e*PKIKP **PKPdf** 23 30 39.2 -2.0
ZAK pmax pmax
comp=Z,21nm,2.0s
HILR **Hailar Array B** 163.39 345 PKP **PKPdf** 23 30 42.0 -0.7
comp=Z,2.0nm,0.5s,baz=83,slow=4.6,SNR=4.6
HILR PKPab **PKPab** 23 31 33.8 +0.2
comp=Z,8.2nm,0.6s,baz=28,slow=4.0,SNR=10
BNX **BinXian** 163.73 322 PKP **PKPdf** 23 30 41.6 -1.5
TNCH **TengChong** 164.64 120 PKP **PKPdf** 23 30 45.0 +0.2
TNCH PKPab **PKPab** 23 31 40.0 -0.1
TNCH PP **PP** 23 35 30.8 +4.5
TNCH SS SS 23 56 02.8 +3.8
TNCH AMB AMB
comp=Z,270nm,5.1s
TNCH LR LR
comp=Z,650nm,19.2s
TNCH LR LR
comp=Z,600nm,19.3s
TNCH LR LR
comp=Z,900nm,18.8s
GOMU **GeErMu** 164.78 75 PKP **PKPdf** 23 30 44.8 -0.1
GOMU PP **PP** 23 35 30.3 +2.6
GOMU SKKS 23 42 18.5
GOMU SS SS 23 56 01.3 -0.2
GOMU LR LR
comp=Z,730nm,18.3s
GOMU LR LR
comp=Z,340nm,18.3s
GOMU LR LR
comp=Z,950nm,19.1s
SONM **Songino Array** 164.98 18 PKP **PKPdf** 23 30 44.6 +0.2
comp=Z,9.3nm,1.2s,baz=259,slow=0.7,SNR=26
SONM PKPab **PKPab** 23 31 41.0 +0.2
comp=Z,6.1nm,0.7s,baz=321,slow=4.7,SNR=11
SONM PP **PP** 23 35 26.7 -0.2
comp=Z,2.0nm,0.9s,baz=310,slow=4.5,SNR=3.6
ULN **Ulaanbaatar** 165.11 16 PKPdf **PKPdf** 23 30 43.9 -0.6
ULN PKPab **PKPab** 23 31 42.5 +1.2
ULN **Ulaanbaatar** 165.11 16 P **PKPdf** 23 30 45.1 +0.7
ULN **Ulaanbaatar** 165.11 16 PKIKP **PKPdf** 23 30 43.9 -0.6
QIZ **Qiongzhong** 165.12 168 PKP **PKPdf** 23 30 44.4 -0.7
QIZ PP **PP** 23 35 29.4 +2.1
QIZ SS SS 23 56 05.3 +4.1
QIZ LR LR
comp=Z,530nm,16.1s
QIZ LR LR
comp=Z,620nm,26.5s
QIZ LR LR
comp=Z,1μm,23.3s
JNU **Nakatsue** 165.15 273 PKPab **PKPab** 23 31 42.5 +0.3
comp=Z,11nm,0.8s,baz=67,slow=10,SNR=4.1
JNU **Nakatsue** 165.15 273 PKPab **PKPab** 23 31 41.7 -0.4
CN2 **Changchun** 166.06 320 *e*PKP **PKPdf** 23 30 42.0 -3.2
KSRS **Korea Array** 167.38 292 PKP **PKPdf** 23 30 47.1 +0.8
comp=Z,4.0nm,1.0s,baz=119,slow=1.5,SNR=8.1
KSRS PKPab **PKPab** 23 31 53.0 +1.4
comp=Z,6.8nm,0.9s,baz=82,slow=4.1,SNR=7.2
KSAR **Wonju Array Be** 167.41 292 PKPdf **PKPdf** 23 30 45.1 -1.2
KSAR PKPab **PKPab** 23 31 50.1 -1.7
KSAR **Wonju Array Be** 167.41 292 PKIKP **PKPdf** 23 30 45.2 -1.2
KSAR 23 31 50.1
KMI **Kunming** 167.57 131 ⇑PKP **PKPdf** 23 30 47.5 +0.3
PZH **PanZhiHua** 167.83 123 PKP **PKPdf** 23 30 47.3 +0.1
PZH PKPab **PKPab** 23 31 53.8 -0.3
PZH PP **PP** 23 35 40.4 -2.3
PZH SS SS 23 56 31.9 +0.7
PZH AMB AMB
comp=Z,450nm,6.5s
PZH LR LR
comp=Z,500nm,21.6s
PZH LR LR
comp=Z,490nm,19.1s
PZH LR LR
comp=Z,610nm,21.2s
GTA **Gaotai** 167.87 58 *e*PKP **PKPdf** 23 30 47.3 +0.4
GTA PKPab **PKPab** 23 31 55.0 +1.0
GTA PP **PP** 23 35 42.4 -0.6
GTA AMB AMB
comp=Z,1μm,8.7s
GTA LR LR
comp=Z,1μm,18.2s
GTA LR LR
comp=Z,710nm,20.4s
GTA LR LR
comp=Z,2μm,18.5s
GYA **Guiyang** 170.89 140 PKP **PKPdf** 23 30 47.8 -1.3
GYA PKPab **PKPab** 23 32 07.6 +0.1
GYA PP **PP** 23 35 59.8 +2.2
GYA SS SS 23 57 05.5 +4.9
GYA LR LR
comp=Z,1μm,19.6s
DL2 **Dalian** 171.38 310 PKP PKPdf 23 30 35.8 -13
DL2 PP **PP** 23 35 58.9 -1.3
CD2 **Chengdu** 171.61 107 PKP **PKPdf** 23 30 50.1 +0.9
CD2 pPKP pPKPdf 23 30 52.3 -2.2
CD2 sPKP sPKPdf 23 30 54.4 -1.9
CD2 PP **PP** 23 36 01.1 -0.9
CD2 SKS **SKSdf** 23 37 51.8 -0.4
CD2 AMB AMB
comp=Z,1μm,6.2s
CD2 LR LR
comp=Z,2μm,16.9s
CD2 LR LR
comp=Z,2μm,20.8s
CD2 LR LR
comp=Z,1μm,19.6s
LZDM **Lanzhou Array** 171.92 71 PKP **PKPdf** 23 30 50.6 +1.0
comp=Z,0.9nm,0.3s,baz=220,slow=3.8,SNR=4.3
LZDM PKPab **PKPab** 23 32 12.6 +0.3
comp=Z,0.8nm,0.3s,baz=286,slow=7.2,SNR=8.5
LZDM PP **PP** 23 36 04.2 +0.3
comp=Z,1.1nm,0.3s,baz=261,slow=5.7,SNR=4.8
LZH **Lanzhou** 172.01 70 *e*PKP **PKPdf** 23 30 50.0 +0.6
LZH PP **PP** 23 36 07.1 +3.0
LZH AMB AMB
comp=Z,2μm,5.1s
LZH LR LR
comp=Z,870nm,18.1s
LZH LR LR
comp=Z,1μm,16.8s
LZH LR LR
comp=Z,1μm,17.5s
BTO **Baotou** 172.66 19 *e*PKP **PKPdf** 23 30 50.3 +0.8
BTO PP **PP** 23 36 08.8 +3.0
BTO SS SS 23 57 17.4 +0.5
BTO LR LR
comp=Z,3μm,18.6s
BTO LR LR
comp=Z,3μm,19.3s
BTO LR LR
comp=Z,2μm,16.8s
SSE **Sheshan** 172.71 251 PKP **PKPdf** 23 30 47.1 -2.5
SSE PP **PP** 23 36 09.3 +2.0
SSE AMB AMB

comp=Z,400nm,6.9s
SSE LR LR
comp=Z,490nm,21.8s
HHC Hu-ho-hao-te 172.74 9⇑ *i*PKP **PKPdf** **23 30 49.3 -0.2**
HHC PP **PP** **23 36 07.6 +1.6**
HHC SS SS 23 57 20.3 +2.8
HHC AMB AMB
comp=Z,1μm,11.8s
HHC LR LR
comp=Z,940nm,18.5s
HHC LR LR
comp=Z,730nm,20.2s
HHC LR LR
comp=Z,2μm,19.3s
BJI Beijing 173.20 340 PKP **PKPdf** **23 30 48.4 -1.1**
BJI PP **PP** **23 36 10.8 +2.6**
BJI AMB AMB
comp=Z,300nm,5.4s
BJI LR LR
comp=Z,450nm,21.9s
BJI LR LR
comp=Z,380nm,21.9s
BJI LR LR
comp=Z,510nm,23.5s
NJ2 Nanjing 174.91 253 *e*PKP **PKPdf** **23 30 50.1 -0.3**
TIA Tai'an 175.85 309 PKP **PKPdf** **23 30 50.3 -0.2**
TIA PP **PP** **23 36 24.9 +2.8**
TIA SKKS 23 43 13.3
TIA SS SS 23 57 51.5 +2.2
TIA LR LR
comp=Z,800nm,20.3s
TIA LR LR
comp=Z,490nm,19.6s
TIA LR LR
comp=Z,1μm,18.2s
TIY Taiyuan 175.94 8 *e*PKP **PKPdf** **23 30 52.1 +1.5**
TIY PKPab **PKPab** **23 32 31.0 +1.5**
TIY PP **PP** **23 36 22.1 +0.7**
TIY SKKS 23 43 14.0
TIY SS SS 23 57 43.9 -4.3
TIY LR LR
comp=Z,900nm,18.0s
TIY LR LR
comp=Z,530nm,18.1s
TIY LR LR
comp=Z,850nm,18.2s
HNS HongShan 176.07 341 ⇓PKP **PKPdf** **23 30 51.5 +1.0**
HNS PKPab **PKPab** **23 32 30.3 +0.3**
HNS PP **PP** **23 36 22.1 0.0**
HNS SKKS 23 43 14.3
HNS SS SS 23 57 45.6 -3.9
HNS AMB AMB
comp=Z,940nm,9.8s
HNS LR LR
comp=Z,2μm,20.8s
HNS LR LR
comp=Z,840nm,17.3s
HNS LR LR
comp=Z,2μm,20.6s
XAN Xi'an 176.49 83 PKP **PKPdf** **23 30 51.3 +0.5**
XAN PP **PP** **23 36 27.5 +1.6**
XAN SS SS 23 57 55.8 -0.9
XAN AMB AMB
comp=Z,3μm,7.7s
XAN LR LR
comp=Z,2μm,20.2s
XAN LR LR
comp=Z,1μm,18.3s
XAN LR LR
comp=Z,2μm,18.6s
WHN Wuhan 176.70 199 PKP **PKPdf** **23 30 53.0 +2.2**
WHN PKPab **sPKPab** **23 32 37.9 -2.0**
WHN LR LR
comp=Z,3μm,17.6s
LYN LuoYang 178.98 32 PKP **PKPdf** **23 30 51.8 +0.8**
LYN PKPab **pPKPab** **23 32 43.8 -4.4**
LYN PP **PP** **23 36 35.3 -0.8**
LYN AMB AMB
comp=Z,2μm,7.8s
LYN LR LR
comp=Z,2μm,17.2s
LYN LR LR
comp=Z,1μm,20.6s
LYN LR LR
comp=Z,3μm,19.9s

IDC ***19*** *23:33:55.4±0.5, 84°.80N×102°.32E, h0km, mb3.9/25, mbtmp3.9/27, ML3.7/2, MS4.2/2, Error ellipse: s-maj=14.0km s-min=12.8km az=161.0*
NEIC ***19*** *23:33:57.4±1.6, 84°.83N±0°.07×100°.7E±0°.9, h10km±1km, mb4.6/64, Error ellipse: s-maj=15.3km s-min=9.3km az=56.0*
ISC 19 23:33:57.0±0.4, **84°.89N**±0°.06×**100°.48E**±0°.05, **h10**km, **n117, σ1§46/118, mb4.5/56, MS4.0/3, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZFI2	**Zemlya Franca-**	**7.38**	**266**	*e*P		**Pn**	**23 35 45.7**	**+1.2**
ZFI2				*e*S		**Sn**	**23 37 05.0**	**-3.1**
	21nm,1.2s							
OMEGA	**Omega**	**7.39**	**266**	*e*P		**Pn**	**23 35 45.6**	**+0.9**
OMEGA				*e*S		**Sn**	**23 37 04.7**	**-3.7**
NOR	**Nord**	**11.73**	**320**	*i* P		Pn	23 36 50.2	+6.2
KBS	**Kingsbay**	**12.15**	**293**	Pn		**Pn**	**23 36 50.2**	**+0.5**
SPITS	**Spitsbergen Ar**	**12.46**	**288**	Pn		**Pn**	**23 36 54.7**	**+0.7**
	baz=43,slow=14							
SPITS				Sn		**Sn**	**23 39 07.2**	**-5.3**
	baz=43,slow=26							
	5.1nm,0.8s							
SPB2	**Spitsbergen Ar**	**12.46**	**288**	Pn		Pn	23 36 47.7	-6.3
TIXI	**Tiksi**	**14.14**	**142**	Pn		**Pn**	**23 37 15.0**	**-2.0**
	0.2nm,0.3s,baz=14,slow=12,SNR=1.7							
	0.7nm,0.3s							
TIXI	**Tiksi**	**14.14**	**142**	Pn		**Pn**	**23 37 15.6**	**-1.3**
DAG	**Danmarks Havn**	**16.44**	**315**	*i* P		**Pn**	**23 37 46.1**	**-1.1**
DBG	**Daneborg**	**18.93**	**314**	*i* P		**Pn**	**23 38 19.9**	**+1.7**
ARCES	**ARCESS Array B**	**19.86**	**269**	P		**Pn**	**23 38 30.1**	**+0.8**
	0.8nm,0.5s,baz=26,slow=11,SNR=9.1							
	0.8nm,0.5s							
ARCES	**ARCESS Array B**	**19.86**	**269**	Pn		**Pn**	**23 38 29.7**	**+0.4**
RES	**Resolute Bay**	**20.42**	**12**	P		**P**	**23 38 35.0**	**+1.3**
	1.4nm,0.9s,baz=18,slow=19,SNR=2.6							
	1.4nm,0.9s							
RES	**Resolute Bay**	**20.42**	**12**			Pn	23 38 35.5	-0.4
BILL	**Bilibino**	**20.50**	**102**			Pn	23 38 36.8	0.0
SUMG	**Summit**	**21.67**	**328**	*i* P		**P**	**23 38 42.8**	**-4.9**
B22K	**Teshekpuk Lake**	**21.76**	**61**			**P**	**23 38 49.0**	**+0.8**
A36M	**Sachs Harbour**	**22.02**	**36**	P		**P**	**23 38 49.9**	**-1.1**
A36M				IAmb		IAmb	23 39 01.7	
	comp=Z,19nm,1.0s							
C23K	**Itkillik River**	**22.47**	**59**	P		**P**	**23 38 56.7**	**+1.0**
C23K				IAmb		IAmb	23 39 23.3	
	comp=Z,15nm,0.9s							
C24K	**Franklin Bluff**	**22.73**	**58**	P		**P**	**23 39 00.3**	**+1.7**
C24K				IAmb		IAmb	23 39 16.8	
	comp=Z,24nm,0.9s							
C18K	**Utukok River**	**22.78**	**69**	P		**P**	**23 39 01.1**	**+1.9**
C18K				IAmb		IAmb	23 39 11.0	
	comp=Z,24nm,1.1s							
D20K	**Etivluk River**	**23.09**	**65**	P		**P**	**23 39 02.7**	**+0.4**
D20K				IAmb		IAmb	23 39 19.5	
	comp=Z,21nm,1.1s							
D19K	**Kuna River**	**23.18**	**67**	P		**P**	**23 39 02.7**	**-0.6**
D19K				IAmb		IAmb	23 39 15.4	
	comp=Z,29nm,1.1s							
D22K	**Ayikyak River**	**23.25**	**62**	P		**P**	**23 39 05.0**	**+1.0**
D25K	**Kavik River**	**23.29**	**56**	P		**P**	**23 39 04.2**	**-0.3**
TOLK	**Toolik Lake Re**	**23.72**	**59**	P		**P**	**23 39 09.1**	**+0.4**
TOLK				IAmb		IAmb	23 39 48.5	
	comp=Z,25nm,1.4s							
YAK	**Yakutsk**	**23.76**	**145**	LR		LR	23 48 41.5	
	comp=Z,122nm,20.1s,baz=308,slow=38							
D27M	**Malcolm River**	**23.76**	**51**	P		**P**	**23 39 09.4**	**+0.3**
E18K	**Tukpahlearik C**	**24.03**	**70**	P		**P**	**23 39 12.0**	**+0.5**
E18K				IAmb		IAmb	23 39 22.4	
	comp=Z,19nm,0.9s							
E22K	**Anaktuvuk Pass**	**24.05**	**61**	P		**P**	**23 39 11.2**	**-0.6**
E19K	**Redstone River**	**24.27**	**66**	P		**P**	**23 39 12.8**	**-1.1**
E19K				IAmb		IAmb	23 39 24.6	
	comp=Z,14nm,0.9s							
E23K	**Chandalar**	**24.29**	**59**	P		**P**	**23 39 12.6**	**-1.4**
SEY	**Seymchan**	**24.36**	**119**	P		**P**	**23 39 12.9**	**-1.7**
	comp=Z,1.8nm,0.3s,baz=34,slow=14,SNR=2.5							
	comp=Z,1.8nm,0.3s							
E24K	**Your Creek**	**24.36**	**58**	P		**P**	**23 39 15.0**	**+0.3**
E28M	**Babbage River**	**24.49**	**50**	P		**P**	**23 39 17.2**	**+1.4**
E25K	**Arctic Village**	**24.54**	**56**	P		**P**	**23 39 18.1**	**+1.8**
C36M	**Paulatuk**	**24.70**	**37**	P		**P**	**23 39 18.2**	**+0.6**
C36M				IAmb		IAmb	23 39 26.7	
	comp=Z,10nm,0.8s							
F20K	**Avaraart Lake**	**24.80**	**65**	P		**P**	**23 39 17.7**	**-0.9**
E29M	**Blow River**	**24.82**	**49**	P		**P**	**23 39 19.4**	**+0.7**
E29M				IAmb		IAmb	23 39 32.4	
	comp=Z,14nm,1.1s							
F24K	**Squaw Lake**	**24.95**	**58**	P		**P**	**23 39 21.1**	**+1.1**
F24K				IAmb		IAmb	23 39 58.8	
	comp=Z,14nm,1.4s							
INK	**Inuvik**	**25.18**	**45**	P		**P**	**23 39 22.6**	**+0.7**
F28M	**Old Crow**	**25.45**	**51**	P		**P**	**23 39 25.0**	**+0.6**
F28M				IAmb		IAmb	23 39 57.3	
	comp=Z,7.7nm,0.7s							
G21K	**Allakaket**	**25.50**	**63**	P		**P**	**23 39 25.6**	**+0.6**
G23K	**Bananza Creek**	**25.59**	**60**	P		**P**	**23 39 26.7**	**+1.0**
F30M	**Barrier River**	**25.73**	**47**	P		**P**	**23 39 27.8**	**+0.8**
G24K	**Hadweenzic Riv**	**25.79**	**58**	P		**P**	**23 39 29.1**	**+1.5**
G24K				IAmb		IAmb	23 39 38.7	
	comp=Z,11nm,0.8s							
IMAR	**Indian Mountai**	**26.01**	**64**	P		**P**	**23 39 30.5**	**+1.0**
F31M	**Tsiigehtchic**	**26.03**	**46**	P		**P**	**23 39 30.2**	**+0.6**
G29M	**Pine Creek**	**26.27**	**49**	P		**P**	**23 39 32.1**	**+0.2**
G29M				IAmb		IAmb	23 40 08.4	
	comp=Z,10.0nm,0.8s							
G30M	**tAoh Zraii Nji**	**26.32**	**48**	P		**P**	**23 39 32.3**	**-0.1**
G30M				IAmb		IAmb	23 39 45.7	
	comp=Z,13nm,0.8s							
H21K	**Melozitna Rive**	**26.41**	**63**	P		**P**	**23 39 34.0**	**+0.9**
H21K				IAmb		IAmb	23 39 43.3	
	comp=Z,19nm,1.3s							
G31M	**Satah River**	**26.50**	**46**	P		**P**	**23 39 34.9**	**+1.0**
H27K	**Steamboat Moun**	**26.70**	**53**	P		**P**	**23 39 37.2**	**+1.4**
H27K				IAmb		IAmb	23 39 55.4	
	comp=Z,20nm,1.2s							
I28M	**Miner Creek**	**27.58**	**52**	P		**P**	**23 39 44.2**	**+0.4**
I28M				IAmb		IAmb	23 40 10.7	
	comp=Z,14nm,1.3s							
FINES	**FINESS Array B**	**27.74**	**264**	P		**P**	**23 39 47.4**	**+2.3**
	comp=Z,4.6nm,0.9s,baz=11,slow=8.6,SNR=4.8							
	comp=Z,4.6nm,0.9s							
FINES	**FINESS Array B**	**27.74**	**264**	P		**P**	**23 39 46.7**	**+1.6**
ILAR	**Eielson Array**	**27.74**	**58**	P		**P**	**23 39 45.0**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=352,slow=9.2,SNR=5.8							
ILAR				PcP		**PcP**	**23 43 00.9**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=314,slow=3.6,SNR=2.9							
	comp=Z,0.8nm,0.9s							
ILAR	**Eielson Array**	**27.74**	**58**	P		**P**	**23 39 46.0**	**+0.9**
NOA	**NORSAR Array B**	**29.47**	**278**	P		**P**	**23 40 02.0**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=11,slow=9.0,SNR=1.9							
	comp=Z,0.6nm,0.8s							
HFS	**Hagfors**	**30.14**	**276**	P		**P**	**23 40 05.9**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=50,slow=4.5,SNR=4.5							
	comp=Z,3.4nm,0.8s							
M29M	**Somme Creek**	**30.66**	**51**	P		**P**	**23 40 11.7**	**+0.5**
M29M				IAmb		IAmb	23 40 26.8	
	comp=Z,7.0nm,0.9s							
ZALV	**Zalesovo Beam**	**31.30**	**198**	P		**P**	**23 40 15.4**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=28,slow=3.5,SNR=3.8							
ZALV				PcP		**PcP**	**23 43 10.2**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=328,slow=2.2,SNR=2.5							
	comp=Z,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**31.30**	**198**	P		**P**	**23 40 14.2**	**-2.6**
YKA	**Yellowknife Ar**	**32.01**	**30**	P		**P**	**23 40 21.9**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=352,slow=9.8,SNR=1.5							
	comp=Z,0.7nm,0.9s							
BVAR	**Borovoye Array**	**32.79**	**214**	P		**P**	**23 40 30.2**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=15,slow=6.0,SNR=4.4							
	comp=Z,1.6nm,0.8s							
NACGM	**Naroch**	**34.15**	**261**	*e*P		**P**	**23 40 44.9**	**+3.4**
KURK	**Kurchatov**	**34.74**	**205**	P		**P**	**23 40 46.9**	**+0.2**
KURK				IAmb		IAmb	23 40 57.8	
	comp=Z,7.0nm,0.9s							
KURBB	**Kurchatov Arra**	**34.84**	**205**	P		**P**	**23 40 47.5**	**0.0**
	comp=Z,0.9nm,0.5s,baz=21,slow=7.1,SNR=8.7							
KURBB				PcP		**PcP**	**23 43 20.9**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=0.6,slow=2.8,SNR=5.3							
	comp=Z,0.9nm,0.5s							
AB31	**Akbulak array**	**37.15**	**225**	P		**P**	**23 41 08.2**	**+0.8**
SONM	**Songino Array**	**37.24**	**173**	P		**P**	**23 41 07.7**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=347,slow=9.0,SNR=7.4							
SONM				PcP		**PcP**	**23 43 28.2**	**+0.5**
	comp=Z,1.2nm,1.0s,baz=332,slow=3.1,SNR=3.9							
	comp=Z,2.4nm,0.8s							
AKASG	**Malin Array Be**	**38.09**	**257**	P		**P**	**23 41 15.8**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=12,slow=8.9,SNR=5.6							
	comp=Z,0.4nm,0.4s							
MAKZ	**Makanchi**	**38.53**	**200**	P		**P**	**23 41 19.2**	**+0.1**
MKAR	**Makanchi Array**	**38.53**	**200**	P		**P**	**23 41 18.9**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=8.9,slow=8.6,SNR=10							
MKAR				PcP		**PcP**	**23 43 31.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=20,slow=4.6,SNR=1.2							
	comp=Z,3.1nm,0.7s							
MKAR	**Makanchi Array**	**38.53**	**200**	P		**P**	**23 41 19.1**	**-0.1**
CLL	**Collm**	**38.94**	**274**	*i* Px		Px	23 41 28.0	
	comp=Z,11nm,1.5s							
CLL				*i* x		x	23 41 33.2	
CLL				*e*PP		**PP**	**23 42 53.0**	**+1.6**
CLL				*e*PPP		PPP	23 43 15.0	
CLL				*e*PPPP			23 43 22.0	
CLL				*e*S		**S**	**23 47 19.0**	**-1.4**
GERES	**GERESS Array B**	**41.32**	**273**	P		**P**	**23 41 43.7**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=2.8,slow=8.3,SNR=7.0							
	comp=Z,0.4nm,0.7s							
WMQ	**Urumqi**	**41.36**	**194**	*e*P		P	23 41 47.0	+4.3
WMQ				LR		LR		
	comp=Z,170nm,17.9s							
BURAR	**Bucovina Array**	**41.51**	**261**	P		**P**	**23 41 44.1**	**+0.2**
KKAR	**Karatay Array**	**42.69**	**213**	P		**P**	**23 41 54.9**	**+1.4**
BOOM	**Boomskoye usch**	**43.06**	**207**	P		**P**	**23 41 57.9**	**+1.2**
KDJ	**Kajisay**	**43.37**	**205**	P		**P**	**23 42 00.1**	**+1.0**
TARG	**Taragay, Kyrgy**	**43.74**	**205**	P		**P**	**23 42 03.2**	**+0.7**
TARG				IAmb		IAmb	23 42 14.0	
	comp=Z,11nm,0.9s							
KBZ	**Khabaz**	**43.87**	**242**	P		**P**	**23 42 04.7**	**+1.7**
	comp=Z,1.5nm,1.0s,baz=346,slow=3.4,SNR=6.4							
	comp=Z,1.5nm,1.0s							
HHC	**Hu-ho-hao-te**	**44.30**	**168**	*e*P		**P**	**23 42 07.3**	**+0.8**
HHC				pmax		pmax		
	comp=Z,14nm,0.9s							
GTA	**Gaotai**	**45.63**	**181**	*e*P		P	23 42 25.6	+8.4
GTA				pmax		pmax		
	comp=Z,5.0nm,1.2s							
JTMT	**Jette**	**46.75**	**32**	P		**P**	**23 42 26.6**	**+0.6**
KSRS	**Korea Array**	**48.20**	**151**	P		**P**	**23 42 35.1**	**-2.0**
	comp=Z,0.7nm,0.4s,baz=342,slow=7.9,SNR=1.8							
	comp=Z,0.7nm,0.4s							
BR131	**Keskin Array S**	**48.61**	**251**	P		**P**	**23 42 43.2**	**+2.8**
BRTR	**Keskin Array B**	**48.61**	**251**	P		**P**	**23 42 41.7**	**+1.3**
	comp=Z,2.0nm,1.0s,baz=14,slow=3.4,SNR=5.6							
	comp=Z,2.0nm,1.0s							
BRTR	**Keskin Array B**	**48.61**	**251**	P		**P**	**23 42 39.4**	**-1.0**
LZH	**Lanzhou**	**48.96**	**176**	*e*P		**P**	**23 42 38.8**	**-4.4**
LZH				pP		sP	23 42 46.3	+0.5
LZH				pmax		pmax		
	comp=Z,22nm,1.6s							
BOZ	**Bozeman (W)**	**49.02**	**30**	P		**P**	**23 42 44.5**	**+1.0**
TIA	**Tai'an**	**49.05**	**162**	P		**P**	**23 42 42.6**	**-1.1**
TIA				pmax		pmax		
	comp=Z,7.0nm,0.6s							
MJAR	**Matsushiro Arr**	**49.64**	**140**	P		**P**	**23 42 46.8**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=352,slow=7.6,SNR=1.2							
	comp=Z,0.5nm,0.3s							
RSSD	**Black Hills**	**50.79**	**23**	P		**P**	**23 42 57.5**	**+0.4**
RSSD				IAmb		IAmb	23 43 13.6	
	comp=Z,8.7nm,1.0s							
FXWY	**Fox Creek**	**51.00**	**29**	P		**P**	**23 42 59.5**	**+0.8**
FXWY				IAmb		IAmb	23 43 15.6	
	comp=Z,7.2nm,1.2s							
PDAR	**Pinedale Array**	**51.93**	**28**	P		**P**	**23 43 05.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=20,slow=4.7,SNR=5.3							
	comp=Z,0.5nm,0.7s							
PDAR	**Pinedale Array**	**51.93**	**28**	P		**P**	**23 43 06.9**	**+1.2**
ESDC	**Sonseca Array**	**51.97**	**288**	P		**P**	**23 43 06.8**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=6.8,slow=8.9,SNR=5.9							
	comp=Z,0.5nm,0.9s							
HWUT	**Hardware Ranch**	**53.00**	**30**	P		**P**	**23 43 11.8**	**-1.8**
HWUT				IAmb		IAmb	23 43 34.7	
	comp=Z,5.0nm,0.8s							
NJ2	**Nanjing**	**53.25**	**160**	*e*P		**P**	**23 43 16.1**	**+0.9**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
KEST	**Kesra**	**54.72**	**275**	P		**P**	**23 43 27.8**	**+1.7**
	comp=Z,10nm,1.1s,baz=314,slow=4.2,SNR=5.5							
	comp=Z,10nm,1.1s							
PV12	**Saucer Basin,**	**56.40**	**28**	P		**P**	**23 43 38.0**	**-0.3**
PV13	**Radium Mtn., P**	**56.56**	**28**	P		**P**	**23 43 39.6**	**+0.2**
R55A	**Marlinton**	**57.05**	**1**	P		**P**	**23 43 41.4**	**-1.3**
PZH	**PanZhiHua**	**58.50**	**179**	P		**P**	**23 43 56.4**	**+3.3**
TZTN	**Tazewell**	**58.78**	**4**	P		**P**	**23 43 55.4**	**+0.6**
ANMO	**Albuquerque**	**59.86**	**25**	P		**P**	**23 44 03.4**	**+0.9**
TASM	**ASL Pad, Albuq**	**59.86**	**25**	P		**P**	**23 44 02.9**	**+0.4**
TASM				IAmb		IAmb	23 44 22.7	
	comp=Z,3.2nm,0.8s							
TASM	**ASL Pad, Albuq**	**59.86**	**25**	P		**P**	**23 44 03.2**	**+0.7**
TASM				IAmb		IAmb	23 44 22.7	
	comp=Z,3.2nm,0.9s							
ABQ	**Albuquerque**	**59.86**	**25**	P		**P**	**23 44 02.2**	**-0.3**
ABQ				IAmb		IAmb	23 44 22.7	
	comp=Z,3.8nm,1.0s							
WMOK	**Wichita Mounta**	**60.32**	**18**	P		**P**	**23 44 06.4**	**+0.9**
WMOK				IAmb		IAmb	23 44 22.5	
	comp=Z,4.6nm,1.2s							
X40A	**Basin Creek Fa**	**60.71**	**13**	P		**P**	**23 44 08.4**	**+0.4**
X40A				IAmb		IAmb	23 44 13.4	
	comp=Z,5.9nm,1.0s							
TXAR	**Lajitas Array**	**65.55**	**23**	P		**P**	**23 44 39.8**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=354,slow=5.2,SNR=5.9							
	comp=Z,0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**66.51**	**182**	P		**P**	**23 44 44.8**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=348,slow=7.6,SNR=5.0							
	comp=Z,0.9nm,0.3s							
TORD	**Torodi Ar. Bea**	**77.78**	**280**	P		**P**	**23 45 54.7**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=7.5,slow=7.7,SNR=3.7							
	comp=Z,1.2nm,0.4s							
KAPI	**Kappang**	**90.12**	**161**	LR		LR	00 30 17.9	
	comp=Z,461nm,18.4s,baz=168,slow=38							

IDC 19 23:49:43.2±1.3, **6°.76N**×**124°.82E, h0**km, **mb3.5/4, mbtmp3.5/4, MS3.7/2, Error ellipse: s-maj=24.5km s-min=12.1km az=157.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**0.81**	**68**	Pg		Pg	23 49 58.6	-0.2
	152nm,0.3s,baz=254,slow=7.2,SNR=14							
DAV				Lg		Lg	23 50 10.2	
	150nm,0.3s,baz=315,slow=23,SNR=4.8							
WRA	**Warramunga Arr**	**28.14**	**161**	P		P	23 55 35.6	-1.7
	0.5nm,0.9s,baz=330,slow=10,SNR=3.0							
	0.5nm,0.9s							
ASAR	**Alice Springs**	**31.52**	**164**	P		P	23 56 08.7	+1.4
	0.2nm,0.5s,baz=345,slow=7.1,SNR=5.5							
	0.2nm,0.5s							
CTA	**Charters Tower**	**34.01**	**142**	LR		LR	00 12 39.4	
	comp=Z,19nm,19.5s,baz=168,slow=40							
HNR	**Honiara**	**38.52**	**114**	LR		LR	00 10 35.6	
	comp=Z,615nm,21.7s,baz=142,slow=32							
ZALV	**Zalesovo Beam**	**57.04**	**333**	P		P	23 59 29.1	-1.8
	0.2nm,0.4s,baz=128,slow=5.3,SNR=1.7							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**58.18**	**327**	P		P	23 59 40.7	+1.7
	0.7nm,1.2s,baz=126,slow=5.8,SNR=1.8							
	0.7nm,1.2s							

IDC ***19*** *23:51:34.6±1.4, 33°.76S×66°.86W, h0km, mb4.6/1, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=59.4km s-min=22.8km az=124.0*
SJA ***19*** *23:51:34.8±1.1, 33°.78S×66°.89W, h10km±5km, ML4.2, MW4.0*
ISC 19 23:51:35.0±1.3, **33°.79S**±0°.04×**66°.93W**±0°.04, **h4**km±9km, **n30, σ1§25/43, San Luis Province**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AVIZ	**Vizcacheras**	**1.36**	**283**	*e*P		**Pb**	**23 52 01.1**	**-0.1**
AVIZ				*i* S		**Sb**	**23 52 18.1**	**-1.0**
ACAN	**Cantantal**	**1.53**	**352**	*e*P		**Pg**	**23 52 04.0**	**-0.3**
ACAN				*e*S		**Sg**	**23 52 24.0**	**-0.1**
ACAN				IAML			23 52 27.6	
	comp=Z,4μm,0.5s							
RFA	**San Rafael**	**1.61**	**232**	*e*P		**Pg**	**23 52 05.8**	**-0.1**
RFA				*e*S		**Sg**	**23 52 27.9**	**+1.1**
RFA				IAML			23 52 28.7	
	comp=Z,2μm,0.2s							
MRA	**San Martin**	**1.70**	**37**	*e*P		**Pg**	**23 52 07.4**	**-0.2**
MRA				*e*S		**Sg**	**23 52 31.0**	**+1.3**
MRA				IAML			23 52 32.8	
	comp=Z,2μm,0.2s							
AAGR	**Agrelo**	**1.74**	**293**	*e*P		**Pb**	**23 52 07.4**	**-0.2**
AAGR				*i* S		**Sb**	**23 52 30.0**	**+0.1**
ARCO	**CERRO ARCO**	**1.93**	**299**	*e*P		**Pb**	**23 52 10.9**	**0.0**
ARCO				*e*S		**Sg**	**23 52 37.0**	**0.0**
ARCO				IAML			23 52 37.7	
	comp=Z,2μm,0.5s							
ASAL	**Salagasta**	**2.00**	**306**	*e*P		**Pb**	**23 52 10.7**	**-1.3**
CFA	**Coronel Fontan**	**2.44**	**333**	*e*P		**Pn**	**23 52 16.1**	**+0.4**
CFA				*i* S		**Sn**	**23 52 46.6**	**+0.5**
ACHE	**Chepes**	**2.63**	**5**	*e*P		**Pn**	**23 52 18.1**	**-0.3**
SJA	**San Juan**	**2.64**	**328**	*e*P		**Pb**	**23 52 22.4**	**-0.6**
ZON	**Zonda**	**2.68**	**326**	*e*P		**Pn**	**23 52 20.6**	**+1.5**
ZON				*i* S		**Sb**	**23 52 54.3**	**-2.6**
MT04	**Ro Olivares**	**2.71**	**277**	*e*P		**Pb**	**23 52 22.7**	**-1.5**
LMEL	**Las Melosas**	**2.73**	**268**	*e*P		**Pn**	**23 52 20.6**	**+0.8**
RTLL	**Cerro Villicun**	**2.78**	**332**	*e*P		**Pn**	**23 52 21.2**	**+0.8**
RTLL				*i* S		**Sn**	**23 52 55.1**	**+0.7**
MT13	**San Alfonso**	**2.80**	**270**	*e*P		**Pn**	**23 52 21.6**	**+0.9**
RTLS	**Leoncito**	**2.81**	**314**	*e*P		**Pn**	**23 52 22.1**	**+1.0**
RTLS				*e*S		**Sn**	**23 52 56.3**	**+0.7**
RTLS				IAML			23 53 06.3	
	comp=Z,1μm,0.5s							
EDS3	**Malargue**	**2.84**	**225**	*e*P		**Pg**	**23 52 29.1**	**-0.4**
MT03	**Universidad Ad**	**3.00**	**275**	*e*P		**Pn**	**23 52 22.6**	**-0.9**
TCA	**Tanti**	**3.14**	**39**	*e*P		**Pn**	**23 52 26.7**	**+1.4**
TCA				*e*S		**Sb**	**23 53 09.7**	**-0.4**
AVFE	**Valle Fertil**	**3.15**	**352**	*e*P		**Pn**	**23 52 26.6**	**+1.0**
VA03	**San Esteban**	**3.20**	**288**	*e*P		**Pn**	**23 52 28.9**

TNTI Sn Sn 00 05 43.2 -0.2
TNTI Ternate 1.23 140 P Pn 00 05 28.4 +0.5
TNTI Ternate 1.23 140 S Sn 00 05 43.7 +0.3
TNTI Ternate 1.23 140 P Pn 00 05 28.1 +0.2
SGSI Sangihe 2.21 332 P Pn 00 05 41.6 +0.2
KMSI Cibinong 2.82 246 P Pn 00 05 50.4 +0.6
SANI Sanana 3.79 189 P Pn 00 06 01.7 -1.3
SANI Sanana 3.79 189 P Pn 00 06 02.6 -0.4
LUWI Luwuk 4.68 234 Pn Pn 00 06 16.8 +1.5
LUWI Luwuk 4.68 234 P Pn 00 06 17.1 +1.8
MRSI Marisa 4.79 255 P Pn 00 06 18.4 +1.6
NLAI Namlea 4.95 174 P Pn 00 06 19.6 +0.5
SWI Sorong 5.35 119 P Pn 00 06 26.1 +1.6
DAV Davao City (W) 5.41 350 Pn Pn 00 06 24.5 -0.8
46nm,0.3s,baz=44,slow=14,SNR=1.7
DAV Sn Sn 00 07 30.2 +3.9
31nm,0.3s,baz=266,slow=11,SNR=1.3
92nm,0.4s
DAV Davao City (W) 5.41 350 Pn Pn 00 06 27.2 +2.0
MSAI Masohi 5.56 155 P Pn 00 06 31.4 +4.0
0.6nm199nm,1.1s
APSI Ampana 5.57 242 P Pn 00 06 30.0 +2.5
AAI Ambon 5.61 163 P Pn 00 06 30.7 +2.6
0.4nm73nm,0.8s
TOLI2 Tolitoli 5.81 264 Pn Pn 00 06 29.4 -1.5
TOLI2 Tolitoli 5.81 264 P Pn 00 06 32.9 +2.0
MPSI Mapaga 6.81 258 P Pn 00 06 46.2 +1.7
0.2nm51nm,0.8s
FAKI Fak Fak 7.31 129 Pn Pn 00 06 50.6 -0.9
FAKI Fak Fak 7.31 129 P Pn 00 06 55.0 +3.5
0.1nm734nm41nm,0.9s
BBSI Bau Bau 8.20 209 P Pn 00 07 09.2 +5.6
1µm93nm,1.0s
TTSI Tana Toraja 8.24 235 P Pn 00 07 05.5 +1.3
789nm72nm,0.7s
MYLDM Lahad Datu 8.75 293 Pn Pn 00 07 12.8 +1.5
MYLDM Lahad Datu 8.75 293 P Pn 00 07 17.0 +5.7
SPSI Sidrap Palu 8.83 230 P Pn 00 07 15.6 +3.2
58nm,0.7s
BNSI Bone 8.87 227 P Pn 00 07 14.8 +2.0
KAPI Kappang 9.54 225 Pn Pn 00 07 20.3 -1.8
1.9nm,0.3s,baz=54,slow=6.8,SNR=8.5
KAPI Sn Sn 00 09 08.6 +0.5
1.0nm,0.3s,baz=110,slow=12,SNR=1.2
11nm,0.5s
KAPI Kappang 9.54 225 Pn Pn 00 07 21.9 -0.2
BATI Baumata 12.20 194 Pn Pn 00 07 56.3 -2.2
3.5nm,0.3s,baz=38,slow=17,SNR=1.3
9.1nm,0.3s
TGY Tagaytay City 13.50 336 LR LR 00 13 37.1
comp=Z,370nm,21.6s,baz=260,slow=38
PLAI Plampang 13.66 220 P Pn 00 08 15.6 -2.8
SBUM Sibu 14.36 273 Pn Pn 00 08 28.2 +0.3
MTN Manton Dam 15.16 163 Pn Pn 00 08 36.3 -2.3
JAGI Jajag, Banyuwa 15.99 231 Pn Pn 00 08 47.1 -2.2
KNRA Kununurra 17.42 173 Pn Pn 00 09 06.4 -0.9
KNRA IAmb IAmb 00 09 10.2
comp=Z,76nm,1.2s
FITZ Fitzroy Crossi 19.71 183 P P 00 09 32.1 -1.3
comp=Z,0.7nm,0.3s,baz=17,slow=11,SNR=17
comp=Z,3.7nm,0.6s
FITZ Fitzroy Crossi 19.71 183 P 00 09 32.0 -1.4
FITZ Fitzroy Crossi 19.71 183 P P 00 09 32.6 -0.8
YULB Yu-li 22.14 347 P P 00 09 58.7 -0.9
YULB IAmb IAmb 00 10 06.2
comp=Z,48nm,1.1s
TPUB Ta-pu 22.21 345 P P 00 10 00.4 0.0
SSLB Suanglung 22.60 347 P P 00 10 04.6 +0.1
COEN Coen 22.66 134 P P 00 10 04.6 -0.6
COEN Coen 22.66 134 P P 00 10 06.7 +1.5
WB0 Warramunga Arr 22.69 161 P P 00 10 04.3 -1.2
WB0 IAmb IAmb 00 10 06.9
comp=Z,42nm,0.7s
WRAB Tennant Creek 22.83 161 P P 00 10 06.2 -0.8
WRAB Tennant Creek 22.83 161 P P 00 10 06.4 -0.6
WRA Warramunga Arr 22.84 161 P P 00 10 06.3 -0.8
comp=Z,41nm,0.6s,baz=339,slow=11,SNR=124
WRA PcP PcP 00 13 57.5 +0.1
comp=Z,1.0nm,0.8s,baz=326,slow=2.1,SNR=1.8
WRA S S 00 14 16.9 +3.0
comp=Z,7.3nm,1.1s,baz=338,slow=17,SNR=6.3
comp=Z,41nm,0.6s
WRA Warramunga Arr 22.84 161 P P 00 10 06.0 -1.0
WB2 Warramunga Arr 22.84 161 P P 00 10 05.7 -1.4
WR8 Warramunga Arr 22.90 161 P P 00 10 06.5 -1.2
WR8 IAmb IAmb 00 10 09.2
comp=Z,48nm,0.8s
WR0 Warramunga Arr 22.92 160 P P 00 10 06.4 -1.5
WR0 IAmb IAmb 00 10 09.3
comp=Z,42nm,0.8s
MBWA Marble Bar 23.70 196 P P 00 10 13.8 -1.7
MBWA IAmb IAmb 00 10 23.8
comp=Z,23nm,1.1s
MBWA Marble Bar 23.70 196 P P 00 10 15.6 +0.1
PSA00 Pilbara Seismi 24.06 195 P P 00 10 17.9 -0.9
PSA00 IAmb IAmb 00 10 44.1
comp=Z,68nm,2.0s
PSA00 Pilbara Seismi 24.06 195 P P 00 10 17.5 -1.4
PSA00 IAmb IAmb 00 10 21.8
comp=Z,7.0nm,1.2s
QIS Mount Isa 25.56 151 P P 00 10 33.9 +1.3
AS31 Alice Springs 26.22 165 P P 00 10 38.0 -0.5
ASAR Alice Springs 26.22 165 P P 00 10 38.1 -0.4
comp=Z,18nm,0.8s,baz=346,slow=12,SNR=98
ASAR PcP PcP 00 14 04.9 +0.1
comp=Z,0.7nm,0.5s,baz=351,slow=2.5,SNR=1.9
ASAR S S 00 15 13.2 +4.9
comp=Z,7.2nm,0.9s,baz=337,slow=16,SNR=9.7
comp=Z,18nm,0.8s
NJ2 Nanjing 31.04 347 *eP* P 00 11 23.3 +2.1
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
CMAR Chiang Mai Arr 31.79 303 P P 00 11 27.8 -0.3
comp=Z,1.6nm,0.6s,baz=120,slow=6.5,SNR=9.6
CMAR PcP PcP 00 14 19.6 +0.8
comp=Z,1.2nm,0.3s,baz=99,slow=2.5,SNR=4.4
comp=Z,1.6nm,0.6s
CMAR Chiang Mai Arr 31.79 303 P P 00 11 28.7 +0.6
CMAR PcP 00 14 18.5 -0.4
CHTO Chiang Mai 31.96 304 P P 00 11 28.0 -1.6
FORT Forrest 32.35 178 P P 00 11 31.5 -1.3
FORT IAmb IAmb 00 11 39.9
comp=Z,19nm,0.9s
ENH Enshi 32.70 332 P P 00 11 35.8 -0.2
ENH IAmb IAmb 00 11 36.6
comp=Z,20nm,1.0s
PZH PanZhiHua 34.29 318 P P 00 11 52.5 +2.5
PZH pmax pmax
comp=Z,10.0nm,0.6s
BBOO Buckleboo 35.50 166 P P 00 12 00.2 +0.1
KSRS Korea Array 35.58 2 P P 00 12 01.6 +0.8
comp=Z,2.7nm,0.8s,baz=185,slow=10,SNR=6.4
comp=Z,2.7nm,0.8s
CD2 Chengdu 36.18 326 P P 00 12 05.0 -1.1
CD2 pmax pmax
comp=Z,10.0nm,0.8s
MJAR Matsushiro Arr 36.28 16 P P 00 12 07.7 +0.8
comp=Z,2.6nm,0.8s,baz=194,slow=10,SNR=4.4
comp=Z,2.6nm,0.8s
STKA Stephens Creek 36.33 158 P P 00 12 07.3 0.0
comp=Z,6.2nm,0.8s,baz=322,slow=8.2,SNR=11
comp=Z,6.2nm,0.8s
HNS HongShan 37.15 344 ⇑P P 00 12 15.8 +1.6
ARMA Armidale 39.90 145 P P 00 12 37.3 -0.2
ARMA IAmb IAmb 00 12 46.9
comp=Z,12nm,0.8s
LZDM Lanzhou Array 40.12 331 P P 00 12 40.1 +0.5
comp=Z,1.0nm,0.3s,baz=161,slow=5.3,SNR=1.8
comp=Z,1.0nm,0.3s
SHL Shillong 40.96 308 P P 00 12 45.2 -1.3
SHL IAmb IAmb 00 12 46.8
comp=Z,9.4nm,0.8s
HHC Hu-ho-hao-te 41.25 343 *eP* P 00 12 50.9 +2.3
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,310nm,5.0s
USRK Ussuriysk Ar. 42.57 6 P P 00 12 59.4 +0.2
comp=Z,4.9nm,0.9s,baz=208,slow=11,SNR=4.2
comp=Z,4.9nm,0.9s
MDJ Mudanjiang 42.80 3 P P 00 13 03.3 +2.3
MDJ pmax pmax
comp=Z,17nm,2.1s
LSA Lhasa 43.66 313 P P 00 13 08.8 0.0
GTA Gaotai 44.74 330 *eP* P 00 13 17.3 +0.4
GTA PcP PP 00 15 00.3 -1.6
GTA pmax pmax
comp=Z,3.0nm,1.1s
EVN Everest 46.08 308 P P 00 13 27.6 -0.6
EVN IAmb IAmb 00 13 34.3
comp=Z,24nm,1.6s
HILR Hailar Array B 48.01 354 P P 00 13 42.2 -0.1
comp=Z,4.0nm,0.8s,baz=180,slow=11,SNR=6.9
comp=Z,4.0nm,0.8s
HEH HeiHe 48.36 1 *eP* P 00 13 45.3 +0.4
HEH pmax pmax
comp=Z,10.0nm,1.1s
SONM Songino Array 49.14 342 P P 00 13 51.4 +0.3
comp=Z,3.4nm,0.8s,baz=154,slow=7.8,SNR=14
comp=Z,3.4nm,0.8s
WMQ Urumqi 54.28 326 *eP* P 00 14 32.0 +2.5
WMQ LR LR
comp=Z,1µm,19.3s
WMQ LR LR
comp=Z,960nm,24.7s
WMQ LR LR
comp=Z,710nm,17.3s
PETK Petropavlovsk- 57.34 22 P P 00 14 52.1 +1.0
comp=Z,1.9nm,0.6s,baz=187,slow=5.8,SNR=5.0
comp=Z,1.9nm,0.6s
MK31 Makanchi Array 59.11 326 P P 00 15 03.2 -0.5
MK31 IAmb IAmb 00 16 20.6
comp=Z,16nm,1.3s
MKAR Makanchi Array 59.11 326 P P 00 15 04.0 +0.3
comp=Z,3.2nm,0.5s,baz=119,slow=8.0,SNR=46
comp=Z,3.2nm,0.5s
MKAR Makanchi Array 59.11 326 P P 00 15 03.7 0.0
PRZ Przheval'sk 59.12 320 P P 00 15 03.8 -0.3
PRZ IAmb IAmb 00 15 07.0
comp=Z,9.6nm,0.8s
TARG Taragay, Kyrgy 59.14 319 P P 00 15 05.0 +0.6
TARG IAmb IAmb 00 15 09.0
comp=Z,4.6nm,0.6s
MAKZ Makanchi 59.30 326 P P 00 15 05.0 +0.1
KSH Kashi 59.35 316 P P 00 15 07.3 +1.7
KSH pmax pmax
comp=Z,2.0nm,1.1s
KDJ Kajisay 59.74 319 P P 00 15 08.4 +0.1
KDJ IAmb IAmb 00 15 10.2
comp=Z,8.9nm,1.0s
YAK Yakutsk 60.21 2 P P 00 15 11.4 +0.5
BKZ Black Stump Fm 61.22 137 P P 00 15 18.6 +0.4
ARSB Arslanbob 62.19 317 P P 00 15 23.8 -1.1
ARSB IAmb IAmb 00 15 51.2
comp=Z,19nm,1.7s
ZAA0 Zalesovo Array 62.30 334 P P 00 15 24.2 -1.0
ZALV Zalesovo Beam 62.30 334 P P 00 15 24.4 -0.8
comp=Z,1.0nm,0.6s,baz=122,slow=6.6,SNR=6.6
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 62.30 334 P P 00 15 24.0 -1.2
KBL Kabul 62.62 308 P P 00 15 26.8 -1.2
KBL IAmb IAmb 00 15 32.8
comp=Z,6.3nm,1.1s
GAR Garm 63.17 313 P P 00 15 30.1 -1.4
KURBB Kurchatov Arra 63.34 328 P P 00 15 32.5 +0.3
comp=Z,6.8nm,0.6s,baz=128,slow=6.2,SNR=43
comp=Z,6.8nm,0.6s
KURK Kurchatov 63.34 328 P P 00 15 31.4 -0.8
KURK Kurchatov 63.34 328 P P 00 15 32.1 -0.1
KURK pP pwP 00 15 45.2 -0.6
CHGR Chuyangaron 63.89 313 P P 00 15 35.9 -0.3
CHGR IAmb IAmb 00 15 40.9
comp=Z,11nm,1.0s
KK31 Karatay Array 64.59 318 P P 00 15 40.2 -0.4
KKAR Karatay Array 64.59 318 P P 00 15 39.9 -0.7
DRV Dumont d'Urvil 68.90 174 P P 00 16 07.9 +0.3
BVAR Borovoye Array 68.91 327 P P 00 16 08.7 +0.8
comp=Z,2.7nm,0.6s,baz=129,slow=8.0,SNR=7.4
comp=Z,2.7nm,0.6s
TIXI Tiksi 69.84 1 P P 00 16 12.8 -0.5
TIXI IAmb IAmb 00 16 23.4
comp=Z,7.6nm,1.1s
AB31 Akbulak array 73.60 321 P P 00 16 35.7 -0.6
ABKAR Akbulak array 73.60 321 P P 00 16 35.7 -0.6
ARTI Arti 76.62 328 P P 00 16 52.9 -0.7
ARTI IAmb IAmb 00 16 57.8
comp=Z,12nm,1.3s
RAYN Ar Rayn 81.12 293 P P 00 17 18.6 -0.4
RAYN Ar Rayn 81.12 293 P P 00 17 17.6 -1.5
RAYN PcP PcP 00 17 24.0 -1.4
RAYN pP pP 00 17 31.5 +0.8
VNDA Vanda 81.47 173 P P 00 17 19.9 +0.2
comp=Z,5.8nm,0.9s,baz=327,slow=6.5,SNR=17
comp=Z,5.8nm,0.9s
VNDA Vanda 81.47 173 P P 00 17 19.1 -0.6
VNDA IAmb IAmb 00 17 21.4
comp=Z,4.6nm,0.8s
D19K Kuna River 83.04 21 P P 00 17 29.7 +1.5
E19K Redstone River 83.14 22 P P 00 17 28.8 +0.1
E19K IAmb IAmb 00 17 32.3
comp=Z,9.9nm,0.9s
KBZ Khabaz 84.24 314 P P 00 17 33.6 -1.1
comp=Z,2.5nm,0.9s,baz=68,slow=4.4,SNR=4.5
comp=Z,2.5nm,0.9s
GURO Guroymak-BITLI 84.66 308 P P 00 17 36.5 -0.7
GURO IAmb IAmb 00 17 42.9
comp=Z,8.8nm,0.9s
ILAR Eielson Array 86.98 25 P P 00 17 47.4 -0.5
comp=Z,3.4nm,1.4s,baz=260,slow=4.7,SNR=4.2
comp=Z,3.4nm,1.4s
ILAR Eielson Array 86.98 25 P P 00 17 47.2 -0.7
GAZ Gaziantep 88.46 307 P P 00 17 55.5 -0.3
GAZ IAmb IAmb 00 17 57.2
comp=Z,11nm,1.4s
MMAI Mount Meron Ar 90.05 303 P P 00 18 03.9 +0.6
comp=Z,1.3nm,0.7s,baz=90,slow=4.3,SNR=2.1
comp=Z,1.3nm,0.7s
SYO Syowa Base 90.50 201 *eP* P 00 18 05.2 +0.8
BRTR Keskin Array B 91.17 310 P P 00 18 08.2 -0.3
comp=Z,1.0nm,0.8s,baz=109,slow=6.8,SNR=7.3
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 92.27 340 P P 00 18 12.4 -0.3
comp=Z,5.5nm,1.1s,baz=66,slow=4.1,SNR=4.3
comp=Z,5.5nm,1.1s
ARCES ARCESS Array B 92.27 340 P P 00 18 12.0 -0.7
SPITS Spitsbergen Ar 92.41 349 P P 00 18 13.4 +0.2
comp=Z,14nm,1.2s,baz=15,slow=6.0,SNR=2.1
comp=Z,14nm,1.2s
AKASG Malin Array Be 93.34 321 P P 00 18 18.1 +0.1
comp=Z,0.2nm,0.2s,baz=77,slow=4.0,SNR=1.8
comp=Z,0.2nm,0.2s
FINES FINESS Array B 93.51 332 P P 00 18 18.1 -0.4
comp=Z,2.6nm,0.9s,baz=68,slow=5.9,SNR=3.4
comp=Z,2.6nm,0.9s
BURAR Bucovina Array 96.38 318 P P 00 18 31.5 -0.7
BURAR IAmb IAmb 00 18 36.7
comp=Z,2.2nm,0.8s
BUR08 Bucovina Ar. S 96.39 318 P P 00 18 31.8 -0.4
LANS Liptovska Anna 99.82 320 *e*PDIFF **Pdif** 00 18 46.5 -1.0
CPUP Villa Florida 155.25 172 PKP **PKPdf** 00 24 56.3 -0.6
comp=Z,0.1nm,0.3s,baz=110,slow=2.2,SNR=1.3
CPUP PKPab **PKPab** 00 25 23.0 +1.2
comp=Z,0.6nm,0.7s,baz=234,slow=4.3,SNR=4.3

*IDC **20** 00:07:04.0±1.8, 1°.58N×126°.37E, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=172.8km s-min=22.0km az=66.0*

*NEIC **20** 00:07:09.7±1.3, 1°.6N±0°.2×126°.5E±0°.2, h35km±2km, mb4.4/11, Error ellipse: s-maj=40.9km s-min=7.3km az=224.0*

ISC 20 00:07:09.7±0.8, 1°.6N±0°.2×126°.3E±0°.2, h35km, n22, σ1§16/22, mb4.2/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.31**	**128**	Pn	**Pn**	**00 07 30.0**	**-1.5**
FAKI	**Fak Fak**	**7.42**	**127**	Pn	**Pn**	**00 08 57.8**	**+2.3**
WB0	**Warramunga Arr**	**22.65**	**160**	P	**P**	**00 12 06.7**	**-1.3**
WB0				IAmb	IAmb	00 12 08.8	
	comp=Z,7.3nm,0.8s						
WRAB	**Tennant Creek**	**22.79**	**160**	P	**P**	**00 12 08.9**	**-0.5**
WRAB				IAmb	IAmb	00 12 15.0	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**22.79**	**160**	P	**P**	**00 12 08.0**	**-1.5**
	comp=Z,6.1nm,0.6s,baz=339,slow=11,SNR=5.3						
	comp=Z,6.1nm,0.6s						
WRA	**Warramunga Arr**	**22.79**	**160**	P	**P**	**00 12 09.5**	**0.0**
WR8	**Warramunga Arr**	**22.86**	**160**	P	**P**	**00 12 09.0**	**-1.2**
WR8				IAmb	IAmb	00 12 12.0	
	comp=Z,8.7nm,0.9s						

ASAR Alice Springs 26.16 164 P **P** 00 12 40.6 -0.3
comp=Z,2.6nm,0.8s,baz=352,slow=13,SNR=3.9
comp=Z,2.6nm,0.8s
ASAR Alice Springs 26.16 164 P **P** 00 12 43.0 +2.1
MKAR Makanchi Array 59.09 326 P **P** 00 17 06.7 +0.1
comp=Z,0.7nm,0.4s,baz=117,slow=7.1,SNR=5.4
comp=Z,0.7nm,0.4s
MKAR Makanchi Array 59.09 326 P **P** 00 17 06.1 -0.6
MAKZ Makanchi 59.27 326 P **P** 00 17 07.4 -0.5
KURBB Kurchatov Arra 63.33 328 P **P** 00 17 34.8 -0.4
comp=Z,1.1nm,0.7s,baz=129,slow=7.1,SNR=4.4
comp=Z,1.1nm,0.7s
KURK Kurchatov 63.33 328 P **P** 00 17 34.3 -1.0
KURK IAmb IAmb 00 17 37.7
comp=Z,2.5nm,0.9s
AB31 Akbulak array 73.56 321 P **P** 00 18 38.9 -0.2
ABKAR Akbulak array 73.56 321 P **P** 00 18 38.6 -0.6
VNDA Vanda 81.36 173 P **P** 00 19 21.7 -0.6
comp=Z,0.4nm,0.5s,baz=332,slow=6.9,SNR=1.4
comp=Z,0.4nm,0.5s
VNDA Vanda 81.36 173 P **P** 00 19 23.1 +0.8
VNDA IAmb IAmb 00 19 60.0
comp=Z,3.0nm,1.2s
C19K Lookout Ridge 82.88 20 P **P** 00 19 31.1 +0.6
C19K IAmb IAmb 00 20 14.2
comp=Z,9.3nm,1.3s
L19K White Mountain 83.38 28 P **P** 00 19 32.8 -0.4
L19K IAmb IAmb 00 20 08.2
comp=Z,18nm,1.5s
K24K Donnelly Dome 87.65 26 P **P** 00 19 53.1 -1.3
BURAR Bucovina Array 96.32 318 P **P** 00 20 36.7 +1.6

TRN 20 00:14:14.0, 16°.89N×61°.99W, h29km, MD3.9, South-west of Antigua., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBWH	**Windy Hill**	**0.24**	**232**	*eP*	Pn	00 14 21.9	+0.3
MBWH				*eS*	Sb	00 14 26.6	+1.4
MBFL	**Flemmings, Mon**	**0.26**	**236**	*eP*	Pn	00 14 22.9	+1.1
MBFL				*eS*	Sn	00 14 27.5	+0.7
MLYT	**Lee's Yard**	**0.26**	**229**	*eP*	Pn	00 14 23.1	+1.3
MLYT				*eS*	Sn	00 14 28.1	+1.3
DHSZ	**Broadband at M**	**0.65**	**161**	*eP*	Pn	00 14 27.8	+0.6
DHSZ				*eS*	Sn	00 14 38.2	+1.7
ANWB	**Willy Bob**	**0.80**	**14**	*eP*	Pb	00 14 30.0	+0.7
ANWB				*eS*	Sn	00 14 42.1	+1.9
SKOC	**St. Kitts, UWI**	**0.81**	**299**	*eP*	Pb	00 14 31.8	+2.2
SKOC				*eS*	Sn	00 14 43.0	+2.5
ATGZ	**Broadband at L**	**0.83**	**162**	*eP*	Pb	00 14 31.1	+1.2
ATGZ				*eS*	Sn	00 14 42.8	+1.8
SKI	**Saint Kitts**	**0.84**	**302**	*eP*	Pb	00 14 32.4	+2.3
SKI				*eS*	Sn	00 14 43.4	+2.2
MMLZ	**Guadeloupe Bro**	**0.90**	**160**	*eP*	Pb	00 14 32.1	+1.1
MMLZ				*eS*	Sb	00 14 44.2	+1.6
DSDZ	**La Diserade, G**	**1.06**	**123**	*eP*	Pb	00 14 33.7	+0.1
DSDZ				*eS*	Sb	00 14 47.5	+0.3
TBG	**Guadaloupe-3**	**1.09**	**162**	*eP*	Pb	00 14 35.5	+1.3
TBG				*eS*	Sb	00 14 50.4	+2.5
DWS	**Wesley**	**1.47**	**153**	*eP*	Pb	00 14 40.1	-0.6
DWS				*eS*	Sb	00 14 58.2	-0.7
DSLB	**Salisbury**	**1.55**	**159**	*eP*	Pb	00 14 42.4	+0.4
DSLB				*eS*	Sb	00 15 01.5	+0.3
DLPL	**La Plaine**	**1.71**	**155**	*eP*	Pb	00 14 44.1	-0.7
DLPL				*eS*	Sb	00 15 04.7	-1.1
SVN	**Savane Anatole**	**2.19**	**159**	*eP*	Pb	00 14 50.9	-2.0
SVN				*eS*	Sb	00 15 17.7	-1.9
ILAM	**Ilet Lapin Mar**	**2.36**	**153**	*eP*	Pn	00 14 53.2	+2.4
ILAM				*eS*	Sn	00 15 20.8	+2.0
BIM	**Bigot**	**2.52**	**159**	*eP*	Pn	00 14 54.5	+1.5
BIM				*eS*	Sn	00 15 24.9	+2.1
SLBI	**Saint Lucia, B**	**3.02**	**161**	*eS*	Sn	00 15 36.8	+1.9
MCLT	**Moule a Chique**	**3.32**	**162**	*eS*	Sn	00 15 43.4	+0.8

*HEL **20** 00:26:54.1±0.4, 67°.83N×20°.13E, h0km, ML1.1, Suspected explosion*

UPP 20 00:26:54.2±0.0, 67°.82N×20°.21E, h0km, ML1.9, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**20**	P	Pg	00 26 57.2	+0.3
KUA				S	Sg	00 26 59.1	+0.3
RATU	**Laukkuluspa**	**0.23**	**271**	P	Pg	00 26 58.8	+0.2
RATU				S	Sg	00 27 02.1	+0.4
NIKU	**Nikkaluokta**	**0.45**	**277**	P	Pg	00 27 02.8	+0.1
NIKU				S	Sg	00 27 08.8	+0.3
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 27 07.7	-0.2
LANU	**Lannavaara** baz=256	**0.71**	**71**	PG	Pg	00 27 07.6	-0.3
LANU				SG	Sg	00 27 17.2	+0.2
DUNU	**Dundret**	**0.72**	**169**	P	Pg	00 27 07.6	-0.3
DUNU				S	Sg	00 27 17.3	+0.2
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	00 27 09.0	-0.1
SALU	**Saltoluokta**	**0.79**	**237**	P	Pg	00 27 09.1	-0.1
SALU				S	Sg	00 27 19.6	+0.2
SALU	**Saltoluokta**	**0.79**	**237**	*eP*	Pg	00 27 08.1	-1.2
KIF	**Kilpisjarvi**	**1.21**	**10**	PN	Pn	00 27 18.4	+0.1
KIF				smax	smax	00 27 31.9	
	comp=Z,1.4nm,0.2s						
KIF				SG	Sb	00 27 33.5	-0.5
HEF	**Hetta**	**1.42**	**64**	*eP*	Pn	00 27 19.9	-1.4
HEF	**Hetta**	**1.42**	**64**	PG	Pn	00 27 20.5	-0.8
HEF				smax	smax	00 27 37.6	
	comp=Z,0.9nm,0.2s						
HEF				SN	Sn	00 27 43.9	+3.2
ERTU	**Ertsjaerv**	**1.49**	**148**	P	Pn	00 27 21.3	-0.8
ERTU				S	Sg	00 27 42.0	+0.1
ERTU	**Ertsjaerv**	**1.49**	**148**	PG	Pn	00 27 21.9	-0.2
ERTU				SG	Sg	00 27 41.4	-0.5
KLF	**Kolari**	**1.56**	**110**	PG	Pn	00 27 22.8	-0.3
KLF				smax	smax	00 27 41.8	
	comp=Z,0.8nm,0.2s						
KLF				SG	Sn	00 27 43.3	-0.7
KTK1	**Kautokeino**	**1.64**	**42**	PN	Pn	00 27 24.6	+0.4
HARU	**Harads**	**1.69**	**169**	P	Pn	00 27 25.0	+0.1
KALU	**Kalix**	**2.33**	**146**	SG	Sb	00 28 07.1	+0.8
TOF	**Tornio**	**2.38**	**135**	smax	smax	00 28 05.4	
	comp=Z,0.9nm,0.2s						
TOF				SG	Sb	00 28 07.9	+0.1
RNF	**Rovaniemi**	**2.57**	**116**	PG	Pb	00 27 39.4	-1.6
RNF				SG	Sb	00 28 12.7	-0.4
ARA0	**ARCESS Array S**	**2.59**	**46**	PG	Pb	00 27 39.6	-1.9
ARA0				SG	Sb	00 28 13.0	-0.8
KU1	**Kurvinen**	**4.35**	**117**	SG	Sb	00 29 07.3	+2.9

HEL 20 00:28:13.6±0.1, 67°.59N×33°.91E, h0km, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero** baz=225	**0.42**	**42**	PG	Pg	00 28 21.2	-0.4
LVZ				SG	Sg	00 28 26.8	-0.1
VRF	**Varrio**	**1.65**	**277**	PG	Pn	00 28 43.4	-0.4
VRF				smax	smax	00 29 03.1	
	comp=Z,2.5nm,0.2s						
VRF				SG	Sn	00 29 03.4	-2.3
OLKF	**Oulanka, Finla**	**2.19**	**236**	PG	Pb	00 28 53.2	-0.7
OLKF				smax	smax	00 29 18.4	
	comp=Z,1.4nm,0.2s						
OLKF				SG	Sb	00 29 21.9	+0.3
KU6	**Riekki**	**2.24**	**227**	PG	Pb	00 28 53.5	-1.3
KU6				smax	smax	00 29 19.9	
	comp=Z,0.8nm,0.2s						
KU6				SG	Sb	00 29 22.9	-0.1
RAJF	**Raja-Jooseppi**	**2.29**	**295**	PB	Pn	00 28 52.9	+0.4
MSF	**Maaselka** baz=50	**2.57**	**231**	PG	Pb	00 28 59.6	-0.9
KU1	**Kurvinen**	**2.68**	**223**	SN	Sn	00 29 30.0	-1.0
KEV	**Kevo**	**3.33**	**314**	PN	Pn	00 29 06.6	-0.2
KEV				SN	Sn	00 29 45.3	-1.7
ARA0	**ARCESS Array S** baz=122	**3.65**	**306**	PN	Pn	00 29 10.5	-0.8
KLF	**Kolari**	**3.86**	**269**	PB	Pb	00 29 20.7	-1.7
HEF	**Hetta**	**3.94**	**287**	PN	Pn	00 29 16.3	+1.0
KTK1	**Kautokeino**	**4.21**	**295**	PB	Pb	00 29 24.7	-3.8

*HEL **20** 00:28:30.6±0.4, 67°.83N×20°.11E, h0km, ML1.4, Suspected*

explosion

UPP 20 00:28:30.6±0.0, 67°83N×20°21E, h0km, ML1.6, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**21**	P	Pg	00 28 33.4	+0.3
KUA				S	Sg	00 28 35.3	+0.4
RATU	**Laukkuluspa**	**0.23**	**269**	P	Pg	00 28 35.3	+0.2
NIKU	**Nikkaluokta**	**0.45**	**275**	P	Pg	00 28 39.1	0.0
NIKU				S	Sg	00 28 45.3	+0.4
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 28 44.0	-0.2
LANU	**Lannavaara** baz=261	**0.71**	**71**	PG	Pg	00 28 43.9	-0.2
LANU				SB	Sg	00 28 53.7	+0.4
DUNU	**Dundret**	**0.73**	**169**	P	Pg	00 28 44.2	-0.2
DUNU				S	Sg	00 28 54.2	+0.4
MASU	**Masugnsbyn**	**0.78**	**118**	P	Pg	00 28 45.4	-0.1
MASU				S	Sg	00 28 55.0	-0.6
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 28 45.5	-0.2
SALU				S	Sg	00 28 56.5	+0.5
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pb	00 28 54.0	-0.1
KIF	**Kilpisjarvi**	**1.20**	**10**	PN	Pn	00 28 54.7	+0.2
KIF	comp=Z,4.9nm,0.2s			smax	smax	00 29 08.2	
KIF				SG	Sg	00 29 09.6	+0.5
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	00 28 56.6	-1.0
HEF	**Hetta**	**1.42**	**64**	PG	Pn	00 28 56.7	-0.9
HEF	comp=Z,3.1nm,0.2s			smax	smax	00 29 14.2	
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	00 28 57.8	-0.8
ERTU				S	Sg	00 29 18.2	-0.4
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	Pn	00 28 58.1	-0.6
ERTU				SN	Sn	00 29 15.1	+0.2
KLF	**Kolari**	**1.56**	**111**	PG	Pn	00 28 59.4	-0.1
KLF	comp=Z,1.9nm,0.2s			smax	smax	00 29 18.6	
KTK1	**Kautokeino**	**1.63**	**42**	PG	Pn	00 29 00.4	-0.2
KTK1				SN	Sg	00 29 23.3	+0.3
HARU	**Harads**	**1.70**	**169**	P	Pn	00 29 01.4	0.0
KALU	**Kalix** baz=324	**2.34**	**146**	PG	Pn	00 29 11.4	+1.2
KALU				SG	Sb	00 29 43.3	+0.4
TOF	**Tornio**	**2.39**	**135**	PB	Pn	00 29 12.6	+1.6
TOF	comp=Z,1.4nm,0.2s			smax	smax	00 29 42.1	
TOF				SG	Sb	00 29 45.0	+0.6
RNF	**Rovaniemi**	**2.57**	**116**	SB	Sb	00 29 49.9	+0.3
RNF	**Rovaniemi**	**2.57**	**116**	PB	Pb	00 29 15.6	-1.9
RNF				SG	Sb	00 29 49.9	+0.3
ARA0	**ARCESS Array S**	**2.58**	**46**	SG	Sb	00 29 48.4	-1.6
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PN	Pn	00 29 20.9	+0.3
KEV	**Kevo**	**3.14**	**49**	SN	Sn	00 29 58.7	-0.5

IDC 20 00:43:21.6±2.1, 18°33S×176°40W, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=132.1km s-min=24.9km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=95,slow=7.1,SNR=16	**46.44**	**260**	P	P	00 51 50.0	-0.6
	0.7nm,0.5s						
ASAR	**Alice Springs** 4.5nm,0.5s,baz=87,slow=8.5,SNR=73	**46.52**	**255**	P	P	00 51 51.8	+0.5
	4.5nm,0.5s						
TXAR	**Lajitas Array** baz=242,slow=4.8,SNR=6.6	**84.61**	**57**	P	P	00 55 57.0	-0.5
ILAR	**Eielson Array** 0.2nm,0.4s,baz=221,slow=5.4,SNR=7.5	**85.88**	**12**	P	P	00 56 03.0	+0.1
	0.2nm,0.4s						
PDAR	**Pinedale Array** 0.2nm,0.8s,baz=258,slow=5.8,SNR=2.2	**86.35**	**43**	P	P	00 56 07.2	+1.1
	0.2nm,0.8s						
GERES	**GERESS Array B** 0.4nm,0.5s,baz=30,slow=3.2,SNR=4.3	**148.48**	**347**	PKPbc	PKPbc	01 03 09.2	-1.3

*NEIC **20** 01:00:56.0±1.5, 36°46N±0°02×120°64W±0°02, h28km±7km, Error ellipse: s-maj=3.3km s-min=2.7km az=203.0*

NCEDC 20 01:00:56.7±2.1, 36°43N±0°01×120°66W±0°02, h20km±3km, Md3.0/93, ML2.5/65(NEIC), Error ellipse: s-maj=2.1km s-min=1.5km az=48.0, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMPB	**Monarch Peak**	**0.24**	**208**		Pb	01 01 02.9	+0.2
PMPB				Sg	Sb	01 01 07.6	+0.8
PMPB	comp=E,791nm,0.8s			IAML		01 01 08.6	
PMPB	comp=N,778nm,0.5s			IAML		01 01 10.0	
BMSM	**Mercy Hot Spri**	**0.25**	**335**		Pb	01 01 03.1	+0.3
LRV	**Little Rabbit**	**0.29**	**269**		Pb	01 01 03.6	+0.3
PPTM	**Peach Tree Val**	**0.33**	**189**		Pb	01 01 04.2	+0.4
BBGB	**Big Mountain B**	**0.34**	**296**	Pg	Pb	01 01 04.4	+0.4
BBGB					Sb	01 01 09.9	+0.8
PSMM	**Smith Mountain**	**0.36**	**172**		Pb	01 01 05.2	+0.7
PSMM					Sn	01 01 12.1	-1.0
PSAM	**San Ardo**	**0.45**	**204**		Pb	01 01 06.3	+0.5
WSRE	**Westside REC,**	**0.45**	**102**		Pb	01 01 06.7	+0.9
WSRE					Sn	01 01 15.0	-0.3
PHPM	**Hope Ranch**	**0.45**	**174**		Pb	01 01 06.2	+0.2
BSGM	**Shirttail Gulc**	**0.48**	**268**		Pb	01 01 06.4	0.0
PKD	**Bear Valley Ra**	**0.49**	**169**	Pg	Pb	01 01 06.6	-0.1
PKD				Sg	Sb	01 01 14.7	+1.2
AVNL	**Avenal, CA USA**	**0.51**	**144**		Pb	01 01 07.7	+0.7
PSTM	**Stockdale Moun**	**0.52**	**166**		Pb	01 01 07.3	+0.2
PVCM	**Vineyard Canyo**	**0.52**	**169**		Pb	01 01 07.4	+0.3
PCCM	**Crazy Canyon**	**0.53**	**230**		Pb	01 01 07.9	+0.6
BJOM	**Mount Johnson**	**0.56**	**291**		Pb	01 01 07.9	0.0
CTM	**Castle Mountai**	**0.56**	**152**		Pb	01 01 08.8	+0.8
PPO	**Portuguese Can**	**0.56**	**176**		Pb	01 01 08.6	+0.6
PHFM	**Heflinger Ranc**	**0.59**	**159**		Pb	01 01 08.8	+0.5
BJCM	**Johnson Can.**	**0.60**	**281**		Pb	01 01 08.5	-0.1
HULI	**Fort Hunter Li**	**0.62**	**229**	Pg	Pb	01 01 09.2	+0.4
HULI				Sg	Sb	01 01 18.1	+0.9
HULI	comp=N,206nm,0.4s			IAML		01 01 24.0	
BSMM	**Soledad Missio**	**0.62**	**266**		Pb	01 01 09.2	+0.3
SCZ	**Santa Cruz**	**0.62**	**286**		Pb	01 01 08.8	-0.2
PKLM	**Kerr Lake**	**0.71**	**158**		Pb	01 01 10.8	+0.4
SAO	**San Andreas Ge**	**0.71**	**298**		Pb	01 01 10.7	+0.2
SAO	**San Andreas Ge**	**0.71**	**298**	Pg	Pb	01 01 10.4	-0.1
SAO	**San Andreas Ge**	**0.71**	**298**	Sg	Sb	01 01 20.7	+0.8
BSRM	**Salinas Radio**	**0.73**	**289**		Pb	01 01 10.7	-0.1
PMRM	**Maxey Ranch**	**0.73**	**152**		Pb	01 01 11.1	+0.3
FRP	**Fremont Peak**	**0.74**	**296**		Pb	01 01 11.0	0.0
TCHL	**Shandon**	**0.77**	**164**		Pn	01 01 12.0	-0.4
PAGB	**Antelope Grade**	**0.77**	**154**		Pb	01 01 11.6	+0.1
LCUV	**Le Cuvier**	**0.78**	**184**		Pb	01 01 11.9	+0.4
SLD	**San Luis Dam**	**0.78**	**325**		Pn	01 01 12.2	-0.4
THIS	**South End of C**	**0.79**	**153**		Pb	01 01 12.1	+0.4
HPCM	**Pacheco Lake**	**0.80**	**322**		Pb	01 01 12.2	+0.3
HFEM	**San Felipe**	**0.81**	**313**		Pb	01 01 12.4	+0.3
RAMR	**Ramage Ranch**	**0.81**	**192**		Pn	01 01 13.1	+0.1
TCAS	**Cass Winery, P**	**0.82**	**174**		Pn	01 01 12.8	-0.3
BPRM	**Ponciano Ridge**	**0.86**	**269**		Pb	01 01 13.2	+0.2
LEGD	**La Grand CA**	**0.88**	**28**		Pb	01 01 12.7	-0.7
LEGD	**La Grand CA** comp=N,136nm,0.3s	**0.88**	**28**	IAML		01 01 25.4	
HTUM	**Tustin Road**	**0.88**	**297**		Pb	01 01 13.3	-0.1
CDC	**Canada Road**	**0.89**	**312**		Pn	01 01 13.8	-0.3
MHDM	**Hidden Dam**	**0.92**	**42**		Pb	01 01 13.3	-0.7
TSCN	**Private Proper**	**0.92**	**164**		Pn	01 01 14.7	+0.2
FORD	**Fort Ord Natur**	**0.94**	**286**	Pg	Pb	01 01 14.2	-0.1
KARE	**Kearney REC, C**	**0.95**	**80**		Pb	01 01 13.4	-1.0
FRI	**Friant**	**0.95**	**54**		Pb	01 01 13.5	-0.9
PCBM	**Cambria**	**0.97**	**200**		Pb	01 01 15.5	+0.4
PBPM	**Bitterwater Pu**	**0.97**	**151**		Pb	01 01 14.7	-0.1
TRAY	**Twisselman Ran**	**0.98**	**154**		Pb	01 01 14.9	-0.1
HMOM	**Monterey**	**1.03**	**280**		Pn	01 01 15.9	0.0
PTAM	**Tassajara Cree**	**1.04**	**182**		Pn	01 01 16.5	+0.3
VOG	**Valley Oaks Go**	**1.04**	**96**		Pb	01 01 14.8	-1.1
JLAB	**Laurel Hill**	**1.12**	**310**		Pn	01 01 16.5	-0.8
ARN	**Arnold Ranch**	**1.15**	**323**		Pn	01 01 17.0	-0.7
CCOB	**Coe Ranch Numb**	**1.16**	**316**		Pn	01 01 17.4	-0.4
MHC	**Mount Hamilton** comp=E,88nm,0.7s	**1.20**	**319**	Pn	Pn	01 01 17.5	-1.0
MHC				IAML		01 01 43.7	
CMMM	**Mount Mocho**	**1.22**	**327**		Pn	01 01 18.8	+0.1
MMIM	**Miami Mountain**	**1.23**	**36**		Pn	01 01 18.8	-0.1
SMMC	**Simmler**	**1.24**	**154**		Pn	01 01 18.9	0.0
CARC	**Carrizo Plain**	**1.30**	**149**		Pn	01 01 19.6	-0.2
BUCR	**Buckhorn Ranch**	**1.30**	**18**		Pn	01 01 19.7	-0.2
KCC	**Kaiser Creek**	**1.40**	**50**		Pn	01 01 20.9	-0.2
VES	**Vestal, Richgr**	**1.41**	**114**	Pn	Pn	01 01 20.5	-0.6
VES	comp=N,100nm,0.2s			IAML		01 01 41.8	
CRGC	**Crocker Grade**	**1.41**	**147**		Pn	01 01 21.0	-0.3
SPG2	**Springville 2**	**1.55**	**98**		Pn	01 01 22.6	-0.5
CMB	**Columbia Colle**	**1.62**	**8**		Pn	01 01 24.2	+0.2
CMB	**Columbia Colle**	**1.62**	**8**	Pn	Pn	01 01 23.6	-0.5
CMB	**Columbia Colle** comp=E,43nm,0.5s	**1.62**	**8**	IAML		01 01 48.5	
MRDM	**Red Cones**	**1.73**	**47**		Pb	01 01 27.3	-0.7
MINS	**Minaret Summit**	**1.77**	**46**		Pb	01 01 28.1	-0.6
MDYM	**Dry Creek**	**1.80**	**47**		Pb	01 01 29.1	-0.1
MDCM	**Deadman Creek**	**1.82**	**45**		Pb	01 01 28.6	-0.8
MLCM	**Laurel Creek C**	**1.83**	**49**		Pb	01 01 28.9	-0.7
WASM	**Alta Sierra Ca**	**1.84**	**111**		Pn	01 01 27.4	+0.2
MGPM	**Gravel Pit**	**1.84**	**49**		Pb	01 01 29.4	-0.5
MEMM	**East Mammoth H**	**1.85**	**48**		Pb	01 01 30.0	+0.1
JSBM	**San Bruno Moun**	**1.87**	**312**		Pn	01 01 26.7	-0.8
MCVM	**Convict Lake**	**1.87**	**51**		Pb	01 01 29.4	-0.9
MTUM	**Tungsten Hills**	**1.92**	**61**		Pb	01 01 30.1	-1.0
ISA	**Isabella, Lake**	**1.93**	**113**		Pn	01 01 28.9	+0.5
ISA	**Isabella, Lake**	**1.93**	**113**	Pn	Pn	01 01 28.4	0.0
ISA	comp=N,58nm,0.2s			IAML		01 01 54.4	
ISA	comp=E,71nm,0.2s			IAML		01 01 54.6	
TEJ	**El Tejon**	**2.00**	**126**		Pn	01 01 28.8	-0.6
WELL	**Weller Preserv**	**2.00**	**359**		Pn	01 01 30.8	+1.4
WELL	**Weller Preserv** comp=E,29nm,0.5s	**2.00**	**359**	IAML		01 01 58.7	
TIN	**Tinemaha, Big**	**2.05**	**72**	Pn	Pn	01 01 29.9	-0.2
CWC	**Cottonwood Cre**	**2.08**	**89**	Pn	Pn	01 01 31.0	+0.4
CWC	comp=E,55nm,0.2s			IAML		01 02 01.4	
MFS	**McCloud Flat S**	**2.29**	**97**		Pn	01 01 35.4	+1.9
WNMM	**Nine Mile Cany**	**2.31**	**104**		Pn	01 01 35.4	+1.9
LHV	**Little Huntoon**	**2.50**	**43**	Pn	Pn	01 01 37.1	+0.9
LHV	comp=N,30nm,0.8s			IAML		01 02 26.3	
LHV	comp=E,30nm,0.8s			IAML		01 02 31.4	
CLC	**China Lake**	**2.56**	**103**	Pn	Pn	01 01 37.2	+0.2
LRMC	**Laurel Mtn Rad**	**2.60**	**111**	Pn	Pn	01 01 38.0	+0.4
LRMC	comp=N,32nm,0.4s			IAML		01 02 18.0	
LRMC	comp=E,19nm,0.5s			IAML		01 02 18.1	
NVAR	**Mina Array Bea**	**2.74**	**43**	Pn	Pn	01 01 40.5	+0.8
RYN	**Ryan**	**2.77**	**37**	Pn	Pn	01 01 40.8	+0.6
RYN	comp=E,22nm,0.6s			IAML		01 02 22.4	
RYN	comp=N,21nm,0.4s			IAML		01 02 23.1	
QSM	**Queen of Sheba**	**3.10**	**98**	Pn	Pn	01 01 45.0	+0.5
QSM	comp=N,16nm,3.6s			IAML		01 03 41.5	
WCT	**Wildcat Mounta**	**3.27**	**82**	Pn	Pn	01 01 46.3	-0.5
WCT	comp=E,9.4nm,4.7s			IAML		01 02 19.0	
BFSC	**Mount Baldy Ra**	**3.29**	**131**	Pn	Pn	01 01 47.2	0.0
BFSC	comp=N,13nm,0.1s			IAML		01 03 37.2	
BEKR	**Beckworth**	**3.44**	**4**	Pn	Pn	01 01 49.9	+0.6
BEKR	comp=N,8.0nm,3.2s			IAML		01 02 59.9	
TPNV	**Topopah Spring**	**3.58**	**80**	Pn	Pn	01 01 50.3	-0.9
TPNV	comp=N,9.2nm,2.0s			IAML		01 03 12.3	
TPNV	comp=N,10.0nm,4.5s			IAML		01 03 21.3	
SHPR	**Sheep Range**	**4.43**	**87**	Pn	Pn	01 02 04.0	+1.0
PFO	**Pinyon Flats O**	**4.45**	**128**	Pn	Pn	01 02 04.2	+1.1
PFO	comp=N,7.0nm,4.7s			IAML		01 04 04.8	

*NEIC **20** 01:08:38.8±1.6, 19°51N±0°04×65°98W±0°04, h10km±2km, mb3.9/3, ML3.4/20, Md3.6/14(RSPR), Error ellipse: s-maj=7.5km s-min=5.5km az=304.0*

*RSPR **20** 01:08:39.8, 19°69N×65°93W, h51km±12km, MD3.6/14*

ISC 20 01:08:37.2±2.1, 19°61N±0°08×66°00W±0°06, h10km±12km, n55, σ1°00/65, 12C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.23**	**204**		**Pg**	**01 09 01.0**	**+0.2**
EMPR					**Sn**	**01 09 18.0**	**+1.0**
EMPR	**Esperanza - Ma**	**1.23**	**204**	*e*P	**Pg**	**01 09 01.0**	**+0.2**
EMPR	**Esperanza - Ma**	**1.23**	**204**	*e*S	**Sn**	**01 09 18.0**	**+1.0**
GCPR	**Guaynabo City**	**1.29**	**184**		**Pn**	**01 09 01.2**	**0.0**
GCPR				Sn	**Sb**	**01 09 16.5**	**-1.7**
GCPR	comp=N,444nm,0.7s			IAML		01 09 23.2	
GCPR	**Guaynabo City**	**1.29**	**184**	*e*P	**Pg**	**01 09 01.7**	**-0.3**
GCPR	**Guaynabo City**	**1.29**	**184**	*e*S	**Sb**	**01 09 17.6**	**-0.6**
ECPR	**Experimental S**	**1.32**	**195**	*e*P	**Pb**	**01 09 02.2**	**0.0**
ECPR	**Experimental S**	**1.32**	**195**	*e*S	**Sb**	**01 09 19.8**	**+0.6**
AOPR	**Arecibo Observ**	**1.44**	**210**	Pn	**Pn**	**01 09 02.9**	**-0.4**
AOPR				Sn	**Sn**	**01 09 20.1**	**-2.3**
AOPR	comp=N,1μm,0.4s			IAML		01 09 28.8	
AOPR	**Arecibo Observ**	**1.44**	**210**	*i*P	**Pn**	**01 09 03.9**	**+0.5**
AOPR	**Arecibo Observ**	**1.44**	**210**	*e*S	**Sn**	**01 09 22.8**	**+0.5**
HUMP	**Col San Antoni**	**1.46**	**174**	Pn	**Pb**	**01 09 04.0**	**-0.4**
HUMP				Sn	**Sn**	**01 09 21.9**	**-0.9**
HUMP	**Col San Antoni**	**1.46**	**174**	*e*P	**Pb**	**01 09 04.2**	**-0.3**
HUMP	**Col San Antoni**	**1.46**	**174**	*e*S	**Sn**	**01 09 22.9**	**+0.1**
SJG	**San Juan**	**1.49**	**186**	Pn	**Pn**	**01 09 04.2**	**+0.2**
SJG				Sn	**Sn**	**01 09 21.0**	**-2.6**
SJG	comp=N,396nm,0.4s			IAML		01 09 27.3	
SJG	comp=N,401nm,0.5s			IAML		01 09 31.4	
SJG	**San Juan**	**1.49**	**186**	*e*P	**Pb**	**01 09 04.6**	**-0.4**
SJG	**San Juan**	**1.49**	**186**	*e*S	**Sn**	**01 09 23.3**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.51**	**207**		**Pn**	**01 09 04.9**	**+0.7**
UUPR					**Sn**	**01 09 25.1**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.51**	**207**	*i*P	**Pn**	**01 09 04.9**	**+0.7**
UUPR	**Utuado, UPR, P**	**1.51**	**207**	*e*S	**Sn**	**01 09 25.1**	**+1.1**
AGPR	**Aguadilla, PR**	**1.54**	**223**		**Pn**	**01 09 05.7**	**+0.9**
AGPR					**Sn**	**01 09 25.0**	**+0.1**
AGPR	**Aguadilla, PR**	**1.54**	**223**	*i*P	**Pn**	**01 09 05.7**	**+0.9**
AGPR	**Aguadilla, PR**	**1.54**	**223**	*e*S	**Sn**	**01 09 25.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.66**	**200**	Pn	**Pn**	**01 09 06.4**	**+0.1**
OBIP				Sn	**Sn**	**01 09 26.4**	**-1.2**
OBIP	comp=N,263nm,0.5s			IAML		01 09 32.2	
OBIP	**Obispado Ponce**	**1.66**	**200**	*i*P	**Pn**	**01 09 06.7**	**+0.4**
OBIP	**Obispado Ponce**	**1.66**	**200**	*e*S	**Sn**	**01 09 27.8**	**+0.2**
LSP	**Las Mesas**	**1.75**	**216**		**Pn**	**01 09 07.7**	**0.0**
LSP					**Sn**	**01 09 31.2**	**+1.1**
LSP	**Las Mesas**	**1.75**	**216**	*i*P	**Pn**	**01 09 07.7**	**0.0**
LSP	**Las Mesas**	**1.75**	**216**	*e*S	**Sn**	**01 09 31.2**	**+1.1**
GBPR	**Guanica, Bosqu**	**1.82**	**207**		**Pb**	**01 09 10.2**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.82**	**207**	*e*P	**Pb**	**01 09 10.2**	**-0.4**
IDE	**Isla Desecheo**	**1.85**	**229**		**Pn**	**01 09 09.7**	**+0.7**
IDE					**Sn**	**01 09 32.8**	**+0.4**
IDE	**Isla Desecheo**	**1.85**	**229**	*i*P	**Pn**	**01 09 09.7**	**+0.7**
IDE	**Isla Desecheo**	**1.85**	**229**	*e*S	**Sn**	**01 09 32.8**	**+0.4**
MLPR	**Magueyes Islan**	**1.91**	**211**	*i*P	**Pn**	**01 09 10.1**	**+0.4**
MLPR	**Magueyes Islan**	**1.91**	**211**	*e*S	**Sn**	**01 09 34.2**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.91**	**214**	Pn	**Pn**	**01 09 09.7**	**0.0**
CRPR				Sn	**Sn**	**01 09 31.9**	**-1.8**
CRPR	comp=E,193nm,0.9s			IAML		01 09 45.5	
CRPR	**Cabo Rojo, PR**	**1.91**	**214**	*i*P	**Pn**	**01 09 10.2**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.91**	**214**	*e*S	**Sn**	**01 09 34.8**	**+1.1**
HIDR	**Higuey Centro**	**2.76**	**249**	*i*P	**Pn**	**01 09 22.7**	**+1.2**
HIDR	**Higuey Centro**	**2.76**	**249**	*e*S	**Sn**	**01 09 53.3**	**-1.6**
MIDR	**Miches**	**2.95**	**258**	*i*P	**Pn**	**01 09 24.7**	**+0.7**
MIDR	**Miches**	**2.95**	**258**	*e*S	**Sn**	**01 09 58.8**	**-0.7**
DR12	**Loma Pena Alta**	**3.30**	**256**	Pn	**Pn**	**01 09 29.2**	**+0.3**
BANI	**BANI**	**4.30**	**254**	Pn	**Pn**	**01 09 44.3**	**+1.6**
SC01	**Santiago de lo**	**4.46**	**269**	Pn	**Pn**	**01 09 43.9**	**-1.0**
SC01	comp=N,72nm,1.5s			IAML		01 11 18.8	
SC01	comp=E,77nm,1.6s			IAML		01 11 33.9	
SDDR	**Presa de Saban**	**5.03**	**264**	Pn	**Pn**	**01 09 53.9**	**+1.0**
SDDR	comp=E,40nm,0.6s			IAML		01 10 59.0	
SDDR	comp=E,39nm,0.6s			IAML		01 11 01.9	
GDHS	**Morne Mazeau,**	**5.22**	**129**	Pn	**Pn**	**01 09 57.4**	**+2.0**
CBE	**Ff, Capester**	**5.46**	**129**	Pn	**Pn**	**01 10 00.1**	**+1.4**
BIM	**Bigot**	**6.92**	**136**	Pn	**Pn**	**01 10 19.2**	**+0.5**
CHIV	**Chivirico**	**9.81**	**274**	Pn	**Pn**	**01 10 55.9**	**-2.5**
BAUV	**El Baul**	**10.78**	**191**	Pn	**Pn**	**01 11 11.6**	**-0.1**
RUSC	**La Rusia**	**15.27**	**208**		**Pn**	**01 12 15.2**	**+1.7**
RUSC	comp=Z,9.1nm,1.4s			IAmb	IAmb	01 12 57.7	
BOAV	**Boa Vista**	**17.92**	**162**		**P**	**01 12 46.8**	**-0.4**
BOAV	comp=Z,4.3nm,1.2s			IAmb	IAmb	01 12 49.8	
HODGE	**Hodges**	**20.51**	**319**	P	Pn	01 13 18.4	+0.7
HODGE	comp=Z,11nm,1.2s			IAmb	IAmb	01 13 42.1	

*IDC **20** 01:29:48.5±10.0, 3°94N×124°08E, h425km±130km, mb3.3/6, mbtmp4.2/7, Error ellipse: s-maj=102.6km s-min=20.8km az=58.0*

*DJA **20** 01:29:50.5±0.6, 3°N±5°×12°5E±°, h208km±6km, M4.1/12, mB4.7/5, mb4.0/5, MLv4.2/12, Mw(mB)3.9/5*

ISC 20 01:29:37.2±1.1, 4°4N±0°1×125°3E±0°1, h300km, n13, σ2s43/14, mb3.7/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.79**	**161**	P	**Pn**	**01 30 20.5**	**+3.8**
SGSI				S	**S**	**01 30 43.2**	**-5.0**
TNTI	**Ternate**	**4.20**	**150**	P	**Pn**	**01 30 46.7**	**+1.0**
APSI	**Ampana** 0.1nm952nm17nm,0.7s	**6.43**	**214**	P	**Pn**	**01 31 11.9**	**+0.2**
SANI	**Sanana**	**6.49**	**174**	P	**Pn**	**01 31 11.2**	**-1.2**
MPSI	**Mapaga**	**6.73**	**233**	P	**Pn**	**01 31 17.9**	**+2.5**
NLAI	**Namlea**	**7.84**	**166**	P	**Pn**	**01 31 30.5**	**+1.6**
BATI	**Baumata** 31nm,0.5s,baz=0.0,slow=3.0,SNR=6.4	**14.63**	**186**	P	**P**	**01 32 51.0**	**+0.7**
FITZ	**Fitzroy Crossi** 2.6nm,0.5s,baz=8.2,slow=8.8,SNR=23	**22.40**	**179**	P	**P**	**01 34 09.8**	**-1.1**
	2.6nm,0.5s						
WRA	**Warramunga Arr** 1.1nm,0.4s,baz=332,slow=11,SNR=27	**25.82**	**160**	P	**P**	**01 34 43.0**	**+1.2**
	1.1nm,0.4s						
ASAR	**Alice Springs** 0.7nm,0.4s,baz=341,slow=7.2,SNR=13	**29.18**	**164**	P	**P**	**01 35 11.4**	**-0.2**
	0.7nm,0.4s						
STKA	**Stephens Creek** 2.7nm,0.4s,baz=330,slow=8.9,SNR=7.9	**39.32**	**158**	P	**P**	**01 36 40.2**	**+2.2**
	2.7nm,0.4s						
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=115,slow=7.8,SNR=8.3	**56.15**	**326**	P	**P**	**01 38 44.5**	**-1.7**
	0.3nm,0.3s						
KURBB	**Kurchatov Arra** 0.6nm,0.2s,baz=121,slow=6.1,SNR=5.6	**60.36**	**328**	P	**P**	**01 39 13.0**	**-2.0**
	0.6nm,0.2s						

*GCG **20** 01:36:14.9±2.0, 13°70N×90°99W, h45km±21km, MD4.1, ML4.4*

*CATAC **20** 01:36:14.2±0.5, 14°N±2°×9°1W±°, h21km±3km, M4.2/31, MLv4.2/31, Error ellipse: s-maj=5.4km s-min=2.3km az=29.9, confirmed*

*SNET **20** 01:36:32.6±12.0, 13°63N×90°01W, h13km, ML4.1*

ISC 20 01:36:12.4±1.6, 13°72N±0°05×90°98W±0°04, h7km±11km, n68, σ0s86/85, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.49**	**109**	*i*P	**Pb**	**01 36 25.1**	**+1.8**
ESSG	**Sabana Grande**	**0.67**	**12**	*e*P	**Pn**	**01 36 28.4**	**0.0**
ESSG				*e*S	**Sn**	**01 36 38.9**	**-0.3**
FG16	**Alotenango, Sa**	**0.71**	**40**	*i*P	**Pn**	**01 36 29.9**	**+0.9**
FG16				*i*S	**Sn**	**01 36 41.4**	**+1.1**
FG16	comp=E,96μm,0.2s			IAML		01 36 42.0	
PCG5	**San Vicente Pa**	**0.76**	**50**	*e*P	**Pn**	**01 36 29.6**	**-0.1**
PCG5				*e*S	**Sn**	**01 36 40.0**	**-1.6**
STG5	**El Palmar, Qui**	**0.77**	**332**	*e*P	Pn	01 36 33.9	+4.2
STG2	**El Palmar, Qui**	**0.81**	**332**	*i*P	Pn	01 36 34.9	+4.6
STG8	**El Palmar, Qui**	**0.81**	**333**	*e*P	Pn	01 36 35.0	+4.6
STG8	comp=E,8μm,0.2s			IAML		01 36 52.3	
FAME	**Alcaldia de Sa**	**0.94**	**83**	P	**Pb**	**01 36 31.6**	**+0.6**
RTAL	**Retalhuleu**	**1.06**	**319**	S	**Sn**	**01 36 47.7**	**-0.9**
RTAL	**Retalhuleu**	**1.06**	**319**	P	**Pn**	**01 36 33.6**	**0.0**
SOKI	**Kika Raxquin**	**1.17**	**339**	*e*P	**Pn**	**01 36 36.0**	**+0

CSGN	**Cosiguina Volc**	**3.41**	**102**	P		**Pn**	**01 37 06.5**	**+0.5**
CSGN				S		**Sn**	**01 37 45.7**	**-1.1**
POTN	**Potosi Cosigui**	**3.46**	**102**	P		**Pn**	**01 37 07.9**	**+1.3**
POTN				S		**Sn**	**01 37 48.2**	**+0.4**
CRIN	**San Cristobal**	**3.96**	**104**	P		**Pn**	**01 37 14.5**	**+0.9**
YUSH	**Yuscaran**	**4.02**	**86**	P		**Pn**	**01 37 14.8**	**+0.3**
PKGN	**Cerro Pekin**	**4.04**	**105**	P		**Pn**	**01 37 15.4**	**+0.8**
CNGN	**Cerro Negro**	**4.34**	**106**	P		**Pn**	**01 37 19.7**	**+0.8**

*HLW **20** 01:54:32.4, 27°.38N×34°.43E, h22km±1km, Md2.6, Ml2.3*
*SGS **20** 01:54:35.8, 27°.52N×34°.73E, h10km, Ml1.9*
ISC 20 01:54:30.3±0.9, 27°.41N±0°.04×34°.52E±0°.04, h12km, n28, σ1§05/29, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TR1	**Tor 1**	**0.78**	**320**	P	**Pb**	**01 54 46.6**	**+0.8**
HHRG	**Al Ghardaqah**	**0.87**	**257**	P	**Pb**	**01 54 47.8**	**+0.5**
HHRG				S	**Sb**	**01 54 58.5**	**-0.3**
RSHS		**0.92**	**16**	P	**Pg**	**01 54 48.4**	**+0.4**
RSHS		**0.92**	**16**	S	**Sg**	**01 54 59.4**	**-0.6**
KRABS	**KRABS**	**0.94**	**43**	S	**Sg**	**01 55 00.1**	**-0.8**
KRABS				P	**Pg**	**01 54 48.9**	**+0.3**
MWLHS	**Almuwaylih**	**0.94**	**69**	P	**Pb**	**01 54 48.8**	**+0.2**
MWLHS	**Almuwaylih**	**0.94**	**69**	S	**Sg**	**01 54 59.7**	**-1.2**
AYUS	**`Aynunah**	**1.02**	**41**	P	**Pb**	**01 54 50.1**	**+0.2**
AYUS	**`Aynunah**	**1.02**	**41**	S	**Sb**	**01 55 02.3**	**-1.0**
BDAS	**Al Bad`**	**1.14**	**27**	P	**Pb**	**01 54 51.9**	**0.0**
TR2	**Tor 2**	**1.20**	**324**	P	**Pb**	**01 54 53.0**	**0.0**
HKAT	**Jabal Katrina**	**1.20**	**337**	P	**Pb**	**01 54 53.6**	**+0.5**
HDHB	**Dhahab**	**1.31**	**4**	P	**Pn**	**01 54 54.5**	**+0.1**
WTBKS	**WTBKS**	**1.40**	**61**	P	**Pn**	**01 54 56.3**	**+0.5**
WTBKS	**WTBKS**	**1.40**	**61**	S	**Sn**	**01 55 12.5**	**-1.8**
JLOS		**1.57**	**33**	P	**Pn**	**01 54 58.6**	**+0.4**
HAQS	**Haql**	**1.67**	**12**	P	Pg	01 55 10.9	+8.6
WJHS		**1.81**	**112**	P	**Pn**	**01 55 01.6**	**+0.3**
JMOS	**Jabal al Moall**	**1.82**	**16**	P	**Pn**	**01 55 02.3**	**+0.8**
TBKS	**Tabuk**	**1.96**	**65**	P	**Pn**	**01 55 04.8**	**+1.4**
NADB	**Abo Dabab**	**2.06**	**180**	P	**Pn**	**01 55 04.6**	**-0.3**
URD12	**Shuwaq**	**2.28**	**81**	P	**Pn**	**01 55 09.7**	**+1.8**
EWJHS	**Al Wajh**	**2.28**	**123**	P	**Pn**	**01 55 07.7**	**-0.1**
URD10	**Hayder**	**2.41**	**71**	P	**Pn**	**01 55 11.2**	**+1.6**
URD04	**Abu Rakah**	**2.46**	**97**	P	**Pn**	**01 55 12.3**	**+1.9**
URD03	**Al Ula**	**2.72**	**105**	P	**Pn**	**01 55 15.7**	**+1.8**
URD14	**Abu Rakah**	**2.86**	**89**	P	**Pn**	**01 55 18.0**	**+2.1**
HAGS	**Hagol**	**3.05**	**172**	P	**Pn**	**01 55 18.8**	**+0.3**

*IDC **20** 02:13:18.0±2.5, 0°.44S×132°.46E, h0km, mb3.9/2, mbtmp3.8/4, ML3.9/2, MS3.6/1, Error ellipse: s-maj=94.2km s-min=27.7km az=77.0*
*DJA **20** 02:13:20.4±0.6, 0°.S×4°.×13°.2E±°, h10km, M3.9/7, MLv3.9/7*
ISC 20 02:13:23.9±1.3, 0°.56S±0°.09×132°.11E±0°.07, h35km, n9, σ4§44/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.90**	**251**	P	**Pn**	**02 13 40.6**	**+0.5**
SWI				S	**Sn**	**02 13 55.1**	**+3.1**
RKPI	**Ransiki, Papua**	**2.27**	**115**	P	**Pn**	**02 13 58.8**	**-0.2**
FAKI	**Fak Fak**	**2.34**	**177**	P	**Pn**	**02 14 02.4**	**+2.4**
FAKI				S	**Sn**	**02 14 34.7**	**+7.1**
KMPI	**Kaimana, Papua**	**3.46**	**153**	P	**Pn**	**02 14 16.8**	**+1.4**
FITZ	**Fitzroy Crossi**	**18.55**	**200**	P	**Pn**	**02 17 38.9**	**+0.7**
	0.3nm,0.3s,baz=28,slow=10,SNR=7.0						
FITZ				S	**Sn**	**02 20 56.5**	**-8.2**
	1.1nm,0.5s,baz=24,slow=20,SNR=1.3 0.7nm,0.3s						
WRA	**Warramunga Arr**	**19.38**	**174**	P	**P**	**02 17 46.3**	**-0.7**
	0.3nm,0.3s,baz=355,slow=11,SNR=12						
WRA				S	**S**	**02 21 17.9**	**-6.5**
	0.8nm,0.9s,baz=348,slow=23,SNR=4.8 2.2nm,0.7s						
ASAR	**Alice Springs**	**23.03**	**176**	P	**P**	**02 18 26.2**	**0.0**
	5.8nm,0.8s,baz=354,slow=9.4,SNR=43 5.8nm,0.8s						
JOW	**Kunigami**	**27.49**	**353**	LR	LR	02 28 02.7	
	comp=Z,119nm,21.4s,baz=334,slow=32						
MKAR	**Makanchi Array**	**64.14**	**324**	P	**P**	**02 23 55.1**	**+0.2**
	0.7nm,0.7s,baz=108,slow=7.8,SNR=3.0 0.7nm,0.7s						

*AEIC **20** 02:44:48.8±1.6, 54°.91N±0°.06×157°.82W±0°.09, h35km±9km, ML3.3, mb3.8/8(NEIC), ML3.4/32(NEIC), Error ellipse: s-maj=9.4km s-min=6.3km az=148.0*
*NEIC **20** 02:44:48.6±1.1, 54°.98N±0°.03×157°.95W±0°.07, h29km±4km, Error ellipse: s-maj=6.2km s-min=4.9km az=77.0*
ISC 20 02:44:47.6±1.6, 54°.96N±0°.09×157°.92W±0°.06, h22km±14km, n68, σ0§78/75, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.97**	**263**		**Pn**	**02 45 06.1**	**+0.2**
CNBA					**Sn**	**02 45 17.9**	**-1.1**
VNSG	**Veniaminof 6**	**1.35**	**331**		**Pn**	**02 45 10.9**	**-0.2**
VNKR	**Veniaminof 5**	**1.36**	**323**		**Pn**	**02 45 11.0**	**-0.2**
VNKR					**Sn**	**02 45 28.4**	**-0.1**
SDPT	**Sand Point**	**1.52**	**286**	Pn	**Pn**	**02 45 13.9**	**+0.5**
SDPT				Sn	**Sn**	**02 45 33.9**	**+1.4**
SDPT				IAML		02 45 41.7	
	comp=E,376nm,1.0s						
SDPT				IAML		02 45 43.5	
	comp=N,360nm,1.2s						
VNNF	**Veniaminof 3**	**1.55**	**330**		**Pn**	**02 45 14.5**	**+0.5**
CHIR	**Chirikof Islan**	**1.57**	**56**	Pn	**Pn**	**02 45 14.1**	**0.0**
CHIR				IAML		02 45 44.8	
	comp=E,396nm,0.7s						
CHIR				IAML		02 45 46.9	
	comp=N,310nm,0.6s						
VNFG	**Fog Glacier, M**	**1.62**	**326**		**Pn**	**02 45 15.6**	**+0.6**
VNFG					**Sn**	**02 45 37.1**	**+1.9**
VNFG	**Fog Glacier, M**	**1.62**	**326**	Pn	**Pn**	**02 45 15.1**	**+0.2**
VNFG				Sn	**Sn**	**02 45 36.4**	**+1.2**
VNFG				IAML		02 45 41.7	
	comp=N,2μm,0.7s						
VNFG				IAML		02 45 42.3	
	comp=E,2μm,0.8s						
ANPB	**Aniakchak Plen**	**1.86**	**354**		**Pn**	**02 45 18.3**	**+0.1**
ANPB					**Sb**	**02 45 43.4**	**-0.4**
ANPK	**Aniakchak Peak**	**1.89**	**357**		**Pn**	**02 45 18.8**	**+0.2**
ANNE	**Aniakchak Nort**	**1.96**	**358**		**Pn**	**02 45 20.1**	**+0.6**
PS1A	**Pavlof South-1**	**2.24**	**284**		**Pn**	**02 45 23.6**	**+0.3**
PS1A					**Sn**	**02 45 51.5**	**+1.2**
PVV	**Pavlof Volcano**	**2.26**	**282**		**Pn**	**02 45 23.5**	**-0.1**
S12K	**Black Hills**	**2.48**	**289**	Pn	**Pn**	**02 45 26.3**	**-0.4**
S12K				IAML		02 46 02.4	
	comp=N,269nm,0.5s						
SII	**Sitkinak Islan**	**2.65**	**51**	Pn	**Pn**	**02 45 29.4**	**+0.4**
SII				IAML		02 46 16.3	
	comp=N,236nm,1.1s						
SII				IAML		02 46 32.2	
	comp=E,223nm,1.0s						
PLK4	**Peulik 4**	**2.82**	**17**	Pn	**Pn**	**02 45 31.1**	**-0.3**
PLK4				IAML		02 46 17.0	
	comp=N,174nm,0.6s						
FALS	**False Pass**	**3.18**	**270**	Pn	**Pn**	**02 45 36.3**	**+0.1**
OHAK	**Old Harbor**	**3.45**	**47**	Pn	**Pn**	**02 45 39.2**	**-0.7**
OHAK				IAML		02 46 57.4	
	comp=N,51nm,0.9s						
P16K	**Nushagak River**	**4.09**	**359**	Pn	**Pn**	**02 45 48.7**	**0.0**
KDAK	**Kodiak Island**	**4.10**	**44**	Pn	**Pn**	**02 45 48.7**	**-0.2**
O15K	**Ungalikthiuk R**	**4.36**	**347**	Pn	**Pn**	**02 45 52.0**	**-0.4**
O15K				IAML		02 46 45.7	
	comp=N,48nm,1.5s						
O15K				IAML		02 46 48.5	
	comp=E,30nm,1.4s						
O16K	**Kokwok River B**	**4.65**	**359**	Pn	**Pn**	**02 45 56.6**	**+0.2**
O14K	**Tigyukauivet M**	**4.68**	**338**	Pn	**Pn**	**02 45 56.8**	**0.0**
O14K				IAML		02 47 30.3	
	comp=N,32nm,1.4s						
O14K				IAML		02 47 35.6	
	comp=E,24nm,1.2s						
SYI	**Shuyak Island**	**4.76**	**37**	Pn	**Pn**	**02 45 58.1**	**+0.2**
SYI				IAML		02 47 20.2	
	comp=N,35nm,1.3s						
SYI				IAML		02 47 23.3	
	comp=E,37nm,1.5s						
O18K	**Koktuh Hills**	**5.12**	**15**	Pn	**Pn**	**02 46 01.7**	**-1.3**
O18K				IAML		02 47 31.1	
	comp=N,19nm,0.9s						
N15K	**Kwethluk River**	**5.36**	**348**	Pn	**Pn**	**02 46 06.5**	**+0.4**
N14K	**Kuskokwak Cree**	**5.38**	**339**	Pn	**Pn**	**02 46 06.2**	**-0.2**
N16K	**Nishlik Lake**	**5.55**	**356**		**Pn**	**02 46 10.4**	**+1.6**
CNPM	**China Poot**	**5.84**	**36**	Pn	**Pn**	**02 46 12.7**	**-0.1**
M16K	**Timber Creek**	**6.11**	**355**	Pn	**Pn**	**02 46 16.5**	**+0.1**
N19K	**Bonanza Creek**	**6.15**	**16**	Pn	**Pn**	**02 46 16.3**	**-0.9**
M13K	**Dall Lake**	**6.20**	**334**	Pn	**Pn**	**02 46 17.5**	**-0.1**
M14K	**Bethel**	**6.20**	**341**	Pn	**Pn**	**02 46 17.6**	**-0.1**
M17K	**Holitna River**	**6.47**	**2**	Pn	**Pn**	**02 46 21.0**	**-0.3**
L16K	**Owhat River**	**6.82**	**354**	Pn	**Pn**	**02 46 25.8**	**-0.4**
L14K	**Kuka Creek**	**6.88**	**340**	Pn	**Pn**	**02 46 26.7**	**-0.3**
L18K	**Granite Mounta**	**7.31**	**5**	Pn	**Pn**	**02 46 32.4**	**-0.6**
M20K	**Styx River**	**7.38**	**18**	Pn	**Pn**	**02 46 34.4**	**+0.4**
L19K	**White Mountain**	**7.42**	**11**	Pn	**Pn**	**02 46 34.3**	**-0.1**
SUA	**Susitna One**	**7.54**	**27**	Pn	**Pn**	**02 46 36.1**	**-0.1**
K15K	**Wolf Creek Mou**	**7.60**	**347**	Pn	**Pn**	**02 46 37.3**	**+0.4**
K17K	**Iditarod**	**7.79**	**359**	Pn	**Pn**	**02 46 39.0**	**-0.4**
K13K	**Kusilvak Mount**	**7.83**	**336**	Pn	**Pn**	**02 46 39.9**	**-0.1**
GHO	**Glory Hole Cre**	**8.30**	**31**	Pn	**Pn**	**02 46 47.4**	**+0.7**
FID	**Port Fidalgo**	**8.41**	**42**	Pn	**Pn**	**02 46 48.1**	**+0.1**
J16K	**Anvik River**	**8.47**	**352**	Pn	**Pn**	**02 46 48.1**	**-0.6**
SML	**Sawmill**	**8.51**	**32**	Pn	**Pn**	**02 46 49.4**	**0.0**
EYAK	**Cordova Ski Ar**	**8.58**	**44**	Pn	**Pn**	**02 46 50.7**	**+0.4**
SCM	**Sheep Creek Mo**	**8.85**	**35**	Pn	**Pn**	**02 46 53.7**	**-0.3**
KLU	**Klutina**	**9.10**	**39**	Pn	**Pn**	**02 46 57.2**	**-0.3**
GLB	**Gilahina Butte**	**9.87**	**43**	Pn	**Pn**	**02 47 08.1**	**+0.1**
TABL	**Table Mountain**	**10.51**	**52**	Pn	**Pn**	**02 47 18.1**	**+1.2**
ILAR	**Eielson Array**	**11.28**	**25**	Pn	**Pn**	**02 47 25.3**	**-1.9**
BCAR	**Beaver Creek A**	**11.60**	**39**	Pn	**Pn**	**02 47 32.6**	**+1.0**
M29M	**Somme Creek**	**12.55**	**45**	Pn	**Pn**	**02 47 45.4**	**+0.6**
I26K	**Coal Creek Min**	**12.68**	**29**	Pn	**Pn**	**02 47 46.5**	**+0.2**
WHY	**Whitehorse**	**13.50**	**56**	Pn	**Pn**	**02 48 00.7**	**+3.0**
C19K	**Lookout Ridge**	**14.22**	**358**	P	**P**	**02 48 14.1**	**-0.5**
D23K	**Nanushuk River**	**14.45**	**11**	P	**P**	**02 48 17.0**	**0.0**
H29M	**Whitestone**	**14.73**	**32**	P	**P**	**02 48 21.9**	**+1.6**
B20K	**Meade River**	**15.11**	**1**	P	**P**	**02 48 23.2**	**-1.2**
B22K	**Teshekpuk Lake**	**15.57**	**6**	P	**P**	**02 48 28.8**	**-0.7**
H31M	**Peel River**	**15.81**	**37**	P	**P**	**02 48 32.4**	**+0.2**
H31M				IAML	IAML	02 49 10.2	
	comp=Z,14nm,1.5s						
G30M	**tAoh Zraii Nji**	**15.88**	**32**	Pn	**Pn**	**02 48 29.2**	**-0.2**
F30M	**Barrier River**	**16.41**	**31**	Pn	**Pn**	**02 48 35.4**	**-0.8**
F30M				IAML	IAML	02 48 41.7	
	comp=Z,14nm,1.4s						
INK	**Inuvik**	**17.52**	**31**	Pn	**Pn**	**02 48 49.3**	**-0.7**
C36M	**Paulatuk**	**20.98**	**33**	P	**P**	**02 49 29.0**	**+0.1**
C36M				IAML	IAML	02 49 45.8	
	comp=Z,3.7nm,1.0s						
A36M	**Sachs Harbour**	**21.97**	**27**	P	**P**	**02 49 38.4**	**-1.0**
A36M				IAML	IAML	02 49 46.7	
	comp=Z,6.3nm,1.2s						

CATAC 20 02:50:57.1±0.6, 12°.N±4°.×8°.7W±°, h34km±5km, M2.4/12, MLv2.4/12, Error ellipse: s-maj=9.6km s-min=3.7km az=31.3, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKGN	**Cerro Pekin**	**0.59**	**49**	P	Pb	02 51 09.6	+0.3
PKGN				S	Sn	02 51 19.4	+1.8
QUEN	**Al S del Volca**	**0.65**	**62**	P	Pb	02 51 10.8	+0.5
CSGN	**Cosiguina Volc**	**0.70**	**350**	P	Pb	02 51 11.7	+0.6
CSGN				S	Sb	02 51 22.3	+1.7
POLN	**Al Sur del Vol**	**0.71**	**59**	P	Pn	02 51 10.4	-0.5
POLN				S	Sb	02 51 21.1	+0.3
POTN	**Potosi Cosigui**	**0.72**	**355**	P	Pb	02 51 11.4	+0.1
POTN				S	Sb	02 51 22.5	+1.6
CNGA	**Al SSO del Vol**	**0.75**	**74**	P	Pb	02 51 12.3	+0.4
CNGA				S	Sb	02 51 22.8	+0.9
CNGN	**Cerro Negro**	**0.76**	**73**	P	Pb	02 51 12.5	+0.5
CNGN	**Cerro Negro**	**0.76**	**73**	S	Sb	02 51 23.4	+1.3
COPN	**Copaltepe**	**0.83**	**97**	P	Pn	02 51 12.6	+0.1
MOMN	**Momotombo**	**0.89**	**82**	P	Pn	02 51 13.6	+0.4
MOM3	**MOM3**	**0.93**	**76**	P	Pb	02 51 14.5	-0.3
MOM3				S	Sn	02 51 26.3	+0.4
MOM2	**El Cardon**	**0.95**	**80**	P	Pn	02 51 14.4	+0.4
MOM2				S	Sn	02 51 26.2	-0.1
CNCH	**Conchagua**	**1.06**	**339**	P	Pb	02 51 16.8	-0.4
CNCH	**Conchagua**	**1.06**	**339**	S	Sn	02 51 29.5	+0.1
LCND	**La Caada**	**1.11**	**337**	S	Sn	02 51 30.2	-0.3
PACA	**Pacayal**	**1.46**	**324**	P	Pn	02 51 20.3	-1.0
PACA	**Pacayal**	**1.46**	**324**	S	Sn	02 51 39.9	+0.6
YUSH	**Yuscaran**	**1.76**	**19**	P	Pn	02 51 26.5	+1.1
RCVN	**Varillal2**	**1.77**	**43**	P	Pn	02 51 26.7	+1.1
RCVN	**Varillal2**	**1.77**	**43**	S	Sn	02 51 48.7	+1.6

TEH 20 02:53:25.6, 38°.31N×44°.57E, h8km, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.83**	**92**	Pg	Pg	02 53 41.4	-0.1
IMRD	**Marand**	**0.98**	**65**	Pg	Pg	02 53 44.2	-0.2
IMRD				Sg	Sn	02 53 59.3	-0.7
IHRS	**Heris**	**1.95**	**89**	Pn	Pb	02 54 01.8	+0.3

*ISK **20** 02:53:56.5, 37°.98N×42°.81E, h4km, ML1.8/3*
AFAD 20 02:53:59.2, 38°.05N×42°.74E, h7km±2km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PERV	**Siirt/Pervari-**	**0.19**	**236**	P	Pg	02 54 03.4	+0.3
PERV				S	Sg	02 54 07.2	+1.5
AKDM	**Akdamar-Van**	**0.33**	**34**	Pg	Pg	02 54 04.6	-1.2
AKDM				Sg	Sg	02 54 10.1	-0.1
SIRN	**Sirnak**	**0.61**	**205**	P	Pg	02 54 11.7	+0.6
SIRN				S	Sg	02 54 19.5	+0.4
SIRN				*i* IAML		02 54 23.0	
	comp=E,31nm,0.3s						
SIRN				*i* IAML		02 54 31.0	
	comp=N,23nm,0.4s						
SRTM	**Siirt_Merkez**	**0.65**	**265**	P	Pg	02 54 12.2	+0.5
SRTM				S	Sb	02 54 21.4	-0.9
SRTM				*i* IAML		02 54 30.0	
	comp=N,28nm,0.8s						
SRTM				*i* IAML		02 54 32.0	
	comp=E,23nm,0.5s						
GURO	**Guroymak-BITLI**	**0.75**	**312**	Pg	Pg	02 54 12.9	-0.7
GURO				Sg	Sb	02 54 25.4	+0.3
ADCV	**BITLIS_Adilcev**	**0.75**	**359**	P	Pg	02 54 13.7	0.0
HAKT	**HAKKARI**	**0.91**	**123**	P	Pg	02 54 16.6	-0.1
CUKT	**Cukurca**	**1.06**	**139**	Pg	Pg	02 54 15.8	-3.7
BTMN	**Batman**	**1.18**	**262**	P	Pn	02 54 22.1	-0.1
BTMN				S	Sg	02 54 36.9	-0.1
BTMN				*i* IAML		02 54 41.0	
	comp=N,12nm,0.6s						
BTMN				*i* IAML		02 54 41.0	
	comp=E,14nm,0.5s						
MUSM	**Mu-Merkez**	**1.18**	**305**	P	Pg	02 54 20.8	-0.9

*IDC **20** 03:35:20.6±0.8, 7°.29N×94°.58E, h0km, mb4.1/16, mbtmp4.1/17, ML3.5/1, MS3.8/1, Error ellipse: s-maj=33.0km s-min=17.4km az=54.0*
*NEIC **20** 03:35:22.3±1.2, 7°.2N±0°.1×94°.4E±0°.1, h10km±1km, mb4.7/18, Error ellipse: s-maj=22.4km s-min=14.4km az=237.0*
ISC 20 03:35:24.1±0.5, 7°.15N±0°.07×94°.42E±0°.06, h26km, n54, σ0§85/52, mb4.4/25, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.51**	**254**	*e*P	**Pb**	**03 35 33.6**	**-0.9**
CMBY				*e*S	**Sb**	**03 35 41.5**	**0.0**
CMBY				*e*S	**Sn**	**03 35 42.4**	**-1.1**
CMBY				IAML		03 35 44.0	
	comp=N,17μm,0.2s						
CMBY				IAML		03 35 44.2	
	comp=E,16μm,0.2s						
PSI	**Prapat**	**6.23**	**134**	Pn	**Pn**	**03 36 56.5**	**+2.0**
	comp=E,1.0nm,0.3s,baz=349,slow=5.2,SNR=4.4 comp=E,2.7nm,0.3s						
RPSI	**Rantau Prapat**	**6.30**	**136**		**Pn**	**03 36 56.5**	**+1.1**
RPSI	**Rantau Prapat**	**6.30**	**134**	Pn	**Pn**	**03 36 54.6**	**-0.8**
CM31	**Chiang Mai Arr**	**12.07**	**21**	Pn	**Pn**	**03 38 14.5**	**0.0**
CMAR	**Chiang Mai Arr**	**12.07**	**21**	Pn	**Pn**	**03 38 15.2**	**+0.7**
	comp=E,0.2nm,0.3s,baz=199,slow=16,SNR=1.6						
CMAR	**Chiang Mai Arr**	**12.07**	**21**		**Pn**	**03 38 14.1**	**-0.4**
EVN	**Everest**	**21.91**	**342**	P	**P**	**03 40 15.5**	**-0.6**
NIL	**Nilore**	**32.85**	**326**	P	**P**	**03 41 56.1**	**+0.3**
MBWA	**Marble Bar**	**37.54**	**139**	P	**P**	**03 42 35.0**	**-1.4**
MBWA				IAmb	IAmb	03 42 48.0	
	comp=Z,16nm,1.2s						
GAR	**Garm**	**38.43**	**329**		**P**	**03 42 44.0**	**+0.2**
GAR				IAmb	IAmb	03 42 49.0	
	comp=Z,14nm,1.0s						
CHGR	**Chuyangaron**	**38.78**	**328**		**P**	**03 42 46.6**	**-0.1**
CHGR				IAmb	IAmb	03 42 50.9	
	comp=Z,22nm,1.1s						
BOOM	**Boomskoye usch**	**38.80**	**338**	P	**P**	**03 42 46.7**	**-0.2**
MKAR	**Makanchi Array**	**40.85**	**347**	P	**P**	**03 43 03.6**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=164,slow=8.6,SNR=9.6 comp=Z,4.8nm,0.9s						
SONM	**Songino Array**	**41.80**	**12**	P	**P**	**03 43 10.9**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=193,slow=5.9,SNR=4.8 comp=Z,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**45.31**	**346**	P	**P**	**03 43 40.2**	**+0.5**
	comp=Z,3.9nm,0.3s,baz=164,slow=6.8,SNR=14 comp=Z,2.3nm,0.3s						
KURK	**Kurchatov**	**45.37**	**346**		**P**	**03 43 41.1**	**+0.9**
KURK				IAmb	IAmb	03 43 46.0	
	comp=Z,11nm,1.1s						
ZAA0	**Zalesovo Array**	**47.30**	**352**		**P**	**03 43 55.6**	**+0.3**
ZAA0				IAmb	IAmb	03 44 00.6	
	comp=Z,6.3nm,1.0s						
ZALV	**Zalesovo Beam**	**47.30**	**352**	P	**P**	**03 43 55.9**	**+0.5**
	comp=Z,5.7nm,0.9s,baz=169,slow=8.9,SNR=15 comp=Z,5.7nm,0.9s						
ZALV	**Zalesovo Beam**	**47.30**	**352**		**P**	**03 43 54.9**	**-0.4**
WB0	**Warramunga Arr**	**47.58**	**125**	P	**P**	**03 43 57.0**	**-1.0**
WB0				IAmb	IAmb	03 44 06.3	
	comp=Z,7.8nm,1.5s						
WRA	**Warramunga Arr**	**47.62**	**125**	P	**P**	**03 43 57.4**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=299,slow=8.1,SNR=2.0 comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**47.62**	**125**	P	**P**	**03 43 57.6**	**-0.8**
WR8	**Warramunga Arr**	**47.76**	**125**	P	**P**	**03 43 58.9**	**-0.5**
WR8				IAmb	IAmb	03 44 10.8	
	comp=Z,5.7nm,1.3s						
ASAR	**Alice Springs**	**49.24**	**130**	P	**P**	**03 44 10.4**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=294,slow=6.9,SNR=5.9 comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**49.24**	**130**	P	**P**	**03 44 10.2**	**-0.6**
JHJ	**Hachijo jima 2**	**49.28**	**52**	LR	LR	04 06 03.9	
	comp=Z,103nm,19.9s,baz=138,slow=38						
FORT	**Forrest**	**49.60**	**141**	P	**P**	**03 44 14.3**	**+1.0**
BVAR	**Borovoye Array**	**49.76**	**341**	P	**P**	**03 44 13.9**	**-0.3**
	comp=Z,1.nm,0.8s,baz=133,slow=8.1,SNR=9.8 comp=Z,3.1nm,0.8s						
AB31	**Akbulak array**	**50.99**	**331**		**P**	**03 44 24.0**	**+0.4**
AB31				IAmb	IAmb	03 44 29.8	
	comp=Z,11nm,1.3s						
ABKAR	**Akbulak array**	**50.99**	**331**		**P**	**03 44 23.5**	**-0.1**
ARTI	**Arti**	**56.70**	**337**	P	**P**	**03 45 05.3**	**+0.1**
ARTI				IAmb	IAmb	03 45 10.2	
	comp=Z,12nm,1.2s						
KMBO	**Kilima Mbogo**	**57.62**	**264**	P	**P**	**03 45 16.4**	**+3.5**
	comp=Z,2.0nm,0.7s,baz=112,slow=5.4,SNR=4.1 comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**63.11**	**311**	P	**P**	**03 45 49.1**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=108,slow=7.9,SNR=7.4 comp=Z,0.9nm,0.8s						
BRTR	**Keskin Array B**	**63.11**	**311**	P	**P**	**03 45 49.5**	**-0.3**
H04N2	**CROZET ISLANDS**	**65.25**	**211**	T	T	04 57 19.9	
	baz=47						
H04N1	**CROZET ISLANDS**	**65.26**	**211**	T	T	04 57 11.5	
	baz=47						
H04N3	**CROZET ISLANDS**	**65.27**	**211**	T	T	04 57 16.0	
	baz=47						
FINES	**FINESS Array B**	**73.47**	**332**	P	**P**	**03 46 53.5**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=93,slow=4.0,SNR=7.2 comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**73.47**	**332**	P	**P**	**03 46 54.0**	**-0.1**
ARCES	**ARCESS Array B**	**76.03**	**340**	P	**P**	**03 47 08.8**	**-0.1**
	comp=Z,2.6nm,0.9s,baz=106,slow=6.9,SNR=4.2 comp=Z,2.6nm,0.9s						
ARCES	**ARCESS Array B**	**76.03**	**340**	P	**P**	**03 47 09.0**	**+0.2**
GERES	**GERESS Array B**	**78.55**	**318**	P	**P**	**03 47 24.1**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=68,slow=4.9,SNR=6.0 comp=Z,0.9nm,0.8s						
HFS	**Hagfors**	**79.22**	**330**	P	**P**	**03 47 26.7**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=123,slow=5.5,SNR=7.2 comp=Z,1.6nm,0.6s						
NOA	**NORSAR Array B**	**80.49**	**331**	P	**P**	**03 47 33.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=94,slow=5.2,SNR=2.5 comp=Z,0.7nm,0.

	comp=Z,570nm,12.1s					
PZH	**PanZhiHua**	**20.32**	**19**	P	Pn	03 41 48.6 +1.6
PZH				pmax	pmax	
	comp=Z,10.0nm,0.5s					
SMRI	**Semarang**	**21.30**	**132**	P	**P**	**03 41 53.8 -1.8**
SMRI				IAmb	IAmb	03 42 01.2
	comp=Z,56nm,0.9s					
EVN	**Everest**	**21.84**	**341**		**P**	**03 42 01.2 -0.7**
LSA	**Lhasa**	**22.54**	**352**	P	**P**	**03 42 09.1 -0.2**
MYLDM	**Lahad Datu**	**23.91**	**94**	P	**P**	**03 42 22.4 -0.4**
MYLDM				IAmb	IAmb	03 42 43.3
	comp=Z,28nm,0.9s					
JAGI	**Jajag, Banyuwa**	**25.04**	**128**	P	**P**	**03 42 32.7 -0.4**
JAGI				IAmb	IAmb	03 42 58.6
	comp=Z,26nm,1.1s					
CD2	**Chengdu**	**25.05**	**19**	P	**P**	**03 42 34.1 +0.9**
TOLI2	**Tolitoli**	**26.87**	**102**		**P**	**03 42 49.9 +0.1**
TOLI2				IAmb	IAmb	03 42 55.2
	comp=Z,14nm,0.9s					
KAPI	**Kappang**	**27.96**	**115**	P	**P**	**03 43 00.1 +0.5**
WHN	**Wuhan**	**29.68**	**36**	P	P	03 43 20.9 +6.2
LZDM	**Lanzhou Array**	**29.76**	**15**	LR	LR	03 56 58.0
	comp=Z,203nm,18.7s,baz=225,slow=40					
TWG	**Pinlang**	**29.84**	**56**	P	**P**	**03 43 16.2 0.0**
LZH	**Lanzhou**	**29.92**	**15**	*e*P	P	03 43 23.8 +6.9
LZH				pP	pwP	03 43 30.8 +8.2
LZH				pmax	pmax	
	comp=Z,22nm,1.6s					
LYN	**LuoYang**	**31.78**	**29**	P	**P**	**03 43 36.8 +3.6**
LYN				pmax	pmax	
	comp=Z,14nm,0.8s					
MMRI	**Maumere**	**31.81**	**119**	P	**P**	**03 43 33.9 +0.2**
GTA	**Gaotai**	**32.35**	**8**	*e*P	P	**03 43 40.5 +2.2**
GTA				pP	pwP	03 43 44.5 +0.6
GTA				pmax	pmax	
	comp=Z,3.0nm,1.3s					
NIL	**Nilore**	**32.82**	**326**	P	**P**	**03 43 41.7 -0.6**
NJ2	**Nanjing**	**33.48**	**39**	*e*P	**P**	**03 43 49.5 +1.4**
NJ2				pmax	pmax	
	comp=Z,12nm,0.6s					
BATI	**Baumata**	**33.80**	**121**	LR	LR	03 58 04.5
	comp=Z,373nm,21.4s,baz=296,slow=37					
HNS	**HongShan**	**35.15**	**28**	⇑P	**P**	**03 44 00.8 -1.7**
HNS				pmax	pmax	
	comp=Z,19nm,1.4s					
KBL	**Kabul**	**35.89**	**323**	P	**P**	**03 44 09.3 +0.1**
HHC	**Hu-ho-hao-te**	**36.73**	**22**	*e*P	**P**	**03 44 18.1 +2.0**
HHC				pmax	pmax	
	comp=Z,11nm,0.9s					
HHC				pmax	pmax	
	comp=Z,230nm,5.9s					
WMQ	**Urumqi**	**36.90**	**352**	*e*P	**P**	**03 44 20.0 +2.5**
WMQ				pmax	pmax	
	comp=Z,12nm,0.7s					
MBWA	**Marble Bar**	**37.55**	**139**	P	**P**	**03 44 22.7 -0.5**
MBWA				IAmb	IAmb	03 44 23.3
	comp=Z,39nm,1.6s					
PSA00	**Pilbara Seismi**	**37.92**	**140**		**P**	**03 44 25.5 -0.8**
PSA00	**Pilbara Seismi**	**37.92**	**140**	P	**P**	**03 44 25.5 -0.8**
PSA00				IAmb	IAmb	03 45 20.8
	comp=Z,79nm,2.0s					
DRK	**Karamyk**	**38.03**	**331**	P	**P**	**03 44 26.1 -1.3**
GAR	**Garm**	**38.40**	**329**		**P**	**03 44 30.3 0.0**
GAR				IAmb	IAmb	03 44 38.7
	comp=Z,24nm,1.1s					
CHGR	**Chuyangaron**	**38.74**	**328**		**P**	**03 44 33.5 +0.3**
CHGR				IAmb	IAmb	03 44 41.7
	comp=Z,30nm,0.9s					
AAK	**Ala-Archa**	**39.42**	**337**	LR	LR	04 02 22.0
	comp=Z,149nm,21.1s,baz=160,slow=38					
AAK	**Ala-Archa**	**39.42**	**337**	P	**P**	**03 44 39.8 +1.0**
MKAR	**Makanchi Array**	**40.76**	**347**	P	**P**	**03 44 50.0 +0.2**
	comp=Z,10nm,1.1s,baz=165,slow=7.7,SNR=8.5					
	comp=Z,10nm,1.1s					
MAKZ	**Makanchi**	**40.85**	**347**	P	**P**	**03 44 50.3 -0.1**
KNRA	**Kununurra**	**40.85**	**124**	P	**P**	**03 44 51.5 +0.6**
KNRA				IAmb	IAmb	03 46 00.5
	comp=Z,20nm,1.6s					
KK31	**Karatay Array**	**41.48**	**333**	P	**P**	**03 44 56.2 +0.5**
KKAR	**Karatay Array**	**41.48**	**333**	P	**P**	**03 44 56.2 +0.5**
MTN	**Manton Dam**	**41.49**	**119**	P	**P**	**03 44 55.2 -1.0**
SONM	**Songino Array**	**41.67**	**12**	P	**P**	**03 44 57.9 +0.5**
	comp=Z,2.3nm,0.9s,baz=193,slow=8.1,SNR=6.3					
SONM				PcP	**PcP**	**03 46 54.1 0.0**
	comp=Z,0.8nm,0.6s,baz=193,slow=3.6,SNR=2.9					
	comp=Z,2.3nm,0.9s					
KURBB	**Kurchatov Arra**	**45.23**	**346**	P	**P**	**03 45 26.1 +0.2**
	comp=Z,6.0nm,0.2s,baz=165,slow=7.2,SNR=7.9					
KURBB				PcP	**PcP**	**03 47 06.1 +0.2**
	comp=Z,1.8nm,0.7s,baz=164,slow=2.8,SNR=2.6					
	comp=Z,6.0nm,0.2s					
KURK	**Kurchatov**	**45.29**	**346**	P	**P**	**03 45 26.4 +0.1**
KURK				IAmb	IAmb	03 45 35.0
	comp=Z,23nm,1.2s					
CN2	**Changchun**	**45.33**	**32**	P	**P**	**03 45 27.6 +0.8**
NWAO	**Narrogin (SRO)**	**45.43**	**153**	P	**P**	**03 45 27.7 -0.1**
ZAA0	**Zalesovo Array**	**47.20**	**352**	P	**P**	**03 45 41.3 0.0**
ZAA0				IAmb	IAmb	03 45 58.1
	comp=Z,9.9nm,1.1s					
ZALV	**Zalesovo Beam**	**47.20**	**352**	P	**P**	**03 45 42.1 +0.7**
	comp=Z,4.7nm,0.9s,baz=177,slow=7.4,SNR=7.1					
ZALV				PcP	**PcP**	**03 47 11.7 -1.0**
	comp=Z,2.0nm,0.8s,baz=153,slow=4.1,SNR=1.5					
	comp=Z,4.7nm,0.9s					
ZALV	**Zalesovo Beam**	**47.20**	**352**	P	**P**	**03 45 42.2 +0.8**
WB0	**Warramunga Arr**	**47.55**	**125**	P	**P**	**03 45 43.6 -1.0**
WRA	**Warramunga Arr**	**47.59**	**125**	P	**P**	**03 45 44.2 -0.7**
	comp=Z,2.0nm,0.5s,baz=305,slow=8.2,SNR=20					
WRA				PcP	**PcP**	**03 47 13.9 -0.9**
	comp=Z,1.7nm,0.8s,baz=310,slow=2.8,SNR=5.1					
	comp=Z,2.0nm,0.5s					
WRA	**Warramunga Arr**	**47.59**	**125**	P	**P**	**03 45 43.4 -1.6**
WRAB	**Tennant Creek**	**47.60**	**125**	P	**P**	**03 45 44.6 -0.3**
WRAB				IAmb	IAmb	03 47 07.1
	comp=Z,8.3nm,0.9s					
WB2	**Warramunga Arr**	**47.60**	**125**	P	**P**	**03 45 44.1 -0.9**
WB2				IAmb	IAmb	03 46 00.4
	comp=Z,5.3nm,0.7s					
WR8	**Warramunga Arr**	**47.73**	**125**	P	**P**	**03 45 45.4 -0.6**
WR8				IAmb	IAmb	03 45 51.5
	comp=Z,16nm,1.4s					
WR0	**Warramunga Arr**	**47.76**	**125**	P	**P**	**03 45 45.7 -0.5**
WR0				IAmb	IAmb	03 46 02.2
	comp=Z,5.2nm,0.8s					
ASAR	**Alice Springs**	**49.23**	**130**	P	**P**	**03 45 56.6 -0.9**
	comp=Z,2.8nm,0.4s,baz=301,slow=7.9,SNR=23					
ASAR				PcP	**PcP**	**03 47 20.1 -0.5**
	comp=Z,3.3nm,0.8s,baz=306,slow=4.1,SNR=11					
	comp=Z,2.8nm,0.4s					
ASAR	**Alice Springs**	**49.23**	**130**	P	**P**	**03 45 57.0 -0.5**
AS31	**Alice Springs**	**49.23**	**130**	P	**P**	**03 45 56.9 -0.6**
FORT	**Forrest**	**49.62**	**141**	P	**P**	**03 46 00.8 +0.5**
BVAR	**Borovoye Array**	**49.69**	**341**	P	**P**	**03 46 00.2 -0.3**
	comp=Z,4.3nm,0.8s,baz=139,slow=9.0,SNR=9.8					
BVAR				PcP	**PcP**	**03 47 21.7 0.0**
	comp=Z,2.1nm,0.7s,baz=147,slow=3.4,SNR=3.3					
	comp=Z,4.3nm,0.8s					
RAYN	**Ar Rayn**	**49.69**	**295**	P	**P**	**03 46 02.1 +0.9**
RAYN				IAmb	IAmb	03 46 15.3
	comp=Z,5.5nm,0.8s					
AB31	**Akbulak array**	**50.95**	**331**	P	**P**	**03 46 10.6 +0.4**
AB31				IAmb	IAmb	03 46 19.5
	comp=Z,11nm,0.9s					
ABKAR	**Akbulak array**	**50.95**	**331**	P	**P**	**03 46 10.6 +0.4**
ARTI	**Arti**	**56.64**	**337**	P	**P**	**03 46 51.6 -0.1**
ARTI				IAmb	IAmb	03 47 00.5
	comp=Z,12nm,0.8s					
KMBO	**Kilima Mbogo**	**57.75**	**264**	P	**P**	**03 47 02.0 +1.4**
	comp=Z,4.9nm,0.8s,baz=64,slow=12,SNR=7.1					
	comp=Z,4.9nm,0.8s					
STKA	**Stephens Creek**	**59.41**	**134**	P	**P**	**03 47 10.5 -1.0**
	comp=Z,2.5nm,0.7s,baz=315,slow=7.0,SNR=4.5					
	comp=Z,2.5nm,0.7s					
MMAI	**Mount Meron Ar**	**60.28**	**304**	LR	LR	04 17 10.7
	comp=Z,53nm,18.7s,baz=92,slow=40					
BRTR	**Keskin Array B**	**63.12**	**311**	P	**P**	**03 47 34.7 -2.1**
	comp=Z,1.3nm,0.8s,baz=132,slow=6.1,SNR=7.2					
	comp=Z,1.3nm,0.8s					
BRTR	**Keskin Array B**	**63.12**	**311**	P	**P**	**03 47 34.9 -1.9**
TOO	**Toolangi**	**65.15**	**137**	P	**P**	**03 47 51.0 +1.0**
TOO				IAmb	IAmb	03 47 51.9
	comp=Z,5.7nm,0.9s					
ELL	**Elmali**	**65.40**	**307**	P	**P**	**03 47 51.5 -0.3**
ELL				IAmb	IAmb	03 48 02.5
	comp=Z,8.4nm,0.8s					
H04N2	**CROZET ISLANDS**	**65.41**	**211**	T	T	04 58 58.8
	baz=50,slow=74					
H04N1	**CROZET ISLANDS**	**65.42**	**211**	T	T	04 58 56.8
	baz=50					
H04N3	**CROZET ISLANDS**	**65.43**	**211**	T	T	04 58 55.5
	baz=50,slow=74					
H04S1	**CROZET ISLANDS**	**65.81**	**211**	T	T	04 59 22.7
	baz=47					
H04S3	**CROZET ISLANDS**	**65.82**	**211**	T	T	04 59 22.7
	baz=47					
H04S2	**CROZET ISLANDS**	**65.83**	**211**	T	T	04 59 23.8
	baz=47					
KARP	**Karpathos**	**67.42**	**305**	P	**P**	**03 48 02.8 -1.9**
TIXI	**Tiksi**	**67.75**	**11**	P	**P**	**03 48 05.8 -0.1**
PEA0B	**Petropavlovsk-**	**68.27**	**35**	P	**P**	**03 48 10.4 +0.8**
AKASG	**Malin Array Be**	**68.87**	**322**	P	**P**	**03 48 12.4 -0.9**
	comp=Z,0.2nm,0.3s,baz=87,slow=4.8,SNR=2.1					
	comp=Z,0.2nm,0.3s					
FINES	**FINESS Array B**	**73.43**	**332**	P	**P**	**03 48 39.8 -1.0**
	comp=Z,5.0nm,0.9s,baz=86,slow=5.9,SNR=5.5					
	comp=Z,5.0nm,0.9s					
BOSA	**Boshof**	**75.60**	**238**	P	**P**	**03 48 54.2 0.0**
	comp=Z,3.3nm,0.6s,baz=88,slow=2.2,SNR=7.1					
	comp=Z,3.3nm,0.6s					
ARCES	**ARCESS Array B**	**75.97**	**340**	P	**P**	**03 48 54.5 -0.9**
	comp=Z,2.6nm,0.9s,baz=107,slow=6.2,SNR=4.8					
	comp=Z,2.6nm,0.9s					
MAW	**Mawson**	**78.03**	**192**	P	**P**	**03 49 07.8 +1.0**
	comp=Z,4.8nm,0.6s,baz=40,slow=3.3,SNR=12					
	comp=Z,4.8nm,0.6s					
GERES	**GERESS Array B**	**78.54**	**318**	P	**P**	**03 49 09.9 -0.4**
	comp=Z,1.6nm,0.8s,baz=76,slow=5.6,SNR=8.4					
	comp=Z,1.6nm,0.8s					
HFS	**Hagfors**	**79.17**	**330**	P	**P**	**03 49 12.5 -1.0**
	comp=Z,4.8nm,0.9s,baz=83,slow=3.6,SNR=5.7					
	comp=Z,4.8nm,0.9s					
NB2	**NORSAR Subarra**	**80.45**	**331**	P	**P**	**03 49 19.4 -1.0**
	comp=Z,0.8nm,0.8s,baz=96,slow=5.6					
NOA	**NORSAR Array B**	**80.45**	**331**	P	**P**	**03 49 19.2 -1.2**
	comp=Z,1.5nm,0.8s,baz=92,slow=5.8,SNR=5.1					
	comp=Z,1.5nm,0.8s					
SPITS	**Spitsbergen Ar**	**80.51**	**348**	P	**P**	**03 49 19.5 -0.9**
	comp=Z,2.2nm,0.6s,baz=84,slow=13,SNR=4.7					
	comp=Z,2.2nm,0.6s					
SYO	**Syowa Base**	**84.95**	**197**	*e*P	**P**	**03 49 44.3 +0.8**
EKA	**Eskdalemuir Ar**	**88.44**	**325**	P	**P**	**03 50 01.0 0.0**
	comp=Z,2.7nm,0.8s,baz=98,slow=5.1,SNR=3.8					
	comp=Z,2.7nm,0.8s					
TORD	**Torodi Ar. Bea**	**91.12**	**283**	P	**P**	**03 50 13.0 -1.3**
	comp=Z,2.3nm,0.3s,baz=82,slow=4.3,SNR=0.7					
	comp=Z,2.3nm,0.3s					
ESDC	**Sonseca Array**	**91.91**	**310**	P	**P**	**03 50 17.6 0.0**
	comp=Z,1.5nm,0.8s,baz=59,slow=4.5,SNR=9.4					
	comp=Z,1.5nm,0.8s					
ILAR	**Eielson Array**	**95.15**	**22**	P	**P**	**03 50 31.2 -0.7**
	comp=Z,0.5nm,0.8s,baz=260,slow=3.6,SNR=4.1					
	comp=Z,0.5nm,0.8s					
YKA	**Yellowknife Ar**	**106.92**	**14**	Pdiff	**Pdif**	**03 51 25.8 +1.2**
	comp=Z,0.3nm,0.6s,baz=230,slow=4.4,SNR=6.8					
NVAR	**Mina Array Bea**	**125.23**	**31**	PKP	**PKPdf**	**03 56 10.7 +0.5**
	comp=Z,1.0nm,0.7s,baz=313,slow=4.0,SNR=6.8					
PDAR	**Pinedale Array**	**125.58**	**22**	PKP	**PKPdf**	**03 56 09.8 -1.1**
	comp=Z,1.0nm,0.8s,baz=35,slow=1.7,SNR=9.0					
TXAR	**Lajitas Array**	**139.61**	**25**	PKP	**PKPdf**	**03 56 39.2 +1.8**
	comp=Z,0.7nm,0.7s,baz=253,slow=1.4,SNR=8.1					
PLCA	**Paso Flores**	**144.12**	**199**	PKP	**PKPab**	**03 56 42.9 +0.3**
	comp=Z,5.4nm,0.8s,baz=174,slow=1.3,SNR=6.0					
CPUP	**Villa Florida**	**147.20**	**231**	PKPbc	**PKPdf**	**03 56 52.2 +1.6**
	comp=Z,1.3nm,0.8s,baz=117,slow=6.8,SNR=9.8					
CFA	**Coronel Fontan**	**150.93**	**211**	PKPbc	**PKPbc**	**03 57 01.9 -0.3**
	comp=Z,7.3nm,0.7s,baz=172,slow=2.4,SNR=17					

*IDC **20** 03:42:02.7±1.6,51°.66N×176°.30W, h0km, mb3.8/7, mbtmp3.9/8, ML4.4/1, MS3.4/1, Error ellipse: s-maj=44.7km s-min=23.8km az=2.0*
*NEIC **20** 03:42:09.8±0.9,51°.48N±0°.05×175°.92W±0°.02, h35km±2km, mb4.3/62, ML4.5/12, ML4.0(AEIC), Error ellipse: s-maj=7.8km s-min=3.0km az=176.0*
*AEIC **20** 03:42:10.6±2.7,51°.53N±0°.04×175°.99W±0°.03, h33km±5km, Error ellipse: s-maj=6.2km s-min=2.7km az=185.0*

ISC 20 03:42:10.0±1.4, 51°.5N±0°.1×175°.94W±0°.05, h47km±11km, n118, σ0°94/123, mb4.3/20, 1D, Andreanof Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.45**	**320**				**Pn**	**03 42 20.5**	**0.0**
ETKA							Sn	03 42 27.7	-0.3
GSIG	**Igitkin Island**	**0.47**	**1**				**Pn**	**03 42 20.7**	**-0.1**
GSIG							Sn	03 42 28.1	-0.4
GSCK	**Great Sitkin C**	**0.52**	**345**				**Pn**	**03 42 21.6**	**+0.3**
GSCK							Sn	03 42 29.7	+0.3
GSMY	**Great Sitkin M**	**0.54**	**352**				**Pn**	**03 42 21.6**	**+0.1**
GSMY							Sn	03 42 29.8	0.0
GSTD	**Great Sitkin T**	**0.56**	**347**				**Pn**	**03 42 21.9**	**0.0**
GSTD							Sn	03 42 30.4	0.0
GSTR	**Great Sitkin T**	**0.59**	**353**				**Pn**	**03 42 22.5**	**+0.3**
GSTR						Sn	Sn	03 42 31.0	+0.1
GSTR						IAML		03 42 33.4	
	comp=N,25μm,0.4s								
GSTR						IAML		03 42 33.5	
	comp=E,18μm,0.4s								
ADK	**Adak**	**0.59**	**309**				**Pn**	**03 42 22.1**	**-0.1**
ADK						Sn	Sn	03 42 30.4	-0.5
ADK						IAML		03 42 31.2	
	comp=E,19μm,0.5s								
GSSP	**Great Sitkin S**	**0.60**	**346**				**Pn**	**03 42 22.6**	**+0.3**
GSSP							Sn	03 42 31.8	+0.7
ADAG	**Mount Adagdak**	**0.62**	**319**				**Pn**	**03 42 23.2**	**+0.6**
KIWB	**Kanaga Island**	**0.83**	**295**				**Pn**	**03 42 25.6**	**+0.3**
KIWB						IAML		03 42 37.5	
	comp=E,22μm,0.4s								
KIWB	**Kanaga Island**	**0.83**	**295**				**Sn**	**03 42 36.7**	**+0.3**
KIMD	**Kanaga Island**	**0.84**	**288**				**Pn**	**03 42 25.8**	**+0.3**
KIMD							Sn	03 42 36.8	-0.1
KIKV	**Kanaga Island**	**0.85**	**296**				**Pn**	**03 42 25.9**	**+0.3**
KIKV							Sn	03 42 37.2	+0.2
TAPA	**Tanaga Point A**	**1.21**	**285**				**Pn**	**03 42 31.2**	**+0.7**
TAFL	**Tanaga Flats**	**1.24**	**282**				**Pn**	**03 42 31.8**	**+0.8**
TAFL							Sn	03 42 47.5	+1.0
ATKA	**Atka Island**	**1.28**	**57**				**Pn**	**03 42 31.4**	**-0.1**
ATKA						IAML		03 42 49.4	
	comp=N,6μm,0.5s								
TASE	**Tanaga Southea**	**1.34**	**285**				**Pn**	**03 42 33.5**	**+1.1**
KOKL	**Mount Kliuchef**	**1.35**	**52**				**Pn**	**03 42 33.2**	**+0.8**
KOWE	**Korovin West**	**1.35**	**50**				**Pn**	**03 42 33.5**	**+1.1**
KOFP	**Korovin Flat P**	**1.37**	**56**				**Pn**	**03 42 33.7**	**+0.9**
KOSE	**Korovin Southe**	**1.44**	**54**				**Pn**	**03 42 35.0**	**+1.4**
GANE	**Gareloi Northe**	**1.79**	**281**				**Pn**	**03 42 40.3**	**+1.8**
GAKI	**Gareloi-Kavalg**	**1.79**	**272**				**Pn**	**03 42 40.0**	**+1.6**
GAIO	**Gareloi South**	**1.81**	**281**				**Pn**	**03 42 39.9**	**+1.2**
CEPE	**Semis' Perret**	**2.78**	**281**				**Pn**	**03 42 52.9**	**+0.9**
CERB	**Semisopochnoi**	**2.79**	**280**				**Pn**	**03 42 53.2**	**+1.1**
AMKA	**Amchitka**	**2.98**	**269**				**Pn**	**03 42 55.2**	**+0.5**
NIKH	**Nikolski High**	**4.59**	**69**	Pn		Pn	**Pn**	**03 43 17.9**	**+1.0**
NIKH						IAML		03 44 26.9	
	comp=E,590nm,1.1s								
LVA	**Lava Point**	**6.56**	**62**	Pn			**Pn**	**03 43 42.8**	**-1.0**
SPIA	**Saint Paul Isl**	**6.58**	**28**	Pn			**Pn**	**03 43 45.1**	**+1.1**
AKUT	**Akutan**	**6.70**	**63**	Pn			**Pn**	**03 43 47.0**	**+1.4**
FALS	**False Pass**	**8.23**	**61**	Pn			**Pn**	**03 44 06.7**	**0.0**
S12K	**Black Hills**	**9.25**	**58**	Pn			**Pn**	**03 44 20.9**	**+0.3**
SDPT	**Sand Point**	**9.99**	**61**	Pn			**Pn**	**03 44 30.6**	**-0.2**
M11K	**Mekoryuk**	**10.42**	**28**	Pn			**Pn**	**03 44 39.4**	**+2.9**
M14K	**Bethel**	**12.07**	**35**	Pn			**Pn**	**03 45 01.4**	**+2.3**
KDAK	**Kodiak Island**	**14.86**	**56**	Pn			**Pn**	**03 45 34.1**	**-2.7**
	comp=E,1.5nm,0.3s,baz=278,slow=14,SNR=23								
KDAK				LR		LR		03 51 00.9	
	comp=E,138nm,19.7s,baz=251,slow=36								
	comp=E,15nm,0.9s								
J17K	**VABM Dome**	**14.90**	**31**	Pn			**Pn**	**03 45 38.0**	**+0.6**
L19K	**White Mountain**	**15.63**	**39**	Pn			**Pn**	**03 45 47.1**	**+0.2**
L19K				IAmb		IAmb	IAmb	03 45 53.3	
	comp=Z,18nm,0.9s								
SKT	**Skwentna**	**16.88**	**42**				**P**	**03 46 04.2**	**+0.1**
SKT				IAmb		IAmb	IAmb	03 46 25.8	
	comp=Z,21nm,1.2s								
KTH	**Kantishna Hill**	**17.89**	**38**				**P**	**03 46 16.2**	**+0.9**
KTH				IAmb		IAmb	IAmb	03 46 19.5	
	comp=Z,18nm,0.7s								
TRF	**Thorofare Moun**	**18.09**	**39**				**P**	**03 46 17.9**	**+0.3**
TRF				IAmb		IAmb	IAmb	03 46 39.9	
	comp=Z,30nm,1.4s								
RND	**Reindeer**	**18.64**	**40**				**P**	**03 46 23.9**	**+0.4**
RND				IAmb		IAmb	IAmb	03 46 26.1	
	comp=Z,19nm,0.8s								
MCK	**McKinley**	**18.75**	**39**				**P**	**03 46 25.5**	**+0.8**
MCK				IAmb		IAmb	IAmb	03 46 28.4	
	comp=Z,19nm,1.0s								
MLY	**Manley**	**18.76**	**34**	P			**P**	**03 46 25.8**	**+1.0**
MLY				IAmb		IAmb	IAmb	03 46 26.5	
	comp=Z,9.4nm,0.6s								
DHY	**Denali Highway**	**19.10**	**42**	P			**P**	**03 46 28.1**	**-0.5**
DHY				IAmb		IAmb	IAmb	03 46 31.7	
	comp=Z,14nm,0.6s								
I23K	**Minto, Yukon-K**	**19.31**	**35**	P		P	**P**	**03 46 31.5**	**+0.7**
I23K				IAmb		IAmb	IAmb	03 46 32.9	
	comp=Z,11nm,0.8s								
WRH	**Wood River Hil**	**19.43**	**37**	P		P	**P**	**03 46 30.9**	**-1.3**
CCB	**Clear Creek Bu**	**19.63**	**37**				**P**	**03 46 32.9**	**-1.3**
HDA	**Harding Lake**	**19.84**	**38**	P		P	**P**	**03 46 37.7**	**+1.1**
HDA				IAmb		IAmb	IAmb	03 46 40.7	
	comp=Z,17nm,0.6s								
PAX	**Paxson**	**19.86**	**43**				**P**	**03 46 37.7**	**+0.8**
PAX				IAmb		IAmb	IAmb	03 46 42.2	
	comp=Z,15nm,1.2s								
IL31		**20.03**	**37**	P		P	**P**	**03 46 39.8**	**+1.2**
ILAR	**Eielson Array**	**20.03**	**37**	P		P	**P**	**03 46 36.4**	**-2.2**
	comp=Z,1.3nm,0.6s,baz=222,slow=9.2,SNR=32								
	comp=Z,1.3nm,0.6s								
K24K	**Donnelly Dome**	**20.05**	**41**	P		P	**P**	**03 46 38.4**	**-0.4**
COLD	**Coldfoot**	**20.24**	**29**	P		P	**P**	**03 46 38.8**	**-2.1**
COLD				IAmb		IAmb	IAmb	03 46 48.3	
	comp=Z,10.0nm,0.8s								
DOT	**Dot Lake**	**20.70**	**42**	P		P	**P**	**03 46 45.6**	**-0.3**
DOT				IAmb		IAmb	IAmb	03 46 49.5	
	comp=Z,11nm,0.6s								
B21K	**Ikpikpuk River**	**20.75**	**21**				**P**	**03 46 46.3**	**0.0**
B21K				IAmb		IAmb	IAmb	03 46 49.8	
	comp=Z,16nm,1.1s								
SCRK	**Sand Creek**	**20.85**	**41**	P		P	**P**	**03 46 47.1**	**-0.5**
F24K	**Squaw Lake**	**21.13**	**30**	P		P	**P**	**03 46 51.4**	**+0.8**
F24K				IAmb		IAmb	IAmb	03 47 10.9	
	comp=Z,12nm,1.2s								
J26L	**Joseph Creek**	**21.22**	**40**				**P**	**03 46 51.1**	**-0.4**
J26L				IAmb		IAmb	IAmb	03 46 52.9	
	comp=Z,13nm,0.5s								
TOLK	**Toolik Lake Re**	**21.32**	**27**	P		P	**P**	**03 46 52.8**	**+0.2**
E25K	**Arctic Village**	**22.20**	**30**	P		P	**P**	**03 47 02.2**	**+0.3**
DAWY	**Dawson**	**22.79**	**43**				**P**	**03 47 08.0**	**-0.3**
I28M	**Miner Creek**	**23.00**	**39**				**P**	**03 47 09.2**	**-1.3**
F28M	**Old Crow**	**23.84**	**34**	P		P	**P**	**03 47 19.2**	**+0.8**
H29M	**Whitestone**	**23.87**	**38**				**P**	**03 47 17.7**	**-1.0**
J30M	**Hart River**	**24.21**	**42**				**P**	**03 47 22.9**	**+0.9**
J30M				IAmb		IAmb	IAmb	03 47 25.1	
	comp=Z,7.6nm,0.9s								
I30M	**Mount Dempster**	**24.35**	**41**				**P**	**03 47 22.0**	**-1.2**
I30M				IAmb		IAmb	IAmb	03 47 26.1	
	comp=Z,7.1nm,0.8s								
E29M	**Blow River**	**24.84**	**33**				**P**	**03 47 29.1**	**+1.6**
YKA	**Yellowknife Ar**	**33.84**	**47**	P		P	**P**	**03 48 47.0**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=282,slow=8.9,SNR=7.5								
	comp=Z,1.1nm,0.8s								
YKA	**Yellowknife Ar**	**33.84**	**47**	P		P	**P**	**03 48 47.6**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**34.47**	**209**	T		T	T	04 25 28.8	
	baz=18,slow=76,SNR=166								
H11N3	**WAKE ISLAND Hy**	**34.48**	**209**	T		T	T	04 25 33.8	
	baz=18,slow=76,SNR=238								
H11N1	**WAKE ISLAND Hy**	**34.49**	**209**	T		T	T	04 25 34.4	
	baz=18,slow=76,SNR=191								
H11S1	**WAKE ISLAND Hy**	**35.68**	**209**	T		T	T	04 26 58.4	
	baz=18,slow=76,SNR=106								
H11S2	**WAKE ISLAND Hy**	**35.70**	**209**	T		T	T	04 27 07.5	
	baz=18,slow=76,SNR=67								
H11S3	**WAKE ISLAND Hy**	**35.70**	**209**	T		T	T	04 27 03.1	
	baz=18

PSI	**Prapat**	**6.19**	**135**	Pn	**Pn**	**03 44 38.0**	**+2.3**
	comp=N,1.5nm,0.3s,baz=323,slow=16,SNR=5.4							
PSI				Sn	**Sn**	**03 45 46.5**	**0.0**
	comp=N,0.9nm,0.3s,baz=314,slow=17,SNR=1.8							
	comp=N,7.5nm,0.5s							
RPSI	**Rantau Prapat**	**6.27**	**135**		**Pn**	**03 44 38.2**	**+1.5**
RPSI	**Rantau Prapat**	**6.27**	**135**		**Pn**	**03 44 38.0**	**+1.4**
RPSI					**Sn**	**03 45 46.5**	**-1.7**
KULM	**Kulim**	**6.38**	**107**		**Pn**	**03 44 37.5**	**-0.8**
IPM	**Ipoh**	**7.01**	**112**		**Pn**	**03 44 45.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**11.98**	**21**	Pn	**Pn**	**03 45 58.5**	**+3.5**
	baz=205,slow=13							
CMAR	**Chiang Mai Arr**	**11.98**	**21**		**Pn**	**03 45 55.1**	**+0.1**
EVN	**Everest**	**21.89**	**341**	P	**P**	**03 47 57.3**	**-0.7**
EVN				IAmb	IAmb	03 48 05.4		
	comp=Z,8.6nm,0.8s							
GAR	**Garm**	**38.44**	**329**	P	**P**	**03 50 24.8**	**-1.3**
GAR				IAmb	IAmb	03 50 32.0		
	comp=Z,15nm,1.2s							
CHGR	**Chuyangaron**	**38.79**	**328**	P	**P**	**03 50 28.7**	**-0.3**
CHGR				IAmb	IAmb	03 50 38.1		
	comp=Z,14nm,0.8s							
AAK	**Ala-Archa**	**39.47**	**337**	P	**P**	**03 50 34.5**	**-0.2**
AAK				IAmb	IAmb	03 50 41.2		
	comp=Z,4.9nm,1.2s							
MKAR	**Makanchi Array**	**40.82**	**347**	P	**P**	**03 50 44.9**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=166,slow=8.2,SNR=8.7							
	comp=Z,1.8nm,0.7s							
MKAR	**Makanchi Array**	**40.82**	**347**	P	**P**	**03 50 44.8**	**-0.9**
SONM	**Songino Array**	**41.73**	**12**	P	**P**	**03 50 53.8**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=201,slow=7.6,SNR=5.1							
SONM				PcP	**PcP**	**03 52 50.5**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=180,slow=4.0,SNR=2.4							
	comp=Z,1.1nm,0.8s							
KURBB	**Kurchatov Arra**	**45.28**	**346**	P	**P**	**03 51 21.6**	**0.0**
	comp=Z,2.4nm,0.7s,baz=169,slow=7.1,SNR=16							
KURBB				PcP	**PcP**	**03 52 59.3**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=138,slow=2.9,SNR=2.1							
	comp=Z,2.4nm,0.7s							
KURK	**Kurchatov**	**45.35**	**346**	P	**P**	**03 51 22.2**	**0.0**
KURK				IAmb	IAmb	03 51 28.1		
	comp=Z,3.4nm,0.7s							
KURK					**PcP**	**03 52 59.5**	**-2.0**
ZALV	**Zalesovo Beam**	**47.26**	**352**	P	**P**	**03 51 37.7**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=175,slow=7.3,SNR=7.9							
	comp=Z,2.1nm,0.8s							
WRA	**Warramunga Arr**	**47.57**	**125**	P	**P**	**03 51 40.3**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=305,slow=8.7,SNR=7.9							
WRA				PcP	**PcP**	**03 53 09.6**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=303,slow=3.4,SNR=2.7							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**47.57**	**125**	P	**P**	**03 51 39.8**	**-0.3**
ASAR	**Alice Springs**	**49.20**	**130**	P	**P**	**03 51 52.5**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=310,slow=7.6,SNR=11							
ASAR				PcP	**PcP**	**03 53 16.0**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=308,slow=4.1,SNR=5.6							
	comp=Z,1.0nm,0.4s							
ASAR	**Alice Springs**	**49.20**	**130**	P	**P**	**03 51 53.0**	**+0.3**
MJAR	**Matsushiro Arr**	**49.33**	**47**	LR	LR	04 13 10.6		
	comp=Z,51nm,20.8s,baz=342,slow=37							
BVAR	**Borovoye Array**	**49.74**	**341**	P	**P**	**03 51 55.8**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=140,slow=7.5,SNR=7.5							
BVAR				PcP	**PcP**	**03 53 18.3**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=180,slow=2.9,SNR=2.2							
	comp=Z,1.9nm,0.7s							
AB31	**Akbulak array**	**50.99**	**331**	P	**P**	**03 52 05.5**	**-0.4**
AB31				IAmb	IAmb	03 52 15.1		
	comp=Z,4.8nm,1.1s							
ABKAR	**Akbulak array**	**50.99**	**331**	P	**P**	**03 52 06.2**	**+0.4**
KMBO	**Kilima Mbogo**	**57.73**	**264**	P	**P**	**03 52 57.1**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=215,slow=12,SNR=4.3							
	comp=Z,1.7nm,0.5s							
STKA	**Stephens Creek**	**59.37**	**134**	P	**P**	**03 53 06.8**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=289,slow=6.7,SNR=3.1							
	comp=Z,0.7nm,0.3s							
H04N2	**CROZET ISLANDS**	**65.35**	**211**	T	T	05 04 50.1		
	baz=48,slow=74,SNR=6.3							
H04N1	**CROZET ISLANDS**	**65.36**	**211**	T	T	05 04 53.9		
	baz=48							
H04N3	**CROZET ISLANDS**	**65.37**	**211**	T	T	05 04 52.1		
	baz=48,slow=74							
TIXI	**Tiksi**	**67.81**	**11**	P	**P**	**03 54 01.9**	**+0.2**
FINES	**FINESS Array B**	**73.47**	**332**	P	**P**	**03 54 35.5**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=68,slow=5.1,SNR=7.0							
	comp=Z,2.2nm,0.7s							
FINES	**FINESS Array B**	**73.47**	**332**	P	**P**	**03 54 36.9**	**+0.5**
BOSA	**Boshof**	**75.56**	**238**	P	**P**	**03 54 49.5**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=135,slow=4.3,SNR=4.0							
	comp=Z,2.8nm,0.9s							
BOSA	**Boshof**	**75.56**	**238**	P	**P**	**03 54 49.4**	**0.0**
BOSA				IAmb	IAmb	03 55 06.7		
	comp=Z,16nm,1.4s							
ARCES	**ARCESS Array B**	**76.02**	**340**	P	**P**	**03 54 51.4**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=77,slow=5.3,SNR=3.6							
	comp=Z,1.1nm,0.7s							
ARCES	**ARCESS Array B**	**76.02**	**340**	P	**P**	**03 54 51.5**	**+0.4**
GERES	**GERESS Array B**	**78.57**	**318**	P	**P**	**03 55 06.1**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=72,slow=4.3,SNR=5.2							
	comp=Z,0.5nm,0.6s							
HFS	**Hagfors**	**79.22**	**330**	P	**P**	**03 55 08.5**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=102,slow=6.5,SNR=7.3							
	comp=Z,2.0nm,0.6s							
NOA	**NORSAR Array B**	**80.50**	**331**	P	**P**	**03 55 15.2**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=92,slow=5.5,SNR=2.6							
	comp=Z,0.5nm,0.7s							
EKA	**Eskdalemuir Ar**	**88.48**	**325**	P	**P**	**03 55 57.0**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=82,slow=6.7,SNR=3.5							
	comp=Z,1.6nm,0.7s							
ESDC	**Sonseca Array**	**91.94**	**310**	P	**P**	**03 56 14.2**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=66,slow=3.0,SNR=4.5							
	comp=Z,0.7nm,0.8s							
ESDC	**Sonseca Array**	**91.94**	**310**	P	**P**	**03 56 13.4**	**+0.3**
NVAR	**Mina Array Bea**	**125.29**	**31**	PKP	**PKPdf**	**04 02 05.7**	**0.0**
	comp=Z,0.3nm,0.5s,baz=337,slow=4.0,SNR=2.1							
NVAR	**Mina Array Bea**	**125.29**	**31**		**PKPdf**	**04 02 04.9**	**-0.8**
PDAR	**Pinedale Array**	**125.64**	**22**	PKP	**PKPdf**	**04 02 06.0**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=226,slow=5.0,SNR=2.5							
PDAR	**Pinedale Array**	**125.64**	**22**		**PKPdf**	**04 02 05.3**	**-1.0**
TXAR	**Lajitas Array**	**139.67**	**25**	PKP	**PKPdf**	**04 02 31.1**	**-1.8**
	comp=Z,0.1nm,0.5s,baz=300,slow=0.6,SNR=3.7							
TXAR	**Lajitas Array**	**139.67**	**25**		**PKPdf**	**04 02 30.6**	**-2.2**
CPUP	**Villa Florida**	**147.15**	**231**	PKPbc	**PKPdf**	**04 02 45.9**	**0.0**
	comp=Z,0.6nm,0.8s,baz=338,slow=3.2,SNR=5.2							
CPUP	**Villa Florida**	**147.15**	**231**		**PKPdf**	**04 02 45.5**	**-0.4**

*IDC **20** 03:43:12.6±0.7,54.°81S×130.°23W,h0km,mb3.9/10, mbtmp3.9/10,MS4.2/10,Error ellipse: s-maj=27.5km s-min=18.8km az=145.0*

*NEIC **20** 03:43:14.9±1.4,54.°8S±0.°1×130.°1W±0.°2,h10km±1km, mb4.8/16,Error ellipse: s-maj=26.2km s-min=10.7km az=316.0*

*GCMT **20** 03:43:17.9±0.2,55.°04S±0.°02×129.°95W±0.°02,h16km±1km, MW5.0/78,Moment Tensor Solution. s38,c45; s78,c107; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.19±.16; Mθθ2.30±.17; Mϕϕ-2.48±.15; Mrθ0.50±.44; Mθϕ3.11±.12; Mϕr1.41±.44; Best double couple: Mo4.19900×10¹⁶ NP1:ϕs18.00000°,δ89.00000°,λ159.00000°. NP2: ϕs118.00000°,δ89.00000°,λ.00000°. Principal axes: T 4.1330, Plg16.0000°, Azm332.0000°; N 0.1400, Plg69.0000°, Azm195.0000°; P -4.2650, Plg14.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 03:43:14.3±0.6,54.°8S±0.°1×130.°2W±0.°1,h10km,n58,
σ1§12/38,mb4.3/15,MS4.1/10,4C,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAI	**San Martin Ant**	**31.34**	**140**	P	**P**	**03 49 34.6**	**+0.3**
VA02	**Isla de Pascua**	**31.47**	**37**	P	**P**	**03 49 36.1**	**+0.2**
RPN	**Rapa Nui**	**31.54**	**37**	LR	LR	03 59 07.5	
	comp=Z,348nm,19.8s,baz=159,slow=30						
VNDA	**Vanda**	**32.56**	**202**	P	**P**	**03 49 45.0**	**-0.1**
	2.1nm,1.0s,baz=91,slow=8.5,SNR=5.4						
VNDA				LR	LR	03 59 57.1	
	comp=Z,236nm,18.3s,baz=84,slow=31						
	2.1nm,1.0s						
VNDA	**Vanda**	**32.56**	**202**	P	**P**	**03 49 46.2**	**+1.1**
PMSA	**Palmer Station**	**33.17**	**134**	LR	LR	03 59 29.9	
	comp=Z,511nm,20.2s,baz=276,slow=30						
PMSA	**Palmer Station**	**33.17**	**134**	P	**P**	**03 49 50.8**	**+0.3**
PMSA				IAmb	IAmb	03 50 17.3	
	comp=Z,28nm,1.4s						

TBI	**Tubuai**	**34.54**	**328**	*e*S	S	03 55 12.3	-19	
	comp=Z,468nm,32.8s							
TBI				*e*LR	LR	03 59 00.4		
	comp=Z,5μm,28.8s							
TBI				*e*LR	LR	03 59 02.0		
	comp=Z,1μm,30.2s							
USHA	**Ushuaia**	**34.55**	**116**	LR	LR	03 59 56.7		
	comp=Z,202nm,20.6s,baz=256,slow=29							
MG01	**Puerto William**	**34.92**	**117**	P	**P**	**03 50 05.9**	**+0.1**
QSPA	**South Pole Qui**	**35.40**	**180**	P	**P**	**03 50 10.4**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=67,slow=6.8,SNR=5.5							
QSPA				LR	LR	04 03 08.0		
	comp=Z,670nm,18.2s,baz=84,slow=34							
	comp=Z,2.0nm,0.9s							
QSPA	**South Pole Qui**	**35.40**	**180**	P	**P**	**03 50 09.4**	**-0.6**
QSPA				IAmb	IAmb	03 50 32.1		
	comp=Z,7.5nm,1.0s							
BELA	**Belgrano 2**	**38.29**	**160**	P	**P**	**03 50 34.1**	**-0.2**
BELA				IAmb	IAmb	03 50 50.9		
	comp=Z,18nm,1.5s							
URZ	**Urewera**	**38.85**	**273**	LR	LR	04 03 02.9		
	comp=Z,499nm,20.8s,baz=130,slow=31							
PPT2	**Papeete2**	**40.01**	**330**	*e*S	S	03 56 31.3	-24	
	comp=Z,101nm,26.0s							
PPT2				*e*LR	LR	04 01 29.2		
	comp=Z,989nm,28.0s							
PPT2				*e*LR	LR	04 01 31.9		
	comp=Z,1μm,25.8s							
PPT	**Papeete**	**40.03**	**330**	LR	LR	04 03 45.7		
	comp=Z,508nm,18.4s,baz=201,slow=31							
RAR	**Rarotonga**	**40.26**	**314**	LR	LR	04 04 39.7		
	comp=Z,232nm,19.6s,baz=120,slow=32							
PLCA	**Paso Flores**	**41.18**	**95**	LR	LR	04 03 51.3		
	comp=Z,265nm,19.3s,baz=226,slow=30							
H03N3	**Juan Fernandez**	**41.36**	**81**	T	T	04 34 53.9		
	baz=224,slow=72,SNR=2629							
H03N2	**Juan Fernandez**	**41.37**	**80**	T	T	04 34 52.8		
	baz=224,slow=72,SNR=3612							
H03N1	**Juan Fernandez**	**41.38**	**81**	T	T	04 35 03.0		
	baz=224,slow=72,SNR=2218							
RAO	**Raoul Island**	**42.56**	**287**	LR	LR	04 03 03.2		
	comp=Z,95nm,21.4s,baz=140,slow=28							
BI02	**San Fabin de**	**43.50**	**90**	P	**P**	**03 51 19.4**	**+1.7**
BO02	**Sierra Bellavi**	**45.09**	**89**	P	**P**	**03 51 30.4**	**-0.1**
BO02				IAmb	IAmb	03 51 33.3		
	comp=Z,9.0nm,0.8s							
PEL	**Peldehue**	**46.33**	**87**	P	**P**	**03 51 41.5**	**+1.2**
PEL				IAmb	IAmb	03 52 11.7		
	comp=Z,26nm,1.3s							
VA06	**Catapilco**	**46.40**	**86**	P	**P**	**03 51 41.4**	**+0.7**
TAOE	**Nuku Hiva Isla**	**46.49**	**346**	*e*S	S	03 58 06.5	-23	
	comp=Z,108nm,24.5s							
TAOE				*e*LR	LR	04 04 27.5		
	comp=Z,932nm,25.0s							
VNA3	**Neumayer Olymp**	**47.45**	**158**	⇑P	**P**	**03 51 52.1**	**+3.5**
VNA2	**Neumayer--Watz**	**48.18**	**158**	⇑P	**P**	**03 51 53.0**	**-1.2**
	baz=353,slow=30							
VNA1	**Neumayer--Stat**	**48.20**	**158**	⇑P	**P**	**03 51 53.2**	**-1.1**
SNAA	**Sanae**	**48.54**	**160**	⇑P	**P**	**03 51 55.3**	**-1.7**
SNAA	**Sanae**	**48.54**	**160**	P	**P**	**03 51 55.4**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=252,slow=10.0,SNR=5.7							
	comp=Z,0.5nm,0.6s							
SNAA	**Sanae**	**48.54**	**160**	P	**P**	**03 51 55.8**	**-1.2**
SNAA				IAmb	IAmb	03 52 16.1		
	comp=Z,7.9nm,1.3s							
MAW	**Mawson**	**57.55**	**186**	P	**P**	**03 53 02.6**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=172,slow=7.1,SNR=3.8							
	comp=Z,2.5nm,1.0s							
CPUP	**Villa Florida**	**59.12**	**93**	P	**P**	**03 53 14.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=134,slow=2.3,SNR=3.6							
	comp=Z,0.3nm,0.6s							
CPUP	**Villa Florida**	**59.12**	**93**	P	**P**	**03 53 14.6**	**-0.3**
LPAZ	**La Paz**	**60.77**	**76**	P	**P**	**03 53 28.3**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=196,slow=7.4,SNR=6.8							
	comp=Z,1.3nm,0.8s							
LPAZ	**La Paz**	**60.77**	**76**		**P**	**03 53 25.8**	**-1.3**
LPAZ				IAmb	IAmb	03 53 40.1		
	comp=Z,8.5nm,1.1s							
SIV	**San Ignacio**	**65.03**	**82**	P	**P**	**03 53 54.8**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=199,slow=4.6,SNR=15							
	comp=Z,2.3nm,0.8s							
ASAR	**Alice Springs**	**74.32**	**251**	P	**P**	**03 54 51.4**	**-0.6**
	comp=Z,3.1nm,1.1s,baz=143,slow=6.1,SNR=13							
	comp=Z,3.1nm,1.1s							
H01W1	**Cape Leeuwin H**	**75.07**	**230**	T	T	05 18 11.1		
	baz=146,slow=76,SNR=31							
H01W2	**Cape Leeuwin H**	**75.07**	**230**	T	T	05 18 12.7		
	baz=146,slow=76,SNR=32							
H01W3	**Cape Leeuwin H**	**75.08**	**230**	T	T	05 18 07.9		
	baz=146,slow=76,SNR=30							
MACA	**Manacapuru-AM**	**75.67**	**75**	P	**P**	**03 54 59.6**	**-0.1**
MACA				IAmb	IAmb	03 55 09.0		
	comp=Z,12nm,1.2s							
WRA	**Warramunga Arr**	**77.06**	**254**	P	**P**	**03 55 07.3**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=147,slow=5.1,SNR=8.9							
	comp=Z,1.4nm,0.7s							
TXAR	**Lajitas Array**	**86.82**	**23**	P	**P**	**03 55 57.2**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=190,slow=7.0,SNR=4.6							
	comp=Z,0.3nm,0.8s							
TXAR	**Lajitas Array**	**86.82**	**23**	P	**P**	**03 55 57.7**	**-0.9**
H11N3	**WAKE ISLAND Hy**	**91.44**	**303**	T	T	05 37 56.4		
	baz=148,slow=76,SNR=13							
H11N1	**WAKE ISLAND Hy**	**91.44**	**303**	T	T	05 37 59.2		
	baz=148,slow=76,SNR=12							
H11N2	**WAKE ISLAND Hy**	**91.46**	**303**	T	T	05 37 49.6		
	baz=148,slow=76,SNR=11							
FAKI	**Fak Fak**	**92.02**	**262**	P	**P**	**03 56 25.5**	**+2.0**
ILAR	**Eielson Array**	**119.91**	**352**	PKP	**PKiKP**	**04 02 04.2**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=209,slow=2.0,SNR=11							
ILAR	**Eielson Array**	**119.91**	**352**		**PKiKP**	**04 02 04.0**	**+0.6**
ESDC	**Sonseca Array**	**141.47**	**90**	PKP	**PKiKP**	**04 02 46.4**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=288,slow=1.2,SNR=4.2							
ESDC	**Sonseca Array**	**141.47**	**90**		**PKPdf**	**04 02 45.3**	**+0.4**
SONM	**Songino Array**	**144.84**	**283**	PKP	**PKPdf**	**04 02 50.4**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=144,slow=3.0,SNR=10							
EKA	**Eskdalemuir Ar**	**150.24**	**67**	PKPbc	**PKPbc**	**04 03 04.4**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=259,slow=1.8,SNR=4.8							
GERES	**GERESS Array B**	**157.06**	**90**	PKP	**PKPdf**	**04 03 08.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=163,slow=1.0,SNR=5.6							

*IDC **20** 03:45:44.7±1.4,6.°86N×93.°69E,h0km,mb3.8/10, mbtmp3.9/12,ML4.4/2,Error ellipse: s-maj=50.0km s-min=23.6km az=54.0*

*NEIC **20** 03:45:51.5±2.0,6.°92N±0.°05×93.°8E±0.°2,h35km±1km, mb4.4/12,Error ellipse: s-maj=28.6km s-min=7.4km az=258.0*

ISC 20 03:45:49.7±0.8,6.°76N±0.°08×93.°6E±0.°1,h35km,n36,
σ1§45/31,mb4.0/16,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.39**	**50**	*e*P	**Pn**	**03 45 59.8**	**+1.0**
CMBY				*e*S	**Sn**	**03 46 08.4**	**+3.2**
CMBY				IAML		03 46 10.7	
	comp=N,11μm,0.5s						
CMBY				IAML		03 46 12.9	
	comp=E,11μm,0.5s						
PSI	**Prapat**	**6.58**	**126**	Pn	**Pn**	**03 47 25.1**	**+0.9**
	comp=E,3.0nm,0.3s,baz=222,slow=5.3,SNR=2.5						
	comp=E,9.5nm,0.4s						
RPSI	**Rantau Prapat**	**6.65**	**127**		**Pn**	**03 47 25.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**12.73**	**24**	Pn	**Pn**	**03 48 45.9**	**-2.5**
	comp=E,1.5nm,0.3s,baz=203,slow=12,SNR=4.4						
	comp=E,1.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.73**	**24**		**Pn**	**03 48 44.6**	**-3.7**
EVN	**Everest**	**22.05**	**344**	P	**P**	**03 50 41.4**	**-0.8**
H08S3	**Diego Garcia H**	**25.47**	**236**	T	T	04 18 05.0		
	baz=56,slow=75,SNR=5.5							
H08S2	**Diego Garcia H**	**25.48**	**236**	T	T	04 18 06.0		
	baz=56,slow=75,SNR=6.6							
H08S1	**Diego Garcia H**	**25.49**	**236**	T	T	04 18 06.2		
	baz=56,slow=75,SNR=5.9							
SOEI	**Soe**	**34.66**	**118**	P	**P**	**03 52 35.8**	**-0.5**
KDJ	**Kajisay**	**38.12**	**340**	P	**P**	**03 53 07.4**	**+1.7**
KDJ				IAmb	IAmb	03 53 08.3		
	comp=Z,8.7nm,1.1s							
FITZ	**Fitzroy Crossi**	**40.11**	**128**	P	**P**	**03 53 23.2**	**+0.9**
MKAR	**Makanchi Array**	**41.06**	**348**	P	**P**	**03 53 27.8**	**-2.1**
	comp=Z,1.5nm,0.9s,baz=177,slow=8.5,SNR=3.8						
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	**41.06**	**348**	P	**P**	**03 53 29.3**	**-0.6**
SONM	**Songino Array**	**42.35**	**13**	P	**P**	**03 53 40.8**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=201,slow=7.7,SNR=1.8						
	comp=Z,1.1nm,1.0s						
KURBB	**Kurchatov Arra**	**45.50**	**347**	P	**P**	**03 54 04.6**	**-1.0**
	comp=Z,1.7nm,0.9s,baz=161,slow=7.4,SNR=5.5						
	comp=Z,1.7nm,0.9s						
KURK	**Kurchatov**	**45.57**	**347**	P	**P**	**03 54 06.5**	**+0.4**
KURK				IAmb	IAmb	03 54 12.5	
	comp=Z,4.6nm,1.1s						
ZALV	**Zalesovo Beam**	**47.59**	**353**	P	**P**	**03 54 22.0**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=169,slow=10,SNR=4.3						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**47.59**	**353**	P	**P**	**03 54 22.8**	**+0.8**
WB0	**Warramunga Arr**	**48.00**	**124**	P	**P**	**03 54 24.5**	**-1.2**
WB0				IAmb	IAmb	03 55 08.5	
	comp=Z,3.9nm,1.0s						
WRA	**Warramunga Arr**	**48.05**	**124**	P	**P**	**03 54 25.1**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=300,slow=8.2,SNR=1.8						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**48.05**	**124**	P	**P**	**03 54 25.8**	**-0.2**
WR8	**Warramunga Arr**	**48.18**	**124**	P	**P**	**03 54 25.6**	**-1.5**
WR8				IAmb	IAmb	03 54 42.6	
	comp=Z,3.6nm,1.0s						
BVAR	**Borovoye Array**	**49.88**	**342**	P	**P**	**03 54 37.8**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=149,slow=9.2,SNR=2.1						
	comp=Z,0.5nm,0.5s						
AB31	**Akbulak array**	**50.96**	**332**	P	**P**	**03 54 48.9**	**+1.1**
ABKAR	**Akbulak array**	**50.96**	**332**		**P**	**03 54 49.3**	**+1.4**
H04N2	**CROZET ISLANDS**	**64.51**	**211**	T	T	05 06 56.3		
	baz=47							
H04N1	**CROZET ISLANDS**	**64.52**	**211**	T	T	05 06 56.1		
	baz=47							
H04N3	**CROZET ISLANDS**	**64.53**	**211**	T	T	05 06 56.0		
	baz=47							
TOO	**Toolangi**	**65.40**	**137**	P	**P**	**03 56 29.7**	**+0.6**
TOO				IAmb	IAmb	03 56 42.6		
	comp=Z,2.3nm,0.9s							
TIXI	**Tiksi**	**68.42**	**11**	P	**P**	**03 56 48.5**	**+0.8**
TIXI				IAmb	IAmb	03 56 50.7		
	comp=Z,3.7nm,0.8s							
FINES	**FINESS Array B**	**73.45**	**332**	P	**P**	**03 57 18.0**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=101,slow=9.5,SNR=3.5							
	comp=Z,2.3nm,0.9s							
FINES	**FINESS Array B**	**73.45**	**332**	P	**P**	**03 57 18.2**	**-0.2**
GERES	**GERESS Array B**	**78.31**	**318**	P	**P**	**03 57 47.8**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=122,slow=3.6,SNR=1.7							
	comp=Z,0.2nm,0.5s							
HFS	**Hagfors**	**79.16**	**330**	P	**P**	**03 57 52.0**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=104,slow=12,SNR=1.4							
	comp=Z,0.9nm,0.6s							
NOA	**NORSAR Array B**	**80.45**	**331**	P	**P**	**03 57 58.2**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=92,slow=5.6,SNR=3.3							
	comp=Z,0.8nm,0.9s							

*SOME **20** 03:48:15.1,42.°55N×79.°62E,h5km*
*KRNET **20** 03:48:15.7±0.1,42.°09N×79.°88E,mb2.7*
*NNC **20** 03:48:16.1±1.4,42.°61N×79.°58E,h0km,mb3.1,mpv2.8, Error ellipse: s-maj=9.0km s-min=4.7km az=165.0*

ISC 20 03:48:15.4±1.5,42.°59N±0.°05×79.°68E±0.°06,h10km,n20,
σ1§12/38,8C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.58**	**344**	P	**Pb**	**03 48 27.5**	**-0.4**
	45nm,0.1s						
SHLS				S	**Sb**	**03 48 35.8**	**-0.5**
	70nm,0.2s						
SHLS	**Shalkode**	**0.58**	**344**	*e*P	**Pb**	**03 48 27.5**	**-0.4**
	45nm,0.1s						
SHLS				*e*S	**Sb**	**03 48 36.4**	**+0.1**
	70nm,0.2s						
UZB	**Uzynbulak**	**0.73**	**319**	P	**Pg**	**03 48 29.5**	**-0.1**
	3.6nm,0.2s						
UZB				S	**Sb**	**03 48 39.5**	**-1.1**
	52nm,0.3s						
UZB	**Uzynbulak**	**0.73**	**319**	*e*P	**Pg**	**03 48 29.4**	**-0.2**
	3.6nm,0.2s						
UZB				*e*S	**Sb**	**03 48 39.6**	**-1.1**
	52nm,0.3s						
**P

PAU Pauzhetka 5.11 28 *e*P **Pn 04 00 36.9 -0.4**
PAU *e*S **Sn 04 01 32.5 -2.3**
PAU A A 04 01 36.2
comp=E,280nm,0.2s
PAU A A 04 01 36.2
comp=E,260nm,0.2s
NMR Nemuro--Hokkai 6.31 237 *e*P **Pn 04 00 49.5 -4.2**
NMR *e*S Sn 04 01 54.7 -10
PEA0B Petropavlovsk- 6.81 24 Pn Pn 04 00 54.6 -5.9
PEA0B Petropavlovsk- 6.81 24 *i* PN **Pn 04 01 01.8 +1.3**
PETK Petropavlovsk- 6.81 24 P **Pn 04 00 59.1 -1.4**
comp=E,27nm,0.4s,baz=199,slow=13,SNR=10
PETK Petropavlovsk- 6.81 24 Pn 04 00 56.5 -4.0
PET Petropavlovsk 7.03 29 *i* PN **Pn 04 01 04.2 +0.7**
PET Petropavlovsk 7.03 29 *e*P **Pn 04 01 04.2 +0.7**
PET *e*S **Sn 04 02 18.5 -3.3**
AKK Akkeshi 7.04 238 *e*P **Pn 04 00 59.4 -4.3**
JKA Kamikawa-asahi 7.87 252 Pn 04 01 13.2 -1.8
JKA Kamikawa-asahi 7.87 252 *e*P **Pn 04 01 14.5 -0.5**
ASAJ Asahikawa 7.87 252 P **Pn 04 01 14.4 -0.6**
comp=E,111nm,0.5s,baz=69,slow=17,SNR=6.8
ASAJ LR LR 04 03 55.4
comp=E,117nm,20.1s,baz=318,slow=35
ERM Erimo 8.64 238 Pn 04 01 22.5 -3.0
ERM Erimo 8.64 238 PN **Pn 04 01 22.5 -3.0**
USRK Ussuriysk Ar. 14.99 267 P **Pn 04 02 50.8 0.0**
comp=E,3.3nm,0.6s,baz=74,slow=14,SNR=4.3
MJA0 Matsu Arr-Jizo 15.17 232 *e*P **P 04 02 56.6 0.0**
MJA0 pmax pmax
comp=Z,6.0nm,0.7s
MAJO Matsushiro 15.19 232 Pn **Pn 04 02 51.2 -2.3**
MAJO Matsushiro 15.19 232 *i* P **P 04 02 55.5 -1.3**
MJAR Matsushiro Arr 15.19 232 P **P 04 02 56.2 -0.6**
comp=E,5.9nm,0.7s,baz=49,slow=9.1,SNR=10
MJB9 Matsu-Tunnel 15.19 232 Pn **Pn 04 02 52.4 -1.1**
SEY Seymchan 15.97 359 P **P 04 03 06.7 +1.5**
comp=E,1.9nm,0.4s,baz=168,slow=14,SNR=5.2
HEH HeiHe 17.21 290 *e*P **P 04 03 20.4 +1.3**
HEH pmax pmax
comp=E,15nm,0.8s
YAK Yakutsk 20.08 327 LR LR 04 11 59.2
comp=E,104nm,18.4s,baz=234,slow=38
YAK Yakutsk 20.08 327 *i* P **Pn 04 03 51.5 -1.2**
YAK pmax pmax
comp=Z,12nm,0.8s
YAK Yakutsk 20.08 327 *e*P **Pn 04 03 51.5 -1.2**
KSRS Korea Array 20.82 252 P **P 04 03 58.1 -0.3**
comp=E,2.2nm,0.6s,baz=57,slow=10,SNR=7.7
comp=E,2.2nm,0.6s
KSRS Korea Array 20.82 252 *e*P **P 04 03 58.9 +0.4**
KSRS pmax pmax
comp=Z,3.0nm,0.8s
JNU Nakatsue 21.80 238 P **P 04 04 09.3 +0.3**
JNU IAmb IAmb 04 04 29.6
comp=Z,26nm,1.3s
BILL Bilibino 22.16 13 *i* P **P 04 04 13.0 +0.5**
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL Bilibino 22.16 13 *e*P **P 04 04 13.0 +0.5**
HILR Hailar Array B 22.19 289 P **P 04 04 12.2 -0.9**
comp=E,1.3nm,0.4s,baz=82,slow=10,SNR=1.8
HILR LR LR 04 13 31.2
comp=Z,174nm,19.7s,baz=80,slow=38
comp=Z,1.3nm,0.4s
JOW Kunigami 28.03 233 LR LR 04 15 18.9
comp=Z,109nm,21.4s,baz=327,slow=34
H11N2 WAKE ISLAND Hy 29.47 153 T T 04 36 44.8
baz=340,slow=76,SNR=875
H11N1 WAKE ISLAND Hy 29.49 153 T T 04 36 45.9
baz=340,slow=76,SNR=569
H11N3 WAKE ISLAND Hy 29.49 153 T T 04 36 39.8
baz=340,slow=76,SNR=427
SDPT Sand Point 29.82 56 P **P 04 05 21.9 -0.9**
C16K Lisburne Hills 29.87 30 P **P 04 05 22.9 -0.1**
H11S1 WAKE ISLAND Hy 30.56 154 T T 04 38 26.6
baz=341,slow=76,SNR=1121
H11S3 WAKE ISLAND Hy 30.57 154 T T 04 38 04.9
baz=341,slow=76,SNR=1077
H11S2 WAKE ISLAND Hy 30.58 154 T T 04 38 09.4
baz=341,slow=76,SNR=1174
F17K Baldwin Pennin 30.72 34 P **P 04 05 30.9 +0.4**
F17K IAmb IAmb 04 05 38.1
comp=Z,13nm,1.1s
ULN Ulaanbaatar 30.76 289 *i* P **P 04 05 32.2 +0.8**
ULN pmax pmax
comp=Z,1.0nm,0.9s
ULN Ulaanbaatar 30.76 289 *e*P **P 04 05 32.2 +0.8**
C18K Utukok River 31.43 30 P **P 04 05 38.1 +1.2**
G18K Tagagawik 31.60 36 P **P 04 05 38.6 +0.2**
G18K IAmb IAmb 04 05 55.8
comp=Z,16nm,1.4s
C19K Lookout Ridge 32.13 30 P **P 04 05 43.7 +0.6**
C19K IAmb IAmb 04 05 45.3
comp=Z,12nm,1.1s
D19K Kuna River 32.46 31 P **P 04 05 46.1 +0.2**
D19K IAmb IAmb 04 05 50.7
comp=Z,10nm,1.1s
E19K Redstone River 32.51 33 P **P 04 05 46.5 +0.2**
J19K Poorman 32.55 40 P **P 04 05 47.3 +0.6**
J19K IAmb IAmb 04 06 24.6
comp=Z,7.5nm,1.4s
D20K Etivluk River 33.05 31 P **P 04 05 51.5 +0.5**
D20K IAmb IAmb 04 05 53.6
comp=Z,7.8nm,0.8s
B20K Meade River 33.22 29 P **P 04 05 52.6 +0.2**
G21K Allakaket 33.77 35 P **P 04 05 58.0 +0.7**
G21K IAmb IAmb 04 06 00.4
comp=Z,9.1nm,1.2s
H21K Melozitna Rive 33.94 37 P **P 04 05 59.5 +0.6**
H21K IAmb IAmb 04 06 37.9
comp=Z,7.5nm,1.5s
B21K Ikpikpuk River 33.97 30 P **P 04 05 59.2 +0.3**
E22K Anaktuvuk Pass 34.66 33 P **P 04 06 05.5 +0.4**
E24K Your Creek 35.89 33 P **P 04 06 16.0 +0.4**
E24K IAmb IAmb 04 06 18.2
comp=Z,9.5nm,1.2s
D24K Happy Valley 35.90 31 P **P 04 06 16.1 +0.6**
D24K IAmb IAmb 04 06 22.8
comp=Z,14nm,1.5s
H24K Noodor Dome 35.98 37 P **P 04 06 17.0 +0.6**
ILAR Eielson Array 36.38 39 P **P 04 06 20.3 +0.5**
comp=Z,0.6nm,0.5s,baz=263,slow=7.8,SNR=19
comp=Z,0.6nm,0.5s
ILAR Eielson Array 36.38 39 P **P 04 06 20.1 +0.3**
D25K Kavik River 36.78 31 P **P 04 06 23.6 +0.5**
D25K IAmb IAmb 04 06 25.9
comp=Z,10nm,1.2s
LZDM Lanzhou Array 37.99 271 P **P 04 06 34.9 +0.8**
comp=Z,2.1nm,0.3s,baz=71,slow=8.7,SNR=2.5
comp=Z,2.1nm,0.3s
ZALV Zalesovo Beam 42.42 306 P **P 04 07 07.7 -2.3**
comp=Z,0.5nm,0.5s,baz=56,slow=11,SNR=2.2
ZALV PcP **PcP 04 09 01.6 -0.1**
comp=Z,0.3nm,0.4s,baz=50,slow=4.5,SNR=4.0
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 42.42 306 P **P 04 07 10.4 +0.4**
DGZ Jazzator, Alta 42.43 299 *i* P **P 04 07 11.1 +0.7**
DGZ pmax pmax
comp=Z,2.0nm,1.2s
A36M Sachs Harbour 43.65 26 P **P 04 07 19.9 +0.2**
A36M IAmb IAmb 04 07 23.2
comp=Z,10nm,0.8s
C36M Paulatuk 44.63 30 P **P 04 07 27.6 +0.1**
C36M IAmb IAmb 04 07 29.7
comp=Z,5.4nm,0.5s
MKAR Makanchi Array 46.77 297 P **P 04 07 44.4 -0.5**
comp=Z,0.9nm,0.6s,baz=58,slow=6.1,SNR=7.4
MKAR PcP **PcP 04 09 17.3 +0.4**
comp=Z,0.2nm,0.4s,baz=80,slow=3.1,SNR=4.4
comp=Z,0.9nm,0.6s
MKAR Makanchi Array 46.77 297 P **P 04 07 44.3 -0.5**
MKAR **PcP 04 09 17.8 +0.9**
MKAR Makanchi Array 46.77 297 *e*P **P 04 07 47.1 +2.2**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 46.77 297 *e*P **P 04 07 47.1 +2.2**
KURK Kurchatov 47.18 303 P **P 04 07 47.8 -0.1**
KURK **PcP 04 09 20.0 +1.8**
KURK Kurchatov 47.18 303 P **P 04 07 47.6 -0.3**
KURK 04 09 18.6
KURK Kurchatov 47.18 303 *e*P **P 04 07 47.6 -0.3**
KURBB Kurchatov Arra 47.27 303 P **P 04 07 47.6 -1.0**
comp=Z,1.2nm,0.7s,baz=71,slow=8.5,SNR=6.5
KURBB PcP **PcP 04 09 18.6 +0.1**
comp=Z,0.5nm,0.8s,baz=71,slow=4.0,SNR=2.4
comp=Z,1.2nm,0.7s
RES Resolute Bay 50.61 19 P **P 04 08 14.7 +0.9**
comp=Z,1.4nm,0.6s,baz=346,slow=4.2,SNR=4.6
comp=Z,1.4nm,0.6s
RES Resolute Bay 50.61 19 P **P 04 08 14.5 +0.7**
RES IAmb IAmb 04 08 55.6
comp=Z,6.2nm,1.3s
RES Resolute Bay 50.61 19 P **P 04 08 14.5 +0.7**
RES pmax pmax
comp=Z,6.0nm,1.3s
BVAR Borovoye Array 50.65 309 P **P 04 08 13.0 -1.5**
comp=Z,0.6nm,0.3s,baz=52,slow=8.6,SNR=3.5
BVAR PcP **PcP 04 09 31.1 +0.4**
comp=Z,0.8nm,0.4s,baz=22,slow=1.6,SNR=4.6
comp=Z,0.6nm,0.3s
BORK Borovoye 50.68 309 *ce*P **P 04 08 15.5 +0.9**
BORK pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 50.75 37 P **P 04 08 16.2 +1.2**
comp=Z,0.8nm,0.6s,baz=300,slow=7.8,SNR=8.3
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 50.75 37 P **P 04 08 15.7 +0.7**
YKA Yellowknife Ar 50.75 37 *e*P **P 04 08 16.4 +1.4**
YKA pmax pmax
comp=Z,1.0nm,0.6s
SHL Shillong 52.32 268 P **P 04 08 27.8 +0.3**
SHL Shillong 52.32 268 P **P 04 08 27.8 +0.3**
SHL pmax pmax
comp=Z,9.0nm,0.5s
SPITS Spitsbergen Ar 52.35 350 P **P 04 08 27.1 +0.3**
comp=Z,5.4nm,0.9s,baz=52,slow=12,SNR=1.7
comp=Z,5.4nm,0.9s
CMAR Chiang Mai Arr 52.38 256 P **P 04 08 29.0 +1.3**
comp=Z,2.0nm,0.7s,baz=33,slow=7.7,SNR=6.0
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 52.38 256 P **P 04 08 28.8 +1.0**
EVN Everest 54.25 274 P **P 04 08 42.3 +0.1**
EVN IAmb IAmb 04 08 43.6
comp=Z,4.6nm,0.7s
ARCES ARCESS Array B 57.59 341 P **P 04 09 03.5 -1.1**
comp=Z,2.7nm,0.9s,baz=12,slow=5.8,SNR=3.9
comp=Z,2.7nm,0.9s
ARCES ARCESS Array B 57.59 341 P **P 04 09 04.4 -0.2**
ARCES ARCESS Array B 57.59 341 *e*P **P 04 09 08.0 +3.4**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
PLID Pearl Lake 59.58 55 P **P 04 09 19.2 +0.1**
PLID IAmb IAmb 04 09 44.5
comp=Z,5.1nm,1.2s
NVAR Mina Array Bea 62.37 62 P **P 04 09 38.6 +0.6**
comp=Z,0.3nm,0.3s,baz=315,slow=6.4,SNR=2.1
comp=Z,0.3nm,0.3s
NVAR Mina Array Bea 62.37 62 P **P 04 09 38.1 0.0**
FINES FINESS Array B 63.79 335 P **P 04 09 46.3 -0.4**
comp=Z,3.2nm,0.6s,baz=42,slow=7.9,SNR=16
comp=Z,3.2nm,0.6s
FINES FINESS Array B 63.79 335 P **P 04 09 46.5 -0.2**
FINES FINESS Array B 63.79 335 *e*P **P 04 09 46.8 +0.1**
FINES pmax pmax
comp=Z,3.0nm,0.6s
PDAR Pinedale Array 64.64 54 P **P 04 09 54.1 +1.1**
comp=Z,0.9nm,0.7s,baz=306,slow=1.1,SNR=10.0
comp=Z,0.9nm,0.7s
PDAR Pinedale Array 64.64 54 P **P 04 09 54.0 +1.0**
RDMU Red Mountain 66.09 56 P **P 04 10 03.7 +1.3**
NB2 NORSAR Subarra 67.97 341 P **P 04 10 13.4 -0.3**
comp=Z,1.7nm,0.7s,baz=27,slow=6.5
NOA NORSAR Array B 67.97 341 P **P 04 10 13.6 -0.1**
comp=Z,2.0nm,0.6s,baz=26,slow=6.3,SNR=12
comp=Z,2.0nm,0.6s
NOA NORSAR Array B 67.97 341 *e*P **P 04 10 13.8 +0.1**
NOA pmax pmax
comp=Z,2.0nm,0.6s
HFS Hagfors 68.20 339 P **P 04 10 14.8 -0.2**
comp=Z,4.5nm,0.5s,baz=57,slow=5.5,SNR=26
comp=Z,4.5nm,0.5s
WRA Warramunga Arr 68.73 199 P **P 04 10 17.6 -1.2**
comp=Z,0.5nm,0.6s,baz=8.5,slow=6.3,SNR=2.7
comp=Z,0.5nm,0.6s
WRA Warramunga Arr 68.73 199 P **P 04 10 17.8 -1.0**
WRA Warramunga Arr 68.73 199 P **P 04 10 17.8 -1.0**
MNK Minsk 68.75 329 *i* P **P 04 10 17.5 -1.1**
MNK *i* *PP **PcP 04 10 40.5 -2.3**
MNK *i* 04 10 47.3
MNK *i* 04 12 59.4
MNK *i* S **S 04 19 14.6 -1.0**
MNK *i* *SS **SKiKP 04 19 54.6 -8.3**
MNK *i* SS **SS 04 23 42.2 +1.6**
MNK pmax pmax
comp=E,13nm,0.8s
MNK pmax pmax
comp=N,11nm,0.8s
MNK pmax pmax
comp=Z,9.0nm,0.8s
MNK MLR MLR
comp=Z,475nm,14.0s
MNK MLR MLR
comp=N,165nm,14.0s
MNK MLR MLR
comp=E,156nm,15.0s
ISCO Idaho Springs 68.84 54 P **P 04 10 21.1 +1.3**
ISCO Idaho Springs 68.84 54 P **P 04 10 21.1 +1.3**
ISCO pmax pmax
comp=Z,5.0nm,1.5s
KBZ Khabaz 70.64 314 P **P 04 10 30.7 +0.3**
comp=Z,1.5nm,0.5s,baz=114,slow=2.8,SNR=4.8
comp=Z,1.5nm,0.5s
KBZ Khabaz 70.64 314 *i* P **P 04 10 29.8 -0.6**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 70.64 314 *e*P **P 04 10 29.8 -0.6**
AK03 Malin Array Si 71.28 326 P **P 04 10 32.9 -1.3**
AKASG Malin Array Be 71.30 326 P **P 04 10 33.7 -0.6**
comp=Z,2.4nm,0.3s,baz=37,slow=6.2,SNR=14
comp=Z,2.4nm,0.3s
AKASG Malin Array Be 71.30 326 P **P 04 10 34.3 +0.1**
AKASG Malin Array Be 71.30 326 *e*P **P 04 10 33.9 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 71.30 326 *ce*P **P 04 10 34.4 +0.1**
AKBB Malin Array Si 71.30 326 P **P 04 10 32.9 -1.4**
AK04 Malin Array Si 71.31 326 P **P 04 10 32.9 -1.4**
AK21 Malin Array Si 71.31 326 P **P 04 10 33.0 -1.3**
AK22 Malin Array Si 71.31 326 P **P 04 10 33.0 -1.3**
KIEV Kiev 71.31 326 P **P 04 10 33.2 -1.1**
comp=Z,32nm,1.2s
AK01 Malin Array Si 71.32 326 P **P 04 10 33.0 -1.4**
AK11 Malin Array Si 71.34 326 P **P 04 10 33.2 -1.3**
AK02 Malin Array Si 71.35 326 P **P 04 10 33.2 -1.3**
AK08 Malin Array Si 71.35 326 P **P 04 10 33.2 -1.3**
AK18 Malin Array Si 71.35 326 P **P 04 10 33.2 -1.3**
AK15 Malin Array Si 71.35 326 P **P 04 10 33.2 -1.3**
AK09 Malin Array Si 71.35 326 P **P 04 10 33.2 -1.4**
AK20 Malin Array Si 71.35 326 P **P 04 10 33.2 -1.4**
AK19 Malin Array Si 71.37 326 P **P 04 10 33.3 -1.4**
AK16 Malin Array Si 71.37 326 P **P 04 10 33.3 -1.4**
AK10 Malin Array Si 71.38 326 P **P 04 10 33.3 -1.4**
AK07 Malin Array Si 71.43 326 P **P 04 10 34.0 -1.1**
AK13 Malin Array Si 71.44 326 P **P 04 10 34.0 -1.1**
ASAR Alice Springs 72.43 198 P **P 04 10 41.8 +0.5**
comp=Z,0.9nm,0.7s,baz=11,slow=5.4,SNR=10
comp=Z,0.9nm,0.7s
ASAR Alice Springs 72.43 198 P **P 04 10 42.0 +0.7**
ASAR Alice Springs 72.43 198 P **P 04 10 42.0 +0.7**
LUBAR Lubar, Ukraine 72.49 326 P **P 04 10 38.8 -2.6**
SORM Soroca 73.71 325 ⇓P **P 04 10 48.2 -1.4**
BUR08 Bucovina Ar. S 75.33 326 P **P 04 10 58.4 +0.2**
BUR08 IAmb IAmb 04 10 59.3
comp=Z,4.2nm,0.6s
BURAR Bucovina Array 75.34 326 ⇑P **P 04 10 58.6 +0.4**
TESR Tescani 75.70 325 ⇑P **P 04 11 00.6 +0.4**
EKA Eskdalemuir Ar 76.08 346 P **P 04 11 02.3 +0.1**
comp=Z,0.8nm,0.5s,baz=20,slow=5.9,SNR=4.4
comp=Z,0.8nm,0.5s
CLL Collm 76.21 335 *i* P **P 04 11 02.8 -0.2**
CLL *e*SP **sP 04 11 33.0 +1.8**
CLL Collm 76.21 335 *i* P **P 04 11 02.8 -0.2**
MLR Muntele Rosu 76.82 325 ⇓P **P 04 11 08.2 +1.4**
VOIR 77.22 325 ⇓P **P 04 11 09.9 +1.0**
TX31 Lajitas Ar. Si 77.42 61 P **P 04 11 10.7 +0.4**
TXAR Lajitas Array 77.42 61 P **P 04 11 11.1 +0.8**
comp=Z,1.0nm,0.5s,baz=320,slow=6.6,SNR=33
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 77.42 61 P **P 04 11 10.9 +0.7**
ARR Arges 77.44 326 ⇓P **P 04 11 12.2 +2.1**
SURR Surduc 78.06 327 ⇑P **P 04 11 14.4 +1.0**
BRTR Keskin Array B 78.17 317 P **P 04 11 15.1 +0.8**
comp=Z,1.2nm,0.9s,baz=64,slow=5.7,SNR=6.2
comp=Z,1.2nm,0.9s
BRTR Keskin Array B 78.17 317 P **P 04 11 14.9 +0.6**
BRTR Keskin Array B 78.17 317 *eP* **P 04 11 15.5 +1.2**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
GERES GERESS Array B 78.20 334 P **P 04 11 14.4 +0.1**
comp=Z,0.5nm,0.5s,baz=38,slow=6.8,SNR=4.8
comp=Z,0.5nm,0.5s
MMAI Mount Meron Ar 82.60 311 P **P 04 11 39.3 +1.2**
comp=Z,1.7nm,0.5s,baz=35,slow=6.2,SNR=4.6
comp=Z,1.7nm,0.5s
QSPA South Pole Qui 136.74 180 PKP **PKPdf 04 18 36.5 +1.0**
comp=Z,0.6nm,0.8s,baz=294,slow=2.7,SNR=1.8
QSPA South Pole Qui 136.74 180 PKiKP 04 18 37.0 -0.3
H03N2 Juan Fernandez 138.81 90 T T 06 53 34.1
baz=309,slow=77,SNR=139
H03N1 Juan Fernandez 138.82 90 T T 06 53 35.5
baz=309,slow=77,SNR=180
H03N3 Juan Fernandez 138.82 90 T T 06 53 39.0
baz=309,slow=77,SNR=168
SMAI San Martin Ant 150.70 150 PKPdf **PKPdf 04 19 02.3 +2.7**
TROLL Troll, Antarti 151.42 199 ⇑P **PKPbc 04 19 07.4 +0.4**
comp=Z,67nm,0.4s
SNAA Sanae 152.78 196 ⇑P **PKPbc 04 19 09.6 -0.4**
comp=Z,15nm,0.5s
SNAA Sanae 152.78 196 PKPbc **PKPbc 04 19 09.0 -1.0**
comp=Z,0.6nm,0.5s,baz=208,slow=5.6,SNR=20
SNAA Sanae 152.78 196 PKPbc 04 19 09.7 -0.4
SNAA Sanae 152.78 196 PKIKP **PKPbc 04 19 09.0 -1.0**
VNA2 Neumayer--Watz 154.24 195 ⇑P **PKPbc 04 19 13.1 0.0**
comp=Z,1.3nm,0.6s,baz=212,slow=8.4
VNA3 Neumayer Olymp 154.33 193 ⇑P **PKPbc 04 19 12.3 -1.0**
comp=Z,0.8nm,0.7s

NEIC ***20*** *04:01:27.3±1.5, 19°.30N±0°.04×67°.28W±0°.04, h10km±1km, ML2.7/12, Md3.4/10(RSPR), Error ellipse: s-maj=6.2km s-min=5.6km az=168.0*
SDD ***20*** *04:01:30.4±1.5, 19°.25N×67°.17W, h22km±69km, MD3.4, ML2.7, MW3.1*
RSPR ***20*** *04:01:32.2, 19°.23N×67°.31W, h25km±29km, MD3.4/10*

ISC 20 04:01:27.9±1.6, 19°.27N±0°.07×67°.26W±0°.04, h14km±11km, n49, σ0s51/58, 12C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.81**	**170**			**Pn**	**04 01 44.6**	**-0.3**
AGPR						**Sb**	**04 01 54.8**	**+0.2**
AGPR	**Aguadilla, PR**	**0.81**	**170**	⇑*ePg*		**Pn**	**04 01 44.6**	**-0.3**
AGPR				⇑*eSg*		**Sb**	**04 01 54.7**	**+0.2**
AGPR				IAML			04 01 55.7	
	comp=N,345nm,0.3s							
AGPR	**Aguadilla, PR**	**0.81**	**170**	⇑*eP*		**Pn**	**04 01 44.6**	**-0.3**
AGPR	**Aguadilla, PR**	**0.81**	**170**	*eS*		**Sb**	**04 01 54.8**	**+0.2**
IDE	**Isla Desecheo**	**0.91**	**193**			**Pn**	**04 01 46.9**	**+0.7**
IDE						**Sb**	**04 01 58.1**	**+0.9**
IDE	**Isla Desecheo**	**0.91**	**193**	⇑*eP*		**Pn**	**04 01 46.9**	**+0.7**
IDE	**Isla Desecheo**	**0.91**	**193**	*eS*		**Sb**	**04 01 58.1**	**+0.9**
AOPR	**Arecibo Observ**	**1.04**	**153**			**Pb**	**04 01 47.5**	**-0.1**
AOPR	**Arecibo Observ**	**1.04**	**153**	⇑*ePg*		**Pg**	**04 01 47.8**	**-0.2**
AOPR				⇑*eSg*		**Sb**	**04 02 01.1**	**0.0**
AOPR				IAML			04 02 17.1	
	comp=N,298nm,3.1s							
AOPR	**Arecibo Observ**	**1.04**	**153**	⇓*eP*		**Pn**	**04 01 48.7**	**+0.7**
EMPR	**Esperanza - Ma**	**1.05**	**139**			**Pn**	**04 01 48.9**	**+0.7**
EMPR						**Sn**	**04 02 02.5**	**0.0**
EMPR	**Esperanza - Ma**	**1.05**	**139**	⇓*eP*		**Pn**	**04 01 48.9**	**+0.7**
EMPR	**Esperanza - Ma**	**1.05**	**139**	*eS*		**Sn**	**04 02 02.5**	**0.0**
PRSN	**Puerto Rico Se**	**1.05**	**174**			**Pn**	**04 01 48.8**	**+0.5**
PRSN						**Sb**	**04 02 01.4**	**-0.2**
PRSN	**Puerto Rico Se**	**1.05**	**174**	⇓*eP*		**Pn**	**04 01 48.8**	**+0.5**
PRSN	**Puerto Rico Se**	**1.05**	**174**	*eS*		**Sb**	**04 02 01.4**	**-0.2**
LSP	**Las Mesas**	**1.10**	**171**			**Pg**	**04 01 49.1**	**-0.1**
LSP						**Sb**	**04 02 03.2**	**+0.2**
LSP	**Las Mesas**	**1.10**	**171**	⇑*iP*		**Pg**	**04 01 49.1**	**-0.1**
LSP	**Las Mesas**	**1.10**	**171**	*eS*		**Sb**	**04 02 03.2**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.14**	**153**			**Pg**	**04 01 49.6**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.14**	**153**	⇑*eP*		**Pg**	**04 01 49.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.27**	**174**			**Pb**	**04 01 51.6**	**+0.1**
CRPR						**Sb**	**04 02 07.0**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.27**	**174**	IAML			04 02 08.3	
	comp=E,102nm,0.2s							
CRPR				IAML			04 02 08.8	
	comp=N,114nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.27**	**174**	⇑*ePg*		**Pb**	**04 01 51.5**	**-0.1**
CRPR				⇓*eSg*		**Sb**	**04 02 06.9**	**-0.7**
CRPR				IAML			04 02 08.8	
	comp=N,135nm,0.2s							
CRPR	**Cabo Rojo, PR**	**1.27**	**174**	⇓*eP*		**Pb**	**04 01 51.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.27**	**174**	*eS*		**Sb**	**04 02 07.0**	**-0.7**
ECPR	**Experimental S**	**1.27**	**138**	⇑*eP*		**Pb**	**04 01 51.9**	**+0.3**
ECPR	**Experimental S**	**1.27**	**138**	*eS*		**Sb**	**04 02 07.2**	**-0.7**
MLPR	**Magueyes Islan**	**1.31**	**171**	⇑*iP*		**Pb**	**04 01 52.2**	**-0.1**
MLPR	**Magueyes Islan**	**1.31**	**171**	*eS*		**Sb**	**04 02 07.8**	**-1.1**
GBPR	**Guanica, Bosqu**	**1.34**	**164**			**Pg**	**04 01 53.6**	**0.0**
GBPR	**Guanica, Bosqu**	**1.34**	**164**	⇑*eP*		**Pg**	**04 01 53.6**	**0.0**
OBIP	**Obispado Ponce**	**1.37**	**153**			**Pb**	**04 01 53.0**	**-0.3**
OBIP				IAML			04 02 10.2	
	comp=E,116nm,0.3s							
OBIP				IAML			04 02 11.1	
	comp=N,118nm,0.2s							
OBIP	**Obispado Ponce**	**1.37**	**153**			**Sn**	**04 02 09.4**	**-1.1**
OBIP	**Obispado Ponce**	**1.37**	**153**	⇑*eP*		**Pb**	**04 01 53.3**	**0.0**
OBIP	**Obispado Ponce**	**1.37**	**153**	*eS*		**Sn**	**04 02 09.4**	**-1.1**
GCPR	**Guaynabo City**	**1.47**	**131**			**Pb**	**04 01 55.0**	**0.0**
GCPR	**Guaynabo City**	**1.47**	**131**			**Sn**	**04 02 13.3**	**+0.4**
GCPR	**Guaynabo City**	**1.47**	**131**	⇓*eP*		**Pb**	**04 01 55.2**	**+0.2**
GCPR	**Guaynabo City**	**1.47**	**131**	*eS*		**Sn**	**04 02 13.3**	**+0.4**
SJG	**San Juan**	**1.56**	**138**			**Pn**	**04 01 55.5**	**+0.3**
SJG				IAML			04 02 23.4	
	comp=N,77nm,0.3s							
SJG	**San Juan**	**1.56**	**138**	⇓*eP*		**Pg**	**04 01 57.3**	**-0.6**
SJG	**San Juan**	**1.56**	**138**	*eS*		**Sn**	**04 02 15.4**	**+0.2**
MIDR	**Miches**	**1.72**	**261**	⇑*eP*		**Pg**	**04 02 00.8**	**-0.2**
HUMP	**Col San Antoni**	**1.75**	**130**			**Pn**	**04 01 58.4**	**+0.6**
HUMP				IAML			04 02 25.5	
	comp=N,72nm,0.2s							
HUMP				IAML			04 02 27.3	
	comp=E,91nm,0.2s							
HUMP	**Col San Antoni**	**1.75**	**130**			**Sb**	**04 02 21.0**	**-0.4**
HUMP	**Col San Antoni**	**1.75**	**130**	⇓*eP*		**Pb**	**04 01 59.7**	**0.0**
HUMP	**Col San Antoni**	**1.75**	**130**	*eS*		**Sb**	**04 02 21.0**	**-0.4**
HATOM	**Hato Mayor del**	**2.07**	**257**	*ePg*		**Pg**	**04 02 06.5**	**-1.1**
HATOM				*eSg*		**Sg**	**04 02 35.0**	**+0.6**
HATOM				IAML			04 02 46.6	
	comp=N,25nm,0.6s							

IDC ***20*** *04:14:22.5±2.4, 1°.99N×127°.17E, h0km, mb3.4/4, mbtmp3.4/4, MS3.8/1, Error ellipse: s-maj=232.3km s-min=23.3km az=67.0*

DJA 20 04:14:26.1±0.4, 2°.1N±7°×12°.6E±°, h10km, M3.1/5, MLv3.1/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.40**	**139**	P		Pn	04 14 51.9	+0.2
FITZ	**Fitzroy Crossi**	**19.83**	**182**	LR		LR	04 27 45.5	
	comp=Z,293nm,21.5s,baz=160,slow=40							
WRA	**Warramunga Arr**	**22.99**	**161**	P		P	04 19 27.2	-4.0
	0.8nm,0.5s,baz=340,slow=10,SNR=8.4							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**26.37**	**164**	P		P	04 20 01.0	-1.8
	0.3nm,0.5s,baz=348,slow=13,SNR=6.4							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**58.95**	**326**	P		P	04 24 26.3	+0.5
	0.2nm,0.5s,baz=117,slow=8.6,SNR=1.6							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**63.18**	**328**	P		P	04 24 53.4	-0.9
	0.3nm,0.6s,baz=127,slow=5.9,SNR=2.8							
	0.3nm,0.6s							

MOS ***20*** *04:27:03.7±1.0, 13°.85N×93°.28W, h17km, mb6.3/61, MS6.4/47, Error ellipse: s-maj=7.4km s-min=4.9km az=97.6*
ISC-PP ***20*** *04:27:05, 13°.89N×93°.21W, h32km, Mwppsm6.6, Moment Tensor Solution. s26 Moment tensor: Scale 10¹⁸Nm; Mrr0.65±.19; Mθθ-0.64±.21; Mϕϕ0.08±.16; Mrθ0.22±.17; Mθϕ0.15±.12; Mϕr0.10±.28; Fault plane solution:*

M₀8.61000×10¹⁸ NP1:φ₀293.60000°,δ38.90000°, λ114.80000°. NP2:φ₀82.90000°,δ55.30000°,λ71.30000°.

GCG ***20*** *04:27:05.7±1.9, 13°.73N×93°.27W, h36km±31km, MD5.7, ML6.2*

NEIC ***20*** *04:27:05.9, 13°.98N×93°.14W, h20km*

NEIC ***20*** *04:27:05.3±1.6, 13°.89N±0°.04×93°.21W±0°.04, h15km±1km, mb6.2/1095, Ms_20 6.3/709, Mwb6.2/167, Mww6.3/96, Md6.4/244(MEX), Error ellipse: s-maj=8.1km s-min=5.5km az=309.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.89; Mθθ-2.13; Mφφ0.24; Mrθ0.78; Mθφ0.96; Mrφ0.27; Fault plane solution: M₀2.38000×10¹⁸ NP1:φ₀93.06000°,δ55.69000°,λ68.66000°. NP2: φs307.79000°,δ39.70000°,λ118.08000°. Principal axes: T 2.1482, Plg70.0000°, Azm313.0000°; N 0.4163, Plg17.0000°, Azm105.0000°; P -2.5644, Plg8.0000°, Azm198.0000°;*

NEIC ***20*** *04:27:05.9, 13°.98N×93°.35W, h20km, Moment Tensor Solution. Duration: 7s1 Moment tensor: Scale 10¹⁸Nm; Mrr2.79; Mθθ-2.45; Mφφ-0.34; Mrθ2.19; Mθφ0.83; Mrφ0.52; Fault plane solution: M₀3.56000×10¹⁸ NP1: φs303.89000°,δ29.51000°,λ119.77000°. NP2: φs90.58000°,δ64.69000°,λ74.30000°. Principal axes: T 3.7330, Plg67.0000°, Azm332.0000°; N -0.3683, Plg14.0000°, Azm97.0000°; P -3.3647, Plg18.0000°, Azm192.0000°;*

BJI ***20*** *04:27:05.1, 14°.05N×93°.25W, h13km, mB6.6/56, Ms6.6/64, Ms7 6.5/71*

NEIC ***20*** *04:27:06.7, 13°.98N×93°.13W, h17km*

OSUNB ***20*** *04:27:06.2±0.3, 13°.67N×93°.27W, h28km±2km, Error ellipse: s-maj=2.6km s-min=3.2km az=0.0*

MEX ***20*** *04:27:06.3±0.9, 13°.78N×93°.34W, h9km±20km, MD6.4*

IPGP ***20*** *04:27:07.0, 13°.95N×93°.14W, h17km, Mw6.2, Fault plane solution: NP1:φ₀304.00000°,δ41.00000°,λ111.00000°. NP2:φ₀97.00000°,δ52.00000°,λ73.00000°.*

CATAC ***20*** *04:27:08.5±0.3, 14°.N±2°×9°.3W±°, h25km, M6.0/54, mb6.4/24, mB6.4/26, MLv6.2/54, Mw(mB)6.1/26, MwMwp5.4/11, Mwp5.6/11, Error ellipse: s-maj=4.2km s-min=3.1km az=45.5, confirmed*

IDC ***20*** *04:27:10.0±1.1, 13°.80N×93°.15W, h55km±8km, mb5.5/30, mbtmp5.7/34, MS6.1/60, Error ellipse: s-maj=10.5km s-min=6.4km az=46.0*

BGR ***20*** *04:27:09.4, 13°.90N×92°.97W, h33km, mb6.3, mB_BB6.7, Ms6.3*

GCMT ***20*** *04:27:09.1±0.1, 14°.01N×93°.43W, h23km, MW6.3/154, Moment Tensor Solution. s151,c363; s154,c628; Duration: 3s5 Moment tensor: Scale 10¹⁸Nm; Mrr3.16±.02; Mθθ-2.81±.01; Mφφ-0.34±.01; Mrθ1.79±.03; Mθφ0.96±.01; Mφr-0.36±.03; Best double couple: M₀3.64100×10¹⁸ NP1:φs293.00000°,δ30.00000°, λ96.00000°. NP2:φs105.00000°,δ60.00000°,λ86.00000°. Principal axes: T 3.6580, Plg75.0000°, Azm5.0000°; N -0.0300, Plg3.0000°, Azm107.0000°; P -3.6240, Plg15.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 20 04:27:04.8±0.4, 13°.78N±0°.02×93°.20W±0°.02, h20km±1km, h20km:pP-P,n3013,σ2°.21/2876, mb6.2/650, MS6.3/492, 162C-135D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**1.45**	**39**			**Pn**	**04 27 29.9**	**+0.1**
THIG						**Sn**	**04 27 48.5**	**+0.2**
THIG		**1.45**	**39**	*i*	P	**Pn**	**04 27 29.9**	**+0.1**
THIG				*e*	S	**Sn**	**04 27 48.5**	**+0.2**
THIG		**1.45**	**39**	*i*	P	**Pn**	**04 27 30.1**	**+0.3**
THIG					IAML		04 27 53.3	
	comp=E,195μm,0.4s							
SMCA	**Catarina**	**1.53**	**45**	*i*	P	**Pn**	**04 27 31.5**	**+0.4**
SMCA				*e*	S	**Sb**	**04 27 51.6**	**+0.1**
SMCA					IAML		04 27 53.7	
	comp=E,134μm,0.3s							
PATR	**El Naranjo**	**1.63**	**35**			**Pn**	**04 27 32.4**	**-0.2**
PATR						**Sn**	**04 27 53.2**	**0.0**
PATR	**El Naranjo**	**1.63**	**35**	*e*	P	**Pn**	**04 27 32.4**	**-0.2**
PATR				*e*	S	**Sn**	**04 27 53.2**	**0.0**
RTAL	**Retalhuleu**	**1.64**	**63**			**Pb**	**04 27 33.5**	**-0.8**
RTAL	**Retalhuleu**	**1.64**	**63**	*i*	P	**Pb**	**04 27 33.7**	**-0.7**
RTAL				*e*	S	**Sb**	**04 27 54.2**	**-0.5**
RTAL	**Retalhuleu**	**1.64**	**63**		P	**Pb**	**04 27 34.2**	**-0.2**
CHUJ	**Union Juarez**	**1.68**	**39**	*e*	P	**Pn**	**04 27 33.2**	**-0.2**
CHUJ				*e*	S	**Sb**	**04 27 55.4**	**-0.7**
PAVE	**Pavencul**	**1.72**	**35**			**Pn**	**04 27 33.6**	**-0.3**
PAVE						**Sn**	**04 27 55.8**	**+0.3**
PAVE	**Pavencul**	**1.72**	**35**	*e*	P	**Pn**	**04 27 33.6**	**-0.3**
PAVE				*e*	S	**Sn**	**04 27 55.8**	**+0.3**
STG2	**El Palmar, Qui**	**1.89**	**69**	*i*	P	**Pn**	**04 27 35.3**	**-0.8**
STG5	**El Palmar, Qui**	**1.90**	**71**	*i*	P	**Pn**	**04 27 35.3**	**-0.9**
STG5				*i*	S	**Sn**	**04 27 59.5**	**-0.2**
STG8	**El Palmar, Qui**	**1.92**	**69**	*i*	P	**Pn**	**04 27 35.9**	**-0.7**
QUEO	**Labor Ovalle**	**1.96**	**56**	*i*	P	**Pn**	**04 27 38.4**	**+1.1**
QUEO				*e*	S	**Sb**	**04 28 04.1**	**-0.1**
SOKI	**Kika Raxquin**	**2.03**	**59**	*i*	P	**Pn**	**04 27 39.3**	**+1.0**
HUEH	**Huehuetenango**	**2.25**	**47**			**Pn**	**04 27 42.2**	**+1.0**
HUEH						**Sn**	**04 28 07.5**	**-0.9**
HUEH	**Huehuetenango**	**2.25**	**47**	*e*	P	**Pb**	**04 27 42.9**	**-1.9**
HUEH				*e*	S	**Sn**	**04 28 09.0**	**+0.6**
HUEH	**Huehuetenango**	**2.25**	**47**	*i*	P	**Pb**	**04 27 43.0**	**-1.9**
HUEH	**Huehuetenango**	**2.25**	**47**	*i*	P	**Pb**	**04 27 43.5**	**-1.4**
ESSG	**Sabana Grande**	**2.38**	**75**	*e*	P	**Pn**	**04 27 43.1**	**+0.4**
QUIS	**Sacapulas**	**2.54**	**55**	*e*	P	**Pb**	**04 27 47.6**	**-2.2**
ESSJ	**San Jos, E**	**2.63**	**94**	*e*	P	**Pn**	**04 27 43.4**	**-2.8**
FG16	**Alotenango, Sa**	**2.66**	**79**	*i*	P	**Pn**	**04 27 43.5**	**-3.2**
FG16					IAML		04 28 19.2	
	comp=E,311μm,0.3s							
CCIG	**Comitan**	**2.69**	**22**			**Pn**	**04 27 48.4**	**+1.1**
CCIG						**Sn**	**04 28 17.9**	**-1.5**
CCIG	**Comitan**	**2.69**	**22**	*e*	P	**Pn**	**04 27 49.2**	**+2.0**
CCIG				*e*	S	**Sn**	**04 28 22.1**	**+2.7**
CCIG	**Comitan**	**2.69**	**22**	*i*	P	**Pn**	**04 27 49.2**	**+2.0**
CCIG				*e*	S	**Sn**	**04 28 22.1**	**+2.7**
CCIG					IAML		04 28 29.0	
	comp=N,106μm,0.5s							
CCIG	**Comitan**	**2.69**	**22**		P	**Pn**	**04 27 48.9**	**+1.7**
CCIG	**Comitan**	**2.69**	**22**		P	**Pn**	**04 27 48.9**	**+1.7**
CCIG	**Comitan**	**2.69**	**22**		S	**Sn**	**04 28 20.8**	**+1.4**
GCG4	**OSOP**	**2.71**	**72**	*e*	P	**Pn**	**04 27 49.4**	**+2.0**
PCG5	**San Vicente Pa**	**2.78**	**81**	*e*	P	**Pn**	**04 27 46.0**	**-2.3**
APG	**El Apazote**	**2.92**	**65**	P		**Pn**	**04 27 52.4**	**+2.0**
	comp=N,1μm,0.7s,baz=195,slow=12,SNR=1121							
APG					S	**Sb**	**04 28 29.1**	**-2.6**
	comp=N,878nm,0.5s,baz=217,slow=17,SNR=3.9							
APG	**El Apazote**	**2.92**	**65**	*i*	P	**Pn**	**04 27 52.4**	**+2.0**
TGBT	**Tuxtla Gutierr**	**2.98**	**2**			**Pn**	**04 27 51.5**	**+0.5**
TGBT						**Sn**	**04 28 25.9**	**-0.3**
TGBT	**Tuxtla Gutierr**	**2.98**	**2**	*e*	P	**Pn**	**04 27 51.5**	**+0.5**
TGBT				*e*	S	**Sn**	**04 28 25.9**	**-0.3**
TGIG		**2.98**	**1**			**Pn**	**04 27 52.0**	**+0.9**
TGIG						**Sn**	**04 28 25.9**	**-0.5**
TGIG		**2.98**	**1**			**Pn**	**04 27 52.0**	**+0.9**
TGIG				*e*	S	**Sn**	**04 28 25.9**	**-0.5**
TGIG		**2.98**	**1**	*i*	P	**Pn**	**04 27 52.0**	**+0.9**
TGIG				*i*	S	**Sn**	**04 28 24.4**	**-2.0**
FAME	**Alcaldia de Sa**	**3.10**	**88**	P		**Pn**	**04 27 53.9**	**+1.4**
FAME	**Alcaldia de Sa**	**3.10**	**88**	S		**Sn**	**04 28 28.3**	**-0.7**
AVCB	**Coban**	**3.19**	**58**	IAML			04 28 49.0	
	comp=E,179μm,0.6s							
NUBE	**Las Nubes**	**3.33**	**87**	*e*	P	**Pn**	**04 27 57.5**	**+1.6**
NUBE				*e*	S	**Sn**	**04 28 33.1**	**-1.9**
NUBE	**Las Nubes**	**3.33**	**87**	P		**Pn**	**04 27 56.9**	**+1.1**
NUBE	**Las Nubes**	**3.33**	**87**	S		**Sn**	**04 28 34.1**	**-0.8**
SLOZ	**Alcaldia de Sa**	**3.33**	**85**	P		**Pn**	**04 27 55.2**	**-0.6**
LOAL	**Lomas de Alarc**	**3.33**	**86**	P		**Pn**	**04 27 58.1**	**+2.3**
LOAL	**Lomas de Alarc**	**3.33**	**86**	S		**Sn**	**04 28 36.8**	**+1.9**
JUAM	**Asuncion Mita**	**3.44**	**80**	*e*	P	**Pn**	**04 27 58.4**	**+1.1**
HUIG	**Huatulco**	**3.44**	**306**			**Pn**	**04 27 55.1**	**-2.2**
HUIG						**Sn**	**04 28 29.1**	**-8.4**
HUIG	**Huatulco**	**3.44**	**306**	*e*	P	**Pn**	**04 27 55.1**	**-2.2**
HUIG				*e*	S	**Sn**	**04 28 29.1**	**-8.4**
HUIG	**Huatulco**	**3.44**	**306**	*i*	P	**Pn**	**04 27 55.3**	**-2.0**
HUIG					IAML		04 28 31.2	
	comp=N,17μm,0.4s							
CEVE	**Cerro Verde**	**3.48**	**89**	S		**Sn**	**04 28 40.9**	**+2.2**
CEVE	**Cerro Verde**	**3.48**	**89**	P		**Pn**	**04 28 00.0**	**+2.0**
UNIC	**Universidad Ca**	**3.55**	**86**	P		**Pn**	**04 28 00.7**	**+1.8**
UNIC	**Universidad Ca**	**3.55**	**86**	S		**Sn**	**04 28 42.9**	**+2.4**
UXUV	**UXUV**	**3.64**	**346**			**Pn**	**04 28 00.9**	**+0.9**
UXUV						**Sn**	**04 28 41.1**	**-1.3**
UXUV	**UXUV**	**3.64**	**346**	*e*	P	**Pn**	**04 28 00.9**	**+0.9**
UXUV				*e*	S	**Sn**	**04 28 41.1**	**-1.3**
JAYA	**Jayaque - finc**	**3.65**	**91**	*e*	P	**Pn**	**04 28 01.9**	**+1.6**
JAYA				*e*	S	**Sn**	**04 28 41.7**	**-1.2**
JAYA	**Jayaque - finc**	**3.65**	**91**	P		**Pn**	**04 28 01.9**	**+1.6**
JAYA	**Jayaque - finc**	**3.65**	**91**	S		**Sn**	**04 28 43.1**	**+0.2**
CMIG	**Matias Romero**	**3.67**	**334**	P		**Pn**	**04 27 59.9**	**-0.6**
	comp=N,2μm,0.3s,baz=161,slow=10,SNR=345							
CMIG					S	**Sn**	**04 28 39.0**	**-4.3**
	comp=N,7μm,0.6s,baz=165,slow=8.2,SNR=4.1							
CMIG					LR	LR	04 29 36.2	
	comp=N,446μm,20.4s,baz=240,slow=40							
CEDA	**San Andres**	**3.70**	**89**	P		**Pn**	**04 28 02.8**	**+1.9**
CEDA	**San Andres**	**3.70**	**89**	S		**Sn**	**04 28 45.4**	**+1.4**
PMON	**Piamonte**	**3.78**	**91**	P		**Pn**	**04 28 04.0**	**+2.0**
PMON	**Piamonte**	**3.78**	**91**	S		**Sn**	**04 28 46.5**	**+0.5**
MTO3	**Montecristo**	**3.78**	**80**			**Pn**	**04 28 03.0**	**+0.9**
MTO3	**Montecristo**	**3.78**	**80**	*e*	P	**Pn**	**04 28 03.5**	**+1.4**
MTO3	**Montecristo**	**3.78**	**80**	P		**Pn**	**04 28 03.3**	**+1.1**
MTO3	**Montecristo**	**3.78**	**80**	S		**Sn**	**04 28 49.0**	**+2.8**
LALI	**Alcalda de L**	**3.78**	**94**	*e*	P	**Pn**	**04 28 04.3**	**+2.3**
LALI				*e*	S	**Sn**	**04 28 43.0**	**-3.0**
LALI	**Alcalda de L**	**3.78**	**94**	P		**Pn**	**04 28 04.7**	**+2.7**
LALI	**Alcalda de L**	**3.78**	**94**	S		**Sn**	**04 28 46.5**	**+0.5**
ZAFR2	**Estanzuela, Za**	**3.82**	**77**	*e*	P	**Pn**	**04 28 02.4**	**-0.1**
ESQI	**Esquipulas**	**3.82**	**78**			**Pn**	**04 28 04.1**	**+1.4**
ESQI	**Esquipulas**	**3.82**	**78**	P		**Pn**	**04 28 04.3**	**+1.6**
UEES	**Universidad Ev**	**3.85**	**90**	P		**Pn**	**04 28 05.7**	**+2.6**
UEES	**Universidad Ev**	**3.85**	**90**	S		**Sn**	**04 28 48.2**	**+0.4**
UTEC	**Universidad Te**	**3.89**	**91**	S		**Sn**	**04 28 49.6**	**+0.9**
PANCS	**Alcalda de**	**3.91**	**92**	P		**Pn**	**04 28 06.7**	**+2.8**
PANCS	**Alcalda de**	**3.91**	**92**	S		**Sn**	**04 28 47.6**	**-1.7**
IGN	**Direccin Gen**	**3.92**	**90**	P		**Pn**	**04 28 06.6**	**+2.6**
IGN	**Direccin Gen**	**3.92**	**90**	S		**Sn**	**04 28 51.0**	**+1.6**
LOMA	**Loma Larga**	**3.92**	**91**	P		**Pn**	**04 28 06.4**	**+2.4**
LOMA	**Loma Larga**	**3.92**	**91**	S		**Sn**	**04 28 48.7**	**-0.8**
PAVA	**Las Pavas**	**4.14**	**90**	P		**Pn**	**04 28 09.2**	**+2.1**
PAVA	**Las Pavas**	**4.14**	**90**	S		**Sn**	**04 28 58.3**	**+3.2**
LLGN	**La Laguna**	**4.15**	**84**	S		**Sn**	**04 28 56.3**	**+1.1**
LLGN	**La Laguna**	**4.15**	**84**	P		**Pn**	**04 28 07.7**	**+0.5**
VHSA	**Villahermosa**	**4.19**	**3**			**Pn**	**04 28 09.4**	**+1.8**
VHSA						**Sn**	**04 28 55.1**	**-0.9**
VHSA	**Villahermosa**	**4.19**	**3**	*e*	P	**Pn**	**04 28 09.4**	**+1.8**
VHSA				*e*	S	**Sn**	**04 28 55.1**	**-0.9**
UESV	**Universidad de**	**4.29**	**91**	P		**Pn**	**04 28 11.4**	**+2.4**
UESV	**Universidad de**	**4.29**	**91**	S		**Sn**	**04 28 58.6**	**-0.1**
TECO	**Alcaldia de Te**	**4.30**	**93**	P		**Pn**	**04 28 11.2**	**+2.0**
TECO	**Alcaldia de Te**	**4.30**	**93**	S		**Sn**	**04 28 60.0**	**+1.1**
SCLA	**Alcaldia de Sa**	**4.35**	**90**	P		**Pn**	**04 28 12.0**	**+2.2**
SCLA	**Alcaldia de Sa**	**4.35**	**90**	S		**Sn**	**04 29 02.2**	**+2.2**
MIHL	**Minatitlan**	**4.38**	**343**			**Pn**	**04 28 10.4**	**+0.2**
MIHL						**Sn**	**04 29 01.8**	**+1.0**
MIHL	**Minatitlan**	**4.38**	**343**	*e*	P	**Pn**	**04 28 10.4**	**+0.2**
MIHL				*e*	S	**Sn**	**04 29 01.8**	**+1.0**
TUIG	**Tuzandepetl**	**4.39**	**345**			**Pn**	**04 28 10.0**	**-0.4**
TUIG						**Sn**	**04 28 59.4**	**-1.7**
TUIG	**Tuzandepetl**	**4.39**	**345**	*e*	P	**Pn**	**04 28 10.0**	**-0.4**
TUIG				*e*	S	**Sn**	**04 28 59.4**	**-1.7**
PEIG	**Puerto Escondi**	**4.41**	**301**			**Pn**	**04 28 09.3**	**-1.4**
PEIG						**Sn**	**04 28 52.2**	**-2.3**
PEIG	**Puerto Escondi**	**4.41**	**301**	*e*	P	**Pn**	**04 28 09.3**	**-1.4**
PEIG				*e*	S	**Sn**	**04 28 52.2**	**-9.3**
PETF	**Flores**	**4.48**	**45**			**Pn**	**04 28 12.1**	**+0.5**
PETF						**Sn**	**04 29 03.3**	**0.0**
PETF	**Flores**	**4.48**	**45**	*i*	P	**Pn**	**04 28 12.9**	**+1.3**
PETF				*e*	S	**Sn**	**04 29 05.5**	**+2.2**
PETF	**Flores**	**4.48**	**45**	*e*	P	**Pn**	**04 28 13.2**	**+1.6**
PETF	**Flores**	**4.48**	**45**	P		**Pn**	**04 28 12.8**	**+1.2**
PETF	**Flores**	**4.48**	**45**	S		**Sn**	**04 29 06.7**	**+3.5**
NEUV	**Arroyo Zacate**	**4.65**	**328**			**Pn**	**04 28 12.5**	**-1.4**
NEUV						**Sn**	**04 29 02.2**	**-5.1**
NEUV	**Arroyo Zacate**	**4.65**	**328**	*e*	P	**Pn**	**04 28 12.5**	**-1.4**
NEUV				*e*	S	**Sn**	**04 29 02.2**	**-5.1**
OXLC	**Oaxaca**	**4.70**	**315**			**Pn**	**04 28 15.2**	**+0.4**
OXLC						**Sn**	**04 29 03.6**	**-5.3**
OXLC	**Oaxaca**	**4.70**	**315**	*e*	P	**Pn**	**04 28 15.2**	**+0.4**
OXLC				*e*	S	**Sn**	**04 29 03.6**	**-5.3**
OXBJ	**Oaxaca**	**4.72**	**314**			**Pn**	**04 28 18.9**	**+3.8**
OXBJ						**Sn**	**04 29 06.2**	**-3.1**
OXBJ	**Oaxaca**	**4.72**	**314**	*e*	P	**Pn**	**04 28 18.9**	**+3.8**
OXBJ				*e*	S	**Sn**	**04 29 06.2**	**-3.1**
OXIG	**Oaxaca**	**4.73**	**314**			**Pn**	**04 28 16.0**	**+0.8**
OXIG						**Sn**	**04 29 04.1**	**-5.5**
VHO	**Vista Hermosa**	**4.73**	**314**	*e*	P	**Pn**	**04 28 16.0**	**+0.8**
VHO				*e*	S	**Sn**	**04 29 04.1**	**-5.5**
PACA	**Pacayal**	**4.75**	**93**	P		**Pn**	**04 28 17.9**	**+2.4**
PACA	**Pacayal**	**4.75**	**93**	S		**Sn**	**04 29 10.4**	**+0.3**
IZABA	**Izabal, Puerto**	**4.87**	**66**	*e*	P	**Pn**	**04 28 18.6**	**+1.6**
IZABA				*e*	S	**Sn**	**04 29 13.5**	**+0.6**
IZABA	**Izabal, Puerto**	**4.87**	**66**	P		**Pn**	**04 28 19.7**	**+2.7**
CNRM	**Centro Naciona**	**4.90**	**93**	P		**Pn**	**04 28 20.3**	**+2.9**
CNRM	**Centro Naciona**	**4.90**	**93**	S		**Sn**	**04 29 16.6**	**+3.0**
PMUV	**Sontecomapan**	**5.09**	**339**			**Pn**	**04 28 17.5**	**-2.6**
PMUV						**Sn**	**04 29 14.2**	**-4.2**
PMUV	**Sontecomapan**	**5.09**	**339**	*e*	P	**Pn**	**04 28 17.5**	**-2.6**
PMUV				*e*	S	**Sn**	**04 29 14.2**	**-4.2**
LCND	**La Caada**	**5.19**	**95**	P		**Pn**	**04 28 24.1**	**+2.7**
YOIG	**Yosondua**	**5.19**	**307**			**Pn**	**04 28 22.1**	**+0.4**
YOIG						**Sn**	**04 29 14.5**	**-6.7**
YOIG	**Yosondua**	**5.19**	**307**	*e*	P	**Pn**	**04 28 22.1**	**+0.4**
YOIG				*e*	S	**Sn**	**04 29 14.5**	**-6.7**
CNCH	**Conchagua**	**5.24**	**95**	P		**Pn**	**04 28 24.1**	**+1.9**
CNCH	**Conchagua**	**5.24**	**95**	S		**Sn**	**04 29 22.5**	**+0.2**
PNIG	**Pinotepa**	**5.42**	**299**			**Pn**	**04 28 24.0**	**-0.6**
PNIG						**Sn**	04 29 17.4	-9.1
PNIG	**Pinotepa**	**5.42**	**299**	*e*	P	**Pn**	**04 28 24.0**	**-0.6**
PNIG				*e*	S	**Sn**	04 29 17.4	-9.1
SCIG	**Sabancuy**	**5.51**	**20**			**Pn**	**04 28 25.9**	**+0.2**
SCIG						**Sn**	**04 29 26.4**	**-2.2**
SCIG	**Sabancuy**	**5.51**	**20**	*e*	P	**Pn**	**04 28 25.9**	**+0.2**
SCIG				*e*	S	**Sn**	**04 29 26.4**	**-2.2**
SCIG	**Sabancuy**	**5.51**	**20**	P		**Pn**	**04 28 26.0**	**+0.2**
SCIG	**Sabancuy**	**5.51**	**20**	S		**Sn**	**04 29 28.1**	**-0.5**
CSGN	**Cosiguina Volc**	**5.55**	**98**	P		**Pn**	**04 28 28.1**	**+1.7**
CSGN						**Sn**	**04 29 30.9**	**+1.2**
POTN	**Potosi Cosigui**	**5.60**	**97**	P		**Pn**	**04 28 29.3**	**+2.3**
POTN						**Sn**	**04 29 30.3**	**-0.4**
TXIG	**Tlaxiaco**	**5.60**	**309**			**Pn**	**04 28 27.9**	**+0.7**
TXIG						**Sn**	**04 29 26.1**	**-5.1**
TXIG	**Tlaxiaco**	**5.60**	**309**	*e*	P	**Pn**	**04 28 27.9**	**+0.7**
TXIG				*e*	S	**Sn**	**04 29 26.1**	**-5.1**
TOIG	**Toxpalan**	**5.68**	**320**			**Pn**	**04 28 28.6**	**+0.4**
TOIG						**Sn**	**04 29 32.0**	**-0.9**
TOIG	**Toxpalan**	**5.68**	**320**	*e*	P	**Pn**	**04 28 28.6**	**+0.4**
TOIG				*e*	S	**Sn**	**04 29 32.0**	**-0.9**
TGUH	**Tegucigalpa,Un**	**5.76**	**87**			**Pn**	**04 28 30.7**	**+1.4**
TGUH	**Tegucigalpa,Un**	**5.76**	**87**	*e*	P	**Pn**	**04 28 24.7**	**-4.7**
TGUH	**Tegucigalpa,Un**	**5.76**	**87**	P		**Pn**	**04 28 30.6**	**+1.2**
TGUH				S		**Sn**	**04 29 36.2**	**+1.2**
TGUH	**Tegucigalpa,Un**	**5.76**	**87**	P		**Pn**	**04 28 30.8**	**+1.4**
	comp=N,132μmcomp=N,36μmcomp=N,2μm,0.9s							
HLIG	**Huajuapan de L**	**5.99**	**313**			**Pn**	**04 28 34.1**	**+1.5**
HLIG						**Sn**	**04 29 40.4**	**-0.4**
HLIG	**Huajuapan de L**	**5.99**	**313**	*e*	P	**Pn**	**04 28 34.1**	**+1.5**
HLIG				*e*	S	**Sn**	**04 29 40.4**	**-0.4**
CRIN	**San Cristobal**	**6.08**	**99**			**Pn**	**04 28 36.8**	**+3.0**
CRIN	**San Cristobal**	**6.08**	**99**	P		**Pn**	**04 28 36.9**	**+3.2**
CRIN	**San Cristobal**	**6.08**	**99**	S		**Sn**	**04 29 40.2**	**-2.7**
CRIN	**San Cristobal**	**6.08**	**99**	P		**Pn**	**04 28 36.4**	**+2.6**
	comp=N,191μmcomp=N,54μmcomp=N,4μm,0.7s							
TPIG	**Tehuac#an**	**6.11**	**320**			**Pn**	**04 28 35.8**	**+1.7**
TPIG						**Sn**	**04 29 39.5**	**-4.1**
TPIG	**Tehuac#an**	**6.11**	**320**	*e*	P	**Pn**	**04 28 35.8**	**+1.7**
TPIG				*e*	S	**Sn**	**04 29 39.5**	**-4.1**
PKGN	**Cerro Pekin**	**6.16**	**100**	P		**Pn**	**04 28 36.8**	**+2.1**
PKGN					S	**Sn**	**04 29 41.9**	**-2.8**
YUSH	**Yuscaran**	**6.18**	**88**	P		**Pn**	**04 28 36.4**	**+1.3**
MGIG	**Malinaltepec**	**6.26**	**304**			**Pn**	**04 28 37.5**	**+1.2**
MGIG						**Sn**	**04 29 41.6**	**-5.8**
MGIG	**Malinaltepec**	**6.26**	**304**	*e*	P	**Pn**	**04 28 37.5**	**+1.2**
MGIG				*e*	S	**Sn**	**04 29 41.6**	**-5.8**
FTIG	**Fresnillo de T**	**6.28**	**312**			**Pn**	**04 28 38.1**	**+1.7**
FTIG						**Sn**	**04 29 40.1**	**-7.6**
FTIG	**Fresnillo de T**	**6.28**	**312**	*e*	P	**Pn**	**04 28 38.1**	**+1.7**
FTIG				*e*	S	**Sn**	**04 29 40.1**	**-7.6**
HERN	**Volcan Telica**	**6.31**	**100**	Pn		**Pn**	**04 28 37.6**	**+0.7**
POLN	**Al Sur del Vol**	**6.32**	**99**	P		**Pn**	**04 28 37.7**	**+0.7**
POLN					S	**Sn**	**04 29 45.0**	**-3.7**
TLIG	**Tlapa**	**6.39**	**307**	Pn		**Pn**	**04 28 38.7**	**+0.7**
TLIG	**Tlapa**	**6.39**	**307**	*e*	P	**Pn**	**04 28 39.2**	**+1.1**
TLIG				*e*	S	**Sn**	**04 29 44.4**	**-6.2**
TLIG	**Tlapa**	**6.39**	**307**	P		**Pn**	**04 28 39.8**	**+1.8**
TLIG	**Tlapa**	**6.39**	**307**	S		**Sn**	**04 29 46.4**	**-4.2**
CRIG	**Cruz Grande**	**6.43**	**298**			**Pn**	**04 28 38.4**	**-0.1**
CRIG						**Sn**	04 29 40.3	-11
CRIG	**Cruz Grande**	**6.43**	**298**	*e*	P	**Pn**	**04 28 38.4**	**-0.1**
CRIG				*e*	S	**Sn**	04 29 40.3	-11
CNGA	**Al SSO del Vol**	**6.46**	**101**	P		**Pn**	**04 28 40.7**	**+1.8**
CNGA					S	**Sn**	**04 29 47.2**	**-4.9**
CNGN	**Cerro Negro**	**6.46**	**101**	Pn		**Pn**	**04 28 40.7**	**+1.8**
CNGN	**Cerro Negro**	**6.46**	**101**	P		**Pn**	**04 28 40.8**	**+1.9**
CNGN	**Cerro Negro**	**6.46**	**101**	S		**Sn**	**04 29 49.2**	**-3.0**
HMTT	**Tlapaneco**	**6.53**	**308**			**Pn**	**04 28 41.8**	**+2.0**
HMTT						**Sn**	**04 29 48.1**	**-5.7**
HMTT	**Tlapaneco**	**6.53**	**308**	*e*	P	**Pn**	**04 28 41.8**	**+2.0**
HMTT				*e*	S	**Sn**	**04 29 48.1**	**-5.7**
OCON	**Estacion meteo**	**6.54**	**90**	P		**Pn**	**04 28 42.8**	**+2.8**
JAUV	**Jalcomulco**	**6.54**	**329**			**Pn**	**04 28 37.1**	**-2.9**
JAUV						**Sn**	**04 29 45.5**	**-8.6**
JAUV	**Jalcomulco**	**6.54**	**329**	*e*	P	**Pn**	**04 28 37.1**	**-2.9**
JAUV				*e*	S	**Sn**	**04 29 45.5**	**-8.6**
POHV	**Veracruz**	**6.56**	**324**	*e*	P	Pn	04 28 11.3	-29
MOM3	**MOM3**	**6.63**	**100**	P		**Pn**	**04 28 43.0**	**+1.8**
MOM3					S	**Sn**	**04 29 54.0**	**-2.3**
MOMN	**Momotombo**	**6.63**	**101**	P		**Pn**	**04 28 43.6**	**+2.3**
COPN	**Copaltepe**	**6.63**	**103**	P		**Pn**	**04 28 43.3**	**+2.0**
LVIG	**Laguna Verde**	**6.67**	**333**			**Pn**	**04 28 37.0**	**-4.7**
LVIG						**Sn**	04 29 46.3	-11
LVIG	**Laguna Verde**	**6.67**	**333**	*e*	P	**Pn**	**04 28 37.0**	**-4.7**
LVIG				*e*	S	**Sn**	04 29 46.3	-11
MOM2	**El Cardon**	**6.68**	**101**	P		**Pn**	**04 28 44.6**	**+2.7**
MOM2					S	**Sn**	**04 29 51.4**	**-6.0**
RCFN	**Al S de San Ju**	**6.

TEIG Tepich 7.96 36 Pn 04 28 58.4 -1.0
TEIG Tepich 7.96 36 eP Pn 04 28 58.1 -1.3
TEIG eS Sn 04 30 24.7 -4.2
TEIG Tepich 7.96 36 ⇓P Pn 04 28 58.6 -0.8
TEIG Tepich 7.96 36 P Pn 04 28 59.2 -0.2
comp=N,639µmcomp=N,286µmcomp=N,10µm,0.4s
CUP5 Mexico City 7.96 315 Pn 04 29 02.9 +3.2
CUP5 Sn 04 30 23.2 -6.1
CUP5 Mexico City 7.96 315 eP Pn 04 29 02.9 +3.2
CUP5 eS Sn 04 30 23.2 -6.1
PBVM Pinon 7.97 316 Pn 04 29 01.9 +2.4
PBVM Sn 04 30 25.4 -3.8
PBVM Pinon 7.97 316 eP Pn 04 29 01.9 +2.4
PBVM eS Sn 04 30 25.4 -3.8
VRVM Mexico City 7.97 315 Pn 04 28 58.3 -1.6
VRVM Mexico City 7.97 315 eP Pn 04 28 58.3 -1.6
BJVM Benito Juarez 7.98 315 Pn 04 29 02.3 +2.3
BJVM Sn 04 30 24.6 -5.3
BJVM Benito Juarez 7.98 315 eP Pn 04 29 02.3 +2.3
BJVM eS Sn 04 30 24.6 -5.3
VTVM Tizayuca 8.00 319 Pn 04 29 01.4 +1.2
VTVM Sn 04 30 29.6 -0.8
VTVM Tizayuca 8.00 319 eP Pn 04 29 01.4 +1.2
VTVM eS Sn 04 30 29.6 -0.8
MCRU Las Cruces 8.00 314 eP Pn 04 29 03.4 +3.1
MCRU eS Sn 04 30 21.7 -8.9
AOVM Tlapan 8.02 314 Pn 04 29 04.0 +3.3
AOVM Sn 04 30 25.0 -6.0
AOVM Tlapan 8.02 314 eP Pn 04 29 04.0 +3.3
AOVM eS Sn 04 30 25.0 -6.0
CTVM Cuauhtemoc 8.03 315 Pn 04 29 04.3 +3.7
CTVM Sn 04 30 34.8 +3.8
CTVM Cuauhtemoc 8.03 315 eP Pn 04 29 04.3 +3.7
CTVM eS Sn 04 30 34.8 +3.8
MHVM Bosque de Chap 8.03 315 Pn 04 29 03.4 +2.7
MHVM Sn 04 30 23.2 -8.0
MHVM Bosque de Chap 8.03 315 eP Pn 04 29 03.4 +2.7
MHVM eS Sn 04 30 23.2 -8.0
INVM La Marquesa 8.07 314 Pn 04 29 04.6 +3.2
INVM Sn 04 30 24.2 -8.1
INVM La Marquesa 8.07 314 eP Pn 04 29 04.6 +3.2
INVM eS Sn 04 30 24.2 -8.1
APVM Azcapotzalco 8.09 315 Pn 04 29 02.8 +1.4
APVM Sn 04 30 33.9 +1.5
APVM Azcapotzalco 8.09 315 eP Pn 04 29 02.8 +1.4
APVM eS Sn 04 30 33.9 +1.5
PTVM Pico Tres Padr 8.09 316 Pn 04 29 04.2 +2.7
PTVM Sn 04 30 36.3 +3.6
PTVM Pico Tres Padr 8.09 316 eP Pn 04 29 04.2 +2.7
PTVM eS Sn 04 30 36.3 +3.6
ELI1 Hacienda Flor 8.10 112 eP Pn 04 29 06.5 +5.2
ALIBA Liberia Airpor 8.13 112 eP Pn 04 29 06.3 +4.6
LAPC Finca la Perla 8.16 111 eP Pn 04 29 05.8 +3.6
DELF Filadelfia 8.18 113 eP Pn 04 29 07.2 +4.8
SIUN Universidad Ur 8.19 89 Pn 04 29 03.9 +1.3
ARIG Puente Sto Nin 8.20 304 Pn 04 29 05.2 +2.5
ARIG Sn 04 30 28.3 -6.7
ARIG Puente Sto Nin 8.20 304 eP Pn 04 29 05.2 +2.5
ARIG eS Sn 04 30 28.3 -6.7
ERIA Liberia 8.21 112 eP Pn 04 29 07.9 +5.1
SAJU San Juanillo, 8.21 116 eP Pn 04 29 06.9 +4.0
BUAI Buenos Aires 8.21 110 eP Pn 04 29 07.6 +4.6
VRLE La Escondida, 8.21 110 eP Pn 04 29 07.6 +4.5
PEJA Penjamo Buenos 8.22 110 eP Pn 04 29 06.9 +3.8
GPS9 Bodega del ICE 8.23 111 eP Pn 04 29 09.2 +6.0
SACU Santa Cruz 8.23 114 eP Pn 04 29 07.2 +4.1
GPS1 Guardaparques 8.23 110 eP Pn 04 29 07.9 +4.6
ZUVM ZUMPANGO 8.24 318 Pn 04 29 05.5 +2.0
ZUVM Sn 04 30 40.8 +4.6
ZUVM ZUMPANGO 8.24 318 eP Pn 04 29 05.5 +2.0
ZUVM eS Sn 04 30 40.8 +4.6
TOVM TOLUCA 8.28 312 Pn 04 29 07.1 +3.0
TOVM Sn 04 30 39.5 +2.2
TOVM TOLUCA 8.28 312 eP Pn 04 29 07.1 +3.0
TOVM eS Sn 04 30 39.5 +2.2
JUD3 Juan Diaz 3 8.31 115 Pn 04 29 06.7 +2.4
JUD3 Juan Diaz 3 8.31 115 eP Pn 04 29 08.6 +4.3
MESS Mesas 8.39 110 eP Pn 04 29 09.9 +4.5
PLVR Palo Verde 8.40 113 eP Pn 04 29 09.9 +4.2
HORNC Hornillas 8.41 110 eP Pn 04 29 10.0 +4.3
VMAR Armenia, Volca 8.44 110 eP Pn 04 29 09.5 +3.5
CUI Cuipilapa 8.45 111 eP Pn 04 29 09.7 +3.5
CMARA Lajas Hojancha 8.48 115 eP Pn 04 29 11.1 +4.5
INDA Punta Indio, G 8.48 116 eP Pn 04 29 11.3 +4.7
UPAL Upala 8.50 109 eP Pn 04 29 11.1 +4.3
MOTZ Rio Naranjo 8.52 110 eP Pn 04 29 10.7 +3.6
CNAS Canas 8.60 112 eP Pn 04 29 13.6 +5.3
TENO El Achiote 8.60 110 eP Pn 04 29 12.5 +4.2
TIMP Tierras Morena 8.61 111 eP Pn 04 29 13.2 +4.8
INVE Universidad In 8.61 112 eP Pn 04 29 13.6 +5.2
TILA Tilaran 8.69 111 eP Pn 04 29 14.1 +4.5
QUEB Quebradon, Cot 8.70 110 eP Pn 04 29 13.7 +4.0
ATVM ATLACOMULCO 8.71 314 Pn 04 29 13.1 +3.1
ATVM Sn 04 30 50.9 +3.1
ATVM ATLACOMULCO 8.71 314 eP Pn 04 29 13.1 +3.1
ATVM eS Sn 04 30 50.9 +3.1
JUNT Juntas 8.78 112 eP Pn 04 29 16.2 +5.5
JTS Las Juntas de 8.78 112 P Pn 04 29 15.8 +5.1
comp=N,446nm,0.8s,baz=297,slow=8.7,SNR=58
JTS S Sn 04 30 50.6 +1.4
comp=N,210nm,0.4s,baz=159,slow=18,SNR=6.3
JTS LR LR 04 31 36.8
comp=N,24µm,20.1s,baz=297,slow=30
JTS Las Juntas de 8.78 112 Pn 04 29 11.6 +0.9
JTS Las Juntas de 8.78 112 i P Pn 04 29 16.2 +5.4
JTS MLR MLR
comp=Z,77µm,15.0s
JTS Las Juntas de 8.78 112 ⇑P Pn 04 29 15.4 +4.6
JTS Las Juntas de 8.78 112 ⇓iP Pn 04 29 16.6 +5.8
JTS Las Juntas de 8.78 112 P Pn 04 29 15.3 +4.6
comp=Z,54µmcomp=Z,14µmcomp=Z,845nm,1.0s
ZIIG Zihuatanejo 8.82 297 Pn 04 29 13.1 +1.8
ZIIG Sn 04 30 44.9 -5.3
ZIIG Zihuatanejo 8.82 297 eP Pn 04 29 13.1 +1.8
ZIIG eS Sn 04 30 44.9 -5.3
TABAC Tabacon 8.87 111 eP Pn 04 29 16.7 +4.7
ACIG Acambay 8.88 315 Pn 04 29 15.1 +2.8
ACIG Sn 04 30 54.2 +2.3
ACIG Acambay 8.88 315 eP Pn 04 29 15.1 +2.8
ACIG eS Sn 04 30 54.2 +2.3
MTEVE Monteverde 8.88 112 eP Pn 04 29 17.6 +5.3
CASO Castillo 8.92 111 eP Pn 04 29 17.3 +4.5
VARE2 V. Arenal 8.93 111 eP Pn 04 29 17.8 +5.0
CEDE Laguna Cedeo 8.93 111 ⇓eP Pn 04 29 17.3 +4.4
VACR Volcan Arenal 8.96 111 eP Pn 04 29 18.3 +5.1
CBL1 Cabuya 8.97 117 ⇓iP Pn 04 29 18.9 +5.6
FORC Fortuna 8.97 111 eP Pn 04 29 17.8 +4.5
PAQE Paquera 9.00 115 eP Pn 04 29 18.7 +5.0
ENAS Puntarenas 9.02 114 eP Pn 04 29 18.9 +4.9
SOCE Pocosol 9.05 111 Pn 04 29 17.6 +3.2
SOCE Pocosol 9.05 111 eP Pn 04 29 19.4 +5.0
CTUV Llano Grande 9.09 328 Pn 04 29 11.9 -3.0
CTUV Sn 04 30 52.7 -4.2
CTUV Llano Grande 9.09 328 eP Pn 04 29 11.9 -3.0
CTUV eS Sn 04 30 52.7 -4.2
ROBF Roble, Puntare 9.10 114 eP Pn 04 29 21.3 +6.2
ARZA Esparza 9.16 113 eP Pn 04 29 21.5 +5.5
QUEU Ciudad Quesada 9.24 111 eP Pn 04 29 23.8 +6.7
SRA1 San Ramn 9.29 112 ⇓eP Pn 04 29 22.4 +4.5
VPL2 V. Platanar 9.29 111 eP Pn 04 29 23.2 +5.4
RAMO San Ramon 9.30 112 eP Pn 04 29 23.6 +5.6
OROT Orotina 9.32 113 eP Pn 04 29 24.7 +6.5
VPL1 V. Platanar 9.32 111 ⇓eP Pn 04 29 23.4 +5.0
ZARE Zarcero 9.33 112 eP Pn 04 29 24.4 +4.9
VPL3 V. Platanar 9.34 110 ⇑eP Pn 04 29 25.7 +7.2
PALD Palmares 9.34 112 eP Pn 04 29 25.0 +6.5
NARAN Naranjo de Ala 9.38 112 eP Pn 04 29 25.7 +6.7
SARCI Sarchi 9.41 112 eP Pn 04 29 25.8 +6.4
ATEO Atenas 9.42 113 eP Pn 04 29 25.2 +5.6
ARTO Ro Cuarto 9.43 110 ⇑eP Pn 04 29 26.4 +6.8
VPS8 V Poas 9.47 111 eP Pn 04 29 25.2 +4.8
TCS1 Tacares 9.47 112 eP Pn 04 29 26.6 +6.3
VPS5 V. Poas 9.47 111 eP Pn 04 29 26.9 +6.5
PURI Puriscal 9.54 113 eP Pn 04 29 28.6 +7.3
BILN Bilwi Airport 9.54 87 Pn 04 29 23.2 +2.0
UELA Alajuela 9.56 112 eP Pn 04 29 28.9 +7.4
SARA Sarapiqu 9.57 109 eP Pn 04 29 24.5 +3.0
BELE Belen 9.60 112 eP Pn 04 29 26.9 +4.9
SANTA Santa Ana 9.62 112 eP Pn 04 29 27.3 +5.0
HEME Heredia, Merce 9.63 112 eP Pn 04 29 28.7 +6.2

MOIG Morelia 9.64 309 Pn 04 29 24.3 +1.5
MOIG Morelia 9.64 309 eP Pn 04 29 26.5 +3.8
MOIG eS Sn 04 31 15.4 +4.8
MOIG Morelia 9.64 309 ⇓P Pn 04 29 26.6 +3.8
HDC Heredia 9.65 112 Pn 04 29 24.4 +1.5
HDC Heredia 9.65 112 ⇓eP Pn 04 29 26.9 +4.1
HDC Heredia 9.65 112 eP Pn 04 29 24.3 +1.5
ACOS Acosta 9.69 113 eP Pn 04 29 29.1 +5.7
MEXI Barrio Mexico 9.70 112 eP Pn 04 29 30.5 +7.0
CENT San Jose 9.71 112 eP Pn 04 29 30.3 +6.7
LUJA Lujan 9.72 112 eP Pn 04 29 29.4 +5.7
SJS Escuela Geolog 9.73 112 eP Pn 04 29 29.9 +6.0
ECI Escuela Centro 9.73 112 ⇓iP Pn 04 29 29.9 +6.0
SJS3 Mercedes San J 9.73 112 eP Pn 04 29 28.4 +5.5
PICV PH. Pirrs 9.74 114 eP Pn 04 29 30.1 +6.2
AMPA Desamparados 9.74 112 eP Pn 04 29 30.7 +6.6
CORON Coronado 9.76 112 eP Pn 04 29 31.2 +6.8
JRQG Juriquilla Cam 9.76 316 Pn 04 29 23.9 -0.5
JRQG Juriquilla Cam 9.76 316 eP Pn 04 29 26.0 +1.6
JRQG eS Sn 04 31 21.5 +7.8
CVIMO Finca Echandi 9.80 111 ⇓iP Pn 04 29 30.1 +5.2
TRIO Tres Rios 9.80 112 eP Pn 04 29 32.4 +7.6
SVQ2 Quepos 9.85 115 eP Pn 04 29 31.7 +6.3
QUEP Quepos 9.85 115 eP Pn 04 29 31.4 +6.0
CARI Cariari 9.86 109 eP Pn 04 29 31.5 +6.0
PILE Guapiles 9.86 110 eP Pn 04 29 31.2 +5.6
PITB Pirrs, San 9.87 113 eP Pn 04 29 31.7 +5.8
RAZU San Marcos de 9.88 113 eP Pn 04 29 30.8 +4.9
TAGO Cartago 9.88 112 eP Pn 04 29 31.7 +5.8
LLNJ Naranjito 9.89 115 eP Pn 04 29 32.0 +6.1
VICA Volcano Irazu 9.90 111 ⇓iP Pn 04 29 31.4 +4.8
CVTG V. Turrialba, 9.90 110 ⇓iP Pn 04 29 31.5 +5.3
RAFA San Farael, Vo 9.94 111 eP Pn 04 29 32.4 +5.4
REPA Paraso 9.94 112 eP Pn 04 29 32.2 +5.4
PIEC Cerro El Cedra 9.95 114 ⇓eP Pn 04 29 32.4 +5.4
PCAYA Pacayas 9.96 112 eP Pn 04 29 32.2 +5.1
VTUN Crater Central 9.96 111 ⇓iP Pn 04 29 32.4 +5.1
CVTQ Turrialba Volc 9.96 111 ⇓iP Pn 04 29 31.7 +4.4
CVTR Volcan Turrial 9.96 111 ⇓iP Pn 04 29 32.1 +4.7
VTR0 Volcan Turrial 9.97 111 ⇓eP Pn 04 29 32.6 +5.2
CVTV Tajo 9.98 111 ⇓iP Pn 04 29 32.2 +4.7
ABRB Las Abras (San 10.01 111 ⇑eP Pn 04 29 34.5 +6.7
VTCV VTCV, Calle Va 10.01 111 eP Pn 04 29 32.2 +4.5
VINA Juan Vinas 10.03 112 ⇑eP Pn 04 29 33.3 +5.3
EGUB Earth Gujpi 10.05 110 ⇓iP Pn 04 29 32.6 +4.5
VERB Verbena 10.05 111 eP Pn 04 29 32.9 +4.6
RESJ San Isidro (Tu 10.07 111 eP Pn 04 29 33.3 +4.8
TURIB Turrialba 10.08 111 eP Pn 04 29 33.3 +4.7
RVLA Villa Bonita 10.09 110 eP Pn 04 29 34.4 +5.7
LCOCO El Coco 10.12 110 eP Pn 04 29 34.9 +5.7
BUS1 Rivas 10.16 113 ⇓iP Pn 04 29 35.6 +5.4
IRES Siquirres 10.17 110 eP Pn 04 29 35.0 +5.3
URUA Uruapan 10.19 305 Pn 04 29 33.4 +3.2
URUA Sn 04 31 20.5 -3.6
URUA Uruapan 10.19 305 eP Pn 04 29 33.4 +3.2
URUA eS Sn 04 31 20.5 -3.6
ZEDO Perez Zeledon 10.31 114 eP Pn 04 29 37.9 +6.1
RPIG Rio Verde 10.33 322 Pn 04 29 34.7 +2.7
RPIG Sn 04 31 29.0 +1.7
RPIG Rio Verde 10.33 322 eP Pn 04 29 34.7 +2.7
RPIG eS Sn 04 31 29.0 +1.7
IGIG Irapuato, Guan 10.41 313 Pn 04 29 36.4 +3.2
IGIG Irapuato, Guan 10.41 313 eP Pn 04 29 36.4 +3.2
IGIG eS Sn 04 31 35.3 +5.8
SAJE San Jernim 10.47 114 ⇓iP Pn 04 29 39.3 +5.3
EDPE Pejibaye, P 10.49 115 eP Pn 04 29 39.5 +5.2
VERB Veragua Rainfo 10.52 110 eP Pn 04 29 38.9 +4.3
BURE Buenos Aires 10.69 114 eP Pn 04 29 42.6 +5.6
LAES El Progreso Va 10.71 111 ⇓iP Pn 04 29 42.3 +5.1
MMIG Aquila 10.73 296 Pn 04 29 39.5 +2.0
MMIG Sn 04 31 43.2 +6.1
MMIG Aquila 10.73 296 eP Pn 04 29 39.5 +2.0
MMIG eS Sn 04 31 43.2 +6.1
FIMO Fila Mora 10.76 115 ⇓eP Pn 04 29 43.5 +5.5
GTIG Gomez Farias 10.84 329 Pn 04 29 38.4 -0.5
GTIG Sn 04 31 34.2 -5.4
GTIG Gomez Farias 10.84 329 eP Pn 04 29 38.4 -0.5
GTIG eS Sn 04 31 34.2 -5.4
CEUA Cerro Uatsi, L 10.86 111 ⇓iP Pn 04 29 44.9 +5.6
EDP2 Potrero Grande 10.91 115 eP Pn 04 29 46.3 +6.4
BRIBI Bribri 10.97 111 eP Pn 04 29 46.3 +5.5
PIRO Carate, Puerto 11.05 118 Pn 04 29 43.8 +1.9
PIRO Carate, Puerto 11.05 118 ⇓eP Pn 04 29 48.3 +6.4
EDAD Golfito 11.08 116 eP Pn 04 29 46.7 +4.3
FITO Golfito 11.11 116 eP Pn 04 29 49.1 +6.5
RGM0 Gandoca 11.18 111 Pn 04 29 44.7 +1.1
RGM0 Gandoca 11.18 111 ⇓eP Pn 04 29 49.1 +5.6
ALCO Alturas Coton, 11.24 114 ⇓eP Pn 04 29 47.8 +3.2
SAIC Isla e San And 11.26 95 P Pn 04 29 46.0 +1.3
comp=Z,41µmcomp=Z,7µmcomp=Z,149nm,1.9s
RSRNO Rio Sereno 11.27 115 eP Pn 04 29 50.5 +5.5
NELY Ciudad Neily 11.28 116 eP Pn 04 29 50.5 +5.6
SCLRA Santa Clara, W 11.34 115 eP Pn 04 29 52.0 +6.1
DMCAL E. de Neily 11.40 115 ⇑iP Pn 04 29 53.9 +7.2
BRU2 Volcan 11.43 115 Pn 04 29 49.5 +2.3
BRU2 Volcan 11.43 115 ⇓eP Pn 04 29 52.7 +5.4
EZ5V 11.47 301 Pn 04 29 51.3 +3.5
EZ5V 11.47 301 ⇑iP Pn 04 29 51.3 +3.5
EZ5V eS Sn 04 31 56.6 +1.1
MNGA Volcan de Coli 11.47 301 ⇑iP Pn 04 29 51.2 +3.4
MNGA eS Sn 04 31 56.4 +0.7
INCO Volcan de Coli 11.49 301 ⇑iP Pn 04 29 51.6 +3.4
INCO eS Sn 04 31 58.6 +2.4
SOMAC Volcano de Col 11.51 301 ⇑iP Pn 04 29 51.9 +3.4
SOMAC eS Sn 04 32 03.3 +6.6
PRVC Isla de Provid 11.52 91 Pn 04 29 48.8 +0.6
PRVC Isla de Provid 11.52 91 P Pn 04 29 47.6 -0.6
comp=Z,40µmcomp=Z,7µmcomp=Z,415nm,1.2s
COMA Comala 11.53 300 Pn 04 29 49.1 +0.7
COMA Sn 04 31 54.0 -2.7
COMA Comala 11.53 300 eP Pn 04 29 49.1 +0.7
COMA eS Sn 04 31 54.0 -2.7
CDAR Ciudad de Arme 11.57 298 ⇑iP Pn 04 29 50.7 +1.7
CDAR eS Sn 04 31 45.7 -12
LMNES Limones 11.61 118 eP Pn 04 29 53.9 +4.3
JEFFS S de V. Baru 11.63 115 eP Pn 04 29 54.6 +4.7
CEGR Campo Tres 11.64 300 ⇑iP Pn 04 29 52.7 +2.7
CEGR eS Sn 04 31 53.3 -6.3
BQTLY Boquete Panama 11.65 114 eP Pn 04 29 55.1 +4.9
DAP26 falda E V. Bar 11.67 114 eP Pn 04 29 55.1 +4.6
WILLF Boquete 11.68 114 eP Pn 04 29 55.8 +5.2
PBNVO Pueblo Nuevo, 11.84 113 eP Pn 04 29 57.6 +5.0
RBALA Bur 11.88 113 eP Pn 04 29 57.9 +4.8
KKNTU Kakint² 12.20 113 ⇓eP Pn 04 30 00.4 +2.8
PDCAN Manzana , Fuen 12.54 115 eP P 04 30 09.4 -4.4
LNIG Linares 12.54 333 Pn 04 30 02.8 +0.6
LNIG Sn 04 32 19.7 -1.7
LNIG Linares 12.54 333 eP Pn 04 30 02.8 +0.6
LNIG eS Sn 04 32 19.7 -1.7
ZAIG Zacatecas 12.61 317 Pn 04 30 04.0 +0.6
ZAIG Zacatecas 12.61 317 eP Pn 04 30 06.4 +3.0
ZAIG eS Sn 04 32 27.9 +4.4
ZAIG Zacatecas 12.61 317 ⇑P Pn 04 30 06.8 +3.4
CJM Chamela 12.69 298 eP Pn 04 30 00.6 -0.7
CJM eS Sn 04 32 20.8 -4.3
ANIG Ahuacatlan 13.00 305 Pn 04 30 10.9 +2.4
ANIG Sn 04 32 34.4 +1.6
ANIG Ahuacatlan 13.00 305 eP Pn 04 30 10.9 +2.4
ANIG eS Sn 04 32 34.4 +1.6
GMAL Guarumal, Vera 13.19 116 ⇓eP Pn 04 30 13.8 +2.7
SOR Soroa 13.19 46 Pn 04 30 09.8 -1.3
SOR Soroa 13.19 46 P Pn 04 30 09.8 -1.3
MNIG Monterrey 13.53 332 Pn 04 30 15.8 +0.1
MNIG Sn 04 32 42.5 -3.1
MNIG Monterrey 13.53 332 eP Pn 04 30 15.8 +0.1
MNIG eP P 04 30 15.8 -8.9
MNIG eS Sn 04 32 42.5 -3.1
MNIG eS S 04 32 45.5 -23
BCIP Isla Barro Col 13.87 108 ⇓P Pn 04 30 23.4 +2.9
BCIP Isla Barro Col 13.87 108 eP Pn 04 30 23.9 +3.4
BCIP Isla Barro Col 13.87 108 P Pn 04 30 23.8 +3.4
comp=Z,28µmcomp=Z,12µmcomp=Z,992nm,1.3s
ZANG Zanguenga, Cho 13.92 109 eP Pn 04 30 24.4 +3.2
AZU Azuero 14.02 114 eP P 04 30 26.2 -4.0
CBCY The Bluff, Cay 14.17 63 i P Pn 04 30 26.1 +1.6
CBCY IAML 04 30 35.5
comp=Z,2µm,1.0s
HBVL Hebbronville 14.18 340 Pn 04 30 24.5 0.0
CAZU Cerro Azul, Pa 14.25 107 ⇓iP Pn 04 30 27.2 +1.5
CAMR Camarioca 14.53 49 Pn Pn 04 30 28.5 -0.9

CAMR Camarioca 14.53 49 i P Pn 04 30 30.6 +1.2
CAMR IAML 04 31 08.0
comp=Z,2µm,1.0s
PAYG Puerto Ayora 14.64 168 P 04 30 34.7 -2.5
PAYG Puerto Ayora 14.64 168 P P 04 30 35.3 -1.9
comp=Z,71µmcomp=Z,21µmcomp=Z,542nm,2.6s
MAPC Malpelo 15.01 129 P P 04 30 40.6 -0.6
comp=Z,9µmcomp=Z,199nm,1.6s
833A Chaparral WMA, 15.58 339 Pn 04 30 42.4 -1.0
833A IAmb IAmb 04 30 47.0
comp=Z,1µm,1.1s
MAIG Mazatlaan 15.64 309 P Pn 04 30 45.1 +0.9
MAIG Sn 04 33 41.6 +4.6
MAIG Mazatlaan 15.64 309 eP Pn 04 30 45.1 +0.9
MAIG eS Sn 04 33 41.6 +4.6
MTDJ Mount Denham 15.70 72 Pn Pn 04 30 45.0 0.0
MTDJ IAmb IAmb 04 30 52.3
comp=Z,2µm,1.6s
MTDJ Mount Denham 15.70 72 ⇑iP P 04 30 50.0 +1.0
MTDJ Mount Denham 15.70 72 ⇓P Pn 04 30 43.1 -1.9
MTDJ Mount Denham 15.70 72 iP P 04 30 49.6 +0.6
MTDJ Mount Denham 15.70 72 P Pn 04 30 44.2 -0.8
comp=Z,48µmcomp=Z,20µmcomp=Z,1µm,1.6s
EF04 Eagle Ford 04 15.94 345 Pn Pn 04 30 46.4 -1.5
MCIG Muzquiz 16.01 332 Pn 04 30 47.7 -1.3
MCIG Sn 04 33 43.8 -2.3
MCIG Muzquiz 16.01 332 eP Pn 04 30 47.7 -1.3
MCIG eS Sn 04 33 43.8 -2.3
PDIG Papasquiaro 16.04 316 P Pn 04 30 50.6 +1.0
PDIG S 04 34 05.5 +4.9
PDIG Papasquiaro 16.04 316 eP Pn 04 30 50.6 +1.0
PDIG eS Sn 04 33 49.0 +1.8
HKT Hockley 16.28 352 Pn 04 30 50.5 -1.7
HKT Hockley 16.28 352 i P Pn 04 30 50.6 -1.7
HKT pmax pmax
comp=Z,503nm,1.5s
HKT Hockley 16.28 352 ⇑P Pn 04 30 49.1 -3.1
MLDN Muldoon 16.33 348 Pn Pn 04 30 51.5 -1.4
STH Stony Hill 16.33 73 ⇓iP Pn 04 30 53.8 +0.6
CAPC Capurgana 16.36 107 P P 04 30 55.2 -1.1
comp=Z,24µmcomp=Z,8µmcomp=Z,214nm,1.4s
HOJ Hope 16.37 73 ⇑iP P 04 30 57.0 +0.6
GWJ Greenwich 16.41 73 ⇓iP Pn 04 30 54.6 +0.4
CCCC Cccc 16.46 61 i P P 04 30 58.9 +1.6
CCCC IAML 04 31 05.0
comp=Z,1µm,1.0s
PTAC Punta Ardita, 16.50 112 P Pn 04 30 55.6 +0.3
comp=Z,7µmcomp=Z,410nm,1.3s
HNDO Hondo 16.66 341 P Pn 04 30 56.6 -0.6
HNDO IAmb IAmb 04 31 04.2
comp=Z,2µm,1.2s
061Z Ochoppi 16.67 42 Pn Pn 04 30 55.1 -2.2
061Z IAmb IAmb 04 30 59.3
comp=Z,3µm,1.1s
061Z Ochoppi 16.67 42 i P Pn 04 30 55.5 -1.8
061Z IAmb IAmb 04 30 59.5
comp=Z,2µm,1.1s
061Z IVmB_BB 04 31 09.1
comp=Z,29µm,1.0s
LMGC Las Mercedes 16.70 66 i P Pn 04 30 58.7 +0.9
LMGC IAML 04 31 13.3
comp=Z,1µm,1.0s
441A DeRidder 16.89 0 IAmb IAmb 04 31 06.5
comp=Z,1µm,1.1s
HNVL Huntsville, TX 17.03 353 IAmb IAmb 04 31 08.1
comp=Z,2µm,1.2s
SSIG Sanalona 17.12 312 P P 04 31 05.0 +0.3
SSIG S 04 34 22.4 +0.1
SSIG Sanalona 17.12 312 eP P 04 31 05.0 +0.3
SSIG eS Sn 04 34 12.9 -0.1
CHIV Chivirico 17.20 67 IAmb IAmb 04 31 13.8
comp=Z,2µm,1.8s
CHIV Chivirico 17.20 67 i P P 04 31 05.1 -0.4
CHIV IAML 04 31 12.6
comp=Z,800nm,1.0s
LCBC Los crdobas, 17.21 105 P P 04 31 04.9 -0.8
comp=Z,42µmcomp=Z,12µmcomp=Z,722nm,1.3s
SOLC Bahia Solano 17.26 114 P P 04 31 10.7 +4.5
435B Jarrell 17.40 347 IAmb IAmb 04 31 12.4
comp=Z,2µm,1.2s
HPIG 17.53 320 Pn Pn 04 31 07.2 -1.1
HPIG 17.53 320 eP P 04 31 10.0 +0.7
HPIG eS S 04 34 28.6 -2.3
HPIG 17.53 320 ⇑P P 04 31 10.1 +0.7
MARVS Santiago de Cu 17.67 67 i P P 04 31 10.3 -0.4
MARVS IAmb IAmb 04 31 20.1
comp=Z,270nm,1.0s
MARVS IVmB_BB 04 31 40.4
comp=Z,12µm,1.0s
JCT Junction City 17.70 341 P Pn 04 31 09.5 -0.8
JCT IAmb IAmb 04 31 15.6
comp=Z,2µm,1.0s
JCT Junction City 17.70 341 P Pn 04 31 09.5 -0.8
JCT pmax pmax
comp=Z,2µm,1.0s
JCT Junction City 17.70 341 eP Pn 04 31 08.1 -2.2
JCT eS Sn 04 34 12.9 -14
JCT Junction City 17.70 341 ⇓P Pn 04 31 09.2 -1.1
BCIG La Boquilla 17.82 322 P P 04 31 14.0 +1.6
BCIG S 04 34 41.1 +4.5
BCIG La Boquilla 17.82 322 eP P 04 31 14.0 +1.6
BCIG eS S 04 34 41.1 +4.5
HLGC Holguin 17.82 64 i P Pn 04 31 11.1 -0.7
060A Indiantown 17.84 40 i P Pn 04 31 09.9 -2.0
060A IVmB_BB 04 31 13.2
comp=Z,28µm,1.0s
060A IAmb IAmb 04 31 13.6
comp=Z,2µm,1.4s
PIZC Pizarro, Choco 17.90 118 P P 04 31 21.0 +7.7
comp=Z,63µmcomp=Z,24µmcomp=Z,1µm,1.6s
NATX Nacogdoches 17.95 356 ⇓P Pn 04 31 11.5 -1.7
DWPF Disney Wildern 17.98 36 Pn 04 31 12.5 -1.3
DWPF IAmb IAmb 04 31 17.6
comp=Z,2µm,1.7s
DWPF Disney Wildern 17.98 36 ⇓P Pn 04 31 12.4 -1.3
DWPF Disney Wildern 17.98 36 iP Pn 04 31 13.7 0.0
DWPF IAmb IAmb 04 31 31.4
comp=Z,1µm,1.2s
DWPF IVmB_BB 04 31 36.8
comp=Z,17µm,1.0s
DBBC Dabeiba 18.00 110 P P 04 31 19.4 +4.8
SJCC San Jacinto, C 18.05 100 P P 04 31 14.8 -0.3
comp=Z,30µmcomp=Z,14µmcomp=Z,686nm,1.0s
451A Vernon 18.11 21 IAmb IAmb 04 31 18.9
comp=Z,3µm,1.2s
BRAL Brewton 18.21 17 IAmb IAmb 04 31 21.3
comp=Z,5µm,1.8s
BRAL Brewton 18.21 17 ⇓P Pn 04 31 14.9 -1.6
TXAR Lajitas Array 18.27 330 P P 04 31 18.7 +1.3
comp=Z,305nm,1.1s,baz=157,slow=8.8,SNR=435
TXAR S Sn 04 34 42.6 +1.8
comp=Z,7.9nm,1.0s,baz=54,slow=24,SNR=0.9
TXAR LR LR 04 38 49.3
comp=Z,33µm,21.1s,baz=132,slow=38
TXAR P3KPbc 05 06 02.7
comp=Z,2.1nm,1.0s,baz=304,slow=5.9,SNR=12
TXAR Lajitas Array 18.27 330 Pn 04 31 16.3 -1.0
UREC San Jos de Ur 18.36 107 P Pn 04 31 19.6 +1.2
comp=Z,30µmcomp=Z,10µmcomp=Z,382nm,1.5s
GTBY Guantanamo Bay 18.36 68 IAmb IAmb 04 31 23.3
comp=Z,2µm,1.4s
GTBY Guantanamo Bay 18.36 68 ⇓P P 04 31 17.6 -0.8
GTBY Guantanamo Bay 18.36 68 iP Pn 04 31 18.4 +0.1
GTBY IVmB_BB 04 31 21.3
comp=Z,22µm,1.0s
GTBY IAML 04 31 23.1
comp=Z,2µm,1.0s
GTBY IAmb IAmb 04 31 28.6
comp=Z,740nm,1.0s
GTBY Guantanamo Bay 18.36 68 P P 04 31 17.5 -0.8
comp=Z,42µmcomp=Z,22µmcomp=Z,727nm,1.0s
VBMS Vicksburg 18.52 7 IAmb IAmb 04 31 25.1
comp=Z,2µm,1.6s
VBMS Vicksburg 18.52 7 ⇓P P 04 31 19.1 -0.9
WHTX Lake Whitney, 18.55 349 IAmb IAmb 04 31 25.5
comp=Z,2µm,1.3s
TUMC Tumaco 18.60 128 P P 04 31 16.6 -4.4
comp=Z,53µmcomp=Z,22µmcomp=Z,615nm,1.2s
SLBS Sierra La Lagu 18.65 304 S 04 35 01.4 +7.9
SLBS Sierra La Lagu 18.65 304 P Pn 04 31 22.3 +0.3
SLBS IAmb IAmb 04 31 27.3
comp=Z,2µm,1.9s
SLBS Sierra La Lagu 18.65 304 eP Pn 04 31 24.0 +1.9
SLBS eS S 04 35 01.4 +7.9

SLBS Sierra La Lagu 18.65 304 ⇑P **Pn 04 31 24.0 +1.9**
NMDO Nuevo Mundo 18.66 66 *i* P **Pn 04 31 22.9 +0.9**
NMDO IVmB_BB 04 31 45.0
comp=Z,15µm,1.0s
NMDO IAmb IAmb 04 31 46.4
comp=Z,420nm,1.4s
CBOC Ciudad Bolivar 18.66 113 P **Pn 04 31 25.3 +3.0**
comp=Z,38µmcomp=Z,12µmcomp=Z,487nm,1.4s
QMBU Quimbuelo 18.70 68 *i* P **P 04 31 20.5 -1.7**
QMBU IAmb IAmb 04 31 24.1
comp=Z,420nm,1.6s
QMBU IVmB_BB 04 31 37.2
comp=Z,11µm,1.0s
SMRC Santa Marta, M 18.71 96 P **Pn 04 31 22.8 +0.1**
SMRC Santa Marta, M 18.71 96 P **P 04 31 21.2 -1.1**
comp=Z,27µmcomp=Z,9µmcomp=Z,135nm,2.7s
MOAC Moa 18.71 66 *i* P **Pn 04 31 24.1 +1.4**
MOAC IAmb IAmb 04 31 33.6
comp=Z,340nm,1.2s
MOAC IVmB_BB 04 31 53.3
comp=Z,4µm,1.0s
143A Socs Landing, 18.91 5 IAmb IAmb 04 31 30.8
comp=Z,1µm,1.1s
ARGC Ariguani, Magd 18.96 100 P **Pn 04 31 26.1 +0.4**
comp=Z,33µmcomp=Z,15µmcomp=Z,319nm,1.2s
HELC Santa Helena 18.96 112 P **Pn 04 31 28.5 +2.5**
comp=Z,41µmcomp=Z,12µmcomp=Z,627nm,1.5s
TSIG Topolobambo 18.97 311 P **Pn 04 31 26.2 +0.4**
TSIG **S 04 35 02.7 +3.0**
TSIG Topolobambo 18.97 311 *eP* **Pn 04 31 26.2 +0.4**
TSIG *eS* **Sn 04 34 54.6 -3.1**
TREL Terrell 19.05 353 IAmb IAmb 04 31 30.7
comp=Z,920nm,1.0s
LPIG La Paz 19.14 305 P **Pn 04 31 28.5 +0.6**
comp=Z,158nm,1.1s,baz=133,slow=0.3,SNR=23
LPIG S **S 04 35 06.7 +3.4**
comp=Z,23nm,0.5s,baz=121,slow=5.5,SNR=1.5
LPIG LR LR 04 39 10.4
comp=Z,55µm,19.6s,baz=112,slow=38
LPIG La Paz 19.14 305 P **P 04 31 26.9 -0.1**
LPIG **S 04 35 03.0 -0.3**
LPIG La Paz 19.14 305 *eP* **P 04 31 26.9 -0.1**
LPIG *eS* **S 04 35 03.0 -0.3**
352A Blakely 19.19 22 IAmb IAmb 04 31 30.7
comp=Z,2µm,1.0s
250A Grady 19.20 18 P **P 04 31 26.7 -0.8**
250A IAmb IAmb 04 31 36.4
comp=Z,2µm,1.6s
CSIG Choix 19.24 315 P **P 04 31 27.8 -0.2**
CSIG **Sn 04 35 01.7 -2.4**
CSIG Choix 19.24 315 *eP* **P 04 31 27.8 -0.2**
CSIG *eS* **Sn 04 35 01.7 -2.4**
YOTC Yotoco, Valle 19.27 119 P **Pn 04 31 29.5 -0.1**
comp=Z,40µmcomp=Z,9µmcomp=Z,345nm,0.8s
Z41A Richland Creek 19.40 1 IAmb IAmb 04 31 41.0
comp=Z,1µm,1.2s
JAMC Jamundi, Valle 19.41 121 P **Pn 04 31 31.3 0.0**
comp=Z,40µmcomp=Z,8µmcomp=Z,394nm,0.9s
SGCY Sterling City 19.46 339 IAmb IAmb 04 31 35.1
comp=Z,3µm,1.1s
Z38A Mt. Pleasant 19.46 356 IAmb IAmb 04 31 39.8
comp=Z,1µm,1.1s
NIZA Niza - Manizal 19.50 115 P **Pn 04 31 37.8 +5.2**
PLPT Palo Pinto 19.52 347 IAmb IAmb 04 31 35.3
comp=Z,2µm,1.2s
FW06 Azle 19.52 349 IAmb IAmb 04 31 40.7
comp=Z,1µm,0.8s
GUY2C Guyana, Caldas 19.52 114 P **Pn 04 31 35.2 +2.2**
comp=Z,52µmcomp=Z,17µmcomp=Z,857nm,0.8s
PPLP Puerto Lpez 19.58 140 P **Pn 04 31 35.2 +2.0**
PAC1 Pacto, Paraso 19.59 132 P **Pn 04 31 35.4 +1.9**
comp=Z,42µmcomp=Z,8µmcomp=Z,186nm,1.5s
BBAC Balboa, Cauca 19.63 125 P **Pn 04 31 35.6 +1.6**
comp=Z,39µmcomp=Z,10µmcomp=Z,475nm,1.3s
ABTX Abilene, Hawle 19.66 344 IAmb IAmb 04 31 37.1
comp=Z,2µm,1.0s
POPC Popayan, Colom 19.78 123 P **Pn 04 31 38.4 +2.6**
comp=Z,39µmcomp=Z,10µmcomp=Z,498nm,1.5s
PTBC PUERTO BERRIO, 19.79 109 P **Pn 04 31 36.6 +0.9**
comp=Z,39µmcomp=Z,10µmcomp=Z,719nm,1.3s
WLAR White Oak Lake 19.82 0 IAmb IAmb 04 31 42.1
comp=Z,2µm,1.4s
CUSE Cuicocha Este 19.85 131 P **Pn 04 31 38.9 +2.1**
comp=Z,10µmcomp=Z,198nm,0.6s
CMBC Cumbal 19.86 129 P **Pn 04 31 40.0 +3.1**
OTAV Otavalo 19.86 131 P **Pn 04 31 37.4 +0.5**
OTAV Otavalo 19.86 131 P **Pn 04 31 37.4 +0.5**
OTAV pmax pmax
comp=Z,508nm,1.7s
OTAV Otavalo 19.86 131 ⇓P **Pn 04 31 38.8 +1.8**
OTAV Otavalo 19.86 131 P **Pn 04 31 38.1 +1.2**
OTAV Otavalo 19.86 131 *eP* **P 04 31 34.7 -0.6**
OTAV Otavalo 19.86 131 P **Pn 04 31 38.9 +2.0**
comp=Z,40µmcomp=Z,9µmcomp=Z,198nm,1.2s
LRAL Lakeview Retre 19.99 15 P **P 04 31 35.4 -0.7**
LRAL Lakeview Retre 19.99 15 ⇑P **P 04 31 35.1 -0.9**
TULM Tulcn-Chalpat 20.03 129 P Pn 04 31 40.8 +1.8
comp=Z,33µmcomp=Z,12µmcomp=Z,483nm,1.1s
CRJC Cerrejon, Guaj 20.03 96 P **P 04 31 36.2 -0.6**
comp=Z,33µmcomp=Z,8µmcomp=Z,314nm,1.2s
GCUF Volcan Galeras 20.04 127 P Pn 04 31 40.8 +1.6
comp=Z,32µmcomp=Z,17µmcomp=Z,424nm,1.5s
PECS Pecos 20.07 333 IAmb IAmb 04 31 45.5
comp=Z,1µm,1.4s
CCAR Cane Creek 20.09 3 IAmb IAmb 04 31 41.0
comp=Z,2µm,1.4s
CRUC La Cruz 20.14 126 P Pn 04 31 42.5 +2.3
ORTC Ortega, Tolima 20.25 117 P Pn 04 31 43.2 +2.0
comp=Z,42µmcomp=Z,17µmcomp=Z,1µm,1.6s
OCAC Ocana 20.27 104 P **P 04 31 40.2 +0.7**
comp=Z,35µmcomp=Z,11µmcomp=Z,912nm,0.8s
Y45A Yeager Farm, C 20.27 9 P **P 04 31 38.6 -0.6**
Y45A IAmb IAmb 04 31 49.8
comp=Z,1µm,1.2s
BRJC Barrancabermej 20.29 108 P Pn 04 31 43.3 +1.7
comp=Z,42µmcomp=Z,12µmcomp=Z,562nm,1.0s
152A Waverly Hall 20.34 21 IAmb IAmb 04 31 42.5
comp=Z,1µm,1.0s
BONI La Bonita 20.40 129 P Pn 04 31 45.7 +2.6
comp=Z,35µmcomp=Z,10µmcomp=Z,531nm,1.9s
LOOK Love County 20.45 351 IAmb IAmb 04 31 49.1
comp=Z,1µm,1.0s
APMT Aspermont 20.45 343 IAmb IAmb 04 31 45.8
comp=Z,1µm,0.9s
SN07 Snyder 07 20.46 341 IAmb IAmb 04 31 46.7
comp=Z,2µm,1.1s
WTFS Witchita Falls 20.47 347 IAmb IAmb 04 31 45.3
comp=Z,3µm,1.5s
SPBC San Pablo de B 20.50 111 P Pn 04 31 44.9 +0.8
comp=Z,46µmcomp=Z,10µmcomp=Z,603nm,1.3s
ROSC El Rosal 20.62 114 P Pn 04 31 48.1 +2.3
comp=Z,1µm,0.7s,baz=344,slow=8.0,SNR=69
ROSC S Sn 04 35 42.2 +3.8
comp=Z,12nm,0.7s,baz=211,slow=21,SNR=1.1
ROSC El Rosal 20.62 114 P Pn 04 31 45.7 -0.2
ROSC El Rosal 20.62 114 P Pn 04 31 45.7 -0.2
ROSC pmax pmax
comp=Z,5µm,1.4s
ROSC El Rosal 20.62 114 P Pn 04 31 50.2 +4.3
comp=Z,62µmcomp=Z,34µmcomp=Z,2µm,1.2s
X40A Basin Creek Fa 20.62 1 IAmb IAmb 04 31 46.1
comp=Z,1µm,1.6s
PRAC Prado 20.66 117 P Pn 04 31 47.5 +1.5
comp=Z,41µmcomp=Z,14µmcomp=Z,916nm,1.5s
MIAR Mount Ida 20.68 359 IAmb IAmb 04 31 46.6
comp=Z,2µm,1.3s
MIAR Mount Ida 20.68 359 ⇓P **P 04 31 42.9 -0.8**
BETC Betania 20.73 121 P Pn 04 31 47.7 +1.0
URIC Uribia, Colomb 20.79 93 P **P 04 31 44.1 -0.8**
comp=Z,35µmcomp=Z,8µmcomp=Z,198nm,1.1s
154A Montrose 20.89 25 IAMs_20 IAMs_20 04 40 41.4
comp=Z,135µm,20.0s
OXF Oxford 20.93 9 P **P 04 31 44.3 -2.0**
OXF IAmb IAmb 04 32 02.1
comp=Z,1µm,1.2s
OXF Oxford 20.93 9 P **P 04 31 44.3 -2.0**
OXF pmax pmax
comp=Z,1µm,1.3s
OXF Oxford 20.93 9 ⇓P **P 04 31 44.2 -2.0**
BARC Barichara 20.95 108 P Pn 04 31 50.3 +0.8
comp=Z,7µmcomp=Z,943nm,1.0s
GARC Garzon, Huila 20.95 122 P Pn 04 31 50.6 +1.0
comp=Z,35µmcomp=Z,9µmcomp=Z,371nm,0.8s
CVER Cruz Verde, Cu 20.99 114 P Pn 04 31 51.8 +1.6
comp=Z,22µmcomp=Z,2µm,1.1s
DKNS Dickens 21.01 342 IAmb IAmb 04 31 53.8
comp=Z,1µm,1.0s
MNTX Cornudas Mount 21.05 330 P **P 04 31 47.0 -0.7**
MNTX Cornudas Mount 21.05 330 *eP* **P 04 31 47.7 +0.1**
MNTX *eS* **S 04 35 33.0 -8.2**
MNTX Cornudas Mount 21.05 330 ⇑P **P 04 31 48.5 +0.8**
PAMC Pamplona, Colo 21.14 106 P **P 04 31 52.3 +3.1**
comp=Z,200nmcomp=Z,5µmcomp=Z,556nm,0.7s
X34A Smith Ranch, M 21.15 349 IAmb IAmb 04 31 56.1
comp=Z,2µm,1.1s
FLOC Florencia 21.17 123 P **P 04 31 50.8 +1.7**
FLOC Florencia 21.17 123 P **P 04 31 52.2 +3.1**
comp=Z,32µmcomp=Z,14µmcomp=Z,1µm,1.4s
CHIC Chingaza 21.24 114 P **P 04 31 54.4 +4.1**
comp=Z,48µmcomp=Z,24µmcomp=Z,2µm,1.0s
COHC Cochancay 21.25 138 P **P 04 31 52.0 +2.1**
comp=Z,32µmcomp=Z,7µmcomp=Z,456nm,1.5s
RUSC La Rusia 21.30 110 P **P 04 31 52.6 +1.6**
RUSC La Rusia 21.30 110 P **P 04 31 53.0 +2.0**
comp=Z,39µmcomp=Z,16µmcomp=Z,2µm,1.2s
URMC La Uribe, Meta 21.33 118 P **P 04 31 53.2 +2.3**
comp=Z,31µmcomp=Z,10µmcomp=Z,995nm,0.9s
WHAR Wooly Hollow 21.44 2 P **P 04 31 50.7 -1.1**
MET Memphis--Engin 21.46 7 IAmb IAmb 04 31 57.8
comp=Z,1µm,1.7s
GOGA Godfrey 21.46 23 IAmb IAmb 04 31 54.5
comp=Z,1µm,1.0s
GOGA Godfrey 21.46 23 IAMs_20 IAMs_20 04 40 49.5
comp=Z,117µm,20.0s
GOGA Godfrey 21.46 23 ⇓P **P 04 31 51.0 -1.0**
WMOK Wichita Mounta 21.47 347 IAmb IAmb 04 31 55.5
comp=Z,2µm,1.5s
WMOK Wichita Mounta 21.47 347 ⇑P **P 04 31 51.7 -0.5**
VILC Villavicencio, 21.51 115 P **P 04 31 57.9 +5.0**
comp=Z,374nmcomp=Z,13µmcomp=Z,2µm,0.6s
GUYB Guaymas 21.64 313 *eP* **P 04 31 54.6 +0.6**
GUYB *eS* **S 04 35 53.9 +0.9**
SDDR Presa de Saban 21.64 73 P **P 04 31 54.8 +0.6**
SDDR Presa de Saban 21.64 73 ⇑P **P 04 31 54.7 +0.6**
SDDR Presa de Saban 21.64 73 *eP* **P 04 31 52.6 -1.5**
SDDR Presa de Saban 21.64 73 P **P 04 31 53.2 -1.0**
comp=Z,39µmcomp=Z,11µmcomp=Z,303nm,1.1s
HBAR Harrisburg 21.81 6 IAmb IAmb 04 32 03.3
comp=Z,2µm,1.4s
TUL3 Leonard 22.16 354 P **P 04 31 58.7 -0.9**
TUL3 IAmb IAmb 04 32 04.5
comp=Z,907nm,0.8s
SC01 Santiago de lo 22.25 72 P **P 04 32 01.3 +0.7**
GNAR Gosnell 22.28 7 IAmb IAmb 04 32 20.8
comp=Z,1µm,1.2s
SRIG Santa Rosalia 22.30 310 IAmb IAmb 04 32 05.3
comp=Z,861nm,1.2s
SRIG Santa Rosalia 22.30 310 ⇑P **P 04 32 02.1 +0.9**
HALT Halls 22.31 8 IAmb IAmb 04 32 19.1
comp=Z,1µm,1.4s
MCRA Macar, Loja 22.31 143 P **P 04 32 02.7 +1.3**
comp=Z,28µmcomp=Z,8µmcomp=Z,280nm,1.6s
MACC Macarena, Meta 22.35 119 P **P 04 32 05.4 +3.6**
comp=Z,31µmcomp=Z,15µmcomp=Z,1µm,1.5s
RLO Rose Lookout 22.35 356 IAmb IAmb 04 32 05.7
comp=Z,1µm,1.0s
NZIG Nacozari, Sono 22.37 320 P **P 04 32 03.4 +1.4**
NZIG **S 04 36 06.5 -0.6**
NZIG Nacozari, Sono 22.37 320 *eP* **P 04 32 03.4 +1.4**
NZIG *eS* **S 04 36 06.5 -0.6**
AMTX Amarillo 22.37 341 ⇑P **P 04 32 02.2 +0.4**
GRTK Grand Turk 22.38 67 P **P 04 32 02.8 +0.8**
GRTK Grand Turk 22.38 67 ⇓P **P 04 32 02.4 +0.4**
GRTK Grand Turk 22.38 67 P **P 04 32 00.5 -1.5**
comp=Z,48µmcomp=Z,37µmcomp=Z,2µm,1.5s
HSIG 22.38 315 ⇑P **P 04 32 03.1 +1.1**
HHAR Hobbs 22.42 358 IAmb IAmb 04 32 06.2
comp=Z,678nm,0.9s
PEBM Pemiscott Bayo 22.44 7 IAmb IAmb 04 32 22.5
comp=Z,2µm,1.2s
LNXT Lenox 22.48 8 IAmb IAmb 04 32 24.5
comp=Z,1µm,1.2s
U38A Gravette 22.59 358 IAmb IAmb 04 32 08.5
comp=Z,1µm,1.0s
NHSC New Hope 22.61 29 P **P 04 32 04.2 -0.2**
NHSC New Hope 22.61 29 ⇓P **P 04 32 03.8 -0.5**
SDV Santo Domingo 22.65 100 P **P 04 32 06.7 +1.6**
comp=Z,262nm,0.6s,baz=285,slow=5.3,SNR=202
SDV S **S 04 36 07.9 -4.6**
comp=Z,21nm,0.8s,baz=297,slow=14,SNR=2.0
SDV LR LR 04 41 34.2
comp=Z,32µm,20.5s,baz=289,slow=38
comp=Z,262nm,0.6s
SDV Santo Domingo 22.65 100 P **P 04 32 06.0 +0.8**
SDV IAmb IAmb 04 32 13.5
comp=Z,482nm,0.8s
SDV Santo Domingo 22.65 100 P **P 04 32 06.0 +0.8**
SDV S **S 04 36 14.4 +1.9**
SDV Santo Domingo 22.65 100 *eP* **P 04 32 06.2 +1.0**
SDV Santo Domingo 22.65 100 P **P 04 32 06.4 +1.2**
comp=Z,25µmcomp=Z,10µmcomp=Z,650nm,1.0s
HODGE Hodges 22.65 24 IAmb IAmb 04 32 06.9
comp=Z,2µm,1.4s
GLAT Glass 22.67 8 IAmb IAmb 04 32 20.1
comp=Z,1µm,1.2s
PTLC Puerto Leguiza 22.69 125 P **P 04 32 11.3 +5.9**
comp=Z,26µmcomp=Z,9µmcomp=Z,541nm,0.8s
WVT Waverly 22.77 11 P **P 04 32 03.8 -2.3**
WVT Waverly 22.77 11 P **P 04 32 03.8 -2.3**
WVT pmax pmax
comp=Z,304nm,1.1s
WVT MLR MLR
comp=Z,23µm,22.0s
WVT Waverly 22.77 11 ⇑P **P 04 32 03.4 -2.7**
UTMT University of 22.80 9 IAmb IAmb 04 32 28.1
comp=Z,998nm,1.0s
319A Douglas 22.91 323 IAmb IAmb 04 32 12.8
comp=Z,813nm,1.3s
121A Cookes Peak, D 22.94 327 IAmb IAmb 04 32 16.9
comp=Z,1µm,1.1s
HICK Hickman 22.95 8 IAmb IAmb 04 32 29.8
comp=Z,1µm,1.1s
PARMO Parma 23.00 7 IAmb IAmb 04 32 30.0
comp=Z,558nm,1.0s
PBMO Poplar Bluff 23.04 6 IAmb IAmb 04 32 10.7
comp=Z,344nm,0.7s
BG3 Lake Jocassee 23.07 22 IAmb IAmb 04 32 12.3
comp=Z,535nm,0.9s
JSC Jenkinsville 23.11 26 IAmb IAmb 04 32 12.5
comp=Z,903nm,0.9s
MGMO Mountain Grove 23.30 2 IAmb IAmb 04 32 14.4
comp=Z,337nm,0.7s
PAULI Pauline 23.34 24 IAmb IAmb 04 32 14.2
comp=Z,566nm,0.8s
TKL Tuckaleechee C 23.38 20 LR LR 04 43 14.1
comp=Z,71µm,18.5s,baz=198,slow=41
TKL Tuckaleechee C 23.38 20 IAmb IAmb 04 32 32.3
comp=Z,1µm,1.1s
TKL Tuckaleechee C 23.38 20 ⇑P **P 04 32 11.1 -1.2**
T45A Paducah 23.50 9 IAmb IAmb 04 32 16.2
comp=Z,702nm,0.7s
U49A Red Boiling Sp 23.60 15 IAmb IAmb 04 32 39.7
comp=Z,444nm,1.0s
CGM3 Cape Girardeau 23.64 7 IAmb IAmb 04 32 40.2
comp=Z,712nm,1.3s
Y22A Socorro 23.64 330 IAmb IAmb 04 32 34.7
comp=Z,532nm,0.9s
V53A Saluda 23.72 21 IAmb IAmb 04 32 18.6
comp=Z,1µm,1.3s
V53A IAMs_20 IAMs_20 04 42 01.3
comp=Z,106µm,21.0s
T47A Sharon Grove 23.75 12 IAmb IAmb 04 32 39.4
comp=Z,597nm,1.3s
S44A Carbondale 24.08 8 IAmb IAmb 04 32 41.8
comp=Z,921nm,1.1s
SIUC Southern Illin 24.10 8 IAmb IAmb 04 32 42.0
comp=Z,965nm,1.1s
BAHB Baha de los 24.18 312 P **P 04 32 19.8 -0.1**
BAHB **S 04 36 39.1 +1.9**
BAHB Baha de los 24.18 312 *eP* **P 04 32 19.8 -0.1**
BAHB *eS* **S 04 36 39.1 +1.9**
FVM French Village 24.23 5 IAmb IAmb 04 32 46.8
comp=Z,779nm,1.8s
ANMO Albuquerque 24.24 333 LR LR 04 43 04.1
comp=Z,64µm,19.5s,baz=192,slow=39
ANMO Albuquerque 24.24 333 P **P 04 32 20.8 +0.1**
ANMO Albuquerque 24.24 333 *ceP* **P 04 32 21.7 +1.0**
ANMO pmax pmax
comp=Z,402nm,2.5s
ANMO MLR MLR
comp=Z,48µm,19.0s
ANMO Albuquerque 24.24 333 ⇑P **P 04 32 21.8 +1.0**
TASM ASL Pad, Albuq 24.24 333 IAmb IAmb 04 32 47.3
comp=Z,149nm,1.0s
TASM ASL Pad, Albuq 24.24 333 IAmb IAmb 04 32 47.3
comp=Z,146nm,1.0s
CCM Cathedral Cave 24.24 4 P **P 04 32 18.6 -1.8**
CCM IAmb IAmb 04 32 22.4
comp=Z,573nm,0.8s
CCM Cathedral Cave 24.24 4 P **P 04 32 18.7 -1.8**
CCM pmax pmax
comp=Z,573nm,0.9s
CCM Cathedral Cave 24.24 4 ⇓P **P 04 32 18.3 -2.2**
TZTN Tazewell 24.27 19 IAmb IAmb 04 32 44.2
comp=Z,1µm,1.2s
TZTN Tazewell 24.27 19 ⇓P **P 04 32 19.1 -1.7**
Y60A Bolivia 24.30 31 IAmb IAmb 04 32 23.4
comp=Z,1µm,1.5s
Y60A IAMs_20 IAMs_20 04 42 19.7
comp=Z,120µm,20.0s
W57A Gilead 24.39 27 IAmb IAmb 04 32 24.5
comp=Z,843nm,1.1s
R40A Maddies Statio 24.43 2 IAmb IAmb 04 32 23.8
comp=Z,528nm,0.8s
TUC Tucson 24.47 322 P **P 04 32 23.0 +0.3**
TUC IAmb IAmb 04 32 27.0
comp=Z,534nm,1.2s
TUC Tucson 24.47 322 P **P 04 32 23.0 +0.3**
TUC pmax pmax
comp=Z,534nm,1.2s
TUC MLR MLR
comp=Z,202µm,18.0s
TUC Tucson 24.47 322 *eP* **P 04 32 23.3 +0.5**
TUC Tucson 24.47 322 ⇑P **P 04 32 23.9 +1.2**
USIN University of 24.59 11 IAmb IAmb 04 32 51.1
comp=Z,1µm,1.4s
U54A Nelsons Funny 24.84 22 IAMs_20 IAMs_20 04 43 06.0
comp=Z,110µm,20.0s
SLM Saint Louis 24.90 6 IAmb IAmb 04 32 29.5
comp=Z,580nm,0.8s
WCI Wyandotte Cave 25.11 13 P **P 04 32 27.7 -0.7**
WCI Wyandotte Cave 25.11 13 P **P 04 32 27.7 -0.7**
WCI pmax pmax
comp=Z,1µm,1.2s
WCI MLR MLR
comp=Z,57µm,21.0s
WCI Wyandotte Cave 25.11 13 ⇑P **P 04 32 26.2 -2.1**
W59A Clinton 25.12 29 IAmb IAmb 04 32 30.4
comp=Z,540nm,1.3s
BAUV El Baul 25.12 98 *eP* **P 04 32 27.2 -1.5**
S51A Beattyville 25.26 18 IAmb IAmb 04 32 58.9
comp=Z,731nm,1.2s
OLIL Olney 25.27 9 IAmb IAmb 04 32 54.7
comp=Z,758nm,1.3s
Q44A Meyer Farm, Va 25.30 8 IAmb IAmb 04 33 00.2
comp=Z,532nm,1.0s
KSU1 Kansas State U 25.40 354 ⇑P **P 04 32 31.2 +0.3**
R49A Shelbyville 25.44 15 IAmb IAmb 04 33 00.4
comp=Z,615nm,1.1s
ATAH Atahualpa 25.45 144 P **P 04 32 35.0 +2.9**
comp=Z,74nm,0.9s,baz=338,slow=6.4,SNR=55
ATAH S S 04 36 47.1 -12
comp=Z,9.2nm,0.9s,baz=140,slow=12,SNR=1.5
ATAH LR LR 04 40 59.1
comp=Z,77µm,18.1s,baz=284,slow=33
comp=Z,74nm,0.9s
214A Organ Pipe Nat 25.49 318 P **P 04 32 32.5 +0.5**
CBKS Cedar Bluff 25.60 348 ⇑P **P 04 32 33.2 +0.4**
R50A Paris 25.65 16 IAmb IAmb 04 33 03.5
comp=Z,834nm,1.4s
P40A Paris 25.67 2 IAmb IAmb 04 32 41.1
comp=Z,415nm,0.9s
AOPR Arecibo Observ 25.80 76 *eP* **P 04 32 32.7 -2.2**
W18A Petrified Fore 25.96 328 IAmb IAmb 04 33 04.5
comp=Z,481nm,1.4s
P43A Skaggs, Pawnee 25.97 6 IAmb IAmb 04 33 01.0
comp=Z,977nm,1.4s
BLO Bloomington 25.97 12 IAmb IAmb 04 33 07.9
comp=Z,848nm,1.4s
BLA Blacksburg 25.98 24 ⇑P **P 04 32 35.8 -0.5**
S54A Dingess, Beckl 26.16 22 IAMs_20 IAMs_20 04 43 57.9
comp=Z,117µm,20.0s
SDCO Great Sand Dun 26.26 338 IAmb IAmb 04 32 51.5
comp=Z,686nm,1.4s
SDCO Great Sand Dun 26.26 338 ⇑P **P 04 32 40.7 +1.5**
T57A Hurt 26.27 26 IAmb IAmb 04 32 40.8
comp=Z,787nm,1.5s
P46A Rosedale 26.28 10 IAmb IAmb 04 33 06.6
comp=Z,609nm,1.1s
SFX San Felipe 26.29 314 P **P 04 32 36.9 -2.2**
SFX San Felipe 26.29 314 IAmb IAmb 04 32 43.1
comp=Z,437nm,1.5s
SFX San Felipe 26.29 314 *eP* **P 04 32 36.9 -2.2**
SJG San Juan 26.35 77 P **P 04 32 37.7 -2.1**
comp=Z,52nm,0.6s,baz=258,slow=4.7,SNR=37
SJG PcP **PcP 04 36 05.8 +0.1**
comp=Z,52nm,0.9s,baz=248,slow=2.9,SNR=6.2
SJG San Juan 26.35 77 P **P 04 32 38.0 -1.8**
SJG **PcP 04 36 06.7 +1.1**
SJG San Juan 26.35 77 P **P 04 32 38.0 -1.8**
SJG 04 36 06.7
SJG pmax pmax
comp=Z,99nm,1.2s
SJG MLR MLR
comp=Z,30µm,20.0s
SJG San Juan 26.35 77 ⇑P **P 04 32 38.0 -1.8**
SJG San Juan 26.35 77 *eP* P 04 32 32.0 -7.8
SJG San Juan 26.35 77 P **P 04 32 36.8 -3.0**
comp=Z,7µmcomp=Z,2µmcomp=Z,34nm,0.7s
P48A Milroy 26.49 14 IAmb IAmb 04 33 14.5
comp=Z,493nm,1.1s
V61A Roper 26.53 31 IAMs_20 IAMs_20 04 43 47.8
comp=Z,113µm,20.0s
Q51A Peebles 26.62 17 IAmb IAmb 04 33 15.4
comp=Z,638nm,1.1s
113A Mohawk Valley, 26.63 319 IAmb IAmb 04 32 47.4
comp=Z,592nm,1.7s
Q52A Bidwell 26.89 19 IAmb IAmb 04 32 47.0
comp=Z,518nm,1.0s
Q52A IAMs_20 IAMs_20 04 44 54.1
comp=Z,87µm,19.0s
HDIL Hopedale 26.90 7 IAmb IAmb 04 33 18.0
comp=Z,411nm,1.1s
HDIL Hopedale 26.90 7 ⇓P **P 04 32 42.4 -2.0**
N41A Harden Midland 26.91 4 IAmb IAmb 04 33 09.1
comp=Z,575nm,1.2s
T59A Double "B" Far 27.00 28 IAmb IAmb 04 32 47.7
comp=Z,882nm,1.1s
R55A Marlinton 27.03 23 IAmb IAmb 04 33 23.7
comp=Z,526nm,1.2s
R55A IAMs_20 IAMs_20 04 44 21.9
comp=Z,99µm,19.0s
SFIN Lafayette 27.04 10 IAmb IAmb 04 33 11.3
comp=Z,394nm,1.2s
MVCO Mesa Verde 27.04 332 IAmb IAmb 04 32 50.7
comp=Z,825nm,1.4s
MVCO Mesa Verde 27.04 332 ⇑P **P 04 32 47.5 +1.4**
WUAZ Wupatki 27.13 326 IAMs_20 IAMs_20 04 45 10.5
comp=Z,74µm,19.0s
WUAZ Wupatki 27.13 326 ⇑P **P 04 32 48.5 +1.6**
O48B Farmland 27.31 14 IAmb IAmb 04 33 25.3
comp=Z,620nm,1.2s
MBIG Mexicali 27.35 316 P **P 04 32 49.4 +0.7**
MBIG Mexicali 27.35 316 *eP* **P 04 32 49.4 +0.7**
MBIG *eP* **pP 04 32 49.8 -3.1**
Q54A Coxs Mills 27.38 21 IAmb IAmb 04 32 51.7
comp=Z,375nm,1.1s
Q54A IAMs_20 IAMs_20 04 44 46.3
comp=Z,104µm,19.0s
CPBX Cerro Prieto 27.43 316 IAmb IAmb 04 33 11.8
comp=Z,836nm,1.4s
O49A Covington 27.44 15 IAmb IAmb 04 33 26.3
comp=Z,433nm,1.4s
O49A IAMs_20 IAMs_20 04 45 34.7
comp=Z,82µm,20.0s
GLA Glamis 27.50 318 IAmb IAmb 04 32 53.2
comp=Z,265nm,0.9s
GLA IAMs_20 IAMs_20 04 44 17.8
comp=Z,93µm,19.0s
P53A Whipple 27.64 20 IAmb IAmb 04 32 54.1
comp=Z,657nm,1.3s
P53A IAMs_20 IAMs_20 04 44 57.2
comp=Z,104µm,20.0s
R58B Mineral 27.67 27 IAmb IAmb 04 32 53.8
comp=Z,658nm,1.5s
R58B IAMs_20 IAMs_20 04 44 52.1
comp=Z,93µm,18.0s
PV01 Paradox Valley 27.84 333 IAmb IAmb 04 32 58.1
comp=Z,532nm,1.3s

ACSO	**Alum Creek Sta**	**27.84**	**17**	IAmb	IAmb	04 33 33.8			
	comp=Z,570nm,1.1s								
ACSO				IAMs_20	IAMs_20	04 45 46.3			
	comp=Z,58µm,19.0s								
ACSO	**Alum Creek Sta**	**27.84**	**17**	⇑P	**P**	**04 32 51.0**	**-1.9**		
BGNE	**Belgrade**	**27.86**	**352**	IAmb	IAmb	04 33 21.2			
	comp=Z,502nm,0.9s								
PV13	**Radium Mtn., P**	**27.96**	**333**	IAmb	IAmb	04 32 59.0			
	comp=Z,893nm,1.6s								
PV15	**Paradox Valley**	**27.97**	**334**	IAmb	IAmb	04 32 59.5			
	comp=Z,778nm,1.3s								
YUH	**Yuha Desert**	**27.98**	**316**	IAmb	IAmb	04 33 00.1			
	comp=Z,620nm,1.9s								
PV05	**Paradox Valley**	**28.02**	**333**	IAmb	IAmb	04 32 59.2			
	comp=Z,921nm,1.7s								
SCIA	**State Center**	**28.03**	**360**	IAmb	IAmb	04 33 21.4			
	comp=Z,428nm,0.9s								
SCIA	**State Center**	**28.03**	**360**	⇑P	**P**	**04 32 54.0**	**-0.7**		
Q56A	**Snyder Ridge,**	**28.05**	**24**	IAMs_20	IAMs_20	04 44 42.9			
	comp=Z,98µm,20.0s								
PV03	**Paradox Valley**	**28.06**	**333**	IAmb	IAmb	04 32 59.8			
	comp=Z,651nm,1.4s								
O52A	**Adamsville**	**28.07**	**19**	IAmb	IAmb	04 32 57.7			
	comp=Z,811nm,1.5s								
O52A				IAMs_20	IAMs_20	04 45 49.5			
	comp=Z,83µm,18.0s								
PV18	**Skein Mesa, Pa**	**28.08**	**333**	IAmb	IAmb	04 32 59.9			
	comp=Z,866nm,1.2s								
CBN	**Corbin Frederi**	**28.09**	**27**	⇓P	**P**	**04 32 54.2**	**-1.0**		
PV11	**David Mesa, Pa**	**28.10**	**333**	IAmb	IAmb	04 33 00.3			
	comp=Z,778nm,1.3s								
PV07	**Paradox Valley**	**28.12**	**334**	IAmb	IAmb	04 33 04.7			
	comp=Z,461nm,1.1s								
PV17	**East Wray Mesa**	**28.13**	**333**	IAmb	IAmb	04 33 00.2			
	comp=Z,368nm,1.2s								
ISCO	**Idaho Springs**	**28.13**	**339**	IAmb	IAmb	04 33 02.6			
	comp=Z,506nm,1.8s								
ISCO	**Idaho Springs**	**28.13**	**339**	⇑P	**P**	**04 32 57.3**	**+1.4**		
PV16	**Nyswonger Mesa**	**28.13**	**333**	IAmb	IAmb	04 33 00.5			
	comp=Z,583nm,1.3s								
OGNE	**Ogallala**	**28.15**	**346**	⇑P	**P**	**04 32 57.0**	**+1.2**		
PCRV	**Puerto La Cruz**	**28.16**	**94**	*e*P	**P**	**04 32 54.9**	**-1.2**		
PV19	**Morning Glory**	**28.16**	**333**	IAmb	IAmb	04 33 08.5			
	comp=Z,875nm,1.4s								
N49A	**Columbus Grove**	**28.17**	**15**	IAMs_20	IAMs_20	04 46 07.0			
	comp=Z,84µm,19.0s								
PV20	**West Nyswonger**	**28.18**	**333**	IAmb	IAmb	04 33 00.7			
	comp=Z,858nm,1.4s								
PV14	**Lion Creek, Pa**	**28.23**	**333**	IAmb	IAmb	04 33 01.2			
	comp=Z,578nm,1.4s								
L40A	**Anamosa**	**28.24**	**3**	IAmb	IAmb	04 33 22.5			
	comp=Z,738nm,1.3s								
PV10	**Paradox Valley**	**28.24**	**333**	IAmb	IAmb	04 33 00.6			
	comp=Z,1µm,1.6s								
PV22	**Blue Mesa, Par**	**28.26**	**334**	IAmb	IAmb	04 33 06.2			
	comp=Z,341nm,1.1s								
W13A	**Hualapai Mount**	**28.26**	**322**	IAmb	IAmb	04 33 01.9			
	comp=Z,404nm,1.5s								
BC3	**Big Chuckawall**	**28.29**	**318**	IAmb	IAmb	04 33 00.5			
	comp=Z,380nm,0.9s								
BC3				IAMs_20	IAMs_20	04 44 10.6			
	comp=Z,88µm,21.0s								
CBX	**Cerro Bola**	**28.29**	**315**	IAmb	IAmb	04 33 03.1			
	comp=Z,586nm,1.5s								
L42A	**Oliver, Polo**	**28.29**	**6**	IAmb	IAmb	04 33 24.4			
	comp=Z,378nm,1.2s								
PV23	**Carpenter Ridg**	**28.29**	**333**	IAmb	IAmb	04 33 06.0			
	comp=Z,699nm,1.0s								
HQIL	**Hanson Quary C**	**28.30**	**8**	IAmb	IAmb	04 33 23.6			
	comp=Z,334nm,1.0s								
U15A	**North Rim**	**28.31**	**326**	IAmb	IAmb	04 33 02.2			
	comp=Z,520nm,1.5s								
MCWV	**Mont Chateau**	**28.34**	**22**	⇑P	**P**	**04 32 58.0**	**+0.6**		
PV21	**Cone Mtn., Par**	**28.37**	**333**	IAmb	IAmb	04 33 06.5			
	comp=Z,325nm,1.2s								
O53A	**New Philadelph**	**28.39**	**20**	IAmb	IAmb	04 33 40.4			
	comp=Z,561nm,1.1s								
SALN	**Salton City**	**28.40**	**317**	IAmb	IAmb	04 33 01.7			
	comp=Z,531nm,1.0s								
IRM	**Iron Mountain**	**28.41**	**319**	IAmb	IAmb	04 33 02.7			
	comp=Z,348nm,1.2s								
BAR	**Barrett**	**28.51**	**315**	IAMs_20	IAMs_20	04 45 05.8			
	comp=Z,59µm,18.0s								
N51A	**Ashland**	**28.65**	**17**	IAMs_20	IAMs_20	04 46 09.7			
	comp=Z,71µm,19.0s								
L44A	**Lake County Fo**	**28.67**	**8**	IAmb	IAmb	04 33 46.7			
	comp=Z,294nm,1.2s								
TJX	**Tijuana**	**28.67**	**315**	IAmb	IAmb	04 33 04.0			
	comp=Z,553nm,1.1s								
HMU	**Henry Mountain**	**28.67**	**330**	IAmb	IAmb	04 33 05.4			
	comp=Z,454nm,1.2s								
BORC	**Borrego Spring**	**28.68**	**317**	IAmb	IAmb	04 33 05.1			
	comp=Z,432nm,1.6s								
L46A	**Eue Claire**	**28.77**	**11**	IAmb	IAmb	04 33 44.5			
	comp=Z,265nm,1.0s								
BELC	**Belle Mtn. Jos**	**28.86**	**318**	IAMs_20	IAMs_20	04 44 28.7			
	comp=Z,92µm,22.0s								
DANC	**Danby, Needles**	**28.87**	**320**	IAmb	IAmb	04 33 05.8			
	comp=Z,316nm,1.0s								
P57A	**Homestead Farm**	**28.89**	**25**	IAmb	IAmb	04 33 05.3			
	comp=Z,296nm,1.0s								
M50A	**Fremont**	**28.91**	**16**	IAMs_20	IAMs_20	04 46 39.7			
	comp=Z,67µm,19.0s								
PFO	**Pinyon Flats O**	**28.92**	**317**	LR	LR	04 45 21.4			
	comp=Z,50µm,18.0s,baz=130,slow=38								
PFO	**Pinyon Flats O**	**28.92**	**317**	P	**P**	**04 33 03.6**	**+0.7**		
PFO	**Pinyon Flats O**	**28.92**	**317**	IAMs_20	IAMs_20	04 45 53.4			
	comp=Z,62µm,18.0s								
PFO	**Pinyon Flats O**	**28.92**	**317**	*i* P	**P**	**04 33 04.4**	**+1.6**		
PFO				pmax	pmax				
	comp=Z,144nm,1.1s								
PFO				MLR	MLR				
	comp=Z,102µm,17.0s								
CPE	**Camp Elliot**	**28.93**	**315**	IAMs_20	IAMs_20	04 45 08.8			
	comp=Z,58µm,18.0s								
DNR	**Dunn Ranch,Anz**	**29.00**	**317**	IAmb	IAmb	04 33 08.1			
	comp=Z,330nm,1.3s								
N53A	**Lisbon**	**29.02**	**20**	IAmb	IAmb	04 33 56.4			
	comp=Z,597nm,1.1s								
KNB	**Kanab**	**29.03**	**326**	IAmb	IAmb	04 33 07.5			
	comp=Z,319nm,1.1s								
SABA	**Saba**	**29.08**	**79**	IAMs_20	IAMs_20	04 45 29.1			
	comp=Z,51µm,18.0s								
PKCU	**Pink Cliffs**	**29.08**	**328**	IAmb	IAmb	04 33 10.6			
	comp=Z,869nm,1.5s								
K43A	**Burlington**	**29.13**	**7**	IAmb	IAmb	04 33 46.4			
	comp=Z,322nm,1.2s								
R61A	**Willards**	**29.14**	**30**	IAmb	IAmb	04 33 07.5			
	comp=Z,700nm,1.0s								
JFWS	**Jewell Farm**	**29.15**	**4**	IAmb	IAmb	04 33 07.7			
	comp=Z,228nm,0.8s								
JFWS	**Jewell Farm**	**29.15**	**4**	⇓P	**P**	**04 33 02.6**	**-2.0**		
V12A	**Nelson**	**29.27**	**322**	IAmb	IAmb	04 33 09.3			
	comp=Z,280nm,1.0s								
SEUS	**St. Eustatius**	**29.32**	**79**	IAMs_20	IAMs_20	04 45 36.5			
	comp=Z,48µm,18.0s								
K30B	**Basset**	**29.32**	**350**	IAmb	IAmb	04 33 52.5			
	comp=Z,734nm,1.1s								
O20A	**White River Ci**	**29.39**	**336**	IAmb	IAmb	04 33 14.7			
	comp=Z,445nm,1.4s								
SGC2	**Sao Gabriel da**	**29.43**	**116**	P	**P**	**04 33 07.6**	**+0.2**		
SGC2	**Sao Gabriel da**	**29.43**	**116**	P	**P**	**04 33 07.2**	**-0.2**		
	comp=Z,11µmcomp=Z,3µmcomp=Z,192nm,1.5s								
MTPU	**Mount Pierson**	**29.47**	**329**	IAmb	IAmb	04 33 12.8			
	comp=Z,301nm,1.1s								
SRU	**San Rafael Swe**	**29.51**	**332**	IAmb	IAmb	04 33 12.4			
	comp=Z,500nm,1.8s								
M52A	**Chesterland**	**29.52**	**18**	IAMs_20	IAMs_20	04 45 45.8			
	comp=Z,71µm,21.0s								
SKI	**Saint Kitts**	**29.54**	**79**	*e*P	**P**	**04 33 07.2**	**-1.2**		
SZCU	**Shurtz Canyon**	**29.60**	**327**	IAmb	IAmb	04 33 12.8			
	comp=Z,299nm,1.0s								
AAM	**Ann Arbor**	**29.60**	**14**	IAMs_20	IAMs_20	04 47 10.9			
	comp=Z,58µm,20.0s								
Q16A	**Castle Valley**	**29.65**	**331**	IAmb	IAmb	04 33 14.0			
	comp=Z,480nm,1.2s								
CCUT	**Cedar City**	**29.71**	**326**	IAmb	IAmb	04 33 15.1			
	comp=Z,448nm,1.3s								
P17A	**Butcher Ranch,**	**29.90**	**332**	IAmb	IAmb	04 33 14.8			
	comp=Z,225nm,0.8s								
SSPA	**Standing Stone**	**29.93**	**24**	P	**P**	**04 33 11.4**	**-0.1**		
SSPA	**Standing Stone**	**29.93**	**24**	⇑P	**P**	**04 33 10.8**	**-0.7**		
ECSD	**EROS Data Cent**	**30.00**	**355**	IAmb	IAmb	04 33 14.2			
	comp=Z,516nm,1.4s								
ECSD	**EROS Data Cent**	**30.00**	**355**	⇑P	**P**	**04 33 11.4**	**-0.7**		
MVL	**Millersville**	**30.02**	**26**	IAmb	IAmb	04 33 14.9			
	comp=Z,217nm,1.0s								
MBWH	**Windy Hill**	**30.05**	**80**	*e*P	P	04 33 03.5	-9.4		

BFSC	**Mount Baldy Ra**	**30.09**	**317**	IAMs_20	IAMs_20	04 44 43.5			
	comp=Z,68µm,22.0s								
I40A	**Norwalk**	**30.09**	**4**	IAmb	IAmb	04 34 12.7			
	comp=Z,374nm,1.5s								
J47A	**Sunmer**	**30.23**	**12**	IAMs_20	IAMs_20	04 47 35.6			
	comp=Z,65µm,19.0s								
RDMU	**Red Mountain**	**30.30**	**335**	IAmb	IAmb	04 33 19.1			
	comp=Z,298nm,1.2s								
NNA	**Nana**	**30.30**	**147**	P	**P**	**04 33 17.1**	**+2.0**		
	comp=Z,28nm,1.0s,baz=299,slow=7.7,SNR=9.1								
NNA				PcP	**PcP**	**04 36 15.8**	**+0.3**		
	comp=Z,30nm,0.8s,baz=330,slow=4.4,SNR=5.7								
NNA				S	**S**	**04 38 09.6**	**-4.9**		
	comp=Z,2.5nm,0.3s,baz=359,slow=4.4,SNR=1.2								
NNA				LR	LR	04 43 10.0			
	comp=Z,56µm,20.9s,baz=330,slow=32								
	comp=Z,28nm,1.0s								
NNA	**Nana**	**30.30**	**147**	P	**P**	**04 33 17.1**	**+2.0**		
NNA				IAmb	IAmb	04 33 25.4			
	comp=Z,352nm,1.4s								
NNA					**PcP**	**04 36 16.5**	**+1.1**		
NNA	**Nana**	**30.30**	**147**	IAMs_20	IAMs_20	04 42 46.9			
	comp=Z,56µm,21.0s								
NNA	**Nana**	**30.30**	**147**	*ce*P	**P**	**04 33 18.0**	**+2.9**		
NNA				pmax	pmax				
	comp=Z,121nm,1.3s								
NNA				MLR	MLR				
	comp=Z,88µm,20.0s								
NNA	**Nana**	**30.30**	**147**	⇑P	**P**	**04 33 18.3**	**+3.1**		
NNA	**Nana**	**30.30**	**147**	P	**P**	**04 33 16.1**	**+1.0**		
K50A	**Casco**	**30.30**	**16**	IAmb	IAmb	04 34 16.9			
	comp=Z,263nm,1.0s								
K50A				IAMs_20	IAMs_20	04 47 32.6			
	comp=Z,80µm,18.0s								
MWC	**Mount Wilson**	**30.35**	**316**	IAmb	IAmb	04 33 20.0			
	comp=Z,442nm,1.3s								
PASC	**Pasadena Art C**	**30.40**	**316**	IAmb	IAmb	04 33 20.4			
	comp=Z,340nm,1.4s								
DHSZ	**Broadband at M**	**30.45**	**81**	*e*P	**P**	**04 33 14.1**	**-2.3**		
P61A	**Hammonton**	**30.46**	**29**	IAmb	IAmb	04 33 18.6			
	comp=Z,639nm,1.0s								
ANWB	**Willy Bob**	**30.47**	**79**	*e*P	**P**	**04 33 15.4**	**-1.1**		
ERPA	**Erie**	**30.48**	**20**	IAmb	IAmb	04 34 06.8			
	comp=Z,465nm,1.2s								
ERPA	**Erie**	**30.48**	**20**	⇓P	**P**	**04 33 16.7**	**+0.4**		
MMLZ	**Guadeloupe Bro**	**30.54**	**82**	*e*P	**P**	**04 33 12.7**	**-4.5**		
PRN	**Pahroc Range**	**30.54**	**324**	⇑P	**P**	**04 33 19.1**	**+1.9**		
TBG	**Guadaloupe-3**	**30.56**	**82**	*e*P	**P**	**04 33 15.4**	**-1.9**		
N58A	**Sunbury**	**30.57**	**25**	IAmb	IAmb	04 33 18.6			
	comp=Z,257nm,1.5s								
QSM	**Queen of Sheba**	**30.65**	**320**	IAmb	IAmb	04 33 22.4			
	comp=Z,384nm,1.6s								
GWY	**Greenwater Val**	**30.67**	**321**	IAmb	IAmb	04 33 22.8			
	comp=Z,653nm,2.0s								
PSUT	**Pine Spring**	**30.70**	**327**	IAmb	IAmb	04 33 22.8			
	comp=Z,219nm,0.9s								
I45A	**Fountain**	**30.74**	**10**	IAmb	IAmb	04 33 21.1			
	comp=Z,342nm,1.3s								
MPU	**Mule Canyon**	**30.75**	**332**	IAmb	IAmb	04 33 23.5			
	comp=Z,430nm,1.5s								
GRW	**Mount Saint Ca**	**30.77**	**89**	*e*P	**P**	**04 33 19.2**	**-0.1**		
BSUT	**Blindstream Ca**	**30.77**	**333**	IAmb	IAmb	04 33 24.1			
	comp=Z,460nm,1.4s								
GRGR	**Grenville**	**30.78**	**89**	*e*P	**P**	**04 33 14.6**	**-4.7**		
GRHS	**Sauteurs**	**30.78**	**89**	*e*P	**P**	**04 33 18.7**	**-0.7**		
DSLB	**Salisbury**	**30.78**	**83**	*e*P	**P**	**04 33 15.4**	**-3.9**		
GRSS	**Sisters**	**30.80**	**89**	*e*P	P	04 33 10.3	-9.2		
WSHM	**Spangler Hills**	**30.81**	**319**	IAMs_20	IAMs_20	04 46 24.5			
	comp=Z,76µm,20.0s								
M57A	**Sunshine Farm,**	**30.82**	**24**	IAmb	IAmb	04 33 21.8			
	comp=Z,271nm,1.3s								
TPO	**Tropico Hills**	**30.85**	**317**	IAmb	IAmb	04 33 24.1			
	comp=Z,315nm,1.2s								
LRMC	**Laurel Mtn Rad**	**30.86**	**319**	IAmb	IAmb	04 33 24.6			
	comp=Z,297nm,1.4s								
LRMC				IAMs_20	IAMs_20	04 46 04.7			
	comp=Z,67µm,21.0s								
DWS	**Wesley**	**30.89**	**83**	*e*P	**P**	**04 33 21.8**	**+1.5**		
TPNV	**Topopah Spring**	**30.92**	**322**	IAmb	IAmb	04 33 25.6			
	comp=Z,881nm,2.0s								
DLPL	**La Plaine**	**30.95**	**83**	*e*P	**P**	**04 33 20.1**	**-0.8**		
GCMP	**Grenada, Carri**	**30.96**	**89**	*e*P	**P**	**04 33 17.7**	**-3.2**		
K22A	**Casper**	**30.99**	**341**	IAmb	IAmb	04 33 27.1			
	comp=Z,427nm,1.0s								
CLC	**China Lake**	**31.02**	**319**	P	**P**	**04 33 21.6**	**+0.3**		
CLC				IAmb	IAmb	04 33 25.6			
	comp=Z,264nm,1.3s								
CLC	**China Lake**	**31.02**	**319**	P	**P**	**04 33 21.6**	**+0.3**		
CLC				pmax	pmax				
	comp=Z,264nm,1.3s								
OSI	**Osito Audit C**	**31.02**	**316**	IAmb	IAmb	04 33 25.6			
	comp=Z,255nm,1.2s								
WCT	**Wildcat Mounta**	**31.04**	**322**	IAmb	IAmb	04 33 26.4			
	comp=Z,360nm,1.5s								
SVN	**Savane Anatole**	**31.05**	**84**	*e*P	P	04 33 10.2	-11		
SVB	**Belmont**	**31.06**	**87**	*e*P	**P**	**04 33 19.0**	**-2.8**		
S11A	**Rachel**	**31.11**	**324**	IAmb	IAmb	04 33 26.3			
	comp=Z,291nm,1.0s								
DSDZ	**La Diserade, G**	**31.12**	**81**	*e*P	**P**	**04 33 18.2**	**-4.1**		
BIM	**Bigot**	**31.15**	**85**	*e*P	**P**	**04 33 19.8**	**-2.9**		
TRN	**Trinidad (W)**	**31.22**	**92**	*e*P	P	04 33 15.6	-7.7		
TPP	**Pointe-a-Pierr**	**31.23**	**93**	*e*P	**P**	**04 33 24.5**	**+1.3**		
SLBI	**Saint Lucia, B**	**31.27**	**86**	*e*P	P	04 33 14.9	-8.7		
SPR3	**Spring Creek 3**	**31.30**	**327**	IAmb	IAmb	04 33 28.3			
	comp=Z,784nm,1.7s								
MCLT	**Moule a Chique**	**31.32**	**86**	*e*P	P	04 33 17.1	-7.0		
ILAM	**Ilet Lapin Mar**	**31.33**	**84**	*e*P	**P**	**04 33 23.7**	**-0.5**		
CTU	**Camp Tracy**	**31.34**	**332**	IAmb	IAmb	04 33 28.7			
	comp=Z,324nm,1.2s								
SPMN	**Marine on St.**	**31.35**	**1**	IAmb	IAmb	04 33 34.6			
	comp=Z,351nm,0.7s								
BRNJ	**Basking Ridge**	**31.37**	**28**	IAmb	IAmb	04 33 26.6			
	comp=Z,290nm,0.9s								
ISA	**Isabela, Lake**	**31.48**	**318**	IAMs_20	IAMs_20	04 46 01.2			
	comp=Z,83µm,22.0s								
GRAC	**Grapevine Rang**	**31.62**	**321**	IAmb	IAmb	04 33 31.1			
	comp=Z,330nm,0.9s								
RSSD	**Black Hills**	**31.63**	**345**	P	**P**	**04 33 26.6**	**-0.2**		
RSSD				IAmb	IAmb	04 33 31.5			
	comp=Z,325nm,1.0s								
RSSD	**Black Hills**	**31.63**	**345**	P	**P**	**04 33 26.6**	**-0.2**		
RSSD				pmax	pmax				
	comp=Z,325nm,1.0s								
RSSD				MLR	MLR				
	comp=Z,4µm,18.0s								
MMNY	**Mt. Morris Dam**	**31.73**	**22**	IAmb	IAmb	04 33 46.1			
	comp=Z,314nm,1.3s								
GLMI	**Grayling**	**31.80**	**12**	IAmb	IAmb	04 34 37.7			
	comp=Z,246nm,0.9s								
GLMI				IAMs_20	IAMs_20	04 48 35.0			
	comp=Z,74µm,19.0s								
GLMI	**Grayling**	**31.80**	**12**	⇑P	**P**	**04 33 26.6**	**-1.4**		
PAL	**Pasades**	**31.93**	**28**	IAmb	IAmb	04 33 31.0			
	comp=Z,221nm,0.8s								
BBSR	**BB Station**	**31.94**	**50**	P	**P**	**04 33 28.4**	**-1.0**		
BBSR				IAmb	IAmb	04 33 32.7			
	comp=Z,318nm,1.2s								
VES	**Vestal, Richgr**	**31.98**	**318**	IAMs_20	IAMs_20	04 46 38.6			
	comp=Z,52µm,21.0s								
HWUT	**Hardware Ranch**	**32.00**	**334**	IAmb	IAmb	04 33 38.7			
	comp=Z,260nm,1.4s								
BINY	**Binghamton**	**32.01**	**25**	IAmb	IAmb	04 33 32.1			
	comp=Z,234nm,0.9s								
BINY				IAMs_20	IAMs_20	04 47 10.8			
	comp=Z,68µm,20.0s								
BINY	**Binghamton**	**32.01**	**25**	⇑P	**P**	**04 33 28.9**	**-1.0**		
N62A	**Caumsett State**	**32.08**	**29**	IAmb	IAmb	04 33 32.2			
	comp=Z,366nm,1.1s								
BGU	**Big Grassy Mou**	**32.12**	**331**	IAmb	IAmb	04 33 35.5			
	comp=Z,493nm,1.7s								
BW06	**Boulder Array**	**32.15**	**337**	IAmb	IAmb	04 33 39.3			
	comp=Z,256nm,1.4s								
BW06	**Boulder Array**	**32.15**	**337**	⇑P	**P**	**04 33 32.1**	**+0.7**		
PD31	**Pinedale Array**	**32.15**	**337**	IAmb	IAmb	04 33 39.3			
	comp=Z,257nm,1.4s								
PDAR	**Pinedale Array**	**32.15**	**337**	P	**P**	**04 33 32.0**	**+0.6**		
	comp=Z,48nm,0.9s,baz=132,slow=7.3,SNR=174								
PDAR				PcP	**PcP**	**04 36 20.1**	**-0.1**		
	comp=Z,42nm,1.1s,baz=91,slow=2.2,SNR=4.5								
PDAR				S	**S**	**04 38 44.5**	**+1.1**		
	comp=Z,4.9nm,1.1s,baz=112,slow=15,SNR=1.4								
PDAR				LR	LR	04 48 21.0			
	comp=Z,18µm,18.5s,baz=136,slow=40								
	comp=Z,48nm,0.9s								
PDAR	**Pinedale Array**	**32.15**	**337**	P	**P**	**04 33 31.1**	**-0.4**		
PDAR					**PcP**	**04 36 20.6**	**+0.4**		

TIN	**Tinemaha, Big**	**32.19**	**321**	IAMs_20	IAMs_20	04 47 20.8			
	comp=Z,79µm,20.0s								
DSP	**Deep Springs**	**32.23**	**321**	IAmb	IAmb	04 33 36.8			
	comp=Z,501nm,1.5s								
K57A	**Scipio Center**	**32.25**	**23**	IAmb	IAmb	04 33 33.9			
	comp=Z,216nm,1.0s								
WSPT	**Westport, CT**	**32.33**	**29**	IAmb	IAmb	04 33 34.4			
	comp=Z,455nm,1.3s								
L59A	**Walton**	**32.39**	**26**	IAmb	IAmb	04 33 35.5			
	comp=Z,265nm,1.0s								
HVU	**Hansel Valley**	**32.67**	**332**	IAmb	IAmb	04 33 40.4			
	comp=Z,719nm,1.4s								
KSCT	**Kent School, K**	**32.70**	**28**	IAmb	IAmb	04 33 38.0			
	comp=Z,402nm,1.0s								
Q09A	**Carvers**	**32.74**	**324**	IAmb	IAmb	04 33 41.7			
	comp=Z,712nm,1.5s								
PKD	**Bear Valley Ra**	**33.01**	**317**	IAmb	IAmb	04 33 43.1			
	comp=Z,329nm,1.2s								
PKD				IAMs_20	IAMs_20	04 48 05.7			
	comp=Z,61µm,18.0s								
NV11	**Mina Array Sit**	**33.04**	**323**	IAmb	IAmb	04 33 43.1			
	comp=Z,369nm,0.9s								
ELK	**Elko**	**33.06**	**328**	LR	LR	04 48 51.5			
	comp=Z,48µm,18.2s,baz=144,slow=39								
ELK	**Elko**	**33.06**	**328**	IAmb	IAmb	04 33 43.4			
	comp=Z,182nm,0.9s								
ELK				IAMs_20	IAMs_20	04 48 40.0			
	comp=Z,47µm,19.0s								
ELK	**Elko**	**33.06**	**328**	⇑P	**P**	**04 33 41.2**	**+1.8**		
MDPB	**Devils Postpil**	**33.08**	**321**	IAmb	IAmb	04 33 43.7			
	comp=Z,250nm,0.9s								
NVAR	**Mina Array Bea**	**33.12**	**322**	P	**P**	**04 33 42.0**	**+2.0**		
	comp=Z,310nm,0.8s,baz=138,slow=8.2,SNR=495								
NVAR				PcP	**PcP**	**04 36 24.1**	**+1.1**		
	comp=Z,58nm,0.9s,baz=140,slow=3.8,SNR=10								
NVAR				PKiKP	**PKiKP**	**04 43 49.4**	**+0.3**		
	comp=Z,2.2nm,1.1s,baz=140,slow=1.4,SNR=4.2								
NVAR				LR	LR	04 48 34.5			
	comp=Z,102µm,18.8s,baz=128,slow=39								
NVAR				P3KPbc		05 04 56.5			
	comp=Z,0.9nm,0.7s,baz=330,slow=5.4,SNR=7.0								
	comp=Z,310nm,0.8s								
NVAR	**Mina Array Bea**	**33.12**	**322**	P	**P**	**04 33 40.1**	**+0.2**		
NVAR					**PcP**	**04 36 23.8**	**+0.8**		
SADO	**Sadowa**	**33.13**	**18**	LR	LR	04 48 48.0			
	comp=Z,78µm,18.8s,baz=221,slow=39								
TEFE	**Tefe**	**33.14**	**119**	P	**P**	**04 33 40.8**	**+0.7**		
TEFE				S	**S**	**04 38 57.0**	**-1.8**		
TEFE	**Tefe**	**33.14**	**119**	*e*P	**P**	**04 33 40.3**	**+0.3**		
PMPB	**Monarch Peak**	**33.33**	**317**	IAmb	IAmb	04 33 45.4			
	comp=Z,357nm,1.0s								
UCCT	**U. Connecticut**	**33.33**	**29**	IAmb	IAmb	04 33 43.7			
	comp=Z,484nm,1.1s								
E46A	**Sault Ste Mari**	**33.34**	**11**	IAMs_20	IAMs_20	04 49 30.8			
	comp=Z,63µm,19.0s								
RYN	**Ryan**	**33.38**	**322**	IAmb	IAmb	04 33 46.9			
	comp=Z,629nm,1.7s								
DELO	**Deloro Mine**	**33.40**	**20**	IAmb	IAmb	04 34 00.4			
	comp=Z,318nm,1.2s						

CVS Carmenet Viney 35.64 319 IAmb IAmb 04 34 05.8
comp=Z,730nm,1.7s
CVS IAMs_20 IAMs_20 04 48 19.2
comp=Z,61µm,22.0s
LABB Lıbrea 35.67 129 P **P** **04 34 02.7 +0.7**
LABB S **S** **04 39 36.2 -1.7**
SUTB Sutter Butte 35.74 320 IAmb IAmb 04 34 06.0
comp=Z,297nm,0.8s
ORV Oroville 35.76 321 IAmb IAmb 04 34 07.3
comp=Z,283nm,1.1s
ORV IAMs_20 IAMs_20 04 49 26.2
comp=Z,59µm,20.0s
DGMT Dagmar 35.77 347 ⇑P **P** **04 34 03.4 +0.9**
MCCM Marconi Confer 35.79 318 IAMs_20 IAMs_20 04 48 10.4
comp=Z,57µm,22.0s
EPLO Experimental L 35.80 359 IAmb IAmb 04 34 04.7
comp=Z,270nm,1.1s
MNRC McLaughlin Min 35.94 319 IAmb IAmb 04 34 09.0
comp=Z,317nm,1.2s
MNRC IAMs_20 IAMs_20 04 48 31.1
comp=Z,48µm,21.0s
WVOR Wild Horse Val 36.04 327 IAmb IAmb 04 34 09.2
comp=Z,605nm,1.4s
WVOR IAMs_20 IAMs_20 04 51 01.0
comp=Z,49µm,18.0s
WVOR Wild Horse Val 36.04 327 ⇑P **P** **04 34 06.1 +1.1**
MACA Manacapuru-AM 36.38 115 P **P** **04 34 08.9 +0.7**
MACA S **S** **04 39 50.2 +1.5**
MACA Manacapuru-AM 36.38 115 *eP* **P** **04 34 08.6 +0.5**
HOPS Hopland Field 36.40 319 IAmb IAmb 04 34 12.7
comp=Z,259nm,1.2s
ULM Lac du Bonnet 36.44 357 P **P** **04 34 06.9 -1.2**
comp=Z,85nm,0.8s,baz=175,slow=8.9,SNR=49
ULM PcP **PcP** **04 36 31.8 -0.2**
comp=Z,142nm,1.0s,baz=175,slow=2.9,SNR=7.6
ULM S **S** **04 39 41.0 -7.7**
comp=Z,57nm,1.2s,baz=113,slow=23,SNR=3.6
ULM LR LR 04 52 24.6
comp=Z,38µm,20.2s,baz=169,slow=42
ULM Lac du Bonnet 36.44 357 P **P** **04 34 06.6 -1.5**
ULM IAmb IAmb 04 34 15.4
comp=Z,200nm,1.0s
ULM **PcP** **04 36 32.2 +0.2**
HATC Hat Creek Radi 36.52 323 IAmb IAmb 04 34 13.4
comp=Z,776nm,1.4s
PLID Pearl Lake 36.72 333 IAmb IAmb 04 34 14.7
comp=Z,630nm,1.2s
EGMT Eagleton 36.81 341 ⇑P **P** **04 34 12.5 +1.0**
KCPM Cahto Peak 37.13 320 IAmb IAmb 04 34 19.3
comp=Z,954nm,1.7s
KCPM IAMs_20 IAMs_20 04 49 08.5
comp=Z,64µm,21.0s
BMO Blue Mountains 37.14 331 IAMs_20 IAMs_20 04 52 14.9
comp=Z,52µm,18.0s
BMO Blue Mountains 37.14 331 ⇑P **P** **04 34 14.4 +0.1**
MSO Missoula 37.26 336 IAmb IAmb 04 34 23.1
comp=Z,510nm,1.2s
MSO IAMs_20 IAMs_20 04 52 01.6
comp=Z,48µm,19.0s
MSO Missoula 37.26 336 ⇑P **P** **04 34 16.2 +0.9**
N02D Trinity Center 37.36 322 IAMs_20 IAMs_20 04 50 09.5
comp=Z,58µm,22.0s
PKME Peaks-Kenny Pk 37.36 28 ⇑P **P** **04 34 14.8 -1.2**
KHBM Hayfork Bally 37.48 321 IAMs_20 IAMs_20 04 49 22.8
comp=Z,51µm,22.0s
KMRM Mail Ridge 37.52 320 IAmb IAmb 04 34 22.1
comp=Z,694nm,1.4s
YBH Yreka Blue Hor 37.83 323 LR LR 04 51 12.1
comp=Z,6µm,20.3s,baz=130,slow=38
K04D Chiloquin, OR 37.86 325 IAmb IAmb 04 34 23.5
comp=Z,327nm,0.9s
KMPM Mount Pierce 37.89 320 IAmb IAmb 04 34 26.8
comp=Z,346nm,1.1s
L04D Klamath Falls 37.91 324 IAmb IAmb 04 34 23.7
comp=Z,230nm,0.9s
KHMM Horse Mountain 37.92 321 IAmb IAmb 04 34 24.6
comp=Z,321nm,0.9s
KHMM IAMs_20 IAMs_20 04 50 16.3
comp=Z,57µm,21.0s
F10A Beach Ranch, E 37.96 333 IAmb IAmb 04 34 24.5
comp=Z,334nm,0.9s
JCC Jacoby Creek, 38.07 321 IAmb IAmb 04 34 25.5
comp=Z,446nm,1.1s
JCC IAMs_20 IAMs_20 04 49 54.3
comp=Z,54µm,22.0s
KRPM Rodgers 38.26 321 IAMs_20 IAMs_20 04 50 26.5
comp=Z,53µm,21.0s
J04A Umpqua Nationa 38.46 325 IAmb IAmb 04 34 28.9
comp=Z,548nm,1.1s
KSXB Camp Six Broad 38.58 322 IAMs_20 IAMs_20 04 51 02.7
comp=Z,48µm,20.0s
LPAZ La Paz 38.81 140 P **P** **04 34 30.1 +0.8**
comp=Z,15nm,0.8s,baz=339,slow=8.3,SNR=60
LPAZ PcP **PcP** **04 36 41.5 +0.9**
comp=Z,20nm,1.1s,baz=349,slow=5.4,SNR=3.8
LPAZ S **S** **04 40 25.6 -1.0**
comp=Z,1.4nm,0.8s,baz=85,slow=14,SNR=1.0
LPAZ LR LR 04 51 10.6
comp=Z,20µm,19.0s,baz=312,slow=37
comp=Z,15nm,0.8s
LPAZ La Paz 38.81 140 P **P** **04 34 29.7 +0.4**
LPAZ **PcP** **04 36 41.1 +0.4**
LPAZ La Paz 38.81 140 ⇑P **P** **04 34 30.1 +0.8**
LPAZ La Paz 38.81 140 P **P** **04 34 30.1 +0.8**
LPAZ S **S** **04 40 26.4 -0.3**
LPAZ La Paz 38.81 140 *eP* **P** **04 34 29.1 -0.2**
LPAZ La Paz 38.81 140 P **P** **04 34 29.8 +0.4**
WIFE Three Sisters- 38.84 327 IAmb IAmb 04 34 32.8
comp=Z,744nm,1.7s
PB18 Visviri 38.98 142 IAmb IAmb 04 34 42.1
comp=Z,399nm,1.1s
PB18 IAMs_20 IAMs_20 04 49 45.1
comp=Z,51µm,22.0s
I04A Tendick Farm, 38.98 326 IAmb IAmb 04 34 33.1
comp=Z,832nm,1.8s
KBO Bosley Butte 39.02 323 IAMs_20 IAMs_20 04 51 28.3
comp=Z,53µm,20.0s
AP01 Chacalluta 39.09 144 IAMs_20 IAMs_20 04 48 55.3
comp=Z,47µm,21.0s
PB12 IPOC Station P 39.30 144 IAMs_20 IAMs_20 04 48 59.6
comp=Z,49µm,21.0s
HAWA Hanford 39.33 331 IAMs_20 IAMs_20 04 52 39.8
comp=Z,41µm,20.0s
HAWA Hanford 39.33 331 ⇑P **P** **04 34 32.6 -0.1**
G05A Wamic 39.38 328 IAmb IAmb 04 34 45.1
comp=Z,719nm,1.3s
J01E Myrtle Point 39.43 324 IAmb IAmb 04 34 37.1
comp=Z,294nm,0.9s
I03D Drain, OR 39.44 325 IAmb IAmb 04 34 37.2
comp=Z,468nm,1.3s
H04A Detroit Lake 39.46 327 IAmb IAmb 04 34 36.7
comp=Z,482nm,1.0s
PB16 IPOC Station P 39.55 143 IAMs_20 IAMs_20 04 50 08.2
comp=Z,35µm,20.0s
BUCK Buck Mountain 39.56 326 IAmb IAmb 04 34 38.0
comp=Z,906nm,1.5s
NEW Newport 39.69 335 LR LR 04 53 31.1
comp=Z,58µm,18.5s,baz=140,slow=40
NEW Newport 39.69 335 ⇑P **P** **04 34 35.8 +0.1**
C09A Chrisman Ranch 39.82 334 IAmb IAmb 04 34 40.5
comp=Z,342nm,1.1s
G04A Mulino 39.96 327 IAmb IAmb 04 34 41.4
comp=Z,596nm,1.1s
I02E Swisshome, OR 39.98 325 IAmb IAmb 04 34 43.4
comp=Z,829nm,1.6s
COR Corvallis 39.99 326 P **P** **04 34 38.3 +0.2**
COR IAmb IAmb 04 34 42.2
comp=Z,521nm,1.3s
COR Corvallis 39.99 326 P **P** **04 34 38.3 +0.2**
COR pmax pmax
comp=Z,521nm,1.3s
COR MLR MLR
comp=Z,27µm,20.0s
COR Corvallis 39.99 326 ⇓P **P** **04 34 40.0 +1.9**
G03D McMinnville, O 40.38 327 IAmb IAmb 04 34 45.2
comp=Z,1µm,1.5s
PB11 IPOC Station P 40.59 145 IAmb IAmb 04 34 53.5
comp=Z,982nm,1.6s
GO01 Chusmiza 40.78 144 IAmb IAmb 04 34 55.5
comp=Z,348nm,1.2s
GO01 IAMs_20 IAMs_20 04 50 25.9
comp=Z,34µm,20.0s
F04D Rainier, OR 40.83 328 IAmb IAmb 04 34 48.5
comp=Z,618nm,0.9s
MDP Montagnes des 40.87 98 P **P** **04 34 46.7 +0.9**
comp=Z,25nm,0.9s,baz=308,slow=7.6,SNR=10.0
MDP LR LR 04 52 18.0
comp=Z,16µm,21.8s,baz=294,slow=37
comp=Z,25nm,0.9s
TA01 Diego Aracena 40.95 146 IAmb IAmb 04 34 56.5
comp=Z,715nm,1.5s
TA01 IAMs_20 IAMs_20 04 50 46.0
comp=Z,31µm,19.0s
F03A Seaside 41.01 327 IAmb IAmb 04 34 50.8
comp=Z,807nm,1.1s
D05A Enumclaw 41.08 330 IAmb IAmb 04 34 50.9
comp=Z,335nm,1.1s
PATCX Punta Patache 41.17 146 IAmb IAmb 04 34 58.4
comp=Z,511nm,1.2s
PATCX IAMs_20 IAMs_20 04 51 02.7
comp=Z,31µm,19.0s
PB08 IPOC Station P 41.18 144 P **P** **04 34 49.5 +0.8**
PB08 S **S** **04 41 03.8 +2.2**
ITTB Itaituba 41.32 113 P **P** **04 34 49.1 -0.5**
ITTB Itaituba 41.32 113 *eP* **P** **04 34 48.9 -0.6**
E03A Lebam 41.42 328 P **P** **04 34 50.3 +0.4**
E03A IAmb IAmb 04 34 53.8
comp=Z,442nm,1.2s
FFC Flin Flon 41.43 352 P **P** **04 34 49.9 0.0**
FFC IAmb IAmb 04 34 53.9
comp=Z,560nm,1.6s
FFC Flin Flon 41.43 352 P **P** **04 34 49.9 0.0**
FFC pmax pmax
comp=Z,560nm,1.7s
FFC MLR MLR
comp=Z,12µm,19.0s
FFC Flin Flon 41.43 352 ⇑P **P** **04 34 50.2 +0.3**
RADR Rader Ridge 41.46 328 P **P** **04 34 50.4 +0.1**
RADR IAmb IAmb 04 34 55.7
comp=Z,1µm,1.9s
ICQ Pointe Anglais 41.50 25 P **P** **04 34 49.5 -1.0**
PB02 IPOC Station P 41.72 146 IAmb IAmb 04 35 02.2
comp=Z,403nm,1.1s
MAL2 Monte Alegre, 41.74 109 P **P** **04 34 53.7 +0.7**
MAL2 IAmb IAmb 04 35 00.7
comp=Z,562nm,1.5s
MAL2 Monte Alegre, 41.74 109 P **P** **04 34 52.9 -0.1**
WISH Wiskhah 41.91 329 IAmb IAmb 04 35 23.2
comp=Z,1µm,1.6s
VILB Vilhena 42.13 128 IAmb IAmb 04 35 04.9
comp=Z,813nm,1.6s
VILB Vilhena 42.13 128 P **P** **04 34 56.5 +0.4**
VILB S **S** **04 41 13.2 -2.0**
VILB Vilhena 42.13 128 *eP* **P** **04 34 56.4 +0.2**
NLWA Neilton Lookou 42.15 329 IAmb IAmb 04 35 00.1
comp=Z,566nm,1.4s
NLWA Neilton Lookou 42.15 329 ⇑P **P** **04 34 57.1 +1.2**
PB09 IPOC Station P 42.45 146 IAmb IAmb 04 35 09.4
comp=Z,496nm,1.4s
PGC Sidney 42.80 331 IAmb IAmb 04 35 04.8
comp=Z,437nm,1.1s
PB05 IPOC Station P 42.81 148 P **P** **04 35 02.9 +1.3**
C03A Quillayute Air 42.87 329 IAmb IAmb 04 35 06.2
comp=Z,651nm,1.5s
NPGB Novo Progresso 42.89 117 P **P** **04 35 01.4 -0.9**
NPGB Novo Progresso 42.89 117 *eP* **P** **04 35 01.1 -1.2**
PB06 IPOC Station P 43.02 147 P **P** **04 35 04.2 +0.9**
PB06 IAmb IAmb 04 35 13.4
comp=Z,405nm,1.2s
SIV San Ignacio 43.40 132 LR LR 04 52 31.0
comp=Z,44µm,18.7s,baz=320,slow=35
LLLB Lillooet 43.49 334 P **P** **04 35 06.7 -0.1**
LLLB IAmb IAmb 04 35 10.6
comp=Z,634nm,1.4s
RPN Rapa Nui 43.57 201 LR LR 04 48 26.9
comp=Z,29µm,21.5s,baz=360,slow=29
VA02 Isla de Pascua 43.64 201 IAMs_20 IAMs_20 04 48 45.1
comp=Z,28µm,18.0s
AF01 San Pedro de A 43.96 146 P **P** **04 35 12.1 +0.9**
AF01 IAMs_20 IAMs_20 04 52 33.8
comp=Z,29µm,20.0s
OZB Mount Ozzard 44.00 330 P **P** **04 35 11.2 +0.2**
OZB IAmb IAmb 04 35 14.8
comp=Z,274nm,1.1s
OZB Mount Ozzard 44.00 330 ⇑P **P** **04 35 12.2 +1.3**
ATM1 UHE Belo Monte 44.04 110 P **P** **04 35 12.3 +0.7**
ATM1 S **S** **04 41 45.4 +2.0**
PDRB Porto dos Gac 44.09 123 P **P** **04 35 10.3 -1.7**
PDRB S **S** **04 41 45.8 +1.8**
PDRB Porto dos Gac 44.09 123 *eP* **P** **04 35 10.7 -1.3**
PB14 IPOC Station P 44.18 150 P **P** **04 35 14.5 +1.6**
PB14 S **S** **04 41 49.3 +3.7**
PB14 IPOC Station P 44.18 150 IAmb IAmb 04 35 22.7
comp=Z,354nm,1.3s
CLDB Colider 44.46 122 P **P** **04 35 13.8 -1.2**
CLDB S **S** **04 41 46.6 -2.8**
CLDB Colider 44.46 122 *eP* **P** **04 35 13.8 -1.2**
PTLB Pontes e Lacer 44.48 130 P **P** **04 35 15.0 -0.1**
PTLB IAmb IAmb 04 35 23.7
comp=Z,335nm,1.4s
PTLB Pontes e Lacer 44.48 130 P **P** **04 35 15.2 +0.1**
PTLB S **S** **04 41 50.6 +1.1**
PTLB Pontes e Lacer 44.48 130 *eP* **P** **04 35 14.9 -0.1**
CBB Campbell River 44.66 331 IAmb IAmb 04 35 20.3
comp=Z,451nm,1.3s
YJA Yavi 44.87 142 *eP* **P** **04 35 20.9 +2.2**
GO02 Mina Guanaco 45.03 149 IAmb IAmb 04 35 29.9
comp=Z,498nm,1.5s
GO02 Mina Guanaco 45.03 149 ⇑P **P** **04 35 21.4 +1.6**
GO02 Mina Guanaco 45.03 149 *eP* **P** **04 35 23.0 +3.2**
AC01 Pan de Azucar 45.37 151 IAMs_20 IAMs_20 04 49 57.5
comp=Z,30µm,21.0s
HJA Humahuaca 45.73 143 *eP* **P** **04 35 27.8 +2.5**
SCHQ Schefferville 45.84 21 P **P** **04 35 24.1 -1.3**
comp=Z,57nm,0.9s,baz=210,slow=6.4,SNR=29
SCHQ PcP **PcP** **04 37 03.0 +0.4**
comp=Z,81nm,1.0s,baz=206,slow=2.4,SNR=6.9
SCHQ S S 04 41 53.5 -15
comp=Z,6.9nm,1.1s,baz=360,slow=6.2,SNR=1.5
SCHQ LR LR 04 56 35.3
comp=Z,81µm,18.5s,baz=210,slow=38
comp=Z,57nm,0.9s
DRLN Deer Lake 45.91 32 P **P** **04 35 25.2 -0.8**
DRLN IAmb IAmb 04 35 26.8
comp=Z,313nm,1.7s
DRLN Deer Lake 45.91 32 ⇑P **P** **04 35 24.9 -1.2**
SALTA 45.99 145 *eP* **P** **04 35 28.5 +1.0**
HOLB Holberg 46.40 330 IAmb IAmb 04 35 34.0
comp=Z,507nm,1.5s
AC06 Mina Casimiro 46.51 152 IAmb IAmb 04 35 41.0
comp=Z,637nm,1.9s
AC06 IAMs_20 IAMs_20 04 50 19.5
comp=Z,26µm,21.0s
AC02 Maricunga 46.66 150 P **P** **04 35 33.5 +0.8**
AC02 IAmb IAmb 04 35 43.4
comp=Z,253nm,1.2s
AC02 IAMs_20 IAMs_20 04 50 53.2
comp=Z,28µm,21.0s
AC02 Maricunga 46.66 150 *eP* **P** **04 35 36.1 +3.4**
MAS01 UHE Manso 46.69 126 S **S** **04 42 17.9 -3.6**
AZAP Zapla 46.71 144 *eP* **P** **04 35 33.4 +0.4**
GO03 Copiapo 46.77 152 P **P** **04 35 34.5 +1.4**
GO03 IAMs_20 IAMs_20 04 50 39.3
comp=Z,25µm,21.0s
GO03 Copiapo 46.77 152 *eP* **P** **04 35 35.4 +2.3**
SLA San Lorenzo 46.85 145 *eP* **P** **04 35 36.5 +2.6**
AC04 Llanos de Chal 46.91 153 IAMs_20 IAMs_20 04 50 31.2
comp=Z,32µm,22.0s
SALV Santo Antonio 47.38 127 P **P** **04 35 37.6 -0.4**
SALV S **S** **04 42 31.7 +0.4**
SALV Santo Antonio 47.38 127 *eP* **P** **04 35 37.5 -0.4**
BBB Bella Bella 47.39 331 LR LR 04 58 52.0
comp=Z,25µm,18.5s,baz=146,slow=40
BBB Bella Bella 47.39 331 IAmb IAmb 04 35 41.9
comp=Z,282nm,1.4s
BBB Bella Bella 47.39 331 ⇑P **P** **04 35 39.1 +1.5**
PRPB Parauapebas 47.41 112 P **P** **04 35 37.2 -1.1**
PRPB S **S** **04 42 29.0 -2.9**
PRPB Parauapebas 47.41 112 *eP* **P** **04 35 37.9 -0.4**
TMAB Tom-Au,PA,Br 47.51 106 P **P** **04 35 39.8 +0.8**
TMAB S **S** **04 42 33.4 +0.1**
TMAB Tom-Au,PA,Br 47.51 106 *eP* **P** **04 35 39.3 +0.2**
FSA Cafayete 47.68 146 *eP* **P** **04 35 41.7 +1.3**
LCO Las Campanas 47.77 153 P **P** **04 35 42.1 +0.9**
LCO IAmb IAmb 04 35 51.0
comp=Z,216nm,1.2s
LCO Las Campanas 47.77 153 P **P** **04 35 42.1 +0.9**
LCO pmax pmax
comp=Z,216nm,1.2s
LCO Las Campanas 47.77 153 ⇑P **P** **04 35 42.5 +1.4**
AC05 El Transito 47.81 153 P **P** **04 35 42.4 +1.1**
AC05 IAmb IAmb 04 35 51.4
comp=Z,194nm,1.1s
AC05 IAMs_20 IAMs_20 04 51 10.0
comp=Z,29µm,20.0s
KUQ Kuujjuuaa 48.03 17 P **P** **04 35 42.0 -0.4**
CO05 La Serena 48.33 154 IAMs_20 IAMs_20 04 51 00.7
comp=Z,35µm,21.0s
TINO Tinogasta 48.44 149 *eP* **P** **04 35 47.9 +1.7**
VCA Vinchina 48.69 150 *eP* **P** **04 35 51.4 +3.3**
VCA *eP* **P** **04 35 51.4 +3.3**
SNDB Serra Nova Dou 48.79 120 P **P** **04 35 48.8 -0.1**
SNDB S **S** **04 42 50.8 -0.6**
SNDB Serra Nova Dou 48.79 120 *eP* **P** **04 35 48.8 -0.1**
CO06 Fray Jorge 48.82 155 IAmb IAmb 04 35 57.9
comp=Z,243nm,1.6s
CO06 IAMs_20 IAMs_20 04 51 14.9
comp=Z,39µm,21.0s
CO01 Juntas del Tor 48.87 153 IAMs_20 IAMs_20 04 51 32.1
comp=Z,32µm,22.0s
HG4B Hotspring 48.93 330 IAmb IAmb 04 35 53.4
comp=Z,252nm,1.3s
PP1B Ponte de Pedra 49.01 128 *eP* **P** **04 35 50.7 +0.1**
VA04 Juan Fernndez 49.10 164 P **P** **04 35 52.7 +1.7**
AGUA GUANDACOL 49.18 151 *eP* **P** **04 35 53.5 +1.6**
CO03 El Pedregal 49.36 154 P **P** **04 35 54.2 +1.0**
CO03 IAmb IAmb 04 36 02.9
comp=Z,230nm,1.2s
CO03 PcP **PcP** **04 37 16.7 +1.1**
CO03 IAMs_20 IAMs_20 04 51 32.1
comp=Z,33µm,21.0s
CO03 El Pedregal 49.36 154 *eP* **P** **04 35 55.5 +2.4**
AANI Anillaco 49.37 149 *eP* **P** **04 35 54.1 +0.8**
BDQN Bodoquena, MS 49.41 133 *eP* **P** **04 35 52.9 -0.7**
ACDV Cuesta del Vie 49.47 152 *eP* **P** **04 35 56.6 +2.5**
CO02 Combarbal 49.55 155 P **P** **04 35 55.5 +0.9**
CO02 IAmb IAmb 04 36 04.2
comp=Z,214nm,1.1s
CO02 PcP **PcP** **04 37 17.9 +1.6**
CO02 IAMs_20 IAMs_20 04 51 37.1
comp=Z,39µm,22.0s
CO02 Combarbal 49.55 155 ⇓P **P** **04 35 55.9 +1.2**
CO02 Combarbal 49.55 155 *eP* **P** **04 35 57.6 +3.0**
MOBC Moresby Island 49.82 330 IAmb IAmb 04 35 59.7
comp=Z,185nm,0.9s
ACCO Cerro Coronel 49.85 153 *eP* **P** **04 35 58.3 +1.1**
PAL2 UHE Estreito - 49.89 111 P **P** **04 35 57.6 +0.2**
PAL2 S **S** **04 43 06.2 -0.7**
DIB Dawson Inlet, 50.10 330 IAmb IAmb 04 36 02.7
comp=Z,289nm,1.1s
AQDB Aquidauana 50.18 132 P **P** **04 35 59.0 -0.5**
AQDB S **S** **04 43 08.4 -2.2**
ARAG Araguaiana, MT 50.33 124 *eP* **P** **04 35 59.6 -1.1**
LAJE UHE Lajeado 50.40 116 P **P** **04 36 00.8 -0.5**
BLKN Baker Lake 50.52 358 IAmb IAmb 04 36 03.5
comp=Z,188nm,1.1s
SMTB Santa Maria do 50.55 114 P **P** **04 36 02.5 +0.1**
SMTB S **S** **04 43 16.0 -0.1**
SMTB Santa Maria do 50.55 114 *eP* **P** **04 36 02.5 +0.1**
VA06 Catapilco 50.62 156 P **P** **04 36 03.6 +1.1**
VA06 IAMs_20 IAMs_20 04 52 18.4
comp=Z,33µm,20.0s
AVFE Valle Fertil 50.65 151 *eP* **P** **04 36 03.9 +0.9**
U35K Hyder 50.70 334 P **P** **04 36 02.7 -0.1**
U35K IAMs_20 IAMs_20 05 00 51.4
comp=Z,36µm,19.0s
U35K Hyder 50.70 334 P **P** **04 36 05.2 +2.4**
baz=131,SNR=14
U35K S **S** **04 43 19.6 +2.7**
baz=131
RTLL Cerro Villicun 50.74 152 *eP* **P** **04 36 06.3 +2.7**
RTLS Leoncito 50.78 154 *eP* **P** **04 36 06.3 +2.1**
ZON Zonda 50.84 153 P **P** **04 36 05.8 +1.5**
ZON IAmb IAmb 04 36 14.5
comp=Z,243nm,1.3s
ZON PcP **PcP** **04 37 22.2 +1.2**
ZON Zonda 50.84 153 P **P** **04 36 05.8 +1.5**
ZON 04 37 22.2
ZON pmax pmax
comp=Z,243nm,1.3s
ZON Zonda 50.84 153 ⇑P **P** **04 36 05.7 +1.3**
ZON Zonda 50.84 153 *eP* **P** **04 36 04.5 +0.2**
VA01 Torpederas 50.89 157 IAMs_20 IAMs_20 04 52 13.8
comp=Z,38µm,20.0s
TOAD Toad River Com 50.93 339 P **P** **04 36 05.1 +0.5**
baz=138,SNR=57
TOAD S **S** **04 43 21.9 +1.8**
baz=138
YKAW1 Yellowknife Wh 50.95 347 IAmb IAmb 04 36 09.5
comp=Z,374nm,0.8s
YKA Yellowknife Ar 50.98 347 P **P** **04 36 05.2 +0.3**
comp=Z,311nm,1.0s,baz=158,slow=7.0,SNR=159
YKA PcP **PcP** **04 37 21.4 +0.5**
comp=Z,35nm,0.9s,baz=160,slow=3.3,SNR=4.8
YKA PP **PP** **04 38 02.8 +1.4**
comp=Z,12nm,0.9s,baz=155,slow=8.5,SNR=3.5
YKA S **S** **04 43 14.7 -6.0**
comp=Z,1.2nm,1.0s,baz=148,slow=6.5,SNR=1.3
YKA P4KPbc 05 13 31.4
comp=Z,2.7nm,1.0s,baz=160,slow=3.9,SNR=5.4
comp=Z,311nm,1.0s
YKA Yellowknife Ar 50.98 347 P **P** **04 36 05.0 +0.1**
YKA **PcP** **04 37 21.6 +0.7**
YKA **PP** **04 38 01.8 +0.4**
V35K Ketchikan 51.01 333 IAmb IAmb 04 36 09.8
comp=Z,280nm,1.2s
V35K Ketchikan 51.01 333 P **P** **04 36 07.2 +2.1**
baz=129,SNR=44
V35K S **S** **04 43 25.7 +4.5**
baz=129
YKAW3 Yellowknife Wh 51.04 347 IAmb IAmb 04 36 10.3
comp=Z,384nm,0.8s
CFA Coronel Fontan 51.09 152 LR LR 04 53 17.8
comp=Z,12µm,20.9s,baz=358,slow=31
ROC1 El Roble 51.09 156 *eP* **P** **04 36 09.0 +2.6**
VA03 San Esteban 51.09 155 P **P** **04 36 07.9 +1.7**
VA03 IAmb IAmb 04 36 16.1
comp=Z,228nm,1.1s
VA03 PcP **PcP** **04 37 22.1 +0.1**
VA03 IAMs_20 IAMs_20 04 52 34.0
comp=Z,37µm,21.0s
VA03 San Esteban 51.09 155 *eP* **P** **04 36 08.0 +1.7**
AUSP Uspallata 51.11 154 *eP* **P** **04 36 08.3 +1.7**
C2SB Chapadao do Su 51.26 128 P **P** **04 36 07.5 -0.1**
C2SB S **S** **04 43 25.4 -0.4**
C2SB Chapadao do Su 51.26 128 *eP* **P** **04 36 07.9 +0.3**
NBBC Barra do Corda 51.28 109 S **S** **04 43 30.4 +4.3**
MT02 Curacav 51.30 156 P **P** **04 36 09.9 +2.2**
MT02 IAmb IAmb 04 36 16.5
comp=Z,379nm,1.8s
MT02 IAMs_20 IAMs_20 04 52 28.4
comp=Z,39µm,21.0s
PEL Peldehue 51.37 156 P **P** **04 36 09.4 +1.1**
PEL IAMs_20 IAMs_20 04 52 40.5
comp=Z,37µm,21.0s
PEL Peldehue 51.37 156 P **P** **04 36 09.4 +1.1**
PEL pmax pmax
comp=Z,132nm,1.3s
PEL Peldehue 51.37 156 ⇓P **P** **04 36 09.3 +1.1**
PEL Peldehue 51.37 156 *eP* **P** **04 36 11.1 +2.8**
ACHE Chepes 51.44 151 *eP* **P** **04 36 10.8 +1.8**
VA05 Santo Domingo 51.46 157 IAMs_20 IAMs_20 04 52 30.9
comp=Z,37µm,21.0s
T35M Bob Quinn 51.50 335 P **P** **04 36 09.7 +0.8**
T35M IAmb IAmb 04 36 14.0
comp=Z,332nm,1.2s
T35M IAMs_20 IAMs_20 05 00 15.5
comp=Z,28µm,20.0s
T35M Bob Quinn 51.50 335 P **P** **04 36 11.3 +2.4**
baz=131,SNR=64
T35M S **S** **04 43 33.1 +5.1**
baz=131
KOTAN Kotaneelee Air 51.51 341 P **P** **04 36 09.9 +0.9**
baz=140,SNR=95
KOTAN S **S** **04 43 30.1 +2.0**
baz=140
MT05 Renca 51.57 156 P **P** **04 36 11.2 +1.5**
MT05 IAmb IAmb 04 36 19.5
comp=Z,449nm,1.4s
MT05 IAMs_20 IAMs_20 04 52 46.7
comp=Z,38µm,21.0s
LIRD Liard River Hi 51.64 339 P **P** **04 36 10.8 +0.8**
baz=138,SNR=26
LIRD S **S** **04 43 31.7 +1.7**
baz=138
MT16 CCHEN 51.69 156 P **P** **04 36 11.5 +0.8**
MT16 PcP **PcP** **04 37 26.3 +2.2**

MT16 IAMs_20 IAMs_20 04 52 50.8
comp=Z,38µm,21.0s
TAOE Nuku Hiva Isla 51.73 247 ⇑*i* PKP1 P 04 36 16.7 +5.3
comp=Z,538nm,1.3s
TAOE Nuku Hiva Isla 51.73 247 P P 04 36 18.0 +6.6
MT03 Universidad Ad 51.75 156 P **P** **04 36 11.2 +0.1**
MT03 IAmb IAmb 04 36 21.0
comp=Z,399nm,1.2s
MT03 IAMs_20 IAMs_20 04 52 53.4
comp=Z,37µm,21.0s
CRAG Craig 51.77 332 P **P** **04 36 12.1 +1.2**
CRAG Craig 51.77 332 P **P** **04 36 13.4 +2.5**
CRAG Craig 51.77 332 ⇑P **P** **04 36 12.9 +2.0**
CRAG Craig 51.77 332 P **P** **04 36 13.1 +2.2**
baz=127,SNR=23
CRAG S **S** **04 43 39.9 +8.2**
baz=127
MT01 Popeta 51.79 157 P **P** **04 36 12.6 +1.3**
MT09 Talagante 51.81 156 P **P** **04 36 12.4 +0.7**
MT09 IAmb IAmb 04 36 21.3
comp=Z,525nm,1.9s
MT09 PcP **PcP** **04 37 25.6 +1.0**
MT09 IAMs_20 IAMs_20 04 52 42.0
comp=Z,39µm,21.0s
WRAK Wrangell Islan 52.02 334 P **P** **04 36 12.6 -0.1**
WRAK Wrangell Islan 52.02 334 ⇑P **P** **04 36 14.3 +1.6**
WRAK Wrangell Islan 52.02 334 P **P** **04 36 14.5 +1.8**
baz=129,SNR=9.9
WRAK S **S** **04 43 41.7 +6.7**
baz=129
MT13 San Alfonso 52.06 156 P **P** **04 36 12.9 -0.6**
MT13 IAmb IAmb 04 36 23.9
comp=Z,290nm,1.2s
MT13 IAMs_20 IAMs_20 04 53 02.6
comp=Z,35µm,21.0s
AAGR Agrelo 52.09 154 *e*P **P** **04 36 14.9 +1.2**
ACAN Cantantal 52.13 152 *e*P **P** **04 36 13.5 -0.4**
BO04 La Punta 52.15 156 P **P** **04 36 14.1 0.0**
BO04 IAMs_20 IAMs_20 04 52 52.9
comp=Z,37µm,21.0s
U33K Whale Pass 52.16 333 P **P** **04 36 13.8 -0.1**
U33K IAmb IAmb 04 36 18.3
comp=Z,480nm,1.4s
U33K IAMs_20 IAMs_20 05 00 12.3
comp=Z,31µm,18.0s
U33K Whale Pass 52.16 333 P **P** **04 36 15.9 +2.1**
baz=128,SNR=22
U33K S **S** **04 43 44.4 +7.3**
baz=128
LMEL Las Melosas 52.18 156 P **P** **04 36 14.9 +0.4**
LMEL IAmb IAmb 04 36 24.6
comp=Z,204nm,1.1s
LMEL IAMs_20 IAMs_20 04 53 07.8
comp=Z,37µm,21.0s
AMBA Amambai (Brazi 52.25 134 *e*P **P** **04 36 13.7 -1.3**
DLBC Dease Lake 52.39 337 LR LR 05 01 54.3
comp=Z,32µm,18.3s,baz=104,slow=40
DLBC Dease Lake 52.39 337 P **P** **04 36 17.9 +2.3**
baz=132,SNR=146
DLBC S **S** **04 43 46.6 +6.2**
baz=132
S34M Telegraph Cree 52.47 336 P **P** **04 36 16.3 +0.2**
S34M Telegraph Cree 52.47 336 P **P** **04 36 18.4 +2.3**
baz=131,SNR=55
S34M S **S** **04 43 47.7 +6.3**
baz=131
T33K Petersburg 52.52 334 P **P** **04 36 18.5 +2.1**
baz=128,SNR=9.4
T33K S **S** **04 43 49.9 +7.9**
baz=128
GO05 Hualane 52.55 158 ⇓P **P** **04 36 18.0 +1.0**
TCA Tanti 52.60 149 *e*P **P** **04 36 18.1 +0.5**
BO02 Sierra Bellavi 52.79 157 P **P** **04 36 19.2 +0.4**
BO02 PcP **PcP** **04 37 28.8 +0.6**
FRB Frobisher Bay 52.80 13 LR LR 05 00 01.9
comp=Z,15µm,18.9s,baz=197,slow=37
FRB Frobisher Bay 52.80 13 ⇑P **P** **04 36 18.6 +0.3**
MRA San Martin 52.93 151 *e*P **P** **04 36 20.1 +0.2**
CPUP Villa Florida 52.98 139 P **P** **04 36 19.6 -0.6**
comp=Z,15nm,0.9s,baz=182,slow=7.8,SNR=65
CPUP S S 04 43 37.6 -11
comp=Z,0.2nm,0.3s,baz=280,slow=12,SNR=1.4
CPUP LR LR 05 00 45.5
comp=Z,4µm,18.1s,baz=184,slow=38
CPUP PKPPKP **P'P'df** **05 06 48.3 +4.0**
comp=Z,0.3nm,0.3s,baz=294,slow=0.7,SNR=3.2
comp=Z,15nm,0.9s
CPUP Villa Florida 52.98 139 P **P** **04 36 19.4 -0.9**
CPUP Villa Florida 52.98 139 ⇑P **P** **04 36 19.3 -0.9**
CPUP Villa Florida 52.98 139 P **P** **04 36 19.7 -0.6**
WTLY Watson Lake, Y 53.09 339 P **P** **04 36 21.2 +0.4**
WTLY Watson Lake, Y 53.09 339 P **P** **04 36 22.2 +1.4**
baz=135,SNR=153
WTLY S **S** **04 43 53.8 +3.9**
baz=135
R33M Jennings River 53.40 337 P **P** **04 36 23.5 +0.5**
R33M IAmb IAmb 04 36 28.7
comp=Z,724nm,1.6s
R33M Jennings River 53.40 337 P **P** **04 36 25.0 +1.9**
baz=132
R33M S **S** **04 43 59.2 +5.0**
baz=132
ML02 Panimavida 53.41 158 P **P** **04 36 23.6 +0.3**
ML02 IAmb IAmb 04 36 32.8
comp=Z,449nm,1.4s
ML02 IAMs_20 IAMs_20 04 54 25.5
comp=Z,28µm,19.0s
Q32M Nakina River 53.61 336 P **P** **04 36 24.2 -0.6**
Q32M IAmb IAmb 04 36 29.6
comp=Z,386nm,1.0s
Q32M Nakina River 53.61 336 P **P** **04 36 27.0 +2.2**
baz=130
Q32M S **S** **04 43 58.9 +1.6**
baz=130
S32K Killisnoo 53.62 334 P **P** **04 36 24.6 0.0**
S32K IAMs_20 IAMs_20 05 01 07.9
comp=Z,31µm,19.0s
S32K Killisnoo 53.62 334 P **P** **04 36 26.4 +1.8**
baz=127,SNR=8.2
BI05 Punta Hualpn 53.68 160 IAMs_20 IAMs_20 04 53 32.7
comp=Z,28µm,20.0s
SIT Sitka 53.71 333 P **P** **04 36 24.4 -0.8**
SIT Sitka 53.71 333 P **P** **04 36 27.4 +2.2**
SIT Sitka 53.71 333 P **P** **04 36 24.4 -0.8**
SIT pmax pmax
comp=Z,157nm,1.2s
SIT Sitka 53.71 333 P **P** **04 36 27.3 +2.1**
baz=126
SIT S **S** **04 44 02.1 +4.0**
baz=126
ITRB Iturama 53.71 127 P **P** **04 36 25.7 -0.1**
ITRB S **S** **04 43 59.2 0.0**
ITRB Iturama 53.71 127 *e*P **P** **04 36 25.4 -0.5**
WRGLY Wrigley 53.77 344 P **P** **04 36 26.4 +0.9**
baz=142,SNR=76
WRGLY S **S** **04 44 02.1 +3.3**
baz=142
JIS Juneau Island 54.04 335 P **P** **04 36 29.9 +2.3**
ITU3 Corumbazu 54.05 125 P **P** **04 36 27.6 -0.8**
ITU3 S **S** **04 43 59.0 -5.0**
R32K Eaglecrest 54.09 334 P **P** **04 36 27.4 -0.6**
R32K IAmb IAmb 04 36 36.4
comp=Z,203nm,1.4s
R32K IAMs_20 IAMs_20 05 02 02.2
comp=Z,21µm,19.0s
R32K Eaglecrest 54.09 334 P **P** **04 36 29.7 +1.7**
baz=128,SNR=9.6
BI02 San Fabin de 54.27 158 P **P** **04 36 30.0 +0.3**
BI02 IAMs_20 IAMs_20 04 54 33.1
comp=Z,26µm,19.0s
BESE Bessie Mountai 54.42 335 P **P** **04 36 30.2 -0.3**
BESE IAmb IAmb 04 36 34.9
comp=Z,316nm,1.4s
BESE IAMs_20 IAMs_20 05 02 20.8
comp=Z,21µm,18.0s
NBPS Pedro II - PI 54.43 106 P **P** **04 36 31.6 +0.2**
NBPS S **S** **04 44 13.9 +4.6**
IPMB Ipameri, GO 54.45 124 P **P** **04 36 30.5 -0.8**
IPMB S **S** **04 44 08.0 -1.4**
IPMB Ipameri, GO 54.45 124 *e*P **P** **04 36 30.7 -0.6**
SDBA SAO DESIDERIO 54.48 116 P **P** **04 36 31.5 -0.1**
SDBA S **S** **04 44 06.3 -3.7**
SDBA SAO DESIDERIO 54.48 116 *e*P **P** **04 36 30.9 -0.7**
P32M Atlin 54.59 336 P **P** **04 36 31.6 -0.1**
P32M IAmb IAmb 04 36 35.9
comp=Z,311nm,1.1s
P32M Atlin 54.59 336 P **P** **04 36 33.4 +1.7**
baz=129,SNR=44
P32M S **S** **04 44 13.8 +3.7**
baz=129
S31K Pelican 54.63 334 P **P** **04 36 32.6 +0.7**
S31K IAmb IAmb 04 36 36.6
comp=Z,460nm,1.2s
S31K IAMs_20 IAMs_20 05 01 33.6
comp=Z,32µm,20.0s
S31K Pelican 54.63 334 P **P** **04 36 33.9 +2.0**
baz=126,SNR=27
S31K S **S** **04 44 15.2 +4.5**
baz=126
P33M Teslin, Yukon 54.64 337 P **P** **04 36 31.4 -0.7**
P33M IAmb IAmb 04 36 36.2
comp=Z,329nm,1.4s
P33M IAMs_20 IAMs_20 05 03 19.4
comp=Z,32µm,19.0s
P33M Teslin, Yukon 54.64 337 P **P** **04 36 33.5 +1.4**
baz=130,SNR=41
P33M S **S** **04 44 14.7 +3.8**
baz=130
BAT3 Ipameri 54.69 123 P **P** **04 36 32.6 -0.4**
BAT3 S **S** **04 44 13.3 +0.7**
R31K City Hall, Gus 54.69 334 P **P** **04 36 33.9 +1.6**
baz=126
BAT2 UHE Batalha 54.72 123 P **P** **04 36 32.9 -0.4**
SFA1 Serra Facao 54.86 124 P **P** **04 36 33.7 -0.6**
SFA1 S **S** **04 44 14.1 -0.7**
SKAG Skagway 55.15 335 P **P** **04 36 35.9 +0.3**
SKAG Skagway 55.15 335 P **P** **04 36 37.1 +1.5**
SKAG Skagway 55.15 335 ⇑P **P** **04 36 37.2 +1.5**
SKAG Skagway 55.15 335 P **P** **04 36 37.1 +1.5**
baz=127,SNR=7.8
SKAG S **S** **04 44 22.5 +5.0**
baz=127
SBBR Sobral 55.31 104 P **P** **04 36 37.6 0.0**
SBBR S **S** **04 44 24.9 +3.8**
N32M Quiet Lake 55.35 338 P **P** **04 36 37.6 +0.5**
N32M Quiet Lake 55.35 338 P **P** **04 36 38.6 +1.4**
baz=131
N32M S **S** **04 44 25.2 +4.9**
baz=131
NBMO Morrinhos-CE 55.39 104 P **P** **04 36 38.6 +0.5**
NBMO S **S** **04 44 26.5 +4.4**
PTGB Pitanga 55.45 133 P **P** **04 36 38.2 -0.3**
PTGB S **S** **04 44 18.8 -3.9**
PLBC Pleasant Camp 55.57 335 P **P** **04 36 40.5 +1.8**
baz=126,SNR=16
PLBC S **S** **04 44 27.4 +4.1**
baz=126
WHY Whitehorse 55.71 337 P **P** **04 36 39.7 -0.2**
WHY IAmb IAmb 04 36 43.5
comp=Z,304nm,1.1s
WHY Whitehorse 55.71 337 P **P** **04 36 40.9 +1.1**
baz=128,SNR=39
WHY S **S** **04 44 29.9 +4.6**
baz=128
BB19B Bebedouro 55.89 128 P **P** **04 36 41.3 -0.3**
BB19B S **S** **04 44 28.2 -0.4**
BB19B Bebedouro 55.89 128 *e*P **P** **04 36 41.0 -0.7**
ILON Igloolik, Nuna 56.02 5 P **P** **04 36 41.6 -0.2**
ILON IAmb IAmb 04 36 44.3
comp=Z,370nm,1.0s
PMNB Patos De Minas 56.17 124 ⇑P **P** **04 36 43.5 -0.3**
PMNB Patos De Minas 56.17 124 P **P** **04 36 43.4 -0.4**
PMNB S **S** **04 44 33.2 +0.6**
PMNB Patos De Minas 56.17 124 *e*P **P** **04 36 43.2 -0.6**
PSAL Palomas, Salto 56.20 143 *e*P **P** **04 36 43.4 -0.2**
P30M Million Dollar 56.21 335 P **P** **04 36 45.5 +2.2**
baz=126
P30M S **S** **04 44 36.3 +4.5**
baz=126
P29M Windy Craggy 56.24 335 P **P** **04 36 44.3 +0.7**
P29M IAmb IAmb 04 36 48.1
comp=Z,394nm,1.1s
P29M Windy Craggy 56.24 335 P **P** **04 36 45.4 +1.8**
baz=125
O30N Mendenhall 56.25 336 P **P** **04 36 43.9 +0.2**
O30N IAmb IAmb 04 36 47.8
comp=Z,305nm,1.2s
O30N Mendenhall 56.25 336 P **P** **04 36 45.2 +1.5**
baz=127,SNR=64
O30N S **S** **04 44 37.4 +5.0**
baz=127
FRTB Fartura 56.42 130 P **P** **04 36 44.8 -0.7**
FRTB Fartura 56.42 130 *e*P **P** **04 36 44.6 -0.8**
LR04 Corral 56.47 162 IAMs_20 IAMs_20 04 55 07.0
comp=Z,26µm,20.0s
M31M Drury Creek, Y 56.51 338 P **P** **04 36 46.0 +0.5**
M31M IAmb IAmb 04 36 54.0
comp=Z,229nm,1.1s
M31M IAMs_20 IAMs_20 05 04 26.8
comp=Z,25µm,18.0s
M31M Drury Creek, Y 56.51 338 P **P** **04 36 46.7 +1.3**
baz=130,SNR=54
M31M S **S** **04 44 38.2 +2.5**
baz=130
NBPB Pedra_Branca-C 56.57 106 S **S** **04 44 36.2 -1.6**
N31M Braeburn, Yuko 56.57 337 P **P** **04 36 45.6 -0.3**
N31M IAMs_20 IAMs_20 05 03 49.5
comp=Z,23µm,18.0s
N31M Braeburn, Yuko 56.57 337 P **P** **04 36 47.3 +1.4**
baz=128,SNR=69
N31M S **S** **04 44 39.9 +3.3**
baz=128
LR03 Panguipulli 56.58 161 P **P** **04 36 47.4 +1.3**
LR03 IAMs_20 IAMs_20 04 55 03.4
comp=Z,23µm,20.0s
GO06 Curarrehue 56.82 160 ⇓P **P** **04 36 48.9 +0.9**
HYT Haines Junctio 56.84 336 P **P** **04 36 48.1 +0.1**
HYT IAmb IAmb 04 36 57.6
comp=Z,382nm,1.4s
HYT PcP **PcP** **04 37 45.0 +1.5**
HYT Haines Junctio 56.84 336 P **P** **04 36 49.6 +1.7**
baz=126,SNR=36
HYT S **S** **04 44 47.0 +6.7**
baz=126
PNL Peninsula 56.96 334 P **P** **04 36 50.1 +1.4**
baz=123,SNR=11
PNL S **S** **04 44 48.9 +7.2**
baz=123
O29M Mount Kennedy 56.97 335 P **P** **04 36 49.0 +0.1**
O29M IAmb IAmb 04 36 53.1
comp=Z,392nm,1.3s
O29M IAMs_20 IAMs_20 05 02 35.9
comp=Z,32µm,20.0s
O29M Mount Kennedy 56.97 335 P **P** **04 36 50.5 +1.6**
baz=124,SNR=38
O29M S **S** **04 44 48.4 +6.4**
baz=124
ITAB Concordia 57.01 136 IAmb IAmb 04 36 57.8
comp=Z,373nm,1.3s
ITAB Concordia 57.01 136 P **P** **04 36 49.1 -0.4**
ITAB S **S** **04 44 40.2 -2.9**
ITAB Concordia 57.01 136 *e*P **P** **04 36 48.7 -0.8**
N30M Aishikik Lake 57.05 337 P **P** **04 36 49.6 +0.2**
N30M IAmb IAmb 04 36 53.7
comp=Z,357nm,1.3s
N30M Aishikik Lake 57.05 337 P **P** **04 36 51.0 +1.7**
baz=126,SNR=49
N30M S **S** **04 44 49.3 +6.3**
baz=126
CANS Sao Roque de M 57.13 125 S **S** **04 44 47.2 +2.0**
BCPM Bancas Point 57.22 334 IAMs_20 IAMs_20 05 01 49.9
comp=Z,20µm,22.0s
JQT1 Jequitai-MG 57.22 121 P **P** **04 36 51.3 +0.1**
LR05 Currie 57.23 161 P **P** **04 36 50.5 -0.2**
LR05 IAmb IAmb 04 36 59.9
comp=Z,187nm,1.2s
LR05 IAMs_20 IAMs_20 04 55 12.7
comp=Z,26µm,21.0s
YUK6 Outpost Mounta 57.25 336 P **P** **04 36 53.0 +2.0**
baz=125,SNR=28
MC01 Montes Claros 57.31 120 P **P** **04 36 52.0 +0.1**
MC01 S **S** **04 44 49.4 +1.8**
IVI Ivigtut 57.35 24 ⇓P **P** **04 36 52.3 +1.0**
IVI Ivigtut 57.35 24 *i* P **P** **04 36 49.4 -1.9**
IVI IAmb IAmb 04 37 03.4
comp=Z,133nm,1.4s
RCLB Rio Claro- Sao 57.42 128 P **P** **04 36 51.9 -0.6**
RCLB S **S** **04 44 46.3 -2.5**
RCLB Rio Claro- Sao 57.42 128 *e*P **P** **04 36 51.9 -0.6**
PINM Pinnacle 57.55 334 P **P** **04 36 54.8 +1.9**
baz=122,SNR=15
PCA Pinnacle 57.56 334 P **P** **04 36 52.6 -0.4**
PCA IAmb IAmb 04 37 02.1
comp=Z,417nm,1.1s
PCA IAMs_20 IAMs_20 05 01 58.8
comp=Z,21µm,22.0s
YUK4 Talbot Arm 57.59 336 P **P** **04 36 55.2 +1.9**
baz=125,SNR=15
M30M Minto, Yukon 57.62 338 P **P** **04 36 53.3 0.0**
M30M IAmb IAmb 04 37 01.7
comp=Z,328nm,1.1s
M30M IAMs_20 IAMs_20 05 05 45.2
comp=Z,19µm,18.0s
M30M Minto, Yukon 57.62 338 P **P** **04 36 54.3 +1.0**
baz=127,SNR=77
M30M S **S** **04 44 54.3 +3.9**
baz=127
LL05 Los Muermos 57.85 163 P **P** **04 36 55.5 +0.4**
LL05 IAmb IAmb 04 37 27.1
comp=Z,218nm,1.2s
LL05 IAMs_20 IAMs_20 04 55 46.9
comp=Z,27µm,20.0s
NUUK Nuuk 57.89 20 ⇑P **P** **04 36 55.9 +0.8**
NUUK Nuuk 57.89 20 *i* P **P** **04 36 54.8 -0.3**
NUUK IAmb IAmb 04 37 07.1
comp=Z,191nm,1.3s
O28M Mount Upton 57.90 335 P **P** **04 36 55.0 -0.6**
O28M IAMs_20 IAMs_20 05 05 49.3
comp=Z,20µm,18.0s
O28M Mount Upton 57.90 335 P **P** **04 36 57.1 +1.5**
baz=123,SNR=11
MAYO Mayo, Yukon 57.93 339 P **P** **04 36 56.5 +1.1**
MAYO Mayo, Yukon 57.93 339 P **P** **04 36 56.8 +1.3**
baz=129,SNR=56
MAYO S **S** **04 44 57.2 +2.9**
baz=129
NBMA Muriti-CE 57.97 108 S **S** **04 44 54.7 -1.7**
PFBR Pau dos Ferros 57.99 106 P **P** **04 36 57.2 +0.6**
PFBR S **S** **04 44 55.0 -1.6**
YUK8 Steele Glacier 58.01 336 P **P** **04 36 58.0 +1.6**
baz=124,SNR=28
TIJ01 Guaruva-PR 58.01 132 P **P** **04 36 59.5 +2.8**
TIJ01 S **S** **04 44 59.8 +3.2**
TABL Table Mountain 58.11 334 P **P** **04 36 57.1 +0.1**
TABL IAmb IAmb 04 37 06.8
comp=Z,365nm,1.0s
TABL IAMs_20 IAMs_20 05 02 04.6
comp=Z,24µm,21.0s
PLCA Paso Flores 58.16 160 P **P** **04 36 58.0 +0.7**
comp=Z,60nm,1.1s,baz=330,slow=8.4,SNR=31
PLCA S S 04 44 48.4 -10
comp=Z,3.9nm,1.1s,baz=42,slow=3.0,SNR=2.5
PLCA LR LR 04 57 11.6
comp=Z,22µm,18.4s,baz=5.0,slow=31
PLCA PKP2bc **P'P'bc** **05 06 50.3 +4.0**
comp=Z,6.2nm,1.0s,baz=180,slow=1.0,SNR=4.0
comp=Z,60nm,1.1s
PLCA Paso Flores 58.16 160 P **P** **04 36 57.5 +0.1**
PLCA IAmb IAmb 04 37 06.9
comp=Z,215nm,1.3s
PLCA Paso Flores 58.16 160 ⇑P **P** **04 36 58.0 +0.7**
PLCA Paso Flores 58.16 160 P **P** **04 36 58.1 +0.7**
PLCA S **S** **04 44 55.8 -2.1**
PLCA Paso Flores 58.16 160 *e*P **P** **04 36 58.1 +0.7**
SPB Sao Paulo 58.16 129 IAMs_20 IAMs_20 05 01 25.7
comp=Z,23µm,20.0s
SPB Sao Paulo 58.16 129 *e*P **P** **04 36 57.3 -0.3**
M29M Somme Creek 58.16 337 P **P** **04 36 57.8 +0.6**
M29M Somme Creek 58.16 337 P **P** **04 36 58.7 +1.5**
baz=126,SNR=197
M29M S **S** **04 44 59.6 +2.0**
baz=126
VABB Valinhos 58.17 128 P **P** **04 36 57.3 -0.5**
VABB S **S** **04 45 00.1 +1.3**
VAO Valinhos 58.18 128 P **P** **04 36 57.1 -0.7**
VAO IAmb IAmb 04 37 00.0
comp=Z,258nm,1.5s
VAO Valinhos 58.18 128 *e*P **P** **04 36 57.4 -0.5**
CPSB Cacapava Do Su 58.26 139 P **P** **04 36 57.5 -0.7**
CPSB S **S** **04 44 59.3 -0.2**
CPSB Cacapava Do Su 58.26 139 *e*P **P** **04 36 57.2 -1.0**
LOGN Logan Glacier 58.26 335 P **P** **04 36 58.1 +0.2**
LOGN IAmb IAmb 04 37 07.6
comp=Z,379nm,1.1s
LOGN IAMs_20 IAMs_20 05 02 36.4
comp=Z,23µm,22.0s
DIAM Diamantina, MG 58.31 122 P **P** **04 36 58.9 0.0**
DIAM S **S** **04 45 00.1 -0.8**
DIAM Diamantina, MG 58.31 122 *e*P **P** **04 36 59.1 +0.1**
MESA MESA 58.32 334 P **P** **04 36 58.2 -0.3**
MESA IAmb IAmb 04 37 13.3
comp=Z,344nm,1.2s
MESA IAMs_20 IAMs_20 05 02 54.1
comp=Z,26µm,19.0s
MESA MESA 58.32 334 P **P** **04 36 59.9 +1.5**
baz=121,SNR=8.0
YAH Yahtse 58.33 334 P **P** **04 36 58.8 +0.2**
YAH IAmb IAmb 04 37 08.7
comp=Z,420nm,1.1s
YAH IAMs_20 IAMs_20 05 02 58.3
comp=Z,29µm,20.0s
L29M L29M 58.43 338 P **P** **04 36 58.9 -0.1**
L29M IAmb IAmb 04 37 02.6
comp=Z,399nm,1.2s
L29M L29M 58.43 338 P **P** **04 36 59.9 +0.9**
baz=126,SNR=108
L29M S **S** **04 45 04.3 +3.4**
baz=126
NRS Narsarsuaq 58.43 25 P **P** **04 36 59.0 0.0**
NRS Narsarsuaq 58.43 25 P **P** **04 36 59.0 0.0**
NRS pmax pmax
comp=Z,76nm,1.0s
NRS MLR MLR
comp=Z,44µm,20.0s
NRS Narsarsuaq 58.43 25 ⇑P **P** **04 36 59.0 0.0**
NRS Narsarsuaq 58.43 25 *i* P **P** **04 36 57.8 -1.1**
CTGM Chitina Glacie 58.47 335 P **P** **04 36 58.3 -1.1**
CTGM IAmb IAmb 04 37 10.1
comp=Z,404nm,1.3s
CTGM IAMs_20 IAMs_20 05 02 42.1
comp=Z,23µm,21.0s
CTG Chitina Glacier 58.48 335 P **P** **04 37 01.5 +2.0**
baz=122,SNR=24
GRNC Granite Creek 58.52 334 P **P** **04 37 00.1 +0.2**
GRNC IAMs_20 IAMs_20 05 03 18.4
comp=Z,25µm,20.0s
YUK3 Moose Creek 58.56 336 P **P** **04 37 01.4 +1.3**
baz=123,SNR=32
K29M Barlow Dome 58.65 339 P **P** **04 37 00.2 -0.4**
K29M IAmb IAmb 04 37 08.6
comp=Z,549nm,1.6s
K29M PcP **PcP** **04 37 51.7 +1.2**
K29M Barlow Dome 58.65 339 P **P** **04 37 01.2 +0.6**
baz=127,SNR=41
K29M S **S** **04 45 05.4 +1.4**
baz=127
BARN Barnard Glacie 58.66 335 P **P** **04 36 59.9 -0.9**
BARN IAMs_20 IAMs_20 05 02 46.9
comp=Z,23µm,21.0s
PET01 Itanhaem-SP 58.67 130 P **P** **04 37 00.6 -0.6**
PET01 S **S** **04 45 02.3 -2.8**
PET01 Itanhaem-SP 58.67 130 *e*P **P** **04 37 00.3 -0.9**
J30M Hart River 58.70 340 P **P** **04 37 00.8 -0.2**
J30M IAmb IAmb 04 37 08.3
comp=Z,170nm,1.1s
J30M Hart River 58.70 340 P **P** **04 37 02.0 +1.0**
baz=129,SNR=39
J30M S **S** **04 45 07.8 +3.2**
baz=129
ISLE Juniper Island 58.70 334 P **P** **04 37 00.2 -0.9**
ISLE IAMs_20 IAMs_20 05 03 09.2
comp=Z,26µm,20.0s
SNH Sunshine Point 58.70 334 IAMs_20 IAMs_20 05 06 19.2
comp=Z,23µm,18.0s
BSCB Bom Sucesso 58.79 125 P **P** **04 37 02.1 -0.1**
BSCB S **S** **04 45 06.6 -0.3**
BSCB Bom Sucesso 58.79 125 *e*P **P** **04 37 02.4 +0.2**
WAX Waxell Ridge 58.85 334 P **P** **04 37 02.1 +0.1**
WAX IAmb IAmb 04 37 30.6
comp=Z,315nm,1.3s
WAX IAMs_20 IAMs_20 05 05 21.9
comp=Z,23µm,18.0s
H31M Peel River 58.86 342 P **P** **04 37 01.6 -0.3**
H31M IAmb IAmb 04 37 09.3
comp=Z,503nm,1.6s

H31M IAMs_20 IAMs_20 05 06 52.3
comp=Z,24µm,19.0s
H31M Peel River 58.86 342 P **P** **04 37 02.3 +0.4**
baz=132,SNR=45
H31M S **S** **04 45 09.4 +3.0**
baz=132
C36M Paulatuk 58.86 348 IAmb IAmb 04 37 06.8
comp=Z,243nm,1.2s
C36M Paulatuk 58.86 348 P **P** **04 37 01.7 -0.1**
baz=144,SNR=110
C36M S **S** **04 45 07.3 +1.1**
baz=144
BGLC Bering Glacier 58.87 333 P **P** **04 37 01.2 -0.8**
baz=119
NBPA Parau_RN 58.95 105 P **P** **04 37 03.9 +0.5**
NBPA S **S** **04 45 10.3 +1.3**
TGL Tana Glacier 58.99 334 IAMs_20 IAMs_20 05 05 37.7
comp=Z,23µm,19.0s
ANA01 Lindo Horizont 59.05 116 S **S** **04 45 09.8 -0.5**
LL01 San Ignacio de 59.06 162 IAmb IAmb 04 37 13.6
comp=Z,285nm,1.2s
LL01 San Ignacio de 59.06 162 ⇓P **P** **04 37 05.3 +1.8**
SUCK Suckling Hills 59.06 333 IAMs_20 IAMs_20 05 02 20.7
comp=Z,27µm,20.0s
BVCY Beaver Creek 59.06 336 P **P** **04 37 04.6 +1.2**
baz=123,SNR=47
BVCY S **S** **04 45 13.9 +4.7**
baz=123
PLTB Pedras Altas 59.09 141 IAmb IAmb 04 37 12.1
comp=Z,198nm,1.2s
PLTB Pedras Altas 59.09 141 P **P** **04 37 03.0 -1.0**
PLTB S **S** **04 45 09.6 -0.6**
PLTB Pedras Altas 59.09 141 *e*P **P** **04 37 03.6 -0.4**
CRQE Cirque 59.10 334 P **P** **04 37 05.2 +1.4**
baz=120,SNR=16
CRQM Cirque 59.12 334 IAMs_20 IAMs_20 05 05 30.7
comp=Z,24µm,18.0s
I30M Mount Dempster 59.12 340 P **P** **04 37 04.5 +0.6**
baz=129,SNR=144
I30M S **S** **04 45 13.3 +3.2**
baz=129
BERG Berg Lake 59.18 334 IAMs_20 IAMs_20 05 03 38.9
comp=Z,19µm,20.0s
CNLB Canela 59.21 137 P **P** **04 37 04.2 -0.7**
CNLB S **S** **04 45 09.3 -2.7**
CNLB Canela 59.21 137 *e*P **P** **04 37 04.3 -0.7**
NBTA Tacaratu-PE 59.26 109 P **P** **04 37 06.3 +0.8**
NBTA S **S** **04 45 15.3 +2.2**
KAIM Kayak Island 59.27 333 P **P** **04 37 06.4 +1.5**
baz=118
TRQA Tornquist 59.29 152 **P** **04 37 05.7 +0.4**
TRQA IAmb IAmb 04 37 08.3
comp=Z,274nm,1.5s
TRQA Tornquist 59.29 152 P **P** **04 37 05.7 +0.4**
TRQA pmax pmax
comp=Z,274nm,1.5s
TRQA Tornquist 59.29 152 P **P** **04 37 05.5 +0.2**
TRQA S **S** **04 45 11.9 -0.8**
STCH Steam Cracks 59.35 285 P **P** **04 37 05.5 -0.7**
STCH IAmb IAmb 04 37 08.1
comp=Z,109nm,0.7s
GO07 Milladeo Hill, 59.38 163 P **P** **04 37 06.2 +0.6**
GO07 IAmb IAmb 04 37 15.3
comp=Z,179nm,1.0s
PARB Paraibuna 59.39 128 P **P** **04 37 06.2 0.0**
PARB Paraibuna 59.39 128 *e*P **P** **04 37 05.3 -1.0**
MCARA McCarthy VSAT 59.39 335 IAMs_20 IAMs_20 05 03 56.3
comp=Z,22µm,19.0s
MCARA McCarthy VSAT 59.39 335 P **P** **04 37 07.6 +2.0**
baz=120,SNR=45
MCARA S **S** **04 45 18.5 +5.1**
baz=120
HMT Hamilton 59.40 333 IAmb IAmb 04 37 10.1
comp=Z,394nm,1.3s
HMT IAMs_20 IAMs_20 05 02 31.6
comp=Z,24µm,21.0s
M27K Edge Creek, AK 59.43 336 P **P** **04 37 07.5 +1.4**
baz=122
DAWY Dawson 59.45 338 IAmb IAmb 04 37 13.3
comp=Z,92nm,0.7s
DAWY Dawson 59.45 338 P **P** **04 37 06.1 0.0**
baz=125,SNR=30
DAWY S **S** **04 45 16.3 +2.2**
baz=125
VRDI Verde Repeater 59.49 334 IAMs_20 IAMs_20 05 06 05.0
comp=Z,20µm,19.0s
POIN Pond Inlet 59.59 5 IAmb IAmb 04 37 09.9
comp=Z,513nm,1.8s
MLH Mauna Loa 59.59 285 P **P** **04 37 07.2 -0.8**
RAGM Ragged Mountai 59.60 333 IAMs_20 IAMs_20 05 02 37.1
comp=Z,26µm,20.0s
POHA Pohakuloa 59.70 285 P **P** **04 37 07.3 -1.5**
POHA IAmb IAmb 04 37 11.2
comp=Z,320nm,1.4s
POHA Pohakuloa 59.70 285 P **P** **04 37 08.6 -0.2**
GLB Gilahina Butte 59.75 335 IAmb IAmb 04 37 11.7
comp=Z,227nm,0.9s
GLB IAMs_20 IAMs_20 05 02 53.7
comp=Z,18µm,22.0s
BCAR Beaver Creek A 59.78 337 P **P** **04 37 08.2 -0.1**
F31M Tsiigehtchic 59.79 343 P **P** **04 37 08.6 +0.3**
baz=133,SNR=197
F31M S **S** **04 45 19.1 +0.9**
baz=133
L27K Beaver Creek, 59.79 337 IAmb IAmb 04 37 17.1
comp=Z,246nm,0.9s
L27K IAMs_20 IAMs_20 05 06 30.2
comp=Z,21µm,18.0s
L27K Beaver Creek, 59.79 337 P **P** **04 37 09.6 +1.1**
baz=122,SNR=126
L27K S **S** **04 45 22.0 +3.5**
baz=122
BMRM Bremner River 59.85 334 IAMs_20 IAMs_20 05 03 13.6
comp=Z,18µm,20.0s
BMRM Bremner River 59.85 334 P **P** **04 37 10.3 +1.4**
baz=118,SNR=19
BMRM S **S** **04 45 23.3 +3.8**
baz=118
M26K Nabesna, AK 59.90 336 IAmb IAmb 04 37 17.7
comp=Z,310nm,1.0s
M26K IAMs_20 IAMs_20 05 03 46.7
comp=Z,25µm,21.0s
M26K Nabesna, AK 59.90 336 P **P** **04 37 10.3 +1.1**
baz=121,SNR=64
M26K S **S** **04 45 24.9 +4.8**
baz=121
Q23K Middleton Isla 59.92 332 P **P** **04 37 10.1 +0.8**
baz=116
EPYK Eagle Plains 59.96 341 P **P** **04 37 10.0 +0.5**
baz=129,SNR=82
EPYK S **S** **04 45 22.2 +1.5**
baz=129
LL02 Futaleuf 59.97 162 P **P** **04 37 10.3 +0.5**
LL02 IAmb IAmb 04 37 18.7
comp=Z,164nm,1.1s
LL02 IAMs_20 IAMs_20 04 57 33.7
comp=Z,22µm,20.0s
LL02 Futaleuf 59.97 162 ⇓P **P** **04 37 10.8 +1.0**
MHA Mahukona 60.02 285 P **P** **04 37 10.1 -0.5**
MHA Mahukona 60.02 285 P **P** **04 37 10.1 -0.5**
SFJD Kangerlussuaq 60.08 18 LR LR 05 04 56.1
comp=Z,68µm,18.2s,baz=220,slow=38
SFJD Kangerlussuaq 60.08 18 ⇑P **P** **04 37 10.0 -0.2**
SFJD Kangerlussuaq 60.08 18 *i* P **P** **04 37 09.8 -0.5**
SFJD IAmb IAmb 04 37 12.4
comp=Z,31nm,1.0s
SFJD Kangerlussuaq 60.08 18 P **P** **04 37 10.3 +0.1**
RCBR Riachuelo 60.11 105 P **P** **04 37 12.1 +0.7**
RCBR IAmb IAmb 04 37 20.5
comp=Z,227nm,1.1s
RCBR Riachuelo 60.11 105 P **P** **04 37 12.1 +0.7**
RCBR pmax pmax
comp=Z,227nm,1.2s
RCBR MLR MLR
comp=Z,15µm,19.0s
RCBR Riachuelo 60.11 105 ⇑P **P** **04 37 12.7 +1.3**
RCBR Riachuelo 60.11 105 P **P** **04 37 12.7 +1.3**
RCBR S **S** **04 45 22.8 -1.3**
RCBR Riachuelo 60.11 105 *e*P **P** **04 37 11.8 +0.4**
EYAK Cordova Ski Ar 60.15 333 IAMs_20 IAMs_20 05 02 52.5
comp=Z,28µm,20.0s
EYAK Cordova Ski Ar 60.15 333 P **P** **04 37 11.9 +1.1**
EYAK Cordova Ski Ar 60.15 333 P **P** **04 37 12.6 +1.8**
baz=117,SNR=10
N25K Chitina, Valde 60.16 334 IAmb IAmb 04 37 20.7
comp=Z,242nm,0.8s

N25K IAMs_20 IAMs_20 05 06 15.6
comp=Z,18µm,18.0s
N25K Chitina, Valde 60.16 334 P **P** **04 37 12.8 +1.8**
baz=119,SNR=51
N25K S **S** **04 45 26.6 +3.2**
baz=119
G30M tAoh Zraii Nji 60.20 342 IAmb IAmb 04 37 21.6
comp=Z,191nm,1.1s
G30M tAoh Zraii Nji 60.20 342 P **P** **04 37 11.3 +0.1**
baz=130,SNR=46
G30M S **S** **04 45 23.8 0.0**
baz=130
NBLA Lagarto - SE 60.22 111 S **S** **04 45 24.7 -0.6**
INK Inuvik 60.33 344 PKPPKP 05 06 39.9
comp=Z,6.7nm,1.2s,baz=305,slow=4.1,SNR=4.6
INK LR LR 05 07 42.1
comp=Z,35µm,18.5s,baz=134,slow=40
INK P4KPbc 05 14 15.6
comp=Z,5.9nm,1.1s,baz=140,slow=3.2,SNR=5.2
INK Inuvik 60.33 344 ⇑P **P** **04 37 12.2 +0.4**
INK Inuvik 60.33 344 P **P** **04 37 12.5 +0.6**
baz=134,SNR=310
INK S **S** **04 45 24.6 -0.5**
baz=134
NBIT Itapeh - BA 60.36 116 S **S** **04 45 27.4 +0.3**
L26K Log Cabin Wild 60.36 336 IAmb IAmb 04 37 16.1
comp=Z,359nm,1.3s
L26K Log Cabin Wild 60.36 336 P **P** **04 37 13.4 +1.0**
baz=121,SNR=71
L26K S **S** **04 45 30.1 +4.2**
baz=121
H29M Whitestone 60.39 341 IAMs_20 IAMs_20 05 06 33.9
comp=Z,23µm,19.0s
H29M Whitestone 60.39 341 P **P** **04 37 13.2 +0.7**
baz=128,SNR=70
H29M S **S** **04 45 27.4 +1.3**
baz=128
K27K Chicken 60.41 338 IAmb IAmb 04 37 16.6
comp=Z,278nm,1.1s
K27K Chicken 60.41 338 P **P** **04 37 14.0 +1.4**
baz=122
K27K S **S** **04 45 28.6 +2.2**
baz=122
HIN Hinchinbrook I 60.42 333 IAMs_20 IAMs_20 05 02 54.6
comp=Z,25µm,20.0s
DIV Divide 60.43 334 IAMs_20 IAMs_20 05 03 27.9
comp=Z,20µm,21.0s
I28M Miner Creek 60.45 340 IAmb IAmb 04 37 23.5
comp=Z,142nm,1.1s
I28M IAMs_20 IAMs_20 05 05 08.4
comp=Z,19µm,22.0s
I28M Miner Creek 60.45 340 P **P** **04 37 13.1 +0.1**
baz=126,SNR=53
I28M S **S** **04 45 27.0 0.0**
baz=126
MENT Mentasta 60.46 336 P **P** **04 37 12.7 -0.3**
MENT IAmb IAmb 04 37 16.7
comp=Z,419nm,1.5s
MENT Mentasta 60.46 336 P **P** **04 37 14.0 +1.0**
CMC01 Camacan, BA 60.47 117 P **P** **04 37 14.3 +0.6**
CMC01 S **S** **04 45 28.5 0.0**
CMC01 Camacan, BA 60.47 117 *e*P **P** **04 37 14.2 +0.4**
F30M Barrier River 60.49 343 P **P** **04 37 13.8 +0.7**
baz=131,SNR=188
F30M S **S** **04 45 28.0 +0.8**
baz=131
VAS01 Vassouras-RJ 60.52 126 S **S** **04 45 28.7 -0.3**
VAS01 Vassouras-RJ 60.52 126 *e*P **P** **04 37 14.2 +0.2**
FID Port Fidalgo 60.56 333 IAMs_20 IAMs_20 05 03 04.6
comp=Z,20µm,21.0s
SJMB Sao Joao De Ma 60.57 121 P **P** **04 37 14.5 +0.1**
SJMB S **S** **04 45 29.9 +0.2**
SJMB Sao Joao De Ma 60.57 121 *e*P **P** **04 37 13.9 -0.5**
P23K Montague Islan 60.65 332 IAMs_20 IAMs_20 05 02 43.7
comp=Z,22µm,20.0s
P23K Montague Islan 60.65 332 P **P** **04 37 15.5 +1.2**
baz=115,SNR=7.4
KLU Klutina 60.66 334 IAMs_20 IAMs_20 05 03 39.0
comp=Z,18µm,21.0s
KLU Klutina 60.66 334 P **P** **04 37 15.6 +1.1**
baz=117,SNR=43
KLU S **S** **04 45 31.6 +1.7**
baz=117
G29M Pine Creek 60.71 341 P **P** **04 37 15.2 +0.5**
baz=128,SNR=214
G29M S **S** **04 45 31.6 +1.4**
baz=128
GUA01 Guaratinga, BA 60.76 118 P **P** **04 37 16.1 +0.3**
GUA01 S **S** **04 45 33.2 +1.0**
GUA01 Guaratinga, BA 60.76 118 *e*P **P** **04 37 15.7 -0.1**
HARP HAARP 60.77 335 P **P** **04 37 16.4 +1.3**
baz=119,SNR=43
HARP S **S** **04 45 33.7 +2.5**
baz=119
GDH Godhavn 60.81 15 *i* P **P** **04 37 14.9 -0.3**
NBCA Caruaru-PE 60.82 108 S **S** **04 45 36.5 +3.2**
SIM2 UHE Simplicio 60.83 125 P **P** **04 37 16.4 +0.2**
AY01 Puyuhuapi 60.87 163 P **P** **04 37 16.3 +0.5**
AY01 IAmb IAmb 04 37 25.0
comp=Z,160nm,1.1s
NBPV Pedro Velho 60.88 105 P **P** **04 37 17.7 +1.1**
NBPV S **S** **04 45 38.6 +4.8**
GLI Glacier Island 60.89 333 IAMs_20 IAMs_20 05 02 50.0
comp=Z,19µm,22.0s
GLI Glacier Island 60.89 333 P **P** **04 37 16.7 +0.8**
baz=116
GLI S **S** **04 45 35.8 +3.1**
baz=116
RES Resolute Bay 60.91 359 LR LR 05 07 43.4
comp=Z,21µm,19.2s,baz=170,slow=40
RES Resolute Bay 60.91 359 ⇑P **P** **04 37 15.6 -0.2**
DOT Dot Lake 60.96 337 IAMs_20 IAMs_20 05 05 55.6
comp=Z,27µm,19.0s
M24K Tolsona, Glenn 61.05 335 IAMs_20 IAMs_20 05 06 36.2
comp=Z,16µm,18.0s
M24K Tolsona, Glenn 61.05 335 P **P** **04 37 18.9 +1.8**
baz=117,SNR=23
VAH Vaihoa 61.06 244 *e*P **P** **04 37 19.1 +1.3**
comp=Z,4.4nm,1.1s
SCRK Sand Creek 61.10 337 IAmb IAmb 04 37 21.1
comp=Z,288nm,1.2s
SCRK IAMs_20 IAMs_20 05 06 46.2
comp=Z,17µm,18.0s
SCRK Sand Creek 61.10 337 P **P** **04 37 18.4 +1.0**
baz=121,SNR=96
SCRK S **S** **04 45 38.2 +2.7**
baz=121
NBAN Anadia - AL 61.10 109 P **P** **04 37 18.2 +0.1**
NBAN S **S** **04 45 39.6 +2.9**
NBAN Anadia - AL 61.10 109 *e*P **P** **04 37 17.8 -0.3**
I27K Kandik River 61.11 339 IAmb IAmb 04 37 26.2
comp=Z,295nm,1.0s
I27K Kandik River 61.11 339 P **P** **04 37 17.9 +0.5**
baz=124,SNR=85
I27K S **S** **04 45 38.5 +3.1**
baz=124
PAX Paxson 61.17 336 IAmb IAmb 04 37 26.0
comp=Z,263nm,0.9s
PAX IAMs_20 IAMs_20 05 05 34.3
comp=Z,21µm,20.0s
PAX Paxson 61.17 336 P **P** **04 37 18.3 +0.4**
baz=119,SNR=78
PAX S **S** **04 45 39.5 +3.1**
baz=119
J26L Joseph Creek 61.21 338 P **P** **04 37 19.2 +1.1**
baz=121,SNR=161
J26L S **S** **04 45 40.0 +3.2**
baz=121
A36M Sachs Harbour 61.24 349 IAMs_20 IAMs_20 05 08 49.2
comp=Z,16µm,18.0s
A36M Sachs Harbour 61.24 349 P **P** **04 37 18.1 +0.1**
baz=144,SNR=254
A36M S **S** **04 45 37.3 +0.5**
baz=144
DUB01 Friburgo-RJ 61.26 125 P **P** **04 37 20.4 +1.3**
DUB01 S **S** **04 45 40.7 +2.1**
DUB01 Friburgo-RJ 61.26 125 *e*P **P** **04 37 18.7 -0.4**
RIDG Independent Ri 61.31 337 P **P** **04 37 19.9 +1.1**
baz=120,SNR=47
RIDG S **S** **04 45 40.4 +2.4**
baz=120
SCM Sheep Creek Mo 61.41 334 IAmb IAmb 04 37 28.1
comp=Z,258nm,1.0s
SCM IAMs_20 IAMs_20 05 04 09.8
comp=Z,20µm,21.0s
SCM Sheep Creek Mo 61.41 334 P **P** **04 37 20.5 +0.9**
baz=116,SNR=14

SCM S **S** **04 45 41.1 +1.7**
baz=116
ILULI Ilulissat 61.42 16 *i* P **P** **04 37 19.0 -0.3**
ILULI IAmb IAmb 04 37 21.8
comp=Z,68nm,1.0s
PWL Port Wells 61.43 333 IAmb IAmb 04 37 32.0
comp=Z,112nm,1.0s
PWL IAMs_20 IAMs_20 05 03 23.4
comp=Z,19µm,20.0s
PWL Port Wells 61.43 333 P **P** **04 37 20.3 +0.6**
baz=115,SNR=7.7
H27K Steamboat Moun 61.43 340 P **P** **04 37 20.5 +0.9**
baz=124,SNR=95
H27K S **S** **04 45 41.7 +2.2**
baz=124
I26K Coal Creek Min 61.49 339 P **P** **04 37 20.2 +0.3**
baz=122
I26K S **S** **04 45 42.4 +2.3**
baz=122
RIB01 Linhares ES 61.52 121 P **P** **04 37 20.6 -0.3**
RIB01 S **S** **04 45 42.0 +0.2**
RIB01 Linhares ES 61.52 121 *e*P **P** **04 37 20.5 -0.3**
M23K Glacier View 61.57 334 P **P** **04 37 21.2 +0.7**
baz=116,SNR=29
E29M Blow River 61.60 343 P **P** **04 37 21.5 +0.9**
baz=129,SNR=371
E29M S **S** **04 45 42.8 +1.4**
baz=129
SEW Seward 61.63 332 P **P** **04 37 20.9 0.0**
SEW IAmb IAmb 04 37 24.1
comp=Z,374nm,1.2s
SEW IAMs_20 IAMs_20 05 02 34.7
comp=Z,23µm,22.0s
SEW Seward 61.63 332 P **P** **04 37 21.4 +0.5**
baz=113,SNR=18
K24K Donnelly Dome 61.70 336 IAMs_20 IAMs_20 05 04 44.1
comp=Z,20µm,20.0s
K24K Donnelly Dome 61.70 336 P **P** **04 37 21.9 +0.5**
baz=119,SNR=17
K24K S **S** **04 45 46.6 +3.7**
baz=119
CAM01 Campos-RJ 61.71 124 P **P** **04 37 22.0 0.0**
CAM01 S **S** **04 45 46.4 +2.3**
CAM01 Campos-RJ 61.71 124 *e*P **P** **04 37 21.9 -0.2**
F28M Old Crow 61.71 342 IAMs_20 IAMs_20 05 07 30.0
comp=Z,23µm,20.0s
F28M Old Crow 61.71 342 P **P** **04 37 22.4 +1.0**
baz=126,SNR=623
F28M S **S** **04 45 45.1 +2.2**
baz=126
KNK Knik Glacier 61.72 333 IAmb IAmb 04 37 24.4
comp=Z,216nm,0.9s
KNK IAMs_20 IAMs_20 05 03 04.0
comp=Z,19µm,22.0s
KNK Knik Glacier 61.72 333 P **P** **04 37 22.3 +0.8**
baz=115,SNR=35
KNK S **S** **04 45 46.0 +2.8**
baz=115
SAQQ Saqqaq 61.74 15 *i* P **P** **04 37 20.8 -0.7**
SAQQ IAmb IAmb 04 37 24.8
comp=Z,36nm,1.0s
G27K Doyon Strip 61.80 340 IAmb IAmb 04 37 29.7
comp=Z,223nm,1.1s
G27K IAMs_20 IAMs_20 05 07 24.1
comp=Z,24µm,18.0s
G27K Doyon Strip 61.80 340 P **P** **04 37 22.5 +0.5**
baz=124,SNR=64
G27K S **S** **04 45 45.5 +1.3**
baz=124
SML Sawmill 61.83 334 IAMs_20 IAMs_20 05 03 46.9
comp=Z,24µm,22.0s
SML Sawmill 61.83 334 P **P** **04 37 23.1 +0.8**
baz=115,SNR=32
SML S **S** **04 45 47.3 +2.6**
baz=115
NIAQ Niaqornat 61.88 14 *i* P **P** **04 37 23.6 +1.2**
NIAQ IAmb IAmb 04 37 26.2
comp=Z,563nm,1.5s
HON Honolulu 61.88 287 P **P** **04 37 22.8 -0.5**
HON Honolulu 61.88 287 P **P** **04 37 22.8 -0.5**
HON pmax pmax
comp=Z,612nm,1.4s
O22K Cooper Landing 61.90 332 IAmb IAmb 04 37 49.8
comp=Z,298nm,1.0s
O22K IAMs_20 IAMs_20 05 02 45.9
comp=Z,23µm,22.0s
O22K Cooper Landing 61.90 332 P **P** **04 37 23.5 +0.8**
baz=113,SNR=11
WAT6 Susitna Watana 61.92 335 P **P** **04 37 23.7 +0.6**
baz=116,SNR=126
WAT6 S **S** **04 45 47.4 +1.3**
baz=116
J25K Salcha River, 61.94 337 IAmb IAmb 04 37 26.5
comp=Z,308nm,1.3s
J25K IAMs_20 IAMs_20 05 07 57.9
comp=Z,19µm,18.0s
J25K Salcha River, 61.94 337 P **P** **04 37 23.9 +0.8**
baz=120,SNR=82
J25K S **S** **04 45 48.2 +2.2**
baz=120
DHY Denali Highway 61.99 335 IAmb IAmb 04 37 26.3
comp=Z,135nm,1.0s
DHY IAMs_20 IAMs_20 05 07 30.0
comp=Z,19µm,18.0s
DHY Denali Highway 61.99 335 P **P** **04 37 23.7 +0.2**
baz=117,SNR=23
DHY S **S** **04 45 49.7 +2.8**
baz=117
GHO Glory Hole Cre 62.07 334 IAMs_20 IAMs_20 05 03 53.3
comp=Z,23µm,22.0s
COYC Coyhaique 62.08 163 IAmb IAmb 04 37 27.6
comp=Z,233nm,1.3s
COYC Coyhaique 62.08 163 ⇑P **P** **04 37 24.8 +0.7**
BRSE Bradley Lake S 62.09 331 P **P** **04 37 24.9 +0.8**
baz=112,SNR=19
PMR Palmer 62.09 333 P **P** **04 37 23.8 -0.1**
PMR IAmb IAmb 04 37 37.4
comp=Z,296nm,1.1s
PMR Palmer 62.09 333 P **P** **04 37 24.3 +0.3**
PMR Palmer 62.09 333 P **P** **04 37 23.8 -0.1**
PMR pmax pmax
comp=Z,296nm,1.1s
PMR Palmer 62.09 333 P **P** **04 37 24.6 +0.6**
baz=114,SNR=36
PMR S **S** **04 45 50.3 +2.6**
baz=114
SLKM Skilak Lake 62.14 332 IAMs_20 IAMs_20 05 03 15.2
comp=Z,17µm,22.0s
RC01 Rabbit Creek A 62.15 333 IAMs_20 IAMs_20 05 02 59.4
comp=Z,19µm,22.0s
RC01 Rabbit Creek A 62.15 333 P **P** **04 37 25.1 +0.7**
baz=113,SNR=44
RC01 S **S** **04 45 50.2 +1.6**
baz=113
BRLK Bradley Lake 62.16 331 IAMs_20 IAMs_20 05 05 51.0
comp=Z,19µm,18.0s
E28M Babbage River 62.21 343 P **P** **04 37 25.2 +0.5**
baz=127
E28M S **S** **04 45 49.2 +0.1**
baz=127
CNPM China Poot 62.24 331 IAMs_20 IAMs_20 05 05 52.0
comp=Z,20µm,18.0s
KDAK Kodiak Island 62.30 329 P **P** **04 37 25.7 +0.3**
KDAK Kodiak Island 62.30 329 IAMs_20 IAMs_20 05 04 57.6
comp=Z,15µm,19.0s
KDAK Kodiak Island 62.30 329 P **P** **04 37 25.7 +0.3**
KDAK pmax pmax
comp=Z,462nm,1.5s
KDAK MLR MLR
comp=Z,15µm,19.0s
KDAK Kodiak Island 62.30 329 ⇑P **P** **04 37 25.9 +0.5**
KDAK Kodiak Island 62.30 329 P **P** **04 37 26.2 +0.7**
baz=109
ABR01 Abrolhos, BA 62.33 119 P **P** **04 37 26.9 +0.6**
ABR01 S **S** **04 45 54.1 +2.1**
ABR01 Abrolhos, BA 62.33 119 *e*P **P** **04 37 26.1 -0.1**
WAT1 Susitna Watana 62.37 335 P **P** **04 37 26.3 +0.4**
baz=115
WAT1 S **S** **04 45 53.7 +2.3**
baz=115
SAATT Saattut 62.38 14 *i* P **P** **04 37 26.1 +0.4**
SAATT IAmb IAmb 04 37 28.8
comp=Z,301nm,1.0s
FIS Fire Island 62.39 333 IAMs_20 IAMs_20 05 04 21.6
comp=Z,18µm,21.0s
D28M Stokes Point 62.43 343 P **P** **04 37 27.2 +1.1**
baz=128,SNR=237

D28M S **S** **04 45 53.8 +2.0**
baz=128
HDA **Harding Lake** **62.44 337** IAmb IAmb 04 37 33.9
comp=Z,221nm,0.9s
HDA IAMs_20 IAMs_20 05 05 40.7
comp=Z,19µm,21.0s
HDA **Harding Lake** **62.44 337** P **P** **04 37 26.5 +0.2**
baz=118,SNR=79
HDA S **S** **04 45 53.9 +1.7**
baz=118
PRP **Porcupine Dome** **62.45 338** P **P** **04 37 27.2 +0.7**
baz=120,SNR=146
PRP S **S** **04 45 54.7 +2.2**
baz=120
OHAK **Old Harbor** **62.48 328** IAmb IAmb 04 37 30.2
comp=Z,402nm,1.4s
OHAK **Old Harbor** **62.48 328** P **P** **04 37 28.1 +1.5**
OHAK **Old Harbor** **62.48 328** P **P** **04 37 27.6 +1.0**
baz=108,SNR=14
Q20K **Shuyak Island** **62.48 330** P **P** **04 37 27.5 +0.9**
baz=110,SNR=18
Q20K S **S** **04 45 55.0 +2.2**
baz=110
HOM **Homer** **62.48 331** IAMs_20 IAMs_20 05 06 09.4
comp=Z,19µm,18.0s
HOM **Homer** **62.48 331** P **P** **04 37 27.8 +1.1**
baz=111
HOM S **S** **04 45 55.6 +2.8**
baz=111
NUUG **Nuugaatsiaq** **62.52 13** *i* P **P** **04 37 26.4 -0.3**
NUUG IAmb IAmb 04 37 30.1
comp=Z,363nm,1.0s
E27K **Coleen River** **62.57 342** IAMs_20 IAMs_20 05 08 06.5
comp=Z,22µm,19.0s
E27K **Coleen River** **62.57 342** P **P** **04 37 28.2 +1.0**
baz=125,SNR=239
E27K S **S** **04 45 55.8 +2.0**
baz=125
G26K **Porcupine Rive** **62.58 340** IAmb IAmb 04 37 35.2
comp=Z,303nm,1.1s
G26K **Porcupine Rive** **62.58 340** P **P** **04 37 27.8 +0.5**
baz=122,SNR=42
G26K S **S** **04 45 54.9 +1.0**
baz=122
M22K **Willow** **62.59 333** P **P** **04 37 27.9 +0.6**
baz=113,SNR=19
M22K S **S** **04 45 56.2 +2.2**
baz=113
ILAR **Eielson Array** **62.59 337** P **P** **04 37 27.4 +0.1**
comp=Z,187nm,1.0s,baz=118,slow=3.9,SNR=330
ILAR PP **PP** **04 39 48.9 +4.0**
comp=Z,46nm,1.1s,baz=116,slow=7.4,SNR=5.6
ILAR PKPPKP **P'P'df** **05 06 29.6 -4.7**
comp=Z,2.7nm,1.1s,baz=306,slow=2.9,SNR=8.3
ILAR LR LR 05 07 42.8
comp=Z,24µm,18.0s,baz=112,slow=39
ILAR P4KPbc 05 14 24.6
comp=Z,0.9nm,0.9s,baz=176,slow=2.8,SNR=6.7
comp=Z,187nm,1.0s
CAPN **Captain Cook N** **62.66 332** P **P** **04 37 29.2 +1.4**
baz=112
RND **Reindeer** **62.74 335** IAMs_20 IAMs_20 05 07 51.8
comp=Z,22µm,18.0s
SII **Sitkinak Islan** **62.74 327** IAMs_20 IAMs_20 05 05 53.6
comp=Z,16µm,18.0s
SII **Sitkinak Islan** **62.74 327** P **P** **04 37 29.3 +0.8**
baz=107,SNR=7.5
SUA **Susitna One** **62.75 333** P **P** **04 37 29.5 +0.9**
baz=113,SNR=44
SUA S **S** **04 45 58.1 +1.7**
baz=113
UPNV **Upernavik** **62.82 12** *i* P **P** **04 37 28.6 0.0**
UPNV IAmb IAmb 04 37 31.6
comp=Z,265nm,1.2s
CCB **Clear Creek Bu** **62.88 337** IAmb IAmb 04 37 37.8
comp=Z,136nm,1.2s
CCB IAMs_20 IAMs_20 05 06 03.3
comp=Z,17µm,20.0s
WRH **Wood River Hil** **62.91 337** IAmb IAmb 04 37 31.2
comp=Z,102nm,1.0s
WRH IAMs_20 IAMs_20 05 05 31.1
comp=Z,15µm,20.0s
CUT **Chulitna** **62.91 334** IAMs_20 IAMs_20 05 04 42.3
comp=Z,20µm,22.0s
CUT **Chulitna** **62.91 334** P **P** **04 37 30.2 +0.8**
baz=114,SNR=55
MCK **McKinley** **62.91 336** IAMs_20 IAMs_20 05 08 09.3
comp=Z,25µm,19.0s
MCK **McKinley** **62.91 336** P **P** **04 37 30.1 +0.6**
baz=116,SNR=109
MCK S **S** **04 45 59.4 +1.2**
baz=116
H25L **Birch Creek** **62.93 339** P **P** **04 37 30.4 +0.9**
baz=120,SNR=84
POKR **Poker Plat Res** **62.95 337** IAmb IAmb 04 37 37.4
comp=Z,269nm,1.0s
POKR IAMs_20 IAMs_20 05 08 39.3
comp=Z,21µm,18.0s
POKR **Poker Plat Res** **62.95 337** P **P** **04 37 30.1 +0.3**
baz=118,SNR=79
POKR S **S** **04 45 59.7 +1.0**
baz=118
COLA **College** **63.00 337** P **P** **04 37 29.9 -0.1**
COLA IAmb IAmb 04 37 37.9
comp=Z,252nm,0.9s
COLA **College** **63.00 337** IAMs_20 IAMs_20 05 08 37.6
comp=Z,20µm,19.0s
COLA **College** **63.00 337** P **P** **04 37 30.2 +0.2**
COLA **College** **63.00 337** *c i* P **P** **04 37 28.1 -1.9**
COLA pmax pmax
comp=Z,186nm,1.0s
COLA MLR MLR
comp=Z,28µm,17.0s
COLA **College** **63.00 337** ⇑P **P** **04 37 29.9 -0.1**
COLA **College** **63.00 337** P **P** **04 37 30.3 +0.3**
baz=117
COLA **College** **63.00 337** P **P** **04 37 30.2 +0.2**
D27M **Malcolm River** **63.01 343** P **P** **04 37 30.9 +0.8**
baz=126,SNR=454
D27M S **S** **04 46 01.8 +2.5**
baz=126
O20K **Slope Mountain** **63.09 331** P **P** **04 37 31.6 +0.8**
baz=110,SNR=25
F26K **Sheenjek River** **63.10 341** P **P** **04 37 31.8 +1.1**
baz=122,SNR=69
F26K S **S** **04 46 02.7 +2.2**
baz=122
BMAR **Burnt Mountain** **63.10 340** P **P** **04 37 31.2 +0.5**
L22K **Petersville** **63.17 334** IAMs_20 IAMs_20 05 04 49.9
comp=Z,21µm,22.0s
P19K **Oil Pt** **63.24 330** IAMs_20 IAMs_20 05 06 25.3
comp=Z,15µm,18.0s
P19K **Oil Pt** **63.24 330** P **P** **04 37 32.5 +0.8**
baz=109,SNR=10
P19K S **S** **04 46 05.7 +3.4**
baz=109
STLK **Strandline Lak** **63.24 333** IAmb IAmb 04 37 34.9
comp=Z,183nm,1.0s
G25K **Bearman Lake** **63.27 339** P **P** **04 37 32.8 +1.0**
baz=120,SNR=43
SKT **Skwentna** **63.29 333** IAMs_20 IAMs_20 05 07 03.5
comp=Z,15µm,18.0s
SKT **Skwentna** **63.29 333** P **P** **04 37 32.5 +0.5**
baz=112,SNR=78
SKT S **S** **04 46 05.3 +2.3**
baz=112
N20K **Mount Spurr** **63.30 332** P **P** **04 37 32.5 +0.4**
baz=111,SNR=70
N20K S **S** **04 46 03.6 +0.3**
baz=111
SPCR **Spurr Chakacha** **63.30 332** P **P** **04 37 32.6 +0.4**
baz=111,SNR=60
SPCR S **S** **04 46 03.3 +0.1**
baz=111
CHIR **Chirikof Islan** **63.31 326** P **P** **04 37 32.4 +0.2**
baz=105
CHIR S **S** **04 46 02.9 -0.4**
baz=105
BWN **Browne** **63.31 336** IAMs_20 IAMs_20 05 07 18.2
comp=Z,23µm,19.0s
NEA2 **Nenana** **63.34 336** IAMs_20 IAMs_20 05 07 46.6
comp=Z,14µm,18.0s
NEA2 **Nenana** **63.34 336** P **P** **04 37 32.4 +0.1**
baz=116,SNR=67
NEA2 S **S** **04 46 03.5 +0.1**
baz=116
TRF **Thorofare Moun** **63.34 335** IAMs_20 IAMs_20 05 07 56.8
comp=Z,17µm,20.0s
TRF **Thorofare Moun** **63.34 335** P **P** **04 37 33.1 +0.5**
baz=114,SNR=96
TRF S **S** **04 46 05.1 +1.2**
baz=114
H24K **Noodor Dome** **63.45 338** IAMs_20 IAMs_20 05 06 44.9
comp=Z,21µm,21.0s
H24K **Noodor Dome** **63.45 338** P **P** **04 37 33.7 +0.6**
baz=118,SNR=136
H24K S **S** **04 46 06.6 +1.6**
baz=118
AY03 **Cochrane** **63.49 164** P **P** **04 37 34.7 +1.3**
AY03 IAmb IAmb 04 37 43.5
comp=Z,172nm,1.4s
F25K **Christian Rive** **63.54 340** P **P** **04 37 35.0 +1.4**
baz=120,SNR=94
F25K S **S** **04 46 08.4 +2.5**
baz=120
TIAR **Tiarei** **63.55 242** *e* PKP1 **P** **04 37 34.6 +0.2**
comp=Z,365nm,1.0s
TVO **Taravao** **63.57 242** *e* PKP1 **P** **04 37 36.6 +2.0**
comp=Z,47nm,1.1s
KTH **Kantishna Hill** **63.65 335** IAMs_20 IAMs_20 05 08 04.7
comp=Z,20µm,18.0s
ANGG **Ammassalik, Gr** **63.68 22** *i* P **P** **04 37 33.7 -0.7**
ANGG IAmb IAmb 04 37 36.0
comp=Z,485nm,1.8s
I23K **Minto, Yukon-K** **63.70 337** IAMs_20 IAMs_20 05 09 07.8
comp=Z,18µm,18.0s
I23K **Minto, Yukon-K** **63.70 337** P **P** **04 37 35.3 +0.7**
baz=116,SNR=161
I23K S **S** **04 46 08.7 +0.9**
baz=116
G24K **Hadweenzic Riv** **63.72 339** IAmb IAmb 04 37 43.3
comp=Z,319nm,1.1s
G24K IAMs_20 IAMs_20 05 06 55.8
comp=Z,27µm,21.0s
G24K **Hadweenzic Riv** **63.72 339** P **P** **04 37 35.6 +0.9**
baz=118,SNR=72
G24K S **S** **04 46 10.1 +2.0**
baz=118
PPT **Papeete** **63.75 242** LR LR 04 58 01.5
comp=Z,7µm,19.1s,baz=72,slow=29
PPT2 **Papeete2** **63.76 242** *e* PP **PP** **04 39 53.3 -3.1**
comp=Z,745nm,26.5s
PPT2 *e* S **S** **04 46 06.2 -4.0**
comp=Z,6µm,26.2s
PPT2 *e* SS **SS** **04 50 25.7 +7.1**
comp=Z,3µm,28.8s
PPT2 *e* LQ LQ 04 53 58.7
comp=Z,22µm,31.2s
PPT2 *e* LR LR 04 56 29.1
comp=Z,18µm,25.0s
PPT2 *e* LR LR 04 56 30.4
comp=Z,12µm,24.8s
E25K **Arctic Village** **63.78 341** IAMs_20 IAMs_20 05 08 56.9
comp=Z,21µm,20.0s
E25K **Arctic Village** **63.78 341** P **P** **04 37 36.4 +1.1**
baz=121,SNR=76
E25K S **S** **04 46 12.1 +3.2**
baz=121
Q18K **Katmai Hardscr** **63.79 329** P **P** **04 37 35.9 +0.4**
baz=107,SNR=51
Q18K S **S** **04 46 10.4 +1.0**
baz=107
PAE **Paea** **63.80 242** *e* PKP1 **P** **04 37 36.1 +0.1**
comp=Z,40nm,1.1s
ACHA **Angle Creek He** **63.82 329** IAmb IAmb 04 37 38.9
comp=Z,160nm,1.2s
BPAW **Bear Paw Mtn.** **63.89 336** IAmb IAmb 04 37 38.1
comp=Z,202nm,0.9s
BPAW IAMs_20 IAMs_20 05 07 39.2
comp=Z,22µm,20.0s
BPAW **Bear Paw Mtn.** **63.89 336** P **P** **04 37 36.1 +0.1**
baz=114,SNR=56
BPAW S **S** **04 46 10.3 -0.1**
baz=114
PPLA **Purkeypile** **63.92 334** IAMs_20 IAMs_20 05 05 14.0
comp=Z,22µm,22.0s
PPLA **Purkeypile** **63.92 334** P **P** **04 37 36.6 +0.2**
baz=112,SNR=34
PPLA S **S** **04 46 11.5 +0.5**
baz=112
O19K **Port Alsworth** **63.93 331** IAMs_20 IAMs_20 05 05 56.3
comp=Z,15µm,18.0s
M20K **Styx River** **63.96 333** IAmb IAmb 04 37 38.8
comp=Z,203nm,0.8s
M20K IAMs_20 IAMs_20 05 05 01.0
comp=Z,19µm,21.0s
M20K **Styx River** **63.96 333** P **P** **04 37 37.0 +0.4**
baz=110
M20K S **S** **04 46 13.1 +1.6**
baz=110
KULLO **Kullorsuaq** **64.00 10** ⇑P **P** **04 37 36.7 +0.3**
KULLO **Kullorsuaq** **64.00 10** *i* P **P** **04 37 36.8 +0.3**
KULLO IAmb IAmb 04 37 39.5
comp=Z,484nm,1.1s
C27K **Jago River** **64.02 343** P **P** **04 37 37.8 +1.1**
baz=123,SNR=156
C27K S **S** **04 46 13.7 +1.9**
baz=123
H23K **Yukon River** **64.06 338** IAmb IAmb 04 37 44.8
comp=Z,273nm,1.4s
H23K IAMs_20 IAMs_20 05 07 33.0
comp=Z,21µm,20.0s
H23K **Yukon River** **64.06 338** P **P** **04 37 37.5 +0.5**
baz=116
H23K S **S** **04 46 12.2 -0.3**
baz=116
TULEG **Thule** **64.06 6** P **P** **04 37 36.6 -0.2**
TULEG IAmb IAmb 04 37 40.1
comp=Z,320nm,1.5s
TULEG **Thule** **64.06 6** ⇑P **P** **04 37 37.4 +0.5**
TULEG **Thule** **64.06 6** *i* P **P** **04 37 37.6 +0.7**
TULEG IAmb IAmb 04 37 38.3
comp=Z,180nm,1.2s
Q17K **Contact Creek** **64.12 329** P **P** **04 37 38.0 +0.3**
baz=106
Q17K S **S** **04 46 15.2 +1.7**
baz=106
P18K **Big Mountain,** **64.12 330** IAmb IAmb 04 37 41.2
comp=Z,373nm,1.2s
P18K **Big Mountain,** **64.12 330** P **P** **04 37 37.6 0.0**
baz=107,SNR=11
P18K S **S** **04 46 14.1 +0.8**
baz=107
MLY **Manley** **64.17 337** IAMs_20 IAMs_20 05 08 12.6
comp=Z,16µm,18.0s
MLY **Manley** **64.17 337** P **P** **04 37 38.3 +0.4**
baz=114,SNR=140
MLY S **S** **04 46 14.2 +0.3**
baz=114
R17L **Mt. Peulik Vol** **64.19 328** P **P** **04 37 38.5 +0.5**
baz=106,SNR=15
R17L S **S** **04 46 16.9 +2.7**
baz=106
N19K **Bonanza Creek** **64.21 331** P **P** **04 37 38.5 +0.2**
baz=109,SNR=66
N19K S **S** **04 46 15.5 +0.9**
baz=109
O18K **Koktuh Hills** **64.25 330** IAMs_20 IAMs_20 05 06 21.1
comp=Z,18µm,18.0s
O18K **Koktuh Hills** **64.25 330** P **P** **04 37 38.6 +0.2**
baz=108,SNR=27
O18K S **S** **04 46 17.6 +2.6**
baz=108
F24K **Squaw Lake** **64.25 340** IAmb IAmb 04 37 42.2
comp=Z,361nm,1.7s
F24K **Squaw Lake** **64.25 340** P **P** **04 37 39.4 +1.1**
baz=118,SNR=53
F24K S **S** **04 46 17.8 +3.0**
baz=118
CHUM **Lake Minchumin** **64.35 335** P **P** **04 37 38.8 -0.1**
baz=112,SNR=34
CHUM S **S** **04 46 15.1 -0.9**
baz=112
L20K **Farewell, AK** **64.50 333** P **P** **04 37 39.9 0.0**
baz=110,SNR=102
L20K S **S** **04 46 19.4 +1.5**
baz=110
M19K **Big River Lodg** **64.53 333** IAMs_20 IAMs_20 05 08 10.1
comp=Z,21µm,18.0s
M19K **Big River Lodg** **64.53 333** P **P** **04 37 40.8 +0.6**
baz=109
M19K S **S** **04 46 20.9 +2.6**
baz=109
C26K **Camden Bay** **64.53 343** P **P** **04 37 41.5 +1.4**
baz=122
C26K S **S** **04 46 20.6 +2.6**
baz=122
Q16K **King Salmon** **64.62 329** P **P** **04 37 41.5 +0.8**
baz=106,SNR=20
Q16K S **S** **04 46 20.5 +1.1**
baz=106
G23K **Bananza Creek** **64.62 338** IAmb IAmb 04 37 44.1
comp=Z,257nm,1.2s
G23K **Bananza Creek** **64.62 338** P **P** **04 37 41.5 +0.8**
baz=116,SNR=59
G23K S **S** **04 46 21.3 +1.8**
baz=116
D25K **Kavik River** **64.66 342** P **P** **04 37 42.0 +1.0**
baz=120,SNR=238
D25K S **S** **04 46 20.9 +1.2**
baz=120
P17K **Kvichak River** **64.66 329** P **P** **04 37 41.5 +0.5**
baz=106,SNR=27
P17K S **S** **04 46 20.5 +0.6**
baz=106
E24K **Your Creek** **64.72 340** IAmb IAmb 04 37 49.5
comp=Z,200nm,1.1s
E24K **Your Creek** **64.72 340** P **P** **04 37 42.6 +1.2**
baz=118,SNR=79
E24K S **S** **04 46 24.2 +3.6**
baz=118
I21K **Tanana** **64.72 336** IAmb IAmb 04 37 50.6
comp=Z,280nm,1.2s
I21K IAMs_20 IAMs_20 05 07 34.5
comp=Z,18µm,20.0s
I21K **Tanana** **64.72 336** P **P** **04 37 41.5 +0.2**
baz=113,SNR=40
I21K S **S** **04 46 21.9 +1.4**
baz=113
H22K **Ishtalitna Cre** **64.78 337** IAmb IAmb 04 37 44.3
comp=Z,236nm,1.1s
H22K IAMs_20 IAMs_20 05 09 43.9
comp=Z,17µm,18.0s
H22K **Ishtalitna Cre** **64.78 337** P **P** **04 37 41.9 +0.2**
baz=114,SNR=86
H22K S **S** **04 46 22.0 +0.7**
baz=114
R16K **Pilot Point** **64.80 328** P **P** **04 37 42.1 +0.1**
baz=104
L19K **White Mountain** **64.82 333** IAmb IAmb 04 37 44.8
comp=Z,267nm,1.3s
L19K IAMs_20 IAMs_20 05 06 21.6
comp=Z,16µm,21.0s
L19K **White Mountain** **64.82 333** P **P** **04 37 42.0 -0.1**
baz=109,SNR=24
L19K S **S** **04 46 23.9 +1.9**
baz=109
N18K **Kilae Creek** **64.82 331** IAMs_20 IAMs_20 05 06 26.1
comp=Z,16µm,19.0s
N18K **Kilae Creek** **64.82 331** P **P** **04 37 42.2 0.0**
baz=107,SNR=30
N18K S **S** **04 46 23.4 +1.4**
baz=107
K20K **Telida** **64.88 334** IAMs_20 IAMs_20 05 05 54.1
comp=Z,16µm,22.0s
K20K **Telida** **64.88 334** P **P** **04 37 42.5 0.0**
baz=110
K20K S **S** **04 46 23.5 +0.8**
baz=110
COLD **Coldfoot** **64.92 339** IAMs_20 IAMs_20 05 07 19.0
comp=Z,22µm,21.0s
COLD **Coldfoot** **64.92 339** P **P** **04 37 43.9 +1.3**
baz=116,SNR=146
COLD S **S** **04 46 25.7 +2.8**
baz=116
M18K **Stony River** **65.04 332** P **P** **04 37 43.5 0.0**
baz=108,SNR=65
M18K S **S** **04 46 25.0 +0.5**
baz=108
E23K **Chandalar** **65.08 340** IAMs_20 IAMs_20 05 08 45.8
comp=Z,24µm,20.0s
E23K **Chandalar** **65.08 340** P **P** **04 37 45.1 +1.3**
baz=117,SNR=226
E23K S **S** **04 46 27.1 +1.9**
baz=117
O17K **Koliganek Bris** **65.14 330** P **P** **04 37 44.5 +0.4**
baz=106,SNR=35
O17K S **S** **04 46 26.5 +0.7**
baz=106
J20K **Nowinta River** **65.20 335** IAmb IAmb 04 37 47.1
comp=Z,375nm,1.4s
J20K IAMs_20 IAMs_20 05 08 43.4
comp=Z,19µm,20.0s
J20K **Nowinta River** **65.20 335** P **P** **04 37 44.5 0.0**
baz=110,SNR=70
J20K S **S** **04 46 27.1 +0.6**
baz=110
H21K **Melozitna Rive** **65.22 337** IAmb IAmb 04 37 52.0
comp=Z,150nm,0.9s
H21K IAMs_20 IAMs_20 05 08 00.7
comp=Z,15µm,19.0s
H21K **Melozitna Rive** **65.22 337** P **P** **04 37 44.4 -0.2**
baz=112,SNR=69
H21K S **S** **04 46 27.5 +0.7**
baz=112
G22K **Bettles** **65.25 338** P **P** **04 37 45.5 +0.8**
baz=114
G22K S **S** **04 46 28.1 +1.2**
baz=114
CHNA **Chernabura Isl** **65.28 324** P **P** **04 37 44.8 -0.4**
baz=101
D24K **Happy Valley** **65.33 341** P **P** **04 37 46.2 +0.9**
baz=118
D24K S **S** **04 46 30.7 +2.8**
baz=118
TOLK **Toolik Lake Re** **65.33 340** P **P** **04 37 46.2 +0.8**
baz=117,SNR=80
TOLK S **S** **04 46 30.5 +2.4**
baz=117
P16K **Nushagak River** **65.38 329** P **P** **04 37 45.8 +0.1**
baz=105
N17K **Nushagak Hills** **65.39 331** IAMs_20 IAMs_20 05 07 24.9
comp=Z,16µm,18.0s
N17K **Nushagak Hills** **65.39 331** P **P** **04 37 46.3 +0.5**
baz=106,SNR=23
N17K S **S** **04 46 30.2 +1.2**
baz=106
I20K **Naaghedeneel** **65.56 336** IAMs_20 IAMs_20 05 08 39.7
comp=Z,19µm,20.0s
I20K **Naaghedeneel** **65.56 336** P **P** **04 37 47.0 +0.2**
baz=110,SNR=21
I20K S **S** **04 46 32.2 +1.5**
baz=110
S14K **Fog Glacier** **65.56 326** P **P** **04 37 47.2 +0.2**
baz=102
C24K **Franklin Bluff** **65.56 342** P **P** **04 37 47.8 +1.1**
baz=118,SNR=199
C24K S **S** **04 46 33.8 +3.1**
baz=118
O16K **Kokwok River B** **65.58 330** P **P** **04 37 47.2 +0.2**
baz=105,SNR=24
O16K S **S** **04 46 30.9 -0.3**
baz=105
L18K **Granite Mounta** **65.65 333** IAMs_20 IAMs_20 05 09 01.9
comp=Z,16µm,18.0s
L18K **Granite Mounta** **65.65 333** P **P** **04 37 47.5 0.0**
baz=107,SNR=88
L18K S **S** **04 46 32.4 +0.3**
baz=107
IMAR **Indian Mountai** **65.70 337** P **P** **04 37 46.7 -1.0**
F22K **John River** **65.73 339** P **P** **04 37 48.9 +1.0**
baz=114
F22K S **S** **04 46 35.1 +2.2**
baz=114
J19K **Poorman** **65.75 335** IAMs_20 IAMs_20 05 08 49.9
comp=Z,17µm,19.0s
J19K **Poorman** **65.75 335** P **P** **04 37 47.8 -0.3**
baz=109,SNR=105
J19K S **S** **04 46 33.7 +0.5**
baz=109
M17K **Holitna River** **65.75 332** IAMs_20 IAMs_20 05 08 16.3
comp=Z,18µm,18.0s
M17K **Holitna River** **65.75 332** P **P** **04 37 48.2 0.0**
baz=106,SNR=36
M17K S **S** **04 46 35.1 +1.7**
baz=106
G21K **Allakaket** **65.81 338** IAmb IAmb 04 37 56.8
comp=Z,291nm,1.1s
G21K **Allakaket** **65.81 338** P **P** **04 37 48.9 +0.4**
baz=112
G21K S **S** **04 46 35.7 +1.7**
baz=112
D23K **Nanushuk River** **65.84 341** P **P** **04 37 49.9 +1.4**
baz=116

D23K S **S** **04 46 35.8 +1.6**
baz=116
E22K **Anaktuvuk Pass** **65.86 339** IAMs_20 IAMs_20 05 08 23.7
comp=Z,22µm,21.0s
E22K **Anaktuvuk Pass** **65.86 339** P **P** **04 37 49.4 +0.6**
baz=114
E22K S **S** **04 46 36.5 +1.9**
baz=114
SDPT **Sand Point** **65.88 325** P **P** **04 37 50.6 +1.6**
SDPT **Sand Point** **65.88 325** P **P** **04 37 49.0 0.0**
baz=101
H20K **Anotleneega Mo** **65.96 336** P **P** **04 37 49.2 -0.2**
baz=110,SNR=56
H20K S **S** **04 46 36.6 +0.8**
baz=110
J18K **Innoko River** **66.04 334** IAmb IAmb 04 37 52.5
comp=Z,257nm,1.2s
J18K IAMs_20 IAMs_20 05 08 58.7
comp=Z,17µm,18.0s
J18K **Innoko River** **66.04 334** P **P** **04 37 49.8 -0.2**
baz=108,SNR=51
J18K S **S** **04 46 37.2 +0.3**
baz=108
F21K **Alatna River** **66.08 338** IAMs_20 IAMs_20 05 10 04.2
comp=Z,18µm,18.0s
F21K **Alatna River** **66.08 338** P **P** **04 37 51.3 +1.2**
baz=112,SNR=342
F21K S **S** **04 46 37.9 +0.7**
baz=112
N16K **Nishlik Lake** **66.13 330** P **P** **04 37 51.1 +0.5**
baz=104,SNR=30
N16K S **S** **04 46 40.6 +2.6**
baz=104
C23K **Itkillik River** **66.21 341** IAMs_20 IAMs_20 05 10 17.5
comp=Z,18µm,19.0s
C23K **Itkillik River** **66.21 341** P **P** **04 37 52.1 +1.3**
baz=116
C23K S **S** **04 46 41.0 +2.4**
baz=116
TBI **Tubuai** **66.25 237** *e*P P 04 37 57.3 +5.4
comp=Z,280nm,1.3s
TBI **Tubuai** **66.25 237** *e*PP **PP** **04 40 21.4 +3.3**
comp=Z,2µm,28.2s
TBI *e*S **S** **04 46 40.2 -0.3**
comp=Z,18µm,25.0s
TBI *e*SS **SS** **04 50 50.4 -6.7**
comp=Z,24µm,34.0s
TBI *e*LQ LQ 04 54 54.0
comp=Z,29µm,25.2s
TBI *e*LR LR 04 57 47.2
comp=Z,75µm,26.0s
TBI *e*LR LR 04 57 49.6
comp=Z,17µm,25.8s
O15K **Ungalikthiuk R** **66.34 329** IAmb IAmb 04 37 53.8
comp=Z,286nm,1.2s
O15K IAMs_20 IAMs_20 05 10 28.1
comp=Z,13µm,18.0s
O15K **Ungalikthiuk R** **66.34 329** P **P** **04 37 51.2 -0.7**
baz=103,SNR=12
O15K S **S** **04 46 40.4 -0.1**
baz=103
L17K **Donlin** **66.35 332** P **P** **04 37 52.1 +0.1**
baz=106,SNR=21
M16K **Timber Creek** **66.36 331** IAMs_20 IAMs_20 05 07 39.6
comp=Z,17µm,18.0s
M16K **Timber Creek** **66.36 331** P **P** **04 37 52.5 +0.4**
baz=105,SNR=19
D22K **Ayikyak River** **66.46 340** IAMs_20 IAMs_20 05 08 51.6
comp=Z,17µm,19.0s
D22K **Ayikyak River** **66.46 340** P **P** **04 37 53.8 +1.2**
baz=114
D22K S **S** **04 46 44.2 +2.4**
baz=114
GCSA **Galena City Sc** **66.51 335** P **P** **04 37 52.9 0.0**
baz=108,SNR=14
GCSA S **S** **04 46 43.0 +0.6**
baz=108
K17K **Iditarod** **66.51 333** IAmb IAmb 04 37 55.3
comp=Z,251nm,1.1s
K17K **Iditarod** **66.51 333** P **P** **04 37 53.0 0.0**
baz=106,SNR=38
H19K **Roundabout Mou** **66.59 336** IAmb IAmb 04 38 01.7
comp=Z,319nm,1.1s
H19K IAMs_20 IAMs_20 05 10 05.0
comp=Z,20µm,18.0s
H19K **Roundabout Mou** **66.59 336** P **P** **04 37 53.5 +0.1**
baz=109,SNR=56
H19K S **S** **04 46 44.8 +1.5**
baz=109
N15K **Kwethluk River** **66.70 330** IAmb IAmb 04 38 15.7
comp=Z,185nm,1.4s
N15K IAMs_20 IAMs_20 05 08 03.6
comp=Z,16µm,18.0s
N15K **Kwethluk River** **66.70 330** P **P** **04 37 54.1 -0.1**
baz=103,SNR=5.7
N15K S **S** **04 46 45.8 +0.9**
baz=103
E21K **Killik River** **66.72 339** IAmb IAmb 04 38 02.2
comp=Z,282nm,0.9s
E21K IAMs_20 IAMs_20 05 08 49.1
comp=Z,19µm,21.0s
E21K **Killik River** **66.72 339** P **P** **04 37 54.9 +0.7**
baz=112
E21K S **S** **04 46 45.8 +0.9**
baz=112
SUMG **Summit** **66.76 16** P **P** **04 37 53.9 -1.0**
SUMG **Summit** **66.76 16** P **P** **04 37 54.8 -0.1**
SUMG **Summit** **66.76 16** P **P** **04 37 54.8 -0.1**
SUMG pmax pmax
comp=Z,1µm,1.7s
SUMG MLR MLR
comp=Z,54µm,19.0s
SUMG **Summit** **66.76 16** ⇑P **P** **04 37 55.5 +0.7**
SUMG **Summit** **66.76 16** *i* P **P** **04 37 55.4 +0.5**
SUMG IAmb IAmb 04 37 58.2
comp=Z,236nm,1.0s
L16K **Owhat River** **66.78 332** IAMs_20 IAMs_20 05 08 06.8
comp=Z,13µm,18.0s
L16K **Owhat River** **66.78 332** P **P** **04 37 55.2 +0.6**
baz=104,SNR=39
L16K S **S** **04 46 49.1 +3.4**
baz=104
F20K **Avaraart Lake** **66.83 338** IAmb IAmb 04 38 03.2
comp=Z,259nm,0.8s
F20K **Avaraart Lake** **66.83 338** P **P** **04 37 55.9 +1.0**
baz=110,SNR=208
F20K S **S** **04 46 47.6 +1.4**
baz=110
S12K **Black Hills** **66.83 325** IAmb IAmb 04 37 56.6
comp=Z,160nm,0.9s
S12K **Black Hills** **66.83 325** P **P** **04 37 54.7 -0.4**
baz=100,SNR=6.4
S12K S **S** **04 46 47.5 +0.8**
baz=100
G19K **Purcell Mounta** **67.04 337** IAMs_20 IAMs_20 05 11 54.8
comp=Z,18µm,18.0s
G19K **Purcell Mounta** **67.04 337** P **P** **04 37 56.7 +0.4**
baz=108,SNR=75
G19K S **S** **04 46 50.0 +1.2**
baz=108
J17K **VABM Dome** **67.04 333** IAmb IAmb 04 37 59.2
comp=Z,488nm,1.8s
J17K IAMs_20 IAMs_20 05 09 28.1
comp=Z,21µm,19.0s
J17K **VABM Dome** **67.04 333** P **P** **04 37 56.5 +0.2**
baz=106,SNR=20
J17K S **S** **04 46 50.3 +1.4**
baz=106
O14K **Tigyukauivet M** **67.08 329** IAmb IAmb 04 38 17.6
comp=Z,332nm,1.6s
O14K IAMs_20 IAMs_20 05 10 49.6
comp=Z,13µm,19.0s
O14K **Tigyukauivet M** **67.08 329** P **P** **04 37 56.5 -0.1**
baz=102
O14K S **S** **04 46 50.0 +0.6**
baz=102
M15K **Kasigluk River** **67.11 330** P **P** **04 37 57.1 +0.3**
baz=103
M15K S **S** **04 46 51.7 +2.0**
baz=103
NEEM **North Greenlan** **67.14 9** *i* P **P** **04 37 56.6 -0.4**
NEEM IAmb IAmb 04 38 02.0
comp=Z,391nm,1.0s
H18K **Honhosa River** **67.24 335** IAmb IAmb 04 38 00.8
comp=Z,343nm,1.4s
H18K IAMs_20 IAMs_20 05 07 24.5
comp=Z,15µm,21.0s
H18K **Honhosa River** **67.24 335** P **P** **04 37 58.3 +0.7**
baz=107
H18K S **S** **04 46 52.0 +0.8**
baz=107
C21K **Knifeblade Rid** **67.27 340** P **P** **04 37 58.7 +1.0**
baz=112,SNR=83
C21K S **S** **04 46 53.7 +2.2**
baz=112
GO09 **Cerro Castillo** **67.28 166** P **P** **04 37 58.9 +1.0**
GO09 IAmb IAmb 04 38 02.0
comp=Z,182nm,1.4s
B22K **Teshekpuk Lake** **67.29 341** P **P** **04 37 58.5 +0.7**
baz=114
B22K S **S** **04 46 53.6 +1.9**
baz=114
B21K **Ikpikpuk River** **67.39 341** IAmb IAmb 04 38 01.6
comp=Z,248nm,1.1s
B21K IAMs_20 IAMs_20 05 09 24.0
comp=Z,21µm,20.0s
B21K **Ikpikpuk River** **67.39 341** P **P** **04 37 59.0 +0.6**
baz=112
B21K S **S** **04 46 53.9 +1.1**
baz=112
E20K **Nigu River** **67.42 339** P **P** **04 37 59.5 +0.8**
baz=110
E20K S **S** **04 46 53.9 +0.5**
baz=110
N14K **Kuskokwak Cree** **67.42 330** P **P** **04 37 58.8 0.0**
baz=102
N14K S **S** **04 46 54.3 +0.8**
baz=102
FALS **False Pass** **67.47 324** P **P** **04 37 59.4 +0.3**
FALS **False Pass** **67.47 324** P **P** **04 37 58.9 -0.3**
baz=98,SNR=9.2
E19K **Redstone River** **67.52 338** IAmb IAmb 04 38 07.2
comp=Z,133nm,0.9s
E19K IAMs_20 IAMs_20 05 11 49.7
comp=Z,19µm,18.0s
E19K **Redstone River** **67.52 338** P **P** **04 37 59.7 +0.4**
baz=109
E19K S **S** **04 46 55.3 +0.8**
baz=109
G18K **Tagagawik** **67.57 336** IAMs_20 IAMs_20 05 10 45.2
comp=Z,17µm,18.0s
G18K **Tagagawik** **67.57 336** P **P** **04 38 00.5 +0.8**
baz=107
G18K S **S** **04 46 57.5 +2.2**
baz=107
MG05 **Puerto Natales** **67.62 166** P **P** **04 38 01.6 +1.6**
J16K **Anvik River** **67.68 333** IAMs_20 IAMs_20 05 09 37.0
comp=Z,15µm,19.0s
J16K **Anvik River** **67.68 333** P **P** **04 38 01.4 +1.1**
baz=104,SNR=62
J16K S **S** **04 46 58.4 +1.9**
baz=104
L15K **Ungalak Mounta** **67.70 331** P **P** **04 38 01.4 +0.9**
baz=102
L15K S **S** **04 46 58.3 +1.5**
baz=102
D20K **Etivluk River** **67.72 339** IAMs_20 IAMs_20 05 10 51.0
comp=Z,16µm,19.0s
D20K **Etivluk River** **67.72 339** P **P** **04 38 01.3 +0.7**
baz=110
D20K S **S** **04 46 59.7 +2.7**
baz=110
M14K **Bethel** **67.73 330** P **P** **04 38 01.5 +0.8**
baz=102,SNR=49
H17K **Granite Mounta** **67.81 335** IAmb IAmb 04 38 04.8
comp=Z,366nm,1.4s
H17K **Granite Mounta** **67.81 335** P **P** **04 38 02.1 +0.9**
baz=105,SNR=30
H17K S **S** **04 46 59.0 +0.9**
baz=105
K15K **Wolf Creek Mou** **67.86 332** IAMs_20 IAMs_20 05 09 34.1
comp=Z,16µm,18.0s
K15K **Wolf Creek Mou** **67.86 332** P **P** **04 38 02.7 +1.2**
baz=103,SNR=58
K15K S **S** **04 47 02.4 +3.7**
baz=103
I17K **Unalakleet** **67.86 334** IAMs_20 IAMs_20 05 10 13.4
comp=Z,20µm,18.0s
I17K **Unalakleet** **67.86 334** P **P** **04 38 02.9 +1.4**
baz=104,SNR=15
I17K S **S** **04 47 00.4 +1.7**
baz=104
A22K **Sinclair Lake** **68.03 342** P **P** **04 38 03.4 +0.9**
baz=112
A22K S **S** **04 47 02.1 +1.6**
baz=112
F18K **Selawik** **68.16 337** P **P** **04 38 03.9 +0.6**
baz=106,SNR=19
F18K S **S** **04 47 04.3 +2.1**
baz=106
D19K **Kuna River** **68.17 339** IAmb IAmb 04 38 12.0
comp=Z,389nm,1.3s
D19K IAMs_20 IAMs_20 05 12 02.8
comp=Z,22µm,19.0s
D19K **Kuna River** **68.17 339** P **P** **04 38 04.0 +0.6**
baz=108
D19K S **S** **04 47 03.8 +1.4**
baz=108
L14K **Kuka Creek** **68.19 331** IAmb IAmb 04 38 06.0
comp=Z,123nm,0.8s
L14K IAMs_20 IAMs_20 05 08 20.2
comp=Z,13µm,19.0s
L14K **Kuka Creek** **68.19 331** P **P** **04 38 04.1 +0.5**
baz=101
L14K S **S** **04 47 05.3 +2.6**
baz=101
G17K **Kiwalik Mounta** **68.26 336** P **P** **04 38 05.1 +1.1**
baz=105
G17K S **S** **04 47 05.7 +2.3**
baz=105
M13K **Dall Lake** **68.33 330** P **P** **04 38 05.5 +1.1**
baz=100,SNR=22
M13K S **S** **04 47 07.0 +2.6**
baz=100
B20K **Meade River** **68.35 341** IAMs_20 IAMs_20 05 10 24.2
comp=Z,20µm,20.0s
B20K **Meade River** **68.35 341** P **P** **04 38 05.6 +1.2**
baz=110
B20K S **S** **04 47 06.2 +1.9**
baz=110
A21K **Barrow** **68.65 342** P **P** **04 38 06.9 +0.6**
baz=111
A21K S **S** **04 47 10.1 +2.3**
baz=111
H16K **Elim** **68.70 334** P **P** **04 38 07.9 +1.2**
baz=103,SNR=32
H16K S **S** **04 47 12.1 +3.4**
baz=103
E18K **Tukpahlearik C** **68.75 338** IAmb IAmb 04 38 09.9
comp=Z,247nm,1.2s
E18K IAMs_20 IAMs_20 05 12 54.3
comp=Z,18µm,18.0s
E18K **Tukpahlearik C** **68.75 338** P **P** **04 38 07.3 +0.3**
baz=106
E18K S **S** **04 47 10.3 +1.1**
baz=106
C19K **Lookout Ridge** **68.87 339** IAMs_20 IAMs_20 05 09 28.3
comp=Z,18µm,21.0s
C19K **Lookout Ridge** **68.87 339** P **P** **04 38 08.8 +1.0**
baz=107,SNR=90
C19K S **S** **04 47 11.8 +1.1**
baz=107
J14K **Nanvaranak Lak** **68.87 332** IAMs_20 IAMs_20 05 10 41.8
comp=Z,13µm,18.0s
J14K **Nanvaranak Lak** **68.87 332** P **P** **04 38 09.2 +1.4**
baz=101,SNR=52
J14K S **S** **04 47 13.4 +2.7**
baz=101
E17K **Hotham Inlet** **69.12 337** P **P** **04 38 09.9 +0.6**
baz=104,SNR=92
E17K S **S** **04 47 15.2 +1.6**
baz=104
UNV **Unalaska Valle** **69.14 323** P **P** **04 38 10.6 +0.9**
UNV **Unalaska Valle** **69.14 323** P **P** **04 38 09.5 -0.2**
baz=95,SNR=22
K13K **Kusilvak Mount** **69.23 331** IAmb IAmb 04 38 13.3
comp=Z,280nm,1.3s
K13K IAMs_20 IAMs_20 05 09 31.2
comp=Z,13µm,18.0s
K13K **Kusilvak Mount** **69.23 331** P **P** **04 38 10.7 +0.6**
baz=100
K13K S **S** **04 47 15.1 +0.1**
baz=100
C18K **Utukok River** **69.30 339** IAmb IAmb 04 38 13.3
comp=Z,308nm,1.4s
C18K IAMs_20 IAMs_20 05 12 36.6
comp=Z,22µm,19.0s
C18K **Utukok River** **69.30 339** P **P** **04 38 10.9 +0.4**
baz=106
C18K S **S** **04 47 16.0 +0.2**
baz=106
MG02 **Cerro Sombrero** **69.43 165** IAMs_20 IAMs_20 05 04 48.5
comp=Z,15µm,18.0s
G15K **Niukluk** **69.53 335** P **P** **04 38 12.8 +1.0**
baz=101,SNR=11
G15K S **S** **04 47 20.5 +2.1**
baz=101
A19K **Wainwright** **69.69 340** P **P** **04 38 13.8 +1.0**
baz=106
A19K S **S** **04 47 21.7 +1.6**
baz=106
B18K **Kokolik River** **69.70 339** P **P** **04 38 14.1 +1.2**
baz=105,SNR=40
B18K S **S** **04 47 20.8 +0.4**
baz=105
M11K **Mekoryuk** **69.73 330** IAmb IAmb 04 38 17.0
comp=Z,450nm,1.5s
M11K **Mekoryuk** **69.73 330** P **P** **04 38 14.4 +1.3**
baz=98
M11K S **S** **04 47 22.3 +1.5**
baz=98
D17K **Noatak River** **69.74 338** P **P** **04 38 13.6 +0.5**
baz=103,SNR=29
D17K S **S** **04 47 22.6 +1.7**
baz=103
RDOG **Red Dog Mine** **69.76 338** IAmb IAmb 04 38 16.2
comp=Z,336nm,1.4s
RDOG IAMs_20 IAMs_20 05 10 07.0
comp=Z,15µm,22.0s
RDOG **Red Dog Mine** **69.76 338** P **P** **04 38 13.6 +0.3**
baz=104,SNR=31
RDOG S **S** **04 47 21.2 0.0**
baz=104
BORG **Borgarnes** **69.92 26** LR LR 05 07 57.8
comp=Z,15µm,21.6s,baz=263,slow=35
BORG **Borgarnes** **69.92 26** IAMs_20 IAMs_20 05 09 27.3
comp=Z,20µm,18.0s
BORG **Borgarnes** **69.92 26** ⇓P **P** **04 38 17.6 +3.3**
F15K **North Star Dit** **69.92 335** IAMs_20 IAMs_20 05 11 38.1
comp=Z,19µm,18.0s
F15K **North Star Dit** **69.92 335** P **P** **04 38 15.4 +1.1**
baz=101,SNR=30
F15K S **S** **04 47 22.7 -0.4**
baz=101
C17K **DeLong Mountai** **69.96 338** P **P** **04 38 14.9 +0.4**
baz=104
C17K S **S** **04 47 25.2 +1.7**
baz=104
ANM **Nome** **70.01 334** P **P** **04 38 15.5 +0.6**
baz=100
ANM S **S** **04 47 28.4 +4.3**
baz=100
NIKH **Nikolski High** **70.48 322** P **P** **04 38 17.3 -0.7**
baz=93,SNR=9.1
NIKH S **S** **04 47 32.8 +2.7**
baz=93
F14K **Arctic Creek** **70.56 335** P **P** **04 38 19.3 +1.1**
baz=100
F14K S **S** **04 47 33.6 +3.0**
baz=100
C16K **Lisburne Hills** **70.70 338** IAmb IAmb 04 38 22.3
comp=Z,441nm,1.6s
C16K IAMs_20 IAMs_20 05 14 10.5
comp=Z,18µm,18.0s
C16K **Lisburne Hills** **70.70 338** P **P** **04 38 19.7 +0.8**
baz=101
C16K S **S** **04 47 35.9 +3.9**
baz=101
SCO **Scoresbysund** **70.86 20** P **P** **04 38 20.0 +0.1**
SCO **Scoresbysund** **70.86 20** P **P** **04 38 20.0 +0.1**
SCO pmax pmax
comp=Z,100nm,1.1s
SCO MLR MLR
comp=Z,81µm,19.0s
SCO **Scoresbysund** **70.86 20** *i* P **P** **04 38 20.8 +0.8**
SCO IAmb IAmb 04 38 24.1
comp=Z,111nm,1.2s
PMOZ **Porto Moniz, M** **71.00 60** *e*S **S** **04 47 45.1 +8.0**
PMOZ *e*LR LR 05 00 26.6
PMOZ *i* IAMs_20 IAMs_20 05 03 25.9
comp=Z,6µm,24.0s
TNA **Tin City** **71.23 335** IAMs_20 IAMs_20 05 12 17.2
comp=Z,16µm,19.0s
TNA **Tin City** **71.23 335** P **P** **04 38 23.2 +1.0**
baz=98,SNR=8.9
TNA S **S** **04 47 41.8 +3.5**
baz=98
FUL **Funchal** **71.27 60** *e*P **P** **04 38 24.5 +1.3**
USHA **Ushuaia** **71.49 165** LR LR 05 04 10.5
comp=Z,28µm,18.8s,baz=314,slow=31
SPIA **Saint Paul Isl** **71.51 326** P **P** **04 38 24.7 +0.6**
baz=93
PMPST **Porto Santo, M** **71.71 59** *e*P **P** **04 38 27.3 +1.5**
EFI **East Falkland** **71.97 158** P **P** **04 38 27.8 +1.0**
EFI IAmb IAmb 04 38 30.0
comp=Z,255nm,1.5s
EFI **East Falkland** **71.97 158** IAMs_20 IAMs_20 05 06 04.6
comp=Z,13µm,19.0s
EFI **East Falkland** **71.97 158** *ce*P **P** **04 38 28.3 +1.5**
EFI pmax pmax
comp=Z,164nm,1.7s
DBG **Daneborg** **72.24 16** *i* P **P** **04 38 28.2 0.0**
DBG IAmb IAmb 04 38 31.3
comp=Z,113nm,1.0s
GAMB **Gambell** **72.66 333** IAMs_20 IAMs_20 05 13 33.1
comp=Z,12µm,18.0s
GAMB **Gambell** **72.66 333** P **P** **04 38 31.6 +0.7**
baz=94
EOSO **Osorio** **72.88 65** P **P** **04 38 33.0 0.0**
DAG **Danmarks Havn** **73.15 13** *i* P **P** **04 38 33.4 -0.2**
DAG IAmb IAmb 04 38 36.1
comp=Z,358nm,1.0s
ATKA **Atka Island** **73.73 321** IAmb IAmb 04 38 38.7
comp=Z,319nm,0.9s
ATKA **Atka Island** **73.73 321** P **P** **04 38 38.0 +0.6**
BBTS **Babate** **73.96 79** LR LR 05 06 40.8
comp=Z,11µm,21.0s,baz=80,slow=32
RAR **Rarotonga** **74.02 243** P **P** **04 38 41.7 +2.1**
comp=Z,8.7nm,0.5s,baz=49,slow=9.3,SNR=3.1
RAR LR LR 05 03 29.1
comp=Z,4µm,18.8s,baz=54,slow=29
RAR **Rarotonga** **74.02 243** P **P** **04 38 40.1 +0.5**
NOR **Nord** **74.49 9** *i* P **P** **04 38 41.7 +0.3**
NOR IAmb IAmb 04 38 44.3
comp=Z,667nm,1.7s
VAL **Valentia** **74.95 40** P **P** **04 38 42.1 -2.4**
VAL **Valentia** **74.95 40** P **P** **04 38 45.9 +1.4**
ADK **Adak** **75.28 320** P **P** **04 38 45.9 -0.5**
ADK **Adak** **75.28 320** P **P** **04 38 46.9 +0.5**
ADK **Adak** **75.28 320** P **P** **04 38 45.9 -0.5**
ADK pmax pmax
comp=Z,500nm,1.0s
JMIC **Jan Mayen** **75.34 20** LR LR 05 11 37.7
comp=Z,47µm,21.7s,baz=262,slow=35
JMIC **Jan Mayen** **75.34 20** *e*P **P** **04 38 47.3 +0.8**
JNW **Jan Mayen West** **75.37 20** *e*P **P** **04 38 48.2 +1.6**
IGLA **Glengowla, Co** **75.40 38** P **P** **04 38 48.3 +1.2**
KIWB **Kanaga Island** **75.57 320** IAmb IAmb 04 38 50.3
comp=Z,308nm,1.1s
IDGL **Inch Island, C** **76.38 36** P **P** **04 38 53.2 +0.6**
PMAFR **Mafra** **76.80 53** P **P** **04 38 56.0 +0.6**
LIS **Lisbon** **76.93 53** *e*S **S** **04 48 44.1 +0.8**
LIS IAMs_20 IAMs_20 05 15 59.4
comp=Z,14µm,27.5s
IWEX **Carrickbyrne,** **77.05 39** P **P** **04 38 57.0 +0.5**
PSBE **So Bento** **77.10 52** *e*P **P** **04 38 59.1 +2.0**
PSBE *i* IAmb IAmb 04 39 02.3
comp=Z,165nm,2.2s
ILTH **Belurgan, Co L** **77.15 37** P **P** **04 38 58.1 +1.1**
PGAV **Gavieira, Arco** **77.19 50** *e*P **P** **04 38 58.1 +0.4**
PGAV *i* IAmb IAmb 04 39 17.7
comp=Z,141nm,1.7s
PGAV *e*LR LR 05 05 55.6
PGAV *i* IAMs_20 IAMs_20 05 16 50.3
comp=Z,13µm,16.0s
DSB **Dublin** **77.20 38** P **P** **04 38 57.4 +0.1**
DSB **Dublin** **77.20 38** IAMs_20 IAMs_20 05 12 05.0
comp=Z,14µm,20.0s
DSB **Dublin** **77.20 38** P **P** **04 38 58.5 +1.1**
KPL **Plockton** **77.21 34** *e*P **P** **04 38 57.4 +0.1**
KPL IAMs_20 IAMs_20 05 14 48.8
comp=Z,16µm,16.0s

PCAS Casmilo, Conde 77.26 52 *eP* **P 04 38 58.5 +0.5**
PCAS *i* IAmb IAmb 04 39 14.4
comp=Z,176nm,2.4s
PFVI Vila Bisbo 77.39 55 P **P 04 38 59.5 +0.8**
PFVI Vila Bisbo 77.39 55 *eP* **P 04 39 01.2 +2.5**
PFVI *i* IAmb IAmb 04 39 03.3
comp=Z,326nm,1.3s
PCAB Cabril 77.41 50 *eP* **P 04 38 59.0 +0.2**
PCAB *i* IAmb IAmb 04 39 22.7
comp=Z,92nm,1.7s
PTEO Sao Teotonio 77.41 54⇑ *eP* **P 04 39 00.4 +1.6**
PTEO *i* IAmb IAmb 04 39 03.4
comp=Z,242nm,1.8s
LAWE Loch Awe, Argy 77.46 35 *eP* **P 04 38 59.5 +0.8**
LAWE IAmb IAmb 04 39 01.8
comp=Z,221nm,1.1s
LAWE IAMs_20 IAMs_20 05 13 09.5
comp=Z,30µm,19.5s
MORF Marmelete 77.50 54 *eP* **P 04 38 59.7 +0.3**
MORF *eS* **S 04 48 50.5 +0.7**
MORF IAMs_20 IAMs_20 05 10 06.0
comp=Z,17µm,19.5s
MORF Marmelete 77.50 54 *eP* **P 04 39 00.1 +0.6**
MORF *i* IAmb IAmb 04 39 04.0
comp=Z,142nm,1.9s
MORF Marmelete 77.50 54 *eP* **P 04 38 59.7 +0.3**
MORF *eS* **S 04 48 50.5 +0.7**
MOE Montemor 77.57 53 *eP* **P 04 39 01.1 +1.3**
MOE *i* IAmb IAmb 04 39 04.1
comp=Z,202nm,1.4s
PSARD Sardoal 77.58 52 *eP* **P 04 39 00.9 +1.2**
PSARD *i* IAmb IAmb 04 39 03.1
comp=Z,108nm,1.2s
PMTG Montargil 77.60 53 *eP* **P 04 39 00.2 +0.4**
PMTG *i* IAmb IAmb 04 39 04.0
comp=Z,224nm,1.5s
POLO Lamas de Olo 77.62 50 *eP* **P 04 39 01.1 +1.0**
POLO *i* IAmb IAmb 04 39 20.5
comp=Z,37nm,1.5s
PVIS Viseu 77.63 51 *eP* **P 04 39 01.1 +1.0**
PVRL Vila Real 77.69 50 *eP* **P 04 39 00.4 0.0**
PVRL *i* IAmb IAmb 04 39 06.3
comp=Z,97nm,1.8s
MESJ Messejana 77.77 54 *eP* **P 04 39 01.3 +0.4**
MESJ *eS* **S 04 48 53.5 +0.9**
MESJ IAMs_20 IAMs_20 05 09 03.2
comp=Z,8µm,24.7s
MESJ Messejana 77.77 54 *eP* **P 04 39 01.5 +0.7**
MESJ *i* IAmb IAmb 04 39 06.2
comp=Z,69nm,1.5s
MESJ Messejana 77.77 54 *eP* **P 04 39 01.3 +0.4**
MESJ *eS* **S 04 48 53.5 +0.9**
PARRA Arraiolos 77.78 53 *eP* **P 04 39 01.0 +0.1**
PARRA *i* IAmb IAmb 04 39 05.0
comp=Z,181nm,1.8s
EVO Evora 77.83 53 P **P 04 39 01.1 -0.1**
EVO Evora 77.83 53 *eP* **P 04 39 01.9 +0.6**
EVO *i* IAmb IAmb 04 39 05.5
comp=Z,166nm,1.7s
MTE Manteigas 77.94 51 IAMs_20 IAMs_20 05 09 41.9
comp=Z,14µm,20.0s
MTE Manteigas 77.94 51 *eP* **P 04 39 02.0 +0.1**
MTE *i* IAmb IAmb 04 39 05.7
comp=Z,139nm,1.5s
MTE *eS* **S 04 48 58.4 +4.0**
MTE *eLR* LR 05 05 39.4
MTE *i* IAMs_20 IAMs_20 05 10 06.7
comp=Z,12µm,20.0s
PCVE Castro Verde 77.94 54 P **P 04 39 01.3 -0.5**
PCVE Castro Verde 77.94 54 *eP* **P 04 39 02.5 +0.7**
PCVE *i* IAmb IAmb 04 39 06.3
comp=Z,138nm,1.6s
BIGH Upper Bighouse 78.01 32 *eP* **P 04 39 01.4 -0.3**
BIGH IAmb IAmb 04 39 04.9
comp=Z,231nm,1.2s
BIGH IAMs_20 IAMs_20 05 13 30.1
comp=Z,26µm,18.7s
PGBU Glenifferbraes 78.02 35 *eP* **P 04 39 01.9 +0.1**
PGBU IAMs_20 IAMs_20 05 12 38.9
comp=Z,48µm,19.7s
PBEJ Beja 78.02 54 *eP* **P 04 39 02.7 +0.4**
PBEJ *i* IAmb IAmb 04 39 06.6
comp=Z,146nm,2.0s
PCBR Castelo Branco 78.07 52 *eP* **P 04 39 03.0 +0.6**
PCBR *i* IAmb IAmb 04 39 06.6
comp=Z,136nm,1.4s
PBDV Barranco-do-Ve 78.08 54 P **P 04 39 02.9 +0.2**
PBDV Barranco-do-Ve 78.08 54 *eP* **P 04 39 03.3 +0.7**
PBDV *i* IAmb IAmb 04 39 07.4
comp=Z,219nm,1.8s
PESTR Estremoz 78.12 53 P **P 04 39 04.5 +1.7**
PESTR Estremoz 78.12 53 *eP* **P 04 39 03.3 +0.5**
PESTR *i* IAmb IAmb 04 39 06.8
comp=Z,122nm,1.8s
IOMK Kirk Michael 78.16 37 *eP* **P 04 39 02.9 +0.2**
IOMK IAMs_20 IAMs_20 05 13 25.3
comp=Z,10µm,15.5s
MVO Moncorvo 78.22 50 *eP* **P 04 39 03.9 +0.5**
MVO *i* IAmb IAmb 04 39 16.0
comp=Z,113nm,1.6s
MVO *eLR* LR 05 06 14.8
MVO *i* IAMs_20 IAMs_20 05 16 08.8
comp=Z,10µm,18.0s
PVAQ Vaqueiros 78.23 54 *eP* **P 04 39 05.2 +1.9**
PVAQ *i* IAmb IAmb 04 39 07.9
comp=Z,173nm,1.6s
PVAQ *eS* **S 04 49 01.0 +3.5**
PVAQ *eLR* LR 05 04 05.0
PVAQ *i* IAMs_20 IAMs_20 05 11 07.9
comp=Z,12µm,20.0s
ECAL Calabor 78.33 49 P **P 04 39 03.8 -0.2**
PBRG Braganca 78.35 50 *eP* **P 04 39 04.5 +0.5**
PBRG *i* IAmb IAmb 04 39 08.2
comp=Z,159nm,1.7s
EGRO El Granado 78.39 54 P **P 04 39 03.8 -0.5**
HTL Hartland 78.63 40 *eP* **P 04 39 05.5 +0.2**
HTL IAMs_20 IAMs_20 05 15 25.5
comp=Z,27µm,16.1s
PBAR Barrancos 78.64 53 P **P 04 39 05.6 -0.1**
PBAR Barrancos 78.64 53 *eP* **P 04 39 06.1 +0.4**
PBAR *i* IAmb IAmb 04 39 10.0
comp=Z,168nm,1.8s
EDI Edinburgh 78.73 35 *eP* **P 04 39 05.3 -0.4**
EDI IAMs_20 IAMs_20 05 14 33.3
comp=Z,27µm,20.5s
ESK Eskdalemuir 78.80 36 P **P 04 39 06.0 -0.2**
ESK IAmb IAmb 04 39 09.4
comp=Z,291nm,1.1s
ESK Eskdalemuir 78.80 36 P **P 04 39 06.0 -0.2**
ESK pmax pmax
comp=Z,291nm,1.1s
ESK MLR MLR
comp=Z,27µm,20.0s
EKA Eskdalemuir Ar 78.83 36 P **P 04 39 06.3 0.0**
comp=Z,248nm,1.1s,baz=279,slow=5.5,SNR=81
comp=Z,248nm,1.1s
KESW Keswick, Cumbr 78.96 36 *eP* **P 04 39 07.5 +0.4**
KESW IAmb IAmb 04 39 10.1
comp=Z,406nm,1.4s
KESW IAMs_20 IAMs_20 05 13 57.8
comp=Z,23µm,18.5s
DRUM Mains of Drumt 78.98 34 *eP* **P 04 39 06.7 -0.4**
DRUM IAmb IAmb 04 39 10.2
comp=Z,296nm,0.9s
DRUM IAMs_20 IAMs_20 05 13 28.3
comp=Z,19µm,19.7s
HLM1 Long Mynd 79.40 38 *eP* **P 04 39 09.6 0.0**
HLM1 IAmb IAmb 04 39 12.4
comp=Z,179nm,1.2s
HLM1 IAMs_20 IAMs_20 05 13 05.0
comp=Z,19µm,21.7s
MCH1 Michaelchurch 79.41 39 *eP* **P 04 39 09.1 -0.5**
MCH1 IAMs_20 IAMs_20 05 15 58.5
comp=Z,18µm,18.3s
RTC Rabat Centre 79.45 58 P **P 04 39 09.7 -0.4**
KBS Kingsbay 79.45 11 P **P 04 39 09.4 +0.1**
KBS Kingsbay 79.45 11 *eP* **P 04 39 10.8 +1.4**
KBS IVmB_BB 04 39 12.1
comp=Z,5µm,3.6s
KBS *e* 04 49 10.5
KBS Kingsbay 79.45 11*ceP* **P 04 39 10.2 +0.9**
KBS pmax pmax
comp=Z,155nm,1.2s
KBS Kingsbay 79.45 11 *i* P **P 04 39 11.5 +2.2**
SFS San Fernando 79.57 55 P **P 04 39 11.8 +1.0**
SFS San Fernando 79.57 55 IAmb IAmb 04 39 16.1
comp=Z,395nm,1.1s
EDMD Edmundbyers 79.58 36 *eP* **P 04 39 10.4 0.0**
EDMD IAmb IAmb 04 39 13.7
comp=Z,487nm,1.2s
EDMD IAMs_20 IAMs_20 05 14 25.1
comp=Z,24µm,20.4s
TIO Tiouine 79.62 61 P **P 04 39 11.8 +0.4**
CNIL Conil 79.70 55 P **P 04 39 13.4 +1.9**
LBWR Ladybower, Pea 79.95 37 *eP* **P 04 39 13.3 +0.8**
LBWR IAmb IAmb 04 39 15.8
comp=Z,432nm,1.2s
LBWR IAMs_20 IAMs_20 05 14 19.5
comp=Z,18µm,20.6s
STRD Stroud 79.95 39 *eP* **P 04 39 12.5 0.0**
STRD IAMs_20 IAMs_20 05 16 24.5
comp=Z,20µm,16.8s
GDLE Glaisdale, N Y 80.31 36 *eP* **P 04 39 14.9 +0.6**
GDLE IAmb IAmb 04 39 17.9
comp=Z,342nm,1.0s
GDLE IAMs_20 IAMs_20 05 14 47.3
comp=Z,23µm,19.2s
CWF Charnwood Fore 80.31 38 *eP* **P 04 39 14.3 -0.1**
CWF IAMs_20 IAMs_20 05 13 41.9
comp=Z,20µm,21.6s
PAB San Pablo 80.50 52 P **P 04 39 15.8 0.0**
PAB IAmb IAmb 04 39 19.7
comp=Z,212nm,1.1s
PAB San Pablo 80.50 52 IAMs_20 IAMs_20 05 12 15.6
comp=Z,13µm,20.0s
PAB San Pablo 80.50 52 P **P 04 39 15.8 0.0**
PAB pmax pmax
comp=Z,212nm,1.2s
SPA0 Spitsbergen Ar 80.53 11 *eP* **P 04 39 15.6 +0.3**
SPA0 IVmB_BB 04 39 25.5
comp=Z,5µm,4.5s
SPA0 *eS* **S 04 49 22.6 +1.9**
SPA0 IAMs_BB IVMs_BB 05 15 51.3
comp=Z,11µm,21.1s
SPITS Spitsbergen Ar 80.53 11 P **P 04 39 16.2 +1.0**
comp=Z,101nm,1.1s,baz=162,slow=0.8,SNR=23
SPITS LR LR 05 16 14.3
comp=Z,33µm,20.9s,baz=256,slow=37
comp=Z,101nm,1.1s
SPB2 Spitsbergen Ar 80.54 11 IAmb IAmb 04 39 19.0
comp=Z,449nm,1.6s
LMK Market Rasen 80.76 37 *eP* **P 04 39 17.7 +0.9**
LMK IAMs_20 IAMs_20 05 15 41.6
comp=Z,17µm,19.9s
ESDC Sonseca Array 80.77 51 P **P 04 39 17.5 +0.2**
comp=Z,93nm,0.9s,baz=290,slow=4.0,SNR=107
ESDC PKKPbc **PKKPbc 04 57 56.6 -0.4**
comp=Z,2.1nm,0.8s,baz=79,slow=1.7,SNR=11
ESDC PKPPKP 05 06 00.2
comp=Z,1.0nm,1.0s,baz=93,slow=2.7,SNR=4.9
ESDC LR LR 05 11 39.0
comp=Z,10µm,19.2s,baz=290,slow=33
comp=Z,93nm,0.9s
ESDC Sonseca Array 80.77 51 P **P 04 39 16.8 -0.5**
ESDC IAmb IAmb 04 39 21.1
comp=Z,174nm,1.1s
ESBB Sonseca Array 80.77 51 IAmb IAmb 04 39 21.0
comp=Z,188nm,1.1s
HSPB Hornsund (broa 80.80 13 *eP* **P 04 39 17.4 +0.8**
HSPB *eS* **S 04 49 28.5 +5.1**
HSPB *eL* L 05 12 45.0
comp=Z,29µm,24.6s
HSPB Hornsund (broa 80.80 13 *eP* **P 04 39 18.8 +2.2**
BILL Bilibino 81.23 338 P **P 04 39 19.2 +0.1**
BILL IAMs_20 IAMs_20 05 21 34.7
comp=Z,12µm,20.0s
BILL Bilibino 81.23 338*ceP* **P 04 39 19.7 +0.6**
BILL pmax pmax
comp=Z,655nm,1.3s
BILL MLR MLR
comp=Z,14µm,23.0s
MD01 Midelt array s 81.37 58 P **P 04 39 21.1 +0.4**
PMSA Palmer Station 81.38 168 LR LR 05 08 42.8
comp=Z,10µm,18.4s,baz=326,slow=31
PMSA Palmer Station 81.38 168 P **P 04 39 21.5 +1.8**
PMSA Palmer Station 81.38 168 IAMs_20 IAMs_20 05 07 22.5
comp=Z,11µm,20.0s
PMSA Palmer Station 81.38 168 *eP* **P 04 39 19.8 +0.1**
MDT Midelt 81.51 58 P **P 04 39 22.4 +1.0**
comp=Z,73nm,0.9s,baz=303,slow=6.5,SNR=61
MDT S S 04 49 23.4 -9.1
comp=Z,0.6nm,0.5s,baz=213,slow=11,SNR=1.5
MDT LR LR 05 10 16.1
comp=Z,5µm,21.7s,baz=306,slow=32
comp=Z,73nm,0.9s
ELMS Elmsett, Ipswi 81.81 38 *eP* **P 04 39 22.7 +0.3**
ELMS IAmb IAmb 04 39 25.3
comp=Z,252nm,1.0s
ELMS IAMs_20 IAMs_20 05 16 20.1
comp=Z,22µm,20.9s
ESPZ Base Esperanza 81.86 164 IAmb IAmb 04 39 25.2
comp=Z,576nm,1.8s
SUE Sulen 81.88 29 *eP* **P 04 39 23.4 +0.8**
SUE IVmB_BB 04 39 26.6
comp=Z,6µm,12.8s
SUE *eS* **S 04 49 36.5 +1.5**
SUE IVMs_BB IVMs_BB 05 13 31.9
comp=Z,6µm,20.8s
FOO Floro 81.88 29 *eP* **P 04 39 23.2 +0.6**
FOO IVmB_BB 04 39 32.5
comp=Z,5µm,7.9s
FOO *eS* **S 04 49 36.0 +1.0**
ASK Askoy 82.22 30 *eP* **P 04 39 25.6 +1.2**
ASK IVmB_BB 04 39 34.9
comp=Z,5µm,7.1s
ASK *eS* **S 04 49 40.6 +2.1**
BER Bergen 82.31 30 *eP* **P 04 39 25.4 +0.5**
BER IVmB_BB 04 39 26.7
comp=Z,4µm,3.9s
BER *eS* **S 04 49 39.9 +0.3**
BER IVMs_BB IVMs_BB 05 15 35.9
comp=Z,6µm,23.8s
AFI Afiamalu 82.51 254 P **P 04 39 29.2 +2.3**
HYA Hoyanger 82.52 29 *eP* **P 04 39 27.8 +1.8**
HYA IVmB_BB 04 39 36.5
comp=Z,5µm,5.4s
HYA *eS* **S 04 49 43.5 +1.9**
HYA IVMs_BB IVMs_BB 05 14 12.7
comp=Z,5µm,21.9s
KMY Karmoy 82.56 31 *eP* **P 04 39 26.4 +0.2**
KMY IVmB_BB 04 39 35.9
comp=Z,4µm,7.5s
KMY *eS* **S 04 49 43.7 +1.7**
KMY IVMs_BB IVMs_BB 05 12 31.6
comp=Z,5µm,21.6s
BJO1 Bjornoya 82.58 15 *eP* **P 04 39 27.1 +1.0**
BJO1 IVmB_BB 04 39 28.1
comp=Z,9µm,3.4s
BJO1 *eS* **S 04 49 42.8 +1.0**
BJO1 IVMs_BB IVMs_BB 05 17 08.3
comp=Z,11µm,19.4s
AKN Aaknes 82.63 28 *eP* **P 04 39 27.4 +0.8**
AKN IVmB_BB 04 39 28.7
comp=Z,5µm,3.3s
AKN *eS* **S 04 49 44.2 +1.4**
AKN IVMs_BB IVMs_BB 05 13 59.5
comp=Z,7µm,23.4s
MOL Molde 82.77 27 *eP* **P 04 39 27.3 +0.1**
MOL IVmB_BB 04 39 31.4
comp=Z,5µm,3.8s
MOL IVMs_BB IVMs_BB 05 14 12.3
comp=Z,4µm,22.7s
HOPEN Hopen 82.98 12 *eP* **P 04 39 29.5 +1.4**
HOPEN IVmB_BB 04 39 29.7
comp=Z,8µm,3.5s
HOPEN *eS* **SKSac 04 49 48.4 -0.2**
HOPEN IVMs_BB IVMs_BB 05 17 50.4
comp=Z,10µm,17.8s
HOPE Hope Point 83.05 150 P **P 04 39 29.8 +1.1**
HOPE Hope Point 83.05 150 IAMs_20 IAMs_20 05 11 37.7
comp=Z,17µm,22.0s
HOPE Hope Point 83.05 150 P **P 04 39 29.8 +1.1**
HOPE pmax pmax
comp=Z,608nm,1.6s
ODD1 Odda 83.06 30 *eP* **P 04 39 30.0 +1.2**
ODD1 IVmB_BB 04 39 30.9
comp=Z,5µm,4.2s
ODD1 *eS* **SKSac 04 49 49.8 +0.1**
ODD1 IVMs_BB IVMs_BB 05 13 22.1
comp=Z,5µm,20.0s
BLS5 Blasjo 83.11 31 *eP* **P 04 39 30.1 +1.0**
BLS5 IVmB_BB 04 39 31.2
comp=Z,6µm,4.1s
BLS5 *eS* **SKSac 04 49 50.2 +0.3**
BLS5 IVMs_BB IVMs_BB 05 13 11.2
comp=Z,5µm,23.4s
LOF Lofoten 83.42 21 *eP* **P 04 39 30.5 0.0**
LOF IVmB_BB 04 39 32.4
comp=Z,7µm,3.4s
LOF *eS* **S 04 49 51.7 +1.1**
LOF IVMs_BB IVMs_BB 05 15 17.9
comp=Z,6µm,19.3s
CART Cartagena 83.45 53 IAMs_20 IAMs_20 05 18 04.0
comp=Z,8µm,18.0s
CLF Chambon-Foret 83.49 42 IAMs_20 IAMs_20 05 16 07.8
comp=Z,17µm,21.0s
DOMB Dombas 83.60 28 *eP* **P 04 39 32.8 +1.1**
DOMB IVmB_BB 04 39 33.9
comp=Z,8µm,3.4s
DOMB *e* 04 49 59.0
DOMB IVMs_BB IVMs_BB 05 14 50.7
comp=Z,7µm,21.1s
SKAR Skarslia 83.65 29 *eP* **P 04 39 33.1 +1.2**
SKAR IVmB_BB 04 39 34.0
comp=Z,6µm,4.0s
SKAR *e* 04 49 54.3
SKAR IVMs_BB IVMs_BB 05 14 56.3
comp=Z,6µm,21.3s
SNART Snartemo 83.78 31 *eP* **P 04 39 33.7 +1.2**
SNART Snartemo 83.78 31 *i* P **P 04 39 33.7 +1.2**
VAGH Vaagaholmen 83.82 23 *eP* **P 04 39 34.0 +1.5**
SMAI San Martin Ant 83.83 170 IAmb IAmb 04 39 36.4
comp=Z,241nm,1.4s
STOK Stokkvaagen 83.86 23 *eP* **P 04 39 34.1 +1.4**
LEIR Leirfjorden 83.97 23 *eP* **P 04 39 34.7 +1.3**
LEIR IVmB_BB 04 39 35.8
comp=Z,10µm,3.3s
LEIR *eS* **S 04 49 57.8 +1.6**
LEIR *eSS* **SS 04 55 29.4 +5.6**
LEIR IVMs_BB IVMs_BB 05 15 25.0
comp=Z,8µm,20.8s
NSS Namsos 84.06 25 *eP* **P 04 39 34.7 +0.9**
NSS IVmB_BB 04 39 36.0
comp=Z,7µm,3.5s
NSS *e* 04 49 56.3
NSS *eSS* SS 04 55 29.4 +4.3
NSS IVMs_BB IVMs_BB 05 17 11.2
comp=Z,8µm,18.5s
STEI Steigen 84.09 21 *eP* **P 04 39 34.7 +0.8**
STEI IVmB_BB 04 39 35.6
comp=Z,7µm,3.5s
STEI *eS* **S 04 49 59.6 +2.3**
STEI IVMs_BB IVMs_BB 05 17 23.8
comp=Z,6µm,19.9s
UCC Uccle 84.16 39 IAmb IAmb 04 39 37.8
comp=Z,156nm,1.1s
UCC Uccle 84.16 39 *dP* **P 04 39 35.0 +0.3**
comp=Z,67nm,1.1s
RAUS Rausandaksla 84.21 23 *eP* **P 04 39 35.7 +1.1**
FAUS Fauske 84.32 22 *eP* **P 04 39 37.0 +1.9**
HOMB Homborsund 84.45 31 *eP* **P 04 39 37.9 +1.9**
HOMB Homborsund 84.45 31 *i* P **P 04 39 37.2 +1.3**
MOR8 Moi Rana 84.46 23 *eP* **P 04 39 37.3 +1.5**
DOU Dourbes 84.48 40 *dP* **P 04 39 34.7 -1.6**
comp=Z,36nm,0.0s
BMRD Maredsous 84.54 40 *dP* **P 04 39 37.2 +0.6**
comp=Z,53nm,1.7s
KONO Kongsberg 84.58 30 P **P 04 39 37.0 +0.4**
KONO Kongsberg 84.58 30 IAMs_20 IAMs_20 05 14 41.1
comp=Z,15µm,22.0s
KONO Kongsberg 84.58 30 *eP* **P 04 39 37.8 +1.2**
KONO Kongsberg 84.58 30*ceP* **P 04 39 38.3 +1.7**
KONO pmax pmax
comp=Z,797nm,1.7s
TRO Tromso 84.63 19 *eP* **P 04 39 37.7 +1.0**
BGES Gesves 84.71 40 *dP* **P 04 39 38.0 +0.5**
comp=Z,141nm,1.2s
BCLA Clavier 84.84 39 *dP* **P 04 39 38.5 +0.4**
comp=Z,85nm,1.3s
RCHB Rochefort 84.86 40 *dP* **P 04 39 38.6 +0.4**
comp=Z,99nm,1.3s
NB2 NORSAR Subarra 84.89 28 P **P 04 39 39.8 +1.6**
comp=Z,995nm,1.4s,baz=289,slow=4.8
NOA NORSAR Array B 84.89 28 P **P 04 39 39.5 +1.2**
comp=Z,193nm,1.0s,baz=291,slow=4.8,SNR=211
NOA PKKPbc **PKKPbc 04 57 45.5 -2.8**
comp=Z,1.2nm,0.8s,baz=99,slow=3.8,SNR=3.5
NOA LR LR 05 15 52.8
comp=Z,17µm,21.9s,baz=290,slow=34
comp=Z,193nm,1.0s
BSTI Sart Tilman 84.96 39 *dP* **P 04 39 39.6 +1.0**
comp=Z,29nm,1.3s
BEBN Eben Emael 84.97 39 *dP* **P 04 39 39.8 +1.1**
comp=Z,164nm,1.2s
OSL Oslo 85.02 29 *eP* **P 04 39 40.0 +1.2**
JETT Jettan, Norway 85.14 19 *eP* **P 04 39 40.4 +1.2**
NC602 NORSAR Array S 85.15 28 *eP* **P 04 39 41.0 +1.5**
GOET G??ttrup 85.19 32 *i* P **P 04 39 41.0 +1.3**
GOET IAmb IAmb 04 39 43.8
comp=Z,380nm,1.0s
MEM Membach 85.22 39 *dP* **P 04 39 40.9 +0.9**
comp=Z,166nm,1.1s
BHOU Houvegnez 85.29 39 *dP* **P 04 39 41.6 +1.2**
comp=Z,170nm,1.2s
BTNL Ternell 85.30 39 *dP* **P 04 39 41.3 +0.9**
comp=Z,82nm,1.3s
MUD Monsted U'grnd 85.34 33 *i* P **P 04 39 42.0 +1.5**
MUD IAmb IAmb 04 39 44.4
comp=Z,330nm,1.2s
WLF Walferdange 85.57 40 P **P 04 39 41.3 -0.5**
WLF Walferdange 85.57 40 IAMs_20 IAMs_20 05 17 55.4
comp=Z,14µm,20.0s
WLF Walferdange 85.57 40 *dP* **P 04 39 42.9 +1.1**
comp=Z,205nm,1.2s
WLF Walferdange 85.57 40 *eP* **P 04 39 43.1 +1.3**
comp=Z,493nm,1.2s,baz=290,slow=4.7
HAMF Hammerfest 85.61 17 *eP* **P 04 39 41.7 +0.1**
OVD Ostervraa, Den 85.61 32 *i* P **P 04 39 41.8 0.0**
OVD IAmb IAmb 04 39 46.7
comp=Z,548nm,1.3s
SSB Saint Sauveur 85.69 45 IAmb IAmb 04 39 46.0
comp=Z,220nm,1.2s
SSB Saint Sauveur 85.69 45 IAMs_20 IAMs_20 05 15 56.2
comp=Z,9µm,21.0s
BUG Bochum-Univer 85.75 38 *eP* **P 04 39 43.8 +1.2**
comp=Z,519nm,1.2s,baz=290,slow=4.7
IBBN Ibbenburen 85.79 37 *eP* **P 04 39 44.0 +1.2**
comp=Z,423nm,1.0s,baz=290,slow=4.7
SSRD Sdr. Stenderup 85.89 34 *i* P **P 04 39 43.7 +0.5**
SSRD IAmb IAmb 04 39 47.1
comp=Z,647nm,1.1s
TJOU Tjoern 86.09 31 *i* P **P 04 39 45.0 +0.8**
KTK1 Kautokeino 86.28 19 *eP* **P 04 39 44.6 -0.3**
HFS Hagfors 86.36 29 P **P 04 39 46.2 +0.8**
comp=Z,70nm,1.0s,baz=259,slow=1.5,SNR=45
HFS S **SKSac 04 50 09.0 -1.7**
comp=Z,4.9nm,1.1s,baz=347,slow=5.9,SNR=2.0
HFS LR LR 05 18 34.4
comp=Z,15µm,19.8s,baz=282,slow=36
comp=Z,70nm,1.0s
ONAU Onsala 86.46 32 *i* P **P 04 39 46.0 0.0**
KASTN Kahler Asten 86.51 38 *eP* **P 04 39 47.6 +1.1**
comp=Z,308nm,1.1s,baz=290,slow=4.7
RETH Rethem/Aller, 86.60 36 *eP* **P 04 39 48.6 +1.9**
comp=Z,458nm,1.1s,baz=290,slow=4.7
ECH Echery 86.61 41 P **P 04 39 47.1 +0.1**
ECH IAMs_20 IAMs_20 05 18 25.2
comp=Z,13µm,20.0s
ECH Echery 86.61 41 P **P 04 39 47.1 +0.1**
ECH pmax pmax
comp=Z,312nm,1.1s
ECH MLR MLR
comp=Z,13µm,20.0s
ARA0 ARCESS Array S 86.71 18 *eP* **P 04 39 46.6 -0.5**
ARCES ARCESS Array B 86.71 18 P **P 04 39 46.9 -0.1**
comp=Z,58nm,0.9s,baz=298,slow=4.5,SNR=145
ARCES S **SKSac 04 50 07.9 -4.7**
comp=Z,4.1nm,1.1s,baz=51,slow=1.9,SNR=2.1
ARCES PKKPbc **PKKPbc 04 57 41.5 -2.6**
comp=Z,3.2nm,0.9s,baz=150,slow=2.0,SNR=4.7
ARCES LR LR 05 19 55.0
comp=Z,17µm,18.1s,baz=302,slow=36
comp=Z,58nm,0.9s
ARCES ARCESS Array B 86.71 18 P **P 04 39 47.3 +0.3**
ARCES ARCESS Array B 86.71 18 P **P 04 39 47.3 +0.3**
ARCES pmax pmax
comp=Z,561nm,2.0s

BSEG Bad Segeberg 86.76 35 *e*P **P 04 39 48.9 +1.3**
comp=Z,224nm,1.0s,baz=290,slow=4.7
BORU Boraas 86.81 31 *i* P **P 04 39 47.9 +0.2**
TNS Taunus Mts 86.83 39 *e*P **P 04 39 49.2 +1.2**
comp=Z,507nm,1.0s,baz=290,slow=4.7
DBIC Dimbokro 86.84 84 P **P 04 39 49.3 +0.6**
comp=Z,73nm,1.0s,baz=304,slow=4.7,SNR=48
DBIC S **SKSac 04 50 14.1 -1.2**
comp=Z,1.5nm,0.6s,baz=130,slow=20,SNR=7.5
DBIC PKKPbc **PKKPbc 04 57 41.4 -0.7**
comp=Z,7.0nm,1.0s,baz=90,slow=6.1,SNR=4.7
DBIC LR LR 05 16 10.9
comp=Z,7µm,20.6s,baz=302,slow=34
comp=Z,73nm,1.0s
DBIC Dimbokro 86.84 84 P **P 04 39 48.6 -0.2**
DBIC IAmb IAmb 04 39 52.1
comp=Z,236nm,1.2s
DBIC Dimbokro 86.84 84 P **P 04 39 48.9 +0.2**
MAHO Mahon 86.90 50 P **P 04 39 48.5 -0.1**
MAHO IAmb IAmb 04 39 51.9
comp=Z,259nm,1.0s
MAHO IAMs_20 IAMs_20 05 14 49.0
comp=Z,9µm,20.0s
FABU Falkenberg 87.01 32 *i* P **P 04 39 48.5 -0.2**
KEV Kevo 87.04 18 P **P 04 39 48.5 -0.1**
KEV IAmb IAmb 04 39 51.1
comp=Z,144nm,1.0s
KEV Kevo 87.04 18 P **P 04 39 48.5 -0.1**
KEV pmax pmax
comp=Z,145nm,1.0s
KEV MLR MLR
comp=Z,27µm,21.0s
KEV Kevo 87.04 18 P **P 04 39 48.3 -0.3**
KEV S **S 04 50 25.1 -1.2**
BNI Bardonecchia 87.21 44 IAmb IAmb 04 39 54.2
comp=Z,268nm,1.1s
BNI IAMs_20 IAMs_20 05 19 56.3
comp=Z,13µm,19.0s
SENIN Lac Senin/Sane 87.24 43 IAMs_20 IAMs_20 05 18 35.1
comp=Z,14µm,21.0s
COP Copenhagen 87.32 33 *i* P **P 04 39 51.1 +0.9**
COP IAmb IAmb 04 39 54.5
comp=Z,122nm,0.8s
BFO Black Forest 87.33 41 P **P 04 39 50.7 +0.2**
BFO IAmb IAmb 04 39 53.4
comp=Z,188nm,1.1s
BFO Black Forest 87.33 41 P **P 04 39 50.7 +0.2**
BFO pmax pmax
comp=Z,188nm,1.1s
BFO MLR MLR
comp=Z,21µm,18.0s
BFO Black Forest 87.33 41 *e*P **P 04 39 51.0 +0.5**
comp=Z,224nm,1.2s,baz=290,slow=4.7
GTTG Gottingen 87.33 37 *e*P **P 04 39 51.5 +1.2**
comp=Z,341nm,1.1s,baz=290,slow=4.7
CLZ Clausthal 87.47 37 *e*P **P 04 39 52.4 +1.3**
comp=Z,322nm,1.3s,baz=290,slow=4.7
BJUU Bjuv 87.49 33 *i* P **P 04 39 51.4 +0.3**
VADS Vadso 87.51 17 *e*P **P 04 39 50.1 -0.7**
ASSE Asse, Remlinge 87.55 37 *e*P **P 04 39 52.6 +1.3**
comp=Z,351nm,1.3s,baz=290,slow=4.7
UBBA Unterbreizbach 87.58 38 *e*P **P 04 39 53.3 +1.9**
comp=Z,544nm,1.8s,baz=290,slow=4.7
GORT1 Trebel 87.63 36 *e*P **P 04 39 53.0 +1.2**
comp=Z,552nm,1.8s,baz=290,slow=4.7
STU Stuttgart 87.74 40 P **P 04 39 52.7 +0.3**
STU IAmb IAmb 04 39 55.9
comp=Z,188nm,0.9s
STU IAMs_20 IAMs_20 05 18 49.8
comp=Z,12µm,20.0s
STU Stuttgart 87.74 40 P **P 04 39 52.7 +0.3**
STU pmax pmax
comp=Z,188nm,0.9s
STU MLR MLR
comp=Z,12µm,20.0s
STU Stuttgart 87.74 40 *e*P **P 04 39 53.3 +0.9**
comp=Z,509nm,1.0s,baz=290,slow=4.7
DEL Delary 87.79 32 *i* P **P 04 39 53.1 +0.6**
FLTG Flechtingen 87.81 36 *e*P **P 04 39 53.3 +0.6**
comp=Z,999nm,2.2s,baz=290,slow=4.7
LUNU Lund 87.88 33 *i* P **P 04 39 53.4 +0.5**
RGN Rugen 88.20 34 P **P 04 39 54.0 -0.5**
RGN IAMs_20 IAMs_20 05 19 33.5
comp=Z,12µm,20.0s
SEY Seymchan 88.47 335 LR LR 05 22 37.4
comp=Z,10µm,19.9s,baz=58,slow=38
SEY Seymchan 88.47 335*ce*P **P 04 39 56.2 +0.6**
SEY pmax pmax
comp=Z,245nm,1.3s
SEY MLR MLR
comp=Z,10µm,19.0s
NEUB Neuenburg 88.51 37 *e*P **P 04 39 57.2 +1.2**
comp=Z,704nm,2.0s,baz=290,slow=4.7
TUE Stuetta 88.56 42 P **P 04 39 57.1 +0.4**
TUE IAmb IAmb 04 40 00.6
comp=Z,219nm,1.1s
TUE IAMs_20 IAMs_20 05 19 26.9
comp=Z,14µm,20.0s
MOX Moxa 88.61 38 *e*P **P 04 39 57.5 +0.9**
comp=Z,247nm,1.7s,baz=290,slow=4.7
MOX *e*L L 05 19 26.1
comp=Z,14µm,21.8s
DAVA Damuels 88.65 42 *e*P **P 04 39 58.0 +1.0**
comp=Z,218nm,1.0s,SNR=54
DAVA Damuels 88.65 42 *e*P **PKKPbc 04 57 39.0 0.0**
comp=Z,14nm,1.4s
UBR Ueberruh 88.67 41 *e*P **P 04 39 57.9 +0.9**
comp=Z,248nm,1.2s,baz=290,slow=4.7
DAVOX Davos/Dischmat 88.81 42 P **P 04 39 58.8 +1.0**
comp=Z,46nm,0.9s,baz=284,slow=6.7,SNR=45
DAVOX LR LR 05 17 59.7
comp=Z,6µm,19.1s,baz=296,slow=34
comp=Z,46nm,0.9s
BSD Bornholm Skovb 88.85 33 *i* P **P 04 39 58.0 +0.5**
BSD IAmb IAmb 04 40 00.3
comp=Z,173nm,1.2s
CKHR Kef el Ahmar 88.90 53 P P 04 40 03.2 +4.8
PLN Plauen 88.99 38 *e*P **P 04 39 59.3 +1.0**
comp=Z,62nm,1.4s,baz=290,slow=4.7
DFRA Djebel Bou Aff 89.03 53 P P 04 40 05.7 +6.7
FUORN Ofenpass-Fuorn 89.11 42 P **P 04 39 58.4 -0.9**
FUORN IAmb IAmb 04 40 03.1
comp=Z,98nm,0.9s
FUORN IAMs_20 IAMs_20 05 20 07.4
comp=Z,11µm,20.0s
MANZ Manzenberg 89.13 39 *e*P **P 04 40 00.2 +1.2**
comp=Z,22nm,1.2s,baz=290,slow=4.7
RETA Reutte 89.15 41 *i* P **P 04 39 59.9 +0.7**
comp=Z,53nm,0.9s,SNR=25
TANN Tannenbergstha 89.19 38 *e*P **P 04 40 00.4 +1.1**
comp=Z,100nm,1.0s,baz=290,slow=4.7
CLL Collm 89.20 37 P **P 04 39 59.1 -0.2**
CLL IAmb IAmb 04 40 02.7
comp=Z,106nm,1.1s
CLL IAMs_20 IAMs_20 05 20 17.0
comp=Z,15µm,21.0s
CLL Collm 89.20 37 *i* P **P 04 40 00.0 +0.8**
CLL *e* 04 50 31.0
CLL *e*S **S 04 50 49.0 +1.5**
CLL pmax pmax
comp=Z,112nm,1.1s
CLL pmax pmax
comp=Z,9.0nm,1.3s
CLL pmax pmax
comp=Z,23nm,1.9s
CLL MLR MLR
comp=Z,15µm,21.1s
CLL Collm 89.20 37 *e*P **P 04 40 00.1 +0.8**
comp=Z,100nm,1.1s,baz=290,slow=4.7
RUE Ruedersdorf 89.22 36 *e*P **P 04 39 60.0 +0.7**
comp=Z,108nm,1.1s,baz=290,slow=4.7
ROTZ Rotzenmuhle 89.27 39 *e*P **P 04 40 00.7 +1.1**
comp=Z,220nm,2.4s,baz=290,slow=4.7
FETA Feichten 89.28 42 *i* P **P 04 40 00.8 +0.9**
comp=Z,79nm,1.0s,SNR=21
FETA Feichten 89.28 42 *e*P **PKKPbc 04 57 37.3 -0.2**
comp=Z,11nm,1.1s
MSSA Maissana 89.36 44 P **P 04 40 01.0 +0.7**
MOTA Moosalm 89.41 41 *e*P **P 04 40 01.1 +0.5**
comp=Z,60nm,0.9s,SNR=19
SQTA Sankt Quirin 89.52 41 *i* P **P 04 40 01.7 +0.6**
comp=Z,81nm,1.3s,SNR=24
SQTA Sankt Quirin 89.52 41 *e*P **PKKPbc 04 57 34.5 -2.3**
comp=Z,7.8nm,1.2s
CTEI Djebel Teioual 89.58 53 P P **04 40 05.9 +4.3**
CASM Ain Smara 89.59 53 P P 04 40 06.3 +4.8
PET Petropavlovsk 89.67 325 *e*P **P 04 40 01.3 -0.1**
PET *e* 04 43 32.5
PET *e* 04 50 35.6
PET *e*S **S 04 50 49.4 -2.4**
PET *e*PS **PS 04 51 59.1 -0.2**
PET *e*PPS PPS 04 52 31.2
PET *e*SS **SS 04 56 48.2 +0.6**
PET pmax pmax
comp=Z,3µm,12.0s
PET pmax pmax
comp=Z,4µm,5.9s
PET pmax pmax
comp=Z,2µm,18.5s
HSKC Hora Svate Kat 89.70 38 *e*P **P 04 40 03.6 +1.9**
HSKC AMS AMS 05 21 40.0
comp=Z,19µm,18.1s
CAEH 'Ain El Ouahch 89.72 52 P **P 04 40 05.3 +3.3**
WATA Walderalm 89.72 41 *e*P **P 04 40 02.9 +0.9**
comp=Z,75nm,1.5s,SNR=12
WATA Walderalm 89.72 41 *e*P **PKKPbc 04 57 35.1 -1.3**
comp=Z,8.1nm,0.8s
CKFL Kef-Lekhel 89.73 53 P **P 04 40 06.1 +3.9**
PRMA PARMA 89.75 44 P **P 04 40 01.6 -0.4**
PRMA IAmb IAmb 04 40 05.2
comp=Z,279nm,1.5s
WTTA Wattenberg 89.78 41 *e*PcP **PcP 04 40 03.6 -0.1**
comp=Z,98nm,2.1s,SNR=12
WTTA Wattenberg 89.78 41 *e*P **PKKPbc 04 57 35.3 -0.9**
comp=Z,12nm,1.0s
WET Wettzell 89.90 39 *e*P **P 04 40 03.8 +1.1**
comp=Z,157nm,1.1s,baz=290,slow=4.7
BRG Berggiesshubel 89.91 37 *e*P **P 04 40 03.6 +1.0**
comp=Z,142nm,1.1s,baz=290,slow=4.7
RICC Richard 90.12 38 *e*P **P 04 40 06.1 +2.5**
RICC AMS AMS 05 21 50.0
comp=Z,16µm,19.3s
PEA0B Petropavlovsk- 90.17 325 P **P 04 40 04.2 +0.4**
PEA0B IAmb IAmb 04 40 06.8
comp=Z,210nm,1.4s
PEA0B Petropavlovsk- 90.17 325*ce*P **P 04 40 04.7 +0.9**
PETK Petropavlovsk- 90.17 325 P **P 04 40 04.5 +0.7**
comp=Z,44nm,0.9s,baz=78,slow=8.2,SNR=23
PETK LR LR 05 21 31.8
comp=Z,1µm,18.1s,baz=47,slow=36
comp=Z,44nm,0.9s
PETK Petropavlovsk- 90.17 325 P **P 04 40 04.2 +0.4**
CMAH Djebel Manchou 90.20 52 P **P 04 40 06.1 +1.7**
CTI Castel Tesino 90.21 42 IAmb IAmb 04 40 07.2
comp=Z,121nm,1.2s
APA Apatity 90.22 18 *i* P **P 04 40 01.4 -2.3**
APA *i* S **S 04 50 51.7 -4.7**
TIXI Tiksi 90.23 348 LR LR 05 28 51.6
comp=Z,11µm,18.1s,baz=42,slow=41
TIXI Tiksi 90.23 348 P **P 04 40 02.6 -1.0**
TIXI IAmb IAmb 04 40 05.7
comp=Z,261nm,1.1s
TIXI Tiksi 90.23 348 IAMs_20 IAMs_20 05 28 45.2
comp=Z,8µm,18.0s
TIXI Tiksi 90.23 348 *i* P **P 04 40 03.0 -0.6**
TIXI pmax pmax
comp=Z,187nm,1.1s
KHC Kasperske Hory 90.33 39 IAmb IAmb 04 40 08.5
comp=Z,113nm,1.1s
KHC IAMs_20 IAMs_20 05 23 01.3
comp=Z,13µm,18.0s
KHC Kasperske Hory 90.33 39*ce*P **P 04 40 04.9 +0.2**
KHC pmax pmax
comp=Z,56nm,1.0s
KHC Kasperske Hory 90.33 39 *e*P **P 04 40 05.5 +0.8**
KHC *e*SKS **SKSac 04 50 32.3 -2.8**
KHC AMS AMS 05 22 50.0
comp=Z,15µm,19.3s
ZCCA Zocca 90.34 44 IAmb IAmb 04 40 10.3
comp=Z,266nm,1.1s
ABSA Djebel Ababsia 90.35 53 P **P 04 40 08.8 +3.7**
RJOB Jochberg 90.35 40 *e*P **P 04 40 05.8 +1.0**
comp=Z,110nm,1.2s,baz=290,slow=4.7
LVZ Lovozero 90.38 17 P **P 04 40 04.1 -0.4**
LVZ IAmb IAmb 04 40 06.9
comp=Z,112nm,1.2s
LVZ Lovozero 90.38 17*ce*P **P 04 40 04.2 -0.3**
LVZ pmax pmax
comp=Z,77nm,1.1s
LVZ MLR MLR
comp=Z,26µm,20.0s
LESA Schwarzleotal 90.39 41 *i* P **P 04 40 05.7 +0.7**
comp=Z,68nm,1.3s,SNR=24
PVCC Panska Ves 90.41 37 *e*P **P 04 40 07.6 +2.7**
PVCC *e* 04 50 36.1
PVCC MLR MLR
comp=Z,14µm,20.1s
PVCC Panska Ves 90.41 37 *e*P **P 04 40 07.6 +2.7**
PVCC *e*SKS **SKSac 04 50 36.1 +0.8**
PVCC AMS AMS 05 22 00.0
comp=Z,14µm,20.1s
TEOL Teolo 90.46 43 IAmb IAmb 04 40 08.7
comp=Z,193nm,1.1s
PRA Prague 90.50 38 *e*P **P 04 40 07.7 +2.3**
PRA MLR MLR
comp=Z,15µm,18.3s
PRA Prague 90.50 38 *e*P **P 04 40 07.7 +2.3**
PRA AMS AMS 05 22 50.0
comp=Z,15µm,18.3s
GEC2 GERESS Array S 90.51 39 IAmb IAmb 04 40 09.1
comp=Z,132nm,1.1s
GEC2 GERESS Array S 90.51 39 *e*P **P 04 40 06.6 +0.9**
comp=Z,141nm,1.1s,baz=290,slow=4.7
GERES GERESS Array B 90.51 39 P **P 04 40 06.3 +0.7**
comp=Z,45nm,0.9s,baz=306,slow=3.1,SNR=142
GERES PKKPbc **PKKPbc 04 57 32.4 -1.9**
comp=Z,2.5nm,0.9s,baz=126,slow=1.3,SNR=14
GERES PKPPKP **P'P'df 05 05 40.2 -5.0**
comp=Z,0.4nm,0.6s,baz=117,slow=3.4,SNR=4.7
GERES LR LR 05 19 55.2
comp=Z,8µm,19.2s,baz=292,slow=35
comp=Z,45nm,0.9s
ZVC Zvikov 90.59 39 *e*P **P 04 40 07.0 +1.2**
ZVC AMS AMS 05 23 30.0
comp=Z,14µm,17.8s
PRU Pruhonice 90.59 38 *e*P **P 04 40 06.9 +1.1**
PRU *e* 04 50 39.4
PRU MLR MLR
comp=Z,13µm,17.4s
PRU Pruhonice 90.59 38 *e*P **P 04 40 06.9 +1.1**
PRU *e*SKS **SKSac 04 50 39.4 +2.9**
PRU AMS AMS 05 22 10.0
comp=Z,13µm,17.4s
CIMO Cimolais 90.63 42 IAmb IAmb 04 40 09.2
comp=Z,127nm,1.1s
MA2 Magadan 90.76 333 P **P 04 40 08.7 +2.3**
MA2 Magadan 90.76 333*ce*P **P 04 40 06.2 -0.2**
MA2 pmax pmax
comp=Z,157nm,1.0s
MA2 MLR MLR
comp=Z,7µm,19.0s
CASP Castiglione de 90.78 46 IAmb IAmb 04 40 09.7
comp=Z,124nm,1.2s
VSL Villasalto 90.79 49 IAmb IAmb 04 40 11.1
comp=Z,196nm,1.0s
VSL IAMs_20 IAMs_20 05 17 03.8
comp=Z,10µm,20.0s
OSSC Osservatorio P 90.80 45 IAmb IAmb 04 40 11.3
comp=Z,79nm,0.9s
GKP Gorka Klasztor 90.84 34 *e*P **P 04 40 07.5 +0.6**
GKP *e*S **SKSac 04 50 40.5 +2.8**
GKP *e*L L 05 16 56.0
comp=Z,18µm,24.0s
CKRC Cesky Krumlov 90.90 39 *e*P **P 04 40 08.3 +1.0**
CKRC *e* 04 50 41.8
CKRC MLR MLR
comp=Z,13µm,18.2s
CKRC Cesky Krumlov 90.90 39 *e*P **P 04 40 08.3 +1.0**
CKRC *e*SKS **SKSac 04 50 41.8 +3.5**
CKRC AMS AMS 05 23 10.0
comp=Z,13µm,18.2s
BIOA Bad Ischl, Aus 90.90 40 *e*P **P 04 40 07.7 +0.3**
comp=Z,44nm,1.0s,SNR=32
KBA Koelnbreinsper 90.94 41 *e*P **P 04 40 08.3 +0.6**
comp=Z,62nm,1.0s,SNR=19
FINES FINESS Array B 91.19 25 P **P 04 40 08.6 +0.2**
comp=Z,79nm,0.9s,baz=318,slow=2.6,SNR=66
FINES PKKPbc **PKKPdf 04 57 30.6 +1.9**
comp=Z,3.3nm,0.8s,baz=151,slow=3.2,SNR=4.4
FINES LR LR 05 22 48.9
comp=Z,18µm,18.7s,baz=292,slow=37
comp=Z,79nm,0.9s
FINES FINESS Array B 91.19 25 P **P 04 40 08.0 -0.3**
MOA Molln 91.23 40 *e*P **P 04 40 09.3 +0.4**
comp=Z,63nm,1.0s,SNR=25
CHVC Chvalec 91.26 37 *e*P **P 04 40 10.2 +1.3**
CHVC MLR MLR
comp=Z,19µm,22.0s
CHVC Chvalec 91.26 37 *e*P **P 04 40 10.2 +1.3**
CHVC AMS AMS 05 20 20.0
comp=Z,19µm,22.0s
UPC Upice 91.26 37 *e*P **P 04 40 10.2 +1.3**
UPC *e* 04 40 15.4
UPC MLR MLR
comp=Z,19µm,21.4s
UPC Upice 91.26 37 *e*P **P 04 40 10.2 +1.3**
UPC *e*pP **sP 04 40 15.4 +0.2**
UPC AMS AMS 05 20 20.0
comp=Z,19µm,21.4s
MYKA Terra Mystica 91.29 41 *e*P **P 04 40 09.8 +0.5**
comp=Z,77nm,1.2s,SNR=14
KSP Ksiaz 91.29 37 *e*P **P 04 40 10.0 +1.0**
KSP *e*S **SKSac 04 50 40.6 +0.1**
KSP *e*L L 05 21 23.3
comp=Z,21µm,20.8s
TREC Trest 91.43 38 *e*P **P 04 40 10.8 +1.0**
TREC *e* 04 50 44.4
TREC MLR MLR
comp=Z,13µm,19.2s
TREC Trest 91.43 38 *e*P **P 04 40 10.8 +1.0**
TREC *e*SKS **SKSac 04 50 44.4 +3.1**
TREC AMS AMS 05 22 20.0
comp=Z,13µm,19.2s
SABO M.te Sabotino 91.50 42 IAmb IAmb 04 40 13.8
comp=Z,148nm,1.2s
DPC Dobruska-Polom 91.51 37 *e*P **P 04 40 11.3 +1.2**
DPC *e* 04 50 44.1
DPC MLR MLR
comp=Z,16µm,20.5s
DPC Dobruska-Polom 91.51 37 *e*P **P 04 40 11.3 +1.2**
DPC *e*SKS **SKSac 04 50 44.1 +2.3**
DPC AMS AMS 05 20 20.0
comp=Z,16µm,20.5s
TOA0 Torodi Ar. Sit 91.56 76 P **P 04 40 13.1 +2.0**
TORD Torodi Ar. Bea 91.56 76 P **P 04 40 06.4 -4.6**
comp=Z,3.2nm,0.3s,baz=319,slow=5.1,SNR=1.6
TORD Torodi Ar. Bea 91.56 76 P **P 04 40 08.0 -3.0**
ACRG Accra 91.57 84 IAmb IAmb 04 40 27.2
comp=Z,62nm,0.8s
MURB Monte Urbino 91.76 45 IAmb IAmb 04 40 13.7
comp=Z,152nm,1.1s
OBKA Obir 91.92 41 *e*P **P 04 40 12.2 0.0**
comp=Z,89nm,1.3s,SNR=9.0
KEST Kesra 91.96 53 P **P 04 40 13.3 +0.7**
comp=Z,109nm,1.1s,baz=293,slow=2.6,SNR=32
comp=Z,109nm,1.1s
KEST Kesra 91.96 53 IAmb IAmb 04 40 17.0
comp=Z,211nm,1.2s
KEST Kesra 91.96 53 P **P 04 40 13.9 +1.4**
SNR=13
CESX Cesi 92.03 45 IAmb IAmb 04 40 15.5
comp=Z,208nm,1.2s
GBAS Gorenja Brezov 92.06 42 *i* P **P 04 40 13.6 +0.8**
KRUC Moravsky 92.07 38 *e*P **P 04 40 13.2 +0.5**
KRUC Moravsky 92.07 38 *e*S **S 04 51 15.2 +1.2**
KRUC *e*PKKP 04 57 29.4
LJU Ljubljana 92.08 42 *e*P **P 04 40 13.7 +0.9**
LJU *e*S **SKSac 04 50 44.6 -0.5**
VRAC Vranov 92.09 38 P **P 04 40 13.7 +0.9**
comp=Z,66nm,1.0s,baz=290,slow=6.8,SNR=42
VRAC LR LR 05 23 23.1
comp=Z,11µm,18.3s,baz=294,slow=37
comp=Z,66nm,1.0s
VRAC Vranov 92.09 38 ⇑P **P 04 40 13.9 +1.1**
VRAC Vranov 92.09 38 *e*P **P 04 40 13.3 +0.5**
VRAC Vranov 92.09 38 *e*S **S 04 51 16.6 +2.4**
VRAC *e*PKKP 04 57 30.1
VRAC Vranov 92.09 38 ⇑P **P 04 40 13.9 +1.1**
RAO Raoul Island 92.11 241 LR LR 05 11 25.9
comp=Z,2µm,21.0s,baz=88,slow=29
SOKA Soboth 92.16 41 *e*P **P 04 40 13.4 +0.1**
comp=Z,104nm,1.4s,SNR=18
SOKA Soboth 92.16 41 *e*P **PKKPbc 04 57 30.2 +0.1**
comp=Z,11nm,0.9s
CONA Conrad Observa 92.19 40 *e*P **P 04 40 14.3 +0.9**
comp=Z,89nm,1.2s,SNR=32
FDMO Fiordimonte 92.23 45 IAmb IAmb 04 40 17.1
comp=Z,172nm,1.1s
PERS Pernice 92.23 41 *e*P **P 04 40 13.7 +0.1**
ARSA Arzberg 92.25 40 IAmb IAmb 04 40 16.8
comp=Z,78nm,1.2s
ARSA Arzberg 92.25 40 *e*P **P 04 40 14.0 +0.4**
comp=Z,73nm,2.0s,SNR=18
ARSA Arzberg 92.25 40 *e*P **PKKPbc 04 57 29.5 -0.3**
comp=Z,3.8nm,1.3s
NRCA Norcia 92.32 45 IAmb IAmb 04 40 16.5
comp=Z,79nm,1.3s
MORC Moravsky Berou 92.46 37 P **P 04 40 14.1 -0.4**
MORC IAmb IAmb 04 40 18.5
comp=Z,157nm,1.3s
MORC Moravsky Berou 92.46 37 ⇑P **P 04 40 16.0 +1.4**
MORC Moravsky Berou 92.46 37 *e*P **P 04 40 15.5 +1.0**
MORC Moravsky Berou 92.46 37 *e*S **S 04 51 19.6 +2.0**
MORC *e*PKKP 04 57 26.8
MORC Moravsky Berou 92.46 37 ⇑P **P 04 40 16.0 +1.4**
STEB Steborice 92.53 37 *e*P **P 04 40 16.3 +1.5**
RONA Rosalia, Austr 92.55 40 *e*P **P 04 40 15.6 +0.5**
comp=Z,70nm,1.0s,SNR=31
RONA Rosalia, Austr 92.55 40 *e*P **PKKPbc 04 57 28.4 -0.7**
comp=Z,5.4nm,0.9s
TAM Tamanrasset 92.57 66 P **P 04 40 15.4 -0.4**
TAM IAmb IAmb 04 40 19.9
comp=Z,224nm,1.4s
TAM IAMs_20 IAMs_20 05 18 14.8
comp=Z,12µm,21.0s
TAM Tamanrasset 92.57 66 P **P 04 40 15.4 -0.4**
TAM pmax pmax
comp=Z,224nm,1.4s
CAMP Campotosto 92.63 45 P **P 04 40 14.5 -1.1**
CAMP IAmb IAmb 04 40 18.4
comp=Z,88nm,1.2s
AQU L'Aquila 92.69 45 *e*P **P 04 40 17.3 +1.5**
RAC Raciborz 92.71 37 *e*P **P 04 40 17.0 +1.4**
RAC Raciborz 92.71 37 *e*S **S 04 51 18.6 -1.1**
RAC AMS AMS 05 22 12.0
comp=Z,20nm,20.8s
RAC Raciborz 92.71 37 *e*P **P 04 40 17.0 +1.4**
RAC *e*S **S 04 51 18.6 -1.1**
RAC MLR MLR
comp=Z,20µm,20.8s
OKC Ostrava-Krasne 92.79 37 *e*P **P 04 40 18.4 +2.4**
OKC *e* 04 40 23.4
OKC MLR MLR
comp=Z,11µm,20.1s
OKC Ostrava-Krasne 92.79 37 *e*P **P 04 40 18.4 +2.4**
OKC *e*pP **sP 04 40 23.4 +1.2**
OKC AMS AMS 05 23 30.0
comp=Z,11µm,20.1s
MAUC Maruska 92.80 38 *e*P **P 04 40 17.6 +1.5**
MODS Modra-Piesok 92.88 39 *e*P **P 04 40 18.3 +1.8**
MODS pmax pmax
comp=Z,474nm,1.3s
MODS Modra-Piesok 92.88 39 *e*P **P 04 40 18.3 +1.8**
SMOL Smolenice 92.92 39 *e*P **P 04 40 19.3 +2.7**
SMOL pmax pmax
comp=Z,89nm,1.3s
JAVC Velka Javorina 92.92 38 *e*P **P 04 40 17.7 +1.0**
JAVC Velka Javorina 92.92 38 *e*S **S 04 51 23.3 +1.6**
JAVC *e*PKKP 04 57 24.5
MSVF Nonsavu 92.95 253 P **P 04 40 18.8 +1.4**
MSVF IAmb IAmb 04 40 21.9
comp=Z,111nm,1.1s
MSVF Nonsavu 92.95 253 P **P 04 40 21.2 +3.8**
MSVF Nonsavu 92.95 253 P **P 04 40 18.8 +1.4**
MSVF pmax pmax
comp=Z,111nm,1.2s
VSU Vasula 93.07 27 *i* P **P 04 40 15.5 -1.5**
VSU pmax pmax
comp=Z,61nm,1.4s
VSU MLR MLR
comp=Z,15µm,20.0s
PABE Paberze 93.31 30 P **P 04 40 18.0 -0.2**
PABE IAMs_20 IAMs_20 05 19 03.2
comp=Z,12µm,22.0s
BEHE Becsehely 93.35 41 P **P 04 40 19.1 +0.5**
BEHE Becsehely 93.35 41 *e*P **P 04 40 20.3 +1.7**
BEL Belsk 93.41 35 *e*P **P 04 40 20.0 +1.2**
BEL *e*S **SKSac 04 50 53.1 +0.9**

BEL *eL* L 05 18 43.5
comp=Z,397µm,24.7s
R9F13 Warsaw-Wawer 93.43 34 *eP* **P 04 40 19.8 +1.0**
comp=Z,3.5nm,0.9s
TARA Tarawa 93.44 272 P **P 04 40 22.6 +2.9**
OJC Ojcow 93.58 36 P **P 04 40 19.3 -0.4**
OJC Ojcow 93.58 36 P **P 04 40 19.3 -0.4**
SUW Suwalki 93.66 32 *eP* P 04 40 14.5 -5.4
SUW *eS* **SKSac 04 50 47.6 -5.9**
SUW *eL* L 05 19 52.1
comp=Z,11µm,24.2s
SUW Suwalki 93.66 32 P **P 04 40 20.7 +0.9**
SUW IAMs_20 IAMs_20 05 22 21.4
comp=Z,11µm,22.0s
SUW Suwalki 93.66 32 P **P 04 40 20.7 +0.9**
SUW MLR MLR
comp=Z,11µm,22.0s
LANS Liptovska Anna 93.86 37 *eP* **P 04 40 22.7 +1.7**
LANS pmax pmax
comp=Z,79nm,1.6s
LANS Liptovska Anna 93.86 37 *eP* **P 04 40 22.7 +1.7**
PUL Pulkovo 93.86 25*ceP* **P 04 40 21.4 +0.7**
PUL pmax pmax
comp=Z,42nm,0.6s
PUL MLR MLR
comp=Z,18µm,19.0s
NIE Niedzica 94.23 37 *eP* **P 04 40 19.6 -3.1**
NIE *eL* L 05 24 34.3
comp=Z,10µm,19.1s
BLY Banja Luka 94.31 42 *eP* **P 04 40 23.5 +0.4**
BLY Banja Luka 94.31 42 ⇑P **P 04 40 24.4 +1.3**
SLATY Slatina 94.35 42 *eP* **P 04 40 26.0 +2.7**
MORH Mrgy, Hungar 94.63 40 *eP* **P 04 40 24.7 +0.2**
MORH Mrgy, Hungar 94.63 40 ⇑P **P 04 40 25.1 +0.6**
PSZ Piszkesteto 94.66 38 P **P 04 40 25.8 +1.0**
PSZ Piszkesteto 94.66 38 ⇑P **P 04 40 26.5 +1.8**
PSZ Piszkesteto 94.66 38 ⇑P **P 04 40 26.5 +1.8**
CTZ Chatham Island 94.72 226 IAMs_20 IAMs_20 05 14 03.2
comp=Z,12µm,19.0s
STHS Stebnicka Huta 94.78 37 *eP* **P 04 40 25.4 +0.2**
STHS pmax pmax
comp=Z,37nm,1.4s
STHS Stebnicka Huta 94.78 37 *eP* **P 04 40 25.4 +0.2**
VAE Valguarnera 95.19 50 P **P 04 40 28.8 +1.4**
comp=Z,14nm,0.8s,baz=25,slow=22,SNR=4.3
VAE LR LR 05 20 23.7
comp=Z,18µm,19.8s,baz=326,slow=34
comp=Z,14nm,0.8s
CUC Castrocucco 95.26 47 P **P 04 40 28.6 +1.0**
CUC IAmb IAmb 04 40 30.5
comp=Z,56nm,1.0s
CUC IAMs_20 IAMs_20 05 28 46.8
comp=Z,10µm,18.0s
KWP Kalwaria Pacla 95.52 36 *eP* **P 04 40 26.4 -2.1**
KWP *eS* **SKSac 04 50 55.8 -8.0**
KWP *eL* L 05 22 40.9
comp=Z,7µm,26.1s
MATE Matera 95.63 46 ⇑P **P 04 40 29.5 +0.2**
MNK Minsk 95.76 30 *i* P **P 04 40 30.5 +1.0**
MNK *i* 04 44 21.0
MNK *i* S **SKSac 04 51 06.9 +2.2**
MNK *i* PS **PS 04 53 11.3 +4.8**
MNK *i* SSS SSS 05 01 59.2
MNK pmax pmax
comp=Z,117nm,1.0s
MNK pmax pmax
comp=N,43nm,1.0s
MNK pmax pmax
comp=E,45nm,1.0s
MNK MLR MLR
comp=E,6µm,18.0s
KLINJ Klinje 95.88 43 *eP* **P 04 40 29.8 -0.7**
CEL Celeste 95.99 48 IAMs_20 IAMs_20 05 20 08.2
comp=Z,9µm,21.0s
RUDO Rudo 96.21 42 *eP* **P 04 40 33.9 +2.1**
TIP Timpagrande 96.25 47 IAMs_20 IAMs_20 05 26 31.1
comp=Z,11µm,21.0s
TIP Timpagrande 96.25 47 ⇓P **P 04 40 34.4 +2.2**
RNPP9 Sopachiv 96.39 33 P **P 04 40 33.4 +1.0**
RNPP8 Varash 96.42 33 P **P 04 40 33.5 +1.0**
MORS Morshin 96.44 36 P **P 04 40 33.8 +1.1**
KORU Korolevo 96.48 37 P **P 04 40 33.7 +0.8**
SIRR Siria 96.48 39 ⇑P **P 04 40 34.0 +1.0**
RNPP5 Staryi Chortor 96.49 34 P **P 04 40 33.9 +1.0**
MEZ Mezhgor'ye 96.53 37 P **P 04 40 34.5 +1.3**
PDG Podgorica 96.64 44 IAMs_20 IAMs_20 05 23 33.0
comp=Z,12µm,22.0s
KLMR Klimovskoe 96.68 21 *eP* **P 04 40 32.0 -1.5**
KLMR *e* 04 44 25.5
KLMR S **SKSac 04 51 08.7 -0.6**
KLMR SS **SS 04 58 26.6 -0.6**
KLMR SSS SSS 05 02 11.9
KLMR pmax pmax
comp=Z,164nm,1.4s
KLMR MLR MLR
comp=Z,14µm,17.0s
BZS Buzias 96.76 40 ⇑P **P 04 40 35.4 +1.1**
BZS Buzias 96.76 40 ⇑P **P 04 40 35.4 +1.1**
DRGR 96.88 38 ⇑P **P 04 40 35.6 +0.7**
DRGR 96.88 38 ⇑P **P 04 40 35.6 +0.7**
STNU Starunia 97.00 36 P **P 04 40 36.2 +0.9**
SURR Surduc 97.01 40 ⇑P Pdif 04 40 36.4 +0.9
RAKU Rahkiv 97.15 37 P Pdif 04 40 36.0 -0.1
MARR Marisel-Cluj 97.18 38 ⇑P Pdif 04 40 39.0 +2.6
YAK Yakutsk 97.29 341 LR LR 05 30 20.9
comp=Z,9µm,18.0s,baz=25,slow=39
YAK Yakutsk 97.29 341 IAMs_20 IAMs_20 05 30 04.1
comp=Z,11µm,18.0s
YAK Yakutsk 97.29 341 *eP* Pdif 04 40 36.4 +0.1
YAK *e**PP pP 04 40 41.2 +0.3
YAK *e* 04 44 32.2
YAK *e*PPP PPP 04 46 36.4
YAK *eS* **SKSac 04 51 12.8 +0.4**
YAK *e* 04 51 58.1
YAK *e*SP **SP 04 53 21.5 +1.7**
YAK *e*SS **SS 04 58 37.4 +1.6**
YAK *e*SSS SSS 05 02 23.6
YAK pmax pmax
comp=Z,58nm,1.1s
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,21nm,1.4s
YAK pmax pmax
comp=Z,1µm,3.7s
YAK pmax pmax
comp=N,780nm,4.0s
YAK pmax pmax
comp=E,1µm,5.3s
YAK smax smax
comp=N,1µm,4.7s
YAK smax smax
comp=E,581nm,3.8s
YAK MLR MLR
comp=Z,13µm,29.0s
YAK MLR MLR
comp=N,7µm,28.0s
YAK MLR MLR
comp=E,3µm,18.0s
DEV Deva 97.43 39 ⇑P Pdif 04 40 40.5 +3.1
DEV Deva 97.43 39 ⇑P Pdif 04 40 40.5 +3.2
CJR Cluj-Napoca 97.45 38 ⇓P Pdif 04 40 40.3 +2.8
CJR Cluj-Napoca 97.45 38 ⇓P Pdif 04 40 40.3 +2.8
KSV Kosov 97.53 36 P Pdif 04 40 37.9 +0.2
GZR Gura Zlata 97.58 40 ⇓P Pdif 04 40 40.8 +2.7
GZR Gura Zlata 97.58 40 ⇓P Pdif 04 40 40.8 +2.7
HERR Herculane 97.60 40 ⇓P Pdif 04 40 40.5 +2.4
VLO Vlora 97.64 45 P Pdif 04 40 41.6 +3.2
BOVS Bovan 97.72 42 ⇑P Pdif 04 40 39.7 +1.1
PHP Peshkopia 97.76 44 P Pdif 04 40 41.3 +2.2
HORU Horodok 97.83 35 P Pdif 04 40 39.5 +0.4
BUR08 Bucovina Ar. S 97.94 37 P **P 04 40 39.6 -0.1**
BUR08 IAmb IAmb 04 40 43.3
comp=Z,63nm,1.6s
BURAR Bucovina Array 97.97 37 P **P 04 40 38.8 -1.0**
BURAR Bucovina Array 97.97 37 ⇑P Pdif 04 40 40.4 +0.6
BURAR Bucovina Array 97.97 37 ⇑P Pdif 04 40 40.4 +0.6
MI29 MI29, Kamyanyy 97.97 34 P Pdif 04 40 40.0 +0.3
comp=Z,334nm,1.7s
MI30 MI30,Zelenitsa 97.98 33 P Pdif 04 40 40.1 +0.4
comp=Z,4µmcomp=Z,109nm,2.0s
URZ Urewera 98.15 233 LR LR 05 14 33.7
comp=Z,4µm,21.7s,baz=86,slow=29
LOT Lotru 98.17 39 ⇑P Pdif 04 40 43.0 +2.2

KEK Kerkira 98.18 46 P Pdif 04 40 43.1 +2.3
LUBAR Lubar, Ukraine 98.19 34 P Pdif 04 40 41.0 +0.4
KMPD K-Podol'skiy 98.19 36 P Pdif 04 40 41.0 +0.3
KMPD P Pdif 04 40 41.0 +0.3
MDB Medias 98.20 39 ⇓P Pdif 04 40 44.0 +3.2
MDB Medias 98.20 39 ⇓P Pdif 04 40 44.0 +3.2
RTZ Ruatahuna 98.32 232 IAMs_20 IAMs_20 05 18 14.5
comp=Z,10µm,18.0s
AK21 Malin Array Si 98.41 33 P Pdif 04 40 42.3 +0.7
AK20 Malin Array Si 98.41 33 P Pdif 04 40 42.3 +0.7
AK19 Malin Array Si 98.43 33 P Pdif 04 40 42.3 +0.7
AK22 Malin Array Si 98.44 33 P Pdif 04 40 42.3 +0.6
AK18 Malin Array Si 98.45 33 P Pdif 04 40 42.4 +0.6
KBN Korca 98.46 45 P Pdif 04 40 45.1 +2.9
AK17 Malin Array Si 98.47 33 P Pdif 04 40 42.5 +0.7
LFKM Lefkimmi 98.47 46 P Pdif 04 40 45.0 +2.8
AK16 Malin Array Si 98.50 33 P Pdif 04 40 42.6 +0.6
AK04 Malin Array Si 98.51 33 P Pdif 04 40 42.7 +0.7
KIEV Kiev 98.55 33 P **P 04 40 39.6 -2.5**
KIEV IAmb IAmb 04 40 44.4
comp=Z,163nm,2.0s
KIEV Kiev 98.55 33 IAMs_20 IAMs_20 05 25 32.0
comp=Z,10µm,21.0s
KIEV Kiev 98.55 33 ⇑P **P 04 40 41.9 -0.2**
KIEV Kiev 98.55 33 *i* P **P 04 40 40.1 -2.1**
SNR=13
KIEV Kiev 98.55 33 ⇑P **P 04 40 41.9 -0.2**
AKASG Malin Array Be 98.55 33 P **P 04 40 41.6 -0.6**
comp=Z,5.6nm,0.8s,baz=293,slow=3.7,SNR=28
AKASG PP **PP 04 44 37.9 -4.4**
comp=Z,1.2nm,0.6s,baz=305,slow=7.6,SNR=4.4
AKASG PKKPbc **PKKPbc 04 57 10.6 -2.5**
comp=Z,4.7nm,0.9s,baz=93,slow=2.3,SNR=8.3
AKASG LR LR 05 28 32.9
comp=Z,8µm,18.2s,baz=301,slow=37
comp=Z,5.6nm,0.8s
AKASG Malin Array Be 98.55 33 P **P 04 40 41.7 -0.4**
AKASG Malin Array Be 98.55 33*ce*P Pdif 04 40 42.2 0.0
AKASG pmax pmax
comp=Z,9.0nm,0.9s
AKBB Malin Array Si 98.55 33 P **P 04 40 41.0 -1.2**
AKBB IAmb IAmb 04 40 44.4
comp=Z,182nm,2.0s
AKBB Malin Array Si 98.55 33*ce*P Pdif 04 40 42.5 +0.3
AKBB pmax pmax
comp=Z,16nm,1.0s
IGT Igoumenitsa 98.63 46 P Pdif 04 40 45.0 +2.2
NEST Nestorio 98.73 45 P Pdif 04 40 46.3 +2.9
ARR Arges 98.74 39 ⇓P Pdif 04 40 44.2 +0.9
BKZ Black Stump Fm 98.79 232 IAMs_20 IAMs_20 05 16 41.1
comp=Z,8µm,19.0s
PENT Pentalofos 98.89 45 P Pdif 04 40 46.8 +2.7
DOPR Dopca 98.90 38 ⇑P Pdif 04 40 45.4 +1.5
JAN Janina 98.93 46 P Pdif 04 40 47.2 +3.0
VOIR 98.96 39 ⇓P Pdif 04 40 45.2 +0.9
VOIR 98.96 39 ⇓P Pdif 04 40 45.2 +0.9
TSLK Tsoukalades, L 99.16 46 P **Pdif 04 40 50.0 +4.8**
VTS Vitosha 99.19 42 P **Pdif 04 40 48.4 +3.0**
VTS Vitosha 99.19 42 *eP* **Pdif 04 40 44.3 -1.1**
DMLN Damoulianata-K 99.22 47 P **Pdif 04 40 50.0 +4.5**
TURR Turia 99.23 38 ⇓P **Pdif 04 40 48.1 +2.6**
NYDR Nydri-Lefkada 99.24 46 P **Pdif 04 40 48.2 +2.7**
EVGI Lefkada island 99.25 47 P **Pdif 04 40 51.3 +5.7**
BFZ Birch Farm 99.25 230 IAMs_20 IAMs_20 05 18 33.2
comp=Z,10µm,18.0s
FSK Fiskardo 99.25 47 P **Pdif 04 40 53.1 +7.4**
VLAD Vladila 99.27 40 ⇓P **Pdif 04 40 48.3 +2.7**
ONER Baraj Valea Uz 99.31 38 ⇓P **Pdif 04 40 48.5 +2.7**
TYV Tymovskoe 99.35 328 *eP* **Pdif 04 40 47.2 +1.4**
TYV pmax pmax
comp=Z,43nm,1.0s
TYV pmax pmax
comp=Z,600nm,3.4s
OBN Obninsk 99.41 27 P **Pdif 04 40 45.2 -0.7**
comp=Z,30nm,0.7s,baz=253,slow=3.2,SNR=16
OBN LR LR 05 24 33.2
comp=Z,13µm,21.6s,baz=256,slow=35
comp=Z,30nm,0.7s
OBN Obninsk 99.41 27 P **Pdif 04 40 46.4 +0.5**
OBN Obninsk 99.41 27*ce*P **Pdif 04 40 45.8 -0.1**
OBN *i* 04 40 53.2
OBN pmax pmax
comp=Z,45nm,1.0s
OBN MLR MLR
comp=Z,15µm,21.0s
MOS Moscow 99.44 26 *eP* **Pdif 04 40 45.3 -0.8**
MOS *e* 04 44 50.1
MOS *e*PPP PPP 04 47 07.0
MOS *eS* **S 04 52 14.1 -3.4**
MOS *e*PS **PS 04 53 46.0 -0.4**
MOS pmax pmax
comp=Z,144nm,1.6s
MOS pmax pmax
comp=Z,700nm,2.8s
MOS smax smax
comp=N,2µm,5.0s
MOS MLR MLR
comp=N,9µm,19.0s
MOS MLR MLR
comp=E,7µm,19.0s
MOS MLR MLR
comp=Z,11µm,19.0s
COVR Voineasa-Covas 99.45 38 ⇑P **Pdif 04 40 49.4 +3.0**
MLR Muntele Rosu 99.48 39 P **Pdif 04 40 46.8 +0.2**
comp=Z,30nm,1.1s,baz=336,slow=3.9,SNR=31
MLR LR LR 05 26 16.6
comp=Z,9µm,20.6s,baz=310,slow=36
comp=Z,30nm,1.1s
MLR Muntele Rosu 99.48 39 P **Pdif 04 40 46.9 +0.2**
MLR IAmb IAmb 04 40 50.1
comp=Z,174nm,1.6s
MLR Muntele Rosu 99.48 39 ⇑P **Pdif 04 40 47.5 +0.9**
MLR Muntele Rosu 99.48 39 ⇑P **Pdif 04 40 47.5 +0.9**
KUR Kuril'sk 99.48 321*ce*P **Pdif 04 40 47.1 +0.7**
KUR pmax pmax
comp=Z,432nm,1.0s
KKB Krupnik 99.48 43 *eP* **Pdif 04 40 48.2 +1.6**
SORM Soroca 99.49 35 ⇓P **Pdif 04 40 47.6 +1.2**
SORM Soroca 99.49 35 ⇓P **Pdif 04 40 47.6 +1.2**
PLOR Plostina 99.72 38 ⇓P **Pdif 04 40 49.2 +1.6**
PLOR Plostina 99.72 38 ⇓P **Pdif 04 40 49.2 +1.6**
NEHR Nehoiu 99.72 38 ⇓P **Pdif 04 40 50.1 +2.5**
MRZ Mangatainoka R 99.75 231 IAMs_20 IAMs_20 05 16 34.4
comp=Z,9µm,20.0s
VRI Vrincioaia 99.75 38 ⇑P **Pdif 04 40 51.4 +3.7**
VRI Vrincioaia 99.75 38 ⇑P **Pdif 04 40 51.4 +3.7**
THL Klokotos Trika 99.78 45 P **Pdif 04 40 58.6 +11**
PGB Panagyurishte 99.84 42 *eP* **Pdif 04 40 49.4 +1.2**
EVR Evrytania 99.93 46 P **Pdif 04 40 49.9 +1.1**
THE Thessaloniki 99.94 44 P **Pdif 04 40 51.0 +2.4**
MMB Musomishta 100.03 43 P **Pdif 04 40 51.6 +2.5**
MMB Musomishta 100.03 43 *eP* **Pdif 04 40 49.4 +0.3**
GHRR 100.06 37 ⇓P **Pdif 04 40 52.3 +3.3**
SOH Sokhos 100.11 44 P **Pdif 04 40 53.8 +4.4**
PVL Pavlikeni 100.19 41 *eP* **Pdif 04 40 50.5 +0.8**
EFP Efpalio 100.22 46 P **Pdif 04 40 51.8 +1.9**
KIS Kishinev 100.38 36 *i* PS PS 04 53 56.0 -0.8
KIS *eL* L 05 22 49.0
KIS LRM MLR 05 29 59.0
comp=Z,4µm,19.0s
BHW Baring Head 100.40 230 IAMs_20 IAMs_20 05 17 20.6
comp=Z,8µm,19.0s
MILM Milestii Mici 100.42 36 ⇑P **Pdif 04 40 52.8 +2.2**
MILM Milestii Mici 100.42 36 ⇑P **Pdif 04 40 52.8 +2.2**
MILM Milestii Mici 100.42 36⇑*iP* **Pdif 04 40 49.0 -1.6**
comp=Z,650nm,3.2s
MILM Milestii Mici 100.42 36 *i* PS PS 04 53 50.0 -7.2
MILM *eL* L 05 14 12.0
MILM LRM MLR 05 29 56.0
comp=Z,7µm,18.5s
KLV Kalavryta, Ach 100.56 47 P **Pdif 04 40 53.3 +1.7**
ELND Elena 100.73 41 ⇓P **Pdif 04 40 54.8 +2.7**
GUR Goura 100.74 47 P **Pdif 04 40 54.4 +2.0**
OUR Ouranopolis 100.76 44 P **Pdif 04 40 54.4 +2.1**
KAVA Kavala 100.80 43 P **Pdif 04 40 54.8 +2.4**
VNA3 Neumayer Olymp 100.87 161 ⇑P **Pdif 04 40 51.5 -0.5**
comp=Z,18nm,0.8s
CFR Carcaliu 100.96 38 ⇑P **Pdif 04 40 52.6 -0.4**
CFR Carcaliu 100.96 38 ⇑P **Pdif 04 40 52.6 -0.4**
KDZ Kurdzhali 101.03 42 *eP* **Pdif 04 40 53.4 -0.1**
THAS Thassos island 101.12 43 P **Pdif 04 40 55.9 +2.0**
VNA1 Neumayer--Stat 101.22 160 ⇑P **Pdif 04 40 54.1 +0.6**
comp=Z,17nm,1.0s

JMB Yambol 101.37 41 *eP* **Pdif 04 40 55.5 +0.6**
NNZ Nelson 101.48 230 IAMs_20 IAMs_20 05 20 53.2
comp=Z,7µm,18.0s
VNA2 Neumayer--Watz 101.55 160 ⇑P **Pdif 04 40 54.2 -0.7**
comp=Z,8.1nm,0.8s,baz=302,slow=5.1
YSS Yuzhno-Sakhali 101.55 325 *eP* **Pdif 04 40 56.3 +0.7**
YSS *e* 04 45 04.6
YSS *e*PS **PS 04 54 10.3 +1.0**
YSS *e*SS SS 04 59 40.7 +4.6
YSS MLR MLR
comp=N,3µm,22.0s
YSS MLR MLR
comp=Z,4µm,22.0s
YSS MLR MLR
comp=E,6µm,23.0s
KYMI Kymi, Euboea I 101.65 45 P **Pdif 04 40 57.6 +1.3**
KIRV Kirov 101.70 19 *i* P **Pdif 04 40 56.3 +0.3**
LIA Limnos Island 101.78 44 P **Pdif 04 40 58.2 +1.4**
GVZ Greta Valley S 101.98 228 IAMs_20 IAMs_20 05 20 13.3
comp=Z,10µm,18.0s
QRZ Quartz Range 102.06 231 IAMs_20 IAMs_20 05 19 57.7
comp=Z,8µm,18.0s
LPSR Galich'ya Gora 102.12 28 *eP* **Pdif 04 40 58.1 +0.1**
LPSR pmax pmax
comp=Z,103nm,1.1s
MQZ McQueen's Vall 102.35 228 IAMs_20 IAMs_20 05 18 50.2
comp=Z,8µm,20.0s
LTZ Lake Taylor 102.51 229 IAMs_20 IAMs_20 05 19 10.4
comp=Z,9µm,19.0s
GRNR Gornyy 102.53 330 *eP* **Pdif 04 41 00.7 +0.8**
OXZ Oxford 102.75 228 IAMs_20 IAMs_20 05 21 16.7
comp=Z,11µm,18.0s
PRK Paraskevi 102.83 44 P **Pdif 04 41 04.3 +2.8**
VORR Voronezh 102.88 28 *eP* **Pdif 04 41 02.7 +1.3**
VORR pmax pmax
comp=Z,81nm,0.4s
SNAA Sanae 103.09 161 ⇑P **Pdif 04 41 01.4 -0.5**
comp=Z,129nm,0.9s
SNAA Sanae 103.09 161 Pdiff **Pdif 04 41 00.6 -1.3**
comp=Z,6.2nm,0.9s,baz=295,slow=3.4,SNR=22
SNAA PKKPbc **PKKPbc 04 56 57.2 -3.8**
comp=Z,2.4nm,0.8s,baz=126,slow=4.1,SNR=9.7
SNAA Sanae 103.09 161 **Pdif 04 41 02.3 +0.4**
SNAA **PKKPbc 04 56 58.6 -2.4**
SNAA IAMs_20 IAMs_20 05 18 58.6
comp=Z,9µm,22.0s
SNAA Sanae 103.09 161 P **Pdif 04 41 02.3 +0.4**
INZ Inchbonnie 103.11 229 IAMs_20 IAMs_20 05 21 02.3
comp=Z,8µm,19.0s
VSR Storozhevoye 103.17 29 *eP* **Pdif 04 41 01.9 -0.8**
VSR pmax pmax
comp=Z,60nm,2.1s
VSR MLR MLR
comp=Z,15µm,23.0s
APE Apeiranthos 103.39 46 P **Pdif 04 41 07.4 +3.2**
VORD Divnogorie 103.40 29 *eP* **Pdif 04 41 02.8 -0.9**
VORD pmax pmax
comp=Z,9.0nm,0.9s
RPZ Rata Peaks 103.50 228 IAMs_20 IAMs_20 05 19 27.7
comp=Z,8µm,20.0s
SAP3 Santorini-Thir 103.56 47 P **Pdif 04 41 08.0 +3.1**
SNT5 Nea Kammeni, S 103.61 47 P **Pdif 04 41 06.5 +1.5**
QSPA South Pole Qui 103.73 180 Pdiff **Pdif 04 41 10.0 +5.1**
comp=Z,13nm,1.0s,baz=172,slow=3.2,SNR=7.8
QSPA PKiKP **PKiKP 04 45 24.9 +2.0**
comp=Z,2.6nm,1.1s,baz=101,slow=3.7,SNR=3.8
QSPA S **SKSac 04 51 41.1 -2.4**
comp=Z,0.8nm,1.0s,baz=331,slow=8.9,SNR=1.2
QSPA PKKPbc **PKKPbc 04 56 58.6 -1.0**
comp=Z,7.3nm,0.9s,baz=285,slow=2.1,SNR=16
QSPA South Pole Qui 103.73 180 **Pdif 04 41 10.4 +5.5**
QSPA **SKSac 04 51 43.3 -0.3**
QSPA **PKKPbc 04 56 56.6 -3.0**
QSPA South Pole Qui 103.73 180 IAMs_20 IAMs_20 05 21 07.4
comp=Z,10µm,19.0s
ODZ Otahua Downs 103.93 227 IAMs_20 IAMs_20 05 18 31.4
comp=Z,9µm,20.0s
VRH Novokhopyorsk 104.34 27 *eP* **Pdif 04 41 07.7 -0.2**
VRH pmax pmax
comp=Z,40nm,1.1s
VRH MLR MLR
comp=Z,18µm,22.0s
FOZ Fox Glacier 104.38 228 IAMs_20 IAMs_20 05 19 36.3
comp=Z,7µm,20.0s
ZEA Zeya 104.41 337 *eP* **Pdif 04 41 15.4 +7.2**
ZEA *e* 04 45 31.6
ZEA *e* 04 54 37.4
SIM Simferopol' 104.58 36 *i* P **Pdif 04 41 11.4 +2.2**
SIM 04 45 32.0
SIM S **SKSac 04 51 54.6 +6.2**
SIM SP **SP 04 54 38.0 -0.3**
SIM pmax pmax
comp=Z,220nm,3.5s
SIM pmax pmax
comp=Z,420nm,8.3s
SIM smax smax
comp=N,830nm,5.3s
SIM pmax pmax
comp=Z,930nm,11.0s
SIM MLR MLR
comp=Z,14µm,22.0s
TROLL Troll, Antarti 104.78 161 ⇑P **Pdif 04 41 09.4 -0.1**
comp=Z,240nm,0.9s
WKZ Wanaka 105.06 227 IAMs_20 IAMs_20 05 21 17.3
comp=Z,8µm,19.0s
ARTI Arti 106.18 16 P **Pdif 04 41 16.9 +0.9**
ARTI S **SKSac 04 51 56.5 +1.3**
ARTI SP **SP 04 54 49.6 -4.5**
ARTI MLR MLR
comp=Z,27µm,20.0s
DCZ Deep Cove 106.42 226 IAMs_20 IAMs_20 05 23 17.2
comp=Z,10µm,18.0s
ANN Anapa 106.52 34 *i* P **Pdif 04 41 18.6 +0.8**
ANN *e* 04 45 37.9
ANN *e* 04 51 58.0
ANN pmax pmax
comp=Z,19nm,0.9s
VNDA Vanda 106.59 193 PKKPbc PKKPbc 04 56 43.2 -7.0
comp=Z,1.3nm,0.8s,baz=63,slow=2.3,SNR=5.6
ANTO Ankara 106.76 41 IAMs_20 IAMs_20 05 36 22.0
comp=Z,7µm,19.0s
PYZ Puysegur Point 106.78 226 IAMs_20 IAMs_20 05 20 18.9
comp=Z,10µm,20.0s
HEH HeiHe 106.98 334 Pdif **Pdif 04 41 21.8 +2.1**
HEH AMB AMB
comp=Z,4µm,9.2s
HEH LR LR
comp=Z,5µm,19.2s
HEH LR LR
comp=Z,4µm,18.6s
HEH LR LR
comp=Z,11µm,19.0s
BR131 Keskin Array S 107.38 40 P **PKiKP 04 45 26.6 -4.0**
BRTR Keskin Array B 107.38 40 Pdiff **Pdif 04 41 19.6 -2.3**
comp=Z,0.7nm,0.9s,baz=236,slow=1.6,SNR=5.0
BRTR PKiKP **PKiKP 04 45 30.0 -0.6**
comp=Z,2.9nm,0.9s,baz=221,slow=0.4,SNR=7.9
BRTR PKKPbc **PKKPbc 04 56 45.6 -1.4**
comp=Z,5.1nm,1.1s,baz=150,slow=5.0,SNR=13
BRTR Keskin Array B 107.38 40 **Pdif 04 41 21.1 -0.8**
BRTR **PKiKP 04 45 30.1 -0.6**
BRTR **PKKPbc 04 56 45.2 -1.7**
BRTR Keskin Array B 107.38 40 P **Pdif 04 41 21.1 -0.8**
ERBR Yeremizino-Bor 107.54 32 *i* P **Pdif 04 41 21.7 -0.6**
ERBR *e* 04 45 53.0
ERBR *e* 04 52 01.7
ERBR *eS*P SP 04 55 10.7 +1.9
ERBR pmax pmax
comp=Z,15nm,0.9s
KIV Kislovodsk 109.88 32 IAMs_20 IAMs_20 05 35 42.6
comp=Z,6µm,18.0s
KIV Kislovodsk 109.88 32 P **PKiKP 04 45 32.5 -2.6**
KIV Kislovodsk 109.88 32 *eP* **Pdif 04 41 32.2 -0.7**
KIV *e* 04 46 05.4
KIV *e* 04 52 12.2
KIV *eP*S **PS 04 55 34.2 -1.8**
KIV *eS*S SS 05 01 30.2 +0.3
MDJ Mudanjiang 110.09 329 IAMs_20 IAMs_20 05 41 14.4
comp=Z,8µm,20.0s
MDJ Mudanjiang 110.09 329 Pdif **Pdif 04 41 33.1 -0.6**
MDJ PP **PP 04 46 08.6 +0.5**
MDJ AMB AMB
comp=Z,2µm,10.3s
MDJ LR LR
comp=Z,6µm,19.9s

MDJ LR LR
comp=Z,6µm,18.6s
MDJ LR LR
comp=Z,10µm,17.9s
KBZ Khabaz 110.15 32 PKiKP **PKiKP 04 45 36.1 +0.7**
comp=Z,3.8nm,1.0s,baz=0.0,slow=2.0,SNR=4.3
KBZ PKKPbc **PKKPbc 04 56 36.2 -1.8**
comp=Z,4.6nm,0.9s,baz=47,slow=1.3,SNR=7.3
BNX BinXian 110.34 331 Pdif **Pdif 04 41 34.5 -0.3**
BNX AMB AMB
comp=Z,2µm,11.7s
BNX LR LR
comp=Z,4µm,20.9s
BNX LR LR
comp=Z,3µm,17.8s
BNX LR LR
comp=Z,6µm,18.9s
HILR Hailar Array B 110.57 338 PP **PP 04 46 08.6 -2.7**
comp=Z,15nm,1.0s,baz=75,slow=6.1,SNR=4.9
HILR PKKPbc **PKKPbc 04 56 34.8 -2.2**
comp=Z,0.5nm,0.3s,baz=208,slow=2.8,SNR=4.1
HIA Hailar 110.81 338 IAMs_20 IAMs_20 05 41 17.1
comp=Z,11µm,20.0s
ELIB Princess Elisa 111.11 163 *d*PKiKP **PKiKP 04 45 36.2 -0.4**
AKTO Aktyubinsk 111.26 19 PKIKP **PKiKP 04 45 36.2 -1.2**
BORK Borovoye 111.95 11 *c i*PKIKP **PKiKP 04 45 40.8 +2.2**
BORK pmax pmax
comp=Z,10.0nm,1.3s
BVA0 Borovoye Array 111.99 11 PKIKP **PKiKP 04 45 37.4 -1.3**
BVAR Borovoye Array 111.99 11 PKiKP **PKiKP 04 45 38.9 +0.2**
comp=Z,9.5nm,0.8s,baz=313,slow=1.0,SNR=14
ZALV Zalesovo Beam 112.53 1 Pdiff **Pdif 04 41 44.2 -0.1**
comp=Z,0.7nm,0.6s,baz=304,slow=0.5,SNR=4.4
ZALV PKiKP **PKiKP 04 45 38.4 -1.2**
comp=Z,5.5nm,0.6s,baz=324,slow=1.7,SNR=14
ZALV PP **PP 04 46 24.1 -0.8**
comp=Z,19nm,0.9s,baz=341,slow=6.0,SNR=9.6
ZALV PKKPbc **PKKPbc 04 56 26.8 -3.9**
comp=Z,2.5nm,0.8s,baz=192,slow=4.3,SNR=6.2
ZALV Zalesovo Beam 112.53 1 **Pdif 04 41 45.0 +0.7**
ZALV **PKiKP 04 45 38.8 -0.8**
ZALV **PP 04 46 24.0 -0.9**
ZALV **PKKPbc 04 56 28.0 -2.6**
CN2 Changchun 112.72 331 Pdif **Pdif 04 41 50.5 +5.1**
CN2 PP PP 04 46 35.8 +8.9
CN2 SS SS 05 02 13.1 +5.7
CN2 AMB AMB
comp=Z,1µm,5.0s
CN2 LR LR
comp=Z,4µm,19.0s
CN2 LR LR
comp=Z,3µm,19.0s
CN2 LR LR
comp=Z,6µm,19.0s
AB31 Akbulak array 112.90 19 *i* PKIKP **PKiKP 04 45 40.6 +0.1**
MAK Makhachkala 113.04 30 *d i*P **Pdif 04 41 43.8 -3.0**
MAK *e*PPP PPP 04 48 51.7
MAK *e*PS PKKPbc 04 56 01.4 -27
MAK *e*SSS SSS 05 06 26.8
MAK pmax pmax
comp=Z,324nm,1.2s
TLY Talaya 113.19 349 P **PKiKP 04 45 35.3 -5.7**
GNI Garni 113.64 34 IAMs_20 IAMs_20 05 36 39.2
comp=Z,8µm,21.0s
GNI Garni 113.64 34 P **PKiKP 04 45 39.0 -3.4**
AKT Akhty 114.25 31 *e*P **Pdif 04 41 52.1 -0.3**
AKT *e*SP SP 04 56 12.3 -1.0
AKT *e*PS PKKPbc 04 56 15.4 -9.2
AKT *e*SS **SS 05 02 28.3 +0.4**
AKT MLR MLR
comp=Z,13µm,24.0s
SNY Shenyang 115.11 330 Pdif **Pdif 04 42 05.6 +10**
SNY PP **PP 04 46 39.6 -4.2**
BRZS Berezniki 115.31 10 *e*PKP **PKPdf 04 45 45.3 +0.2**
BRZS Berezniki 115.31 10 *e*PKiKP **PKPdf 04 45 45.3 +0.2**
KURK Kurchatov 115.39 6 **PKiKP 04 45 45.1 -0.1**
KURK **PP 04 46 44.1 -1.1**
KURK Kurchatov 115.39 6 P **PKiKP 04 45 44.9 -0.3**
KURK Kurchatov 115.39 6 *c i*PKIKP **PKPdf 04 45 45.7 +0.5**
KURK pmax pmax
comp=Z,41nm,1.0s
KURBB Kurchatov Arra 115.47 6 PKP **PKPdf 04 45 45.4 0.0**
comp=Z,24nm,0.9s,baz=346,slow=2.2,SNR=78
KURBB PP **PP 04 46 43.9 -1.9**
comp=Z,7.6nm,1.1s,baz=355,slow=6.1,SNR=7.1
KURBB PKKPbc **PKKPbc 04 56 18.3 -2.3**
comp=Z,6.0nm,1.1s,baz=190,slow=2.7,SNR=16
ULN Ulaanbaatar 116.03 345 **PKPdf 04 45 46.8 0.0**
ULN Ulaanbaatar 116.03 345 IAMs_20 IAMs_20 05 43 48.3
comp=Z,10µm,20.0s
ULN Ulaanbaatar 116.03 345 P **PKiKP 04 45 43.5 -3.3**
ULN Ulaanbaatar 116.03 345 *c i*PKIKP **PKPdf 04 45 48.2 +1.4**
ULN pmax pmax
comp=Z,22nm,1.7s
KS19 Wonju Array Si 116.05 324 **PKiKP 04 45 46.1 -0.8**
KSRS Korea Array 116.05 324 PKP **PKPdf 04 45 46.9 0.0**
comp=Z,12nm,0.9s,baz=17,slow=1.3,SNR=35
KSRS PKKPab **PKKPbc 04 56 18.7 +0.6**
comp=Z,4.9nm,1.2s,baz=259,slow=6.1,SNR=7.8
KSAR Wonju Array Be 116.08 324 **PKiKP 04 45 46.5 -0.4**
KSAR Wonju Array Be 116.08 324 PKiKP **PKiKP 04 45 46.5 -0.4**
SONM Songino Array 116.22 345 PKP **PKiKP 04 45 47.0 -0.1**
comp=Z,9.5nm,0.9s,baz=353,slow=2.1,SNR=26
SONM PP **PP 04 46 51.8 +0.4**
comp=Z,18nm,1.0s,baz=10,slow=6.2,SNR=10
SONM PKKPbc **PKKPbc 04 56 15.4 -2.7**
comp=Z,5.6nm,0.9s,baz=192,slow=3.2,SNR=14
SONM SKKP **SKKPdf 05 00 16.4 -0.6**
comp=Z,1.5nm,0.9s,baz=202,slow=3.1,SNR=4.0
KOOLE Kule 116.58 109 **PKiKP 04 45 48.7 +0.3**
KOOLE Kule 116.58 109 *i* P **PKPdf 04 45 47.7 -0.8**
XLT XiLinHaoTe 116.69 337 *e*PKP **PKPdf 04 45 47.3 -0.8**
XLT AMB AMB
comp=Z,3µm,9.9s
XLT LR LR
comp=Z,490nm,20.4s
XLT LR LR
comp=Z,4µm,19.5s
XLT LR LR
comp=Z,7µm,20.0s
INCN Inchon 116.75 325 IAMs_20 IAMs_20 05 45 35.2
comp=Z,6µm,20.0s
INCN Inchon 116.75 325 P **PKPdf 04 45 41.8 -6.5**
QNGWA Qangwa 117.18 105 *i* P **PKiKP 04 45 50.1 +0.4**
SYO Syowa Base 117.30 163 ↑ *i* PKPdf **PKiKP 04 45 50.2 +2.0**
SYO Syowa Base 117.30 163 ↓ *i* pPKPdf pPKPdf 04 45 52.2 -0.8
SUR Sutherland 117.43 119 IAMs_20 IAMs_20 05 31 01.0
comp=Z,8µm,20.0s
LKGWB Lokgwabe 117.59 110 *i* P **PKPdf 04 45 50.1 -0.2**
DL2 Dalian 118.31 330 PKP **PKiKP 04 45 54.9 +3.7**
DL2 AMB AMB
comp=Z,1µm,4.9s
DL2 LR LR
comp=Z,5µm,17.1s
DL2 LR LR
comp=Z,4µm,17.0s
DL2 LR LR
comp=Z,8µm,20.2s
KGCAE Kacgae 118.42 109 *i* P **PKPdf 04 45 51.8 -0.1**
PHPEN Phepeng 119.14 112 *i* P **PKPdf 04 45 52.9 -0.3**
SLIND Selinda 119.28 104 *i* P **PKiKP 04 45 54.7 +1.0**
MAKZ Makanchi 119.54 4 **PKPdf 04 45 52.5 -0.9**
MAKZ Makanchi 119.54 4 PKIKP **PKPdf 04 45 52.5 -0.9**
MK31 Makanchi Array 119.57 4 *c i*PKIKP **PKPdf 04 45 53.2 -0.3**
MKAR Makanchi Array 119.57 4 PKP **PKPdf 04 45 52.8 -0.7**
comp=Z,27nm,0.9s,baz=354,slow=1.7,SNR=47
MKAR PP **PP 04 47 14.1 -0.4**
comp=Z,15nm,1.0s,baz=9.9,slow=3.5,SNR=6.6
MKAR PKKPbc **PKKPbc 04 56 03.5 -2.5**
comp=Z,3.8nm,0.9s,baz=143,slow=5.3,SNR=13
MKAR Makanchi Array 119.57 4 **PKPdf 04 45 52.1 -1.3**
MKAR Makanchi Array 119.57 4 *c i*PKIKP **PKPdf 04 45 52.9 -0.6**
MKAR pmax pmax
comp=Z,27nm,0.9s
BJI Beijing 119.89 334 Pdif **Pdif 04 42 18.3 +0.9**
BJI PKP **PKiKP 04 45 55.3 +1.0**
BJI PP **PP 04 47 19.1 +2.1**
BJI SS SS 05 03 43.1 +2.2
BJI AMB AMB
comp=Z,1µm,10.6s
BJI LR LR
comp=Z,3µm,17.1s
BJI LR LR
comp=Z,3µm,19.2s
BJI LR LR
comp=Z,6µm,20.1s
BJT Baijiatuau 119.91 334 IAMs_20 IAMs_20 05 48 59.2
comp=Z,8µm,19.0s
BJT Baijiatuau 119.91 334 P **PKiKP 04 45 56.1 +1.8**
SKOMA Sekoma 120.08 110 *i* P **PKPdf 04 45 54.5 -0.6**
CNB Canberra Magne 120.15 237 P **PKiKP 04 45 57.2 +2.2**
CNB Canberra Magne 120.15 237 P **PKiKP 04 45 56.7 +1.7**
CAN Canberra 120.45 237 IAMs_20 IAMs_20 05 31 28.9
comp=Z,6µm,18.0s
KDWAN Kaudwane 120.70 109 *i* P **PKPdf 04 45 56.0 -0.3**
KSANE Kasane 120.77 103 *i* P **PKPdf 04 45 56.5 -0.1**
TAU Tasmania Unive 120.78 228 IAMs_20 IAMs_20 05 28 55.4
comp=Z,9µm,19.0s
PMG Port Moresby 120.83 267 PKP **PKiKP 04 45 57.2 +0.4**
comp=Z,20nm,0.8s,baz=107,slow=2.3,SNR=3.9
PMG Port Moresby 120.83 267 **PKPdf 04 45 55.6 -1.0**
PMG Port Moresby 120.83 267 *c i*PKIKP **PKiKP 04 45 58.5 +1.7**
PMG pmax pmax
comp=Z,24nm,1.0s
HHC Hu-ho-hao-te 121.00 338 ↓ *i*PKP **PKiKP 04 45 57.4 +0.8**
HHC PP **PP 04 47 25.3 +0.7**
HHC SKS **SKSdf 04 53 06.9 -0.9**
HHC SS **SS 05 03 55.8 +0.6**
HHC LR LR
comp=Z,9µm,18.6s
HHC LR LR
comp=Z,5µm,18.8s
HHC LR LR
comp=Z,18µm,19.7s
TDK Taldyqorghan 121.01 7 *e*PKP **PKPdf 04 45 56.2 -0.1**
TDK *e*PP **PP 04 47 24.4 +0.2**
TDK LR LR 05 38 28.4
comp=Z,5µm,17.1s
TDK Taldyqorghan 121.01 7 *e*PKIKP **PKPdf 04 45 56.2 -0.1**
TDK *e* 04 47 24.4
BOSA Boshof 121.32 115 PKP **PKiKP 04 45 57.5 +0.1**
comp=Z,46nm,1.0s,baz=280,slow=2.4,SNR=32
BOSA PKKPab **PKKPab 04 55 59.5 +0.6**
comp=Z,15nm,1.4s,baz=120,slow=8.3,SNR=4.0
BOSA Boshof 121.32 115 **PKPdf 04 45 57.0 -0.4**
BOSA Boshof 121.32 115 PKP **PKiKP 04 45 57.6 +0.1**
KHWEE KHWEE 121.36 107 *i* P **PKPdf 04 45 57.5 -0.1**
BRLS Borolday 121.37 15 *e*PKP **PKiKP 04 45 57.3 +0.1**
BRLS *e*PP **PP 04 47 28.1 +1.3**
BRLS Borolday 121.37 15 *e*PKIKP **PKiKP 04 45 57.2 +0.1**
BRLS *e* 04 47 28.1
KK31 Karatay Array 121.46 14 *i* PKIKP **PKPdf 04 45 57.0 -0.2**
KKAR Karatay Array 121.46 14 **PKPdf 04 45 56.7 -0.5**
KKAR Karatay Array 121.46 14 PKIKP **PKPdf 04 45 56.7 -0.5**
AULRC Lightning Ridg 121.62 244 P **PKiKP 04 45 59.6 +1.7**
AULRC Lightning Ridg 121.62 244 P **PKiKP 04 45 59.7 +1.8**
BTO Baotou 121.76 339 *e*PKP **PKPdf 04 45 56.9 -1.1**
BTO PP **PP 04 47 30.8 +1.0**
BTO SS SS 05 04 11.3 +6.4
BTO AMB AMB
comp=Z,1µm,5.5s
BTO LR LR
comp=Z,33µm,18.4s
LPHEP Lephephe 121.80 109 *i* P **PKPdf 04 45 58.2 -0.2**
SGDS Sogindy 121.97 10 *e*PKP **PKPdf 04 45 58.1 -0.1**
CHM Chimkent 121.98 15 *e*PKP **PKPdf 04 45 58.0 -0.2**
CHM LR LR 05 38 26.8
comp=Z,7µm,19.8s
CHM Chimkent 121.98 15 *e*PKIKP **PKPdf 04 45 58.0 -0.2**
CHM MLR MLR
comp=Z,7µm,20.0s
GRHM Grahamstown, E 122.07 121 **PKPdf 04 45 58.2 -0.4**
USP Ospenovka 122.13 11 P **PKiKP 04 45 59.2 +0.5**
SNR=51
IUG Iuzhnay 122.25 15 *e*PKP **PKPdf 04 45 58.6 -0.3**
IUG *e*PP **PP 04 47 32.8 -0.1**
IUG Iuzhnay 122.25 15 *e*PKIKP **PKPdf 04 45 58.6 -0.3**
IUG *e* 04 47 32.8
CHMS Chumysh 122.43 10 P **PKiKP 04 46 00.0 +0.7**
SNR=5.5
TV1H Townsville Har 122.45 256 P **PKiKP 04 46 01.1 +1.3**
TV1H Townsville Har 122.45 256 P **PKiKP 04 46 01.5 +1.7**
AAA Alma-Ata 122.58 9 *e*PKP **PKPdf 04 45 59.2 -0.2**
AAA LR LR 05 38 53.5
AAA Alma-Ata 122.58 9 *e*PKIKP **PKPdf 04 45 59.2 -0.2**
EKS2 Erkin-Say 122.58 11 P **PKiKP 04 46 00.3 +0.6**
SNR=38
TIA Tai'an 122.62 331 PKP **PKiKP 04 46 06.3 +6.5**
TIA SS SS 05 04 22.8 +6.8
TIA AMB AMB
comp=Z,2µm,14.7s
TIA LR LR
comp=Z,6µm,18.2s
TIA LR LR
comp=Z,4µm,19.2s
TIA LR LR
comp=Z,12µm,18.8s
MDOK Medeo 122.64 8 *e*PKP **PKPdf 04 45 59.4 -0.2**
MDOK *e*PP **PP 04 47 35.5 -0.1**
MDOK LR LR 05 39 12.3
MDOK Medeo 122.64 8 *e*PKIKP **PKPdf 04 45 59.4 -0.2**
MDOK *e* 04 47 35.4
TKM2 Tokmak 2 122.65 10 P **PKiKP 04 46 00.1 +0.1**
SNR=35
WMQ Urumqi 122.68 359 PKP **PKiKP 04 46 00.9 +1.1**
WMQ PP **PP 04 47 38.1 +2.4**
WMQ SKS **SKSdf 04 53 13.9 +3.1**
WMQ SS **SS 05 04 14.8 -1.1**
WMQ AMB AMB
comp=Z,2µm,3.8s
WMQ LR LR
comp=Z,21µm,22.1s
HNS HongShan 122.73 334 Pdif **Pdif 04 42 34.1 +4.1**
HNS PKP **PKiKP 04 46 01.1 +1.2**
HNS PP **PP 04 47 39.4 +3.1**
HNS SKS **SKSdf 04 53 14.8 +3.9**
HNS SKKS **SKKSac 04 54 34.4 -1.3**
HNS SS **SS 05 04 20.3 +3.1**
HNS AMB AMB
comp=Z,4µm,12.4s
HNS LR LR
comp=Z,6µm,20.8s
HNS LR LR
comp=Z,3µm,21.8s
HNS LR LR
comp=Z,11µm,20.1s
AAK Ala-Archa 122.74 11 **PKiKP 04 46 00.2 +0.1**
AAK Ala-Archa 122.74 11 P **PKPdf 04 45 58.6 -1.2**
AAK Ala-Archa 122.74 11 P **PKiKP 04 46 00.4 +0.3**
SNR=17
AAK Ala-Archa 122.74 11 *i* PKPdf **PKPdf 04 45 58.9 -1.0**
SNR=18
AAK Ala-Archa 122.74 11 *c i*PKIKP **PKiKP 04 46 00.7 +0.6**
AAK pmax pmax
comp=Z,61nm,1.3s
AAK Ala-Archa 122.74 11 PKP **PKiKP 04 46 00.3 +0.3**
TNSS Tian-Shan 122.75 9 *e*PKP **PKPdf 04 45 59.5 -0.7**
TNSS Tian-Shan 122.75 9 *e*PKIKP **PKPdf 04 45 59.5 -0.7**
PDGK Podgornoye 122.78 6 PKIKP **PKPdf 04 45 58.3 -1.6**
KBK Karagaybulak 122.80 10 P **PKiKP 04 46 00.7 +0.5**
SNR=19
UZB Uzynbulak 122.91 7 *e*PKP **PKPdf 04 45 59.9 -0.2**
UZB Uzynbulak 122.91 7 *e*PKIKP **PKPdf 04 45 59.9 -0.2**
SATY Saty 122.92 7 *e*PKP **PKPdf 04 45 59.9 -0.3**
SATY Saty 122.92 7 *e*PKIKP **PKPdf 04 45 59.8 -0.3**
SHLS Shalkode 122.95 6 *e*PKP **PKPdf 04 45 59.1 -1.1**
SHLS Shalkode 122.95 6 *e*PKIKP **PKPdf 04 45 59.9 -0.3**
CTA Charters Tower 123.02 255 P **PKPdf 04 46 00.7 0.0**
CTA Charters Tower 123.02 255 P **PKPdf 04 46 00.6 -0.1**
CTAO Charters Tower 123.02 255 **PKPdf 04 46 00.2 -0.5**
CTAO Charters Tower 123.02 255 IAMs_20 IAMs_20 05 28 43.1
comp=Z,6µm,20.0s
CTAO Charters Tower 123.02 255 P **PKiKP 04 46 01.1 +0.2**
CTAO Charters Tower 123.02 255 P **PKiKP 04 46 01.6 +0.7**
CTAO Charters Tower 123.02 255 PKIKP **PKPdf 04 46 00.2 -0.5**
MBAR Mbarara 123.02 82 IAMs_20 IAMs_20 05 41 49.9
comp=Z,8µm,20.0s
MBAR Mbarara 123.02 82 P **PKPdf 04 45 57.8 -3.4**
BROLN Tlhalogang 123.07 106 *i* P **PKPdf 04 46 00.8 -0.1**
UCH Uchtor 123.14 11 P **PKiKP 04 46 02.0 +0.7**
SNR=61
MREMI Moremi 123.24 108 *i* P **PKiKP 04 46 01.3 -0.1**
TIY Taiyuan 123.41 336 PKP **PKiKP 04 46 02.6 +1.2**
TIY PP **PP 04 47 40.6 -0.4**
TIY SKS **SKSdf 04 53 15.3 +2.9**
TIY SS **SS 05 04 28.3 +2.4**
TIY AMB AMB
comp=Z,2µm,11.2s
TIY LR LR
comp=Z,10µm,18.3s
TIY LR LR
comp=Z,5µm,18.4s
TIY LR LR
comp=Z,10µm,19.6s
ULHL Ulahol 123.42 9 P **PKiKP 04 46 02.1 +0.6**
SNR=21
CMSA Cobar Meteorol 123.49 241 P **PKPdf 04 46 01.3 0.0**
MAW Mawson 123.98 169 PKP **PKPdf 04 46 00.6 -0.5**
comp=Z,24nm,1.0s,baz=226,slow=2.8,SNR=32
BRAT Ballarat 124.24 234 P **PKiKP 04 46 04.7 +1.9**
BRAT Ballarat 124.24 234 P **PKPdf 04 46 02.6 +0.1**
SSE Sheshan 124.48 324 PKP **PKiKP 04 46 03.9 +0.3**
SSE SS SS 05 04 40.9 +0.8
SSE AMB AMB
comp=Z,710nm,4.5s
SSE LR LR
comp=Z,2µm,18.7s
SSE LR LR
comp=Z,2µm,18.3s
MTSU Mount Surprise 124.71 257 P **PKiKP 04 46 04.5 +0.2**
MTSU Mount Surprise 124.71 257 P **PKPdf 04 46 04.1 +0.1**
QLP Quilpie 125.00 247 P **PKiKP 04 46 05.0 +0.3**
QLP Quilpie 125.00 247 P **PKiKP 04 46 04.5 -0.2**
NJ2 Nanjing 125.05 327 *e*PKP **PKiKP 04 46 05.1 +0.4**
NJ2 sPKP **sPKPdf 04 46 15.9 +5.2**
NJ2 PP **PP 04 47 55.1 +2.9**
NJ2 AMB AMB
comp=Z,410nm,5.1s
NJ2 LR LR
comp=Z,4µm,19.6s
NJ2 LR LR
comp=Z,4µm,18.9s
NJ2 LR LR
comp=Z,4µm,19.9s
RAYN Ar Rayn 125.18 48 **PKPdf 04 46 04.1 -0.8**
RAYN Ar Rayn 125.18 48 P **PKPdf 04 46 03.9 -1.0**
RAYN Ar Rayn 125.18 48 *i* PKPdf **PKPdf 04 46 04.5 -0.4**
SNR=15
RAYN Ar Rayn 125.18 48 PKIKP **PKPdf 04 46 04.1 -0.8**
COEN Coen 125.38 263 P **PKPdf 04 46 05.2 -0.2**
COEN Coen 125.38 263 P **PKPdf 04 46 05.4 0.0**
JAY Jayapura 125.60 277 PKP **PKPdf 04 46 05.5 -0.4**
comp=Z,29nm,0.9s,baz=225,slow=1.4,SNR=5.1
JAY Jayapura 125.60 277 PKP **PKiKP 04 46 08.2 +1.9**
GTA Gaotai 125.71 348 PKP **PKPdf 04 46 05.4 -0.2**
GTA PP PP 04 48 04.3 +8.1
GTA PKS 04 49 44.1
GTA AMB AMB
comp=Z,3µm,10.9s
GTA LR LR
comp=Z,9µm,21.1s
GTA LR LR
comp=Z,5µm,18.5s
GTA LR LR
comp=Z,16µm,20.7s
KSH Kashi 126.03 10 PKP **PKiKP 04 46 07.6 +1.0**
KSH PP **PP 04 48 00.9 +2.6**
KSH AMB AMB
comp=Z,3µm,10.1s
KSH LR LR
comp=Z,10µm,21.0s
KSH LR LR
comp=Z,11µm,20.8s
KSH LR LR
comp=Z,16µm,21.6s
LYN LuoYang 126.10 334 PKP **PKPdf 04 46 06.3 0.0**
LYN AMB AMB
comp=Z,7µm,11.9s
LYN LR LR
comp=Z,3µm,24.7s
LYN LR LR
comp=Z,5µm,24.7s
LYN LR LR
comp=Z,8µm,25.8s
GENI Genyem 126.14 277 P **PKiKP 04 46 08.6 +1.3**
GENI Genyem 126.14 277 P **PKiKP 04 46 08.4 +1.1**
GENI Genyem 126.14 277 PKP **PKiKP 04 46 09.8 +2.5**
LODK Lodwar 126.20 75 IAMs_20 IAMs_20 05 46 25.3
comp=Z,7µm,19.0s
LODK Lodwar 126.20 75 P **PKPdf 04 46 05.5 -1.6**
STKA Stephens Creek 126.93 240 PKP **PKPdf 04 46 07.6 -0.3**
comp=Z,50nm,0.8s,baz=50,slow=2.0,SNR=52
STKA SKKPbc SKKPbc 04 59 23.6 -4.7
comp=Z,9.6nm,1.0s,baz=324,slow=3.4,SNR=4.6
STKA Stephens Creek 126.93 240 P **PKPdf 04 46 07.8 -0.1**
STKA Stephens Creek 126.93 240 P **PKPdf 04 46 07.9 0.0**
SMPI Sarmi 127.39 278 PKP **PKiKP 04 46 13.0 +3.2**
LZH Lanzhou 127.86 342 *e*PKP **PKiKP 04 46 10.3 -0.1**
LZH PP **PP 04 48 10.3 -0.3**
LZH LR LR
comp=Z,24µm,16.2s
XAN Xi'an 127.99 337 PKP **PKPdf 04 46 09.4 -0.6**
XAN PP **PP 04 48 13.0 +1.5**
XAN SS SS 05 05 27.0 +3.7
XAN AMB AMB
comp=Z,4µm,12.1s
XAN LR LR
comp=Z,23µm,18.5s
LZDM Lanzhou Array 128.02 343 PKP **PKiKP 04 46 10.8 -0.2**
comp=Z,35nm,0.9s,baz=56,slow=0.5,SNR=26
TRNA Turayna 128.32 42 P **PKPdf 04 46 10.8 0.0**
AUMBR Murray Bridge 128.35 236 P **PKiKP 04 46 12.0 +0.9**
AUMBR Murray Bridge 128.35 236 P **PKiKP 04 46 11.7 +0.6**
WHN Wuhan 128.57 329 PKP **PKPdf 04 46 10.8 -0.3**
WHN PP **PP 04 48 16.8 +1.4**
WHN LR LR
comp=Z,21µm,22.6s
HTT Hallett 128.95 238 P **PKiKP 04 46 12.9 +0.4**
KBL Kabul 129.07 19 P **PKiKP 04 46 11.9 -0.4**
KBL Kabul 129.07 19 P **PKPdf 04 46 10.6 -1.7**
SNR=17
KBL Kabul 129.07 19 PKIKP **PKPdf 04 46 11.9 -0.4**
SLWR Sila 129.09 43 P **PKPdf 04 46 12.0 -0.2**
KBU Kabul Universi 129.12 19 PKP **PKPdf 04 46 11.5 -0.9**
JRN Qarnain Island 129.23 41 P **PKPdf 04 46 11.6 -0.9**
QIS Mount Isa 129.27 255 P **PKiKP 04 46 12.6 -0.1**
QIS Mount Isa 129.27 255 P **PKPdf 04 46 12.7 0.0**
KMBO Kilima Mbogo 129.41 80 PKP **PKiKP 04 46 15.2 +1.1**
comp=Z,10nm,1.0s,baz=314,slow=2.8,SNR=35
BAKI Biak 129.66 280 PKP **PKiKP 04 46 17.5 +3.1**
GOMU GeErMu 129.72 352 PKP **PKiKP 04 46 14.1 -0.3**
GOMU PP **PP 04 48 23.6 +0.7**
GOMU SKKS 04 55 20.3
GOMU SS **SS 05 05 46.0 +1.2**
GOMU AMB AMB
comp=Z,2µm,11.2s
GOMU LR LR
comp=Z,6µm,18.8s
GOMU LR LR
comp=Z,3µm,18.4s
GOMU LR LR
comp=Z,7µm,18.3s
SSLB Suanglung 129.91 318 **PKPdf 04 46 13.6 -0.3**
SSLB Suanglung 129.91 318 P **PKiKP 04 46 15.9 +1.2**
SSLB Suanglung 129.91 318 P **PKiKP 04 46 15.7 +1.0**
GHWR Ruwais 129.94 42 P **PKPdf 04 46 10.2 -3.7**
WHYH Whyalla 130.13 238 P **PKiKP 04 46 15.9 +1.2**
WHYH Whyalla 130.13 238 P **PKiKP 04 46 15.5 +0.8**
SHME Shamm 130.43 37 P **PKPdf 04 46 14.6 -0.2**
SNR=6.3
SHME Shamm 130.43 37 *i* PKPdf **PKPdf 04 46 14.4 -0.4**
SNR=9.2
KIBK Kibwezi 130.52 81 PKP **PKiKP 04 46 16.0 -0.2**
KIBK Kibwezi 130.52 81 IAMs_20 IAMs_20 05 48 13.6
comp=Z,4µm,19.0s
KIBK Kibwezi 130.52 81 P **PKPdf 04 46 12.5 -2.8**
SNR=24
UMQ Umm Al-Quwin 130.54 38 P **PKPdf 04 46 13.3 -1.7**
BANOM Banah 130.62 37 P **PKPdf 04 46 11.8 -3.4**
BANOM Banah 130.62 37 *i* PKPdf **PKPdf 04 46 13.9 -1.3**
SNR=7.8
MZWR Madinat Zayed 130.73 41 P **PKPdf 04 46 12.5 -2.9**
NAZ Nazwa, Dubai 130.94 38 P **PKPdf 04 46 14.1 -1.7**
SNR=6.4
NAZ Nazwa, Dubai 130.94 38 *i* PKPdf **PKPdf 04 46 14.6 -1.1**
SNR=12
MASF Masafi 130.95 38 P **PKPdf 04 46 13.5 -2.3**
SNR=12
MSFE Esma-Masafi 130.96 38 *i* PKPdf **PKPdf 04 46 14.8 -1.1**
SNR=12
ASUD Al Ashush, Dub 131.01 39 P **PKPdf 04 46 13.2 -2.7**
SNR=5.3
ASUD Al Ashush, Dub 131.01 39 *i* PKPdf **PKPdf 04 46 15.7 -0.2**

SNR=7.8
MZR Muzera 131.01 42 P **PKPdf** 04 46 13.7 -2.3
SNR=7.5
MZR Muzera 131.01 42 *i* PKPdf **PKPdf** 04 46 15.4 -0.6
SNR=14
KNMB Chin-men Tao 131.05 321 IAMs_20 IAMs_20 05 53 59.6
comp=Z,7µm,20.0s
FAQ Al Faqa, Dubai 131.08 39 P **PKPdf** 04 46 13.4 -2.6
FAQ Al Faqa, Dubai 131.08 39 *i* PKPdf **PKPdf** 04 46 15.3 -0.8
SNR=8.9
MDH Madha 131.09 38 P **PKPdf** 04 46 12.4 -3.6
SNR=5.4
MDH Madha 131.09 38 *i* PKPdf **PKPdf** 04 46 14.7 -1.4
SNR=8.2
NIL Nilore 131.10 15 **PKPdf** 04 46 15.8 0.0
NIL Nilore 131.10 15 P **PKPdf** 04 46 11.9 -4.0
NIL Nilore 131.10 15 PKIKP **PKPdf** 04 46 15.9 0.0
CNSH ChangSha 131.21 329 PKP **PKPdf** 04 46 16.0 -0.2
CNSH AMB AMB
comp=Z,3µm,9.6s
CNSH LR LR
comp=Z,3µm,23.5s
CNSH LR LR
comp=Z,5µm,19.6s
CNSH LR LR
comp=Z,7µm,18.8s
UOSS Minazif 131.30 38 **PKPdf** 04 46 16.0 -0.5
UOSS Minazif 131.30 38 P **PKPdf** 04 46 13.9 -2.5
UOSS Minazif 131.30 38 PKP **PKPdf** 04 46 15.4 -1.1
UOSS PKP **PKiKP** 04 46 16.7 -0.7
HATD Hatta, Dubai 131.34 38 P **PKPdf** 04 46 14.2 -2.4
SNR=10
HATD Hatta, Dubai 131.34 38 *i* PKPdf **PKPdf** 04 46 15.6 -1.0
SNR=14
ASHO Ashiyiah 131.41 38 P **PKPdf** 04 46 14.3 -2.4
SNR=8.3
ASHO Ashiyiah 131.41 38 *i* PKPdf **PKPdf** 04 46 16.0 -0.7
SNR=17
ALCI Alchi Leh 131.41 11 *eP* **PKPdf** 04 46 16.6 -0.3
ALCI IAmb IAmb 04 46 20.4
comp=Z,200nm,1.1s
BBOO Buckleboo 131.42 238 P **PKiKP** 04 46 17.7 +0.3
BBOO Buckleboo 131.42 238 P **PKiKP** 04 46 17.2 -0.2
RKPI Ransiki, Papua 131.60 280 PKP **PKiKP** 04 46 20.8 +2.5
ALNE Al Ain 131.69 39 P **PKPdf** 04 46 14.1 -3.1
SNR=15
ALNE Al Ain 131.69 39 *i* PKPdf **PKPdf** 04 46 16.8 -0.4
SNR=11
SOHO SOHO 132.10 38 P **PKPdf** 04 46 15.2 -2.8
SOHO SOHO 132.10 38 *i* PKPdf **PKPdf** 04 46 17.2 -0.8
SNR=18
UMZA Um Al Zommool 132.30 41 P **PKPdf** 04 46 15.7 -2.6
TSSA Tissa 132.54 12‖ *eP* **PKPdf** 04 46 17.8 -1.1
CD2 Chengdu 132.67 340 PKP **PKPdf** 04 46 18.8 -0.2
CD2 sPKP sPKPdf 04 46 23.5 -1.8
CD2 PP **PP** 04 48 44.3 +2.5
CD2 SKS **SKSac** 04 53 25.3 -4.5
CD2 SKKS **SKKSac** 04 55 38.6 +0.1
CD2 SS **SS** 05 06 17.3 -3.4
CD2 AMB AMB
comp=Z,4µm,9.5s
CD2 LR LR
comp=Z,7µm,16.1s
ARQ Araqi 132.69 39 P **PKPdf** 04 46 15.6 -3.6
SNR=6.9
THN Thein Dam 132.84 13 *eP* **PKPdf** 04 46 19.5 +0.3
HOQ Hoqain 132.98 38 P **PKPdf** 04 46 16.3 -3.4
SNR=11
HNLY HANLEY 133.11 9 *eP* **PKPdf** 04 46 19.5 -0.9
HNLY IAmb IAmb 04 46 25.2
comp=Z,135nm,0.9s
DHRM DHARAMSHALA 133.14 12 *eP* **PKPdf** 04 46 19.5 -0.6
DHRM IAmb IAmb 04 46 27.5
comp=Z,78nm,1.0s
TLWR Talawar 133.35 13‖ *eP* **PKPdf** 04 46 19.9 -0.3
BSY Bisya 133.54 39 P **PKPdf** 04 46 17.1 -3.7
SNR=11
NGCH Negor - Chabah 133.75 33 P **PKPdf** 04 46 17.4 -3.7
SMDO Samad 133.82 38 P **PKPdf** 04 46 17.8 -3.6
SNR=32
FAKI Fak Fak 133.84 279 IAMs_20 IAMs_20 05 40 22.9
comp=Z,6µm,19.0s
FAKI Fak Fak 133.84 279 P **PKiKP** 04 46 25.0 +2.2
FAKI Fak Fak 133.84 279 P **PKiKP** 04 46 23.6 +0.8
FAKI Fak Fak 133.84 279 PKP **PKiKP** 04 46 24.4 +1.6
WSAR Wadi Sarin 134.03 37 P **PKPdf** 04 46 16.8 -4.9
SNR=12
SWI Sorong 134.18 282 PKP **PKiKP** 04 46 24.8 +1.3
WRAB Tennant Creek 134.20 256 PKPdf **PKPdf** 04 46 21.5 -0.5
WRAB Tennant Creek 134.20 256 IAMs_20 IAMs_20 05 35 04.9
comp=Z,5µm,21.0s
WRAB Tennant Creek 134.20 256 P **PKiKP** 04 46 23.5 +0.1
WRAB Tennant Creek 134.20 256 *c* *i* PKIKP **PKiKP** 04 46 22.9 -0.5
WRAB pmax pmax
comp=Z,143nm,1.7s
WRA Warramunga Arr 134.21 256 PKP **PKPdf** 04 46 21.8 -0.3
comp=Z,32nm,0.8s,baz=83,slow=2.0,SNR=46
WRA PP **PP** 04 48 52.4 -1.2
comp=Z,3.3nm,1.0s,baz=91,slow=5.2,SNR=6.0
WRA SKKPbc SKKPbc 04 58 52.8 -8.9
comp=Z,2.0nm,0.9s,baz=275,slow=2.6,SNR=3.9
JMDO Jabal Madar 134.38 38 P **PKPdf** 04 46 17.7 -4.7
SNR=11
SMLA Simla 134.40 12 *eP* **PKPdf** 04 46 22.1 0.0
SMLA IAmb IAmb 04 46 24.7
comp=Z,121nm,0.8s
DOK Doka 134.47 46 P **PKPdf** 04 46 15.7 -6.9
SNR=6.1
ASAR Alice Springs 134.49 250 PKhKP PKPpre 04 46 03.9
comp=Z,1.5nm,0.7s,baz=97,slow=2.9,SNR=11
ASAR PKP **PKPdf** 04 46 21.9 -0.6
comp=Z,7.9nm,0.9s,baz=101,slow=1.9,SNR=14
ASAR SKPbc **SKPbc** 04 49 46.4 -5.1
comp=Z,0.8nm,0.9s,baz=62,slow=3.1,SNR=4.1
ASAR PKKP **PKKPdf** 04 56 06.7 -1.6
comp=Z,0.7nm,0.8s,baz=218,slow=0.8,SNR=4.3
ASAR SKKPbc **SKKPbc** 04 58 52.0 -8.8
comp=Z,2.6nm,1.0s,baz=271,slow=2.6,SNR=4.5
WHFO Wadi Hawf 134.69 47 P **PKPdf** 04 46 17.3 -5.8
SNR=9.7
WBK Wadi Bani Khal 134.71 37 P **PKPdf** 04 46 17.5 -5.5
SNR=8.0
ABTO Aybut 134.72 48 P **PKPdf** 04 46 18.7 -4.4
SNR=14
SRGN SRI GANGA NAGA 134.81 16‖ *eP* **PKPdf** 04 46 20.6 -2.4
GULI GuiLin 134.88 329‖ PKP **PKPdf** 04 46 17.3 -5.9
GULI PP PP 04 48 48.3 -7.8
GULI GuiLin 134.88 329 SS SS 05 06 45.3 -2.6
GULI AMB AMB
comp=Z,3µm,10.3s
GULI LR LR
comp=N,6µm,21.7s
GULI LR LR
comp=E,6µm,20.2s
GULI LR LR
comp=Z,9µm,21.0s
HKPS Hong Kong Po S 135.25 323 IAMs_20 IAMs_20 05 58 11.6
comp=Z,7µm,22.0s
RBK Rabkut 135.27 47 P **PKPdf** 04 46 20.0 -4.2
JLN Jalan Bani Buh 135.32 37 P **PKPdf** 04 46 20.4 -3.7
SNR=12
MHTO MHTO 135.33 40 P **PKPdf** 04 46 20.4 -3.7
SNR=12
DDI Dehra Dun 135.35 11 *eP* **PKPdf** 04 46 22.5 -1.6
JOSI Joshimath 135.38 9 *eP* **PKPdf** 04 46 22.4 -1.8
KKR Kurukshetra 135.47 12 *eP* **PKPdf** 04 46 23.0 -1.2
GYA Guiyang 135.59 334‖ PKP **PKiKP** 04 46 25.8 -0.4
GYA PP **PP** 04 49 02.8 +2.2
GYA PKS 04 49 59.1
GYA SS SS 05 06 55.3 -1.0
GYA AMB AMB
comp=Z,5µm,12.7s
GYA LR LR
comp=Z,2µm,19.2s
GYA LR LR
comp=Z,4µm,21.3s
GYA LR LR
comp=Z,6µm,23.8s
DMTO DMTO 135.65 46 P **PKPdf** 04 46 20.7 -4.1
DQM DQM 135.83 41 P **PKPdf** 04 46 19.7 -5.4
SHAO Shalim 135.91 45 P **PKPdf** 04 46 20.7 -4.6
SAUI Saumlaki 135.97 273 IAMs_20 IAMs_20 05 36 35.3
comp=Z,5µm,21.0s
RTK Rohtak 136.27 13 *eP* **PKPdf** 04 46 23.3 -2.4
DAV Davao City (W) 136.29 296 P PKPdf 04 46 17.7 -8.3

PTH Pithoragarh 136.46 8 *eP* **PKPdf** 04 46 23.6 -2.6
BNDI Bandanaira 136.53 278 P **PKPdf** 04 46 25.7 -0.8
BNDI Bandanaira 136.53 278 P **PKiKP** 04 46 28.4 +0.2
BNDI Bandanaira 136.53 278 PKP **PKiKP** 04 46 27.6 -0.6
LGTI Lohaghat 136.56 8 *eP* **PKPdf** 04 46 24.7 -1.5
LSA Lhasa 136.57 354 IAMs_20 IAMs_20 05 53 16.4
comp=Z,6µm,21.0s
LSA Lhasa 136.57 354 P **PKPdf** 04 46 20.8 -6.1
LSA Lhasa 136.57 354 PKP PKPpre 04 46 16.5
LSA PP **PKPdf** 04 46 24.5 -2.4
LSA LR LR
comp=N,4µm,19.2s
LSA LR LR
comp=E,4µm,20.6s
LSA LR LR
comp=Z,6µm,22.0s
MERT Meerut 136.61 12 *eP* **PKPdf** 04 46 25.4 -0.9
TKRD Thakurdwara 136.64 10 *eP* **PKPdf** 04 46 24.7 -1.7
NDI New Delhi 136.78 12 *eP* **PKPdf** 04 46 25.4 -1.3
NPLP NPLP New Delhi 136.82 12 *eP* **PKPdf** 04 46 26.1 -0.6
NPLP IAmb IAmb 04 46 30.9
comp=Z,64nm,0.7s
LDR Lodi Road 136.88 12 *eP* **PKPdf** 04 46 26.1 -0.7
AYAN Aya Nagar 136.96 13 *eP* **PKPdf** 04 46 27.3 +0.4
AYAN IAmb IAmb 04 46 31.0
comp=Z,88nm,1.0s
DRS Darwin Rock St 137.07 266 P **PKiKP** 04 46 29.0 -0.3
DRS Darwin Rock St 137.07 266 P **PKiKP** 04 46 29.5 +0.2
AUDHS Darwin High Sc 137.14 266 P **PKiKP** 04 46 28.8 -0.6
AUDHS Darwin High Sc 137.14 266 P **PKiKP** 04 46 29.9 +0.5
KUDL Kundal 137.15 13 *eP* **PKPdf** 04 46 25.0 -2.3
KUDL IAmb IAmb 04 46 29.9
comp=Z,272nm,1.2s
TNTI Ternate 137.29 287 P **PKiKP** 04 46 29.9 +0.1
TNTI Ternate 137.29 287 P **PKPdf** 04 46 28.4 +0.4
TNTI Ternate 137.29 287 PKP **PKiKP** 04 46 30.0 +0.1
PZH PanZhiHua 137.41 340 PKP **PKiKP** 04 46 29.0 -0.9
PZH PP **PP** 04 49 13.5 +1.7
PZH PKS **PKSdf** 04 50 02.8 -1.7
PZH SS SS 05 07 19.8 +2.1
PZH AMB AMB
comp=Z,3µm,10.0s
PZH LR LR
comp=Z,5µm,22.2s
PZH LR LR
comp=Z,4µm,19.8s
PZH LR LR
comp=Z,7µm,23.5s
AAI Ambon 137.94 280 PKP **PKiKP** 04 46 30.4 -0.8
LKP Lekhapani 138.20 348 *eP* **PKPdf** 04 46 26.7 -2.6
AJM Ajmer 138.28 16 *eP* **PKPdf** 04 46 29.3 -0.2
AJM IAmb IAmb 04 46 31.8
comp=Z,34nm,0.9s
KMI Kunming 138.33 338 Pdif **Pdif** 04 43 43.5 +3.5
KMI PKP **PKPdf** 04 46 30.1 +0.2
KMI PKS PP 04 50 05.4 +48
KMI SKKS 04 56 14.1
KMI AMB AMB
comp=Z,3µm,11.8s
KMI LR LR
comp=Z,11µm,19.6s
KMI LR LR
comp=Z,5µm,20.6s
KMI LR LR
comp=Z,13µm,20.0s
ZIRO ZIRO 138.38 351 *eP* **PKPdf** 04 46 29.1 -0.8
FORT Forrest 138.51 239 **PKPdf** 04 46 29.7 0.0
TAWA Tawang 138.58 353 *eP* **PKPdf** 04 46 29.6 -0.9
NLAI Namlea 138.86 281 PKP **PKPdf** 04 46 25.6 -5.2
JORH JORHAT 139.08 350 *eP* **PKPdf** 04 46 30.6 -0.3
GTK Tadong 139.11 358 *eP* **PKPdf** 04 46 28.9 -2.2
GTK IAmb IAmb 04 46 36.2
comp=Z,290nm,1.6s
TEZP TEZPUR 139.43 352 *eP* **PKPdf** 04 46 28.1 -3.5
MOKO MOKOCHONG 139.44 349 *eP* **PKPdf** 04 46 28.2 -3.6
MOKO IAmb IAmb 04 46 36.5
comp=Z,103nm,0.3s
SANI Sanana 139.55 283 PKP PKPdf 04 46 23.5 -8.6
SANI Sanana 139.55 283 P **PKPdf** 04 46 32.9 +0.8
SANI Sanana 139.55 283 PKP **PKPdf** 04 46 26.4 -5.7
BHUJ Bhuj 139.55 25 *eP* **PKPdf** 04 46 30.8 -1.0
STMR SITAMARHI 139.69 2‖ *eP* **PKPdf** 04 46 27.4 -4.6
TNCH TengChong 139.77 343 PKP PKPdf 04 46 23.9 -8.6
TNCH sPKP sPKPdf 04 46 32.8 -6.0
TNCH PP **PP** 04 49 25.9 -0.6
UDPR Udaipur 139.79 19‖ *eP* **PKPdf** 04 46 29.8 -2.6
KOHI KOHIMA 140.10 350 *eP* **PKPdf** 04 46 29.5 -3.5
KOHI IAmb IAmb 04 46 37.5
comp=Z,163nm,1.3s
JHNI Jhansi 140.17 12 *eP* **PKPdf** 04 46 30.4 -2.6
JHNI IAmb IAmb 04 46 34.8
comp=Z,98nm,1.3s
QIZ Qiongzhong 140.27 325 IAMs_20 IAMs_20 06 01 08.1
comp=Z,7µm,20.0s
QIZ Qiongzhong 140.27 325 PKP **PKPdf** 04 46 31.3 -2.0
QIZ SS SS 05 07 54.5 +2.2
QIZ AMB AMB
comp=Z,2µm,9.6s
QIZ LR LR
comp=Z,4µm,20.6s
QIZ LR LR
comp=Z,3µm,18.6s
QIZ LR LR
comp=Z,7µm,20.6s
SHL Shillong 140.58 353 P **PKPdf** 04 46 28.4 -5.6
SNR=39
SHL Shillong 140.58 353 *eP* **PKPdf** 04 46 29.6 -4.3
SHL IAmb IAmb 04 46 35.7
comp=Z,100nm,1.2s
GUNA GUNA 140.71 14 *eP* **PKPdf** 04 46 30.5 -3.5
GUNA IAmb IAmb 04 46 38.9
comp=Z,124nm,1.0s
ALBI Allahabad 140.85 7 *eP* **PKPdf** 04 46 32.3 -1.9
ALBI IAmb IAmb 04 46 36.1
comp=Z,302nm,1.3s
FOMA Nahampoana Res 140.95 113 IAMs_20 IAMs_20 05 44 11.8
comp=Z,6µm,21.0s
VAR Varanasi 140.99 5 *eP* **PKPdf** 04 46 30.9 -3.5
IMP Imphal 141.00 350 *eP* **PKPdf** 04 46 30.7 -3.9
IMP IAmb IAmb 04 46 37.8
VOI Vohitsoka 141.16 108 **PKPdf** 04 46 34.8 -0.2
VOI IAMs_20 IAMs_20 05 48 17.2
comp=Z,7µm,19.0s
VOI Vohitsoka 141.16 108 P **PKPdf** 04 46 28.3 -6.6
SNR=6.7
SILR SILCHAR 141.23 351 *eP* **PKPdf** 04 46 32.7 -2.2
SHBG Sahibganj 141.23 359‖ *eP* **PKPdf** 04 46 30.9 -4.0
ABPO Ambohimpanom 141.74 103 IAMs_20 IAMs_20 05 51 10.5
comp=Z,5µm,18.0s
BHPL Bhopal 142.08 14 *eP* **PKPdf** 04 46 33.8 -2.7
BHPL IAmb IAmb 04 46 42.4
comp=Z,292nm,1.8s
LUWI Luwuk 142.23 286 PKP PKPdf 04 46 29.0 -7.9
LUWI Luwuk 142.23 286 P **PKiKP** 04 46 38.7 -1.2
LUWI Luwuk 142.23 286 PKP **PKiKP** 04 46 38.7 -1.2
AGT Agartala 142.32 353 *eP* **PKPdf** 04 46 34.3 -2.5
MRSI Marisa 142.42 289 PKP **PKPdf** 04 46 37.3 0.0
FITZ Fitzroy Crossi 142.45 258 PKhKP PKPpre 04 46 32.7
comp=Z,67nm,0.8s,baz=195,slow=1.8,SNR=34
NRDN NARMADA NAGAR 142.52 15 *eP* **PKPdf** 04 46 33.8 -3.5
NRDN IAmb IAmb 04 46 39.8
comp=Z,138nm,1.3s
BOK Bokaro 142.65 1 *eP* **PKPdf** 04 46 33.4 -4.0
BOK IAmb IAmb 04 46 40.1
comp=Z,84nm,0.9s
BELO BELONIA 142.92 353 *eP* **PKPdf** 04 46 35.1 -2.8
SOEI Soe 143.13 272 PKP PKPbc 04 46 34.9 -0.7
SOEI Soe 143.13 272 P **PKPdf** 04 46 37.7 -0.9
SOEI Soe 143.13 272 PKP **PKPdf** 04 46 37.7 -0.9
APSI Ampana 143.22 287 PKP **PKPdf** 04 46 37.3 -1.4
MYLDM Lahad Datu 143.33 299 IAMs_20 IAMs_20 05 38 51.5
comp=Z,6µm,21.0s
MYLDM Lahad Datu 143.33 299 P **PKPdf** 04 46 38.6 -0.3
KNTI KHUNTI 143.36 2 *eP* PKPab 04 46 34.3 -0.4
BATI Baumata 143.79 271 PKP PKPbc 04 46 38.5 +1.2
comp=Z,103nm,0.8s,baz=151,slow=0.9,SNR=11
BATI Baumata 143.79 271 PKP **PKPdf** 04 46 40.3 +0.6
BLSP Bilaspur 144.03 7 *eP* **PKPab** 04 46 36.8 -0.4
BLSP IAmb IAmb 04 46 45.8
comp=Z,210nm,1.2s
SBV Sambava 144.18 94 P **PKPab** 04 46 32.4 -5.6
MPSI Mapaga 144.34 290 PKP **PKPab** 04 46 38.3 -0.4
AKL Akola 144.41 16 *eP* PKPbc 04 46 39.1 +0.1
AKL IAmb IAmb 04 46 41.4

comp=Z,403nm,1.1s
NGP Nagpur 144.47 13 *eP* **PKPab** 04 46 38.7 -0.2
NGP IAmb IAmb 04 46 43.4
comp=Z,132nm,0.9s
JHSG JHARSUGUGA 144.56 5 *eP* PKPbc 04 46 39.5 +0.1
JHSG IAML 04 46 44.3
comp=Z,344nm,1.1s
MMRI Maumere 144.89 275 P **PKPab** 04 46 40.5 -0.2
MMRI Maumere 144.89 275 PKP **PKPab** 04 46 40.2 -0.5
PCI Palu 144.90 289 PKP **PKPdf** 04 46 42.7 +1.1
EDFI Ende, Flores 145.44 275 PKP **PKPbc** 04 46 40.3 -2.3
POO Poona 145.45 22 *eP* **PKPbc** 04 46 41.9 -0.5
POO IAmb IAmb 04 46 45.9
comp=Z,515nm,1.3s
CHTO Chiang Mai 145.47 339 **PKPbc** 04 46 41.3 -1.1
CHTO IAMs_20 IAMs_20 06 01 31.6
comp=Z,7µm,22.0s
CHTO Chiang Mai 145.47 339 P **PKPbc** 04 46 35.2 -7.2
CHTO Chiang Mai 145.47 339 P **PKPbc** 04 46 41.5 -0.9
CHTO Chiang Mai 145.47 339 PKP2 **PKPbc** 04 46 41.3 -1.1
CHTO Chiang Mai 145.47 339 PKP **PKPbc** 04 46 41.3 -1.1
CHTO PKP **PKPdf** 04 46 42.1 -0.4
TTSI Tana Toraja 145.69 285 PKP **PKPab** 04 46 43.6 0.0
CMAR Chiang Mai Arr 145.81 339 PKPbc **PKPbc** 04 46 43.4 -0.1
comp=Z,492nm,1.0s,baz=338,slow=2.8,SNR=361
CMAR PP **PP** 04 50 01.8 -1.1
comp=Z,1.1nm,0.2s,baz=30,slow=4.2,SNR=1.9
CMAR Chiang Mai Arr 145.81 339 **PKPdf** 04 46 43.1 0.0
CMAR **PP** 04 50 02.6 -0.2
CMAR Chiang Mai Arr 145.81 339 PKP2 **PKPdf** 04 46 43.1 0.0
CMAR 04 50 02.6
BNSI Bone 145.86 283 PKP **PKPbc** 04 46 43.9 +0.1
BSSI Bau Bau, Buton 145.99 280 PKP **PKPbc** 04 46 44.0 -0.2
SPSI Sidrap Palu 146.04 284 PKP **PKPbc** 04 46 44.0 -0.4
BKSI Bulukumba 146.12 281 PKP **PKPdf** 04 46 43.7 0.0
BWNR Bhubaneshwar 146.13 2 *eP* **PKPdf** 04 46 41.4 -2.2
BWNR IAmb IAmb 04 46 47.2
comp=Z,2µm,1.3s
NWAO Narrogin (SRO) 146.36 230 IAMs_20 IAMs_20 06 00 09.5
comp=Z,5µm,19.0s
NWAO Narrogin (SRO) 146.36 230 P **PKPab** 04 46 45.9 +0.2
KAPI Kappang 146.38 282 **PKPdf** 04 46 44.0 -0.1
KAPI Kappang 146.38 282 P PKPdf 04 46 33.4 -11
KAPI Kappang 146.38 282 P **PKPbc** 04 46 45.2 -0.2
KAPI Kappang 146.38 282 PKIKP **PKPdf** 04 46 44.1 -0.1
KAPI Kappang 146.38 282 PKP **PKPdf** 04 46 44.2 +0.1
KAPI PKP **PKPbc** 04 46 45.1 -0.3
KLBR Kellerberrin 146.55 233 P **PKPab** 04 46 46.7 +0.3
KAD Karad 146.70 22 *eP* **PKPdf** 04 46 45.0 +0.3
KAD IAmb IAmb 04 46 48.4
comp=Z,782nm,1.3s
BASI Baing, Sumba 146.79 272 PKP **PKPab** 04 46 47.9 +0.1
WSI Waingapu 146.97 273 PKP **PKPab** 04 46 47.8 -0.7
RAGD RAYAGADA 147.02 6 *eP* **PKPdf** 04 46 43.3 -1.8
RAGD IAmb IAmb 04 46 49.7
comp=Z,507nm,1.2s
AUHAR St Anne's Scho 147.28 229 P **PKiKP** 04 46 49.9 +0.2
MUN Mundaring 147.57 231 P **PKPbc** 04 46 48.9 +0.6
MEEK Meekatharra 147.62 242 P **PKPbc** 04 46 47.8 -0.8
PSA00 Pilbara Seismi 147.62 251 **PKPdf** 04 46 45.3 -0.7
PSA00 Pilbara Seismi 147.62 251 P **PKPbc** 04 46 47.5 -1.2
AUMAZ Mazenod Senior 147.68 231 P **PKiKP** 04 46 49.6 -1.0
BKB Balikpapan 147.73 290 P **PKPbc** 04 46 50.0 +0.8
BKB Balikpapan 147.73 290 PKP **PKPbc** 04 46 49.7 +0.5
BLDU Balidu 147.78 234 P **PKPbc** 04 46 48.3 -0.6
MBWA Marble Bar 147.79 252 **PKPdf** 04 46 47.6 +1.3
MBWA Marble Bar 147.79 252 IAMs_20 IAMs_20 05 46 27.2
comp=Z,5µm,20.0s
MBWA Marble Bar 147.79 252 P PKPdf 04 46 34.4 -12
MBWA Marble Bar 147.79 252 P **PKPbc** 04 46 47.8 -1.4
MBWA Marble Bar 147.79 252 PKP **PKPdf** 04 46 46.3 0.0
MBWA PKP **PKPbc** 04 46 47.4 -1.7
MSEY Mahe Island 147.83 77 **PKPbc** 04 46 48.9 -0.6
MSEY Mahe Island 147.83 77 P **PKPdf** 04 46 42.7 -3.9
MSEY Mahe Island 147.83 77 *i* PKPbc **PKPdf** 04 46 48.0 +1.3
SNR=14
MSEY Mahe Island 147.83 77 PKP2 **PKPbc** 04 46 48.9 -0.6
WBSI Waikabubak, Su 147.84 274 PKP **PKPdf** 04 46 47.6 +1.0
HYBB Hyderabad (bro 147.95 15 *e*PKPbc **PKPbc** 04 46 49.0 -0.7
HYBB *e*PKiKP **PKiKP** 04 46 51.5 -0.1
HYBB *es*PKPbc **sPKPbc** 04 46 55.9 -0.2
HYBB *e*PP **PP** 04 50 16.9 +1.5
HYBB *e*SKSdf **SKSdf** 04 53 53.9 -0.8
HYBB *e*PKKPdf **PKKPdf** 04 55 42.4 +0.5
HYBB *e*SKKSac **SKKSac** 04 57 07.1 -0.9
GOA Goa 148.21 24 *eP* **PKPdf** 04 46 47.4 +0.3
VIS Vishakhapatnam 148.51 6 *eP* **PKPdf** 04 46 47.3 -0.3
VIS IAmb IAmb 04 46 56.8
comp=Z,383nm,1.2s
MORW Morawa 148.93 236 **PKPdf** 04 46 49.8 +1.8
MORW Morawa 148.93 236 P **PKPbc** 04 46 52.0 0.0
PLAI Plampang 149.24 276 P **PKPdf** 04 46 49.4 +0.5
PLAI Plampang 149.24 276 PKP **PKPdf** 04 46 49.1 +0.2
VIJD Vijayawada 149.29 12 *eP* **PKPdf** 04 46 48.1 -0.7
MTKI Muara Teweh, K 149.41 292 PKP **PKiKP** 04 46 54.9 +0.2
SBUM Sibu 150.08 301 PKPdf **PKPdf** 04 46 49.1 -1.1
SBUM IAMs_20 IAMs_20 06 08 07.0
comp=Z,4µm,21.0s
SBUM Sibu 150.08 301 P **PKPdf** 04 46 52.6 +2.4
TWSI Taliwang, Sumb 150.09 276 PKP **PKPdf** 04 46 50.1 -0.1
BBKI Banjar Baru 150.48 288 PKP **PKPbc** 04 46 56.4 +0.2
SRBI Singaraja 151.55 278 PKP **PKPdf** 04 46 53.4 +1.0
DNP Denpasar 151.69 277 PKP **PKiKP** 04 46 59.4 0.0
ABJI Asem Bagus 152.42 280 PKP **PKPdf** 04 46 55.3 +1.6
KMMI Kalianget 152.47 281 PKP **PKPdf** 04 46 56.1 +2.3
MDRS Chennai 152.55 14 *eP* **PKPdf** 04 46 53.2 -0.7
JAGI Jajag, Banyuwa 152.66 278 P **PKPdf** 04 46 54.5 +0.3
JAGI Jajag, Banyuwa 152.66 278 PKP **PKPdf** 04 46 54.4 +0.3
BLJI Banyuglugur 153.02 280 PKP **PKPdf** 04 46 55.6 +1.0
SALM Salem 153.34 19 *eP* **PKPdf** 04 46 53.3 -1.7
SALM IAmb IAmb 04 47 05.0
comp=Z,419nm,1.6s
GRJI Gresik 153.85 283 PKP **PKPdf** 04 46 58.7 +2.9
PBA Port Blair 154.05 347 P **PKPdf** 04 46 51.4 -4.7
SNR=7.0
PBA Port Blair 154.05 347 *eP* **PKPdf** 04 46 55.6 -0.5
PBA IAmb IAmb 04 47 20.0
comp=Z,494nm,1.1s
KOD Kodaikanal 154.41 22 *eP* **PKPdf** 04 46 54.0 -3.0
KOD IAmb IAmb 04 47 21.7
comp=Z,192nm,1.0s
TBJI Tambak Boyo 154.42 283 PKP **PKPdf** 04 46 56.7 +0.1
TBJI PKP **PKiKP** 04 47 07.2 +2.2
NGJI Ngawi 154.95 282 PKP **PKPdf** 04 46 57.5 +0.1
NGJI PKP **pPKPbc** 04 47 09.9 -0.9
PCJI Pacitan 155.44 281 PKP **PKPdf** 04 46 58.1 +0.1
PCJI PKP **pPKPdf** 04 46 59.0 -3.8
HMDM Hanimaadhoo 155.51 34 IAMs_20 IAMs_20 06 07 47.6
comp=Z,5µm,20.0s
SMRI Semarang 155.82 284 IAMs_20 IAMs_20 06 12 20.3
comp=Z,5µm,22.0s
SMRI Semarang 155.82 284 P **PKPdf** 04 47 01.2 +2.6
SMRI Semarang 155.82 284 PKP **PKPdf** 04 46 58.6 0.0
SMRI PKP **pPKPdf** 04 47 00.8 -2.5
UGM Wanagama 155.99 282 P **PKPdf** 04 47 00.5 +1.7
UGM Wanagama 155.99 282 PKP **PKPdf** 04 46 58.9 +0.1
UGM PKP sPKPbc 04 47 19.3 +4.6
KULM Kulim 156.59 323 P **PKPdf** 04 47 01.5 +1.9
IPM Ipoh 157.01 321 P **PKPdf** 04 47 01.5 +1.3
MALK Mahakanadarawa 157.11 16 PKP **PKPdf** 04 46 59.9 -0.4
CMBY CAMPBELL BAY 158.17 341 *eP* **PKPdf** 04 46 59.8 -1.7
PALK Pallekele 158.23 17 PKPdf **PKPdf** 04 46 59.7 -2.0
PALK **PKPab** 04 47 35.4 0.0
PALK Pallekele 158.23 17 P **PKPdf** 04 46 55.1 -6.6
PALK Pallekele 158.23 17 PKIKP **PKPdf** 04 46 59.7 -2.0
PALK 04 47 35.4
PALK Pallekele 158.23 17 PKP **PKPdf** 04 47 01.3 -0.4
BBJI Bungbulang 158.58 285 P **PKPdf** 04 47 03.2 +1.1
PSI Prapat 159.61 323 P **PKPdf** 04 47 03.7 +0.3
BKNI Bangkinang 160.12 314 PKP **PKPdf** 04 46 57.0 -6.9
GSI Gunungsitoli 161.60 324 P **PKPdf** 04 47 06.6 +1.1

IDC ***20*** *04:37:21.0±0.8, 0˚.27S×.124˚.14E, h0km, mb3.9/9, mbtmp3.9/11, ML3.7/2, MS4.3/2, Error ellipse: s-maj=41.5km s-min=15.7km az=72.0*
NEIC ***20*** *04:37:26.9±1.6, 0˚.03N±0˚.09×124˚.71E±0˚.09, h35km±2km, mb4.1/8, Error ellipse: s-maj=15.5km s-min=14.6km az=105.0*
DJA ***20*** *04:37:27.7±0.2, 0˚S±2˚×12˚5E±˚, h10km, M4.3/19, mB5.2/3,*

mb4.6/3,MLv4.2/19,Mw(mB)4.6/3
ISC 20 04:37:27.0±0.7,0°06'S±0°06'×124°77'E±0°06,h35km,n40,
σ1s57/37,mb4.2/13,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.01	309	P	Pn	04 37 45.9	+1.2
LUWI	Luwuk	2.22	244	Pn	Pn	04 38 01.3	0.0
LUWI				Sn	Sn	04 38 29.1	+1.5
LUWI	Luwuk	2.22	244	P	Pn	04 38 03.1	+1.8
LUWI				S	Sn	04 38 28.2	+0.6
SANI	Sanana	2.32	148	P	Pn	04 38 02.8	+0.1
TNTI	Ternate	2.73	72	P	Pn	04 38 14.3	+6.0
TNTI				S	Sn	04 38 49.8	+10
MRSI	Marisa	2.88	281	P	Pn	04 38 13.0	+2.6
APSI	Ampana	3.23	255	P	Pn	04 38 17.4	+2.2
SGSI	Sangihe	3.80	12	P	Pn	04 38 29.7	+6.6
NLAI	Namlea	3.92	144	P	Pn	04 38 26.8	+2.0
TOLI2	Tolitoli	4.15	286	Pn	Pn	04 38 26.3	-1.7
KDI	Kendari	4.42	209	P	Pn	04 38 31.6	-0.1
MPSI	Mapaga	4.89	275	P	Pn	04 38 40.0	+2.0
TTSI	Tana Toraja 0.2nm1µm33nm,0.6s	5.77	239	P	Pn	04 38 50.7	+0.6
SPSI	Sidrap Palu 0.2nm5µm37nm,0.8s	6.32	232	P	Pn	04 38 58.6	+0.8
BNSI	Bone 0.2nm49nm,0.7s	6.34	227	P	Pn	04 38 58.2	+0.1
KAPI	Kappang 2.3nm,0.3s,baz=171,slow=18,SNR=5.2	7.02	225	Pn	Pn	04 38 55.1	-12
KAPI				Sn	Sn	04 40 02.6	-23
	2.9nm,0.3s,baz=169,slow=15,SNR=1.9 5.0nm,0.3s						
KAPI	Kappang	7.02	225		Pn	04 39 08.0	+0.7
JAY	Jayapura comp=Z,1µm,21.8s,baz=351,slow=40	16.12	99	LR	LR	04 48 29.1	
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=2.0,slow=9.3,SNR=7.6 3.0nm,0.9s	17.94	177	P	Pn	04 41 31.4	-2.4
FITZ	Fitzroy Crossi	17.94	177	P	Pn	04 41 34.1	+0.3
WB0	Warramunga Arr	21.74	155	P	P	04 42 14.5	-1.0
WB0				IAmb	IAmb	04 42 39.6	
	comp=Z,7.7nm,1.2s						
WRA	Warramunga Arr comp=Z,0.8nm,0.5s,baz=328,slow=11,SNR=11 comp=Z,0.8nm,0.5s	21.87	155	P	P	04 42 15.9	-1.0
WRA	Warramunga Arr	21.87	155	P	P	04 42 15.2	-1.7
WR8	Warramunga Arr	21.95	155	P	P	04 42 16.6	-1.1
WR8				IAmb	IAmb	04 42 19.4	
	comp=Z,2.8nm,1.0s						
COEN	Coen	22.86	128	P	P	04 42 31.5	+3.9
COEN				IAmb	IAmb	04 43 08.0	
	comp=Z,12nm,1.4s						
ASAR	Alice Springs comp=Z,0.7nm,0.6s,baz=334,slow=7.0,SNR=9.0 comp=Z,0.7nm,0.6s	25.09	160	P	P	04 42 48.9	+0.3
ASAR	Alice Springs	25.09	160	P	P	04 42 48.2	-0.3
STKA	Stephens Creek comp=Z,2.1nm,0.7s,baz=308,slow=6.2,SNR=2.9 comp=Z,2.1nm,0.7s	35.42	155	P	P	04 44 20.1	+0.3
MJAR	Matsushiro Arr comp=Z,527nm,21.6s,baz=192,slow=34	38.50	18	LR	LR	04 59 02.7	
USRK	Ussuriysk Ar. comp=Z,1.3nm,0.4s,baz=162,slow=6.1,SNR=2.4 comp=Z,1.3nm,0.4s	44.54	7	P	P	04 45 36.9	+1.6
EVN	Everest	45.81	311	P	P	04 45 45.2	-1.3
MKAR	Makanchi Array comp=Z,2.7nm,0.6s,baz=125,slow=8.3,SNR=8.5 comp=Z,2.7nm,0.6s	59.60	327	P	P	04 47 26.4	-1.0
MKAR	Makanchi Array	59.60	327	P	P	04 47 25.1	-2.3
ZALV	Zalesovo Beam comp=Z,0.6nm,0.3s,baz=147,slow=5.4,SNR=0.9 comp=Z,0.6nm,0.3s	63.11	335	P	P	04 47 48.8	-2.2
ZALV	Zalesovo Beam	63.11	335	P	P	04 47 49.4	-1.5
KURBB	Kurchatov Arra comp=Z,1.5nm,0.7s,baz=118,slow=6.1,SNR=8.0 comp=Z,1.5nm,0.7s	63.91	329	P	P	04 47 55.5	-0.8
KURK	Kurchatov	63.92	329	P	P	04 47 55.1	-1.3
KURK				IAmb	IAmb	04 47 59.8	
	comp=Z,5.2nm,0.8s						
BVAR	Borovoye Array comp=Z,0.6nm,0.4s,baz=87,slow=7.4,SNR=1.2 comp=Z,0.6nm,0.4s	69.45	328	P	P	04 48 30.5	-1.1
ILAR	Eielson Array comp=Z,0.2nm,0.6s,baz=236,slow=4.7,SNR=1.1 comp=Z,0.2nm,0.6s	89.35	25	P	P	04 50 19.7	+0.1
CPUP	Villa Florida comp=Z,0.2nm,0.3s,baz=8.1,slow=1.4,SNR=3.2	153.68	176	PKPbc	PKPbc	04 57 21.2	-1.8

IDC 20 04:54:14.6±1.0,11°.76N×125°.85E,h0km,mb3.9/9,
mbtmp3.9/9,Error ellipse: s-maj=75.6km s-min=18.2km
az=66.0
ISC 20 04:54:18.7±1.0,11°8N±0°.2×126°0E±0°.4,h28km,n9,
σ1s50/9,mb3.8/8,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura 10nm,0.7s,baz=133,slow=9.5,SNR=4.3 10nm,0.7s	20.41	133	P	P	04 58 52.6	-1.2
FITZ	Fitzroy Crossi 2.3nm,1.1s,baz=23,slow=23,SNR=2.0 2.3nm,1.1s	29.69	181	P	P	05 00 20.4	-1.9
WRA	Warramunga Arr 1.0nm,1.1s,baz=344,slow=8.1,SNR=1.7 1.0nm,1.1s	32.58	165	P	P	05 00 49.8	+1.9
ASAR	Alice Springs 0.7nm,0.7s,baz=345,slow=7.1,SNR=4.7 0.7nm,0.7s	36.07	168	P	P	05 01 18.9	+0.8
MKAR	Makanchi Array 0.3nm,0.6s,baz=108,slow=9.3,SNR=2.1 0.3nm,0.6s	50.65	322	P	P	05 03 13.8	-1.7
KURBB	Kurchatov Arra 0.6nm,0.9s,baz=127,slow=6.4,SNR=5.7 0.6nm,0.9s	54.67	325	P	P	05 03 45.1	0.0
ARCES	ARCESS Array B 3.5nm,0.9s,baz=107,slow=6.0,SNR=4.2 3.5nm,0.9s	82.68	340	P	P	05 06 40.3	+0.9
FINES	FINESS Array B 1.1nm,0.8s,baz=108,slow=4.5,SNR=4.6 1.1nm,0.8s	84.43	332	P	P	05 06 49.0	+0.5
AKASG	Malin Array Be 1.6nm,0.8s,baz=71,slow=4.1,SNR=2.6 1.6nm,0.8s	85.21	321	P	P	05 06 53.0	+0.4

IDC 20 05:02:44.7±0.7,51°.65N×173°.49W,h0km,mb4.0/26,
mbtmp4.0/29,ML3.7/3,MS4.9/2,Error ellipse:
s-maj=20.8km s-min=12.6km az=170.0
AEIC 20 05:02:49.7±3.1,51°.53N±0°.05×173°.62W±0°.07,h20km±4km,
Error ellipse: s-maj=7.4km s-min=5.9km az=196.0
NEIC 20 05:02:50.5±2.0,51°.58N±0°.05×173°.55W±0°.06,h39km±5km,
mb4.3/29,ML4.1/12,ML3.8(AEIC),Error ellipse:
s-maj=7.9km s-min=5.5km az=190.0
ISC 20 05:02:50.8±1.3,51°59N±0°.08×173°54W±0°.04,
h44km±11km,n109,σ0s95/102,mb4.1/29,Andreanof
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.73	327		Pn	05 03 04.1	-0.7
ATKA	Atka Island	0.73	327		Sn	05 03 14.0	-0.9
KOFP	Korovin Flat P	0.77	333		Pn	05 03 05.1	-0.2
KOFP					Sn	05 03 17.0	+1.2
KOSE	Korovin Southe	0.82	337		Pn	05 03 06.1	+0.2
KOSE					Sn	05 03 18.5	+1.5
KOKL	Mount Kliuchef	0.84	331		Pn	05 03 06.1	-0.1
KOKL					Sn	05 03 17.7	+0.2
KOKV	Korovin Volcan	0.86	334		Pn	05 03 06.6	0.0
KOKV					Sn	05 03 07.5	-11
KONE	Korovin Northe	0.88	336		Pn	05 03 07.0	+0.2
KONE					Sn	05 03 21.4	+3.1
KOWE	Korovin West	0.89	331		Pn	05 03 07.1	+0.1
KOWE					Sn	05 03 19.4	+0.7
KONW	Korovin Northw	0.91	333		Pn	05 03 07.3	+0.2
KONW					Sn	05 03 07.5	-12
GSIG	Igitkin Island	1.53	286		Pn	05 03 14.5	-1.2
GSIG					Sn	05 03 35.7	+1.3
GSMY	Great Sitkin M	1.63	287		Pn	05 03 16.1	-0.9
GSTR	Great Sitkin T	1.64	289		Pn	05 03 17.6	+0.4
GSTD	Great Sitkin T	1.68	287		Pn	05 03 16.6	-1.1
GSSP	Great Sitkin S	1.71	288		Pn	05 03 17.3	-0.8
ETKA	Kagalaska Isla	1.80	280		Pn	05 03 18.8	-0.6
ADAG	Mount Adagdak	1.94	283		Pn	05 03 21.5	+0.3
ADK	Adak	1.98	280		Pn	05 03 21.2	-0.5
ADK					IAML		05 03 56.4
	2µm,0.3s						
ADK					IAML		05 03 59.1
	1µm,0.3s						
ADK	Adak	1.98	280		Sn	05 03 47.1	+1.8
KIRH	Kanaga Island	2.23	279		Pn	05 03 25.6	+0.4
KINC	Kanaga Island	2.26	280		Pn	05 03 26.3	+0.7
KIWB	Kanaga Island	2.26	278		Pn	05 03 25.3	-0.3
KIWB	Kanaga Island comp=N,1µm,0.6s	2.26	278	IAML		05 04 05.2	
KIKV	Kanaga Island	2.28	279		Pn	05 03 25.5	-0.3
KICM	Kanaga Island	2.30	280		Pn	05 03 26.3	+0.2
KIMD	Kanaga Island	2.31	276		Pn	05 03 26.3	0.0
CLCO	Concord Point,	2.64	62		Pn	05 03 31.9	+1.1
CLCO					Sn	05 04 02.1	+0.7
TAPA	Tanaga Point A	2.67	276		Pn	05 03 32.1	+0.8
TAFL	Tanaga Flats	2.72	275		Pn	05 03 32.7	+0.7
TAFP	Tanaga Falls P	2.78	278		Pn	05 03 33.1	+0.3
NIKH	Nikolski High	3.19	63		Pn	05 03 37.9	-0.5
NIKH	Nikolski High comp=N,565nm,0.9s	3.19	63	IAML		05 04 34.0	
OKFG	Magazine Ridge	3.89	60		Pn	05 03 48.8	+0.8
AMKA	Amchitka	4.48	270		Pn	05 03 56.0	-0.1
UNV	Unalaska Valle	4.83	59		Pn	05 04 01.5	+0.5
UNV	Unalaska Valle comp=E,92nm,4.3s	4.83	59	IAML		05 05 13.9	
UNV				IAML		05 06 52.5	
	comp=N,120nm,3.7s						
N14K	Kuskokwak Cree	10.68	34	Pn	Pn	05 05 24.2	+3.3
N15K	Kwethluk River	11.42	36	Pn	Pn	05 05 32.9	+1.8
KDAK	Kodiak Island comp=N,0.4nm,0.3s,baz=108,slow=4.0,SNR=8.7	13.58	55	Pn	Pn	05 05 59.0	-1.5
KDAK				Sn	Sn	05 08 28.1	-1.7
	comp=N,0.2nm,0.3s,baz=298,slow=15,SNR=1.0 comp=N,16nm,0.9s						
CNPM	China Poot	14.85	49	Pn	Pn	05 06 18.0	+0.3
BRLK	Bradley Lake	15.11	48	Pn	Pn	05 06 22.3	+1.3
BRLK				IAmb	IAmb	05 07 00.3	
	comp=Z,17nm,0.9s						
STLK	Strandline Lak	15.46	42	Pn	Pn	05 06 26.8	+1.0
SUA	Susitna One	15.90	43		P	05 06 33.1	-1.3
GHO	Glory Hole Cre	16.82	43	Pn	Pn	05 06 42.0	-0.9
GHO				IAmb	IAmb	05 06 51.6	
	comp=Z,35nm,1.4s						
SML	Sawmill	17.09	43	Pn	Pn	05 06 46.0	-0.3
SML				IAmb	IAmb	05 06 55.2	
	comp=Z,38nm,1.3s						
SCM	Sheep Creek Mo	17.53	44		Pn	05 06 51.9	+0.2
SCM				IAmb	IAmb	05 07 20.6	
	comp=Z,35nm,1.3s						
PETK	Petropavlovsk- comp=Z,0.4nm,0.3s,baz=86,slow=14,SNR=4.7 comp=Z,2.2nm,0.6s	17.59	286	P	Pn	05 06 50.9	-1.6
RND	Reindeer	17.63	38		Pn	05 06 52.3	-0.6
I23K	Minto, Yukon-K	18.41	33	P	Pn	05 07 03.0	+0.8
I23K				IAmb	IAmb	05 07 05.0	
	comp=Z,38nm,1.3s						
HDA	Harding Lake	18.86	37	P	P	05 07 07.0	+0.1
IL31		19.07	36		P	05 07 09.4	+0.2
ILAR	Eielson Array comp=Z,0.9nm,0.3s,baz=234,slow=10.0,SNR=53 comp=Z,1.6nm,0.4s	19.07	36	P	P	05 07 07.9	-1.4
H24K	Noodor Dome	19.31	33		Pn	05 07 12.6	-0.7
H24K				IAmb	IAmb	05 07 17.4	
	comp=Z,29nm,1.3s						
J25K	Salcha River,	19.56	37	P	P	05 07 14.2	-0.4
J25K				IAmb	IAmb	05 07 15.5	
	comp=Z,10.0nm,0.6s						
GRNC	Granite Creek	19.73	50	P	P	05 07 16.1	-0.6
GRNC				IAmb	IAmb	05 07 30.0	
	comp=Z,24nm,1.2s						
SCRK	Sand Creek	19.82	40		P	05 07 16.8	-0.6
J26L	Joseph Creek comp=Z,15nm,0.6s	20.20	39	IAmb	IAmb	05 07 22.4	
BCAR	Beaver Creek A	20.38	43	P	Pn	05 07 24.9	-1.0
O28M	Mount Upton	20.49	50	P	P	05 07 24.8	-0.3
I26K	Coal Creek Min	20.72	37	P	P	05 07 26.6	-0.5
I26K				IAmb	IAmb	05 07 28.7	
	comp=Z,10nm,0.9s						
I28M	Miner Creek	22.00	38	P	P	05 07 40.8	-0.2
I28M				IAmb	IAmb	05 07 43.4	
	comp=Z,15nm,1.2s						
H29M	Whitestone	22.90	37	P	P	05 07 49.7	-0.7
H29M				IAmb	IAmb	05 07 53.8	
	comp=Z,16nm,1.1s						
INK	Inuvik comp=Z,2.0nm,0.4s,baz=235,slow=8.7,SNR=21 comp=Z,2.0nm,0.4s	25.42	34	P	P	05 08 14.0	+0.2
INK	Inuvik comp=Z,12nm,1.4s	25.42	34	IAmb	IAmb	05 08 15.5	
DLBC	Dease Lake comp=Z,2.7nm,0.7s,baz=235,slow=14,SNR=4.0 comp=Z,2.7nm,0.7s	25.49	57	P	P	05 08 13.5	-1.2
BBB	Bella Bella comp=Z,2µm,18.9s,baz=60,slow=33	27.70	71	LR	LR	05 17 54.2	
YKA	Yellowknife Ar comp=Z,0.7nm,0.8s,baz=293,slow=22,SNR=6.2 comp=Z,0.7nm,0.8s	32.68	47	P	P	05 09 18.3	-0.1
H11N2	WAKE ISLAND Hy baz=21,slow=76,SNR=11	35.31	213	T	T	05 47 54.0	
H11N3	WAKE ISLAND Hy baz=21,slow=76,SNR=8.9	35.32	213	T	T	05 47 54.6	
H11N1	WAKE ISLAND Hy baz=21,slow=76,SNR=8.9	35.33	213	T	T	05 47 55.4	
USRK	Ussuriysk Ar. comp=Z,3.1nm,0.8s,baz=61,slow=9.1,SNR=1.9 comp=Z,3.1nm,0.8s	36.51	280	P	P	05 09 51.3	-0.4
H11S1	WAKE ISLAND Hy baz=20,slow=76,SNR=30	36.52	213	T	T	05 49 04.8	
H11S2	WAKE ISLAND Hy baz=20,slow=76,SNR=36	36.53	213	T	T	05 49 10.5	
H11S3	WAKE ISLAND Hy baz=20,slow=76,SNR=17	36.53	213	T	T	05 49 15.6	
NVAR	Mina Array Bea comp=Z,0.6nm,0.8s,baz=303,slow=5.5,SNR=3.2 comp=Z,0.6nm,0.8s	40.26	87	P	P	05 10 22.6	-0.9
KSRS	Korea Array comp=Z,4.2nm,0.9s,baz=57,slow=8.1,SNR=7.0 comp=Z,4.2nm,0.9s	42.91	274	P	P	05 10 45.8	+0.9
PDAR	Pinedale Array comp=Z,0.7nm,0.5s,baz=314,slow=3.0,SNR=11 comp=Z,0.7nm,0.5s	43.09	76	P	P	05 10 47.4	+0.7
JNU	Nakatsue comp=Z,2µm,21.2s,baz=40,slow=37	43.87	267	LR	LR	05 29 57.9	
SONM	Songino Array comp=Z,1.7nm,0.5s,baz=56,slow=7.0,SNR=8.5 comp=Z,1.7nm,0.5s	49.45	299	P	P	05 11 35.7	-0.7
SPITS	Spitsbergen Ar comp=Z,4.8nm,0.8s,baz=38,slow=7.3,SNR=1.3 comp=Z,4.8nm,0.8s	50.35	357	P	P	05 11 42.3	-0.3
TXAR	Lajitas Array comp=Z,0.2nm,0.7s,baz=284,slow=5.8,SNR=5.0 comp=Z,0.2nm,0.7s	55.36	85	P	P	05 12 20.1	-0.2
P40A	Paris	55.47	68		P	05 12 20.5	-0.4
R40A	Maddies Statio	56.16	69	P	P	05 12 24.1	-1.8
R40A				IAmb	IAmb	05 12 39.1	
	comp=Z,3.5nm,0.6s						
ZALV	Zalesovo Beam comp=Z,0.4nm,0.4s,baz=46,slow=8.3,SNR=2.0	56.22	316	P	P	05 12 26.6	+0.6
ZALV				PcP	PcP	05 13 25.0	+1.8
	comp=Z,0.3nm,0.3s,baz=54,slow=3.7,SNR=2.0 comp=Z,0.4nm,0.4s						
ARCES	ARCESS Array B comp=Z,2.0nm,0.6s,baz=10,slow=7.2,SNR=8.3	58.38	352	P	P	05 12 40.1	-0.9
ARCES				PcP	PcP	05 13 32.0	+0.5
	comp=Z,1.6nm,0.7s,baz=16,slow=4.7,SNR=5.9 comp=Z,2.0nm,0.6s						
KURK	Kurchatov	61.20	316	P	P	05 13 01.5	+0.9
KURK	Kurchatov comp=Z,2.0nm,0.5s	61.20	316	IAmb	IAmb	05 13 02.0	
	comp=Z,1.1nm,0.6s						
KURBB	Kurchatov Arra comp=Z,1.2nm,0.5s,baz=45,slow=6.7,SNR=15	61.30	316	P	P	05 13 01.5	+0.2
KURBB				PcP	PcP	05 13 44.6	+1.2
	comp=Z,0.3nm,0.5s,baz=49,slow=5.9,SNR=4.3 comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array comp=Z,1.1nm,0.6s,baz=46,slow=6.3,SNR=11 comp=Z,1.1nm,0.6s	62.42	311	P	P	05 13 08.9	-0.1
SSPA	Standing Stone	62.59	59	P	P	05 13 10.9	+0.7
BVAR	Borovoye Array comp=Z,3.6nm,0.5s,baz=43,slow=8.0,SNR=11 comp=Z,3.6nm,0.5s	62.79	322	P	P	05 13 12.2	+0.8
F64A	Sherman	63.59	49	P	P	05 13 16.7	0.0
FINES	FINESS Array B comp=Z,1.9nm,0.7s,baz=54,slow=9.7,SNR=5.1	66.23	350	P	P	05 13 32.6	-0.9
FINES				PcP	PcP	05 14 04.2	+0.8
	comp=Z,5.6nm,1.2s,baz=27,slow=5.8,SNR=3.5						
	comp=Z,1.9nm,0.7s						
NOA	NORSAR Array B comp=Z,0.3nm,0.6s,baz=16,slow=6.1,SNR=3.2 comp=Z,0.3nm,0.6s	67.66	358	P	P	05 13 42.3	-0.4
HFS	Hagfors comp=Z,1.3nm,0.4s,baz=330,slow=2.4,SNR=13 comp=Z,1.3nm,0.4s	68.48	356	P	P	05 13 47.6	-0.2
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.3s,baz=130,slow=30,SNR=1.5 comp=Z,0.7nm,0.3s	74.24	280	P	P	05 14 24.4	+1.1
AKASG	Malin Array Be comp=Z,1.0nm,0.3s,baz=18,slow=6.1,SNR=4.6 comp=Z,1.0nm,0.3s	76.27	345	P	P	05 14 34.1	-0.3
GERES	GERESS Array B comp=Z,0.5nm,0.7s,baz=19,slow=6.2,SNR=4.8 comp=Z,0.5nm,0.7s	79.75	355	P	P	05 14 52.8	-1.1
KBZ	Khabaz comp=Z,2.0nm,0.8s,baz=25,slow=5.7,SNR=2.7 comp=Z,2.0nm,0.8s	79.95	334	P	P	05 14 55.5	+0.7
WRA	Warramunga Arr comp=Z,0.5nm,0.8s,baz=28,slow=5.3,SNR=2.4 comp=Z,0.5nm,0.8s	84.53	228	P	P	05 15 18.8	-0.3
BRTR	Keskin Array B comp=Z,0.8nm,0.8s,baz=242,slow=1.0,SNR=5.3 comp=Z,0.8nm,0.8s	86.01	339	P	P	05 15 26.1	-0.4
ASAR	Alice Springs comp=Z,0.6nm,0.7s,baz=32,slow=4.7,SNR=6.1 comp=Z,0.6nm,0.7s	87.95	227	P	P	05 15 36.5	+0.6
ESDC	Sonseca Array comp=Z,0.6nm,1.0s,baz=6.3,slow=6.5,SNR=1.9 comp=Z,0.6nm,1.0s	88.66	8	P	P	05 15 39.7	+0.5
ESDC	Sonseca Array comp=Z,2.7nm,1.4s	88.66	8	IAmb	IAmb	05 16 20.7	
H03N2	Juan Fernandez baz=317,slow=74	118.07	109	T	T	07 31 15.4	
H03N1	Juan Fernandez baz=317	118.08	109	T	T	07 31 10.6	
H03N3	Juan Fernandez baz=317	118.09	109	T	T	07 31 12.2	
QSPA	South Pole Qui comp=Z,0.5nm,0.8s,baz=129,slow=4.0,SNR=1.3	141.35	180	PKP	PKPdf	05 22 16.4	+1.1
BOSA	Boshof comp=Z,2.4nm,0.8s,baz=32,slow=1.2,SNR=5.8	153.07	321	PKPbc	PKiKP	05 22 44.6	+1.0
SNAA	Sanae comp=Z,0.4nm,0.8s,baz=265,slow=22,SNR=1.5	159.42	172	PKPab	PKPab	05 23 20.0	-1.0

GCG 20 05:20:08.8±1.7,13°.83N×93°.31W,h36km±999km,MD3.9,
ML3.7
MEX 20 05:20:09.3±0.6,13°.81N×93°.34W,h10km,MD4.0
ISC 20 05:20:02.9±1.5,13°69N±0°.08×93°43W±0°.03,h10km,n23,
σ2s34/36,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.66	43	eP	Pn	05 20 32.9	+0.8
THIG				eS	Sn	05 20 50.5	-3.0
SMCA	Catarina	1.75	48	eP	Pn	05 20 34.8	+1.4
SMCA				eS	Sn	05 20 54.6	-1.2
PATR	El Naranjo	1.83	39	eP	Pn	05 20 35.6	+0.9
PATR				eS	Sn	05 20 55.1	-3.0
CHUJ	Union Juarez	1.90	42	eP	Pn	05 20 36.2	+0.5
CHUJ				eS	Sn	05 20 57.8	-1.9
PAVE	Pavencul	1.93	39	eP	Pn	05 20 37.1	+1.1
PAVE				eS	Sn	05 20 58.7	-1.8
STG2	El Palmar, Qui	2.13	69	eP	Pn	05 20 38.8	+0.1
STG2				eS	Sn	05 21 02.0	-3.3
STG5	El Palmar, Qui	2.14	70	eP	Pn	05 20 38.8	0.0
STG5				eS	Sn	05 21 02.5	-3.1
STG8	El Palmar, Qui	2.15	69	*i* P	Pn	05 20 39.4	+0.2
STG8				eS	Sn	05 21 02.0	-4.0
STG8				IAML		05 21 05.1	
	comp=E,682nm,0.2s						
QUEO	Labor Ovalle	2.20	57	eP	Pn	05 20 41.6	+1.8
QUEO				eS	Sn	05 21 07.2	-0.1
CCIG	Comitan	2.87	26	eP	Pn	05 20 50.5	+1.6
CCIG				eS	Sn	05 21 23.6	0.0
TGIG		3.09	5	eP	Pn	05 20 54.9	+3.0
TGIG				eS	Sn	05 21 28.4	-0.5
TGIG		3.09	5	eP	Pn	05 20 54.7	+2.9
HUIG	Huatulco	3.32	309	eP	Pn	05 20 57.6	+2.7
HUIG				eS	Sn	05 21 30.6	-3.9
HUIG	Huatulco	3.32	309	eP	Pn	05 20 57.5	+2.6
NUBE	Las Nubes	3.55	86	eP	Pn	05 21 01.5	+3.1
UXUV	UXUV	3.68	349	eP	Pn	05 21 02.4	+2.5
UXUV				eS	Sn	05 21 42.2	-1.1
PEIG	Puerto Escondi	4.27	303	eP	Pn	05 21 10.4	+2.4
PEIG				eS	Sn	05 21 54.1	-3.9
NEUV	Arroyo Zacate	4.61	331	eP	Pn	05 21 16.7	+4.0
NEUV				eS	Sn	05 22 06.4	0.0
VHO	Vista Hermosa	4.64	317	eP	Pn	05 21 17.2	+3.9
VHO				eS	Sn	05 22 05.0	-2.3
YOIG	Yosondua	5.07	309	eP	Pn	05 21 23.7	+4.3
YOIG				eS	Sn	05 22 16.1	-2.0
TXIG	Tlaxiaco	5.48	311	eP	Pn	05 21 30.8	+5.8
TXIG				eS	Sn	05 22 24.6	-3.8
TOIG	Toxpalan	5.61	322	eP	Pn	05 21 31.6	+5.1
TOIG				eS	Sn	05 22 31.8	+0.6
SCIG	Sabancuy	5.67	22	eP	Pn	05 21 32.7	+5.3
SCIG				eS	Sn	05 22 29.7	-2.9

JMA 20 05:27:55.7±0.5,32°.2°×13°.8E±°,h380km±4km,MV3.8/39,
FAR S OFF TOKAI DISTRICT
MOS 20 05:27:55.3±0.8,32°.18N×138°.06E,h366km,mb4.2/16,
Error ellipse: s-maj=15.0km s-min=7.2km az=112.6
IDC 20 05:27:57.0±0.6,32°.22N×138°.05E,h364km±6km,mb3.6/24,
mbtmp4.3/28,Error ellipse: s-maj=13.7km s-min=8.2km
az=73.0
NEIC 20 05:27:57.2±1.0,32°.23N±0°.06×138°.06E±0°.07,
h363km±6km,mb4.2/25,Error ellipse: s-maj=11.4km
s-min=5.2km az=135.0
ISC 20 05:27:55.7±0.4,32°19N±0°.05×138°17E±0°.05,h350km,
n138,σ1s83/151,mb4.1/44,8C-6D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.38	78	eP	Pn	05 28 46.8	+3.7
JHCJ	Hachijojimakas	1.63	57	eP	Pn	05 28 47.2	+2.7
JHJ	Hachijo jima 2 600nm,0.3s,baz=260,slow=22,SNR=94	1.65	55	P	Pn	05 28 47.7	+3.1
JHJ				S	S	05 29 29.5	+5.6
	132nm,0.3s,baz=60,slow=22,SNR=1.5						
JHJ2	Mitsune	1.67	56		Pn	05 28 47.4	+2.7
JHJ2	Mitsune	1.67	56	P	Pn	05 28 47.7	+3.0
JHJ2	M

MJAR	**Matsushiro Arr**	**4.34**	**0**		**Pn**	**05 29 09.2**	**+1.1**
MAJO	**Matsushiro**	**4.34**	**0**		**Pn**	**05 29 09.5**	**+1.4**
MAJO	**Matsushiro**	**4.34**	**0**	P	**Pn**	**05 29 09.5**	**+1.4**
MAJO	**Matsushiro**	**4.34**	**0**	*d* iP	**Pn**	**05 29 09.5**	**+1.4**
MAT	**Matsushiro**	**4.34**	**0**	P	**Pn**	**05 29 09.5**	**+1.4**
MAT				*eS*	**S**	**05 30 06.5**	**-0.1**
MJB9	**Matsu-Tunnel**	**4.34**	**0**		**Pn**	**05 29 10.5**	**+2.4**
JTO	**Tosashimizu**	**4.58**	**280**	P	**Pn**	**05 29 12.4**	**+1.7**
JHS	**Saijyo**	**5.06**	**305**	S	**S**	**05 30 24.4**	**+3.6**
JHS	**Saijyo**	**5.06**	**305**	P	**Pn**	**05 29 17.6**	**+1.8**
JSD	**Sado**	**5.83**	**1**	P	**Pn**	**05 29 25.8**	**+1.4**
JMM	**Marumori**	**6.06**	**20**		**Pn**	**05 29 27.0**	**-0.1**
JMM	**Marumori**	**6.06**	**20**	P	**Pn**	**05 29 26.9**	**-0.1**
CBIJ	**Chichi jima**	**6.17**	**144**	*eP*	**Pn**	**05 29 26.7**	**-1.8**
CBIJ				*eS*	**S**	**05 30 38.4**	**-5.3**
JCJ	**Chichijima**	**6.17**	**144**	P	Pn	05 29 20.2	-8.3
	64nm,0.4s,baz=8.8,slow=19,SNR=55						
JCJ				S	S	05 30 33.5	-10
	227nm,0.3s,baz=299,slow=21,SNR=20						
JCJ	**Chichijima**	**6.17**	**144**	Pn	**Pn**	**05 29 28.2**	**-0.2**
JNU	**Nakatsue**	**6.22**	**281**	P	**Pn**	**05 29 30.7**	**+1.7**
	70nm,0.6s,baz=118,slow=3.6,SNR=43						
JNU	**Nakatsue**	**6.22**	**281**		**Pn**	**05 29 30.4**	**+1.4**
JNU	**Nakatsue**	**6.22**	**281**	P	**Pn**	**05 29 30.6**	**+1.7**
JTU	**Tsushima**	**7.70**	**290**	P	**Pn**	**05 29 47.3**	**+1.2**
JTM	**Tenmabayashi**	**8.89**	**14**	P	**P**	**05 30 01.5**	**-1.1**
KSRS	**Korea Array**	**9.92**	**305**	P	**P**	**05 30 13.8**	**-0.3**
	4.4nm,0.6s,baz=114,slow=12,SNR=14						
ERM	**Erimo**	**10.58**	**21**		**P**	**05 30 21.4**	**+0.1**
ERM	**Erimo**	**10.58**	**21**	P	**P**	**05 30 21.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**12.93**	**340**	P	**Pn**	**05 30 47.6**	**-0.6**
	7.3nm,0.7s,baz=165,slow=12,SNR=8.2						
HILR	**Hailar Array B**	**22.14**	**327**	P	**P**	**05 32 23.2**	**+0.2**
	6.7nm,0.4s,baz=133,slow=12,SNR=11						
	6.7nm,0.4s						
ZEA	**Zeya**	**22.92**	**343**	*eP*	**P**	**05 32 30.5**	**+0.6**
HHC	**Hu-ho-hao-te**	**22.99**	**300**	*eP*	**P**	**05 32 33.5**	**+2.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
PEA0B	**Petropavlovsk-**	**25.21**	**28**	P	**P**	**05 32 50.2**	**-0.4**
PEA0B	**Petropavlovsk-**	**25.21**	**28**	P	**P**	**05 32 50.2**	**-0.4**
PEA0B				pmax	pmax		
	comp=Z,72nm,1.4s						
ULN	**Ulaanbaatar**	**28.26**	**313**	P	**P**	**05 33 17.3**	**-0.6**
ULN				IAmb	IAmb	05 33 18.9	
	comp=Z,8.8nm,0.9s						
ULN	**Ulaanbaatar**	**28.26**	**313**	⇓*iP*	**P**	**05 33 18.3**	**+0.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**28.66**	**312**	P	**P**	**05 33 21.4**	**0.0**
	comp=Z,2.3nm,0.4s,baz=123,slow=8.0,SNR=15						
	comp=Z,2.3nm,0.4s						
LZDM	**Lanzhou Array**	**28.71**	**287**	P	**P**	**05 33 21.2**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=132,slow=6.2,SNR=3.8						
	comp=Z,1.7nm,0.4s						
GTA	**Gaotai**	**31.75**	**294**	P	**P**	**05 33 47.9**	**-0.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CMAR	**Chiang Mai Arr**	**37.78**	**258**	P	**P**	**05 34 39.1**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=52,slow=7.3,SNR=9.9						
	comp=Z,1.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.78**	**258**	*ceP*	**P**	**05 34 38.2**	**-1.5**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAA0	**Zalesovo Array**	**43.38**	**316**		**P**	**05 35 23.8**	**-0.7**
ZALV	**Zalesovo Beam**	**43.38**	**316**	P	**P**	**05 35 23.6**	**-0.9**
	comp=Z,3.8nm,0.4s,baz=80,slow=8.8,SNR=25						
ZALV				PcP	**PcP**	**05 37 04.8**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=91,slow=3.9,SNR=5.6						
	comp=Z,3.8nm,0.4s						
EVN	**Everest**	**44.30**	**278**		**P**	**05 35 32.4**	**-0.5**
EVN				IAmb	IAmb	05 35 33.2	
	comp=Z,13nm,0.7s						
MK31	**Makanchi Array**	**44.60**	**306**	⇓*iP*	**P**	**05 35 33.5**	**-0.8**
MKAR	**Makanchi Array**	**44.60**	**306**	P	**P**	**05 35 33.6**	**-0.7**
	comp=Z,5.6nm,0.5s,baz=85,slow=10,SNR=43						
MKAR				PcP	**PcP**	**05 37 09.8**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=90,slow=5.8,SNR=3.7						
	comp=Z,5.6nm,0.5s						
MKAR	**Makanchi Array**	**44.60**	**306**		**P**	**05 35 33.8**	**-0.5**
MKAR	**Makanchi Array**	**44.60**	**306**	*ceP*	**P**	**05 35 33.5**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAKZ	**Makanchi**	**44.81**	**306**	P	**P**	**05 35 35.6**	**-0.4**
MAKZ				IAmb	IAmb	05 35 35.8	
	comp=Z,8.7nm,0.5s						
MAKZ	**Makanchi**	**44.81**	**306**	P	**P**	**05 35 35.6**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
COEN	**Coen**	**46.14**	**173**	P	**P**	**05 35 47.4**	**+0.9**
COEN				IAmb	IAmb	05 35 48.7	
	comp=Z,6.8nm,1.0s						
KURK	**Kurchatov**	**46.96**	**311**		**P**	**05 35 51.6**	**-0.9**
KURK				IAmb	IAmb	05 35 52.7	
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**46.96**	**311**	⇑*iP*	**P**	**05 35 50.5**	**-1.9**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.02**	**311**	P	**P**	**05 35 52.0**	**-0.9**
	comp=Z,4.5nm,0.5s,baz=94,slow=6.4,SNR=65						
	comp=Z,4.5nm,0.5s						
KNRA	**Kununurra**	**48.44**	**192**	P	**P**	**05 36 04.2**	**+0.2**
KNRA				IAmb	IAmb	05 36 04.6	
	comp=Z,9.3nm,0.6s						
GSI	**Gunungsitoli**	**49.03**	**239**		**P**	**05 36 07.3**	**-1.3**
KSH	**Kashi**	**50.06**	**297**	P	**P**	**05 36 19.4**	**+3.2**
FITZ	**Fitzroy Crossi**	**51.42**	**195**	P	**P**	**05 36 26.2**	**0.0**
	comp=Z,2.3nm,0.6s,baz=6.2,slow=9.6,SNR=7.3						
	comp=Z,2.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**51.42**	**195**	P	**P**	**05 36 26.3**	**+0.1**
WB0	**Warramunga Arr**	**51.79**	**185**	P	**P**	**05 36 28.8**	**-0.1**
BVAR	**Borovoye Array**	**51.96**	**315**	P	**P**	**05 36 29.0**	**-0.7**
	comp=Z,4.6nm,0.5s,baz=98,slow=7.8,SNR=24						
BVAR				PcP	**PcP**	**05 37 35.9**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=93,slow=4.9,SNR=3.9						
	comp=Z,4.6nm,0.5s						
WRAB	**Tennant Creek**	**51.96**	**185**	P	**P**	**05 36 29.7**	**-0.4**
WRAB	**Tennant Creek**	**51.96**	**185**	P	**P**	**05 36 29.7**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	**Warramunga Arr**	**51.97**	**185**	P	**P**	**05 36 29.9**	**-0.3**
	comp=Z,1.9nm,0.4s,baz=0.3,slow=7.7,SNR=31						
WRA				PcP	**PcP**	**05 37 37.9**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=356,slow=4.1,SNR=5.8						
	comp=Z,1.9nm,0.4s						
WRA	**Warramunga Arr**	**51.97**	**185**	P	**P**	**05 36 30.1**	**-0.1**
WR8	**Warramunga Arr**	**51.97**	**184**	P	**P**	**05 36 30.1**	**-0.1**
WR8				IAmb	IAmb	05 36 57.9	
	comp=Z,9.7nm,1.4s						
BORK	**Borovoye**	**52.00**	**315**	⇓*iP*	**P**	**05 36 29.3**	**-0.8**
BORK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
B21K	**Ikpikpuk River**	**52.30**	**24**	P	**P**	**05 36 33.9**	**+2.0**
KK31	**Karatay Array**	**53.34**	**302**		**P**	**05 36 39.2**	**-0.8**
KK31				IAmb	IAmb	05 36 40.1	
	comp=Z,8.2nm,0.8s						
KK31	**Karatay Array**	**53.34**	**302**	P	**P**	**05 36 39.2**	**-0.8**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	**Karatay Array**	**53.34**	**302**		**P**	**05 36 39.5**	**-0.5**
KKAR	**Karatay Array**	**53.34**	**302**	P	**P**	**05 36 39.5**	**-0.5**
GAR	**Garm**	**54.45**	**297**	P	**P**	**05 36 47.5**	**-0.6**
GAR				IAmb	IAmb	05 36 48.2	
	comp=Z,8.3nm,0.6s						
ILAR	**Eielson Array**	**55.01**	**30**	P	**P**	**05 36 51.9**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=278,slow=7.4,SNR=3.7						
	comp=Z,0.6nm,0.9s						
AS31	**Alice Springs**	**55.69**	**185**	P	**P**	**05 36 57.6**	**+0.7**
ASAR	**Alice Springs**	**55.69**	**185**	P	**P**	**05 36 56.6**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=12,slow=13,SNR=20						
	comp=Z,1.3nm,0.6s						
MBWA	**Marble Bar**	**55.91**	**201**	P	**P**	**05 36 58.1**	**-0.3**
MBWA				IAmb	IAmb	05 36 58.5	
	comp=Z,10.0nm,0.9s						
ARTI	**Arti**	**58.38**	**320**	⇓*iP*	**P**	**05 37 13.0**	**-2.1**
ARTI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AB31	**Akbulak array**	**59.08**	**312**		**P**	**05 37 19.5**	**-0.5**
ABKAR	**Akbulak array**	**59.08**	**312**		**P**	**05 37 19.5**	**-0.5**
KIRV	**Kirov**	**62.53**	**324**	⇑*iP*	**P**	**05 37 42.4**	**-0.4**
STKA	**Stephens Creek**	**63.81**	**177**	P	**P**	**05 37 52.1**	**+0.7**
	comp=Z,2.7nm,0.5s,baz=299,slow=10,SNR=6.7						
	comp=Z,2.7nm,0.5s						
SPITS	**Spitsbergen Ar**	**64.74**	**349**	P	**P**	**05 37 57.0**	**+0.1**
	comp=Z,4.1nm,0.8s,baz=91,slow=6.1,SNR=7.2						
	comp=Z,4.1nm,0.8s						
SPITS	**Spitsbergen Ar**	**64.74**	**349**	P	**P**	**05 37 57.0**	**+0.1**
BELG	**Belogornoye**	**65.54**	**318**	⇓*iP*	**P**	**05 38 01.5**	**-0.9**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**67.58**	**339**	P	**P**	**05 38 14.8**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=64,slow=8.4,SNR=16						
	comp=Z,1.9nm,0.5s						
FINES	**FINESS Array B**	**71.83**	**332**	P	**P**	**05 38 40.1**	**-0.6**
	comp=Z,3.5nm,0.4s,baz=61,slow=5.1,SNR=49						
	comp=Z,3.5nm,0.4s						
KBZ	**Khabaz**	**72.02**	**311**	P	**P**	**05 38 42.0**	**-0.1**
	comp=Z,7.4nm,0.8s,baz=105,slow=3.3,SNR=15						
	comp=Z,7.4nm,0.8s						
KBZ	**Khabaz**	**72.02**	**311**	⇑*iP*	**P**	**05 38 41.4**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SHA1	**Shidzhatmaz**	**72.17**	**311**	*eP*	**P**	**05 38 40.8**	**-2.5**
AKASG	**Malin Array Be**	**76.46**	**322**	P	**P**	**05 39 06.5**	**-1.0**
	comp=Z,2.8nm,0.4s,baz=52,slow=5.7,SNR=18						
	comp=Z,2.8nm,0.4s						
AKASG	**Malin Array Be**	**76.46**	**322**	IAmb	IAmb	05 39 06.9	
	comp=Z,5.3nm,1.4s						
AKASG	**Malin Array Be**	**76.46**	**322**	*ceP*	**P**	**05 39 06.6**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKBB	**Malin Array Si**	**76.46**	**322**	P	**P**	**05 39 06.7**	**-0.7**
AKBB	**Malin Array Si**	**76.46**	**322**	⇑*iP*	**P**	**05 39 07.0**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIEV	**Kiev**	**76.47**	**322**	P	**P**	**05 39 07.0**	**-0.5**
KIEV	**Kiev**	**76.47**	**322**	P	**P**	**05 39 07.0**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HFS	**Hagfors**	**77.36**	**335**	P	**P**	**05 39 11.5**	**-0.8**
	comp=Z,5.2nm,0.8s,baz=72,slow=4.8,SNR=12						
	comp=Z,5.2nm,0.8s						
NB2	**NORSAR Subarra**	**77.58**	**337**	P	**P**	**05 39 12.7**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=43,slow=5.3						
NOA	**NORSAR Array B**	**77.58**	**337**	P	**P**	**05 39 12.7**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=44,slow=5.4,SNR=8.5						
	comp=Z,2.0nm,0.6s						
BR131	**Keskin Array S**	**80.01**	**311**		**P**	**05 39 26.6**	**-0.5**
BR131				IAmb	IAmb	05 39 27.6	
	comp=Z,3.8nm,0.7s						
BR131	**Keskin Array S**	**80.01**	**311**	P	**P**	**05 39 26.7**	**-0.5**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	**Keskin Array B**	**80.01**	**311**	P	**P**	**05 39 27.0**	**-0.2**
	comp=Z,3.5nm,0.7s,baz=106,slow=4.4,SNR=18						
	comp=Z,3.5nm,0.7s						
BRTR	**Keskin Array B**	**80.01**	**311**		**P**	**05 39 26.6**	**-0.5**
BRTR	**Keskin Array B**	**80.01**	**311**	*ceP*	**P**	**05 39 27.0**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NVAR	**Mina Array Bea**	**80.07**	**51**	P	**P**	**05 39 29.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=302,slow=5.7,SNR=2.6						
	comp=Z,0.2nm,0.5s						
CLL	**Collm**	**83.90**	**329**	*i* P	**P**	**05 39 45.9**	**-0.9**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CLL	**Collm**	**83.90**	**329**	*i* P	**P**	**05 39 45.9**	**-0.9**
	comp=Z,4.0nm,0.6s						
GERES	**GERESS Array B**	**85.35**	**327**	P	**P**	**05 39 53.3**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=49,slow=6.1,SNR=3.7						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**95.22**	**51**	P	**P**	**05 40 40.6**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=301,slow=3.8,SNR=3.7						
	comp=Z,0.2nm,0.6s						
QSPA	**South Pole Qui**	**121.95**	**180**	PKP	**PKiKP**	**05 46 10.5**	**+2.4**
	comp=Z,0.7nm,0.6s,baz=300,slow=1.0,SNR=7.3						

IDC 20 05:30:05.4±1.6, 1°.57N×126°.34E, h0km, mb3.8/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=119.8km s-min=19.3km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	Pn	05 34 36.2	0.0
	0.1nm,0.3s,baz=9.7,slow=10,SNR=1.2						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**22.78**	**160**	P	P	05 35 09.0	-0.7
	3.8nm,0.6s,baz=338,slow=11,SNR=22						
	3.8nm,0.6s						
ASAR	**Alice Springs**	**26.14**	**164**	P	P	05 35 41.6	0.0
	1.3nm,0.7s,baz=346,slow=11,SNR=20						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	P	05 40 07.3	-0.4
	0.3nm,0.4s,baz=119,slow=8.3,SNR=5.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	P	05 40 36.6	+0.3
	0.6nm,0.5s,baz=128,slow=6.0,SNR=9.9						
	0.6nm,0.5s						

*ASRS **20** 06:00:44.0±1.0, 54°.27N×86°.16E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 06:00:47.5±2.6, 54°.28N×86°.02E, h0km, mbtmp2.8/2, ML2.8/2, Error ellipse: s-maj=18.5km s-min=11.7km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.78**	**245**	I	I	06 05 50.0	
	baz=67,slow=355,SNR=6.6						
ZALV	**Zalesovo Beam**	**0.78**	**245**	Pg	Pg	06 01 01.1	-1.4
	0.9nm,0.3s,baz=61,slow=17,SNR=7.9						
ZALV				Lg	Lg	06 01 13.7	
	4.1nm,0.3s,baz=64,slow=28,SNR=17						
KURBB	**Kurchatov Arra**	**5.87**	**234**	Pn	Pn	06 02 16.3	+0.7
	0.1nm,0.3s,baz=51,slow=14,SNR=4.8						
KURBB				Sn	Sn	06 03 23.9	+0.5
	baz=44,slow=21						
KURBB				Lg	Lg	06 03 54.0	
	baz=273,slow=37,SNR=1.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**7.86**	**199**	Pn	Pn	06 02 44.2	+1.1
	0.3nm,0.3s,baz=22,slow=13,SNR=5.1						
	0.3nm,0.3s						

TRN 20 06:02:36.9, 11°.70N×61°.89W, h145km, MD3.6, North of the Paria peninsula., Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRFF	**Grenada Fort F**	**0.38**	**24**	*eP*	Pn	06 02 58.1	+1.0
GRFF				*eS*	Sn	06 03 13.9	+1.4
GRGR	**Grenville**	**0.49**	**29**	*eP*	Pn	06 02 58.9	+1.3
GRGR				*eS*	Sn	06 03 15.0	+1.6
GRW	**Mount Saint Ca**	**0.51**	**26**	*eP*	Pn	06 02 58.8	+1.0
GRW				*eS*	Sn	06 03 14.7	+1.0
GRHS	**Sauteurs**	**0.58**	**25**	*eP*	Pn	06 02 58.7	+0.6
GRHS				*eS*	Sn	06 03 14.9	+0.7
GRSS	**Sisters**	**0.66**	**25**	*eS*	Sn	06 03 15.8	+0.8
GCMP	**Grenada, Carri**	**0.91**	**30**	*eP*	Pn	06 03 01.1	+0.7
GCMP				*eS*	Sn	06 03 18.6	+0.3
DMDM	**Guralp CMG5TDE**	**1.05**	**161**	*eS*	Sn	06 03 20.9	+0.4
PSMG	**Mucurapo Girls**	**1.08**	**161**	*eP*	Pn	06 03 03.7	+1.8
PSMG				*eS*	Sn	06 03 21.5	+0.6
PSGH	**Port of Spain**	**1.10**	**160**	*eP*	Pn	06 03 03.8	+1.8
PSGH				*eS*	Sn	06 03 21.4	+0.2
TRN	**Trinidad (W)**	**1.15**	**155**	*eP*	Pn	06 03 04.1	+1.6
TRN				*eS*	Sn	06 03 22.4	+0.3
SVB	**Belmont**	**1.69**	**22**	*eS*	Sn	06 03 33.2	+1.1
MCLT	**Moule a Chique**	**2.21**	**25**	*eS*	Sn	06 03 42.5	-0.4
SLBI	**Saint Lucia, B**	**2.48**	**21**	*eP*	Pn	06 03 18.4	+0.8
SLBI				*eS*	Sn	06 03 48.7	-0.1
BAUV	**El Baul**	**6.64**	**246**	*eS*	Sn	06 05 22.4	-4.3

*IDC **20** 06:04:18.3±3.0, 54°.45N×86°.95E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=24.9km s-min=18.7km az=53.0*

ASRS 20 06:04:17.0±1.8, 54°.39N×86°.79E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**250**	I	I	06 11 50.0	
	0.2nm,0.9s,baz=69,slow=355,SNR=13						
ZALV	**Zalesovo Beam**	**1.24**	**250**	Pg	Pn	06 04 42.5	+0.9
	1.4nm,0.3s,baz=68,slow=16,SNR=10						
ZALV				Lg	Lg	06 05 01.6	
	1.1nm,0.3s,baz=69,slow=27,SNR=5.8						
KURBB	**Kurchatov Arra**	**6.30**	**237**	Pn	Pn	06 05 54.1	+3.1
	0.1nm,0.3s,baz=53,slow=13,SNR=9.0						
KURBB				Sn	Sn	06 07 07.1	+3.5
	baz=69,slow=23,SNR=1.4						
KURBB				Lg	Lg	06 07 44.2	
	baz=43,slow=34,SNR=4.4						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**8.12**	**202**	Pn	Pn	06 06 20.7	+4.6
	0.1nm,0.3s,baz=28,slow=13,SNR=1.7						
	0.2nm,0.3s						

*NOU **20** 06:05:41.6, 34°.93S×177°.69W, h0km, MLv4.6/8, South of Kermadec Islands*
*WEL **20** 06:06:12.0±0.8, 36°.5S±6°.1×178°.0E±1°.1, h129km±17km, M3.8/17, MLv3.8/17, Error ellipse: s-maj=9.7km s-min=7.2km az=83.7, confirmed*

ISC 20 06:06:09.3±3.6, 35°.8S±0°.1×179°.8W±0°.2, h100km, n68, σ1s12/90, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.36**	**219**	P	**Pn**	**06 06 46.8**	**+0.2**
MXZ	**Matakaoa Point**	**2.36**	**219**	P	**Pn**	**06 06 46.9**	**+0.4**
MXZ				S	**Sn**	**06 07 15.3**	**+0.2**
WMGZ	**Waiomatatini S**	**2.51**	**214**	P	**Pn**	**06 06 49.9**	**+1.3**
WMGZ				S	**Sn**	**06 07 19.6**	**+1.0**
PKGZ	**Pakihiroa**	**2.71**	**218**	P	**Pn**	**06 06 52.5**	**+1.3**
PKGZ				S	**Sn**	**06 07 23.6**	**+0.2**
HAZ	**Te Kaha**	**2.79**	**223**	P	**Pn**	**06 06 52.9**	**+0.8**
HAZ				S	**Sn**	**06 07 27.2**	**+2.0**
PUZ	**Puketiti**	**2.79**	**213**	P	**Pn**	**06 06 53.1**	**+0.8**
PUZ				S	**Sn**	**06 07 25.7**	**+0.4**
RUGZ	**Raukumara Rang**	**2.99**	**222**	P	**Pn**	**06 06 55.8**	**+0.7**
CNGZ	**Carnagh Statio**	**3.16**	**210**	P	**Pn**	**06 06 58.8**	**+1.7**
CNGZ				S	**Sn**	**06 07 34.7**	**+0.7**
TKGZ	**Te Karaka**	**3.27**	**214**	P	**Pn**	**06 06 59.5**	**+0.8**
TKGZ				S	**Sn**	**06 07 36.7**	**-0.2**
MWZ	**Matawai**	**3.35**	**219**	P	**Pn**	**06 07 00.3**	**+0.5**
MWZ				S	**Sn**	**06 07 37.3**	**-1.4**
URZ	**Urewera**	**3.52**	**224**	P	**Pn**	**06 07 02.1**	**+0.1**
URZ	**Urewera**	**3.52**	**224**	P	**Pn**	**06 07 02.0**	**+0.1**
URZ				S	**Sn**	**06 07 40.9**	**-1.7**
RAGZ	**Rawiri**	**3.53**	**218**	P	**Pn**	**06 07 02.7**	**+0.5**
RAGZ				S	**Sn**	**06 07 42.3**	**-0.8**
RIGZ	**Rimuhau**	**3.53**	**213**	P	**Pn**	**06 07 02.5**	**+0.3**
RIGZ				S	**Sn**	**06 07 42.5**	**-0.6**
OPRZ	**Ohinepanea**	**3.59**	**233**	P	**Pn**	**06 07 03.3**	**+0.4**
EDRZ	**Edgecumbe**	**3.63**	**229**	P	**Pn**	**06 07 04.6**	**+1.0**
KUZ	**Kuaotunu**	**3.75**	**253**	P	**Pn**	**06 07 05.3**	**+0.2**
KUZ	**Kuaotunu**	**3.75**	**253**	P	**Pn**	**06 07 05.3**	**+0.2**
KUZ				S	**Sn**	**06 07 46.2**	**-2.1**
SNGZ	**Shannon Statio**	**3.79**	**216**	P	**Pn**	**06 07 06.3**	**+0.7**
SNGZ				S	**Sn**	**06 07 49.1**	**-0.1**
KNZ	**Kokohu**	**3.83**	**211**	P	**Pn**	**06 07 05.8**	**-0.4**
RTZ	**Ruatahuna**	**3.84**	**221**	P	**Pn**	**06 07 07.2**	**+0.8**
MHGZ	**Mahia Peninsul**	**3.85**	**208**	P	**Pn**	**06 07 07.1**	**+0.7**
TARZ	**Mount Tarawera**	**3.86**	**229**	P	**Pn**	**06 07 08.0**	**+1.3**
MUGZ	**Murupara**	**3.86**	**224**	P	**Pn**	**06 07 07.3**	**+0.7**
GRZ	**Great Barrier**	**3.87**	**261**	P	**Pn**	**06 07 06.6**	**-0.1**
KARZ	**Kaharoa**	**3.89**	**233**	P	**Pn**	**06 07 07.8**	**+0.8**
RRRZ	**Republican Roa**	**3.92**	**228**	P	**Pn**	**06 07 08.4**	**+1.0**
RAHZ	**Arahi**	**4.02**	**217**	P	**Pn**	**06 07 09.7**	**+1.0**
RAHZ				S	**Sn**	**06 07 54.7**	**0.0**
HSRZ	**Hossack Road**	**4.07**	**230**	P	**Pn**	**06 07 10.7**	**+1.4**
WHHZ	**Waihua**	**4.07**	**214**	P	**Pn**	**06 07 10.1**	**+0.7**
WHHZ				S	**Sn**	**06 07 55.9**	**-0.2**
MTHZ	**Maungataniwha**	**4.09**	**220**	P	**Pn**	**06 07 10.4**	**+0.7**
MTHZ				S	**Sn**	**06 07 56.7**	**+0.1**
ALRZ	**Allen Road**	**4.17**	**226**	P	**Pn**	**06 07 11.4**	**+0.7**
WIAZ	**Waiheke Island**	**4.22**	**254**	P	**Pn**	**06 07 12.3**	**+0.9**
TOZ	**Tahuroa Road**	**4.26**	**241**	P	**Pn**	**06 07 12.9**	**+1.0**
MKAZ	**Moumakai**	**4.28**	**250**	P	**Pn**	**06 07 13.2**	**+1.0**
NMHZ	**Naumai**	**4.29**	**218**	P	**Pn**	**06 07 13.6**	**+1.1**
NMHZ		

baz=244,slow=74,SNR=113
H03N2 Juan Fernandez 83.60 124 T T 08 05 05.0
baz=250,slow=72,SNR=28
H03N3 Juan Fernandez 83.60 124 T T 08 05 11.0
baz=250,slow=72,SNR=38
H03N1 Juan Fernandez 83.62 124 T T 08 05 11.4
baz=250,slow=72,SNR=35
SNAA Sanae 84.61 178 P P 06 33 03.1 -0.3
1.1nm,1.0s,baz=199,slow=5.6,SNR=2.8
1.1nm,1.0s
TXAR Lajitas Array 88.24 57 P P 06 33 22.1 +0.1
0.4nm,0.9s,baz=238,slow=4.6,SNR=4.3
0.4nm,0.9s

ASRS ***20*** *06:25:39.0±1.5,54.30N×86.82E,h0km,M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 06:25:41.3±3.5,54.33N×86.77E,h0km,mbtmp2.8/2, ML2.5/2,Error ellipse: s-maj=29.8km s-min=17.4km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**252**	I	I	06 33 00.0	
	0.1nm,0.8s,baz=73,slow=356,SNR=7.7						
ZALV	**Zalesovo Beam**	**1.21**	**252**	Pg	Pg	06 26 03.3	-1.1
	1.5nm,0.3s,baz=69,slow=18,SNR=19						
ZALV				Lg	Lg	06 26 20.9	
	1.4nm,0.3s,baz=69,slow=25,SNR=8.0						
KURBB	**Kurchatov Arra**	**6.25**	**237**	Pn	Pn	06 27 15.6	+0.9
	0.1nm,0.3s,baz=53,slow=14,SNR=4.2						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**8.06**	**202**	Pn	Pn	06 27 40.7	+1.2
	0.1nm,0.3s,baz=23,slow=14,SNR=1.6						
	0.1nm,0.3s						

MOS ***20*** *06:32:11.5±0.9,1.66N×126.44E,h21km,mb5.1/36,Error ellipse: s-maj=11.5km s-min=5.6km az=118.9*

BJI ***20*** *06:32:13.1,1.22N×126.49E,h56km,mB5.6/5,mb4.8/44, Ms4.9/4,Ms7 4.6/4*

IDC ***20*** *06:32:14.4±2.6,1.58N×126.48E,h31km±18km,mb4.5/27, mbtmp4.6/29,ML4.2/2,MS3.7/1,Error ellipse: s-maj=22.5km s-min=9.6km az=74.0*

NEIC ***20*** *06:32:15.7±1.8,1.63N±0.06×126.54E±0.06,h35km±1km, mb5.0/77,Error ellipse: s-maj=11.9km s-min=8.9km az=225.0*

DJA ***20*** *06:32:17.0±0.2,2.2°N±2.2°×12.7°E±°,h52km±2km,M4.8/53, mb4.9/53,mB5.4/7,MLv4.8/21,Mw(mB)4.8/7,MwMwp5.4/1, Mwp5.6/1*

ISC 20 06:32:15.8±0.4,1.63N±0.04×126.50E±0.05,h40km±3km, h40km:pP-P,n246,σ1.9s35/244,mb5.0/112,6C-9D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.21**	**135**		**Pn**	**06 32 35.6**	**-0.7**
TNTI	**Ternate**	**1.21**	**135**	P	**Pn**	**06 32 35.4**	**-0.9**
TNTI				S	**Sn**	**06 32 50.8**	**-0.7**
SGSI	**Sangihe**	**2.26**	**335**	P	**Pn**	**06 32 51.5**	**+0.8**
KMSI	**Cibinong**	**2.73**	**247**	P	**Pn**	**06 32 58.1**	**+0.9**
SANI	**Sanana**	**3.69**	**188**	P	**Pn**	**06 33 10.2**	**-0.2**
LUWI	**Luwuk**	**4.58**	**235**		**Pn**	**06 33 24.8**	**+2.2**
LUWI	**Luwuk**	**4.58**	**235**	P	**Pn**	**06 33 24.8**	**+2.2**
MRSI	**Marisa**	**4.70**	**256**	P	**Pn**	**06 33 26.1**	**+1.8**
NLAI	**Namlea**	**4.87**	**173**	P	**Pn**	**06 33 27.5**	**+0.9**
SWI	**Sorong**	**5.36**	**117**	P	**Pn**	**06 33 36.0**	**+2.7**
	62nm,0.7s						
APSI	**Ampana**	**5.47**	**243**	P	**Pn**	**06 33 37.5**	**+2.7**
DAV	**Davao City (W)**	**5.48**	**350**	Sn	**Sn**	**06 34 36.0**	**-0.8**
	67nm,0.3s,baz=275,slow=23,SNR=1.5						
DAV				LR	LR	06 36 11.5	
	comp=Z,740nm,20.5s,baz=158,slow=43						
MSAI	**Masohi**	**5.50**	**154**	P	**Pn**	**06 33 39.4**	**+4.1**
	0.6nm125nm,0.8s						
AAI	**Ambon**	**5.54**	**162**	P	**Pn**	**06 33 38.7**	**+2.8**
	0.4nm84nm,0.5s						
TOLI2	**Tolitoli**	**5.74**	**265**		**Pn**	**06 33 38.7**	**+0.1**
MPSI	**Mapaga**	**6.73**	**259**	P	**Pn**	**06 33 55.5**	**+3.4**
	0.4nm79nm,0.9s						
KDI	**Kendari**	**6.77**	**215**	P	**Pn**	**06 33 55.0**	**+2.3**
PCI	**Palu**	**7.13**	**249**	P	**Pn**	**06 33 59.1**	**+1.5**
FAKI	**Fak Fak**	**7.31**	**128**		**Pn**	**06 34 02.5**	**+2.4**
FAKI	**Fak Fak**	**7.31**	**128**	P	**Pn**	**06 34 03.1**	**+3.0**
	0.3nm73nm,1.0s						
BBSI	**Bau Bau**	**8.09**	**209**	P	**Pn**	**06 34 14.0**	**+3.2**
	101nm,0.8s						
TTSI	**Tana Toraja**	**8.14**	**235**	P	**Pn**	**06 34 12.9**	**+1.4**
	104nm,0.7s						
SPSI	**Sidrap Palu**	**8.73**	**230**	P	**Pn**	**06 34 21.5**	**+1.9**
	1μm81nm,0.6s						
MYLDM	**Lahad Datu**	**8.73**	**294**		**Pn**	**06 34 22.4**	**+2.8**
BNSI	**Bone**	**8.76**	**227**	P	**Pn**	**06 34 22.1**	**+2.1**
	100nm,0.7s						
BKSI	**Bulukumba**	**9.40**	**223**	P	**Pn**	**06 34 30.5**	**+1.8**
	71nm,0.7s						
KAPI	**Kappang**	**9.44**	**226**	Pn	**Pn**	**06 34 31.2**	**+1.9**
	4.5nm,0.3s,baz=74,slow=3.0,SNR=16						
KAPI				Sn	**Sn**	**06 36 14.4**	**+0.2**
	3.0nm,0.3s,baz=210,slow=20,SNR=2.0						
BSSI	**Bau Bau, Buton**	**9.78**	**218**	P	**Pn**	**06 34 36.6**	**+2.6**
	63nm,0.6s						
BAKI	**Biak**	**10.00**	**106**	P	**Pn**	**06 34 39.8**	**+2.7**
EDFI	**Ende, Flores**	**11.37**	**205**	P	**Pn**	**06 34 58.0**	**+2.1**
	22nm,0.8s						
TWSI	**Taliwang, Sumb**	**14.07**	**223**	P	**P**	**06 35 37.3**	**-2.4**
	10μm66nm,0.7s						
SBUM	**Sibu**	**14.30**	**274**	P	**P**	**06 35 42.6**	**+0.4**
JAY	**Jayapura**	**14.78**	**106**	Pn	**Pn**	**06 35 42.2**	**-0.1**
	0.5nm,0.3s,baz=358,slow=22,SNR=0.9						
	4.5nm,0.5s						
MTN	**Manton Dam**	**15.10**	**162**		**Pn**	**06 35 46.5**	**+0.1**
STKI	**Sintang**	**15.11**	**264**	P	**Pn**	**06 35 48.3**	**+1.8**
KMMI	**Kalianget**	**15.20**	**235**	P	**P**	**06 35 50.7**	**-1.5**
JAGI	**Jajag, Banyuwa**	**15.88**	**231**	P	**Pn**	**06 35 58.1**	**+1.5**
JAGI	**Jajag, Banyuwa**	**15.88**	**231**	P	**P**	**06 36 00.8**	**+1.0**
	72nm,0.9s						
KNRA	**Kununurra**	**17.34**	**173**	P	**Pn**	**06 36 14.9**	**0.0**
PCJI	**Pacitan**	**18.13**	**237**	P	**P**	**06 36 26.2**	**+1.5**
	70nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**06 36 39.7**	**-1.3**
	0.9nm,0.3s,baz=18,slow=8.4,SNR=18						
	3.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**19.62**	**182**	P	**P**	**06 36 40.1**	**-0.9**
KPJI	**Karang Pucung**	**19.66**	**243**	P	**P**	**06 36 41.3**	**-0.2**
	32nm,0.7s						
YULB	**Yu-li**	**22.21**	**347**	P	**P**	**06 37 07.0**	**-2.0**
YULB				IAmb	IAmb	06 37 14.2	
	comp=Z,72nm,1.3s						
TPUB	**Ta-pu**	**22.28**	**346**	P	**P**	**06 37 09.2**	**-0.5**
WB0	**Warramunga Arr**	**22.63**	**160**	P	**P**	**06 37 12.4**	**-1.0**
WB0				IAmb	IAmb	06 37 16.0	
	comp=Z,56nm,0.7s						
MYKOM	**Kota Tinggi**	**22.64**	**271**	P	**P**	**06 37 14.0**	**+0.3**
COEN	**Coen**	**22.65**	**134**	P	**P**	**06 37 13.1**	**-0.6**
WRAB	**Tennant Creek**	**22.77**	**161**	P	**P**	**06 37 13.8**	**-1.1**
WRAB	**Tennant Creek**	**22.77**	**161**	⇓*i*P	**P**	**06 37 13.8**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,114nm,1.2s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**06 37 13.5**	**-1.5**
	comp=Z,50nm,0.6s,baz=338,slow=10,SNR=130						
WRA				PcP	**PcP**	**06 41 05.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=312,slow=3.0,SNR=4.9						
WRA				S	**S**	**06 41 16.9**	**-4.5**
	comp=Z,4.9nm,0.8s,baz=339,slow=18,SNR=5.8						
WRA				ScP	**ScP**	**06 44 41.7**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=355,slow=3.2,SNR=2.2						
	comp=Z,50nm,0.6s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**06 37 13.6**	**-1.5**
WR8	**Warramunga Arr**	**22.84**	**160**	IAmb	IAmb	06 37 18.6	
	comp=Z,59nm,0.7s						
PMG	**Port Moresby**	**23.31**	**118**	⇓*i*P	**P**	**06 37 21.1**	**+0.6**
PMG				pmax	pmax		
	comp=Z,20nm,0.9s						
MBWA	**Marble Bar**	**23.60**	**196**	P	**P**	**06 37 21.8**	**-1.4**
PSA00	**Pilbara Seismi**	**23.96**	**195**	P	**P**	**06 37 24.5**	**-2.1**
MASI	**Maura Aman, Be**	**24.71**	**259**	P	**P**	**06 37 31.9**	**-1.7**
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**06 37 46.2**	**-0.3**
	comp=Z,27nm,0.8s,baz=344,slow=7.5,SNR=91						
ASAR				PcP	**PcP**	**06 41 12.6**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=337,slow=2.2,SNR=6.3						
ASAR				S	**S**	**06 42 15.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=348,slow=21,SNR=2.3						
ASAR				ScP	**ScP**	**06 44 50.2**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=340,slow=3.2,SNR=1.6						
	comp=Z,27nm,0.8s						
ASAR	**Alice Springs**	**26.15**	**164**	P	**P**	**06 37 46.6**	**0.0**
GSI	**Gunungsitoli**	**28.92**	**270**	P	**P**	**06 38 10.1**	**-1.3**
GSI				IAmb	IAmb	06 38 12.2	
	comp=Z,21nm,0.7s						
GSI	**Gunungsitoli**	**28.92**	**270**	P	**P**	**06 38 09.7**	**-1.7**
	comp=Z,31nm,0.9s						
CTAO	**Charters Tower**	**29.00**	**139**	P	**P**	**06 38 12.4**	**+0.4**
CTAO				IAmb	IAmb	06 38 14.2	
	comp=Z,25nm,1.1s						
CTAO	**Charters Tower**	**29.00**	**139**	P	**P**	**06 38 12.5**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,25nm,1.1s						
WHN	**Wuhan**	**30.98**	**339**	P	**P**	**06 38 33.5**	**+4.1**
WHN				pmax	pmax		
	comp=Z,42nm,0.9s						
NJ2	**Nanjing**	**31.11**	**347**	*e*P	**P**	**06 38 33.3**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.79**	**304**	P	**P**	**06 38 37.0**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=117,slow=7.4,SNR=8.9						
CMAR				PcP	**PcP**	**06 41 27.3**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=118,slow=3.1,SNR=7.1						
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.79**	**304**	*i*P	**P**	**06 38 37.0**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FORT	**Forrest**	**32.26**	**177**	P	**P**	**06 38 41.3**	**+0.6**
FORT				IAmb	IAmb	06 39 26.3	
	comp=Z,17nm,1.0s						
KMI	**Kunming**	**32.73**	**317**	P	**P**	**06 38 46.9**	**+1.7**
KMI				pmax	pmax		
	comp=Z,18nm,0.6s						
PZH	**PanZhiHua**	**34.32**	**318**	P	**P**	**06 38 58.6**	**-0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LYN	**LuoYang**	**35.28**	**340**	*e*P	**P**	**06 39 08.5**	**+1.6**
LYN				pmax	pmax		
	comp=Z,17nm,0.7s						
BBOO	**Buckleboo**	**35.42**	**166**	IAmb	IAmb	06 39 08.6	
	comp=Z,26nm,0.9s						
TIA	**Tai'an**	**35.49**	**347**	P	**P**	**06 39 08.0**	**-0.7**
TIA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSRS	**Korea Array**	**35.67**	**2**	P	**P**	**06 39 10.4**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=177,slow=10,SNR=9.5						
KSRS				PcP	**PcP**	**06 41 38.1**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=167,slow=1.4,SNR=4.9						
	comp=Z,1.6nm,0.5s						
EIDS	**Eidsvold**	**35.87**	**140**	P	**P**	**06 39 11.5**	**-0.6**
EIDS				IAmb	IAmb	06 39 14.2	
	comp=Z,22nm,0.9s						
XAN	**Xi'an**	**36.19**	**335**	P	**P**	**06 39 15.2**	**+0.4**
CD2	**Chengdu**	**36.22**	**326**	P	**P**	**06 39 14.8**	**-0.3**
CD2				pP	sP	06 39 28.8	-1.6
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
STKA	**Stephens Creek**	**36.27**	**158**	P	**P**	**06 39 14.9**	**-0.5**
	comp=Z,12nm,0.8s,baz=328,slow=8.3,SNR=17						
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**36.27**	**158**	⇓*i*P	**P**	**06 39 14.5**	**-0.9**
MJAR	**Matsushiro Arr**	**36.39**	**16**	P	**P**	**06 39 15.4**	**-0.9**
	comp=Z,6.5nm,0.9s,baz=179,slow=9.4,SNR=12						
	comp=Z,6.5nm,0.9s						
MJAR	**Matsushiro Arr**	**36.39**	**16**	P	**P**	**06 39 15.5**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAJO	**Matsushiro**	**36.39**	**16**	⇓*i*P	**P**	**06 39 17.6**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
HNS	**HongShan**	**37.22**	**344**	⇓P	**P**	**06 39 24.8**	**+1.4**
DL2	**Dalian**	**37.37**	**354**	P	**P**	**06 39 27.1**	**+2.5**
DL2				pmax	pmax		
	comp=Z,55nm,1.4s						
BJI	**Beijing**	**39.37**	**347**	P	**P**	**06 39 41.9**	**+0.5**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARMA	**Armidale**	**39.87**	**145**	IAmb	IAmb	06 39 48.7	
	comp=Z,35nm,1.1s						
LZDM	**Lanzhou Array**	**40.17**	**331**	P	**P**	**06 39 48.8**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=122,slow=7.3,SNR=1.9						
	comp=Z,1.2nm,0.3s						
LZH	**Lanzhou**	**40.20**	**331**	*e*P	**P**	**06 39 50.3**	**+1.6**
LZH				pP	pP	06 39 58.3	-1.2
LZH				pmax	pmax		
	comp=Z,30nm,1.5s						
SHL	**Shillong**	**40.97**	**308**	P	**P**	**06 39 55.1**	**0.0**
SHL				IAmb	IAmb	06 39 59.8	
	comp=Z,17nm,0.7s						
SHL	**Shillong**	**40.97**	**308**	P	**P**	**06 39 55.1**	**0.0**
SHL				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC	**Hu-ho-hao-te**	**41.32**	**343**	*e*P	P	06 40 02.3	+4.6
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
CAN	**Canberra**	**42.36**	**152**	P	**P**	**06 40 06.8**	**+0.5**
CAN	**Canberra**	**42.36**	**152**	P	**P**	**06 40 06.8**	**+0.5**
CAN				pmax	pmax		
	comp=Z,22nm,1.2s						
CAN	**Canberra**	**42.36**	**152**	P	**P**	**06 40 07.0**	**+0.8**
USRK	**Ussuriysk Ar.**	**42.67**	**6**	P	**P**	**06 40 08.3**	**-0.2**
	comp=Z,5.2nm,0.6s,baz=189,slow=8.0,SNR=8.3						
	comp=Z,5.2nm,0.6s						
MDJ	**Mudanjiang**	**42.89**	**3**	P	**P**	**06 40 12.6**	**+2.2**
MDJ				pmax	pmax		
	comp=Z,22nm,1.2s						
LSA	**Lhasa**	**43.68**	**313**	P	**P**	**06 40 14.3**	**-3.2**
GTA	**Gaotai**	**44.79**	**330**	*e*P	**P**	**06 40 26.6**	**+0.7**
GTA				PcP	**PP**	**06 42 09.4**	**-1.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EVN	**Everest**	**46.08**	**308**	P	**P**	**06 40 36.6**	**-0.3**
EVN				IAmb	IAmb	06 40 38.7	
	comp=Z,21nm,1.1s						
HIA	**Hailar**	**47.81**	**354**	P	**P**	**06 40 50.1**	**+0.8**
HIA				IAmb	IAmb	06 40 55.2	
	comp=Z,18nm,1.2s						
HIA	**Hailar**	**47.81**	**354**	P	**P**	**06 40 50.1**	**+0.8**
HIA				pmax	pmax		
	comp=Z,18nm,1.2s						
HILR	**Hailar Array B**	**48.10**	**354**	P	**P**	**06 40 52.5**	**+0.9**
	comp=Z,3.7nm,0.5s,baz=183,slow=9.7,SNR=6.9						
HILR				PcP	**PcP**	**06 42 19.6**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=172,slow=2.9,SNR=2.2						
	comp=Z,3.7nm,0.5s						
HEH	**HeiHe**	**48.45**	**1**	*e*P	**P**	**06 40 54.9**	**+0.7**
HEH				pmax	pmax		
	comp=Z,15nm,0.8s						
ULN	**Ulaanbaatar**	**49.04**	**343**	⇑*i*P	**P**	**06 40 59.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	**Ulaanbaatar**	**49.04**	**343**	P	**P**	**06 41 00.2**	**+1.3**
ULN				PcP	**PcP**	**06 42 22.2**	**-0.2**
SONM	**Songino Array**	**49.21**	**342**	P	**P**	**06 41 00.5**	**+0.2**
	comp=Z,8.0nm,1.0s,baz=160,slow=9.1,SNR=16						
	comp=Z,8.0nm,1.0s						
HYBB	**Hyderabad (bro**	**49.64**	**292**	*e*P	**P**	**06 41 04.0**	**0.0**
HYBB				*es*P	**sP**	**06 41 18.6**	**-0.9**
MSVF	**Nonsavu**	**54.27**	**113**	P	**P**	**06 41 37.0**	**-1.5**
WMQ	**Urumqi**	**54.32**	**326**	*e*P	**P**	**06 41 40.6**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
PEA0B	**Petropavlovsk-**	**57.45**	**22**	P	**P**	**06 42 02.4**	**+1.9**
PEA0B	**Petropavlovsk-**	**57.45**	**22**	P	**P**	**06 42 02.4**	**+1.9**
PEA0B				pmax	pmax		
	comp=Z,245nm,2.0s						
PETK	**Petropavlovsk-**	**57.45**	**22**	P	**P**	**06 42 01.1**	**+0.6**
	comp=Z,4.9nm,0.6s,baz=192,slow=5.2,SNR=11						
	comp=Z,4.9nm,0.6s						
ZSN	**Zaisan**	**58.15**	**328**	*e*P	**P**	**06 42 05.5**	**-0.1**
ZSN	**Zaisan**	**58.15**	**328**	*e*P	**P**	**06 42 05.5**	**-0.1**
DGZ	**Jazzator, Alta**	**58.31**	**331**	⇓*i*P	**P**	**06 42 07.0**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHLS	**Shalkode**	**58.82**	**321**	*e*P	**P**	**06 42 08.5**	**-2.0**
	comp=Z,10nm,1.1s						
SHLS	**Shalkode**	**58.82**	**321**	*e*P	**P**	**06 42 08.5**	**-2.0**
SHLS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
UZB	**Uzynbulak**	**59.09**	**321**	*e*P	**P**	**06 42 12.5**	**+0.1**
	comp=Z,7.0nm,0.9s						
UZB	**Uzynbulak**	**59.09**	**321**	*e*P	**P**	**06 42 12.5**	**+0.1**
UZB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	**59.15**	**326**	⇓*i*P	**P**	**06 42 12.5**	**-0.1**
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**06 42 12.3**	**-0.2**
	comp=Z,6.2nm,0.5s,baz=120,slow=7.6,SNR=44						
	comp=Z,6.2nm,0.5s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	**P**	**06 42 12.7**	**+0.1**
TARG	**Taragay, Kyrgy**	**59.16**	**319**		**P**	**06 42 13.1**	**-0.2**
TARG				IAmb	IAmb	06 42 22.9	
	comp=Z,8.6nm,0.7s						
TARG	**Taragay, Kyrgy**	**59.16**	**319**	P	**P**	**06 42 13.1**	**-0.2**
TARG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAKZ	**Makanchi**	**59.33**	**326**	P	**P**	**06 42 14.6**	**+0.8**
MAKZ				IAmb	IAmb	06 42 16.7	
	comp=Z,18nm,1.1s						
MAKZ	**Makanchi**	**59.33**	**326**	P	**P**	**06 42 14.6**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.1s						
MAKZ	**Makanchi**	**59.33**	**326**	P	**P**	**06 42 13.5**	**-0.3**
MAKZ				sP	**sP**	**06 42 28.8**	**-0.8**
MAKZ				PcP	**PcP**	**06 43 01.9**	**+0.4**
KSH	**Kashi**	**59.38**	**316**	P	**P**	**06 42 16.3**	**+1.9**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SATY	**Saty**	**59.44**	**321**	*e*P	**P**	**06 42 14.4**	**-0.3**
	comp=Z,14nm,1.0s						
SATY	**Saty**	**59.44**	**321**	*e*P	**P**	**06 42 14.4**	**-0.3**
SATY				pmax	pmax		
	comp=Z,14nm,1.0s						
KDJ	**Kajisay**	**59.77**	**319**	IAmb	IAmb	06 42 19.6	
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	**60.30**	**2**	*e*P	**P**	**06 42 20.6**	**+0.5**
YAK				*e**PP	**pP**	**06 42 31.9**	**+0.6**
YAK				*e*		06 43 05.6	
YAK				*e*		06 44 30.2	
YAK				*e*PPP	PPP	06 45 57.1	
YAK				*e*S	**S**	**06 50 32.6**	**+1.2**
YAK				*e**SS	**sS**	**06 50 48.1**	**-1.7**
YAK				*e*		06 52 08.2	
YAK				pmax	pmax		
	comp=Z,42nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,563nm,5.0s						
YAK				pmax	pmax		
	comp=N,625nm,4.3s						
YAK				pmax	pmax		
	comp=E,883nm,5.9s						
YAK				smax	smax		
	comp=E,279nm,3.4s						
YAK				smax	smax		
	comp=N,792nm,3.9s						
MDOK	**Medeo**	**60.35**	**320**	*e*P	**P**	**06 42 20.8**	**-0.3**
MDOK	**Medeo**	**60.35**	**320**	*e*P	**P**	**06 42 20.8**	**-0.3**
TNSS	**Tian-Shan**	**60.35**	**320**	*e*P	**P**	**06 42 20.9**	**-0.5**
TNSS	**Tian-Shan**	**60.35**	**320**	*e*P	**P**	**06 42 20.9**	**-0.5**
TDK	**Taldyqorghan**	**60.43**	**323**	*e*P	**P**	**06 42 21.4**	**0.0**
	comp=N,8.0nm,0.6s						
TDK	**Taldyqorghan**	**60.43**	**323**	*e*P	**P**	**06 42 21.4**	**0.0**
TDK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAA	**Alma-Ata**	**60.46**	**320**	*e*P	**P**	**06 42 21.5**	**-0.3**
	comp=Z,9.6nm,0.4s						
AAA	**Alma-Ata**	**60.46**	**320**	*e*P	**P**	**06 42 21.4**	**-0.3**
AAA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TUWZ	**Tuamarina**	**60.67**	**141**	P	**P**	**06 42 23.4**	**+0.3**
BOOM	**Boomskoye usch**	**60.75**	**319**	IAmb	IAmb	06 42 26.2	
	comp=Z,11nm,1.2s						
RTZ	**Ruatahuna**	**61.26**	**136**	P	**P**	**06 42 26.6**	**-0.6**
AAK	**Ala-Archa**	**61.77**	**319**	⇑*i*P	**P**	**06 42 30.6**	**-0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SGDS	**Sogindy**	**62.04**	**320**	*e*P	**P**	**06 42 32.4**	**-0.1**
ARSB	**Arsianbob**	**62.21**	**317**	IAmb	IAmb	06 42 36.0	
	comp=Z,23nm,1.3s						
ZALV	**Zalesovo Beam**	**62.35**	**334**	P	**P**	**06 42 33.7**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=135,slow=7.0,SNR=8.5						
	comp=Z,1.3nm,0.3s						
ZALV	**Zalesovo Beam**	**62.35**	**334**	P	**P**	**06 42 33.3**	**-0.8**
KBL	**Kabul**	**62.63**	**308**	P	**P**	**06 42 36.7**	**0.0**
KBL				IAmb	IAmb	06 42 37.4	
	comp=Z,13nm,0.8s						
KBL	**Kabul**	**62.63**	**308**	P	**P**	**06 42 36.7**	**0.0**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s						
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	**P**	**06 42 40.9**	**-0.2**
	comp=Z,9.0nm,0.7s,baz=129,slow=6.3,SNR=54						
	comp=Z,9.0nm,0.7s						
KURK	**Kurchatov**	**63.39**	**328**	P	**P**	**06 42 41.1**	**0.0**
KURK				IAmb	IAmb	06 42 42.9	
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	**63.39**	**328**	*c i*P	**P**	**06 42 40.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,22nm,0.9s						
KURK	**Kurchatov**	**63.39**	**328**	P	**P**	**06 42 40.9**	**-0.2**
SEY	**Seymchan**	**64.12**	**13**	*e*P	**P**	**06 42 47.0**	**+1.3**
SEY				pmax	pmax		
	comp=Z,20nm,1.2s						
IUG	**luzhnay**	**64.57**	**317**	*e*P	**P**	**06 42 49.1**	**-0.1**
	comp=Z,8.0nm,0.7s						
IUG	**luzhnay**	**64.57**	**317**	*e*P	**P**	**06 42 49.1**	**-0.1**
IUG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KK31	**Karatay Array**	**64.61**	**318**	P	**P**	**06 42 49.2**	**-0.2**
KK31	**Karatay Array**	**64.61**	**318**	P	**P**	**06 42

	comp=Z,19nm,1.1s							
KBZ	**Khabaz**	**84.25**	**314**	P		**P**	**06 44 43.5**	**+0.1**
	comp=Z,5.8nm,0.9s,baz=153,slow=6.8,SNR=8.6							
	comp=Z,5.8nm,0.9s							
KIV	**Kislovodsk**	**84.42**	**314**	*e*P		**P**	**06 44 45.1**	**+0.7**
KIV				pmax		pmax		
	comp=Z,10.0nm,1.0s							
E22K	**Anaktuvuk Pass**	**85.39**	**22**	IAmb		IAmb	06 45 12.5	
	comp=Z,19nm,1.5s							
VRH	**Novokhopyorsk**	**85.46**	**321**	*e*P		**P**	**06 44 47.5**	**-1.8**
VRH				pmax		pmax		
	comp=Z,43nm,0.8s							
LABN	**Labinsk**	**85.86**	**314**	*e*P		**P**	**06 44 49.4**	**-2.1**
LABN				*e*			06 55 09.7	
LABN				pmax		pmax		
	comp=Z,37nm,0.6s							
C23K	**Itkillik River**	**86.02**	**20**	IAmb		IAmb	06 44 55.9	
	comp=Z,19nm,1.4s							
ERBR	**Yeremizino-Bor**	**86.06**	**316**	*e*P		**P**	**06 44 52.8**	**+0.3**
ERBR				*e*			06 55 14.3	
ERBR				pmax		pmax		
	comp=Z,55nm,1.0s							
E23K	**Chandalar**	**86.20**	**22**	IAmb		IAmb	06 44 58.9	
	comp=Z,14nm,1.1s							
SOC	**Sochi**	**86.55**	**313**	*e*P		**P**	**06 44 51.6**	**-3.3**
SOC				*e*S		**SKSac**	**06 55 12.6**	**-6.0**
SOC				*e*SS		**SS**	**07 01 10.7**	**+0.7**
SOC				pmax		pmax		
	comp=Z,21nm,1.1s							
C24K	**Franklin Bluff**	**86.67**	**20**	IAmb		IAmb	06 44 57.6	
	comp=Z,10nm,1.1s							
VORD	**Divnogorie**	**86.98**	**321**	*e*P		**P**	**06 44 57.4**	**+0.6**
VORD				pmax		pmax		
	comp=Z,10.0nm,0.9s							
VORR	**Voronezh**	**87.05**	**321**	*e*P		**P**	**06 44 58.4**	**+1.2**
VORR				pmax		pmax		
	comp=Z,91nm,0.4s							
VSR	**Storozhevoye**	**87.07**	**321**	*e*P		**P**	**06 44 55.7**	**-1.6**
VSR				pmax		pmax		
	comp=Z,10.0nm,1.0s							
ILAR	**Eielson Array**	**87.08**	**25**	P		**P**	**06 44 56.8**	**-0.3**
	comp=Z,1.4nm,1.1s,baz=239,slow=6.4,SNR=6.3							
	comp=Z,1.4nm,1.1s							
KLMR	**Klimovskoe**	**87.11**	**331**	*e*P		**P**	**06 44 55.3**	**-2.0**
KLMR				pmax		pmax		
	comp=Z,22nm,1.1s							
LPSR	**Galich'ya Gora**	**87.24**	**322**	*e*P		**P**	**06 44 58.0**	**-0.1**
LPSR				pmax		pmax		
	comp=Z,29nm,0.9s							
E25K	**Arctic Village**	**87.72**	**22**	IAmb		IAmb	06 45 03.1	
	comp=Z,8.0nm,0.8s							
OBN	**Obninsk**	**88.64**	**325**	⇓ *i*P		**P**	**06 45 03.7**	**-0.9**
OBN				*i*			06 45 09.7	
OBN				pmax		pmax		
	comp=Z,51nm,1.3s							
K27K	**Chicken**	**89.17**	**26**	IAmb		IAmb	06 45 11.4	
	comp=Z,10nm,1.1s							
E27K	**Coleen River**	**89.21**	**22**	IAmb		IAmb	06 45 10.3	
	comp=Z,6.4nm,1.1s							
KMBO	**Kilima Mbogo**	**89.28**	**269**	P		**P**	**06 45 08.8**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=56,slow=6.6,SNR=5.8							
	comp=Z,2.2nm,0.5s							
D27M	**Malcolm River**	**89.39**	**21**	IAmb		IAmb	06 45 10.2	
	comp=Z,5.6nm,0.9s							
F28M	**Old Crow**	**89.89**	**22**			**P**	**06 45 10.4**	**0.0**
F28M				IAmb		IAmb	06 45 15.0	
	comp=Z,22nm,1.6s							
MMAI	**Mount Meron Ar**	**90.05**	**303**	P		**P**	**06 45 11.8**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=168,slow=7.4,SNR=6.6							
	comp=Z,1.1nm,0.4s							
SYO	**Syowa Base**	**90.40**	**201** ⇑	*e*pP		pP	06 45 24.3	-0.1
BRTR	**Keskin Array B**	**91.18**	**310**	P		**P**	**06 45 16.0**	**-1.1**
	comp=Z,1.6nm,0.9s,baz=104,slow=6.1,SNR=6.7							
	comp=Z,1.6nm,0.9s							
BRTR	**Keskin Array B**	**91.18**	**310**			**P**	**06 45 16.4**	**-0.7**
BRTR	**Keskin Array B**	**91.18**	**310**	*i* P		**P**	**06 45 18.7**	**+1.6**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
QSPA	**South Pole Qui**	**91.55**	**180**	P		**P**	**06 45 22.2**	**+4.0**
	comp=Z,1.0nm,0.4s,baz=200,slow=1.3,SNR=5.2							
ARCES	**ARCESS Array B**	**92.33**	**340**	P		**P**	**06 45 21.1**	**-0.5**
	comp=Z,7.7nm,0.9s,baz=69,slow=6.6,SNR=8.6							
	comp=Z,7.7nm,0.9s							
ARCES	**ARCESS Array B**	**92.33**	**340**			**P**	**06 45 21.4**	**-0.2**
ARCES	**ARCESS Array B**	**92.33**	**340**	P		**P**	**06 45 21.4**	**-0.2**
ARCES				pmax		pmax		
	comp=Z,89nm,1.9s							
SPITS	**Spitsbergen Ar**	**92.48**	**349**	P		**P**	**06 45 21.5**	**-0.7**
	comp=Z,5.9nm,0.9s,baz=66,slow=4.9,SNR=1.6							
	comp=Z,5.9nm,0.9s							
AK08	**Malin Array Si**	**93.36**	**321**	P		**P**	**06 45 27.6**	**+0.9**
AK10	**Malin Array Si**	**93.36**	**321**	P		**P**	**06 45 27.9**	**+1.2**
AK03	**Malin Array Si**	**93.37**	**321**	P		**P**	**06 45 27.9**	**+1.1**
AKASG	**Malin Array Be**	**93.37**	**321**	P		**P**	**06 45 25.3**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=77,slow=3.9,SNR=4.4							
	comp=Z,0.6nm,0.5s							
AKASG	**Malin Array Be**	**93.37**	**321**	IAmb		IAmb	06 45 27.5	
	comp=Z,4.2nm,1.1s							
AKASG	**Malin Array Be**	**93.37**	**321**	*i* P		**P**	**06 45 25.7**	**-1.1**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AK02	**Malin Array Si**	**93.39**	**321**	P		**P**	**06 45 28.0**	**+1.2**
FINES	**FINESS Array B**	**93.56**	**332**	P		**P**	**06 45 26.5**	**-0.9**
	comp=Z,2.5nm,0.9s,baz=56,slow=4.8,SNR=6.9							
	comp=Z,2.5nm,0.9s							
FINES	**FINESS Array B**	**93.56**	**332**	*i* P		**P**	**06 45 29.5**	**+2.1**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.6s							
C36M	**Paulatuk**	**95.25**	**20**	IAmb		IAmb	06 45 36.1	
	comp=Z,6.3nm,0.9s							
RNPP5	**Staryi Chortor**	**95.39**	**322**	P		**P**	**06 45 37.1**	**+1.1**
KMPD	**K-Podol'skiy**	**95.43**	**319**	P		**P**	**06 45 37.1**	**+0.8**
BURAR	**Bucovina Array**	**96.41**	**318**			**P**	**06 45 41.1**	**+0.2**
BURAR				IAmb		IAmb	06 45 43.3	
	comp=Z,8.6nm,1.1s							
BUR08	**Bucovina Ar. S**	**96.41**	**318**	IAmb		IAmb	06 45 43.0	
	comp=Z,5.7nm,0.9s							
HFS	**Hagfors**	**99.76**	**332**	P		**Pdif**	**06 45 54.3**	**-1.2**
	comp=Z,4.5nm,1.1s,baz=83,slow=24,SNR=2.0							
	comp=Z,4.5nm,1.1s							
NOA	**NORSAR Array B**	**100.55**	**333**	P		**Pdif**	**06 45 57.8**	**-1.3**
	comp=Z,1.5nm,0.9s,baz=69,slow=4.4,SNR=4.0							
SNAA	**Sanae**	**103.14**	**195**	Pdiff		**Pdif**	**06 46 10.8**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=129,slow=21,SNR=0.7							
SCHQ	**Schefferville**	**122.66**	**9**	PKP		**PKiKP**	**06 51 07.9**	**+0.5**
	comp=Z,2.5nm,0.5s,baz=324,slow=1.8,SNR=9.0							
TXAR	**Lajitas Array**	**123.04**	**53**	PKP		**PKPdf**	**06 51 07.9**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=210,slow=0.2,SNR=5.1							
L40A	**Anamosa**	**124.74**	**34**			**PKPdf**	**06 51 10.9**	**-0.7**
CO01	**Juntas del Tor**	**147.70**	**152**			**PKPbc**	**06 51 57.8**	**+0.6**
LCO	**Las Campanas**	**148.21**	**151**			**PKPbc**	**06 51 58.0**	**-0.6**
LCO	**Las Campanas**	**148.21**	**151**	PKP2		**PKPbc**	**06 51 58.0**	**-0.6**
AC05	**El Transito**	**148.56**	**151**			**PKiKP**	**06 52 00.6**	**-0.3**
CPUP	**Villa Florida**	**155.17**	**172**	PKPbc		PKPbc	06 52 15.7	
	comp=Z,0.6nm,0.8s,baz=21,slow=3.9,SNR=5.0							
LPAZ	**La Paz**	**159.51**	**136**	PKP		**PKPdf**	**06 52 11.4**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=135,slow=3.9,SNR=4.3							

*MEX **20** 06:42:22.9±0.7, 13.88N×93.45W, h10km, MD3.9*
*GCG **20** 06:42:24.6±0.6, 13.85N×93.11W, h50km±172km, MD3.8, ML3.4*

ISC 20 06:42:19.0±1.7, 13.92N±0.09×93.25W±0.05, h10km, n15, σ2s22/25, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCA	**Catarina**	**1.47**	**51**	*e*P	**Pg**	**06 42 48.4**	**+1.2**
PATR	**El Naranjo**	**1.54**	**39**	*e*P	**Pg**	**06 42 49.2**	**+0.6**
PATR				*e*S	**Sg**	**06 43 09.9**	**+1.2**
CHUJ	**Union Juarez**	**1.60**	**43**	*e*P	**Pg**	**06 42 50.1**	**+0.3**
CHUJ				*e*S	**Sg**	**06 43 11.6**	**+0.9**
RTAL	**Retalhuleu**	**1.62**	**68**	*e*P	**Pg**	**06 42 50.4**	**+0.3**
RTAL				*e*S	**Sg**	**06 43 12.5**	**+1.4**
PAVE	**Pavencul**	**1.64**	**39**	*e*P	**Pg**	**06 42 50.9**	**+0.6**
PAVE				*e*S	**Sg**	**06 43 13.0**	**+1.4**
STG2	**El Palmar, Qui**	**1.89**	**74**	*e*P	**Pn**	**06 42 51.9**	**+0.5**
STG2				*e*S	**Sn**	**06 43 13.3**	**-2.0**
STG5	**El Palmar, Qui**	**1.90**	**75**	*e*P	**Pn**	**06 42 52.3**	**+0.7**
STG8	**El Palmar, Qui**	**1.91**	**74**	*e*P	**Pn**	**06 42 52.9**	**+1.0**
STG8				*e*S	**Sn**	**06 43 15.2**	**-0.9**
STG8				IAML		06 43 18.0	
	comp=E,312nm,0.2s						
QUEO	**Labor Ovalle**	**1.93**	**60**	*e*P	**Pb**	**06 42 55.4**	**+1.1**
HUEH	**Huehuetenango**	**2.19**	**50**	*e*P	**Pb**	**06 43 00.0**	**+1.2**
CCIG	**Comitan**	**2.58**	**24**	*e*P	**Pb**	**06 43 06.5**	**+1.1**
CCIG				*e*S	**Sg**	**06 43 41.4**	**-0.6**
FG16	**Alotenango, Sa**	**2.68**	**82**	*e*S	**Sn**	**06 43 28.0**	**-7.0**
FG16				IAML		06 43 41.7	
	comp=N,316nm,0.2s						
TGIG		**2.84**	**2**	*e*P	**Pb**	**06 43 09.2**	**-0.7**
TGIG				*e*S	**Sb**	**06 43 42.8**	**-2.0**
HUIG	**Huatulco**	**3.32**	**304**	*e*P	**Pn**	**06 43 13.0**	**+2.0**
HUIG				*e*S	**Sn**	**06 43 46.2**	**-4.3**
NEUV	**Arroyo Zacate**	**4.50**	**327**	*e*P	**Pn**	**06 43 29.9**	**+2.7**
NEUV				*e*S	**Sn**	**06 44 17.4**	**-2.3**

*NEIC **20** 06:42:22.9±1.0, 33.498N±0.008×116.434W±0.009, h5km±1km, Error ellipse: s-maj=1.2km s-min=1.0km az=175.0*

PAS 20 06:42:23.4±0.7, 33.500N±0.009×116.458W±0.007, h6km±1km, ML3.4/207, ML3.3/82(NEIC), Error ellipse: s-maj=1.3km s-min=0.9km az=176.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XPFO	**Pinon Flat**	**0.11**	**1**		Pg	06 42 25.7	-0.1
XPFO					Sg	06 42 27.5	-0.1
PFO	**Pinyon Flats O**	**0.11**	**359**		Pg	06 42 25.8	-0.1
PFO				IAML		06 42 27.7	
	9µm,0.3s						
PFO	**Pinyon Flats O**	**0.11**	**359**		Pg	06 42 25.7	-0.2
PFO					Sg	06 42 27.5	-0.1
FRD	**Ford Ranch, An**	**0.12**	**268**		Pg	06 42 26.2	+0.2
FRD					Sg	06 42 28.3	+0.6
SNDA	**J Saunders Pla**	**0.14**	**292**		Pg	06 42 26.6	+0.2
SNDA					Sg	06 42 29.1	+0.7
DNR	**Dunn Ranch,Anz**	**0.16**	**295**	Pg	Pg	06 42 27.0	+0.3
PMD	**Palm Desert**	**0.16**	**24**		Pg	06 42 26.5	-0.2
PMD				IAML		06 42 29.0	
	comp=N,12µm,0.2s						
BZNA	**Buzz No.'s Pla**	**0.17**	**267**		Pg	06 42 27.2	+0.3
BORC	**Borrego Spring**	**0.23**	**172**	Pg	Pg	06 42 28.2	+0.1
BORC				IAML		06 42 31.6	
	comp=E,3µm,0.2s						
CRY	**Cary Ranch**	**0.24**	**286**		Pg	06 42 28.4	+0.2
CRY					Sg	06 42 31.9	+0.5
GVDA	**Garner Valley**	**0.25**	**313**		Sg	06 42 31.7	0.0
GVDA	**Garner Valley**	**0.25**	**313**		Pg	06 42 28.1	-0.2
MATG	**Mataguay Scout**	**0.34**	**208**		Pg	06 42 30.2	+0.1
MATG					Sg	06 42 35.0	+0.5
SLH	**Sleepy Hollow**	**0.35**	**151**		Pg	06 42 30.4	+0.2
SLH					Sg	06 42 35.7	+0.9
PLM	**Palomar**	**0.37**	**247**		Sg	06 42 35.9	+0.4
CTCC	**Cactus City**	**0.42**	**68**		Pg	06 42 31.7	+0.1
POB	**Polly Butte**	**0.43**	**296**		Pg	06 42 31.6	-0.1
POB					Sg	06 42 37.5	0.0
JUEM	**Julian Eagle M**	**0.43**	**196**		Sg	06 42 37.4	-0.1
EW2	**E Wide Canyon**	**0.44**	**5**		Sg	06 42 37.9	+0.1
DEVC	**Devers**	**0.45**	**347**		Sg	06 42 38.1	+0.1
SALN	**Salton City**	**0.45**	**119**		Pg	06 42 32.4	+0.2
SALN	**Salton City**	**0.45**	**119**		Sg	06 42 38.9	+0.9
DGR	**Domenigoni Val**	**0.48**	**288**		Sg	06 42 38.8	-0.3
HMTC	**Hemet**	**0.50**	**295**		Pg	06 42 32.8	-0.3
HMTC					Sg	06 42 39.3	-0.4
CTW	**Cottonwood Mou**	**0.52**	**70**		Pg	06 42 33.3	-0.2
CTW					Sg	06 42 40.5	+0.3
BLAC	**Blackrock camp**	**0.57**	**6**		Sg	06 42 41.7	-0.3
BBSC	**Beaumont Base**	**0.60**	**314**		Sg	06 42 43.0	0.0
5271	**Bombay Beach**	**0.62**	**103**		Pg	06 42 35.6	+0.2
BOMB	**Bombay Beach**	**0.62**	**102**		Pg	06 42 35.6	+0.1
BOMB					Sb	06 42 45.1	-0.6
BELC	**Belle Mtn. Jos**	**0.63**	**37**		Pg	06 42 35.2	-0.4
BELC				IAML		06 42 46.6	
	comp=N,2µm,0.5s						
BELC	**Belle Mtn. Jos**	**0.63**	**37**		Sg	06 42 43.6	-0.2
DPP	**Dos Picos Cty**	**0.64**	**219**		Pg	06 42 35.4	-0.4
DPP					Sg	06 42 43.9	-0.2
DPP	**Dos Picos Cty**	**0.64**	**219**	IAML		06 42 44.3	
	comp=E,4µm,0.3s						
DPP				IAML		06 42 44.3	
	comp=N,4µm,0.3s						
ERRC	**Elmore Ranch**	**0.66**	**125**		Pb	06 42 36.7	-0.5
ERRC					Sb	06 42 46.0	-0.6
HAY	**Hayfield**	**0.68**	**72**		Pg	06 42 36.9	+0.3
HAY					Sb	06 42 46.5	-0.9
EML	**El Monte Cty P**	**0.69**	**208**		Sg	06 42 45.0	-0.6
FRK	**Frink**	**0.69**	**98**		Pg	06 42 36.2	-0.5
FRK					Sg	06 42 45.7	0.0
PEC	**Perris**	**0.70**	**304**		Sg	06 42 45.9	-0.3
GORC	**Green Oak Ranc**	**0.73**	**242**		Sg	06 42 46.1	-0.9
CRR	**Carrizo Plain**	**0.74**	**146**		Pg	06 42 37.3	-0.2
CRR					Sg	06 42 47.8	+0.7
SUP	**Superstition M**	**0.76**	**135**		Pg	06 42 37.7	-0.3
SUP					Sg	06 42 48.4	+0.5
CFT	**Crafton Hills**	**0.76**	**315**		Pg	06 42 37.9	-0.2
CFT					Sg	06 42 48.0	0.0
SWSC	**Sam W. Stewart**	**0.78**	**135**		Pg	06 42 37.9	-0.5
SWSC					Sg	06 42 48.6	0.0
GTM	**Goat Mountain**	**0.80**	**6**		Pg	06 42 38.1	-0.7
GTM					Sg	06 42 48.6	-0.6
SVD	**Seven Oaks Dam**	**0.81**	**319**		Pg	06 42 38.4	-0.6
SVD					Sg	06 42 49.4	0.0
CPE	**Camp Elliot**	**0.82**	**222**		Pg	06 42 38.5	-0.6
ELS	**Elsinore Mount**	**0.82**	**281**		Pg	06 42 38.4	-0.8
CLI2	**Calipatria 2**	**0.83**	**117**		Pg	06 42 39.0	-0.3
CLI2					Sb	06 42 51.6	0.0
BAR	**Barrett**	**0.84**	**192**		Pg	06 42 38.7	-0.8
BAR				IAML		06 42 51.0	
	comp=E,832nm,0.2s						
BAR				IAML		06 42 51.2	
	comp=N,989nm,0.3s						
BAR	**Barrett**	**0.84**	**192**		Sg	06 42 49.6	-0.7
MTRP	**Mission Trails**	**0.84**	**217**		Pg	06 42 38.8	-0.9
MTRP					Sg	06 42 49.6	-1.0
BBRC	**Big Bear Solar**	**0.85**	**333**		Sg	06 42 50.2	-0.6
BC3	**Big Chuckawall**	**0.85**	**79**		Pg	06 42 39.2	-0.6
BC3	**Big Chuckawall**	**0.85**	**79**		Sg	06 42 50.7	-0.2
BC3	**Big Chuckawall**	**0.85**	**79**	IAML		06 42 43.1	
	comp=E,217nm,0.4s						
RSBC	**Riverside Bore**	**0.86**	**303**		Sg	06 42 50.5	-0.8
RSBC	**Riverside Bore**	**0.86**	**303**		Pg	06 42 39.2	-0.8
RSBC	**Riverside Bore**	**0.86**	**303**		Pg	06 42 39.4	-0.6
SDRC	**San Diego Road**	**0.86**	**208**		Pg	06 42 38.9	-1.1
SDRC					Sg	06 42 50.1	-1.1
WEMD	**Westmorland, C**	**0.87**	**122**		Pg	06 42 39.5	-0.5
WEMD					Sb	06 42 52.8	0.0
HLNC	**Highland**	**0.89**	**315**		Sg	06 42 52.2	+0.2
COK2	**Cook Ranch 2**	**0.89**	**136**		Pg	06 42 39.9	-0.6
COK2					Sb	06 42 53.6	+0.2
IKP	**In-Ko-Pah, Jac**	**0.90**	**161**		Pg	06 42 40.2	-0.5
IKP					Sg	06 42 52.0	-0.3
RVR	**Riverside**	**0.91**	**303**		Pg	06 42 40.0	-0.9
RVR					Sg	06 42 51.8	-0.9
SDMC	**San Diego Miss**	**0.91**	**219**		Pg	06 42 40.1	-0.9
SDMC					Sg	06 42 51.9	-0.9
TKX	**Tecate**	**0.94**	**188**		Pg	06 42 40.6	-0.8
YUH	**Yuha Desert**	**0.96**	**152**		Pg	06 42 40.8	-1.1
TJX	**Tijuana**	**1.11**	**207**		Pg	06 42 43.7	-1.0
CBX	**Cerro Bola**	**1.20**	**188**		Pg	06 42 45.0	-1.4
CBX				IAML		06 43 02.1	
	comp=N,914nm,0.6s						
CBX				IAML		06 43 02.4	
	comp=E,924nm,0.7s						
BFSC	**Mount Baldy Ra**	**1.24**	**307**		Pg	06 42 46.0	-1.2
IRM	**Iron Mountain**	**1.27**	**59**		Pn	06 42 45.7	-2.1
IRM				IAML		06 43 05.6	
	comp=N,379nm,0.4s						
GLA	**Glamis**	**1.44**	**108**		Pn	06 42 47.5	-2.6
GLA				IAML		06 43 14.9	
	comp=N,281nm,0.6s						
GLA				IAML		06 43 15.4	
	comp=E,362nm,0.5s						
DANC	**Danby, Needles**	**1.45**	**38**	IAML		06 43 10.9	
	comp=E,498nm,0.8s						
DANC				IAML		06 43 14.1	
	comp=N,536nm,0.4s						
MWC	**Mount Wilson**	**1.51**	**299**		Pn	06 42 51.0	-0.4
MWC				IAML		06 43 11.8	
	comp=N,618nm,0.4s						
MWC				IAML		06 43 13.1	
	comp=E,710nm,0.5s						
ESJX	**Sierra Juarez**	**1.55**	**164**	IAML		06 43 12.8	
	comp=E,235nm,0.2s						
PASC	**Pasadena Art C**	**1.59**	**295**	IAML		06 43 13.3	
	comp=E,472nm,0.4s						
PASC				IAML		06 43 13.9	
	comp=N,298nm,0.5s						
BLYC	**Blythe**	**1.63**	**81**		Pn	06 42 50.4	-2.3
CCX	**Cicese**	**1.64**	**186**	IAML		06 43 16.8	
	comp=N,402nm,0.7s						
CCX				IAML		06 43 17.4	
	comp=E,230nm,0.4s						
GSC	**Goldstone, Bar**	**1.82**	**351**	IAML		06 43 28.0	
	comp=E,215nm,0.9s						
NEE2	**Needles Airpor**	**1.98**	**50**		Pb	06 42 59.5	-0.5
NEE2				IAML		06 43 27.9	
	comp=E,467nm,0.6s						
TPO	**Tropico Hills**	**2.01**	**314**		Pn	06 42 59.1	+1.0
TPO				IAML		06 43 30.2	
	comp=N,333nm,0.6s						
TPO				IAML		06 43 31.8	
	comp=E,172nm,0.7s						
MTPC	**Mountain Pass**	**2.12**	**20**		Pn	06 42 58.6	-1.0
MTPC				IAML		06 43 31.4	
	comp=N,183nm,0.4s						
MTPC				IAML		06 43 31.6	
	comp=E,226nm,0.4s						
VTX	**Valle De La Tr**	**2.18**	**165**		Pn	06 42 59.6	-0.7
VTX				IAML		06 43 34.0	
	comp=E,118nm,0.5s						
OSI	**Osito Audit: C**	**2.19**	**301**		Pn	06 43 01.0	+0.6
OSI				IAML		06 43 36.0	
	comp=E,153nm,0.6s						
OSI				IAML		06 43 43.1	
	comp=N,146nm,0.9s						
LRMC	**Laurel Mtn Rad**	**2.22**	**333**		Pb	06 43 02.9	-1.2
LRMC				IAML		06 43 35.0	
	comp=E,198nm,0.3s						
LRMC				IAML		06 43 35.5	
	comp=N,258nm,0.4s						
113A	**Mohawk Valley,**	**2.37**	**107**	Pn	Pn	06 43 04.5	+1.6
SHOC	**Shoshone, Teco**	**2.40**	**4**		Pn	06 43 03.7	+0.4
CLC	**China Lake**	**2.49**	**338**		Pn	06 43 04.0	-0.6
W13A	**Hualapai Mount**	**2.66**	**52**		Pn	06 43 06.1	-1.0
ISA	**Isabella, Lake**	**2.72**	**323**	IAML		06 43 51.7	
	comp=E,87nm,0.7s						
Y14A	**Wickenburg**	**2.91**	**80**		Pn	06 43 09.1	-1.3
CWC	**Cottonwood Cre**	**3.22**	**336**		Pn	06 43 16.1	+1.4
TPNV	**Topopah Spring**	**3.45**	**3**	IAML		06 44 14.6	
	comp=E,42nm,0.7s						
GRAC	**Grapevine Rang**	**3.57**	**348**	IAML		06 44 20.4	
	comp=N,38nm,0.8s						
GRAC				IAML		06 44 21.1	
	comp=E,39nm,0.5s						
U15A	**North Rim**	**4.50**	**48**		Pn	06 43 32.1	-0.3
WUAZ	**Wupatki**	**4.66**	**63**		Pn	06 43 34.4	-0.1
SZCU	**Shurtz Canyon**	**4.92**	**33**	Pn	Pn	06 43 37.3	-0.9

IDC 20 06:45:20.8±2.7, 3.96S×135.92E, h0km, mb3.5/1, mbtmp3.9/4, ML4.0/3, Error ellipse: s-maj=83.2km s-min=31.4km az=85.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.96**	**185**	Pn	Pn	06 49 05.0	-2.0
	0.4nm,0.3s,baz=6.8,slow=14,SNR=16						
WRA				Sn	Sn	06 51 55.4	-9.3
	0.7nm,0.3s,baz=3.2,slow=24,SNR=7.5						
	0.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**17.29**	**215**	P	Pn	06 49 24.4	+0.7
	0.7nm,0.3s,baz=35,slow=12,SNR=11						
FITZ				S	Sn	06 52 28.6	-8.2
	3.6nm,0.5s,baz=196,slow=18,SNR=6.2						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**19.69**	**185**	P	P	06 49 52.3	+0.5
	0.9nm,0.3s,baz=10,slow=11,SNR=57						
ASAR				S	S	06 53 19.9	-15
	1.2nm,0.8s,baz=9.9,slow=28,SNR=5.4						
	5.2nm,0.5s						
MKAR	**Makanchi Array**	**69.11**	**324**	P	P	06 56 28.8	0.0
	0.4nm,0.8s,baz=123,slow=5.3,SNR=2.2						
	0.4nm,0.8s						

*DJA **20** 06:55:47.4±1.7, 6.7N±13.2×12.6E±.7, h183km±15km, M4.5/6, mB4.9/3, mb4.8/2, MLv4.5/6, Mw(mB)4.2/3*
*IDC **20** 06:55:50.3±4.4, 6.38N×126.83E, h85km±36km, mb3.7/5, mbtmp4.0/5, Error ellipse: s-maj=79.8km s-min=17.5km az=64.0*
*NEIC **20** 06:55:53.5±1.0, 5.93N±0.09×126.1E±0.2, h84km±11km, mb4.4/16, Error ellipse: s-maj=24.8km s-min=12.1km az=72.0*

ISC 20 06:55:53.4±0.7, 5.98N±0.08×126.0E±0.2, h100km, n26, σ1s35/27, mb4.1/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.15**	**341**	P	**Pn**	**06 56 12.6**	**-2.9**
	599nm,0.4s,baz=80,slow=22,SNR=6.0						
DAV				S	**Sn**	**06 56 33.4**	**+1.3**
	1µm,0.4s,baz=311,slow=22,SNR=39						
DAV	**Davao City (W)**	**

IDC ***20*** *06:55:58.1±0.9,51.84N×74.12E,h0km,mbtmp2.8/3, ML2.4/3,Error ellipse: s-maj=32.1km s-min=7.6km az=29.0.*

NNC ***20*** *06:56:00.9±3.8,51.71N×74.46E,h12km±45km,mb3.0, mpv2.7,Error ellipse: s-maj=30.5km s-min=28.1km az=23.0,Suspected Mining explosion.*

ISC 20 06:55:57.2±1.0,51.8N±0.1×74.07E±0.08,h0km,n9, σ0.73/10,3C-4D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BVA0	**Borovoye Array**	**2.58**	**301**	⇓Pn	**Pg**	**06 56 45.9**	**-0.7**
	2.1nm,0.5s						
BVA0				⇑Sn	**Sg**	**06 57 20.6**	**+0.6**
	7.8nm,0.5s						
BVAR	**Borovoye Array**	**2.58**	**301**	Pg	**Pb**	**06 56 44.2**	**-0.1**
	0.4nm,0.3s,baz=114,slow=18,SNR=30						
BVAR				Lg	Lg	06 57 20.0	
	1.1nm,0.3s,baz=118,slow=29,SNR=24						
KURBB	**Kurchatov Arra**	**3.04**	**111**	Pn	**Pn**	**06 56 46.5**	**0.0**
	0.3nm,0.3s,baz=293,slow=14,SNR=9.0						
KURBB				Pg	**Pb**	**06 56 51.3**	**-0.8**
	0.3nm,0.3s,baz=292,slow=18,SNR=4.0						
KURBB				Lg	Lg	06 57 29.5	
	0.2nm,0.3s,baz=292,slow=16,SNR=4.8						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**3.04**	**111**	⇑Pg	**Pb**	**06 56 51.1**	**-1.0**
	2.5nm,0.3s,baz=298,slow=17						
KURBB				⇓Lg	Lg	06 57 28.8	
	18nm,0.5s,baz=292,slow=28						
KURK	**Kurchatov**	**3.05**	**109**	⇓Pg	**Pb**	**06 56 52.6**	**+0.2**
	0.4nm,0.3s						
KURK				⇑Lg	Lg	06 57 30.5	
	2.5nm,0.5s						
I46RU	**ZALESOVO INFRA**	**6.87**	**67**	I	I	07 34 50.0	
	baz=253,slow=333,SNR=1.2						
ZALV	**Zalesovo Beam**	**6.87**	**67**	Pn	**Pn**	**06 57 39.6**	**+0.5**
	0.2nm,0.3s,baz=254,slow=14,SNR=5.0						
	0.8nm,0.4s						
MK31	**Makanchi Array**	**7.33**	**130**	⇓Lg	Lg	06 59 48.7	
	1.7nm,0.6s,baz=321,slow=29,SNR=3.6						
MKAR	**Makanchi Array**	**7.33**	**130**	Pn	**Pn**	**06 57 46.0**	**+0.5**
	0.1nm,0.3s,baz=312,slow=13,SNR=2.0						
MKAR				Sn	**Sn**	**06 59 10.2**	**+0.8**
	0.2nm,0.3s,baz=318,slow=24,SNR=1.5						
MKAR				Lg	Lg	06 59 45.1	
	0.3nm,0.3s,baz=317,slow=26,SNR=4.6						
	0.2nm,0.3s						

MEX ***20*** *06:59:58.8±0.8,13.73N×93.25W,h10km,MD4.1*
GCG ***20*** *06:59:59.4±1.7,13.72N×93.13W,h35km±999km,MD4.1*

ISC 20 06:59:52.4±2.0,13.71N±0.07×93.28W±0.04,h4km±12km, n27,σ2.29/43,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.54**	**39**	*e*P	**Pb**	**07 00 22.6**	**+1.1**
THIG				*e*S	**Sn**	**07 00 40.4**	**-0.6**
SMCA	**Catarina**	**1.63**	**46**	*i* P	**Pg**	**07 00 23.8**	**+0.2**
SMCA				*i* S	**Sn**	**07 00 43.8**	**+0.5**
PATR	**El Naranjo**	**1.72**	**36**	*e*P	**Pn**	**07 00 24.7**	**+1.3**
PATR				*e*S	**Sg**	**07 00 46.0**	**-1.8**
RTAL	**Retalhuleu**	**1.73**	**62**	*e*P	**Pb**	**07 00 25.4**	**+0.6**
RTAL				*e*S	**Sg**	**07 00 46.8**	**-1.4**
CHUJ	**Union Juarez**	**1.78**	**39**	*e*P	**Pn**	**07 00 25.4**	**+1.2**
CHUJ				*e*S	**Sg**	**07 00 47.5**	**-2.2**
PAVE	**Pavencul**	**1.82**	**36**	*e*P	**Pb**	**07 00 26.3**	**0.0**
PAVE				*e*S	**Sb**	**07 00 48.4**	**-1.1**
STG2	**El Palmar, Qui**	**1.98**	**68**	*i* P	**Pn**	**07 00 27.7**	**+0.9**
STG5	**El Palmar, Qui**	**1.99**	**70**	*i* P	**Pn**	**07 00 27.8**	**+0.8**
STG8	**El Palmar, Qui**	**2.01**	**68**	*i* P	**Pn**	**07 00 28.1**	**+0.9**
QUEO	**Labor Ovalle**	**2.06**	**56**	*i* P	**Pb**	**07 00 31.1**	**+0.6**
QUEO				*i* S	**Sb**	**07 00 56.1**	**-0.5**
ESSG	**Sabana Grande**	**2.47**	**74**	*e*P	**Pn**	**07 00 36.1**	**+2.6**
QUIS	**Sacapulas**	**2.63**	**53**	*i* P	**Pb**	**07 00 40.0**	**-0.2**
FG16	**Alotenango, Sa**	**2.74**	**78**	*i* P	**Pn**	**07 00 36.2**	**-1.1**
CCIG	**Comitan**	**2.78**	**23**	*e*P	**Pb**	**07 00 42.1**	**-0.6**
CCIG				*e*S	**Sb**	**07 01 17.5**	**+0.2**
APG	**El Apazote**	**3.01**	**64**	*i* P	**Pn**	**07 00 44.6**	**+3.5**
TGIG		**3.05**	**3**	*e*P	**Pn**	**07 00 44.6**	**+3.1**
TGIG				*e*S	**Sn**	**07 01 19.0**	**+0.5**
TGIG		**3.05**	**3**	*i* P	**Pn**	**07 00 44.5**	**+3.1**
NUBE	**Las Nubes**	**3.40**	**86**	*e*P	**Pn**	**07 00 49.2**	**+2.8**
NUBE				*e*S	**Sn**	**07 01 25.9**	**-1.4**
HUIG	**Huatulco**	**3.42**	**307**	*e*P	**Pn**	**07 00 48.0**	**+1.6**
HUIG				*e*S	Sn	07 01 21.7	-5.7
UXUV	**UXUV**	**3.68**	**347**	*e*P	**Pn**	**07 00 53.6**	**+3.5**
UXUV				*e*S	**Sn**	**07 01 34.3**	**+0.4**
JAYA	**Jayaque - finc**	**3.72**	**90**	*i* S	**Sn**	**07 01 33.9**	**-1.3**
PEIG	**Puerto Escondi**	**4.38**	**302**	*e*P	**Pn**	**07 01 01.5**	**+1.8**
PEIG				*e*S	Sn	07 01 45.1	-6.0
NEUV	**Arroyo Zacate**	**4.66**	**329**	*e*P	**Pn**	**07 01 05.7**	**+2.2**
NEUV				*e*S	**Sn**	**07 01 54.1**	**-4.0**
VHO	**Vista Hermosa**	**4.72**	**316**	*e*P	**Pn**	**07 01 08.6**	**+4.0**
VHO				*e*S	**Sn**	**07 01 54.5**	**-5.3**
YOIG	**Yosondua**	**5.17**	**308**	*e*P	**Pn**	**07 01 14.9**	**+4.1**
YOIG				*e*S	**Sn**	**07 02 07.8**	**-3.3**
SCIG	**Sabancuy**	**5.60**	**21**	*e*P	**Pn**	**07 01 19.3**	**+2.9**
SCIG				*e*S	**Sn**	**07 02 20.1**	**-1.1**
TOIG	**Toxpalan**	**5.68**	**321**	*e*P	**Pn**	**07 01 20.0**	**+2.3**
TOIG				*e*S	**Sn**	**07 02 21.0**	**-2.4**

NEIC ***20*** *07:03:06.2±2.1,9.68S±0.05×121.74E±0.03,h35km±2km, mb4.3/16,Error ellipse: s-maj=8.6km s-min=4.7km az=160.0*

DJA ***20*** *07:03:08.7±0.2,10.2°S±2.2°×12.2°E±.°,h46km±4km,M4.8/26, mb4.7/26,mB5.4/9,MLv4.6/20,Mw(mB)4.9/9*

IDC ***20*** *07:03:09.6±1.8,9.79S×121.82E,h80km±14km,mb4.1/11, mbtmp4.4/14,MS3.2/1,Error ellipse: s-maj=26.1km s-min=10.4km az=45.0*

ISC 20 07:03:06.0±0.4,9.77S±0.05×121.90E±0.05,h35km,n88, σ2.71/87,mb4.5/16,Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.03**	**349**	P	**Pn**	**07 03 25.3**	**+1.3**
EDFI				S	**Sn**	**07 03 37.6**	**+0.3**
MMRI	**Maumere**	**1.17**	**17**		**Pn**	**07 03 28.2**	**+2.3**
MMRI	**Maumere**	**1.17**	**17**	P	**Pn**	**07 03 28.3**	**+2.4**
MMRI	**Maumere**	**1.17**	**17**	P	**Pn**	**07 03 28.0**	**+2.1**
BASI	**Baing, Sumba**	**1.38**	**251**	P	**Pn**	**07 03 31.9**	**+3.2**
WSI	**Waingapu**	**1.58**	**273**	P	**Pn**	**07 03 34.5**	**+3.0**
BATI	**Baumata**	**1.79**	**104**	P	Pn	07 03 39.9	+5.4
	472nm,0.5s,baz=302,slow=2.7,SNR=41						
BATI				S	**Sn**	**07 04 02.8**	**+6.8**
	349nm,0.4s,baz=40,slow=11,SNR=7.8						
BATI				LR	LR	07 04 40.7	
	comp=Z,996nm,19.8s,baz=22,slow=49						
BATI	**Baumata**	**1.79**	**104**	P	**Pn**	**07 03 36.2**	**+1.7**
SOEI	**Soe**	**2.34**	**90**		Pn	07 03 47.8	+5.8
SOEI	**Soe**	**2.34**	**90**	P	Pn	07 03 49.0	+7.0
SOEI	**Soe**	**2.34**	**90**	P	Pn	07 03 48.1	+6.1
WBSI	**Waikabubak, Su**	**2.47**	**273**	P	**Pn**	**07 03 45.9**	**+2.1**
BSSI	**Bau Bau, Buton**	**3.86**	**339**	P	**Pn**	**07 04 06.5**	**+3.6**
PLAI	**Plampang**	**4.17**	**283**	P	**Pn**	**07 04 11.0**	**+3.8**
PLAI	**Plampang**	**4.17**	**283**	P	**Pn**	**07 04 10.0**	**+2.8**
BBSI	**Bau Bau**	**4.30**	**9**	P	**Pn**	**07 04 10.2**	**+1.2**
BKSI	**Bulukumba**	**4.75**	**338**	P	**Pn**	**07 04 19.7**	**+4.5**
TWSI	**Taliwang, Sumb**	**5.05**	**281**	P	**Pn**	**07 04 22.8**	**+3.5**
KAPI	**Kappang**	**5.18**	**336**	P	**Pn**	**07 04 25.5**	**+4.5**
	64nm,0.7s,baz=165,slow=8.6,SNR=17						
KAPI				S	**Sn**	**07 05 23.6**	**+4.1**
	14nm,0.5s,baz=186,slow=21,SNR=1.0						
KAPI				LR	LR	07 06 17.9	
	comp=Z,239nm,20.4s,baz=152,slow=36						
KAPI	**Kappang**	**5.18**	**336**		**Pn**	**07 04 19.8**	**-1.2**
KAPI	**Kappang**	**5.18**	**336**	P	**Pn**	**07 04 25.6**	**+4.6**
SRBI	**Singaraja**	**6.81**	**284**	P	**Pn**	**07 04 46.3**	**+2.8**
	0.3nm69nm,0.7s						
JAGI	**Jajag, Banyuwa**	**7.76**	**279**		**Pn**	**07 04 56.5**	**+0.1**
JAGI	**Jajag, Banyuwa**	**7.76**	**279**	P	**Pn**	**07 04 57.1**	**+0.7**
JAGI	**Jajag, Banyuwa**	**7.76**	**279**	P	**Pn**	**07 04 57.2**	**+0.8**
	2um118nm,0.8s						
ABJI	**Asem Bagus**	**7.82**	**284**	P	**Pn**	**07 05 00.2**	**+2.9**
	0.2nm53nm,0.7s						
KMMI	**Kalianget**	**8.30**	**288**	P	**Pn**	**07 05 06.7**	**+2.8**
	43nm,1.6s						
BLJI	**Banyuglugur**	**8.45**	**283**	P	**Pn**	**07 05 09.3**	**+3.4**
SANI	**Sanana**	**8.68**	**28**	P	**Pn**	**07 05 12.1**	**+3.0**
	15nm,0.6s						
LUWI	**Luwuk**	**8.71**	**6**	Pn	**Pn**	**07 05 08.1**	**-1.4**
KNRA	**Kununurra**	**8.91**	**132**		**Pn**	**07 05 14.3**	**+2.1**
FITZ	**Fitzroy Crossi**	**9.04**	**157**	P	**Pn**	**07 05 16.4**	**+2.3**
	5.8nm,0.5s,baz=336,slow=9.9,SNR=20						
FITZ				S	**Sn**	**07 06 49.5**	**-5.2**
	25nm,0.6s,baz=206,slow=20,SNR=13						
DRS	**Darwin Rock St**	**9.22**	**108**	P	**Pn**	**07 05 19.3**	**+2.7**
SAUI	**Saumlaki**	**9.46**	**80**	P	**Pn**	**07 05 24.0**	**+4.2**
MTN	**Manton Dam**	**9.56**	**110**		**Pn**	**07 05 22.8**	**+1.6**
PCJI	**Pacitan**	**10.70**	**278**	P	**Pn**	**07 05 38.6**	**+1.7**
	56nm,0.7s						
UGM	**Wanagama**	**11.39**	**278**	Pn	**Pn**	**07 05 45.4**	**-0.9**
UGM	**Wanagama**	**11.39**	**278**	P	**Pn**	**07 05 49.2**	**+2.9**
UGM	**Wanagama**	**11.39**	**278**	P	**Pn**	**07 05 48.2**	**+1.9**
	69nm,1.9s						
MBWA	**Marble Bar**	**11.52**	**190**	Pn	**Pn**	**07 05 49.0**	**+1.0**
MBWA	**Marble Bar**	**11.52**	**190**	P	**Pn**	**07 05 48.0**	**0.0**
PSA00	**Pilbara Seismi**	**11.90**	**189**	Pn	**Pn**	**07 05 54.7**	**+1.4**
PSA00	**Pilbara Seismi**	**11.90**	**189**	P	**Pn**	**07 05 53.6**	**+0.3**
FAKI	**Fak Fak**	**12.33**	**57**		**Pn**	**07 06 01.5**	**+2.3**
FAKI	**Fak Fak**	**12.33**	**57**	P	**Pn**	**07 06 02.2**	**+3.0**
	26nm,0.8s						
KPJI	**Karang Pucung**	**13.05**	**280**	P	**Pn**	**07 06 10.3**	**+1.3**
	37nm,0.7s						
SGSI	**Sangihe**	**13.85**	**15**	P	**P**	**07 06 25.3**	**-2.4**
BBJI	**Bungbulang**	**14.27**	**278**	P	**Pn**	**07 06 26.2**	**+0.5**
SBUM	**Sibu**	**15.50**	**321**		**Pn**	**07 06 45.0**	**+2.9**
SBUM				IAmb	IAmb	07 06 50.3	
	comp=Z,10nm,0.8s						
WB0	**Warramunga Arr**	**15.64**	**131**		**Pn**	**07 06 43.5**	**-0.3**
WRA	**Warramunga Arr**	**15.70**	**132**	P	**Pn**	**07 06 42.7**	**-2.0**
	comp=Z,3.7nm,0.8s,baz=310,slow=15,SNR=25						
WRA				S	**Sn**	**07 09 28.2**	**-10**
	comp=Z,5.8nm,0.5s,baz=305,slow=24,SNR=10						
WRA	**Warramunga Arr**	**15.70**	**132**		**Pn**	**07 06 44.9**	**+0.2**
WRAB	**Tennant Creek**	**15.71**	**131**		**Pn**	**07 06 44.3**	**-0.5**
WRAB	**Tennant Creek**	**15.71**	**131**		**Pn**	**07 06 44.5**	**-0.2**
WRAB				IAmb	IAmb	07 07 12.3	
	comp=Z,7.8nm,0.8s						
WR8	**Warramunga Arr**	**15.83**	**131**		**Pn**	**07 06 46.0**	**-0.4**
WR8				IAmb	IAmb	07 06 58.1	
	comp=Z,7.3nm,0.6s						
MEEK	**Meekatharra**	**17.07**	**190**	P	**P**	**07 07 04.3**	**+0.9**
KASI	**Kota Agung**	**17.75**	**282**	P	**P**	**07 07 12.2**	**+1.1**
	comp=Z,57nm,0.7s						
AS31	**Alice Springs**	**17.96**	**142**		**P**	**07 07 14.7**	**+1.3**
ASAR	**Alice Springs**	**17.96**	**142**	P	**P**	**07 07 14.1**	**+0.7**
	comp=Z,2.5nm,0.5s,baz=319,slow=12,SNR=29						
ASAR				S	Sn	07 10 20.2	-12
	comp=Z,4.1nm,0.6s,baz=54,slow=8.9,SNR=16						
ASAR				ScP	**ScP**	**07 15 14.2**	**-6.3**
	comp=Z,0.2nm,0.6s,baz=315,slow=1.9,SNR=1.4						
GENI	**Genyem**	**19.50**	**70**	P	**Pn**	**07 07 36.1**	**+4.3**
MORW	**Morawa**	**19.97**	**195**	P	**Pn**	**07 07 40.2**	**+3.0**
QIS	**Mount Isa**	**20.16**	**124**	P	Pn	07 07 40.8	+1.3
BLDU	**Ballidu**	**21.30**	**192**	P	**P**	**07 07 55.1**	**+5.4**
BBOO	**Buckleboo**	**26.40**	**152**	P	**P**	**07 08 39.1**	**-0.2**
BBOO				IAmb	IAmb	07 09 03.6	
	comp=Z,43nm,1.4s						
STKA	**Stephens Creek**	**28.59**	**143**	P	**P**	**07 08 58.8**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=323,slow=10,SNR=1.6						
	comp=Z,0.6nm,0.4s						
MJAR	**Matsushiro Arr**	**48.55**	**18**	P	**P**	**07 11 44.5**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=193,slow=9.9,SNR=5.1						
	comp=Z,1.5nm,0.5s						
MJAR	**Matsushiro Arr**	**48.55**	**18**	IAmb	IAmb	07 12 03.6	
	comp=Z,7.9nm,1.5s						
JMM	**Marumori**	**50.58**	**19**	P	**P**	**07 12 00.7**	**-0.5**
EVN	**Everest**	**50.58**	**319**		**P**	**07 12 01.4**	**-0.9**
USRK	**Ussuriysk Ar.**	**54.49**	**9**	P	**P**	**07 12 28.5**	**-1.6**
	comp=Z,1.6nm,0.4s,baz=183,slow=8.4,SNR=4.2						
	comp=Z,1.6nm,0.4s						
SONM	**Songino Array**	**58.98**	**348**	P	**P**	**07 13 00.5**	**-1.5**
	comp=Z,2.0nm,0.5s,baz=164,slow=8.6,SNR=9.7						
	comp=Z,2.0nm,0.5s						
HILR	**Hailar Array B**	**59.10**	**358**	P	**P**	**07 13 02.0**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=169,slow=8.8,SNR=5.0						
	comp=Z,2.3nm,0.5s						
MKAR	**Makanchi Array**	**66.46**	**331**	P	**P**	**07 13 50.9**	**-1.0**
	comp=Z,11nm,0.6s,baz=138,slow=7.4,SNR=56						
	comp=Z,11nm,0.6s						
MKAR	**Makanchi Array**	**66.46**	**331**	P	**P**	**07 13 51.2**	**-0.7**
BOOM	**Boomskoye usch**	**66.83**	**325**	P	**P**	**07 13 53.5**	**-1.1**
BOOM				IAmb	IAmb	07 13 57.9	
	comp=Z,9.9nm,1.4s						
PETK	**Petropavlovsk-**	**69.67**	**22**	P	**P**	**07 14 11.6**	**-0.3**
	comp=Z,5.5nm,0.9s,baz=245,slow=3.0,SNR=6.1						
	comp=Z,5.5nm,0.9s						
ZAA0	**Zalesovo Array**	**70.80**	**338**	P	**P**	**07 14 16.7**	**-2.0**
ZALV	**Zalesovo Beam**	**70.80**	**338**	P	**P**	**07 14 16.5**	**-2.2**
	comp=Z,12nm,0.5s,baz=138,slow=5.1,SNR=51						
	comp=Z,12nm,0.5s						
ZALV	**Zalesovo Beam**	**70.80**	**338**		**P**	**07 14 16.6**	**-2.1**
KURBB	**Kurchatov Arra**	**70.94**	**332**	P	**P**	**07 14 18.3**	**-1.4**
	comp=Z,1.6nm,0.4s,baz=147,slow=5.3,SNR=21						
	comp=Z,1.6nm,0.4s						
KURK	**Kurchatov**	**70.97**	**333**		**P**	**07 14 18.6**	**-1.2**
KURK				IAmb	IAmb	07 14 19.6	
	comp=Z,4.6nm,0.8s						
BVAR	**Borovoye Array**	**76.33**	**331**	P	**P**	**07 14 49.9**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=129,slow=5.6,SNR=10						
	comp=Z,1.2nm,0.4s						
AB31	**Akbulak array**	**79.84**	**324**	P	**P**	**07 15 09.8**	**-1.0**
AB31				IAmb	IAmb	07 15 11.3	
	comp=Z,1.7nm,0.9s						
ABKAR	**Akbulak array**	**79.84**	**324**	P	**P**	**07 15 09.6**	**-1.3**
QSPA	**South Pole Qui**	**80.23**	**180**	P	**P**	**07 15 14.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=305,slow=3.0,SNR=6.7						
QSPA	**South Pole Qui**	**80.23**	**180**	IAmb	IAmb	07 15 28.2	
	comp=Z,4.8nm,1.4s						
BRTR	**Keskin Array B**	**94.83**	**309**	P	**P**	**07 16 23.0**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=47,slow=6.3,SNR=2.8						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**133.21**	**59**	PKP	**PKPdf**	**07 22 16.5**	**-2.4**
	comp=Z,0.1nm,0.6s,baz=286,slow=1.4,SNR=0.9						

IDC ***20*** *07:05:13.2±0.8,6.46S×151.72E,h0km,mb4.3/15, mbtmp4.3/16,ML2.7/1,MS3.7/1,Error ellipse: s-maj=26.4km s-min=15.9km az=109.0*

NEIC ***20*** *07:05:15.7±2.2,6.49S±0.09×151.7E±0.1,h10km±1km, mb4.8/16,Error ellipse: s-maj=23.8km s-min=11.0km az=121.0*

ISC 20 07:05:14.9±0.7,6.5S±0.1×151.7E±0.1,h10km,n40, σ1.16/38,mb4.5/23,1C,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.32**	**11**	Pn	**Pn**	**07 05 54.7**	**+1.5**
PMG	**Port Moresby**	**5.37**	**237**	Pn	**Pn**	**07 06 36.1**	**+1.0**
	18nm,0.3s,baz=32,slow=6.8,SNR=18						
PMG				Sn	**Sn**	**07 07 38.9**	**+1.9**
	8.9nm,0.3s,baz=137,slow=7.5,SNR=4.7						
	46nm,0.3s						
PMG	**Port Moresby**	**5.37**	**237**		**Pn**	**07 06 36.9**	**+1.7**
COEN	**Coen**	**11.21**	**228**	Pn	**Pn**	**07 07 53.1**	**-2.3**
MTN	**Manton Dam**	**21.25**	**251**	P	**P**	**07 10 02.0**	**+0.6**
WRA	**Warramunga Arr**	**21.54**	**230**	P	**P**	**07 10 04.8**	**+0.2**
	3.4nm,0.6s,baz=53,slow=9.8,SNR=3.6						
WRA				PcP	**PcP**	**07 14 06.8**	**-0.4**
	0.6nm,0.7s,baz=69,slow=2.6,SNR=2.8						
	3.4nm,0.6s						
ASAR	**Alice Springs**	**24.19**	**223**	P	**P**	**07 10 31.2**	**-0.6**
	2.9nm,0.4s,baz=48,slow=9.3,SNR=15						
	2.9nm,0.4s						
STKA	**Stephens Creek**	**26.98**	**199**	P	**P**	**07 10 56.9**	**-0.1**
	4.0nm,0.7s,baz=3.8,slow=8.5,SNR=4.4						
	4.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**27.93**	**243**	P	**P**	**07 11 04.8**	**-0.9**
	6.7nm,0.6s,baz=50,slow=9.0,SNR=3.9						
	6.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**27.93**	**243**	IAmb	IAmb	07 11 05.6	
	comp=Z,1.7nm,0.6s						
PSA00	**Pilbara Seismi**	**34.26**	**241**	P	**P**	**07 11 59.9**	**-1.6**
PSA00				IAmb	IAmb	07 12 04.3	
	comp=Z,8.2nm,0.9s						
JAGI	**Jajag, Banyuwa**	**37.29**	**265**	P	**P**	**07 12 25.6**	**-2.0**
JHJ	**Hachijo jima 2**	**40.98**	**345**	LR	LR	07 25 52.6	
	comp=Z,108nm,21.8s,baz=49,slow=30						
CMAR	**Chiang Mai Arr**	**57.64**	**297**	P	**P**	**07 15 06.1**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=118,slow=6.7,SNR=1.5						
	comp=Z,1.1nm,0.3s						
PETK	**Petropavlovsk-**	**59.58**	**4**	P	**P**	**07 15 18.6**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=182,slow=8.7,SNR=4.5						
	comp=Z,3.3nm,0.9s						
LZDM	**Lanzhou Array**	**61.73**	**317**	P	**P**	**07 15 34.1**	**0.0**
	comp=Z,1.0nm,0.3s,baz=95,slow=7.2,SNR=1.6						
	comp=Z,1.0nm,0.3s						
VNDA	**Vanda**	**71.20**	**178**	P	**P**	**07 16 32.7**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=329,slow=6.3,SNR=11						
	comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**71.20**	**178**	IAmb	IAmb	07 16 33.5	
	comp=Z,5.2nm,1.4s						
K15K	**Wolf Creek Mou**	**77.34**	**20**	P	**P**	**07 17 11.6**	**+1.9**
M16K	**Timber Creek**	**77.44**	**22**	P	**P**	**07 17 11.9**	**+1.7**
M16K				IAmb	IAmb	07 17 13.3	
	comp=Z,11nm,1.0s						
L16K	**Owhat River**	**77.69**	**22**	P	**P**	**07 17 12.8**	**+1.2**
MKAR	**Makanchi Array**	**80.88**	**319**	P	**P**	**07 17 29.0**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=97,slow=9.0,SNR=4.3						
	comp=Z,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**81.95**	**327**	P	**P**	**07 17 34.4**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=111,slow=6.1,SNR=4.3						
	comp=Z,1.0nm,0.4s						
SML	**Sawmill**	**82.09**	**25**	P	**P**	**07 17 36.4**	**+0.9**
IMAR	**Indian Mountai**	**82.32**	**20**	P	**P**	**07 17 37.5**	**+1.0**
MLY	**Manley**	**82.83**	**21**	P	**P**	**07 17 40.1**	**+0.8**
MLY				IAmb	IAmb	07 17 43.1	
	comp=Z,3.9nm,0.7s						
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**07 17 44.5**	**+1.7**
	comp=Z,3.2nm,0.8s,baz=280,slow=0.5,SNR=13						
	comp=Z,3.2nm,0.8s						
QSPA	**South Pole Qui**	**83.49**	**180**	IAmb	IAmb	07 17 45.6	
	comp=Z,4.0nm,0.9s						
IL31		**84.11**	**22**	P	**P**	**07 17 45.5**	**-0.3**
IL31				IAmb	IAmb	07 17 46.0	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**84.11**	**22**	P	**P**	**07 17 45.4**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=246,slow=5.5,SNR=26						
	comp=Z,2.1nm,0.7s						
KURK	**Kurchatov**	**84.43**	**322**	P	**P**	**07 17 48.0**	**+0.3**
KURK				IAmb	IAmb	07 17 49.2	
	comp=Z,6.7nm,1.2s						
KURBB	**Kurchatov Arra**	**84.45**	**322**	P	**P**	**07 17 47.7**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=114,slow=3.7,SNR=14						
	comp=Z,1.0nm,0.5s						
J25K	**Salcha River,**	**84.61**	**23**	P	**P**	**07 17 49.1**	**+0.7**
J25K				IAmb	IAmb	07 17 49.6	
	comp=Z,5.6nm,0.7s						
D23K	**Nanushuk River**	**84.97**	**18**	P	**P**	**07 17 52.1**	**+2.0**
D23K				IAmb	IAmb	07 17 52.5	
	comp=Z,8.7nm,1.1s						
TOLK	**Toolik Lake Re**	**85.14**	**18**	P	**P**	**07 17 52.3**	**+1.3**
TOLK				IAmb	IAmb	07 17 53.2	
	comp=Z,7.4nm,1.1s						
BCAR	**Beaver Creek A**	**85.38**	**25**	P	**P**	**07 17 53.4**	**+1.1**
KKAR	**Karatay Array**	**88.00**	**314**		**P**	**07 18 05.6**	**+0.1**
BVAR	**Borovoye Array**	**89.94**	**323**	P	**P**	**07 18 13.6**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=110,slow=8.4,SNR=4.8						
	comp=Z,1.3nm,0.6s						
SYO	**Syowa Base**	**91.73**	**200**	*e*PcP	**PcP**	**07 18 24.3**	**+1.0**
NVAR	**Mina Array Bea**	**93.96**	**52**	P	**P**	**07 18 33.7**	**0.0**
	comp=Z,0.5nm,0.7s,baz=268,slow=4.4,SNR=2.3						
	comp=Z,0.5nm,0.7s						

IDC ***20*** *07:05:17.7±2.8,54.40N×86.95E,h0km,mbtmp3.1/2, ML3.0/2,Error ellipse: s-maj=22.9km s-min=15.8km az=61.0*

ASRS 20 07:05:16.0±0.7,54.38N×86.79E,h0km,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**259**	I	I	07 26 10.0	
	baz=80,slow=356,SNR=5.7						
ZALV	**Zalesovo Beam**	**0.93**	**259**	Pg	Pg	07 20 49.6	-1.5
	0.8nm,0.3s,baz=79,slow=17,SNR=8.5						
ZALV				Lg	Lg	07 21 05.1	
	0.7nm,0.3s,baz=74,slow=28,SNR=5.3						
ZALV				Rg	Rg	07 21 10.3	
	3.5nm,0.3s,baz=73,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**5.95**	**237**	Pn	Pn	07 22 03.1	+0.6
	0.1nm,0.3s,baz=54,slow=13,SNR=5.6						
	0.8nm,0.2s						
MKAR	**Makanchi Array**	**7.80**	**201**	Pn	Pn	07 22 29.3	+1.4
	0.2nm,0.3s,baz=20,slow=13,SNR=6.6						
	0.3nm,0.3s						

IDC 20 07:28:10.2±20.0, 23.37S×179.73E, h655km±288km, mb3.0/4, mbtmp4.0/4, Error ellipse: s-maj=152.1km s-min=80.5km az=9.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.69**	**247**	P	P	07 34 08.5	0.0
	1.5nm,0.6s,baz=97,slow=8.1,SNR=3.9						
	1.5nm,0.6s						
ASAR	**Alice Springs**	**41.88**	**260**	P	P	07 35 06.6	+0.3
	2.8nm,0.8s,baz=101,slow=6.8,SNR=27						
	2.8nm,0.8s						
WRA	**Warramunga Arr**	**42.20**	**266**	P	P	07 35 08.7	-0.1
	2.4nm,0.6s,baz=103,slow=8.0,SNR=58						
	2.4nm,0.6s						
TXAR	**Lajitas Array**	**90.36**	**58**	P	P	07 40 04.3	+0.3
	0.3nm,0.7s,baz=253,slow=4.6,SNR=3.9						
	0.3nm,0.7s						
HFS	**Hagfors**	**141.98**	**349**	PKP	PKPdf	07 46 26.0	-2.8
	2.5nm,0.9s,baz=42,slow=2.3,SNR=5.9						

*IDC **20** 07:32:22.3±1.4, 49.80N×81.60E, h0km, mbtmp2.8/2, ML2.5/1, Error ellipse: s-maj=18.5km s-min=9.4km az=53.0*
*NNC **20** 07:32:23.3±1.2, 49.55N×81.57E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=18.2km s-min=5.1km az=53.0, Suspected Mining explosion.*
ISC 20 07:32:24.1±1.5, 49.79N±0.07×81.62E±0.08, h0km, n8, σ0s36/10, 6C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.14**	**297**	⇑Pn	**Pn**	**07 33 01.2**	**+0.2**
	6.9nm,0.8s						
KURK				⇑Sn	**Sb**	**07 33 30.7**	**0.0**
	12nm,1.0s						
KURBB	**Kurchatov Arra**	**2.15**	**294**	Pg	**Pn**	**07 33 00.8**	**-0.4**
	0.4nm,0.3s,baz=112,slow=19,SNR=48						
KURBB				Lg	Lg	07 33 30.0	
	0.8nm,0.3s,baz=120,slow=30,SNR=18						
KURBB	**Kurchatov Arra**	**2.15**	**294**	⇑Pn	**Pn**	**07 33 01.4**	**+0.1**
	16nm,0.7s						
KURBB				⇓Sn	**Sb**	**07 33 31.2**	**0.0**
	46nm,0.6s						
MAKZ	**Makanchi**	**2.99**	**175**	⇑Pg	**Pn**	**07 33 13.1**	**+0.3**
	2.6nm,0.8s						
MAKZ				⇑Lg	Lg	07 33 52.4	
	20nm,1.4s						
MK31	**Makanchi Array**	**3.03**	**171**	⇑Pg	**Pn**	**07 33 13.7**	**+0.4**
	0.3nm,0.2s,baz=353,slow=16,SNR=19						
MK31				⇓Lg	Lg	07 33 53.9	
	10nm,0.8s,baz=348,slow=32,SNR=17						
MKAR	**Makanchi Array**	**3.03**	**171**	Pn	**Pn**	**07 33 12.6**	**-0.7**
	0.6nm,0.3s,baz=356,slow=13,SNR=13						
MKAR				Sn	**Sn**	**07 33 50.2**	**0.0**
	0.6nm,0.3s,baz=351,slow=25,SNR=4.4						
MKAR				Lg	Lg	07 33 54.8	
	1.3nm,0.3s,baz=353,slow=29,SNR=20						
	1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**4.61**	**24**	Pn	**Pn**	**07 33 35.0**	**0.0**
	0.9nm,0.3s,baz=207,slow=14,SNR=1.6						
ZALV				Lg	Lg	07 34 47.6	
	0.2nm,0.3s,baz=202,slow=25,SNR=6.6						
I46RU	**ZALESOVO INFRA**	**4.62**	**24**	I	I	07 59 40.0	
	0.1nm,1.2s,baz=200,slow=333,SNR=3.3						

*IDC **20** 07:38:28.1±1.6, 1.75N×126.44E, h0km, mb3.6/4, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=122.8km s-min=20.2km az=69.0*
*DJA **20** 07:38:33.8±2.7, 2.7N±5.1×12.6E±.1, h26km±29km, M3.5/6, MLv3.5/6*
ISC 20 07:38:33.9±1.1, 1.6N±0.2×126.4E±0.3, h35km, n7, σ1s21/7, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**128**	P	**Pn**	**07 38 55.9**	**+0.4**
SGSI	**Sangihe**	**2.25**	**339**	P	**Pn**	**07 39 09.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.56**	**182**	P	**P**	**07 42 59.1**	**+0.3**
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.6						
	1.3nm,0.9s						
WRA	**Warramunga Arr**	**22.77**	**160**	P	**P**	**07 43 33.5**	**-0.1**
	1.0nm,0.6s,baz=340,slow=11,SNR=9.3						
	1.0nm,0.6s						
ASAR	**Alice Springs**	**26.14**	**164**	P	**P**	**07 44 05.9**	**+0.8**
	0.2nm,0.6s,baz=347,slow=10,SNR=9.1						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**07 48 29.1**	**-1.8**
	0.3nm,0.3s,baz=116,slow=8.3,SNR=5.1						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.35**	**328**	P	**P**	**07 48 59.0**	**-0.6**
	0.7nm,0.5s,baz=134,slow=6.3,SNR=5.9						
	0.7nm,0.5s						

*IDC **20** 07:44:57.3±3.2, 54.38N×87.23E, h0km, mbtmp2.9/2, ML2.2/2, Error ellipse: s-maj=26.6km s-min=19.0km az=54.0*
ASRS 20 07:44:56.0±0.5, 54.27N×87.10E, h0km, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**257**	I	I	07 53 00.0	
	0.2nm,1.0s,baz=75,slow=356,SNR=28						
ZALV	**Zalesovo Beam**	**1.38**	**257**	Pg	Pb	07 45 23.9	+1.3
	1.5nm,0.3s,baz=74,slow=17,SNR=13						
ZALV				Lg	Lg	07 45 44.6	
	1.4nm,0.3s,baz=71,slow=29,SNR=13						
KURBB	**Kurchatov Arra**	**6.38**	**239**	Pn	Pn	07 46 34.3	+3.1
	baz=55,slow=14,SNR=6.3						
KURBB				Lg	Lg	07 48 24.4	
	baz=44,slow=35,SNR=2.1						
	0.5nm,0.2s						
MKAR	**Makanchi Array**	**8.09**	**204**	Pn	Pn	07 46 59.2	+4.5
	0.1nm,0.3s,baz=25,slow=13,SNR=2.2						
MKAR				Lg	Lg	07 49 20.6	
	baz=21,slow=29						
	0.2nm,0.3s						

*IDC **20** 07:48:03.3±16.0, 12.98S×166.97E, h170km±145km, mb3.3/6, mbtmp3.8/6, Error ellipse: s-maj=57.8km s-min=35.1km az=90.0*
ISC 20 07:48:04.5±1.3, 13.0S±0.2×167.0E±0.3, h180km, n6, σ1s04/7, mb3.5/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.91**	**227**	P	**P**	**07 53 55.7**	**+0.2**
	2.1nm,0.9s,baz=76,slow=12,SNR=2.2						
	2.1nm,0.9s						
WRA	**Warramunga Arr**	**32.00**	**253**	P	**P**	**07 54 13.8**	**-0.2**
	0.4nm,1.0s,baz=83,slow=9.2,SNR=2.0						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**33.05**	**247**	P	**P**	**07 54 22.7**	**-0.5**
	0.4nm,0.6s,baz=76,slow=9.1,SNR=12						
ASAR				PcP	**PcP**	**07 57 01.2**	**-1.4**
	0.2nm,0.7s,baz=80,slow=2.3,SNR=4.4						
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**77.00**	**180**	P	**P**	**07 59 37.7**	**+0.5**
	1.3nm,1.0s,baz=68,slow=3.5,SNR=5.3						
	1.3nm,1.0s						
ILAR	**Eielson Array**	**85.00**	**18**	P	**P**	**08 00 18.6**	**-0.6**
	0.3nm,0.6s,baz=232,slow=4.6,SNR=5.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**95.77**	**317**	P	**P**	**08 01 11.4**	**+1.2**
	0.4nm,0.6s,baz=94,slow=5.2,SNR=2.6						
	0.4nm,0.6s						

IDC 20 07:50:13.7±3.0, 53.73N×86.94E, h0km, mbtmp2.7/2, ML2.0/2, Error ellipse: s-maj=27.6km s-min=16.3km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**281**	I	I	07 57 20.0	
	baz=100,slow=354,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.27**	**281**	Pg	Pg	07 50 36.6	-1.5
	0.5nm,0.3s,baz=99,slow=18,SNR=6.3						
ZALV				Lg	Lg	07 50 55.3	
	0.5nm,0.3s,baz=99,slow=29,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.04**	**242**	Pn	Pn	07 51 45.3	+1.1
	baz=59,slow=15,SNR=1.7						
	0.4nm,0.2s						
MKAR	**Makanchi Array**	**7.55**	**205**	Pn	Pn	07 52 06.4	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=1.4						
	0.1nm,0.4s						

*IDC **20** 07:59:12.3±1.2, 14.82S×173.26W, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=38.7km s-min=32.7km az=95.0*
*NEIC **20** 07:59:13.3±2.3, 14.95S±0.08×172.7W±0.2, h10km±1km, mb4.4/9, Error ellipse: s-maj=27.6km s-min=12.1km az=105.0*
ISC 20 07:59:12.7±0.8, 14.8S±0.2×172.9W±0.2, h10km, n23, σ1s32/15, mb4.2/9, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.34**	**51**		**Pn**	**07 59 36.1**	**-1.5**
NIUE	**Niue**	**5.12**	**147**		Pn	08 00 22.1	-7.4
TOZ	**Tahuroa Road**	**25.10**	**202**	P	**P**	**08 04 37.4**	**-0.2**
RTZ	**Ruatahuna**	**25.39**	**199**	P	**P**	**08 04 39.2**	**-1.1**
RTZ				IAmb	IAmb	08 05 07.0	
	comp=Z,16nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**38.70**	**328**	T	T	08 47 15.0	
	baz=146,slow=76,SNR=5.4						
H11S3	**WAKE ISLAND Hy**	**38.72**	**328**	T	T	08 47 16.1	
	baz=146,slow=76,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**38.72**	**328**	T	T	08 47 15.2	
	baz=146,slow=76,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**39.63**	**329**	T	T	08 49 46.8	
	baz=148						
H11N1	**WAKE ISLAND Hy**	**39.64**	**329**	T	T	08 49 39.5	
	baz=149						
H11N2	**WAKE ISLAND Hy**	**39.65**	**329**	T	T	08 49 37.0	
	baz=148						
WR8	**Warramunga Arr**	**50.35**	**256**	P	**P**	**08 08 09.8**	**-0.6**
WR8				IAmb	IAmb	08 08 20.4	
	comp=Z,5.2nm,1.3s						
WB0	**Warramunga Arr**	**50.47**	**256**	P	**P**	**08 08 11.2**	**0.0**
WRAB	**Tennant Creek**	**50.50**	**256**	P	**P**	**08 08 11.0**	**-0.4**
WRAB				IAmb	IAmb	08 08 12.7	
	comp=Z,6.6nm,1.3s						
WRA	**Warramunga Arr**	**50.51**	**256**	P	**P**	**08 08 09.6**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=91,slow=6.7,SNR=9.8						
	comp=Z,0.2nm,0.4s						
ASAR	**Alice Springs**	**50.81**	**251**	P	**P**	**08 08 12.1**	**-1.7**
	comp=Z,1.2nm,0.6s,baz=88,slow=8.4,SNR=20						
	comp=Z,1.2nm,0.6s						
SBA	**Scott Base**	**63.92**	**185**	P	**P**	**08 09 45.6**	**+0.3**
VNDA	**Vanda**	**64.06**	**186**	P	**P**	**08 09 45.9**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=16,slow=7.4,SNR=4.3						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**64.06**	**186**	IAmb	IAmb	08 10 19.7	
	comp=Z,3.3nm,1.4s						
QSPA	**South Pole Qui**	**75.27**	**180**	P	**P**	**08 10 58.0**	**+2.2**
	comp=Z,1.8nm,0.8s,baz=62,slow=2.8,SNR=8.6						
	comp=Z,1.8nm,0.8s						
QSPA	**South Pole Qui**	**75.27**	**180**	P	**P**	**08 10 56.8**	**+1.0**
QSPA				IAmb	IAmb	08 10 59.1	
	comp=Z,1.8nm,0.8s						
ILAR	**Eielson Array**	**81.73**	**11**	P	**P**	**08 11 33.2**	**+2.2**
	comp=Z,0.7nm,1.0s,baz=199,slow=4.7,SNR=4.3						
	comp=Z,0.7nm,1.0s						
MAW	**Mawson**	**88.56**	**198**	P	**P**	**08 12 04.9**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=173,slow=8.1,SNR=4.2						
	comp=Z,2.3nm,0.9s						
BRTR	**Keskin Array B**	**146.00**	**322**	PKPbc	**PKPdf**	**08 18 52.6**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=35,slow=1.7,SNR=3.5						

*ASRS **20** 08:09:47.0±1.4, 54.31N×86.15E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 20 08:09:49.8±2.3, 54.26N×86.12E, h0km, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=18.4km s-min=11.8km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**249**	I	I	08 14 50.0	
	0.1nm,0.8s,baz=66,slow=353,SNR=3.9						
ZALV	**Zalesovo Beam**	**0.83**	**249**	Pg	Pg	08 10 04.5	-1.1
	1.8nm,0.3s,baz=65,slow=16,SNR=13						
ZALV				Lg	Lg	08 10 17.5	
	5.5nm,0.3s,baz=68,slow=35,SNR=10						
KURBB	**Kurchatov Arra**	**5.90**	**235**	Pn	Pn	08 11 18.9	+0.6
	0.1nm,0.3s,baz=51,slow=13,SNR=4.5						
KURBB				Lg	Lg	08 12 57.1	
	0.1nm,0.3s,baz=52,slow=31,SNR=1.8						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.86**	**200**	Pn	Pn	08 11 45.7	+0.5
	0.5nm,0.3s,baz=20,slow=13,SNR=9.0						
	0.4nm,0.3s						
BVAR	**Borovoye Array**	**9.43**	**269**	Pn	Pn	08 12 07.4	+0.6
	baz=77,slow=15,SNR=1.9						
	0.2nm,0.3s						

*ISN **20** 08:11:44.5±0.9, 34.58N×45.72E, h24km±5km, ML2.8*
*TEH **20** 08:11:46.4, 34.61N×45.78E, h12km±82km*
ISC 20 08:11:45.0±2.0, 34.59N±0.04×45.69E±0.06, h12km±17km, n12, σ0s88/17, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLG1	**Gilan-e-Gharb**	**0.51**	**159**	Pg	**Pb**	**08 11 56.5**	**+0.6**
IDHR	**Dehrash**	**0.59**	**79**	Pg	**Pb**	**08 11 56.4**	**-1.0**
KCHF	**Cheshme Sefid,**	**1.16**	**105**	Pg	**Pg**	**08 12 07.9**	**+0.6**
IKRK	**Kirkuk**	**1.37**	**307**	*e*Pg	**Pn**	**08 12 10.0**	**-0.1**
IKRK				*e*Sg	**Sn**	**08 12 28.0**	**-0.2**
IKRK				AML	AML	08 12 32.8	
	comp=N,462nm,0.6s						
IKRK				AML	AML	08 12 36.0	
	comp=E,283nm,0.7s						
IBDR	**Badra**	**1.48**	**172**	*e*Pn	**Pn**	**08 12 11.0**	**-0.5**
IBDR				*e*Sn	**Sb**	**08 12 31.0**	**-0.4**
IBDR				AML	AML	08 12 42.9	
	comp=E,62nm,1.1s						
IBDR				AML	AML	08 12 43.1	
	comp=N,73nm,0.7s						
SNQR	**Sonqor, Kerman**	**1.62**	**80**	Pg	**Pg**	**08 12 15.8**	**-0.4**
BHD	**Baghdad**	**1.70**	**220**	*e*Pn	**Pn**	**08 12 15.0**	**+0.5**
BHD				*e*Sn	**Sn**	**08 12 37.0**	**+0.7**
IBZA	**Bozab**	**1.80**	**93**	Pg	**Pb**	**08 12 18.1**	**0.0**
IDOB	**Doab**	**2.21**	**110**	Pn	**Pb**	**08 12 23.7**	**-1.4**
MSL	**Mosul**	**2.78**	**311**	*e*Pn	**Pn**	**08 12 30.0**	**+0.7**
MSL				*e*Sn	**Sn**	**08 13 02.0**	**-0.8**
RAFI	**Al-Rafai**	**2.88**	**173**	*e*Pn	**Pn**	**08 12 31.0**	**+0.3**
RAFI				*e*Sn	**Sn**	**08 13 05.0**	**-0.2**
ZNJK	**Zanjan**	**3.21**	**49**	Pn	**Pn**	**08 12 37.5**	**+2.0**

*IDC **20** 08:11:48.0±1.2, 1.94N×126.81E, h0km, mb3.9/6, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=109.4km s-min=17.5km az=68.0*
*DJA **20** 08:11:52.9±1.4, 2.7N±3.3×12.7E±.1, h18km±13km, M4.0/10, mb3.9/1, MLv4.0/10*
ISC 20 08:11:53.6±0.9, 1.86N±0.07×126.7E±0.1, h35km, n13, σ0s65/15, mb4.0/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.30**	**147**	P	**Pn**	**08 12 16.0**	**+0.7**
SGSI	**Sangihe**	**2.13**	**328**	P	**Pn**	**08 12 27.0**	**+0.2**
SGSI				S	**Sn**	**08 12 52.2**	**+0.2**
KMSI	**Cibinong**	**2.96**	**244**	P	**Pn**	**08 12 38.2**	**0.0**
SANI	**Sanana**	**3.94**	**190**	P	**Pn**	**08 12 51.6**	**-0.1**
LUWI	**Luwuk**	**4.83**	**233**	P	**Pn**	**08 13 04.8**	**+0.9**
MRSI	**Marisa**	**4.91**	**254**	P	Pn	08 13 11.1	+6.2
FITZ	**Fitzroy Crossi**	**19.86**	**183**	P	**P**	**08 16 21.7**	**-0.2**
	0.1nm,0.3s,baz=0.1,slow=10,SNR=1.7						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**22.95**	**161**	P	**P**	**08 16 53.5**	**-1.5**
	3.1nm,0.5s,baz=341,slow=10,SNR=25						
WRA				PcP	**PcP**	**08 20 45.3**	**+0.6**
	0.3nm,0.7s,baz=335,slow=2.5,SNR=1.6						
	3.1nm,0.5s						
ASAR	**Alice Springs**	**26.34**	**165**	P	**P**	**08 17 26.0**	**-0.5**
	0.5nm,0.4s,baz=344,slow=9.0,SNR=15						
ASAR				PcP	**PcP**	**08 20 52.8**	**+0.6**
	0.2nm,0.5s,baz=352,slow=2.8,SNR=4.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.04**	**326**	P	**P**	**08 21 49.9**	**-0.4**
	0.8nm,0.4s,baz=120,slow=7.9,SNR=7.8						
	0.8nm,0.4s						
KURBB	**Kurchatov Arra**	**63.26**	**328**	P	**P**	**08 22 18.4**	**-0.2**
	0.9nm,0.5s,baz=129,slow=6.1,SNR=6.2						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**68.84**	**327**	P	**P**	**08 22 54.9**	**+0.4**
	0.2nm,0.3s,baz=126,slow=7.3,SNR=1.8						
	0.2nm,0.3s						
AKTO	**Aktyubinsk**	**75.07**	**322**	P	**P**	**08 23 31.6**	**-0.4**
	0.8nm,0.5s,baz=97,slow=8.1,SNR=2.8						
	0.8nm,0.5s						

*IDC **20** 08:14:41.5±3.4, 54.41N×87.24E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.5km s-min=20.1km az=50.0*
ASRS 20 08:14:43.0±0.7, 54.31N×86.89E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**254**	I	I	08 22 10.0	
	0.1nm,0.7s,baz=74,slow=356,SNR=6.6						
ZALV	**Zalesovo Beam**	**1.27**	**254**	Pg	Pn	08 15 07.9	-0.1
	1.0nm,0.3s,baz=72,slow=17,SNR=8.4						
ZALV				Lg	Lg	08 15 29.1	
	1.4nm,0.3s,baz=70,slow=29,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.30**	**238**	Pn	Pn	08 16 18.6	+1.5
	0.1nm,0.3s,baz=59,slow=13,SNR=1.7						
KURBB				Lg	Lg	08 18 10.0	
	baz=58,slow=35,SNR=1.7						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**8.07**	**203**	Pn	Pn	08 16 43.9	+2.4
	0.1nm,0.3s,baz=25,slow=13,SNR=1.5						
MKAR				Lg	Lg	08 19 05.5	
	baz=20,slow=26,SNR=2.0						
	0.1nm,0.3s						

*KRSC **20** 08:26:05.2±0.9, 53.07N×153.97E, h497km±19km, Mc5.6, Ml6.3, Felt [II] at cape Shipunskiy.*
*BJI **20** 08:26:06.0, 53.15N×154.05E, h500km, mB6.4/65, mb6.4/89*
*MOS **20** 08:26:06.1±0.8, 53.11N×153.78E, h492km, mb5.8/67, MS4.7/4, Error ellipse: s-maj=5.6km s-min=3.9km az=91.1*
*NEIC **20** 08:26:07.8, 53.16N×153.66E, h494km*
*IDC **20** 08:26:07.9±0.3, 53.15N×153.71E, h496km±2km, mb5.3/41, mbtmp6.2/49, Error ellipse: s-maj=5.1km s-min=4.2km az=125.0*
*NEIC **20** 08:26:07.7, 53.15N×153.66E, h490km, Moment Tensor Solution. Duration: 6s9 Moment tensor: Scale 10^18Nm; Mrr=0.71; Mθθ=0.11; Mϕϕ=0.60; Mrθ=0.41; Mθϕ=2.09; Mϕr=-2.02; Fault plane solution: M0=3.01000×10^18 NP1: ϕs=261.14000°, δ45.81000°, λ=-14.19000°. NP2: ϕs=1.14000°, δ79.87000°, λ=-134.92000°. Principal axes: T 2.9588, Plg22.0000°, Azm124.0000°; N 0.1064, Plg44.0000°, Azm11.0000°; P -3.0652, Plg38.0000°, Azm232.0000°;*
*IPGP **20** 08:26:07.0, 53.16N×153.69E, h505km, Mw6.4, Fault plane solution: NP1: ϕs=1.00000°, δ76.00000°, λ=-134.00000°. NP2: ϕs=257.00000°, δ46.00000°, λ=-19.00000°.*
*NEIC **20** 08:26:07.7, 53.15N×153.66E, h493km*
*NEIC **20** 08:26:08.0±1.9, 53.13N±0.08×153.7E±0.1, h496km±1km, mb5.6/1015, Mwb6.3/209, Mww6.3/37, Error ellipse: s-maj=13.6km s-min=13.4km az=356.0, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr=1.38; Mθθ-0.04; Mϕϕ 1.42; Mrθ0.47; Mθϕ2.26; Mϕr-2.59; Fault plane solution: M0 3.74000×10^18 NP1: ϕs=253.08000°, δ40.21000°, λ=-21.88000°. NP2: ϕs=0.13000°, δ76.08000°, λ=-128.11000°. Principal axes: T 3.7960, Plg22.0000°, Azm118.0000°; N -0.1159, Plg37.0000°, Azm11.0000°; P -3.6801, Plg45.0000°, Azm232.0000°;*
*GCMT **20** 08:26:11.0±0.1, 53.14N±0.01×153.68E±0.01, h504km, MW6.3/156, Moment Tensor Solution. s156,c395; s138,c212; Duration: 3s5 Moment tensor: Scale 10^18Nm; Mrr-1.02±.01; Mθθ-0.19±.02; Mϕϕ 1.20±.02; Mrθ0.43±.02; Mθϕ2.54±.02; Mϕr-2.25±.02; Best double couple: M0 3.59500×10^18 NP1: ϕs=258.00000°, δ47.00000°, λ=-16.00000°. NP2: ϕs=358.00000°, δ79.00000°, λ=-136.00000°. Principal axes: T 3.6940, Plg20.0000°, Azm121.0000°; N -0.2030, Plg45.0000°, Azm10.0000°; P -3.4970, Plg38.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*
ISC 20 08:26:07.4±0.2, 53.06N±0.02×153.71E±0.02, h496km±1km, h495km:pP-P, n2295, σ1s74/2618, mb5.7/724, 79C-179D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.02**	**112**	PN	**P**	**08 27 11.6**	**-0.6**
MIPR				S	**S**	**08 28 02.6**	**-2.3**
APC	**Apacha**	**2.09**	**92**	PN	**P**	**08 27 11.8**	**-0.6**
APC				S	**S**	**08 28 02.2**	**-3.3**
APC	**Apacha**	**2.09**	**92**	*e*P	**P**	**08 27 11.9**	**-0.6**
APC				*e*S	**S**	**08 28 02.3**	**-3.2**
PEA0B	**Petropavlovsk-**	**2.41**	**87**		**P**	**08 27 13.4**	**-0.8**
PEA0B	**Petropavlovsk-**	**2.41**	**87**	*d* iPN	**P**	**08 27 13.3**	**-0.9**
PETK	**Petropavlovsk-**	**2.41**	**87**	P	**P**	**08 27 12.9**	**-1.3**
	3μm,0.4s,baz=267,slow=5.3,SNR=3940						
PETK				S	**S**	**08 28 06.2**	**-2.6**
	3μm,1.0s,baz=269,slow=10,SNR=4.3						
PETK				ScP	**ScP**	**08 36 24.0**	**+1.0**
	40nm,0.8s,baz=336,slow=3.2,SNR=9.1						
PETK	**Petropavlovsk-**	**2.41**	**87**		**P**	**08 27 12.5**	**-1.7**
PAU	**Pauzhetka**	**2.49**	**129**	PN	**P**	**08 27 13.9**	**-0.9**
PAU				S	**S**	**08 28 06.6**	**-3.0**
PAU	**Pauzhetka**	**2.49**	**129**	*e*P	**P**	**08 27 13.9**	**-0.9**
PAU				*e*S	**S**	**08 28 05.3**	**-4.2**
GNL	**Ganaly**	**2.62**	**74**	PN	**P**	**08 27 15.1**	**-0.5**
GNL	**Ganaly**	**2.62**	**74**	*e*P	**P**	**08 27 15.1**	**-0.5**
ASAK	**Asacha**	**2.64**	**103**	PN	**P**	**08 27 14.6**	**-1.1**
ASAK	**Asacha**	**2.64**	**103**	*e*P	**P**	**08 27 14.8**	**-1.0**
KRMR	**Karymshinskiy**	**2.69**	**93**	PN	**P**	**08 27 14.8**	**-1.1**

KDTR Khodutka, Kamc 2.96 113 eP P 08 27 15.2 -2.5
KDTR eS S 08 28 07.3 -7.7
INSR Institute 2.96 88 PN P 08 27 16.4 -1.2
INSR S P 08 28 11.0 -4.0
INSR Institute 2.96 88 eP P 08 27 16.6 -1.0
INSR eS S 08 28 10.4 -4.6
KOK Koryaka 2.98 84 PN P 08 27 17.2 -0.7
KOK Koryaka 2.98 84 eP P 08 27 17.2 -0.7
KRX Arik 2.99 82 PN P 08 27 17.2 -0.8
KRX Arik 2.99 82 eP P 08 27 17.1 -0.8
PET Petropavlovsk 2.99 89 P 08 27 16.4 -1.4
PET Petropavlovsk 2.99 89 P P 08 27 16.7 -1.1
PET Petropavlovsk 2.99 89κ iPN P 08 27 16.4 -1.4
PET eS S 08 28 11.4 -3.9
PET pmax pmax
comp=Z,41μm,5.9s
PET pmax pmax
comp=Z,17μm,1.0s
PET pmax pmax
comp=Z,28μm,10.7s
PET smax smax
comp=N,7μm,0.8s
PET smax smax
comp=E,6μm,0.6s
PET MLR MLR
comp=Z,10μm,14.0s
PET MLR MLR
comp=Z,8μm,11.0s
PET Petropavlovsk 2.99 89 eP P 08 27 16.6 -1.3
PET eS S 08 28 09.5 -5.8
PET Petropavlovsk 2.99 89 ⇓P P 08 27 16.3 -1.5
PET Petropavlovsk 2.99 89 P P 08 27 16.0 -1.8
RUS Russkaya 2.99 100 PN P 08 27 15.7 -2.2
RUS Russkaya 2.99 100 eP P 08 27 15.7 -2.2
RUS eS S 08 28 08.6 -6.8
AVH Avacha 3.04 84 PN P 08 27 17.3 -0.9
AVH Avacha 3.04 84 eP P 08 27 17.4 -0.9
KRER Koryakskii 3.04 83 PN P 08 27 17.6 -0.9
KRER Koryakskii 3.04 83 eP P 08 27 17.6 -0.9
DALK Dalny 3.05 89 PN P 08 27 16.3 -1.9
DALK S S 08 28 10.0 -6.1
DALK Dalny 3.05 89 eP P 08 27 16.7 -1.5
DALK eS S 08 28 10.2 -5.9
SMAR Somma 3.08 84 PN P 08 27 17.7 -1.0
SMAR Somma 3.08 84 eP P 08 27 17.8 -1.0
UGLR Uglovaya 3.09 85 PN P 08 27 17.7 -0.9
UGLR Uglovaya 3.09 85 eP P 08 27 17.7 -0.9
NLC Nalytchevo 3.40 86 eP P 08 27 18.6 -2.1
NLC eS S 08 28 13.9 -6.7
KII Karymskiy 3.56 72 PN P 08 27 20.7 -1.3
KII Karymskiy 3.56 72 eP P 08 27 20.9 -1.1
ESO Esso 4.09 43 PN P 08 27 26.1 0.0
ESO S S 08 28 27.1 -3.4
ESO Esso 4.09 43 eP P 08 27 26.1 0.0
KZV Kizimen 4.39 59 PN P 08 27 27.4 -1.4
KZV Kizimen 4.39 59 eP P 08 27 27.3 -1.5
KMNR Kamenistaya 4.67 52 PN P 08 27 29.8 -1.4
KMNR Kamenistaya 4.67 52 eP P 08 27 29.8 -1.4
KOZ Kozyrevsk 4.68 48 PN P 08 27 30.2 -0.9
KOZ Kozyrevsk 4.68 48 eP P 08 27 30.1 -1.0
KPT Kopyto 4.79 50 PN P 08 27 30.8 -1.3
KPT Kopyto 4.79 50 eP P 08 27 30.5 -1.6
KIRR Kirishev 4.83 50 PN P 08 27 30.9 -1.7
KIRR S S 08 28 39.4 -3.0
KIRR Kirishev 4.83 50 eP P 08 27 31.0 -1.6
KIRR eS S 08 28 36.6 -5.8
BZWR Bezymyannyi-We 4.91 51 PN P 08 27 31.9 -1.4
BZWR Bezymyannyi-We 4.91 51 eP P 08 27 31.5 -1.8
LGNR Loginova 5.07 51 PN P 08 27 34.8 -0.1
LGNR Loginova 5.07 51 eP P 08 27 34.3 -0.6
ZLN Zelenaya 5.08 52 PN P 08 27 34.0 -0.8
ZLN Zelenaya 5.08 52 eP P 08 27 34.0 -0.8
CIRR Tsirk 5.11 50 PN P 08 27 34.0 -1.1
CIRR Tsirk 5.11 50 eP P 08 27 34.2 -1.0
KLY Klyuchi 5.18 48 PN P 08 27 34.6 -0.9
KLY S S 08 28 45.3 -2.5
KLY Klyuchi 5.18 48 eP P 08 27 34.6 -0.9
SRKR Sorokina 5.62 47 PN P 08 27 38.7 -1.0
SRKR Sorokina 5.62 47 eP P 08 27 38.3 -1.4
SMKR Semkarok 5.71 49 PN P 08 27 38.7 -1.9
SMKR Semkarok 5.71 49 eP P 08 27 38.8 -1.7
KBG Krutoberegovo 6.13 55 PN P 08 27 41.1 -3.4
KBG S S 08 28 57.1 -7.0
KBG Krutoberegovo 6.13 55 eP P 08 27 40.7 -3.8
KBG eS S 08 28 52.4 -12
KBTR Krutoberegovo 6.16 56 PN P 08 27 41.0 -3.9
KBTR S S 08 28 58.0 -6.8
KBTR Krutoberegovo 6.16 56 eP P 08 27 41.0 -3.9
OKH Okha 6.48 279c iPN P 08 27 45.0 -3.0
OKH iS S 08 29 06.0 -4.5
OKH pmax pmax
comp=Z,34μm,7.3s
OKH smax smax
comp=N,114μm,7.7s
OKH smax smax
comp=E,78μm,10.5s
OKH MLR MLR
comp=E,13μm,8.0s
OKH MLR MLR
comp=N,10μm,8.0s
OKH MLR MLR
comp=Z,9μm,10.0s
OKH Okha 6.48 279 eP P 08 27 44.8 -3.2
OKH eS S 08 29 05.3 -5.2
MA2 Magadan 6.73 347 P P 08 27 50.9 +0.4
comp=Z,1μm,0.5s,baz=151,slow=9.3,SNR=614
MA2 S S 08 29 14.1 -1.0
comp=Z,446nm,0.6s,baz=200,slow=22,SNR=8.0
MA2 ScP ScP 08 36 25.7 +0.4
comp=Z,22nm,0.6s,baz=134,slow=3.5,SNR=5.1
MA2 Magadan 6.73 347 P P 08 27 51.3 +0.8
MA2 Magadan 6.73 347c iPN P 08 27 51.1 +0.6
MA2 Magadan 6.73 347 ⇑P P 08 27 51.1 +0.6
MA2 Magadan 6.73 347 P P 08 27 50.1 -0.4
comp=Z,16nmcomp=Z,47μmcomp=Z,3μm,1.6s
PALN Palana 6.98 28 PN P 08 27 53.0 +0.1
PALN S S 08 29 17.6 -2.1
PALN Palana 6.98 28 eP P 08 27 53.1 +0.1
PALN eS S 08 29 13.5 -6.2
TYV Tymovskoe 7.17 257 PN P 08 27 58.3 +3.2
TYV S S 08 29 27.1 +3.7
TYV Tymovskoe 7.17 257 eP P 08 27 58.3 +3.2
BKI Bering 7.52 69 PN P 08 27 57.6 -0.9
BKI Bering 7.52 69 eP P 08 27 57.8 -0.7
BKI eS S 08 29 22.5 -7.3
NKL Nikolayevsk 7.84 276 ePN P 08 28 02.9 +1.0
NKL eS S 08 29 38.2 +2.3
NKL pmax pmax
comp=N,9μm,0.6s
NKL pmax pmax
comp=E,9μm,0.6s
NKL pmax pmax
comp=Z,30μm,0.5s
NKL smax smax
comp=E,117μm,3.5s
NKL smax smax
comp=N,149μm,2.0s
OSSR Ossora 8.10 36 PN P 08 28 04.2 -0.2
OSSR S S 08 29 40.0 -0.7
OSSR Ossora 8.10 36 eP P 08 28 04.2 -0.2
UGL Uglegorsk 8.34 246d iPN P 08 28 10.3 +3.2
UGL eS S 08 29 44.8 -0.7
UGL pmax pmax
comp=Z,22μm,2.3s
UGL pmax pmax
comp=Z,11μm,0.9s
KUR Kuril'sk 8.71 208d iPN P 08 28 09.2 -1.9
KUR iS S 08 29 51.1 -1.6
KUR pmax pmax
comp=Z,22μm,5.0s
KUR pmax pmax
comp=Z,3μm,0.5s
KUR pmax pmax
comp=E,290nm,0.3s
KUR smax smax
comp=E,41μm,5.4s
KUR smax smax
comp=E,3μm,0.5s
KUR smax smax
comp=N,2μm,0.4s
KUR Kuril'sk 8.71 208 eP P 08 28 09.3 -1.9
KUR eS S 08 29 47.0 -5.7

YSS Yuzhno-Sakhali 9.32 233 P 08 28 19.5 +2.0
YSS Yuzhno-Sakhali 9.32 233 P P 08 28 19.2 +1.7
YSS Yuzhno-Sakhali 9.32 233κ iPN P 08 28 19.8 +2.3
YSS eS S 08 30 06.5 +2.1
YSS pmax pmax
comp=Z,3μm,1.0s
YSS pmax pmax
comp=N,2μm,1.1s
YSS pmax pmax
comp=E,3μm,0.9s
YSS pmax pmax
comp=Z,20μm,8.8s
YSS pmax pmax
comp=N,12μm,5.7s
YSS smax smax
comp=E,22μm,5.2s
YSS smax smax
comp=N,1μm,1.2s
YSS smax smax
comp=E,2μm,1.4s
YSS Yuzhno-Sakhali 9.32 233 eS S 08 30 04.7 +0.3
YSS Yuzhno-Sakhali 9.32 233 ⇓P P 08 28 19.8 +2.3
SEY Seymchan 9.93 356 P P 08 28 24.6 +1.0
comp=E,1μm,0.7s,baz=166,slow=10,SNR=326
SEY S S 08 30 14.3 -1.4
comp=E,180nm,0.8s,baz=196,slow=18,SNR=16
SEY ScP ScP 08 36 29.1 +0.5
comp=E,12nm,0.6s,baz=130,slow=17,SNR=1.9
TILK Tilichiki 10.06 38 PN P 08 28 25.0 0.0
TILK S S 08 30 15.2 -3.1
TILK Tilichiki 10.06 38 eP P 08 28 23.3 -1.6
SHO Shikotan 10.26 209 eP P 08 28 31.4 +4.0
YUK Yuzh-Kuril'sk 10.41 213d iPN P 08 28 27.9 -1.2
YUK eS S 08 30 22.0 -3.6
YUK pmax pmax
comp=Z,6μm,2.8s
YUK pmax pmax
comp=Z,8μm,0.5s
YUK pmax pmax
comp=N,3μm,0.4s
YUK pmax pmax
comp=E,4μm,0.4s
YUK smax smax
comp=E,32μm,1.6s
YUK smax smax
comp=N,48μm,2.9s
YUK Yuzh-Kuril'sk 10.41 213 eP P 08 28 27.2 -1.9
RUSJ Misakicho 10.56 215 ⇑iPN P 08 28 30.3 -0.3
GLVR Golovnino 10.79 213d iPN P 08 28 31.4 -1.6
GLVR eS S 08 30 29.6 -3.4
GLVR pmax pmax
comp=Z,6μm,1.5s
GLVR pmax pmax
comp=Z,7μm,0.5s
GLVR pmax pmax
comp=E,422nm,0.3s
GLVR pmax pmax
comp=N,751nm,0.5s
GLVR smax smax
comp=N,37μm,2.8s
GLVR smax smax
comp=E,56μm,1.2s
GRNR Gornyy 10.92 265 ⇓iPN P 08 28 36.9 +2.6
GRNR eS S 08 30 36.9 +1.5
GRNR pmax pmax
comp=E,1μm,0.8s
GRNR pmax pmax
comp=N,480nm,0.9s
GRNR pmax pmax
comp=Z,2μm,0.7s
GRNR smax smax
comp=N,3μm,1.1s
GRNR MLR MLR
comp=E,6μm,10.0s
GRNR MLR MLR
comp=N,2μm,14.0s
GRNR MLR MLR
comp=Z,5μm,15.0s
JWK2 Keihoku 10.93 230 eP P 08 28 36.8 +2.3
JWK2 eS S 08 30 37.9 +2.2
JWK2 Keihoku 10.93 230 A A 08 28 36.8
comp=N,166nm,3.4s,comp=E,101nm,3.9s
NMR Nemuro--Hokkai 11.05 212 ePN P 08 28 31.2 -4.6
JMP Maruseppu 11.35 201 eP P 08 28 39.9 +0.8
JMP eS S 08 30 43.5 -0.4
JMP Maruseppu 11.35 221 A A 08 28 39.9
comp=N,33nm,4.3s,comp=E,35nm,2.6s
KMSK Kamenskaya 11.53 30 PN P 08 28 40.2 -0.3
KMSK S S 08 30 44.6 -2.2
KMSK Kamenskaya 11.53 30 eP P 08 28 40.5 0.0
KMSK eS S 08 30 42.7 -4.2
JKA Kamikawa-asahi 11.57 224 P 08 28 41.0 -0.3
ASAJ Asahikawa 11.57 224 P P 08 28 42.5 +1.2
comp=E,1μm,0.4s,baz=5.9,slow=4.3,SNR=449
ASAJ S S 08 30 50.9 +2.7
comp=E,286nm,1.0s,baz=81,slow=18,SNR=5.8
ASAJ ScP ScP 08 36 32.1 +0.9
comp=E,84nm,0.7s,baz=270,slow=1.0,SNR=9.1
ASAJ Asahikawa 11.57 224 P P 08 28 42.7 +1.4
ASAJ S S 08 30 48.9 +0.7
ASAJ Asahikawa 11.57 224 A A 08 28 42.7
comp=N,35nm,3.8s,comp=E,24nm,6.5s
SHEM Shemya Is, Ala 12.32 83 P P 08 28 49.4 +0.3
comp=E,1μm,0.3s,baz=28,slow=3.1,SNR=42
SHEM S S 08 31 02.5 0.0
comp=E,868nm,0.8s,baz=240,slow=22,SNR=14
SHEM ScP ScP 08 36 32.7 +0.6
comp=E,225nm,0.7s,baz=296,slow=1.4,SNR=7.1
SHEM Shemya Is, Ala 12.32 83 P P 08 28 49.2 +0.1
SMY Shemya 12.32 83 P 08 28 48.9 -0.2
SMY Shemya 12.32 83 P P 08 28 49.4 +0.3
SMY Shemya 12.32 83 PN P 08 28 48.9 -0.2
SMY S S 08 30 58.2 -4.3
SMY Shemya 12.32 83 ⇑P P 08 28 49.2 +0.1
JEW Eniwo 13.09 224 P P 08 28 55.7 -1.8
JEW eS S 08 31 12.8 -5.0
JEW Eniwo 13.09 224 A A 08 28 55.7
comp=N,27nm,4.9s,comp=E,22nm,2.9s
ERM Erimo 13.13 217 P 08 28 56.2 -1.7
ERM Erimo 13.13 217 P P 08 28 56.9 -1.0
ERM Erimo 13.13 217 PN P 08 28 56.2 -1.7
ERM Erimo 13.13 217 P P 08 28 54.5 -3.4
ERM S S 08 31 10.7 -7.8
JEM Erimo 13.13 217 P P 08 28 57.0 -0.9
JEM Erimo 13.13 217 P P 08 28 55.8 -2.1
JEM eS S 08 31 14.4 -4.1
JEM Erimo 13.13 217 A A 08 28 55.8
comp=N,33nm,1.8s,comp=E,23nm,4.0s
TEY Ternei 13.77 241 ⇓eP P 08 29 05.3 +0.7
TEY eS S 08 31 28.8 -1.9
TEY pmax pmax
comp=E,820nm,0.5s
TEY pmax pmax
comp=N,650nm,0.6s
TEY pmax pmax
comp=Z,1μm,0.6s
TEY pmax pmax
comp=N,2μm,3.4s
TEY pmax pmax
comp=E,3μm,3.4s
TEY pmax pmax
comp=Z,5μm,3.5s
TEY smax smax
comp=N,47μm,5.8s
TEY smax smax
comp=E,32μm,5.5s
JSH Shimam 13.86 227 P P 08 29 03.0 -2.5
JSH eS S 08 31 27.8 -4.7
JOT Ohata 14.48 221 P P 08 29 08.2 -3.9
JOT eS S 08 31 37.3 -7.2
JOT Ohata 14.48 221 A A 08 29 08.2
comp=N,13nm,4.8s,comp=E,17nm,2.2s
JTM Tenmabayashi 14.98 220 P 08 29 15.3 -2.1
JTM Tenmabayashi 14.98 220 P P 08 29 15.5 -1.9
JTM Tenmabayashi 14.98 220 P P 08 29 14.8 -2.5
JTM S S 08 31 47.0 -7.1
JTM Tenmabayashi 14.98 220 A A 08 29 14.8
comp=N,20nm,2.8s,comp=E,21nm,4.3s
YAK Yakutsk 15.62 315 P P 08 29 23.2 -0.5
comp=E,16μm,0.7s,baz=106,slow=2.2,SNR=1344
YAK S S 08 32 05.3 -0.5
comp=E,2μm,0.8s,baz=141,slow=24,SNR=21
YAK Yakutsk 15.62 315c iP P 08 29 23.0 -0.7
YAK eS S 08 32 05.6 -0.2
YAK pmax pmax
comp=N,713nm,1.0s
YAK pmax pmax
comp=E,836nm,0.9s
YAK smax smax
comp=N,38μm,2.5s
YAK smax smax
comp=E,61μm,3.3s
AMKA Amchitka 15.75 86 P 08 29 24.3 -1.0
ZEA Zeya 15.77 283 eP P 08 29 25.4 0.0
ZEA eS S 08 32 04.6 -4.2
ZEA pmax pmax
comp=Z,2μm,2.1s
ZEA pmax pmax
comp=Z,560nm,1.3s
ZEA smax smax
comp=N,46μm,7.5s
ZEA smax smax
comp=E,60μm,5.7s
JOM Ohasama 16.04 217 P P 08 29 27.4 -1.0
JOM eS S 08 32 11.8 -2.5
JOM Ohasama 16.04 217 A A 08 29 27.4
comp=N,22nm,3.3s,comp=E,21nm,2.9s
BILL Bilibino 16.19 17 P 08 29 28.4 -1.2
BILL Bilibino 16.19 17d iP P 08 29 28.1 -1.5
BILL pmax pmax
comp=Z,444nm,0.6s
HEH HeiHe 16.52 271 ⇓iP P 08 29 32.8 -0.6
HEH S S 08 32 20.8 -2.0
HEH ScP ScP 08 36 39.8 +0.2
HEH ScS ScS 08 40 16.9 -2.2
HEH pmax pmax
comp=Z,2μm,0.6s
HEH pmax pmax
comp=Z,6μm,7.0s
USRK Ussuriysk Ar. 16.82 247 P P 08 29 36.2 -0.3
comp=Z,514nm,0.6s,baz=58,slow=10,SNR=292
USRK S S 08 32 30.4 +2.3
comp=Z,32nm,0.7s,baz=65,slow=19,SNR=5.0
USRK ScP ScP 08 36 40.3 0.0
comp=Z,57nm,0.9s,baz=321,slow=1.8,SNR=8.8
JYA Atsumi 17.40 219 P P 08 29 41.9 -0.4
JYA eS S 08 32 40.2 +2.2
JYA Atsumi 17.40 219 A A 08 29 41.9
comp=N,38nm,2.3s,comp=E,15nm,3.3s
VLA Vladivostok 17.58 244c iP P 08 29 41.9 -2.0
VLA pmax pmax
comp=Z,717nm,0.6s
JMM Marumori 17.64 216 P P 08 29 44.4 -0.2
JMM Marumori 17.64 216 ⇓P P 08 29 44.1 -0.5
KIWB Kanaga Island 17.75 82 P 08 29 43.9 -1.5
MDJ Mudanjiang 17.91 252 P P 08 29 46.7 -0.3
MDJ Mudanjiang 17.91 252 P P 08 29 46.8 -0.2
MDJ S S 08 32 45.9 -0.4
MDJ ScS ScS 08 40 24.0 +0.5
MDJ pmax pmax
comp=Z,2μm,1.0s
MDJ pmax pmax
comp=Z,15μm,7.2s
MDJ Mudanjiang 17.91 252 P P 08 29 46.6 -0.3
ADK Adak 18.02 82 P 08 29 46.4 -1.6
ADK Adak 18.02 82 P P 08 29 46.6 -1.3
ADK Adak 18.02 82 P P 08 29 46.3 -1.6
ADK S S 08 32 44.3 -3.6
MSHR Mys Shultsa 18.34 244 ⇓iP P 08 29 49.5 -1.4
MSHR pmax pmax
comp=Z,437nm,0.7s
MSHR Mys Shultsa 18.34 244 eP P 08 29 48.9 -2.0
JSD Sado 18.45 222 P P 08 29 52.8 +0.8
JSD Sado 18.45 222 ⇓P P 08 29 52.0 +0.1
JSD Sado 18.45 222 P P 08 29 52.1 +0.1
PSTR Posyet 18.48 245d iP P 08 29 50.6 -1.6
BNX BinXian 18.54 257 ⇓P P 08 29 53.0 +0.2
BNX sP sP 08 31 55.9 -3.7
BNX S S 08 32 56.4 -0.1
BNX pmax pmax
comp=Z,21μm,7.0s
JYT Yasato 19.32 215 P P 08 30 00.2 +0.2
ATKA Atka Island 19.42 80 P P 08 29 59.6 -1.0
ATKA Atka Island 19.42 80 P P 08 29 59.2 -1.4
ATKA Atka Island 19.42 80 ⇑P P 08 29 58.8 -1.8
MAJO Matsushiro 19.77 220 P P 08 30 04.8 +0.7
MAJO Matsushiro 19.77 220 P P 08 30 05.0 +0.9
MAJO Matsushiro 19.77 220d iP P 08 30 04.8 +0.7
MAJO pmax pmax
comp=Z,7μm,0.6s
MAJO Matsushiro 19.77 220 ⇓P P 08 30 04.8 +0.7
MAJO Matsushiro 19.77 220 P P 08 30 04.7 +0.6
MAJO S S 08 33 19.2 +2.5
MAT Matsushiro 19.77 220 P P 08 30 04.8 +0.7
MJAR Matsushiro Arr 19.77 220 P P 08 30 05.3 +1.2
comp=Z,3μm,0.7s,baz=20,slow=9.3,SNR=714
MJAR S S 08 33 19.8 +3.2
comp=Z,127nm,1.2s,baz=28,slow=18,SNR=5.7
MJAR PcP PcP 08 33 59.1 +0.8
comp=Z,39nm,0.7s,baz=59,slow=0.8,SNR=4.4
MJAR ScP ScP 08 36 47.0 -0.1
comp=Z,54nm,0.8s,baz=64,slow=1.3,SNR=19
MJAR PKiKP PKiKP 08 41 46.7 0.0
comp=Z,4.1nm,0.9s,baz=129,slow=0.7,SNR=4.4
MJAR Matsushiro Arr 19.77 220 P P 08 30 04.9 +0.8
JRY Ryogami san 19.97 217 P P 08 30 06.9 +0.9
JRY S S 08 33 21.0 +1.1
JGN Niukaw 20.39 221 P P 08 30 10.5 +0.7
JGN eS S 08 33 29.8 +3.0
JOD2 Odawara 2 20.58 216 P P 08 30 11.8 +0.3
GAMB Gambell 20.76 45 P P 08 30 14.3 +1.6
GAMB Gambell 20.76 45 P P 08 30 11.8 -0.8
baz=255
GAMB S S 08 33 31.0 -0.8
baz=255
CN2 Changchun 20.79 255 ⇓P P 08 30 13.0 -0.2
CN2 S S 08 33 31.8 -1.0
CN2 pmax pmax
comp=Z,830nm,0.6s
CN2 pmax pmax
comp=Z,11μm,7.0s
SPIA Saint Paul Isl 20.86 64 P P 08 30 14.7 +1.1
SPIA Saint Paul Isl 20.86 64 P P 08 30 11.8 -1.8
baz=274
SPIA S S 08 33 35.8 +2.3
baz=274
JGF Kuroka 20.92 220 P P 08 30 15.6 +1.0
JGF Kuroka 20.92 220 ⇓P P 08 30 15.3 +0.8
JGF Kuroka 20.92 220 eP P 08 30 15.4 +0.8
INU Inuyama 21.28 220 P P 08 30 18.6 +0.8
INU Inuyama 21.28 220 P P 08 30 18.0 +0.3
INU Inuyama 21.28 220 ⇓P P 08 30 18.2 +0.5
HILR Hailar Array B 21.39 274 P P 08 30 19.0 +0.3
comp=Z,877nm,0.4s,baz=75,slow=9.4,SNR=654
HILR S S 08 33 43.6 +1.4
comp=Z,120nm,0.9s,baz=85,slow=16,SNR=4.2
HILR PcP PcP 08 34 02.5 +1.2
comp=Z,122nm,0.9s,baz=98,slow=2.7,SNR=3.6
HILR ScP ScP 08 36 51.2 +0.4
comp=Z,72nm,0.9s,baz=107,slow=5.0,SNR=4.5
comp=Z,877nm,0.4s
JSG Sagara 21.43 217 P P 08 30 21.6 +2.5
JSG Sagara 21.43 217 ⇓P P 08 30 20.9 +1.7
JSG Sagara 21.43 217 P P 08 30 20.9 +1.7
HIA Hailar 21.51 274 P P 08 30 20.3 +0.6
TIXI Tiksi 21.60 339 P P 08 30 20.2 0.0
comp=Z,1μm,0.7s,baz=144,slow=7.7,SNR=986
TIXI ScP ScP 08 36 51.6 +0.7
comp=Z,209nm,0.9s,baz=101,slow=2.7,SNR=14
comp=Z,1μm,0.7s
TIXI Tiksi 21.60 339 P P 08 30 20.6 +0.4
TIXI Tiksi 21.60 339c iP P 08 30 20.4 +0.3
TIXI pmax pmax
comp=Z,663nm,0.6s
TIXI Tiksi 21.60 339 ⇓P P 08 30 20.5 +0.3
JWT Wachi 21.98 223 P P 08 30 24.4 +0.3
JIE Ise 22.24 220 P P 08 30 27.8 +1.4
JHJ2 Mitsune 22.29 212 P P 08 30 27.6 +0.7
JHJ2 Mitsune 22.29 212 ⇓P P 08 30 27.6 +0.7
JHJ2 Mitsune 22.29 212 P P 08 30 27.7 +0.8
NIKH Nikolski High 22.36 75 P P 08 30 26.0 -1.3
NIKH Nikolski High 22.36 75 P P 08 30 27.0 -0.3
baz=286
NIKH S S 08 33 53.8 -3.6
baz=286
TNA Tin City 22.79 42 ⇑P P 08 30 31.3 +0.3
TNA Tin City 22.79 42 P P 08 30 30.3 -0.7
baz=255,SNR=6.2
TNA S S 08 34 06.3 +2.5

baz=255
JAD Aida 22.80 225 P P 08 30 32.1 +0.7
M11K Mekoryuk 22.88 55 P P 08 30 31.8 +0.1
baz=270
M11K S S 08 34 06.4 +1.2
baz=270
SNY Shenyang 23.09 253 ⇓P P 08 30 34.8 +0.9
SNY S S 08 34 04.3 -4.8
SNY pmax pmax
comp=Z,940nm,0.6s
JHS Saijyo 23.20 227 eP P 08 30 36.0 +0.9
F14K Arctic Creek 23.42 42 P P 08 30 36.4 -0.2
baz=258
F14K S S 08 34 14.9 +1.2
baz=258
UNV Unalaska Valle 23.50 72 P P 08 30 36.0 -1.4
UNV Unalaska Valle 23.50 72 P P 08 30 36.2 -1.2
baz=285,SNR=9.1
UNV S S 08 34 15.1 -0.1
baz=285
ANM Nome 23.64 45 P P 08 30 38.7 +0.1
baz=261
ANM S S 08 34 18.3 +1.1
baz=261
K13K Kusilvak Mount 23.68 52 P P 08 30 38.8 -0.1
baz=267,SNR=9.3
K13K S S 08 34 19.2 +1.4
baz=267
KSRS Korea Array 23.75 239 P P 08 30 41.2 +1.4
comp=Z,209nm,0.6s,baz=34,slow=9.4,SNR=460
KSRS PcP PcP 08 34 07.0 +0.7
comp=Z,65nm,0.8s,baz=19,slow=1.3,SNR=7.9
KSRS S S 08 34 22.2 +2.7
comp=Z,5.1nm,0.7s,baz=42,slow=13,SNR=1.0
KSRS ScP ScP 08 36 58.0 +0.9
comp=Z,12nm,0.7s,baz=75,slow=4.2,SNR=9.1
KSRS P4KP 09 13 00.2
comp=Z,1.4nm,0.8s,baz=48,slow=3.7,SNR=7.6
comp=Z,209nm,0.6s
KSAR Wonju Array Be 23.78 239 P P 08 30 41.4 +1.3
KSAR Wonju Array Be 23.78 239 P P 08 30 41.4 +1.3
AKUT Akutan 23.85 71 P P 08 30 40.0 -0.5
AKUT Akutan 23.85 71 ⇑P P 08 30 39.8 -0.7
JMN Monobe 23.96 224 P P 08 30 42.9 +1.1
JMN Monobe 23.96 224 ⇓P P 08 30 43.0 +1.1
JMN Monobe 23.96 224 P P 08 30 43.1 +1.3
F15K North Star Dit 24.15 42 P P 08 30 43.5 +0.4
baz=259,SNR=8.1
F15K S S 08 34 26.0 +0.8
baz=259
CIT Chita 24.23 284 eP P 08 30 44.8 +0.8
CIT e 08 33 01.6
CIT e 08 34 06.0
CIT eS S 08 34 28.6 +1.8
CIT pmax pmax
comp=Z,778nm,1.8s
J14K Nanvaranak Lak 24.24 50 P P 08 30 43.4 -0.4
baz=266
J14K S S 08 34 26.8 +0.3
baz=266
G15K Niukluk 24.27 44 P P 08 30 43.3 -0.9
baz=261,SNR=8.0
G15K S S 08 34 28.5 +1.3
baz=261
M13K Dall Lake 24.29 55 P P 08 30 44.9 +0.6
baz=272,SNR=6.6
INCN Inchon 24.40 241 P P 08 30 46.6 +0.9
INCN Inchon 24.40 241 P P 08 30 46.3 +0.6
INCN P P 08 30 46.3 +0.6
INCN S S 08 34 29.5 -0.4
INCN S S 08 34 29.5 -0.4
INCN Inchon 24.40 241 P P 08 30 46.8 +1.1
INCN Inchon 24.40 241 ⇓P P 08 30 46.7 +0.9
C16K Lisburne Hills 24.54 36 P P 08 30 46.2 -0.3
baz=252,SNR=23
C16K S S 08 34 32.4 +1.2
baz=252
L14K Kuka Creek 24.60 53 P P 08 30 46.5 -0.6
baz=270,SNR=24
L14K S S 08 34 34.5 +2.2
baz=270
TJN Taejon 24.86 238 P P 08 30 50.7 +1.0
TJN Taejon 24.86 238 di P P 08 30 50.9 +1.2
TJN pmax pmax
comp=Z,85nm,2.0s
M14K Bethel 24.97 54 P P 08 30 50.6 +0.3
baz=272,SNR=20
M14K S S 08 34 38.2 +0.2
baz=272
H16K Elim 24.99 45 P P 08 30 50.4 -0.1
baz=264,SNR=20
H16K S S 08 34 40.0 +1.6
baz=264
FALS False Pass 25.01 69 P P 08 30 51.4 +0.6
FALS False Pass 25.01 69 P P 08 30 50.9 +0.1
baz=284,SNR=11
N14K Kuskokwak Cree 25.15 56 P P 08 30 52.3 +0.4
baz=274,SNR=9.0
N14K S S 08 34 41.9 +1.0
baz=274
K15K Wolf Creek Mou 25.16 51 P P 08 30 52.5 +0.5
baz=269,SNR=11
K15K S S 08 34 41.9 +0.8
baz=269
L15K Ungalak Mounta 25.17 52 P P 08 30 51.8 -0.3
baz=271
L15K S S 08 34 42.1 +0.7
baz=271
D17K Noatak River 25.20 38 P P 08 30 52.6 +0.3
baz=256,SNR=87
D17K S S 08 34 42.3 +0.7
baz=256
JTU Tsushima 25.31 233 P P 08 30 54.2 +0.4
JTU Tsushima 25.31 233 ⇓P P 08 30 54.5 +0.8
JTU Tsushima 25.31 233 P P 08 30 54.6 +0.8
JTU eS S 08 34 47.4 +3.2
RDOG Red Dog Mine 25.35 37 P P 08 30 53.8 +0.1
RDOG Red Dog Mine 25.35 37 P P 08 30 53.3 -0.4
baz=256,SNR=49
RDOG S S 08 34 43.8 -0.2
baz=256
C17K DeLong Mountai 25.36 36 P P 08 30 53.7 -0.1
baz=255,SNR=56
C17K S S 08 34 42.9 -1.4
baz=255
O14K Tigyukauivet M 25.42 58 P P 08 30 54.6 +0.2
baz=276,SNR=9.0
O14K S S 08 34 46.0 +0.7
baz=276
E17K Hotham Inlet 25.54 40 P P 08 30 55.5 +0.2
baz=259,SNR=97
E17K S S 08 34 47.3 +0.4
baz=259
S12K Black Hills 25.57 66 P P 08 30 55.9 +0.2
baz=283,SNR=20
S12K S S 08 34 49.3 +1.6
baz=283
M15K Kasigluk River 25.59 54 P P 08 30 55.7 -0.2
baz=274,SNR=21
M15K S S 08 34 47.8 -0.1
baz=274
I17K Unalakleet 25.59 47 P P 08 30 56.3 +0.4
baz=267,SNR=28
I17K S S 08 34 49.4 +1.5
baz=267
J16K Anvik River 25.61 48 P P 08 30 55.9 -0.1
baz=268,SNR=10
J16K S S 08 34 49.4 +1.2
baz=268
G17K Kiwalik Mounta 25.76 43 P P 08 30 57.3 -0.1
baz=263,SNR=58
G17K S S 08 34 51.1 +0.7
baz=263
JNU Nakatsue 25.78 228 S S 08 34 54.0 +2.3
comp=Z,68nm,1.1s,baz=321,slow=23,SNR=2.4
JNU ScP ScP 08 37 02.8 -0.4
comp=Z,17nm,0.7s,baz=343,slow=2.2,SNR=6.4
JNU Nakatsue 25.78 228 P P 08 30 58.6 +0.6
JNU Nakatsue 25.78 228 ⇓P P 08 30 59.0 +1.0
JNU Nakatsue 25.78 228 P P 08 30 59.0 +1.0
N15K Kwethluk River 25.93 56 P P 08 30 59.1 +0.3
baz=275,SNR=29
N15K S S 08 34 52.8 -0.5
baz=275
H17K Granite Mounta 26.01 45 P P 08 31 00.2 +0.6
baz=265,SNR=28
H17K S S 08 34 56.4 +2.0
baz=265
E18K Tukpahlearik C 26.07 39 P P 08 31 00.1 +0.1
baz=260,SNR=35
E18K S S 08 34 55.7 +0.4
baz=260
B18K Kokolik River 26.08 34 P P 08 31 00.4 +0.3
baz=254
B18K S S 08 34 55.8 +0.3
baz=254
C18K Utukok River 26.11 36 P P 08 31 00.1 -0.4
baz=256
C18K S S 08 34 54.7 -1.4
baz=256
L16K Owhat River 26.13 52 P P 08 31 00.7 0.0
baz=272,SNR=12
L16K S S 08 34 56.2 -0.2
baz=272
DL2 Dalian 26.14 250 ⇓i P P 08 31 01.8 +0.8
DL2 S S 08 34 56.8 -0.2
DL2 pmax pmax
comp=Z,8μm,8.4s
O15K Ungalikthiuk R 26.16 58 P P 08 31 00.7 -0.2
baz=277,SNR=15
O15K S S 08 34 57.4 +0.5
baz=277
J17K VABM Dome 26.30 48 P P 08 31 02.2 +0.1
baz=269,SNR=23
J17K S S 08 35 01.0 +2.0
baz=269
XLT XiLinHaoTe 26.30 265 eP P 08 31 02.9 +0.4
XLT PcP PcP 08 34 13.4 +1.2
XLT S S 08 35 00.8 +1.1
XLT pmax pmax
comp=Z,810nm,0.6s
XLT pmax pmax
comp=Z,4μm,7.7s
F18K Selawik 26.30 41 P P 08 31 02.0 0.0
baz=262,SNR=28
F18K S S 08 35 00.6 +1.7
baz=262
M16K Timber Creek 26.42 54 P P 08 31 03.0 -0.2
baz=274,SNR=17
M16K S S 08 35 01.6 +0.7
baz=274
SDPT Sand Point 26.53 67 P P 08 31 02.5 -1.7
SDPT Sand Point 26.53 67 P P 08 31 03.3 -0.9
baz=284,SNR=6.7
N16K Nishlik Lake 26.55 55 P P 08 31 04.0 -0.5
baz=276,SNR=14
N16K S S 08 35 04.4 +1.2
baz=276
A19K Wainwright 26.56 33 P P 08 31 02.9 -1.4
baz=254,SNR=6.4
A19K S S 08 35 03.5 +0.6
baz=254
G18K Tagagawik 26.62 43 P P 08 31 05.0 +0.1
baz=265,SNR=86
G18K S S 08 35 04.9 +0.9
baz=265
K17K Iditarod 26.65 50 P P 08 31 05.3 0.0
baz=271,SNR=23
K17K S S 08 35 06.0 +1.5
baz=271
L17K Donlin 26.67 51 P P 08 31 05.6 +0.2
baz=272,SNR=35
L17K S S 08 35 06.8 +2.0
baz=272
H18K Honhosa River 26.68 44 P P 08 31 05.6 +0.1
baz=266
H18K S S 08 35 05.7 +0.7
baz=266
C19K Lookout Ridge 26.78 35 P P 08 31 06.3 0.0
baz=257,SNR=41
C19K S S 08 35 06.5 -0.1
baz=257
S14K Fog Glacier 26.81 64 P P 08 31 06.2 -0.7
baz=283
O16K Kokwok River B 26.99 57 P P 08 31 08.1 -0.1
baz=278,SNR=22
O16K S S 08 35 11.1 +1.2
baz=278
P16K Nushagak River 27.12 58 P P 08 31 09.3 -0.1
baz=279,SNR=9.1
P16K S S 08 35 13.9 +2.0
baz=279
M17K Holitna River 27.12 53 P P 08 31 10.1 +0.7
baz=275,SNR=28
M17K S S 08 35 14.2 +2.3
baz=275
JFU Fukue jima 2 27.15 231 P P 08 31 11.1 +1.1
JFU eS S 08 35 16.5 +3.4
CHNA Chernabura Isl 27.16 67 P P 08 31 08.9 -0.8
CHNA Chernabura Isl 27.16 67 P P 08 31 08.8 -0.9
baz=286,SNR=28
D19K Kuia River 27.19 37 P P 08 31 09.4 -0.5
baz=260
D19K S S 08 35 13.0 +0.2
baz=260
G19K Purcell Mounta 27.28 42 P P 08 31 10.5 -0.3
baz=266,SNR=57
G19K S S 08 35 14.4 +0.1
baz=266
GCSA Galena City Sc 27.29 45 P P 08 31 10.5 -0.3
baz=269,SNR=31
GCSA S S 08 35 14.4 0.0
baz=269
CBIJ Chichi jima 27.32 203 P P 08 31 12.3 +0.8
JCJ Chichijima 27.32 203 P P 08 31 12.0 +0.5
JCJ Chichijima 27.32 203 ⇓P P 08 31 12.2 +0.7
N17K Nushagak Hills 27.33 55 P P 08 31 11.0 -0.2
baz=277,SNR=8.1
N17K S S 08 35 16.5 +1.4
baz=277
E19K Redstone River 27.36 39 P P 08 31 11.4 0.0
baz=263
E19K S S 08 35 16.4 +0.9
baz=263
J18K Innoko River 27.36 48 P P 08 31 11.2 -0.2
baz=271,SNR=57
J18K S S 08 35 15.0 -0.6
baz=271
L18K Granite Mounta 27.42 51 P P 08 31 12.4 +0.4
baz=274,SNR=21
L18K S S 08 35 18.1 +1.6
baz=274
O17K Koliganek Bris 27.47 56 P P 08 31 12.6 +0.2
baz=278,SNR=46
O17K S S 08 35 19.8 +2.5
baz=278
H19K Roundabout Mou 27.50 44 P P 08 31 13.0 +0.4
baz=268,SNR=152
H19K S S 08 35 18.8 +1.0
baz=268
R16K Pilot Point 27.60 61 P P 08 31 13.7 +0.1
baz=282
R16K S S 08 35 20.7 +1.3
baz=282
D20K Etivluk River 27.77 37 P P 08 31 15.1 +0.1
baz=261
D20K S S 08 35 22.1 +0.3
baz=261
B20K Meade River 27.81 34 P P 08 31 15.6 +0.3
baz=258,SNR=100
B20K S S 08 35 22.8 +0.4
baz=258
J19K Poorman 27.84 47 P P 08 31 15.4 -0.2
baz=271,SNR=43
J19K S S 08 35 22.7 -0.3
baz=271
E20K Nigu River 27.86 38 P P 08 31 15.9 +0.1
baz=262
E20K S S 08 35 23.6 +0.3
baz=262
Q16K King Salmon 27.86 58 P P 08 31 16.1 +0.2
baz=280,SNR=10
Q16K S S 08 35 24.1 +0.7
baz=280
P17K Kvichak River 27.89 57 P P 08 31 16.7 +0.6
baz=280,SNR=23
P17K S S 08 35 25.5 +1.7
baz=280
M18K Stony River 27.89 52 P P 08 31 16.1 0.0
baz=276,SNR=23
M18K S S 08 35 25.9 +2.1
baz=276
F20K Avaraart Lake 27.90 40 P P 08 31 16.1 0.0
baz=265,SNR=54
F20K S S 08 35 25.2 +1.4
baz=265
N18K Kilae Creek 27.95 54 P P 08 31 17.3 +0.6
baz=277,SNR=25
N18K S S 08 35 25.9 +1.1
baz=277
H20K Anotleneega Mo 28.16 44 P P 08 31 18.1 -0.3
baz=269,SNR=73
H20K S S 08 35 29.0 +1.0
baz=269
R17L Mt. Peulik Vol 28.22 61 P P 08 31 19.5 +0.4
baz=283,SNR=8.8
R17L S S 08 35 28.5 -0.7
baz=283
A21K Barrow 28.28 31 P P 08 31 19.1 -0.3
baz=256
A21K S S 08 35 29.7 0.0
baz=256
L19K White Mountain 28.28 51 P P 08 31 19.0 -0.6
baz=275,SNR=20
L19K S S 08 35 29.4 -0.6
baz=275
I20K Naaghedeneel 28.32 45 P P 08 31 19.9 0.0
baz=271
I20K S S 08 35 31.7 +1.2
baz=271
Q17K Contact Creek 28.34 59 P P 08 31 19.9 -0.3
baz=282,SNR=25
Q17K S S 08 35 30.6 -0.6
baz=282
O18K Koktuh Hills 28.40 56 P P 08 31 19.9 -0.7
baz=279,SNR=31
O18K S S 08 35 33.5 +1.6
baz=279
P18K Big Mountain, 28.46 57 P P 08 31 20.9 -0.3
baz=280,SNR=23
P18K S S 08 35 33.8 +0.9
baz=280
J20K Nowinta River 28.48 46 P P 08 31 20.7 -0.6
baz=272,SNR=56
J20K S S 08 35 33.3 +0.3
baz=272
C21K Knifeblade Rid 28.49 36 P P 08 31 21.5 +0.2
baz=262,SNR=117
C21K S S 08 35 33.7 +0.7
baz=262
M19K Big River Lodg 28.53 51 P P 08 31 21.6 -0.1
baz=276
M19K S S 08 35 34.9 +1.1
baz=276
BJI Beijing 28.55 258 P P 08 31 22.8 +0.6
BJI sP sP 08 33 47.8 +4.6
BJI S S 08 35 34.5 -0.2
BJI pmax pmax
comp=Z,160nm,0.7s
BJI pmax pmax
comp=Z,3μm,3.6s
K20K Telida 28.55 48 P P 08 31 22.0 +0.1
baz=274,SNR=33
K20K S S 08 35 33.0 -1.2
baz=274
BJT Baijiatuau 28.57 258 P P 08 31 23.0 +0.6
B21K Ikpikpuk River 28.61 35 P P 08 31 22.4 +0.2
baz=262,SNR=172
B21K S S 08 35 35.1 +0.2
baz=262
N19K Bonanza Creek 28.61 54 P P 08 31 22.1 -0.5
baz=278,SNR=29
N19K S S 08 35 37.1 +1.7
baz=278
IMAR Indian Mountai 28.63 43 P P 08 31 22.3 -0.2
E21K Killik River 28.69 38 P P 08 31 22.7 -0.4
baz=264
E21K S S 08 35 35.8 -0.5
baz=264
L20K Farewell, AK 28.71 50 P P 08 31 23.2 -0.1
baz=276,SNR=28
L20K S S 08 35 37.1 +0.4
baz=276
Q18K Katmai Hardscr 28.71 58 P P 08 31 23.0 -0.5
baz=282,SNR=82
Q18K S S 08 35 37.3 +0.3
baz=282
A22K Sinclair Lake 28.73 32 P P 08 31 23.4 +0.1
baz=259
A22K S S 08 35 36.8 +0.1
baz=259
G21K Allakaket 28.75 42 P P 08 31 22.9 -0.6
baz=268
G21K S S 08 35 38.5 +1.4
baz=268
F21K Alatna River 28.79 40 P P 08 31 23.4 -0.5
baz=267,SNR=62
F21K S S 08 35 38.4 +0.6
baz=267
H21K Melozitna Rive 29.02 43 P P 08 31 25.6 -0.3
baz=271,SNR=64
H21K S S 08 35 42.4 +1.0
baz=271
CHIR Chirikof Islan 29.06 64 P P 08 31 26.6 +0.2
CHIR Chirikof Islan 29.06 64 P P 08 31 25.3 -1.1
baz=286
CHIR S S 08 35 40.9 -1.3
baz=286
M20K Styx River 29.12 51 P P 08 31 27.1 +0.1
baz=277
M20K S S 08 35 45.1 +1.9
baz=277
B22K Teshekpuk Lake 29.13 34 P P 08 31 25.8 -1.0
baz=262,SNR=57
B22K S S 08 35 44.0 +1.2
baz=262
D22K Ayikyak River 29.21 37 P P 08 31 27.6 +0.1
baz=265
D22K S S 08 35 44.4 +0.2
baz=265
CHUM Lake Minchumin 29.30 47 P P 08 31 28.3 -0.1
baz=274,SNR=57
CHUM S S 08 35 47.6 +1.9
baz=274
F22K John River 29.30 40 P P 08 31 28.6 +0.2
baz=268,SNR=127
F22K S S 08 35 45.6 -0.2
baz=268
I21K Tanana 29.38 44 P P 08 31 29.1 +0.1
baz=272,SNR=19
I21K S S 08 35 48.5 +1.6
baz=272
P19K Oil Pt 29.42 56 P P 08 31 29.4 -0.1
baz=281,SNR=10
P19K S S 08 35 49.5 +1.8
baz=281
PPLA Purkeypile 29.44 49 P P 08 31 28.7 -1.1
baz=276,SNR=25
PPLA S S 08 35 49.1 +0.9
baz=276
E22K Anaktuvuk Pass 29.47 38 P P 08 31 30.0 +0.1
baz=267,SNR=160
E22K S S 08 35 48.0 -0.4
baz=267
IRK Irkutsk 29.53 289 eP P 08 31 30.2 -0.3
IRK eS S 08 35 45.0 -4.5
IRK pmax pmax
comp=Z,410nm,1.7s
G22K Bettles 29.55 41 P P 08 31 30.5 0.0
baz=270,SNR=250
G22K S S 08 35 49.9 +0.5
baz=270
H22K Ishtalitna Cre 29.61 43 P P 08 31 31.6 +0.6
baz=272,SNR=84
H22K S S 08 35 51.4 +1.0
baz=272
SII Sitkinak Islan 29.64 62 P P 08 31 31.7 +0.3
SII Sitkinak Islan 29.64 62 P P 08 31 30.3 -1.1
baz=286,SNR=12
SII S S 08 35 49.5 -1.6
baz=286
O20K Slope Mountain 29.64 55 P P 08 31 30.9 -0.6
baz=281,SNR=10
O20K S S 08 35 50.7 -0.6
baz=281
N20K Mount Spurr 29.65 52 P P 08 31 31.6 0.0
baz=279
N20K S S 08 35 53.7 +2.3
baz=279
SPCR Spurr Chakacha 29.65 52 P P 08 31 31.4 -0.2
baz=279,SNR=46
SPCR S S 08 35 54.0 +2.6
baz=279

ULN	**Ulaanbaatar**	**29.72**	**279**		P		**P**	**08 31 33.1**	**+0.6**
ULN					S		**S**	**08 35 53.3**	**+0.3**
ULN	**Ulaanbaatar**	**29.72**	**279**	*d*	*i* P		**P**	**08 31 33.4**	**+0.9**
ULN					pmax		pmax		
	comp=Z,186nm,0.8s								
ULN	**Ulaanbaatar**	**29.72**	**279**	⇑	P		**P**	**08 31 33.3**	**+0.8**
SKT	**Skwentna**	**29.86**	**51**		P		**P**	**08 31 32.2**	**-1.1**
	baz=278,SNR=24								
SKT					S		**S**	**08 35 54.0**	**-0.5**
	baz=278								
BPAW	**Bear Paw Mtn.**	**29.87**	**46**		P		**P**	**08 31 32.3**	**-1.0**
	baz=275,SNR=28								
BPAW					S		**S**	**08 35 55.2**	**+0.7**
	baz=275								
MLY	**Manley**	**29.91**	**45**		P		**P**	**08 31 33.1**	**-0.7**
	baz=274,SNR=59								
MLY					S		**S**	**08 35 56.8**	**+1.6**
	baz=274								
D23K	**Nanushuk River**	**29.93**	**37**		P		**P**	**08 31 33.6**	**-0.3**
	baz=267,SNR=121								
D23K					S		**S**	**08 35 56.4**	**+1.0**
	baz=267								
OHAK	**Old Harbor**	**29.94**	**61**		P		**P**	**08 31 33.3**	**-0.7**
	baz=285,SNR=37								
OHAK					S		**S**	**08 35 54.3**	**-1.3**
	baz=285								
C23K	**Itkillik River**	**30.02**	**35**		P		**P**	**08 31 34.5**	**0.0**
	baz=265,SNR=170								
C23K					S		**S**	**08 35 56.4**	**-0.3**
	baz=265								
Q20K	**Shuyak Island**	**30.06**	**58**		P		**P**	**08 31 34.9**	**-0.1**
	baz=283,SNR=26								
Q20K					S		**S**	**08 35 54.8**	**-2.7**
	baz=283								
COLD	**Coldfoot**	**30.06**	**40**		P		**P**	**08 31 35.0**	**+0.1**
	baz=270,SNR=226								
COLD					S		**S**	**08 35 58.1**	**+0.6**
	baz=270								
TLY	**Talaya**	**30.10**	**288**		P		**P**	**08 31 37.3**	**+1.8**
TLY	**Talaya**	**30.10**	**288**		P		**P**	**08 31 37.4**	**+1.9**
TLY					S		**S**	**08 36 01.0**	**+2.6**
TLY	**Talaya**	**30.10**	**288**	*ce*	P		**P**	**08 31 37.4**	**+1.9**
TLY					pmax		pmax		
	comp=Z,489nm,1.7s								
TLY	**Talaya**	**30.10**	**288**	⇓	P		**P**	**08 31 37.3**	**+1.9**
SONM	**Songino Array**	**30.13**	**279**		P		**P**	**08 31 36.8**	**+0.9**
	comp=Z,78nm,0.5s,baz=60,slow=7.6,SNR=123								
SONM					pP		**pP**	**08 33 01.1**	**+1.1**
	comp=Z,34nm,0.7s,baz=50,slow=10.0,SNR=3.4								
SONM					PcP		**PcP**	**08 34 22.8**	**+0.9**
	comp=Z,35nm,0.6s,baz=58,slow=1.6,SNR=5.1								
SONM					S		**S**	**08 35 59.8**	**+0.6**
	comp=Z,28nm,0.9s,baz=40,slow=9.7,SNR=3.6								
SONM					ScP		**ScP**	**08 37 16.6**	**0.0**
	comp=Z,100nm,0.8s,baz=86,slow=2.1,SNR=14								
SONM					P3KPbc			09 03 14.0	
	comp=Z,1.8nm,0.7s,baz=222,slow=4.8,SNR=6.5								
	comp=Z,78nm,0.5s								
G23K	**Bananza Creek**	**30.14**	**41**		P		**P**	**08 31 35.4**	**-0.2**
	baz=271,SNR=147								
G23K					S		**S**	**08 35 60.0**	**+1.3**
	baz=271								
KDAK	**Kodiak Island**	**30.16**	**59**		P		**P**	**08 31 35.7**	**-0.2**
KDAK					IAmb		IAmb	08 31 37.8	
	comp=Z,266nm,0.8s								
KDAK	**Kodiak Island**	**30.16**	**59**	*d*	*i* P		**P**	**08 31 35.7**	**-0.2**
KDAK					pmax		pmax		
	comp=Z,350nm,0.8s								
KDAK	**Kodiak Island**	**30.16**	**59**	⇑	P		**P**	**08 31 34.8**	**-1.1**
KDAK	**Kodiak Island**	**30.16**	**59**		P		**P**	**08 31 35.3**	**-0.6**
	baz=285								
KDAK					S		**S**	**08 35 56.7**	**-2.4**
	baz=285								
KDAK	**Kodiak Island**	**30.16**	**59**		P		**P**	**08 31 35.7**	**-0.2**
KDAK					PcP		**PcP**	**08 34 23.0**	**+1.4**
KDAK					ScP		**ScP**	**08 37 17.2**	**+0.9**
HOM	**Homer**	**30.21**	**55**		P		**P**	**08 31 35.5**	**-0.8**
	baz=282								
HOM					S		**S**	**08 36 00.0**	**+0.2**
	baz=282								
CAPN	**Captain Cook N**	**30.23**	**53**		P		**P**	**08 31 36.2**	**-0.2**
	baz=281								
CAPN					S		**S**	**08 36 00.7**	**+0.6**
	baz=281								
TRF	**Thorofare Moun**	**30.24**	**48**		IAmb		IAmb	08 33 10.3	
	comp=Z,365nm,1.2s								
TRF	**Thorofare Moun**	**30.24**	**48**		P		**P**	**08 31 36.3**	**-0.4**
	baz=277,SNR=89								
TRF					S		**S**	**08 36 01.2**	**+0.6**
	baz=277								
E23K	**Chandalar**	**30.29**	**39**		IAmb		IAmb	08 31 38.7	
	comp=Z,227nm,0.7s								
E23K	**Chandalar**	**30.29**	**39**		P		**P**	**08 31 37.0**	**-0.1**
	baz=269,SNR=186								
E23K					S		**S**	**08 36 02.0**	**+0.9**
	baz=269								
SUA	**Susitna One**	**30.31**	**52**		P		**P**	**08 31 36.9**	**-0.4**
	baz=280,SNR=35								
SUA					S		**S**	**08 36 00.8**	**-0.8**
	baz=280								
TOLK	**Toolik Lake Re**	**30.32**	**37**		IAmb		IAmb	08 33 06.8	
	comp=Z,317nm,1.1s								
TOLK	**Toolik Lake Re**	**30.32**	**37**		P		**P**	**08 31 37.4**	**+0.1**
	baz=268,SNR=68								
TOLK					S		**S**	**08 36 01.3**	**-0.2**
	baz=268								
H23K	**Yukon River**	**30.36**	**43**		IAmb		IAmb	08 33 09.2	
	comp=Z,304nm,1.0s								
H23K	**Yukon River**	**30.36**	**43**		P		**P**	**08 31 38.2**	**+0.6**
	baz=273								
H23K					S		**S**	**08 36 04.7**	**+2.5**
	baz=273								
JAM	**Amami Oshima**	**30.38**	**225**		P		**P**	**08 31 38.9**	**+0.7**
JAM				*e*	S		**S**	**08 36 05.5**	**+2.4**
CUT	**Chulitna**	**30.39**	**50**		P		**P**	**08 31 37.5**	**-0.3**
	baz=278,SNR=28								
CUT					S		**S**	**08 36 02.2**	**-0.2**
	baz=278								
CNPM	**China Poot**	**30.44**	**56**		IAmb		IAmb	08 31 41.0	
	comp=Z,379nm,1.0s								
I23K	**Minto, Yukon-K**	**30.48**	**44**		IAmb		IAmb	08 33 15.3	
	comp=Z,439nm,1.4s								
I23K	**Minto, Yukon-K**	**30.48**	**44**		P		**P**	**08 31 38.8**	**+0.3**
	baz=274,SNR=69								
I23K					S		**S**	**08 36 06.0**	**+2.0**
	baz=274								
M22K	**Willow**	**30.55**	**51**		IAmb		IAmb	08 33 13.2	
	comp=Z,453nm,1.3s								
M22K	**Willow**	**30.55**	**51**		P		**P**	**08 31 38.1**	**-1.1**
	baz=280								
M22K					S		**S**	**08 36 04.2**	**-0.9**
	baz=280								
BRLK	**Bradley Lake**	**30.56**	**55**		IAmb		IAmb	08 31 41.5	
	comp=Z,261nm,1.0s								
TIA	**Tai'an**	**30.58**	**251**		P		**P**	**08 31 40.5**	**+0.7**
TIA					PP		**PP**	**08 33 10.6**	**-7.3**
TIA					S		**S**	**08 36 06.5**	**+0.3**
TIA					pmax		pmax		
	comp=Z,2μm,0.6s								
TIA					pmax		pmax		
	comp=Z,3μm,3.5s								
D24K	**Happy Valley**	**30.61**	**36**		IAmb		IAmb	08 31 41.1	
	comp=Z,275nm,0.8s								
D24K	**Happy Valley**	**30.61**	**36**		P		**P**	**08 31 39.8**	**+0.1**
	baz=268								
D24K					S		**S**	**08 36 06.0**	**+0.1**
	baz=268								
BRSE	**Bradley Lake S**	**30.64**	**55**		P		**P**	**08 31 39.2**	**-0.8**
	baz=283,SNR=26								
BRSE					S		**S**	**08 36 02.7**	**-3.8**
	baz=283								
NEA2	**Nenana**	**30.66**	**45**		IAmb		IAmb	08 31 42.2	
	comp=Z,208nm,1.2s								
NEA2	**Nenana**	**30.66**	**45**		P		**P**	**08 31 40.0**	**-0.2**
	baz=276,SNR=80								
NEA2					S		**S**	**08 36 06.9**	**+0.3**
	baz=276								
C24K	**Franklin Bluff**	**30.68**	**35**		P		**P**	**08 31 40.4**	**+0.2**
	baz=267								
C24K					S		**S**	**08 36 07.0**	**+0.2**
	baz=267								
E24K	**Your Creek**	**30.72**	**38**		P		**P**	**08 31 40.5**	**-0.1**
	baz=270,SNR=352								
E24K					S		**S**	**08 36 08.1**	**+0.5**
	baz=270								
SLKM	**Skilak Lake**	**30.73**	**53**		IAmb		IAmb	08 31 43.3	
	comp=Z,140nm,1.1s								

HHC	**Hu-ho-hao-te**	**30.80**	**264**	⇓	*i* P		**P**	**08 31 42.5**	**+0.7**
HHC					pP		pP	08 33 06.4	+0.1
HHC					sP		sP	08 34 03.8	+0.4
HHC					S		**S**	**08 36 09.8**	**+0.2**
HHC					SS		SS	08 38 47.8	-27
HHC					pmax		pmax		
	comp=Z,330nm,0.9s								
HHC					pmax		pmax		
	comp=Z,2μm,7.6s								
MCK	**McKinley**	**30.81**	**47**		P		**P**	**08 31 41.2**	**-0.3**
	baz=277,SNR=68								
MCK					S		**S**	**08 36 08.8**	**-0.3**
	baz=277								
ZAK	**Zakamensk**	**30.83**	**286**	*e*	P		**P**	**08 31 42.7**	**+0.8**
ZAK					pmax		pmax		
	comp=Z,278nm,1.2s								
RC01	**Rabbit Creek A**	**30.85**	**52**		P		**P**	**08 31 42.3**	**+0.4**
	baz=281,SNR=19								
RC01					S		**S**	**08 36 08.2**	**-1.5**
	baz=281								
RND	**Reindeer**	**30.89**	**48**		IAmb		IAmb	08 33 16.9	
	comp=Z,239nm,1.2s								
F24K	**Squaw Lake**	**30.95**	**40**		IAmb		IAmb	08 33 16.2	
	comp=Z,161nm,1.0s								
F24K	**Squaw Lake**	**30.95**	**40**		P		**P**	**08 31 42.5**	**-0.2**
	baz=272,SNR=158								
F24K					S		**S**	**08 36 12.6**	**+1.4**
	baz=272								
O22K	**Cooper Landing**	**30.98**	**53**		P		**P**	**08 31 42.1**	**-0.8**
	baz=282,SNR=16								
O22K					S		**S**	**08 36 09.9**	**-1.8**
	baz=282								
H24K	**Noodor Dome**	**31.05**	**43**		IAmb		IAmb	08 33 16.6	
	comp=Z,204nm,1.2s								
H24K	**Noodor Dome**	**31.05**	**43**		P		**P**	**08 31 43.5**	**0.0**
	baz=275,SNR=69								
H24K					S		**S**	**08 36 15.7**	**+3.0**
	baz=275								
PMR	**Palmer**	**31.05**	**51**		P		**P**	**08 31 43.3**	**-0.2**
PMR	**Palmer**	**31.05**	**51**		P		**P**	**08 31 43.5**	**0.0**
	baz=281,SNR=14								
PMR					S		**S**	**08 36 10.4**	**-2.3**
	baz=281								
WAT1	**Susitna Watana**	**31.11**	**49**		P		**P**	**08 31 43.4**	**-0.7**
	baz=279								
WAT1					S		**S**	**08 36 12.6**	**-1.1**
	baz=279								
COLA	**College**	**31.15**	**45**		P		**P**	**08 31 44.7**	**+0.4**
COLA					IAmb		IAmb	08 31 45.9	
	comp=Z,196nm,0.6s								
COLA	**College**	**31.15**	**45**	*d*	*i* P		**P**	**08 31 44.5**	**+0.3**
COLA					pmax		pmax		
	comp=Z,222nm,0.9s								
COLA	**College**	**31.15**	**45**	⇓	P		**P**	**08 31 44.6**	**+0.3**
COLA	**College**	**31.15**	**45**		P		**P**	**08 31 44.6**	**+0.4**
	baz=276								
COLA					S		**S**	**08 36 15.3**	**+1.2**
	baz=276								
COLA	**College**	**31.15**	**45**		P		**P**	**08 31 44.5**	**+0.3**
COLA					S		**S**	**08 36 14.8**	**+0.7**
G24K	**Hadweenzic Riv**	**31.15**	**41**		IAmb		IAmb	08 31 46.4	
	comp=Z,218nm,0.8s								
G24K	**Hadweenzic Riv**	**31.15**	**41**		P		**P**	**08 31 44.8**	**+0.5**
	baz=274,SNR=163								
G24K					S		**S**	**08 36 16.6**	**+2.4**
	baz=274								
HNS	**HongShan**	**31.16**	**256**	⇓	P		**P**	**08 31 45.9**	**+1.2**
HNS					pP		**pP**	**08 33 11.3**	**+1.9**
HNS					PcP		**PcP**	**08 34 25.6**	**+1.0**
HNS					S		**S**	**08 36 15.5**	**+0.6**
HNS					SS		SS	08 38 55.5	-25
HNS					ScS		**ScS**	**08 41 17.9**	**-0.6**
HNS					pmax		pmax		
	comp=Z,2μm,0.9s								
CCB	**Clear Creek Bu**	**31.19**	**45**		IAmb		IAmb	08 33 21.2	
	comp=Z,312nm,1.2s								
SEW	**Seward**	**31.19**	**54**		IAmb		IAmb	08 31 47.2	
	comp=Z,364nm,1.0s								
SEW	**Seward**	**31.19**	**54**		P		**P**	**08 31 44.1**	**-0.6**
	baz=283,SNR=18								
SEW					S		**S**	**08 36 12.4**	**-2.5**
	baz=283								
POKR	**Poker Plat Res**	**31.30**	**44**		IAmb		IAmb	08 31 47.9	
	comp=Z,111nm,0.7s								
POKR	**Poker Plat Res**	**31.30**	**44**		P		**P**	**08 31 45.9**	**+0.2**
	baz=276,SNR=58								
POKR					S		**S**	**08 36 17.6**	**+1.1**
	baz=276								
SML	**Sawmill**	**31.38**	**51**		P		**P**	**08 31 46.6**	**+0.1**
	baz=281,SNR=70								
SML					S		**S**	**08 36 17.0**	**-1.0**
	baz=281								
KNK	**Knik Glacier**	**31.40**	**51**		P		**P**	**08 31 46.6**	**+0.1**
	baz=282,SNR=85								
KNK					S		**S**	**08 36 17.1**	**-1.1**
	baz=282								
D25K	**Kavik River**	**31.49**	**36**		P		**P**	**08 31 47.3**	**+0.1**
	baz=270,SNR=591								
D25K					S		**S**	**08 36 19.1**	**-0.2**
	baz=270								
WAT6	**Susitna Watana**	**31.52**	**49**		P		**P**	**08 31 47.4**	**-0.3**
	baz=280,SNR=28								
WAT6					S		**S**	**08 36 18.8**	**-1.4**
	baz=280								
IL31		**31.57**	**45**		IAmb		IAmb	08 31 50.9	
	comp=Z,166nm,0.9s								
ILAR	**Eielson Array**	**31.57**	**45**		P		**P**	**08 31 47.6**	**-0.3**
	comp=Z,85nm,0.8s,baz=275,slow=9.4,SNR=576								
ILAR					pP		**pP**	**08 33 14.2**	**+1.0**
	comp=Z,52nm,0.8s,baz=265,slow=7.7,SNR=2.6								
ILAR					PcP		**PcP**	**08 34 25.4**	**+0.1**
	comp=Z,6.2nm,0.6s,baz=287,slow=3.7,SNR=0.8								
ILAR					S		**S**	**08 36 20.7**	**0.0**
	comp=Z,31nm,1.1s,baz=258,slow=14,SNR=9.8								
ILAR					ScP		**ScP**	**08 37 20.4**	**-0.6**
	comp=Z,35nm,0.7s,baz=278,slow=3.5,SNR=16								
ILAR					P3KPbc			09 03 08.8	
	comp=Z,11nm,1.0s,baz=115,slow=3.5,SNR=49								
ILAR					PKP2ab		**P'P'ab**	**09 07 07.5**	**-3.3**
	comp=Z,0.8nm,1.0s,baz=159,slow=3.0,SNR=4.5								
	comp=Z,85nm,0.8s								
ILAR	**Eielson Array**	**31.57**	**45**		P		**P**	**08 31 47.4**	**-0.6**
PWL	**Port Wells**	**31.57**	**52**		IAmb		IAmb	08 31 51.5	
	comp=Z,472nm,1.2s								
PWL	**Port Wells**	**31.57**	**52**		P		**P**	**08 31 47.8**	**-0.2**
	baz=282,SNR=38								
PWL					S		**S**	**08 36 19.6**	**-1.2**
	baz=282								
HDA	**Harding Lake**	**31.59**	**46**		IAmb		IAmb	08 31 50.7	
	comp=Z,125nm,0.6s								
HDA	**Harding Lake**	**31.59**	**46**		P		**P**	**08 31 47.4**	**-0.7**
	baz=278,SNR=98								
HDA					S		**S**	**08 36 20.9**	**-0.1**
	baz=278								
DHY	**Denali Highway**	**31.60**	**48**		P		**P**	**08 31 47.9**	**-0.5**
	baz=280,SNR=53								
DHY					S		**S**	**08 36 19.8**	**-1.7**
	baz=280								
MOY	**Mondy**	**31.62**	**289**	*e*	P		**P**	**08 31 50.4**	**+1.7**
MOY				*e*				08 33 16.4	
MOY				*e*				08 36 26.8	
MOY					pmax		pmax		
	comp=Z,451nm,1.9s								
M23K	**Glacier View**	**31.67**	**51**		P		**P**	**08 31 48.5**	**-0.4**
	baz=281,SNR=36								
M23K					S		**S**	**08 36 22.1**	**-0.2**
	baz=281								
G25K	**Bearman Lake**	**31.69**	**41**		P		**P**	**08 31 49.4**	**+0.5**
	baz=275,SNR=26								
G25K					S		**S**	**08 36 25.2**	**+2.7**
	baz=275								
E25K	**Arctic Village**	**31.81**	**38**		P		**P**	**08 31 50.6**	**+0.6**
E25K	**Arctic Village**	**31.81**	**38**		P		**P**	**08 31 50.5**	**+0.5**
	baz=273,SNR=110								
E25K					S		**S**	**08 36 26.1**	**+1.8**
	baz=273								
F25K	**Christian Rive**	**31.81**	**39**		IAmb		IAmb	08 33 23.1	
	comp=Z,165nm,0.9s								
F25K	**Christian Rive**	**31.81**	**39**		P		**P**	**08 31 50.8**	**+0.7**
	baz=274,SNR=113								
F25K					S		**S**	**08 36 26.7**	**+2.2**
	baz=274								
SCM	**Sheep Creek Mo**	**31.84**	**50**		IAmb		IAmb	08 31 53.8	
	comp=Z,412nm,1.1s								
SCM	**Sheep Creek Mo**	**31.84**	**50**		P		**P**	**08 31 50.5**	**0.0**
	baz=282,SNR=45								
SCM					S		**S**	**08 36 25.1**	**0.0**

	baz=282								
H25L	**Birch Creek**	**31.85**	**42**		P		**P**	**08 31 50.9**	**+0.6**
	baz=276,SNR=43								
H25L					S		**S**	**08 36 29.0**	**+4.2**
	baz=276								
BTO	**Baotou**	**31.87**	**265**	⇓	*i* P		**P**	**08 31 52.3**	**+1.3**
BTO					pP		**pP**	**08 33 16.8**	**+0.8**
BTO					PP		**PP**	**08 33 22.0**	**-8.0**
BTO					S		**S**	**08 36 27.9**	**+1.8**
BTO					SS		SS	08 39 10.4	-22
BTO					pmax		pmax		
	comp=Z,2μm,1.7s								
BTO					pmax		pmax		
	comp=Z,16μm,10.5s								
C26K	**Camden Bay**	**32.00**	**35**		P		**P**	**08 31 52.1**	**+0.6**
	baz=271								
C26K					S		**S**	**08 36 28.4**	**+1.4**
	baz=271								
JMZ	**Minamidaito 2**	**32.00**	**221**		P		**P**	**08 31 52.4**	**+0.3**
JMZ	**Minamidaito 2**	**32.00**	**221**	⇓	P		**P**	**08 31 54.0**	**+1.9**
JMZ	**Minamidaito 2**	**32.00**	**221**		P		**P**	**08 31 52.6**	**+0.5**
PRP	**Porcupine Dome**	**32.05**	**43**		P		**P**	**08 31 52.8**	**+0.6**
	baz=277,SNR=292								
PRP					S		**S**	**08 36 30.2**	**+2.0**
	baz=277								
GLI	**Glacier Island**	**32.16**	**52**		IAmb		IAmb	08 31 55.7	
	comp=Z,123nm,0.8s								
GLI	**Glacier Island**	**32.16**	**52**		P		**P**	**08 31 52.3**	**-0.7**
	baz=283								
GLI					S		**S**	**08 36 28.8**	**-0.9**
	baz=283								
SSE	**Sheshan**	**32.18**	**240**		P		**P**	**08 31 53.8**	**+0.2**
SSE					S		**S**	**08 36 31.0**	**+0.2**
SSE					pmax		pmax		
	comp=Z,160nm,1.2s								
SSE					pmax		pmax		
	comp=Z,4μm,3.5s								
SSE	**Sheshan**	**32.18**	**240**		P		**P**	**08 31 54.1**	**+0.5**
SSE					PcP		**PcP**	**08 34 28.4**	**+0.8**
SSE					ScP		**ScP**	**08 37 24.3**	**+0.7**
K24K	**Donnelly Dome**	**32.19**	**46**		IAmb		IAmb	08 31 55.9	
	comp=Z,293nm,0.9s								
K24K	**Donnelly Dome**	**32.19**	**46**		P		**P**	**08 31 53.0**	**-0.3**
	baz=280,SNR=18								
K24K					S		**S**	**08 36 29.2**	**-1.0**
	baz=280								
P23K	**Montague Islan**	**32.22**	**54**		P		**P**	**08 31 53.8**	**+0.3**
	baz=284,SNR=11								
P23K					S		**S**	**08 36 29.8**	**-0.8**
	baz=284								
BMAR	**Burnt Mountain**	**32.23**	**40**		P		**P**	**08 31 54.3**	**+0.6**
J25K	**Salcha River,**	**32.24**	**45**		IAmb		IAmb	08 33 28.6	
	comp=Z,277nm,1.3s								
J25K	**Salcha River,**	**32.24**	**45**		P		**P**	**08 31 52.5**	**-1.3**
	baz=279,SNR=76								
J25K					S		**S**	**08 36 29.9**	**-1.2**
	baz=279								
TIY	**Taiyuan**	**32.28**	**258**		P		**P**	**08 31 55.6**	**+1.1**
TIY					PP		**PP**	**08 33 28.3**	**-5.4**
TIY					S		**S**	**08 36 32.6**	**+0.2**
TIY					SS		SS	08 39 20.8	-20
TIY					pmax		pmax		
	comp=Z,390nm,0.8s								
TIY					pmax		pmax		
	comp=Z,5μm,3.7s								
M24K	**Tolsona, Glenn**	**32.32**	**50**		P		**P**	**08 31 54.7**	**+0.2**
	baz=282,SNR=14								
M24K					S		**S**	**08 36 32.9**	**+0.5**
	baz=282								
JOW	**Kunigami**	**32.33**	**226**		PcP		**PcP**	**08 34 28.4**	**+0.3**
	comp=Z,61nm,0.5s,baz=90,slow=2.5,SNR=4.2								
JOW					S		**S**	**08 36 35.2**	**+2.1**
	comp=Z,173nm,1.1s,baz=206,slow=26,SNR=18								
JOW	**Kunigami**	**32.33**	**226**		P		**P**	**08 31 55.0**	**+0.1**
JOW	**Kunigami**	**32.33**	**226**	⇓	P		**P**	**08 31 55.0**	**+0.1**
JOW	**Kunigami**	**32.33**	**226**		P		**P**	**08 31 55.1**	**+0.2**
F26K	**Sheenjek River**	**32.37**	**39**		IAmb		IAmb	08 31 57.0	
	comp=Z,134nm,0.8s								
F26K	**Sheenjek River**	**32.37**	**39**		P		**P**	**08 31 55.5**	**+0.7**
	baz=275,SNR=129								
F26K					S		**S**	**08 36 35.9**	**+2.9**
	baz=275								
C27K	**Jago River**	**32.42**	**35**		P		**P**	**08 31 55.8**	**+0.6**
	baz=272,SNR=340								
C27K					S		**S**	**08 36 34.0**	**+0.5**
	baz=272								
PAX	**Paxson**	**32.47**	**48**		IAmb		IAmb	08 33 29.3	
	comp=Z,426nm,2.0s								
PAX	**Paxson**	**32.47**	**48**		P		**P**	**08 31 56.0**	**+0.2**
	baz=281,SNR=32								
PAX					S		**S**	**08 36 33.9**	**-0.8**
	baz=281								
HIN	**Hinchinbrook I**	**32.56**	**53**		IAmb		IAmb	08 31 59.5	
	comp=Z,171nm,0.9s								
KLU	**Klutina**	**32.57**	**51**		IAmb		IAmb	08 32 00.0	
	comp=Z,216nm,1.0s								
KLU	**Klutina**	**32.57**	**51**		P		**P**	**08 31 56.6**	**0.0**
	baz=283,SNR=39								
KLU					S		**S**	**08 36 37.3**	**+1.0**
	baz=283								
G26K	**Porcupine Rive**	**32.58**	**40**		P		**P**	**08 31 57.0**	**+0.5**
	baz=276,SNR=166								
G26K					S		**S**	**08 36 38.7**	**+2.6**
	baz=276								
RIDG	**Independent Ri**	**32.60**	**46**		IAmb		IAmb	08 31 58.0	
	comp=Z,179nm,1.0s								
RIDG	**Independent Ri**	**32.60**	**46**		P		**P**	**08 31 56.1**	**-0.8**
	baz=280,SNR=42								
RIDG					S		**S**	**08 36 35.5**	**-1.2**
	baz=280								
NJ2	**Nanjing**	**32.68**	**244**	⇓	*i* P		**P**	**08 31 58.5**	**+0.7**
NJ2					PP		**PP**	**08 33 31.8**	**-5.6**
NJ2					S		**S**	**08 36 37.3**	**-1.1**
NJ2					ScP		**ScP**	**08 37 25.3**	**0.0**
NJ2					sS		**sS**	**08 39 16.1**	**-0.8**
NJ2					ScS		**ScS**	**08 41 25.3**	**-1.3**
NJ2					pmax		pmax		
	comp=Z,570nm,0.8s								
NJ2					pmax		pmax		
	comp=Z,4μm,3.9s								
DIV	**Divide**	**32.73**	**51**		IAmb		IAmb	08 32 01.2	
	comp=Z,223nm,1.0s								
HARP	**HAARP**	**32.73**	**49**		P		**P**	**08 31 57.9**	**0.0**
	baz=282,SNR=17								
HARP					S		**S**	**08 36 37.3**	**-1.2**
	baz=282								
MIDW

	baz=285						
L26K	**Log Cabin Wild**	**33.41**	**48**	P	**P**	**08 32 03.8**	**+0.2**
	baz=283,SNR=32						
L26K				S	**S**	**08 36 50.5**	**+1.6**
	baz=283						
D27M	**Malcolm River**	**33.41**	**36**	IAmb	IAmb	08 33 39.2	
	comp=Z,326nm,1.3s						
D27M	**Malcolm River**	**33.41**	**36**	P	**P**	**08 32 04.1**	**+0.4**
	baz=275,SNR=111						
D27M				S	**S**	**08 36 49.4**	**+0.6**
	baz=275						
RAGM	**Ragged Mountai**	**33.44**	**52**	IAmb	IAmb	08 33 40.8	
	comp=Z,387nm,1.3s						
G27K	**Doyon Strip**	**33.44**	**41**	IAmb	IAmb	08 32 06.8	
	comp=Z,116nm,0.8s						
G27K	**Doyon Strip**	**33.44**	**41**	P	**P**	**08 32 04.8**	**+0.9**
	baz=278,SNR=124						
G27K				S	**S**	**08 36 52.1**	**+2.9**
	baz=278						
GLB	**Gilahina Butte**	**33.57**	**50**	IAmb	IAmb	08 33 43.7	
	comp=Z,167nm,1.2s						
H27K	**Steamboat Moun**	**33.58**	**42**	IAmb	IAmb	08 32 07.5	
	comp=Z,134nm,0.8s						
H27K	**Steamboat Moun**	**33.58**	**42**	P	**P**	**08 32 06.0**	**+0.9**
	baz=279,SNR=114						
H27K				S	**S**	**08 36 54.0**	**+2.7**
	baz=279						
I27K	**Kandik River**	**33.64**	**43**	P	**P**	**08 32 06.2**	**+0.5**
	baz=280,SNR=58						
I27K				S	**S**	**08 36 53.4**	**+1.0**
	baz=280						
HMT	**Hamilton**	**33.65**	**52**	IAmb	IAmb	08 33 43.5	
	comp=Z,567nm,1.6s						
KAIM	**Kayak Island**	**33.69**	**53**	P	**P**	**08 32 07.2**	**+1.2**
KAIM	**Kayak Island**	**33.69**	**53**	P	**P**	**08 32 07.1**	**+1.1**
	baz=286,SNR=6.4						
M26K	**Nabesna, AK**	**33.71**	**49**	IAmb	IAmb	08 32 10.5	
	comp=Z,231nm,0.8s						
M26K	**Nabesna, AK**	**33.71**	**49**	P	**P**	**08 32 06.7**	**+0.5**
	baz=284,SNR=95						
M26K				S	**S**	**08 36 56.7**	**+3.3**
	baz=284						
K27K	**Chicken**	**33.75**	**46**	IAmb	IAmb	08 33 47.0	
	comp=Z,211nm,1.1s						
K27K	**Chicken**	**33.75**	**46**	P	**P**	**08 32 06.5**	**0.0**
	baz=282,SNR=75						
K27K				S	**S**	**08 36 54.6**	**+0.6**
	baz=282						
VRDI	**Verde Repeater**	**33.79**	**51**	IAmb	IAmb	08 33 46.1	
	comp=Z,330nm,1.4s						
MCARA	**McCarthy VSAT**	**33.95**	**50**	IAmb	IAmb	08 33 47.8	
	comp=Z,241nm,1.2s						
MCARA	**McCarthy VSAT**	**33.95**	**50**	P	**P**	**08 32 08.7**	**+0.5**
	baz=285,SNR=19						
MCARA				S	**S**	**08 36 59.3**	**+2.3**
	baz=285						
E28M	**Babbage River**	**33.99**	**37**	P	**P**	**08 32 09.0**	**+0.5**
	baz=277,SNR=131						
E28M				S	**S**	**08 36 58.5**	**+0.9**
	baz=277						
F28M	**Old Crow**	**34.01**	**39**	P	**P**	**08 32 09.4**	**+0.7**
	baz=279,SNR=115						
F28M				S	**S**	**08 37 00.1**	**+2.3**
	baz=279						
L27K	**Beaver Creek,**	**34.08**	**47**	IAmb	IAmb	08 32 13.4	
	comp=Z,248nm,0.9s						
L27K	**Beaver Creek,**	**34.08**	**47**	P	**P**	**08 32 10.3**	**+1.0**
	baz=284,SNR=138						
L27K				S	**S**	**08 37 00.8**	**+1.8**
	baz=284						
CRQE	**Cirque**	**34.09**	**51**	P	**P**	**08 32 10.2**	**+0.7**
	baz=286,SNR=30						
CRQE				S	**S**	**08 37 01.2**	**+1.8**
	baz=286						
BGLC	**Bering Glacier**	**34.18**	**53**	S	**S**	**08 37 03.4**	**+3.1**
	baz=287						
D28M	**Stokes Point**	**34.19**	**36**	P	**P**	**08 32 10.2**	**+0.1**
	baz=277,SNR=47						
D28M				S	**S**	**08 37 01.6**	**+1.2**
	baz=277						
M27K	**Edge Creek, AK**	**34.23**	**48**	P	**P**	**08 32 11.5**	**+0.8**
	baz=285,SNR=86						
M27K				S	**S**	**08 37 05.0**	**+3.6**
	baz=285						
WAX	**Waxell Ridge**	**34.29**	**52**	IAmb	IAmb	08 32 15.2	
	comp=Z,337nm,0.9s						
I28M	**Miner Creek**	**34.36**	**43**	IAmb	IAmb	08 32 14.5	
	comp=Z,143nm,0.9s						
I28M	**Miner Creek**	**34.36**	**43**	P	**P**	**08 32 12.4**	**+0.6**
	baz=282,SNR=130						
I28M				S	**S**	**08 37 05.1**	**+1.8**
	baz=282						
LYN	**LuoYang**	**34.44**	**254**	⇓*i*P	**P**	**08 32 13.9**	**+1.2**
LYN				PP	**PP**	**08 33 48.0**	**-2.7**
LYN				sP	sP	08 34 36.1	+0.6
LYN				S	**S**	**08 37 06.3**	**+1.3**
LYN				sS	sS	08 39 45.3	+0.9
LYN				ScS	**ScS**	**08 41 33.0**	**-2.9**
LYN				pmax	pmax		
	comp=Z,3μm,0.6s						
LYN				pmax	pmax		
	comp=Z,8μm,3.6s						
ISLE	**Juniper Island**	**34.49**	**52**	IAmb	IAmb	08 32 18.8	
	comp=Z,185nm,0.9s						
E29M	**Blow River**	**34.62**	**37**	IAmb	IAmb	08 32 15.8	
	comp=Z,131nm,0.9s						
E29M	**Blow River**	**34.62**	**37**	P	**P**	**08 32 14.5**	**+0.7**
	baz=279,SNR=145						
E29M				S	**S**	**08 37 08.5**	**+1.5**
	baz=279						
BVCY	**Beaver Creek**	**34.67**	**48**	P	**P**	**08 32 15.1**	**+0.8**
	baz=285,SNR=46						
BVCY				S	**S**	**08 37 10.5**	**+2.6**
	baz=285						
BARN	**Barnard Glacie**	**34.67**	**51**	IAmb	IAmb	08 32 18.6	
	comp=Z,278nm,0.8s						
MESA	**MESA**	**34.80**	**52**	P	**P**	**08 32 16.4**	**+0.8**
	baz=288,SNR=14						
MESA				S	**S**	**08 37 12.6**	**+2.4**
	baz=288						
G29M	**Pine Creek**	**34.84**	**40**	IAmb	IAmb	08 33 47.0	
	comp=Z,318nm,1.4s						
G29M	**Pine Creek**	**34.84**	**40**	P	**P**	**08 32 16.5**	**+0.9**
	baz=281,SNR=45						
G29M				S	**S**	**08 37 12.0**	**+1.7**
	baz=281						
H29M	**Whitestone**	**34.84**	**41**	P	**P**	**08 32 16.4**	**+0.8**
	baz=282,SNR=49						
H29M				S	**S**	**08 37 13.2**	**+3.0**
	baz=282						
YAH	**Yahtse**	**34.84**	**52**	IAmb	IAmb	08 32 19.9	
	comp=Z,365nm,1.0s						
CTG	**Chitna Glacier**	**34.85**	**51**	P	**P**	**08 32 16.6**	**+0.6**
	baz=287,SNR=53						
CTG				S	**S**	**08 37 12.8**	**+1.9**
	baz=287						
DAWY	**Dawson**	**34.90**	**45**	IAmb	IAmb	08 33 48.4	
	comp=Z,307nm,2.0s						
DAWY	**Dawson**	**34.90**	**45**	P	**P**	**08 32 16.3**	**+0.1**
	baz=284,SNR=32						
DAWY				S	**S**	**08 37 11.1**	**-0.2**
	baz=284						
YUK3	**Moose Creek**	**35.02**	**49**	P	**P**	**08 32 17.4**	**-0.1**
	baz=286,SNR=29						
YUK3				S	**S**	**08 37 15.7**	**+2.1**
	baz=286						
LOGN	**Logan Glacier**	**35.05**	**51**	IAmb	IAmb	08 32 23.4	
	comp=Z,412nm,1.4s						
TABL	**Table Mountain**	**35.10**	**51**	IAmb	IAmb	08 32 21.7	
	comp=Z,314nm,0.9s						
JMJ	**Miyako jima 2**	**35.39**	**228**	P	**P**	**08 32 21.9**	**+1.2**
O28M	**Mount Upton**	**35.45**	**51**	IAmb	IAmb	08 32 24.7	
	comp=Z,195nm,0.8s						
O28M	**Mount Upton**	**35.45**	**51**	P	**P**	**08 32 21.2**	**+0.1**
	baz=288,SNR=49						
O28M				S	**S**	**08 37 22.2**	**+2.1**
	baz=288						
EPYK	**Eagle Plains**	**35.45**	**41**	IAmb	IAmb	08 33 53.8	
	comp=Z,426nm,1.6s						
EPYK	**Eagle Plains**	**35.45**	**41**	P	**P**	**08 32 21.2**	**+0.4**
	baz=283,SNR=58						
EPYK				S	**S**	**08 37 21.6**	**+2.0**
	baz=283						
YUK8	**Steele Glacier**	**35.49**	**50**	P	**P**	**08 32 21.8**	**+0.4**
	baz=288,SNR=13						
YUK8				S	**S**	**08 37 22.8**	**+2.1**
	baz=288						
G30M	**tAoh Zraii Nji**	**35.52**	**40**	P	**P**	**08 32 21.7**	**+0.4**
	baz=282,SNR=31						
G30M				S	**S**	**08 37 22.4**	**+1.8**
	baz=282						
F30M	**Barrier River**	**35.55**	**38**	P	**P**	**08 32 22.8**	**+1.3**
	baz=282,SNR=327						
F30M				S	**S**	**08 37 23.1**	**+2.2**
	baz=282						
PINM	**Pinnacle**	**35.63**	**52**	P	**P**	**08 32 23.4**	**+1.0**
	baz=289,SNR=15						
PINM				S	**S**	**08 37 23.0**	**+0.5**
	baz=289						
L29M	**L29M**	**35.69**	**46**	IAmb	IAmb	08 32 27.9	
	comp=Z,385nm,1.3s						
L29M	**L29M**	**35.69**	**46**	P	**P**	**08 32 24.0**	**+1.2**
	baz=286,SNR=102						
L29M				S	**S**	**08 37 24.1**	**+0.9**
	baz=286						
M29M	**Somme Creek**	**35.73**	**48**	IAmb	IAmb	08 32 27.5	
	comp=Z,112nm,0.8s						
M29M	**Somme Creek**	**35.73**	**48**	P	**P**	**08 32 24.3**	**+1.1**
	baz=287,SNR=68						
M29M				S	**S**	**08 37 26.5**	**+2.5**
	baz=287						
K29M	**Barlow Dome**	**35.75**	**45**	P	**P**	**08 32 23.5**	**+0.1**
	baz=286,SNR=35						
K29M				S	**S**	**08 37 25.4**	**+1.1**
	baz=286						
I30M	**Mount Dempster**	**35.87**	**42**	IAmb	IAmb	08 32 26.0	
	comp=Z,123nm,0.8s						
I30M	**Mount Dempster**	**35.87**	**42**	P	**P**	**08 32 24.8**	**+0.5**
	baz=285,SNR=41						
I30M				S	**S**	**08 37 27.8**	**+1.8**
	baz=285						
BCPM	**Bancas Point**	**35.97**	**52**	IAmb	IAmb	08 32 28.4	
	comp=Z,180nm,0.9s						
YUK4	**Talbot Arm**	**35.98**	**49**	P	**P**	**08 32 26.0**	**+0.6**
	baz=288,SNR=5.1						
J30M	**Hart River**	**36.05**	**44**	P	**P**	**08 32 26.5**	**+0.6**
	baz=286,SNR=34						
J30M				S	**S**	**08 37 30.6**	**+1.8**
	baz=286						
PNL	**Peninsula**	**36.18**	**52**	P	**P**	**08 32 27.8**	**+0.9**
PNL	**Peninsula**	**36.18**	**52**	P	**P**	**08 32 27.2**	**+0.4**
	baz=290						
PNL				S	**S**	**08 37 31.5**	**+0.9**
	baz=290						
INK	**Inuvik**	**36.23**	**37**	⇓P	**P**	**08 32 27.4**	**+0.3**
INK	**Inuvik**	**36.23**	**37**	P	**P**	**08 32 27.6**	**+0.5**
	baz=283,SNR=122						
INK				S	**S**	**08 37 31.5**	**+0.4**
	baz=283						
YUK6	**Outpost Mounta**	**36.24**	**50**	P	**P**	**08 32 28.6**	**+0.9**
	baz=289,SNR=13						
YUK6				S	**S**	**08 37 34.2**	**+2.3**
	baz=289						
WHN	**Wuhan**	**36.31**	**247**	⇓P	**P**	**08 32 28.6**	**+0.3**
WHN				pP	**pP**	**08 33 56.6**	**+1.2**
WHN				PP	**PP**	**08 34 06.5**	**+0.4**
WHN				PcP	**PcP**	**08 34 39.8**	**+0.1**
WHN				S	**S**	**08 37 32.4**	**-0.8**
WHN				sS	**sS**	**08 40 13.4**	**-0.4**
WHN				SS	**SS**	**08 40 39.8**	**-0.6**
WHN				pmax	pmax		
	comp=Z,3μm,0.8s						
WHN				pmax	pmax		
	comp=Z,12μm,5.7s						
F31M	**Tsiigehtchic**	**36.35**	**38**	P	**P**	**08 32 28.5**	**+0.3**
	baz=284,SNR=92						
F31M				S	**S**	**08 37 33.7**	**+0.9**
	baz=284						
O29M	**Mount Kennedy**	**36.35**	**51**	P	**P**	**08 32 29.4**	**+1.0**
	baz=290,SNR=14						
O29M				S	**S**	**08 37 36.1**	**+2.8**
	baz=290						
M30M	**Minto, Yukon**	**36.43**	**47**	P	**P**	**08 32 30.3**	**+1.3**
	baz=288,SNR=70						
M30M				S	**S**	**08 37 37.7**	**+3.4**
	baz=288						
MAYO	**Mayo, Yukon**	**36.52**	**45**	P	**P**	**08 32 30.8**	**+1.2**
	baz=287,SNR=70						
MAYO				S	**S**	**08 37 36.7**	**+1.1**
	baz=287						
H31M	**Peel River**	**36.53**	**41**	P	**P**	**08 32 30.1**	**+0.4**
	baz=286,SNR=69						
H31M				S	**S**	**08 37 36.2**	**+0.5**
	baz=286						
N30M	**Aishikik Lake**	**36.66**	**49**	P	**P**	**08 32 31.7**	**+0.8**
	baz=289,SNR=9.0						
N30M				S	**S**	**08 37 38.4**	**+0.6**
	baz=289						
HYT	**Haines Junctio**	**36.68**	**50**	IAmb	IAmb	08 32 35.6	
	comp=Z,371nm,1.1s						
HYT	**Haines Junctio**	**36.68**	**50**	P	**P**	**08 32 32.6**	**+1.5**
	baz=290,SNR=88						
HYT				S	**S**	**08 37 42.0**	**+3.8**
	baz=290						
YOJ	**Yonaguni jima**	**36.75**	**231**	P	**P**	**08 32 29.9**	**-2.0**
YOJ	**Yonaguni jima**	**36.75**	**231**	⇑P	**P**	**08 32 29.9**	**-2.0**
XAN	**Xi'an**	**36.87**	**257**	⇓P	**P**	**08 32 33.1**	**+0.1**
XAN				pP	pP	08 34 03.8	+3.5
XAN				S	**S**	**08 37 40.8**	**-0.8**
XAN				pmax	pmax		
	comp=Z,830nm,0.8s						
XAN				pmax	pmax		
	comp=Z,7μm,6.6s						
P29M	**Windy Craggy**	**36.98**	**52**	IAmb	IAmb	08 32 38.1	
	comp=Z,208nm,0.8s						
P29M	**Windy Craggy**	**36.98**	**52**	P	**P**	**08 32 35.3**	**+1.8**
	baz=291,SNR=31						
P29M				S	**S**	**08 37 46.8**	**+4.2**
	baz=291						
TATO	**Taipei**	**37.04**	**233**	P	**P**	**08 32 35.6**	**+1.2**
TATO	**Taipei**	**37.04**	**233**	P	**P**	**08 32 35.0**	**+0.6**
TATO				P	**P**	**08 32 35.0**	**+0.6**
TATO	**Taipei**	**37.04**	**233**	P	**P**	**08 32 35.3**	**+0.9**
TATO	**Taipei**	**37.04**	**233**	P	**P**	**08 32 35.6**	**+1.2**
TATO				pP	**pP**	**08 34 02.8**	**+0.9**
P30M	**Million Dollar**	**37.17**	**51**	P	**P**	**08 32 36.8**	**+1.7**
	baz=291,SNR=57						
P30M				S	**S**	**08 37 48.8**	**+3.4**
	baz=291						
N31M	**Braeburn, Yuko**	**37.24**	**48**	P	**P**	**08 32 37.4**	**+1.8**
	baz=290,SNR=70						
N31M				S	**S**	**08 37 50.1**	**+3.7**
	baz=290						
O30N	**Mendenhall**	**37.34**	**50**	IAmb	IAmb	08 32 40.9	
	comp=Z,240nm,1.1s						
O30N	**Mendenhall**	**37.34**	**50**	P	**P**	**08 32 37.6**	**+1.1**
	baz=291,SNR=53						
O30N				S	**S**	**08 37 50.5**	**+2.5**
	baz=291						
YHNB	**Yeheng**	**37.35**	**233**	P	**P**	**08 32 36.8**	**-0.2**
M31M	**Drury Creek, Y**	**37.61**	**47**	IAmb	IAmb	08 34 13.6	
	comp=Z,680nm,1.9s						
M31M	**Drury Creek, Y**	**37.61**	**47**	P	**P**	**08 32 39.9**	**+1.2**
	baz=290,SNR=34						
M31M				S	**S**	**08 37 54.4**	**+2.5**
	baz=290						
NACB	**Ninganchiao**	**37.66**	**233**	IAmb	IAmb	08 32 49.8	
	comp=Z,153nm,0.7s						
NACB	**Ninganchiao**	**37.66**	**233**	P	**P**	**08 32 38.1**	**-1.4**
PLBC	**Pleasant Camp**	**37.70**	**52**	P	**P**	**08 32 41.0**	**+1.7**
	baz=292,SNR=76						
PLBC				S	**S**	**08 37 57.9**	**+4.8**
	baz=292						
WHY	**Whitehorse**	**37.94**	**49**	P	**P**	**08 32 42.8**	**+1.4**
	baz=292,SNR=58						
WHY				S	**S**	**08 38 01.0**	**+4.1**
	baz=292						
A36M	**Sachs Harbour**	**38.10**	**30**	IAmb	IAmb	08 34 17.9	
	comp=Z,266nm,0.9s						
A36M	**Sachs Harbour**	**38.10**	**30**	P	**P**	**08 32 43.0**	**+0.6**
	baz=285,SNR=189						
A36M				S	**S**	**08 38 00.3**	**+1.6**
	baz=285						
SKAG	**Skagway**	**38.18**	**51**	P	**P**	**08 32 45.2**	**+1.9**
SKAG	**Skagway**	**38.18**	**51**	P	**P**	**08 32 44.5**	**+1.2**
	baz=293						
SKAG				S	**S**	**08 38 03.1**	**+2.8**
	baz=293						
SSLB	**Suanglung**	**38.30**	**233**	IAmb	IAmb	08 32 48.8	
	comp=Z,324nm,0.9s						
SSLB	**Suanglung**	**38.30**	**233**	P	**P**	**08 32 44.7**	**-0.1**
S31K	**Pelican**	**38.34**	**54**	IAmb	IAmb	08 32 57.0	
	comp=Z,169nm,1.1s						
S31K	**Pelican**	**38.34**	**54**	P	**P**	**08 32 45.9**	**+1.3**
	baz=294,SNR=7.4						
S31K				S	**S**	**08 38 06.1**	**+3.5**
	baz=294						
R31K	**City Hall, Gus**	**38.40**	**53**	P	**P**	**08 32 46.0**	**+0.9**
	baz=294						
R31K				S	**S**	**08 38 08.1**	**+4.6**
	baz=294						
YULB	**Yu-li**	**38.47**	**232**	P	**P**	**08 32 45.7**	**-0.4**
LZH	**Lanzhou**	**38.49**	**264**	⇓P	**P**	**08 32 48.1**	**+1.8**
LZH				pP	pP	08 34 19.3	+4.8
LZH				sP	sP	08 35 11.4	+0.7
LZH				S	**S**	**08 38 01.8**	**-4.0**
LZH				sS	sS	08 40 46.8	-1.1
LZH				ScS	**ScS**	**08 41 57.8**	**-1.5**
LZH				pmax	pmax		
	comp=Z,2μm,1.7s						
LZH				pmax	pmax		
	comp=Z,8μm,3.9s						
QZH	**Quanzhou**	**38.50**	**237**	⇓*i*P	**P**	**08 32 46.6**	**+0.3**
QZH				pP	**pP**	**08 34 20.3**	**+5.7**
QZH				sP	**sP**	**08 35 13.8**	**+3.1**
QZH				S	**S**	**08 38 07.0**	**+1.2**
QZH				sS	**sS**	**08 40 51.1**	**+3.1**
QZH				pmax	pmax		
	comp=Z,780nm,0.7s						
QZH				pmax	pmax		
	comp=Z,6μm,6.1s						
N32M	**Quiet Lake**	**38.57**	**48**	P	**P**	**08 32 47.3**	**+0.8**
	baz=292						
N32M				S	**S**	**08 38 09.1**	**+3.0**
	baz=292						
LZDM	**Lanzhou Array**	**38.67**	**264**	P	**P**	**08 32 49.1**	**+1.1**
	comp=Z,383nm,0.6s,baz=27,slow=1.6,SNR=590						
LZDM				PcP	**PcP**	**08 34 48.3**	**+0.9**
	comp=Z,43nm,0.5s,baz=195,slow=3.4,SNR=3.4						
LZDM				ScP	**ScP**	**08 37 48.0**	**+0.2**
	comp=Z,19nm,0.4s,baz=222,slow=2.0,SNR=7.5						
LZDM				S	**S**	**08 38 09.5**	**+0.8**
	comp=Z,37nm,0.8s,baz=74,slow=18,SNR=5.9						
LZDM				P3KPbc		09 02 40.8	
	comp=Z,0.8nm,0.3s,baz=183,slow=9.8,SNR=2.3						
	comp=Z,383nm,0.6s						
BESE	**Bessie Mountai**	**38.76**	**52**	IAmb	IAmb	08 32 52.4	
	comp=Z,159nm,0.9s						
GTA	**Gaotai**	**38.77**	**272**	P	**P**	**08 32 49.9**	**+1.4**
GTA				pP	pP	08 34 15.9	-0.9
GTA				S	**S**	**08 38 11.0**	**+1.3**
GTA				sS	sS	08 40 52.3	+0.3
GTA				SS	**SS**	**08 41 21.6**	**-6.0**
GTA				ScS	**ScS**	**08 41 57.8**	**-2.9**
GTA				pmax	pmax		
	comp=Z,2μm,0.8s						
GTA				pmax	pmax		
	comp=Z,6μm,10.9s						
TPUB	**Ta-pu**	**38.87**	**233**	P	**P**	**08 32 49.2**	**-0.2**
P32M	**Atlin**	**38.89**	**51**	P	**P**	**08 32 50.3**	**+1.1**
	baz=294,SNR=9.6						
P32M				S	**S**	**08 38 14.5**	**+3.6**
	baz=294						
CNSH	**ChangSha**	**38.91**	**247**	P	**P**	**08 32 50.0**	**+0.3**
CNSH				S	**S**	**08 38 09.4**	**-2.4**
CNSH				pmax	pmax		
	comp=Z,390nm,0.8s						
KNMB	**Chin-men Tao**	**39.00**	**237**	IAmb	IAmb	08 32 53.6	
	comp=Z,266nm,0.8s						
R32K	**Eaglecrest**	**39.05**	**53**	P	**P**	**08 32 51.6**	**+1.3**
	baz=295,SNR=8.8						
R32K				S	**S**	**08 38 17.0**	**+4.0**
	baz=295						
P33M	**Teslin, Yukon**	**39.06**	**49**	IAmb	IAmb	08 32 54.8	
	comp=Z,142nm,0.9s						
P33M	**Teslin, Yukon**	**39.06**	**49**	P	**P**	**08 32 52.0**	**+1.4**
	baz=294,SNR=55						
P33M				S	**S**	**08 38 16.3**	**+3.0**
	baz=294						
TWGBT	**Beinan**	**39.06**	**232**	P	**P**	**08 32 50.9**	**0.0**
JIS	**Juneau Island**	**39.11**	**53**	P	**P**	**08 32 52.3**	**+1.5**
SIT	**Sitka**	**39.17**	**55**	IAmb	IAmb	08 32 56.2	
	comp=Z,286nm,0.9s						
SIT	**Sitka**	**39.17**	**55**	P	**P**	**08 32 53.5**	**+2.2**
SIT	**Sitka**	**39.17**	**55**	P	**P**	**08 32 53.1**	**+1.8**
	baz=296,SNR=12						
SIT				S	**S**	**08 38 20.0**	**+5.3**
	baz=296						
C36M	**Paulatuk**	**39.25**	**34**	IAmb	IAmb	08 34 26.9	
	comp=Z,131nm,0.8s						
C36M	**Paulatuk**	**39.25**	**34**	P	**P**	**08 32 51.8**	**+0.1**
	baz=289,SNR=102						
C36M				S	**S**	**08 38 15.6**	**0.0**
	baz=289						
ENH	**Enshi**	**39.27**	**252**	P	**P**	**08 32 52.8**	**+0.2**
S32K	**Killisnoo**	**39.36**	**54**	P	**P**	**08 32 54.2**	**+1.4**
	baz=296,SNR=7.4						
S32K				S	**S**	**08 38 22.5**	**+5.0**
	baz=296						
ZAA0	**Zalesovo Array**	**39.50**	**300**	P	**P**	**08 32 54.0**	**0.0**
ZAA0				IAmb	IAmb	08 32 56.7	
	comp=Z,176nm,0.8s						
ZALV	**Zalesovo Beam**	**39.50**	**300**	P	**P**	**08 32 54.1**	**+0.1**
	comp=Z,134nm,0.5s,baz=60,slow=7.2,SNR=147						
ZALV				PcP	**PcP**	**08 34 49.4**	**+0.1**
	comp=Z,72nm,0.4s,baz=75,slow=5.4,SNR=10.0						
ZALV				ScP	**ScP**	**08 37 50.2**	**-0.1**
	comp=Z,38nm,0.8s,baz=45,slow=4.6,SNR=5.1						
ZALV				PKiKP	**PKiKP**	**08 41 57.7**	**-1.4**
	comp=Z,3.6nm,0.4s,baz=158,slow=1.8,SNR=5.0						
	comp=Z,134nm,0.5s						
ZALV	**Zalesovo Beam**	**39.50**	**300**	P	**P**	**08 32 54.0**	**-0.1**
ZALV	**Zalesovo Beam**	**39.50**	**300**	*i* P	**P**	**08 32 54.0**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,136nm,0.5s						
Q32M	**Nakina River**	**39.83**	**51**	IAmb	IAmb	08 33 01.6	
	comp=Z,123nm,0.7s						
Q32M	**Nakina River**	**39.83**	**51**	P	**P**	**08 32 58.0**	**+1.1**
	baz=295,SNR=37						
Q32M				S	**S**	**08 38 29.7**	**+4.9**
	baz=295						
DGZ	**Jazzator, Alta**	**40.18**	**293**	*d i* P	**P**	**08 33 01.3**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,396nm,0.7s						
R33M	**Jennings River**	**40.25**	**50**	IAmb	IAmb	08 33 05.0	
	comp=Z,178nm,0.8s						
R33M	**Jennings River**	**40.25**	**50**	P	**P**	**08 33 02.3**	**+2.1**
	baz=296,SNR=79						
R33M				S	**S**	**08 38 36.3**	**+5.4**
	baz=296						
T33K	**Petersburg**	**40.44**	**54**	P	**P**	**08 33 03.4**	**+1.8**
	baz=297						
T33K				S	**S**	**08 38 38.2**	**+4.8**
	baz=297						
U33K	**Whale Pass**	**40.68**	**55**	IAmb	IAmb	08 33 08.4	
	comp=Z,149nm,0.9s						
U33K	**Whale Pass**	**40.68**	**55**	P	**P**	**08 33 05.2**	**+1.7**
	baz=298,SNR=14						
U33K				S	**S**	**08 38 42.1**	**+5.2**
	baz=298						
S34M	**Telegraph Cree**	**40.82**	**52**	IAmb	IAmb	08 33 09.4	
	comp=Z,136nm,0.8s						
S34M	**Telegraph Cree**	**40.82**	**52**	P	**P**	**08 33 06.4**	**+1.8**
	baz=297,SNR=47						
S34M				S	**S**	**08 38 43.9**	**+4.9**
	baz=297						
WRAK	**Wrangell Islan**	**40.92**	**55**	IAmb	IAmb	08 33 10.2	
	comp=Z,252nm,0.8s						
WRAK	**Wrangell Islan**	**40.92**	**55**	⇓P	**P**	**08 33 07.9**	**+2.5**
WRAK	**Wrangell Islan**	**40.92**	**55**	P	**P**	**08 33 07.2**	**+1.8**
	baz=298,SNR=28						
WRAK				S	**S**	**08 38 46.0**	**+5.6**
	baz=298						
WTLY	**Watson Lake, Y**	**40.93**	**48**	P	**P**	**08 33 06.7**	**+1.3**
WTLY				IAmb	IAmb	08 33 09.5	
	comp=Z,128nm,0.8s						
WTLY	**Watson Lake, Y**	**40.93**	**48**	P	**P**	**08 33 06.3**	**+0.8**
	baz=296,SNR=54						
WTLY				S	**S**	**08

baz=297
T35M Bob Quinn 41.68 53 P P 08 33 14.1 +2.6
T35M IAmb IAmb 08 33 16.9
comp=Z,296nm,0.9s
T35M Bob Quinn 41.68 53 P P 08 33 13.3 +1.8
baz=298,SNR=123
T35M S S **08 38 58.1 +6.7**
baz=298
V35K Ketchikan 41.80 56 P P 08 33 14.0 +1.5
baz=299,SNR=22
V35K S S **08 38 59.4 +6.2**
baz=299
WRGLY Wrigley 41.84 42 P P 08 33 13.6 +1.0
baz=296
WRGLY S S **08 38 56.9 +3.3**
baz=296
CD2 Chengdu 42.15 259 P P 08 33 16.5 +0.9
CD2 PP PP **08 35 06.1 +0.6**
CD2 sP sP 08 35 42.3 +0.9
CD2 S S **08 38 57.8 -1.2**
CD2 sS sS 08 41 43.5 -0.3
CD2 SS SS **08 42 24.6 +0.3**
CD2 pmax pmax
comp=Z,2μm,0.6s
CD2 pmax pmax
comp=Z,6μm,5.2s
U35K Hyder 42.30 54 P P 08 33 18.2 +1.9
baz=300,SNR=20
U35K S S **08 39 05.9 +5.6**
baz=300
DIB Dawson Inlet, 42.43 59 IAmb IAmb 08 33 21.5
comp=Z,271nm,0.9s
LIRD Liard River Hi 42.46 48 P P 08 33 18.4 +0.8
baz=298,SNR=30
LIRD S S **08 39 06.1 +3.5**
baz=298
GULI GuiLin 42.60 247 ⇓*i* P P 08 33 11.9 -7.2
GULI pP pP 08 34 44.8 -4.8
GULI PP **PcP 08 35 01.0 +0.9**
GULI sP sP 08 35 35.8 -9.3
GULI S S 08 38 55.8 -10
GULI ScS ScS 08 41 38.9 -45
GULI SS SS **08 42 24.4 -7.2**
GULI pmax pmax
comp=Z,470nm,1.4s
GULI pmax pmax
comp=Z,5μm,5.7s
GULI LR LR
comp=N,3μm,17.9s
GULI LR LR
comp=E,6μm,15.2s
GULI LR LR
comp=Z,6μm,15.6s
MOBC Moresby Island 42.72 59 IAmb IAmb 08 33 24.0
comp=Z,379nm,1.3s
GZH Guangzhou 42.74 241 P P 08 33 16.0 -4.3
GZH PP **PcP 08 35 04.8 +4.2**
GZH sP **sP 08 35 39.6 -6.7**
GZH S S 08 38 57.3 -10
GZH sS sS 08 41 42.5 -10
GZH pmax pmax
comp=Z,480nm,0.8s
GZH pmax pmax
comp=Z,8μm,4.0s
ZSN Zaisan 42.83 291 ⇓*i* P **P 08 33 21.6 +1.0**
comp=Z,191nm,0.7s
ZSN *e*S **S 08 39 10.4 +2.1**
ZSN Zaisan 42.83 291 *d i* P **P 08 33 21.6 +1.0**
ZSN *e*S **S 08 39 10.3 +2.1**
ZSN pmax pmax
comp=Z,191nm,0.7s
HKPS Hong Kong Po S 42.99 240 P P 08 33 23.1 +1.0
HKPS IAmb IAmb 08 33 24.8
comp=Z,284nm,0.9s
HKPS Hong Kong Po S 42.99 240 P P 08 33 23.2 +1.0
KOTAN Kotaneelee Air 43.03 47 P P 08 33 22.8 +0.8
baz=299,SNR=21
KOTAN S S **08 39 13.1 +2.4**
baz=299
TOAD Toad River Com 43.12 49 P P 08 33 24.0 +1.2
baz=299,SNR=185
TOAD S S **08 39 15.3 +3.1**
baz=299
WMQ Urumqi 43.30 285 ⇓P P **08 33 26.4 +1.9**
WMQ pP pP 08 34 56.5 +1.1
WMQ sP sP 08 35 53.0 +2.2
WMQ S S **08 39 18.4 +3.2**
WMQ pmax pmax
comp=Z,770nm,0.7s
WMQ pmax pmax
comp=Z,5μm,3.9s
HG4B Hotspring 43.57 59 IAmb IAmb 08 33 30.2
comp=Z,186nm,0.8s
GYA Guiyang 43.77 251 ⇓P P **08 33 29.1 +0.6**
GYA pP PcP 08 35 02.9 -1.4
GYA PcP **pP 08 35 04.6 +4.9**
GYA PP **PP 08 35 20.8 +0.3**
GYA sP sP 08 35 56.4 +1.5
GYA ScP **ScP 08 38 08.1 0.0**
GYA S S **08 39 21.0 -1.5**
GYA ScS **ScS 08 42 28.4 -3.6**
GYA pmax pmax
comp=Z,870nm,0.7s
GOMU GeErMu 43.86 272 P P 08 33 29.5 +0.2
GOMU S S **08 39 24.8 +0.9**
GOMU pmax pmax
comp=Z,600nm,0.6s
SZP Santa 43.90 229 ⇓P P **08 33 30.6 +1.3**
KURK Kurchatov 44.42 299 P P **08 33 33.5 +0.5**
KURK Kurchatov 44.42 299 P P **08 33 33.4 +0.5**
KURK S S **08 39 30.1 -0.6**
KURK Kurchatov 44.42 299 *d i* P P **08 33 33.5 +0.5**
KURK pmax pmax
comp=Z,796nm,0.5s
KURK Kurchatov 44.42 299 P P **08 33 33.5 +0.5**
KURBB Kurchatov Arra 44.52 299 P P **08 33 34.3 +0.6**
comp=Z,533nm,0.5s,baz=62,slow=7.4,SNR=997
KURBB pP **PcP 08 35 06.5 +0.1**
comp=Z,152nm,0.8s,baz=58,slow=8.2,SNR=5.8
KURBB ScP **ScP 08 38 10.1 -0.5**
comp=Z,38nm,0.9s,baz=64,slow=3.4,SNR=6.6
KURBB S S **08 39 31.9 -0.2**
comp=Z,79nm,1.0s,baz=65,slow=18,SNR=5.5
KURBB PKP2bc 09 05 32.6
comp=Z,2.5nm,0.8s,baz=243,slow=4.9,SNR=9.1
KURBB P4KPbc 09 11 16.3
comp=Z,0.8nm,0.6s,baz=58,slow=3.7,SNR=7.2
comp=Z,533nm,0.5s
KURBB Kurchatov Arra 44.52 299 P P **08 33 34.1 +0.4**
MK31 Makanchi Array 44.64 292 *i* P P **08 33 35.2 +0.4**
MK31 pmax pmax
comp=Z,493nm,0.5s
MKAR Makanchi Array 44.64 292 P P **08 33 35.3 +0.5**
comp=Z,472nm,0.5s,baz=52,slow=7.0,SNR=1681
MKAR PcP **pP 08 35 06.1 -0.3**
comp=Z,10.0nm,0.4s,baz=67,slow=4.9,SNR=1.1
MKAR ScP **ScP 08 38 11.6 +0.4**
comp=Z,12nm,0.5s,baz=58,slow=3.7,SNR=2.3
MKAR S S **08 39 34.5 +0.4**
comp=Z,30nm,0.7s,baz=60,slow=17,SNR=6.6
MKAR ScS **ScS 08 42 33.8 -3.0**
comp=Z,48nm,1.2s,baz=64,slow=8.5,SNR=5.1
MKAR P4KPbc 09 11 16.7
comp=Z,0.5nm,0.5s,baz=49,slow=5.1,SNR=6.6
comp=Z,472nm,0.5s
MKAR Makanchi Array 44.64 292 P P **08 33 35.4 +0.6**
MKAR Makanchi Array 44.64 292 *i* P P **08 33 35.4 +0.6**
MKAR pmax pmax
comp=Z,477nm,0.5s
RES Resolute Bay 44.76 21 P P **08 33 35.0 -0.1**
RES IAmb IAmb 08 33 38.6
comp=Z,174nm,1.2s
RES Resolute Bay 44.76 21 ⇓P P **08 33 34.9 -0.3**
MAKZ Makanchi 44.81 292 P P **08 33 36.5 +0.4**
BBB Bella Bella 45.22 58 IAmb IAmb 08 33 43.2
comp=Z,274nm,1.0s
BBB Bella Bella 45.22 58 ⇑P P **08 33 40.9 +1.8**
NOR Nord 45.48 358 *i* P P **08 33 40.2 -0.6**
NOR IAmb IAmb 08 33 43.4
comp=Z,32nm,1.0s
YKA Yellowknife Ar 45.74 40 P P **08 33 43.0 +0.1**
comp=Z,47nm,0.5s,baz=305,slow=7.6,SNR=472
YKA PcP **PcP 08 35 10.3 0.0**
comp=Z,10.0nm,0.6s,baz=303,slow=4.6,SNR=6.5
YKA pP **pP 08 35 17.1 +1.3**
comp=Z,41nm,0.9s,baz=301,slow=9.0,SNR=5.6
YKA ScP **ScP 08 38 16.2 +0.7**
comp=Z,46nm,0.8s,baz=302,slow=4.6,SNR=23
YKA S S **08 39 49.0 +0.1**
comp=Z,20nm,1.0s,baz=303,slow=14,SNR=6.7
comp=Z,47nm,0.5s
YKA Yellowknife Ar 45.74 40 P P **08 33 43.3 +0.4**
YKAW1 Yellowknife Wh 45.80 40 IAmb IAmb 08 35 19.2
comp=Z,194nm,1.4s
JOHN Johnston Islan 46.26 127 P P 08 33 48.4 +1.0
JOHN Johnston Islan 46.26 127 P P 08 33 47.8 +0.4
KBS Kingsbay 46.32 350 P P 08 33 47.1 0.0
KBS IAmb IAmb 08 35 26.2
comp=Z,254nm,1.5s
KBS Kingsbay 46.32 350 *eP* P **08 33 47.5 +0.3**
KBS IVmB_BB 08 35 24.9
comp=Z,2μm,1.9s
KBS *e*S S **08 39 53.0 -3.7**
KBS Kingsbay 46.32 350 ⇓P P **08 33 47.3 +0.2**
KBS Kingsbay 46.32 350 *i* P P **08 33 47.4 +0.2**
SPA0 Spitsbergen Ar 46.48 349 *eP* P **08 33 47.9 -0.5**
SPA0 IVmB_BB 08 35 28.4
comp=Z,4μm,1.8s
SPA0 *e*S S **08 39 57.0 -2.0**
SPITS Spitsbergen Ar 46.48 349 P P **08 33 48.0 -0.4**
comp=Z,55nm,0.5s,baz=59,slow=6.9,SNR=223
SPITS pP **pP 08 35 22.3 +1.1**
comp=Z,36nm,0.7s,baz=90,slow=5.0,SNR=1.5
SPITS ScP **ScP 08 38 18.8 +0.4**
comp=Z,7.1nm,0.5s,baz=90,slow=5.8,SNR=2.4
SPITS S S **08 39 58.6 -0.4**
comp=Z,12nm,0.8s,baz=68,slow=10.0,SNR=2.4
comp=Z,55nm,0.5s
PZH PanZhiHua 46.59 256 P P **08 33 50.6 +0.5**
PZH PP **PP 08 35 45.3 -0.8**
PZH sP **sP 08 36 17.4 -0.3**
PZH ScP **ScP 08 38 19.9 +0.1**
PZH PcS **PcS 08 39 09.3 -0.9**
PZH S S **08 40 00.9 -1.3**
PZH SS SS **08 43 33.8 -2.2**
PZH pmax pmax
comp=Z,1μm,0.6s
PZH pmax pmax
comp=Z,5μm,6.7s
HOPEN Hopen 46.65 345 *eP* P **08 33 49.2 -0.4**
HOPEN IVmB_BB 08 35 17.8
comp=Z,2μm,3.4s
HOPEN *e*S S **08 39 56.8 -4.6**
TGY Tagaytay City 46.73 226 P P **08 33 52.3 +1.1**
comp=Z,2μm,0.6s,baz=281,slow=6.6,SNR=28
KMI Kunming 47.06 254 ⇓P P **08 33 54.5 +0.7**
KMI pP pP 08 35 28.8 +2.0
KMI PP **PP 08 35 50.1 -0.4**
KMI sP sP 08 36 21.8 +0.3
KMI ScP **ScP 08 38 21.8 -0.2**
KMI S S **08 40 08.9 0.0**
KMI ScS **ScS 08 42 51.3 -2.4**
KMI SS SS **08 43 41.9 -1.7**
KMI pmax pmax
comp=Z,840nm,0.7s
KMI pmax pmax
comp=Z,7μm,3.7s
BVA0 Borovoye Array 47.32 305 P P **08 33 55.1 0.0**
BVAR Borovoye Array 47.32 305 P P **08 33 55.4 +0.3**
comp=Z,605nm,0.4s,baz=57,slow=8.1,SNR=915
BVAR PcP **PcP 08 35 16.6 +0.3**
comp=Z,80nm,0.3s,baz=70,slow=2.7,SNR=4.5
BVAR PP **PP 08 35 52.2 +0.2**
comp=Z,40nm,0.6s,baz=61,slow=10,SNR=1.7
BVAR ScP **ScP 08 38 21.9 -0.4**
comp=Z,51nm,0.6s,baz=60,slow=3.3,SNR=5.5
BVAR S S **08 40 11.2 -0.1**
comp=Z,210nm,1.1s,baz=61,slow=19,SNR=9.2
comp=Z,605nm,0.4s
BORK Borovoye 47.35 305 *d i* P P **08 33 55.6 +0.3**
BORK pmax pmax
comp=Z,522nm,0.7s
BORK Borovoye 47.35 305 P P **08 33 55.6 +0.3**
BORK PcP **PcP 08 35 15.8 -0.5**
BORK pP **pP 08 35 29.4 +0.9**
BORK sP **sP 08 36 24.2 +0.7**
BORK ScP **ScP 08 38 22.3 -0.1**
TULEG Thule 47.86 12 IAmb IAmb 08 34 01.6
comp=Z,210nm,1.6s
TULEG Thule 47.86 12 *i* P P **08 33 57.2 -1.6**
TULEG IAmb IAmb 08 33 59.9
comp=Z,52nm,0.7s
CBB Campbell River 47.88 59 IAmb IAmb 08 34 03.2
comp=Z,596nm,1.9s
TDK Taldyqorghan 47.89 292 ⇓*i* P P **08 34 00.6 +1.0**
comp=Z,311nm,0.5s
TDK Taldyqorghan 47.89 292 *d i* P P **08 34 00.5 +1.0**
TDK pmax pmax
comp=Z,311nm,0.5s
QIZ Qiongzhong 47.92 242 IAmb IAmb 08 34 03.7
comp=Z,329nm,0.9s
QIZ Qiongzhong 47.92 242 P P **08 34 02.0 +1.9**
QIZ pP **pP 08 35 33.6 0.0**
QIZ sP **sP 08 36 26.3 -1.8**
QIZ S S **08 40 23.3 +2.8**
QIZ sS sS **08 43 08.8 -1.0**
QIZ SS SS **08 44 00.3 +3.2**
QIZ pmax pmax
comp=Z,320nm,1.3s
QIZ pmax pmax
comp=Z,6μm,3.5s
QIZ Qiongzhong 47.92 242 P P **08 34 01.7 +1.6**
BRZS Berezniki 47.96 301 *eP* P **08 34 00.2 +0.2**
BRZS Berezniki 47.96 301 *eP* P **08 34 00.1 +0.2**
SHLS Shalkode 48.44 290 ⇓*i* P P **08 34 02.9 -0.9**
comp=Z,337nm,0.6s
SHLS *e*S S **08 40 26.1 -1.3**
SHLS Shalkode 48.44 290 *d i* P P **08 34 02.9 -0.9**
SHLS *e*S S **08 40 26.0 -1.3**
SHLS pmax pmax
comp=Z,337nm,0.6s
OZB Mount Ozzard 48.45 60 IAmb IAmb 08 34 07.4
comp=Z,304nm,0.9s
OZB Mount Ozzard 48.45 60 ⇓P P **08 34 04.9 +1.2**
HON Honolulu 48.50 112 P P **08 34 05.4 +1.1**
HON Honolulu 48.50 112 P P **08 34 05.4 +1.1**
HON pmax pmax
comp=Z,490nm,0.8s
DHH Diamond Head 48.66 112 P P **08 34 06.9 +1.4**
DHH Diamond Head 48.66 112 P P **08 34 06.9 +1.4**
UZB Uzynbulak 48.70 290 ⇓*i* P P **08 34 06.5 +0.7**
UZB Uzynbulak 48.70 290 *d i* P P **08 34 06.5 +0.7**
ARXS Arharly 48.70 292 *i* P P **08 34 06.2 +0.5**
NEEM North Greenlan 48.84 7 *i* P P **08 34 05.5 -1.0**
NEEM IAmb IAmb 08 34 08.4
comp=Z,166nm,1.1s
SATY Saty 49.10 290 ⇓*i* P P **08 34 09.7 +1.0**
SATY *e*S S **08 40 38.6 +2.2**
SATY Saty 49.10 290 *d i* P P **08 34 09.7 +1.0**
SATY *e*S S **08 40 38.6 +2.2**
KPA Kalaupapa 49.18 111 P P **08 34 10.2 +0.9**
KPA Kalaupapa 49.18 111 P P **08 34 10.2 +0.9**
CLRS Cowichan Lake 49.25 60 IAmb IAmb 08 34 13.2
comp=Z,198nm,0.9s
LLLB Lillooet 49.31 57 IAmb IAmb 08 34 13.8
comp=Z,202nm,0.8s
PRZ Przheval'sk 49.48 290 IAmb IAmb 08 34 14.8
comp=Z,677nm,1.4s
POIN Pond Inlet 49.55 18 P P **08 34 10.7 -0.7**
SVE Sverdlovsk 49.59 314 *c i* P P **08 34 12.7 +0.8**
SVE *e*S S **08 40 42.4 +0.1**
SVE *e* 08 43 02.6
SVE pmax pmax
comp=Z,500nm,0.8s
TNCH TengChong 49.60 258 P P **08 34 14.4 +1.7**
TNCH pP pP 08 35 48.5 +1.4
TNCH PP **PP 08 36 14.5 +1.2**
TNCH sP sP 08 36 41.9 +0.4
TNCH ScP **ScP 08 38 33.3 +0.5**
TNCH S S **08 40 46.3 +2.5**
TNCH ScS **ScS 08 43 09.6 -1.3**
TNCH sS sS 08 43 34.5 +0.1
TNCH SS SS **08 44 24.9 +1.2**
TNCH pmax pmax
comp=Z,610nm,0.9s
TNCH pmax pmax
comp=Z,7μm,3.1s
PGC Sidney 49.71 60 IAmb IAmb 08 34 16.3
comp=Z,155nm,0.7s
MDOK Medeo 49.80 291 *eP* P **08 34 14.6 +0.7**
MDOK *e*S S **08 40 47.8 +1.7**
MDOK Medeo 49.80 291 *eP* P **08 34 14.6 +0.7**
MDOK *e*S S **08 40 47.7 +1.7**
KNDC Almaty 49.82 291 P P **08 34 14.5 +0.6**
AAA Alma-Ata 49.85 291 *eP* P **08 34 15.2 +1.0**
comp=Z,397nm,0.7s
AAA Alma-Ata 49.85 291 *eP* P **08 34 15.2 +1.0**
AAA pmax pmax
comp=Z,397nm,0.7s
TNSS Tian-Shan 49.94 291 *eP* P **08 34 15.9 +0.7**
TNSS Tian-Shan 49.94 291 *eP* P **08 34 15.9 +0.7**
B04A Port Angeles 50.05 60 IAmb IAmb 08 34 19.1
comp=Z,194nm,0.8s
A04D Lummi Island 50.05 59 IAmb IAmb 08 34 19.2
comp=Z,334nm,0.9s
NLWA Neilton Lookou 50.28 61 IAmb IAmb 08 34 21.1
comp=Z,373nm,0.9s
NLWA Neilton Lookou 50.28 61 ⇑P P **08 34 18.1 +0.8**
TARG Taragay, Kyrgy 50.30 289 IAmb IAmb 08 34 24.3
comp=Z,196nm,0.7s
DAG Danmarks Havn 50.35 358 ⇑P P **08 34 16.2 -1.0**
DAG Danmarks Havn 50.35 358 *i* P P **08 34 16.0 -1.2**
DAG IAmb IAmb 08 34 18.9
comp=Z,54nm,0.7s
WISH Wishkah 50.50 61 IAmb IAmb 08 34 23.1
comp=Z,301nm,0.9s
LSA Lhasa 50.58 268 P P **08 34 18.0 -2.1**
LSA S S **08 40 55.6 -1.8**
LSA pmax pmax
comp=Z,880nm,0.7s
LSA LR LR
comp=N,2μm,16.5s
LSA LR LR
comp=E,3μm,14.4s
LSA LR LR
comp=Z,3μm,15.1s
LSA Lhasa 50.58 268 P P **08 34 22.1 +2.0**
VADS Vadso 50.75 339 *eP* P **08 34 19.6 -0.6**
VADS *e*S S **08 40 55.4 -2.3**
TKM2 Tokmak 2 50.77 292 P P **08 34 22.0 +0.9**
SNR=64
ARTI Arti 50.84 314 P P **08 34 21.3 +0.2**
ARTI Arti 50.84 314 *d i* P P **08 34 21.0 -0.1**
ARTI 08 35 28.6
ARTI *PP **pP 08 35 55.9 -0.4**
ARTI 08 36 19.7
ARTI S S **08 40 58.0 -1.3**
ARTI 08 43 13.5
ARTI *SS **sS 08 43 49.2 -1.6**
ARTI SS SS **08 44 38.0 -3.4**
ARTI pmax pmax
comp=Z,648nm,1.2s
ARTI Arti 50.84 314 P P **08 34 21.0 -0.1**
ARTI PcP **PcP 08 35 29.0 -0.1**
ARTI pP **pP 08 35 57.1 +0.8**
ARTI sP **sP 08 36 51.9 +1.0**
ARTI ScP **ScP 08 38 36.5 -0.8**
ULHL Ulahol 50.85 291 P P **08 34 22.8 +1.1**
SNR=18
RADR Rader Ridge 50.93 62 IAmb IAmb 08 34 25.5
comp=Z,472nm,1.3s
KULLO Kullorsuaq 50.97 10 ⇓P P **08 34 21.1 -0.7**
KULLO Kullorsuaq 50.97 10 *i* P P **08 34 20.4 -1.4**
KULLO IAmb IAmb 08 34 21.8
comp=Z,68nm,0.6s
SGDS Sogindy 50.97 293 ⇓*i* P P **08 34 23.3 +0.9**
SGDS *e*S S **08 41 03.8 +2.2**
POHA Pohakuloa 51.13 110 P P **08 34 24.3 +0.3**
POHA Pohakuloa 51.13 110 ⇑P P **08 34 24.1 +0.1**
USP Ospenovka 51.16 293 P P **08 34 24.8 +1.1**
SNR=64
LVZ Lovozero 51.16 335 P P **08 34 22.8 -0.5**
LVZ Lovozero 51.16 335 ⇑P P **08 34 23.0 -0.3**
CHMS Chumysh 51.20 292 P P **08 34 25.1 +1.1**
SNR=16
BLKN Baker Lake 51.21 32 IAmb IAmb 08 36 03.8
comp=Z,532nm,1.4s
DAV Davao City (W) 51.26 217 P P **08 34 25.9 +1.2**
comp=Z,479nm,0.7s,baz=70,slow=3.2,SNR=15
comp=Z,479nm,0.7s
DAV Davao City (W) 51.26 217 P P **08 34 25.8 +1.1**
DAV Davao City (W) 51.26 217 P P **08 34 25.3 +0.6**
DAV P P **08 34 25.3 +0.6**
DAV Davao City (W) 51.26 217 P P **08 34 25.8 +1.1**
KBK Karagaybulak 51.31 292 P P **08 34 26.0 +1.0**
SNR=273
D05A Enumclaw 51.40 60 IAmb IAmb 08 34 29.4
comp=Z,350nm,0.9s
HAMF Hammerfest 51.52 341 *eP* P **08 34 24.7 -1.1**
HAMF IVmB_BB 08 34 51.0
comp=Z,1μm,3.6s
HAMF *e* 08 38 49.6
HAMF *e*S S **08 41 01.2 -6.8**
HAMF *e* 08 43 20.8
KEV Kevo 51.55 339 P P **08 34 25.4 -0.6**
KEV Kevo 51.55 339 P P **08 34 25.3 -0.7**
F04D Rainier, OR 51.57 62 IAmb IAmb 08 34 30.2
comp=Z,291nm,0.9s
AAK Ala-Archa 51.58 292 PKPPKP 09 04 56.1
comp=Z,6.4nm,0.9s,baz=248,slow=6.8,SNR=7.3
AAK Ala-Archa 51.58 292 P P **08 34 28.0 +1.1**
AAK Ala-Archa 51.58 292 P P **08 34 27.3 +0.4**
AAK S S **08 41 09.1 -0.9**
AAK Ala-Archa 51.58 292 P S **08 41 13.7 +3.7**
AAK Ala-Archa 51.58 292 P P **08 34 28.0 +1.1**
SNR=262
AAK Ala-Archa 51.58 292 *i* P P **08 34 28.0 +1.1**
SNR=204
AAK Ala-Archa 51.58 292 *d i* P P **08 34 27.8 +0.9**
AAK pmax pmax
comp=Z,329nm,0.7s
AAK Ala-Archa 51.58 292 P P **08 34 27.8 +0.9**
AAK S S **08 41 12.4 +2.4**
APA Apatity 51.73 335 ⇓*eP* P **08 34 25.4 -2.0**
APA *e**PP **pP 08 36 00.6 -2.4**
APA *e*S S **08 41 05.4 -5.5**
APA *e* 08 43 20.6
APA *e*SS **SS 08 44 52.5 -2.5**
APA MLR MLR
comp=Z,2μm,24.9s
UCH Uchtor 51.83 292 P P **08 34 30.0 +0.9**
SNR=93
EKS2 Erkin-Say 51.96 293 P P **08 34 30.8 +1.1**
SNR=89
G03D McMinnville, O 51.99 63 IAmb IAmb 08 34 33.5
comp=Z,231nm,1.1s
B08A Colville Reser 52.02 58 IAmb IAmb 08 34 33.2
comp=Z,310nm,0.8s
ARA0 ARCESS Array S 52.04 339 *eP* P **08 34 29.0 -0.6**
ARA0 IVmB_BB 08 34 30.2
comp=Z,1μm,2.7s
ARA0 *e*S S **08 41 09.2 -5.9**
ARCES ARCESS Array B 52.04 339 P P **08 34 29.3 -0.4**
comp=Z,28nm,0.4s,baz=42,slow=7.4,SNR=149
ARCES PcP **PcP 08 35 34.1 +0.6**
comp=Z,18nm,0.5s,baz=28,slow=5.5,SNR=4.3
ARCES ScP **ScP 08 38 41.7 -0.7**
comp=Z,26nm,0.8s,baz=45,slow=5.3,SNR=7.2
ARCES PKPPKP **P'P'df 09 04 54.7 -1.5**
comp=Z,4.5nm,1.0s,baz=17,slow=26,SNR=4.7
comp=Z,28nm,0.4s
ARCES ARCESS Array B 52.04 339 P P **08 34 29.2 -0.5**
LTY Liberty 52.04 59 IAmb IAmb 08 34 32.7
comp=Z,228nm,1.1s
COR Corvallis 52.38 64 P P **08 34 34.2 +1.8**
COR IAmb IAmb 08 34 36.8
comp=Z,329nm,0.8s
I02E Swisshome, OR 52.40 64 IAmb IAmb 08 34 36.8
comp=Z,270nm,0.8s
G04A Mulino 52.42 62 IAmb IAmb 08 34 36.3
comp=Z,403nm,0.9s
H04D Lebanon 52.73 63 IAmb IAmb 08 34 39.0
comp=Z,164nm,0.8s
UPNV Upernavik 52.76 11 *i* P P **08 34 33.7 -1.0**
UPNV IAmb IAmb 08 34 36.1
comp=Z,48nm,0.6s
KSH Kashi 52.81 288 P P **08 34 40.4 +4.6**
KSH pP pP 08 36 17.5 +5.7
KSH S S **08 41 32.1 +5.7**
KSH pmax pmax
comp=Z,270nm,0.7s
BUCK Buck Mountain 52.81 64 IAmb IAmb 08 34 40.1
comp=Z,297nm,0.8s
DBG Daneborg 52.85 358 *i* P P **08 34 34.0 -1.4**
DBG IAmb IAmb 08 34 36.9

	comp=Z,28nm,0.8s									
H04A	**Detroit Lake**	**52.92**	**63**	IAmb	IAmb	08 34 40.0				
	comp=Z,200nm,0.9s									
E07A	**Sunnyside**	**52.92**	**60**	IAmb	IAmb	08 34 39.9				
	comp=Z,204nm,0.9s									
C09A	**Chrisman Ranch**	**52.92**	**58**	IAmb	IAmb	08 34 39.5				
	comp=Z,186nm,0.8s									
I03D	**Drain, OR**	**52.94**	**64**	IAmb	IAmb	08 34 40.5				
	comp=Z,243nm,0.7s									
KTK1	**Kautokeino**	**52.94**	**340**	*e*P	**P**	**08 34 35.6**	**-0.5**			
KTK1				IVmB_BB		08 34 41.8				
	comp=Z,1µm,1.5s									
KTK1				*e*S	**S**	**08 41 21.4**	**-5.6**			
WAH2	**Wahluke Slope**	**52.94**	**59**	IAmb	IAmb	08 34 39.7				
	comp=Z,326nm,0.8s									
J01E	**Myrtle Point**	**52.98**	**65**	IAmb	IAmb	08 34 41.4				
	comp=Z,242nm,1.0s									
G05A	**Wamic**	**53.02**	**62**	IAmb	IAmb	08 34 47.4				
	comp=Z,216nm,0.8s									
KIRV	**Kirov**	**53.05**	**321**	PKPPKP		09 04 53.1				
	comp=Z,5.5nm,0.5s,baz=260,slow=7.5,SNR=4.2									
KIRV	**Kirov**	**53.05**	**321**	*d* iP	**P**	**08 34 37.2**	**+0.3**			
JETT	**Jettan, Norway**	**53.05**	**341**	*e*P	**P**	**08 34 36.8**	**-0.1**			
JETT				IVmB_BB		08 34 38.4				
	comp=Z,2µm,1.6s									
JETT				*e*S	**S**	**08 41 24.0**	**-4.7**			
SHL	**Shillong**	**53.16**	**264**	P	**P**	**08 34 39.1**	**+0.6**			
	SNR=278									
HAWA	**Hanford**	**53.20**	**60**	IAmb	IAmb	08 34 41.7				
	comp=Z,193nm,0.9s									
TRO	**Tromso**	**53.27**	**342**	*e*P	**P**	**08 34 38.3**	**-0.1**			
TRO				IVmB_BB		08 34 39.4				
	comp=Z,1µm,1.3s									
TRO				*e*S	**S**	**08 41 28.3**	**-3.1**			
ARSB	**Arslanbob**	**53.29**	**292**	IAmb	IAmb	08 34 42.0				
	comp=Z,562nm,1.4s									
K02D	**Willamette Mer**	**53.43**	**66**	IAmb	IAmb	08 34 44.5				
	comp=Z,299nm,0.9s									
KK31	**Karatay Array**	**53.47**	**295**	IAmb	IAmb	08 34 42.2				
	comp=Z,209nm,0.7s									
KK31	**Karatay Array**	**53.47**	**295**	*i* P	**P**	**08 34 40.0**	**-0.3**			
KKAR	**Karatay Array**	**53.47**	**295**	P	**P**	**08 34 40.6**	**+0.3**			
KKAR	**Karatay Array**	**53.47**	**295**	P	**P**	**08 34 40.6**	**+0.3**			
WIFE	**Three Sisters-**	**53.53**	**63**	IAmb	IAmb	08 34 45.0				
	comp=Z,245nm,0.9s									
I05D	**Terrebonne, OR**	**53.60**	**63**	IAmb	IAmb	08 34 45.1				
	comp=Z,211nm,0.8s									
YPT	**Yellepit**	**53.72**	**60**	IAmb	IAmb	08 34 45.5				
	comp=Z,212nm,0.9s									
E09A	**Wood Farm, Sta**	**53.84**	**59**	IAmb	IAmb	08 34 46.2				
	comp=Z,347nm,0.8s									
BBOR	**Butler Butte**	**53.84**	**65**	IAmb	IAmb	08 34 47.6				
	comp=Z,372nm,0.9s									
L02F	**Cave Junction**	**53.87**	**66**	IAmb	IAmb	08 34 47.6				
	comp=Z,330nm,0.9s									
BRLS	**Borolday**	**53.89**	**296**	*e*P	**P**	**08 34 45.2**	**+2.0**			
BRLS	**Borolday**	**53.89**	**296**	*e*P	**P**	**08 34 45.2**	**+2.0**			
KSXB	**Camp Six Broad**	**53.89**	**66**	IAmb	IAmb	08 34 48.1				
	comp=Z,551nm,1.0s									
TARA	**Tarawa**	**53.95**	**156**	⇓P	**P**	**08 34 44.8**	**+0.9**			
CHTO	**Chiang Mai**	**54.16**	**253**	P	**P**	**08 34 46.2**	**+0.7**			
CHTO	**Chiang Mai**	**54.16**	**253**	P	**P**	**08 34 46.3**	**+0.8**			
CHTO				P	**P**	**08 34 46.3**	**+0.8**			
CHTO				S	**S**	**08 41 44.5**	**0.0**			
CHTO				S	**S**	**08 41 44.5**	**0.0**			
CHTO	**Chiang Mai**	**54.16**	**253**	P	**P**	**08 34 46.7**	**+1.2**			
CHTO	**Chiang Mai**	**54.16**	**253**	P	**P**	**08 34 46.2**	**+0.7**			
CHTO				pmax	pmax					
	comp=Z,636nm,0.8s									
CHTO	**Chiang Mai**	**54.16**	**253**	P	**P**	**08 34 46.5**	**+1.0**			
CHTO				S	**S**	**08 41 46.1**	**+1.5**			
CHTO	**Chiang Mai**	**54.16**	**253**	P	**P**	**08 34 46.6**	**+1.2**			
CHTO				pP	**pP**	**08 36 23.7**	**+1.5**			
PINE	**Pine Mountain**	**54.18**	**63**	IAmb	IAmb	08 34 50.0				
	comp=Z,538nm,1.0s									
G08A	**Pilot Rock**	**54.23**	**60**	IAmb	IAmb	08 34 49.2				
	comp=Z,381nm,1.8s									
NUUG	**Nuugaatsiaq**	**54.25**	**10**	*i* P	**P**	**08 34 43.9**	**-1.4**			
NUUG				IAmb	IAmb	08 34 46.4				
	comp=Z,39nm,1.0s									
KRPM	**Rodgers**	**54.27**	**67**	IAmb	IAmb	08 34 50.2				
	comp=Z,767nm,1.4s									
IUG	**luzhnay**	**54.37**	**295**	⇓ *i* P	**P**	**08 34 47.7**	**+0.9**			
	comp=Z,293nm,0.5s									
IUG				*e*S	**S**	**08 41 49.1**	**+2.1**			
IUG	**luzhnay**	**54.37**	**295**	*d* iP	**P**	**08 34 47.7**	**+0.9**			
IUG				*e*S	**S**	**08 41 49.1**	**+2.1**			
IUG				pmax	pmax					
	comp=Z,293nm,0.5s									
SUMG	**Summit**	**54.37**	**4**	P	**P**	**08 34 45.9**	**-0.7**			
SUMG	**Summit**	**54.37**	**4**	IAmb	IAmb	08 36 31.4				
	comp=Z,304nm,1.1s									
SUMG	**Summit**	**54.37**	**4**	*i* P	**P**	**08 34 46.5**	**-0.2**			
SUMG				IAmb	IAmb	08 34 50.5				
	comp=Z,47nm,0.7s									
SGSI	**Sangihe**	**54.42**	**215**	P	**P**	**08 34 47.8**	**+0.5**			
	comp=Z,13µmcomp=Z,14µmcomp=Z,801nm,0.5s									
CM31	**Chiang Mai Arr**	**54.45**	**252**	IAmb	IAmb	08 34 50.7				
	comp=Z,483nm,0.9s									
CMAR	**Chiang Mai Arr**	**54.45**	**252**	P	**P**	**08 34 48.5**	**+1.0**			
	comp=Z,295nm,0.7s,baz=24,slow=7.5,SNR=147									
CMAR				PcP	**PcP**	**08 35 44.5**	**+0.9**			
	comp=Z,96nm,0.8s,baz=12,slow=3.0,SNR=10									
CMAR				ScP	**ScP**	**08 38 53.5**	**-0.2**			
	comp=Z,17nm,0.6s,baz=13,slow=3.7,SNR=5.4									
CMAR				S	**S**	**08 41 49.8**	**+1.5**			
	comp=Z,0.9nm,0.3s,baz=31,slow=14,SNR=1.3									
CMAR				PKPPKP	**P'P'df**	**09 04 49.5**	**-1.9**			
	comp=Z,1.3nm,0.4s,baz=233,slow=5.5,SNR=4.6									
	comp=Z,295nm,0.7s									
CHM	**Chimkent**	**54.49**	**295**	*e*P	**P**	**08 34 48.4**	**+0.8**			
CHM	**Chimkent**	**54.49**	**295**	*e*P	**P**	**08 34 48.3**	**+0.8**			
JCC	**Jacoby Creek,**	**54.49**	**67**	IAmb	IAmb	08 34 51.7				
	comp=Z,566nm,1.2s									
DLV	**Lat**	**54.55**	**239**	IAmb	IAmb	08 34 51.7				
	comp=Z,247nm,0.8s									
YBH	**Yreka Blue Hor**	**54.60**	**66**	IAmb	IAmb	08 34 53.1				
	comp=Z,299nm,0.8s									
F10A	**Beach Ranch, E**	**54.67**	**59**	IAmb	IAmb	08 34 51.8				
	comp=Z,329nm,1.3s									
KMPM	**Mount Pierce**	**54.71**	**68**	IAmb	IAmb	08 34 54.0				
	comp=Z,382nm,1.0s									
M02C	**Callahan**	**54.76**	**66**	IAmb	IAmb	08 34 53.9				
	comp=Z,418nm,1.2s									
AB31	**Akbulak array**	**54.80**	**307**	IAmb	IAmb	08 34 52.5				
	comp=Z,309nm,0.7s									
AB31	**Akbulak array**	**54.80**	**307**	*i* P	**P**	**08 34 49.6**	**0.0**			
ABKAR	**Akbulak array**	**54.80**	**307**	P	**P**	**08 34 49.8**	**+0.2**			
NIAQ	**Niaqornat**	**54.91**	**11**	*i* P	**P**	**08 34 49.9**	**0.0**			
AKTO	**Aktyubinsk**	**54.92**	**309**	PKPPKP		09 04 46.1				
	comp=Z,11nm,0.8s,baz=212,slow=2.0,SNR=26									
AKTO	**Aktyubinsk**	**54.92**	**309**	P	**P**	**08 34 49.5**	**-0.9**			
KLMR	**Klimovskoe**	**54.96**	**327**	*d* iP	**P**	**08 34 49.5**	**-0.9**			
KLMR				*e**PP	**pP**	**08 36 25.4**	**-2.3**			
KLMR				*e*		08 36 58.7				
KLMR				S	**S**	**08 41 51.7**	**-2.1**			
KLMR				pmax	pmax					
	comp=Z,250nm,0.7s									
KMRM	**Mail Ridge**	**55.08**	**68**	IAmb	IAmb	08 34 56.5				
	comp=Z,328nm,0.9s									
SAATT	**Saattut**	**55.10**	**10**	*i* P	**P**	**08 34 50.7**	**-0.6**			
SAATT				IAmb	IAmb	08 34 52.9				
	comp=Z,99nm,0.8s									
N02D	**Trinity Center**	**55.12**	**67**	IAmb	IAmb	08 34 56.2				
	comp=Z,250nm,0.8s									
DRK	**Karamyk**	**55.20**	**291**	IAmb	IAmb	08 34 57.0				
	comp=Z,323nm,0.6s									
M03C	**McCloud**	**55.24**	**66**	IAmb	IAmb	08 34 56.6				
	comp=Z,385nm,1.1s									
STEI	**Steigen**	**55.43**	**342**	*e*P	**P**	**08 34 52.7**	**-0.9**			
STEI				IVmB_BB		08 35 31.8				
	comp=Z,1µm,3.3s									
STEI				*e*S	**S**	**08 41 57.2**	**-2.5**			
KCPM	**Cahto Peak**	**55.51**	**68**	IAmb	IAmb	08 34 59.1				
	comp=Z,206nm,0.8s									
LOF	**Lofoten**	**55.55**	**343**	*e*P	**P**	**08 34 53.5**	**-0.9**			
LOF				IVmB_BB		08 35 50.6				
	comp=Z,2µm,2.7s									
LOF				*e*S	**S**	**08 41 56.8**	**-4.6**			
LOF				*e*		08 44 58.2				
FFC	**Flin Flon**	**55.74**	**43**	P	**P**	**08 34 56.6**	**+0.5**			
FFC				IAmb	IAmb	08 36 39.1				
	comp=Z,508nm,1.6s									
MYLDM	**Lahad Datu**	**55.76**	**224**	IAmb	IAmb	08 35 00.9				
	comp=Z,572nm,1.3s									
MYLDM	**Lahad Datu**	**55.76**	**224**	P	**P**	**08 34 58.7**	**+2.0**			
MSO	**Missoula**	**55.76**	**56**	IAmb	IAmb	08 34 59.9				
	comp=Z,305nm,0.8s									
FCC	**Fort Churchill**	**55.84**	**36**	IAmb	IAmb	08 36 39.2				
	comp=Z,540nm,1.4s									
FAUS	**Fauske**	**55.90**	**342**	*e*P	**P**	**08 34 56.4**	**-0.5**			
FAUS				IVmB_BB		08 34 58.2				
	comp=Z,1µm,1.0s									
FAUS				*e*S	S	08 41 55.7	-10			
FAUS				*e*		08 45 01.1				
PLID	**Pearl Lake**	**55.91**	**59**	IAmb	IAmb	08 35 01.2				
	comp=Z,335nm,0.8s									
HATC	**Hat Creek Radi**	**55.92**	**66**	IAmb	IAmb	08 35 01.9				
	comp=Z,392nm,0.8s									
BAKI	**Biak**	**56.03**	**201**	P	**P**	**08 34 59.3**	**+0.8**			
	comp=Z,14µmcomp=Z,16µmcomp=Z,1µm,1.5s									
HOPS	**Hopland Field**	**56.28**	**68**	IAmb	IAmb	08 35 03.5				
	comp=Z,224nm,0.9s									
SMPI	**Sarmi**	**56.28**	**198**	P	**P**	**08 35 01.0**	**+0.8**			
	comp=Z,11µmcomp=Z,13µmcomp=Z,831nm,1.1s									
WVOR	**Wild Horse Val**	**56.34**	**63**	IAmb	IAmb	08 35 04.8				
	comp=Z,426nm,0.9s									
GDH	**Godhavn**	**56.38**	**11**	*i* P	**P**	**08 34 59.6**	**-0.6**			
GDH				IAmb	IAmb	08 35 01.5				
	comp=Z,39nm,0.9s									
JAY	**Jayapura**	**56.44**	**196**	P	**P**	**08 35 02.6**	**+1.2**			
	comp=Z,240nm,0.8s,baz=354,slow=2.0,SNR=39									
JAY				PKPPKP	**P'P'df**	**09 04 40.9**	**-5.2**			
	comp=Z,16nm,1.0s,baz=258,slow=6.4,SNR=4.6									
	comp=Z,240nm,0.8s									
JAY	**Jayapura**	**56.44**	**196**	P	**P**	**08 35 02.2**	**+0.8**			
TNTI	**Ternate**	**56.53**	**212**	IAmb	IAmb	08 35 05.1				
	comp=Z,232nm,0.6s									
GDXM	**Geysers**	**56.56**	**68**	IAmb	IAmb	08 35 06.6				
	comp=Z,374nm,1.0s									
GENI	**Genyem**	**56.61**	**196**	P	**P**	**08 35 03.3**	**+0.8**			
	comp=Z,14µmcomp=Z,23µmcomp=Z,518nm,1.4s									
SRPI	**Serui, Papua**	**56.66**	**201**	P	**P**	**08 35 06.4**	**+3.5**			
ILULI	**Ilulissat**	**56.69**	**10**	IAmb	IAmb	08 35 03.8				
	comp=Z,91nm,0.7s									
ILULI	**Ilulissat**	**56.69**	**10**	*i* P	**P**	**08 35 01.0**	**-1.3**			
ILULI				IAmb	IAmb	08 35 03.5				
	comp=Z,92nm,0.7s									
MNRC	**McLaughlin Min**	**56.71**	**68**	IAmb	IAmb	08 35 07.1				
	comp=Z,761nm,1.4s									
SCO	**Scoresbysund**	**56.72**	**358**	*i* P	**P**	**08 35 02.5**	**-0.1**			
SCO				IAmb	IAmb	08 35 05.1				
	comp=Z,65nm,1.3s									
ORV	**Oroville**	**56.77**	**67**	IAmb	IAmb	08 35 06.6				
	comp=Z,205nm,0.8s									
RKPI	**Ransiki, Papua**	**56.78**	**204**	P	**P**	**08 35 04.5**	**+0.7**			
	comp=Z,12µmcomp=Z,419nm,1.0s									
SUTB	**Sutter Butte**	**56.83**	**67**	IAmb	IAmb	08 35 07.1				
	comp=Z,285nm,0.9s									
VAGH	**Vaagaholmen**	**56.85**	**342**	IVmB_BB		08 34 47.4				
	comp=Z,2µm,3.1s									
VAGH				*e*P	**P**	**08 35 02.3**	**-1.1**			
VAGH				*e*S	**S**	**08 42 15.3**	**-2.8**			
SWI	**Sorong**	**56.92**	**207**	P	**P**	**08 35 05.3**	**+0.7**			
	comp=Z,14µmcomp=Z,19µmcomp=Z,974nm,1.1s									
RAUS	**Rausandaksla**	**56.97**	**342**	*e*P	**P**	**08 35 03.7**	**-0.7**			
RAUS				IVmB_BB		08 35 04.3				
	comp=Z,2µm,2.4s									
RAUS				*e*S	**S**	**08 42 16.2**	**-3.5**			
RAUS				*e*		08 45 14.8				
MCCM	**Marconi Confer**	**56.98**	**69**	IAmb	IAmb	08 35 07.6				
	comp=Z,676nm,1.6s									
CVS	**Carmenet Viney**	**57.07**	**69**	IAmb	IAmb	08 35 09.3				
	comp=Z,454nm,1.1s									
MOR8	**Moi Rana**	**57.13**	**342**	*e*P	**P**	**08 35 03.5**	**-1.9**			
MOR8				*e*S	**S**	**08 42 15.0**	**-6.8**			
MOR8				*e*		08 45 16.0				
MFID	**Camas Ranch**	**57.15**	**60**	IAmb	IAmb	08 35 09.5				
	comp=Z,426nm,1.3s									
BEKR	**Beckworth**	**57.18**	**66**	IAmb	IAmb	08 35 10.2				
	comp=Z,383nm,1.0s									
STOK	**Stokkvaagen**	**57.25**	**342**	*e*P	**P**	**08 35 05.5**	**-0.8**			
STOK				IVmB_BB		08 36 41.5				
	comp=Z,1µm,2.9s									
STOK				*e*S	**S**	**08 42 21.2**	**-2.1**			
STOK				*e*		08 45 21.8				
LEIR	**Leirfjorden**	**57.43**	**342**	*e*P	**P**	**08 35 06.6**	**-0.8**			
LEIR				IVmB_BB		08 36 48.1				
	comp=Z,2µm,2.6s									
LEIR				*e*S	**S**	**08 42 20.4**	**-5.2**			
LEIR				*e*		08 45 25.3				
DLMT	**Dillon**	**57.45**	**57**	IAmb	IAmb	08 35 12.1				
	comp=Z,432nm,0.9s									
BOZ	**Bozeman (W)**	**57.77**	**56**	IAmb	IAmb	08 35 14.2				
	comp=Z,184nm,0.8s									
PAHR	**Pah Rah Range**	**57.83**	**66**	IAmb	IAmb	08 35 14.7				
	comp=Z,462nm,1.0s									
KMSI	**Cibinong**	**57.85**	**216**	P	**P**	**08 35 11.6**	**+0.5**			
	comp=Z,12µmcomp=Z,19µmcomp=Z,2µm,1.0s									
JRSC	**Jasper Ridge**	**57.86**	**69**	IAmb	IAmb	08 35 14.4				
	comp=Z,372nm,0.9s									
PNTR	**Pine Nut**	**58.15**	**66**	IAmb	IAmb	08 35 17.2				
	comp=Z,354nm,0.8s									
BELG	**Belogornoye**	**58.16**	**316**	*d* iP	**P**	**08 35 12.6**	**0.0**			
BELG				pmax	pmax					
	comp=Z,165nm,0.8s									
NIL	**Nilore**	**58.45**	**285**	P	**P**	**08 35 16.2**	**+1.2**			
NIL	**Nilore**	**58.45**	**285**	P	**P**	**08 35 15.6**	**+0.6**			
NIL	**Nilore**	**58.45**	**285**	P	**S**	**08 42 39.8**	**+0.1**			
NIL	**Nilore**	**58.45**	**285**	P	**P**	**08 35 16.2**	**+1.2**			
NIL				pmax	pmax					
	comp=Z,1µm,0.9s									
CMB	**Columbia Colle**	**58.45**	**68**	IAmb	IAmb	08 35 18.3				
	comp=Z,309nm,1.0s									
FIA1	**FINESS Array S**	**58.52**	**333**	IAmb	IAmb	08 35 17.2				
	comp=Z,274nm,0.8s									
FINES	**FINESS Array B**	**58.52**	**333**	P	**P**	**08 35 14.8**	**-0.2**			
	comp=Z,80nm,0.5s,baz=31,slow=7.8,SNR=254									
FINES				pP	**pP**	**08 36 52.9**	**-1.0**			
	comp=Z,45nm,0.8s,baz=30,slow=9.1,SNR=1.7									
FINES				ScP	**ScP**	**08 39 10.3**	**-0.7**			
	comp=Z,13nm,0.7s,baz=38,slow=5.3,SNR=2.4									
FINES				S	**S**	**08 42 38.5**	**-1.1**			
	comp=Z,20nm,0.9s,baz=31,slow=16,SNR=7.5									
	comp=Z,80nm,0.5s									
FINES	**FINESS Array B**	**58.52**	**333**	P	**P**	**08 35 14.6**	**-0.3**			
FINES	**FINESS Array B**	**58.52**	**333**	*i* P	**P**	**08 35 14.8**	**-0.2**			
FINES				pmax	pmax					
	comp=Z,81nm,0.5s									
YHL	**Hebgen Lake**	**58.52**	**56**	IAmb	IAmb	08 35 19.6				
	comp=Z,228nm,0.8s									
TOLI2	**Tolitoli**	**58.54**	**220**	IAmb	IAmb	08 35 18.7				
	comp=Z,370nm,0.8s									
TOLI2	**Tolitoli**	**58.54**	**220**	P	**P**	**08 35 15.6**	**-0.1**			
YHB	**Horse Butte**	**58.59**	**56**	IAmb	IAmb	08 35 20.3				
	comp=Z,323nm,0.8s									
FAKI	**Fak Fak**	**58.62**	**205**	P	**P**	**08 35 16.6**	**+0.3**			
	comp=Z,13µmcomp=Z,14µmcomp=Z,592nm,1.4s									
WAKR	**Walker**	**58.65**	**67**	IAmb	IAmb	08 35 20.7				
	comp=Z,291nm,0.8s									
MRSI	**Marisa**	**58.69**	**218**	P	**P**	**08 35 16.9**	**+0.2**			
	comp=Z,12µmcomp=Z,15µmcomp=Z,912nm,1.5s									
YMR	**Madison River**	**58.76**	**56**	IAmb	IAmb	08 35 21.2				
	comp=Z,232nm,0.8s									
YNM	**Yellowstone No**	**58.85**	**56**	IAmb	IAmb	08 35 22.3				
	comp=Z,172nm,1.0s									
SFJD	**Kangerlussuaq**	**58.87**	**11**	P	**P**	**08 35 16.3**	**-0.9**			
SFJD				IAmb	IAmb	08 35 18.7				
	comp=Z,62nm,0.8s									
SFJD	**Kangerlussuaq**	**58.87**	**11**	*i* P	**P**	**08 35 16.6**	**-0.6**			
SFJD				IAmb	IAmb	08 35 18.6				
	comp=Z,62nm,0.8s									
SFJD	**Kangerlussuaq**	**58.87**	**11**	P	**P**	**08 35 16.3**	**-0.9**			
KMPI	**Kaimana, Papua**	**58.97**	**203**	P	**P**	**08 35 19.3**	**+0.7**			
	comp=Z,10µmcomp=Z,11µmcomp=Z,812nm,0.8s									
YNE	**Yellowstone No**	**59.00**	**55**	IAmb	IAmb	08 35 22.6				
	comp=Z,178nm,0.8s									
RYN	**Ryan**	**59.06**	**66**	IAmb	IAmb	08 35 23.2				
	comp=Z,200nm,0.8s									
NSS	**Namsos**	**59.07**	**342**	*e*P	**P**	**08 35 17.7**	**-0.8**			
NSS				IVmB_BB		08 36 28.2				
	comp=Z,2µm,3.6s									
NSS				*e*S	**S**	**08 42 41.5**	**-4.9**			
NSS				*e*		08 45 47.7				
YMP	**Mirror Lake Pl**	**59.12**	**56**	IAmb	IAmb	08 35 23.9				
	comp=Z,161nm,1.0s									
LKWY	**Lake**	**59.12**	**56**	IAmb	IAmb	08 35 25.2				
	comp=Z,135nm,0.8s									
H17A	**Grant Village**	**59.15**	**56**	IAmb	IAmb	08 35 25.3				
	comp=Z,371nm,1.0s									
FLWY	**Flagg Ranch**	**59.31**	**57**	IAmb	IAmb	08 37 18.6				
	comp=Z,430nm,1.6s									
NVAR	**Mina Array Bea**	**59.33**	**66**	P	**P**	**08 35 21.6**	**+0.5**			
	comp=Z,187nm,0.7s,baz=301,slow=6.6,SNR=479									
NVAR				pP	**pP**	**08 37 01.3**	**+0.6**			
	comp=Z,25nm,0.9s,baz=304,slow=6.5,SNR=3.2									
NVAR				ScP	**ScP**	**08 39 15.9**	**+0.6**			
	comp=Z,23nm,0.7s,baz=286,slow=4.5,SNR=8.2									
NVAR				PKP2bc	**P'P'bc**	**09 04 53.7**	**-2.9**			
	comp=Z,2.9nm,0.9s,baz=146,slow=3.0,SNR=5.0									
	comp=Z,187nm,0.7s									
NVAR	**Mina Array Bea**	**59.33**	**66**	P	**P**	**08 35 22.1**	**+1.0**			
NV11	**Mina Array Sit**	**59.41**	**66**	IAmb	IAmb	08 35 25.5				
	comp=Z,215nm,0.9s									
FXWY	**Fox Creek**	**59.47**	**57**	IAmb	IAmb	08 35 26.2				
	comp=Z,127nm,0.7s									
MDPB	**Devils Postpil**	**59.47**	**67**	IAmb	IAmb	08 35 26.1				
	comp=Z,170nm,0.8s									
MOS	**Moscow**	**59.50**	**324**	*e*P	**P**	**08 35 20.3**	**-1.3**			
MOS				*e**PP	**pP**	**08 37 01.0**	**0.0**			
MOS				*e**SP	**sP**	**08 37 53.5**	**-0.8**			
MOS				*i* S	**S**	**08 42 50.9**	**-1.3**			
MOS				*e*		08 44 16.1				
MOS				*e*SS	**SS**	**08 46 54.8**	**-2.3**			
MOS				pmax	pmax					
	comp=Z,500nm,0.6s									
MOS				pmax	pmax					
	comp=Z,412nm,0.6s									
MOS				pmax	pmax					
	comp=N,300nm,0.4s									
MOS				pmax	pmax					
	comp=N,225nm,0.4s									
MOS				pmax	pmax					
	comp=E,110nm,0.4s									
MOS				pmax	pmax					
	comp=E,100nm,0.4s									
MOS				smax	smax					
	comp=N,8µm,3.5s									
MOS				smax	smax					
	comp=E,3µm,3.5s									
PMPB	**Monarch Peak**	**59.51**	**69**	IAmb	IAmb	08 35 33.5				
	comp=Z,272nm,1.2s									
MPSI	**Mapaga**	**59.59**	**220**	P	**P**	**08 35 23.0**	**+0.2**			
	comp=Z,10µmcomp=Z,10µmcomp=Z,390nm,0.5s									
SANI	**Sanana**	**59.62**	**213**	P	**P**	**08 35 23.0**	**0.0**			
SANI	**Sanana**	**59.62**	**213**	P	**P**	**08 35 22.7**	**-0.3**			
	comp=Z,15µmcomp=Z,17µmcomp=Z,1µm,0.8s									
Q09A	**Carvers**	**59.65**	**65**	IAmb	IAmb	08 35 27.3				
	comp=Z,356nm,0.8s									
LOHW	**Long Hollow**	**59.70**	**57**	IAmb	IAmb	08 35 27.4				
	comp=Z,252nm,1.1s									
SNOW	**Snow King Moun**	**59.73**	**57**	IAmb	IAmb	08 35 28.3				
	comp=Z,169nm,0.9s									
LUWI	**Luwuk**	**59.78**	**216**	P	**P**	**08 35 22.5**	**-1.6**			
LUWI	**Luwuk**	**59.78**	**216**	P	**P**	**08 35 23.2**	**-0.9**			
LUWI	**Luwuk**	**59.78**	**216**	P	**P**	**08 35 23.1**	**-1.0**			
	comp=Z,8µmcomp=Z,9µmcomp=Z,739nm,1.0s									
PKD	**Bear Valley Ra**	**59.85**	**69**	IAmb	IAmb	08 35 28.0				
	comp=Z,251nm,0.7s									
MSAI	**Masohi**	**59.94**	**209**	P	**P**	**08 35 25.8**	**+0.7**			
	comp=Z,14µmcomp=Z,14µmcomp=Z,1µm,0.8s									
APSI	**Ampana**	**60.07**

DOMB Dombas 61.88 342 *e*P P **08 35 36.3 -1.1**
VORR Voronezh 62.09 320 *e*P P **08 35 36.7 -2.1**
VORR *e**PP **pP** **08 37 19.5 +0.2**
VORR *e*S **S** **08 43 17.1 -7.4**
VORR pmax pmax
comp=Z,310nm,0.5s
VORR pmax pmax
comp=Z,230nm,0.4s
VORR smax smax
comp=N,130nm,1.9s
AKN Aaknes 62.13 343 *e*P P **08 35 38.7 -0.2**
SAVO Savo Central 62.18 173 P P **08 35 40.6 +0.8**
NC405 NORSAR Array S 62.22 340 IAmb IAmb 08 35 41.9
comp=Z,140nm,0.7s
BKB Balikpapan 62.24 223 P P **08 35 42.0 +1.7**
BKB Balikpapan 62.24 223 P P **08 35 39.7 -0.6**
comp=Z,21µmcomp=Z,1µm,1.0s
NC204 NORSAR Array S 62.26 341 IAmb IAmb 08 35 42.2
comp=Z,168nm,0.8s
SHOC Shoshone, Teco 62.27 67 IAmb IAmb 08 35 44.1
comp=Z,199nm,0.9s
MMPI Merauke 62.33 195 P P **08 35 41.9 +1.1**
NB201 NORSAR Array S 62.36 340 IAmb IAmb 08 35 42.8
comp=Z,104nm,0.7s
TCRU Three Creeks R 62.37 62 IAmb IAmb 08 35 48.3
comp=Z,185nm,0.9s
NB2 NORSAR Subarra 62.39 340 P P **08 35 40.0 -0.6**
comp=Z,76nm,0.6s,baz=24,slow=6.5
NB2 PP **pP** **08 37 25.5 +4.3**
comp=Z,42nm,1.0s,baz=51,slow=8.6
NB2 P'P' P'P'df 09 04 10.8 -30
comp=Z,11nm,1.0s,baz=205,slow=4.6
NOA NORSAR Array B 62.39 340 P P **08 35 40.1 -0.5**
comp=Z,64nm,0.7s,baz=25,slow=6.5,SNR=147
NOA pP **pP** **08 37 20.8 -0.4**
comp=Z,12nm,0.8s,baz=24,slow=6.9,SNR=2.7
comp=Z,64nm,0.7s
GSC Goldstone, Bar 62.41 67 IAmb IAmb 08 35 44.4
comp=Z,206nm,0.9s
K22A Casper 62.44 55 IAmb IAmb 08 37 27.4
comp=Z,438nm,1.5s
PASC Pasadena Art C 62.47 69 IAmb IAmb 08 35 44.9
comp=Z,202nm,0.8s
PMG Port Moresby 62.47 187 P P **08 35 42.7 +1.1**
comp=Z,339nm,1.0s,baz=0.3,slow=6.5,SNR=62
PMG S **S** **08 43 31.8 +1.8**
comp=Z,8.4nm,0.5s,baz=104,slow=23,SNR=9.7
comp=Z,339nm,1.0s
PMG Port Moresby 62.47 187 P P **08 35 42.6 +1.0**
PMG IAmb IAmb 08 35 44.2
comp=Z,314nm,0.9s
PMG Port Moresby 62.47 187 P P **08 35 42.7 +1.1**
PMG Port Moresby 62.47 187*d* *i*P P **08 35 42.5 +0.8**
PMG pmax pmax
comp=Z,387nm,1.0s
VSR Storozhevoye 62.47 320 *e*P P **08 35 38.8 -2.4**
VSR *e**PP **pP** **08 37 21.0 -0.9**
VSR pmax pmax
comp=Z,2µm,4.4s
VSR pmax pmax
comp=Z,520nm,0.9s
HNR Honiara 62.47 173 P P **08 35 42.4 +0.8**
HNR IAmb IAmb 08 35 52.2
comp=Z,224nm,0.8s
MWC Mount Wilson 62.50 69 IAmb IAmb 08 35 45.5
comp=Z,337nm,0.9s
TMUT Trail Mountain 62.52 61 IAmb IAmb 08 35 45.9
comp=Z,250nm,0.7s
RSSD Black Hills 62.56 52 P P **08 35 42.7 +0.4**
RSSD Black Hills 62.56 52 P P **08 35 42.7 +0.4**
RSSD pmax pmax
comp=Z,258nm,0.7s
RSSD Black Hills 62.56 52 P P **08 35 42.5 +0.3**
NC602 NORSAR Array S 62.60 340 *e*P P **08 35 40.7 -1.2**
VORD Divnogorie 62.62 320 *e*P P **08 35 39.6 -2.6**
VORD *e**PP **pP** **08 37 22.1 -0.8**
VORD *e*S **S** **08 43 23.8 -7.1**
VORD pmax pmax
comp=Z,250nm,0.6s
VORD pmax pmax
comp=Z,320nm,0.6s
VORD smax smax
comp=N,590nm,4.7s
P17A Butcher Ranch, 62.64 60 IAmb IAmb 08 35 46.2
comp=Z,258nm,0.9s
CCUT Cedar City 62.66 63 IAmb IAmb 08 35 46.5
comp=Z,132nm,0.8s
HFS Hagfors 62.69 339 P P **08 35 42.2 -0.3**
comp=Z,49nm,0.3s,baz=61,slow=7.0,SNR=157
HFS pP **pP** **08 37 22.3 -1.0**
comp=Z,41nm,0.8s,baz=37,slow=5.7,SNR=2.3
comp=Z,49nm,0.3s
BFSC Mount Baldy Ra 62.71 69 IAmb IAmb 08 35 46.7
comp=Z,237nm,0.8s
TTSI Tana Toraja 62.72 219 P P **08 35 43.1 -0.3**
SZCU Shurtz Canyon 62.77 63 IAmb IAmb 08 35 47.5
comp=Z,149nm,0.9s
P18A Preston Nutter 62.78 60 IAmb IAmb 08 35 47.8
comp=Z,202nm,0.9s
MTKI Muara Teweh, K 62.79 225 P P **08 35 44.1 +0.3**
comp=Z,13µmcomp=Z,18µmcomp=Z,496nm,0.9s
Q16A Castle Valley 62.82 61 IAmb IAmb 08 35 47.4
comp=Z,362nm,1.3s
MTPU Mount Pierson 62.93 62 IAmb IAmb 08 35 48.9
comp=Z,527nm,1.6s
MTPC Mountain Pass 62.97 66 IAmb IAmb 08 35 48.3
comp=Z,231nm,1.2s
FOO Floro 63.01 344 *e*P P **08 35 43.3 -1.3**
SRU San Rafael Swe 63.02 60 IAmb IAmb 08 35 47.8
comp=Z,256nm,0.9s
LCMT Little Creek M 63.12 64 IAmb IAmb 08 35 50.0
comp=Z,144nm,1.0s
V12A Nelson 63.18 66 IAmb IAmb 08 35 50.3
comp=Z,182nm,0.8s
HYA Hoyanger 63.22 343 *e*P P **08 35 45.6 -0.3**
SKAR Skarslia 63.29 342 *e*P P **08 35 46.0 -0.4**
PKCU Pink Cliffs 63.30 63 IAmb IAmb 08 35 51.7
comp=Z,249nm,0.9s
KNB Kanab 63.34 63 IAmb IAmb 08 35 51.7
comp=Z,323nm,1.1s
STKI Sintang 63.40 229 P P **08 35 49.1 +1.4**
comp=Z,803nm,1.0s
PBA Port Blair 63.45 253 P P **08 35 49.0 +0.9**
SNR=8.0
SUE Sulen 63.57 344 *e*P P **08 35 47.2 -0.9**
SPSI Sidrap Palu 63.59 218 P P **08 35 48.9 0.0**
comp=Z,12µmcomp=Z,430nm,0.8s
SAUI Saumlaki 63.73 205 P P **08 35 52.0 +2.2**
SAUI Saumlaki 63.73 205 P P **08 35 50.5 +0.7**
MNK Minsk 63.79 328 *i*P P **08 35 50.4 +0.7**
MNK *i* 08 36 20.8
MNK *i**PP **pP** **08 37 29.3 -1.6**
MNK *i* 08 38 26.1
MNK *i**SP **sP** **08 38 28.6 +4.9**
MNK *i*S **S** **08 43 45.4 +0.3**
MNK *i* 08 44 56.0
MNK *i*SS **SS** **08 48 09.4 +5.7**
MNK pmax pmax
comp=Z,356nm,0.8s
MNK pmax pmax
comp=N,69nm,0.8s
MNK pmax pmax
comp=E,144nm,0.9s
NACGM Naroch 63.80 329 ⇓*i*P P **08 35 49.4 -0.4**
comp=E,55nm,0.8s
BELC Belle Mtn. Jos 63.82 68 IAmb IAmb 08 35 53.1
comp=Z,137nm,0.9s
PFO Pinyon Flats O 63.85 68 P P **08 35 51.2 +0.6**
PFO IAmb IAmb 08 35 53.5
comp=Z,128nm,0.9s
PFO Pinyon Flats O 63.85 68 P P **08 35 51.2 +0.6**
PFO pmax pmax
comp=Z,129nm,0.9s
PFO Pinyon Flats O 63.85 68 P P **08 35 50.9 +0.2**
PFO pP **pP** **08 37 32.2 -0.1**
BNSI Bone 63.86 218 P P **08 35 51.0 +0.3**
comp=Z,13µmcomp=Z,18µmcomp=Z,853nm,0.5s
PMD Palm Desert 63.87 68 IAmb IAmb 08 35 53.7
comp=Z,157nm,0.8s
BBSI Bau Bau 63.99 215 P P **08 35 52.0 +0.5**
comp=Z,13µmcomp=Z,14µmcomp=Z,601nm,1.1s
KONO Kongsberg 63.99 341 P P **08 35 50.9 0.0**
KONO Kongsberg 63.99 341 ⇓P P **08 35 51.0 +0.1**
CPE Camp Elliot 64.02 69 IAmb IAmb 08 35 54.5
comp=Z,220nm,1.0s
NEE2 Needles Airpor 64.02 66 IAmb IAmb 08 35 54.5
comp=Z,124nm,0.7s
DPP Dos Picos Cty 64.03 69 IAmb IAmb 08 35 54.5
comp=Z,164nm,1.0s
ASK Askoy 64.03 343 *e*P P **08 35 51.0 -0.2**
U15A North Rim 64.06 63 IAmb IAmb 08 35 56.1
comp=Z,190nm,1.0s
BORC Borrego Spring 64.13 69 IAmb IAmb 08 35 55.8
comp=Z,236nm,0.9s
W13A Hualapai Mount 64.18 66 IAmb IAmb 08 35 56.0
comp=Z,189nm,1.1s
STRU Stroemstad 64.23 340 *i*P P **08 35 52.5 +0.2**
PV21 Cone Mtn., Par 64.24 60 IAmb IAmb 08 35 56.6
comp=Z,225nm,0.8s
KULM Kulim 64.26 242 P P **08 35 53.9 +0.6**
ODD1 Odda 64.31 342 *e*P P **08 35 52.6 -0.4**
PV14 Lion Creek, Pa 64.35 60 IAmb IAmb 08 35 56.2
comp=Z,234nm,0.9s
BC3 Big Chuckawall 64.38 68 IAmb IAmb 08 35 57.4
comp=Z,120nm,0.8s
BAR Barrett 64.42 69 IAmb IAmb 08 35 57.0
comp=Z,230nm,1.1s
PV07 Paradox Valley 64.50 60 IAmb IAmb 08 35 57.6
comp=Z,191nm,0.9s
PV12 Saucer Basin, 64.51 60 IAmb IAmb 08 36 09.8
comp=Z,244nm,0.8s
PV03 Paradox Valley 64.53 60 IAmb IAmb 08 35 57.9
comp=Z,269nm,1.1s
KAPI Kappang 64.56 218 P P **08 35 55.9 +0.8**
comp=Z,190nm,0.4s,baz=18,slow=2.4,SNR=105
KAPI S **S** **08 43 57.1 +1.7**
comp=Z,3.3nm,0.4s,baz=90,slow=16,SNR=8.0
comp=Z,190nm,0.4s
KAPI Kappang 64.56 218 P P **08 35 56.2 +1.1**
KAPI Kappang 64.56 218 P P **08 35 56.3 +1.2**
KAPI P P **08 35 56.3 +1.2**
KAPI Kappang 64.56 218 P P **08 35 56.0 +0.8**
KAPI Kappang 64.56 218*d* *i*P P **08 35 56.2 +1.1**
KAPI pmax pmax
comp=Z,581nm,1.1s
KAPI Kappang 64.56 218 P P **08 35 56.0 +0.8**
KAPI S **S** **08 44 00.6 +5.2**
KHAM Kharkiv 64.57 321 P P **08 35 54.3 -0.5**
PV13 Radium Mtn., P 64.62 60 IAmb IAmb 08 35 57.9
comp=Z,246nm,0.9s
BKSI Bulukumba 64.71 218 P P **08 35 56.0 -0.1**
comp=Z,10µmcomp=Z,9µmcomp=Z,623nm,0.8s
IPM Ipoh 64.74 241 P P **08 35 56.7 +0.3**
IVI Ivigtut 64.76 12 IAmb IAmb 08 35 57.8
comp=Z,113nm,0.7s
IVI Ivigtut 64.76 12 *i*P P **08 35 54.9 -0.8**
IVI IAmb IAmb 08 35 57.6
comp=Z,110nm,0.7s
PV01 Paradox Valley 64.77 60 IAmb IAmb 08 35 59.5
comp=Z,107nm,0.7s
F33A 5 Mile Ranch, 64.80 47 IAmb IAmb 08 37 42.6
comp=Z,277nm,1.3s
BLS5 Blasjo 64.80 342 *e*P P **08 35 56.0 -0.1**
XMAS Kiritimati 64.84 124 P P **08 35 57.4 +0.5**
XMAS Kiritimati 64.84 124 P P **08 35 57.7 +0.8**
YUH Yuha Desert 64.86 69 IAmb IAmb 08 36 00.3
comp=Z,226nm,0.8s
CCX Cicese 65.03 70 IAmb IAmb 08 36 01.2
comp=Z,148nm,1.0s
TJOU Tjoern 65.05 339 *i*P P **08 35 57.4 -0.2**
FUNA Funafuti 65.08 152 P P **08 36 00.2 +1.9**
FUNA IAmb IAmb 08 36 00.8
comp=Z,116nm,0.9s
BBKI Banjar Baru 65.08 224 P P **08 35 58.7 +0.2**
comp=Z,874nm,1.3s
NRS Narsarsuaq 65.11 10 IAmb IAmb 08 38 12.8
comp=Z,231nm,1.9s
NRS Narsarsuaq 65.11 10 *i*P P **08 35 56.8 -1.2**
NRS IAmb IAmb 08 35 59.5
comp=Z,42nm,1.0s
BORU Boraas 65.16 338 *i*P P **08 35 57.9 -0.5**
EYMN Ely 65.16 42 IAmb IAmb 08 37 46.6
comp=Z,180nm,1.1s
KMY Karmoy 65.22 343 *e*P P **08 35 58.8 +0.1**
MAK Makhachkala 65.30 309 *e*P P **08 35 57.1 -2.4**
MAK *e**PP **pP** **08 37 39.8 -1.5**
MAK *e* 08 38 26.3
MAK *e**SP **PP** **08 38 31.3 +0.5**
MAK *e*PPP PPP 08 40 12.0
MAK *e*S **S** **08 44 00.8 -2.9**
MAK pmax pmax
comp=Z,158nm,0.6s
BSSI Bau Bau, Buton 65.33 217 P P **08 35 59.9 -0.1**
comp=Z,9µmcomp=Z,12µmcomp=Z,590nm,0.6s
HOMB Homborsund 65.48 341 *i*P P **08 36 00.9 +0.6**
MVCO Mesa Verde 65.50 60 IAmb IAmb 08 36 04.1
comp=Z,332nm,1.3s
MYKOM Kota Tinggi 65.56 237 P P **08 36 02.8 +1.3**
ONAU Onsala 65.57 338 *i*P P **08 36 00.3 -0.6**
SUW Suwalki 65.66 331 *e*P P **08 36 00.6 -0.9**
SUW *e*S **S** **08 44 06.4 -1.1**
SNART Snartemo 65.67 341 *e*P P **08 36 01.8 +0.2**
SNART Snartemo 65.67 341 *i*P P **08 36 01.8 +0.2**
GOF Gofitskoye 65.70 313*d* *i*P P **08 36 02.4 +0.4**
GOF *e*S **S** **08 44 09.0 +0.6**
FABU Falkenberg 65.75 338 *i*P P **08 36 01.6 -0.4**
VTX Valle De La Tr 65.88 70 IAmb IAmb 08 36 07.1
comp=Z,248nm,0.9s
DEL Delary 65.96 337 *i*P P **08 36 02.9 -0.5**
TPRI Tanjung Pinang 65.97 236 P P **08 36 05.6 +1.6**
comp=Z,10µmcomp=Z,9µmcomp=Z,335nm,0.7s
113A Mohawk Valley, 65.98 67 IAmb IAmb 08 36 07.0
comp=Z,159nm,1.0s
OVD Ostervraa, Den 66.01 339 *i*P P **08 36 04.3 +0.7**
OVD IAmb IAmb 08 36 06.1
comp=Z,175nm,0.7s
X16A Lo Mia Camp, P 66.02 64 IAmb IAmb 08 36 08.6
comp=Z,215nm,0.8s
E38A The Farm, Brul 66.21 43 IAmb IAmb 08 36 06.0
comp=Z,194nm,1.0s
ERBR Yeremizino-Bor 66.29 315 *i*P P **08 36 06.2 +0.6**
ERBR *e**PP **pP** **08 37 49.1 +1.3**
ERBR *e* 08 38 35.9
ERBR *e*PPP PPP 08 40 23.4
ERBR *i*S **S** **08 44 15.8 +0.5**
ERBR *e*SS **SS** **08 48 43.0 +0.5**
ERBR pmax pmax
comp=Z,271nm,0.8s
ERBR pmax pmax
comp=N,59nm,1.1s
ERBR pmax pmax
comp=E,46nm,1.1s
LHMI Lhok Sumawe 66.32 245 P P **08 36 08.4 +2.2**
LHMI Lhok Sumawe 66.32 245 P P **08 36 08.1 +1.9**
AKT Akhty 66.34 308 *i*P P **08 36 06.4 +0.2**
AKT *e* 08 36 29.7
AKT *e**PP **pP** **08 37 49.6 +1.2**
AKT *e* 08 38 38.4
AKT *e*PPP PPP 08 40 23.7
AKT *e*S **S** **08 44 15.1 -1.2**
AKT *e* 08 45 17.3
AKT *e*SS **SS** **08 48 46.5 +2.7**
AKT pmax pmax
comp=Z,375nm,0.7s
AKT MLR MLR
comp=Z,2µm,18.0s
W18A Petrified Fore 66.42 63 IAmb IAmb 08 36 10.8
comp=Z,203nm,0.9s
GOET G??ttrup 66.48 340 *i*P P **08 36 07.3 +0.8**
GOET IAmb IAmb 08 36 09.6
comp=Z,182nm,0.8s
BJUU Bjuv 66.52 337 *i*P P **08 36 07.1 +0.2**
AK23 Malin Array Si 66.53 325 P P **08 36 06.2 -0.8**
AKASG Malin Array Be 66.54 325 P P **08 36 06.7 -0.4**
comp=Z,74nm,0.4s,baz=33,slow=6.8,SNR=185
AKASG pP **pP** **08 37 49.1 -0.3**
comp=Z,17nm,0.6s,baz=34,slow=7.0,SNR=2.3
AKASG S **S** **08 44 16.6 -1.5**
comp=Z,15nm,0.8s,baz=35,slow=12,SNR=13
comp=Z,74nm,0.4s
AKASG Malin Array Be 66.54 325 P P **08 36 05.5 -1.6**
AKASG IAmb IAmb 08 36 08.9
comp=Z,201nm,1.0s
AKASG Malin Array Be 66.54 325 *i*P P **08 36 06.3 -0.8**
AKASG pmax pmax
comp=Z,78nm,0.4s
AKBB Malin Array Si 66.54 325 IAmb IAmb 08 36 09.0
comp=Z,158nm,0.8s
AKBB Malin Array Si 66.54 325 P P **08 36 06.5 -0.6**
KIEV Kiev 66.56 325 P P **08 36 06.5 -0.7**
KIEV IAmb IAmb 08 36 09.0
comp=Z,135nm,0.8s
KIEV Kiev 66.56 325 ⇓P P **08 36 06.0 -1.1**
KIEV Kiev 66.56 325 *i*P P **08 36 06.2 -0.9**
SNR=95
KIEV Kiev 66.56 325 P P **08 36 06.2 -0.9**
KIEV pP **pP** **08 37 49.8 +0.3**
AK09 Malin Array Si 66.59 325 P P **08 36 06.7 -0.7**
SFX San Felipe 66.67 69 IAmb IAmb 08 36 11.2
comp=Z,238nm,1.0s
KIV Kislovodsk 66.72 313 *e*P P **08 36 08.9 +0.4**
KIV Kislovodsk 66.72 313 P P **08 36 08.9 +0.4**
KIV Kislovodsk 66.72 313 P P **08 36 08.4 -0.1**
KIV P P **08 36 08.4 -0.1**
KIV Kislovodsk 66.72 313 ⇑P P **08 36 08.8 +0.4**
KIV Kislovodsk 66.72 313 *i*P P **08 36 08.8 +0.4**
SNR=23
KIV Kislovodsk 66.72 313 *e*P P **08 36 08.8 +0.3**
KIV *e* 08 36 33.6
KIV *e**PP **pP** **08 37 50.9 0.0**
KIV *e* 08 38 44.0
KIV *e*S **S** **08 44 22.0 +1.3**
KIV *e*SS **SS** **08 48 53.5 +4.0**
KIV pmax pmax
comp=Z,351nm,3.7s
KIV pmax pmax
comp=Z,196nm,1.0s
KIV MLR MLR
comp=Z,998nm,17.0s
KIV Kislovodsk 66.72 313 P P **08 36 08.9 +0.3**
KIV S **S** **08 44 21.3 +0.6**
X18A Snowflake 66.75 63 IAmb IAmb 08 36 12.9
comp=Z,216nm,0.9s
SPMN Marine on St. 66.79 45 IAmb IAmb 08 37 55.4
comp=Z,164nm,1.3s
KBZ Khabaz 66.81 313 P P **08 36 09.4 +0.5**
comp=Z,235nm,0.6s,baz=58,slow=4.3,SNR=286
KBZ pP **pP** **08 37 52.0 +0.7**
comp=Z,53nm,0.9s,baz=54,slow=6.0,SNR=3.0
KBZ S **S** **08 44 22.1 +0.7**
comp=Z,15nm,0.9s,baz=61,slow=10,SNR=11
comp=Z,235nm,0.6s
LUNU Lund 66.83 337 *i*P P **08 36 08.8 0.0**
TSI Tuntungan 66.88 243 P P **08 36 10.0 +0.3**
comp=Z,11µmcomp=Z,13µmcomp=Z,1µm,0.8s
BSD Bornholm Skovb 66.94 336 *i*P P **08 36 09.4 -0.1**
BSD IAmb IAmb 08 36 11.4
comp=Z,78nm,0.7s
MUD Monsted U'grnd 67.03 340 *i*P P **08 36 10.4 +0.4**
MUD IAmb IAmb 08 36 12.7
comp=Z,58nm,0.8s
MMRI Maumere 67.04 214 P P **08 36 11.0 +0.4**
MMRI Maumere 67.04 214 P P **08 36 10.6 0.0**
LABN Labinsk 67.04 314 *e*P P **08 36 10.9 +0.6**
LABN *e**PP **pP** **08 37 54.0 +1.2**
LABN *e* 08 38 43.4
LABN *e*PPP PPP 08 40 31.1
LABN *e*S **S** **08 44 26.1 +1.9**
LABN *e*SS **SS** **08 48 52.0 -2.1**
LABN pmax pmax
comp=Z,210nm,0.9s
RNPP9 Sopachiv 67.06 328 P P **08 36 09.9 -0.3**
PIX Pinacate 67.06 68 IAmb IAmb 08 36 13.7
comp=Z,236nm,1.1s
RNPP2 Kostyukhnivka 67.13 327 P P **08 36 11.1 +0.4**
DSRI Dabo 67.15 235 P P **08 36 12.5 +1.1**
comp=Z,9µmcomp=Z,9µmcomp=Z,467nm,0.8s
PSI Prapat 67.27 242 P P **08 36 12.4 +0.1**
KCSI Kotacane, Aceh 67.29 244 P P **08 36 10.3 -1.9**
BIGH Upper Bighouse 67.33 347 *e*P P **08 36 11.5 -0.3**
BIGH IAmb IAmb 08 36 13.9
comp=Z,52nm,0.6s
EDFI Ende, Flores 67.33 215 P P **08 36 11.1 -1.4**
comp=Z,10µmcomp=Z,9µmcomp=Z,431nm,1.4s
COEN Coen 67.36 191 P P **08 36 13.4 +0.9**
comp=Z,755nm,0.9s,comp=Z,0.0nm
COEN Coen 67.36 191 P P **08 36 13.3 +0.8**
SCHQ Schefferville 67.36 24 P P **08 36 11.4 -0.7**
comp=Z,35nm,0.4s,baz=343,slow=5.2,SNR=174
SCHQ pP **pP** **08 37 54.9 0.0**
comp=Z,79nm,0.9s,baz=346,slow=7.9,SNR=8.3
SCHQ PKPPKP **P'P'df** **09 04 30.4 -2.0**
comp=Z,19nm,1.0s,baz=164,slow=3.5,SNR=6.3
comp=Z,35nm,0.4s
HYBB Hyderabad (bro 67.36 269 *e*P P **08 36 13.0 +0.2**
HYBB *e*PcP **PcP** **08 36 36.8 +0.8**
HYBB *e*pP **pP** **08 37 56.1 +1.0**
HYBB *e*sP **PP** **08 38 49.0 -0.3**
MLSI Meulaboh, Aceh 67.41 245 P P **08 36 11.7 -1.3**
comp=Z,8µmcomp=Z,10µmcomp=Z,608nm,0.6s
SOEI Soe 67.42 212 P P **08 36 12.6 -0.6**
SOEI Soe 67.42 212 P P **08 36 13.0 -0.1**
SOEI Soe 67.42 212 P P **08 36 12.5 -0.6**
comp=Z,9µmcomp=Z,12µmcomp=Z,793nm,0.8s
I37A Lemond, Waseca 67.50 46 IAmb IAmb 08 36 14.7
comp=Z,269nm,0.9s
TPI Tanjungpandan 67.65 231 P P **08 36 14.9 +0.5**
comp=Z,10µmcomp=Z,8µmcomp=Z,317nm,1.0s
T25A Trinidad 67.67 58 IAmb IAmb 08 38 01.2
comp=Z,199nm,1.8s
R9F13 Warsaw-Wawer 67.83 331 *e*P P **08 36 15.5 +0.6**
comp=Z,3.4nm,0.5s
R9F13 *e*S **S** **08 44 33.3 +0.2**
R9F13 *i* SKSac **SKKSac** **08 45 24.4 +0.3**
R9F13 *e*SS **SS** **08 49 06.6 +1.0**
LINV Loch Inver, As 67.83 348 *e*P P **08 36 14.7 -0.2**
SSRD Sdr. Stenderup 67.84 339 *i*P P **08 36 15.3 +0.3**
SSRD IAmb IAmb 08 36 17.8
comp=Z,141nm,0.8s
RGN Rugen 67.84 336 IAmb IAmb 08 36 18.1
comp=Z,244nm,1.0s
PPBI Pangkal Pinang 67.85 233 P P **08 36 17.0 +1.4**
KDU Kakadu 67.97 202 P P **08 36 16.9 +0.7**
comp=Z,335nm,0.7s,comp=Z,0.0nm
TUC Tucson 67.97 65 P P **08 36 17.1 +0.8**
TUC IAmb IAmb 08 36 19.6
comp=Z,104nm,1.0s
GKP Gorka Klasztor 68.00 334 *e*P P **08 36 16.2 +0.2**
BATI Baumata 68.04 212 P P **08 36 16.9 +0.2**
comp=Z,507nm,0.5s,baz=139,slow=0.7,SNR=51
BATI S **S** **08 44 37.6 +1.1**
comp=Z,25nm,0.6s,baz=0.0,slow=7.1,SNR=7.6
comp=Z,507nm,0.5s
BATI Baumata 68.04 212 P P **08 36 16.7 -0.1**
comp=Z,7µmcomp=Z,10µmcomp=Z,862nm,1.0s
DRS Darwin Rock St 68.10 204 P P **08 36 17.5 +0.4**
MCD Coleburn Disti 68.12 347 *e*P P **08 36 16.6 -0.1**
MCD IAmb IAmb 08 36 19.3
comp=Z,60nm,0.6s
BKNI Bangkinang 68.25 239 P P **08 36 19.1 +1.1**
BKNI Bangkinang 68.25 239 P P **08 36 19.3 +1.2**
BKNI Bangkinang 68.25 239 P P **08 36 19.2 +1.1**
BEL Belsk 68.27 331 *e*P P **08 36 18.1 +0.4**
BEL *e*pP **pP** **08 38 02.9 +2.3**
BEL *e*S **S** **08 44 40.0 +1.7**
F42A Maple Grove Fa 68.29 42 IAmb IAmb 08 38 03.1
comp=Z,144nm,1.4s
ANN Anapa 68.30 317 *e*P P **08 36 16.9 -1.1**
ANN *e**PP **pP** **08 38 01.0 0.0**
ANN *e* 08 38 55.9
ANN *e*PPP PPP 08 40 42.5
ANN *e*S **S** **08 44 37.3 -1.6**
ANN *e*SS **SS** **08 49 18.8 +5.5**
ANN pmax pmax
comp=E,14nm,0.4s
ANN pmax pmax
comp=Z,77nm,0.6s
ANN pmax pmax
comp=N,37nm,0.6s
SOC Sochi 68.32 314 *e*P P **08 36 17.1 -1.0**
SOC *e**PP **pP** **08 38 01.4 +0.3**
SOC *e**SP **sP** **08 38 50.3 -3.1**
SOC *e* 08 38 56.1
SOC *e*PPP PPP 08 40 42.7
SOC *e*S **S** **08 44 38.7 -0.5**
SOC *e*SS **SS** **08 49 16.5 +2.8**
SOC pmax pmax
comp=Z,100nm,0.7s
SBSI Sibolga 68.34 242 P P **08 36 16.9 -1.8**
comp=Z,5µmcomp=Z,395nm,0.7s
MTN Manton Dam 68.44 204 P P **08 36 19.8 +0.7**
comp=Z,932nm,0.7s,comp=Z,0.0nm
MNSI Mandailing Nat 68.61 240 P P **08 36 19.2 -1.1**
comp=Z,6µmcomp=Z,260nm,0.7s
DRUM Mains of Drumt 68.67 346 *e*P P **08 36 19.8 -0.2**
DRUM IAmb IAmb 08 36 22.2

comp=Z,80nm,0.4s
WSI Waingapu 68.67 216 P **P** **08 36 19.1 -1.5**
comp=Z,9µmcomp=Z,1µm,1.0s
KPL Plockton 68.67 348 *e*P **P** **08 36 19.8 -0.2**
KPL IAmb IAmb 08 36 22.2
comp=Z,53nm,0.5s
KMMI Kalianget 68.69 223 P **P** **08 36 21.6 +0.9**
comp=Z,16µcomp=Z,805nm,1.6s
I40A Norwalk 68.79 44 IAmb IAmb 08 36 22.4
comp=Z,102nm,0.6s
GNI Garni 68.79 309 *e*P **P** **08 36 22.7 +1.4**
GNI Garni 68.79 309 P **P** **08 36 22.8 +1.4**
GNI IAmb IAmb 08 36 29.8
comp=Z,182nm,0.8s
GNI Garni 68.79 309 P **P** **08 36 22.1 +0.8**
GNI P **P** **08 36 22.1 +0.8**
PLAI Plampang 68.81 218 P **P** **08 36 19.7 -1.7**
PLAI Plampang 68.81 218 P **P** **08 36 19.8 -1.7**
comp=Z,8µcomp=Z,7µcomp=Z,615nm,0.9s
WBSI Waikabubak, Su 68.97 217 P **P** **08 36 20.6 -1.8**
comp=Z,9µcomp=Z,16µcomp=Z,901nm,0.8s
SNSI Sinabang, Aceh 69.00 244 P **P** **08 36 22.8 +0.2**
SORM Soroca 69.02 324 ⇑P **P** **08 36 21.4 -0.9**
SORM Soroca 69.02 324 ⇑P **P** **08 36 21.4 -0.9**
TWSI Taliwang, Sumb 69.07 219 P **P** **08 36 21.9 -1.1**
comp=Z,7µcomp=Z,5µcomp=Z,237nm,0.9s
BASI Baing, Sumba 69.08 215 P **P** **08 36 22.4 -0.6**
comp=Z,11µcomp=Z,2µm,1.1s
SRBI Singaraja 69.12 221 P **P** **08 36 23.3 0.0**
comp=Z,9µcomp=Z,9µcomp=Z,585nm,0.9s
TASB TASBURUN-IGDIR 69.16 309 *e*P **P** **08 36 23.6 +0.2**
PMBI Palembang 69.17 234 P **P** **08 36 26.6 +2.9**
SANVU Saraoutou 69.21 166 P **P** **08 36 24.3 +0.6**
SANVU Saraoutou 69.21 166 P **P** **08 36 23.7 0.0**
SANVU PcP **PcP** **08 36 44.0 +0.5**
GSI Gunungsitoli 69.25 243 P **P** **08 36 24.3 +0.1**
PPI Padang Panjang 69.25 239 P **P** **08 36 23.5 -0.6**
comp=Z,8µcomp=Z,6µcomp=Z,172nm,0.7s
ABJI Asem Bagus 69.25 222 P **P** **08 36 24.5 +0.4**
comp=Z,12µcomp=Z,641nm,0.9s
KMPD K-Podol'skiy 69.31 326 P **P** **08 36 23.7 -0.3**
INVG Invergeldie, C 69.36 347 *e*P **P** **08 36 23.9 -0.3**
INVG IAmb IAmb 08 36 26.0
comp=Z,72nm,0.5s
121A Cookes Peak, D 69.43 63 IAmb IAmb 08 36 29.0
comp=Z,322nm,1.2s
BLJI Banyuglugur 69.47 223 P **P** **08 36 25.1 -0.3**
comp=Z,11µcomp=Z,9µcomp=Z,565nm,0.8s
H43A Windswept, Lux 69.50 42 IAmb IAmb 08 36 26.8
comp=Z,131nm,0.7s
SIM Simferopol' 69.53 319 *e*P **P** **08 36 25.5 +0.1**
SIM *e**PP **pP** **08 38 10.4 +1.5**
SIM *e*S **S** **08 44 52.4 -0.7**
SIM 08 45 37.0
SIM SS **SS** **08 49 33.0 +1.0**
SIM pmax pmax
comp=Z,200nm,1.0s
SIM smax smax
comp=N,2µm,3.6s
SENK Senkaya-Erzuru 69.57 311 *e*P **P** **08 36 26.9 +0.9**
PDSI Padang 69.60 239 P **P** **08 36 25.2 -1.1**
comp=N,7µcomp=N,11µcomp=N,355nm,0.8s
KWP Kalwaria Pacla 69.62 328 *e*P **P** **08 36 23.5 -2.4**
KWP *e*pP **pP** **08 38 11.6 +2.2**
KWP *e*S **S** **08 44 53.8 -0.2**
ESY Stoneypath 69.65 346 *e*P **P** **08 36 25.7 -0.3**
DNP Denpasar 69.66 221 P **P** **08 36 25.9 -0.6**
comp=N,804nm,0.5s
LAWE Loch Awe, Argy 69.70 348 *e*P **P** **08 36 25.9 -0.3**
LAWE IAmb IAmb 08 36 28.3
comp=Z,139nm,0.5s
JFWS Jewell Farm 69.74 45 IAmb IAmb 08 36 28.8
comp=Z,70nm,0.6s
KIS Kishinev 69.82 323 ⇓*i*P **P** **08 36 26.5 -0.6**
KIS ⇓pP **pP** **08 38 10.0 -0.7**
KIS *i*S **S** **08 44 50.0 -6.3**
comp=Z,960nm,1.7s
KIS *e*L L 08 53 09.0
KIS LRM MLR 08 53 45.0
comp=Z,700nm,17.0s
PURM Purcari 69.83 322 ⇓P **P** **08 36 26.9 -0.3**
CHOM Cayeli-Rize 69.86 312 *e*P **P** **08 36 27.6 +0.1**
MILM Milestii Mici 69.89 323 ⇓P **P** **08 36 25.0 -2.5**
MILM Milestii Mici 69.89 323 ⇓P **P** **08 36 25.0 -2.5**
MILM Milestii Mici 69.89 323 ⇓*i*P **P** **08 36 25.0 -2.5**
comp=Z,260nm,0.8s
MILM ⇓*i*pP **pP** **08 38 09.0 -2.1**
MILM *i*S **S** **08 44 50.0 -7.1**
comp=Z,490nm,0.8s
JAGI Jajag, Banyuwa 69.90 222 IAmb IAmb 08 36 28.0
comp=Z,162nm,0.7s
JAGI Jajag, Banyuwa 69.90 222 P **P** **08 36 26.0 -2.0**
JAGI Jajag, Banyuwa 69.90 222 P **P** **08 36 25.6 -2.4**
comp=Z,7µcomp=Z,227nm,0.9s
KSU1 Kansas State U 69.96 51 IAmb IAmb 08 36 28.7
comp=Z,199nm,0.6s
OJC Ojcow 69.99 330 *e*P **P** **08 36 28.2 +0.1**
OJC *e*pP **pP** **08 38 13.4 +1.7**
OJC *e*S **S** **08 44 57.0 -1.2**
PGBU Glenifferbraes 70.01 347 *e*P **P** **08 36 28.0 -0.1**
PGBU IAmb IAmb 08 36 30.2
comp=Z,167nm,0.6s
PBSI Pulau Batu 70.02 241 P **P** **08 36 29.0 +0.3**
NGJI Ngawi 70.03 225 P **P** **08 36 30.7 +2.0**
AGRB Hanur-Agry 70.07 310 *e*P **P** **08 36 30.2 +1.2**
KRJI Kerinci 70.10 237 P **P** **08 36 29.9 +0.6**
IASR Iasi 70.11 324 ⇑P **P** **08 36 28.7 -0.1**
N38A Joes South For 70.16 48 IAmb IAmb 08 36 31.3
comp=Z,244nm,1.0s
SMRI Semarang 70.18 226 P **P** **08 36 30.1 +0.4**
SMRI Semarang 70.18 226 P **P** **08 36 30.2 +0.5**
comp=Z,16µcomp=Z,725nm,0.8s
KOPR Koprukoy-ERZUR 70.26 311 *e*P **P** **08 36 31.0 +0.9**
STHS Stebnicka Huta 70.26 329 *e*P **P** **08 36 29.0 -0.8**
STHS pmax pmax
comp=Z,91nm,0.6s
STHS Stebnicka Huta 70.26 329 *e*P **P** **08 36 29.0 -0.8**
EKA Eskdalemuir Ar 70.29 346 P **P** **08 36 29.6 -0.2**
comp=Z,46nm,0.4s,baz=14,slow=4.9,SNR=158
EKA pP **pP** **08 38 15.2 +1.7**
comp=Z,15nm,0.6s,baz=22,slow=5.3,SNR=4.3
EKA PKP2bc **P'P'bc** **09 04 20.6 -6.3**
comp=Z,18nm,1.1s,baz=202,slow=4.2,SNR=9.8
comp=Z,46nm,0.4s
ESK Eskdalemuir 70.32 346 P **P** **08 36 30.0 +0.1**
ESK Eskdalemuir 70.32 346 *e*P **P** **08 36 29.9 +0.1**
ESK IAmb IAmb 08 36 32.1
comp=Z,55nm,0.6s
HSIG 70.39 68 IAmb IAmb 08 36 33.9
comp=Z,178nm,1.0s
KSP Ksiaz 70.44 333 *e*P **P** **08 36 30.4 -0.4**
KSP *e*pP **pP** **08 38 15.0 +0.4**
KSP *e*S S 08 44 42.6 -21
GLMI Grayling 70.45 40 IAmb IAmb 08 38 21.6
comp=Z,175nm,1.0s
I45A Fountain 70.47 41 IAmb IAmb 08 38 17.1
comp=Z,618nm,2.0s
VASR Vaslui 70.49 324 ⇑P P 08 36 26.0 -5.2
BUR08 Bucovina Ar. S 70.53 326 IAmb IAmb 08 36 34.0
comp=Z,173nm,0.9s
BURAR Bucovina Array 70.55 326 P **P** **08 36 31.5 -0.1**
BURAR IAmb IAmb 08 36 34.0
comp=Z,182nm,0.5s
BURAR Bucovina Array 70.55 326 ⇓P **P** **08 36 31.2 -0.4**
BURAR Bucovina Array 70.55 326 ⇓P **P** **08 36 31.2 -0.4**
NIE Niedzica 70.55 330 *e*P **P** **08 36 32.0 +0.6**
NIE *e*pP **pP** **08 38 15.3 -0.1**
NIE *e*S **S** **08 45 03.8 -0.9**
EDMD Edmundbyers 70.60 345 *e*P **P** **08 36 31.4 -0.2**
EDMD IAmb IAmb 08 36 33.6
comp=Z,36nm,0.5s
MASI Maura Aman, Be 70.61 236 P **P** **08 36 31.8 -0.5**
NEWG New Galloway 70.65 347 *e*P **P** **08 36 31.8 -0.2**
NEWG IAmb IAmb 08 36 33.9
comp=Z,31nm,0.8s
VANB Van 70.66 309 *e*P **P** **08 36 34.9 +2.4**
SISI Saibi 70.67 240 P **P** **08 36 32.6 0.0**
comp=Z,11µcomp=Z,13µcomp=Z,681nm,0.7s
BAYT Aydıntepe-Bayb 70.71 312 *e*P **P** **08 36 33.4 +0.6**
EPT El Paso 70.71 63 IAmb IAmb 08 36 35.7
comp=Z,209nm,1.0s
OSTC Ostas 70.72 333 *e*P **P** **08 36 32.3 -0.1**
OSTC *e*S **S** **08 45 05.6 -0.9**
OSTC Ostas 70.72 333 *e*P **P** **08 36 32.3 -0.1**
OSTC *e*S **S** **08 45 05.6 -0.9**
K43A Burlington 70.72 44 IAmb IAmb 08 36 33.7
comp=Z,97nm,0.7s
CHVC Chvalec 70.73 333 *e*P **P** **08 36 32.6 +0.1**
CHVC Chvalec 70.73 333 *e*P **P** **08 36 32.6 +0.1**
L42A Oliver, Polo 70.73 45 IAmb IAmb 08 36 32.5
comp=Z,134nm,0.6s
KLI Kotabumi 70.81 233 P **P** **08 36 32.7 -0.7**
comp=Z,8µcomp=Z,11µcomp=Z,853nm,0.9s
MDSI Maura Dua 70.81 233 P **P** **08 36 32.3 -1.1**
comp=Z,5µcomp=Z,386nm,1.0s
OKC Ostrava-Krasne 70.82 331 *e*P **P** **08 36 34.3 +1.3**
OKC Ostrava-Krasne 70.82 331 *e*P **P** **08 36 34.3 +1.3**
UPC Upice 70.82 333 *e*P **P** **08 36 33.2 +0.2**
UPC *e*S **S** **08 45 06.0 -1.6**
UPC Upice 70.82 333 *e*P **P** **08 36 33.2 +0.2**
UPC *e*S **S** **08 45 06.0 -1.6**
STEB Steborice 70.84 332 *e*P **P** **08 36 33.5 +0.4**
KSI Kapahiang 70.87 235 P **P** **08 36 32.7 -1.2**
comp=Z,8µcomp=Z,379nm,0.7s
BIR Birlad 70.87 324 ⇓P **P** **08 36 33.9 +0.5**
BIR Birlad 70.87 324 ⇓P **P** **08 36 33.9 +0.5**
CLL Collm 70.88 335 IAmb IAmb 08 36 35.5
comp=Z,96nm,0.6s
CLL Collm 70.88 335 ⇓*i*P **P** **08 36 32.7 -0.6**
CLL *e**PP **pP** **08 38 18.0 +0.6**
CLL *e*S **S** **08 45 08.0 -0.3**
CLL pmax pmax
comp=Z,102nm,0.7s
PCJI Pacitan 70.89 225 P **P** **08 36 33.0 -0.8**
comp=Z,6µcomp=Z,347nm,0.7s
UGM Wanagama 70.92 226 P **P** **08 36 32.5 -1.6**
UGM Wanagama 70.92 226 P **P** **08 36 33.4 -0.7**
comp=Z,8µcomp=Z,504nm,0.9s
YOGI Yogyakarta 70.93 226 P **P** **08 36 33.9 -0.2**
comp=Z,10µcomp=Z,628nm,0.8s
CLGH Cloghs, Cushen 70.94 348 *e*P **P** **08 36 33.7 +0.1**
CLGH IAmb IAmb 08 36 35.8
comp=Z,67nm,0.6s
KAN01 Argonia South 70.96 53 IAmb IAmb 08 36 36.0
comp=Z,143nm,0.7s
GAL1 Galloway 70.96 347 *e*P **P** **08 36 33.6 -0.2**
GAL1 IAmb IAmb 08 36 35.8
comp=Z,47nm,0.6s
P38A Dawn 70.97 49 IAmb IAmb 08 36 35.4
comp=Z,243nm,0.9s
SRIG Santa Rosalia 70.97 70 IAmb IAmb 08 36 37.2
comp=Z,328nm,1.2s
KRLC Kraliky 70.99 332 *e*P **P** **08 36 34.3 +0.2**
KRLC Kraliky 70.99 332 *e*P **P** **08 36 34.3 +0.2**
KRLC *ex* x 08 48 18.2
KESW Keswick, Cumbr 71.01 346 *e*P **P** **08 36 34.3 +0.3**
KESW IAmb IAmb 08 36 36.2
comp=Z,90nm,0.5s
TESR Tescani 71.01 324 ⇑P **P** **08 36 33.6 -0.6**
KAN14 Manchester OK 71.02 54 IAmb IAmb 08 38 20.8
comp=Z,357nm,1.8s
LANS Liptovska Anna 71.04 330 *e*P **P** **08 36 35.7 +1.3**
LANS pmax pmax
comp=Z,101nm,0.6s
LANS Liptovska Anna 71.04 330 *e*P **P** **08 36 35.7 +1.3**
MORC Moravsky Berou 71.05 332 ⇑P **P** **08 36 35.2 +0.8**
MORC Moravsky Berou 71.05 332 *e*P **P** **08 36 34.5 +0.1**
MORC *e*pP **pP** **08 38 20.5 +2.1**
MORC *e*S **S** **08 45 08.9 -1.4**
AKDM Akdamar-Van 71.07 309 *e*P **P** **08 36 35.7 +0.8**
BLSI Bandar Lampung 71.07 232 P **P** **08 36 34.9 0.0**
comp=Z,7µcomp=Z,7µcomp=Z,451nm,0.9s
VLDR Varlesti 71.07 323 ⇓P **P** **08 36 33.7 -0.8**
KPJI Karang Pucung 71.10 228 P **P** **08 36 33.9 -1.2**
comp=Z,10µcomp=Z,6µcomp=Z,241nm,1.1s
VARL Varlezi 71.11 323 ⇑P **P** **08 36 35.2 +0.5**
IDGL Inch Island, C 71.12 349 P **P** **08 36 34.5 -0.1**
IDGL pP **pP** **08 38 23.3 +4.6**
IDGL Inch Island, C 71.12 349 *e*P **P** **08 36 34.7 +0.1**
IDGL IAmb IAmb 08 36 36.9
comp=Z,108nm,0.6s
GHRR 71.13 324 ⇑P **P** **08 36 35.4 +0.5**
KARO Karliova-Bingo 71.17 311 *e*P **P** **08 36 36.3 +0.8**
PVCC Panska Ves 71.19 334 *e*P **P** **08 36 35.2 0.0**
PVCC *e*S **S** **08 45 11.1 -0.7**
PVCC Panska Ves 71.19 334 *e*P **P** **08 36 35.2 0.0**
PVCC *e*S **S** **08 45 11.1 -0.7**
SCTR Scanteiesti 71.25 323 ⇓P **P** **08 36 36.4 +0.8**
N41A Harden Midland 71.28 46 IAmb IAmb 08 36 36.8
comp=Z,143nm,0.9s
TATR Tatarca 71.29 323 ⇑P **P** **08 36 34.9 -1.0**
RICC Richard 71.30 334 *e*P **P** **08 36 36.4 +0.6**
SBJI Serang 71.31 231 P **P** **08 36 36.2 -0.1**
comp=Z,9µcomp=Z,10µcomp=Z,420nm,1.1s
GIUM Giurgiulesti 71.33 323 ⇑P **P** **08 36 36.5 +0.4**
GURO Guroymak-BITLI 71.33 310 *e*P **P** **08 36 37.5 +1.1**
GURO Guroymak-BITLI 71.33 310 IAmb IAmb 08 36 40.2
comp=Z,155nm,0.9s
MAUC Maruska 71.33 331 *e*P **P** **08 36 36.7 +0.6**
MAUC *e*S **S** **08 45 13.3 -0.2**
LWLI Liwa 71.33 233 P **P** **08 36 34.8 -1.8**
TLCR 71.36 322 ⇑P **P** **08 36 35.8 -0.5**
TLCR 71.36 322 ⇑P **P** **08 36 35.8 -0.5**
MNTX Cornudas Mount 71.37 62 IAmb IAmb 08 36 39.1
comp=Z,148nm,0.7s
CROK Carrier 71.37 54 IAmb IAmb 08 38 23.2
comp=Z,549nm,1.9s
PANC Panciu 71.38 324 ⇑P **P** **08 36 37.3 +0.9**
DBJI Dramaga 71.40 230 P **P** **08 36 35.8 -1.1**
comp=Z,9µcomp=Z,13µcomp=Z,816nm,1.0s
NEGRR Negrea 71.41 323 ⇓P **P** **08 36 35.8 -0.7**
PPSI Pulau Pagai 71.41 238 P **P** **08 36 37.4 +0.4**
comp=Z,13µcomp=Z,753nm,0.8s
HSKC Hora Svate Kat 71.41 335 *e*P **P** **08 36 36.4 -0.1**
IZVR Izvoarele 71.44 323 ⇓P **P** **08 36 37.4 +0.7**
SCHLR Schela 71.48 323 ⇑P **P** **08 36 36.3 -0.6**
VRI Vrincioaia 71.54 324 *e*P **P** **08 36 37.2 -0.1**
VRI Vrincioaia 71.54 324 ⇓P **P** **08 36 37.5 +0.2**
VRI Vrincioaia 71.54 324 ⇓P **P** **08 36 37.5 +0.2**
KASI Kota Agung 71.56 233 P **P** **08 36 36.4 -1.4**
comp=Z,358nm,0.9s
PLOR Plostina 71.58 324 ⇑P **P** **08 36 37.2 -0.4**
PLOR Plostina 71.58 324 ⇑P **P** **08 36 37.2 -0.4**
BNGB Bingl 71.60 311 *e*P **P** **08 36 38.9 +1.0**
CFR Carcaliu 71.62 323 ⇓P **P** **08 36 37.4 -0.3**
CFR Carcaliu 71.62 323 ⇓P **P** **08 36 37.4 -0.3**
CUKT Cukurca 71.64 308 *e*P **P** **08 36 38.5 +0.3**
PRA Prague 71.64 334 *e*P **P** **08 36 38.4 +0.6**
PRA Prague 71.64 334 *e*P **P** **08 36 38.4 +0.6**
PRA *e*XS **sS** **08 48 28.0 +5.2**
WIM Isle of Man 71.66 347 *e*P **P** **08 36 38.1 +0.3**
PRU Pruhonice 71.69 334 *e*P **P** **08 36 38.4 +0.3**
PRU *e*S **S** **08 45 14.0 -3.4**
PRU Pruhonice 71.69 334 *e*P **P** **08 36 38.4 +0.3**
PRU *e*S **S** **08 45 14.0 -3.4**
PRU *e*XS **sS** **08 48 25.2 +1.8**
JURR Jurilovca 71.70 322 ⇓P **P** **08 36 38.3 +0.1**
J47A Sunmer 71.70 41 IAmb IAmb 08 36 40.8
comp=Z,211nm,0.9s
MESR Meseseni 71.71 327 ⇓P **P** **08 36 39.7 +1.4**
P40A Paris 71.72 48 IAmb IAmb 08 36 39.8
comp=Z,206nm,0.8s
VRAC Vranov 71.74 332 ⇓P **P** **08 36 39.2 +0.8**
VRAC Vranov 71.74 332 *e*P **P** **08 36 38.8 +0.4**
VRAC *e*pP **pP** **08 38 22.8 +0.1**
VRAC *e*S **S** **08 45 16.6 -1.4**
VRAC Vranov 71.74 332 ⇓P **P** **08 36 39.2 +0.8**
COVR Voineasa-Covas 71.74 324 ⇓P **P** **08 36 38.9 +0.4**
TPGR Topolog 71.79 322 ⇑P **P** **08 36 38.5 -0.3**
BBJI Bungbulang 71.79 229 P **P** **08 36 37.6 -1.6**
BISRR Bisoca 71.82 324 ⇓P **P** **08 36 39.9 +0.9**
JAVC Velka Javorina 71.83 331 *e*P **P** **08 36 40.3 +1.2**
JAVC *e*S **S** **08 45 18.8 -0.4**
CBBR Cluj-Babes-Bol 71.85 326 ⇓P **P** **08 36 39.9 +0.8**
GRER 71.87 324 ⇑P **P** **08 36 41.0 +1.8**
CJR Cluj-Napoca 71.88 326 ⇑P **P** **08 36 39.9 +0.5**
CJR Cluj-Napoca 71.88 326 ⇑P **P** **08 36 39.9 +0.5**
SKJI Sukabumi 71.89 230 P **P** **08 36 41.3 +1.6**
comp=Z,6µcomp=Z,499nm,0.6s
CNJI Cibinong 71.89 229 P **P** **08 36 38.8 -0.9**
DOPR Dopca 71.92 325 ⇓P **P** **08 36 40.0 +0.4**
M44A Midewin, Midew 71.93 44 IAmb IAmb 08 36 40.9
comp=Z,109nm,0.7s
LBWR Ladybower, Pea 71.95 345 *e*P **P** **08 36 39.5 0.0**
LBWR IAmb IAmb 08 36 45.8
comp=Z,45nm,0.7s
ILTH Belurgan, Co L 72.00 348 P **P** **08 36 42.7 +2.9**
KRUC Moravsky 72.02 332 *e*P **P** **08 36 40.4 +0.4**
KRUC *ep*P **pP** **08 38 24.6 +0.1**
KRUC *e*S **S** **08 45 21.3 +0.2**
BZK Bozkurt 72.06 317 *e*P **P** **08 36 40.4 0.0**
BZK Bozkurt 72.06 317 IAmb IAmb 08 36 43.5
comp=Z,114nm,0.6s
BZK Bozkurt 72.06 317 ⇓P **P** **08 36 40.7 +0.3**
TREC Trest 72.06 333 *e*P **P** **08 36 40.5 +0.2**
TREC *e* 08 38 30.2
TREC Trest 72.06 333 *e*P **P** **08 36 40.5 +0.2**
TREC *ex* x 08 38 30.2
NEHR Nehoiu 72.07 324 ⇓P **P** **08 36 43.4 +3.0**
HDIL Hopedale 72.08 46 IAmb IAmb 08 36 41.5
comp=Z,172nm,0.8s
DRGR 72.11 327 *e*P **P** **08 36 40.4 -0.3**
DRGR 72.11 327 ⇓P **P** **08 36 40.4 -0.3**
DRGR 72.11 327 ⇓P **P** **08 36 40.4 -0.3**
HARR Harsova 72.11 323 ⇑P **P** **08 36 40.7 +0.1**
HARR Harsova 72.11 323 ⇑P **P** **08 36 40.7 +0.1**
MDB Medias 72.11 326 ⇓P **P** **08 36 41.4 +0.7**
MDB Medias 72.11 326 ⇓P **P** **08 36 41.4 +0.7**
TIRR Tirgusor 72.13 322 *e*P **P** **08 36 40.6 -0.2**
TIRR Tirgusor 72.13 322 IAmb IAmb 08 36 43.4
comp=Z,142nm,0.8s
TIRR Tirgusor 72.13 322 ⇑P **P** **08 36 40.0 -0.8**
L46A Eue Claire 72.14 43 IAmb IAmb 08 36 42.4
comp=Z,124nm,0.6s
MLR Muntele Rosu 72.14 324 *e*P **P** **08 36 40.8 -0.2**
MLR Muntele Rosu 72.14 324 IAmb IAmb 08 36 44.5
comp=Z,157nm,0.7s
MLR Muntele Rosu 72.14 324 ⇓P **P** **08 36 41.1 +0.1**
MLR Muntele Rosu 72.14 324 ⇓P **P** **08 36 41.1 +0.1**
ILIC ilic-Erzincan 72.18 313 *e*P **P** **08 36 42.2 +0.9**
TLBR Topalu 72.19 322 ⇑P **P** **08 36 41.2 +0.1**
SMOL Smolenice 72.21 331 *e*P **P** **08 36 41.7 +0.5**
SMOL pmax pmax
comp=Z,51nm,0.7s
ISR Istrita 72.25 324 ⇑P **P** **08 36 41.9 +0.4**
ISR Istrita 72.25 324 ⇑P **P** **08 36 41.9 +0.4**
QUOK Quay 72.25 53 IAmb IAmb 08 36 43.7
comp=Z,242nm,1.0s
TV1H Townsville Har 72.27 187 P **P** **08 36 42.5 +0.8**
ZVC Zvikov 72.28 334 *e*P **P** **08 36 41.9 +0.3**
ZVC *ex* x 08 38 26.1
VHRN Van Horn 72.29 62 IAmb IAmb 08 36 45.8
comp=Z,135nm,0.8s
WME Myndd Eilian 72.34 346 *e*P **P** **08 36 41.5 -0.3**
TOKT Tokat 72.35 314 *e*P **P** **08 36 42.9 +0.7**
MFTR Murfatlar 72.37 322 ⇑P **P** **08 36 40.6 -1.6**
CVDA Cernavoda 72.38 322 ⇓P **P** **08 36 43.2 +1.0**
WMOK Wichita Mounta 72.38 55 IAmb IAmb 08 36 45.2
comp=Z,190nm,0.9s
MODS Modra-Piesok 72.38 331 *e*P **P** **08 36 42.9 +0.7**
MODS pmax pmax
comp=Z,198nm,1.1s
MODS Modra-Piesok 72.38 331 *e*P **P** **08 36 42.9 +0.7**
PECS Pecos 72.43 61 IAmb IAmb 08 36 45.1
comp=Z,320nm,1.3s
SVSK Karacayir 72.48 314 *e*P **P** **08 36 43.8 +0.9**
VOIR 72.50 325 ⇑P **P** **08 36 43.1 +0.1**
VOIR 72.50 325 ⇑P **P** **08 36 43.1 +0.1**
CWF Charnwood Fore 72.52 344 *e*P **P** **08 36 43.2 +0.4**
CWF IAmb IAmb 08 36 45.3
comp=Z,48nm,0.5s
ODSA Odessa 72.53 60 IAmb IAmb 08 36 45.9
comp=Z,217nm,1.1s
CIDE Kastamonu/Cide 72.55 318 ⇑P **P** **08 36 42.9 -0.4**
MANR Mangalia 72.62 322 ⇑P **P** **08 36 44.0 +0.4**
SN07 Snyder 07 72.62 58 IAmb IAmb 08 38 31.7
comp=Z,548nm,1.8s
R40A Maddies Statio 72.62 49 IAmb IAmb 08 38 32.4
comp=Z,304nm,1.1s
ICOR Ion Corvin 72.65 322 ⇓P **P** **08 36 44.3 +0.5**
KURC Kurucasile-Bar 72.67 318 *e*P **P** **08 36 43.9 0.0**
FOEL Foel Wylfa 72.67 346 *e*P **P** **08 36 44.0 +0.2**
FOEL IAmb IAmb 08 36 45.9
comp=Z,42nm,0.6s
MTUR Matau 72.68 325 ⇓P **P** **08 36 42.5 -1.5**
MTUR Matau 72.68 325 ⇓P **P** **08 36 42.5 -1.5**
ARR Arges 72.70 325 ⇓P **P** **08 36 44.9 +0.7**
KHC Kasperske Hory 72.73 334 *e*P **P** **08 36 44.6 +0.4**
KHC *e*S **S** **08 45 29.6 +0.5**
KHC Kasperske Hory 72.73 334 *e*P **P** **08 36 44.6 +0.4**
KHC *e*S **S** **08 45 29.6 +0.5**
KHC *e*XS **sS** **08 48 40.3 +4.5**
SULR 72.73 324 ⇑P **P** **08 36 44.3 +0.1**
DSB Dublin 72.77 348 P **P** **08 36 43.0 -1.3**
DSB Dublin 72.77 348 P **P** **08 36 44.4 +0.1**
LLW Llanuwychllyn 72.78 346 *e*P **P** **08 36 44.4 +0.1**
CKRC Cesky Krumlov 72.81 333 *e*P **P** **08 36 44.7 0.0**
CKRC *e* 08 38 35.1
CKRC *e*S **S** **08 45 29.5 -0.6**
CKRC Cesky Krumlov 72.81 333 *e*P **P** **08 36 44.7 0.0**
CKRC *ex* x 08 38 35.1
CKRC *e*S **S** **08 45 29.5 -0.6**
TRQ Mont Tremblant 72.85 33 IAmb IAmb 08 38 33.3
comp=Z,215nm,1.0s
TUL3 Leonard 72.91 53 IAmb IAmb 08 36 46.6
comp=Z,201nm,0.6s
SIRR Siria 72.91 327 ⇑P **P** **08 36 45.7 +0.4**
ILGA Ilgaz 72.93 317 IAmb IAmb 08 36 49.6
comp=Z,285nm,1.0s
AAM Ann Arbor 72.95 41 IAmb IAmb 08 36 46.6
comp=Z,120nm,0.7s
GERES GERESS Array B 72.95 334 P **P** **08 36 45.9 +0.2**
comp=Z,26nm,0.4s,baz=35,slow=5.9,SNR=114
GERES pP **pP** **08 38 30.6 +0.2**
comp=Z,5.0nm,0.7s,baz=28,slow=6.0,SNR=2.3
GERES PKPPKP **P'P'df** **09 04 19.2 -3.7**
comp=Z,0.9nm,0.9s,baz=224,slow=4.8,SNR=4.1
comp=Z,26nm,0.4s
IGLA Glengowla, Co 72.96 350 P **P** **08 36 45.1 -0.2**
IGLA Glengowla, Co 72.96 350 *e*P **P** **08 36 45.1 -0.2**
IGLA IAmb IAmb 08 36 47.2
comp=Z,88nm,0.6s
K50A Casco 72.96 40 IAmb IAmb 08 36 47.7
comp=Z,82nm,0.6s
X34A Smith Ranch, M 72.96 55 IAmb IAmb 08 36 48.5
comp=Z,299nm,1.2s
HLM1 Long Mynd 72.98 345 *e*P **P** **08 36 45.6 +0.1**
HLM1 IAmb IAmb 08 36 47.5
comp=Z,24nm,0.5s
AFI Afiamalu 73.00 145 P **P** **08 36 46.5 +0.4**
AFI IAmb IAmb 08 36 48.3
comp=Z,144nm,0.8s
MNHN Monahans 73.03 60 IAmb IAmb 08 36 49.0
comp=Z,246nm,1.1s
RLO Rose Lookout 73.07 52 IAmb IAmb 08 36 47.3
comp=Z,140nm,0.6s
BEBN Eben Emael 73.07 339 *dP* **P** **08 36 46.2 +0.2**
BEBN *dp*P **pP** **08 38 34.1 +3.2**
CTAO Charters Tower 73.13 187 P **P** **08 36 47.4 +0.6**
U38A Gravette 73.15 51 IAmb IAmb 08 38 35.5
comp=Z,416nm,1.3s
BTNL Ternell 73.17 339 *dP* **P** **08 36 46.5 -0.2**
BTNL *dp*P **pP** **08 38 35.9 +4.3**
MEM Membach 73.17 339 *dP* **P** **08 36 46.4 -0.3**
comp=Z,59nm,1.0s
MEM *dp*P **pP** **08 38 36.8 +5.3**
CONA Conrad Observa 73.19 332 *i* P **P** **08 36 47.2 +0.2**
comp=Z,71nm,0.6s
CONA pP **pP** **08 38 34.7 +3.0**
comp=Z,50nm,1.3s
SURR Surdue 73.21 327 ⇑P **P** **08 36 47.0 0.0**
MALK Mahakanadarawa 73.22 262 P **P** **08 36 46.7 -0.8**
SLM Saint Louis 73.25 47 IAmb IAmb 08 36 48.4
comp=Z,115nm,0.8s
RONA Rosalia, Austr 73.28 331 *e*P **P** **08 36 47.7 +0.3**
comp=Z,46nm,0.6s,SNR=22
RONA *ep*P **pP** **08 38 34.7 +2.5**
comp=Z,41nm,1.6s
CCM Cathedral Cave 73.28 48 P **P** **08 36 46.9 -0.6**
CCM IAmb IAmb 08 36 56.5
comp=Z,274nm,1.3s
CCM Cathedral Cave 73.28 48 P **P** **08 36 47.3 -0.2**
CCM PcP **PcP** **08 37 00.9 0.0**
CCM pP **pP** **08 38 33.3 +0.6**
CORM Corum 73.28 316 *e*P **P** **08 36 50.9 +3.2**
BSTI Sart Tilman 73.29 339 *dP* **P** **08 36 47.9 +0.5**
BSTI *dp*P **pP** **08 38 36.5 +4.2**
GZR Gura Zlata 73.31 326 ⇓P **P** **08 36 47.4 -0.3**
GZR Gura Zlata 73.31 326 ⇓P **P** **08 36 47.4 -0.3**
WTFS Witchita Falls 73.31 56 IAmb IAmb 08 36 49.8
comp=Z,126nm,0.9s

ALPN Alpine 73.33 62 lAmb lAmb 08 36 50.9
comp=Z,434nm,1.4s
UCC Uccle 73.34 340 *d*P **P** **08 36 47.7 +0.1**
comp=Z,36nm,0.8s
UCC *d*pP **pP** **08 38 38.0 +5.5**
CANT Cankiri 73.35 317 *e*P **P** **08 36 51.9 +3.9**
BHOU Houvegnez 73.42 339 *d*P **P** **08 36 47.8 -0.3**
comp=Z,40nm,1.2s
SGCY Sterling City 73.43 59 lAmb lAmb 08 38 35.7
comp=Z,301nm,1.4s
YOZ Yozgat 73.44 315 *e*P **P** **08 36 48.8 +0.2**
BZS Buzias 73.50 327 *e*P **P** **08 36 48.2 -0.4**
BZS Buzias 73.50 327 ⇓P **P** **08 36 48.5 -0.1**
BCLA Clavier 73.50 340 *d*P **P** **08 36 48.2 -0.3**
comp=Z,37nm,0.7s
BCLA *d*pP **pP** **08 38 32.8 -0.8**
MGMO Mountain Grove 73.55 50 lAmb lAmb 08 38 37.0
comp=Z,342nm,1.4s
COPA Copaceanca 73.57 324 ⇓P **P** **08 36 48.5 -0.6**
MSVF Nonsavu 73.58 156 P **P** **08 36 51.2 +1.8**
MSVF Nonsavu 73.58 156 P **P** **08 36 50.8 +1.4**
BGES Gesves 73.58 340 *d*P **P** **08 36 49.0 -0.1**
comp=Z,40nm,1.0s
BGES *d*pP **pP** **08 38 37.7 +3.6**
MONM Monmouth 73.63 345 *e*P **P** **08 36 49.6 +0.4**
MONM lAmb lAmb 08 36 51.7
comp=Z,41nm,0.5s
ABTX Abilene, Hawle 73.63 57 lAmb lAmb 08 36 51.3
comp=Z,136nm,0.8s
FVM French Village 73.71 48 lAmb lAmb 08 36 50.7
comp=Z,126nm,0.6s
MOA Molln 73.71 333 *i* P **P** **08 36 49.9 +0.1**
comp=Z,43nm,0.6s,SNR=16
MOA *e*pP **pP** **08 38 37.1 +2.2**
comp=Z,28nm,1.3s
BMRD Maredsous 73.73 340 *d*P **P** **08 36 49.2 -0.7**
comp=Z,64nm,1.1s
BMRD *d*pP **pP** **08 38 40.4 +5.4**
P46A Rosedale 73.76 45 lAmb lAmb 08 36 51.6
comp=Z,150nm,0.7s
RCHB Rochefort 73.77 339 *d*P **P** **08 36 49.7 -0.4**
comp=Z,40nm,1.1s
RCHB *d*pP **pP** **08 38 39.3 +4.1**
LOOK Love County 73.77 55 lAmb lAmb 08 36 51.6
comp=Z,158nm,0.7s
SWN1 Swindon 73.78 344 *e*P **P** **08 36 50.7 +0.6**
SWN1 lAmb lAmb 08 36 52.6
comp=Z,208nm,0.5s
MNTQ Montreal, Queb 73.79 33 lAmb lAmb 08 38 39.0
comp=Z,166nm,1.0s
BNN Bunyan 73.86 314 *e*P **P** **08 36 51.3 +0.3**
BNN Bunyan 73.86 314 lAmb lAmb 08 36 54.1
comp=Z,217nm,0.8s
WOL Wolverton 73.88 344 *e*P **P** **08 36 50.9 +0.2**
HERR Herculane 73.89 326 ⇑P **P** **08 36 50.7 -0.2**
ARSA Arzberg 73.91 332 *i* P **P** **08 36 51.4 +0.4**
comp=Z,26nm,0.5s,SNR=20
ARSA *e*pP **pP** **08 38 38.3 +2.2**
comp=Z,17nm,1.2s
MORH Mrgy, Hungar 73.91 329 *e*P **P** **08 36 50.5 -0.5**
MORH Mrgy, Hungar 73.91 329 ⇓P **P** **08 36 49.9 -1.1**
SHME Shamm 73.93 292 P **S** **08 45 39.2 -3.8**
SNR=60
SHME Shamm 73.93 292 P **S** **08 45 39.2 -3.8**
SHME P **S** **08 45 41.4 -2.8**
BIOA Bad Ischl, Aus 74.03 333 *e*P **P** **08 36 51.8 +0.1**
comp=Z,29nm,0.5s,SNR=16
WLF Walferdange 74.03 339 P **P** **08 36 51.1 -0.5**
WLF Walferdange 74.03 339 *d*P **P** **08 36 51.6 0.0**
HMNX Herstmonceux 74.04 343 *e*P **P** **08 36 52.5 +0.9**
SZH Strazhitsa 74.06 323 P **P** **08 36 53.0 +1.1**
O48B Farmland 74.08 43 lAmb lAmb 08 38 38.7
comp=Z,195nm,1.2s
BR131 Keskin Array S 74.08 316 lAmb lAmb 08 36 55.1
comp=Z,122nm,0.8s
BR131 Keskin Array S 74.08 316 P **P** **08 36 52.2 0.0**
SNR=70
BRTR Keskin Array B 74.08 316 P **P** **08 36 52.2 0.0**
comp=Z,73nm,0.6s,baz=49,slow=3.0,SNR=175
BRTR pP **pP** **08 38 38.0 +0.6**
comp=Z,27nm,0.9s,baz=46,slow=4.2,SNR=5.0
comp=Z,73nm,0.6s
BRTR Keskin Array B 74.08 316 P **P** **08 36 52.1 -0.1**
BRTR Keskin Array B 74.08 316 *i* P **P** **08 36 52.2 0.0**
BRTR pmax pmax
comp=Z,77nm,0.6s
TX31 Lajitas Ar. Si 74.13 62 lAmb lAmb 08 36 55.9
comp=Z,213nm,0.9s
TXAR Lajitas Array 74.13 62 P **P** **08 36 53.2 +0.5**
comp=Z,128nm,0.6s,baz=299,slow=5.0,SNR=1412
TXAR pP **pP** **08 38 38.5 +0.1**
comp=Z,38nm,0.9s,baz=304,slow=5.0,SNR=4.8
TXAR PKPPKP **P'P'df** **09 04 18.4 -2.4**
comp=Z,1.4nm,0.9s,baz=128,slow=4.5,SNR=5.4
comp=Z,128nm,0.6s
PLPT Palo Pinto 74.15 56 lAmb lAmb 08 36 54.0
comp=Z,134nm,0.8s
MDVR Moldovita 74.21 327 ⇓P **P** **08 36 52.2 -0.6**
OZNA Ozona 74.22 60 lAmb lAmb 08 38 40.4
comp=Z,386nm,1.8s
PUNG Punghina 74.24 326 ⇑P **P** **08 36 51.8 -1.0**
BEHE Becsehely 74.25 331 *e*P **P** **08 36 53.3 +0.4**
Z35A Perchaven, San 74.27 55 lAmb lAmb 08 36 53.9
comp=Z,155nm,0.5s
SAHE Sakarya_HENDEK 74.27 319 ⇑P **P** **08 36 50.9 -2.3**
ANTO Ankara 74.31 317 *e*P **P** **08 36 53.9 +0.4**
ANTO Ankara 74.31 317 P **P** **08 36 53.9 +0.4**
ANTO lAmb lAmb 08 36 56.6
comp=Z,145nm,0.8s
ANTO Ankara 74.31 317 P **P** **08 36 53.6 +0.2**
ANTO Ankara 74.31 317 ⇓P **P** **08 36 53.7 +0.3**
ANTO Ankara 74.31 317 ⇓P **P** **08 36 53.7 +0.3**
ANTO Ankara 74.31 317 P **P** **08 36 53.8 +0.3**
ANTO S **S** **08 45 47.4 +0.4**
QIS Mount Isa 74.32 194 P **P** **08 36 53.7 +0.2**
YUVA Yuva-Kibriscik 74.32 318 *e*P **P** **08 36 53.8 +0.2**
KAMT Kaman 74.34 316 *e*P **P** **08 36 53.8 +0.1**
MDH Madha 74.43 291 P **P** **08 36 53.4 -0.9**
SNR=9.4
MDH Madha 74.43 291 P **S** **08 45 46.0 -2.5**
MDH P **S** **08 45 46.0 -2.5**
MDH Madha 74.43 291 *i* P **P** **08 36 53.2 -1.0**
SNR=9.1
MASF Masafi 74.45 291 P **P** **08 36 54.3 -0.2**
SNR=8.3
MASF Masafi 74.45 291 P **S** **08 45 44.4 -4.5**
MASF P **S** **08 45 44.4 -4.5**
MDUB Mudurnu 74.45 318 *e*P **P** **08 36 55.9 +1.6**
MDUB Mudurnu 74.45 318 lAmb lAmb 08 36 58.8
comp=Z,214nm,0.9s
KIRS Kirsehir-Merke 74.46 316 ⇓P **P** **08 36 54.5 +0.2**
MSFE Esma-Masafi 74.46 291 *i* P **P** **08 36 54.3 -0.2**
SNR=32
SAND Sanderson 74.46 61 lAmb lAmb 08 36 56.6
comp=Z,195nm,1.0s
SIUC Southern Illin 74.47 47 lAmb lAmb 08 36 55.4
comp=Z,230nm,1.1s
S44A Carbondale 74.47 47 lAmb lAmb 08 36 55.0
comp=Z,126nm,0.6s
O49A Covington 74.47 42 lAmb lAmb 08 38 45.1
comp=Z,207nm,1.4s
M52A Chesterland 74.50 40 lAmb lAmb 08 36 55.3
comp=Z,178nm,0.7s
VAL Valentia 74.51 350 P **P** **08 36 53.5 -0.7**
VAL Valentia 74.51 350 P **P** **08 36 54.6 +0.4**
KMRS Kahramanmaras 74.52 313 *e*P **P** **08 36 55.4 +0.8**
ERPA Erie 74.52 38 lAmb lAmb 08 36 55.3
comp=Z,178nm,0.6s
JMB Yambol 74.52 322 P **P** **08 36 55.5 +1.0**
LESA Schwarzleotal 74.53 334 *e*P **P** **08 36 55.0 +0.4**
comp=Z,54nm,0.5s,SNR=23
AFSR Afar-Bala (An 74.55 316 *e*P **P** **08 36 55.3 +0.5**
SOKA Soboth 74.56 332 *i* P **P** **08 36 55.0 +0.2**
comp=Z,72nm,0.4s,SNR=58
SOKA *e*pP **pP** **08 38 42.1 +1.9**
comp=Z,58nm,1.2s
SAUV Serdivan-Sakar 74.57 319 *e*P **P** **08 36 54.9 +0.1**
PERS Pernice 74.58 332 *i* P **P** **08 36 55.0 +0.2**
PERS eS **S** **08 45 48.5 -1.1**
WRAB Tennant Creek 74.60 199 P **P** **08 36 55.9 +0.8**
WRAB Tennant Creek 74.60 199 P **P** **08 36 55.7 +0.6**
WRAB Tennant Creek 74.60 199 *d* P **P** **08 36 55.6 +0.5**
WRAB pmax pmax
comp=Z,728nm,0.9s
UMQ Umm Al-Quwin 74.61 292 P **P** **08 36 55.9 +0.7**
SNR=7.5
UMQ Umm Al-Quwin 74.61 292 P **S** **08 45 42.9 -7.5**
UMQ Umm Al-Quwin 74.61 292 *i* P **P** **08 36 56.1 +0.8**
SNR=21
WRA Warramunga Arr 74.61 199 P **P** **08 36 55.9 +0.7**
comp=Z,443nm,0.6s,baz=15,slow=6.0,SNR=312
WRA PP **PP** **08 39 52.2 +1.3**
comp=Z,18nm,0.8s,baz=6.8,slow=8.3,SNR=4.7
WRA S **S** **08 45 51.9 +1.5**
comp=Z,15nm,1.2s,baz=22,slow=10,SNR=14
WRA PKKPbc **PKKPbc** **08 56 16.6 +1.6**
comp=Z,0.4nm,0.5s,baz=222,slow=1.3,SNR=5.9
WRA PKPPKP **P'P'df** **09 04 17.1 +1.0**
comp=Z,1.6nm,1.0s,baz=199,slow=2.2,SNR=3.2
comp=Z,443nm,0.6s
WRA Warramunga Arr 74.61 199 P **P** **08 36 56.1 +0.9**
WRA Warramunga Arr 74.61 199 *i* P **P** **08 36 54.2 -1.0**
WRA pmax pmax
comp=Z,429nm,0.5s
CGM3 Cape Girardeau 74.62 48 lAmb lAmb 08 38 42.5
comp=Z,303nm,1.8s
GROS Grobnik 74.63 331 *i* P **P** **08 36 55.0 -0.1**
N51A Ashland 74.64 41 lAmb lAmb 08 36 55.7
comp=Z,149nm,0.6s
P48A Milroy 74.64 44 lAmb lAmb 08 38 42.2
comp=Z,201nm,1.3s
KLYT Kilyos 74.64 320 *e*P **P** **08 36 55.0 -0.1**
KLYT Kilyos 74.64 320 ⇓P **P** **08 36 54.8 -0.3**
FCAR Ozark Folk Cen 74.65 50 lAmb lAmb 08 38 44.4
comp=Z,362nm,1.3s
GAZ Gaziantep 74.66 312 *e*P **P** **08 36 56.3 +0.8**
GAZ Gaziantep 74.66 312 lAmb lAmb 08 36 59.1
comp=Z,124nm,0.9s
KBA Koelnbreinsper 74.67 333 *e*P **P** **08 36 55.9 +0.4**
comp=Z,114nm,0.5s,SNR=65
PBMO Poplar Bluff 74.70 49 lAmb lAmb 08 38 45.4
comp=Z,345nm,1.4s
HTL Hartland 74.70 346 *e*P **P** **08 36 56.4 +1.0**
HTL lAmb lAmb 08 36 57.7
comp=Z,37nm,0.8s
POLA Polatl-ANKAR 74.71 317 *e*P **P** **08 36 55.9 +0.2**
WSAR Wadi Sarin 74.71 288 P **P** **08 36 55.9 0.0**
SNR=42
WSAR Wadi Sarin 74.71 288 P **S** **08 45 48.7 -3.0**
CTYL Yalikoy Yolu 74.74 321 ⇓P **P** **08 36 55.6 -0.2**
MMNY Mt. Morris Dam 74.76 37 lAmb lAmb 08 36 57.0
comp=Z,108nm,0.6s
UOSS Minazif 74.76 291 P **P** **08 36 55.7 -0.4**
UOSS Minazif 74.76 291 P **P** **08 36 55.7 -0.4**
UOSS Minazif 74.76 291 P **S** **08 45 45.7 -6.4**
UOSS P **S** **08 45 45.7 -6.4**
UOSS Minazif 74.76 291 P **P** **08 36 55.3 -0.9**
UOSS S **S** **08 45 47.6 -4.5**
GULT Gulveren 74.76 319 *e*P **P** **08 36 56.1 +0.1**
HRT Hereke 74.76 319 *e*P **P** **08 36 55.9 -0.1**
SERE Sereflikochisa 74.76 316 *e*P **P** **08 36 56.4 +0.3**
BFO Black Forest 74.79 337 P **P** **08 36 55.1 -0.9**
ISK Istanbul-Kandi 74.79 320 *e*P **P** **08 36 55.6 -0.4**
BGKT Bogazkoy 74.81 320 *e*P **P** **08 36 55.9 -0.2**
OBKA Obir 74.86 332 *i* P **P** **08 36 56.5 +0.1**
comp=Z,77nm,0.5s,SNR=16
OBKA *e*pP **pP** **08 38 43.9 +2.0**
comp=Z,52nm,1.3s
HATD Hatta, Dubai 74.89 291 P **P** **08 36 56.6 -0.3**
SNR=32
HATD Hatta, Dubai 74.89 291 P **S** **08 45 50.1 -3.5**
SNR=5.5
HATD Hatta, Dubai 74.89 291 *i* P **P** **08 36 56.8 -0.1**
SNR=157
PHSR Pinarhisar 74.90 321 *e*P **P** **08 36 56.9 +0.3**
PHSR Pinarhisar 74.90 321 ⇑P **P** **08 36 57.2 +0.6**
WATA Walderalm 74.91 334 *i* P **P** **08 36 57.1 +0.3**
comp=Z,52nm,0.5s,SNR=28
WATA *e*pP **pP** **08 38 43.6 +1.4**
comp=Z,10nm,0.6s
FITZ Fitzroy Crossi 74.91 208 P **P** **08 36 57.9 +1.1**
comp=Z,285nm,0.5s,baz=14,slow=4.7,SNR=510
FITZ S **S** **08 45 55.1 +1.6**
comp=Z,14nm,1.2s,baz=179,slow=19,SNR=14
FITZ PKKP **PKKPdf** **08 56 00.0 -1.7**
comp=Z,6.1nm,1.2s,baz=256,slow=9.4,SNR=3.2
comp=Z,285nm,0.5s
KULU Kulu 74.92 316 *e*P **P** **08 36 57.5 +0.6**
USIN University of 74.94 46 lAmb lAmb 08 36 58.3
comp=Z,166nm,0.9s
LCAR Lake Charles 74.95 49 lAmb lAmb 08 38 45.7
comp=Z,388nm,1.7s
WTTA Wattenberg 74.96 334 *i* P **P** **08 36 57.5 +0.4**
comp=Z,145nm,0.9s,SNR=32
RETA Reutte 74.97 335 *i* P **P** **08 36 57.1 0.0**
comp=Z,33nm,0.7s,SNR=11
ACSO Alum Creek Sta 74.98 41 lAmb lAmb 08 38 48.4
comp=Z,180nm,1.1s
SLVT Silivri 74.98 321 *e*P **P** **08 36 57.2 +0.1**
GULA Gulagac 74.98 315 *e*P **P** **08 36 55.5 -1.8**
MYKA Terra Mystica 75.00 333 *i* P **P** **08 36 57.0 -0.2**
comp=Z,39nm,0.4s,SNR=19
MYKA *e*pP **pP** **08 38 44.3 +1.6**
comp=Z,28nm,1.1s
EDRB Edirne 75.00 322 *e*P **P** **08 36 56.9 -0.3**
WBK Wadi Bani Khal 75.00 288 P **P** **08 36 58.2 +0.6**
SNR=29
WBK Wadi Bani Khal 75.00 288 P **S** **08 45 52.5 -2.4**
WBK P **S** **08 45 52.5 -2.4**
MOTA Moosalm 75.02 335 *i* P **P** **08 36 57.5 0.0**
comp=Z,167nm,1.1s,SNR=33
MOTA *e*pP **pP** **08 38 44.4 +1.4**
comp=Z,24nm,1.1s
BRDY Brady 75.03 58 lAmb lAmb 08 38 45.1
comp=Z,366nm,1.8s
NAZ Nazwa, Dubai 75.03 292 P **P** **08 36 57.3 -0.3**
SNR=16
NAZ Nazwa, Dubai 75.03 292 P **S** **08 45 51.8 -3.3**
NAZ Nazwa, Dubai 75.03 292 *i* P **P** **08 36 57.5 -0.2**
SNR=32
ASHO Ashiyiah 75.05 291 P **P** **08 36 57.5 -0.2**
SNR=27
ASHO Ashiyiah 75.05 291 P **S** **08 45 51.0 -4.3**
SNR=12
ASHO Ashiyiah 75.05 291 *i* P **P** **08 36 57.6 -0.2**
SNR=77
ADVT Abdulvahap 75.07 319 *e*P **P** **08 36 57.6 0.0**
SLBS Sierra La Lagu 75.09 71 P **P** **08 36 59.3 +1.2**
SLBS lAmb lAmb 08 37 01.8
comp=Z,250nm,1.1s
YLV Yalova 75.10 319 *e*P **P** **08 36 57.6 -0.3**
SQTA Sankt Quirin 75.11 335 *i* P **P** **08 36 58.1 +0.3**
comp=Z,170nm,1.5s,SNR=34
SQTA *e*pP **pP** **08 38 45.7 +2.3**
comp=Z,35nm,1.7s
JLN Jalan Bani Buh 75.11 287 P **P** **08 36 58.6 +0.4**
SNR=57
JLN Jalan Bani Buh 75.11 287 P **S** **08 45 53.8 -2.2**
SBD Saint Breward 75.15 346 *e*P **P** **08 36 57.8 -0.1**
PAOC Oil Creek Stat 75.16 39 lAmb lAmb 08 36 59.2
comp=Z,93nm,0.7s
SMDO Samad 75.18 289 P **P** **08 36 58.9 +0.2**
SNR=14
SMDO Samad 75.18 289 P **S** **08 45 52.9 -4.1**
SVRH Sivrihisar-ESK 75.19 317 *e*P **P** **08 36 57.9 -0.5**
HOQ Hoqain 75.20 289 P **P** **08 36 58.5 -0.2**
SNR=25
HOQ Hoqain 75.20 289 P **S** **08 45 54.6 -2.3**
HOQ P **S** **08 45 54.6 -2.3**
SOHO SOHO 75.21 290 P **P** **08 36 58.1 -0.5**
SOHO SOHO 75.21 290 P **S** **08 45 52.2 -4.7**
SOHO P **S** **08 45 52.2 -4.7**
SOHO SOHO 75.21 290 *i* P **P** **08 36 58.1 -0.5**
SNR=135
BOVS Bovan 75.22 326 ⇓P **P** **08 36 57.6 -0.8**
CMRD Camardi-Nigde 75.23 314 *e*P **P** **08 36 59.3 +0.6**
WHTX Lake Whitney, 75.24 56 lAmb lAmb 08 37 00.4
comp=Z,173nm,0.9s
CRLT Corlu 75.25 321 *e*P **P** **08 37 02.2 +3.6**
JCT Junction City 75.26 59 lAmb lAmb 08 37 01.5
comp=Z,162nm,0.8s
FAQ Al Faqa, Dubai 75.26 291 P **P** **08 36 58.5 -0.5**
SNR=12
FAQ Al Faqa, Dubai 75.26 291 P **S** **08 45 52.1 -5.4**
FAQ Al Faqa, Dubai 75.26 291 *i* P **P** **08 36 58.4 -0.5**
SNR=14
DIM Dimitrovgrad 75.26 323 P **P** **08 36 59.5 +0.8**
MARNC Mare, Loyalty 75.26 166 lAmb lAmb 08 37 04.0
comp=Z,461nm,1.5s
MARNC Mare, Loyalty 75.26 166 P **P** **08 37 00.5 +1.8**
ARMT Armutlu 75.30 320 *e*P **P** **08 36 58.9 0.0**
J59A Piesco 75.31 34 lAmb lAmb 08 37 00.7
comp=Z,90nm,0.7s
WCI Wyandotte Cave 75.31 45 P **P** **08 36 58.6 -0.4**
WCI lAmb lAmb 08 37 00.7
comp=Z,120nm,0.7s
WCI Wyandotte Cave 75.31 45 P **P** **08 36 59.0 0.0**
WCI pP **pP** **08 38 45.5 +0.7**
XMI Christmas Isla 75.32 229 P **P** **08 36 59.1 -0.2**
TREL Terrell 75.33 55 lAmb lAmb 08 38 47.9
comp=Z,521nm,1.8s
N53A Lisbon 75.33 40 lAmb lAmb 08 37 00.3
comp=Z,95nm,0.7s
CHBY Cihanbeyli 75.35 316 *e*P **P** **08 36 59.2 -0.2**
DAVA Damuels 75.39 335 *e*P **P** **08 36 59.4 -0.1**
comp=Z,48nm,0.7s,SNR=18
L56A Greenwood 75.40 37 lAmb lAmb 08 37 01.3
comp=Z,92nm,0.6s
H62A Milan 75.41 31 lAmb lAmb 08 38 51.3
comp=Z,204nm,1.3s
SULT Sultanhani-AKS 75.41 315 *e*P **P** **08 36 59.9 +0.2**
FETA Feichten 75.42 335 *e*P **P** **08 36 60.0 +0.3**
comp=Z,84nm,0.9s,SNR=28
VISS Visnje 75.42 332 *i* P **P** **08 36 59.0 -0.4**
VISS *i* S **S** **08 45 58.0 -0.6**
VISS *i* 08 49 08.7
VISS *e* 08 56 53.4
HICK Hickman 75.44 48 lAmb lAmb 08 38 49.8
comp=Z,300nm,1.1s
CEYT Ceyhan 75.44 313 *e*P **P** **08 37 00.6 +0.9**
CIFT Ciftеler, Eski 75.45 318 *e*P **P** **08 36 59.4 -0.5**
MDNY Mudanya-Bursa 75.46 320 *e*P **P** **08 36 59.8 0.0**
LBNH Lisbon 75.47 32 lAmb lAmb 08 38 51.2
comp=Z,195nm,1.2s
X40A Basin Creek Fa 75.47 52 lAmb lAmb 08 38 49.9
comp=Z,258nm,1.3s
PLD Plovdiv 75.47 323 P **P** **08 37 00.5 +0.7**
ASUD Al Ashush, Dub 75.50 292 P **P** **08 37 00.3 0.0**
SNR=14
ASUD Al Ashush, Dub 75.50 292 P **S** **08 45 54.5 -5.6**
ASUD Al Ashush, Dub 75.50 292 *i* P **P** **08 37 00.3 0.0**
SNR=34
KIZT Kizilcal 75.52 317 *e*P **P** **08 37 00.2 -0.1**
O52A Adamsville 75.53 41 lAmb lAmb 08 37 00.8
comp=Z,97nm,0.7s
KARA Karaisali 75.53 314 *e*P **P** **08 37 00.8 +0.5**
VTS Vitosha 75.60 325 P **P** **08 37 02.0 +1.3**
O53A New Philadelph 75.66 40 lAmb lAmb 08 37 02.0
comp=Z,132nm,0.9s
YESY Yesilyurt 75.67 315 *e*P **P** **08 37 01.2 0.0**
YATNC Mamie plateau, 75.67 167 P **P** **08 37 02.4 +1.3**
DRIO Del Rio 75.68 60 lAmb lAmb 08 37 03.9
comp=Z,140nm,0.7s
BLY Banja Luka 75.68 330 ⇑*i*P **P** **08 37 00.3 -0.6**
BLY Banja Luka 75.68 330 ⇑P **P** **08 37 00.7 -0.2**
JMDO Jabal Madar 75.69 288 P **P** **08 37 01.6 +0.2**
SNR=72
JMDO Jabal Madar 75.69 288 P **S** **08 45 56.8 -5.5**
JMDO P **S** **08 45 56.8 -5.5**
ALNE Al Ain 75.71 291 P **P** **08 37 01.4 -0.1**
SNR=33
ALNE Al Ain 75.71 291 P **S** **08 45 56.3 -6.2**
ALNE Al Ain 75.71 291 *i* P **P** **08 37 01.4 -0.1**
SNR=94
KDZ Kurdzhali 75.71 323 P **P** **08 37 01.6 +0.5**
TAHT Tahtakopru-Hat 75.77 312 *e*P **P** **08 37 02.3 +0.7**
BAND Balkesir-Ban 75.78 320 ⇓P **P** **08 37 01.5 -0.1**
TRI Trieste 75.81 332 lAmb lAmb 08 37 03.1
comp=Z,104nm,0.5s
ARQ Araqi 75.84 290 P **P** **08 37 02.2 0.0**
SNR=35
ARQ Araqi 75.84 290 P **S** **08 45 59.2 -4.6**
RKY Sarkoy-Tekirda 75.84 321 *e*P **P** **08 37 01.9 -0.1**
Q51A Peebles 75.86 42 lAmb lAmb 08 37 02.8
comp=Z,83nm,0.6s
RZN Rozhen 75.87 323 P **P** **08 37 02.6 +0.3**
LADK Ladik-KONYA 75.90 316 *e*P **P** **08 37 02.2 -0.2**
HALT Halls 75.91 48 lAmb lAmb 08 38 52.7
comp=Z,406nm,1.1s
BSY Bisya 75.91 289 P **P** **08 37 02.8 +0.2**
SNR=58
BSY Bisya 75.91 289 P **S** **08 45 58.5 -6.2**
SNR=8.0
BSY P **S** **08 45 58.5 -6.2**
SNR=8.0
I62A Tamworth 75.98 32 lAmb lAmb 08 38 54.8
comp=Z,155nm,1.2s
T47A Sharon Grove 76.00 46 lAmb lAmb 08 38 53.0
comp=Z,206nm,1.1s
RUDO Rudo 76.01 328 *e*P **P** **08 37 02.3 -0.5**
TVSB Tavsanli 76.02 319 *e*P **P** **08 37 02.7 -0.4**
OUENC Ouen Island, N 76.02 167 P **P** **08 37 04.7 +1.7**
KRBG Karabiga-Canak 76.05 321 *e*P **P** **08 37 03.1 0.0**
RDO Rodhopi 76.06 322 *e*P **P** **08 37 03.2 +0.1**
RDO Rodhopi 76.06 322 lAmb lAmb 08 37 05.9
comp=Z,270nm,1.3s
RDO Rodhopi 76.06 322 P **P** **08 37 03.4 +0.4**
I63A Otisfield 76.06 31 lAmb lAmb 08 38 53.9
comp=Z,612nm,1.9s
R50A Paris 76.09 43 lAmb lAmb 08 38 53.4
comp=Z,141nm,1.1s
MERS Mersin 76.10 314 *e*P **P** **08 37 03.3 -0.2**
LMN Caledonia Moun 76.11 27 lAmb lAmb 08 38 52.0
comp=Z,290nm,1.7s
ERIK Erikli-Kesan 76.11 321 *e*P **P** **08 37 03.3 -0.1**
SUSR Susurluk-Balik 76.12 320 *e*P **P** **08 37 03.2 -0.3**
435B Jarrell 76.15 57 lAmb lAmb 08 38 53.9
comp=Z,225nm,1.4s
ENEZ Enez 76.19 322 *e*P **P** **08 37 03.7 -0.1**
ENEZ Enez 76.19 322 P **P** **08 37 05.0 +1.2**
L59A Walton 76.25 35 lAmb lAmb 08 37 06.6
comp=Z,147nm,0.8s
P53A Whipple 76.25 41 lAmb lAmb 08 38 55.7
comp=Z,164nm,1.1s
M57A Sunshine Farm, 76.26 37 lAmb lAmb 08 37 05.6
comp=Z,97nm,0.6s
LPK Lapseki 76.27 321 *e*P **P** **08 37 04.4 +0.1**
TUE Stuetta 76.28 336 lAmb lAmb 08 37 07.5
comp=Z,112nm,0.8s
KKB Krupnik 76.32 324 P **P** **08 37 05.5 +1.0**
SHUT Suhut-Afyon 76.35 318 *e*P **P** **08 37 05.0 +0.1**
Q52A Bidwell 76.35 42 lAmb lAmb 08 38 54.7
comp=Z,167nm,1.2s
MMB Musomishta 76.36 324 P **P** **08 37 05.6 +0.8**
GELI Tayfur-Gelibol 76.36 321 *e*P **P** **08 37 04.6 -0.2**
GEDZ Gediz 76.39 319 *e*P **P** **08 37 05.0 -0.1**
WVT Waverly 76.40 47 P **P** **08 37 05.0 -0.1**
CLF Chambon-Foret 76.40 341 lAmb lAmb 08 37 08.0
comp=Z,140nm,0.9s
BALB Balikesir 76.48 320 *e*P **P** **08 37 05.1 -0.3**
SIMA Sinav-Kutahya 76.52 319 *e*P **P** **08 37 05.4 -0.4**
KAVA Kavala 76.56 323 P **P** **08 37 07.4 +1.6**
KIZK Mersin 76.59 314 *e*P **P** **08 37 05.8 -0.3**
SSPA Standing Stone 76.59 38 P **P** **08 37 05.6 -0.5**
SSPA Standing Stone 76.59 38 P **P** **08 37 05.2 -0.8**
COMU Canakkale 76.62 321 *e*P **P** **08 37 06.0 -0.3**
JRN Qarnain Island 76.63 294 P **P** **08 37 06.3 -0.2**
SMTH Samothraki Isl 76.65 322 P **P** **08 37 08.3 +1.9**
KLINJ Klinje 76.67 328 *e*P **P** **08 37 02.3 -4.3**
TEOL Teolo 76.71 334 lAmb lAmb 08 37 09.6
comp=Z,166nm,0.8s
GADA Gvkgeada 76.76 322 *e*P **P** **08 37 06.3 -0.7**
SILI Silifke-Mersin 76.78 314 *e*P **P** **08 37 06.6 -0.5**
SEYD Seydisehir-KON 76.79 316 *e*P **P** **08 37 07.3 -0.1**
SRS Serrai 76.79 324 P **P** **08 37 08.7 +1.5**
KEBE Keben-Mersin 76.80 314 *e*P **P** **08 37 07.1 -0.3**
YAYO Edremit-Balk 76.81 320 *e*P **P** **08 37 06.8 -0.5**
NATX Nacogdoches 76.82 54 lAmb lAmb 08 37 10.4
comp=Z,311nm,1.1s
MHTO MHTO 76.85 287 P **P** **08 37 08.0 +0.3**

SNR=229
MHTO MHTO 76.85 287 P **S** 08 46 09.3 -5.4
HDMB Hadim 76.89 315 *eP* **P** 08 37 07.8 -0.3
Q54A Coxs Mills 76.90 41 IAmb IAmb 08 38 59.8
comp=Z,173nm,1.2s
EZN Ezine 76.91 321 *eP* **P** 08 37 07.2 -0.6
EZN Ezine 76.91 321 ⇓P **P** 08 37 07.2 -0.6
EZN Ezine 76.91 321 ⇓P **P** 08 37 07.2 -0.6
SHMA Al-Shehemyia 76.94 296 P **P** 08 37 07.8 -0.4
SHMA Al-Shehemyia 76.94 296 P **S** 08 46 08.8 -6.7
VAY Valandovo 76.97 324 *i* P **P** 08 37 08.1 -0.1
ISP Isparta 76.98 317 *eP* **P** 08 37 07.6 -0.8
MZWR Madinat Zayed 76.99 292 P **P** 08 37 07.6 -0.9
BOZC Bozcaada 77.00 321 *eP* **P** 08 37 07.4 -0.9
SOMA Soma-Manisa 77.03 320 *eP* **P** 08 37 07.8 -0.7
OXF Oxford 77.04 49 IAmb IAmb 08 37 10.0
comp=Z,238nm,1.1s
UMZA Um Al Zommool 77.10 290 P **P** 08 37 08.7 -0.4
UMZA Um Al Zommool 77.10 290 P **S** 08 46 08.5 -8.7
BERE Bereket-Mersin 77.10 314 *eP* **P** 08 37 08.3 -0.8
PDG Podgorica 77.11 327 IAmb IAmb 08 37 10.7
comp=Z,248nm,1.1s
PDG Podgorica 77.11 327 ⇑P **P** 08 37 06.6 -2.3
HRV Adam Dziewonsk 77.14 33 P **P** 08 37 09.1 +0.1
HRV IAmb IAmb 08 39 03.8
comp=Z,367nm,2.0s
KULA Kula-Manisa 77.14 319 *eP* **P** 08 37 08.8 -0.4
TREB Trebinje 77.15 328 *eP* **P** 08 37 07.7 -1.4
MANT Manisa 77.20 319 IAmb IAmb 08 37 12.0
comp=Z,141nm,0.8s
MLDN Muldoon 77.22 57 IAmb IAmb 08 37 12.7
comp=Z,385nm,0.9s
HNVL Huntsville, TX 77.23 56 IAmb IAmb 08 37 12.0
comp=Z,254nm,0.6s
PLAL Pickwick Lake 77.25 48 IAmb IAmb 08 39 00.1
comp=Z,250nm,1.3s
BCK Bucak 77.26 317 *eP* **P** 08 37 08.6 -1.3
LIA Limnos Island 77.28 322 P **P** 08 37 11.0 +1.2
BEIL Beino 77.30 311 *eP* **P** 08 37 10.4 +0.3
TEKE Tekeli-Mersin 77.32 314 *eP* **P** 08 37 09.1 -1.0
OUR Ouranopolis 77.34 323 *eP* **P** 08 37 09.5 -0.6
GHWR Ruwais 77.39 293 P **P** 08 37 09.9 -0.7
GHWR Ruwais 77.39 293 P S 08 46 10.6 -10
PRK Paraskevi 77.44 321 P **P** 08 37 12.3 +1.6
FKH Fakeheh 77.45 311 *eP* **P** 08 37 11.2 +0.2
ODEM Odemis-Izmir 77.58 319 *eP* **P** 08 37 11.2 -0.4
GAZI Gazipasa 77.58 315 *eP* **P** 08 37 09.9 -1.7
143A Socs Landing, 77.61 52 IAmb IAmb 08 37 14.4
comp=Z,165nm,0.9s
SIGR SIGRI 77.63 321 *eP* **P** 08 37 10.8 -0.9
SIGR SIGRI 77.63 321 P **P** 08 37 12.5 +0.8
HWQ Hawqa 77.63 311 *eP* **P** 08 37 11.5 -0.5
TRNA Turayna 77.70 295 P **P** 08 37 11.8 -0.6
TRNA Turayna 77.70 295 P **S** 08 46 14.7 -8.8
HKT Hockley 77.71 56 P **P** 08 37 12.5 +0.3
HKT IAmb IAmb 08 39 02.5
comp=Z,502nm,2.0s
KORT Korkueli 77.75 317 *eP* **P** 08 37 11.4 -1.2
OHR Ohrid 77.77 326 *i* P **P** 08 37 12.2 -0.4
APMY Acipayam-Deniz 77.78 318 *eP* **P** 08 37 12.5 -0.2
R55A Marlinton 77.79 41 IAmb IAmb 08 39 03.7
comp=Z,171nm,1.1s
MZR Muzera 77.81 292 P **P** 08 37 12.5 -0.5
SNR=20
MZR Muzera 77.81 292 P **S** 08 46 16.9 -8.0
MZR P **S** 08 46 16.9 -8.0
MZR Muzera 77.81 292 *i* P **P** 08 37 12.5 -0.5
SNR=60
ZCCA Zocca 77.83 334 IAmb IAmb 08 37 22.2
comp=Z,308nm,1.4s
LFK Lefkose 77.86 314 *eP* **P** 08 37 12.8 -0.4
BLCB Balcova 77.89 320 *eP* **P** 08 37 12.3 -0.9
BLCB Balcova 77.89 320 P **P** 08 37 14.6 +1.4
SMRA Abu-Samra 77.90 295 P **P** 08 37 12.9 -0.6
SNR=6.6
SMRA Abu-Samra 77.90 295 P S 08 46 16.4 -9.3
DQM DQM 77.93 287 P **P** 08 37 13.2 -0.4
SNR=18
DQM DQM 77.93 287 P **S** 08 46 20.1 -6.0
AYDB Zeytinkoy-Aydi 77.94 319 *eP* **P** 08 37 13.1 -0.5
SLWR Sila 77.96 294 P **P** 08 37 13.4 -0.4
SLWR Sila 77.96 294 P S 08 46 16.6 -10
SLWR P S 08 46 16.6 -10
SWET Sewanee 78.00 46 IAmb IAmb 08 39 04.0
comp=Z,178nm,1.0s
BHL Bhannes 78.08 311 *eP* **P** 08 37 13.8 -0.5
LIT Litokhoron 78.08 324 P **P** 08 37 15.0 +0.8
EIDS Eidsvold 78.13 182 P **P** 08 37 15.4 +1.0
ELL Elmali 78.15 317 *eP* **P** 08 37 14.3 -0.5
KBN Korca 78.21 325 P **P** 08 37 16.8 +1.8
CSS Mathiatis 78.22 314 *eP* **P** 08 37 14.8 -0.2
CSS Mathiatis 78.22 314 IAmb IAmb 08 37 17.2
comp=Z,204nm,1.1s
CHOS Chios island 78.27 321 *eP* **P** 08 37 14.6 -0.7
CHOS Chios island 78.27 321 P **P** 08 37 16.2 +0.9
NEST Nestorio 78.31 325 P **P** 08 37 16.4 +0.9
AS31 Alice Springs 78.32 198 IAmb IAmb 08 37 18.5
comp=Z,257nm,1.0s
ASAR Alice Springs 78.32 198 P **P** 08 37 16.6 +1.1
comp=Z,452nm,0.5s,baz=11,slow=5.2,SNR=1705
ASAR S **S** 08 46 31.8 +2.0
comp=Z,15nm,1.1s,baz=12,slow=7.1,SNR=13
ASAR PKKPbc **PKKPbc** 08 56 08.4 +1.3
comp=Z,2.4nm,0.6s,baz=196,slow=1.8,SNR=15
ASAR PKPPKP **P'P'df** 09 04 12.2 +2.7
comp=Z,2.5nm,1.0s,baz=185,slow=1.2,SNR=5.3
comp=Z,452nm,0.5s
ASAR Alice Springs 78.32 198 P **P** 08 37 16.9 +1.3
RCY Rachaya 78.33 311 *eP* **P** 08 37 15.5 -0.3
QRWL Qaraoun 78.36 311 *eP* **P** 08 37 15.8 -0.1
441A DeRidder 78.36 54 IAmb IAmb 08 37 18.6
comp=Z,242nm,0.9s
MURB Monte Urbino 78.41 332 IAmb IAmb 08 37 20.2
comp=Z,251nm,0.8s
GCAM G?zelcaml? 78.41 319 *eP* **P** 08 37 15.4 -0.5
NIUE Niue 78.43 145 P **P** 08 37 16.9 +0.8
VBMS Vicksburg 78.43 51 IAmb IAmb 08 37 18.5
comp=Z,176nm,1.0s
FDMO Fiordimonte 78.45 332 IAmb IAmb 08 37 19.1
comp=Z,181nm,0.5s
SHBL Chebaa 78.50 311 *eP* **P** 08 37 16.4 -0.4
OSSC Osservatorio P 78.52 333 IAmb IAmb 08 37 18.8
comp=Z,141nm,0.5s
HBVL Hebbronville 78.59 60 IAmb IAmb 08 39 09.5
comp=Z,513nm,1.6s
DALY Dalyan (Mula) 78.61 318 *eP* **P** 08 37 16.7 -0.3
NRCA Norcia 78.63 332 IAmb IAmb 08 37 22.5
comp=Z,220nm,0.8s
S57A Dark Hollow, R 78.69 40 IAmb IAmb 08 39 09.0
comp=Z,194nm,1.2s
AKAS Kas 78.72 317 *eP* **P** 08 37 16.7 -1.1
Z47A Carrollton 78.75 49 IAmb IAmb 08 37 19.1
comp=Z,138nm,0.8s
KYMI Kymi, Euboea I 78.79 322 P **P** 08 37 17.5 -0.5
TURN Turunc 78.81 318 *eP* **P** 08 37 17.9 -0.2
HMDM Hanimaadhoo 78.92 267 P **P** 08 37 19.8 +0.7
SNR=5.7
BODT Bodrum 78.93 319 *eP* **P** 08 37 18.5 -0.3
BODT Bodrum 78.93 319 P **P** 08 37 19.3 +0.5
MMAI Mount Meron Ar 78.93 311 P **P** 08 37 19.4 +0.4
comp=Z,61nm,0.4s,baz=30,slow=6.8,SNR=128
comp=Z,61nm,0.4s
AQU L'Aquila 78.99 331 P **P** 08 37 18.8 -0.3
AQU L'Aquila 78.99 331 ⇑*i*P **P** 08 37 19.5 +0.4
JAN Janina 79.05 325 P **P** 08 37 19.4 -0.1
AGG Agios Georgios 79.09 323 P **P** 08 37 19.7 0.0
DAT Datca 79.11 319 P **P** 08 37 18.9 -1.0
ATAL Atalanti 79.14 323 P **P** 08 37 19.2 -0.7
MAKR Makrakomi, Fth 79.17 324 P **P** 08 37 19.0 -1.1
TETR Tetrakomo, Epi 79.18 324 P **P** 08 37 20.6 +0.4
KARY Karystos 79.19 322 P **P** 08 37 20.6 +0.5
AXAR Agios Charalam 79.20 323 P **P** 08 37 20.0 -0.3
RMQ Roma 79.32 185 P **P** 08 37 22.6 +1.8
ARG Arkhangelos 79.34 318 *eP* **P** 08 37 20.3 -0.6
ARG Arkhangelos 79.34 318 IAmb IAmb 08 37 23.6
comp=Z,317nm,1.2s
ARG Arkhangelos 79.34 318 P **P** 08 37 24.8 +3.8
DION Dionisos Attik 79.34 322 P **P** 08 37 20.2 -0.8
KEK Kerkira 79.36 326 *eP* **P** 08 37 24.5 +3.5
KEK Kerkira 79.36 326 P **P** 08 37 24.2 +3.1
PTL Penteli 79.39 322 P **P** 08 37 20.6 -0.6
MMLI Mount Malkishu 79.41 311 *eP* **P** 08 37 21.9 +0.4
VILL Villia 79.50 322 P **P** 08 37 20.9 -1.0
LFKM Lefkimmi 79.51 325 P **P** 08 37 23.9 +2.1
MATE Matera 79.54 328 *eP* **P** 08 37 21.4 -0.5
MATE Matera 79.54 328 ⇑P **P** 08 37 21.8 -0.2
MBWA Marble Bar 79.57 212 P **P** 08 37 22.3 +0.1
MBWA IAmb IAmb 08 37 23.7
comp=Z,416nm,1.2s
MBWA Marble Bar 79.57 212 P **P** 08 37 22.3 +0.1
MBWA Marble Bar 79.57 212 P **P** 08 37 21.7 -0.5
MBWA Marble Bar 79.57 212 P **P** 08 37 22.0 -0.2
MBWA S **S** 08 46 41.5 -1.2
MBWA Marble Bar 79.57 212 P **P** 08 37 22.0 -0.2
AMPL Ampelaki 79.58 324 P **P** 08 37 21.8 -0.4
346A Big Creek Wild 79.62 51 IAmb IAmb 08 37 24.4
comp=Z,150nm,0.6s
ANX Ano Chora 79.62 324 P **P** 08 37 22.3 -0.3
ACER Acerenza 79.66 329 IAmb IAmb 08 37 25.2
comp=Z,149nm,0.7s
KALE Kalithea 79.72 323 P **P** 08 37 22.6 -0.4
QLP Quilpie 79.73 189 P **P** 08 37 24.4 +1.5
SERG Sergoula 79.73 323 P **P** 08 37 23.3 +0.2
PVO Paravola 79.74 324 P **P** 08 37 22.1 -1.0
LTK Loutraki 79.75 323 P **P** 08 37 22.2 -0.9
EFP Efpalio 79.77 323 P **P** 08 37 23.9 +0.7
UJAP Al Uja 79.80 310 *eP* **P** 08 37 23.8 +0.4
TSLK Tsoukalades, L 79.86 325 P **P** 08 37 24.7 +1.0
LKD2 Lefkada island 79.89 325 P **P** 08 37 23.6 -0.3
PSA00 Pilbara Seismi 79.92 212 P **P** 08 37 24.0 0.0
PSA00 IAmb IAmb 08 37 25.6
comp=Z,302nm,1.1s
PSA00 Pilbara Seismi 79.92 212 P **P** 08 37 23.6 -0.4
NYDR Nydri-Lefkada 79.95 324 P **P** 08 37 24.6 +0.5
KLV Kalavryta, Ach 80.03 323 P **P** 08 37 25.3 +0.6
EVGI Lefkada island 80.05 324 P **P** 08 37 24.5 -0.1
GUR Goura 80.05 323 P **P** 08 37 24.4 -0.4
AXS Araxos 80.17 324 P **P** 08 37 25.3 0.0
FSK Fiskardo 80.22 324 P **P** 08 37 25.1 -0.5
KARP Karpathos 80.31 318 *eP* **P** 08 37 24.4 -1.7
KARP Karpathos 80.31 318 IAmb IAmb 08 37 27.5
comp=Z,228nm,1.0s
V58A Windy Hill, Pi 80.34 41 IAmb IAmb 08 39 17.4
comp=Z,186nm,1.2s
MHLO Agia Marina, M 80.39 321 P **P** 08 37 27.5 +1.1
DMLN Damoulianata-K 80.49 324 P **P** 08 37 28.2 +1.2
SHAO Shalim 80.53 287 P **P** 08 37 27.0 -0.5
SNR=6.2
SHAO Shalim 80.53 287 *i* P **P** 08 37 27.1 -0.5
SNR=19
250A Grady 80.59 48 IAmb IAmb 08 37 29.2
comp=Z,150nm,1.1s
TIP Timpagrande 80.86 327 IAmb IAmb 08 37 31.5
comp=Z,260nm,1.4s
ITM Ithomi 80.87 323 *eP* **P** 08 37 27.0 -2.0
ITM Ithomi 80.87 323 IAmb IAmb 08 37 30.5
comp=Z,104nm,0.5s
ITM Ithomi 80.87 323 P **P** 08 37 28.8 -0.2
DOK Doka 80.92 289 P **P** 08 37 28.7 -0.8
SNR=26
DOK Doka 80.92 289 P S 08 46 46.2 -11
SNR=9.7
COCO West Island 81.07 236 P **P** 08 37 30.9 +0.8
DMTO DMTO 81.17 288 P **P** 08 37 29.7 -1.1
SNR=6.6
DMTO DMTO 81.17 288 P S 08 46 47.6 -12
V61A Roper 81.33 39 IAmb IAmb 08 39 24.7
comp=Z,239nm,1.3s
X58A Rowland 81.33 42 IAmb IAmb 08 37 32.8
comp=Z,117nm,0.9s
IDI Anoyia 81.43 320 P **P** 08 37 29.2 -2.8
IDI Anoyia 81.43 320 *eP* **P** 08 37 29.4 -2.6
IDI Anoyia 81.43 320 IAmb IAmb 08 37 32.5
comp=Z,90nm,0.5s
IDI Anoyia 81.43 320 P **P** 08 37 30.0 -2.0
154A Montrose 81.44 46 IAmb IAmb 08 39 26.3
comp=Z,396nm,1.2s
ANKY Antikythira Is 81.53 321 P **P** 08 37 33.2 +0.8
EJON La Jonquera 81.60 339 P **P** 08 37 32.2 -0.5
352A Blakely 81.61 48 IAmb IAmb 08 37 34.5
comp=Z,189nm,1.0s
WHFO Wadi Hawf 81.68 289 P **P** 08 37 32.5 -1.0
SNR=35
WHFO Wadi Hawf 81.68 289 P S 08 46 51.3 -14
SNR=6.3
RAYN Ar Rayn 81.76 298 P **P** 08 37 33.7 -0.1
RAYN IAmb IAmb 08 37 35.3
comp=Z,118nm,0.8s
RAYN Ar Rayn 81.76 298 P **P** 08 37 33.7 -0.1
RAYN Ar Rayn 81.76 298 P **P** 08 37 33.7 -0.1
RAYN pmax pmax
comp=Z,118nm,0.8s
RBK Rabkut 81.76 288 P **P** 08 37 32.8 -1.1
SNR=10
RBK Rabkut 81.76 288 P S 08 46 52.4 -13
RBK P S 08 46 52.4 -13
CLLI Llivia 81.77 339 *eP* **P** 08 37 33.9 +0.3
CLLI *epP* **pP** 08 39 24.4 +3.0
CLLI *esP* **sP** 08 40 10.7 -1.8
CLLI *ePP* **PP** 08 40 52.0 +3.5
CLLI *eS* **S** 08 47 05.1 -0.1
CLLI *eScS* **ScS** 08 47 22.6 +4.4
CLLI *eSS* **SS** 08 52 40.5 +5.3
Y58A Scranton 81.77 42 IAmb IAmb 08 37 35.0
comp=Z,198nm,0.8s
CBEU Beuda 81.83 339 *eP* **P** 08 37 34.3 +0.4
CBEU *epP* **pP** 08 39 20.0 -1.7
CBEU *esP* **sP** 08 40 10.1 -2.6
CBEU *ePP* **PP** 08 40 45.8 -3.2
CBEU *eS* **SKSac** 08 47 06.9 +0.7
CBEU *eScS* **ScS** 08 47 20.2 +1.8
CBEU *eSS* **SS** 08 52 39.8 +3.4
CBRU Bruguera 81.91 339 *eP* **P** 08 37 35.4 +1.0
CBRU *epP* **pP** 08 39 17.2 -5.0
CBRU *ePP* **PP** 08 40 48.9 -0.7
CBRU *eS* **S** 08 47 09.5 +2.9
CBRU *eScS* **ScS** 08 47 24.2 +4.9
GVD Gavdhos 82.14 320 *eP* **P** 08 37 34.0 -1.5
TIGA Tifton 82.24 47 IAmb IAmb 08 39 28.7
comp=Z,318nm,1.1s
NHSC New Hope 82.25 43 IAmb IAmb 08 39 29.4
comp=Z,467nm,1.8s
Y60A Bolivia 82.26 41 IAmb IAmb 08 37 37.4
comp=Z,231nm,0.8s
CFON Fontmartina 82.35 339 *eP* **P** 08 37 36.9 +0.3
CFON *eS* **S** 08 47 13.9 +3.0
CFON *eScS* **ScS** 08 47 26.9 +4.1
CFON *eSS* **SS** 08 52 43.6 -0.1
ABTO Aybut 82.40 289 P **P** 08 37 36.5 -0.7
SNR=26
ABTO Aybut 82.40 289 P S 08 46 57.5 -15
SNR=8.9
VSL Villasalto 82.78 333 IAmb IAmb 08 37 42.0
comp=Z,254nm,1.5s
GIRL Giralia 82.81 216 IAmb IAmb 08 37 41.4
comp=Z,174nm,0.9s
553A Crawfordville 82.93 48 IAmb IAmb 08 39 33.5
comp=Z,216nm,1.2s
ARMA Armidale 83.14 182 IAmb IAmb 08 37 44.1
comp=Z,158nm,0.9s
ARMA Armidale 83.14 182 P **P** 08 37 41.7 +1.2
TAOE Nuku Hiva Isla 83.15 114 P **P** 08 37 41.7 +0.8
TAOE IAmb IAmb 08 37 43.7
comp=Z,216nm,1.1s
TAOE Nuku Hiva Isla 83.15 114 ⇑*i*P **P** 08 37 41.4 +0.5
comp=Z,454nm,1.1s
456A Hilliard 83.53 46 IAmb IAmb 08 39 36.0
comp=Z,243nm,1.3s
MAHO Mahon 83.71 337 P **P** 08 37 42.3 -1.0
CMAS Mas de Barbera 83.80 340 *eP* **P** 08 37 43.6 -0.1
CMAS *epP* **pP** 08 39 31.1 -1.2
CMAS *esP* **sP** 08 40 22.4 -0.7
CMAS *ePP* **PP** 08 41 05.5 +0.7
CMAS *eS* **S** 08 47 26.0 +0.9
CMAS *eScS* **ScS** 08 47 35.2 +0.6
CMAS *eSS* **SS** 08 53 08.8 +4.1
ECAL Calabor 83.88 345 P **P** 08 37 43.0 -1.3
PBRG Braganca 84.02 345 *eP* **P** 08 37 45.5 +0.7
PBRG *epP* **pP** 08 39 36.6 +3.2
KAAM Kaadhehdhoo 84.02 263 P **P** 08 37 45.8 +0.6
PGAV Gavieira, Arco 84.08 347 *eP* **P** 08 37 45.2 -0.1
ETOS Mallorca 84.17 338 P **P** 08 37 43.8 -1.9
PMOR Pomariorio Ree 84.23 124 *eP* **P** 08 37 47.0 +0.9
comp=Z,277nm,1.0s
PCAB Cabril 84.30 346 *eP* **P** 08 37 45.5 -0.8
PCAB *epP* **pP** 08 39 37.4 +2.5
LHI Lord Howe Isla 84.35 175 IAmb IAmb 08 37 50.4
comp=Z,204nm,0.9s
LHI Lord Howe Isla 84.35 175 P **P** 08 37 49.3 +3.0
656A Willston 84.48 47 IAmb IAmb 08 39 42.0
comp=Z,214nm,1.1s
CMSA Cobar Meteorol 84.53 187 P **P** 08 37 48.3 +1.1
VAH Vaihoa 84.56 124 *eP* **P** 08 37 48.8 +1.1
comp=Z,6.5nm,0.9s
POLO Lamas de Olo 84.59 346 *eP* **P** 08 37 46.8 -1.0
POLO *epP* **pP** 08 39 39.0 +2.5
PVRL Vila Real 84.68 346 *eP* **P** 08 37 47.6 -0.5
PVRL *epP* **pP** 08 39 38.9 +2.0
MVO Moncorvo 84.69 346 *eP* **P** 08 37 47.2 -1.0
MVO *epP* **pP** 08 39 38.8 +1.9
MEEK Meekatharra 85.04 211 P **P** 08 37 49.1 -0.8
ECHE Chera 85.15 341 P **P** 08 37 50.0 -0.5
STKA Stephens Creek 85.24 190 P **P** 08 37 51.3 +0.6
comp=Z,109nm,0.9s,baz=341,slow=6.7,SNR=84
STKA S **SKSac** 08 47 29.9 +2.5
comp=Z,21nm,1.2s,baz=112,slow=18,SNR=3.9
comp=Z,109nm,0.9s
STKA Stephens Creek 85.24 190 P **P** 08 37 51.1 +0.4
STKA Stephens Creek 85.24 190 *di*P **P** 08 37 51.0 +0.4
PVIS Viseu 85.25 346 *eP* **P** 08 37 50.5 -0.5
PVIS *epP* **pP** 08 39 43.5 +3.6
MTE Manteigas 85.51 346 *eP* **P** 08 37 51.8 -0.5
MTE *epP* **pP** 08 39 44.2 +2.9
PPT Papeete 85.60 127 P **P** 08 37 53.8 +1.0
comp=Z,203nm,0.9s,baz=44,slow=5.4,SNR=9.5
comp=Z,203nm,0.9s
PPT2 Papeete2 85.62 127 *eP* **P** 08 37 54.9 +2.0
comp=Z,175nm,1.0s
PPT2 *eS* **S** 08 47 36.9 -6.3
comp=Z,3μm,25.2s
PPT2 *esS* **sS** 08 50 48.9 -5.9
comp=Z,4μm,33.0s
PPT2 *esS* **sS** 08 50 49.5 -5.3
comp=Z,5μm,38.2s
PPT2 Papeete2 85.62 127 *eLQ* LQ 09 02 09.1
comp=Z,1μm,32.0s
PPT2 *eLR* LR 09 05 40.5
comp=Z,2μm,31.5s
PPT2 *eLR* LR 09 05 42.2
comp=Z,968nm,32.5s
PPTF Pamatai, Papee 85.62 127 IAmb IAmb 08 37 59.5
comp=Z,213nm,1.0s
PPTF Pamatai, Papee 85.62 127 P **P** 08 37 54.8 +1.9
PPTF Pamatai, Papee 85.62 127 P **P** 08 37 54.2 +1.3
PPTF x x 08 39 48.4
ESDC Sonseca Array 85.64 343 P **P** 08 37 52.5 -0.4
comp=Z,29nm,0.7s,baz=360,slow=3.4,SNR=83
ESDC pP **pP** 08 39 43.0 +1.1
comp=Z,42nm,1.1s,baz=5.5,slow=5.2,SNR=12
ESDC PKKPbc **PKKPbc** 08 55 50.6 +0.7
comp=Z,1.1nm,0.3s,baz=191,slow=1.9,SNR=7.4
comp=Z,29nm,0.7s
ESDC Sonseca Array 85.64 343 P **P** 08 37 51.8 -1.1
PAE Paea 85.68 127 *eP* **P** 08 37 55.0 +1.9
comp=Z,74nm,1.1s
TIAR Tiarei 85.70 127 *eP* **P** 08 37 54.6 +1.3
comp=Z,344nm,0.9s
PAB San Pablo 85.83 343 P **P** 08 37 52.5 -1.3
PAB San Pablo 85.83 343 P **P** 08 37 52.5 -1.3
PAB pmax pmax
comp=Z,42nm,0.7s
MGCD Mangrove Creek 85.94 182 P **P** 08 37 56.5 +2.5
TVO Taravao 85.94 127 *eP* **P** 08 37 56.5 +2.1
comp=Z,32nm,1.0s
PCAS Casmilo, Conde 85.99 346 *eP* **P** 08 37 53.9 -0.6
PCAS *epP* **pP** 08 39 41.5 -2.2
PCBR Castelo Branco 86.05 346 *eP* **P** 08 37 53.9 -0.8
PCBR *epP* **pP** 08 39 45.7 +1.8
PCBR *i* IAmb IAmb 08 39 48.7
comp=Z,172nm,1.4s
KEST Kesra 86.30 332 P **P** 08 37 56.5 +0.4
comp=Z,86nm,0.5s,baz=26,slow=2.3,SNR=74
KEST pP **pP** 08 39 46.6 +1.2
comp=Z,20nm,0.9s,baz=63,slow=1.8,SNR=2.6
KEST S **SKSac** 08 47 34.2 -0.5
comp=Z,4.1nm,0.7s,baz=292,slow=18,SNR=2.1
comp=Z,86nm,0.5s
KEST Kesra 86.30 332 IAmb IAmb 08 37 59.0
comp=Z,89nm,0.6s
KEST Kesra 86.30 332 P **P** 08 37 55.7 -0.4
TLIG Tlapa 86.34 66 IAmb IAmb 08 39 50.7
comp=Z,194nm,1.4s
PSARD Sardoal 86.39 346 *etx* tx 08 39 49.1
PSBE So Bento 86.56 347 *eP* **P** 08 37 56.4 -0.8
PSBE *epP* **pP** 08 39 49.6 +3.0
BBOO Buckleboo 86.88 195 IAmb IAmb 08 38 01.5
comp=Z,131nm,1.2s
BBOO Buckleboo 86.88 195 P **P** 08 37 58.3 -0.2
PMTG Montargil 86.92 346 *eP* **P** 08 37 56.5 -2.3
PMTG *epP* **pP** 08 39 50.0 +1.7
PESTR Estremoz 87.02 345 *eP* **P** 08 37 58.3 -1.1
PESTR *epP* **pP** 08 39 51.2 +2.3
HTT Hallett 87.09 192 P **P** 08 38 00.6 +1.1
PARRA Arraiolos 87.14 346 *eP* **P** 08 37 58.8 -1.1
PARRA *etx* tx 08 39 52.2
PMAFR Mafra 87.18 347 *eP* **P** 08 37 59.6 -0.5
EVO Evora 87.41 346 *eP* **P** 08 38 00.7 -0.5
EVO *epP* **pP** 08 39 53.2 +2.4
MOE Montemor 87.47 346 *eP* **P** 08 38 01.0 -0.5
MOE *epP* **pP** 08 39 53.1 +2.0
PBAR Barrancos 87.61 345 *eP* **P** 08 38 01.2 -0.9
PBAR *epP* **pP** 08 39 52.9 +1.1
CNB Canberra Magne 88.09 184 P **P** 08 38 05.4 +1.2
CAN Canberra 88.11 184 P **P** 08 38 05.4 +1.1
CAN IAmb IAmb 08 38 08.1
comp=Z,113nm,1.0s
CAN Canberra 88.11 184 P **P** 08 38 05.5 +1.2
CAN Canberra 88.11 184 P **P** 08 38 05.4 +1.1
CAN pmax pmax
comp=Z,113nm,1.0s
CAN Canberra 88.11 184 P **P** 08 38 05.5 +1.2
MORW Morawa 88.12 212 P **P** 08 38 04.0 -0.4
PCVE Castro Verde 88.30 346 *eP* **P** 08 38 04.4 -0.9
PCVE *epP* **pP** 08 39 56.4 +1.1
PVAQ Vaqueiros 88.47 345 *eP* **P** 08 38 05.4 -0.7
PVAQ *epP* **pP** 08 39 56.0 -0.1
PBDV Barranco-do-Ve 88.66 345 *eP* **P** 08 38 08.0 +0.9
BLDU Ballidu 89.34 211 P **P** 08 38 09.0 -1.0
OUZ Omahuta 89.60 164 P **P** 08 38 13.8 +2.7
OUZ Omahuta 89.60 164 P **P** 08 38 13.2 +2.1
MILA Mila 89.83 184 P **P** 08 38 14.5 +2.2
KLBR Kellerberrin 89.92 210 P **P** 08 38 11.6 -1.1
WCZ Waipu Caves 90.43 163 P **P** 08 38 18.2 +3.3
TBI Tubuai 90.62 130 *eS* **S** 08 48 29.7 +0.7
comp=Z,9μm,29.2s
TBI Tubuai 90.62 130 *eLQ* LQ 09 04 03.5
comp=Z,7μm,38.0s
MUN Mundaring 90.76 211 P **P** 08 38 16.7 +0.1
NWAO Narrogin (SRO) 91.33 210 P **P** 08 38 17.8 -1.4
NWAO IAmb IAmb 08 38 23.2
comp=Z,83nm,0.7s
NWAO Narrogin (SRO) 91.33 210 P **P** 08 38 20.1 +1.0
NWAO Narrogin (SRO) 91.33 210 P **P** 08 38 18.9 -0.3
NWAO Narrogin (SRO) 91.33 210 P **P** 08 38 18.6 -0.6
NWAO Narrogin (SRO) 91.33 210 P **P** 08 38 17.8 -1.4
NWAO pmax pmax
comp=Z,83nm,0.7s
IFR Ifrane 91.83 342 P **P** 08 38 19.7 -2.3
MD01 Midelt array s 92.40 342 P **P** 08 38 23.3 -1.3
MDT Midelt 92.42 342 P **P** 08 38 24.8 +0.2
comp=Z,9.5nm,0.7s,baz=17,slow=5.7,SNR=14
MDT pP **pP** 08 40 16.0 +0.9
comp=Z,4.6nm,0.8s,baz=19,slow=8.9,SNR=2.6
MDT PP **PP** 08 42 13.4 +0.5
comp=Z,4.0nm,0.7s,baz=29,slow=16,SNR=4.0
comp=Z,9.5nm,0.7s
HAZ Te Kaha 92.83 161 P **P** 08 38 28.2 +2.3
HAZ PP **pP** 08 40 15.2 -1.3
ATD Arta Tunnel 93.00 293 IAmb IAmb 08 38 29.6
comp=Z,61nm,1.2s
HIZ Hauiti 93.03 164 P **P** 08 38 30.6 +3.8
URZ Urewera 93.19 162 P **P** 08 38 29.1 +1.5
URZ Urewera 93.19 162 P **P** 08 38 27.5 -0.1
MWZ Matawai 93.34 161 P **P** 08 38 28.7 +0.4
ESQI Esquipulas 93.77 60 IAmb IAmb 08 40 56.2
comp=Z,65nm,1.3s
BKZ Black Stump Fm 93.95 162 P **P** 08 38 32.4 +1.3
MRZ Mangatainoka R 95.24 163 P **P** 08 38 38.9 +2.1
TGUH Tegucigalpa,Un 95.26 58 IAmb IAmb 08 40 45.1
comp=Z,91nm,1.4s

NNZ Nelson 95.43 165 P P 08 38 40.5 +2.9
OXZ Oxford 97.30 167 P P 08 38 48.1 +2.0
KMBO Kilima Mbogo 106.52 291 PP PP 08 43 55.5 -4.3
comp=Z,5.7nm,0.8s,baz=53,slow=7.8,SNR=5.7
KMBO PKKPbc PKKPbc 08 54 54.0 -0.1
comp=Z,1.6nm,0.5s,baz=224,slow=16,SNR=1.2
SDV Santo Domingo 107.71 46 PKP PKiKP 08 43 38.7 +0.6
ROSC El Rosal 109.60 52 PKKP PKKPbc 08 54 58.6 +14
comp=Z,5.5nm,0.4s,baz=110,slow=7.5,SNR=4.4
TORD Torodi Ar. Bea 109.81 331 PKKP PKiKP 08 43 42.4 +0.6
comp=Z,6.7nm,0.5s,baz=34,slow=3.1,SNR=5.2
TORD PP PP 08 44 22.5 +0.1
comp=Z,8.4nm,0.8s,baz=21,slow=7.0,SNR=5.8
TORD PKKP PKKPdf 08 54 58.2 +0.6
comp=Z,1.9nm,0.5s,baz=194,slow=0.6,SNR=3.5
ABPO Ambohimpanom 114.85 271 PKiKP 08 43 50.7 -0.7
ABPO Ambohimpanom 114.85 271 PKIKP PKiKP 08 43 50.7 -0.7
SGC2 Sao Gabriel da 117.37 47 PKP PKiKP 08 43 56.4 +0.1
SGC2 PKP PKiKP 08 43 56.4 +0.1
BOAV Boa Vista 117.74 39 PKP PKiKP 08 43 57.1 +0.1
BOAV PKP PKiKP 08 43 57.1 +0.1
DBIC Dimbokro 117.78 336 PKP PKPdf 08 43 56.4 -0.7
comp=Z,42nm,0.4s,baz=57,slow=2.5,SNR=79
DBIC SKP SKPdf 08 46 45.0 +0.1
comp=Z,12nm,0.8s,baz=100,slow=1.2,SNR=4.6
DBIC PKKPbc PKKPbc 08 54 17.6 0.0
comp=Z,4.8nm,0.7s,baz=282,slow=2.5,SNR=3.5
DBIC SKKPbc SKKPbc 08 57 12.3 +0.2
comp=Z,7.2nm,0.9s,baz=178,slow=3.9,SNR=4.2
DBIC Dimbokro 117.78 336 PKPdf 08 43 56.2 -0.9
DBIC Dimbokro 117.78 336 PKIKP PKPdf 08 43 56.2 -0.9
DBIC Dimbokro 117.78 336 PKP PKPdf 08 43 56.6 -0.5
TEFE Tefe 121.40 47 PKP PKPdf 08 44 03.1 -0.9
TEFE PKP PKiKP 08 44 03.6 -0.5
TEFE PKP PKiKP 08 44 04.3 +0.1
TEFE Tefe 121.40 47 eP PKiKP 08 44 04.3 +0.1
NNA Nana 122.67 64 PKPdf 08 44 06.1 -0.3
NNA Nana 122.67 64 PKIKP PKPdf 08 44 06.1 -0.3
MACA Manacapuru-AM 122.75 42 PKP PKPdf 08 44 06.3 -0.3
MACA PKP PKiKP 08 44 06.6 -0.2
MACA Manacapuru-AM 122.75 42 eP PKPdf 08 44 06.1 -0.5
LSZ Lusaka 123.17 290 PKKPab PKKPab 08 54 00.8 +0.2
comp=Z,6.9nm,0.7s,baz=205,slow=4.7,SNR=7.9
CASY Casey 123.44 199 PKiKP 08 44 06.6 +0.1
MAL2 Monte Alegre, 124.13 34 PKP PKPdf 08 44 09.4 +0.2
MAL2 PKP PKiKP 08 44 09.9 +0.3
ITTB Itaituba 125.76 37 PKP PKPdf 08 44 12.6 -0.2
ITTB PKP PKiKP 08 44 12.2 -0.2
ITTB Itaituba 125.76 37 eP PKPdf 08 44 12.3 -0.1
ATM1 UHE Belo Monte 125.97 33 PKP PKPdf 08 44 12.7 -0.1
ATM1 PKP PKPdf 08 44 12.7 -0.1
LABB L¡brea 126.06 51 PKP PKPdf 08 44 12.3 -0.6
LABB PKP PKiKP 08 44 12.5 -0.8
TMAB Tom-Au,PA,Br 126.35 27 PKP PKiKP 08 44 13.7 -0.2
TMAB PKP PKPdf 08 44 14.4 +1.0
TMAB Tom-Au,PA,Br 126.35 27 eP PKiKP 08 44 14.2 +0.3
MATP Matopo 127.08 286 SKKP SKKPdf 08 57 12.7 -1.3
comp=Z,4.4nm,0.8s,baz=213,slow=5.7,SNR=6.3
NPGB Novo Progresso 128.37 38 PKP PKPdf 08 44 16.9 -0.5
NPGB Novo Progresso 128.37 38 eP PKPdf 08 44 17.3 -0.1
NBMO Morrinhos-CE 129.13 18 PKP PKPdf 08 44 18.9 +0.1
NBMO PKP PKiKP 08 44 19.4 -0.2
PRPB Parauapebas 129.45 31 PKP PKPdf 08 44 19.2 -0.2
PRPB PKP PKPdf 08 44 19.6 +0.1
PRPB Parauapebas 129.45 31 eP PKPdf 08 44 19.5 +0.1
SBBR Sobral 129.51 18 PKP PKPdf 08 44 19.6 +0.1
SBBR PKP PKiKP 08 44 20.3 -0.1
NBPS Pedro II - PI 129.91 20 PKP PKPdf 08 44 20.0 -0.4
NBPS PKP PKiKP 08 44 21.0 -0.2
LEPH Lephalale, Lim 130.15 284 eS PKPdf 08 44 21.1 +0.6
VNDA Vanda 130.41 178 PKhKP PKPpre 08 44 07.2
comp=Z,1.0nm,0.8s,baz=287,slow=5.8,SNR=4.0
VNDA PKP PKiKP 08 44 19.9 -0.3
comp=Z,17nm,0.8s,baz=325,slow=4.3,SNR=57
VNDA pP pPKPdf 08 46 17.3 +0.7
comp=Z,2.5nm,0.7s,baz=328,slow=2.4,SNR=1.6
VNDA SKPbc SKPbc 08 46 54.7 -1.2
comp=Z,53nm,0.7s,baz=328,slow=4.1,SNR=38
VNDA SKKPbc SKKPbc 08 56 34.5 -2.0
comp=Z,2.1nm,0.8s,baz=224,slow=1.8,SNR=6.0
PAL2 UHE Estreito - 130.74 28 PKP PKPdf 08 44 22.3 +0.4
PAL2 PKP PKiKP 08 44 22.9 +0.1
LPAZ La Paz 130.85 58 PKP PKPdf 08 44 23.1 +0.4
comp=Z,9.0nm,0.6s,baz=1.5,slow=5.6,SNR=25
LPAZ pPKP pPKPdf 08 46 20.6 +0.5
comp=Z,7.9nm,0.9s,baz=55,slow=2.1,SNR=3.2
LPAZ SKPbc SKPbc 08 46 59.4 -0.8
comp=Z,48nm,0.8s,baz=313,slow=4.1,SNR=19
LPAZ La Paz 130.85 58 PKP PKPdf 08 44 22.5 -0.2
LPAZ PKP PKPdf 08 44 23.1 +0.4
LPAZ La Paz 130.85 58 eP PKPdf 08 44 22.6 0.0
SBA Scott Base 130.90 176 PKiKP 08 44 21.4 +0.3
SBA Scott Base 130.90 176 PKIKP PKiKP 08 44 21.4 +0.3
NBPB Pedra_Branca-C 131.39 18 PKP PKPdf 08 44 23.3 +0.2
CLDB Colider 131.72 40 PKP PKPdf 08 44 23.8 +0.1
CLDB PKP PKiKP 08 44 24.1 -0.7
CLDB Colider 131.72 40 eP PKPdf 08 44 24.0 +0.3
VILB Vilhena 131.75 47 PKP PKiKP 08 44 24.3 -0.5
VILB PKP PKPdf 08 44 24.4 +0.7
VILB Vilhena 131.75 47 eP PKiKP 08 44 24.7 -0.1
NBPA Parau_RN 132.01 15 PKP PKPdf 08 44 24.6 +0.4
NBPA PKP PKiKP 08 44 25.3 0.0
PDRB Porto dos Gac 132.02 42 PKP PKPdf 08 44 24.2 0.0
PDRB PKP PKiKP 08 44 24.3 -1.0
PDRB Porto dos Gac 132.02 42 eP PKiKP 08 44 24.9 -0.4
PFBR Pau dos Ferros 132.19 16 PKP PKiKP 08 44 25.9 +0.2
TSUM Tsumeb 132.21 298 SKKPbc SKKPbc 08 56 25.5 -0.2
comp=Z,2.4nm,0.7s,baz=228,slow=6.7,SNR=3.9
RCBR Riachuelo 132.26 13 PKiKP 08 44 25.8 -0.1
RCBR Riachuelo 132.26 13 PKIKP PKiKP 08 44 25.8 -0.1
RCBR Riachuelo 132.26 13 PKP PKiKP 08 44 26.4 +0.5
RCBR Riachuelo 132.26 13 eP PKiKP 08 44 25.5 -0.4
LBTB Lobatse 132.32 285 SKKPbc SKKPbc 08 56 26.9 +1.0
comp=Z,3.4nm,0.8s,baz=334,slow=1.5,SNR=4.7
SMTB Santa Maria do 132.67 29 PKP PKPdf 08 44 25.7 +0.3
SMTB PKP PKiKP 08 44 26.3 -0.4
SMTB Santa Maria do 132.67 29 eP PKiKP 08 44 26.2 -0.4
NBPV Pedro Velho 132.92 12 PKP PKPdf 08 44 26.3 +0.4
NBPV PKP PKiKP 08 44 27.2 0.0
NBMA Muriti-CE 133.32 17 PKP PKPdf 08 44 26.9 +0.2
LAJE UHE Lajeado 133.51 31 PKP PKiKP 08 44 27.9 -0.5
LAJE PKP PKPdf 08 44 28.7 +1.7
KSTD Kokstad 134.27 277 eP PKPpre 08 44 17.2
SNDB Serra Nova Dou 134.40 35 PKP PKPdf 08 44 29.1 +0.4
SNDB PKP PKiKP 08 44 29.9 -0.2
SNDB Serra Nova Dou 134.40 35 eP PKPdf 08 44 27.7 -0.9
PTLB Pontes e Lacer 134.43 47 PKP PKPdf 08 44 28.9 +0.3
PTLB PKP PKiKP 08 44 29.1 -1.0
PTLB Pontes e Lacer 134.43 47 eP PKPdf 08 44 28.7 +0.1
NBCA Caruaru-PE 134.60 14 PKP PKPdf 08 44 29.4 +0.3
NBTA Tacaratu-PE 135.16 17 PKP PKPdf 08 44 30.0 -0.2
NBTA PKP PKiKP 08 44 30.3 -1.4
BOSA Boshof 135.22 282 PKhKP PKPpre 08 44 14.3
comp=Z,4.4nm,0.4s,baz=42,slow=2.8,SNR=13
BOSA PKP PKPdf 08 44 30.5 +0.5
comp=Z,19nm,0.5s,baz=19,slow=1.8,SNR=19
BOSA SKPbc SKPbc 08 47 09.2 -4.6
comp=Z,35nm,0.9s,baz=50,slow=4.9,SNR=6.3
BOSA SKKPbc SKKPbc 08 56 19.3 +3.8
comp=Z,5.6nm,0.8s,baz=206,slow=5.9,SNR=7.2
BOSA Boshof 135.22 282 eP PKPpre 08 44 17.1
NBAN Anadia - AL 135.98 14 PKP PKPdf 08 44 31.5 -0.2
NBAN Anadia - AL 135.98 14 eP PKPdf 08 44 31.6 -0.1
SALV Santo Antonio 136.31 43 PKP PKPdf 08 44 32.4 +0.3
SALV Santo Antonio 136.31 43 eP PKPdf 08 44 32.7 +0.6
SDBA SAO DESIDERIO 136.81 27 PKP PKPdf 08 44 33.3 +0.1
ARAG Araguaiana, MT 137.66 38 eP PKPdf 08 44 35.0 +0.4
MAW Mawson 137.72 215 PKhKP PKPpre 08 44 21.2
comp=Z,10nm,0.5s,baz=109,slow=4.2,SNR=47
MAW PKP PKPdf 08 44 33.2 +0.2
comp=Z,69nm,0.8s,baz=22,slow=2.0,SNR=17
MAW SKPbc SKPbc 08 47 19.4 -0.2
comp=Z,20nm,0.7s,baz=78,slow=3.3,SNR=7.6
MAW PKKP PKKPdf 08 54 07.3 +0.4
comp=Z,1.8nm,0.7s,baz=207,slow=18,SNR=1.9
MAW SKKPbc SKKPbc 08 56 08.5 -0.4
comp=Z,12nm,0.8s,baz=265,slow=7.6,SNR=17
GRHM Grahamstown, E 137.90 276 eP PKPpre 08 44 24.1
ALKP Alkanpan, Nort 137.97 284 eP PKPpre 08 44 24.8
ARMS Ukamas 138.01 288 eP PKPpre 08 44 24.2
AUGR Augrabies 138.08 287 eP PKPpre 08 44 25.8
BRAK Brakfontein 138.92 281 eP PKPpre 08 44 28.8
BUFB Buffelsbos 139.49 277 eP PKPpre 08 44 29.5

ANA01 Lindo Horizont 139.89 22 PKP PKPdf 08 44 39.0 +0.2
C2SB Chapadao do Su 140.05 41 PKP PKiKP 08 44 40.8 -0.7
C2SB Chapadao do Su 140.05 41 eP PKiKP 08 44 40.3 -1.2
AQDB Aquidauana 140.38 46 PKP PKPdf 08 44 39.7 +0.3
CVNA Calvinia 140.55 284 eP PKPpre 08 44 33.5
NBIT Itapeh - BA 140.56 20 PKP PKPdf 08 44 39.9 0.0
KOMG Komaggas 140.62 289 eP PKPpre 08 44 34.7
BAT2 UHE Batalha 140.71 33 PKP PKPpre 08 44 34.9
CO01 Juntas del Tor 140.75 72 i P PKPpre 08 44 35.1
CO01 IAML 08 45 57.1
comp=Z,12nm,1.9s
CMC01 Camacan, BA 140.96 21 PKP PKPpre 08 44 34.5
ITU3 Corumbatzu 141.03 35 PKP PKPpre 08 44 36.4
IPMB Iparnei, GO 141.04 34 PKP PKPpre 08 44 36.8
CO02 Combarbal 141.13 74 i P PKPpre 08 44 35.5
CO02 IAML 08 45 55.6
comp=Z,19nm,0.8s
MC01 Montes Claros 141.17 28 PKP PKPpre 08 44 36.3
AROD Rodeo 141.25 71 i P PKPpre 08 44 37.6
AGUA GUANDACOL 141.29 69 i P PKPpre 08 44 36.8
AGUA IAML 08 45 51.0
comp=Z,19nm,1.8s
MATJ Matjiesfontein 141.35 282 eP PKPpre 08 44 36.6
ACDV Cuesta del Vie 141.45 71 i P PKPpre 08 44 38.1
ACDV IAML 08 45 50.9
comp=Z,16nm,1.6s
JQT1 Jequitai-MG 141.56 28 PKP PKPpre 08 44 36.7
ACCO Cerro Coronel 141.79 71 i P PKPpre 08 44 38.9
GUA01 Guaratinga, BA 142.09 21 PKP PKPpre 08 44 38.6
PMNB Patos De Minas 142.15 32 eP PKPdf 08 44 41.9 -0.9
CER Ceres 142.18 283 eP PKPdf 08 44 40.5 -1.8
VA03 San Esteban 142.53 75 i P PKPpre 08 44 40.0
VA03 IAML 08 45 51.4
comp=Z,20nm,1.2s
MT02 Curacav 142.54 76 i P PKPpre 08 44 38.9
MT02 IAML 08 46 01.1
comp=Z,20nm,1.6s
RTLS Leoncito 142.56 73 i P PKPpre 08 44 40.8
RTLS IAML 08 46 04.7
comp=Z,45nm,2.0s
RTLL Cerro Villicun 142.68 71 i P PKPpre 08 44 40.2
RTLL IAML 08 45 56.4
comp=Z,28nm,0.8s
AVFE Valle Fertil 142.76 70 i P PKPdf 08 44 40.9 -2.7
AVFE IAML 08 45 55.0
comp=Z,7.7nm,0.5s
ELIM Elim 142.78 281 eP PKPdf 08 44 40.0 -3.4
QSPA South Pole Qui 142.80 180 PKP PKPdf 08 44 42.6 +0.2
comp=Z,356nm,0.9s,baz=315,slow=0.7,SNR=390
QSPA SKPbc SKiKP 08 47 34.2 0.0
comp=Z,330nm,0.7s,baz=276,slow=0.9,SNR=26
QSPA PKKP PKKPdf 08 53 58.1 +0.4
comp=Z,4.2nm,0.9s,baz=106,slow=2.8,SNR=12
QSPA SKKPbc SKKPbc 08 55 49.3 -0.6
comp=Z,12nm,0.8s,baz=184,slow=1.7,SNR=8.9
AMBA Amambai (Brazi 142.84 47 eP PKPdf 08 44 42.2 -1.6
MT05 Renca 142.87 76 i P PKPdf 08 44 40.9 -2.8
MT05 IAML 08 46 26.7
comp=Z,32nm,1.6s
CFA Coronel Fontan 143.02 71 i P PKPab 08 44 40.7 -0.6
CFA IAML 08 46 03.1
comp=Z,11nm,2.4s
MT03 Universidad Ad 143.08 76 i P PKPab 08 44 41.2 -0.3
MT03 IAML 08 45 52.6
comp=Z,24nm,1.4s
MT04 Ro Olivares 143.23 75 i P PKPab 08 44 42.2 -0.1
MT04 IAML 08 46 01.2
comp=Z,13nm,2.5s
BO01 Tunca 143.37 78 i P PKPab 08 44 41.5 -1.0
BO01 IAML 08 46 28.6
comp=Z,14nm,2.1s
MT13 San Alfonso 143.38 76 i P PKPbc 08 44 43.5 +0.5
MT13 IAML 08 46 41.4
comp=Z,30nm,1.6s
ACHE Chepes 143.59 69 i P PKPdf 08 44 44.6 -0.5
ABR01 Abrolhos, BA 143.66 20 PKP PKPbc 08 44 44.3 +0.3
ABR01 Abrolhos, BA 143.66 20 eP PKPbc 08 44 44.0 0.0
AAGR Agrelo 143.76 74 i P PKPdf 08 44 44.8 -0.4
BB19B Bebedouro 143.78 37 PKP PKPdf 08 44 45.1 -0.5
BB19B Bebedouro 143.78 37 eP PKPdf 08 44 45.1 -0.5
CANS Sao Roque de M 143.80 33 PKP PKPbc 08 44 44.6 0.0
SJMB Sao Joao De Ma 143.81 24 PKP PKPab 08 44 43.9 -0.5
SJMB Sao Joao De Ma 143.81 24 eP PKPab 08 44 44.3 -0.1
BO02 Sierra Bellavi 143.83 78 i P PKPab 08 44 44.6 +0.3
BO02 IAML 08 46 42.4
comp=Z,17nm,2.7s
ACAN Cantantal 144.12 71 i P PKPbc 08 44 44.6 -0.6
ACAN IAML 08 46 43.3
comp=Z,126nm,1.1s
RIB01 Linhares ES 144.59 23 PKP PKPdf 08 44 46.8 -0.1
RIB01 Linhares ES 144.59 23 eP PKPdf 08 44 46.6 -0.3
CPUP Villa Florida 144.67 53 PKP PKPdf 08 44 46.5 -0.4
comp=Z,38nm,0.7s,baz=223,slow=3.2,SNR=126
CPUP SKPbc SKiKP 08 47 39.6 +0.2
comp=Z,25nm,0.8s,baz=176,slow=2.6,SNR=16
CPUP SKKPbc SKKPbc 08 55 37.4 -0.5
comp=Z,0.7nm,0.5s,baz=9.4,slow=4.9,SNR=2.9
CPUP Villa Florida 144.67 53 PKP PKPbc 08 44 47.0 0.0
BSCB Bom Sucesso 144.98 31 PKP PKPbc 08 44 48.3 +0.1
BSCB Bom Sucesso 144.98 31 eP PKPdf 08 44 47.8 +0.1
MRA San Martin 145.06 70 i P PKPbc 08 44 48.0 -0.2
MRA IAML 08 46 45.5
comp=Z,21nm,2.3s
RCLB Rio Claro- Sao 145.38 36 PKP PKPbc 08 44 49.8 +0.5
RCLB Rio Claro- Sao 145.38 36 eP PKPdf 08 44 47.4 -0.8
FRTB Fartura 145.46 40 PKP PKPbc 08 44 49.8 +0.3
FRTB Fartura 145.46 40 eP PKPdf 08 44 47.4 -0.9
PTGB Pitanga 145.68 45 PKP PKPbc 08 44 49.6 -0.7
PTGB Pitanga 145.68 45 eP PKPbc 08 44 49.4 -0.7
VABB Valinhos 146.11 36 PKP PKPbc 08 44 51.0 -0.5
VAO Valinhos 146.11 36 PKPbc 08 44 51.3 -0.2
VAO Valinhos 146.11 36 eP PKPdf 08 44 48.7 -0.9
SYO Syowa Base 146.37 216 i PKPbc PKPbc 08 44 50.3 -0.3
SYO Syowa Base 146.37 216 i PKiKP PKPab 08 44 54.2 +1.2
SIM2 UHE Simplicio 146.43 29 PKP PKPbc 08 44 51.3 -1.0
SPB Sao Paulo 146.49 37 eP PKPbc 08 44 51.2 -1.2
VAS01 Vassouras-RJ 146.59 30 eP PKPdf 08 44 49.6 -0.6
CAM01 Campos-RJ 146.67 27 PKP PKPbc 08 44 52.2 -0.6
CAM01 Campos-RJ 146.67 27 eP PKPdf 08 44 51.0 +0.7
DUB01 Friburgo-RJ 146.71 28 PKP PKPbc 08 44 53.1 0.0
DUB01 Friburgo-RJ 146.71 28 eP PKPdf 08 44 49.6 -0.9
PARB Paraibuna 146.89 34 PKP PKPbc 08 44 52.7 -0.8
PARB Paraibuna 146.89 34 eP PKPdf 08 44 52.0 +1.2
PET01 Itanhaem-SP 147.18 37 PKP PKPdf 08 44 51.9 +0.8
PET01 Itanhaem-SP 147.18 37 eP PKPdf 08 44 52.1 +1.0
TIJ01 Guaruva-PR 147.46 41 PKP PKPbc 08 44 54.0 -1.0
ITAB Concordia 147.85 47 PKP PKPdf 08 44 52.9 +0.7
ITAB Concordia 147.85 47 eP PKPdf 08 44 53.5 +1.3
PLCA Paso Flores 147.86 86 PKP PKPdf 08 44 52.2 +0.3
comp=Z,142nm,0.9s,baz=286,slow=0.4,SNR=14
PLCA PKPbc PKPbc 08 44 56.2 +0.6
comp=Z,116nm,0.7s,baz=303,slow=3.3,SNR=96
PLCA pPKP pPKPbc 08 46 51.0 -0.6
comp=Z,60nm,0.9s,baz=289,slow=3.5,SNR=8.8
PLCA SKPbc SKiKP 08 47 46.5 +0.9
comp=Z,47nm,0.8s,baz=266,slow=2.7,SNR=7.9
PLCA Paso Flores 147.86 86 PKP PKPbc 08 44 54.5 -1.1
PLCA Paso Flores 147.86 86 eP PKPdf 08 44 51.5 -0.3
PSAL Palomas, Salto 148.43 58 eP PKPdf 08 44 54.1 +1.1
COYC Coyhaique 149.67 94 PKPdf 08 44 54.5 0.0
COYC PKiKP 08 45 00.2 -0.3
COYC PKPab 08 45 08.2 +0.9
CPSB Cacapava Do Su 149.94 52 PKP PKPdf 08 44 56.7 +1.2
CPSB Cacapava Do Su 149.94 52 eP PKPdf 08 44 56.3 +0.9
AY03 Cochrane 150.20 98 PKPdf 08 44 55.2 -0.1
AY03 PKPbc PKiKP 08 45 01.8 +0.3
CNLB Canela 150.21 47 PKP PKPdf 08 44 57.8 +1.8
CNLB Canela 150.21 47 eP PKPdf 08 44 56.7 +0.8
PLTB Pedras Altas 150.99 54 PKP PKPdf 08 44 58.6 +1.6
PLTB Pedras Altas 150.99 54 eP PKPdf 08 44 57.1 +0.1
TRQA Tornquist 151.22 73 PKPdf 08 44 56.4 -0.8
TRQA PKPbc 08 45 03.6 -0.1
TRQA Tornquist 151.22 73 PKIKP PKPdf 08 44 56.4 -0.8
TRQA Tornquist 151.22 73 PKP PKPbc 08 45 03.5 -0.1
ELIB Princess Elisa 151.57 210 dPKPdf PKPdf 08 44 55.9 -0.9
ELIB dPKP PKPbc 08 45 03.1 -0.5
ELIB dPKPab PKPab 08 45 15.7 +1.0
NVL N'lazarevskaya 155.45 210 ePKIKP PKPdf 08 45 04.4 +2.3
NVL e 08 49 12.5
NVL ePPP PPP 08 52 49.2
NVL eSS SS 09 08 21.5 +6.3
NVL eSSS SSS 09 14 26.0

NVL pmax pmax
comp=Z,37nm,0.8s
SMAI San Martin Ant 155.56 144 PKPdf 08 45 01.7 -0.6
TROLL Troll, Antarti 157.24 203 ⇑PKPab PKPab 08 45 38.5 -0.6
comp=Z,7µm,0.7s
TROLL ⇑PKPdf PKPdf 08 45 03.9 -0.7
comp=Z,1µm,0.9s
SNAA Sanae 158.68 200 ⇑PKPab PKPab 08 45 44.0 -1.1
comp=Z,888nm,0.6s
SNAA ⇑PKPdf PKPdf 08 45 05.0 -1.2
comp=Z,173nm,0.8s
SNAA Sanae 158.68 200 PKP PKPdf 08 45 06.1 -0.1
comp=Z,11nm,1.1s,baz=168,slow=2.7,SNR=31
SNAA PKPab PKPab 08 45 43.7 -1.4
comp=Z,7.7nm,0.7s,baz=107,slow=1.7,SNR=6.6
SNAA PP PP 08 49 26.5 -1.9
comp=Z,36nm,0.9s,baz=121,slow=3.5,SNR=6.1
SNAA Sanae 158.68 200 PKPdf 08 45 04.8 -1.4
SNAA Sanae 158.68 200 PKIKP PKPdf 08 45 04.8 -1.4
VNA2 Neumayer--Watz 160.17 198 ⇑PKPab PKPab 08 45 51.3 -0.4
comp=Z,46nm,0.6s,baz=130,slow=4.7
VNA2 ⇑PKPdf PKPdf 08 45 06.9 -0.9
comp=Z,23nm,0.9s,baz=87,slow=1.4
VNA3 Neumayer Olymp 160.31 196 ⇑PKPab PKPab 08 45 50.8 -1.4
comp=Z,152nm,0.7s
VNA3 ⇑PKPdf PKPdf 08 45 06.8 -1.2
comp=Z,12nm,0.7s
VNA1 Neumayer--Stat 160.56 198 ⇑PKPab PKPab 08 45 52.9 -0.4
comp=Z,78nm,0.8s
VNA1 ⇑PKPdf PKPdf 08 45 07.4 -0.8
comp=Z,26nm,1.1s
EFI East Falkland 160.63 99 PKPdf 08 45 53.8 -0.4
EFI East Falkland 160.63 99 PKP2 PKPab 08 45 53.8 -0.4

*IDC **20** 08:28:10.2±2.3, 1°.54N×126°.51E, h0km, mb4.2/4, mbtmp4.2/5, ML3.8/1, MS5.1/1, Error ellipse: s-maj=101.7km s-min=40.5km az=85.0*
*DJA **20** 08:28:12.8±1.1, 2°.1N±3°×12°.7E±°, h12km±11km, M4.1/11, MLv4.1/11*
*NEIC **20** 08:28:18.6±1.4, 1°.3N±0°.1×126°.64E±0°.06, h35km±2km, mb4.2/12, Error ellipse: s-maj=24.9km s-min=7.4km az=18.0*

ISC 20 08:28:16.4±1.3, 1°.6N±0°.1×126°.8E±0°.1, h35km, n29, σ1s57/27, mb4.2/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.99	144		Pn		08 28 34.0	+0.2
TNTI	Ternate	0.99	144	P	Pn		08 28 34.0	+0.2
TNTI				S	Sn		08 28 49.5	+3.0
SGSI	Sangihe	2.44	329	P	Pn		08 28 50.0	-3.8
KMSI	Cibinong	2.98	250	P	Pn		08 29 01.2	+0.1
LUWI	Luwuk	4.78	237	Pn	Pn		08 29 23.5	-2.5
LUWI	Luwuk	4.78	237	P	Pn		08 29 26.4	+0.4
NLAI	Namlea	4.79	176	P	Pn		08 29 26.7	+0.6
MRSI	Marisa	4.97	257	P	Pn		08 29 26.7	-1.8
TOLI2	Tolitoli	6.02	266		Pn		08 29 40.8	-2.2
MYLDM	Lahad Datu	9.01	294		Pn		08 30 27.4	+3.3
KNRA	Kununurra	17.25	174	P	P		08 32 14.7	-1.3
FITZ	Fitzroy Crossi	19.58	183	P	P		08 32 40.1	-1.5
	0.2nm,0.3s,baz=1.7,slow=8.1,SNR=8.1							
	2.4nm,0.7s							
WB0	Warramunga Arr	22.49	161		P		08 33 11.9	-1.1
WB0				IAmb	IAmb		08 33 15.0	
	comp=Z,9.4nm,0.7s							
WRAB	Tennant Creek	22.63	161	P	P		08 33 13.4	-1.1
WRAB				IAmb	IAmb		08 33 22.8	
	comp=Z,9.4nm,0.8s							
WRA	Warramunga Arr	22.63	161	P	P		08 33 13.2	-1.4
	comp=Z,7.4nm,0.6s,baz=339,slow=11,SNR=81							
	comp=Z,7.4nm,0.6s							
WRA	Warramunga Arr	22.63	161		P		08 33 12.5	-2.0
WR8	Warramunga Arr	22.70	161		P		08 33 14.1	-1.1
WR8				IAmb	IAmb		08 33 15.4	
	comp=Z,7.6nm,0.6s							
WR0	Warramunga Arr	22.71	161	P	P		08 33 14.4	-1.0
WR0				IAmb	IAmb		08 33 23.1	
	comp=Z,9.2nm,0.9s							
AS31	Alice Springs	26.03	165		P		08 33 46.1	-0.4
AS31				IAmb	IAmb		08 33 54.1	
	comp=Z,2.3nm,0.7s							
ASAR	Alice Springs	26.03	165	P	P		08 33 45.8	-0.7
	comp=Z,3.7nm,0.7s,baz=340,slow=11,SNR=36							
	comp=Z,3.7nm,0.7s							
ASAR	Alice Springs	26.03	165	P	P		08 33 45.6	-0.9
FORT	Forrest	32.20	178	P	P		08 34 41.7	+0.5
BBOO	Buckleboo	35.31	166	P	P		08 35 07.6	-0.7
STKA	Stephens Creek	36.12	158	P	P		08 35 14.2	-1.0
	comp=Z,1.6nm,0.5s,baz=320,slow=9.9,SNR=3.2							
	comp=Z,1.6nm,0.5s							
BRDH	Bariadhala	40.05	304	LR	LR		08 52 33.8	
	comp=Z,2µm,20.6s,baz=182,slow=37							
VNDA	Vanda	81.30	173	P	P		08 40 27.9	-0.7
	comp=Z,1.5nm,0.8s,baz=320,slow=5.5,SNR=8.6							
	comp=Z,1.5nm,0.8s							
VNDA	Vanda	81.30	173	IAmb	IAmb		08 40 29.5	
	comp=Z,1.5nm,0.7s							
QSPA	South Pole Qui	91.50	180	P	P		08 41 21.6	+2.5
TXAR	Lajitas Array	122.85	53	PKP	PKPdf		08 47 09.6	0.0
	comp=Z,0.8nm,0.8s,baz=283,slow=1.4,SNR=1.7							

*ASRS **20** 08:29:40.0±1.1, 53°.65N×87°.64E, h0km, M2.8, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 08:29:43.9±3.3, 53°.59N×87°.80E, h0km, mbtmp2.8/2, ML2.7/2, Error ellipse: s-maj=32.4km s-min=16.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.81	283	I	I		08 40 00.0	
	baz=100,slow=355,SNR=5.9							
ZALV	Zalesovo Beam	1.81	283	Pg	Pn		08 30 17.0	+0.7
	1.8nm,0.3s,baz=98,slow=17,SNR=17							
ZALV				Lg	Lg		08 30 40.5	
	1.5nm,0.3s,baz=100,slow=29,SNR=6.4							
KURBB	Kurchatov Arra	6.44	246	Pn	Pn		08 31 21.1	+1.3
	0.1nm,0.3s,baz=64,slow=14,SNR=4.4							
	0.2nm,0.3s							
MKAR	Makanchi Array	7.66	210	Pn	Pn		08 31 37.4	+0.7
	0.2nm,0.3s,baz=30,slow=13,SNR=10.0							
	0.3nm,0.3s							

PLV 20 08:32:54.4±1.6, 19°.21N×105°.12E, h1km±936km, ML4.1, MW3.8, Vietnam

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CCVB	Con Cuong	0.28	236	*i* Pg	Pg		08 32 59.7	-0.1
CCVB				*e*Sg	Sg		08 33 03.8	+0.4
CCVB				IAML			08 33 04.3	
	comp=E,13µm,0.3s							
CCVB				IAML			08 33 08.9	
	comp=N,8µm,0.5s							
THV	Thanh Hoa	0.89	44	*i* Pg	Pg		08 33 11.7	+0.2
THV				IAML			08 33 27.1	
	comp=E,3µm,0.2s							
LAVB	Lang Chanh	0.95	8	*i* Pg	Pg		08 33 12.6	0.0
LAVB				IAML			08 33 27.3	
	comp=N,16µm,0.4s							
LAVB				IAML			08 33 28.3	
	comp=E,19µm,0.2s							
HBVN	Hoa-Binh	1.62	8	*e*Pg	Pg		08 33 25.5	-0.1
HBVN				IAML			08 33 53.0	
	comp=E,5µm,0.3s							
PLV	Phu-Lien	2.13	41	*e*Pg	Pg		08 33 35.0	-0.3
BGV	Bac-Giang	2.32	26	*e*Pg	Pg		08 33 38.4	-0.5
BGV				IAML			08 34 11.3	
	comp=E,1µm,0.2s							
BGV				IAML			08 34 11.5	
	comp=N,1µm,0.5s							
DBV	Dienbien	2.93	318	*e*Pg	Pg		08 33 50.6	0.0
DBV				IAML			08 34 36.6	
	comp=N,979nm,0.6s							
DBV				IAML			08 34 36.7	
	comp=E,1µm,0.5s							
VTVB	Vinh Tuy

*ASRS **20** 08:55:23.0±1.1,54.29N×86.13E,h0km,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 08:55:25.9±2.2,54.28N×86.09E,h0km,mbtmp3.2/3, ML2.8/3,Error ellipse: s-maj=18.1km s-min=10.9km az=57.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.82**	**247**	I	I	09 00 10.0	
	baz=66,slow=351,SNR=1.0						
ZALV	**Zalesovo Beam**	**0.82**	**247**	Pg	Pg	08 55 39.8	-1.8
	2.4nm,0.3s,baz=64,slow=16,SNR=15						
ZALV				Lg	Lg	08 55 53.9	
	4.9nm,0.3s,baz=66,slow=28,SNR=9.0						
KURBB	**Kurchatov Arra**	**5.90**	**235**	Pn	Pn	08 56 55.2	+0.8
	0.2nm,0.3s,baz=50,slow=13,SNR=12						
KURBB				Lg	Lg	08 58 34.4	
	baz=45,slow=29,SNR=1.6						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.88**	**199**	Pn	Pn	08 57 22.6	+1.0
	0.5nm,0.3s,baz=20,slow=10,SNR=14						
	0.4nm,0.3s						
BVAR	**Borovoye Array**	**9.41**	**269**	Pn	Pn	08 57 42.1	-0.6
	baz=56,slow=16,SNR=2.1						
	0.4nm,0.3s						

*IDC **20** 08:59:07.1±3.4,53.60N×87.72E,h0km,mbtmp2.8/2, ML2.6/2,Error ellipse: s-maj=32.5km s-min=16.6km az=53.0*

ASRS 20 08:59:05.0±1.4,53.58N×87.73E,h0km,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.77**	**283**	I	I	09 09 10.0	
	baz=100,slow=357,SNR=4.9						
ZALV	**Zalesovo Beam**	**1.77**	**283**	Pg	Pg	08 59 39.0	+0.2
	1.3nm,0.3s,baz=99,slow=15,SNR=11						
ZALV				Lg	Lg	09 00 03.0	
	2.5nm,0.3s,baz=102,slow=28,SNR=14						
KURBB	**Kurchatov Arra**	**6.39**	**246**	Pn	Pn	09 00 42.8	+2.4
	0.1nm,0.3s,baz=63,slow=14,SNR=4.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**7.64**	**209**	Pn	Pn	09 01 01.1	+3.6
	0.2nm,0.3s,baz=26,slow=12,SNR=6.3						
	0.3nm,0.4s						

*NNC **20** 09:00:48.7±3.7,52.00N×75.55E,h0km,mb3.0,mpv2.5, Error ellipse: s-maj=184.9km s-min=17.2km az=28.0, Suspected Mining explosion.*

*IDC **20** 09:00:48.5±1.1,51.65N×75.49E,h0km,mbtmp3.0/2, ML2.4/2,Error ellipse: s-maj=34.7km s-min=8.6km az=29.0*

ISC 20 09:00:45.9±1.1,51.6N±0.1×75.23E±0.08,h0km,n9, σ1§50/10,4C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.29**	**113**	Pg	**Pb**	**09 01 27.2**	**-0.8**
	0.3nm,0.3s,baz=305,slow=19,SNR=23						
KURBB				Lg	Lg	09 01 57.5	
	0.5nm,0.3s,baz=304,slow=33,SNR=11						
KURBB	**Kurchatov Arra**	**2.29**	**113**	⇑Pn	**Pg**	**09 01 29.0**	**-0.7**
	3.2nm,0.6s						
KURBB				⇑Sn	**Sg**	**09 01 59.6**	**+0.2**
	38nm,0.6s						
KURK	**Kurchatov**	**2.30**	**111**	⇓Pn	**Pg**	**09 01 29.2**	**-0.8**
	1.0nm,0.6s						
KURK				⇑Sn	**Sb**	**09 01 56.0**	**-1.3**
	3.8nm,0.8s						
BVA0	**Borovoye Array**	**3.31**	**298**	⇑Pg	**Pg**	**09 01 48.3**	**-0.9**
	1.6nm,0.6s,baz=114,slow=17,SNR=10						
BVA0				⇓Lg	Lg	09 02 32.9	
	11nm,0.9s,baz=107,slow=25,SNR=4.8						
BVAR	**Borovoye Array**	**3.31**	**298**	Pg	**Pg**	**09 01 48.5**	**-0.7**
	0.1nm,0.3s,baz=114,slow=17,SNR=12						
BVAR				Lg	Lg	09 02 33.1	
	0.2nm,0.3s,baz=104,slow=27,SNR=4.5						
I46RU	**ZALESOVO INFRA**	**6.29**	**64**	I	I	09 38 20.0	
	baz=247,slow=319,SNR=1.4						
ZALV	**Zalesovo Beam**	**6.29**	**64**	Pn	**Pn**	**09 02 21.6**	**+1.9**
	0.3nm,0.3s,baz=251,slow=14,SNR=4.7						
	1.1nm,0.4s						
MK31	**Makanchi Array**	**6.66**	**133**	⇓Lg	Lg	09 04 24.7	
	2.3nm,0.6s,baz=106,slow=19,SNR=4.9						
MKAR	**Makanchi Array**	**6.66**	**133**	Pn	**Pn**	**09 02 27.5**	**+2.6**
	0.1nm,0.3s,baz=324,slow=14,SNR=2.6						
MKAR				Sn	**Sn**	**09 03 40.6**	**-0.8**
	0.2nm,0.3s,baz=329,slow=22,SNR=3.0						
MKAR				Lg	Lg	09 04 11.0	
	0.4nm,0.3s,baz=312,slow=28,SNR=10						
	0.5nm,0.6s						

*SNET **20** 09:06:46.8±2.1,13.74N×90.96W,h14km,ML3.1*
*GCG **20** 09:06:47.9±1.1,13.69N×91.01W,h37km±142km,MD3.8, ML3.7*
*CATAC **20** 09:06:48.5±0.6,14°N±4.4°×9°1W±°,h36km±7km,M3.1/12, MLv3.1/12,Error ellipse: s-maj=9.4km s-min=3.0km az=26.8,confirmed*

ISC 20 09:06:48.2±6.7,13.6N±0.1×90.99W±0.07,h37km±7km,n32, σ0§72/36,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSG	**Sabana Grande**	**0.75**	**12**	*e*P	**Pn**	**09 07 01.8**	**-0.5**
FG16	**Alotenango, Sa**	**0.78**	**37**	*i* P	**Pn**	**09 07 03.0**	**+0.1**
FG16				*e*S	**Sn**	**09 07 14.4**	**+0.9**
FG16				IAML		09 07 15.1	
	comp=E,9μm,0.2s						
PCG5	**San Vicente Pa**	**0.83**	**46**	*i* P	**Pn**	**09 07 02.4**	**-1.0**
STG5	**El Palmar, Qui**	**0.83**	**335**	*e*P	Pn	09 07 07.5	+4.1
STG8	**El Palmar, Qui**	**0.88**	**337**	*e*P	Pn	09 07 08.2	+4.0
STG8				IAML		09 07 24.2	
	comp=N,664nm,0.2s						
FAME	**Alcaldia de Sa**	**0.97**	**78**	P	**Pn**	**09 07 04.9**	**-0.4**
RTAL	**Retalhuleu**	**1.11**	**322**	S	**Sn**	**09 07 20.9**	**-0.3**
RTAL	**Retalhuleu**	**1.11**	**322**	P	**Pn**	**09 07 06.8**	**-0.4**
NUBE	**Las Nubes**	**1.21**	**77**	*e*P	**Pn**	**09 07 08.5**	**-0.1**
NUBE				*e*S	**Sn**	**09 07 23.8**	**0.0**
NUBE	**Las Nubes**	**1.21**	**77**	*e*P	**Pn**	**09 07 08.3**	**-0.4**
NUBE	**Las Nubes**	**1.21**	**77**	P	**Pn**	**09 07 08.2**	**-0.5**
LOAL	**Lomas de Alarc**	**1.23**	**73**	P	**Pn**	**09 07 08.5**	**-0.4**
LOAL	**Lomas de Alarc**	**1.23**	**73**	S	**Sn**	**09 07 23.8**	**-0.5**
SLOZ	**Alcaldia de Sa**	**1.23**	**72**	*e*P	**Pn**	**09 07 06.5**	**-2.4**
SLOZ				*e*S	**Sn**	**09 07 23.2**	**-1.2**
SLOZ	**Alcaldia de Sa**	**1.23**	**72**	P	**Pn**	**09 07 08.4**	**-0.5**
CEVE	**Cerro Verde**	**1.34**	**82**	*e*P	**Pn**	**09 07 10.9**	**+0.3**
CEVE				*e*S	**Sn**	**09 07 28.1**	**+0.8**
CEVE	**Cerro Verde**	**1.34**	**82**	P	**Pn**	**09 07 10.5**	**-0.1**
CEVE	**Cerro Verde**	**1.34**	**82**	S	**Sn**	**09 07 26.8**	**-0.5**
SBLS	**San Blas**	**1.34**	**81**	*e*P	**Pn**	**09 07 10.7**	**+0.1**
SBLS				*e*S	**Sn**	**09 07 28.1**	**+0.8**
UNIC	**Universidad Ca**	**1.44**	**76**	P	**Pn**	**09 07 11.9**	**+0.1**
UNIC	**Universidad Ca**	**1.44**	**76**	S	**Sn**	**09 07 29.0**	**-0.5**
APG	**El Apazote**	**1.45**	**21**	*e*P	**Pn**	**09 07 12.7**	**+0.6**
JAYA	**Jayaque - finc**	**1.50**	**89**	*e*P	**Pn**	**09 07 12.7**	**0.0**
JAYA				*e*S	**Sn**	**09 07 31.2**	**+0.2**
JAYA	**Jayaque - finc**	**1.50**	**89**	*e*P	**Pn**	**09 07 12.5**	**-0.1**
JAYA	**Jayaque - finc**	**1.50**	**89**	P	**Pn**	**09 07 12.6**	**-0.1**
JAYA	**Jayaque - finc**	**1.50**	**89**	S	**Sn**	**09 07 30.6**	**-0.5**
LALI	**Alcalda de L**	**1.63**	**95**	P	**Pn**	**09 07 14.2**	**-0.2**
PMON	**Piamonte**	**1.63**	**87**	S	**Sn**	**09 07 33.1**	**-1.1**
PMON	**Piamonte**	**1.63**	**87**	P	**Pn**	**09 07 15.0**	**+0.6**
MTO3	**Montecristo**	**1.75**	**64**	*e*P	**Pn**	**09 07 16.2**	**0.0**
MTO3	**Montecristo**	**1.75**	**64**	S	**Sn**	**09 07 36.0**	**-1.4**
MTO3	**Montecristo**	**1.75**	**64**	P	**Pn**	**09 07 16.1**	**-0.1**

IDC 20 09:09:06.5±4.4,20.60S×175.89W,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=287.4km s-min=34.7km az=154.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.41**	**257**	P	P	09 17 34.0	-1.3
	0.6nm,0.9s,baz=89,slow=6.7,SNR=5.6						
	0.6nm,0.9s						
WRA	**Warramunga Arr**	**46.54**	**262**	P	P	09 17 37.0	+0.7
	1.0nm,0.5s,baz=99,slow=8.3,SNR=21						
	1.0nm,0.5s						
NVAR	**Mina Array Bea**	**79.76**	**42**	P	P	09 21 16.9	+0.1
	0.4nm,0.7s,baz=257,slow=5.2,SNR=2.9						
	0.4nm,0.7s						

*NEIC **20** 09:12:41.5±1.7,66.34N±0.02×157.27W±0.05,h13km±4km, Error ellipse: s-maj=3.1km s-min=2.5km az=127.0*
*AEIC **20** 09:12:41.3±1.6,66.34N±0.02×157.27W±0.04,h10km±3km, ML3.2,ML3.4/136(NEIC),Error ellipse: s-maj=2.7km s-min=2.5km az=118.0*
*ANF **20** 09:12:41.1±0.2,66.36N×157.26W,h1km±1km,ML3.6/57, Error ellipse: s-maj=1.5km s-min=1.0km az=112.0*

ISC 20 09:12:41.1±0.9,66.35N±0.02×157.25W±0.02,h9km±8km, n201,σ1§02/212,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
G19K	**Purcell Mounta**	**0.22**	**163**	Pg	**Pg**	**09 12 45.9**	**+0.4**
G19K				Sg	**Sg**	**09 12 48.7**	**+0.2**
G19K				IAML		09 12 49.3	
	comp=N,5μm,0.5s						
G19K	**Purcell Mounta**	**0.22**	**163**	P	**Pg**	**09 12 45.9**	**+0.4**
	baz=340						
G19K				S	**Sg**	**09 12 49.2**	**+0.7**
	baz=340						
G18K	**Tagagawik**	**0.73**	**232**		**Pg**	**09 12 54.8**	**-0.4**
G18K				Sg	**Sg**	**09 13 04.7**	**0.0**
G18K				IAML		09 13 07.5	
	comp=N,1μm,0.6s						
G18K	**Tagagawik**	**0.73**	**232**	P	**Pg**	**09 12 55.1**	**-0.1**
	baz=51						
G18K				S	**Sg**	**09 13 04.9**	**+0.2**
	baz=51						
H19K	**Roundabout Mou**	**0.89**	**158**		**Pg**	**09 12 57.8**	**-0.4**
H19K				Sg	**Sg**	**09 13 09.5**	**-0.2**
H19K				IAML		09 13 14.2	
	comp=N,1μm,0.5s						
H19K	**Roundabout Mou**	**0.89**	**158**	P	**Pg**	**09 12 58.0**	**-0.2**
	baz=338						
H19K				S	**Sg**	**09 13 09.9**	**+0.2**
	baz=338						
F20K	**Avaraart Lake**	**0.93**	**40**		**Pb**	**09 12 58.6**	**-0.6**
F20K				Sg	**Sb**	**09 13 11.0**	**-0.6**
F20K				IAML		09 13 15.5	
	comp=N,1μm,0.3s						
F20K	**Avaraart Lake**	**0.93**	**40**	P	**Pb**	**09 12 58.9**	**-0.3**
	baz=222						
F20K				S	**Sb**	**09 13 11.5**	**-0.1**
	baz=222						
F18K	**Selawik**	**1.00**	**286**		**Pg**	**09 12 59.6**	**-0.6**
F18K					**Sg**	**09 13 13.2**	**0.0**
F18K	**Selawik**	**1.00**	**286**	P	**Pg**	**09 12 59.8**	**-0.4**
	baz=104						
F18K				S	**Sg**	**09 13 13.8**	**+0.7**
	baz=104						
E19K	**Redstone River**	**1.11**	**0**		**Pg**	**09 13 02.4**	**0.0**
E19K					**Sg**	**09 13 16.7**	**-0.1**
E19K	**Redstone River**	**1.11**	**0**	IAML		09 13 20.6	
	comp=E,748nm,0.6s						
E19K				IAML		09 13 22.0	
	comp=N,817nm,0.4s						
E19K	**Redstone River**	**1.11**	**0**	P	**Pb**	**09 13 02.6**	**+0.2**
	baz=181						
H18K	**Honhosa River**	**1.29**	**201**		**Pg**	**09 13 04.5**	**-1.3**
H18K				IAML		09 13 24.6	
	comp=E,619nm,0.3s						
H18K	**Honhosa River**	**1.29**	**201**		**Sg**	**09 13 21.0**	**-1.5**
H18K	**Honhosa River**	**1.29**	**201**	P	**Pg**	**09 13 04.6**	**-1.1**
	baz=20						
H20K	**Anotleneega Mo**	**1.30**	**131**		**Pg**	**09 13 05.3**	**-0.6**
H20K					**Sb**	**09 13 22.7**	**+0.4**
H20K	**Anotleneega Mo**	**1.30**	**131**	P	**Pg**	**09 13 05.6**	**-0.4**
	baz=312						
H20K				S	**Sn**	**09 13 23.6**	**+0.8**
	baz=312						
IMAR	**Indian Mountai**	**1.47**	**103**		**Pn**	**09 13 07.7**	**0.0**
G21K	**Allakaket**	**1.51**	**82**		**Pn**	**09 13 08.2**	**0.0**
G21K	**Allakaket**	**1.51**	**82**	P	**Pn**	**09 13 08.5**	**+0.2**
	baz=265						
G21K				S	**Sn**	**09 13 28.6**	**+0.6**
	baz=265						
GCSA	**Galena City Sc**	**1.62**	**174**		**Pn**	**09 13 09.9**	**+0.3**
GCSA	**Galena City Sc**	**1.62**	**174**	P	**Pn**	**09 13 10.1**	**+0.4**
	baz=354						
G17K	**Kiwalik Mounta**	**1.64**	**240**		**Pn**	**09 13 09.3**	**-0.7**
G17K					**Sn**	**09 13 30.3**	**-0.8**
G17K	**Kiwalik Mounta**	**1.64**	**240**	P	**Pn**	**09 13 09.3**	**-0.7**
	baz=57						
E18K	**Tukpahlearik C**	**1.71**	**311**		**Pn**	**09 13 11.6**	**+0.7**
E18K	**Tukpahlearik C**	**1.71**	**311**	P	**Pn**	**09 13 11.9**	**+1.0**
	baz=128						
F21K	**Alatna River**	**1.73**	**58**		**Pn**	**09 13 11.8**	**+0.5**
F21K				IAML		09 13 41.4	
	comp=N,404nm,0.7s						
F21K	**Alatna River**	**1.73**	**58**	P	**Pn**	**09 13 12.0**	**+0.8**
	baz=241						
H17K	**Granite Mounta**	**1.80**	**219**		**Pn**	**09 13 11.9**	**-0.3**
H17K				IAML		09 13 38.4	
	comp=E,435nm,0.3s						
H17K	**Granite Mounta**	**1.80**	**219**	P	**Pn**	**09 13 12.4**	**+0.2**
	baz=37						
H17K				S	**Sn**	**09 13 37.2**	**+2.0**
	baz=37						
I20K	**Naaghedeneel**	**1.94**	**142**		**Pn**	**09 13 14.8**	**+0.7**
H21K	**Melozitna Rive**	**1.94**	**109**		**Pn**	**09 13 14.1**	**-0.1**
H21K				IAML		09 13 45.4	
	comp=N,237nm,0.7s						
H21K	**Melozitna Rive**	**1.94**	**109**	P	**Pn**	**09 13 14.4**	**+0.2**
	baz=293						
E20K	**Nigu River**	**1.96**	**12**		**Pn**	**09 13 15.5**	**+1.1**
E20K					**Pb**	**09 13 16.3**	**-0.5**
E20K	**Nigu River**	**1.96**	**12**	P	**Pb**	**09 13 16.4**	**-0.5**
	baz=193						
E17K	**Hotham Inlet**	**1.96**	**294**		**Pn**	**09 13 14.4**	**0.0**
E17K	**Hotham Inlet**	**1.96**	**294**	P	**Pn**	**09 13 14.7**	**+0.2**
	baz=110						
D19K	**Kuna River**	**2.18**	**352**		**Pn**	**09 13 18.8**	**+1.4**
D19K					**Pn**	**09 13 18.9**	**+1.5**
D19K	**Kuna River**	**2.18**	**352**	P	**Pn**	**09 13 19.0**	**+1.5**
	baz=171						
F22K	**John River**	**2.31**	**57**		**Pn**	**09 13 20.0**	**+0.7**
D20K	**Etivluk River**	**2.38**	**6**		**Pn**	**09 13 21.8**	**+1.6**
H22K	**Ishtalitna Cre**	**2.43**	**98**		**Pn**	**09 13 21.5**	**+0.6**
H22K				IAML		09 13 59.8	
	comp=N,145nm,0.4s						
H22K	**Ishtalitna Cre**	**2.43**	**98**	P	**Pn**	**09 13 21.2**	**+0.3**
	baz=283						
E21K	**Killik River**	**2.45**	**30**		**Pn**	**09 13 22.0**	**+0.9**
E21K					**Pb**	**09 13 22.2**	**-3.1**
E21K	**Killik River**	**2.45**	**30**	P	**Pn**	**09 13 22.1**	**+0.9**
	baz=213						
J19K	**Poorman**	**2.46**	**163**		**Pn**	**09 13 22.0**	**+0.7**
J19K				IAML		09 14 05.6	
	comp=N,159nm,0.5s						
J19K				IAML		09 14 09.3	
	comp=E,155nm,0.7s						
J19K	**Poorman**	**2.46**	**163**	P	**Pn**	**09 13 22.0**	**+0.7**
	baz=344						
I21K	**Tanana**	**2.47**	**116**		**Pn**	**09 13 21.6**	**+0.2**
I21K	**Tanana**	**2.47**	**116**	P	**Pn**	**09 13 21.9**	**+0.5**
	baz=300						
J20K	**Nowinta River**	**2.54**	**148**		**Pn**	**09 13 24.1**	**+1.7**
J20K				IAML		09 14 02.5	
	comp=E,183nm,0.6s						
J20K				IAML		09 14 09.3	
	comp=N,156nm,0.6s						
D17K	**Noatak River**	**2.66**	**303**		**Pn**	**09 13 24.2**	**+0.3**
D17K	**Noatak River**	**2.66**	**303**	P	**Pn**	**09 13 24.4**	**+0.4**
	baz=118						
C18K	**Utukok River**	**2.76**	**328**		**Pn**	**09 13 25.6**	**+0.1**
C18K	**Utukok River**	**2.76**	**328**	P	**Pn**	**09 13 26.1**	**+0.6**
	baz=145						
E22K	**Anaktuvuk Pass**	**2.77**	**47**		**Pn**	**09 13 27.4**	**+1.9**
E22K	**Anaktuvuk Pass**	**2.77**	**47**	P	**Pn**	**09 13 26.5**	**+1.0**
	baz=232						
RDOG	**Red Dog Mine**	**2.79**	**310**		**Pn**	**09 13 27.1**	**+1.4**
RDOG	**Red Dog Mine**	**2.79**	**310**	P	**Pn**	**09 13 27.2**	**+1.4**
	baz=126						
I17K	**Unalakleet**	**2.87**	**212**		**Pn**	**09 13 28.0**	**+1.1**
I17K				IAML		09 14 22.7	
	comp=N,146nm,0.8s						
C19K	**Lookout Ridge**	**2.91**	**343**		**Pn**	**09 13 27.6**	**+0.1**
C19K	**Lookout Ridge**	**2.91**	**343**	P	**Pn**	**09 13 28.8**	**+1.3**
	baz=161						
J18K	**Innoko River**	**2.91**	**175**		**Pn**	**09 13 27.9**	**+0.4**
J18K				IAML		09 14 20.2	
	comp=N,87nm,0.7s						
J18K				IAML		09 14 20.5	
	comp=E,106nm,0.8s						
J18K	**Innoko River**	**2.91**	**175**	P	**Pn**	**09 13 27.7**	**+0.3**
	baz=356						
COLD	**Coldfoot**	**2.92**	**69**		**Pn**	**09 13 28.2**	**+0.6**
COLD				IAML		09 14 19.4	
	comp=N,91nm,0.5s						
COLD				IAML		09 14 21.5	
	comp=E,82nm,0.6s						
COLD	**Coldfoot**	**2.92**	**69**	P	**Pn**	**09 13 27.8**	**+0.1**
	baz=256						
C21K	**Knifeblade Rid**	**2.97**	**17**		**Pn**	**09 13 29.1**	**+0.8**
MLY	**Manley**	**3.00**	**113**		**Pn**	**09 13 28.7**	**0.0**
MLY				IAML		09 14 22.3	
	comp=N,81nm,0.9s						
MLY	**Manley**	**3.00**	**113**	P	**Pn**	**09 13 28.6**	**-0.2**
	baz=299						
J17K	**VABM Dome**	**3.07**	**196**		**Pn**	**09 13 30.1**	**+0.4**
J17K				IAML		09 14 26.1	
	comp=N,124nm,0.9s						
J17K	**VABM Dome**	**3.07**	**196**	P	**Pn**	**09 13 30.2**	**+0.5**
	baz=14						
D22K	**Ayikyak River**	**3.08**	**32**		**Pn**	**09 13 31.2**	**+1.4**
D22K	**Ayikyak River**	**3.08**	**32**	IAML		09 14 24.6	
	comp=N,107nm,1.1s						
D22K	**Ayikyak River**	**3.08**	**32**	P	**Pn**	**09 13 31.3**	**+1.4**
	baz=217						
C17K	**DeLong Mountai**	**3.13**	**316**		**Pn**	**09 13 31.1**	**+0.6**
C17K	**DeLong Mountai**	**3.13**	**316**	P	**Pn**	**09 13 31.2**	**+0.8**
	baz=130						
H23K	**Yukon River**	**3.18**	**96**	P	**Pn**	**09 13 32.1**	**+0.9**
	baz=283						
CHUM	**Lake Minchumin**	**3.24**	**138**	P	**Pn**	**09 13 33.7**	**+1.7**
	baz=322						
K20K	**Telida**	**3.30**	**154**		**Pn**	**09 13 33.8**	**+1.0**
K20K				IAML		09 14 31.7	
	comp=N,88nm,0.7s						
K20K	**Telida**	**3.30**	**154**	P	**Pn**	**09 13 34.0**	**+1.2**
	baz=337						
J16K	**Anvik River**	**3.40**	**207**		**Pn**	**09 13 35.0**	**+0.9**
J16K				IAML		09 14 34.9	
	comp=E,94nm,0.8s						
B21K	**Ikpikpuk River**	**3.43**	**16**		**Pn**	**09 13 34.6**	**+0.1**
B21K	**Ikpikpuk River**	**3.43**	**16**	IAML		09 14 42.1	
	comp=E,82nm,1.1s						
B21K				IAML		09 14 48.0	
	comp=N,67nm,0.8s						
BPAW	**Bear Paw Mtn.**	**3.47**	**128**		**Pn**	**09 13 36.6**	**+1.4**
BPAW				IAML		09 14 34.8	
	comp=N,91nm,0.8s						
BPAW				IAML		09 14 35.4	
	comp=E,81nm,1.0s						
BPAW	**Bear Paw Mtn.**	**3.47**	**128**	P	**Pn**	**09 13 36.6**	**+1.4**
	baz=313						
I23K	**Minto, Yukon-K**	**3.47**	**107**		**Pn**	**09 13 35.9**	**+0.8**
I23K	**Minto, Yukon-K**	**3.47**	**107**	IAML		09 14 33.4	
	comp=E,82nm,0.6s						
I23K	**Minto, Yukon-K**	**3.47**	**107**	P	**Pn**	**09 13 36.4**	**+1.2**
	baz=294						
B18K	**Kokolik River**	**3.48**	**332**		**Pn**	**09 13 36.1**	**+0.8**
B18K	**Kokolik River**	**3.48**	**332**	P	**Pn**	**09 13 36.3**	**+1.0**
	baz=148						
D23K	**Nanushuk River**	**3.63**	**41**	P	**Pn**	**09 13 38.9**	**+1.6**
	baz=227						
B20K	**Meade River**	**3.67**	**0**	Pn	**Pn**	**09 13 39.1**	**+1.2**
B20K				IAML		09 15 00.4	
	comp=E,47nm,1.0s						
B20K	**Meade River**	**3.67**	**0**	P	**Pn**	**09 13 39.0**	**+1.1**
	baz=181						
K17K	**Iditarod**	**3.68**	**188**		**Pn**	**09 13 38.1**	**+0.1**
K17K				IAML		09 14 42.4	
	comp=N,58nm,0.6s						
K17K				IAML		09 14 45.8	
	comp=E,62nm,0.8s						
K17K	**Iditarod**	**3.68**	**188**	P	**Pn**	**09 13 38.1**	**+0.1**
	baz=6.5						
C16K	**Lisburne Hills**	**3.68**	**305**	Pn	**Pn**	**09 13 39.1**	**+1.1**
C16K	**Lisburne Hills**	**3.68**	**305**	P	**Pn**	**09 13 39.3**	**+1.3**
	baz=118						
TOLK	**Toolik Lake Re**	**3.74**	**49**	Pn	**Pn**	**09 13 40.7**	**+1.8**
TOLK				IAML		09 14 50.1	
	comp=E,71nm,1.0s						
TOLK				IAML		09 15 01.4	
	comp=N,51nm,0.8s						
TOLK	**Toolik Lake Re**	**3.74**	**49**	P	**Pn**	**09 13 40.6**	**+1.7**
	baz=236						
E24K	**Your Creek**	**3.82**	**59**	Pn	**Pn**	**09 13 41.1**	**+1.1**
E24K				IAML		09 14 51.9	
	comp=E,51nm,0.6s						
E24K				IAML		09 14 56.2	
	comp=N,42nm,0.9s						
NEA2	**Nenana**	**3.84**	**114**		**Pn**	**09 13 40.8**	**+0.6**
NEA2				IAML		09 14 48.9	
	comp=E,45nm,1.0s						
NEA2				IAML		09 14 52.0	
	comp=N,46nm,1.1s						
NEA2	**Nenana**	**3.84**	**114**	P	**Pn**	**09 13 41.0**	**+0.8**
	baz=301						
H24K	**Noodor Dome**	**3.85**	**93**		**Pn**	**09 13 40.8**	**+0.4**
H24K				IAML		09 14 51.4	
	comp=E,68nm,0.9s						
H24K				IAML		09 15 01.0	
	comp=N,52nm,0.8s						
H24K	**Noodor Dome**	**3.85**	**93**	P	**Pn**	**09 13 41.3**	**+0.9**
	baz=282						
F24K	**Squaw Lake**	**3.87**	**68**		**Pn**	**09 13 40.7**	**+0.1**
F24K	**Squaw Lake**	**3.87**	**68**	IAML		09 14 54.1	
	comp=N,53nm,0.7s						
KTH	**Kantishna Hill**	**3.89**	**133**		**Pn**	**09 13 41.9**	**+1.0**
KTH				IAML		09 14 46.4	
	comp=E,61nm,1.2s						
G24K	**Hadweenzic Riv**	**3.92**	**80**		**Pn**	**09 13 41.1**	**-0.3**
BWN	**Browne**	**3.93**	**120**		**Pn**	**09 13 42.9**	**+1.4**
PPLA	**Purkeypile**	**4.09**	**146**		**Pn**	**09 13 45.4**	**+1.5**
PPLA				IAML		09 14 55.9	
	comp=E,39nm,1.2s						
PPLA	**Purkeypile**	**4.09**	**146**	P	**Pn**	**09 13 45.6**	**+1.7**
	baz=330						
A19K	**Wainwright**	**4.12**	**342**		**Pn**	**09 13 44.9**	**+0.9**
L20K	**Farewell, AK**	**4.15**	**158**		**Pn**	**09 13 45.8**	**+1.3**
L20K				IAML		09 14 53.5	
	comp=E,50nm,0.9s						
L20K				IAML		09 15 09.3	
	comp=N,39nm,1.1s		

CCB					IAML		09 14 58.7	
	comp=E,35nm,0.8s							
C23K	**Itkillik River**	**4.29**	**32**			**Pn**	**09 13 46.8**	**+0.4**
C23K	**Itkillik River**	**4.29**	**32**		IAML		09 15 04.9	
	comp=N,34nm,0.7s							
C23K					IAML		09 15 08.4	
	comp=E,32nm,1.1s							
L19K	**White Mountain**	**4.32**	**165**			**Pn**	**09 13 48.2**	**+1.5**
L19K					IAML		09 15 03.1	
	comp=E,30nm,0.8s							
L19K					IAML		09 15 19.8	
	comp=N,32nm,1.2s							
L19K	**White Mountain**	**4.32**	**165**	P		**Pn**	**09 13 48.3**	**+1.5**
	baz=347							
MCK	**McKinley**	**4.39**	**123**			**Pn**	**09 13 48.6**	**+0.8**
MCK	**McKinley**	**4.39**	**123**	P		**Pn**	**09 13 48.7**	**+0.8**
	baz=310							
IL31		**4.59**	**105**			**Pn**	**09 13 51.1**	**+0.7**
ILAR	**Eielson Array**	**4.59**	**105**			**Pn**	**09 13 51.0**	**+0.5**
H25L	**Birch Creek**	**4.61**	**86**			**Pn**	**09 13 51.4**	**+0.6**
H25L	**Birch Creek**	**4.61**	**86**	P		**Pn**	**09 13 51.7**	**+0.9**
	baz=276							
M19K	**Big River Lodg**	**4.64**	**163**	P		**Pn**	**09 13 52.6**	**+1.5**
	baz=346							
RND	**Reindeer**	**4.64**	**126**			**Pn**	**09 13 52.3**	**+1.1**
HDA	**Harding Lake**	**4.73**	**110**			**Pn**	**09 13 52.9**	**+0.5**
HDA					IAML		09 15 11.4	
	comp=E,27nm,0.8s							
HDA	**Harding Lake**	**4.73**	**110**	P		**Pn**	**09 13 53.2**	**+0.8**
	baz=295							
A22K	**Sinclair Lake**	**4.75**	**9**			**Pn**	**09 13 52.1**	**-0.5**
A22K	**Sinclair Lake**	**4.75**	**9**	P		**Pn**	**09 13 53.4**	**+0.8**
	baz=191							
L22K	**Petersville**	**4.75**	**141**			**Pn**	**09 13 55.1**	**+2.2**
L22K					IAML		09 14 51.9	
	comp=N,31nm,1.2s							
L22K					IAML		09 15 17.7	
	comp=E,22nm,0.9s							
L16K	**Owhat River**	**4.76**	**193**			**Pn**	**09 13 52.9**	**+0.1**
FYU	**Fort Yukon**	**4.82**	**82**	Pn		**Pn**	**09 13 54.0**	**+0.3**
M20K	**Styx River**	**4.83**	**156**	P		**Pn**	**09 13 55.6**	**+1.6**
	baz=340							
PRP	**Porcupine Dome**	**4.87**	**95**			**Pn**	**09 13 54.7**	**+0.2**
PRP	**Porcupine Dome**	**4.87**	**95**		IAML		09 15 29.0	
	comp=E,25nm,0.8s							
M18K	**Stony River**	**4.92**	**172**			**Pn**	**09 13 55.3**	**+0.3**
M18K	**Stony River**	**4.92**	**172**	P		**Pn**	**09 13 56.2**	**+1.1**
	baz=353							
M17K	**Holitna River**	**4.97**	**181**	Pn		**Pn**	**09 13 56.5**	**+0.8**
A21K	**Barrow**	**5.00**	**2**			**Pn**	**09 13 56.0**	**-0.1**
SKT	**Skwentna**	**5.05**	**148**			**Pn**	**09 13 58.4**	**+1.6**
SKT					IAML		09 15 23.9	
	comp=E,20nm,1.1s							
SKT	**Skwentna**	**5.05**	**148**	P		**Pn**	**09 13 58.7**	**+1.8**
	baz=333							
WAT7	**Susitna Watana**	**5.05**	**130**			**Pn**	**09 13 58.3**	**+1.3**
WAT1	**Susitna Watana**	**5.15**	**129**	P		**Pn**	**09 13 59.6**	**+1.4**
	baz=317							
J25K	**Salcha River,**	**5.24**	**104**			**Pn**	**09 13 59.9**	**+0.3**
J25K					IAML		09 15 27.7	
	comp=N,19nm,0.8s							
J25K	**Salcha River,**	**5.24**	**104**	P		**Pn**	**09 14 00.2**	**+0.6**
	baz=295							
DHY	**Denali Highway**	**5.36**	**123**			**Pn**	**09 14 02.4**	**+1.3**
DHY					IAML		09 15 41.6	
	comp=N,20nm,1.0s							
DHY	**Denali Highway**	**5.36**	**123**	P		**Pn**	**09 14 02.7**	**+1.5**
	baz=312							
SPNN	**North Nagishla**	**5.39**	**156**			**Pn**	**09 14 03.0**	**+1.3**
M16K	**Timber Creek**	**5.40**	**189**	Pn		**Pn**	**09 14 01.8**	**+0.1**
M16K					IAML		09 15 41.3	
	comp=E,19nm,0.9s							
STLK	**Strandline Lak**	**5.42**	**151**			**Pn**	**09 14 03.5**	**+1.4**
SPBG	**Spurr Blockage**	**5.55**	**155**			**Pn**	**09 14 05.4**	**+1.7**
WAT6	**Susitna Watana**	**5.58**	**128**	P		**Pn**	**09 14 05.4**	**+1.1**
	baz=317							
SPU	**Mount Spurr**	**5.68**	**154**	Pn		**Pn**	**09 14 06.8**	**+1.4**
SUA	**Susitna One**	**5.68**	**147**	Pn		**Pn**	**09 14 07.1**	**+1.5**
N19K	**Bonanza Creek**	**5.70**	**166**	Pn		**Pn**	**09 14 06.5**	**+0.8**
N19K	**Bonanza Creek**	**5.70**	**166**	P		**Pn**	**09 14 07.0**	**+1.2**
	baz=349							
N18K	**Kilae Creek**	**5.73**	**173**	Pn		**Pn**	**09 14 07.2**	**+1.0**
N18K	**Kilae Creek**	**5.73**	**173**	P		**Pn**	**09 14 07.3**	**+1.2**
	baz=354							
N17K	**Nushagak Hills**	**5.85**	**180**	P		**Pn**	**09 14 09.5**	**+1.7**
	baz=360							
GHO	**Glory Hole Cre**	**5.87**	**138**	Pn		**Pn**	**09 14 09.6**	**+1.5**
I26K	**Coal Creek Min**	**5.88**	**94**	P		**Pn**	**09 14 08.5**	**+0.3**
	baz=286							
PMR	**Palmer**	**5.96**	**139**	Pn		**Pn**	**09 14 11.1**	**+1.8**
J26L	**Joseph Creek**	**6.00**	**102**			**Pn**	**09 14 10.3**	**+0.4**
SML	**Sawmill**	**6.00**	**135**	Pn		**Pn**	**09 14 11.2**	**+1.2**
SCRK	**Sand Creek**	**6.07**	**107**	Pn		**Pn**	**09 14 11.0**	**0.0**
SCRK	**Sand Creek**	**6.07**	**107**	P		**Pn**	**09 14 11.0**	**0.0**
	baz=299							
DOT	**Dot Lake**	**6.21**	**110**	Pn		**Pn**	**09 14 12.4**	**-0.3**
SCM	**Sheep Creek Mo**	**6.28**	**132**	Pn		**Pn**	**09 14 15.0**	**+1.3**
RED	**Redoubt Volcan**	**6.28**	**159**	Pn		**Pn**	**09 14 15.2**	**+1.4**
I27K	**Kandik River**	**6.42**	**90**	Pn		**Pn**	**09 14 15.9**	**+0.2**
M24K	**Tolsona, Glenn**	**6.43**	**126**	Pn		**Pn**	**09 14 17.6**	**+1.7**
HARP	**HAARP**	**6.57**	**121**	P		**Pn**	**09 14 20.6**	**+3.0**
	baz=312							
MENT	**Mentasta**	**6.74**	**114**	Pn		**Pn**	**09 14 21.2**	**+1.2**
PWL	**Port Wells**	**6.79**	**140**	Pn		**Pn**	**09 14 22.7**	**+2.0**
K27K	**Chicken**	**6.79**	**103**	Pn		**Pn**	**09 14 21.5**	**+0.8**
O16K	**Kokwok River B**	**6.79**	**184**	Pn		**Pn**	**09 14 21.3**	**+0.5**
D27M	**Malcolm River**	**6.81**	**57**	P		**Pn**	**09 14 23.5**	**+2.5**
	baz=252							
I28M	**Miner Creek**	**7.14**	**89**	Pn		**Pn**	**09 14 25.8**	**+0.2**
L27K	**Beaver Creek,**	**7.38**	**109**	Pn		**Pn**	**09 14 28.6**	**-0.2**
BCAR	**Beaver Creek A**	**7.39**	**109**	Pn		**Pn**	**09 14 29.0**	**0.0**
E29M	**Blow River**	**7.77**	**66**	Pn		**Pn**	**09 14 33.4**	**-0.1**
M27K	**Edge Creek, AK**	**7.77**	**114**	Pn		**Pn**	**09 14 33.8**	**-0.4**
DAWY	**Dawson**	**7.84**	**99**	Pn		**Pn**	**09 14 35.9**	**+0.7**
L29M	**L29M**	**8.78**	**103**	Pn		**Pn**	**09 14 48.8**	**+0.7**
M29M	**Somme Creek**	**9.01**	**107**	Pn		**Pn**	**09 14 51.7**	**+0.5**
A36M	**Sachs Harbour**	**12.56**	**49**	Pn		**Pn**	**09 15 38.8**	**-0.9**

IDC 20 09:14:37.6±262.0, 56°51N×41°76E, h0km, Error ellipse: s-maj=105.2km s-min=53.2km az=99.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**2.52**	**277**	I	I	09 30 30.0	
	baz=92,slow=328,SNR=7.2						
I31KZ	**AKTYUBINSK INF**	**11.45**	**115**	I	I	10 20 00.0	
	0.1nm,0.5s,baz=307,slow=327,SNR=1.7						
I46RU	**ZALESOVO INFRA**	**24.39**	**78**	I	I	11 45 20.0	
	baz=290,slow=312,SNR=1.7						

IDC 20 09:26:37.1±2.9, 54°17N×86°42E, h0km, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=22.1km s-min=12.5km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**258**	I	I	09 32 40.0	
	0.1nm,0.9s,baz=76,slow=356,SNR=11						
ZALV	**Zalesovo Beam**	**0.97**	**258**	Pg	Pg	09 26 54.4	-1.3
	0.6nm,0.3s,baz=75,slow=17,SNR=8.5						
ZALV				Lg	Lg	09 27 09.6	
	1.4nm,0.3s,baz=77,slow=30,SNR=17						
KURBB	**Kurchatov Arra**	**5.99**	**237**	Pn	Pn	09 28 08.2	+1.3
	0.1nm,0.3s,baz=56,slow=13,SNR=5.3						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.83**	**201**	Pn	Pn	09 28 33.0	+0.7
	0.1nm,0.3s,baz=19,slow=14,SNR=1.5						
	0.1nm,0.3s						

*SOME **20** 09:32:58.6, 40°.08N×71°.60E, h5km*
*KRNET **20** 09:32:58.4±0.1, 40°.08N×71°.60E, h24km, mb3.7*
*ISU **20** 09:32:59, 40°.08N×71°.56E, h18km*

ISC 20 09:32:57.3±1.2, 40°.08N±0°.02×71°.60E±0°.02, h2km±10km, n39, σ1§10/75, 30C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.33**	**25**	P	**Pb**	**09 33 06.1**	**+0.2**
FRG				S	**Sb**	**09 33 11.6**	**-0.1**
MINT	**Mingtut**	**0.62**	**309**	P	**Pb**	**09 33 11.2**	**+0.4**
MINT				S	**Sb**	**09 33 19.8**	**-0.2**
DRK	**Karamyk**	**0.62**	**166**	⇑*i*P	**Pb**	**09 33 10.3**	**-0.7**
DRK				⇑*i*S	**Sb**	**09 33 19.0**	**-1.3**
TSTA	**Tashata**	**0.83**	**53**	P	**Pb**	**09 33 14.2**	**-0.4**
TSTA				S	**Sb**	**09 33 26.4**	**+0.1**
NAM	**Namangan**	**0.91**	**3**	P	**Pn**	**09 33 17.5**	**+0.3**
NAM				S	**Sn**	**09 33 30.7**	**-0.3**
OHH	**Osh**	**1.01**	**63**	⇑*i*P	**Pg**	**09 33 17.1**	**+0.5**
OHH				⇑*i*S	**Sg**	**09 33 30.8**	**+1.1**
CHDK	**Chadak**	**1.10**	**324**	P	**Pn**	**09 33 20.6**	**+0.7**
CHDK				S	**Sn**	**09 33 35.9**	**+0.1**
SFK	**Sufi-Kurgan**	**1.46**	**92**	⇑*i*P	**Pn**	**09 33 25.3**	**+0.4**
SFK				⇑*i*S	**Sg**	**09 33 44.7**	**+0.5**
GAR	**Garm**	**1.47**	**223**	⇑*i*P	**Pg**	**09 33 25.1**	**-0.3**
GAR				⇑*e*S	**Sn**	**09 33 44.5**	**-0.3**
TRKS	**Terek-Say**	**1.49**	**347**	⇑*e*P	**Pn**	**09 33 24.5**	**-0.8**
TRKS				⇑*e*S	**Sg**	**09 33 43.4**	**-1.8**
ARSB	**Arslanbob**	**1.63**	**40**	⇓*i*P	**Pb**	**09 33 28.1**	**0.0**
ARSB				⇓*e*S	**Sb**	**09 33 49.6**	**+0.4**
ARK	**Arkit**	**1.74**	**9**	⇓*e*P	**Pb**	**09 33 29.9**	**-0.1**
ARK				⇓*e*S	**Sb**	**09 33 52.7**	**+0.3**
SALK	**Salom-Alik**	**1.87**	**64**	⇑*i*P	**Pn**	**09 33 31.5**	**+0.9**
SALK				⇑*e*S	**Sn**	**09 33 55.7**	**+0.8**
CHMG	**Chimgan**	**1.90**	**321**	P	**Pb**	**09 33 32.5**	**-0.3**
CHMG				S	**Sg**	**09 33 57.8**	**-0.6**
CHRV	**Charvak**	**2.00**	**322**	P	**Pb**	**09 33 33.7**	**-0.8**
CHRV				S	**Sb**	**09 34 00.4**	**+0.5**
PSK	**Pskem**	**2.07**	**334**	P	**Pb**	**09 33 35.5**	**-0.1**
PSK				S	**Sg**	**09 34 03.2**	**-0.5**
TGS	**TashGRES**	**2.08**	**311**	P	**Pg**	**09 33 37.8**	**+0.8**
TGS				S	**Sg**	**09 34 06.5**	**+2.6**
TVKS	**Tavaksay**	**2.10**	**316**	P	**Pb**	**09 33 36.2**	**0.0**
TVKS				S	**Sg**	**09 34 04.1**	**-0.7**
NZBK	**Nazarbek**	**2.21**	**302**	P	**Pg**	**09 33 40.6**	**+1.0**
NZBK				S	**Sg**	**09 34 11.0**	**+2.8**
CHGR	**Chuyangaron**	**2.37**	**234**	⇑*i*P	**Pn**	**09 33 38.2**	**+0.9**
CHGR				⇑*i*S	**Sn**	**09 34 07.3**	**+0.3**
MNAS	**Manas**	**2.50**	**15**	⇓*i*P	**Pn**	**09 33 40.4**	**+1.2**
MNAS				⇓*i*S	**Sn**	**09 34 10.8**	**+0.5**
CHM	**Chimkent**	**2.70**	**327**	*e*P	**Pg**	**09 33 48.8**	**-0.2**
	83nm,0.1s						
CHM				*e*S	**Sg**	**09 34 24.4**	**+0.4**
	315nm,0.5s						
ARLS	**Aral**	**2.72**	**48**	⇑*i*P	**Pn**	**09 33 43.4**	**+1.2**
ARLS				⇑*i*S	**Sn**	**09 34 16.2**	**+0.4**
DZA	**Taraz**	**2.82**	**356**	*e*P	**Pg**	**09 33 50.0**	**-1.3**
	37nm,0.2s						
DZA				*e*S	**Sg**	**09 34 26.7**	**-1.1**
	137nm,0.6s						
MRKS	**Merke**	**2.93**	**24**	*e*P	**Pg**	**09 33 52.3**	**-1.1**
	24nm,0.3s						
MRKS				*e*S	**Sg**	**09 34 30.9**	**-0.5**
	19nm,0.3s						
EKS2	**Erkin-Say**	**3.06**	**32**	⇑*i*P	**Pn**	**09 33 48.0**	**+1.2**
EKS2				⇑*i*S	**Sn**	**09 34 24.2**	**+0.2**
UCH	**Uchtor**	**3.07**	**45**	⇑*i*P	**Pn**	**09 33 48.5**	**+1.2**
UCH				⇑*i*S	**Sn**	**09 34 25.0**	**+0.1**
KK31	**Karatay Array**	**3.13**	**345**	Pg	**Pb**	**09 33 54.5**	**+0.8**
	16nm,0.6s,baz=162,slow=13,SNR=26						
KK31				⇓Lg	Lg	09 34 38.4	
	29nm,0.5s,baz=160,slow=28,SNR=4.3						
JNKS	**Jany-Kuch**	**3.24**	**71**	⇑*i*P	**Pn**	**09 33 50.8**	**+1.4**
JNKS				⇑*i*S	**Sn**	**09 34 28.8**	**+0.1**
AAK	**Ala-Archa**	**3.36**	**39**	⇑Pg	**Pn**	**09 33 53.3**	**+2.4**
	5.6nm,0.6s						
AAK				⇑Lg	Lg	09 34 43.5	
	26nm,1.0s						
AAK	**Ala-Archa**	**3.36**	**39**	⇓*i*P	**Pn**	**09 33 52.1**	**+1.1**
AAK				⇓*i*S	**Sn**	**09 34 31.5**	**0.0**
KBK	**Karagaybulak**	**3.60**	**43**	⇑*i*P	**Pn**	**09 33 55.8**	**+1.5**
KBK				⇑*i*S	**Sn**	**09 34 37.4**	**-0.1**
USP	**Ospenovka**	**3.85**	**33**	⇓*i*P	**Pn**	**09 33 59.2**	**+1.5**
USP				⇓*i*S	**Sn**	**09 34 43.3**	**-0.3**
BOOM	**Boomskoye usch**	**4.06**	**52**	⇑*i*P	**Pn**	**09 34 02.2**	**+1.6**
BOOM				⇑*i*S	**Sn**	**09 34 48.4**	**-0.4**
TKM2	**Tokmak 2**	**4.13**	**45**	⇓*i*P	**Pn**	**09 34 02.9**	**+1.3**
TKM2				⇓*i*S	**Sn**	**09 34 50.2**	**-0.4**
KST	**Kastek**	**4.41**	**46**	*e*P	**Pb**	**09 34 18.6**	**+3.0**
	4.8nm,0.3s						
KST				*e*S	**Sg**	**09 35 15.9**	**-3.1**
	17nm,0.5s						
TNSS	**Tian-Shan**	**4.98**	**52**	*e*P	**Pg**	**09 34 31.6**	**-1.1**
	0.7nm,0.2s						
TNSS				*e*S	**Sg**	**09 35 37.8**	**+0.6**
	1.9nm,0.7s						
KOTS	**Kotyrbulak**	**5.19**	**51**	*e*P	**Pg**	**09 34 35.9**	**-0.9**
	2.4nm,0.3s						
KOTS				*e*S	**Sg**	**09 35 45.2**	**+1.1**
	18nm,0.6s						
AB31	**Akbulak array**	**12.36**	**322**	⇑Pg	**Pn**	**09 35 52.1**	**-2.0**
	0.1nm,0.3s,baz=133,slow=13,SNR=4.9						
AB31				⇑Lg	Lg	09 36 40.7	
	0.4nm,0.3s,baz=357,slow=27,SNR=4.3						

IDC 20 09:39:37.6±7.1, 17°25S×174°71W, h0km, mb3.8/3, mbtmp3.8/3, MS3.4/1, Error ellipse: s-maj=307.9km s-min=35.4km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.64**	**108**	LR	LR	09 47 03.9	
	comp=Z,167nm,20.9s,baz=212,slow=30						
WRA	**Warramunga Arr**	**48.23**	**258**	P	P	09 48 19.7	-0.8
	0.2nm,0.3s,baz=96,slow=7.7,SNR=24						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**48.37**	**253**	P	P	09 48 22.2	+0.6
	2.3nm,0.5s,baz=87,slow=8.1,SNR=51						
	2.3nm,0.5s						
ILAR	**Eielson Array**	**84.49**	**12**	P	P	09 52 11.9	0.0
	0.4nm,0.8s,baz=213,slow=5.3,SNR=8.0						
	0.4nm,0.8s						

*ASRS **20** 09:42:11.0±0.4, 53°.66N×86°.80E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 09:42:13.6±2.9, 53°72N×86°99E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=27.3km s-min=16.2km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.30**	**281**	I	I	09 49 20.0	
	baz=99,slow=357,SNR=1.5						
ZALV	**Zalesovo Beam**	**1.30**	**281**	Pg	Pg	09 42 36.7	-1.9
	1.2nm,0.3s,baz=102,slow=16,SNR=14						
ZALV				Lg	Lg	09 42 56.3	
	1.4nm,0.3s,baz=103,slow=27,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.05**	**243**	Pn	Pn	09 43 45.2	+0.9
	0.1nm,0.3s,baz=58,slow=13,SNR=5.3						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**7.55**	**205**	Pn	Pn	09 44 06.5	+1.5
	0.1nm,0.3s,baz=21,slow=12,SNR=2.0						
	0.2nm,0.3s						

*MOS **20** 09:48:13.1±0.5, 44°.25N×148°.65E, h73km, mb4.5/1, Error ellipse: s-maj=26.1km s-min=16.4km az=179.2*
*JMA **20** 09:48:18.6±0.4, 44°.N±2°×14°.8E±°, h0km, MV4.3/25, SE OFF ETOROFU*
*SKHL **20** 09:48:19.1±0.4, 44°.30N×148°.20E, h49km±5km, mb4.8/4*

ISC 20 09:48:15.1±2.5, 44°21N±0°.08×148°5E±0°.1, h55km±30km, n27, σ1§90/44, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.11**	**338**	*c*iPN	**Pn**	**09 48 34.2**	**-0.1**
KUR				*i* S	**Sn**	**09 48 46.2**	**-2.4**
KUR	**Kuril'sk**	**1.11**	**338**	*e*P	**Pn**	**09 48 35.5**	**+1.2**
KUR				AMB	AMB	09 48 36.6	
	550nm,0.4s						
KUR				*e*S	**Sn**	**09 48 47.5**	**-1.1**
KUR				A	A	09 48 48.6	
	900nm,0.3s						
KUR				A	A	09 48 48.6	
	1µm,0.3s						
SHO	**Shikotan**	**1.23**	**254**	*e*P	Pn	09 48 43.6	+7.7
SHO				AMB	AMB	09 48 43.8	
	120nm,0.2s						
SHO				*e*S	**Sn**	**09 48 54.6**	**+3.1**
SHO				A	A	09 48 56.3	
	600nm,0.5s						
SHO				A	A	09 48 56.3	
	1µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.88**	**266**	*e*PN	**Pn**	**09 48 46.3**	**+1.5**
YUK				*e*S	**Sn**	**09 49 04.2**	**-3.2**
YUK				pmax	pmax		
	comp=Z,539nm,0.2s						
YUK				pmax	pmax		
	comp=E,143nm,0.1s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,829nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.88**	**266**	*e*P	**Pn**	**09 48 45.3**	**+0.5**
YUK				AMB	AMB	09 48 46.9	
	comp=N,460nm,0.2s						
YUK				*e*S	**Sn**	**09 49 05.2**	**-2.2**
YUK				A	A	09 49 07.7	
	comp=N,1µm,0.3s						
YUK				A	A	09 49 07.7	
	comp=N,1µm,0.3s						
NEM2	**Nemuro 2**	**2.14**	**248**	P	**Pn**	**09 48 48.5**	**+0.1**
NEM2				*e*S	**Sn**	**09 49 10.5**	**-3.3**
NMR	**Nemuro--Hokkai**	**2.15**	**248**	⇓*i*PN	**Pn**	**09 48 48.9**	**+0.5**
NMR				*e*S	**Sn**	**09 49 10.9**	**-3.1**
NMR	**Nemuro--Hokkai**	**2.15**	**248**	*e*P	**Pn**	**09 48 49.0**	**+0.5**
GLVR	**Golovnino**	**2.18**	**258**	*e*PN	**Pn**	**09 48 50.0**	**+1.2**
GLVR				*e*S	**Sn**	**09 49 12.4**	**-2.2**
GLVR				pmax	pmax		
	comp=N,54nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,173nm,0.1s						
GLVR				smax	smax		
	comp=E,487nm,0.1s						
GLVR				smax	smax		
	comp=N,1µm,0.4s						
GLVR	**Golovnino**	**2.18**	**258**	*e*P	**Pn**	**09 48 50.0**	**+1.2**
GLVR				AMB	AMB	09 48 53.4	
	comp=N,170nm,0.2s						
GLVR				*e*S	**Sn**	**09 49 12.4**	**-2.2**
GLVR				A	A	09 49 19.0	
	comp=N,1µm,0.3s						
GLVR				A	A	09 49 19.0	
	comp=N,490nm,0.3s						
RUSJ	**Misakicho**	**2.32**	**268**	*e*PN	**Pn**	**09 48 52.4**	**+1.7**
RUSJ				*e*S	**Sn**	**09 49 18.1**	**+0.1**
JRA	**Rausu**	**2.42**	**265**	P	**Pn**	**09 48 54.0**	**+1.8**
JRA				*e*S	**Sn**	**09 49 19.7**	**-1.0**
JNSB	**Nemuroshibetsu**	**2.53**	**261**	P	**Pn**	**09 48 55.2**	**+1.5**
JKHN	**Kushirohamanak**	**2.65**	**246**	*e*P	**Pn**	**09 48 56.4**	**+1.1**
JKHN				*e*S	**Sn**	**09 49 23.9**	**-2.2**
JNK	**Nakash**	**2.78**	**258**	P	**Pn**	**09 48 58.5**	**+1.5**
JNK				*e*S	**Sn**	**09 49 26.9**	**-2.5**
AKK	**Akkeshi**	**2.89**	**247**	*e*P	**Pn**	**09 48 59.5**	**+0.9**
JAK	**Akkeshi**	**2.99**	**247**	P	**Pn**	**09 49 00.7**	**+0.7**
JAK				*e*S	**Sn**	**09 49 32.0**	**-2.7**
JAR	**Ashorobuto**	**3.52**	**257**	*e*P	**Pn**	**09 49 09.4**	**+2.2**
JAR				*e*S	**Sn**	**09 49 46.5**	**-1.2**
JOB	**Onbets**	**3.61**	**250**	P	**Pn**	**09 49 10.2**	**+1.8**
JOB				*e*S	**Sn**	**09 49 47.4**	**-2.4**
JCH	**Churui**	**4.04**	**249**	*e*P	**Pn**	**09 49 15.3**	**+0.9**
JCH				*e*S	**Sn**	**09 49 58.7**	**-1.8**
JKK2	**Kamakawa 2**	**4.13**	**267**	*e*P	**Pn**	**09 49 19.2**	**+3.6**
JNBK	**Urakawa-nobuka**	**4.60**	**247**	P	**Pn**	**09 49 24.4**	**+2.5**
YSS	**Yuzhno-Sakhali**	**4.86**	**306**	*e*PN	**Pn**	**09 49 26.3**	**+0.8**
YSS				*e*S	**Sn**	**09 50 19.7**	**-0.7**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				smax	smax		
	comp=N,10.0nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS	**Yuzhno-Sakhali**	**4.86**	**306**	*e*P	**Pn**	**09 49 26.5**	**+1.0**
VLA	**Vladivostok**	**12.06**	**271**	*c* iPN	**Pn**	**09 51 05.0**	**+1.0**
VLA				pmax	pmax		
	comp=Z,39nm,0.8s						
VLA	**Vladivostok**	**12.06**	**271**	*e*P	**Pn**	**09 51 05.0**	**+1.0**
TJN	**Taejon**	**17.87**	**251**	⇑*i*P	**Pn**	**09 52 20.1**	**+0.5**

*ASRS **20** 09:55:03.0±0.6, 53°.64N×87°.96E, h0km, M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 20 09:55:01.1±3.2, 53°56N×88°16E, h0km, mbtmp2.6/2, ML2.1/1, Error ellipse: s-maj=26.0km s-min=18.2km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.02**	**283**	I	I	10 09 00.0	
	baz=101,slow=357,SNR=7.8						
ZALV	**Zalesovo Beam**	**2.02**	**282**	Pg	Pb	09 55 38.6	-0.1
	0.6nm,0.3s,baz=96,slow=19,SNR=9.4						
ZALV				Lg	Lg	09 56 05.1	
	1.7nm,0.3s,baz=102,slow=25,SNR=24						
KURBB	**Kurchatov Arra**	**6.62**	**248**	Pn	Pn	09 56 40.0	+0.4
	baz=59,slow=14,SNR=3.9						
KURBB				Sn	Sn	09 57 53.7	-2.0
	baz=62,slow=23,SNR=1.4						
KURBB				Lg	Lg	09 58 33.2	
	baz=60,slow=30,SNR=4.5						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.75**	**211**	Pn	Pn	09 56 56.0	+1.0
	0.2nm,0.6s,baz=24,slow=20,SNR=1.7						
MKAR				Lg	Lg	09 59 10.9	
	0.1nm,0.3s,baz=32,slow=34,SNR=4.1				

*NNC **20** 10:46:26.8±1.5,39.°85N×75.°30E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=10.9km s-min=8.9km az=150.0*

ISC 20 10:46:24.9±3.4,**39.°6N**±0.°1×**75.°42E**±0.°07,**h2**km±26km,**n16,** σ1**9**13/26,**12C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.43**	**7**	⇑*iP*		**Pn**	**10 46 50.1**	**-2.0**
JNKS				⇑*iS*		**Sn**	**10 47 08.2**	**-3.5**
SFK	**Sufi-Kurgan**	**1.52**	**285**	⇑*eP*		**Pn**	**10 46 53.5**	**+0.1**
SFK				⇑*iS*		**Sb**	**10 47 14.5**	**+0.6**
SALK	**Salom-Alik**	**1.75**	**316**	⇑*eP*		**Pn**	**10 46 56.4**	**0.0**
SALK				⇑*iS*		**Sn**	**10 47 19.7**	**+0.4**
ARLS	**Aral**	**2.37**	**340**	⇓*eP*		**Pn**	**10 47 05.4**	**+0.4**
ARLS				⇓*iS*		**Sn**	**10 47 35.5**	**+0.7**
UCH	**Uchtor**	**2.68**	**345**	⇑*eP*		**Pn**	**10 47 10.1**	**+0.6**
UCH				⇑*iS*		**Sn**	**10 47 43.0**	**+0.3**
KDJ	**Kajisay**	**2.83**	**28**	⇑*eP*		**Pn**	**10 47 11.5**	**+0.3**
KDJ				⇑*eS*		**Sn**	**10 47 45.9**	**-0.1**
BOOM	**Boomskoye usch**	**2.88**	**8**	⇑*eP*		**Pn**	**10 47 12.4**	**+0.5**
BOOM				⇑*iS*		**Sn**	**10 47 47.2**	**0.0**
MRKS	**Merke**	**3.52**	**333**	Pg		**Pb**	**10 47 26.7**	**-1.3**
MRKS				Lg		Lg	10 48 11.2	
MRKS	**Merke**	**3.52**	**333**	*eP*		**Pb**	**10 47 27.0**	**-1.0**
	2.6nm,0.5s							
MRKS				*eS*		**Sb**	**10 48 11.3**	**+0.1**
	7.1nm,0.7s							
MTBS	**Maitube**	**3.57**	**12**	Pg		**Pb**	**10 47 28.0**	**-0.8**
MTBS				Lg		Lg	10 48 13.3	
MTBS	**Maitube**	**3.57**	**12**	*eP*		**Pb**	**10 47 28.0**	**-0.8**
	2.8nm,0.7s							
MTBS				*eS*		**Sb**	**10 48 13.3**	**+0.7**
	4.9nm,0.6s							
TNSS	**Tian-Shan**	**3.59**	**18**	Pg		**Pb**	**10 47 29.3**	**0.0**
TNSS				Lg		Lg	10 48 15.7	
TNSS	**Tian-Shan**	**3.59**	**18**	*eP*		**Pb**	**10 47 29.3**	**0.0**
	2.7nm,0.5s							
TNSS				*eS*		**Sb**	**10 48 15.7**	**+2.3**
	1.4nm,0.7s							
DGS	**Degeres**	**3.61**	**4**	Pg		**Pb**	**10 47 29.8**	**+0.3**
	4.7nm,0.4s							
DGS				Lg		Lg	10 48 16.4	
	5.2nm,0.5s							
KRBS	**Karabastau**	**4.06**	**3**	Pg		**Pb**	**10 47 37.5**	**+0.3**
	1.9nm,0.3s							
KRBS				Lg		Lg	10 48 30.0	
	3.3nm,0.6s							
KTBS	**Karatobe**	**4.18**	**13**	Pg		**Pb**	**10 47 39.6**	**+0.4**
KTBS				Lg		Lg	10 48 33.5	

*AEIC **20** 11:00:07.9±0.7,55.°20N±0.°05×159.°90W±0.°07,h50km±6km, Error ellipse: s-maj=7.6km s-min=4.9km az=144.0*

NEIC 20 11:00:08.1±0.6,**55.°17N**±0.°05×**159.°86W**±0.°08,**h54**km±5km, **ML3.3**/34,**ML3.2**(AEIC),**Error ellipse: s-maj=8.3km s-min=5.0km az=144.0,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.38**	**155**			Pn	11 00 18.2	-0.1
CNBA						Sn	11 00 25.9	+0.3
CNBA				IAML			11 00 27.1	
	comp=N,2μm,0.2s							
CNBA				IAML			11 00 27.2	
	comp=E,2μm,0.2s							
SDPT	**Sand Point**	**0.40**	**298**			Pn	11 00 18.1	-0.4
SDPT						Sn	11 00 26.0	+0.1
VNKR	**Veniaminof 5**	**0.91**	**18**			Pn	11 00 24.6	-0.2
VNKR						Sn	11 00 37.1	+0.1
VNSG	**Veniaminof 6**	**1.06**	**24**			Pn	11 00 26.7	-0.1
PS1A	**Pavlof South-1**	**1.10**	**284**			Pn	11 00 27.1	-0.2
PS1A						Sn	11 00 41.2	-0.4
PVV	**Pavlof Volcano**	**1.12**	**281**			Pn	11 00 27.2	-0.3
VNHG	**Veniaminof 1**	**1.13**	**20**			Pn	11 00 27.7	0.0
VNHG						Sn	11 00 42.7	+0.4
VNFG	**Fog Glacier, M**	**1.14**	**9**			Pn	11 00 27.8	0.0
VNFG				IAML			11 00 44.0	
	comp=E,958nm,0.6s							
DOL	**Dolgoi Island**	**1.15**	**270**			Pn	11 00 27.6	-0.3
DOL						Sn	11 00 42.6	+0.1
PS4A	**Pavlof South-4**	**1.15**	**280**			Pn	11 00 27.7	-0.3
PS4A						Sn	11 00 42.9	+0.2
HAG	**Hague Volcano**	**1.18**	**278**			Pn	11 00 28.2	-0.1
PN7A	**Pavlof North-7**	**1.25**	**283**			Pn	11 00 29.4	0.0
PN7A						Sn	11 00 45.3	+0.2
S12K	**Black Hills**	**1.36**	**294**			Pn	11 00 30.7	-0.1
DT1	**Dutton Round H**	**1.39**	**269**			Pn	11 00 30.9	-0.2
DT1						Sn	11 00 48.5	+0.1
ANPB	**Aniakchak Plen**	**1.87**	**28**			Pn	11 00 37.6	0.0
AZAC	**Aniakchak**	**1.96**	**27**			Pn	11 00 39.0	0.0
FALS	**False Pass**	**2.07**	**263**			Pn	11 00 41.1	+0.8
ISNN	**Isanotski Nort**	**2.28**	**263**			Pn	11 00 44.4	+1.1
CHIR	**Chirikof Islan**	**2.50**	**73**	Pn		Pn	11 00 45.8	-0.5
CHIR				IAML			11 01 27.7	
	comp=E,148nm,1.1s							
CHIR				IAML			11 01 32.1	
	comp=N,225nm,0.9s							
PLK4	**Peulik 4**	**3.15**	**37**			Pn	11 00 56.0	+0.8
PLK4				IAML			11 01 37.6	
	comp=N,110nm,0.8s							
PLK4				IAML			11 01 47.8	
	comp=E,87nm,1.1s							
PLK1	**Peulik 1**	**3.20**	**33**			Pn	11 00 56.4	+0.6
AKUT	**Akutan**	**3.58**	**256**	Pn		Pn	11 01 01.6	+0.6
AKUT				IAML			11 02 04.2	
	comp=E,71nm,1.2s							
CNTC	**Contact Creek**	**3.80**	**34**			Pn	11 01 04.3	+0.1
CAHL	**Cahill**	**3.84**	**39**			Pn	11 01 04.8	+0.2
ACHA	**Angle Creek He**	**3.95**	**37**	Pn		Pn	11 01 06.4	+0.3
O15K	**Ungalikthiuk R**	**4.02**	**0**			Pn	11 01 06.4	-0.6
O15K				IAML			11 02 22.6	
	comp=E,32nm,1.1s							
UNV	**Unalaska Valle**	**4.09**	**254**			Pn	11 01 08.3	+0.3
UNV				IAML			11 02 16.2	
	comp=E,33nm,1.1s							
UNV				IAML			11 02 19.6	
	comp=N,26nm,0.5s							
O14K	**Tigyukauivet M**	**4.17**	**350**			Pn	11 01 08.9	-0.1
O16K	**Kokwok River B**	**4.54**	**11**	Pn		Pn	11 01 13.6	-0.6
KDAK	**Kodiak Island**	**4.81**	**54**	Pn		Pn	11 01 16.6	-1.3
KDAK				IAML			11 02 37.0	
	comp=N,18nm,1.1s							
N14K	**Kuskokwak Cree**	**4.87**	**349**			Pn	11 01 18.2	-0.5
N14K				IAML			11 02 03.6	
	comp=E,28nm,1.1s							
N14K				IAML			11 02 13.2	
	comp=N,29nm,1.2s							
N15K	**Kwethluk River**	**5.02**	**359**			Pn	11 01 20.5	-0.3
N15K				IAML			11 02 10.9	
	comp=E,16nm,0.9s							
N15K				IAML			11 02 47.2	
	comp=N,14nm,1.1s							
SYI	**Shuyak Island**	**5.36**	**47**	Pn		Pn	11 01 24.8	-0.5
SYI				IAML			11 02 43.3	
	comp=N,24nm,0.7s							
SYI				IAML			11 03 14.0	
	comp=E,14nm,1.0s							
M13K	**Dall Lake**	**5.58**	**342**	Pn		Pn	11 01 28.6	+0.2
M14K	**Bethel**	**5.71**	**350**	Pn		Pn	11 01 29.7	-0.5
M16K	**Timber Creek**	**5.89**	**4**	Pn		Pn	11 01 32.8	+0.1
M11K	**Mekoryuk**	**6.23**	**330**	Pn		Pn	11 01 36.9	-0.4
N19K	**Bonanza Creek**	**6.34**	**25**	Pn		Pn	11 01 39.3	+0.4
L14K	**Kuka Creek**	**6.37**	**348**	Pn		Pn	11 01 38.8	-0.4
M17K	**Holitna River**	**6.38**	**11**	Pn		Pn	11 01 39.4	0.0
L16K	**Owhat River**	**6.57**	**2**	Pn		Pn	11 01 41.7	-0.2
K13K	**Kusilvak Mount**	**7.23**	**342**	Pn		Pn	11 01 50.9	-0.1
L18K	**Granite Mounta**	**7.26**	**12**	Pn		Pn	11 01 51.5	0.0
M19K	**Big River Lodg**	**7.34**	**21**	Pn		Pn	11 01 53.0	+0.6
SLKM	**Skilak Lake**	**7.42**	**40**	Pn		Pn	11 01 53.9	+0.3
L19K	**White Mountain**	**7.50**	**18**	Pn		Pn	11 01 54.5	-0.3
K17K	**Iditarod**	**7.62**	**5**	Pn		Pn	11 01 56.2	0.0
J16K	**Anvik River**	**8.15**	**358**	Pn		Pn	11 02 03.4	-0.2
J17K	**VABM Dome**	**8.27**	**2**	Pn		Pn	11 02 04.6	-0.6
PWL	**Port Wells**	**8.36**	**42**	Pn		Pn	11 02 06.0	-0.5
J19K	**Poorman**	**9.11**	**12**	Pn		Pn	11 02 16.6	-0.1
SCM	**Sheep Creek Mo**	**9.35**	**39**	Pn		Pn	11 02 19.0	-1.1
KLU	**Klutina**	**9.68**	**43**	Pn		Pn	11 02 23.6	-1.0

*IDC **20** 11:30:53.3±0.5,13.°76N×93.°20W,h0km,mb4.8/25, mbtmp4.7/29,ML1.1/1,MS4.4/57,Error ellipse: s-maj=17.6km s-min=11.4km az=55.0*

*MOS **20** 11:30:54.3±1.1,13.°92N×93.°16W,h12km,mb5.3/20,Error ellipse: s-maj=9.7km s-min=5.7km az=107.3*

*MEX **20** 11:30:54.7±0.7,13.°67N×93.°33W,h10km,MD4.9*

*NEIC **20** 11:30:55.9±1.5,13.°89N±0.°04×93.°16W±0.°05,h10km±1km, mb5.2/633,Mww5.3/57, Md4.9/142(MEX),Error ellipse: s-maj=8.4km s-min=6.8km az=134.0*

*GCMT **20** 11:30:55.9±0.2,13.°89N±0.°01×93.°41W±0.°01,h12km, MW5.3/126,Moment Tensor Solution. s88,c132; s126,c234; Duration: 1s1 Moment tensor: Scale 10**17** Nm; Mrr=1.07±.01; Mθθ=0.72±.01; Mφφ=0.34±.01; Mrθ=0.18±.04; Mθφ=-0.50±.01; Mφr=0.25±.05; Best double couple: Mo1.11100×10**17** NP1:ϕs139.00000°,δ47.00000°, λ-69.00000°. NP2:ϕs290.00000°,δ47.00000°, λ-110.00000°. Principal axes: T 1.0720, Plg0.0000°, Azm35.0000°; N 0.0740, Plg15.0000°, Azm304.0000°; P -1.1500, Plg75.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **20** 11:30:56.4,14.°04N×93.°10W,h12km,Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10**17**Nm; Mrr=1.03; Mθθ0.74; Mφφ0.29; Mrθ0.09; Mθφ-0.47; Mφr-0.53; Fault plane solution: Mo1.16000×10**17** NP1: ϕs105.85000°,δ37.94000°,λ-118.69000°. NP2: ϕs320.61000°,δ57.36000°,λ-69.48000°. Principal axes: T 1.1003, Plg10.0000°, Azm36.0000°; N 0.1129, Plg17.0000°, Azm129.0000°; P -1.2132, Plg70.0000°, Azm277.0000°;*

*NEIC **20** 11:30:56.4,13.°94N×93.°10W,h12km*

*GCG **20** 11:30:56.7±2.0,13.°73N×93.°15W,h35km±49km,MD5.0, ML5.3*

*CATAC **20** 11:30:58.1±0.5,14.°N±3.°×9.°3W±.°,h15km±7km,M5.2/5, mB5.7/3,mb5.4/2,MLv5.1/5,Mw(mB)5.2/3,MwMwp5.2/1, Mwp5.4/1,Error ellipse: s-maj=11.4km s-min=4.1km az=70.3,Moment Tensor Solution. Moment tensor: Scale 10**16**Nm; Mrr-9.19; Mθθ6.86; Mφφ2.33; Mrθ1.37; Mθφ-3.40; Mφr-3.36; Fault plane solution: Mo9.65073×10**16** NP1: ϕs106.81411°,δ37.44381°,λ-109.43075°. NP2: ϕs310.77012°,δ55.01549°,λ-75.70807°. Principal axes: T 9.1165, Plg8.9739°, Azm30.5913°; N 0.9918, Plg11.6689°, Azm122.4602°; P -10.1083, Plg75.2016°, Azm263.8816°; confirmed*

ISC 20 11:30:55.4±1.5,**13.°85N**±0.°03×**93.°17W**±0.°03,**h14**km±9km, **n1160,**σ2**9**05/968,**mb5.1**/324,**MS4.5**/55,**15C-12D,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**1.37**	**40**			**Pn**	**11 31 19.8**	**-0.2**
THIG						**Sg**	**11 31 38.6**	**-0.9**
THIG		**1.37**	**40**	*eP*		**Pn**	**11 31 19.8**	**-0.2**
THIG				*eS*		**Sg**	**11 31 38.6**	**-0.9**
THIG		**1.37**	**40**	*iP*		**Pn**	**11 31 19.9**	**-0.2**
THIG				IAML			11 31 42.3	
	comp=E,15μm,0.4s							
SMCA	**Catarina**	**1.46**	**46**	*eP*		**Pn**	**11 31 21.2**	**0.0**
PATR	**El Naranjo**	**1.55**	**35**			**Pn**	**11 31 22.1**	**-0.7**
PATR						**Sb**	**11 31 42.6**	**-1.0**
PATR						**Sg**	**11 31 43.5**	**-1.9**
PATR	**El Naranjo**	**1.55**	**35**	*eP*		**Pn**	**11 31 22.1**	**-0.7**
PATR				*eS*		**Sb**	**11 31 42.6**	**-1.0**
PATR				*eS*		**Sg**	**11 31 43.5**	**-1.9**
RTAL	**Retalhuleu**	**1.58**	**65**			**Pb**	**11 31 23.4**	**-1.0**
RTAL	**Retalhuleu**	**1.58**	**65**	*eP*		**Pn**	**11 31 23.1**	**+0.2**
RTAL				*eS*		**Sg**	**11 31 44.2**	**-2.0**
RTAL	**Retalhuleu**	**1.58**	**65**	⇑*eP*		**Pb**	**11 31 23.3**	**-1.0**
RTAL	**Retalhuleu**	**1.58**	**65**	S		**Sn**	**11 31 42.4**	**-0.7**
CHUJ	**Union Juarez**	**1.60**	**39**	*eP*		**Pn**	**11 31 22.9**	**-0.6**
CHUJ				*eS*		**Sn**	**11 31 43.4**	**-0.8**
CHUJ				*eS*		**Sg**	**11 31 45.4**	**-1.8**
PAVE	**Pavencul**	**1.64**	**35**			**Pn**	**11 31 23.5**	**-0.5**
PAVE						**Sb**	**11 31 45.9**	**-0.3**
PAVE						**Sg**	**11 31 46.5**	**-1.9**
PAVE	**Pavencul**	**1.64**	**35**	*eP*		**Pn**	**11 31 23.5**	**-0.5**
PAVE				*eS*		**Sb**	**11 31 45.9**	**-0.3**
PAVE				*eS*		**Sg**	**11 31 46.5**	**-1.9**
STG2	**El Palmar, Qui**	**1.83**	**71**	*eP*		**Pn**	**11 31 25.0**	**-1.6**
STG8	**El Palmar, Qui**	**1.86**	**71**	*eP*		**Pn**	**11 31 25.3**	**-1.4**
STG8				*eS*		**Sn**	**11 31 49.0**	**-1.4**
QUEO	**Labor Ovalle**	**1.90**	**57**	*eP*		**Pn**	**11 31 28.2**	**+0.6**
QUEO				*eS*		**Sg**	**11 31 54.1**	**-2.3**
SOKI	**Kika Raxquin**	**1.96**	**60**	*eP*		**Pn**	**11 31 29.0**	**+0.5**
SOKI				IAML			11 32 07.2	
	comp=E,10μm,0.8s							
HUEH	**Huehuetenango**	**2.17**	**48**			**Pb**	**11 31 32.8**	**-1.9**
HUEH	**Huehuetenango**	**2.17**	**48**	*eP*		**Pb**	**11 31 32.6**	**-2.1**
HUEH				*iS*		**Sn**	**11 31 58.6**	**+0.5**
HUEH	**Huehuetenango**	**2.17**	**48**	*iP*		**Pb**	**11 31 32.8**	**-1.9**
HUEH				IAML			11 32 09.4	
	comp=E,14μm,0.7s							
HUEH	**Huehuetenango**	**2.17**	**48**	⇑*P*		**Pb**	**11 31 32.8**	**-1.9**
HUEH	**Huehuetenango**	**2.17**	**48**	S		**Sb**	**11 32 00.4**	**-1.1**
ESSG	**Sabana Grande**	**2.33**	**77**	*eP*		**Pn**	**11 31 32.6**	**-0.7**
ESSG				*eS*		**Sn**	**11 32 00.4**	**-1.4**
QUIS	**Sacapulas**	**2.47**	**54**	*eP*		**Pb**	**11 31 37.2**	**-2.4**
QUIS				IAML			11 31 38.4	
	comp=Z,12μm,0.3s							
ESSJ	**San Jos, E**	**2.60**	**96**	*eP*		**Pn**	**11 31 32.9**	**-4.2**
FG16	**Alotenango, Sa**	**2.61**	**80**	*eP*		**Pn**	**11 31 32.9**	**-4.4**
FG16				*eS*		**Sn**	**11 32 01.3**	**-7.6**
FG16				IAML			11 32 06.9	
	comp=N,48μm,0.2s							
CCIG	**Comitan**	**2.61**	**22**			**Pn**	**11 31 39.1**	**+1.8**
CCIG	**Comitan**	**2.61**	**22**	*eP*		**Pn**	**11 31 39.1**	**+1.8**
CCIG				*eS*		**Sb**	**11 32 14.8**	**+0.6**
CCIG	**Comitan**	**2.61**	**22**	*iP*		**Pn**	**11 31 38.4**	**+1.0**
CCIG				*eS*		**Sb**	**11 32 13.0**	**-1.2**
CCIG	**Comitan**	**2.61**	**22**	⇑*P*		**Pb**	**11 31 39.3**	**-2.9**
GCG4	**OSOP**	**2.66**	**74**	*eS*		**Sb**	**11 32 12.8**	**-2.6**
PCG5	**San Vicente Pa**	**2.73**	**82**	*eP*		**Pn**	**11 31 35.6**	**-3.4**
PCG5				*eS*		**Sn**	**11 32 05.8**	**-6.0**
APG	**El Apazote**	**2.86**	**66**	Pn		**Pn**	**11 31 42.2**	**+1.4**
	comp=N,187nm,0.7s,baz=188,slow=12,SNR=528							
APG				Sn		**Sb**	**11 32 19.7**	**-1.5**
	comp=N,25nm,0.3s,baz=88,slow=16,SNR=9.2							
APG	**El Apazote**	**2.86**	**66**	*iP*		**Pn**	**11 31 42.1**	**+1.4**
TGBT	**Tuxtla Gutierr**	**2.91**	**1**			**Pn**	**11 31 41.3**	**0.0**
TGBT						**Sn**	**11 32 17.1**	**+1.1**
TGBT	**Tuxtla Gutierr**	**2.91**	**1**	*eP*		**Pn**	**11 31 41.3**	**0.0**
TGBT				*eS*		**Sn**	**11 32 17.1**	**+1.1**
TGIG		**2.91**	**1**			**Pn**	**11 31 41.8**	**+0.4**
TGIG						**Sn**	**11 32 16.5**	**+0.3**
TGIG		**2.91**	**1**	*eP*		**Pn**	**11 31 41.8**	**+0.4**
TGIG				*eS*		**Sn**	**11 32 16.5**	**+0.3**
TGIG		**2.91**	**1**	*eP*		**Pn**	**11 31 42.0**	**+0.7**
FAME	**Alcaldia de Sa**	**3.06**	**90**	P		**Pn**	**11 31 42.4**	**-0.9**
FAME	**Alcaldia de Sa**	**3.06**	**90**	S		**Sn**	**11 32 17.6**	**-2.2**
AVCB	**Coban**	**3.12**	**59**	IAML			11 32 02.1	
	comp=E,12μm,0.6s							
SLOZ	**Alcaldia de Sa**	**3.29**	**87**	P		**Pn**	**11 31 44.5**	**-2.0**
SLOZ	**Alcaldia de Sa**	**3.29**	**87**	S		**Sn**	**11 32 23.3**	**-2.2**
NUBE	**Las Nubes**	**3.29**	**89**	*eP*		**Pn**	**11 31 46.5**	**-0.1**
NUBE				*eS*		**Sn**	**11 32 21.6**	**-4.0**
NUBE	**Las Nubes**	**3.29**	**89**	⇑*P*		**Pn**	**11 31 46.1**	**-0.5**
NUBE	**Las Nubes**	**3.29**	**89**	S		**Sn**	**11 32 23.1**	**-2.5**
LOAL	**Lomas de Alarc**	**3.29**	**87**	P		**Pn**	**11 31 46.5**	**-0.1**
LOAL	**Lomas de Alarc**	**3.29**	**87**	S		**Sn**	**11 32 25.1**	**-0.4**
JUAM	**Asuncion Mita**	**3.39**	**81**	*eP*		**Pn**	**11 31 49.0**	**+1.1**
JUAM				*eS*		**Sn**	**11 32 28.6**	**+0.6**
JUAM				IAML			11 32 32.0	
	comp=N,3μm,0.4s							
HUIG	**Huatulco**	**3.43**	**304**			**Pn**	**11 31 45.1**	**-3.3**
HUIG						Sn	11 32 19.0	-10
HUIG	**Huatulco**	**3.43**	**304**	*eP*		**Pn**	**11 31 45.1**	**-3.3**
HUIG				*eS*		Sn	11 32 19.0	-10
CEVE	**Cerro Verde**	**3.44**	**90**	P		**Pn**	**11 31 49.5**	**+0.7**
CEVE	**Cerro Verde**	**3.44**	**90**	S		**Sn**	**11 32 27.7**	**-1.8**
UNIC	**Universidad Ca**	**3.51**	**87**	P		**Pn**	**11 31 50.1**	**+0.5**
UNIC	**Universidad Ca**	**3.51**	**87**	S		**Sn**	**11 32 30.4**	**-0.6**
UXUV	**UXUV**	**3.58**	**345**			**Pn**	**11 31 50.4**	**-0.1**
UXUV						**Sn**	**11 32 30.3**	**-1.5**
UXUV	**UXUV**	**3.58**	**345**	*eP*		**Pn**	**11 31 50.4**	**-0.1**
UXUV				*eS*		**Sn**	**11 32 30.9**	**-1.5**
JAYA	**Jayaque - finc**	**3.62**	**93**	*eP*		**Pn**	**11 31 51.3**	**+0.2**
JAYA				*eS*		**Sn**	**11 32 30.6**	**-3.1**
JAYA	**Jayaque - finc**	**3.62**	**93**	S		**Sn**	**11 32 32.3**	**-1.4**
JAYA	**Jayaque - finc**	**3.62**	**93**	P		**Pn**	**11 31 51.7**	**+0.6**
CMIG	**Matias Romero**	**3.62**	**333**	Pn		**Pn**	**11 31 50.4**	**-0.7**
	comp=N,192nm,0.3s,baz=162,slow=9.5,SNR=538							
CMIG				Sn		**Sn**	**11 32 27.9**	**-5.8**
	comp=N,85nm,0.3s,baz=139,slow=17,SNR=4.9							
CMIG				LR		LR	11 33 07.3	
	comp=N,5μm,20.0s,baz=158,slow=36							
CMIG	**Matias Romero**	**3.62**	**333**			**Pn**	**11 31 49.8**	**-1.3**
CMIG						**Sn**	**11 32 25.8**	**-7.9**
CEDA	**San Andres**	**3.66**	**90**	S		**Sn**	**11 32 34.5**	**-0.2**
MTO3	**Montecristo**	**3.73**	**81**			**Pn**	**11 31 52.8**	**0.0**
MTO3	**Montecristo**	**3.73**	**81**	*eP*		**Pn**	**11 31 52.7**	**0.0**
MTO3	**Montecristo**	**3.73**	**81**	S		**Sn**	**11 32 35.6**	**-1.0**
MTO3	**Montecristo**	**3.73**	**81**	⇑P		**Pn**	**11 31 52.8**	**0.0**
PMON	**Piamonte**	**3.74**	**92**	S		**Sn**	**11 32 35.8**	**-1.0**
PMON	**Piamonte**	**3.74**	**92**	⇓P		**Pn**	**11 31 53.9**	**+1.0**
LALI	**Alcalda de L**	**3.75**	**95**	P		**Pn**	**11 31 53.5**	**+0.7**
LALI	**Alcalda de L**	**3.75**	**95**	S		**Sn**	**11 32 35.0**	**-1.9**
ZAFR2	**Estanzuela, Za**	**3.77**	**78**	*eP*		**Pn**	**11 31 52.0**	**-1.1**
ESQI	**Esquipulas**	**3.77**	**79**			**Pn**	**11 31 53.9**	**+0.7**
ESQI	**Esquipulas**	**3.77**	**79**	S		**Sn**	**11 32 36.1**	**-1.4**
ESQI	**Esquipulas**	**3.77**	**79**	⇑P		**Pn**	**11 31 53.8**	**+0.5**
UEES	**Universidad Ev**	**3.82**	**92**	P		**Pn**	**11 31 54.9**	**+1.1**
UEES	**Universidad Ev**	**3.82**	**92**	S		**Sn**	**11 32 37.5**	**-1.0**
LOMA	**Loma Larga**	**3.89**	**93**	P		**Pn**	**11 31 55.5**	**+0.7**
LOMA	**Loma Larga**	**3.89**	**93**	S		**Sn**	**11 32 39.1**	**-1.2**
UDBS	**Universidad Do**	**3.90**	**91**	S		**Sn**	**11 32 39.8**	**-0.7**
LLGN	**La Laguna**	**4.11**	**85**	P		**Pn**	**11 31 58.1**	**+0.2**
PAVA	**Las Pavas**	**4.11**	**91**	P		**Pn**	**11 31 58.8**	**+0.9**
PAVA	**Las Pavas**	**4.11**	**91**	S		**Sn**	**11 32 45.8**	**-0.1**
VHSA	**Villahermosa**	**4.12**	**3**			**Pn**	**11 31 59.5**	**+1.7**
VHSA						**Sn**	**11 32 49.1**	**+3.3**
VHSA	**Villahermosa**	**4.12**	**3**	*eP*		**Pn**	**11 31 59.5**	**+1.7**
VHSA				*eS*		**Sn**	**11 32 49.1**	**+3.3**
UESV	**Universidad de**	**4.26**	**92**	P		**Pn**	**11 32 00.8**	**+0.9**
UESV	**Universidad de**	**4.26**	**92**	S		**Sn**	**11 32 48.1**	**-1.3**
TECO	**Alcaldia de Te**	**4.27**	**94**	P		**Pn**	**11 32 01.0**	**+1.0**
TECO	**Alcaldia de Te**	**4.27**	**94**	S		**Sn**	**11 32 48.6**	**-1.1**
SCLA	**Alcaldia de Sa**	**4.31**	**91**	P		**Pn**	**11 32 02.0**	**+1.4**
SCLA	**Alcaldia de Sa**	**4.31**	**91**	S		**Sn**	**11 32 50.3**	**-0.5**
TUIG	**Tuzandepetl**	**4.33**	**344**			**Pn**	**11 31 59.9**	**-1.0**
TUIG						**Sn**	**11 32 47.1**	**-4.1**
TUIG	**Tuzandepetl**	**4.33**	**344**	*eP*		**Pn**	**11 31 59.9**	**-1.0**
TUIG				*eS*		**Sn**	**11 32 47.1**	**-4.1**
PEIG	**Puerto Escondi**	**4.40**	**300**			**Pn**	**11 31 59.0**	**-2.9**
PEIG						Sn	11 32 42.5	-10
PEIG	**Puerto Escondi**	**4.40**	**300**	*eP*		**Pn**	**11 31 59.0**	**-2.9**
PEIG				*eS*		Sn	11 32 42.5	-10
PETF	**Flores**	**4.41**	**46**			**Pn**	**11 32 03.0**	**+1.2**
PETF	**Flores**	**4.41**	**46**			**Sn**	**11 32 53.2**	**+0.2**
PETF	**Flores**	**4.41**	**46**	*eP*		**Pn**	**11 32 03.1**	**+1.2**
PETF				*eS*		**Sn**	**11 32 53.2**	**+0.2**
PETF	**Flores**	**4.41**	**46**	*eP*		**Pn**	**11 32 02.8**	**+0.9**
PETF	**Flores**	**4.41**	**46**	P		**Pn**	**11 32 03.4**	**+1.6**
NEUV	**Arroyo Zacate**	**4.60**	**327**			**Pn**	**11 32 02.8**	**-1.8**
NEUV						**Sn**	**11 32 54.5**	**-3.4**
NEUV	**Arroyo Zacate**	**4.60**	**327**	*eP*		**Pn**	**11 32 02.8**	**-1.8**
NEUV				*eS*		**Sn**	**11 32 54.5**	**-3.4**
OXLC	**Oaxaca**	**4.67**	**314**			**Pn**	**11 32 04.6**	**-1.1**
OXLC						**Sn**	**11 32 54.6**	**-5.3**
OXLC	**Oaxaca**	**4.67**	**314**	*eP*		**Pn**	**11 32 04.6**	**-1.1**
OXLC				*eS*		**Sn**	**11 32 54.6**	**-5.3**
OXBJ	**Oaxaca**	**4.69**	**313**			**Sn**	**11 32 56.8**	**-3.5**
OXBJ	**O

DAIG Los Arroyos 7.00 298 Pn 11 32 36.9 -0.7
DAIG Los Arroyos 7.00 298 eP Pn 11 32 36.9 -0.7
DAIG eS Sn 11 33 45.1 -12
PPCL Tochimilco 7.26 315 eP Pn 11 32 43.6 +2.3
PPCL eS Sn 11 33 59.6 -4.1
PPPT Popocatepetl 7.31 315 eP Pn 11 32 44.2 +2.0
PPPT eS Sn 11 34 04.3 -0.9
PPSX Xalitzintla 7.31 316 eP Pn 11 32 45.0 +2.9
PPSX eS Sn 11 34 00.6 -4.3
PPM Popocatepetl 7.37 315 eP Pn 11 32 45.9 +2.9
PPM eS Sn 11 34 04.0 -2.8
PPIG Popocatepetl 7.37 315 Pn 11 32 45.9 +2.8
PPIG Sn 11 34 04.0 -2.9
MEIG Mezcala 7.42 304 Pn 11 32 44.4 +1.1
MEIG Sn 11 33 58.3 -9.0
MEIG Mezcala 7.42 304 eP Pn 11 32 44.4 +1.1
MEIG eS Sn 11 33 58.3 -9.0
AMVM AMECAMECA 7.53 315 Pn 11 32 43.5 -1.5
AMVM Sn 11 34 16.5 +6.2
AMVM AMECAMECA 7.53 315 eP Pn 11 32 43.5 -1.5
AMVM eS Sn 11 34 16.5 +6.2
CAIG El Cayaco 7.55 296 Pn 11 32 44.2 -0.8
CAIG Sn 11 33 57.0 -13
CAIG El Cayaco 7.55 296 eP Pn 11 32 44.2 -0.8
CAIG eS Sn 11 33 57.0 -13
CXUV Coxquihui 7.58 327 Pn 11 32 44.7 -0.8
CXUV Sn 11 34 08.1 -3.1
CXUV Coxquihui 7.58 327 eP Pn 11 32 44.7 -0.8
CXUV eS Sn 11 34 08.1 -3.1
MPVM San Francisco 7.73 314 Pn 11 32 49.9 +2.2
MPVM Sn 11 34 15.5 +0.3
MPVM San Francisco 7.73 314 eP Pn 11 32 49.9 +2.2
MPVM eS Sn 11 34 15.5 +0.3
THVM De Xico 7.78 315 Sn 11 34 17.9 +1.4
THVM De Xico 7.78 315 eS Sn 11 34 17.9 +1.4
MYIG Merida 7.79 24 Pn 11 32 47.7 -0.6
MYIG Sn 11 34 16.8 +0.5
MYIG Merida 7.79 24 eP Pn 11 32 47.7 -0.6
MYIG eS Sn 11 34 16.8 +0.5
TLVM San Miguel Top 7.83 314 Pn 11 32 49.7 +0.5
TLVM Sn 11 34 17.3 -0.7
TLVM San Miguel Top 7.83 314 eP Pn 11 32 49.7 +0.5
TLVM eS Sn 11 34 17.3 -0.7
XCVM Xochimilco 7.84 314 Pn 11 32 47.7 -1.6
XCVM Sn 11 34 14.8 -3.2
XCVM Xochimilco 7.84 314 eP Pn 11 32 47.7 -1.6
XCVM eS Sn 11 34 14.8 -3.2
TEIG Tepich 7.88 36 Pn Pn 11 32 49.5 0.0
baz=127,slow=24,SNR=116
TEIG Sn Sn 11 34 15.3 -3.2
baz=132,slow=24,SNR=3.4
TEIG Tepich 7.88 36 Pn 11 32 49.1 -0.4
TEIG Tepich 7.88 36 P Pn 11 32 49.4 -0.1
comp=N,22µmcomp=N,98µmcomp=N,2µm,0.4s
MAVM Malinalco, Edo 7.92 311 Pn 11 32 52.4 +2.1
MAVM Sn 11 34 11.7 -8.1
MAVM Malinalco, Edo 7.92 311 eP Pn 11 32 52.4 +2.1
MAVM eS Sn 11 34 11.7 -8.1
UNM Universidad Na 7.93 314 Pn Pn 11 32 50.5 -0.1
UNM Universidad Na 7.93 314 P Pn 11 32 50.5 -0.1
UNM Universidad Na 7.93 314 eP Pn 11 32 50.0 -0.6
UNM eS Sn 11 34 28.2 +7.9
PBVM Pinon 7.94 315 Sn 11 34 22.6 +2.5
PBVM Pinon 7.94 315 eS Sn 11 34 22.6 +2.5
VTVM Tizayuca 7.97 318 Pn 11 32 49.3 -1.7
VTVM Sn 11 34 20.6 -0.6
VTVM Tizayuca 7.97 318 eP Pn 11 32 49.3 -1.7
VTVM eS Sn 11 34 20.6 -0.6
MCRU Las Cruces 7.98 314 eP Pn 11 32 49.3 -2.0
MCRU eS Sn 11 34 23.5 +1.9
AOVM Tlapan 7.99 313 Pn 11 32 53.4 +1.8
AOVM Sn 11 34 15.7 -6.3
AOVM Tlapan 7.99 313 eP Pn 11 32 53.4 +1.8
AOVM i S Sn 11 34 15.7 -6.3
MHVM Bosque de Chap 8.01 314 Pn 11 32 54.8 +3.2
MHVM Bosque de Chap 8.01 314 eP Pn 11 32 54.8 +3.2
INVM La Marquesa 8.05 313 Pn 11 32 55.1 +2.9
INVM La Marquesa 8.05 313 eP Pn 11 32 55.1 +2.9
PTVM Pico Tres Padr 8.07 316 Pn 11 32 50.6 -1.8
PTVM Sn 11 34 00.4 +0.4
PTVM Pico Tres Padr 8.07 316 eP Pn 11 32 50.6 -1.8
PTVM eS Sn 11 34 24.0 +0.4
ALIBA Liberia Airpor 8.12 113 eP Pn 11 32 56.2 +3.3
LAPC Finca la Perla 8.15 111 eP Pn 11 32 55.0 +1.6
SIUN Universidad Ur 8.15 90 Pn 11 32 53.7 +0.4
ARIG Puente Sto Nin 8.19 303 Pn 11 32 55.3 +1.4
ARIG Sn 11 34 17.2 -9.1
ARIG Puente Sto Nin 8.19 303 eP Pn 11 32 55.3 +1.4
ARIG eS Sn 11 34 17.2 -9.1
SAJU San Juanillo, 8.21 116 eP Pn 11 32 55.7 +1.6
ZUVM ZUMPANGO 8.21 317 Sn 11 34 30.8 +3.7
ZUVM ZUMPANGO 8.21 317 eS Sn 11 34 30.8 +3.7
TOVM TOLUCA 8.26 312 Pn 11 32 56.8 +1.7
TOVM Sn 11 34 23.3 -5.0
TOVM TOLUCA 8.26 312 eP Pn 11 32 56.8 +1.7
TOVM eS Sn 11 34 23.3 -5.0
JUD3 Juan Diaz 3 8.31 115 Pn 11 32 58.0 +2.4
JUD3 Juan Diaz 3 8.31 115 eP Pn 11 32 57.6 +2.0
MESS Mesas 8.38 111 eP Pn 11 32 58.5 +1.9
COLC Colonia 8.40 111 eP Pn 11 32 58.8 +2.0
HORNC Hornillas 8.40 111 eP Pn 11 32 59.0 +2.1
VMAR Armenia, Volca 8.43 110 eP Pn 11 32 58.8 +1.7
CUI Cuipilapa 8.44 111 eP Pn 11 32 59.9 +2.5
INDI Punta indio, G 8.48 117 eP Pn 11 33 00.6 +2.8
TENO El Achiote 8.59 110 eP Pn 11 33 01.6 +2.1
TILA Tilaran 8.69 112 eP Pn 11 33 02.2 +1.5
JTS Las Juntas de 8.78 113 Pn Pn 11 33 05.4 +3.5
comp=N,6.9nm,0.3s,baz=309,slow=14,SNR=20
JTS Sn Sn 11 34 36.0 -4.7
comp=N,6.5nm,0.3s,baz=261,slow=18,SNR=3.7
JTS LR LR 11 36 03.8
comp=N,967nm,18.8s,baz=294,slow=35
JTS Las Juntas de 8.78 113 Pn 11 33 05.0 +3.1
JTS Las Juntas de 8.78 113 ⇑ iP Pn 11 33 05.3 +3.4
JTS Las Juntas de 8.78 113 eP Pn 11 33 04.8 +2.9
JTS Las Juntas de 8.78 113 P Pn 11 33 05.1 +3.1
comp=N,3µmcomp=N,1µmcomp=N,56nm,1.7s
ZIIG Zihuatanejo 8.82 296 Pn 11 33 03.5 +1.0
ZIIG Zihuatanejo 8.82 296 eP Pn 11 33 03.5 +1.0
ACIG Acambay 8.86 314 Pn 11 33 02.1 -1.0
ACIG Sn 11 34 44.6 +1.7
ACIG Acambay 8.86 314 eP Pn 11 33 02.1 -1.0
ACIG eS Sn 11 34 44.6 +1.7
MTEVE Monteverde 8.88 112 eP Pn 11 33 08.3 +4.9
CASO Castillo 8.91 111 eP Pn 11 33 06.4 +2.5
VARE2 V. Arenal 8.92 111 eP Pn 11 33 06.3 +2.3
CEDE Laguna Cedeo 8.92 111 eP Pn 11 33 07.3 +3.3
VACR Volcan Arenal 8.95 111 eP Pn 11 33 07.3 +3.0
SOCE Pocosol 9.04 111 Pn 11 33 06.9 +1.3
CTUV Llano Grande 9.05 328 Pn 11 33 04.5 -1.1
CTUV Sn 11 34 42.5 -4.9
CTUV Llano Grande 9.05 328 eP Pn 11 33 04.5 -1.1
CTUV eS Sn 11 34 42.5 -4.9
MOIG Morelia 9.62 308 Pn 11 33 16.6 +2.8
MOIG Morelia 9.62 308 eP Pn 11 33 16.3 +2.6
PICV PH. Pirrs 9.73 115 ⇓ iP Pn 11 33 19.4 +4.3
JRQG Juriquilla Cam 9.74 315 Sn 11 35 09.3 +4.7
JRQG Juriquilla Cam 9.74 315 Pn 11 33 18.9 +3.6
JRQG Juriquilla Cam 9.74 315 eP Pn 11 33 15.2 -0.1
JRQG eS Sn 11 35 09.3 +4.7
VICA Volcano Irazu 9.89 112 eP Pn 11 33 21.2 +3.5
CVTG V. Turrialba, 9.90 111 eP Pn 11 33 20.3 +3.0
PIEC Cerro El Cedra 9.95 114 eP Pn 11 33 21.9 +3.7
CVTV Tajo 9.97 112 eP Pn 11 33 20.1 +1.5
ABRB Las Abras (San 10.00 111 eP Pn 11 33 23.3 +4.3
VERB Verbena 10.05 112 eP Pn 11 33 23.1 +3.7
RESJ San Isidro (Tu 10.06 111 eP Pn 11 33 22.8 +3.2
LCOCO El Coco 10.12 111 eP Pn 11 33 23.8 +3.5
BUS1 Rivas 10.16 114 eP Pn 11 33 24.2 +2.9
RPIG Rio Verde 10.29 322 Pn 11 33 24.7 +1.9
RPIG Rio Verde 10.29 322 eP Pn 11 33 24.7 +1.9
SAJE San Jernim 10.46 114 eP Pn 11 33 28.6 +3.4
EDPE Pejibaye, P 10.49 115 eP Pn 11 33 28.9 +3.5
VERH Veragua Rainfo 10.51 111 eP Pn 11 33 27.2 +1.4
LAES El Progreso Va 10.70 111 eP Pn 11 33 32.1 +3.7
MMIG Aquila 10.73 296 Pn 11 33 28.4 -0.4
MMIG Sn 11 35 31.5 +2.8
MMIG Aquila 10.73 296 eP Pn 11 33 28.4 -0.4
MMIG eS Sn 11 35 31.5 +2.8
PIRO Carate, Puerto 11.06 118 Pn 11 33 33.8 +0.7
PIRO Carate, Puerto 11.06 118 eP Pn 11 33 37.2 +4.0
DMCAL E. de Neily 11.40 116 eP Pn 11 33 40.9 +3.0
BRU2 Volcan 11.43 115 Pn 11 33 39.6 +1.1
BRU2 Volcan 11.43 115 eP Pn 11 33 39.2 +0.7
MNGA Volcan de Coli 11.47 301 eP Pn 11 33 41.2 +2.2
INCO Volcan de Coli 11.48 301 eP Pn 11 33 41.9 +2.5
SOMAC Volcano de Col 11.50 301 eP Pn 11 33 41.5 +1.9
CDAR Ciudad de Arme 11.57 297 eP Pn 11 33 41.5 +1.3
CEGR Campo Tres 11.63 300 eP Pn 11 33 43.6 +2.3
WILLF Boquete 11.68 115 eP Pn 11 33 44.8 +3.0
RBALA Bur 11.87 113 eP Pn 11 33 47.1 +2.7
KKNTU Kakint² 12.20 113 eP Pn 11 33 49.2 +0.4
ZAIG Zacatecas 12.58 316 Pn 11 33 53.3 -1.0
ZAIG Zacatecas 12.58 316 eP Pn 11 33 57.0 +2.7
CJM Chamela 12.69 298 eP Pn 11 33 56.2 +0.7
SOR Soroa 13.11 46 Pn 11 34 00.8 -0.5
SOR Soroa 13.11 46 P Pn 11 34 00.8 -0.5
SOR Soroa 13.11 46 eP Pn 11 33 59.5 -1.7
BCIP Isla Barro Col 13.86 108 Pn 11 34 14.7 +3.1
BCIP Isla Barro Col 13.86 108 P Pn 11 34 14.7 +3.1
HBVL Hebbronville 14.12 339 Pn 11 34 18.3 +3.3
CAMR Camarioca 14.45 49 eP P 11 34 29.2 +2.9
PAYG Puerto Ayora 14.71 169 P P 11 34 27.9 -1.4
comp=N,3µmcomp=N,2µmcomp=N,48nm,1.7s
MGV Manicaragua 14.98 55 eP Pn 11 34 24.1 -2.7
833A Chaparral WMA, 15.53 339 Pn 11 34 34.4 +0.4
833A IAmb IAmb 11 34 42.4
comp=Z,80nm,1.2s
MTDJ Mount Denham 15.64 72 Pn 11 34 35.4 -0.1
MTDJ IAmb IAmb 11 34 41.3
comp=Z,106nm,0.8s
MTDJ Mount Denham 15.64 72 eP P 11 34 40.4 +0.7
MTDJ Mount Denham 15.64 72 P Pn 11 34 36.0 +0.4
comp=Z,169nm,0.8s
EF04 Eagle Ford 04 15.88 345 Pn Pn 11 34 38.6 +0.1
MCIG Muzquiz 15.97 332 Pn 11 34 38.8 -0.9
MCIG Muzquiz 15.97 332 eP Pn 11 34 38.8 -0.9
PDIG Papasquiaro 16.02 316 P P 11 34 43.5 -0.4
PDIG Papasquiaro 16.02 316 eP P 11 34 43.5 -0.4
HKT Hockley 16.21 352 P Pn 11 34 42.8 +0.1
HKT Hockley 16.21 352 Pn Pn 11 34 42.4 -0.3
HKT IAmb IAmb 11 34 49.1
comp=Z,62nm,1.4s
HKT Hockley 16.21 352 c iP Pn 11 34 41.4 -1.3
HKT pmax pmax
comp=Z,73nm,2.5s
MLDN Muldoon 16.26 348 Pn 11 34 44.0 +0.5
CCCC Cccc 16.40 61 eP P 11 34 47.8 -0.2
061Z Ochoppi 16.59 42 Pn 11 34 46.2 -1.5
061Z IAmb IAmb 11 34 48.3
comp=Z,294nm,1.1s
HNDO Hondo 16.60 341 Pn 11 34 47.5 -0.3
LMGC Las Mercedes 16.64 66 eP Pn 11 34 47.5 -0.8
DRIO Del Rio 16.97 337 P Pn 11 34 51.9 -0.5
DRIO IAmb IAmb 11 34 59.1
comp=Z,191nm,1.9s
CHIV Chivirico 17.14 67 IAmb IAmb 11 34 58.3
comp=Z,48nm,0.8s
CHIV Chivirico 17.14 67 eP Pn 11 34 48.7 -5.9
435B Jarrell 17.34 347 Pn 11 34 56.8 -0.2
HPIG 17.50 320 Pn 11 34 59.3 0.0
MARVS Santiago de Cu 17.61 67 eP Pn 11 34 59.7 -0.7
JCT Junction City 17.65 341 P P 11 35 01.7 -0.1
JCT IAmb IAmb 11 35 04.8
comp=Z,283nm,1.9s
JCT Junction City 17.65 341 P P 11 35 01.7 -0.1
JCT pmax pmax
comp=Z,283nm,2.0s
HLGC Holguin 17.75 64 eP Pn 11 35 01.2 -1.1
RCC Rio Carpintero 17.79 68 eP Pn 11 35 00.7 -2.0
PINC Pinares de May 17.86 66 eP Pn 11 35 03.4 -0.1
DWPF Disney Wildern 17.91 36 P Pn 11 35 03.4 -0.6
DWPF IAmb IAmb 11 35 06.0
comp=Z,96nm,0.5s
DBBC Dabeiba 18.00 110 P P 11 35 09.1 +3.3
SJCC San Jacinto, C 18.03 101 P Pn 11 35 05.6 -0.2
comp=Z,3µmcomp=Z,2µmcomp=Z,111nm,1.3s
TXAR Lajitas Array 18.22 329 P P 11 35 09.8 +1.5
comp=Z,2.6nm,0.7s,baz=155,slow=12,SNR=29
TXAR PcP PcP 11 39 41.5 +0.7
comp=Z,0.4nm,0.7s,baz=146,slow=6.9,SNR=3.4
TXAR LR LR 11 43 14.4
comp=Z,450nm,19.6s,baz=131,slow=40
TXAR Lajitas Array 18.22 329 P P 11 35 09.0 +0.8
TXAR Lajitas Array 18.22 329 P P 11 35 09.0 +0.8
GTBY Guantanamo Bay 18.30 68 eP P 11 35 09.8 +0.8
GTBY Guantanamo Bay 18.30 68 P Pn 11 35 08.7 -0.2
comp=Z,3µmcomp=Z,159nm,1.1s
656A Willston 18.32 31 P P 11 35 09.1 0.0
UREC San Jose de Ur 18.34 107 P P 11 35 11.5 +1.9
comp=Z,1µmcomp=Z,38nm,1.5s
VBMS Vicksburg 18.44 7 IAmb IAmb 11 35 13.3
comp=Z,201nm,1.8s
WHTX Lake Whitney, 18.48 348 IAmb IAmb 11 35 15.8
comp=Z,228nm,2.0s
OZNA Ozona 18.50 338 IAmb IAmb 11 35 16.2
comp=Z,259nm,1.8s
SLBS Sierra La Lagu 18.64 304 P Pn 11 35 14.2 +1.0
SLBS IAmb IAmb 11 35 17.6
comp=Z,169nm,1.8s
QMBU Quimbuelo 18.64 68 eP P 11 35 10.1 -2.8
CBOC Ciudad Bolivar 18.66 113 P Pn 11 35 16.1 +2.5
comp=Z,2µmcomp=Z,64nm,2.4s
HELC Santa Helena 18.95 112 P Pn 11 35 20.0 +2.7
comp=Z,1µmcomp=Z,34nm,1.3s
LPIG La Paz 19.13 305 P P 11 35 17.5 -0.6
comp=Z,10.0nm,0.5s,baz=294,slow=6.7,SNR=7.2
LPIG S Sn 11 38 45.9 -7.4
comp=Z,20nm,0.3s,baz=80,slow=21,SNR=4.0
LPIG LR LR 11 42 59.2
comp=Z,584nm,18.0s,baz=121,slow=38
MASC Masc 19.16 68 eP P 11 35 15.7 -2.8
YOTC Yotoco, Valle 19.27 119 P P 11 35 20.2 +0.2
comp=Z,861nmcomp=Z,28nm,1.1s
Z41A Richland Creek 19.32 1 IAmb IAmb 11 35 23.8
comp=Z,198nm,1.8s
Z38A Mt. Pleasant 19.39 355 IAmb IAmb 11 35 30.1
comp=Z,185nm,1.4s
SGCY Sterling City 19.41 339 IAmb IAmb 11 35 24.3
comp=Z,68nm,0.6s
JAMC Jamundi, Valle 19.41 121 P Pn 11 35 24.2 +1.5
comp=Z,3µmcomp=Z,28nm,0.9s
FW06 Azle 19.45 349 IAmb IAmb 11 35 30.3
comp=Z,109nm,0.6s
PLPT Palo Pinto 19.45 347 IAmb IAmb 11 35 35.9
comp=Z,46nm,0.7s
GUY2C Guyana, Caldas 19.52 114 P Pn 11 35 25.1 +0.8
comp=Z,2µmcomp=Z,61nm,1.1s
BBAC Balboa, Cauca 19.64 125 P Pn 11 35 25.3 -0.1
Z35A Perchaven, San 19.75 350 IAmb IAmb 11 35 33.3
comp=Z,175nm,0.8s
WLAR White Oak Lake 19.75 0 IAmb IAmb 11 35 33.2
comp=Z,72nm,0.8s
PTBC PUERTO BERRIO, 19.78 110 P Pn 11 35 27.3 +0.4
comp=Z,1µmcomp=Z,93nm,1.0s
POPC Popayan, Colom 19.79 123 P Pn 11 35 28.6 +1.3
comp=Z,1µmcomp=Z,51nm,1.5s
OTAV Otavalo 19.88 132 P Pn 11 35 28.4 -0.1
OTAV Otavalo 19.88 132 P Pn 11 35 28.4 -0.1
OTAV pmax pmax
comp=Z,43nm,1.5s
OTAV Otavalo 19.88 132 eP P 11 35 26.7 -0.2
OTAV Otavalo 19.88 132 P P 11 35 27.7 +0.8
comp=Z,724nmcomp=Z,15nm,1.5s
LRAL Lakeview Retre 19.91 15 P Pn 11 35 27.3 -1.0
CRJC Cerrejon, Guaj 20.00 96 P Pn 11 35 30.5 +0.9
comp=Z,821nmcomp=Z,36nm,0.7s
CCAR Cane Creek 20.02 3 IAmb IAmb 11 35 40.7
comp=Z,240nm,1.9s
GCUF Volcan Galeras 20.06 127 P Pn 11 35 30.7 0.0
comp=Z,2µmcomp=Z,42nm,1.6s
ODSA Odessa 20.11 336 IAmb IAmb 11 35 34.4
comp=Z,57nm,0.8s
Y45A Yeager Farm, C 20.20 9 IAmb IAmb 11 35 33.3
comp=Z,250nm,1.6s
OCAC Ocana 20.25 104 P Pn 11 35 33.5 +0.9
comp=Z,105nm,0.7s
ORTC Ortega, Tolima 20.25 118 P Pn 11 35 32.2 -0.3
comp=Z,1µmcomp=Z,98nm,1.2s
152A Waverly Hall 20.26 21 IAmb IAmb 11 35 36.5
comp=Z,100nm,0.6s
BRJC Barrancabermej 20.28 108 P Pn 11 35 35.2 +2.4
comp=Z,5µmcomp=Z,210nm,0.8s
APMT Aspermont 20.40 343 IAmb IAmb 11 35 36.3
comp=Z,213nm,1.6s
WTFS Witchita Falls 20.40 347 P P 11 35 32.6 +0.6
WTFS IAmb IAmb 11 35 39.0
comp=Z,81nm,0.9s
SN07 Snyder 07 20.41 341 IAmb IAmb 11 35 35.4
comp=Z,79nm,0.6s
SPBC San Pablo de B 20.49 112 P Pn 11 35 36.8 +1.4
comp=Z,2µmcomp=Z,87nm,1.7s
SLOR San Lorenzo - 20.52 134 P Pn 11 35 35.8 -0.3
X40A Basin Creek Fa 20.55 1 IAmb IAmb 11 35 35.8
comp=Z,147nm,2.0s
POST Post 20.58 340 IAmb IAmb 11 35 38.1
comp=Z,107nm,1.1s
ROSC El Rosal 20.62 114 P P 11 35 36.2 +1.3
comp=Z,26nm,0.7s,baz=344,slow=5.5,SNR=24
comp=Z,26nm,0.7s
ROSC El Rosal 20.62 114 P Pn 11 35 38.0 +0.8
comp=Z,3µmcomp=Z,2µmcomp=Z,207nm,1.7s
PRAC Prado 20.66 117 P Pn 11 35 36.8 -0.5
comp=Z,1µmcomp=Z,44nm,0.7s
URIC Uribia, Colomb 20.76 93 P P 11 35 34.6 -1.4
comp=Z,2µmcomp=Z,618nmcomp=Z,27nm,1.2s
154A Montrose 20.82 25 P P 11 35 35.8 -0.7
UALR University of 20.85 2 P P 11 35 36.5 -0.3
OXF Oxford 20.85 9 P P 11 35 36.3 -0.5
OXF IAmb IAmb 11 35 52.8
comp=Z,192nm,1.9s
OXF Oxford 20.85 9 P P 11 35 36.3 -0.5
OXF pmax pmax
comp=Z,191nm,1.9s
BARC Barichara 20.93 108 P Pn 11 35 40.3 -0.4
comp=Z,2µmcomp=Z,234nm,1.1s
DKNS Dickens 20.95 342 IAmb IAmb 11 35 41.0
comp=Z,60nm,0.6s
GARC Garzon, Huila 20.96 122 P Pn 11 35 40.8 -0.2
comp=Z,984nmcomp=Z,36nm,0.9s
CVER Cruz Verde, Cu 20.98 114 P Pn 11 35 40.7 -0.8
comp=Z,2µmcomp=Z,158nm,1.7s
PAMC Pamplona, Colo 21.12 106 P P 11 35 43.7 +3.3
comp=Z,481nmcomp=Z,33nm,1.0s
FLOC Florencia 21.18 124 P P 11 35 41.9 +1.3
FLOC IAmb IAmb 11 35 47.6
comp=Z,226nm,1.4s
FLOC Florencia 21.18 124 P P 11 35 43.6 +3.0
comp=Z,1µmcomp=Z,111nm,1.4s
CHIC Chingaza 21.24 114 P P 11 35 44.9 +3.3
comp=Z,2µmcomp=Z,246nm,1.4s
COHC Cochancay 21.29 139 P P 11 35 42.2 +0.6
COHC Cochancay 21.29 139 P P 11 35 42.3 +0.6
comp=Z,503nmcomp=Z,31nm,1.4s
RUSC La Rusia 21.29 110 P P 11 35 43.7 +1.4
comp=Z,2µmcomp=Z,193nm,1.0s
URMC La Uribe, Meta 21.33 118 P P 11 35 41.5 -0.8
comp=Z,990nmcomp=Z,61nm,1.4s
GOGA Godfrey 21.38 23 IAmb IAmb 11 35 44.0
comp=Z,128nm,0.9s
WMOK Wichita Mounta 21.41 347 P P 11 35 42.0 -0.9
WMOK IAmb IAmb 11 35 44.2
comp=Z,158nm,1.9s
WMOK Wichita Mounta 21.41 347 P P 11 35 42.0 -0.9
WMOK pmax pmax
comp=Z,158nm,1.9s
VILC Villavicencio, 21.51 115 P P 11 35 49.1 +4.9
comp=Z,947nmcomp=Z,109nm,0.8s
Y52A Lilburn 21.57 21 P P 11 35 44.1 -0.5
SDDR Presa de Saban 21.59 73 P P 11 35 44.5 -0.5
SDDR Presa de Saban 21.59 73 P P 11 35 44.3 -0.7
comp=Z,55nm,1.1s
MSTX Muleshoe 21.85 338 IAmb IAmb 11 35 50.8
comp=Z,56nm,2.0s
TUL3 Leonard 22.09 354 IAmb IAmb 11 35 54.1
comp=Z,95nm,0.7s
SWET Sewanee 22.25 16 IAmb IAmb 11 35 53.4
comp=Z,36nm,0.6s
SRIG Santa Rosalia 22.29 310 IAmb IAmb 11 35 56.3
comp=Z,54nm,1.0s
AMTX Amarillo 22.31 341 P P 11 35 53.1 +0.4
GRTK Grand Turk 22.31 67 P P 11 35 55.0 +2.3
GRTK Grand Turk 22.31 67 P P 11 35 50.2 -2.5
comp=Z,232nm,1.7s
MCRA Macar, Loja 22.35 143 P P 11 35 53.0 -0.2
comp=Z,688nmcomp=Z,31nm,1.5s
MACC Macarena, Meta 22.36 120 P P 11 35 56.6 +3.4
comp=Z,1µmcomp=Z,104nm,0.7s
BANI BANI 22.36 75 P P 11 35 53.7 +0.3
U38A Gravette 22.52 357 IAmb IAmb 11 35 58.2
comp=Z,95nm,0.7s
HODGE Hodges 22.57 24 IAmb IAmb 11 35 57.0
comp=Z,67nm,0.8s
SDV Santo Domingo 22.63 100 P P 11 35 56.4 +0.1
SDV IAmb IAmb 11 36 01.4
comp=Z,127nm,1.0s
SDV Santo Domingo 22.63 100 eP P 11 35 56.5 +0.1
SDV Santo Domingo 22.63 100 P P 11 35 54.0 -2.3
comp=Z,1µmcomp=Z,128nm,0.9s
WVT Waverly 22.70 11 P P 11 35 55.6 -1.0
WVT Waverly 22.70 11 P P 11 35 55.6 -1.0
WVT pmax pmax
comp=Z,18nm,0.6s
PTLC Puerto Leguiza 22.70 125 P P 11 36 02.8 +5.9
comp=Z,2µmcomp=Z,48nm,1.0s
PTGC Puerto Gaitan, 22.85 113 P P 11 36 00.9 +2.4
comp=Z,4µmcomp=Z,380nm,2.0s
CPCT Cooper Cave 22.87 18 IAmb IAmb 11 36 00.2
comp=Z,32nm,0.6s
121A Cookes Peak, D 22.90 327 IAmb IAmb 11 36 13.8
comp=Z,47nm,1.1s
PBMO Poplar Bluff 22.96 6 IAmb IAmb 11 36 01.8
comp=Z,39nm,0.9s
BG3 Lake Jocassee 22.99 22 IAmb IAmb 11 36 01.8
comp=Z,74nm,0.8s
MGMO Mountain Grove 23.22 2 IAmb IAmb 11 36 07.3
comp=Z,38nm,0.6s
PAULI Pauline 23.26 24 IAmb IAmb 11 36 03.7
comp=Z,100nm,0.9s
TKL Tuckaleechee C 23.30 20 P P 11 36 03.2 +0.4
comp=Z,20nm,0.6s,baz=191,slow=8.3,SNR=34
TKL LR LR 11 46 58.9
comp=Z,1µm,18.6s,baz=214,slow=41
comp=Z,20nm,0.6s
TKL Tuckaleechee C 23.30 20 IAmb IAmb 11 36 05.3
comp=Z,90nm,1.1s
U49A Red Boiling Sp 23.52 15 IAmb IAmb 11 36 05.4
comp=Z,30nm,0.6s
Y22A Socorro 23.60 330 IAmb IAmb 11 36 32.0
comp=Z,72nm,1.5s
V53A Saluda 23.64 21 IAmb IAmb 11 36 08.0
comp=Z,74nm,0.9s
T47A Sharon Grove 23.67 12 IAmb IAmb 11 36 10.1
comp=Z,30nm,0.7s
BIRD Birdtown, Kers 23.68 27 IAmb IAmb 11 36 08.0
comp=Z,93nm,0.9s
S44A Carbondale 24.00 8 IAmb IAmb 11 36 11.7
comp=Z,40nm,0.7s
SIUC Southern Illin 24.03 8 IAmb IAmb 11 36 11.8
comp=Z,42nm,0.8s
CCM Cathedral Cave 24.17 4 P P 11 36 10.1 -1.1
CCM IAmb IAmb 11 36 12.0
comp=Z,53nm,0.8s
CCM Cathedral Cave 24.17 4 P P 11 36 10.1 -1.1
CCM pmax pmax
comp=Z,53nm,0.8s
ANMO Albuquerque 24.19 333 LR LR 11 46 51.2
comp=Z,1µm,18.2s,baz=228,slow=40
ANMO Albuquerque 24.19 333 ⇑ iP P 11 36 13.2 +1.5
ANMO pmax pmax
comp=Z,4.0nm,0.9s
T50A Nancy 24.25 16 IAmb IAmb 11 36 13.6
comp=Z,30nm,0.9s
TUC Tucson 24.44 322 P P 11 36 15.1 +1.3
TUC Tucson 24.44 322 P P 11 36 15.1 +1.3
TUC pmax pmax
comp=Z,19nm,1.0s
USIN University of 24.51 11 IAmb IAmb 11 36 16.2
comp=Z,51nm,1.2s
WCI Wyandotte Cave 25.04 13 P P 11 36 17.6 -1.5
WCI IAmb IAmb 11 36 20.6
comp=Z,43nm,0.8s
WCI Wyandotte Cave 25.04 13 P P 11 36 17.6 -1.5
WCI pmax pmax
comp=Z,43nm,0.8s
BAUV El Baul 25.10 99 P P 11 36 18.6 -1.3
U56A King 25.16 25 P P 11 36 19.7 -0.6
OLIL Olney 25.19 9 IAmb IAmb 11 36 48.1
comp=Z,80nm,1.4s
Q44A Meyer Farm, Va 25.22 8 IAmb IAmb 11 36 23.9
comp=Z,27nm,0.6s
T25A Trinidad 25.27 339 IAmb IAmb 11 36 28.6

R49A **Shelbyville** 25.36 15 IAmb IAmb 11 36 23.6
comp=Z,25nm,0.7s
ATAH **Atahualpa** 25.49 144 LR LR 11 43 32.6
comp=Z,502nm,21.4s,baz=301,slow=30
R50A **Paris** 25.57 16 IAmb IAmb 11 36 53.5
comp=Z,105nm,1.7s
X18A **Snowflake** 25.58 326 IAmb IAmb 11 36 51.4
comp=Z,58nm,1.9s
P40A **Paris** 25.60 2 IAmb IAmb 11 36 27.0
comp=Z,43nm,0.6s
P38A **Dawn** 25.68 359 IAmb IAmb 11 36 27.8
comp=Z,78nm,1.0s
P43A **Skaggs, Pawnee** 25.89 6 IAmb IAmb 11 36 28.6
comp=Z,20nm,0.5s
BLO **Bloomington** 25.90 12 IAmb IAmb 11 36 28.7
comp=Z,21nm,0.7s
S54A **Dingess, Beckl** 26.08 22 IAmb IAmb 11 36 29.5
comp=Z,46nm,1.0s
T57A **Hurt** 26.19 26 IAmb IAmb 11 36 30.8
comp=Z,62nm,1.1s
P46A **Rosedale** 26.20 10 IAmb IAmb 11 36 33.7
comp=Z,40nm,0.6s
SJG **San Juan** 26.30 77 LR LR 11 47 51.7
comp=Z,1µm,19.2s,baz=250,slow=39
P48A **Milroy** 26.41 14 IAmb IAmb 11 36 31.9
comp=Z,24nm,0.8s
KSCO **Kaye Shedlock'** 26.42 343 IAmb IAmb 11 36 36.5
comp=Z,72nm,1.1s
Q51A **Peebles** 26.54 17 IAmb IAmb 11 36 34.7
comp=Z,127nm,1.4s
Q52A **Bidwell** 26.80 19 IAmb IAmb 11 36 36.4
comp=Z,61nm,1.0s
N41A **Harden Midland** 26.83 4 IAmb IAmb 11 36 38.4
comp=Z,26nm,0.7s
R55A **Marlinton** 26.95 23 IAmb IAmb 11 36 37.8
comp=Z,63nm,1.2s
S57A **Dark Hollow, R** 26.96 25 IAmb IAmb 11 36 37.6
comp=Z,94nm,1.6s
P51A **Williamsport** 27.04 17 IAmb IAmb 11 36 38.4
comp=Z,34nm,0.6s
O48B **Farmland** 27.23 13 IAmb IAmb 11 36 40.5
comp=Z,18nm,0.7s
Q54A **Coxs Mills** 27.30 21 IAmb IAmb 11 36 41.8
comp=Z,69nm,1.4s
O49A **Covington** 27.36 15 IAmb IAmb 11 36 41.0
comp=Z,35nm,1.2s
P53A **Whipple** 27.57 20 IAmb IAmb 11 36 43.5
comp=Z,115nm,1.7s
R58B **Mineral** 27.59 27 IAmb IAmb 11 36 43.1
comp=Z,48nm,0.9s
N47A **Urbana** 27.71 12 IAmb IAmb 11 36 43.9
comp=Z,23nm,0.8s
BLYC **Blythe** 27.72 319 P P **11 36 44.1 +0.7**
ACSO **Alum Creek Sta** 27.76 17 IAmb IAmb 11 37 23.1
comp=Z,33nm,1.1s
PV01 **Paradox Valley** 27.79 333 IAmb IAmb 11 37 13.1
comp=Z,50nm,1.9s
BGNE **Belgrade** 27.80 352 IAmb IAmb 11 36 47.2
comp=Z,45nm,0.7s
PV02 **Paradox Valley** 27.92 333 IAmb IAmb 11 37 05.3
comp=Z,63nm,1.5s
PV15 **Paradox Valley** 27.92 334 IAmb IAmb 11 37 05.6
comp=Z,68nm,1.8s
YUH **Yuha Desert** 27.95 316 IAmb IAmb 11 36 49.8
comp=Z,41nm,1.4s
Q56A **Snyder Ridge,** 27.97 24 IAmb IAmb 11 36 47.4
comp=Z,98nm,1.6s
O52A **Adamsville** 27.99 19 IAmb IAmb 11 36 46.8
comp=Z,82nm,1.5s
PV12 **Saucer Basin,** 28.04 333 IAmb IAmb 11 37 06.3
comp=Z,62nm,1.3s
PV11 **David Mesa, Pa** 28.05 333 IAmb IAmb 11 37 06.2
comp=Z,46nm,1.6s
ISCO **Idaho Springs** 28.07 339 IAmb IAmb 11 36 51.5
comp=Z,51nm,2.0s
PV16 **Nyswonger Mesa** 28.09 333 IAmb IAmb 11 37 06.5
comp=Z,33nm,1.4s
PV19 **Morning Glory** 28.11 333 IAmb IAmb 11 37 06.6
comp=Z,53nm,1.4s
PV20 **West Nyswonger** 28.13 333 IAmb IAmb 11 37 19.6
comp=Z,80nm,1.8s
PV04 **Paradox Valley** 28.15 333 IAmb IAmb 11 37 20.1
comp=Z,50nm,1.5s
L34A **Svendsen Farm,** 28.15 355 IAmb IAmb 11 36 49.1
comp=Z,68nm,1.0s
L40A **Anamosa** 28.16 3 IAmb IAmb 11 36 48.5
comp=Z,116nm,1.8s
PV10 **Paradox Valley** 28.19 333 IAmb IAmb 11 37 06.7
comp=Z,71nm,1.7s
L42A **Oliver, Polo** 28.22 6 IAmb IAmb 11 36 48.5
comp=Z,16nm,0.8s
PV23 **Carpenter Ridg** 28.24 333 IAmb IAmb 11 36 56.0
comp=Z,27nm,1.0s
BC3 **Big Chuckawall** 28.26 318 P P **11 36 49.6 +1.3**
BC3 IAmb IAmb 11 36 51.5
comp=Z,26nm,0.9s
O53A **New Philadelph** 28.31 20 IAmb IAmb 11 36 49.5
comp=Z,111nm,1.9s
O54A **Avella** 28.53 21 IAmb IAmb 11 36 51.2
comp=Z,33nm,0.6s
P57A **Homestead Farm** 28.81 25 IAmb IAmb 11 36 54.6
comp=Z,50nm,0.9s
PFO **Pinyon Flats O** 28.89 317 LR LR 11 49 36.3
comp=Z,982nm,18.2s,baz=121,slow=39
PFO **Pinyon Flats O** 28.89 317⇑*iP* P **11 36 55.2 +1.2**
PFO pmax pmax
comp=Z,12nm,1.1s
N53A **Lisbon** 28.94 20 IAmb IAmb 11 37 37.6
comp=Z,44nm,1.3s
PKCU **Pink Cliffs** 29.04 327 IAmb IAmb 11 36 59.4
comp=Z,29nm,1.3s
JFWS **Jewell Farm** 29.07 4 IAmb IAmb 11 36 58.6
comp=Z,19nm,0.6s
HAYD **Hayden** 29.30 338 IAmb IAmb 11 37 04.1
comp=Z,50nm,2.0s
PAMR **Moraine State** 29.30 20 IAmb IAmb 11 36 57.8
comp=Z,19nm,0.7s
SGC2 **Sao Gabriel da** 29.43 116 P P 11 36 53.6 -5.2
SSPA **Standing Stone** 29.85 24 P P **11 37 01.1 -1.1**
SSPA IAmb IAmb 11 37 03.2
comp=Z,69nm,1.6s
ECSD **EROS Data Cent** 29.93 355 IAmb IAmb 11 37 04.4
comp=Z,80nm,1.4s
MVL **Millersville** 29.94 26 IAmb IAmb 11 37 04.2
comp=Z,30nm,0.8s
I40A **Norwalk** 30.02 4 IAmb IAmb 11 37 07.5
comp=Z,16nm,0.4s
I37A **Lemond, Waseca** 30.06 360 IAmb IAmb 11 37 07.3
comp=Z,26nm,1.1s
I42A **Draeger Farm,** 30.16 6 IAmb IAmb 11 37 07.5
comp=Z,13nm,0.6s
NNA **Nana** 30.34 147 LR LR 11 47 19.1
comp=Z,329nm,18.8s,baz=351,slow=32
NNA **Nana** 30.34 147 P P **11 37 08.2 +1.3**
NNA IAmb IAmb 11 37 09.2
comp=Z,69nm,1.4s
NNA **Nana** 30.34 147⇑*iP* P **11 37 08.1 +1.2**
NNA pmax pmax
comp=Z,89nm,1.5s
N58A **Sunbury** 30.49 25 IAmb IAmb 11 37 08.6
comp=Z,16nm,0.8s
BSUT **Blindstream Ca** 30.73 333 IAmb IAmb 11 37 30.3
comp=Z,45nm,1.9s
M57A **Sunshine Farm,** 30.74 24 IAmb IAmb 11 37 11.1
comp=Z,22nm,0.8s
TPO **Tropico Hills** 30.82 317 IAmb IAmb 11 37 15.4
comp=Z,37nm,1.4s
K22A **Casper** 30.93 341 IAmb IAmb 11 37 17.3
comp=Z,54nm,1.6s
S11A **Rachel** 31.07 324 IAmb IAmb 11 37 27.2
comp=Z,35nm,1.3s
KSPA **Keystone Colle** 31.48 25 IAmb IAmb 11 37 17.4
comp=Z,21nm,1.1s
TCUT **Toone Canyon** 31.48 333 IAmb IAmb 11 37 20.7
comp=Z,21nm,0.8s
RSSD **Black Hills** 31.57 345 P P **11 37 18.7 +1.0**
RSSD IAmb IAmb 11 37 21.5
comp=Z,20nm,0.8s
RSSD **Black Hills** 31.57 345 P P **11 37 18.7 +1.0**
RSSD pmax pmax
comp=Z,20nm,0.8s
GRAC **Grapevine Rang** 31.59 321 IAmb IAmb 11 37 21.7
comp=Z,24nm,1.0s
MMNY **Mt. Morris Dam** 31.65 22 IAmb IAmb 11 37 18.8
comp=Z,36nm,1.1s
MEDO **Medina** 31.84 21 IAmb IAmb 11 37 20.4
comp=Z,21nm,0.9s

BINY **Binghamton** 31.93 25 IAmb IAmb 11 37 21.4
comp=Z,38nm,0.8s
F33A **5 Mile Ranch,** 32.00 356 IAmb IAmb 11 37 24.2
comp=Z,33nm,1.6s
PDAR **Pinedale Array** 32.10 337 P P **11 37 23.9 +1.5**
comp=Z,1.3nm,0.6s,baz=128,slow=11,SNR=16
PDAR PcP PcP **11 40 11.9 +0.3**
comp=Z,0.5nm,0.6s,baz=135,slow=2.8,SNR=2.5
comp=Z,1.3nm,0.6s
PDAR **Pinedale Array** 32.10 337 P P **11 37 23.5 +1.2**
K57A **Scipio Center** 32.17 23 IAmb IAmb 11 37 23.1
comp=Z,44nm,0.9s
WSPT **Westport, CT** 32.25 29 IAmb IAmb 11 37 23.8
comp=Z,33nm,0.8s
HVU **Hansel Valley** 32.62 332 IAmb IAmb 11 37 30.3
comp=Z,13nm,0.8s
J57A **Williamstown** 32.95 23 IAmb IAmb 11 37 29.8
comp=Z,20nm,0.9s
NV11 **Mina Array Sit** 33.00 322 IAmb IAmb 11 37 34.2
comp=Z,25nm,1.0s
ELK **Elko** 33.01 328 LR LR 11 52 22.6
comp=Z,574nm,19.6s,baz=150,slow=39
PECO **Prince Edward** 33.03 22 IAmb IAmb 11 37 30.5
comp=Z,21nm,0.7s
MDPB **Devils Postpil** 33.05 320 IAmb IAmb 11 37 34.4
comp=Z,17nm,0.9s
SADO **Sadowa** 33.05 18 LR LR 11 52 41.9
comp=Z,2µm,18.4s,baz=218,slow=40
SADO **Sadowa** 33.05 18 IAmb IAmb 11 37 30.8
comp=Z,25nm,1.2s
NVAR **Mina Array Bea** 33.09 322 P P **11 37 33.2 +2.1**
comp=Z,15nm,0.7s,baz=124,slow=8.6,SNR=68
NVAR PcP PcP **11 40 15.3 +0.9**
comp=Z,3.3nm,0.8s,baz=126,slow=4.1,SNR=10
NVAR LR LR 11 52 57.3
comp=Z,1µm,19.4s,baz=127,slow=40
comp=Z,15nm,0.7s
NVAR **Mina Array Bea** 33.09 322 P P **11 37 32.5 +1.4**
LHV **Little Huntoon** 33.09 322 IAmb IAmb 11 37 35.0
comp=Z,18nm,0.9s
TEFE **Tefe** 33.14 119 *eP* P **11 37 31.9 +0.4**
SNOW **Snow King Moun** 33.15 336 IAmb IAmb 11 37 37.5
comp=Z,31nm,0.7s
LOHW **Long Hollow** 33.22 337 IAmb IAmb 11 37 38.5
comp=Z,42nm,1.6s
DELO **Delores Mine** 33.32 20 IAmb IAmb 11 37 33.2
comp=Z,31nm,0.7s
MOOW **Moose Ponds** 33.39 337 IAmb IAmb 11 37 39.9
comp=Z,35nm,1.8s
FXWY **Fox Creek** 33.41 336 IAmb IAmb 11 37 46.6
comp=Z,37nm,1.9s
BUKO **Buck Lake** 33.58 18 IAmb IAmb 11 37 35.5
comp=Z,16nm,0.8s
J59A **Pesco** 33.58 25 IAmb IAmb 11 37 36.5
comp=Z,15nm,0.7s
WAKR **Walker** 33.82 321 IAmb IAmb 11 37 41.3
comp=Z,23nm,1.4s
EYMN **Ely** 34.02 2 IAmb IAmb 11 37 39.8
comp=Z,50nm,1.9s
NCB **Newcomb** 34.12 25 IAmb IAmb 11 37 40.1
comp=Z,40nm,1.2s
YNE **Yellowstone No** 34.20 339 IAmb IAmb 11 37 45.9
comp=Z,72nm,1.9s
BOAV **Boa Vista** 34.20 107 P P **11 37 41.1 +0.3**
BOAV IAmb IAmb 11 37 45.0
comp=Z,60nm,1.7s
BOAV **Boa Vista** 34.20 107 *eP* P **11 37 41.0 +0.2**
YMR **Madison River** 34.26 337 IAmb IAmb 11 37 48.0
comp=Z,31nm,1.4s
PNTR **Pine Nut** 34.29 322 IAmb IAmb 11 37 45.3
comp=Z,20nm,0.9s
MDND **Maddock** 34.32 352 P P **11 37 41.4 0.0**
J61A **Chester** 34.32 27 IAmb IAmb 11 37 43.0
comp=Z,91nm,1.8s
AGMN **Agassiz Nation** 34.42 357 IAmb IAmb 11 37 43.6
comp=Z,51nm,1.1s
YHL **Hebgen Lake** 34.49 337 IAmb IAmb 11 37 50.4
comp=Z,48nm,1.7s
LONY **Lake Ozonia** 34.51 24 IAmb IAmb 11 37 43.7
comp=Z,28nm,0.9s
WBO **Williamsburg** 34.57 23 IAmb IAmb 11 37 44.1
comp=Z,20nm,0.8s
VT1 **Waterbury** 35.02 26 IAmb IAmb 11 37 47.5
comp=Z,17nm,0.6s
FRNY **Flat Rock** 35.09 25 IAmb IAmb 11 37 47.8
comp=Z,29nm,1.2s
I62A **Tamworth** 35.28 28 IAmb IAmb 11 37 51.1
comp=Z,78nm,1.6s
BOZ **Bozeman (W)** 35.29 337 IAmb IAmb 11 37 57.8
comp=Z,39nm,1.9s
MFID **Camas Ranch** 35.31 331 IAmb IAmb 11 37 57.7
comp=Z,34nm,1.9s
DLMT **Dillon** 35.47 336 IAmb IAmb 11 38 18.0
comp=Z,32nm,1.2s
MNTQ **Montreal, Queb** 35.62 24 IAmb IAmb 11 37 52.6
comp=Z,23nm,0.9s
SUTB **Sutter Butte** 35.70 320 IAmb IAmb 11 37 56.7
comp=Z,22nm,0.8s
EPLO **Experimental L** 35.73 359 IAmb IAmb 11 37 54.4
comp=Z,42nm,1.2s
ORV **Oroville** 35.73 321 IAmb IAmb 11 37 57.3
comp=Z,28nm,1.6s
I63A **Otisfield** 35.76 28 IAmb IAmb 11 37 54.3
comp=Z,24nm,0.8s
O03E **Paynes Creek** 36.36 322 IAmb IAmb 11 38 11.3
comp=Z,26nm,1.2s
ULM **Lac du Bonnet** 36.37 357 P P **11 37 58.8 -0.1**
comp=Z,28nm,0.6s,baz=175,slow=9.1,SNR=27
ULM LR LR 11 57 06.0
comp=Z,555nm,18.1s,baz=166,slow=43
comp=Z,28nm,0.6s
ULM **Lac du Bonnet** 36.37 357 IAmb IAmb 11 37 59.6
comp=Z,38nm,0.9s
ULM **Lac du Bonnet** 36.37 357⇓*iP* P **11 37 57.9 -1.1**
MACA **Manacapuru-AM** 36.38 115 P P **11 37 59.3 -0.2**
MACA **Manacapuru-AM** 36.38 115 *eP* P **11 38 00.7 +1.1**
G62A **West of Eustis** 36.69 27 IAmb IAmb 11 38 01.9
comp=Z,26nm,0.8s
EGMT **Eagleton** 36.76 341 IAmb IAmb 11 38 07.8
comp=Z,110nm,1.8s
PKME **Peaks-Kenny Pk** 37.28 28 IAmb IAmb 11 38 06.7
comp=Z,24nm,0.8s
YBH **Yreka Blue Hor** 37.80 323 P P **11 38 11.0 -0.4**
comp=Z,0.3nm,0.7s,baz=111,slow=2.7,SNR=12
YBH LR LR 11 55 36.9
comp=Z,67nm,18.4s,baz=126,slow=39
YBH **Yreka Blue Hor** 37.80 323 P P **11 38 11.0 -0.4**
G65A **Princeton** 38.05 30 IAmb IAmb 11 38 13.8
comp=Z,42nm,0.7s
LDAQ **Lac Daran** 38.58 24 IAmb IAmb 11 38 18.2
comp=Z,62nm,2.0s
D62A **Allapoint, All** 38.78 26 IAmb IAmb 11 38 19.5
comp=Z,31nm,0.8s
LPAZ **La Paz** 38.84 140 P P **11 38 20.9 -0.1**
comp=Z,7.6nm,0.7s,baz=340,slow=7.9,SNR=27
LPAZ LR LR 11 52 41.0
comp=Z,248nm,21.6s,baz=313,slow=34
comp=Z,7.6nm,0.7s
LPAZ **La Paz** 38.84 140 *eP* P **11 38 20.5 -0.5**
PB18 **Visviri** 39.02 143 IAmb IAmb 11 38 50.0
comp=Z,77nm,1.3s
H04A **Detroit Lake** 39.41 327 IAmb IAmb 11 38 27.8
comp=Z,32nm,1.0s
HOOD **Mount Hood Mea** 39.57 328 IAmb IAmb 11 38 30.1
comp=Z,65nm,1.1s
PB16 **IPOC Station P** 39.58 143 IAmb IAmb 11 38 29.7
comp=Z,138nm,1.9s
NEW **Newport** 39.64 335 P P **11 38 27.9 +1.2**
comp=Z,1.5nm,0.4s,baz=132,slow=8.8,SNR=6.7
NEW LR LR 11 54 50.5
comp=Z,337nm,21.7s,baz=135,slow=36
comp=Z,1.5nm,0.4s
PB11 **IPOC Station P** 40.63 145 IAmb IAmb 11 38 37.1
comp=Z,46nm,0.9s
GO01 **Chusmiza** 40.82 144 IAmb IAmb 11 38 39.8
comp=Z,29nm,0.9s
MDP **Montagnes des** 40.85 98 LR LR 11 57 45.3
comp=Z,288nm,18.1s,baz=309,slow=39
HMBC **Humberstone** 40.92 146 IAmb IAmb 11 38 39.3
comp=Z,43nm,1.5s
TA01 **Diego Aracena** 40.99 146 IAmb IAmb 11 38 42.1
comp=Z,58nm,1.1s
PATCX **Punta Patache** 41.21 146 IAmb IAmb 11 38 44.7
comp=Z,60nm,1.1s
ITTB **Itaituba** 41.31 113 *eP* P **11 38 40.0 -1.0**
FFC **Flin Flon** 41.36 352 P P **11 38 41.1 +0.3**
FFC IAmb IAmb 11 38 43.7
comp=Z,72nm,1.7s

FFC **Flin Flon** 41.36 352 *eP* P **11 38 41.0 +0.3**
GNW **Green Mountain** 41.70 330 P P **11 38 43.9 +0.3**
GNW IAmb IAmb 11 38 45.5
comp=Z,46nm,1.7s
MAL2 **Monte Alegre,** 41.73 109 P P **11 38 44.6 +0.2**
MAL2 IAmb IAmb 11 38 49.5
comp=Z,45nm,1.2s
PB02 **IPOC Station P** 41.76 146 IAmb IAmb 11 38 46.6
comp=Z,37nm,0.9s
PB07 **IPOC Station P** 42.09 147 IAmb IAmb 11 38 49.3
comp=Z,46nm,1.3s
VILB **Vilhena** 42.14 128 IAmb IAmb 11 38 50.8
comp=Z,47nm,1.2s
VILB **Vilhena** 42.14 128 *eP* P **11 38 47.0 -0.7**
PB03 **IPOC Station P** 42.43 147 IAmb IAmb 11 38 52.0
comp=Z,46nm,1.4s
PB09 **IPOC Station P** 42.49 146 IAmb IAmb 11 38 53.0
comp=Z,24nm,0.9s
PB05 **IPOC Station P** 42.85 148 IAmb IAmb 11 38 57.6
comp=Z,34nm,1.1s
NPGB **Novo Progresso** 42.89 117 *eP* P **11 38 52.1 -1.7**
PB06 **IPOC Station P** 43.06 147 IAmb IAmb 11 38 57.0
comp=Z,35nm,1.1s
SIV **San Ignacio** 43.42 132 LR LR 11 56 22.6
comp=Z,542nm,18.4s,baz=294,slow=35
RPN **Rapa Nui** 43.65 201 LR LR 11 52 40.7
comp=Z,455nm,18.7s,baz=26,slow=30
PDRB **Porto dos Gac** 44.10 123 *eP* P **11 39 02.5 -1.1**
PB14 **IPOC Station P** 44.23 150 IAmb IAmb 11 39 07.2
comp=Z,79nm,1.8s
PTLB **Pontes e Lacer** 44.50 130 IAmb IAmb 11 39 09.5
comp=Z,69nm,1.5s
PTLB **Pontes e Lacer** 44.50 130 *eP* P **11 39 06.2 -0.4**
CBB **Campbell River** 44.62 331 IAmb IAmb 11 39 27.2
comp=Z,61nm,1.6s
SCHQ **Schefferville** 45.76 21 P P **11 39 15.8 -0.4**
comp=Z,13nm,0.9s,baz=187,slow=3.9,SNR=8.4
SCHQ PcP PcP **11 40 54.7 +0.9**
comp=Z,3.5nm,0.9s,baz=215,slow=5.6,SNR=5.1
SCHQ LR LR 12 00 29.5
comp=Z,2µm,18.2s,baz=206,slow=39
comp=Z,13nm,0.9s
AC02 **Maricunga** 46.70 150 IAmb IAmb 11 39 29.1
comp=Z,33nm,1.1s
BBB **Bella Bella** 47.34 331 LR LR 12 03 13.1
comp=Z,503nm,18.1s,baz=146,slow=41
SALV **Santo Antonio** 47.39 127 *eP* P **11 39 29.7 +0.2**
PRPB **Parauapebas** 47.40 112 *eP* P **11 39 30.7 +1.0**
TMAB **Tom-Au,PA,Br** 47.50 106 *eP* P **11 39 29.5 -0.9**
LCO **Las Campanas** 47.82 153 P P **11 39 33.3 +0.4**
LCO IAmb IAmb 11 41 03.3
comp=Z,29nm,1.3s
LCO **Las Campanas** 47.82 153 *eP* P **11 39 33.0 0.0**
AC05 **El Transito** 47.86 153 IAmb IAmb 11 41 03.5
comp=Z,21nm,0.9s
PP1B **Ponte de Pedra** 49.03 128 *eP* P **11 39 41.3 -0.8**
CO03 **El Pedregal** 49.41 154 IAmb IAmb 11 39 46.5
comp=Z,30nm,1.1s
BDQN **Bodoquena, MS** 49.43 133 *eP* P **11 39 42.5 -2.7**
CO02 **Combarbal** 49.60 155 IAmb IAmb 11 39 47.7
comp=Z,34nm,1.1s
AQDB **Aquidauana** 50.20 132 IAmb IAmb 11 39 51.3
comp=Z,22nm,1.3s
AQDB **Aquidauana** 50.20 132 *eP* P **11 39 49.6 -1.4**
ARAG **Araguaiana, MT** 50.34 124 *eP* P **11 39 50.7 -1.5**
BLKN **Baker Lake** 50.45 358 IAmb IAmb 11 39 54.2
comp=Z,57nm,1.4s
SMTB **Santa Maria do** 50.55 114 *eP* P **11 39 53.5 -0.4**
U35K **Hyder** 50.65 334 P P **11 39 55.1 +1.2**
baz=131
TOAD **Toad River Com** 50.87 339 P P **11 39 56.9 +1.2**
baz=138
YKAW1 **Yellowknife Wh** 50.88 347 P P **11 39 56.5 +0.9**
ZON **Zonda** 50.89 153 IAmb IAmb 11 39 58.1
comp=Z,68nm,1.6s
YKA **Yellowknife Ar** 50.92 347 P P **11 39 57.9 +2.0**
comp=Z,17nm,0.6s,baz=163,slow=13,SNR=175
YKA LR LR 12 06 05.9
comp=Z,172nm,18.2s,baz=160,slow=42
comp=Z,17nm,0.6s
YKA **Yellowknife Ar** 50.92 347 P P **11 39 56.7 +0.8**
YKA **Yellowknife Ar** 50.92 347 P P **11 39 56.7 +0.8**
V35K **Ketchikan** 50.96 333 P P **11 39 57.8 +1.5**
baz=129
YKAW3 **Yellowknife Wh** 50.98 347 IAmb IAmb 11 40 00.2
comp=Z,34nm,0.7s
VA03 **San Esteban** 51.15 155 IAmb IAmb 11 39 59.6
comp=Z,43nm,1.1s
T35M **Bob Quinn** 51.45 335 P P **11 40 01.4 +1.4**
baz=132
KOTAN **Kotaneelee Air** 51.45 341 P P **11 40 01.6 +1.6**
baz=140
LIRD **Liard River Hi** 51.59 339 P P **11 40 03.2 +2.2**
baz=138
CRAG **Craig** 51.72 332 P P **11 40 04.6 +2.6**
baz=127
TAOE **Nuku Hiva Isla** 51.80 247 *eP* P **11 39 59.3 -4.0**
comp=Z,107nm,29.5s
TAOE *eS* S 11 47 16.7 -8.8
comp=Z,460nm,24.3s
TAOE *eSS* **SS** **11 50 53.9 -8.5**
comp=Z,135nm,26.3s
TAOE *eLR* LR 11 54 27.2
comp=Z,744nm,27.1s
MT09 **Talagante** 51.86 156 IAmb IAmb 11 40 04.5
comp=Z,94nm,1.9s
WRAK **Wrangell Islan** 51.97 334 P P **11 40 05.5 +1.7**
baz=129
U33K **Whale Pass** 52.12 333 P P **11 40 07.5 +2.6**
baz=128
LMEL **Las Melosas** 52.23 156 IAmb IAmb 11 40 08.1
comp=Z,31nm,0.9s
AMBA **Amambai (Brazi** 52.28 134 *eP* P **11 40 05.1 -1.6**
DLBC **Dease Lake** 52.33 337 LR LR 12 05 16.1
comp=Z,391nm,18.8s,baz=108,slow=39
DLBC **Dease Lake** 52.33 337 P P **11 40 08.7 +2.1**
baz=133
BO01 **Tunca** 52.37 157 IAmb IAmb 11 40 08.4
comp=Z,23nm,1.1s
S34M **Telegraph Cree** 52.42 336 IAmb IAmb 11 40 15.2
comp=Z,27nm,1.5s
S34M **Telegraph Cree** 52.42 336 P P **11 40 09.6 +2.4**
baz=131
T33K **Petersburg** 52.47 334 P P **11 40 10.4 +2.8**
baz=128
FRB **Frobisher Bay** 52.72 13 LR LR 12 05 22.2
comp=Z,345nm,21.9s,baz=202,slow=39
CPUP **Villa Florida** 53.01 139 P P **11 40 10.8 -1.2**
comp=Z,3.9nm,0.8s,baz=184,slow=7.6,SNR=23
CPUP LR LR 12 02 47.0
comp=Z,39nm,18.1s,baz=176,slow=36
comp=Z,3.9nm,0.8s
CPUP **Villa Florida** 53.01 139 P P **11 40 10.3 -1.6**
WTLY **Watson Lake, Y** 53.04 339 IAmb IAmb 11 40 30.5
comp=Z,62nm,1.8s
WTLY **Watson Lake, Y** 53.04 339 P P **11 40 14.0 +2.2**
baz=135
R33M **Jennings River** 53.34 337 IAmb IAmb 11 40 20.8
comp=Z,33nm,1.3s
R33M **Jennings River** 53.34 337 P P **11 40 16.9 +2.8**
baz=132
Q32M **Nakina River** 53.56 336 P P **11 40 18.1 +2.3**
baz=130
S32K **Killisnoo** 53.58 334 P P **11 40 18.3 +2.6**
baz=127
SIT **Sitka** 53.66 333 P P **11 40 18.1 +1.8**
baz=126
WRGLY **Wrigley** 53.71 344 P P **11 40 18.8 +2.2**
baz=142
ITRB **Iturama** 53.73 127 *eP* P **11 40 17.5 +0.1**
R32K **Eaglecrest** 54.04 334 P P **11 40 20.4 +1.3**
baz=128
BI02 **San Fabin de** 54.32 158 IAmb IAmb 11 40 22.9
comp=Z,33nm,1.3s
IPMB **Ipameri, GO** 54.46 124 *eP* P **11 40 23.4 +0.6**
SDBA **SAO DESIDERIO** 54.48 116 *eP* P **11 40 24.0 +0.9**
P32M **Atlin** 54.53 336 P P **11 40 24.2 +1.5**
baz=129
P33M **Teslin, Yukon** 54.59 337 P P **11 40 24.4 +1.2**
baz=130
S31K **Pelican** 54.59 333 P P **11 40 24.8 +1.8**
baz=126
R31K **City Hall, Gus** 54.64 334 P P **11 40 25.4 +2.0**
baz=126
SKAG **Skagway** 55.10 335 P P **11 40 28.2 +1.5**
baz=127
N32M **Quiet Lake** 55.30 338 P P **11 40 30.1 +1.8**

	baz=131					
PTGB	**Pitanga**	**55.48**	**133**	*e*P	**P**	**11 40 29.7 -0.4**
PLBC	**Pleasant Camp**	**55.52**	**335**	P	**P**	**11 40 31.5 +1.6**
	baz=126					
WHY	**Whitehorse**	**55.66**	**337**	P	**P**	**11 40 32.0 +1.1**
	baz=128					
ILON	**Igloolik, Nuna**	**55.95**	**5**	P	**P**	**11 40 33.1 +0.4**
ILON				IAmb	IAmb	11 40 35.2
	comp=Z,14nm,1.0s					
P30M	**Million Dollar**	**56.16**	**335**	P	**P**	**11 40 36.0 +1.5**
	baz=126					
PMNB	**Patos De Minas**	**56.18**	**124**	*e*P	**P**	**11 40 33.5 -1.8**
P29M	**Windy Craggy**	**56.19**	**335**	P	**P**	**11 40 36.0 +1.3**
	baz=125					
O30N	**Mendenhall**	**56.20**	**336**	P	**P**	**11 40 36.2 +1.5**
	baz=127					
PSAL	**Palomas, Salto**	**56.24**	**143**	*e*P	**P**	**11 40 34.8 -0.5**
M31M	**Drury Creek, Y**	**56.46**	**338**	IAmb	IAmb	11 40 42.6
	comp=Z,31nm,1.8s					
M31M	**Drury Creek, Y**	**56.46**	**338**	P	**P**	**11 40 37.7 +1.2**
	baz=130					
N31M	**Braeburn, Yuko**	**56.52**	**337**	IAmb	IAmb	11 40 54.7
	comp=Z,61nm,1.6s					
N31M	**Braeburn, Yuko**	**56.52**	**337**	P	**P**	**11 40 37.9 +0.9**
	baz=128					
HYT	**Haines Junctio**	**56.79**	**336**	IAmb	IAmb	11 40 52.7
	comp=Z,24nm,1.4s					
HYT	**Haines Junctio**	**56.79**	**336**	P	**P**	**11 40 40.5 +1.5**
	baz=126					
PNL	**Peninsula**	**56.91**	**334**	P	**P**	**11 40 41.5 +1.7**
	baz=123					
O29M	**Mount Kennedy**	**56.92**	**335**	P	**P**	**11 40 41.1 +1.1**
	baz=124					
N30M	**Aishikik Lake**	**57.00**	**337**	P	**P**	**11 40 42.0 +1.5**
	baz=126					
ITAB	**Concordia**	**57.04**	**136**	*e*P	**P**	**11 40 39.6 -1.5**
YUK6	**Outpost Mounta**	**57.20**	**336**	P	**P**	**11 40 43.1 +1.0**
	baz=125					
PINM	**Pinnacle**	**57.51**	**334**	P	**P**	**11 40 45.3 +1.3**
	baz=122					
YUK4	**Talbot Arm**	**57.54**	**336**	P	**P**	**11 40 45.2 +0.8**
	baz=125					
M30M	**Minto, Yukon**	**57.56**	**338**	P	**P**	**11 40 45.5 +1.1**
	baz=127					
O28M	**Mount Upton**	**57.85**	**335**	P	**P**	**11 40 47.3 +0.6**
	baz=123					
MAYO	**Mayo, Yukon**	**57.88**	**339**	P	**P**	**11 40 48.1 +1.5**
	baz=129					
YUK8	**Steele Glacier**	**57.95**	**336**	P	**P**	**11 40 48.6 +1.2**
	baz=124					
M29M	**Somme Creek**	**58.11**	**337**	P	**P**	**11 40 49.1 +0.8**
	baz=126					
PLCA	**Paso Flores**	**58.21**	**160**	P	**P**	**11 40 49.5 +0.2**
	comp=Z,15nm,1.1s,baz=336,slow=7.9,SNR=11					
PLCA				LR	LR	12 01 21.4
	comp=Z,304nm,18.6s,baz=358,slow=31					
	comp=Z,15nm,1.1s					
PLCA	**Paso Flores**	**58.21**	**160**	*e*P	**P**	**11 40 49.0 -0.2**
MESA	**MESA**	**58.27**	**334**	P	**P**	**11 40 50.5 +0.9**
	baz=121					
CPSB	**Cacapava Do Su**	**58.29**	**140**	*e*P	**P**	**11 40 49.0 -0.8**
DIAM	**Diamantina, MG**	**58.32**	**122**	*e*P	**P**	**11 40 50.6 +0.1**
L29M	**L29M**	**58.38**	**338**	IAmb	IAmb	11 40 56.3
	comp=Z,11nm,0.8s					
L29M	**L29M**	**58.38**	**338**	P	**P**	**11 40 50.8 +0.8**
	baz=126					
CTG	**Chitna Glacier**	**58.42**	**335**	P	**P**	**11 40 51.5 +1.0**
	baz=122					
YUK3	**Moose Creek**	**58.50**	**336**	P	**P**	**11 40 52.2 +1.0**
	baz=123					
K29M	**Barlow Dome**	**58.60**	**339**	IAmb	IAmb	11 40 57.4
	comp=Z,44nm,1.8s					
K29M	**Barlow Dome**	**58.60**	**339**	P	**P**	**11 40 52.7 +1.0**
	baz=127					
J30M	**Hart River**	**58.64**	**340**	IAmb	IAmb	11 40 58.9
	comp=Z,11nm,0.7s					
J30M	**Hart River**	**58.64**	**340**	P	**P**	**11 40 52.6 +0.6**
	baz=129					
C36M	**Paulatuk**	**58.80**	**348**	P	**P**	**11 40 54.3 +1.5**
	baz=144,SNR=9.1					
H31M	**Peel River**	**58.80**	**342**	IAmb	IAmb	11 40 59.0
	comp=Z,9.1nm,0.7s					
H31M	**Peel River**	**58.80**	**342**	P	**P**	**11 40 53.9 +1.0**
	baz=132					
BSCB	**Bom Sucesso**	**58.81**	**125**	*e*P	**P**	**11 40 54.8 +1.0**
BGLC	**Bering Glacier**	**58.82**	**333**	P	**P**	**11 40 54.7 +1.6**
	baz=119					
BVCY	**Beaver Creek**	**59.01**	**336**	P	**P**	**11 40 55.6 +1.1**
	baz=123					
CRQE	**Cirque**	**59.05**	**334**	P	**P**	**11 40 55.9 +1.0**
	baz=120					
I30M	**Mount Dempster**	**59.07**	**340**	IAmb	IAmb	11 41 00.9
	comp=Z,32nm,1.4s					
I30M	**Mount Dempster**	**59.07**	**340**	P	**P**	**11 40 55.5 +0.6**
	baz=129					
LL01	**San Ignacio de**	**59.12**	**162**	P	**P**	**11 40 56.3 +0.9**
PLTB	**Pedras Altas**	**59.12**	**141**	*e*P	**P**	**11 40 54.8 -0.9**
MCARA	**McCarthy VSAT**	**59.34**	**335**	P	**P**	**11 40 57.9 +1.1**
	baz=120					
M27K	**Edge Creek, AK**	**59.38**	**336**	P	**P**	**11 40 57.8 +0.6**
	baz=122					
DAWY	**Dawson**	**59.40**	**338**	P	**P**	**11 40 58.1 +0.9**
	baz=125					
BCAR	**Beaver Creek A**	**59.72**	**337**	P	**P**	**11 41 00.4 +1.0**
F31M	**Tsiigehtchic**	**59.73**	**343**	IAmb	IAmb	11 41 04.6
	comp=Z,26nm,0.8s					
F31M	**Tsiigehtchic**	**59.73**	**343**	P	**P**	**11 41 00.3 +1.1**
	baz=133,SNR=23					
L27K	**Beaver Creek,**	**59.74**	**337**	IAmb	IAmb	11 41 06.7
	comp=Z,16nm,0.8s					
L27K	**Beaver Creek,**	**59.74**	**337**	P	**P**	**11 41 00.4 +0.9**
	baz=122					
BMRM	**Bremner River**	**59.80**	**334**	P	**P**	**11 41 00.9 +0.9**
	baz=118					
M26K	**Nabesna, AK**	**59.85**	**336**	P	**P**	**11 41 01.1 +0.8**
	baz=121					
EPYK	**Eagle Plains**	**59.91**	**341**	IAmb	IAmb	11 41 06.4
	comp=Z,18nm,1.0s					
EPYK	**Eagle Plains**	**59.91**	**341**	P	**P**	**11 41 02.3 +1.7**
	baz=129					
SFJD	**Kangerlussuaq**	**60.00**	**18**	LR	LR	12 08 40.5
	comp=Z,2µm,18.2s,baz=221,slow=38					
LL02	**Futaleuf**	**60.03**	**162**	P	**P**	**11 41 02.5 +0.8**
EYAK	**Cordova Ski Ar**	**60.10**	**333**	P	**P**	**11 41 03.5 +1.5**
	baz=117					
N25K	**Chitina, Valde**	**60.11**	**334**	IAmb	IAmb	11 41 05.4
	comp=Z,16nm,0.8s					
N25K	**Chitina, Valde**	**60.11**	**334**	P	**P**	**11 41 03.1 +1.0**
	baz=119					
G30M	**tAoh Zrail Nji**	**60.15**	**342**	IAmb	IAmb	11 41 23.7
	comp=Z,28nm,1.6s					
G30M	**tAoh Zrail Nji**	**60.15**	**342**	P	**P**	**11 41 03.8 +1.5**
	baz=130					
INK	**Inuvik**	**60.27**	**344**	LR	LR	12 11 03.7
	comp=Z,603nm,18.3s,baz=330,slow=40					
INK	**Inuvik**	**60.27**	**344**	P	**P**	**11 41 04.4 +1.4**
	baz=134,SNR=47					
L26K	**Log Cabin Wild**	**60.31**	**336**	IAmb	IAmb	11 41 12.1
	comp=Z,33nm,1.7s					
L26K	**Log Cabin Wild**	**60.31**	**336**	P	**P**	**11 41 04.5 +1.1**
	baz=121					
H29M	**Whitestone**	**60.33**	**341**	IAmb	IAmb	11 41 21.4
	comp=Z,20nm,1.0s					
H29M	**Whitestone**	**60.33**	**341**	P	**P**	**11 41 04.7 +1.1**
	baz=128					
K27K	**Chicken**	**60.35**	**338**	IAmb	IAmb	11 41 10.3
	comp=Z,10nm,0.6s					
K27K	**Chicken**	**60.35**	**338**	P	**P**	**11 41 05.3 +1.6**
	baz=123					
I28M	**Miner Creek**	**60.39**	**340**	IAmb	IAmb	11 41 28.7
	comp=Z,38nm,1.9s					
I28M	**Miner Creek**	**60.39**	**340**	P	**P**	**11 41 05.1 +1.0**
	baz=126					
MENT	**Mentasta**	**60.41**	**336**	IAmb	IAmb	11 41 07.4
	comp=Z,42nm,1.6s					
F30M	**Barrier River**	**60.43**	**343**	P	**P**	**11 41 05.7 +1.6**
	baz=131					
CMC01	**Camacan, BA**	**60.47**	**117**	*e*P	**P**	**11 41 05.8 +0.6**
SJMB	**Sao Joao De Ma**	**60.58**	**121**	*e*P	**P**	**11 41 04.3 -1.6**
P23K	**Montague Islan**	**60.60**	**332**	P	**P**	**11 41 07.0 +1.5**
	baz=115					
KLU	**Klutina**	**60.61**	**334**	IAmb	IAmb	11 41 08.5
	comp=Z,16nm,0.8s					
KLU	**Klutina**	**60.61**	**334**	P	**P**	**11 41 07.0 +1.4**
	baz=117					
G29M	**Pine Creek**	**60.65**	**341**	IAmb	IAmb	11 41 11.6
	comp=Z,30nm,1.1s					
G29M	**Pine Creek**	**60.65**	**341**	P	**P**	**11 41 07.2 +1.5**
	baz=128					
HARP	**HAARP**	**60.72**	**335**	P	**P**	**11 41 07.7 +1.5**
	baz=119					
GUA01	**Guaratinga, BA**	**60.77**	**118**	*e*P	**P**	**11 41 07.1 -0.1**
RES	**Resolute Bay**	**60.84**	**359**	LR	LR	12 11 36.5
	comp=Z,504nm,18.9s,baz=176,slow=40					
RES	**Resolute Bay**	**60.84**	**359**	P	**P**	**11 41 07.2 +0.5**
RES				IAmb	IAmb	11 41 08.8
	comp=Z,21nm,1.1s					
RES	**Resolute Bay**	**60.84**	**359**	P	**P**	**11 41 07.2 +0.5**
RES				pmax	pmax	
	comp=Z,21nm,1.1s					
GLI	**Glacier Island**	**60.84**	**333**	P	**P**	**11 41 08.5 +1.4**
	baz=116					
DOT	**Dot Lake**	**60.91**	**337**	IAmb	IAmb	11 41 13.4
	comp=Z,20nm,1.0s					
M24K	**Tolsona, Glenn**	**61.00**	**335**	P	**P**	**11 41 09.2 +1.0**
	baz=118					
SCRK	**Sand Creek**	**61.04**	**337**	P	**P**	**11 41 09.1 +0.6**
SCRK				IAmb	IAmb	11 41 15.9
	comp=Z,18nm,1.2s					
SCRK	**Sand Creek**	**61.04**	**337**	P	**P**	**11 41 10.1 +1.5**
	baz=121					
I27K	**Kandik River**	**61.06**	**339**	IAmb	IAmb	11 41 15.9
	comp=Z,15nm,1.0s					
I27K	**Kandik River**	**61.06**	**339**	P	**P**	**11 41 09.6 +1.1**
	baz=124					
NBAN	**Chadia - AL**	**61.09**	**109**	*e*P	**P**	**11 41 08.0 -1.5**
PAX	**Paxson**	**61.12**	**336**	IAmb	IAmb	11 41 16.0
	comp=Z,22nm,1.0s					
PAX	**Paxson**	**61.12**	**336**	P	**P**	**11 41 10.3 +1.2**
	baz=119					
J26L	**Joseph Creek**	**61.16**	**338**	IAmb	IAmb	11 41 17.1
	comp=Z,16nm,0.8s					
J26L	**Joseph Creek**	**61.16**	**338**	P	**P**	**11 41 10.3 +1.0**
	baz=121					
A36M	**Sachs Harbour**	**61.18**	**349**	P	**P**	**11 41 10.7 +1.6**
	baz=144					
RIDG	**Independent Ri**	**61.25**	**337**	IAmb	IAmb	11 41 17.1
	comp=Z,30nm,1.1s					
RIDG	**Independent Ri**	**61.25**	**337**	P	**P**	**11 41 11.4 +1.5**
	baz=120					
SCM	**Sheep Creek Mo**	**61.37**	**334**	P	**P**	**11 41 11.6 +0.9**
	baz=116					
H27K	**Steamboat Moun**	**61.38**	**340**	IAmb	IAmb	11 41 16.7
	comp=Z,39nm,1.6s					
H27K	**Steamboat Moun**	**61.38**	**340**	P	**P**	**11 41 11.9 +1.2**
	baz=124					
PWL	**Port Wells**	**61.38**	**333**	P	**P**	**11 41 12.0 +1.3**
	baz=115					
I26K	**Coal Creek Min**	**61.43**	**339**	IAmb	IAmb	11 41 16.7
	comp=Z,10nm,0.7s					
I26K	**Coal Creek Min**	**61.43**	**339**	P	**P**	**11 41 12.6 +1.6**
	baz=122					
M23K	**Glacier View**	**61.52**	**334**	P	**P**	**11 41 12.9 +1.3**
	baz=116					
RIB01	**Linhares ES**	**61.52**	**121**	*e*P	**P**	**11 41 12.3 0.0**
E29M	**Blow River**	**61.54**	**343**	P	**P**	**11 41 13.2 +1.5**
	baz=129,SNR=22					
SEW	**Seward**	**61.58**	**332**	P	**P**	**11 41 13.3 +1.2**
	baz=113					
K24K	**Donnelly Dome**	**61.65**	**336**	P	**P**	**11 41 14.1 +1.6**
	baz=119					
F28M	**Old Crow**	**61.65**	**342**	P	**P**	**11 41 14.0 +1.5**
	baz=126,SNR=59					
KNK	**Knik Glacier**	**61.67**	**333**	P	**P**	**11 41 13.7 +1.0**
	baz=115					
G27K	**Doyon Strip**	**61.75**	**340**	IAmb	IAmb	11 41 18.7
	comp=Z,12nm,1.2s					
G27K	**Doyon Strip**	**61.75**	**340**	P	**P**	**11 41 13.9 +0.7**
	baz=124					
SML	**Sawmill**	**61.78**	**334**	P	**P**	**11 41 14.1 +0.6**
	baz=115					
O22K	**Cooper Landing**	**61.85**	**332**	P	**P**	**11 41 14.8 +0.9**
	baz=113					
WAT6	**Susitna Watana**	**61.87**	**335**	P	**P**	**11 41 14.7 +0.5**
	baz=116					
J25K	**Salcha River,**	**61.89**	**337**	IAmb	IAmb	11 41 20.7
	comp=Z,19nm,1.0s					
J25K	**Salcha River,**	**61.89**	**337**	P	**P**	**11 41 15.4 +1.3**
	baz=120					
DHY	**Denali Highway**	**61.94**	**335**	P	**P**	**11 41 15.2 +0.6**
	baz=117					
PMR	**Primer**	**62.04**	**333**	P	**P**	**11 41 16.1 +1.0**
	baz=114					
BRSE	**Bradley Lake S**	**62.04**	**331**	P	**P**	**11 41 16.4 +1.2**
	baz=112					
RC01	**Rabbit Creek A**	**62.10**	**333**	P	**P**	**11 41 16.3 +0.7**
	baz=113					
COYC	**Coyhaique**	**62.14**	**163**	P	**P**	**11 41 16.1 +0.1**
E28M	**Babbage River**	**62.15**	**343**	P	**P**	**11 41 17.5 +1.7**
	baz=127					
KDAK	**Kodiak Island**	**62.25**	**329**	P	**P**	**11 41 17.9 +1.3**
	baz=109					
WAT1	**Susitna Watana**	**62.31**	**335**	P	**P**	**11 41 18.3 +1.3**
	baz=115					
ABR01	**Abrolhos, BA**	**62.33**	**119**	*e*P	**P**	**11 41 17.4 -0.3**
D28M	**Stokes Point**	**62.37**	**343**	P	**P**	**11 41 18.6 +1.4**
	baz=128					
HDA	**Harding Lake**	**62.39**	**337**	IAmb	IAmb	11 41 23.4
	comp=Z,9.9nm,0.6s					
HDA	**Harding Lake**	**62.39**	**337**	P	**P**	**11 41 18.5 +1.1**
	baz=116					
PRP	**Porcupine Dome**	**62.39**	**338**	P	**P**	**11 41 18.2 +0.6**
	baz=120					
OHAK	**Old Harbor**	**62.43**	**328**	P	**P**	**11 41 18.5 +0.7**
	baz=108					
Q20K	**Shuyak Island**	**62.43**	**330**	P	**P**	**11 41 18.9 +1.1**
	baz=110					
HOM	**Homer**	**62.44**	**331**	P	**P**	**11 41 18.5 +0.7**
	baz=111					
E27K	**Coleen River**	**62.52**	**342**	P	**P**	**11 41 18.9 +0.6**
	baz=125					
G26K	**Porcupine Rive**	**62.53**	**340**	IAmb	IAmb	11 41 24.8
	comp=Z,26nm,1.4s					
G26K	**Porcupine Rive**	**62.53**	**340**	P	**P**	**11 41 18.9 +0.6**
	baz=122					
IL31		**62.53**	**337**	IAmb	IAmb	11 41 25.1
	comp=Z,20nm,0.9s					
ILAR	**Eielson Array**	**62.53**	**337**	P	**P**	**11 41 18.8 +0.4**
	comp=Z,4.7nm,0.8s,baz=168,slow=4.3,SNR=52					
ILAR				LR	LR	12 09 35.0
	comp=Z,286nm,20.0s,baz=104,slow=37					
	comp=Z,4.7nm,0.8s					
ILAR	**Eielson Array**	**62.53**	**337**	*e*P	**P**	**11 41 18.0 -0.4**
M22K	**Willow**	**62.54**	**333**	P	**P**	**11 41 19.9 +1.5**
	baz=113					
CAPN	**Captain Cook N**	**62.62**	**332**	P	**P**	**11 41 20.6 +1.7**
	baz=112					
SUA	**Susitna One**	**62.70**	**333**	IAmb	IAmb	11 41 23.4
	comp=Z,20nm,0.9s					
SUA	**Susitna One**	**62.70**	**333**	P	**P**	**11 41 21.4 +1.7**
	baz=113					
SII	**Sitkinak Islan**	**62.70**	**327**	P	**P**	**11 41 20.6 +1.0**
	baz=107					
CCB	**Clear Creek Bu**	**62.83**	**337**	IAmb	IAmb	11 41 27.3
	comp=Z,7.2nm,0.7s					
WRH	**Wood River Hil**	**62.86**	**337**	IAmb	IAmb	11 41 49.5
	comp=Z,34nm,1.8s					
CUT	**Chulitna**	**62.86**	**334**	P	**P**	**11 41 21.7 +1.1**
	baz=114					
MCK	**McKinley**	**62.86**	**336**	IAmb	IAmb	11 41 24.8
	comp=Z,14nm,0.9s					
MCK	**McKinley**	**62.86**	**336**	P	**P**	**11 41 21.7 +1.0**
	baz=116					
H25L	**Birch Creek**	**62.87**	**339**	P	**P**	**11 41 22.1 +1.5**
	baz=120					
POKR	**Poker Flat Res**	**62.90**	**337**	P	**P**	**11 41 21.9 +1.1**
	baz=118					
D27M	**Malcolm River**	**62.95**	**343**	IAmb	IAmb	11 41 26.9
	comp=Z,18nm,0.7s					
D27M	**Malcolm River**	**62.95**	**343**	P	**P**	**11 41 22.4 +1.3**
	baz=126,SNR=21					
COLA	**College**	**62.95**	**337**	P	**P**	**11 41 22.0 +0.9**
COLA	**College**	**62.95**	**337**	i/P	**P**	**11 41 22.1 +1.0**
COLA				pmax	pmax	
	comp=Z,5.0nm,0.4s					
COLA	**College**	**62.95**	**337**	P	**P**	**11 41 22.2 +1.0**
	baz=117					
F26K	**Shenjek River**	**63.05**	**341**	IAmb	IAmb	11 41 28.0
	comp=Z,12nm,1.0s					
F26K	**Sheenjek River**	**63.05**	**341**	P	**P**	**11 41 22.7 +0.9**
	baz=122					
BMAR	**Burnt Mountain**	**63.05**	**340**	P	**P**	**11 41 22.9 +1.1**
O20K	**Slope Mountain**	**63.05**	**331**	P	**P**	**11 41 23.3 +1.3**
	baz=110					
L22K	**Petersville**	**63.12**	**334**	IAmb	IAmb	11 41 26.6
	comp=Z,19nm,1.1s					
SPU	**Mount Spurr**	**63.18**	**332**	IAmb	IAmb	11 41 24.9
	comp=Z,13nm,0.8s					
P19K	**Oil Pt**	**63.19**	**330**	P	**P**	**11 41 23.9 +1.0**
	baz=109					
STLK	**Strandline Lak**	**63.19**	**333**	IAmb	IAmb	11 41 25.7
	comp=Z,9.0nm,1.0s					
G25K	**Bearman Lake**	**63.22**	**339**	P	**P**	**11 41 23.8 +1.0**
	baz=120					
SKT	**Skwentna**	**63.24**	**333**	P	**P**	**11 41 24.2 +1.0**
	baz=112					
N20K	**Mount Spurr**	**63.25**	**332**	P	**P**	**11 41 24.1 +0.7**
	baz=111					
SPCR	**Spurr Chakacha**	**63.25**	**332**	P	**P**	**11 41 24.6 +1.3**
	baz=111					
CHIR	**Chirikof Islan**	**63.27**	**326**	P	**P**	**11 41 23.6 +0.2**
	baz=105					
NEA2	**Nenana**	**63.29**	**336**	IAmb	IAmb	11 41 28.9
	comp=Z,39nm,1.8s					
NEA2	**Nenana**	**63.29**	**336**	P	**P**	**11 41 24.4 +1.0**
	baz=116					
TRF	**Thorofare Moun**	**63.29**	**335**	P	**P**	**11 41 24.2 +0.5**
	baz=114,SNR=8.2					
H24K	**Noodor Dome**	**63.40**	**338**	IAmb	IAmb	11 41 30.5
	comp=Z,15nm,0.7s					
H24K	**Noodor Dome**	**63.40**	**338**	P	**P**	**11 41 25.1 +0.8**
	baz=118					
F25K	**Christian Rive**	**63.48**	**340**	P	**P**	**11 41 25.4 +0.7**
	baz=120					
I23K	**Minto, Yukon-K**	**63.64**	**337**	P	**P**	**11 41 26.6 +0.9**
	baz=116,SNR=22					
G24K	**Hadweenzic Riv**	**63.66**	**339**	IAmb	IAmb	11 41 32.9
	comp=Z,26nm,1.4s					
G24K	**Hadweenzic Riv**	**63.66**	**339**	P	**P**	**11 41 26.5 +0.6**
	baz=118					
E25K	**Arctic Village**	**63.73**	**341**	IAmb	IAmb	11 41 32.7
	comp=Z,14nm,0.6s					
E25K	**Arctic Village**	**63.73**	**341**	P	**P**	**11 41 27.5 +1.2**
	baz=121					
Q18K	**Katmai Hardscr**	**63.74**	**329**	P	**P**	**11 41 27.4 +0.7**
	baz=107					
PPT	**Papeete**	**63.82**	**242**	LR	LR	12 03 38.4
	comp=Z,292nm,18.2s,baz=56,slow=31					
PPT2	**Papeete2**	**63.83**	**242**	*e*P	**P**	**11 41 28.7 +0.9**
	comp=Z,72nm,26.2s					
PPT2	**Papeete2**	**63.83**	**242**	*e*PP	**PP**	**11 43 48.2 -0.2**
	comp=Z,44nm,25.5s					
PPT2				*e*S	**S**	**11 50 01.6 -1.4**
	comp=Z,345nm,27.5s					
PPT2				*e*SS	SS	11 53 54.2 -17
	comp=Z,134nm,29.5s					
PPT2				*e*LQ	LQ	11 57 39.2
	comp=Z,731nm,29.0s					
PPT2				*e*LR	LR	12 00 04.1
	comp=Z,643nm,25.5s					
PPT2				*e*LR	LR	12 00 11.1
	comp=Z,321nm,39.2s					
BPAW	**Bear Paw Mtn.**	**63.84**	**336**	IAmb	IAmb	11 41 28.8
	comp=Z,13nm,0.8s					
BPAW	**Bear Paw Mtn.**	**63.84**	**336**	P	**P**	**11 41 27.9 +0.8**
	baz=114,SNR=8.0					
PPLA	**Purkeypile**	**63.87**	**334**	P	**P**	**11 41 28.4 +0.9**
	baz=112					
M20K	**Styx River**	**63.91**	**333**	IAmb	IAmb	11 41 29.6
	comp=Z,18nm,0.8s					
M20K	**Styx River**	**63.91**	**333**	P	**P**	**11 41 28.8 +1.2**
	baz=110					
C27K	**Jago River**	**63.96**	**342**	P	**P**	**11 41 29.3 +1.5**
	baz=123					
H23K	**Yukon River**	**64.01**	**338**	IAmb	IAmb	11 41 34.9
	comp=Z,8.6nm,0.9s					
H23K	**Yukon River**	**64.01**	**338**	P	**P**	**11 41 29.1 +0.9**
	baz=116					
Q17K	**Contact Creek**	**64.07**	**329**	P	**P**	**11 41 29.8 +1.0**
	baz=106					
P18K	**Big Mountain,**	**64.08**	**330**	P	**P**	**11 41 29.7 +1.0**
	baz=107					
MLY	**Manley**	**64.12**	**337**	IAmb	IAmb	11 41 35.3
	comp=Z,22nm,0.9s					
MLY	**Manley**	**64.12**	**337**	P	**P**	**11 41 30.0 +1.0**
	baz=114					
R17L	**Mt. Peulik Vol**	**64.14**	**328**	P	**P**	**11 41 30.0 +0.8**
	baz=106					
N19K	**Bonanza Creek**	**64.16**	**331**	IAmb	IAmb	11 41 31.0
	comp=Z,16nm,0.8s					
N19K	**Bonanza Creek**	**64.16**	**331**	P	**P**	**11 41 30.5 +1.1**
	baz=109					
F24K	**Squaw Lake**	**64.19**	**340**	IAmb	IAmb	11 41 48.8
	comp=Z,36nm,1.7s					
F24K	**Squaw Lake**	**64.19**	**340**	P	**P**	**11 41 30.7 +1.2**
	baz=118					
O18K	**Koktuh Hills**	**64.20**	**330**	P	**P**	**11 41 30.1 +0.5**
	baz=108					
CHUM	**Lake Minchumin**	**64.30**	**335**	P	**P**	**11 41 30.3 +0.3**
	baz=112					
L20K	**Farewell, AK**	**64.45**	**333**	IAmb	IAmb	11 41 32.6
	comp=Z,21nm,0.8s					
L20K	**Farewell, AK**	**64.45**	**333**	P	**P**	**11 41 32.1 +1.0**
	baz=110					
C26K	**Camden Bay**	**64.47**	**343**	P	**P**	**11 41 32.2 +1.0**
	baz=122					
M19K	**Big River Lodg**	**64.48**	**333**	P	**P**	**11 41 32.6 +1.2**
	baz=109					
G23K	**Bananza Creek**	**64.57**	**338**	IAmb	IAmb	11 41 38.4
	comp=Z,9.1nm,0.8s					
G23K	**Bananza Creek**	**64.57**	**338**	P	**P**	**11 41 32.9 +1.0**
	baz=116					
Q16K	**King Salmon**	**64.58**	**329**	P	**P**	**11 41 33.4 +1.4**
	baz=106					
D25K	**Kavik River**	**64.60**	**342**	P	**P**	**11 41 33.7 +1.6**
	baz=120					
P17K	**Kvichak River**	**64.61**	**329**	P	**P**	**11 41 32.9 +0.7**
	baz=106					
E24K	**Your Creek**	**64.66**	**340**	IAmb	IAmb	11 41 39.6
	comp=Z,7.7nm,0.7s					
E24K	**Your Creek**	**64.66**	**340**	P	**P**	**11 41 33.6 +1.1**
	baz=118					
I21K	**Tanana**	**64.67**	**336**	P	**P**	**11 41 33.1 +0.6**
	baz=113					
H22K	**Ishtalitna Cre**	**64.72**	**337**	IAmb	IAmb	11 41 39.2
	comp=Z,13nm,0.9s					
H22K	**Ishtalitna Cre**	**64.72**	**337**	P	**P**	**11 41 33.9 +1.0**
	baz=114					
L19K	**White Mountain**	**64.78**	**333**	P	**P**	**11 41 33.9 +0.6**
	baz=109					
N18K	**Kilae Creek**	**64.78**	**331**	P	**P**	**11 41 33.9 +0.6**
	baz=107					
K20K	**Telida**	**64.83**	**334**	IAmb	IAmb	11 41 36.8
	comp=Z,19nm,1.0s					
K20K	**Telida**	**64.83**	**334**	P	**P**	**11 41 34.8 +1.2**
	baz=110					
COLD	**Coldfoot**	**64.86**	**339**	IAmb	IAmb	11 41 41.4
	comp=Z,49nm,1.8s					
COLD	**Coldfoot**	**64.86**	**339**	P	**P**	**11 41 35.0 +1.3**
	baz=116					
M18K	**Stony River**	**64.99**	**332**	P	**P**	**11 41 35.7 +1.0**
	baz=108					
E23K	**Chandalar**	**65.03**	**340**	IAmb	IAmb	11 41 41.8
	comp=Z,20nm,0.8s					
E23K	**Chandalar**	**65.03**	**340**	P	**P**	**11 41 36.0 +1.1**
	baz=117					
O17K	**Koliganek Bris**	**65.09**	**330**	P	**P**	**11 41 36.3 +1.0**
	baz=106					
J20K	**Nowinta River**	**65.15**	**335**	IAmb	IAmb	11 41 42.3
	comp=Z,17nm,1.0s					
J20K	**Nowinta River**	**65.15**	**335**	P	**P**	**11 41 36.5 +0.9**
	baz=110					
H21K	**Melozitna Rive**	**65.17**	**337**	IAmb	IAmb	11 42 18.4
	comp=Z,24nm,1.6s					
H21K	**Melozitna Rive**	**65.17**	**337**	P	**P**	**11 41 36.2 +0.5**
	baz=112					
G22K	**Bettles**	**65.19**	**338**	P	**P**	**11 41 37.1 +1.2**
	baz=114					
CHNA	**Chernabura Isl**	**65.24**	**324**	P	**P**	**11 41 37.0

S14K Fog Glacier 65.52 326 P P 11 41 38.9 +0.6
baz=102
O16K Kokwok River B 65.53 330 P P 11 41 38.8 +0.6
baz=105
L18K Granite Mounta 65.61 333 P P 11 41 38.7 +0.1
baz=107
F22K John River 65.67 339 P P 11 41 39.6 +0.6
baz=114
J19K Poorman 65.70 335 IAmb IAmb 11 41 40.5
comp=Z,16nm,0.9s
J19K Poorman 65.70 335 P P 11 41 39.9 +0.6
baz=109
M17K Holitna River 65.71 332 P P 11 41 39.9 +0.5
baz=106
G21K Allakaket 65.76 338 P P 11 41 40.5 +0.9
baz=112
D23K Nanushuk River 65.79 340 P P 11 41 40.5 +0.9
baz=116
E22K Anaktuvuk Pass 65.81 339 P P 11 41 40.9 +1.0
baz=114
SDPT Sand Point 65.84 325 P P 11 41 41.1 +0.8
baz=101
H20K Anotleneega Mo 65.91 336 P P 11 41 41.6 +1.0
baz=110
J18K Innoko River 65.99 334 P P 11 41 42.1 +1.0
baz=108
F21K Alatna River 66.02 338 P P 11 41 42.5 +1.3
baz=112
N16K Nishlik Lake 66.09 330 P P 11 41 42.9 +1.1
baz=104
C23K Itkillik River 66.15 341 P P 11 41 43.1 +1.1
baz=116
O15K Ungalikthiuk R 66.29 329 P P 11 41 43.7 +0.6
baz=103
L17K Donlin 66.30 332 P P 11 41 44.0 +0.9
baz=106
M16K Timber Creek 66.32 331 P P 11 41 44.8 +1.6
baz=105
TBI Tubuai 66.32 237 *e*P P 11 41 40.2 -3.6
comp=Z,390nm,28.8s
TBI Tubuai 66.32 237 *e*PP PP 11 44 13.2 +3.1
comp=Z,302nm,29.8s
TBI *e*S S 11 50 32.3 -1.0
comp=Z,1µm,28.2s
TBI *e*SS SS 11 54 38.4 -12
comp=Z,723nm,35.8s
TBI *e*LQ LQ 11 58 56.6
comp=Z,1µm,21.2s
TBI *e*LR LR 12 01 27.7
comp=Z,3µm,29.0s
TBI *e*LR LR 12 01 31.2
comp=Z,993nm,38.2s
D22K Ayikyak River 66.41 340 P P 11 41 44.7 +1.0
baz=114
GCSA Galena City Sc 66.46 335 P P 11 41 45.0 +1.0
baz=108
K17K Iditarod 66.47 333 P P 11 41 45.3 +1.2
baz=106
H19K Roundabout Mou 66.54 336 IAmb IAmb 11 41 51.3
comp=Z,28nm,1.1s
H19K Roundabout Mou 66.54 336 P P 11 41 45.6 +1.1
baz=109
N15K Kwethluk River 66.65 330 P P 11 41 45.4 0.0
baz=103
E21K Killik River 66.66 339 IAmb IAmb 11 41 52.2
comp=Z,21nm,0.8s
E21K Killik River 66.66 339 P P 11 41 46.0 +0.7
baz=112
SUMG Summit 66.68 16 P P 11 41 46.1 +0.3
SUMG IAmb IAmb 11 41 49.9
comp=Z,10.0nm,0.8s
SUMG Summit 66.68 16 P P 11 41 46.1 +0.3
SUMG pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 66.68 16 *i*P P 11 41 46.0 +0.2
SUMG IAmb IAmb 11 41 48.7
comp=Z,21nm,1.4s
L16K Owhat River 66.73 332 P P 11 41 47.0 +1.1
baz=104
F20K Avaraart Lake 66.78 338 P P 11 41 47.0 +1.0
baz=110
S12K Black Hills 66.79 325 P P 11 41 47.5 +1.1
baz=100
G19K Purcell Mounta 66.99 337 P P 11 41 48.4 +1.0
baz=108
J17K VABM Dome 66.99 333 P P 11 41 48.7 +1.2
baz=106
O14K Tigyukauivet M 67.03 329 P P 11 41 48.5 +0.8
baz=102
M15K Kasigluk River 67.06 330 P P 11 41 48.7 +0.8
baz=103
NEEM North Greenlan 67.06 9 *i*P P 11 41 47.4 -0.7
NEEM IAmb IAmb 11 41 50.4
comp=Z,62nm,1.4s
H18K Honhosa River 67.19 335 P P 11 41 50.5 +1.8
baz=107
C21K Knifeblade Rid 67.21 340 P P 11 41 50.2 +1.4
baz=112
B22K Teshekpuk Lake 67.24 341 P P 11 41 50.0 +1.1
baz=114
B21K Ikpikpuk River 67.33 341 P P 11 41 50.8 +1.3
baz=112
E20K Nigu River 67.36 339 P P 11 41 50.6 +0.7
baz=110
N14K Kuskokwak Cree 67.38 329 P P 11 41 51.2 +1.2
baz=102
FALS False Pass 67.43 324 P P 11 41 51.1 +0.7
baz=98
E19K Redstone River 67.47 338 P P 11 41 51.4 +0.9
baz=109
F19K Shaleruckik Mo 67.47 337 P P 11 41 51.4 +0.9
baz=108
G18K Tagagawik 67.52 336 P P 11 41 52.0 +1.2
baz=107
J16K Anvik River 67.63 333 P P 11 41 52.9 +1.4
baz=104
L15K Ungalak Mounta 67.66 331 P P 11 41 52.7 +1.0
baz=102
D20K Etivluk River 67.67 339 P P 11 41 53.5 +1.8
baz=110
M14K Bethel 67.68 330 P P 11 41 53.0 +1.1
baz=102
H17K Granite Mounta 67.76 335 P P 11 41 52.5 +0.2
baz=105
K15K Wolf Creek Mou 67.81 332 P P 11 41 54.1 +1.4
baz=103
I17K Unalakleet 67.82 334 P P 11 41 53.5 +0.8
baz=104
A22K Sinclair Lake 67.97 342 P P 11 41 54.3 +0.8
baz=112
F18K Selawik 68.11 337 P P 11 41 55.9 +1.4
baz=106
D19K Kuna River 68.11 339 P P 11 41 55.8 +1.2
baz=108
L14K Kuka Creek 68.15 331 P P 11 41 55.4 +0.6
baz=101
G17K Kiwalik Mounta 68.21 335 P P 11 41 56.6 +1.5
baz=105
M13K Dall Lake 68.29 330 P P 11 41 56.9 +1.2
baz=100
B20K Meade River 68.30 341 P P 11 41 57.3 +1.8
baz=110
H16K Elim 68.65 334 P P 11 41 59.8 +1.9
baz=103
E18K Tukpahlearik C 68.70 337 P P 11 41 59.6 +1.5
baz=106
C19K Lookout Ridge 68.81 339 P P 11 42 00.6 +1.6
baz=107
J14K Nanvaranak Lak 68.83 332 P P 11 42 00.5 +1.5
baz=101
E17K Hotham Inlet 69.07 337 P P 11 42 01.3 +0.8
baz=104,SNR=16
UNV Unalaska Valle 69.11 323 P P 11 42 01.8 +0.9
baz=95
K13K Kusilvak Mount 69.18 331 P P 11 42 02.0 +0.8
baz=100
C18K Utukok River 69.24 339 P P 11 42 03.2 +1.6
baz=106
G15K Niukluk 69.48 335 P P 11 42 03.8 +0.8
baz=102
B18K Kokolik River 69.64 339 P P 11 42 04.9 +0.9
baz=105
M11K Mekoryuk 69.68 330 P P 11 42 05.9 +1.5
baz=98
D17K Noatak River 69.69 338 P P 11 42 04.9 +0.6
baz=103
BORG Borgarnes 69.83 26 LR LR 12 12 13.2
comp=Z,357nm,19.6s,baz=276,slow=36

F15K North Star Dit 69.87 335 P P 11 42 06.2 +0.7
baz=101
ANM Nome 69.96 334 P P 11 42 07.2 +1.2
baz=100
NIKH Nikolski High 70.45 322 P P 11 42 10.6 +1.4
baz=93
F14K Arctic Creek 70.51 335 P P 11 42 10.9 +1.5
baz=100
C16K Lisburne Hills 70.64 338 P P 11 42 11.6 +1.5
baz=101
SCO Scoresbysund 70.78 20 *i*P P 11 42 09.3 -1.6
SCO IAmb IAmb 11 42 15.6
comp=Z,16nm,1.5s
TNA Tin City 71.18 335 P P 11 42 15.0 +1.6
baz=98
SPIA Saint Paul Isl 71.47 326 P P 11 42 17.0 +1.6
baz=93
DBG Daneborg 72.16 16 *i*P P 11 42 17.9 -1.3
DBG IAmb IAmb 11 42 20.9
comp=Z,4.5nm,0.6s
DAG Danmarks Havn 73.07 13 *i*P P 11 42 24.0 -0.6
DAG IAmb IAmb 11 42 28.0
comp=Z,12nm,0.8s
BBTS Babate 73.91 79 LR LR 12 16 02.3
comp=Z,234nm,18.0s,baz=80,slow=37
RAR Rarotonga 74.08 243 LR LR 12 09 12.1
comp=Z,214nm,18.1s,baz=72,slow=31
JMIC Jan Mayen 75.27 20 LR LR 12 16 50.7
comp=Z,680nm,18.9s,baz=250,slow=37
PCAS Casmilo, Conde 77.19 52 *e*P P 11 42 49.9 +0.9
PCAS *i*IAmb IAmb 11 42 51.7
comp=Z,69nm,2.0s
PFVI Vila Bisbo 77.32 55 *e*P P 11 42 51.8 +1.9
PFVI *i*IAmb IAmb 11 42 57.6
comp=Z,179nm,1.5s
MOE Montemor 77.50 53 *e*P P 11 42 51.7 +0.8
PMTG Montargil 77.53 53 *e*P P 11 42 51.3 +0.4
PVIS Viseu 77.56 51 *e*P P 11 42 50.6 -0.6
MESJ Messejana 77.70 54 *e*P P 11 42 52.5 +0.5
EVO Evora 77.76 53 *e*P P 11 42 52.8 +0.5
EVO *i*IAmb IAmb 11 42 53.5
comp=Z,33nm,1.5s
MTE Manteigas 77.87 51 *e*P P 11 42 52.7 -0.2
MTE *i*IAmb IAmb 11 42 54.2
comp=Z,67nm,1.6s
PBEJ Beja 77.95 54 *e*P P 11 42 53.7 +0.4
PCBR Castelo Branco 77.99 52 *e*P P 11 42 53.9 +0.4
PCBR *i*IAmb IAmb 11 42 55.9
comp=Z,46nm,1.7s
PESTR Estremoz 78.04 53 *e*P P 11 42 52.8 -1.0
PESTR *i*IAmb IAmb 11 42 58.3
comp=Z,44nm,1.6s
MVO Moncorvo 78.15 50 *e*P P 11 42 53.6 -0.9
MVO *i*IAmb IAmb 11 42 56.2
comp=Z,59nm,1.5s
PVAQ Vaqueiros 78.16 54 *e*P P 11 42 54.9 +0.4
PBAR Barrancos 78.57 53 *e*P P 11 42 57.4 +0.6
PBAR *i*IAmb IAmb 11 43 01.1
comp=Z,32nm,1.8s
EKA Eskdalemuir Ar 78.75 36 P P 11 42 56.7 -0.6
comp=Z,16nm,0.8s,baz=279,slow=5.9,SNR=20
comp=Z,16nm,0.8s
SPITS Spitsbergen Ar 80.46 11 LR LR 12 22 16.1
comp=Z,651nm,18.5s,baz=269,slow=38
ESDC Sonseca Array 80.69 51 P P 11 43 08.2 -0.2
comp=Z,11nm,0.9s,baz=290,slow=4.6,SNR=39
ESDC LR LR 12 13 42.6
comp=Z,315nm,18.8s,baz=258,slow=32
comp=Z,11nm,0.9s
SHEM Shemya Is, Ala 80.76 322 LR LR 12 16 50.3
comp=Z,66nm,18.9s,baz=107,slow=34
BILL Bilibino 81.17 338 P P 11 43 11.0 +0.7
BILL Bilibino 81.17 338 *i*P P 11 43 11.6 +1.3
BILL pmax pmax
comp=Z,31nm,1.0s
MDT Midelt 81.44 58 LR LR 12 12 09.1
comp=Z,176nm,19.9s,baz=270,slow=30
PMSA Palmer Station 81.45 168 LR LR 12 12 19.5
comp=Z,138nm,18.1s,baz=8.0,slow=31
CEST Esterri de Car 83.96 48 IAmb IAmb 11 43 27.6
comp=Z,17nm,0.9s
DOU Dourbes 84.41 40 *d*P P 11 43 28.4 +1.0
comp=Z,7.0nm,1.1s
BMRD Maredsous 84.46 40 *d*P P 11 43 28.8 +1.1
BGES Gesves 84.64 40 *d*P P 11 43 29.5 +0.9
comp=Z,10nm,0.9s
BCLA Clavier 84.76 39 *d*P P 11 43 30.1 +0.9
comp=Z,6.9nm,1.0s
RCHB Rochefort 84.78 40 *d*P P 11 43 29.7 +0.4
NB2 NORSAR Subarra 84.81 28 P P 11 43 30.8 +1.5
comp=Z,9.2nm,1.4s,baz=290,slow=5.1
NOA NORSAR Array B 84.81 28 P P 11 43 30.9 +1.5
comp=Z,6.7nm,0.8s,baz=296,slow=5.2,SNR=15
NOA LR LR 12 21 53.0
comp=Z,229nm,18.1s,baz=285,slow=36
comp=Z,6.7nm,0.8s
HFS Hagfors 86.28 29 P P 11 43 37.2 +0.7
comp=Z,4.2nm,0.7s,baz=242,slow=3.2,SNR=5.6
HFS LR LR 12 22 36.6
comp=Z,366nm,18.0s,baz=312,slow=36
comp=Z,4.2nm,0.7s
ECH Echery 86.54 41 P P 11 43 38.4 +0.3
ECH IAmb IAmb 11 43 40.1
comp=Z,22nm,1.1s
ECH Echery 86.54 41 P P 11 43 38.4 +0.3
ECH pmax pmax
comp=Z,23nm,1.1s
ARCES ARCESS Array B 86.63 18 P P 11 43 38.8 +0.7
comp=Z,2.5nm,0.6s,baz=292,slow=4.0,SNR=14
ARCES LR LR 12 23 30.4
comp=Z,423nm,18.2s,baz=266,slow=36
comp=Z,2.5nm,0.6s
DBIC Dimbokro 86.79 84 P P 11 43 41.2 +1.2
comp=Z,11nm,1.0s,baz=331,slow=3.2,SNR=6.9
DBIC LR LR 12 16 34.7
comp=Z,190nm,21.9s,baz=326,slow=32
comp=Z,11nm,1.0s
DBIC Dimbokro 86.79 84 P P 11 43 39.5 -0.4
DBIC IAmb IAmb 11 43 43.4
comp=Z,32nm,1.2s
DBIC Dimbokro 86.79 84 P P 11 43 39.6 -0.4
DBIC pmax pmax
comp=Z,33nm,1.3s
SENIN Lac Senin/Sane 87.17 43 P P 11 43 41.8 +0.3
BFO Black Forest 87.25 41 P P 11 43 41.6 0.0
BFO IAmb IAmb 11 43 45.4
comp=Z,25nm,1.4s
BFO Black Forest 87.25 41 P P 11 43 41.6 0.0
BFO pmax pmax
comp=Z,25nm,1.4s
DAVA Damuels 88.57 42 *e*PcP PcP 11 43 50.1 +0.3
comp=Z,28nm,1.0s
DAVOX Davos/Dischmat 88.73 42 P P 11 43 50.0 +1.1
comp=Z,8.0nm,0.9s,baz=308,slow=10,SNR=11
DAVOX LR LR 12 16 58.5
comp=Z,143nm,21.2s,baz=265,slow=31
comp=Z,8.0nm,0.9s
DAVOX Davos/Dischmat 88.73 42 P P 11 43 50.0 +1.1
FUORN Ofenpass-Fuorn 89.03 42 IAmb IAmb 11 43 53.0
comp=Z,22nm,1.1s
RETA Reutte 89.07 41 *e*PcP PcP 11 43 52.1 +0.2
comp=Z,13nm,1.0s
CLL Collm 89.12 37 *i*P P 11 43 51.5 +1.1
CLL pmax pmax
comp=Z,68nm,2.2s
CLL Collm 89.12 37 *i*P P 11 43 51.5 +1.1
comp=Z,68nm,2.2s
CLL *e*PP PP 11 47 21.0 +0.9
FETA Feichten 89.20 42 *e*PcP PcP 11 43 52.8 +0.3
comp=Z,9.8nm,1.0s
MOTA Moosalm 89.33 41 *e*PcP PcP 11 43 53.1 -0.1
comp=Z,11nm,1.4s
SQTA Sankt Quirin 89.44 41 *e*PcP PcP 11 43 54.2 +0.6
comp=Z,11nm,1.1s
PETK Petropavlovsk- 90.12 325 P P 11 43 56.1 +1.1
comp=Z,2.6nm,0.8s,baz=60,slow=8.5,SNR=1.4
comp=Z,2.6nm,0.8s
CTI Castel Tesino 90.13 42 P P 11 43 55.6 +0.2
CTI IAmb IAmb 11 43 57.2
comp=Z,25nm,1.4s
CTI Castel Tesino 90.13 42 P P 11 43 55.6 +0.2
CTI pmax pmax
comp=Z,25nm,1.4s
TIXI Tiksi 90.17 348 LR LR 12 32 07.3
comp=Z,234nm,18.8s,baz=24,slow=41
TIXI Tiksi 90.17 348 P P 11 43 55.3 +0.5
TIXI IAmb IAmb 11 43 55.9
comp=Z,9.2nm,0.8s
TIXI Tiksi 90.17 348 ⇑*i*P P 11 43 54.3 -0.5
TIXI pmax pmax
comp=Z,24nm,1.8s
KHC Kasperske Hory 90.25 39 P P 11 43 56.9 +1.1
KHC IAmb IAmb 11 44 00.5
comp=Z,12nm,1.3s
KHC Kasperske Hory 90.25 39 ⇓*i*P P 11 43 56.7 +0.9
KHC pmax pmax
comp=Z,5.0nm,1.1s
KHC Kasperske Hory 90.25 39 *e*P P 11 43 58.2 +2.4
GERES GERESS Array B 90.44 39 P P 11 43 58.4 +1.6
comp=Z,2.4nm,0.9s,baz=298,slow=5.0,SNR=11
GERES LR LR 12 24 41.0
comp=Z,230nm,18.1s,baz=288,slow=36
comp=Z,2.4nm,0.9s
ZVC Zvikov 90.51 39 *e*P P 11 43 58.5 +1.5
KBA Koelnbreinsper 90.86 41 *e*PcP PcP 11 44 00.7 +0.8
comp=Z,12nm,1.2s
FINES FINESS Array B 91.11 25 P P 11 44 00.9 +1.5
comp=Z,5.8nm,0.8s,baz=289,slow=3.6,SNR=13
FINES LR LR 12 24 07.5
comp=Z,226nm,20.2s,baz=288,slow=35
comp=Z,5.8nm,0.8s
OSTC Ostas 91.28 37 *e*P P 11 44 02.9 +2.4
OSTC Ostas 91.28 37 *e*P P 11 44 02.9 +2.4
TORD Torodi Ar. Bea 91.51 76 P P 11 44 03.1 +0.9
comp=Z,1.6nm,0.4s,baz=293,slow=4.6,SNR=1.5
TORD LR LR 12 20 59.6
comp=Z,142nm,21.3s,baz=296,slow=33
comp=Z,1.6nm,0.4s
KEST Kesra 91.89 53 P P 11 44 05.6 +1.9
comp=Z,16nm,1.0s,baz=321,slow=3.5,SNR=8.6
comp=Z,16nm,1.0s
VRAC Vranov 92.01 38 P P 11 44 05.8 +1.9
comp=Z,2.2nm,0.4s,baz=293,slow=7.4,SNR=4.8
VRAC LR LR 12 27 25.3
comp=Z,324nm,18.1s,baz=322,slow=37
comp=Z,2.2nm,0.4s
RAO Raoul Island 92.18 241 LR LR 12 20 17.3
comp=Z,114nm,18.3s,baz=40,slow=32
MORC Moravsky Berou 92.38 37 IAmb IAmb 11 44 08.3
comp=Z,10.0nm,1.2s
VAE Valguarnera 95.12 50 LR LR 12 21 56.8
comp=Z,558nm,20.5s,baz=324,slow=32
RNPP9 Sopachiv 96.31 33 P P 11 44 24.2 +0.6
RNPP8 Varash 96.33 33 P P 11 44 24.2 +0.5
KLMR Klimovskoe 96.60 21 *e*P P 11 44 23.1 -1.6
KLMR pmax pmax
comp=Z,36nm,1.6s
YAK Yakutsk 97.24 341 LR LR 12 33 22.0
comp=Z,93nm,19.3s,baz=32,slow=38
LUBAR Lubar, Ukraine 98.11 34 P Pdif 11 44 32.1 +0.3
URZ Urewera 98.22 233 LR LR 12 18 42.5
comp=Z,135nm,21.2s,baz=66,slow=29
AK20 Malin Array Si 98.33 33 P Pdif 11 44 33.1 +0.4
AKASG Malin Array Be 98.47 33 LR LR 12 32 09.9
comp=Z,156nm,18.6s,baz=330,slow=37
OBN Obninsk 99.32 27 LR LR 12 30 47.2
comp=Z,327nm,18.5s,baz=230,slow=36
OBN Obninsk 99.32 27 *i*P **Pdif** 11 44 39.1 +2.1
OBN *i* 11 44 47.4
OBN pmax pmax
comp=Z,8.0nm,0.7s
OBN MLR MLR
comp=Z,326nm,17.0s
MOS Moscow 99.36 26 *e*P **Pdif** 11 44 36.0 -1.2
ZALV Zalesovo Beam 112.45 1 PKiKP **PKiKP** 11 49 31.0 0.0
comp=Z,0.5nm,0.4s,baz=0.0,slow=1.8,SNR=2.3
ZALV Zalesovo Beam 112.45 1 *i*PKiKP **PKiKP** 11 49 31.0 0.0
KURK Kurchatov 115.31 6 PKiKP **PKiKP** 11 49 36.1 -0.5
KURBB Kurchatov Arra 115.39 6 PKP **PKiKP** 11 49 36.1 -0.6
comp=Z,1.8nm,0.7s,baz=344,slow=2.0,SNR=20
MK31 Makanchi Array 119.50 4 ⇓*i*PKiKP **PKPdf** 11 49 44.2 -0.7
MKAR Makanchi Array 119.50 4 PKP **PKPdf** 11 49 44.2 -0.7
comp=Z,1.7nm,0.8s,baz=8.0,slow=2.1,SNR=11
HHC Hu-ho-hao-te 120.95 338 *e*PKP **PKPdf** 11 49 44.5 -3.4
BOSA Boshof 121.32 115 PKP **PKPdf** 11 49 49.1 +0.2
comp=Z,3.3nm,0.8s,baz=195,slow=6.1,SNR=5.0
WMQ Urumqi 122.61 359 *e*PKP **PKiKP** 11 49 51.9 +0.7
WMQ LR LR
comp=Z,310nm,19.3s
MAW Mawson 124.04 169 PKP **PKPdf** 11 49 51.7 -1.1
comp=Z,2.6nm,0.9s,baz=252,slow=3.2,SNR=2.4
TARG Taragay, Kyrgy 124.08 8 **PKiKP** 11 49 54.9 +0.3
TARG Taragay, Kyrgy 124.08 8 PKiKP **PKiKP** 11 49 54.9 +0.3
NJ2 Nanjing 125.01 327 *e*PKP **PKiKP** 11 49 56.4 +0.3
GTA Gaotai 125.65 348 *e*PKP **PKPdf** 11 49 57.3 +0.3
GTA sPKP sPKPdf 11 50 05.6 +4.0
GTA PP **PP** 11 51 51.6 +4.3
GTA LR LR
comp=Z,230nm,20.7s
GTA LR LR
comp=Z,190nm,20.7s
GTA LR LR
comp=Z,300nm,22.2s
KSH Kashi 125.95 10 PKP **PKiKP** 11 49 59.0 +1.0
STKA Stephens Creek 127.00 240 PKP **PKPdf** 11 49 59.3 -0.3
comp=Z,4.7nm,0.7s,baz=68,slow=1.6,SNR=8.0
WRAB Tennant Creek 134.25 256 **PKPdf** 11 50 13.5 -0.1
WRAB Tennant Creek 134.25 256 PKiKP **PKPdf** 11 50 13.5 -0.1
WRA Warramunga Arr 134.26 256 PKP **PKPdf** 11 50 13.0 -0.7
comp=Z,3.0nm,0.7s,baz=84,slow=1.9,SNR=32
WRA Warramunga Arr 134.26 256 **PKPdf** 11 50 13.7 0.0
ASAR Alice Springs 134.55 250 PKhKP PKPpre 11 50 05.7
comp=Z,0.1nm,0.3s,baz=87,slow=3.1,SNR=4.4
ASAR PKP **PKPdf** 11 50 13.2 -0.9
comp=Z,1.8nm,0.7s,baz=120,slow=2.0,SNR=11
ASAR Alice Springs 134.55 250 **PKPdf** 11 50 13.8 -0.4
PZH PanZhiHua 137.35 340 PKP **PKPdf** 11 50 19.8 +0.3
FITZ Fitzroy Crossi 142.50 258 **PKPdf** 11 50 27.2 -1.6
MYLDM Lahad Datu 143.33 299 **PKPdf** 11 50 31.2 +0.8
CHTO Chiang Mai 145.42 340 **PKPbc** 11 50 34.1 +0.3
CHTO Chiang Mai 145.42 340 PKiKP **PKPbc** 11 50 34.1 +0.3
CMAR Chiang Mai Arr 145.75 339 PKPbc **PKPdf** 11 50 34.5 0.0
comp=Z,23nm,0.9s,baz=339,slow=3.4,SNR=86
CMAR Chiang Mai Arr 145.75 339 **PKPdf** 11 50 33.4 -1.1
CMAR Chiang Mai Arr 145.75 339 PKiKP **PKPdf** 11 50 33.4 -1.1
PSA00 Pilbara Seismi 147.68 252 **PKPdf** 11 50 37.1 -0.6
MBWA Marble Bar 147.84 252 **PKPbc** 11 50 40.3 -0.6
HYBB Hyderabad (bro 147.87 15 *e*PKiKP **PKiKP** 11 50 43.0 0.0
MORW Morawa 149.00 236 **PKPbc** 11 50 43.4 -0.2

NEIC ***20*** *11:50:59.8±1.6, 13°.83N±0°.07×93°.17W±0°.05, h10km±2km, mb4.1/3, Md4.5/63(MEX), Error ellipse: s-maj=11.3km s-min=7.6km az=195.0*
MEX ***20*** *11:51:00.9±0.5, 13°.85N×93°.38W, h10km, MD4.5*
GCG ***20*** *11:51:00.1±1.7, 13°.72N×93°.20W, h36km±999km, MD4.0, ML4.1, MW3.1*
ISC 20 11:50:57.5±1.0, 13°.68N±0°.07×93°.35W±0°.03, h10km, n81, σ3ᵠ77/134, mb4.2/3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.61**	**41**		**Pn**	**11 51 23.6**	**-2.3**
THIG					**Sn**	**11 51 43.7**	**-3.1**
THIG		**1.61**	**41**	*e*P	**Pn**	**11 51 23.6**	**-2.3**
THIG				*e*S	**Sn**	**11 51 43.7**	**-3.1**
THIG		**1.61**	**41**	*e*S	**Sn**	**11 51 43.5**	**-3.3**
THIG				IAML		11 51 45.9	
	comp=E,1µm,0.6s						
SMCA	**Catarina**	**1.70**	**46**	*e*P	**Pn**	**11 51 25.8**	**-1.4**
SMCA				*e*S	**Sn**	**11 51 45.5**	**-3.6**
PATR	**El Naranjo**	**1.79**	**37**		**Pn**	**11 51 26.9**	**-1.8**
PATR					**Sn**	**11 51 47.4**	**-4.3**
PATR	**El Naranjo**	**1.79**	**37**	*e*P	**Pn**	**11 51 26.9**	**-1.8**
PATR				*e*S	**Sn**	**11 51 47.4**	**-4.3**
RTAL	**Retalhuleu**	**1.81**	**62**	Pn	**Pn**	**11 51 27.9**	**-0.9**
RTAL				Sn	**Sn**	**11 51 48.3**	**-3.5**
RTAL	**Retalhuleu**	**1.81**	**62**	*e*P	**Pn**	**11 51 28.0**	**-0.8**
RTAL				*e*S	**Sn**	**11 51 49.4**	**-2.4**
CHUJ	**Union Juarez**	**1.85**	**40**	*e*P	**Pn**	**11 51 27.8**	**-1.7**
CHUJ				*e*S	**Sn**	**11 51 49.1**	**-4.0**
PAVE	**Pavencul**	**1.89**	**37**		**Pn**	**11 51 28.5**	**-1.5**
PAVE					**Sn**	**11 51 50.0**	**-3.9**
PAVE	**Pavencul**	**1.89**	**37**	*e*P	**Pn**	**11 51 28.5**	**-1.5**
PAVE				*e*S	**Sn**	**11 51 50.0**	**-3.9**
STG2	**El Palmar, Qui**	**2.06**	**68**	*e*P	**Pn**	**11 51 29.6**	**-2.6**
STG2				*e*S	**Sn**	**11 51 51.7**	**-6.4**
STG5	**El Palmar, Qui**	**2.07**	**69**	*e*P	**Pn**	**11 51 29.6**	**-2.8**
STG8	**El Palmar, Qui**	**2.08**	**68**	*e*P	**Pn**	**11 51 30.2**	**-2.5**
STG8				*e*S	**Sn**	**11 51 52.1**	**-6.8**
STG8				IAML		11 51 55.3	

	comp=N,4μm,0.2s								
QUEO	**Labor Ovalle**	**2.14**	**56**	*eS*		**Sn**	**11 51 57.7**	**-2.6**
QUEO				IAML			11 51 58.6		
	comp=N,3μm,0.2s								
HUEH	**Huehuetenango**	**2.42**	**47**			**Pn**	**11 51 35.9**	**-1.4**
HUEH	**Huehuetenango**	**2.42**	**47**	*eP*		**Pn**	**11 51 33.6**	**-3.8**
HUEH				*eS*		**Sn**	**11 52 00.3**	**-6.8**
FG16	**Alotenango, Sa**	**2.82**	**78**	*eP*		Pn	11 51 37.8	-5.0
FG16				IAML			11 52 14.1		
	comp=E,3μm,0.2s								
CCIG	**Comitan**	**2.84**	**24**			**Pn**	**11 51 44.3**	**+1.3**
CCIG	**Comitan**	**2.84**	**24**	*eP*		**Pn**	**11 51 43.5**	**+0.4**
CCIG				*i* S		**Sn**	**11 52 16.8**	**-0.7**
CCIG	**Comitan**	**2.84**	**24**	*eP*		**Pn**	**11 51 43.5**	**+0.4**
CCIG				IAML			11 52 22.6		
	comp=N,462nm,0.5s								
TGIG		**3.09**	**4**			**Pn**	**11 51 46.9**	**+0.6**
TGIG						**Sn**	**11 52 21.7**	**-1.7**
TGIG		**3.09**	**4**	*eP*		**Pn**	**11 51 46.9**	**+0.6**
TGIG				*eS*		**Sn**	**11 52 21.7**	**-1.7**
TGIG		**3.09**	**4**	*i* P		**Pn**	**11 51 46.9**	**+0.6**
APG	**El Apazote**	**3.09**	**64**	*eP*		**Pn**	**11 51 45.3**	**-1.3**
HUIG	**Huatulco**	**3.38**	**308**			**Pn**	**11 51 50.6**	**+0.2**
HUIG						**Sn**	**11 52 24.3**	**-6.3**
HUIG	**Huatulco**	**3.38**	**308**	*eP*		**Pn**	**11 51 50.6**	**+0.2**
HUIG				*eS*		**Sn**	**11 52 24.3**	**-6.3**
HUIG	**Huatulco**	**3.38**	**308**	*eP*		**Pn**	**11 51 50.8**	**+0.4**
NUBE	**Las Nubes**	**3.48**	**86**	*eP*		**Pn**	**11 51 50.9**	**-0.9**
UXUV	**UXUV**	**3.70**	**348**			**Pn**	**11 51 56.4**	**+1.7**
UXUV						**Sn**	**11 52 35.3**	**-3.1**
UXUV	**UXUV**	**3.70**	**348**	*eP*		**Pn**	**11 51 56.4**	**+1.7**
UXUV				*eS*		**Sn**	**11 52 35.3**	**-3.1**
CMIG	**Matias Romero**	**3.70**	**337**			**Pn**	**11 51 55.0**	**+0.3**
CMIG						**Sn**	**11 52 34.2**	**-4.2**
MTO3	**Montecristo**	**3.94**	**79**			**Pn**	**11 51 57.6**	**-0.6**
PEIG	**Puerto Escondi**	**4.34**	**303**			**Pn**	**11 52 04.4**	**+0.9**
PEIG						**Sn**	**11 52 46.6**	**-7.5**
PEIG	**Puerto Escondi**	**4.34**	**303**	*eP*		**Pn**	**11 52 04.4**	**+0.9**
PEIG				*eS*		**Sn**	**11 52 46.6**	**-7.5**
PETF	**Flores**	**4.65**	**46**			**Pn**	**11 52 06.9**	**-1.0**
PETF	**Flores**	**4.65**	**46**	*eP*		**Pn**	**11 52 08.4**	**+0.6**
PETF				*eS*		**Sn**	**11 52 59.6**	**-2.3**
NEUV	**Arroyo Zacate**	**4.65**	**330**			**Pn**	**11 52 08.2**	**+0.3**
NEUV						**Sn**	**11 52 56.8**	**-5.1**
NEUV	**Arroyo Zacate**	**4.65**	**330**	*eP*		**Pn**	**11 52 08.2**	**+0.3**
NEUV				*eS*		**Sn**	**11 52 56.8**	**-5.1**
OXIG	**Oaxaca**	**4.69**	**316**			**Pn**	**11 52 11.5**	**+2.9**
OXIG						**Sn**	**11 53 00.3**	**-2.9**
VHO	**Vista Hermosa**	**4.69**	**316**	*eP*		**Pn**	**11 52 11.5**	**+2.9**
VHO				*eS*		**Sn**	**11 53 00.3**	**-2.9**
PNIG	**Pinotepa**	**5.35**	**301**			**Pn**	**11 52 19.1**	**+1.7**
PNIG						**Sn**	**11 53 12.8**	**-6.3**
PNIG	**Pinotepa**	**5.35**	**301**	*eP*		**Pn**	**11 52 19.1**	**+1.7**
PNIG				*eS*		**Sn**	**11 53 12.8**	**-6.3**
TXIG	**Tlaxiaco**	**5.55**	**310**			**Pn**	**11 52 24.3**	**+3.9**
TXIG						**Sn**	**11 53 20.8**	**-3.6**
TXIG	**Tlaxiaco**	**5.55**	**310**	*eP*		**Pn**	**11 52 24.3**	**+3.9**
TXIG				*eS*		**Sn**	**11 53 20.8**	**-3.6**
SCIG	**Sabancuy**	**5.65**	**21**			**Pn**	**11 52 21.5**	**-0.1**
SCIG						**Sn**	**11 53 20.5**	**-6.1**
SCIG	**Sabancuy**	**5.65**	**21**	*eP*		**Pn**	**11 52 21.5**	**-0.1**
SCIG				*eS*		**Sn**	**11 53 20.5**	**-6.1**
TOIG	**Toxpalan**	**5.66**	**321**			**Pn**	**11 52 25.7**	**+3.9**
TOIG						**Sn**	**11 53 25.1**	**-1.9**
TOIG	**Toxpalan**	**5.66**	**321**	*eP*		**Pn**	**11 52 25.7**	**+3.9**
TOIG				*eS*		**Sn**	**11 53 25.1**	**-1.9**
HLIG	**Huajuapan de L**	**5.95**	**314**			**Pn**	**11 52 29.5**	**+3.6**
HLIG						**Sn**	**11 53 33.2**	**-1.1**
HLIG	**Huajuapan de L**	**5.95**	**314**	*eP*		**Pn**	**11 52 29.5**	**+3.6**
HLIG				*eS*		**Sn**	**11 53 33.2**	**-1.1**
MGIG	**Malinaltepec**	**6.20**	**305**			**Pn**	**11 52 32.9**	**+3.6**
MGIG						**Sn**	**11 53 36.0**	**-4.3**
MGIG	**Malinaltepec**	**6.20**	**305**	*eP*		**Pn**	**11 52 32.9**	**+3.6**
MGIG				*eS*		**Sn**	**11 53 36.0**	**-4.3**
CRIN	**San Cristobal**	**6.21**	**98**	Pn		**Pn**	**11 52 28.5**	**-0.8**
FTIG	**Fresnillo de T**	**6.23**	**313**			**Pn**	**11 52 33.8**	**+4.1**
FTIG						**Sn**	**11 53 36.0**	**-5.1**
FTIG	**Fresnillo de T**	**6.23**	**313**	*eP*		**Pn**	**11 52 33.8**	**+4.1**
FTIG				*eS*		**Sn**	**11 53 36.0**	**-5.1**
TLIG	**Tlapa**	**6.34**	**308**			**Pn**	**11 52 35.4**	**+4.2**
TLIG	**Tlapa**	**6.34**	**308**	*eP*		**Pn**	**11 52 35.2**	**+4.1**
TLIG				*eS*		Sn	11 53 34.6	-9.1
CRIG	**Cruz Grande**	**6.36**	**299**			**Pn**	**11 52 33.9**	**+2.7**
CRIG						**Sn**	**11 53 36.2**	**-7.7**
CRIG	**Cruz Grande**	**6.36**	**299**	*eP*		**Pn**	**11 52 33.9**	**+2.7**
CRIG				*eS*		**Sn**	**11 53 36.2**	**-7.7**
JAUV	**Jalcomulco**	**6.55**	**330**			**Pn**	**11 52 34.1**	**+0.1**
JAUV						**Sn**	**11 53 41.5**	**-7.4**
JAUV	**Jalcomulco**	**6.55**	**330**	*eP*		**Pn**	**11 52 34.1**	**+0.1**
JAUV				*eS*		**Sn**	**11 53 41.5**	**-7.4**
CNGN	**Cerro Negro**	**6.58**	**99**	Pn		**Pn**	**11 52 34.7**	**+0.2**
DAIG	**Los Arroyos**	**6.93**	**299**			**Pn**	**11 52 41.8**	**+2.7**
DAIG						Sn	11 53 49.3	-8.7
DAIG	**Los Arroyos**	**6.93**	**299**	*eP*		**Pn**	**11 52 41.8**	**+2.7**
DAIG				*eS*		Sn	11 53 49.3	-8.7
PPPT	**Popocatepetl**	**7.30**	**317**	*eP*		**Pn**	**11 52 48.0**	**+3.2**
MEIG	**Mezcala**	**7.37**	**306**			**Pn**	**11 52 49.6**	**+4.4**
MEIG						**Sn**	**11 54 04.4**	**-4.5**
MEIG	**Mezcala**	**7.37**	**306**	*eP*		**Pn**	**11 52 49.6**	**+4.4**
MEIG				*eS*		**Sn**	**11 54 04.4**	**-4.5**
CAIG	**El Cayaco**	**7.46**	**298**			**Pn**	**11 52 49.7**	**+3.2**
CAIG						**Sn**	**11 54 03.7**	**-7.6**
CAIG	**El Cayaco**	**7.46**	**298**	*eP*		**Pn**	**11 52 49.7**	**+3.2**
CAIG				*eS*		**Sn**	**11 54 03.7**	**-7.6**
YAIG	**Yautepec**	**7.53**	**314**			**Pn**	**11 52 51.1**	**+3.6**
YAIG						**Sn**	**11 54 07.4**	**-5.7**
YAIG	**Yautepec**	**7.53**	**314**	*eP*		**Pn**	**11 52 51.1**	**+3.6**
YAIG				*eS*		**Sn**	**11 54 07.4**	**-5.7**
TEIG	**Tepich**	**8.12**	**36**			**Pn**	**11 52 54.3**	**-1.1**
ARIG	**Puente Sto Nin**	**8.14**	**305**			**Pn**	**11 52 59.8**	**+4.0**
ARIG						**Sn**	**11 54 22.0**	**-5.9**
ARIG	**Puente Sto Nin**	**8.14**	**305**	*eP*		**Pn**	**11 52 59.8**	**+4.0**
ARIG				*eS*		**Sn**	**11 54 22.0**	**-5.9**
JUD3	**Juan Diaz 3**	**8.40**	**114**	Pn		**Pn**	**11 53 00.5**	**+1.0**
MOIG	**Morelia**	**9.59**	**310**	Pn		**Pn**	**11 53 19.4**	**+3.5**
AMTX	**Amarillo**	**22.41**	**342**	P		**P**	**11 55 58.3**	**+1.8**
AMTX				IAmb		IAmb	11 55 59.2		
	comp=Z,12nm,0.6s								
RTBA	**Rita Blanca**	**24.18**	**341**	P		**P**	**11 56 17.4**	**+3.2**
RTBA				IAmb		IAmb	11 56 17.7		
	comp=Z,6.2nm,1.0s								
CCM	**Cathedral Cave**	**24.35**	**4**	P		**P**	**11 56 14.7**	**-0.9**
CCM				IAmb		IAmb	11 56 30.4		
	comp=Z,2.4nm,1.0s								
BPMT	**Black Pine Rid**	**36.77**	**337**	P		**P**	**11 58 06.8**	**+1.2**

*HEL **20** 11:57:14.4±0.3, 60.°99N×29.°29E, h0km, ML1.6, Suspected explosion*
*IDC **20** 11:57:17.0±2.9, 60.°96N×29.°04E, h0km, mbtmp3.3/1, ML2.1/1, Error ellipse: s-maj=24.8km s-min=13.9km az=170.0*

ISC 20 11:57:15.1±1.4, 61.°01N±0.°05×29.°07E±0.°07, h0km, n14, σ0s65/20, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.42**	**352**			PG	**Pg**	**11 57 22.9**	**-0.2**
	baz=155								
RUF					smax	smax		11 57 29.5	
	comp=Z,13nm,0.2s								
VJF	**Virojoki**	**0.88**	**238**		PG	**Pg**		**11 57 31.9**	**-0.1**
	baz=59								
VJF					smax	smax		11 57 44.0	
	comp=Z,8.7nm,0.2s								
VJF					SB	**Sb**		**11 57 45.0**	**-0.5**
FIA0	**FINESS Array S**	**1.51**	**288**		PG	**Pn**		**11 57 43.3**	**0.0**
	baz=104								
FIA0					smax	smax		11 58 02.9	
	comp=Z,7.0nm,0.2s								
FIA0					SN	**Sg**		**11 58 04.2**	**+0.6**
FINES	**FINESS Array B**	**1.51**	**288**		Pg	**Pn**		**11 57 43.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=112,slow=16,SNR=11								
FINES					Lg	Lg		11 58 04.6	
	comp=Z,2.7nm,0.3s,baz=103,slow=29,SNR=27								
PVF	**Pernaja**	**1.64**	**255**		PG	**Pn**		**11 57 45.4**	**+0.3**
PVF					smax	smax		11 58 06.2	
	comp=Z,6.0nm,0.2s								
PVF					SN	**Sg**		**11 58 09.4**	**+1.6**
JOF	**Joensuu**	**2.19**	**28**		PG	**Pn**		**11 57 53.0**	**+0.4**
JOF					SB	**Sn**		**11 58 19.5**	**-0.8**
SUF	**Sumiainen**	**2.20**	**322**		PG	**Pb**		**11 57 55.4**	**-0.3**
SUF					smax	smax		11 58 22.0	
	comp=Z,1.1nm,0.2s								
SUF					SG	**Sg**		**11 58 25.7**	**-0.1**
NUR	**Nurmijarvi**	**2.23**	**259**		PG	**Pb**		**11 57 55.8**	**-0.4**
NUR					smax	smax		11 58 23.3	
	comp=Z,1.6nm,0.2s								
NUR					SG	**Sg**		**11 58 27.1**	**+0.5**
KEF	**Keuruu**	**2.32**	**302**		PG	**Pb**		**11 57 57.5**	**-0.2**
KEF					smax	smax		11 58 25.9	
	comp=Z,1.9nm,0.2s								
KEF					SG	**Sb**		**11 58 27.6**	**+0.7**
NIF	**Nilsia**	**2.46**	**347**		smax	smax		11 58 28.2	
	comp=Z,1.7nm,0.2s								
NIF					SG	**Sb**		**11 58 31.3**	**+0.4**
RAF	**Rauma**	**3.56**	**273**		SG	**Sg**		**11 59 08.5**	**-0.7**
VAF	**Ylistaro**	**3.64**	**307**		SB	**Sb**		**11 59 04.2**	**-0.6**
I43RU	**DUBNA INFRASON**	**6.03**	**132**		I	I		12 34 10.0	
	baz=324,slow=315,SNR=0.4								
ARCES	**ARCESS Array B**	**8.69**	**352**		Pn	**Pn**		**11 59 22.8**	**+1.0**
	baz=166,slow=12,SNR=1.4								
	comp=Z,1.4nm,0.9s								

IDC 20 12:04:04.0±262.0, 56.°52N×42.°13E, h0km, Error ellipse: s-maj=107.0km s-min=57.2km az=98.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**2.72**	**276**			I	I	12 21 10.0	
	0.1nm,0.6s,baz=91,slow=331,SNR=6.5								
I31KZ	**AKTYUBINSK INF**	**11.27**	**116**			I	I	13 08 30.0	
	0.1nm,0.5s,baz=308,slow=330,SNR=1.7								
I46RU	**ZALESOVO INFRA**	**24.19**	**78**			I	I	14 33 30.0	
	baz=289,slow=319,SNR=1.3								

HEL 20 12:31:54.3±0.2, 60.°40N×22.°32E, h0km, ML1.4, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAF	**Rauma**	**0.68**	**337**			PG	Pg	12 32 06.7	-0.6
RAF						SG	Sg	12 32 15.4	-0.6
RAF						smax	smax	12 32 15.6	
	comp=Z,5.3nm,0.2s								
TVF	**Tvarminne**	**0.73**	**140**			PB	Pg	12 32 08.5	+0.3
	baz=313								
TVF						smax	smax	12 32 17.1	
	comp=Z,0.9nm,0.2s								
MEF	**Metsahovi**	**1.05**	**99**			PG	Pg	12 32 13.2	-1.3
AAL	**Aland**	**1.18**	**260**			PN	Pb	12 32 17.7	+0.2
	baz=72								
HEL5	**Espoo, Suvisaa**	**1.24**	**102**			PG	Pg	12 32 17.0	-1.1
HEL5						smax	smax	12 32 31.9	
	comp=Z,3.6nm,0.2s								
FIA0	**FINESS Array S**	**2.11**	**59**			PG	Pn	12 32 31.0	+0.2
	baz=243								
FIA0						smax	smax	12 32 57.0	
	comp=Z,1.7nm,0.2s								
FIA0						SG	Sb	12 33 00.1	-0.1
KEF	**Keuruu**	**2.16**	**34**			smax	smax	12 32 58.3	
	comp=Z,2.1nm,0.2s								
KEF						SG	Sn	12 33 00.1	+1.2
VJF	**Virojoki**	**2.60**	**85**			smax	smax	12 33 11.0	
	comp=Z,3.7nm,0.2s								
VJF						SG	Sb	12 33 13.5	-0.6

*TEH **20** 12:41:44.8, 29.°13N×54.°51E, h19km±24km*
*OMAN **20** 12:41:48.9±0.9, 28.°70N×54.°38E, h16km±19km, mb3.8/6, ml3.2/7, Error ellipse: s-maj=21.6km s-min=7.4km az=179.0*

ISC 20 12:41:44.4±1.0, 29.°03N±0.°05×54.°53E±0.°04, h10km, n41, σ1s01/50, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**0.98**	**238**			Pg	**Pn**	**12 42 04.7**	**+0.4**
LAR1	**LAR**	**1.36**	**186**			Pg	**Pg**	**12 42 12.0**	**+1.6**
QIR1	**Qir**	**1.41**	**248**			Pg	**Pg**	**12 42 12.1**	**+0.7**
SHI	**Shiraz**	**1.86**	**290**			Pn	**Pb**	**12 42 18.2**	**-0.4**
NGRK	**Negar Kerman**	**2.02**	**72**			Pn	**Pn**	**12 42 19.6**	**+0.7**
KHGB	**Koh Gabri**	**2.17**	**51**			Pn	**Pn**	**12 42 21.0**	**+0.3**
KRBR	**Kerman**	**2.17**	**63**			Pn	**Pn**	**12 42 21.5**	**+0.7**
GENO	**Geno**	**2.18**	**138**			Pn	**Pb**	**12 42 23.3**	**-0.6**
IMEH	**Mehriz**	**2.36**	**2**			Pn	**Pn**	**12 42 23.7**	**+0.3**
ZRDN	**Zarand Kerman**	**2.61**	**42**			Pn	**Pn**	**12 42 26.9**	**+0.1**
IBAF	**Bafgh**	**2.71**	**19**			Pn	**Pn**	**12 42 27.8**	**-0.3**
CHMN	**Cheshme madani**	**2.76**	**72**			Pn	**Pn**	**12 42 29.9**	**+0.9**
DSBU	**Dashti - Bushe**	**2.94**	**258**			Pn	**Pn**	**12 42 32.1**	**+0.8**
KLNJ	**Kolanjah**	**3.22**	**309**			Pn	**Pn**	**12 42 35.7**	**+0.4**
SHME	**Shamm**	**3.29**	**154**			P	**Pn**	**12 42 37.7**	**+1.7**
BANOM	**Banah**	**3.47**	**153**			P	**Pn**	**12 42 39.7**	**+1.2**
BANOM						S	**Sn**	**12 43 18.8**	**-0.8**
UMQ	**Umm Al-Quwin**	**3.63**	**164**			P	**Pn**	**12 42 41.0**	**+0.4**
MASF	**Masafi**	**3.92**	**158**			P	**Pn**	**12 42 46.2**	**+1.5**
	SNR=6.1								
MASF						S	**Sn**	**12 43 29.2**	**-1.5**
MDH	**Madha**	**4.03**	**157**			P	**Pn**	**12 42 46.8**	**+0.6**
NAZ	**Nazwa, Dubai**	**4.15**	**166**			P	**Pn**	**12 42 48.4**	**+0.6**
UOSS	**Minazif**	**4.33**	**159**			P	**Pn**	**12 42 51.7**	**+1.4**
TPRV	**Parvadeh(Tabas**	**4.40**	**24**			Pn	**Pn**	**12 42 51.2**	**-0.2**
ZNGN	**Zangian**	**4.42**	**315**			Pn	**Pn**	**12 42 51.8**	**0.0**
HATD	**Hatta, Dubai**	**4.42**	**161**			P	**Pn**	**12 42 52.3**	**+0.8**
HATD						S	**Sn**	**12 43 42.5**	**-0.7**
SHMA	**Al-Shehemyia**	**4.47**	**226**			P	**Pn**	**12 42 53.3**	**+1.2**
	SNR=9.2								
ASHO	**Ashiyiah**	**4.54**	**162**			P	**Pn**	**12 42 54.0**	**+0.9**
	SNR=19								
ASHO						S	**Sn**	**12 43 45.3**	**-0.7**
JHBN	**Jahan bin**	**4.61**	**315**			Pn	**Pn**	**12 42 54.7**	**+0.3**
SOHO	**SOHO**	**5.19**	**159**			P	**Pn**	**12 43 02.2**	**+0.1**
SOHO						S	**Sn**	**12 44 00.1**	**-2.0**
TRNA	**Turayna**	**5.20**	**215**			P	**Pn**	**12 43 03.3**	**+1.1**
	SNR=8.6								
SMRA	**Abu-Samra**	**5.39**	**219**			P	**Pn**	**12 43 04.3**	**-0.6**
ARQ	**Araqi**	**5.94**	**162**			P	**Pn**	**12 43 13.5**	**+1.1**
ARQ						S	**Sn**	**12 44 19.0**	**-1.6**
HOQ	**Hoqain**	**5.97**	**155**			P	**Pn**	**12 43 13.2**	**+0.3**
HOQ						S	**Sn**	**12 44 19.4**	**-1.9**
MZR	**Muzera**	**6.07**	**189**			P	**Pn**	**12 43 14.1**	**-0.1**
UMZA	**Um Al Zommool**	**6.31**	**175**			P	**Pn**	**12 43 17.9**	**+0.4**
BSY	**Bisya**	**6.70**	**158**			P	**Pn**	**12 43 24.4**	**+1.5**
BSY						S	**Sn**	**12 44 38.6**	**-0.8**
SMDO	**Samad**	**6.73**	**151**			P	**Pn**	**12 43 23.9**	**+0.5**
SMDO						S	**Sn**	**12 44 39.6**	**-0.6**
JMDO	**Jabal Madar**	**7.37**	**153**			P	**Pn**	**12 43 33.9**	**+1.8**
JLN	**Jalan Bani Buh**	**8.14**	**146**			P	**Pn**	**12 43 43.7**	**+1.0**
MHTO	**MHTO**	**8.59**	**158**			P	**Pn**	**12 43 48.6**	**-0.1**
DOK	**Doka**	**10.37**	**182**			P	**Pn**	**12 44 11.5**	**-1.7**
WHFO	**Wadi Hawf**	**11.08**	**184**			P	**Pn**	**12 44 21.9**	**-1.0**

*ISK **20** 12:50:51.3, 36.°43N×29.°10E, h19km, ML2.6/18*
*AFAD **20** 12:50:51.9, 36.°43N×29.°02E, h7km±5km, ML2.2*

ISC 20 12:50:52.2±0.9, 36.°43N±0.°03×29.°05E±0.°03, h16km±7km, n32, σ1s14/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IZZE	**Mula-Seydike**	**0.14**	**88**			P	**Pg**	**12 50 56.2**	**+0.1**
IZZE						S	**Sg**	**12 50 59.7**	**+0.9**
IZZE					*i*	IAML		12 51 00.0	
	comp=N,5μm,0.4s								
IZZE					*i*	IAML		12 51 00.0	
	comp=E,3μm,0.4s								
SABU	**Mula-Dalaman**	**0.40**	**350**			P	**Pg**	**12 50 59.8**	**-0.5**
SABU						S	**Sb**	**12 51 06.5**	**-0.1**
SABU					*i*	IAML		12 51 09.0	
	comp=N,189nm,0.7s								
SABU					*i*	IAML		12 51 09.0	
	comp=E,197nm,0.3s								
AKAS	**Kas**	**0.49**	**114**			Pg	**Pg**	**12 51 01.1**	**-0.9**
AKAS						Sg	**Sg**	**12 51 07.9**	**-0.8**
DALY	**Dalyan (Mula)**	**0.50**	**320**			Pg	**Pb**	**12 51 02.3**	**-0.3**
DALY						Sg	**Sb**	**12 51 10.4**	**+0.8**
CAME	**Cameli-Denizli**	**0.55**	**21**			Pg	**Pg**	**12 51 02.1**	**-1.1**
CAME						Sg	**Sg**	**12 51 10.9**	**+0.4**
KNIK	**Mula-Seydike**	**0.59**	**45**			P	**Pg**	**12 51 02.5**	**-1.4**
KNIK						S	**Sg**	**12 51 12.3**	**+0.6**
KNIK					*i*	IAML		12 51 13.0	
	comp=N,116nm,0.9s								
KNIK					*i*	IAML		12 51 14.0	
	comp=E,161nm,0.6s								
TURN	**Turunc**	**0.73**	**298**			P	**Pb**	**12 51 06.4**	**-0.1**
TURN						S	**Sn**	**12 51 19.9**	**+1.2**
TURN					*i*	IAML		12 51 20.0	
	comp=N,112nm,0.6s								
TURN					*i*	IAML		12 51 22.0	
	comp=E,64nm,0.4s								
TURN	**Turunc**	**0.73**	**298**		Pg		**Pb**	**12 51 06.6**	**0.0**
ELL	**Elmali**	**0.76**	**65**		Pg		**Pg**	**12 51 06.6**	**-0.4**
ARG	**Arkhangelos**	**0.78**	**254**		Pg		**Pb**	**12 51 07.5**	**+0.2**
ARG					Sg		**Sn**	**12 51 19.5**	**-0.3**
DNZT	**Denizli-Tavas-**	**0.84**	**359**		P		**Pg**	**12 51 07.3**	**-1.3**
DNZT					P		**Pb**	**12 51 07.9**	**-0.6**
DNZT					*i*	IAML		12 51 23.0	
	comp=N,90nm,0.5s								
DNZT					*i*	IAML		12 51 23.0	
	comp=E,90nm,0.5s								
DNZT					*i*	IAML		12 51 23.0	
	comp=N,88nm,0.4s								
DNZT					*i*	IAML		12 51 23.0	
	comp=E,89nm,0.5s								
GOLH	**Golhisar**	**0.90**	**27**		P		**Pg**	**12 51 08.3**	**-1.4**
GOLH					*i*	IAML		12 51 23.0	
	comp=E,64nm,0.6s								
GOLH					S		**Sb**	**12 51 23.3**	**+2.0**
GOLH					*i*	IAML		12 51 25.0	
	comp=N,59nm,0.4s								
YER	**Yerkesik**	**0.93**	**319**		Pg		**Pb**	**12 51 10.3**	**+0.3**
MULA	**Mugla, Merkez-**	**1.01**	**325**		P		**Pb**	**12 51 11.3**	**-0.1**
MULA					S		**Sn**	**12 51 27.6**	**+2.0**
MULA					*i*	IAML		12 51 28.0	
	comp=E,95nm,0.6s								
MULA					*i*	IAML		12 51 31.0	
	comp=N,58nm,0.5s								
TAVA	**DENIZLI_Tavas**	**1.04**	**354**		P		**Pg**	**12 51 11.1**	**-1.2**
TAVA					*i*	IAML		12 51 27.0	
	comp=N,55nm,0.5s								
TAVA					S		**Sn**	**12 51 27.3**	**+1.0**
TAVA					*i*	IAML		12 51 28.0	
	comp=E,66nm,0.5s								
AKUM	**Antalya-Kumluc**	**1.05**	**96**		P		**Pg**	**12 51 11.0**	**-1.5**
AKUM					*i*	IAML		12 51 33.0	
	comp=N,36nm,0.7s								
AKUM					*i*	IAML		12 51 35.0	
	comp=E,48nm,0.6s								
APMY	**Acipayam-Deniz**	**1.06**	**11**		Pg		**Pg**	**12 51 10.9**	**-1.8**
KORT	**Korkueli**	**1.19**	**61**		P		**Pg**	**12 51 13.7**	**-1.4**
KORT					S		**Sn**	**12 51 32.2**	**+2.1**
KORT					*i*	IAML		12 51 33.0	
	comp=N,47nm,0.4s								
KORT					*i*	IAML		12 51 37.0	
	comp=E,98nm,0.6s								
KORT	**Korkueli**	**1.19**	**61**		Pn		**Pg**	**12 51 13.7**	**-1.4**
DNIZ	**Denizli-Tavas-**	**1.19**	**359**		P		**Pg**	**12 51 13.2**	**-2.0**
DNIZ					S		**Sg**	**12 51 30.0**	**-0.7**
DNIZ					*i*	IAML		12 51 32.0	
	comp=N,209nm,0.5s								
DNIZ					*i*	IAML		12 51 32.0	
	comp=E,282nm,0.3s								
DAT	**Datca**	**1.22**	**284**		Pn		**Pg**	**12 51 14.5**	**-1.3**
YAZI	**Mula-Dat§a-**	**1.31**	**281**		P		**Pn**	**12 51 14.3**	**-1.5**
YAZI					S		**Sn**	**12 51 35.4**	**+2.4**
YAZI					*i*	IAML		12 51 37.0	
	comp=E,27nm,0.5s								
YAZI					*i*	IAML		12 51 40.0	
	comp=N,30nm,0.9s								
INCE	**Denizli-Bozkur**	**1.34**	**18**		P		**Pn**	**12 51 14.8**	**-1.5**
INCE					S		**Sb**	**12 51 35.2**	**+1.2**
INCE					*i*	IAML		12 51 36.0	
	comp=N,64nm,0.4s								
INCE					*i*	IAML		12 51 37.0	
	comp=E,48nm,0.4s								
ESEN	**Aydn-Nazilli**	**1.47**	**338**		P		**Pn**	**12 51 18.1**	**+0.1**
ESEN					*i*	IAML		12 51 39.0	
	comp=E,49nm,0.9s								
ESEN					*i*	IAML		12 51 41.0	
	comp=N,35nm,0.5s								
**BOD

explosion
ISC 20 13:09:50.8±1.1,67°.84N±0°.03×20°.38E±0°.06, h0km, n19, σ1§40/28, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	Lannavaara	0.65	71	PG	Pg	13 10 03.2	+0.1
LANU				SG	Sg	13 10 12.3	+0.9
KIF	Kilpisjarvi	1.18	7	*e*P	Pg	13 10 12.3	-1.0
KIF	Kilpisjarvi baz=193	1.18	7	PG	Pb	13 10 13.6	-0.3
KIF				smax	smax	13 10 28.9	
	comp=Z,2.5nm,0.2s						
KIF				SG	Sb	13 10 29.0	-0.7
HEF	Hetta	1.35	64	*e*P	Pg	13 10 15.9	-0.8
HEF	Hetta baz=251	1.35	64	PG	Pn	13 10 16.6	-0.3
HEF				smax	smax	13 10 33.4	
	comp=Z,1.1nm,0.2s						
HEF				SN	Sn	13 10 38.8	+3.2
I37NO	I37NO baz=153,slow=324,SNR=7.2	1.40	333	I	I	13 20 00.0	
ERTU	Ertsjaerv	1.47	151	PN	Pn	13 10 18.7	+0.1
ERTU				SN	Sn	13 10 39.1	+0.6
KLF	Kolari	1.51	112	PN	Pg	13 10 21.3	+1.7
KLF				smax	smax	13 10 37.0	
	comp=Z,1.1nm,0.2s						
KLF				SN	Sn	13 10 40.6	+1.4
KTK1	Kautokeino	1.58	41	PG	Pg	13 10 21.2	+0.1
KTK1				SN	Sg	13 10 43.9	+2.4
TRO	Tromso	1.88	344	SG	Sg	13 10 51.8	+0.8
KALU	Kalix	2.31	148	PG	Pb	13 10 32.1	-1.1
TOF	Tornio	2.35	137	PG	Pb	13 10 33.4	-0.5
TOF				smax	smax	13 11 00.8	
	comp=Z,0.9nm,0.2s						
TOF				SG	Sb	13 11 04.2	+0.7
RNF	Rovaniemi	2.52	117	PG	Pb	13 10 36.0	-0.7
RNF				SG	Sb	13 11 08.4	+0.1
ARA0	ARCESS Array S	2.53	45	PB	Pb	13 10 34.9	-2.1
ARA0				SG	Sb	13 11 09.1	+0.4
ARCES	ARCESS Array B comp=Z,0.1nm,0.3s,baz=225,slow=15,SNR=10	2.53	45	Pn	Pn	13 10 33.7	+0.6
ARCES				Sn	Sb	13 11 08.9	+0.3
	comp=Z,0.3nm,0.3s,baz=229,slow=25,SNR=8.6 comp=Z,0.6nm,0.4s						
RAJF	Raja-Jooseppi	3.03	74	SG	Sg	13 11 25.7	-2.4
RANF	Ranua	3.12	123	SG	Sg	13 11 29.2	-1.6
OLKF	Oulanka, Finla	3.84	109	PB	Pb	13 10 56.6	-2.8
FINES	FINESS Array B comp=Z,0.1nm,0.3s,baz=334,slow=15,SNR=1.9 comp=Z,2.1nm,0.9s	6.87	156	Pn	Pn	13 11 32.7	+0.1

DJA 20 13:21:52.1±0.2, 2°.S±1°.×12°.3E±°, h10km, M4.0/19, mB5.6/2, mb4.1/4, MLv4.0/19, Mw(mB)5.2/2, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	0.81	8	P	Pg	13 22 07.4	-0.4
LUWI				S	Sg	13 22 18.8	+0.4
APSI	Ampana	1.38	313	P	Pn	13 22 19.4	-1.0
KDI	Kendari	2.09	181	P	Pn	13 22 26.9	-0.4
MRSI	Marisa	2.42	343	P	Pn	13 22 31.3	-0.5
MRSI				S	Sn	13 23 02.1	+0.6
KMSI	Cibinong	2.75	29	P	Pn	13 22 36.7	+0.4
KMSI				S	Sn	13 23 10.1	+0.6
PCI	Palu	2.97	288	P	Pn	13 22 39.3	-0.1
TTSI	Tana Toraja	3.08	247	P	Pn	13 22 41.4	+0.6
SANI	Sanana	3.33	93	P	Pn	13 22 43.3	-1.0
MPSI	Mapaga	3.51	308	P	Pn	13 22 45.9	-0.9
SPSI	Sidrap Palu	3.57	234	P	Pn	13 22 48.1	+0.5
SPSI				S	Sn	13 23 30.3	+0.4
BNSI	Bone	3.59	225	P	Pn	13 22 48.1	+0.2
BNSI				S	Sn	13 23 30.8	+0.3
BKSI	Bulukumba	4.28	216	P	Pn	13 22 57.3	0.0
BKSI				S	Sn	13 23 47.9	+0.5
BSSI	Bau Bau, Buton	4.78	207	P	Pn	13 23 04.6	+0.3
BSSI				S	Sn	13 24 00.9	+1.1
TNTI	Ternate	5.38	61	P	Pn	13 23 12.3	-0.2

KRSC 20 13:24:56.1±2.1, 55°.41N×166°.13E, h32km±11km, MI3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.23	203	*i* P	Pn	13 25 03.4	+0.2
BKI				*e*S	Sn	13 25 08.5	+0.8
KBTR	Krutoberegovo	2.03	294	*e*P	Pn	13 25 29.6	+1.6
KBTR				*e*S	Sb	13 25 54.9	-2.3
KBG	Krutoberegovo	2.11	295	*e*P	Pn	13 25 30.5	+1.5
SMKR	Semkarok	2.87	296	*e*P	Pb	13 25 43.3	-3.3
SRKR	Sorokina	3.05	296	*e*P	Pn	13 25 44.3	+2.2
BZWR	Bezymyannyi-We	3.24	282	*e*P	Pb	13 25 49.4	-3.5
KZV	Kizimen	3.35	267	*e*P	Pb	13 25 50.7	-4.1
KMNR	Kamenistaya	3.36	278	*e*P	Pb	13 25 51.4	-3.6
ESO	Esso	4.24	280	*e*P	Pn	13 26 03.7	+5.3
SMAR	Somma	4.80	246	*e*P	Pn	13 26 10.9	+4.7
KRER	Koryakskii	4.81	247	*e*P	Pn	13 26 11.1	+4.8
AVH	Avacha	4.83	247	*e*P	Pn	13 26 11.7	+5.2
KRX	Arik	4.83	248	*e*P	Pn	13 26 11.6	+5.0
KOK	Koryaka	4.87	247	*e*P	Pn	13 26 11.9	+4.8
DALK	Dalny	4.94	244	*e*P	Pn	13 26 09.2	+1.2
KRMR	Karymshinskiy	5.37	244	*e*P	Pn	13 26 19.1	+5.3
KRMR				*e*S	Sn	13 27 19.7	+5.2
MTVR	Mutnovka	5.53	241	*e*P	Pn	13 26 20.9	+4.6
ASAK	Asacha	5.73	241	*e*P	Pn	13 26 24.5	+5.6

TEH 20 13:34:21.9, 35°.81N×42°.87E, h10km
ISN 20 13:34:25.7±1.1, 35°.91N×43°.48E, h6km±10km, ML3.4
ISC 20 13:34:23.6±1.5, 35°.81N±0°.05×43°.1E±0°.1, h10km, n9, σ2§79/13, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSL	Mosul	0.59	3	*e*Pg	Pn	13 34 36.7	-1.4
MSL				*e*Sg	Sb	13 34 43.9	-0.7
IKRK	Kirkuk	1.10	111	*e*Pg	Pn	13 34 43.0	-2.1
IKRK				*e*Sg	Sb	13 34 54.0	-5.2
IKRK	comp=E,1μm,0.9s			AML	AML	13 35 06.3	
IKRK	comp=N,1μm,0.4s			AML	AML	13 35 09.0	
MAHB	Mahabad	2.33	65	Pn	Pn	13 35 04.4	+2.3
BHD	Baghdad	2.75	157	*e*Pn	Pb	13 35 12.0	-0.8
BHD				*e*Sn	Sb	13 35 45.0	-1.5
IDHR	Dehrash	2.92	111	Pn	Pn	13 35 13.3	+2.9
IAZR	Azarshahr	2.99	50	Pn	Pn	13 35 14.1	+2.8
ISHB	Shabestar	3.20	39	Pn	Pn	13 35 15.7	+1.5
IBDR	Badra	3.58	138	*e*Pn	Pn	13 35 22.0	+2.9
IBDR				*e*Sn	Sn	13 36 03.0	+1.6
SNQR	Sonqor, Kerman	3.84	103	Pn	Pn	13 35 25.2	+2.2

IDC 20 13:35:26.2±1.0, 10°.99N×94°.96E, h0km, mb4.0/9, mbtmp3.9/10, ML3.5/1, Error ellipse: s-maj=40.9km s-min=17.3km az=57.0
BKK 20 13:35:28.3±0.4, 11°.N±3°.×9°.5E±°, h10km, M3.9/13, mB4.6/2, mb3.8/6, Mjma3.6/13, ML4.4/12, MLv3.9/6, Mw(mB)3.8/2
ISC 20 13:35:29.5±1.0, 11°.0N±0°.1×95°.1E±0°.2, h22km, n16, σ0§54/16, mb4.0/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RNTT	Ranong	3.72	116	P	Pn	13 36 25.0	-0.7
PKDT	Phuket	4.48	134	P	Pn	13 36 36.2	+0.1
KHLT	Khaolaem Dam	5.07	42	P	Pn	13 36 44.3	+0.1
UTHA	Uthaitani 3.6nm,0.8s	6.19	43	P	Pn	13 36 58.5	-1.1
CM04	Chiang Mai Arr 0.0nm3.9nm,1.2s	8.23	27	P	Pn	13 37 27.2	-0.6
CM01	Chiang Mai Arr 0.0nm5.1nm,0.8s	8.24	27	P	Pn	13 37 28.1	+0.2
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=214,slow=15,SNR=11 1.2nm,0.6s	8.27	26	Pn	Pn	13 37 28.2	0.0
MKAR	Makanchi Array 1.9nm,0.8s,baz=161,slow=7.7,SNR=15 1.9nm,0.8s	37.25	345	P	P	13 42 40.1	+0.5
SONM	Songino Array 0.4nm,0.3s,baz=181,slow=7.1,SNR=3.6 0.4nm,0.3s	37.90	12	P	P	13 42 45.2	0.0
KURBB	Kurchatov Arra	41.75	344	P	P	13 43 16.9	-0.1
	1.2nm,0.7s,baz=164,slow=7.7,SNR=13 1.2nm,0.7s						
ZALV	Zalesovo Beam 1.8nm,0.7s,baz=177,slow=8.1,SNR=10 1.8nm,0.7s	43.58	351	P	P	13 43 32.1	+0.4
BVAR	Borovoye Array 2.5nm,0.6s,baz=134,slow=8.3,SNR=11 2.5nm,0.8s	46.34	340	P	P	13 43 53.9	+0.1
WRA	Warramunga Arr 1.3nm,0.7s,baz=305,slow=8.5,SNR=17 1.3nm,0.7s	49.41	128	P	P	13 44 18.4	+0.4
ASAR	Alice Springs 1.5nm,0.8s,baz=311,slow=7.0,SNR=17 1.5nm,0.8s	51.29	133	P	P	13 44 32.9	+0.6
BRTR	Keskin Array B 0.8nm,0.7s,baz=126,slow=7.8,SNR=5.4 0.8nm,0.7s	61.12	309	P	P	13 45 41.6	-0.8
GERES	GERESS Array B 1.0nm,0.6s,baz=94,slow=7.9,SNR=5.2 1.0nm,0.6s	76.11	318	P	P	13 47 15.9	+0.1

AZER 20 13:48:57.2, 38°.46N×44°.51E, h2km, ml3.5
ISK 20 13:48:59.8, 38°.41N×44°.50E, h5km, ML3.5/12
AFAD 20 13:48:59.0, 38°.47N×44°.57E, h7km±2km, MW3.5
NSSP 20 13:49:03.4, 38°.67N×44°.65E, h10km, Ms3.2
TEH 20 13:49:06.6, 38°.44N×44°.97E, h9km±4km
ISC 20 13:49:00.3±1.2, 38°.43N±0°.02×44°.53E±0°.02, h1km±10km, n63, σ1§55/108, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	Van, Ozalp-Mer	0.48	298	SPECP		13 49 08.0	
OZAP				P	Pg	13 49 08.8	-0.7
OZAP				S	Sg	13 49 15.9	+0.1
YOVA	Hakkari_Yksek	0.87	193	SPECP		13 49 16.0	
YOVA				P	Pg	13 49 16.4	-0.5
YOVA				S	Sn	13 49 32.6	-0.6
TVAN	Van	0.89	276	P	Pg	13 49 16.1	-1.3
TVAN				S	Sb	13 49 32.4	+1.2
VANB	Van	0.91	281	Pg	Pg	13 49 17.5	-0.3
VMUR	Van-Muradiye	0.94	307	SPECP		13 49 17.0	
VMUR				P	Pg	13 49 17.4	-0.8
VMUR				S	Sg	13 49 30.2	-0.2
IMRD	Marand	0.96	73	Pg	Pb	13 49 19.4	-0.4
NAX	Nakhchivan	1.05	45	P	Pb	13 49 20.8	-0.6
NAX				S	Sn	13 49 36.4	-1.3
HAKT	HAKKARI	1.09	217	P	Pg	13 49 20.8	-0.4
HAKT				S	Sn	13 49 38.6	-0.2
HAKT	HAKKARI	1.09	217	P	Pb	13 49 21.4	-0.7
HAKT				S	Sn	13 49 39.0	+0.2
AKDM	Akdamar-Van	1.23	266	Pn	Pg	13 49 22.3	-1.5
AKDM				Sn	Sn	13 49 41.4	-0.7
ORD	Ordubad	1.25	66	P	Pn	13 49 24.3	-0.7
ORD				S	Sn	13 49 42.5	0.0
SBZ	Shahbuz	1.25	39	P	Pg	13 49 24.0	-0.2
SBZ				S	Sn	13 49 42.5	-0.1
ITBZ	Tabriz	1.28	98	Pg	Pb	13 49 24.6	-0.8
DYDN	Diyadin	1.29	330	P	Pg	13 49 24.6	+0.2
DYDN				S	Sg	13 49 40.6	-1.1
HYR	Heyderabad	1.31	11	P	Pg	13 49 24.5	-0.9
HYR				S	Sn	13 49 45.3	+1.4
IAZR	Azarshahr	1.37	123	Pg	Pb	13 49 27.7	+0.8
CUKT	Cukurca	1.39	212	P	Pg	13 49 27.1	+0.1
CUKT				S	Sn	13 49 47.5	+1.3
CUKT	Cukurca	1.39	212	Pn	Pg	13 49 26.9	-0.1
CUKT				Sn	Sn	13 49 46.5	+0.4
VAYK	Vayk	1.44	29	*i* P	Pn	13 49 27.1	-0.6
VAYK				*i* S	Sb	13 49 44.2	-2.7
ADCV	BITLIS_Adilcev	1.47	285	P	Pn	13 49 27.9	-0.2
ADCV				S	Sg	13 49 48.9	+1.5
IGDI	IGDIR	1.48	346	P	Pn	13 49 27.7	-0.5
IGDI				S	Sg	13 49 48.9	+1.1
TASB	TASBURUN-IGDIR	1.56	352	Pn	Pg	13 49 30.3	0.0
NRKZ	NAREK	1.57	4	*e*P	Pb	13 49 29.6	-0.6
NRKZ				*e*S	Sn	13 49 48.8	-1.7
AGRB	Hanur-Agry	1.66	314	Pn	Pn	13 49 30.8	+0.1
AGRB				Sn	Sg	13 49 54.1	+0.6
DORK	Agr/Tutak/Do	1.67	305	P	Pn	13 49 30.2	-0.7
DORK				S	Sn	13 49 53.2	+0.2
MLAZ	Malazgirt-MUS	1.70	295	Pn	Pn	13 49 31.7	+0.3
MLAZ				Sn	Sb	13 49 55.0	+0.4
GNI	Garni	1.72	5	Pn	Pb	13 49 32.7	-0.2
GNI	Garni	1.72	5	*e*P	Pg	13 49 33.1	-0.2
GNI				*e*S	Sb	13 49 54.7	-0.4
VNNZ	Vanand	1.76	342	*e*P	Pb	13 49 33.2	-0.2
VNNZ				*e*S	Sn	13 49 54.8	-0.2
EGVZ	Egvard	1.76	63	*e*P	Pb	13 49 32.8	-0.6
EGVZ				*e*S	Sn	13 49 54.3	-0.9
ARUZ	Aruch	1.88	350	*e*P	Pb	13 49 35.6	+0.1
ARUZ				*e*S	Sb	13 49 59.1	-0.5
KAPZ	Kaputan	1.89	4	*e*P	Pb	13 49 35.6	-0.2
KAPZ				*e*S	Sn	13 49 58.9	+0.4
MAHB	Mahabad	1.91	150	Pg	Pg	13 49 35.5	+3.0
AYRK	Ayrk	1.94	30	*e*P	Pb	13 49 36.4	-0.2
AYRK				*e*S	Sb	13 50 00.4	-1.1
GURO	Guroymak-BITLI	1.97	274	Pn	Pn	13 49 35.2	+0.3
GURO				Sn	Sn	13 50 01.1	+0.8
IHRS	Heris	1.97	93	Pg	Pg	13 49 37.3	-0.9
QRD	Qoradiz	2.40	64	P	Pn	13 49 41.4	+0.5
QRD				S	Sb	13 50 13.0	-1.5
GDB	GEDABAY	2.47	22	P	Pn	13 49 43.1	+1.2
GDB				S	Sb	13 50 15.2	-1.5
LSVT	Lusahovit	2.53	11	*e*P	Pb	13 49 44.7	-1.9
LSVT				*e*S	Sn	13 50 14.5	+0.4
ISRB	Sarab	2.54	103	Pn	Pb	13 49 45.6	-1.3
KOPR	Koprukoy-ERZUR	2.60	308	Pn	Pn	13 49 44.5	+0.8
AGDM	Agdam	2.60	49	P	Pb	13 49 48.1	+0.3
AGDM				S	Sb	13 50 18.9	-1.5
GANJ	Ganja	2.61	31	P	Pb	13 49 45.7	-2.1
GANJ				S	Sb	13 50 18.9	-1.5
SRTK	Saratovka	2.63	357	*e*P	Pb	13 49 48.3	-0.1
SRTK				*e*S	Sb	13 50 20.9	-1.4
GRMI	Germi	2.66	81	Pn	Pb	13 49 46.6	-2.2
QZX	Qazax, Azerbai	2.70	14	P	Pn	13 49 45.4	+0.5
QZX				S	Sb	13 50 20.7	-2.4
SENK	Senkaya-Erzuru	2.71	322	Pn	Pn	13 49 46.4	+1.1
YRD	Yardimli	2.94	79	P	Pb	13 49 51.4	-2.3
YRD				S	Sb	13 50 27.2	-3.0
LRK	Lerik	2.99	85	P	Pb	13 49 52.1	-2.4
LRK				S	Sb	13 50 29.3	-2.3
MNGR	Mingechevir, A	3.06	39	P	Pn	13 49 50.9	+1.2
MNGR				S	Sb	13 50 31.5	-1.8
BNGB	Bingl	3.07	282	Pn	Pn	13 49 50.9	+0.9
DGRG	David-gareji	3.08	12	P	Pg	13 49 59.1	-0.3
TRLG	Trialeti	3.12	354	P	Pg	13 49 58.9	-1.2
TRLG				S	Sg	13 50 45.3	+4.7
GLBA	Clilabad	3.12	74	P	Pn	13 49 51.5	+0.8
GLBA				S	Sn	13 50 30.5	+2.0
VSHL	Vashlovani	3.14	27	P	Pb	13 49 55.0	-2.0
VSHL				S	Sg	13 50 45.2	+4.0
LKRN	Lenkeran, Azer	3.34	84	P	Pn	13 49 55.0	+1.3
LKRN				S	Sn	13 50 36.3	+2.4
ASTR	Astara	3.34	87	P	Pb	13 49 56.5	-3.9
ASTR				S	Sb	13 50 39.5	-2.0
QBL	Gabala	3.58	44	P	Pn	13 49 59.2	+2.3
QBL				S	Sb	13 50 44.9	-3.5
ZNJK	Zanjan	3.74	117	Pn	Pn	13 50 02.5	+3.1
XNQ	Khinaliq	3.90	44	P	Pn	13 50 04.1	+2.6
XNQ				S	Sn	13 50 51.3	+3.2
IDHR	Dehrash	4.01	158	Pn	Pb	13 50 08.3	-3.6
SVRC	Sivrice-ELAZID	4.11	271	Pn	Pn	13 50 05.9	+1.5
SHTL	Shatili	4.24	6	P	Pb	13 50 17.8	+2.0

DJA 20 13:50:14.6±0.2, 10°.S±2°.×12°.2E±°, h10km, M3.6/14, mb3.8/4, MLv3.5/14
IDC 20 13:50:16.9±2.5, 9°.85S×121°.76E, h91km±24km, mb3.4/5, mbtmp3.5/9, MS3.5/1, Error ellipse: s-maj=50.7km s-min=21.1km az=57.0
ISC 20 13:50:12.6±0.8, 9°.81S±0°.06×122°.08E±0°.06, h35km, n22, σ2§65/23, mb4.0/5, Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	Ende, Flores	1.12	340	P	Pn	13 50 32.0	+0.1
MMRI	Maumere	1.18	8	P	Pn	13 50 34.7	+2.1
BASI	Baing, Sumba	1.53	255	P	Pn	13 50 39.0	+1.6
BASI				S	Sn	13 50 57.6	+1.4
BATI	Baumata 24nm,0.3s,baz=270,slow=15,SNR=8.2	1.61	104	P	Pn	13 50 48.4	+10
BATI				S	Sn	13 51 10.3	+12
	22nm,0.3s,baz=288,slow=22,SNR=5.3						
BATI	Baumata	1.61	104	P	Pn	13 50 48.0	+9.5
WSI	Waingapu	1.76	275	P	Pn	13 50 41.8	+1.2
WSI				S	Sn	13 51 02.0	+0.2
SOEI	Soe	2.16	89	P	Pn	13 50 54.8	+8.6
WBSI	Waikabubak, Su	2.66	273	P	Pn	13 50 52.9	0.0
BSSI	Bau Bau, Buton	3.97	337	P	Pn	13 51 14.1	+3.1
PLAI	Plampang	4.36	283	P	Pn	13 51 18.1	+1.8
BKSI	Bulukumba	4.87	336	P	Pn	13 51 26.2	+2.9
TWSI	Taliwang, Sumb 13nm,0.7s	5.24	281	P	Pn	13 51 30.0	+1.5
KAPI	Kappang 4.7nm,0.4s,baz=157,slow=6.1,SNR=4.6	5.30	334	P	Pn	13 51 32.3	+3.0
FITZ	Fitzroy Crossi 0.8nm,0.6s,baz=330,slow=13,SNR=8.6	8.93	158	P	Pn	13 52 23.2	+4.1
FITZ	1.6nm,0.5s,baz=210,slow=21,SNR=8.4			S	Sn	13 53 56.1	-2.4
WRA	Warramunga Arr 0.4nm,0.9s,baz=302,slow=13,SNR=4.7	15.54	132	P	Pn	13 53 53.2	+4.1
WRA				S	Sn	13 56 37.1	-3.2
	0.6nm,0.8s,baz=304,slow=22,SNR=3.4						
ASAR	Alice Springs 0.3nm,0.8s,baz=324,slow=13,SNR=4.6	17.81	142	P	Pn	13 54 21.4	+3.5
ASAR				S	Sn	13 57 32.1	-3.4
	0.2nm,0.7s,baz=315,slow=22,SNR=4.4						
PALK	Pallekele comp=Z,53nm,18.9s,baz=3.5,slow=37	44.57	291	LR	LR	14 17 32.8	
SONM	Songino Array 0.2nm,0.3s,baz=158,slow=8.8,SNR=1.6 0.2nm,0.3s	59.06	348	P	P	14 00 06.8	-2.5
MKAR	Makanchi Array 0.7nm,0.6s,baz=144,slow=7.5,SNR=8.3 0.7nm,0.6s	66.59	331	P	P	14 00 57.4	-2.0
PETK	Petropavlovsk- 1.3nm,0.6s,baz=231,slow=9.8,SNR=1.6 1.3nm,0.6s	69.64	22	P	P	14 01 16.9	-1.4
ZALV	Zalesovo Beam 0.9nm,0.4s,baz=124,slow=6.3,SNR=4.8 0.9nm,0.4s	70.91	338	P	P	14 01 23.5	-2.5
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=141,slow=4.5,SNR=1.9 0.1nm,0.3s	71.07	332	P	P	14 01 24.6	-2.4

TRN 20 14:00:21.9, 10°.85N×62°.32W, h83km, MD3.3, North of the Paria peninsula.
FUNV 20 14:00:23.4, 10°.95N×62°.33W, h61km, MW3.6
ISC 20 14:00:21.4±2.1, 10°.85N±0°.08×62°.33W±0°.08, h88km±25km, n14, σ1§11/28, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	Guralp CMG5TDE	0.78	101	*e*P	Pn	14 00 39.1	+0.6
DMDM				*e*S	Sn	14 00 51.3	-0.1
TRN	Trinidad (W)	0.93	103	*e*P	Pn	14 00 40.6	+0.4
TRN				*e*S	Sn	14 00 53.2	-1.1
GRFF	Grenada Fort F	1.32	26	*e*P	Pn	14 00 44.4	-0.5
GRFF				*e*S	Sn	14 01 01.9	-0.7
GRGR	Grenville	1.43	27	*e*P	Pn	14 00 46.0	-0.3
GRGR				*e*S	Sn	14 01 04.8	-0.2
GRW	Mount Saint Ca	1.45	27	*e*P	Pn	14 00 47.3	+1.3
GRW				*e*S	Sn	14 01 06.7	+1.1
GRHS	Sauteurs	1.52	26	*e*P	Pn	14 00 48.9	+1.5
GRHS				*e*S	Sn	14 01 06.6	-0.4
GRSS	Sisters	1.60	26	*e*P	Pn	14 00 48.6	+0.3
GRSS				*e*S	Sn	14 01 08.8	0.0
GCMP	Grenada, Carri	1.85	28	*e*P	Pn	14 00 51.5	-0.1
GCMP				*e*S	Sn	14 01 14.6	+0.1
PCRV	Puerto La Cruz	2.37	254	*e*P	Pn	14 00 59.5	+1.0
PCRV				*e*S	Sn	14 01 25.5	-1.4
PCRV	Puerto La Cruz	2.37	254	*e*P	Pn	14 00 59.3	+0.8
PCRV				*e*S	Sn	14 01 26.0	-0.9
SVB	Belmont	2.62	24	*e*P	Pn	14 01 03.1	+1.2
SVB				*e*S	Sn	14 01 31.1	-1.9
MCLT	Moule a Chique	3.15	25	*e*P	Pn	14 01 09.3	+0.4
MCLT				*e*S	Sn	14 01 43.9	-1.7
SLBI	Saint Lucia, B	3.42	23	*e*P	Pn	14 01 14.3	+1.7
SLBI				*e*S	Sn	14 01 50.9	-1.1
BIM	Bigot	3.84	18	*e*P	Pn	14 01 19.6	+1.2
BIM				*e*S	Sn	14 02 00.5	-2.0

GII 20 14:00:27.6±0.0, 36°.29N×26°.63E, h100km, Mws3.5, confirmed
HLW 20 14:00:32.9, 36°.35N×26°.87E, h22km±4km, Ml4.1
ISK 20 14:00:34.7, 36°.32N×26°.58E, h117km±1km, ML3.1/28
ATH 20 14:00:35.6, 36°.33N×26°.59E, h110km±2km, ML3.5/6, Manual Solution by A.Agalos First location: 2019/11/20 14:01:56, This location: 2019/11/20 14:09:36 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km
THE 20 14:00:36.3, 36°.N±3°.×2°.7E±°, h104km±4km, M3.2/9, MLh3.2/9
AFAD 20 14:00:37.9, 35°.80N×27°.26E, h7km±1km, ML3.3
ISC 20 14:00:33.4±1.2, 36°.25N±0°.05×26°.66E±0°.03, h126km±7km, n104, σ1§80/115, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASTA	Astypalaia	0.39	320	P	Pn	14 00 51.4	0.0
ASTA				S	Sn	14 01 03.2	-1.7
NISR	Nisiros	0.52	46	P	Pn	14 00 52.9	+0.8
NISR				S	Sn	14 01 05.5	-0.8
NISR	Nisiros	0.52	46	P	Pn	14 00 52.7	+0.6
NISR				S	Sn	14 01 05.5	-0.8
KLNA	Kalymnos	0.75	20	P	Pn	14 00 53.8	+0.1
KLNA				S	Sn	14 01 07.6	-1.5
YAZI	Mula-Dat§a-	0.77	56	P	Pn	14 00 54.9	+1.0
YAZI				S	Sn	14 01 09.4	0.0
KARP	Karpathos	0.81	150	Pg	Pn	14 00 56.0	+1.7
KARP	Karpathos	0.81	150	P	Pn	14 00 56.0	+1.7
KARP				S	Sn	14 01 11.0	+0.9
KARP	Karpathos	0.81	150	P	Pn	14 00 55.9	+1.7
KARP				S	Sn	14 01 10.5	+0.4
DAT	Datca	0.88	57	P	Pn	14 00 56.3	+1.3
DAT				S	Sn	14 01 08.2	-3.1
DAT	Datca	0.88	57	Pg	Pn	14 00 56.2	+1.3
DATC	Datca-Mugla	0.95	58	Pg	Pn	14 00 56.8	+1.4
THERA	Ancient Thera,	0.96	277	P	Pn	14 00 56.0	+0.4
THERA				S	Sn	14 01 10.8	-1.5
THERA

IZZE				S	**Sn**	**14 01 34.4**	**-0.3**
IZZE				*i* IAML		14 01 37.0	
	comp=N,280nm,0.3s						
IZZE				*i* IAML		14 01 37.0	
	comp=E,347nm,0.3s						
URLA	**Izmir**	**2.11**	**359**	Pn	**Pn**	**14 01 08.8**	**+0.3**
NAZL	**Nazilli-Aydin**	**2.15**	**37**	Pn	**Pn**	**14 01 10.7**	**+1.7**
BLCB	**Balcova**	**2.15**	**8**	Pn	**Pn**	**14 01 09.9**	**+0.9**
CHOS	**Chios island**	**2.19**	**347**	Pn	**Pn**	**14 01 09.7**	**+0.2**
CHOS	**Chios island**	**2.19**	**347**	P	**Pn**	**14 01 09.6**	**0.0**
CHOS	**Chios island**	**2.19**	**347**	P	**Pn**	**14 01 09.5**	**0.0**
CAME	**Cameli-Denizli**	**2.24**	**71**	Pn	**Pn**	**14 01 12.4**	**+2.2**
CHAN	**Chania**	**2.25**	**252**	P	**Pn**	**14 01 11.2**	**+1.1**
CH01	**Chania**	**2.26**	**252**	P	**Pn**	**14 01 11.7**	**+1.4**
ODEM	**Odemis-Izmir**	**2.32**	**29**	Pn	**Pn**	**14 01 12.6**	**+1.5**
AKAS	**Kas**	**2.38**	**90**	Pn	**Pn**	**14 01 14.2**	**+2.2**
APMY	**Acipayam-Deniz**	**2.45**	**59**	Pn	**Pn**	**14 01 14.8**	**+2.0**
KARY	**Karystos**	**2.51**	**316**	P	**Pn**	**14 01 14.4**	**+0.8**
KARY	**Karystos**	**2.51**	**316**	P	**Pn**	**14 01 14.3**	**+0.8**
GVD	**Gavdhos**	**2.52**	**237**	Pn	**Pn**	**14 01 15.9**	**+2.1**
GVD	**Gavdhos**	**2.52**	**237**	P	**Pn**	**14 01 15.8**	**+2.1**
GVD				S	**Sn**	**14 01 45.5**	**+0.8**
GVD	**Gavdhos**	**2.52**	**237**	P	**Pn**	**14 01 15.5**	**+1.8**
DEMR	**Demre-Antalya**	**2.62**	**89**	Pn	**Pn**	**14 01 16.9**	**+1.9**
ELL	**Elmali**	**2.67**	**78**	Pn	**Pn**	**14 01 18.4**	**+2.8**
KNDR	**Palaiochora Ch**	**2.67**	**249**	Pn	**Pn**	**14 01 17.6**	**+2.1**
KNDR	**Palaiochora Ch**	**2.67**	**249**	P	**Pn**	**14 01 18.2**	**+2.7**
KNDR	**Palaiochora Ch**	**2.67**	**249**	P	**Pn**	**14 01 17.2**	**+1.7**
ANKY	**Antikythira Is**	**2.75**	**263**	P	**Pn**	**14 01 17.2**	**+0.7**
ANKY	**Antikythira Is**	**2.75**	**263**	P	**Pn**	**14 01 17.4**	**+0.8**
KULA	**Kula-Manisa**	**2.77**	**35**	Pn	**Pn**	**14 01 18.4**	**+1.5**
VLY	**Voula,Athens**	**2.79**	**306**	P	**Pn**	**14 01 17.1**	**0.0**
DION	**Dionisos Attik**	**2.84**	**311**	P	**Pn**	**14 01 17.9**	**+0.1**
SIGR	**SIGRI**	**3.02**	**348**	Pn	**Pn**	**14 01 20.6**	**+0.5**
SIGR	**SIGRI**	**3.02**	**348**	P	**Pn**	**14 01 20.4**	**+0.3**
VLI	**Veliai**	**3.04**	**280**	P	**Pn**	**14 01 20.8**	**+0.5**
KORT	**Korkueli**	**3.06**	**75**	Pn	**Pn**	**14 01 23.6**	**+2.8**
KEMT	**Kemer-ANTALYA**	**3.16**	**82**	Pn	**Pn**	**14 01 24.8**	**+2.9**
GUR	**Goura**	**3.84**	**297**	P	**Pn**	**14 01 31.9**	**+0.9**
ITM	**Ithomi**	**3.91**	**285**	Pn	**Pn**	**14 01 33.3**	**+1.4**
ITM	**Ithomi**	**3.91**	**285**	P	**Pn**	**14 01 32.8**	**+0.9**
KLV	**Kalavryta, Ach**	**4.02**	**298**	P	**Pn**	**14 01 34.5**	**+1.1**
TRIZ	**Trizonia**	**4.22**	**301**	P	**Pn**	**14 01 37.0**	**+1.0**
DRO	**Drossia**	**4.30**	**295**	P	**Pn**	**14 01 38.3**	**+1.2**
EFP	**Efpalio**	**4.37**	**301**	P	**Pn**	**14 01 39.2**	**+1.4**
ANX	**Ano Chora**	**4.44**	**303**	P	**Pn**	**14 01 40.4**	**+1.5**
RLS	**Riolos of Patr**	**4.52**	**295**	P	**Pn**	**14 01 40.8**	**+0.9**
SLUM	**Salum**	**4.90**	**195**	P	**Pn**	**14 01 46.8**	**+1.7**
CSS	**Mathiatis**	**5.59**	**101**	P	Pn	14 01 47.8	-6.4
CSS	**Mathiatis**	**5.59**	**101**	S	**Sn**	**14 02 52.6**	**-4.7**
HNTI	**Hanita**	**7.69**	**112**	P	Pn	14 02 17.7	-5.0
HNTI	**Hanita**	**7.69**	**112**	S	**Sn**	**14 03 43.6**	**-4.7**
RYAN	**Fayoum**	**7.77**	**156**	P	**Pn**	**14 02 25.8**	**+2.1**
GEM	**Giv'at Ha'Em**	**8.01**	**110**	P	Pn	14 02 22.3	-4.6
GEM	**Giv'at Ha'Em**	**8.01**	**110**	S	**Sn**	**14 03 51.2**	**-4.7**
MMLI	**Mount Malkishu**	**8.18**	**115**	P	Pn	14 02 23.8	-5.5
MMLI	**Mount Malkishu**	**8.18**	**115**	S	**Sn**	**14 03 56.5**	**-3.7**
SUZ	**Suez**	**8.23**	**139**	P	**Pn**	**14 02 31.3**	**+1.4**
KRMI	**Paran Flat**	**9.11**	**130**	P	Pn	14 02 36.5	-5.4
KRMI	**Paran Flat**	**9.11**	**130**	S	**Sn**	**14 04 17.8**	**-4.9**
HFRF	**Wahat Farafira**	**9.18**	**171**	P	**Pn**	**14 02 45.5**	**+2.8**
HRFI	**Mount Harif**	**9.36**	**129**	P	Pn	14 02 39.9	-5.4
HRFI	**Mount Harif**	**9.36**	**129**	S	**Sn**	**14 04 24.7**	**-4.1**
EIL	**Elat**	**9.57**	**131**	P	Pn	14 02 43.9	-4.1
EIL	**Elat**	**9.57**	**131**	S	**Sn**	**14 04 29.0**	**-4.7**
HBST	**Basata**	**9.77**	**134**	P	**Pn**	**14 02 52.2**	**+1.6**

DJA 20 14:04:14.9±0.7, 1°S±5°×13°1E±°, h10km, M3.9/8, MLv3.9/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.25**	**173**	P	Pb	14 04 21.1	-0.5
FAKI	**Fak Fak**	**2.51**	**156**	P	Pn	14 04 55.4	-0.4
RKPI	**Ransiki, Papua**	**3.08**	**107**	P	Pg	14 05 13.9	-0.1
MSAI	**Masohi**	**3.56**	**220**	P	Pn	14 05 09.5	-0.8
TNTI	**Ternate**	**4.10**	**290**	P	Pn	14 05 17.7	0.0
MTKI	**Muara Teweh, K**	**16.34**	**269**	P	P	14 08 14.7	+7.2

*IDC **20** 14:06:54.6±0.7, 11°.02N×95°.00E, h0km, mb4.2/17, mbtmp4.2/18, ML4.3/1, MS3.2/4, Error ellipse: s-maj=29.3km s-min=14.5km az=61.0*
*NEIC **20** 14:06:55.9±1.0, 10°.99N±0°.08×95°.11E±0°.04, h10km±1km, mb4.6/25, Error ellipse: s-maj=14.5km s-min=4.8km az=199.0*
*BKK **20** 14:06:56.4±0.4, 11°.N±2°×9°.5E±°, h10km, M3.9/16, mB4.3/12, mb4.1/13, Mjma3.9/16, ML4.5/16, MLv4.3/16, Mw(mB)3.4/12*

ISC 20 14:06:57.7±0.6, 11°.06N±0°.07×95°.09E±0°.07, h22km, n75, σ1§00/74, mb4.4/31, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.38**	**285**		**Pn**	**14 07 35.6**	**+0.2**
PBA	**Port Blair**	**2.38**	**285**	*e*P	**Pn**	**14 07 35.2**	**-0.2**
PBA				*e*S	**Sn**	**14 08 05.1**	**+1.2**
PBA				IAML		14 08 09.4	
	comp=N,3µm,0.4s						
PBA				IAML		14 08 09.7	
	comp=E,3µm,0.3s						
RNTT	**Ranong**	**3.72**	**116**	P	**Pn**	**14 07 53.2**	**-0.7**
PKDT	**Phuket**	**4.49**	**134**	P	**Pn**	**14 08 04.7**	**+0.2**
KHLT	**Khaolaem Dam**	**5.04**	**42**	P	**Pn**	**14 08 11.9**	**-0.1**
	comp=E,0.3nmcomp=E,0.3nmcomp=E,0.6nmcomp=E,652nm comp=E,30nm,1.1s						
LHMI	**Lhok Sumawe**	**6.08**	**162**	Pn	**Pn**	**14 08 24.5**	**-1.8**
UTHA	**Uthaitani**	**6.16**	**43**	P	**Pn**	**14 08 26.1**	**-1.3**
	comp=E,96nmcomp=E,10nm,0.8s						
KULM	**Kulim**	**7.95**	**136**	Pn	**Pn**	**14 08 50.6**	**-1.4**
CM05	**Chiang Mai Arr**	**8.19**	**27**	P	**Pn**	**14 08 55.7**	**+0.3**
	comp=E,7.5nm,0.8s						
CM13	**Chiang Mai Arr**	**8.19**	**26**	P	**Pn**	**14 08 56.4**	**+1.0**
CM04	**Chiang Mai Arr**	**8.21**	**27**	P	**Pn**	**14 08 56.4**	**+0.9**
	comp=E,75nmcomp=E,8.2nm,0.8s						
CM01	**Chiang Mai Arr**	**8.21**	**27**	P	**Pn**	**14 08 56.6**	**+0.9**
	comp=E,83nmcomp=E,12nm,1.1s						
CM02	**Chiang Mai Arr**	**8.22**	**26**	P	**Pn**	**14 08 55.5**	**-0.3**
	comp=E,60nmcomp=E,7.4nm,0.9s						
CM31	**Chiang Mai Arr**	**8.24**	**26**	Pn	**Pn**	**14 08 55.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**8.24**	**26**	Pn	**Pn**	**14 08 56.6**	**+0.6**
	comp=E,0.9nm,0.3s,baz=215,slow=15,SNR=19						
CMAR				LR	LR	14 11 50.2	
	comp=E,57nm,20.1s,baz=215,slow=36 comp=E,1.6nm,0.3s						
CMAR	**Chiang Mai Arr**	**8.24**	**26**	Pn	**Pn**	**14 08 55.7**	**-0.3**
CM09	**Chiang Mai Arr**	**8.25**	**27**	P	**Pn**	**14 08 57.1**	**+1.0**
	comp=E,8.8nm,0.8s						
UTTA	**Uttaradit**	**8.49**	**38**	P	**Pn**	**14 09 00.2**	**+0.8**
CHTO	**Chiang Mai**	**8.56**	**25**		**Pn**	**14 09 00.8**	**+0.4**
CHTO	**Chiang Mai**	**8.56**	**25**	P	**Pn**	**14 09 01.0**	**+0.6**
PSI	**Prapat**	**9.04**	**155**	LR	LR	14 12 35.9	
	comp=E,187nm,18.9s,baz=304,slow=37						
SHL	**Shillong**	**14.74**	**349**	Pn	**Pn**	**14 10 23.5**	**-1.7**
EVN	**Everest**	**18.52**	**336**		**P**	**14 11 11.9**	**-1.5**
LSA	**Lhasa**	**18.91**	**349**	P	**P**	**14 11 16.8**	**-0.7**
LSA	**Lhasa**	**18.91**	**349**	P	**P**	**14 11 13.4**	**-4.0**
ENH	**Enshi**	**23.33**	**33**	P	**P**	**14 12 03.5**	**-1.0**
LZDM	**Lanzhou Array**	**25.98**	**16**	P	**P**	**14 12 30.4**	**+1.2**
	comp=E,0.9nm,0.3s,baz=180,slow=13,SNR=4.0 comp=E,8.9nm,0.3s						
LZH	**Lanzhou**	**26.14**	**16**	*e*P	**P**	**14 12 33.8**	**+3.2**
LZH				pP	pwP	14 12 41.5	+1.3
LZH				pmax	pmax		
	comp=Z,22nm,1.7s						
LYN	**LuoYang**	**28.25**	**31**	*e*P	**P**	**14 12 50.4**	**+1.1**
LYN				sP	sP	14 12 57.4	0.0
LYN				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA	**Gaotai**	**28.54**	**8**	*e*P	**P**	**14 12 54.0**	**+2.0**
GTA				pP	sP	14 13 00.3	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NIL	**Nilore**	**30.09**	**322**	P	**P**	**14 13 05.1**	**-0.7**
NIL				IAmb	IAmb	14 13 08.6	
	comp=Z,5.1nm,0.8s						
KSH	**Kashi**	**33.04**	**332**	P	**P**	**14 13 30.8**	**-0.9**
KSH				pP	pP	14 13 37.8	+0.4
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
TARG	**Taragay, Kyrgy**	**34.10**	**337**		**P**	**14 13 42.1**	**+0.8**
TARG				IAmb	IAmb	14 13 44.3	
	comp=Z,8.1nm,0.9s						
KDJ	**Kajisay**	**34.69**	**336**	P	**P**	**14 13 47.5**	**+1.4**
KDJ				IAmb	IAmb	14 13 48.4	
	comp=Z,11nm,1.2s						
DRK	**Karamyk**	**35.06**	**328**	P	**P**	**14 13 49.9**	**+0.4**
GAR	**Garm**	**35.51**	**326**		**P**	**14 13 52.9**	**-0.2**
GAR				IAmb	IAmb	14 13 53.8	
	comp=Z,8.6nm,0.6s						
ARSB	**Arslanbob**	**35.87**	**331**	P	**P**	**14 13 56.1**	**0.0**
ARSB				IAmb	IAmb	14 13 57.6	
	comp=Z,6.2nm,0.6s						
CHGR	**Chuyangaron**	**35.93**	**324**		**P**	**14 13 56.0**	**-0.6**
MKAR	**Makanchi Array**	**37.23**	**345**	P	**P**	**14 14 08.2**	**+0.6**
	comp=E,5.0nm,0.8s,baz=162,slow=8.3,SNR=40 comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**37.23**	**345**		**P**	**14 14 07.7**	**+0.1**
MAKZ	**Makanchi**	**37.32**	**345**		**P**	**14 14 08.7**	**+0.4**
MAKZ				IAmb	IAmb	14 14 10.3	
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**37.87**	**12**	P	**P**	**14 14 12.9**	**-0.2**
	comp=E,1.1nm,0.8s,baz=191,slow=6.9,SNR=6.4 comp=Z,1.1nm,0.8s						
HRA	**Herat**	**37.89**	**313**	P	**P**	**14 14 13.6**	**0.0**
KKAR	**Karatay Array**	**38.41**	**331**	P	**P**	**14 14 17.3**	**-0.3**
KURBB	**Kurchatov Arra**	**41.73**	**344**	P	**P**	**14 14 45.5**	**+0.6**
	comp=E,4.5nm,0.8s,baz=163,slow=7.6,SNR=42 comp=Z,4.5nm,0.8s						
KURK	**Kurchatov**	**41.79**	**344**		**P**	**14 14 45.7**	**+0.2**
ZAA0	**Zalesovo Array**	**43.55**	**351**		**P**	**14 14 59.9**	**+0.1**
ZAA0				IAmb	IAmb	14 15 01.2	
	comp=Z,5.8nm,0.8s						
ZALV	**Zalesovo Beam**	**43.55**	**351**	P	**P**	**14 15 00.2**	**+0.4**
	comp=E,5.2nm,0.7s,baz=174,slow=8.7,SNR=28 comp=Z,5.2nm,0.7s						
ZALV	**Zalesovo Beam**	**43.55**	**351**		**P**	**14 14 59.6**	**-0.1**
BVAR	**Borovoye Array**	**46.32**	**340**	P	**P**	**14 15 22.4**	**+0.5**
	comp=E,7.0nm,0.8s,baz=134,slow=8.3,SNR=39 comp=Z,7.0nm,0.8s						
AB31	**Akbulak array**	**47.94**	**329**		**P**	**14 15 34.5**	**0.0**
AB31				IAmb	IAmb	14 15 35.9	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**47.94**	**329**	P	**P**	**14 15 34.7**	**+0.1**
WRA	**Warramunga Arr**	**49.42**	**128**	P	**P**	**14 15 46.8**	**+0.5**
	comp=E,1.6nm,0.7s,baz=306,slow=8.7,SNR=14 comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**51.30**	**133**	P	**P**	**14 16 01.2**	**+0.7**
	comp=E,1.8nm,0.7s,baz=310,slow=7.4,SNR=23						
ASAR				LR	LR	14 38 49.4	
	comp=Z,34nm,19.6s,baz=310,slow=37 comp=Z,1.8nm,0.7s						
ARTI	**Arti**	**53.41**	**336**		**P**	**14 16 15.2**	**-0.5**
ARTI				IAmb	IAmb	14 16 17.2	
	comp=Z,9.6nm,0.7s						
OPO	**Ambohidratompo**	**55.68**	**238**	LR	LR	14 36 57.3	
	comp=Z,48nm,20.2s,baz=167,slow=32						
BR131	**Keskin Array S**	**61.11**	**309**		**P**	**14 17 09.6**	**-1.0**
BR131				IAmb	IAmb	14 17 10.7	
	comp=Z,2.8nm,0.7s						
BRTR	**Keskin Array B**	**61.11**	**309**	P	**P**	**14 17 09.8**	**-0.8**
	comp=E,2.0nm,0.7s,baz=121,slow=8.1,SNR=13 comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**61.11**	**309**	P	**P**	**14 17 09.6**	**-1.0**
STKA	**Stephens Creek**	**61.66**	**135**	P	**P**	**14 17 14.5**	**+0.3**
	comp=E,2.2nm,0.7s,baz=322,slow=6.1,SNR=3.4 comp=Z,2.2nm,0.7s						
TIXI	**Tiksi**	**63.94**	**11**		**P**	**14 17 28.5**	**-0.2**
TIXI				IAmb	IAmb	14 17 36.2	
	comp=Z,8.6nm,1.1s						
BURAR	**Bucovina Array**	**68.35**	**317**	P	**P**	**14 17 57.3**	**-0.4**
FINES	**FINESS Array B**	**70.36**	**332**	P	**P**	**14 18 09.7**	**+0.1**
	comp=E,1.9nm,0.8s,baz=123,slow=7.0,SNR=4.9 comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**70.36**	**332**	P	**P**	**14 18 09.0**	**-0.6**
KEV	**Kevo**	**72.17**	**340**	P	**P**	**14 18 20.6**	**+0.2**
ARCES	**ARCESS Array B**	**72.61**	**340**	P	**P**	**14 18 24.3**	**+1.2**
	comp=E,1.5nm,0.7s,baz=350,slow=4.9,SNR=4.3 comp=Z,1.5nm,0.7s						
ARCES	**ARCESS Array B**	**72.61**	**340**	P	**P**	**14 18 23.2**	**+0.1**
ARCES				IAmb	IAmb	14 18 40.1	
	comp=Z,15nm,1.4s						
GERES	**GERESS Array B**	**76.10**	**318**	P	**P**	**14 18 44.7**	**+0.7**
	comp=E,2.7nm,0.7s,baz=76,slow=5.6,SNR=16 comp=Z,2.7nm,0.7s						
HFS	**Hagfors**	**76.20**	**329**	P	**P**	**14 18 44.7**	**+0.6**
	comp=E,0.9nm,0.6s,baz=119,slow=5.1,SNR=1.6 comp=Z,0.9nm,0.6s						
MAW	**Mawson**	**81.83**	**192**	P	**P**	**14 19 15.1**	**+0.5**
	comp=E,2.2nm,0.8s,baz=37,slow=10,SNR=2.3 comp=Z,2.2nm,0.8s						
EKA	**Eskdalemuir Ar**	**85.64**	**325**	P	**P**	**14 19 35.3**	**+0.7**
	comp=E,2.0nm,0.8s,baz=68,slow=4.4,SNR=2.5 comp=Z,2.0nm,0.8s						
D19K	**Kuna River**	**85.83**	**21**	P	**P**	**14 19 36.5**	**+1.1**
G21K	**Allakaket**	**88.22**	**22**	P	**P**	**14 19 47.2**	**+0.2**
IMAR	**Indian Mountai**	**88.34**	**22**	P	**P**	**14 19 48.2**	**+0.6**
ILAR	**Eielson Array**	**91.45**	**22**	P	**P**	**14 20 02.9**	**+0.8**
	comp=E,0.3nm,0.8s,baz=316,slow=6.2,SNR=5.8 comp=Z,0.3nm,0.8s						

*NEIC **20** 14:07:31.0±0.9, 19°.49N±0°.06×66°.02W±0°.06, h10km±2km, ML2.8/14, Md3.5/8(RSPR), Error ellipse: s-maj=12.0km s-min=8.5km az=39.0*
*SDD **20** 14:07:31.1±1.2, 19°.71N×66°.46W, h23km±249km, MD3.8, ML2.9, MW3.2*
*RSPR **20** 14:07:33.4, 19°.58N×66°.00W, h33km±18km, MD3.5/8*

ISC 20 14:07:30.3±2.4, 19°.53N±0°.08×66°.07W±0°.07, h14km±10km, n40, σ0§80/49, 8C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**1.13**	**203**		**Pg**	**14 07 52.5**	**+0.4**
EMPR					**Sg**	**14 08 07.5**	**+0.7**
EMPR	**Esperanza - Ma**	**1.13**	**203**	*e*P	**Pg**	**14 07 52.5**	**+0.4**
EMPR	**Esperanza - Ma**	**1.13**	**203**	*e*S	**Sg**	**14 08 07.5**	**+0.7**
GCPR	**Guaynabo City**	**1.21**	**180**		**Pg**	**14 07 53.1**	**-0.5**
GCPR					**Sn**	**14 08 08.9**	**0.0**
GCPR	**Guaynabo City**	**1.21**	**180**	IAML		14 08 21.5	
	comp=N,170nm,0.8s						
GCPR	**Guaynabo City**	**1.21**	**180**	*e*P	**Pg**	**14 07 53.1**	**-0.5**
GCPR	**Guaynabo City**	**1.21**	**180**	*e*S	**Sn**	**14 08 08.9**	**0.0**
ECPR	**Experimental S**	**1.23**	**193**	*e*P	**Pg**	**14 07 54.1**	**0.0**
ECPR	**Experimental S**	**1.23**	**193**	*e*S	**Sg**	**14 08 10.4**	**+0.3**
AOPR	**Arecibo Observ**	**1.34**	**209**		**Pg**	**14 07 55.5**	**-0.6**
AOPR					**Sb**	**14 08 12.7**	**+0.5**
AOPR	**Arecibo Observ**	**1.34**	**209**	*e*Pg	**Pg**	**14 07 55.3**	**-0.7**
AOPR				*e*Sg	**Sg**	**14 08 13.5**	**0.0**
AOPR				IAML		14 08 20.8	
	comp=N,584nm,0.4s						
AOPR	**Arecibo Observ**	**1.34**	**209**	*e*P	**Pg**	**14 07 55.5**	**-0.6**
AOPR	**Arecibo Observ**	**1.34**	**209**	*e*S	**Sb**	**14 08 12.7**	**+0.5**
HUMP	**Col San Antoni**	**1.39**	**171**		**Pg**	**14 07 56.4**	**-0.6**
HUMP					**Sn**	**14 08 13.2**	**-0.3**
HUMP	**Col San Antoni**	**1.39**	**171**	IAML		14 08 16.5	
	comp=E,152nm,0.2s						
HUMP	**Col San Antoni**	**1.39**	**171**	*e*P	**Pg**	**14 07 56.4**	**-0.6**
HUMP	**Col San Antoni**	**1.39**	**171**	*e*S	**Sn**	**14 08 13.2**	**-0.3**
SJG	**San Juan**	**1.41**	**183**		**Pg**	**14 07 57.1**	**-0.3**
SJG				IAML		14 08 18.0	
	comp=E,181nm,0.6s						
SJG				IAML		14 08 19.0	
	comp=E,146nm,0.6s						
AGPR	**Aguadilla, PR**	**1.44**	**223**		**Pg**	**14 07 58.0**	**0.0**
OBIP	**Obispado Ponce**	**1.56**	**199**		**Pb**	**14 07 58.6**	**-0.3**
OBIP					**Sb**	**14 08 18.6**	**+0.1**
OBIP	**Obispado Ponce**	**1.56**	**199**	IAML		14 08 19.9	
	comp=E,130nm,0.4s						
OBIP				IAML		14 08 24.1	
	comp=N,127nm,0.5s						
OBIP	**Obispado Ponce**	**1.56**	**199**	*e*P	**Pb**	**14 07 58.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.56**	**199**	*e*S	**Sb**	**14 08 18.6**	**+0.1**
IDE	**Isla Desecheo**	**1.74**	**230**		**Pb**	**14 08 01.4**	**-0.7**
IDE					**Sb**	**14 08 23.5**	**-0.3**
IDE	**Isla Desecheo**	**1.74**	**230**	*e*P	**Pb**	**14 08 01.4**	**-0.7**
IDE	**Isla Desecheo**	**1.74**	**230**	*e*S	**Sb**	**14 08 23.5**	**-0.3**
MLPR	**Magueyes Islan**	**1.80**	**211**	*e*Pg	**Pb**	**14 08 02.1**	**-0.9**
MLPR				*e*Sg	**Sb**	**14 08 25.0**	**-0.5**
MLPR				IAML		14 08 35.7	
	comp=N,18nm,0.4s						
MLPR	**Magueyes Islan**	**1.80**	**211**	*e*P	**Pb**	**14 08 01.9**	**-1.1**
MLPR	**Magueyes Islan**	**1.80**	**211**	*e*S	**Sn**	**14 08 24.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.80**	**213**		**Pb**	**14 08 02.5**	**-0.6**
CRPR					**Sb**	**14 08 25.0**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.80**	**213**	IAML		14 08 37.1	
	comp=E,78nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.80**	**213**	*e*Pg	**Pb**	**14 08 02.1**	**-1.0**
CRPR				*e*Sg	**Sb**	**14 08 25.3**	**-0.2**
CRPR				IAML		14 08 33.1	
	comp=N,80nm,0.8s						
CRPR	**Cabo Rojo, PR**	**1.80**	**213**	*e*P	**Pb**	**14 08 02.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.80**	**213**	*e*S	**Sb**	**14 08 25.0**	**-0.6**
MIDR	**Miches**	**2.86**	**260**	*e*Pg	**Pn**	**14 08 14.6**	**-0.9**
MIDR				*e*Sg	**Sn**	**14 08 48.0**	**-1.9**
MIDR				IAML		14 08 53.2	
	comp=N,19nm,1.6s						
DR12	**Loma Pena Alta**	**3.21**	**257**	Pn	**Pn**	**14 08 21.3**	**+0.9**
HATOM	**Hato Mayor del**	**3.21**	**257**	*e*Pg	**Pn**	**14 08 21.6**	**+1.2**
HATOM				*e*Sg	**Sn**	**14 08 57.2**	**-1.3**
HATOM				IAML		14 09 14.4	
	comp=N,21nm,1.1s						
DR08	**Loma La Naviza**	**3.77**	**262**	*e*Pg	**Pn**	**14 08 29.9**	**+1.8**
DR08				*e*Sg	**Sn**	**14 09 13.2**	**+0.8**
DR08				IAML		14 09 15.4	
	comp=N,658nm,0.1s						
BANI	**BANI**	**4.21**	**255**	Pn	**Pn**	**14 08 35.7**	**+1.6**
SDDR	**Presa de Saban**	**4.96**	**265**		**Pn**	**14 08 46.2**	**+1.8**
SDDR				IAML		14 09 53.6	
	comp=N,15nm,1.1s						

*IDC **20** 14:25:42.4±0.5, 72°.73N×89°.59W, h0km, mb4.0/20, mbtmp4.1/25, ML4.5/4, MS3.4/7, Error ellipse: s-maj=12.3km s-min=11.2km az=143.0*
*NEIC **20** 14:25:43.5±0.9, 72°.80N±0°.06×89°.7W±0°.2, h10km±1km, mb4.2/30, Error ellipse: s-maj=11.8km s-min=9.9km az=223.0*
*PGC **20** 14:25:43.2±0.0, 72°.80N×89°.80W, h10km, ML4.4/1, mb4.0(PMR), mb4.2(NEIC), 154km west of Arctic Bay, Nu Baffin Island Region, Canada*
*PMR **20** 14:25:43.0, 72°.90N×89°.14W, h20km*
*OTT **20** 14:25:45.4±0.1, 72°.81N×89°.51W, h18km, MN4.6/9, 145km west from Arctic Bay, Nu*

ISC 20 14:25:42.3±0.4, 72°.62N±0°.04×90°.01W±0°.04, h10km, n268, σ1§70/285, mb4.1/27, MS3.3/5, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**2.50**	**329**	Pn	**Pn**	**14 26 22.9**	**+0.1**
	11nm,0.3s,baz=138,slow=11,SNR=294						
RES				Sn	**Sb**	**14 26 57.1**	**-0.7**
	76nm,0.3s,baz=273,slow=4.9,SNR=6.1						
RES	**Resolute Bay**	**2.50**	**329**		**Pn**	**14 26 22.7**	**-0.1**
RES	**Resolute Bay**	**2.50**	**329**	PN	**Pn**	**14 26 23.0**	**+0.2**
RES				SN	**Sn**	**14 26 52.8**	**-0.4**
RES				Trac		14 27 07.7	
	comp=Z,803nm,0.2s						
RES	**Resolute Bay**	**2.50**	**329**	Pn	**Pn**	**14 26 22.6**	**-0.1**
POIN	**Pond Inlet**	**3.61**	**83**		**Pn**	**14 26 37.6**	**-0.4**
POIN	**Pond Inlet**	**3.61**	**83**	PN	**Pn**	**14 26 37.7**	**-0.4**
POIN				SN	**Sn**	**14 27 16.7**	**-3.9**
POIN				LG	Lg	14 27 31.5	
POIN				Trac		14 27 34.7	
	comp=Z,824nm,0.2s						
POIN	**Pond Inlet**	**3.61**	**83**	Pn	**Pn**	**14 26 37.5**	**-0.6**
ILON	**Igloolik, Nuna**	**4.22**	**137**		**Pn**	**14 26 49.1**	**+2.6**
ILON	**Igloolik, Nuna**	**4.22**	**137**	PN	**Pn**	**14 26 49.4**	**+2.9**
ILON				SN	**Sn**	**14 27 36.4**	**+0.7**
ILON				LG	Lg	14 27 56.2	
ILON				Trac		14 28 04.7	
	comp=Z,356nm,0.2s						
ILON	**Igloolik, Nuna**	**4.22**	**137**	Pn	**Pn**	**14 26 48.1**	**+1.7**
TULEG	**Thule**	**6.84**	**45**		**Pn**	**14 27 19.8**	**-2.7**
TULEG	**Thule**	**6.84**	**45**	*i* P	**Pn**	**14 27 19.7**	**-2.7**
TULEG	

FCC Trac 14 33 09.4
comp=Z,156nm,0.8s
FCC Fort Churchill 14.02 189 Pn **Pn** **14 29 00.8 +0.2**
SFJD Kangerlussuaq 14.46 93 Pn **Pn** **14 29 06.3 -0.3**
comp=Z,1.2nm,0.3s,baz=306,slow=15,SNR=6.0
SFJD Sn Sn 14 31 37.5 -9.2
comp=Z,0.3nm,0.3s,baz=310,slow=20,SNR=1.4
SFJD LR LR 14 34 14.8
comp=Z,95nm,18.3s,baz=46,slow=36
comp=Z,3.5nm,0.3s
INK Inuvik 14.89 275 Pn **Pn** **14 29 11.8 -0.6**
comp=Z,1.3nm,0.3s,baz=38,slow=12,SNR=51
INK Sn **Sn** **14 31 51.1 -6.0**
comp=Z,1.6nm,0.3s,baz=171,slow=28,SNR=4.2
INK Lg Lg 14 33 21.1
baz=358,slow=24
comp=Z,5.0nm,0.5s
INK Inuvik 14.89 275 Pn **14 29 11.6 -0.8**
INK Inuvik 14.89 275 PN **Pn** **14 29 13.2 +0.7**
INK SN **Sn** **14 31 51.8 -5.3**
INK Trac 14 33 40.6
comp=Z,80nm,0.9s
INK Inuvik 14.89 275 Pn **Pn** **14 29 11.1 -1.3**
INK Inuvik 14.89 275 P **Pn** **14 29 11.8 -0.6**
baz=52,SNR=8.9
SUMG Summit 15.04 65 Pn **14 29 12.4 -2.4**
WRGLY Wrigley 15.44 250 Pn **14 29 20.3 +0.6**
WRGLY Wrigley 15.44 250 P **Pn** **14 29 20.8 +1.1**
baz=38,SNR=7.6
F31M Tsiigehtchic 15.48 272 Pn **14 29 19.1 -1.2**
F31M IAmb IAmb 14 29 50.8
comp=Z,7.8nm,0.7s
F31M Tsiigehtchic 15.48 272 Pn **Pn** **14 29 18.8 -1.5**
F31M Tsiigehtchic 15.48 272 P **Pn** **14 29 19.2 -1.1**
baz=50,SNR=6.9
D28M Stokes Point 15.84 282 P **Pn** **14 29 24.6 -0.3**
baz=55
F30M Barrier River 15.99 275 Pn **14 29 27.2 +0.3**
F30M Barrier River 15.99 275 Pn **Pn** **14 29 26.0 -0.9**
F30M Sn **Sn** **14 32 18.6 -5.3**
F30M Barrier River 15.99 275 P **Pn** **14 29 26.8 -0.1**
baz=50,SNR=14
E29M Blow River 16.14 279 Pn **14 29 28.8 -0.1**
E29M IAmb IAmb 14 29 51.8
comp=Z,9.3nm,0.5s
E29M Blow River 16.14 279 Pn **Pn** **14 29 28.3 -0.6**
E29M Sn **Sn** **14 32 21.6 -6.0**
E29M Blow River 16.14 279 P **Pn** **14 29 28.2 -0.6**
baz=52
E28M Babbage River 16.50 281 Pn **14 29 32.6 -0.8**
E28M IAmb IAmb 14 29 48.5
comp=Z,14nm,0.7s
E28M Babbage River 16.50 281 Pn **Pn** **14 29 32.8 -0.6**
E28M Babbage River 16.50 281 P **Pn** **14 29 32.8 -0.6**
baz=52,SNR=31
G30M tAoh Zraii Nji 16.52 273 Pn **14 29 33.2 -0.6**
G30M IAmb IAmb 14 29 39.5
comp=Z,19nm,1.0s
G30M tAoh Zraii Nji 16.52 273 P **Pn** **14 29 33.3 -0.4**
baz=49
D27M Malcolm River 16.55 284 Pn **14 29 34.0 -0.1**
D27M Malcolm River 16.55 284 Pn **Pn** **14 29 33.9 -0.2**
D27M Malcolm River 16.55 284 P **Pn** **14 29 33.1 -1.0**
baz=54,SNR=14
H31M Peel River 16.75 269 Pn **14 29 36.2 -0.3**
H31M IAmb IAmb 14 29 50.8
comp=Z,16nm,0.8s
H31M Peel River 16.75 269 Pn **Pn** **14 29 36.1 -0.5**
H31M Peel River 16.75 269 P **Pn** **14 29 36.5 -0.1**
baz=46
EPYK Eagle Plains 17.08 272 Pn **14 29 39.8 -1.0**
EPYK IAmb IAmb 14 29 45.9
comp=Z,34nm,1.2s
EPYK Eagle Plains 17.08 272 Pn **Pn** **14 29 40.2 -0.5**
EPYK Eagle Plains 17.08 272 P **Pn** **14 29 40.5 -0.2**
baz=47,SNR=5.3
G29M Pine Creek 17.11 275 Pn **Pn** **14 29 40.4 -0.7**
G29M Pine Creek 17.11 275 P **Pn** **14 29 40.4 -0.7**
baz=48
C27K Jago River 17.12 287 Pn **14 29 41.4 +0.1**
C27K IAmb IAmb 14 29 48.3
comp=Z,18nm,0.9s
C27K Jago River 17.12 287 Pn **Pn** **14 29 40.6 -0.7**
C27K Jago River 17.12 287 P **Pn** **14 29 40.4 -0.9**
baz=54
F28M Old Crow 17.21 278 Pn **Pn** **14 29 41.8 -0.6**
F28M Old Crow 17.21 278 P **Pn** **14 29 41.4 -1.0**
baz=50
C26K Camden Bay 17.30 288 Pn **Pn** **14 29 43.8 +0.4**
C26K Camden Bay 17.30 288 P **Pn** **14 29 42.2 -1.2**
baz=55
E27K Coleen River 17.36 281 Pn **14 29 43.1 -1.1**
E27K Coleen River 17.36 281 P **Pn** **14 29 43.3 -1.0**
baz=51
H29M Whitestone 17.67 273 Pn **Pn** **14 29 47.8 -0.3**
H29M Whitestone 17.67 273 P **Pn** **14 29 47.7 -0.4**
baz=47
I30M Mount Dempster 17.76 269 P Pn **14 29 48.8 -0.6**
baz=44
D25K Kavik River 18.07 288 P P **14 29 53.5 +0.2**
D25K Kavik River 18.07 288 Pn **P** **14 29 53.6 +0.2**
D25K Kavik River 18.07 288 P **Pn** **14 29 52.4 -0.6**
baz=53
KOTAN Kotaneelee Air 18.14 244 P P **14 29 55.6 +1.5**
baz=32,SNR=8.7
J30M Hart River 18.21 268 Pn **14 29 54.9 0.0**
J30M IAmb IAmb 14 30 09.3
comp=Z,11nm,0.6s
J30M Hart River 18.21 268 Pn **P** **14 29 55.5 +0.5**
J30M Hart River 18.21 268 P **P** **14 29 55.3 +0.2**
baz=43
G27K Doyon Strip 18.26 278 Pn **P** **14 29 56.3 +0.8**
G27K Doyon Strip 18.26 278 P **Pn** **14 29 55.1 -0.3**
baz=48
F26K Sheenjek River 18.42 282 Pn **Pn** **14 29 57.6 +0.2**
F26K Sheenjek River 18.42 282 P **P** **14 29 57.2 -0.1**
baz=49
C24K Franklin Bluff 18.49 290 P P **14 29 57.5 -0.5**
baz=53
E25K Arctic Village 18.57 284 Pn **Pn** **14 30 00.6 +1.5**
E25K Arctic Village 18.57 284 P **P** **14 29 58.3 -0.6**
baz=50
H27K Steamboat Moun 18.61 276 Pn **Pn** **14 30 00.8 +1.2**
H27K Steamboat Moun 18.61 276 P **P** **14 29 59.4 0.0**
baz=46
I28M Miner Creek 18.67 273 Pn **Pn** **14 30 01.9 +1.5**
I28M Miner Creek 18.67 273 P **P** **14 29 59.9 -0.3**
baz=45
G26K Porcupine Rive 18.80 280 Pn **Pn** **14 30 02.8 +0.9**
G26K Porcupine Rive 18.80 280 P **P** **14 30 01.3 -0.1**
baz=48
D24K Happy Valley 18.87 289 P P **14 30 00.6 -1.5**
baz=52
FNSB Fort Nelson 18.92 240 Pn **Pn** **14 30 06.3 +3.0**
F25K Christian Rive 18.93 283 P Pn **14 30 04.6 +1.1**
F25K Christian Rive 18.93 283 Pn **Pn** **14 30 04.8 +1.4**
F25K Christian Rive 18.93 283 P P **14 30 02.9 0.0**
baz=49
C23K Itkillik River 18.96 292 P Pn **14 30 04.7 +0.9**
C23K Itkillik River 18.96 292 P P **14 30 02.5 -0.6**
baz=53
I27K Kandik River 19.07 275 P Pn **14 30 05.2 0.0**
baz=45
K29M Barlow Dome 19.10 267 P Pn **14 30 05.9 +0.2**
baz=42
TOLK Toolik Lake Re 19.40 288 P P **14 30 07.7 -0.3**
baz=50
M31M Drury Creek, Y 19.41 261 P Pn **14 30 09.9 +0.6**
baz=38,SNR=7.6
E24K Your Creek 19.45 286 P P **14 30 08.1 -0.4**
baz=49
WTLY Watson Lake, Y 19.46 250 P Pn **14 30 10.4 +0.4**
baz=34
A22K Sinclair Lake 19.47 297 P P **14 30 07.6 -1.1**
baz=54
DAWY Dawson 19.50 269 Pn Pn **14 30 13.1 +2.8**
DAWY Dawson 19.50 269 P Pn **14 30 10.3 0.0**
baz=42
D23K Nanushuk River 19.51 290 P P **14 30 09.5 +0.4**
baz=51
TOAD Toad River Com 19.54 244 P Pn **14 30 11.6 +0.7**
baz=31
G25K Bearman Lake 19.61 281 P Pn **14 30 11.1 -0.4**
baz=47
F24K Squaw Lake 19.63 284 P P **14 30 11.2 +0.6**
baz=48

I26K Coal Creek Min 19.74 276 P P **14 30 11.6 -0.1**
baz=44
E23K Chandalar 19.78 287 P Pn **14 30 13.1 -0.7**
E23K IAmb IAmb 14 30 39.0
comp=Z,6.6nm,0.7s
E23K Chandalar 19.78 287 P P **14 30 11.5 -0.7**
baz=49
L29M L29M 19.83 266 Pn **14 30 16.0 +1.7**
L29M IAmb IAmb 14 30 21.0
comp=Z,10.0nm,0.6s
L29M L29M 19.83 266 P P **14 30 13.3 +0.6**
baz=40,SNR=5.2
M30M Minto, Yukon 19.84 264 P P **14 30 13.7 +0.9**
baz=39
N32M Quiet Lake 19.86 257 P Pn **14 30 14.5 -0.1**
baz=36
H25L Birch Creek 19.86 280 P P **14 30 12.6 -0.4**
baz=46
G24K Hadweenzic Riv 20.06 282 P P **14 30 15.2 0.0**
baz=47
D22K Ayikyak River 20.13 291 P P **14 30 15.0 -0.9**
baz=50
B21K Ikpikpuk River 20.20 294 P P **14 30 16.0 -0.6**
baz=51
PRP Porcupine Dome 20.30 278 P P **14 30 18.0 +0.1**
baz=45,SNR=7.2
SCHQ Schefferville 20.32 139 P P **14 30 18.9 +0.9**
comp=Z,6.1nm,0.4s,baz=333,slow=9.1,SNR=29
SCHQ S S 14 33 54.9 -11
comp=Z,6.5nm,0.4s,baz=255,slow=18,SNR=4.0
SCHQ Lg Lg 14 36 07.0
comp=Z,1.4nm,0.3s,baz=59,slow=15,SNR=2.8
SCHQ LR LR 14 39 17.1
comp=Z,73nm,18.1s,baz=316,slow=40
comp=Z,6.1nm,0.4s
K27K Chicken 20.33 272 P P **14 30 19.2 +1.1**
baz=42
E22K Anaktuvuk Pass 20.36 288 P P **14 30 18.3 -0.2**
baz=48
N31M Braeburn, Yuko 20.39 261 P P **14 30 19.9 +1.1**
baz=38
J26L Joseph Creek 20.44 274 Pn 14 30 21.5 0.0
J26L Joseph Creek 20.44 274 P P **14 30 20.3 +0.9**
baz=43
M29M Somme Creek 20.44 265 P P **14 30 20.3 +0.9**
baz=36
COLD Coldfoot 20.50 285 P P **14 30 20.0 +0.1**
baz=47
P33M Teslin, Yukon 20.54 255 P Pn 14 30 22.1 -0.6
baz=35
C21K Knifeblade Rid 20.54 293 P P **14 30 20.0 -0.3**
baz=50
SCO Scoresbysund 20.60 62 P P **14 30 20.9 -0.1**
SCO IAmb IAmb 14 30 28.6
comp=Z,13nm,0.8s
B20K Meade River 20.66 296 P P **14 30 21.3 -0.2**
baz=51
R33M Jennings River 20.68 252 P Pn 14 30 24.3 -0.1
baz=33
H24K Noodor Dome 20.77 281 P P **14 30 23.6 +0.7**
baz=45
E21K Killik River 20.77 291 P P **14 30 22.3 -0.6**
baz=49
WHY Whitehorse 20.78 258 P P **14 30 24.3 +1.1**
baz=36
N30M Aishikik Lake 20.80 262 P P **14 30 24.3 +1.0**
baz=38
G23K Bananza Creek 20.80 284 P P **14 30 23.5 +0.3**
baz=46
F22K John River 20.88 287 P P **14 30 23.9 -0.2**
baz=47
J25K Salcha River, 20.89 276 P P **14 30 23.6 -0.7**
baz=43
SCRK Sand Creek 20.95 274 P P **14 30 24.7 -0.2**
baz=42
L27K Beaver Creek, 20.98 270 P P **14 30 25.3 +0.1**
baz=40
O30N Mendenhall 21.05 260 P P **14 30 26.1 +0.2**
baz=36
G22K Bettles 21.08 286 P P **14 30 25.4 -0.8**
baz=46
POKR Poker Plat Res 21.15 279 P P **14 30 26.6 -0.4**
baz=44
BVCY Beaver Creek 21.18 268 P P **14 30 27.9 +0.5**
baz=39
DLBC Dease Lake 21.21 249 P P **14 30 29.6 +1.8**
comp=Z,3.7nm,0.7s,baz=29,slow=14,SNR=6.3
DLBC LR LR 14 38 10.6
comp=Z,53nm,20.2s,baz=98,slow=35
comp=Z,3.7nm,0.7s
DLBC Dease Lake 21.21 249 P P **14 30 29.6 +1.8**
baz=32
ILAR Eielson Array 21.23 278 P P **14 30 32.0 +4.2**
comp=Z,1.4nm,0.6s,baz=61,slow=7.3,SNR=21
ILAR LR LR 14 40 24.5
comp=Z,120nm,18.1s,baz=40,slow=41
comp=Z,1.4nm,0.6s
H23K Yukon River 21.27 282 P P **14 30 28.0 -0.3**
baz=45
P32M Atlin 21.31 255 P P **14 30 29.4 +0.6**
baz=34
D20K Etivluk River 21.33 293 P P **14 30 27.8 -1.1**
baz=48
YUK4 Talbot Arm 21.35 264 P P **14 30 29.3 -0.1**
baz=38,SNR=5.9
Q32M Nakina River 21.41 253 P P **14 30 31.6 +1.6**
baz=33
F21K Alatna River 21.45 288 P P **14 30 29.9 -0.2**
baz=46
HDA Harding Lake 21.52 277 P P **14 30 31.7 +0.8**
baz=42
E20K Nigu River 21.52 292 P P **14 30 30.3 -0.7**
baz=48
M27K Edge Creek, AK 21.53 269 P P **14 30 32.0 +0.8**
baz=39
YUK3 Moose Creek 21.55 266 P P **14 30 32.2 +0.6**
baz=38
YUK6 Outpost Mounta 21.58 263 P P **14 30 32.7 +0.8**
baz=37
K24K Donnelly Dome 21.61 275 P P **14 30 31.9 0.0**
baz=42
I23K Minto, Yukon-K 21.70 280 P P **14 30 33.0 +0.2**
baz=44
YUK8 Steele Glacier 21.73 265 P P **14 30 34.5 +1.0**
baz=38
H22K Ishtalitna Cre 21.76 283 P P **14 30 33.4 -0.1**
baz=44
M26K Nabesna, AK 21.83 270 P P **14 30 34.7 +0.4**
baz=39
C19K Lookout Ridge 21.89 296 P P **14 30 34.0 -0.9**
baz=48
D19K Kuna River 21.89 293 P P **14 30 35.9 +1.0**
D19K IAmb IAmb 14 31 00.5
comp=Z,19nm,1.2s
D19K Kuna River 21.89 293 P P **14 30 34.2 -0.8**
baz=47
G21K Allakaket 21.94 286 P P **14 30 35.6 +0.2**
baz=45
S34M Telegraph Cree 21.97 250 P P **14 30 37.4 +1.6**
baz=31
NEA2 Nenana 22.01 279 P P **14 30 36.6 +0.4**
baz=43
PAX Paxson 22.14 273 P P **14 30 38.8 +1.0**
PAX IAmb IAmb 14 30 48.7
comp=Z,9.2nm,1.0s
PAX Paxson 22.14 273 P P **14 30 38.6 +0.9**
baz=40
O29M Mount Kennedy 22.16 262 P P **14 30 39.6 +1.7**
baz=36
MLY Manley 22.19 281 P P **14 30 38.4 +0.2**
baz=43
PLBC Pleasant Camp 22.19 258 P P **14 30 39.5 +1.3**
baz=34
F20K Avaraart Lake 22.21 289 P P **14 30 37.6 -0.7**
baz=46
O28M Mount Upton 22.27 264 P P **14 30 40.1 +0.8**
baz=37
H21K Melozitna Rive 22.34 284 P P **14 30 39.8 0.0**
baz=44
E19K Redstone River 22.35 291 P P **14 30 39.3 -0.5**
baz=46
I21K Tanana 22.45 283 P P **14 30 40.8 -0.1**
baz=43
P29M Windy Craggy 22.45 260 P P **14 30 42.3 +1.2**
baz=35
HARP HAARP 22.48 272 P P **14 30 41.7 +0.4**
baz=39
ULM Lac du Bonnet 22.60 190 P P **14 30 43.8 +1.1**
comp=Z,2.0nm,0.4s,baz=358,slow=8.3,SNR=4.6
ULM S **S** **14 34 48.8 -1.2**
comp=Z,4.6nm,0.8s,baz=105,slow=7.8,SNR=3.0
comp=Z,2.0nm,0.4s
MCK McKinley 22.61 277 P P **14 30 42.8 +0.2**
baz=41
C18K Utukok River 22.63 296 P P **14 30 42.3 -0.6**
baz=47
MCARA McCarthy VSAT 22.63 268 P P **14 30 43.8 +1.0**
baz=38
DHY Denali Highway 22.63 275 P P **14 30 45.6 +2.5**
DHY IAmb IAmb 14 30 52.0
comp=Z,6.6nm,0.8s
DHY Denali Highway 22.63 275 P P **14 30 43.1 +0.1**
baz=40
R32K Eaglecrest 22.63 254 P P **14 30 44.1 +1.2**
baz=33
PINM Pinnacle 22.82 263 P P **14 30 45.7 +0.7**
baz=36
N25K Chitina, Valde 22.93 270 P P **14 30 45.5 -0.5**
baz=38
BPAW Bear Paw Mtn. 22.94 280 P P **14 30 45.0 -1.1**
baz=42
M24K Tolsona, Glenn 23.02 272 P P **14 30 46.4 -0.6**
baz=39
H20K Anotleneega Mo 23.07 285 P P **14 30 46.3 -1.1**
baz=43
EPLO Experimental L 23.09 186 P P **14 30 50.8 +3.1**
EPLO IAmb IAmb 14 30 56.9
comp=Z,6.4nm,0.6s
WAT6 Susitna Watana 23.12 274 P P **14 30 48.1 -0.1**
baz=40
CRQE Cirque 23.15 267 P P **14 30 49.3 +0.9**
baz=37
WAT1 Susitna Watana 23.17 276 P P **14 30 48.8 +0.3**
baz=40
TRF Thorofare Moun 23.22 278 P P **14 30 48.4 -0.8**
baz=41
MESA MESA 23.27 265 P P **14 30 49.9 +0.2**
baz=36
E18K Tukpahlearik C 23.31 293 P P **14 30 48.9 -1.0**
baz=45
S32K Killisnoo 23.33 253 P P **14 30 51.6 +1.5**
baz=32
KLU Klutina 23.42 271 P P **14 30 51.2 +0.1**
baz=38
H19K Roundabout Mou 23.49 287 P P **14 30 51.0 -0.6**
baz=43
CHUM Lake Minchumin 23.50 281 P P **14 30 51.0 -0.7**
baz=41
RDOG Red Dog Mine 23.50 296 P P **14 30 50.5 -1.2**
baz=45
J20K Nowinta River 23.82 283 P P **14 30 54.4 -0.4**
baz=41
V35K Ketchikan 24.34 247 P P **14 31 00.7 +0.9**
baz=28
SKT Skwentna 24.72 277 P P **14 31 04.4 +1.2**
baz=38
L20K Farewell, AK 25.03 280 P P **14 31 06.5 +0.5**
baz=39
NEW Newport 27.34 222 LR LR 14 42 31.4
comp=Z,104nm,20.5s,baz=35,slow=37
PDAR Pinedale Array 31.37 208 P P **14 32 07.6 +4.6**
comp=Z,1.4nm,0.5s,baz=37,slow=5.2,SNR=5.7
comp=Z,1.4nm,0.5s
ARCES ARCESS Array B 32.08 37 P P **14 32 09.0 +0.3**
comp=Z,1.0nm,0.4s,baz=335,slow=7.2,SNR=11
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 36.41 54 P P **14 32 46.9 +0.6**
comp=Z,5.0nm,0.7s,baz=323,slow=7.9
NOA NORSAR Array B 36.41 54 P P **14 32 47.0 +0.6**
comp=Z,0.8nm,0.6s,baz=323,slow=7.7,SNR=6.4
comp=Z,0.8nm,0.6s
NC405 NORSAR Array S 36.47 53 P P **14 32 46.9 0.0**
EKA Eskdalemuir Ar 37.61 69 P P **14 32 56.9 +0.4**
comp=Z,2.0nm,0.6s,baz=315,slow=8.2,SNR=6.0
comp=Z,2.0nm,0.6s
HFS Hagfors 37.80 52 P P **14 32 58.4 +0.3**
comp=Z,3.5nm,0.5s,baz=340,slow=7.1,SNR=25
comp=Z,3.5nm,0.5s
ANMO Albuquerque 38.68 202 LR LR 14 49 49.6
comp=Z,174nm,19.4s,baz=125,slow=37
FINES FINESS Array B 39.38 43 P P **14 33 11.3 0.0**
comp=Z,2.8nm,0.6s,baz=340,slow=8.2,SNR=18
comp=Z,2.8nm,0.6s
FINES FINESS Array B 39.38 43 P P **14 33 10.9 -0.4**
TXAR Lajitas Array 43.96 197 P P **14 33 52.6 +3.3**
comp=Z,0.7nm,0.7s,baz=9.5,slow=6.0,SNR=9.3
ECH Echery 46.84 65 P P **14 34 12.1 +0.3**
GERES GERESS Array B 48.01 60 P P **14 34 21.4 +0.4**
comp=Z,0.6nm,0.4s,baz=350,slow=7.3,SNR=4.8
comp=Z,0.6nm,0.4s
ESDC Sonseca Array 51.50 80 P P **14 34 48.4 +0.7**
comp=Z,1.5nm,0.8s,baz=332,slow=8.8,SNR=6.3
comp=Z,1.5nm,0.8s
ESDC Sonseca Array 51.50 80 P P **14 34 48.3 +0.7**
BUR08 Bucovina Ar. S 51.97 51 P P **14 34 51.0 0.0**
BUR08 IAmb IAmb 14 35 02.1
comp=Z,4.8nm,1.1s
BURAR Bucovina Array 52.00 51 P P **14 34 52.1 +0.8**
NRCA Norcia 53.42 63 P P **14 35 02.0 +0.2**
ZALV Zalesovo Beam 53.67 4 P P **14 35 03.5 +0.1**
comp=Z,0.7nm,0.3s,baz=352,slow=8.0,SNR=5.3
comp=Z,0.7nm,0.3s
BVAR Borovoye Array 53.91 15 P P **14 35 05.1 0.0**
comp=Z,1.8nm,0.7s,baz=352,slow=8.7,SNR=8.0
comp=Z,1.8nm,0.7s
ABKAR Akbulak array 56.62 23 P P **14 35 25.0 +0.2**
KURBB Kurchatov Arra 56.79 9 P P **14 35 25.8 -0.1**
comp=Z,0.5nm,0.7s,baz=354,slow=7.1,SNR=5.0
comp=Z,0.5nm,0.7s
SONM Songino Array 59.30 347 P P **14 35 45.2 +1.5**
comp=Z,0.5nm,0.7s,baz=12,slow=7.4,SNR=3.1
comp=Z,0.5nm,0.7s
KBZ Khabaz 59.42 38 P P **14 35 46.1 +1.7**
comp=Z,2.5nm,0.8s,baz=324,slow=5.3,SNR=5.1
comp=Z,2.5nm,0.8s
MKAR Makanchi Array 60.76 6 P P **14 35 54.0 +0.4**
comp=Z,0.7nm,0.8s,baz=340,slow=1.8,SNR=5.1
comp=Z,0.7nm,0.8s
MKAR Makanchi Array 60.76 6 P P **14 35 53.3 -0.4**
BRTR Keskin Array B 61.40 47 P P **14 35 59.2 +1.1**
comp=Z,0.8nm,0.6s,baz=318,slow=1.7,SNR=4.6
comp=Z,0.8nm,0.6s
HHC Hu-ho-hao-te 65.83 342 *eP* **P** **14 36 26.4 -1.0**
HHC pmax pmax
comp=Z,14nm,0.7s
KSRS Korea Array 67.11 328 P P **14 36 36.6 +1.1**
comp=Z,1.0nm,0.7s,baz=21,slow=5.6,SNR=5.2
comp=Z,1.0nm,0.7s
KSH Kashi 67.73 12 P P **14 36 40.8 +1.2**
GTA Gaotai 68.06 352 *eP* **P** **14 36 43.3 +1.7**
GTA pmax pmax
comp=Z,5.0nm,1.0s
WRA Warramunga Arr 121.71 309 PKP **PKiKP** **14 44 36.5 +0.7**
comp=Z,0.4nm,0.5s,baz=337,slow=2.0,SNR=5.3
ASAR Alice Springs 125.39 309 PKP **PKiKP** **14 44 43.9 +0.8**
comp=Z,0.3nm,0.6s,baz=23,slow=1.5,SNR=7.4
SNAA Sanae 154.17 134 PKPbc **PKiKP** **14 45 41.8 +1.4**
comp=Z,0.4nm,0.6s,baz=288,slow=3.2,SNR=1.8

JMA ***20*** *15:11:13.9±0.4, 44°N±2°×14°8E±°, h0km, MV3.9/22, SE OFF ETOROFU*
SKHL ***20*** *15:11:14.9±0.1, 44.4°40N×148.2°20E, h40km±9km, mb4.3/3*
ISC 20 15:11:11.8±3.1, 44°3N±0.1°×148°5E±0.2, h31km±15km, n16, s206/26, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**				**1.05 337**	*eP*	**Pb**	**15 11 30.6**	**-0.8**
KUR						AMB	AMB	15 11 31.0	
	260nm,0.3s								
KUR						*eS*	**Sn**	**15 11 42.3**	**-1.7**
KUR						A	A	15 11 43.7	
	380nm,0.2s								
KUR						A	A	15 11 43.7	
	420nm,0.2s								
SHO	**Shikotan**				**1.24 252**	*eP*	Pb	15 11 41.1	+6.5
SHO						AMB	AMB	15 11 41.5	
	60nm,0.3s								
SHO						*eS*	**Sb**	**15 11 54.6**	**+4.4**
SHO						A	A	15 11 55.2	
	70nm,0.2s								
SHO						A	A	15 11 55.2	
	210nm,0.2s								
YUK	**Yuzh-Kuril'sk**				**1.89 264**	*eP*	**Pn**	**15 11 41.6**	**-0.2**
YUK						AMB	AMB	15 11 42.5	

	120nm,0.3s						
YUK				*e*S	**Sn**	**15 12 03.4**	**-1.1**
YUK				A	A	15 12 04.0	
	140nm,0.2s						
YUK				A	A	15 12 04.0	
	100nm,0.2s						
NEM2	**Nemuro 2**	**2.16**	**246**	*e*P	**Pn**	**15 11 46.0**	**+0.4**
NMR	**Nemuro--Hokkai**	**2.17**	**247**	*e*P	**Pn**	**15 11 46.6**	**+0.8**
NMR				*e*S	**Sn**	**15 12 10.5**	**-1.1**
JRA	**Rausu**	**2.43**	**263**	*e*P	**Pn**	**15 11 51.3**	**-3.4**
JRA				*e*S	**Sn**	**15 12 18.9**	**+1.0**
JNSB	**Nemuroshibetsu**	**2.54**	**260**	*e*P	**Pn**	**15 11 53.0**	**+2.1**
JKHN	**Kushirohamanak**	**2.67**	**245**	*e*P	**Pn**	**15 11 53.9**	**+1.2**
JKHN				*e*S	**Sn**	**15 12 22.7**	**-1.3**
JNK	**Nakash**	**2.79**	**257**	*e*P	**Pn**	**15 11 56.0**	**+1.7**
JNK				*e*S	**Sn**	**15 12 27.2**	**+0.3**
AKK	**Akkeshi**	**2.91**	**246**	*e*P	**Pn**	**15 11 57.0**	**+1.1**
AKK				*e*S	**Sn**	**15 12 28.9**	**-0.9**
JAK	**Akkeshi**	**3.01**	**246**	*e*P	**Pn**	**15 11 58.6**	**+1.2**
JAK				*e*S	**Sn**	**15 12 31.5**	**-0.9**
JTKR	**Abashiri--Toko**	**3.29**	**266**	*e*P	**Pb**	**15 12 05.3**	**-4.2**
JAR	**Ashorobuto**	**3.53**	**256**	*e*P	**Pn**	**15 12 06.9**	**+2.4**
JAR				*e*S	**Sn**	**15 12 46.4**	**+1.2**
JOB	**Onbets**	**3.63**	**250**	*e*P	**Pn**	**15 12 07.6**	**+1.8**
JOB				*e*S	**Sn**	**15 12 46.8**	**-0.7**
JCH	**Churui**	**4.06**	**248**	*e*P	**Pn**	**15 12 14.1**	**+2.3**
JNBK	**Urakawa-nobuka**	**4.62**	**246**	*e*P	**Pn**	**15 12 21.8**	**+2.4**

IDC 20 15:17:04.3±3.3,**52°.07N**×**154°.96E**,**h481**km±50km,**mb2.7**/2,
mbtmp3.5/3,**Error ellipse: s-maj=246.6km**
s-min=50.6km az=153.0,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**1.97**	**57**	P	P	15 18 07.3	0.0
	1.0nm,0.3s,baz=226,slow=7.7,SNR=17						
MJAR	**Matsushiro Arr**	**19.54**	**224**	P	P	15 20 59.8	+0.1
	1.1nm,0.6s,baz=16,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**73.93**	**200**	P	P	15 27 49.5	-0.1
	0.3nm,0.5s,baz=15,slow=6.1,SNR=4.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**77.63**	**200**	P	P	15 28 10.2	+0.1
	0.2nm,0.5s,baz=12,slow=4.9,SNR=10						
	0.2nm,0.5s						

*IDC **20** 15:46:25.5±1.4,4°.81N×125°.15E,h0km,mb3.8/6,*
mbtmp3.8/6,Error ellipse: s-maj=118.2km s-min=17.6km
az=67.0
*DJA **20** 15:46:58.7±0.7,4°.N±6°×12°.5E±°,h344km±7km,M3.8/13,*
mB4.8/1,mb3.6/3,MLv3.9/13,Mw(mB)4.1/1
ISC 20 15:47:00.7±1.1,**4°.2N**±0°.1×**124°.6E**±0°.1,**h350**km,**n12**,
σ1**92**/13,**mb3.3**/6,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.03**	**121**	P	**Pn**	**15 47 43.9**	**-2.7**
SGSI				S	**S**	**15 48 21.1**	**-2.2**
KMSI	**Cibinong**	**3.68**	**190**	P	**Pn**	**15 48 04.6**	**-2.0**
TNTI	**Ternate**	**4.37**	**141**	P	**Pn**	**15 48 12.7**	**-0.9**
MRSI	**Marisa**	**4.60**	**216**	P	**Pn**	**15 48 14.2**	**-1.8**
MPSI	**Mapaga**	**6.11**	**231**	P	**Pn**	**15 48 31.2**	**-1.7**
	0.0nm4.2nm,0.8s						
SANI	**Sanana**	**6.37**	**168**	P	**Pn**	**15 48 33.4**	**-2.5**
FITZ	**Fitzroy Crossi**	**22.20**	**177**	P	**P**	**15 51 30.1**	**+1.3**
	0.9nm,0.3s,baz=359,slow=10,SNR=19						
	0.9nm,0.3s						
WRA	**Warramunga Arr**	**25.84**	**159**	P	**P**	**15 52 02.2**	**+0.6**
	0.5nm,0.4s,baz=339,slow=9.0,SNR=16						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**29.15**	**162**	P	**P**	**15 52 31.8**	**+0.8**
	0.2nm,0.3s,baz=340,slow=7.6,SNR=25						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**39.36**	**157**	P	**P**	**15 53 59.6**	**+2.1**
	0.8nm,0.3s,baz=353,slow=7.2,SNR=5.2						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**55.98**	**326**	P	**P**	**15 56 04.6**	**+0.8**
	0.6nm,0.4s,baz=120,slow=7.8,SNR=16						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**60.22**	**328**	P	**P**	**15 56 33.3**	**+0.5**
	0.5nm,0.5s,baz=131,slow=6.6,SNR=6.2						
	0.5nm,0.5s						

*AEIC **20** 15:51:02.5±0.8,53°.37N±0°.03×165°.89W±0°.06,*
h39km±10km,Error ellipse: s-maj=6.0km s-min=2.7km
az=49.0
NEIC 20 15:51:03.8±0.8,**53°.43N**±0°.04×**165°.95W**±0°.04,**h35**km±2km,
ML3.3/10,**ML3.1**(AEIC),**Error ellipse: s-maj=7.6km**
s-min=4.0km az=0.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**0.53**	**321**		Pn	15 51 14.6	-0.3
UNV					Sn	15 51 23.8	+1.1
UNV				IAML		15 51 24.7	
	comp=N,2μm,0.3s						
MREP	**Makushin Rep't**	**0.61**	**309**		Pn	15 51 15.9	-0.1
MNAT	**Makushin Natee**	**0.63**	**316**		Pn	15 51 16.2	-0.1
MGOD	**Makushin Gods**	**0.66**	**304**		Pn	15 51 16.6	-0.1
ZRO	**Akutan Zero**	**0.66**	**358**		Pn	15 51 16.6	-0.1
ZRO					Sn	15 51 27.2	+1.3
AKMO	**Akutan Morgan**	**0.66**	**357**		Pn	15 51 16.6	-0.1
AKMO					Sn	15 51 27.6	+1.7
AKBBA	**Akutan Broad B**	**0.67**	**1**		Pn	15 51 16.6	-0.2
AKBBA					Sn	15 51 27.9	+1.8
AHB	**Akutan Harbor**	**0.69**	**6**		Pn	15 51 16.9	-0.2
AHB					Sn	15 51 27.5	+0.9
MSW	**Makushin Switc**	**0.69**	**315**		Pn	15 51 17.2	0.0
MSW					Sn	15 51 28.1	+1.5
AKV	**Akutan Volcano**	**0.70**	**359**		Pn	15 51 17.2	0.0
AKRB	**Akutan Reef Bi**	**0.70**	**354**		Pn	15 51 17.4	+0.1
MAPS	**Pakushin South**	**0.70**	**303**		Pn	15 51 17.3	+0.1
AKUT	**Akutan**	**0.71**	**8**	Pn	Pn	15 51 16.7	-0.6
AKUT				Sn	Sn	15 51 27.5	+0.4
AKUT				IAML		15 51 30.3	
	comp=E,779nm,0.4s						
AKSA	**Akutan Strait**	**0.72**	**12**		Pn	15 51 16.8	-0.7
AKSA					Sn	15 51 27.8	+0.5
AKLV	**Akutan Long Va**	**0.73**	**359**		Pn	15 51 17.3	-0.3
LVA	**Lava Point**	**0.73**	**356**	Pn	Pn	15 51 17.4	-0.2
LVA				IAML		15 51 30.6	
	comp=E,929nm,0.5s						
LVA				IAML		15 51 41.9	
	comp=N,1μm,0.9s						
AKGG	**Akutan Green G**	**0.77**	**358**		Pn	15 51 18.2	+0.1
OKFG	**Magazine Ridge**	**1.18**	**270**		Pn	15 51 23.3	-0.4
OKTU	**Okmok Mt. Tuli**	**1.26**	**269**		Pn	15 51 24.6	-0.3
OKNC	**Okmok New Cone**	**1.30**	**272**		Pn	15 51 25.5	0.0
OKCE	**Okmok Cone E**	**1.33**	**271**		Pn	15 51 26.1	+0.2
OKWR	**Okmok West Rim**	**1.35**	**271**		Pn	15 51 26.5	+0.3
WEBT	**Westdahl Beart**	**1.36**	**31**		Pn	15 51 26.6	+0.4
OKSP	**Okmok Steeple**	**1.42**	**264**		Pn	15 51 26.4	-0.7
NIKH	**Nikolski High**	**1.81**	**256**	Pn	Pn	15 51 31.1	-1.3
NIKH				IAML		15 52 03.3	
	comp=N,486nm,0.6s						
NIKH				IAML		15 52 07.2	
	comp=E,370nm,0.6s						
FALS	**False Pass**	**2.06**	**45**	Pn	Pn	15 51 34.9	-1.0
DT1	**Dutton Round H**	**2.73**	**51**		Pn	15 51 44.7	-0.3
SDPT	**Sand Point**	**3.73**	**57**	Pn	Pn	15 51 57.8	-1.0
ATKA	**Atka Island**	**5.15**	**260**	Pn	Pn	15 52 18.3	-0.1
O14K	**Tigyukauivet M**	**6.39**	**22**	Pn	Pn	15 52 36.7	+1.5
O15K	**Ungalikthiuk R**	**6.69**	**28**	Pn	Pn	15 52 40.3	+0.9
M11K	**Mekoryuk**	**6.97**	**359**	Pn	Pn	15 52 45.1	+1.9
KNKB	**Kanaga Island**	**7.00**	**261**	Pn	Pn	15 52 43.7	0.0
P16K	**Nushagak River**	**7.15**	**35**	Pn	Pn	15 52 44.8	-0.9
N15K	**Kwethluk River**	**7.48**	**23**	Pn	Pn	15 52 51.8	+1.5
M14K	**Bethel**	**7.65**	**15**	Pn	Pn	15 52 54.4	+1.8
K13K	**Kusilvak Mount**	**8.55**	**4**	Pn	Pn	15 53 06.2	+1.2
L16K	**Owhat River**	**8.99**	**20**	Pn	Pn	15 53 12.3	+1.3
AMKA	**Amchitka**	**9.25**	**263**	Pn	Pn	15 53 13.5	-1.0
L19K	**White Mountain**	**10.56**	**29**	Pn	Pn	15 53 33.4	+0.9
SML	**Sawmill**	**12.59**	**41**	Pn	Pn	15 53 59.5	-0.7

*IDC **20** 15:59:33.4±1.6,1°.44N×125°.99E,h0km,mb3.6/4,*
mbtmp3.6/5,ML3.2/1,Error ellipse: s-maj=121.9km
s-min=20.2km az=68.0
*DJA **20** 15:59:36.7±0.3,1°.N±3°×12°.6E±°,h10km,M3.4/9,MLv3.4/9*
ISC 20 15:59:35.3±1.1,**1°.44N**±0°.08×**126°.33E**±0°.09,**h10**km,**n9**,
σ1**50**/9,**mb3.8**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**123**	P	**Pn**	**15 59 59.9**	**+1.3**
SGSI	**Sangihe**	**2.37**	**340**	P	**Pn**	**16 00 15.6**	**+1.4**
KMSI	**Cibinong**	**2.50**	**250**	P	**Pn**	**16 00 17.5**	**+1.5**
SANI	**Sanana**	**3.49**	**186**	P	**Pn**	**16 00 30.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.43**	**182**	P	**P**	**16 04 00.7**	**-1.2**
	0.1nm,0.3s,baz=355,slow=11,SNR=1.4						
	1.6nm,0.9s						
WRA	**Warramunga Arr**	**22.66**	**160**	P	**P**	**16 04 37.3**	**+0.4**
	2.4nm,0.7s,baz=338,slow=11,SNR=11						
	2.4nm,0.7s						
ASAR	**Alice Springs**	**26.03**	**164**	P	**P**	**16 05 09.8**	**+1.0**
	0.4nm,0.5s,baz=344,slow=12,SNR=13						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**16 09 35.5**	**-1.2**
	0.2nm,0.3s,baz=138,slow=7.2,SNR=7.0						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.44**	**328**	P	**P**	**16 10 03.6**	**-1.7**
	0.5nm,0.6s,baz=133,slow=6.0,SNR=3.6						
	0.5nm,0.6s						

*GEN **20** 16:06:47.9,45°.22N×11°.13E,h16km±1km,Ml2.5*
*LDG **20** 16:06:49.4±0.2,45°.28N×11°.28E,h20km,Ml2.5/11,Error*
ellipse: s-maj=4.8km s-min=2.9km az=90.0
*PRU **20** 16:06:53.6,45°.53N×11°.18E,h20km*
ROM 20 16:06:48.9±0.0,**45°.246N**±0°.003×**11°.172E**±0°.004,
h18km,**ML2.7**/95,**16C-4D**,**Error ellipse: s-maj=0.3km**
s-min=0.1km az=279.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPPE	**Oppeano**	**0.06**	**0**	⇑P	Pg	16 06 52.2	+0.1
OPPE				S	Sg	16 06 55.4	+1.0
OPPE				AML	AML		
	comp=N,4145μm,0.3s						
OPPE				AML	AML		
	comp=E,7370μm,0.3s						
OPPE				AML	AML		
	comp=E,7370μm,0.3s						
OPPE				AML	AML		
	comp=N,3657μm,0.1s						
GAZZ	**Gazzo Veronese**	**0.14**	**202**	⇑*e*Pg	Pg	16 06 52.9	0.0
GAZZ				*e*Sg	Sb	16 06 56.7	+0.8
SERM	**Sermide**	**0.25**	**160**	P	Pg	16 06 54.4	-0.1
SERM				S	Sb	16 06 59.1	+0.2
SERM	**Sermide**	**0.25**	**160**	⇓P	Pg	16 06 54.4	-0.1
SERM				S	Sb	16 06 59.1	+0.2
SERM				AML	AML		
	comp=E,1915μm,0.2s						
SERM				AML	AML		
	comp=E,1920μm,0.2s						
SERM				AML	AML		
	comp=N,1690μm,0.3s						
SERM				AML	AML		
	comp=N,1685μm,0.3s						
SERM				AML	AML		
	comp=N,4320μm,0.3s						
SERM				AML	AML		
	comp=E,6185μm,0.3s						
SERM				AML	AML		
	comp=N,1533μm,0.1s						
SERM				AML	AML		
	comp=E,1916μm,0.2s						
SERM				AML	AML		
	comp=N,3351μm,0.1s						
SBPO	**S.Benedetto Po**	**0.26**	**223**	⇑P	Pg	16 06 54.8	0.0
SBPO				S	Sb	16 07 00.2	+0.8
SBPO				AML	AML		
	comp=E,973μm,0.3s						
SBPO				AML	AML		
	comp=N,1774μm,0.3s						
TREG	**Tregnago**	**0.28**	**358**	P	Pg	16 06 55.2	+0.1
TREG				S	Sb	16 06 59.7	-0.1
TREG				AML	AML		
	comp=N,3190μm,0.6s						
TREG				AML	AML		
	comp=E,3905μm,0.3s						
TREG				AML	AML		
	comp=N,3190μm,1.4s						
TREG				AML	AML		
	comp=E,2674μm,0.1s						
TREG				AML	AML		
	comp=N,3049μm,0.2s						
MNTV	**Mantova**	**0.29**	**250**	P	Pg	16 06 55.2	0.0
MNTV				S	Sb	16 07 00.8	+0.8
ZOVE	**Zovencedo**	**0.30**	**47**	⇑P	Pg	16 06 55.5	0.0
ZOVE				S	Sb	16 07 00.6	0.0
ZOVE				AML	AML		
	comp=N,1410μm,0.5s						
ZOVE				AML	AML		
	comp=E,1680μm,0.1s						
ZOVE				AML	AML		
	comp=E,1681μm,0.1s						
ZOVE				AML	AML		
	comp=N,1226μm,0.2s						
TEOL	**Teolo**	**0.37**	**72**	⇑*e*Pg	Pg	16 06 56.7	+0.1
TEOL				*e*Sg	Sb	16 07 02.4	0.0
TEOL	**Teolo**	**0.37**	**72**	⇑P	Pg	16 06 56.7	+0.1
TEOL				S	Sb	16 07 02.5	+0.1
TEOL				AML	AML		
	comp=E,1425μm,1.2s						
TEOL				AML	AML		
	comp=N,1825μm,0.4s						
TEOL				AML	AML		
	comp=E,1425μm,0.8s						
TEOL				AML	AML		
	comp=E,1192μm,0.2s						
TEOL				AML	AML		
	comp=N,1568μm,0.3s						
MARN	**Marana (Italy)**	**0.39**	**4**	⇑*e*Pg	Pg	16 06 57.0	-0.1
MARN				*e*Sg	Sb	16 07 03.0	-0.2
MARN	**Marana (Italy)**	**0.39**	**4**	P	Pg	16 06 57.0	-0.1
MARN				S	Sb	16 07 03.1	0.0
CAVE	**Cavezzo**	**0.40**	**198**	P	Pg	16 06 57.0	-0.1
CAVE				S	Sb	16 07 03.4	+0.2
CAVE	**Cavezzo**	**0.40**	**198**	⇑P	Pg	16 06 56.9	-0.2
CAVE				S	Sb	16 07 03.5	+0.3
CAVE				AML	AML		
	comp=E,1885μm,0.7s						
CAVE				AML	AML		
	comp=N,1650μm,0.8s						
CAVE				AML	AML		
	comp=E,1885μm,1.3s						
CAVE				AML	AML		
	comp=N,1650μm,1.2s						
CAVE				AML	AML		
	comp=E,1593μm,0.1s						
CAVE				AML	AML		
	comp=N,1588μm,0.3s						
ROVR	**Rover Verones**	**0.41**	**350**	P	Pg	16 06 57.3	-0.1
ROVR				S	Sg	16 07 03.3	+0.3
ROVR				AML	AML		
	comp=N,5195μm,0.5s						
ROVR				AML	AML		
	comp=E,2895μm,1.0s						
ROVR				AML	AML		
	comp=E,1200μm,1.0s						
ROVR				AML	AML		
	comp=N,2260μm,0.5s						
ROVR				AML	AML		
	comp=N,5195μm,1.5s						
ROVR				AML	AML		
	comp=N,2260μm,1.5s						
ROVR				AML	AML		
	comp=E,2895μm,1.0s						
ROVR				AML	AML		
	comp=E,2447μm,0.1s						
ROVR				AML	AML		
	comp=E,956μm,0.2s						
ROVR				AML	AML		
	comp=N,5026μm,0.1s						
ROVR				AML	AML		
	comp=N,2219μm,0.1s						
NDIM	**Novi di Modena**	**0.41**	**208**	P	Pg	16 06 57.0	-0.2
NDIM				AML	AML		
	comp=E,908μm,0.2s						
NDIM				AML	AML		
	comp=N,2434μm,1.4s						
NDIM				AML	AML		
	comp=N,928μm,1.4s						
NDIM				AML	AML		
	comp=E,908μm,1.8s						
NDIM				AML	AML		
	comp=N,2434μm,0.6s						
NDIM				AML	AML		
	comp=N,928μm,0.6s						
NDIM				AML	AML		
	comp=E,938μm,0.4s						
NDIM				AML	AML		
	comp=E,908μm,0.2s						
NDIM				AML	AML		
	comp=E,937μm,0.2s						
FERS	**Ferrara-Casagl**	**0.43**	**143**	P	Pg	16 06 57.3	-0.4
RAVA	**Ravarino**	**0.49**	**184**	P	Pb	16 06 58.9	-0.1
RAVA				S	Sb	16 07 07.4	+1.5
RAVA	**Ravarino**	**0.49**	**184**	⇑P	Pb	16 06 58.9	-0.1
RAVA				S	Sb	16 07 06.4	+0.5
RAVA				AML	AML		
	comp=N,2835μm,0.4s						
RAVA				AML	AML		
	comp=E,5085μm,0.2s						
RAVA				AML	AML		
	comp=E,5086μm,0.2s						
RAVA				AML	AML		
	comp=N,2833μm,0.4s						
ZEN8	**San Zeno di Mo**	**0.50**	**322**	P	Pg	16 06 58.4	-0.6
ZEN8				S	Sb	16 07 06.1	-0.2
SANR	**Sandrigo**	**0.50**	**38**	P	Pb	16 06 59.1	-0.1
MBAL	**Monte Baldo -**	**0.50**	**334**	⇓P	Pg	16 06 58.7	-0.3
MBAL				S	Sb	16 07 06.3	-0.1
MBAL				AML	AML		
	comp=N,1625μm,0.1s						
MBAL				AML	AML		
	comp=E,1460μm,0.1s						
MBAL				AML	AML		
	comp=E,1162μm,1.3s						
MBAL				AML	AML		
	comp=N,1630μm,0.1s						
MBAL				AML	AML		
	comp=E,1162μm,0.7s						
MBAL				AML	AML		
	comp=N,1170μm,0.1s						
BALD	**Monte Baldo**	**0.50**	**330**	*e*Pg	Pg	16 06 58.9	-0.2
BALD				*e*Sg	Sb	16 07 06.3	-0.2
BALD	**Monte Baldo**	**0.50**	**330**	P	Pg	16 06 58.8	-0.3
BALD				S	Sb	16 07 06.4	-0.1
BALD	**Monte Baldo**	**0.50**	**330**	P	Pg	16 06 58.8	-0.3
BALD				S	Sg	16 07 06.2	+0.2
VARA	**Varagna**	**0.61**	**342**	⇓*e*Pg	Pg	16 07 00.7	-0.4
VARA				*e*S	Sb	16 07 09.5	-0.1
VARA	**Varagna**	**0.61**	**342**	P	Pg	16 07 00.7	-0.4
VARA				S	Sb	16 07 09.6	0.0
VARA				AML	AML		
	comp=N,2830μm,0.6s						
VARA				AML	AML		
	comp=N,2430μm,0.4s						
VARA				AML	AML		
	comp=E,2960μm,0.2s						
VARA				AML	AML		
	comp=E,2625μm,0.5s						
VARA				AML	AML		
	comp=E,2207μm,0.2s						
VARA				AML	AML		
	comp=N,2744μm,0.2s						
VARA				AML	AML		
	comp=E,2958μm,0.2s						
VARA				AML	AML		
	comp=N,2229μm,0.2s						
VOBA	**Vobarno**	**0.61**	**310**	P	Pg	16 07 01.0	-0.1
VOBA				AML	AML		
	comp=N,1120μm,0.2s						
VOBA				AML	AML		
	comp=E,626μm,0.2s						
VOBA				AML	AML		
	comp=N,1119μm,0.2s						
VOBA				AML	AML		
	comp=E,627μm,0.2s						
ADRI	**Adria, Italy**	**0.63**	**109**	*e*Pg	Pg	16 07 01.4	0.0
ADRI				*e*Sg	Sb	16 07 11.3	+1.3
DOSS	**Dosso del Somm**	**0.64**	**1**	⇑*e*Pg	Pg	16 07 01.1	-0.4
DOSS				*e*S	Sb	16 07 10.3	0.0
DOSS	**Dosso del Somm**	**0.64**	**1**	P	Pg	16 07 01.1	-0.4
DOSS				S	Sg	16 07 09.7	-0.3
DOSS	**Dosso del Somm**	**0.64**	**1**	⇑P	Pg	16 07 01.1	-0.4
DOSS				S	Sg	16 07 09.8	-0.2
DOSS				AML	AML		
	comp=N,1222μm,0.5s						
DOSS				AML	AML		
	comp=E,1174μm,0.5s						
DOSS				AML	AML		
	comp=N,1145μm,0.7s						
DOSS				AML	AML		
	comp=E,1186μm,0.7s						
DOSS				AML	AML		
	comp=E,1174μm,1.5s						
DOSS				AML	AML		
	comp=N,1222μm,1.5s						
DOSS				AML	AML		
	comp=E,1021μm,0.1s						
DOSS				AML	AML		
	comp=N,1107μm,0.3s						
DOSS				AML	AML		
	comp=N,957μm,0.1s						
DOSS				AML	AML		
	comp=E,1049μm,0.3s						
MAGA	**Magasa**	**0.65**	**324**	P	Pg	16 07 01.2	-0.6
MAGA				S	Sb	16 07 10.7	0.0
MAGA				AML	AML		
	comp=E,1945μm,1.4s						
MAGA				AML	AML		
	comp=N,1275μm,0.2s						
MAGA				AML	AML		
	comp=E,1945μm,0.6s						
MAGA				AML	AML		
	comp=E,1567μm,0.2s						
MAGA				AML	AML		
	comp=N,1276μm,0.2s						
CEKR	**Cima Ekar Asia**	**0.67**	**25**	*e*Pg	Pg	16 07 01.8	-0.2
LUSI	**Trento, Gardas**	**0.73**	**347**	P	Pb	16 07 02.7	-0.5
LUSI				S	Sg	16 07 13.1	+0.1
LUSI				AML	AML		
	comp=E,2120μm,0.8s						
LUSI				AML	AML		
	comp=N,4955μm,0.2s						
LUSI				AML	AML		
	comp=E,2120μm,1.2s						
LUSI				AML	AML		
	comp=N,4955μm,0.2s						
LUSI				AML	AML		
	comp=E,1857μm,0.3s						
ASOL	**Asolo**	**0.76**	**43**	P	Pg	16 07 04.1	+0.4
BAG8	**Bagolino**	**0.76**	**320**	P	Pb	16 07 03.1	-0.6
BAG8				S	Sg	16 07 13.9	0.0
CNCS	**Concesio**	**0.76**	**299**	P	Pb	16 07 03.0	-0.7
CGRP	**Cima Grappa**	**0.77**	**35**	⇑*e*Pg	Pb	16 07 03.6	-0.3
CGRP				*e*Sg	Sg	16 07 15.2	+0.9
CGRP	**Cima Grappa**	**0.77**	**35**	⇑P	Pb	16 07 03.6	-0.4
CGRP				S	Sg	16 07 14.9	+0.6
CGRP				AML	AML		
	comp=E,283μm,0.6s						
CGRP				AML	AML		
	comp=N,231μm,0.7s						
CGRP				AML	AML		
	comp=N,231μm,1.3s						
CGRP				AML	AML		
	comp=E,247μm,0.3s						
CGRP				AML	AML		
	comp=N,208μm,0.3s						
CGRP				AML	AML		
	comp=E,226μm,0.3s						
CGRP				AML	AML		
	comp=N,223μm,0.5s						
PRMA	**PARMA**	**0.78**	**232**	P	Pg	16 07 04.1	0.0
PRMA				S	Sn	16 07 16.8	+0.6
PRMA	**PARMA**	**0.78**	**232**	P	Pg	16 07 04.2	+0.2
PANI	**Panarotta**	**0.81**	**8**	*e*Pg	Pb	16 07 04.4	-0.3
PANI	**Panarotta**	**0.81**	**8**	⇑P	Pb	16 07 04.4	-0.3
PANI				S	Sb	16 07 15.5	+0.1
PANI				AML	AML		
	comp=E,378μm,1.4s						
PANI				AML	AML		
	comp=N,470μm,0.2s						
PANI				AML	AML		
	comp=E,378μm,0.6s						
PANI				AML	AML		
	comp=N,470μm,0.1s						
PANI				AML	AML		
	comp=E,363μm,0.2s						
RONC	**Roncone**	**0.83**	**333**	*e*Pg	Pb	16 07 04.4	-0.5

RONC				*e*Sg		Sg	16 07 16.3	+0.1	
RONC	**Roncone**	**0.83**	**333**	⇓P		Pb	16 07 04.4	-0.6	
RONC				S		Sg	16 07 16.6	+0.4	
RONC				AML		AML			
	comp=E,1275µm,0.2s								
RONC				AML		AML			
	comp=N,896µm,0.2s								
RONC				AML		AML			
	comp=N,895µm,0.2s								
RONC				AML		AML			
	comp=N,895µm,1.8s								
RONC				AML		AML			
	comp=N,802µm,0.1s								
RONC				AML		AML			
	comp=E,801µm,0.2s								
RONC				AML		AML			
	comp=E,1272µm,0.2s								
RONC				AML		AML			
	comp=N,895µm,0.2s								
GAVI	**Passo Gaver BS**	**0.84**	**324**	*e*Pg		Pb	16 07 04.8	-0.3	
GAGG	**Gaggia**	**0.85**	**350**	*e*Pg		Pb	16 07 05.1	-0.2	
GAGG	**Gaggia**	**0.85**	**350**	P		Pb	16 07 05.0	-0.3	
GAGG				S		Sg	16 07 16.8	0.0	
GAGG	**Gaggia**	**0.85**	**350**	P		Pb	16 07 05.0	-0.3	
GAGG				S		Sb	16 07 16.5	0.0	
GAGG				AML		AML			
	comp=N,766µm,0.3s								
GAGG				AML		AML			
	comp=E,796µm,0.3s								
GAGG				AML		AML			
	comp=E,796µm,1.7s								
GAGG				AML		AML			
	comp=N,766µm,1.7s								
GAGG				AML		AML			
	comp=E,688µm,0.3s								
GAGG				AML		AML			
	comp=N,722µm,0.3s								
GAGG				AML		AML			
	comp=E,688µm,0.3s								
GAGG				AML		AML			
	comp=N,722µm,0.3s								
GAGG				AML		AML			
	comp=N,766µm,0.3s								
GAGG				AML		AML			
	comp=E,796µm,0.3s								
MTLO	**Montello**	**0.86**	**49**	*e*Pg		Pg	16 07 05.8	0.0	
CTI	**Castel Tesino**	**0.87**	**23**	P		Pb	16 07 05.1	-0.5	
CTI				S		Sg	16 07 17.7	+0.3	
CTI	**Castel Tesino**	**0.87**	**23**	P		Pb	16 07 05.1	-0.5	
CTI				S		Sg	16 07 17.7	+0.3	
CTI				AML		AML			
	comp=N,1190µm,0.3s								
CTI				AML		AML			
	comp=N,1190µm,1.7s								
CTI				AML		AML			
	comp=E,1530µm,0.1s								
CTI				AML		AML			
	comp=N,1184µm,0.1s								
CTI				AML		AML			
	comp=E,1528µm,0.1s								
MTRZ	**Monterenzio**	**0.90**	**166**	P		Pn	16 07 09.1	+2.4	
MTRZ				S		Sn	16 07 24.5	+5.3	
ZONE	**Zone**	**0.91**	**305**	P		Pb	16 07 05.5	-0.6	
ZONE				S		Sg	16 07 18.4	0.0	
ZONE				AML		AML			
	comp=E,338µm,0.2s								
ZONE				AML		AML			
	comp=N,451µm,0.7s								
ZONE				AML		AML			
	comp=N,451µm,1.3s								
ZONE				AML		AML			
	comp=E,337µm,0.2s								
ZONE				AML		AML			
	comp=N,426µm,0.3s								
ZCCA	**Zocca**	**0.91**	**189**	P		Pn	16 07 07.5	+0.7	
ZCCA				S		Sn	16 07 23.0	+3.5	
ZCCA	**Zocca**	**0.91**	**189**	P		Pb	16 07 06.2	+0.1	
ZCCA				AML		AML			
	comp=E,193µm,0.3s								
ZCCA				AML		AML			
	comp=N,113µm,0.3s								
MABI	**Malga Bissina**	**0.93**	**331**	P		Pb	16 07 06.2	-0.5	
MABI				S		Sg	16 07 19.2	-0.2	
MABI				AML		AML			
	comp=E,216µm,0.7s								
MABI				AML		AML			
	comp=N,152µm,0.3s								
MABI				AML		AML			
	comp=E,216µm,1.3s								
MABI				AML		AML			
	comp=N,141µm,0.1s								
MABI				AML		AML			
	comp=E,178µm,0.2s								
GSCL	**Gusciola**	**0.99**	**205**	P		Pn	16 07 08.0	0.0	
GSCL				S		Sn	16 07 23.2	+1.7	
GSCL	**Gusciola**	**0.99**	**205**	P		Pb	16 07 07.5	-0.1	
GSCL				AML		AML			
	comp=N,134µm,0.3s								
GSCL				AML		AML			
	comp=E,118µm,0.8s								
ZIAN	**Ziano**	**1.07**	**15**	⇑P		Pb	16 07 08.8	-0.1	
ZIAN				S		Sb	16 07 22.9	+0.3	
ZIAN				AML		AML			
	comp=E,615µm,0.1s								
ZIAN				AML		AML			
	comp=E,535µm,1.3s								
ZIAN				AML		AML			
	comp=N,526µm,1.3s								
ZIAN				AML		AML			
	comp=E,535µm,0.7s								
ZIAN				AML		AML			
	comp=N,526µm,0.7s								
ZIAN				AML		AML			
	comp=N,600µm,0.1s								
ZIAN				AML		AML			
	comp=E,487µm,0.2s								
ZIAN				AML		AML			
	comp=N,498µm,0.2s								
FNVD	**Fontana Vidola**	**1.08**	**182**	P		Pb	16 07 08.8	-0.4	
GRAM	**Graiana**	**1.09**	**227**	P		Pb	16 07 09.1	-0.2	
GRAM				S		Sg	16 07 24.5	+0.2	
GRAM	**Graiana**	**1.09**	**227**	P		Pb	16 07 09.1	-0.2	
GRAM				AML		AML			
	comp=N,192µm,0.3s								
GRAM				AML		AML			
	comp=E,210µm,0.8s								
GRAM				AML		AML			
	comp=N,193µm,0.3s								
GRAM				AML		AML			
	comp=E,198µm,0.3s								
FRE8	**Fregona**	**1.13**	**47**	P		Pb	16 07 10.3	+0.3	
MDI	**Monti di Nese**	**1.16**	**298**	P		Pn	16 07 09.5	-0.9	
MDI				S		Sb	16 07 22.9	-2.2	
MDI	**Monti di Nese**	**1.16**	**298**	⇑P		Pn	16 07 09.5	-0.8	
MDI				S		Sb	16 07 24.6	-0.6	
MDI				AML		AML			
	comp=E,164µm,1.3s								
MDI				AML		AML			
	comp=N,155µm,0.3s								
MDI				AML		AML			
	comp=E,164µm,0.7s								
MDI				AML		AML			
	comp=E,143µm,0.3s								
MDI				AML		AML			
	comp=N,155µm,0.3s								
MDI				AML		AML			
	comp=E,139µm,0.2s								
MDI				AML		AML			
	comp=N,172µm,0.2s								
OZOL	**Ozolo**	**1.16**	**356**	P		Pb	16 07 10.6	0.0	
OZOL				S		Sg	16 07 26.5	-0.1	
OZOL				AML		AML			
	comp=N,546µm,0.4s								
OZOL				AML		AML			
	comp=E,1014µm,1.4s								
OZOL				AML		AML			
	comp=E,1014µm,0.6s								
OZOL				AML		AML			
	comp=N,546µm,0.4s								
OZOL				AML		AML			
	comp=N,537µm,0.2s								
OZOL				AML		AML			
	comp=N,508µm,0.3s								
OZOL				AML		AML			
	comp=E,947µm,0.2s								
OZOL				AML		AML			
	comp=E,845µm,0.2s								
CAE	**Caneva**	**1.17**	**49**	P		Pn	16 07 09.7	-0.8	
SARO	**Sassorosso**	**1.20**	**208**	P		Pb	16 07 11.1	-0.1	
SARO	**Sassorosso**	**1.20**	**208**	P		Pb	16 07 11.1	0.0	
SEI	**Scarperia**	**1.20**	**174**	P		Pb	16 07 11.1	0.0	
SEI				S		Sg	16 07 27.3	-0.4	
AGOR	**Agordo**	**1.21**	**30**	P		Pb	16 07 11.2	-0.1	
CARE	**Lago del Cares**	**1.23**	**344**	P		Pn	16 07 11.5	0.0	
CARE				AML		AML			
	comp=E,211µm,0.4s								
CARE				AML		AML			
	comp=N,188µm,0.4s								
CARE				AML		AML			
	comp=E,208µm,0.2s								
CARE				AML		AML			
	comp=N,171µm,0.2s								
APPI	**Appiano**	**1.23**	**2**	P		Pb	16 07 11.7	-0.1	
APPI				S		Sg	16 07 28.5	-0.4	
APPI				AML		AML			
	comp=E,454µm,0.8s								
APPI				AML		AML			
	comp=N,398µm,0.3s								
APPI				AML		AML			
	comp=E,454µm,1.2s								
APPI				AML		AML			
	comp=N,398µm,1.7s								
APPI				AML		AML			
	comp=N,397µm,0.3s								
APPI				AML		AML			
	comp=E,369µm,0.2s								
EQUI	**Equi**	**1.30**	**214**	P		Pb	16 07 12.7	-0.2	
BORM	**Bormio**	**1.34**	**336**	P		Pb	16 07 13.8	+0.2	
BRMO	**Bormio**	**1.35**	**336**	P		Pb	16 07 13.7	-0.1	
BRMO				S		Sb	16 07 31.0	+0.2	
BRMO	**Bormio**	**1.35**	**336**	P		Pb	16 07 13.5	-0.3	
BRMO				AML		AML			
	comp=E,164µm,1.5s								
BRMO				AML		AML			
	comp=N,142µm,1.0s								
BRMO				AML		AML			
	comp=E,164µm,0.5s								
BRMO				AML		AML			
	comp=E,135µm,0.2s								
BRMO				AML		AML			
	comp=N,140µm,0.2s								
CIMO	**Cimolais**	**1.39**	**39**	P		Pb	16 07 13.9	-0.4	
CIMO				AML		AML			
	comp=E,55µm,1.6s								
CIMO				AML		AML			
	comp=N,62µm,1.6s								
CIMO				AML		AML			
	comp=N,62µm,0.4s								
CIMO				AML		AML			
	comp=E,49µm,1.6s								
CIMO				AML		AML			
	comp=E,55µm,0.4s								
CIMO				AML		AML			
	comp=N,55µm,1.0s								
CIMO				AML		AML			
	comp=N,49µm,0.3s								
CIMO				AML		AML			
	comp=E,50µm,0.3s								
CIMO				AML		AML			
	comp=E,44µm,0.4s								
BERNI	**Berninapass**	**1.42**	**326**	P		Pb	16 07 15.1	+0.1	
BERNI				S		Sb	16 07 33.0	+0.2	
BERNI	**Berninapass**	**1.42**	**326**	P		Pb	16 07 15.1	+0.1	
MAIM	**Mastiano**	**1.42**	**200**	P		Pn	16 07 14.0	+0.2	
MAIM				S		Sb	16 07 33.3	+0.7	
MOSI	**Grossmontoni**	**1.44**	**343**	P		Pb	16 07 15.3	-0.1	
MOSI				AML		AML			
	comp=E,409µm,1.0s								
MOSI				AML		AML			
	comp=N,735µm,0.5s								
MOSI				AML		AML			
	comp=N,735µm,0.5s								
MOSI				AML		AML			
	comp=E,380µm,0.3s								
STAL	**STALIGIAL**	**1.48**	**46**	P		Pb	16 07 15.6	-0.4	
BRES	**Bressanone**	**1.50**	**15**	P		Pn	16 07 15.9	+0.6	
BRES				S		Sb	16 07 35.3	-0.1	
BRES				AML		AML			
	comp=E,210µm,1.6s								
BRES				AML		AML			
	comp=N,258µm,1.2s								
BRES				AML		AML			
	comp=E,210µm,0.4s								
BRES				AML		AML			
	comp=N,258µm,0.8s								
BRES				AML		AML			
	comp=N,229µm,0.2s								
BRES				AML		AML			
	comp=E,177µm,0.2s								
FUORN	**Ofenpass-Fuorn**	**1.51**	**336**	P		Pb	16 07 16.3	-0.4	
FUORN				AML		AML			
	comp=E,148µm,0.4s								
FUORN				AML		AML			
	comp=N,87µm,1.1s								
FUORN				AML		AML			
	comp=N,86µm,0.4s								
FUORN				AML		AML			
	comp=E,147µm,0.4s								
ASQU	**Asqua**	**1.52**	**163**	P		Pg	16 07 17.5	-0.6	
ASQU				S		Sb	16 07 36.0	+0.5	
PLMA	**Palmaria, Port**	**1.52**	**219**	P		Pn	16 07 15.9	+0.7	
PLMA				S		Sg	16 07 36.9	-1.1	
PLMA	**Palmaria, Port**	**1.52**	**219**	P		Pn	16 07 15.7	+0.4	
PLMA				AML		AML			
	comp=N,78µm,0.4s								
PLMA				AML		AML			
	comp=E,63µm,0.2s								
PII	**Pisa**	**1.59**	**197**	P		Pb	16 07 17.5	-0.4	
PII				AML		AML			
	comp=E,93µm,0.3s								
PII				AML		AML			
	comp=N,90µm,1.0s								
PII				AML		AML			
	comp=E,94µm,0.3s								
PII				AML		AML			
	comp=N,65µm,0.4s								
MPRI	**Monte Prat**	**1.61**	**51**	P		Pn	16 07 16.2	-0.4	
MPRI				AML		AML			
	comp=E,105µm,1.5s								
MPRI				AML		AML			
	comp=N,195µm,0.4s								
MPRI				AML		AML			
	comp=E,105µm,0.5s								
MPRI				AML		AML			
	comp=N,158µm,0.4s								
MPRI				AML		AML			
	comp=E,79µm,0.7s								
MPRI				AML		AML			
	comp=N,195µm,0.4s								
MPRI				AML		AML			
	comp=E,89µm,0.4s								
ROSI	**Rosskopf**	**1.69**	**6**	P		Pb	16 07 18.7	-0.9	
ROSI				AML		AML			
	comp=E,126µm,0.7s								
ROSI				AML		AML			
	comp=N,168µm,0.4s								
ROSI				AML		AML			
	comp=E,120µm,0.3s								
ROSI				AML		AML			
	comp=N,168µm,0.4s								
PARC	**Parchiule**	**1.77**	**154**	P		Pb	16 07 20.5	-0.4	
FETA	**Feichten**	**1.80**	**350**	*i* Pn		Pg	16 07 22.6	-1.0	
	comp=N,0.5nm,0.1s								
FETA				*e*Sn		Sb	16 07 45.2	+1.3	
	comp=N,8.3nm,0.3s								
ROBS	**Robic**	**1.92**	**58**	*i* Pn		Pn	16 07 19.8	-1.0	
SQTA	**Sankt Quirin**	**1.98**	**1**	Pn		Pb	16 07 23.4	-1.1	
	comp=N,4.2nm,0.2s,SNR=8.8								
SQTA				*i* Sn		Sb	16 07 50.6	+1.8	
	comp=N,66nm,0.4s								
WTTA	**Wattenberg**	**2.04**	**9**	*e*Pn		Pb	16 07 25.5	-0.2	
	comp=N,2.4nm,0.2s								
WTTA				*e*Sn		Sg	16 07 53.2	-1.5	
	comp=N,18nm,0.2s								
WTTA	**Wattenberg**	**2.04**	**9**	AML		AML			
	comp=E,82µm,0.8s								
WTTA				AML		AML			
	comp=N,103µm,0.4s								
CADS	**Cadrg**	**2.05**	**60**	*i* Pn		Pn	16 07 21.6	-1.0	
CADS				*i* Sn		Sn	16 07 47.1	-0.5	
VOJS	**Vojsko**	**2.06**	**67**	*i* Pn		Pn	16 07 21.9	-0.8	
MOTA	**Moosalm**	**2.10**	**359**	*e*Pn		Pg	16 07 28.1	-1.1	
	comp=N,1.6nm,0.1s								
MOTA				*e*Sn		Sb	16 07 53.5	+1.1	
	comp=N,12nm,0.2s								
WATA	**Walderalm**	**2.11**	**7**	*e*Pn		Pb	16 07 26.4	-0.3	
	comp=N,2.8nm,0.1s,SNR=4.7								
WATA				*e*Sn		Sg	16 07 55.6	-1.2	
	comp=N,16nm,0.1s								
JAVS	**Javornik**	**2.13**	**71**	*i* Pn		Pn	16 07 23.3	-0.5	
JAVS				*e*Sn		Sn	16 07 49.9	0.0	
MYKA	**Terra Mystica**	**2.21**	**50**	*e*Pg		Pg	16 07 30.7	-0.6	
	comp=N,7.9nm,0.3s,SNR=7.8								
MYKA				*e*Sn		Sg	16 08 01.4	+1.4	
	comp=N,2.4nm,0.1s								
DAVA	**Damuels**	**2.23**	**337**	*e*Pn		Pb	16 07 27.2	-1.6	
	comp=N,0.5nm,0.1s								
DAVA				*e*Sn		Sb	16 07 55.6	-0.6	
	comp=N,3.4nm,0.3s								
RETA	**Reutte**	**2.26**	**353**	*i* Pg		Pg	16 07 34.0	+1.7	
	comp=N,1.4nm,0.1s								
RETA				Sn		Sb	16 07 57.5	+0.6	
	comp=N,1.5nm,0.2s								
KBA	**Koelnbreinsper**	**2.38**	**39**	*e*Pn		Pb	16 07 29.4	-1.8	
	comp=N,0.2nm,0.1s								
KBA				*e*Sg		Sg	16 08 05.5	+0.2	
	comp=N,1.9nm,0.2s								
SATI	**Passo dei Sala**	**2.40**	**286**	AML		AML			
	comp=N,44µm,0.9s								
SATI				AML		AML			
	comp=N,44µm,1.1s								
SATI				AML		AML			
	comp=E,44µm,0.7s								
LESA	**Schwarzleotal**	**2.42**	**25**	*e*Pn		Pb	16 07 30.2	-1.7	
	comp=E,1.2nm,0.2s								
LESA				*e*Sn		Sg	16 08 04.1	-2.5	
	comp=E,7.7nm,0.2s								
OBKA	**Obir**	**2.68**	**61**	Pn		Pg	16 07 38.8	-1.4	
	comp=E,4.4nm,0.3s								
OBKA				*e*Sg		Sg	16 08 13.4	-1.5	
	comp=E,7.9nm,0.3s								
NVLJ	**Novalja**	**2.72**	**103**	*e*Pn		Pn	16 07 31.4	-0.2	
NVLJ				Sn		Sn	16 08 02.1	-2.0	
VIRC	**Vir**	**2.92**	**108**	*i* Pn		Pn	16 07 34.8	+0.3	
VIRC				Sn		Sn	16 08 07.3	-1.9	
SBF	**Sospel**	**3.01**	**244**	*e*Pn		Pb	16 07 39.1	-2.9	
SBF				*e*Sn		Sn	16 08 11.4	0.0	
	comp=E,3.4nm,0.2s								
SOKA	**Soboth**	**3.05**	**61**	*e*Pn		Pg	16 07 45.1	-2.2	
	comp=E,1.2nm,0.2s								
SOKA				*e*Sg		Sg	16 08 26.1	-0.8	
	comp=E,2.7nm,0.3s								
PGF	**Pioggiola**	**3.12**	**211**	*e*Pn		Pn	16 07 39.1	+1.7	
PGF				*e*Sn		Sn	16 08 11.3	-2.9	
	comp=E,1.6nm,0.2s								
LPG	**La Plagne**	**3.13**	**276**	*e*Pn		Pn	16 07 37.4	-0.2	
LPG				*e*Sn		Sn	16 08 12.4	-2.2	
	comp=E,1.8nm,0.2s								
LPL	**La Plagne**	**3.14**	**277**	*e*Pn		Pn	16 07 37.9	+0.2	
LPL	**La Plagne**	**3.14**	**277**	*e*P		Pn	16 07 40.6	+2.9	
LPL				*e*Sn		Sn	16 08 12.5	-2.4	
	comp=E,2.5nm,0.3s								
MBDF	**Montbardon**	**3.17**	**262**	*e*Pn		Pn	16 07 38.0	0.0	
MBDF	**Montbardon**	**3.17**	**262**	*e*P		Pn	16 07 41.1	+3.1	
MBDF				*e*Sn		Sn	16 08 14.3	-1.1	
	comp=E,1.5nm,0.2s								
MOA	**Molln**	**3.37**	**38**	*e*Pn		Pn	16 07 41.8	+1.2	
	comp=E,0.7nm,0.2s								
MORI	**Morici**	**3.52**	**111**	*e*Pn		Pn	16 07 43.3	+0.5	
MORI				Sn		Sn	16 08 22.3	-1.7	
ZIRJ	**Zirje**	**3.58**	**115**	*e*Pn		Pn	16 07 43.7	+0.2	
ZIRJ				Sn		Sn	16 08 23.4	-1.9	
ORIF	**Oris-en-Rattie**	**3.76**	**267**	*e*Pn		Pn	16 07 44.5	-1.7	
ORIF	**Oris-en-Rattie**	**3.76**	**267**	*e*P		Pn	16 07 49.3	+3.1	
ORIF				*e*Sn		Sn	16 08 27.4	-2.7	
	comp=E,3.0nm,0.3s								
LMR	**La Mourre**	**3.85**	**242**	*e*Pn		Pn	16 07 47.5	+0.2	
LMR	**La Mourre**	**3.85**	**242**	*e*P		Pn	16 07 50.4	+3.1	
LMR				*e*Sn		Sn	16 08 31.1	-1.1	
	comp=E,0.6nm,0.2s								
HINF	**Hinteralfeld**	**3.94**	**312**	*e*Pn		Pn	16 07 47.5	-1.0	
HINF	**Hinteralfeld**	**3.94**	**312**	*e*P		Pn	16 07 51.0	+2.5	
HINF				*e*Sn		Sn	16 08 31.0	-3.3	
	comp=E,1.6nm,0.2s								
CDF	**Champ du Feu**	**4.14**	**321**	*e*Pn		Pn	16 07 50.7	-0.7	
CDF	**Champ du Feu**	**4.14**	**321**	*e*P		Pn	16 07 53.4	+2.0	
CONA	**Conrad Observa**	**4.20**	**49**	*e*Pn		Pn	16 07 50.0	-2.2	
	comp=E,1.6nm,0.5s								
KHC	**Kasperske Hory**	**4.22**	**22**	*e*SN		Sn	16 08 39.0	-2.2	
RONA	**Rosalia, Austr**	**4.31**	**53**	*e*Pn		Pn	16 07 52.3	-1.3	
	comp=E,0.4nm,0.1s								
HAU	**Haudompre**	**4.32**	**311**	*e*Pn		Pn	16 07 53.1	-0.7	
HAU	**Haudompre**	**4.32**	**311**	*e*P		Pn	16 07 55.8	+2.0	
HAU				*e*Sn		Sn	16 08 40.0	-3.7	
	comp=E,2.1nm,0.3s								
RICI	**Ricice**	**4.62**	**110**	*e*Pn		Pn	16 07 57.9	+0.1	
RICI				Sn		Sn	16 08 48.7	-2.3	
VIVF	**Saint-Julien-l**	**4.62**	**267**	*e*Pn		Pn	16 07 57.9	0.0	
VIVF	**Saint-Julien-l**	**4.62**	**267**	*e*P		Pn	16 08 01.5	+3.6	
VIVF				*e*Sn		Sn	16 08 47.9	-3.3	
CLL	**Collm**	**6.19**	**11**	*e*Pg		Pg	16 08 46.0	-1.3	
CLL				*e*Sg		Sg	16 10 05.0	-2.3	

ROM 20 16:07:39.4±0.1,45°245N±0°003×11°174E±0°005, h19km,ML2.1/14,1C-1D,Error ellipse: s-maj=0.4km s-min=0.1km az=265.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPPE	**Oppeano**	**0.06**	**359**	P	Pg	16 07 43.0	0.0
OPPE				S	Sg	16 07 46.1	+0.8
OPPE				AML	AML		
	comp=E,1475µm,0.3s						
OPPE				AML	AML		
	comp=N,1176µm,1.5s						
OPPE				AML	AML		
	comp=E,1480µm,0.3s						
OPPE				AML	AML		
	comp=N,1176µm,0.5s						
SERM	**Sermide**	**0.25**	**160**	⇓P	Pg	16 07 45.2	0.0
SERM				S	Sg	16 07 49.8	+0.6
SERM				AML	AML		
	comp=N,5650µm,1.6s						
SERM				AML	AML		
	comp=E,8150µm,1.6s						
SERM				AML	AML		
	comp=N,5600µm,1.6s						
SERM				AML	AML		
	comp=N,239µm,0.1s						
SERM				AML	AML		
	comp=E,330µm,0.2s						
SBPO	**S.Benedetto Po**	**0.26**	**223**	⇑P	Pg	16 07 45.5	+0.1
TREG	**Tregnago**	**0.28**	**358**	P	Pb	16 07 45.9	+0.2
TREG				S	Sg	16 07 50.4	+0.4
TREG				AML	AML		
	comp=E,756µm,0.3s						
TREG				AML	AML		
	comp=N,680µm,1.2s						
TREG				AML	AML		
	comp=N,680µm,0.8s						
TREG				AML	AML		
	comp=N,551µm,0.2s						
TREG				AML	AML		
	comp=E,548µm,0.1s						
ZOVE	**Zovencedo**	**0.30**	**47**	P	Pb	16 07 46.3	0.0
ZOVE				S	Sb	16 07 51.1	+0.3
TEOL	**Teolo**	**0.37**	**72**	P	Pb	16 07 47.4	0.0
TEOL				S	Sb	16 07 53.1	+0.2
TEOL				AML	AML		
	comp=E,272µm,1.2s						
TEOL				AML	AML		
	comp=N,298µm,0.4s						
TEOL				AML	AML		
	comp=E,272µm,1.2s						
TEOL				AML	AML		
	comp=N,298µm,0.4s						
TEOL				AML	AML		
	comp=N,298µm,1.6s						
TEOL				AML	AML		
	comp=E,272µm,0.8s						
TEOL				AML	AML		
	comp=E,230µm,0.3s						
TEOL				AML	AML		
	comp=N,228µm,0.3s						
MARN	**Marana (Italy)**	**0.39**	**4**	P	Pb	16 07 48.0	+0.1
MARN				S	Sb	16 07 53.8	+0.1
CAVE	**Cavezzo**	**0.40**	**198**	P	Pg	16 07 47.7	0.0

CAVE				S	Sb	16 07 54.2	+0.6	
ROVR	**Rover Verones**	**0.41**	**350**	P	Pg	16 07 48.1	+0.1	
ROVR				S	Sb	16 07 54.0	-0.1	
ROVR				AML	AML			
	comp=N,409μm,0.5s							
ROVR				AML	AML			
	comp=N,928μm,0.5s							
ROVR				AML	AML			
	comp=E,542μm,1.0s							
ROVR				AML	AML			
	comp=E,228μm,1.0s							
ROVR				AML	AML			
	comp=E,435μm,0.1s							
ROVR				AML	AML			
	comp=N,397μm,0.2s							
ROVR				AML	AML			
	comp=N,889μm,0.2s							
ROVR				AML	AML			
	comp=E,170μm,0.2s							
ZEN8	**San Zeno di Mo**	**0.50**	**322**	P	Pg	16 07 49.0	-0.6	
MBAL	**Monte Baldo -**	**0.50**	**334**	P	Pg	16 07 49.5	-0.1	
MBAL				S	Sb	16 07 56.8	+0.1	
BALD	**Monte Baldo**	**0.51**	**330**	P	Pb	16 07 49.9	+0.1	
BALD				S	Sb	16 07 57.5	+0.7	
MAGA	**Magasa**	**0.66**	**324**	P	Pb	16 07 52.2	0.0	
MAGA				S	Sg	16 08 01.4	+0.2	
MAGA				AML	AML			
	comp=E,355μm,1.5s							
MAGA				AML	AML			
	comp=N,244μm,1.4s							
MAGA				AML	AML			
	comp=N,244μm,0.6s							
MAGA				AML	AML			
	comp=N,219μm,0.2s							
MAGA				AML	AML			
	comp=E,277μm,0.3s							
FETA	**Feichten**	**1.80**	**350**	*e*Sg	Sg	16 08 36.2	-1.4	
	comp=E,2.6nm,0.4s							
SQTA	**Sankt Quirin**	**1.98**	**1**	*i* Pn	Pg	16 08 17.3	-0.1	
	comp=E,1.7nm,0.2s							
SQTA				*e*Sg	Sg	16 08 41.7	-1.4	
	comp=E,9.2nm,0.3s							
WTTA	**Wattenberg**	**2.04**	**9**	*e*Sg	Sg	16 08 44.3	-1.0	
	comp=E,5.9nm,0.3s							
MOTA	**Moosalm**	**2.10**	**359**	*e*Sg	Sg	16 08 45.2	-1.9	
	comp=E,1.9nm,0.2s							
WATA	**Walderalm**	**2.11**	**7**	*e*Sn	Sn	16 08 41.1	+1.5	
	comp=E,6.8nm,0.4s							
LESA	**Schwarzleotal**	**2.42**	**25**	*e*Sn	Sg	16 08 54.8	-2.3	
	comp=E,1.3nm,0.2s							

CATAC ***20*** *16:19:55.9±0.7, 13°N±4°×9°0W±°, h27km±3km, M3.2/10, MLv3.2/10, Error ellipse: s-maj=9.7km s-min=5.0km az=26.6, confirmed*
GCG ***20*** *16:19:56.9±0.9, 13°47'N×90°01'W, h52km±16km, MD3.9, ML4.0*
SNET ***20*** *16:19:56.0±1.1, 13°40'N×90°01'W, h48km±11km, ML3.0*
ISC 20 16:19:58.8±1.6, 13°47'N±0'.06×89°86W±0'.04, h18km±5km, n47, σ0⁰95/53, 7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**0.41**	**337**	S	**Sn**	**16 20 15.2**	**-1.7**
FAME	**Alcaldia de Sa**	**0.41**	**337**	P	**Pb**	**16 20 07.3**	**-0.3**
CEVE	**Cerro Verde**	**0.42**	**32**	⇓*e*P	**Pn**	**16 20 09.1**	**-1.1**
CEVE	**Cerro Verde**	**0.42**	**32**	P	**Pn**	**16 20 09.1**	**-1.1**
CEVE	**Cerro Verde**	**0.42**	**32**	S	**Sn**	**16 20 19.4**	**+1.7**
SBLS	**San Blas**	**0.43**	**31**	⇓*i*P	**Pn**	**16 20 09.1**	**-1.3**
JAYA	**Jayaque - finc**	**0.44**	**65**	*e*P	**Pb**	**16 20 08.8**	**+0.7**
JAYA				*e*S	**Sn**	**16 20 18.2**	**+0.3**
JAYA	**Jayaque - finc**	**0.44**	**65**	*i* P	**Pb**	**16 20 08.8**	**+0.7**
JAYA	**Jayaque - finc**	**0.44**	**65**	S	**Sn**	**16 20 19.3**	**+1.4**
JAYA	**Jayaque - finc**	**0.44**	**65**	P	**Pb**	**16 20 08.8**	**+0.7**
NUBE	**Las Nubes**	**0.44**	**10**	⇓*i*P	**Pb**	**16 20 08.7**	**+0.5**
NUBE				*e*S	**Sn**	**16 20 17.9**	**-0.1**
NUBE	**Las Nubes**	**0.44**	**10**	*i* P	**Pb**	**16 20 08.6**	**+0.5**
NUBE				*i* S	**Sn**	**16 20 18.0**	**0.0**
NUBE	**Las Nubes**	**0.44**	**10**	P	**Pb**	**16 20 08.6**	**+0.5**
SNJE	**San Jose**	**0.47**	**31**	⇓*e*P	**Pn**	**16 20 09.5**	**-1.3**
RTR	**El Retiro**	**0.47**	**25**	⇓*e*P	**Pn**	**16 20 09.6**	**-1.2**
LOAL	**Lomas de Alarc**	**0.53**	**8**	*e*P	**Pg**	**16 20 10.3**	**+0.7**
LOAL	**Lomas de Alarc**	**0.53**	**8**	P	**Pg**	**16 20 10.2**	**+0.7**
LOAL	**Lomas de Alarc**	**0.53**	**8**	S	**Sn**	**16 20 20.7**	**+0.5**
CEDA	**San Andres**	**0.56**	**53**	P	**Pg**	**16 20 10.7**	**+0.8**
CEDA	**San Andres**	**0.56**	**53**	S	**Sn**	**16 20 22.3**	**+1.6**
PMON	**Piamonte**	**0.58**	**65**	⇓*i*P	**Pg**	**16 20 10.8**	**+0.5**
PMON	**Piamonte**	**0.58**	**65**	P	**Pg**	**16 20 10.9**	**+0.5**
PMON	**Piamonte**	**0.58**	**65**	S	**Sn**	**16 20 22.2**	**+0.9**
BOQS	**Boqueron**	**0.62**	**64**	*e*P	**Pg**	**16 20 11.6**	**+0.4**
RBDL	**Robledal**	**0.66**	**14**	⇓*e*P	**Pg**	**16 20 12.0**	**0.0**
LOMA	**Loma Larga**	**0.69**	**75**	*e*P	**Pb**	**16 20 11.8**	**-0.6**
LOMA	**Loma Larga**	**0.69**	**75**	S	**Sn**	**16 20 25.0**	**+0.9**
LOMA	**Loma Larga**	**0.69**	**75**	P	**Pb**	**16 20 12.2**	**-0.2**
LFRS	**El Faro**	**0.79**	**78**	*e*P	**Pb**	**16 20 13.8**	**-0.2**
LFRS				*e*S	**Sn**	**16 20 27.0**	**+0.5**
LBRS	**Las Brisas**	**0.83**	**71**	*e*P	**Pb**	**16 20 14.8**	**0.0**
PCG5	**San Vicente Pa**	**0.90**	**326**	*i* P	**Pg**	**16 20 16.4**	**0.0**
PCG5				*e*S	**Sn**	**16 20 31.0**	**+1.6**
FG16	**Alotenango, Sa**	**1.02**	**322**	*e*P	**Pg**	**16 20 19.3**	**+0.5**
FG16				IAML		16 20 35.2	
	comp=N,5μm,0.4s						
MTO3	**Montecristo**	**1.04**	**27**	*i* P	**Pb**	**16 20 17.0**	**-1.5**
MTO3	**Montecristo**	**1.04**	**27**	P	**Pb**	**16 20 16.8**	**-1.6**
MTO3	**Montecristo**	**1.04**	**27**	S	**Sg**	**16 20 33.2**	**+0.3**
TECO	**Alcaldia de Te**	**1.05**	**86**	S	**Sg**	**16 20 32.9**	**0.0**
PACA	**Pacayal**	**1.49**	**90**	*e*P	**Pn**	**16 20 24.2**	**-0.6**
PACA	**Pacayal**	**1.49**	**90**	P	**Pn**	**16 20 24.5**	**-0.3**
PACA	**Pacayal**	**1.49**	**90**	S	**Sb**	**16 20 45.4**	**+0.7**
RANC	**El Ranchito**	**1.52**	**91**	S	**Sb**	**16 20 46.8**	**+1.1**
RANC	**El Ranchito**	**1.52**	**91**	P	**Pn**	**16 20 24.5**	**-0.8**
STG8	**El Palmar, Qui**	**1.75**	**304**	*e*P	**Pn**	**16 20 28.7**	**+0.2**
STG8				*e*S	**Sb**	**16 20 53.1**	**+0.8**
LCND	**La Caada**	**1.92**	**94**	*e*P	**Pn**	**16 20 28.6**	**-1.9**
LCND	**La Caada**	**1.92**	**94**	P	**Pn**	**16 20 29.0**	**-1.6**
LCND	**La Caada**	**1.92**	**94**	S	**Sn**	**16 20 54.5**	**+0.3**
CNCH	**Conchagua**	**1.98**	**95**	S	**Sb**	**16 20 57.2**	**-1.5**
CSGN	**Cosiguina Volc**	**2.29**	**102**	S	**Sn**	**16 21 03.7**	**+0.2**

KRNET ***20*** *16:26:26.5±0.1, 39°56N×72°67E, h15km, mb3.2*
NNC ***20*** *16:26:31.9±5.0, 39°94N×72°30E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=37.3km s-min=16.8km az=178.0*
SOME ***20*** *16:26:32.2, 39°88N×72°27E, h10km*
ISC 20 16:26:27.4±0.9, 39°57N±0'.06×72°65E±0'.03, h10km, n31, σ2⁰35/54, 38C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.66**	**263**	⇑*i*P	**Pg**	**16 26 39.7**	**-0.6**
DRK				⇑*i*S	**Sg**	**16 26 49.3**	**+0.3**
SFK	**Sufi-Kurgan**	**0.80**	**56**	⇑*i*P	**Pg**	**16 26 41.8**	**-1.0**
SFK				⇑*i*S	**Sb**	**16 26 53.0**	**-1.5**
OHH	**Osh**	**0.96**	**6**	⇓*i*P	**Pg**	**16 26 45.0**	**-1.0**
OHH				⇓*i*S	**Sb**	**16 26 58.8**	**-0.3**
SALK	**Salom-Alik**	**1.59**	**34**	⇑*i*P	**Pb**	**16 26 56.3**	**-0.8**
SALK				⇑*i*S	**Sg**	**16 27 18.2**	**-0.5**
ARSB	**Arslanbob**	**1.77**	**8**	⇑*i*P	**Pb**	**16 26 59.8**	**-0.3**
ARSB				⇑*i*S	**Sg**	**16 27 24.2**	**-0.3**
GAR	**Garm**	**1.90**	**253**	⇑*i*P	**Pb**	**16 27 02.0**	**-0.2**
GAR				⇑*i*S	**Sg**	**16 27 27.8**	**-0.6**
TRKS	**Terek-Say**	**2.27**	**330**	⇑*i*P	**Pb**	**16 27 06.7**	**-1.9**
TRKS				⇑*i*S	**Sb**	**16 27 36.1**	**-0.8**
ARK	**Arkit**	**2.29**	**347**	⇑*i*P	**Pb**	**16 27 07.8**	**-1.1**
ARK				⇑*i*S	**Sb**	**16 27 37.9**	**+0.6**
ARLS	**Aral**	**2.62**	**29**	⇑*i*P	**Pb**	**16 27 12.1**	**-2.5**
ARLS				⇑*i*S	**Sb**	**16 27 45.6**	**-1.3**
JNKS	**Jany-Kuch**	**2.74**	**56**	⇑*i*P	**Pb**	**16 27 13.8**	**-2.9**
JNKS				⇑*i*S	**Sb**	**16 27 48.4**	**-2.0**
CHQR	**Chuyangaron**	**2.86**	**253**	⇑*i*P	**Pb**	**16 27 15.7**	**-2.9**
CHQR				⇑*i*S	**Sb**	**16 27 51.5**	**-2.2**
MNAS	**Manas**	**2.92**	**358**	⇑*i*P	**Pb**	**16 27 16.6**	**-3.1**
MNAS				⇑*i*S	**Sb**	**16 27 53.0**	**-2.5**
UCH	**Uchtor**	**3.01**	**27**	⇓*i*P	**Pb**	**16 27 17.8**	**-3.6**
UCH				⇓*i*S	**Sb**	**16 27 55.5**	**-2.9**
MRKS	**Merke**	**3.21**	**8**	Pg	**Pg**	**16 27 27.1**	**-1.8**
	7.1nm,0.3s						
MRKS				Lg	Lg	16 28 06.2	
	22nm,0.4s						
MRKS	**Merke**	**3.21**	**8**	*e*P	**Pg**	**16 27 27.1**	**-1.8**
	7.1nm,0.3s						
MRKS				*e*S	**Sb**	**16 28 06.2**	**+2.6**
	22nm,0.4s						
EKS2	**Erkin-Say**	**3.21**	**15**	⇑*i*P	**Pn**	**16 27 20.4**	**+2.4**
EKS2				⇑*i*S	**Sb**	**16 28 00.0**	**-3.7**
IUG	**Iuzhnay**	**3.25**	**323**	Pg	**Pb**	**16 27 23.9**	**-1.4**
	8.9nm,0.3s						
IUG				Lg	Lg	16 28 00.8	
	42nm,0.5s						
AAK	**Ala-Archa**	**3.37**	**24**	⇑Pg	**Pb**	**16 27 25.4**	**-2.0**
	3.4nm,0.7s						
AAK				⇓Lg	Lg	16 28 09.3	
	2.7nm,0.4s						
AAK	**Ala-Archa**	**3.37**	**24**	⇑*i*P	**Pn**	**16 27 22.6**	**+2.3**
AAK				⇑*i*S	**Sb**	**16 28 03.7**	**-4.8**
KBK	**Karagaybulak**	**3.54**	**29**	⇑*i*P	**Pn**	**16 27 25.0**	**+2.3**
KBK				⇑*i*S	**Sn**	**16 28 07.8**	**+3.1**
ULHL	**Ulahol**	**3.82**	**44**	⇑*i*P	**Pn**	**16 27 28.9**	**+2.4**
ULHL				⇑*i*S	**Sn**	**16 28 14.2**	**+2.6**
BOOM	**Boomskoye usch**	**3.84**	**39**	⇑*i*P	**Pn**	**16 27 29.2**	**+2.5**
BOOM				⇑*i*S	**Sn**	**16 28 14.8**	**+2.8**
KK31	**Karatay Array**	**3.88**	**336**	Pg	**Pb**	**16 27 31.8**	**-4.2**
	1.1nm,0.3s,baz=161,slow=14,SNR=20						
KK31				⇑Lg	Lg	16 28 20.9	
	9.1nm,0.4s,baz=151,slow=24,SNR=12						
USP	**Ospenovka**	**3.95**	**20**	⇑*i*P	**Pn**	**16 27 30.5**	**+2.4**
USP				⇑*i*S	**Sn**	**16 28 17.5**	**+2.9**
BRLS	**Boroldav**	**4.06**	**329**	Pg	**Pb**	**16 27 35.6**	**-3.3**
	1.3nm,0.3s						
BRLS				Lg	Lg	16 28 21.6	
	4.8nm,0.4s						
BRLS	**Boroldav**	**4.06**	**329**	*e*P	**Pb**	**16 27 35.6**	**-3.3**
	1.3nm,0.3s						
BRLS				*e*S	**Sn**	**16 28 21.6**	**+4.4**
	4.8nm,0.4s						
KST	**Kastek**	**4.28**	**35**	Pg	**Pg**	**16 27 50.2**	**+0.8**
	1.2nm,0.2s						
KST				Lg	Lg	16 28 46.2	
	7.0nm,0.5s						
KST	**Kastek**	**4.28**	**35**	*e*P	**Pg**	**16 27 50.2**	**+0.8**
	1.2nm,0.2s						
KST				*e*S	**Sg**	**16 28 46.2**	**+1.4**
	7.0nm,0.5s						
DGS	**Degeres**	**4.36**	**32**	Pg	**Pg**	**16 27 49.9**	**-1.0**
	3.0nm,0.5s						
DGS				Lg	Lg	16 28 46.1	
	7.5nm,0.7s						
TARG	**Taragay, Kyrgy**	**4.48**	**60**	⇑*i*P	**Pn**	**16 27 38.0**	**+2.3**
TARG				⇑*i*S	**Sn**	**16 28 30.1**	**+2.0**
KRBS	**Karabastau**	**4.71**	**28**	Pg	**Pg**	**16 27 56.2**	**-1.4**
	1.3nm,0.5s						
KRBS				Lg	Lg	16 28 56.7	
	4.0nm,0.6s						

IDC ***20*** *16:26:47.4±2.2, 1°59N×126°64E, h0km, mb3.3/3, mbtmp3.4/3, MS3.3/1, Error ellipse: s-maj=174.2km s-min=27.7km az=66.0*
DJA ***20*** *16:26:50.6±0.2, 2°N±2°×12°6E±°, h10km, M3.3/12, MLv3.3/12*
ISC 20 16:26:50.2±1.0, 1°52N±0'.05×126°42E±0'.06, h10km, n11, σ0⁰96/15, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**128**	P	**Pn**	**16 27 13.0**	**-0.1**
TNTI				S	**Sb**	**16 27 29.7**	**+1.0**
SGSI	**Sangihe**	**2.33**	**338**	P	**Pn**	**16 27 29.2**	**+0.6**
SGSI				S	**Sn**	**16 27 58.5**	**+1.2**
LBMI	**Labuha**	**2.40**	**153**	P	**Pn**	**16 27 30.0**	**+0.4**
KMSI	**Cibinong**	**2.61**	**249**	P	**Pn**	**16 27 32.3**	**-0.2**
KMSI				S	**Sn**	**16 28 05.0**	**+0.7**
SANI	**Sanana**	**3.57**	**187**	P	**Pn**	**16 27 46.5**	**+0.8**
SANI				S	**Sn**	**16 28 29.1**	**+1.1**
LUWI	**Luwuk**	**4.45**	**235**	P	**Pn**	**16 27 57.7**	**0.0**
LUWI				S	**Sn**	**16 28 50.7**	**+1.1**
MRSI	**Marisa**	**4.60**	**257**	P	**Pn**	**16 28 00.0**	**+0.2**
WRA	**Warramunga Arr**	**22.70**	**160**	P	**P**	**16 31 50.6**	**-1.7**
	0.6nm,0.5s,baz=340,slow=11,SNR=28						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.07**	**164**	P	**P**	**16 32 23.1**	**-1.1**
	0.4nm,0.6s,baz=347,slow=10,SNR=8.7						
	0.4nm,0.6s						
HNR	**Honiara**	**35.12**	**109**	LR	LR	16 48 35.3	
	comp=Z,40nm,18.1s,baz=82,slow=37						
MKAR	**Makanchi Array**	**59.19**	**326**	P	**P**	**16 36 50.7**	**-0.8**
	0.2nm,0.5s,baz=120,slow=10,SNR=2.4						
	0.2nm,0.5s						

IDC ***20*** *16:57:19.6±2.1, 1°09N×125°35E, h0km, mb3.2/3, mbtmp3.3/3, Error ellipse: s-maj=195.1km s-min=27.6km az=64.0*
DJA ***20*** *16:57:22.9±1.3, 1°N±4°×12°6E±°, h11km±13km, M3.1/8, MLv3.1/8*
ISC 20 16:57:23.6±1.4, 1°6N±0'.2×126°5E±0'.1, h35km, n6, σ0⁰74/6, mb3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**131**	P	**Pn**	**16 57 44.2**	**+0.5**
KMSI	**Cibinong**	**2.67**	**249**	P	**Pn**	**16 58 04.6**	**+0.5**
SANI	**Sanana**	**3.61**	**188**	P	**Pn**	**16 58 17.0**	**-0.1**
WRA	**Warramunga Arr**	**22.71**	**161**	P	**P**	**17 02 21.9**	**-0.8**
	0.6nm,0.5s,baz=336,slow=11,SNR=16						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**17 02 55.0**	**+0.7**
	0.5nm,0.9s,baz=345,slow=11,SNR=9.4						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**17 07 20.9**	**-0.4**
	0.1nm,0.5s,baz=121,slow=9.1,SNR=1.4						
	0.1nm,0.5s						

IDC ***20*** *17:04:16.9±1.2, 1°.32N×125°.98E, h0km, mb4.0/5, mbtmp4.0/6, ML3.6/1, MS3.2/3, Error ellipse: s-maj=108.4km s-min=17.5km az=67.0*
DJA ***20*** *17:04:19.5±0.2, 2°N±2°×12°6E±°, h10km, M4.0/17, mB4.8/1, mb4.1/7, MLv3.9/17, Mw(mB)4.0/1*
ISC 20 17:04:21.4±0.9, 1°54N±0'.05×126°37E±0'.05, h35km, n19, σ1⁰29/22, mb4.1/5, MS3.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**127**	P	**Pn**	**17 04 42.2**	**-0.2**
SGSI	**Sangihe**	**2.30**	**338**	P	**Pn**	**17 04 57.5**	**+0.7**
SGSI				S	**Sn**	**17 05 25.7**	**+1.8**
KMSI	**Cibinong**	**2.58**	**248**	P	**Pn**	**17 04 59.9**	**-0.8**
KMSI				S	**Sn**	**17 05 31.5**	**+0.7**
SANI	**Sanana**	**3.58**	**186**	P	**Pn**	**17 05 13.8**	**-0.7**
LUWI	**Luwuk**	**4.42**	**235**	P	**Pn**	**17 05 26.3**	**+0.3**
LUWI				S	**Sn**	**17 06 18.0**	**+1.7**
MRSI	**Marisa**	**4.56**	**257**	P	**Pn**	**17 05 28.2**	**+0.3**
MRSI				S	**Sn**	**17 06 20.1**	**+0.4**
NLAI	**Namlea**	**4.80**	**171**	P	**Pn**	**17 05 32.0**	**+0.8**
NLAI				S	**Sn**	**17 06 29.0**	**+3.4**
APSI	**Ampana**	**5.31**	**243**	P	**Pn**	**17 05 39.7**	**+1.4**
MPSI	**Mapaga**	**6.58**	**260**	P	**Pn**	**17 05 56.4**	**+0.6**
	0.0nm7.4nm,0.8s						
TTSI	**Tana Toraja**	**7.98**	**235**	P	**Pn**	**17 06 14.9**	**0.0**
	16nm,0.9s						
TTSI				S	**Sn**	**17 07 44.9**	**+0.9**
	16nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.52**	**182**	P	**P**	**17 08 43.7**	**-2.3**
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.7						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**22.73**	**160**	P	**P**	**17 09 19.4**	**-1.1**
	6.6nm,0.7s,baz=338,slow=11,SNR=35						
	6.6nm,0.7s						
PMG	**Port Moresby**	**23.38**	**118**	LR	LR	17 22 45.7	
	comp=Z,44nm,18.1s,baz=317,slow=47						
ASAR	**Alice Springs**	**26.10**	**164**	P	**P**	**17 09 52.0**	**-0.2**
	0.9nm,0.5s,baz=346,slow=13,SNR=24						
ASAR				PcP	**PcP**	**17 13 19.5**	**+0.1**
	0.2nm,0.5s,baz=356,slow=2.3,SNR=4.9						
	0.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.73**	**304**	LR	LR	17 23 10.0	
	comp=Z,23nm,20.1s,baz=110,slow=36						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**17 11 21.7**	**+0.5**
	1.2nm,0.5s,baz=332,slow=11,SNR=4.5						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**17 14 17.4**	**-1.3**
	0.4nm,0.3s,baz=121,slow=7.9,SNR=12						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	P	17 14 50.0	+2.6
	0.9nm,0.3s,baz=130,slow=6.0,SNR=9.9						
	0.9nm,0.3s						

VNDA	**Vanda**	**81.31**	**173**	LR	LR	17 53 55.8		
	comp=Z,21nm,18.3s,baz=190,slow=37							

NEIC ***20*** *17:07:16.0±2.1, 19°09N±0°.06×65°76W±0°.07, h35km±2km, ML2.7/16, Md2.9/10(RSPR), Error ellipse: s-maj=12.9km s-min=8.7km az=51.0*
SDD ***20*** *17:07:15.1±1.7, 19°21N×65°90W, h22km±24km, MD3.4, ML3.1*
RSPR ***20*** *17:07:19.7, 18°96N×65°86W, h9km±3km, MD2.9/10*
ISC 20 17:07:14.5±2.7, 19°13N±0°.10×65°76W±0°.09, h25km±14km, n43, σ1⁰16/50, 6C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCPR	**Guaynabo City**	**0.87**	**201**		**Pb**	**17 07 29.6**	**-1.4**
GCPR				IAML		17 07 47.2	
	comp=E,140nm,0.4s						
GCPR	**Guaynabo City**	**0.87**	**201**		**Sb**	**17 07 42.0**	**-0.4**
GCPR	**Guaynabo City**	**0.87**	**201**	⇓*e*P	**Pn**	**17 07 32.2**	**+0.9**
GCPR	**Guaynabo City**	**0.87**	**201**	*e*S	**Sb**	**17 07 42.0**	**-0.4**
EMPR	**Esperanza - Ma**	**0.98**	**229**		**Pb**	**17 07 33.9**	**+1.0**
EMPR					**Sb**	**17 07 44.8**	**-0.5**
EMPR	**Esperanza - Ma**	**0.98**	**229**	IAML		17 07 46.4	
	comp=E,257nm,0.7s						
EMPR				IAML		17 07 48.1	
	comp=E,276nm,0.5s						
EMPR	**Esperanza - Ma**	**0.98**	**229**	⇑*e*P	**Pb**	**17 07 33.9**	**+1.0**
EMPR	**Esperanza - Ma**	**0.98**	**229**	*e*S	**Sb**	**17 07 44.8**	**-0.5**
HUMP	**Col San Antoni**	**0.99**	**185**		**Pn**	**17 07 31.7**	**-1.1**
HUMP				IAML		17 07 46.6	
	comp=E,360nm,0.2s						
HUMP				IAML		17 07 46.6	
	comp=E,151nm,0.2s						
HUMP	**Col San Antoni**	**0.99**	**185**		**Sb**	**17 07 45.4**	**-0.2**
HUMP	**Col San Antoni**	**0.99**	**185**	⇑*e*P	**Pb**	**17 07 34.2**	**+1.3**
HUMP	**Col San Antoni**	**0.99**	**185**	*e*S	**Sb**	**17 07 45.4**	**-0.2**
ECPR	**Experimental S**	**0.99**	**216**	⇑*e*P	**Pn**	**17 07 33.6**	**+0.7**
ECPR	**Experimental S**	**0.99**	**216**	*e*S	**Sb**	**17 07 45.1**	**-0.5**
SJG	**San Juan**	**1.08**	**200**		**Pn**	**17 07 33.7**	**-0.4**
SJG				IAML		17 07 48.6	
	comp=E,171nm,0.5s						
SJG				IAML		17 07 53.5	
	comp=E,148nm,0.3s						
SJG	**San Juan**	**1.08**	**200**	*e*Pg	**Pb**	**17 07 35.4**	**+0.8**
SJG				⇓*e*Sg	**Sn**	**17 07 48.2**	**0.0**
SJG	**San Juan**	**1.08**	**200**	⇑*e*P	**Pb**	**17 07 35.4**	**+0.8**
SJG	**San Juan**	**1.08**	**200**	*e*S	**Sn**	**17 07 46.9**	**-1.4**
AOPR	**Arecibo Observ**	**1.23**	**231**		**Pn**	**17 07 37.2**	**+1.0**
AOPR					**Sn**	**17 07 51.1**	**-0.9**
AOPR	**Arecibo Observ**	**1.23**	**231**	⇓*e*Pg	**Pn**	**17 07 37.1**	**+0.9**
AOPR				⇓*e*Sg	**Sn**	**17 07 51.4**	**-0.6**
AOPR				IAML		17 07 55.9	
	comp=E,671nm,0.3s						
AOPR				IAML		17 07 55.9	
	comp=N,686nm,0.3s						
AOPR	**Arecibo Observ**	**1.23**	**231**	⇓*i*P	**Pn**	**17 07 37.2**	**+1.0**
AOPR	**Arecibo Observ**	**1.23**	**231**	*e*S	**Sn**	**17 07 51.1**	**-0.9**
UUPR	**Utuado, UPR, P**	**1.26**	**226**		**Pn**	**17 07 37.7**	**+1.1**
UUPR					**Sn**	**17 07 52.3**	**-0.6**
UUPR	**Utuado, UPR, P**	**1.26**	**226**	⇓*e*P	**Pn**	**17 07 37.7**	**+1.1**
UUPR	**Utuado, UPR, P**	**1.26**	**226**	*e*S	**Sn**	**17 07 52.3**	**-0.6**
OBIP	**Obispado Ponce**	**1.35**	**217**		**Pn**	**17 07 37.1**	**-0.8**
OBIP				IAML		17 08 00.7	
	comp=E,81nm,0.4s						
OBIP	**Obispado Ponce**	**1.35**	**217**		**Sn**	**17 07 54.7**	**-0.3**
OBIP	**Obispado Ponce**	**1.35**	**217**	⇓*e*P	**Pn**	**17 07 39.2**	**+1.4**
OBIP	**Obispado Ponce**	**1.35**	**217**	*e*S	**Sn**	**17 07 54.7**	**-0.3**
LSP	**Las Mesas**	**1.58**	**233**		**Pb**	**17 07 42.9**	**-0.2**
LSP					**Sn**	**17 07 59.8**	**-0.9**
LSP	**Las Mesas**	**1.58**	**233**	⇑*e*P	**Pb**	**17 07 42.9**	**-0.2**
LSP	**Las Mesas**	**1.58**	**233**	*e*S	**Sn**	**17 07 59.8**	**-0.9**
MLPR	**Magueyes Islan**	**1.68**	**227**	*e*Pg	**Pn**	**17 07 44.0**	**+1.5**
MLPR				*e*Sg	**Sn**	**17 08 04.9**	**+1.7**
MLPR				IAML		17 08 05.8	
	comp=E,12nm,0.2s						
MLPR				IAML		17 08 10.0	
	comp=N,10.0nm,0.3s						
MLPR	**Magueyes Islan**	**1.68**	**227**	⇑*e*P	**Pn**	**17 07 43.9**	**+1.5**
MLPR	**Magueyes Islan**	**1.68**	**227**	*e*S	**Sn**	**17 08 02.8**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.70**	**229**		**Pn**	**17 07 44.3**	**+1.6**
CRPR					**Sn**	**17 08 03.3**	**-0.4**
CRPR	**Cabo Rojo, PR**

ML2.3/4, Error ellipse: s-maj=24.2km s-min=10.7km az=80.0
*BNS **20** 17:28:38.6±0.7, 52°.98N×9°.22E, h5km, ML3.2*
*BGR **20** 17:28:38.9±0.2, 52°.92N×9°.32E, h5km, ML3.2/13, Error ellipse: s-maj=3.3km s-min=2.2km az=124.0*
*BER **20** 17:28:39.0±2.2, 53°.06N×9°.31E, h0km±35km, ML2.1, ML3.1(DNK)*
*PRU **20** 17:28:42.6, 52°.80N×9°.39E, h10km*
ISC 20 17:28:35.6±0.7, 53°.07N±0°.03×9°.15E±0°.02, h0km, n81, α2°47/131, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEEL	**Gasfeld**	**0.15**	**139**	*e*Pg	**Pg**	**17 28 39.5**	**+1.1**
GOLB	**Goldborn**	**0.22**	**132**	*e*Pg	**Pg**	**17 28 39.7**	**-0.1**
GOLB				*e*Sg	**Sg**	**17 28 42.9**	**+0.3**
SYKE	**Friedhofskapel**	**0.25**	**221**	*e*Pg	**Pg**	**17 28 44.5**	**+4.1**
SYKE				*e*Sg	**Sg**	**17 28 50.8**	**+7.1**
RETHO	**Rethem**	**0.35**	**159**	*e*Sg	**Sg**	**17 28 48.2**	**+1.4**
RETH	**Rethem/Aller,**	**0.35**	**159**	*e*Pg	**Pb**	**17 28 43.5**	**-1.2**
RETH				*e*Sg	**Sg**	**17 28 47.6**	**+0.7**
KUDEN	**Kuden**	**0.60**	**2**	*e*Pg	Pn	17 28 58.5	+7.2
KUDEN				*e*Sg	Sn	17 29 12.6	+11
FAHL	**Forsthaus Ahlh**	**0.62**	**255**	*e*Sg	**Sn**	**17 29 04.5**	**+2.1**
SEVE	**Sevelten**	**0.71**	**248**	*e*Pg	**Pn**	**17 28 54.1**	**+1.3**
SEVE				*e*Sg	**Sn**	**17 29 06.5**	**+2.1**
HAM4	**Hamburger Ster**	**0.77**	**57**	*e*Pg	**Pn**	**17 28 54.9**	**+1.2**
HAM4				*e*Sg	**Sn**	**17 29 07.7**	**+1.8**
RAST	**Rastdorf**	**0.88**	**260**	*e*Pg	**Pn**	**17 28 58.1**	**+2.9**
BSEG	**Bad Segeberg**	**1.11**	**38**	*e*Pg	**Pn**	**17 28 59.7**	**+1.3**
IBBN	**Ibbenburen**	**1.14**	**229**	*e*Pg	**Pn**	**17 28 59.0**	**+0.2**
IBBN				*e*Sg	**Sn**	**17 29 16.4**	**+1.3**
ZARR	**Zarrentin**	**1.17**	**65**	*e*Sg	**Sn**	**17 29 17.6**	**+2.0**
GORT1	**Trebel**	**1.30**	**93**	*e*Pg	**Pb**	**17 29 02.6**	**+1.8**
GORT1				*e*Sg	**Sn**	**17 29 19.6**	**+0.6**
KASTN	**Kahler Asten**	**1.92**	**194**	*e*Pn	**Pn**	**17 29 09.6**	**0.0**
KASTN				*e*Sn	**Sn**	**17 29 32.8**	**-1.7**
BUG	**Bochum--Univer**	**2.00**	**216**	*e*Pn	**Pn**	**17 29 10.4**	**-0.2**
BUG				*e*Sn	**Sn**	**17 29 34.3**	**-1.9**
	137nm,0.6s						
LAUG	**Laupendahl**	**2.19**	**219**	*e*Pn	**Pn**	**17 29 13.4**	**+0.2**
HOBG	**Hohbusch**	**2.37**	**209**	*e*Pn	**Pn**	**17 29 16.0**	**+0.3**
KOE	**Koeppel**	**2.79**	**199**	*e*Pn	**Pn**	**17 29 22.0**	**+0.6**
CLL	**Collm**	**2.95**	**125**	*e*Pn	**Pn**	**17 29 26.0**	**+2.3**
CLL				*e*Pg	**Pb**	**17 29 30.0**	**+1.0**
CLL				*ex*	x	17 29 35.0	
CLL				*ex*	x	17 29 38.0	
CLL				*ex*	x	17 29 43.0	
CLL				*e*Sn	Sn	17 29 45.0	-15
CLL				*e*Sg	**Sb**	**17 30 05.0**	**-0.6**
	comp=Z,61nm,1.0s						
BGG	**Burgeitz**	**3.08**	**202**	*e*Pn	**Pn**	**17 29 25.2**	**-0.3**
LUNU	**Lund**	**3.59**	**43**	*i* P	**Pn**	**17 29 34.1**	**+1.7**
LUNU				*i* S	**Sn**	**17 30 11.9**	**-3.6**
LUNU	**Lund**	**3.59**	**43**	*i* P	**Pn**	**17 29 34.1**	**+1.7**
LUNU				*i* S	**Sn**	**17 30 11.9**	**-3.6**
HSKC	**Hora Svate Kat**	**3.62**	**131**	*e*PN	**Pn**	**17 29 33.3**	**+0.4**
HSKC				*e*SG	**Sb**	**17 30 27.7**	**+2.8**
	comp=Z,31nm,0.6s						
BJUU	**Bjuv**	**3.76**	**35**	*i* P	**Pn**	**17 29 36.6**	**+1.9**
BJUU				*i* S	**Sn**	**17 30 18.0**	**-1.6**
BJUU	**Bjuv**	**3.76**	**35**	*i* P	**Pn**	**17 29 36.6**	**+1.9**
BJUU				*i* S	**Sn**	**17 30 18.0**	**-1.6**
BSD	**Bornholm Skovb**	**3.96**	**57**	*i* P	**Pn**	**17 29 37.6**	**+0.1**
BSD				*i* S	**Sn**	**17 30 21.5**	**-3.1**
BSD				IAML		17 30 27.5	
	comp=Z,20nm,0.9s						
BSD	**Bornholm Skovb**	**3.96**	**57**	*i* P	**Pn**	**17 29 37.6**	**+0.1**
BSD				*i* S	**Sn**	**17 30 21.5**	**-3.1**
BSD				IAML		17 30 27.5	
	comp=Z,20nm,0.9s						
GIVF	**Givet**	**4.01**	**224**	*e*Pn	**Pn**	**17 29 37.6**	**-0.7**
GIVF				*e*Sn	**Sn**	**17 30 23.4**	**-2.6**
GIVF				*e*Sg	**Sg**	**17 30 43.3**	**-1.1**
	comp=Z,19nm,0.4s						
BAIF	**Baives**	**4.31**	**228**	*e*Pn	**Pn**	**17 29 42.2**	**-0.1**
BAIF				*e*Sn	**Sn**	**17 30 29.7**	**-3.6**
BAIF				*e*Sg	**Sg**	**17 30 52.9**	**-1.1**
	comp=Z,5.8nm,0.3s						
DEL	**Delary**	**4.37**	**37**	*i* P	**Pn**	**17 29 43.9**	**+0.8**
DEL				*i* S	**Sn**	**17 30 33.4**	**-1.2**
PRU	**Pruhonice**	**4.56**	**130**	*e*SG	**Sg**	**17 30 58.0**	**-4.1**
	comp=Z,17nm,0.8s						
ONAU	**Onsala**	**4.62**	**19**	*i* P	**Pn**	**17 29 47.5**	**+1.0**
ONAU				*i* S	**Sn**	**17 30 38.1**	**-2.6**
ONAU	**Onsala**	**4.62**	**19**	*i* P	**Pn**	**17 29 47.5**	**+1.0**
ONAU				*i* S	**Sn**	**17 30 38.1**	**-2.6**
CDF	**Champ du Feu**	**4.81**	**195**	*e*Pn	**Pn**	**17 29 47.3**	**-2.0**
CDF				*e*Sn	**Sn**	**17 30 40.5**	**-5.3**
CDF				*e*Sg	**Sg**	**17 31 07.1**	**-3.0**
	comp=Z,20nm,0.6s						
ZVC	**Zvikov**	**4.82**	**137**	*e*PN	**Pn**	**17 29 50.9**	**+1.6**
ZVC				*e*SG	**Sg**	**17 31 06.1**	**-4.1**
KHC	**Kasperske Hory**	**4.83**	**143**	*e*PN	**Pn**	**17 29 49.8**	**+0.3**
KHC				*e*PG	**Pg**	**17 30 10.0**	**+2.0**
KHC				*e*SG	**Sb**	**17 31 04.9**	**+5.3**
	comp=Z,29nm,1.2s						
UPC	**Upice**	**4.97**	**118**	*e*PN	**Pn**	**17 29 52.0**	**+0.6**
UPC				*e*SG	**Sg**	**17 31 12.4**	**-2.7**
	comp=Z,35nm,0.8s						
PAGF	**Fort de Pagny**	**5.01**	**207**	*e*Pg	**Pg**	**17 30 09.7**	**-1.9**
PAGF				*e*Sg	**Sg**	**17 31 14.8**	**-1.7**
	comp=Z,33nm,0.8s						
OSTC	**Ostas**	**5.05**	**117**	*e*SG	**Sg**	**17 31 16.4**	**-1.3**
	comp=Z,23nm,1.0s						
GERES	**GERESS Array B**	**5.11**	**144**	Pn	**Pn**	**17 29 53.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=323,slow=14,SNR=12						
GERES				Lg	Lg	17 31 14.0	
	comp=Z,0.2nm,0.3s,baz=330,slow=29,SNR=7.1						
	comp=Z,1.1nm,0.4s						
SAVF	**Savonnieres en**	**5.14**	**211**	*e*Sg	**Sg**	**17 31 17.3**	**-3.2**
	comp=Z,9.8nm,0.4s						
TJOU	**Tjoern**	**5.17**	**15**	*i* P	**Pn**	**17 29 54.8**	**+0.7**
TJOU				*i* S	**Sn**	**17 30 52.7**	**-1.7**
TJOU	**Tjoern**	**5.17**	**15**	*i* P	**Pn**	**17 29 54.8**	**+0.7**
TJOU				*i* P	Pb	17 29 55.0	-12
TJOU				*i* S	**Sn**	**17 30 51.9**	**-2.5**
DPC	**Dobruska-Polom**	**5.22**	**119**	*e*PN	**Pn**	**17 29 55.3**	**+0.4**
HOMB	**Homborsund**	**5.23**	**356**	*e*P	**Pn**	**17 29 55.9**	**+1.1**
HOMB				IAML		17 30 50.6	
	comp=Z,4.4nm,0.7s						
HOMB				*e*S	**Sn**	**17 30 53.8**	**-2.0**
HOMB	**Homborsund**	**5.23**	**356**	*i* S	**Sn**	**17 30 54.1**	**-1.6**
MEZF	**Maizieres J'vi**	**5.26**	**211**	*e*Sg	**Sg**	**17 31 22.1**	**-2.3**
	comp=Z,7.0nm,0.4s						
HAU	**Haudompre**	**5.38**	**201**	*e*Sg	**Sg**	**17 31 24.5**	**-3.6**
	comp=Z,13nm,0.5s						
SNART	**Snartemo**	**5.40**	**349**	*e*P	**Pn**	**17 29 59.1**	**+1.9**
SNART				*e*S	**Sn**	**17 30 57.2**	**-2.7**
SNART				IAML		17 31 11.7	
	comp=Z,6.2nm,0.7s						
SNART	**Snartemo**	**5.40**	**349**	*i* S	**Sn**	**17 30 58.3**	**-1.6**
HINF	**Hinteralfeld**	**5.46**	**197**	*e*Pn	**Pn**	**17 29 55.9**	**-2.3**
HINF				*e*Sg	**Sg**	**17 31 25.4**	**-5.4**
	comp=Z,11nm,0.5s						
KRLC	**Kraliky**	**5.62**	**119**	*e*SG	**Sg**	**17 31 33.4**	**-2.6**
RETA	**Reutte**	**5.68**	**169**	*e*Pn	**Pn**	**17 30 02.6**	**+1.4**
	comp=Z,1.0nm,0.3s						
DAVA	**Damuels**	**5.81**	**175**	*i* Pn	**Pn**	**17 30 02.9**	**-0.2**
	comp=Z,2.3nm,0.5s						
MOTA	**Moosalm**	**5.87**	**167**	*e*Pn	**Pn**	**17 30 02.9**	**-1.0**
	comp=Z,1.1nm,0.2s						
MOTA				*e*Sg	**Sg**	**17 31 49.7**	**+5.8**
	comp=Z,6.3nm,0.6s						
WATA	**Walderalm**	**5.95**	**164**	*i* Pn	**Pn**	**17 30 04.6**	**-0.3**
	comp=Z,6.3nm,0.4s,SNR=5.8						
SQTA	**Sankt Quirin**	**6.00**	**166**	*i* Pn	**Pn**	**17 30 05.3**	**-0.4**
	comp=Z,2.2nm,0.2s,SNR=4.1						
VRAC	**Vranov**	**6.00**	**126**	*e*PN	**Pn**	**17 30 06.6**	**+1.0**
VRAC				*e*SG	**Sg**	**17 31 48.5**	**+0.2**
WTTA	**Wattenberg**	**6.03**	**164**	*i* Pn	**Pn**	**17 30 05.4**	**-0.7**
	comp=Z,4.0nm,0.3s,SNR=7.0						
KRUC	**Moravsky**	**6.08**	**128**	*e*PN	**Pn**	**17 30 06.6**	**0.0**
KRUC				*e*SG	**Sg**	**17 31 48.1**	**-2.5**
LESA	**Schwarzleotal**	**6.08**	**157**	*i* Pn	**Pn**	**17 30 06.9**	**+0.1**
	comp=Z,1.7nm,0.3s,SNR=5.8						
LESA				Sg	**Sg**	**17 31 53.9**	**+3.0**
	comp=Z,3.9nm,0.7s						
STRU	**Stroemstad**	**6.09**	**10**	*e*P	**Pn**	**17 30 07.3**	**+0.7**
STRU				*e*S	**Sn**	**17 31 11.1**	**-5.8**
FETA	**Feichten**	**6.14**	**170**	*e*Pn	**Pn**	**17 30 07.4**	**-0.2**
	comp=Z,1.8nm,0.3s,SNR=4.8						
MOA	**Molln**	**6.16**	**146**	Sg	**Sg**	**17 31 53.4**	**+0.1**
	comp=Z,13nm,0.9s						
MORC	**Moravsky Berou**	**6.20**	**119**	*e*PN	**Pn**	**17 30 08.6**	**+0.3**
MORC				*e*SG	**Sg**	**17 31 53.9**	**-0.5**
KMY	**Karmoy**	**6.53**	**342**	*e*P	**Pn**	**17 30 13.5**	**+0.8**
KMY				*e*S	**Sn**	**17 31 24.6**	**-3.3**
KMY				IAML		17 31 30.8	
	comp=Z,4.1nm,0.7s						
KBA	**Koelnbreinsper**	**6.57**	**154**	*i* Pn	**Pn**	**17 30 14.4**	**+0.8**
	comp=Z,3.0nm,0.4s,SNR=4.3						
CONA	**Conrad Observa**	**6.69**	**138**	*e*Sg	**Sg**	**17 32 10.5**	**+0.2**
	comp=Z,10nm,0.6s						
LOR	**Lormes**	**6.73**	**212**	*e*Pn	**Pn**	**17 30 13.8**	**-1.7**
LOR				*e*Sn	**Sn**	**17 31 27.1**	**-5.7**
LOR				*e*Sg	**Sg**	**17 32 07.4**	**-4.1**
	comp=Z,3.8nm,0.4s						
CABF	**La Chapelle**	**6.76**	**198**	*e*Pn	**Pn**	**17 30 14.3**	**-1.8**
CABF				*e*Sn	**Sn**	**17 31 27.5**	**-6.3**
CABF				*e*Sg	**Sg**	**17 32 08.5**	**-4.1**
	comp=Z,6.5nm,0.5s						
ODD1	**Odda**	**7.00**	**350**	*e*S	**Sn**	**17 31 36.0**	**-3.6**
ODD1				IAML		17 31 37.0	
	comp=Z,2.5nm,0.8s						
SSF	**Saint Saulge**	**7.03**	**213**	*e*Pn	**Pn**	**17 30 19.4**	**-0.2**
RONA	**Rosalia, Austr**	**7.05**	**137**	Sg	**Sg**	**17 32 22.7**	**+0.8**
	comp=Z,7.0nm,0.6s						
ARSA	**Arzberg**	**7.12**	**142**	*e*Sg	**Sg**	**17 32 24.9**	**+0.9**
	comp=Z,4.8nm,0.5s						
SOKA	**Soboth**	**7.44**	**147**	*e*Sg	**Sg**	**17 32 41.3**	**+7.0**
	comp=Z,2.1nm,0.6s						
HFS	**Hagfors**	**7.51**	**18**	Pn	**Pn**	**17 30 25.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=207,slow=15,SNR=1.1						
HFS				Sn	**Sn**	**17 31 49.9**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=190,slow=24,SNR=4.8						
HFS				Lg	Lg	17 32 41.5	
	comp=Z,0.2nm,0.3s,baz=194,slow=24,SNR=3.2						
	comp=Z,0.5nm,0.3s						
EKA	**Eskdalemuir Ar**	**7.57**	**292**	Pn	**Pn**	**17 30 28.3**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=104,slow=14,SNR=7.1						
EKA				Sn	**Sn**	**17 31 55.6**	**+2.2**
	baz=102,slow=25						
SKAR	**Skarslia**	**7.65**	**357**	*e*P	**Pn**	**17 30 28.9**	**+0.7**
SKAR				*e*S	**Sn**	**17 31 50.3**	**-5.1**
SKAR				IAML		17 31 51.1	
	comp=Z,1.6nm,0.6s						
NOA	**NORSAR Array B**	**8.07**	**7**	Pn	**Pn**	**17 30 36.5**	**+2.5**
	baz=190,slow=13,SNR=3.8						
	comp=Z,0.4nm,0.6s						
FINES	**FINESS Array B**	**12.39**	**41**	Pn	**Pn**	**17 31 34.1**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=1.2						
	comp=Z,1.8nm,1.0s						

*UCR **20** 17:41:22.9±1.4, 7°.79N×82°.02W, h0km±92km, MW3.8*
*UPA **20** 17:41:23.0±3.1, 7°.75N×82°.04W, h0km±8km, ML3.8, MW3.7*
ISC 20 17:41:20.2±1.4, 7°.63N±0°.05×82°.16W±0°.03, h4km±10km, n64, σ1s05/83, 3C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REME3	**Remedios, Chir**	**0.68**	**28**	*e*P	**Pb**	**17 41 34.9**	**+0.3**
PDCAN	**Manzana , Fuen**	**0.80**	**35**	*e*P	**Pb**	**17 41 36.9**	**+0.1**
LOMA3	**Las Lomas, Chi**	**0.83**	**344**	*e*P	**Pn**	**17 41 37.9**	**-0.8**
LOMA3				*e*S	**Sn**	**17 41 52.1**	**+0.6**
LMNES	**Limones**	**0.84**	**304**	*e*P	**Pn**	**17 41 38.8**	**0.0**
DVD	**David**	**0.85**	**340**¶	*e*P	**Pn**	**17 41 38.2**	**-0.8**
DVD				*e*S	**Sn**	**17 41 51.4**	**-0.6**
BAGA3	**Bagala, Chiriq**	**0.91**	**336**	*e*P	**Pn**	**17 41 39.6**	**-0.2**
GMAL	**Guarumal, Vera**	**0.93**	**82**	*e*P	**Pg**	**17 41 38.4**	**+0.4**
GMAL				AMP		17 41 39.3	
	comp=Z,4μm,0.1s						
GMAL				*e*S	**Sg**	**17 41 50.1**	**+0.1**
GMAL	**Guarumal, Vera**	**0.93**	**82**	*e*P	**Pg**	**17 41 38.2**	**+0.2**
RSUS3	**Rio de Jesus,**	**1.05**	**70**	*e*P	**Pb**	**17 41 40.9**	**-0.1**
RSUS3				AMP		17 41 41.3	
	comp=Z,650nm,0.1s						
RSUS3				*e*S	**Sg**	**17 41 53.7**	**-0.3**
PSOM3	**Paja de Sombre**	**1.06**	**351**	*e*P	**Pg**	**17 41 41.0**	**+0.4**
PSOM3				*e*S	**Sg**	**17 41 54.6**	**+0.2**
MESA3	**La Mesa, Verag**	**1.09**	**62**	*e*P	**Pb**	**17 41 41.6**	**-0.1**
MESA3				*e*S	**Sb**	**17 41 56.0**	**-0.3**
JEFFS	**S de V. Baru**	**1.10**	**340**	*e*P	**Pg**	**17 41 41.8**	**+0.5**
PTAR3	**Potrerillos Ar**	**1.11**	**342**	*e*P	**Pn**	**17 41 43.9**	**+1.2**
PTAR3				*e*S	**Sn**	**17 42 02.1**	**+3.6**
WILLF	**Boquete**	**1.15**	**346**	*e*P	**Pb**	**17 41 42.5**	**-0.2**
MARI3	**Mariato, Verag**	**1.16**	**89**	*e*P	**Pn**	**17 41 43.1**	**-0.1**
MARI3				AMP		17 41 44.7	
	comp=Z,2μm,0.1s						
MARI3				*e*S	**Sn**	**17 41 60.0**	**+0.5**
BQTLY	**Boquete Panama**	**1.16**	**345**	*e*P	**Pg**	**17 41 43.0**	**+0.4**
DAP26	**falda E V. Bar**	**1.18**	**347**	*e*P	**Pb**	**17 41 43.2**	**-0.1**
LNBQ3	**Los Naranjos,**	**1.19**	**346**	*e*P	**Pg**	**17 41 43.7**	**+0.6**
LNBQ3				*e*S	**Sn**	**17 42 00.5**	**0.0**
RBALA	**Bur**	**1.24**	**0**	*e*P	**Pn**	**17 41 44.1**	**-0.3**
KKNTU	**Kakint²**	**1.25**	**16**	*e*P	**Pn**	**17 41 43.3**	**-1.2**
PBNVO	**Pueblo Nuevo,**	**1.25**	**358**	*e*P	**Pn**	**17 41 43.7**	**-0.9**
TBS2		**1.26**	**337**	*e*P	**Pg**	**17 41 45.6**	**+1.2**
BC3P	**Paso Ancho**	**1.26**	**339**	*e*P	**Pg**	**17 41 46.4**	**+2.0**
BRU2	**Volcan**	**1.27**	**335**	*e*P	**Pg**	**17 41 45.3**	**+0.6**
BRU2				AMP		17 41 47.5	
	comp=Z,994nm,0.3s						
BRU2				*e*S	**Sn**	**17 42 05.5**	**+2.9**
BRU2	**Volcan**	**1.27**	**335**	*e*P	**Pb**	**17 41 44.9**	**0.0**
CHGR2	**Aguacate**	**1.30**	**1**¶	*e*P	**Pn**	**17 41 44.5**	**-0.7**
CHGR2				*e*S	**Sb**	**17 42 00.4**	**-2.0**
CACAO	**El Cacao, Vera**	**1.32**	**102**	*e*P	**Pg**	**17 41 45.9**	**+0.4**
CACAO				AMP		17 41 46.4	
	comp=Z,15μm,0.1s						
CACAO				*e*S	**Sg**	**17 42 04.0**	**+1.4**
EDAD	**Golfito**	**1.43**	**316**	*e*P	**Pg**	**17 41 48.6**	**+1.0**
ALCO	**Alturas Coton,**	**1.47**	**333**	*e*P	**Pn**	**17 41 47.7**	**0.0**
TOSI3	**Tonosi**	**1.72**	**97**	*e*P	**Pb**	**17 41 52.1**	**-0.2**
TOSI3				*e*S	**Sb**	**17 42 14.7**	**+0.5**
CHIT3	**Chitre**	**1.75**	**79**¶	*e*P	**Pn**	**17 41 51.9**	**+0.5**
CHIT3				*e*S	**Sb**	**17 42 14.5**	**-0.9**
FIMO	**Fila Mora**	**1.80**	**319**	*e*P	**Pg**	**17 41 54.5**	**-0.2**
CNI2	**El Empalme, Bo**	**1.81**	**350**	*e*S	**Sb**	**17 42 17.2**	**+0.2**
AZU	**Azuero**	**1.87**	**85**	*i* P	**Pb**	**17 41 54.2**	**-0.8**
AZU				AMP		17 41 56.1	
	comp=Z,2μm,0.2s						
AZU				*e*S	**Sb**	**17 42 18.6**	**-0.2**
AZU	**Azuero**	**1.87**	**85**	*e*P	**Pb**	**17 41 54.1**	**-0.9**
DRK0	**Durika**	**1.95**	**327**	*e*P	**Pb**	**17 41 56.4**	**0.0**
DRK0	**Durika**	**1.95**	**327**	*e*P	**Pb**	**17 41 56.9**	**+0.5**
RGM0	**Gandoca**	**2.00**	**347**	*e*P	**Pg**	**17 41 58.8**	**+0.2**
RGM0				*e*S	**Sg**	**17 42 24.8**	**+0.3**
RGM0	**Gandoca**	**2.00**	**347**	*e*P	**Pg**	**17 41 58.5**	**-0.1**
PCRI3	**Pocri, Los San**	**2.02**	**89**	*e*P	**Pb**	**17 41 56.8**	**-0.8**
PCRI3				*e*S	**Sn**	**17 42 21.1**	**+0.3**
EDPE	**Pejibaye, P**	**2.07**	**317**	*e*P	**Pb**	**17 41 58.3**	**-0.1**
BRIBI	**Bribri**	**2.08**	**342**	*e*P	**Pg**	**17 41 59.8**	**-0.4**
CEUA	**Cerro Uatsi, L**	**2.13**	**339**	*e*P	**Pg**	**17 42 01.3**	**+0.3**
SAJE	**San Jernim**	**2.17**	**322**	*e*P	**Pb**	**17 41 59.5**	**-0.7**
LAES	**El Progreso Va**	**2.30**	**337**	*e*P	**Pb**	**17 42 02.9**	**+0.6**
BUS1	**Rivas**	**2.48**	**321**	*e*P	**Pb**	**17 42 04.0**	**-1.6**
ZANG	**Zanguenga, Cho**	**2.62**	**60**	*e*P	**Pb**	**17 42 06.5**	**-1.3**
PIEC	**Cerro El Cedra**	**2.66**	**318**	*e*P	**Pb**	**17 42 06.8**	**-1.9**
BCIP	**Isla Barro Col**	**2.76**	**56**	*e*P	**Pb**	**17 42 07.7**	**-2.4**
BCIP				*e*S	**Sn**	**17 42 39.9**	**+0.9**
BCIP	**Isla Barro Col**	**2.76**	**56**	*e*P	**Pb**	**17 42 08.6**	**-1.6**
LCR2	**La Lucha 2**	**2.78**	**319**	*e*S	**Sb**	**17 42 44.8**	**-0.4**
RESJ	**San Isidro (Tu**	**2.80**	**328**	*e*P	**Pb**	**17 42 10.3**	**-0.6**
VTCV	**VTCV, Calle Va**	**2.81**	**327**	*e*P	**Pb**	**17 42 10.0**	**-1.0**
ABRB	**Las Abras (San**	**2.82**	**327**	*e*P	**Pb**	**17 42 10.3**	**-1.0**
PICV	**PH. Pirrs**	**2.83**	**315**	*e*P	**Pb**	**17 42 08.9**	**-2.4**
CVTV	**Tajo**	**2.84**	**326**	*e*P	**Pb**	**17 42 10.5**	**-1.2**
CVTQ	**Turrialba Volc**	**2.85**	**326**	*e*P	**Pb**	**17 42 10.9**	**-1.0**
VTR0	**Volcan Turrial**	**2.85**	**326**	*e*P	**Pb**	**17 42 10.7**	**-1.4**
CVTR	**Volcan Turrial**	**2.85**	**326**	*e*P	**Pb**	**17 42 11.0**	**-1.1**
VTUN	**Crater Central**	**2.86**	**326**	*e*P	**Pb**	**17 42 11.5**	**-0.6**
UPA	**Univ. de Panam**	**2.92**	**62**	*e*P	**Pb**	**17 42 07.7**	**+0.2**
UPA				*e*S	**Sn**	**17 42 43.3**	**+0.2**
CVTG	**V. Turrialba,**	**2.97**	**328**	*e*P	**Pb**	**17 42 12.5**	**-1.2**
VPS8	**V Poas**	**3.27**	**321**	*e*P	**Pb**	**17 42 19.4**	**+0.4**
JTS	**Las Juntas de**	**3.82**	**314**	*e*P	**Pb**	**17 42 25.8**	**-2.6**

*NOU **20** 18:03:06.3, 37°.24S×177°.00E, h253km, MLv4.3/14, North Island, New Zealand*
*IDC **20** 18:03:10.6±1.4, 37°.38S×176°.83E, h207km±7km, mb3.6/4, mbtmp4.2/5, Error ellipse: s-maj=39.1km s-min=21.0km az=40.0*
*WEL **20** 18:03:12.1±0.8, 37°.5S±6°×17°.7E±°, h192km±7km, M4.2/104, ML3.6/7, MLv4.2/104, Error ellipse: s-maj=8.0km s-min=5.4km az=32.2, confirmed*
ISC 20 18:03:11.2±0.8, 37°.35S±0°.06×176°.80E±0°.06, h216km±5km, n190, σ1s39/198, mb3.9/8, 3C, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYRZ	**Mayor Island**	**0.45**	**279**	P	**Pn**	**18 03 38.9**	**-1.1**
WHRZ	**Whale Island**	**0.52**	**165**	P	**Pn**	**18 03 40.3**	**+0.1**
OPRZ	**Ohinepanea**	**0.53**	**202**	P	**Pn**	**18 03 39.5**	**-0.6**
OPRZ				S	**S**	**18 04 01.5**	**-1.4**
TGRZ	**Tauranga**	**0.57**	**229**	P	**Pn**	**18 03 39.8**	**-0.5**
MARZ	**Manawahe**	**0.64**	**189**	P	**Pn**	**18 03 40.5**	**-0.1**
LIRZ	**Lichensteins R**	**0.73**	**207**	P	**Pn**	**18 03 41.1**	**+0.1**
EDRZ	**Edgecumbe**	**0.76**	**184**	P	**Pn**	**18 03 41.3**	**+0.1**
OPCS	**Opotiki Colleg**	**0.77**	**150**	P	**Pn**	**18 03 40.5**	**-0.6**
KARZ	**Kaharoa**	**0.80**	**213**	P	**Pn**	**18 03 41.4**	**0.0**
OMRZ	**Omania**	**0.83**	**204**	P	**Pn**	**18 03 41.5**	**0.0**
MKRZ	**Makatiti**	**0.83**	**199**	P	**Pn**	**18 03 42.5**	**+0.9**
KMRZ	**Kaimai**	**0.84**	**234**	P	**Pn**	**18 03 41.6**	**0.0**
KMRZ				S	**S**	**18 04 06.0**	**+0.6**
HAZ	**Te Kaha**	**0.88**	**118**	P	**Pn**	**18 03 40.6**	**-1.2**
HAZ				S	**S**	**18 04 02.2**	**-3.4**
NGRZ	**Ngongotaha**	**0.89**	**213**	P	**Pn**	**18 03 42.2**	**+0.2**
TARZ	**Mount Tarawera**	**0.91**	**195**	P	**Pn**	**18 03 42.5**	**+0.4**
RUGZ	**Raukumara Rang**	**0.93**	**132**	P	**Pn**	**18 03 40.6**	**-1.6**
URZ	**Urewera**	**0.94**	**165**	P	**Pn**	**18 03 41.5**	**-0.6**
	649nm,0.3s,baz=346,slow=1.9,SNR=919						
URZ				S	**S**	**18 04 03.7**	**-2.7**
	344nm,0.4s,baz=222,slow=6.1,SNR=5.7						
URZ	**Urewera**	**0.94**	**165**	P	**Pn**	**18 03 41.4**	**-0.7**
URZ	**Urewera**	**0.94**	**165**	P	**Pn**	**18 03 41.5**	**-0.6**
URZ				S	**S**	**18 04 04.3**	**-2.0**
UTU	**Utuhina**	**0.95**	**210**	P	**Pn**	**18 03 43.0**	**+0.8**
HLRZ	**Highlands Stat**	**0.97**	**201**	P	**Pn**	**18 03 42.7**	**+0.4**
RRRZ	**Republican Roa**	**1.01**	**193**	P	**Pn**	**18 03 42.9**	**+0.2**
HSRZ	**Hossack Road**	**1.05**	**205**	P	**Pn**	**18 03 43.4**	**+0.5**
KUZ	**Kuaotunu**	**1.05**	**305**	P	**Pn**	**18 03 41.1**	**-1.8**
KUZ	**Kuaotunu**	**1.05**	**305**	P	**Pn**	**18 03 41.3**	**-1.6**
TOZ	**Tahuroa Road**	**1.10**	**249**	P	**Pn**	**18 03 43.2**	**+0.1**
HRRZ	**Handcock Road**	**1.11**	**201**	P	**Pn**	**18 03 43.8**	**+0.4**
MUGZ	**Murupara**	**1.12**	**181**	P	**Pn**	**18 03 43.3**	**-0.1**
GRRZ	**Galatos Road**

MSWZ	**Moikau Station**	**4.23**	**196**	P		**Pn**	**18 04 14.4**	**-2.0**
SNZO	**South Karori**	**4.28**	**202**	P		**Pn**	**18 04 14.4**	**-2.4**
BHW	**Baring Head**	**4.32**	**200**	P		**Pn**	**18 04 15.2**	**-2.1**
TCW	**Tory Channel**	**4.32**	**206**	P		**Pn**	**18 04 15.5**	**-1.9**
PLWZ	**Palliser**	**4.38**	**195**	P		**Pn**	**18 04 16.0**	**-2.1**
TUWZ	**Tuamarina**	**4.63**	**208**	P		**Pn**	**18 04 20.0**	**-1.2**
NNZ	**Nelson**	**4.69**	**213**	P		**Pn**	**18 04 19.3**	**-2.6**
TKNZ	**Takaka Hill**	**4.74**	**218**	P		**Pn**	**18 04 20.6**	**-2.0**
QRZ	**Quartz Range**	**4.80**	**222**	P		**Pn**	**18 04 21.5**	**-1.9**
QRZ	**Quartz Range**	**4.80**	**222**	P		**Pn**	**18 04 21.3**	**-2.1**
CMWZ	**Cape Campbell**	**4.83**	**204**	P		**Pn**	**18 04 22.2**	**-1.4**
BSWZ	**Blackbirch Sta**	**4.91**	**207**	P		**Pn**	**18 04 22.9**	**-1.8**
MRNZ	**Matariki Terra**	**5.11**	**217**	P		**Pn**	**18 04 24.9**	**-2.4**
THZ	**Tophouse**	**5.33**	**213**	P		**Pn**	**18 04 28.6**	**-1.5**
KHZ	**Kahutara**	**5.65**	**205**	P		**Pn**	**18 04 31.7**	**-2.3**
KHZ	**Kahutara**	**5.65**	**205**	P		**Pn**	**18 04 31.7**	**-2.3**
DSZ	**Denniston Nort**	**5.84**	**220**	P		**Pn**	**18 04 34.0**	**-2.6**
GVZ	**Greta Valley S**	**6.31**	**206**	P		**Pn**	**18 04 39.9**	**-2.6**
LTZ	**Lake Taylor**	**6.44**	**211**	P		**Pn**	**18 04 41.7**	**-2.6**
AMCZ	**Amberley**	**6.63**	**207**	P		**Pn**	**18 04 43.8**	**-2.8**
OKCZ	**Okains Bay**	**6.97**	**203**	P		**Pn**	**18 04 48.4**	**-2.7**
OXZ	**Oxford**	**6.99**	**210**	P		Pn	18 04 47.6	-3.7
MQZ	**McQueen's Vall**	**7.09**	**205**	P		Pn	18 04 48.6	-3.9
AKCZ	**Akaroa Harbour**	**7.15**	**203**	P		**Pn**	**18 04 50.5**	**-2.8**
RACZ	**Rakaia**	**7.29**	**208**	P		**Pn**	**18 04 52.4**	**-2.7**
WVZ	**Waitaha Valley**	**7.36**	**217**	P		**Pn**	**18 04 53.7**	**-2.3**
WACZ	**Wakanui South**	**7.59**	**208**	P		**Pn**	**18 04 56.6**	**-2.4**
RPZ	**Rata Peaks**	**7.71**	**213**	P		**Pn**	**18 04 58.2**	**-2.5**
	8.8nm,0.3s,baz=57,slow=0.5,SNR=18							
RPZ				S		S	18 06 19.6	-8.5
	17nm,0.3s,baz=130,slow=23,SNR=12							
RPZ	**Rata Peaks**	**7.71**	**213**	P		**Pn**	**18 04 58.0**	**-2.6**
RPZ	**Rata Peaks**	**7.71**	**213**	P		**Pn**	**18 04 58.0**	**-2.6**
ARCZ	**Arundel**	**7.85**	**211**	P		**Pn**	**18 04 59.7**	**-2.7**
FOZ	**Fox Glacier**	**8.15**	**219**	P		**Pn**	**18 05 03.4**	**-2.8**
TMZ	**Timaru**	**8.28**	**210**	P		**Pn**	**18 05 05.3**	**-2.7**
LBZ	**Lake Benmore**	**8.63**	**213**	P		**Pn**	**18 05 09.6**	**-2.9**
ODZ	**Otahua Downs**	**8.97**	**209**	P		**Pn**	**18 05 14.3**	**-2.5**
ODZ	**Otahua Downs**	**8.97**	**209**	P		**Pn**	**18 05 14.5**	**-2.3**
JCZ	**Jackson Bay**	**9.06**	**220**	P		**Pn**	**18 05 15.1**	**-2.9**
JCZ	**Jackson Bay**	**9.06**	**220**	P		**Pn**	**18 05 15.1**	**-2.9**
WKZ	**Wanaka**	**9.50**	**216**	P		**Pn**	**18 05 21.2**	**-2.5**
STKA	**Stephens Creek**	**29.37**	**270**	P		**P**	**18 08 55.7**	**+1.5**
	1.7nm,0.6s,baz=95,slow=11,SNR=3.8							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**39.07**	**278**	P		**P**	**18 10 17.8**	**+0.3**
	0.8nm,0.4s,baz=122,slow=7.4,SNR=40							
	0.8nm,0.4s							
WRA	**Warramunga Arr**	**40.72**	**283**	P		**P**	**18 10 31.3**	**+0.2**
	1.4nm,0.3s,baz=121,slow=8.0,SNR=31							
	1.4nm,0.3s							
VNDA	**Vanda**	**40.79**	**185**	P		**P**	**18 10 34.4**	**+3.5**
	0.5nm,0.5s,baz=357,slow=8.8,SNR=6.0							
QSPA	**South Pole Qui**	**52.77**	**180**	P		P	18 12 10.3	+6.5
	5.0nm,0.6s,baz=350,slow=0.5,SNR=76							
TROLL	**Troll, Antarti**	**70.86**	**182**	⇑P		**P**	**18 14 04.8**	**+0.6**
	comp=Z,90nm,0.4s							
SNAA	**Sanae**	**71.28**	**180**	P		**P**	**18 14 07.3**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=214,slow=11,SNR=11							
	comp=Z,1.0nm,0.4s							
VNA3	**Neumayer Olymp**	**71.61**	**178**	⇑P		**P**	**18 14 09.0**	**+0.5**
	comp=Z,3.6nm,0.5s							
VNA2	**Neumayer--Watz**	**71.99**	**179**	⇑P		**P**	**18 14 11.8**	**+1.0**
	comp=Z,4.1nm,0.4s,baz=174,slow=6.0							
ARCES	**ARCESS Array B**	**144.23**	**343**	PKP		**PKPab**	**18 22 17.7**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=33,slow=2.9,SNR=9.0							
DBIC	**Dimbokro**	**149.42**	**177**	PKPbc		**PKPab**	**18 22 39.5**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=189,slow=2.6,SNR=3.6							

RSNC 20 18:34:08.2±0.0, 5°N±1°×7°7W±°, h81km±4km, M3.0, mb3.9, ML2.7, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIZC	**Pizarro, Choco**	**0.58**	**286**	P	Pn	18 34 22.5	-0.3
PIZC				S	Sn	18 34 33.8	+0.2
YOTC	**Yotoco, Valle**	**0.93**	**151**	P	Pn	18 34 23.7	-2.9
YOTC				S	Sn	18 34 35.6	-4.8
CBOC	**Ciudad Bolivar**	**1.32**	**37**	P	Pn	18 34 30.4	-1.0
CBOC				S	Sn	18 34 47.3	-1.5
GUY2C	**Guyana, Caldas**	**1.49**	**74**	P	Pn	18 34 33.6	-0.3
GUY2C				S	Sn	18 34 53.1	-0.1
JAMC	**Jamundi, Valle**	**1.58**	**175**	P	Pn	18 34 32.2	-2.6
JAMC				S	Sn	18 34 51.2	-3.7
ORTC	**Ortega, Tolima**	**1.79**	**120**	P	Pn	18 34 37.0	-0.3
ORTC				S	Sn	18 34 59.6	+0.1
HELC	**Santa Helena**	**1.87**	**42**	P	Pn	18 34 38.6	-0.2
HELC				S	Sn	18 35 02.1	+0.1
NORC	**Norcasia**	**2.07**	**68**	P	Pn	18 34 41.9	+0.8
NORC				S	Sn	18 35 07.4	+1.2
PRAC	**Prado**	**2.19**	**119**	P	Pn	18 34 42.5	-0.3
PRAC				S	Sn	18 35 08.1	-1.1
POPC	**Popayan, Colom**	**2.25**	**177**	P	Pn	18 34 42.6	-1.1
POPC				S	Sn	18 35 09.0	-1.8
DBBC	**Dabeiba**	**2.28**	**15**	P	Pn	18 34 45.7	+1.7
DBBC				S	Sn	18 35 14.3	+3.0
BETC	**Betania**	**2.50**	**147**	P	Pn	18 34 46.8	+2.2
BETC				S	Sn	18 35 17.8	+1.2
PTAC	**Punta Ardita,**	**2.54**	**337**	P	Pn	18 34 46.9	-0.5
PTAC				S	Sn	18 35 14.9	-2.5
BBAC	**Balboa, Cauca**	**2.80**	**189**	P	Pn	18 34 49.5	-1.5
BBAC				S	Sn	18 35 21.0	-2.9
URMC	**La Uribe, Meta**	**2.87**	**122**	P	Pn	18 34 51.3	-0.6
URMC				S	Sn	18 35 24.3	-1.1
PTBC	**PUERTO BERRIO,**	**2.90**	**53**	P	Pn	18 34 52.7	+0.4
PTBC				S	Sn	18 35 26.6	+0.4
GARC	**Garzon, Huila**	**2.91**	**153**	P	Pn	18 34 52.2	-0.4
GARC				S	Sn	18 35 25.8	-0.8
VILC	**Villavicencio,**	**3.17**	**102**	P	Pn	18 34 57.9	+1.9
VILC				S	Sn	18 35 37.8	+4.9
FLOC	**Florencia**	**3.40**	**160**	P	Pn	18 34 58.9	-0.1
FLOC				S	Sn	18 35 38.4	+0.2
GCUF	**Volcan Galeras**	**3.59**	**189**	P	Pn	18 35 03.3	+1.2
GCUF				S	Sn	18 35 41.9	-1.8
CAPC	**Capurgana**	**3.85**	**352**	P	Pn	18 35 08.2	+3.1
RUSC	**La Rusia**	**3.86**	**73**	P	Pn	18 35 07.1	+1.4
MACC	**Macarena, Meta**	**3.96**	**132**	P	Pn	18 35 05.9	-0.7
MACC				S	Sn	18 35 51.9	+0.1
BARC	**Barichara**	**4.02**	**64**	P	Pn	18 35 08.7	+1.1
OTAV	**Otavalo**	**4.82**	**200**	P	Pn	18 35 16.9	-1.9
OTAV				S	Sn	18 36 08.6	-5.1
PAC1	**Pacto, Paraso**	**4.92**	**204**	P	Pn	18 35 19.1	-0.8
PAC1				S	Sn	18 36 08.6	-7.1
BCIP	**Isla Barro Col**	**5.28**	**325**	P	Pn	18 35 24.3	-0.4
BCIP				S	Sn	18 36 25.3	+1.1

*IDC **20** 18:35:09.5±1.8, 1°.81N×126°.57E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=174.9km s-min=20.5km az=66.0*
*DJA **20** 18:35:14.3±0.2,2°N±2°×12°6E±°, h10km, M3.6/12, mb3.7/1, MLv3.6/12*

ISC 20 18:35:15.7±1.1, 1°.71N±0°.07×126°.55E±0°.07, h35km, n11, σ1s21/12, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**139**	P	**Pn**	**18 35 37.4**	**+0.9**
TNTI				S	**Sn**	**18 35 53.9**	**+1.8**
SGSI	**Sangihe**	**2.21**	**333**	P	**Pn**	**18 35 50.9**	**+1.0**
KMSI	**Cibinong**	**2.80**	**246**	P	**Pn**	**18 35 58.4**	**+0.4**
SANI	**Sanana**	**3.77**	**188**	P	**Pn**	**18 36 10.8**	**-0.6**
LUWI	**Luwuk**	**4.66**	**234**	P	Pn	18 36 25.9	+2.3
LUWI				S	**Sn**	**18 37 17.8**	**+1.4**
MRSI	**Marisa**	**4.76**	**255**	P	**Pn**	**18 36 26.0**	**+1.0**
MPSI	**Mapaga**	**6.78**	**258**	P	**Pn**	**18 36 53.3**	**+0.5**
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**18 40 14.9**	**-1.0**
	0.7nm,0.4s,baz=339,slow=11,SNR=16						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**26.22**	**165**	P	**P**	**18 40 47.5**	**+0.1**
	0.2nm,0.3s,baz=348,slow=12,SNR=11						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**18 45 11.6**	**-1.2**
	0.2nm,0.3s,baz=121,slow=7.7,SNR=7.6						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.34**	**328**	P	**P**	**18 45 39.7**	**-1.5**
	0.3nm,0.5s,baz=126,slow=6.6,SNR=8.5						
	0.3nm,0.5s						

*IDC **20** 18:37:11.9±0.8, 18°.21S×168°.23E, h0km, mb4.2/12, mbtmp4.2/13, ML4.0/1, MS3.6/8, Error ellipse: s-maj=24.0km s-min=19.3km az=117.0*
*NEIC **20** 18:37:13.8±2.0, 18°.29S±0°.06×168°.37E±0°.09, h14km±4km, mb4.6/14, Error ellipse: s-maj=12.3km s-min=8.2km az=99.0*

ISC 20 18:37:13.3±0.5, 18°.30S±0°.06×168°.23E±0°.10, h10km, n51, σ1s48/42, mb4.4/19, MS3.5/7, 4C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.00**	**341**		**Pn**	**18 38 00.6**	**-0.3**
MARNC	**Mare, Loyalty**	**3.17**	**183**		**Pn**	**18 38 02.0**	**-1.3**
DZM	**Mont Dzumac**	**4.11**	**204**	Pn	**Pn**	**18 38 16.7**	**+0.4**
	8.8nm,0.3s,baz=326,slow=20,SNR=39						
DZM				Sn	**Sn**	**18 38 59.8**	**-4.7**
	20nm,0.3s,baz=127,slow=24,SNR=10						
DZM				LR	LR	18 39 09.4	
	comp=Z,173nm,19.6s,baz=44,slow=28						
	27nm,0.4s						
ONTNC	**Ouen Toro**	**4.32**	**202**		**Pn**	**18 38 19.2**	**+0.2**
PINNC	**Pines Island,**	**4.36**	**190**	Pn	**Pn**	**18 38 20.1**	**+0.5**
MSVF	**Nonsavu**	**9.36**	**88**	Pn	**Pn**	**18 39 25.9**	**-2.5**
HNR	**Honiara**	**11.93**	**317**	LR	LR	18 44 11.6	
	comp=Z,253nm,18.1s,baz=200,slow=35						
CTA	**Charters Tower**	**20.83**	**262**	LR	LR	18 49 19.8	
	comp=Z,5.7nm,18.9s,baz=62,slow=35						
URZ	**Urewera**	**21.35**	**160**	P	**P**	**18 42 03.2**	**+2.6**
	12nm,0.8s,baz=321,slow=6.5,SNR=1.6						
URZ				LR	LR	18 49 23.3	
	comp=Z,206nm,19.5s,baz=352,slow=34						
	12nm,0.8s						
STKA	**Stephens Creek**	**27.56**	**236**	P	**P**	**18 43 00.5**	**0.0**
	2.0nm,0.5s,baz=59,slow=6.0,SNR=5.1						
	2.0nm,0.5s						
RAR	**Rarotonga**	**30.23**	**101**	LR	LR	18 53 05.5	
	comp=Z,71nm,21.1s,baz=281,slow=32						
WRA	**Warramunga Arr**	**32.03**	**261**	P	**P**	**18 43 39.2**	**-1.1**
	0.6nm,0.7s,baz=81,slow=6.1,SNR=8.4						
	0.6nm,0.7s						
AS31	**Alice Springs**	**32.44**	**255**	P	**P**	**18 43 43.1**	**-0.8**
ASAR	**Alice Springs**	**32.44**	**255**	P	**P**	**18 43 43.5**	**-0.4**
	2.0nm,0.4s,baz=84,slow=8.4,SNR=56						
ASAR				LR	LR	18 56 41.6	
	comp=Z,146nm,18.7s,baz=90,slow=36						
	2.0nm,0.4s						
TBI	**Tubuai**	**39.76**	**105**	eLR	LR	18 56 15.2	
	486nm,38.8s						
PPT2	**Papeete2**	**40.08**	**96**	eLR	LR	18 56 27.2	
	117nm,24.8s						
PPT	**Papeete**	**40.09**	**96**	LR	LR	19 00 14.3	
	comp=Z,29nm,18.1s,baz=212,slow=34						
FITZ	**Fitzroy Crossi**	**40.39**	**263**	P	**P**	**18 44 52.3**	**+0.5**
	3.1nm,0.7s,baz=114,slow=7.8,SNR=14						
FITZ				LR	LR	19 01 19.2	
	comp=Z,159nm,19.1s,baz=60,slow=36						
	3.1nm,0.7s						
MORW	**Mawa**	**48.65**	**247**	P	**P**	**18 45 56.1**	**-1.6**
VNDA	**Vanda**	**59.34**	**182**	P	**P**	**18 47 16.4**	**+1.4**
	0.3nm,0.5s,baz=331,slow=5.3,SNR=2.1						
	0.3nm,0.5s						
VNDA	**Vanda**	**59.34**	**182**	IAmb	IAmb	18 47 54.2	
	comp=Z,3.5nm,1.4s						
PETK	**Petropavlovsk-**	**71.69**	**353**	P	**P**	**18 48 34.6**	**-0.5**
	comp=Z,6.6nm,0.9s,baz=141,slow=7.5,SNR=4.4						
	comp=Z,6.6nm,0.9s						
QSPA	**South Pole Qui**	**71.75**	**180**	P	**P**	**18 48 39.7**	**+4.1**
	comp=Z,5.2nm,0.8s,baz=11,slow=2.7,SNR=17						
QSPA	**South Pole Qui**	**71.75**	**180**		**P**	**18 48 39.5**	**+3.9**
QSPA				IAmb	IAmb	18 48 41.1	
	comp=Z,6.7nm,0.9s						
MDJ	**Mudanjiang**	**71.85**	**332**	IAmb	IAmb	18 48 38.5	
	comp=Z,12nm,1.0s						
CM31	**Chiang Mai Arr**	**77.25**	**294**	P	**P**	**18 49 07.3**	**-0.9**
CM31				IAmb	IAmb	18 49 12.5	
	comp=Z,3.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**77.25**	**294**	P	**P**	**18 49 10.1**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=131,slow=4.3,SNR=12						
	comp=Z,1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**77.25**	**294**		**P**	**18 49 08.5**	**+0.3**
BELA	**Belgrano 2**	**83.11**	**175**	P	**P**	**18 49 38.7**	**-0.2**
BELA				IAmb	IAmb	18 50 17.9	
	comp=Z,2.9nm,0.6s						
ULN	**Ulaanbaatar**	**85.54**	**324**	P	**P**	**18 49 52.3**	**+0.5**
ULN				IAmb	IAmb	18 49 53.5	
	comp=Z,6.0nm,1.1s						
YAK	**Yakutsk**	**85.69**	**343**		**P**	**18 49 51.4**	**-0.5**
SONM	**Songino Array**	**85.90**	**323**	P	**P**	**18 49 54.1**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=142,slow=5.4,SNR=9.5						
	comp=Z,1.9nm,0.9s						
SHL	**Shillong**	**86.07**	**298**	P	**P**	**18 49 55.4**	**+0.4**
NVAR	**Mina Array Bea**	**88.90**	**49**	P	**P**	**18 50 08.0**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=238,slow=8.5,SNR=4.5						
	comp=Z,1.0nm,0.8s						
TROLL	**Troll, Antarti**	**89.40**	**184**	⇑P	**P**	**18 50 10.5**	**+0.4**
	comp=Z,160nm,0.6s						
ILAR	**Eielson Array**	**89.62**	**18**	P	**P**	**18 50 09.7**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=242,slow=4.9,SNR=14						
	comp=Z,0.6nm,0.6s						
LPIG	**La Paz**	**89.87**	**65**	LR	LR	19 22 50.3	
	comp=Z,48nm,18.1s,baz=298,slow=30						
SNAA	**Sanae**	**90.05**	**183**	⇑P	**P**	**18 50 12.9**	**-0.1**
	comp=Z,19nm,0.4s						
SNAA	**Sanae**	**90.05**	**183**	P	**P**	**18 50 13.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=208,slow=11,SNR=23						
	comp=Z,0.7nm,0.5s						
SNAA	**Sanae**	**90.05**	**183**	IAmb	IAmb	18 50 49.6	
	comp=Z,5.5nm,1.4s						
VNA3	**Neumayer Olymp**	**90.68**	**181**	⇑P	**P**	**18 50 15.2**	**-0.7**
	comp=Z,3.7nm,0.6s						
VNA2	**Neumayer--Watz**	**90.96**	**181**	⇑P	**P**	**18 50 17.2**	**0.0**
	comp=Z,2.4nm,0.6s,baz=178,slow=4.8						
ARCES	**ARCESS Array B**	**122.32**	**345**	PKP	**PKPdf**	**18 56 10.7**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=41,slow=2.2,SNR=13						
KBA	**Koelnbreinsper**	**144.66**	**330**	ePKP	**PKPab**	**18 56 49.1**	**0.0**
	comp=Z,3.2nm,1.2s						
LESA	**Schwarzleotal**	**144.72**	**331**	ePKP	**PKPab**	**18 56 49.2**	**0.0**
	comp=Z,3.6nm,0.5s						
WTTA	**Wattenberg**	**145.32**	**332**	ePKP	**PKPdf**	**18 56 52.4**	**+0.8**
	comp=Z,4.3nm,1.0s						
MOTA	**Moosalm**	**145.50**	**332**	ePKP	**PKPdf**	**18 56 52.4**	**+0.5**
	comp=Z,11nm,1.0s						
RETA	**Reutte**	**145.54**	**333**	*i* PKP	**PKPab**	**18 56 52.9**	**+0.7**
	comp=Z,4.7nm,1.0s						
SQTA	**Sankt Quirin**	**145.54**	**332**	ePKP	**PKPdf**	**18 56 52.2**	**+0.3**
	comp=Z,8.4nm,1.1s						
FETA	**Feichten**	**145.91**	**332**	*i* PKP	**PKPdf**	**18 56 52.5**	**-0.1**
	comp=Z,5.9nm,1.0s						
DAVA	**Damuels**	**146.07**	**333**	ePKP	**PKPbc**	**18 56 54.5**	**+0.7**
	comp=Z,7.9nm,1.1s						

*PRE **20** 18:43:25.0±0.6, 20°.59S×34°.38E, h5km, ML3.4*
*NEIC **20** 18:43:32.5±1.6, 20°.5S±0°.1×33°.63E±0°.09, h10km±2km, mb4.3/5, Error ellipse: s-maj=17.1km s-min=14.3km az=177.0*

ISC 20 18:43:32.2±0.7, 20°.54S±0°.06×33°.62E±0°.05, h10km, n62, σ2s49/81, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**3.61**	**214**	eP	**Pn**	**18 44 31.8**	**+3.6**
MOPA				eS	**Sb**	**18 45 21.9**	**+1.8**
MOPA				IAML		18 45 33.8	
	comp=Z,468nm,0.7s						
MUSN	**Musina, Limpop**	**3.91**	**243**	eP	**Pn**	**18 44 35.6**	**+3.2**
MUSN				eS	**Sb**	**18 45 25.8**	**-3.0**
MUSN				IAML		18 45 46.0	
	comp=Z,312nm,0.3s						
MUSN	**Musina, Limpop**	**3.91**	**243**	eP	**Pn**	**18 44 36.2**	**+3.8**
MUSN				eS	**Sn**	**18 45 24.9**	**+6.4**
MUSN				IAML		18 45 46.0	
	comp=Z,312nm,0.3s						
HOED	**Hoedspruit, Li**	**4.59**	**212**	eP	**Pn**	**18 44 41.7**	**0.0**
HOED				eS	**Sn**	**18 45 36.9**	**+1.7**
HOED				eS	Sb	18 45 38.1	-10
HOED				IAML		18 46 14.2	
	comp=Z,96nm,0.4s						
PILG	**Pilgrimsrest,**	**5.13**	**211**	eP	**Pn**	**18 44 49.0**	**-0.4**
PILG				eS	**Sn**	**18 45 50.2**	**+1.4**
PILG				IAML		18 46 23.8	
	comp=Z,113nm,0.6s						
BROLN	**Tlhalogang**	**5.91**	**263**	*i* P	**Pn**	**18 45 01.2**	**+1.3**
BROLN				*i* S	**Sn**	**18 46 08.0**	**+0.3**
BROLN				IAML		18 46 39.8	
	comp=N,367nm,0.6s						
MREMI	**Moremi**	**6.09**	**250**		**Pn**	**18 45 02.6**	**+0.2**
MREMI	**Moremi**	**6.09**	**250**	*i* P	**Pn**	**18 45 05.2**	**+2.8**
LEPH	**Lephalale, Lim**	**6.33**	**237**	eP	**Pn**	**18 45 08.6**	**+2.9**
LEPH				IAML		18 47 15.1	
	comp=Z,124nm,0.5s						
CRLN	**Carolina, Mapu**	**6.36**	**211**	eP	**Pn**	**18 45 05.0**	**-1.2**
CRLN				eS	**Sn**	**18 46 18.8**	**-0.2**
CRLN				IAML		18 46 38.2	
	comp=Z,20nm,0.6s						
POGA	**Pongola**	**7.00**	**194**		**Pn**	**18 45 18.0**	**+3.2**
POGA				Sn	**Sn**	**18 46 33.1**	**-1.4**
POGA	**Pongola**	**7.00**	**194**	eP	Pn	18 45 10.7	-4.2
POGA				eS	**Sn**	**18 46 29.1**	**-5.4**
POGA				IAML		18 46 37.0	
	comp=Z,38nm,0.4s						
HRAO	**HartRAO**	**7.62**	**225**	eP	**Pn**	**18 45 25.0**	**+1.5**
HRAO				eS	**Sn**	**18 46 52.5**	**+2.4**
HRAO				IAML		18 47 46.6	
	comp=Z,48nm,0.5s						
LPHEP	**Lephephe**	**7.73**	**247**		**Pn**	**18 45 26.7**	**+1.7**
LPHEP				Sn	**Sn**	**18 46 52.2**	**-0.5**
LPHEP	**Lephephe**	**7.73**	**247**	*i* P	**Pn**	**18 45 26.3**	**+1.3**
LPHEP				*i* S	**Sn**	**18 46 50.2**	**-2.5**
LPHEP				IAML		18 47 44.1	
	comp=N,108nm,0.7s						
KHWEE	**KHWEE**	**7.75**	**258**		**Pn**	**18 45 26.0**	**+0.8**
NWCL	**Newcastle**	**7.93**	**205**	eP	**Pn**	**18 45 26.1**	**-1.7**
NWCL				eS	**Sn**	**18 46 55.1**	**-2.5**
NWCL				IAML		18 46 58.9	
	comp=Z,37nm,0.3s						
KSANE	**Kasane**	**8.44**	**287**		**Pn**	**18 45 35.1**	**+0.3**
KSANE				Sn	**Sn**	**18 47 04.6**	**-5.6**
KSANE	**Kasane**	**8.44**	**287**	*i* P	**Pn**	**18 45 34.4**	**-0.4**
KSANE				*i* S	**Sn**	**18 47 04.7**	**-5.6**
KSANE				IAML		18 48 02.9	
	comp=N,263nm,0.6s						
LBTB	**Lobatse**	**8.64**	**237**		**Pn**	**18 45 38.8**	**+1.4**
LBTB	**Lobatse**	**8.64**	**237**	eP	**Pn**	**18 45 40.6**	**+3.2**
LBTB				eS	**Sn**	**18 47 18.8**	**+3.8**
LBTB				IAML		18 47 43.9	
	comp=Z,14nm,0.4s						
KDWAN	**Kaudwane**	**8.78**	**250**		**Pn**	**18 45 41.0**	**+1.6**
PMBG	**Pietermaritzbu**	**9.37**	**197**	eP	**Pn**	**18 45 44.6**	**-2.8**
PMBG				eS	**Sn**	**18 47 26.7**	**-6.2**
PMBG				IAML		18 47 33.2	
	comp=Z,14nm,0.5s						
MAKGR	**Makgori**	**9.66**	**235**		**Pn**	**18 45 52.1**	**+0.6**
MAKGR	**Makgori**	**9.66**	**235**	*i* P	**Pn**	**18 45 52.0**	**+0.5**
MAKGR				IAML		18 48 50.9	
	comp=N,272nm,0.6s						
SLIND	**Selinda**	**9.73**	**280**	*i* P	**Pn**	**18 45 51.2**	**-1.1**
KSTD	**Kokstad**	**10.76**	**200**	eP	**Pn**	**18 46 04.3**	**-2.3**
KSTD				eS	**Sn**	**18 48 00.5**	**-6.7**
KSTD				IAML		18 48 18.1	
	comp=Z,10nm,0.6s						
KGCAE	**Kacgae**	**10.86**	**256**		**Pn**	**18 46 09.1**	**+1.2**
PHPEN	**Phepeng**	**11.06**	**242**		**Pn**	**18 46 11.0**	**+0.4**
PHPEN	**Phepeng**	**11.06**	**242**	*i* P	**Pn**	**18 46 09.3**	**-1.3**
BOSA	**Boshof**	**11.07**	**222**		**Pn**	**18 46 10.8**	**+0.1**
BOSA	**Boshof**	**11.07**	**222**	eP	**Pn**	**18 46 11.8**	**+1.1**
BOSA				eS	**Sn**	**18 48 14.3**	**-0.3**
BOSA				IAML		18 48 21.1	
	comp=Z,5.5nm,0.4s						
GRTLG	**Ghanzi**	**11.62**	**264**	*i* P	**Pn**	**18 46 17.1**	**-1.2**
GRTLG				*i* S	Sn	18 48 19.4	-8.9
GRTLG				IAML		18 49 45.4	
	comp=N,105nm,0.9s						
QNGWA	**Qangwa**	**11.74**	**273**		**Pn**	**18 46 19.3**	**-0.7**
QNGWA	**Qangwa**	**11.74**	**273**	*i* P	**Pn**	**18 46 18.5**	**-1.4**
XAUDM	**Khaudum**	**11.75**	**278**		**Pn**	**18 46 19.9**	**-0.2**
XAUDM	**Khaudum**	**11.75**	**278**	*i* P	**Pn**	**18 46 18.8**	**-1.2**
LKGWB	**Lokgwabe**	**12.02**	**250**		Pn	18 46 17.6	-6.1
KOOLE	**Kule**	**12.71**	**256**		**Pn**	**18 46 32.2**	**-1.0**

mb5.4/66

NEIC ***20*** *18:51:14.2±1.7, 18°.93N±0°.08×145°.1E±0°.1, h608km±4km, mb4.9/375, Error ellipse: s-maj=16.0km s-min=11.6km az=83.0*

GCMT ***20*** *18:51:15.2±0.4, 18°.99N±0°.03×145°.01E±0°.03, h605km±3km, MW5.3/82, Moment Tension Solution. s82,c123; Duration: 1↑0 Moment tensor: Scale 10¹⁷Nm; Mrr-0.33±.03; Mθθ 0.18±.04; Mϕϕ 0.14±.05; Mrθ-0.84±.04; Mθϕ-0.66±.04; Mϕr-0.03±.05; Best double couple: M₀1.11000×10¹⁷ NP1:ϕs352.00000°, δ37.00000°, λ-18.00000°. NP2:ϕs96.00000°, δ79.00000°, λ-126.00000°. Principal axes: T 1.1090, Plg26.0000°, Azm214.0000°; N 0.0010, Plg35.0000°, Azm104.0000°; P -1.1100, Plg44.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

IDC ***20*** *18:51:15.7±0.5, 18°.98N×145°.11E, h634km±5km, mb4.5/35, mbtmp5.4/39 Error ellipse: s-maj=10.3km s-min=6.0km az=79.0*

DJA ***20*** *18:51:15.1±0.6, 19°N±8°×14°5E±1°0, h602km±20km, M5.2/42, mb5.6/42, mB5.6/36, Mw(mB)5.1/36*

ISC 20 18:51:14.7±0.4, 18°.95N±0°.03×145°.06E±0°.05, h621km±4km, **n1063,σ1↑11/955, mb5.0**/334**, 26C-52D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.33**	**182**	P		**P**	**P**	**18 52 50.4**	**-1.3**
	477nm,0.7s,baz=94,slow=4.2,SNR=32								
GUMO				S		**S**	**S**	**18 54 07.7**	**-3.0**
	338nm,0.5s,baz=265,slow=23,SNR=5.9								
JCJ	**Chichijima**	**8.53**	**342**	P		P	P	18 53 11.4	-8.2
	175nm,0.4s,baz=247,slow=1.2,SNR=21								
JCJ				S		S	S	18 54 51.5	-11
	221nm,0.5s,baz=267,slow=23,SNR=8.9								
JCJ	**Chichijima**	**8.53**	**342**			**P**	**P**	**18 53 19.2**	**-0.5**
JMZ	**Minamidaito 2**	**14.51**	**301**	P		**P**	**P**	**18 54 17.2**	**-0.4**
JHJ2	**Mitsune**	**14.87**	**343**			**P**	**P**	**18 54 20.0**	**-0.6**
JHJ2	**Mitsune**	**14.87**	**343**	P		**P**	**P**	**18 54 21.1**	**+0.4**
JHJ2	**Mitsune**	**14.87**	**343**	S		**S**	**S**	**18 56 52.7**	**+0.4**
JHJ	**Hachijo jima 2**	**14.88**	**343**	P		**P**	**P**	**18 54 20.6**	**-0.2**
	802nm,0.7s,baz=325,slow=22,SNR=21								
JHJ				S		**S**	**S**	**18 56 49.0**	**-3.5**
	255nm,0.5s,baz=17,slow=23,SNR=7.3								
JSG	**Sagara**	**16.81**	**340**	P		**P**	**P**	**18 54 38.9**	**+0.5**
JSG	**Sagara**	**16.81**	**340**	P		**P**	**P**	**18 54 40.4**	**+2.0**
JOW	**Kunigami**	**17.33**	**300**	P		**P**	**P**	**18 54 44.5**	**+1.1**
	150nm,0.5s,baz=156,slow=7.2,SNR=16								
JOW	**Kunigami**	**17.33**	**300**	P		**P**	**P**	**18 54 43.7**	**+0.4**
JOW	**Kunigami**	**17.33**	**300**	P		**P**	**P**	**18 54 44.6**	**+1.3**
JMN	**Monobe**	**17.79**	**328**			**P**	**P**	**18 54 47.8**	**+0.4**
JMN	**Monobe**	**17.79**	**328**	P		**P**	**P**	**18 54 48.4**	**+1.0**
INU	**Inuyama**	**17.82**	**338**			**P**	**P**	**18 54 47.4**	**-0.3**
INU	**Inuyama**	**17.82**	**338**	P		**P**	**P**	**18 54 48.1**	**+0.5**
INU	**Inuyama**	**17.82**	**338**	S		**S**	**S**	**18 57 42.4**	**+2.1**
JGF	**Kuroka**	**17.93**	**339**			**P**	**P**	**18 54 48.7**	**0.0**
JGF	**Kuroka**	**17.93**	**339**	P		**P**	**P**	**18 54 49.0**	**+0.3**
JGF	**Kuroka**	**17.93**	**339**	S		**S**	**S**	**18 57 44.3**	**+2.1**
MJAR	**Matsushiro Arr**	**18.53**	**342**	P		**P**	**P**	**18 54 53.4**	**-0.7**
	40nm,0.5s,baz=169,slow=9.3,SNR=139								
MJAR				S		**S**	**S**	**18 57 49.6**	**-2.2**
	6.3nm,0.5s,baz=141,slow=13,SNR=5.0								
MJAR				ScP		**ScP**	**ScP**	**19 01 26.9**	**-2.3**
	7.1nm,0.7s,baz=158,slow=4.2,SNR=13								
MJAR	**Matsushiro Arr**	**18.53**	**342**	P		**P**	**P**	**18 54 53.5**	**-0.6**
MAJO	**Matsushiro**	**18.54**	**342**			**P**	**P**	**18 54 53.3**	**-0.8**
MAJO	**Matsushiro**	**18.54**	**342**	P		**P**	**P**	**18 54 54.0**	**-0.1**
MAJO	**Matsushiro**	**18.54**	**342**	*d*	*i*	**P**	**P**	**18 54 53.5**	**-0.6**
MJB9	**Matsu-Tunnel**	**18.54**	**342**	P		**P**	**P**	**18 54 54.3**	**+0.1**
JNU	**Nakatsue**	**18.98**	**321**	P		**P**	**P**	**18 54 58.5**	**+0.2**
	174nm,0.6s,baz=137,slow=1.9,SNR=206								
JNU	**Nakatsue**	**18.98**	**321**	P		**P**	**P**	**18 54 58.2**	**-0.1**
JNU	**Nakatsue**	**18.98**	**321**	P		**P**	**P**	**18 54 58.7**	**+0.4**
JMM	**Marumori**	**19.21**	**350**	P		**P**	**P**	**18 55 00.2**	**0.0**
JMM	**Marumori**	**19.21**	**350**	P		**P**	**P**	**18 55 01.4**	**+1.2**
JSD	**Sado**	**19.92**	**344**	P		**P**	**P**	**18 55 06.2**	**-0.4**
JSD	**Sado**	**19.92**	**344**	P		**P**	**P**	**18 55 07.2**	**+0.6**
MANU	**Manus Island**	**20.98**	**174**			**P**	**P**	**18 55 15.9**	**-0.6**
SMPI	**Sarmi**	**21.73**	**197**	P		**P**	**P**	**18 55 23.9**	**+0.8**
	103nm,0.7s								
JAY	**Jayapura**	**21.76**	**192**	P		**P**	**P**	**18 55 24.1**	**+0.7**
	88nm,0.8s,baz=344,slow=3.6,SNR=19								
	88nm,0.8s								
JAY	**Jayapura**	**21.76**	**192**	P		**P**	**P**	**18 55 24.2**	**+0.8**
BAKI	**Biak**	**21.86**	**205**	P		**P**	**P**	**18 55 25.2**	**+0.9**
	195nm,1.0s								
GENI	**Genyem**	**21.94**	**193**	P		**P**	**P**	**18 55 25.5**	**+0.5**
GENI	**Genyem**	**21.94**	**193**	P		**P**	**P**	**18 55 25.6**	**+0.5**
JTM	**Tenmabayashi**	**22.03**	**352**	P		**P**	**P**	**18 55 26.4**	**+1.0**
JTM	**Tenmabayashi**	**22.03**	**352**	P		**P**	**P**	**18 55 26.1**	**+0.7**
NACB	**Ninganchiao**	**22.42**	**288**	P		**P**	**P**	**18 55 29.9**	**+0.7**
NACB	**Ninganchiao**	**22.42**	**288**	S		**S**	**S**	**18 58 54.5**	**+0.9**
SRPI	**Serui, Papua**	**22.43**	**204**	P		**P**	**P**	**18 55 30.3**	**+0.9**
YULB	**Yu-li**	**22.59**	**285**	P		**P**	**P**	**18 55 31.7**	**+1.0**
YULB	**Yu-li**	**22.59**	**285**	S		**S**	**S**	**18 58 56.3**	**0.0**
TATO	**Taipei**	**22.66**	**290**	P		**P**	**P**	**18 55 32.4**	**+1.2**
TATO				S		**S**	**S**	**18 59 00.5**	**+3.2**
YHNB	**Yeheng**	**22.70**	**289**	P		**P**	**P**	**18 55 32.2**	**+0.5**
YHNB	**Yeheng**	**22.70**	**289**	S		**S**	**S**	**18 58 58.0**	**-0.1**
TWGBT	**Beinan**	**22.73**	**284**	P		**P**	**P**	**18 55 32.6**	**+0.7**
TWGBT	**Beinan**	**22.73**	**284**	S		**S**	**S**	**18 58 58.4**	**0.0**
TWG	**Pinlang**	**22.73**	**284**	P		**P**	**P**	**18 55 30.9**	**-1.1**
SSLB	**Suanglung**	**22.95**	**286**	P		**P**	**P**	**18 55 34.2**	**+0.3**
SSLB	**Suanglung**	**22.95**	**286**	P		**P**	**P**	**18 55 34.8**	**+0.9**
RKPI	**Ransiki, Papua**	**22.98**	**209**	P		**P**	**P**	**18 55 34.2**	**0.0**
	147nm,0.8s								
TPUB	**Ta-pu**	**23.19**	**285**	P		**P**	**P**	**18 55 36.1**	**+0.1**
TPUB	**Ta-pu**	**23.19**	**285**	P		**P**	**P**	**18 55 36.4**	**+0.4**
TJN	**Taejon**	**23.32**	**322**	P		**P**	**P**	**18 55 36.2**	**-0.7**
TJN	**Taejon**	**23.32**	**322**	P		**P**	**P**	**18 55 36.1**	**-0.8**
TJN	**Taejon**	**23.32**	**322**	*d*	*i*	**P**	**P**	**18 55 36.3**	**-0.7**
TGY	**Tagaytay City**	**23.62**	**262**	P		**P**	**P**	**18 55 41.2**	**+1.3**
	187nm,0.5s,baz=134,slow=8.6,SNR=5.2								
	187nm,0.5s								
KSRS	**Korea Array**	**23.76**	**324**	P		**P**	**P**	**18 55 41.2**	**+0.4**
	149nm,0.8s,baz=144,slow=9.0,SNR=520								
KSRS				ScP		**ScP**	**ScP**	**19 01 40.5**	**-1.8**
	11nm,0.9s,baz=140,slow=3.3,SNR=27								
	149nm,0.8s								
KSAR	**Wonju Array Be**	**23.77**	**324**	P		**P**	**P**	**18 55 41.0**	**+0.1**
KSAR	**Wonju Array Be**	**23.77**	**324**	P		**P**	**P**	**18 55 41.0**	**+0.1**
KS19	**Wonju Array Si**	**23.83**	**324**	P		**P**	**P**	**18 55 41.0**	**-0.4**
SWI	**Sorong**	**23.91**	**216**	P		**P**	**P**	**18 55 42.2**	**-0.2**
	2μm208nm,0.8s								
RABL	**Rabaul**	**24.04**	**162**	P		**P**	**P**	**18 55 43.0**	**-0.6**
INCN	**Inchon**	**24.51**	**323**	P		**P**	**P**	**18 55 46.6**	**-0.9**
INCN	**Inchon**	**24.51**	**323**	P		**P**	**P**	**18 55 47.5**	**+0.1**
INCN	**Inchon**	**24.51**	**323**	P		**P**	**P**	**18 55 47.0**	**-0.5**
INCN	**Inchon**	**24.51**	**323**	P		**P**	**P**	**18 55 46.6**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**25.02**	**1↑**	*e*	P	**P**	**P**	**18 55 52.6**	**+0.8**
TNTI	**Ternate**	**25.05**	**226**	P		**P**	**P**	**18 55 51.6**	**-1.0**
TNTI	**Ternate**	**25.05**	**226**	P		**P**	**P**	**18 55 53.3**	**+0.8**
TNTI	**Ternate**	**25.05**	**226**	P		**P**	**P**	**18 55 51.8**	**-0.7**
	76nm,0.6s								
KMPI	**Kaimana, Papua**	**25.10**	**208**	P		**P**	**P**	**18 55 53.1**	**+0.2**
FAKI	**Fak Fak**	**25.12**	**211**	P		**P**	**P**	**18 55 51.9**	**-1.3**
FAKI	**Fak Fak**	**25.12**	**211**	P		**P**	**P**	**18 55 53.4**	**+0.2**
FAKI	**Fak Fak**	**25.12**	**211**	P		**P**	**P**	**18 55 52.9**	**-0.3**
	2μm219nm,0.7s								
QZH	**Quanzhou**	**25.24**	**288**	P		**P**	**P**	**18 55 54.3**	**+0.2**
QZH				pmax		pmax			
	comp=Z,190nm,0.8s								
KNMB	**Chin-men Tao**	**25.36**	**287**	P		**P**	**P**	**18 55 55.4**	**+0.3**
MSHR	**Mys Shultsa**	**26.34**	**336**	*de*	P	**P**	**P**	**18 56 04.5**	**+1.1**
MSHR				pmax		pmax			
	comp=Z,69nm,0.8s								
PSTR	**Posyet**	**26.54**	**336**	*d*	*i*	**P**	**P**	**18 56 05.9**	**+0.8**
VLA	**Vladivostok**	**26.54**	**338**	*c*	*i*	**P**	**P**	**18 56 05.9**	**+0.7**
VLA				pmax		pmax			
	comp=Z,167nm,1.0s								
NJ2	**Nanjing**	**26.93**	**304**	*e*	P	**P**	**P**	**18 56 10.4**	**+1.6**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.6s								
MSAI	**Masohi**	**27.26**	**217**	P		**P**	**P**	**18 56 11.6**	**-0.3**
USRK	**Ussuriysk Ar.**	**27.46**	**339**	P		**P**	**P**	**18 56 14.0**	**+0.9**
	comp=Z,54nm,0.7s,baz=157,slow=8.8,SNR=84								
	comp=Z,54nm,0.7s								
KMSI	**Cibinong**	**27.59**	**231**	P		**P**	**P**	**18 56 14.7**	**0.0**
	comp=Z,5μmcomp=Z,519nm,0.9s								
BNDI	**Bandanaira**	**27.69**	**214**	P		**P**	**P**	**18 56 15.5**	**-0.1**
BNDI	**Bandanaira**	**27.69**	**214**	P		**P**	**P**	**18 56 15.0**	**-0.6**
	comp=Z,4μmcomp=Z,484nm,0.9s								
AAI	**Ambon**	**27.96**	**218**	P		**P**	**P**	**18 56 17.9**	**-0.1**
YSS	**Yuzhno-Sakhali**	**27.99**	**357**	P		**P**	**P**	**18 56 18.1**	**+0.3**
YSS	**Yuzhno-Sakhali**	**27.99**	**357**	P		**P**	**P**	**18 56 18.4**	**+0.6**
YSS	**Yuzhno-Sakhali**	**27.99**	**357**	*d*	*i*	**P**	**P**	**18 56 18.1**	**+0.3**
YSS				pmax		pmax			
	comp=Z,54nm,0.6s								
SANI	**Sanana**	**28.06**	**224**	P		**P**	**P**	**18 56 17.3**	**-1.5**
SANI	**Sanana**	**28.06**	**224**	P		**P**	**P**	**18 56 17.0**	**-1.8**
	comp=Z,1μmcomp=Z,93nm,0.5s								
PMG	**Port Moresby**	**28.25**	**176**	P		**P**	**P**	**18 56 20.7**	**+0.3**
	comp=Z,72nm,0.7s,baz=5.3,slow=7.5,SNR=41								
	comp=Z,72nm,0.7s								
PMG	**Port Moresby**	**28.25**	**176**	P		**P**	**P**	**18 56 20.5**	**+0.1**
PMG	**Port Moresby**	**28.25**	**176**	P		**P**	**P**	**18 56 20.9**	**+0.5**
PMG	**Port Moresby**	**28.25**	**176**	P		**P**	**P**	**18 56 20.5**	**+0.1**
PMG				pmax		pmax			
	comp=Z,91nm,0.9s								
NLAI	**Namlea**	**28.26**	**221**	P		**P**	**P**	**18 56 20.6**	**0.0**
	comp=Z,3μmcomp=Z,402nm,0.7s								
DL2	**Dalian**	**28.42**	**319**	P		**P**	**P**	**18 56 21.0**	**-0.6**
DL2				pmax		pmax			
	comp=Z,170nm,0.9s								
MDJ	**Mudanjiang**	**28.67**	**337**	P		**P**	**P**	**18 56 24.8**	**+1.1**
MDJ				sP		PcP		18 59 12.0	-1.3
MDJ				S		**S**		**19 00 31.5**	**+0.9**
MDJ				ScP		**ScP**		**19 01 54.4**	**-2.5**
MDJ				pmax		pmax			
	comp=Z,73nm,0.9s								
MDJ				pmax		pmax			
	comp=Z,650nm,4.8s								
MDJ	**Mudanjiang**	**28.67**	**337**	P		**P**	**P**	**18 56 24.7**	**+1.1**
MRSI	**Marisa**	**29.18**	**234**	P		**P**	**P**	**18 56 28.8**	**+0.3**
	comp=Z,3μmcomp=Z,460nm,0.8s								
MYLDM	**Lahad Datu**	**29.30**	**246**	P		**P**	**P**	**18 56 31.0**	**+1.5**
MYLDM	**Lahad Datu**	**29.30**	**246**	P		**P**	**P**	**18 56 32.0**	**+2.5**
LUWI	**Luwuk**	**29.57**	**230**	P		**P**	**P**	**18 56 31.4**	**-0.4**
LUWI	**Luwuk**	**29.57**	**230**	P		**P**	**P**	**18 56 31.0**	**-0.8**
TOLI2	**Tolitoli**	**29.68**	**236**	P		**P**	**P**	**18 56 33.2**	**+0.4**
TOLI2	**Tolitoli**	**29.68**	**236**	P		**P**	**P**	**18 56 33.4**	**+0.6**
CN2	**Changchun**	**29.75**	**331**	*i*	P	**P**	**P**	**18 56 33.5**	**+0.5**
CN2				S		**S**	**S**	**19 00 50.3**	**+3.1**
CN2				pmax		pmax			
	comp=Z,70nm,0.8s								
CN2				pmax		pmax			
	comp=Z,320nm,4.0s								
TIA	**Tai'an**	**29.99**	**311**	P		**P**	**P**	**18 56 35.4**	**+0.2**
TIA				pmax		pmax			
	comp=Z,41nm,0.7s								
SAUI	**Saumlaki**	**30.01**	**208**	P		**P**	**P**	**18 56 36.2**	**+0.7**
SAUI	**Saumlaki**	**30.01**	**208**	P		**P**	**P**	**18 56 37.2**	**+1.6**
SAUI	**Saumlaki**	**30.01**	**208**	P		**P**	**P**	**18 56 35.7**	**+0.1**
	comp=Z,4μmcomp=Z,388nm,0.9s								
WHN	**Wuhan**	**30.09**	**298**	⇓	P	**P**	**P**	**18 56 37.4**	**+1.3**
APSI	**Ampana**	**30.31**	**232**	P		**P**	**P**	**18 56 37.7**	**-0.5**
	comp=Z,506nm,0.9s								
BNX	**BinXian**	**30.45**	**335**	⇑	P	**P**	**P**	**18 56 39.8**	**+0.8**
BNX				pmax		pmax			
	comp=Z,220nm,0.8s								
MPSI	**Mapaga**	**30.85**	**236**	P		**P**	**P**	**18 56 43.1**	**+0.3**
	comp=Z,2μmcomp=Z,110nm,0.7s								
SAVO	**Savo Central**	**31.48**	**151**	P		**P**	**P**	**18 56 49.5**	**+1.3**
PCI	**Palu**	**31.68**	**234**	P		**P**	**P**	**18 56 49.1**	**-0.7**
	comp=Z,3μmcomp=Z,341nm,0.7s								
TYV	**Tymovskoe**	**31.90**	**357**	*e*	P	**P**	**P**	**18 56 52.1**	**+1.0**
TYV				pmax		pmax			
	comp=Z,105nm,0.7s								
TYV				pmax		pmax			
	comp=Z,400nm,2.3s								
HNS	**HongShan**	**32.26**	**311**	⇓	P	**P**	**P**	**18 56 55.5**	**+1.1**
HNS				pmax		pmax			
	comp=Z,220nm,0.7s								
GRNR	**Gornyy**	**32.48**	**350**	⇓	*i*	P	**P**	**18 56 57.3**	**+1.2**
GRNR				pmax		pmax			
	comp=E,20nm,0.7s								
GRNR				pmax		pmax			
	comp=N,50nm,0.8s								
GRNR				pmax		pmax			
	comp=Z,110nm,0.7s								
GRNR				MLR		MLR			
	comp=E,310nm,15.0s								
BJT	**Baijiatuan**	**32.53**	**316**	P		**P**	**P**	**18 56 57.4**	**+0.8**
BJT	**Baijiatuan**	**32.53**	**316**	P		**P**	**P**	**18 56 57.3**	**+0.6**
BJT	**Baijiatuan**	**32.53**	**316**	pP		pP		18 58 35.0	+0.6
BJI	**Beijing**	**32.54**	**316**	P		**P**	**P**	**18 56 57.3**	**+0.6**
BJI				S		**S**	**S**	**19 01 27.9**	**-1.9**
BJI				pmax		pmax			
	comp=E,56nm,0.6s								
BJI				pmax		pmax			
	comp=E,130nm,3.8s								
COEN	**Coen**	**32.75**	**183**	P		**P**	**P**	**18 56 59.6**	**+0.8**
	comp=Z,177nm,0.8s								
COEN	**Coen**	**32.75**	**183**	P		**P**	**P**	**18 57 00.2**	**+1.4**
LYN	**LuoYang**	**32.82**	**305**	P		**P**	**P**	**18 56 59.9**	**+0.7**
LYN				pmax		pmax			
	comp=Z,240nm,1.0s								
SKR	**Severo-Kuril's**	**32.86**	**13**	⇓	*e*	P	**P**	**18 56 58.8**	**-0.4**
BBSI	**Bau Bau**	**32.88**	**225**	P		**P**	**P**	**18 57 01.7**	**+1.8**
	comp=Z,2μmcomp=Z,315nm,0.8s								
TTSI	**Tana Toraja**	**33.09**	**231**	P		**P**	**P**	**18 57 02.0**	**+0.3**
SPSI	**Sidrap Palu**	**33.74**	**230**	P		**P**	**P**	**18 57 07.2**	**0.0**
	comp=Z,5μmcomp=Z,415nm,0.7s								
BNSI	**Bone**	**33.80**	**229**	P		**P**	**P**	**18 57 08.1**	**+0.5**
	comp=Z,3μmcomp=Z,314nm,0.8s								
KDU	**Kakadu**	**33.80**	**202**	P		**P**	**P**	**18 57 06.9**	**-0.7**
	comp=Z,110nm,0.8s								
TIY	**Taiyuan**	**34.03**	**310**	P		**P**	**P**	**18 57 10.9**	**+1.6**
TIY				pmax		pmax			
	comp=Z,100nm,0.6s								
ENH	**Enshi**	**34.12**	**296**	P		**P**	**P**	**18 57 11.0**	**+0.8**
DRS	**Darwin Rock St**	**34.17**	**205**	P		**P**	**P**	**18 57 11.1**	**+0.5**
AUDHS	**Darwin High Sc**	**34.20**	**205**	P		**P**	**P**	**18 57 11.1**	**+0.2**
HEH	**HeiHe**	**34.26**	**340**	*eP*		**P**	**P**	**18 57 11.3**	**+0.4**
HEH				PcP		**PcP**	**PcP**	**18 59 28.8**	**+0.1**
HEH				ScP		**ScP**	**ScP**	**19 02 13.3**	**-2.5**
HEH				pmax		pmax			
	comp=Z,200nm,0.9s								
BKSI	**Bulukumba**	**34.43**	**228**	P		**P**	**P**	**18 57 12.8**	**-0.1**
	comp=Z,100nm,0.7s								
MTN	**Manton Dam**	**34.45**	**205**	P		**P**	**P**	**18 57 12.5**	**-0.5**
	comp=Z,563nm,0.7s								
KAPI	**Kappang**	**34.48**	**229**	P		**P**	**P**	**18 57 13.3**	**+0.1**
KAPI	**Kappang**	**34.48**	**229**	P		**P**	**P**	**18 57 14.2**	**+0.9**
KAPI	**Kappang**	**34.48**	**229**	P		**P**	**P**	**18 57 13.8**	**+0.5**
KAPI	**Kappang**	**34.48**	**229**	*c*	*i*	**P**	**P**	**18 57 13.9**	**+0.6**
KAPI				pmax		pmax			
	comp=Z,112nm,0.9s								
KAPI	**Kappang**	**34.48**	**229**	P		**P**	**P**	**18 57 14.1**	**+0.9**
BSSI	**Bau Bau, Buton**	**34.76**	**226**	P		**P**	**P**	**18 57 15.6**	**0.0**
	comp=Z,3μmcomp=Z,381nm,0.8s								
XLT	**XiLinHaoTe**	**34.76**	**322**	*eP**		**P**	**P**	**18 57 16.3**	**+1.0**
XLT				PcP		**PcP**	**PcP**	**18 59 31.1**	**+0.6**
XLT				pmax		pmax			
	comp=Z,150nm,0.8s								
XLT				pmax		pmax			
	comp=Z,510nm,5.0s								
SOEI	**Soe**	**35.13**	**217**	P		**P**	**P**	**18 57 18.8**	**0.0**
MMRI	**Maumere**	**35.47**	**221**	P		**P**	**P**	**18 57 21.9**	**+0.5**
MMRI	**Maumere**	**35.47**	**221**	P		**P**	**P**	**18 57 20.9**	**-0.5**
	comp=Z,2μmcomp=Z,199nm,0.9s								
PETK	**Petropavlovsk-**	**35.48**	**13**	P		**P**	**P**	**18 57 21.4**	**+0.4**
	comp=Z,15nm,0.8s,baz=177,slow=5.0,SNR=12								
PETK				PcP		**PcP**		**18 59 31.2**	**-1.1**
	comp=Z,9.0nm,0.8s,baz=218,slow=7.1,SNR=3.8								
PETK				ScP		**S**		**19 02 17.9**	**+4.3**
	comp=Z,4.3nm,0.7s,baz=176,slow=5.7,SNR=2.9								
	comp=Z,15nm,0.8s								
MTKI	**Muara Teweh, K**	**35.62**	**240**	P		**P**	**P**	**18 57 23.3**	**+0.6**
	comp=Z,3μmcomp=Z,285nm,0.8s								
BATI	**Baumata**	**35.84**	**218**	P		**P**	**P**	**18 57 23.1**	**-1.4**
HHC	**Hu-ho-hao-te**	**36.00**	**315**	⇓	*i*	**P**	**P**	**18 57 26.8**	**+1.2**
HHC				pmax		pmax			
	comp=Z,200nm,0.8s								
HHC				pmax		pmax			
	comp=Z,190nm,6.7s								
SBUM	**Sibu**	**36.08**	**247**	P		**P**	**P**	**18 57 27.6**	**+1.1**
SBUM	**Sibu**	**36.08**	**247**	P		**P**	**P**	**18 57 28.2**	**+1.7**
GYA	**Guiyang**	**36.10**	**289**	⇓	P	**P**	**P**	**18 57 28.3**	**+1.6**
GYA				PcP		**PcP**	**PcP**	**18 59 35.8**	**+0.9**
GYA				S		**S**	**S**	**19 02 23.3**	**-0.6**
GYA				pmax		pmax			
	comp=Z,73nm,0.7s								
HIA	**Hailar**	**36.45**	**332**	P		**P**	**P**	**18 57 29.6**	**+0.5**
HIA	**Hailar**	**36.45**	**332**	P		**P**	**P**	**18 57 29.9**	**+0.8**
HILR	**Hailar Array B**	**36.66**	**332**	P		**P**	**P**	**18 57 31.5**	**+0.7**
	comp=Z,46nm,0.4s,baz=132,slow=9.7,SNR=95								
HILR				PcP		**PcP**	**PcP**	**18 59 35.2**	**-0.8**
	comp=Z,14nm,0.7s,baz=137,slow=5.8,SNR=5.9								
HILR				ScP		**ScP**	**ScP**	**19 02 23.4**	**-1.4**
	comp=Z,22nm,0.9s,baz=135,slow=4.8,SNR=13								
	comp=Z,46nm,0.4s								
MTSU	**Mount Surprise**	**36.86**	**181**	P		**P**	**P**	**18 57 33.3**	**+0.6**
	comp=Z,93nm,0.8s								
MTSU	**Mount Surprise**	**36.86**	**181**	P		**P**	**P**	**18 57 33.9**	**+1.1**
BTO	**Baotou**	**36.94**	**313**	⇓	*i*	**P**	**P**	**18 57 35.5**	**+2.2**
BTO				pmax		pmax			
	comp=Z,230nm,1.0s								
BTO				pmax		pmax			
	comp=Z,470nm,8.2s								
ZEA	**Zeya**	**37.35**	**343**	*e*	P	**P**	**P**	**18 57 36.5**	**+0.3**
ZEA				pmax		pmax			
	comp=E,10.0nm,1.0s								
ZEA				pmax		pmax			
	comp=N,40nm,0.9s								
ZEA				pmax		pmax			
	comp=Z,90nm,0.8s								
KNRA	**Kununurra**	**37.97**	**206**	P		**P**	**P**	**18 57 41.5**	**-0.2**
	comp=Z,174nm,0.7s								
TV1H	**Townsville Har**	**38.01**	**177**	P		**P**	**P**	**18 57 42.5**	**+0.5**
PLAI	**Plampang**	**38.55**	**227**	P		**P**	**P**	**18 57 46.1**	**-0.4**
CTA	**Charters Tower**	**38.81**	**178**	P		**P**	**P**	**18 57 49.5**	**+1.0**
CTAO	**Charters Tower**	**38.81**	**178**	P		**P**	**P**	**18 57 49.3**	**+0.7**
CTAO	**Charters Tower**	**38.81**	**178**	P		**P**	**P**	**18 57 49.5**	**+1.0**
CTAO	**Charters Tower**	**38.81**	**178**	P		**P**	**P**	**18 57 49.3**	**+0.7**
CTAO				pmax		pmax			
	comp=Z,124nm,0.7s								
CTAO	**Charters Tower**	**38.81**	**178**	P		**P**	**P**	**18 57 49.2**	**+0.7**
CD2	**Chengdu**	**39.09**	**296**	P		**P**	**P**	**18 57 51.1**	**+0.3**
CD2				pmax		pmax			
	comp=Z,180nm,0.7s								
KMI	**Kunming**	**39.59**	**287**	⇓	P	**P**	**P**	**18 57 56.6**	**+1.6**
KMI				pmax		pmax			
	comp=Z,26nm,0.8s								
QIS	**Mount Isa**	**39.63**	**188**	P		**P**	**P**	**18 57 54.9**	**-0.1**
	comp=Z,126nm,0.9s								
QIS	**Mount Isa**	**39.63**	**188**	P		**P**	**P**	**18 57 55.5**	**+0.5**
LZH	**Lanzhou**	**40.01**	**304**	⇓	P	**P**	**P**	**18 57 59.9**	**+1.8**
LZH				S		**S**	**S**	**19 03 21.3**	**+0.4**
LZH				pmax		pmax			
	comp=Z,380nm,1.6s								
LZH				pmax		pmax			
	comp=Z,730nm,6.9s								
WR8	**Warramunga Arr**	**40.03**	**196**	P		**P**	**P**	**18 57 58.4**	**+0.2**
WRAB	**Tennant Creek**	**40.05**	**196**	P		**P**	**P**	**18 57 58.

IPM	**Ipoh**	**45.30**	**257**	P	**P**	**18 58 40.1**	**+0.7**			
IPM				IAmb	IAmb	18 58 41.4				
	comp=Z,47nm,1.3s									
IPM	**Ipoh**	**45.30**	**257**	P	**P**	**18 58 41.0**	**+1.7**			
ZAK	**Zakamensk**	**45.59**	**323**	*eP*	**P**	**18 58 41.1**	**0.0**			
ZAK				pmax	pmax					
	comp=Z,87nm,1.0s									
IRK	**Irkutsk**	**45.96**	**326**	*eP*	**P**	**18 58 42.1**	**-1.6**			
IRK				pmax	pmax					
	comp=Z,222nm,0.9s									
TLY	**Talaya**	**46.01**	**325**	P	**P**	**18 58 45.1**	**+1.0**			
INKA	**Innaminka**	**46.60**	**185**	IAmb	IAmb	18 58 49.8				
	comp=Z,45nm,0.7s									
WRKA	**Warakurna**	**46.67**	**201**	P	**P**	**18 58 49.2**	**-0.3**			
	comp=Z,77nm,0.8s									
TW1H	**Toowoomba 1 Ha**	**46.70**	**172**	P	**P**	**18 58 50.5**	**+0.8**			
AUWSH	**Wavell State H**	**46.72**	**170**	P	**P**	**18 58 50.6**	**+0.9**			
MBWA	**Marble Bar**	**46.95**	**213**	P	**P**	**18 58 51.4**	**-0.2**			
	comp=Z,143nm,0.8s									
MBWA	**Marble Bar**	**46.95**	**213**	P	**P**	**18 58 51.7**	**+0.2**			
MBWA	**Marble Bar**	**46.95**	**213**	P	**P**	**18 58 51.8**	**+0.2**			
MBWA	**Marble Bar**	**46.95**	**213**	P	**P**	**18 58 51.6**	**0.0**			
PSAC2	**Pilbara Seismi**	**47.20**	**213**	P	**P**	**18 58 53.2**	**-0.2**			
	comp=Z,151nm,1.4s									
GOMU	**GeErMu**	**47.21**	**302**	P	**P**	**18 58 55.4**	**+1.6**			
GOMU				pmax	pmax					
	comp=Z,32nm,0.7s									
PSA00	**Pilbara Seismi**	**47.23**	**213**	P	**P**	**18 58 53.7**	**+0.1**			
	comp=Z,140nm,0.9s									
PSA00	**Pilbara Seismi**	**47.23**	**213**	P	**P**	**18 58 53.9**	**+0.1**			
PSA00	**Pilbara Seismi**	**47.23**	**213**	P	**P**	**18 58 53.8**	**+0.1**			
MOY	**Mondy**	**47.46**	**324**	*eP*	**P**	**18 58 55.8**	**+0.7**			
MOY				pmax	pmax					
	comp=Z,56nm,1.5s									
GC1S	**Gold Coast 1 S**	**47.54**	**170**	P	**P**	**18 58 57.0**	**+1.2**			
PSI	**Prapat**	**47.88**	**256**	P	**P**	**18 59 01.3**	**+2.5**			
AULRC	**Lightning Ridg**	**48.18**	**177**	P	**P**	**18 59 00.3**	**-0.2**			
MSVF	**Nonsavu**	**48.78**	**136**⇑	*eP*	**P**	**18 59 06.9**	**+1.6**			
MSVF				pmax	pmax					
	comp=Z,8.0nm,0.7s									
KNGR	**Kungurtug, Tuv**	**49.01**	**321**	*d iP*	**P**	**18 59 07.3**	**+0.7**			
KNGR				pmax	pmax					
	comp=Z,32nm,0.9s									
NIKH	**Nikolski High**	**49.15**	**35**	P	**P**	**18 59 07.1**	**-0.3**			
	baz=244									
SHL	**Shillong**	**49.39**	**288**	P	**P**	**18 59 10.1**	**+0.2**			
ARMA	**Armidale**	**49.49**	**173**	P	**P**	**18 59 11.1**	**+0.8**			
	comp=Z,31nm,0.9s									
ARMA	**Armidale**	**49.49**	**173**	P	**P**	**18 59 11.5**	**+1.2**			
LSA	**Lhasa**	**49.90**	**293**	P	**P**	**18 59 15.7**	**+1.9**			
LSA	**Lhasa**	**49.90**	**293**	P	**P**	**18 59 11.6**	**-2.3**			
LSA				pmax	pmax					
	comp=Z,84nm,0.8s									
LSA	**Lhasa**	**49.90**	**293**	P	**P**	**18 59 15.8**	**+1.9**			
LSA	**Lhasa**	**49.90**	**293**	P	**P**	**18 59 15.7**	**+1.9**			
AUPHS	**Peel High Scho**	**50.08**	**173**	P	**P**	**18 59 15.5**	**+1.0**			
CMSA	**Cobar Meteorol**	**50.20**	**179**	P	**P**	**18 59 15.8**	**+0.4**			
	comp=Z,59nm,0.9s									
CMSA	**Cobar Meteorol**	**50.20**	**179**	P	**P**	**18 59 15.8**	**+0.4**			
SPIA	**Saint Paul Isl**	**50.42**	**30**	P	**P**	**18 59 16.5**	**0.0**			
	baz=240									
P08K	**Saint George I**	**50.47**	**31**	P	**P**	**18 59 17.4**	**+0.5**			
	baz=241									
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**18 59 18.4**	**-0.1**			
	comp=Z,432nm,1.0s									
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**18 59 18.8**	**+0.2**			
	comp=Z,59nm,0.7s,baz=358,slow=7.6,SNR=113									
	comp=Z,59nm,0.7s									
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**18 59 18.6**	**0.0**			
UNV	**Unalaska Valle**	**50.79**	**35**	P	**P**	**18 59 19.1**	**-0.2**			
	baz=246									
BILL	**Bilibino**	**50.88**	**10**	P	**P**	**18 59 20.2**	**+0.6**			
BILL	**Bilibino**	**50.88**	**10**	*d iP*	**P**	**18 59 20.3**	**+0.6**			
BILL				pmax	pmax					
	comp=Z,74nm,0.9s									
AUDCS	**Dubbo College**	**51.00**	**176**	P	**P**	**18 59 22.0**	**+0.9**			
FORT	**Forrest**	**52.08**	**199**	P	**P**	**18 59 28.9**	**+0.1**			
	comp=Z,84nm,1.1s									
FORT	**Forrest**	**52.08**	**199**	IAmb	IAmb	18 59 30.1				
	comp=Z,50nm,0.6s									
MEEK	**Meekatharra**	**52.08**	**210**	P	**P**	**18 59 28.2**	**-0.8**			
	comp=Z,57nm,0.8s									
MEEK	**Meekatharra**	**52.08**	**210**	P	**P**	**18 59 28.8**	**-0.2**			
BBOO	**Buckleboo**	**52.18**	**190**	P	**P**	**18 59 29.0**	**-0.6**			
	comp=Z,91nm,0.8s									
BBOO	**Buckleboo**	**52.18**	**190**	IAmb	IAmb	18 59 30.5				
	comp=Z,60nm,0.8s									
BBOO	**Buckleboo**	**52.18**	**190**	P	**P**	**18 59 29.8**	**+0.2**			
WHYH	**Whyalla**	**52.18**	**188**	P	**P**	**18 59 30.4**	**+0.9**			
AUJCS	**Jamestown Cent**	**52.22**	**187**	P	**P**	**18 59 31.0**	**+1.1**			
HTT	**Hallett**	**52.41**	**186**	P	**P**	**18 59 31.1**	**-0.2**			
	comp=Z,19nm,0.9s									
HTT	**Hallett**	**52.41**	**186**	P	**P**	**18 59 32.0**	**+0.7**			
AUKHS	**Kincumber High**	**52.46**	**173**	P	**P**	**18 59 33.5**	**+2.0**			
SYDH	**Sydney Hard Ro**	**52.70**	**174**	P	**P**	**18 59 34.3**	**+1.1**			
FALS	**False Pass**	**52.85**	**35**	P	**P**	**18 59 33.9**	**-0.1**			
	baz=248									
YNG	**Young**	**53.05**	**177**	P	**P**	**18 59 36.3**	**+0.7**			
	comp=Z,50nm,0.9s									
WOLH	**Wollongong Har**	**53.35**	**174**	P	**P**	**18 59 39.1**	**+1.4**			
GAMB	**Gambell**	**53.45**	**22**	P	**P**	**18 59 38.9**	**+0.9**			
	baz=234									
TIXI	**Tiksi**	**53.55**	**354**	P	**P**	**18 59 38.1**	**-0.5**			
TIXI				IAmb	IAmb	18 59 40.7				
	comp=Z,34nm,0.7s									
TIXI	**Tiksi**	**53.55**	**354**	*deP*	**P**	**18 59 38.2**	**-0.5**			
TIXI				pmax	pmax					
	comp=Z,48nm,1.0s									
WMQ	**Urumqi**	**53.69**	**311**	*eP*	**P**	**18 59 41.8**	**+1.5**			
WMQ				PcP	**PcP**	**19 00 37.0**	**+0.8**			
WMQ				pmax	pmax					
	comp=Z,97nm,0.7s									
WMQ				pmax	pmax					
	comp=Z,170nm,3.6s									
WMQ	**Urumqi**	**53.69**	**311**	P	**P**	**18 59 41.8**	**+1.5**			
WMQ	**Urumqi**	**53.69**	**311**	PcP	**PcP**	**19 00 37.1**	**+0.9**			
M11K	**Mekoryuk**	**53.83**	**28**	P	**P**	**18 59 42.2**	**+1.4**			
	baz=242									
S12K	**Black Hills**	**53.88**	**34**	P	**P**	**18 59 41.9**	**+0.6**			
	baz=249									
AUDAR	**Daramalan Coll**	**54.04**	**176**	P	**P**	**18 59 44.4**	**+1.7**			
AUMBR	**Murray Bridge**	**54.06**	**186**	P	**P**	**18 59 43.8**	**+1.0**			
AUSIS	**Research Schoo**	**54.07**	**176**	P	**P**	**18 59 44.2**	**+1.3**			
AUMTS	**Mt Stromlo**	**54.10**	**176**	P	**P**	**18 59 44.2**	**+1.1**			
CAN	**Canberra**	**54.10**	**176**	P	**P**	**18 59 44.0**	**+0.9**			
	comp=Z,74nm,1.4s									
CAN	**Canberra**	**54.10**	**176**	IAmb	IAmb	18 59 45.3				
	comp=Z,54nm,1.0s									
CAN	**Canberra**	**54.10**	**176**	P	**P**	**18 59 44.2**	**+1.1**			
CNB	**Canberra Magne**	**54.12**	**176**	P	**P**	**18 59 44.4**	**+1.1**			
SDPT	**Sand Point**	**54.61**	**35**	P	**P**	**18 59 46.5**	**+0.2**			
	baz=251									
KMBL	**Kambalda**	**54.76**	**204**	P	**P**	**18 59 46.3**	**-1.4**			
	comp=Z,20nm,0.7s									
CHNA	**Chernabura Isl**	**54.92**	**36**	P	**P**	**18 59 49.1**	**+0.6**			
	baz=252									
DGZ	**Jazzator, Alta**	**54.93**	**318**	*d iP*	**P**	**18 59 50.1**	**+1.2**			
DGZ				pmax	pmax					
	comp=Z,111nm,1.0s									
M13K	**Dall Lake**	**55.10**	**28**	P	**P**	**18 59 50.7**	**+1.1**			
	baz=245									
K13K	**Kusilvak Mount**	**55.22**	**26**	P	**P**	**18 59 51.3**	**+0.9**			
	baz=242									
MORW	**Morawa**	**55.35**	**211**	P	**P**	**18 59 51.4**	**-0.5**			
S14K	**Fog Glacier**	**55.41**	**34**	P	**P**	**18 59 52.6**	**+0.6**			
	baz=251									
ARPS	**Mount Arapiles**	**55.50**	**183**	P	**P**	**18 59 53.2**	**+0.4**			
	comp=Z,44nm,1.0s									
O14K	**Tigyukauivet M**	**55.60**	**30**	P	**P**	**18 59 54.3**	**+1.2**			
	baz=248									
N14K	**Kuskokwak Cree**	**55.66**	**29**	P	**P**	**18 59 54.6**	**+1.1**			
	baz=247									
L14K	**Kuka Creek**	**55.80**	**27**	IAmb	IAmb	18 59 56.6				
	comp=Z,43nm,1.0s									
L14K	**Kuka Creek**	**55.80**	**27**	P	**P**	**18 59 55.4**	**+1.0**			
	baz=245,SNR=8.8									
TNA	**Tin City**	**55.80**	**22**	P	**P**	**18 59 55.2**	**+0.8**			
	baz=237									
MILA	**Mila**	**55.84**	**176**	P	**P**	**18 59 54.7**	**-0.4**			
	comp=Z,26nm,1.1s									
M14K	**Bethel**	**55.87**	**28**	IAmb	IAmb	18 59 57.1				
	comp=Z,57nm,0.9s									
M14K	**Bethel**	**55.87**	**28**	P	**P**	**18 59 56.2**	**+1.3**			
	baz=246,SNR=5.6									
J14K	**Nanvaranak Lak**	**56.05**	**26**	P	**P**	**18 59 57.0**	**+0.9**			
	baz=243									
ZSN	**Zaisan**	**56.20**	**315**	*‖ iP*	**P**	**18 59 58.5**	**+0.9**			
ZSN	**Zaisan**	**56.20**	**315**	*d iP*	**P**	**18 59 58.4**	**+0.9**			
ANM	**Nome**	**56.20**	**23**	P	**P**	**18 59 58.4**	**+1.2**			
	baz=240									
BRAT	**Ballarat**	**56.21**	**181**	P	**P**	**18 59 58.8**	**+1.3**			
O15K	**Ungalikthiuk R**	**56.26**	**31**	P	**P**	**18 59 58.2**	**+0.6**			
	baz=249									
F14K	**Arctic Creek**	**56.32**	**22**	P	**P**	**18 59 59.4**	**+1.5**			
	baz=238									
BLDU	**Ballidu**	**56.32**	**209**	P	**P**	**18 59 58.2**	**-0.3**			
M15K	**Kasigluk River**	**56.42**	**29**	P	**P**	**18 59 59.3**	**+0.6**			
	baz=247									
L15K	**Ungalak Mounta**	**56.46**	**27**	P	**P**	**18 59 59.6**	**+0.6**			
	baz=246,SNR=5.4									
N15K	**Kwethluk River**	**56.49**	**29**	IAmb	IAmb	19 00 01.6				
	comp=Z,58nm,0.8s									
N15K	**Kwethluk River**	**56.49**	**29**	P	**P**	**19 00 00.3**	**+1.1**			
	baz=248,SNR=9.5									
KLBR	**Kellerberrin**	**56.67**	**208**	P	**P**	**19 00 00.8**	**-0.1**			
K15K	**Wolf Creek Mou**	**56.70**	**27**	P	**P**	**19 00 01.6**	**+1.0**			
	baz=245									
GEXS	**Deakin Univers**	**56.85**	**181**	P	**P**	**19 00 02.7**	**+0.8**			
G15K	**Niukluk**	**56.91**	**23**	P	**P**	**19 00 02.7**	**+0.7**			
	baz=241									
F15K	**North Star Dit**	**57.04**	**22**	P	**P**	**19 00 04.0**	**+1.1**			
	baz=240									
P16K	**Nushagak River**	**57.10**	**31**	IAmb	IAmb	19 00 05.5				
	comp=Z,97nm,0.9s									
P16K	**Nuagak River**	**57.10**	**31**	P	**P**	**19 00 04.4**	**+1.1**			
	baz=251									
N16K	**Nishlik Lake**	**57.22**	**29**	P	**P**	**19 00 05.1**	**+0.9**			
	baz=249									
O16K	**Kokwok River B**	**57.23**	**30**	P	**P**	**19 00 05.0**	**+0.7**			
	baz=250,SNR=6.9									
M16K	**Timber Creek**	**57.33**	**29**	P	**P**	**19 00 05.8**	**+0.9**			
	baz=249									
L16K	**Owhat River**	**57.35**	**28**	P	**P**	**19 00 05.5**	**+0.5**			
	baz=248,SNR=5.8									
CHIR	**Chirikof Islan**	**57.38**	**35**	P	**P**	**19 00 06.1**	**+0.7**			
	baz=255									
H16K	**Elim**	**57.43**	**24**	P	**P**	**19 00 06.0**	**+0.5**			
	baz=243,SNR=5.5									
ZAA0	**Zalesovo Array**	**57.45**	**322**	IAmb	IAmb	19 00 06.9				
	comp=Z,72nm,1.1s									
ZALV	**Zalesovo Beam**	**57.45**	**322**	P	**P**	**19 00 05.9**	**0.0**			
	comp=Z,39nm,0.4s,baz=111,slow=8.2,SNR=249									
ZALV				PcP	**PcP**	**19 00 49.5**	**-1.2**			
	comp=Z,15nm,0.6s,baz=106,slow=4.0,SNR=6.8									
ZALV				ScP	**ScP**	**19 03 49.5**	**-2.3**			
	comp=Z,2.5nm,0.6s,baz=102,slow=5.1,SNR=3.6									
	comp=Z,39nm,0.4s									
R17L	**Mt. Peulik Vol**	**57.48**	**33**	P	**P**	**19 00 06.4**	**+0.4**			
	baz=253									
J16K	**Anvik River**	**57.50**	**26**	P	**P**	**19 00 07.2**	**+1.2**			
	baz=246									
Q16K	**King Salmon**	**57.64**	**32**	P	**P**	**19 00 07.6**	**+0.6**			
	baz=252									
MUN	**Mundaring**	**57.70**	**209**	P	**P**	**19 00 08.6**	**+0.8**			
I17K	**Unalakleet**	**57.71**	**25**	IAmb	IAmb	19 00 09.7				
	comp=Z,54nm,0.9s									
I17K	**Unalakleet**	**57.71**	**25**	P	**P**	**19 00 08.6**	**+1.2**			
	baz=245,SNR=11									
O17K	**Koliganek Bris**	**57.77**	**30**	P	**P**	**19 00 08.8**	**+0.9**			
	baz=251,SNR=11									
MK31	**Makanchi Array**	**57.85**	**314**	*d iP*	**P**	**19 00 09.5**	**+0.7**			
MKAR	**Makanchi Array**	**57.85**	**314**	P	**P**	**19 00 09.7**	**+0.9**			
	comp=Z,70nm,0.6s,baz=89,slow=8.0,SNR=668									
MKAR				PcP	**PcP**	**19 00 51.8**	**-0.7**			
	comp=Z,10nm,0.7s,baz=57,slow=5.3,SNR=3.8									
	comp=Z,70nm,0.6s									
MKAR	**Makanchi Array**	**57.85**	**314**	P	**P**	**19 00 09.4**	**+0.6**			
P17K	**Kvichak River**	**57.91**	**31**	P	**P**	**19 00 09.5**	**+0.7**			
	baz=252									
N17K	**Nushagak Hills**	**57.97**	**30**	P	**P**	**19 00 10.4**	**+1.1**			
	baz=251									
L17K	**Donlin**	**58.03**	**28**	P	**P**	**19 00 10.4**	**+0.8**			
	baz=249									
NWAO	**Narrogin (SRO)**	**58.04**	**208**	P	**P**	**19 00 10.3**	**+0.2**			
NWAO				IAmb	IAmb	19 00 10.8				
	comp=Z,36nm,0.7s									
NWAO	**Narrogin (SRO)**	**58.04**	**208**	P	**P**	**19 00 10.3**	**+0.2**			
NWAO	**Narrogin (SRO)**	**58.04**	**208**	P	**P**	**19 00 10.6**	**+0.5**			
NWAO	**Narrogin (SRO)**	**58.04**	**208**	P	**P**	**19 00 10.9**	**+0.8**			
NWAO	**Narrogin (SRO)**	**58.04**	**208**	P	**P**	**19 00 10.3**	**+0.2**			
NWAO				pmax	pmax					
	comp=Z,36nm,0.7s									
MAKZ	**Makanchi**	**58.07**	**314**	P	**P**	**19 00 11.1**	**+0.8**			
MAKZ	**Makanchi**	**58.07**	**314**	P	**P**	**19 00 11.1**	**+0.8**			
MAKZ				pmax	pmax					
	comp=Z,126nm,0.8s									
C16K	**Lisburne Hills**	**58.13**	**20**	P	**P**	**19 00 11.0**	**+0.9**			
	baz=238									
M17K	**Holitna River**	**58.15**	**29**	P	**P**	**19 00 11.8**	**+1.4**			
	baz=250									
J17K	**VABM Dome**	**58.17**	**26**	IAmb	IAmb	19 00 12.9				
	comp=Z,43nm,0.9s									
J17K	**VABM Dome**	**58.17**	**26**	P	**P**	**19 00 12.0**	**+1.5**			
	baz=247,SNR=8.7									
K17K	**Iditarod**	**58.24**	**27**	IAmb	IAmb	19 00 13.5				
	comp=Z,76nm,0.8s									
K17K	**Iditarod**	**58.24**	**27**	P	**P**	**19 00 12.4**	**+1.4**			
	baz=248,SNR=18									
SII	**Sitkinak Islan**	**58.34**	**35**	P	**P**	**19 00 12.3**	**+0.5**			
	baz=256									
G17K	**Kiwalik Mounta**	**58.41**	**23**	P	**P**	**19 00 12.8**	**+0.6**			
	baz=244									
R18K	**Karluk**	**58.45**	**33**	P	**P**	**19 00 13.5**	**+1.0**			
	baz=255									
H17K	**Granite Mounta**	**58.46**	**24**	P	**P**	**19 00 13.2**	**+0.7**			
	baz=245									
Q18K	**Katmai Hardscr**	**58.46**	**32**	P	**P**	**19 00 12.5**	**-0.2**			
	baz=254									
P18K	**Big Mountain,**	**58.56**	**31**	P	**P**	**19 00 13.9**	**+0.6**			
	baz=253									
D17K	**Noatak River**	**58.57**	**21**	P	**P**	**19 00 14.3**	**+1.2**			
	baz=241,SNR=15									
N18K	**Kilae Creek**	**58.63**	**30**	P	**P**	**19 00 14.7**	**+1.0**			
	baz=252,SNR=5.2									
E17K	**Hotham Inlet**	**58.70**	**22**	P	**P**	**19 00 15.1**	**+1.1**			
	baz=242,SNR=14									
O18K	**Koktuh Hills**	**58.70**	**31**	IAmb	IAmb	19 00 16.1				
	comp=Z,56nm,0.8s									
O18K	**Koktuh Hills**	**58.70**	**31**	P	**P**	**19 00 15.1**	**+0.9**			
	baz=253,SNR=8.6									
L18K	**Granite Mounta**	**58.77**	**28**	P	**P**	**19 00 15.8**	**+1.2**			
	baz=250,SNR=14									
RDOG	**Red Dog Mine**	**58.80**	**20**	IAmb	IAmb	19 00 16.8				
	comp=Z,45nm,0.8s									
RDOG	**Red Dog Mine**	**58.80**	**20**	P	**P**	**19 00 15.7**	**+1.0**			
	baz=241,SNR=9.3									
M18K	**Stony River**	**58.91**	**29**	P	**P**	**19 00 16.7**	**+1.1**			
	baz=252,SNR=8.3									
C17K	**Delong Mountai**	**58.92**	**20**	P	**P**	**19 00 16.4**	**+0.9**			
	baz=240									
OHAK	**Old Harbor**	**58.98**	**34**	P	**P**	**19 00 16.5**	**+0.4**			
	baz=256									
H18K	**Honhosa River**	**59.15**	**24**	P	**P**	**19 00 17.8**	**+0.8**			
	baz=247,SNR=8.0									
J18K	**Innoko River**	**59.18**	**26**	P	**P**	**19 00 17.9**	**+0.6**			
	baz=250									
Q19K	**Cape Douglas,**	**59.22**	**32**	P	**P**	**19 00 18.2**	**+0.6**			
	baz=255									
O19K	**Port Alsworth**	**59.23**	**30**	P	**P**	**19 00 18.5**	**+0.9**			
O19K				IAmb	IAmb	19 00 19.3				
	comp=Z,37nm,0.6s									
O19K	**Port Alsworth**	**59.23**	**30**	P	**P**	**19 00 17.9**	**+0.3**			
	baz=254									
F18K	**Selawik**	**59.26**	**22**	P	**P**	**19 00 17.9**	**+0.3**			
	baz=245									
E18K	**Tukpahlearik C**	**59.28**	**21**	P	**P**	**19 00 19.0**	**+1.1**			
	baz=243									
N19K	**Bonanza Creek**	**59.33**	**30**	P	**P**	**19 00 19.6**	**+1.2**			
	baz=253,SNR=10									
G18K	**Tagagawik**	**59.33**	**23**	P	**P**	**19 00 19.0**	**+0.8**			
	baz=246									
KDAK	**Kodiak Island**	**59.48**	**33**	P	**P**	**19 00 19.4**	**0.0**			
	baz=257									
L19K	**White Mountain**	**59.57**	**28**	P	**P**	**19 00 21.0**	**+1.1**			
	baz=252,SNR=9.9									
SHLS	**Shalkode**	**59.59**	**309**	*‖ iP*	**P**	**19 00 19.4**	**-1.3**			
SHLS	**Shalkode**	**59.59**	**309**	*d iP*	**P**	**19 00 19.3**	**-1.3**			
P19K	**Oil Pt**	**59.61**	**31**	P	**P**	**19 00 20.5**	**+0.3**			
	baz=255									
C18K	**Utukok River**	**59.65**	**20**	P	**P**	**19 00 21.0**	**+0.6**			
	baz=242,SNR=5.5									
GLAD	**Gladstone**	**59.69**	**177**	P	**P**	**19 00 22.4**	**+1.5**			
	baz=256									
WUS	**Wushi**	**59.73**	**307**	P	**P**	**19 00 22.6**	**+1.1**			
WUS	**Wushi**	**59.73**	**307**	pP	pP	19 02 19.2	+0.2			
Q20K	**Shuyak Island**	**59.77**	**33**	P	**P**	**19 00 21.4**	**+0.2**			
	baz=256									
B18K	**Kokolik River**	**59.79**	**19**	P	**P**	**19 00 21.6**	**+0.4**			
	baz=241									
J19K	**Poorman**	**59.82**	**26**	P	**P**	**19 00 22.4**	**+0.8**			
	baz=250,SNR=18									
UZB	**Uzynbulak**	**59.92**	**309**	*‖ iP*	**P**	**19 00 23.5**	**+0.7**			
UZB	**Uzynbulak**	**59.92**	**309**	*d iP*	**P**	**19 00 23.4**	**+0.7**			
G19K	**Purcell Mounta**	**60.02**	**23**	P	**P**	**19 00 23.7**	**+0.9**			
	baz=248									
H19K	**Roundabout Mou**	**60.03**	**24**	P	**P**	**19 00 24.0**	**+1.2**			
	baz=249									
L20K	**Farewell, AK**	**60.09**	**28**	P	**P**	**19 00 24.5**	**+1.1**			
	baz=253,SNR=8.2									
M20K	**Styx River**	**60.26**	**29**	P	**P**	**19 00 25.4**	**+0.9**			
	baz=254									
K20K	**Telida**	**60.27**	**27**	IAmb	IAmb	19 00 26.9				
	comp=Z,48nm,0.8s									
K20K	**Telida**	**60.27**	**27**	P	**P**	**19 00 25.9**	**+1.4**			
	baz=252,SNR=22									
OUZ	**Omahuta**	**60.30**	**153**	P	**P**	**19 00 26.0**	**+1.0**			
C19K	**Lookout Ridge**	**60.37**	**20**	P	**P**	**19 00 26.6**	**+1.5**			
	baz=244									
HOM	**Homer**	**60.39**	**31**	P	**P**	**19 00 26.2**	**+0.9**			
	baz=256									
A19K	**Wainwright**	**60.42**	**18**	P	**P**	**19 00 26.9**	**+1.5**			
	baz=242									
TDK	**Taldyqorghan**	**60.42**	**311**	*‖ iP*	**P**	**19 00 26.9**	**+1.0**			
	comp=Z,88nm,0.8s									
TDK	**Taldyqorghan**	**60.42**	**311**	*d iP*	**P**	**19 00 26.9**	**+1.0**			
TDK				pmax	pmax					
	comp=Z,87nm,0.8s									
E19K	**Redstone River**	**60.48**	**22**	IAmb	IAmb	19 00 28.2				
	comp=Z,47nm,0.7s									
E19K	**Redstone River**	**60.48**	**22**	P	**P**	**19 00 26.9**	**+1.1**			
	baz=247,SNR=28									
J20K	**Nowinta River**	**60.50**	**26**	IAmb	IAmb	19 00 28.3				
	comp=Z,173nm,1.8s									
J20K	**Nowinta River**	**60.50**	**26**	P	**P**	**19 00 27.2**	**+1.2**			
	baz=252,SNR=19									
SPCR	**Spurr Chakacha**	**60.50**	**30**	P	**P**	**19 00 27.1**	**+0.9**			
	baz=255									
I20K	**Naaghedeneel**	**60.56**	**25**	P	**P**	**19 00 27.8**	**+1.5**			
	baz=251									
CNPM	**China Poot**	**60.56**	**32**	IAmb	IAmb	19 00 27.9				
	comp=Z,55nm,0.8s									
D19K	**Kuna River**	**60.59**	**21**	P	**P**	**19 00 27.2**	**+0.6**			
	baz=245									
H20K	**Anotleneega Mo**	**60.63**	**25**	P	**P**	**19 00 27.9**	**+1.0**			
	baz=250,SNR=22									
KURK	**Kurchatov**	**60.68**	**318**	P	**P**	**19 00 27.7**	**+0.3**			
KURK	**Kurchatov**	**60.68**	**318**	P	**P**	**19 00 27.9**	**+0.5**			
KURK				S	**S**	**19 07 56.5**	**-1.0**			
KURK	**Kurchatov**	**60.68**	**318**	*d iP*	**P**	**19 00 27.6**	**+0.3**			
KURK				pmax	pmax					
	comp=Z,215nm,0.9s									
KURK	**Kurchatov**	**60.68**	**318**	P	**P**	**19 00 27.8**	**+0.3**			
KURK	**Kurchatov**	**60.68**	**318**	pP	pP	19 02 24.9	-1.3			
KURBB	**Kurchatov Arra**	**60.73**	**318**	P	**P**	**19 00 27.9**	**+0.2**			
	comp=Z,

	baz=246								
PWL	Port Wells	62.26	30	P	P	19 00 37.8	+0.3		
	baz=259,SNR=18								
KNK	Knik Glacier	62.31	30	IAmb	IAmb	19 00 39.0			
	comp=Z,61nm,0.8s								
KNK	Knik Glacier	62.31	30	P	P	19 00 38.0	+0.2		
	baz=258,SNR=14								
F22K	John River	62.31	23	P	P	19 00 39.1	+1.4		
	baz=252								
G22K	Bettles	62.38	23	P	P	19 00 38.9	+0.8		
	baz=253								
TKM2	Tokmak 2	62.42	309	P	P	19 00 40.3	+1.1		
	SNR=65								
SML	Sawmill	62.45	29	IAmb	IAmb	19 00 40.0			
	comp=Z,76nm,0.8s								
SML	Sawmill	62.45	29	P	P	19 00 38.8	+0.1		
	baz=258,SNR=21								
RND	Reindeer	62.55	28	IAmb	IAmb	19 00 40.7			
	comp=Z,32nm,0.8s								
P23K	Montague Islan	62.56	32	P	P	19 00 39.4	0.0		
	baz=260								
WAT1	Susitna Watana	62.56	28	P	P	19 00 39.2	-0.2		
	baz=258								
D22K	Ayikyak River	62.58	21	P	P	19 00 40.9	+1.4		
	baz=251,SNR=32								
MCK	McKinley	62.59	27	P	P	19 00 39.3	-0.2		
	baz=257,SNR=17								
A22K	Sinclair Lake	62.60	19	P	P	19 00 40.6	+1.1		
	baz=247								
E22K	Anaktuvuk Pass	62.64	22	IAmb	IAmb	19 00 42.1			
	comp=Z,46nm,0.8s								
E22K	Anaktuvuk Pass	62.64	22	P	P	19 00 40.9	+1.1		
	baz=252,SNR=31								
M23K	Glacier View	62.73	30	P	P	19 00 40.8	+0.3		
	baz=259,SNR=11								
NEA2	Nenana	62.73	26	IAmb	IAmb	19 00 42.0			
	comp=Z,27nm,0.8s								
NEA2	Nenana	62.73	26	P	P	19 00 40.4	0.0		
	baz=256,SNR=25								
I23K	Minto, Yukon-K	62.75	26	IAmb	IAmb	19 00 42.5			
	comp=Z,34nm,0.7s								
I23K	Minto, Yukon-K	62.75	26	P	P	19 00 41.0	+0.5		
	baz=256,SNR=20								
B22K	Teshekpuk Lake	62.84	20	P	P	19 00 42.0	+1.0		
	baz=249								
H23K	Yukon River	62.84	25	P	P	19 00 41.9	+0.8		
	baz=255								
WAT6	Susitna Watana	62.88	29	P	P	19 00 41.6	0.0		
	baz=259,SNR=22								
G23K	Bananza Creek	62.89	24	P	P	19 00 42.5	+1.1		
	baz=254,SNR=18								
KBK	Karagaybulak	62.91	309	P	P	19 00 43.1	+0.9		
	SNR=8.1								
SCM	Sheep Creek Mo	62.92	30	IAmb	IAmb	19 00 43.4			
	comp=Z,76nm,0.9s								
SCM	Sheep Creek Mo	62.92	30	P	P	19 00 42.4	+0.6		
	baz=259,SNR=14								
COLD	Coldfoot	62.96	23	IAmb	IAmb	19 00 44.2			
	comp=Z,39nm,0.8s								
COLD	Coldfoot	62.96	23	P	P	19 00 42.8	+1.0		
	baz=254,SNR=28								
CHMS	Chumysh	63.04	309	P	P	19 00 43.6	+0.6		
	SNR=27								
WRH	Wood River Hil	63.12	27	IAmb	IAmb	19 00 43.5			
	comp=Z,29nm,0.8s								
SGDS	Sogindy	63.12	310	*e*P	P	19 00 43.9	+0.5		
DHY	Denali Highway	63.14	28	P	P	19 00 43.3	0.0		
	baz=259,SNR=16								
FRU1	Bishkek	63.14	309	IAmb	IAmb	19 00 45.3			
	comp=Z,48nm,0.9s								
USP	Ospenovka	63.22	310	P	P	19 00 44.8	+0.8		
	SNR=28								
UCH	Uchtor	63.24	308	P	P	19 00 46.2	+1.5		
	SNR=65								
AAK	Ala-Archa	63.24	309	P	P	19 00 45.0	+0.6		
AAK	Ala-Archa	63.24	309	P	P	19 00 45.1	+0.6		
AAK				S	S	19 08 31.1	+1.7		
AAK	Ala-Archa	63.24	309	P	P	19 00 45.2	+0.9		
	SNR=6.4								
AAK	Ala-Archa	63.24	309	P	P	19 00 45.1	+0.6		
AAK	Ala-Archa	63.24	309	*d* iP	P	19 00 44.9	+0.6		
AAK				pmax	pmax				
	comp=Z,19nm,0.7s								
AAK	Ala-Archa	63.24	309	P	P	19 00 44.9	+0.6		
AAK	Ala-Archa	63.24	309	PcP	PcP	19 01 14.6	-0.1		
AAK				PP	PP	19 03 15.6	+1.2		
D23K	Nanushuk River	63.29	21	P	P	19 00 45.7	+1.7		
	baz=253								
COLA	College	63.31	26	P	P	19 00 43.5	-0.5		
COLA				IAmb	IAmb	19 00 46.9			
	comp=Z,26nm,0.8s								
COLA	College	63.31	26	P	P	19 00 45.0	+1.0		
COLA	College	63.31	26‖	*e*P	P	19 00 43.8	-0.2		
COLA				pmax	pmax				
	comp=Z,25nm,0.8s								
COLA	College	63.31	26	P	P	19 00 45.7	+1.7		
	baz=257								
E23K	Chandalar	63.41	22	P	P	19 00 46.4	+1.6		
	baz=254,SNR=55								
EYAK	Cordova Ski Ar	63.46	31	IAmb	IAmb	19 00 46.8			
	comp=Z,54nm,0.9s								
EYAK	Cordova Ski Ar	63.46	31	P	P	19 00 46.0	+0.9		
	baz=261								
M24K	Tolsona, Glenn	63.51	29	IAmb	IAmb	19 01 10.9			
	comp=Z,27nm,0.8s								
M24K	Tolsona, Glenn	63.51	29	P	P	19 00 46.3	+0.8		
	baz=260								
H24K	Noodor Dome	63.51	25	P	P	19 00 46.3	+0.8		
	baz=257								
BTLS	Baital	63.52	311	*e*P	P	19 00 46.6	+0.8		
	comp=Z,37nm,0.4s								
BTLS	Baital	63.52	311	*e*P	P	19 00 46.6	+0.8		
BTLS				pmax	pmax				
	comp=Z,37nm,0.4s								
KLU	Klutina	63.52	30	IAmb	IAmb	19 00 47.3			
	comp=Z,33nm,0.8s								
KLU	Klutina	63.52	30	P	P	19 00 46.3	+0.6		
	baz=261,SNR=10								
POKR	Poker Flat Res	63.53	26	P	P	19 00 45.2	-0.4		
	baz=258								
DIV	Divide	63.54	30	IAmb	IAmb	19 00 47.5			
	comp=Z,44nm,1.2s								
C23K	Itkillik River	63.58	20	P	P	19 00 46.9	+1.2		
	baz=252,SNR=56								
TOLK	Toolik Lake Re	63.58	22	IAmb	IAmb	19 00 48.1			
	comp=Z,49nm,0.7s								
TOLK	Toolik Lake Re	63.58	22	P	P	19 00 47.1	+1.3		
	baz=254,SNR=37								
HDA	Harding Lake	63.59	27	IAmb	IAmb	19 00 46.1			
	comp=Z,23nm,0.7s								
HDA	Harding Lake	63.59	27	P	P	19 00 45.3	-0.6		
	baz=258,SNR=18								
IL31		63.69	26	IAmb	IAmb	19 00 46.6			
	comp=Z,31nm,0.8s								
ILAR	Eielson Array	63.69	26	P	P	19 00 45.5	-1.0		
	comp=Z,25nm,0.8s,baz=251,slow=5.7,SNR=179								
	comp=Z,25nm,0.8s								
ILAR	Eielson Array	63.69	26	P	P	19 00 45.1	-1.4		
TLZ	Tolley Road	63.76	154	P	P	19 00 51.3	+3.9		
EKS2	Erkin-Say	63.77	309	P	P	19 00 48.5	+0.8		
	SNR=25								
E24K	Your Creek	63.82	23	P	P	19 00 48.4	+1.0		
	baz=255								
G24K	Hadweenzic Riv	63.87	24	P	P	19 00 48.8	+1.2		
	baz=257,SNR=17								
F24K	Squaw Lake	63.90	23	P	P	19 00 49.3	+1.4		
	baz=256,SNR=31								
PAX	Paxson	63.97	28	IAmb	IAmb	19 00 49.8			
	comp=Z,41nm,0.7s								
PAX	Paxson	63.97	28	P	P	19 00 48.7	+0.2		
	baz=260,SNR=26								
K24K	Donnelly Dome	63.98	27	IAmb	IAmb	19 00 49.5			
	comp=Z,43nm,0.7s								
K24K	Donnelly Dome	63.98	27	P	P	19 00 48.5	+0.1		
	baz=260,SNR=6.4								
D24K	Happy Valley	63.99	21	P	P	19 00 49.7	+1.4		
	baz=254								
HARP	HAARP	64.02	29	P	P	19 00 49.3	+0.5		
	baz=261,SNR=16								
KAIM	Kayak Island	64.03	32	P	P	19 00 49.8	+1.0		
	baz=263								
BMRM	Bremner River	64.08	31	IAmb	IAmb	19 00 50.8			
	comp=Z,72nm,1.2s								
BMRM	Bremner River	64.08	31	P	P	19 00 49.8	+0.6		
	baz=262,SNR=8.0								
VRZ	Vera Road	64.11	155	P	P	19 00 51.5	+2.0		
N25K	Chitina, Valde	64.17	30	P	P	19 00 50.3	+0.6		
	baz=262,SNR=6.7								
C24K	Franklin Bluff	64.18	21	P	P	19 00 50.4	+0.9		
	baz=254								
J25K	Salcha River,	64.30	27	P	P	19 00 49.8	-0.7		
	baz=260								
TWVZ	Taurewa	64.34	154	P	P	19 00 52.7	+1.6		
URZ	Urewera	64.38	152	P	P	19 00 51.2	0.0		
	comp=Z,5.2nm,0.5s,baz=200,slow=1.9,SNR=1.9								
	comp=Z,5.2nm,0.5s								
URZ	Urewera	64.38	152	P	P	19 00 51.3	+0.1		
RIDG	Independent Ri	64.38	28	IAmb	IAmb	19 00 52.2			
	comp=Z,54nm,0.8s								
RIDG	Independent Ri	64.38	28	P	P	19 00 51.0	+0.1		
	baz=261,SNR=13								
PRP	Porcupine Dome	64.40	26	P	P	19 00 50.1	-1.1		
	baz=259,SNR=8.2								
G25K	Bearman Lake	64.41	24	P	P	19 00 52.2	+1.2		
	baz=258,SNR=9.9								
H25L	Birch Creek	64.42	25	P	P	19 00 52.3	+1.2		
	baz=259,SNR=27								
WTVZ	West Tongariro	64.44	154	P	P	19 00 53.5	+1.7		
NNVZ	North Ngauruho	64.47	154	P	P	19 00 53.8	+1.8		
OTVZ	Oturere	64.51	154	P	P	19 00 54.0	+1.7		
RTZ	Ruatahuna	64.61	153	IAmb	IAmb	19 00 53.6			
	comp=Z,65nm,0.8s								
RTZ	Ruatahuna	64.61	153	P	P	19 00 52.9	0.0		
VRDI	Verde Repeater	64.67	31	IAmb	IAmb	19 00 54.4			
	comp=Z,25nm,0.8s								
DOT	Dot Lake	64.71	28	IAmb	IAmb	19 00 54.5			
	comp=Z,56nm,0.8s								
QRZ	Quartz Range	64.72	157	P	P	19 00 54.5	+1.2		
MOVZ	Moawhango	64.76	154	P	P	19 00 54.5	+0.8		
F25K	Christian Rive	64.76	23	P	P	19 00 54.9	+1.5		
	baz=258,SNR=64								
MENT	Mentasta	64.76	29	P	P	19 00 54.5	+1.1		
CRQM	Cirque	64.76	31	IAmb	IAmb	19 00 55.2			
	comp=Z,46nm,0.8s								
CRQE	Cirque	64.78	31	P	P	19 00 54.4	+0.7		
	baz=264,SNR=7.2								
SCRK	Sand Creek	64.79	27	IAmb	IAmb	19 00 54.9			
	comp=Z,35nm,1.0s								
SCRK	Sand Creek	64.79	27	P	P	19 00 53.7	0.0		
	baz=261,SNR=22								
BKZ	Black Stump Fm	64.86	153	IAmb	IAmb	19 00 55.2			
	comp=Z,25nm,0.7s								
BKZ	Black Stump Fm	64.86	153	P	P	19 00 55.2	+0.9		
BKZ	Black Stump Fm	64.86	153	P	P	19 00 54.5	+0.2		
WAX	Waxell Ridge	64.87	31	IAmb	IAmb	19 00 56.0			
	comp=Z,28nm,0.6s								
D25K	Kavik River	64.87	21	P	P	19 00 54.9	+0.9		
	baz=257								
NIL	Nilore	64.88	299	P	P	19 00 55.3	+0.6		
NIL	Nilore	64.88	299	P	P	19 00 56.0	+1.3		
NIL				S	S	19 08 50.1	+1.0		
NIL	Nilore	64.88	299	P	P	19 00 55.3	+0.6		
MCARA	McCarthy VSAT	64.89	30	IAmb	IAmb	19 00 55.8			
	comp=Z,44nm,0.8s								
MCARA	McCarthy VSAT	64.89	30	P	P	19 00 54.7	+0.5		
	baz=264,SNR=11								
E25K	Arctic Village	64.90	23	IAmb	IAmb	19 00 56.7			
	comp=Z,39nm,0.9s								
E25K	Arctic Village	64.90	23	P	P	19 00 55.6	+1.5		
	baz=258,SNR=33								
TGL	Tana Glacier	64.91	31	IAmb	IAmb	19 00 55.6			
	comp=Z,32nm,1.0s								
L26K	Log Cabin Wild	64.94	29	P	P	19 00 55.4	+0.9		
	baz=262,SNR=32								
M26K	Nabesna, AK	65.02	29	P	P	19 00 55.7	+0.7		
	baz=263								
J26L	Joseph Creek	65.05	27	IAmb	IAmb	19 00 57.8			
	comp=Z,31nm,0.8s								
J26L	Joseph Creek	65.05	27	P	P	19 00 55.3	0.0		
	baz=262,SNR=38								
TKNZ	Takaka Hill	65.06	157	P	P	19 00 55.9	+0.5		
BMAR	Burnt Mountain	65.13	24	P	P	19 00 56.7	+1.1		
KRHZ	Kereru	65.21	154	P	P	19 00 56.8	+0.3		
DUWZ	D'Urville Isla	65.22	156	P	P	19 00 57.0	+0.5		
MESA	MESA	65.29	32	P	P	19 00 58.0	+1.0		
	baz=265								
I26K	Coal Creek Min	65.34	26	P	P	19 00 56.3	-0.6		
	baz=262								
F26K	Sheenjek River	65.34	23	P	P	19 00 58.5	+1.6		
	baz=260,SNR=76								
G26K	Porcupine Rive	65.35	24	P	P	19 00 58.2	+1.4		
	baz=260,SNR=37								
PNHZ	Pukenui	65.37	154	P	P	19 00 58.1	+0.6		
NNZ	Nelson	65.37	157	P	P	19 00 57.7	+0.3		
TSZ	Takapari Road	65.39	154	P	P	19 00 58.0	+0.5		
GRNC	Granite Creek	65.44	31	IAmb	IAmb	19 00 59.5			
	comp=Z,39nm,0.7s								
DRK	Karamyk	65.46	305	IAmb	IAmb	19 01 00.4			
	comp=Z,33nm,0.8s								
C26K	Camden Bay	65.50	21	P	P	19 00 59.8	+2.0		
	baz=258								
M27K	Edge Creek, AK	65.53	29	P	P	19 00 58.9	+0.6		
	baz=264,SNR=8.6								
KAHZ	Kahuranaki	65.55	154	P	P	19 00 59.4	+0.8		
DZA	Taraz	65.56	309	*e*P	P	19 00 59.3	+0.5		
DZA	Taraz	65.56	309	*e*P	P	19 00 59.2	+0.5		
K27K	Chicken	65.63	28	P	P	19 00 59.8	+1.1		
	baz=263								
L27K	Beaver Creek,	65.63	29	P	P	19 00 59.5	+0.7		
	baz=264								
BCAR	Beaver Creek A	65.65	29	P	P	19 00 59.3	+0.4		
KIW	Kapiti Island	65.65	156	P	P	19 00 59.1	-0.1		
CTG	Chitna Glacier	65.66	31	P	P	19 01 00.1	+0.9		
	baz=265,SNR=7.6								
CTGM	Chitina Glacie	65.66	31	IAmb	IAmb	19 01 01.1			
	comp=Z,37nm,0.8s								
THZ	Tophouse	65.67	157	P	P	19 01 00.2	+0.9		
DVHZ	Dannevirke	65.68	154	P	P	19 00 59.0	-0.3		
TCW	Tory Channel	65.71	156	P	P	19 00 59.3	-0.1		
OGWZ	Otaki Gorge	65.72	155	P	P	19 00 59.9	+0.3		
MRZ	Mangatainoka R	65.75	155	P	P	19 00 59.7	-0.1		
MRZ				IAmb	IAmb	19 01 01.0			
	comp=Z,103nm,1.5s								
MRZ	Mangatainoka R	65.75	155	P	P	19 00 59.9	+0.2		
LOGN	Logan Glacier	65.81	31	IAmb	IAmb	19 01 01.9			
	comp=Z,29nm,0.7s								
C27K	Jago River	65.86	21	P	P	19 01 01.3	+1.3		
	baz=259								
BVA0	Borovoye Array	65.90	320	P	P	19 00 59.9	-0.7		
BVAR	Borovoye Array	65.90	320	P	P	19 01 00.9	+0.3		
	comp=Z,162nm,0.7s,baz=102,slow=8.2,SNR=432								
	comp=Z,162nm,0.7s								
HOWZ	Holdsworth Sta	65.92	155	P	P	19 01 01.0	+0.2		
CAW	Cannon Point	65.92	156	P	P	19 01 01.1	+0.3		
BORK	Borovoye	65.94	320	*d* iP	P	19 01 01.1	+0.3		
BORK				pmax	pmax				
	comp=Z,105nm,0.8s								
BORK	Borovoye	65.94	320	P	P	19 01 01.2	+0.3		
BVCY	Beaver Creek	66.01	29	P	P	19 01 02.0	+0.9		
	baz=265,SNR=6.0								
I27K	Kandik River	66.02	26	P	P	19 01 01.6	+0.4		
	baz=263,SNR=13								
BFZ	Birch Farm	66.03	154	P	P	19 01 02.2	+0.7		
WVZ	Waitaha Valley	66.08	160	P	P	19 01 02.3	+0.5		
BHW	Baring Head	66.11	156	P	P	19 01 01.8	-0.1		
H27K	Steamboat Moun	66.13	25	P	P	19 01 02.9	+1.1		
	baz=263,SNR=68								
PINM	Pinnacle	66.13	32	P	P	19 01 02.2	+0.2		
	baz=267								
MTW	Mount Morrison	66.14	155	P	P	19 01 01.9	-0.2		
KK31	Karatay Array	66.14	309	*i* P	P	19 01 02.5	+0.2		
KKAR	Karatay Array	66.14	309	P	P	19 01 02.4	0.0		
KKAR	Karatay Array	66.14	309	P	P	19 01 02.4	0.0		
YUK3	Moose Creek	66.15	30	P	P	19 01 03.1	+0.9		
	baz=266								
G27K	Doyon Strip	66.16	24	P	P	19 01 03.1	+1.2		
	baz=262,SNR=13								
FOZ	Fox Glacier	66.20	161	P	P	19 01 03.4	+1.0		
O28M	Mount Upton	66.21	31	P	P	19 01 03.7	+1.0		
	baz=266,SNR=11								
MSWZ	Moikau Station	66.26	156	P	P	19 01 02.7	-0.2		
PAWZ	Paruwai Farm	66.30	155	P	P	19 01 03.0	-0.2		
LTZ	Lake Taylor	66.34	158	P	P	19 01 03.8	+0.4		
E27K	Coleen River	66.37	23	P	P	19 01 04.7	+1.4		
	baz=262								
PLWZ	Palliser	66.39	156	P	P	19 01 03.7	-0.1		
TRWZ	Traveller	66.42	155	P	P	19 01 04.1	+0.2		
YUK8	Steele Glacier	66.44	31	P	P	19 01 05.5	+1.3		
	baz=266,SNR=9.8								
KHZ	Kahutara	66.47	157	P	P	19 01 03.1	-1.1		
KHZ				IAmb	IAmb	19 01 06.5			
	comp=Z,23nm,0.9s								
KHZ	Kahutara	66.47	157	P	P	19 01 01.5	-2.7		
PNL	Peninsula	66.54	32	P	P	19 01 05.2	+0.7		
	baz=268								
IUG	luzhnay	66.57	308‖	*i* P	P	19 01 05.9	+0.8		
	comp=Z,29nm,0.6s								
IUG	luzhnay	66.57	308	*d* iP	P	19 01 05.9	+0.8		
IUG				pmax	pmax				
	comp=Z,29nm,0.6s								
BRLS	Boroldoy	66.64	309	*e*P	P	19 01 06.7	+1.2		
BRLS	Boroldoy	66.64	309	*e*P	P	19 01 06.6	+1.2		
I28M	Miner Creek	66.70	26	P	P	19 01 05.9	+0.5		
	baz=264,SNR=32								
OXZ	Oxford	66.74	159	P	P	19 01 05.5	-0.4		
OXZ				IAmb	IAmb	19 01 06.0			
	comp=Z,29nm,0.7s								
OXZ	Oxford	66.74	159	P	P	19 01 05.7	-0.1		
D27M	Malcolm River	66.75	22	P	P	19 01 07.1	+1.4		
	baz=262								
RPZ	Rata Peaks	66.76	160	P	P	19 01 06.0	0.0		
	comp=Z,32nm,0.7s,baz=108,slow=3.2,SNR=8.1								
	comp=Z,32nm,0.7s								
RPZ	Rata Peaks	66.76	160	P	P	19 01 05.9	0.0		
GVZ	Greta Valley S	66.78	158	P	P	19 01 06.2	+0.2		
DAWY	Dawson	66.81	28	P	P	19 01 06.9	+0.9		
	baz=266,SNR=19								
CHM	Chimkent	66.87	309	*e*P	P	19 01 07.7	+0.8		
	comp=Z,55nm,0.5s								
CHM	Chimkent	66.87	309	*e*P	P	19 01 07.6	+0.8		
CHM				pmax	pmax				
	comp=Z,55nm,0.5s								
F28M	Old Crow	66.94	24	IAmb	IAmb	19 01 09.1			
	comp=Z,53nm,0.8s								
F28M	Old Crow	66.94	24	P	P	19 01 08.2	+1.4		
	baz=264,SNR=56								
O29M	Mount Kennedy	66.98	32	P	P	19 01 08.8	+1.5		
	baz=268,SNR=8.8								
YUK4	Talbot Arm	66.99	31	P	P	19 01 09.1	+1.7		
	baz=268,SNR=14								
LBZ	Lake Benmore	67.08	161	P	P	19 01 08.1	+0.2		
YUK6	Outpost Mounta	67.11	31	P	P	19 01 09.5	+1.4		
	baz=268,SNR=6.5								
M29M	Somme Creek	67.13	29	P	P	19 01 09.6	+1.5		
	baz=267,SNR=40								
E28M	Babbage River	67.18	23	IAmb	IAmb	19 01 10.8			
	comp=Z,51nm,0.8s								
E28M	Babbage River	67.18	23	P	P	19 01 09.7	+1.5		
	baz=264,SNR=74								
L29M	L29M	67.31	29	P	P	19 01 10.6	+1.5		
	baz=267,SNR=44								
P29M	Windy Craggy	67.38	32	P	P	19 01 10.5	+0.9		
	baz=269								
H29M	Whitestone	67.41	25	P	P	19 01 10.7	+1.1		
	baz=266,SNR=19								
HYT	Haines Junctio	67.52	31	P	P	19 01 11.8	+1.3		
	baz=269,SNR=17								
D28M	Stokes Point	67.55	22	P	P	19 01 11.5	+1.2		
	baz=264,SNR=36								
G29M	Pine Creek	67.60	25	P	P	19 01 11.9	+1.1		
	baz=266,SNR=37								
K29M	Barlow Dome	67.62	28	P	P	19 01 12.1	+1.0		
	baz=267,SNR=35								
N30M	Aishikik Lake	67.74	30	IAmb	IAmb	19 01 14.0			
	comp=Z,41nm,0.8s								
N30M	Aishikik Lake	67.74	30	P	P	19 01 13.0	+1.2		
	baz=269,SNR=7.5								
E29M	Blow River	67.76	23	P	P	19 01 12.7	+1.0		
	baz=265								
P30M	Million Dollar	67.78	32	P	P	19 01 13.6	+1.5		
	baz=269,SNR=9.2								
ODZ	Otahua Downs	67.82	161	P	P	19 01 13.1	+0.7		
M30M	Minto, Yukon	67.91	29	P	P	19 01 13.8	+1.0		
	baz=269,SNR=10								
EPYK	Eagle Plains	68.08	25	IAmb	IAmb	19 01 15.5			
	comp=Z,53nm,0.8s								
EPYK	Eagle Plains	68.08	25	P	P	19 01 14.4	+0.7		
	baz=267,SNR=25								
PLBC	Pleasant Camp	68.08	33	P	P	19 01 14.9	+1.1		
	baz=270,SNR=8.9								
S31K	Pelican	68.17	34	P	P	19 01 14.5	+0.3		
	baz=271								
J30M	Hart River	68.17	27	P	P	19 01 15.4	+1.0		
	baz=268,SNR=30								
I30M	Mount Dempster	68.17	26	P	P	19 01 15.0	+0.6		
	baz=268								
O30N	Mendenhall	68.22	31	P	P	19 01 15.5	+0.9		
	baz=270								
KBL	Kabul	68.22	300	P	P	19 01 15.6	+0.2		
KBL	Kabul	68.22	300	P	P	19 01 15.9	+0.4		
	SNR=32								
KBL				S	S	19 09 26.9	-1.6		
KBL	Kabul	68.22	300	P	P	19 01 15.6	+0.2		
KBL				pmax	pmax				
	comp=Z,74nm,0.7s								
G30M	tAoh Zraii Nji	68.31	25	P	P	19 01 15.8	+0.7		
	baz=267								
MAYO	Mayo, Yukon	68.34	28	P	P	19 01 16.5	+1.2		
	baz=269								
N31M	Braeburn, Yuko	68.37	30	IAmb	IAmb	19 01 17.9			
	comp=Z,42nm,0.8s								
N31M	Braeburn, Yuko	68.37	30	P	P	19 01 16.7	+1.2		
	baz=270,SNR=9.6								
F30M	Barrier River	68.50	24	P	P	19 01 17.2	+1.0		
	baz=267,SNR=51								
SYZ	Scrubby Hill	68.72	162	P	P	19 01 18.4	+0.8		
WHY	Whitehorse	68.81	31	IAmb	IAmb	19 01 20.6			
	comp=Z,35nm,0.8s								
WHY	Whitehorse	68.81	31	P	P	19 01 19.4	+1.1		
	baz=271,SNR=5.7								
M31M	Drury Creek, Y	69.02	30	IAmb	IAmb	19 01 21.2			
	comp=

LIRD	**Liard River Hi**	73.31	32	P		P		19 01 45.3	+0.8	
	baz=279,SNR=12									
AKTO	**Aktyubinsk**	73.78	318	P		P		19 01 46.0	-1.2	
HRA	**Herat**	73.78	301	IAmb		IAmb		19 01 49.3		
	comp=Z,32nm,0.7s									
TOAD	**Toad River Com**	73.84	33	P		P		19 01 47.9	+0.4	
	baz=280,SNR=7.1									
WRGLY	**Wrigley**	73.93	28	P		P		19 01 48.9	+1.1	
	baz=280,SNR=18									
KOTAN	**Kotaneelee Air**	74.21	31	P		P		19 01 50.6	+1.1	
	baz=280,SNR=6.0									
KIRV	**Kirov**	76.93	328	*d* iP		P		19 02 04.7	+0.3	
NLWA	**Neilton Lookou**	77.01	44	IAmb		IAmb		19 02 07.8		
	comp=Z,38nm,0.8s									
B04A	**Port Angeles**	77.09	43	IAmb		IAmb		19 02 08.0		
	comp=Z,27nm,0.8s									
WISH	**Wishkah**	77.14	44	IAmb		IAmb		19 02 08.8		
	comp=Z,56nm,0.8s									
E03A	**Lebam**	77.41	45	IAmb		IAmb		19 02 10.1		
	comp=Z,50nm,0.9s									
LLLB	**Lillooet**	77.49	41	IAmb		IAmb		19 02 09.8		
	comp=Z,24nm,0.8s									
GNW	**Green Mountain**	77.65	44	IAmb		IAmb		19 02 11.0		
	comp=Z,34nm,0.8s									
ALE	**Alert**	77.90	4	P		P		19 02 10.1	+0.8	
YKAW3	**Yellowknife Wh**	78.03	28	IAmb		IAmb		19 02 11.6		
	comp=Z,25nm,0.8s									
YKA	**Yellowknife Ar**	78.05	28	P		P		19 02 10.4	0.0	
	comp=Z,16nm,0.7s,baz=291,slow=5.7,SNR=36									
YKA				pP		pwP		19 04 22.1	-3.3	
	comp=Z,3.5nm,0.9s,baz=299,slow=6.5,SNR=4.3									
	comp=Z,16nm,0.7s									
YKA	**Yellowknife Ar**	78.05	28	P		P		19 02 09.9	-0.6	
YKAW1	**Yellowknife Wh**	78.11	28	IAmb		IAmb		19 02 12.1		
	comp=Z,36nm,0.9s									
I03D	**Drain, OR**	78.28	48	IAmb		IAmb		19 02 14.7		
	comp=Z,26nm,0.8s									
D05A	**Enumclaw**	78.30	44	IAmb		IAmb		19 02 14.4		
	comp=Z,23nm,0.8s									
K02D	**Willamette Mer**	78.31	49	IAmb		IAmb		19 04 08.9		
	comp=Z,41nm,1.5s									
HOPEN	**Hopen**	78.32	348	*e*P		P		19 02 12.1	+0.5	
BUCK	**Buck Mountain**	78.40	47	IAmb		IAmb		19 02 15.3		
	comp=Z,46nm,0.8s									
G04A	**Mulino**	78.49	46	IAmb		IAmb		19 02 17.4		
	comp=Z,42nm,0.9s									
SPA0	**Spitsbergen Ar**	78.82	351	*e*P		P		19 02 14.3	0.0	
SPB2	**Spitsbergen Ar**	78.82	351	IAmb		IAmb		19 02 16.1		
	comp=Z,26nm,0.8s									
SPITS	**Spitsbergen Ar**	78.82	351	P		P		19 02 14.4	0.0	
	comp=Z,15nm,0.6s,baz=106,slow=6.2,SNR=49									
	comp=Z,15nm,0.6s									
I04A	**Tendick Farm,**	78.91	47	P		P		19 02 16.2	+0.7	
KBS	**Kingsbay**	78.95	352	P		P		19 02 14.7	-0.3	
KBS				IAmb		IAmb		19 02 16.2		
	comp=Z,54nm,0.7s									
KBS	**Kingsbay**	78.95	352	*e*P		P		19 02 15.2	+0.2	
KBS	**Kingsbay**	78.95	352	*d* iP		P		19 02 15.2	+0.2	
KBS				pmax		pmax				
	comp=Z,34nm,0.8s									
KBS	**Kingsbay**	78.95	352	*i* P		P		19 02 14.9	0.0	
JLN	**Jalan Bani Buh**	79.19	290	P		P		19 02 17.6	+0.3	
NOR	**Nord**	79.22	357	*i* P		P		19 02 15.7	-0.6	
NOR				IAmb		IAmb		19 02 16.6		
	comp=Z,9.6nm,0.7s									
J04A	**Umpqua Nationa**	79.27	48	IAmb		IAmb		19 02 19.5		
	comp=Z,44nm,0.7s									
RES	**Resolute Bay**	79.32	14	IAmb		IAmb		19 02 18.5		
	comp=Z,33nm,0.8s									
L04D	**Klamath Falls**	79.41	49	IAmb		IAmb		19 02 20.0		
	comp=Z,25nm,0.7s									
WBK	**Wadi Bani Khal**	79.46	290	P		P		19 02 19.1	+0.4	
BELG	**Belogornoye**	79.63	322	*d* iP		P		19 02 19.0	+0.1	
BELG				pmax		pmax				
	comp=Z,36nm,0.8s									
B08A	**Colville Reser**	79.70	42	IAmb		IAmb		19 02 21.0		
	comp=Z,28nm,0.7s									
HSPB	**Hornsund (broa**	79.74	350	*e*P		P		19 02 19.1	0.0	
M03C	**McCloud**	79.80	50	IAmb		IAmb		19 02 22.1		
	comp=Z,44nm,0.8s									
J05D	**Fort Rock, OR**	79.87	48	IAmb		IAmb		19 02 22.7		
	comp=Z,34nm,0.8s									
PINE	**Pine Mountain**	79.93	47	IAmb		IAmb		19 02 23.6		
	comp=Z,53nm,0.8s									
LVZ	**Lovozero**	79.99	339	P		P		19 02 20.4	-0.2	
LVZ				IAmb		IAmb		19 02 20.9		
	comp=Z,31nm,0.9s									
LVZ	**Lovozero**	79.99	339⇓	*e*P		P		19 02 20.9	+0.3	
LVZ				pmax		pmax				
	comp=Z,25nm,0.9s									
WAH2	**Wahluke Slope**	80.01	44	IAmb		IAmb		19 02 22.9		
	comp=Z,30nm,0.8s									
SMDO	**Samad**	80.15	291	P		P		19 02 22.8	+0.4	
K05A	**Summer Lake**	80.27	48	IAmb		IAmb		19 02 25.2		
	comp=Z,38nm,0.8s									
JMDO	**Jabal Madar**	80.29	290	P		P		19 02 23.3	+0.2	
VADS	**Vadso**	80.62	342	*e*P		P		19 02 23.6	-0.2	
HOQ	**Hoqain**	80.65	292	P		P		19 02 25.5	+0.6	
MHTO	**MHTO**	80.81	289	P		P		19 02 26.0	+0.3	
	SNR=7.8									
BANOM	**Banah**	80.86	294	P		P		19 02 27.2	+1.2	
BANOM	**Banah**	80.86	294	P		P		19 02 27.0	+1.1	
KLMR	**Klimovskoe**	80.95	331	*e*P		P		19 02 24.2	-1.4	
KLMR				*e*				19 05 40.2		
KLMR				pmax		pmax				
	comp=Z,83nm,1.2s									
SHME	**Shamm**	80.97	294	P		P		19 02 27.7	+1.3	
SHME	**Shamm**	80.97	294	P		P		19 02 27.8	+1.3	
BSY	**Bisya**	80.99	291	P		P		19 02 27.3	+0.6	
MDH	**Madha**	81.04	294	P		P		19 02 27.5	+0.6	
NEW	**Newport**	81.13	42	IAmb		IAmb		19 02 28.4		
	comp=Z,17nm,0.8s									
MASF	**Masafi**	81.14	294	P		P		19 02 28.5	+1.1	
MSFE	**Esma-Masafi**	81.15	294	P		P		19 02 28.4	+0.9	
SOHO	**SOHO**	81.17	292	P		P		19 02 28.2	+0.6	
UOSS	**Minazif**	81.23	293	P		P		19 02 28.3	+0.5	
UOSS				IAmb		IAmb		19 02 28.9		
	comp=Z,31nm,0.7s									
UOSS	**Minazif**	81.23	293	P		P		19 02 28.4	+0.5	
UOSS	**Minazif**	81.23	293	P		P		19 02 28.3	+0.5	
HATD	**Hatta, Dubai**	81.32	293	P		P		19 02 29.2	+0.9	
HATD	**Hatta, Dubai**	81.32	293	P		P		19 02 29.0	+0.7	
ARQ	**Araqi**	81.41	292	P		P		19 02 29.6	+0.8	
	SNR=10									
ASHO	**Ashiyiah**	81.43	293	P		P		19 02 29.6	+0.7	
ASHO	**Ashiyiah**	81.43	293	P		P		19 02 29.2	+0.3	
BEKR	**Beckworth**	81.49	51	IAmb		IAmb		19 02 31.0		
	comp=Z,20nm,0.7s									
DQM	**DQM**	81.50	288	P		P		19 02 29.3	+0.1	
KEV	**Kevo**	81.51	342	P		P		19 02 27.8	-0.5	
KEV	**Kevo**	81.51	342	P		P		19 02 27.8	-0.5	
KEV				pmax		pmax				
	comp=Z,62nm,0.7s									
NAZ	**Nazwa, Dubai**	81.69	294	P		P		19 02 30.8	+0.7	
NAZ	**Nazwa, Dubai**	81.69	294	P		P		19 02 30.7	+0.6	
FAQ	**Al Faqa, Dubai**	81.82	293	P		P		19 02 31.2	+0.5	
FAQ	**Al Faqa, Dubai**	81.82	293	P		P		19 02 31.3	+0.5	
ALNE	**Al Ain**	81.88	293	P		P		19 02 32.0	+0.8	
CMB	**Columbia Colle**	82.02	53	IAmb		IAmb		19 02 33.3		
	comp=Z,18nm,0.8s									
ARA0	**ARCESS Array S**	82.07	342	*e*P		P		19 02 31.2	0.0	
ARCES	**ARCESS Array B**	82.07	342	P		P		19 02 30.9	-0.3	
	comp=Z,54nm,0.7s,baz=80,slow=7.1,SNR=144									
	comp=Z,54nm,0.7s									
ARCES	**ARCESS Array B**	82.07	342	P		P		19 02 30.3	-0.9	
ASUD	**Al Ashush, Dub**	82.08	293	P		P		19 02 33.1	+1.0	
ASUD	**Al Ashush, Dub**	82.08	293	P		P		19 02 33.0	+0.9	
BMO	**Blue Mountains**	82.10	45	IAmb		IAmb		19 02 33.6		
	comp=Z,24nm,0.8s									
PNTR	**Pine Nut**	82.29	51	IAmb		IAmb		19 02 35.1		
	comp=Z,23nm,0.8s									
PKD	**Bear Valley Ra**	82.54	55	P		P		19 02 35.7	+1.4	
PKD				IAmb		IAmb		19 02 38.0		
	comp=Z,25nm,0.9s									
TULEG	**Thule**	82.55	8	*i* P		P		19 02 34.4	+0.9	
TULEG				IAmb		IAmb		19 02 34.9		
	comp=Z,65nm,0.7s									
PLID	**Pearl Lake**	82.90	45	IAmb		IAmb		19 02 37.5		
	comp=Z,19nm,0.8s									
AKT	**Akhty**	82.98	311	*e*P		P		19 02 36.0	-0.5	
AKT				*e*S		SKSac		19 12 01.4	+1.3	
AKT				pmax		pmax				
	comp=Z,36nm,0.6s									
KTK1	**Kautokeino**	83.03	342	*e*P		P		19 02 35.0	-1.0	
NEEM	**North Greenlan**	83.33	4	*i* P		P		19 02 38.1	+0.4	
NEEM				IAmb		IAmb		19 02 39.2		
	comp=Z,67nm,0.8s									
LHV	**Little Huntoon**	83.37	52	P		P		19 02 38.5	+0.2	
NVAR	**Mina Array Bea**	83.46	52	P		P		19 02 40.0	+0.9	
	comp=Z,15nm,0.7s,baz=264,slow=5.9,SNR=64									
NVAR				pP		pP		19 04 49.8	+1.6	
	comp=Z,3.1nm,1.0s,baz=293,slow=5.4,SNR=4.0									
	comp=Z,15nm,0.7s									
NVAR	**Mina Array Bea**	83.46	52	P		P		19 02 39.5	+0.4	
VRH	**Novokhopyorsk**	83.48	322	*e*P		P		19 02 37.1	-1.4	
VRH				pmax		pmax				
	comp=Z,30nm,0.6s									
JETT	**Jettan, Norway**	83.50	343	*e*P		P		19 02 38.0	-0.4	
MZWR	**Madinat Zayed**	83.60	293	P		P		19 02 40.2	+0.5	
SHAO	**Shalim**	83.79	287	P		P		19 02 41.4	+0.6	
SHAO	**Shalim**	83.79	287	P		P		19 02 41.4	+0.6	
TRO	**Tromso**	83.86	343	*e*P		P		19 02 39.3	-0.7	
DAG	**Danmarks Havn**	83.98	356	*i* P		P		19 02 39.7	-0.8	
DAG				IAmb		IAmb		19 02 41.0		
	comp=Z,58nm,0.8s									
MZR	**Muzera**	84.18	292	P		P		19 02 42.8	+0.1	
MZR	**Muzera**	84.18	292	P		P		19 02 42.6	0.0	
POIN	**Pond Inlet**	84.20	12	IAmb		IAmb		19 02 43.0		
	comp=Z,30nm,0.8s									
GHWR	**Ruwais**	84.41	293	P		P		19 02 43.6	-0.1	
HLID	**Hailey**	84.49	46	IAmb		IAmb		19 02 45.7		
	comp=Z,14nm,0.8s									
DMTO	**DMTO**	84.50	287	P		P		19 02 44.3	+0.1	
LPSR	**Galich'ya Gora**	84.53	324	*e*P		P		19 02 42.3	-1.3	
LPSR				pmax		pmax				
	comp=Z,42nm,0.8s									
GMN	**Gold Mountain**	84.61	53	IAmb		IAmb		19 02 46.5		
	comp=Z,17nm,0.8s									
OBN	**Obninsk**	84.74	327	*d* iP		P		19 02 43.4	-1.2	
OBN				pmax		pmax				
	comp=Z,16nm,0.8s									
VORR	**Voronezh**	84.75	323	*e*P		P		19 02 42.3	-2.4	
VORR				pmax		pmax				
	comp=Z,53nm,0.8s									
ELK	**Elko**	84.91	49	IAmb		IAmb		19 02 47.9		
	comp=Z,21nm,0.8s									
VSR	**Storozhevoye**	84.96	323	*e*P		P		19 02 41.9	-3.9	
VSR				pmax		pmax				
	comp=Z,20nm,0.8s									
DOK	**Doka**	84.96	288	P		P		19 02 46.3	-0.1	
VORD	**Divnogorie**	84.98	322	*e*P		P		19 02 43.3	-2.6	
VORD				pmax		pmax				
	comp=Z,20nm,0.9s									
RBK	**Rabkut**	85.24	287	P		P		19 02 48.0	+0.1	
	SNR=6.7									
WCT	**Wildcat Mounta**	85.26	53	IAmb		IAmb		19 02 49.5		
	comp=Z,20nm,0.8s									
GWY	**Greenwater Val**	85.43	53	IAmb		IAmb		19 02 50.3		
	comp=Z,20nm,0.8s									
SHMA	**Al-Shehemyia**	85.47	296	P		P		19 02 48.8	+0.1	
TPNV	**Topopah Spring**	85.49	53	IAmb		IAmb		19 02 50.6		
	comp=Z,28nm,0.8s									
WHFO	**Wadi Hawf**	85.50	287	P		P		19 02 49.0	-0.1	
	SNR=8.4									
KBZ	**Khabaz**	85.54	315	P		P		19 02 48.4	-0.3	
	comp=Z,38nm,0.9s,baz=158,slow=1.6,SNR=49									
	comp=Z,38nm,0.9s									
KBZ	**Khabaz**	85.54	315	*d* iP		P		19 02 47.9	-0.8	
KBZ				pmax		pmax				
	comp=Z,33nm,0.9s									
GNI	**Garni**	85.56	311	*de*P		P		19 02 48.8	-0.4	
GNI				pmax		pmax				
	comp=Z,11nm,1.0s									
KIV	**Kislovodsk**	85.60	315	P		P		19 02 48.5	-0.6	
KIV	**Kislovodsk**	85.60	315	P		P		19 02 48.7	-0.4	
KIV	**Kislovodsk**	85.60	315	⇑P		P		19 02 48.8	-0.4	
KIV	**Kislovodsk**	85.60	315	P		P		19 02 48.8	-0.4	
KIV	**Kislovodsk**	85.60	315	*e*P		P		19 02 48.2	-1.0	
KIV				*e*				19 12 15.8		
KIV				pmax		pmax				
	comp=Z,32nm,1.0s									
KIV	**Kislovodsk**	85.60	315	P		P		19 02 48.1	-1.0	
KULLO	**Kullorsuaq**	85.60	6	*i* P		P		19 02 48.5	+0.1	
KULLO				IAmb		IAmb		19 02 48.6		
	comp=Z,68nm,1.0s									
GSC	**Goldstone, Bar**	85.63	54	IAmb		IAmb		19 02 51.2		
	comp=Z,20nm,0.9s									
SHOC	**Shoshone, Teco**	85.83	54	IAmb		IAmb		19 02 52.1		
	comp=Z,21nm,0.9s									
STEI	**Steigen**	86.00	343	*e*P		P		19 02 49.5	-0.8	
ABTO	**Aybut**	86.11	287	P		P		19 02 51.5	-0.6	
	SNR=27									
FAUS	**Fauske**	86.36	343	*e*P		P		19 02 51.0	-1.1	
YMR	**Madison River**	86.38	44	IAmb		IAmb		19 02 56.8		
	comp=Z,13nm,0.7s									
FINES	**FINESS Array B**	86.40	335	P		P		19 02 50.9	-1.5	
	comp=Z,30nm,0.6s,baz=60,slow=4.6,SNR=180									
FINES				pP		pwP		19 05 07.2	-0.8	
	comp=Z,2.8nm,0.7s,baz=106,slow=3.0,SNR=2.8									
	comp=Z,30nm,0.6s									
FINES	**FINESS Array B**	86.40	335	P		P		19 02 50.6	-1.8	
DBG	**Daneborg**	86.48	356	*i* P		P		19 02 51.9	-0.7	
DBG				IAmb		IAmb		19 02 52.6		
	comp=Z,14nm,0.8s									
MTPC	**Mountain Pass**	86.53	54	IAmb		IAmb		19 02 55.7		
	comp=Z,13nm,0.8s									
PMD	**Palm Desert**	86.53	56	IAmb		IAmb		19 02 55.1		
	comp=Z,15nm,0.8s									
PSUT	**Pine Spring**	86.70	50	IAmb		IAmb		19 02 56.3		
	comp=Z,19nm,0.8s									
BELC	**Belle Mtn. Jos**	86.70	55	IAmb		IAmb		19 02 56.3		
	comp=Z,16nm,0.7s									
FLWY	**Flagg Ranch**	86.79	44	IAmb		IAmb		19 02 59.3		
	comp=Z,17nm,0.8s									
DUG	**Dugway, Tooele**	86.83	49	IAmb		IAmb		19 02 56.9		
	comp=Z,12nm,0.8s									
YMP	**Mirror Lake Pl**	86.88	44	IAmb		IAmb		19 02 58.6		
	comp=Z,55nm,1.8s									
V12A	**Nelson**	86.97	53	IAmb		IAmb		19 02 57.9		
	comp=Z,24nm,0.8s									
KHAM	**Kharkiv**	87.16	322	P		P		19 02 54.6	-1.7	
BATM	**Batumi**	87.17	313	⇓P		P		19 02 56.0	-0.5	
FFC	**Flin Flon**	87.20	32	P		P		19 02 56.5	+0.2	
FFC				IAmb		IAmb		19 02 57.6		
	comp=Z,20nm,0.8s									
FFC	**Flin Flon**	87.20	32	P		P		19 02 56.5	+0.2	
FFC				pmax		pmax				
	comp=Z,20nm,0.8s									
FFC	**Flin Flon**	87.20	32	P		P		19 02 56.8	+0.5	
BC3	**Big Chuckawall**	87.25	55	IAmb		IAmb		19 02 59.0		
	comp=Z,16nm,0.8s									
RLMT	**Red Lodge**	87.31	43	IAmb		IAmb		19 03 00.4		
	comp=Z,13nm,0.7s									
IRM	**Iron Mountain**	87.31	55	IAmb		IAmb		19 02 59.1		
	comp=Z,15nm,0.8s									
RAUS	**Rausandaksla**	87.37	342	*e*P		P		19 02 55.2	-1.7	
MOR8	**Moi Rana**	87.44	342	*e*P		P		19 02 55.2	-2.1	
SOC	**Sochi**	87.72	315	*e*P		P		19 02 55.5	-3.5	
SOC				*e*				19 06 32.5		
SOC				*e*PPP		PPP		19 08 41.9		
SOC				*e*S		SKSac		19 12 25.2	-3.6	
SOC				*e*SS		SS		19 18 55.0	-0.7	
SOC				pmax		pmax				
	comp=Z,19nm,0.6s									
BLYC	**Blythe**	87.94	55	IAmb		IAmb		19 03 02.6		
	comp=Z,12nm,0.8s									
GLA	**Glamis**	87.95	56	IAmb		IAmb		19 03 02.3		
	comp=Z,18nm,0.8s									
KNB	**Kanab**	88.02	52	IAmb		IAmb		19 03 03.2		
	comp=Z,19nm,0.9s									
PDAR	**Pinedale Array**	88.08	45	P		P		19 03 01.0	0.0	
	comp=Z,2.6nm,0.7s,baz=241,slow=2.0,SNR=23									
PDAR				pP		pwP		19 05 14.9	-5.0	
	comp=Z,0.7nm,0.9s,baz=312,slow=6.7,SNR=3.6									
	comp=Z,2.6nm,0.7s									
PDAR	**Pinedale Array**	88.08	45	P		P		19 02 59.8	-1.2	
GURO	**Guroymak-BITLI**	88.11	310	IAmb		IAmb		19 03 01.7		
	comp=Z,15nm,0.8s									
Q16A	**Castle Valley**	88.50	49	IAmb		IAmb		19 03 04.9		
	comp=Z,14nm,0.7s									
P17A	**Butcher Ranch,**	88.58	49	IAmb		IAmb		19 03 05.0		
	comp=Z,12nm,0.8s									
KOPT	**Kop Dagi**	88.63	312	IAmb		IAmb		19 03 04.8		
	comp=Z,21nm,1.3s									
SUMG	**Summit**	88.67	1	IAmb		IAmb		19 03 07.8		
	comp=Z,16nm,1.0s									
SUMG	**Summit**	88.67	1	*i* P		P		19 03 03.5	+0.1	
SUMG				IAmb		IAmb		19 03 08.0		
	comp=Z,12nm,0.8s									
P18A	**Preston Nutter**	88.87	48	IAmb		IAmb		19 03 07.1		
	comp=Z,13nm,0.7s									
RDMU	**Red Mountain**	88.97	47	IAmb		IAmb		19 03 06.7		
	comp=Z,13nm,0.8s									
Y14A	**Wickenburg**	89.04	54	IAmb		IAmb		19 03 07.4		
	comp=Z,15nm,0.8s									
MNK	**Minsk**	89.42	329	*i* P		P		19 03 06.0	-0.6	
MNK				*i*				19 06 47.7		
MNK				*i* PPP		PPP		19 08 50.2		
MNK				*i*				19 12 37.6		
MNK				pmax		pmax				
	comp=Z,42nm,0.9s									
MNK				pmax		pmax				
	comp=N,21nm,0.9s									
MNK				pmax		pmax				
	comp=E,20nm,0.9s									
WUAZ	**Wupatki**	89.68	52	IAmb		IAmb		19 03 10.6		
	comp=Z,8.5nm,0.8s									
SAATT	**Saattut**	89.72	5	*i* P		P		19 03 07.6	-0.1	
SAATT				IAmb		IAmb		19 03 08.5		
	comp=Z,32nm,0.8s									
O20A	**White River Ci**	90.07	47	IAmb		IAmb		19 03 11.5		
	comp=Z,12nm,0.8s									
K22A	**Casper**	90.15	44	IAmb		IAmb		19 03 12.8		
	comp=Z,10nm,0.9s									
PV05	**Paradox Valley**	90.32	49	IAmb		IAmb		19 03 12.9		
	comp=Z,15nm,0.7s									
SCO	**Scoresbysund**	90.34	356	*i* P		P		19 03 10.1	-0.4	
SCO				IAmb		IAmb		19 03 11.6		
	comp=Z,8.4nm,0.8s									
PV03	**Paradox Valley**	90.43	49	IAmb		IAmb		19 03 13.2		
	comp=Z,18nm,0.8s									
PV07	**Paradox Valley**	90.50	49	IAmb		IAmb		19 03 21.7		
	comp=Z,6.5nm,0.8s									
HAYD	**Hayden**	90.58	47	IAmb		IAmb		19 03 14.8		
	comp=Z,14nm,0.8s									
PV15	**Paradox Valley**	90.65	49	IAmb		IAmb		19 03 14.3		
	comp=Z,7.8nm,0.9s									
PV01	**Paradox Valley**	90.68	49	IAmb		IAmb		19 03 14.7		
	comp=Z,16nm,0.7s									
AKASG	**Malin Array Be**	90.75	325	P		P		19 03 11.1	-1.8	
	comp=Z,1.6nm,0.5s,baz=53,slow=5.0,SNR=12									
AKASG				pP		pwP		19 05 28.2	-1.6	
	comp=Z,0.2nm,0.3s,baz=64,slow=2.2,SNR=1.5									
AKASG				PP		PP		19 06 51.5	-8.0	
	comp=Z,2.1nm,0.8s,baz=56,slow=7.6,SNR=2.4									
	comp=Z,1.6nm,0.5s									
AKBB	**Malin Array Si**	90.75	325	IAmb		IAmb		19 05 02.6		
	comp=Z,21nm,1.8s									
KIEV	**Kiev**	90.77	325	P		P		19 03 10.7	-2.3	
KIEV				IAmb		IAmb		19 05 02.6		
	comp=Z,21nm,1.8s									
KIEV	**Kiev**	90.77	325	⇑P		P		19 03 10.7	-2.3	
KIEV	**Kiev**	90.77	325	P		P		19 03 10.6	-2.3	
KIEV	**Kiev**	90.77	325	P		P		19 03 10.7	-2.3	
KIEV				pmax		pmax				
	comp=Z,21nm,1.8s									
RSSD	**Black Hills**	91.10	42	P		P		19 03 14.6	-0.4	
RSSD				IAmb		IAmb		19 03 15.7		
	comp=Z,8.2nm,0.7s									
RSSD	**Black Hills**	91.10	42	P		P		19 03 14.6	-0.4	
RSSD				pmax		pmax				
	comp=Z,8.0nm,0.7s									
NC405	**NORSAR Array S**	91.91	339	IAmb		IAmb		19 03 18.4		
	comp=Z,15nm,0.8s									
HFS	**Hagfors**	91.93	338	P		P		19 03 16.4	-1.6	
	comp=Z,11nm,0.7s,baz=98,slow=4.5,SNR=60									
HFS				PP		PP		19 07 03.8	-4.4	
	comp=Z,5.9nm,0.9s,baz=47,slow=8.7,SNR=4.2									
	comp=Z,11nm,0.7s									
S22A	**4UR Ranch, Cre**	92.09	49	IAmb		IAmb		19 05 08.7		
	comp=Z,5.1nm,0.4s									
NC204	**NORSAR Array S**	92.10	340	IAmb		IAmb		19 03 18.4		
	comp=Z,11nm,0.8s									
NB2	**NORSAR

comp=Z,2.0nm,0.4s
WATA Walderalm 101.91 330 *e*PP **PKiKP 19 08 22.7 +0.6**
comp=Z,0.9nm,0.2s
WTTA Wattenberg 101.93 330 *e*PP **PKiKP 19 08 22.8 +0.6**
comp=Z,6.5nm,0.9s
BSTI Sart Tilman 102.13 335 *d*PKiKP **PKiKP 19 08 24.3 +2.1**
MOTA Moosalm 102.13 330 *e*PP **PP 19 08 25.1 -0.3**
comp=Z,3.1nm,0.7s
MAW Mawson 104.41 203 PP **PP 19 08 36.3 -6.1**
comp=Z,3.5nm,0.7s,baz=23,slow=7.7,SNR=3.7
SYO Syowa Base 113.08 202⇑ *e*Pdiff **Pdif 19 04 53.4 +1.2**
ESDC Sonseca Array 114.90 334 PKP PKPdf 19 08 45.4 -1.2
comp=Z,0.6nm,0.7s,baz=1.8,slow=4.6,SNR=4.2
ESDC PP **PP 19 09 51.0 -5.2**
comp=Z,6.0nm,0.8s,baz=30,slow=6.1,SNR=7.1
ESDC PKKPab **PKKPab 19 19 34.1 -1.3**
comp=Z,0.5nm,0.9s,baz=203,slow=3.0,SNR=5.2
MD01 Midelt array s 120.94 330 PKPdf 19 08 58.2 -0.3
MD31 MD31 120.94 330 PKPdf 19 08 58.1 -0.3
NVL N'lazarevskaya 121.29 196 *i* PKIKP **PKiKP 19 08 59.2 +1.3**
NVL *e* 19 10 42.4
NVL *e*SS SS 19 26 30.8 +3.9
NVL *e*SSS SSS 19 31 11.5
NVL pmax pmax
comp=Z,8.0nm,1.0s
TROLL Troll, Antarti 122.70 193 ⇑PKPdf **PKPdf 19 09 00.9 +0.3**
comp=Z,332nm,0.9s
LBTB Lobatse 123.93 252 PKPdf 19 09 04.0 -0.3
LBTB Lobatse 123.93 252 PKIKP **PKPdf 19 09 04.0 -0.3**
SNAA Sanae 124.05 192 ⇑PKPdf **PKPdf 19 09 02.4 -0.8**
comp=Z,53nm,0.6s
SNAA Sanae 124.05 192 PKP **PKPdf 19 09 02.5 -0.7**
comp=Z,1.3nm,0.5s,baz=220,slow=5.9,SNR=21
SNAA Sanae 124.05 192 PKPdf 19 09 01.9 -1.2
BOSA Boshof 124.57 248 PKP **PKPdf 19 09 04.8 -0.7**
comp=Z,4.9nm,1.1s,baz=0.0,slow=0.0,SNR=4.6
KDWAN Kaudwane 124.57 254 PKPdf 19 09 05.5 -0.1
VNA2 Neumayer--Watz 125.50 191 ⇑PKPdf **PKPdf 19 09 06.1 +0.2**
comp=Z,4.9nm,0.6s,baz=141,slow=2.0
VNA3 Neumayer Olymp 125.61 190 ⇑PKPdf **PKPdf 19 09 06.0 -0.1**
comp=Z,3.4nm,0.6s
VNA1 Neumayer--Stat 125.89 191 ⇑PKPdf **PKPdf 19 09 07.2 +0.6**
comp=Z,7.0nm,1.2s
KGCAE Kacgae 126.75 255 PKPdf 19 09 10.4 +0.6
TORD Torodi Ar. Bea 131.83 309 PKP **PKPdf 19 09 20.0 +0.5**
comp=Z,2.1nm,0.3s,baz=29,slow=4.2,SNR=3.3
TORD SKPbc **SKPbc 19 11 46.5 -2.1**
comp=Z,9.8nm,0.8s,baz=48,slow=4.4,SNR=6.4
DBIC Dimbokro 140.92 308 PKhKP PKPpre 19 09 30.3
comp=Z,7.3nm,0.6s,baz=71,slow=3.9,SNR=12
DBIC SKPbc **SKPbc 19 12 13.6 -2.1**
comp=Z,16nm,0.8s,baz=84,slow=2.7,SNR=14
DBIC Dimbokro 140.92 308 PKPpre 19 09 29.6
DBIC Dimbokro 140.92 308 PKHKP PKPpre 19 09 29.6
PLCA Paso Flores 142.61 133 PKP **PKPdf 19 09 37.2 -1.4**
comp=Z,9.8nm,0.9s,baz=218,slow=3.5,SNR=14
PLCA SKPbc **SKPbc 19 12 19.3 +0.2**
comp=Z,1.5nm,0.6s,baz=199,slow=2.4,SNR=3.6
AC05 El Transito 146.34 114 PKPbc 19 09 48.8 +0.8
TA01 Diego Aracena 146.83 99 PKPdf 19 09 44.6 -1.7
BOAV Boa Vista 147.09 53 PKPdf 19 09 47.1 +0.1
TEFE Tefe 147.17 65 *e*P **PKPdf 19 09 47.2 +0.1**
PB11 IPOC Station P 147.27 97 PKPdf 19 09 46.7 -0.6
LPAZ La Paz 148.28 90 PKP **PKPdf 19 09 50.6 +1.0**
comp=Z,8.4nm,0.7s,baz=313,slow=1.6,SNR=18
LPAZ PKPbc **PKPbc 19 09 54.5 +0.6**
comp=Z,8.4nm,0.7s,baz=4.3,slow=5.6,SNR=26
LPAZ pPKPbc **pPKPab 19 12 16.7 +2.0**
comp=Z,1.8nm,0.8s,baz=300,slow=3.0,SNR=3.0
LPAZ La Paz 148.28 90 *e*P **PKPdf 19 09 47.6 -2.0**
MACA Manacapuru-AM 150.33 61 *e*P **PKPdf 19 09 52.7 +0.5**
PRPB Parauapebas 160.73 51 *e*P **PKPdf 19 10 05.3 -0.5**

IDC 20 19:02:03.6±5.2, 29°.72S×177°.73W, h67km±39km, mb3.1/2, mbtmp3.4/2, Error ellipse: s-maj=106.7km s-min=62.0km az=171.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.49**	**340**	P			Pn	19 02 16.9	+0.9
	230nm,0.3s,baz=49,slow=20,SNR=2.8								
RAO				S			Sn	19 02 27.4	+2.2
	804nm,0.2s,baz=30,slow=14,SNR=8.5								
ASAR	**Alice Springs**	**43.39**	**266**	P			P	19 10 00.5	+0.7
	0.3nm,0.7s,baz=110,slow=8.0,SNR=2.8								
	0.3nm,0.7s								
WRA	**Warramunga Arr**	**44.31**	**271**	P			P	19 10 06.1	-1.2
	0.2nm,0.2s,baz=110,slow=8.2,SNR=5.0								
	0.2nm,0.2s								
H03S2	**Juan Fernandez**	**80.64**	**124**	T			T	20 43 18.2	
	baz=238,slow=74,SNR=10								
H03S1	**Juan Fernandez**	**80.65**	**124**	T			T	20 43 20.4	
	baz=238,slow=74,SNR=11								
H03S3	**Juan Fernandez**	**80.66**	**124**	T			T	20 43 19.3	
	baz=238,slow=74,SNR=8.0								
FINES	**FINESS Array B**	**144.59**	**340**	PKP			PKPdf	19 21 31.3	-0.4
	1.6nm,0.8s,baz=49,slow=4.2,SNR=6.5								

BJI ***20*** *19:02:40.2, 44˚.90N×147˚.05E, h138km, mB5.3/18, mb5.2/73*
MOS ***20*** *19:02:40.8±1.1, 44˚.85N×147˚.06E, h148km, mb4.6/32, Error ellipse: s-maj=6.3km s-min=5.0km az=91.6*
MOS Felt (III) at Malokuril'skoye.
IDC ***20*** *19:02:40.9±1.3, 45˚.00N×146˚.93E, h125km±10km, mb4.3/30, mbtmp4.7/38, MS3.7/11, Error ellipse: s-maj=10.9km s-min=8.9km az=125.0*
SKHL ***20*** *19:02:41.8±0.6, 44˚.80N×147˚.20E, h144km±5km, mb5.8/5, msha6.6/4*
NIED ***20*** *19:02:42.0, 44˚.65N×147˚.23E, h144km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.60; $M_{\theta\theta}$1.06; $M_{\phi\phi}$-0.46; $M_{r\theta}$-0.22; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.95; Fault plane solution: $M_0$1.43000×10^{16} NP1: ϕ_s288.00000°, δ45.00000°, λ-25.00000°. NP2:ϕ_s36.00000°, δ72.00000°, λ-132.00000°.*
JMA ***20*** *19:02:42.0±0.3, 45˚.N±2°×14˚.7E±˚, h144km±4km, MD4.6/36, MV4.6/36, NEAR ETOROFU ISLAND*
JMA Felt I J1 at NEAR ETOROFU ISLAND .
NEIC ***20*** *19:02:43.2±1.6, 45˚.02N±0˚.08×147˚.0E±0˚.1, h146km±7km, mb4.8/182, Error ellipse: s-maj=13.9km s-min=10.4km az=121.0*
GCMT ***20*** *19:02:44.2±0.6, 44˚.79N±0˚.03×147˚.04E±0˚.05, h156km±6km, MW4.8/81, Moment Tensor Solution. s6,c6; s81,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.12; $M_{\theta\theta}$1.25±.15; $M_{\phi\phi}$-0.74±.15; $M_{r\theta}$-0.75±.09; $M_{\theta\phi}$0.81±.11; $M_{\phi r}$-1.60±.09; Best double couple: $M_0$2.22800×10^{16} NP1:ϕ_s290.00000°, δ36.00000°, λ-14.00000°. NP2:ϕ_s31.00000°, δ82.00000°, λ-125.00000°. Principal axes: T 2.2250, Plg28.0000°, Azm148.0000°; N 0.0070, Plg34.0000°, Azm37.0000°; P -2.2320, Plg42.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 19:02:41.8±0.4, 44°.86N±0°.03×147°.13E±0°.04, h140km±3km, h140km:pP-P, n872, σ1§13/853, mb4.8/198, 41C-51D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.64**	**54**	*d*iPN			**Pn**	**19 03 02.1**	**-0.7**
KUR				*e*S			**Sn**	**19 03 18.5**	**-0.3**
KUR	**Kuril'sk**	**0.64**	**54**	*i* P			**Pn**	**19 03 03.4**	**+0.6**
KUR				AMB			AMB	19 03 03.9	
	26μm,0.6s								
KUR				*e*S			**Sn**	**19 03 20.1**	**+1.3**
KUR				A			A	19 03 20.7	
	9μm,0.7s								
KUR				A			A	19 03 20.7	
	13μm,0.7s								
SHO	**Shikotan**	**1.01**	**192**	*e*P			Pn	19 03 12.1	+6.3
SHO				AMB			AMB	19 03 12.5	
	2μm,0.2s								
SHO				*e*S			**Sn**	**19 03 28.5**	**+4.6**
SHO				A			A	19 03 28.9	
	13μm,0.3s								
SHO				A			A	19 03 28.9	
	12μm,0.3s								
YUK	**Yuzh-Kuril'sk**	**1.23**	**228**	*c* iPN			**Pn**	**19 03 07.8**	**0.0**
YUK	**Yuzh-Kuril'sk**	**1.23**	**228**	*i* P			**Pn**	**19 03 07.9**	**+0.1**
YUK				AMB			AMB	19 03 08.1	
	6μm,0.3s								
YUK				*e*S			**Sn**	**19 03 27.0**	**-0.5**
YUK				A			A	19 03 29.7	
	14μm,0.6s								
YUK				A			A	19 03 29.7	
	12μm,0.6s								
RUSJ	**Misakicho**	**1.54**	**241**	⇑*i* PN			**Pn**	**19 03 11.2**	**+0.1**
RUSJ				*e*S			**Sn**	**19 03 33.6**	**+0.2**
GLVR	**Golovnino**	**1.61**	**226**	*e*PN			**Pn**	**19 03 12.1**	**+0.3**
GLVR				*e*S			**Sn**	**19 03 34.6**	**-0.1**
GLVR				pmax			pmax		
	comp=Z,2μm,0.6s								
GLVR				pmax			pmax		
	comp=N,268nm,0.4s								
GLVR				pmax			pmax		
	comp=E,215nm,0.1s								
GLVR				smax			smax		
	comp=N,14μm,0.3s								
GLVR				smax			smax		
	comp=E,8μm,0.3s								
GLVR	**Golovnino**	**1.61**	**226**	*e*P			**Pn**	**19 03 12.1**	**+0.3**
GLVR				AMB			AMB	19 03 12.7	
	comp=E,2μm,0.4s								
GLVR				*e*S			**Sn**	**19 03 34.6**	**-0.1**
GLVR				A			A	19 03 36.1	
	comp=E,14μm,0.3s								
GLVR				A			A	19 03 36.1	
	comp=E,8μm,0.3s								
JRA	**Rausu**	**1.71**	**238**	*i* P			**Pn**	**19 03 13.0**	**+0.1**
JRA				*e*S			**Sn**	**19 03 36.6**	**-0.1**
NEM2	**Nemuro 2**	**1.80**	**214**	*i* P			**Pn**	**19 03 12.9**	**-1.1**
NEM2				S			**Sn**	**19 03 34.9**	**-3.6**
NMR	**Nemuro--Hokkai**	**1.80**	**215**	⇑*i* PN			**Pn**	**19 03 12.9**	**-1.1**
NMR				*e*S			**Sn**	**19 03 34.9**	**-3.7**
NMR	**Nemuro--Hokkai**	**1.80**	**215**	*i* P			**Pn**	**19 03 12.9**	**-1.1**
JNSB	**Nemuroshibetsu**	**1.87**	**235**	P			**Pn**	**19 03 15.2**	**+0.4**
JNSB				*e*S			**Sn**	**19 03 40.3**	**+0.2**
JNK	**Nakash**	**2.15**	**235**	*i* P			**Pn**	**19 03 18.5**	**+0.3**
JNK				*e*S			**Sn**	**19 03 46.0**	**0.0**
JKHN	**Kushirohamanak**	**2.28**	**219**	*i* P			**Pn**	**19 03 18.9**	**-0.7**
JKHN				S			**Sn**	**19 03 45.9**	**-2.9**
AKK	**Akkeshi**	**2.48**	**223**	*e*P			**Pn**	**19 03 21.5**	**-0.6**
JTKR	**Abashiri--Toko**	**2.48**	**250**	P			**Pn**	**19 03 22.5**	**+0.4**
JTKR				S			**Sn**	**19 03 53.2**	**+0.1**
JTKR	**Abashiri--Toko**	**2.48**	**250**	A			A	19 03 22.5	
	comp=N,3.0nm,1.7s,comp=E,5.0nm,1.8s								
JAK	**Akkeshi**	**2.56**	**224**	*i* P			**Pn**	**19 03 22.7**	**-0.5**
JAK				S			**Sn**	**19 03 52.4**	**-2.7**
JAK	**Akkeshi**	**2.56**	**224**	A			A	19 03 22.7	
	comp=N,11nm,0.7s,comp=E,16nm,0.8s								
JMP	**Maruseppu**	**2.83**	**254**	P			**Pn**	**19 03 27.1**	**+0.5**
JMP	**Maruseppu**	**2.83**	**254**	A			A	19 03 27.1	
	comp=N,4.0nm,1.9s,comp=E,7.0nm,2.4s								
JAR	**Ashorobuto**	**2.88**	**238**	*i* P			**Pn**	**19 03 28.0**	**+0.7**
JAR				S			**Sn**	**19 04 04.2**	**+1.8**
JAR	**Ashorobuto**	**2.88**	**238**	A			A	19 03 28.0	
	comp=N,9.0nm,3.9s,comp=E,8.0nm,2.8s								
JSE	**Soyaes**	**3.23**	**273**	P			**Pn**	**19 03 32.8**	**+1.1**
JKK2	**Kamakawa 2**	**3.29**	**254**	*i* P			**Pn**	**19 03 33.6**	**+1.0**
JKK2				S			**Sn**	**19 04 13.2**	**+1.4**
JKA	**Kamikawa-asahi**	**3.33**	**259**				**Pn**	**19 03 33.8**	**+0.8**
JKA	**Kamikawa-asahi**	**3.33**	**259**	*e*P			**Pn**	**19 03 33.8**	**+0.8**
ASAJ	**Asahikawa**	**3.33**	**259**	P			**Pn**	**19 03 34.7**	**+1.7**
	comp=E,904nm,0.7s,baz=90,slow=15,SNR=186								
ASAJ				S			**Sn**	**19 04 15.2**	**+2.6**
	comp=E,159nm,0.7s,baz=351,slow=2.3,SNR=7.2								
ASAJ	**Asahikawa**	**3.33**	**259**	PN			**Pn**	**19 03 33.8**	**+0.8**
JCH	**Churui**	**3.54**	**232**	P			**Pn**	**19 03 35.3**	**-0.4**
JCH				*e*S			**Sn**	**19 04 14.5**	**-2.8**
YSS	**Yuzhno-Sakhali**	**3.70**	**306**				**Pn**	**19 03 38.5**	**+0.7**
YSS	**Yuzhno-Sakhali**	**3.70**	**306**	P			**Pn**	**19 03 38.9**	**+1.1**
YSS	**Yuzhno-Sakhali**	**3.70**	**306**	*c*ePN			**Pn**	**19 03 38.7**	**+0.9**
YSS				*e*S			**Sn**	**19 04 22.4**	**+1.1**
YSS				pmax			pmax		
	comp=Z,1μm,3.0s								
YSS				pmax			pmax		
	comp=Z,300nm,0.8s								
YSS				pmax			pmax		
	comp=N,440nm,0.6s								
YSS				pmax			pmax		
	comp=E,340nm,0.6s								
YSS				smax			smax		
	comp=N,250nm,0.8s								
YSS				smax			smax		
	comp=E,410nm,0.9s								
YSS	**Yuzhno-Sakhali**	**3.70**	**306**	*e*P			**Pn**	**19 03 38.7**	**+0.9**
YSS				*e*S			**Sn**	**19 04 22.3**	**+1.0**
JWK2	**Keihoku**	**3.73**	**279**	*e*P			**Pn**	**19 03 40.9**	**+2.7**
JWK2				*e*S			**Sn**	**19 04 27.0**	**+5.0**
JHR	**Hokuryu**	**4.04**	**256**	P			**Pn**	**19 03 43.9**	**+1.7**
JEM	**Erimo**	**4.06**	**227**	P			**Pn**	**19 03 42.2**	**-0.3**
JEM	**Erimo**	**4.06**	**227**	S			**Sn**	**19 04 27.7**	**-1.9**
ERM	**Erimo**	**4.06**	**227**				**Pn**	**19 03 42.6**	**+0.1**
ERM	**Erimo**	**4.06**	**227**	P			**Pn**	**19 03 41.6**	**-0.9**
ERM	**Erimo**	**4.06**	**227**	S			**Sn**	**19 04 27.7**	**-1.9**
ERM	**Erimo**	**4.06**	**227**	PN			**Pn**	**19 03 42.6**	**+0.1**
JNBK	**Urakawa-nobuka**	**4.09**	**232**	*i* P			**Pn**	**19 03 41.9**	**-1.1**
KHLM	**Kholmsk**	**4.17**	**304**	*e*P			**Pn**	**19 03 46.1**	**+2.2**
JRBN	**Rebuntou**	**4.33**	**280**	P			**Pn**	**19 03 48.0**	**+1.9**
JEW	**Eniwo**	**4.58**	**246**	P			**Pn**	**19 03 50.5**	**+1.1**
JEW				*e*S			**Sn**	**19 04 42.5**	**+0.6**
UGL	**Uglegorsk**	**5.46**	**322**	*e*PN			Pn	19 03 55.4	-5.6
UGL				pmax			pmax		
	comp=Z,100nm,1.4s								
UGL	**Uglegorsk**	**5.46**	**322**	*i* P			**Pn**	**19 04 02.2**	**+1.2**
UGL				AMB			AMB	19 04 04.0	
	comp=Z,110nm,0.8s								
JTM	**Tenmabayashi**	**6.04**	**230**				**Pn**	**19 04 06.3**	**-2.5**
JTM	**Tenmabayashi**	**6.04**	**230**	P			**Pn**	**19 04 06.6**	**-2.2**
TYV	**Tymovskoe**	**6.72**	**335**	*e*PN			**Pn**	**19 04 19.5**	**+1.6**
TYV				*e*S			**Sn**	**19 05 32.0**	**-1.1**
TYV				pmax			pmax		
	comp=Z,92nm,1.0s								
TYV				pmax			pmax		
	comp=Z,500nm,2.1s								
TYV				smax			smax		
	comp=N,40nm,1.4s								
TYV				smax			smax		
	comp=E,41nm,1.4s								
TYV				smax			smax		
	comp=E,400nm,2.1s								
TYV	**Tymovskoe**	**6.72**	**335**	*i* P			**Pn**	**19 04 19.2**	**+1.3**
TYV				*e*S			**Sn**	**19 05 33.9**	**+0.8**
TEY	**Ternei**	**7.47**	**275**	⇑*e*PN			**Pn**	**19 04 30.3**	**+2.3**
TEY				pmax			pmax		
	comp=E,90nm,1.5s								
TEY				pmax			pmax		
	comp=N,20nm,0.9s								
TEY				pmax			pmax		
	comp=Z,80nm,1.5s								
TEY	**Ternei**	**7.47**	**275**	*e*P			**Pn**	**19 04 30.3**	**+2.3**
SKR	**Severo-Kuril's**	**8.40**	**43**	*e*PN			**Pn**	**19 04 40.6**	**+0.3**
SKR				*e*S			**Sn**	**19 06 13.8**	**+0.3**
SKR				pmax			pmax		
	comp=Z,481nm,0.6s								
SKR				smax			smax		
	comp=N,471nm,0.6s								
SKR				smax			smax		
	comp=E,383nm,0.4s								
SKR	**Severo-Kuril's**	**8.40**	**43**	*e*P			**Pn**	**19 04 41.0**	**+0.7**
SKR				*e*S			**Sn**	**19 06 13.4**	**-0.1**
JMM	**Marumori**	**8.46**	**216**				**Pn**	**19 04 37.5**	**-3.7**
JMM	**Marumori**	**8.46**	**216**	P			**Pn**	**19 04 37.8**	**-3.5**
OKH	**Okha**	**9.12**	**344**	*e*P			**Pn**	**19 04 50.1**	**+0.1**
PAU	**Pauzhetka**	**9.24**	**41**	*i* P			**Pn**	**19 04 51.6**	**-0.1**
PAU				*e*S			**Sn**	**19 06 32.3**	**-1.6**
NKL	**Nikolayevsk**	**9.31**	**335**	*e*P			**Pn**	**19 04 54.0**	**+1.4**
JSD	**Sado**	**9.53**	**227**	Pn			**Pn**	**19 04 53.1**	**-2.5**
JSD	**Sado**	**9.53**	**227**	P			**Pn**	**19 04 53.7**	**-1.9**
MJB9	**Matsu-Tunnel**	**10.71**	**222**				**Pn**	**19 05 09.9**	**-1.5**
MAJO	**Matsushiro**	**10.71**	**222**				**Pn**	**19 05 08.9**	**-2.6**
MAJO	**Matsushiro**	**10.71**	**222**	P			**Pn**	**19 05 09.3**	**-2.1**
MAJO	**Matsushiro**	**10.71**	**222**	⇓*e*PN			**Pn**	**19 05 08.8**	**-2.6**
MAJO				pmax			pmax		
	comp=Z,10.0nm,0.7s								
MJAR	**Matsushiro Arr**	**10.71**	**222**	P			**Pn**	**19 05 09.2**	**-2.3**
	comp=Z,12nm,0.6s,baz=27,slow=13,SNR=28								
MJAR	**Matsushiro Arr**	**10.71**	**222**				**Pn**	**19 05 08.7**	**-2.7**
PEA0B	**Petropavlovsk-**	**10.78**	**36**	*i* PN			**Pn**	**19 05 12.4**	**+0.3**
PETK	**Petropavlovsk-**	**10.78**	**36**	P			**Pn**	**19 05 12.6**	**+0.5**
	comp=Z,10nm,0.6s,baz=210,slow=8.9,SNR=34								
PETK	**Petropavlovsk-**	**10.78**	**36**	Pn			**Pn**	**19 05 12.1**	**0.0**
USRK	**Ussuriysk Ar.**	**10.84**	**272**	P			**Pn**	**19 05 13.3**	**+0.4**
	comp=Z,27nm,0.7s,baz=85,slow=13,SNR=26								
VLA	**Vladivostok**	**11.12**	**266**	*d* iPN			**Pn**	**19 05 16.4**	**-0.3**
VLA				pmax			pmax		
	comp=Z,70nm,1.2s								
VLA	**Vladivostok**	**11.12**	**266**	*e*P			**Pn**	**19 05 16.4**	**-0.3**
PET	**Petropavlovsk**	**11.13**	**39**	P			**Pn**	**19 05 18.5**	**+1.8**
PET	**Petropavlovsk**	**11.13**	**39**	*e*PN			**Pn**	**19 05 18.2**	**+1.5**
PET				*e*S			**Sn**	**19 07 18.3**	**-1.1**
PET	**Petropavlovsk**	**11.13**	**39**	*e*P			**Pn**	**19 05 17.6**	**+0.9**
MSHR	**Mys Shultsa**	**11.78**	**264**	*c*ePN			**Pn**	**19 05 25.0**	**-0.4**
MSHR				pmax			pmax		
	comp=Z,85nm,0.9s								
JGF	**Kuroka**	**11.88**	**222**				**Pn**	**19 05 24.5**	**-2.3**
JGF	**Kuroka**	**11.88**	**222**	P			**Pn**	**19 05 24.7**	**-2.1**
PSTR	**Posyet**	**12.01**	**265**	*c* iPN			**Pn**	**19 05 27.9**	**-0.5**
PSTR	**Posyet**	**12.01**	**265**	*e*P			**Pn**	**19 05 27.9**	**-0.5**
INU	**Inuyama**	**12.24**	**223**				**Pn**	**19 05 29.1**	**-2.4**
INU	**Inuyama**	**12.24**	**223**	P			**Pn**	**19 05 30.3**	**-1.2**
MDJ	**Mudanjiang**	**12.48**	**275**				**Pn**	**19 05 33.3**	**-1.2**
MDJ	**Mudanjiang**	**12.48**	**275**	P			**Pn**	**19 05 33.5**	**-0.9**
MDJ				pmax			pmax		
	comp=Z,29nm,1.3s								
MDJ	**Mudanjiang**	**12.48**	**275**	P			**Pn**	**19 05 36.0**	**+1.6**
JHJ2	**Mitsune**	**13.03**	**208**	P			**Pn**	**19 05 39.4**	**-2.2**
JHJ	**Hachijo jima 2**	**13.03**	**208**	P			**Pn**	**19 05 42.1**	**+0.4**
	comp=Z,53nm,0.3s,baz=105,slow=20,SNR=5.5								
JHJ				S			Sn	19 07 51.4	-14
	comp=Z,205nm,0.8s,baz=83,slow=23,SNR=8.5								
BNX	**BinXian**	**13.91**	**281**	⇑P			**Pn**	**19 05 51.9**	**-1.0**
BNX				pmax			pmax		
	comp=Z,37nm,1.4s								
HEH	**HeiHe**	**14.35**	**299**	*e*P			**Pn**	**19 05 58.0**	**-0.3**
HEH				pmax			pmax		
	comp=Z,46nm,1.3s								
MA2	**Magadan**	**14.90**	**7**	P			**Pn**	**19 06 05.9**	**+0.8**
	comp=Z,14nm,0.5s,baz=180,slow=12,SNR=5.8								
MA2	**Magadan**	**14.90**	**7**	Pn			**Pn**	**19 06 04.4**	**-0.8**
MA2	**Magadan**	**14.90**	**7**	P			**P**	**19 06 08.8**	**+1.5**
MA2	**Magadan**	**14.90**	**7**	⇓*e*P			**Pn**	**19 06 03.6**	**-1.5**
MA2	**Magadan**	**14.90**	**7**	*e*P			**Pn**	**19 06 03.6**	**-1.5**
JMN	**Monobe**	**15.10**	**227**				**Pn**	**19 06 07.0**	**-0.9**
JMN	**Monobe**	**15.10**	**227**	P			**Pn**	**19 06 07.5**	**-0.4**
CN2	**Changchun**	**15.55**	**274**	P			**Pn**	**19 06 11.9**	**-1.4**
CN2				pmax			pmax		
	comp=Z,40nm,0.9s								
ZEA	**Zeya**	**15.67**	**312**	*e*P			**Pn**	**19 06 15.1**	**+0.4**
ZEA				pmax			pmax		
	comp=E,10.0nm,1.0s								
ZEA				pmax			pmax		
	comp=N,30nm,0.9s								
ZEA				pmax			pmax		
	comp=Z,50nm,0.8s								
ZEA	**Zeya**	**15.67**	**312**	*e*P			**Pn**	**19 06 15.1**	**+0.4**
KSRS	**Korea Array**	**15.83**	**250**	P			**Pn**	**19 06 20.2**	**-1.4**
	comp=Z,25nm,0.9s,baz=60,slow=12,SNR=28								
KSRS				PcP			**PcP**	**19 11 08.9**	**+1.9**
	comp=Z,3.8nm,0.8s,baz=15,slow=0.8,SNR=10								
KSRS				ScP			**ScP**	**19 14 30.9**	**+2.6**
	comp=Z,3.6nm,0.9s,baz=326,slow=0.8,SNR=11								
KS19	**Wonju Array Si**	**16.24**	**250**	P			**Pn**	**19 06 18.8**	**-3.0**
KSAR	**Wonju Array Be**	**16.26**	**250**	P			**Pn**	**19 06 18.8**	**-3.2**
KSAR	**Wonju Array Be**	**16.26**	**250**	P			**Pn**	**19 06 18.8**	**-3.2**
KSAR	**Wonju Array Be**	**16.26**	**250**	*e*P			**Pn**	**19 06 18.8**	**-3.2**
INCN	**Inchon**	**17.08**	**252**				**P**	**19 06 30.3**	**-1.2**
INCN	**Inchon**	**17.08**	**252**	P			**Pn**	**19 06 32.5**	**+0.5**
INCN	**Inchon**	**17.08**	**252**	P			**P**	**19 06 30.3**	**-1.2**
JTU	**Tsushima**	**17.08**	**239**	P			**Pn**	**19 06 31.8**	**-0.2**
JNU	**Nakatsue**	**17.20**	**233**	P			**P**	**19 06 32.5**	**-0.4**
	comp=Z,91nm,0.8s,baz=60,slow=9.1,SNR=34								
JNU	**Nakatsue**	**17.20**	**233**	P			**P**	**19 06 31.7**	**-1.2**
JNU	**Nakatsue**	**17.20**	**233**	P			**P**	**19 06 32.7**	**-0.2**
TJN	**Taejon**	**17.20**	**247**				**P**	**19 06 32.7**	**-0.1**
TJN	**Taejon**	**17.20**	**247**	P			**Pn**	**19 06 33.6**	**+0.1**
TJN	**Taejon**	**17.20**	**247**	*de*P			**P**	**19 06 32.6**	**-0.3**
SEY	**Seymchan**	**18.36**	**8**	P			**P**	**19 06 45.6**	**+0.3**
	comp=Z,3.3nm,0.4s,baz=177,slow=9.5,SNR=13								
SEY	**Seymchan**	**18.36**	**8**	⇑*e*P			**P**	**19 06 42.3**	**-3.0**
SEY				pmax			pmax		
	comp=Z,39nm,1.9s								
HIA	**Hailar**	**19.12**	**293**				**P**	**19 06 51.6**	**-2.2**
HIA	**Hailar**	**19.12**	**293**	P			**P**	**19 06 51.6**	**-2.2**
HILR	**Hailar Array B**	**19.13**	**294**	P			**P**	**19 06 51.8**	**-2.1**
	comp=Z,4.4nm,0.4s,baz=93,slow=12,SNR=13						

	comp=Z,4.5nm,0.3s									
TIXI	**Tiksi**	**28.27**	**348**	⇑	*e*P		**P**	**19 08 18.3**	**-3.0**
TIXI					pmax		pmax			
	comp=Z,4.0nm,0.7s									
LYN	**LuoYang**	**28.39**	**261**		P		**P**	**19 08 23.9**	**+1.1**
LYN					pP		pP	19 08 53.1	+1.2
LYN					pmax		pmax			
	comp=Z,66nm,0.6s									
SPIA	**Saint Paul Isl**	**29.00**	**50**		P		**P**	**19 08 27.6**	**-0.4**
	baz=264									
P08K	**Saint George I**	**29.32**	**51**		P		**P**	**19 08 30.6**	**-0.2**
	baz=265									
WHN	**Wuhan**	**29.39**	**252**	⇓	P		**P**	**19 08 32.0**	**+0.3**
WHN					pmax		pmax			
	comp=Z,190nm,0.6s									
NIKH	**Nikolski High**	**29.64**	**58**		P		**P**	**19 08 33.8**	**+0.2**
	baz=272									
GAMB	**Gambell**	**29.81**	**36**		P		**P**	**19 08 34.1**	**-0.9**
	baz=251									
H11N2	**WAKE ISLAND Hy**	**29.96**	**140**		T		T	19 40 03.4		
	baz=334,slow=75,SNR=382									
H11N1	**WAKE ISLAND Hy**	**29.97**	**140**		T		T	19 39 44.8		
	baz=334,slow=75,SNR=360									
H11N3	**WAKE ISLAND Hy**	**29.97**	**140**		T		T	19 39 51.2		
	baz=334,slow=75,SNR=45									
YULB	**Yu-li**	**30.04**	**233**		P		**P**	**19 08 38.0**	**+0.5**
TPUB	**Ta-pu**	**30.50**	**234**		P		**P**	**19 08 41.5**	**0.0**
TPUB	**Ta-pu**	**30.50**	**234**		P		**P**	**19 08 42.2**	**+0.7**
H11S1	**WAKE ISLAND Hy**	**30.94**	**142**		T		T	19 40 58.7		
	baz=335,slow=76,SNR=1042									
H11S3	**WAKE ISLAND Hy**	**30.95**	**142**		T		T	19 41 07.3		
	baz=335,slow=76,SNR=98									
H11S2	**WAKE ISLAND Hy**	**30.96**	**142**		T		T	19 41 13.7		
	baz=335,slow=76,SNR=78									
UNV	**Unalaska Valle**	**31.01**	**56**		P		**P**	**19 08 44.9**	**-0.8**
	baz=273									
XAN	**Xi'an**	**31.16**	**263**		P		**P**	**19 08 46.8**	**-0.5**
XAN	**Xi'an**	**31.16**	**263**		pP		**pP**	**19 09 16.9**	**+0.3**
XAN					sP		sP	19 09 33.3	+0.9
M11K	**Mekoryuk**	**31.51**	**44**		P		**P**	**19 08 48.8**	**-1.2**
	baz=262									
TNA	**Tin City**	**31.93**	**34**		P		**P**	**19 08 52.9**	**-0.8**
	baz=252									
F14K	**Arctic Creek**	**32.54**	**34**		P		**P**	**19 08 58.2**	**-0.8**
	baz=254									
ANM	**Nome**	**32.69**	**36**		P		**P**	**19 08 58.4**	**-1.9**
	baz=256									
ENH	**Enshi**	**32.88**	**257**				**P**	**19 09 01.7**	**-0.7**
ENH	**Enshi**	**32.88**	**257**		P		**P**	**19 09 02.1**	**-0.3**
ENH	**Enshi**	**32.88**	**257**		P		**P**	**19 09 01.7**	**-0.7**
ENH	**Enshi**	**32.88**	**257**		PcP		**PcP**	**19 11 44.9**	**+1.2**
J14K	**Nanvaranak Lak**	**33.12**	**40**		P		**P**	**19 09 03.2**	**-0.8**
	baz=261									
F15K	**North Star Dit**	**33.28**	**34**		P		**P**	**19 09 04.7**	**-0.7**
	baz=256									
L14K	**Kuka Creek**	**33.34**	**42**		P		**P**	**19 09 05.3**	**-0.6**
	baz=264									
KNGR	**Kungurtug, Tuv**	**33.34**	**298**	⇑	*e*P		**P**	**19 09 04.1**	**-2.2**
KNGR					pmax		pmax			
	comp=Z,12nm,1.8s									
G15K	**Niukluk**	**33.35**	**36**		P		**P**	**19 09 04.8**	**-1.2**
	baz=257									
S12K	**Black Hills**	**33.50**	**53**		P		**P**	**19 09 06.8**	**-0.7**
	baz=273									
M14K	**Bethel**	**33.63**	**43**		P		**P**	**19 09 07.5**	**-0.9**
M14K	**Bethel**	**33.63**	**43**		P		**P**	**19 09 08.1**	**-0.3**
	baz=266									
N14K	**Kuskokwak Cree**	**33.71**	**45**		P		**P**	**19 09 09.1**	**-0.1**
	baz=267									
LZH	**Lanzhou**	**33.74**	**270**	⇓	P		**P**	**19 09 10.8**	**+0.9**
LZH					pP		pP	19 09 38.5	-0.8
LZH					pmax		pmax			
	comp=Z,120nm,1.4s									
LZH					pmax		pmax			
	comp=Z,300nm,5.5s									
C16K	**Lisburne Hills**	**33.77**	**30**		P		**P**	**19 09 09.4**	**-0.2**
	baz=251									
O14K	**Tigyukauivet M**	**33.90**	**46**		P		**P**	**19 09 11.6**	**+0.8**
O14K	**Tigyukauivet M**	**33.90**	**46**		P		**P**	**19 09 11.1**	**+0.3**
	baz=268									
LZDM	**Lanzhou Array**	**33.91**	**270**		P		**P**	**19 09 12.3**	**+0.7**
	comp=Z,13nm,0.5s,baz=46,slow=4.3,SNR=20									
	comp=Z,13nm,0.5s									
L15K	**Ungalak Mounta**	**33.94**	**42**		P		**P**	**19 09 11.2**	**0.0**
	baz=265									
K15K	**Wolf Creek Mou**	**33.99**	**41**		P		**P**	**19 09 12.0**	**+0.4**
K15K					IAmb		IAmb	19 09 19.2		
	comp=Z,58nm,1.7s									
K15K	**Wolf Creek Mou**	**33.99**	**41**		P		**P**	**19 09 11.4**	**-0.2**
	baz=264									
H16K	**Elim**	**34.03**	**37**		P		**P**	**19 09 11.4**	**-0.5**
	baz=260									
M15K	**Kasigluk River**	**34.25**	**44**		P		**P**	**19 09 13.3**	**-0.5**
	baz=267									
D17K	**Noatak River**	**34.41**	**31**		P		**P**	**19 09 14.3**	**-0.8**
	baz=254									
SDPT	**Sand Point**	**34.42**	**53**		P		**P**	**19 09 15.2**	**-0.1**
	baz=275									
N15K	**Kwethluk River**	**34.52**	**45**		P		**P**	**19 09 17.9**	**+1.7**
N15K					IAmb		IAmb	19 09 20.1		
	comp=Z,23nm,0.9s									
N15K	**Kwethluk River**	**34.52**	**45**		P		**P**	**19 09 16.0**	**-0.3**
	baz=268									
J16K	**Anvik River**	**34.53**	**39**		P		**P**	**19 09 17.8**	**+1.5**
J16K					IAmb		IAmb	19 10 26.1		
	comp=Z,46nm,1.6s									
J16K	**Anvik River**	**34.53**	**39**		P		**P**	**19 09 15.6**	**-0.6**
	baz=263									
I17K	**Unalakleet**	**34.57**	**38**		P		**P**	**19 09 15.6**	**-0.9**
	baz=262									
RDOG	**Red Dog Mine**	**34.57**	**30**		P		**P**	**19 09 15.6**	**-1.0**
	baz=254									
C17K	**DeLong Mountai**	**34.60**	**30**		P		**P**	**19 09 15.0**	**-1.8**
	baz=253									
O15K	**Ungalikthiuk R**	**34.63**	**46**		P		**P**	**19 09 16.4**	**-0.8**
	baz=270									
E17K	**Hotham Inlet**	**34.72**	**32**		P		**P**	**19 09 17.6**	**-0.2**
	baz=256									
G17K	**Kiwalik Mounta**	**34.85**	**35**		P		**P**	**19 09 19.4**	**+0.4**
	baz=260									
S14K	**Fog Glacier**	**34.87**	**51**		P		**P**	**19 09 18.8**	**-0.5**
	baz=274									
L16K	**Owhat River**	**34.90**	**42**		P		**P**	**19 09 20.4**	**+0.9**
L16K					IAmb		IAmb	19 09 52.9		
	comp=Z,58nm,1.9s									
L16K	**Owhat River**	**34.90**	**42**		P		**P**	**19 09 19.4**	**0.0**
	baz=266									
CHNA	**Chernabura Isl**	**34.97**	**54**		P		**P**	**19 09 20.7**	**+0.6**
	baz=276									
H17K	**Granite Mounta**	**35.06**	**36**		P		**P**	**19 09 20.0**	**-0.8**
	baz=262									
GTA	**Gaotai**	**35.11**	**278**		P		**P**	**19 09 22.4**	**+0.7**
GTA					pP		pwP	19 09 56.3	+1.4
GTA					PcP		**PcP**	**19 11 51.9**	**+1.9**
GTA					pmax		pmax			
	comp=Z,61nm,1.2s									
M16K	**Timber Creek**	**35.11**	**43**		P		**P**	**19 09 21.9**	**+0.7**
	baz=268									
N16K	**Nishlik Lake**	**35.19**	**44**		P		**P**	**19 09 23.6**	**+1.7**
	baz=269									
J17K	**VABM Dome**	**35.23**	**39**		P		**P**	**19 09 22.3**	**0.0**
	baz=264									
E18K	**Tukpahlearik C**	**35.26**	**32**		P		**P**	**19 09 22.7**	**+0.2**
	baz=257									
B18K	**Kokolik River**	**35.34**	**28**		P		**P**	**19 09 23.0**	**0.0**
	baz=253									
C18K	**Utukok River**	**35.35**	**30**		P		**P**	**19 09 22.7**	**-0.6**
	baz=255									
F18K	**Selawik**	**35.45**	**33**		P		**P**	**19 09 24.6**	**+0.5**
	baz=259									
L17K	**Donlin**	**35.48**	**41**		P		**P**	**19 09 25.0**	**+0.6**
	baz=267									
K17K	**Iditarod**	**35.52**	**40**		P		**P**	**19 09 24.5**	**-0.2**
	baz=266									
O16K	**Kokwok River B**	**35.52**	**46**		P		**P**	**19 09 24.8**	**0.0**
	baz=271									
P16K	**Nushagak River**	**35.58**	**47**		P		**P**	**19 09 24.4**	**-0.8**
	baz=272									
G18K	**Tagagawik**	**35.73**	**35**		IAmb		IAmb	19 10 00.2		
	comp=Z,20nm,1.1s									
G18K	**Tagagawik**	**35.73**	**35**		P		**P**	**19 09 26.6**	**0.0**
	baz=261									
H18K	**Honhosa River**	**35.74**	**36**		P		**P**	**19 09 27.4**	**+0.8**
	baz=263									
M17K	**Holitna River**	**35.86**	**43**		P		**P**	**19 09 29.4**	**+1.8**
M17K	**Holitna River**	**35.86**	**43**		P		**P**	**19 09 27.9**	**+0.2**
	baz=269									
N17K	**Nushagak Hills**	**35.97**	**44**		P		**P**	**19 09 29.0**	**+0.4**
	baz=270									
O17K	**Koliganek Bris**	**36.02**	**45**		P		**P**	**19 09 29.5**	**+0.5**
	baz=271									
C19K	**Lookout Ridge**	**36.03**	**29**		P		**P**	**19 09 28.9**	**-0.2**
	baz=256									
L18K	**Granite Mounta**	**36.24**	**41**		P		**P**	**19 09 31.8**	**+0.9**
	baz=268									
Q16K	**King Salmon**	**36.29**	**47**		P		**P**	**19 09 31.9**	**+0.7**
	baz=273									
J18K	**Innoko River**	**36.29**	**39**		P		**P**	**19 09 31.4**	**+0.1**
	baz=267									
GCSA	**Galena City Sc**	**36.33**	**37**		P		**P**	**19 09 31.5**	**0.0**
	baz=265									
P17K	**Kvichak River**	**36.38**	**46**		P		**P**	**19 09 31.3**	**-0.7**
	baz=273									
G19K	**Purcell Mounta**	**36.40**	**35**		P		**P**	**19 09 31.3**	**-0.8**
	baz=263									
D19K	**Kuna River**	**36.41**	**30**		P		**P**	**19 09 31.6**	**-0.7**
	baz=258									
R17L	**Mt. Peulik Vol**	**36.51**	**49**		P		**P**	**19 09 33.1**	**-0.2**
	baz=275									
CD2	**Chengdu**	**36.52**	**263**		P		**P**	**19 09 33.8**	**+0.1**
CD2					pmax		pmax			
	comp=Z,250nm,0.7s									
E19K	**Redstone River**	**36.54**	**32**		IAmb		IAmb	19 10 10.4		
	comp=Z,17nm,0.8s									
E19K	**Redstone River**	**36.54**	**32**		P		**P**	**19 09 33.4**	**0.0**
	baz=261									
H19K	**Roundabout Mou**	**36.59**	**36**		IAmb		IAmb	19 10 07.8		
	comp=Z,19nm,0.8s									
H19K	**Roundabout Mou**	**36.59**	**36**		P		**P**	**19 09 34.5**	**+0.8**
	baz=264									
N18K	**Kilae Creek**	**36.61**	**44**		P		**P**	**19 09 33.8**	**-0.3**
	baz=271									
M18K	**Stony River**	**36.64**	**42**		P		**P**	**19 09 33.9**	**-0.4**
	baz=270									
Q17K	**Contact Creek**	**36.72**	**48**		P		**P**	**19 09 34.6**	**-0.5**
	baz=274									
J19K	**Poorman**	**36.81**	**38**		P		**P**	**19 09 34.5**	**-1.2**
	baz=267									
O18K	**Koktuh Hills**	**36.98**	**45**		P		**P**	**19 09 36.6**	**-0.5**
	baz=273									
P18K	**Big Mountain,**	**36.99**	**46**		P		**P**	**19 09 36.6**	**-0.7**
	baz=274									
D20K	**Etivluk River**	**36.99**	**30**		P		**P**	**19 09 35.9**	**-1.3**
	baz=260									
ACHA	**Angle Creek He**	**37.02**	**48**		P		**P**	**19 09 38.4**	**+0.8**
ACHA					IAmb		IAmb	19 09 56.9		
	comp=Z,32nm,1.4s									
F20K	**Avaraart Lake**	**37.06**	**33**		P		**P**	**19 09 36.8**	**-1.0**
	baz=263									
E20K	**Nigu River**	**37.07**	**31**		P		**P**	**19 09 37.9**	**+0.1**
	baz=261									
B20K	**Meade River**	**37.07**	**28**		P		**P**	**19 09 36.8**	**-0.9**
	baz=257									
L19K	**White Mountain**	**37.10**	**41**		P		**P**	**19 09 37.3**	**-0.9**
	baz=270									
CHIR	**Chirikof Islan**	**37.11**	**52**		P		**P**	**19 09 37.1**	**-1.1**
	baz=278									
Q18K	**Katmai Hardscr**	**37.15**	**47**		P		**P**	**19 09 38.0**	**-0.7**
	baz=275									
GYA	**Guiyang**	**37.20**	**254**	⇓	P		**P**	**19 09 39.5**	**0.0**
GYA					pmax		pmax			
	comp=Z,62nm,0.8s									
H20K	**Anotleneega Mo**	**37.23**	**36**		P		**P**	**19 09 39.7**	**+0.4**
	baz=266									
N19K	**Bonanza Creek**	**37.30**	**44**		P		**P**	**19 09 40.6**	**+0.7**
	baz=272									
I20K	**Naaghedeneel**	**37.35**	**37**		P		**P**	**19 09 40.5**	**+0.2**
	baz=267									
O19K	**Port Alsworth**	**37.41**	**45**		P		**P**	**19 09 41.1**	**+0.4**
	baz=273									
J20K	**Nowinta River**	**37.47**	**38**		IAmb		IAmb	19 10 14.3		
	comp=Z,10nm,0.8s									
J20K	**Nowinta River**	**37.47**	**38**		P		**P**	**19 09 41.9**	**+0.7**
	baz=268									
K20K	**Telida**	**37.48**	**39**		P		**P**	**19 09 42.0**	**+0.6**
	baz=269									
L20K	**Farewell, AK**	**37.56**	**41**		P		**P**	**19 09 41.1**	**-1.0**
	baz=270									
C21K	**Knifeblade Rid**	**37.72**	**30**		P		**P**	**19 09 42.5**	**-0.8**
	baz=261									
IMAR	**Indian Mountai**	**37.74**	**35**		P		**P**	**19 09 44.0**	**+0.5**
SII	**Sitkinak Islan**	**37.81**	**50**		P		**P**	**19 09 44.1**	**-0.1**
	baz=278									
Q19K	**Cape Douglas,**	**37.83**	**47**		P		**P**	**19 09 44.6**	**+0.2**
	baz=275									
B21K	**Ikpikpuk River**	**37.86**	**29**		P		**P**	**19 09 44.0**	**-0.4**
	baz=260									
G21K	**Allakaket**	**37.88**	**34**		IAmb		IAmb	19 10 20.0		
	comp=Z,14nm,0.9s									
G21K	**Allakaket**	**37.88**	**34**		P		**P**	**19 09 44.6**	**0.0**
	baz=266									
E21K	**Killik River**	**37.91**	**31**		P		**P**	**19 09 44.6**	**-0.3**
	baz=263									
M20K	**Styx River**	**37.92**	**42**		P		**P**	**19 09 45.0**	**-0.2**
	baz=272									
F21K	**Alatna River**	**37.95**	**33**		P		**P**	**19 09 44.8**	**-0.5**
	baz=265									
P19K	**Oil Pt**	**37.99**	**45**		P		**P**	**19 09 44.3**	**-1.4**
	baz=275									
A22K	**Sinclair Lake**	**38.00**	**27**		P		**P**	**19 09 45.1**	**-0.4**
	baz=258									
H21K	**Melozitna Rive**	**38.11**	**36**		P		**P**	**19 09 46.0**	**-0.5**
	baz=267									
OHAK	**Old Harbor**	**38.21**	**49**		P		**P**	**19 09 48.3**	**+0.9**
OHAK	**Old Harbor**	**38.21**	**49**		P		**P**	**19 09 49.6**	**+2.1**
OHAK	**Old Harbor**	**38.21**	**49**		P		**P**	**19 09 47.5**	**0.0**
	baz=278									
O20K	**Slope Mountain**	**38.26**	**45**		P		**P**	**19 09 47.6**	**-0.4**
	baz=275									
CHUM	**Lake Minchumin**	**38.27**	**38**		P		**P**	**19 09 47.5**	**-0.4**
	baz=270									
PPLA	**Purkeypile**	**38.33**	**40**		P		**P**	**19 09 50.0**	**+1.4**
PPLA					IAmb		IAmb	19 10 25.6		
	comp=Z,45nm,1.5s									
PPLA	**Purkeypile**	**38.33**	**40**		P		**P**	**19 09 48.4**	**-0.2**
	baz=272									
B22K	**Teshekpuk Lake**	**38.38**	**28**		P		**P**	**19 09 47.1**	**-1.7**
	baz=261									
SPCR	**Spurr Chakacha**	**38.39**	**43**		P		**P**	**19 09 48.1**	**-1.0**
	baz=274									
I21K	**Tanana**	**38.43**	**36**		P		**P**	**19 09 49.0**	**-0.3**
	baz=269									
D22K	**Ayikyak River**	**38.43**	**30**		P		**P**	**19 09 48.2**	**-1.0**
	baz=263									
KDAK	**Kodiak Island**	**38.51**	**48**		LR		LR	19 26 37.6		
	comp=Z,160nm,19.6s,baz=239,slow=37									
KDAK	**Kodiak Island**	**38.51**	**48**		P		**P**	**19 09 50.2**	**+0.2**
KDAK	**Kodiak Island**	**38.51**	**48**		P		**P**	**19 09 50.2**	**+0.2**
KDAK					pmax		pmax			
	comp=Z,172nm,1.7s									
Q20K	**Shuyak Island**	**38.51**	**47**		P		**P**	**19 09 50.3**	**+0.3**
	baz=277									
SKT	**Skwentna**	**38.67**	**42**		P		**P**	**19 09 51.1**	**-0.2**
	baz=273									
E22K	**Anaktuvuk Pass**	**38.67**	**32**		IAmb		IAmb	19 10 26.5		
	comp=Z,13nm,0.9s									
E22K	**Anaktuvuk Pass**	**38.67**	**32**		P		**P**	**19 09 51.3**	**0.0**
	baz=265									
G22K	**Bettles**	**38.70**	**34**		P		**P**	**19 09 51.6**	**+0.1**
	baz=267									
H22K	**Ishtalitna Cre**	**38.70**	**35**		IAmb		IAmb	19 10 34.1		
	comp=Z,38nm,1.9s									
H22K	**Ishtalitna Cre**	**38.70**	**35**		P		**P**	**19 09 52.2**	**+0.7**
	baz=268									
HOM	**Homer**	**38.79**	**45**		P		**P**	**19 09 52.8**	**+0.5**
	baz=276									
BPAW	**Bear Paw Mtn.**	**38.85**	**38**		P		**P**	**19 09 52.5**	**-0.3**
	baz=271									
KTH	**Kantishna Hill**	**38.89**	**39**		IAmb		IAmb	19 10 26.8		
	comp=Z,24nm,1.1s									
MLY	**Manley**	**38.95**	**37**		P		**P**	**19 09 53.3**	**-0.4**
	baz=270									
SUA	**Susitna One**	**39.08**	**42**		P		**P**	**19 09 54.8**	**0.0**
	baz=274									
D23K	**Nanushuk River**	**39.16**	**30**		P		**P**	**19 09 54.1**	**-1.2**
	baz=265									
TRF	**Thorofare Moun**	**39.18**	**39**		P		**P**	**19 09 54.7**	**-1.0**
	baz=272									
COLD	**Coldfoot**	**39.23**	**33**		P		**P**	**19 09 55.9**	**0.0**
COLD	**Coldfoot**	**39.23**	**33**		P		**P**	**19 09 55.1**	**-0.8**
	baz=268									
BRSE	**Bradley Lake S**	**39.23**	**45**		P		**P**	**19 09 55.7**	**-0.4**
	baz=277									
CUT	**Chulitna**	**39.24**	**41**		P		**P**	**19 09 55.7**	**-0.3**
	baz=274									
C23K	**Itkillik River**	**39.27**	**29**		P		**P**	**19 09 55.4**	**-0.7**
	baz=264									
G23K	**Bananza Creek**	**39.28**	**34**		IAmb		IAmb	19 10 32.2		
	comp=Z,10nm,0.9s									
G23K	**Bananza Creek**	**39.28**	**34**		P		**P**	**19 09 55.4**	**-1.0**
	baz=269									
H23K	**Yukon River**	**39.46**	**35**		P		**P**	**19 09 57.5**	**-0.4**
	baz=270									
E23K	**Chandalar**	**39.49**	**32**		P		**P**	**19 09 58.1**	**-0.1**
E23K					IAmb		IAmb	19 10 33.1		
	comp=Z,13nm,0.9s									
E23K	**Chandalar**	**39.49**	**32**		P		**P**	**19 09 57.0**	**-1.1**
	baz=267									
I23K	**Minto, Yukon-K**	**39.54**	**36**		P		**P**	**19 09 57.4**	**-1.0**
	baz=271									
TOLK	**Toolik Lake Re**	**39.54**	**31**		P		**P**	**19 09 58.5**	**0.0**
TOLK					IAmb		IAmb	19 10 19.3		
	comp=Z,44nm,2.0s									
TOLK	**Toolik Lake Re**	**39.54**	**31**		P		**P**	**19 09 57.4**	**-1.1**
	baz=267									
RC01	**Rabbit Creek A**	**39.59**	**43**		P		**P**	**19 09 58.9**	**-0.1**
	baz=276									
NEA2	**Nenana**	**39.67**	**37**		IAmb		IAmb	19 10 34.8		
	comp=Z,9.9nm,0.8s									
NEA2	**Nenana**	**39.67**	**37**		P		**P**	**19 09 58.9**	**-0.8**
	baz=272									
MCK	**McKinley**	**39.77**	**39**		P		**P**	**19 09 59.8**	**-0.6**
	baz=273									
PMR	**Palmer**	**39.84**	**42**		P		**P**	**19 10 00.0**	**-0.9**
	baz=276									
SEW	**Seward**	**39.84**	**44**		P		**P**	**19 10 01.2**	**+0.2**
	baz=277									
D24K	**Happy Valley**	**39.84**	**30**		P		**P**	**19 10 00.7**	**-0.2**
	baz=267									
DGZ	**Jazzator, Alta**	**39.86**	**299**		*de*P		**P**	**19 10 00.9**	**-0.6**
DGZ					pmax		pmax			
	comp=Z,4.0nm,0.8s									
E24K	**Your Creek**	**39.91**	**32**		P		**P**	**19 10 01.8**	**+0.2**
	baz=268									
GHO	**Glory Hole Cre**	**39.92**	**42**		P		**P**	**19 10 02.6**	**+0.8**
GHO					IAmb		IAmb	19 11 05.8		
	comp=Z,13nm,0.6s									
C24K	**Franklin Bluff**	**39.92**	**29**		P		**P**	**19 10 00.7**	**-0.8**
	baz=266									
WAT1	**Susitna Watana**	**40.00**	**40**		P		**P**	**19 10 02.4**	**0.0**
	baz=275									
GOMU	**GeErMu**	**40.09**	**276**		P		**P**	**19 10 04.0**	**+0.1**
GOMU					pmax		pmax			
	comp=Z,33nm,0.9s									
WRH	**Wood River Hil**	**40.10**	**37**		P		**P**	**19 10 03.6**	**+0.5**
F24K	**Squaw Lake**	**40.13**	**33**		P		**P**	**19 10 03.5**	**+0.1**
	baz=270									
H24K	**Noodor Dome**	**40.14**	**35**		IAmb		IAmb	19 10 12.5		
	comp=Z,33nm,1.9s									
H24K	**Noodor Dome**	**40.14**	**35**		P		**P**	**19 10 03.5**	**0.0**
	baz=272									
KNK	**Knik Glacier**	**40.17**	**42**		P		**P**	**19 10 03.4**	**-0.4**
	baz=276									
COLA	**College**	**40.19**	**37**	⇑	*e*P		**P**	**19 10 04.9**	**+1.1**
COLA					pmax		pmax			
	comp=Z,8.0nm,0.9s									
SML	**Sawmill**	**40.19**	**42**				**P**	**19 10 05.2**	**+1.2**
SML	**Sawmill**	**40.19**	**42**		P		**P**	**19 10 04.0**	**0.0**
	baz=276,SNR=8.1									
G24K	**Hadweenzic Riv**	**40.29**	**34**		IAmb		IAmb	19 10 40.0		
	comp=Z,20nm,1.2s									
G24K	**Hadweenzic Riv**	**40.29**	**34**		P		**P**	**19 10 05.1**	**+0.4**
	baz=271									
PWL	**Port Wells**	**40.30**	**43**		P		**P**	**19 10 04.2**	**-0.7**
	baz=277									
ZAA0	**Zalesovo Array**	**40.33**	**306**				**P**	**19 10 03.1**	**-2.0**
ZALV	**Zalesovo Beam**	**40.33**	**306**		P		**P**	**19 10 04.3**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=75,slow=9.3,SNR=7.7									
ZALV					PcP		**PcP**	**19 12 06.6**	**+1.0**
	comp=Z,12nm,0.6s,baz=82,slow=2.8,SNR=24									
ZALV					ScP		**ScP**	**19 15 42.5**	**+0.8**
	comp=Z,3.0nm,0.9s,baz=83,slow=4.6,SNR=6.9									
	comp=Z,1.0nm,0.4s									
ZALV	**Zalesovo Beam**	**40.33**	**306**				**P**	**19 10 02.1**	**-3.0**
ZALV	**Zalesovo Beam**	**40.33**	**306**	*i*	P		**P**	**19 10 03.7**	**-1.4**
ZALV					pmax		pmax			
	comp=Z,1.0nm,0.4s									
POKR	**Poker Flat Res**	**40.35**	**36**		P		**P**	**19 10 04.7**	**-0.5**
	baz=273									
WAT6	**Susitna Watana**	**40.40**	**40**		P		**P**	**19 10 05.1**	**-0.7**
	baz=276									
M23K	**Glacier View**	**40.48**	**42**		P		**P**	**19 10 05.7**	**-0.7**
	baz=277									
DHY	**Denali Highway**	**40.52**	**40**		IAmb		IAmb	19 10 34.9		
	comp=Z,27nm,1.7s									
DHY	**Denali Highway**	**40.52**	**40**		P		**P**	**19 10 05.9**	**-0.8**
	baz=275									
PZH	**PanZhiHua**	**40.57**	**259**		P		**P**	**19 10 07.8**	**+0.2**
PZH					ScP		**ScP**	**19 15 44.8**	**+1.6**
PZH					S		**S**	**19 16 05.1**	**-1.5**
PZH					pmax		pmax			
	comp=Z

baz=279
KAIM Kayak Island 42.36 44 P P 19 10 21.0 -0.6
baz=281
E27K Coleen River 42.49 32 P P 19 10 22.5 -0.1
baz=275
G27K Doyon Strip 42.59 34 P P 19 10 22.9 -0.5
baz=276
M26K Nabesna, AK 42.60 40 P P 19 10 23.0 -0.6
baz=280
D27M Malcolm River 42.65 30 P P 19 10 23.3 -0.6
baz=274
H27K Steamboat Moun 42.70 34 IAmb IAmb 19 10 28.0
comp=Z,32nm,1.9s
H27K Steamboat Moun 42.70 34 P P 19 10 23.8 -0.5
baz=277
I27K Kandik River 42.74 35 P P 19 10 24.7 0.0
baz=277
K27K Chicken 42.76 38 P P 19 10 25.2 +0.4
baz=279
MCARA McCarthy VSAT 42.77 42 P P 19 10 25.6 +0.7
baz=281
CRQE Cirque 42.85 43 P P 19 10 25.6 -0.1
baz=281
L27K Beaver Creek, 43.02 39 P P 19 10 27.4 +0.4
baz=280
M27K Edge Creek, AK 43.12 40 P P 19 10 29.7 +1.7
M27K IAmb IAmb 19 11 10.9
comp=Z,22nm,1.4s
M27K Edge Creek, AK 43.12 40 P P 19 10 27.9 0.0
baz=281
F28M Old Crow 43.19 32 P P 19 10 27.9 -0.4
baz=277
E28M Babbage River 43.21 31 P P 19 10 28.5 +0.1
baz=276
D28M Stokes Point 43.43 30 P P 19 10 29.3 -0.7
baz=276
I28M Miner Creek 43.46 36 P P 19 10 31.4 +0.9
baz=279
MESA MESA 43.52 43 P P 19 10 30.5 -0.7
baz=283
CTG Chitna Glacier 43.65 42 P P 19 10 32.7 +0.5
baz=282
TNCH TengChong 43.75 260 P P 19 10 34.3 +0.8
TNCH pmax pmax
comp=Z,69nm,0.8s
E29M Blow River 43.84 31 P P 19 10 33.7 +0.3
baz=278
YUK3 Moose Creek 43.89 41 P P 19 10 34.3 +0.1
baz=282
DAWY Dawson 43.92 37 P P 19 10 33.6 -0.5
baz=281
H29M Whitestone 43.97 34 IAmb IAmb 19 11 44.4
comp=Z,46nm,1.8s
H29M Whitestone 43.97 34 P P 19 10 34.9 +0.3
baz=280
G29M Pine Creek 44.00 33 P P 19 10 35.6 +0.9
baz=279
MK31 Makanchi Array 44.07 297*d i* P P 19 10 34.5 -1.0
MKAR Makanchi Array 44.07 297 P P 19 10 34.8 -0.7
comp=Z,7.4nm,0.6s,baz=80,slow=6.2,SNR=60
MKAR PcP **PcP** 19 12 19.1 +0.8
comp=Z,6.9nm,0.7s,baz=70,slow=5.1,SNR=11
MKAR ScP **ScP** 19 15 57.8 +1.0
comp=Z,1.6nm,0.8s,baz=64,slow=5.5,SNR=5.7
comp=Z,7.4nm,0.6s
MKAR Makanchi Array 44.07 297 P 19 10 34.0 -1.5
MKAR Makanchi Array 44.07 297 *i* P P 19 10 34.5 -1.0
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 44.07 297 *eP* P 19 10 34.5 -1.0
MAKZ Makanchi 44.26 297 P 19 10 35.8 -1.3
MAKZ Makanchi 44.26 297 P P 19 10 37.2 +0.1
MAKZ Makanchi 44.26 297 P P 19 10 36.0 -1.0
MAKZ Makanchi 44.26 297 pP **pP** 19 11 07.7 0.0
MAKZ PcP **PcP** 19 12 19.6 +0.7
YUK8 Steele Glacier 44.32 41 P P 19 10 38.1 +0.5
baz=283
EPYK Eagle Plains 44.60 34 IAmb IAmb 19 10 49.3
comp=Z,59nm,1.9s
EPYK Eagle Plains 44.60 34 P P 19 10 40.7 +1.2
baz=281
M29M Somme Creek 44.66 40 P P 19 10 41.4 +1.2
baz=283
L29M L29M 44.66 39 P P 19 10 41.8 +1.7
baz=283
G30M tAoh Zraii Nji 44.69 33 IAmb IAmb 19 11 17.8
comp=Z,12nm,0.8s
G30M tAoh Zraii Nji 44.69 33 P P 19 10 40.6 +0.4
baz=281
F30M Barrier River 44.74 32 IAmb IAmb 19 11 16.9
comp=Z,25nm,0.8s
F30M Barrier River 44.74 32 P P 19 10 42.0 +1.5
baz=280,SNR=11
K29M Barlow Dome 44.77 38 P P 19 10 41.7 +0.7
baz=283
YUK4 Talbot Arm 44.84 41 P P 19 10 40.8 -0.8
baz=284
PNL Peninsula 44.89 44 P P 19 10 41.5 -0.4
baz=285
KURK Kurchatov 44.91 303 P 19 10 40.2 -1.9
KURK Kurchatov 44.91 303 P P 19 10 41.7 -0.4
KURK Kurchatov 44.91 303 *c i* P P 19 10 41.1 -1.0
KURK pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 44.91 303 *eP* P 19 10 41.1 -1.0
I30M Mount Dempster 44.97 35 P P 19 10 43.8 +1.2
baz=282
KURBB Kurchatov Arra 44.99 303 P P 19 10 41.4 -1.3
comp=Z,5.3nm,0.4s,baz=73,slow=8.3,SNR=50
KURBB PcP **PcP** 19 12 22.1 +0.8
comp=Z,9.4nm,0.8s,baz=74,slow=3.4,SNR=19
KURBB ScP **ScP** 19 16 00.8 +0.3
comp=Z,1.1nm,0.9s,baz=77,slow=3.3,SNR=4.6
comp=Z,5.3nm,0.4s
YUK6 Outpost Mounta 45.07 42 P P 19 10 43.0 -0.5
baz=285
J30M Hart River 45.12 36 P P 19 10 44.0 +0.2
baz=283
O29M Mount Kennedy 45.13 43 P P 19 10 43.2 -0.7
baz=285
M30M Minto, Yukon 45.38 39 P P 19 10 44.5 -1.2
baz=284
INK Inuvik 45.45 31 IAmb IAmb 19 10 47.1
comp=Z,11nm,0.5s
INK Inuvik 45.45 31 P P 19 10 46.0 -0.1
baz=282,SNR=16
HYT Haines Junctio 45.50 42 IAmb IAmb 19 10 51.1
comp=Z,21nm,0.7s
HYT Haines Junctio 45.50 42 P P 19 10 48.7 +1.8
baz=286,SNR=9.2
N30M Aishikik Lake 45.53 41 P P 19 10 45.0 -1.9
baz=285
F31M Tsiigehtchic 45.55 32 P 19 10 47.5 +0.6
F31M Tsiigehtchic 45.55 32 P P 19 10 47.6 +0.8
baz=282
H31M Peel River 45.67 34 P P 19 10 48.8 +0.9
baz=283
P29M Windy Craggy 45.72 43 P P 19 10 49.9 +1.5
baz=286
P30M Million Dollar 45.95 42 P P 19 10 52.0 +1.7
baz=287
N31M Braeburn, Yuko 46.13 40 P P 19 10 52.8 +1.1
baz=286
LSA Lhasa 46.15 271 P P 19 10 49.9 -2.8
LSA pmax pmax
comp=Z,22nm,0.5s
LSA Lhasa 46.15 271 P P 19 10 54.2 +1.5
LSA Lhasa 46.15 271 P P 19 10 54.0 +1.2
O30N Mendenhall 46.19 41 P P 19 10 53.4 +1.3
baz=287
M31M Drury Creek, Y 46.56 39 P P 19 10 56.5 +1.5
baz=287
MYLDM Lahad Datu 46.78 221 P 19 10 58.9 +1.7
MYLDM IAmb IAmb 19 11 01.4
comp=Z,66nm,1.7s
WHY Whitehorse 46.79 41 P P 19 10 58.0 +1.2
baz=288
S31K Pelican 46.97 45 P P 19 10 58.7 +0.6
baz=289
UTTA Uttaradit 47.25 251 P P 19 11 01.8 +1.0
comp=Z,467nmcomp=Z,53nm,0.8s
LAMP Lampang 47.32 252 P P 19 11 02.8 +1.4
A36M Sachs Harbour 47.37 25 P P 19 11 00.8 -0.2
baz=285
N32M Quiet Lake 47.47 40 P P 19 11 01.3 -0.7
baz=288
CHTO Chiang Mai 47.59 253 P 19 11 03.8 +0.4
CHTO Chiang Mai 47.59 253 P P 19 11 04.8 +1.4
CHTO Chiang Mai 47.59 253 P P 19 11 04.1 +0.7
CHTO Chiang Mai 47.59 253 P P 19 11 03.8 +0.4
CHTO pmax pmax
comp=Z,54nm,0.9s
CHTO Chiang Mai 47.59 253 P P 19 11 04.5 +1.1
comp=Z,611nmcomp=Z,72nm,0.9s
CHTO Chiang Mai 47.59 253 P P 19 11 04.5 +1.1
CHTO Chiang Mai 47.59 253 PcP **PcP** 19 12 32.3 +1.3
P32M Atlin 47.68 43 P P 19 11 02.8 -0.9
baz=289
R32K Eaglecrest 47.72 44 P P 19 11 03.4 -0.6
baz=290
PHIT Phitsanulok 47.73 250 P P 19 11 06.5 +2.0
comp=Z,76nm,1.0s
SIT Sitka 47.73 46 P P 19 11 03.5 -0.5
baz=290
CM31 Chiang Mai Arr 47.83 253 IAmb IAmb 19 11 07.6
comp=Z,34nm,1.0s
CMAR Chiang Mai Arr 47.83 253 P P 19 11 06.5 +1.2
comp=Z,18nm,0.8s,baz=39,slow=7.1,SNR=129
CMAR PcP **PcP** 19 12 33.6 +1.8
comp=Z,6.3nm,0.7s,baz=10,slow=1.3,SNR=14
CMAR ScP **ScP** 19 16 15.2 +2.3
comp=Z,1.4nm,0.8s,baz=18,slow=3.8,SNR=10
CMAR LR LR 19 30 31.2
comp=Z,24nm,21.6s,baz=100,slow=35
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 47.83 253 P 19 11 05.3 0.0
CMAR Chiang Mai Arr 47.83 253 *i* P P 19 11 06.5 +1.2
CMAR pmax pmax
comp=Z,19nm,0.8s
P33M Teslin, Yukon 47.90 42 P P 19 11 04.1 -1.3
baz=290
SHL Shillong 48.10 266 P P 19 11 07.6 +0.1
WUS Wushi 48.47 291 P P 19 11 10.3 +0.2
WUS PcP **PcP** 19 12 35.3 +1.3
C36M Paulatuk 48.51 28 IAmb IAmb 19 11 10.2
comp=Z,11nm,0.5s
Q32M Nakina River 48.59 43 P P 19 11 10.0 -0.9
baz=291
BVAR Borovoye Array 48.79 309 P P 19 11 11.7 -0.6
comp=Z,3.8nm,0.5s,baz=71,slow=10,SNR=19
BVAR PcP **PcP** 19 12 35.8 +1.0
comp=Z,12nm,0.6s,baz=70,slow=4.9,SNR=10.0
comp=Z,3.8nm,0.5s
BORK Borovoye 48.83 309⇑ *eP* P 19 11 11.4 -1.1
BORK pmax pmax
comp=Z,12nm,2.4s
TARG Taragay, Kyrgy 49.15 292 IAmb IAmb 19 12 39.4
comp=Z,15nm,0.8s
U33K Whale Pass 49.21 47 P P 19 11 14.8 -0.5
baz=293
FAKI Fak Fak 49.39 200 P P 19 11 17.0 -0.2
TOLI2 Tolitoli 49.40 216 P 19 11 16.9 -0.3
TOLI2 Tolitoli 49.40 216 P P 19 11 17.6 +0.3
CRAG Craig 49.46 48 P P 19 11 16.9 -0.3
baz=293
MRSI Marisa 49.51 214 P P 19 11 18.5 +0.4
comp=Z,1μmcomp=Z,73nm,1.0s
S34M Telegraph Cree 49.53 44 P P 19 11 17.4 -0.4
baz=293
UTHA Uthaitani 49.55 249 P P 19 11 20.3 +1.9
comp=Z,14nm,0.8s
DLBC Dease Lake 49.87 43 P P 19 11 20.8 +0.3
baz=293
BOOM Boomskoye usch 50.01 294 IAmb IAmb 19 11 24.2
comp=Z,35nm,1.1s
TKM2 Tonak 2 50.02 295 P P 19 11 22.4 +0.4
SNR=26
BRDH Bariadhala 50.09 263 LR LR 19 36 35.5
comp=Z,62nm,18.0s,baz=222,slow=41
EVN Everest 50.25 272 P 19 11 24.4 0.0
V35K Ketchikan 50.31 47 P P 19 11 23.5 -0.1
baz=294
T35M Bob Quinn 50.34 45 P P 19 11 23.4 -0.5
baz=294
SANI Sanana 50.36 208 P P 19 11 23.8 -0.7
comp=Z,16nm,1.1s
MPSI Mapaga 50.47 216 P P 19 11 25.7 +0.4
comp=Z,13nm,1.0s
USP Ospenovka 50.57 295 P P 19 11 26.1 +0.3
SNR=20
KBK Karagaybulak 50.57 295 P P 19 11 26.5 +0.4
SNR=26
AAK Ala-Archa 50.87 295 P 19 11 27.4 -0.9
AAK IAmb IAmb 19 11 30.2
comp=Z,18nm,1.2s
AAK Ala-Archa 50.87 295 P P 19 11 28.5 +0.1
AAK Ala-Archa 50.87 295 P P 19 11 27.9 -0.4
SNR=14
AAK Ala-Archa 50.87 295 *i* P P 19 11 28.4 +0.1
SNR=18
AAK Ala-Archa 50.87 295 *d i* P P 19 11 28.2 -0.1
AAK pmax pmax
comp=Z,12nm,1.1s
AAK Ala-Archa 50.87 295 *eP* P 19 11 28.2 -0.1
AAK Ala-Archa 50.87 295 P P 19 11 28.5 +0.1
U35K Hyder 50.88 46 P P 19 11 27.9 0.0
baz=295
APSI Ampana 50.89 214 P P 19 11 28.9 +0.4
comp=Z,61nm,1.1s
WRGLY Wrigley 50.94 36 P P 19 11 27.1 -1.2
baz=294
EKS2 Erkin-Say 51.32 295 P P 19 11 32.0 +0.3
SNR=13
KSH Kashi 51.45 291 P P 19 11 36.8 +4.2
KSH pmax pmax
comp=Z,15nm,0.8s
PCI Palu 51.62 216 P P 19 11 33.3 -0.6
comp=Z,47nm,1.0s
KOTAN Kotaneelee Air 51.98 39 P P 19 11 36.5 +0.5
baz=296
SBUM Sibu 52.23 226 P P 19 11 39.0 +0.6
SBUM IAmb IAmb 19 11 41.6
comp=Z,13nm,0.9s
SVE Sverdlovsk 52.33 316 *eP* P 19 11 37.5 -1.2
SVE pmax pmax
comp=Z,16nm,0.9s
SVE Sverdlovsk 52.33 316 *eP* P 19 11 37.5 -1.2
KK31 Karatay Array 53.19 297 IAmb IAmb 19 11 46.0
comp=Z,23nm,1.4s
KKAR Karatay Array 53.19 297 P 19 11 44.5 -0.8
KKAR Karatay Array 53.19 297 P P 19 11 44.5 -0.8
ARTI Arti 53.64 316 LR LR 19 34 58.4
comp=Z,68nm,19.0s,baz=341,slow=36
ARTI Arti 53.64 316 P 19 11 46.5 -1.8
ARTI IAmb IAmb 19 11 47.1
comp=Z,14nm,0.8s
ARTI Arti 53.64 316 *d i* P P 19 11 46.0 -2.3
ARTI *PP **pP** 19 12 17.7 -2.2
ARTI 19 12 52.3
ARTI 19 13 46.7
ARTI S S 19 19 08.5 -2.2
ARTI pmax pmax
comp=Z,14nm,0.8s
SPITS Spitsbergen Ar 53.69 349 P P 19 11 46.0 -2.5
comp=Z,3.4nm,0.6s,baz=5.2,slow=17,SNR=11
SPITS PcP **PcP** 19 12 51.7 -0.9
comp=Z,7.5nm,0.9s,baz=73,slow=4.8,SNR=5.8
comp=Z,3.4nm,0.6s
MTKI Muara Teweh, K 53.84 221 P P 19 11 51.0 +0.7
comp=Z,57nm,0.8s
RES Resolute Bay 53.91 17 P 19 11 48.6 -1.4
RES IAmb IAmb 19 11 51.4
comp=Z,16nm,1.4s
RES Resolute Bay 53.91 17 P P 19 11 48.6 -1.4
RES pmax pmax
comp=Z,16nm,1.4s
DRK Karamyk 54.23 293 IAmb IAmb 19 11 54.4
comp=Z,37nm,1.4s
SPSI Sidrap Palu 54.42 214 P P 19 11 53.9 -0.5
comp=Z,15nm,1.0s
YKA Yellowknife Ar 54.89 34 P P 19 11 57.1 -0.1
comp=Z,3.7nm,0.7s,baz=256,slow=5.7,SNR=9.7
comp=Z,3.7nm,0.7s
KAPI Kappang 55.38 214 *deP* P 19 12 02.1 +0.8
KAPI pmax pmax
comp=Z,12nm,0.6s
BKSI Bulukumba 55.52 213 P P 19 12 02.4 +0.1
comp=Z,397nmcomp=Z,22nm,1.0s
AB31 Akbulak array 56.36 308 IAmb IAmb 19 12 09.1
comp=Z,8.0nm,0.4s
ABKAR Akbulak array 56.36 308 P 19 12 06.3 -1.6
NIL Nilore 56.47 286 P P 19 12 09.0 0.0
NIL Nilore 56.47 286 P P 19 12 10.0 +1.0
NIL Nilore 56.47 286 P P 19 12 09.0 0.0
NIL pmax pmax
comp=Z,62nm,0.9s
KULM Kulim 56.49 240 P P 19 12 10.5 +1.2
KULM Kulim 56.49 240 P P 19 12 10.6 +1.3
KIRV Kirov 56.71 322⇑ *eP* P 19 12 09.8 -0.4
BTDF Bukit Timah Da 57.76 234 P P 19 12 20.0 +1.8
HAMF Hammerfest 57.86 341 *eP* P 19 12 15.5 -2.6
EDFI Ende, Flores 58.09 210 P P 19 12 20.3 -0.2
comp=Z,15nm,0.9s
ARA0 ARCESS Array S 58.20 339 *eP* P 19 12 19.1 -1.5
ARCES ARCESS Array B 58.20 339 P P 19 12 19.1 -1.5
comp=Z,1.2nm,0.4s,baz=45,slow=7.9,SNR=27
ARCES PcP **PcP** 19 13 10.8 +0.4
comp=Z,5.4nm,0.7s,baz=26,slow=5.8,SNR=6.2
ARCES LR LR 19 43 15.7
comp=Z,103nm,19.5s,baz=282,slow=42
comp=Z,1.2nm,0.4s
DAG Danmarks Havn 58.31 356 *i* P P 19 12 18.0 -3.2
DAG IAmb IAmb 19 12 19.6
comp=Z,3.7nm,0.6s
COEN Coen 58.65 184 P P 19 12 24.6 +0.4
DSRI Dabo 58.80 232 P P 19 12 26.2 +0.8
comp=Z,39nm,0.9s
KBL Kabul 58.80 289 P 19 12 24.4 -1.1
KBL Kabul 58.80 289 P P 19 12 25.2 -0.4
KBL Kabul 58.80 289 P P 19 12 24.4 -1.1
KBL pmax pmax
comp=Z,31nm,0.9s
TPI Tanjungpandan 59.02 228 P P 19 12 27.8 +0.9
comp=Z,46nm,1.1s
KTK1 Kautokeino 59.14 340 *eP* P 19 12 25.2 -1.9
MTN Manton Dam 59.24 198 P 19 12 28.9 +0.6
PPBI Pangkal Pinang 59.33 230 P P 19 12 30.3 +1.2
JETT Jettan, Norway 59.42 341 *eP* P 19 12 27.0 -2.0
KLMR Klimovskoe 59.49 327 *eP* P 19 12 27.8 -1.8
KLMR pmax pmax
comp=Z,10.0nm,1.0s
PLAI Plampang 59.64 214 P P 19 12 30.0 -1.1
TRO Tromso 59.70 341 *eP* P 19 12 28.9 -2.0
TWSI Taliwang, Sumb 59.92 215 P P 19 12 32.7 -0.3
comp=Z,23nm,1.0s
SRBI Singaraja 60.03 217 P P 19 12 34.8 +1.0
DBG Daneborg 60.82 356 *i* P P 19 12 36.5 -1.8
DBG IAmb IAmb 19 12 37.5
comp=Z,3.0nm,0.6s
STEI Steigen 61.88 341 *eP* P 19 12 42.4 -3.2
KRJI Kerinci 61.89 234 P P 19 12 47.7 +1.2
LOF Lofoten 62.09 342 *eP* P 19 12 45.2 -1.8
KPJI Karang Pucung 62.27 224 P P 19 12 48.6 -0.3
comp=Z,35nm,1.0s
FAUS Fauske 62.30 341 *eP* P 19 12 46.5 -2.0
MDSI Maura Dua 62.33 230 P P 19 12 49.1 -0.2
comp=Z,16nm,1.4s
SUMG Summit 62.80 2 P 19 12 51.0 -1.2
SUMG IAmb IAmb 19 13 13.2
comp=Z,38nm,1.8s
SUMG Summit 62.80 2 P P 19 12 51.0 -1.2
SUMG pmax pmax
comp=Z,38nm,1.8s
SUMG Summit 62.80 2 *i* P P 19 12 51.0 -1.2
SUMG IAmb IAmb 19 12 52.5
comp=Z,5.7nm,0.7s
LWLI Liwa 62.84 230 P P 19 12 51.7 -1.1
RAUS Rausandaksla 63.36 341 *eP* P 19 12 53.5 -2.0
HRA Herat 63.41 293 IAmb IAmb 19 12 57.6
comp=Z,15nm,0.7s
MOR8 Moi Rana 63.48 341 *eP* P 19 12 53.4 -2.9
STOK Stokkvaagen 63.68 341 *eP* P 19 12 53.4 -4.2
LEIR Leirfjorden 63.84 341 *eP* P 19 12 56.8 -1.8
FINES FINESS Array B 63.88 333 P P 19 12 57.1 -1.8
comp=Z,18nm,0.5s,baz=38,slow=6.2,SNR=78
FINES LR LR 19 42 11.7
comp=Z,176nm,18.1s,baz=318,slow=37
comp=Z,18nm,0.5s
FINES FINESS Array B 63.88 333 P 19 12 56.9 -2.1
OBN Obninsk 64.41 323 *eP* P 19 13 01.7 -0.8
OBN pmax pmax
comp=Z,11nm,1.0s
OBN Obninsk 64.41 323 *eP* P 19 13 01.7 -0.8
WB0 Warramunga Arr 65.36 193 IAmb IAmb 19 13 10.1
comp=Z,14nm,1.0s
WR8 Warramunga Arr 65.52 193 IAmb IAmb 19 13 11.1
comp=Z,9.9nm,1.1s
WRAB Tennant Creek 65.53 193 P P 19 13 10.2 +0.1
WRAB IAmb IAmb 19 13 11.7
comp=Z,9.6nm,0.9s
WRAB Tennant Creek 65.53 193 P P 19 13 10.4 +0.4
WRAB Tennant Creek 65.53 193 *deP* P 19 13 10.1 +0.1
WRAB pmax pmax
comp=Z,9.0nm,0.9s
WRA Warramunga Arr 65.54 193 P P 19 13 10.3 +0.2
comp=Z,7.1nm,0.8s,baz=11,slow=6.7,SNR=40
comp=Z,7.1nm,0.8s
WRA Warramunga Arr 65.54 193 P 19 13 09.2 -0.9
WRA Warramunga Arr 65.54 193 P P 19 13 09.2 -0.9
WRA pmax pmax
comp=Z,1.0nm,1.0s
BOZ Bozeman (W) 66.22 49 IAmb IAmb 19 13 51.7
comp=Z,8.4nm,0.7s
NVAR Mina Array Bea 67.00 58 P P 19 13 21.8 +2.1
comp=Z,1.9nm,0.5s,baz=295,slow=6.7,SNR=12
comp=Z,1.9nm,0.5s
DSP Deep Springs 67.88 59 IAmb IAmb 19 14 02.1
comp=Z,20nm,1.0s
DOMB Dombas 68.24 340 *eP* P 19 13 26.0 -0.9
MNK Minsk 68.39 327 *i* P P 19 13 26.1 -1.6
comp=E,6.0nm,0.7s
MNK *i* P P 19 13 26.1 -1.6
comp=N,12nm,0.8s
MNK *i* P P 19 13 26.1 -1.6
comp=Z,12nm,0.8s,baz=42
MNK *i* pP **pP** 19 14 00.1 -0.7
MNK *i* sP sP 19 14 26.6 +11
MNK *i* PP **PP** 19 15 58.9 -0.9
MNK *i* PPP PPP 19 17 39.9
MNK *i* S **S** 19 22 17.4 -0.1
MNK *i* sS **SKiKP** 19 23 05.9 -0.9
MNK *i* SS SS 19 27 03.9 +21
MNK Minsk 68.39 327 *i* P P 19 13 26.1 -1.6
MNK *i* 19 13 50.1
MNK *i* *PP **pP** 19 14 00.1 -0.7
MNK *i* 19 15 58.9
MNK *i* PPP PPP 19 17 39.8
MNK *i* S **S** 19 22 17.3 -0.1
MNK *i* *S **SKiKP** 19 23 05.9 -0.9
MNK pmax pmax
comp=N,12nm,0.8s
MNK pmax pmax
comp=E,6.0nm,0.7s
MNK pmax pmax
comp=Z,12nm,0.8s
NB2 NORSAR Subarra 68.56 339 P P 19 13 27.1 -1.7
comp=Z,2.0nm,0.5s,baz=31,slow=6.5
NOA NORSAR Array B 68.56 339 P P 19 13 27.7 -1.1
comp=Z,2.5nm,0.5s,baz=33,slow=6.5,SNR=36
comp=Z,2.5nm,0.5s
HFS Hagfors 68.66 337 P P 19 13 27.9 -1.5
comp=Z,7.9nm,0.5s,baz=52,slow=5.8,SNR=58
comp=Z,7.9nm,0.5s
NC602 NORSAR Array S 68.74 338 *eP* P 19 13 28.1 -1.8
NCK Nalchik 68.84 311 *ceP* P 19 13 31.4 +0.6
SPR3 Spring Creek 3 69.00 56 P P 19 13 34.4 +2.1
KIV Kislovodsk 69.02 311 P P 19 13 31.7 -0.3
KIV Kislovodsk 69.02 311 P P 19 13 33.2 +1.2
KIV Kislovodsk 69.02 311 ⇑P P 19 13 33.4 +1.4
KIV Kislovodsk 69.02 311 *i* P P 19 13 32.3 +0.3
SNR=8.7
KIV Kislovodsk 69.02 311 *eP* P 19 13 30.9 -1.1
KIV pmax pmax
comp=Z,25nm,1.0s
KIV Kislovodsk 69.02 311 *eP* P 19 13 31.7 -0.3
KIV Kislovodsk 69.02 311 P P 19 13 32.3 +0.3
KIV Kislovodsk 69.02 311 pP pP 19 14 07.0 +1.9
KBZ Khabaz 69.06 311 P P 19 13 32.6 +0.6
comp=Z,11nm,0.8s,baz=69,slow=4.6,SNR=19
comp=Z,11nm,0.8s
KBZ Khabaz 69.06 311 *deP* P 19 13 32.4 +0.3
KBZ pmax pmax
comp=Z,11nm,0.9s
KBZ Khabaz 69.06 311 *eP* P 19 13 32.4 +0.3
DUG Dugway, Tooele 69.10 54 IAmb IAmb 19 14 09.8
comp=Z,10nm,0.9s
TPNV Topopah Spring 69.20 58 IAmb IAmb 19 14 10.1
comp=Z,18nm,1.0s

PDAR Pinedale Array 69.20 50 P **P** **19 13 34.7 +1.3**
comp=Z,0.9nm,0.5s,baz=251,slow=1.6,SNR=18
comp=Z,0.9nm,0.5s
PDAR Pinedale Array 69.20 50 P **P** **19 13 35.0 +1.6**
AS31 Alice Springs 69.25 193 **P** **19 13 33.9 +0.5**
ASAR Alice Springs 69.26 193 P **P** **19 13 34.5 +1.1**
comp=Z,1.7nm,0.5s,baz=11,slow=6.5,SNR=56
comp=Z,1.7nm,0.5s
GWY Greenwater Val 69.44 59 lAmb lAmb 19 14 11.4
comp=Z,16nm,0.8s
FOO Floro 69.56 342 *e*P P 19 13 24.7 -10
MBWA Marble Bar 70.30 207 P **P** **19 13 40.8 +0.9**
GNI Garni 70.46 307 ⇑*e*P **P** **19 13 41.5 +0.5**
GNI pmax pmax
comp=Z,15nm,1.0s
ULM Lac du Bonnet 70.62 37 LR LR 19 46 57.6
comp=Z,76nm,18.2s,baz=18,slow=38
AKASG Malin Array Be 70.68 323 P **P** **19 13 41.1 -0.8**
comp=Z,3.8nm,0.5s,baz=40,slow=6.2,SNR=17
comp=Z,3.8nm,0.5s
AKASG Malin Array Be 70.68 323 *i* P **P** **19 13 40.7 -1.2**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 70.68 323 lAmb lAmb 19 13 41.7
comp=Z,14nm,1.1s
AKBB Malin Array Si 70.68 323 *ce*P **P** **19 13 40.9 -1.0**
KIEV Kiev 70.69 323 **P** **19 13 40.2 -1.7**
KIEV lAmb lAmb 19 13 41.7
comp=Z,12nm,1.1s
KIEV Kiev 70.69 323 ⇑P **P** **19 13 41.2 -0.8**
KIEV Kiev 70.69 323 *i* P **P** **19 13 41.0 -1.0**
SNR=6.0
KIEV Kiev 70.69 323 P **P** **19 13 41.1 -0.8**
KIEV Kiev 70.69 323 P **P** **19 13 40.9 -1.0**
KIEV Kiev 70.69 323 pP pP 19 14 14.7 -0.4
TJOU Tjoern 71.01 337 *i* P **P** **19 13 43.9 +0.1**
BORU Boraas 71.02 336 *i* P **P** **19 13 42.2 -1.6**
SRU San Rafael Swe 71.13 53 lAmb lAmb 19 14 22.5
comp=Z,12nm,0.8s
BATM Batumi 71.15 310 ⇑P **P** **19 13 45.1 +0.2**
BATM Batumi 71.15 310 P **P** **19 13 45.1 +0.2**
ONAU Onsala 71.47 336 *i* P **P** **19 13 45.1 -1.4**
RNPP9 Sopachiv 71.52 326 P **P** **19 13 46.1 -0.8**
RNPP5 Staryi Chortor 71.66 326 P **P** **19 13 47.1 -0.7**
DEL Delary 71.68 335 *i* P **P** **19 13 44.0 -3.8**
BJUU Bjuv 72.27 335 *i* P **P** **19 13 51.3 0.0**
BSD Bornholm Skovb 72.49 334 *i* P **P** **19 13 51.8 -0.9**
BSD lAmb lAmb 19 13 53.9
comp=Z,37nm,1.0s
PV13 Radium Mtn., P 72.76 53 lAmb lAmb 19 14 32.5
comp=Z,19nm,1.1s
BANOM Banah 72.76 289 P **P** **19 13 55.7 +0.9**
BANOM Banah 72.76 289 *i* P **P** **19 13 55.5 +0.7**
SNR=7.7
SHME Shamm 72.78 290 P **P** **19 13 55.5 +0.6**
SHME Shamm 72.78 290 *i* P **P** **19 13 55.1 +0.2**
SNR=6.6
SORM Soroca 72.99 322 ⇓P **P** **19 13 54.7 -1.1**
SORM Soroca 72.99 322 P **P** **19 13 54.6 -1.1**
GURO Guroymak-BITLI 73.08 308 lAmb lAmb 19 13 59.0
comp=Z,17nm,0.7s
WBK Wadi Bani Khal 73.15 285 P **P** **19 13 59.0 +1.8**
JLN Jalan Bani Buh 73.16 285 P **P** **19 13 58.8 +1.6**
MASF Masafi 73.22 289 P **P** **19 13 58.4 +0.8**
MSFE Esma-Masafi 73.23 289 P **P** **19 13 58.3 +0.7**
UOSS Minazif 73.48 289 **P** **19 13 59.0 -0.1**
UOSS Minazif 73.48 289 P **P** **19 13 59.5 +0.5**
UOSS Minazif 73.48 289 P **P** **19 13 58.9 -0.1**
SMDO Samad 73.48 286 P **P** **19 14 00.3 +1.1**
HATD Hatta, Dubai 73.61 289 P **P** **19 14 00.6 +0.8**
HATD Hatta, Dubai 73.61 289 *i* P **P** **19 14 00.6 +0.8**
SNR=7.2
HOQ Hoqain 73.64 287 P **P** **19 14 00.9 +0.9**
MILM Milestii Mici 73.70 321 ⇑P **P** **19 13 58.4 -1.6**
MILM Milestii Mici 73.70 321 P **P** **19 13 58.3 -1.6**
ASHO Ashiyiah 73.75 289 P **P** **19 14 01.6 +1.0**
ASHO Ashiyiah 73.75 289 P **P** **19 14 01.3 +0.7**
SOHO SOHO 73.80 288 P **P** **19 14 01.5 +0.6**
SOHO SOHO 73.80 288 P **P** **19 14 01.5 +0.6**
JMDO Jabal Madar 73.91 286 P **P** **19 14 02.6 +1.1**
FAQ Al Faqa, Dubai 74.02 289 P **P** **19 14 02.6 +0.4**
FAQ Al Faqa, Dubai 74.02 289 P **P** **19 14 02.6 +0.4**
KWP Kalwaria Pacla 74.18 326 *e*P **P** **19 14 02.7 0.0**
KWP Kalwaria Pacla 74.18 326 P **P** **19 14 02.1 -0.6**
BSY Bisya 74.28 286 P **P** **19 14 04.8 +1.1**
ASUD Al Ashush, Dub 74.28 289 P **P** **19 14 04.5 +0.8**
ASUD Al Ashush, Dub 74.28 289 P **P** **19 14 03.5 -0.1**
ARQ Araqi 74.34 287 P **P** **19 14 04.9 +0.9**
SNR=5.3
ALNE Al Ain 74.38 288 P **P** **19 14 05.0 +0.8**
ALNE Al Ain 74.38 288 *i* P **P** **19 14 04.8 +0.5**
SNR=16
BUR08 Bucovina Ar. S 74.72 323 lAmb lAmb 19 14 06.9
comp=Z,16nm,1.3s
BURAR Bucovina Array 74.73 323 **P** **19 14 05.3 -0.7**
BURAR Bucovina Array 74.73 323 ⇓P **P** **19 14 06.0 -0.1**
BURAR Bucovina Array 74.73 323 P **P** **19 14 06.0 -0.1**
OJC Ojcow 74.83 328 *e*P **P** **19 14 06.7 +0.2**
VLDR Vladesti 74.85 321 ⇓P **P** **19 14 06.8 +0.2**
BIZ Bicaz 74.88 323 ⇓P **P** **19 14 05.7 -1.1**
STHS Stebnicka Huta 74.92 327 *e*P **P** **19 14 06.6 -0.4**
STHS pmax pmax
comp=Z,5.0nm,0.8s
STHS Stebnicka Huta 74.92 327 *e*P **P** **19 14 06.6 -0.4**
MHTO MHTO 74.93 285 P **P** **19 14 08.6 +1.2**
SNR=9.3
TESR Tescani 74.97 322 ⇑P **P** **19 14 07.0 -0.3**
TLCR 75.02 320 ⇓P **P** **19 14 07.6 0.0**
TLCR 75.02 320 P **P** **19 14 07.5 0.0**
ONER Baraj Valea Uz 75.22 322 ⇑P **P** **19 14 09.5 +0.7**
NIE Niedzica 75.29 327 *e*P **P** **19 14 09.2 0.0**
CFR Carcaliu 75.34 320 ⇑P **P** **19 14 08.6 -0.9**
CFR Carcaliu 75.34 320 P **P** **19 14 08.5 -0.9**
ODBI Odobesti 75.37 321 ⇓P **P** **19 14 10.5 +0.9**
VRI Vrincioaia 75.44 321 ⇑P **P** **19 14 10.3 +0.2**
VRI Vrincioaia 75.44 321 P **P** **19 14 10.2 +0.2**
TPGR Topolog 75.45 320 ⇓P **P** **19 14 09.6 -0.5**
PLOR Plostina 75.48 322 ⇓P **P** **19 14 10.4 0.0**
PLOR Plostina 75.48 322 P **P** **19 14 10.3 0.0**
KSP Ksiaz 75.59 330 *e*P **P** **19 14 10.5 -0.3**
UMZA Um Al Zommool 75.68 288 P **P** **19 14 12.0 +0.3**
COVR Voineasa-Covas 75.69 322 ⇑P **P** **19 14 11.2 -0.2**
ILGA Ilgaz 75.75 314 lAmb lAmb 19 14 14.7
comp=Z,13nm,0.9s
STEB Steborice 75.81 329 *e*P **P** **19 14 11.7 -0.4**
LANS Liptovska Anna 75.82 328 *e*P **P** **19 14 12.1 -0.1**
LANS pmax pmax
comp=Z,8.0nm,1.0s
LANS Liptovska Anna 75.82 328 *e*P **P** **19 14 12.1 -0.1**
DOPR Dopca 75.95 322 ⇓P **P** **19 14 13.0 +0.1**
UPC Upice 75.97 330 *e*P **P** **19 14 13.5 +0.5**
UPC Upice 75.97 330 *e*P **P** **19 14 13.5 +0.5**
DPC Dobruska-Polom 75.99 330 *e*P **P** **19 14 13.1 0.0**
DPC Dobruska-Polom 75.99 330 *e*P **P** **19 14 13.1 0.0**
MORC Moravsky Berou 76.03 329 ⇓P **P** **19 14 13.1 -0.3**
MORC Moravsky Berou 76.03 329 *e*P **P** **19 14 13.4 +0.1**
MORC Moravsky Berou 76.03 329 P **P** **19 14 13.0 -0.3**
KRLC Kraliky 76.06 330 *e*P **P** **19 14 13.5 0.0**
KRLC Kraliky 76.06 330 *e*P **P** **19 14 13.5 0.0**
MLR Muntele Rosu 76.08 322 lAmb lAmb 19 14 15.8
comp=Z,46nm,1.8s
MLR Muntele Rosu 76.08 322 ⇓P **P** **19 14 14.3 +0.4**
MLR Muntele Rosu 76.08 322 P **P** **19 14 14.2 +0.4**
BNN Bunyan 76.25 311 lAmb lAmb 19 14 16.7
comp=Z,9.8nm,0.7s
ICOR Ion Corvin 76.31 320 ⇑P **P** **19 14 15.4 +0.5**
CLL Collm 76.32 332 lAmb lAmb 19 14 16.1
comp=Z,21nm,1.1s
CLL Collm 76.32 332 *i* P **P** **19 14 14.0 -0.9**
CLL pmax pmax
comp=Z,15nm,1.0s
CLL Collm 76.32 332 *i* P **P** **19 14 14.0 -0.9**
comp=Z,15nm,1.0s
DRGR 76.44 324 ⇑P **P** **19 14 14.9 -0.8**
DRGR 76.44 324 P **P** **19 14 14.9 -0.8**
VOIR 76.51 322 ⇓P **P** **19 14 16.1 -0.1**
VOIR 76.51 322 P **P** **19 14 17.0 +0.8**
STKA Stephens Creek 76.54 185 P **P** **19 14 17.2 +1.1**
comp=Z,2.9nm,0.9s,baz=304,slow=11,SNR=2.1
comp=Z,2.9nm,0.9s
SCHQ Schefferville 76.58 19 P **P** **19 14 17.1 +0.7**
comp=Z,6.3nm,0.5s,baz=332,slow=5.4,SNR=18
comp=Z,6.3nm,0.5s
CICN Ciocanesti 76.60 320 ⇓P **P** **19 14 17.6 +1.1**
MZR Muzera 76.62 289 P **P** **19 14 17.5 +0.4**
MZR Muzera 76.62 289 *i* P **P** **19 14 17.3 +0.3**
SNR=9.0
PSZ Piszkesteto 76.66 327 ⇓P **P** **19 14 17.2 +0.2**
PSZ Piszkesteto 76.66 327 P **P** **19 14 17.2 +0.2**
JAVC Velka Javorina 76.74 328 *e*P **P** **19 14 18.6 +1.2**
ARR Arges 76.75 322 ⇓P **P** **19 14 17.8 +0.3**
VRAC Vranov 76.76 329 ⇑P **P** **19 14 15.8 -1.6**
VRAC Vranov 76.76 329 *e*P **P** **19 14 17.7 +0.2**
VRAC Vranov 76.76 329 P **P** **19 14 15.8 -1.6**
BRTR Keskin Array B 76.77 313 P **P** **19 14 18.4 +0.6**
comp=Z,4.9nm,0.8s,baz=77,slow=3.3,SNR=27
comp=Z,4.9nm,0.8s
BRTR Keskin Array B 76.77 313 **P** **19 14 17.7 -0.1**
HSKC Hora Svate Kat 76.78 332 *e*P **P** **19 14 17.6 +0.1**
PRU Pruhonice 76.92 331 *e*P **P** **19 14 19.0 +0.7**
PRU Pruhonice 76.92 331 *e*P **P** **19 14 19.0 +0.7**
KRUC Moravsky 77.04 329 *e*P **P** **19 14 19.3 +0.3**
EKA Eskdalemuir Ar 77.06 343 P **P** **19 14 18.6 -0.3**
comp=Z,1.6nm,0.4s,baz=15,slow=5.1,SNR=24
comp=Z,1.6nm,0.4s
KIRS Kirsehir-Merke 77.06 313 ⇓P **P** **19 14 20.2 +0.8**
ANTO Ankara 77.10 314 P **P** **19 14 21.2 +1.6**
ANTO Ankara 77.10 314 ⇑P **P** **19 14 20.3 +0.7**
ANTO Ankara 77.10 314 P **P** **19 14 20.3 +0.7**
ANTO Ankara 77.10 314 P **P** **19 14 20.2 +0.7**
ANTO Ankara 77.10 314 pP **pP** **19 14 55.1 +1.7**
ANTO sP sP 19 15 09.9 +1.8
MODS Modra-Piesok 77.29 328 *e*P **P** **19 14 21.4 +1.0**
MODS pmax pmax
comp=Z,24nm,1.2s
MODS Modra-Piesok 77.29 328 *e*P **P** **19 14 21.4 +1.0**
SIRR Siria 77.29 325 ⇓P **P** **19 14 19.6 -0.8**
MDUB Mudurnu 77.45 315 lAmb lAmb 19 14 25.3
comp=Z,21nm,0.7s
COPA Copaceanca 77.46 321 ⇓P **P** **19 14 21.2 -0.2**
SURR Surduc 77.51 324 ⇑P **P** **19 14 21.7 +0.1**
ZVC Zvikov 77.51 331 *e*P **P** **19 14 22.0 +0.4**
GZR Gura Zlata 77.52 323 ⇑P **P** **19 14 21.7 -0.2**
GZR Gura Zlata 77.52 323 P **P** **19 14 21.6 -0.2**
BZS Buzias 77.83 324 ⇑P **P** **19 14 22.5 -0.9**
BZS Buzias 77.83 324 P **P** **19 14 22.5 -0.9**
KHC Kasperske Hory 77.98 331 lAmb lAmb 19 14 25.7
comp=Z,14nm,0.9s
KHC Kasperske Hory 77.98 331 *e*P **P** **19 14 24.4 +0.1**
KHC Kasperske Hory 77.98 331 *e*P **P** **19 14 24.4 +0.1**
HERR Herculane 78.09 323 ⇓P **P** **19 14 24.2 -0.6**
ELND Elena 78.11 320 ⇑P **P** **19 14 24.9 -0.1**
CTYL Yalikoy Yolu 78.11 318 ⇑P **P** **19 14 25.6 +0.6**
GERES GERESS Array B 78.18 331 P **P** **19 14 25.4 0.0**
comp=Z,1.4nm,0.4s,baz=19,slow=5.7,SNR=20
comp=Z,1.4nm,0.4s
CONA Conrad Observa 78.18 329 *i* P **P** **19 14 26.0 +0.6**
comp=Z,10nm,0.9s
RONA Rosalia, Austr 78.22 329 *e*P **P** **19 14 24.7 -0.8**
comp=Z,12nm,0.9s,SNR=6.4
BORA Eskisehir 78.27 315 lAmb lAmb 19 14 27.9
comp=Z,9.9nm,0.8s
GRFO Grafenberg 78.30 333 P **P** **19 14 25.8 -0.2**
GRFO lAmb lAmb 19 14 27.8
comp=Z,25nm,1.0s
GRFO Grafenberg 78.30 333 P **P** **19 14 25.8 -0.2**
GRFO pmax pmax
comp=Z,25nm,1.0s
PLVB Pleven 78.31 321 ⇓P **P** **19 14 26.4 +0.3**
MORH Mrgy, Hungar 78.55 326 ⇓P **P** **19 14 26.1 -1.3**
SHAO Shalim 78.56 284 P **P** **19 14 28.6 +0.7**
SNR=6.4
SHAO Shalim 78.56 284 *i* P **P** **19 14 28.6 +0.7**
SNR=6.4
MOA Molln 78.83 330 *i* P **P** **19 14 29.3 +0.3**
comp=Z,4.8nm,0.9s
MORW Morawa 78.85 207 P **P** **19 14 29.6 +0.6**
BAND Balkesir-Ban 79.07 317 ⇑P **P** **19 14 30.7 +0.3**
BTNL Ternell 79.09 336 *dP* **P** **19 14 29.9 -0.3**
MEM Membach 79.10 336 *dP* **P** **19 14 30.5 +0.2**
comp=Z,12nm,1.0s
DOK Doka 79.18 285 P **P** **19 14 31.5 +0.3**
BIOA Bad Ischl, Aus 79.19 330 *i* P **P** **19 14 31.5 +0.6**
comp=Z,19nm,1.4s
DMTO DMTO 79.23 284 P **P** **19 14 31.9 +0.4**
SNR=11
BOVS Bovan 79.39 323 ⇑P **P** **19 14 31.8 -0.3**
VLDQ Val d'Or 79.50 29 **P** **19 14 31.8 -0.7**
VLDQ lAmb lAmb 19 15 47.6
comp=Z,53nm,1.9s
SOKA Soboth 79.54 329 *i* P **P** **19 14 33.0 +0.1**
comp=Z,12nm,0.7s
BGES Gesves 79.57 336 *dP* **P** **19 14 31.9 -1.0**
comp=Z,10nm,1.0s
RDO Rodopi 79.67 319 lAmb lAmb 19 14 35.3
comp=Z,23nm,1.2s
BMRD Maredsous 79.73 337 *dP* **P** **19 14 33.7 0.0**
comp=Z,12nm,0.9s
RCHB Rochefort 79.73 336 *dP* **P** **19 14 34.0 +0.3**
comp=Z,10nm,1.1s
LESA Schwarzleotal 79.75 330 *i* P **P** **19 14 34.5 +0.5**
comp=Z,14nm,0.6s,SNR=5.9
KBA Koelnbreinsper 79.81 330 *eP* **P** **19 14 34.9 +0.4**
comp=Z,24nm,0.9s,SNR=9.7
RBK Rabkut 79.89 285 P **P** **19 14 35.4 +0.2**
WHFO Wadi Hawf 79.91 285 P **P** **19 14 35.2 -0.1**
SNR=10
GCIS Gornji Cirnik 80.00 328 *i* P **P** **19 14 35.1 -0.2**
BLDU Ballidu 80.07 206 P **P** **19 14 36.4 +0.8**
MYKA Terra Mystica 80.09 330 *i* P **P** **19 14 35.6 -0.2**
comp=Z,8.7nm,0.8s
CRES Cresnjevec Ost 80.10 328 *i* P **P** **19 14 35.5 -0.3**
WATA Walderalm 80.21 331 *i* P **P** **19 14 36.9 +0.4**
comp=Z,18nm,0.5s,SNR=7.7
WTTA Wattenberg 80.25 331 *i* P **P** **19 14 37.2 +0.4**
comp=Z,22nm,0.5s,SNR=8.6
MANT Manisa 80.28 316 lAmb lAmb 19 14 38.4
comp=Z,12nm,0.8s
EZN Ezine 80.33 318 ⇓P **P** **19 14 36.4 -0.7**
EZN Ezine 80.33 318 P **P** **19 14 36.4 -0.7**
RETA Reutte 80.36 332 *i* P **P** **19 14 37.6 +0.3**
comp=Z,8.9nm,0.7s
MOTA Moosalm 80.37 331 *eP* **P** **19 14 37.7 +0.3**
comp=Z,23nm,0.8s,SNR=7.3
BFO Black Forest 80.42 334 P **P** **19 14 37.0 -0.5**
BFO lAmb lAmb 19 14 37.8
comp=Z,8.3nm,0.7s
BFO Black Forest 80.42 334 P **P** **19 14 37.0 -0.5**
BFO pmax pmax
comp=Z,8.0nm,0.7s
BFO Black Forest 80.42 334 P **P** **19 14 37.4 -0.1**
BFO Black Forest 80.42 334 pP pP 19 15 12.3 +0.8
SQTA Sankt Quirin 80.44 331 *i* P **P** **19 14 38.1 +0.4**
comp=Z,16nm,0.6s,SNR=7.0
BOJS Bojanci 80.45 328 *i* P **P** **19 14 37.2 -0.5**
CSS Mathiatis 80.49 310 lAmb lAmb 19 14 39.4
comp=Z,9.5nm,0.7s
ABTO Aybut 80.62 285 P **P** **19 14 39.4 +0.3**
STAL STALIGIAL 80.74 330 lAmb lAmb 19 14 38.9
comp=Z,13nm,0.6s
FETA Feichten 80.78 331 *i* P **P** **19 14 40.0 +0.4**
comp=Z,8.0nm,0.8s
MMAI Mount Meron Ar 80.79 308 P **P** **19 14 41.0 +1.2**
comp=Z,15nm,0.6s,baz=38,slow=5.6,SNR=48
MMAI LR LR 19 57 31.5
comp=Z,31nm,18.3s,baz=358,slow=41
comp=Z,15nm,0.6s
CIMO Cimolais 80.79 330 lAmb lAmb 19 15 04.8
comp=Z,27nm,1.8s
DAVA Damuels 80.83 332 *i* P **P** **19 14 39.9 0.0**
comp=Z,13nm,0.6s
ECH Echery 80.89 334 lAmb lAmb 19 14 40.8
comp=Z,16nm,0.9s
ECH Echery 80.89 334 P **P** **19 14 39.9 -0.1**
FUORN Ofenpass-Fuorn 81.28 332 lAmb lAmb 19 14 43.3
comp=Z,12nm,0.8s
CTI Castel Tesino 81.30 330 lAmb lAmb 19 14 42.1
comp=Z,11nm,0.6s
PDG Podgorica 81.41 324 lAmb lAmb 19 14 43.5
comp=Z,26nm,0.7s
PDG Podgorica 81.41 324 ⇓P **P** **19 14 42.5 -0.3**
RAYN Ar Rayn 81.52 295 P **P** **19 14 44.5 +0.7**
TUE Stuetta 81.72 332 lAmb lAmb 19 14 45.7
comp=Z,13nm,0.7s
TX31 Lajitas Ar. Si 82.05 56 lAmb lAmb 19 15 24.0
comp=Z,20nm,1.0s
TXAR Lajitas Array 82.05 56 P **P** **19 14 48.2 +1.7**
comp=Z,1.1nm,0.6s,baz=300,slow=3.9,SNR=16
comp=Z,1.1nm,0.6s
NWAO Narrogin (SRO) 82.06 205 P **P** **19 14 47.0 +1.0**
TRQ Mont Tremblant 82.11 28 **P** **19 14 46.5 0.0**
TRQ lAmb lAmb 19 14 49.5
comp=Z,25nm,1.0s
SENIN Lac Senin/Sane 82.48 333 lAmb lAmb 19 14 49.5
comp=Z,8.1nm,0.7s
FDMO Fiordimonte 83.37 328 lAmb lAmb 19 14 54.1
comp=Z,14nm,0.6s
BNI Bardonecchia 83.85 333 lAmb lAmb 19 15 00.9
comp=Z,27nm,1.4s
SSB Saint Sauveur 84.32 334 P **P** **19 14 58.4 +0.6**
PPT Papeete 84.61 121 LR LR 19 45 01.6
comp=Z,32nm,21.4s,baz=264,slow=30
IDI Anoyia 84.61 316 lAmb lAmb 19 15 03.5
comp=Z,26nm,0.9s
KEST Kesra 91.14 327 P **P** **19 15 30.8 +0.1**
comp=Z,5.0nm,0.8s,baz=172,slow=1.0,SNR=7.5
comp=Z,5.0nm,0.8s
ESDC Sonseca Array 91.92 338 P **P** **19 15 34.2 -0.1**
comp=Z,2.2nm,0.7s,baz=12,slow=4.3,SNR=19
comp=Z,2.2nm,0.7s
ESDC Sonseca Array 91.92 338 **P** **19 15 33.6 -0.7**
ESDC lAmb lAmb 19 15 35.1
comp=Z,5.7nm,1.1s
TORD Torodi Ar. Bea 114.31 323 PKP **PKiKP** **19 21 04.3 -0.8**
comp=Z,2.0nm,0.3s,baz=29,slow=5.3,SNR=3.0
VNDA Vanda 122.45 176 PKP **PKiKP** **19 21 20.0 +1.0**
comp=Z,1.8nm,0.7s,baz=320,slow=4.3,SNR=11
QSPA South Pole Qui 134.59 180 PKP **PKiKP** **19 21 47.3 +3.7**
comp=Z,2.8nm,0.5s,baz=218,slow=0.6,SNR=10
QSPA SKPab **SKPab** **19 25 02.3 -0.3**
comp=Z,4.1nm,1.0s,baz=12,slow=1.8,SNR=5.7
LPAZ La Paz 138.91 58 SKPab **SKPbc** **19 25 14.9 +0.7**
comp=Z,0.6nm,0.6s,baz=321,slow=6.5,SNR=4.6
NVL N'lazarevskaya 146.18 205 *e*PKP2 **PKiKP** **19 22 06.5 -0.7**
NVL pmax pmax
comp=Z,25nm,0.7s
TROLL Troll, Antarti 148.03 200 ⇓PKPbc **PKiKP** **19 22 10.7 -0.4**
comp=Z,544nm,0.4s
BDFB Brasilia 148.19 29 PKPbc **PKPbc** **19 22 11.4 0.0**
baz=308,slow=0.1
SNAA Sanae 149.51 198 ⇓PKPbc **PKiKP** **19 22 13.7 -0.5**
comp=Z,154nm,0.8s
SNAA Sanae 149.51 198 PKPbc **PKPbc** **19 22 13.5 +0.4**
comp=Z,5.2nm,0.8s,baz=163,slow=2.8,SNR=13
VNA2 Neumayer--Watz 151.04 197 ⇓PKPbc **PKiKP** **19 22 17.7 +0.4**
comp=Z,35nm,0.6s,baz=120,slow=2.1
VNA3 Neumayer Olymp 151.24 195 ⇓PKPbc **PKiKP** **19 22 17.9 +0.2**
comp=Z,17nm,0.8s
VNA1 Neumayer--Stat 151.44 197 ⇓PKPbc **PKiKP** **19 22 18.6 +0.7**
comp=Z,8.8nm,0.6s
PLCA Paso Flores 152.21 95 PKPbc **PKiKP** **19 22 21.9 +1.3**
comp=Z,2.9nm,0.5s,baz=230,slow=5.5,SNR=6.5
PLCA Paso Flores 152.21 95 PKIKP **PKiKP** **19 22 22.0 +1.3**

IDC 20 19:23:55.0±2.9, 15°43S×173°33W, h0km, mb3.8/4, mbtmp3.8/4, MS3.3/5, Error ellipse: s-maj=160.6km s-min=26.9km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.10**	**116**	LR		LR	19 31 31.3	
	comp=Z,18nm,19.6s,baz=289,slow=32							
URZ	**Urewera**	**24.26**	**199**	LR		LR	19 37 24.2	
	comp=Z,69nm,21.4s,baz=357,slow=33							
WRA	**Warramunga Arr**	**49.90**	**257**	P		P	19 32 50.5	-0.3
	0.6nm,0.5s,baz=92,slow=6.7,SNR=28							
	0.6nm,0.5s							
ASAR	**Alice Springs**	**50.16**	**252**	P		P	19 32 52.7	-0.1
	1.7nm,0.3s,baz=89,slow=7.5,SNR=65							
	1.7nm,0.3s							
SHEM	**Shemya Is, Ala**	**68.74**	**352**	LR		LR	19 57 45.4	
	comp=Z,64nm,21.9s,baz=314,slow=30							
MJAR	**Matsushiro Arr**	**69.00**	**320**	LR		LR	20 02 55.3	
	comp=Z,28nm,18.3s,baz=76,slow=34							
QSPA	**South Pole Qui**	**74.62**	**180**	P		P	19 35 41.9	+5.9
	4.5nm,1.0s,baz=52,slow=1.9,SNR=8.5							
PDAR	**Pinedale Array**	**82.24**	**42**	P		P	19 36 18.6	0.0
	0.3nm,0.7s,baz=249,slow=7.3,SNR=3.2							
	0.3nm,0.7s							
ILAR	**Eielson Array**	**82.46**	**11**	P		P	19 36 18.8	-0.2
	0.3nm,0.7s,baz=206,slow=5.1,SNR=5.3							
	0.3nm,0.7s							
SNAA	**Sanae**	**92.88**	**177**	LR		LR	20 14 41.7	
	comp=Z,16nm,18.4s,baz=197,slow=33							
BRTR	**Keskin Array B**	**146.22**	**321**	PKPbc		PKPbc	19 43 37.7	-0.3
	1.4nm,0.9s,baz=48,slow=1.8,SNR=6.0							

*IDC **20** 19:24:29.8±0.6, 52°.95N×172°.75E, h0km, mb3.9/15, mbtmp3.9/16, ML3.1/1, Error ellipse: s-maj=21.1km s-min=12.6km az=1.0*
*NEIC **20** 19:24:32.3±2.2, 52°.8N±0°.1×172°.79E±0°.07, h15km±3km, mb4.1/18, Error ellipse: s-maj=16.7km s-min=6.1km az=185.0*

ISC 20 19:24:31.6±0.6, 52°.9N±0°.1×172°.66E±0°.05, h10km, n46, σ1§10/40, mb4.1/20, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**0.89**	**101**	Pn		**Pg**	**19 24 48.0**	**-0.7**
	4μm,0.3s,baz=47,slow=1.3,SNR=741							
SHEM				Sn		**Sb**	**19 25 00.1**	**-0.9**
	2μm,0.3s,baz=214,slow=10,SNR=56							
SHEM				LR		LR	19 25 00.6	
	comp=Z,344nm,22.0s,baz=207,slow=36							
SHEM	**Shemya Is, Ala**	**0.89**	**101**			**Pg**	**19 24 47.8**	**-0.9**
SMY	**Shemya**	**0.89**	**101**			**Pg**	**19 24 47.7**	**-1.0**
AMKA	**Amchitka**	**4.37**	**108**	Pn		**Pn**	**19 25 38.6**	**+0.8**
PEA0B	**Petropavlovsk-**	**9.03**	**277**			**Pn**	**19 26 43.8**	**+1.9**
PETK	**Petropavlovsk-**	**9.03**	**277**	Pn		**Pn**	**19 26 43.0**	**+1.1**
	0.9nm,0.3s,baz=88,slow=18,SNR=14							
PETK				Sn		**Sn**	**19 28 20.3**	**-3.2**
	1.0nm,0.3s,baz=202,slow=24,SNR=6.4							
	7.2nm,0.8s							
PETK	**Petropavlovsk-**	**9.03**	**277**			**Pn**	**19 26 42.9**	**+1.0**
H18K	**Honhosa River**	**19.08**	**39**	P		**P**	**19 28 53.6**	**-0.3**
H18K				lAmb		lAmb	19 29 11.2	
	comp=Z,19nm,1.4s							
G18K	**Tagagawik**	**19.31**	**37**	P		**Pn**	**19 28 58.5**	**+1.0**
G18K				lAmb		lAmb	19 29 25.1	
	comp=Z,15nm,1.4s							
E19K	**Redstone River**	**20.58**	**33**	P		**P**	**19 29 10.4**	**+0.2**
E19K				lAmb		lAmb	19 29 30.0	
	comp=Z,9.9nm,1.2s							
C19K	**Lookout Ridge**	**20.77**	**28**	P		**P**	**19 29 12.3**	**0.0**
H21K	**Melozitna Rive**	**21.42**	**40**	P		**P**	**19 29 20.6**	**+1.3**
H21K				lAmb		lAmb	19 29 30.4	
	comp=Z,15nm,1.5s							
D20K	**Etivluk River**	**21.43**	**31**	P		**P**	**19 29 19.2**	**-0.2**
D20K				lAmb		lAmb	19 29 57.5	
	comp=Z,17nm,1.4s							
B21K	**Ikpikpuk River**	**22.52**	**30**	P		**P**	**19 29 32.6**	**+1.6**
B21K				lAmb		lAmb	19 30 13.4	
	comp=Z,15nm,1.4s							
I23K	**Minto, Yukon-K**	**22.64**	**42**	P		**P**	**19 29 33.0**	**+0.6**
E22K	**Anaktuvuk Pass**	**22.72**	**34**	P		**P**	**19 29 35.3**	**+2.1**
D23K	**Nanushuk River**	**23.44**	**33**	P		**P**	**19 29 41.3**	**+0.7**
ILAR	**Eielson Array**	**23.59**	**44**	P		**P**	**19 29 41.7**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=250,slow=8.3,SNR=11							
	comp=Z,0.6nm,0.6s							
TOLK	**Toolik Lake Re**	**23.68**	**34**	P		**P**	**19 29 43.4**	**+0.4**
TOLK				lAmb		lAmb	19 30 13.0	
	comp=Z,8.0nm,1.4s							
SCRK	**Sand Creek**	**24.72**	**46**	P		**P**	**19 29 52.1**	**-0.7**
BMAR	**Burnt Mountain**	**25.08**	**38**	P		**P**	**19 29 57.2**	**+1.3**
ISLE	**Juniper Island**	**25.39**	**54**	P		**P**	**19 29 59.2**	**+0.4**
MJAR	**Matsushiro Arr**	**29.08**	**250**	P		**P**	**19 30 33.7**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=50,slow=8.0,SNR=4.9							
	comp=Z,0.6nm,0.5s							
MJAR	**Matsushiro Arr**	**29.08**	**250**	lAmb		lAmb	19 30 45.7	
	comp=Z,5.3nm,1.4s							
INK	**Inuvik**	**29.35**	**38**	P		**P**	**19 30 34.6**	**+0.5**
INK				lAmb		lAmb	19 30 46.2	
	comp=Z,3.2nm,1.2s							
H11N2	**WAKE ISLAND Hy**	**33.41**	**190**	T		T	20 06 26.3	
	baz=6.2,slow=76,SNR=344							
H11N3	**WAKE ISLAND Hy**	**33.42**	**190**	T		T	20 06 27.4	
	baz=6.2,slow=76,SNR=426							

H11S1	WAKE ISLAND Hy 34.64 190 baz=6.2,slow=76,SNR=445	T	T	20 07 58.7		
H11S3	WAKE ISLAND Hy 34.66 190 baz=6.2,slow=76,SNR=398	T	T	20 07 59.9		
H11S2	WAKE ISLAND Hy 34.66 190 baz=6.2,slow=76,SNR=238	T	T	20 07 59.5		
SONM	Songino Array 41.22 291 comp=Z,0.8nm,0.5s,baz=61,slow=7.2,SNR=7.2 comp=Z,0.8nm,0.5s	P	P	19 32 15.4	-1.0	
SPITS	Spitsbergen Ar 48.38 354 comp=Z,7.6nm,1.0s,baz=56,slow=8.9,SNR=1.4 comp=Z,7.6nm,1.0s	P	P	19 33 12.4	-0.5	
PDAR	Pinedale Array 50.75 68 comp=Z,0.6nm,0.7s,baz=300,slow=3.3,SNR=6.1 comp=Z,0.6nm,0.7s	P	P	19 33 31.2	-0.5	
KURK	Kurchatov 54.05 308	P	P	19 33 54.9	-0.8	
KURBB	Kurchatov Arra 54.16 308 comp=Z,2.0nm,0.8s,baz=50,slow=7.1,SNR=14 comp=Z,2.0nm,0.8s	P	P	19 33 56.2	-0.4	
MKAR	Makanchi Array 54.87 303 comp=Z,0.4nm,0.3s,baz=49,slow=7.3,SNR=15 comp=Z,0.4nm,0.3s	P	P	19 34 00.8	-1.1	
BVAR	Borovoye Array 56.20 315 comp=Z,1.0nm,0.6s,baz=50,slow=7.8,SNR=4.8 comp=Z,1.0nm,0.6s	P	P	19 34 11.0	-0.3	
TXAR	Lajitas Array 63.50 76 comp=Z,2.0nm,0.8s,baz=330,slow=8.0,SNR=13 comp=Z,2.0nm,0.8s	P	P	19 35 02.4	+0.4	
CMAR	Chiang Mai Arr 65.70 269 comp=Z,0.7nm,0.5s,baz=29,slow=6.6,SNR=9.5 comp=Z,0.7nm,0.5s	P	P	19 35 15.8	-0.5	
HFS	Hagfors 66.05 349 comp=Z,1.3nm,0.5s,baz=57,slow=5.5,SNR=13 comp=Z,1.3nm,0.5s	P	P	19 35 17.7	-0.3	
AKASG	Malin Array Be 72.26 337 comp=Z,0.8nm,0.5s,baz=26,slow=6.7,SNR=2.6 comp=Z,0.8nm,0.5s	P	P	19 35 56.7	+0.1	
AKASG	Malin Array Be 72.26 337	IAmb	IAmb	19 36 26.8		
WRA	Warramunga Arr 79.79 216 comp=Z,0.9nm,0.8s,baz=30,slow=6.2,SNR=4.7 comp=Z,0.9nm,0.8s	P	P	19 36 39.4	-0.4	
ASAR	Alice Springs 83.37 215 comp=Z,0.7nm,0.8s,baz=20,slow=5.1,SNR=6.7 comp=Z,0.7nm,0.8s	P	P	19 36 59.2	+0.5	

*JMA **20** 19:24:44.0±0.1,24°N±1°×122°.5E±0°.4, h65km±2km, MV2.3/12, NW OFF ISHIGAKIJIMA IS*
*TAP **20** 19:24:44.0,24°.25N×122°.52E, h70km, ML2.8, D*
ISC 20 19:24:44.7±1.3,24°22N±0°.03×122°53E±0°.02, h59km±10km, n90,σ1°12/179, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.44	58	*i* P	Pn	19 24 56.3	+0.3
JYNG				*e*S	Sn	19 25 05.4	+1.2
YOJ	Yonaguni jima	0.50	61	*e*P	Pn	19 24 56.8	+0.2
YOJ				*e*S	Sn	19 25 05.7	+0.4
YOJ	Yonaguni jima	0.50	61	*i* P	Pn	19 24 57.0	+0.4
YOJ				S	Sn	19 25 06.7	+1.5
ESAO	Su ao	0.72	300	*e*P	Pn	19 24 58.1	-1.0
ESAO				*e*S	Sn	19 25 09.6	-0.2
EWUT	Wuta	0.72	289	*i* P	Pn	19 24 59.1	-0.1
EWUT				*e*S	Sn	19 25 10.4	+0.7
EAHA	Aohua	0.73	279	*e*P	Pn	19 25 00.1	+0.9
EAHA				*e*S	Sn	19 25 10.6	+0.6
TWC	Suao	0.74	302	*i* P	Pn	19 24 58.9	-0.4
TWC				*i* S	Sn	19 25 09.6	-0.5
ENA	Nanau	0.75	286	*i* P	Pn	19 24 59.5	0.0
ENA				S	Sn	19 25 10.8	+0.4
ETL	Fush Village	0.83	266	*i* P	Pn	19 25 00.4	-0.1
ETL				*i* S	Sn	19 25 12.3	+0.1
NDS	Dongshan	0.85	299	*e*P	Pn	19 24 59.7	-1.1
NDS				*e*S	Sn	19 25 13.1	+0.4
NACB	Ninganchiao	0.86	267	*i* P	Pn	19 25 00.3	-0.6
NACB				*i* S	Sn	19 25 12.2	-0.6
TWD	Chiawan	0.87	261	*i* P	Pn	19 25 00.4	-0.5
TWD				*i* S	Sn	19 25 12.1	-0.8
HWA	Hwalien	0.88	255	*i* P	Pn	19 25 01.0	-0.1
HWA				*i* S	Sn	19 25 13.5	+0.2
TEYL	Yanliau Villag	0.92	248	P	Pn	19 25 01.6	-0.1
TEYL				S	Sn	19 25 14.4	+0.2
TWE	Neicheng	0.94	303	*i* P	Pn	19 25 02.2	+0.4
TWE				S	Sn	19 25 14.3	-0.2
ETLH	Xiulin Townshi	0.96	270	*i* P	Pn	19 25 01.7	-0.6
ETLH				*i* S	Sn	19 25 14.6	-0.7
LATG	Datong	0.97	289	*i* P	Pn	19 25 02.2	-0.2
LATG				*e*S	Sn	19 25 16.2	+0.7
ENTT	Nioudou	0.98	296	*i* P	Pn	19 25 02.8	+0.4
ENTT				*i* S	Sn	19 25 15.8	+0.3
ETM	Tongmen	0.98	256	*i* P	Pn	19 25 01.8	-0.7
ETM				S	Sn	19 25 14.5	-1.1
SHUL	Shoufeng	0.98	245	*i* P	Pn	19 25 02.2	-0.2
SHUL				*i* S	Sn	19 25 15.7	+0.1
TIPB	Shuangxi	0.99	320	*i* P	Pn	19 25 01.9	-0.7
TIPB				*i* S	Sn	19 25 14.4	-1.4
FUSB	Fushanzhiwuyua	1.02	302	*i* P	Pn	19 25 03.6	+0.7
FUSB				S	Sn	19 25 16.0	-0.5
LXIB	Xiulin Townshi	1.04	260	*i* P	Pn	19 25 02.8	-0.6
LXIB				*i* S	Sn	19 25 16.1	-1.1
SXI1	Grass Mountain	1.06	326	*e*P	Pn	19 25 03.5	-0.1
SXI1				*e*S	Sn	19 25 17.6	0.0
NNSB	Datong	1.07	282	*i* P	Pn	19 25 02.7	-1.1
NNSB				*e*S	Sn	19 25 18.5	+0.7
NNSH	Datong	1.07	282	*i* P	Pn	19 25 03.4	-0.4
NNSH				*e*S	Sn	19 25 17.6	-0.3
NNS	Nan Shan	1.08	282	*i* P	Pn	19 25 03.6	-0.2
NNS				S	Sn	19 25 18.4	+0.3
ESL	Shilin	1.08	249	*i* P	Pn	19 25 03.0	-0.7
ESL				*i* S	Sn	19 25 16.9	-1.1
NWLT	Wulai	1.09	301	*i* P	Pn	19 25 03.6	-0.4
NWLT				*i* S	Sn	19 25 18.1	-0.2
IRIF	Iriomote-Funau	1.10	84	P	Pn	19 25 04.0	+0.1
IRIF				*e*S	Sn	19 25 18.4	+0.1
YHNB	Yeheng	1.15	293	*i* P	Pn	19 25 04.8	+0.1
YHNB				*i* S	Sn	19 25 19.4	-0.2
EGFH	Guangfu	1.15	242	*i* P	Pn	19 25 04.1	-0.6
EGFH				*i* S	Sn	19 25 18.9	-0.6
TWA	Mucha	1.15	312	*i* P	Pn	19 25 04.0	-0.6
TWA				*i* S	Sn	19 25 18.9	-0.7
WARBT	Fenglin Townsh	1.16	245	*i* P	Pn	19 25 04.0	-0.8
WARBT				*e*S	Sn	19 25 18.5	-1.3
WHF	Hehuan Shan	1.16	267	*i* P	Pn	19 25 04.4	-0.8
WHF				S	Sn	19 25 19.0	-1.4
NSK	Sanguang	1.16	293	*i* P	Pn	19 25 04.8	-0.1
NSK				*i* S	Sn	19 25 19.8	-0.2
HATJ	Hateruma jima	1.17	97	*e*S	Sn	19 25 21.4	+1.3
FUSS	Fushou	1.18	272	*i* P	Pn	19 25 05.5	+0.3
FUSS				*i* S	Sn	19 25 20.3	-0.3
TWT	Tachien	1.24	272	*i* P	Pn	19 25 06.3	+0.3
TWT				*i* S	Sn	19 25 22.0	+0.1
HGSD	Ruisui	1.24	235	*i* P	Pn	19 25 05.5	-0.5
HGSD				S	Sn	19 25 20.5	-1.2
TDCB	Techi	1.25	272	*i* P	Pn	19 25 06.3	+0.1
TDCB				S	Sn	19 25 21.0	-1.3
OWD	Renai	1.27	258	*i* P	Pn	19 25 06.0	-0.4
OWD				*i* S	Sn	19 25 21.7	-0.8
YM01	YM01	1.27	317	P	Pn	19 25 05.5	-0.8
YM01				S	Sn	19 25 19.8	-2.8
ZUZH	Zhuzihu	1.30	317	P	Pn	19 25 05.6	-1.1
ZUZH				*i* S	Sn	19 25 20.8	-2.4
EHYH	Wanrong	1.30	237	*i* P	Pn	19 25 06.1	-0.6
EHYH				*i* S	Sn	19 25 22.1	-1.1
WUSB	Renai	1.31	261	*i* P	Pn	19 25 07.0	+0.1
WUSB				*i* S	Sn	19 25 22.7	-0.9
EHY	Hungye	1.31	238	*i* P	Pn	19 25 06.1	-0.7
EHY				*i* S	Sn	19 25 22.1	-1.3
TWS1	Kuangyinshan	1.34	311	P	Pn	19 25 06.3	-0.9
TWS1				*i* S	Sn	19 25 23.3	-0.8
JKRS	Kuro-shima	1.35	89	*e*P	Pn	19 25 07.7	+0.5
JKRS				*e*S	Sn	19 25 24.7	+0.5
VWDT	VWDT	1.35	250	*i* P	Pn	19 25 07.6	+0.2
VWDT				*i* S	Sn	19 25 23.7	-0.6
NFF	Wufeng Townshi	1.35	288	*i* P	Pn	19 25 07.4	0.0
NFF				*i* S	Sn	19 25 24.4	-0.1
KSHI	Guanxi Townshi	1.36	295	*i* P	Pn	19 25 08.2	+0.8
KSHI				*i* S	Sn	19 25 25.4	+0.9
YULB	Yu-li	1.40	234	*i* P	Pn	19 25 07.4	-0.6
YULB				*i* S	Sn	19 25 24.2	-1.3
TWF1	Yuli	1.42	233	*i* P	Pn	19 25 08.0	-0.3
TWF1				*i* S	Sn	19 25 24.7	-1.3
LIOB	Emei	1.45	288	*i* P	Pn	19 25 08.9	+0.3
LIOB				S	Sn	19 25 27.1	+0.4
WHP	Taichung City	1.45	273	*i* P	Pn	19 25 10.2	+1.5
WHP				*i* S	Sn	19 25 27.1	+0.3
NSTT	Nanjuang	1.46	287	*i* P	Pn	19 25 08.7	0.0
NSTT				*i* S	Sn	19 25 27.4	+0.6
PCYT	Pengchaiyu	1.47	344	P	Pn	19 25 09.1	+0.2
PCYT				S	Sn	19 25 23.7	-3.5
JIJ	Ishigaki jima	1.48	84	*e*P	Pn	19 25 08.8	-0.2
JIJ				*e*S	Sn	19 25 26.7	-0.6
WCS	Beigang Elemen	1.49	264	*i* P	Pn	19 25 09.9	+0.7
WCS				*e*S	Sn	19 25 27.3	-0.3
SSLB	Suanglung	1.50	254	*i* P	Pn	19 25 09.5	+0.1
SSLB				*i* S	Sn	19 25 28.1	0.0
FULB	Fuli	1.52	229	*i* P	Pn	19 25 09.0	-0.6
FULB				*i* S	Sn	19 25 26.9	-1.6
SMLT	Sun Moon Lake	1.53	258	*i* P	Pn	19 25 09.9	+0.1
SMLT				*i* S	Sn	19 25 28.8	0.0
TYC	Yuchr	1.56	259	*i* P	Pn	19 25 11.2	+1.0
TYC				*i* S	Sn	19 25 30.0	+0.6
TWQ1	Liyutan	1.61	275	P	Pn	19 25 11.7	+0.9
TWQ1				*e*S	Sn	19 25 32.2	+1.6
EHD	Haiduan	1.61	229	*i* P	Pn	19 25 09.9	-1.0
EHD				*i* S	Sn	19 25 29.5	-1.2
YUS	Yu-Shan	1.62	244	*i* P	Pn	19 25 11.7	+0.3
YUS				*i* S	Sn	19 25 30.7	-0.8
WHYT	Xinyi Township	1.62	252	*i* P	Pn	19 25 11.7	+0.7
WHYT				S	Sn	19 25 31.3	+0.4
JISG	Ishigakijimahi	1.66	77	*e*P	Pn	19 25 11.2	-0.3
JISG				*e*S	Sn	19 25 31.2	-0.7
EDH	Donghe	1.67	223	*i* P	Pn	19 25 10.9	-0.8
EDH				*i* S	Sn	19 25 29.7	-2.4
WJS	Zhushan	1.70	257	*i* P	Pn	19 25 12.7	+0.7
WJS				*i* S	Sn	19 25 34.5	+1.9
WNT	Mingjian	1.72	259	P	Pn	19 25 13.1	+0.7
WNT				*i* S	Sn	19 25 35.3	+2.0
ELDTW	Lidau	1.72	234	*i* P	Pn	19 25 11.8	-0.6
ELDTW				S	Sn	19 25 31.0	-2.5
ALS	Alishan	1.73	246	*i* P	Pn	19 25 13.7	+1.0
ALS				S	Sn	19 25 35.1	+1.2
WGK	Gukeng	1.88	254	P	Pn	19 25 16.3	+1.8
WGK				*i* S	Sn	19 25 40.2	+3.1
STYH	Taoyuan	1.92	237	*i* P	Pn	19 25 15.4	+0.4
STYH				*i* S	Sn	19 25 38.5	+0.5
TWGBT	Beinan	1.93	224	*i* P	Pn	19 25 14.3	-0.8
TWGBT				S	Sn	19 25 36.8	-1.5
TWG	Pinlang	1.93	224	*i* P	Pn	19 25 14.4	-0.8
TWG				*i* S	Sn	19 25 37.1	-1.2
TPUB	Ta-pu	1.97	243	*i* P	Pn	19 25 17.2	+1.5
TPUB				*i* S	Sn	19 25 41.0	+1.7
WTP	Ta-pu	2.01	242	*i* P	Pn	19 25 17.9	+1.6
WTP				*i* S	Sn	19 25 43.0	+2.7
TWK	Hsinying	2.10	244	*i* P	Pn	19 25 19.5	+2.0
TWK				*i* S	Sn	19 25 44.3	+1.7
CHN1	Nanshi	2.10	241	*i* P	Pn	19 25 19.5	+2.0
CHN1				*i* S	Sn	19 25 44.9	+2.2
ECL	Taimali	2.17	222	*i* P	Pn	19 25 17.6	-0.7
ECL				*i* S	Sn	19 25 42.2	-2.0
WSL	Shuilin Townsh	2.22	252	*e*P	Pn	19 25 18.1	-0.9
WSL				S	Sn	19 25 47.8	+2.4
SSD	Sandimen	2.28	230	*i* P	Pn	19 25 21.1	+1.2
SSD				*i* S	Sn	19 25 49.3	+2.5
SCST	Cishan	2.29	235	*e*P	Pn	19 25 21.3	+1.2
SCST				S	Sn	19 25 51.1	+3.9
MASBT	Mashibuluo	2.37	228	*i* P	Pn	19 25 21.9	+0.8
MASBT				*e*S	Sn	19 25 49.7	+0.7
LYUB	Lan-yu	2.37	202	P	Pn	19 25 19.6	-1.5
LYUB				*e*S	Sn	19 25 45.8	-3.3
EAST	Anshuo	2.39	221	*i* P	Pn	19 25 21.5	0.0
EAST				*e*S	Sn	19 25 48.9	-0.8
SCZT	Fangliau	2.54	224	*i* P	Pn	19 25 25.6	+2.1
SCZT				*i* S	Sn	19 25 54.7	+1.4

*SFS **20** 19:59:23.9,35°.70N×4°.64W, h72km, ML3.2/9, ML2.5/12, MLv2.1/12*
*INMG **20** 19:59:24.3±1.4,35°.75N×4°.71W, h69km±10km, ML2.1, Error ellipse: s-maj=6.0km s-min=4.9km az=92.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*
*MDD **20** 19:59:24.4±1.5,35°.78N×4°.66W, h90km±58km, Mb2.4/6, Error ellipse: s-maj=18.9km s-min=7.0km az=161.0*
*CNRM **20** 19:59:25.6,35°.43N×4°.86W, h50km*
ISC 20 19:59:20.9±1.4,35°67N±0°.03×4°62W±0°.05, h96km±15km, n40,σ1°57/63,5C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.72	129	P	Pn	19 59 39.8	+1.6
PALE	Palemas	0.72	129	S	Sn	19 59 51.8	+0.7
EMU	Mijas	0.90	352	Pn	Pn	19 59 40.7	+0.7
AKLM	AKL	1.32	152	P	Pn	19 59 45.1	+0.3
AKLM	AKL	1.32	152	S	Sn	19 59 59.4	-3.5
ELGU	Los Guajares,	1.44	34	Sn	Sn	20 00 04.3	-1.1
ELGU				Pn	Pn	19 59 46.9	+0.6
LCRM	LCR	1.99	186	P	Pn	19 59 55.6	+2.2
LCRM	LCR	1.99	186	S	Sn	20 00 18.1	0.0
ECAB	El Cabril	2.48	345	Pn	Pn	20 00 00.9	+1.2
ECAB				Sn	Sn	20 00 28.2	-1.2
ECAB	El Cabril 137nm,SNR=1.8	2.48	345	⇑*i*Vmb_VC		20 00 00.2	
ECAB				Pn	Pn	20 00 00.9	+1.2
ECAB				Sn	Sn	20 00 28.1	-1.2
EADA	Adamuz	2.49	1	Pn	Pn	20 00 01.4	+1.7
EADA				Sn	Sn	20 00 29.2	-0.4
EADA	Adamuz	2.49	1	Pn	Pn	20 00 01.5	+1.7
EADA	81nm,SNR=0.8			⇑*i*Vmb_VC		20 00 05.3	
EADA				Sn	Sn	20 00 28.5	-1.1
EMIN	Mina Concepcio	2.66	322	Pn	Pn	20 00 03.4	+1.4
EMIN				Sn	Sn	20 00 32.5	-1.1
EMIN	Mina Concepcio 155nm,SNR=1.2	2.66	322	Pn ⇑*i*Vmb_VC	Pn	20 00 03.4 20 00 05.6	+1.4
EMIN				Sn	Sn	20 00 31.7	-1.9
MD31	MD31	2.80	182	P	Pn	20 00 04.6	+0.5
MD31	MD31	2.80	182	S	Sn	20 00 35.5	-1.6
MDT	Midelt	2.85	180	P	Pn	20 00 05.9	+1.1
MDT	Midelt	2.85	180	S	Sn	20 00 36.7	-1.7
EGRO	El Granado	2.96	310	Pn	Pn	20 00 07.3	+1.3
EGRO				Sn	Sn	20 00 39.4	-1.3
EGRO	El Granado 351nm,SNR=1.6	2.96	310	Pn ⇑*i*Vmb_VC	Pn	20 00 07.3 20 00 12.0	+1.3
EGRO				Sn	Sn	20 00 39.5	-1.3
PVAQ	Vaqueiros	3.03	306	*e*P	Pn	20 00 08.3	+1.3
PVAQ				*e*S	Sn	20 00 41.5	-1.0
PVAQ				*i* IAML		20 00 42.7	
PVAQ				*i* IAML		20 00 42.8	
PVAQ				*i* IAML		20 00 43.3	
TLOR	Lorca, Murcia	3.08	49	Pn	Pn	20 00 09.5	+1.9
PBDV	Barranco-do-Ve	3.09	301	Pn	Pn	20 00 09.3	+1.4
PBDV				Sn	Sn	20 00 43.5	-0.6
PBDV	Barranco-do-Ve	3.09	301	*e*P	Pn	20 00 09.3	+1.4
PBDV				*e*S	Sn	20 00 43.2	-0.8
PBDV				*i* IAML		20 00 44.3	
PBDV				*i* IAML		20 00 44.3	
PBDV				*i* IAML		20 00 45.3	
PBAR	Barrancos	3.16	323	Pn	Pn	20 00 10.2	+1.5
PBAR				Sn	Sn	20 00 44.0	-1.6
PBAR	Barrancos	3.16	323	*e*P	Pn	20 00 10.3	+1.6
PBAR				*e*S	Sn	20 00 43.1	-2.5
PBAR				*i* IAML		20 00 45.0	
PBAR				*i* IAML		20 00 46.5	
PBAR				*i* IAML		20 00 48.3	
PSIM	Granatula de C	3.21	12	Pn	Pn	20 00 10.9	+1.4
PSIM				Sn	Sn	20 00 44.2	-2.8
PCVE	Castro Verde	3.37	306	Pn	Pn	20 00 13.0	+1.4
PCVE				Sn	Sn	20 00 49.1	-1.6
PCVE	Castro Verde	3.37	306	*e*P	Pn	20 00 13.2	+1.6
PCVE				*e*S	Sn	20 00 49.4	-1.3
PCVE				*i* IAML		20 00 51.1	
PCVE				*i* IAML		20 00 51.7	
PCVE				*i* IAML		20 01 00.6	
MESJ	Messejana	3.61	308	*e*P	Pn	20 00 16.2	+1.4
MESJ				*e*S	Sn	20 00 55.5	-0.9
MESJ				*i* IAML		20 00 57.4	
MESJ				*i* IAML		20 00 57.7	
MESJ				*i* IAML		20 01 06.6	
EBAD	Badajoz	3.62	329	Pn	Pn	20 00 16.6	+1.7
EBAD				Sn	Sn	20 00 55.0	-1.7
EBAD	Badajoz	3.62	329	Pn	Pn	20 00 16.5	+1.7
EBAD	186nm,SNR=1.5			⇑*i*Vmb_VC		20 00 23.9	
EBAD				Sn	Sn	20 00 55.0	-1.7
MORF	Marmelete	3.63	298	*e*P	Pn	20 00 14.2	-0.9
MORF				*e*S	Sn	20 00 55.2	-1.8
MORF				*i* IAML		20 01 06.5	
MORF				*i* IAML		20 01 06.6	
PAB	San Pablo	3.87	3	Sn	Sn	20 01 00.2	-2.6
EVO	Evora	3.94	317	Sn	Sn	20 01 03.1	-1.2
EVO	Evora	3.94	317	*e*S	Sn	20 01 04.2	-0.1
PESTR	Estremoz	3.97	324	*e*P	Pn	20 00 21.6	+2.0
PESTR				*e*S	Sn	20 01 03.8	-1.3
PESTR				*i* IAML		20 01 04.7	
PESTR				*i* IAML		20 01 06.7	
PESTR				*i* IAML		20 01 08.2	
PARRA	Arraiolos	4.16	320	*e*P	Pn	20 00 23.6	-6.1
PARRA				*e*S	Sn	20 01 07.7	-16
PARRA				*i* IAML		20 01 09.2	
PARRA				*i* IAML		20 01 11.4	
PARRA				*i* IAML		20 01 16.4	
PMTG	Montargil	4.44	321	*e*P	Pn	20 00 27.8	+1.8
PMTG				*e*S	Sn	20 01 15.6	-0.9
PSARD	Sardoal	4.82	325	*e*P	Pn	20 00 33.2	+2.0
PSARD				*e*S	Sn	20 01 23.7	-2.1
PSARD				*i* IAML		20 01 24.4	
PSARD				*i* IAML		20 01 25.3	
PSARD				*i* IAML		20 01 38.0	

*KOLA **20** 20:16:31.3,67°.64N×33°.84E, h0km, ML1.6, Error ellipse: s-maj=5.6km s-min=2.2km az=140.0, Khibiny, mines Rasvumchorr, Central*
HEL 20 20:16:30.8±0.2,67°59N×33°96E, h0km, ML1.5, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	Apatity	0.21	265	P	Pg	20 16 34.1	-0.8
APA				S	Sg	20 16 37.0	-0.6
APA0	Apatity Array	0.37	273	P	Pg	20 16 36.9	-0.9
APA0				S	Sg	20 16 41.4	-1.2
LVZ	Lovozero	0.41	40	P	Pg	20 16 38.2	-0.4
LVZ				S	Sg	20 16 43.6	-0.3
LVZ	Lovozero baz=225	0.41	40	PG	Pg	20 16 38.2	-0.4
LVZ				SG	Sg	20 16 43.0	-0.9
KVDA	Kovda	0.99	206	P	Pg	20 16 49.3	-0.5
KVDA				S	Sg	20 17 02.3	-0.4
KVDA	Kovda	0.99	206	P	Pg	20 16 50.3	+0.5
VRF	Varrio	1.67	278	PG	Pn	20 17 00.6	-0.7
VRF				SG	Sn	20 17 20.6	-2.8
VRF	comp=Z,5.5nm,0.2s			smax	smax	20 17 20.8	
TERR	Teriberka	1.68	14	P	Pn	20 17 00.3	-1.1
TERR				S	Sn	20 17 21.6	-1.9
OLKF	Oulanka, Finla baz=56	2.20	237	PG	Pb	20 17 10.4	-1.0
OLKF	comp=Z,1.6nm,0.2s			smax	smax	20 17 35.9	
OLKF				SG	Sb	20 17 38.9	-0.2
KU6	Riekki baz=48	2.25	228	PG	Pn	20 17 10.4	+1.2
KU6	comp=Z,1.3nm,0.2s			smax	smax	20 17 37.4	
KU6				SG	Sb	20 17 40.2	-0.3
RAJF	Raja-Jooseppi	2.30	295	PG	Pn	20 17 10.6	+0.7
RAJF				SG	Sb	20 17 37.8	-1.2
MSF	Maaselka	2.58	232	PG	Pb	20 17 16.4	-1.5
MSF				SG	Sb	20 17 49.7	-0.3
VADS	Vadso	3.04	329	P	Pn	20 17 19.2	-0.9
VADS				S	Sn	20 17 54.4	-2.7
RANF	Ranua baz=58	3.25	244	PB	Pb	20 17 27.0	-2.3
RANF				SG	Sb	20 18 09.2	0.0
RNF	Rovaniemi	3.26	256	PN	Pn	20 17 23.4	+0.4
RNF				SN	Sn	20 17 58.0	-4.4
KEV	Kevo	3.35	314	PN	Pn	20 17 23.8	-0.5
KEV				SN	Sn	20 18 02.5	-2.1
ARA0	ARCESS Array S	3.67	306	PN	Pn	20 17 27.6	-1.1
ARA0				SN	Sn	20 18 10.6	-2.0
ARCES	ARCESS Array B	3.67	306	S	Sn	20 18 09.7	-2.9
KLF	Kolari	3.87	269	SG	Sb	20 18 30.5	+3.3
HEF	Hetta	3.96	287	SN	Sn	20 18 12.2	-1.6
TOF	Tornio	4.10	253	SN	Sn	20 18 21.9	-1.2
KTK1	Kautokeino	4.23	295	SN	Sn	20 18 23.5	-2.9
KALU	Kalix	4.55	253	SN	Sn	20 18 33.4	-0.9
LANU	Lannavaara	4.56	281	SN	Sn	20 18 32.8	-1.7
ERTU	Ertsjaerv	4.72	263	SN	Sn	20 18 36.4	-2.1
FAUS	Fauske	7.17	277	S	Sn	20 19 33.5	-5.1

*IDC **20** 20:50:14.2±2.2,1°.74N×126°.35E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=173.3km s-min=28.2km az=66.0*
*DJA **20** 20:50:17.8±0.3,2°N±4°×12°6E±1°, h10km, M3.0/6, MLv3.0/6*
ISC 20 20:50:15.6±1.5,1°38N±0°.4×126°5E±0°.4, h10km, n4,σ0°84/5, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.35	137	P	Pn	20 50 41.0	+0.5
TNTI				S	Sb	20 50 58.0	-0.4
WRA	Warramunga Arr 0.7nm,0.5s,baz=339,slow=11,SNR=5.4 0.7nm,0.5s	22.92	161	P	P	20 55 19.3	-0.7
ASAR	Alice Springs 0.2nm,0.6s,baz=344,slow=7.7,SNR=3.1 0.2nm,0.6s	26.30	164	P	P	20 55 52.3	+0.7
MKAR	Makanchi Array 0.3nm,0.7s,baz=121,slow=8.5,SNR=2.4 0.3nm,0.7s	59.00	326	P	P	21 00 15.4	-0.2

**DJA

ϕ_s160.73000°,δ74.87000°,λ-176.66000°. NP2: ϕ_s69.86000°,δ86.77000°,λ-15.15000°. Principal axes: T 4.4202, Plg8.0000°, Azm116.0000°; N -1.1657, Plg75.0000°, Azm238.0000°; P -3.2545, Plg13.0000°, Azm24.0000°;

BJI **20** 21:03:57.8, 19°.42N×101°.35E, h13km, mB5.7/58, mb5.4/81, ML6.1/7, Ms6.0/89, Ms7 6.0/85

IPGP **20** 21:03:57.0, 19°.44N×101°.22E, h8km, Mw5.7, Fault plane solution: NP1:ϕ_s169.00000°,δ72.00000°,λ-170.00000°. NP2:ϕ_s76.00000°,δ81.00000°,λ-18.00000°.

NEIC **20** 21:03:57.8, 19°.45N×101°.25E, h10km

NEIC **20** 21:03:57.5, 19°.44N×101°.22E, h20km

NEIC **20** 21:03:57.8±1.4, 19°.45N±0°.06×101°.25E±0°.06, h10km±1km, mb5.7/198, Ms_20 5.6/534, Mwb5.6/61, Mww5.7/35, Error ellipse: s-maj=10.5km s-min=9.5km az=188.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.02; $M_{\theta\theta}$-2.12; $M_{\phi\phi}$2.10; $M_{r\theta}$-0.67; $M_{\theta\phi}$2.40; $M_{r\phi}$-0.03; Fault plane solution: $M_0$3.26000×10^{17} NP1: ϕ_s159.66000°,δ78.82000°,λ-176.60000°. NP2: ϕ_s69.00000°,δ86.67000°,λ-11.20000°. Principal axes: T 3.2109, Plg6.0000°, Azm115.0000°; N 0.1018, Plg78.0000°, Azm233.0000°; P -3.3127, Plg10.0000°, Azm24.0000°;

ISC-PP **20** 21:03:57, 19°.45N×101°.25E, h15km, Mwpgsm6.3, Moment Tensor Solution. s44 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.14±.14; $M_{\theta\theta}$-0.42±.19; $M_{\phi\phi}$0.55±.15; $M_{r\theta}$-0.16±.18; $M_{\theta\phi}$0.20±.15; $M_{r\phi}$0.44±.12; Fault plane solution: $M_0$3.76000×10^{18} NP1:ϕ_s64.40000°,δ67.60000°, λ349.80000°. NP2:ϕ_s158.30000°,δ80.60000°, λ-157.30000°.

GCMT **20** 21:03:58.8±0.1, 19°.44N±0°.01×101°.41E±0°.01, h12km, MW5.7/147, Moment Tensor Solution. s122,c203; s147,c305; Duration: 1ꜛ7 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.00±.04; $M_{\theta\theta}$-1.41±.04; $M_{\phi\phi}$2.40±.04; $M_{r\theta}$0.63±.10; $M_{\theta\phi}$2.98±.03; $M_{r\phi}$2.20±.10; Best double couple: $M_0$4.04600×10^{17} NP1:ϕ_s76.00000°,δ62.00000°, λ2.00000°. NP2:ϕ_s345.00000°,δ88.00000°,λ152.00000°. Principal axes: T 4.8850, Plg21.0000°, Azm297.0000°; N -1.6840, Plg62.0000°, Azm162.0000°; P -3.2070, Plg18.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

DJA **20** 21:04:00.6±1.1, 20°.N±4°.×10°.E±°, h31km, 9km, M5.5/43, mB5.9/38, mb5.5/43, MLv6.8/2, Mw(mB)5.4/38, MwMwp5.2/21, Mwp5.5/21

BGR **20** 21:04:09.0, 19.69N×100°.21E, h33km, mb5.5, Ms5.5

ISC 20 21:03:58.5±0.4, **19°.45N**±0°.02×**101°.32E**±0°.03, **h11**km±2km, **h11km:pP-P, n1630,** σ1ꜛ73/1495, **mb5.6**/288, **MS5.6**/417, **56C-77D, Laos**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAMP	**Lampang**	**1.84**	**240**	P		**Pn**	**21 04 27.8**		**-2.3**
UTTA	**Uttaradit**	**1.84**	**203**	P		**Pn**	**21 04 27.3**		**-2.8**
CMAI	**Chiengmai2**	**2.20**	**283**	P		**Pn**	**21 04 33.0**		**-2.1**
CHTO	**Chiang Mai**	**2.33**	**255**			**Pn**	**21 04 34.4**		**-2.5**
CHTO	**Chiang Mai**	**2.33**	**255**	P		**Pb**	**21 04 39.3**		**-1.3**
CHTO				S		**Sg**	**21 05 12.3**		**-1.3**
CHTO	**Chiang Mai**	**2.33**	**255**	P		**Pn**	**21 04 36.5**		**-0.4**
CHTO	**Chiang Mai**	**2.33**	**255**	P		**Pn**	**21 04 34.4**		**-2.5**
CHTO	**Chiang Mai**	**2.33**	**255**	P		**Pn**	**21 04 34.3**		**-2.5**
PHIT	**Phitsanulok**	**2.41**	**201**	P		**Pn**	**21 04 35.9**		**-2.0**
CM09	**Chiang Mai Arr**	**2.42**	**246**	P		**Pn**	**21 04 35.0**		**-3.1**
CM31	**Chiang Mai Arr**	**2.46**	**247**			**Pn**	**21 04 35.8**		**-2.7**
CMAR	**Chiang Mai Arr**	**2.46**	**247**	Pn		**Pn**	**21 04 37.1**		**-1.5**
	60nm,0.3s,baz=62,slow=12,SNR=697								
CMAR				Lg		Lg	21 05 14.1		
	732nm,0.3s,baz=43,slow=15,SNR=3.6								
	247nm,0.4s								
CMAR	**Chiang Mai Arr**	**2.46**	**247**			**Pn**	**21 04 36.0**		**-2.6**
CMAR	**Chiang Mai Arr**	**2.46**	**247**	*i* P		**Pn**	**21 04 36.0**		**-2.6**
CMAR				pmax		pmax			
	comp=Z,304nm,0.4s								
KMI	**Kunming**	**5.80**	**13**	⇓P		**Pn**	**21 05 26.5**		**+1.8**
KMI				Sn		**Sn**	**21 06 34.5**		**+3.1**
KMI				Sg		**Sg**	**21 07 04.3**		**-0.5**
KMI				smax		smax			
	comp=Z,5μm,1.8s								
KMI				smax		smax			
	comp=Z,4μm,1.8s								
KMI				LR		LR			
	comp=Z,198μm,5.9s								
KMI				LR		LR			
	comp=Z,184μm,10.1s								
TNCH	**TengChong**	**6.13**	**335**	Pn		**Pn**	**21 05 29.0**		**-0.2**
TNCH				Sg		**Sg**	**21 07 13.4**		**-2.0**
TNCH				smax		smax			
	comp=Z,50μm,1.4s								
TNCH				smax		smax			
	comp=Z,46μm,1.9s								
TNCH				LR		LR			
	comp=Z,541μm,5.7s								
PZH	**PanZhiHua**	**7.03**	**3**	Pn		**Pn**	**21 05 41.8**		**+0.2**
PZH				Sg		**Sg**	**21 07 39.3**		**-5.1**
PZH				smax		smax			
	comp=Z,2μm,1.7s								
PZH				smax		smax			
	comp=Z,6μm,1.8s								
PZH				LR		LR			
	comp=Z,87μm,7.7s								
PZH				LR		LR			
	comp=Z,97μm,8.6s								
QIZ	**Qiongzhong**	**8.06**	**92**			**Pn**	**21 05 54.6**		**-1.1**
QIZ	**Qiongzhong**	**8.06**	**92**	P		**Pn**	**21 05 55.8**		**+0.1**
QIZ				S		**Sn**	**21 07 23.8**		**-3.1**
QIZ				pmax		pmax			
	comp=Z,2μm,3.4s								
QIZ				smax		smax			
	comp=Z,2μm,2.4s								
QIZ				smax		smax			
	comp=Z,880nm,1.9s								
QIZ				LR		LR			
	comp=Z,52μm,12.4s								
QIZ				LR		LR			
	comp=Z,54μm,13.7s								
QIZ	**Qiongzhong**	**8.06**	**92**	P		**Pn**	**21 05 55.5**		**-0.2**
GYA	**Guiyang**	**8.54**	**34**	⇓P		**Pn**	**21 06 01.8**		**-0.5**
GYA				S		**Sn**	**21 07 37.1**		**-1.6**
GYA				smax		smax			
	comp=Z,4μm,1.6s								
GYA				smax		smax			
	comp=Z,5μm,1.3s								
GYA				LR		LR			
	comp=Z,24μm,4.0s								
GYA				LR		LR			
	comp=Z,73μm,10.7s								
IMP	**Imphal**	**8.68**	**309**	*e*P		**Pn**	**21 06 06.2**		**+2.1**
IMP				IAmb		IAmb	21 06 24.1		
	comp=Z,344nm,1.1s								
KOHI	**KOHIMA**	**9.13**	**314**	*e*P		**Pn**	**21 06 12.5**		**+2.1**
KOHI				IAmb		IAmb	21 06 22.6		
	comp=Z,431nm,0.9s								
MOKO	**MOKOCHONG**	**9.28**	**319**	*e*P		**Pn**	**21 06 14.1**		**+1.6**
MOKO				IAmb		IAmb	21 06 25.4		
	comp=Z,463nm,1.1s								
LKP	**Lekhapani**	**9.32**	**328**	*e*P		**Pn**	**21 06 09.9**		**-2.9**
LKP				IAmb		IAmb	21 06 14.2		
	comp=Z,2μm,1.9s								
SILR	**SILCHAR**	**9.51**	**305**	*e*P		**Pn**	**21 06 17.7**		**+2.2**
BRDH	**Bariadhala**	**9.59**	**291**	Pn		**Pn**	**21 06 16.9**		**+0.3**
	comp=Z,22nm,0.3s,baz=78,slow=8.3,SNR=12								
BRDH				Sn		**Sn**	**21 08 10.4**		**+6.0**
	comp=Z,60nm,0.3s,baz=252,slow=20,SNR=2.4								
BRDH				Lg		Lg	21 08 55.9		
	comp=Z,73nm,0.3s,baz=37,slow=20,SNR=2.8								
BRDH				LR		LR	21 10 07.3		
	comp=Z,17μm,21.9s,baz=136,slow=39								
	comp=Z,262nm,0.8s								
JORH	**JORHAT**	**9.74**	**319**	*e*P		**Pn**	**21 06 22.1**		**+3.4**
DLV	**Lat**	**10.16**	**136**			**Pn**	**21 06 23.3**		**-1.3**
DLV	**Lat**	**10.16**	**136**	P		**Pn**	**21 06 27.6**		**+3.0**
PASG	**PASIGHAT**	**10.18**	**329**	*e*P		**Pn**	**21 06 27.2**		**+2.5**
GULI	**GuiLin**	**10.19**	**54**	P		Pn	21 06 14.0		-11
GULI				S		Sn	21 08 05.0		-14
GULI				pmax		pmax			
	comp=Z,370nm,1.0s								
GULI				pmax		pmax			
	comp=Z,1μm,8.9s								
GULI				LR		LR			
	comp=N,318μm,10.8s								
GULI				LR		LR			
	comp=E,226μm,9.1s								
GULI				LR		LR			
	comp=Z,56μm,7.8s								
AGT	**Agartala**	**10.35**	**297**	*e*P		**Pn**	**21 06 27.9**		**+0.9**
AGT				IAmb		IAmb	21 06 35.8		
	comp=Z,228nm,1.1s								
ITAN	**ITANAGAR**	**10.36**	**319**	*e*P		**Pn**	**21 06 28.9**		**+1.8**
TEZP	**TEZPUR**	**10.60**	**314**	*e*P		**Pn**	**21 06 30.6**		**+0.2**
TEZP				IAmb		IAmb	21 06 35.5		
	comp=Z,247nm,1.1s								
SHL	**Shillong**	**10.63**	**307**			**Pn**	**21 06 29.9**		**-1.2**
SHL	**Shillong**	**10.63**	**307**	P		**Pn**	**21 06 30.3**		**-0.7**
	SNR=280								
SHL				S		**Sn**	**21 08 36.4**		**+6.2**
SHL	**Shillong**	**10.63**	**307**	*e*P		**Pn**	**21 06 30.1**		**-1.0**
SHL				IAmb		IAmb	21 06 43.4		
	comp=Z,800nm,1.2s								
SHL	**Shillong**	**10.63**	**307**	P		**Pn**	**21 06 29.9**		**-1.2**
PBA	**Port Blair**	**11.32**	**228**	P		**Pn**	**21 06 44.7**		**+4.4**
CD2	**Chengdu**	**11.62**	**10**	P		**Pn**	**21 06 44.0**		**-0.5**
CD2				S		**Sn**	**21 08 55.8**		**+1.5**
CD2				pmax		pmax			
	comp=Z,2μm,8.1s								
CD2				LR		LR			
	comp=Z,116μm,11.0s								
CD2				LR		LR			
	comp=Z,165μm,11.0s								
GZH	**Guangzhou**	**11.78**	**70**	P		Pn	21 06 51.8		+5.2
GZH				S		Sn	21 09 09.5		+11
GZH				pmax		pmax			
	comp=Z,81nm,1.2s								
GZH				LR		LR			
	comp=Z,53μm,4.6s								
GZH				LR		LR			
	comp=Z,84μm,7.9s								
TAWA	**Tawang**	**11.87**	**315**	*e*P		**Pn**	**21 06 49.4**		**+1.3**
CAL	**Calcutta**	**12.52**	**286**	⇓*e*P		**Pn**	**21 06 55.9**		**-0.7**
COBR	**COOCHBEHAR**	**12.88**	**304**	*e*P		**Pn**	**21 06 60.0**		**-1.6**
ENH	**Enshi**	**13.07**	**33**			**Pn**	**21 07 02.4**		**-1.9**
ENH	**Enshi**	**13.07**	**33**	P		**Pn**	**21 07 03.3**		**-1.0**
CNSH	**ChangSha**	**13.72**	**49**	P		**Pn**	**21 07 12.0**		**-1.1**
CNSH				S		**Sn**	**21 09 46.6**		**+1.1**
CNSH				pmax		pmax			
	comp=Z,250nm,1.7s								
CNSH				LR		LR			
	comp=Z,132μm,10.3s								
CNSH				LR		LR			
	comp=Z,56μm,10.8s								
LSA	**Lhasa**	**13.77**	**320**			**Pn**	**21 07 13.3**		**-0.8**
LSA	**Lhasa**	**13.77**	**320**	P		**Pn**	**21 07 14.9**		**+0.7**
LSA				P		**Pn**	**21 07 14.9**		**+0.7**
LSA				S		**Sn**	**21 09 49.3**		**+2.0**
LSA				S		**Sn**	**21 09 49.3**		**+2.0**
LSA	**Lhasa**	**13.77**	**320**	P		Pn	21 07 09.3		-4.8
LSA				S		**Sn**	**21 09 43.8**		**-3.5**
LSA				pmax		pmax			
	comp=Z,2.0nm,0.4s								
LSA				LR		LR			
	comp=N,38μm,13.4s								
LSA				LR		LR			
	comp=E,24μm,13.4s								
LSA				LR		LR			
	comp=Z,26μm,13.7s								
LSA	**Lhasa**	**13.77**	**320**	P		**Pn**	**21 07 15.1**		**+1.0**
LSA	**Lhasa**	**13.77**	**320**	P		**Pn**	**21 07 13.3**		**-0.8**
SHBG	**Sahibganj**	**13.87**	**297**	*e*P		**Pn**	**21 07 14.5**		**-0.6**
SHBG				IAmb		IAmb	21 07 36.2		
	comp=Z,201nm,1.2s								
GTK	**Tadong**	**14.05**	**306**	*e*P		**Pn**	**21 07 17.7**		**-0.1**
GTK				IAmb		IAmb	21 07 36.1		
	comp=Z,389nm,1.3s								
KULM	**Kulim**	**14.09**	**183**			**Pn**	**21 07 18.4**		**+0.2**
KULM	**Kulim**	**14.09**	**183**	P		**Pn**	**21 07 21.3**		**+3.1**
BWNR	**Bhubaneshwar**	**14.62**	**276**	*e*P		**Pn**	**21 07 23.9**		**-1.6**
LHMI	**Lhok Sumawe**	**14.76**	**197**			**Pn**	**21 07 25.9**		**-1.5**
LHMI	**Lhok Sumawe**	**14.76**	**197**	P		**P**	**21 07 31.9**		**-1.5**
	comp=Z,7μmcomp=Z,5μmcomp=Z,224nm,1.5s								
IPM	**Ipoh**	**14.88**	**181**			**Pn**	**21 07 27.1**		**-1.9**
IPM	**Ipoh**	**14.88**	**181**	P		**Pn**	**21 07 31.7**		**+2.7**
BOK	**Bokaro**	**14.99**	**290**	*e*P		**Pn**	**21 07 30.0**		**-0.4**
BOK				IAmb		IAmb	21 07 43.2		
	comp=Z,98nm,0.9s								
EVN	**Everest**	**15.74**	**305**	Pn		**Pn**	**21 07 38.3**		**-2.6**
GAYA	**Gaya**	**15.83**	**293**	*e*P		**Pn**	**21 07 39.4**		**-2.0**
MLSI	**Meulaboh, Aceh**	**15.83**	**198**	P		**P**	**21 07 44.3**		**-1.1**
	comp=Z,7μmcomp=Z,530nm,1.2s								
XAN	**Xi'an**	**16.03**	**23**	⇑P		**Pn**	**21 07 40.8**		**-3.2**
XAN				pP		P	21 07 48.8		+1.3
XAN				S		**S**	**21 10 52.3**		**-3.3**
XAN				pmax		pmax			
	comp=Z,260nm,1.0s								
XAN				pmax		pmax			
	comp=Z,3μm,6.1s								
XAN				LR		LR			
	comp=Z,45μm,10.5s								
TSI	**Tuntungan**	**16.08**	**190**	P		**P**	**21 07 49.5**		**+1.4**
	comp=Z,6μmcomp=Z,9μmcomp=Z,276nm,1.6s								
WHN	**Wuhan**	**16.16**	**44**	⇑P		**Pn**	**21 07 46.8**		**+1.2**
WHN				pP		**pP**	**21 07 51.3**		**-1.0**
WHN				sP		**sP**	**21 07 55.1**		**+1.2**
WHN				PP		**PnPn**	**21 08 00.5**		**+6.0**
WHN				S		**Sn**	**21 10 51.3**		**+6.5**
WHN				pmax		pmax			
	comp=Z,1μm,1.1s								
WHN				pmax		pmax			
	comp=Z,6μm,7.6s								
WHN				LR		LR			
	comp=Z,64μm,7.3s								
KCSI	**Kotacane, Aceh**	**16.20**	**193**	P		**P**	**21 07 48.8**		**-0.7**
	comp=Z,4μmcomp=Z,3μmcomp=Z,225nm,1.0s								
LZDM	**Lanzhou Array**	**16.58**	**7**	Pn		**Pn**	**21 07 50.5**		**-0.8**
	baz=184,slow=13								
LZDM				LR		LR	21 14 07.8		
	comp=Z,10μm,20.6s,baz=175,slow=37								
	comp=Z,94nm,0.9s								
JHSG	**JHARSUGUGA**	**16.59**	**281**	*e*P		**Pn**	**21 07 49.8**		**-1.4**
PSI	**Prapat**	**16.71**	**188**	Pn		**P**	**21 07 56.3**		**+1.1**
	comp=Z,2.3nm,0.3s,baz=352,slow=11,SNR=19								
PSI				Sn		**S**	**21 11 05.2**		**-4.7**
	comp=Z,0.6nm,0.3s,baz=344,slow=17,SNR=0.9								
PSI				Lg		Lg	21 12 47.7		
	comp=Z,0.6nm,0.3s,baz=0.0,slow=4.0,SNR=3.0								
PSI				LR		LR	21 13 43.8		
	comp=Z,6μm,20.9s,baz=334,slow=35								
PSI	**Prapat**	**16.71**	**188**	P		**P**	**21 07 57.7**		**+2.5**
PSI	**Prapat**	**16.71**	**188**	P		**Pn**	**21 07 54.0**		**+1.1**
PSI				pmax		pmax			
	comp=Z,71nm,1.0s								
LZH	**Lanzhou**	**16.72**	**7**	*e*P		**Pn**	**21 07 52.6**		**-0.4**
LZH				pP		P	21 07 56.6		+1.3
LZH				S		**S**	**21 11 08.1**		**-1.9**
LZH				pmax		pmax			
	comp=Z,200nm,1.7s								
LZH				pmax		pmax			
	comp=Z,2μm,3.8s								
LZH				LR		LR			
	comp=Z,30μm,13.3s								
LZH				LR		LR			
	comp=Z,32μm,16.5s								
RPSI	**Rantau Prapat**	**16.82**	**188**			**Pn**	**21 07 54.0**		**-0.1**
RAGD	**RAYAGADA**	**16.86**	**272**	*e*P		**Pn**	**21 07 54.4**		**-0.3**
RAGD				IAmb		IAmb	21 08 08.4		
	comp=Z,191nm,1.2s								
QZH	**Quanzhou**	**16.90**	**68**	P		**Pn**	**21 07 54.4**		**-0.7**
QZH				S		**Sn**	**21 11 03.6**		**+0.6**
QZH				pmax		pmax			
	comp=Z,140nm,1.1s								
QZH				pmax		pmax			
	comp=Z,2μm,6.0s								
QZH				LR		LR			
	comp=Z,54μm,11.5s								
QZH				LR		LR			
	comp=Z,36μm,7.2s								
VIS	**Vishakhapatnam**	**17.14**	**267**	*e*P		**Pn**	**21 07 57.7**		**-0.5**
SNSI	**Sinabang, Aceh**	**17.63**	**197**	P		**P**	**21 08 06.3**		**+1.1**
	comp=Z,5μmcomp=Z,4μmcomp=Z,180nm,0.8s								
GOMU	**GeErMu**	**17.64**	**342**	P		**Pn**	**21 08 04.3**		**-0.4**
GOMU				pP		pP	21 08 07.5		-1.6
GOMU				sP		sP	21 08 11.8		+1.0
GOMU				S		**Sn**	**21 11 21.8**		**+0.4**
GOMU				LR		LR			
	comp=Z,34μm,9.7s								
GOMU				LR		LR			
	comp=Z,19μm,9.8s								
MYKOM	**Kota Tinggi**	**17.72**	**172**	P		**Pn**	**21 08 04.1**		**-1.4**
MYKOM	**Kota Tinggi**	**17.72**	**172**	P		**P**	**21 08 09.5**		**+3.2**
VAR	**Varanasi**	**17.89**	**292**	*e*P		**Pn**	**21 08 05.2**		**-2.3**
SBSI	**Sibolga**	**17.95**	**188**	P		**P**	**21 08 11.8**		**+3.0**
	comp=Z,7μmcomp=Z,165nm,0.8s								
GKPR	**Gorakhpur**	**17.97**	**297**	*e*P		**Pn**	**21 08 06.2**		**-2.2**
LYN	**LuoYang**	**18.00**	**31**	⇓*i*P		**Pn**	**21 08 07.4**		**-1.4**
LYN				PP		**PnPn**	**21 08 23.0**		**+3.1**
LYN				S		**Sn**	**21 11 26.8**		**-2.8**
LYN				sS		S	21 11 35.0		-0.8
LYN				SS		**SnSn**	**21 11 45.3**		**+1.8**
LYN				pmax		pmax			
	comp=Z,180nm,1.1s								
LYN				pmax		pmax			
	comp=Z,5μm,7.1s								
LYN				LR		LR			
	comp=Z,20μm,7.4s								
LYN				LR		LR			
	comp=Z,16μm,6.9s								
BTDF	**Bukit Timah Da**	**18.14**	**172**	P		**P**	**21 08 14.8**		**+3.9**
BLSP	**Bilaspur**	**18.14**	**282**	*e*P		**Pn**	**21 08 07.4**		**-3.2**
TPUB	**Ta-pu**	**18.39**	**75**			**P**	**21 08 13.3**		**-0.3**
TPUB				IAmb		IAmb	21 08 22.1		
	comp=Z,721nm,2.0s								
TPUB	**Ta-pu**	**18.39**	**75**	P		**Pn**	**21 08 14.5**		**+0.9**
GSI	**Gunungsitoli**	**18.40**	**192**	P		**Pn**	**21 08 17.7**		**+3.9**
MNSI	**Mandailing Nat**	**18.62**	**185**	P		**Pn**	**21 08 16.7**		**+0.3**
	comp=Z,219nm,1.0s								
TPRI	**Tanjung Pinang**	**18.68**	**170**	P		Pn	21 08 24.9		+7.7
TWG	**Pinlang**	**18.73**	**76**	P		**P**	**21 08 17.5**		**+0.1**
TWGBT	**Beinan**	**18.73**	**76**	P		**Pn**	**21 08 18.7**		**+0.9**
SSLB	**Suanglung**	**18.75**	**73**	P		**Pn**	**21 08 18.9**		**+0.8**
ALBI	**Allahabad**	**18.95**	**291**	*e*P		**P**	**21 08 17.7**		**-2.1**
BKNI	**Bangkinang**	**19.01**	**181**	P		**P**	**21 08 20.2**		**-0.2**
BKNI	**Bangkinang**	**19.01**	**181**	P		**P**	**21 08 19.0**		**-1.4**
BKNI	**Bangkinang**	**19.01**	**181**	P		**Pn**	**21 08 24.3**		**+3.2**
BKNI	**Bangkinang**	**19.01**	**181**	P		**Pn**	**21 08 22.0**		**+0.9**
	comp=Z,3μmcomp=Z,10μmcomp=Z,778nm,1.6s								
YULB	**Yu-li**	**19.01**	**75**			**P**	**21 08 19.8**		**-0.7**
YULB	**Yu-li**	**19.01**	**75**	P		**Pn**	**21 08 21.4**		**+0.3**
YHNB	**Yeheng**	**19.30**	**71**	P		**Pn**	**21 08 24.6**		**-0.1**
NACB	**Ninganchiao**	**19.40**	**72**	P		**Pn**	**21 08 26.4**		**+0.6**
TATO	**Taipei**	**19.46**	**70**	P		**P**	**21 08 25.0**		**-0.4**
TATO				S		**Sn**	**21 11 59.5**		**-5.4**
TGY	**Tagaytay City**	**19.52**	**103**	LR		LR	21 15 40.8		
	comp=Z,18μm,20.3s,baz=310,slow=36								
BRCI	**Bahraich**	**19.80**	**298**	⇑*e*P		**Pn**	**21 08 30.6**		**0.0**
PPI	**Padang Panjang**	**19.80**	**183**	P		**Pn**	**21 08 31.0**		**+0.3**
	comp=Z,3μmcomp=Z,2μmcomp=Z,125nm,1.3s								
VJD	**Vijayawada**	**19.87**	**265**	*e*P		**P**	**21 08 30.3**		**+0.4**
GTA	**Gaotai**	**19.94**	**357**	P		**Pn**	**21 08 31.8**		**-0.5**
GTA				sP		sP	21 08 39.0		+3.2
GTA				S		**Sn**	**21 12 15.8**		**-0.6**
GTA				pmax		pmax			
	comp=Z,370nm,1.3s								
GTA				pmax		pmax			
	comp=Z,3μm,6.6s								
GTA				LR		LR			
	comp=Z,23μm,15.3s								
GTA				LR		LR			
	comp=Z,27μm,11.3s								
SBUM	**Sibu**	**19.98**	**146**	P		**P**	**21 08 29.8**		**-1.2**
SBUM				IAmb		IAmb	21 08 38.6		
	comp=Z,417nm,1.3s								
SBUM	**Sibu**	**19.98**	**146**	P		**Pn**	**21 08 34.0**		**+1.2**
DSRI	**Dabo**	**20.06**	**170**	P		**P**	**21 08 32.1**		**+0.1**
	comp=Z,3μmcomp=Z,3μmcomp=Z,170nm,1.6s								
NJ2	**Nanjing**	**20.14**	**48**	*e*P		**P**	**21 08 32.0**		**-0.7**
NJ2				PP		**PnPn**	**21 08 55.8**		**+6.7**
NJ2				S		**S**	**21 12 18.4**		**-0.4**
NJ2				pmax		pmax			
	comp=Z,230nm,1.4s								
NJ2				pmax		pmax			
	comp=Z,2μm,3.5s								
NJ2				LR		LR			
	comp=Z,73μm,10.9s								
NJ2				LR		LR			
	comp=Z,42μm,11.0s								
LKN	**LUCKNOW**	**20.14**	**295**	*e*P		**P**	**21 08 31.8**		**-1.1**
PDSI	**Padang**	**20.25**	**182**	P		Pn	21 08 35.3		-0.7
	comp=Z,119nm,1.1s								
TIY	**Taiyuan**	**20.62**	**26**	P		Pn	21 08 39.1		-1.1
TIY				S		**S**	**21 12 29.9**		**+1.5**
TIY				pmax		pmax			
	comp=Z,450nm,1.3s								
TIY				pmax		pmax			
	comp=Z,2μm,3.5s								
TIY				LR		LR			
	comp=Z,18μm,8.5s								
TIY				LR		LR			
	comp=Z,34μm,11.0s								
SISI	**Saibi**	**20.76**	**186**	P		Pn	21 08 42.1		+0.1
	comp=Z,121nm,0.8s								
SSE	**Sheshan**	**21.34**	**53**	P		**P**	**21 08 46.3**		**+0.5**
SSE				S		**S**	**21 12 44.3**		**+1.5**
SSE				pmax		pmax			
	comp=Z,17nm,0.7s								
SSE				LR		LR			
	comp=Z,7μm,10.2s								
SSE				LR		LR			
	comp=Z,8μm,10.3s								
HNS	**HongShan**	**21.37**	**30**	⇓P		**P**	**21 08 45.6**		**-0.4**
HNS				S		Sn	21 12 47.6		-3.1
HNS				pmax		pmax			
	comp=Z,660nm,1.4s								
HNS				LR		LR			
	comp=Z,15μm,12.7s								
HNS				LR		LR			
	comp=Z,18μm,14.3s								
HNS				LR		LR			
	comp=Z,22μm,15.9s								
KRJI	**Kerinci**	**21.41**	**180**	P		**P**	**21 08 48.2**		**+1.6**
LGTI	**Lohaghat**	**21.58**	**302**	*e*P		**P**	**21 08 47.9**		**-0.5**
LGTI				IAmb		IAmb	21 08 58.6		
	comp=Z,314nm,

GUNA **GUNA** 22.81 287 *e*P P 21 09 01.7 0.0
AKL **Akola** 22.86 277 *e*P P 21 09 01.8 -0.3
TPI **Tanjungpandan** 22.93 164 P P 21 09 02.1 -0.7
MALK **Mahakanadarawa** 22.93 244 P P 21 09 01.8 -1.1
KSI **Kapahiang** 22.99 177 P P 21 09 04.5 +1.0
comp=Z,6μmcomp=Z,228nm,2.2s
HHC **Hu-ho-hao-te** 23.06 20 ⇓*i*P P 21 09 03.0 -1.1
HHC S S 21 13 17.0 +1.9
HHC pmax pmax
comp=Z,170nm,1.5s
HHC pmax pmax
comp=Z,3μm,4.3s
HHC LR LR
comp=Z,38μm,11.4s
HHC LR LR
comp=Z,17μm,10.9s
HHC LR LR
comp=Z,38μm,11.6s
PALK **Pallekele** 23.39 242 LR LR 21 17 56.4
comp=Z,2μm,20.5s,baz=64,slow=36
PALK **Pallekele** 23.39 242 P P 21 09 05.1 -2.6
PALK IAmb IAmb 21 09 14.5
comp=Z,226nm,1.4s
PALK **Pallekele** 23.39 242 P P 21 09 10.9 +3.2
PALK S S 21 13 27.3 +6.5
PALK **Pallekele** 23.39 242 *ce*P P 21 09 07.6 0.0
PALK pmax pmax
comp=Z,54nm,1.4s
PALK MLR MLR
comp=Z,3μm,16.0s
MERT **Meerut** 23.47 298 *e*P P 21 09 06.1 -2.1
SALM **Salem** 23.56 254 *e*P P 21 09 09.9 +0.7
DDI **Dehra Dun** 23.67 302 *e*P P 21 09 08.6 -1.7
DDI IAmb IAmb 21 09 32.0
comp=Z,310nm,1.0s
JMIU **JAMIA UNIVERSI** 23.72 297 *e*P P 21 09 09.4 -1.2
NDI **New Delhi** 23.81 297 *e*P P 21 09 09.6 -2.0
AYAN **Aya Nagar** 23.83 297 *e*P P 21 09 10.3 -1.4
NPLP **NPLP New Delhi** 23.84 297 *e*P P 21 09 11.9 0.0
NPLP IAmb IAmb 21 09 21.5
comp=Z,129nm,0.7s
MDSI **Maura Dua** 23.95 173 P P 21 09 11.0 -1.9
comp=Z,4μmcomp=Z,219nm,1.1s
BJT **Baijiatuau** 24.15 29 P P 21 09 14.2 -0.5
BJT **Baijiatuau** 24.15 29 P P 21 09 15.5 +0.8
BJT **Baijiatuau** 24.15 29 P P 21 09 14.2 -0.5
BJT pmax pmax
comp=Z,564nm,1.4s
BJT MLR MLR
comp=Z,13μm,19.0s
BJI **Beijing** 24.17 29 P P 21 09 14.6 -0.2
BJI S S 21 13 34.8 +2.0
BJI pmax pmax
comp=Z,150nm,1.3s
BJI pmax pmax
comp=Z,1μm,3.9s
BJI LR LR
comp=Z,9μm,9.8s
BJI LR LR
comp=Z,8μm,10.4s
BJI LR LR
comp=Z,8μm,16.7s
MTKI **Muara Teweh, K** 24.25 145 P P 21 09 16.9 +1.1
comp=Z,4μmcomp=Z,120nm,1.1s
JHJR **Jhajjar** 24.27 291 *e*P P 21 09 14.7 -1.3
KUDL **Kundal** 24.28 296 *e*P P 21 09 14.0 -1.9
KUDL IAmb IAmb 21 09 24.3
comp=Z,554nm,1.3s
KLI **Kotabumi** 24.41 171 P P 21 09 17.0 -0.2
comp=Z,2μmcomp=Z,4μmcomp=Z,324nm,1.2s
LWLI **Liwa** 24.46 173 P P 21 09 18.3 +0.5
comp=Z,2μmcomp=Z,256nm,0.9s
RTK **Rohtak** 24.59 298 *e*P P 21 09 17.7 -1.1
SMLA **Simla** 24.68 303 *e*P P 21 09 19.8 +0.2
SMLA IAmb IAmb 21 09 36.6
comp=Z,549nm,1.4s
KOD **Kodaikanal** 24.78 252 *e*P P 21 09 21.3 +0.3
CGRH **CHANDIGARH** 24.85 302 *e*P P 21 09 22.0 +0.9
BLSI **Bandar Lampung** 24.96 171 P P 21 09 22.9 +0.7
BHK **Bhakra** 25.39 303 *e*P P 21 09 25.9 -0.1
BKB **Balikpapan** 25.64 142 P P 21 09 26.3 -2.1
BKB IAMs_20 IAMs_20 21 20 55.5
comp=Z,16μm,19.0s
BKB **Balikpapan** 25.64 142 P P 21 09 30.2 +1.8
BKB **Balikpapan** 25.64 142 P P 21 09 28.0 -0.4
DHRM **DHARAMSHALA** 25.80 305 *e*P P 21 09 28.0 -2.0
DHRM IAmb IAmb 21 09 40.8
comp=Z,322nm,0.7s
JOW **Kunigami** 25.82 68 LR LR 21 19 30.5
comp=Z,5μm,18.6s,baz=273,slow=36
KAD **Karad** 25.83 270 *e*P P 21 09 29.9 -0.3
KAD IAmb IAmb 21 09 35.5
comp=Z,184nm,1.1s
SBJI **Serang** 25.85 169 P P 21 09 32.0 +1.8
comp=Z,4μmcomp=Z,160nm,1.0s
TLWR **Talawar** 25.95 304 *e*P P 21 09 29.4 -1.8
TLWR IAmb IAmb 21 09 36.7
comp=Z,202nm,0.7s
POO **Poona** 25.98 273 *e*P P 21 09 31.1 -0.4
UDPR **Udaipur** 26.07 286 *e*P P 21 09 32.4 0.0
UDPR IAmb IAmb 21 09 39.2
comp=Z,99nm,0.6s
TSSA **Tissa** 26.15 306 *e*P P 21 09 31.4 -1.7
TSSA IAmb IAmb 21 09 54.5
comp=Z,220nm,1.3s
DL2 **Dalian** 26.17 38 P P 21 09 34.8 +1.8
DL2 S S 21 14 06.8 +2.1
DL2 pmax pmax
comp=Z,130nm,1.3s
DL2 pmax pmax
comp=Z,1μm,5.4s
DL2 LR LR
comp=Z,19μm,14.9s
DL2 LR LR
comp=Z,16μm,8.3s
MPSI **Mapaga** 26.31 134 P P 21 09 35.0 +0.5
BBKI **Banjar Baru** 26.37 148 P P 21 09 36.4 +1.4
comp=Z,95nm,0.9s
TOLI2 **Tolitoli** 26.37 131 P 21 09 33.4 -1.7
TOLI2 IAmb IAmb 21 09 42.1
comp=Z,95nm,1.1s
TOLI2 **Tolitoli** 26.37 131 P P 21 09 35.5 +0.5
DBJI **Dramaga** 26.39 168 P P 21 09 36.6 +1.5
comp=Z,4μmcomp=Z,250nm,1.6s
DAV **Davao City (W)** 26.58 114 LR LR 21 20 17.5
comp=Z,6μm,19.1s,baz=304,slow=37
WMQ **Urumqi** 26.85 338 ⇓P P 21 09 41.0 +1.8
WMQ S S 21 14 19.8 +4.2
WMQ pmax pmax
comp=Z,120nm,1.3s
WMQ pmax pmax
comp=Z,450nm,3.6s
WMQ LR LR
comp=Z,16μm,14.9s
WMQ LR LR
comp=Z,6μm,13.7s
BKNR **BIKANER** 27.00 294 *e*P P 21 09 39.8 -0.9
PCI **Palu** 27.19 136 P P 21 09 43.2 +0.8
comp=Z,2μmcomp=Z,81nm,1.1s
XLT **XiLinHaoTe** 27.34 24 *e*P P 21 09 44.3 +0.7
XLT pP sP 21 09 48.6 -0.2
XLT S S 21 14 24.3 +1.0
XLT pmax pmax
comp=Z,87nm,1.2s
XLT pmax pmax
comp=Z,930nm,5.7s
XLT LR LR
comp=Z,2μm,9.1s
XLT LR LR
comp=Z,15μm,13.1s
XLT LR LR
comp=Z,22μm,11.4s
BBJI **Bungbulang** 27.46 166 P P 21 09 47.8 +2.9
KPJI **Karang Pucung** 27.65 164 P P 21 09 46.6 +0.1
comp=Z,3μmcomp=Z,227nm,1.3s
SMRI **Semarang** 27.82 160 P P 21 09 47.0 -1.1
SMRI IAmb IAmb 21 09 58.5
comp=Z,165nm,1.0s
SMRI **Semarang** 27.82 160 P P 21 09 51.1 +3.0
SMRI **Semarang** 27.82 160 P P 21 09 51.0 +3.0
comp=Z,193nm,1.2s
HJU **Haeju** 28.16 44 P P 21 09 49.9 -1.0
HJU S S 21 14 36.8 +0.6
HJU AmB
comp=Z,719nm,1.9s
HJU AMS AMS
comp=Z,7μm,10.6s
TJN **Taejon** 28.40 48 P P 21 09 51.1 -1.9
TJN **Taejon** 28.40 48 P P 21 09 53.9 +0.9
TJN **Taejon** 28.40 48 *ce*P P 21 09 53.1 +0.1
INCN **Inchon** 28.46 46 P P 21 09 52.5 -1.1
INCN IAmb IAmb 21 09 54.3
comp=Z,87nm,1.2s
INCN **Inchon** 28.46 46 P P 21 09 53.1 -0.6
INCN S S 21 14 41.1 +0.1
INCN **Inchon** 28.46 46 P P 21 09 53.7 +0.1
INCN **Inchon** 28.46 46 P P 21 09 52.5 -1.1
INCN pmax pmax
comp=Z,87nm,1.2s
INCN MLR MLR
comp=Z,6μm,19.0s
SONM **Songino Array** 28.61 7 P P 21 09 54.3 -0.7
comp=Z,85nm,1.1s,baz=190,slow=9.0,SNR=133
SONM PcP PcP 21 13 05.5 -0.4
comp=Z,20nm,1.2s,baz=265,slow=1.5,SNR=4.9
SONM LR LR 21 22 46.6
comp=Z,15μm,20.0s,baz=182,slow=40
comp=Z,85nm,1.1s
UGM **Wanagama** 28.66 161 P P 21 09 58.6 +3.0
NIL **Nilore** 28.70 305 P P 21 09 53.0 -2.9
NIL IAmb IAmb 21 10 43.7
comp=Z,230nm,1.2s
NIL **Nilore** 28.70 305 P P 21 09 56.7 +0.9
NIL **Nilore** 28.70 305 P P 21 09 53.0 -2.9
NIL pmax pmax
comp=Z,230nm,1.3s
ULN **Ulaanbaatar** 28.73 8 P P 21 09 54.7 -1.3
ULN IAmb IAmb 21 09 58.6
comp=Z,247nm,1.4s
ULN **Ulaanbaatar** 28.73 8 IAMs_20 IAMs_20 21 22 26.9
comp=Z,20μm,21.0s
ULN **Ulaanbaatar** 28.73 8 P P 21 09 56.0 0.0
ULN S S 21 14 46.4 +1.2
ULN **Ulaanbaatar** 28.73 8 *c* ⇓*i*P P 21 09 55.6 -0.4
ULN pmax pmax
comp=Z,114nm,1.3s
ULN MLR MLR
comp=Z,14μm,17.0s
PYAG **Pyongyang** 28.76 42 P P 21 09 55.0 -1.2
PYAG S S 21 14 45.0 -0.7
PYAG AmB
comp=Z,324nm,3.6s
PYAG AMS AMS
comp=Z,9μm,12.5s
JASL **Jaisalmer** 28.88 291 *e*P P 21 09 54.9 -2.5
SNY **Shenyang** 29.24 35 ⇓P P 21 09 59.9 -0.5
SNY S S 21 14 49.0 -4.0
SNY pmax pmax
comp=Z,460nm,5.0s
SNY LR LR
comp=Z,4μm,7.6s
SNY LR LR
comp=Z,12μm,12.3s
SNY LR LR
comp=Z,9μm,14.0s
KSAR **Wonju Array Be** 29.29 47 P P 21 09 59.6 -1.4
KSAR **Wonju Array Be** 29.29 47 P P 21 09 59.6 -1.4
LUWI **Luwuk** 29.29 132 P P 21 09 59.1 -2.1
LUWI **Luwuk** 29.29 132 P 21 10 00.5 -0.7
LUWI **Luwuk** 29.29 132 P P 21 10 03.7 +2.5
LUWI **Luwuk** 29.29 132 P P 21 10 02.2 +1.0
KS19 **Wonju Array Si** 29.31 47 P P 21 09 59.5 -1.6
KSRS **Korea Array** 29.32 47 P P 21 10 00.0 -1.2
comp=Z,12nm,1.0s,baz=241,slow=9.7,SNR=11
KSRS PcP PcP 21 13 08.0 +0.3
comp=Z,6.2nm,0.9s,baz=247,slow=3.4,SNR=8.7
KSRS LR LR 21 23 40.7
comp=Z,3730μm,18.3s,baz=230,slow=40
comp=Z,12nm,1.0s
KSH **Kashi** 29.61 318 P P 21 10 04.1 +0.2
KSH sP sP 21 10 10.9 +1.6
KSH S S 21 15 06.3 +7.1
KSH pmax pmax
comp=Z,38nm,1.1s
KSH LR LR
comp=Z,10μm,14.9s
KSH LR LR
comp=Z,13μm,16.6s
JNU **Nakatsue** 29.68 57 LR LR 21 21 52.4
comp=Z,9μm,18.1s,baz=250,slow=36
JNU **Nakatsue** 29.68 57 P P 21 10 04.1 -0.4
JNU **Nakatsue** 29.68 57 P P 21 10 05.6 +1.1
TARG **Taragay, Kyrgy** 29.87 323 P 21 10 05.6 -1.0
TARG **Taragay, Kyrgy** 29.87 323 P P 21 10 05.6 -1.0
TARG pmax pmax
comp=Z,49nm,1.0s
SHLS **Shalkode** 29.95 327 *e*P P 21 10 05.0 -2.0
SHLS *e*S S 21 15 01.4 -3.1
SHLS **Shalkode** 29.95 327 *e*P P 21 10 04.9 -2.0
SHLS *e*S S 21 15 01.4 -3.1
PRZ **Przheval'sk** 30.04 325 P 21 10 07.6 -0.2
PRZ IAmb IAmb 21 10 12.2
comp=Z,83nm,1.0s
PRZ **Przheval'sk** 30.04 325 P P 21 10 07.6 -0.2
PRZ pmax pmax
comp=Z,83nm,1.0s
UZB **Uzynbulak** 30.17 326 *e*P P 21 10 08.6 -0.3
UZB **Uzynbulak** 30.17 326 *e*P P 21 10 08.6 -0.3
KAPI **Kappang** 30.33 141 P P 21 10 11.4 +1.0
comp=Z,4.2nm,0.4s,baz=285,slow=11,SNR=5.0
KAPI LR LR 21 25 34.5
comp=Z,7μm,18.1s,baz=316,slow=43
comp=Z,4.2nm,0.4s
KAPI **Kappang** 30.33 141 P P 21 10 08.0 -2.4
KAPI **Kappang** 30.33 141 P P 21 10 11.7 +1.4
KAPI P P 21 10 11.7 +1.4
KAPI P P 21 10 11.7 +1.4
KAPI S S 21 15 16.6 +6.0
KAPI S S 21 15 16.6 +6.0
KAPI S S 21 15 16.6 +6.0
KAPI **Kappang** 30.33 141 P P 21 10 12.9 +2.5
KAPI **Kappang** 30.33 141 *ce*P P 21 10 11.4 +1.0
KAPI pmax pmax
comp=Z,24nm,1.4s
KAPI MLR MLR
comp=Z,7μm,18.0s
HHU **Hamhung** 30.39 42 P P 21 10 09.4 -1.2
HHU S S 21 15 10.2 -0.9
HHU AmB
comp=Z,356nm,1.8s
HHU AMS AMS
comp=Z,18μm,11.3s
KDJ **Kajisay** 30.48 323 P P 21 10 10.1 -1.6
KDJ IAmb IAmb 21 10 15.7
comp=Z,83nm,1.0s
KDJ **Kajisay** 30.48 323 P P 21 10 10.1 -1.6
KDJ pmax pmax
comp=Z,83nm,1.0s
JAGI **Jajag, Banyuwa** 30.49 154 P 21 10 11.1 -0.6
JAGI **Jajag, Banyuwa** 30.49 154 P P 21 10 14.7 +3.0
ZAK **Zakamensk** 30.90 2 *e*P P 21 10 14.7 -0.5
ZAK *e* 21 20 50.9
ZAK pmax pmax
comp=Z,172nm,1.6s
ZSN **Zaisan** 30.99 338 *e*P P 21 10 15.9 0.0
ZSN *e*S S 21 15 21.1 +0.7
ZSN **Zaisan** 30.99 338 *e*P P 21 10 15.8 0.0
ZSN *e*S S 21 15 21.1 +0.7
ULHL **Ulahol** 31.09 322 P P 21 10 20.0 +2.8
SNR=14
TNSS **Tian-Shan** 31.21 324 *e*P P 21 10 17.9 -0.5
TNSS **Tian-Shan** 31.21 324 *e*P P 21 10 17.8 -0.5
KNGR **Kungurtug, Tuv** 31.23 355 *de*P P 21 10 20.3 +2.2
KNGR pmax pmax
comp=Z,166nm,1.1s
KNGR MLR MLR
comp=Z,4μm,11.0s
MDOK **Medeo** 31.24 325 *e*P P 21 10 18.0 -0.3
MDOK *e*S S 21 15 25.0 +0.2
MDOK LR LR 21 24 18.3
MDOK **Medeo** 31.24 325 *e*P P 21 10 18.0 -0.3
MDOK *e*S S 21 15 24.9 +0.2
AAA **Alma-Ata** 31.34 324 *e*P P 21 10 19.1 -0.1
comp=Z,53nm,0.7s
AAA LR LR 21 24 23.9
comp=Z,8μm,13.3s
AAA **Alma-Ata** 31.34 324 *e*P P 21 10 19.0 -0.1
AAA pmax pmax
comp=Z,53nm,0.7s
AAA MLR MLR
comp=Z,8μm,13.0s
MK31 **Makanchi Array** 31.42 335 *de*P P 21 10 19.0 -0.7
MKAR **Makanchi Array** 31.42 335 P P 21 10 18.9 -0.8
comp=Z,57nm,0.8s,baz=143,slow=9.7,SNR=152
MKAR PcP PcP 21 13 12.9 -0.2
comp=Z,14nm,1.0s,baz=150,slow=4.7,SNR=3.3
MKAR LR LR 21 23 34.6
comp=Z,5μm,19.3s,baz=140,slow=38
comp=Z,57nm,0.8s
MKAR **Makanchi Array** 31.42 335 P P 21 10 18.4 -1.2
MKAR **Makanchi Array** 31.42 335 *i* P P 21 10 18.8 -0.9
MKAR pmax pmax
comp=Z,57nm,0.9s
BOOM **Boomskoye usch** 31.42 323 P P 21 10 18.6 -1.4
BOOM IAmb IAmb 21 10 23.5
comp=Z,65nm,1.1s
BOOM **Boomskoye usch** 31.42 323 P P 21 10 18.6 -1.4
BOOM pmax pmax
comp=Z,65nm,1.1s
TNTI **Ternate** 31.55 123 P P 21 10 19.9 -1.3
TNTI IAmb IAmb 21 10 24.9
comp=Z,132nm,1.6s
TNTI **Ternate** 31.55 123 P P 21 10 22.9 +1.7
MAKZ **Makanchi** 31.56 334 P P 21 10 19.8 -1.1
MAKZ **Makanchi** 31.56 334 P P 21 10 19.8 -1.1
MAKZ pmax pmax
comp=Z,35nm,1.0s
MAKZ MLR MLR
comp=Z,7μm,20.0s
CN2 **Changchun** 31.59 34 P P 21 10 20.8 -0.4
CN2 PP PnPn 21 11 26.0 +1.4
CN2 PcP PcP 21 13 14.5 +1.0
CN2 S S 21 15 26.5 -3.3
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,540nm,6.0s
CN2 LR LR
comp=Z,10μm,12.0s
CN2 LR LR
comp=Z,13μm,13.0s
TDK **Taldyqorghan** 31.80 328 *e*P P 21 10 23.0 -0.1
comp=Z,67nm,1.3s
TDK LR LR 21 24 44.9
comp=Z,5μm,14.9s
TDK **Taldyqorghan** 31.80 328 *e*P P 21 10 22.9 -0.1
TDK pmax pmax
comp=Z,67nm,1.3s
TDK MLR MLR
comp=Z,5μm,15.0s
TKM2 **Tokmak 2** 31.89 323 P P 21 10 24.2 0.0
SNR=57
UCH **Uchtor** 32.09 321 P P 21 10 26.2 0.0
SNR=42
KBK **Karagaybulak** 32.10 322 P P 21 10 26.6 +0.6
SNR=47
MOY **Mondy** 32.15 360 *e*P P 21 10 27.6 +1.4
MOY pmax pmax
comp=Z,117nm,1.7s
DGZ **Jazzator, Alta** 32.16 343 *d*⇓*i*P P 21 10 28.2 +1.8
DGZ pmax pmax
comp=Z,82nm,1.0s
DGZ MLR MLR
comp=Z,5μm,15.0s
TLY **Talaya** 32.22 3 P P 21 10 27.5 +0.9
JMN **Monobe** 32.25 57 P P 21 10 27.2 0.0
JMN IAmb IAmb 21 10 30.4
comp=Z,137nm,1.2s
JMN **Monobe** 32.25 57 P P 21 10 28.0 +0.8
KBL **Kabul** 32.28 304 P P 21 10 25.3 -2.4
KBL IAmb IAmb 21 10 35.0
comp=Z,142nm,1.4s
KBL **Kabul** 32.28 304 P P 21 10 27.1 -0.6
SNR=40
KBL P P 21 10 27.1 -0.6
SNR=40
KBL S S 21 15 43.6 +2.2
KBL S S 21 15 43.6 +2.2
KBL **Kabul** 32.28 304 P P 21 10 25.3 -2.4
KBL pmax pmax
comp=Z,142nm,1.5s
SANI **Sanana** 32.30 129 P P 21 10 26.4 -1.4
SANI **Sanana** 32.30 129 P P 21 10 30.4 +2.6
DRK **Karamyk** 32.32 314 P P 21 10 27.0 -1.0
DRK IAmb IAmb 21 10 35.1
comp=Z,124nm,1.0s
DRK **Karamyk** 32.32 314 P P 21 10 27.0 -1.0
DRK pmax pmax
comp=Z,124nm,1.0s
AAK **Ala-Archa** 32.35 322 P P 21 10 28.4 +0.3
comp=Z,40nm,0.9s,baz=136,slow=4.9,SNR=46
AAK LR LR 21 24 06.7
comp=Z,5μm,19.8s,baz=120,slow=38
comp=Z,40nm,0.9s
AAK **Ala-Archa** 32.35 322 P P 21 10 27.5 -0.6
AAK **Ala-Archa** 32.35 322 P P 21 10 29.1 +0.9
AAK S S 21 15 45.0 +2.8
AAK **Ala-Archa** 32.35 322 P P 21 10 28.9 +0.8
SNR=31
AAK **Ala-Archa** 32.35 322 *i* P P 21 10 27.2 -0.9
SNR=32
AAK **Ala-Archa** 32.35 322 *de*P P 21 10 29.3 +1.1
AAK pmax pmax
comp=Z,83nm,1.3s
AAK MLR MLR
comp=Z,5μm,17.0s
CHMS **Chumysh** 32.42 322 P P 21 10 29.4 +0.8
SNR=6.8
PLAI **Plampang** 32.44 149 P P 21 10 32.1 +3.2
ARSB **Arslanbob** 32.51 318 P P 21 10 28.1 -1.4
ARSB IAmb IAmb 21 10 51.0
comp=Z,110nm,1.6s
ARSB **Arslanbob** 32.51 318 P P 21 10 28.1 -1.4
ARSB pmax pmax
comp=Z,110nm,1.6s
USP **Ospenovka** 32.73 322 P P 21 10 31.3 -0.1
SNR=37
SGDS **Sogindy** 32.77 323 ⇓*i*P P 21 10 31.4 -0.3
SGDS *e*S S 21 15 48.9 +0.4
EKS2 **Erkin-Say** 32.79 321 P P 21 10 35.1 +3.2
SNR=23
IRK **Irkutsk** 32.81 3 *e*P P 21 10 31.4 -0.4
IRK *e*S S 21 15 47.2 -1.5
IRK pmax pmax
comp=Z,770nm,1.9s
GAR **Garm** 33.10 313 P 21 10 33.0 -1.7
HIA **Hailar** 33.22 22 P P 21 10 33.8 -1.7
HIA IAmb IAmb 21 10 37.0
comp=Z,92nm,1.1s
HIA **Hailar** 33.22 22 P P 21 10 35.5 0.0
HIA **Hailar** 33.22 22 P P 21 10 33.8 -1.7
HIA pmax pmax
comp=Z,92nm,1.1s
HIA MLR MLR
comp=Z,16μm,18.0s
HILR **Hailar Array B** 33.47 22 P P 21 10 36.5 -1.2
comp=Z,41nm,0.7s,baz=192,slow=10,SNR=45
HILR PcP PcP 21 13 19.7 +1.0
comp=Z,15nm,0.8s,baz=189,slow=2.9,SNR=6.7
HILR LR LR 21 25 05.4
comp=Z,8μm,19.4s,baz=125,slow=38
comp=Z,41nm,0.7s
CHGR **Chuyangaron** 33.76 311 P 21 10 38.2 -2.3
CHGR IAmb IAmb 21 10 46.6
comp=Z,78nm,0.8s
CHGR **Chuyangaron** 33.76 311 P P 21 10 38.2 -2.3
CHGR pmax pmax
comp=Z,78nm,0.8s
CIT **Chita** 33.89 14 *e*P P 21 10 40.6 -0.7
CIT *e* 21 10 46.2
CIT *e* 21 13 21.0
CIT *e* 21 18 32.6
CIT pmax pmax
comp=Z,283nm,1.5s
BNX **BinXian** 33.92 33 ⇓P P 21 10 40.6 -1.0
BNX S S 21 16 05.6 -0.5
BNX pmax pmax
comp=Z,53nm,1.1s
BNX pmax pmax
comp=Z,500nm,6.1s
BNX LR LR
comp=Z,9μm,14.9s
BNX LR LR
comp=Z,10μm,11.6s
BNX LR LR

comp=Z,12µm,10.6s
PSTR Posyet 33.96 41 ⇓ *e*P P 21 10 42.3 +0.4
BTLS Baital 34.10 325 ⇓ *i*P P 21 10 43.0 -0.2
BTLS Baital 34.10 325 *d i*P P 21 10 43.0 -0.2
MDJ Mudanjiang 34.39 37 P P 21 10 44.3 -1.4
MDJ Mudanjiang 34.39 37 P P 21 10 45.6 -0.1
MDJ PcP **PcP** 21 13 21.9 +0.6
MDJ S **S** 21 16 12.6 -0.8
MDJ pmax pmax
comp=Z,26nm,1.2s
MDJ pmax pmax
comp=Z,750nm,8.9s
MDJ LR LR
comp=Z,16µm,12.4s
MDJ LR LR
comp=Z,19µm,11.0s
MDJ Mudanjiang 34.39 37 P P 21 10 46.3 +0.6
DZA Taraz 34.40 319 *e*P P 21 10 45.5 -0.3
DZA Taraz 34.40 319 *e*P P 21 10 45.5 -0.3
MMRI Maumere 34.69 142 P P 21 10 47.9 -0.7
MMRI IAmb IAmb 21 11 01.3
comp=Z,114nm,1.0s
MMRI Maumere 34.69 142 P P 21 10 50.9 +2.3
IUG luzhnay 34.82 317 ⇓ *i*P P 21 10 49.2 -0.4
comp=Z,166nm,1.5s
IUG luzhnay 34.82 317 *d i*P P 21 10 49.1 -0.4
IUG pmax pmax
comp=Z,166nm,1.5s
VLA Vladivostok 34.88 41 *de*P P 21 10 50.4 +0.5
VLA pmax pmax
comp=Z,111nm,2.0s
VLA MLR MLR
comp=Z,6µm,15.0s
KK31 Karatay Array 35.02 319 P 21 10 49.1 -2.1
KK31 Karatay Array 35.02 319 P P 21 10 49.1 -2.1
KK31 pmax pmax
comp=Z,30nm,0.9s
KKAR Karatay Array 35.02 319 P P 21 10 48.7 -2.5
KKAR Karatay Array 35.02 319 P P 21 10 48.7 -2.5
CHM Chimkent 35.18 317 *e*P P 21 10 52.4 -0.3
comp=Z,84nm,1.0s
CHM *e*S S 21 16 25.9 +0.2
CHM LR LR 21 26 55.4
CHM Chimkent 35.18 317 *e*P P 21 10 52.3 -0.3
CHM *e*S S 21 16 25.9 +0.2
CHM pmax pmax
comp=Z,84nm,1.0s
INU Inuyama 35.20 56 P 21 10 52.0 -0.8
INU IAmb IAmb 21 10 54.7
comp=Z,130nm,1.3s
INU Inuyama 35.20 56 P P 21 10 53.7 +0.9
BRLS Boroldaу 35.40 319 *e*P P 21 10 53.4 -1.1
BRLS *e*S S 21 16 28.6 -0.5
BRLS Boroldaу 35.40 319 *e*P P 21 10 53.4 -1.1
BRLS *e*S S 21 16 28.6 -0.5
USRK Ussuriysk Ar. 35.54 39 P P 21 10 53.6 -2.0
comp=Z,60nm,0.9s,baz=204,slow=4.2,SNR=55
comp=Z,60nm,0.9s
JGF Kuroka 35.55 56 P 21 10 55.2 -0.7
JGF Kuroka 35.55 56 P P 21 10 56.7 +0.9
KURBB Kurchatov Arra 35.97 335 P P 21 10 58.6 -0.6
comp=Z,17nm,0.9s,baz=148,slow=8.6,SNR=74
KURBB PcP **PcP** 21 13 26.6 +0.8
comp=Z,16nm,1.1s,baz=145,slow=1.8,SNR=8.3
KURBB LR LR 21 25 17.9
comp=Z,7µm,21.6s,baz=134,slow=36
comp=Z,17nm,0.9s
KURK Kurchatov 36.01 335 P P 21 10 57.8 -1.7
KURK Kurchatov 36.01 335 IAMs_20 IAMs_20 21 27 08.1
comp=Z,13µm,19.0s
KURK Kurchatov 36.01 335 P P 21 10 59.1 -0.5
KURK S **S** 21 16 40.3 +2.2
KURK Kurchatov 36.01 335 *ce*P P 21 10 59.0 -0.5
KURK pmax pmax
comp=Z,103nm,1.3s
KURK MLR MLR
comp=Z,8µm,16.0s
MJB9 Matsu-Tunnel 36.48 54 P P 21 11 02.9 -0.9
MJB9 IAmb IAmb 21 11 06.5
comp=Z,170nm,1.1s
MAJO Matsushiro 36.48 54 P P 21 11 01.9 -2.0
MAJO IAmb IAmb 21 11 05.5
comp=Z,174nm,1.1s
MAJO Matsushiro 36.48 54 P P 21 11 04.4 +0.6
MAJO Matsushiro 36.48 54 *de*P P 21 11 03.9 +0.1
MAJO pmax pmax
comp=Z,112nm,1.0s
MAJO MLR MLR
comp=Z,7µm,16.0s
MJAR Matsushiro Arr 36.48 54 P P 21 11 02.5 -1.3
comp=Z,81nm,1.1s,baz=263,slow=7.5,SNR=60
MJAR PcP **PcP** 21 13 29.0 +1.3
comp=Z,21nm,1.1s,baz=258,slow=4.1,SNR=6.0
comp=Z,81nm,1.1s
MJAR Matsushiro Arr 36.48 54 P P 21 11 02.0 -1.9
MJAR IAmb IAmb 21 11 05.6
comp=Z,207nm,1.2s
ZAA0 Zalesovo Array 36.70 344 P 21 11 04.2 -1.2
ZALV Zalesovo Beam 36.70 344 P P 21 11 04.8 -0.6
comp=Z,286nm,0.9s,baz=153,slow=9.0,SNR=136
ZALV LR LR 21 27 08.2
comp=Z,4µm,18.5s,baz=152,slow=38
comp=Z,286nm,0.9s
ZALV Zalesovo Beam 36.70 344 P P 21 11 04.3 -1.1
ZALV Zalesovo Beam 36.70 344 *i* P P 21 11 04.5 -0.9
ZALV pmax pmax
comp=Z,286nm,0.9s
BATI Baumata 36.78 141 P P 21 11 06.7 +0.1
comp=Z,41nm,0.7s,baz=114,slow=5.1,SNR=8.4
comp=Z,41nm,0.7s
SOEI Soe 36.79 140 P P 21 11 04.7 -2.0
SOEI Soe 36.79 140 P 21 11 04.9 -1.8
SOEI IAmb IAmb 21 11 45.5
comp=Z,236nm,1.2s
SOEI Soe 36.79 140 P P 21 11 07.8 +1.1
JHJ Hachijo jima 2 36.87 60 LR LR 21 25 08.5
comp=Z,6µm,21.2s,baz=268,slow=34
JSD Sado 37.00 52 P P 21 11 07.7 -0.5
JSD IAmb IAmb 21 11 14.0
comp=Z,134nm,1.3s
JSD Sado 37.00 52 P P 21 11 09.1 +0.9
HEH HeiHe 37.08 28 *e*P P 21 11 08.6 -0.1
HEH PP **PnPn** 21 12 36.1 +2.7
HEH PcP **PcP** 21 13 29.8 +0.7
HEH S **S** 21 16 54.1 -0.4
HEH pmax pmax
comp=Z,62nm,1.1s
HEH pmax pmax
comp=Z,930nm,5.0s
HEH LR LR
comp=Z,10µm,13.3s
HEH LR LR
comp=Z,12µm,15.4s
NGCH Negor - Chabah 37.51 287 P P 21 11 17.3 +4.6
NGCH S **S** 21 17 06.4 +4.8
HRA Herat 37.64 301 P 21 11 11.0 -2.9
FAKI Fak Fak 37.66 123 P 21 11 11.5 -2.6
FAKI Fak Fak 37.66 123 P P 21 11 16.4 +2.4
BRZS Berezniki 38.06 330 *e*P P 21 11 17.2 +0.1
BRZS Berezniki 38.06 330 *e*P P 21 11 17.1 +0.1
JCJ Chichijima 38.17 71 LR LR 21 26 46.0
comp=Z,2µm,19.6s,baz=282,slow=36
TEY Ternei 38.78 41 ⇑ *e*P P 21 11 23.7 +0.6
TEY pmax pmax
comp=N,20nm,1.7s
TEY pmax pmax
comp=E,20nm,1.6s
TEY pmax pmax
comp=Z,50nm,1.8s
TEY MLR MLR
comp=E,300nm,11.0s
TEY MLR MLR
comp=N,200nm,12.0s
TEY MLR MLR
comp=Z,500nm,13.0s
JMM Marumori 38.85 53 P 21 11 22.5 -1.3
JMM IAmb IAmb 21 11 24.8
comp=Z,117nm,1.0s
JMM Marumori 38.85 53 P P 21 11 24.6 +0.8
JLN Jalan Bani Buh 39.18 281 P P 21 11 27.1 +0.3
SNR=5.4
JLN P P 21 11 27.1 +0.3
SNR=5.4
JLN P P 21 11 27.1 +0.3
SNR=5.4
JLN S **S** 21 17 30.5 +3.5
JLN *S* **S** 21 17 30.5 +3.5
JLN *S* **S** 21 17 30.5 +3.5
ZEA Zeya 39.61 24 *e*P P 21 11 28.6 -1.3
ZEA *e* 21 13 05.6
ZEA *e*S S 21 17 26.2 -6.5
ZEA pmax pmax
comp=E,100nm,2.5s
ZEA pmax pmax
comp=Z,400nm,2.1s
ZEA pmax pmax
comp=N,40nm,1.2s
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=Z,90nm,1.1s
ZEA pmax pmax
comp=N,5µm,11.0s
ZEA MLR MLR
comp=N,9µm,11.0s
ZEA MLR MLR
comp=Z,14µm,11.0s
WSAR Wadi Sarin 39.84 283 LR LR 21 31 31.6
comp=Z,13nm,18.5s,baz=110,slow=42
JTM Tenmabayashi 39.98 49 P P 21 11 32.4 -0.8
JTM IAmb IAmb 21 11 34.8
comp=Z,285nm,1.1s
JTM Tenmabayashi 39.98 49 P P 21 11 33.9 +0.7
JMDO Jabal Madar 40.38 282 P P 21 11 39.5 +2.7
JMDO P P 21 11 39.5 +2.7
SMDO Samad 40.38 283 P P 21 11 39.1 +2.2
SNR=6.8
SMDO P P 21 11 39.1 +2.2
SNR=6.8
MHTO MHTO 40.62 280 P P 21 11 40.6 +1.8
SNR=9.9
MHTO P P 21 11 40.6 +1.8
SNR=9.9
HOQ Hoqain 41.03 284 P P 21 11 44.8 +2.6
SNR=9.2
HOQ P P 21 11 44.8 +2.6
SNR=9.2
DQM DQM 41.14 278 P P 21 11 45.0 +2.0
SNR=8.5
DQM P P 21 11 45.0 +2.0
SNR=8.5
BVAR Borovoye Array 41.17 332 P P 21 11 40.5 -2.4
comp=Z,35nm,0.9s,baz=128,slow=9.5,SNR=53
BVAR LR LR 21 29 57.6
comp=Z,5µm,19.5s,baz=128,slow=38
comp=Z,35nm,0.9s
BSY Bisya 41.18 283 P P 21 11 46.2 +2.8
BSY P P 21 11 46.2 +2.8
SOHO SOHO 41.72 285 P P 21 11 50.5 +2.7
SOHO P P 21 11 50.5 +2.7
SOHO SOHO 41.72 285 P P 21 11 47.9 +0.1
GRNR Gornyy 41.76 33 ⇓ *i*P P 21 11 48.3 +0.5
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=E,9µm,11.0s
GRNR MLR MLR
comp=N,3µm,10.0s
GRNR MLR MLR
comp=Z,10µm,12.0s
ARQ Araqi 41.77 284 P P 21 11 51.0 +2.8
ARQ P P 21 11 51.0 +2.8
ERM Erimo 41.87 48 IAMs_20 IAMs_20 21 28 35.6
comp=Z,8µm,21.0s
BANOM Banah 41.88 287 P P 21 11 52.1 +3.0
BANOM P P 21 11 52.1 +3.0
BANOM Banah 41.88 287 P P 21 11 49.7 +0.5
MDH Madha 41.89 286 P P 21 11 49.3 +0.1
UOSS Minazif 41.98 286 P P 21 11 48.7 -1.2
UOSS Minazif 41.98 286 P P 21 11 51.0 +1.1
MASF Masafi 42.01 287 P P 21 11 54.1 +3.9
MSFE Esma-Masafi 42.01 287 P P 21 11 52.4 +2.2
SHME Shamm 42.02 288 P P 21 11 53.3 +3.1
SHME P P 21 11 53.3 +3.1
SHME Shamm 42.02 288 P P 21 11 48.8 -1.4
HATD Hatta, Dubai 42.05 286 P P 21 11 51.9 +1.4
HATD Hatta, Dubai 42.05 286 P P 21 11 50.3 -0.2
ASHO Ashiyiah 42.13 286 P P 21 11 51.8 +0.7
SNR=12
ASHO P P 21 11 51.8 +0.7
SNR=12
ASHO Ashiyiah 42.13 286 *i* P P 21 11 51.8 +0.7
SNR=16
ASAJ Asahikawa 42.24 45 P P 21 11 51.3 -0.4
ASAJ pmax pmax
comp=Z,162nm,1.1s
JKA Kamikawa-asahi 42.24 45 P P 21 11 51.3 -0.5
JKA IAmb IAmb 21 12 01.1
comp=Z,162nm,1.1s
ALNE Al Ain 42.43 285 P P 21 11 54.5 +0.9
SNR=9.2
ALNE P P 21 11 54.5 +0.9
SNR=9.2
ALNE Al Ain 42.43 285 *i* P P 21 11 54.8 +1.1
SNR=14
NAZ Nazwa, Dubai 42.48 286 P P 21 11 56.4 +2.4
NAZ Nazwa, Dubai 42.48 286 P P 21 11 55.4 +1.5
FAQ Al Faqa, Dubai 42.55 286 P P 21 11 55.3 +0.8
FAQ Al Faqa, Dubai 42.55 286 P P 21 11 55.2 +0.7
ASUD Al Ashush, Dub 42.79 286 P P 21 11 59.7 +3.1
ASUD Al Ashush, Dub 42.79 286 P P 21 11 58.1 +1.6
AUDHS Darwin High Sc 43.00 135 P P 21 11 59.1 +0.9
DRS Darwin Rock St 43.04 135 P P 21 12 00.5 +2.0
UMZA Um Al Zommool 43.06 283 P P 21 11 57.8 -0.9
UMZA P P 21 11 57.8 -0.9
UMZA P P 21 11 57.8 -0.9
YSS Yuzhno-Sakhali 43.47 41 P P 21 12 00.7 -1.0
YSS IAmb IAmb 21 12 04.3
comp=Z,161nm,1.2s
YSS Yuzhno-Sakhali 43.47 41 P P 21 12 03.2 +1.5
YSS Yuzhno-Sakhali 43.47 41 ⇑ *e*P P 21 12 02.8 +1.1
YSS *e*S S 21 18 29.3 -0.7
YSS *e*SS **ScS** 21 21 57.9 -3.7
YSS pmax pmax
comp=Z,100nm,1.1s
YSS smax smax
comp=N,900nm,5.5s
YSS smax smax
comp=E,1µm,4.4s
YSS MLR MLR
comp=Z,6µm,15.0s
YSS MLR MLR
comp=N,5µm,13.0s
YSS MLR MLR
comp=E,6µm,10.0s
GIRL Giralia 43.70 163 P P 21 12 02.1 -1.6
GIRL IAmb IAmb 21 13 25.4
comp=Z,172nm,1.4s
UGL Uglegorsk 43.99 38 *e*P P 21 12 05.6 -0.2
UGL *e*S **S** 21 18 35.2 -2.4
UGL pmax pmax
comp=Z,600nm,1.0s
UGL smax smax
comp=N,2µm,6.0s
UGL smax smax
comp=E,2µm,6.0s
UGL MLR MLR
comp=N,7µm,11.0s
UGL MLR MLR
comp=E,14µm,11.0s
UGL MLR MLR
comp=Z,14µm,11.0s
GENI Genyem 44.00 116 P P 21 12 07.9 +1.5
KNRA Kununurra 44.13 140 P P 21 12 07.3 +0.1
comp=Z,38nm,1.1s
KNRA Kununurra 44.13 140 P P 21 12 06.0 -1.3
MZWR Madinat Zayed 44.16 284 P P 21 12 07.9 +0.3
MZWR P P 21 12 07.9 +0.3
MBWA Marble Bar 44.20 155 P P 21 12 07.9 +0.2
comp=Z,66nm,1.1s
MBWA Marble Bar 44.20 155 P P 21 12 06.6 -1.2
MBWA Marble Bar 44.20 155 P P 21 12 08.6 +0.8
MBWA P P 21 12 08.6 +0.8
MBWA Marble Bar 44.20 155 P P 21 12 09.5 +1.7
KDU Kakadu 44.29 134 P P 21 12 07.8 -0.8
comp=Z,6.9nm,1.2s
FITZ Fitzroy Crossi 44.30 146 P P 21 12 08.4 -0.2
comp=Z,5.4nm,1.1s
FITZ Fitzroy Crossi 44.30 146 P P 21 12 06.9 -1.7
comp=Z,21nm,0.9s,baz=326,slow=4.9,SNR=13
FITZ LR LR 21 34 56.4
comp=Z,2µm,18.8s,baz=320,slow=42
comp=Z,21nm,0.9s
FITZ Fitzroy Crossi 44.30 146 P P 21 12 06.9 -1.7
FITZ Fitzroy Crossi 44.30 146 P P 21 12 10.6 +2.0
YUK Yuzh-Kuril'sk 44.41 46 ⇑ *e*P P 21 12 09.5 +0.2
JAY Jayapura 44.42 115 LR LR 21 31 05.3
comp=Z,2µm,19.0s,baz=300,slow=37
AB31 Akbulak array 44.44 322 P P 21 12 08.9 -0.6
AB31 IAmb IAmb 21 12 17.3
comp=Z,193nm,1.2s
ABKAR Akbulak array 44.44 322 P P 21 12 08.5 -1.0
DOK Doka 44.51 277 P P 21 12 10.7 +0.3
DOK P P 21 12 10.7 +0.3
PSAC1 Pilbara Seismi 44.57 155 P P 21 12 10.6 -0.2
comp=Z,77nm,1.0s
MZR Muzera 44.59 283 P P 21 12 11.6 +0.6
MZR P P 21 12 11.6 +0.6
MZR Muzera 44.59 283 P P 21 12 11.5 +0.5
PSA00 Pilbara Seismi 44.62 155 P P 21 12 10.7 -0.4
comp=Z,58nm,1.0s
PSA00 Pilbara Seismi 44.62 155 P P 21 12 09.7 -1.5
PSA00 Pilbara Seismi 44.62 155 P P 21 12 09.4 -1.7
PSA00 IAmb IAmb 21 12 16.1
comp=Z,43nm,1.2s
PSA00 Pilbara Seismi 44.62 155 P P 21 12 12.2 +1.1
RBK Rabkut 44.62 275 P P 21 12 13.4 +1.9
SNR=9.6
RBK P P 21 12 13.4 +1.9
SNR=9.6
WHFO Wadi Hawf 44.96 276 P P 21 12 14.3 +0.2
SNR=6.0
WHFO P P 21 12 14.3 +0.2
SNR=6.0
TYV Tymovskoe 45.17 36 *e*P P 21 12 16.1 +0.9
TYV *e*S **S** 21 18 54.4 -0.3
TYV pmax pmax
comp=Z,64nm,1.3s
TYV pmax pmax
comp=Z,500nm,2.1s
TYV smax smax
comp=N,1µm,4.9s
TYV smax smax
comp=E,700nm,4.9s
TYV smax smax
comp=N,41nm,1.9s
TYV smax smax
comp=E,35nm,1.9s
ABTO Aybut 45.50 275 P P 21 12 17.7 -0.7
SNR=8.9
AKTO Aktyubinsk 46.08 322 LR LR 21 35 46.0
comp=E,3µm,21.3s,baz=112,slow=42
SLWR Sila 46.14 285 P P 21 12 25.1 +1.8
SLWR P P 21 12 25.1 +1.8
TRNA Turayna 46.52 286 P P 21 12 27.9 +1.6
YAK Yakutsk 46.89 18 LR LR 21 34 02.6
comp=E,5µm,19.9s,baz=214,slow=38
YAK Yakutsk 46.89 18 P P 21 12 27.3 -1.3
YAK Yakutsk 46.89 18 IAMs_20 IAMs_20 21 33 50.8
comp=Z,8µm,18.0s
YAK Yakutsk 46.89 18 *d i*P P 21 12 28.8 +0.2
YAK *e**PP **pP** 21 12 32.1 -0.4
YAK *e* 21 14 02.0
YAK *e* 21 14 17.8
YAK *e*PPP PPP 21 15 00.2
YAK *e*S **S** 21 19 18.7 -0.4
YAK *e**SS **pS** 21 19 24.1 +0.5
YAK *e*SSS SSS 21 23 41.0
YAK pmax pmax
comp=Z,147nm,1.0s
YAK pmax pmax
comp=N,86nm,1.3s
YAK pmax pmax
comp=E,88nm,1.4s
YAK pmax pmax
comp=Z,266nm,3.5s
YAK pmax pmax
comp=N,289nm,3.5s
YAK pmax pmax
comp=E,282nm,3.3s
YAK smax smax
comp=N,304nm,4.3s
YAK smax smax
comp=E,271nm,3.1s
YAK MLR MLR
comp=Z,11µm,18.0s
YAK MLR MLR
comp=N,6µm,16.0s
YAK MLR MLR
comp=E,5µm,17.0s
SVE Sverdlovsk 47.94 331 *de*P P 21 12 36.5 -0.4
SVE *e*S **S** 21 19 37.3 +3.0
SVE pmax pmax
comp=Z,226nm,1.3s
SVE MLR MLR
comp=Z,4µm,14.0s
ARTI Arti 48.75 330 LR LR 21 34 49.3
comp=Z,4µm,19.2s,baz=122,slow=38
ARTI Arti 48.75 330 P P 21 12 41.5 -1.6
ARTI IAmb IAmb 21 12 45.2
comp=Z,113nm,1.0s
ARTI Arti 48.75 330 *d i*P P 21 12 41.8 -1.4
ARTI 21 14 06.1
ARTI 21 14 39.8
ARTI PPP PPP 21 15 29.0
ARTI S **S** 21 19 45.7 -0.1
ARTI 21 22 34.2
ARTI SSS SSS 21 24 35.3
ARTI pmax pmax
comp=Z,124nm,1.0s
ARTI MLR MLR
comp=Z,5µm,15.0s
MEEK Meekatharra 48.79 159 P P 21 12 45.0 +1.2
comp=Z,54nm,1.7s
MEEK Meekatharra 48.79 159 P P 21 12 46.5 +2.7
AKT Akhty 50.26 308 *e*P P 21 12 52.5 -2.6
AKT *e* 21 14 10.8
AKT *e*S **S** 21 20 07.6 0.0
AKT *e*SS **SS** 21 23 37.7 -3.3
AKT pmax pmax
comp=Z,140nm,1.3s
MORW Morawa 50.28 163 P P 21 12 55.0 -0.2
comp=Z,65nm,1.1s
MORW Morawa 50.28 163 P P 21 12 54.0 -1.1
MORW IAmb IAmb 21 13 04.3
comp=Z,56nm,0.9s
MORW Morawa 50.28 163 P P 21 12 55.7 +0.6
MAK Makhachkala 50.67 310 *e*P P 21 12 50.9 -7.1
MAK *e*PPP PPP 21 15 46.6
MAK *e*S S 21 20 00.8 -12
MAK *e*SS **SS** 21 23 45.5 -1.7
MAK *e*SSS SSS 21 25 11.3
MAK pmax pmax
comp=Z,505nm,1.3s
MAK MLR MLR
comp=Z,4µm,15.0s
WB0 Warramunga Arr 50.70 138 P P 21 12 56.3 -2.1
WRA Warramunga Arr 50.79 139 P P 21 12 57.0 -2.1
comp=Z,20nm,1.0s,baz=326,slow=8.1,SNR=30
WRA LR LR 21 39 02.5
comp=Z,1µm,18.0s,baz=336,slow=41
comp=Z,20nm,1.0s
WRAB Tennant Creek 50.79 139 P P 21 12 57.5 -1.6
WRAB IAmb IAmb 21 13 11.6
comp=Z,117nm,1.8s
WRAB Tennant Creek 50.79 139 P P 21 12 59.5 +0.3
WRAB Tennant Creek 50.79 139 *de*P P 21 12 59.8 +0.6
WRAB pmax pmax
comp=Z,55nm,1.5s
WRAB MLR MLR
comp=Z,1µm,18.0s
WR8 Warramunga Arr 50.90 138 P P 21 12 58.1 -1.8
WRKA Warakurna 51.42 148 P P 21 13 03.8 -0.1
comp=Z,13nm,0.8s
GNI Garni 52.34 306 LR LR 21 39 18.9
comp=Z,2µm,20.9s,baz=118,slow=41
GNI Garni 52.34 306 P P 21 13 09.5 -1.3
GNI Garni 52.34 306 P P 21 13 11.7 +0.9
GNI P P 21 13 11.7 +0.9
GNI P P 21 13 11.7 +0.9
GNI Garni 52.34 306 P P 21 13 10.3 -0.5
GNI Garni 52.34 306 *ce*P P 21 13 11.0 +0.2
GNI pmax pmax
comp=Z,118nm,1.1s
GNI MLR MLR

comp=Z,2µm,19.0s
BELG Belogornoye 52.85 322 LR LR 21 38 27.2
comp=Z,3µm,19.6s,baz=104,slow=39
BELG Belogornoye 52.85 322*ce*P **P 21 13 12.2 -1.9**
BELG pmax pmax
comp=Z,27nm,1.0s
BELG MLR MLR
comp=Z,574nm,20.0s
COEN Coen 52.91 126 P **P 21 13 14.6 -0.5**
MUN Mundaring 53.09 164 P **P 21 13 19.0 +3.0**
MA2 Magadan 53.34 29 LR LR 21 36 40.6
comp=Z,2µm,19.5s,baz=232,slow=37
MA2 Magadan 53.34 29 P **P 21 13 16.7 -0.9**
MA2 Magadan 53.34 29 P **P 21 13 18.5 +0.9**
MA2 Magadan 53.34 29*ce*P **P 21 13 16.8 -0.8**
MA2 pmax pmax
comp=Z,318nm,1.1s
MA2 MLR MLR
comp=Z,2µm,14.0s
MA2 Magadan 53.34 29 P **P 21 13 15.9 -1.7**
comp=Z,306nm,1.2s
AS31 Alice Springs 53.35 142 P **P 21 13 17.1 -1.1**
ASAR Alice Springs 53.35 142 P **P 21 13 16.1 -2.1**
comp=Z,8.7nm,0.7s,baz=320,slow=7.0,SNR=45
ASAR PcP **PcP 21 14 26.1 +0.4**
comp=Z,4.9nm,0.9s,baz=334,slow=3.6,SNR=5.4
comp=Z,8.7nm,0.7s
ASAR Alice Springs 53.35 142 P **P 21 13 17.0 -1.2**
ASAR Alice Springs 53.35 142 P **P 21 13 17.0 -1.2**
AUALC St Philip's Co 53.36 142 P **P 21 13 19.7 +1.5**
PMG Port Moresby 53.49 118 P **P 21 13 18.7 -0.6**
comp=Z,62nm,0.9s,baz=310,slow=5.3,SNR=18
PMG LR LR 21 39 26.2
comp=Z,396nm,18.1s,baz=277,slow=40
comp=Z,62nm,0.9s
PMG Port Moresby 53.49 118 P **P 21 13 18.2 -1.2**
PMG IAmb IAmb 21 13 24.6
comp=Z,106nm,1.1s
PMG Port Moresby 53.49 118 P **P 21 13 21.1 +1.8**
PMG Port Moresby 53.49 118*ce*P **P 21 13 19.9 +0.6**
PMG pmax pmax
comp=Z,66nm,0.9s
NCK Nalchik 53.58 310⇑*e*P **P 21 13 20.8 +1.1**
NCK pmax pmax
comp=Z,41nm,0.6s
KIRV Kirov 54.06 329 LR LR 21 37 46.3
comp=Z,3µm,19.1s,baz=115,slow=38
KIRV Kirov 54.06 329*ce*P **P 21 13 22.0 -0.9**
KBZ Khabaz 54.11 310 P **P 21 13 22.4 -1.1**
comp=Z,31nm,1.0s,baz=97,slow=8.7,SNR=28
KBZ LR LR 21 40 39.2
comp=Z,3µm,18.9s,baz=80,slow=41
comp=Z,31nm,1.0s
KBZ Khabaz 54.11 310*ce*P **P 21 13 22.2 -1.3**
KBZ pmax pmax
comp=Z,46nm,1.0s
KBZ MLR MLR
comp=Z,3µm,18.0s
GOF Gofitskoye 54.19 312*ce*P **P 21 13 23.4 -0.7**
NWAO Narrogin (SRO) 54.26 163 LR LR 21 35 55.5
comp=Z,2µm,21.4s,baz=318,slow=35
KVAR Kislovodsk Arr 54.28 311 LR LR 21 41 30.8
comp=Z,3µm,18.3s,baz=198,slow=42
KIV Kislovodsk 54.29 311 P **P 21 13 23.9 -1.1**
KIV Kislovodsk 54.29 311 P **P 21 13 24.5 -0.5**
KIV P **P 21 13 24.5 -0.5**
KIV Kislovodsk 54.29 311⇑P **P 21 13 24.4 -0.6**
KIV Kislovodsk 54.29 311 *i* P **P 21 13 24.7 -0.3**
SNR=50
KIV Kislovodsk 54.29 311 *e*P **P 21 13 23.8 -1.2**
KIV *e* 21 15 26.0
KIV *e*S **S 21 21 01.7 -1.0**
KIV *e*SS **SKiKP 21 24 40.2 +3.9**
KIV pmax pmax
comp=Z,340nm,1.0s
KIV pmax pmax
comp=Z,87nm,4.3s
KIV MLR MLR
comp=Z,1µm,17.0s
KIV Kislovodsk 54.29 311 P **P 21 13 22.3 -2.7**
comp=Z,3µmcomp=Z,332nm,1.1s
GURO Guroymak-BITLI 54.32 304 P **P 21 13 23.9 -1.4**
PEA0B Petropavlovsk- 54.62 38 P **P 21 13 26.6 -0.4**
PEA0B IAmb IAmb 21 14 45.4
comp=Z,189nm,1.7s
PEA0B Petropavlovsk- 54.62 38⇑*e*P **P 21 13 27.2 +0.1**
PETK Petropavlovsk- 54.62 38 P **P 21 13 26.3 -0.8**
comp=Z,13nm,0.9s,baz=217,slow=6.7,SNR=9.1
PETK LR LR 21 37 04.2
comp=Z,3µm,20.1s,baz=236,slow=36
comp=Z,13nm,0.9s
TIXI Tiksi 54.62 10 LR LR 21 39 04.0
comp=Z,12µm,19.4s,baz=233,slow=39
TIXI Tiksi 54.62 10 P **P 21 13 24.4 -2.3**
TIXI Tiksi 54.62 10*de*P **P 21 13 26.6 -0.2**
TIXI pmax pmax
comp=Z,140nm,1.1s
TIXI MLR MLR
comp=Z,13µm,17.0s
QIS Mount Isa 54.65 135 P **P 21 13 28.7 +1.0**
BATM Batumi 54.78 308⇑P **P 21 13 28.0 -0.5**
BATM Batumi 54.78 308 P **P 21 13 27.9 -0.5**
PET Petropavlovsk 55.15 38 P **P 21 13 30.9 0.0**
PET Petropavlovsk 55.15 38 P **P 21 13 32.0 +1.1**
PET Petropavlovsk 55.15 38 *e*P **P 21 13 31.1 +0.2**
PET *e*S **S 21 21 13.3 -0.4**
PET pmax pmax
comp=Z,116nm,1.2s
PET MLR MLR
comp=Z,5µm,18.0s
PET MLR MLR
comp=Z,7µm,17.0s
RABL Rabaul 55.23 110 P **P 21 13 31.7 -0.4**
MARD Mardin 55.26 302 P **P 21 13 30.7 -1.5**
SEY Seymchan 55.55 26 LR LR 21 40 26.7
comp=Z,4µm,20.4s,baz=232,slow=39
SEY Seymchan 55.55 26*ce*P **P 21 13 34.6 +0.9**
SEY pmax pmax
comp=Z,57nm,1.7s
SEY MLR MLR
comp=Z,6µm,16.0s
KOPT Kop Dagi 55.58 306 P **P 21 13 33.6 -1.0**
KOPT IAmb IAmb 21 13 45.9
comp=Z,104nm,1.2s
LABN Labinsk 55.77 311 *e*P **P 21 13 34.8 -0.7**
LABN *e**PP **pP 21 13 39.5 0.0**
LABN *e*S **S 21 21 24.2 +1.9**
LABN pmax pmax
comp=Z,117nm,1.0s
LABN MLR MLR
comp=N,5µm,16.0s
LABN MLR MLR
comp=Z,4µm,15.0s
LABN MLR MLR
comp=E,9µm,16.0s
ERBR Yeremizino-Bor 56.06 312 *e*P **P 21 13 38.1 +0.5**
ERBR *e**PP **pP 21 13 42.3 +0.7**
ERBR *e*S **S 21 21 27.4 +1.3**
ERBR pmax pmax
comp=Z,155nm,1.2s
ERBR MLR MLR
comp=Z,3µm,16.0s
ERBR MLR MLR
comp=E,8µm,16.0s
ERBR MLR MLR
comp=N,2µm,13.0s
VRH Novokhopyorsk 56.10 319 *e*P **P 21 13 37.9 +0.1**
VRH pmax pmax
comp=Z,129nm,1.2s
SOC Sochi 56.39 310 *e*P **P 21 13 38.0 -2.0**
SOC *e* 21 15 42.3
SOC *e*PPP PPP 21 17 10.0
SOC *e*S **S 21 21 28.9 -1.7**
SOC *e*SS **SS 21 25 08.4 -9.1**
SOC pmax pmax
comp=Z,124nm,0.9s
SOC MLR MLR
comp=Z,1µm,18.0s
ATD Arta Tunnel 56.68 271 LR LR 21 37 15.3
comp=Z,73nm,21.3s,baz=71,slow=35
ATD Arta Tunnel 56.68 271 P **P 21 13 47.0 +4.5**
SNR=6.1
ARPR Arapgir-MALATY 57.22 304 P **P 21 13 45.2 -1.0**
VORD Divnogorie 57.57 319 *e*P **P 21 13 45.8 -2.4**
VORD pmax pmax
comp=Z,30nm,1.0s

VSR Storozhevoye 57.69 319 *e*P **P 21 13 46.1 -2.9**
VSR pmax pmax
comp=Z,50nm,1.2s
VSR MLR MLR
comp=Z,3µm,13.0s
VORR Voronezh 57.73 319 *e*P **P 21 13 49.6 +0.3**
VORR pmax pmax
comp=Z,68nm,0.4s
LPSR Galich'ya Gora 58.06 320 *e*P **P 21 13 51.2 -0.4**
LPSR pmax pmax
comp=Z,134nm,1.0s
GAZ Gaziantep 58.11 302 P **P 21 13 51.2 -1.1**
GAZ IAmb IAmb 21 13 59.0
comp=Z,70nm,0.9s
ANN Anapa 58.12 311 *e*P **P 21 13 52.2 0.0**
ANN *e**PP **pP 21 13 55.8 -0.4**
ANN *e* 21 16 03.5
ANN *e*PPP PPP 21 17 24.2
ANN *e*S **S 21 21 52.9 -0.4**
ANN pmax pmax
comp=E,4.0nm,1.0s
ANN pmax pmax
comp=N,53nm,1.4s
ANN pmax pmax
comp=Z,68nm,1.2s
ANN MLR MLR
comp=E,2µm,15.0s
ANN MLR MLR
comp=N,745nm,16.0s
ANN MLR MLR
comp=Z,2µm,16.0s
ASF Jabal al Asfar 58.61 296 LR LR 21 43 30.2
comp=Z,2µm,18.7s,baz=94,slow=40
TOKA Tokat 58.66 306 P **P 21 13 55.3 -0.9**
TOKA IAmb IAmb 21 14 03.4
comp=Z,75nm,1.1s
TV1H Townsville Har 58.90 128 P **P 21 14 00.4 +2.5**
CTA Charters Tower 59.01 129 LR LR 21 42 31.7
comp=Z,24nm,19.7s,baz=278,slow=39
CTA Charters Tower 59.01 129 P **P 21 14 00.2 +1.5**
CTAO Charters Tower 59.01 129 P **P 21 13 57.3 -1.4**
CTAO Charters Tower 59.01 129 P **P 21 14 00.7 +2.0**
CTAO Charters Tower 59.01 129 P **P 21 13 57.3 -1.4**
CTAO pmax pmax
comp=Z,28nm,1.1s
BNN Bunyan 59.16 304 P **P 21 13 57.9 -1.8**
BNN IAmb IAmb 21 14 07.5
comp=Z,111nm,1.2s
HWQ Hawqa 59.26 299 *e*P **P 21 13 58.2 -2.3**
MOS Moscow 59.37 324 *e*P **P 21 13 59.5 -1.2**
MOS *e* 21 14 45.7
MOS *e*S **S 21 22 07.8 -1.4**
MOS *e* 21 23 49.0
MOS *e*SS **SS 21 26 09.8 +6.0**
MOS pmax pmax
comp=Z,207nm,1.2s
MOS pmax pmax
comp=Z,300nm,1.5s
MOS pmax pmax
comp=E,100nm,1.1s
MOS pmax pmax
comp=E,90nm,1.0s
MOS MLR MLR
comp=E,3µm,17.0s
MOS MLR MLR
comp=Z,4µm,17.0s
BHL Bhannes 59.52 298 *e*P **P 21 13 59.9 -2.4**
KLMR Klimovskoe 59.54 330 *e*P **P 21 13 59.1 -2.7**
KLMR *e* 21 16 10.5
KLMR SS SS 21 26 04.2 -2.1
KLMR pmax pmax
comp=Z,206nm,1.3s
KLMR MLR MLR
comp=Z,3µm,13.0s
BALJ Balqa 59.68 296 P **P 21 14 02.0 -1.3**
MMAI Mount Meron Ar 59.80 297 P **P 21 14 04.4 +0.3**
comp=Z,21nm,1.1s,baz=93,slow=10,SNR=26
MMAI LR LR 21 45 55.8
comp=Z,2µm,18.3s,baz=96,slow=42
comp=Z,21nm,1.1s
GHAJ Ghor Haditha 59.81 295 P **P 21 14 02.7 -1.5**
GHAJ IAmb IAmb 21 14 11.9
comp=Z,156nm,1.7s
OBN Obninsk 59.86 323 LR LR 21 42 20.2
comp=Z,4µm,20.2s,baz=33,slow=38
OBN Obninsk 59.86 323 P **P 21 14 02.8 -1.3**
OBN IAMs_20 IAMs_20 21 42 07.6
comp=Z,4µm,21.0s
OBN Obninsk 59.86 323*d* iP **P 21 14 04.6 +0.6**
OBN *i* 21 14 09.1
OBN *i* 21 14 49.4
OBN *i* 21 16 11.3
OBN pmax pmax
comp=Z,127nm,1.2s
OBN MLR MLR
comp=Z,3µm,17.0s
OBN Obninsk 59.86 323 P **P 21 14 01.7 -2.3**
comp=Z,1µmcomp=Z,125nm,1.4s
OBN pP **pP 21 14 07.7 -0.3**
comp=Z,1µmcomp=Z,125nm,1.4s
INKA Innaminka 60.48 140 P **P 21 14 07.7 -0.9**
SIM Simferopol' 60.48 311 *e*P **P 21 14 08.4 -0.2**
SIM 21 16 19.0
SIM *e*S **S 21 22 24.3 +0.4**
SIM pmax pmax
comp=Z,210nm,1.5s
SIM pmax pmax
comp=Z,110nm,3.2s
SIM smax smax
comp=N,280nm,5.5s
SIM MLR MLR
comp=Z,2µm,20.0s
EIL Elat 60.51 294 LR LR 21 46 46.7
comp=Z,3µm,18.9s,baz=90,slow=42
BZK Bozkurt 60.53 308⇑P **P 21 14 09.4 +0.5**
KIRS Kirsehir-Merke 60.66 305⇑P **P 21 14 10.7 +0.8**
ILGA Ilgaz 60.76 307 P **P 21 14 09.8 -1.0**
BR104 Keskin Array S 60.85 305 P **P 21 14 09.1 -2.2**
comp=Z,212nmcomp=Z,19nm,1.2s
BR131 Keskin Array S 60.85 305 P **P 21 14 09.6 -1.7**
BR131 Keskin Array S 60.85 305 P **P 21 14 11.9 +0.5**
SNR=21
BR131 Keskin Array S 60.85 305*de*P **P 21 14 11.6 +0.3**
BRTR Keskin Array B 60.85 305 P **P 21 14 09.8 -1.5**
comp=Z,4.2nm,0.8s,baz=104,slow=5.2,SNR=32
BRTR LR LR 21 46 23.1
comp=Z,817nm,19.9s,baz=92,slow=42
comp=Z,4.2nm,0.8s
BRTR Keskin Array B 60.85 305 P **P 21 14 09.3 -2.0**
BR105 Keskin Array S 60.87 305 P **P 21 14 09.2 -2.3**
comp=Z,226nmcomp=Z,23nm,1.4s
CSS Mathiatis 61.36 300 P **P 21 14 12.9 -1.8**
CSS IAmb IAmb 21 14 23.1
comp=Z,99nm,1.2s
ANTO Ankara 61.50 305 P **P 21 14 13.5 -2.2**
ANTO IAmb IAmb 21 14 26.8
comp=Z,84nm,1.5s
ANTO Ankara 61.50 305 P **P 21 14 16.2 +0.6**
ANTO P **P 21 14 16.2 +0.6**
ANTO Ankara 61.50 305 P **P 21 14 13.5 -2.2**
ANTO pmax pmax
comp=Z,84nm,1.5s
BBOO Buckleboo 61.67 147 P **P 21 14 15.8 -0.8**
BBOO IAmb IAmb 21 14 30.5
comp=Z,42nm,1.2s
QLP Quilpie 61.87 136 P **P 21 14 20.6 +2.5**
BILL Bilibino 62.81 23 P **P 21 14 23.0 -0.8**
BILL IAMs_20 IAMs_20 21 44 53.6
comp=Z,4µm,21.0s
BILL Bilibino 62.81 23*d* iP **P 21 14 23.7 -0.1**
BILL pmax pmax
comp=Z,79nm,1.0s
BILL MLR MLR
comp=Z,4µm,14.0s
BORA Eskisehir 63.30 306 P **P 21 14 26.4 -1.2**
BORA IAmb IAmb 21 14 33.8
comp=Z,70nm,1.7s
ISP Isparta 63.39 303⇑*e*P **P 21 14 28.8 +0.4**
ISP pmax pmax
comp=Z,80nm,1.7s
ISP MLR MLR
comp=Z,2µm,23.0s
LVZ Lovozero 63.40 337 P **P 21 14 25.9 -1.9**
LVZ IAmb IAmb 21 14 28.9
comp=Z,79nm,1.2s

LVZ IAMs_20 IAMs_20 21 44 35.3
comp=Z,5µm,19.0s
LVZ Lovozero 63.40 337*de*P **P 21 14 27.7 -0.1**
LVZ pmax pmax
comp=Z,87nm,1.2s
LVZ MLR MLR
comp=Z,5µm,16.0s
LVZ Lovozero 63.40 337 P **P 21 14 26.0 -1.8**
comp=Z,72nm,1.6s
PURM Purcari 63.47 313⇓P **P 21 14 27.2 -1.3**
HTT Hallett 63.66 145 P **P 21 14 32.7 +2.7**
APA Apatity 63.78 337⇓*i*P **P 21 14 28.7 -1.6**
APA *e* 21 16 51.9
APA *i*S **S 21 23 04.0 -0.8**
APA MLR MLR
comp=Z,6µm,13.9s
PUL Pulkovo 63.84 328⇓*e*P **P 21 14 32.8 +2.1**
PUL pmax pmax
comp=Z,76nm,0.4s
PUL MLR MLR
comp=Z,3µm,18.0s
AK09 Malin Array Si 63.86 318 P **P 21 14 28.8 -2.3**
AK08 Malin Array Si 63.88 318 P **P 21 14 29.0 -2.2**
AKASG Malin Array Be 63.90 318 P **P 21 14 29.4 -1.9**
comp=Z,28nm,1.0s,baz=80,slow=6.1,SNR=46
AKASG LR LR 21 47 57.8
comp=Z,3µm,18.8s,baz=92,slow=41
comp=Z,28nm,1.0s
AKASG Malin Array Be 63.90 318 P **P 21 14 30.9 -0.5**
AKASG IAmb IAmb 21 14 38.1
comp=Z,88nm,1.3s
AKASG Malin Array Be 63.90 318 P **P 21 14 30.9 -0.5**
AKASG pmax pmax
comp=Z,87nm,1.3s
AKBB Malin Array Si 63.90 318*de*P **P 21 14 31.0 -0.3**
AKBB Malin Array Si 63.90 318 P **P 21 14 29.3 -2.0**
KIEV Kiev 63.91 318 P **P 21 14 29.3 -2.1**
KIEV IAmb IAmb 21 14 33.2
comp=Z,74nm,1.2s
KIEV Kiev 63.91 318 IAMs_20 IAMs_20 21 47 37.6
comp=Z,4µm,18.0s
KIEV Kiev 63.91 318⇑P **P 21 14 29.5 -1.9**
KIEV Kiev 63.91 318 *i* P **P 21 14 29.6 -1.9**
SNR=21
KIEV Kiev 63.91 318 P **P 21 14 29.5 -1.9**
KIEV Kiev 63.91 318 P **P 21 14 29.1 -2.3**
STKA Stephens Creek 63.99 142 P **P 21 14 31.4 -0.7**
comp=Z,21nm,0.8s,baz=332,slow=8.0,SNR=17
STKA LR LR 21 44 54.8
comp=Z,3µm,20.6s,baz=307,slow=38
comp=Z,21nm,0.8s
STKA Stephens Creek 63.99 142 P **P 21 14 33.3 +1.2**
STKA Stephens Creek 63.99 142*de*P **P 21 14 32.9 +0.8**
MILM Milestii Mici 64.19 313⇑P **P 21 14 32.2 -1.2**
MILM Milestii Mici 64.19 313 P **P 21 14 32.1 -1.2**
MILM Milestii Mici 64.19 313⇓*i*P **P 21 14 31.0 -2.3**
comp=Z,100nm,1.4s
TLCR 64.24 312⇓P **P 21 14 33.1 -0.6**
TLCR 64.24 312 P **P 21 14 33.0 -0.6**
AKAS Kas 64.27 302 P **P 21 14 32.5 -1.7**
AKAS IAmb IAmb 21 14 39.6
comp=Z,55nm,1.0s
KLYT Kilyos 64.28 307⇓P **P 21 14 33.1 -0.9**
SHEM Shemya Is, Ala 64.36 40 LR LR 21 46 41.2
comp=Z,706nm,18.0s,baz=278,slow=40
SORM Soroca 64.48 315⇓P **P 21 14 32.7 -2.5**
SORM Soroca 64.48 315 P **P 21 14 32.6 -2.5**
HNR Honiara 64.48 111 LR LR 21 40 19.7
comp=Z,2µm,21.6s,baz=296,slow=34
HNR Honiara 64.48 111 P **P 21 14 35.2 -0.5**
HNR IAmb IAmb 21 14 45.5
comp=Z,100nm,1.2s
HNR Honiara 64.48 111 P **P 21 14 35.2 -0.5**
HNR pmax pmax
comp=Z,100nm,1.2s
HNR MLR MLR
comp=Z,3µm,21.0s
TPGR Topolog 64.53 311⇑P **P 21 14 34.3 -1.3**
CFR Carcaliu 64.72 312⇓P **P 21 14 37.2 +0.3**
CFR Carcaliu 64.72 312 P **P 21 14 37.1 +0.3**
MNK Minsk 64.80 322 *i* P **P 21 14 38.6 +1.4**
comp=E,15nm,0.8s
MNK *i* P **P 21 14 38.6 +1.4**
comp=N,47nm,0.8s
MNK *i* P **P 21 14 38.6 +1.4**
comp=Z,83nm,0.8s,baz=91
MNK *i* PcP **PcP 21 15 11.9 +1.3**
MNK *i* PP **PP 21 17 00.9 +1.4**
MNK *i* PPP PPP 21 18 32.4
MNK *i*S **S 21 23 21.2 +3.4**
MNK *i* PS **PnS 21 23 49.8 +14**
MNK *i* ScS **ScS 21 24 36.1 +4.3**
MNK *i* SS SS 21 28 59.5 +91
MNK *i* LQ LQ 21 39 44.6
MNK *i* LR LR 21 42 14.8
MNK *i* LRM MLR 21 43 14.6
comp=E,4µm,16.7s
MNK *i* LRM MLR 21 45 23.5
comp=Z,2µm,14.9s
MNK *i* LRM MLR 21 45 27.4
comp=N,1µm,13.7s
MNK Minsk 64.80 322 *i* P **P 21 14 38.5 +1.4**
MNK *i* 21 15 11.9
MNK *i* 21 17 00.8
MNK *i* PPP PPP 21 18 32.4
MNK *i*S **S 21 23 21.2 +3.4**
MNK *i* PS **PnS 21 23 49.8 +14**
MNK pmax pmax
comp=N,47nm,0.8s
MNK pmax pmax
comp=Z,83nm,0.8s
MNK pmax pmax
comp=E,15nm,0.8s
MNK MLR MLR
comp=E,4µm,17.0s
MNK MLR MLR
comp=Z,2µm,15.0s
MNK MLR MLR
comp=N,1µm,14.0s
MANT Manisa 64.88 304 P **P 21 14 37.1 -1.2**
BAND Balkesir-Ban 65.06 306⇑P **P 21 14 39.3 +0.1**
BALB Balikesir 65.29 305 P **P 21 14 39.7 -0.9**
ABPO Ambohimpanom 65.39 237 P **P 21 14 39.9 -1.9**
ABPO IAmb IAmb 21 14 46.0
comp=Z,84nm,1.9s
ABPO Ambohimpanom 65.39 237 P **P 21 14 39.9 -1.9**
ABPO pmax pmax
comp=Z,84nm,1.9s
ABPO MLR MLR
comp=Z,2µm,20.0s
ODBI Odobesti 65.45 312⇑P **P 21 14 40.6 -0.9**
VSU Vasula 65.58 326*de*P **P 21 14 41.6 -0.5**
VSU pmax pmax
comp=Z,121nm,1.7s
VSU MLR MLR
comp=Z,3µm,16.0s
VRI Vrincioaia 65.67 312⇓P **P 21 14 42.3 -0.8**
VRI Vrincioaia 65.67 312 P **P 21 14 42.2 -0.8**
TESR Tescani 65.69 313⇑P **P 21 14 43.2 +0.1**
BISRR Bisoca 65.70 312⇓P **P 21 14 42.8 -0.5**
PLOR Plostina 65.73 312⇓P **P 21 14 42.3 -1.2**
PLOR Plostina 65.73 312 P **P 21 14 42.2 -1.2**
VADS Vadso 65.73 339 *e*P **P 21 14 41.4 -1.5**
KIBK Kibwezi 65.76 258 P **P 21 14 44.1 -0.1**
KIBK Kibwezi 65.76 258 P **P 21 14 42.3 -1.9**
KIBK IAmb IAmb 21 14 48.9
comp=Z,40nm,1.3s
KIBK Kibwezi 65.76 258 P **P 21 14 45.2 +1.1**
SNR=12
EIDS Eidsvold 65.77 131 P **P 21 14 42.8 -1.1**
EIDS Eidsvold 65.77 131 P **P 21 14 46.4 +2.5**
ONER Baraj Valea Uz 65.88 313⇑P **P 21 14 43.2 -1.1**
LOZB Loznitsa 65.94 310⇑P **P 21 14 44.1 -0.7**
RAZG Razgrad 65.98 310⇑P **P 21 14 44.0 -1.1**
RNPP9 Sopachiv 66.00 318 P **P 21 14 43.2 -1.8**
RNPP5 Staryi Chortor 66.01 318 P **P 21 14 43.1 -2.0**
COVR Voineasa-Covas 66.04 312⇓P **P 21 14 44.3 -1.1**
KMBO Kilima Mbogo 66.04 260 P **P 21 14 45.1 -1.0**
comp=Z,8.9nm,0.9s,baz=60,slow=8.6,SNR=15
comp=Z,8.9nm,0.9s
KMBO Kilima Mbogo 66.04 260*de*P **P 21 14 45.7 -0.5**
JMB Yambol 66.05 309 P **P 21 14 46.5 +1.0**
FIA1 FINESS Array S 66.06 329 P **P 21 14 43.9 -1.3**
FINES FINESS Array B 66.06 329 P **P 21 14 43.8 -1.4**

comp=Z,38nm,1.0s,baz=90,slow=7.6,SNR=35
FINES LR LR 21 45 14.5
comp=Z,3µm,18.2s,baz=92,slow=38
comp=Z,38nm,1.0s
FINES FINESS Array B 66.06 329 P **P 21 14 43.9 -1.3**
FINES FINESS Array B 66.06 329 P **P 21 14 43.9 -1.3**
TURR Turia 66.16 313 ⇑P **P 21 14 45.9 -0.3**
CMSA Cobar Meteorol 66.19 139 P **P 21 14 49.1 +2.6**
LODK Lodwar 66.21 265 P **P 21 14 44.7 -2.4**
LODK Lodwar 66.21 265 P **P 21 14 46.7 -0.4**
SNR=10
MLR Muntele Rosu 66.24 312 LR LR 21 48 58.0
comp=Z,2µm,18.5s,baz=62,slow=41
MLR Muntele Rosu 66.24 312 ⇓P **P 21 14 46.2 -0.7**
MLR Muntele Rosu 66.24 312 P **P 21 14 46.2 -0.7**
KARP Karpathos 66.32 301 P **P 21 14 45.4 -2.1**
EZN Ezine 66.47 306 ⇑P **P 21 14 49.0 +0.7**
EZN Ezine 66.47 306 P **P 21 14 48.9 +0.7**
KEV Kevo 66.48 339 P **P 21 14 47.2 -0.5**
KEV Kevo 66.48 339 P **P 21 14 47.2 -0.5**
KEV pmax pmax
comp=Z,117nm,1.1s
KEV MLR MLR
comp=Z,6µm,18.0s
ELND Elena 66.50 309 ⇓P **P 21 14 48.0 -0.3**
DOPR Dopca 66.60 313 ⇑P **P 21 14 48.9 -0.1**
BURAR Bucovina Array 66.61 314 ⇓P **P 21 14 48.0 -1.2**
BURAR Bucovina Array 66.61 314 P **P 21 14 47.9 -1.2**
BUR08 Bucovina Ar. S 66.61 314 P **P 21 14 48.0 -1.1**
BUR08 IAmb IAmb 21 14 56.6
comp=Z,55nm,1.1s
COPA Copaceanca 66.87 311 ⇓P **P 21 14 49.7 -1.0**
VOIR 66.88 312 ⇓P **P 21 14 50.8 -0.1**
VOIR 66.88 312 P **P 21 14 50.8 -0.1**
ARA0 ARCESS Array S 66.97 338 *e*P **P 21 14 49.6 -1.4**
ARCES ARCESS Array B 66.97 338 P **P 21 14 49.6 -1.4**
comp=Z,34nm,1.0s,baz=91,slow=5.2,SNR=26
ARCES LR LR 21 47 05.5
comp=Z,6µm,18.2s,baz=90,slow=39
comp=Z,34nm,1.0s
ARCES ARCESS Array B 66.97 338 P **P 21 14 49.5 -1.5**
ARCES IAmb IAmb 21 14 52.4
comp=Z,60nm,1.1s
HUMR Humele 67.00 311 ⇓P **P 21 14 51.0 -0.6**
KDZ Kurdzhali 67.02 308 P **P 21 14 52.3 +0.6**
PABE Paberze 67.06 323 P **P 21 14 50.4 -1.2**
PABE IAMs_20 IAMs_20 21 46 46.1
comp=Z,5µm,21.0s
VOI Vohitsoka 67.31 235 P **P 21 14 52.2 -1.7**
PLVB Pleven 67.37 310 ⇑P **P 21 14 52.9 -1.0**
APE Apeiranthos 67.42 303 ⇓P **P 21 14 54.9 +0.5**
APE Apeiranthos 67.42 303 P **P 21 14 54.9 +0.5**
RZN Rozhen 67.46 308 P **P 21 14 55.5 +0.7**
VLAD Vladila 67.46 310 ⇓P **P 21 14 54.1 -0.4**
SUW Suwalki 67.56 321 *e*P **P 21 14 55.5 +0.6**
SUW *e*L L 21 45 30.2
comp=Z,3µm,22.8s
SUW Suwalki 67.56 321 P **P 21 14 54.5 -0.4**
SUW Suwalki 67.56 321 P **P 21 14 54.5 -0.4**
SUW MLR MLR
comp=Z,3µm,20.0s
HAMF Hammerfest 67.70 339 *e*P **P 21 14 52.4 -3.1**
LOT Lotru 67.77 312 ⇑P **P 21 14 56.0 -0.6**
CJR Cluj-Napoca 67.77 313 ⇑P **P 21 14 55.7 -0.8**
CJR Cluj-Napoca 67.77 313 P **P 21 14 55.7 -0.8**
PGB Panagyurishte 67.79 309 P **P 21 14 57.5 +0.9**
MPEP Malo Peshtene 68.01 310 P **P 21 14 58.9 +0.9**
MARR Marisel-Cluj 68.11 313 ⇓P **P 21 14 58.0 -0.6**
KWP Kalwaria Pacla 68.12 317 *e*P **P 21 14 59.5 +1.0**
KWP *e*L L 21 43 18.6
comp=Z,3µm,32.6s
IDI Anoyia 68.19 301 P **P 21 14 57.2 -2.1**
IDI Anoyia 68.19 301 LR LR 21 50 28.5
comp=Z,533nm,21.1s,baz=85,slow=41
IDI Anoyia 68.19 301 P **P 21 14 58.0 -1.4**
BAIL Bailesti 68.22 311 ⇓P **P 21 14 58.7 -0.6**
DEV Deva 68.33 313 ⇑P **P 21 15 00.0 +0.1**
DEV Deva 68.33 313 P **P 21 15 00.0 +0.1**
PLNA Plana 68.34 309 P **P 21 15 01.1 +0.9**
DRGR 68.37 314 ⇑P **P 21 14 59.9 -0.4**
DRGR 68.37 314 P **P 21 14 59.9 -0.4**
VTS Vitosha 68.46 309 P P 21 15 07.3 +6.3
GZR Gura Zlata 68.47 312 ⇓P **P 21 15 00.2 -0.8**
GZR Gura Zlata 68.47 312 P **P 21 15 00.1 -0.8**
BLKB Belogradchik 68.75 310 ⇓P **P 21 15 03.2 +0.6**
JETT Jettan, Norway 68.76 338 *e*P **P 21 15 00.5 -1.7**
HERR Herculane 68.78 312 ⇓P **P 21 15 02.3 -0.5**
SURR Surduc 68.89 313 ⇑P **P 21 15 02.2 -1.2**
STHS Stebnicka Huta 69.09 316 *e*P **P 21 15 04.4 -0.2**
STHS pmax pmax
comp=Z,13nm,0.9s
STHS Stebnicka Huta 69.09 316 *e*P **P 21 15 04.4 -0.2**
VAY Valandovo 69.12 308 *i*P **P 21 15 05.6 +0.7**
BEL Belsk 69.15 319 *e*P **P 21 15 06.5 +1.6**
BEL *e*L L 21 46 28.3
comp=Z,3µm,18.9s
SIRR Siria 69.15 313 ⇑P **P 21 15 04.7 -0.4**
BZS Buzias 69.26 312 ⇑P **P 21 15 04.3 -1.4**
BZS Buzias 69.26 312 P **P 21 15 04.3 -1.4**
ARMA Armidale 69.28 135 P **P 21 15 08.6 +2.5**
TRO Tromso 69.28 338 *e*P **P 21 15 02.9 -2.5**
MDVR Moldovita 69.29 312 ⇓P **P 21 15 05.2 -0.8**
LIT Litokhoron 69.36 306 P **P 21 15 05.3 -1.2**
LIT IAmb IAmb 21 15 12.7
comp=Z,63nm,1.0s
LIT Litokhoron 69.36 306 P **P 21 15 05.3 -1.2**
LIT pmax pmax
comp=Z,63nm,1.0s
BOVS Bovan 69.44 310 ⇑P **P 21 15 06.5 -0.4**
NIE Niedzica 69.70 317 *e*P **P 21 15 10.2 +1.8**
NIE *e*L L 21 50 31.3
comp=Z,2µm,20.1s
OJC Ojcow 69.94 317 *e*P **P 21 15 09.8 0.0**
OJC *e*L L 21 51 12.4
comp=Z,3µm,20.1s
OJC Ojcow 69.94 317 P **P 21 15 08.4 -1.4**
OJC Ojcow 69.94 317 P **P 21 15 08.5 -1.4**
SPB2 Spitsbergen Ar 70.06 347 P **P 21 15 08.5 -1.6**
SPA0 Spitsbergen Ar 70.06 347 *e*P **P 21 15 07.6 -2.6**
SPITS Spitsbergen Ar 70.06 347 P **P 21 15 08.1 -2.0**
comp=Z,69nm,0.9s,baz=121,slow=14,SNR=23
SPITS LR LR 21 49 53.3
comp=Z,5µm,18.7s,baz=90,slow=39
comp=Z,69nm,0.9s
SPITS Spitsbergen Ar 70.06 347 P **P 21 15 08.3 -1.8**
SPITS pmax pmax
comp=Z,115nm,1.0s
PSZ Piszkesteto 70.15 315 P **P 21 15 10.3 -1.0**
PSZ IAMs_20 IAMs_20 21 49 25.9
comp=Z,3µm,18.0s
PSZ Piszkesteto 70.15 315 P **P 21 15 10.3 -1.0**
PSZ pmax pmax
comp=Z,35nm,1.2s
PSZ MLR MLR
comp=Z,3µm,18.0s
LANS Liptovska Anna 70.28 316 *e*P **P 21 15 13.6 +1.6**
LANS pmax pmax
comp=Z,12nm,1.2s
LANS Liptovska Anna 70.28 316 *e*P **P 21 15 13.6 +1.6**
OHR Ohrid 70.47 308 *i*P **P 21 15 13.2 -0.2**
FAUS Fauske 70.70 336 *e*P **P 21 15 12.0 -2.2**
AUDAR Daramalan Coll 70.83 140 P **P 21 15 17.6 +2.2**
KBS Kingsbay 70.93 348 P **P 21 15 13.6 -1.8**
KBS IAmb IAmb 21 15 16.8
comp=Z,102nm,1.4s
KBS Kingsbay 70.93 348 *e*P **P 21 15 14.8 -0.5**
KBS Kingsbay 70.93 348 *de*P **P 21 15 14.5 -0.9**
KBS pmax pmax
comp=Z,83nm,1.4s
KBS MLR MLR
comp=Z,4µm,19.0s
KBS Kingsbay 70.93 348 *i*P **P 21 15 15.5 +0.1**
OKC Ostrava-Krasne 71.04 317 *e*P **P 21 15 18.4 +1.8**
OKC MLR MLR
comp=Z,3µm,13.3s
OKC Ostrava-Krasne 71.04 317 *e*P **P 21 15 18.4 +1.8**
OKC AMS AMS 21 49 50.0
comp=Z,3µm,13.3s
RUDO Rudo 71.12 311 *e*P **P 21 15 17.7 +0.5**
MOR8 Moi Rana 71.14 335 *e*P **P 21 15 14.8 -2.1**
GKP Gorka Klasztor 71.15 321 *e*P **P 21 15 18.0 +0.9**
GKP *e*L L 21 47 02.3
comp=Z,3µm,22.2s

MORH Mrgy, Hungar 71.23 313 ⇑*i*P **P 21 15 18.3 +0.5**
MORH Mrgy, Hungar 71.23 313 ⇑P **P 21 15 16.4 -1.4**
STEB Steborice 71.27 317 *e*P **P 21 15 17.8 -0.2**
RAUS Rausandaksla 71.27 335 *e*P **P 21 15 17.2 -0.4**
MAUC Maruska 71.31 317 *e*P **P 21 15 17.8 -0.5**
PDG Podgorica 71.40 309 P **P 21 15 17.4 -1.5**
PDG IAmb IAmb 21 15 25.8
comp=Z,97nm,1.0s
PDG Podgorica 71.40 309 ⇓P **P 21 15 19.3 +0.4**
GAMB Gambell 71.42 28 P **P 21 15 19.3 +0.8**
baz=276
MORC Moravsky Berou 71.44 317 P **P 21 15 17.9 -1.1**
MORC Moravsky Berou 71.44 317 ⇓P **P 21 15 18.7 -0.3**
MORC Moravsky Berou 71.44 317 *e*P **P 21 15 18.8 -0.3**
MORC Moravsky Berou 71.44 317 P **P 21 15 18.7 -0.3**
JAVC Velka Javorina 71.49 316 *e*P **P 21 15 19.6 +0.2**
VAGH Vaagaholmen 71.55 335 *e*P **P 21 15 19.5 +0.3**
LEIR Leirfjorden 71.68 335 *e*P **P 21 15 17.3 -2.8**
MODS Modra-Piesok 71.82 316 *e*P **P 21 15 22.1 +0.8**
MODS pmax pmax
comp=Z,60nm,1.2s
MODS Modra-Piesok 71.82 316 *e*P **P 21 15 22.1 +0.8**
KRLC Kraliky 71.88 318 *e*P **P 21 15 22.6 +0.9**
KRLC MLR MLR
comp=Z,3µm,14.0s
KRLC Kraliky 71.88 318 *e*P **P 21 15 22.6 +0.9**
KRLC AMS AMS 21 50 10.0
comp=Z,3µm,14.0s
MBAR Mbarara 71.92 263 LR LR 21 48 34.9
comp=Z,942nm,18.0s,baz=72,slow=37
MBAR Mbarara 71.92 263 P **P 21 15 20.4 -2.4**
MBAR Mbarara 71.92 263 P **P 21 15 22.3 -0.4**
MBAR P **P 21 15 22.3 -0.4**
MBAR Mbarara 71.92 263 *de*P **P 21 15 22.1 -0.6**
MBAR pmax pmax
comp=Z,19nm,1.0s
MBAR MLR MLR
comp=Z,2µm,18.0s
TREB Trebinje 72.01 310 *e*P **P 21 15 25.8 +3.2**
KSP Ksiaz 72.07 318 *e*P **P 21 15 23.8 +1.0**
KSP *e*L L 21 50 10.4
comp=Z,3µm,18.2s
VRAC Vranov 72.12 317 LR LR 21 51 45.6
comp=Z,2µm,20.4s,baz=80,slow=40
VRAC Vranov 72.12 317 ⇓P **P 21 15 22.4 -0.7**
VRAC Vranov 72.12 317 *e*P **P 21 15 22.2 -0.9**
VRAC Vranov 72.12 317 P **P 21 15 22.4 -0.7**
DPC Dobruska-Polom 72.13 318 *e*P **P 21 15 23.6 +0.4**
DPC *e* 21 15 29.2
DPC MLR MLR
comp=Z,3µm,15.1s
DPC Dobruska-Polom 72.13 318 *e*P **P 21 15 23.6 +0.4**
DPC *ex* x 21 15 29.2
DPC AMS AMS 21 50 20.0
comp=Z,3µm,15.1s
OSTC Ostas 72.17 318 *e*P **P 21 15 23.8 +0.4**
OSTC *e* 21 15 29.5
OSTC MLR MLR
comp=Z,3µm,15.2s
OSTC Ostas 72.17 318 *e*P **P 21 15 23.8 +0.4**
OSTC *ex* x 21 15 29.5
OSTC AMS AMS 21 50 10.0
comp=Z,3µm,15.2s
HFS Hagfors 72.17 328 P **P 21 15 21.3 -1.9**
comp=Z,46nm,1.0s,baz=281,slow=0.8,SNR=30
HFS LR LR 21 49 37.2
comp=Z,4µm,18.3s,baz=81,slow=38
comp=Z,46nm,1.0s
CHVC Chvalec 72.26 318 AMS AMS 21 50 10.0
comp=Z,3µm,15.4s
KRUC Moravsky 72.29 317 *e*P **P 21 15 22.5 -1.6**
UPC Upice 72.30 318 *e*P **P 21 15 23.7 -0.5**
UPC MLR MLR
comp=Z,3µm,15.8s
UPC Upice 72.30 318 *e*P **P 21 15 23.7 -0.5**
UPC AMS AMS 21 50 20.0
comp=Z,3µm,15.8s
SLATY Slatina 72.39 312 *e*P **P 21 15 27.1 +2.3**
BEHE Becsehely 72.47 314 P **P 21 15 23.9 -1.3**
BEHE IAmb IAmb 21 15 33.2
comp=Z,47nm,1.2s
BEHE Becsehely 72.47 314 *e*P **P 21 15 24.9 -0.3**
BLY Banja Luka 72.49 312 ⇑*i*P **P 21 15 26.4 +1.0**
BLY Banja Luka 72.49 312 ⇑P **P 21 15 25.6 +0.2**
RONA Rosalia, Austr 72.58 315 *i*pP **P 21 15 27.1 +1.2**
comp=Z,25nm,1.1s,SNR=9.0
DEL Delary 72.62 324 *i*P **P 21 15 27.0 +1.1**
TNA Tin City 72.80 26 IAMs_20 IAMs_20 21 49 24.8
comp=Z,4µm,19.0s
TNA Tin City 72.80 26 P **P 21 15 27.5 +0.8**
baz=279
CONA Conrad Observa 72.83 315 *i*pP **P 21 15 28.8 +1.3**
comp=Z,82nm,1.3s,SNR=20
KOGS Kog 72.83 314 *i*P **P 21 15 28.3 +0.9**
TREC Trest 72.84 317 AMS AMS 21 50 40.0
comp=Z,3µm,12.2s
NC405 NORSAR Array S 72.99 329 P **P 21 15 26.6 -1.5**
NC405 IAmb IAmb 21 15 29.5
comp=Z,71nm,1.1s
LUNU Lund 72.99 324 *e*P **P 21 15 27.2 -1.0**
BORU Boraas 73.03 326 *e*P **P 21 15 26.8 -1.6**
SPIA Saint Paul Isl 73.04 35 P **P 21 15 29.4 +1.0**
baz=280
NC602 NORSAR Array S 73.14 329 *e*P **P 21 15 28.2 -0.7**
BJUU Bjuv 73.15 324 *i*P **P 21 15 30.0 +0.9**
FABU Falkenberg 73.16 325 *i*P **P 21 15 29.6 +0.5**
ARSA Arzberg 73.18 315 P **P 21 15 28.3 -1.2**
ARSA Arzberg 73.18 315 *i*P **P 21 15 27.8 -1.6**
comp=Z,34nm,1.0s,SNR=11
PVCC Panska Ves 73.20 318 AMS AMS 21 50 40.0
comp=Z,2µm,14.9s
NB2 NORSAR Subarra 73.24 329 P **P 21 15 27.1 -2.5**
comp=Z,66nm,1.1s,baz=80,slow=6.2
NOA NORSAR Array B 73.24 329 P **P 21 15 27.3 -2.3**
comp=Z,29nm,0.9s,baz=80,slow=6.0,SNR=44
NOA PP **PP 21 18 07.6 -4.8**
comp=Z,3.0nm,0.9s,baz=95,slow=8.2,SNR=4.3
NOA LR LR 21 50 35.1
comp=Z,3µm,18.6s,baz=85,slow=38
comp=Z,29nm,0.9s
RGN Rugen 73.25 323 IAMs_20 IAMs_20 21 49 00.7
comp=Z,4µm,21.0s
PRU Pruhonice 73.32 318 *e*P **P 21 15 31.7 +1.5**
PRU *e*S **S 21 25 00.2 +1.4**
PRU MLR MLR
comp=Z,3µm,14.4s
PRU Pruhonice 73.32 318 *e*P **P 21 15 31.7 +1.5**
PRU *e*S **S 21 25 00.2 +1.4**
PRU AMS AMS 21 51 00.0
comp=Z,3µm,14.4s
C16K Lisburne Hills 73.34 23 IAMs_20 IAMs_20 21 52 38.9
comp=Z,3µm,19.0s
C16K Lisburne Hills 73.34 23 P **P 21 15 30.9 +0.9**
baz=281,SNR=8.4
RUE Ruedersdorf 73.34 320 *e*P **P 21 15 31.4 +1.2**
comp=Z,154nm,1.2s,baz=78,slow=5.8
GCIS Gornji Cirnik 73.36 313 *i*P **P 21 15 31.7 +1.1**
PRA Prague 73.37 318 AMS AMS 21 51 00.0
comp=Z,3µm,14.2s
F14K Arctic Creek 73.47 26 P **P 21 15 31.7 +0.9**
baz=280
P08K Saint George I 73.52 35 P **P 21 15 32.3 +1.1**
baz=280
ONAU Onsala 73.52 326 *i*P **P 21 15 30.9 -0.3**
BRG Berggiesshubel 73.53 319 *e*P **P 21 15 32.4 +0.9**
comp=Z,50nm,1.2s,baz=78,slow=5.8
PERS Pernice 73.56 314 *i*P **P 21 15 32.4 +0.6**
TJOU Tjoern 73.56 326 *i*P **P 21 15 30.9 -0.6**
SOKA Soboth 73.61 314 *e*pP **P 21 15 32.5 +0.3**
comp=Z,37nm,1.1s,SNR=12
ZVC Zvikov 73.64 317 *e*P **P 21 15 31.4 -0.7**
ZVC *ex* x 21 15 34.4
ZVC AMS AMS 21 51 20.0
comp=Z,2µm,12.5s
OSL Oslo 73.68 328 *e*P **P 21 15 31.1 -1.0**
CKRC Cesky Krumlov 73.69 317 *e*P **P 21 15 33.1 +0.7**
CKRC MLR MLR
comp=Z,2µm,13.3s
CKRC Cesky Krumlov 73.69 317 *e*P **P 21 15 33.1 +0.7**
CKRC AMS AMS 21 51 20.0
comp=Z,2µm,13.3s
MOA Molln 73.90 316 *i*pP **P 21 15 35.0 +1.3**
comp=Z,33nm,1.0s,SNR=11
HSKC Hora Svate Kat 73.90 318 *e*P **P 21 15 35.4 +1.7**
HSKC *ex* x 21 15 39.7

HSKC AMS AMS 21 52 10.0
comp=Z,3µm,17.3s
OBKA Obir 73.97 314 *e*pP **P 21 15 35.6 +1.3**
comp=Z,39nm,1.2s
CLL Collm 74.03 319 P **P 21 15 33.6 -0.7**
CLL IAMs_20 IAMs_20 21 53 35.6
comp=Z,3µm,20.0s
CLL Collm 74.03 319 *i*P **P 21 15 34.9 +0.5**
CLL *i* 21 15 40.4
CLL *e*S **S 21 25 09.0 +2.2**
CLL pmax pmax
comp=Z,43nm,1.2s
CLL MLR MLR
comp=Z,3µm,20.1s
CLL Collm 74.03 319 *e*P **P 21 15 35.2 +0.8**
comp=Z,38nm,1.0s,baz=78,slow=5.8
ANM Nome 74.04 27 P **P 21 15 34.6 +0.5**
baz=282
DOMB Dombas 74.07 331 *e*P **P 21 15 33.6 -0.8**
GEC2 GERESS Array S 74.07 317 P **P 21 15 34.0 -0.8**
GEC2 IAmb IAmb 21 15 42.7
comp=Z,56nm,1.2s
GEC2 GERESS Array S 74.07 317 *e*P **P 21 15 35.7 +0.9**
comp=Z,66nm,1.2s,baz=78,slow=5.8
GERES GERESS Array B 74.07 317 P **P 21 15 33.4 -1.4**
comp=Z,5.1nm,0.7s,baz=64,slow=6.1,SNR=38
GERES LR LR 21 54 25.3
comp=Z,2µm,18.3s,baz=76,slow=41
comp=Z,5.1nm,0.7s
C17K DeLong Mountai 74.08 22 P **P 21 15 35.2 +0.8**
baz=282,SNR=7.8
KHC Kasperske Hory 74.10 317 P **P 21 15 33.8 -1.0**
KHC Kasperske Hory 74.10 317 ⇓*e*P **P 21 15 35.8 +0.9**
KHC pmax pmax
comp=Z,31nm,1.7s
KHC MLR MLR
comp=Z,2µm,18.0s
KHC Kasperske Hory 74.10 317 *e*P **P 21 15 35.7 +0.9**
KHC *e*S **S 21 25 05.5 -2.3**
KHC AMS AMS 21 51 30.0
comp=Z,3µm,13.3s
F15K North Star Dit 74.11 25 P **P 21 15 34.5 0.0**
F15K IAmb IAmb 21 15 37.0
comp=Z,76nm,1.1s
F15K IAMs_20 IAMs_20 21 51 09.4
comp=Z,3µm,18.0s
F15K North Star Dit 74.11 25 P **P 21 15 35.4 +0.9**
baz=282
ACER Acerenza 74.15 308 P **P 21 15 33.9 -1.4**
ACER IAmb IAmb 21 15 42.5
comp=Z,108nm,1.1s
CEY Cerknica 74.21 313 *i*P **P 21 15 36.4 +0.8**
RDOG Red Dog Mine 74.27 23 P **P 21 15 35.5 0.0**
RDOG IAmb IAmb 21 15 41.2
comp=Z,101nm,1.6s
RDOG Red Dog Mine 74.27 23 P **P 21 15 36.1 +0.6**
baz=283
D17K Noatak River 74.29 23 P **P 21 15 36.4 +0.8**
baz=283,SNR=18
KONO Kongsberg 74.29 328 P **P 21 15 35.1 -0.6**
KONO IAmb IAmb 21 15 37.1
comp=Z,60nm,1.1s
KONO Kongsberg 74.29 328 IAMs_20 IAMs_20 21 54 35.2
comp=Z,3µm,20.0s
KONO Kongsberg 74.29 328 *e*P **P 21 15 36.2 +0.5**
KONO Kongsberg 74.29 328 *de*P **P 21 15 35.2 -0.5**
KONO pmax pmax
comp=Z,46nm,1.1s
KONO MLR MLR
comp=Z,2µm,17.0s
BIOA Bad Ischl, Aus 74.35 315 *i*pP **P 21 15 37.5 +1.2**
comp=Z,35nm,1.2s,SNR=12
B18K Kokolik River 74.37 21 P **P 21 15 36.8 +0.9**
baz=284
A19K Wainwright 74.42 21 P **P 21 15 37.2 +1.0**
baz=284
G15K Niukluk 74.51 26 P **P 21 15 37.7 +0.9**
baz=283
M11K Mekoryuk 74.51 31 P **P 21 15 37.9 +1.0**
baz=282
WET Wettzell 74.55 317 *e*P **P 21 15 38.3 +0.8**
comp=Z,46nm,1.1s,baz=78,slow=5.8
TANN Tannenbergstha 74.55 318 *e*P **P 21 15 38.1 +0.7**
comp=Z,30nm,1.0s,baz=78,slow=5.8
MYKA Terra Mystica 74.56 314 *e*P **P 21 15 36.0 -1.7**
comp=Z,24nm,1.3s
NIKH Nikolski High 74.61 39 P **P 21 15 38.2 +0.5**
baz=282
MOL Molde 74.66 331 *e*P **P 21 15 38.6 +0.9**
KBA Koelnbreinsper 74.67 315 *e*P **P 21 15 37.2 -1.2**
comp=Z,26nm,0.9s
SKAR Skarslia 74.71 329 *e*P **P 21 15 36.7 -1.5**
GORT1 Trebel 74.72 321 *e*P **P 21 15 39.7 +1.5**
comp=Z,110nm,1.4s,baz=78,slow=5.8
PLN Plauen 74.72 319 *e*P **P 21 15 39.3 +0.9**
comp=Z,11nm,1.0s,baz=78,slow=5.8
C18K Utukok River 74.75 22 P **P 21 15 37.3 -1.0**
C18K IAmb IAmb 21 15 40.5
comp=Z,116nm,1.1s
C18K Utukok River 74.75 22 P **P 21 15 39.0 +0.7**
baz=284
NOR Nord 74.80 352 *i*P **P 21 15 38.2 -0.1**
NOR IAmb IAmb 21 15 39.1
comp=Z,108nm,1.1s
NEUB Neuenburg 74.81 319 *e*P **P 21 15 39.6 +0.7**
comp=Z,60nm,1.1s,baz=78,slow=5.8
MANZ Manzenberg 74.86 318 *e*P **P 21 15 40.5 +1.3**
comp=Z,18nm,1.4s,baz=78,slow=5.8
FLTG Flechtingen 74.90 321 *e*P **P 21 15 40.0 +0.7**
comp=Z,64nm,1.6s,baz=78,slow=5.8
E17K Hotham Inlet 74.90 24 P **P 21 15 40.2 +1.1**
baz=284,SNR=27
K13K Kusilvak Mount 74.91 29 IAMs_20 IAMs_20 21 53 14.0
comp=Z,3µm,18.0s
K13K Kusilvak Mount 74.91 29 P **P 21 15 40.2 +0.9**
baz=283
MOX Moxa 75.03 319 *e*P **P 21 15 41.1 +0.9**
comp=Z,32nm,1.0s,baz=78,slow=5.8
MOX *e*L L 21 52 51.1
comp=Z,2µm,19.2s
GOET G??ttrup 75.03 326 *i*P **P 21 15 41.0 +1.0**
GOET IAmb IAmb 21 15 42.6
comp=Z,156nm,1.1s
LESA Schwarzleotal 75.04 315 *i*P **P 21 15 39.8 -0.6**
comp=Z,22nm,0.7s,SNR=13
BSEG Bad Segeberg 75.10 322 *e*P **P 21 15 42.3 +1.8**
comp=Z,40nm,1.1s,baz=78,slow=5.8
SSRD Sdr. Stenderup 75.15 324 *i*P **P 21 15 41.1 +0.4**
SSRD IAmb IAmb 21 15 43.5
comp=Z,154nm,1.2s
MUD Monsted U'grnd 75.19 325 *e*P **P 21 15 39.9 -1.0**
MUD IAmb IAmb 21 15 43.3
comp=Z,62nm,1.0s
C19K Lookout Ridge 75.20 21 P **P 21 15 42.0 +1.1**
baz=286
J14K Nanvaranak Lak 75.22 28 IAMs_20 IAMs_20 21 54 42.2
comp=Z,2µm,18.0s
J14K Nanvaranak Lak 75.22 28 P **P 21 15 42.1 +1.1**
baz=284,SNR=8.9
E18K Tukpahlearik C 75.28 23 P **P 21 15 40.5 -0.8**
E18K IAmb IAmb 21 15 43.8
comp=Z,92nm,1.1s
E18K Tukpahlearik C 75.28 23 P **P 21 15 42.5 +1.2**
baz=285,SNR=20
ASSE Asse, Remlinge 75.28 320 *e*P **P 21 15 42.4 +0.9**
comp=Z,41nm,1.4s,baz=78,slow=5.8
H16K Elim 75.34 26 P **P 21 15 42.3 +0.7**
baz=284,SNR=9.8
CLZ Clausthal 75.53 320 *e*P **P 21 15 44.1 +1.0**
comp=Z,49nm,1.0s,baz=78,slow=5.8
A21K Barrow 75.53 19 P **P 21 15 43.4 +0.8**
baz=288
AQU L'Aquila 75.67 310 P **P 21 15 43.8 -0.2**
AQU L'Aquila 75.67 310 ⇑*i*P **P 21 15 44.9 +0.8**
FDMO Fiordimonte 75.73 311 P **P 21 15 43.5 -0.9**
FDMO IAmb IAmb 21 15 51.8
comp=Z,53nm,1.0s
B20K Meade River 75.76 20 P **P 21 15 44.9 +1.0**
baz=288
WTTA Wattenberg 75.77 315 *i*pP **P 21 15 45.3 +0.6**
comp=Z,36nm,1.1s,SNR=12
G17K Kiwalik Mounta 75.77 25 P **P 21 15 44.8 +0.7**
baz=286
SNART Snartemo 75.79 327 *i*P **P 21 15 45.2 +0.9**
WATA Walderalm 75.79 315 *i*pP **P 21 15 45.3 +0.5**
comp=Z,40nm,1.4s,SNR=11
FUR Furstenfeldbru 75.80 316 *e*P **P 21 15 45.8 +1.2**

comp=Z,66nm,1.3s,baz=78,slow=5.8
UNV Unalaska Valle 75.80 38 P P 21 15 45.2 +0.8
baz=284
GTTG Gottingen 75.84 320 *e*P P 21 15 45.8 +1.0
comp=Z,32nm,0.8s,baz=78,slow=5.8
DZM Mont Dzumac 75.84 120 LR LR 21 52 17.4
comp=Z,405nm,19.0s,baz=319,slow=38
F18K Selawik 75.86 24 P P 21 15 45.6 +1.0
baz=286,SNR=29
D19K Kuna River 75.89 22 IAMs_20 IAMs_20 21 52 13.1
comp=Z,3µm,20.0s
D19K Kuna River 75.89 22 P P 21 15 46.0 +1.2
baz=287
M13K Dall Lake 75.89 31 P P 21 15 46.5 +1.7
baz=284
RETH Rethem/Aller, 75.93 321 *e*P P 21 15 46.4 +1.2
comp=Z,85nm,1.7s,baz=78,slow=5.8
L14K Kuka Creek 75.97 30 P P 21 15 46.8 +1.5
baz=285,SNR=15
UBBA Unterbreizbach 75.99 319 *e*P P 21 15 46.9 +1.4
comp=Z,55nm,1.3s,baz=78,slow=5.8
VAE Valguarnera 76.05 305 LR LR 21 54 44.1
comp=Z,880nm,18.3s,baz=82,slow=40
SQTA Sankt Quirin 76.06 315 *e*pP P 21 15 46.8 +0.4
comp=Z,27nm,0.8s,SNR=12
MOTA Moosalm 76.10 316 *i* pP P 21 15 47.0 +0.5
comp=Z,82nm,1.1s,SNR=15
A22K Sinclair Lake 76.14 19 P P 21 15 47.2 +1.1
baz=289
I17K Unalakleet 76.19 27 IAMs_20 IAMs_20 21 51 49.5
comp=Z,2µm,18.0s
I17K Unalakleet 76.19 27 P P 21 15 47.7 +1.2
baz=286,SNR=7.7
YATNC Mamie plateau, 76.21 120 P P 21 15 49.5 +2.2
H17K Granite Mounta 76.22 26 P P 21 15 45.6 -1.2
H17K Granite Mounta 76.22 26 P P 21 15 48.0 +1.3
baz=286
K15K Wolf Creek Mou 76.25 29 IAMs_20 IAMs_20 21 53 55.3
comp=Z,3µm,19.0s
K15K Wolf Creek Mou 76.25 29 P P 21 15 47.8 +0.8
baz=286,SNR=7.3
RETA Reutte 76.29 316 *i* pP P 21 15 48.5 +0.9
comp=Z,79nm,1.5s,SNR=15
D20K Etivluk River 76.34 22 P P 21 15 48.4 +1.0
baz=288
J16K Anvik River 76.39 27 IAMs_20 IAMs_20 21 51 37.9
comp=Z,3µm,19.0s
J16K Anvik River 76.39 27 P P 21 15 48.8 +1.1
baz=286
FETA Feichten 76.42 315 *e*pP P 21 15 49.2 +0.8
comp=Z,66nm,1.4s,SNR=11
L15K Ungalak Mounta 76.43 29 P P 21 15 48.6 +0.6
baz=286,SNR=10
G18K Tagagawik 76.45 25 IAMs_20 IAMs_20 21 52 27.3
comp=Z,4µm,19.0s
G18K Tagagawik 76.45 25 P P 21 15 48.8 +0.7
baz=287,SNR=15
M14K Bethel 76.46 30 P P 21 15 48.7 +0.6
baz=286,SNR=16
E19K Redstone River 76.52 23 P P 21 15 49.1 +0.7
baz=288
E20K Nigu River 76.64 22 P P 21 15 50.2 +1.0
baz=289
B21K Ikpikpuk River 76.72 20 P P 21 15 50.2 +0.7
baz=290
H18K Honhosa River 76.79 25 IAMs_20 IAMs_20 21 53 12.3
comp=Z,4µm,22.0s
H18K Honhosa River 76.79 25 P P 21 15 51.0 +1.0
baz=288
N14K Kuskokwak Cree 76.82 31 P P 21 15 51.6 +1.5
baz=286,SNR=15
C21K Knifeblade Rid 76.82 21 P P 21 15 51.3 +1.3
baz=290
FUORN Ofenpass-Fuorn 76.83 315 P P 21 15 49.5 -1.4
FUORN IAMs_20 IAMs_20 21 53 23.7
comp=Z,2µm,20.0s
B22K Teshekpuk Lake 76.86 20 P P 21 15 51.0 +0.8
baz=291
KASTN Kahler Asten 76.87 320 *e*P P 21 15 51.7 +1.0
comp=Z,10nm,1.0s,baz=78,slow=5.8
DAVA Damuels 76.92 316 *e*pP P 21 15 52.0 +0.7
comp=Z,45nm,1.5s,SNR=8.9
G19K Purcell Mounta 76.98 24 IAMs_20 IAMs_20 21 52 54.3
comp=Z,3µm,19.0s
G19K Purcell Mounta 76.98 24 P P 21 15 51.7 +0.7
baz=288,SNR=25
IBBN Ibbenburen 76.98 321 *e*P P 21 15 52.4 +1.2
comp=Z,267nm,2.2s,baz=78,slow=5.8
STU Stuttgart 76.99 317 P P 21 15 50.8 -0.6
STU IAmb IAmb 21 15 59.3
comp=Z,79nm,1.0s
STU Stuttgart 76.99 317 P P 21 15 50.8 -0.6
STU pmax pmax
comp=Z,79nm,1.0s
STU MLR MLR
comp=Z,2µm,20.0s
STU Stuttgart 76.99 317 *e*P P 21 15 52.2 +0.8
comp=Z,214nm,1.1s,baz=78,slow=5.8
J17K VABM Dome 77.02 27 IAMs_20 IAMs_20 21 53 20.5
comp=Z,3µm,20.0s
J17K VABM Dome 77.02 27 P P 21 15 52.6 +1.4
baz=287,SNR=9.6
DAVOX Davos/Dischmat 77.05 315 LR LR 21 53 51.7
comp=Z,3µm,20.9s,baz=56,slow=39
M15K Kasigluk River 77.08 30 P P 21 15 52.8 +1.2
baz=287
F20K Avaraart Lake 77.20 23 IAMs_20 IAMs_20 21 55 56.1
comp=Z,3µm,18.0s
F20K Avaraart Lake 77.20 23 P P 21 15 52.8 +0.6
baz=290
O14K Tigvukauivet M 77.21 31 P P 21 15 53.6 +1.2
baz=286
FALS False Pass 77.29 36 P P 21 15 53.4 +0.4
baz=286
L16K Owhat River 77.34 29 P P 21 15 54.6 +1.5
baz=287,SNR=9.9
E21K Killik River 77.35 21 IAMs_20 IAMs_20 21 53 34.7
comp=Z,3µm,20.0s
E21K Killik River 77.35 21 P P 21 15 53.5 +0.4
baz=291
VLC Villacollemand 77.37 312 P P 21 15 52.9 -0.7
H19K Roundabout Mou 77.43 25 IAMs_20 IAMs_20 21 52 57.2
comp=Z,3µm,18.0s
H19K Roundabout Mou 77.43 25 P P 21 15 54.8 +1.3
baz=289
TUE Stuetta 77.48 315 P P 21 15 53.3 -1.2
TUE IAmb IAmb 21 16 04.6
comp=Z,45nm,1.2s
TUE IAMs_20 IAMs_20 21 53 56.8
comp=Z,4µm,20.0s
BUG Bochum-Univer 77.50 320 *e*P P 21 15 55.4 +1.3
comp=Z,40nm,1.2s,baz=78,slow=5.8
GCSA Galena City Sc 77.52 25 P P 21 15 54.9 +0.9
baz=289
N15K Kwethluk River 77.52 30 P P 21 15 55.7 +1.6
baz=287,SNR=17
K17K Iditarod 77.56 28 P P 21 15 55.8 +1.5
baz=288,SNR=20
D22K Ayikyak River 77.63 21 P P 21 15 55.9 +1.3
baz=292,SNR=38
BFO Black Forest 77.66 317 P P 21 15 54.0 -1.2
BFO Black Forest 77.66 317 P P 21 15 54.0 -1.2
BFO pmax pmax
comp=Z,50nm,1.5s
BFO MLR MLR
comp=Z,2µm,21.0s
DAG Danmarks Havn 77.67 348 *i* P P 21 15 53.8 -0.9
DAG IAmb IAmb 21 15 55.0
comp=Z,102nm,1.2s
L17K Donlin 77.75 28 P P 21 15 56.9 +1.5
baz=288
M16K Timber Creek 77.79 29 IAMs_20 IAMs_20 21 52 50.1
comp=Z,3µm,20.0s
M16K Timber Creek 77.79 29 P P 21 15 56.8 +1.2
baz=288
S12K Black Hills 77.80 35 P P 21 15 57.0 +1.2
baz=287
C23K Itkillik River 77.94 20 P P 21 15 57.4 +1.1
baz=294,SNR=25
O15K Ungalikthiuk R 77.94 31 P P 21 15 57.7 +1.2
baz=288,SNR=7.0
F21K Alatna River 77.96 23 P P 21 15 57.1 +0.6
baz=292
J18K Innoko River 78.00 27 IAMs_20 IAMs_20 21 53 30.5
comp=Z,2µm,18.0s
J18K Innoko River 78.00 27 P P 21 15 57.6 +0.8
baz=289,SNR=32
JMIC Jan Mayen 78.01 342 LR LR 21 56 01.1
comp=Z,912nm,20.1s,baz=58,slow=40
N16K Nishlik Lake 78.05 30 P P 21 15 58.6 +1.5
baz=288
H20K Anotleneega Mo 78.06 24 P P 21 15 58.0 +0.9
baz=291,SNR=20
E22K Anaktuvuk Pass 78.21 21 IAMs_20 IAMs_20 21 54 52.6
comp=Z,3µm,19.0s
E22K Anaktuvuk Pass 78.21 21 P P 21 15 58.8 +0.9
baz=293,SNR=37
G21K Allakaket 78.21 23 P P 21 15 58.8 +0.9
baz=292,SNR=32
D23K Nanushuk River 78.27 21 P P 21 15 59.5 +1.4
baz=294
J19K Poorman 78.28 26 P P 21 15 59.6 +1.3
baz=290,SNR=35
IMAR Indian Mountai 78.32 24 P P 21 15 57.1 -1.3
F22K John River 78.32 22 P P 21 15 59.5 +1.0
baz=293
M17K Holitna River 78.37 29 P P 21 16 00.2 +1.4
baz=289,SNR=15
L18K Granite Mounta 78.43 28 IAMs_20 IAMs_20 21 52 53.0
comp=Z,3µm,20.0s
L18K Granite Mounta 78.43 28 P P 21 16 00.5 +1.4
baz=290,SNR=12
I20K Naaghedeneel 78.47 25 P P 21 16 00.8 +1.6
baz=291
MEM Membach 78.50 320 *d*P P 21 16 01.4 +1.7
MEM *d*PcP **sP** 21 16 07.1 +1.8
C24K Franklin Bluff 78.59 20 IAMs_20 IAMs_20 21 56 03.5
comp=Z,3µm,18.0s
C24K Franklin Bluff 78.59 20 P P 21 16 00.9 +1.0
baz=295
O16K Kokwok River B 78.65 31 P P 21 16 01.7 +1.3
baz=289,SNR=12
WLF Walferdange 78.67 319 P P 21 15 59.4 -1.3
WLF Walferdange 78.67 319 P P 21 15 59.4 -1.3
WLF IAmb IAmb 21 16 09.3
comp=Z,134nm,1.5s
WLF IAMs_20 IAMs_20 21 54 04.3
comp=Z,3µm,18.0s
WLF Walferdange 78.67 319 P P 21 15 59.4 -1.3
WLF pmax pmax
comp=Z,134nm,1.5s
WLF MLR MLR
comp=Z,3µm,18.0s
WLF Walferdange 78.67 319 *e*P P 21 16 02.6 +1.8
comp=Z,139nm,1.5s,baz=78,slow=5.8
TOLK Toolik Lake Re 78.77 21 P P 21 15 60.0 -1.0
TOLK IAmb IAmb 21 16 03.1
comp=Z,72nm,0.8s
TOLK Toolik Lake Re 78.77 21 P P 21 16 01.8 +0.9
baz=295,SNR=29
SDPT Sand Point 78.77 35 P P 21 16 02.2 +1.1
baz=288
N17K Nushagak Hills 78.77 30 IAMs_20 IAMs_20 21 50 15.1
comp=Z,3µm,20.0s
N17K Nushagak Hills 78.77 30 P P 21 16 02.8 +1.7
baz=290
G22K Bettles 78.79 23 P P 21 16 01.7 +0.6
baz=293,SNR=15
D24K Happy Valley 78.80 20 P P 21 16 01.8 +0.7
baz=295
H21K Melozitna River 78.80 24 P P 21 16 02.2 +1.0
baz=292,SNR=50
J20K Nowinta River 78.82 26 P P 21 16 02.9 +1.6
baz=292,SNR=18
SENIN Lac Senin/Sane 78.87 315 P P 21 16 00.3 -1.9
SENIN IAmb IAmb 21 16 20.1
comp=Z,143nm,2.0s
SENIN IAMs_20 IAMs_20 21 56 03.7
comp=Z,2µm,20.0s
P16K Nushagak River 78.89 31 P P 21 16 02.7 +1.1
baz=289
S14K Fog Glacier 78.97 34 P P 21 16 01.9 -0.5
baz=288
E23K Chandler 79.00 21 P P 21 16 02.9 +0.6
baz=295
M18K Stony River 79.07 28 P P 21 16 04.2 +1.5
baz=290,SNR=21
O17K Koliganek Bris 79.07 30 P P 21 16 03.9 +1.2
baz=290,SNR=10
BGES Gesves 79.12 320 *d*P P 21 16 07.8 +4.6
COLD Coldfoot 79.14 22 IAMs_20 IAMs_20 21 53 49.1
comp=Z,3µm,19.0s
COLD Coldfoot 79.14 22 P P 21 16 03.9 +1.0
baz=294,SNR=15
K20K Telida 79.16 26 P P 21 16 04.6 +1.4
baz=292
H22K Ishtalitna Cre 79.25 24 IAMs_20 IAMs_20 21 54 17.3
comp=Z,3µm,19.0s
H22K Ishtalitna Cre 79.25 24 P P 21 16 05.1 +1.4
baz=294
L19K White Mountain 79.25 28 P P 21 16 05.3 +1.6
baz=291,SNR=27
I21K Tanana 79.30 24 P P 21 16 05.0 +1.2
baz=293
N18K Kilae Creek 79.32 29 IAMs_20 IAMs_20 21 50 43.6
comp=Z,2µm,19.0s
N18K Kilae Creek 79.32 29 P P 21 16 05.5 +1.4
baz=291
E24K Your Creek 79.37 21 P P 21 16 05.4 +1.1
baz=296
DBG Daneborg 79.39 346 *i* P P 21 16 03.7 -0.5
DBG IAmb IAmb 21 16 05.6
comp=Z,64nm,1.3s
G23K Bananza Creek 79.42 23 IAMs_20 IAMs_20 21 56 15.5
comp=Z,3µm,22.0s
G23K Bananza Creek 79.42 23 P P 21 16 05.5 +1.0
baz=295,SNR=45
D25K Kavik River 79.50 20 IAMs_20 IAMs_20 21 57 10.6
comp=Z,3µm,18.0s
D25K Kavik River 79.50 20 P P 21 16 05.8 +0.9
baz=298
DOU Dourbes 79.51 319 *d*P P 21 16 06.5 +1.2
L20K Farewell, AK 79.56 27 IAMs_20 IAMs_20 21 57 01.8
comp=Z,3µm,18.0s
L20K Farewell, AK 79.56 27 P P 21 16 06.8 +1.4
baz=292,SNR=21
R16K Pilot Point 79.58 33 P P 21 16 06.9 +1.4
baz=290
P17K Kvichak River 79.58 31 P P 21 16 06.9 +1.4
baz=290,SNR=8.7
Q16K King Salmon 79.66 31 P P 21 16 06.8 +0.9
baz=290,SNR=5.3
BNI Bardonecchia 79.67 314 P P 21 16 05.3 -1.2
BNI Bardonecchia 79.67 314 P P 21 16 05.3 -1.2
BNI pmax pmax
comp=Z,55nm,1.5s
BNI MLR MLR
comp=Z,600nm,19.0s
C26K Camden Bay 79.67 19 P P 21 16 07.6 +1.7
baz=299
CHUM Lake Minchumin 79.68 26 P P 21 16 07.3 +1.3
baz=293
F24K Squaw Lake 79.82 21 P P 21 16 07.8 +1.1
baz=296
MLY Manley 79.85 24 P P 21 16 05.7 -1.2
MLY IAmb IAmb 21 16 09.3
comp=Z,116nm,1.0s
MLY Manley 79.85 24 P P 21 16 07.8 +0.9
baz=294,SNR=60
N19K Bonanza Creek 79.92 29 IAMs_20 IAMs_20 21 57 44.3
comp=Z,2µm,18.0s
N19K Bonanza Creek 79.92 29 P P 21 16 08.8 +1.3
baz=292,SNR=22
O18K Koktuh Hills 79.94 30 IAMs_20 IAMs_20 21 55 14.9
comp=Z,3µm,19.0s
O18K Koktuh Hills 79.94 30 P P 21 16 08.8 +1.3
baz=291,SNR=9.2
H23K Yukon River 79.97 23 IAMs_20 IAMs_20 21 56 02.1
comp=Z,3µm,21.0s
H23K Yukon River 79.97 23 P P 21 16 08.6 +1.1
baz=295
P18K Big Mountain, 80.09 30 P P 21 16 08.7 +0.3
baz=291
M20K Styx River 80.12 28 P P 21 16 08.8 +0.3
baz=293
PPLA Purkeypile 80.12 26 P P 21 16 08.4 -0.2
PPLA Purkeypile 80.12 26 P P 21 16 09.2 +0.6
baz=293,SNR=11
BPAW Bear Paw Mtn. 80.13 25 IAMs_20 IAMs_20 21 53 27.6
comp=Z,2µm,21.0s
BPAW Bear Paw Mtn. 80.13 25 P P 21 16 09.6 +1.1
baz=294,SNR=40
R17L Mt. Peulik Vol 80.17 32 P P 21 16 09.5 +0.7
baz=291
C27K Jago River 80.18 19 IAMs_20 IAMs_20 21 57 02.4
comp=Z,3µm,18.0s
C27K Jago River 80.18 19 P P 21 16 09.5 +0.9
baz=300
Q17K Contact Creek 80.18 32 P P 21 16 08.6 -0.3
baz=291
O19K Port Alsworth 80.22 29 P P 21 16 10.2 +1.3
baz=292,SNR=19
I23K Minto, Yukon-K 80.33 24 IAMs_20 IAMs_20 21 54 57.7
comp=Z,3µm,18.0s
I23K Minto, Yukon-K 80.33 24 P P 21 16 10.2 +0.8
baz=296,SNR=27
E25K Arctic Village 80.33 20 P P 21 16 10.3 +0.8
baz=298,SNR=18
G24K Hadweenzic Riv 80.33 22 P P 21 16 10.3 +0.8
baz=297,SNR=24
KTH Kantishna Hill 80.38 26 P P 21 16 09.8 -0.1
KTH IAmb IAmb 21 16 14.4
comp=Z,75nm,1.4s
KEST Kesra 80.44 304 P P 21 16 10.4 -0.5
comp=Z,20nm,1.2s,baz=58,slow=6.5,SNR=9.0
KEST LR LR 21 57 48.5
comp=Z,836nm,21.4s,baz=48,slow=40
comp=Z,20nm,1.2s
KEST Kesra 80.44 304 P P 21 16 10.3 -0.5
KEST IAmb IAmb 21 16 18.5
comp=Z,134nm,1.6s
KEST Kesra 80.44 304 P P 21 16 12.5 +1.7
SNR=9.4
Q18K Katmai Hardscr 80.47 31 P P 21 16 10.3 -0.2
baz=292,SNR=8.5
F25K Christian Rive 80.55 21 IAMs_20 IAMs_20 21 53 29.5
comp=Z,3µm,19.0s
F25K Christian Rive 80.55 21 P P 21 16 12.0 +1.2
baz=298,SNR=46
H24K Noodor Dome 80.58 23 IAMs_20 IAMs_20 21 55 22.3
comp=Z,3µm,18.0s
H24K Noodor Dome 80.58 23 P P 21 16 11.7 +0.8
baz=297
NEA2 Nenana 80.68 24 P P 21 16 11.9 +0.5
baz=296,SNR=22
TRF Thorofare Moun 80.68 26 P P 21 16 11.8 +0.1
baz=295,SNR=11
SKT Skwentna 80.77 27 P P 21 16 12.2 +0.3
baz=294,SNR=47
G25K Bearman Lake 80.79 22 P P 21 16 13.0 +1.1
baz=298,SNR=26
SPCR Spurr Chakacha 80.79 28 P P 21 16 13.0 +0.9
baz=294,SNR=12
N20K Mount Spurr 80.79 28 P P 21 16 12.9 +0.7
baz=294
L22K Petersville 80.87 27 IAMs_20 IAMs_20 21 57 53.4
comp=Z,2µm,18.0s
P19K Oil Pt 80.94 30 P P 21 16 12.9 0.0
baz=293
BMAR Burnt Mountain 80.99 21 P P 21 16 12.4 -0.7
F26K Sheenjek River 81.00 21 P P 21 16 14.2 +1.1
baz=300,SNR=51
COLA College 81.02 24 IAMs_20 IAMs_20 21 55 28.0
comp=Z,3µm,18.0s
COLA College 81.02 24 P P 21 16 14.3 +1.2
COLA College 81.02 24 *de*P P 21 16 13.1 0.0
COLA pmax pmax
comp=Z,32nm,1.0s
COLA MLR MLR
comp=Z,1µm,15.0s
COLA College 81.02 24 P P 21 16 13.3 +0.2
baz=297
Q19K Cape Douglas, 81.02 30 P P 21 16 13.0 -0.4
baz=293
SSB Saint Sauveur 81.04 315 P P 21 16 13.2 -0.5
SSB Saint Sauveur 81.04 315 P P 21 16 13.2 -0.5
SSB pmax pmax
comp=Z,36nm,1.3s
O20K Slope Mountain 81.05 29 P P 21 16 13.2 -0.3
baz=293
POKR Poker Plat Res 81.07 24 IAMs_20 IAMs_20 21 55 32.3
comp=Z,3µm,18.0s
POKR Poker Plat Res 81.07 24 P P 21 16 13.6 +0.1
baz=297,SNR=21
MCK McKinley 81.11 25 P P 21 16 14.0 +0.3
baz=296
H25L Birch Creek 81.12 22 P P 21 16 14.9 +1.2
baz=298,SNR=20
CUT Chulitna 81.13 27 P P 21 16 13.8 0.0
CUT IAMs_20 IAMs_20 21 58 46.3
comp=Z,2µm,18.0s
CUT Chulitna 81.13 27 P P 21 16 13.8 0.0
baz=295
CCB Clear Creek Bu 81.14 24 IAMs_20 IAMs_20 21 55 23.3
comp=Z,3µm,18.0s
FYU Fort Yukon 81.19 22 IAMs_20 IAMs_20 21 56 00.3
comp=Z,3µm,18.0s
D27M Malcolm River 81.21 19 IAMs_20 IAMs_20 21 56 46.6
comp=Z,2µm,19.0s
D27M Malcolm River 81.21 19 P P 21 16 15.2 +1.0
baz=302
SUA Susitna One 81.33 28 P P 21 16 14.7 -0.4
SUA Susitna One 81.33 28 P P 21 16 15.3 +0.2
baz=295,SNR=17
ILAR Eielson Array 81.44 24 P P 21 16 13.0 -2.4
comp=Z,13nm,1.0s,baz=304,slow=3.7,SNR=43
ILAR PP PP 21 19 15.8 -5.1
comp=Z,1.5nm,0.9s,baz=297,slow=4.0,SNR=3.7
ILAR PKKPbc PKKPbc 21 34 50.6 -0.4
comp=Z,1.4nm,1.1s,baz=165,slow=1.4,SNR=6.9
ILAR LR LR 21 55 53.5
comp=Z,2µm,18.6s,baz=295,slow=38
comp=Z,13nm,1.0s
ILAR Eielson Array 81.44 24 P P 21 16 13.4 -1.9
ILAR Eielson Array 81.44 24 P P 21 16 13.5 -1.9
CAPN Captain Cook N 81.44 28 P P 21 16 16.0 +0.6
baz=295
M22K Willow 81.47 27 P P 21 16 15.8 +0.2
baz=295,SNR=18
G26K Porcupine Rive 81.50 21 P P 21 16 17.3 +1.6
baz=300,SNR=51
MATP Matopo 81.57 245 LR LR 21 48 11.4
comp=Z,459nm,21.6s,baz=66,slow=33
E27K Coleen River 81.58 20 IAMs_20 IAMs_20 21 56 20.5
comp=Z,3µm,21.0s
E27K Coleen River 81.58 20 P P 21 16 17.1 +1.0
baz=302,SNR=52
HDA Harding Lake 81.58 24 P P 21 16 14.9 -1.3
HDA Harding Lake 81.58 24 P P 21 16 15.3 -0.9
baz=296,SNR=10
PRP Porcupine Dome 81.59 23 IAMs_20 IAMs_20 21 57 23.0
comp=Z,3µm,21.0s
PRP Porcupine Dome 81.59 23 P P 21 16 16.8 +0.5
baz=299,SNR=62
WAT1 Susitna Watana 81.67 26 P P 21 16 16.4 -0.3
baz=296
HOM Homer 81.67 29 P P 21 16 17.8 +1.1
baz=294
Q20K Shuyak Island 81.75 31 P P 21 16 17.1 0.0
baz=294
CRHA Rehia 81.75 305 P P 21 16 19.8 +2.0
D28M Stokes Point 81.83 18 P P 21 16 18.8 +1.5
baz=304,SNR=80
OHAK Old Harbor 81.87 32 P P 21 16 18.8 +1.0
OHAK Old Harbor 81.87 32 P P 21 16 18.2 +0.5
baz=293
POGA Pongola 81.88 237 P P 21 16 16.8 -1.5
POGA IAmb IAmb 21 16 23.3
comp=Z,56nm,1.2s
RC01 Rabbit Creek A 81.93 28 IAMs_20 IAMs_20 21 57 38.4
comp=Z,2µm,19.0s
RC01 Rabbit Creek A 81.93 28 P P 21 16 18.4 +0.4
baz=296,SNR=8.0
NEEM North Greenlan 81.95 354 *i* P P 21 16 18.5 +0.2
NEEM IAmb IAmb 21 16 19.8
comp=Z,148nm,1.0s
PMR Palmer 81.97 27 P P 21 16 19.0 +0.8
PMR Palmer 81.97 27 P P 21 16 18.5 +0.3
baz=296,SNR=14
CBST Bordj Sabath 81.98 306 P P 21 16 21.2 +2.3
BRLK Bradley Lake 81.98 29 IAMs_20 IAMs_20 21 52 07.8
comp=Z,2µm,19.0s
GHO Glory Hole Cre 81.98 27 IAMs_20 IAMs_20 21 58 36.7
comp=Z,2µm,18.0s
KDAK Kodiak Island 81.99 31 P P 21 16 16.7 -1.7
comp=Z,82nm,0.9s,baz=348,slow=3.4,SNR=15
KDAK LR LR 21 56 14.2
comp=Z,2µm,19.1s,baz=283,slow=38
comp=Z,82nm,0.9s
KDAK Kodiak Island 81.99 31 P P 21 16 17.3 -1.1
KDAK IAmb IAmb 21 16 20.0
comp=Z,98nm,0.9s
KDAK Kodiak Island 81.99 31 IAMs_20 IAMs_20 21 53 47.4
comp=Z,3µm,20.0s

KDAK **Kodiak Island** 81.99 31 *de* P P 21 16 18.9 +0.5
KDAK pmax pmax
comp=Z,120nm,1.0s
KDAK MLR MLR
comp=Z,2µm,23.0s
KDAK **Kodiak Island** 81.99 31 P P 21 16 18.9 +0.5
baz=294
E28M **Babbage River** 82.00 19 P P 21 16 17.4 -0.9
E28M IAmb IAmb 21 16 20.9
comp=Z,122nm,1.1s
E28M **Babbage River** 82.00 19 P P 21 16 19.3 +1.0
baz=304,SNR=91
DHY **Denali Highway** 82.03 25 P P 21 16 18.7 -0.1
baz=298,SNR=9.2
BRSE **Bradley Lake S** 82.06 29 P P 21 16 18.8 0.0
baz=295
SCO **Scoresbysund** 82.08 344 P P 21 16 18.1 -0.6
SCO **Scoresbysund** 82.08 344 P P 21 16 18.1 -0.6
SCO pmax pmax
comp=Z,35nm,1.1s
SCO MLR MLR
comp=Z,4µm,19.0s
SCO **Scoresbysund** 82.08 344 *i* P P 21 16 18.3 -0.4
SCO IAmb IAmb 21 16 20.2
comp=Z,34nm,1.1s
J25K **Salcha River,** 82.09 24 IAMs_20 IAMs_20 21 57 48.2
comp=Z,2µm,19.0s
J25K **Salcha River,** 82.09 24 P P 21 16 18.4 -0.5
baz=299,SNR=17
WAT6 **Susitna Watana** 82.11 26 P P 21 16 19.1 -0.1
baz=297,SNR=20
EKA **Eskdalemuir Ar** 82.14 326 P P 21 16 17.6 -1.6
comp=Z,23nm,0.9s,baz=76,slow=5.5,SNR=18
comp=Z,23nm,0.9s
ESK **Eskdalemuir** 82.17 326 P P 21 16 18.4 -1.0
ESK IAmb IAmb 21 16 21.7
comp=Z,54nm,1.1s
ESK **Eskdalemuir** 82.17 326 P P 21 16 18.4 -1.0
ESK pmax pmax
comp=Z,54nm,1.1s
O22K **Cooper Landing** 82.20 28 IAMs_20 IAMs_20 21 52 52.6
comp=Z,3µm,19.0s
O22K **Cooper Landing** 82.20 28 P P 21 16 19.6 +0.1
baz=296
SML **Sawmill** 82.22 27 IAMs_20 IAMs_20 21 58 36.9
comp=Z,3µm,18.0s
SML **Sawmill** 82.22 27 P P 21 16 20.3 +0.7
baz=297,SNR=26
G27K **Doyon Strip** 82.29 21 P P 21 16 20.9 +1.0
baz=302,SNR=49
CBBAR **Babar** 82.30 304 P P 21 16 20.8 +0.1
K24K **Donnelly Dome** 82.32 24 P P 21 16 20.2 +0.1
baz=299,SNR=5.9
KNK **Knik Glacier** 82.34 27 P P 21 16 19.4 -0.8
KNK IAMs_20 IAMs_20 21 58 41.2
comp=Z,2µm,18.0s
KNK **Knik Glacier** 82.34 27 P P 21 16 20.9 +0.6
baz=297,SNR=18
F28M **Old Crow** 82.44 20 P P 21 16 21.4 +0.8
baz=304,SNR=24
M23K **Glacier View** 82.48 27 P P 21 16 21.5 +0.6
baz=297,SNR=20
SEW **Seward** 82.48 28 P P 21 16 21.1 +0.2
baz=296,SNR=5.8
CASM **Ain Smara** 82.49 306 P P 21 16 23.1 +1.5
I26K **Coal Creek Min** 82.56 22 IAMs_20 IAMs_20 21 59 45.2
comp=Z,3µm,20.0s
I26K **Coal Creek Min** 82.56 22 P P 21 16 21.8 +0.6
baz=301,SNR=18
E29M **Blow River** 82.62 19 IAMs_20 IAMs_20 21 56 22.8
comp=Z,3µm,18.0s
E29M **Blow River** 82.62 19 P P 21 16 22.7 +1.1
baz=305,SNR=41
SCM **Sheep Creek Mo** 82.63 26 IAMs_20 IAMs_20 21 58 47.8
comp=Z,2µm,18.0s
SCM **Sheep Creek Mo** 82.63 26 P P 21 16 22.6 +0.8
baz=298,SNR=14
PWL **Port Wells** 82.64 28 P P 21 16 21.0 -0.9
PWL **Port Wells** 82.64 28 P P 21 16 22.3 +0.5
baz=297,SNR=16
H27K **Steamboat Moun** 82.64 21 IAMs_20 IAMs_20 21 56 10.8
comp=Z,4µm,20.0s
H27K **Steamboat Moun** 82.64 21 P P 21 16 22.9 +1.1
baz=302,SNR=53
COAT **Oued Athmania** 82.66 306 P P 21 16 24.0 +1.5
CTGD **Timgad** 82.69 305 P P 21 16 24.5 +1.8
RIDG **Independent Ri** 82.72 24 IAMs_20 IAMs_20 22 00 24.9
comp=Z,2µm,19.0s
RIDG **Independent Ri** 82.72 24 P P 21 16 22.1 -0.1
baz=300,SNR=24
J26L **Joseph Creek** 82.82 23 IAMs_20 IAMs_20 21 59 30.6
comp=Z,3µm,18.0s
J26L **Joseph Creek** 82.82 23 P P 21 16 23.2 +0.4
baz=301,SNR=46
BROLN **Tlhalogang** 82.84 245 *i* P P 21 16 21.2 -2.4
PAX **Paxson** 82.85 25 IAMs_20 IAMs_20 22 00 36.5
comp=Z,2µm,18.0s
PAX **Paxson** 82.85 25 P P 21 16 23.3 +0.4
baz=299,SNR=14
SCRK **Sand Creek** 82.93 24 IAMs_20 IAMs_20 21 55 01.4
comp=Z,2µm,20.0s
SCRK **Sand Creek** 82.93 24 P P 21 16 23.8 +0.4
baz=300,SNR=20
I27K **Kandik River** 82.95 22 IAMs_20 IAMs_20 21 54 20.9
comp=Z,3µm,21.0s
I27K **Kandik River** 82.95 22 P P 21 16 24.8 +1.4
baz=302,SNR=55
M24K **Tolsona, Glenn** 82.98 26 P P 21 16 25.1 +1.5
baz=299,SNR=22
DOT **Dot Lake** 83.06 24 IAMs_20 IAMs_20 22 00 43.0
comp=Z,2µm,18.0s
GLI **Glacier Island** 83.17 27 P P 21 16 24.9 +0.3
baz=298
HARP **HAARP** 83.25 25 P P 21 16 26.1 +1.1
baz=300,SNR=11
MREMI **Moremi** 83.34 243 P P 21 16 24.0 -2.2
MREMI IAmb IAmb 21 16 42.1
comp=Z,48nm,0.9s
MREMI **Moremi** 83.34 243 *i* P P 21 16 23.1 -3.1
KLU **Klutina** 83.38 26 IAMs_20 IAMs_20 21 56 31.7
comp=Z,2µm,19.0s
KLU **Klutina** 83.38 26 P P 21 16 26.8 +1.1
baz=299,SNR=20
KSANE **Kasane** 83.42 249 P P 21 16 24.5 -2.2
KSANE IAmb IAmb 21 16 31.3
comp=Z,109nm,1.6s
KSANE **Kasane** 83.42 249 *i* P P 21 16 25.0 -1.7
G29M **Pine Creek** 83.43 20 P P 21 16 26.7 +0.9
baz=305,SNR=26
CKTS **El Kantara** 83.44 305 P P 21 16 29.2 +2.7
P23K **Montague Islan** 83.45 28 P P 21 16 27.0 +1.0
baz=298
FID **Port Fidalgo** 83.50 27 IAMs_20 IAMs_20 21 57 21.8
comp=Z,2µm,19.0s
A36M **Sachs Harbour** 83.53 13 P P 21 16 25.5 -0.7
A36M **Sachs Harbour** 83.53 13 P P 21 16 27.2 +1.0
baz=316,SNR=32
CAZD **Ain Tagrout** 83.54 306 P P 21 16 29.2 +2.1
MENT **Mentasta** 83.56 25 P P 21 16 28.3 +1.8
DIV **Divide** 83.62 27 IAMs_20 IAMs_20 21 56 42.0
comp=Z,2µm,18.0s
K27K **Chicken** 83.62 23 IAMs_20 IAMs_20 22 00 52.7
comp=Z,3µm,18.0s
K27K **Chicken** 83.62 23 P P 21 16 27.7 +0.9
baz=302
I28M **Miner Creek** 83.62 22 IAMs_20 IAMs_20 21 56 39.6
comp=Z,3µm,18.0s
I28M **Miner Creek** 83.62 22 P P 21 16 27.9 +1.0
baz=304,SNR=33
HIN **Hinchinbrook I** 83.66 28 IAMs_20 IAMs_20 21 53 34.1
comp=Z,2µm,21.0s
L26K **Log Cabin Wild** 83.66 25 IAMs_20 IAMs_20 22 01 03.8
comp=Z,2µm,18.0s
L26K **Log Cabin Wild** 83.66 25 P P 21 16 27.9 +0.8
baz=301,SNR=24
H29M **Whitestone** 83.72 21 IAMs_20 IAMs_20 21 54 37.1
comp=Z,3µm,21.0s
H29M **Whitestone** 83.72 21 P P 21 16 28.1 +0.8
baz=305,SNR=18
F30M **Barrier River** 83.72 19 IAMs_20 IAMs_20 21 59 54.0
comp=Z,3µm,18.0s
F30M **Barrier River** 83.72 19 P P 21 16 28.3 +1.1
baz=307
CTCHA **Tamokra** 83.84 306 P P 21 16 29.2 +0.7
N25K **Chitina, Valde** 83.88 26 P P 21 16 29.4 +1.1
baz=300,SNR=25
MSVF **Nonsavu** 83.90 111 P P 21 16 28.7 -0.4
MSVF IAmb IAmb 21 16 33.5
comp=Z,33nm,1.2s
MSVF **Nonsavu** 83.90 111 P P 21 16 30.5 +1.4
MSVF **Nonsavu** 83.90 111 *de* P P 21 16 30.7 +1.6
MSVF pmax pmax
comp=Z,39nm,1.3s
EYAK **Cordova Ski Ar** 83.91 27 IAMs_20 IAMs_20 21 59 52.8
comp=Z,3µm,19.0s
EYAK **Cordova Ski Ar** 83.91 27 P P 21 16 30.3 +2.0
EYAK **Cordova Ski Ar** 83.91 27 P P 21 16 29.0 +0.7
baz=299,SNR=7.3
INK **Inuvik** 83.96 18 P P 21 16 27.2 -1.2
comp=Z,133nm,1.0s,baz=329,slow=7.0,SNR=94
INK LR LR 22 01 09.7
comp=Z,1µm,18.4s,baz=310,slow=41
comp=Z,133nm,1.0s
INK **Inuvik** 83.96 18 P P 21 16 27.4 -1.0
INK **Inuvik** 83.96 18 P P 21 16 29.3 +0.9
baz=309,SNR=121
G30M **tAoh Zraii Nji** 83.97 19 P P 21 16 29.0 +0.5
baz=307
TULEG **Thule** 84.03 358 P P 21 16 28.2 -0.5
TULEG IAMs_20 IAMs_20 21 56 49.0
comp=Z,2µm,18.0s
TULEG **Thule** 84.03 358 *i* P P 21 16 28.0 -0.7
TULEG IAmb IAmb 21 16 29.4
comp=Z,119nm,1.1s
M26K **Nabesna, AK** 84.12 25 P P 21 16 30.3 +0.9
baz=301,SNR=31
EPYK **Eagle Plains** 84.17 20 IAMs_20 IAMs_20 21 59 58.0
comp=Z,2µm,18.0s
EPYK **Eagle Plains** 84.17 20 P P 21 16 29.7 0.0
baz=306,SNR=21
Q23K **Middleton Isla** 84.19 28 P P 21 16 31.3 +1.6
baz=299
BMRM **Bremner River** 84.19 27 IAMs_20 IAMs_20 21 59 50.2
comp=Z,3µm,18.0s
BMRM **Bremner River** 84.19 27 P P 21 16 30.8 +1.0
baz=300,SNR=34
L27K **Beaver Creek,** 84.23 24 IAMs_20 IAMs_20 22 00 21.9
comp=Z,2µm,19.0s
L27K **Beaver Creek,** 84.23 24 P P 21 16 31.2 +1.2
baz=302
BCAR **Beaver Creek A** 84.25 24 P P 21 16 30.2 +0.2
SUMG **Summit** 84.34 349 P P 21 16 30.3 -0.6
SUMG **Summit** 84.34 349 P P 21 16 30.2 -0.6
SUMG **Summit** 84.34 349 P P 21 16 30.2 -0.6
SUMG pmax pmax
comp=Z,109nm,1.2s
SUMG MLR MLR
comp=Z,5µm,20.0s
SUMG **Summit** 84.34 349 *i* P P 21 16 31.0 +0.2
SUMG IAmb IAmb 21 16 31.8
comp=Z,114nm,1.2s
F31M **Tsiigehtchic** 84.44 19 IAMs_20 IAMs_20 21 58 04.1
comp=Z,2µm,20.0s
F31M **Tsiigehtchic** 84.44 19 P P 21 16 31.6 +0.7
baz=309,SNR=79
RAGM **Raggl Mountai** 84.46 27 IAMs_20 IAMs_20 21 57 52.1
comp=Z,3µm,20.0s
ABSD **Ouled Sidi Bra** 84.52 306 P P 21 16 32.4 +0.4
AKET **Djebel Ketaf** 84.55 306 P P 21 16 35.3 +3.0
M27K **Edge Creek, AK** 84.59 25 IAMs_20 IAMs_20 21 59 45.4
comp=Z,3µm,19.0s
M27K **Edge Creek, AK** 84.59 25 P P 21 16 33.2 +1.3
baz=302,SNR=19
DAWY **Dawson** 84.59 23 P P 21 16 32.4 +0.6
baz=304,SNR=29
MCARA **McCarthy VSAT** 84.64 26 P P 21 16 33.4 +1.3
baz=301,SNR=16
HMT **Hamilton** 84.66 27 IAMs_20 IAMs_20 22 00 05.5
comp=Z,2µm,20.0s
KHWEE **KHWEE** 84.79 245 P P 21 16 31.3 -2.3
KAIM **Kayak Island** 84.80 27 P P 21 16 34.5 +1.6
baz=300
BERG **Berg Lake** 84.87 27 IAMs_20 IAMs_20 21 56 18.1
comp=Z,2µm,21.0s
CRQE **Cirque** 84.94 26 P P 21 16 34.4 +0.7
baz=301,SNR=5.9
BVCY **Beaver Creek** 84.96 24 P P 21 16 35.0 +1.4
baz=303,SNR=11
I30M **Mount Dempster** 84.97 21 P P 21 16 34.3 +0.5
baz=307
LPHEP **Lephephe** 85.00 243 P P 21 16 33.0 -1.6
LPHEP **Lephephe** 85.00 243 *i* P P 21 16 31.6 -3.0
KULLO **Kullorsuaq** 85.18 354 *i* P P 21 16 35.2 +0.7
KULLO IAmb IAmb 21 16 35.4
comp=Z,227nm,1.3s
BGLC **Bering Glacier** 85.19 27 P P 21 16 35.1 +0.3
SLIND **Selinda** 85.19 248 *i* P P 21 16 32.8 -2.9
WAX **Waxell Ridge** 85.20 27 IAMs_20 IAMs_20 21 58 07.8
comp=Z,2µm,21.0s
ABRIN **Birine** 85.28 306 P P 21 16 37.6 +1.7
ADCK **Dar Chioukh** 85.28 305 P P 21 16 32.0 -3.9
H31M **Peel River** 85.28 20 IAMs_20 IAMs_20 21 57 38.4
comp=Z,2µm,19.0s
H31M **Peel River** 85.28 20 P P 21 16 35.9 +0.7
baz=309
BORG **Borgarnes** 85.38 339 LR LR 21 56 20.3
comp=Z,1µm,20.3s,baz=36,slow=37
J30M **Hart River** 85.38 21 IAMs_20 IAMs_20 22 00 02.0
comp=Z,3µm,20.0s
J30M **Hart River** 85.38 21 P P 21 16 36.7 +0.9
baz=307
K29M **Barlow Dome** 85.39 22 IAMs_20 IAMs_20 21 59 31.5
comp=Z,3µm,20.0s
K29M **Barlow Dome** 85.39 22 P P 21 16 37.0 +1.0
baz=306
YUK3 **Moose Creek** 85.47 25 P P 21 16 37.6 +1.2
baz=304,SNR=11
GRNC **Granite Creek** 85.51 26 IAMs_20 IAMs_20 21 57 41.9
comp=Z,2µm,18.0s
RES **Resolute Bay** 85.51 4 P P 21 16 35.2 -0.9
comp=Z,31nm,0.9s,baz=349,slow=6.7,SNR=35
RES LR LR 21 57 31.9
comp=Z,2µm,19.1s,baz=352,slow=38
comp=Z,31nm,0.9s
RES **Resolute Bay** 85.51 4 P P 21 16 35.9 -0.3
RES IAmb IAmb 21 16 37.8
comp=Z,49nm,1.1s
CTG **Chitna Glacier** 85.56 26 P P 21 16 38.1 +1.3
baz=303,SNR=10
CTGM **Chitina Glacie** 85.56 26 IAMs_20 IAMs_20 22 02 00.1
comp=Z,2µm,19.0s
L29M **L29M** 85.60 23 P P 21 16 38.1 +1.2
baz=306
MESA **MESA** 85.73 27 P P 21 16 39.0 +1.3
baz=302
C36M **Paulatuk** 85.74 15 P P 21 16 37.7 +0.4
baz=318
LOGN **Logan Glacier** 85.77 26 IAMs_20 IAMs_20 21 57 11.8
comp=Z,2µm,22.0s
M29M **Somme Creek** 85.86 24 P P 21 16 39.6 +1.3
baz=305
LBTB **Lobatse** 85.87 242 LR LR 21 51 30.1
comp=Z,1µm,21.5s,baz=66,slow=33
LBTB **Lobatse** 85.87 242 P P 21 16 36.7 -2.2
LBTB IAmb IAmb 21 16 43.1
comp=Z,45nm,1.1s
LBTB **Lobatse** 85.87 242 P P 21 16 36.7 -2.2
LBTB pmax pmax
comp=Z,45nm,1.1s
KDWAN **Kaudwane** 86.02 244 P P 21 16 37.4 -2.3
KDWAN IAmb IAmb 21 16 43.8
comp=Z,79nm,1.2s
KDWAN **Kaudwane** 86.02 244 *i* P P 21 16 36.5 -3.2
YUK8 **Steele Glacier** 86.02 25 P P 21 16 40.2 +1.0
baz=304,SNR=8.3
O28M **Mount Upton** 86.13 26 IAMs_20 IAMs_20 22 00 42.3
comp=Z,2µm,19.0s
O28M **Mount Upton** 86.13 26 P P 21 16 41.0 +1.1
baz=304
EZEK **Zmalet El Emir** 86.17 306 P P 21 16 41.8 +1.5
EBGR **Bougara** 86.20 306 P P 21 16 41.8 +1.3
M30M **Minto, Yukon** 86.41 23 P P 21 16 41.9 +0.9
baz=307
YUK4 **Talbot Arm** 86.43 25 P P 21 16 42.0 +0.8
baz=305
PINM **Pinnacle** 86.48 26 P P 21 16 42.5 +1.2
baz=304
EADEB **Ain Deheb** 86.74 306 P P 21 16 45.5 +2.3
UPNV **Upernavik** 86.77 353 *i* P P 21 16 42.6 +0.2
UPNV IAmb IAmb 21 16 43.3
comp=Z,114nm,1.0s
YUK6 **Outpost Mounta** 86.77 25 P P 21 16 43.8 +0.8
baz=305,SNR=7.3
BCPM **Bancas Point** 86.82 26 IAMs_20 IAMs_20 21 58 54.5
comp=Z,2µm,18.0s
MAKGR **Makgori** 86.85 241 P P 21 16 41.7 -2.1
MAKGR IAmb IAmb 21 16 49.7
comp=Z,59nm,1.6s
MAKGR **Makgori** 86.85 241 *i* P P 21 16 38.3 -5.4
N30M **Aishikik Lake** 86.97 24 P P 21 16 44.9 +1.2
baz=306
O29M **Mount Kennedy** 87.06 26 IAMs_20 IAMs_20 22 01 18.7
comp=Z,2µm,18.0s
O29M **Mount Kennedy** 87.06 26 P P 21 16 45.1 +0.9
baz=305
XAUDM **Khaudum** 87.07 249 P P 21 16 43.3 -1.6
XAUDM IAmb IAmb 21 16 49.8
comp=Z,33nm,1.3s
XAUDM **Khaudum** 87.07 249 *i* P P 21 16 42.1 -2.8
PNL **Peninsula** 87.08 26 P P 21 16 45.7 +1.5
baz=305
HYT **Haines Junctio** 87.18 25 P P 21 16 44.3 -0.5
HYT IAmb IAmb 21 16 47.3
comp=Z,40nm,1.1s
HYT **Haines Junctio** 87.18 25 P P 21 16 46.0 +1.2
baz=306,SNR=8.7
VAL **Valentia** 87.41 325 P P 21 16 46.1 +0.2
N31M **Braeburn, Yuko** 87.45 24 IAMs_20 IAMs_20 22 03 12.1
comp=Z,2µm,19.0s
N31M **Braeburn, Yuko** 87.45 24 P P 21 16 47.1 +1.1
baz=308,SNR=12
M31M **Drury Creek, Y** 87.53 23 IAMs_20 IAMs_20 22 00 03.0
comp=Z,3µm,20.0s
M31M **Drury Creek, Y** 87.53 23 P P 21 16 47.0 +0.7
baz=309
NUUG **Nuugaatsiaq** 87.57 352 *i* P P 21 16 45.6 -0.7
NUUG IAmb IAmb 21 16 47.4
comp=Z,68nm,1.1s
QNGWA **Qangwa** 87.57 248 P P 21 16 45.0 -2.4
QNGWA **Qangwa** 87.57 248 *i* P P 21 16 44.7 -2.7
BOSA **Boshof** 87.58 239 P P 21 16 44.9 -2.4
comp=Z,6.8nm,0.8s,baz=49,slow=2.6,SNR=6.5
BOSA LR LR 21 52 16.0
comp=Z,1µm,20.4s,baz=66,slow=33
comp=Z,6.8nm,0.8s
BOSA **Boshof** 87.58 239 P P 21 16 44.8 -2.5
BOSA IAmb IAmb 21 16 57.5
comp=Z,40nm,1.2s
ETOB **Tobarra** 87.63 310 P P 21 16 46.7 -0.7
TAM **Tamanrasset** 87.73 293 P P 21 16 46.8 -1.5
TAM IAmb IAmb 21 16 51.9
comp=Z,67nm,1.8s
TAM **Tamanrasset** 87.73 293 P P 21 16 46.8 -1.5
TAM pmax pmax
comp=Z,67nm,1.8s
O30N **Mendenhall** 87.77 24 P P 21 16 48.6 +1.1
baz=307,SNR=15
P29M **Windy Craggy** 87.79 26 P P 21 16 48.7 +1.1
baz=306
P30M **Million Dollar** 87.82 25 P P 21 16 48.7 +0.9
baz=307
KGCAE **Kacgae** 87.90 245 P P 21 16 46.6 -2.3
KGCAE IAmb IAmb 21 16 53.0
comp=Z,54nm,1.3s
KGCAE **Kacgae** 87.90 245 *i* P P 21 16 44.7 -4.2
SAATT **Saattut** 88.02 351 *i* P P 21 16 47.5 -0.9
SAATT IAmb IAmb 21 16 49.4
comp=Z,40nm,1.0s
GRTLG **Ghanzi** 88.21 247 *i* P P 21 16 47.0 -3.4
WHY **Whitehorse** 88.31 24 P P 21 16 49.7 -0.5
WHY **Whitehorse** 88.31 24 P P 21 16 51.3 +1.1
baz=308,SNR=12
NIAQ **Niaqornat** 88.32 352 *i* P P 21 16 50.2 +0.3
NIAQ IAmb IAmb 21 16 51.4
comp=Z,105nm,1.3s
PHPEN **Phepeng** 88.34 242 *i* P P 21 16 45.9 -5.0
MMPY **Sheldon Lake,** 88.37 22 P P 21 16 52.1 +1.7
baz=312
PLBC **Pleasant Camp** 88.46 26 P P 21 16 51.5 +0.7
baz=307,SNR=5.2
N32M **Quiet Lake** 88.68 23 IAMs_20 IAMs_20 22 02 10.4
comp=Z,3µm,21.0s
N32M **Quiet Lake** 88.68 23 P P 21 16 51.9 +0.1
baz=310
OSBL **Sidi Abdelli** 88.72 307 P P 21 16 54.9 +2.4
WKZ **Wanaka** 88.72 139 IAMs_20 IAMs_20 21 57 17.3
comp=Z,3µm,22.0s
ENIJ **Nijar** 88.77 309 P P 21 16 52.9 +0.1
SKAG **Skagway** 88.88 25 P P 21 16 55.5 +2.8
SKAG **Skagway** 88.88 25 P P 21 16 53.7 +1.0
baz=308
ESDC **Sonseca Array** 88.94 312 P P 21 16 52.8 -0.7
comp=Z,6.2nm,1.1s,baz=42,slow=3.8,SNR=19
ESDC PP PP 21 20 20.3 -2.4
comp=Z,2.3nm,1.0s,baz=63,slow=7.2,SNR=4.5
ESDC LR LR 22 04 10.7
comp=Z,960nm,18.4s,baz=38,slow=41
comp=Z,6.2nm,1.1s
ESDC **Sonseca Array** 88.94 312 P P 21 16 52.6 -0.9
OBBL **Beni Bahdel** 89.14 307 P P 21 16 56.3 +1.7
P33M **Teslin, Yukon** 89.39 24 IAMs_20 IAMs_20 21 58 37.2
comp=Z,2µm,22.0s
P33M **Teslin, Yukon** 89.39 24 P P 21 16 56.6 +1.4
baz=310,SNR=18
ILULI **Ilulissat** 89.39 350 P P 21 16 53.5 -1.4
ILULI IAmb IAmb 21 16 56.5
comp=Z,70nm,1.1s
ILULI IAMs_20 IAMs_20 22 00 17.4
comp=Z,3µm,20.0s
ILULI **Ilulissat** 89.39 350 P P 21 16 53.5 -1.4
ILULI pmax pmax
comp=Z,70nm,1.1s
ILULI MLR MLR
comp=Z,3µm,20.0s
S31K **Pelican** 89.42 27 P P 21 16 56.6 +1.3
baz=307
P32M **Atlin** 89.44 25 P P 21 16 56.5 +1.1
baz=309
EQTA **Presa de Quent** 89.58 309 P P 21 16 55.8 -0.8
KOOLE **Kule** 89.68 246 P P 21 16 55.2 -2.1
LTZ **Lake Taylor** 89.84 136 IAMs_20 IAMs_20 21 59 22.1
comp=Z,2µm,20.0s
ELGU **Los Guajares,** 89.85 309 P P 21 16 57.3 -0.6
EDA **Edea** 89.86 274 P P 21 16 56.0 -2.2
TOZ **Tahuroa Road** 89.87 130 IAMs_20 IAMs_20 22 01 38.3
comp=Z,2µm,20.0s
NNZ **Nelson** 89.89 134 IAMs_20 IAMs_20 22 01 49.4
comp=Z,2µm,20.0s
R32K **Eaglecrest** 89.94 26 P P 21 16 59.0 +1.2
baz=309
JIS **Juneau Island** 90.00 26 P P 21 17 00.0 +2.0
EADA **Adamuz** 90.00 311 P P 21 16 58.6 0.0
EGOR **Sierra Gorda,** 90.11 310 P P 21 16 58.2 -0.9
SIT **Sitka** 90.36 27 P P 21 17 01.0 +1.4
baz=308
Q32M **Nakina River** 90.41 25 P P 21 17 01.5 +1.3
baz=311
S32K **Killisnoo** 90.42 27 P P 21 17 01.7 +1.7
baz=309
KHZ **Kahutara** 90.52 135 IAMs_20 IAMs_20 21 59 40.0
comp=Z,2µm,19.0s
TSUM **Tsumeb** 90.62 250 LR LR 21 55 06.3
comp=Z,2µm,20.9s,baz=51,slow=34
R33M **Jennings River** 90.63 24 IAMs_20 IAMs_20 22 03 33.0
comp=Z,2µm,19.0s
R33M **Jennings River** 90.63 24 P P 21 17 02.8 +1.7
baz=312
ECAB **El Cabril** 90.64 311 P P 21 17 00.7 -0.8
EMIJ **Mijas** 90.82 309 P P 21 17 01.7 -0.7
SNZO **South Karori** 90.83 134 IAMs_20 IAMs_20 22 02 14.2
comp=Z,2µm,19.0s
WTLY **Watson Lake, Y** 90.95 23 P P 21 17 03.3 +0.8
baz=314,SNR=8.5
MRZ **Mangatainoka R** 91.15 133 IAMs_20 IAMs_20 22 00 19.0
comp=Z,2µm,21.0s
BKZ **Black Stump Fm** 91.17 131 P P 21 17 02.5 -1.3
BKZ IAmb IAmb 21 17 11.7
comp=Z,80nm,1.8s
BKZ IAMs_20 IAMs_20 22 01 57.7
comp=Z,2µm,20.0s
BKZ **Black Stump Fm** 91.17 131 P P 21 17 05.3 +1.5
URZ **Urewera** 91.25 130 LR LR 22 03 09.7
comp=Z,768nm,18.0s,baz=284,slow=39
MAW **Mawson** 91.29 194 P P 21 17 03.7 +0.2
comp=Z,20nm,1.1s,baz=45,slow=8.1,SNR=9.7
MAW LR LR 21 55 52.3
comp=Z,698nm,18.2s,baz=28,slow=34
comp=Z,20nm,1.1s
SFJD **Kangerlussuaq** 91.31 349 LR LR 22 03 11.5

comp=Z,2µm,19.6s,baz=28,slow=39
SFJD Kangerlussuaq 91.31 349 P **P** **21 17 02.8 -1.1**
SFJD Kangerlussuaq 91.31 349 IAMs_20 IAMs_20 22 02 59.1
comp=Z,3µm,18.0s
SFJD Kangerlussuaq 91.31 349 P **P** **21 17 02.8 -1.1**
SFJD pmax pmax
comp=Z,184nm,1.6s
SFJD MLR MLR
comp=Z,3µm,18.0s
SFJD Kangerlussuaq 91.31 349 *i* P **P** **21 17 03.3 -0.7**
SFJD IAmb IAmb 21 17 05.0
comp=Z,101nm,1.2s
EBAD Badajoz 91.47 312 P **P** **21 17 04.3 -1.0**
ECEU Ceuta 91.54 309 P **P** **21 17 05.6 -0.1**
S34M Telegraph Cree 91.55 25 P **P** **21 17 07.1 +1.9**
baz=312,SNR=10
BFZ Birch Farm 91.62 133 IAMs_20 IAMs_20 22 05 16.4
comp=Z,2µm,20.0s
DLBC Dease Lake 91.63 24 P **P** **21 17 05.3 -0.4**
comp=Z,24nm,1.1s,baz=90,slow=27,SNR=13
DLBC LR LR 21 59 56.9
comp=Z,2µm,19.9s,baz=280,slow=37
comp=Z,24nm,1.1s
DLBC Dease Lake 91.63 24 P **P** **21 17 07.5 +1.8**
baz=313,SNR=13
U33K Whale Pass 91.90 27 P **P** **21 17 07.4 +0.6**
baz=310
WRAK Wrangell Islan 92.03 27 P **P** **21 17 08.7 +1.2**
baz=311
WIN Windhoek 92.20 247 P **P** **21 17 07.2 -1.9**
WIN IAmb IAmb 21 17 25.1
comp=Z,24nm,1.2s
WIN Windhoek 92.20 247 P **P** **21 17 07.2 -1.9**
WIN pmax pmax
comp=Z,24nm,1.2s
WIN MLR MLR
comp=Z,1µm,20.0s
MDT Midelt 92.27 306 LR LR 22 05 02.8
comp=Z,737nm,19.3s,baz=73,slow=40
CRAG Craig 92.31 28 P **P** **21 17 10.0 +1.2**
baz=310
LIRD Liard River Hi 92.42 22 P **P** **21 17 10.3 +1.1**
baz=316,SNR=6.3
T35M Bob Quinn 92.53 25 IAMs_20 IAMs_20 22 06 28.5
comp=Z,2µm,18.0s
T35M Bob Quinn 92.53 25 P **P** **21 17 11.8 +1.9**
baz=312
KOTAN Kotaneelee Air 92.59 21 P **P** **21 17 11.8 +1.7**
baz=318
TOAD Toad River Com 93.13 22 P **P** **21 17 13.4 +0.9**
baz=317,SNR=12
YKAW3 Yellowknife Wh 93.48 16 P **P** **21 17 13.8 -0.2**
YKAW3 IAmb IAmb 21 17 16.2
comp=Z,49nm,1.1s
YKA Yellowknife Ar 93.53 16 P **P** **21 17 14.4 +0.2**
comp=Z,27nm,1.0s,baz=323,slow=5.1,SNR=30
YKA LR LR 22 06 02.3
comp=Z,2µm,18.6s,baz=314,slow=40
comp=Z,27nm,1.0s
YKA Yellowknife Ar 93.53 16 P **P** **21 17 13.5 -0.8**
YKA Yellowknife Ar 93.53 16 P **P** **21 17 13.5 -0.8**
TORD Torodi Ar. Bea 94.52 286 P **P** **21 17 17.7 -2.1**
comp=Z,1.9nm,0.4s,baz=54,slow=7.9,SNR=5.9
TORD PP **PP** **21 21 07.2 -0.2**
comp=Z,3.1nm,0.5s,baz=58,slow=8.7,SNR=3.6
comp=Z,1.9nm,0.4s
NRS Narsarsuaq 95.34 345 IAMs_20 IAMs_20 22 01 00.6
comp=Z,3µm,22.0s
SYO Syowa Base 98.49 199 ‖ *e*Pdiff Pdif 21 17 37.6 +1.1
SYO Syowa Base 98.49 199 ‖ *ep*Pdiff Pdif 21 17 40.1 +3.6
SYO Syowa Base 98.49 199 ‖ *es*Pdiff Pdif 21 17 42.6 +6.1
NLWA Neilton Lookou 102.06 30 IAMs_20 IAMs_20 22 12 52.1
comp=Z,1µm,19.0s
FFC Flin Flon 103.48 14 IAMs_20 IAMs_20 22 08 58.0
comp=Z,2µm,18.0s
NEW Newport 104.33 25 IAMs_20 IAMs_20 22 10 11.7
comp=Z,2µm,19.0s
MSO Missoula 106.76 24 IAMs_20 IAMs_20 22 12 03.8
comp=Z,2µm,18.0s
EGMT Eagleton 107.29 21 IAMs_20 IAMs_20 22 14 28.5
comp=Z,2µm,19.0s
PLID Pearl Lake 107.34 27 IAMs_20 IAMs_20 22 13 19.3
comp=Z,2µm,21.0s
BOZ Bozeman (W) 108.68 24 IAMs_20 IAMs_20 22 13 08.4
comp=Z,2µm,19.0s
HLID Hailey 109.24 27 IAMs_20 IAMs_20 22 13 18.6
comp=Z,2µm,19.0s
QSPA South Pole Qui 109.28 180 PKKPbc PKKPbc 21 33 38.4 +1.2
comp=Z,4.3nm,0.9s,baz=82,slow=0.6,SNR=6.0
QSPA PKKP **PKKPdf** **21 33 49.6 -3.6**
comp=Z,8.0nm,0.9s,baz=163,slow=2.7,SNR=12
QSPA South Pole Qui 109.28 180 IAMs_20 IAMs_20 22 05 56.8
comp=Z,1µm,20.0s
RLMT Red Lodge 109.96 23 IAMs_20 IAMs_20 22 15 20.2
comp=Z,2µm,21.0s
FLWY Flagg Ranch 110.31 24 IAMs_20 IAMs_20 22 14 19.7
comp=Z,2µm,18.0s
MDND Maddock 110.43 15 IAMs_20 IAMs_20 22 09 04.9
comp=Z,2µm,21.0s
FXWY Fox Creek 110.56 25 IAMs_20 IAMs_20 22 15 55.3
comp=Z,2µm,18.0s
MOOW Moose Ponds 110.58 24 IAMs_20 IAMs_20 22 15 55.7
comp=Z,2µm,19.0s
LOHW Long Hollow 110.75 24 IAMs_20 IAMs_20 22 16 09.2
comp=Z,2µm,18.0s
SNOW Snow King Moun 110.81 24 IAMs_20 IAMs_20 22 16 04.1
comp=Z,2µm,19.0s
AGMN Agassiz Nation 110.83 12 IAMs_20 IAMs_20 22 13 21.2
comp=Z,2µm,19.0s
NVAR Mina Array Bea 111.47 33 PKiKP **PKiKP** **21 22 34.4 +0.9**
comp=Z,2.4nm,1.0s,baz=328,slow=1.8,SNR=7.5
NVAR PP **PP** **21 23 09.5 -3.9**
comp=Z,1.1nm,0.9s,baz=313,slow=4.0,SNR=1.8
NVAR PKKPbc **PKKPbc** **21 33 27.5 -1.4**
comp=Z,1.7nm,0.8s,baz=159,slow=3.2,SNR=5.8
BW06 Boulder Array 111.87 24 IAMs_20 IAMs_20 22 15 01.9
comp=Z,1µm,18.0s
PDAR Pinedale Array 111.87 24 PKiKP **PKiKP** **21 22 33.8 -0.5**
comp=Z,3.6nm,1.1s,baz=325,slow=4.0,SNR=12
PDAR PP **PP** **21 23 16.6 +0.6**
comp=Z,1.4nm,0.9s,baz=342,slow=4.7,SNR=4.2
PDAR PKKPbc **PKKPbc** **21 33 23.6 -4.1**
comp=Z,0.5nm,0.8s,baz=215,slow=3.7,SNR=3.6
HWUT Hardware Ranch 112.04 26 IAMs_20 IAMs_20 22 18 35.7
comp=Z,1µm,19.0s
RSSD Black Hills 112.61 20 IAMs_20 IAMs_20 22 15 12.1
comp=Z,1µm,20.0s
SNAA Sanae 112.77 199 PKKPbc PKKPbc 21 33 22.9 -2.3
comp=Z,2.6nm,0.9s,baz=141,slow=6.5,SNR=7.8
F33A 5 Mile Ranch, 113.08 13 IAMs_20 IAMs_20 22 16 10.9
comp=Z,2µm,20.0s
K22A Casper 113.09 22 IAMs_20 IAMs_20 22 16 37.9
comp=Z,1µm,18.0s
PPT2 Papeete2 113.20 101 *e*PKiKP **PKiKP** **21 22 42.1 +5.0**
comp=Z,82nm,31.5s
PPT2 *e*S **SKKSac** **21 30 20.2 -9.4**
comp=Z,400nm,27.0s
PPT2 *e*SS **SS** **21 39 17.5 +4.6**
comp=Z,685nm,28.2s
PPT2 Papeete2 113.20 101 *e*LQ LQ 21 51 35.7
comp=Z,2µm,36.8s
PPT2 *e*LR LR 21 56 19.9
comp=Z,1µm,24.5s
PPT2 *e*LR LR 21 56 22.8
comp=Z,1µm,36.2s
E38A The Farm, Brul 113.23 10 IAMs_20 IAMs_20 22 09 38.6
comp=Z,2µm,21.0s
E62A Clayton Lake 113.72 353 IAMs_20 IAMs_20 22 16 55.8
comp=Z,2µm,19.0s
LRMC Laurel Mtn Rad 114.03 34 IAMs_20 IAMs_20 22 19 46.4
comp=Z,1µm,19.0s
E46A Sault Ste Mari 114.30 4 IAMs_20 IAMs_20 22 18 58.4
comp=Z,2µm,21.0s
F64A Sherman 114.33 352 IAMs_20 IAMs_20 22 12 09.7
comp=Z,2µm,20.0s
SPMN Marine on St. 114.36 11 IAMs_20 IAMs_20 22 10 32.6
comp=Z,2µm,20.0s
TBI Tubuai 114.58 107 *e*S SKKSac 21 30 22.0 -17
comp=Z,1µm,29.8s
TBI *e*SS **SS** **21 39 35.9 +5.1**
comp=Z,4µm,36.0s
TBI Tubuai 114.58 107 *e*LQ LQ 21 52 11.1
comp=Z,5µm,36.5s
TBI *e*LR LR 21 57 00.6
comp=Z,12µm,34.8s
TBI *e*LR LR 21 57 02.0
comp=Z,2µm,36.5s
O20A White River Ci 114.63 25 IAMs_20 IAMs_20 22 14 53.0
comp=Z,1µm,20.0s
HAYD Hayden 114.68 24 IAMs_20 IAMs_20 22 18 35.9
comp=Z,1µm,18.0s
PASC Pasadena Art C 114.75 36 IAMs_20 IAMs_20 22 13 55.5
comp=Z,1µm,19.0s
MWC Mount Wilson 114.78 35 IAMs_20 IAMs_20 22 14 20.3
comp=Z,1µm,21.0s
K30B Basset 115.24 17 IAMs_20 IAMs_20 22 14 37.4
comp=Z,2µm,21.0s
I37A Lemond, Waseca 115.42 12 IAMs_20 IAMs_20 22 18 59.7
comp=Z,2µm,19.0s
ISCO Idaho Springs 115.92 23 IAMs_20 IAMs_20 22 17 48.9
comp=Z,1µm,18.0s
I40A Norwalk 116.03 10 IAMs_20 IAMs_20 22 20 40.5
comp=Z,2µm,19.0s
OGNE Ogallala 116.12 20 IAMs_20 IAMs_20 22 17 30.8
comp=Z,1µm,20.0s
I42A Draeges Farm, 116.28 8 IAMs_20 IAMs_20 22 15 49.0
comp=Z,2µm,20.0s
VT1 Waterbury 116.30 355 IAMs_20 IAMs_20 22 15 20.3
comp=Z,2µm,22.0s
I63A Otisfield 116.38 353 IAMs_20 IAMs_20 22 15 23.0
comp=Z,2µm,22.0s
I45A Fountain 116.45 6 IAMs_20 IAMs_20 22 15 24.4
comp=Z,2µm,20.0s
I62A Tamworth 116.63 354 IAMs_20 IAMs_20 22 12 08.7
comp=Z,2µm,20.0s
MVCO Mesa Verde 117.02 26 IAMs_20 IAMs_20 22 19 41.9
comp=Z,2µm,19.0s
JFWS Jewell Farm 117.04 10 IAMs_20 IAMs_20 22 11 47.3
comp=Z,2µm,21.0s
S22A 4UR Ranch, Cre 117.25 25 IAMs_20 IAMs_20 22 17 11.0
comp=Z,1µm,22.0s
J61A Chester 117.26 355 IAMs_20 IAMs_20 22 13 04.5
comp=Z,2µm,21.0s
J59A Piesco 117.28 357 IAMs_20 IAMs_20 22 13 32.0
comp=Z,2µm,21.0s
J47A Sunmer 117.37 5 IAMs_20 IAMs_20 22 16 27.7
comp=Z,2µm,19.0s
K43A Burlington 117.52 8 IAMs_20 IAMs_20 22 17 56.9
comp=Z,2µm,19.0s
SDCO Great Sand Dun 117.76 24 IAMs_20 IAMs_20 22 20 53.8
comp=Z,2µm,19.0s
TRY Troy 117.96 356 IAMs_20 IAMs_20 22 19 38.9
comp=Z,2µm,19.0s
K50A Casco 117.98 3 IAMs_20 IAMs_20 22 22 30.8
comp=Z,2µm,18.0s
L42A Oliver, Polo 118.02 9 IAMs_20 IAMs_20 22 12 15.2
comp=Z,2µm,22.0s
L44A Lake County Fo 118.09 8 IAMs_20 IAMs_20 22 18 40.1
comp=Z,2µm,19.0s
WES Weston 118.10 354 IAMs_20 IAMs_20 22 12 20.7
comp=Z,2µm,20.0s
AAM Ann Arbor 118.39 4 IAMs_20 IAMs_20 22 12 29.7
comp=Z,2µm,22.0s
L46A Eue Claire 118.44 6 IAMs_20 IAMs_20 22 21 25.3
comp=Z,2µm,19.0s
T25A Trinidad 118.71 23 IAMs_20 IAMs_20 22 16 34.8
comp=Z,1µm,19.0s
L56A Greenwood 118.72 359 IAMs_20 IAMs_20 22 17 01.1
comp=Z,2µm,22.0s
ERPA Erie 118.73 1 IAMs_20 IAMs_20 22 15 12.6
comp=Z,2µm,21.0s
CBKS Cedar Bluff 118.78 19 IAMs_20 IAMs_20 22 13 42.1
comp=Z,2µm,22.0s
M65A Busby, Falmout 118.84 353 IAMs_20 IAMs_20 22 17 18.3
comp=Z,2µm,21.0s
M63A Gales Ferry 119.15 354 IAMs_20 IAMs_20 22 18 17.3
comp=Z,2µm,18.0s
M52A Chesterland 119.27 2 IAMs_20 IAMs_20 22 15 38.9
comp=Z,2µm,19.0s
M50A Fremont 119.32 4 IAMs_20 IAMs_20 22 16 29.4
comp=Z,1µm,20.0s
KSU1 Kansas State U 119.39 16 IAMs_20 IAMs_20 22 16 59.0
comp=Z,2µm,20.0s
WSPT Westport, CT 119.49 355 IAMs_20 IAMs_20 22 19 47.3
comp=Z,2µm,21.0s
N47A Urbana 119.63 6 IAMs_20 IAMs_20 22 13 13.6
comp=Z,2µm,22.0s
PAL Palisades 119.69 356 IAMs_20 IAMs_20 22 15 14.8
comp=Z,2µm,21.0s
ANMO Albuquerque 119.81 26 IAMs_20 IAMs_20 22 19 01.3
comp=Z,1µm,19.0s
N51A Ashland 119.84 3 IAMs_20 IAMs_20 22 23 54.1
comp=Z,1µm,18.0s
TUC Tucson 120.05 31 IAMs_20 IAMs_20 22 23 42.4
comp=Z,1µm,19.0s
SSPA Standing Stone 120.22 359 IAMs_20 IAMs_20 22 24 29.9
comp=Z,2µm,18.0s
O48B Farmland 120.30 6 IAMs_20 IAMs_20 22 13 22.3
comp=Z,2µm,21.0s
P43A Skaggs, Pawnee 120.35 10 IAMs_20 IAMs_20 22 14 54.0
comp=Z,2µm,22.0s
ACSO Alum Creek Sta 120.49 4 IAMs_20 IAMs_20 22 17 11.3
comp=Z,1µm,21.0s
O52A Adamsville 120.67 3 IAMs_20 IAMs_20 22 21 41.0
comp=Z,2µm,19.0s
P61A Hammonton 121.08 356 IAMs_20 IAMs_20 22 15 36.4
comp=Z,2µm,21.0s
Q44A Meyer Farm, Va 121.15 9 IAMs_20 IAMs_20 22 15 16.2
comp=Z,2µm,21.0s
OK038 West end E0370 121.23 19 IAMs_20 IAMs_20 22 20 35.1
comp=Z,2µm,20.0s
P57A Homestead Farm 121.37 359 IAMs_20 IAMs_20 22 16 51.4
comp=Z,2µm,21.0s
T35A Sooner Cattle 121.47 17 IAMs_20 IAMs_20 22 18 23.1
comp=Z,2µm,19.0s
CCM Cathedral Cave 121.59 12 IAMs_20 IAMs_20 22 21 27.0
comp=Z,2µm,18.0s
Q51A Peebles 121.67 4 IAMs_20 IAMs_20 22 21 39.5
comp=Z,2µm,19.0s
AMTX Amarillo 121.71 22 IAMs_20 IAMs_20 22 20 49.2
comp=Z,2µm,20.0s
Q52A Bidwell 121.80 3 IAMs_20 IAMs_20 22 19 26.9
comp=Z,2µm,22.0s
OK048 Pawnee Station 121.82 17 IAMs_20 IAMs_20 22 21 18.4
comp=Z,2µm,18.0s
Q56A Snyder Ridge, 121.82 0 IAMs_20 IAMs_20 22 19 42.2
comp=Z,2µm,19.0s
MSTX Muleshoe 122.13 24 IAMs_20 IAMs_20 22 21 13.4
comp=Z,1µm,21.0s
WCI Wyandotte Cave 122.19 7 IAMs_20 IAMs_20 22 18 52.3
comp=Z,2µm,20.0s
OK029 Liberty Lake 122.25 18 IAMs_20 IAMs_20 22 19 03.9
comp=Z,2µm,21.0s
S44A Carbondale 122.30 10 IAMs_20 IAMs_20 22 15 18.5
comp=Z,2µm,20.0s
U38A Gravette 122.47 15 IAMs_20 IAMs_20 22 18 03.4
comp=Z,2µm,21.0s
R55A Marlinton 122.56 1 IAMs_20 IAMs_20 22 17 42.9
comp=Z,2µm,20.0s
TUL3 Leonard 122.61 16 IAMs_20 IAMs_20 22 22 18.3
comp=Z,1µm,19.0s
WMOK Wichita Mounta 122.82 20 IAMs_20 IAMs_20 22 18 10.4
comp=Z,2µm,22.0s
R58B Mineral 122.89 359 IAMs_20 IAMs_20 22 19 37.5
comp=Z,2µm,20.0s
S54A Dingess, Beckl 123.00 2 IAMs_20 IAMs_20 22 20 16.7
comp=Z,1µm,20.0s
S51A Beattyville 123.03 5 IAMs_20 IAMs_20 22 22 37.5
comp=Z,2µm,18.0s
T45A Paducah 123.06 10 IAMs_20 IAMs_20 22 15 40.6
comp=Z,2µm,21.0s
MNTX Cornudas Mount 123.06 27 IAMs_20 IAMs_20 22 21 54.5
comp=Z,1µm,20.0s
APMT Aspermont 123.67 22 **PKPdf** **21 22 56.2 -0.7**
T57A Hurt 123.86 1 IAMs_20 IAMs_20 22 19 11.1
comp=Z,2µm,20.0s
T59A Double "B" Far 123.88 359 IAMs_20 IAMs_20 22 20 25.6
comp=Z,2µm,20.0s
WVT Waverly 124.05 9 **PKPdf** **21 22 57.1 -0.4**
WVT Waverly 124.05 9 IAMs_20 IAMs_20 22 21 06.8
comp=Z,2µm,19.0s
WVT Waverly 124.05 9 PKiKP **PKPdf** **21 22 57.1 -0.4**
WVT MLR MLR
comp=Z,1µm,19.0s
U54A Nelsons Funny 124.25 3 IAMs_20 IAMs_20 22 22 54.8
comp=Z,2µm,20.0s
Z35A Perchaven, San 124.60 19 IAMs_20 IAMs_20 22 20 40.3
comp=Z,1µm,20.0s
V53A Saluda 125.04 4 IAMs_20 IAMs_20 22 23 00.8
comp=Z,2µm,21.0s
V58A Windy Hill, Pi 125.06 0 IAMs_20 IAMs_20 22 19 56.0
comp=Z,2µm,21.0s
PLAL Pickwick Lake 125.14 9 IAMs_20 IAMs_20 22 17 46.6
comp=Z,2µm,20.0s
OXF Oxford 125.38 11 IAMs_20 IAMs_20 22 27 47.1
comp=Z,2µm,19.0s
W52A Murphy 125.53 5 IAMs_20 IAMs_20 22 23 32.7
comp=Z,2µm,20.0s
KMSC Kings Mountain 125.65 3 IAMs_20 IAMs_20 22 19 48.8
comp=Z,1µm,21.0s
X48A Hartselle 125.81 9 IAMs_20 IAMs_20 22 20 47.4
comp=Z,2µm,20.0s
TXAR Lajitas Array 125.84 27 PKhKP PKPpre 21 22 56.5
comp=Z,0.4nm,0.5s,baz=191,slow=2.0,SNR=4.5
TXAR PKP **PKPdf** **21 23 00.2 -1.0**
comp=Z,15nm,1.1s,baz=342,slow=2.8,SNR=39
TXAR PP **PP** **21 24 47.5 -5.0**
comp=Z,2.0nm,1.0s,baz=319,slow=5.6,SNR=2.8
TXAR Lajitas Array 125.84 27 **PKPdf** **21 22 59.8 -1.5**
TXAR Lajitas Array 125.84 27 PKiKP **PKPdf** **21 22 59.8 -1.5**
Y45A Yeager Farm, C 125.98 11 IAMs_20 IAMs_20 22 18 20.1
comp=Z,2µm,21.0s
X58A Rowland 126.29 1 IAMs_20 IAMs_20 22 21 49.7
comp=Z,2µm,19.0s
JCT Junction City 126.36 23 IAMs_20 IAMs_20 22 23 16.3
comp=Z,1µm,20.0s
Y52A Lilburn 126.74 6 IAMs_20 IAMs_20 22 21 17.7
comp=Z,2µm,20.0s
NHSC New Hope 127.72 2 IAMs_20 IAMs_20 22 22 17.5
comp=Z,2µm,19.0s
152A Waverly Hall 127.86 6 IAMs_20 IAMs_20 22 25 49.4
comp=Z,2µm,20.0s
250A Grady 128.35 8 IAMs_20 IAMs_20 22 23 38.6
comp=Z,2µm,18.0s
352A Blakely 129.01 7 IAMs_20 IAMs_20 22 18 36.2
comp=Z,2µm,20.0s
PMSA Palmer Station 133.66 189 IAMs_20 IAMs_20 22 17 37.3
comp=Z,1µm,18.0s
RCBR Riachuelo 136.26 282 IAMs_20 IAMs_20 22 36 55.7
comp=Z,1µm,22.0s
TEIG Tepich 139.46 14 IAMs_20 IAMs_20 22 34 12.5
comp=Z,1µm,20.0s
SEUS St. Eustatius 140.18 336 IAMs_20 IAMs_20 22 26 34.6
comp=Z,1µm,22.0s
SJG San Juan 140.70 341 IAMs_20 IAMs_20 22 38 01.1
comp=Z,908nm,20.0s
GTBY Guantanamo Bay 140.71 355 IAMs_20 IAMs_20 22 35 17.4
comp=Z,1µm,18.0s
GDHS Morne Mazeau, 140.80 334 IAMs_20 IAMs_20 22 26 55.7
comp=Z,933nm,20.0s
CBE Ff, Capester 140.91 333 IAMs_20 IAMs_20 22 26 49.3
comp=Z,1µm,21.0s
SDDR Presa de Saban 141.12 349 IAMs_20 IAMs_20 22 30 42.3
comp=Z,1µm,20.0s
ILAM Ilet Lapin Mar 141.74 331 IAMs_20 IAMs_20 22 23 40.2
comp=Z,1µm,22.0s
BIM Bigot 142.06 332 IAMs_20 IAMs_20 22 28 43.5
comp=Z,869nm,20.0s
MTDJ Mount Denham 142.54 358 IAMs_20 IAMs_20 22 32 15.0
comp=Z,1µm,20.0s
GRGR Grenville 144.42 331 IAMs_20 IAMs_20 22 33 12.1
comp=Z,918nm,19.0s
SJMB Sao Joao De Ma 144.60 265 *e*P PKPbc 21 23 35.1 +0.3
CAM01 Campos-RJ 145.32 260 *e*P **PKPdf** **21 23 37.9 +0.7**
TMAB Tom-Au,PA,Br 145.62 296 *e*P **PKPab** **21 23 38.7 +0.2**
DUB01 Friburgo-RJ 146.00 259 *e*P **PKPab** **21 23 40.7 +1.0**
SDBA SAO DESIDERIO 146.82 277 *e*P **PKPdf** **21 23 39.9 -0.1**
DIAM Diamantina, MG 146.89 266 *e*P **PKPdf** **21 23 40.8 +0.7**
SMTB Santa Maria do 148.13 285 *e*P **PKPdf** **21 23 42.6 +0.4**
BSCB Bom Sucesso 148.18 261 *e*P **PKPdf** **21 23 43.1 +0.9**
URIC Uribia, Colomb 148.35 347 P **PKPbc** **21 23 44.4 -1.5**
comp=Z,854nmcomp=Z,86nm,1.2s
PRPB Parauapebas 148.98 291 *e*P **PKPdf** **21 23 43.9 +0.3**
PARB Paraibuna 149.01 257 *e*P **PKPdf** **21 23 43.9 +0.4**
CRJC Cerrejon, Guaj 149.19 349 P **PKPdf** **21 23 44.7 +0.7**
SMRC Santa Marta, M 149.26 351 **PKPdf** **21 23 44.8 +0.8**
PMNB Patos De Minas 149.52 266 *e*P **PKPdf** **21 23 44.5 +0.1**
JTS Las Juntas de 149.81 12 IAMs_20 IAMs_20 22 30 56.4
comp=Z,1µm,22.0s
HDC Heredia 150.25 11 IAMs_20 IAMs_20 22 32 38.9
comp=Z,929nm,22.0s
HDC Heredia 150.25 11 *e*P **PKPdf** **21 23 46.7 +0.9**
VAO Valinhos 150.26 258 **PKPdf** **21 23 41.5 -4.0**
MAL2 Monte Alegre, 150.43 303 **PKPdf** **21 23 42.8 -3.1**
PET01 Itanhaem-SP 150.50 255 *e*P **PKPdf** **21 23 47.9 +2.2**
BDFB Brasilia 150.54 272 PKPbc **PKPbc** **21 23 50.3 -1.2**
baz=308,slow=0.1
SPB Sao Paulo 150.67 256 *e*P **PKPdf** **21 23 47.9 +2.0**
SDV Santo Domingo 150.75 344 IAMs_20 IAMs_20 22 32 39.4
comp=Z,846nm,22.0s
SDV Santo Domingo 150.75 344 *e*P **PKPdf** **21 23 46.7 +0.1**
RCLB Rio Claro- Sao 150.78 259 *e*P **PKPdf** **21 23 47.4 +1.2**
IPMB Ipameri, GO 151.12 268 *e*P **PKPdf** **21 23 47.2 +0.3**
BCIP Isla Barro Col 151.54 2 **PKPdf** **21 23 49.0 +1.4**
BCIP IAMs_20 IAMs_20 22 36 04.6
comp=Z,806nm,20.0s
BCIP Isla Barro Col 151.54 2 PKiKP **PKPdf** **21 23 49.0 +1.4**
BCIP MLR MLR
comp=Z,800nm,20.0s
BB19B Bebedouro 151.69 262 *e*P **PKPdf** **21 23 48.8 +1.2**
BOAV Boa Vista 151.90 319 **PKPdf** **21 23 45.2 -2.9**
BOAV Boa Vista 151.90 319 *e*P **PKPdf** **21 23 49.6 +1.4**
FRTB Fartura 152.64 257 *e*P **PKPdf** **21 23 49.9 +0.9**
SNDB Serra Nova Dou 152.64 282 *e*P **PKPdf** **21 23 49.9 +0.7**
PAMC Pamplona, Colo 152.74 347 P **PKPdf** **21 23 51.6 +1.6**
comp=Z,236nmcomp=Z,29nm,1.1s
APAC Apartado, Choc 152.75 355 P PKPab 21 24 28.3 +21
ITTB Itaituba 153.06 301 *e*P **PKPdf** **21 23 50.7 +0.8**
BARC Barichara 153.56 348 P **PKPdf** **21 23 52.5 +1.6**
comp=Z,70nm,1.0s
NPGB Novo Progresso 154.21 295 *e*P **PKPdf** **21 23 50.9 -0.6**
HELC Santa Helena 154.33 353 P **PKPab** **21 24 15.5 +1.3**
comp=Z,847nmcomp=Z,72nm,1.2s
CBOC Ciudad Bolivar 154.71 354 P **PKPab** **21 24 16.9 +1.4**
comp=Z,721nmcomp=Z,44nm,1.4s
ROSC El Rosal 155.49 349 PKP **PKPdf** **21 23 52.2 -1.6**
comp=Z,40nm,1.2s,baz=12,slow=4.0,SNR=14
ROSC El Rosal 155.49 349 PKPdf **PKPdf** **21 23 50.7 -3.1**
ROSC El Rosal 155.49 349 PKiKP **PKPdf** **21 23 50.7 -3.1**
MACA Manacapuru-AM 156.10 310 *e*P **PKPdf** **21 23 54.6 +0.5**
CLDB Colider 156.35 288 *e*P **PKPdf** **21 23 54.2 -0.1**
LL01 San Ignacio de 156.53 192 IAMs_20 IAMs_20 22 34 34.4
comp=Z,1µm,22.0s
PLCA Paso Flores 157.67 196 PKPab **PKPab** **21 24 25.1 -2.4**
comp=Z,8.7nm,1.1s,baz=166,slow=5.5,SNR=12
SALV Santo Antonio 157.82 276 *e*P **PKPdf** **21 23 56.3 +0.2**
POPC Popayan, Colom 158.06 355 P **PKPab** **21 24 30.2 +0.2**
AQDB Aquidauana 158.38 263 *e*P **PKPdf** **21 23 58.3 +1.5**
BBAC Balboa, Cauca 158.62 356 P **PKPab** **21 24 33.8 +1.4**
comp=Z,29nm,1.8s
TEFE Tefe 159.04 317 *e*P **PKPdf** **21 23 57.9 +0.2**
CPUP Villa Florida 159.19 247 PKPab **PKPab** **21 24 32.4 -2.1**
comp=Z,1.6nm,0.8s,baz=312,slow=6.8,SNR=5.1
CPUP Villa Florida 159.19 247 *e*P **PKPdf** **21 23 57.9 +0.4**
BDQN Rodoquena, MS 159.36 264 *e*P **PKPdf** **21 23 58.4 +0.5**
TULM Tulcn-Ihalpat 159.94 357 P **PKPab** **21 24 39.9 +1.5**
OTAV Otavalo 160.43 359 *e*P **PKPdf** **21 24 01.7 +1.8**
PTLB Pontes e Lacer 160.94 279 *e*P **PKPdf** **21 24 00.1 +0.4**
VILB Vilhena 161.12 287 *e*P **PKPdf** **21 24 01.3 +1.3**
LPAZ La Paz 169.47 286 PKP **PKPdf** **21 24 08.3 +0.6**
comp=Z,3.3nm,1.0s,baz=46,slow=3.0,SNR=8.7
LPAZ PKPab **PKPab** **21 25 18.3 -2.5**
comp=Z,3.0nm,1.0s,baz=52,slow=4.6,SNR=1.9
LPAZ La Paz 169.47 286 *e*P **PKPdf** **21 24 07.9 +0.1**

WEL 20 21:07:55.5±0.6, 38°S±4'×17°6E±', h166km±6km, M2.5/19, ML2.3/7, MLv2.5/19, Error ellipse: s-maj=6.7km s-min=4.3km az=133.7, confirmed, North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.64**	**125**	P		Pn	21 08 19.6	+0.2
URZ				S		Sn	21 08 38.4	+0.6
TOZ	**Tahuroa Road**	**0.76**	**282**	P		Pn	21 08 21.0	+0.9
RTZ	**Ruatahuna**	**0.83**	**149**	P		Pn	21 08 21.3	+0.6
RTZ				S		Sn	21 08 41.1	+0.9
MWZ	**Matawai**	**0.96**	**117**	P		Pn	21 08 22.1	+0.5
MWZ				S		Sn	21 08 41.5	-0.2
RAGZ	**Rawiri**	**0.97**	**128**	P		Pn	21 08 22.4	+0.7
RAGZ				S		Sn	21 08 43.2	+1.2
RUGZ	**Raukumara Rang**	**0.98**	**94**	P		Pn	21 08 21.3	-0.5
RUGZ				S		Sn	21 08 41.2	-0.8
WATZ	**Wairara**	**0.98**	**214**	P		Pn	21 08 22.6	+0.8
MTHZ	**Maungataniwha**	**1.00**	**162**	P		Pn	21 08 22.5	+0.6
MTHZ				S		Sn	21 08 43.1	+0.8
HAZ	**Te Kaha**	**1.07**	**83**	P		Pn	21 08 22.2	-0.2
HAZ				S		Sn	21 08 42.8	-0.2
RATZ	**Rangitukua**	**1.10**	**208**	P		Pn	21 08 22.8	+0.1
SNGZ	**Shannon Statio**	**1.13**	**142**	S		Sn	21 08 44.4	+0.2
RAHZ	**Arahi**	**1.14**	**154**	S		Sn	21 08 45.8	+1.5

KATZ	**Kakaramea**	**1.23 208**	P	Pn	21 08 23.8	-0.1
NMHZ	**Naumai**	**1.23 167**	P	Pn	21 08 22.5	-1.3
NMHZ			S	Sn	21 08 47.9	+2.1
TKGZ	**Te Karaka**	**1.24 116**	P	Pn	21 08 23.7	-0.1
TKGZ			S	Sn	21 08 46.7	+1.1
TWGZ	**Tauwhareparae**	**1.25 103**	P	Pn	21 08 24.1	+0.2
TWGZ			S	Sn	21 08 47.5	+1.6
BKZ	**Black Stump Fm**	**1.27 178**	P	Pn	21 08 24.4	+0.3
BKZ	**Black Stump Fm**	**1.27 178**	P	Pn	21 08 24.3	+0.1
BKZ			S	Sn	21 08 46.3	-0.1
PKGZ	**Pakihiroa**	**1.30 89**	P	Pn	21 08 24.7	+0.3
PKGZ			S	Sn	21 08 46.9	+0.3
RIGZ	**Rimuhau**	**1.32 128**	P	Pn	21 08 25.5	+0.9
RIGZ			S	Sn	21 08 48.0	+1.0
WHHZ	**Waihua**	**1.33 152**	P	Pn	21 08 24.9	+0.2
WHHZ			S	Sn	21 08 49.0	+1.7
NTVZ	**North Tongarir**	**1.34 206**	P	Pn	21 08 25.3	+0.4
TMVZ	**Te Maari**	**1.35 205**	P	Pn	21 08 25.2	+0.3
KRVZ	**Karewarewa**	**1.35 207**	P	Pn	21 08 24.7	-0.3
WTVZ	**West Tongariro**	**1.39 208**	P	Pn	21 08 25.7	+0.4
NNVZ	**North Ngauruho**	**1.39 207**	P	Pn	21 08 25.9	+0.5
OTVZ	**Oturere**	**1.40 205**	P	Pn	21 08 26.0	+0.5
TWVZ	**Taurewa**	**1.41 214**	P	Pn	21 08 25.9	+0.3
SNVZ	**South Ngauruho**	**1.43 206**	P	Pn	21 08 25.8	0.0
ARHZ	**Aropaoanui**	**1.43 162**	P	Pn	21 08 26.5	+0.9
ARHZ			S	Sn	21 08 49.8	+0.8
PUZ	**Puketiti**	**1.45 98**	P	Pn	21 08 25.8	0.0
PUZ			S	Sn	21 08 48.6	-0.5
KNZ	**Kokohu**	**1.48 140**	P	Pn	21 08 26.6	+0.5
KNZ			S	Sn	21 08 49.7	-0.1
TUVZ	**Tukino**	**1.50 204**	P	Pn	21 08 26.7	+0.3
CNGZ	**Carnagh Statio**	**1.51 113**	P	Pn	21 08 27.6	+1.2
MXZ	**Matakaoa Point**	**1.52 78**	P	Pn	21 08 26.6	+0.1
KWHZ	**Kaweka Forest**	**1.53 180**	P	Pn	21 08 27.0	+0.4
KWHZ			S	Sn	21 08 50.7	-0.1
PRGZ	**Paritu Road**	**1.53 133**	P	Pn	21 08 26.7	+0.1
PRGZ			S	Sn	21 08 51.1	+0.4
KFHS	**Kaweka Forest**	**1.54 179**	P	Pn	21 08 26.6	-0.1
WHVZ	**Whangaehu Hut**	**1.54 205**	P	Pn	21 08 26.6	-0.3
TRVZ	**Turoa**	**1.56 206**	P	Pn	21 08 26.8	-0.4
WMGZ	**Waiomatatini S**	**1.56 88**	P	Pn	21 08 26.2	-0.8
WNVZ	**Wahianoa**	**1.57 205**	P	Pn	21 08 27.2	0.0
MOVZ	**Moawhango**	**1.60 199**	P	Pn	21 08 27.0	-0.4
MHGZ	**Mahia Peninsul**	**1.70 138**	P	Pn	21 08 28.6	+0.3
MHGZ			S	Sn	21 08 54.3	+0.4
KRHZ	**Kereru**	**1.75 182**	P	Pn	21 08 28.7	-0.1
KRHZ			S	Sn	21 08 53.2	-1.6
VRZ	**Vera Road**	**1.80 227**	P	Pn	21 08 30.0	+0.6
CKHZ	**Cape Kidnapper**	**1.83 164**	P	Pn	21 08 30.1	+0.4
CKHZ			S	Sn	21 08 57.0	+0.7
KAHZ	**Kahuranaki**	**1.93 170**	P	Pn	21 08 31.0	+0.2
PNHZ	**Pukenui**	**2.02 185**	P	Pn	21 08 31.4	-0.5
PNHZ			S	Sn	21 08 59.3	-0.9
PXZ	**Pawanui**	**2.16 171**	P	Pn	21 08 32.9	-0.4
PXZ			S	Sn	21 09 01.9	-0.9
TSZ	**Takapari Road**	**2.19 190**	P	Pn	21 08 32.9	-0.9
PRHZ	**Porangahau**	**2.37 176**	P	Pn	21 08 34.9	-1.0
DVHZ	**Dannevirke**	**2.41 185**	P	Pn	21 08 35.1	-1.2
POWZ	**Post Office Ro**	**2.55 192**	P	Pn	21 08 36.3	-1.7
BFZ	**Birch Farm**	**2.79 183**	P	Pn	21 08 39.4	-1.4
BFZ	**Birch Farm**	**2.79 183**	P	Pn	21 08 39.1	-1.8
BFZ			S	Sn	21 09 13.8	-2.4
MRZ	**Mangatainoka R**	**2.84 193**	P	Pn	21 08 39.5	-2.0
MRZ			S	Sn	21 09 13.9	-3.4
CPWZ	**Castlepoint**	**3.02 183**	P	Pn	21 08 42.3	-1.4
CPWZ			S	Sn	21 09 18.9	-2.3
OGWZ	**Otaki Gorge**	**3.08 198**	P	Pn	21 08 42.3	-2.1
OGWZ			S	Sn	21 09 19.9	-2.6
HOWZ	**Holdsworth Sta**	**3.08 193**	P	Pn	21 08 42.0	-2.5
HOWZ			S	Sn	21 09 18.8	-3.9
KIW	**Kapiti Island**	**3.19 201**	P	Pn	21 08 43.3	-2.5
KIW			S	Sn	21 09 20.2	-4.9
MTW	**Mount Morrison**	**3.34 192**	P	Pn	21 08 44.7	-3.0
MTW			S	Sn	21 09 23.7	-4.7
CAW	**Cannon Point**	**3.38 198**	P	Pn	21 08 45.5	-2.7
DUWZ	**D'Urville Isla**	**3.50 213**	P	Pn	21 08 46.9	-2.8
DUWZ			S	Sn	21 09 28.8	-3.2
TRWZ	**Traveller**	**3.54 189**	P	Pn	21 08 47.6	-2.8
TRWZ			S	Sn	21 09 28.8	-4.4
MSWZ	**Moikau Station**	**3.63 194**	P	Pn	21 08 48.2	-3.2
MSWZ			S	Sn	21 09 30.0	-5.2
TCW	**Tory Channel**	**3.71 206**	P	Pn	21 08 49.3	-3.1
TCW			S	Sn	21 09 32.2	-4.6
BHW	**Baring Head**	**3.71 199**	P	Pn	21 08 49.0	-3.4
BHW			S	Sn	21 09 31.2	-5.6
PLWZ	**Palliser**	**3.78 194**	P	Pn	21 08 49.9	-3.5
PLWZ			S	Sn	21 09 33.8	-4.7
TUWZ	**Tuamarina**	**4.02 208**	P	Pn	21 08 54.0	-2.4
TUWZ			S	Sn	21 09 39.5	-4.5
KHZ	**Kahutara**	**5.03 205**	P	Pn	21 09 05.9	-3.6
KHZ			S	Sn	21 10 02.3	-5.2

ROM 20 21:13:08.9±0.1,**41°169N**±0°.004×**15°058E**±0°.006, **h23**km,**ML1.5/14**,**1C-1D**,**Error ellipse: s-maj=0.5km s-min=0.1km az=56.0**,**Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIOG	**Biogem**	**0.07**	**61**	⇑P	Pb	21 13 12.6	-0.5
BIOG				S	Sb	21 13 16.3	+0.4
MRB1	**Monte Rocchett**	**0.08**	**237**	P	Pb	21 13 13.0	-0.1
MRB1				S	Sb	21 13 16.2	+0.2
MRB1				AML	AML		
	comp=E,192μm,2.1s						
MRB1				AML	AML		
	comp=N,159μm,0.4s						
MRB1				AML	AML		
	comp=E,151μm,0.4s						
MRB1				AML	AML		
	comp=N,176μm,0.4s						
MRB1				AML	AML		
	comp=E,192μm,0.1s						
SSB3	**San Sossio Bar**	**0.16**	**125**	P	Pb	21 13 14.0	+0.2
SSB3				S	Sb	21 13 17.9	+0.7
CAFE	**Carife**	**0.20**	**136**	P	Pb	21 13 14.4	+0.1
CAFE				S	Sb	21 13 18.3	+0.3
CAFE				AML	AML		
	comp=E,178μm,0.2s						
CAFE				AML	AML		
	comp=E,185μm,0.2s						
CAFE				AML	AML		
	comp=N,323μm,0.4s						
CAFE				AML	AML		
	comp=N,275μm,0.3s						
CAFE				AML	AML		
	comp=N,323μm,1.6s						
RSF3	**Rocca San Feli**	**0.22**	**156**	P	Pb	21 13 14.3	-0.3
RSF3				S	Sb	21 13 18.8	+0.2
SGTA	**Sant Agata di**	**0.23**	**98**	P	Pb	21 13 14.7	-0.1
SGTA				S	Sb	21 13 19.6	+0.7
MTMR	**Montemarano**	**0.25**	**189**	P	Pb	21 13 15.3	+0.2
MTMR				S	Sb	21 13 19.6	+0.3
MTMR				AML	AML		
	comp=N,26μm,0.2s						
MTMR				AML	AML		
	comp=E,34μm,0.1s						
SNAL	**S. Angelo Dei**	**0.27**	**155**	⇓P	Pb	21 13 15.5	+0.2
SNAL				S	Sb	21 13 20.5	+0.8
SNAL				AML	AML		
	comp=E,148μm,0.3s						
SNAL				AML	AML		
	comp=N,136μm,1.3s						
SNAL				AML	AML		
	comp=N,136μm,0.7s						
SNAL				AML	AML		
	comp=N,150μm,0.5s						
SNAL				AML	AML		
	comp=E,76μm,0.1s						
SNAL				AML	AML		
	comp=E,148μm,1.7s						
VITU	**Vitulano (BN)**	**0.32**	**273**	P	Pb	21 13 16.2	0.0
VITU				S	Sb	21 13 21.4	+0.3
SACR	**S. Croce Del S**	**0.35**	**311**	P	Pb	21 13 16.8	+0.2
SACR				S	Sb	21 13 22.6	+0.8
GATE	**Gambatesa**	**0.36**	**342**	P	Pb	21 13 17.3	+0.5
BSSO	**Busso**	**0.51**	**317**	P	Pb	21 13 19.6	+0.3
MELA	**Melanico ??? S**	**0.54**	**6**	P	Pb	21 13 19.4	-0.3
MELA				S	Sb	21 13 27.4	+0.4

*BJI **20** 21:19:18.5,18°.73N×101°.48E,h10km,mb4.4/9,ML4.3/4, Ms4.4/1,Ms7 4.3/1*

*NEIC **20** 21:19:24.4±1.0,19°.39N±0°.07×101°.38E±0°.04,h10km±1km, mb4.5/7,Error ellipse: s-maj=11.4km s-min=6.1km az=177.0*

*IDC **20** 21:19:24.7±1.0,19°.46N×101°.28E,h0km,mb3.8/8, mbtmp3.7/9,ML3.9/1,Error ellipse: s-maj=19.3km s-min=17.3km az=133.0*

*BKK **20** 21:19:25.5±0.8,20°.N±5°×10°.1E±°,h4km,M4.5/22, Mjma4.5/20,ML4.6/18,MLv4.4/22*

ISC 20 21:19:25.3±0.6,**19°.49N**±0°.07×**101°.34E**±0°.06,**h10**km,**n44,** σ1**9**.**07**/42,**mb4.3**/14,**Laos**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAMP	**Lampang**	**1.88**	**239**	P	**Pn**	**21 19 58.3**	**+0.8**
UTTA	**Uttaradit**	**1.89**	**203**	P	**Pn**	**21 19 58.2**	**+0.6**
LOEI	**Loei**	**1.97**	**182**	P	**Pn**	**21 20 00.2**	**+1.4**
CMAI	**Chiengmai2**	**2.20**	**282**	P	**Pn**	**21 20 02.2**	**+0.1**
CHTO	**Chiang Mai**	**2.36**	**254**		**Pn**	**21 20 03.8**	**-0.4**
CHTO	**Chiang Mai**	**2.36**	**254**	Sn	**Sn**	**21 20 31.8**	**-1.4**
CHTO	**Chiang Mai**	**2.36**	**254**	P	**Pn**	**21 20 04.1**	**-0.1**
PHIT	**Phitsanulok**	**2.45**	**201**	P	**Pn**	**21 20 06.4**	**+1.0**
CM09	**Chiang Mai Arr**	**2.45**	**245**	P	**Pn**	**21 20 05.5**	**+0.1**
CM04	**Chiang Mai Arr**	**2.48**	**244**	P	**Pn**	**21 20 06.1**	**+0.3**
CM31	**Chiang Mai Arr**	**2.49**	**246**		Pn	21 20 03.9	-2.0
CM31	**Chiang Mai Arr**	**2.49**	**246**	P	**Pn**	**21 20 06.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**2.49**	**246**	Pn	**Pn**	**21 20 05.8**	**-0.2**
CMAR	7.7nm,0.3s,baz=60,slow=11,SNR=36			Lg	Lg	21 20 42.0	
	36nm,0.3s,baz=81,slow=32,SNR=10 11nm,0.4s						
CMAR	**Chiang Mai Arr**	**2.49**	**246**		**Pn**	**21 20 04.3**	**-1.6**
CM01	**Chiang Mai Arr**	**2.49**	**245**	P	**Pn**	**21 20 06.2**	**+0.3**
CM13	**Chiang Mai Arr**	**2.53**	**246**	P	**Pn**	**21 20 06.6**	**0.0**
TNCH	**TengChong**	**6.10**	**335**	Pg	**Pg**	**21 21 23.1**	**+0.9**
TNCH				smax	smax		
	comp=N,780nm,1.3s						
TNCH				smax	smax		
	comp=E,750nm,1.1s						
PZH	**PanZhiHua**	**6.99**	**3**	Pg	Pb	21 21 35.5	+8.6
PZH				smax	smax		
	comp=N,40nm,1.3s						
PZH				smax	smax		
	comp=E,60nm,1.6s						
QIZ	**Qiongzhong**	**8.05**	**92**	Pn	Pn	21 21 20.5	-1.9
QIZ	**Qiongzhong**	**8.05**	**92**	P	**Pn**	**21 21 21.1**	**-1.3**
QIZ				S	**Sn**	**21 22 51.1**	**-2.4**
QIZ				smax	smax		
	comp=N,49nm,1.0s						
QIZ				smax	smax		
	comp=E,32nm,1.3s						
SHL	**Shillong**	**10.62**	**306**		**Pn**	**21 21 57.5**	**-0.3**
NJ2	**Nanjing**	**20.10**	**48**	*e*P	**P**	**21 23 58.3**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.02**	**20**	*e*P	**P**	**21 24 31.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,20nm,0.6s						
WMQ	**Urumqi**	**26.82**	**338**	*e*P	**P**	**21 25 07.1**	**+1.2**
WMQ				S	**S**	**21 29 44.8**	**+2.7**
SONM	**Songino Array**	**28.57**	**7**	P	**P**	**21 25 23.2**	**+1.6**
	0.4nm,0.7s,baz=182,slow=8.2,SNR=1.8 0.4nm,0.7s						
KDJ	**Kajisay**	**30.46**	**323**		P	21 25 36.5	-2.0
KDJ				IAmb	IAmb	21 25 55.7	
	comp=Z,14nm,1.1s						
MKAR	**Makanchi Array**	**31.39**	**334**	P	**P**	**21 25 47.5**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=143,slow=9.1,SNR=7.7 comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**31.39**	**334**	P	**P**	**21 25 45.7**	**-0.7**
GAR	**Garm**	**33.09**	**313**		**P**	**21 26 00.8**	**-0.7**
GAR				IAmb	IAmb	21 26 11.3	
	comp=Z,10nm,1.2s						
KURBB	**Kurchatov Arra**	**35.94**	**335**	P	**P**	**21 26 26.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=142,slow=9.1,SNR=3.0 comp=Z,0.3nm,0.3s						
ZAA0	**Zalesovo Array**	**36.66**	**344**		**P**	**21 26 31.5**	**-0.5**
ZAA0				IAmb	IAmb	21 26 37.8	
	comp=Z,4.8nm,0.8s						
ZALV	**Zalesovo Beam**	**36.66**	**344**	P	**P**	**21 26 33.2**	**+1.2**
	comp=Z,4.7nm,0.7s,baz=152,slow=8.0,SNR=17 comp=Z,4.7nm,0.7s						
ZALV	**Zalesovo Beam**	**36.66**	**344**	P	**P**	**21 26 31.8**	**-0.3**
BVAR	**Borovoye Array**	**41.15**	**332**	P	**P**	**21 27 10.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=123,slow=7.1,SNR=2.1 comp=Z,0.6nm,0.8s						
AB31	**Akbulak array**	**44.42**	**322**	P	**P**	**21 27 36.4**	**+0.1**
ABKAR	**Akbulak array**	**44.42**	**322**	P	**P**	**21 27 36.2**	**0.0**
WRA	**Warramunga Arr**	**50.81**	**139**	P	**P**	**21 28 28.6**	**+2.3**
	comp=Z,0.7nm,0.8s,baz=320,slow=7.7,SNR=3.0 comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**53.37**	**142**	P	**P**	**21 28 45.5**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=319,slow=7.2,SNR=3.2 comp=Z,0.3nm,0.5s						
KIV	**Kislovodsk**	**54.28**	**311**	P	**P**	**21 28 50.4**	**-1.4**
GURO	**Guroymak-BITLI**	**54.31**	**304**	P	**P**	**21 28 51.0**	**-1.2**
GURO				IAmb	IAmb	21 28 55.9	
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**54.58**	**10**	P	**P**	**21 28 53.0**	**-0.4**
TIXI				IAmb	IAmb	21 28 55.6	
	comp=Z,3.4nm,1.1s						
FINES	**FINESS Array B**	**66.03**	**329**	P	**P**	**21 30 12.2**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=85,slow=16,SNR=3.6 comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**66.03**	**329**	P	**P**	**21 30 11.6**	**-0.4**
BMAR	**Burnt Mountain**	**80.95**	**21**	P	**P**	**21 31 39.2**	**-0.6**

*IDC **20** 21:27:10.6±0.6,45°.46N×95°.90E,h0km,mb4.1/16, mbtmp4.1/22,ML3.5/4,Error ellipse: s-maj=22.5km s-min=10.9km az=34.0*

*MOS **20** 21:27:10.6±1.2,45°.48N×95°.82E,h10km,mb4.6/11,Error ellipse: s-maj=8.2km s-min=6.6km az=41.8*

*BJI **20** 21:27:10.4,45°.50N×95°.94E,h10km, mb4.3/14,ML4.5/9, Ms4.2/1,Ms7 4.0/1*

*NEIC **20** 21:27:12.4±1.0,45°.47N±0°.06×95°.9E±0°.1,h10km±1km, mb4.5/34,Error ellipse: s-maj=12.5km s-min=9.7km az=70.0*

*NNC **20** 21:27:17.7±3.7,42°.87N×93°.90E,h0km,mb4.4,Error ellipse: s-maj=89.5km s-min=34.7km az=32.0*

ISC 20 21:27:13.1±0.4,**45°.52N**±0°.05×**95°.84E**±0°.05,**h10**km,**n135,** σ1**9**.**53**/133,**mb4.4**/35,**8C-10D**,**Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**5.21**	**12**	⇑*e*P	**Pn**	**21 28 30.8**	**-0.3**
WMQ	**Urumqi**	**6.05**	**257**	Pn	**Pn**	**21 28 44.5**	**+1.8**
WMQ				Sn	**Sn**	**21 29 59.8**	**+7.8**
WMQ				smax	smax		
	comp=N,220nm,0.7s						
WMQ				smax	smax		
	comp=E,300nm,0.7s						
GTA	**Gaotai**	**6.78**	**153**	Pn	Pn	21 28 48.6	-4.1
GTA				Sn	Sn	21 29 59.8	-10
GTA				Sg	**Sb**	**21 30 35.9**	**+3.9**
GTA				smax	smax		
	comp=N,210nm,0.7s						
GTA				smax	smax		
	comp=E,230nm,0.8s						
MOY	**Mondy**	**7.03**	**27**	*e*P	**Pn**	**21 28 57.9**	**+1.7**
MOY				*e*S	**Sn**	**21 30 16.9**	**+0.7**
DGZ	**Jazzator, Alta**	**7.05**	**309**	⇓*e*P	**Pn**	**21 28 57.6**	**+1.1**
SONM	**Songino Array**	**7.62**	**69**	Pn	**Pn**	**21 29 03.7**	**-0.5**
	2.8nm,0.3s,baz=252,slow=14,SNR=61						
SONM				Pg	**Pb**	**21 29 29.8**	**+4.5**
	8.4nm,0.3s,baz=256,slow=19,SNR=13						
SONM				Lg	Lg	21 31 07.9	
	24nm,0.3s,baz=254,slow=29,SNR=14 5.5nm,0.4s						
TLY	**Talaya**	**8.04**	**37**	Pn	**Pn**	**21 29 09.5**	**-0.4**
ULN	**Ulaanbaatar**	**8.06**	**69**		**Pn**	**21 29 09.4**	**-0.9**
ULN	**Ulaanbaatar**	**8.06**	**69**	*de*P	**Pn**	**21 29 09.0**	**-1.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GOMU	**GeErMu**	**9.35**	**185**	P	**Pn**	**21 29 27.1**	**-1.1**
GOMU				S	**Sn**	**21 31 13.5**	**0.0**
GOMU				smax	smax		
	comp=Z,37nm,0.8s						
GOMU				smax	smax		
	comp=Z,28nm,0.6s						
MK31	**Makanchi Array**	**9.49**	**283**	⇓Pn	**Pn**	**21 29 31.4**	**+1.6**
	comp=Z,3.0nm,0.6s,baz=95,slow=12,SNR=22						
MK31				⇑Lg	Lg	21 32 07.6	
	comp=Z,60nm,0.7s,baz=99,slow=26,SNR=3.8						
MK31	**Makanchi Array**	**9.49**	**283**	*ce*P	**Pn**	**21 29 31.5**	**+1.7**
MKAR	**Makanchi Array**	**9.49**	**283**	Pn	**Pn**	**21 29 29.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=103,slow=13,SNR=18 comp=Z,2.5nm,0.6s						
MKAR	**Makanchi Array**	**9.49**	**283**	Pn	**Pn**	**21 29 30.3**	**+0.5**
MKAR	**Makanchi Array**	**9.49**	**283**	*e*P	**Pn**	**21 29 30.3**	**+0.5**
MAKZ	**Makanchi**	**9.71**	**283**	P	**Pn**	**21 29 33.4**	**+0.7**
MAKZ	**Makanchi**	**9.71**	**283**	⇑Pn	**Pn**	**21 29 32.6**	**-0.2**
	comp=Z,6.5nm,0.9s						
MAKZ				⇑Lg	Lg	21 32 14.2	
	comp=Z,49nm,0.9s						
MAKZ	**Makanchi**	**9.71**	**283**	P	**Pn**	**21 29 33.4**	**+0.7**
ZAA0	**Zalesovo Array**	**11.03**	**324**	Pn	**Pn**	**21 29 50.2**	**-0.6**
ZALV	**Zalesovo Beam**	**11.03**	**324**	Pn	**Pn**	**21 29 51.1**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=119,slow=5.1,SNR=2.1						
ZALV				Lg	Lg	21 33 03.1	
	comp=Z,0.4nm,0.3s,baz=147,slow=18,SNR=3.6						
ZALV	**Zalesovo Beam**	**11.03**	**324**	Pn	**Pn**	**21 29 50.1**	**-0.7**
LZDM	**Lanzhou Array**	**11.25**	**145**	Pn	**Pn**	**21 29 52.2**	**-2.0**
	comp=Z,2.3nm,0.3s,baz=319,slow=10,SNR=6.4						
LZDM				Lg	Lg	21 32 56.5	
	baz=322,slow=28						
BTO	**Baotou**	**11.47**	**110**	*e*P	**Pn**	**21 29 56.1**	**-0.9**
BTO				pP		21 30 00.4	
BTO				sP		21 30 04.1	
BTO				PP	**PnPn**	**21 30 05.3**	**+0.7**
BTO				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC	**Hu-ho-hao-te**	**12.39**	**107**	*e*P	**Pn**	**21 30 08.3**	**-1.2**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
KURK	**Kurchatov**	**12.62**	**300**		Pn	21 30 11.0	-1.4
KURK	**Kurchatov**	**12.62**	**300**	⇑Pn	Pn	21 30 23.8	+11
	comp=Z,4.3nm,0.8s						
KURK				⇓Lg	Lg	21 34 13.6	
	comp=Z,28nm,0.8s						
KURK	**Kurchatov**	**12.62**	**300**	⇑*e*P	Pn	21 30 10.9	-1.6
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURBB	**Kurchatov Arra**	**12.64**	**300**	Pn	**Pn**	**21 30 11.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=104,slow=14,SNR=13						
KURBB				Lg	Lg	21 33 53.3	
	comp=Z,0.3nm,0.3s,baz=110,slow=31,SNR=6.2 comp=Z,2.3nm,0.7s						
KURBB	**Kurchatov Arra**	**12.64**	**300**	⇓Pn	Pn	21 30 25.5	+13
	comp=Z,7.2nm,0.6s						
KURBB				⇓Lg	Lg	21 34 13.6	
	comp=Z,212nm,1.2s						
KURBB	**Kurchatov Arra**	**12.64**	**300**	P	Pn	21 30 25.5	+13
TARG	**Taragay, Kyrgy**	**13.60**	**260**		**Pn**	**21 30 25.1**	**-1.3**
TARG	**Taragay, Kyrgy**	**13.60**	**260**	P	**Pn**	**21 30 25.1**	**-1.3**
KDJ	**Kajisay**	**13.89**	**262**	Pn	**Pn**	**21 30 29.3**	**-0.8**
KDJ	**Kajisay**	**13.89**	**262**	P	**Pn**	**21 30 29.3**	**-0.8**
BOOM	**Boomskoye usch**	**14.64**	**265**		**Pn**	**21 30 39.7**	**-0.6**
BOOM	**Boomskoye usch**	**14.64**	**265**	P	**Pn**	**21 30 39.7**	**-0.6**
AAK	**Ala-Archa**	**15.60**	**267**	Pn	**Pn**	**21 30 56.1**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=100,slow=6.6,SNR=6.6						
AAK	**Ala-Archa**	**15.60**	**267**	Pn	**Pn**	**21 30 52.7**	**-0.4**
AAK	**Ala-Archa**	**15.60**	**267**	⇓*e*P	**Pn**	**21 30 55.9**	**+2.7**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s						
LSA	**Lhasa**	**16.22**	**195**		**Pn**	**21 31 01.2**	**-0.3**
LSA	**Lhasa**	**16.22**	**195**	P	**Pn**	**21 31 01.2**	**-0.3**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HILR	**Hailar Array B**	**16.62**	**67**	Lg	Lg	21 35 47.9	
	baz=295,slow=31						
BVAR	**Borovoye Array**	**18.16**	**304**	P	**Pn**	**21 31 25.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=102,slow=13,SNR=38 comp=Z,9.1nm,0.6s						
KK31	**Karatay Array**	**18.27**	**271**		**Pn**	**21 31 24.6**	**-2.0**
KK31	**Karatay Array**	**18.27**	**271**	P	**Pn**	**21 31 24.6**	**-2.0**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KKAR	**Karatay Array**	**18.27**	**271**		**Pn**	**21 31 25.1**	**-1.5**
KKAR	**Karatay Array**	**18.27**	**271**	P	**Pn**	**21 31 25.1**	**-1.5**
DRK	**Karamyk**	**18.69**	**260**	P	**P**	**21 31 31.1**	**-0.6**
DRK	**Karamyk**	**18.69**	**260**	P	**P**	**21 31 31.1**	**-0.6**
DRK				pmax	pmax		
	comp=Z,11nm,0.7s						
PZH	**PanZhiHua**	**19.56**	**164**	P	**P**	**21 31 42.0**	**+0.9**
GAR	**Garm**	**19.94**	**260**		**P**	**21 31 44.4**	**-0.8**
GAR				IAmb	IAmb	21 31 46.3	
	comp=Z,37nm,1.2s						
SHL	**Shillong**	**20.16**	**190**		**P**	**21 31 45.7**	**-2.0**
SHL	**Shillong**	**20.16**	**190**	P	**P**	**21 31 45.7**	**-2.0**
SHL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHGR	**Chuyangaron**	**20.90**	**260**		**P**	**21 31 54.7**	**-0.8**
CHGR				IAmb	IAmb	21 32 01.4	
	comp=Z,28nm,0.7s						
CHGR	**Chuyangaron**	**20.90**	**260**	P	**P**	**21 31 54.7**	**-0.8**
CHGR				pmax	pmax		
	comp=Z,28nm,0.7s						
NIL	**Nilore**	**20.98**	**243**	P	**P**	**21 31 55.5**	**-1.0**
NIL				IAmb	IAmb	21 32 01.7	
	comp=Z,20nm,0.7s						
NIL	**Nilore**	**20.98**	**243**	P	**P**	**21 31 55.5**	**-1.0**
NIL				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2	**Nanjing**	**22.32**	**119**	*e*P	**P**	**21 32 09.0**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBL	**Kabul**	**23.16**	**251**		**P**	**21 32 17.8**	**-2.0**
KBL				IAmb	IAmb	21 32

BILL	**Bilibino**	**41.63**	**32**	*e*P	**P**	**P**	**21 35 02.3**	**+1.4**
BILL				pmax	pmax			
	comp=Z,5.0nm,1.3s							
FIA1	**FINESS Array S**	**42.22**	**318**	P	**P**	**P**	**21 35 05.5**	**-0.4**
FINES	**FINESS Array B**	**42.22**	**318**	P	**P**	**P**	**21 35 06.0**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=76,slow=9.1,SNR=19							
	comp=Z,3.3nm,0.6s							
FINES	**FINESS Array B**	**42.22**	**318**	P	**P**	**P**	**21 35 05.7**	**-0.1**
FINES	**FINESS Array B**	**42.22**	**318**	*e*P	**P**	**P**	**21 35 06.3**	**+0.4**
FINES				pmax	pmax			
	comp=Z,5.0nm,0.9s							
AKASG	**Malin Array Be**	**43.42**	**302**	P	**P**	**P**	**21 35 15.5**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=63,slow=8.6,SNR=4.6							
	comp=Z,2.1nm,0.6s							
AKASG	**Malin Array Be**	**43.42**	**302**	*e*P	**P**	**P**	**21 35 16.4**	**+0.7**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
GAZ	**Gaziantep**	**43.93**	**281**	P	**P**	**P**	**21 35 19.2**	**-0.9**
GAZ				IAmb	IAmb	IAmb	21 35 33.5	
	comp=Z,4.7nm,0.9s							
KBS	**Kingsbay**	**44.59**	**344**	*ce*P	P	P	21 35 22.3	-2.4
KBS				pmax	pmax			
	comp=Z,42nm,1.7s							
BR131	**Keskin Array S**	**45.12**	**286**			**P**	**21 35 28.7**	**-1.0**
BR131				IAmb	IAmb	IAmb	21 35 31.1	
	comp=Z,3.5nm,0.7s							
BR131	**Keskin Array S**	**45.12**	**286**	ǁ*eP*	**P**	**P**	**21 35 30.0**	**+0.3**
BRTR	**Keskin Array B**	**45.12**	**286**	P	**P**	**P**	**21 35 30.3**	**+0.6**
	comp=Z,3.2nm,0.9s,baz=80,slow=7.1,SNR=16							
	comp=Z,3.2nm,0.9s							
BRTR	**Keskin Array B**	**45.12**	**286**	P	**P**	**P**	**21 35 29.2**	**-0.6**
BRTR	**Keskin Array B**	**45.12**	**286**	*e*P	**P**	**P**	**21 35 30.5**	**+0.8**
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BUR08	**Bucovina Ar. S**	**47.04**	**299**	P	**P**	**P**	**21 35 43.6**	**-1.0**
BUR08				IAmb	IAmb	IAmb	21 36 12.3	
	comp=Z,6.2nm,1.4s							
BURAR	**Bucovina Array**	**47.04**	**299**	P	**P**	**P**	**21 35 43.5**	**-1.1**
BURAR				IAmb	IAmb	IAmb	21 35 46.3	
	comp=Z,2.1nm,0.8s							
BURAR	**Bucovina Array**	**47.04**	**299**	P	**P**	**P**	**21 35 43.6**	**-1.1**
MMAI	**Mount Meron Ar**	**47.38**	**277**	P	**P**	**P**	**21 35 47.2**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=54,slow=6.3,SNR=3.7							
	comp=Z,0.3nm,0.3s							
CSS	**Mathiatis**	**47.76**	**280**	P	**P**	**P**	**21 35 49.6**	**-0.7**
CSS				IAmb	IAmb	IAmb	21 36 03.1	
	comp=Z,4.7nm,0.8s							
HFS	**Hagfors**	**48.41**	**318**	P	**P**	**P**	**21 35 55.1**	**+0.2**
	comp=Z,9.0nm,0.6s,baz=116,slow=5.4,SNR=21							
	comp=Z,9.0nm,0.6s							
NC405	**NORSAR Array S**	**48.96**	**320**	P	**P**	**P**	**21 35 58.6**	**-0.6**
OJC	**Ojcow**	**49.16**	**305**			**P**	**21 36 00.0**	**-0.9**
OJC	**Ojcow**	**49.16**	**305**	P	**P**	**P**	**21 36 00.0**	**-0.9**
NORES	**NORESS Array B**	**49.18**	**320**	P	**P**	**P**	**21 36 00.7**	**-0.1**
NB2	**NORSAR Subarra**	**49.21**	**320**	P	**P**	**P**	**21 36 01.0**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=68,slow=7.4							
NOA	**NORSAR Array B**	**49.21**	**320**	P	**P**	**P**	**21 36 00.6**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=71,slow=9.0,SNR=13							
	comp=Z,2.1nm,0.6s							
NOA	**NORSAR Array B**	**49.21**	**320**	*e*P	**P**	**P**	**21 36 01.0**	**-0.1**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
CLL	**Collm**	**52.51**	**308**	*i* P	**P**	**P**	**21 36 26.3**	**+0.2**
CLL				*e*			21 36 31.0	
CLL				pmax	pmax			
	comp=Z,11nm,1.0s							
CLL	**Collm**	**52.51**	**308**	*i* P	**P**	**P**	**21 36 26.3**	**+0.2**
	comp=Z,11nm,1.0s							
CLL				*ex*	x		21 36 31.0	
IDI	**Anoyia**	**53.37**	**285**	P	**P**	**P**	**21 36 31.3**	**-1.4**
FUORN	**Ofenpass-Fuorn**	**56.45**	**304**	P	**P**	**P**	**21 36 55.1**	**-0.1**
FUORN				IAmb	IAmb	IAmb	21 37 01.2	
	comp=Z,11nm,1.3s							
TIP	**Timpagrande**	**56.57**	**294**	P	**P**	**P**	**21 36 55.5**	**-0.3**
MEM	**Membach**	**56.67**	**310**	*d*PcP	**PcP**	**PcP**	**21 37 49.3**	**-3.1**
EKA	**Eskdalemuir Ar**	**58.61**	**319**	P	**P**	**P**	**21 37 08.6**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=64,slow=7.0,SNR=5.0							
	comp=Z,1.5nm,0.6s							
BNI	**Bardonecchia**	**59.41**	**305**	P	**P**	**P**	**21 37 15.5**	**-0.2**
BNI				IAmb	IAmb	IAmb	21 37 27.1	
	comp=Z,5.0nm,0.9s							
BNI	**Bardonecchia**	**59.41**	**305**	P	**P**	**P**	**21 37 15.5**	**-0.2**
BNI				pmax	pmax			
	comp=Z,5.0nm,1.0s							
ILAR	**Eielson Array**	**59.70**	**26**	P	**P**	**P**	**21 37 16.5**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=309,slow=5.0,SNR=6.1							
	comp=Z,0.4nm,0.7s							
ILAR	**Eielson Array**	**59.70**	**26**	P	**P**	**P**	**21 37 16.7**	**-0.6**
ILAR	**Eielson Array**	**59.70**	**26**	*e*P	**P**	**P**	**21 37 16.7**	**-0.6**
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**68.86**	**150**	P	**P**	**P**	**21 38 18.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=315,slow=5.7,SNR=1.6							
	comp=Z,1.0nm,0.6s							
FITZ	**Fitzroy Crossi**	**68.86**	**150**	P	**P**	**P**	**21 38 17.5**	**-0.3**
ESDC	**Sonseca Array**	**68.91**	**305**	P	**P**	**P**	**21 38 18.1**	**0.0**
	comp=Z,2.2nm,0.9s,baz=64,slow=5.4,SNR=15							
	comp=Z,2.2nm,0.9s							
ESDC	**Sonseca Array**	**68.91**	**305**	P	**P**	**P**	**21 38 17.6**	**-0.5**
WB0	**Warramunga Arr**	**73.82**	**142**	P	**P**	**P**	**21 38 46.1**	**-1.6**
WB0				IAmb	IAmb	IAmb	21 39 27.9	
	comp=Z,5.8nm,1.4s							
WRA	**Warramunga Arr**	**73.95**	**142**	P	**P**	**P**	**21 38 46.6**	**-2.0**
	comp=Z,1.2nm,0.5s,baz=341,slow=6.2,SNR=9.0							
	comp=Z,1.2nm,0.5s							
WRA	**Warramunga Arr**	**73.95**	**142**	*e*P	**P**	**P**	**21 38 49.7**	**+1.2**
WRA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ASAR	**Alice Springs**	**77.08**	**145**	P	**P**	**P**	**21 39 04.8**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=339,slow=6.0,SNR=10.0							
	comp=Z,0.8nm,0.6s							
STKA	**Stephens Creek**	**87.50**	**142**	P	**P**	**P**	**21 40 01.4**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=335,slow=8.3,SNR=3.4							
	comp=Z,1.8nm,0.5s							
STKA	**Stephens Creek**	**87.50**	**142**	*e*P	**P**	**P**	**21 40 02.9**	**+2.2**
STKA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
LPAZ	**La Paz**	**147.90**	**330**	PKPbc	**PKPdf**	**PKPdf**	**21 46 56.3**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=4.6,slow=6.0,SNR=7.1							
LPAZ	**La Paz**	**147.90**	**330**			**PKPdf**	**21 46 56.9**	**+0.5**
LPAZ	**La Paz**	**147.90**	**330**	*e*PKP2	**PKPdf**	**PKPdf**	**21 46 57.6**	**+1.1**
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.7s							
PB16	**IPOC Station P**	**150.28**	**331**	PKPbc	**PKPdf**	**PKPdf**	**21 47 04.0**	**+3.9**
CPUP	**Villa Florida**	**151.25**	**303**	PKPbc	**PKPdf**	**PKPdf**	**21 47 04.4**	**+3.7**
	comp=Z,0.9nm,0.5s,baz=275,slow=4.4,SNR=6.8							
PB11	**IPOC Station P**	**151.65**	**330**	PKPbc	**PKPdf**	**PKPdf**	**21 47 05.5**	**+3.8**

PRU ***20*** *21:32:33.0, 53˚.49N×8˚.40E, h10km*
IDC ***20*** *21:32:55.2±1.6, 52˚.93N×9˚.07E, h0km, mbtmp3.3/5, ML2.1/4, Error ellipse: s-maj=30.9km s-min=11.6km az=75.0*
DNK ***20*** *21:32:56.9±1.8, 52˚.96N×9˚.20E, h30km, ML3.0*
BGR ***20*** *21:32:57.0±0.2, 52˚.94N×9˚.31E, h5km, ML3.0/18, Error ellipse: s-maj=2.2km s-min=2.2km az=159.0*
BNS ***20*** *21:32:57.5±0.9, 52˚.98N×9˚.22E, h5km, ML2.8*
BER ***20*** *21:32:57.6±2.1, 52˚.94N×9˚.21E, h15km±32km, ML2.2, ML3.0(DNK)*
LDG ***20*** *21:32:58.5±0.5, 52˚.84N×9˚.17E, h5km, Ml2.9/10, Error ellipse: s-maj=10.2km s-min=5.3km az=1.0*

ISC 20 21:32:53.5±0.7**, 53˚.02N**±0˚.03×**9˚.19E**±0˚.02**, h0**km**, n89, σ2˚.56/146, Germany**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DEEL	**Gasfeld**	**0.10**	**132**	*e*Pg		**Pg**	**21 32 58.1**	**+2.7**
GOLB	**Goldborn**	**0.17**	**126**	*e*Pg		**Pg**	**21 32 59.1**	**+2.3**
GOLB				*e*Sg		**Sg**	**21 33 01.8**	**+2.7**
SYKE	**Friedhofskapel**	**0.24**	**233**	*e*Pg		**Pb**	**21 33 02.9**	**+4.8**
SYKE				*e*Sg		**Sb**	**21 33 08.5**	**+7.3**
RETH	**Rethem/Aller,**	**0.30**	**160**	*e*Pg		**Pb**	**21 33 02.1**	**+0.3**
RETH				*e*Sg		**Sb**	**21 33 06.3**	**-1.0**
RETHO	**Rethem**	**0.30**	**160**	*e*Pg		**Pb**	**21 33 02.1**	**+0.3**
RETHO				*e*Sg		**Sb**	**21 33 06.8**	**-0.5**
FAHL	**Forsthaus Ahlh**	**0.64**	**260**	*e*Pg		**Pn**	**21 33 11.7**	**+1.9**
FAHL				*e*Sg		**Sn**	**21 33 23.4**	**+2.7**
KUDEN	**Kuden**	**0.65**	**0**	*e*Pg		Pn	21 33 16.6	+6.7
KUDEN				*e*Sg		Sn	21 33 31.3	+10
SEVE	**Sevelten**	**0.72**	**252**	*e*Pg		**Pn**	**21 33 12.5**	**+1.7**
HAM4	**Hamburger Ster**	**0.78**	**54**	*e*Pg		**Pn**	**21 33 12.7**	**+1.0**
HAM4				*e*Sg		**Sn**	**21 33 25.8**	**+1.7**
RAST	**Rastdorf**	**0.90**	**263**	*e*Sg		**Sn**	**21 33 30.6**	**+3.5**
IBBN	**Ibbenburen**	**1.13**	**231**	*e*Pn		**Pn**	**21 33 17.4**	**+0.8**
IBBN				*e*Sg		**Sn**	**21 33 35.0**	**+2.2**
BSEG	**Bad Segeberg**	**1.13**	**36**	*e*Pn		**Pn**	**21 33 17.9**	**+1.3**
BSEG				*e*Pg		**Pb**	**21 33 18.7**	**+2.7**
BSEG				*e*Sg		**Sn**	**21 33 35.4**	**+2.6**
ASSE	**Asse, Remlinge**	**1.27**	**134**	*e*Pg		**Pn**	**21 33 19.1**	**+0.7**
ASSE				*e*Sg		**Sb**	**21 33 35.6**	**+0.5**
GORT1	**Trebel**	**1.28**	**91**	*e*Pn		**Pn**	**21 33 19.2**	**+0.7**
CLZ	**Clausthal**	**1.39**	**148**	*e*Pn		**Pn**	**21 33 20.8**	**+0.6**
CLZ				*e*Sg		**Sg**	**21 33 37.9**	**-0.1**
GTTG	**Gottingen**	**1.56**	**162**	*e*Pn		**Pn**	**21 33 23.3**	**+0.9**
GTTG				*e*Sg		**Sn**	**21 33 43.0**	**-0.3**
KASTN	**Kahler Asten**	**1.89**	**195**	*e*Pn		**Pn**	**21 33 27.9**	**+0.9**
BUG	**Bochum--Univer**	**1.98**	**217**	*e*Pn		**Pn**	**21 33 28.8**	**+0.6**
LAUG	**Laupendahl**	**2.17**	**220**	*e*Pn		**Pn**	**21 33 31.9**	**+1.0**
HOBG	**Hohbusch**	**2.34**	**210**	*e*Pn		**Pn**	**21 33 35.2**	**+1.9**
SSRD	**Sdr. Stenderup**	**2.48**	**6**	*i* P		**Pb**	**21 33 37.8**	**-1.0**
SSRD				*i* S		**Sn**	**21 34 06.9**	**+1.0**
SSRD				IAML			21 34 26.2	
	comp=Z,48nm,0.8s							
SSRD	**Sdr. Stenderup**	**2.48**	**6**	*i* P		**Pb**	**21 33 37.8**	**-1.0**
SSRD				*i* S		**Sn**	**21 34 06.9**	**+1.0**
SSRD				IAML			21 34 26.2	
	comp=Z,48nm,0.8s							
KOE	**Koeppel**	**2.76**	**200**	*e*Pn		**Pn**	**21 33 40.3**	**+1.3**
CLL	**Collm**	**2.91**	**125**	*e*Pn		**Pn**	**21 33 44.0**	**+3.0**
CLL				*e*Pg		**Pg**	**21 33 50.0**	**+0.8**
CLL				*ex*		x	21 33 55.0	
CLL				*e*Sn		Sn	21 34 04.0	-13
CLL				*ex*		x	21 34 14.0	
CLL				*ex*		x	21 34 18.0	
CLL				*e*Sg		**Sb**	**21 34 23.0**	**+0.7**
	comp=Z,18nm,0.7s							
BGG	**Burgeitz**	**3.05**	**203**	*e*Pn		**Pn**	**21 33 43.7**	**+0.7**
COP	**Copenhagen**	**3.27**	**34**	*i* S		**Sn**	**21 34 24.6**	**-0.9**
COP	**Copenhagen**	**3.27**	**34**	*i* S		**Sn**	**21 34 24.6**	**-0.9**
MUD	**Monsted U'grnd**	**3.44**	**360**	*i* P		**Pn**	**21 33 49.5**	**+1.2**
MUD				*i* S		**Sn**	**21 34 30.2**	**+0.5**
MUD				IAML			21 34 53.7	
	comp=Z,9.4nm,0.4s							
MUD	**Monsted U'grnd**	**3.44**	**360**	*i* P		**Pn**	**21 33 49.5**	**+1.2**
MUD				*i* S		**Sn**	**21 34 30.2**	**+0.5**
MUD				IAML			21 34 53.7	
	comp=Z,9.4nm,0.4s							
HSKC	**Hora Svate Kat**	**3.57**	**131**	*e*PG		**Pn**	**21 33 51.2**	**+1.0**
HSKC				*e*SG		**Sg**	**21 34 48.6**	**+0.3**
LUNU	**Lund**	**3.61**	**42**	*i* P		**Pn**	**21 33 52.4**	**+1.8**
LUNU				*i* S		**Sn**	**21 34 33.1**	**-0.8**
LUNU	**Lund**	**3.61**	**42**	*i* P		**Pn**	**21 33 52.4**	**+1.8**
LUNU				*i* S		**Sn**	**21 34 33.1**	**-0.8**
BJUU	**Bjuv**	**3.78**	**35**	*i* P		**Pn**	**21 33 54.8**	**+1.8**
BJUU				*i* S		**Sn**	**21 34 36.5**	**-1.7**
BJUU	**Bjuv**	**3.78**	**35**	*i* P		**Pn**	**21 33 54.8**	**+1.8**
BJUU				*i* S		**Sn**	**21 34 36.5**	**-1.7**
BSD	**Bornholm Skovb**	**3.97**	**56**	*i* P		**Pn**	**21 33 56.0**	**+0.5**
BSD				*i* S		**Sn**	**21 34 40.9**	**-1.9**
BSD				IAML			21 34 43.8	
	comp=Z,16nm,0.9s							
BSD	**Bornholm Skovb**	**3.97**	**56**	*i* P		**Pn**	**21 33 56.0**	**+0.5**
BSD				*i* S		**Sn**	**21 34 40.9**	**-1.9**
BSD				IAML			21 34 43.8	
	comp=Z,16nm,0.9s							
GIVF	**Givet**	**4.00**	**225**	*e*Pn		**Pn**	**21 33 57.0**	**+1.0**
GIVF				*e*Sn		**Sn**	**21 34 39.0**	**-4.5**
	comp=Z,7.8nm,0.3s							
PVCC	**Panska Ves**	**4.17**	**125**	*e*PG		**Pn**	**21 34 00.7**	**+2.4**
BAIF	**Baives**	**4.30**	**228**	*e*Pn		**Pn**	**21 34 01.2**	**+1.1**
BAIF				*e*Sn		**Sn**	**21 34 45.6**	**-5.3**
	comp=Z,4.1nm,0.3s							
BAIF				*e*Sg		**Sg**	**21 35 10.3**	**-1.3**
	comp=Z,4.6nm,0.3s							
DEL	**Delary**	**4.39**	**36**	*i* P		**Pn**	**21 34 03.3**	**+1.9**
DEL				*i* S		**Sn**	**21 34 51.2**	**-1.9**
DEL	**Delary**	**4.39**	**36**	*i* P		**Pn**	**21 34 03.3**	**+1.9**
DEL				*i* S		**Sn**	**21 34 51.2**	**-1.9**
FABU	**Falkenberg**	**4.47**	**26**	*i* P		**Pn**	**21 34 05.7**	**+3.2**
FABU				*i* S		**Sn**	**21 34 52.2**	**-3.0**
FABU	**Falkenberg**	**4.47**	**26**	*i* P		**Pn**	**21 34 05.7**	**+3.2**
FABU				*i* S		**Sn**	**21 34 52.2**	**-3.0**
PRU	**Pruhonice**	**4.52**	**130**	*e*SG		**Sg**	**21 35 19.5**	**+1.0**
	comp=Z,31nm,1.5s							
ONAU	**Onsala**	**4.65**	**18**	*i* P		**Pn**	**21 34 06.4**	**+1.5**
ONAU				*i* S		**Sn**	**21 34 56.8**	**-2.8**
ONAU	**Onsala**	**4.65**	**18**	*i* P		**Pn**	**21 34 06.4**	**+1.5**
ONAU				*i* S		**Sn**	**21 34 56.8**	**-2.8**
CDF	**Champ du Feu**	**4.78**	**196**	*e*Pn		**Pn**	**21 34 06.7**	**-0.1**
CDF	**Champ du Feu**	**4.78**	**196**	*e*P		**Pn**	**21 34 09.8**	**+3.0**
CDF				*e*Sg		**Sb**	**21 35 21.3**	**+5.2**
	comp=Z,2.4nm,0.3s							
KHC	**Kasperske Hory**	**4.78**	**143**	*e*PG		**Pn**	**21 34 08.0**	**+1.2**
KHC				*e*SG		**Sg**	**21 35 24.8**	**-2.1**
	comp=Z,4.8nm,0.6s							
CHVC	**Chvalec**	**4.91**	**117**	*e*PG		**Pn**	**21 34 12.6**	**+4.1**
CHVC				*e*SG		**Sg**	**21 35 28.5**	**-2.5**
	comp=Z,7.7nm,0.8s							
PAGF	**Fort de Pagny**	**4.99**	**208**	*e*Pn		**Pn**	**21 34 10.0**	**+0.4**
PAGF	**Fort de Pagny**	**4.99**	**208**	*e*P		**Pn**	**21 34 13.7**	**+4.1**
PAGF				*e*Sg		**Sg**	**21 35 29.4**	**-4.2**
	comp=Z,1.2nm,0.2s							
BORU	**Boraas**	**5.05**	**22**	*i* P		**Pn**	**21 34 12.3**	**+1.9**
BORU				*i* S		**Sn**	**21 35 07.0**	**-2.5**
BORU	**Boraas**	**5.05**	**22**	*i* P		**Pn**	**21 34 12.3**	**+1.9**
BORU				*i* S		**Sn**	**21 35 07.0**	**-2.5**
GERES	**GERESS Array B**	**5.06**	**144**	Pn		**Pn**	**21 34 12.3**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=328,slow=14,SNR=14							
GERES				Lg		Lg	21 35 37.0	
	comp=Z,0.1nm,0.3s,baz=323,slow=31,SNR=5.5							
	comp=Z,0.8nm,0.4s							
SAVF	**Savonnieres en**	**5.11**	**212**	*e*Pn		**Pn**	**21 34 10.6**	**-0.7**
SAVF	**Savonnieres en**	**5.11**	**212**	*e*Pn		**Pn**	**21 34 11.3**	**0.0**
SAVF	**Savonnieres en**	**5.11**	**212**	*e*P		**Pn**	**21 34 15.1**	**+3.8**
DPC	**Dobruska-Polom**	**5.18**	**118**	*e*PG		**Pn**	**21 34 15.0**	**+2.7**
TJOU	**Tjoern**	**5.21**	**14**	*i* P		**Pn**	**21 34 13.6**	**+1.0**
TJOU				*i* S		**Sn**	**21 35 09.2**	**-4.0**
TJOU	**Tjoern**	**5.21**	**14**	*i* P		**Pn**	**21 34 13.6**	**+1.0**
TJOU				*i* S		**Sn**	**21 35 09.2**	**-4.0**
MEZF	**Maizieres J'vi**	**5.23**	**212**	*e*Pn		**Pn**	**21 34 13.7**	**+0.7**
MEZF	**Maizieres J'vi**	**5.23**	**212**	*e*P		**Pn**	**21 34 17.6**	**+4.6**
HOMB	**Homborsund**	**5.27**	**356**	*e*P		**Pn**	**21 34 13.6**	**+0.2**
HOMB				*e*S		**Sn**	**21 35 11.0**	**-3.9**
HOMB				IAML			21 35 14.6	
	comp=Z,5.6nm,0.7s							
HOMB	**Homborsund**	**5.27**	**356**	*e*P		**Pn**	**21 34 13.6**	**+0.2**
HOMB				*e*S		**Sn**	**21 35 11.0**	**-3.9**
HAU	**Haudompre**	**5.34**	**201**	*e*Pn		**Pn**	**21 34 14.6**	**+0.1**
HAU				*e*Sn		**Sn**	**21 35 10.8**	**-5.9**
	comp=Z,1.2nm,0.2s							
HINF	**Hinteralfeld**	**5.42**	**197**	*e*Pn		**Pn**	**21 34 15.2**	**-0.4**
SNART	**Snartemo**	**5.44**	**349**	*i* P		**Pn**	**21 34 18.2**	**+2.4**
SNART				*i* S		**Sn**	**21 35 16.5**	**-2.5**
SNART				IAML			21 35 17.4	
	comp=Z,8.4nm,0.3s							
SNART	**Snartemo**	**5.44**	**349**	*i* P		**Pn**	**21 34 18.2**	**+2.4**
SNART				*i* S		**Sn**	**21 35 16.5**	**-2.5**
KRLC	**Kraliky**	**5.58**	**119**	*e*PG		**Pn**	**21 34 22.4**	**+4.6**
KRLC				*e*SG		**Sg**	**21 35 50.8**	**-1.8**
STRU	**Stroemstad**	**6.13**	**10**	*e*P		**Pn**	**21 34 26.1**	**+0.9**
STRU				*e*S		**Sn**	**21 35 30.6**	**-5.3**
KMY	**Karmoy**	**6.58**	**342**	*e*P		**Pn**	**21 34 31.5**	**+0.1**
KMY				*e*S		**Sn**	**21 35 42.5**	**-4.6**
KMY				IAML			21 35 46.6	
	comp=Z,3.5nm,0.8s							
BLS5	**Blasjo**	**6.59**	**348**	*e*P		**Pn**	**21 34 32.3**	**+0.7**
BLS5				*e*S		**Sn**	**21 35 43.8**	**-3.7**
BLS5				IAML			21 35 49.0	
	comp=Z,1.9nm,0.7s							
LOR	**Lormes**	**6.70**	**213**	*e*Pn		**Pn**	**21 34 33.2**	**0.0**
LOR				*e*Sn		**Sn**	**21 35 44.8**	**-5.4**
	comp=Z,1.0nm,0.2s							
CABF	**La Chapelle**	**6.73**	**199**	*e*Pn		**Pn**	**21 34 33.7**	**+0.2**
SSF	**Saint Saulge**	**7.00**	**214**	*e*Pn		**Pn**	**21 34 37.3**	**+0.1**
SSF				*e*Sn		**Sn**	**21 35 52.8**	**-4.7**
	comp=Z,0.4nm,0.2s							
ODD1	**Odda**	**7.05**	**349**	*e*P		**Pn**	**21 34 38.5**	**+0.6**
ODD1				*e*S		**Sn**	**21 35 54.4**	**-4.3**
ODD1				IAML			21 36 01.7	
	comp=Z,2.4nm,0.7s							
SMF	**Signal de Mont**	**7.26**	**211**	*e*Pn		**Pn**	**21 34 41.2**	**+0.4**
AVF	**Avril sur Loir**	**7.29**	**213**	*e*Pn		**Pn**	**21 34 41.0**	**-0.2**
LDF	**La Druitiere**	**7.38**	**237**	*e*Pn		**Pn**	**21 34 42.7**	**+0.3**
FLN	**La Foliniere**	**7.46**	**239**	*e*Pn		**Pn**	**21 34 43.3**	**-0.2**
HFS	**Hagfors**	**7.55**	**17**	Pn		**Pn**	**21 34 45.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=200,slow=11,SNR=9.1							
	comp=Z,1.8nm,0.8s							
EKA	**Eskdalemuir Ar**	**7.61**	**293**	Pn		**Pn**	**21 34 46.9**	**+1.3**
	comp=Z,1.6nm,0.2s,baz=104,slow=13,SNR=19							
EKA				Sn		**Sn**	**21 36 07.7**	**-4.7**
	baz=111,slow=26							
BGF	**Bois d'Agland**	**7.66**	**215**	*e*Pn		**Pn**	**21 34 46.3**	**0.0**
BGF				*e*Sn		**Sn**	**21 36 06.5**	**-7.3**
	comp=Z,7.8nm,0.6s							
NC602	**NORSAR Array S**	**7.84**	**8**	*e*P		**Pn**	**21 34 48.5**	**-0.2**
NC602				*e*S		**Sn**	**21 36 11.8**	**-6.2**
NC602				IAML			21 36 25.4	
	comp=Z,1.8nm,0.7s							
GRR	**Gorron**	**7.89**	**238**	*e*Pn		**Pn**	**21 34 49.5**	**+0.1**
GRR				*e*Sn		**Sn**	**21 36 13.1**	**-6.2**
	comp=Z,1.6nm,0.2s							
NOA	**NORSAR Array B**	**8.11**	**7**	Pn		**Pn**	**21 34 52.5**	**0.0**
	baz=195,slow=12,SNR=5.9							
	comp=Z,0.3nm,0.5s							
MFF	**Saint Martin d**	**8.81**	**227**	*e*Pn		**Pn**	**21 35 01.2**	**-0.9**
FINES	**FINESS Array B**	**12.41**	**41**	Pn		**Pn**	**21 35 50.8**	**-0.4**
	baz=236,slow=9.8,SNR=1.6							
	comp=Z,1.6nm,0.8s							

BKK ***20*** *21:33:17.8±1.5, 20˚.N±6˚×10˚1E±1˚0, h1km±6km, M4.1/12, Mjma4.1/12, ML4.5/12, MLv3.9/7*
IDC ***20*** *21:33:18.3±3.9, 19˚.49N×101˚.24E, h0km, mb3.5/2, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=73.8km s-min=33.9km az=114.0*

ISC 20 21:33:19.9±1.9**, 19˚.5N**±0˚.1×**101˚.2E**±0˚.2**, h10**km**, n6, σ0s.46/6, Laos**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAMP	**Lampang**	**1.80**	**237**	P		**Pn**	**21 33 51.5**	**+0.5**
UTTA	**Uttaradit**	**1.88**	**200**	P		**Pn**	**21 33 51.7**	**-0.3**
CMAI	**Chiengmai2**	**2.09**	**282**	P		**Pn**	**21 33 54.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**2.40**	**244**	Pn		**Pn**	**21 33 59.0**	**-0.3**
	1.6nm,0.3s,baz=60,slow=11,SNR=15							
	4.6nm,0.5s							
MKAR	**Makanchi Array**	**31.31**	**335**	P		**P**	**21 39 40.5**	**+0.2**
	0.3nm,0.6s,baz=140,slow=7.6,SNR=1.8							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**36.61**	**344**	P		**P**	**21 40 26.2**	**+0.1**
	0.6nm,0.5s,baz=160,slow=10.0,SNR=3.7							
	0.6nm,0.5s							

IDC 20 21:33:35.1±1.4**, 19˚.27N**×**101˚.47E, h0**km**, mb3.7**/3**, mbtmp3.7**/4**, ML4.6/1, Error ellipse: s

σ0§70/12, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.16**	**255**	P	**Pg**	**21 43 31.2**	**-0.3**
AAI				S	**Sg**	**21 43 34.7**	**+0.8**
MSAI	**Masohi**	**0.65**	**63**	P	**Pg**	**21 43 40.1**	**-0.6**
MSAI				S	**Sb**	**21 43 51.6**	**+0.9**
NLAI	**Namlea**	**1.31**	**288**	P	**Pn**	**21 43 51.5**	**-0.9**
BNDI	**Bandanaira**	**1.78**	**119**	P	**Pn**	**21 43 59.0**	**+0.1**
SANI	**Sanana**	**2.84**	**304**	P	**Pn**	**21 44 14.3**	**+0.8**
FAKI	**Fak Fak**	**3.96**	**80**	P	**Pn**	**21 44 28.6**	**-0.4**
SWI	**Sorong**	**4.02**	**47**	P	**Pn**	**21 44 30.2**	**+0.5**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=340,slow=12,SNR=2.8 0.8nm,0.6s	**17.22**	**161**	P	**Pn**	**21 47 29.2**	**+0.4**
ASAR	**Alice Springs** 4.5nm,0.7s,baz=348,slow=11,SNR=23 4.5nm,0.7s	**20.61**	**165**	P	**P**	**21 48 07.8**	**+0.1**
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=116,slow=8.2,SNR=3.6 0.5nm,0.8s	**64.54**	**327**	P	**P**	**21 54 04.6**	**-0.7**

*ISN **20** 21:47:37.1±0.4,34.°15N×45.°60E,h10km±2km, ML3.5*
*TEH **20** 21:47:38.4,34.°12N×45.°67E,h13km±38km*
ISC 20 21:47:38.2±0.9,**34.°10N**±0.°03×**45.°62E**±0.°04,**h10**km,**n24,** σ1§**01**/29, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLG1	**Gilan-e-Gharb**	**0.24**	**87**	Pg	**Pg**	**21 47 42.9**	**-0.2**
IGHG	**Ghaleghazi**	**0.82**	**74**	Pg	**Pg**	**21 47 53.7**	**-0.3**
IDHR	**Dehrash**	**0.87**	**46**	Pg	**Pg**	**21 47 53.9**	**-1.1**
IBDR	**Badra**	**1.02**	**165**	*e*Pg	**Pg**	**21 47 58.0**	**+0.1**
IBDR				*e*Sg	**Sn**	**21 48 12.7**	**-0.3**
IBDR	comp=E,564nm,1.1s			AML	AML	21 48 18.5	
IBDR	comp=N,1μm,0.4s			AML	AML	21 48 18.7	
KCHF	**Cheshme Sefid,**	**1.19**	**81**	Pg	**Pn**	**21 48 00.8**	**-0.3**
BHD	**Baghdad**	**1.33**	**232**	*e*Pg	**Pn**	**21 48 02.5**	**-0.3**
BHD				*e*Sg	**Sb**	**21 48 21.5**	**+1.3**
IKRK	**Kirkuk**	**1.67**	**321**	*e*Pn	**Pn**	**21 48 07.6**	**0.0**
IKRK				*e*Sn	**Sn**	**21 48 30.0**	**+0.9**
IKRK	comp=E,940nm,0.6s			AML	AML	21 48 34.4	
IKRK	comp=N,850nm,0.5s			AML	AML	21 48 34.6	
SNQR	**Sonqor, Kerman**	**1.82**	**65**	Pg	**Pb**	**21 48 11.3**	**-0.5**
IBZA	**Bozab**	**1.89**	**78**	Pn	**Pb**	**21 48 12.0**	**-0.9**
IDOB	**Doab**	**2.15**	**98**	Pn	**Pn**	**21 48 15.1**	**+0.9**
RAFI	**Al-Rafai**	**2.41**	**170**	*e*Pn	**Pn**	**21 48 19.0**	**+1.4**
RAFI				*e*Sn	**Sb**	**21 48 50.0**	**-1.4**
MAHB	**Mahabad**	**2.66**	**1**	Pn	**Pn**	**21 48 23.0**	**+1.7**
HAGD	**Aghdareh**	**2.99**	**75**	Pn	**Pn**	**21 48 26.6**	**+0.6**
HGHA	**Hamedan- Ghaye**	**3.00**	**62**	Pn	**Pn**	**21 48 27.7**	**+1.6**
MSL	**Mosul**	**3.08**	**319**	*e*Pn	**Pn**	**21 48 26.7**	**-0.2**
MSL				*e*Sn	**Sn**	**21 49 03.0**	**-0.8**
IHSH	**Hashtrud**	**3.46**	**22**	Pn	**Pn**	**21 48 33.4**	**+0.9**
IAZR	**Azarshahr**	**3.58**	**5**	Pn	**Pn**	**21 48 35.5**	**+1.5**
ZNJK	**Zanjan**	**3.58**	**43**	Pn	**Pn**	**21 48 35.3**	**+1.3**
IQOM	**Qom**	**4.56**	**79**	Pn	**Pn**	**21 48 47.9**	**+0.4**
JHBN	**Jahan bin**	**4.62**	**112**	Pn	**Pn**	**21 48 49.5**	**+1.1**
QAMS	**Qamsar**	**4.81**	**93**	Pn	**Pn**	**21 48 51.8**	**+0.8**
IKLH	**Kolahrood**	**5.03**	**97**	Pn	**Pn**	**21 48 55.2**	**+1.3**
GRMI	**Germi**	**5.04**	**21**	Pn	**Pn**	**21 48 55.1**	**+1.1**
IVRN	**Varamin**	**5.12**	**78**	Pn	**Pn**	**21 48 55.8**	**+0.8**

*IDC **20** 21:59:11.6±1.6,1.°74N×126.°54E,h0km,mb3.8/4, mbtmp3.8/5,ML3.3/1,Error ellipse: s-maj=118.8km s-min=19.2km az=69.0*
*DJA **20** 21:59:15.8±0.3,2.°1N±3.°×12.°6E±.°,h10km,M4.0/12,mb4.2/5, MLv3.9/12*
ISC 20 21:59:13.8±1.1,**1.°76N**±0.°08×**126.°59E**±0.°10,**h10**km,**n11,** σ1§**45**/11, **mb3.9**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**142**	P	**Pn**	**21 59 39.4**	**+2.0**
SGSI	**Sangihe**	**2.18**	**331**	P	**Pn**	**21 59 51.8**	**+1.6**
KMSI	**Cibinong**	**2.86**	**246**	P	**Pn**	**22 00 01.1**	**+1.7**
SANI	**Sanana**	**3.83**	**189**	P	**Pn**	**22 00 13.2**	**+0.3**
LUWI	**Luwuk**	**4.72**	**234**	P	**Pn**	**22 00 25.6**	**+0.5**
EDFI	**Ende, Flores** 4.4nm,1.0s	**11.53**	**205**	P	**Pn**	**22 01 59.1**	**+0.5**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=5.7,slow=10,SNR=1.3 2.0nm,1.1s	**19.76**	**183**	P	**P**	**22 03 43.2**	**-0.8**
WRA	**Warramunga Arr** 2.8nm,0.7s,baz=339,slow=11,SNR=11 2.8nm,0.7s	**22.87**	**161**	P	**P**	**22 04 15.3**	**-2.3**
ASAR	**Alice Springs** 0.9nm,0.8s,baz=347,slow=12,SNR=9.0 0.9nm,0.8s	**26.26**	**165**	P	**P**	**22 04 49.8**	**+0.3**
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=118,slow=7.8,SNR=12 0.7nm,0.6s	**59.09**	**326**	P	**P**	**22 09 13.7**	**-0.7**
KURBB	**Kurchatov Arra** 0.9nm,0.5s,baz=131,slow=6.1,SNR=7.9 0.9nm,0.5s	**63.31**	**328**	P	**P**	**22 09 42.3**	**-0.6**

*CATAC **20** 22:02:01.1±0.6,11.°1N×3.°6W±.°,h20km±3km,M3.2/19, MLv3.2/19,Error ellipse: s-maj=7.5km s-min=3.8km az=42.7,confirmed*
*UCR **20** 22:02:01.2±1.0,11.°02N×86.°47W,h6km±9km,MW3.5*
ISC 20 22:02:00.6±1.6,**11.°05N**±0.°04×**86.°48W**±0.°06,**h11**km±10km, **n52,** σ0§**67**/60, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIN	**Rivas**	**0.75**	**57**	P	**Pb**	**22 02 16.0**	**+0.3**
NADN	**Granada**	**0.82**	**32**	P	**Pb**	**22 02 17.6**	**+0.6**
LCRUZ	**La Cruz**	**0.83**	**88**	*e*P	**Pg**	**22 02 15.1**	**-1.7**
JAPN	**Al SSO del Vol**	**0.92**	**59**	P	**Pb**	**22 02 19.0**	**+0.3**
JAPN	**Al SSO del Vol**	**0.92**	**59**	*e*P	**Pb**	**22 02 18.9**	**+0.3**
CARN	**Rivas**	**0.95**	**81**	S	**Sn**	**22 02 33.8**	**+0.4**
MORN	**Al O del Volca**	**0.95**	**59**	P	**Pb**	**22 02 19.5**	**+0.3**
CONN	**Concepcion**	**0.98**	**58**	P	**Pg**	**22 02 19.2**	**-0.3**
MASN	**Masaya**	**0.99**	**19**	P	**Pn**	**22 02 20.3**	**-0.2**
ELI1	**Hacienda Flor**	**0.99**	**114**	S	**Sn**	**22 02 35.1**	**+0.6**
MAS3	**Al N del Volca**	**1.01**	**17**	P	**Pg**	**22 02 20.0**	**-0.3**
MAS3				S	**Sb**	**22 02 34.3**	**+0.6**
ALIBA	**Liberia Airpor**	**1.02**	**116**	*e*P	**Pb**	**22 02 20.4**	**+0.1**
ALIBA				*e*S	**Sn**	**22 02 34.8**	**-0.4**
LAPC	**Finca la Perla**	**1.06**	**105**	*e*P	**Pb**	**22 02 20.5**	**-0.6**
LAPC				*e*S	**Sg**	**22 02 34.8**	**-0.2**
UNAN	**Cigeo UNAN**	**1.08**	**11**	S	**Sg**	**22 02 36.0**	**+0.6**
ALLN	**Telcor Managua**	**1.12**	**10**	P	**Pb**	**22 02 21.9**	**-0.1**
VRLE	**La Escondida,**	**1.12**	**103**	*e*P	**Pb**	**22 02 21.8**	**-0.4**
VRLE				*e*S	**Sb**	**22 02 36.7**	**-0.1**
COPN	**Copaltepe**	**1.13**	**354**	P	**Pb**	**22 02 22.1**	**-0.2**
COPN	**Copaltepe**	**1.13**	**354**	*e*P	**Pb**	**22 02 22.0**	**-0.2**
VORI	**VORI**	**1.13**	**101**	*e*P	**Pb**	**22 02 22.1**	**-0.3**
BUAI	**Buenos Aires**	**1.14**	**98**	*e*P	**Pb**	**22 02 22.0**	**-0.4**
GPS1	**Guardaparques**	**1.14**	**104**	*e*P	**Pb**	**22 02 22.2**	**-0.2**
GPS2	**Hotel Rincn d**	**1.14**	**105**	*e*P	**Pb**	**22 02 22.1**	**-0.4**
WILN	**Americas 2**	**1.14**	**14**	S	**Sn**	**22 02 38.4**	**+0.2**
JUD3	**Juan Diaz 3**	**1.27**	**133**	*e*P	**Pn**	**22 02 22.7**	**-1.7**
MESS	**Mesas**	**1.30**	**103**	*e*P	**Pn**	**22 02 24.9**	**+0.1**
PLVR	**Palo Verde**	**1.31**	**122**	*e*P	**Pg**	**22 02 27.8**	**+2.0**
HORNC	**Hornillas**	**1.32**	**104**	*e*P	**Pn**	**22 02 24.8**	**-0.3**
CUI	**Cuipilapa**	**1.35**	**107**	*e*P	**Pn**	**22 02 25.1**	**-0.3**
MOMN	**Momotombo**	**1.35**	**357**	P	**Pn**	**22 02 25.4**	**-0.2**
VMAR	**Armenia, Volca**	**1.36**	**100**	*e*P	**Pn**	**22 02 25.4**	**-0.2**
MOM2	**El Cardon**	**1.38**	**360**	P	**Pn**	**22 02 25.7**	**-0.1**
MOM2				S	**Sb**	**22 02 44.6**	**+0.5**
MOTZ	**Rio Naranjo**	**1.43**	**104**	*e*P	**Pb**	**22 02 27.1**	**-0.2**
CNGA	**Al SSO del Vol**	**1.46**	**351**	P	**Pn**	**22 02 27.3**	**+0.3**
CNGA				S	**Sn**	**22 02 45.5**	**-0.6**
MOM3	**MOM3**	**1.46**	**358**	P	**Pn**	**22 02 26.7**	**-0.2**
MOM3				S	**Sn**	**22 02 45.6**	**-0.3**
CNGN	**Cerro Negro**	**1.46**	**351**	P	**Pn**	**22 02 26.6**	**-0.4**
CNGN	**Cerro Negro**	**1.46**	**351**	S	**Sn**	**22 02 46.2**	**0.0**
CNGN	**Cerro Negro**	**1.46**	**351**	*e*P	**Pn**	**22 02 26.9**	**-0.1**
ROCN	**Rota Cerro Neg**	**1.49**	**350**	P	**Pn**	**22 02 27.2**	**-0.2**
ROCN				S	**Sn**	**22 02 46.7**	**-0.1**
TIMP	**Tierras Morena**	**1.51**	**108**	*e*P	Pn	22 02 20.4	-7.3
TENO	**El Achiote**	**1.51**	**103**	*e*P	**Pn**	**22 02 28.2**	**+0.4**
QUEN	**Al S del Volca**	**1.58**	**347**	P	**Pn**	**22 02 28.8**	**+0.1**
HERN	**Volcan Telica**	**1.59**	**347**	P	**Pn**	**22 02 27.9**	**-0.9**
JTS	**Las Juntas de**	**1.68**	**116**	*e*P	**Pn**	**22 02 30.6**	**+0.6**
PKGN	**Cerro Pekin**	**1.69**	**343**	S	**Sb**	**22 02 52.7**	**-0.3**
TABAC	**Tabacon**	**1.77**	**108**	*e*P	**Pb**	**22 02 32.6**	**-0.5**
ARE1	**Arenal 1**	**1.82**	**108**	*e*P	**Pb**	**22 02 33.8**	**-0.2**
VARE2	**V. Arenal**	**1.82**	**108**	*e*P	**Pb**	**22 02 33.9**	**-0.2**
CEDE	**Laguna Cedeo**	**1.83**	**108**	*e*P	**Pb**	**22 02 34.3**	**+0.1**
LIMN	**Finca el Limon**	**2.01**	**3**	P	**Pn**	**22 02 34.1**	**-0.5**
LIMN				S	**Sn**	**22 02 59.7**	**0.0**
CSGN	**Cosiguina Volc**	**2.19**	**331**	S	**Sn**	**22 03 04.7**	**+0.5**
PIEC	**Cerro El Cedra**	**2.85**	**119**	*e*P	**Pn**	**22 02 48.5**	**+2.1**
DRK0	**Durika**	**3.64**	**119**	S	**Sn**	**22 03 38.3**	**-2.0**

*SDD **20** 22:27:17.0±1.9,19.°09N×65.°86W,h26km±999km,MD3.5, ML2.3,MW3.0*
*NEIC **20** 22:27:17.5±0.4,19.°00N±0.°06×65.°80W±0.°06,h35km±2km, ML2.5/12,Md3.0/13(RSPR),Error ellipse: s-maj=12.8km s-min=4.8km az=44.0*
*RSPR **20** 22:27:18.5,19.°04N×65.°81W,h24km±18km,MD3.0/13*
ISC 20 22:27:15.3±2.6,**19.°1N**±0.°1×**65.°84W**±0.°08,**h19**km±3km,**n40,** σ0§**50**/53, **18C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCPR	**Guaynabo City**	**0.79**	**197**		**Pb**	**22 27 31.1**	**+0.6**
GCPR					**Sb**	**22 27 41.5**	**+0.7**
GCPR	comp=E,101nm,0.2s			IAML		22 27 42.1	
GCPR	**Guaynabo City**	**0.79**	**197**	⇓*e*P	**Pn**	**22 27 31.3**	**-0.3**
GCPR	**Guaynabo City**	**0.79**	**197**	*e*S	**Sb**	**22 27 41.6**	**+0.8**
EMPR	**Esperanza - Ma**	**0.88**	**228**		**Pn**	**22 27 33.1**	**+0.4**
EMPR					**Sg**	**22 27 44.6**	**+0.4**
EMPR	**Esperanza - Ma**	**0.88**	**228**	⇑*e*P	**Pn**	**22 27 33.1**	**+0.4**
EMPR	**Esperanza - Ma**	**0.88**	**228**	*e*S	**Sg**	**22 27 44.6**	**+0.4**
ECPR	**Experimental S**	**0.90**	**214**	⇓*e*P	**Pn**	**22 27 33.0**	**0.0**
ECPR	**Experimental S**	**0.90**	**214**	*e*S	**Sb**	**22 27 44.1**	**+0.2**
HUMP	**Col San Antoni**	**0.92**	**181**		**Pg**	**22 27 32.9**	**-0.4**
HUMP					**Sb**	**22 27 44.2**	**-0.5**
HUMP	comp=N,317nm,0.2s			IAML		22 27 46.0	
HUMP	**Col San Antoni**	**0.92**	**181**	⇑*e*P	**Pg**	**22 27 32.9**	**-0.4**
HUMP	**Col San Antoni**	**0.92**	**181**	*e*S	**Sb**	**22 27 44.4**	**-0.2**
SJG	**San Juan**	**1.00**	**197**		**Pg**	**22 27 34.4**	**-0.3**
SJG	comp=N,126nm,0.2s			IAML		22 27 49.0	
SJG	comp=N,170nm,0.4s			IAML		22 27 49.8	
SJG	**San Juan**	**1.00**	**197**	⇑*e*Pg	**Pg**	**22 27 34.5**	**-0.3**
SJG				⇑*e*Sg	**Sb**	**22 27 47.3**	**+0.5**
SJG	**San Juan**	**1.00**	**197**	⇑*e*P	**Pn**	**22 27 34.7**	**+0.3**
SJG	**San Juan**	**1.00**	**197**	*e*S	**Sb**	**22 27 47.3**	**+0.5**
AOPR	**Arecibo Observ**	**1.13**	**231**		**Pb**	**22 27 36.5**	**+0.2**
AOPR					**Sb**	**22 27 50.3**	**-0.3**
AOPR	**Arecibo Observ**	**1.13**	**231**	⇑*e*Pg	**Pn**	**22 27 36.2**	**0.0**
AOPR				⇑*e*Sg	**Sb**	**22 27 50.5**	**-0.1**
AOPR	comp=N,369nm,0.3s			IAML		22 27 55.3	
AOPR	**Arecibo Observ**	**1.13**	**231**	⇓*e*P	**Pb**	**22 27 36.5**	**+0.2**
AOPR	**Arecibo Observ**	**1.13**	**231**	*e*S	**Sb**	**22 27 50.5**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.17**	**226**		**Pb**	**22 27 37.4**	**+0.5**
UUPR					**Sb**	**22 27 51.5**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.17**	**226**	⇑*e*P	**Pb**	**22 27 37.5**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.17**	**226**	*e*S	**Sb**	**22 27 51.5**	**-0.2**
OBIP	**Obispado Ponce**	**1.25**	**216**		**Pn**	**22 27 38.3**	**+0.4**
OBIP					**Sb**	**22 27 53.4**	**-0.8**
OBIP	comp=N,51nm,0.6s			IAML		22 27 58.7	
OBIP	**Obispado Ponce**	**1.25**	**216**	⇑*e*P	**Pb**	**22 27 38.6**	**+0.1**
OBIP	**Obispado Ponce**	**1.25**	**216**	*e*S	**Sb**	**22 27 53.4**	**-0.8**
AGPR	**Aguadilla, PR**	**1.35**	**244**		**Pn**	**22 27 39.5**	**+0.3**
AGPR					**Sn**	**22 27 55.5**	**-1.0**
AGPR	**Aguadilla, PR**	**1.35**	**244**	⇑*e*Pg	**Pn**	**22 27 39.8**	**+0.6**
AGPR				⇑*e*Sg	**Sn**	**22 27 56.0**	**-0.6**
AGPR	comp=N,60nm,0.2s			IAML		22 28 02.4	
AGPR	**Aguadilla, PR**	**1.35**	**244**	⇓*e*P	**Pn**	**22 27 39.5**	**+0.3**
AGPR	**Aguadilla, PR**	**1.35**	**244**	*e*S	**Sn**	**22 27 55.5**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.47**	**222**		**Pb**	**22 27 42.3**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.47**	**222**	⇓*e*P	**Pb**	**22 27 42.3**	**+0.2**
LSP	**Las Mesas**	**1.48**	**233**		**Pn**	**22 27 41.0**	**-0.1**
LSP	**Las Mesas**	**1.48**	**233**	⇓*e*P	**Pn**	**22 27 41.0**	**-0.1**
MLPR	**Magueyes Islan**	**1.58**	**226**	⇑*e*Pg	**Pn**	**22 27 42.9**	**+0.5**
MLPR				⇑*e*Sg	**Sn**	**22 28 01.9**	**-0.5**
MLPR	comp=N,7.9nm,0.6s			IAML		22 28 08.5	
MLPR	**Magueyes Islan**	**1.58**	**226**	⇑*e*P	**Pn**	**22 27 43.0**	**+0.6**
MLPR	**Magueyes Islan**	**1.58**	**226**	*e*S	**Sn**	**22 28 01.8**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.60**	**229**		**Pn**	**22 27 43.2**	**+0.5**
CRPR					**Sn**	**22 28 02.6**	**-0.3**
CRPR	comp=E,31nm,2.8s			IAML		22 28 21.9	
CRPR	**Cabo Rojo, PR**	**1.60**	**229**	⇑*e*Pg	**Pn**	**22 27 43.5**	**+0.8**
CRPR				⇑*e*Sg	**Sb**	**22 28 05.1**	**+0.8**
CRPR	comp=N,23nm,1.0s			IAML		22 28 17.7	
CRPR	**Cabo Rojo, PR**	**1.60**	**229**	⇑*e*P	**Pn**	**22 27 43.5**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.60**	**229**	*e*S	**Sn**	**22 28 02.9**	**-0.1**

*RHSSO **20** 22:29:05.9±0.9,42.°93N×17.°05E,h7km,ML2.2/4*
*BEO **20** 22:29:07.8±0.6,43.°16N×17.°28E,h0km,ML2.1/7*
*PDG **20** 22:29:07.0±0.2,42.°93N×17.°13E,h15km,ML2.6/8,Error ellipse: s-maj=1.1km s-min=1.8km az=0.0*
ISC 20 22:29:05.2±0.9,**42.°93N**±0.°03×**17.°02E**±0.°02,**h13**km±7km, **n44,** σ1§**01**/80, **3C-5D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSTV	**Lastovo**	**0.18**	**211**	*i* Pg	**Pg**	**22 29 09.6**	**+0.2**
LSTV				Sg	**Sg**	**22 29 13.0**	**+0.7**
MAKA	**Makarska**	**0.36**	**0**	*e*Pg	**Pg**	**22 29 12.4**	**-0.1**
MAKA				Sg	**Sg**	**22 29 17.4**	**0.0**
HVAR	**Hvar**	**0.49**	**301**	*e*Pg	**Pg**	**22 29 14.1**	**-0.7**
HVAR				Sg	**Sg**	**22 29 20.8**	**-0.6**
STON	**Ston**	**0.50**	**96**	*i* Pg	**Pg**	**22 29 15.2**	**+0.1**
STON				Sg	**Sb**	**22 29 23.0**	**-0.1**
STON	**Ston**	**0.50**	**96**	*e*Pg	**Pg**	**22 29 15.2**	**+0.1**
STON				*e*Sg	**Sb**	**22 29 22.3**	**-0.8**
RICI	**Ricice**	**0.57**	**8**	*e*Pg	**Pg**	**22 29 16.2**	**-0.2**
RICI				Sg	**Sg**	**22 29 24.7**	**-0.6**
DBRK	**Dubrovnik**	**0.87**	**107**	*e*Pg	**Pg**	**22 29 21.7**	**-0.3**
DBRK				Sg	**Sb**	**22 29 33.9**	**+0.2**
TREB	**Trebinje**	**1.00**	**102**	⇑*i*Pg	**Pg**	**22 29 23.1**	**-1.4**
TREB				*e*Sg	**Sg**	**22 29 37.0**	**-0.6**
TREB	**Trebinje**	**1.00**	**102**	*e*Pg	**Pg**	**22 29 24.0**	**-0.5**
TREB				*e*Sg	**Sb**	**22 29 38.0**	**+0.5**
BRY	**Bratogost**	**1.12**	**91**	⇓*i*Pg	**Pg**	**22 29 25.5**	**-1.3**
BRY				*i* Sg	**Sn**	**22 29 42.1**	**+0.1**
KIJV	**Kijevo**	**1.17**	**338**	*i* Pg	**Pg**	**22 29 26.0**	**-1.6**
KIJV				Sg	**Sg**	**22 29 42.0**	**-0.9**
KLINJ	**Klinje**	**1.17**	**78**	*e*Pg	**Pg**	**22 29 26.8**	**-1.0**
KLINJ				*e*Sg	**Sb**	**22 29 42.5**	**0.0**
HCY	**Herceg Novi**	**1.19**	**113**	⇓*i*Pg	**Pg**	**22 29 26.9**	**-1.2**
HCY				*e*Sg	**Sn**	**22 29 44.0**	**+0.5**
ZIRJ	**Zirje**	**1.24**	**306**	*e*Pg	Pn	22 29 26.6	-1.6
ZIRJ				Sg	**Sb**	**22 29 43.0**	**-1.3**
MORI	**Morici**	**1.34**	**315**	*e*Pg	**Pn**	**22 29 28.8**	**-0.8**
MORI				Sg	**Sb**	**22 29 46.9**	**-0.3**
NKME	**Niksic**	**1.43**	**96**	⇓*i*Pg	**Pn**	**22 29 30.8**	**-0.1**
NKME				*i* Sg	**Sn**	**22 29 51.1**	**+1.5**
CEME	**Cevo**	**1.45**	**105**	⇑*i*Pg	**Pn**	**22 29 30.6**	**-0.6**
CEME				*i* Sg	**Sb**	**22 29 50.8**	**+0.3**
BUM	**Brajici-Budva**	**1.52**	**114**	⇑*i*Pg	**Pn**	**22 29 32.4**	**+0.3**
BUM				*i* Sg	**Sg**	**22 29 53.8**	**-0.3**
PDG	**Podgorica**	**1.72**	**106**	*e*Sg	**Sb**	**22 29 58.1**	**-0.1**
PDG	**Podgorica**	**1.72**	**106**	*e*Pn	**Pn**	**22 29 36.2**	**+1.4**
PDG				*i* Sn	**Sb**	**22 29 58.7**	**+0.5**
DRME	**Dracevica, Mon**	**1.76**	**114**	*e*Pg	**Pn**	**22 29 36.4**	**+1.0**
DRME				*e*Sg	**Sg**	**22 30 01.1**	**-0.8**
DRME	**Dracevica, Mon**	**1.76**	**114**	⇓*i*Pn	**Pn**	**22 29 36.6**	**+1.2**
DRME				*e*Sn	**Sb**	**22 29 59.4**	**0.0**
DUGI	**Dugi Otok**	**1.78**	**307**	*e*Pn	**Pn**	**22 29 35.3**	**-0.4**
DUGI				Sn	**Sn**	**22 29 59.1**	**+1.0**
BLY	**Banja Luka**	**1.82**	**4**	*e*Pn	**Pn**	**22 29 38.0**	**+1.7**
BLY				*e*Sn	**Sn**	**22 30 00.4**	**+1.2**
BLY	**Banja Luka**	**1.82**	**4**	*e*Pg	**Pn**	**22 29 38.4**	**+2.1**
BLY				*e*Sg	**Sn**	**22 30 00.9**	**+1.7**
KOME	**Kolasin**	**1.84**	**92**	⇓*i*Pn	**Pn**	**22 29 37.8**	**+1.3**
KOME				*e*Sn	**Sg**	**22 30 02.6**	**-1.7**
UDBI	**Udbina**	**1.84**	**331**	*e*Pn	**Pn**	**22 29 37.8**	**+1.2**
UDBI				Sn	**Sn**	**22 30 01.6**	**+1.8**
RUDO	**Rudo**	**1.85**	**67**	*e*Pn	**Pn**	**22 29 37.2**	**+0.6**
RUDO				*e*Sn	**Sb**	**22 30 01.6**	**-0.3**
SLATY	**Slatina**	**1.91**	**6**	*e*Pn	**Pn**	**22 29 39.3**	**+1.8**
SLATY				*e*Sn	**Sn**	**22 30 02.3**	**+0.9**
VIRC	**Vir**	**1.98**	**314**	*i* Pn	**Pn**	**22 29 38.4**	**+0.1**
VIRC				Sn	**Sn**	**22 30 04.5**	**+1.6**
BBLS	**Lazi&#263i**	**1.98**	**61**	*e*Pn	**Pn**	**22 29 39.1**	**+0.7**
BBLS				*e*Sn	**Sn**	**22 30 02.8**	**-0.3**
BEY	**Berane**	**2.11**	**91**	*e*Pg	**Pb**	**22 29 43.0**	**-0.4**
IVA	**Berane**	**2.11**	**91**	*e*Pn	**Pn**	**22 29 41.3**	**+1.0**
SJES	**Sjenica**	**2.19**	**80**	*e*Pg	**Pn**	**22 29 44.0**	**+2.6**
SJES				*e*Sg	**Sb**	**22 30 11.0**	**-0.8**
PLIT	**Plitvice**	**2.20**	**333**	*e*Pn	**Pn**	**22 29 42.2**	**+0.8**
PLIT				Sn	**Sn**	**22 30 09.9**	**+1.4**
NVLJ	**Novalja**	**2.26**	**317**	*i* Pn	**Pn**	**22 29 41.8**	**-0.4**
NVLJ				Sn	**Sn**	**22 30 10.3**	**+0.4**
IVAS	**Ivanjica**	**2.38**	**73**	*e*Pn	**Pn**	**22 29 44.1**	**+0.1**
TEKS	**Tekeris**	**2.44**	**47**	*e*Pg	**Pn**	**22 29 45.7**	**+1.0**
TEKS				*e*Sg	**Sn**	**22 30 15.0**	**+0.6**
RABC	**Rab**	**2.44**	**319**	*e*Pn	**Pn**	**22 29 44.9**	**+0.3**
RABC				Sn	**Sn**	**22 30 14.9**	**+0.6**
DIVS	**Divibare**	**2.46**	**61**	*e*Pn	**Pn**	**22 29 46.0**	**+0.9**
DIVS				*e*Sn	**Sn**	**22 30 14.0**	**-1.0**
TRUS	**Trudelj**	**2.78**	**61**	*e*Sn	**Sn**	**22 30 21.4**	**-1.5**
SELS	**Selova**	**3.02**	**83**	*e*Pn	**Pn**	**22 29 54.9**	**+2.2**
SELS				*e*Sn	**Sn**	**22 30 29.8**	**+1.1**
AVAS	**Avala Beograd**	**3.08**	**54**	*e*Pg	Pn	22 29 48.9	-4.7
KALN	**Kalnik**	**3.23**	**353**	*e*Pn	**Pn**	**22 29 56.2**	**+0.6**
KALN				Sn	**Sn**	**22 30 34.6**	**+0.7**

*IDC **20** 22:31:33.1±0.8,6.°69N×124.°87E,h0km,mb4.0/11, mbtmp4.0/11,MS3.6/3,Error ellipse: s-maj=15.1km s-min=9.8km az=154.0*
*NEIC **20** 22:31:35.2±1.5,6.°74N±0.°07×124.°97E±0.°05,h10km±1km, mb4.5/23,Error ellipse: s-maj=13.3km s-min=6.5km az=150.0*
*DJA **20** 22:31:36.2±0.4,7.°1N±3.°×12.°5E±.°,h10km,M4.9/18, mb5.0/18,mB5.3/7,MLv5.0/11,Mw(mB)4.8/7*
ISC 20 22:31:35.5±0.5,**6.°78N**±0.°05×**125.°02E**±0.°06,**h10**km,**n70,** σ1§**70**/68, **mb4.3**/25, **1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)** 3μm,0.3s,baz=90,slow=2.0,SNR=94	**0.63**	**62**	Pg	**Pb**	**22 31 49.0**	**+0.4**
DAV	4μm,0.3s,baz=343,slow=19,SNR=20			Lg	Lg	22 31 59.5	
DAV	comp=Z,2μm,19.9s,baz=64,slow=62			LR	LR	22 32 22.7	
DAV	**Davao City (W)**	**0.63**	**62**		**Pb**	**22 31 48.4**	**-0.2**
DAV					**Sb**	**22 31 58.2**	**+0.7**
SGSI	**Sangihe**	**3.11**	**171**	P	**Pn**	**22 32 26.8**	**+2.1**
SGSI				S	**Sn**	**22 33 05.3**	**+3.4**
KMSI	**Cibinong**	**6.25**	**190**	P	**Pn**	**22 33 09.9**	**+2.1**

TOO	**Toolangi**	**48.08**	**158**	P	**P**	**22 40 13.1**	**-2.4**
TOO				IAmb	IAmb	22 40 16.2	
	comp=Z,7.3nm,1.2s						
MKAR	**Makanchi Array**	**54.10**	**325**	P	**P**	**22 40 59.1**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=123,slow=7.9,SNR=6.4						
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**54.10**	**325**	P	**P**	**22 40 59.7**	**-0.9**
MAKZ	**Makanchi**	**54.28**	**325**	P	**P**	**22 41 01.8**	**-0.2**
ZALV	**Zalesovo Beam**	**57.12**	**333**	P	**P**	**22 41 20.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=97,slow=12,SNR=2.3						
	comp=Z,0.2nm,0.3s						
DRK	**Karamyk**	**57.69**	**313**	P	**P**	**22 41 26.1**	**-0.7**
DRK				IAmb	IAmb	22 41 35.8	
	comp=Z,5.3nm,1.0s						
KURBB	**Kurchatov Arra**	**58.27**	**327**	P	**P**	**22 41 29.8**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=125,slow=6.2,SNR=8.7						
	comp=Z,0.9nm,0.7s						
KURK	**Kurchatov**	**58.27**	**327**	P	**P**	**22 41 29.8**	**-0.5**
GAR	**Garm**	**58.63**	**312**	P	**P**	**22 41 32.0**	**-1.2**
KK31	**Karatay Array**	**59.86**	**316**	P	**P**	**22 41 40.2**	**-1.3**
KKAR	**Karatay Array**	**59.86**	**316**	P	**P**	**22 41 40.3**	**-1.2**
BVAR	**Borovoye Array**	**63.85**	**327**	P	**P**	**22 42 06.0**	**-2.1**
	comp=Z,0.6nm,0.6s,baz=101,slow=7.5,SNR=3.7						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**83.11**	**26**	P	**P**	**22 44 00.7**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=253,slow=2.7,SNR=3.3						
	comp=Z,0.5nm,0.7s						
DLBC	**Dease Lake**	**92.02**	**31**	LR	LR	23 21 59.1	
	comp=Z,107nm,20.2s,baz=278,slow=33						

SDD 20 22:36:11.5±1.1, 18.16N×70.27W, h8km±26km, MD2.7, ML1.9, MW2.0, 3C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BANI	**BANI**	**0.24**	**341**	*e*Pg	Pg	22 36 16.3	-0.2
BANI				*e*Sg	Sg	22 36 19.8	0.0
BANI				IAML		22 36 20.4	
	comp=N,290nm,0.1s						
ABDR	**Alto Bandera**	**0.73**	**333**	*e*Pg	Pg	22 36 24.6	-1.1
ABDR				*e*Sg	Sg	22 36 34.3	-0.9
PODR	**Polo**	**0.96**	**271**	⇑*e*Pg	Pg	22 36 29.1	-0.8
PODR				⇑*e*Sg	Sg	22 36 41.5	-1.0
PODR				IAML		22 36 44.5	
	comp=N,22nm,1.1s						
HATOM	**Hato Mayor del**	**1.05**	**53**	*e*Pg	Pg	22 36 31.3	-0.5
HATOM				*e*Sg	Sg	22 36 44.3	-1.2
HATOM				IAML		22 37 27.8	
	comp=N,9.5nm,0.6s						
HATOM				IAML		22 37 32.0	
	comp=N,9.4nm,1.1s						
MIDR	**Miches**	**1.42**	**55**	*e*Sg	Sn	22 36 56.1	-0.4
MIDR				IAML		22 37 31.4	
	comp=N,16nm,2.2s						
MIDR				IAML		22 37 31.4	
	comp=N,16nm,2.2s						
HIDR	**Higuey Centro**	**1.54**	**74**	*e*Pg	Pn	22 36 38.3	-1.0
HIDR				IAML		22 37 21.5	
	comp=N,84nm,0.2s						
PCDR	**Punta Cana, DR**	**1.83**	**79**	IAML		22 37 42.7	
	comp=N,61nm,4.2s						

NEIC ***20*** *22:36:50.8±0.8, 17.9N±0.2×68.63W±0.05, h87km±25km, ML2.1/6, Md2.9/4(RSPR), Error ellipse: s-maj=27.1km s-min=5.7km az=187.0*

RSPR ***20*** *22:36:52.0, 17.98N×68.63W, h85km±4km, MD2.9/4*

ISC 20 22:36:50.5±2.7, 18.0N±0.2×68.6W±0.1, h95km, n11, σ0.62/15, 1C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**1.07**	**319**	Pn	**Pn**	**22 37 11.5**	**0.0**
DR12				Sn	**Sn**	**22 37 27.2**	**0.0**
MIDR	**Miches**	**1.08**	**338**	⇑*e*P	**Pn**	**22 37 11.4**	**0.0**
MIDR	**Miches**	**1.08**	**338**	*e*S	**Sn**	**22 37 27.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.45**	**89**		**Pn**	**22 37 15.9**	**+0.1**
CRPR					**Sn**	**22 37 35.0**	**0.0**
CRPR				IAML		22 37 39.6	
	comp=N,9.1nm,1.4s						
CRPR	**Cabo Rojo, PR**	**1.45**	**89**	⇓*e*P	**Pn**	**22 37 16.2**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.45**	**89**	*e*S	**Sn**	**22 37 35.0**	**0.0**
MLPR	**Magueyes Islan**	**1.51**	**90**	*e*S	**Sn**	**22 37 36.7**	**+0.3**
AOPR	**Arecibo Observ**	**1.82**	**78**		**Pn**	**22 37 20.2**	**-0.3**
AOPR					**Sn**	**22 37 43.7**	**+0.2**
AOPR				IAML		22 37 46.3	
	comp=E,33nm,1.4s						
AOPR	**Arecibo Observ**	**1.82**	**78**	⇓*e*P	**Pn**	**22 37 21.6**	**+1.0**
AOPR	**Arecibo Observ**	**1.82**	**78**	*e*S	**Sn**	**22 37 43.8**	**+0.3**
HUMP	**Col San Antoni**	**2.65**	**86**	Pn	**Pn**	**22 37 31.4**	**-0.1**
HUMP				Sn	**Sn**	**22 38 01.2**	**-1.7**
HUMP				IAML		22 38 05.6	
	comp=E,8.1nm,1.4s						
HUMP				IAML		22 39 13.6	
	comp=N,6.9nm,1.3s						

NEIC ***20*** *22:51:09.4±1.6, 35.68N±0.02×117.52W±0.02, h12km±3km, Error ellipse: s-maj=2.7km s-min=2.1km az=151.0*

PAS 20 22:51:10.4±2.0, 35.68N±0.02×117.515W±0.005, h9km±4km, ML3.3/272, ML3.2/110(NEIC), Error ellipse: s-maj=2.3km s-min=0.4km az=167.0, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSHM	**Spangler Hills**	**0.08**	**167**		Pg	22 51 12.6	-0.1
WSHM				Sg	Sg	22 51 14.5	+0.1
WSHM				IAML		22 51 15.1	
	9μm,0.2s						
GPO	**China Lake**	**0.12**	**255**		Pg	22 51 13.4	+0.1
GPO					Sg	22 51 16.0	+0.7
CLC	**China Lake**	**0.15**	**334**		Pg	22 51 13.6	-0.1
CLC				Sg	Sg	22 51 16.2	+0.2
CCCA	**Chr Cany lake**	**0.20**	**142**	Pg	Pg	22 51 14.9	+0.4
TOW	**Tower One**	**0.24**	**302**		Pg	22 51 15.6	+0.3
TOW					Sg	22 51 20.0	+1.5
LRMC	**Laurel Mtn Rad**	**0.24**	**214**		Pg	22 51 15.2	-0.2
LRMC				IAML		22 51 19.2	
	comp=E,4μm,0.4s						
LRMC				IAML		22 51 19.7	
	comp=N,5μm,0.3s						
WNMM	**Nine Mile Cany**	**0.35**	**297**		Pg	22 51 17.3	-0.1
WNMM					Sg	22 51 22.5	+0.4
WVPM	**Volcano Peak E**	**0.36**	**318**		Pg	22 51 17.4	-0.3
WVPM					Sg	22 51 22.8	+0.4
JRC2	**Joshua Ridge**	**0.38**	**322**		Pg	22 51 17.8	-0.2
JRC2					Sg	22 51 23.2	+0.1
WRVM	**Rose V. Centra**	**0.45**	**317**		Sg	22 51 25.1	+0.1
DTP	**Desert Tortois**	**0.49**	**213**		Sg	22 51 26.5	0.0
WBSM	**Bird Springs**	**0.53**	**254**		Sg	22 51 27.5	-0.2
WORM	**Onyx Ranch**	**0.59**	**272**		Sg	22 51 29.1	-0.6
GSC	**Goldstone, Bar**	**0.69**	**123**		Sg	22 51 32.6	-0.3
GSC	**Goldstone, Bar**	**0.69**	**123**		Pg	22 51 23.2	-0.5
GSC				IAML		22 51 33.2	
	comp=E,1μm,0.5s						
GSC				IAML		22 51 36.4	
	comp=N,847nm,0.3s						
ISA	**Isabella, Lake**	**0.78**	**269**		Pg	22 51 24.8	-0.7
ISA				IAML		22 51 35.2	
	comp=N,926nm,0.4s						
ISA				IAML		22 51 35.6	
	comp=E,1μm,0.2s						
GWY	**Greenwater Val**	**0.85**	**54**		Pg	22 51 26.1	-0.7
GWY					Sg	22 51 37.6	-0.4
GWY				IAML		22 51 40.1	
	comp=N,735nm,0.3s						
GWY				IAML		22 51 41.1	
	comp=E,1000nm,0.3s						
CWC	**Cottonwood Cre**	**0.89**	**329**		Pg	22 51 27.1	-0.4
CWC					Sg	22 51 38.8	-0.2
EDW2	**Edwards Air Fo**	**0.89**	**206**		Sg	22 51 38.6	-0.5
FURC	**Furnace Creek,**	**0.94**	**34**		Pg	22 51 28.2	-0.4
FURC				IAML		22 51 43.9	
	comp=N,721nm,0.9s						
FURC				IAML		22 51 47.1	
	comp=E,816nm,0.5s						
TPO	**Tropico Hills**	**0.99**	**216**		Pg	22 51 28.8	-0.6
TPO				IAML		22 51 48.7	
	comp=N,591nm,0.4s						
TPO				IAML		22 51 48.8	
	comp=E,580nm,0.5s						
SHOC	**Shoshone, Teco**	**1.03**	**77**		Pg	22 51 29.8	-0.4
SHOC					Sg	22 51 43.4	-0.2
TEJ	**El Tejon**	**1.06**	**245**		Pg	22 51 29.3	-1.4
SPG2	**Springville 2**	**1.14**	**297**		Pg	22 51 31.1	-1.2
SPG2					Sg	22 51 45.8	-1.3
ALPC	**Antelope**	**1.18**	**213**		Pb	22 51 31.8	-1.2
TJR	**Tejon Ranch**	**1.20**	**237**		Pb	22 51 32.0	-1.3
LRRC	**Littlerock Res**	**1.23**	**200**		Pn	22 51 32.4	-1.3
LEOC	**Leona Valley**	**1.23**	**212**		Pb	22 51 32.5	-1.4
CJV	**Casa Juvan**	**1.26**	**204**		Pn	22 51 32.8	-1.5
AMDNV	**Amargosa**	**1.26**	**52**		Pn	22 51 32.6	-1.6
VES	**Vestal, Richgr**	**1.29**	**278**		Pn	22 51 34.1	-0.5
VES					Sb	22 51 50.8	-0.6
WCT	**Wildcat Mounta**	**1.32**	**33**		Pn	22 51 33.9	-1.3
CHFC	**Chilao Flat St**	**1.41**	**197**		Pn	22 51 35.2	-1.2
BFSC	**Mount Baldy Ra**	**1.44**	**185**		Pn	22 51 36.6	-0.3
BFSC				IAML		22 51 56.6	
	comp=E,231nm,0.7s						
BFSC				IAML		22 51 56.9	
	comp=N,182nm,0.4s						
TIN	**Tinemaha, Big**	**1.49**	**337**		Pn	22 51 37.3	-0.2
TIN				IAML		22 52 03.7	
	comp=N,369nm,0.8s						
TIN				IAML		22 52 12.0	
	comp=E,275nm,0.7s						
MWC	**Mount Wilson**	**1.52**	**197**		Pn	22 51 36.9	-1.0
MWC				IAML		22 52 01.6	
	comp=E,300nm,0.3s						
MWC				IAML		22 52 03.3	
	comp=N,221nm,0.6s						
PASC	**Pasadena Art C**	**1.60**	**200**		Pn	22 51 37.3	-1.7
PASC				IAML		22 52 05.9	
	comp=E,174nm,0.8s						
PSRC	**Puddingstone R**	**1.60**	**189**		Pn	22 51 38.6	-0.4
MTPC	**Mountain Pass**	**1.61**	**96**		Pn	22 51 37.5	-1.7
MTPC				IAML		22 52 02.1	
	comp=E,274nm,0.2s						
MTPC				IAML		22 52 03.3	
	comp=N,275nm,0.3s						
TPNV	**Topopah Spring**	**1.63**	**39**		Pn	22 51 38.3	-1.1
TPNV				IAML		22 52 04.1	
	comp=N,156nm,0.6s						
GMN	**Gold Mountain**	**1.63**	**7**		Pn	22 51 38.7	-0.8
DSP	**Deep Springs**	**1.73**	**348**		Pn	22 51 40.3	-0.3
DJJ	**Donna J Jenkin**	**1.75**	**206**		Pn	22 51 40.1	-0.8
BLAC	**Blackrock camp**	**1.86**	**150**		Pn	22 51 41.5	-1.0
CARC	**Carrizo Plain**	**1.94**	**260**		Pb	22 51 45.7	-0.2
ELS	**Elsinore Mount**	**2.03**	**178**		Pn	22 51 44.0	-0.8
ELS				IAML		22 52 20.8	
	comp=E,140nm,0.5s						
DANC	**Danby, Needles**	**2.04**	**120**		Pn	22 51 42.9	-2.0
DANC				IAML		22 52 19.6	
	comp=E,241nm,0.3s						
DANC				IAML		22 52 21.0	
	comp=N,201nm,0.5s						
SHPR	**Sheep Range**	**2.08**	**66**		Pn	22 51 44.6	-1.0
BELC	**Belle Mtn. Jos**	**2.09**	**143**		Pn	22 51 44.4	-1.4
BELC				IAML		22 52 19.8	
	comp=N,163nm,0.5s						
BELC				IAML		22 52 21.5	
	comp=E,213nm,0.4s						
V12A	**Nelson**	**2.17**	**88**		Pn	22 51 45.2	-1.6
V12A				IAML		22 52 20.8	
	comp=N,122nm,0.5s						
V12A				IAML		22 52 25.8	
	comp=E,130nm,0.5s						
DNR	**Dunn Ranch,Anz**	**2.23**	**161**		Pn	22 51 46.6	-1.1
PMD	**Palm Desert**	**2.23**	**155**		Pn	22 51 46.0	-1.7
PMD				IAML		22 52 23.0	
	comp=N,78nm,0.7s						
PMD				IAML		22 52 23.0	
	comp=E,88nm,0.6s						
PFO	**Pinyon Flats O**	**2.24**	**157**		Pn	22 51 46.6	-1.2
PFO				IAML		22 52 26.2	
	comp=E,77nm,0.9s						
MDPB	**Devils Postpil**	**2.32**	**328**		Pn	22 51 49.2	+0.1
PKD	**Bear Valley Ra**	**2.47**	**277**		Pn	22 51 50.6	-0.3
NEE2	**Needles Airpor**	**2.54**	**110**		Pn	22 51 49.8	-2.0
NEE2				IAML		22 52 36.1	
	comp=E,151nm,0.5s						
PRN	**Pahroc Range**	**2.63**	**48**		Pn	22 51 52.7	-0.4
BC3	**Big Chuckawall**	**2.64**	**139**		Pn	22 51 51.4	-1.9
BC3				IAML		22 52 40.1	
	comp=N,90nm,0.5s						
BC3				IAML		22 52 43.3	
	comp=E,71nm,0.7s						
LHV	**Little Huntoon**	**2.68**	**343**		Pn	22 51 53.8	0.0
LHV				IAML		22 52 39.4	
	comp=E,59nm,0.6s						
PMPB	**Monarch Peak**	**2.72**	**282**	Pn	Pn	22 51 53.4	-0.9
PMPB				IAML		22 52 37.6	
	comp=E,140nm,2.3s						
PMPB				IAML		22 52 42.2	
	comp=N,139nm,1.1s						
NV11	**Mina Array Sit**	**2.79**	**350**		Pn	22 51 55.5	+0.1
NVAR	**Mina Array Bea**	**2.81**	**347**		Pn	22 51 55.4	-0.5
W13A	**Hualapai Mount**	**3.02**	**100**		Pn	22 51 57.2	-1.4
W13A				IAML		22 52 48.8	
	comp=E,48nm,0.5s						
W13A				IAML		22 52 49.2	
	comp=N,42nm,1.2s						
R11B	**Troy Canyon, C**	**3.08**	**30**		Pn	22 51 57.2	-2.2
BLYC	**Blythe**	**3.13**	**127**		Pn	22 51 57.7	-2.2
BLYC				IAML		22 52 49.8	
	comp=N,55nm,0.5s						
BLYC				IAML		22 52 50.4	
	comp=E,42nm,0.6s						
GLA	**Glamis**	**3.44**	**139**		Pn	22 52 02.0	-2.2
GLA				IAML		22 53 03.8	
	comp=N,70nm,0.5s						
GLA				IAML		22 53 08.0	
	comp=E,75nm,0.6s						
PNTR	**Pine Nut**	**3.79**	**335**		Pn	22 52 08.5	-0.7
PNTR				IAML		22 53 33.1	
	comp=E,24nm,1.4s						
PNTR				IAML		22 53 47.5	
	comp=N,20nm,3.1s						

IDC 20 23:01:53.2±6.2, 19.49N×145.57E, h358km±57km, mb3.0/6, mbtmp3.7/7, Error ellipse: s-maj=109.3km s-min=23.7km az=82.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.17**	**341**	P	P	23 05 41.0	-0.5
	0.6nm,0.3s,baz=157,slow=10,SNR=4.3						
KSRS	**Korea Array**	**23.61**	**323**	P	P	23 06 33.6	+0.3
	0.4nm,0.3s,baz=151,slow=8.5,SNR=2.2						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**40.71**	**196**	P	P	23 09 00.3	-0.2
	0.2nm,0.4s,baz=14,slow=8.3,SNR=1.6						
	0.2nm,0.4s						
SONM	**Songino Array**	**42.45**	**321**	P	P	23 09 14.3	-0.1
	0.4nm,0.6s,baz=126,slow=7.3,SNR=3.2						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**60.65**	**318**	P	P	23 11 27.4	-0.1
	0.5nm,0.5s,baz=95,slow=7.0,SNR=11						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**65.79**	**320**	P	P	23 12 01.2	+0.3
	0.9nm,0.5s,baz=100,slow=7.6,SNR=5.7						
	0.9nm,0.5s						
FINES	**FINESS Array B**	**86.11**	**335**	P	P	23 13 53.9	-0.4
	0.7nm,0.5s,baz=57,slow=5.1,SNR=7.3						
	0.7nm,0.5s						

NEIC ***20*** *23:07:26.1±0.3, 19.4N±0.1×68.17W±0.04, h16km±13km, ML2.4/10, Md3.4/10(RSPR), Error ellipse: s-maj=15.3km s-min=4.0km az=190.0*

SDD ***20*** *23:07:26.6±2.5, 19.32N×68.14W, h10km±151km, MD3.2, ML2.3, MW2.7*

RSPR ***20*** *23:07:28.0, 19.56N×68.16W, h17km±5km, MD3.4/10*

ISC 20 23:07:26.2±1.5, 19.27N±0.08×68.18W±0.02, h9km±10km, n41, σ0.57/52, 25C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.78**	**194**	⇑*e*Sg	**Sb**	**23 07 52.1**	**-0.3**
PCDR				IAML		23 07 56.7	
	comp=N,75nm,1.1s						
HIDR	**Higuey Centro**	**0.84**	**217**	⇑*e*Pg	**Pg**	**23 07 42.3**	**-0.2**
HIDR				⇑*e*Sg	**Sb**	**23 07 53.9**	**-0.5**
HIDR				IAML		23 07 55.7	
	comp=N,132nm,0.2s						
HIDR	**Higuey Centro**	**0.84**	**217**	⇑*e*Sg	Sn	23 08 12.7	+16
HIDR				IAML		23 08 15.2	
MIDR	**Miches**	**0.87**	**251**	⇑*e*Pg	**Pb**	**23 07 43.6**	**+0.2**
MIDR				*e*Sg	**Sn**	**23 07 57.2**	**-0.1**
MIDR				IAML		23 07 58.4	
	comp=N,48nm,0.2s						
MIDR	**Miches**	**0.87**	**251**	⇑*e*P	**Pb**	**23 07 43.6**	**+0.2**
MIDR	**Miches**	**0.87**	**251**	*e*S	**Sn**	**23 07 57.2**	**-0.1**
SMDR	**Samana, DR**	**0.95**	**271**	⇑*e*Pg	**Pg**	**23 07 43.8**	**-0.7**
SMDR				IAML		23 08 11.5	
	comp=N,76nm,0.7s						
DR12	**Loma Pena Alta**	**1.23**	**247**	Pn	**Pb**	**23 07 49.6**	**0.0**
DR12				Sn	**Sn**	**23 08 06.6**	**+0.2**
HATOM	**Hato Mayor del**	**1.23**	**247**	⇑*e*Pg	**Pn**	**23 07 49.5**	**-0.1**
HATOM				⇑*e*Sg	**Sn**	**23 08 08.2**	**+1.9**
HATOM				IAML		23 08 08.5	
	comp=N,77nm,0.5s						
HATOM	**Hato Mayor del**	**1.23**	**247**	⇑*e*Pg	**Sg**	**23 08 07.0**	**+1.2**
HATOM				IAML		23 09 05.0	
	comp=N,13nm,3.8s						
AGPR	**Aguadilla, PR**	**1.29**	**128**		**Pg**	**23 07 51.0**	**0.0**
AGPR					**Sg**	**23 08 08.4**	**+0.6**
AGPR	**Aguadilla, PR**	**1.29**	**128**	⇑*e*Sg	**Sg**	**23 08 08.9**	**+1.1**
AGPR				IAML		23 08 09.1	
	comp=N,62nm,0.5s						
AGPR	**Aguadilla, PR**	**1.29**	**128**	⇑*e*Sg	**Sg**	**23 08 08.9**	**+1.1**
AGPR				IAML		23 08 09.1	
	comp=N,62nm,0.5s						
AGPR	**Aguadilla, PR**	**1.29**	**128**	⇑*e*P	**Pg**	**23 07 51.0**	**0.0**
AGPR	**Aguadilla, PR**	**1.29**	**128**	*e*S	**Sg**	**23 08 08.4**	**+0.6**
LSP	**Las Mesas**	**1.50**	**136**		**Pg**	**23 07 54.9**	**-0.1**
LSP					**Sg**	**23 08 15.3**	**+0.7**
LSP	**Las Mesas**	**1.50**	**136**	⇑*e*P	**Pg**	**23 07 54.9**	**-0.1**
LSP	**Las Mesas**	**1.50**	**136**	*e*S	**Sg**	**23 08 15.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.62**	**141**		**Pn**	**23 07 54.5**	**-0.3**
CRPR					**Sb**	**23 08 16.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.62**	**141**	⇑*e*Pg	**Pb**	**23 07 56.0**	**-0.1**
CRPR				IAML		23 08 21.7	
	comp=N,30nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.62**	**141**	⇑*e*Sg	**Sg**	**23 08 18.2**	**-0.1**
CRPR				IAML		23 08 23.9	
	comp=N,20nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.62**	**141**	⇑*e*P	**Pb**	**23 07 56.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.62**	**141**	*e*S	**Sg**	**23 08 18.1**	**-0.1**
AOPR	**Arecibo Observ**	**1.64**	**124**		**Pn**	**23 07 55.1**	**0.0**
AOPR					**Sb**	**23 08 16.8**	**-0.5**
AOPR				IAML		23 08 30.6	
	comp=N,57nm,0.3s						
AOPR	**Arecibo Observ**	**1.64**	**124**	⇑*e*Pg	**Pn**	**23 07 54.6**	**-0.5**
AOPR				*e*Sg	**Sb**	**23 08 17.1**	**-0.1**
AOPR				IAML		23 08 55.8	
	comp=N,126nm,2.6s						
AOPR	**Arecibo Observ**	**1.64**	**124**	⇑*e*Sg	**Sb**	**23 08 17.3**	**0.0**
AOPR				IAML		23 08 55.8	
	comp=N,126nm,2.6s						
AOPR	**Arecibo Observ**	**1.64**	**124**	⇓*e*P	**Pn**	**23 07 55.4**	**+0.3**
AOPR	**Arecibo Observ**	**1.64**	**124**	*e*S	**Sb**	**23 08 17.1**	**-0.1**
MLPR	**Magueyes Islan**	**1.69**	**140**	⇑*e*Pg	**Pb**	**23 07 56.6**	**-0.7**
MLPR				⇑*e*Sg	**Sg**	**23 08 19.6**	**-0.8**
MLPR				IAML		23 08 24.2	
	comp=N,10nm,0.4s						
MLPR	**Magueyes Islan**	**1.69**	**140**	⇑*e*Sg	**Sg**	**23 08 20.4**	**+0.1**
MLPR				IAML		23 08 24.2	
	comp=N,10nm,0.4s						
MLPR	**Magueyes Islan**	**1.69**	**140**	⇓*e*P	**Pb**	**23 07 56.6**	**-0.7**
MLPR	**Magueyes Islan**	**1.69**	**140**	*e*S	**Sg**	**23 08 19.5**	**-0.8**
OBIP	**Obispado Ponce**	**1.93**	**129**		**Pn**	**23 07 59.2**	**0.0**
OBIP					**Sn**	**23 08 24.0**	**+0.5**
OBIP				IAML		23 08 28.0	
	comp=N,31nm,0.6s						
OBIP				IAML		23 08 28.9	
	comp=E,25nm,0.8s						
OBIP	**Obispado Ponce**	**1.93**	**129**	⇑*e*P	**Pn**	**23 07 59.8**	**+0.6**
OBIP	**Obispado Ponce**	**1.93**	**129**	*e*S	**Sn**	**23 08 24.4**	**+0.9**
ECPR	**Experimental S**	**1.97**	**118**	⇑*e*P	**Pn**	**23 07 59.9**	**+0.3**
ECPR	**Experimental S**	**1.97**	**118**	*e*S	**Sn**	**23 08 24.8**	**+0.4**
HUMP	**Col San Antoni**	**2.48**	**117**		**Pn**	**23 08 06.6**	**-0.1**
HUMP					**Sn**	**23 08 36.5**	**-0.6**
HUMP				IAML		23 08 40.9	
	comp=E,19nm,1.0s						
HUMP				IAML		23 08 45.4	
	comp=N,12nm,0.7s						
HUMP	**Col San Antoni**	**2.48**	**117**	⇑*e*P	**Pn**	**23 08 06.8**	**+0.1**
HUMP	**Col San Antoni**	**2.48**	**117**	*e*S	**Sn**	**23 08 37.3**	**+0.2**
SDDR	**Presa de Saban**	**2.95**	**265**	Pn	**Pn**	**23 08 12.7**	**-0.6**
SDDR				IAML		23 09 07.5	
	comp=N,17nm,0.6s						

IDC 20 23:08:43.1±2.7, 4.55N×127.26E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=270.9km s-min=21.2km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.32**	**164**	P	P	23 14 13.1	+1.4
	0.9nm,0.7s,baz=344,slow=9.0,SNR=4.7						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**28.79**	**167**	P	P	23 14 41.6	-1.3
	0.4nm,0.6s,baz=352,slow=8.8,SNR=4.2						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	23 18 32.5	+0.4
	0.4nm,0.5s,baz=119,slow=7.2,SNR=9.5						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**61.34**	**327**	P	P	23 19 00.6	0.0
	0.8nm,0.6s,baz=124,slow=6.4,SNR=12						
	0.8nm,0.6s						
BVAR	**Borovoye Array**	**66.93**	**327**	P	P	23 19 36.5	-0.8
	0.8nm,0.8s,baz=114,slow=7.1,SNR=3.9						
	0.8nm,0.8s						

SDD 20 23:11:39.8±2.0, 17.97N×68.24W, h93km±19km, MD3.4, ML2.5, MW3.0, 13C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.55**	**346**	⇑*e*Pg	Pn	23 11 53.9	-1.4
PCDR				⇓*e*Sg	Sn	23 12 04.8	-1.9
PCDR

$M_0$9.89000×10^{18} NP1:ϕ_s132.70000°,δ63.30000°, λ172.60000°. NP2:ϕ_s226.10000°,δ83.40000°,λ26.90000°.

MOS ***20*** *23:50:43.5±0.8, 19.45N×101.38E, h23km, mb6.1/83, MS6.1/54 Error ellipse: s-maj=5.4km s-min=3.7km az=119.6*

NEIC ***20*** *23:50:44.0±1.3, 19.45N±0.06×101.36E±0.06, h10km±1km, mb6.0/263, Ms_20 6.2/704, Mwb6.0/157, Mww6.2/40, Error ellipse: s-maj=10.2km s-min=9.3km az=183.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.29; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$0.92; $M_{r\theta}$-0.84; $M_{\theta\phi}$0.91; $M_{\phi r}$-0.10; Fault plane solution: $M_0$1.49000×10^{18} NP1: ϕ_s163.66000°,δ55.19000°,λ-167.25000°. NP2: ϕ_s66.30000°,δ79.56000°,λ-35.48000°. Principal axes: T 1.4682, Plg16.0000°, Azm120.0000°; N 0.0394, Plg53.0000°, Azm232.0000°; P -1.5076, Plg32.0000°, Azm19.0000°;*

NEIC ***20*** *23:50:44, 19.45N×101.36E, h10km*

NEIC ***20*** *23:50:44, 19.45N×101.34E, h18km*

IPGP ***20*** *23:50:44.0, 19.45N×101.35E, h4km, Mw6.2, Fault plane solution: NP1:ϕ_s63.00000°,δ69.00000°,λ-36.00000°. NP2:ϕ_s168.00000°,δ57.00000°,λ-154.00000°.*

NEIC ***20*** *23:50:44, 19.35N×101.24E, h18km, Moment Tensor Solution. Duration: ϵ_s1 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.81; $M_{\theta\theta}$0.67; $M_{\phi\phi}$1.48; $M_{r\theta}$-0.90; $M_{\theta\phi}$1.61; $M_{\phi r}$0.37; Fault plane solution: $M_0$2.28000×10^{18} NP1: ϕ_s168.74000°,δ64.59000°,λ-155.04000°. NP2: ϕ_s67.45000°,δ67.60000°,λ-27.66000°. Principal axes: T 2.3425, Plg2.0000°, Azm119.0000°; N -0.1382, Plg55.0000°, Azm211.0000°; P -2.2043, Plg35.0000°, Azm27.0000°;*

GCMT ***20*** *23:50:45.0±0.1, 19.36N×101.44E, h12km, MW6.1/159, Moment Tensor Solution. s147,c305; s159,c563; Duration: ϵ_s8 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.77±.01; $M_{\theta\theta}$-0.76±.01; $M_{\phi\phi}$1.53±.01; $M_{r\theta}$0.14±.03; $M_{\theta\phi}$1.31±.01; $M_{\phi r}$0.81±.03; Best double couple: $M_0$1.88400×10^{18} NP1:ϕ_s70.00000°,δ63.00000°, λ-6.00000°. NP2:ϕ_s163.00000°,δ84.00000°, λ-153.00000°. Principal axes: T 2.3280, Plg14.0000°, Azm294.0000°; N -0.8880, Plg63.0000°, Azm174.0000°; P -1.4410, Plg23.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

DJA ***20*** *23:50:48.2±0.4, 20°N±.2°×10°E±°, h42km±4km, M6.0/114, mB6.4/109, mb5.9/114, MLv7.5/2, Mw(mB)6.1/109, MwMwp5.7/94, Mwp5.8/94*

BGR ***20*** *23:50:50.5, 19.56N×100.89E, h33km, mb5.8, Ms6.0*

ISC 20 23:50:43.7±0.4, 19.43N±0.02×101.39E±0.02, h10km±2km, h10km:pP-P, n2116, σ1.956/2077, mb5.9/378, MS6.2/484, 106C-148D, Laos

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
UTTA	**Uttaradit**	**1.86**	**205**	P		**Pn**	**23 51 15.2**	**-0.4**
LAMP	**Lampang**	**1.89**	**242**	P		**Pn**	**23 51 15.4**	**-0.7**
LOEI	**Loei**	**1.92**	**184**	P		**Pg**	**23 51 20.2**	**-0.3**
LOEI	**Loei**	**1.92**	**184**	S		**Sb**	**23 51 43.7**	**+1.0**
LOEI	**Loei**	**1.92**	**184**	P		**Pn**	**23 51 17.6**	**+1.2**
CHTO	**Chiang Mai**	**2.39**	**256**			**Pn**	**23 51 21.9**	**-1.1**
CHTO	**Chiang Mai**	**2.39**	**256**	P		**Pn**	**23 51 23.6**	**+0.6**
CHTO				S		**Sb**	**23 51 58.3**	**+1.8**
CHTO	**Chiang Mai**	**2.39**	**256**	P		**Pn**	**23 51 22.2**	**-0.8**
CHTO	**Chiang Mai**	**2.39**	**256**	S		**Sn**	**23 51 53.2**	**+0.8**
CHTO	**Chiang Mai**	**2.39**	**256**	P		**Pn**	**23 51 21.9**	**-1.1**
CHTO	**Chiang Mai**	**2.39**	**256**	⇑P		**Pn**	**23 51 21.9**	**-1.1**
PHIT	**Phitsanulok**	**2.41**	**203**	P		**Pn**	**23 51 23.3**	**0.0**
CM31	**Chiang Mai Arr**	**2.51**	**248**			**Pn**	**23 51 23.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**2.51**	**248**	Pn		**Pn**	**23 51 23.6**	**-1.0**
	236nm,0.3s,baz=66,slow=13,SNR=592							
CMAR				LR		LR	23 51 56.5	
	comp=Z,162μm,20.7s,baz=340,slow=30							
CMAR				Lg		Lg	23 52 01.9	
	2μm,0.3s,baz=69,slow=29,SNR=13							
	892nm,0.5s							
CMAR	**Chiang Mai Arr**	**2.51**	**248**	*i* P		**Pn**	**23 51 23.6**	**-1.0**
CMAR				pmax		pmax		
	comp=Z,976nm,0.5s							
CM05	**Chiang Mai Arr**	**2.53**	**247**	P		**Pn**	**23 51 24.1**	**-0.8**
KMI	**Kunming**	**5.80**	**12**	⇓Pn		**Pn**	**23 52 11.3**	**+1.2**
KMI				Sn		**Sn**	**23 53 22.9**	**+6.1**
KMI				Sg		**Sg**	**23 53 50.3**	**+0.2**
KMI				smax		smax		
	comp=Z,15μm,1.2s							
KMI				smax		smax		
	comp=Z,12μm,1.5s							
KMI				LR		LR		
	comp=Z,503μm,5.8s							
KMI				LR		LR		
	comp=Z,497μm,8.5s							
TNCH	**TengChong**	**6.17**	**335**	Pn		**Pn**	**23 52 15.9**	**+0.8**
TNCH				Sg		**Sg**	**23 54 00.1**	**-1.9**
PZH	**PanZhiHua**	**7.05**	**3**	Pn		**Pn**	**23 52 28.3**	**+1.2**
PZH				Sg		**Sg**	**23 54 27.3**	**-2.7**
PZH				smax		smax		
	comp=Z,8μm,1.5s							
PZH				smax		smax		
	comp=Z,14μm,1.4s							
PZH				LR		LR		
	comp=Z,110μm,8.0s							
PZH				LR		LR		
	comp=Z,190μm,8.2s							
QIZ	**Qiongzhong**	**8.00**	**91**			**Pn**	**23 52 39.9**	**-0.1**
QIZ	**Qiongzhong**	**8.00**	**91**	P		**Pn**	**23 52 40.8**	**+0.8**
QIZ				S		**Sn**	**23 54 13.3**	**+2.7**
QIZ				pmax		pmax		
	comp=Z,270nm,1.8s							
QIZ				pmax		pmax		
	comp=Z,6μm,9.3s							
QIZ				smax		smax		
	comp=Z,10μm,2.6s							
QIZ				smax		smax		
	comp=Z,3μm,1.5s							
QIZ				LR		LR		
	comp=Z,308μm,17.0s							
QIZ	**Qiongzhong**	**8.00**	**91**	P		**Pn**	**23 52 41.3**	**+1.3**
GYA	**Guiyang**	**8.52**	**34**	⇓P		**Pn**	**23 52 46.8**	**-0.5**
GYA				S		**Sn**	**23 54 18.9**	**-4.6**
GYA				smax		smax		
	comp=Z,12μm,1.6s							
GYA				smax		smax		
	comp=Z,14μm,1.5s							
GYA				LR		LR		
	comp=Z,100μm,4.6s							
GYA				LR		LR		
	comp=Z,137μm,7.6s							
IMP	**Imphal**	**8.74**	**309**	*e*P		**Pn**	**23 52 52.0**	**+1.6**
IMP				IAmb		IAmb	23 53 05.6	
	comp=Z,3μm,1.7s							
KOHI	**KOHIMA**	**9.19**	**314**	*e*P		**Pn**	**23 52 58.1**	**+1.6**
KOHI				IAmb		IAmb	23 53 04.6	
	comp=Z,2μm,1.2s							
MOKO	**MOKOCHONG**	**9.34**	**319**	*e*P		**Pn**	**23 53 00.1**	**+1.6**
MOKO				IAmb		IAmb	23 53 06.8	
	comp=Z,850nm,0.9s							
LKP	**Lekhapani**	**9.37**	**328**	*e*P		**Pn**	**23 52 57.8**	**-1.0**
BRDH	**Bariadhala**	**9.66**	**291**	Pn		**Pn**	**23 53 02.1**	**-0.7**
	comp=Z,55nm,0.3s,baz=110,slow=12,SNR=41							
BRDH				Sn		**Sn**	**23 54 55.0**	**+3.6**
	comp=Z,30nm,0.3s,baz=98,slow=12,SNR=1.5							
BRDH				Lg		Lg	23 55 38.5	
	comp=Z,16nm,0.3s,baz=120,slow=20,SNR=1.5							
BRDH				LR		LR	23 57 43.8	
	comp=Z,261μm,18.1s,baz=145,slow=44							
	comp=Z,366nm,0.6s							
JORH	**JORHAT**	**9.80**	**319**	*e*P		**Pn**	**23 53 07.8**	**+3.1**
DLV	**Lat**	**10.10**	**136**			**Pn**	**23 53 08.3**	**-0.8**
DLV	**Lat**	**10.10**	**136**	P		**Pn**	**23 53 11.4**	**+2.3**
DLV	**Lat**	**10.10**	**136**	S		**Sn**	**23 55 05.5**	**+2.8**
DLV	**Lat**	**10.10**	**136**	⇓P		**Pn**	**23 53 12.0**	**+2.9**
GULI	**GuiLin**	**10.15**	**53**	P		Pn	23 53 00.3	-9.2
GULI				pmax		pmax		
	comp=Z,3μm,3.8s							
GULI				pmax		pmax		
	comp=Z,460nm,1.3s							
GULI				LR		LR		
	comp=N,1012μm,7.6s							
GULI				LR		LR		
	comp=E,752μm,9.7s							
PASG	**PASIGHAT**	**10.23**	**328**	*e*P		**Pn**	**23 53 13.7**	**+3.1**
PASG				IAmb		IAmb	23 53 29.3	
	comp=Z,255nm,1.1s							
AGT	**Agartala**	**10.42**	**297**	*e*P		**Pn**	**23 53 15.5**	**+2.3**
TEZP	**TEZPUR**	**10.66**	**314**	*e*P		**Pn**	**23 53 17.5**	**+0.9**
TEZP				IAmb		IAmb	23 53 20.8	
	comp=Z,5μm,2.3s							
SHL	**Shillong**	**10.70**	**307**			**Pn**	**23 53 16.9**	**-0.4**
SHL	**Shillong**	**10.70**	**307**	P		**Pn**	**23 53 17.3**	**+0.1**
	SNR=584							
SHL	**Shillong**	**10.70**	**307**	*e*P		**Pn**	**23 53 18.1**	**+0.9**
SHL				IAmb		IAmb	23 53 24.2	
	comp=Z,810nm,0.8s							
SHL	**Shillong**	**10.70**	**307**	P		**Pn**	**23 53 16.9**	**-0.4**
PBA	**Port Blair**	**11.36**	**228**	Pn		**Pn**	**23 53 25.9**	**-0.3**
PBA	**Port Blair**	**11.36**	**228**	P		**Pn**	**23 53 29.9**	**+3.7**
	SNR=6.2							
PBA	**Port Blair**	**11.36**	**228**	*e*P		**Pn**	**23 53 27.3**	**+1.1**
PBA	**Port Blair**	**11.36**	**228**	⇑P		**Pn**	**23 53 29.6**	**+3.4**
CD2	**Chengdu**	**11.63**	**10**	P		**Pn**	**23 53 29.6**	**-0.2**
CD2				S		**Sn**	**23 55 42.5**	**+2.7**
CD2				pmax		pmax		
	comp=Z,380nm,0.6s							
CD2				pmax		pmax		
	comp=Z,4μm,4.9s							
MCO	**Taipa Grande**	**11.69**	**75**	P		**Pn**	**23 53 34.0**	**+3.3**
GZH	**Guangzhou**	**11.72**	**70**	P		Pn	23 53 38.4	+7.3
GZH				S		Sn	23 55 53.1	+11
GZH				LR		LR		
	comp=Z,171μm,6.0s							
GZH				LR		LR		
	comp=Z,146μm,6.7s							
HKPS	**Hong Kong Po S**	**12.25**	**74**			**Pn**	**23 53 38.4**	**+0.1**
HKPS	**Hong Kong Po S**	**12.25**	**74**	P		**Pn**	**23 53 40.9**	**+2.5**
CAL	**Calcutta**	**12.58**	**286**	*e*P		**Pn**	**23 53 42.0**	**-0.9**
COBR	**COOCHBEHAR**	**12.94**	**304**	*e*P		**Pn**	**23 53 47.4**	**-0.3**
ENH	**Enshi**	**13.05**	**33**			**Pn**	**23 53 48.5**	**-0.8**
ENH	**Enshi**	**13.05**	**33**	P		**Pn**	**23 53 49.1**	**-0.2**
CNSH	**ChangSha**	**13.68**	**48**	P		**Pn**	**23 53 56.0**	**-1.9**
CNSH				S		**Sn**	**23 56 30.0**	**0.0**
CNSH				pmax		pmax		
	comp=Z,220nm,1.6s							
CNSH				LR		LR		
	comp=Z,171μm,10.5s							
LSA	**Lhasa**	**13.82**	**320**			**Pn**	**23 54 01.5**	**+1.3**
LSA	**Lhasa**	**13.82**	**320**	P		**Pn**	**23 54 02.3**	**+2.1**
LSA				P		**Pn**	**23 54 02.3**	**+2.1**
LSA				P		**Pn**	**23 54 02.3**	**+2.1**
LSA	**Lhasa**	**13.82**	**320**	P		**Pn**	**23 53 58.0**	**-2.2**
LSA				S		**Sn**	**23 56 33.5**	**-0.6**
LSA				pmax		pmax		
	comp=Z,170nm,1.5s							
LSA				LR		LR		
	comp=Z,112μm,16.5s							
LSA				LR		LR		
	comp=Z,108μm,14.4s							
LSA	**Lhasa**	**13.82**	**320**	P		**Pn**	**23 54 02.5**	**+2.3**
LSA	**Lhasa**	**13.82**	**320**	P		**Pn**	**23 54 01.5**	**+1.3**
SHBG	**Sahibganj**	**13.94**	**297**	*e*P		**Pn**	**23 54 01.0**	**-0.4**
KULM	**Kulim**	**14.07**	**183**			**Pn**	**23 54 05.5**	**+2.2**
KULM	**Kulim**	**14.07**	**183**	P		**Pn**	**23 54 06.0**	**+2.7**
KULM	**Kulim**	**14.07**	**183**	⇑P		**Pn**	**23 54 05.8**	**+2.5**
GTK	**Tadong**	**14.12**	**306**	*e*P		**Pn**	**23 54 05.1**	**+1.1**
GTK				IAmb		IAmb	23 54 18.8	
	comp=Z,1μm,1.3s							
BWNR	**Bhubaneshwar**	**14.69**	**276**	*e*P		**Pn**	**23 54 11.3**	**-0.4**
BWNR				IAmb		IAmb	23 54 16.2	
	comp=Z,1μm,1.2s							
LHMI	**Lhok Sumawe**	**14.77**	**198**			**Pn**	**23 54 14.9**	**+2.2**
LHMI	**Lhok Sumawe**	**14.77**	**198**	P		**P**	**23 54 17.7**	**-1.1**
LHMI	**Lhok Sumawe**	**14.77**	**198**	P		**Pn**	**23 54 14.4**	**+1.7**
	comp=Z,29μmcomp=Z,900nm,1.3s							
LHMI	**Lhok Sumawe**	**14.77**	**198**	⇓P		**P**	**23 54 16.0**	**-2.8**
IPM	**Ipoh**	**14.87**	**181**			**Pn**	**23 54 14.0**	**-0.1**
IPM	**Ipoh**	**14.87**	**181**	P		**Pn**	**23 54 15.5**	**+1.4**
IPM	**Ipoh**	**14.87**	**181**	⇓P		**Pn**	**23 54 15.4**	**+1.2**
BOK	**Bokaro**	**15.06**	**290**	*e*P		**Pn**	**23 54 16.4**	**-0.3**
EVN	**Everest**	**15.81**	**305**			**Pn**	**23 54 24.7**	**-2.3**
MLSI	**Meulaboh, Aceh**	**15.84**	**199**	P		**P**	**23 54 29.9**	**-0.8**
	comp=Z,31μmcomp=Z,2μm,1.5s							
GAYA	**Gaya**	**15.89**	**293**	*e*P		**Pn**	**23 54 26.3**	**-1.3**
GAYA				IAmb		IAmb	23 54 40.4	
	comp=Z,364nm,1.3s							
XAN	**Xi'an**	**16.02**	**23**	⇓P		**Pn**	**23 54 26.9**	**-2.3**
XAN				pP		P	23 54 33.4	+0.7
XAN				S		**Sn**	**23 57 20.0**	**-7.0**
XAN				pmax		pmax		
	comp=Z,390nm,1.0s							
XAN				pmax		pmax		
	comp=Z,10μm,5.6s							
XAN				LR		LR		
	comp=Z,166μm,8.9s							
TSI	**Tuntungan**	**16.07**	**190**	P		**P**	**23 54 32.9**	**-0.4**
	comp=Z,29μmcomp=Z,1μm,2.1s							
WHN	**Wuhan**	**16.12**	**44**	⇓P		**Pn**	**23 54 29.3**	**-1.2**
WHN				sP		**P**	**23 54 35.1**	**+1.3**
WHN				PP		**PnPn**	**23 54 44.6**	**+5.2**
WHN				S		**Sn**	**23 57 24.4**	**-5.0**
WHN				pmax		pmax		
	comp=Z,2μm,1.4s							
WHN				pmax		pmax		
	comp=Z,17μm,5.5s							
WHN				LR		LR		
	comp=Z,78μm,12.0s							
WHN				LR		LR		
	comp=Z,123μm,6.6s							
KCSI	**Kotacane, Aceh**	**16.20**	**193**	P		**P**	**23 54 34.8**	**0.0**
	comp=Z,17μmcomp=Z,18μmcomp=Z,644nm,1.4s							
KNMB	**Chin-men Tao**	**16.54**	**69**			**Pn**	**23 54 34.2**	**-1.7**
LZDM	**Lanzhou Array**	**16.59**	**7**	Pn		**Pn**	**23 54 36.3**	**-0.4**
	baz=176,slow=8.2							
LZDM				Sn		**Sn**	**23 57 42.5**	**+1.4**
	baz=183,slow=17							
LZDM				Lg		Lg	23 59 36.3	
	baz=180,slow=39							
LZDM				LR		LR	00 01 40.0	
	comp=Z,53μm,21.3s,baz=180,slow=40							
	comp=Z,323nm,1.1s							
PSI	**Prapat**	**16.70**	**189**	Pn		**P**	**23 54 42.1**	**+1.7**
	comp=Z,2.5nm,0.3s,baz=5.4,slow=16,SNR=41							
PSI				Lg		Lg	23 59 29.9	
	comp=Z,0.6nm,0.3s,baz=342,slow=20,SNR=2.7							
PSI				LR		LR	00 00 27.5	
	comp=Z,24μm,20.6s,baz=338,slow=35							
PSI	**Prapat**	**16.70**	**189**	P		**P**	**23 54 41.7**	**+1.3**
PSI	**Prapat**	**16.70**	**189**	P		**Pn**	**23 54 39.0**	**+0.9**
PSI				pmax		pmax		
	comp=Z,2μm,1.6s							
LZH	**Lanzhou**	**16.73**	**7**	⇓P		**Pn**	**23 54 38.9**	**+0.5**
LZH				pP		pP	23 54 43.8	-0.1
LZH				S		**Sn**	**23 57 38.0**	**-6.4**
LZH				pmax		pmax		
	comp=Z,540nm,1.8s							
LZH				pmax		pmax		
	comp=Z,10μm,4.1s							
LZH				LR		LR		
	comp=Z,96μm,15.6s							
LZH				LR		LR		
	comp=Z,114μm,18.1s							
RPSI	**Rantau Prapat**	**16.81**	**189**			**Pn**	**23 54 39.0**	**-0.3**
RPSI				IAmb		IAmb	23 54 46.9	
	comp=Z,2μm,1.6s							
QZH	**Quanzhou**	**16.84**	**68**	⇑*i*P		**Pn**	**23 54 37.4**	**-2.3**
QZH				S		**Sn**	**23 57 47.9**	**+0.9**
QZH				pmax		pmax		
	comp=Z,320nm,1.2s							
QZH				pmax		pmax		
	comp=Z,6μm,4.9s							
QZH				LR		LR		
	comp=Z,150μm,12.8s							
RAGD	**RAYAGADA**	**16.93**	**272**	*e*P		**Pn**	**23 54 41.0**	**+0.2**
RAGD				IAmb		IAmb	23 54 53.6	
	comp=Z,3μm,2.2s							
VIS	**Vishakhapatnam**	**17.21**	**267**	*e*P		**Pn**	**23 54 45.0**	**+0.6**
VIS				IAmb		IAmb	23 55 00.5	
	comp=Z,1μm,1.9s							
SNSI	**Sinabang, Aceh**	**17.63**	**197**	P		**P**	**23 54 51.8**	**+1.3**
	comp=Z,20μmcomp=Z,15μmcomp=Z,767nm,1.1s							
GOMU	**GeErMu**	**17.68**	**342**	P		**P**	**23 54 51.3**	**-0.1**
GOMU				pP		sP	23 54 55.3	-0.8
GOMU				sP		pP	23 54 59.8	+5.2
GOMU				S		**Sn**	**23 58 11.0**	**+3.4**
GOMU				LR		LR		
	comp=Z,27μm,12.5s							
GOMU				LR		LR		
	comp=Z,61μm,13.1s							
MYKOM	**Kota Tinggi**	**17.70**	**172**	P		**Pn**	**23 54 50.5**	**0.0**
MYKOM	**Kota Tinggi**	**17.70**	**172**	P		**P**	**23 54 53.8**	**+2.5**
MYKOM	**Kota Tinggi**	**17.70**	**172**	⇑P		**P**	**23 54 52.0**	**+0.7**
SBSI	**Sibolga**	**17.94**	**188**	P		**P**	**23 54 56.9**	**+2.9**
	comp=Z,20μmcomp=Z,35μmcomp=Z,820nm,1.0s							
VAR	**Varanasi**	**17.96**	**292**	*e*P		**P**	**23 54 55.2**	**+1.0**
LYN	**LuoYang**	**17.98**	**31**	⇓*i*P		**Pn**	**23 54 52.4**	**-1.5**
LYN				pP		pP	23 54 56.4	-1.1
LYN				sP		sP	23 55 00.3	+1.4
LYN				PP		**PnPn**	**23 55 06.0**	**+1.1**
LYN				S		**Sn**	**23 58 11.4**	**-3.1**
LYN				sS		S	23 58 22.8	+2.0
LYN				SS		**SnSn**	**23 58 34.5**	**+6.1**
LYN				pmax		pmax		
	comp=Z,290nm,1.8s							
LYN				pmax		pmax		
	comp=Z,16μm,4.5s							
LYN				LR		LR		
	comp=Z,71μm,11.5s							
LYN				LR		LR		
	comp=Z,42μm,7.2s							
BTDF	**Bukit Timah Da**	**18.11**	**172**	P		**P**	**23 54 58.4**	**+2.5**
SZP	**Santa**	**18.18**	**93**	P		**P**	**23 54 59.6**	**+2.9**
BLSP	**Bilaspur**	**18.21**	**282**	*e*P		**Pn**	**23 54 55.5**	**-1.2**
BLSP				IAmb		IAmb	23 55 18.2	
	comp=Z,602nm,1.4s							
TPUB	**Ta-pu**	**18.33**	**74**	P		**Pn**	**23 54 57.9**	**-0.2**
TPUB	**Ta-pu**	**18.33**	**74**	P		**P**	**23 55 00.6**	**+2.3**
MNSI	**Mandailing Nat**	**18.61**	**186**	P		**Pn**	**23 55 04.1**	**+2.5**
	comp=Z,19μmcomp=Z,731nm,1.3s							
TWG	**Pinlang**	**18.67**	**76**	P		**Pn**	**23 55 03.4**	**+1.0**
TWGBT	**Beinan**	**18.67**	**76**	P		**Pn**	**23 55 04.8**	**+2.4**
SSLB	**Suanglung**	**18.70**	**73**	P		**P**	**23 55 01.6**	**-0.7**
SSLB	**Suanglung**	**18.70**	**73**	P		**Pn**	**23 55 05.8**	**+3.1**
YULB	**Yu-li**	**18.95**	**74**			**Pn**	**23 55 05.7**	**0.0**
YULB	**Yu-li**	**18.95**	**74**	P		**Pn**	**23 55 08.5**	**+2.8**
BKNI	**Bangkinang**	**18.99**	**181**	P		**Pn**	**23 55 07.9**	**+1.6**
BKNI	**Bangkinang**	**18.99**	**181**	P		**Pn**	**23 55 07.1**	**+0.8**
BKNI	**Bangkinang**	**18.99**	**181**	P		**Pn**	**23 55 09.4**	**+3.2**
BKNI	**Bangkinang**	**18.99**	**181**	P		**Pn**	**23 55 08.2**	**+2.0**
	comp=Z,17μmcomp=Z,32μmcomp=Z,2μm,1.5s							
ALBI	**Allahabad**	**19.02**	**291**	*e*P		**Pn**	**23 55 06.4**	**-0.2**
YHNB	**Yeheng**	**19.24**	**71**	P		**P**	**23 55 08.6**	**+0.3**
YHNB	**Yeheng**	**19.24**	**71**	P		**Pn**	**23 55 11.9**	**+2.6**
NACB	**Ninganchiao**	**19.34**	**72**	P		**P**	**23 55 09.8**	**+0.4**
NACB	**Ninganchiao**	**19.34**	**72**	P		**Pn**	**23 55 12.4**	**+2.0**
TATO	**Taipei**	**19.40**	**70**	P		**Pn**	**23 55 12.8**	**+1.6**
TGY	**Tagaytay City**	**19.45**	**103**	P		**Pn**	**23 55 12.1**	**+0.3**
	comp=Z,53nm,0.3s,baz=252,slow=3.2,SNR=7.5							
TGY				S		**S**	**23 58 51.6**	**+1.0**
	comp=Z,97nm,0.3s,baz=307,slow=20,SNR=0.9							
TGY				LR		LR	00 02 26.2	
	comp=Z,131μm,20.7s,baz=322,slow=36							
	comp=Z,135nm,0.3s							
PBSI	**Pulau Batu**	**19.60**	**189**	P		**Pn**	**23 55 13.1**	**-0.5**
	comp=Z,18μmcomp=Z,19μmcomp=Z,511nm,1.4s							
PPI	**Padang Panjang**	**19.79**	**183**	P		**Pn**	**23 55 16.3**	**+0.5**
BRCI	**Bahraich**	**19.87**	**298**	*e*P		**Pn**	**23 55 17.9**	**+1.2**
SBUM	**Sibu**	**19.93**	**147**	P		**Pn**	**23 55 16.8**	**-0.7**
SBUM				IAmb		IAmb	23 55 25.7	
	comp=Z,1μm,1.5s							
SBUM	**Sibu**	**19.93**	**147**	P		**Pn**	**23 55 17.8**	**+0.3**
SBUM	**Sibu**	**19.93**	**147**	⇑P		**Pn**	**23 55 17.5**	**0.0**
VJD	**Vijayawada**	**19.94**	**265**	*e*P		**Pn**	**23 55 17.9**	**+0.3**
VJD				IAmb		IAmb	23 55 33.4	
	comp=Z,1μm,1.9s							
GTA	**Gaotai**	**19.96**	**356**	P		**Pn**	**23 55 18.6**	**+0.8**
GTA				S		**S**	**23 59 01.0**	**+0.3**
GTA				pmax		pmax		
	comp=Z,720nm,1.7s							
GTA				pmax		pmax		
	comp=Z,11μm,6.9s							
GTA				LR		LR		
	comp=Z,75μm,14.2s							
GTA				LR		LR		
	comp=Z,60μm,12.7s							
DSRI	**Dabo**	**20.03**	**171**	P		Pn	23 55 18.8	+0.1
	comp=Z,17μmcomp=Z,11μmcomp=Z,441nm,1.7s							
NJ2	**Nanjing**	**20.10**	**48**	⇓*i*P		Pn	23 55 18.8	-0.6
NJ2				PP		**PnPn**	**23 55 40.6**	**+6.7**
NJ2				S		**S**	**23 59 04.0**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,280nm,2.3s							
NJ2				pmax		pmax		
	comp=Z,5μm,4.7s							
NJ2				LR		LR		
	comp=Z,115μm,10.5s							
LKN	**LUCKNOW**	**20.21**	**295**	*e*P		**P**	**23 55 17.6**	**-1.3**
PDSI	**Padang**	**20.24**	**183**	P		**P**	**23 55 19.5**	**+0.3**
	comp=Z,12μmcomp=Z,11μmcomp=Z,604nm,1.4s							
TIY	**Taiyuan**	**20.61**	**26**	P		**P**	**23 55 24.1**	**+0.9**
TIY				S		Sn	23 59 16.8	-1.1
TIY				pmax		pmax		
	comp=Z,560nm,1.7s							
TIY				LR		LR		
	comp=Z,47μm,7.4s							
TIY				LR		LR		
	comp=Z,69μm,12.3s							
YOJ	**Yonaguni jima**	**20.66**	**72**			**P**	**23 55 23.4**	**-0.4**
YOJ				IAmb		IAmb	23 55 35.1	
	comp=Z,892nm,1.4s							
YOJ	**Yonaguni jima**	**20.66**	**72**	P		Pn	23 55 26.3	+0.2
YOJ	**Yonaguni jima**	**20.66**	**72**	P		**P**	**23 55 23.4**	**-0.4**
YOJ				pmax		pmax		
	comp=Z,892nm,1.4s							
SISI	**Saibi**	**20.75**	**187**	P		Pn	23 55 27.2	0.0
	comp=Z,10μmcomp=Z,384nm,1.1s							
**

BTO LR LR
comp=Z,204µm,15.1s
MASI Maura Aman, Be 22.45 178 P **P** **23 55 45.4 +2.3**
comp=Z,12µmcomp=Z,1µm,0.9s
PMBI Palembang 22.47 171 P **P** **23 55 42.9 -0.3**
PMBI IAMs_20 IAMs_20 00 03 57.4
comp=Z,83µm,19.0s
PMBI Palembang 22.47 171 P **P** **23 55 46.0 +2.8**
PMBI Palembang 22.47 171 P **P** **23 55 44.9 +1.7**
comp=Z,12µmcomp=Z,779nm,1.2s
JOSI Joshimath 22.63 304 *e*P **P** **23 55 45.2 0.0**
JOSI IAmb IAmb 23 55 58.4
comp=Z,850nm,1.0s
BHPL Bhopal 22.64 284 *e*P **P** **23 55 45.3 +0.3**
BHPL IAmb IAmb 23 55 50.2
comp=Z,5µm,2.2s
TKRD Thakurdwara 22.67 300 *e*P **P** **23 55 45.3 0.0**
NRDN NARMADA NAGAR 22.83 282 *e*P **P** **23 55 50.8 +3.7**
NRDN IAmb IAmb 23 55 58.1
comp=Z,2µm,2.0s
GUNA GUNA 22.88 287 *e*P **P** **23 55 47.1 -0.5**
GUNA IAmb IAmb 23 55 55.5
comp=Z,2µm,1.6s
TPI Tanjungpandan 22.89 164 P **P** **23 55 48.7 +1.0**
comp=Z,15µmcomp=Z,8µmcomp=Z,320nm,1.6s
AKL Akola 22.93 277 *e*P **P** **23 55 48.4 +0.3**
AKL IAmb IAmb 23 55 53.6
comp=Z,1µm,1.6s
KSI Kapahiang 22.97 177 P **P** **23 55 49.8 +1.2**
comp=Z,11µmcomp=Z,601nm,0.9s
HHC Hu-ho-hao-te 23.05 20 ⇓*i*P **P** **23 55 49.8 +0.4**
HHC sP sP 23 55 55.5 +1.4
HHC pmax pmax
comp=Z,410nm,2.4s
HHC LR LR
comp=Z,32µm,12.3s
HHC LR LR
comp=Z,88µm,12.9s
PALK Pallekele 23.44 242 P **P** **23 55 54.5 +1.0**
comp=Z,279nm,1.1s,baz=53,slow=11,SNR=39
PALK S **S** **00 00 08.4 +1.4**
comp=Z,18nm,1.2s,baz=82,slow=17,SNR=1.1
PALK LR LR 00 04 42.5
comp=Z,20µm,21.2s,baz=62,slow=36
comp=Z,279nm,1.1s
PALK Pallekele 23.44 242 P **P** **23 55 52.7 -0.8**
PALK IAmb IAmb 23 55 57.8
comp=Z,531nm,1.3s
PALK Pallekele 23.44 242 P **P** **23 55 54.0 +0.5**
PALK P **P** **23 55 54.0 +0.5**
PALK P **P** **23 55 54.0 +0.5**
PALK P **pP** **23 55 55.2 -1.5**
PALK P **pP** **23 55 55.2 -1.5**
PALK P **pP** **23 55 55.2 -1.5**
PALK S **S** **00 00 11.9 +4.9**
PALK S **S** **00 00 11.9 +4.9**
PALK S **S** **00 00 11.9 +4.9**
PALK Pallekele 23.44 242 *ce*P **P** **23 55 55.0 +1.6**
PALK pmax pmax
comp=Z,382nm,1.1s
PALK MLR MLR
comp=Z,25µm,21.0s
SALM Salem 23.62 254 *e*P **P** **23 55 57.0 +1.9**
DDI Dehra Dun 23.74 302 *e*P **P** **23 55 55.8 -0.5**
DDI IAmb IAmb 23 56 24.2
comp=Z,815nm,1.2s
JMIU JAMIA UNIVERSI 23.78 297 *e*P **P** **23 55 56.0 -0.7**
NDI New Delhi 23.88 297 *e*P **P** **23 55 56.5 -1.1**
AYAN Aya Nagar 23.90 297 *e*P **P** **23 55 56.9 -0.8**
AYAN IAmb IAmb 23 56 01.8
comp=Z,2µm,1.9s
NPLP NPLP New Delhi 23.91 297 *e*P **P** **23 55 56.5 -1.3**
NPLP IAmb IAmb 23 56 09.2
comp=Z,252nm,0.7s
MDSI Maura Dua 23.93 173 P **P** **23 55 58.0 0.0**
comp=Z,23µmcomp=Z,891nm,1.6s
HALK Hakmana 24.12 239 ⇑P **P** **23 56 01.4 +1.5**
BJT Baijiatuau 24.14 29 P **P** **23 56 00.1 +0.2**
BJT Baijiatuau 24.14 29 P **P** **23 56 00.7 +0.9**
BJT Baijiatuau 24.14 29 P **P** **23 56 00.1 +0.2**
BJT pmax pmax
comp=Z,931nm,1.4s
BJT MLR MLR
comp=Z,47µm,19.0s
BJI Beijing 24.16 29 P **P** **23 56 00.1 +0.1**
BJI pmax pmax
comp=Z,190nm,2.0s
BJI pmax pmax
comp=Z,5µm,3.9s
BJI LR LR
comp=Z,20µm,14.3s
BJI LR LR
comp=Z,26µm,15.2s
BJI LR LR
comp=Z,27µm,13.5s
MTKI Muara Teweh, K 24.20 145 P **P** **23 56 02.6 +2.0**
comp=Z,19µmcomp=Z,471nm,1.3s
KUDL Kundal 24.34 296 *e*P **P** **23 56 01.0 -0.9**
KUDL IAmb IAmb 23 56 07.0
comp=Z,515nm,0.9s
KLI Kotabumi 24.38 172 P **P** **23 56 03.5 +1.2**
comp=Z,24µmcomp=Z,682nm,0.9s
LWLI Liwa 24.44 174 P **P** **23 56 03.9 +1.0**
comp=Z,10µmcomp=Z,677nm,0.9s
RTK Rohtak 24.66 298 *e*P **P** **23 56 03.6 -1.1**
SMLA Simla 24.75 303 *e*P **P** **23 56 05.9 +0.4**
SMLA IAmb IAmb 23 56 11.2
comp=Z,645nm,1.0s
KOD Kodaikanal 24.84 252 *e*P **P** **23 56 08.2 +1.4**
CGRH CHANDIGARH 24.91 302 *e*P **P** **23 56 07.3 +0.3**
BLSI Bandar Lampung 24.93 171 P **P** **23 56 09.4 +2.1**
KASI Kota Agung 24.98 173 P **P** **23 56 06.1 -1.6**
BHK Bhakra 25.45 303 *e*P **P** **23 56 12.2 +0.3**
BHK IAmb IAmb 23 56 18.9
comp=Z,808nm,1.1s
BKB Balikpapan 25.59 142 P **P** **23 56 11.1 -2.1**
BKB Balikpapan 25.59 142 P **P** **23 56 14.5 +1.3**
BKB Balikpapan 25.59 142 P **P** **23 56 13.7 +0.5**
comp=Z,11µmcomp=Z,543nm,1.2s
JOW Kunigami 25.76 68 S **S** **00 00 50.8 +6.8**
comp=Z,15nm,0.5s,baz=301,slow=19,SNR=1.4
JOW LR LR 00 06 16.1
comp=Z,15µm,18.4s,baz=264,slow=36
JOW Kunigami 25.76 68 P **P** **23 56 13.7 -1.1**
JOW IAmb IAmb 23 56 21.8
comp=Z,346nm,1.2s
JOW Kunigami 25.76 68 P **P** **23 56 18.1 +3.3**
JOW Kunigami 25.76 68 ⇑P **P** **23 56 18.1 +3.3**
SBJI Serang 25.82 169 P **P** **23 56 17.1 +1.8**
comp=Z,17µmcomp=Z,639nm,2.0s
DHRM DHARAMSHALA 25.86 305 *e*P **P** **23 56 15.5 -0.4**
DHRM IAmb IAmb 23 56 30.4
comp=Z,2µm,1.4s
KAD Karad 25.90 270 *e*P **P** **23 56 17.0 +0.9**
KAD IAmb IAmb 23 56 22.0
comp=Z,516nm,1.1s
TLWR Talawar 26.02 304 *e*P **P** **23 56 17.4 +0.3**
POO Poona 26.05 273 *e*P **P** **23 56 18.3 +0.8**
POO ⇓*ex* x 23 56 23.5
POO IAmb IAmb 23 56 23.5
comp=Z,1µm,1.3s
ALCI Alchi Leh 26.05 309 *e*P **P** **23 56 17.7 -0.1**
ALCI IAmb IAmb 23 56 37.0
comp=Z,1µm,1.6s
DL2 Dalian 26.14 38 P **P** **23 56 17.9 -0.1**
DL2 pmax pmax
comp=Z,240nm,1.3s
DL2 pmax pmax
comp=Z,5µm,4.7s
DL2 LR LR
comp=Z,95µm,18.0s
DL2 LR LR
comp=Z,60µm,8.2s
UDPR Udaipur 26.14 286 *e*P **P** **23 56 19.3 +0.9**
UDPR IAmb IAmb 23 56 31.9
comp=Z,209nm,0.8s
TSSA Tissa 26.22 306 *e*P **P** **23 56 18.1 -1.0**
TSSA IAmb IAmb 23 56 32.4
comp=Z,848nm,1.6s
MPSI Mapaga 26.25 134 P **P** **23 56 19.4 +0.1**
MNGI Mangalore 26.30 260 *e*P **P** **23 56 21.9 +2.3**
TOLI2 Tolitoli 26.31 132 P **P** **23 56 18.9 -0.9**
TOLI2 IAmb IAmb 23 56 25.8
comp=Z,310nm,1.1s
TOLI2 Tolitoli 26.31 132 P **P** **23 56 19.5 -0.3**

BBKI Banjar Baru 26.32 148 P **P** **23 56 20.7 +0.9**
comp=Z,13µmcomp=Z,380nm,1.3s
DBJI Dramaga 26.36 168 P **P** **23 56 21.3 +1.1**
comp=Z,7µmcomp=Z,702nm,1.8s
DAV Davao City (W) 26.51 114 LR LR 00 07 01.9
comp=Z,41µm,18.6s,baz=306,slow=37
DAV Davao City (W) 26.51 114 P **P** **23 56 22.2 +0.5**
DAV Davao City (W) 26.51 114 P **P** **23 56 21.8 +0.1**
DAV S **S** **00 00 52.8 -3.2**
GOA Goa 26.57 266 *e*P **P** **23 56 24.8 +2.6**
WMQ Urumqi 26.89 338 ⇓P **P** **23 56 26.3 +1.4**
WMQ pmax pmax
comp=Z,140nm,2.2s
WMQ pmax pmax
comp=Z,3µm,4.6s
WMQ LR LR
comp=Z,52µm,14.3s
WMQ LR LR
comp=Z,29µm,24.1s
SRGN SRI GANGA NAGA 27.02 298 *e*P **P** **23 56 24.5 -1.6**
PCI Palu 27.13 136 P **P** **23 56 28.0 +0.8**
comp=Z,15µmcomp=Z,9µmcomp=Z,252nm,1.1s
JMU Jammu 27.14 304 *e*P **P** **23 56 27.9 +0.8**
JMU IAmb IAmb 23 56 44.0
comp=Z,334nm,0.5s
CNJI Cibinong 27.17 167 P **P** **23 56 24.1 -3.4**
XLT XiLinHaoTe 27.33 24 *e*P **P** **23 56 28.8 0.0**
XLT pmax pmax
comp=Z,100nm,1.7s
XLT pmax pmax
comp=Z,3µm,11.0s
XLT LR LR
comp=Z,5µm,13.8s
XLT LR LR
comp=Z,59µm,13.4s
BBJI Bungbulang 27.43 166 P **P** **23 56 29.5 -0.4**
MRSI Marisa 27.58 131 P **P** **23 56 30.2 -1.0**
comp=Z,14µmcomp=Z,150nm,1.2s
KPJI Karang Pucung 27.61 164 P **P** **23 56 33.2 +1.7**
SMRI Semarang 27.78 160 P **P** **23 56 32.8 -0.2**
SMRI IAMs_20 IAMs_20 00 06 38.3
comp=Z,50µm,18.0s
SMRI Semarang 27.78 160 P **P** **23 56 36.5 +3.5**
SMRI Semarang 27.78 160 P **P** **23 56 34.3 +1.3**
SMRI Semarang 27.78 160 ⇑P **P** **23 56 36.0 +2.9**
TBJI Tambak Boyo 28.04 157 P **P** **23 56 34.5 -0.8**
HJU Haeju 28.13 44 P **P** **23 56 34.3 -1.7**
HJU S **S** **00 01 20.5 -0.6**
HJU AmB
comp=Z,4µm,3.7s
HJU AMS AMS
comp=Z,60µm,11.7s
APSI Ampana 28.35 133 P **P** **23 56 39.1 +0.9**
comp=Z,7µmcomp=Z,454nm,1.2s
TJN Taejon 28.36 48 P **P** **23 56 36.6 -1.4**
TJN Taejon 28.36 48 P **P** **23 56 38.1 +0.1**
TJN Taejon 28.36 48 *d*/P **P** **23 56 37.1 -0.9**
GRJI Gresik 28.37 156 P **P** **23 56 40.2 +2.0**
NGJI Ngawi 28.42 159 P **P** **23 56 41.0 +2.3**
comp=Z,156nm,0.9s
INCN Inchon 28.43 45 P **P** **23 56 37.4 -1.3**
INCN IAmb IAmb 23 56 51.4
comp=Z,222nm,1.3s
INCN Inchon 28.43 45 IAMs_20 IAMs_20 00 09 11.1
comp=Z,41µm,18.0s
INCN Inchon 28.43 45 P **P** **23 56 36.5 -2.1**
INCN P **P** **23 56 36.5 -2.1**
INCN S **S** **00 01 25.6 -0.2**
INCN S **S** **00 01 25.6 -0.2**
INCN Inchon 28.43 45 P **P** **23 56 40.3 +1.7**
INCN Inchon 28.43 45 P **P** **23 56 37.4 -1.3**
INCN pmax pmax
comp=Z,222nm,1.3s
INCN MLR MLR
comp=Z,41µm,18.0s
YOGI Yogyakarta 28.46 161 P **P** **23 56 40.8 +1.7**
UGM Wanagama 28.62 161 P **P** **23 56 40.3 -0.2**
UGM Wanagama 28.62 161 P **P** **23 56 43.0 +2.5**
UGM Wanagama 28.62 161 P **P** **23 56 42.0 +1.5**
comp=Z,10µmcomp=Z,325nm,1.1s
SONM Songino Array 28.62 7 P **P** **23 56 40.9 +0.5**
comp=Z,167nm,1.2s,baz=189,slow=8.8,SNR=191
SONM PcP **PcP** **23 59 51.0 -0.3**
comp=Z,55nm,1.2s,baz=191,slow=3.7,SNR=6.9
SONM S **S** **00 01 34.4 +5.5**
comp=Z,3.6nm,1.0s,baz=193,slow=19,SNR=0.8
SONM LR LR 00 09 34.7
comp=Z,57µm,19.4s,baz=180,slow=40
SONM P3KPbc 00 28 52.9
comp=Z,2.3nm,0.9s,baz=13,slow=2.6,SNR=7.6
comp=Z,167nm,1.2s
PYAG Pyongyang 28.73 42 P **P** **23 56 39.3 -2.0**
PYAG S **S** **00 01 29.1 -1.5**
PYAG AmB
comp=Z,2µm,4.9s
PYAG AMS AMS
comp=Z,31µm,11.1s
ULN Ulaanbaatar 28.73 8 P **P** **23 56 41.5 +0.1**
ULN IAmb IAmb 23 56 47.7
comp=Z,312nm,1.3s
ULN Ulaanbaatar 28.73 8 IAMs_20 IAMs_20 00 09 36.5
comp=Z,55µm,21.0s
ULN Ulaanbaatar 28.73 8 P **P** **23 56 41.4 0.0**
ULN P **P** **23 56 41.4 0.0**
ULN P **P** **23 56 41.4 0.0**
ULN S **S** **00 01 31.5 +0.8**
ULN S **S** **00 01 31.5 +0.8**
ULN S **S** **00 01 31.5 +0.8**
ULN Ulaanbaatar 28.73 8 *d*/P **P** **23 56 41.8 +0.4**
ULN pmax pmax
comp=Z,270nm,1.3s
ULN MLR MLR
comp=Z,50µm,18.0s
ULN Ulaanbaatar 28.73 8 ⇓P **P** **23 56 41.7 +0.2**
TTSI Tana Toraja 28.76 139 P **P** **23 56 43.2 +1.4**
comp=Z,15µmcomp=Z,5µmcomp=Z,309nm,1.5s
NIL Nilore 28.77 305 P **P** **23 56 40.8 -1.0**
NIL IAmb IAmb 23 57 20.1
comp=Z,194nm,0.9s
NIL Nilore 28.77 305 P **P** **23 56 40.8 -1.0**
NIL Nilore 28.77 305 P **P** **23 56 40.8 -1.0**
NIL pmax pmax
comp=Z,194nm,0.9s
JSU Suzuyama 28.77 60 P **P** **23 56 43.1 +1.3**
JASL Jaisalmer 28.95 291 *e*P **P** **23 56 43.1 -0.3**
KMSI Cibinong 29.00 128 P **P** **23 56 45.9 +1.9**
KMMI Kalianget 29.09 154 P **P** **23 56 46.4 +1.8**
comp=Z,10µmcomp=Z,5µmcomp=Z,196nm,1.3s
PCJI Pacitan 29.10 160 P **P** **23 56 46.4 +1.7**
comp=Z,4µmcomp=Z,133nm,1.0s
SNY Shenyang 29.21 35 ⇓P **P** **23 56 44.5 -1.0**
SNY pmax pmax
comp=Z,50nm,1.8s
SNY pmax pmax
comp=Z,1µm,6.1s
SNY LR LR
comp=Z,36µm,16.6s
SNY LR LR
comp=Z,37µm,12.8s
LUWI Luwuk 29.23 132 P **P** **23 56 46.5 +0.5**
LUWI Luwuk 29.23 132 P **P** **23 56 45.7 -0.2**
LUWI Luwuk 29.23 132 P **P** **23 56 48.2 +2.3**
LUWI Luwuk 29.23 132 P **P** **23 56 46.4 +0.5**
LUWI Luwuk 29.23 132 ⇑P **P** **23 56 46.0 0.0**
KSAR Wonju Array Be 29.25 47 P **P** **23 56 44.8 -1.2**
KSAR Wonju Array Be 29.25 47 P **P** **23 56 44.8 -1.2**
KS19 Wonju Array Si 29.27 46 P **P** **23 56 45.0 -1.2**
KSRS Korea Array 29.29 47 P **P** **23 56 44.4 -1.8**
comp=Z,16nm,1.2s,baz=241,slow=8.8,SNR=20
KSRS PcP **PcP** **23 59 51.5 -1.5**
comp=Z,20nm,1.0s,baz=244,slow=4.6,SNR=7.5
KSRS LR LR 00 10 21.7
comp=Z,22116µm,19.0s,baz=240,slow=40
comp=Z,16nm,1.2s
SPSI Sidrap Palu 29.45 140 P **P** **23 56 48.9 +1.0**
comp=Z,15µmcomp=Z,271nm,1.3s
BLJI Banyuglugur 29.56 155 P **P** **23 56 50.2 +1.4**
comp=Z,8µmcomp=Z,4µmcomp=Z,233nm,1.3s
JNU Nakatsue 29.63 57 P **P** **23 56 49.8 +0.4**
comp=Z,76nm,1.0s,baz=253,slow=10,SNR=13
JNU LR LR 00 09 31.2
comp=Z,35µm,18.4s,baz=250,slow=38
comp=Z,76nm,1.0s
JNU Nakatsue 29.63 57 P **P** **23 56 49.3 -0.1**
JNU Nakatsue 29.63 57 P **P** **23 56 50.0 +0.6**

JNU Nakatsue 29.63 57 ⇓P **P** **23 56 49.9 +0.4**
JNU Nakatsue 29.63 57 P **P** **23 56 49.9 +0.4**
KSH Kashi 29.66 318 P **P** **23 56 51.1 +1.3**
KSH sP sP 23 56 58.0 +3.4
KSH pmax pmax
comp=Z,110nm,1.1s
KSH LR LR
comp=Z,34µm,15.2s
KSH LR LR
comp=Z,44µm,17.4s
BHUJ Bhuj 29.77 283 *e*P **P** **23 56 52.9 +2.2**
BHUJ IAML 23 57 05.4
comp=Z,295nm,1.4s
ABJI Asem Bagus 29.87 154 P **P** **23 56 53.3 +1.7**
comp=Z,8µmcomp=Z,4µmcomp=Z,176nm,1.1s
TARG Taragay, Kyrgy 29.93 323 P **P** **23 56 52.8 +0.4**
TARG IAmb IAmb 23 57 39.6
comp=Z,223nm,1.1s
TARG Taragay, Kyrgy 29.93 323 P **P** **23 56 52.8 +0.4**
TARG pmax pmax
comp=Z,223nm,1.1s
XMI Christmas Isla 29.99 172 P **P** **23 56 54.4 +1.7**
BNSI Bone 30.00 140 P **P** **23 56 54.3 +1.6**
comp=Z,12µmcomp=Z,4µmcomp=Z,230nm,1.1s
SHLS Shalkode 30.00 327 *e*P **P** **23 56 50.4 -2.3**
SHLS Shalkode 30.00 327 *e*P **P** **23 56 50.4 -2.3**
UZB Uzynbulak 30.22 326 *e*P **P** **23 56 54.4 -0.3**
UZB Uzynbulak 30.22 326 *e*P **P** **23 56 54.4 -0.3**
KAPI Kappang 30.28 142 LR LR 00 12 18.8
comp=Z,44µm,18.8s,baz=318,slow=43
KAPI Kappang 30.28 142 P **P** **23 56 54.6 -0.6**
KAPI Kappang 30.28 142 P **P** **23 56 55.4 +0.2**
KAPI P **P** **23 56 55.4 +0.2**
KAPI P **P** **23 56 55.4 +0.2**
KAPI S **S** **00 01 56.5 +1.3**
KAPI S **S** **00 01 56.5 +1.3**
KAPI S **S** **00 01 56.5 +1.3**
KAPI Kappang 30.28 142 P **P** **23 56 57.7 +2.5**
KAPI Kappang 30.28 142 ⇑*e*P **P** **23 56 55.3 +0.2**
KAPI pmax pmax
comp=Z,35nm,1.4s
KAPI MLR MLR
comp=Z,42µm,18.0s
HHU Hamhung 30.36 42 P **P** **23 56 54.7 -1.0**
HHU S **S** **00 01 55.0 -1.1**
HHU AmB
comp=Z,3µm,3.6s
HHU AMS AMS
comp=Z,43µm,10.2s
JAGI Jajag, Banyuwa 30.44 154 P **P** **23 56 56.3 -0.3**
JAGI IAmb IAmb 23 57 20.4
comp=Z,178nm,1.1s
JAGI IAMs_20 IAMs_20 00 09 13.9
comp=Z,42µm,20.0s
JAGI Jajag, Banyuwa 30.44 154 P **P** **23 56 59.0 +2.3**
JAGI Jajag, Banyuwa 30.44 154 P **P** **23 56 56.8 +0.1**
comp=Z,6µmcomp=Z,3µmcomp=Z,152nm,1.2s
JAGI Jajag, Banyuwa 30.44 154 ⇑P **P** **23 56 56.8 +0.1**
SATY Saty 30.49 326 *e*P **P** **23 56 56.7 -0.4**
comp=Z,246nm,1.9s
SATY Saty 30.49 326 *e*P **P** **23 56 56.6 -0.4**
SATY pmax pmax
comp=Z,246nm,1.9s
KDJ Kajisay 30.54 323 P **P** **23 56 57.7 +0.2**
KDJ IAmb IAmb 23 57 04.9
comp=Z,215nm,1.0s
KDJ Kajisay 30.54 323 P **P** **23 56 57.7 +0.2**
KDJ pmax pmax
comp=Z,215nm,1.0s
SRBI Singaraja 30.55 152 P **P** **23 56 59.4 +1.8**
comp=Z,8µmcomp=Z,4µmcomp=Z,176nm,1.7s
BKSI Bulukumba 30.74 141 P **P** **23 56 59.1 -0.2**
comp=Z,9µmcomp=Z,84nm,1.0s
ZAK Zakamensk 30.92 2 *e*P **P** **23 57 00.7 0.0**
ZAK pmax pmax
comp=Z,293nm,1.6s
ZSN Zaisan 31.03 338 *e*P **P** **23 57 01.5 -0.1**
comp=Z,331nm,2.4s
ZSN Zaisan 31.03 338 *e*P **P** **23 57 01.5 -0.1**
ZSN pmax pmax
comp=Z,331nm,2.4s
ULHL Ulahol 31.15 322 P **P** **23 57 04.5 +1.5**
SNR=36
KNGR Kungurtug, Tuv 31.26 355 *d*/P **P** **23 57 05.1 +1.4**
KNGR pmax pmax
comp=Z,332nm,1.4s
KNGR MLR MLR
comp=Z,9µm,11.0s
TNSS Tian-Shan 31.26 324 *e*P **P** **23 57 03.6 -0.6**
TNSS Tian-Shan 31.26 324 *e*P **P** **23 57 03.6 -0.6**
MDOK Medeo 31.29 325 *e*P **P** **23 57 03.8 -0.4**
MDOK *e*S **S** **00 02 11.2 +0.2**
MDOK LR LR 00 11 00.7
MDOK Medeo 31.29 325 *e*P **P** **23 57 03.7 -0.4**
MDOK *e*S **S** **00 02 11.1 +0.2**
AAA Alma-Ata 31.39 324 *e*P **P** **23 57 04.7 -0.3**
AAA LR LR 00 11 12.1
comp=Z,33µm,16.2s
AAA Alma-Ata 31.39 324 *e*P **P** **23 57 04.6 -0.3**
AAA MLR MLR
comp=Z,33µm,16.0s
MK31 Makanchi Array 31.46 334 *d*/P **P** **23 57 06.1 +0.7**
MKAR Makanchi Array 31.46 334 P **P** **23 57 06.2 +0.7**
comp=Z,97nm,0.8s,baz=143,slow=8.6,SNR=418
MKAR PcP **PcP** **23 59 58.7 +0.2**
comp=Z,22nm,0.8s,baz=144,slow=4.1,SNR=5.5
MKAR S **S** **00 02 10.0 -3.4**
comp=Z,9.4nm,1.1s,baz=134,slow=12,SNR=2.1
MKAR LR LR 00 10 13.5
comp=Z,24µm,18.2s,baz=143,slow=37
comp=Z,97nm,0.8s
MKAR Makanchi Array 31.46 334 P **P** **23 57 05.7 +0.3**
BOOM Boomskoye usch 31.48 323 P **P** **23 57 05.7 -0.1**
BOOM Boomskoye usch 31.48 323 P **P** **23 57 05.7 -0.1**
BOOM pmax pmax
comp=Z,621nm,1.7s
TNTI Ternate 31.49 123 P **P** **23 57 04.7 -1.3**
TNTI IAmb IAmb 23 57 12.4
comp=Z,130nm,0.9s
TNTI Ternate 31.49 123 P **P** **23 57 06.3 +0.4**
TNTI Ternate 31.49 123 P **P** **23 57 04.5 -1.4**
comp=Z,2µmcomp=Z,156nm,1.1s
CN2 Changchun 31.56 34 ⇓P **P** **23 57 05.8 -0.5**
CN2 sP sP 23 57 19.3 +8.3
CN2 PP **PnPn** **23 58 09.8 +0.2**
CN2 pmax pmax
comp=Z,60nm,1.7s
CN2 pmax pmax
comp=Z,2µm,4.0s
CN2 LR LR
comp=Z,49µm,18.0s
CN2 LR LR
comp=Z,43µm,12.0s
MAKZ Makanchi 31.60 334 P **P** **23 57 06.8 +0.2**
MAKZ Makanchi 31.60 334 P **P** **23 57 06.8 +0.2**
MAKZ pmax pmax
comp=Z,103nm,1.1s
MAKZ MLR MLR
comp=Z,25µm,20.0s
MAKZ Makanchi 31.60 334 ⇓P **P** **23 57 07.2 +0.5**
BSSI Bau Bau, Buton 31.62 142 P **P** **23 57 07.6 +0.6**
COCO West Island 31.74 188 P **P** **23 57 10.0 +2.0**
TDK Taldyqorghan 31.85 328 *e*P **P** **23 57 08.6 -0.2**
comp=Z,508nm,2.2s
TDK LR LR 00 11 26.9
comp=Z,22µm,16.4s
TDK Taldyqorghan 31.85 328 *e*P **P** **23 57 08.6 -0.2**
TDK pmax pmax
comp=Z,508nm,2.2s
TDK MLR MLR
comp=Z,22µm,16.0s
TWSI Taliwang, Sumb 31.88 150 P **P** **23 57 10.2 +0.8**
comp=Z,6µmcomp=Z,4µmcomp=Z,319nm,1.3s
TKM2 Tokmak 2 31.95 323 P **P** **23 57 11.4 +1.5**
SNR=132
JHS Saijyo 32.02 55 P **P** **23 57 13.7 +3.1**
UCH Uchtor 32.15 321 P **P** **23 57 13.5 +1.5**
SNR=118
KBK Karagaybulak 32.15 322 P **P** **23 57 13.5 +1.8**
SNR=72
KUU Kurty 32.16 325 *e*P **P** **23 57 11.2 -0.4**
KUU LR LR 00 11 53.8
KUU Kurty 32.16 325 *e*P **P** **23 57 11.2 -0.4**
MOY Mondy 32.17 360 *e*P **P** **23 57 12.2 +0.5**
MOY pmax pmax

comp=Z,321nm,2.3s
DGZ Jazzator, Alta 32.20 343 *d* iP **P** **23 57 13.2 +1.2**
DGZ pmax pmax
comp=Z,216nm,1.4s
DGZ MLR MLR
comp=Z,20µm,18.0s
JMN Monobe 32.20 57 P **P** **23 57 11.6 -0.6**
JMN IAmb IAmb 23 57 21.4
comp=Z,389nm,1.5s
JMN Monobe 32.20 57 P **P** **23 57 14.1 +2.0**
JMN Monobe 32.20 57 ⇓P **P** **23 57 12.3 +0.2**
JMN Monobe 32.20 57 P **P** **23 57 13.7 +1.6**
TLY Talaya 32.23 3 P **P** **23 57 11.6 -0.5**
TLY IAmb IAmb 23 57 16.2
comp=Z,374nm,1.5s
TLY Talaya 32.23 3 P **P** **23 57 13.7 +1.5**
TLY P **P** **23 57 13.7 +1.5**
TLY P **P** **23 57 13.7 +1.5**
TLY S **S** **00 02 27.3 +2.1**
TLY S **S** **00 02 27.3 +2.1**
TLY S **S** **00 02 27.3 +2.1**
SANI Sanana 32.24 129 P **P** **23 57 10.7 -1.9**
SANI Sanana 32.24 129 P **P** **23 57 11.3 -1.3**
SANI Sanana 32.24 129 P **P** **23 57 10.4 -2.2**
KBU Kabul Universi 32.27 304 P **P** **23 57 15.9 +3.0**
KBL Kabul 32.35 304 P **P** **23 57 12.7 -0.9**
KBL IAmb IAmb 23 58 19.2
comp=Z,180nm,1.2s
KBL Kabul 32.35 304 P **P** **23 57 13.9 +0.3**
SNR=86
KBL P **P** **23 57 13.9 +0.3**
SNR=86
KBL P **P** **23 57 13.9 +0.3**
SNR=86
KBL S **S** **00 02 30.8 +2.9**
KBL S **S** **00 02 30.8 +2.9**
KBL S **S** **00 02 30.8 +2.9**
KBL Kabul 32.35 304 P **P** **23 57 12.7 -0.9**
KBL pmax pmax
comp=Z,180nm,1.2s
DRK Karamyk 32.38 314 P **P** **23 57 13.8 -0.1**
DRK Karamyk 32.38 314 P **P** **23 57 13.8 -0.1**
DRK pmax pmax
comp=Z,271nm,0.9s
PLAI Plampang 32.39 149 P **P** **23 57 14.8 +1.0**
PLAI Plampang 32.39 149 P **P** **23 57 14.2 +0.4**
comp=Z,8µmcomp=Z,3µmcomp=Z,331nm,1.1s
AAK Ala-Archa 32.41 321 LR LR 00 10 55.6
comp=Z,21µm,21.2s,baz=122,slow=38
AAK Ala-Archa 32.41 321 P **P** **23 57 15.6 +1.6**
AAK Ala-Archa 32.41 321 P **P** **23 57 15.3 +1.4**
AAK P **P** **23 57 15.3 +1.4**
AAK P **P** **23 57 15.3 +1.4**
AAK S **S** **00 02 32.4 +4.0**
AAK S **S** **00 02 32.4 +4.0**
AAK S **S** **00 02 32.4 +4.0**
AAK Ala-Archa 32.41 321 P **P** **23 57 15.9 +1.9**
SNR=102
AAK Ala-Archa 32.41 321 *i* P **P** **23 57 15.6 +1.6**
SNR=105
AAK Ala-Archa 32.41 321 *d* iP **P** **23 57 15.8 +1.9**
AAK pmax pmax
comp=Z,684nm,1.7s
AAK MLR MLR
comp=Z,23µm,19.0s
AAK Ala-Archa 32.41 321 ⇓P **P** **23 57 15.7 +1.8**
FRU1 Bishkek 32.43 322 P **P** **23 57 15.4 +1.3**
FRU1 Bishkek 32.43 322 P **P** **23 57 15.4 +1.3**
FRU1 pmax pmax
comp=Z,498nm,1.5s
CHMS Chumysh 32.48 322 P **P** **23 57 15.7 +1.2**
SNR=24
ARSB Arslanbob 32.57 318 P **P** **23 57 15.2 -0.2**
ARSB Arslanbob 32.57 318 P **P** **23 57 15.2 -0.2**
ARSB pmax pmax
comp=Z,695nm,1.9s
USP Ospenovka 32.79 322 P **P** **23 57 18.2 +1.0**
SNR=102
JAD Aida 32.82 55 P **P** **23 57 17.9 +0.5**
IRK Irkutsk 32.82 3 *e*P **P** **23 57 16.9 -0.4**
IRK pmax pmax
comp=Z,675nm,1.6s
SGDS Sogindy 32.83 323 *e*P **P** **23 57 17.1 -0.4**
SGDS *e*S **S** **00 02 35.1 +0.3**
EKS2 Erkin-Say 32.85 321 P **P** **23 57 19.6 +1.8**
SNR=78
GAR Garm 33.16 313 P **P** **23 57 20.6 0.0**
HIA Hailar 33.22 22 P **P** **23 57 20.4 -0.4**
HIA IAmb IAmb 23 57 28.7
comp=Z,215nm,1.3s
HIA Hailar 33.22 22 IAMs_20 IAMs_20 00 11 24.2
comp=Z,44µm,19.0s
HIA Hailar 33.22 22 P **P** **23 57 20.8 0.0**
HIA Hailar 33.22 22 P **P** **23 57 20.4 -0.4**
HIA pmax pmax
comp=Z,215nm,1.3s
HIA MLR MLR
comp=Z,44µm,19.0s
HILR Hailar Array B 33.46 22 P **P** **23 57 22.6 -0.3**
comp=Z,28nm,0.5s,baz=196,slow=8.8,SNR=38
HILR PcP **PcP** **00 00 04.5 +0.6**
comp=Z,27nm,0.7s,baz=182,slow=3.2,SNR=7.0
HILR S **S** **00 02 48.2 +3.7**
comp=Z,6.7nm,1.1s,baz=176,slow=26,SNR=1.2
HILR LR LR 00 11 53.5
comp=Z,36µm,18.5s,baz=125,slow=38
comp=Z,28nm,0.5s
KAAM Kaadhehdhoo 33.59 239 P **P** **23 57 27.2 +2.8**
CHGR Chuyangaron 33.82 311 P **P** **23 57 25.5 -0.8**
CHGR IAmb IAmb 23 57 35.9
comp=Z,174nm,0.7s
CHGR Chuyangaron 33.82 311 P **P** **23 57 25.5 -0.8**
CHGR pmax pmax
comp=Z,174nm,0.7s
NLAI Namlea 33.86 129 P **P** **23 57 27.9 +1.2**
comp=Z,12µmcomp=Z,2µmcomp=Z,98nm,1.0s
JWT Wachi 33.88 55 P **P** **23 57 27.1 +0.4**
CIT Chita 33.89 14 *e*P P 23 57 21.7 -5.0
CIT *e* 23 57 26.8
CIT *e* 23 58 36.2
CIT *e* 23 58 52.2
CIT *e* 00 00 09.6
CIT pmax pmax
comp=Z,623nm,2.9s
BNX BinXian 33.90 33 ⇓P **P** **23 57 25.6 -1.1**
BNX pmax pmax
comp=Z,57nm,1.5s
BNX pmax pmax
comp=Z,2µm,3.8s
BNX LR LR
comp=Z,19µm,10.9s
BNX LR LR
comp=Z,41µm,12.6s
WBSI Waikabubak, Su 33.90 147 P **P** **23 57 25.9 -1.2**
comp=Z,11µmcomp=Z,5µmcomp=Z,462nm,1.4s
PSTR Posyet 33.93 40 ⇓*e*P **P** **23 57 27.4 +0.4**
BTLS Baital 34.15 325 *e*P **P** **23 57 28.8 -0.2**
comp=Z,324nm,2.8s
BTLS Baital 34.15 325 *e*P **P** **23 57 28.7 -0.2**
BTLS pmax pmax
comp=Z,324nm,2.8s
MDJ Mudanjiang 34.37 37 P **P** **23 57 29.7 -1.1**
MDJ Mudanjiang 34.37 37 P **P** **23 57 30.5 -0.3**
MDJ PP **PnPn** **23 58 46.3 +1.0**
MDJ pmax pmax
comp=Z,33nm,1.5s
MDJ pmax pmax
comp=Z,2µm,10.3s
MDJ LR LR
comp=Z,74nm,13.7s
MDJ LR LR
comp=Z,78µm,11.0s
MDJ Mudanjiang 34.37 37 P **P** **23 57 30.9 +0.1**
WSI Waingapu 34.40 146 P **P** **23 57 31.2 -0.1**
EDFI Ende, Flores 34.41 143 P **P** **23 57 31.1 -0.5**
comp=Z,2µmcomp=Z,116nm,1.1s
DZA Taraz 34.46 319 *e*P **P** **23 57 31.4 -0.4**
DZA Taraz 34.46 319 *e*P **P** **23 57 31.3 -0.4**
MMRI Maumere 34.64 142 P **P** **23 57 33.5 0.0**
MMRI IAMs_20 IAMs_20 00 13 53.1
comp=Z,32µm,18.0s
MMRI Maumere 34.64 142 P **P** **23 57 33.8 +0.4**
MMRI Maumere 34.64 142 P **P** **23 57 33.0 -0.4**
comp=Z,7µmcomp=Z,6µmcomp=Z,342nm,1.2s
JIE Ise 34.64 57 P **P** **23 57 33.7 +0.4**

VLA Vladivostok 34.85 41 *ce*P **P** **23 57 34.8 -0.2**
VLA pmax pmax
comp=Z,32nm,1.0s
VLA MLR MLR
comp=Z,21µm,15.0s
IUG Iuzhnay 34.88 317 *e*P **P** **23 57 35.2 -0.3**
comp=Z,410nm,1.4s
IUG Iuzhnay 34.88 317 *e*P **P** **23 57 35.1 -0.3**
IUG pmax pmax
comp=Z,409nm,1.4s
AAI Ambon 34.97 128 P **P** **23 57 37.7 +1.4**
comp=Z,10µmcomp=Z,3µmcomp=Z,105nm,1.1s
BASI Baing, Sumba 35.01 146 P **P** **23 57 37.7 +1.1**
comp=Z,11µmcomp=Z,4µmcomp=Z,296nm,1.0s
KK31 Karatay Array 35.08 319 P **P** **23 57 36.9 -0.1**
KK31 Karatay Array 35.08 319 P **P** **23 57 36.9 -0.1**
KK31 pmax pmax
comp=Z,148nm,1.2s
KKAR Karatay Array 35.08 319 P **P** **23 57 36.9 -0.1**
KKAR Karatay Array 35.08 319 P **P** **23 57 36.9 -0.1**
INU Inuyama 35.16 56 P **P** **23 57 37.8 0.0**
INU IAMs_20 IAMs_20 00 10 21.3
comp=Z,35µm,21.0s
INU Inuyama 35.16 56 P **P** **23 57 38.7 +0.9**
INU Inuyama 35.16 56 ⇓P **P** **23 57 38.0 +0.2**
CHM Chimkent 35.24 317 *e*P **P** **23 57 38.3 -0.2**
comp=Z,507nm,1.6s
CHM *e*S **S** **00 03 12.6 +0.5**
CHM LR LR 00 13 35.8
CHM Chimkent 35.24 317 *e*P **P** **23 57 38.2 -0.2**
CHM *e*S **S** **00 03 12.5 +0.5**
CHM pmax pmax
comp=Z,507nm,1.6s
MSAI Masohi 35.29 127 P **P** **23 57 40.6 +1.5**
comp=Z,6µmcomp=Z,197nm,0.7s
BRLS Boroldaу 35.46 319 *e*P **P** **23 57 39.9 -0.5**
comp=Z,247nm,1.8s
BRLS *e*S **S** **00 03 15.4 0.0**
BRLS Boroldaу 35.46 319 *e*P **P** **23 57 39.8 -0.5**
BRLS *e*S **S** **00 03 15.4 0.0**
BRLS pmax pmax
comp=Z,247nm,1.8s
JGF Kuroka 35.50 56 P **P** **23 57 40.3 -0.5**
JGF IAmb IAmb 23 57 48.0
comp=Z,536nm,1.7s
JGF Kuroka 35.50 56 P **P** **23 57 41.1 +0.3**
JGF Kuroka 35.50 56 ⇓P **P** **23 57 40.7 -0.1**
JGF Kuroka 35.50 56 P **P** **23 57 40.6 -0.1**
USRK Ussuriysk Ar. 35.51 39 P **P** **23 57 39.9 -0.8**
comp=Z,89nm,1.1s,baz=232,slow=8.4,SNR=49
USRK PcP **PcP** **00 00 09.4 -0.5**
comp=Z,14nm,0.8s,baz=236,slow=1.6,SNR=3.4
comp=Z,89nm,1.1s
SWI Sorong 35.58 121 P **P** **23 57 41.2 -0.4**
comp=Z,8µmcomp=Z,3µmcomp=Z,241nm,1.1s
JGN Niukaw 35.66 54 P **P** **23 57 41.9 -0.2**
KURBB Kurchatov Arra 36.02 335 P **P** **23 57 45.2 +0.3**
comp=Z,62nm,1.0s,baz=142,slow=9.4,SNR=159
KURBB PcP **PcP** **00 00 11.8 +0.6**
comp=Z,30nm,1.1s,baz=135,slow=1.9,SNR=4.3
KURBB S **S** **00 03 25.6 +2.0**
comp=Z,4.6nm,1.2s,baz=146,slow=6.7,SNR=1.2
KURBB LR LR 00 14 19.3
comp=Z,45µm,18.5s,baz=134,slow=39
comp=Z,62nm,1.0s
KURK Kurchatov 36.05 335 P **P** **23 57 45.4 +0.1**
KURK IAmb IAmb 23 57 55.2
comp=Z,212nm,1.2s
KURK Kurchatov 36.05 335 IAMs_20 IAMs_20 00 13 59.6
comp=Z,47µm,19.0s
KURK Kurchatov 36.05 335 P **P** **23 57 45.7 +0.4**
KURK P **P** **23 57 45.7 +0.4**
KURK P **P** **23 57 45.7 +0.4**
KURK S **S** **00 03 26.7 +2.4**
KURK S **S** **00 03 26.7 +2.4**
KURK S **S** **00 03 26.7 +2.4**
KURK Kurchatov 36.05 335 *d* iP **P** **23 57 45.7 +0.4**
KURK pmax pmax
comp=Z,327nm,1.7s
KURK MLR MLR
comp=Z,39µm,18.0s
MJB9 Matsu-Tunnel 36.44 54 P **P** **23 57 49.4 +0.6**
MJB9 IAmb IAmb 23 58 05.1
comp=Z,365nm,1.4s
MAJO Matsushiro 36.44 54 P **P** **23 57 48.7 -0.2**
MAJO IAmb IAmb 23 58 04.1
comp=Z,391nm,1.4s
MAJO Matsushiro 36.44 54 P **P** **23 57 48.9 +0.1**
MAJO Matsushiro 36.44 54 *d* iP **P** **23 57 48.6 -0.2**
MAJO pmax pmax
comp=Z,155nm,1.1s
MAJO MLR MLR
comp=Z,33µm,16.0s
MAJO Matsushiro 36.44 54 ⇓P **P** **23 57 48.4 -0.4**
MAT Matsushiro 36.44 54 P **P** **23 57 48.6 -0.2**
MJAR Matsushiro Arr 36.44 54 P **P** **23 57 48.7 -0.1**
comp=Z,106nm,1.1s,baz=258,slow=8.0,SNR=62
MJAR PcP **PcP** **00 00 12.2 -0.7**
comp=Z,27nm,1.0s,baz=238,slow=1.7,SNR=6.0
MJAR S **S** **00 03 30.6 0.0**
comp=Z,0.6nm,0.3s,baz=248,slow=30,SNR=1.3
MJAR LR LR 00 12 08.9
comp=Z,27µm,21.0s,baz=246,slow=35
comp=Z,106nm,1.1s
MJAR Matsushiro Arr 36.44 54 P **P** **23 57 48.7 -0.1**
MJAR IAmb IAmb 23 57 59.2
comp=Z,444nm,1.5s
BATI Baumata 36.73 141 LR LR 00 16 16.5
comp=Z,40µm,20.0s,baz=305,slow=42
BATI Baumata 36.73 141 P **P** **23 57 49.9 -1.5**
comp=Z,6µmcomp=Z,3µmcomp=Z,122nm,1.0s
SOEI Soe 36.73 140 P **P** **23 57 50.0 -1.6**
SOEI Soe 36.73 140 P **P** **23 57 50.5 -1.1**
SOEI Soe 36.73 140 P **P** **23 57 51.2 -0.4**
SOEI Soe 36.73 140 P **P** **23 57 50.5 -1.1**
SOEI Soe 36.73 140 ⇑P **P** **23 57 50.5 -1.1**
ZAA0 Zalesovo Array 36.73 344 P **P** **23 57 51.2 +0.2**
ZALV Zalesovo Beam 36.73 344 P **P** **23 57 51.4 +0.4**
comp=Z,216nm,0.8s,baz=153,slow=8.2,SNR=805
ZALV S **S** **00 03 38.3 +3.7**
comp=Z,17nm,1.2s,baz=146,slow=10,SNR=2.5
ZALV LR LR 00 13 03.2
comp=Z,16µm,19.1s,baz=155,slow=36
comp=Z,216nm,0.8s
JOD2 Odawara 2 36.76 57 P **P** **23 57 51.2 -0.3**
BNDI Bandanaira 36.79 127 P **P** **23 57 54.5 +2.5**
BNDI Bandanaira 36.79 127 P **P** **23 57 53.8 +1.8**
JHJ Hachijo jima 2 36.81 60 S **S** **00 03 42.8 +6.5**
comp=Z,185nm,1.0s,baz=277,slow=17,SNR=1.5
JHJ LR LR 00 11 55.4
comp=Z,27µm,21.0s,baz=269,slow=35
JRY Ryogami san 36.82 55 P **P** **23 57 50.6 -1.4**
JSD Sado 36.96 52 P **P** **23 57 52.4 -0.7**
JSD Sado 36.96 52 P **P** **23 57 53.9 +0.7**
HEH HeiHe 37.06 28 *e*P **P** **23 57 53.4 -0.5**
HEH PP **PnPn** **23 59 18.8 +0.2**
HEH pmax pmax
comp=Z,71nm,1.5s
HEH pmax pmax
comp=Z,3µm,3.8s
HEH LR LR
comp=Z,35µm,13.4s
HEH LR LR
comp=Z,44µm,15.4s
NGCH Negor - Chabah 37.58 287 P **P** **23 58 00.8 +2.3**
NGCH S **S** **00 03 54.1 +5.9**
FAKI Fak Fak 37.59 123 P **P** **23 57 58.0 -0.8**
FAKI IAmb IAmb 23 58 16.5
comp=Z,251nm,1.1s
FAKI Fak Fak 37.59 123 P **P** **23 57 58.3 -0.5**
FAKI Fak Fak 37.59 123 P **P** **23 57 58.5 -0.3**
comp=Z,7µmcomp=Z,3µmcomp=Z,222nm,1.1s
FAKI Fak Fak 37.59 123 ⇑P **P** **23 57 58.0 -0.8**
HRA Herat 37.70 301 P **P** **23 57 59.0 -0.7**
BRZS Berezniki 38.10 330 *e*P **P** **23 58 02.6 -0.2**
BRZS *e*S **S** **00 03 55.8 +0.3**
BRZS Berezniki 38.10 330 *e*P **P** **23 58 02.5 -0.2**
BRZS *e*S **S** **00 03 55.8 +0.3**
JCJ Chichijima 38.12 71 S **S** **00 03 49.1 -7.2**
comp=Z,61nm,0.8s,baz=288,slow=20,SNR=1.5
TEY Ternei 38.75 41 ⇑*e*P **P** **23 58 07.5 -0.7**
TEY 00 04 05.0
TEY pmax pmax
comp=E,200nm,4.6s
TEY pmax pmax
comp=N,200nm,3.9s
TEY pmax pmax
comp=Z,500nm,3.9s
TEY pmax pmax
comp=E,20nm,1.8s
TEY pmax pmax
comp=N,20nm,1.4s
TEY pmax pmax
comp=Z,60nm,1.4s
TEY MLR MLR
comp=N,1µm,13.0s
TEY MLR MLR
comp=E,1µm,13.0s
TEY MLR MLR
comp=Z,2µm,12.0s
JMM Marumori 38.81 53 P **P** **23 58 08.1 -0.6**
JMM IAmb IAmb 23 58 17.5
comp=Z,384nm,1.4s
JMM Marumori 38.81 53 P **P** **23 58 08.8 0.0**
JMM Marumori 38.81 53 ⇓P **P** **23 58 07.6 -1.2**
JMM Marumori 38.81 53 P **P** **23 58 08.3 -0.5**
JLN Jalan Bani Buh 39.25 281 P **P** **23 58 13.9 +1.2**
SNR=22
JLN P **P** **23 58 13.9 +1.2**
SNR=22
JLN S **S** **00 04 18.8 +5.3**
JLN S **S** **00 04 18.8 +5.3**
ZEA Zeya 39.60 24 *e*P **P** **23 58 15.6 +0.4**
ZEA *e* 23 59 50.5
ZEA *e*S **S** **00 04 14.7 -3.2**
ZEA pmax pmax
comp=E,300nm,3.9s
ZEA pmax pmax
comp=N,600nm,6.1s
ZEA pmax pmax
comp=Z,2µm,5.9s
ZEA pmax pmax
comp=E,40nm,1.1s
ZEA pmax pmax
comp=N,60nm,1.3s
ZEA pmax pmax
comp=Z,190nm,1.3s
ZEA smax smax
comp=E,900nm,15.7s
ZEA smax smax
comp=N,2µm,14.1s
ZEA MLR MLR
comp=E,10µm,14.0s
ZEA MLR MLR
comp=N,18µm,11.0s
ZEA MLR MLR
comp=Z,24µm,12.0s
WBK Wadi Bani Khal 39.63 282 P **P** **23 58 18.2 +2.3**
SNR=9.9
WBK P **P** **23 58 18.2 +2.3**
SNR=9.9
WBK S **S** **00 04 24.4 +5.1**
WBK S **S** **00 04 24.4 +5.1**
JOM Ohasama 39.67 51 P **P** **23 58 15.5 -0.4**
BAKI Biak 39.76 117 P **P** **23 58 17.6 +0.6**
comp=Z,7µmcomp=Z,3µmcomp=Z,148nm,1.0s
JTM Tenmabayashi 39.94 49 P **P** **23 58 17.7 -0.5**
JTM Tenmabayashi 39.94 49 P **P** **23 58 18.9 +0.7**
JTM Tenmabayashi 39.94 49 ⇑P **P** **23 58 17.6 -0.5**
SAUI Saumlaki 40.13 130 P **P** **23 58 19.7 -0.3**
SAUI IAmb IAmb 23 58 40.4
comp=Z,644nm,1.6s
SAUI IAMs_20 IAMs_20 00 17 01.7
comp=Z,29µm,20.0s
SAUI Saumlaki 40.13 130 P **P** **23 58 21.8 +1.8**
JMDO Jabal Madar 40.45 282 P **P** **23 58 23.2 +0.5**
SNR=17
JMDO P **P** **23 58 23.2 +0.5**
SNR=17
JMDO S **S** **00 04 35.9 +4.5**
JMDO S **S** **00 04 35.9 +4.5**
SMDO Samad 40.45 283 P **P** **23 58 24.0 +1.2**
SNR=27
SMDO P **P** **23 58 24.0 +1.2**
SNR=27
SMDO P **P** **23 58 24.0 +1.2**
SNR=27
SMDO S **S** **00 04 35.6 +4.0**
SMDO S **S** **00 04 35.6 +4.0**
SMDO S **S** **00 04 35.6 +4.0**
MHTO MHTO 40.69 280 P **P** **23 58 25.3 +0.7**
SNR=44
MHTO P **P** **23 58 25.3 +0.7**
SNR=44
MHTO P **P** **23 58 25.3 +0.7**
SNR=44
MHTO S **S** **00 04 38.6 +3.6**
MHTO S **S** **00 04 38.6 +3.6**
MHTO S **S** **00 04 38.6 +3.6**
JEW Eniwo 40.95 46 P **P** **23 58 27.3 +0.8**
HOQ Hoqain 41.10 284 P **P** **23 58 28.8 +0.7**
SNR=35
HOQ P **P** **23 58 28.8 +0.7**
SNR=35
HOQ S **S** **00 04 46.3 +5.1**
HOQ S **S** **00 04 46.3 +5.1**
DQM DQM 41.20 278 P **P** **23 58 29.3 +0.4**
SNR=19
DQM S **S** **00 04 44.8 +2.0**
BVAR Borovoye Array 41.22 332 P **P** **23 58 28.7 0.0**
comp=Z,73nm,0.9s,baz=130,slow=9.5,SNR=68
BVAR PcP **PcP** **00 00 27.5 0.0**
comp=Z,25nm,0.8s,baz=128,slow=2.8,SNR=2.5
BVAR S **S** **00 04 44.2 +2.0**
comp=Z,4.1nm,1.1s,baz=116,slow=15,SNR=1.3
BVAR LR LR 00 17 56.3
comp=Z,18µm,19.4s,baz=128,slow=40
comp=Z,73nm,0.9s
BSY Bisya 41.25 283 P **P** **23 58 31.3 +2.0**
SNR=25
BSY P **P** **23 58 31.3 +2.0**
SNR=25
BSY S **S** **00 04 48.5 +5.0**
BSY S **S** **00 04 48.5 +5.0**
GRNR Gornyy 41.74 33 ⇓*i*P **P** **23 58 33.0 +0.1**
GRNR pmax pmax
comp=E,10.0nm,1.1s
GRNR pmax pmax
comp=N,10.0nm,1.2s
GRNR pmax pmax
comp=Z,30nm,1.1s
GRNR MLR MLR
comp=E,21µm,11.0s
GRNR MLR MLR
comp=N,10µm,13.0s
GRNR MLR MLR
comp=Z,28µm,14.0s
SOHO SOHO 41.78 285 P **P** **23 58 35.2 +1.5**
SOHO P **P** **23 58 35.2 +1.5**
SOHO P **P** **23 58 35.2 +1.5**
SOHO S **S** **00 04 53.8 +2.5**
SOHO S **S** **00 04 53.8 +2.5**
SOHO S **S** **00 04 53.8 +2.5**
SOHO SOHO 41.78 285 *i* P **P** **23 58 35.0 +1.4**
SNR=16
ERM Erimo 41.84 48 P **P** **23 58 33.1 -0.7**
ERM Erimo 41.84 48 IAMs_20 IAMs_20 00 16 28.5
comp=Z,33µm,19.0s
ERM Erimo 41.84 48 P **P** **23 58 35.8 +2.0**
ERM Erimo 41.84 48 P **P** **23 58 33.1 -0.7**
ERM pmax pmax
comp=Z,187nm,1.1s
ERM MLR MLR
comp=Z,33µm,19.0s
ERM Erimo 41.84 48 ⇓P **P** **23 58 34.1 +0.3**
JEM Erimo 41.84 48 P **P** **23 58 35.5 +1.7**
ARQ Araqi 41.84 284 P **P** **23 58 35.3 +1.2**
SNR=17
ARQ S **S** **00 04 57.6 +5.4**
BANOM Banah 41.95 287 P **P** **23 58 37.3 +2.3**
BANOM P **P** **23 58 37.3 +2.3**
BANOM P **P** **23 58 37.3 +2.3**
BANOM S **S** **00 04 59.4 +5.6**
BANOM S **S** **00 04 59.4 +5.6**
BANOM S **S** **00 04 59.4 +5.6**
BANOM Banah 41.95 287 *i* P **P** **23 58 37.1 +2.1**
SNR=8.6
MDH Madha 41.96 286 P **P** **23 58 34.9 -0.1**
SNR=6.5
MDH P **P** **23 58 34.9 -0.1**
SNR=6.5

MDH					S		**S**	**00 04 56.6 +2.8**
MDH					S		**S**	**00 04 56.6 +2.8**
MDH	**Madha**	**41.96**	**286**	*i*	P		**P**	**23 58 35.7 +0.7**
	SNR=8.6							
UOSS	**Minazif**	**42.05**	**286**		P		**P**	**23 58 34.6 -1.3**
UOSS	**Minazif**	**42.05**	**286**		P		**P**	**23 58 38.1 +2.3**
UOSS					S		**S**	**00 04 58.3 +3.1**
UOSS	**Minazif**	**42.05**	**286**	⇑	P		**P**	**23 58 37.9 +2.0**
MASF	**Masafi**	**42.08**	**287**		P		**P**	**23 58 38.5 +2.4**
MASF					P		**P**	**23 58 38.5 +2.4**
MASF					S		**S**	**00 04 59.5 +3.8**
MASF					S		**S**	**00 04 59.5 +3.8**
MSFE	**Esma-Masafi**	**42.08**	**287**	*i*	P		**P**	**23 58 37.5 +1.3**
	SNR=7.1							
SHME	**Shamm**	**42.09**	**288**		P		**P**	**23 58 39.0 +2.9**
SHME					P		**P**	**23 58 39.0 +2.9**
SHME					P		**P**	**23 58 39.0 +2.9**
SHME					S		**S**	**00 04 58.1 +2.4**
SHME					S		**S**	**00 04 58.1 +2.4**
SHME					S		**S**	**00 04 58.1 +2.4**
SHME	**Shamm**	**42.09**	**288**	*i*	P		**P**	**23 58 38.0 +1.9**
	SNR=9.0							
HATD	**Hatta, Dubai**	**42.12**	**286**		P		**P**	**23 58 38.2 +1.8**
	SNR=24							
HATD					P		**P**	**23 58 38.2 +1.8**
	SNR=24							
HATD					S		**S**	**00 05 00.4 +4.0**
HATD					S		**S**	**00 05 00.4 +4.0**
HATD	**Hatta, Dubai**	**42.12**	**286**	*i*	P		**P**	**23 58 38.0 +1.6**
	SNR=42							
ASHO	**Ashiyiah**	**42.20**	**286**		P		**P**	**23 58 39.0 +1.9**
	SNR=31							
ASHO					S		**S**	**00 05 00.9 +3.5**
ASHO	**Ashiyiah**	**42.20**	**286**	*i*	P		**P**	**23 58 37.8 +0.8**
	SNR=40							
ASAJ	**Asahikawa**	**42.20**	**45**		P		**P**	**23 58 37.6 +0.8**
	comp=Z,31nm,0.7s,baz=246,slow=3.7,SNR=10							
ASAJ					S		**S**	**00 05 00.5 +3.5**
	comp=Z,2.9nm,0.3s,baz=221,slow=20,SNR=1.1							
	comp=Z,31nm,0.7s							
ASAJ	**Asahikawa**	**42.20**	**45**		P		**P**	**23 58 35.4 -1.4**
ASAJ					pmax		pmax	
	comp=Z,1μm,1.7s							
ASAJ	**Asahikawa**	**42.20**	**45**		P		**P**	**23 58 36.8 0.0**
JKA	**Kamikawa-asahi**	**42.20**	**45**		P		**P**	**23 58 35.4 -1.4**
JWK2	**Keihoku**	**42.22**	**43**		P		**P**	**23 58 38.2 +1.3**
SMPI	**Sarmi**	**42.38**	**116**		P		**P**	**23 58 38.5 -0.1**
	comp=Z,6μmcomp=Z,4μmcomp=Z,168nm,1.7s							
ALNE	**Al Ain**	**42.50**	**285**		P		**P**	**23 58 41.2 +1.7**
	SNR=22							
ALNE					P		**P**	**23 58 41.2 +1.7**
	SNR=22							
ALNE					P		**P**	**23 58 41.2 +1.7**
	SNR=22							
ALNE					S		**S**	**00 05 04.9 +2.9**
ALNE					S		**S**	**00 05 04.9 +2.9**
ALNE					S		**S**	**00 05 04.9 +2.9**
ALNE	**Al Ain**	**42.50**	**285**	*i*	P		**P**	**23 58 40.1 +0.5**
	SNR=22							
NAZ	**Nazwa, Dubai**	**42.54**	**286**		P		**P**	**23 58 41.4 +1.5**
	SNR=12							
NAZ					P		**P**	**23 58 41.4 +1.5**
	SNR=12							
NAZ					S		**S**	**00 05 05.7 +3.2**
NAZ					S		**S**	**00 05 05.7 +3.2**
NAZ	**Nazwa, Dubai**	**42.54**	**286**	*i*	P		**P**	**23 58 41.3 +1.5**
	SNR=22							
FAQ	**Al Faqa, Dubai**	**42.62**	**286**		P		**P**	**23 58 43.4 +3.0**
	SNR=9.1							
FAQ					P		**P**	**23 58 43.4 +3.0**
	SNR=9.1							
FAQ					S		**S**	**00 05 06.8 +3.2**
FAQ					S		**S**	**00 05 06.8 +3.2**
FAQ	**Al Faqa, Dubai**	**42.62**	**286**	*i*	P		**P**	**23 58 41.6 +1.1**
	SNR=15							
ASUD	**Al Ashush, Dub**	**42.86**	**286**		P		**P**	**23 58 44.4 +1.9**
	SNR=11							
ASUD					P		**P**	**23 58 44.4 +1.9**
	SNR=11							
ASUD					P		**P**	**23 58 44.4 +1.9**
	SNR=11							
ASUD					S		**S**	**00 05 12.6 +5.4**
ASUD					S		**S**	**00 05 12.6 +5.4**
ASUD					S		**S**	**00 05 12.6 +5.4**
ASUD	**Al Ashush, Dub**	**42.86**	**286**	*i*	P		**P**	**23 58 43.8 +1.4**
	SNR=12							
AUDHS	**Darwin High Sc**	**42.94**	**135**		P		**P**	**23 58 42.0 -1.1**
DRS	**Darwin Rock St**	**42.98**	**135**		P		**P**	**23 58 43.4 0.0**
UMZA	**Um Al Zommool**	**43.13**	**283**		P		**P**	**23 58 45.0 +0.4**
UMZA					P		**P**	**23 58 45.0 +0.4**
UMZA					P		**P**	**23 58 45.0 +0.4**
UMZA					S		**S**	**00 05 12.4 +1.3**
UMZA					S		**S**	**00 05 12.4 +1.3**
UMZA					S		**S**	**00 05 12.4 +1.3**
AJN	**Ajban**	**43.17**	**285**		P		**P**	**23 58 46.0 +1.0**
AJN					P		**P**	**23 58 46.0 +1.0**
AJN					S		**S**	**00 05 15.1 +3.3**
AJN					S		**S**	**00 05 15.1 +3.3**
SHAO	**Shalim**	**43.27**	**276**		P		**P**	**23 58 46.9 +1.0**
SHAO					P		**P**	**23 58 46.9 +1.0**
SHAO					S		**S**	**00 05 17.0 +3.7**
SHAO					S		**S**	**00 05 17.0 +3.7**
SHAO	**Shalim**	**43.27**	**276**	*i*	P		**P**	**23 58 47.2 +1.4**
	SNR=7.4							
MTN	**Manton Dam**	**43.44**	**135**		P		**P**	**23 58 48.6 +1.5**
	comp=Z,37nm,1.1s,comp=Z,0.0nm							
MTN	**Manton Dam**	**43.44**	**135**		P		**P**	**23 58 45.6 -1.4**
YSS	**Yuzhno-Sakhali**	**43.44**	**41**		P		**P**	**23 58 46.5 -0.3**
YSS	**Yuzhno-Sakhali**	**43.44**	**41**		P		**P**	**23 58 47.5 +0.7**
YSS	**Yuzhno-Sakhali**	**43.44**	**41**	*ke*	P		**P**	**23 58 47.1 +0.3**
YSS				*e*	*SP		**sP**	**23 58 50.6 -0.9**
YSS				*e*				00 00 28.4
YSS				*e*				00 00 34.4
YSS				*e*	S		**S**	**00 05 13.4 -1.6**
YSS				*e*	SS		**SnSn**	**00 08 46.1 -0.9**
YSS					pmax		pmax	
	comp=Z,110nm,1.2s							
YSS					pmax		pmax	
	comp=N,30nm,1.1s							
YSS					pmax		pmax	
	comp=E,40nm,1.2s							
YSS					pmax		pmax	
	comp=Z,2μm,3.8s							
YSS					smax		smax	
	comp=N,3μm,13.5s							
YSS					smax		smax	
	comp=E,3μm,12.8s							
YSS					MLR		MLR	
	comp=N,19μm,15.0s							
YSS					MLR		MLR	
	comp=Z,27μm,15.0s							
YSS					MLR		MLR	
	comp=E,30μm,14.0s							
GIRL	**Giralia**	**43.66**	**163**		P		**P**	**23 58 50.3 +1.5**
	comp=Z,186nm,1.2s,comp=Z,0.0nm							
GIRL	**Giralia**	**43.66**	**163**		P		**P**	**23 58 47.9 -0.9**
GIRL					IAmb		IAmb	23 58 54.9
	comp=Z,590nm,1.5s							
GENI	**Genyem**	**43.94**	**116**		P		**P**	**23 58 51.7 +0.5**
GENI	**Genyem**	**43.94**	**116**		P		**P**	**23 58 50.5 -0.7**
	comp=Z,6μmcomp=Z,5μmcomp=Z,292nm,1.1s							
DMTO	**DMTO**	**43.96**	**276**		P		**P**	**23 58 53.1 +1.7**
DMTO					P		**P**	**23 58 53.1 +1.7**
DMTO					P		**P**	**23 58 53.1 +1.7**
DMTO					S		**S**	**00 05 26.9 +3.5**
DMTO					S		**S**	**00 05 26.9 +3.5**
DMTO					S		**S**	**00 05 26.9 +3.5**
UGL	**Uglegorsk**	**43.96**	**38**	⇓	*eP		**P**	**23 58 51.8 +0.9**
UGL				*e*				00 00 38.3
UGL				*e*	S		**S**	**00 05 21.2 -1.4**
UGL				*e*	SS		**ScS**	**00 08 50.5 +0.5**
UGL					pmax		pmax	
	comp=Z,4μm,6.2s							
UGL					pmax		pmax	
	comp=Z,574nm,1.4s							
UGL					smax		smax	
	comp=N,4μm,15.0s							
UGL					smax		smax	
	comp=E,4μm,15.0s							
UGL					pmax		pmax	
	comp=Z,33μm,11.0s							
UGL					pmax		pmax	
	comp=N,21μm,10.0s							
UGL					pmax		pmax	
	comp=E,35μm,10.0s							
KNRA	**Kununurra**	**44.07**	**140**		P		**P**	**23 58 52.0 -0.1**
	comp=Z,133nm,1.1s,comp=Z,0.0nm							
KNRA	**Kununurra**	**44.07**	**140**		P		**P**	**23 58 51.3 -0.8**
MBWA	**Marble Bar**	**44.16**	**155**		P		**P**	**23 58 53.0 +0.2**
	comp=Z,244nm,1.6s,comp=Z,0.0nm							
MBWA	**Marble Bar**	**44.16**	**155**		P		**P**	**23 58 52.7 -0.1**
MBWA					IAmb		IAmb	23 58 58.8
	comp=Z,327nm,1.2s							
MBWA	**Marble Bar**	**44.16**	**155**		P		**P**	**23 58 52.9 +0.2**
MBWA					P		**P**	**23 58 52.9 +0.2**
MBWA					S		**S**	**00 05 22.9 -3.0**
MBWA					S		**S**	**00 05 22.9 -3.0**
MBWA	**Marble Bar**	**44.16**	**155**		P		**P**	**23 58 53.1 +0.3**
MBWA	**Marble Bar**	**44.16**	**155**	⇓	P		**P**	**23 58 53.0 +0.2**
KDU	**Kakadu**	**44.23**	**134**		P		**P**	**23 58 51.8 -1.6**
MZWR	**Madinat Zayed**	**44.23**	**284**		P		**P**	**23 58 54.4 +0.9**
MZWR					P		**P**	**23 58 54.4 +0.9**
FITZ	**Fitzroy Crossi**	**44.25**	**146**		P		**P**	**23 58 53.2 -0.4**
	comp=Z,29nm,1.7s							
FITZ	**Fitzroy Crossi**	**44.25**	**146**		LR		LR	00 21 41.3
	comp=Z,16μm,18.1s,baz=320,slow=42							
FITZ	**Fitzroy Crossi**	**44.25**	**146**		P		**P**	**23 58 53.1 -0.4**
FITZ	**Fitzroy Crossi**	**44.25**	**146**		P		**P**	**23 58 53.2 -0.4**
JAY	**Jayapura**	**44.35**	**115**		LR		LR	00 17 51.2
	comp=Z,10μm,18.9s,baz=302,slow=37							
JAY	**Jayapura**	**44.35**	**115**		P		**P**	**23 58 54.5 -0.1**
	comp=Z,88nm,1.2s							
YUK	**Yuzh-Kuril'sk**	**44.37**	**46**	*e*	P		**P**	**23 58 53.6 -0.7**
YUK				*e*				00 00 37.5
YUK				*e*	PPP		PPP	00 01 12.6
YUK					S		**S**	**00 05 24.9 -3.9**
YUK				*e*	SS		**SS**	**00 08 45.0 -2.5**
YUK					pmax		pmax	
	comp=N,463nm,1.2s							
YUK					pmax		pmax	
	comp=Z,1μm,1.2s							
YUK					pmax		pmax	
	comp=E,818nm,1.1s							
YUK					MLR		MLR	
	comp=Z,28μm,15.0s							
YUK					MLR		MLR	
	comp=N,23μm,19.0s							
YUK					MLR		MLR	
	comp=E,20μm,14.0s							
AB31	**Akbulak array**	**44.49**	**322**		P		**P**	**23 58 55.1 -0.1**
ABKAR	**Akbulak array**	**44.49**	**322**		P		**P**	**23 58 55.1 -0.2**
PSAC1	**Pilbara Seismi**	**44.52**	**155**		P		**P**	**23 58 56.1 +0.4**
	comp=Z,330nm,1.3s							
PSA00	**Pilbara Seismi**	**44.57**	**155**		P		**P**	**23 58 56.5 +0.4**
	comp=Z,303nm,1.3s							
PSA00	**Pilbara Seismi**	**44.57**	**155**		P		**P**	**23 58 56.1 0.0**
PSA00					IAmb		IAmb	23 59 02.2
	comp=Z,335nm,1.2s							
PSA00	**Pilbara Seismi**	**44.57**	**155**		P		**P**	**23 58 55.4 -0.7**
PSA00					IAmb		IAmb	23 59 02.2
	comp=Z,320nm,1.1s							
PSA00	**Pilbara Seismi**	**44.57**	**155**		P		**P**	**23 58 57.0 +0.9**
DOK	**Doka**	**44.58**	**277**		P		**P**	**23 58 56.9 +0.6**
	SNR=28							
DOK					P		**P**	**23 58 56.9 +0.6**
	SNR=28							
DOK					P		**P**	**23 58 56.9 +0.6**
	SNR=28							
MZR	**Muzera**	**44.65**	**283**		P		**P**	**23 58 57.6 +0.7**
	SNR=11							
MZR	**Muzera**	**44.65**	**283**	*i*	P		**P**	**23 58 56.8 -0.1**
	SNR=13							
RBK	**Rabkut**	**44.69**	**276**		P		**P**	**23 58 58.1 +0.8**
	SNR=39							
RBK					P		**P**	**23 58 58.1 +0.8**
	SNR=39							
RBK					P		**P**	**23 58 58.1 +0.8**
	SNR=39							
WHFO	**Wadi Hawf**	**45.03**	**276**		P		**P**	**23 58 59.6 -0.3**
	SNR=20							
WHFO					P		**P**	**23 58 59.6 -0.3**
	SNR=20							
WHFO					P		**P**	**23 58 59.6 -0.3**
	SNR=20							
TYV	**Tymovskoe**	**45.14**	**36**	*e*	P		**P**	**23 59 00.7 +0.4**
TYV				*e*	S		**S**	**00 05 41.3 +1.6**
TYV					pmax		pmax	
	comp=Z,111nm,1.3s							
TYV					pmax		pmax	
	comp=Z,1μm,3.4s							
TYV					smax		smax	
	comp=N,1μm,4.6s							
TYV					smax		smax	
	comp=E,2μm,4.6s							
TYV					smax		smax	
	comp=N,26nm,2.0s							
TYV					smax		smax	
	comp=E,23nm,2.0s							
ABTO	**Aybut**	**45.57**	**276**		P		**P**	**23 59 04.7 +0.4**
	SNR=34							
ABTO					P		**P**	**23 59 04.7 +0.4**
	SNR=34							
KUR	**Kuril'sk**	**46.11**	**45**	*de*	P		**P**	**23 59 07.1 -1.0**
KUR					pmax		pmax	
	comp=Z,688nm,1.1s							
KUR					MLR		MLR	
	comp=Z,18μm,16.0s							
AKTO	**Aktyubinsk**	**46.14**	**322**		LR		LR	00 21 55.6
	comp=Z,14μm,22.0s,baz=121,slow=41							
TRNA	**Turayna**	**46.59**	**286**		P		**P**	**23 59 12.9 +0.7**
	SNR=5.3							
SHMA	**Al-Shehemyia**	**46.75**	**288**		P		**P**	**23 59 13.3 -0.1**
	SNR=5.0							
YAK	**Yakutsk**	**46.89**	**18**		P		**P**	**23 59 13.4 -0.5**
	comp=Z,156nm,1.0s,baz=225,slow=10.0,SNR=34							
YAK					S		**S**	**00 06 05.9 +1.4**
	comp=Z,14nm,0.5s,baz=219,slow=6.5,SNR=1.8							
YAK					LR		LR	00 20 50.3
	comp=Z,16μm,18.7s,baz=210,slow=39							
	comp=Z,156nm,1.0s							
YAK	**Yakutsk**	**46.89**	**18**		P		**P**	**23 59 13.2 -0.7**
YAK	**Yakutsk**	**46.89**	**18**		IAMs_20		IAMs_20	00 20 33.1
	comp=Z,25μm,18.0s							
YAK	**Yakutsk**	**46.89**	**18**	*d*	P		**P**	**23 59 12.9 -1.0**
YAK					*PP		**sP**	**23 59 22.5 +3.6**
YAK				*e*				00 00 45.9
YAK				*e*				00 01 02.4
YAK				*e*	PPP		PPP	00 01 45.7
YAK					S		**S**	**00 06 00.9 -3.6**
YAK					*SS		sS	00 06 21.5 +11
YAK				*e*				00 09 01.5
YAK				*e*	SS		**SS**	**00 09 28.8 -2.2**
YAK				*e*	SSS		SSS	00 10 27.5
YAK					pmax		pmax	
	comp=Z,286nm,1.5s							
YAK					pmax		pmax	
	comp=N,129nm,1.2s							
YAK					pmax		pmax	
	comp=E,139nm,1.0s							
YAK					pmax		pmax	
	comp=Z,1μm,8.4s							
YAK					pmax		pmax	
	comp=N,540nm,4.0s							
YAK					pmax		pmax	
	comp=E,377nm,3.5s							
YAK					smax		smax	
	comp=N,767nm,5.7s							
YAK					smax		smax	
	comp=E,598nm,6.1s							
YAK					MLR		MLR	
	comp=Z,26μm,23.0s							
YAK					MLR		MLR	
	comp=N,15μm,17.0s							
YAK					MLR		MLR	
	comp=E,15μm,18.0s							
YAK	**Yakutsk**	**46.89**	**18**	⇓	P		**P**	**23 59 13.6 -0.3**
SMRA	**Abu-Samra**	**46.95**	**286**		P		**P**	**23 59 15.3 +0.3**
	SNR=9.9							
SVE	**Sverdlovsk**	**47.99**	**331**	*c*	P		**P**	**23 59 23.3 +0.7**
SVE				*e*				00 01 16.5
SVE				*i*	S		**S**	**00 06 23.8 +3.4**
SVE					pmax		pmax	
	comp=Z,323nm,1.3s							
SVE					MLR		MLR	
	comp=Z,13μm,14.0s							
MEEK	**Meekatharra**	**48.75**	**159**		P		**P**	**23 59 29.5 +0.7**
	comp=Z,208nm,1.5s,comp=Z,0.0nm							
MEEK	**Meekatharra**	**48.75**	**159**		P		**P**	**23 59 30.0 +1.2**
ARTI	**Arti**	**48.80**	**330**		LR		LR	00 21 37.8
	comp=Z,16μm,19.5s,baz=123,slow=38							
ARTI	**Arti**	**48.80**	**330**		P		**P**	**23 59 28.5 -0.4**
ARTI					IAmb		IAmb	23 59 34.3
	comp=Z,238nm,1.1s							
ARTI	**Arti**	**48.80**	**330**	*d*	P		**P**	**23 59 28.8 -0.1**
ARTI								00 00 51.2
ARTI								00 01 21.8
ARTI					PPP		PPP	00 02 14.2
ARTI					S		**S**	**00 06 33.1 +1.2**
ARTI								00 09 21.1
ARTI					pmax		pmax	
	comp=Z,192nm,1.1s							
ARTI					MLR		MLR	
	comp=Z,18μm,16.0s							
ARTI	**Arti**	**48.80**	**330**	⇓	P		**P**	**23 59 28.8 -0.1**
LKRN	**Lenkeran, Azer**	**49.13**	**305**		P		**P**	**23 59 33.8 +2.1**
MANU	**Manus Island**	**49.93**	**110**		P		**P**	**23 59 37.0 -1.1**
MORW	**Morawa**	**50.25**	**163**		P		**P**	**23 59 41.5 +1.3**
	comp=Z,349nm,1.2s							
MORW	**Morawa**	**50.25**	**163**		P		**P**	**23 59 40.2 0.0**
MORW	**Morawa**	**50.25**	**163**		P		**P**	**23 59 41.8 +1.6**
MORW	**Morawa**	**50.25**	**163**	⇓	P		**P**	**23 59 41.3 +1.1**
AKT	**Akhty**	**50.33**	**308**	*e*	P		**P**	**23 59 38.4 -2.5**
AKT				*e*				00 00 54.7
AKT				*e*				00 01 35.4
AKT				*e*	S		**S**	**00 06 52.6 -1.3**
AKT				*e*				00 09 28.4
AKT				*e*	SS		**SS**	**00 10 27.6 +0.1**
AKT					pmax		pmax	
	comp=Z,382nm,1.1s							
WB0	**Warramunga Arr**	**50.64**	**138**		P		**P**	**23 59 42.8 -0.6**
WB0					IAmb		IAmb	23 59 49.1
	comp=Z,223nm,1.2s							
SEKA	**Sheki**	**50.68**	**308**		P		**P**	**23 59 44.1 +0.6**
MNGR	**Mingechevir, A**	**50.70**	**307**		P		**P**	**23 59 44.8 +1.2**
WRA	**Warramunga Arr**	**50.73**	**139**		P		**P**	**23 59 43.4 -0.6**
	comp=Z,37nm,0.8s,baz=318,slow=7.4,SNR=108							
WRA					PcP		**PcP**	**00 01 03.4 +2.2**
	comp=Z,29nm,1.0s,baz=322,slow=3.6,SNR=6.1							
WRA					S		**S**	**00 06 58.5 -1.2**
	comp=Z,1.8nm,1.1s,baz=320,slow=8.4,SNR=1.5							
WRA					LR		LR	00 25 46.5
	comp=Z,8μm,18.3s,baz=329,slow=42							
WRA					PKPPKP			00 30 28.8
	comp=Z,1.2nm,0.8s,baz=141,slow=1.4,SNR=5.1							
	comp=Z,37nm,0.8s							
WRA	**Warramunga Arr**	**50.73**	**139**	*i*	P		**P**	**23 59 43.7 -0.4**
WRA					pmax		pmax	
	comp=Z,42nm,0.8s							
WRAB	**Tennant Creek**	**50.73**	**139**		P		**P**	**23 59 43.6 -0.5**
WRAB	**Tennant Creek**	**50.73**	**139**	*de*	P		**P**	**23 59 44.2 +0.1**
WRAB					pmax		pmax	
	comp=Z,291nm,1.7s							
WRAB					MLR		MLR	
	comp=Z,8μm,18.0s							
MAK	**Makhachkala**	**50.74**	**310**	*c*	P		**P**	**23 59 41.2 -2.6**
MAK				*e*				00 01 37.3
MAK				*e*	PPP		PPP	00 02 35.4
MAK				*e*	S		**S**	**00 06 55.5 -3.8**
MAK				*e*	SS		**SS**	**00 10 30.0 -3.6**
MAK				*e*	SSS		SSS	00 11 59.0
MAK					pmax		pmax	
	comp=Z,800nm,1.7s							
MAK					MLR		MLR	
	comp=Z,20μm,16.0s							
GANJ	**Ganja**	**51.26**	**307**		P		**P**	**23 59 48.6 +0.7**
WRKA	**Warakurna**	**51.37**	**148**		P		**P**	**23 59 49.6 +0.8**
	comp=Z,95nm,1.1s,comp=Z,0.0nm							
NAX	**Nakhchivan**	**51.73**	**305**		P		**P**	**23 59 51.8 +0.3**
BLDU	**Ballidu**	**51.89**	**163**		P		**P**	**23 59 53.6 +1.1**
	comp=Z,123nm,1.1s							
BLDU	**Ballidu**	**51.89**	**163**		P		**P**	**23 59 54.3 +1.8**
GNI	**Garni**	**52.41**	**306**		LR		LR	00 26 06.3
	comp=Z,9μm,21.7s,baz=117,slow=40							
GNI	**Garni**	**52.41**	**306**		P		**P**	**23 59 56.4 -0.2**
GNI	**Garni**	**52.41**	**306**		P		**P**	**23 59 58.2 +1.6**
GNI					P		**P**	**23 59 58.2 +1.6**
GNI					P		**P**	**23 59 58.2 +1.6**
GNI	**Garni**	**52.41**	**306**		P		**P**	**23 59 57.7 +1.1**
GNI	**Garni**	**52.41**	**306**	*d*	P		**P**	**23 59 57.9 +1.3**
GNI					pmax		pmax	
	comp=Z,452nm,1.7s							
GNI					MLR		MLR	
	comp=Z,7μm,19.0s							
GNI	**Garni**	**52.41**	**306**	⇓	P		**P**	**23 59 57.9 +1.3**
COEN	**Coen**	**52.85**	**126**		P		**P**	**23 59 59.3 -0.6**
	comp=Z,46nm,1.0s,comp=Z,0.0nm							
COEN	**Coen**	**52.85**	**126**		P		**P**	**23 59 59.0 -0.9**
COEN	**Coen**	**52.85**	**126**		P		**P**	**23 59 59.8 -0.1**
COEN	**Coen**	**52.85**	**126**	⇑	P		**P**	**23 59 59.8 -0.1**
BELG	**Belogornoye**	**52.90**	**322**		LR		LR	00 25 36.0
	comp=Z,15μm,19.3s,baz=111,slow=40							
BELG	**Belogornoye**	**52.90**	**322**	*d*	P		**P**	**23 59 59.3 -0.5**
BELG					pmax		pmax	
	comp=Z,31nm,1.1s							
BELG					MLR		MLR	
	comp=Z,2μm,20.0s							
SKR	**Severo-Kuril's**	**53.00**	**41**	*e*	P		P	23 59 44.8 -16
SKR				*e*	S		**S**	**00 07 32.6 +2.5**
SKR					pmax		pmax	
	comp=Z,4μm,5.8s							
SKR					smax		smax	
	comp=E,7μm,5.0s							
SKR					smax		smax	
	comp=N,3μm,7.3s							
SKR					MLR		MLR	
	comp=Z,13μm,15.0s							
AUMAZ	**Mazenod Senior**	**53.04**	**164**		P		**P**	**00 00 03.2 +2.2**
MUN	**Mundaring**	**53.05**	**164**		P		**P**	**00 00 02.6 +1.5**
	comp=Z,277nm,1.2s							
MUN	**Mundaring**	**53.05**	**164**		P		**P**	**00 00 03.2 +2.1**
KLBR	**Kellerberrin**	**53.11**	**163**		P		**P**	**00 00 03.1 +1.6**
	comp=Z,275nm,1.0s							
KLBR	**Kellerberrin**	**53.11**	**163**		P		**P**	**00 00 03.1 +1.6**
AS31	**Alice Springs**	**53.30**	**142**		P		**P**	**00 00 02.8 -0.4**
ASAR	**Alice Springs**	**53.30**	**142**		P		**P**	**00 00 02.5 -0.6**
	comp=Z,33nm,0.7s,baz=320,slow=7.0,SNR=134							
ASAR					PcP		**PcP**	**00 01 12.9 +2.1**
	comp=Z,28nm,0.8s,baz=321,slow=3.9,SNR=5.9							
ASAR					S		**S**	**00 07 36.1 +1.2**
	comp=Z,1.9nm,1.1s,baz=306,slow=11,SNR=2.8							
ASAR					LR		LR	00 27 24.4
	comp=Z,11μm,19.0s,baz=314,slow=41							
	comp=Z,33nm,0.7s							
ASAR	**Alice Springs**	**53.30**	**142**		P		**P**	**00 00 02.8 -0.3**
AUALC	**St Philip's Co**	**53.30**	**142**		P		**P**	**00 00 03.4 +0.2**
MA2	**Magadan**	**53.32**	**29**		P		**P**	**00 00 02.2 -0.6**
	comp=Z,181nm,1.2s,baz=253,slow=8.1,SNR=12							
MA2					S		**S**	**00 07 39.0 +4.7**
	comp=Z,11nm,0.7s,baz=252,slow=20,SNR=1.6							
	comp=Z,181nm,1.2s							
MA2	**Magadan**	**53.32**	**29**		P		**P**	**00 00 02.9 +0.1**
MA2	**Magadan**	**53.32**	**29**		P		**P**	**00 00 03.7 +0.9**
MA2	**Magadan**	**53.32**	**29**	⇑	P		**P**	**00 00 03.4 +0.6**
PMG	**Port Moresby**	**53.42**	**118**		LR		LR	00 26 22.0
	comp=Z,3μm,18.8s,baz=278,slow=40							
**PM

NWAO P P 00 00 11.0 +1.3
NWAO Narrogin (SRO) 54.22 164 P P 00 00 11.8 +2.1
NWAO Narrogin (SRO) 54.22 164 P P 00 00 10.3 +0.6
NWAO pmax pmax
comp=Z,201nm,1.0s
KIV Kislovodsk 54.35 311 P P 00 00 10.7 -0.1
KIV IAMs_20 IAMs_20 00 27 21.2
comp=Z,16µm,20.0s
KIV Kislovodsk 54.35 311 P P 00 00 10.9 +0.1
KIV P P 00 00 10.9 +0.1
KIV P P 00 00 10.9 +0.1
KIV Kislovodsk 54.35 311 *i* P P 00 00 09.9 -0.9
SNR=146
KIV Kislovodsk 54.35 311 ⇓P P 00 00 11.0 +0.1
GURO Guroymak-BITLI 54.38 304 P P 00 00 11.8 +0.6
GURO Guroymak-BITLI 54.38 304 ⇓P P 00 00 12.2 +1.1
PETK Petropavlovsk- 54.59 38 P P 00 00 10.4 -1.8
comp=Z,14nm,0.9s,baz=239,slow=8.2,SNR=8.3
PETK S S 00 07 56.3 +4.6
comp=Z,2.8nm,1.0s,baz=238,slow=22,SNR=1.0
PETK LR LR 00 23 51.2
comp=Z,16µm,20.0s,baz=235,slow=36
comp=Z,14nm,0.9s
PETK Petropavlovsk- 54.59 38 P P 00 00 10.5 -1.7
QIS Mount Isa 54.59 135 P P 00 00 12.8 +0.2
comp=Z,162nm,1.4s,comp=Z,0.0nm
QIS Mount Isa 54.59 135 P P 00 00 12.6 0.0
TIXI Tiksi 54.63 10 LR LR 00 25 42.4
comp=Z,49µm,18.2s,baz=225,slow=38
TIXI Tiksi 54.63 10 P P 00 00 11.1 -1.1
TIXI Tiksi 54.63 10 P P 00 00 11.1 -1.1
TIXI pmax pmax
comp=Z,494nm,1.4s
TIXI MLR MLR
comp=Z,35µm,18.0s
TIXI Tiksi 54.63 10 ⇑P P 00 00 11.2 -0.9
PET Petropavlovsk 55.12 38 P P 00 00 15.2 -0.8
PET IAmb IAmb 00 00 23.7
comp=Z,290nm,1.5s
PET IAMs_20 IAMs_20 00 23 27.0
comp=Z,20µm,19.0s
PET Petropavlovsk 55.12 38 P P 00 00 17.7 +1.7
RABL Rabaul 55.16 110 P P 00 00 17.1 +0.1
MARD Mardin 55.33 302 P P 00 00 18.2 +0.2
H01W3 Cape Leeuwin H 55.36 167 P P 00 00 19.5 +2.0
baz=350,slow=6.8,SNR=11
H01W1 Cape Leeuwin H 55.37 167 P P 00 00 19.6 +2.0
baz=350,slow=6.8,SNR=7.7
H01W2 Cape Leeuwin H 55.37 167 P P 00 00 19.6 +2.0
baz=350,slow=6.8,SNR=16
SEY Seymchan 55.54 26 LR LR 00 27 33.4
comp=Z,14µm,19.7s,baz=222,slow=40
KOPT Kop Dagi 55.64 306 P P 00 00 19.6 -0.8
KOPT IAmb IAmb 00 00 40.5
comp=Z,210nm,1.3s
RKGY Rocky Gully 55.75 164 P P 00 00 22.3 +1.6
FORT Forrest 56.12 152 P P 00 00 25.3 +1.9
comp=Z,80nm,1.1s,comp=Z,0.0nm
FORT Forrest 56.12 152 P P 00 00 23.5 +0.1
MTSU Mount Surprise 56.30 129 P P 00 00 25.4 +0.4
comp=Z,16nm,1.1s
MTSU Mount Surprise 56.30 129 P P 00 00 25.8 +0.8
AUALB St Joseph's Co 56.36 164 P P 00 00 27.6 +2.6
ATD Arta Tunnel 56.74 271 P P 00 00 27.7 -0.6
comp=Z,1.5nm,1.1s,baz=79,slow=4.9,SNR=8.5
ATD S S 00 08 25.4 +3.8
comp=Z,0.2nm,0.9s,baz=60,slow=20,SNR=1.4
ATD LR LR 00 24 02.1
comp=Z,291nm,21.5s,baz=72,slow=35
ATD Arta Tunnel 56.74 271 P P 00 00 27.4 -0.9
ATD Arta Tunnel 56.74 271 P P 00 00 30.0 +1.7
SNR=17
ATD Arta Tunnel 56.74 271 ⇑P P 00 00 29.0 +0.7
ARPR Arapgir-MALATY 57.28 304 P P 00 00 32.3 +0.4
GAZ Gaziantep 58.18 302 P P 00 00 38.0 -0.1
ASF Jabal al Asfar 58.68 296 LR LR 00 32 28.1
comp=Z,9µm,18.9s,baz=92,slow=43
TOKA Tokat 58.73 306 P P 00 00 42.2 +0.3
TOKA IAmb IAmb 00 00 46.6
comp=Z,146nm,1.2s
TV1H Townsville Har 58.83 128 P P 00 00 43.8 +1.0
FKH Fakeheh 58.94 299 *eP* P 00 00 44.4 +0.8
CTA Charters Tower 58.95 129 LR LR 00 29 06.1
comp=Z,173nm,20.0s,baz=282,slow=39
CTA Charters Tower 58.95 129 P P 00 00 44.4 +0.8
CTAO Charters Tower 58.95 129 P P 00 00 44.1 +0.5
CTAO Charters Tower 58.95 129 P P 00 00 44.4 +0.8
CTAO Charters Tower 58.95 129 P P 00 00 44.1 +0.5
CTAO pmax pmax
comp=Z,292nm,1.6s
CTAO MLR MLR
comp=Z,8µm,20.0s
CTAO Charters Tower 58.95 129 ⇑P P 00 00 43.3 -0.3
BEIL Beino 59.11 299 *eP* P 00 00 44.7 0.0
BNN Bunyan 59.23 304 P P 00 00 45.1 -0.4
BNN IAmb IAmb 00 00 53.2
comp=Z,228nm,1.4s
HWQ Hawqa 59.33 299 *eP* P 00 00 46.8 +0.5
ZAHL Zahle 59.40 298 *eP* P 00 00 47.7 +0.9
RCY Rachaya 59.47 298 *eP* P 00 00 48.1 +0.8
SHBL Chebaa 59.56 298 *eP* P 00 00 48.8 +0.9
BHL Bhannes 59.59 298 *eP* P 00 00 48.7 +0.6
QRWL Qaraoun 59.59 298 *eP* P 00 00 48.8 +0.7
GEM Giv'at Ha'Em 59.63 298 ⇓P P 00 00 49.1 +0.8
DQRL Deir Qamar 59.67 298 *eP* P 00 00 49.7 +1.0
BALJ Balqa 59.75 296 P P 00 00 49.2 +0.2
MMAI Mount Meron Ar 59.87 297 P P 00 00 50.7 +0.7
comp=Z,31nm,0.9s,baz=91,slow=5.8,SNR=33
MMAI S S 00 09 03.8 +1.7
comp=Z,0.7nm,0.7s,baz=116,slow=3.4,SNR=1.3
MMAI LR LR 00 33 00.7
comp=Z,9µm,18.3s,baz=95,slow=42
comp=Z,31nm,0.9s
GHAJ Ghor Haditha 59.88 295 P P 00 00 50.3 +0.4
OBN Obninsk 59.91 323 LR LR 00 29 09.0
comp=Z,17µm,21.1s,baz=34,slow=38
OBN Obninsk 59.91 323 P P 00 00 49.1 -0.6
OBN IAMs_20 IAMs_20 00 28 56.8
comp=Z,18µm,21.0s
OBN Obninsk 59.91 323 ⇓P P 00 00 48.9 -0.9
OBN Obninsk 59.91 323 ⇓P P 00 00 49.2 -0.6
SALP Salfit 60.13 296 ⇓P P 00 00 52.6 +0.9
AMAZ Amatzia 60.41 296 ⇓P P 00 00 54.5 +0.8
INKA Innaminka 60.42 140 P P 00 00 53.9 +0.4
EIL Elat 60.58 294 LR LR 00 33 33.8
comp=Z,14µm,18.7s,baz=94,slow=42
BZK Bozkurt 60.60 308 P P 00 00 54.3 -0.4
BZK IAmb IAmb 00 01 11.0
comp=Z,132nm,1.0s
KIRS Kirsehir-Merke 60.72 305 ⇑P P 00 00 55.4 -0.4
ILGA Ilgaz 60.82 307 P P 00 00 56.7 +0.1
BR131 Keskin Array S 60.92 305 P P 00 00 56.4 -0.8
BR131 Keskin Array S 60.92 305 P P 00 00 56.7 -0.4
SNR=50
BR131 P P 00 00 56.7 -0.4
SNR=50
BR131 P P 00 00 56.7 -0.4
SNR=50
BR131 Keskin Array S 60.92 305 P P 00 00 56.4 -0.8
BR131 pmax pmax
comp=Z,407nm,2.0s
BRTR Keskin Array B 60.92 305 P P 00 00 56.2 -0.9
comp=Z,6.8nm,0.7s,baz=116,slow=5.6,SNR=41
BRTR S S 00 09 17.7 +2.3
comp=Z,0.4nm,0.7s,baz=99,slow=27,SNR=2.1
BRTR PKP2bc **P'P'bc** 00 30 22.6 -5.9
comp=Z,0.4nm,0.6s,baz=248,slow=1.6,SNR=3.8
BRTR LR LR 00 33 10.7
comp=Z,5µm,20.2s,baz=94,slow=42
comp=Z,6.8nm,0.7s
BRTR Keskin Array B 60.92 305 P P 00 00 56.4 -0.8
KZIT Kziot 60.92 295 ⇑P P 00 00 57.6 +0.5
CSS Mathiatis 61.43 300 P P 00 00 59.5 -1.0
CSS Mathiatis 61.43 300 ⇓P P 00 01 00.1 -0.4
ANTO Ankara 61.56 305 P P 00 01 00.8 -0.6
ANTO IAmb IAmb 00 01 04.5
comp=Z,186nm,1.6s
ANTO Ankara 61.56 305 ⇓P P 00 01 00.8 -0.6
ANTO Ankara 61.56 305 P P 00 01 00.9 -0.6
ANTO pmax pmax
comp=Z,186nm,1.6s
ANTO Ankara 61.56 305 ⇓P P 00 01 01.2 -0.2
BBOO Buckleboo 61.62 147 P P 00 01 03.6 +1.9
BBOO Buckleboo 61.62 147 P P 00 01 01.5 -0.2
BBOO IAmb IAmb 00 01 05.7
comp=Z,288nm,1.8s
BBOO Buckleboo 61.62 147 P P 00 01 03.9 +2.2
QLP Quilpie 61.81 136 P P 00 01 04.3 +1.3
comp=Z,298nm,1.8s
QLP Quilpie 61.81 136 P P 00 01 04.5 +1.5
QLP Quilpie 61.81 136 ⇓P P 00 01 03.5 +0.4
WHYH Whyalla 62.59 146 P P 00 01 10.3 +2.2
MDUB Mudurnu 62.76 306 P P 00 01 08.8 -0.7
MDUB IAmb IAmb 00 01 21.1
comp=Z,134nm,1.0s
MDUB Mudurnu 62.76 306 ⇓P P 00 01 10.5 +1.1
BILL Bilibino 62.80 23 P P 00 01 08.5 -0.6
BILL IAmb IAmb 00 01 15.0
comp=Z,181nm,1.2s
BILL IAMs_20 IAMs_20 00 31 42.3
comp=Z,14µm,21.0s
SAHE Sakarya_HENDEK 63.00 307 ⇑P P 00 01 10.8 -0.1
BORA Eskisehir 63.36 306 P P 00 01 12.3 -1.1
BORA IAmb IAmb 00 01 23.2
comp=Z,203nm,1.8s
LVZ Lovozero 63.44 337 P P 00 01 12.4 -1.0
LVZ IAmb IAmb 00 01 17.8
comp=Z,240nm,1.6s
LVZ Lovozero 63.44 337 P P 00 01 12.4 -1.0
LVZ pmax pmax
comp=Z,240nm,1.6s
LVZ MLR MLR
comp=Z,20µm,19.0s
LVZ Lovozero 63.44 337 ⇓P P 00 01 12.5 -1.0
ISP Isparta 63.46 303 P P 00 01 12.5 -1.7
ISP IAmb IAmb 00 01 24.6
comp=Z,78nm,1.1s
ISP Isparta 63.46 303 P P 00 01 12.5 -1.7
ISP pmax pmax
comp=Z,78nm,1.1s
PURM Purcari 63.53 313 ⇑P P 00 01 13.8 -0.5
HTT Hallett 63.61 145 P P 00 01 15.6 +0.6
comp=Z,29nm,1.4s
HTT Hallett 63.61 145 P P 00 01 17.2 +2.2
HTT Hallett 63.61 145 ⇑P P 00 01 16.4 +1.4
STKA Stephens Creek 63.93 142 P P 00 01 17.6 +0.5
comp=Z,403nm,1.2s
STKA Stephens Creek 63.93 142 P P 00 01 17.6 +0.5
comp=Z,32nm,0.8s,baz=318,slow=7.9,SNR=23
STKA S S 00 09 54.2 +1.1
comp=Z,2.0nm,0.6s,baz=330,slow=16,SNR=1.7
STKA LR LR 00 31 38.6
comp=Z,15µm,20.7s,baz=308,slow=38
comp=Z,32nm,0.8s
STKA Stephens Creek 63.93 142 P P 00 01 17.8 +0.7
AKASG Malin Array Be 63.96 318 P P 00 01 15.6 -1.5
comp=Z,21nm,0.7s,baz=81,slow=6.0,SNR=47
AKASG S S 00 09 53.2 +0.2
comp=Z,0.1nm,0.3s,baz=80,slow=37,SNR=1.4
AKASG PKP2bc **P'P'bc** 00 30 15.0 -5.5
comp=Z,0.2nm,0.3s,baz=302,slow=2.1,SNR=4.1
AKASG LR LR 00 34 36.4
comp=Z,10µm,18.2s,baz=90,slow=41
comp=Z,21nm,0.7s
AKASG Malin Array Be 63.96 318 P P 00 01 15.8 -1.2
AKASG IAmb IAmb 00 01 21.8
comp=Z,266nm,1.6s
AKBB Malin Array Si 63.96 318 P P 00 01 15.6 -1.5
AKBB IAmb IAmb 00 01 55.7
comp=Z,157nm,1.1s
AKBB Malin Array Si 63.96 318 P P 00 01 15.6 -1.5
AKBB pmax pmax
comp=Z,157nm,1.2s
KIEV Kiev 63.97 318 P P 00 01 15.4 -1.7
KIEV IAmb IAmb 00 01 55.7
comp=Z,154nm,1.2s
KIEV Kiev 63.97 318 IAMs_20 IAMs_20 00 34 25.1
comp=Z,13µm,19.0s
KIEV Kiev 63.97 318 ⇓P P 00 01 16.3 -0.8
KIEV Kiev 63.97 318 P P 00 01 15.8 -1.3
KIEV Kiev 63.97 318 P P 00 01 15.4 -1.7
KIEV pmax pmax
comp=Z,155nm,1.2s
KIEV MLR MLR
comp=Z,13µm,19.0s
ELL Elmali 64.04 302 P P 00 01 17.2 -0.9
ELL Elmali 64.04 302 P P 00 01 17.2 -0.9
ELL pmax pmax
comp=Z,419nm,1.1s
ELL Elmali 64.04 302 ⇓P P 00 01 17.5 -0.6
SAVO Savo Central 64.17 111 P P 00 01 21.3 +2.3
MILM Milestii Mici 64.25 313 ⇑P P 00 01 16.8 -2.2
JURR Jurilovca 64.27 311 ⇓P P 00 01 11.1 -8.2
TLCR 64.30 312 ⇓P P 00 01 19.4 0.0
AKAS Kas 64.33 302 P P 00 01 18.3 -1.7
AKAS IAmb IAmb 00 01 29.9
comp=Z,191nm,1.4s
SHEM Shemya Is, Ala 64.34 40 LR LR 00 31 37.4
comp=Z,4µm,18.7s,baz=253,slow=38
KLYT Kilyos 64.34 307 ⇓P P 00 01 17.3 -2.4
HNR Honiara 64.41 111 LR LR 00 26 54.3
comp=Z,19µm,21.9s,baz=293,slow=34
HNR Honiara 64.41 111 P P 00 01 19.5 -1.1
HNR Honiara 64.41 111 IAMs_20 IAMs_20 00 26 32.0
comp=Z,21nm,22.0s
HNR Honiara 64.41 111 P P 00 01 22.8 +2.2
HNR Honiara 64.41 111 P P 00 01 19.5 -1.1
HNR pmax pmax
comp=Z,182nm,1.0s
SORM Soroca 64.53 315 ⇑P P 00 01 19.9 -1.0
TPGR Topolog 64.59 311 ⇓P P 00 01 21.0 -0.3
TIRR Tirgusor 64.62 311 P P 00 01 20.4 -1.1
TIRR IAmb IAmb 00 01 41.5
comp=Z,78nm,0.9s
TIRR Tirgusor 64.62 311 ⇑P P 00 01 21.5 0.0
TIRR Tirgusor 64.62 311 P P 00 01 20.4 -1.1
TIRR pmax pmax
comp=Z,78nm,0.9s
TIRR MLR MLR
comp=Z,9µm,22.0s
TIRR Tirgusor 64.62 311 ⇑P P 00 01 21.6 +0.1
RMQ Roma 64.78 133 P P 00 01 25.7 +2.9
CFR Carcaliu 64.78 312 ⇑P P 00 01 22.4 -0.1
VLDR Vladesti 64.79 312 ⇓P P 00 01 21.9 -0.7
TATR Tatarca 64.82 312 ⇓P P 00 01 21.4 -1.4
SCTR Scanteiesti 64.86 312 ⇑P P 00 01 23.2 +0.2
TLBR Topalu 64.87 311 ⇑P P 00 01 23.1 -0.1
MANT Manisa 64.94 304 P P 00 01 22.9 -1.1
HARR Harsova 64.95 311 ⇑P P 00 01 24.6 +0.9
VASR Vaslui 64.96 313 ⇓P P 00 01 30.0 +6.3
SCHLR Schela 64.98 312 ⇓P P 00 01 21.7 -2.1
ICOR Ion Corvin 65.07 310 ⇓P P 00 01 24.9 +0.4
IASR Iasi 65.09 314 ⇑P P 00 01 25.6 +1.1
BIR Birlad 65.09 313 ⇑P P 00 01 25.1 +0.5
AUMBR Murray Bridge 65.11 146 P P 00 01 26.8 +2.1
BAND Balkesir-Ban 65.12 306 ⇓P P 00 01 24.3 -0.7
GHRR 65.25 313 ⇓P P 00 01 23.9 -1.7
BALB Balikesir 65.36 305 P P 00 01 25.8 -0.6
BALB IAmb IAmb 00 01 32.7
comp=Z,132nm,1.1s
BALB Balikesir 65.36 305 ⇓P P 00 01 25.9 -0.5
AMRR Amara 65.38 311 ⇑P P 00 01 25.9 -0.5
PANC Panciu 65.44 312 ⇑P P 00 01 27.8 +1.0
ABPO Ambohimpanom 65.44 237 P P 00 01 26.6 -0.8
ABPO IAmb IAmb 00 02 13.1
comp=Z,218nm,1.9s
ABPO Ambohimpanom 65.44 237 IAMs_20 IAMs_20 00 26 20.9
comp=Z,14µm,20.0s
ABPO Ambohimpanom 65.44 237 P P 00 01 26.6 -0.8
ABPO pmax pmax
comp=Z,218nm,1.9s
ABPO Ambohimpanom 65.44 237 ⇑P P 00 01 28.3 +0.9
PHSR Pinarhisar 65.45 308 ⇓P P 00 01 26.8 -0.2
ODBI Odobesti 65.51 312 ⇑P P 00 01 28.6 +1.4
ARG Arkhangelos 65.53 302 P P 00 01 26.6 -0.9
ARG IAmb IAmb 00 02 10.1
comp=Z,174nm,1.3s
ARG Arkhangelos 65.53 302 P P 00 01 26.7 -0.9
ARG pmax pmax
comp=Z,174nm,1.3s
ARG Arkhangelos 65.53 302 ⇑P P 00 01 26.8 -0.8
GRER 65.59 312 ⇓P P 00 01 36.8 +8.9
PGOR Pogoanele 65.61 311 ⇑P P 00 01 29.0 +1.1
CICN Ciocanesti 65.63 310 ⇑P P 00 01 29.3 +1.3
VSU Vasula 65.63 326 ⇑P P 00 01 26.6 -1.2
EIDS Eidsvold 65.71 131 P P 00 01 29.9 +1.1
comp=Z,110nm,1.0s
EIDS Eidsvold 65.71 131 P P 00 01 28.8 0.0
EIDS IAmb IAmb 00 01 35.1
comp=Z,101nm,1.0s
EIDS Eidsvold 65.71 131 P P 00 01 30.1 +1.3
EIDS Eidsvold 65.71 131 ⇑P P 00 01 29.6 +0.8
VRI Vrincioaia 65.73 312 ⇓P P 00 01 29.2 +0.4
TESR Tescani 65.75 313 ⇓P P 00 01 28.9 0.0
LEHL Lehliu 65.75 311 ⇑P P 00 01 26.2 -2.7
BISRR Bisoca 65.76 312 ⇓P P 00 01 30.3 +1.2
VADS Vadso 65.77 339 *eP* P 00 01 28.5 0.0
VADS IVmB_BB 00 01 30.4
comp=Z,3µm,3.7s
VADS *eS* S 00 10 09.1 -5.6
PLOR Plostina 65.79 312 ⇓P P 00 01 29.8 +0.7
KIBK Kibwezi 65.82 258 P P 00 01 29.5 -0.4
KIBK Kibwezi 65.82 258 P P 00 01 29.1 -0.8
KIBK IAmb IAmb 00 01 35.0
comp=Z,126nm,1.5s
KIBK Kibwezi 65.82 258 P P 00 01 30.3 +0.4
SNR=27
ISR Istrita 65.91 312 ⇑P P 00 01 30.5 +0.5
ONER Baraj Valea Uz 65.94 313 ⇓P P 00 01 30.7 +0.6
LOZB Loznitsa 66.00 310 ⇓P P 00 01 29.8 -0.7
RAZG Razgrad 66.05 310 ⇓P P 00 01 30.8 -0.1
NEHR Nehoiu 66.06 312 ⇑P P 00 01 32.0 +1.1
COVR Voineasa-Covas 66.10 312 ⇑P P 00 01 31.0 -0.1
KMBO Kilima Mbogo 66.10 260 P P 00 01 31.5 -0.4
comp=Z,46nm,1.0s,baz=65,slow=8.0,SNR=42
KMBO S S 00 10 24.1 +3.1
comp=Z,0.5nm,0.3s,baz=99,slow=19,SNR=1.2
KMBO LR LR 00 27 21.8
comp=Z,3µm,21.5s,baz=81,slow=33
comp=Z,46nm,1.0s
FIA1 FINESS Array S 66.11 329 P P 00 01 30.2 -0.6
FINES FINESS Array B 66.11 329 P P 00 01 30.2 -0.7
comp=Z,36nm,0.9s,baz=96,slow=8.5,SNR=59
FINES S S 00 10 21.5 +2.4
comp=Z,1.5nm,0.8s,baz=109,slow=7.3,SNR=1.2
FINES LR LR 00 32 02.3
comp=Z,12µm,19.2s,baz=92,slow=38
comp=Z,36nm,0.9s
FINES FINESS Array B 66.11 329 P P 00 01 30.3 -0.6
JMB Yambol 66.12 309 *i* P P 00 01 30.6 -0.7
CMSA Cobar Meteorol 66.14 139 P P 00 01 32.5 +1.1
comp=Z,161nm,1.1s,comp=Z,0.0nm
CMSA Cobar Meteorol 66.14 139 P P 00 01 32.7 +1.3
SULR 66.14 311 ⇓P P 00 01 20.9 -11
AULRC Lightning Ridg 66.17 136 P P 00 01 33.7 +2.0
TURR Turia 66.22 313 ⇑P P 00 01 31.5 -0.4
LODK Lodwar 66.27 265 P P 00 01 32.0 -0.8
LODK IAmb IAmb 00 01 38.3
comp=Z,231nm,1.8s
LODK IAMs_20 IAMs_20 00 30 31.6
comp=Z,11µm,19.0s
LODK Lodwar 66.27 265 P P 00 01 33.5 +0.7
SNR=32
MLR Muntele Rosu 66.30 312 LR LR 00 35 46.5
comp=Z,11µm,19.2s,baz=66,slow=41
MLR Muntele Rosu 66.30 312 P P 00 01 31.7 -0.9
MLR Muntele Rosu 66.30 312 ⇓P P 00 01 32.7 +0.1
MLR Muntele Rosu 66.30 312 P P 00 01 31.7 -0.9
MLR pmax pmax
comp=Z,187nm,1.1s
MLR MLR MLR
comp=Z,11µm,21.0s
SGRR Singureni 66.38 311 ⇑P P 00 01 32.7 -0.2
KARP Karpathos 66.39 301 P P 00 01 31.9 -1.3
KARP Karpathos 66.39 301 ⇓P P 00 01 32.7 -0.5
KEV Kevo 66.52 339 P P 00 01 32.2 -1.1
KEV IAmb IAmb 00 01 39.0
comp=Z,133nm,1.1s
KEV Kevo 66.52 339 P P 00 01 32.2 -1.1
KEV pmax pmax
comp=Z,133nm,1.1s
KEV MLR MLR
comp=Z,22µm,20.0s
KEV Kevo 66.52 339 ⇑P P 00 01 32.7 -0.6
EZN Ezine 66.53 306 ⇑P P 00 01 35.1 +1.1
CAVK Edirne/Enez-Ca 66.56 307 ⇑P P 00 01 31.2 -3.0
ELND Elena 66.56 309 ⇑P P 00 01 33.5 -0.6
DOPP Dopca 66.66 313 ⇑P P 00 01 34.2 -0.5
BURAR Bucovina Array 66.67 314 ⇓P P 00 01 34.9 +0.1
BUR08 Bucovina Ar. S 66.67 314 P P 00 01 34.0 -0.9
BUR08 IAmb IAmb 00 01 57.1
comp=Z,155nm,1.4s
COPA Copaceanca 66.93 311 ⇑P P 00 01 36.6 +0.2
VOIR 66.94 312 ⇓P P 00 01 35.9 -0.7
RDO Rodhopi 66.98 307 ⇑P P 00 01 36.3 -0.5
ARA0 ARCESS Array S 67.01 338 *eP* P 00 01 35.2 -1.4
ARA0 IVmB_BB 00 01 38.6
comp=Z,3µm,3.2s
ARA0 *eS* S 00 10 29.4 -0.5
ARCES ARCESS Array B 67.01 338 P P 00 01 35.6 -1.0
comp=Z,18nm,0.7s,baz=91,slow=8.5,SNR=40
ARCES S S 00 10 30.9 +1.0
comp=Z,3.6nm,1.0s,baz=78,slow=32,SNR=2.2
ARCES LR LR 00 33 44.9
comp=Z,23µm,19.5s,baz=91,slow=38
comp=Z,18nm,0.7s
ARCES ARCESS Array B 67.01 338 P P 00 01 35.8 -0.8
ARCES IAmb IAmb 00 01 41.4
comp=Z,286nm,1.9s
ARCES ARCESS Array B 67.01 338 P P 00 01 35.8 -0.8
ARCES pmax pmax
comp=Z,286nm,1.9s
HUMR Humele 67.06 311 ⇓P P 00 01 36.4 -0.9
KDZ Kurdzhali 67.08 308 *i* P P 00 01 36.5 -1.0
PABE Paberze 67.11 323 P P 00 01 36.8 -0.6
TGMR Targu Mures 67.22 313 ⇓P P 00 01 36.8 -1.4
ARR Arges 67.23 312 ⇓P P 00 01 37.9 -0.5
ARCR ARCALIA 67.29 314 ⇑P P 00 01 39.6 +0.9
MDB Medias 67.34 313 ⇓P P 00 01 39.3 +0.2
VOI Vohitsoka 67.35 235 P P 00 01 38.8 -0.7
VOI Vohitsoka 67.35 235 P P 00 01 40.5 +1.0
SNR=7.1
VOI Vohitsoka 67.35 235 ⇑P P 00 01 39.4 -0.2
PLVB Pleven 67.43 310 ⇓P P 00 01 39.6 0.0
RZN Rozhen 67.52 308 *i* P P 00 01 37.4 -3.1
VLAD Vladila 67.53 310 ⇓P P 00 01 36.1 -4.1
SUW Suwalki 67.62 321 *eP* P 00 01 38.8 -1.8
SUW *eL* L 00 32 20.3
comp=Z,15µm,25.6s
SUW Suwalki 67.62 321 P P 00 01 39.5 -1.1
SUW IAMs_20 IAMs_20 00 33 43.6
comp=Z,15µm,19.0s
SUW Suwalki 67.62 321 P P 00 01 39.5 -1.1
SUW MLR MLR
comp=Z,15µm,19.0s
SUW Suwalki 67.62 321 ⇓P P 00 01 40.0 -0.6
TW1H Toowoomba 1 Ha 67.67 132 P P 00 01 43.5 +2.1
ARPS Mount Arapiles 67.69 146 P P 00 01 42.4 +1.2
comp=Z,54nm,1.2s
HAMF Hammerfest 67.74 339 *eP* P 00 01 40.6 -0.5
HAMF IVmB_BB 00 01 41.9
comp=Z,2µm,5.7s
HAMF *eS* S 00 10 35.0 -3.6
HAMF *eSS* SS 00 15 00.9 +1.7
KTK1 Kautokeino 67.77 338 *eP* P 00 01 40.6 -0.7
KTK1 IVmB_BB 00 01 41.8
comp=Z,2µm,5.9s
KTK1 *eS* S 00 10 37.0 -2.0
LOT Lotru 67.83 312 ⇓P P 00 01 42.1 +0.3
CJR Cluj-Napoca 67.83 313 ⇑P P 00 01 43.2 +1.0
PGB Panagyurishte 67.85 309 *i* P P 00 01 41.2 -1.2
CBBR Cluj-Babes-Bol 67.86 313 ⇑P P 00 01 42.7 +0.4
CRAR CRAIOVA 67.92 311 ⇓P P 00 01 43.7 +0.9
HOPEN Hopen 68.06 346 IVmB_BB 00 01 42.8
comp=Z,2µm,4.8s
HOPEN *eP* P 00 01 42.9 -0.1
HOPEN *ePP* PP 00 04 10.5 -2.3
HOPEN *eS* S 00 10 42.7 +0.5
HOPEN *e* 00 18 16.5
HOPEN IVMs_BB IVMs_BB 00 35 22.4
comp=Z,7µm,19.5s
MPEP Malo Peshtene 68.07 310 P P 00 01 44.2 +0.5
MARR Marisel-Cluj 68.17 313 ⇓P P 00 01 47.7 +3.3
KWP Kalwaria Pacla 68.18 317 *eP* P 00 01 44.0 -0.3
KWP *eL* L 00 30 08.7
comp=Z,14µm,32.6s
KWP Kalwaria Pacla 68.18 317 ⇓P P 00 01 44.2 -0.1
VALD Valchedram 68.25 310 P P 00 01 44.6 -0.2
IDI Anoyia 68.26 301 P P 00 01 43.8 -1.3
IDI Anoyia 68.26 301 LR LR 00 37 37.5
comp=Z,3µm,20.6s,baz=78,slow=41
IDI Anoyia 68.26 301 P P 00 01 44.3 -0.8
IDI IAmb IAmb 00 01 59.9

comp=Z,131nm,1.1s
BAIL Bailesti 68.28 311 ⇓P **P 00 01 45.2 +0.3**
DEV Deva 68.39 313 ⇑P **P 00 01 45.7 +0.1**
DRGR 68.44 314 ⇑P **P 00 01 45.7 -0.3**
AUDCS Dubbo College 68.44 138 P **P 00 01 48.1 +2.1**
VTS Vitosha 68.53 309 *i* P **P 00 01 46.4 -0.4**
GZR Gura Zlata 68.53 312 ⇑P **P 00 01 46.2 -0.4**
PUNG Punghina 68.55 311 ⇑P **P 00 01 46.7 +0.1**
KKB Krupnik 68.70 308 *i* P **P 00 01 46.8 -0.9**
JETT Jettan, Norway 68.80 338 *eP* **P 00 01 46.9 -0.9**
JETT IVmB_BB 00 01 49.6
comp=Z,2µm,3.5s
JETT *eP* **PP 00 04 20.4 +0.9**
JETT *eS* **S 00 10 51.7 +0.4**
BLKB Belogradchik 68.81 310 ⇑P **P 00 01 48.4 +0.1**
HERR Herculane 68.85 312 ⇑P **P 00 01 47.9 -0.6**
FOMA Nahampoana Res 68.92 232 P **P 00 01 48.3 -0.9**
FOMA IAMs_20 IAMs_20 00 27 29.3
comp=Z,11µm,20.0s
FOMA Nahampoana Res 68.92 232 ⇑P **P 00 01 50.5 +1.3**
SURR Surduc 68.95 313 ⇓P **P 00 01 49.1 -0.1**
R9F13 Warsaw-Wawer 68.96 319 *eP* **P 00 01 48.7 -0.3**
comp=Z,2.2nm,1.3s
R9F13 *eS* **S 00 10 54.9 +1.3**
VAY Valandovo 69.19 308 *i* P **P 00 01 49.7 -1.0**
BEL Belsk 69.21 319 *eP* **P 00 01 48.9 -1.8**
BEL *eL* L 00 33 18.6
comp=Z,12µm,19.5s
SIRR Siria 69.21 313 ⇓P **P 00 01 51.1 +0.3**
ARMA Armidale 69.22 135 P **P 00 01 53.6 +2.5**
ARMA Armidale 69.22 135 P **P 00 01 51.5 +0.4**
ARMA IAmb IAmb 00 01 56.9
comp=Z,153nm,1.4s
ARMA Armidale 69.22 135 P **P 00 01 53.2 +2.1**
ARMA Armidale 69.22 135 ⇑P **P 00 01 53.6 +2.5**
BZS Buzias 69.32 312 ⇓P **P 00 01 51.0 -0.5**
TRO Tromso 69.32 338 *eP* **P 00 01 49.9 -1.1**
TRO *ePP* **PP 00 04 25.0 +1.2**
TRO IVmB_BB 00 04 44.3
comp=Z,2µm,3.4s
TRO *eS* **S 00 10 55.9 -1.4**
MDVR Moldovita 69.35 312 ⇑P **P 00 01 51.5 -0.3**
BJO1 Bjornoya 69.38 343 IVmB_BB 00 01 52.3
comp=Z,2µm,5.0s
BJO1 *ePP* PP 00 04 13.0 -11
BJO1 *eS* **S 00 10 55.9 -2.0**
BRAT Ballarat 69.39 145 P **P 00 01 54.0 +2.2**
LIT Litokhoron 69.42 306 P **P 00 01 50.9 -1.3**
LIT IAmb IAmb 00 01 56.1
comp=Z,274nm,1.7s
LIT Litokhoron 69.42 306 P **P 00 01 50.9 -1.3**
LIT pmax pmax
comp=Z,274nm,1.7s
LIT Litokhoron 69.42 306 ⇓P **P 00 01 50.8 -1.4**
BOVS Bovan 69.51 310 ⇑P **P 00 01 52.7 +0.1**
BANR Banloc 69.68 312 ⇓P **P 00 01 54.2 +0.5**
AGG Agios Georgios 69.70 305 ⇓P **P 00 01 51.7 -2.3**
NIE Niedzica 69.76 317 *eP* **P 00 01 54.9 +0.7**
NIE *eL* L 00 31 04.8
comp=Z,7µm,27.9s
OJC Ojcow 70.00 317 *eP* **P 00 01 55.2 -0.3**
OJC *eL* L 00 31 45.0
comp=Z,11µm,28.7s
OJC Ojcow 70.00 317 P **P 00 01 54.9 -0.6**
OJC Ojcow 70.00 317 P **P 00 01 54.9 -0.6**
OJC Ojcow 70.00 317 ⇓P **P 00 01 55.3 -0.3**
SPB2 Spitsbergen Ar 70.09 347 P **P 00 01 55.2 -0.4**
SPB2 IAmb IAmb 00 02 01.1
comp=Z,128nm,1.1s
SPA0 Spitsbergen Ar 70.09 347 *eP* **P 00 01 54.9 -0.7**
SPA0 IVmB_BB 00 01 57.2
comp=Z,1µm,1.9s
SPA0 *ePP* **PP 00 04 30.0 -0.4**
SPA0 *eS* **S 00 11 03.2 -3.1**
SPA0 *eSS* **SS 00 15 36.7 +1.4**
SPA0 *e* 00 19 01.1
SPITS Spitsbergen Ar 70.09 347 P **P 00 01 54.6 -1.1**
comp=Z,48nm,0.9s,baz=99,slow=8.9,SNR=21
SPITS LR LR 00 36 41.9
comp=Z,18µm,19.1s,baz=89,slow=39
comp=Z,48nm,0.9s
SPITS Spitsbergen Ar 70.09 347 P **P 00 01 55.1 -0.6**
SPITS pmax pmax
comp=Z,190nm,1.3s
PSZ Piszkesteto 70.21 315 P **P 00 01 56.5 -0.5**
PSZ IAmb IAmb 00 02 02.1
comp=Z,337nm,2.0s
PSZ IAMs_20 IAMs_20 00 36 15.5
comp=Z,13µm,21.0s
PSZ Piszkesteto 70.21 315 ⇓P **P 00 01 56.7 -0.3**
PSZ Piszkesteto 70.21 315 P **P 00 01 56.5 -0.5**
PSZ pmax pmax
comp=Z,337nm,2.0s
PSZ MLR MLR
comp=Z,13µm,21.0s
PSZ Piszkesteto 70.21 315 ⇓P **P 00 01 56.5 -0.5**
TOO Toolangi 70.26 144 P **P 00 01 58.7 +1.5**
comp=Z,17nm,0.6s,comp=Z,0.0nm
TOO Toolangi 70.26 144 P **P 00 01 57.0 -0.3**
TOO Toolangi 70.26 144 P **P 00 01 57.0 -0.3**
TOO pmax pmax
comp=Z,52nm,1.4s
TOO Toolangi 70.26 144 ⇑P **P 00 01 59.3 +2.1**
HSPB Hornsund (broa 70.27 346 *eP* **P 00 01 55.9 -0.8**
ITM Ithomi 70.32 303 P **P 00 01 56.5 -1.2**
ITM Ithomi 70.32 303 ⇓P **P 00 01 57.0 -0.8**
OHR Ohrid 70.54 308 *i* P **P 00 01 57.8 -1.3**
MGCD Mangrove Creek 70.66 137 P **P 00 02 02.6 +2.9**
STEI Steigen 70.72 336 *eP* **P 00 01 58.6 -1.0**
STEI IVmB_BB 00 02 00.9
comp=Z,3µm,3.3s
AUMTS Mt Stromlo 70.73 140 P **P 00 02 02.1 +1.9**
CAN Canberra 70.73 140 P **P 00 02 01.6 +1.4**
comp=Z,96nm,1.3s,comp=Z,0.0nm
CAN Canberra 70.73 140 P **P 00 02 00.4 +0.2**
CAN IAmb IAmb 00 02 07.5
comp=Z,142nm,1.3s
CAN Canberra 70.73 140 P **P 00 02 02.1 +1.9**
CAN Canberra 70.73 140 P **P 00 02 00.4 +0.2**
CAN pmax pmax
comp=Z,142nm,1.3s
CAN MLR MLR
comp=Z,9µm,22.0s
CAN Canberra 70.73 140 ⇑P **P 00 02 01.8 +1.6**
FAUS Fauske 70.75 336 *eP* **P 00 01 58.9 -0.9**
FAUS IVmB_BB 00 06 04.9
comp=Z,1µm,4.2s
FAUS *eS* **S 00 11 11.7 -2.3**
SYDH Sydney Hard Ro 70.78 138 P **P 00 02 02.9 +2.5**
CNB Canberra Magne 70.95 140 P **P 00 02 02.4 +0.8**
comp=Z,95nm,1.2s,comp=Z,0.0nm
CNB Canberra Magne 70.95 140 P **P 00 02 03.6 +2.0**
KBS Kingsbay 70.96 348 P **P 00 02 00.4 -0.5**
KBS IAmb IAmb 00 02 45.1
comp=Z,132nm,1.5s
KBS Kingsbay 70.96 348 *eP* **P 00 02 01.2 +0.3**
KBS *e* 00 06 14.5
KBS *eS* **S 00 11 14.1 -2.2**
KBS *eSS* **SS 00 15 49.7 +1.1**
KBS *e* 00 19 16.6
KBS Kingsbay 70.96 348 P **P 00 02 00.4 -0.5**
KBS pmax pmax
comp=Z,132nm,1.5s
KBS MLR MLR
comp=Z,18µm,20.0s
KBS Kingsbay 70.96 348 *i* P **P 00 02 00.1 -0.8**
AUKHS Kincumber High 70.99 137 P **P 00 02 04.0 +2.3**
RAC Raciborz 71.04 317 *eP* **P 00 02 02.4 +0.5**
RAC AMS AMS 00 36 32.0
comp=Z,14nm,18.4s
RIV Riverview 71.09 138 P **P 00 02 04.1 +1.8**
comp=Z,104nm,1.5s
RIV Riverview 71.09 138 P **P 00 02 04.5 +2.2**
OKC Ostrava-Krasne 71.10 317 *eP* **P 00 02 02.9 +0.6**
OKC *eS* **S 00 11 19.3 +0.5**
OKC AMS AMS 00 36 30.0
comp=Z,8µm,16.0s
MOR8 Moi Rana 71.18 335 *eP* **P 00 02 01.6 -0.9**
MOR8 IVmB_BB 00 02 02.8
comp=Z,2µm,3.0s
MOR8 *eS* **S 00 11 19.6 +0.3**
GKP Gorka Klasztor 71.21 321 *eP* **P 00 02 02.3 -0.5**
GKP *eL* L 00 36 46.5

comp=Z,15µm,22.8s
MORH Mrgy, Hungar 71.29 313 *eP* **P 00 02 02.4 -1.1**
MORH Mrgy, Hungar 71.29 313 ⇑P **P 00 02 03.4 -0.1**
RAUS Rausandaksla 71.32 335 *eP* **P 00 02 03.3 +0.1**
RAUS IVmB_BB 00 04 42.2
comp=Z,2µm,4.7s
RAUS *eS* **S 00 11 20.4 -0.3**
STEB Steborice 71.33 317 *eP* **P 00 02 04.0 +0.4**
LOF Lofoten 71.34 337 *eP* **P 00 02 04.1 +0.7**
MAUC Maruska 71.37 317 *eP* **P 00 02 05.0 +1.0**
GAMB Gambell 71.40 28 P **P 00 02 04.0 +0.2**
baz=276
PDG Podgorica 71.46 309 P **P 00 02 03.3 -1.3**
PDG IAmb IAmb 00 02 41.4
comp=Z,280nm,1.5s
PDG Podgorica 71.46 309 ⇓P **P 00 02 04.0 -0.6**
PDG Podgorica 71.46 309 ⇓P **P 00 02 03.8 -0.8**
MORC Moravsky Berou 71.50 317 P **P 00 02 04.0 -0.8**
MORC Moravsky Berou 71.50 317 ⇑P **P 00 02 04.5 -0.2**
MORC Moravsky Berou 71.50 317 *eP* **P 00 02 03.9 -0.8**
MORC *eS* S 00 11 13.6 -10
MORC Moravsky Berou 71.50 317 P **P 00 02 04.0 -0.8**
MORC pmax pmax
comp=Z,62nm,1.1s
MORC Moravsky Berou 71.50 317 ⇑P **P 00 02 04.5 -0.2**
JAVC Velka Javorina 71.55 316 *eP* **P 00 02 05.4 +0.3**
JAVC *eS* **S 00 11 15.5 -8.7**
VAGH Vaagaholmen 71.59 335 *eP* **P 00 02 04.7 -0.2**
VAGH IVmB_BB 00 02 28.9
comp=Z,3µm,3.7s
VAGH *eS* **S 00 11 24.1 +0.3**
KOVH Kovagototos 71.69 313 ⇓P **P 00 02 05.1 -0.8**
LEIR Leirfjorden 71.72 335 *eP* **P 00 02 05.9 +0.2**
LEIR IVmB_BB 00 04 45.2
comp=Z,2µm,4.9s
LEIR *eS* **S 00 11 25.4 0.0**
LEIR IVMs_BB IVMs_BB 00 35 31.2
comp=Z,7µm,18.3s
STOK Stokkvaagen 71.74 335 *eP* **P 00 02 05.8 0.0**
STOK IVmB_BB 00 03 55.5
comp=Z,2µm,4.2s
STOK *eS* **S 00 11 23.4 -2.2**
KLINJ Klinje 71.83 310 *eP* **P 00 02 08.9 +2.0**
KRLC Kraliky 71.94 318 *eP* **P 00 02 07.6 +0.2**
KRLC *eS* **S 00 11 28.7 +0.1**
KRLC AMS AMS 00 37 00.0
comp=Z,11µm,15.0s
MBAR Mbarara 71.99 263 P **P 00 02 07.1 -1.4**
comp=Z,44nm,1.1s,baz=66,slow=12,SNR=32
MBAR LR LR 00 35 21.4
comp=Z,5µm,18.1s,baz=72,slow=37
comp=Z,44nm,1.1s
MBAR Mbarara 71.99 263 P **P 00 02 06.7 -1.7**
MBAR Mbarara 71.99 263 P **P 00 02 08.9 +0.5**
MBAR P **P 00 02 08.9 +0.5**
TREB Trebinje 72.07 310 *eP* **P 00 02 07.0 -1.3**
KSP Ksiaz 72.13 318 *eP* **P 00 02 08.2 -0.3**
KSP *eL* L 00 31 58.2
comp=Z,9µm,30.6s
KSP Ksiaz 72.13 318 ⇓P **P 00 02 08.4 0.0**
VRAC Vranov 72.18 317 LR LR 00 38 34.4
comp=Z,11µm,20.1s,baz=81,slow=40
VRAC Vranov 72.18 317 ⇓P **P 00 02 09.5 +0.7**
VRAC Vranov 72.18 317 *eP* **P 00 02 09.0 +0.2**
VRAC *eS* **S 00 11 32.9 +1.6**
DPC Dobruska-Polom 72.19 318 *eP* **P 00 02 09.4 +0.5**
DPC *eS* **S 00 11 33.4 +1.9**
DPC AMS AMS 00 37 00.0
comp=Z,10µm,15.5s
OSTC Ostas 72.22 318 *eP* **P 00 02 09.6 +0.5**
OSTC *eS* **S 00 11 32.2 +0.4**
OSTC AMS AMS 00 37 00.0
comp=Z,10µm,16.0s
HFS Hagfors 72.22 328 P **P 00 02 08.2 -0.6**
comp=Z,18nm,0.6s,baz=84,slow=4.5,SNR=37
HFS S **S 00 11 32.6 +1.2**
comp=Z,2.5nm,0.9s,baz=112,slow=30,SNR=1.7
HFS LR LR 00 36 26.3
comp=Z,18µm,19.6s,baz=82,slow=38
comp=Z,18nm,0.6s
BSD Bornholm Skovb 72.30 323 *i* P **P 00 02 10.6 +1.2**
BSD IAmb IAmb 00 02 13.0
comp=Z,61nm,1.1s
CHVC Chvalec 72.32 318 *eP* **P 00 02 09.9 +0.3**
CHVC *eS* **S 00 11 33.5 +0.6**
CHVC AMS AMS 00 37 00.0
comp=Z,11µm,16.9s
KRUC Moravsky 72.35 317 *eP* **P 00 02 09.6 -0.2**
KRUC *eS* **S 00 11 29.6 -3.7**
UPC Upice 72.36 318 *eP* **P 00 02 10.3 +0.5**
UPC *eS* **S 00 11 35.8 +2.5**
UPC AMS AMS 00 37 00.0
comp=Z,11µm,16.0s
NSS Namsos 72.41 333 IVmB_BB 00 02 11.2
comp=Z,2µm,3.2s
NSS IVMs_BB IVMs_BB 00 35 41.8
comp=Z,7µm,19.4s
SLATY Slatina 72.45 312 *eP* **P 00 02 09.9 -0.6**
BEHE Becsehely 72.53 314 P **P 00 02 10.3 -0.6**
BEHE Becsehely 72.53 314 *eP* **P 00 02 11.1 +0.2**
BLY Banja Luka 72.55 312 *eP* **P 00 02 09.8 -1.3**
BLY Banja Luka 72.55 312 ⇑P **P 00 02 10.9 -0.2**
BLY Banja Luka 72.55 312 ⇓P **P 00 02 10.9 -0.2**
RONA Rosalia, Austr 72.64 315 *eP* **P 00 02 11.6 0.0**
comp=Z,72nm,2.1s,SNR=16
DEL Delary 72.68 324 *i* P **P 00 02 11.0 -0.6**
TNA Tin City 72.78 26 IAMs_20 IAMs_20 00 34 30.3
comp=Z,11µm,20.0s
TNA Tin City 72.78 26 P **P 00 02 12.4 +0.4**
baz=279
CONA Conrad Observa 72.89 315 *eP* **P 00 02 13.2 0.0**
comp=Z,80nm,1.4s,SNR=37
KOGS Kog 72.89 314 *i* P **P 00 02 12.9 -0.2**
KOGS *e* 00 06 46.6
TREC Trest 72.90 317 *eS* **S 00 11 42.4 +2.8**
TREC AMS AMS 00 38 20.0
comp=Z,12µm,17.7s
SPIA Saint Paul Isl 73.02 35 P **P 00 02 14.0 +0.4**
baz=280
NC405 NORSAR Array S 73.04 329 P **P 00 02 12.5 -1.2**
NC405 IAmb IAmb 00 02 28.5
comp=Z,78nm,0.9s
LUNU Lund 73.05 324 *i* P **P 00 02 13.3 -0.5**
BORU Boraas 73.08 326 *i* P **P 00 02 12.2 -1.8**
NC602 NORSAR Array S 73.19 329 *eP* **P 00 02 14.2 -0.4**
BJUU Bjuv 73.21 324 *i* P **P 00 02 14.6 -0.1**
FABU Falkenberg 73.22 325 *i* P **P 00 02 14.5 -0.3**
ARSA Arzberg 73.24 315 P **P 00 02 14.2 -1.0**
ARSA Arzberg 73.24 315 *eP* **P 00 02 14.9 -0.3**
comp=Z,53nm,1.5s,SNR=17
ARSA Arzberg 73.24 315 ⇓P **P 00 02 14.7 -0.5**
PVCC Panska Ves 73.26 318 *eP* **P 00 02 15.9 +0.7**
PVCC *eS* **S 00 11 45.0 +1.4**
PVCC AMS AMS 00 37 20.0
comp=Z,10µm,18.2s
NB2 NORSAR Subarra 73.29 329 P **P 00 02 14.2 -1.0**
comp=Z,1µm,5.0s,baz=80,slow=5.9
NOA NORSAR Array B 73.29 329 P **P 00 02 14.1 -1.2**
comp=Z,26nm,0.9s,baz=79,slow=6.1,SNR=61
NOA PP **PP 00 04 57.3 -0.9**
comp=Z,7.5nm,0.8s,baz=79,slow=8.7,SNR=3.8
NOA S **S 00 11 43.8 +0.1**
comp=Z,0.8nm,1.0s,baz=100,slow=17,SNR=1.3
NOA LR LR 00 36 00.9
comp=Z,11µm,18.7s,baz=85,slow=37
comp=Z,26nm,0.9s
RGN Rugen 73.30 323 IAMs_20 IAMs_20 00 36 38.0
comp=Z,11µm,18.0s
C16K Lisburne Hills 73.33 23 IAMs_20 IAMs_20 00 39 18.6
comp=Z,11µm,21.0s
C16K Lisburne Hills 73.33 23 P **P 00 02 15.4 +0.1**
baz=280
PRU Pruhonice 73.38 318 *eP* **P 00 02 15.8 -0.1**
PRU *eS* **S 00 11 41.7 -3.2**
PRU AMS AMS 00 37 40.0
comp=Z,10µm,15.4s
RUE Ruedersdorf 73.40 320 *eP* **P 00 02 16.3 +0.4**
comp=Z,217nm,1.0s,baz=77,slow=5.8
SANVU Saraoutou 73.42 113 P **P 00 02 15.9 -0.7**
SANVU IAmb IAmb 00 02 24.1
comp=Z,162nm,1.3s
SANVU Saraoutou 73.42 113 P **P 00 02 18.8 +2.2**
PRA Prague 73.43 318 AMS AMS 00 37 50.0
comp=Z,11µm,15.9s

F14K Arctic Creek 73.45 26 P **P 00 02 16.7 +0.7**
baz=280
P08K Saint George I 73.50 35 P **P 00 02 16.6 +0.2**
baz=280
NBO00 NORSAR Array S 73.50 329 P **P 00 02 15.3 -1.2**
NBO00 IAmb IAmb 00 02 37.4
comp=Z,140nm,1.6s
RICC Richard 73.56 318 *eP* **P 00 02 17.9 +1.0**
RICC AMS AMS 00 37 40.0
comp=Z,10µm,18.8s
ONAU Onsala 73.58 326 *i* P **P 00 02 16.2 -0.7**
BRG Berggiesshubel 73.59 319 *eP* **P 00 02 17.3 +0.1**
comp=Z,82nm,1.1s,baz=77,slow=5.8
COP Copenhagen 73.60 324 *i* P **P 00 02 17.4 +0.4**
COP IAmb IAmb 00 02 21.2
comp=Z,135nm,1.0s
TJOU Tjoern 73.62 326 *i* P **P 00 02 16.3 -0.8**
STRU Stroemstad 73.66 327 *i* P **P 00 02 16.8 -0.5**
MATE Matera 73.67 308 ⇓P **P 00 02 16.8 -1.0**
SOKA Soboth 73.67 314 *eP* **P 00 02 17.7 -0.1**
comp=Z,43nm,1.6s,SNR=16
ZVC Zvikov 73.70 317 *eP* **P 00 02 18.3 +0.5**
ZVC *eS* **SKiKP 00 11 47.0 -0.8**
ZVC AMS AMS 00 36 10.0
comp=Z,9µm,17.3s
OSL Oslo 73.73 328 *eP* **P 00 02 18.0 +0.3**
CKRC Cesky Krumlov 73.74 317 *eP* **P 00 02 18.4 +0.3**
CKRC *eS* **S 00 11 49.3 +0.1**
CKRC AMS AMS 00 39 00.0
comp=Z,8µm,17.8s
CORO Coronation Par 73.92 146 P **P 00 02 21.1 +2.1**
TIP Timpagrande 73.94 306 P **P 00 02 18.6 -0.9**
TIP Timpagrande 73.94 306 ⇓P **P 00 02 18.9 -0.6**
TIP Timpagrande 73.94 306 ⇑P **P 00 02 18.9 -0.6**
MOA Molln 73.96 316 *eP* **P 00 02 19.4 0.0**
comp=Z,43nm,0.8s,SNR=15
HSKC Hora Svate Kat 73.96 319 *eP* **P 00 02 17.0 -2.3**
HSKC *eS* **S 00 11 52.6 +1.0**
HSKC AMS AMS 00 38 00.0
comp=Z,11µm,18.7s
ANM Nome 74.02 27 P **P 00 02 20.2 +0.8**
baz=282
OBKA Obir 74.03 314 *eP* **P 00 02 19.9 0.0**
comp=Z,15nm,0.8s
C17K DeLong Mountai 74.08 22 P **P 00 02 19.8 +0.2**
baz=282,SNR=10
CLL Collm 74.09 319 P **P 00 02 19.4 -0.6**
CLL IAMs_20 IAMs_20 00 40 23.0
comp=Z,11µm,21.0s
CLL Collm 74.09 319 P **P 00 02 19.4 -0.6**
CLL pmax pmax
comp=Z,72nm,1.1s
CLL Collm 74.09 319 *eP* **P 00 02 19.7 -0.4**
comp=Z,70nm,1.1s,baz=77,slow=5.8
F15K North Star Dit 74.09 25 IAMs_20 IAMs_20 00 37 40.9
comp=Z,11µm,19.0s
F15K North Star Dit 74.09 25 P **P 00 02 20.0 +0.2**
baz=282,SNR=8.3
DOMB Dombas 74.12 331 *eP* **P 00 02 20.2 +0.1**
GEC2 GERESS Array S 74.13 317 P **P 00 02 20.1 -0.3**
GEC2 GERESS Array S 74.13 317 *eP* **P 00 02 20.6 +0.1**
comp=Z,98nm,1.2s,baz=77,slow=5.8
GERES GERESS Array B 74.13 317 P **P 00 02 20.2 -0.3**
comp=Z,7.0nm,0.6s,baz=74,slow=4.5,SNR=49
GERES PP **PP 00 05 04.9 -0.8**
comp=Z,2.5nm,0.8s,baz=74,slow=7.9,SNR=1.5
GERES LR LR 00 39 43.0
comp=Z,9µm,18.9s,baz=78,slow=40
comp=Z,7.0nm,0.6s
LJU Ljubljana 74.14 314 *i* P **P 00 02 20.2 -0.3**
LJU *e* 00 06 58.0
LJU *eS* **S 00 11 53.8 +0.1**
LJU *e* 00 12 34.3
LJU *eSS* **SS 00 16 41.8 +3.3**
KHC Kasperske Hory 74.16 317 P **P 00 02 20.1 -0.4**
KHC IAMs_20 IAMs_20 00 36 57.8
comp=Z,9µm,20.0s
KHC Kasperske Hory 74.16 317 P **P 00 02 20.1 -0.4**
KHC pmax pmax
comp=Z,58nm,1.2s
KHC MLR MLR
comp=Z,9µm,20.0s
KHC Kasperske Hory 74.16 317 *eP* **P 00 02 20.8 +0.3**
KHC *ex* x 00 02 35.5
KHC *eS* **S 00 11 55.0 +1.1**
KHC AMS AMS 00 36 40.0
comp=Z,10µm,18.4s
KHC Kasperske Hory 74.16 317 ⇑P **P 00 02 20.5 -0.1**
RDOG Red Dog Mine 74.27 23 P **P 00 02 20.5 -0.3**
RDOG IAmb IAmb 00 02 26.6
comp=Z,235nm,1.9s
RDOG IAMs_20 IAMs_20 00 36 53.3
comp=Z,15µm,22.0s
RDOG Red Dog Mine 74.27 23 P **P 00 02 20.9 +0.2**
baz=283,SNR=5.9
D17K Noatak River 74.28 23 P **P 00 02 21.4 +0.6**
baz=283,SNR=21
KONO Kongsberg 74.34 328 P **P 00 02 20.6 -0.7**
KONO Kongsberg 74.34 328 IAMs_20 IAMs_20 00 37 30.2
comp=Z,10µm,22.0s
KONO Kongsberg 74.34 328 *eP* **P 00 02 21.2 -0.1**
KONO Kongsberg 74.34 328 P **P 00 02 20.6 -0.7**
KONO pmax pmax
comp=Z,96nm,1.3s
KONO MLR MLR
comp=Z,10µm,22.0s
KONO Kongsberg 74.34 328 ⇑P **P 00 02 21.2 -0.1**
B18K Kokolik River 74.36 21 P **P 00 02 22.3 +1.0**
baz=283,SNR=9.5
BIOA Bad Ischl, Aus 74.41 316 *eP* **P 00 02 21.4 -0.6**
comp=Z,66nm,1.8s,SNR=19
A19K Wainwright 74.41 21 P **P 00 02 22.2 +0.7**
baz=284
CUC Castrocucco 74.48 307 P **P 00 02 21.9 -0.6**
G15K Niukluk 74.49 26 P **P 00 02 22.5 +0.4**
baz=283
M11K Mekoryuk 74.50 31 P **P 00 02 22.6 +0.4**
baz=282
OVD Ostervraa, Den 74.50 326 *i* P **P 00 02 24.2 +1.9**
OVD IAmb IAmb 00 02 29.4
comp=Z,202nm,1.0s
NIKH Nikolski High 74.59 39 P **P 00 02 25.7 +2.8**
baz=282
WET Wettzell 74.60 317 *eP* **P 00 02 23.4 +0.3**
comp=Z,105nm,1.2s,baz=77,slow=5.8
TANN Tannenbergstha 74.61 318 *eP* **P 00 02 23.2 0.0**
comp=Z,76nm,1.1s,baz=77,slow=5.8
MYKA Terra Mystica 74.62 314 *eP* **P 00 02 22.8 -0.5**
comp=Z,19nm,1.1s,SNR=6.9
CADS Cadrg 74.64 314 *i* P **P 00 02 22.6 -0.9**
CADS *i* S **S 00 11 57.8 -1.7**
MOL Molde 74.70 331 *eP* **P 00 02 23.3 -0.1**
KBA Koelnbreinsper 74.73 315 *eP* **P 00 02 23.5 -0.5**
comp=Z,31nm,1.0s,SNR=14
KBA Koelnbreinsper 74.73 315 ⇑P **P 00 02 22.9 -1.2**
TRI Trieste 74.73 313 P **P 00 02 22.6 -1.3**
TRI IAmb IAmb 00 02 38.0
comp=Z,101nm,1.1s
TRI Trieste 74.73 313 P **P 00 02 22.6 -1.3**
TRI pmax pmax
comp=Z,101nm,1.1s
C18K Utukok River 74.75 22 P **P 00 02 23.7 +0.1**
C18K IAmb IAmb 00 02 30.4
comp=Z,219nm,1.4s
C18K Utukok River 74.75 22 P **P 00 02 24.0 +0.4**
baz=284,SNR=11
GORT1 Trebel 74.78 321 *eP* **P 00 02 23.9 0.0**
comp=Z,128nm,1.2s,baz=77,slow=5.8
PLN Plauen 74.78 319 *eP* **P 00 02 24.0 -0.1**
comp=Z,20nm,1.1s,baz=77,slow=5.8
SABO M.te Sabotino 74.79 314 P **P 00 02 23.5 -0.8**
CEL Celeste 74.80 306 P **P 00 02 24.4 0.0**
CEL IAmb IAmb 00 02 41.2
comp=Z,200nm,1.2s
CEL Celeste 74.80 306 ⇑P **P 00 02 24.4 0.0**
NOR Nord 74.82 352 ⇓P **P 00 02 22.5 -1.3**
NOR Nord 74.82 352 *i* P **P 00 02 22.8 -1.0**
NOR IAmb IAmb 00 02 28.0
comp=Z,329nm,1.7s
NEUB Neuenburg 74.87 319 *eP* **P 00 02 24.7 +0.1**
comp=Z,90nm,1.0s,baz=77,slow=5.8
E17K Hotham Inlet 74.89 24 P **P 00 02 24.9 +0.5**
baz=284,SNR=30
K13K Kusilvak Mount 74.89 29 P **P 00 02 25.0 +0.5**
K13K IAMs_20 IAMs_20 00 34 42.4

comp=Z,10µm,20.0s
K13K **Kusilvak Mount** 74.89 29 P P 00 02 25.0 +0.5
baz=283
ROTZ **Rotzenmuhle** 74.90 318 eP P 00 02 25.4 +0.6
comp=Z,32nm,1.1s,baz=77,slow=5.8
MANZ **Manzenberg** 74.92 318 eP P 00 02 25.4 +0.5
comp=Z,112nm,2.3s,baz=77,slow=5.8
RJOB **Jochberg** 74.95 316 eP P 00 02 25.0 -0.3
comp=Z,77nm,1.1s,baz=77,slow=5.8
FLTG **Flechtingen** 74.96 321 ⇓P P 00 02 24.4 -0.6
FLTG **Flechtingen** 74.96 321 eP P 00 02 24.7 -0.3
comp=Z,424nm,2.4s,baz=77,slow=5.8
LHI **Lord Howe Isla** 74.99 132 P P 00 02 26.8 +1.3
comp=Z,114nm,1.1s
LHI **Lord Howe Isla** 74.99 132 ⇑P P 00 02 30.9 +5.4
AKN **Aaknes** 75.04 331 eP P 00 02 25.9 +0.5
TAU **Tasmania Unive** 75.05 147 P P 00 02 25.4 -0.2
TAU IAmb IAmb 00 02 29.9
comp=Z,290nm,1.8s
TAU **Tasmania Unive** 75.05 147 IAMs_20 IAMs_20 00 40 16.2
comp=Z,12µm,19.0s
TAU **Tasmania Unive** 75.05 147 P P 00 02 25.4 -0.2
TAU pmax pmax
comp=Z,290nm,1.8s
TAU MLR MLR
comp=Z,12µm,19.0s
GOET **G??ttrup** 75.08 326 i P P 00 02 27.8 +2.1
GOET IAmb IAmb 00 02 31.4
comp=Z,156nm,1.0s
MOX **Moxa** 75.09 319 eP P 00 02 26.0 +0.1
comp=Z,81nm,1.2s,baz=77,slow=5.8
MOX eL L 00 40 20.9
comp=Z,9µm,20.6s
LESA **Schwarzleotal** 75.10 315 eP P 00 02 25.6 -0.5
comp=Z,26nm,0.6s,SNR=15
BSEG **Bad Segeberg** 75.15 322 eP P 00 02 26.6 +0.5
comp=Z,76nm,1.3s,baz=77,slow=5.8
C19K **Lookout Ridge** 75.19 21 P P 00 02 27.1 +0.9
baz=286,SNR=20
SSRD **Sdr. Stenderup** 75.20 324 i P P 00 02 27.0 +0.6
SSRD IAmb IAmb 00 02 28.3
comp=Z,142nm,1.0s
J14K **Nanvaranak Lak** 75.21 28 IAMs_20 IAMs_20 00 41 31.6
comp=Z,8µm,18.0s
J14K **Nanvaranak Lak** 75.21 28 P P 00 02 26.8 +0.5
baz=284,SNR=8.9
MUD **Monsted U'grnd** 75.24 325 i P P 00 02 27.0 +0.4
MUD IAmb IAmb 00 02 32.2
comp=Z,263nm,1.6s
E18K **Tukpahlearik C** 75.27 23 P P 00 02 27.2 +0.6
baz=285,SNR=23
H16K **Elim** 75.33 26 P P 00 02 27.2 +0.3
baz=284,SNR=7.7
STAL **STALIGIAL** 75.33 314 P P 00 02 26.6 -0.8
STAL IAmb IAmb 00 02 47.7
comp=Z,104nm,1.0s
ASSE **Asse, Remlinge** 75.34 320 eP P 00 02 27.3 +0.2
comp=Z,554nm,2.5s,baz=77,slow=5.8
CIMO **Cimolais** 75.50 314 P P 00 02 27.3 -1.1
A21K **Barrow** 75.53 19 P P 00 02 28.2 +0.2
baz=288
CLZ **Clausthal** 75.58 320 eP P 00 02 29.1 +0.4
comp=Z,118nm,1.3s,baz=77,slow=5.8
AQU **L'Aquila** 75.73 310 P P 00 02 28.3 -1.5
AQU **L'Aquila** 75.73 310 eP P 00 02 27.7 -2.1
AQU **L'Aquila** 75.73 310 ⇓P P 00 02 29.3 -0.5
B20K **Meade River** 75.75 20 P P 00 02 29.7 +0.4
baz=287
G17K **Kiwalik Mounta** 75.75 25 P P 00 02 30.0 +0.6
baz=285,SNR=15
UNV **Unalaska Valle** 75.77 38 P P 00 02 30.3 +0.7
baz=283
DZM **Mont Dzumac** 75.78 120 LR LR 00 38 02.4
comp=Z,2µm,19.6s,baz=294,slow=38
WTTA **Wattenberg** 75.82 315 eP P 00 02 29.6 -0.8
comp=Z,54nm,1.0s,SNR=17
SNART **Snartemo** 75.84 327 i P P 00 02 29.0 -1.0
WATA **Walderalm** 75.85 315 i P P 00 02 29.8 -0.7
comp=Z,71nm,1.9s,SNR=17
F18K **Selawik** 75.85 24 P P 00 02 30.3 +0.5
baz=286,SNR=56
FUR **Furstenfeldbru** 75.85 316 eP P 00 02 30.5 +0.1
comp=Z,611nm,2.2s,baz=77,slow=5.8
M13K **Dall Lake** 75.87 31 P P 00 02 30.8 +0.7
baz=284
D19K **Kuna River** 75.88 22 IAMs_20 IAMs_20 00 38 04.9
comp=Z,10µm,18.0s
D19K **Kuna River** 75.88 22 P P 00 02 30.0 -0.1
baz=287,SNR=33
ONTNC **Ouen Toro** 75.90 120 P P 00 02 30.4 -0.5
ONTNC IAmb IAmb 00 02 38.6
comp=Z,185nm,1.4s
ONTNC **Ouen Toro** 75.90 120 P P 00 02 32.2 +1.3
GTTG **Gottingen** 75.90 320 eP P 00 02 30.7 +0.2
comp=Z,97nm,1.1s,baz=77,slow=5.8
L14K **Kuka Creek** 75.95 30 IAMs_20 IAMs_20 00 36 48.3
comp=Z,12µm,18.0s
L14K **Kuka Creek** 75.95 30 P P 00 02 30.9 +0.3
baz=285,SNR=24
UBBA **Unterbreizbach** 76.05 319 eP P 00 02 32.1 +0.9
comp=Z,104nm,1.5s,baz=77,slow=5.8
CTI **Castel Tesino** 76.10 314 P P 00 02 30.8 -1.1
CTI IAmb IAmb 00 02 52.0
comp=Z,150nm,1.6s
CTI **Castel Tesino** 76.10 314 P P 00 02 30.8 -1.1
CTI pmax pmax
comp=Z,150nm,1.6s
VAE **Valguarnera** 76.12 305 LR LR 00 41 23.3
comp=Z,4µm,18.1s,baz=79,slow=40
SQTA **Sankt Quirin** 76.12 315 eP P 00 02 31.2 -0.8
comp=Z,30nm,0.8s,SNR=20
A22K **Sinclair Lake** 76.14 19 P P 00 02 32.1 +0.7
baz=289
YATNC **Mamie plateau,** 76.14 120 P P 00 02 35.0 +2.7
MOTA **Moosalm** 76.16 316 eP P 00 02 31.4 -0.9
comp=Z,75nm,1.1s,SNR=24
I17K **Unalakleet** 76.17 27 P P 00 02 32.0 +0.3
I17K IAMs_20 IAMs_20 00 38 09.9
comp=Z,9µm,20.0s
I17K **Unalakleet** 76.17 27 P P 00 02 32.6 +0.9
baz=286,SNR=12
H17K **Granite Mounta** 76.21 26 P P 00 02 32.8 +0.8
baz=286,SNR=34
K15K **Wolf Creek Mou** 76.23 29 P P 00 02 33.2 +1.0
baz=285,SNR=9.6
D20K **Etivluk River** 76.34 22 P P 00 02 33.5 +0.8
baz=288,SNR=90
RETA **Reutte** 76.35 316 eP P 00 02 32.6 -0.6
comp=Z,53nm,0.8s,SNR=20
J16K **Anvik River** 76.38 27 IAMs_20 IAMs_20 00 38 26.4
comp=Z,10µm,18.0s
J16K **Anvik River** 76.38 27 P P 00 02 33.7 +0.7
baz=286
L15K **Ungalak Mounta** 76.42 29 P P 00 02 34.0 +0.7
baz=286,SNR=11
WDD **Wied Dalam** 76.43 303 P P 00 02 32.6 -1.1
WDD IAmb IAmb 00 02 46.6
comp=Z,188nm,1.3s
G18K **Tagagawik** 76.44 25 IAMs_20 IAMs_20 00 39 03.8
comp=Z,13µm,19.0s
G18K **Tagagawik** 76.44 25 P P 00 02 33.4 0.0
baz=287,SNR=14
M14K **Bethel** 76.44 30 P P 00 02 33.9 +0.6
baz=285,SNR=13
FETA **Feichten** 76.48 315 eP P 00 02 33.4 -0.7
comp=Z,24nm,1.0s,SNR=9.2
E19K **Redstone River** 76.51 23 P P 00 02 34.1 +0.5
baz=288
E20K **Nigu River** 76.63 22 P P 00 02 34.7 +0.3
baz=289
B21K **Ikpikpuk River** 76.72 20 P P 00 02 35.5 +0.8
baz=290,SNR=20
UBR **Ueberruh** 76.73 316 eP P 00 02 34.9 -0.5
comp=Z,103nm,1.3s,baz=77,slow=5.8
H18K **Honhosa River** 76.77 25 IAMs_20 IAMs_20 00 39 59.7
comp=Z,11µm,22.0s
H18K **Honhosa River** 76.77 25 P P 00 02 35.5 +0.3
baz=288
N14K **Kuskokwak Cree** 76.80 31 IAMs_20 IAMs_20 00 39 54.8
comp=Z,9µm,19.0s
N14K **Kuskokwak Cree** 76.80 31 P P 00 02 36.0 +0.7
baz=286,SNR=14
MARNC **Mare, Loyalty** 76.81 119 P P 00 02 38.2 +2.1
C21K **Knifeblade Rid** 76.82 21 P P 00 02 36.1 +0.7
baz=290,SNR=34
B22K **Teshekpuk Lake** 76.85 20 P P 00 02 35.6 +0.1
B22K **Teshekpuk Lake** 76.85 20 P P 00 02 36.0 +0.5
baz=291
FUORN **Ofenpass-Fuorn** 76.89 315 P P 00 02 35.7 -0.8
FUORN IAmb IAmb 00 02 59.3
comp=Z,297nm,2.0s
FUORN IAMs_20 IAMs_20 00 40 35.3
comp=Z,13µm,22.0s
KASTN **Kahler Asten** 76.92 320 eP P 00 02 36.3 0.0
comp=Z,392nm,2.5s,baz=77,slow=5.8
G19K **Purcell Mounta** 76.97 24 IAMs_20 IAMs_20 00 39 32.9
comp=Z,11µm,18.0s
G19K **Purcell Mounta** 76.97 24 P P 00 02 36.7 +0.4
baz=288,SNR=33
DAVA **Damuels** 76.98 316 i P P 00 02 36.2 -0.7
comp=Z,40nm,1.0s,SNR=8.1
DAVA **Damuels** 76.98 316 ⇓P P 00 02 36.2 -0.7
J17K **VABM Dome** 77.00 27 IAMs_20 IAMs_20 00 38 46.9
comp=Z,10µm,21.0s
J17K **VABM Dome** 77.00 27 P P 00 02 37.4 +0.9
baz=287
IBBN **Ibbenburen** 77.04 321 eP P 00 02 37.3 +0.4
comp=Z,165nm,1.4s,baz=77,slow=5.8
STU **Stuttgart** 77.05 317 P P 00 02 36.8 -0.3
STU IAMs_20 IAMs_20 00 38 43.4
comp=Z,9µm,20.0s
STU **Stuttgart** 77.05 317 P P 00 02 36.8 -0.3
STU pmax pmax
comp=Z,310nm,1.5s
STU MLR MLR
comp=Z,9µm,20.0s
STU **Stuttgart** 77.05 317 ⇓P P 00 02 37.2 +0.1
STU **Stuttgart** 77.05 317 eP P 00 02 37.5 +0.4
comp=Z,384nm,1.1s,baz=77,slow=5.8
M15K **Kasigluk River** 77.06 30 P P 00 02 37.4 +0.5
baz=286,SNR=13
DAVOX **Davos/Dischmat** 77.11 315 LR LR 00 40 40.1
comp=Z,14µm,21.3s,baz=56,slow=39
TNS **Taunus Mts** 77.15 319 eP P 00 02 37.7 0.0
comp=Z,55nm,1.1s,baz=77,slow=5.8
O14K **Tigyukauivet M** 77.19 32 P P 00 02 38.4 +0.8
baz=286
F20K **Avaraart Lake** 77.19 23 IAMs_20 IAMs_20 00 40 11.7
comp=Z,13µm,18.0s
F20K **Avaraart Lake** 77.19 23 P P 00 02 37.8 +0.3
baz=289
FALS **False Pass** 77.27 36 P P 00 02 39.1 +1.0
baz=286
L16K **Owhi River** 77.33 29 P P 00 02 39.2 +0.8
baz=287,SNR=10.0
E21K **Killik River** 77.34 22 IAMs_20 IAMs_20 00 40 22.0
comp=Z,10µm,19.0s
E21K **Killik River** 77.34 22 P P 00 02 38.6 +0.3
baz=291
H19K **Roundabout Mou** 77.42 25 IAMs_20 IAMs_20 00 39 44.8
comp=Z,11µm,19.0s
H19K **Roundabout Mou** 77.42 25 P P 00 02 39.5 +0.7
baz=288,SNR=34
VLC **Villacollemand** 77.43 312 P P 00 02 40.0 +0.7
N15K **Kwethluk River** 77.50 30 P P 00 02 40.1 +0.8
baz=287,SNR=23
GCSA **Galena City Sc** 77.50 25 P P 00 02 39.9 +0.7
baz=289,SNR=8.4
TUE **Stuetta** 77.54 315 ⇑P P 00 02 39.6 -0.5
K17K **Iditarod** 77.55 28 P P 00 02 40.6 +1.1
baz=288,SNR=25
BUG **Bochum–Univer** 77.56 320 eP P 00 02 40.1 +0.3
comp=Z,181nm,1.7s,baz=77,slow=5.8
D22K **Ayikyak River** 77.62 21 P P 00 02 40.7 +0.7
baz=292
DAG **Danmarks Havn** 77.70 348 ⇓P P 00 02 38.3 -1.9
DAG **Danmarks Havn** 77.70 348 i P P 00 02 38.9 -1.3
DAG IAmb IAmb 00 02 39.9
comp=Z,228nm,1.7s
BFO **Black Forest** 77.72 317 P P 00 02 39.3 -1.6
BFO IAMs_20 IAMs_20 00 39 13.2
comp=Z,9µm,19.0s
BFO **Black Forest** 77.72 317 P P 00 02 39.3 -1.6
BFO pmax pmax
comp=Z,38nm,1.0s
BFO MLR MLR
comp=Z,9µm,19.0s
L17K **Donlin** 77.73 28 P P 00 02 41.6 +1.0
baz=288
M16K **Timber Creek** 77.77 29 IAMs_20 IAMs_20 00 36 32.3
comp=Z,10µm,20.0s
M16K **Timber Creek** 77.77 29 P P 00 02 41.7 +0.9
baz=288
S12K **Black Hills** 77.78 35 IAMs_20 IAMs_20 00 35 20.0
comp=Z,9µm,19.0s
BOB **Bobbio (Coli)** 77.92 313 ⇓P P 00 02 42.4 +0.2
O15K **Ungalikthiuk R** 77.92 31 P P 00 02 42.2 +0.5
baz=288
C23K **Itkillik River** 77.93 20 P P 00 02 42.2 +0.6
baz=293
F21K **Alatna River** 77.95 23 IAMs_20 IAMs_20 00 40 41.8
comp=Z,13µm,19.0s
F21K **Alatna River** 77.95 23 P P 00 02 42.1 +0.3
baz=291
J18K **Innoko River** 77.99 27 IAMs_20 IAMs_20 00 42 51.0
comp=Z,10µm,18.0s
J18K **Innoko River** 77.99 27 P P 00 02 42.5 +0.4
baz=289
N16K **Nishlik Lake** 78.03 30 P P 00 02 43.4 +1.0
baz=288
JMIC **Jan Mayen** 78.04 342 LR LR 00 42 49.3
comp=Z,3µm,20.4s,baz=62,slow=40
H20K **Anotlenega Mo** 78.05 24 P P 00 02 42.7 +0.3
baz=290,SNR=35
E22K **Anaktuvuk Pass** 78.20 21 IAMs_20 IAMs_20 00 36 57.3
comp=Z,15µm,22.0s
E22K **Anaktuvuk Pass** 78.20 21 P P 00 02 43.5 +0.3
baz=293,SNR=44
G21K **Allakaket** 78.20 23 IAMs_20 IAMs_20 00 39 30.5
comp=Z,9µm,21.0s
G21K **Allakaket** 78.20 23 P P 00 02 43.5 +0.3
baz=292,SNR=45
D23K **Nanushuk River** 78.26 21 P P 00 02 44.2 +0.7
baz=294,SNR=48
J19K **Poorman** 78.27 26 P P 00 02 44.5 +0.9
baz=290,SNR=30
IMAR **Indian Mountai** 78.31 24 P P 00 02 43.4 -0.3
F22K **John River** 78.32 22 P P 00 02 44.6 +0.8
baz=292
M17K **Holitna River** 78.35 29 P P 00 02 45.3 +1.2
baz=289
L18K **Granite Mounta** 78.42 28 IAMs_20 IAMs_20 00 43 11.4
comp=Z,9µm,18.0s
L18K **Granite Mounta** 78.42 28 P P 00 02 45.4 +1.0
baz=290
I20K **Naaghedeneel** 78.45 25 IAMs_20 IAMs_20 00 39 07.1
comp=Z,8µm,19.0s
I20K **Naaghedeneel** 78.45 25 P P 00 02 45.6 +1.1
baz=291,SNR=8.4
BTNL **Ternell** 78.48 320 dP P 00 02 44.7 -0.3
BTNL dPP PP 00 05 42.4 +0.2
ECH **Echery** 78.51 317 P P 00 02 44.9 -0.4
ECH **Echery** 78.51 317 P P 00 02 44.9 -0.4
ECH pmax pmax
comp=Z,26nm,1.1s
ECH MLR MLR
comp=Z,8µm,22.0s
ECH **Echery** 78.51 317 ⇓P P 00 02 45.5 +0.2
MEM **Membach** 78.55 320 dP P 00 02 45.3 -0.1
comp=Z,15nm,1.3s
C24K **Franklin Bluff** 78.59 20 IAMs_20 IAMs_20 00 39 05.3
comp=Z,13µm,19.0s
C24K **Franklin Bluff** 78.59 20 P P 00 02 45.7 +0.5
baz=295
BHOU **Houvegnez** 78.63 319 dP P 00 02 45.2 -0.6
O16K **Kokwok River B** 78.63 31 P P 00 02 46.3 +0.7
baz=289,SNR=20
BEBN **Eben Emael** 78.70 320 dP P 00 02 46.3 +0.2
WLF **Walferdange** 78.73 319 P P 00 02 45.7 -0.7
WLF **Walferdange** 78.73 319 P P 00 02 45.9 -0.5
WLF IAmb IAmb 00 03 04.0
comp=Z,238nm,1.4s
WLF IAMs_20 IAMs_20 00 41 01.8
comp=Z,11µm,18.0s
WLF **Walferdange** 78.73 319 dP P 00 02 45.7 -0.7
comp=Z,60nm,1.4s
WLF **Walferdange** 78.73 319 P P 00 02 45.9 -0.5
WLF pmax pmax
comp=Z,238nm,1.4s
WLF MLR MLR
comp=Z,11µm,18.0s
WLF **Walferdange** 78.73 319 ⇓P P 00 02 47.0 +0.5
WLF **Walferdange** 78.73 319 eP P 00 02 47.1 +0.7
comp=Z,198nm,1.3s,baz=77,slow=5.8
SDPT **Sand Point** 78.75 35 P P 00 02 45.1 -1.2
baz=288
N17K **Nushagak Hills** 78.76 30 IAMs_20 IAMs_20 00 37 02.5
comp=Z,12µm,20.0s
N17K **Nushagak Hills** 78.76 30 P P 00 02 47.6 +1.3
baz=290,SNR=20
TOLK **Toolik Lake Re** 78.76 21 P P 00 02 45.9 -0.4
TOLK **Toolik Lake Re** 78.76 21 P P 00 02 46.5 +0.3
baz=295,SNR=43
G22K **Bettles** 78.78 23 P P 00 02 46.5 +0.1
baz=293
D24K **Happy Valley** 78.79 20 P P 00 02 46.9 +0.6
baz=295
H21K **Melozitna Rive** 78.79 24 P P 00 02 47.2 +0.7
baz=292,SNR=77
J20K **Nowinta River** 78.81 26 P P 00 02 47.5 +1.0
baz=291
BSTI **Sart Tilman** 78.83 320 dP P 00 02 46.9 0.0
P16K **Nushagak River** 78.87 31 P P 00 02 47.2 +0.3
baz=289
SENIN **Lac Senin/Sane** 78.93 315 P P 00 02 46.9 -1.0
SENIN IAmb IAmb 00 03 25.0
comp=Z,334nm,1.9s
SENIN IAMs_20 IAMs_20 00 42 40.3
comp=Z,10µm,20.0s
S14K **Fog Glacier** 78.95 34 P P 00 02 47.8 +0.2
baz=288
E23K **Chandalar** 78.99 21 P P 00 02 47.8 +0.2
baz=295
M18K **Stony River** 79.05 28 P P 00 02 48.9 +1.0
baz=290
O17K **Koliganek Bris** 79.05 30 P P 00 02 48.5 +0.6
baz=290,SNR=11
COLD **Coldfoot** 79.13 22 P P 00 02 48.1 -0.2
COLD **Coldfoot** 79.13 22 P P 00 02 48.6 +0.4
baz=294,SNR=24
K20K **Telida** 79.14 26 IAMs_20 IAMs_20 00 38 06.5
comp=Z,8µm,19.0s
K20K **Telida** 79.14 26 P P 00 02 49.4 +1.0
baz=292
RCHB **Rochefort** 79.16 319 dP P 00 02 49.0 +0.2
BGES **Gesves** 79.18 320 dP P 00 02 48.2 -0.6
comp=Z,18nm,1.5s
L19K **White Mountain** 79.24 28 IAMs_20 IAMs_20 00 37 45.0
comp=Z,8µm,18.0s
L19K **White Mountain** 79.24 28 P P 00 02 49.9 +0.9
baz=291,SNR=22
H22K **Ishtalitna Cre** 79.24 24 IAMs_20 IAMs_20 00 40 55.8
comp=Z,13µm,18.0s
H22K **Ishtalitna Cre** 79.24 24 P P 00 02 49.8 +0.8
baz=294,SNR=71
I21K **Tanana** 79.29 24 IAMs_20 IAMs_20 00 40 55.3
comp=Z,10µm,19.0s
I21K **Tanana** 79.29 24 P P 00 02 50.0 +0.9
baz=293
N18K **Kilae Creek** 79.31 29 IAMs_20 IAMs_20 00 37 31.9
comp=Z,9µm,21.0s
N18K **Kilae Creek** 79.31 29 P P 00 02 50.3 +0.9
baz=291,SNR=21
E24K **Your Creek** 79.36 21 P P 00 02 50.2 +0.6
baz=296
CHNA **Chernabura Isl** 79.39 36 P P 00 02 51.4 +1.5
CHNA **Chernabura Isl** 79.39 36 P P 00 02 49.8 -0.1
baz=289
CNBA **Chernabura Isl** 79.39 36 IAMs_20 IAMs_20 00 37 46.7
comp=Z,8µm,20.0s
BMRD **Maredsous** 79.40 320 dP P 00 02 49.9 -0.2
G23K **Bananza Creek** 79.41 23 IAMs_20 IAMs_20 00 38 47.2
comp=Z,10µm,20.0s
G23K **Bananza Creek** 79.41 23 P P 00 02 50.3 +0.5
baz=295,SNR=39
DBG **Daneborg** 79.42 346 i P P 00 02 48.7 -1.0
DBG IAmb IAmb 00 02 54.9
comp=Z,211nm,1.8s
D25K **Kavik River** 79.50 20 IAMs_20 IAMs_20 00 43 59.4
comp=Z,10µm,18.0s
D25K **Kavik River** 79.50 20 P P 00 02 50.8 +0.5
baz=297
UCC **Uccle** 79.50 320 P P 00 02 50.1 -0.5
UCC **Uccle** 79.50 320 dP P 00 02 50.4 -0.2
UCC **Uccle** 79.50 320 P P 00 02 50.1 -0.5
UCC pmax pmax
comp=Z,82nm,1.5s
M19K **Big River Lodg** 79.54 28 IAMs_20 IAMs_20 00 37 55.5
comp=Z,9µm,19.0s
M19K **Big River Lodg** 79.54 28 P P 00 02 51.6 +1.0
baz=292
L20K **Farewell, AK** 79.55 27 IAMs_20 IAMs_20 00 43 50.2
comp=Z,10µm,18.0s
L20K **Farewell, AK** 79.55 27 P P 00 02 51.7 +1.0
baz=292,SNR=17
P17K **Kvichak River** 79.56 31 P P 00 02 51.6 +0.8
baz=290
DOU **Dourbes** 79.57 319 dP P 00 02 50.5 -0.5
DOU dPcP PcP 00 02 58.6 -0.3
Q16K **King Salmon** 79.64 31 P P 00 02 50.9 -0.2
baz=290
CHUM **Lake Minchumin** 79.67 26 P P 00 02 52.2 +1.0
baz=293,SNR=30
C26K **Camden Bay** 79.67 19 P P 00 02 52.2 +1.0
baz=299,SNR=82
BNI **Bardonecchia** 79.73 314 P P 00 02 51.0 -1.2
BNI **Bardonecchia** 79.73 314 P P 00 02 51.0 -1.2
BNI pmax pmax
comp=Z,59nm,1.1s
BNI **Bardonecchia** 79.73 314 ⇑P P 00 02 51.9 -0.2
F24K **Squaw Lake** 79.81 21 IAMs_20 IAMs_20 00 44 47.8
comp=Z,13µm,18.0s
F24K **Squaw Lake** 79.81 21 P P 00 02 52.4 +0.4
baz=296
MLY **Manley** 79.83 24 P P 00 02 52.2 0.0
MLY **Manley** 79.83 24 P P 00 02 52.9 +0.7
baz=294,SNR=77
N19K **Bonanza Creek** 79.90 29 IAMs_20 IAMs_20 00 37 50.7
comp=Z,8µm,20.0s
N19K **Bonanza Creek** 79.90 29 P P 00 02 53.5 +0.8
baz=292,SNR=27
O18K **Koktuh Hills** 79.92 30 P P 00 02 53.5 +0.8
baz=291,SNR=16
H23K **Yukon River** 79.96 23 IAMs_20 IAMs_20 00 42 33.2
comp=Z,9µm,22.0s
H23K **Yukon River** 79.96 23 P P 00 02 53.5 +0.7
baz=295,SNR=45
P18K **Big Mountain,** 80.08 30 P P 00 02 53.7 +0.1
baz=291
M20K **Styx River** 80.10 28 P P 00 02 54.7 +0.9
baz=293
PPLA **Purkeypile** 80.11 26 IAMs_20 IAMs_20 00 44 33.0
comp=Z,9µm,18.0s
PPLA **Purkeypile** 80.11 26 P P 00 02 54.2 +0.4
baz=293,SNR=14
BPAW **Bear Paw Mtn.** 80.12 25 IAMs_20 IAMs_20 00 40 16.2
comp=Z,8µm,21.0s
BPAW **Bear Paw Mtn.** 80.12 25 P P 00 02 54.2 +0.5
baz=294,SNR=79
R17L **Mt. Peulik Vol** 80.15 32 P P 00 02 53.2 -0.8
baz=291
PLK4 **Peulik 4** 80.15 32 IAMs_20 IAMs_20 00 38 50.5
comp=Z,8µm,19.0s
Q17K **Contact Creek** 80.16 32 P P 00 02 52.9 -1.2
baz=291
C27K **Jago River** 80.18 19 IAMs_20 IAMs_20 00 41 02.2
comp=Z,12µm,20.0s
C27K **Jago River** 80.18 19 P P 00 02 54.9 +1.0
baz=300
O19K **Port Alsworth** 80.21 29 IAMs_20 IAMs_20 00 37 46.8
comp=Z,8µm,20.0s
O19K **Port Alsworth** 80.21 29 P P 00 02 54.2 0.0
baz=292,SNR=16
I23K **Minto, Yukon-K** 80.32 24 P P 00 02 55.2 +0.5
baz=295,SNR=39
E25K **Arctic Village** 80.32 20 P P 00 02 55.0 +0.2
baz=298,SNR=22
G24K **Hadweenzic Riv** 80.33 22 IAMs_20 IAMs_20 00 45 23.5
comp=Z,13µm,19.0s
G24K **Hadweenzic Riv** 80.33 22 P P 00 02 55.3 +0.5
baz=297
KTH **Kantishna Hill** 80.37 26 P P 00 02 54.9 -0.2
KTH IAmb IAmb 00 03 04.2
comp=Z,162nm,1.4s
KTH IAMs_20 IAMs_20 00 38 07.8
comp=Z,8µm,19.0s
Q18K **Katmai Hardscr** 80.45 31 P P 00 02 54.8 -0.9
baz=292
KEST **Kesra** 80.51 304 P P 00 02 56.1 -0.4
comp=Z,44nm,1.2s,baz=43,slow=4.3,SNR=13
KEST S S 00 13 02.8 -0.7

KEST comp=Z,5,6nm,1.2s,baz=80,slow=17,SNR=1.3 LR LR 00 44 36.1
comp=Z,4µm,21.7s,baz=69,slow=40
KEST comp=Z,44nm,1.2s **Kesra** **80.51 304** P **P** **00 02 55.7 -0.8**
KEST IAmb IAmb 00 03 14.0
comp=Z,229nm,1.4s
KEST **Kesra** **80.51 304** P **P** **00 02 56.1 -0.4**
KEST SNR=15 P **P** **00 02 56.1 -0.4**
SNR=15
F25K **Christian Rive** **80.55 21** P **P** **00 02 57.0 +1.0**
baz=298,SNR=37
H24K **Noodor Dome** **80.57 23** P **P** **00 02 56.6 +0.4**
baz=297,SNR=31
NEA2 **Nenana** **80.67 24** P **P** **00 02 56.5 -0.1**
baz=296,SNR=32
TRF **Thorofare Moun** **80.67 26** IAMs_20 IAMs_20 00 38 16.8
comp=Z,8µm,20.0s
TRF **Thorofare Moun** **80.67 26** P **P** **00 02 56.8 -0.1**
baz=295,SNR=10
SKT **Skwentna** **80.76 27** P **P** **00 02 56.2 -1.0**
SKT IAMs_20 IAMs_20 00 44 38.2
comp=Z,11µm,18.0s
SKT **Skwentna** **80.76 27** P **P** **00 02 56.7 -0.5**
baz=294,SNR=66
N20K **Mount Spurr** **80.78 28** P **P** **00 02 57.3 -0.1**
baz=294
SPCR **Spurr Chakacha** **80.78 28** P **P** **00 02 57.1 -0.3**
baz=294,SNR=15
G25K **Bearman Lake** **80.78 22** P **P** **00 02 58.1 +1.0**
baz=298,SNR=22
L22K **Petersville** **80.86 27** IAMs_20 IAMs_20 00 45 15.8
comp=Z,8µm,19.0s
LOR **Lormes** **80.91 317** ⇑P **P** **00 02 58.3 0.0**
P19K **Oil Pt** **80.92 30** IAMs_20 IAMs_20 00 38 16.7
comp=Z,8µm,19.0s
P19K **Oil Pt** **80.92 30** P **P** **00 02 57.6 -0.5**
baz=293
BMAR **Burnt Mountain** **80.98 21** P **P** **00 02 58.5 +0.1**
F26K **Sheenjek River** **81.00 21** P **P** **00 02 59.2 +0.8**
baz=300,SNR=44
Q19K **Cape Douglas,** **81.01 30** P **P** **00 02 57.7 -0.9**
baz=293
COLA **College** **81.01 24** IAMs_20 IAMs_20 00 42 15.6
comp=Z,9µm,18.0s
COLA **College** **81.01 24** P **P** **00 02 58.7 +0.3**
COLA **College** **81.01 24** ⇓P **P** **00 02 57.0 -1.4**
COLA **College** **81.01 24** P **P** **00 02 58.3 -0.2**
baz=297
POKR **Poker Plat Res** **81.06 24** P **P** **00 02 58.5 -0.2**
POKR IAmb IAmb 00 03 05.9
comp=Z,265nm,1.4s
POKR **Poker Plat Res** **81.06 24** P **P** **00 02 58.6 -0.1**
baz=297,SNR=29
MCK **McKinley** **81.10 25** P **P** **00 02 58.7 -0.3**
baz=296,SNR=39
SSB **Saint Sauveur** **81.10 315** P **P** **00 02 58.4 -1.0**
SSB **Saint Sauveur** **81.10 315** P **P** **00 02 58.4 -1.0**
SSB pmax pmax
comp=Z,122nm,1.5s
H25L **Birch Creek** **81.12 22** P **P** **00 02 59.7 +0.8**
baz=298,SNR=45
CUT **Chulitna** **81.12 27** IAMs_20 IAMs_20 00 42 01.8
comp=Z,9µm,18.0s
CUT **Chulitna** **81.12 27** P **P** **00 02 58.7 -0.3**
baz=295,SNR=7.4
CCB **Clear Creek Bu** **81.13 24** P **P** **00 02 57.9 -1.2**
FYU **Fort Yukon** **81.18 22** IAMs_20 IAMs_20 00 42 48.0
comp=Z,11µm,19.0s
CHIR **Chirikof Islan** **81.18 34** IAMs_20 IAMs_20 00 42 17.9
comp=Z,10µm,20.0s
CHIR **Chirikof Islan** **81.18 34** P **P** **00 02 59.2 -0.3**
baz=292
D27M **Malcolm River** **81.21 19** IAMs_20 IAMs_20 00 43 36.4
comp=Z,10µm,19.0s
D27M **Malcolm River** **81.21 19** P **P** **00 03 00.4 +0.8**
baz=302
RND **Reindeer** **81.27 25** P **P** **00 02 59.2 -0.8**
RND **Reindeer** **81.27 25** P **P** **00 02 59.2 -0.8**
RND pmax pmax
comp=Z,305nm,1.2s
RND MLR MLR
comp=Z,8µm,22.0s
SUA **Susitna One** **81.31 28** P **P** **00 02 59.7 -0.5**
baz=295,SNR=15
CAPN **Captain Cook N** **81.42 28** P **P** **00 03 00.7 0.0**
baz=294
ILAR **Eielson Array** **81.43 24** P **P** **00 02 58.8 -1.9**
comp=Z,8.6nm,0.8s,baz=298,slow=5.3,SNR=43
ILAR PP **PP** **00 06 06.2 0.0**
comp=Z,9.7nm,1.1s,baz=291,slow=7.6,SNR=4.9
ILAR PKKPbc **PKKPbc** **00 21 35.9 -0.5**
comp=Z,3.2nm,1.1s,baz=116,slow=1.6,SNR=6.8
ILAR PKPPKP **P'P'df** **00 29 39.8 -3.6**
comp=Z,2.1nm,1.1s,baz=119,slow=1.1,SNR=5.9
ILAR LR LR 00 42 50.3
comp=Z,8µm,18.4s,baz=292,slow=38
comp=Z,8.6nm,0.8s
ILAR **Eielson Array** **81.43 24** P **P** **00 02 59.0 -1.7**
ILAR **Eielson Array** **81.43 24** P **P** **00 02 59.0 -1.7**
M22K **Willow** **81.46 27** IAMs_20 IAMs_20 00 45 08.8
comp=Z,11µm,18.0s
M22K **Willow** **81.46 27** P **P** **00 03 00.4 -0.4**
baz=295,SNR=26
G26K **Porcupine Rive** **81.49 21** P **P** **00 03 01.9 +1.0**
baz=300
HDA **Harding Lake** **81.57 24** P **P** **00 03 00.3 -1.2**
baz=298,SNR=14
E27K **Coleen River** **81.58 20** P **P** **00 03 02.0 +0.6**
baz=302,SNR=53
PRP **Porcupine Dome** **81.58 23** P **P** **00 03 01.4 -0.2**
PRP IAmb IAmb 00 03 08.9
comp=Z,286nm,1.4s
PRP IAMs_20 IAMs_20 00 45 30.7
comp=Z,9µm,20.0s
PRP **Porcupine Dome** **81.58 23** P **P** **00 03 01.6 -0.1**
baz=299,SNR=78
SII **Sitkinak Islan** **81.65 33** IAMs_20 IAMs_20 00 42 57.2
comp=Z,8µm,20.0s
SII **Sitkinak Islan** **81.65 33** P **P** **00 03 01.7 -0.4**
baz=293
WAT1 **Susitna Watana** **81.65 26** P **P** **00 03 01.2 -0.7**
baz=296
HOM **Homer** **81.66 29** P **P** **00 03 01.5 -0.5**
baz=294
FIS **Fire Island** **81.68 28** IAMs_20 IAMs_20 00 40 39.6
comp=Z,9µm,18.0s
CLF **Chambon-Foret** **81.69 318** P **P** **00 03 01.8 -0.5**
CLF IAmb IAmb 00 03 19.4
comp=Z,289nm,1.5s
CLF IAMs_20 IAMs_20 00 44 23.0
comp=Z,8µm,19.0s
CMAH **Djebel Manchou** **81.73 306** P **P** **00 03 01.3 -1.6**
Q20K **Shuyak Island** **81.73 31** P **P** **00 03 01.7 -0.7**
baz=294
EDMD **Edmundbyers** **81.74 325** *e*P **P** **00 03 02.7 +0.2**
EDMD IAmb IAmb 00 03 15.8
comp=Z,36nm,0.8s
D28M **Stokes Point** **81.82 18** P **P** **00 03 03.9 +1.2**
baz=304
OHAK **Old Harbor** **81.85 32** P **P** **00 03 04.1 +1.1**
OHAK **Old Harbor** **81.85 32** P **P** **00 03 02.8 -0.2**
baz=293
HPK **Haverah Park** **81.88 324** *e*P **P** **00 03 03.5 +0.2**
HPK IAmb IAmb 00 03 16.1
comp=Z,28nm,0.7s
RC01 **Rabbit Creek A** **81.91 28** P **P** **00 03 03.1 -0.2**
baz=296,SNR=17
POGA **Pongola** **81.93 237** P **P** **00 03 03.7 -0.3**
POGA IAmb IAmb 00 03 05.9
comp=Z,109nm,1.2s
SLKM **Skilak Lake** **81.95 28** IAMs_20 IAMs_20 00 39 42.7
comp=Z,8µm,18.0s
PMR **Palmer** **81.96 27** P **P** **00 03 03.1 -0.4**
PMR **Palmer** **81.96 27** P **P** **00 03 03.2 -0.3**
baz=296,SNR=16
BRLK **Bradley Lake** **81.96 29** IAMs_20 IAMs_20 00 38 55.1
comp=Z,9µm,20.0s
GHO **Glory Hole Cre** **81.97 27** P **P** **00 03 03.5 -0.2**
GHO IAmb IAmb 00 03 17.5
comp=Z,248nm,1.3s
GHO IAMs_20 IAMs_20 00 45 51.1
comp=Z,9µm,18.0s
KDAK **Kodiak Island** **81.97 31** LR LR 00 43 02.1
comp=Z,7µm,18.8s,baz=281,slow=38
KDAK **Kodiak Island** **81.97 31** P **P** **00 03 03.6 -0.1**
KDAK IAmb IAmb 00 03 11.2
comp=Z,239nm,1.2s
KDAK **Kodiak Island** **81.97 31** IAMs_20 IAMs_20 00 40 32.6
comp=Z,11µm,21.0s
KDAK **Kodiak Island** **81.97 31** P **P** **00 03 03.6 -0.1**
KDAK pmax pmax
comp=Z,239nm,1.2s
KDAK MLR MLR
comp=Z,11µm,21.0s
KDAK **Kodiak Island** **81.97 31** P **P** **00 03 03.1 -0.6**
baz=294
EDI **Edinburgh** **81.97 327** *e*P **P** **00 03 03.9 +0.2**
EDI IAmb IAmb 00 03 11.3
comp=Z,35nm,0.7s
NEEM **North Greenlan** **81.97 354** *i* P **P** **00 03 03.6 -0.1**
NEEM IAmb IAmb 00 03 08.8
comp=Z,395nm,1.5s
E28M **Babbage River** **81.99 19** P **P** **00 03 04.5 +0.9**
baz=304,SNR=182
DHY **Denali Highway** **82.02 25** IAMs_20 IAMs_20 00 42 53.4
comp=Z,9µm,19.0s
DHY **Denali Highway** **82.02 25** P **P** **00 03 03.2 -0.9**
baz=297,SNR=14
BRSE **Bradley Lake S** **82.04 29** P **P** **00 03 03.3 -0.7**
baz=295
J25K **Salcha River,** **82.08 24** IAMs_20 IAMs_20 00 42 58.8
comp=Z,9µm,18.0s
J25K **Salcha River,** **82.08 24** P **P** **00 03 02.9 -1.3**
baz=295
WAT6 **Susitna Watana** **82.10 26** P **P** **00 03 03.9 -0.6**
baz=297,SNR=40
CAEH **'Ain El Ouahch** **82.12 306** P **P** **00 03 06.4 +1.5**
SCO **Scoresbysund** **82.12 344** P **P** **00 03 03.5 -0.6**
SCO **Scoresbysund** **82.12 344** P **P** **00 03 03.6 -0.6**
SCO pmax pmax
comp=Z,129nm,1.7s
SCO MLR MLR
comp=Z,14µm,20.0s
SCO **Scoresbysund** **82.12 344** ⇑P **P** **00 03 04.2 +0.1**
SCO **Scoresbysund** **82.12 344** *e*P **P** **00 02 59.8 -4.3**
SCO IAmb IAmb 00 03 05.0
comp=Z,27nm,1.1s
LBWR **Ladybower, Pea** **82.15 324** *e*P **P** **00 03 05.0 +0.3**
LBWR IAmb IAmb 00 03 21.1
comp=Z,84nm,0.9s
CWF **Charnwood Fore** **82.16 323** *e*P **P** **00 03 04.6 -0.1**
CWF IAmb IAmb 00 03 08.6
comp=Z,12nm,0.7s
O22K **Cooper Landing** **82.18 28** IAMs_20 IAMs_20 00 39 40.9
comp=Z,10µm,20.0s
O22K **Cooper Landing** **82.18 28** P **P** **00 03 04.1 -0.7**
baz=296
EKA **Eskdalemuir Ar** **82.19 326** P **P** **00 03 04.0 -0.9**
comp=Z,20nm,0.8s,baz=65,slow=5.7,SNR=24
EKA S **SKSac** **00 13 23.8 -1.8**
comp=Z,1.3nm,0.8s,baz=58,slow=18,SNR=1.3
comp=Z,20nm,0.8s
SML **Sawmill** **82.20 27** IAMs_20 IAMs_20 00 45 25.3
comp=Z,11µm,18.0s
SML **Sawmill** **82.20 27** P **P** **00 03 05.0 +0.1**
baz=297,SNR=28
ESK **Eskdalemuir** **82.22 326** P **P** **00 03 04.5 -0.5**
ESK IAmb IAmb 00 03 31.0
comp=Z,106nm,1.2s
ESK **Eskdalemuir** **82.22 326** IAMs_20 IAMs_20 00 39 27.5
comp=Z,10µm,20.0s
ESK **Eskdalemuir** **82.22 326** *e*P **P** **00 03 05.3 +0.3**
ESK IAmb IAmb 00 03 14.9
comp=Z,20nm,0.8s
ESK **Eskdalemuir** **82.22 326** P **P** **00 03 04.5 -0.5**
ESK pmax pmax
comp=Z,106nm,1.3s
ESK MLR MLR
comp=Z,10µm,20.0s
G27K **Doyon Strip** **82.29 21** P **P** **00 03 06.0 +0.7**
baz=302
K24K **Donnelly Dome** **82.31 24** IAMs_20 IAMs_20 00 40 56.1
comp=Z,8µm,21.0s
K24K **Donnelly Dome** **82.31 24** P **P** **00 03 04.9 -0.5**
baz=299,SNR=11
KNK **Knik Glacier** **82.33 27** IAMs_20 IAMs_20 00 45 37.6
comp=Z,11µm,18.0s
KNK **Knik Glacier** **82.33 27** P **P** **00 03 05.5 0.0**
baz=297,SNR=22
CKFL **Kef-Lekhel** **82.33 306** P **P** **00 03 09.4 +3.2**
F28M **Old Crow** **82.44 20** P **P** **00 03 06.2 +0.2**
baz=304,SNR=29
M23K **Glacier View** **82.47 27** P **P** **00 03 06.0 -0.2**
baz=297,SNR=27
SEW **Seward** **82.47 29** P **P** **00 03 06.0 -0.2**
baz=296
I26K **Coal Creek Min** **82.55 22** IAMs_20 IAMs_20 00 46 42.2
comp=Z,12µm,18.0s
I26K **Coal Creek Min** **82.55 22** P **P** **00 03 06.6 +0.1**
baz=301
E29M **Blow River** **82.61 19** IAMs_20 IAMs_20 00 43 09.5
comp=Z,12µm,20.0s
E29M **Blow River** **82.61 19** P **P** **00 03 07.5 +0.7**
baz=305
SCM **Sheep Creek Mo** **82.61 26** P **P** **00 03 06.8 -0.3**
SCM IAmb IAmb 00 03 27.9
comp=Z,203nm,1.3s
SCM IAMs_20 IAMs_20 00 45 47.2
comp=Z,9µm,19.0s
SCM **Sheep Creek Mo** **82.61 26** P **P** **00 03 06.8 -0.3**
SCM pmax pmax
comp=Z,203nm,1.3s
SCM **Sheep Creek Mo** **82.61 26** P **P** **00 03 07.1 0.0**
baz=298,SNR=13
PWL **Port Wells** **82.63 28** IAMs_20 IAMs_20 00 45 58.7
comp=Z,8µm,18.0s
PWL **Port Wells** **82.63 28** P **P** **00 03 07.1 0.0**
baz=297,SNR=12
H27K **Steamboat Moun** **82.64 21** P **P** **00 03 07.9 +0.8**
baz=302,SNR=100
RIDG **Independent Ri** **82.70 24** P **P** **00 03 06.9 -0.6**
RIDG IAmb IAmb 00 03 24.8
comp=Z,133nm,1.2s
RIDG IAMs_20 IAMs_20 00 41 17.4
comp=Z,9µm,22.0s
RIDG **Independent Ri** **82.70 24** P **P** **00 03 06.6 -0.9**
baz=300,SNR=20
J26L **Joseph Creek** **82.81 23** IAMs_20 IAMs_20 00 46 20.2
comp=Z,10µm,19.0s
J26L **Joseph Creek** **82.81 23** P **P** **00 03 07.5 -0.5**
baz=301,SNR=53
PAX **Paxson** **82.84 25** P **P** **00 03 07.7 -0.5**
baz=299,SNR=19
BROLN **Tlhalogang** **82.89 245** *i* P **P** **00 03 08.8 -0.4**
SCRK **Sand Creek** **82.92 24** IAMs_20 IAMs_20 00 45 14.0
comp=Z,10µm,18.0s
SCRK **Sand Creek** **82.92 24** P **P** **00 03 08.2 -0.4**
baz=300,SNR=28
I27K **Kandik River** **82.94 22** IAMs_20 IAMs_20 00 41 07.5
comp=Z,12µm,20.0s
I27K **Kandik River** **82.94 22** P **P** **00 03 09.6 +0.9**
baz=302,SNR=58
M24K **Tolsona, Glenn** **82.97 26** P **P** **00 03 08.9 0.0**
baz=299,SNR=29
MAHO **Mahon** **83.04 310** P **P** **00 03 13.3 +3.7**
DOT **Dot Lake** **83.05 24** IAMs_20 IAMs_20 00 45 19.6
comp=Z,9µm,18.0s
GLI **Glacier Island** **83.16 27** P **P** **00 03 09.6 -0.3**
baz=298
HARP **HAARP** **83.24 25** P **P** **00 03 10.2 0.0**
baz=299,SNR=16
KLU **Klutina** **83.37 26** P **P** **00 03 11.2 +0.3**
baz=299,SNR=15
MREMI **Moremi** **83.39 243** P **P** **00 03 10.8 -1.0**
MREMI IAmb IAmb 00 03 15.4
comp=Z,141nm,1.1s
MREMI **Moremi** **83.39 243** *i* P **P** **00 03 11.0 -0.8**
G29M **Pine Creek** **83.43 20** P **P** **00 03 11.3 +0.2**
baz=305,SNR=31
P23K **Montague Islan** **83.44 28** IAMs_20 IAMs_20 00 40 29.0
comp=Z,11µm,20.0s
P23K **Montague Islan** **83.44 28** P **P** **00 03 11.4 +0.2**
baz=298
KSANE **Kasane** **83.48 249** P **P** **00 03 11.7 -0.6**
KSANE IAmb IAmb 00 03 14.8
comp=Z,69nm,0.9s
KSANE **Kasane** **83.48 249** *i* P **P** **00 03 11.7 -0.6**
A36M **Sachs Harbour** **83.53 13** P **P** **00 03 11.6 +0.1**
A36M IAmb IAmb 00 03 30.7
comp=Z,133nm,0.8s
A36M IAMs_20 IAMs_20 00 41 01.7
comp=Z,9µm,22.0s
A36M **Sachs Harbour** **83.53 13** P **P** **00 03 12.0 +0.5**
baz=316,SNR=27
MENT **Mentasta** **83.55 25** P **P** **00 03 12.3 +0.5**
DIV **Divide** **83.61 27** IAMs_20 IAMs_20 00 46 18.4
comp=Z,9µm,19.0s
K27K **Chicken** **83.61 23** IAMs_20 IAMs_20 00 47 32.4
comp=Z,10µm,19.0s
K27K **Chicken** **83.61 23** P **P** **00 03 13.0 +0.9**
baz=302
I28M **Miner Creek** **83.61 22** IAMs_20 IAMs_20 00 41 39.3
comp=Z,11µm,21.0s
I28M **Miner Creek** **83.61 22** P **P** **00 03 12.5 +0.3**
baz=304,SNR=45
HIN **Hinchinbrook I** **83.64 28** IAMs_20 IAMs_20 00 41 52.5
comp=Z,10µm,19.0s
L26K **Log Cabin Wild** **83.65 25** IAMs_20 IAMs_20 00 47 42.4
comp=Z,8µm,19.0s
L26K **Log Cabin Wild** **83.65 25** P **P** **00 03 13.0 +0.7**
baz=301,SNR=27
H29M **Whitestone** **83.71 21** IAMs_20 IAMs_20 00 41 23.9
comp=Z,11µm,21.0s
H29M **Whitestone** **83.71 21** P **P** **00 03 12.7 +0.2**
baz=305
F30M **Barrier River** **83.71 19** IAMs_20 IAMs_20 00 46 51.8
comp=Z,11µm,19.0s
F30M **Barrier River** **83.71 19** P **P** **00 03 13.2 +0.6**
baz=307
MSVF **Nonsavu** **83.83 111** P **P** **00 03 13.4 -0.7**
MSVF **Nonsavu** **83.83 111** P **P** **00 03 16.1 +2.0**
MSVF **Nonsavu** **83.83 111** P **P** **00 03 13.4 -0.7**
MSVF pmax pmax
comp=Z,61nm,1.1s
N25K **Chitina, Valde** **83.86 26** P **P** **00 03 14.2 +0.7**
baz=300,SNR=29
EYAK **Cordova Ski Ar** **83.90 27** IAMs_20 IAMs_20 00 46 32.2
comp=Z,10µm,18.0s
EYAK **Cordova Ski Ar** **83.90 27** P **P** **00 03 15.0 +1.4**
EYAK **Cordova Ski Ar** **83.90 27** P **P** **00 03 14.0 +0.4**
baz=299,SNR=11
CORI **Orista** **83.91 312** P **P** **00 03 13.5 -0.5**
CORI IAmb IAmb 00 03 31.2
comp=Z,110nm,1.3s
INK **Inuvik** **83.95 18** LR LR 00 44 55.0
comp=Z,6µm,18.4s,baz=295,slow=39
INK **Inuvik** **83.95 18** P **P** **00 03 13.5 -0.2**
INK **Inuvik** **83.95 18** P **P** **00 03 13.5 -0.2**
INK pmax pmax
comp=Z,381nm,1.4s
INK **Inuvik** **83.95 18** P **P** **00 03 14.1 +0.4**
baz=309,SNR=116
G30M **tAoh Zraii Nji** **83.96 20** P **P** **00 03 13.5 -0.4**
baz=307,SNR=74
TULEG **Thule** **84.05 358** P **P** **00 03 12.7 -1.5**
TULEG IAmb IAmb 00 03 25.1
comp=Z,141nm,1.0s
TULEG IAMs_20 IAMs_20 00 43 37.1
comp=Z,9µm,18.0s
TULEG **Thule** **84.05 358** *i* P **P** **00 03 13.2 -0.9**
TULEG IAmb IAmb 00 03 20.4
comp=Z,143nm,1.2s
M26K **Nabesna, AK** **84.11 25** IAMs_20 IAMs_20 00 47 06.6
comp=Z,8µm,18.0s
M26K **Nabesna, AK** **84.11 25** P **P** **00 03 15.1 +0.4**
baz=301
ETOS **Mallorca** **84.13 310** P **P** **00 03 16.9 +1.6**
EPYK **Eagle Plains** **84.17 20** IAMs_20 IAMs_20 00 44 29.8
comp=Z,9µm,18.0s
EPYK **Eagle Plains** **84.17 20** P **P** **00 03 14.7 -0.3**
baz=306,SNR=22
Q23K **Middleton Isla** **84.17 28** P **P** **00 03 16.2 +1.2**
baz=299
BMRM **Bremner River** **84.18 27** IAMs_20 IAMs_20 00 46 46.6
comp=Z,11µm,19.0s
BMRM **Bremner River** **84.18 27** P **P** **00 03 15.5 +0.4**
baz=300,SNR=38
MID **Middleton Isla** **84.18 28** IAMs_20 IAMs_20 00 40 18.8
comp=Z,8µm,19.0s
L27K **Beaver Creek,** **84.22 24** P **P** **00 03 16.3 +1.0**
baz=302
BCAR **Beaver Creek A** **84.23 24** P **P** **00 03 15.6 +0.2**
CEST **Esterri de Car** **84.24 313** P **P** **00 03 15.1 -0.8**
CEST IAmb IAmb 00 03 32.6
comp=Z,206nm,1.6s
GLB **Gilahina Butte** **84.27 26** P **P** **00 03 15.2 -0.4**
SUMG **Summit** **84.38 349** P **P** **00 03 14.9 -1.4**
SUMG **Summit** **84.38 349** P **P** **00 03 15.0 -1.4**
SUMG IAmb IAmb 00 03 28.0
comp=Z,171nm,1.2s
SUMG **Summit** **84.38 349** P **P** **00 03 15.0 -1.4**
SUMG pmax pmax
comp=Z,171nm,1.2s
SUMG MLR MLR
comp=Z,16µm,20.0s
SUMG **Summit** **84.38 349** *i* P **P** **00 03 15.0 -1.4**
SUMG IAmb IAmb 00 03 20.6
comp=Z,600nm,2.0s
F31M **Tsiigehtchic** **84.44 19** IAMs_20 IAMs_20 00 45 51.0
comp=Z,9µm,18.0s
F31M **Tsiigehtchic** **84.44 19** P **P** **00 03 16.4 +0.2**
baz=309,SNR=99
M27K **Edge Creek, AK** **84.58 25** P **P** **00 03 18.0 +0.8**
baz=302
DAWY **Dawson** **84.58 23** P **P** **00 03 16.8 -0.3**
DAWY IAmb IAmb 00 03 24.0
comp=Z,118nm,1.3s
DAWY **Dawson** **84.58 23** P **P** **00 03 17.2 +0.1**
baz=304,SNR=24
G31M **Satah River** **84.60 19** P **P** **00 03 16.8 -0.2**
baz=309
MCARA **McCarthy VSAT** **84.63 26** P **P** **00 03 17.9 +0.6**
baz=301,SNR=17
HMT **Hamilton** **84.64 27** P **P** **00 03 17.2 -0.3**
HMT IAmb IAmb 00 03 24.9
comp=Z,158nm,1.3s
HMT IAMs_20 IAMs_20 00 47 15.0
comp=Z,9µm,19.0s
DSB **Dublin** **84.76 325** P **P** **00 03 17.7 -0.5**
DSB **Dublin** **84.76 325** IAMs_20 IAMs_20 00 42 23.9
comp=Z,8µm,21.0s
KAIM **Kayak Island** **84.78 27** P **P** **00 03 19.3 +1.1**
baz=300
KHWEE **KHWEE** **84.84 245** P **P** **00 03 18.6 -0.6**
KHWEE IAmb IAmb 00 03 21.0
comp=Z,177nm,1.2s
BERG **Berg Lake** **84.86 27** IAMs_20 IAMs_20 00 47 00.5
comp=Z,10µm,19.0s
CRQM **Cirque** **84.91 26** IAMs_20 IAMs_20 00 44 32.4
comp=Z,10µm,18.0s
CRQE **Cirque** **84.93 26** P **P** **00 03 19.2 +0.2**
baz=301
BVCY **Beaver Creek** **84.94 24** P **P** **00 03 19.6 +0.6**
baz=303,SNR=19
I30M **Mount Dempster** **84.97 21** IAMs_20 IAMs_20 00 46 45.0
comp=Z,10µm,20.0s
I30M **Mount Dempster** **84.97 21** P **P** **00 03 19.1 0.0**
baz=307,SNR=34
SUCK **Suckling Hills** **84.99 27** IAMs_20 IAMs_20 00 45 18.0
comp=Z,11µm,19.0s
TGL **Tana Glacier** **85.04 26** P **P** **00 03 19.5 -0.1**
TGL IAMs_20 IAMs_20 00 44 35.3
comp=Z,9µm,18.0s
LPHEP **Lephephe** **85.05 243** P **P** **00 03 19.6 -0.6**
LPHEP **Lephephe** **85.05 243** *i* P **P** **00 03 19.9 -0.3**
BGLC **Bering Glacier** **85.17 27** P **P** **00 03 20.6 +0.6**
baz=301
WAX **Waxell Ridge** **85.19 27** IAMs_20 IAMs_20 00 44 56.3
comp=Z,10µm,19.0s
KULLO **Kullorsuaq** **85.21 354** *i* P **P** **00 03 19.0 -1.0**
KULLO IAmb IAmb 00 03 19.8
comp=Z,145nm,1.1s
SLIND **Selinda** **85.25 248** *i* P **P** **00 03 21.7 +0.4**
H31M **Peel River** **85.28 20** IAMs_20 IAMs_20 00 48 25.3
comp=Z,8µm,20.0s
H31M **Peel River** **85.28 20** P **P** **00 03 20.6 0.0**
baz=309,SNR=45
ISLE **Juniper Island** **85.32 26** IAMs_20 IAMs_20 00 44 51.8
comp=Z,7µm,20.0s
BARN **Barnard Glacie** **85.36 26** P **P** **00 03 21.2 -0.1**
BARN IAmb IAmb 00 03 29.1
comp=Z,90nm,1.2s
BARN IAMs_20 IAMs_20 00 43 47.7
comp=Z,7µm,19.0s
J30M **Hart River** **85.37 21** IAMs_20 IAMs_20 00 42 43.6
comp=Z,11µm,22.0s
J30M **Hart River** **85.37 21** P **P** **00 03 21.4 +0.2**
baz=307
K29M **Barlow Dome** **85.39 22** IAMs_20 IAMs_20 00 46 19.2

K29M **Barlow Dome** 85.39 22 P P 00 03 21.4 +0.2
baz=306,SNR=29
EBR **Ebro Roquetas** 85.41 312 P P 00 03 20.8 -0.9
EBR **Ebro Roquetas** 85.41 312 P P 00 03 20.8 -0.9
BORG **Borgarnes** 85.42 339 LR LR 00 43 19.4
comp=Z,7µm,21.5s,baz=39,slow=37
YUK3 **Moose Creek** 85.45 25 P P 00 03 21.9 +0.2
baz=304,SNR=14
EIBI **Ibiza** 85.46 310 P P 00 03 24.2 +2.2
GRNC **Granite Creek** 85.50 26 IAMs_20 IAMs_20 00 44 41.4
comp=Z,8µm,20.0s
RES **Resolute Bay** 85.52 4 LR LR 00 44 20.3
comp=Z,6µm,19.5s,baz=350,slow=38
RES **Resolute Bay** 85.52 4 P P 00 03 21.1 -0.4
RES IAmb IAmb 00 03 26.9
comp=Z,188nm,1.8s
RES **Resolute Bay** 85.52 4 P P 00 03 21.1 -0.4
RES pmax pmax
comp=Z,188nm,1.8s
CTG **Chitna Glacier** 85.54 26 P P 00 03 22.9 +0.8
baz=303,SNR=11
CTGM **Chitina Glacie** 85.55 26 IAMs_20 IAMs_20 00 43 52.6
comp=Z,8µm,20.0s
L29M **L29M** 85.59 23 IAMs_20 IAMs_20 00 44 52.7
comp=Z,8µm,18.0s
L29M **L29M** 85.59 23 P P 00 03 23.1 +0.9
baz=305
YAH **Yahtse** 85.70 26 IAMs_20 IAMs_20 00 47 47.8
comp=Z,8µm,18.0s
MESA **MESA** 85.71 27 IAMs_20 IAMs_20 00 47 47.1
comp=Z,11µm,19.0s
MESA **MESA** 85.71 27 P P 00 03 23.9 +0.9
baz=302
CASY **Casey** 85.73 176 P P 00 03 22.1 -0.4
CASY IAmb IAmb 00 03 29.2
comp=Z,131nm,0.9s
CASY **Casey** 85.73 176 IAMs_20 IAMs_20 00 37 30.7
comp=Z,9µm,21.0s
C36M **Paulatuk** 85.74 15 P P 00 03 22.2 -0.5
C36M IAmb IAmb 00 03 31.6
comp=Z,106nm,0.8s
C36M **Paulatuk** 85.74 15 P P 00 03 22.3 -0.3
baz=318,SNR=52
M29M **Somme Creek** 85.85 24 IAMs_20 IAMs_20 00 43 05.7
comp=Z,7µm,20.0s
M29M **Somme Creek** 85.85 24 P P 00 03 24.6 +1.1
baz=305
TABL **Table Mountain** 85.91 26 IAMs_20 IAMs_20 00 49 04.3
comp=Z,7µm,19.0s
LBTB **Lobatse** 85.92 242 LR LR 00 38 15.2
comp=Z,7µm,21.3s,baz=66,slow=33
LBTB **Lobatse** 85.92 242 P P 00 03 24.0 -0.5
LBTB IAmb IAmb 00 03 26.5
comp=Z,64nm,0.9s
LBTB **Lobatse** 85.92 242 P P 00 03 24.0 -0.5
LBTB pmax pmax
comp=Z,64nm,1.0s
YUK8 **Steele Glacier** 86.00 25 P P 00 03 24.9 +0.3
baz=304,SNR=5.1
KDWAN **Kaudwane** 86.07 244 P P 00 03 24.5 -0.8
KDWAN **Kaudwane** 86.07 244 *i* P P 00 03 24.5 -0.8
MAYO **Mayo, Yukon** 86.12 22 P P 00 03 25.0 +0.3
baz=307
O28M **Mount Upton** 86.12 26 P P 00 03 26.0 +0.8
baz=304
M30M **Minto, Yukon** 86.40 23 P P 00 03 26.6 +0.4
baz=307,SNR=21
YUK4 **Talbot Arm** 86.42 25 P P 00 03 26.4 -0.1
baz=305
PCA **Pinnacle** 86.47 26 IAMs_20 IAMs_20 00 45 32.1
comp=Z,8µm,18.0s
PINM **Pinnacle** 86.47 26 P P 00 03 27.0 +0.4
baz=304
GMARE **Gumare** 86.71 248 P P 00 03 27.9 -0.6
GMARE IAmb IAmb 00 03 30.8
comp=Z,119nm,1.4s
YUK6 **Outpost Mounta** 86.76 25 P P 00 03 29.1 +0.9
baz=305
UPNV **Upernavik** 86.79 353 *i* P P 00 03 26.8 -1.0
UPNV IAmb IAmb 00 03 28.2
comp=Z,73nm,1.0s
BCPM **Bancas Point** 86.81 26 IAMs_20 IAMs_20 00 45 42.0
comp=Z,8µm,19.0s
MAKGR **Makgori** 86.90 241 P P 00 03 28.7 -0.7
MAKGR IAmb IAmb 00 03 33.4
comp=Z,136nm,1.6s
MAKGR **Makgori** 86.90 241 *i* P P 00 03 28.8 -0.5
ECHE **Chera** 86.91 311 P P 00 03 29.9 +0.7
N30M **Aishikik Lake** 86.96 24 P P 00 03 29.2 +0.2
baz=306
O29M **Mount Kennedy** 87.04 26 IAMs_20 IAMs_20 00 50 02.3
comp=Z,8µm,19.0s
O29M **Mount Kennedy** 87.04 26 P P 00 03 29.2 -0.3
baz=305
PNL **Peninsula** 87.07 26 P P 00 03 30.3 +0.8
baz=304
SKOMA **Sekoma** 87.12 243 *i* P P 00 03 28.8 -1.6
XAUDM **Khaudum** 87.12 249 P P 00 03 30.1 -0.5
XAUDM **Khaudum** 87.12 249 *i* P P 00 03 30.6 0.0
HYT **Haines Junctio** 87.17 25 P P 00 03 30.2 +0.1
HYT IAmb IAmb 00 03 37.8
comp=Z,73nm,1.2s
HYT **Haines Junctio** 87.17 25 P P 00 03 31.0 +0.9
baz=306
OUZ **Omahuta** 87.35 129 IAMs_20 IAMs_20 00 48 35.2
comp=Z,7µm,20.0s
N31M **Braeburn, Yuko** 87.44 24 IAMs_20 IAMs_20 00 50 08.7
comp=Z,8µm,18.0s
N31M **Braeburn, Yuko** 87.44 24 P P 00 03 31.6 +0.3
baz=308,SNR=18
VAL **Valentia** 87.46 325 P P 00 03 31.6 +0.2
M31M **Drury Creek, Y** 87.52 23 IAMs_20 IAMs_20 00 46 50.6
comp=Z,11µm,20.0s
M31M **Drury Creek, Y** 87.52 23 P P 00 03 31.9 +0.3
baz=309,SNR=14
NUUG **Nuugaatsiaq** 87.60 352 *i* P P 00 03 29.9 -1.8
NUUG IAmb IAmb 00 03 37.2
comp=Z,275nm,1.7s
QNGWA **Qangwa** 87.63 248 P P 00 03 32.0 -1.0
QNGWA **Qangwa** 87.63 248 *i* P P 00 03 32.4 -0.6
BOSA **Boshof** 87.63 239 P P 00 03 32.0 -0.9
comp=Z,44nm,1.1s,baz=74,slow=5.0,SNR=25
BOSA S S 00 14 06.5 -8.6
comp=Z,0.9nm,0.8s,baz=41,slow=19,SNR=1.1
BOSA LR LR 00 38 51.6
comp=Z,5µm,20.7s,baz=68,slow=33
comp=Z,44nm,1.1s
BOSA **Boshof** 87.63 239 P P 00 03 31.7 -1.2
BOSA IAmb IAmb 00 03 35.0
comp=Z,102nm,1.3s
ETOB **Tobarra** 87.70 310 P P 00 03 32.9 -0.1
CART **Cartagena** 87.71 309 P P 00 03 35.1 +2.1
O30N **Mendenhall** 87.76 24 P P 00 03 32.9 +0.1
baz=307,SNR=12
P29M **Windy Craggy** 87.78 26 IAMs_20 IAMs_20 00 48 40.7
comp=Z,6µm,18.0s
P29M **Windy Craggy** 87.78 26 P P 00 03 33.0 +0.1
baz=306
EMUR **La Murta** 87.78 309 P P 00 03 36.0 +2.6
TAM **Tamanrasset** 87.80 293 P P 00 03 33.3 -0.6
TAM IAmb IAmb 00 03 43.6
comp=Z,44nm,0.9s
TAM **Tamanrasset** 87.80 293 P P 00 03 33.3 -0.6
TAM pmax pmax
comp=Z,44nm,0.9s
P30M **Million Dollar** 87.80 25 P P 00 03 34.2 +1.1
baz=307
DCZ **Deep Cove** 87.84 140 IAMs_20 IAMs_20 00 43 02.8
comp=Z,7µm,20.0s
PYZ **Puysegur Point** 87.91 141 IAMs_20 IAMs_20 00 44 41.7
comp=Z,8µm,21.0s
KGCAE **Kacgae** 87.96 245 P P 00 03 33.4 -1.1
KGCAE IAmb IAmb 00 03 47.8
comp=Z,138nm,1.4s
KGCAE **Kacgae** 87.96 245 *i* P P 00 03 33.4 -1.1
SAATT **Saattut** 88.05 351 *i* P P 00 03 32.6 -1.3
SAATT IAmb IAmb 00 03 33.7
comp=Z,50nm,1.3s
POIN **Pond Inlet** 88.10 360 P P 00 03 33.4 -0.7
POIN IAmb IAmb 00 03 39.1
comp=Z,131nm,1.8s
JCZ **Jackson Bay** 88.15 138 P P 00 03 36.6 +1.7
TLOR **Lorca, Murcia** 88.19 309 P P 00 03 37.2 +1.9
UCM **Universidad Co** 88.24 312 P P 00 03 39.1 +3.6
GRTLG **Ghanzi** 88.26 247 P P 00 03 35.6 -0.4
GRTLG **Ghanzi** 88.26 247 *i* P P 00 03 35.2 -0.8
WHY **Whitehorse** 88.30 24 P P 00 03 35.9 +0.4
baz=308,SNR=12
NIAQ **Niaqornat** 88.35 352 *i* P P 00 03 34.8 -0.5
NIAQ IAmb IAmb 00 03 41.9
comp=Z,142nm,1.3s
MMPY **Sheldon Lake,** 88.37 22 P P 00 03 36.8 +1.1
baz=311
MLZ **Mavora Lakes** 88.38 140 IAMs_20 IAMs_20 00 43 10.0
comp=Z,9µm,21.0s
PHPEN **Phepeng** 88.39 242 P P 00 03 35.3 -1.2
PHPEN **Phepeng** 88.39 242 *i* P P 00 03 35.2 -1.2
PLBC **Pleasant Camp** 88.44 26 P P 00 03 37.0 +0.9
baz=307
WHZ **Wether Hill Ro** 88.54 140 IAMs_20 IAMs_20 00 45 03.2
comp=Z,9µm,20.0s
FOZ **Fox Glacier** 88.54 137 IAMs_20 IAMs_20 00 43 35.5
comp=Z,7µm,20.0s
GRHM **Grahamstown, E** 88.63 234 P P 00 03 36.5 -0.9
GRHM IAmb IAmb 00 03 41.9
comp=Z,171nm,1.6s
N32M **Quiet Lake** 88.67 23 IAMs_20 IAMs_20 00 46 57.1
comp=Z,8µm,18.0s
N32M **Quiet Lake** 88.67 23 P P 00 03 37.9 +0.7
baz=310
ENIJ **Nijar** 88.83 309 P P 00 03 37.8 -0.6
SKAG **Skagway** 88.86 25 P P 00 03 39.5 +1.5
SKAG **Skagway** 88.86 25 P P 00 03 38.0 0.0
baz=308
ESDC **Sonseca Array** 89.00 312 P P 00 03 38.2 -0.9
comp=Z,4.2nm,0.8s,baz=63,slow=4.2,SNR=19
ESDC PP PP 00 07 07.6 -0.9
comp=Z,7.0nm,1.2s,baz=68,slow=5.2,SNR=4.0
ESDC PKKPbc PKKPbc 00 21 18.6 +0.7
comp=Z,1.4nm,1.1s,baz=261,slow=3.4,SNR=4.6
ESDC LR LR 00 50 39.3
comp=Z,4µm,20.3s,baz=42,slow=40
comp=Z,4.2nm,0.8s
ESDC **Sonseca Array** 89.00 312 P P 00 03 38.2 -0.9
DSZ **Denniston Nort** 89.00 135 IAMs_20 IAMs_20 00 45 16.8
comp=Z,9µm,21.0s
QRZ **Quartz Range** 89.07 134 IAMs_20 IAMs_20 00 46 54.7
comp=Z,8µm,20.0s
LBZ **Lake Benmore** 89.18 138 P P 00 03 39.5 -0.2
LBZ IAmb IAmb 00 03 50.0
comp=Z,90nm,1.2s
LBZ IAMs_20 IAMs_20 00 46 11.4
comp=Z,7µm,20.0s
INZ **Inchbonnie** 89.22 136 IAMs_20 IAMs_20 00 47 37.4
comp=Z,9µm,20.0s
PAB **San Pablo** 89.33 312 P P 00 03 39.4 -1.3
PAB IAmb IAmb 00 03 48.4
comp=Z,80nm,1.4s
PAB **San Pablo** 89.33 312 IAMs_20 IAMs_20 00 50 16.6
comp=Z,6µm,19.0s
PAB **San Pablo** 89.33 312 P P 00 03 39.4 -1.3
PAB pmax pmax
comp=Z,81nm,1.4s
P33M **Teslin, Yukon** 89.37 24 IAMs_20 IAMs_20 00 51 15.8
comp=Z,7µm,18.0s
P33M **Teslin, Yukon** 89.37 24 P P 00 03 41.2 +0.7
baz=310,SNR=24
S31K **Pelican** 89.40 27 IAMs_20 IAMs_20 00 50 11.8
comp=Z,9µm,19.0s
S31K **Pelican** 89.40 27 P P 00 03 40.9 +0.4
baz=307
RPZ **Rata Peaks** 89.42 137 LR LR 00 47 53.7
comp=Z,8µm,18.6s,baz=286,slow=38
RPZ **Rata Peaks** 89.42 137 P P 00 03 41.0 +0.1
RPZ IAMs_20 IAMs_20 00 47 41.8
comp=Z,8µm,18.0s
ILULI **Ilulissat** 89.42 351 P P 00 03 39.3 -1.1
ILULI IAmb IAmb 00 03 46.3
comp=Z,182nm,1.4s
ILULI IAMs_20 IAMs_20 00 47 05.0
comp=Z,11µm,20.0s
ILULI **Ilulissat** 89.42 351 P P 00 03 39.3 -1.1
ILULI pmax pmax
comp=Z,182nm,1.4s
ILULI MLR MLR
comp=Z,11µm,20.0s
ILULI **Ilulissat** 89.42 351 *i* P P 00 03 37.3 -3.1
ILULI IAmb IAmb 00 03 41.0
comp=Z,72nm,1.1s
P32M **Atlin** 89.42 25 IAMs_20 IAMs_20 00 45 56.1
comp=Z,8µm,19.0s
P32M **Atlin** 89.42 25 P P 00 03 41.8 +1.1
baz=309
EQTA **Presa de Quent** 89.64 309 P P 00 03 39.0 -3.3
HIZ **Hauiti** 89.68 131 IAMs_20 IAMs_20 00 48 37.8
comp=Z,8µm,20.0s
ANGG **Ammassalik, Gr** 89.71 344 IAMs_20 IAMs_20 00 48 12.8
comp=Z,10µm,20.0s
KOOLE **Kule** 89.73 246 P P 00 03 41.5 -1.4
KOOLE **Kule** 89.73 246 *i* P P 00 03 42.0 -0.9
THZ **Tophouse** 89.75 135 IAMs_20 IAMs_20 00 50 24.5
comp=Z,7µm,19.0s
GDH **Godhavn** 89.75 351 *i* P P 00 03 41.1 -0.9
GDH IAmb IAmb 00 03 43.3
comp=Z,48nm,0.8s
LTZ **Lake Taylor** 89.78 136 IAMs_20 IAMs_20 00 49 51.4
comp=Z,9µm,20.0s
ODZ **Otahua Downs** 89.78 138 P P 00 03 43.8 +1.4
NNZ **Nelson** 89.82 134 IAMs_20 IAMs_20 00 48 24.6
comp=Z,11µm,19.0s
EALB **Alboran** 89.86 308 P P 00 03 42.2 -0.9
ELGU **Los Guajares,** 89.92 309 P P 00 03 42.4 -1.2
EDA **Edea** 89.92 274 P P 00 03 42.6 -1.3
EDA IAMs_20 IAMs_20 00 50 37.1
comp=Z,6µm,19.0s
R32K **Eaglecrest** 89.93 26 P P 00 03 43.9 +0.9
baz=309
ECAL **Calabor** 89.94 315 P P 00 03 44.6 +1.1
JIS **Juneau Island** 89.98 26 P P 00 03 44.3 +1.1
PBRG **Braganca** 90.00 315 *e*P P 00 03 36.3 -7.5
PBRG *i* IAmb IAmb 00 03 38.5
comp=Z,44nm,1.6s
PBRG *e*pP sP 00 03 58.5 +10
WMELI **Melilla** 90.05 308 P P 00 03 43.8 -0.2
EMLI **Melilla** 90.06 308 P P 00 03 43.7 -0.4
EADA **Adamuz** 90.06 311 P P 00 03 44.2 0.0
EGOR **Sierra Gorda,** 90.17 310 P P 00 03 43.7 -1.1
SIT **Sitka** 90.34 27 P P 00 03 46.1 +1.2
SIT **Sitka** 90.34 27 P P 00 03 46.3 +1.3
baz=308
GVZ **Greta Valley S** 90.37 136 IAMs_20 IAMs_20 00 49 47.9
comp=Z,7µm,20.0s
Q32M **Nakina River** 90.40 25 P P 00 03 45.7 +0.3
baz=311
S32K **Killisnoo** 90.41 27 P P 00 03 44.5 -0.8
baz=309
KHZ **Kahutara** 90.46 135 IAMs_20 IAMs_20 00 46 13.3
comp=Z,11µm,21.0s
WRGLY **Wrigley** 90.47 19 P P 00 03 45.5 +0.1
WRGLY IAmb IAmb 00 03 54.3
comp=Z,128nm,1.4s
WRGLY **Wrigley** 90.47 19 P P 00 03 45.2 -0.2
baz=318
MVO **Moncorvo** 90.47 314 *e*P P 00 03 46.8 +0.7
MVO *i* IAmb IAmb 00 03 51.8
comp=Z,60nm,1.4s
MVO *e*pP sP 00 04 01.0 +10
MVO *e*LR LR 00 36 05.6
MVO *i* IAMs_20 IAMs_20 00 49 06.2
comp=Z,5µm,20.0s
R33M **Jennings River** 90.62 24 IAMs_20 IAMs_20 00 45 34.5
comp=Z,7µm,20.0s
R33M **Jennings River** 90.62 24 P P 00 03 47.8 +1.4
baz=312
TSUM **Tsumeb** 90.68 250 LR LR 00 41 52.4
comp=Z,11µm,20.7s,baz=64,slow=34
TSUM **Tsumeb** 90.68 250 P P 00 03 46.3 -1.1
TSUM **Tsumeb** 90.68 250 IAMs_20 IAMs_20 00 41 50.6
comp=Z,10µm,20.0s
ECAB **El Cabril** 90.70 311 P P 00 03 46.6 -0.5
SNZO **South Karori** 90.77 134 IAMs_20 IAMs_20 00 48 58.5
comp=Z,9µm,19.0s
EMIJ **Mijas** 90.88 309 P P 00 03 48.7 +0.7
POLO **Lamas de Olo** 90.90 315 *e*P P 00 03 43.1 -5.0
POLO *i* IAmb IAmb 00 03 53.6
comp=Z,43nm,1.8s
POLO *e*pP sP 00 04 02.9 +10
PCAB **Cabril** 90.90 315 *e*pP pP 00 03 52.1 +0.4
WTLY **Watson Lake, Y** 90.94 23 P P 00 03 48.0 +0.2
WTLY **Watson Lake, Y** 90.94 23 P P 00 03 48.3 +0.6
baz=314
PGAV **Gavieira, Arco** 90.94 315 *e*pP pP 00 04 03.5 +11
PGAV *e*LR LR 00 35 27.7
PGAV *i* IAMs_20 IAMs_20 00 48 55.9
comp=Z,5µm,22.0s
MRZ **Mangatainoka R** 91.09 133 P P 00 03 48.0 -0.6
MRZ IAmb IAmb 00 03 55.1
comp=Z,154nm,1.8s
MRZ IAMs_20 IAMs_20 00 47 03.1
comp=Z,9µm,20.0s
BKZ **Black Stump Fm** 91.11 131 P P 00 03 48.3 -0.5
BKZ IAmb IAmb 00 03 54.5
comp=Z,78nm,1.1s
BKZ IAMs_20 IAMs_20 00 49 00.8
comp=Z,11µm,20.0s
BKZ **Black Stump Fm** 91.11 131 P P 00 03 49.9 +1.1
MTE **Manteigas** 91.17 314 P P 00 03 48.1 -1.2
MTE IAmb IAmb 00 04 09.2
comp=Z,67nm,1.2s
MTE **Manteigas** 91.17 314 *e*P P 00 03 54.7 +5.4
MTE *i* IAmb IAmb 00 04 03.8
comp=Z,81nm,1.8s
MTE *e*pP sP 00 04 04.5 +10
MTE *e*LR LR 00 35 40.1
MTE *i* IAMs_20 IAMs_20 00 51 58.0
comp=Z,5µm,20.0s
MSWZ **Moikau Station** 91.18 134 P P 00 03 48.7 -0.3
URZ **Urewera** 91.19 130 LR LR 00 49 53.0
comp=Z,4µm,18.2s,baz=287,slow=39
RTZ **Ruatahuna** 91.23 131 IAMs_20 IAMs_20 00 49 52.1
comp=Z,7µm,20.0s
PVIS **Viseu** 91.26 314 *e*P P 00 03 50.2 +0.5
PVIS *e*pP sP 00 04 05.7 +11
MAW **Mawson** 91.29 194 P P 00 03 48.7 -0.2
comp=Z,69nm,1.1s,baz=34,slow=7.4,SNR=38
MAW S SKSac 00 14 25.5 +4.8
comp=Z,1.5nm,0.8s,baz=53,slow=20,SNR=1.6
MAW LR LR 00 42 27.1
comp=Z,3µm,18.1s,baz=28,slow=34
comp=Z,69nm,1.1s
SFJD **Kangerlussuaq** 91.34 349 LR LR 00 49 60.0
comp=Z,8µm,19.6s,baz=28,slow=39
SFJD **Kangerlussuaq** 91.34 349 P P 00 03 48.2 -1.2
SFJD IAmb IAmb 00 04 01.3
comp=Z,110nm,1.1s
SFJD **Kangerlussuaq** 91.34 349 IAMs_20 IAMs_20 00 49 56.8
comp=Z,8µm,20.0s
SFJD **Kangerlussuaq** 91.34 349 P P 00 03 48.2 -1.2
SFJD pmax pmax
comp=Z,110nm,1.1s
SFJD **Kangerlussuaq** 91.34 349 *i* P P 00 03 49.3 -0.1
SFJD IAmb IAmb 00 03 50.7
comp=Z,305nm,1.8s
PCBR **Castelo Branco** 91.37 313 *e*pP pP 00 04 06.8 +13
ILON **Igloolik, Nuna** 91.42 1 P P 00 03 48.4 -1.3
ILON IAmb IAmb 00 03 55.3
comp=Z,46nm,1.0s
EBAD **Badajoz** 91.53 312 P P 00 03 52.4 +1.5
ESPR **Espera** 91.54 310 P P 00 03 52.4 +1.5
S34M **Telegraph Cree** 91.54 25 IAMs_20 IAMs_20 00 52 30.1
comp=Z,8µm,19.0s
S34M **Telegraph Cree** 91.54 25 P P 00 03 51.5 +0.9
baz=312,SNR=17
BFZ **Birch Farm** 91.56 133 IAMs_20 IAMs_20 00 47 19.6
comp=Z,10µm,20.0s
BFZ **Birch Farm** 91.56 133 P P 00 03 53.2 +2.4
DLBC **Dease Lake** 91.62 24 LR LR 00 46 44.0
comp=Z,8µm,20.0s,baz=280,slow=37
DLBC **Dease Lake** 91.62 24 P P 00 03 51.8 +0.8
baz=312,SNR=13
U33K **Whale Pass** 91.89 27 IAMs_20 IAMs_20 00 43 00.5
comp=Z,8µm,22.0s
U33K **Whale Pass** 91.89 27 P P 00 03 52.8 +0.7
baz=310
PSARD **Sardoal** 91.95 313 *e*P P 00 03 53.9 +1.0
PSARD *i* IAmb IAmb 00 03 59.3
comp=Z,98nm,2.0s
SFS **San Fernando** 91.97 310 IAMs_20 IAMs_20 00 50 36.6
comp=Z,9µm,20.0s
WRAK **Wrangell Islan** 92.02 27 P P 00 03 53.4 +0.7
baz=310
WIN **Windhoek** 92.26 247 P P 00 03 53.5 -1.1
WIN **Windhoek** 92.26 247 P P 00 03 53.6 -1.1
WIN pmax pmax
comp=Z,40nm,1.1s
WIN MLR MLR
comp=Z,5µm,18.0s
CRAG **Craig** 92.30 28 P P 00 03 53.4 -0.6
baz=310
MDT **Midelt** 92.33 306 LR LR 00 51 50.4
comp=Z,3µm,20.6s,baz=70,slow=40
MD01 **Midelt array s** 92.42 306 P P 00 03 53.8 -1.6
T35M **Bob Quinn** 92.52 25 P P 00 03 55.5 +0.4
T35M IAmb IAmb 00 04 04.4
comp=Z,141nm,1.4s
T35M IAMs_20 IAMs_20 00 52 25.0
comp=Z,7µm,19.0s
T35M **Bob Quinn** 92.52 25 P P 00 03 54.8 -0.3
baz=312,SNR=12
KOTAN **Kotaneelee Air** 92.59 21 P P 00 03 56.1 +0.7
baz=318
SUR **Sutherland** 92.61 237 P P 00 03 55.1 -1.0
SUR IAmb IAmb 00 06 53.2
comp=Z,106nm,1.7s
SUR **Sutherland** 92.61 237 IAMs_20 IAMs_20 00 40 56.5
comp=Z,7µm,20.0s
PVAQ **Vaqueiros** 92.64 311 *e*LR LR 00 37 11.5
PVAQ *i* IAMs_20 IAMs_20 00 51 53.9
comp=Z,4µm,20.0s
V35K **Ketchikan** 93.05 27 IAMs_20 IAMs_20 00 48 20.1
comp=Z,6µm,19.0s
V35K **Ketchikan** 93.05 27 P P 00 03 57.3 -0.3
baz=311
TOAD **Toad River Com** 93.12 22 P P 00 03 58.0 +0.1
baz=317
U35K **Hyder** 93.33 26 IAMs_20 IAMs_20 00 46 11.5
comp=Z,7µm,19.0s
U35K **Hyder** 93.33 26 P P 00 03 59.0 +0.2
baz=312
YKA **Yellowknife Ar** 93.53 16 P P 00 03 59.3 -0.3
comp=Z,20nm,0.9s,baz=317,slow=4.6,SNR=14
YKA LR LR 00 52 40.8
comp=Z,7µm,19.1s,baz=316,slow=40
comp=Z,20nm,0.9s
YKA **Yellowknife Ar** 93.53 16 P P 00 03 58.7 -1.0
NUUK **Nuuk** 94.09 349 *i* P P 00 03 58.9 -3.2
NUUK IAmb IAmb 00 04 02.4
comp=Z,34nm,1.2s
TOA0 **Torodi Ar. Sit** 94.59 286 P P 00 04 05.9 +0.5
SNR=7.1
TORD **Torodi Ar. Bea** 94.59 286 P P 00 04 05.2 -0.2
comp=Z,29nm,1.2s,baz=50,slow=5.0,SNR=10
TORD PP PP 00 07 52.1 -1.3
comp=Z,5.8nm,0.8s,baz=66,slow=4.9,SNR=3.9
comp=Z,29nm,1.2s
TORD **Torodi Ar. Bea** 94.59 286 P P 00 04 03.7 -1.8
NRS **Narsarsuaq** 95.38 345 IAMs_20 IAMs_20 00 51 20.5
comp=Z,9µm,20.0s
BLKN **Baker Lake** 95.44 8 P P 00 04 07.7 -0.6
BLKN IAmb IAmb 00 05 13.8
comp=Z,112nm,1.8s
PUH **Pauahi** 95.59 67 P P 00 04 09.3 -0.7
SYO **Syowa Base** 98.50 199 *i* Pdiff Pdif 00 04 23.0 +1.2
SYO **Syowa Base** 98.50 199 *ep*PdifF 00 04 27.2
NLWA **Neilton Lookou** 102.05 30 IAMs_20 IAMs_20 00 58 22.4
comp=Z,5µm,18.0s
VNDA **Vanda** 102.80 169 P **Pdif** 00 04 42.3 +1.4
comp=Z,2.7nm,1.0s,baz=298,slow=3.5,SNR=5.6
VNDA PP PP 00 08 54.4 -0.5
comp=Z,2.6nm,1.1s,baz=304,slow=6.7,SNR=4.0
DBIC **Dimbokro** 102.95 282 P **Pdif** 00 04 43.5 +0.5
comp=Z,5.7nm,0.8s,baz=69,slow=3.7,SNR=5.4
DBIC PP PP 00 08 55.9 -1.4
comp=Z,4.1nm,0.8s,baz=74,slow=7.2,SNR=4.4
DBIC **Dimbokro** 102.95 282 **Pdif** 00 04 42.8 -0.2
DBIC **Dimbokro** 102.95 282 P **Pdif** 00 04 42.8 -0.2
FFC **Flin Flon** 103.48 14 IAMs_20 IAMs_20 00 53 02.2
comp=Z,8µm,20.0s
NEW **Newport** 104.32 25 IAMs_20 IAMs_20 00 57 45.2
comp=Z,6µm,20.0s
SCHQ **Schefferville** 105.36 353 PKiKP **PKiKP** 00 09 07.1 +0.4
comp=Z,9.9nm,1.0s,baz=9.2,slow=10,SNR=4.1
SCHQ PKKP **PKKPdf** 00 20 41.0 -2.2
comp=Z,3.9nm,0.8s,baz=229,slow=9.3,SNR=3.0
SCHQ PKKPab **PKKPab** 00 20 49.9 -2.7
comp=Z,7.3nm,1.0s,baz=184,slow=13,SNR=3.5
KBO **Bosley Butte** 105.61 33 IAMs_20 IAMs_20 00 56 56.0
comp=Z,5µm,19.0s

KRPM	**Rodgers**	**106.47**	**34**	IAMs_20	IAMs_20	00 57 12.8			
	comp=Z,5µm,20.0s								
MSO	**Missoula**	**106.75**	**24**	IAMs_20	IAMs_20	00 53 00.4			
	comp=Z,6µm,21.0s								
KHMM	**Horse Mountain**	**106.82**	**34**	IAMs_20	IAMs_20	00 57 35.1			
	comp=Z,5µm,20.0s								
BMO	**Blue Mountains**	**106.95**	**28**	IAMs_20	IAMs_20	00 59 34.9			
	comp=Z,6µm,21.0s								
KHBM	**Hayfork Bally**	**107.25**	**34**	IAMs_20	IAMs_20	00 58 00.5			
	comp=Z,5µm,20.0s								
EGMT	**Eagleton**	**107.28**	**21**	IAMs_20	IAMs_20	01 01 15.2			
	comp=Z,5µm,19.0s								
KMRM	**Mail Ridge**	**107.30**	**35**	IAMs_20	IAMs_20	00 54 02.2			
	comp=Z,6µm,19.0s								
PLID	**Pearl Lake**	**107.32**	**27**	IAMs_20	IAMs_20	01 00 06.8			
	comp=Z,7µm,20.0s								
KCPM	**Cahto Peak**	**107.75**	**35**	IAMs_20	IAMs_20	00 57 02.9			
	comp=Z,5µm,19.0s								
DLMT	**Dillon**	**108.49**	**25**	IAMs_20	IAMs_20	01 01 08.4			
	comp=Z,6µm,20.0s								
ULM	**Lac du Bonnet**	**108.97**	**12**	PKiKP	**PKiKP**	**00 09 12.7**	**-0.8**		
	comp=Z,4.9nm,0.8s,baz=340,slow=7.9,SNR=2.9								
ULM				PKKPbc	**PKKPbc**	**00 20 19.3**	**-3.1**		
	comp=Z,2.2nm,0.5s,baz=164,slow=2.2,SNR=5.2								
HLID	**Hailey**	**109.23**	**27**	IAMs_20	IAMs_20	01 01 38.1			
	comp=Z,5µm,20.0s								
QSPA	**South Pole Qui**	**109.26**	**180**	PKiKP	**PKiKP**	**00 09 14.3**	**+0.8**		
	comp=Z,6.4nm,1.0s,baz=315,slow=1.4,SNR=6.2								
QSPA				PP	**PP**	**00 09 41.1**	**-1.7**		
	comp=Z,12nm,1.0s,baz=319,slow=2.1,SNR=5.9								
QSPA				PKKPbc	**PKKPbc**	**00 20 21.8**	**-0.8**		
	comp=Z,4.1nm,0.8s,baz=140,slow=1.3,SNR=6.5								
QSPA				PKKP	**PKKPdf**	**00 20 38.0**	**-0.5**		
	comp=Z,9.0nm,1.0s,baz=164,slow=3.2,SNR=5.4								
QSPA	**South Pole Qui**	**109.26**	**180**	IAMs_20	IAMs_20	00 52 42.1			
	comp=Z,6µm,20.0s								
RLMT	**Red Lodge**	**109.95**	**23**	IAMs_20	IAMs_20	00 59 40.9			
	comp=Z,6µm,19.0s								
FLWY	**Flagg Ranch**	**110.30**	**24**	IAMs_20	IAMs_20	01 01 06.3			
	comp=Z,6µm,18.0s								
MDND	**Maddock**	**110.43**	**15**	IAMs_20	IAMs_20	00 59 33.0			
	comp=Z,7µm,21.0s								
FXWY	**Fox Creek**	**110.55**	**25**	IAMs_20	IAMs_20	01 02 34.9			
	comp=Z,6µm,20.0s								
MOOW	**Moose Ponds**	**110.57**	**24**	IAMs_20	IAMs_20	01 02 52.3			
	comp=Z,5µm,19.0s								
LOHW	**Long Hollow**	**110.73**	**24**	IAMs_20	IAMs_20	01 02 57.8			
	comp=Z,5µm,18.0s								
SNOW	**Snow King Moun**	**110.80**	**24**	IAMs_20	IAMs_20	01 02 51.7			
	comp=Z,6µm,19.0s								
AGMN	**Agassiz Nation**	**110.83**	**12**	IAMs_20	IAMs_20	00 57 24.5			
	comp=Z,8µm,21.0s								
TROLL	**Troll, Antarti**	**111.07**	**199**	⇑P	**PKiKP**	**00 09 16.0**	**-0.9**		
	comp=Z,348nm,0.7s								
TROLL				⇑PKPbc	**PKKPbc**	**00 20 11.8**	**-4.5**		
	comp=Z,272nm,0.7s								
NVAR	**Mina Array Bea**	**111.45**	**33**	PKiKP	**PKiKP**	**00 09 18.5**	**-0.4**		
	comp=Z,6.7nm,1.1s,baz=325,slow=5.7,SNR=4.9								
NVAR				PP	**PP**	**00 09 55.9**	**-2.7**		
	comp=Z,1.5nm,0.7s,baz=337,slow=4.7,SNR=3.7								
NVAR				PKKPbc	**PKKPbc**	**00 20 13.6**	**-0.7**		
	comp=Z,4.6nm,0.8s,baz=99,slow=2.0,SNR=15								
BW06	**Boulder Array**	**111.86**	**24**	IAMs_20	IAMs_20	01 04 17.5			
	comp=Z,5µm,18.0s								
PDAR	**Pinedale Array**	**111.86**	**24**	PKiKP	**PKiKP**	**00 09 17.7**	**-1.9**		
	comp=Z,5.1nm,1.0s,baz=324,slow=0.7,SNR=12								
PDAR				PKKPbc	**PKKPbc**	**00 20 10.5**	**-2.6**		
	comp=Z,4.0nm,1.0s,baz=170,slow=2.2,SNR=11								
RSSD	**Black Hills**	**112.61**	**20**	IAMs_20	IAMs_20	01 01 59.0			
	comp=Z,5µm,20.0s								
DUG	**Dugway, Tooele**	**112.66**	**28**	IAMs_20	IAMs_20	01 06 37.1			
	comp=Z,5µm,18.0s								
SNAA	**Sanae**	**112.77**	**199**	⇑P	**PKiKP**	**00 09 19.2**	**-0.9**		
	comp=Z,40nm,0.6s								
SNAA				⇑PKPbc	**PKKPbc**	**00 20 07.4**	**-3.1**		
	comp=Z,75nm,0.8s								
SNAA	**Sanae**	**112.77**	**199**	PKiKP	**PKiKP**	**00 09 19.1**	**-0.9**		
	comp=Z,4.8nm,1.1s,baz=93,slow=6.6,SNR=7.9								
SNAA				PKKPbc	**PKKPbc**	**00 20 07.6**	**-2.9**		
	comp=Z,3.1nm,0.8s,baz=253,slow=4.3,SNR=14								
F33A	**5 Mile Ranch,**	**113.09**	**13**	IAMs_20	IAMs_20	01 02 49.1			
	comp=Z,7µm,20.0s								
PPT	**Papeete**	**113.13**	**101**	PKKPbc	PKKPbc	00 20 02.9	-4.9		
	comp=Z,24nm,0.3s,baz=87,slow=17,SNR=4.7								
PPT2	**Papeete2**	**113.13**	**101**	*e*PKIKP	PKiKP	00 09 30.7	+8.4		
	comp=Z,456nm,29.2s								
PPT2				*e*S	SKKSac	00 17 03.7	-11		
	comp=Z,2µm,26.8s								
PPT2				*e*SS	**SS**	**00 26 03.6**	**+6.1**		
	comp=Z,3µm,29.2s								
PPT2	**Papeete2**	**113.13**	**101**	*e*LQ	LQ	00 38 21.3			
	comp=Z,8µm,37.2s								
PPT2				*e*LR	LR	00 43 05.2			
	comp=Z,8µm,24.5s								
PPT2				*e*LR	LR	00 43 07.4			
	comp=Z,7µm,37.0s								
D62A	**Allapoint, All**	**113.24**	**353**	IAMs_20	IAMs_20	01 02 26.7			
	comp=Z,8µm,20.0s								
E38A	**The Farm, Brul**	**113.24**	**10**	IAMs_20	IAMs_20	00 56 37.0			
	comp=Z,8µm,22.0s								
E62A	**Clayton Lake**	**113.75**	**353**	IAMs_20	IAMs_20	01 03 25.2			
	comp=Z,6µm,20.0s								
VNA2	**Neumayer--Watz**	**114.34**	**200**	⇑P	PKPdf	00 09 22.4	-0.7		
	comp=Z,16nm,0.8s,baz=68,slow=2.5								
VNA2				⇑PKPbc	**PKKPbc**	**00 20 00.9**	**-4.1**		
	comp=Z,4.1nm,0.8s,baz=358,slow=30								
F64A	**Sherman**	**114.35**	**352**	IAMs_20	IAMs_20	00 58 58.2			
	comp=Z,8µm,22.0s								
TBI	**Tubuai**	**114.51**	**107**	*e*PKIKP	PKiKP	00 09 34.4	+10		
	comp=Z,1µm,29.2s								
TBI				*e*S	SKKSac	00 17 02.3	-21		
	comp=Z,7µm,30.0s								
TBI				*e*SS	**SS**	**00 26 15.2**	**-0.1**		
	comp=Z,21µm,35.5s								
TBI	**Tubuai**	**114.51**	**107**	*e*LQ	LQ	00 38 54.2			
	comp=Z,17µm,31.8s								
TBI				*e*LR	LR	00 43 47.7			
	comp=Z,73µm,34.5s								
TBI				*e*LR	LR	00 43 51.0			
	comp=Z,13µm,32.8s								
O20A	**White River Ci**	**114.62**	**25**	IAMs_20	IAMs_20	01 01 50.6			
	comp=Z,5µm,20.0s								
VNA1	**Neumayer--Stat**	**114.68**	**200**	⇑P	**PKiKP**	**00 09 23.3**	**-0.3**		
	comp=Z,15nm,0.8s								
VNA1				⇑PKPbc	**PKKPbc**	**00 19 59.9**	**-3.9**		
	comp=Z,6.9nm,1.0s								
G40A	**Rib Lake**	**114.75**	**9**	IAMs_20	IAMs_20	01 01 17.0			
	comp=Z,7µm,20.0s								
BFSC	**Mount Baldy Ra**	**114.96**	**35**	IAMs_20	IAMs_20	01 00 19.7			
	comp=Z,5µm,21.0s								
VNA3	**Neumayer Olymp**	**115.00**	**199**	⇑P	**PKiKP**	**00 09 23.7**	**-0.6**		
	comp=Z,16nm,0.8s								
VNA3				⇑PKPbc	**PKKPbc**	**00 19 59.8**	**-3.0**		
	comp=Z,6.9nm,0.8s								
K30B	**Basset**	**115.24**	**17**	IAMs_20	IAMs_20	01 01 25.4			
	comp=Z,8µm,22.0s								
G62A	**West of Eustis**	**115.24**	**354**	IAMs_20	IAMs_20	01 00 32.7			
	comp=Z,7µm,22.0s								
I37A	**Lemond, Waseca**	**115.43**	**12**	IAMs_20	IAMs_20	01 05 57.9			
	comp=Z,7µm,20.0s								
ISCO	**Idaho Springs**	**115.91**	**23**	IAMs_20	IAMs_20	01 03 14.6			
	comp=Z,5µm,19.0s								
H62A	**Milan**	**115.94**	**354**	IAMs_20	IAMs_20	01 02 06.2			
	comp=Z,5µm,20.0s								
I40A	**Norwalk**	**116.03**	**10**	IAMs_20	IAMs_20	01 03 33.9			
	comp=Z,6µm,19.0s								
OGNE	**Ogallala**	**116.11**	**20**	IAMs_20	IAMs_20	01 04 18.6			
	comp=Z,5µm,19.0s								
LONY	**Lake Ozonia**	**116.16**	**357**	IAMs_20	IAMs_20	01 04 48.8			
	comp=Z,6µm,20.0s								
I42A	**Draeger Farm,**	**116.29**	**8**	IAMs_20	IAMs_20	01 02 36.5			
	comp=Z,8µm,22.0s								
VT1	**Waterbury**	**116.32**	**355**	IAMs_20	IAMs_20	01 02 19.6			
	comp=Z,6µm,21.0s								
LBNH	**Lisbon**	**116.35**	**355**	IAMs_20	IAMs_20	01 06 33.9			
	comp=Z,6µm,20.0s								
I63A	**Otisfield**	**116.40**	**354**	IAMs_20	IAMs_20	01 04 04.4			
	comp=Z,7µm,21.0s								
I62A	**Tamworth**	**116.66**	**354**	IAMs_20	IAMs_20	01 06 49.0			
	comp=Z,7µm,19.0s								
HNH	**Hanover**	**116.91**	**355**	IAMs_20	IAMs_20	01 05 28.7			
	comp=Z,6µm,19.0s								
MVCO	**Mesa Verde**	**117.01**	**27**	IAMs_20	IAMs_20	01 06 30.3			
	comp=Z,5µm,19.0s								
JFWS	**Jewell Farm**	**117.05**	**10**	IAMs_20	IAMs_20	00 58 35.7			
	comp=Z,7µm,21.0s								
S22A	**4UR Ranch, Cre**	**117.23**	**25**	IAMs_20	IAMs_20	01 03 59.8			
	comp=Z,5µm,21.0s								
J61A	**Chester**	**117.29**	**355**	IAMs_20	IAMs_20	01 00 03.8			
	comp=Z,7µm,22.0s								
J59A	**Piesco**	**117.30**	**357**	IAMs_20	IAMs_20	01 00 30.2			
	comp=Z,7µm,21.0s								
J47A	**Sunmer**	**117.38**	**5**	IAMs_20	IAMs_20	01 06 02.4			
	comp=Z,7µm,19.0s								
SDCO	**Great Sand Dun**	**117.75**	**24**	IAMs_20	IAMs_20	01 03 39.4			
	comp=Z,7µm,21.0s								
BELA	**Belgrano 2**	**117.83**	**190**	PKPdf	**PKPdf**	**00 09 29.1**	**-0.4**		
K62A	**Royalston**	**117.94**	**355**	IAMs_20	IAMs_20	01 02 25.9			
	comp=Z,5µm,19.0s								
N35A	**Tabor**	**117.96**	**15**	IAMs_20	IAMs_20	01 04 56.2			
	comp=Z,7µm,19.0s								
TRY	**Troy**	**117.98**	**356**	IAMs_20	IAMs_20	00 59 50.1			
	comp=Z,6µm,22.0s								
K50A	**Casco**	**118.00**	**3**	IAMs_20	IAMs_20	00 59 38.6			
	comp=Z,6µm,21.0s								
L42A	**Oliver, Polo**	**118.03**	**9**	IAMs_20	IAMs_20	01 09 57.6			
	comp=Z,5µm,19.0s								
HRV	**Adam Dziewonsk**	**118.03**	**354**	IAMs_20	IAMs_20	01 07 46.5			
	comp=Z,6µm,19.0s								
L44A	**Lake County Fo**	**118.10**	**8**	IAMs_20	IAMs_20	01 03 43.5			
	comp=Z,7µm,20.0s								
WES	**Weston**	**118.13**	**354**	IAMs_20	IAMs_20	01 03 03.0			
	comp=Z,7µm,21.0s								
BCX	**Boston College**	**118.16**	**354**	IAMs_20	IAMs_20	01 07 44.9			
	comp=Z,6µm,19.0s								
L61B	**Northampton**	**118.19**	**355**	IAMs_20	IAMs_20	01 02 33.6			
	comp=Z,6µm,20.0s								
L46A	**Eue Claire**	**118.45**	**7**	IAMs_20	IAMs_20	01 09 30.9			
	comp=Z,7µm,20.0s								
T25A	**Trinidad**	**118.70**	**23**	IAMs_20	IAMs_20	01 03 13.4			
	comp=Z,5µm,21.0s								
L56A	**Greenwood**	**118.74**	**359**	IAMs_20	IAMs_20	01 09 05.1			
	comp=Z,6µm,20.0s								
ERPA	**Erie**	**118.75**	**1**	IAMs_20	IAMs_20	01 03 45.5			
	comp=Z,7µm,20.0s								
M44A	**Midewin, Midew**	**118.86**	**8**		**PKPdf**	**00 09 31.6**	**-1.1**		
M44A				IAMs_20	IAMs_20	01 04 15.7			
	comp=Z,7µm,20.0s								
M65A	**Busby, Falmout**	**118.87**	**353**	IAMs_20	IAMs_20	01 02 53.7			
	comp=Z,7µm,22.0s								
M63A	**Gales Ferry**	**119.17**	**354**	IAMs_20	IAMs_20	01 03 53.6			
	comp=Z,6µm,19.0s								
M52A	**Chesterland**	**119.29**	**2**	IAMs_20	IAMs_20	01 02 36.7			
	comp=Z,7µm,20.0s								
M50A	**Fremont**	**119.34**	**4**		**PKPdf**	**00 09 32.4**	**-1.2**		
M50A				IAMs_20	IAMs_20	01 03 18.1			
	comp=Z,5µm,21.0s								
WSPT	**Westport, CT**	**119.51**	**355**	IAMs_20	IAMs_20	01 01 07.6			
	comp=Z,5µm,21.0s								
N47A	**Urbana**	**119.64**	**6**	IAMs_20	IAMs_20	01 00 03.2			
	comp=Z,7µm,22.0s								
TAOE	**Nuku Hiva Isla**	**119.67**	**89**	*e*PKP2	**PKiKP**	**00 09 35.3**	**+0.2**		
	comp=Z,193nm,25.3s								
TAOE				*e*S	**SKSdf**	**00 16 57.9**	**+10**		
	comp=Z,873nm,25.1s								
TAOE	**Nuku Hiva Isla**	**119.67**	**89**	*e*SS	SS	00 27 12.3	-11		
	comp=Z,1µm,30.8s								
PAL	**Palisades**	**119.72**	**356**	IAMs_20	IAMs_20	01 04 23.0			
	comp=Z,5µm,20.0s								
N62A	**Caumsett State**	**119.76**	**356**	IAMs_20	IAMs_20	01 10 41.2			
	comp=Z,6µm,19.0s								
ANMO	**Albuquerque**	**119.80**	**26**		**PKPdf**	**00 09 34.3**	**-0.7**		
ANMO	**Albuquerque**	**119.80**	**26**	IAMs_20	IAMs_20	01 05 49.8			
	comp=Z,5µm,20.0s								
ANMO	**Albuquerque**	**119.80**	**26**	PKiKP	**PKPdf**	**00 09 34.3**	**-0.7**		
N51A	**Ashland**	**119.86**	**3**	IAMs_20	IAMs_20	01 07 37.9			
	comp=Z,5µm,20.0s								
P40A	**Paris**	**120.02**	**12**	IAMs_20	IAMs_20	01 11 47.4			
	comp=Z,7µm,20.0s								
SSPA	**Standing Stone**	**120.24**	**359**	IAMs_20	IAMs_20	01 02 00.9			
	comp=Z,6µm,22.0s								
O48B	**Farmland**	**120.31**	**6**		**PKPdf**	**00 09 34.3**	**-1.2**		
P43A	**Skaggs, Pawnee**	**120.36**	**10**	IAMs_20	IAMs_20	01 00 47.4			
	comp=Z,6µm,22.0s								
ACSO	**Alum Creek Sta**	**120.51**	**4**	IAMs_20	IAMs_20	01 13 10.1			
	comp=Z,5µm,20.0s								
O52A	**Adamsville**	**120.69**	**3**	IAMs_20	IAMs_20	01 09 23.7			
	comp=Z,6µm,18.0s								
P61A	**Hammonton**	**121.10**	**357**	IAMs_20	IAMs_20	01 02 34.6			
	comp=Z,7µm,21.0s								
OK038	**West end E0370**	**121.23**	**19**	IAMs_20	IAMs_20	01 04 01.9			
	comp=Z,6µm,21.0s								
P57A	**Homestead Farm**	**121.39**	**359**	IAMs_20	IAMs_20	01 03 39.4			
	comp=Z,5µm,21.0s								
OLIL	**Olney**	**121.46**	**9**		**PKPdf**	**00 09 37.0**	**-0.8**		
CCM	**Cathedral Cave**	**121.60**	**12**	IAMs_20	IAMs_20	01 03 09.3			
	comp=Z,6µm,21.0s								
Q51A	**Peebles**	**121.68**	**4**	IAMs_20	IAMs_20	01 08 35.2			
	comp=Z,6µm,20.0s								
AMTX	**Amarillo**	**121.70**	**22**	IAMs_20	IAMs_20	01 07 04.9			
	comp=Z,6µm,21.0s								
Q52A	**Bidwell**	**121.81**	**3**	IAMs_20	IAMs_20	01 01 36.6			
	comp=Z,6µm,22.0s								
MSTX	**Muleshoe**	**122.12**	**24**	IAMs_20	IAMs_20	01 08 00.0			
	comp=Z,5µm,20.0s								
WCI	**Wyandotte Cave**	**122.19**	**7**		**PKPdf**	**00 09 38.1**	**-1.1**		
WCI	**Wyandotte Cave**	**122.19**	**7**	IAMs_20	IAMs_20	01 05 49.8			
	comp=Z,7µm,20.0s								
WCI	**Wyandotte Cave**	**122.19**	**7**	PKiKP	**PKPdf**	**00 09 38.1**	**-1.1**		
OK029	**Liberty Lake**	**122.24**	**18**	IAMs_20	IAMs_20	01 05 52.8			
	comp=Z,7µm,21.0s								
R61A	**Willards**	**122.46**	**357**	IAMs_20	IAMs_20	01 03 26.8			
	comp=Z,7µm,22.0s								
U38A	**Gravette**	**122.47**	**15**	IAMs_20	IAMs_20	01 06 18.4			
	comp=Z,5µm,20.0s								
WMOK	**Wichita Mounta**	**122.82**	**20**	IAMs_20	IAMs_20	01 07 21.2			
	comp=Z,6µm,19.0s								
R58B	**Mineral**	**122.91**	**359**	IAMs_20	IAMs_20	01 09 45.5			
	comp=Z,6µm,20.0s								
S54A	**Dingess, Beckl**	**123.02**	**3**	IAMs_20	IAMs_20	01 07 04.5			
	comp=Z,6µm,20.0s								
S51A	**Beattyville**	**123.04**	**5**	IAMs_20	IAMs_20	01 08 52.2			
	comp=Z,6µm,18.0s								
MNTX	**Cornudas Mount**	**123.05**	**27**	IAMs_20	IAMs_20	01 08 32.9			
	comp=Z,4µm,19.0s								
T45A	**Paducah**	**123.06**	**10**	IAMs_20	IAMs_20	01 03 24.0			
	comp=Z,7µm,22.0s								
FCAR	**Ozark Folk Cen**	**123.51**	**13**		**PKPdf**	**00 09 40.3**	**-1.5**		
T57A	**Hurt**	**123.87**	**1**	IAMs_20	IAMs_20	01 05 59.1			
	comp=Z,6µm,21.0s								
U49A	**Red Boiling Sp**	**123.95**	**7**	IAMs_20	IAMs_20	01 15 16.3			
	comp=Z,6µm,20.0s								
WVT	**Waverly**	**124.06**	**9**		**PKPdf**	**00 09 41.6**	**-1.3**		
WVT	**Waverly**	**124.06**	**9**	IAMs_20	IAMs_20	01 07 55.2			
	comp=Z,5µm,19.0s								
WVT	**Waverly**	**124.06**	**9**	PKiKP	**PKPdf**	**00 09 41.6**	**-1.3**		
Z35A	**Perchaven, San**	**124.60**	**19**	IAMs_20	IAMs_20	01 09 23.2			
	comp=Z,5µm,20.0s								
V55A	**Taylorsville**	**124.97**	**3**	IAMs_20	IAMs_20	01 08 14.0			
	comp=Z,7µm,21.0s								
V53A	**Saluda**	**125.06**	**4**	IAMs_20	IAMs_20	01 03 40.5			
	comp=Z,5µm,21.0s								
V58A	**Windy Hill, Pi**	**125.08**	**1**	IAMs_20	IAMs_20	01 06 43.9			
	comp=Z,6µm,21.0s								
PLAL	**Pickwick Lake**	**125.14**	**10**	IAMs_20	IAMs_20	01 04 35.1			
	comp=Z,6µm,20.0s								
OXF	**Oxford**	**125.38**	**11**		**PKPdf**	**00 09 44.5**	**-0.9**		
OXF				IAMs_20	IAMs_20	01 04 49.4			
	comp=Z,7µm,22.0s								
OXF	**Oxford**	**125.38**	**11**	PKiKP	**PKPdf**	**00 09 44.5**	**-0.9**		
W52A	**Murphy**	**125.54**	**5**	IAMs_20	IAMs_20	01 10 19.4			
	comp=Z,6µm,20.0s								
KMSC	**Kings Mountain**	**125.67**	**3**	IAMs_20	IAMs_20	01 06 36.6			
	comp=Z,6µm,21.0s								
WHTX	**Lake Whitney,**	**125.77**	**20**	IAMs_20	IAMs_20	01 10 11.4			
	comp=Z,6µm,20.0s								
TXAR	**Lajitas Array**	**125.83**	**27**	PKhKP	PKPpre	00 09 42.7			
	comp=Z,4.2nm,0.7s,baz=333,slow=1.4,SNR=25								
TXAR				PKP	**PKPdf**	**00 09 46.5**	**-0.1**		
	comp=Z,23nm,1.1s,baz=336,slow=1.7,SNR=31								
TXAR				PP	**PP**	**00 11 36.4**	**-1.3**		
	comp=Z,4.6nm,1.1s,baz=337,slow=6.2,SNR=2.3								
TXAR				SKKPbc	SKKPbc	00 23 08.6	-2.9		
	comp=Z,1.0nm,1.0s,baz=101,slow=3.2,SNR=3.6								
TXAR	**Lajitas Array**	**125.83**	**27**		**PKPdf**	**00 09 45.0**	**-1.6**		
TXAR	**Lajitas Array**	**125.83**	**27**	PKiKP	**PKPdf**	**00 09 45.0**	**-1.6**		
Y45A	**Yeager Farm, C**	**125.99**	**11**	IAMs_20	IAMs_20	01 05 09.4			
	comp=Z,7µm,21.0s								
JCT	**Junction City**	**126.35**	**23**	PKPdf	**PKPdf**	**00 09 46.5**	**-1.0**		
JCT				IAMs_20	IAMs_20	01 08 41.0			
	comp=Z,5µm,20.0s								
JCT	**Junction City**	**126.35**	**23**	PKiKP	**PKPdf**	**00 09 46.5**	**-1.0**		
NATX	**Nacogdoches**	**126.82**	**17**	IAMs_20	IAMs_20	01 10 37.0			
	comp=Z,5µm,19.0s								
Y58A	**Scranton**	**126.95**	**1**	IAMs_20	IAMs_20	01 09 07.6			
	comp=Z,6µm,20.0s								
152A	**Waverly Hall**	**127.87**	**7**	IAMs_20	IAMs_20	01 10 16.0			
	comp=Z,6µm,20.0s								
HOPE	**Hope Point**	**132.71**	**212**	IAMs_20	IAMs_20	01 07 52.2			
	comp=Z,4µm,22.0s								
PMSA	**Palmer Station**	**133.65**	**189**	IAMs_20	IAMs_20	01 03 59.7			
	comp=Z,4µm,22.0s								
JRQG	**Juriquilla Cam**	**134.74**	**29**	PKPdf	**PKPdf**	**00 10 03.2**	**-0.6**		
RCBR	**Riachuelo**	**136.33**	**282**	IAMs_20	IAMs_20	01 08 25.5			
	comp=Z,4µm,22.0s								
UNM	**Universidad Na**	**136.52**	**29**	IAMs_20	IAMs_20	01 09 54.9			
	comp=Z,4µm,22.0s								
NBAN	**Anadia - AL**	**137.99**	**277**	*e*P	**PKPdf**	**00 10 08.5**	**-1.2**		
GRTK	**Grand Turk**	**138.66**	**349**	IAMs_20	IAMs_20	01 17 42.7			
	comp=Z,5µm,20.0s								
TEIG	**Tepich**	**139.47**	**14**	IAMs_20	IAMs_20	01 20 59.6			
	comp=Z,5µm,20.0s								
ANWB	**Willy Bob**	**139.60**	**335**	IAMs_20	IAMs_20	01 11 07.5			
	comp=Z,4µm,22.0s								
SABA	**Saba**	**140.21**	**337**	IAMs_20	IAMs_20	01 13 25.5			
	comp=Z,6µm,22.0s								
GDSD	**La Dsirade Is**	**140.51**	**333**	IAMs_20	IAMs_20	01 17 03.0			
	comp=Z,4µm,22.0s								
ABD	**La Joyeuse, An**	**140.55**	**334**	IAMs_20	IAMs_20	01 13 24.8			
	comp=Z,5µm,21.0s								
GTBY	**Guantanamo Bay**	**140.74**	**355**	IAMs_20	IAMs_20	01 20 11.7			
	comp=Z,3µm,20.0s								
GDHS	**Morne Mazeau,**	**140.84**	**334**	IAMs_20	IAMs_20	01 13 33.3			
	comp=Z,4µm,21.0s								
MAGL	**Barre de l'ile**	**140.93**	**333**	IAMs_20	IAMs_20	01 17 25.0			
	comp=Z,4µm,21.0s								
CBE	**Ff, Capester**	**140.96**	**333**	IAMs_20	IAMs_20	01 13 36.9			
	comp=Z,5µm,22.0s								
BANI	**BANI**	**141.55**	**347**		**PKPdf**	**00 10 14.4**	**-1.9**		
ILAM	**Ilet Lapin Mar**	**141.79**	**332**	IAMs_20	IAMs_20	01 18 09.9			
	comp=Z,3µm,21.0s								
BIM	**Bigot**	**142.10**	**332**	IAMs_20	IAMs_20	01 15 21.2			
	comp=Z,4µm,22.0s								
CMC01	**Camacan, BA**	**142.53**	**270**	*e*P	**PKPdf**	**00 10 16.2**	**-1.6**		
RIB01	**Linhares ES**	**144.00**	**264**	*e*P	PKPbc	00 10 18.2	0.0		
GCMP	**Grenada, Carri**	**144.05**	**331**	*e*P	PKPab	00 10 04.0

ATAH	**Atahualpa**	**167.78**	**359**	PKP	**PKPdf**	**00 10 51.1**	**-0.7**
	comp=Z,9.8nm,1.0s,baz=29,slow=4.1,SNR=11						
ATAH				PKPab	**PKPab**	**00 11 57.0**	**-1.0**
	comp=Z,25nm,1.0s,baz=352,slow=7.1,SNR=6.1						
LCO	**Las Campanas**	**168.05**	**216**	PKPdf	**PKPdf**	**00 10 49.5**	**-1.9**
LCO	**Las Campanas**	**168.05**	**216**	PKIKP	**PKPdf**	**00 10 49.5**	**-1.9**
LPAZ	**La Paz**	**169.54**	**286**	PKP	**PKPdf**	**00 10 52.5**	**-0.6**
	comp=Z,11nm,1.2s,baz=45,slow=2.9,SNR=17						
LPAZ				PKPab	**PKPab**	**00 12 05.6**	**-0.9**
	comp=Z,6.6nm,0.8s,baz=18,slow=3.4,SNR=7.3						
LPAZ	**La Paz**	**169.54**	**286**		**PKPdf**	**00 10 50.4**	**-2.7**
LPAZ	**La Paz**	**169.54**	**286**	PKIKP	**PKPdf**	**00 10 50.4**	**-2.7**
LPAZ	**La Paz**	**169.54**	**286**	*eP*	**PKPdf**	**00 10 53.5**	**+0.4**
PB08	**IPOC Station P**	**171.07**	**264**	PKP	**PKPdf**	**00 10 51.9**	**-1.7**
PB08	**IPOC Station P**	**171.07**	**264**	PKPdf	**PKPdf**	**00 10 52.3**	**-1.3**
PB01	**IPOC Station P**	**171.29**	**258**	PKPdf	**PKPdf**	**00 10 50.6**	**-2.7**
HMBC	**Humberstone**	**171.75**	**263**	PKPdf	**PKPdf**	**00 10 51.5**	**-2.1**
NNA	**Nana**	**172.41**	**347**	PKP	**PKPdf**	**00 10 53.2**	**-0.8**
	comp=Z,2.7nm,0.3s,baz=314,slow=1.8,SNR=3.8						
NNA	**Nana**	**172.41**	**347**		**PKPdf**	**00 10 51.7**	**-2.2**
NNA	**Nana**	**172.41**	**347**	PKIKP	**PKPdf**	**00 10 51.7**	**-2.2**

*GCG **21** 00:23:16.5±1.3, 14°.07N×91°.10W, h72km±7km, MD4.3, ML4.1*
*CATAC **21** 00:23:16.3±0.7, 14°N±3°×9°1W±°, h23km±4km, M3.8/11, MLv3.8/11, Error ellipse: s-maj=7.8km s-min=3.1km az=29.4, confirmed*
*SNET **21** 00:23:19.2±1.6, 14°.35N×90°.86W, h66km, ML3.6*

ISC 21 00:23:19.4±1.5, **14°.19N**±0°.09×**90°.95W**±0°.05, **h72**km±10km, **n45**, σ1°**62**/61, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.22**	**30**		*eP*		**Pn**	**00 23 29.1**	**-1.5**
ESSG					*eS*		**Sn**	**00 23 38.9**	**+0.2**
ESSG					IAML			00 23 39.4	
	comp=N,5μm,0.2s								
FG16	**Alotenango, Sa**	**0.43**	**79**		*eP*		**Pn**	**00 23 29.9**	**-2.2**
FG16					*eS*		**Sn**	**00 23 40.8**	**-0.7**
FG16					IAML			00 23 41.8	
	comp=N,22μm,0.3s								
STG5	**El Palmar, Qui**	**0.44**	**299**		*eP*		**Pn**	**00 23 32.7**	**+0.6**
STG5					*eS*		**Sn**	**00 23 44.9**	**+3.5**
STG8	**El Palmar, Qui**	**0.47**	**303**		*eP*		**Pn**	**00 23 33.6**	**+1.2**
STG8					*eS*		**Sn**	**00 23 46.7**	**+4.6**
STG2	**El Palmar, Qui**	**0.48**	**301**		*eP*		**Pn**	**00 23 33.7**	**+1.2**
STG2					*eS*		**Sn**	**00 23 45.9**	**+3.8**
PCG5	**San Vicente Pa**	**0.55**	**87**		*eP*		**Pn**	**00 23 30.3**	**-2.9**
PCG5					*i* S		**Sn**	**00 23 41.6**	**-1.7**
ESSJ	**San Jos, E**	**0.76**	**145**		*i* P		Pn	00 23 28.5	-6.7
SOKI	**Kika Raxquin**	**0.77**	**325**		*eP*		**Pn**	**00 23 34.1**	**-1.6**
SOKI					*eS*		**Sn**	**00 23 46.9**	**-0.9**
SOKI					IAML			00 23 53.6	
	comp=N,2μm,0.4s								
RTAL	**Retalhuleu**	**0.80**	**295**		P		**Pn**	**00 23 33.2**	**-2.4**
RTAL	**Retalhuleu**	**0.80**	**295**		S		**Sn**	**00 23 44.3**	**-3.4**
APG	**El Apazote**	**0.93**	**30**		*i* P		**Pn**	**00 23 37.7**	**+0.2**
FAME	**Alcaldia de Sa**	**0.97**	**111**		P		**Pn**	**00 23 36.3**	**-1.4**
FAME	**Alcaldia de Sa**	**0.97**	**111**		S		**Sn**	**00 23 51.3**	**0.0**
QUIS	**Sacapulas**	**1.10**	**353**		*eP*		**Pn**	**00 23 39.7**	**+0.1**
LOAL	**Lomas de Alarc**	**1.15**	**99**		P		**Pn**	**00 23 39.7**	**-0.3**
NUBE	**Las Nubes**	**1.17**	**104**		*eP*		**Pn**	**00 23 39.2**	**-1.1**
NUBE					*eS*		**Sn**	**00 23 56.0**	**+0.1**
NUBE	**Las Nubes**	**1.17**	**104**		*i* P		**Pn**	**00 23 39.4**	**-0.9**
NUBE					*eS*		**Sn**	**00 23 55.7**	**-0.3**
NUBE	**Las Nubes**	**1.17**	**104**		P		**Pn**	**00 23 39.4**	**-0.9**
NUBE	**Las Nubes**	**1.17**	**104**		S		**Sn**	**00 23 57.2**	**+1.3**
RBDL	**Robledal**	**1.23**	**93**		*eP*		**Pn**	**00 23 40.6**	**-0.5**
SMCA	**Catarina**	**1.28**	**301**		*eP*		**Pn**	**00 23 38.7**	**-2.9**
RTR	**El Retiro**	**1.30**	**103**		*eP*		**Pn**	**00 23 41.7**	**-0.2**
SBLS	**San Blas**	**1.33**	**105**		*eP*		**Pn**	**00 23 41.7**	**-0.8**
SBLS					*eS*		**Sn**	**00 24 01.4**	**+1.5**
CEVE	**Cerro Verde**	**1.33**	**106**		*eP*		**Pn**	**00 23 42.1**	**-0.5**
CEVE					*eS*		**Sn**	**00 24 01.8**	**+1.9**
CEVE	**Cerro Verde**	**1.33**	**106**		S		**Sn**	**00 24 02.2**	**+2.3**
CEVE	**Cerro Verde**	**1.33**	**106**		P		**Pn**	**00 23 42.4**	**-0.2**
SNJE	**San Jose**	**1.34**	**104**		*eP*		**Pn**	**00 23 41.7**	**-0.9**
UNIC	**Universidad Ca**	**1.37**	**99**		P		**Pn**	**00 23 42.8**	**0.0**
JAYA	**Jayaque - finc**	**1.55**	**110**		*eP*		**Pn**	**00 23 44.0**	**-1.2**
JAYA					*eS*		**Sn**	**00 24 04.1**	**-0.7**
JAYA	**Jayaque - finc**	**1.55**	**110**		*eP*		**Pn**	**00 23 44.1**	**-1.2**
JAYA					*eS*		**Sn**	**00 24 04.3**	**-0.5**
JAYA	**Jayaque - finc**	**1.55**	**110**		P		**Pn**	**00 23 44.1**	**-1.2**
JAYA	**Jayaque - finc**	**1.55**	**110**		S		**Sn**	**00 24 05.8**	**+1.0**
MTO3	**Montecristo**	**1.55**	**82**		*eP*		**Pn**	**00 23 44.4**	**-1.0**
MTO3	**Montecristo**	**1.55**	**82**		*eP*		**Pn**	**00 23 44.6**	**-0.7**
PMON	**Piamonte**	**1.66**	**107**		*eP*		**Pn**	**00 23 46.0**	**-0.7**
PMON					*eS*		**Sn**	**00 24 08.1**	**+0.8**
PMON	**Piamonte**	**1.66**	**107**		P		**Pn**	**00 23 46.4**	**-0.3**
PMON	**Piamonte**	**1.66**	**107**		S		**Sn**	**00 24 09.6**	**+2.4**
BOQS	**Boqueron**	**1.68**	**105**		*eP*		**Pn**	**00 23 46.7**	**-0.4**
BOQS					*eS*		**Sn**	**00 24 09.6**	**+1.6**
UEES	**Universidad Ev**	**1.72**	**106**		S		**Sn**	**00 24 11.4**	**+2.5**
LALI	**Alcalda de L**	**1.73**	**114**		S		**Sn**	**00 24 09.7**	**+0.9**
LOMA	**Loma Larga**	**1.81**	**107**		*eP*		**Pn**	**00 23 48.0**	**-0.7**
LOMA					*eS*		**Sn**	**00 24 11.9**	**+1.0**
LFRS	**El Faro**	**1.92**	**107**		*eP*		**Pn**	**00 23 49.7**	**-0.4**
SCLA	**Alcaldia de Sa**	**2.21**	**102**		*eP*		**Pn**	**00 23 53.4**	**-0.6**
TECA	**Tecapa**	**2.47**	**106**		*eP*		**Pn**	**00 23 58.2**	**+0.5**
CNCH	**Conchagua**	**3.16**	**106**		*eP*		**Pn**	**00 24 06.2**	**-0.7**
CNCH					*eS*		**Sn**	**00 24 45.4**	**+1.7**

*IDC **21** 00:26:47.1±4.0, 30°.89S×138°.35E, h0km, mbtmp3.2/3, ML3.3/3, Error ellipse: s-maj=82.9km s-min=18.4km az=43.0*
*AUST **21** 00:26:50.1±0.2, 31°S±1°×13°9E±°, h10km, ML2.9/14, Error ellipse: s-maj=4.3km s-min=3.1km az=82.6*

ISC 21 00:26:51.1±1.1, **30°.92S**±0°.04×**138°.48E**±0°.04, **h30**km±11km, **n23**, σ2**s00**/35, **South Australia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**0.52**	**334**		P		**Pb**	**00 27 01.7**	**-0.3**
LCRK					S		**Sb**	**00 27 09.3**	**0.0**
YAPP	**Yappala Statio**	**0.96**	**189**		P		**Pn**	**00 27 07.1**	**-1.5**
YAPP					S		**Sb**	**00 27 20.6**	**-1.0**
WHYH	**Whyalla**	**2.25**	**200**		P		**Pn**	**00 27 27.2**	**+1.0**
WHYH					S		**Sn**	**00 27 55.5**	**+2.6**
NAPP	**Napperby**	**2.28**	**187**		P		**Pn**	**00 27 28.4**	**+1.7**
HTT	**Hallett**	**2.53**	**172**		P		**Pn**	**00 27 31.3**	**+1.0**
HTT					S		**Sn**	**00 28 01.5**	**+1.3**
BBOO	**Buckleboo**	**2.79**	**227**		P		**Pn**	**00 27 35.1**	**+1.3**
BBOO	**Buckleboo**	**2.79**	**227**		S		**Sn**	**00 28 09.7**	**+3.2**
STKA	**Stephens Creek**	**2.83**	**111**		P		**Pn**	**00 27 35.2**	**+0.9**
STKA	**Stephens Creek**	**2.83**	**111**		S		**Sn**	**00 28 09.8**	**+2.4**
STKA	**Stephens Creek**	**2.83**	**111**	Pn			**Pn**	**00 27 34.1**	**-0.1**
	1.3nm,0.3s,baz=286,slow=12,SNR=7.7								
STKA					Pg		**Pb**	**00 27 41.6**	**+0.6**
	7.0nm,0.3s,baz=288,slow=15,SNR=21								
STKA					Sn		**Sn**	**00 28 08.5**	**+1.1**
	8.5nm,0.3s,baz=346,slow=11,SNR=6.3								
	2.6nm,0.3s								
SDAN	**Sedan**	**3.65**	**169**		P		**Pn**	**00 27 46.4**	**+0.8**
SDAN					S		**Sn**	**00 28 27.6**	**-0.1**
INKA	**Innaminka**	**3.73**	**33**		P		**Pn**	**00 27 50.1**	**+3.4**
INKA					S		**Sn**	**00 28 32.7**	**+3.1**
MULG	**Mulgathing**	**3.87**	**278**		P		**Pn**	**00 27 50.7**	**+2.2**
MULG					S		**Sn**	**00 28 36.4**	**+3.5**
OOD	**Oodnadatta**	**3.95**	**321**		P		**Pn**	**00 27 51.5**	**+1.7**
KELC	**Kelly Hill Cav**	**5.22**	**194**		P		**Pn**	**00 28 09.1**	**+2.1**
CMSA	**Cobar Meteorol**	**6.21**	**98**		P		**Pn**	**00 28 21.7**	**+1.0**
ARPS	**Mount Arapiles**	**6.47**	**155**		P		**Pn**	**00 28 24.5**	**+0.2**
ASAR	**Alice Springs**	**8.29**	**330**	Pn			**Pn**	**00 28 47.2**	**-2.2**
	0.6nm,0.3s,baz=151,slow=13,SNR=17								
ASAR					Sn		**Sn**	**00 30 20.2**	**-1.8**
	0.7nm,0.3s,baz=150,slow=22,SNR=9.2								
ASAR					Lg		Lg	00 31 09.0	
	baz=152,slow=26								
	0.7nm,0.6s								
FORT	**Forrest**	**8.96**	**268**		P		**Pn**	**00 28 58.7**	**+0.1**
FORT					S		**Sn**	**00 30 35.4**	**-3.1**
QIS	**Mount Isa**	**10.37**	**6**		P		**Pn**	**00 29 18.4**	**+0.5**
WRKA	**Warakurna**	**10.74**	**301**		P		**Pn**	**00 29 24.8**	**+1.9**
WR5	**Warramunga Arr**	**11.51**	**341**		P		**Pn**	**00 29 34.1**	**+0.5**
WRA	**Warramunga Arr**	**11.55**	**340**	Pn			**Pn**	**00 29 33.6**	**-0.4**
	0.4nm,0.3s,baz=166,slow=11,SNR=10								
WRA					Sn		**Sn**	**00 31 37.7**	**-4.4**
	0.3nm,0.3s,baz=166,slow=24,SNR=2.8								
	0.4nm,0.4s								

*NNC **21** 00:27:19.9±1.9, 53°.77N×88°.21E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=14.3km s-min=8.1km az=68.0, Suspected Mining explosion.*
*ASRS **21** 00:27:20.1, 53°.77N±1°.0×88°.2E±1°.0, h2km±1km, MLh3.9/19, confirmed*
*IDC **21** 00:27:20.1±0.9, 53°.78N×88°.08E, h0km, mb3.9/5, mbtmp3.8/12, ML3.5/6, Error ellipse: s-maj=13.6km s-min=10.5km az=155.0*

ISC 21 00:27:20.0±0.5, **53°.76N**±0°.02×**88°.15E**±0°.02, **h0**km, **n44**, σ1°**83**/76, **mb4.1/4, 9C-20D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KIYZ	**Kiyzas, Kuzbas**	**0.31**	**230**	⇓P			**Pg**	**00 27 25.8**	**0.0**
KIYZ					S		**Sg**	**00 27 30.1**	**+0.4**
LUZB	**Luzhba, Kemero**	**0.46**	**102**	⇓P			**Pg**	**00 27 29.2**	**+0.5**
LUZB					S		**Sg**	**00 27 36.1**	**+1.6**
KALT3	**Kaltan 3**	**0.49**	**240**	P			**Pg**	**00 27 30.3**	**+1.0**
KALT3					S		**Sb**	**00 27 37.6**	**-1.5**
KALT1	**Kaltan 1**	**0.55**	**232**	⇓P			**Pg**	**00 27 31.3**	**+0.8**
KALT1					S		**Sg**	**00 27 37.5**	**-0.1**
ERU	**Erunakovo, Kuz**	**0.59**	**311**	⇓P			**Pb**	**00 27 33.1**	**-0.1**
ERU					S		**Sb**	**00 27 40.8**	**-1.3**
KALT2	**Kaltan 2**	**0.61**	**234**	P			**Pg**	**00 27 31.4**	**-0.2**
KALT2					S		**Sg**	**00 27 40.4**	**+0.9**
KOTO	**Kotino, Kuzbas**	**0.84**	**301**	P			**Pb**	**00 27 37.2**	**-0.3**
KOTO					S		**Sb**	**00 27 49.9**	**+0.5**
POMOR	**Pomortsevo, Ku**	**1.16**	**305**	⇓P			**Pb**	**00 27 42.5**	**-0.3**
POMOR					S		**Sn**	**00 28 03.9**	**+4.0**
ELT	**Eltsovka**	**1.25**	**247**	⇓P			**Pg**	**00 27 42.5**	**-1.2**
ELT					S		**Sn**	**00 28 01.8**	**-0.3**
BJR3	**Bachatsky-3 (S**	**1.27**	**293**	⇓P			**Pg**	**00 27 43.9**	**-0.3**
BJR3					S		**Sn**	**00 28 07.9**	**+5.3**
BJR2	**Bachatsky-2, K**	**1.30**	**295**	⇓P			**Pg**	**00 27 44.8**	**-0.2**
BJR2					S		**Sn**	**00 28 07.7**	**+4.2**
BJR1	**Bachatsky 1, K**	**1.34**	**292**	⇓P			**Pg**	**00 27 45.0**	**-0.5**
BJR1					S		**Sn**	**00 28 08.8**	**+4.4**
VEH	**Verkhnyaya Baz**	**1.39**	**110**	⇓P			**Pg**	**00 27 45.1**	**-1.4**
VEH					S		**Sg**	**00 28 04.9**	**+0.4**
SALR	**Pechorkino, Sa**	**1.59**	**296**	⇓P			**Pn**	**00 27 49.3**	**+0.1**
SALR					S		**Sg**	**00 28 10.8**	**0.0**
BRCR	**Berchikul'**	**1.89**	**3**	⇑P			**Pn**	**00 27 54.2**	**+0.7**
BRCR					S		**Sg**	**00 28 20.8**	**+0.2**
ZAA0	**Zalesovo Array**	**1.98**	**277**	⇑P			**Pb**	**00 27 56.0**	**-0.9**
	25nm,0.6s,baz=95,slow=14								
ZAA0					⇓S		**Sb**	**00 28 22.2**	**+0.1**
	38nm,0.8s,baz=91,slow=26								
ZALV	**Zalesovo Beam**	**1.98**	**277**	Pn			**Pn**	**00 27 55.6**	**+0.8**
	32nm,0.3s,baz=90,slow=15,SNR=920								
ZALV					Sn		**Sb**	**00 28 22.1**	**0.0**
	4.2nm,0.3s,baz=97,slow=26,SNR=5.3								
KEM	**Kemerovo**	**1.99**	**324**	P			**Pb**	**00 27 56.3**	**-0.7**
KEM					S		**Sg**	**00 28 24.5**	**+0.6**
YALR	**Yailyu, Altay**	**2.02**	**190**	⇑P			**Pn**	**00 27 55.8**	**+0.5**
YALR					S		**Sb**	**00 28 23.5**	**+0.3**
ARTR	**Artybash**	**2.03**	**195**	⇓P			**Pn**	**00 27 56.1**	**+0.6**
ARTR					S		**Sn**	**00 28 22.7**	**+1.2**
DJO	**Djoy, Khakassi**	**2.08**	**117**	⇓P			**Pb**	**00 27 57.7**	**-1.0**
DJO					S		**Sb**	**00 28 25.2**	**+0.2**
ELDR	**Elanda**	**2.84**	**207**	P			**Pn**	**00 28 08.0**	**+1.5**
ELDR					S		**Sb**	**00 28 46.4**	**-0.3**
NVS	**Novosibirsk**	**3.08**	**293**	P			**Pb**	**00 28 14.7**	**-0.9**
NVS					S		**Sb**	**00 28 54.6**	**+1.0**
ULGR	**Ulagan, Altay**	**3.14**	**182**	⇓P			**Pn**	**00 28 12.9**	**+2.1**
CUR	**Chagan-Uzun**	**3.66**	**178**	P			**Pb**	**00 28 26.2**	**+0.5**
CUR					S		**Sg**	**00 29 14.6**	**-3.0**
MINR	**Mina**	**3.72**	**70**	P			**Pn**	**00 28 19.9**	**+1.2**
MINR					S		**Sg**	**00 29 16.1**	**-3.3**
DGZ	**Jazzator, Alta**	**4.09**	**187**	P			**Pn**	**00 28 26.7**	**+2.9**
DGZ					S		**Sb**	**00 29 27.2**	**+4.4**
KURK	**Kurchatov**	**6.60**	**246**	⇓Pn			**Pn**	**00 28 58.6**	**+0.5**
	13nm,0.8s								
KURK					⇑Lg		Lg	00 30 50.4	
	19nm,0.8s								
KURBB	**Kurchatov Arra**	**6.70**	**246**	Pn			**Pn**	**00 29 00.6**	**+1.2**
	0.9nm,0.3s,baz=61,slow=14,SNR=183								
KURBB					Sn		**Sn**	**00 30 14.9**	**-1.5**
	0.1nm,0.3s,baz=60,slow=28,SNR=4.1								
KURBB					Lg		Lg	00 30 52.4	
	0.3nm,0.3s,baz=63,slow=31,SNR=7.8								
	44nm,0.7s								
KURBB	**Kurchatov Arra**	**6.70**	**246**	⇓Pn			**Pn**	**00 28 59.5**	**+0.1**
	55nm,0.7s,baz=63,slow=14								
KURBB					⇑Lg		Lg	00 30 52.7	
	76nm,0.8s								
MK31	**Makanchi Array**	**7.91**	**211**	Pn			**Pn**	**00 29 16.2**	**0.0**
	21nm,1.1s,baz=26,slow=12,SNR=74								
MK31					⇑Sn		**Sn**	**00 30 47.1**	**+0.6**
	12nm,0.9s,baz=22,slow=25								
MK31					⇑Lg		Lg	00 31 31.0	
	23nm,0.8s,baz=27,slow=28								
MKAR	**Makanchi Array**	**7.91**	**211**	Pn			**Pn**	**00 29 17.6**	**+1.4**
	1.5nm,0.3s,baz=34,slow=13,SNR=71								
MKAR					Sn		**Sn**	**00 30 45.6**	**-0.9**
	0.6nm,0.3s,baz=32,slow=26,SNR=5.9								
MKAR					Lg		Lg	00 31 29.6	
	0.6nm,0.3s,baz=33,slow=32,SNR=8.2								
	9.9nm,0.6s								
MAKZ	**Makanchi**	**8.00**	**212**	⇑Pn			**Pn**	**00 29 17.8**	**+0.5**
	8.7nm,0.8s								
MAKZ					⇓Sn		**Sn**	**00 30 49.2**	**+0.7**
	12nm,0.7s								
MAKZ					⇓Lg		Lg	00 31 33.7	
	40nm,1.0s								
BVA0	**Borovoye Array**	**10.64**	**273**	⇑Pn			**Pn**	**00 29 53.3**	**-0.1**
	4.5nm,0.6s,baz=80,slow=14,SNR=31								
BVA0					⇓Sn		**Sn**	**00 31 54.4**	**+1.2**
	16nm,0.8s								
BVAR	**Borovoye Array**	**10.64**	**273**	Pn			**Pn**	**00 29 49.6**	**-3.9**
	0.1nm,0.3s,baz=75,slow=14,SNR=4.2								
BVAR					Sn		**Sn**	**00 31 45.7**	**-7.5**
	0.1nm,0.3s,baz=79,slow=24,SNR=3.0								
	0.8nm,0.6s								
SONM	**Songino Array**	**12.96**	**110**	Pn			**Pn**	**00 30 25.5**	**+0.2**
	1.0nm,0.8s,baz=297,slow=9.4,SNR=4.7								
SONM					Lg		Lg	00 34 06.6	
	0.1nm,0.3s,baz=291,slow=28,SNR=4.4								
ARTI	**Arti**	**17.18**	**291**	P			**Pn**	**00 31 19.2**	**-1.9**
	0.1nm,0.3s,baz=2.4,slow=17,SNR=1.9								
	1.4nm,0.6s								
AKTO	**Aktyubinsk**	**18.74**	**272**	P			**P**	**00 31 39.3**	**-0.8**
	0.1nm,0.3s,baz=62,slow=7.8,SNR=3.9								
	0.8nm,0.4s								
HILR	**Hailar Array B**	**19.95**	**89**	P			**P**	**00 31 53.4**	**0.0**
	baz=301,slow=8.8								
	0.6nm,0.4s								
LZDM	**Lanzhou Array**	**20.85**	**142**	P			**P**	**00 32 04.8**	**+1.2**
	0.6nm,0.3s,baz=335,slow=9.7,SNR=1.7								
	0.6nm,0.3s								
KIRV	**Kirov**	**21.87**	**298**	P			**P**	**00 32 14.2**	**+0.3**
	12nm,0.7s,baz=90,slow=14,SNR=8.4								
	12nm,0.7s								
ILAR	**Eielson Array**	**54.47**	**26**	P			**P**	**00 36 48.5**	**-0.1**
	0.8nm,0.9s,baz=317,slow=5.3,SNR=8.5								
	0.8nm,0.9s								
ESDC	**Sonseca Array**	**60.35**	**297**	P			**P**	**00 37 30.9**	**+0.4**
	2.6nm,0.8s,baz=44,slow=6.8,SNR=14								
	2.6nm,0.8s								
ASAR	**Alice Springs**	**86.63**	**139**	P			**P**	**00 40 04.4**	**-0.7**
	0.4nm,0.7s,baz=339,slow=4.4,SNR=4.1								
	0.4nm,0.7s								

*IDC **21** 00:57:13.5±0.6, 19°.30N×101°.42E, h0km, mb4.1/23, mbtmp4.2/26, ML4.5/3, Error ellipse: s-maj=13.7km s-min=13.1km az=22.0*
*BJI **21** 00:57:14.9, 19°.29N×101°.33E, h10km, mb4.3/22, ML4.6/1*
*NEIC **21** 00:57:15.3±0.9, 19°.29N±0°.07×101°.42E±0°.09, h10km±1km, mb4.6/31, Error ellipse: s-maj=13.9km s-min=11.1km az=75.0*
*BKK **21** 00:57:16.4±0.8, 19°N±4°×10°1E±°, h7km±4km, M4.8/18, Mjma4.9/18, ML5.0/18, MLv4.8/17*

ISC 21 00:57:15.1±0.4, **19°.30N**±0°.04×**101°.38E**±0°.07, **h10**km, **n84**, σ1°**38**/92, **mb4.3**/40, **Laos**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UTTA	**Uttaradit**	**1.74**	**207**	P			**Pn**	**00 57 46.3**	**+1.0**
LOEI	**Loei**	**1.79**	**183**	P			**Pb**	**00 57 48.1**	**+0.1**
LAMP	**Lampang**	**1.83**	**245**	P			**Pn**	**00 57 47.2**	**+0.6**
CMAI	**Chiengmai2**	**2.29**	**286**	P			**Pn**	**00 57 53.5**	**+0.5**
CHTO	**Chiang Mai**	**2.35**	**258**				**Pn**	**00 57 54.2**	**+0.4**

CHTO	**Chiang Mai**	**2.35**	**258**	P			**Pn**	**00 57 53.8**	**0.0**
CM31	**Chiang Mai Arr**	**2.45**	**250**				**Pn**	**00 57 55.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**2.45**	**250**	Pn			**Pn**	**00 57 55.6**	**+0.4**
	75nm,0.3s,baz=65,slow=15,SNR=44								
CMAR				Lg			Lg	00 58 33.1	
	105nm,0.3s,baz=68,slow=33,SNR=9.1								
	122nm,0.4s								
CMAR	**Chiang Mai Arr**	**2.45**	**250**				**Pn**	**00 57 55.4**	**+0.1**
PZH	**PanZhiHua**	**7.17**	**3**	Pg			**Pg**	**00 59 31.5**	**-1.0**
PZH				Sg			**Sg**	**01 01 01.3**	**-4.2**
PZH				smax			smax		
	comp=N,40nm,1.2s								
PZH				smax			smax		
	comp=E,80nm,1.3s								
SHL	**Shillong**	**10.77**	**307**				**Pn**	**00 59 50.2**	**+0.7**
CD2	**Chengdu**	**11.76**	**10**		*eP*		**Pn**	**01 00 03.6**	**+0.6**
ENH	**Enshi**	**13.16**	**32**	Pn			**Pn**	**01 00 21.2**	**-1.0**
EVN	**Everest**	**15.87**	**306**				**Pn**	**01 00 58.1**	**-1.2**
KCSI	**Kotacane, Aceh**	**16.08**	**193**	P			**P**	**01 01 06.4**	**+1.6**
	comp=E,24nm,1.1s								
XAN	**Xi'an**	**16.14**	**23**	P			**P**	**01 01 06.3**	**+0.9**
XAN				pP			sP	01 01 12.5	+2.5
XAN				pmax			pmax		
	comp=E,14nm,1.2s								
PSI	**Prapat**	**16.58**	**189**	Pn			**P**	**01 01 09.6**	**-0.8**
	comp=E,0.5nm,0.3s,baz=338,slow=5.6,SNR=7.1								
	comp=E,2.0nm,0.3s								
RPSI	**Rantau Prapat**	**16.68**	**189**	Pn			**Pn**	**01 01 08.7**	**-0.4**
RPSI				IAmb			IAmb	01 01 39.3	
	comp=Z,27nm,1.2s								
LZDM	**Lanzhou Array**	**16.71**	**7**	Pn			**Pn**	**01 01 10.3**	**+0.6**
	baz=183,slow=14								
	comp=Z,5.4nm,0.6s								
LZH	**Lanzhou**	**16.86**	**7**		*eP*		**P**	**01 01 16.1**	**+2.6**
LZH					pP		sP	01 01 21.0	+2.9
LZH					sP		pP	01 01 24.8	+8.2
LZH					pmax		pmax		
	comp=Z,31nm,1.1s								
LYN	**LuoYang**	**18.10**	**31**		*eP*		**P**	**01 01 29.9**	**+2.9**
GTA	**Gaotai**	**20.08**	**356**		*eP*		Pn	01 01 51.5	+0.8
GTA					pmax		pmax		
	comp=Z,15nm,1.2s								
BTO	**Baotou**	**22.49**	**17**		*eP*		**P**	**01 02 16.3**	**+1.5**
BTO					pP		**sP**	**01 02 20.3**	**+0.9**
BTO					sP		**pP**	**01 02 22.9**	**+4.9**
BTO					PP		**PnPn**	**01 02 44.3**	**+6.3**
BTO					pmax		pmax		
	comp=Z,33nm,0.8s								
MDSI	**Maura Dua**	**23.80**	**173**	P			**P**	**01 02 31.4**	**+3.2**
	comp=Z,16nm,0.8s								
BJT	**Baijiatuan**	**24.25**	**29**	P			**P**	**01 02 31.9**	**-0.4**
BJT		

	comp=Z,1.6nm,0.6s								
NB2	**NORSAR Subarra**	**73.40**	**329**		P		**P**	01 08 46.3	**-0.9**
	comp=Z,0.5nm,0.6s,baz=78,slow=6.2								
NOA	**NORSAR Array B**	**73.40**	**329**		P		**P**	01 08 46.1	**-1.1**
	comp=Z,1.5nm,0.8s,baz=79,slow=6.0,SNR=4.0								
	comp=Z,1.5nm,0.8s								
GERES	**GERESS Array B**	**74.22**	**317**		P		**P**	01 08 52.1	**-0.3**
	comp=Z,0.7nm,0.9s,baz=64,slow=7.6,SNR=3.5								
	comp=Z,0.7nm,0.9s								
C19K	**Lookout Ridge**	**75.31**	**21**		P		**P**	01 08 59.0	**+0.7**
D19K	**Kuna River**	**76.00**	**22**		P		**P**	01 09 02.7	**+0.5**
D20K	**Etivluk River**	**76.46**	**22**		P		**P**	01 09 05.2	**+0.4**
H18K	**Honhosa River**	**76.89**	**25**		P		**P**	01 09 07.4	**+0.1**
C23K	**Itkillik River**	**78.06**	**20**		P		**P**	01 09 14.1	**+0.4**
C23K					IAmb		IAmb	01 09 25.2	
	comp=Z,12nm,1.4s								
ILAR	**Eielson Array**	**81.55**	**24**		P		**P**	01 09 30.8	**-1.9**
	comp=Z,0.3nm,0.7s,baz=305,slow=5.4,SNR=4.1								
	comp=Z,0.3nm,0.7s								
INK	**Inuvik**	**84.08**	**18**		P		**P**	01 09 45.7	**0.0**
	comp=Z,3.7nm,0.9s,baz=293,slow=7.8,SNR=9.5								
	comp=Z,3.7nm,0.9s								
INK	**Inuvik**	**84.08**	**18**				**P**	01 09 45.4	**-0.4**
INK					IAmb		IAmb	01 09 47.8	
	comp=Z,9.8nm,1.2s								
C36M	**Paulatuk**	**85.86**	**15**				**P**	01 09 54.7	**0.0**
C36M					IAmb		IAmb	01 09 55.5	
	comp=Z,4.8nm,0.8s								
ESDC	**Sonseca Array**	**89.08**	**312**		P		**P**	01 10 10.8	**-0.1**
	comp=Z,0.8nm,0.8s,baz=46,slow=6.1,SNR=2.5								
	comp=Z,0.8nm,0.8s								
TXAR	**Lajitas Array**	**125.94**	**27**		PKP		**PKPdf**	01 16 17.9	**-0.3**
	comp=Z,0.4nm,0.7s,baz=341,slow=3.4,SNR=4.7								
BDFB	**Brasilia**	**150.60**	**272**		PKPbc		**PKiKP**	01 17 09.3	**+0.3**
	baz=128,slow=2.2								

*IDC **21** 01:14:41.5±1.0, 19°.36N×101°.42E, h0km, mb3.7/10, mbtmp3.7/12, ML4.3/2, Error ellipse: s-maj=19.4km s-min=16.3km az=144.0*
*BJI **21** 01:14:41.5, 19°.34N×101°.43E, h10km, mb4.3/23, ML4.3/1*
*NEIC **21** 01:14:43.7±1.4, 19°.40N±0°.07×101°.36E±0°.10, h15km±5km, mb4.4/16, Error ellipse: s-maj=13.8km s-min=10.4km az=107.0*
*BKK **21** 01:14:45.0±0.6, 19°.N±3°×10°.1E±°, h6km±3km, M4.4/19, Mjma4.4/18, ML4.5/19, MLv4.4/18*

ISC 21 01:14:43.0±0.6, 19°.33N±0°.06×101°.28E±0°.07, h10km, n53, σ1§43/57, mb4.2/21, 1D, Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UTTA	**Uttaradit**	**1.72**	**204**	P	**Pn**	**01 15 14.5**	**+1.4**
LAMP	**Lampang**	**1.75**	**243**	P	**Pn**	**01 15 14.7**	**+1.2**
CMAI	**Chiengmai2**	**2.19**	**286**	P	**Pn**	**01 15 20.3**	**+0.7**
CHTO	**Chiang Mai**	**2.27**	**257**		**Pn**	**01 15 21.5**	**+0.9**
CHTO	**Chiang Mai**	**2.27**	**257**	P	**Pn**	**01 15 21.5**	**+0.9**
PHIT	**Phitsanulok**	**2.28**	**201**	P	**Pn**	**01 15 23.1**	**+2.3**
CM09	**Chiang Mai Arr**	**2.34**	**248**	P	**Pn**	**01 15 22.6**	**+1.0**
CM31	**Chiang Mai Arr**	**2.38**	**249**		**Pn**	**01 15 22.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**2.38**	**249**	Pn	**Pn**	**01 15 23.2**	**+1.1**
	11nm,0.3s,baz=63,slow=12,SNR=29						
CMAR				Lg	Lg	01 16 00.3	
	44nm,0.3s,baz=28,slow=17,SNR=11						
	30nm,0.5s						
CMAR	**Chiang Mai Arr**	**2.38**	**249**		**Pn**	**01 15 22.5**	**+0.4**
CM02	**Chiang Mai Arr**	**2.38**	**248**	P	**Pn**	**01 15 23.5**	**+1.4**
TNCH	**TengChong**	**6.22**	**336**	Pg	**Pg**	**01 16 42.1**	**0.0**
TNCH				Sg	**Sg**	**01 18 01.9**	**-0.8**
TNCH				smax	smax		
	comp=N,1μm,1.4s						
TNCH				smax	smax		
	comp=E,850nm,1.3s						
TNCH				LR	LR		
	comp=Z,2μm,10.7s						
PZH	**PanZhiHua**	**7.15**	**3**	Pn	**Pn**	**01 16 29.6**	**+1.8**
SHL	**Shillong**	**10.67**	**307**		**Pn**	**01 17 17.2**	**+1.1**
ENH	**Enshi**	**13.19**	**33**	Pn	**Pn**	**01 17 48.6**	**-1.9**
EVN	**Everest**	**15.78**	**306**		**Pn**	**01 18 25.4**	**-0.5**
XAN	**Xi'an**	**16.15**	**23**	P	**Pn**	**01 18 30.5**	**+0.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LZDM	**Lanzhou Array**	**16.70**	**7**	Pn	**Pn**	**01 18 37.6**	**+0.2**
	baz=195,slow=10						
	comp=Z,1.5nm,0.3s						
GTA	**Gaotai**	**20.05**	**357**	*e*P	**Pn**	**01 19 18.1**	**-0.1**
GTA				pP	sP	01 19 23.4	+2.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NJ2	**Nanjing**	**20.24**	**48**	*e*P	**P**	**01 19 18.1**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TIA	**Tai'an**	**21.84**	**36**	P	**P**	**01 19 36.6**	**+0.9**
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
BTO	**Baotou**	**22.49**	**18**	*e*P	**P**	**01 19 43.6**	**+0.9**
BTO				pP	**sP**	**01 19 47.8**	**+0.4**
BTO				sP	**pP**	**01 19 50.5**	**+4.5**
BTO				PP	**PnPn**	**01 20 12.1**	**+6.1**
BTO				pmax	pmax		
	comp=Z,24nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.18**	**20**	*e*P	**P**	**01 19 50.4**	**+0.4**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
WMQ	**Urumqi**	**26.94**	**338**	*e*P	**P**	**01 20 23.4**	**-1.3**
WMQ				sP	sP	01 20 36.8	+7.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**28.73**	**7**	P	**P**	**01 20 40.8**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=187,slow=10,SNR=4.8						
	comp=Z,0.9nm,0.8s						
BOOM	**Boomskoye usch**	**31.49**	**323**	P	**P**	**01 21 04.2**	**-1.0**
BOOM				IAmb	IAmb	01 21 21.1	
	comp=Z,6.2nm,1.1s						
MK31	**Makanchi Array**	**31.50**	**335**	P	**P**	**01 21 04.5**	**-0.6**
MKAR	**Makanchi Array**	**31.50**	**335**	P	**P**	**01 21 05.7**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=141,slow=9.9,SNR=27						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**31.50**	**335**		**P**	**01 21 04.4**	**-0.7**
GAR	**Garm**	**33.15**	**313**		**P**	**01 21 18.9**	**-0.9**
GAR				IAmb	IAmb	01 21 31.2	
	comp=Z,4.9nm,1.0s						
HILR	**Hailar Array B**	**33.59**	**22**	P	**P**	**01 21 21.7**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=198,slow=8.9,SNR=1.8						
	comp=Z,0.6nm,0.3s						
KURBB	**Kurchatov Array**	**36.06**	**335**	P	**P**	**01 21 43.9**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=149,slow=8.9,SNR=5.5						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**36.10**	**335**	P	**P**	**01 21 44.6**	**-0.3**
ZAA0	**Zalesovo Array**	**36.80**	**344**	P	**P**	**01 21 51.0**	**+0.1**
ZAA0				IAmb	IAmb	01 21 57.5	
	comp=Z,5.3nm,0.8s						
ZALV	**Zalesovo Beam**	**36.80**	**344**	P	**P**	**01 21 50.9**	**0.0**
	comp=Z,4.0nm,0.8s,baz=147,slow=8.8,SNR=19						
	comp=Z,4.0nm,0.8s						
BVAR	**Borovoye Array**	**41.26**	**332**	P	**P**	**01 22 28.2**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=140,slow=11,SNR=2.6						
	comp=Z,1.0nm,0.7s						
AB31	**Akbulak array**	**44.51**	**322**	P	**P**	**01 22 53.5**	**-1.1**
ABKAR	**Akbulak array**	**44.51**	**322**	P	**P**	**01 22 53.6**	**-1.0**
WB0	**Warramunga Arr**	**50.64**	**138**	P	**P**	**01 23 41.3**	**-1.3**
WB0				IAmb	IAmb	01 23 44.4	
	comp=Z,5.8nm,1.4s						
WRA	**Warramunga Arr**	**50.73**	**138**	P	**P**	**01 23 42.6**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=323,slow=7.7,SNR=3.2						
	comp=Z,0.6nm,0.9s						
WB2	**Warramunga Arr**	**50.74**	**138**	P	**P**	**01 23 42.9**	**-0.6**
WR8	**Warramunga Arr**	**50.84**	**138**	P	**P**	**01 23 43.5**	**-0.7**
ASAR	**Alice Springs**	**53.29**	**142**	P	**P**	**01 24 02.5**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=308,slow=7.0,SNR=4.5						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**53.29**	**142**	P	**P**	**01 24 01.9**	**-0.5**
KIV	**Kislovodsk**	**54.34**	**311**	P	**P**	**01 24 10.0**	**+0.1**
GURO	**Guroymak-BITLI**	**54.35**	**304**	P	**P**	**01 24 10.4**	**+0.2**
GURO				IAmb	IAmb	01 24 17.1	
	comp=Z,3.6nm,0.9s						
BRTR	**Keskin Array B**	**60.88**	**305**	P	**P**	**01 24 58.7**	**+2.5**
	comp=Z,0.2nm,0.5s,baz=103,slow=6.1,SNR=1.5						
	comp=Z,0.2nm,0.5s						
BRTR	**Keskin Array B**	**60.88**	**305**	P	**P**	**01 24 56.0**	**-0.3**
AIS	**Amsterdam Isla**	**61.05**	**201**	P	**P**	**01 24 56.9**	**-0.1**
BGES	**Gesves**	**79.19**	**320**	*d*P	**P**	**01 26 47.1**	**-1.1**
ILAR	**Eielson Array**	**81.56**	**24**	P	**P**	**01 26 59.0**	**-1.7**
	comp=Z,0.1nm,0.6s,baz=310,slow=3.2,SNR=1.4						
	comp=Z,0.1nm,0.6s						
E28M	**Babbage River**	**82.12**	**19**	P	**P**	**01 27 02.9**	**-0.7**
E28M				IAmb	IAmb	01 27 20.7	
	comp=Z,2.2nm,1.2s						
E29M	**Blow River**	**82.74**	**19**	P	**P**	**01 27 05.9**	**-0.9**
E29M				IAmb	IAmb	01 27 20.8	
	comp=Z,5.9nm,1.4s						

*CNRM **21** 01:16:08.3, 32°.58N×4°.23W, h2km, ML3.1*
*INMG **21** 01:16:14.3±2.6, 32°.66N×4°.53W, h22km±19km, ML2.4, Error ellipse: s-maj=19.8km s-min=12.5km az=124.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*
*MDD **21** 01:16:19.6±0.8, 33°.56N×5°.42W, h0km, Mb3.7/3, M_mb2.9/3, Error ellipse: s-maj=8.3km s-min=5.4km az=108.0*

ISC 21 01:16:09.4±0.8, 32°.66N±0°.02×4°.31W±0°.02, h10km, n141, σ1§63/157, 3C, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**0.29**	**302**	P	**Pg**	**01 16 15.9**	**+0.6**
MDT	**Midelt**	**0.29**	**302**	S	**Sb**	**01 16 21.2**	**-0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Pg**	**01 16 15.9**	**+0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Sb**	**01 16 21.2**	**-0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Sb**	**01 16 21.2**	**-0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Pg**	**01 16 15.9**	**+0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Sb**	**01 16 21.2**	**-0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Sb**	**01 16 21.2**	**-0.6**
MDT	**Midelt**	**0.29**	**302**	P	**Pg**	**01 16 15.9**	**+

KPKS	**Kokpek**	**3.32**	**15**	Pg		**Pg**	**01 28 54.7**	**-2.3**
	0.4nm,0.2s							
KPKS				Lg		Lg	01 29 36.7	
	45nm,0.4s							
PDGK	**Podgornoye**	**3.41**	**26**	⇑Pn		**Pg**	**01 28 56.3**	**-2.4**
	7.1nm,0.5s							
PDGK				⇓Sn		**Sb**	**01 29 39.3**	**+4.6**
	63nm,0.6s							
ARSB	**Arslanbob**	**3.57**	**289**	⇑*e*P		**Pb**	**01 28 56.8**	**+0.6**
ARSB				⇑*e*S		**Sb**	**01 29 39.6**	**+0.3**
OHH	**Osh**	**3.59**	**276**	⇓*e*P		**Pb**	**01 28 57.7**	**+1.2**
OHH				⇓*e*S		**Sb**	**01 29 41.3**	**+1.5**
EKS2	**Erkin-Say**	**3.67**	**312**	⇑*i*P		**Pb**	**01 28 56.8**	**-1.0**
EKS2				⇑*i*S		**Sb**	**01 29 39.7**	**-2.3**
KUU	**Kurty**	**3.72**	**347**	Pg		**Pg**	**01 29 03.9**	**-0.7**
	4.1nm,0.0s							
KUU				Lg		Lg	01 29 52.4	
	28nm,0.5s							
KUU	**Kurty**	**3.72**	**347**	*e*P		**Pg**	**01 29 03.9**	**-0.7**
	4.1nm,0.0s							
KUU				*e*S		**Sg**	**01 29 52.4**	**-0.4**
	28nm,0.5s							
USP	**Ospenovka**	**3.73**	**324**	⇓*e*P		**Pb**	**01 28 57.1**	**-1.8**
USP				⇓*e*S		**Sb**	**01 29 40.0**	**-3.9**
MRKS	**Merke**	**4.04**	**309**	Pg		**Pg**	**01 29 09.9**	**-0.8**
	4.0nm,0.5s							
MRKS				Lg		Lg	01 30 02.6	
	19nm,0.5s							
MRKS	**Merke**	**4.04**	**309**	*e*P		**Pg**	**01 29 09.9**	**-0.8**
	4.0nm,0.5s							
MRKS				*e*S		**Sg**	**01 30 02.6**	**-0.5**
	19nm,0.5s							
BTLS	**Baital**	**5.40**	**333**	Pg		**Pg**	**01 29 35.9**	**-0.8**
	12nm,1.1s							
BTLS				Lg		Lg	01 30 46.1	
	5.6nm,0.4s							
BTLS	**Baital**	**5.40**	**333**	*e*P		**Pg**	**01 29 35.9**	**-0.8**
	12nm,1.1s							
BTLS				*e*S		**Sg**	**01 30 46.1**	**-0.5**
	5.6nm,0.4s							
IUG	**Iuzhnay**	**5.92**	**291**	Pg		**Pg**	**01 29 45.8**	**-0.9**
	6.4nm,0.4s							
IUG				Lg		Lg	01 31 03.4	
	10nm,0.7s							
KK31	**Karatay Array**	**5.94**	**301**	⇑Pn		**Pb**	**01 29 36.6**	**+0.3**
	0.4nm,0.4s,baz=113,slow=15,SNR=4.3							
KK31				⇑Lg		Lg	01 31 18.0	
	2.8nm,0.6s,baz=113,slow=30							
BRLS	**Boroldav**	**6.35**	**298**	Pg		**Pg**	**01 29 54.1**	**-0.9**
	1.3nm,0.3s							
BRLS				Lg		Lg	01 31 17.1	
	1.3nm,0.2s							
BRLS	**Boroldav**	**6.35**	**298**	*e*P		**Pg**	**01 29 54.1**	**-0.9**
	1.3nm,0.3s							
BRLS				*e*S		**Sg**	**01 31 17.1**	**-0.1**
	1.3nm,0.2s							

*NNC **21** 01:32:32.4±0.6,44°.58N×80°.88E,h0km,mb3.6,mpv3.6, Error ellipse: s-maj=6.8km s-min=3.1km az=119.0*
*SOME **21** 01:32:34.0,44°.53N×80°.83E,h25km*
ISC 21 01:32:31.5±1.3,**44°.47N**±0°.05×**81°.16E**±0°.06,**h17**km±13km, **n23,**σ1°**24**/33,**5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**1.52**	**303**	P	**Pn**	**01 32 57.3**	**-0.6**
	11nm,0.1s						
KAPS				S	**Sn**	**01 33 13.9**	**-3.4**
	179nm,0.1s						
PDGK	**Podgornoye**	**1.66**	**227**	⇓Pn	**Pb**	**01 33 01.9**	**+0.2**
	12nm,0.3s						
PDGK				⇓Sn	**Sg**	**01 33 24.0**	**-1.0**
	24nm,0.5s						
SHLS	**Shalkode**	**1.80**	**224**	P	**Pn**	**01 33 02.2**	**+0.4**
	24nm,0.2s						
SHLS				S	**Sn**	**01 33 22.5**	**-1.8**
	159nm,0.3s						
SHLS	**Shalkode**	**1.80**	**224**	*e*P	**Pn**	**01 33 02.2**	**+0.4**
	24nm,0.2s						
SHLS				*e*S	**Sn**	**01 33 22.5**	**-1.8**
	159nm,0.3s						
TDK	**Taldyqorghan**	**2.03**	**286**	P	**Pn**	**01 33 06.3**	**+1.3**
	69nm,0.3s						
TDK				S	**Sn**	**01 33 29.7**	**-0.3**
	199nm,0.5s						
TDK	**Taldyqorghan**	**2.03**	**286**	*e*P	**Pn**	**01 33 06.3**	**+1.3**
	69nm,0.3s						
TDK				*e*S	**Sn**	**01 33 29.6**	**-0.3**
	199nm,0.5s						
UZB	**Uzynbulak**	**2.03**	**230**	P	**Pb**	**01 33 08.4**	**+0.3**
	33nm,0.4s						
UZB				S	**Sb**	**01 33 33.1**	**0.0**
	68nm,0.3s						
UZB	**Uzynbulak**	**2.03**	**230**	*e*P	**Pb**	**01 33 08.4**	**+0.3**
	33nm,0.4s						
UZB				*e*S	**Sb**	**01 33 33.1**	**0.0**
	68nm,0.3s						
KPKS	**Kokpek**	**2.05**	**241**	P	**Pb**	**01 33 08.3**	**0.0**
	24nm,0.1s						
KPKS				S	**Sb**	**01 33 33.1**	**-0.4**
	151nm,0.3s						
KURS	**Kuram**	**2.37**	**247**	Pg	**Pb**	**01 33 13.2**	**-0.6**
	16nm,0.3s						
KURS				Lg	Lg	01 33 41.3	
	20nm,0.4s						
MAKZ	**Makanchi**	**2.41**	**14**	⇓Pn	**Pb**	**01 33 13.4**	**-1.0**
	1.7nm,0.5s						
MAKZ				⇓Sn	**Sn**	**01 33 42.3**	**+3.0**
	16nm,0.4s						
SATY	**Saty**	**2.44**	**236**	Pg	**Pb**	**01 33 15.0**	**-0.1**
	58nm,0.2s						
SATY				Lg	Lg	01 33 44.4	
	96nm,0.2s						
MK31	**Makanchi Array**	**2.46**	**19**	Pn	**Pb**	**01 33 14.4**	**-0.8**
	0.7nm,0.2s,baz=205,slow=14,SNR=106						
MK31				⇓Sn	**Sb**	**01 33 44.3**	**-0.9**
	25nm,0.3s,baz=207,slow=22						
MDOK	**Medeo**	**3.25**	**248**	Lg	Lg	01 34 08.2	
	10nm,0.4s						
TNSS	**Tian-Shan**	**3.37**	**246**	Lg	Lg	01 34 12.8	
	2.6nm,0.2s						
TNSS	**Tian-Shan**	**3.37**	**246**	*e*P	**Pb**	**01 33 31.4**	**+0.4**
	4.1nm,0.4s						
TNSS				*e*S	**Sb**	**01 34 12.8**	**+0.9**
	2.6nm,0.2s						
MTBS	**Maitube**	**3.67**	**250**	Lg	Lg	01 34 21.2	
	22nm,0.4s						
MTBS	**Maitube**	**3.67**	**250**	*e*P	**Pb**	**01 33 36.4**	**+0.3**
	12nm,0.4s						
MTBS				*e*S	**Sb**	**01 34 21.2**	**+0.8**
	22nm,0.4s						
ZSN	**Zaisan**	**3.95**	**40**	Pg	**Pg**	**01 33 46.8**	**-0.2**
	5.2nm,0.2s						
ZSN	**Zaisan**	**3.95**	**40**	*e*P	**Pg**	**01 33 46.8**	**-0.2**
	5.2nm,0.2s						
ZSN				*e*S	**Sg**	**01 34 39.3**	**+1.1**
	12nm,0.4s						
KST	**Kastek**	**4.02**	**251**	Lg	Lg	01 34 32.5	
	9.6nm,0.3s						
KST	**Kastek**	**4.02**	**251**	*e*P	**Pb**	**01 33 43.0**	**+1.0**
	6.2nm,0.5s						
KST				*e*S	**Sb**	**01 34 32.5**	**+2.1**
	9.6nm,0.3s						
SGDS	**Sogindy**	**4.82**	**260**	Lg	Lg	01 34 56.7	
	4.0nm,0.3s						

*SJA **21** 01:36:19.3±0.7,29°.61S×71°.72W,h14km±3km,ML4.1, MW3.9*
*NEIC **21** 01:36:27.7±1.2,29°.83S±0°.04×71°.29W±0°.07,h56km±7km, mb4.3/4,ML4.4(GUC),Error ellipse: s-maj=9.6km s-min=4.5km az=110.0*
*GUC **21** 01:36:27.7±0.7,29°.84S×71°.22W,h58km±2km,ML4.4*
ISC 21 01:36:27.4±0.8,**29°.79S**±0°.02×**71°.29W**±0°.04,**h47**km±6km, **n120,**σ2°**16**/155,**12C-4D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.13**	**161**		**Pn**	**01 36 36.2**	**+1.2**
CO05				Sn	**Sn**	**01 36 42.1**	**+1.7**
CO05	**La Serena**	**0.13**	**161**	⇓*i*P	**Pn**	**01 36 36.3**	**+1.2**
CO05				*i* S	**Sn**	**01 36 41.9**	**+1.5**
GO04	**Tololo Observa**	**0.57**	**132**		**Pn**	**01 36 39.8**	**+0.2**
GO04				Sn	**Sn**	**01 36 48.5**	**+0.2**
GO04	**Tololo Observa**	**0.57**	**132**	⇑*i*P	**Pn**	**01 36 39.8**	**+0.2**
GO04				*i* S	**Sn**	**01 36 48.3**	**-0.1**
GO04				IAML		01 36 49.9	
	comp=E,57μm,0.3s						
GO04	**Tololo Observa**	**0.57**	**132**	*e*P	**Pn**	**01 36 39.0**	**-0.6**
GO04				IAML		01 36 57.4	
	comp=Z,9μm,0.7s						
CO06	**Fray Jorge**	**0.93**	**199**		**Pn**	**01 36 44.4**	**+0.3**
CO06				Sn	**Sn**	**01 36 56.2**	**-0.2**
CO06	**Fray Jorge**	**0.93**	**199**	⇑*i*P	**Pn**	**01 36 44.4**	**+0.3**
CO06				IAML		01 37 01.0	
	comp=E,10μm,0.2s						
LCO	**Las Campanas**	**0.93**	**33**		**Pn**	**01 36 45.3**	**+0.9**
LCO				Sn	**Sn**	**01 36 58.2**	**+1.3**
LCO	**Las Campanas**	**0.93**	**33**	⇑*i*P	**Pn**	**01 36 45.3**	**+0.9**
LCO				*i* S	**Sn**	**01 36 56.1**	**-0.8**
LCO	**Las Campanas**	**0.93**	**33**	*e*P	Pn	01 36 39.7	-4.7
LCO				IAML		01 37 00.1	
	comp=Z,6μm,0.2s						
CO01	**Juntas del Tor**	**1.05**	**100**		**Pn**	**01 36 46.5**	**+0.5**
CO01				Sn	**Sn**	**01 37 00.1**	**+0.4**
CO01	**Juntas del Tor**	**1.05**	**100**	⇓*i*P	**Pn**	**01 36 46.8**	**+0.7**
CO01				*i* S	**Sn**	**01 36 59.8**	**0.0**
CO01	**Juntas del Tor**	**1.05**	**100**	*e*P	**Pn**	**01 36 45.9**	**-0.2**
CO03	**El Pedregal**	**1.16**	**154**		**Pn**	**01 36 47.3**	**-0.1**
CO03	**El Pedregal**	**1.16**	**154**	⇑*i*P	**Pn**	**01 36 47.2**	**-0.2**
CO03				IAML		01 37 02.4	
	comp=E,8μm,0.3s						
CO03	**El Pedregal**	**1.16**	**154**	*e*P	**Pn**	**01 36 47.0**	**-0.4**
CO03				*e*S	**Sn**	**01 37 02.5**	**+0.2**
CO03				IAML		01 37 04.4	
	comp=Z,2μm,0.2s						
AC05	**El Transito**	**1.30**	**43**		**Pn**	**01 36 50.6**	**+1.3**
AC05	**El Transito**	**1.30**	**43**	⇑*i*P	**Pn**	**01 36 50.8**	**+1.5**
AC05	**El Transito**	**1.30**	**43**	*e*P	**Pn**	**01 36 45.4**	**-3.9**
AC05				*e*S	**Sn**	**01 37 08.1**	**+2.4**
AC05				IAML		01 37 08.5	
	comp=Z,2μm,0.2s						
CO02	**Combarbal**	**1.43**	**170**		**Pn**	**01 36 50.8**	**-0.3**
CO02	**Combarbal**	**1.43**	**170**	⇑*i*P	**Pn**	**01 36 50.9**	**-0.1**
CO02				*i* S	**Sn**	**01 37 07.9**	**-0.8**
CO02				IAML		01 37 13.4	
	comp=N,8μm,0.2s						
CO02	**Combarbal**	**1.43**	**170**	*e*P	**Pn**	**01 36 50.8**	**-0.3**
CO02				IAML		01 37 23.9	
	comp=Z,2μm,0.3s						
AC04	**Llanos de Chal**	**1.59**	**7**		**Pn**	**01 36 54.6**	**+1.4**
AC04	**Llanos de Chal**	**1.59**	**7**	⇑*i*P	**Pn**	**01 36 54.8**	**+1.6**
AC04	**Llanos de Chal**	**1.59**	**7**	*e*P	**Pn**	**01 36 54.1**	**+1.0**
AC04				*e*S	Sn	01 36 54.9	-18
AC04				IAML		01 36 57.4	
	comp=Z,2μm,0.4s						
AROD	**Rodeo**	**1.62**	**104**	*e*P	**Pn**	**01 36 55.6**	**+1.8**
ACDV	**Cuesta del Vie**	**1.92**	**102**	*e*P	**Pn**	**01 37 00.1**	**+2.3**
ACCO	**Cerro Coronel**	**2.08**	**113**	*e*P	**Pn**	**01 37 02.8**	**+2.7**
ACCO				*e*S	**Sn**	**01 37 19.6**	**-5.4**
CO04	**Los Peladeros**	**2.26**	**173**	⇑*i*P	**Pn**	**01 37 02.8**	**+0.2**
CO04				*i* S	**Sn**	**01 37 29.6**	**+0.2**
CO04				IAML		01 37 37.7	
	comp=E,3μm,0.4s						
CO04				IAML		01 37 38.2	
	comp=N,3μm,0.2s						
GO03	**Copiapo**	**2.38**	**23**		**Pn**	**01 37 05.4**	**+1.4**
GO03	**Copiapo**	**2.38**	**23**	*i* P	**Pn**	**01 37 05.2**	**+1.2**
GO03				*i* S	**Sn**	**01 37 33.2**	**+1.2**
GO03				IAML		01 37 41.9	
	comp=N,3μm,0.4s						
GO03	**Copiapo**	**2.38**	**23**	*e*P	**Pn**	**01 37 05.6**	**+1.6**
GO03				*e*S	**Sn**	**01 37 31.0**	**-1.0**
GO03				IAML		01 37 44.6	
	comp=Z,931nm,0.3s						
AGUA	**GUANDACOL**	**2.46**	**84**	*e*P	**Pn**	**01 37 08.7**	**+3.6**
AGUA				IAML		01 37 48.9	
	comp=Z,421nm,0.2s						
AC06	**Mina Casimiro**	**2.56**	**19**		**Pn**	**01 37 07.8**	**+1.3**
AC06	**Mina Casimiro**	**2.56**	**19**	⇑*i*P	**Pn**	**01 37 07.8**	**+1.3**
AC06				*i* S	**Sn**	**01 37 38.3**	**+1.8**
AC06				IAML		01 37 48.0	
	comp=N,1μm,0.4s						
RTLS	**Leoncito**	**2.63**	**140**	*e*P	**Pn**	**01 37 10.4**	**+2.7**
RTLS				IAML		01 37 59.0	
	comp=Z,1μm,0.5s						
VA06	**Catapilco**	**2.76**	**180**		**Pn**	**01 37 09.3**	**+0.2**
VA06	**Catapilco**	**2.76**	**180**	⇓*i*P	**Pn**	**01 37 09.4**	**+0.2**
VA06				IAML		01 37 58.8	
	comp=N,2μm,0.3s						
ZON	**Zonda**	**2.85**	**128**		**Pn**	**01 37 11.5**	**+1.1**
ZON	**Zonda**	**2.85**	**128**	*e*P	**Pn**	**01 37 10.9**	**+2.0**
RTLL	**Cerro Villicun**	**2.87**	**123**	*e*P	**Pn**	**01 37 12.8**	**+2.0**
RTLL				*e*S	**Sn**	**01 37 40.9**	**-3.2**
RTLL				IAML		01 37 56.9	
	comp=Z,509nm,0.3s						
VCA	**Vinchina**	**2.89**	**69**	⇓*e*P	**Pn**	**01 37 15.1**	**+4.0**
VCA	**Vinchina**	**2.89**	**69**	*e*P	Pn	01 36 55.6	-15
VCA				*e*S	**Sn**	**01 37 51.1**	**+6.3**
VCA				IAML		01 38 02.1	
	comp=Z,1μm,0.5s						
SJA	**San Juan**	**2.92**	**127**	*e*P	**Pn**	**01 37 11.9**	**+0.5**
SJA				*e*S	**Sn**	**01 37 47.4**	**+2.2**
SJA				IAML		01 37 57.9	
	comp=Z,431nm,0.3s						
VA03	**San Esteban**	**3.03**	**168**		**Pn**	**01 37 13.0**	**+0.1**
VA03	**San Esteban**	**3.03**	**168**	*e*P	**Pn**	**01 37 13.3**	**+0.3**
VA03				*e*S	**Sn**	**01 37 47.9**	**-0.1**
VA03				IAML		01 38 00.3	
	comp=E,1μm,0.5s						
VA03	**San Esteban**	**3.03**	**168**	*e*P	**Pn**	**01 37 13.6**	**+0.7**
VA03				*e*S	**Sn**	**01 37 51.9**	**+3.9**
VA03				IAML		01 38 00.2	
	comp=Z,529nm,0.3s						
ROCH	**El Roble**	**3.18**	**176**	⇑*e*P		01 37 15.6	
ROCH				*e*P	**Pn**	**01 37 15.5**	**+0.4**
ROC1	**El Roble**	**3.18**	**176**	*e*P	**Pn**	**01 37 15.5**	**+0.3**
ROC1				*e*S	**Sn**	**01 37 56.7**	**+4.7**
CFA	**Coronel Fontan**	**3.19**	**125**	*e*P	**Pn**	**01 37 16.9**	**+1.8**
VA01	**Torpederas**	**3.23**	**185**		**Pn**	**01 37 14.9**	**-0.7**
VA01	**Torpederas**	**3.23**	**185**	*e*P	**Pn**	**01 37 15.1**	**-0.5**
VA01	**Torpederas**	**3.23**	**185**	*e*P	**Pn**	**01 37 14.5**	**-1.1**
VA01				IAML		01 38 07.9	
	comp=Z,191nm,0.3s						
PEL	**Peldehue**	**3.38**	**171**		**Pn**	**01 37 17.9**	**+0.1**
PEL	**Peldehue**	**3.38**	**171**	*e*P	**Pn**	**01 37 17.9**	**+0.1**
PEL				*e*S	**Sn**	**01 37 56.4**	**-0.2**
PEL				IAML		01 38 11.3	
	comp=E,496nm,0.4s						
PEL	**Peldehue**	**3.38**	**171**	*e*P	**Pn**	**01 37 18.6**	**+0.9**
PEL				IAML		01 38 16.5	
	comp=Z,443nm,0.6s						
AVFE	**Valle Fertil**	**3.43**	**106**	*e*P	**Pn**	**01 37 20.1**	**+1.7**
AVFE				IAML		01 38 22.4	
	comp=Z,184nm,0.4s						
MT02	**Curacav**	**3.46**	**178**		**Pn**	**01 37 18.5**	**-0.3**
MT02	**Curacav**	**3.46**	**178**	*i* P	**Pn**	**01 37 18.8**	**0.0**
MT02	**Curacav**	**3.46**	**178**	*e*P	**Pn**	**01 37 18.6**	**-0.1**
MT02				IAML		01 38 26.3	
	comp=Z,215nm,0.3s						
ASAL	**Salagasta**	**3.49**	**144**	*e*P	**Pn**	**01 37 22.4**	**+3.1**
ASAL				*e*S	**Sn**	**01 37 57.7**	**-1.8**
AC02	**Maricunga**	**3.51**	**33**		**Pn**	**01 37 21.4**	**+1.5**
AC02	**Maricunga**	**3.51**	**33**	*i* P	**Pn**	**01 37 21.7**	**+1.8**
AC02				*i* S	**Sn**	**01 38 01.9**	**+1.5**
AC02	**Maricunga**	**3.51**	**33**	*e*P	**Pn**	**01 37 21.9**	**+2.0**
AC02				*e*S	**Sn**	**01 38 02.1**	**+1.7**
AC02				IAML		01 38 16.3	
	comp=Z,367nm,0.5s						
MT10	**Hacienda Santa**	**3.53**	**170**	*i* P	**Pn**	**01 37 20.5**	**+0.7**
MT10				*i* S	**Sn**	**01 37 60.0**	**-0.4**
MT05	**Renca**	**3.62**	**173**		**Pn**	**01 37 21.5**	**+0.5**
MT05	**Renca**	**3.62**	**173**	*e*P	**Pn**	**01 37 21.9**	**+0.9**
MT05	**Renca**	**3.62**	**173**	*e*P	**Pn**	**01 37 21.9**	**+0.9**
MT05				*e*S	**Sn**	**01 38 05.4**	**+2.9**
MT05				IAML		01 38 21.6	
	comp=Z,352nm,0.8s						
ARCO	**CERRO ARCO**	**3.65**	**147**	*e*P	**Pn**	**01 37 19.5**	**-2.0**
ARCO				*e*S	**Sn**	**01 38 10.5**	**+7.2**
ARCO				IAML		01 38 23.1	
	comp=Z,356nm,0.5s						
MT14	**Cerro Cal¡n**	**3.65**	**170**	*i* P	**Pn**	**01 37 21.6**	**+0.1**
MT14				*i* S	**Sn**	**01 38 02.8**	**-0.5**
MT16	**CCHEN**	**3.68**	**170**		**Pn**	**01 37 22.7**	**+0.9**
MT16	**CCHEN**	**3.68**	**170**	*i* P	**Pn**	**01 37 22.0**	**+0.1**
MT16				*e*S	**Sn**	**01 38 03.3**	**-0.8**
AC01	**Pan de Azucar**	**3.68**	**10**		**Pn**	**01 37 21.2**	**-0.6**
AC01	**Pan de Azucar**	**3.68**	**10**	*i* P	**Pn**	**01 37 21.3**	**-0.6**
AC01	**Pan de Azucar**	**3.68**	**10**	*e*P	**Pn**	**01 37 16.0**	**-5.9**
AC01				*e*S	Sn	01 38 18.8	+15
AC01				IAML		01 38 24.5	
	comp=Z,222nm,0.9s						
TINO	**Tinogasta**	**3.69**	**63**	*e*P	**Pn**	**01 37 18.8**	**-3.2**
TINO				*e*P		01 37 24.4	
TINO				*e*S	Sn	01 38 16.0	+12
MT04	**Ro Olivares**	**3.73**	**165**	*e*P	**Pn**	**01 37 24.6**	**+1.8**
MT04	**Ro Olivares**	**3.73**	**165**	*e*P	**Pn**	**01 37 24.5**	**+1.8**
MT04				*e*S	**Sn**	**01 38 11.0**	**+5.5**
MT04				IAML		01 38 25.5	
	comp=Z,224nm,0.4s						
MT03	**Universidad Ad**	**3.75**	**170**		**Pn**	**01 37 23.2**	**+0.4**
MT03	**Universidad Ad**	**3.75**	**170**	*e*P	**Pn**	**01 37 23.5**	**+0.7**
MT03	**Universidad Ad**	**3.75**	**170**	*e*P	**Pn**	**01 37 24.4**	**+1.6**
MT03				*e*S	**Sn**	**01 38 12.7**	**+6.9**
MT03				IAML		01 38 28.4	
	comp=Z,397nm,0.9s						
ACLC	**CERRO LA CRUZ**	**3.79**	**86**	*e*P	**Pn**	**01 37 25.3**	**+1.8**
MT08	**Bocatoma Ro**	**3.80**	**164**		**Pn**	**01 37 22.5**	**-1.1**
MT08	**Bocatoma Ro**	**3.80**	**164**	*e*P	**Pn**	**01 37 26.3**	**+2.6**
MT08	**Bocatoma Ro**	**3.80**	**164**	*e*P	**Pn**	**01 37 26.0**	**+2.4**
MT08				*e*S	Sn	01 38 15.8	+8.7
MT08				IAML		01 38 28.4	
	comp=Z,173nm,0.6s						
MT15	**Las Vizcachas**	**3.85**	**170**	*e*P	**Pn**	**01 37 25.5**	**+1.3**
VA05	**Santo Domingo**	**3.86**	**184**		**Pn**	**01 37 23.4**	**-0.8**
VA05	**Santo Domingo**	**3.86**	**184**	*e*P	**Pn**	**01 37 23.6**	**-0.7**
AAGR	**Agrelo**	**3.90**	**148**	*e*P	**Pn**	**01 37 28.1**	**+3.2**
AAGR				IAML		01 38 36.0	
	comp=Z,173nm,1.5s						
MT09	**Talagante**	**3.98**	**176**		**Pn**	**01 37 26.3**	**+0.3**
MT09	**Talagante**	**3.98**	**176**	⇑*e*P	**Pn**	**01 37 26.3**	**+0.3**
MT13	**San Alfonso**	**4.03**	**168**	*e*P	**Pn**	**01 37 28.4**	**+1.7**
MT13	**San Alfonso**	**4.03**	**168**	*e*P	**Pn**	**01 37 28.2**	**+1.5**
MT13				*e*S	**Sn**	**01 38 20.7**	**+8.0**
MT13				IAML		01 38 28.4	
	comp=Z,230nm,0.3s						
MT01	**Popeta**	**4.06**	**180**		**Pn**	**01 37 26.7**	**-0.2**
MT01	**Popeta**	**4.06**	**180**	*e*P	**Pn**	**01 37 27.0**	**0.0**
MT01				*e*S	**Sn**	**01 38 21.2**	**+7.9**
MT01				IAML		01 38 29.5	
	comp=Z,323nm,0.5s						
LMEL	**Las Melosas**	**4.15**	**167**	*e*P	**Pn**	**01 37 30.5**	**+2.1**
LMEL				*e*S	**Sn**	**01 38 19.5**	**+3.8**
LMEL				IAML		01 38 37.4	
	comp=Z,228nm,0.5s						
BO04	**La Punta**	**4.22**	**172**		**Pn**	**01 37 29.4**	**+0.1**
ACAN	**Cantantal**	**4.30**	**126**	*e*P	**Pn**	**01 37 31.4**	**+1.0**
ACAN				IAML		01 38 49.3	
	comp=Z,497nm,0.9s						
BO01	**Tunca**	**4.59**	**178**		**Pn**	**01 37 33.6**	**-0.6**
BO01	**Tunca**	**4.59**	**178**	*e*P	**Pn**	**01 37 34.2**	**-0.1**
BO01				*e*S	**Sn**	**01 38 31.2**	**+4.9**
BO01				IAML		01 38 48.4	
	comp=Z,116nm,0.4s						
GO02	**Mina Guanaco**	**4.85**	**19**		**Pn**	**01 37 37.8**	**-0.4**
GO02	**Mina Guanaco**	**4.85**	**19**	*e*S	Sn	01 38 44.7	+11
GO02				IAML		01 38 56.7	
	comp=Z,318nm,0.6s						
CYA	**Choya**	**4.99**	**76**	*e*P	**Pn**	**01 37 35.4**	**-4.4**
CYA				*e*S	**Sn**	**01 38 39.1**	**+2.9**
CYA				IAML		01 38 45.5	
	comp=Z,115nm,0.7s						
BO02	**Sierra Bellavi**	**5.00**	**175**		**Pn**	**01 37 40.0**	**0.0**
BO02	**Sierra Bellavi**	**5.00**	**175**	*e*P	**Pn**	**01 37 40.5**	**+0.5**
BO02				IAML		01 39 06.4	
	comp=Z,149nm,0.8s						
PB14	**IPOC Station P**	**5.21**	**9**		**Pn**	**01 37 41.6**	**-1.5**
PB14	**IPOC Station P**	**5.21**	**9**	*e*P	**Pn**	**01 37 42.0**	**-1.1**
PB14				*e*S	Sn	01 38 56.0	+14
PB14				IAML		01 39 01.7	
	comp=Z,148nm,0.6s						
ML02	**Panimavida**	**5.95**	**181**		**Pn**	**01 37 52.2**	**-0.8**
TCA	**Tanti**	**5.97**	**107**	⇑*e*P	**Pn**	**01 37 53.3**	**-0.1**
BI02	**San Fabin de**	**6.85**	**180**		**Pn**	**01 38 04.5**	**-0.8**
BI05	**Punta Hualpn**	**7.12**	**192**	Pn	**Pn**	**01 38 06.2**	**-2.7**
PB03	**IPOC Station P**	**7.84**	**11**	Pn	**Pn**	**01 38 19.0**	**0.0**
LR04	**Corral**	**10.21**	**189**	Pn	**Pn**	**01 38 50.2**	**-1.1**
TRQA	**Tornquist**	**11.29**	**139**	Pn	**Pn**	**01 39 05.3**	**-0.8**
CPUP	**Villa Florida**	**12.80**	**78**	Pn	**Pn**	**01 39 26.2**	**-0.5**
LPAZ	**La Paz**	**13.75**	**13**	Pn	**Pn**	**01 39 40.0**	**-0.3**
PLTB	**Pedras Altas**	**15.33**	**102**	Pn	**Pn**	**01 39 59.5**	**-1.1**
ITAB	**Concordia**	**17.03**	**86**	Pn	**Pn**	**01 40 21.2**	**-1.0**
SNAA	**Sanae**	**55.25**	**159**	P	**P**	**01 45 54.5**	**-0.9**
SNAA				IAmb	IAmb	01 46 09.0	
	comp=Z,4.4nm,1.5s						
QSPA	**South Pole Qui**	**60.43**	**180**	P	**P**	**01 46 30.7**	**-1.2**
QSPA				IAmb	IAmb	01 46 34.0	
	comp=Z,2.9nm,1.1s						

*SOME **21** 01:46:01.7,37°.40N×72°.37E,h35km*
*IDC **21** 01:46:03.5±3.4,37°.56N×72°.44E,h182km±27km,mb3.3/12, mbtmp3.9/18,Error ellipse: s-maj=28.2km s-min=16

	comp=N,173nm,0.7s								
CHMS	**Chumysh**	**5.70**	**18**	P		**Pn**	**01 47 27.7**	**+2.2**
	SNR=7.8								
KK31	**Karatay Array**	**5.70**	**346**			**Pn**	**01 47 26.6**	**+1.1**
KK31	**Karatay Array**	**5.70**	**346**	⇑P		**Pn**	**01 47 24.4**	**-1.1**
	comp=N,20nm,0.4s,baz=156,slow=14,SNR=362								
KK31				⇑S		**Sn**	**01 48 27.8**	**-3.0**
	comp=N,209nm,0.5s,baz=167,slow=23								
KKAR	**Karatay Array**	**5.70**	**346**			**Pn**	**01 47 26.5**	**+1.0**
BRLS	**Borolday**	**5.79**	**341**	*eP*		**Pn**	**01 47 24.8**	**-1.9**
	comp=N,69nm,0.2s								
BRLS				*eS*		Sn	01 48 22.0	-11	
	comp=N,230nm,0.4s								
TKM2	**Tokmak 2**	**5.87**	**24**	P		**Pn**	**01 47 29.9**	**+2.1**
	SNR=8.7								
TARG	**Taragay, Kyrgy**	**5.88**	**44**			**Pn**	**01 47 30.6**	**+2.4**
USP	**Ospenovka**	**5.90**	**15**	P		**Pn**	**01 47 29.6**	**+1.5**
	SNR=7.2								
DHRM	**DHARAMSHALA**	**6.21**	**148**	*eP*		**Pn**	**01 47 33.9**	**+1.4**
DHRM				*eS*		**Sn**	**01 48 41.0**	**-2.1**
DHRM				IAML			01 48 45.9		
	comp=E,112nm,0.6s								
DHRM				IAML			01 48 46.3		
	comp=N,164nm,0.6s								
MTBS	**Maitube**	**6.34**	**28**	Pg		**Pn**	**01 47 36.4**	**+2.5**
	comp=N,7.3nm,0.4s								
MTBS				Lg		Lg	01 48 43.0		
	comp=N,14nm,0.5s								
MTBS	**Maitube**	**6.34**	**28**	*eP*		**Pn**	**01 47 36.5**	**+2.5**
	comp=N,7.3nm,0.4s								
MTBS				*eS*		**Sn**	**01 48 43.0**	**-3.0**
	comp=N,14nm,0.5s								
BHK	**Bhakra**	**6.98**	**151**	*eP*		**Pn**	**01 47 44.0**	**+1.5**
BHK				*eS*		**Sn**	**01 48 59.4**	**-2.0**
SMLA	**Simla**	**7.54**	**147**	*eP*		**Pn**	**01 47 50.6**	**+0.8**
SMLA				*eS*		**Sn**	**01 49 10.7**	**-3.9**
SMLA				IAML			01 49 14.2		
	comp=E,146nm,0.7s								
SMLA				IAML			01 49 15.0		
	comp=N,96nm,0.4s								
JOSI	**Joshimath**	**9.18**	**138**	*eP*		**Pn**	**01 48 13.4**	**+1.8**
JOSI				*eS*		**Sn**	**01 49 48.3**	**-5.8**
JOSI				IAML			01 50 00.6		
	comp=E,101nm,0.3s								
JOSI				IAML			01 50 01.0		
	comp=N,126nm,0.3s								
KUDL	**Kundal**	**10.02**	**159**	*eP*		**Pn**	**01 48 20.8**	**-1.6**
KUDL				*eS*		Sn	01 50 05.0	-8.8	
KUDL				IAML			01 50 08.2		
	comp=E,24nm,0.9s								
KUDL				IAML			01 50 14.4		
	comp=N,10nm,0.3s								
MK31	**Makanchi Array**	**11.76**	**35**	⇑P		**P**	**01 48 51.8**	**+0.9**
	comp=N,2.0nm,0.9s,baz=222,slow=12,SNR=4.5								
MKAR	**Makanchi Array**	**11.76**	**35**	P		**Pn**	**01 48 47.0**	**+2.1**
	comp=N,0.6nm,0.7s,baz=224,slow=12,SNR=4.7								
MKAR	**Makanchi Array**	**11.76**	**35**			**Pn**	**01 48 46.5**	**+1.6**
KURBB	**Kurchatov Arra**	**13.75**	**17**	P		**Pn**	**01 49 09.1**	**-1.0**
	comp=N,0.6nm,0.2s,baz=207,slow=11,SNR=17								
KURK	**Kurchatov**	**13.86**	**17**	P		**P**	**01 49 13.6**	**-0.5**
BHUJ	**Bhuj**	**14.47**	**190**	*ex*		x	01 52 46.1		
AB31	**Akbulak array**	**14.74**	**326**			**Pn**	**01 49 21.7**	**-0.8**
AB31	**Akbulak array**	**14.74**	**326**	⇓P		P	01 49 29.2	+5.3	
	comp=N,4.3nm,0.5s,baz=137,slow=12,SNR=115								
ABKAR	**Akbulak array**	**14.74**	**326**			**Pn**	**01 49 21.7**	**-0.8**
EVN	**Everest**	**15.45**	**124**			**Pn**	**01 49 32.2**	**+0.3**
BVA0	**Borovoye Array**	**15.51**	**355**	P		**P**	**01 49 37.8**	**+5.4**
	comp=N,8.6nm,0.8s,baz=162,slow=16,SNR=22								
BVAR	**Borovoye Array**	**15.51**	**355**	P		**Pn**	**01 49 31.2**	**-0.6**
	comp=N,8.6nm,0.7s,baz=169,slow=12,SNR=38								
AKTO	**Aktyubinsk**	**16.46**	**326**	P		**Pn**	**01 49 43.9**	**+0.5**
	comp=N,9.5nm,0.5s,baz=123,slow=9.0,SNR=38								
AKTO				S		**S**	**01 52 39.4**	**-5.7**
	comp=N,4.9nm,0.6s,baz=166,slow=23,SNR=8.4								
AKTO	**Aktyubinsk**	**16.46**	**326**	⇓P		**Pn**	**01 49 49.4**	**+6.0**
	comp=N,6.2nm,0.7s								
ZAA0	**Zalesovo Array**	**18.47**	**24**			**P**	**01 50 05.9**	**+1.1**
ZAA0				IAmb		IAmb	01 50 08.1		
	comp=Z,4.5nm,1.0s								
ZALV	**Zalesovo Beam**	**18.47**	**24**	P		**P**	**01 50 06.5**	**+1.7**
	comp=Z,2.3nm,0.4s,baz=218,slow=11,SNR=13								
ZALV	**Zalesovo Beam**	**18.47**	**24**			**P**	**01 50 06.2**	**+1.4**
ARTI	**Arti**	**21.03**	**338**	P		**P**	**01 50 32.8**	**+0.6**
	comp=Z,4.2nm,0.5s,baz=165,slow=7.4,SNR=9.3								
	comp=Z,4.2nm,0.5s								
ARTI	**Arti**	**21.03**	**338**			**P**	**01 50 33.4**	**+1.2**
ARTI				IAmb		IAmb	01 50 34.1		
	comp=Z,9.9nm,0.5s								
KBZ	**Khabaz**	**23.14**	**295**	P		**P**	**01 50 54.2**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=117,slow=9.0,SNR=1.4								
	comp=Z,0.9nm,0.6s								
SONM	**Songino Array**	**26.80**	**57**	P		**P**	**01 51 27.8**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=265,slow=5.2,SNR=2.2								
	comp=Z,0.7nm,0.8s								
BRTR	**Keskin Array B**	**30.19**	**286**	P		**P**	**01 51 57.6**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=88,slow=11,SNR=1.8								
	comp=Z,0.3nm,0.5s								
BRTR	**Keskin Array B**	**30.19**	**286**	P		**P**	**01 51 55.4**	**-1.0**
FINES	**FINESS Array B**	**37.23**	**325**	P		**P**	**01 52 57.4**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=110,slow=8.4,SNR=5.3								
	comp=Z,1.7nm,0.9s								
FINES	**FINESS Array B**	**37.23**	**325**	P		**P**	**01 52 56.9**	**+0.3**
ARCES	**ARCESS Array B**	**40.59**	**337**	P		**P**	**01 53 25.7**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=116,slow=7.4,SNR=6.7								
	comp=Z,2.1nm,0.9s								
HFS	**Hagfors**	**42.92**	**321**	P		**P**	**01 53 44.3**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=83,slow=12,SNR=4.5								
	comp=Z,1.3nm,0.6s								
NOA	**NORSAR Array B**	**44.20**	**322**	P		**P**	**01 53 54.3**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=92,slow=7.8,SNR=2.0								
	comp=Z,0.7nm,0.7s								
ESDC	**Sonseca Array**	**57.95**	**298**	P		**P**	**01 55 36.3**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=51,slow=7.5,SNR=4.2								
	comp=Z,0.5nm,0.7s								
ESDC	**Sonseca Array**	**57.95**	**298**	P		**P**	**01 55 36.1**	**-0.4**
ESDC				IAmb		IAmb	01 56 06.0		
	comp=Z,2.1nm,1.4s								
INK	**Inuvik**	**72.66**	**10**	P		**P**	**01 57 10.3**	**0.0**
	comp=Z,1.5nm,0.5s,baz=315,slow=4.3,SNR=8.5								
	comp=Z,1.5nm,0.5s								
INK	**Inuvik**	**72.66**	**10**	P		**P**	**01 57 10.4**	**0.0**
INK				IAmb		IAmb	01 57 25.2		
	comp=Z,3.9nm,1.4s								
ILAR	**Eielson Array**	**73.43**	**16**	P		**P**	**01 57 15.2**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=311,slow=4.3,SNR=6.9								
	comp=Z,0.6nm,0.9s								
ILAR	**Eielson Array**	**73.43**	**16**	P		**P**	**01 57 15.3**	**+0.3**
WRA	**Warramunga Arr**	**81.62**	**123**	P		**P**	**01 58 00.7**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=315,slow=5.1,SNR=7.5								
	comp=Z,0.6nm,0.6s								
WRA	**Warramunga Arr**	**81.62**	**123**	P		**P**	**01 58 00.5**	**-0.5**

NDI 21 01:50:27.7±2.0, 19°80N×72°11E, h25km±21km, ML3.4, MW3.5, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOM	**Bombay**	**1.12**	**143**	*eS*	Sb	01 51 04.8	+2.3
BOM				IAML		01 51 10.3	
	comp=E,586nm,0.3s						
BOM				IAML		01 51 11.7	
	comp=N,426nm,0.2s						
BHV	**Bhavnagar**	**1.94**	**1**	*eP*	Pn	01 51 00.1	+0.9
BHV				*eS*	Sn	01 51 23.0	+0.3
BHV				IAML		01 51 26.7	
	comp=E,321nm,0.3s						
BHV				IAML		01 51 27.3	
	comp=N,375nm,0.2s						
POO	**Poona**	**2.08**	**127**	*eP*	Pn	01 51 00.9	-0.1
POO				IAML		01 51 24.3	
	comp=N,200nm,0.2s						
POO				IAML		01 51 24.4	
	comp=E,109nm,0.3s						
POO				*eS*	Sn	01 51 25.0	-1.1
KAD	**Karad**	**3.16**	**141**	*eP*	Pn	01 51 15.8	-0.2
KAD				*eS*	Sn	01 51 50.8	-2.2
KAD				IAML		01 52 04.0	
	comp=E,378nm,0.4s						
KAD				IAML		01 52 07.1	
	comp=N,196nm,0.3s						
LATR	**Latur**	**4.43**	**107**	*eP*	Pn	01 51 32.6	-0.7
LATR				*eS*	Sn	01 52 22.1	-2.0
LATR				IAML		01 52 28.1	
	comp=N,324nm,0.4s						
LATR				IAML		01 52 28.2	
	comp=E,187nm,0.5s						
AKL	**Akola**	**4.70**	**78**	*eP*	Pn	01 51 36.2	-0.9
AKL				*eS*	Sn	01 52 27.3	-3.5
AKL				IAML		01 52 32.9	
	comp=N,145nm,0.6s						
AKL				IAML		01 52 33.2	
	comp=E,167nm,0.3s						
KOD	**Kodaikanal**	**10.82**	**151**	*ex*	Sn	01 54 55.3	-6.7

*IDC **21** 02:08:08.8±1.4, 14°.37N×88°.25W, h0km, mb3.6/6, mbtmp3.7/8, ML3.8/2, MS2.1/1, Error ellipse: s-maj=31.8km s-min=17.1km az=24.0*
*CATAC **21** 02:08:12.0±0.3, 13°N±2'×8'9W±', h30km±2km, M4.5/32, MLv4.5/32, Error ellipse: s-maj=5.5km s-min=2.3km az=29.6, confirmed*
*SNET **21** 02:08:12.5±0.9, 13°.12N×89°.25W, h36km, ML4.5*
*GCG **21** 02:08:13.3±1.0, 13°.16N×89°.30W, h45km±8km, MD4.9, ML4.7*
*NEIC **21** 02:08:14.3±1.9, 13°.27N±0°.06×89°.10W±0°.06, h73km±10km, mb4.0/11, Error ellipse: s-maj=12.4km s-min=2.2km az=223.0*

ISC 21 02:08:12.1±0.8, 13°18N±0°.05×89°22W±0°.03, h55km±6km, n181, σ1°57/204, mb4.1/9, 1C-2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.33**	**343**	*eP*	Pn	**02 08 22.3**	**+0.4**
LALI				*eS*	Sn	**02 08 29.4**	**+0.5**
LALI	**Alcalda de L**	**0.33**	**343**	*eP*	Pn	**02 08 22.3**	**+0.4**
LALI				*eS*	Sn	**02 08 29.0**	**0.0**
LALI	**Alcalda de L**	**0.33**	**343**	P	Pn	**02 08 22.3**	**+0.4**
PANCS	**Alcalda de**	**0.44**	**6**	*eP*	Pn	**02 08 23.5**	**+0.5**
PANCS				*eS*	Sn	**02 08 31.6**	**+0.6**
PANCS	**Alcalda de**	**0.44**	**6**	P	Pn	**02 08 23.6**	**+0.5**
LOMA	**Loma Larga**	**0.47**	**6**	*eP*	Pn	**02 08 23.7**	**+0.2**
LOMA				*eS*	Sn	**02 08 32.5**	**+0.8**
LOMA	**Loma Larga**	**0.47**	**6**	P	Pn	**02 08 23.8**	**+0.2**
LFRS	**El Faro**	**0.47**	**19**	*eP*	Pn	**02 08 24.0**	**+0.5**
MAGS	**Ministerio de**	**0.51**	**353**	*eP*	Pn	**02 08 24.4**	**+0.5**
MAGS				*eS*	Sn	**02 08 33.2**	**+0.8**
UTEC	**Universidad Te**	**0.52**	**2**	*eP*	Pn	**02 08 24.8**	**+0.8**
UTEC				*eS*	Sn	**02 08 34.2**	**+1.5**
UTEC	**Universidad Te**	**0.52**	**2**	P	Pn	**02 08 24.9**	**+0.8**
JAYA	**Jayaque - finc**	**0.53**	**335**	*i P*	Pn	**02 08 24.5**	**+0.4**
JAYA				*eS*	Sn	**02 08 33.3**	**+0.4**
JAYA	**Jayaque - finc**	**0.53**	**335**	P	Pn	**02 08 24.5**	**+0.4**
IGN	**Direccin Gen**	**0.54**	**6**	*eP*	Pn	**02 08 25.0**	**+0.9**
IGN				*eS*	Sn	**02 08 33.9**	**+0.9**
IGN	**Direccin Gen**	**0.54**	**6**	P	Pn	**02 08 25.1**	**+0.9**
IGN	**Direccin Gen**	**0.54**	**6**	S	Sn	**02 08 34.5**	**+1.6**
UEES	**Universidad Ev**	**0.54**	**358**	*eP*	Pn	**02 08 24.9**	**+0.7**
UEES				*eS*	Sn	**02 08 34.1**	**+1.1**
UEES	**Universidad Ev**	**0.54**	**358**	P	Pn	**02 08 25.0**	**+0.7**
PMON	**Piamonte**	**0.54**	**351**	*eP*	Pn	**02 08 25.0**	**+0.7**
PMON				*eS*	Sn	**02 08 34.6**	**+1.5**
PMON	**Piamonte**	**0.54**	**351**	P	Pn	**02 08 25.0**	**+0.7**
UDBS	**Universidad Do**	**0.54**	**7**	*eP*	Pn	**02 08 25.1**	**+0.8**
UDBS				*eS*	Sn	**02 08 34.0**	**+1.0**
UDBS	**Universidad Do**	**0.54**	**7**	P	Pn	**02 08 25.1**	**+0.8**
UESS	**Universidad de**	**0.54**	**2**	*eP*	Pn	**02 08 25.2**	**+1.0**
UESS				*eS*	Sn	**02 08 34.5**	**+1.4**
BOQS	**Boqueron**	**0.56**	**354**	*eP*	Pn	**02 08 25.4**	**+0.8**
TECO	**Alcaldia de Te**	**0.56**	**50**	*eP*	Pn	**02 08 24.7**	**+0.3**
TECO				*eS*	Sn	**02 08 34.0**	**+0.7**
TECO	**Alcaldia de Te**	**0.56**	**50**	P	Pn	**02 08 24.8**	**+0.3**
PIC2	**El Picacho**	**0.57**	**357**	*eP*	Pn	**02 08 25.7**	**+0.9**
SNVI	**San Vicente**	**0.57**	**41**	*eP*	Pn	**02 08 25.1**	**+0.4**
LFU	**La Fuente**	**0.58**	**11**	*eP*	Pn	**02 08 25.7**	**+1.0**
LBRS	**Las Brisas**	**0.59**	**17**	*eP*	Pn	**02 08 25.7**	**+0.9**
PAVA	**Las Pavas**	**0.60**	**27**	*eP*	Pn	**02 08 25.8**	**+0.8**
PAVA				*eS*	Sn	**02 08 35.9**	**+1.5**
PAVA	**Las Pavas**	**0.60**	**27**	P	Pn	**02 08 25.8**	**+0.8**
PAVA	**Las Pavas**	**0.60**	**27**	S	Sn	**02 08 36.2**	**+1.8**
UESV	**Universidad de**	**0.62**	**43**	*eP*	Pn	**02 08 25.8**	**+0.6**
UESV	**Universidad de**	**0.62**	**43**	P	Pn	**02 08 25.8**	**+0.6**
UESV	**Universidad de**	**0.62**	**43**	S	Sn	**02 08 36.3**	**+1.6**
CEDA	**San Andres**	**0.65**	**345**	*eP*	Pn	**02 08 26.2**	**+0.8**
CEDA				*eS*	Sn	**02 08 35.9**	**+0.7**
CEDA	**San Andres**	**0.65**	**345**	P	Pn	**02 08 26.2**	**+0.8**
CEDA	**San Andres**	**0.65**	**345**	S	Sn	**02 08 37.2**	**+2.0**
SCLA	**Alcaldia de Sa**	**0.71**	**43**	*eP*	Pn	**02 08 27.3**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.71**	**43**	P	Pn	**02 08 27.4**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.71**	**43**	S	Sn	**02 08 38.6**	**+2.0**
CEVE	**Cerro Verde**	**0.76**	**329**	*eP*	Pn	**02 08 27.7**	**+0.7**
CEVE				*eS*	Sn	**02 08 39.4**	**+1.4**
CEVE	**Cerro Verde**	**0.76**	**329**	P	Pn	**02 08 27.7**	**+0.7**
SBLS	**San Blas**	**0.77**	**330**	*eP*	Pn	**02 08 27.8**	**+0.7**
SBLS				*eS*	Sn	**02 08 39.8**	**+1.7**
TECA	**Tecapa**	**0.77**	**66**	*eP*	Pn	**02 08 27.5**	**+0.4**
SNJE	**San Jose**	**0.78**	**332**	*eP*	Pn	**02 08 28.0**	**+0.7**
RTR	**El Retiro**	**0.83**	**330**	*eP*	Pn	**02 08 28.8**	**+0.9**
UNIC	**Universidad Ca**	**0.86**	**338**	*eP*	Pn	**02 08 29.1**	**+0.9**
UNIC				*eS*	Sn	**02 08 41.3**	**+1.2**
UNIC	**Universidad Ca**	**0.86**	**338**	P	Pn	**02 08 29.2**	**+1.1**
UNIC	**Universidad Ca**	**0.86**	**338**	S	Sn	**02 08 42.9**	**+2.8**
NUBE	**Las Nubes**	**0.90**	**323**	*eP*	Pn	**02 08 29.3**	**+0.5**
NUBE				*eS*	Sn	**02 08 41.5**	**+0.3**
NUBE	**Las Nubes**	**0.90**	**323**	*i P*	Pn	**02 08 29.3**	**+0.5**
NUBE				*eS*	Sn	**02 08 42.1**	**+0.9**
NUBE	**Las Nubes**	**0.90**	**323**	P	Pn	**02 08 29.3**	**+0.5**
PACA	**Pacayal**	**0.92**	**71**	P	Pn	**02 08 30.1**	**+1.0**
PACA	**Pacayal**	**0.92**	**71**	S	Sn	**02 08 43.4**	**+1.8**
LCY	**Lacayo**	**0.94**	**75**	*eP*	Pn	**02 08 30.0**	**+0.8**
RANC	**El Ranchito**	**0.94**	**74**	*eP*	Pn	**02 08 30.2**	**+0.9**
VSM	**San Miguel**	**0.96**	**75**	*eP*	Pn	**02 08 30.5**	**+0.9**
LOAL	**Lomas de Alarc**	**0.98**	**327**	S	Sn	**02 08 43.8**	**+1.0**
LOAL	**Lomas de Alarc**	**0.98**	**327**	P	Pn	**02 08 30.9**	**+1.1**
BLLM	**Bellamira**	**0.99**	**74**	‖*eP*	Pn	**02 08 30.7**	**+0.7**
FAME	**Alcaldia de Sa**	**1.02**	**311**	P	Pn	**02 08 30.3**	**+0.1**
LLGN	**La Laguna**	**1.02**	**15**	*eP*	Pn	**02 08 31.1**	**+0.8**
LLGN	**La Laguna**	**1.02**	**15**	P	Pn	**02 08 31.3**	**+1.0**
LLGN	**La Laguna**	**1.02**	**15**	S	Sn	**02 08 46.2**	**+2.4**
RBDL	**Robledal**	**1.03**	**334**	*eP*	Pn	**02 08 31.5**	**+0.9**
RBDL				*eS*	Sn	**02 08 45.7**	**+1.5**
CNRM	**Centro Naciona**	**1.07**	**74**	*eP*	Pn	**02 08 31.9**	**+1.0**
CNRM	**Centro Naciona**	**1.07**	**74**	P	Pn	**02 08 31.9**	**+1.0**
CNRM	**Centro Naciona**	**1.07**	**74**	S	Sn	**02 08 46.9**	**+2.2**
MTO3	**Montecristo**	**1.22**	**354**	Pn	Pn	**02 08 34.1**	**+1.0**
MTO3					Sn	**02 08 50.9**	**+2.0**
MTO3	**Montecristo**	**1.22**	**354**	*i P*	Pn	**02 08 34.2**	**+1.0**
MTO3	**Montecristo**	**1.22**	**354**	P	Pn	**02 08 34.2**	**+1.0**
MTO3	**Montecristo**	**1.22**	**354**	S	Sn	**02 08 50.8**	**+2.0**
JUAM	**Asuncion Mita**	**1.25**	**338**	*i P*	Pn	**02 08 34.2**	**+0.9**
JUAM				*eS*	Sn	**02 08 51.0**	**+1.9**
JUAM				IAML		02 08 52.3	
	comp=N,6μm,0.3s						
ESSJ	**San Jos, E**	**1.30**	**287**	*eP*	Pn	02 08 40.5	+6.5
LCND	**La Caada**	**1.30**	**84**	*eP*	Pn	**02 08 34.8**	**+0.8**
LCND				*eP*		02 08 35.0	
LCND	**La Caada**	**1.30**	**84**	P	Pn	**02 08 34.9**	**+0.8**
CNCH	**Conchagua**	**1.36**	**86**	P	Pn	**02 08 35.5**	**+0.6**
CNCH	**Conchagua**	**1.36**	**86**	S	Sn	**02 08 53.5**	**+1.6**
ESQI	**Esquipulas**	**1.38**	**355**	Pn	Pn	**02 08 36.6**	**+1.5**
ESQI	**Esquipulas**	**1.38**	**355**	S	Sn	**02 08 54.9**	**+2.4**
ESQI	**Esquipulas**	**1.38**	**355**	P	Pn	**02 08 36.7**	**+1.5**
ZAFR2	**Estanzuela, Za**	**1.40**	**355**	*i P*	Pn	02 08 42.5	+7.2
PCG5	**San Vicente Pa**	**1.53**	**313**	*eP*	Pn	**02 08 41.7**	**+4.5**
CSGN	**Cosiguina Volc**	**1.63**	**97**	P	Pn	**02 08 39.1**	**+0.5**
CSGN				S	Sn	**02 08 59.3**	**+0.7**
CSGN	**Cosiguina Volc**	**1.63**	**97**	‖*iP*	Pn	**02 08 39.1**	**+0.5**
FG16	**Alotenango, Sa**	**1.66**	**311**	*eP*	Pn	02 08 45.1	+6.1
FG16				IAML		02 09 17.8	
	comp=E,20μm,0.2s						
POTN	**Potosi Cosigui**	**1.68**	**96**	P	Pn	**02 08 39.8**	**+0.7**
POTN				S	Sn	**02 08 59.5**	**-0.1**
POTN	**Potosi Cosigui**	**1.68**	**96**	‖*iP*	Pn	**02 08 39.9**	**+0.7**
POTN				*eS*	Sn	**02 08 59.4**	**-0.2**
ESSG	**Sabana Grande**	**1.97**	**308**	*eP*	Pn	**02 08 43.7**	**+0.6**
ESSG				IAML		02 09 11.4	
	comp=N,2μm,0.5s						
TGUH	**Tegucigalpa,Un**	**2.09**	**65**	Pn	Pn	**02 08 45.4**	**+0.6**
CRIN	**San Cristobal**	**2.17**	**102**	Pn	Pn	**02 08 46.4**	**+0.5**
CRIN	**San Cristobal**	**2.17**	**102**	*eP*	Pn	**02 08 48.2**	**+2.3**
APG	**El Apazote**	**2.18**	**327**	Pn	Pn	**02 08 47.0**	**+0.8**
	comp=N,0.5nm,0.3s,baz=103,slow=14,SNR=29						
APG				Lg	Lg	02 09 20.7	
	comp=N,1.7nm,0.3s,baz=65,slow=22,SNR=5.8						
APG				LR	LR	02 09 56.1	
	comp=N,40nm,21.5s,baz=75,slow=48						
APG	**El Apazote**	**2.18**	**327**	*eP*	Pn	**02 08 47.1**	**+0.9**
PKGN	**Cerro Pekin**	**2.25**	**103**	P	Pn	**02 08 47.2**	**+0.4**
HERN	**Volcan Telica**	**2.40**	**103**	Pn	Pn	**02 08 48.0**	**-1.1**
CNGA	**Al SSO del Vol**	**2.55**	**105**	P	Pn	**02 08 51.3**	**+0.2**
CNGN	**Cerro Negro**	**2.55**	**105**	Pn	Pn	**02 08 51.5**	**+0.5**
CNGN	**Cerro Negro**	**2.55**	**105**	*eP*	Pn	**02 08 51.3**	**+0.2**
RTAL	**Retalhuleu**	**2.75**	**299**	Pn	Pn	**02 08 57.5**	**+3.8**
COPN	**Copaltepe**	**2.75**	**111**	*eP*	Pn	**02 08 53.6**	**-0.2**
MOM2	**El Cardon**	**2.77**	**105**	P	Pn	**02 08 55.1**	**+1.1**
QUIS	**Sacapulas**	**2.78**	**319**	*eP*	Pn	**02 08 56.2**	**+2.0**
LIMN	**Finca el Limon**	**2.79**	**92**	P	Pn	**02 08 54.7**	**+0.3**
LIMN					S	**Sn**	**02 09 27.3**	**+0.4**
RCFN	**Al S de San Ju**	**2.95**	**83**	P	Pn	**02 08 57.4**	**+0.7**
RCVN	**Varillal2**	**2.98**	**82**	P	Pn	**02 08 57.5**	**+0.5**
RCON	**San Juan de Ri**	**3.00**	**84**	P	Pn	**02 08 58.3**	**+1.0**
TISN	**Laguna Tiscapa**	**3.06**	**109**	P	Pn	**02 08 58.7**	**+0.7**
RCPN	**Sur Rio San Ju**	**3.06**	**83**	P	Pn	**02 08 58.9**	**+0.8**
USIM	**UNAN**	**3.06**	**110**	Pn	Pn	**02 08 59.2**	**+1.1**
HUEH	**Huehuetenango**	**3.07**	**314**	Pn	Pn	**02 09 00.9**	**+2.5**
MGAN	**Managua**	**3.08**	**109**	Pn	Pn	**02 08 58.7**	**+0.4**
MGAN	**Managua**	**3.08**	**109**	*eP*	Pn	**02 09 00.8**	**+2.5**
MATN	**Matagalpa**	**3.22**	**94**	P	Pn	**02 08 59.6**	**-0.7**
MATN	**Matagalpa**	**3.22**	**94**	S	Sn	**02 09 36.9**	**-0.7**
PETF	**Flores**	**3.77**	**351**	Pn	Pn	**02 09 09.7**	**+1.9**
PETF	**Flores**	**3.77**	**351**	*eP*	Pn	**02 09 10.5**	**+2.7**
PETF	**Flores**	**3.77**	**351**	P	Pn	**02 09 10.4**	**+2.7**
CCIG	**Comitan**	**4.18**	**318**	Pn	Pn	**02 09 15.9**	**+2.4**
SIUN	**Universidad Ur**	**4.36**	**82**	Pn	Pn	**02 09 16.1**	**+0.3**
LAPC	**Finca la Perla**	**4.41**	**122**	*eP*	Pn	**02 09 18.6**	**+2.0**
ALIBA	**Liberia Airpor**	**4.42**	**125**	*eP*	Pn	**02 09 19.9**	**+3.3**
BUAI	**Buenos Aires**	**4.44**	**121**	*eP*	Pn	**02 09 21.4**	**+4.4**
VRLE	**La Escondida,**	**4.46**	**122**	*eP*	Pn	**02 09 19.2**	**+1.9**
SAJU	**San Juanillo,**	**4.62**	**132**	*eP*	Pn	**02 09 21.4**	**+1.9**
MESS	**Mesas**	**4.62**	**121**	*eP*	Pn	**02 09 21.1**	**+1.6**
HORNC	**Hornillas**	**4.65**	**121**	*eP*	Pn	**02 09 21.5**	**+1.5**
VMAR	**Armenia, Volca**	**4.66**	**120**	*eP*	Pn	**02 09 21.2**	**+1.3**
COLC	**Colonia**	**4.66**	**122**	*eP*	Pn	**02 09 22.8**	**+2.9**
JUD3	**Juan Diaz 3**	**4.69**	**129**	Pn	Pn	**02 09 22.0**	**+1.7**
JUD3	**Juan Diaz 3**	**4.69**	**129**	*eP*	Pn	**02 09 22.1**	**+1.7**
CUI	**Cuipilapa**	**4.70**	**122**	*eP*	Pn	**02 09 21.9**	**+1.4**
PLVR	**Palo Verde**	**4.72**	**126**	*eP*	Pn	**02 09 23.9**	**+3.0**
TENO	**El Achiote**	**4.83**	**120**	*eP*	Pn	**02 09 24.5**	**+2.2**
CMARA	**Lajas Hojancha**	**4.87**	**130**	*eP*	Pn	**02 09 24.2**	**+1.4**
ESPN	**Las Esperanzas**	**4.90**	**101**	Pn	Pn	**02 09 23.9**	**+0.6**
ESPN	**Las Esperanzas**	**4.90**	**101**	*eP*	Pn	**02 09 27.2**	**+3.9**
INDI	**Punta indio, G**	**4.91**	**132**	*eP*	Pn	**02 09 24.2**	**+0.8**
JTS	**Las Juntas de**	**5.07**	**124**	Pn	Pn	**02 09 28

mbtmp4.2/19,ML4.2/2,MS4.0/3,Error ellipse: s-maj=15.9km s-min=13.6km az=74.0
NEIC ***21*** *02:20:52.3±1.2, 19°.78S±0°.03×14°.78E±0°.09,h10km±1km, mb4.6/17,Error ellipse: s-maj=15.1km s-min=5.1km az=275.0*
PRE ***21*** *02:21:12.6±0.7,20°.26S×18°.94E,h5km,ML2.9*
ISC 21 02:20:51.5±1.3,19°.82S±0°.03×14°.74E±0°.05,h7km±8km, n117,σ2°08/119,mb4.6/32,MS3.9/3,7C-4D,Namibia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KJAB	**KAMANJAB**	**0.22**	**27**	⇓*iPg*	**Pg**		**02 20 57.2**	**+1.3**
KJAB				AMPG			02 20 57.2	
	comp=Z,328nm,0.0s							
KJAB				IAML			02 21 00.9	
	comp=Z,66μm,0.3s							
KJAB				*i* S		**Sg**	**02 21 01.0**	**+2.1**
OPU	**Opuwo**	**1.93**	**334**	⇑*i*Pg		**Pn**	**02 21 24.9**	**0.0**
OPU				AMPG			02 21 25.0	
	comp=Z,4.5nm,0.0s							
OPU				*i* S		**Sb**	**02 21 51.1**	**-0.4**
OPU				IAML			02 21 55.3	
	comp=Z,3μm,0.4s							
KARI	**Karibib**	**2.36**	**154**	*i* Pg		**Pn**	**02 21 31.3**	**+0.6**
KARI				AMPG			02 21 31.4	
	comp=Z,9.3nm,0.1s							
KARI				IAML			02 22 13.2	
	comp=Z,1μm,0.8s							
TSUM	**Tsumeb**	**2.75**	**78**	Pn		**Pn**	**02 21 36.0**	**-0.1**
	comp=Z,161nm,0.5s,baz=252,slow=15,SNR=101							
TSUM				Lg		Lg	02 22 19.6	
	comp=Z,201nm,0.3s,baz=295,slow=17,SNR=7.9							
TSUM	**Tsumeb**	**2.75**	**78**			**Pn**	**02 21 35.2**	**-0.9**
TSUM	**Tsumeb**	**2.75**	**78**	*eP*		**Pg**	**02 21 43.1**	**-1.1**
TSUM				*eS*		**Sn**	**02 22 05.5**	**-4.2**
TSUM				IAML			02 22 28.2	
	comp=Z,950nm,0.4s							
WIN	**Windhoek**	**3.51**	**142**	Pn		**Pn**	**02 21 47.2**	**+0.5**
WIN	**Windhoek**	**3.51**	**142**	*eP*		**Pg**	**02 21 59.9**	**+1.1**
WIN				*eS*		**Sb**	**02 22 33.9**	**-3.2**
WIN				IAML			02 22 49.2	
	comp=Z,291nm,0.4s							
WIN	**Windhoek**	**3.51**	**142**	*i* Pg		**Pn**	**02 21 48.8**	**+2.1**
WIN				AMPG			02 21 48.8	
	comp=Z,78nm,0.0s							
WIN				*i* S		**Sb**	**02 22 41.0**	**+3.9**
GOBN	**Gobabis**	**4.67**	**125**	*i* Pg		**Pn**	**02 22 05.0**	**+2.4**
	comp=Z,246nm,0.5s							
GOBN				AMPG			02 22 05.0	
	comp=Z,0.1nm,0.0s							
GOBN				IAML			02 23 27.2	
	comp=Z,246nm,0.5s							
RUDU	**RUNDU**	**5.08**	**69**	⇓*iPg*		**Pn**	**02 22 10.8**	**+2.6**
RUDU				AMPG			02 22 10.9	
	comp=Z,9.6nm,0.2s							
RUDU				*i* S		Sn	02 22 26.2	-41
KOOLE	**Kule**	**5.98**	**123**	Pn		**Pn**	**02 22 21.1**	**+0.5**
KOOLE	**Kule**	**5.98**	**123**	*i* P		**Pn**	**02 22 23.5**	**+2.8**
KOOLE				IAML			02 24 03.8	
	comp=E,795nm,0.5s							
QNGWA	**Qangwa**	**6.07**	**88**	Pn		**Pn**	**02 22 21.1**	**-0.6**
QNGWA	**Qangwa**	**6.07**	**88**	*i* P		**Pn**	**02 22 23.2**	**+1.4**
QNGWA				*i* S		**Sg**	**02 23 59.4**	**-7.0**
GRTLG	**Ghanzi**	**6.26**	**105**			**Pn**	**02 22 24.6**	**+0.2**
GRTLG	**Ghanzi**	**6.26**	**105**	*i* P		**Pn**	**02 22 28.5**	**+4.1**
XAUDM	**Khaudum**	**6.36**	**80**	Pn		**Pn**	**02 22 24.2**	**-1.6**
XAUDM	**Khaudum**	**6.36**	**80**	*i* P		**Pn**	**02 22 24.5**	**-1.3**
AUSN	**Aus**	**6.96**	**169**	*eP*		**Pb**	**02 22 54.9**	**+2.0**
AUSN				*eS*		**Sb**	**02 24 10.3**	**-6.0**
AUSN	**Aus**	**6.96**	**169**	⇓*iP*		**Pn**	**02 22 35.1**	**+1.0**
AUSN				⇓*iPg*		**Pn**	**02 22 35.1**	**+1.0**
AUSN				AMPG			02 22 35.6	
	comp=Z,351nm,0.8s							
AUSN				*i* S		**Sn**	**02 23 53.5**	**-0.2**
AUSN				IAML			02 25 01.7	
	comp=Z,7μm,3.1s							
GMARE	**Gumare**	**7.01**	**88**	Pn		**Pn**	**02 22 33.9**	**-0.8**
LKGWB	**Lokgwabe**	**7.38**	**127**	Pn		Pn	02 22 45.2	+5.5
LKGWB	**Lokgwabe**	**7.38**	**127**	IAML			02 25 08.3	
	comp=E,416nm,0.6s							
KGCAE	**Kacgae**	**7.59**	**115**	Pn		**Pn**	**02 22 42.2**	**-0.4**
KGCAE	**Kacgae**	**7.59**	**115**	*i* P		**Pn**	**02 22 44.1**	**+1.5**
SLIND	**Selinda**	**8.36**	**83**	*i* P		**Pn**	**02 22 52.7**	**-0.6**
KATM	**Katima Mulilo**	**9.36**	**77**	*i* Pg		**Pn**	**02 23 06.7**	**-0.2**
KATM				AMPG			02 23 06.8	
	comp=Z,0.8nm,0.1s							
KATM				*i* S		Sn	02 24 38.5	-14
KATM				IAML			02 26 03.9	
	comp=Z,162nm,1.2s							
PHPEN	**Phepeng**	**9.37**	**128**	Pn		**Pn**	**02 23 06.9**	**-0.3**
PHPEN	**Phepeng**	**9.37**	**128**	*i* P		**Pn**	**02 23 07.5**	**+0.4**
ARMS	**Ukamas**	**9.38**	**152**	*eP*		**Pn**	**02 23 07.9**	**+0.8**
ARMS	**Ukamas**	**9.38**	**152**	⇑*i*P		**Pn**	**02 23 04.9**	**-2.2**
ARMS				AMPG			02 23 06.7	
	comp=Z,56μm,3.6s							
ARMS				*i* S		Sn	02 25 45.8	+53
ARMS				IAML			02 26 07.8	
	comp=Z,2μm,3.5s							
KDWAN	**Kaudwane**	**9.88**	**113**	Pn		**Pn**	**02 23 13.9**	**-0.2**
KDWAN	**Kaudwane**	**9.88**	**113**	*i* P		**Pn**	**02 23 14.1**	**0.0**
KDWAN				*i* S		Sn	02 25 30.2	+25
KDWAN				IAML			02 26 13.2	
	comp=N,129nm,0.7s							
KSANE	**Kasane**	**10.07**	**80**	Pn		**Pn**	**02 23 15.1**	**-1.7**
KSANE	**Kasane**	**10.07**	**80**	*i* P		**Pn**	**02 23 13.7**	**-3.0**
KSANE				IAML			02 26 30.2	
	comp=N,122nm,0.7s							
KHWEE	**KHWEE**	**10.23**	**104**			**Pn**	**02 23 18.8**	**-0.1**
KOMG	**Komaggas**	**10.24**	**166**	*eP*		Pn	02 23 32.7	+14
KOMG				*eS*		**Sn**	**02 25 15.2**	**+1.1**
KOMG				IAML			02 25 40.5	
	comp=Z,8.2nm,0.7s							
KOMG	**Komaggas**	**10.24**	**166**	⇑*i*Pg		**Pn**	**02 23 19.6**	**+0.6**
KOMG				AMPG			02 23 20.4	
	comp=Z,42nm,1.6s							
KOMG				*i* S		Sn	02 25 31.3	+17
KOMG				IAML			02 26 43.1	
	comp=Z,120nm,0.9s							
UPI	**Upington**	**10.38**	**146**	⇑*i*Pg		**Pn**	**02 23 23.2**	**+2.4**
UPI				AMPG			02 23 23.2	
	comp=Z,12nm,0.0s							
UPI				IAML			02 27 14.3	
	comp=Z,43nm,0.8s							
LPHEP	**Lephephe**	**10.93**	**111**	Pn		**Pn**	**02 23 27.3**	**-1.2**
LPHEP	**Lephephe**	**10.93**	**111**	*i* P		**Pn**	**02 23 28.7**	**+0.3**
MAKGR	**Makgori**	**11.03**	**125**	Pn		**Pn**	**02 23 29.9**	**+0.1**
MAKGR	**Makgori**	**11.03**	**125**	*i* P		**Pn**	**02 23 29.6**	**-0.2**
MAKGR				IAML			02 27 07.1	
	comp=E,135nm,0.6s							
LBTB	**Lobatse**	**11.29**	**119**	Pn		**Pn**	**02 23 34.0**	**+0.5**
	comp=E,1.5nm,0.3s,baz=291,slow=12,SNR=15							
LBTB				Sn		**Sn**	**02 25 42.8**	**+2.8**
	comp=E,1.4nm,0.3s,baz=4.3,slow=10,SNR=4.4							
LBTB				Lg		Lg	02 26 43.5	
	comp=E,4.7nm,0.3s,baz=225,slow=20,SNR=10							
	comp=E,8.1nm,0.7s							
LBTB	**Lobatse**	**11.29**	**119**	Pn		**Pn**	**02 23 33.4**	**0.0**
LBTB						**Sn**	**02 25 41.7**	**+1.7**
LBTB	**Lobatse**	**11.29**	**119**	*eP**		Pn	02 23 07.3	-26
LBTB				*eS*			02 24 31.1	
LBTB				IAML			02 25 39.1	
	comp=Z,3.8nm,0.5s							
BROLN	**Tlhalogang**	**11.87**	**98**	*i* P		**Pn**	**02 23 41.3**	**-0.1**
BROLN				IAML			02 27 18.6	
	comp=N,45nm,0.6s							
ALKP	**Alkanpan, Nort**	**12.16**	**147**	*eP*		Pn	02 23 40.5	-4.9
ALKP				*eS*		Sn	02 25 27.7	-34
ALKP				IAML			02 25 47.5	
	comp=Z,2.6nm,0.8s							
MATP	**Matopo**	**12.94**	**95**	Pn		Pn	02 24 05.0	+9.0
	comp=Z,2.4nm,0.3s,baz=269,slow=13,SNR=36							
MATP				Sn		**Sn**	**02 26 28.2**	**+7.8**
	comp=Z,0.4nm,0.3s,baz=12,slow=22,SNR=2.0							
MATP				Lg		Lg	02 27 48.3	
	comp=Z,1.5nm,0.3s,baz=327,slow=9.2,SNR=7.6							
BOSA	**Boshof**	**12.98**	**134**	Pn		**Pn**	**02 23 56.3**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=309,slow=12,SNR=24							
BOSA				Sn		**Sn**	**02 26 29.7**	**+8.3**
	comp=Z,0.4nm,0.3s,baz=359,slow=18,SNR=1.5							
BOSA				Lg		Lg	02 27 39.5	
	comp=Z,1.4nm,0.3s,baz=24,slow=21,SNR=4.4							
	comp=Z,5.2nm,0.5s							
BOSA	**Boshof**	**12.98**	**134**	Pn		**Pn**	**02 23 56.6**	**0.0**
BOSA						**Sn**	**02 26 22.9**	**+1.5**
BOSA	**Boshof**	**12.98**	**134**	*eP*		Pn	02 23 40.3	-16
BOSA				IAML			02 25 31.4	
	comp=Z,2.0nm,0.3s							
FRAZ	**Fraserburg**	**13.47**	**155**	*eP*		**Pn**	**02 24 03.3**	**+0.2**
FRAZ				*eS*		Sn	02 26 09.7	-24
FRAZ				IAML			02 26 45.0	
	comp=Z,2.7nm,0.7s							
SUR	**Sutherland**	**13.64**	**158**	Pn		**Pn**	**02 24 05.7**	**0.0**
BFON	**Badsfontein, M**	**14.39**	**148**	*eP*		Pn	02 24 09.8	-6.0
BFON				IAML			02 26 50.7	
	comp=Z,2.2nm,0.5s							
MSNA	**Messina**	**14.48**	**103**	*i* S		**Sn**	**02 27 04.2**	**+6.2**
GRHM	**Grahamstown, E**	**16.95**	**145**	Pn		**Pn**	**02 24 49.1**	**-0.1**
GRHM				IAmb		IAmb	02 25 17.7	
	comp=Z,40nm,1.3s							
KSTD	**Kokstad**	**16.99**	**132**	*eP*		Pn	02 24 32.0	-18
KSTD				IAML			02 26 36.6	
	comp=Z,1.8nm,0.5s							
POGA	**Pongola**	**17.25**	**119**	Pn		**Pn**	**02 24 51.3**	**-1.7**
MBAR	**Mbarara**	**24.70**	**41**	P		**P**	**02 26 14.7**	**+1.1**
MBAR				IAmb		IAmb	02 26 20.7	
	comp=Z,8.7nm,1.1s							
KMBO	**Kilima Mbogo**	**28.81**	**53**	LR		LR	02 38 23.8	
	comp=Z,265nm,18.5s,baz=272,slow=36							
OPO	**Ambohidratompo**	**30.64**	**93**	LR		LR	02 38 25.0	
	comp=Z,177nm,20.0s,baz=29,slow=34							
DBIC	**Dimbokro**	**32.63**	**322**	P		**P**	**02 27 24.2**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=147,slow=8.4,SNR=4.1							
	comp=Z,2.0nm,0.4s							
DBIC	**Dimbokro**	**32.63**	**322**	P		**P**	**02 27 25.3**	**+1.2**
DBIC				IAmb		IAmb	02 27 34.1	
	comp=Z,16nm,1.4s							
TORD	**Torodi Ar. Bea**	**35.18**	**338**	P		**P**	**02 27 43.4**	**-2.9**
	comp=Z,3.2nm,0.4s,baz=143,slow=7.3,SNR=3.0							
	comp=Z,3.2nm,0.4s							
VNA2	**Neumayer--Watz**	**52.77**	**189**	⇑P		**P**	**02 30 07.1**	**+0.3**
	comp=Z,5.2nm,0.7s,baz=26,slow=7.2							
SNAA	**Sanae**	**52.87**	**187**	⇑P		**P**	**02 30 07.6**	**-0.1**
	comp=Z,68nm,0.8s							
SNAA	**Sanae**	**52.87**	**187**	P		**P**	**02 30 06.4**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=16,slow=5.5,SNR=19							
	comp=Z,1.5nm,0.8s							
SNAA	**Sanae**	**52.87**	**187**	P		**P**	**02 30 07.8**	**+0.2**
VNA3	**Neumayer Olymp**	**53.40**	**190**	⇑P		**P**	**02 30 10.9**	**-0.6**
	comp=Z,5.0nm,1.0s							
KEST	**Kesra**	**55.48**	**355**	P		**P**	**02 30 26.0**	**-1.1**
	comp=Z,2.9nm,1.0s,baz=201,slow=8.6,SNR=5.2							
	comp=Z,2.9nm,1.0s							
KEST	**Kesra**	**55.48**	**355**	P		**P**	**02 30 27.0**	**-0.1**
KEST				IAmb		IAmb	02 30 56.6	
	comp=Z,13nm,1.4s							
MAW	**Mawson**	**56.49**	**160**	P		**P**	**02 30 33.5**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=312,slow=7.0,SNR=4.4							
	comp=Z,3.0nm,0.6s							
PAB	**San Pablo**	**61.69**	**343**	P		**P**	**02 31 10.7**	**+0.4**
PAB				IAmb		IAmb	02 31 14.2	
	comp=Z,4.9nm,0.8s							
ESDC	**Sonseca Array**	**61.71**	**344**	P		**P**	**02 31 08.8**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=164,slow=6.5,SNR=6.0							
	comp=Z,1.3nm,0.9s							
ESDC	**Sonseca Array**	**61.71**	**344**	P		**P**	**02 31 09.5**	**-0.9**
ESDC				IAmb		IAmb	02 31 14.6	
	comp=Z,3.3nm,1.3s							
BRTR	**Keskin Array B**	**61.80**	**16**	P		**P**	**02 31 11.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=188,slow=10,SNR=2.7							
	comp=Z,0.3nm,0.6s							
BRTR	**Keskin Array B**	**61.80**	**16**	P		**P**	**02 31 10.7**	**-0.5**
BELA	**Belgrano 2**	**62.68**	**190**	P		**P**	**02 31 15.9**	**-0.6**
BELA				IAmb		IAmb	02 31 20.2	
	comp=Z,3.1nm,0.7s							
SENIN	**Lac Senin/Sane**	**66.21**	**354**	P		**P**	**02 31 40.0**	**-0.1**
SENIN				IAmb		IAmb	02 31 42.9	
	comp=Z,5.1nm,0.8s							
FUORN	**Ofenpass-Fuorn**	**66.25**	**357**	P		**P**	**02 31 40.3**	**-0.1**
KBA	**Koelnbreinsper**	**66.59**	**359**	*eP*		**P**	**02 31 43.6**	**+1.1**
	comp=Z,5.2nm,0.8s							
SQTA	**Sankt Quirin**	**66.80**	**357**	*eP*		**P**	**02 31 45.8**	**+2.0**
	comp=Z,5.4nm,0.7s							
WATA	**Walderalm**	**66.90**	**358**	*i* P		**P**	**02 31 46.9**	**+2.5**
	comp=Z,8.1nm,1.4s							
MOTA	**Moosalm**	**66.93**	**357**	*eP*		**P**	**02 31 47.2**	**+2.6**
	comp=Z,11nm,1.5s							
DAVA	**Damuels**	**66.93**	**356**	*ep*	P	pP	02 31 52.2	+4.9
	comp=Z,8.8nm,1.2s							
RETA	**Reutte**	**67.08**	**357**	*eP*		**P**	**02 31 47.9**	**+2.4**
	comp=Z,9.4nm,1.5s							
BIOA	**Bad Ischl, Aus**	**67.20**	**359**	*eP*		**P**	**02 31 48.4**	**+2.2**
	comp=Z,4.2nm,0.8s							
MOA	**Molln**	**67.35**	**360**	*eP*		**P**	**02 31 49.9**	**+2.8**
	comp=Z,11nm,1.1s							
CONA	**Conrad Observa**	**67.44**	**1**	*eP*		**P**	**02 31 51.4**	**+3.6**
	comp=Z,3.6nm,1.1s							
PMSA	**Palmer Station**	**67.49**	**207**	P		**P**	**02 31 48.1**	**+0.3**
KBZ	**Khabaz**	**68.31**	**22**	P		**P**	**02 31 53.2**	**0.0**
	comp=Z,3.8nm,0.9s,baz=145,slow=3.7,SNR=4.4							
	comp=Z,3.8nm,0.9s							
GERES	**GERESS Array B**	**68.35**	**359**	P		**P**	**02 31 52.5**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=174,slow=4.9,SNR=9.8							
	comp=Z,1.1nm,0.7s							
SMAI	**San Martin Ant**	**68.75**	**203**	P		**P**	**02 31 55.9**	**+0.2**
PALK	**Pallekele**	**70.24**	**74**	LR		LR	02 58 37.0	
	comp=Z,227nm,20.4s,baz=170,slow=32							
QSPA	**South Pole Qui**	**70.35**	**180**	P		**P**	**02 32 06.3**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=247,slow=3.7,SNR=15							
	comp=Z,1.7nm,0.6s							
QSPA	**South Pole Qui**	**70.35**	**180**	P		**P**	**02 32 07.2**	**+1.3**
AKASG	**Malin Array Be**	**71.36**	**10**	P		**P**	**02 32 11.1**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=200,slow=7.8,SNR=1.4							
	comp=Z,1.4nm,0.7s							
EKA	**Eskdalemuir Ar**	**76.39**	**350**	P		**P**	**02 32 40.3**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=163,slow=7.4,SNR=7.5							
	comp=Z,3.9nm,0.7s							
BOAV	**Boa Vista**	**76.98**	**277**	P		**P**	**02 32 44.9**	**-0.7**
BOAV				IAmb		IAmb	02 32 59.8	
	comp=Z,8.4nm,1.5s							
LPAZ	**La Paz**	**78.11**	**257**	P		**P**	**02 32 50.7**	**-1.8**
	comp=Z,1.5nm,0.9s,baz=130,slow=4.8,SNR=5.6							
	comp=Z,1.5nm,0.9s							
LPAZ	**La Paz**	**78.11**	**257**	P		**P**	**02 32 51.0**	**-1.5**
KKAR	**Karatay Array**	**80.88**	**38**	P		**P**	**02 33 07.7**	**+1.4**
VNDA	**Vanda**	**80.97**	**173**	P		**P**	**02 33 06.0**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=224,slow=2.5,SNR=3.7							
	comp=Z,1.3nm,0.6s							
VNDA	**Vanda**	**80.97**	**173**	P		**P**	**02 33 06.3**	**0.0**
FINES	**FINESS Array B**	**81.49**	**5**	P		**P**	**02 33 08.7**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=189,slow=5.8,SNR=7.7							
	comp=Z,1.8nm,0.7s							
FINES	**FINESS Array B**	**81.49**	**5**	P		**P**	**02 33 09.4**	**+0.4**
KSH	**Kashi**	**82.13**	**43**	P		**P**	**02 33 15.8**	**+2.7**
KSH				pmax		pmax		
	comp=Z,4.0nm,1.0s							
BVAR	**Borovoye Array**	**87.00**	**30**	P		**P**	**02 33 37.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=251,slow=4.4,SNR=2.6							
	comp=Z,0.4nm,0.5s							
PZH	**PanZhiHua**	**96.05**	**64**	P		**P**	**02 34 21.5**	**+1.2**
TXAR	**Lajitas Array**	**123.74**	**293**	PKP		**PKPdf**	**02 39 50.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=67,slow=0.8,SNR=9.2							
TXAR	**Lajitas Array**	**123.74**	**293**			**PKPdf**	**02 39 49.6**	**-1.1**
PDAR	**Pinedale Array**	**128.22**	**309**	PKP		**PKPdf**	**02 39 58.4**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=102,slow=4.4,SNR=8.5							
PDAR	**Pinedale Array**	**128.22**	**309**			**PKPdf**	**02 39 58.7**	**-0.4**
ILAR	**Eielson Array**	**133.43**	**349**	PKP		**PKPdf**	**02 40 08.0**	**0.0**
	comp=Z,0.4nm,0.7s,baz=9.5,slow=6.4,SNR=5.7							
ILAR	**Eielson Array**	**133.43**	**349**			**PKPdf**	**02 40 08.7**	**+0.7**

IDC ***21*** *02:23:53.9±1.5, 19°.15N×101°.47E,h0km,mb3.6/3, mbtmp3.6/4,ML2.9/1,MS4.5/1,Error ellipse: s-maj=21.7km s-min=19.9km az=148.0*
BKK ***21*** *02:23:57.7±0.6, 19°.N±2°×10°.1E±°, h6km±3km,M3.9/15, Mjma3.8/15,ML3.9/13,MLv3.9/14*
ISC 21 02:23:56.4±1.2,19°.45N±0°.07×101°.29E±0°.08,h10km,n13, σ0°.96/15,mb3.5/3,Laos

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LAMP	**Lampang**	**1.82**	**240**	P		**Pn**	**02 24 28.4**	**+0.6**
LAMP				S		**Sb**	**02 24 52.3**	**-0.4**
UTTA	**Uttaradit**	**1.83**	**203**	P		**Pn**	**02 24 28.6**	**+0.7**
UTTA				S		**Sb**	**02 24 53.0**	**0.0**
LOEI	**Loei**	**1.93**	**181**	P		**Pn**	**02 24 30.1**	**+0.8**
CMAI	**Chiengmai2**	**2.17**	**283**	P		**Pn**	**02 24 32.9**	**+0.1**
CMAI				S		**Sb**	**02 25 02.4**	**-0.6**
CHTO	**Chiang Mai**	**2.31**	**255**	P		**Pn**	**02 24 34.4**	**-0.1**
CM09	**Chiang Mai Arr**	**2.40**	**246**	P		**Pn**	**02 24 36.4**	**+0.7**
CM31	**Chiang Mai Arr**	**2.43**	**247**	P		**Pn**	**02 24 37.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**2.43**	**247**	Pn		**Pn**	**02 24 36.1**	**-0.1**
	0.7nm,0.3s,baz=68,slow=13,SNR=4.1							
CMAR				Lg		Lg	02 25 13.3	
	25nm,0.3s,baz=78,slow=33,SNR=5.0							
	9.1nm,0.3s							
CM05	**Chiang Mai Arr**	**2.45**	**245**	P		**Pn**	**02 24 37.1**	**+0.6**
MKAR	**Makanchi Array**	**31.41**	**335**	P		**P**	**02 30 18.9**	**+1.2**
	0.3nm,0.4s,baz=142,slow=9.3,SNR=5.3							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**36.70**	**344**	P		**P**	**02 31 04.6**	**+1.2**
	1.9nm,0.8s,baz=148,slow=8.7,SNR=8.4							
	1.9nm,0.8s							
WRA	**Warramunga Arr**	**50.81**	**139**	P		**P**	**02 32 55.2**	**-2.1**
	0.5nm,1.0s,baz=321,slow=8.2,SNR=1.7							
	0.5nm,1.0s							
BELG	**Belogornoye**	**52.83**	**322**	LR		LR	03 00 08.6	
	comp=Z,426nm,19.4s,baz=97,slow=41							

NNC 21 02:24:59.7±4.8,37°.94N×71°.77E,h0km,mb3.6,mpv3.4, 2C-1D,Error ellipse: s-maj=37.4km s-min=28.0km az=169.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**4.41**	**343**	Pg		Pn	02 26 07.9	0.0
	8.4nm,0.3s							
IUG				Lg		Lg	02 26 59.6	
	13nm,0.3s							
MRKS	**Merke**	**4.92**	**13**	Pg		Pn	02 26 15.0	0.0
	3.7nm,0.4s							
MRKS				Lg		Lg	02 27 12.6	
	3.3nm,0.3s							
AAK	**Ala-Archa**	**5.13**	**23**	⇑Pn		Pn	02 26 17.6	-0.4
	0.8nm,0.6s,baz=170,slow=23							
AAK				⇓Sn		Sn	02 27 19.4	+1.5
	1.6nm,0.7s,baz=170,slow=23							
KK31	**Karatay Array**	**5.24**	**350**	Pn		Pn	02 26 19.8	+0.4
	1.3nm,0.3s,baz=164,slow=12,SNR=37							
KK31				⇑Sn		Sn	02 27 21.3	+0.8
	3.2nm,0.5s,baz=170,slow=23							
AB31	**Akbulak array**	**14.17**	**327**	P		Pn	02 28 20.2	-1.3
	0.1nm,0.3s,baz=133,slow=14,SNR=5.1							

NEIC ***21*** *02:29:25.3±1.0,38°.37N±0°.01×118°.90W±0°.01,h7km±3km, Error ellipse: s-maj=1.9km s-min=0.7km az=144.0*
REN 21 02:29:25.7±0.8,38°.38N±0°.02×118°.91W±0°.01,h7km±3km, ML2.9/13,ML2.6/42(NEIC),Error ellipse: s-maj=2.3km s-min=1.5km az=186.0,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TVH1	**TV Hill, Hawth**	**0.13**	**56**			Pg	02 29 28.9	+0.2
TVH1						Sg	02 29 31.2	+0.4
LHV	**Little Huntoon**	**0.34**	**113**			Pg	02 29 32.7	+0.4
LHV						Sg	02 29 37.9	+1.0
LHV	**Little Huntoon**	**0.34**	**113**	IAML			02 29 38.0	
	comp=E,2μm,0.3s							
LHV				IAML			02 29 38.1	
	comp=N,2μm,0.4s							
RYN	**Ryan**	**0.39**	**51**			Pg	02 29 33.3	0.0
RYN						Sg	02 29 39.0	+0.6
RYN	**Ryan**	**0.39**	**51**	IAML			02 29 39.2	
	comp=N,2μm,0.2s							
RYN				IAML			02 29 39.4	
	comp=E,2μm,0.3s							
WAKR	**Walker**	**0.43**	**286**			Pg	02 29 34.1	0.0
WAKR						Sg	02 29 41.0	+1.1
WAKR	**Walker**	**0.43**	**286**	IAML			02 29 42.1	
	comp=N,403nm,0.4s							
WAKR				IAML			02 29 43.6	
	comp=E,265nm,0.4s							
NV09	**Mina Array Sit**	**0.45**	**83**			Pg	02 29 34.4	-0.1
NV09						Sg	02 29 41.0	+0.6
NV08	**Mina Array Sit**	**0.46**	**87**			Pg	02 29 34.5	-0.1
NV08						Sg	02 29 41.3	+0.6
NV11	**Mina Array Sit**	**0.59**	**85**			Pg	02 29 36.9	-0.3
NV11						Sg	02 29 45.0	+0.1
NV11	**Mina Array Sit**	**0.59**	**85**	IAML			02 29

CM09	**Chiang Mai Arr**	**2.43**	**246**	P	**Pn**	**02 38 15.8**	**+0.9**
CM04	**Chiang Mai Arr**	**2.46**	**245**	P	**Pn**	**02 38 16.8**	**+1.5**
CMAR	**Chiang Mai Arr**	**2.47**	**246**	Pn	**Pn**	**02 38 15.2**	**-0.1**
	1.8nm,0.3s,baz=60,slow=12,SNR=16						
CMAR				Lg	Lg	02 38 50.7	
	8.4nm,0.3s,baz=55,slow=14,SNR=8.4						
	4.2nm,0.6s						
CM01	**Chiang Mai Arr**	**2.47**	**246**	P	**Pn**	**02 38 16.9**	**+1.5**
CM02	**Chiang Mai Arr**	**2.47**	**246**	P	**Pn**	**02 38 16.8**	**+1.3**
CM05	**Chiang Mai Arr**	**2.49**	**245**	P	**Pn**	**02 38 17.0**	**+1.3**
CM13	**Chiang Mai Arr**	**2.51**	**246**	P	**Pn**	**02 38 15.9**	**-0.1**
PANO	**Nakornpanom**	**3.88**	**126**	P	**Pb**	**02 38 43.3**	**-0.3**
MKAR	**Makanchi Array**	**31.41**	**335**	P	**P**	**02 43 57.4**	**+1.1**
	0.4nm,0.7s,baz=134,slow=6.9,SNR=3.5						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**36.69**	**344**	P	**P**	**02 44 41.6**	**-0.3**
	1.0nm,0.6s,baz=148,slow=8.5,SNR=5.1						
	1.0nm,0.6s						

*IDC **21** 02:39:00.5±0.9, 17°.67S×39°.73E, h0km, mb3.7/7, mbtmp3.8/12, ML3.8/4, Error ellipse: s-maj=29.6km s-min=20.0km az=168.0*
*NEIC **21** 02:39:01.3±1.6, 17°.82S±0°.08×39°.54E±0°.05, h10km±1km, mb4.4/14, Error ellipse: s-maj=15.8km s-min=5.3km az=330.0*

ISC 21 02:39:00.8±0.5, **17°.82S**±0°.09×**39°.59E**±0°.06, **h10**km, **n38,** σ1§**42**/38, **mb3.9**/10, **Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**7.26**	**97**	Pn	**Pn**	**02 40 48.7**	**+1.5**
	0.2nm,0.3s,baz=283,slow=19,SNR=16						
OPO				Sn	**Sn**	**02 42 07.3**	**-2.5**
	0.3nm,0.3s,baz=15,slow=23,SNR=7.1						
	3.2nm,0.3s						
ABPO	**Ambohimpanom**	**7.35**	**101**	Pn	**Pn**	**02 40 49.3**	**+0.9**
VOI	**Vohitsoka**	**7.90**	**122**	Pn	**Pn**	**02 40 56.8**	**+0.9**
FOMA	**Nahampoana Res**	**9.90**	**137**	Pn	**Pn**	**02 41 24.3**	**+1.1**
MATP	**Matopo**	**10.80**	**254**	Pn	**Pn**	**02 41 40.1**	**+4.4**
	0.5nm,0.5s,baz=76,slow=16,SNR=2.0						
MATP				Sn	**Sn**	**02 43 35.9**	**-0.9**
	0.3nm,0.3s,baz=173,slow=21,SNR=1.7						
KSANE	**Kasane**	**13.74**	**268**	Pn	**Pn**	**02 42 16.6**	**+0.7**
LPHEP	**Lephephe**	**13.99**	**244**	Pn	**Pn**	**02 42 19.2**	**-0.1**
LBTB	**Lobatse**	**14.86**	**239**	Pn	**Pn**	**02 42 34.0**	**+2.8**
	0.1nm,0.3s,baz=356,slow=7.6,SNR=2.5						
	1.2nm,0.5s						
LBTB	**Lobatse**	**14.86**	**239**		**Pn**	**02 42 28.6**	**-2.6**
KDWAN	**Kaudwane**	**15.03**	**246**	Pn	**Pn**	**02 42 32.7**	**-0.7**
BOSA	**Boshof**	**16.98**	**228**	P	**Pn**	**02 43 00.3**	**+1.6**
	0.2nm,0.3s,baz=65,slow=9.4,SNR=4.6						
	2.1nm,1.0s						
BOSA	**Boshof**	**16.98**	**228**	Pn	**Pn**	**02 42 57.8**	**-0.9**
BOSA				IAmb	IAmb	02 43 08.7	
	comp=Z,12nm,1.1s						
KGCAE	**Kacgae**	**17.05**	**250**	Pn	**Pn**	**02 42 58.8**	**-0.8**
KGCAE				IAmb	IAmb	02 43 09.4	
	comp=Z,16nm,0.7s						
QNGWA	**Qangwa**	**17.53**	**262**		**Pn**	**02 43 05.5**	**-0.1**
GRTLG	**Ghanzi**	**17.67**	**256**	Pn	**Pn**	**02 43 06.2**	**-1.1**
LKGWB	**Lokgwabe**	**18.26**	**247**		Pn	02 43 08.4	-6.1
KOOLE	**Kule**	**18.89**	**251**	P	**P**	**02 43 21.4**	**-0.3**
KOOLE				IAmb	IAmb	02 43 29.6	
	comp=Z,6.3nm,0.7s						
MBAR	**Mbarara**	**19.20**	**332**	P	**P**	**02 43 24.2**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=117,slow=6.8,SNR=1.6						
	comp=Z,2.4nm,0.2s						
TSUM	**Tsumeb**	**20.91**	**263**	P	Pn	02 43 47.9	+1.6
	comp=Z,1.0nm,0.4s,baz=100,slow=14,SNR=3.9						
	comp=Z,1.0nm,0.4s						
TSUM	**Tsumeb**	**20.91**	**263**	P	**P**	**02 43 43.7**	**-0.1**
SUR	**Sutherland**	**22.30**	**226**	P	**P**	**02 43 55.5**	**-3.1**
SUR				IAmb	IAmb	02 43 55.7	
	comp=Z,36nm,1.4s						
CRZF	**Crozet Islands**	**30.29**	**163**	P	**P**	**02 45 13.1**	**+1.0**
TORD	**Torodi Ar. Bea**	**48.43**	**307**	P	**P**	**02 47 43.4**	**-0.3**
TORD				IAmb	IAmb	02 47 47.7	
	comp=Z,3.2nm,0.6s						
GNI	**Garni**	**57.87**	**5**	P	**P**	**02 48 51.7**	**-1.3**
KEK	**Kerkira**	**60.14**	**342**	P	**P**	**02 49 08.9**	**+0.4**
EVN	**Everest**	**64.50**	**46**	P	**P**	**02 49 38.0**	**-0.9**
EVN				IAmb	IAmb	02 49 40.8	
	comp=Z,2.2nm,0.7s						
KKAR	**Karatay Array**	**66.95**	**24**	P	**P**	**02 49 54.0**	**+0.4**
MKAR	**Makanchi Array**	**74.93**	**29**	P	**P**	**02 50 42.4**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=224,slow=5.1,SNR=3.9						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**74.93**	**29**	P	**P**	**02 50 42.0**	**0.0**
BVAR	**Borovoye Array**	**75.41**	**19**	P	**P**	**02 50 45.0**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=266,slow=4.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**76.26**	**24**	P	**P**	**02 50 49.9**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=226,slow=7.5,SNR=4.2						
	comp=Z,0.5nm,0.9s						
KURK	**Kurchatov**	**76.37**	**24**	P	**P**	**02 50 50.2**	**+0.1**
KURK				IAmb	IAmb	02 51 17.9	
	comp=Z,4.8nm,1.5s						
ZALV	**Zalesovo Beam**	**81.30**	**25**	P	**P**	**02 51 17.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=226,slow=3.8,SNR=3.6						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**81.30**	**25**	P	**P**	**02 51 16.8**	**-0.3**
ASAR	**Alice Springs**	**86.81**	**114**	P	**P**	**02 51 46.6**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=256,slow=6.4,SNR=2.1						
	comp=Z,0.4nm,0.7s						
ASAR	**Alice Springs**	**86.81**	**114**	P	**P**	**02 51 46.5**	**+0.4**
WRA	**Warramunga Arr**	**88.34**	**110**	P	**P**	**02 51 54.5**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=240,slow=2.8,SNR=4.5						
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**144.57**	**296**	PKP	**PKPab**	**02 58 38.1**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=37,slow=2.5,SNR=6.4						

GCG 21 03:04:22.6±0.9, **14°.04N**×**90°.87W**, **h83**km±6km, **MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.34**	**7**	*e*P	Pn	03 04 35.7	0.0
ESSG				*e*S	Sn	03 04 46.0	+0.7
FG16	**Alotenango, Sa**	**0.42**	**57**	*i* P	Pn	03 04 36.8	+0.5
FG16				*i* S	Sn	03 04 47.9	+1.5
PCG5	**San Vicente Pa**	**0.51**	**70**	*e*P	Pn	03 04 36.4	-0.5
STG5	**El Palmar, Qui**	**0.59**	**308**	*e*P	Pn	03 04 41.9	+4.4
STG5				*e*S	Sn	03 04 55.5	+7.0
ESSJ	**San Jos, E**	**0.60**	**143**	*e*P	Pn	03 04 34.7	-2.8
STG8	**El Palmar, Qui**	**0.62**	**311**	*e*P	Pn	03 04 42.5	+4.5
STG8				*e*S	Sn	03 04 57.7	+8.3
APG	**El Apazote**	**1.04**	**22**	*e*P	Pn	03 04 43.6	+1.1
NUBE	**Las Nubes**	**1.07**	**97**	*e*P	Pn	03 04 42.8	0.0

*BEO **21** 03:07:12.1±1.4, 39°.64N×19°.62E, h10km, ML3.1/5*
*TIR **21** 03:07:13.2, 39°.87N×20°.08E, h9km±1km, Ml3.1/7*
*PDG **21** 03:07:14.2±0.6, 39°.84N×19°.94E, h8km±2km, ML3.1/8, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*
*ATH **21** 03:07:16.0, 39°.80N×20°.26E, h16km±1km, ML3.0/7, Manual Solution by F.Xalaris First location: 2019/11/21 03:08:21, This location: 2019/11/21 04:20:28 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km*
*VIE **21** 03:07:17.8±0.7, 40°.04N×19°.70E, h10km, mb3.3/6, ms3.7/5, Error ellipse: s-maj=18.0km s-min=5.3km az=55.0 142 km S of Durres*
*THE **21** 03:07:18.0, 40°N±4°×20°E±°, h0km±3km, M3.0/11, MLh3.0/11*

ISC 21 03:07:15.1±0.9, **39°.84N**±0°.02×**20°.08E**±0°.03, **h24**km±9km, **n90,** σ1§**79**/114, **2C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.25**	**240**	P	**Pn**	**03 07 23.8**	**+0.5**
KEK				S	**Sb**	**03 07 28.9**	**+3.4**
KEK	**Kerkira**	**0.25**	**240**	P	**Pn**	**03 07 23.6**	**+0.2**
KEK				S	**Sb**	**03 07 28.9**	**+3.4**
IGT	**Igoumenitsa**	**0.36**	**147**	Pn	**Pb**	**03 07 21.1**	**-1.9**
IGT				Sn	**Sb**	**03 07 26.8**	**-1.5**
IGT				AML	AML	03 07 32.8	
	5.8nm,0.5s						
IGT	**Igoumenitsa**	**0.36**	**147**	P	**Pb**	**03 07 21.3**	**-1.6**
IGT	**Igoumenitsa**	**0.36**	**147**	P	**Pb**	**03 07 21.3**	**-1.6**
IGT				S	**Sb**	**03 07 26.0**	**-2.3**
LFKM	**Lefkimmi**	**0.39**	**182**	P	**Pb**	**03 07 22.8**	**-0.6**
PRGA	**Parga**	**0.61**	**156**	P	**Pb**	**03 07 26.6**	**-0.4**
JAN	**Janina**	**0.62**	**107**	S	**Sb**	**03 07 36.1**	**+0.4**
JAN	**Janina**	**0.62**	**107**	P	**Pb**	**03 07 25.5**	**-1.8**
JAN				S	**Sb**	**03 07 32.3**	**-3.3**
VLO	**Vlora**	**0.77**	**325**	Pg	**Pb**	**03 07 27.3**	**-2.5**
VLO				Sg	**Sb**	**03 07 37.1**	**-2.8**
VLO				AML	AML	03 07 47.8	
	7.8nm,0.5s						
MSVA	**Metsovo**	**0.85**	**94**	P	**Pb**	**03 07 30.3**	**-1.0**
PENT	**Pentalofos**	**0.89**	**66**	P	**Pb**	**03 07 30.0**	**-1.9**
NEST	**Nestorio**	**0.94**	**52**	Pn	**Pn**	**03 07 30.4**	**-2.5**
NEST				Sn	**Sb**	**03 07 45.3**	**+0.4**
NEST				AML	AML	03 07 53.4	
	1.6nm,0.8s						
NEST	**Nestorio**	**0.94**	**52**	P	**Pn**	**03 07 30.3**	**-2.6**
KBN	**Korca**	**0.95**	**34**	Pn	**Pn**	**03 07 30.5**	**-2.6**
KBN				Sn	**Sb**	**03 07 44.2**	**-0.9**
KBN				AML	AML	03 07 53.4	
	2.5nm,0.8s						
ARTB	**Arta**	**0.97**	**134**	P	**Pn**	**03 07 32.8**	**-0.4**
TETR	**Tetrakomo, Epi**	**1.05**	**118**	P	**Pn**	**03 07 33.4**	**-1.0**
TSLK	**Tsoukalades, L**	**1.11**	**156**	P	**Pn**	**03 07 35.0**	**-0.5**
TSLK	**Tsoukalades, L**	**1.11**	**156**	P	**Pb**	**03 07 34.9**	**-0.5**
TSLK				S	**Sn**	**03 07 49.0**	**-0.6**
LKD2	**Lefkada island**	**1.14**	**157**	Pn	**Pb**	**03 07 35.6**	**-0.5**
LKD2				Sn	**Sb**	**03 07 52.7**	**+2.2**
LKD2	**Lefkada island**	**1.14**	**157**	P	**Pb**	**03 07 35.7**	**-0.5**
LKD2	**Lefkada island**	**1.14**	**157**	P	**Pb**	**03 07 35.6**	**-0.5**
NYDR	**Nydri-Lefkada**	**1.22**	**157**	P	**Pb**	**03 07 36.9**	**-0.6**
NYDR	**Nydri-Lefkada**	**1.22**	**157**	P	**Pb**	**03 07 36.8**	**-0.7**
AMPL	**Ampelaki**	**1.27**	**136**	P	**Pb**	**03 07 38.8**	**+0.5**
LMS2	**Laimos Florina**	**1.28**	**39**	P	**Pb**	**03 07 39.1**	**+0.5**
EVGI	**Lefkada island**	**1.30**	**160**	P	**Pb**	**03 07 38.7**	**-0.1**
EVGI	**Lefkada island**	**1.30**	**160**	P	**Pb**	**03 07 38.6**	**-0.1**
KZN	**Kozani**	**1.38**	**70**	P	**Pn**	**03 07 39.5**	**+0.6**
OHR	**Ohrid**	**1.38**	**23**	*i* Pn	**Pb**	**03 07 40.1**	**-0.1**
FSK	**Fiskardo**	**1.43**	**165**	P	**Pb**	**03 07 40.5**	**-0.4**
TIR	**Tirane**	**1.52**	**354**	Pn	**Pn**	**03 07 41.0**	**+0.3**
TIR				Sn	**Sb**	**03 08 02.8**	**+1.5**
TIR				AML	AML	03 08 10.4	
	0.9nm,0.3s						
THL	**Klokotos Trika**	**1.52**	**100**	S	**Sb**	**03 08 05.2**	**+4.0**
THL	**Klokotos Trika**	**1.52**	**100**	P	**Pb**	**03 07 41.6**	**-0.9**
DMLN	**Damoulianata-K**	**1.61**	**172**	P	**Pb**	**03 07 43.2**	**-0.9**
DMLN	**Damoulianata-K**	**1.61**	**172**	P	**Pb**	**03 07 43.0**	**-1.2**
MAKR	**Makrakomi, Fth**	**1.79**	**117**	P	**Pb**	**03 07 47.6**	**+0.4**
RTZL	**Ratzakli, Kefa**	**1.84**	**163**	P	**Pb**	**03 07 46.6**	**-1.4**
PHP	**Peshkopia**	**1.86**	**8**	Pn	**Pn**	**03 07 46.9**	**+1.4**
PHP				Sn	**Sb**	**03 08 13.2**	**+1.9**
PHP				AML	AML	03 08 23.6	
	1.5nm,0.8s						
AGG	**Agios Georgios**	**1.92**	**114**	P	**Pb**	**03 07 49.5**	**+0.1**
AXS	**Araxos**	**1.93**	**148**	P	**Pb**	**03 07 48.0**	**-1.4**
EFP	**Efpalio**	**2.00**	**134**	P	**Pb**	**03 07 50.1**	**-0.6**
ULC	**Ulcinj**	**2.21**	**344**	*e*Pn	**Pn**	**03 07 51.9**	**+1.5**
DRO	**Drossia**	**2.27**	**145**	P	**Pb**	**03 07 53.6**	**-1.8**
SKO	**Skopje**	**2.37**	**25**	*i* Pn	**Pb**	**03 07 57.3**	**+0.3**
VAY	**Valandovo**	**2.41**	**51**	*i* Pn	**Pb**	**03 07 56.3**	**-1.4**
KLV	**Kalavryta, Ach**	**2.41**	**137**	P	**Pb**	**03 07 55.9**	**-1.9**
DRME	**Dracevica, Mon**	**2.44**	**344**	*e*Pn	**Pn**	**03 07 53.7**	**+0.2**
DRME	**Dracevica, Mon**	**2.44**	**344**	*i* Pn	**Pn**	**03 07 53.8**	**+0.3**
DRME				*i* Sn	**Sb**	**03 08 25.7**	**-2.2**
NEO	**Neokhori**	**2.49**	**101**	P	**Pb**	**03 07 56.8**	**-2.3**
NOCI	**Noci**	**2.49**	**293**	P	**Pn**	**03 07 53.7**	**-0.5**
NOCI				S	**Sb**	**03 08 30.2**	**+0.8**
BUM	**Brajici-Budva**	**2.62**	**340**	*e*Pn	**Pn**	**03 07 56.4**	**+0.5**
BUM				*i* Sn	**Sn**	**03 08 29.8**	**+2.8**
PDG	**Podgorica**	**2.66**	**347**	*e*Pn	**Pn**	**03 07 56.3**	**-0.2**
PDG				*e*Sn	**Sn**	**03 08 30.7**	**+2.7**
PDG	**Podgorica**	**2.66**	**347**	*e*Pn	**Pn**	**03 07 57.2**	**+0.7**
PDG				*i* Sn	**Sb**	**03 08 31.6**	**-2.6**
PVV	**Plav**	**2.75**	**358**	*e*Pn	**Pn**	**03 08 00.0**	**+2.1**
PVV	**Plav**	**2.75**	**358**	*i* Pn	**Pn**	**03 07 59.9**	**+2.1**
CEME	**Cevo**	**2.84**	**342**	*i* Pn	**Pn**	**03 07 59.9**	**+0.9**
HCV	**Herceg Novi**	**2.87**	**336**	*e*Pn	**Pn**	**03 07 59.9**	**+0.6**
HCV				*e*Sn	**Sn**	**03 08 36.2**	**+3.1**
BEY	**Berane**	**3.03**	**357**	*e*Pn	**Pn**	**03 08 03.6**	**+1.9**
IVA	**Berane**	**3.03**	**357**	*e*Pn	**Pn**	**03 08 03.2**	**+1.5**
IVA				*e*Sn	**Sn**	**03 08 41.2**	**+3.9**
KOME	**Kolasin**	**3.04**	**352**	*e*Pn	**Pn**	**03 08 04.0**	**+2.2**
KOME	**Kolasin**	**3.04**	**352**	*e*Pn	**Pn**	**03 08 03.0**	**+1.2**
KOME				*e*Sn	**Sb**	**03 08 41.4**	**-3.8**
TREB	**Trebinje**	**3.16**	**336**	*e*Pn	**Pn**	**03 08 02.3**	**-1.0**
BOSS	**Bosilegrad**	**3.21**	**34**	*e*Pn	**Pn**	**03 08 07.6**	**+3.5**
BARS	**Barje**	**3.25**	**23**	*e*Pn	**Pn**	**03 08 06.1**	**+1.5**
BRY	**Bratogost**	**3.27**	**340**	*e*Pn	**Pn**	**03 08 05.8**	**+0.8**
BRY				*e*Sn	**Sn**	**03 08 44.4**	**+1.1**
SJES	**Sjenica**	**3.42**	**359**	*e*Pn	**Pn**	**03 08 09.5**	**+2.5**
SELS	**Selova**	**3.47**	**13**	*e*Pn	**Pn**	**03 08 11.0**	**+3.4**
STON	**Ston**	**3.52**	**330**	*e*Pn	**Pn**	**03 08 06.9**	**-1.3**
PLE	**Pljevlja**	**3.53**	**352**	*e*Pn	**Pn**	**03 08 09.4**	**+0.9**
PLE	**Pljevlja**	**3.53**	**352**	*i* Pn	**Pn**	**03 08 09.4**	**+1.3**
PLE				*i* Sn	**Sn**	**03 08 52.0**	**+2.5**
VTS	**Vitosha**	**3.66**	**40**	*e*Pn	**Pn**	**03 08 14.0**	**+3.7**
IVAS	**Ivanjica**	**3.73**	**1**	*e*Pn	**Pn**	**03 08 12.3**	**+1.0**
GOCS	**Kraljevo Serbi**	**3.77**	**9**	*e*Pn	**Pn**	**03 08 13.8**	**+2.0**
ZAPS	**Zavoj**	**3.93**	**28**	*e*Pn	**Pn**	**03 08 18.1**	**+4.2**
BOVS	**Bovan**	**3.98**	**17**	*e*Pn	**Pn**	**03 08 15.3**	**+0.7**
GRUS	**Gruza**	**4.07**	**6**	*e*Pn	**Pn**	**03 08 18.5**	**+2.6**
BLKB	**Belogradchik**	**4.25**	**26**	*e*Pn	**Pn**	**03 08 20.7**	**+2.4**
DIVS	**Divibare**	**4.26**	**359**	*e*Pn	**Pn**	**03 08 19.6**	**+1.1**
ZAGS	**Zajecar**	**4.28**	**21**	*e*Pn	**Pn**	**03 08 21.4**	**+2.6**
TEKS	**Tekeris**	**4.72**	**355**	*e*Pn	**Pn**	**03 08 25.2**	**+0.4**
SOKA	**Soboth**	**7.76**	**333**	*i* Pn	**Pn**	**03 09 06.5**	**-0.1**
	1.6nm,0.5s						
ARSA	**Arzberg**	**8.11**	**337**	*e*Pn	**Pn**	**03 09 12.0**	**+0.7**
	2.3nm,0.7s						
CONA	**Conrad Observa**	**8.64**	**341**	*e*Pn	**Pn**	**03 09 19.6**	**+1.0**
	0.3nm,0.3s						
BIOA	**Bad Ischl, Aus**	**9.12**	**331**	*e*Pn	**Pn**	**03 09 25.3**	**+0.1**
	1.5nm,0.4s						
LESA	**Schwarzleotal**	**9.29**	**327**	*e*Pn	**Pn**	**03 09 27.4**	**-0.1**
	1.0nm,0.4s						
LESA				*e*Sn	**Sn**	**03 11 10.1**	**-1.1**
	1.2nm,0.5s						
WTTA	**Wattenberg**	**9.62**	**323**	*i* Pn	**Pn**	**03 09 32.4**	**+0.3**
	1.2nm,0.3s						
WATA	**Walderalm**	**9.70**	**323**	*i* Pn	**Pn**	**03 09 33.1**	**-0.1**
	2.3nm,0.4s						
SQTA	**Sankt Quirin**	**9.79**	**322**	*i* Pn	**Pn**	**03 09 34.3**	**-0.1**
	1.2nm,0.3s						
MOTA	**Moosalm**	**9.93**	**322**	*i* Pn	**Pn**	**03 09 36.1**	**-0.2**
	0.6nm,0.4s						
MOTA				*e*Sn	**Sn**	**03 11 24.7**	**-2.4**
	2.0nm,0.7s						

AUST 21 03:10:51.2±0.5, **18°S**±4°×**12°0E**±°, **h10**km, **mb4.1**/6, **ML2.8**/10, **Error ellipse: s-maj=10.2km s-min=4.9km az=148.1, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAAN	**Eighty Mile Be**	**1.61**	**130**	P	Pb	03 11 21.0	-0.1
CAAN				S	Sb	03 11 41.7	+0.2
AUBRM	**Broome Senior**	**1.94**	**82**	P	Pn	03 11 24.0	-0.3
AUBRM				S	Sb	03 11 50.3	-0.7
MBWA	**Marble Bar**	**2.95**	**189**	P	Pn	03 11 39.3	+1.1
MBWA				S	Sn	03 12 12.4	-1.4
PSAC1	**Pilbara Seismi**	**3.31**	**186**	P	Pn	03 11 43.9	+0.7
PSAC2	**Pilbara Seismi**	**3.33**	**185**	P	Pn	03 11 44.3	+0.8
PSA00	**Pilbara Seismi**	**3.35**	**186**	P	Pn	03 11 44.4	+0.7
PSAB3	**Pilbara Seismi**	**3.37**	**186**	P	Pn	03 11 44.8	+0.8
FITZ	**Fitzroy Crossi**	**5.17**	**89**	P	Pn	03 12 07.9	-0.8
	comp=Z,0.0nmcomp=Z,1.1nm,0.6s						
GIRL	**Giralia**	**7.12**	**231**	P	Pn	03 12 37.3	+1.8
	comp=Z,0.1nmcomp=Z,37nm,1.8s						
GIRL				S	Sn	03 13 53.0	-3.5
CYOQZ	**Cooralya Stati**	**8.42**	**222**	P	Pn	03 12 54.5	+1.2
CYOQZ				S	Sn	03 13 23.2	-5.4
MEEK	**Meekatharra**	**8.50**	**190**	P	Pn	03 12 54.5	0.0
MEEK	**Meekatharra**	**8.50**	**190**	S	Sn	03 14 24.5	-6.1
WRKA	**Warakurna**	**10.12**	**133**	P	Pn	03 13 16.7	-0.1
	comp=Z,0.0nmcomp=Z,3.9nm,1.9s						
MORW	**Morawa**	**11.45**	**199**	P	Pn	03 13 33.4	-1.4
MTN	**Manton Dam**	**11.81**	**65**	P	Pn	03 13 37.9	-1.9
	comp=Z,6.0nm,0.9s						
BLDU	**Ballidu**	**12.74**	**194**	P	Pn	03 13 51.0	-1.6
	comp=Z,12nm,0.7s						
KMBL	**Kambalda**	**13.17**	**174**	P	Pn	03 13 57.4	-1.0
KLBR	**Kellerberrin**	**13.49**	**189**	P	Pn	03 14 01.4	-1.4
	comp=Z,23nm,1.4s						

*IDC **21** 03:14:38.8±5.0, 6°.91S×129°.54E, h179km±48km, mb3.5/3, mbtmp4.0/7, Error ellipse: s-maj=46.1km s-min=16.3km az=57.0*

ISC 21 03:14:35.8±1.3, **6°.9S**±0°.1×**129°.7E**±0°.1, **h150**km, **n7,** σ2§**07**/10, **mb4.0**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.85**	**240**	P	**Pn**	**03 16 13.0**	**-0.9**
	12nm,0.3s,baz=53,slow=5.1,SNR=1.1						
BATI				S	**Sn**	**03 17 32.3**	**+1.4**
	45nm,0.4s,baz=85,slow=18,SNR=8.4						
FITZ	**Fitzroy Crossi**	**11.86**	**199**	P	**Pn**	**03 17 22.9**	**+2.5**
	0.8nm,0.4s,baz=14,slow=12,SNR=2.1						
FITZ				S	**Sn**	**03 19 29.1**	**-2.4**
	4.5nm,0.6s,baz=106,slow=18,SNR=5.3						
WRA	**Warramunga Arr**	**13.76**	**161**	P	**Pn**	**03 17 44.9**	**+0.1**
	1.0nm,0.6s,baz=340,slow=13,SNR=10						
WRA				S	Sn	03 20 08.9	-8.4
	2.8nm,0.6s,baz=350,slow=18,SNR=10						
ASAR	**Alice Springs**	**17.19**	**167**	P	**P**	**03 18 29.0**	**+2.7**
	2.9nm,0.6s,baz=354,slow=10,SNR=20						
ASAR				S	**S**	**03 21 35.5**	**-2.5**
	0.7nm,0.5s,baz=75,slow=23,SNR=5.9						
STKA	**Stephens Creek**	**27.25**	**158**	P	**P**	**03 20 07.0**	**+1.0**
	1.5nm,0.4s,baz=320,slow=7.9,SNR=4.5						
	1.5nm,0.4s						
MKAR	**Makanchi Array**	**67.95**	**327**	P	**P**	**03 25 18.3**	**-0.2**
	1.4nm,0.5s,baz=122,slow=8.1,SNR=14						
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.24**	**329**	P	**P**	**03 25 43.5**	**-1.0**
	0.2nm,0.5s,baz=124,slow=4.5,SNR=4.3						
	0.2nm,0.5s						

*SJA **21** 03:17:26.1±0.8, 33°.75S×66°.85W, h12km, ML4.0, MW3.7*
*IDC **21** 03:17:27.2±1.0, 33°.54S×66°.79W, h0km, mb3.5/2, mbtmp3.5/7, ML3.6/5, Error ellipse: s-maj=29.7km s-min=18.4km az=85.0*

ISC 21 03:17:29.0±1.6, **33°.62S**±0°.03×**66°.98W**±0°.03, **h14**km±11km, **n34,** σ2§**08**/61, **San Luis Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVIZ	**Vizcacheras**	**1.29**	**276**	*e*P	**Pn**	**03 17 53.1**	**+0.3**
AVIZ				*e*S	**Sg**	**03 18 13.0**	**+2.2**
ACAN	**Cantantal**	**1.36**	**352**	*e*P	**Pn**	**03 17 54.5**	**+0.9**
MRA	**San Martin**	**1.60**	**42**	*e*P	**Pb**	**03 17 58.8**	**+0.3**
MRA				*e*S	**Sg**	**03 18 22.4**	**+1.8**
MRA				IAML		03 18 24.0	
	comp=Z,2µm,0.6s						
AAGR	**Agrelo**	**1.64**	**289**	*e*P	**Pn**	**03 17 59.1**	**+1.5**
AAGR				*e*S	Sn	03 18 04.8	-14
AAGR				*e*S	**Sb**	**03 18 15.7**	**-4.0**
AAGR				IAML		03 18 23.9	
	comp=Z,837nm,0.5s						
RFA	**San Rafael**	**1.68**	**227**	*e*P	**Pn**	**03 17 57.3**	**-0.8**
RFA				*e*S	**Sb**	**03 18 21.8**	**+0.9**
RFA				IAML		03 18 23.3	
	comp=Z,741nm,0.4s						
ARCO	**CERRO ARCO**	**1.81**	**295**	*e*P	**Pn**	**03 18 02.0**	**+2.1**
ARCO				*e*S	**Sg**	**03 18 29.0**	**+1.6**
ARCO				IAML		03 18 29.7	
	comp=Z,2µm,0.4s						
ASAL	**Salagasta**	**1.87**	**303**

Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 0 km
*THE **21** 03:25:09.8,36°N±3°×2°7E±°,h116km±4km,M3.1/11, MLh3.1/11*
*HLW **21** 03:25:11.0,36°.16N×26°.64E,h12km±3km,Ml3.8*
*AFAD **21** 03:25:12.0,36°.48N×26°.98E,h107km±6km,MW3.5*
*GII **21** 03:25:12.1±0.0,36°.012N±0°.002×27°.106E±0°.001,h40km, Mws3.4,confirmed*

ISC 21 03:25:08.1±0.7,**36°.34N**±0°.04×**26°.88E**±0°.04,**h132**km±5km, **n173,**σ1°.32/209,**2D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NISR	**Nisiros**	**0.34**	**36**	P		**Pn**		**03 25 26.4**	**-0.2**
NISR				S		**Sn**		**03 25 39.3**	**-1.4**
NISR	**Nisiros**	**0.34**	**36**	P		**Pn**		**03 25 26.4**	**-0.2**
NISR				S		**Sn**		**03 25 38.7**	**-1.9**
ASTA	**Astypalaia**	**0.47**	**296**	P		**Pn**		**03 25 26.6**	**-0.6**
ASTA				S		**Sn**		**03 25 39.5**	**-2.1**
YAZI	**Mula-Dat§a-**	**0.58**	**53**	P		**Pn**		**03 25 27.7**	**-0.1**
YAZI				S		**Sn**		**03 25 41.2**	**-1.6**
KLNA	**Kalymnos**	**0.62**	**7**	P		**Pn**		**03 25 27.3**	**-0.8**
KLNA				S		**Sn**		**03 25 40.9**	**-2.5**
DAT	**Datca**	**0.69**	**55**	Pg		**Pn**		**03 25 28.7**	**0.0**
DAT				Sg		**Sn**		**03 25 43.5**	**-0.8**
DAT	**Datca**	**0.69**	**55**	S		**Sn**		**03 25 43.7**	**-0.7**
DATC	**Datca-Mugla**	**0.76**	**56**	Pg		**Pn**		**03 25 29.3**	**+0.2**
BODT	**Bodrum**	**0.80**	**25**	Pg		**Pn**		**03 25 29.9**	**+0.4**
BODT				Sg		**Sn**		**03 25 44.1**	**-1.7**
BODT	**Bodrum**	**0.80**	**25**	P		**Pn**		**03 25 29.9**	**+0.4**
KARP	**Karpathos**	**0.82**	**164**	Pg		**Pn**		**03 25 30.8**	**+1.2**
KARP	**Karpathos**	**0.82**	**164**	P		**Pn**		**03 25 31.0**	**+1.3**
KARP				S		**Sn**		**03 25 46.9**	**+0.9**
KARP	**Karpathos**	**0.82**	**164**	P		**Pn**		**03 25 30.9**	**+1.2**
KARP				S		**Sn**		**03 25 47.3**	**+1.3**
YKAV	**Yalikavak-Bodr**	**0.85**	**22**	Pg		**Pn**		**03 25 29.2**	**-0.6**
BDRM	**Kayabasi**	**0.86**	**32**	P		**Pn**		**03 25 29.5**	**-0.4**
BDRM				S		**Sn**		**03 25 43.5**	**-3.0**
RGE1	**Gennadi, Rhode**	**0.90**	**110**	P		**Pn**		**03 25 31.6**	**+1.3**
ARG	**Arkhangelos**	**1.01**	**96**	Pn		**Pn**		**03 25 32.8**	**+1.5**
ARG				Sn		**Sn**		**03 25 50.1**	**+1.2**
ARG	**Arkhangelos**	**1.01**	**96**	P		**Pn**		**03 25 32.7**	**+1.5**
ARG				S		**Sn**		**03 25 49.9**	**+1.0**
ARG	**Arkhangelos**	**1.01**	**96**	P		**Pn**		**03 25 32.6**	**+1.3**
ARG				S		**Sn**		**03 25 49.7**	**+0.9**
RDI1	**Rhodes Town Ha**	**1.09**	**84**	P		**Pn**		**03 25 33.3**	**+1.3**
THERA	**Ancient Thera,**	**1.14**	**272**	P		**Pn**		**03 25 32.4**	**-0.1**
THERA	**Ancient Thera,**	**1.14**	**272**	P		**Pn**		**03 25 32.2**	**-0.3**
THERA				S		**Sn**		**03 25 49.2**	**-1.8**
TURN	**Turunc**	**1.18**	**68**	P		**Pn**		**03 25 33.5**	**+0.6**
TURN				S		**Sn**		**03 25 51.1**	**-0.7**
TUN	**Turunc**	**1.18**	**68**	Pn		**Pn**		**03 25 33.7**	**+0.8**
TURN				Sn		**Sn**		**03 25 51.1**	**-0.7**
SNT5	**Nea Kammeni, S**	**1.20**	**274**	P		**Pn**		**03 25 33.0**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.20**	**274**	P		**Pn**		**03 25 33.0**	**-0.1**
SAP3	**Santorini-Thir**	**1.24**	**275**	P		**Pn**		**03 25 33.4**	**-0.2**
SAP3	**Santorini-Thir**	**1.24**	**275**	P		**Pn**		**03 25 33.6**	**0.0**
SIT2	**Siteia**	**1.29**	**209**	P		**Pn**		**03 25 35.5**	**+1.5**
APE	**Apeiranthos**	**1.31**	**304**	Pn		**Pn**		**03 25 33.4**	**-0.9**
APE				Sn		**Sn**		**03 25 51.5**	**-2.7**
APE	**Apeiranthos**	**1.31**	**304**	P		**Pn**		**03 25 33.7**	**-0.6**
APE	**Apeiranthos**	**1.31**	**304**	P		**Pn**		**03 25 33.6**	**-0.7**
APE				S		**Sn**		**03 25 52.1**	**-2.1**
SMG	**Samos**	**1.37**	**359**	P		**Pn**		**03 25 34.0**	**-0.9**
SMG	**Samos**	**1.37**	**359**	P		**Pn**		**03 25 33.8**	**-1.1**
YER	**Yerkesik**	**1.38**	**54**	Pn		**Pn**		**03 25 35.7**	**+0.7**
YER	**Yerkesik**	**1.38**	**54**	P		**Pn**		**03 25 36.1**	**+1.0**
YER				S		**Sn**		**03 25 56.0**	**+0.4**
GCAM	**G?zelcaml?**	**1.39**	**12**	Pn		**Pn**		**03 25 34.6**	**-0.5**
KRL1	**Karlovasi Samo**	**1.46**	**355**	P		**Pn**		**03 25 34.9**	**-0.9**
MULA	**Mugla, Merkez-**	**1.48**	**51**	SPECP				03 25 37.0	
MULA				P		**Pn**		**03 25 37.3**	**+1.1**
MULA				S		**Sn**		**03 25 56.7**	**-0.9**
DALY	**Dalyan (Mula)**	**1.51**	**71**	Pn		**Pn**		**03 25 38.3**	**+2.0**
DALY				Sn		**Sn**		**03 25 58.6**	**+0.7**
AYDN	**Tasoluk**	**1.54**	**31**	P		**Pn**		**03 25 37.3**	**+0.5**
AYDN				S		**Sn**		**03 25 56.5**	**-2.4**
SABU	**Mula-Dalaman**	**1.75**	**73**	SPECP				03 25 40.0	
SABU				P		**Pn**		**03 25 40.9**	**+1.7**
SABU				S		**Sn**		**03 26 02.7**	**-0.3**
IACM	**Heraklion**	**1.79**	**236**	S		**Pn**		**03 25 41.0**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**1.80**	**26**	Pn		**Pn**		**03 25 39.8**	**-0.1**
FETY	**Fethiye**	**1.80**	**80**	P		Pn		03 25 31.1	-8.7
FETY				S		Sn		03 25 54.4	-10
ESEN	**Aydn-Nazilli**	**1.87**	**38**	P		**Pn**		**03 25 41.2**	**+0.6**
ESEN				S		**Sn**		**03 26 03.0**	**-2.5**
IZZE	**Mula-Seydike**	**1.90**	**86**	SPECP				03 25 42.0	
IZZE				P		**Pn**		**03 25 42.0**	**+1.2**
IZZE				S		**Sn**		**03 26 05.7**	**-0.3**
IDI	**Anoyia**	**1.93**	**238**	P		**Pn**		**03 25 41.5**	**+0.2**
	20nm,0.2s,baz=59,slow=5.2,SNR=217								
IDI				S		**Sn**		**03 26 04.5**	**-2.2**
	199nm,0.3s,baz=169,slow=19,SNR=30								
IDI	**Anoyia**	**1.93**	**238**	Pn		**Pn**		**03 25 41.9**	**+0.6**
IDI	**Anoyia**	**1.93**	**238**	P		**Pn**		**03 25 41.9**	**+0.6**
IDI	**Anoyia**	**1.93**	**238**	P		**Pn**		**03 25 41.9**	**+0.6**
DNZT	**Denizli-Tavas-**	**1.96**	**61**	P		**Pn**		**03 25 43.1**	**+1.4**
DNZT				S		**Sn**		**03 26 06.9**	**-0.6**
NAZL	**Nazilli-Aydin**	**1.98**	**34**	Pn		**Pn**		**03 25 42.3**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.98**	**55**	P		**Pn**		**03 25 42.9**	**+0.9**
TAVA				S		**Sn**		**03 26 07.6**	**-0.4**
URLA	**Izmir**	**2.03**	**354**	Pn		**Pn**		**03 25 41.7**	**+0.9**
CAME	**Cameli-Denizli**	**2.04**	**72**	Pn		**Pn**		**03 25 44.1**	**+1.3**
BLCB	**Balcova**	**2.05**	**4**	Pn		**Pn**		**03 25 42.1**	**-0.6**
CAEL	**Denizli, Camel**	**2.11**	**67**	SPECP				03 25 45.0	
CAEL				P		**P**		**03 25 45.0**	**+1.4**
CHOS	**Chios island**	**2.15**	**342**	Pn		**Pn**		**03 25 43.2**	**-0.9**
CHOS	**Chios island**	**2.15**	**342**	P		**Pn**		**03 25 43.1**	**-0.9**
CHOS	**Chios island**	**2.15**	**342**	P		**Pn**		**03 25 43.1**	**-0.9**
DNIZ	**Denizli-Tavas-**	**2.15**	**53**	SPECP				03 25 45.0	
DNIZ				P		**Pn**		**03 25 45.1**	**+1.0**
DNIZ				S		**Sn**		**03 26 11.6**	**-0.2**
ODEM	**Odemis-Izmir**	**2.16**	**26**	Pn		**Pn**		**03 25 44.3**	**+0.2**
ODEM				Sn		**Sn**		**03 26 09.8**	**-2.0**
AKAS	**Kas**	**2.20**	**92**	SPECP				03 25 46.0	
AKAS				P		**Pn**		**03 25 46.7**	**+1.9**
AKAS				S		**Sn**		**03 26 12.4**	**-0.5**
AKAS	**Kas**	**2.20**	**92**	Pn		**Pn**		**03 25 46.6**	**+1.8**
KIRA	**zmir-Kiraz**	**2.22**	**33**	SPECP				03 25 45.0	
KIRA				P		**Pn**		**03 25 45.2**	**+0.3**
KIRA				S		**Sn**		**03 26 11.3**	**-1.9**
KNIK	**Mula-Seydike**	**2.23**	**76**	SPECP				03 25 46.0	
KNIK				P		**Pn**		**03 25 46.5**	**+1.4**
KNIK				S		**Sn**		**03 26 13.7**	**+0.3**
APMY	**Acipayam-Deniz**	**2.25**	**59**	Pn		**Pn**		**03 25 46.3**	**+1.0**
EAG2	**Marmaro, Chios**	**2.29**	**345**	P		**Pn**		**03 25 44.9**	**-0.7**
GOLH	**Golhisar**	**2.33**	**67**	SPECP				03 25 48.0	
GOLH				P		**Pn**		**03 25 48.1**	**+1.8**
GOLH				S		**Sn**		**03 26 15.3**	**-0.4**
CHNB	**Souda**	**2.44**	**250**	P		**Pn**		**03 25 48.5**	**+0.9**
CHAN	**Chania**	**2.44**	**251**	P		**Pn**		**03 25 47.9**	**+0.3**
CHAN	**Chania**	**2.44**	**251**	P		**Pn**		**03 25 48.3**	**+0.7**
CH01	**Chania**	**2.46**	**251**	P		**Pn**		**03 25 48.8**	**+1.0**
INCE	**Denizli-Bozkur**	**2.56**	**57**	SPECP				03 25 50.0	
INCE				P		**Pn**		**03 25 50.0**	**+0.9**
INCE				S		**Sn**		**03 26 20.6**	**-0.1**
KARY	**Karystos**	**2.58**	**312**	P		**Pn**		**03 25 48.2**	**+0.5**
KULA	**Kula-Manisa**	**2.60**	**33**	Pn		**Pn**		**03 25 49.9**	**+0.3**
GVD	**Gavdhos**	**2.72**	**238**	P		**Pn**		**03 25 52.6**	**+1.4**
GVD				S		**Sn**		**03 26 25.3**	**+0.9**
GVD	**Gavdhos**	**2.72**	**238**	P		**Pn**		**03 25 52.9**	**+1.7**
KNDR	**Palaiochora Ch**	**2.87**	**248**	P		**Pn**		**03 25 54.8**	**+1.8**
VLY	**Voula,Athens**	**2.90**	**302**	P		**Pn**		**03 25 53.5**	**+0.1**
DION	**Dionisos Attik**	**2.93**	**307**	P		**Pn**		**03 25 54.0**	**+0.2**
ANKY	**Antikythira Is**	**2.94**	**262**	P		**Pn**		**03 25 54.1**	**+0.2**
ANKY	**Antikythira Is**	**2.94**	**262**	P		**Pn**		**03 25 54.6**	**+0.7**
PRK	**Paraskevi**	**2.94**	**351**	P		**Pn**		**03 25 53.3**	**-0.7**
PRK	**Paraskevi**	**2.94**	**351**	P		**Pn**		**03 25 53.4**	**-0.7**
PTL	**Penteli**	**2.95**	**306**	P		**Pn**		**03 25 54.2**	**+0.1**
ATHU	**Athens Univers**	**2.96**	**304**	P		**Pn**		**03 25 54.2**	**0.0**
SIGR	**SIGRI**	**2.98**	**345**	P		**Pn**		**03 25 53.4**	**-1.1**
KLV	**Kalavryta, Ach**	**4.14**	**296**	P		**Pn**		**03 26 09.8**	**0.0**
MATC	**Matruh**	**4.99**	**177**	⇓P		**Pn**		**03 26 22.9**	**+1.9**
SLUM	**Salum**	**5.03**	**196**	⇓P		**Pn**		**03 26 22.9**	**+1.3**
CSS	**Mathiatis**	**5.43**	**103**	P		**Pn**		**03 26 27.4**	**+0.4**
CSS	**Mathiatis**	**5.43**	**103**	S		**Sn**		**03 27 27.2**	**-1.2**
BRTR	**Keskin Array B**	**6.32**	**56**	P		**Pn**		**03 26 40.6**	**+1.6**
	5.0nm,0.8s,baz=234,slow=15,SNR=30								
BRTR				S		**Sn**		**03 27 52.1**	**+2.2**
	1.1nm,0.5s,baz=222,slow=26,SNR=6.6								
SWA2		**7.17**	**190**	P		**Pn**		**03 26 51.2**	**+0.8**
SWA2				S		**Sn**		**03 28 06.7**	**-3.8**
HNTI	**Hanita**	**7.56**	**113**	P		**Pn**		**03 26 57.4**	**+1.8**
ZRT	**Zar'it**	**7.64**	**113**	P		**Pn**		**03 26 56.8**	**+0.1**
OFRI	**`Ofer**	**7.65**	**117**	P		**Pn**		**03 26 57.2**	**+0.4**
OFRI	**`Ofer**	**7.65**	**117**	S		**Sn**		**03 28 19.6**	**-2.4**
HWQ	**Hawqa**	**7.69**	**103**	*e*P		**Pn**		**03 26 57.5**	**+0.1**
QRWL	**Qaraoun**	**7.74**	**108**	*e*P		**Pn**		**03 26 58.8**	**+0.6**
MMC7	**Mount Meron ar**	**7.75**	**113**	P		**Pn**		**03 26 58.6**	**+0.4**
MMA0B	**Mount Meron ar**	**7.76**	**113**	P		**Pn**		**03 26 58.9**	**+0.5**
MMA0B	**Mount Meron ar**	**7.76**	**113**	P		**Pn**		**03 26 58.9**	**+0.5**
MMA0B	**Mount Meron ar**	**7.76**	**113**	S		**Sn**		**03 28 23.3**	**-1.5**
MMAI	**Mount Meron Ar**	**7.76**	**113**	P		**Pn**		**03 26 58.3**	**0.0**
	4.8nm,0.3s,baz=303,slow=13,SNR=44								
MMAI				S		**Sn**		**03 28 23.6**	**-1.2**
	1.9nm,0.3s,baz=192,slow=12,SNR=6.6								
ZAHL	**Zahle**	**7.78**	**106**	*e*P		**Pn**		**03 26 58.3**	**-0.4**
BEIL	**Beino**	**7.80**	**101**	*e*P		**Pn**		**03 26 58.9**	**0.0**
GEM	**Giv'at Ha'Em**	**7.87**	**111**	P		**Pn**		**03 27 00.1**	**+0.3**
GEM	**Giv'at Ha'Em**	**7.87**	**111**	S				03 27 04.9	
GEM	**Giv'at Ha'Em**	**7.87**	**111**	P		**Pn**		**03 27 00.4**	**+0.6**
GEM	**Giv'at Ha'Em**	**7.87**	**111**	S		**Sn**		**03 28 26.0**	**-1.3**
SHBL	**Chebaa**	**7.87**	**110**	*e*P		**Pn**		**03 27 00.2**	**+0.2**
RCY	**Rachaya**	**7.88**	**108**	*e*P		**Pn**		**03 27 00.2**	**+0.1**
LVBS	**Lehavot Habash**	**7.89**	**111**	P		**Pn**		**03 27 00.1**	**+0.1**
SLTI	**Sal'it**	**7.89**	**119**	P		**Pn**		**03 27 00.5**	**+0.5**
SLTI	**Sal'it**	**7.89**	**119**	S		**Sn**		**03 28 26.2**	**-1.6**
NATI	**Neve Ativ**	**7.90**	**110**	P		**Pn**		**03 27 00.6**	**+0.5**
NATI	**Neve Ativ**	**7.90**	**110**	S				03 27 06.8	
NATI	**Neve Ativ**	**7.90**	**110**	P		**Pn**		**03 27 00.6**	**+0.5**
NATI	**Neve Ativ**	**7.90**	**110**	S		**Sn**		**03 28 26.4**	**-1.6**
AMID	**Amiad**	**7.90**	**113**	P		**Pn**		**03 27 01.1**	**+0.8**
AMID	**Amiad**	**7.90**	**113**	S				03 27 05.9	
HDNS	**Had-Ness**	**7.98**	**113**	P		**Pn**		**03 27 02.4**	**+1.1**
MMLI	**Mount Malkishu**	**8.06**	**116**	P		**Pn**		**03 27 03.5**	**+1.2**
MMLI	**Mount Malkishu**	**8.06**	**116**	S		**Sn**		**03 28 30.0**	**-1.9**
KSHT	**Keshet**	**8.08**	**112**	P		**Pn**		**03 27 03.3**	**+0.7**
KSHT	**Keshet**	**8.08**	**112**	S				03 27 10.3	
KSHT	**Keshet**	**8.08**	**112**	P		**Pn**		**03 27 03.4**	**+0.7**
KSHT	**Keshet**	**8.08**	**112**	S		**Sn**		**03 28 30.8**	**-1.7**
GOLA	**Golan Heights**	**8.09**	**114**	P		**Pn**		**03 27 05.4**	**+2.7**
SALP	**Salfit**	**8.09**	**119**	P		**Pn**		**03 27 03.4**	**+0.6**
SALP	**Salfit**	**8.09**	**119**	S		**Sn**		**03 28 31.0**	**-1.7**
AMAZ	**Amatzia**	**8.22**	**123**	P		**Pn**		**03 27 05.4**	**+0.9**
AMAZ	**Amatzia**	**8.22**	**123**	S		**Sn**		**03 28 33.3**	**-2.4**
HMDT	**Nahal Hemdat**	**8.23**	**117**	P		**Pn**		**03 27 05.5**	**+0.9**
HMDT	**Nahal Hemdat**	**8.23**	**117**	S		**Sn**		**03 28 34.2**	**-1.9**
KZIT	**Kziot**	**8.28**	**129**	P		**Pn**		**03 27 05.9**	**+0.6**
KZIT	**Kziot**	**8.28**	**129**	S		**Sn**		**03 28 33.5**	**-3.8**
YTIR	**Yattir**	**8.46**	**124**	P		**Pn**		**03 27 08.7**	**+0.9**
YTIR	**Yattir**	**8.46**	**124**	S		**Sn**		**03 28 39.4**	**-2.2**
DSI	**Dead Sea**	**8.51**	**122**	P		**Pn**		**03 27 09.3**	**+0.9**
MSBI	**Mazada**	**8.65**	**123**	P		**Pn**		**03 27 11.4**	**+1.2**
MSBI	**Mazada**	**8.65**	**123**	S		**Sn**		**03 28 44.4**	**-1.7**
GHAJ	**Ghor Haditha**	**8.80**	**122**	P		**Pn**		**03 27 12.8**	**+0.6**
GHAJ	**Ghor Haditha**	**8.80**	**122**	S		**Sn**		**03 28 47.9**	**-1.8**
IDAN	**Idan**	**8.89**	**126**	P		**Pn**		**03 27 13.8**	**+0.2**
IDAN	**Idan**	**8.89**	**126**	S		**Sn**		**03 28 49.6**	**-2.5**
KRMI	**Paran Flat**	**9.03**	**131**	P		**Pn**		**03 27 15.5**	**+0.1**
KRMI	**Paran Flat**	**9.03**	**131**	S		**Sn**		**03 28 52.3**	**-3.2**
PRNI	**Paran**	**9.04**	**129**	P		**Pn**		**03 27 16.2**	**+0.7**
PRNI	**Paran**	**9.04**	**129**	S		**Sn**		**03 28 52.5**	**-3.2**
HFRF	**Wahat Farafira**	**9.24**	**172**	P		**Pn**		**03 27 19.4**	**+1.2**
HFRF				S		**Sn**		**03 28 58.1**	**-2.4**
ASF	**Jabal al Asfar**	**9.27**	**114**	P		**Pn**		**03 27 19.8**	**+1.1**
	1.5nm,0.3s,baz=309,slow=5.5,SNR=10								
ASF				S		**Sn**		**03 29 01.9**	**+0.5**
	2.7nm,0.4s,baz=48,slow=12,SNR=3.4								
HRFI	**Mount Harif**	**9.28**	**130**	P		**Pn**		**03 27 19.3**	**+0.5**
HRFI	**Mount Harif**	**9.28**	**130**	S		**Sn**		**03 28 58.3**	**-3.1**
MBRI	**Mt Berech**	**9.38**	**132**	P		**Pn**		**03 27 20.3**	**+0.2**
MBRI	**Mt Berech**	**9.38**	**132**	S		**Sn**		**03 29 01.5**	**-2.4**
EIL	**Elat**	**9.49**	**132**	P		**Pn**		**03 27 21.9**	**+0.4**
	3.0nm,0.5s,baz=323,slow=5.1,SNR=17								
EIL				S		**Sn**		**03 29 02.8**	**-3.7**
	12nm,0.4s,baz=328,slow=14,SNR=9.7								
EIL	**Elat**	**9.49**	**132**	P		**Pn**		**03 27 21.8**	**+0.2**
EIL	**Elat**	**9.49**	**132**	S		**Sn**		**03 29 02.9**	**-3.6**
VAE	**Valguarnera**	**10.05**	**280**	P		**Pn**		**03 27 29.1**	**+0.1**
	3.3nm,0.3s,baz=294,slow=18,SNR=2.6								
VAE				S		Sn		03 29 09.9	-10
	4.6nm,0.5s,baz=27,slow=16,SNR=2.3								
KEST	**Kesra**	**14.21**	**273**	P		**P**		**03 28 25.6**	**-1.2**
	4.5nm,0.8s,baz=92,slow=8.4,SNR=6.4								
KBA	**Koelnbreinsper**	**14.72**	**321**	*e*Pn		**P**		**03 28 32.9**	**+0.4**
	2.3nm,0.5s								
LESA	**Schwarzleotal**	**15.29**	**321**	*i* Pn		**P**		**03 28 39.1**	**+0.4**
	3.4nm,0.4s								
GERES	**GERESS Array B**	**15.79**	**326**	P		**Pn**		**03 28 43.2**	**+0.1**
	0.5nm,0.6s,baz=140,slow=10,SNR=4.5								
SQTA	**Sankt Quirin**	**15.93**	**318**	*e*Pn		**P**		**03 28 46.8**	**+0.9**
	1.8nm,0.5s								
FETA	**Feiten**	**16.08**	**317**	*e*Pn		**P**		**03 28 49.1**	**+1.6**
	6.8nm,1.2s								
DAVA	**Damuels**	**16.70**	**316**	*i* Pn		**P**		**03 28 55.8**	**+1.4**
	0.9nm,0.2s								
ESDC	**Sonseca Array**	**24.47**	**287**	P		**P**		**03 30 15.4**	**+0.6**
	0.3nm,0.4s,baz=90,slow=9.1,SNR=5.3								
	0.3nm,0.4s								
HFS	**Hagfors**	**25.28**	**344**	P		**P**		**03 30 21.4**	**-0.4**
	8.8nm,1.1s,baz=139,slow=7.8,SNR=5.0								
	8.8nm,1.1s								
OPO	**Ambohidratompo**	**57.89**	**157**	LR		LR		04 01 13.2	
	comp=Z,38nm,18.1s,baz=190,slow=38								

*NEIC **21** 03:36:56.8±0.9,32°.94N±0°.01×117°.54W±0°.01,h7km±4km, Error ellipse: s-maj=1.8km s-min=1.3km az=223.0*
PAS 21 03:36:57.3±0.8,**32°.94N**±0°.01×**117°.55W**±0°.01,**h15**km±5km, **ML3.2**/166,**ML3.0**/80(NEIC),**Error ellipse: s-maj=2.2km s-min=1.4km az=224.0,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GORC	**Green Oak Ranc**	**0.34**	**52**				Pg	03 37 04.1	-0.3
GORC							Sg	03 37 09.0	-0.1
CPE	**Camp Elliot**	**0.38**	**98**				Pg	03 37 04.7	-0.3
CPE	**Camp Elliot**	**0.38**	**98**				Sg	03 37 09.8	-0.4
SDMC	**San Diego Miss**	**0.38**	**115**				Pg	03 37 04.8	-0.3
SDMC							Sg	03 37 10.3	-0.1
MTRP	**Mission Trails**	**0.43**	**106**				Pg	03 37 05.7	-0.4
MTRP							Sg	03 37 11.6	-0.3
DPP	**Dos Picos Cty**	**0.51**	**84**				Pg	03 37 07.0	-0.5
DPP					IAML			03 37 14.4	
	comp=E,2μm,0.2s								
DPP	**Dos Picos Cty**	**0.51**	**84**				Sg	03 37 13.8	-0.6
SDRC	**San Diego Road**	**0.55**	**112**				Pg	03 37 07.6	-0.7
SDRC							Sg	03 37 14.7	-0.9
EML	**El Monte Cty P**	**0.59**	**95**				Pg	03 37 08.4	-0.7
EML							Sg	03 37 16.0	-1.0
TJX	**Tijuana**	**0.60**	**136**				Pg	03 37 08.9	-0.2
TJX							Sb	03 37 18.3	+0.5
OLP	**Otay Lakes Par**	**0.62**	**123**				Pg	03 37 08.9	-0.6
OLP							Sg	03 37 17.2	-0.5
PLM	**Palomar**	**0.71**	**54**				Pg	03 37 10.4	-0.8
PLM							Sg	03 37 20.0	-0.6
ELS	**Elsinore Mount**	**0.71**	**8**		Pg		Pg	03 37 10.2	-1.0
ELS					IAML			03 37 21.3	
	comp=E,951nm,0.4s								
ELS					IAML			03 37 22.1	
	comp=N,544nm,0.3s								
ELS	**Elsinore Mount**	**0.71**	**8**				Sg	03 37 19.6	-1.0
MURC	**Murrieta**	**0.72**	**24**				Pg	03 37 10.5	-0.9
MURC							Sg	03 37 20.0	-0.9
DUZA	**Dulzura**	**0.73**	**117**				Pg	03 37 10.7	-0.9
DUZA							Sg	03 37 20.4	-0.9
BAR	**Barrett**	**0.78**	**109**				Pg	03 37 11.5	-1.1
BAR					IAML			03 37 22.1	
	comp=E,1μm,0.2s								
BAR	**Barrett**	**0.78**	**109**				Sg	03 37 21.6	-1.4
BACC	**Bachelor Mtn.**	**0.79**	**32**				Pg	03 37 11.6	-1.1
BACC							Sg	03 37 22.1	-1.2
MATG	**Mataguay Scout**	**0.80**	**71**				Pg	03 37 11.8	-1.1
MATG							Sg	03 37 22.3	-1.2
SANC	**Santa Ana**	**0.81**	**340**				Sb	03 37 24.7	+0.8
JUEM	**Julian Eagle M**	**0.81**	**80**				Pg	03 37 12.0	-1.1
JUEM							Sg	03 37 22.8	-1.0
DGR	**Domenigoni Val**	**0.84**	**33**				Pb	03 37 12.4	-1.2
DGR							Sg	03 37 23.4	-1.2
SCI2	**San Clemente I**	**0.84**	**273**				Pb	03 37 12.8	-0.8
SCI2							Sg	03 37 24.0	-0.7
CIAC	**Catalina I. Ai**	**0.86**	**302**				Pb	03 37 12.6	-1.3
CIAC							Pn	03 37 24.4	+10
TKX	**Tecate**	**0.88**	**115**				Pb	03 37 13.1	-1.2
TKX							Sb	03 37 24.9	-0.9
HMTC	**Hemet**	**0.89**	**31**				Pb	03 37 13.3	-1.2
POB	**Polly Butte**	**0.91**	**35**				Pb	03 37 13.7	-1.2
POB							Sb	03 37 26.2	-0.6
BZNA	**Buzz No.'s Pla**	**0.92**	**53**				Pb	03 37 14.2	-0.9
BZNA							Sb	03 37 26.2	-1.0
CRY	**Cary Ranch**	**0.92**	**47**				Pb	03 37 14.1	-1.0
CRY							Sb	03 37 26.1	-1.1
FRD	**Ford Ranch, An**	**0.96**	**55**				Pb	03 37 14.9	-0.9
FRD							Sb	03 37 27.6	-0.8
FRD	**Ford Ranch, An**	**0.96**	**55**				Pb	03 37 14.9	-0.9
FRD							Sb	03 37 27.6	-0.9
CBX	**Cerro Bola**	**0.98**	**130**				Pb	03 37 15.1	-1.0
CBX	**Cerro Bola**	**0.98**	**130**		IAML			03 37 31.8	
	comp=N,710nm,0.6s								
CBX					IAML			03 37 33.6	
	comp=E,696nm,0.7s								
DNR	**Dunn Ranch,Anz**	**0.99**	**51**				Pb	03 37 15.5	-0.7
DNR	**Dunn Ranch,Anz**	**0.99**	**51**				Sb	03 37 28.7	-0.5
SNDA	**J Saunders Pla**	**0.99**	**52**				Pb	03 37 15.5	-0.8
SNDA							Sb	03 37 28.8	-0.4
PEC	**Perris**	**1.00**	**19**				Pb	03 37 15.3	-1.1
BORC	**Borrego Spring**	**1.00**	**71**				Pb

SPBC				S	Sn	03 59 25.0	-1.4	
PTBC	**PUERTO BERRIO,**	**1.41**	**278**	P	Pn	03 59 04.0	-0.5	
PTBC				S	Sn	03 59 28.1	-1.0	
CHIC	**Chingaza**	**1.83**	**202**	P	Pn	03 59 08.8	-0.2	
CHIC				S	Sn	03 59 36.5	-0.7	
OCAC	**Ocana**	**1.91**	**352**	P	Pn	03 59 09.6	+0.1	
OCAC				S	Sn	03 59 37.2	-0.9	
ROSC	**El Rosal**	**1.96**	**220**	P	Pn	03 59 11.4	+1.1	
	271nm,0.3s,baz=53,slow=20,SNR=244							
ROSC				S	Sn	03 59 41.7	+2.3	
	271nm,0.4s,baz=41,slow=20,SNR=9.7							
ROSC	**El Rosal**	**1.96**	**220**	P	Pn	03 59 11.3	+1.0	
ROSC				S	Sn	03 59 40.1	+0.7	
CVER	**Cruz Verde, Cu**	**2.08**	**210**	P	Pn	03 59 12.1	+0.4	
CVER				S	Sn	03 59 40.3	-1.6	
VILC	**Villavicencio,**	**2.31**	**196**	P	Pn	03 59 13.6	-0.2	
VILC				S	Sn	03 59 44.3	-1.5	
HELC	**Santa Helena**	**2.47**	**267**	P	Pn	03 59 16.1	+0.2	
HELC				S	Sn	03 59 48.9	-0.5	
GUY2C	**Guyana, Caldas**	**2.56**	**244**	P	Pn	03 59 17.6	+0.6	
GUY2C				S	Sn	03 59 51.2	-0.2	
NIZA	**Niza - Manizal**	**2.73**	**242**	P	Pn	03 59 21.1	+2.3	
UREC	**San Jos de Ur**	**2.84**	**300**	P	Pn	03 59 19.1	-0.7	
UREC				S	Sn	03 59 53.9	-2.6	
CBOC	**Ciudad Bolivar**	**2.99**	**261**	P	Pn	03 59 22.6	+0.8	
CBOC				S	Sn	03 59 57.9	-2.0	
PRAC	**Prado**	**3.19**	**215**	P	Pn	03 59 23.5	-0.6	
PRAC				S	Sn	04 00 01.3	-2.9	
DBBC	**Dabeiba**	**3.21**	**282**	P	Pn	03 59 24.8	+0.4	
DBBC				S	Sn	04 00 01.7	-3.0	
ORTC	**Ortega, Tolima**	**3.26**	**222**	P	Pn	03 59 24.5	-0.5	
ORTC				S	Sn	04 00 03.0	-2.8	
URMC	**La Uribe, Meta**	**3.35**	**203**	P	Pn	03 59 25.9	-0.2	
URMC				S	Sn	04 00 04.6	-3.2	
SDV	**Santo Domingo**	**3.48**	**43**	P	Pn	03 59 28.1	+0.3	
	41nm,0.3s,baz=210,slow=5.3,SNR=62							
SDV				S	Sn	04 00 10.4	-0.4	
	65nm,0.5s,baz=81,slow=20,SNR=31							
SDV	**Santo Domingo**	**3.48**	**43**	P	Pn	03 59 28.2	+0.4	
SDV				S	Sn	04 00 08.7	-2.2	
ARGC	**Ariguani, Magd**	**3.69**	**341**	P	Pn	03 59 31.0	+0.8	
ARGC				S	Sn	04 00 13.6	-1.7	
YOTC	**Yotoco, Valle**	**4.03**	**235**	P	Pn	03 59 34.1	-0.6	
YOTC				S	Sn	04 00 20.7	-2.5	
SJCC	**San Jacinto, C**	**4.12**	**329**	P	Pn	03 59 34.0	-1.6	
SJCC				S	Sn	04 00 21.8	-3.2	
LCBC	**Los crdobas,**	**4.13**	**307**	P	Pn	03 59 35.3	-0.5	
LCBC				S	Sn	04 00 23.6	-1.6	
MACC	**Macarena, Meta**	**4.24**	**191**	P	Pn	03 59 35.4	-1.9	
BETC	**Betania**	**4.35**	**213**	P	Pn	03 59 37.3	-1.3	
PIZC	**Pizarro, Choco**	**4.50**	**253**	P	Pn	03 59 40.6	+0.1	
PIZC				S	Sn	04 00 33.1	-0.6	
CRJC	**Cerrejon, Guaj**	**4.65**	**2**	P	Pn	03 59 41.3	-1.2	
CRJC				S	Sn	04 00 34.2	-3.2	
JAMC	**Jamundi, Valle**	**4.76**	**229**	P	Pn	03 59 43.7	-0.4	
JAMC				S	Sn	04 00 37.1	-3.0	
GARC	**Garzon, Huila**	**4.79**	**211**	P	Pn	03 59 43.5	-1.0	
GARC				S	Sn	04 00 37.8	-3.0	
CAPC	**Capurgana**	**4.84**	**298**	P	Pn	03 59 43.7	-1.1	
POPC	**Popayan, Colom**	**5.23**	**224**	P	Pn	03 59 50.5	+0.4	
	0.1nm363nm41nm,0.6s							
POPC				S	Sn	04 00 49.3	-1.6	
	0.1nm363nm41nm,0.6s							
FLOC	**Florencia**	**5.39**	**209**	P	Pn	03 59 51.7	-0.4	
	528nm17nm,0.6s							
FLOC				S	Sn	04 00 50.7	-3.8	
	528nm17nm,0.6s							
URIC	**Uribia, Colomb**	**5.43**	**11**	P	Pn	03 59 51.1	-1.3	
URIC				S	Sn	04 00 52.0	-3.2	
BBAC	**Balboa, Cauca**	**6.00**	**224**	P	Pn	04 00 00.0	-0.1	
	822nm21nm,0.4s							
BBAC				S	Sn	04 01 06.9	-2.0	
	822nm21nm,0.4s							
GCUF	**Volcan Galeras**	**6.65**	**220**	P	Pn	04 00 10.2	+1.3	
	13nm,0.6s							
GCUF				S	Sn	04 01 23.8	-0.9	
	13nm,0.6s							
BCIP	**Isla Barro Col**	**7.29**	**293**	P	Pn	04 00 16.5	-0.3	
JTS	**Las Juntas de**	**12.42**	**289**	P	P	04 01 29.5	+1.6	
	4.6nm,0.5s,baz=119,slow=19,SNR=5.2							
MTDJ	**Mount Denham**	**12.60**	**340**	*eP*	P	04 01 30.6	+0.6	
GTBY	**Guantanamo Bay**	**13.65**	**352**	*eP*	P	04 01 43.5	+1.9	
MASC	**Masc**	**13.80**	**355**	*eP*	P	04 01 45.2	+2.0	
RCC	**Rio Carpintero**	**13.81**	**350**	*eP*	P	04 01 45.8	+2.4	
MARVS	**Santiago de Cu**	**13.86**	**349**	*eP*	P	04 01 47.2	+3.4	
QMBU	**Quimbuelo**	**13.88**	**353**	*eP*	P	04 01 47.1	+2.9	
LPAZ	**La Paz**	**23.00**	**168**	P	P	04 03 20.9	-1.2	
	0.3nm,0.4s,baz=350,slow=8.0,SNR=4.5							
	0.3nm,0.4s							
TXAR	**Lajitas Array**	**36.84**	**312**	P	P	04 05 23.5	+0.2	
	0.2nm,0.7s,baz=119,slow=11,SNR=1.3							
	0.2nm,0.7s							
ILAR	**Eielson Array**	**77.43**	**335**	P	P	04 10 06.8	-0.2	
	0.2nm,0.6s,baz=108,slow=4.2,SNR=7.0							
	0.2nm,0.6s							

*KRSC **21** 04:10:57.4±1.6, 55.°64N×166.°30E, h36km±13km, Ml3.7*
*IDC **21** 04:10:58.1±1.6, 55.°69N×166.°16E, h0km, mb3.7/7, mbtmp3.7/8, ML2.6/1, Error ellipse: s-maj=45.4km s-min=20.2km az=167.0*

ISC 21 04:11:00.7±0.9, 55.°67N±0.°06×166.°19E±0.°08, h20km, n32, σ1s08/34, mb3.8/7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.48**	**195**	*i* P	**Pb**	**04 11 08.7**	**-1.7**
BKI				*e*S	**Sb**	**04 11 15.3**	**-1.8**
KBTR	**Krutoberegovo**	**1.97**	**287**	*e*P	**Pn**	**04 11 30.7**	**-2.2**
KBTR				*e*S	**Sn**	**04 11 55.4**	**-1.6**
KBG	**Krutoberegovo**	**2.05**	**288**	*e*P	**Pn**	**04 11 32.3**	**-1.6**
KBG				*e*S	**Sn**	**04 11 57.8**	**-1.0**
SMKR	**Semkarok**	**2.80**	**291**	*e*P	**Pn**	**04 11 44.1**	**-0.3**
SRKR	**Sorokina**	**2.98**	**291**	*e*P	**Pn**	**04 11 46.8**	**0.0**
ZLN	**Zelenaya**	**3.06**	**279**	*e*P	**Pn**	**04 11 48.7**	**+0.7**
ZLN				*e*S	**Sn**	**04 12 26.3**	**+2.4**
KIRR	**Kirishev**	**3.31**	**277**	*e*P	**Pn**	**04 11 51.5**	**0.0**
KMNR	**Kamenistaya**	**3.37**	**274**	*e*P	**Pn**	**04 11 53.0**	**+0.8**
KPT	**Kopyto**	**3.38**	**278**	*e*P	**Pn**	**04 11 52.7**	**+0.3**
KZV	**Kizimen**	**3.41**	**263**	*e*P	**Pn**	**04 11 52.9**	**+0.1**
SMAR	**Somma**	**4.94**	**244**	*e*P	**Pn**	**04 12 14.4**	**+0.5**
KRER	**Koryakskii**	**4.94**	**244**	*e*P	**Pn**	**04 12 14.4**	**+0.5**
UGLR	**Uglovaya**	**4.96**	**243**	*e*P	**Pn**	**04 12 14.4**	**+0.4**
KRX	**Arik**	**4.97**	**245**	*e*P	**Pn**	**04 12 14.5**	**+0.3**
AVH	**Avacha**	**4.97**	**244**	*e*P	**Pn**	**04 12 14.9**	**+0.7**
KOK	**Koryaka**	**5.01**	**245**	*e*P	**Pn**	**04 12 15.1**	**+0.4**
GNL	**Ganaly**	**5.18**	**251**	*e*P	**Pn**	**04 12 18.2**	**+1.1**
KRMR	**Karymshinskiy**	**5.51**	**242**	*e*P	**Pn**	**04 12 21.9**	**+0.3**
PETK	**Petropavlovsk-**	**5.58**	**246**	Pn	**Pn**	**04 12 22.2**	**-0.3**
	1.0nm,0.3s,baz=70,slow=16,SNR=7.8						
PETK				Sn	**Sn**	**04 13 27.9**	**+1.8**
	0.3nm,0.3s,baz=126,slow=50,SNR=1.1						
	4.6nm,0.7s						
MTVR	**Mutnovka**	**5.69**	**239**	*e*P	**Pn**	**04 12 24.4**	**+0.3**
GRL	**Gorelyy**	**5.70**	**240**	*e*P	**Pn**	**04 12 25.6**	**+1.3**
ASAK	**Asacha**	**5.89**	**239**	*e*P	**Pn**	**04 12 27.0**	**+0.2**
ILAR	**Eielson Array**	**24.45**	**49**	P	**P**	**04 16 17.6**	**-0.1**
	0.6nm,1.0s,baz=274,slow=8.8,SNR=2.8						
	0.6nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**35.88**	**179**	T	T	04 55 31.9	
	baz=359,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**35.90**	**179**	T	T	04 55 44.4	
	baz=359,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**35.90**	**179**	T	T	04 55 35.6	
	baz=359,slow=76,SNR=15						
SONM	**Songino Array**	**36.78**	**283**	P	**P**	**04 18 08.1**	**+1.3**
	0.9nm,0.6s,baz=56,slow=8.6,SNR=5.4						
	0.9nm,0.6s						
SPITS	**Spitsbergen Ar**	**45.14**	**352**	P	**P**	**04 19 15.9**	**+0.7**
	2.0nm,0.6s,baz=66,slow=7.1,SNR=11						
	2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**49.46**	**303**	P	**P**	**04 19 49.1**	**+0.1**
	0.6nm,0.7s,baz=51,slow=7.3,SNR=6.2						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**50.20**	**297**	P	**P**	**04 19 54.0**	**-0.7**
	0.4nm,0.7s,baz=38,slow=6.1,SNR=3.5						
	0.4nm,0.7s						
BVAR	**Borovoye Array**	**51.53**	**310**	P	**P**	**04 20 04.6**	**-0.1**
	0.5nm,0.3s,baz=53,slow=7.9,SNR=3.5						
	0.5nm,0.3s						
TXAR	**Lajitas Array**	**66.40**	**72**	P	**P**	**04 21 49.1**	**+0.9**
	0.6nm,0.7s,baz=301,slow=4.7,SNR=6.7						
	0.6nm,0.7s						

KOLA 21 04:15:46.8, 68.°15N×33.°22E, h0km, ML1.4, Error ellipse: s-maj=3.3km s-min=1.6km az=100.0, Olenegorsk City, Mines, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.55**	**189**	P	Pg	04 15 56.1	-1.1
APA0				S	Sg	04 16 03.3	-1.0
APA	**Apatity**	**0.58**	**173**	S	Sg	04 16 05.9	+0.5
LVZ	**Lovozero**	**0.59**	**114**	S	Sg	04 16 05.1	-0.7
TERR	**Teriberka**	**1.27**	**32**	P	Pg	04 16 09.2	-1.8
TERR				S	Sg	04 16 25.6	-1.8
KVDA	**Kovda**	**1.47**	**185**	S	Sg	04 16 32.0	-1.8
VADS	**Vadso**	**2.42**	**327**	P	Pn	04 16 28.2	+0.7
VADS				S	Sn	04 16 59.0	+1.3
ARCES	**ARCESS Array B**	**3.12**	**300**	S	Sn	04 17 11.0	-4.2

BER 21 04:16:04.4±0.9, 66.°41N×14.°70E, h0km, ML0.6, Explosion, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOR8	**Moi Rana**	**0.26**	**204**	*e*P	Pg	04 16 06.3	-3.0
MOR8				*e*S	Sg	04 16 08.4	-4.2
MOR8				IAML		04 16 09.9	
	comp=Z,18nm,0.6s						
RAUS	**Rausandaksla**	**0.27**	**277**	*e*P	Pg	04 16 08.6	-0.9
RAUS				*e*S	Sg	04 16 11.9	-1.0
RAUS				IAML		04 16 16.8	
	comp=Z,6.8nm,0.5s						
VAGH	**Vaagaholmen**	**0.66**	**300**	*e*P	Pg	04 16 15.7	-1.2
VAGH				*e*S	Sg	04 16 24.9	-0.6
VAGH				IAML		04 16 26.3	
	comp=Z,2.1nm,0.8s						
STOK	**Stokkvaagen**	**0.68**	**265**	*e*P	Pg	04 16 16.8	-0.6
STOK				*e*S	Sg	04 16 26.2	-0.1
STOK				IAML		04 16 28.8	
	comp=Z,3.1nm,0.7s						
LEIR	**Leirfjorden**	**0.71**	**246**	*e*P	Pg	04 16 17.1	-0.8
LEIR				*e*S	Sg	04 16 26.7	-0.3
LEIR				IAML		04 16 29.2	
	comp=Z,2.8nm,0.4s						

*AEIC **21** 04:20:42.9±0.6, 53.°80N±0.°10×164.°1W±0.°1, h59km±10km, Error ellipse: s-maj=15.5km s-min=5.1km az=150.0*
NEIC 21 04:20:44.6±0.6, 53.°86N±0.°07×164.°12W±0.°04, h35km±2km, ML2.9/12, ML2.6(AEIC), Error ellipse: s-maj=12.5km s-min=3.1km az=343.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLS	**Shishaldin Sou**	**0.86**	**5**		Pn	04 21 00.0	-0.2
SSLS					Sn	04 21 13.4	+1.8
SSLN	**Shishaldin Nor**	**0.96**	**4**		Sn	04 21 13.9	-0.1
AKSA	**Akutan Strait**	**0.97**	**287**		Pn	04 21 01.5	-0.2
AKSA					Sn	04 21 15.4	+1.2
ISNN	**Isanotski Nort**	**1.00**	**11**		Pn	04 21 02.4	+0.4
AKUT	**Akutan**	**1.01**	**287**		Pn	04 21 02.2	0.0
AKUT	**Akutan**	**1.01**	**287**	IAML		04 21 24.7	
	comp=N,161nm,0.7s						
AHB	**Akutan Harbor**	**1.03**	**285**		Pn	04 21 02.2	-0.3
AHB					Sn	04 21 18.0	+2.3
FALS	**False Pass**	**1.08**	**22**		Sn	04 21 18.2	+1.3
FALS				IAML		04 21 24.0	
	comp=E,1μm,0.6s						
FALS	**False Pass**	**1.08**	**22**		Pn	04 21 03.0	-0.2
AKBBA	**Akutan Broad B**	**1.10**	**283**		Pn	04 21 03.3	-0.1
AKBBA					Sn	04 21 18.0	+0.7
AKV	**Akutan Volcano**	**1.12**	**285**		Pn	04 21 03.8	0.0
ZRO	**Akutan Zero**	**1.12**	**283**		Pn	04 21 03.7	-0.1
ZRO					Sn	04 21 19.3	+1.4
AKLV	**Akutan Long Va**	**1.12**	**287**		Pn	04 21 03.7	-0.1
AKMO	**Akutan Morgan**	**1.14**	**283**		Pn	04 21 04.0	0.0
AKMO					Sn	04 21 20.0	+1.7
AKGG	**Akutan Green G**	**1.16**	**288**		Pn	04 21 04.4	+0.2
AKRB	**Akutan Reef Bi**	**1.18**	**284**		Pn	04 21 04.5	0.0
UNV	**Unalaska Valle**	**1.41**	**270**		Pn	04 21 06.8	-0.9
UNV					Sn	04 21 25.1	+0.1
MNAT	**Makushin Natee**	**1.52**	**272**		Pn	04 21 08.9	-0.2
MSW	**Makushin Switc**	**1.58**	**273**		Pn	04 21 09.4	-0.6
MGOD	**Makushin Gods**	**1.63**	**269**		Pn	04 21 10.6	-0.2
DT1	**Dutton Round H**	**1.65**	**40**		Pn	04 21 10.4	-0.6
DT1					Sn	04 21 31.9	+0.9
DOL	**Dolgoi Island**	**1.85**	**45**		Pn	04 21 13.7	0.0
DOL					Sn	04 21 36.5	+0.7
S12K	**Black Hills**	**2.20**	**32**	Pn	Pn	04 21 18.9	+0.3
S12K				IAML		04 21 51.6	
	comp=E,62nm,0.5s						
S12K				IAML		04 21 53.4	
	comp=N,65nm,1.2s						
SDPT	**Sand Point**	**2.59**	**53**		Pn	04 21 24.1	+0.1
SDPT	**Sand Point**	**2.59**	**53**	IAML		04 22 06.7	
	comp=E,48nm,0.9s						
SDPT				IAML		04 22 08.5	
	comp=N,39nm,0.9s						
SPIA	**Saint Paul Isl**	**4.81**	**316**	Pn	Pn	04 21 50.8	-3.7

*NOU **21** 04:27:20.9, 18.°77S×177.°75W, h628km, mb4.8/56, Fiji Islands Region*
*NEIC **21** 04:27:20.1±1.6, 18.°8S±0.°1×177.°8W±0.°1, h605km±6km, mb4.4/136, Error ellipse: s-maj=15.4km s-min=13.6km az=141.0*
*IDC **21** 04:27:21.0±1.4, 18.°63S×177.°95W, h616km±17km, mb3.8/17, mbtmp4.7/19, Error ellipse: s-maj=13.5km s-min=8.5km az=157.0*

ISC 21 04:27:20.3±0.6, 18.°76S±0.°06×177.°82W±0.°06, h611km±7km, n311, σ1s13/284, mb4.5/100, 6C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.06**	**284**		**P**	**04 28 48.7**	**+1.6**
MSVF	**Nonsavu**	**4.06**	**284**	P	**P**	**04 28 49.3**	**+2.2**
NIUE	**Niue**	**7.48**	**94**	P	**P**	**04 29 14.7**	**-0.5**
AFI	**Afiamalu**	**7.55**	**51**	P	**P**	**04 29 14.7**	**-1.3**
RAO	**Raoul Island**	**10.44**	**180**	P	**P**	**04 29 42.6**	**-1.0**
	408nm,0.3s,baz=100,slow=8.5,SNR=2.7						
RAO				S	**S**	**04 31 39.6**	**-1.6**
	194nm,0.4s,baz=53,slow=20,SNR=2.1						
RAO	**Raoul Island**	**10.44**	**180**	P	**P**	**04 29 42.0**	**-1.6**
GLKZ	**Green Lake**	**10.45**	**180**	P	**P**	**04 29 42.5**	**-1.1**
GLKZ				S	**S**	**04 31 39.0**	**-2.3**
FUNA	**Funafuti**	**10.58**	**344**	P	**P**	**04 29 44.2**	**-1.0**
MARNC	**Mare, Loyalty**	**13.56**	**256**	P	**P**	**04 30 14.2**	**-0.4**
MARNC	**Mare, Loyalty**	**13.56**	**256**	P	**P**	**04 30 14.4**	**-0.2**
PINNC	**Pines Island,**	**14.31**	**252**	P	**P**	**04 30 22.8**	**+1.0**
SANVU	**Saraoutou**	**14.69**	**281**	P	**P**	**04 30 25.3**	**-0.1**
SANVU	**Saraoutou**	**14.69**	**281**	P	**P**	**04 30 25.7**	**+0.3**
YATNC	**Mamie plateau,**	**14.70**	**255**	P	**P**	**04 30 25.6**	**+0.2**
OUENC	**Ouen Island, N**	**14.81**	**253**	P	**P**	**04 30 28.7**	**+2.3**
DZM	**Mont Dzumac**	**15.11**	**255**	P	**P**	**04 30 29.2**	**-0.1**
	17nm,0.6s,baz=76,slow=16,SNR=20						
RAR	**Rarotonga**	**17.14**	**101**	P	**P**	**04 30 47.6**	**0.0**
	34nm,0.7s,baz=272,slow=5.8,SNR=6.0						
RAR	**Rarotonga**	**17.14**	**101**	P	**P**	**04 30 47.8**	**+0.2**
RAR				IAmb	IAmb	04 30 49.2	
	comp=Z,36nm,0.8s						
OUZ	**Omahuta**	**18.07**	**203**	P	**P**	**04 30 58.8**	**+2.9**
OUZ	**Omahuta**	**18.07**	**203**	P	**P**	**04 30 59.4**	**+3.4**
WCZ	**Waipu Caves**	**18.46**	**200**	P	**P**	**04 31 02.6**	**+3.2**
KUZ	**Kuaotunu**	**18.79**	**196**	P	**P**	**04 31 04.6**	**+2.1**
MXZ	**Matakaoa Point**	**19.03**	**189**	P	**P**	**04 31 04.4**	**-0.3**
MXZ	**Matakaoa Point**	**19.03**	**189**	P	**P**	**04 31 04.4**	**-0.3**
MXZ	**Matakaoa Point**	**19.03**	**189**	P	**P**	**04 31 04.3**	**-0.3**
MYRZ	**Mayor Island**	**19.17**	**195**	P	**P**	**04 31 07.9**	**+2.0**
WMGZ	**Waiomatatini S**	**19.27**	**189**	P	**P**	**04 31 07.3**	**+0.5**
MKAZ	**Moumakai**	**19.28**	**197**	P	**P**	**04 31 09.0**	**+2.1**
HAZ	**Te Kaha**	**19.31**	**191**	P	**P**	**04 31 07.0**	**-0.1**
RUGZ	**Raukumara Rang**	**19.53**	**191**	P	**P**	**04 31 08.6**	**-0.7**
PUZ	**Puketiti**	**19.54**	**189**	P	**P**	**04 31 10.0**	**+0.7**
WHRZ	**Whale Island**	**19.56**	**192**	P	**P**	**04 31 10.4**	**+1.0**
TGRZ	**Tauranga**	**19.59**	**194**	P	**P**	**04 31 11.4**	**+1.7**
TWGZ	**Tauwhareparae**	**19.69**	**190**	P	**P**	**04 31 10.8**	**+0.1**
KMRZ	**Kaimai**	**19.78**	**195**	P	**P**	**04 31 13.9**	**+2.4**
TOZ	**Tahuroa Road**	**19.78**	**196**	P	**P**	**04 31 13.2**	**+1.8**
TOZ	**Tahuroa Road**	**19.78**	**196**	P	**P**	**04 31 13.7**	**+2.3**
KARZ	**Kaharoa**	**19.88**	**194**	P	**P**	**04 31 13.3**	**+1.0**
MWZ	**Matawai**	**19.92**	**191**	P	**P**	**04 31 11.3**	**-1.4**
URZ	**Urewera**	**19.92**	**192**	P	**P**	**04 31 11.1**	**-1.6**
	comp=Z,91nm,0.4s,baz=18,slow=3.2,SNR=106						
URZ	**Urewera**	**19.92**	**192**	P	**P**	**04 31 11.0**	**-1.6**
URZ	**Urewera**	**19.92**	**192**	P	**P**	**04 31 10.8**	**-1.9**
OMRZ	**Omania**	**19.93**	**194**	P	**P**	**04 31 14.4**	**+1.6**
CNGZ	**Carnagh Statio**	**19.95**	**189**	P	**P**	**04 31 13.5**	**+0.5**
TKGZ	**Te Karaka**	**19.96**	**190**	P	**P**	**04 31 13.9**	**+0.8**
TARZ	**Mount Tarawera**	**20.02**	**193**	P	**P**	**04 31 14.3**	**+0.5**
RAGZ	**Rawiri**	**20.09**	**191**	P	**P**	**04 31 12.9**	**-1.4**
RRRZ	**Republican Roa**	**20.12**	**193**	P	**P**	**04 31 15.0**	**+0.5**
MUGZ	**Murupara**	**20.20**	**192**	P	**P**	**04 31 14.6**	**-0.6**
HRRZ	**Handcock Road**	**20.22**	**194**	P	**P**	**04 31 14.6**	**-0.8**
RIGZ	**Rimuhau**	**20.24**	**190**	P	**P**	**04 31 13.9**	**-1.6**
RTZ	**Ruatahuna**	**20.29**	**192**	P	**P**	**04 31 15.3**	**-0.8**
PRRZ	**Plateau Road**	**20.30**	**193**	P	**P**	**04 31 16.0**	**-0.1**
TLZ	**Tolley Road**	**20.34**	**195**	P	**P**	**04 31 19.3**	**+2.8**
SNGZ	**Shannon Statio**	**20.39**	**191**	P	**P**	**04 31 15.7**	**-1.2**
KUTZ	**Kaahu Road**	**20.42**	**194**	P	**P**	**04 31 18.3**	**+1.1**
MTHZ	**Maungataniwha**	**20.55**	**192**	P	**P**	**04 31 18.7**	**+0.3**
KNZ	**Kokohu**	**20.56**	**190**	P	**P**	**04 31 18.7**	**+0.3**
RAHZ	**Arahi**	**20.56**	**191**	P	**P**	**04 31 17.6**	**-0.9**
MRHZ	**Matea Rd**	**20.62**	**193**	P	**P**	**04 31 18.1**	**-0.9**
MHGZ	**Mahia Peninsul**	**20.65**	**189**	P	**P**	**04 31 20.2**	**+0.9**
HIZ	**Hauiti**	**20.69**	**196**	P	**P**	**04 31 19.6**	**0.0**
NMHZ	**Naumai**	**20.79**	**192**	P	**P**	**04 31 20.0**	**-0.6**
RITZ	**Rihia Road**	**20.88**	**194**	P	**P**	**04 31 20.8**	**-0.5**
ARHZ	**Aropaoanui**	**20.92**	**191**	P	**P**	**04 31 21.9**	**+0.3**
BKZ	**Black Stump Fm**	**20.92**	**192**	P	**P**	**04 31 19.8**	**-1.9**
BKZ				IAmb	IAmb	04 31 26.7	
	comp=Z,15nm,0.5s						
BKZ	**Black Stump Fm**	**20.92**	**192**	P	**P**	**04 31 20.0**	**-1.7**
BKZ	**Black Stump Fm**	**20.92**	**192**	P	**P**	**04 31 19.2**	**-2.5**
KRVZ	**Karewarewa**	**21.04**	**194**	P	**P**	**04 31 21.8**	**-1.1**
TMVZ	**Te Maari**	**21.04**	**194**	P	**P**	**04 31 21.9**	**-1.0**
ETVZ	**East Tongariro**	**21.06**	**194**	P	**P**	**04 31 22.5**	**-0.6**
NNVZ	**North Ngauruho**	**21.08**	**194**	P	**P**	**04 31 23.7**	**+0.4**
OTVZ	**Oturere**	**21.10**	**194**	P	**P**	**04 31 21.9**	**-1.6**
NGZ	**Ngauruhoe**	**21.12**	**194**	P	**P**	**04 31 23.8**	**+0.1**
SNVZ	**South Ngauruho**	**21.13**	**194**	P	**P**	**04 31 22.3**	**-1.4**
MCHZ	**McNeill Hill**	**21.15**	**192**	P	**P**	**04 31 22.6**	**-1.1**
KWHZ	**Kaweka Forest**	**21.18**	**192**	P	**P**	**04 31 23.0**	**-1.1**
WHVZ	**Whangaehu Hut**	**21.23**	**194**	P	**P**	**04 31 22.2**	**-2.5**
TRVZ	**Turoa**	**21.25**	**194**	P	**P**	**04 31 24.4**	**-0.5**
WNVZ	**Wahianoa**	**21.27**	**194**	P	**P**	**04 31 23.1**	**-1.8**
CKHZ	**Cape Kidnapper**	**21.29**	**191**	P	**P**	**04 31 24.7**	**-0.2**
KHEZ	**Kahui Hut**	**21.65**	**197**	P	**P**	**04 31 31.8**	**+2.8**
BFZ	**Birch Farm**	**22.43**	**192**	P	**P**	**04 31 33.8**	**-1.3**
SNZO	**South Karori**	**23.36**	**194**	P	**P**	**04 31 42.9**	**-0.4**
TCW	**Tory Channel**	**23.37**	**195**		**P**	**04 31 42.6**	**-0.8**
BHW	**Baring Head**	**23.42**	**194**	P	**P**	**04 31 42.9**	**-0.9**
PLWZ	**Palliser**	**23.49**	**193**	P	**P**	**04 31 43.4**	**-1.1**
QRZ	**Quartz Range**	**23.50**	**199**	P	**P**	**04 31 45.1**	**+0.6**
QRZ	**Quartz Range**	**23.50**	**199**	P	**P**	**04 31 45.1**	**+0.6**
TKNZ	**Takaka Hill**	**23.56**	**198**	P	**P**	**04 31 44.6**	**-0.6**
NNZ	**Nelson**	**23.61**	**197**	P	**P**	**04 31 44.5**	**-1.0**
NNZ				IAmb	IAmb	04 31 47.5	
	comp=Z,36nm,1.0s						
TUWZ	**Tuamarina**	**23.66**	**196**	P	**P**	**04 31 45.4**	**-0.6**
SAVO	**Savo Central**	**23.69**	**291**	P	**P**	**04 31 47.4**	**+0.7**
BSWZ	**Blackbirch Sta**	**23.95**	**195**	P	**P**	**04 31 48.0**	**-0.5**
MRNZ	**Matariki Terra**	**23.96**	**198**	P	**P**	**04 31 48.1**	**-0.5**
THZ	**Toph

ASAR					ScP		04 39 06.5	0.0
MTN	**Manton Dam**	**49.34**	**269**		**P**		**04 35 15.1**	**-0.6**
MTN				IAmb	IAmb		04 35 15.8	
	comp=Z,32nm,0.7s							
FORT	**Forrest**	**50.15**	**245**	P	**P**		**04 35 21.0**	**-0.4**
FORT				IAmb	IAmb		04 35 21.8	
	comp=Z,13nm,0.7s							
KNRA	**Kununurra**	**50.96**	**265**		**P**		**04 35 27.4**	**-0.1**
KNRA				IAmb	IAmb		04 35 28.2	
	comp=Z,46nm,0.7s							
FAKI	**Fak Fak**	**51.29**	**282**	P	**P**		**04 35 29.3**	**-0.7**
FAKI				IAmb	IAmb		04 35 58.0	
	comp=Z,21nm,0.9s							
FAKI	**Fak Fak**	**51.29**	**282**	P	**P**		**04 35 29.9**	**-0.1**
BNDI	**Bandanaira**	**52.91**	**279**	P	**P**		**04 35 41.1**	**-0.4**
	comp=Z,74nm,0.5s							
SWI	**Sorong**	**52.98**	**284**	P	**P**		**04 35 42.0**	**0.0**
FITZ	**Fitzroy Crossi**	**53.44**	**261**	P	**P**		**04 35 45.2**	**0.0**
FITZ	**Fitzroy Crossi**	**53.44**	**261**	P	**P**		**04 35 45.3**	**+0.1**
AAI	**Ambon**	**54.80**	**279**	P	**P**		**04 35 54.6**	**-0.1**
	comp=Z,54nm,0.5s							
NLAI	**Namlea**	**55.98**	**279**	P	**P**		**04 36 02.8**	**-0.1**
	comp=Z,72nm,0.6s							
SOEI	**Soe**	**56.63**	**271**		**P**		**04 36 09.0**	**+1.5**
SOEI	**Soe**	**56.63**	**271**	P	**P**		**04 36 08.9**	**+1.4**
SOEI	**Soe**	**56.63**	**271**	P	**P**		**04 36 07.2**	**-0.3**
TNTI	**Ternate**	**57.20**	**284**	P	**P**		**04 36 10.8**	**-0.4**
	comp=Z,1μmcomp=Z,56nm,0.8s							
SANI	**Sanana**	**57.44**	**280**	P	**P**		**04 36 11.9**	**-0.9**
	comp=Z,59nm,0.8s							
PSA00	**Pilbara Seismi**	**58.24**	**256**		**P**		**04 36 17.9**	**-0.3**
PSA00				IAmb	IAmb		04 36 18.7	
	comp=Z,38nm,1.1s							
PSA00	**Pilbara Seismi**	**58.24**	**256**	P	**P**		**04 36 16.9**	**-1.2**
PSA00				IAmb	IAmb		04 36 18.8	
	comp=Z,9.7nm,0.8s							
PSA00				PcP	**PcP**		**04 37 00.8**	**-0.3**
PSA00	**Pilbara Seismi**	**58.24**	**256**	P	**P**		**04 36 17.8**	**-0.3**
MBWA	**Marble Bar**	**58.41**	**256**	P	**P**		**04 36 18.9**	**-0.3**
MBWA				IAmb	IAmb		04 36 19.4	
	comp=Z,15nm,0.5s							
MBWA	**Marble Bar**	**58.41**	**256**	P	**P**		**04 36 19.0**	**-0.3**
MEEK	**Meekatharra**	**58.66**	**250**	P	**P**		**04 36 20.4**	**-0.5**
MMRI	**Maumere**	**58.87**	**271**	P	**P**		**04 36 22.3**	**-0.2**
MMRI				IAmb	IAmb		04 36 22.8	
	comp=Z,54nm,0.6s							
KLBR	**Kellerberrin**	**58.95**	**244**	P	**P**		**04 36 22.8**	**0.0**
SBA	**Scott Base**	**59.61**	**184**	P	**P**		**04 36 27.3**	**+1.0**
SBA				IAmb	IAmb		04 36 31.8	
	comp=Z,36nm,1.5s							
VNDA	**Vanda**	**59.65**	**185**	P	**P**		**04 36 27.9**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=8.0,slow=7.5,SNR=22							
	comp=Z,2.2nm,0.5s							
VNDA	**Vanda**	**59.65**	**185**	P	**P**		**04 36 28.3**	**+1.8**
BLDU	**Balidu**	**59.92**	**245**	P	**P**		**04 36 29.0**	**-0.2**
MUN	**Mundaring**	**60.24**	**243**	P	**P**		**04 36 31.8**	**+0.5**
MORW	**Morawa**	**60.65**	**247**	P	**P**		**04 36 33.6**	**-0.5**
MORW				IAmb	IAmb		04 36 34.7	
	comp=Z,12nm,0.9s							
BNSI	**Bone**	**62.17**	**275**	P	**P**		**04 36 43.9**	**-0.2**
	comp=Z,31nm,1.1s							
PLAI	**Plampang**	**63.04**	**269**	P	**P**		**04 36 49.4**	**-0.3**
PLAI	**Plampang**	**63.04**	**269**	P	**P**		**04 36 49.4**	**-0.3**
	comp=Z,66nm,0.9s							
GIRL	**Giralia**	**63.19**	**254**	P	**P**		**04 36 51.6**	**+1.1**
GIRL				IAmb	IAmb		04 37 20.7	
	comp=Z,104nm,1.5s							
TOLI2	**Tolitoli**	**63.43**	**281**	P	**P**		**04 36 51.9**	**-0.3**
TOLI2				IAmb	IAmb		04 36 52.7	
	comp=Z,18nm,0.7s							
TOLI2	**Tolitoli**	**63.43**	**281**	P	**P**		**04 36 52.2**	**0.0**
TWSI	**Taliwang, Sumb**	**63.92**	**269**	P	**P**		**04 36 54.8**	**-0.5**
	comp=Z,91nm,1.0s							
MPSI	**Mapaga**	**63.97**	**280**	P	**P**		**04 36 55.2**	**-0.4**
	comp=Z,36nm,0.8s							
JAGI	**Jajag, Banyuwa**	**66.58**	**269**	P	**P**		**04 37 10.4**	**-1.5**
JAGI	**Jajag, Banyuwa**	**66.58**	**269**	P	**P**		**04 37 11.1**	**-0.8**
JAGI	**Jajag, Banyuwa**	**66.58**	**269**	P	**P**		**04 37 10.1**	**-1.8**
	comp=Z,74nm,0.7s							
MYLDM	**Lahad Datu**	**67.06**	**284**	P	**P**		**04 37 16.5**	**+1.7**
MYLDM				IAmb	IAmb		04 37 19.3	
	comp=Z,13nm,1.0s							
MJAR	**Matsushiro Arr**	**68.92**	**323**	P	**P**		**04 37 25.1**	**-0.6**
	comp=Z,5.8nm,0.7s,baz=165,slow=6.1,SNR=12							
	comp=Z,5.8nm,0.7s							
MJAR	**Matsushiro Arr**	**68.92**	**323**	P	**P**		**04 37 25.5**	**-0.2**
MJAR				IAmb	IAmb		04 37 25.8	
	comp=Z,4.9nm,0.7s							
PCJI	**Pacitan**	**69.47**	**268**	P	**P**		**04 37 29.0**	**-0.4**
WOJI	**Wonogiri, Jawa**	**69.82**	**268**	P	**P**		**04 37 31.0**	**-0.4**
	comp=Z,86nm,0.9s							
UGM	**Wanagama**	**70.18**	**268**	P	**P**		**04 37 33.1**	**-0.5**
UGM	**Wanagama**	**70.18**	**268**	P	**P**		**04 37 33.5**	**-0.1**
QSPA	**South Pole Qui**	**71.30**	**180**	P	**P**		**04 37 42.3**	**+2.9**
	comp=Z,11nm,0.6s,baz=313,slow=0.4,SNR=47							
	comp=Z,11nm,0.6s							
QSPA	**South Pole Qui**	**71.30**	**180**	P	**P**		**04 37 42.9**	**+3.6**
QSPA				IAmb	IAmb		04 37 44.2	
	comp=Z,12nm,0.6s							
NACB	**Ninganchiao**	**72.85**	**304**	P	**P**		**04 37 48.1**	**-0.7**
BBJI	**Bungbulang**	**73.03**	**268**	P	**P**		**04 37 49.4**	**-0.8**
SSLB	**Suanglung**	**73.17**	**303**	P	**P**		**04 37 49.6**	**-1.1**
TPUB	**Ta-pu**	**73.19**	**302**	P	**P**		**04 37 49.8**	**-1.0**
TPUB	**Ta-pu**	**73.19**	**302**	P	**P**		**04 37 49.6**	**-1.2**
KSRS	**Korea Array**	**75.71**	**318**	P	**P**		**04 38 05.1**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=131,slow=5.2,SNR=2.5							
	comp=Z,1.2nm,0.5s							
PPBI	**Pangkal Pinang**	**76.09**	**272**	P	**P**		**04 38 06.8**	**-0.5**
MDSI	**Maura Dua**	**77.22**	**270**	P	**P**		**04 38 11.8**	**-1.6**
	comp=Z,15nm,1.0s							
USRK	**Ussuriysk Ar.**	**77.63**	**326**	P	**P**		**04 38 14.9**	**0.0**
	comp=Z,1.3nm,0.4s,baz=129,slow=4.1,SNR=3.0							
	comp=Z,1.3nm,0.4s							
CMB	**Columbia Colle**	**78.08**	**43**	P	**P**		**04 38 18.0**	**+0.5**
CMB				IAmb	IAmb		04 38 19.0	
	comp=Z,8.2nm,0.9s							
OHAK	**Old Harbor**	**78.43**	**13**	P	**P**		**04 38 18.8**	**0.0**
MDPB	**Devils Postpil**	**78.70**	**44**	IAmb	IAmb		04 38 23.3	
	comp=Z,14nm,1.2s							
NJ2	**Nanjing**	**78.91**	**309**	*e*P	**P**		**04 38 24.8**	**+2.8**
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.5s							
WAKR	**Walker**	**78.96**	**43**	IAmb	IAmb		04 38 24.2	
	comp=Z,9.8nm,0.9s							
BEKR	**Beckworth**	**79.16**	**41**	IAmb	IAmb		04 38 24.9	
	comp=Z,12nm,1.3s							
PNTR	**Pine Nut**	**79.19**	**42**	IAmb	IAmb		04 38 25.4	
	comp=Z,17nm,0.8s							
GRAC	**Grapevine Rang**	**79.48**	**45**	IAmb	IAmb		04 38 26.5	
	comp=Z,8.1nm,0.8s							
NVAR	**Mina Array Bea**	**79.65**	**43**	P	**P**		**04 38 26.7**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=223,slow=8.5,SNR=24							
	comp=Z,2.9nm,0.6s							
NVAR	**Mina Array Bea**	**79.65**	**43**	P	**P**		**04 38 27.0**	**+0.9**
K05A	**Summer Lake**	**80.51**	**39**	IAmb	IAmb		04 38 31.8	
	comp=Z,9.5nm,0.7s							
J05D	**Fort Rock, OR**	**80.64**	**38**	IAmb	IAmb		04 38 32.8	
	comp=Z,17nm,0.8s							
BNX	**BinXian**	**81.11**	**325**	⇑P	**P**		**04 38 33.3**	**+0.2**
BNX				pmax	pmax			
	comp=Z,13nm,0.9s							
PINE	**Pine Mountain**	**81.12**	**38**	IAmb	IAmb		04 38 35.4	
	comp=Z,12nm,0.9s							
BELA	**Belgrano 2**	**81.25**	**173**	P	**P**		**04 38 33.6**	**+0.2**
BELA				IAmb	IAmb		04 38 34.5	
	comp=Z,6.4nm,0.8s							
WVOR	**Wild Horse Val**	**81.70**	**40**	IAmb	IAmb		04 38 38.0	
	comp=Z,8.9nm,0.9s							
I07A	**Izee**	**82.13**	**38**	IAmb	IAmb		04 38 40.2	
	comp=Z,6.9nm,0.8s							
GNW	**Green Mountain**	**82.37**	**34**	IAmb	IAmb		04 38 40.8	
	comp=Z,6.8nm,0.9s							
319A	**Douglas**	**82.48**	**53**	IAmb	IAmb		04 38 43.2	
	comp=Z,12nm,0.9s							
D05A	**Enumclaw**	**82.58**	**35**	IAmb	IAmb		04 38 42.5	
	comp=Z,33nm,1.4s							
U15A	**North Rim**	**82.67**	**48**	IAmb	IAmb		04 38 43.7	
	comp=Z,8.1nm,0.9s							
IPM	**Ipoh**	**83.08**	**277**	IAmb	IAmb		04 38 45.1	
	comp=Z,26nm,0.8s							
G08A	**Pilot Rock**	**83.14**	**37**	IAmb	IAmb		04 38 45.1	
	comp=Z,8.8nm,1.2s							
E07A	**Sunnyside**	**83.37**	**36**	IAmb	IAmb		04 38 46.0	
	comp=Z,6.6nm,0.8s							
HAWA	**Hanford**	**83.46**	**36**	IAmb	IAmb		04 38 46.0	
	comp=Z,4.7nm,0.8s							

GHO	**Glory Hole Cre**	**83.50**	**13**	P	**P**		**04 38 44.1**	**-0.8**
GHO				IAmb	IAmb		04 38 45.1	
	comp=Z,11nm,0.7s							
RPSI	**Rantau Prapat**	**84.48**	**275**	IAmb	IAmb		04 38 51.2	
	comp=Z,6.9nm,0.9s							
F10A	**Beach Ranch, E**	**84.53**	**38**	IAmb	IAmb		04 38 51.3	
	comp=Z,7.0nm,0.8s							
B08A	**Colville Reser**	**84.72**	**35**	IAmb	IAmb		04 38 51.7	
	comp=Z,5.5nm,0.8s							
TRF	**Thorofare Moun**	**84.72**	**12**	IAmb	IAmb		04 38 50.5	
	comp=Z,8.8nm,0.8s							
LYN	**LuoYang**	**84.80**	**309**	P	**P**		**04 38 53.0**	**+1.2**
LYN				pmax	pmax			
	comp=Z,32nm,0.6s							
C09A	**Chrisman Ranch**	**84.97**	**36**	P	**P**		**04 38 52.5**	**+0.1**
C09A				IAmb	IAmb		04 38 53.4	
	comp=Z,5.6nm,0.8s							
TX31	**Lajitas Ar. Si**	**85.98**	**57**	IAmb	IAmb		04 38 59.7	
	comp=Z,4.7nm,0.8s							
TXAR	**Lajitas Array**	**85.98**	**57**	P	**P**		**04 38 58.8**	**+1.1**
	comp=Z,3.4nm,0.8s,baz=218,slow=6.5,SNR=40							
	comp=Z,3.4nm,0.8s							
WRH	**Wood River Hil**	**86.08**	**12**	P	**P**		**04 38 55.6**	**-1.5**
WRH				IAmb	IAmb		04 38 56.6	
	comp=Z,5.8nm,1.0s							
TASM	**ASL Pad, Albuq**	**86.19**	**51**	P	**P**		**04 38 59.6**	**+0.9**
TASM	**ASL Pad, Albuq**	**86.19**	**51**	IAmb	IAmb		04 39 00.6	
	comp=Z,2.4nm,1.0s							
TASM	**ASL Pad, Albuq**	**86.19**	**51**	IAmb	IAmb		04 39 00.6	
	comp=Z,2.8nm,1.1s							
ANMO	**Albuquerque**	**86.19**	**51**	P	**P**		**04 38 58.7**	**0.0**
CCB	**Clear Creek Bu**	**86.29**	**12**	P	**P**		**04 38 57.0**	**-1.1**
CCB				IAmb	IAmb		04 38 57.7	
	comp=Z,5.3nm,0.6s							
ALPN	**Alpine**	**86.43**	**56**	IAmb	IAmb		04 39 01.9	
	comp=Z,3.9nm,0.8s							
IL31		**86.59**	**13**	IAmb	IAmb		04 38 59.2	
	comp=Z,5.3nm,1.1s							
ILAR	**Eielson Array**	**86.59**	**13**	P	**P**		**04 38 58.4**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=225,slow=5.0,SNR=35							
	comp=Z,2.1nm,0.8s							
ILAR	**Eielson Array**	**86.59**	**13**	P	**P**		**04 38 58.3**	**-1.3**
DLMT	**Dillon**	**86.95**	**40**	IAmb	IAmb		04 39 03.5	
	comp=Z,5.9nm,0.8s							
J26L	**Joseph Creek**	**87.09**	**14**	IAmb	IAmb		04 39 02.5	
	comp=Z,3.6nm,0.8s							
SNOW	**Snow King Moun**	**87.15**	**42**	IAmb	IAmb		04 39 04.7	
	comp=Z,5.8nm,0.9s							
XAN	**Xi'an**	**87.22**	**307**	P	**P**		**04 39 04.4**	**+1.1**
XAN				pmax	pmax			
	comp=Z,15nm,1.0s							
HILR	**Hailar Array B**	**87.54**	**325**	P	**P**		**04 39 04.2**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=134,slow=6.2,SNR=2.1							
	comp=Z,1.1nm,0.5s							
YHL	**Hebgen Lake**	**87.56**	**41**	IAmb	IAmb		04 39 07.3	
	comp=Z,8.2nm,0.9s							
BW06	**Bouder Array**	**87.59**	**43**	IAmb	IAmb		04 39 06.0	
	comp=Z,3.2nm,0.8s							
PDAR	**Pinedale Array**	**87.59**	**43**	P	**P**		**04 39 05.2**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=210,slow=3.1,SNR=22							
	comp=Z,2.0nm,0.7s							
PDAR	**Pinedale Array**	**87.59**	**43**	P	**P**		**04 39 05.0**	**-0.1**
BOZ	**Bozeman (W)**	**87.66**	**40**	IAmb	IAmb		04 39 06.8	
	comp=Z,4.3nm,1.1s							
HHC	**Hu-ho-hao-te**	**88.27**	**314**	*e*P	**P**		**04 39 09.0**	**+0.9**
HHC				pmax	pmax			
	comp=Z,10.0nm,0.6s							
YNE	**Yellowstone No**	**88.37**	**41**	IAmb	IAmb		04 39 10.7	
	comp=Z,3.9nm,0.9s							
ELIB	**Princess Elisa**	**88.38**	**186**	*d*P	**P**		**04 39 07.8**	**-0.4**
	comp=Z,6.8nm,0.5s							
DRIO	**Del Rio**	**88.46**	**58**	IAmb	IAmb		04 39 11.0	
	comp=Z,5.8nm,0.9s							
TROLL	**Troll, Antarti**	**89.46**	**180**	⇑P	**P**		**04 39 13.0**	**-0.2**
	comp=Z,178nm,0.6s							
CMAR	**Chiang Mai Arr**	**89.70**	**290**	P	**P**		**04 39 16.1**	**+1.0**
	comp=Z,2.2nm,0.3s,baz=108,slow=2.7,SNR=18							
	comp=Z,2.2nm,0.3s							
SNAA	**Sanae**	**89.73**	**178**	⇑P	**P**		**04 39 14.1**	**-0.3**
	comp=Z,37nm,0.5s							
SNAA	**Sanae**	**89.73**	**178**	P	**P**		**04 39 14.0**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=212,slow=6.6,SNR=24							
	comp=Z,1.7nm,0.6s							
SNAA	**Sanae**	**89.73**	**178**	P	**P**		**04 39 13.9**	**-0.5**
VNA3	**Neumayer Olymp**	**89.85**	**176**	⇑P	**P**		**04 39 15.0**	**+0.1**
	comp=Z,8.1nm,0.7s							
PZH	**PanZhiHua**	**90.05**	**298**	P	**P**		**04 39 18.8**	**+2.1**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
VNA2	**Neumayer--Watz**	**90.30**	**177**	⇑P	**P**		**04 39 17.1**	**+0.2**
	comp=Z,6.6nm,0.7s,baz=187,slow=4.4							
VNA1	**Neumayer--Stat**	**90.52**	**177**	⇑P	**P**		**04 39 18.5**	**+0.6**
	comp=Z,6.6nm,0.9s							
G30M	**tAoh Zrai Nji**	**90.88**	**15**	IAmb	IAmb		04 39 19.7	
	comp=Z,7.8nm,0.9s							
R32A	**Long Quarter,**	**93.28**	**51**	IAmb	IAmb		04 39 32.9	
	comp=Z,12nm,0.9s							
SONM	**Songino Array**	**94.56**	**319**	P	**P**		**04 39 36.1**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=137,slow=7.2,SNR=1.9							
	comp=Z,0.3nm,0.5s							
MKAR	**Makanchi Array**	**110.13**	**314**	PKiKP	**PKiKP**		**04 44 41.7**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=111,slow=1.0,SNR=8.4							
KURBB	**Kurchatov Arra**	**112.89**	**318**	PKiKP	**PKiKP**		**04 44 47.0**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=82,slow=2.0,SNR=5.6							
BVAR	**Borovoye Array**	**117.86**	**321**	PKP	**PKPdf**		**04 44 56.9**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=107,slow=1.5,SNR=5.7							
ARCES	**ARCESS Array B**	**127.25**	**350**	PKP	**PKPdf**		**04 45 15.3**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=351,slow=1.6,SNR=11							
FINES	**FINESS Array B**	**134.16**	**344**	SKPbc	**SKPbc**		**04 48 01.8**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=60,slow=3.4,SNR=7.0							
MARD	**Mardin**	**141.57**	**307**		PKPpre		04 45 39.3	
AKASG	**Makanchi Array Be**	**141.57**	**332**	PKhKP	PKPpre		04 45 37.4	
	comp=Z,0.5nm,0.3s,baz=45,slow=3.8,SNR=4.7							
EKA	**Eskdalemuir Ar**	**143.27**	**5**	PKP	PKPab		04 45 43.1	-1.1
	comp=Z,0.5nm,0.4s,baz=323,slow=3.0,SNR=5.4							
BNN	**Bunyan**	**144.64**	**312**		**PKPdf**		**04 45 48.9**	**-0.1**
BRTR	**Keskin Array B**	**145.78**	**314**	PKPbc	**PKPbc**		**04 45 51.6**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=152,slow=4.4,SNR=14							
BRTR	**Keskin Array B**	**145.78**	**314**		**PKPdf**		**04 45 50.9**	**+0.1**
MMAI	**Mount Meron Ar**	**147.07**	**302**	PKPbc	**PKPbc**		**04 45 55.7**	**-0.6**
	comp=Z,4.3nm,0.5s,baz=70,slow=5.5,SNR=8.7							
BMRD	**Maredsous**	**148.47**	**357**	*d*Pdif			04 43 35.5	
GERES	**GERESS Array B**	**148.58**	**345**	PKPbc	**PKPbc**		**04 45 59.0**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=53,slow=5.2,SNR=6.2							
CONA	**Conrad Observa**	**148.84**	**342**	*e*PKP	**PKPbc**		**04 46 00.5**	**+0.2**
	comp=Z,1.1nm,0.5s							
RONA	**Rosalia, Austr**	**148.92**	**341**	*i* PKP	**PKPbc**		**04 46 00.7**	**+0.2**
	comp=Z,1.3nm,0.4s							
WLF	**Walferdange**	**149.01**	**355**	*d*PKP	**PKiKP**		**04 46 03.5**	**+2.1**
LESA	**Schwarzleotal**	**150.15**	**346**	*i* PKP	**PKPbc**		**04 46 03.1**	**-0.3**
	comp=Z,2.0nm,0.5s							
KBA	**Boelnbreinsper**	**150.31**	**345**	*e*PKP	**PKPbc**		**04 46 02.8**	**-1.2**
	comp=Z,1.5nm,0.4s							
RETA	**Reutte**	**150.50**	**348**	*i* PKiKP	**PKiKP**		**04 46 05.0**	**+0.4**
	comp=Z,0.8nm,0.3s							
WTTA	**Wattenberg**	**150.54**	**347**	*e*PKP	**PKPbc**		**04 46 04.0**	**-0.4**
	comp=Z,3.4nm,0.4s							
MOTA	**Moosalm**	**150.57**	**348**	*i* PKP	**PKPbc**		**04 46 04.4**	**-0.1**
	comp=Z,1.3nm,0.4s							
SQTA	**Sankt Quirin**	**150.67**	**347**	*i* PKP	**PKPbc**		**04 46 04.4**	**-0.3**
	comp=Z,0.9nm,0.2s							
DAVA	**Danuels**	**150.86**	**349**	*e*PKiKP	**PKiKP**		**04 46 05.8**	**+0.2**
	comp=Z,0.7nm,0.2s							
FETA	**Feichten**	**150.96**	**348**	*i* PKP	**PKPbc**		**04 46 05.1**	**-0.2**
	comp=Z,1.5nm,0.6s							
LIT	**Litokhoron**	**152.47**	**325**		**PKPdf**		**04 45 59.3**	**-1.9**

*BER **21** 04:27:27.7±2.0,80°.82N×2°.07W,h10km,mb(Pn)2.9, ML1.4(DNK),Confirmed Earthquake*
*DNK **21** 04:27:28.7±1.2,80°.85N×1°.84W,h36km±11km,ML1.4*
*FCIAR **21** 04:27:30.0,80°.56N×1°.55W,h10km,station ZFI2 has station magnitude of 3.50 station OMEGA has station magnitude of 3.40*

ISC 21 04:27:21.8±0.9,80°.94N±0°.07×2°.70W±0°.04,h10km,n15, σ3°17/28,1D,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NOR	**Nord**	**2.23**	**294**	*i* P		**Pg**	**04 28 05.0**	**+0.6**
NOR				*i* S		**Sg**	**04 28 31.5**	**-1.8**
NOR				IAML			04 28 32.0	
	comp=Z,2.7nm,0.3s							
NOR	**Nord**	**2.23**	**294**	*i* P		**Pg**	**04 28 05.0**	**+0.6**
NOR				*i* S		**Sg**	**04 28 31.5**	**-1.8**
NOR				IAML			04 28 32.0	
	comp=Z,2.7nm,0.3s							

KBS	**Kingsbay**	**3.26**	**121**	*e*P		**Pn**	**04 28 15.0**	**+2.1**
KBS				IAML			04 28 48.5	
	comp=Z,4.2nm,0.4s							
KBS				*e*S		**Sn**	**04 28 49.1**	**-2.6**
KBS	**Kingsbay**	**3.26**	**121**	⇓*i*P		**Pn**	**04 28 15.0**	**+2.1**
KBS				*i* S		**Sn**	**04 28 47.9**	**-3.8**
BRBB	**Barentsburg B**	**4.19**	**124**	*e*P		**Pn**	**04 28 28.9**	**+3.3**
BRBB				*e*S		**Sn**	**04 29 11.2**	**-3.3**
BRBA	**Barentsburg A**	**4.22**	**125**	*e*P		**Pn**	**04 28 29.8**	**+3.9**
BRBA				IAML			04 29 17.7	
	comp=Z,4.7nm,0.3s							
SPA0	**Spitsbergen Ar**	**4.42**	**119**	*e*P		**Pn**	**04 28 31.1**	**+2.3**
SPA0				*e*S		**Sn**	**04 29 16.1**	**-4.0**
SPA0	**Spitsbergen Ar**	**4.42**	**119**	*e*P		**Pn**	**04 28 31.2**	**+2.4**
SPA0				*e*S		**Sn**	**04 29 16.4**	**-3.8**
SPA0				IAML			04 29 32.5	
	comp=Z,2.3nm,0.7s							
DAG	**Danmarks Havn**	**5.18**	**224**	*i* P		**Pn**	**04 28 42.6**	**+3.4**
DAG				*i* S		**Sn**	**04 29 37.6**	**-1.2**
DAG				IAML			04 29 38.9	
	comp=Z,2.0nm,0.2s							
DAG	**Danmarks Havn**	**5.18**	**224**	*i* P		**Pn**	**04 28 42.6**	**+3.4**
DAG				*i* S		**Sn**	**04 29 37.6**	**-1.2**
DAG				IAML			04 29 38.9	
	comp=Z,2.0nm,0.2s							
HSPB	**Hornsund (broa**	**5.25**	**129**	*e*P		**Pn**	**04 28 42.8**	**+2.6**
DBG	**Daneborg**	**7.60**	**218**	*e*P		**Pn**	**04 29 15.1**	**+2.8**
DBG				*i* S		**Sn**	**04 30 34.2**	**-4.1**
DBG				IAML			04 31 00.9	
	comp=Z,1.3nm,1.3s							
DBG	**Daneborg**	**7.60**	**218**	*e*P		**Pn**	**04 29 15.1**	**+2.8**
DBG				*i* S		**Sn**	**04 30 34.2**	**-4.1**
DBG				IAML			04 31 00.9	
	comp=Z,1.3nm,1.3s							
ZFI2	**Zemlya Franca-**	**7.79**	**66**	*e*P		**Pn**	**04 29 19.1**	**+4.2**
ZFI2				*e*S		**Sn**	**04 30 39.9**	**-3.0**
	comp=Z,13nm,3.0s							
OMEGA	**Omega**	**7.81**	**66**	*e*P		**Pn**	**04 29 19.2**	**+4.0**
OMEGA				*e*S		**Sn**	**04 30 40.2**	**-3.3**
	comp=Z,11nm,3.6s							

*MDD **21** 04:43:45.9±0.7,37°.69N×9°.21W,h0km±3km,mb_Lg2.5/9, Error ellipse: s-maj=4.2km s-min=2.7km az=71.0*
*INMG **21** 04:43:46.2±1.8,37°.64N×9°.24W,h2km±3km,ML2.0,Error ellipse: s-maj=4.3km s-min=2.0km az=74.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Sines*
*IGIL **21** 04:43:46.6,37°.61N×9°.24W,h6km,ML1.8*
*SFS **21** 04:43:47.6,37°.59N×9°.18W,h20km,ML2.7/8,ML2.4/10, MLv2.2/10*
*CNRM **21** 04:43:47.3,37°.35N×9°.35W,h43km*

ISC 21 04:43:44.1±1.3,37°.52N±0°.03×9°.41W±0°.05,h24km±12km, n62,σ1°83/120,2D,Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PTEO	**Sao Teotonio**	**0.54**	**87**	⇓*i*Pg		**Pb**	**04 43 53.9**	**-1.1**
PTEO				*e*Sg		**Sb**	**04 43 59.7**	**-2.7**
PTEO				*i* IAML			04 44 01.9	
PTEO				*i* IAML			04 44 02.9	
PTEO				*i* IAML			04 44 05.3	
PFVI	**Vila Bisbo**	**0.60**	**130**	Pg		**Pn**	**04 43 56.9**	**-0

PBAR				*i* IAML			04 44 47.0		
PBAR				*i* IAML			04 44 47.1		
PBAR				*i* IAML			04 44 48.1		
PSBE	**So Bento**	**2.05**	**13**	*e*Pg	**Pb**		**04 44 21.0**	**+0.4**	
PSBE				*e*Sg	**Sb**		**04 44 46.3**	**+0.6**	
PSBE				*i* IAML			04 44 49.3		
PSBE				*i* IAML			04 45 00.2		
PSBE				*i* IAML			04 45 06.0		
EMIN	**Mina Concepcio**	**2.18**	**83**	Pg	**Pb**		**04 44 23.4**	**+0.5**	
EMIN	**Mina Concepcio**	**2.18**	**83**	Pn	**Pn**		**04 44 19.8**	**+0.9**	
EMIN				Pg	**Pb**		**04 44 22.8**	**-0.1**	
EMIN				Sn	**Sn**		**04 44 45.1**	**-0.1**	
EMIN				Sg	**Sb**		**04 44 50.3**	**+0.8**	
EMIN				*i* IVmb_Lg			04 44 57.5		
EBAD	**Badajoz**	**2.25**	**56**	Pg	**Pb**		**04 44 23.8**	**-0.3**	
EBAD				Sg	**Sb**		**04 44 49.9**	**-1.6**	
EBAD	**Badajoz**	**2.25**	**56**	Pn	**Pn**		**04 44 20.2**	**+0.3**	
EBAD				Pg	**Pb**		**04 44 23.6**	**-0.5**	
EBAD				Sn	**Sn**		**04 44 45.7**	**-1.2**	
EBAD				Sg	**Sb**		**04 44 51.1**	**-0.5**	
EBAD				*i* IVmb_Lg			04 44 54.7		
PSARD	**Sardoal**	**2.29**	**25**	*e*Pn	**Pn**		**04 44 21.3**	**+0.8**	
PSARD				*e*Sn	**Sn**		**04 44 46.8**	**-1.1**	
PSARD				*e*Sg	**Sb**		**04 44 53.0**	**+0.2**	
PSARD				*i* IAML			04 44 53.9		
PSARD				*i* IAML			04 44 53.9		
PSARD				*i* IAML			04 44 56.3		
PCAS	**Casmilo, Conde**	**2.63**	**15**	*e*Pn	**Pn**		**04 44 25.3**	**+0.3**	
PCAS				*e*Sn	**Sb**		**04 44 58.0**	**-4.3**	
PCAS				*e*Sg	Sn		04 45 04.4	+8.3	
PCAS				*i* IAML			04 45 07.3		
PCAS				*i* IAML			04 45 09.4		
PCAS				*i* IAML			04 45 16.4		
PCBR	**Castelo Branco**	**2.77**	**32**	*e*Pn	**Pn**		**04 44 28.1**	**+1.2**	
PCBR				*e*Sn	**Sn**		**04 44 58.9**	**-0.6**	
PCBR				*e*Sg	**Sb**		**04 45 07.0**	**+0.8**	
PCBR				*i* IAML			04 45 10.9		
PCBR				*i* IAML			04 45 13.4		
PCBR				*i* IAML			04 45 15.3		
ESPR	**Espera**	**2.91**	**102**	Pn	**Pn**		**04 44 30.6**	**+1.8**	
ESPR				Pg	**Pb**		**04 44 36.0**	**+0.7**	
ESPR				Sn	**Sn**		**04 45 03.8**	**+0.8**	
ESPR				Sg	**Sb**		**04 45 15.4**	**+5.1**	
ESPR				*i* IVmb_Lg			04 45 20.3		
ECAB	**El Cabril**	**3.21**	**79**	Pn	**Pn**		**04 44 33.5**	**+0.5**	
ECAB				Sg	**Sb**		**04 45 20.7**	**+1.7**	
ECAB	**El Cabril**	**3.21**	**79**	Pn	**Pn**		**04 44 33.5**	**+0.5**	
ECAB				Sn	**Sn**		**04 45 09.4**	**-1.0**	
ECAB				Sg	**Sb**		**04 45 23.0**	**+4.0**	
ECAB				*i* IVmb_Lg			04 45 30.2		
MTE	**Manteigas**	**3.22**	**26**	*e*Pn	**Pn**		**04 44 33.4**	**+0.1**	
MTE				*e*Sg	**Sb**		**04 45 21.1**	**+1.7**	
MTE				*i* IAML			04 45 25.1		
MTE				*i* IAML			04 45 29.8		
PVIS	**Viseu**	**3.40**	**20**	*e*Pn	**Pn**		**04 44 37.6**	**+1.9**	
PVIS				*e*Sn	**Sn**		**04 45 13.9**	**-1.4**	
EPLA	**Plasencia**	**3.63**	**45**	Pn	**Pn**		**04 44 39.5**	**+0.7**	
EPLA				Sn	**Sn**		**04 45 18.6**	**-2.4**	
EPLA				Sg	**Sb**		**04 45 35.0**	**+3.7**	
EPLA				*i* IVmb_Lg			04 45 39.7		
EADA	**Adamuz**	**3.88**	**79**	Pn	**Pn**		**04 44 43.0**	**+0.8**	
EADA				Sn	**Sn**		**04 45 24.9**	**-2.1**	
EADA				*i* IVmb_Lg			04 45 42.2		
EADA				Sg	**Sb**		**04 45 44.6**	**+6.3**	
PVRL	**Vila Real**	**3.97**	**19**	*e*Sn	**Pn**		**04 45 27.2**	**-2.2**	
POLO	**Lamas de Olo**	**4.04**	**17**	*e*Pn	**Pn**		**04 44 44.6**	**0.0**	
MVO	**Moncorvo**	**4.08**	**26**	*e*Pn	**Pn**		**04 44 45.2**	**+0.2**	
MVO				*e*Sn	**Sn**		**04 45 29.5**	**-2.6**	
MVO				*i* IAML			04 45 51.2		
MVO				*i* IAML			04 45 55.4		
MVO				*i* IAML			04 45 58.4		
PAB	**San Pablo**	**4.45**	**61**	Pn	**Pn**		**04 44 49.7**	**-0.5**	
PAB				Sn	**Sn**		**04 45 38.3**	**-2.9**	
PAB				*i* IVmb_Lg			04 45 44.1		
PAB				Sg	**Sb**		**04 46 00.1**	**+5.2**	
PSIM	**Granatula de C**	**4.64**	**72**	Pn	**Pn**		**04 44 53.1**	**+0.4**	
PSIM				Sn	**Sn**		**04 45 43.6**	**-2.2**	
PSIM				Sg	**Sb**		**04 46 06.3**	**+6.2**	
AKLM	**AKL**	**5.40**	**122**	P	**Pn**		**04 45 02.1**	**-1.1**	
AKLM	**AKL**	**5.40**	**122**	S	**Sn**		**04 46 00.5**	**-4.2**	
MD31	**MD31**	**6.00**	**139**	P	**Pn**		**04 45 12.3**	**+0.8**	
MD31	**MD31**	**6.00**	**139**	S	**Sn**		**04 46 18.6**	**-0.8**	
MDT	**Midelt**	**6.12**	**139**	P	**Pn**		**04 45 13.9**	**+0.8**	
MDT	**Midelt**	**6.12**	**139**	S	**Sn**		**04 46 20.8**	**-1.6**	
OUK	**Oukaimeden**	**6.42**	**168**	P	**Pn**		**04 45 17.6**	**0.0**	
OUK	**Oukaimeden**	**6.42**	**168**	S	**Sn**		**04 46 28.0**	**-2.3**	
TIO	**Tiouine**	**6.81**	**164**	P	**Pn**		**04 45 22.7**	**+0.1**	
TIO	**Tiouine**	**6.81**	**164**	S	**Sn**		**04 46 36.8**	**-2.7**	
OUZM	**OUZ**	**6.95**	**161**	P	**Pn**		**04 45 25.2**	**+0.7**	
OUZM	**OUZ**	**6.95**	**161**	S	**Sn**		**04 46 42.1**	**-0.8**	

*IDC **21** 04:45:13.0±1.1,51°.31N×178°.64E, h0km, mb3.5/10, mbtmp3.6/12, ML4.1/2, MS3.0/4, Error ellipse: s-maj=32.2km s-min=16.1km az=2.0*
*NEIC **21** 04:45:17.5±1.1,51°.39N±0°.04×178°.72E±0°.04, h23km±5km, mb4.2/10, ML4.0/12, ML3.6(AEIC), Error ellipse: s-maj=5.6km s-min=2.5km az=154.0*
*AEIC **21** 04:45:17.5±1.1,51°.43N±0°.06×178°.76E±0°.06, h17km±3km, Error ellipse: s-maj=8.9km s-min=5.5km az=182.0*

ISC 21 04:45:16.8±1.5, 51°.36N±0°.08×178°.70E±0°.04, h23km±10km, n66, σ0°79/60, mb3.7/12, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.38**	**86**		**Pb**	**04 45 25.0**	**+0.1**
AMKA					**Sb**	**04 45 30.2**	**-0.2**
LSSE	**Little Sitkin**	**0.58**	**352**		**Pb**	**04 45 28.3**	**-0.1**
LSPA	**Little Sitkin**	**0.61**	**353**		**Pb**	**04 45 28.8**	**+0.1**
LSPA					**Sb**	**04 45 36.8**	**-0.1**
LSNW	**Little Sitkin**	**0.63**	**350**		**Pb**	**04 45 28.6**	**-0.5**
CESW	**Semis' Southwe**	**0.77**	**44**		**Pb**	**04 45 31.2**	**-0.3**
CERB	**Semis' Cerberu**	**0.82**	**45**		**Pb**	**04 45 32.4**	**0.0**
CERB					**Sb**	**04 45 42.3**	**-0.6**
CEPE	**Semis' Perret**	**0.85**	**44**		**Pb**	**04 45 32.7**	**-0.2**
GAKI	**Gareloi-Kavalg**	**1.57**	**82**		**Pn**	**04 45 43.2**	**0.0**
GAKI					**Sn**	**04 46 02.2**	**-0.6**
GASW	**Gareloi Southw**	**1.58**	**74**		**Sn**	**04 45 43.7**	**+0.2**
GASW					**Sn**	**04 46 03.9**	**+0.7**
GANO	**Gareloi North**	**1.63**	**72**		**Pn**	**04 45 44.7**	**+0.6**
GANE	**Gareloi Northe**	**1.64**	**73**		**Pn**	**04 45 44.7**	**+0.5**
GANE					**Sn**	**04 46 05.6**	**+0.9**
TASE	**Tanaga Southea**	**2.09**	**75**		**Pn**	**04 45 50.6**	**+0.1**
TAFL	**Tanaga Flats**	**2.16**	**78**		**Pn**	**04 45 51.9**	**+0.5**
TAPA	**Tanaga Point A**	**2.23**	**77**		**Pn**	**04 45 52.7**	**+0.4**
KIMD	**Kanaga Island**	**2.57**	**79**		**Pn**	**04 45 57.4**	**+0.4**
KIKV	**Kanaga Island**	**2.63**	**77**		**Pn**	**04 45 58.8**	**+1.0**
KIWB	**Kanaga Island**	**2.64**	**77**		**Pn**	**04 45 58.3**	**+0.4**
KIWB				IAML		04 46 33.1	
	comp=N,449nm,1.1s						
KIWB				IAML		04 46 45.0	
	comp=E,673nm,0.6s						
KIRH	**Kanaga Island**	**2.68**	**77**		**Pn**	**04 45 59.1**	**+0.6**
ADK	**Adak**	**2.93**	**78**		**Pn**	**04 46 02.1**	**+0.3**
ADK	**Adak**	**2.93**	**78**	IAML		04 46 48.4	
	comp=E,354nm,0.6s						
ETKA	**Kagalaska Isla**	**3.09**	**79**		**Pn**	**04 46 04.8**	**+0.6**
SHEM	**Shemya Is, Ala**	**3.16**	**298**	Pn	**Pn**	**04 46 05.1**	**+0.1**
	comp=E,46nm,0.3s,baz=69,slow=5.2,SNR=9.4						
SHEM				Sn	**Sn**	**04 46 43.1**	**+1.2**
	comp=E,43nm,0.3s,baz=292,slow=19,SNR=8.7						
SHEM				LR	LR	04 47 20.6	
	comp=E,387nm,18.9s,baz=175,slow=41 comp=E,112nm,0.3s						
SMY	**Shemya**	**3.16**	**298**		**Pn**	**04 46 06.2**	**+1.2**
SMY	**Shemya**	**3.16**	**298**	IAML		04 46 52.0	
	comp=E,578nm,2.7s						
GSCK	**Great Sitkin C**	**3.27**	**76**		**Pn**	**04 46 07.0**	**+0.4**
GSTD	**Great Sitkin T**	**3.28**	**76**		**Pn**	**04 46 07.3**	**+0.5**
GSMY	**Great Sitkin M**	**3.34**	**76**		**Pn**	**04 46 08.1**	**+0.6**
GSTR	**Great Sitkin T**	**3.34**	**75**	Pn	**Pn**	**04 46 08.2**	**+0.6**
GSIG	**Igitkin Island**	**3.41**	**77**		**Pn**	**04 46 09.0**	**+0.5**
ATKA	**Atka Island**	**4.49**	**76**		**Pn**	**04 46 24.2**	**+0.8**
ATKA	**Atka Island**	**4.49**	**76**	IAML		04 47 49.7	
	comp=E,194nm,3.6s						
ATKA				IAML		04 48 11.5	
	comp=N,162nm,3.9s						
UNV	**Unalaska Valle**	**9.35**	**69**	Pn	**Pn**	**04 47 33.4**	**+3.4**
PETK	**Petropavlovsk-**	**12.99**	**286**	LR	LR	04 53 57.2	
	comp=N,33nm,19.3s,baz=117,slow=40						

O15K	**Ungalikthiuk R**	**14.48**	**49**	Pn	**Pn**		**04 48 39.7**	**-0.4**	
K15K	**Wolf Creek Mou**	**15.32**	**37**	Pn	**Pn**		**04 48 51.6**	**+0.2**	
L16K	**Owhat River**	**15.80**	**41**	Pn	**Pn**		**04 48 58.7**	**+1.1**	
M17K	**Holitna River**	**16.50**	**43**	Pn	**Pn**		**04 49 05.4**	**-1.2**	
M17K				IAmb	IAmb		04 49 47.9		
	comp=E,34nm,1.4s								
OHAK	**Old Harbor**	**17.30**	**59**	Pn	**Pn**		**04 49 15.2**	**-1.3**	
OHAK				IAmb	IAmb		04 49 53.6		
	comp=E,23nm,1.2s								
KDAK	**Kodiak Island**	**17.75**	**58**	P	**Pn**		**04 49 21.4**	**-0.8**	
	comp=Z,0.4nm,0.3s,baz=191,slow=2.0,SNR=7.3 comp=E,2.6nm,0.9s								
KDAK	**Kodiak Island**	**17.75**	**58**	IAmb	IAmb		04 49 46.5		
	comp=Z,30nm,1.1s								
SEY	**Seymchan**	**18.23**	**320**	LR	LR		04 55 16.6		
	comp=Z,25nm,18.6s,baz=92,slow=33								
ILAR	**Eielson Array**	**22.25**	**40**	P	**P**		**04 50 11.7**	**-0.1**	
	comp=Z,0.4nm,1.0s,baz=233,slow=8.0,SNR=7.5 comp=Z,0.4nm,1.0s								
J26L	**Joseph Creek**	**23.53**	**42**	P	**P**		**04 50 24.1**	**-0.9**	
D24K	**Happy Valley**	**23.55**	**29**	P	**P**		**04 50 25.4**	**+0.4**	
INK	**Inuvik**	**28.38**	**35**	P	**P**		**04 51 07.9**	**-0.9**	
	comp=Z,0.9nm,0.9s,baz=243,slow=6.8,SNR=1.9 comp=Z,0.9nm,0.9s								
INK	**Inuvik**	**28.38**	**35**	IAmb	IAmb		04 51 47.5		
	comp=Z,5.2nm,1.5s								
H11N2	**WAKE ISLAND Hy**	**32.90**	**201**	T	T		05 26 42.4		
	baz=11,slow=76,SNR=20								
H11N3	**WAKE ISLAND Hy**	**32.91**	**201**	T	T		05 26 46.0		
	baz=11,slow=76,SNR=13								
H11N1	**WAKE ISLAND Hy**	**32.92**	**201**	T	T		05 26 44.4		
	baz=11,slow=76,SNR=18								
H11S1	**WAKE ISLAND Hy**	**34.12**	**201**	T	T		05 28 23.0		
	baz=20,slow=76,SNR=16								
H11S2	**WAKE ISLAND Hy**	**34.14**	**201**	T	T		05 28 22.7		
	baz=20,slow=76,SNR=14								
H11S3	**WAKE ISLAND Hy**	**34.14**	**201**	T	T		05 28 25.8		
	baz=20,slow=76,SNR=16								
NVAR	**Mina Array Bea**	**45.11**	**81**	P	**P**		**04 53 32.6**	**+1.2**	
	comp=Z,0.1nm,0.4s,baz=312,slow=7.4,SNR=1.9 comp=Z,0.1nm,0.4s								
NVAR	**Mina Array Bea**	**45.11**	**81**	P	**P**		**04 53 31.9**	**+0.5**	
SONM	**Songino Array**	**45.25**	**295**	P	**P**		**04 53 33.3**	**+1.1**	
	comp=Z,0.2nm,0.4s,baz=61,slow=12,SNR=1.9								
SONM				LR	LR		05 12 57.1		
	comp=Z,41nm,18.5s,baz=344,slow=37 comp=Z,0.2nm,0.4s								
PDAR	**Pinedale Array**	**47.80**	**71**	P	**P**		**04 53 52.8**	**+0.3**	
	comp=Z,0.7nm,0.9s,baz=335,slow=3.7,SNR=5.0 comp=Z,0.7nm,0.9s								
PDAR	**Pinedale Array**	**47.80**	**71**	P	**P**		**04 53 51.9**	**-0.6**	
KURK	**Kurchatov**	**57.89**	**312**	P	**P**		**04 55 06.6**	**+0.1**	
KURK				IAmb	IAmb		04 55 09.5		
	comp=Z,1.2nm,0.6s								
KURBB	**Kurchatov Arra**	**57.99**	**312**	P	**P**		**04 55 06.9**	**-0.3**	
	comp=Z,0.8nm,0.6s,baz=42,slow=6.7,SNR=14 comp=Z,0.8nm,0.6s								
MKAR	**Makanchi Array**	**58.81**	**307**	P	**P**		**04 55 12.2**	**-0.8**	
	comp=Z,0.3nm,0.6s,baz=32,slow=7.1,SNR=3.9 comp=Z,0.3nm,0.6s								
BVAR	**Borovoye Array**	**59.88**	**318**	P	**P**		**04 55 19.5**	**-0.8**	
	comp=Z,1.1nm,0.5s,baz=47,slow=6.3,SNR=6.4 comp=Z,1.1nm,0.5s								
TXAR	**Lajitas Array**	**60.20**	**79**	P	**P**		**04 55 23.2**	**+0.2**	
	comp=Z,0.4nm,0.8s,baz=297,slow=4.4,SNR=6.6 comp=Z,0.4nm,0.8s								
TXAR	**Lajitas Array**	**60.20**	**79**	P	**P**		**04 55 22.7**	**-0.2**	
AB31	**Akbulak array**	**66.99**	**321**	P	**P**		**04 56 07.9**	**+0.5**	
AB31				IAmb	IAmb		04 56 28.4		
	comp=Z,2.7nm,1.2s								
ABKAR	**Akbulak array**	**66.99**	**321**	P	**P**		**04 56 07.8**	**+0.4**	
WRA	**Warramunga Arr**	**80.93**	**222**	P	**P**		**04 57 28.0**	**-1.1**	
	comp=Z,0.4nm,0.7s,baz=28,slow=5.3,SNR=5.7 comp=Z,0.4nm,0.7s								

*SNET **21** 04:46:17.9±1.0, 13°.27N×90°.02W, h14km±7km, ML2.7*
*GCG **21** 04:46:17.7±1.8, 13°.44N×90°.20W, h30km±20km, MD3.9*

ISC 21 04:46:12.8±2.1, 13°06N±0°.09×90°10W±0°.05, h9km±13km, n19, σ0°71/27, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.87**	**47**	*e*P	**Pn**	**04 46 31.1**	**-0.2**
JAYA				*e*S	**Sg**	**04 46 40.5**	**-0.2**
JAYA				IAML		04 46 44.7	
	comp=Z,270nm,0.2s						
JAYA	**Jayaque - finc**	**0.87**	**47**	*i* P	**Pn**	**04 46 31.1**	**-0.2**
CEVE	**Cerro Verde**	**0.89**	**31**	*e*P	**Pn**	**04 46 31.1**	**-0.6**
CEVE				*e*S	**Sg**	**04 46 42.1**	**+0.4**
CEVE				IAML		04 46 46.2	
	comp=Z,453nm,0.3s						
NUBE	**Las Nubes**	**0.89**	**20**	*e*P	**Pg**	**04 46 30.3**	**+0.3**
NUBE				*e*S	**Sg**	**04 46 40.3**	**-1.4**
NUBE	**Las Nubes**	**0.89**	**20**	*i* P	**Pg**	**04 46 30.3**	**+0.3**
SBLS	**San Blas**	**0.90**	**31**	*e*P	**Pb**	**04 46 31.1**	**+0.4**
SNJE	**San Jose**	**0.94**	**31**	*e*P	**Pb**	**04 46 31.6**	**+0.3**
SNJE				*e*S	**Sg**	**04 46 42.1**	**-1.0**
RTR	**El Retiro**	**0.94**	**28**	*e*P	**Pb**	**04 46 31.6**	**+0.2**
RTR				*e*S	**Sg**	**04 46 42.4**	**-0.9**
PMON	**Piamonte**	**1.00**	**49**	*e*P	**Pn**	**04 46 33.1**	**0.0**
UNIC	**Universidad Ca**	**1.06**	**30**	*e*P	**Pb**	**04 46 33.1**	**-0.2**
LOMA	**Loma Larga**	**1.07**	**57**	*e*P	**Pn**	**04 46 34.5**	**+0.5**
FG16	**Alotenango, Sa**	**1.27**	**342**	*e*P	**Pg**	**04 46 38.8**	**+1.5**
PAVA	**Las Pavas**	**1.30**	**60**	*e*P	**Pg**	**04 46 39.0**	**+1.2**
TECO	**Alcaldia de Te**	**1.37**	**69**	*e*P	**Pg**	**04 46 39.2**	**+0.2**
TECO				*e*S	**Sn**	**04 46 56.1**	**-0.2**
MTO3	**Montecristo**	**1.51**	**28**	*e*P	**Pn**	**04 46 39.8**	**-0.4**
PACA	**Pacayal**	**1.77**	**76**	*e*P	**Pg**	**04 46 46.7**	**-0.2**
PACA				*e*S	**Sb**	**04 47 08.9**	**+0.9**
STG8	**El Palmar, Qui**	**1.84**	**319**	*e*P	**Pg**	**04 46 48.7**	**+0.5**
STG8				*e*S	**Sg**	**04 47 11.2**	**-0.9**
APG	**El Apazote**	**1.97**	**350**	*e*P	**Pn**	**04 46 45.7**	**-0.7**
LCND	**La Caada**	**2.16**	**83**	*e*P	**Pb**	**04 46 51.8**	**-0.4**

*GUC **21** 04:52:19.3±0.7, 18°.15S×69°.48W, h134km±3km, ML3.5*
*NEIC **21** 04:52:19.2±1.6, 18°.18S±0°.05×69°.51W±0°.06, h129km±7km, mb4.0/9, ML3.3(GUC), Error ellipse: s-maj=10.0km s-min=3.4km az=131.0*

ISC 21 04:52:19.4±0.8, 18°19S±0°.05×69°51W±0°.07, h128km±7km, n43, σ1°28/53, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.14**	**180**		**Pn**	**04 52 36.9**	**-0.8**
PB16				Sn	**Sn**	**04 52 50.7**	**-0.9**
PB18	**Visviri**	**0.60**	**2**		**Pn**	**04 52 39.7**	**+0.1**
PB18				Sn	**Sn**	**04 52 55.2**	**+0.4**
PB18	**Visviri**	**0.60**	**2**	⇓*i*P	**Pn**	**04 52 39.8**	**+0.2**
PB18				*i* S	**Sn**	**04 52 55.7**	**+0.9**
AP01	**Chacalluta**	**0.81**	**257**		**Pn**	**04 52 40.4**	**-0.1**
AP01				Sn	**Sn**	**04 52 57.0**	**+0.6**
AP01	**Chacalluta**	**0.81**	**257**	⇑*i*P	**Pn**	**04 52 40.8**	**+0.3**
AP01				*i* S	**Sn**	**04 52 57.4**	**+0.9**
AP01				IAML		04 52 58.0	
	comp=E,4µm,0.3s						
PB12	**IPOC Station P**	**0.89**	**242**		**Pn**	**04 52 41.0**	**-0.2**
PB12				Sn	**Sn**	**04 52 58.1**	**+0.3**
PB12	**IPOC Station P**	**0.89**	**242**	⇑*i*P	**Pn**	**04 52 41.2**	**-0.1**
PB12				*i* S	**Sn**	**04 52 58.3**	**+0.5**
PB12				IAML		04 53 02.1	
	comp=N,646nm,0.2s						
GO01	**Chusmiza**	**1.50**	**169**		**Pn**	**04 52 48.5**	**+0.5**
GO01				Sn	**Sn**	**04 53 10.7**	**+1.1**
GO01	**Chusmiza**	**1.50**	**169**	⇑*i*P	**Pn**	**04 52 48.4**	**+0.5**
GO01				*i* S	**Sn**	**04 53 11.2**	**+1.6**
GO01				IAML		04 53 11.7	
	comp=N,792nm,0.0s						
PB11	**IPOC Station P**	**1.57**	**185**		**Pn**	**04 52 48.2**	**-0.2**
PB11	**IPOC Station P**	**1.57**	**185**	⇓*i*P	**Pn**	**04 52 48.4**	**0.0**
PB11				*i* S	**Sn**	**04 53 10.8**	**+0.3**
PB11				IAML		04 53 13.2	
	comp=E,365nm,0.2s						
PB08	**IPOC Station P**	**1.97**	**170**		**Pn**	**04 52 53.6**	**+0.3**
PB08	**IPOC Station P**	**1.97**	**170**	⇑*i*P	**Pn**	**04 52 53.8**	**+0.5**
PB08				*i* S	**Sn**	**04 53 20.1**	**+0.9**
PB08				IAML		04 53 22.2	
	comp=E,251nm,0.2s						
TA02	**Huaiquique**	**2.15**	**196**	IAML		04 53 28.4	
	comp=N,495nm,0.2s						
LPAZ	**La Paz**	**2.31**	**35**		**Pn**	**04 52 57.2**	**-0.5**
TA01	**Diego Aracena**	**2.45**	**195**		**Pn**	**04 52 58.5**	**-0.3**
TA01	**Diego Aracena**	**2.45**	**195**	*e*P	**Pn**	**04 52 58.2**	**-0.7**
TA01				IAML		04 53 39.0	
	comp=E,250nm,0.2s						
PATCX	**Punta Patache**	**2.69**	**193**	Pn	**Pn**	**04 53 00.8**	**-1.2**
PATCX	**Punta Patache**	**2.69**	**193**	*e*P	**Pn**	**04 53 02.8**	**+0.7**
PATCX				IAML		04 53 50.0	
	comp=E,108nm,0.6s						
PB01	**IPOC Station P**	**2.84**	**180**		**Pn**	**04 53 03.9**	**-0.1**
PB02	**IPOC Station P**	**3.13**	**187**		**Pn**	**04 53 07.8**	**0.0**
PB07	**IPOC Station P**	**3.54**	**186**		**Pn**	**04 53 13.1**	**-0.1**
PB09	**IPOC Station P**	**3.59**	**176**		**Pn**	**04 53 14.5**	**+0.6**
PB03	**IPOC Station P**	**3.84**	**183**		**Pn**	**04 53 17.0**	**-0.3**
PB06	**IPOC Station P**	**4.49**	**181**		**Pn**	**04 53 24.3**	**-1.6**
PB05	**IPOC Station P**	**4.68**	**188**		**Pn**	**04 53 27.4**	**-1.0**
AF01	**San Pedro de A**	**4.90**	**166**	Pn	**Pn**	**04 53 30.3**	**-1.1**
PB14	**IPOC Station P**	**6.46**	**187**	Pn	**Pn**	**04 53 49.8**	**-2.6**
GO02	**Mina Guanaco**	**6.94**	**181**	Pn	**Pn**	**04 53 56.9**	**-2.0**
AC01	**Pan de Azucar**	**7.98**	**187**	Pn	**Pn**	**04 54 09.4**	**-3.3**
AC02	**Maricunga**	**8.61**	**178**	Pn	**Pn**	**04 54 19.9**	**-1.7**
NNA	**Nana**	**9.39**	**310**	Pn	**Pn**	**04 54 30.4**	**-1.3**
AC05	**El Transito**	**10.62**	**184**	Pn	**Pn**	**04 54 45.3**	**-2.9**
MT02	**Curacav**	**15.08**	**185**	Pn	**Pn**	**04 55 45.1**	**-0.7**
MT02				IAmb	IAmb	04 55 53.3	
	comp=Z,16nm,1.2s						
MT08	**Bocatoma Ro**	**15.20**	**182**	Pn	**Pn**	**04 55 46.9**	**-0.7**
MT08				IAmb	IAmb	04 55 52.6	
	comp=Z,9.4nm,1.4s						
MT09	**Talagante**	**15.58**	**185**		**Pn**	**04 55 51.8**	**-0.4**
MT01	**Popeta**	**15.69**	**185**		**Pn**	**04 55 53.1**	**-0.3**
MT01				IAmb	IAmb	04 55 59.9	
	comp=Z,15nm,1.2s						
BO01	**Tunca**	**16.20**	**185**		**Pn**	**04 55 58.8**	**-0.8**
ITAB	**Concordia**	**18.37**	**122**	P	**P**	**04 56 23.3**	**-1.0**
ITAB				IAmb	IAmb	04 56 23.4	
	comp=Z,7.5nm,1.1s						
PLTB	**Pedras Altas**	**19.73**	**136**	P	**P**	**04 56 36.3**	**-2.7**
BDFB	**Brasilia**	**20.72**	**86**	P	**P**	**04 56 49.1**	**-0.9**
SNAA	**Sanae**	**65.58**	**161**	P	**P**	**05 02 48.7**	**-0.4**
SNAA				IAmb	IAmb	05 02 58.1	
	comp=Z,2.8nm,1.3s						
QSPA	**South Pole Qui**	**71.98**	**180**	P	**P**	**05 03 33.0**	**+4.0**

TRN 21 05:00:20.8, 10°.35N×62°.29W, h2km, MD3.6, Gulf of Paria., Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMG	**Mucurapo Girls**	**0.81**	**67**	*e*P	Pg	05 00 35.5	-0.8
PSMG				*e*S	Sb	05 00 48.8	-0.2
TPP	**Pointe-a-Pierr**	**0.82**	**92**	*e*P	Pn	05 00 38.9	-0.6
TPP				*e*S	Sb	05 00 50.4	+1.0
TRN	**Trinidad (W)**	**0.92**	**71**	*e*P	Pg	05 00 38.2	-0.2
TRN				*e*S	Sb	05 00 52.4	+0.3
GRFF	**Grenada Fort F**	**1.77**	**18**	*e*P	Pb	05 00 53.6	-0.5
GRFF				*e*S	Sn	05 01 15.8	+0.1
GRGR	**Grenville**	**1.88**	**19**	*e*P	Pb	05 00 55.3	-0.5
GRGR				*e*S	Sn	05 01 18.5	+0.2
GRW	**Mount Saint Ca**	**1.90**	**19**	*e*S	Sb	05 01 20.4	-0.1
GRHS	**Sauteurs**	**1.97**	**19**	*e*P	Pn	05 00 55.1	-0.1
GRHS				*e*S	Sn	05 01 19.3	-1.2
GRSS	**Sisters**	**2.04**	**19**	*e*S	Sn	05 01 23.1	+0.6
GCMP	**Grenada, Carri**	**2.28**	**22**	*e*P	Pb	05 01 01.5	-1.2
GCMP				*e*S	Sn	05 01 28.9	+0.6
PCRV	**Puerto La Cruz**	**2.32**	**266**

s-min=10.1km az=71.0
*NEIC **21** 05:14:32.1±1.2,5.12°N±0.07×127.15°E±0.10,h78km±7km, mb4.8/104, Error ellipse: s-maj=14.9km s-min=8.9km az=70.0*
*DJA **21** 05:14:32.3±0.7,5.4°N±4.1×12.7°E±1.1°,h15km±6km,M4.9/15, mb5.0/15,mB5.3/9,MLv5.2/14,Mw(mB)4.7/9*
ISC 21 05:14:31.5±0.3,5.13N±0.04×127.17E±0.07,h76km,n229, σ1§02/189,mb4.8/96,2C-4D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.18**	**229**	P	**Pn**	**05 15 06.3**	**+0.6**
SGSI				S	**Sn**	**05 15 31.4**	**-0.5**
DAV	**Davao City (W)**	**2.49**	**321**	P	**Pn**	**05 15 10.9**	**+0.9**
	794nm,0.4s,baz=165,slow=2.3,SNR=15						
DAV				S	**Sn**	**05 15 41.1**	**+1.7**
	1µm,0.5s,baz=351,slow=15,SNR=7.2						
TNTI	**Ternate**	**4.34**	**177**		**Pn**	**05 15 36.2**	**+1.1**
TNTI	**Ternate**	**4.34**	**177**	P	**Pn**	**05 15 36.7**	**+1.6**
TNTI				S	**Sn**	**05 16 26.4**	**+2.0**
KMSI	**Cibinong**	**5.54**	**215**	P	**Pn**	**05 15 53.5**	**+2.1**
KMSI				S	**Sn**	**05 16 55.1**	**+1.4**
MRSI	**Marisa**	**6.98**	**229**	P	**Pn**	**05 16 11.8**	**+0.7**
SWI	**Sorong**	**7.22**	**145**	P	**Pn**	**05 16 16.9**	**+2.4**
	0.3nm50nm,0.5s						
SANI	**Sanana**	**7.23**	**189**	P	**Pn**	**05 16 12.6**	**-2.0**
	0.6nm2µm88nm,0.8s						
TOLI2	**Tolitoli**	**7.53**	**238**		**Pn**	**05 16 17.5**	**-1.1**
LUWI	**Luwuk**	**7.54**	**216**		**Pn**	**05 16 18.9**	**0.0**
LUWI	**Luwuk**	**7.54**	**216**	P	**Pn**	**05 16 21.6**	**+2.7**
	1.1nm4µm297nm,1.0s						
APSI	**Ampana**	**8.15**	**223**	P	**Pn**	**05 16 28.5**	**+1.3**
	0.7nm2µm179nm,1.0s						
NLAI	**Namlea**	**8.32**	**180**	P	**Pn**	**05 16 29.5**	**+0.1**
	2µm74nm,0.5s						
MSAI	**Masohi**	**8.60**	**168**	P	**Pn**	**05 16 35.5**	**+2.1**
	89nm,1.0s						
MYLDM	**Lahad Datu**	**8.64**	**271**		**Pn**	**05 16 35.8**	**+2.1**
MPSI	**Mapaga**	**8.69**	**237**	P	**Pn**	**05 16 35.7**	**+1.2**
	37nm,0.7s						
AAI	**Ambon**	**8.82**	**173**	P	**Pn**	**05 16 38.2**	**+1.9**
	75nm,0.9s						
FAKI	**Fak Fak**	**9.47**	**148**	Pn	**Pn**	**05 16 44.2**	**-1.0**
BNDI	**Bandanaira**	**9.97**	**164**	P	**Pn**	**05 16 54.0**	**+2.0**
	46nm,0.6s						
TGY	**Tagaytay City**	**10.82**	**326**	LR	LR	05 22 30.2	
	comp=Z,322nm,18.0s,baz=56,slow=44						
TTSI	**Tana Toraja**	**10.95**	**222**	P	**Pn**	**05 17 06.6**	**+1.2**
	61nm,1.0s						
SPSI	**Sidrap Palu**	**11.68**	**219**	P	**Pn**	**05 17 14.0**	**-1.3**
KAPI	**Kappang**	**12.51**	**216**	P	**Pn**	**05 17 25.8**	**-0.8**
	7.6nm,0.4s,baz=29,slow=7.8,SNR=7.6						
KAPI				LR	LR	05 22 35.1	
	comp=Z,164nm,21.9s,baz=28,slow=39						
KAPI	**Kappang**	**12.51**	**216**		**Pn**	**05 17 25.3**	**-1.3**
MMRI	**Maumere**	**14.54**	**200**	Pn	**Pn**	**05 17 53.2**	**-0.3**
SOEI	**Soe**	**15.07**	**191**	Pn	**Pn**	**05 18 00.9**	**+0.4**
SOEI				IAmb	IAmb	05 18 25.0	
	comp=Z,58nm,1.4s						
SBUM	**Sibu**	**15.15**	**260**	P	**Pn**	**05 18 02.9**	**+1.5**
SBUM				IAmb	IAmb	05 18 08.2	
	comp=Z,53nm,0.8s						
JAY	**Jayapura**	**15.51**	**119**	LR	LR	05 23 15.0	
	comp=Z,65nm,19.7s,baz=356,slow=34						
MTN	**Manton Dam**	**18.29**	**168**	P	**Pn**	**05 18 39.9**	**-0.4**
	comp=Z,13nm,0.7s						
MTN	**Manton Dam**	**18.29**	**168**	P	**P**	**05 18 39.3**	**-0.2**
KDU	**Kakadu**	**18.47**	**163**	P	**Pn**	**05 18 42.3**	**-0.1**
	comp=Z,6.0nm,0.8s						
TWG	**Pinlang**	**18.55**	**342**	P	**P**	**05 18 42.2**	**0.0**
TPUB	**Ta-pu**	**19.13**	**341**	P	**P**	**05 18 48.8**	**+0.1**
TPUB				IAmb	IAmb	05 18 51.1	
	comp=Z,38nm,0.8s						
GUMO	**Guam**	**19.36**	**63**	LR	LR	05 25 31.0	
	comp=Z,97nm,21.3s,baz=200,slow=34						
KNRA	**Kununurra**	**20.74**	**176**	P	**P**	**05 19 06.9**	**+0.9**
	comp=Z,21nm,0.7s						
KNRA	**Kununurra**	**20.74**	**176**	P	**P**	**05 19 05.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**23.13**	**184**	P	**P**	**05 19 31.6**	**+0.1**
MYKOM	**Kota Tinggi**	**23.51**	**263**	P	**P**	**05 19 35.0**	**-0.1**
MYKOM				IAmb	IAmb	05 19 36.0	
	comp=Z,25nm,0.6s						
PMG	**Port Moresby**	**24.61**	**126**	LR	LR	05 29 57.1	
	comp=Z,41nm,18.8s,baz=318,slow=38						
COEN	**Coen**	**24.74**	**140**	P	**P**	**05 19 45.4**	**-0.7**
WB0	**Warramunga Arr**	**25.74**	**164**	P	**P**	**05 19 55.1**	**-0.1**
WB0				IAmb	IAmb	05 20 10.7	
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**25.89**	**164**	P	**P**	**05 19 57.6**	**+1.1**
WRAB				IAmb	IAmb	05 20 17.2	
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**25.90**	**164**	P	**P**	**05 19 57.1**	**+0.5**
	comp=Z,5.7nm,0.6s,baz=342,slow=10,SNR=96						
WRA				ScP	**ScP**	**05 26 57.2**	**+0.2**
	comp=Z,3.3nm,1.0s,baz=340,slow=3.4,SNR=11						
WRA				LR	LR	05 32 03.2	
	comp=Z,82nm,18.1s,baz=252,slow=41						
	comp=Z,5.7nm,0.6s						
WRA	**Warramunga Arr**	**25.90**	**164**	P	**P**	**05 19 56.0**	**-0.5**
WR8	**Warramunga Arr**	**25.95**	**164**	P	**P**	**05 19 56.5**	**-0.5**
MBWA	**Marble Bar**	**27.13**	**195**	P	**P**	**05 20 08.5**	**+0.9**
	comp=Z,19nm,1.2s						
MBWA	**Marble Bar**	**27.13**	**195**	P	**P**	**05 20 07.3**	**-0.3**
PSA00	**Pilbara Seismi**	**27.49**	**195**	P	**P**	**05 20 11.4**	**+0.5**
	comp=Z,25nm,1.1s						
PSA00	**Pilbara Seismi**	**27.49**	**195**	P	**P**	**05 20 10.7**	**-0.2**
PSA00				IAmb	IAmb	05 20 31.5	
	comp=Z,15nm,0.8s						
PSA00	**Pilbara Seismi**	**27.49**	**195**	P	**P**	**05 20 10.2**	**-0.7**
PSA00				IAmb	IAmb	05 20 31.5	
	comp=Z,10nm,0.9s						
PSAB3	**Pilbara Seismi**	**27.51**	**195**	P	**P**	**05 20 12.5**	**+1.5**
NJ2	**Nanjing**	**27.89**	**345**	*e*P	**P**	**05 20 15.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
JNU	**Nakatsue**	**28.06**	**7**	LR	LR	05 33 16.0	
	comp=Z,27nm,19.8s,baz=188,slow=40						
PSI	**Prapat**	**28.27**	**266**	LR	LR	05 33 36.3	
	comp=Z,63nm,18.4s,baz=59,slow=40						
QIS	**Mount Isa**	**28.30**	**155**	P	**P**	**05 20 17.5**	**-0.6**
	comp=Z,11nm,0.7s						
AS31	**Alice Springs**	**29.37**	**167**	P	**P**	**05 20 26.7**	**-0.9**
ASAR	**Alice Springs**	**29.37**	**167**	P	**P**	**05 20 27.3**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=359,slow=8.4,SNR=26						
ASAR				PcP	**PcP**	**05 23 32.6**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=346,slow=1.9,SNR=4.3						
ASAR				ScP	**ScP**	**05 27 07.8**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=346,slow=3.2,SNR=11						
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	**29.37**	**167**	P	**P**	**05 20 27.2**	**-0.4**
ENH	**Enshi**	**30.05**	**328**	P	**P**	**05 20 33.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.57**	**298**	P	**P**	**05 20 38.0**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=116,slow=7.8,SNR=8.8						
CMAR				LR	LR	05 33 58.4	
	comp=Z,53nm,18.4s,baz=95,slow=38						
	comp=Z,1.7nm,0.3s						
CHTO	**Chiang Mai**	**30.71**	**299**	P	**P**	**05 20 39.1**	**-0.4**
CTAO	**Charters Tower**	**31.31**	**144**	P	**P**	**05 20 43.7**	**-1.0**
INU	**Inuyama**	**31.41**	**16**	P	**P**	**05 20 45.8**	**+0.3**
INU				IAmb	IAmb	05 20 46.7	
	comp=Z,15nm,0.7s						
JGF	**Kuroka**	**31.74**	**16**	P	**P**	**05 20 48.8**	**+0.4**
JGF				IAmb	IAmb	05 20 50.4	
	comp=Z,8.4nm,0.7s						
KSRS	**Korea Array**	**32.18**	**1**	P	**P**	**05 20 51.9**	**-0.2**
	comp=Z,4.4nm,0.9s,baz=178,slow=9.7,SNR=14						
KSRS				LR	LR	05 39 04.7	
	comp=Z,12µm,18.2s,baz=165,slow=46						
	comp=Z,4.4nm,0.9s						
PZH	**PanZhiHua**	**32.27**	**314**	P	**P**	**05 20 56.3**	**+3.0**
TIA	**Tai'an**	**32.28**	**345**	P	**P**	**05 20 53.3**	**+0.2**
TIA				pmax	pmax		
	comp=Z,18nm,0.9s						
LYN	**LuoYang**	**32.29**	**337**	P	**P**	**05 20 53.9**	**+0.7**
LYN				pmax	pmax		
	comp=Z,43nm,0.7s						
MJAR	**Matsushiro Arr**	**32.86**	**17**	P	**P**	**05 20 57.3**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=190,slow=9.7,SNR=6.7						
	comp=Z,2.2nm,0.5s						
XAN	**Xi'an**	**33.38**	**332**	P	**P**	**05 21 02.6**	**-0.2**
XAN				pP	pP	05 21 22.1	+2.5
XAN				pmax	pmax		
	comp=Z,69nm,0.9s						
XAN	**Xi'an**	**33.38**	**332**	P	**P**	**05 21 02.8**	**-0.1**
CD2	**Chengdu**	**33.80**	**322**	P	**P**	**05 21 06.3**	**-0.1**
CD2				pP	pP	05 21 24.3	+0.9
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,330nm,5.4s						
HNS	**HongShan**	**34.08**	**342**	⇓P	**P**	**05 21 09.0**	**+0.3**
HNS				pmax	pmax		
	comp=Z,54nm,0.8s						
JMM	**Marumori**	**34.87**	**19**	P	**P**	**05 21 15.8**	**+0.3**
TIY	**Taiyuan**	**35.11**	**339**	*e*P	**P**	**05 21 19.8**	**+2.1**
TIY				pmax	pmax		
	comp=Z,30nm,0.9s						
MORW	**Morawa**	**35.65**	**197**	P	**P**	**05 21 21.8**	**-0.6**
MORW				IAmb	IAmb	05 21 42.9	
	comp=Z,24nm,1.4s						
HNR	**Honiara**	**35.73**	**114**	LR	LR	05 34 18.9	
	comp=Z,35nm,21.4s,baz=270,slow=33						
BJT	**Baijiatuan**	**36.12**	**346**	P	**P**	**05 21 25.1**	**-1.1**
BJI	**Beijing**	**36.14**	**346**	P	**P**	**05 21 26.6**	**+0.2**
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
LZDM	**Lanzhou Array**	**37.52**	**328**	P	**P**	**05 21 39.0**	**+0.4**
	comp=Z,9.2nm,0.6s,baz=153,slow=10.0,SNR=13						
LZDM				LR	LR	05 37 25.6	
	comp=Z,118nm,21.8s,baz=185,slow=37						
	comp=Z,9.2nm,0.6s						
LZH	**Lanzhou**	**37.54**	**328**	*e*P	**P**	**05 21 39.1**	**+0.5**
LZH				pP	pP	05 21 58.0	+2.5
LZH				sP	sP	05 22 10.0	+6.2
JTM	**Tenmabayashi**	**37.63**	**17**	P	**P**	**05 21 38.8**	**-0.2**
EIDS	**Eidsvold**	**38.20**	**144**	P	**P**	**05 21 43.4**	**-0.7**
EIDS				IAmb	IAmb	05 21 47.7	
	comp=Z,8.2nm,0.9s						
HHC	**Hu-ho-hao-te**	**38.22**	**341**	*e*P	**P**	**05 21 45.3**	**+1.1**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
BTO	**Baotou**	**38.53**	**339**	*e*P	**P**	**05 21 48.8**	**+2.0**
BTO				pP	**pwP**	**05 22 07.0**	**-2.5**
BTO				sP	**sP**	**05 22 16.3**	**+4.3**
BTO				pmax	pmax		
	comp=Z,28nm,0.9s						
BTO				pmax	pmax		
	comp=Z,470nm,6.3s						
BBOO	**Buckleboo**	**38.67**	**168**	P	**P**	**05 21 48.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**39.14**	**5**	P	**P**	**05 21 51.6**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=178,slow=9.1,SNR=5.7						
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	**39.29**	**160**	P	**P**	**05 21 52.3**	**-0.8**
	comp=Z,56nm,1.0s						
STKA	**Stephens Creek**	**39.29**	**160**	P	**P**	**05 21 52.5**	**-0.5**
	comp=Z,7.8nm,0.8s,baz=334,slow=7.6,SNR=9.3						
STKA				LR	LR	05 40 58.8	
	comp=Z,36nm,18.2s,baz=19,slow=40						
	comp=Z,7.8nm,0.8s						
MDJ	**Mudanjiang**	**39.38**	**3**	P	**P**	**05 21 53.5**	**-0.1**
MDJ				IAmb	IAmb	05 21 55.0	
	comp=Z,18nm,1.2s						
MDJ	**Mudanjiang**	**39.38**	**3**	P	**P**	**05 21 53.4**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
SHL	**Shillong**	**39.42**	**305**	P	**P**	**05 21 53.5**	**-1.0**
BNX	**BinXian**	**40.45**	**0**	⇑P	**P**	**05 22 03.8**	**+1.3**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ASAJ	**Asahikawa**	**41.13**	**17**	LR	LR	05 42 04.2	
	comp=Z,22nm,19.3s,baz=152,slow=40						
JKA	**Kamikawa-asahi**	**41.13**	**17**	P	**P**	**05 22 09.1**	**+0.9**
GTA	**Gaotai**	**42.14**	**328**	P	**P**	**05 22 17.5**	**+0.9**
GTA				pP	pP	05 22 32.6	-1.3
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
ARMA	**Armidale**	**42.40**	**148**	P	**P**	**05 22 19.3**	**+0.5**
ARMA				IAmb	IAmb	05 22 41.1	
	comp=Z,14nm,0.9s						
EVN	**Everest**	**44.53**	**305**	P	**P**	**05 22 36.5**	**-0.2**
HILR	**Hailar Array B**	**44.71**	**353**	P	**P**	**05 22 37.8**	**+0.7**
	comp=Z,3.1nm,0.4s,baz=179,slow=8.9,SNR=5.7						
	comp=Z,3.1nm,0.4s						
HEH	**HeiHe**	**44.97**	**0**	*e*P	**P**	**05 22 42.1**	**+3.1**
ULN	**Ulaanbaatar**	**45.94**	**341**	P	**P**	**05 22 46.5**	**-0.4**
ULN				IAmb	IAmb	05 22 48.2	
	comp=Z,12nm,0.7s						
ULN	**Ulaanbaatar**	**45.94**	**341**	P	**P**	**05 22 47.4**	**+0.5**
SONM	**Songino Array**	**46.12**	**341**	P	**P**	**05 22 48.7**	**+0.3**
	comp=Z,5.6nm,0.7s,baz=157,slow=8.6,SNR=22						
SONM				LR	LR	05 42 47.8	
	comp=Z,64nm,18.8s,baz=198,slow=37						
	comp=Z,5.6nm,0.7s						
PALK	**Pallekele**	**46.23**	**275**	LR	LR	05 44 16.1	
	comp=Z,17nm,19.1s,baz=86,slow=39						
DZM	**Mont Dzumac**	**47.00**	**127**	LR	LR	05 43 53.8	
	comp=Z,39nm,18.2s,baz=308,slow=38						
WMQ	**Urumqi**	**51.84**	**324**	*e*P	P	05 23 38.9	+6.8
WMQ				pmax	pmax		
	comp=Z,41nm,0.9s						
WMQ				LR	LR		
	comp=Z,130nm,24.3s						
PEA0B	**Petropavlovsk-**	**53.97**	**22**	P	**P**	**05 23 47.6**	**+0.1**
PETK	**Petropavlovsk-**	**53.97**	**22**	P	**P**	**05 23 47.8**	**+0.3**
	comp=Z,14nm,0.8s,baz=194,slow=5.4,SNR=11						
	comp=Z,14nm,0.8s						
ZSN	**Zaisan**	**55.58**	**326**	*e*P	**P**	**05 23 59.8**	**+0.5**
SHLS	**Shalkode**	**56.56**	**320**	*e*P	**P**	**05 24 04.1**	**-2.4**
	comp=Z,7.5nm,0.7s						
MKAR	**Makanchi Array**	**56.67**	**325**	P	**P**	**05 24 07.5**	**+0.4**
	comp=Z,21nm,0.6s,baz=121,slow=8.3,SNR=205						
MKAR				LR	LR	05 51 40.5	
	comp=Z,36nm,18.1s,baz=78,slow=39						
	comp=Z,21nm,0.6s						
MKAR	**Makanchi Array**	**56.67**	**325**	P	**P**	**05 24 07.4**	**+0.3**
YAK	**Yakutsk**	**56.80**	**1**	LR	LR	05 52 07.4	
	comp=Z,16nm,19.0s,baz=136,slow=40						
YAK	**Yakutsk**	**56.80**	**1**	P	**P**	**05 24 07.3**	**-0.4**
YAK	**Yakutsk**	**56.80**	**1**	P	**P**	**05 24 07.2**	**-0.4**
YAK				pP	**pP**	**05 24 26.3**	**+0.7**
UZB	**Uzynbulak**	**56.84**	**319**	⇓*i*P	**P**	**05 24 08.9**	**+0.3**
	comp=Z,6.6nm,0.8s						
MAKZ	**Makanchi**	**56.86**	**324**	P	**P**	**05 24 08.7**	**+0.3**
MAKZ	**Makanchi**	**56.86**	**324**	P	**P**	**05 24 08.8**	**+0.4**
MAKZ	**Makanchi**	**56.86**	**324**	pP	pP	05 24 29.0	+2.5
SATY	**Saty**	**57.20**	**319**	*e*P	**P**	**05 24 11.5**	**+0.4**
	comp=Z,6.3nm,0.7s						
MA2	**Magadan**	**57.25**	**14**	LR	LR	05 48 39.9	
	comp=Z,16nm,20.7s,baz=114,slow=36						
KSH	**Kashi**	**57.38**	**314**	P	**P**	**05 24 14.4**	**+2.1**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	**Nilore**	**57.43**	**307**	P	**P**	**05 24 11.9**	**-0.8**
KDJ	**Kajisay**	**57.60**	**318**	P	**P**	**05 24 14.7**	**+0.7**
TDK	**Taldyqorghan**	**58.10**	**321**	*e*P	**P**	**05 24 17.7**	**+0.5**
	comp=Z,6.6nm,0.7s						
MDOK	**Medeo**	**58.14**	**319**	*e*P	**P**	**05 24 18.1**	**+0.4**
TNSS	**Tian-Shan**	**58.15**	**318**	*e*P	**P**	**05 24 18.1**	**0.0**
AAA	**Alma-Ata**	**58.25**	**319**	*e*P	**P**	**05 24 18.8**	**+0.5**
ZAA0	**Zalesovo Array**	**59.55**	**332**	P	**P**	**05 24 26.5**	**-0.5**
ZALV	**Zalesovo Beam**	**59.55**	**332**	P	**P**	**05 24 26.7**	**-0.3**
	comp=Z,7.8nm,0.4s,baz=129,slow=6.5,SNR=39						
ZALV				LR	LR	05 51 58.4	
	comp=Z,23nm,19.2s,baz=66,slow=38						
	comp=Z,7.8nm,0.4s						
ZALV	**Zalesovo Beam**	**59.55**	**332**	P	**P**	**05 24 26.1**	**-0.8**
AAK	**Ala-Archa**	**59.63**	**317**	LR	LR	05 52 21.3	
	comp=Z,36nm,20.1s,baz=96,slow=38						
AAK	**Ala-Archa**	**59.63**	**317**	P	**P**	**05 24 28.4**	**+0.4**
ARSB	**Arslanbob**	**60.17**	**315**	P	**P**	**05 24 29.9**	**-1.8**
ARSB				IAmb	IAmb	05 24 34.8	
	comp=Z,3.9nm,0.6s						
DRK	**Karamyk**	**60.37**	**313**	P	**P**	**05 24 32.9**	**-0.4**
KURK	**Kurchatov**	**60.81**	**327**	P	**P**	**05 24 36.2**	**+0.6**
KURK	**Kurchatov**	**60.81**	**327**	P	**P**	**05 24 36.2**	**+0.6**
KURBB	**Kurchatov Arra**	**60.81**	**327**	P	**P**	**05 24 35.6**	**-0.1**
	comp=Z,30nm,0.7s,baz=126,slow=6.2,SNR=282						
	comp=Z,30nm,0.7s						
KBL	**Kabul**	**61.03**	**307**	P	**P**	**05 24 36.4**	**-1.4**
SHEM	**Shemya Is, Ala**	**61.04**	**31**	LR	LR	05 55 30.5	
	comp=Z,12nm,18.2s,baz=78,slow=40						
GAR	**Garm**	**61.31**	**312**	P	**P**	**05 24 39.1**	**-0.3**
DZA	**Taraz**	**61.88**	**316**	*e*P	**P**	**05 24 43.6**	**+0.5**
CHGR	**Chuyangaron**	**62.07**	**311**		**P**	**05 24 44.4**	**-0.2**
KK31	**Karatay Array**	**62.52**	**316**	P	**P**	**05 24 47.0**	**-0.4**
KKAR	**Karatay Array**	**62.52**	**316**	P	**P**	**05 24 46.9**	**-0.5**
IUG	**Iuzhnay**	**62.53**	**315**	⇓*i*P	**P**	**05 24 48.0**	**+0.4**
	comp=Z,5.1nm,0.7s						
RAO	**Raoul Island**	**62.80**	**126**	LR	LR	05 49 59.6	
	comp=Z,38nm,18.3s,baz=128,slow=34						
CHM	**Chimkent**	**62.88**	**315**	*e*P	**P**	**05 24 50.4**	**+0.6**
BRLS	**Borolday**	**62.96**	**316**	⇓*i*P	**P**	**05 24 51.0**	**+0.7**
URZ	**Urewera**	**63.27**	**138**	LR	LR	05 52 45.8	
	comp=Z,36nm,18.1s,baz=269,slow=36						
BKZ	**Black Stump Fm**	**63.33**	**139**	P	**P**	**05 24 52.4**	**-0.4**
BKZ				IAmb	IAmb	05 25 12.0	
	comp=Z,18nm,1.4s						
BRZS	**Berezniki**	**63.81**	**324**	*e*P	**P**	**05 24 56.5**	**+0.7**
BVAR	**Borovoye Array**	**66.39**	**327**	P	**P**	**05 25 12.9**	**+0.5**
	comp=Z,32nm,0.8s,baz=111,slow=7.9,SNR=71						
	comp=Z,32nm,0.8s						
BORK	**Borovoye**	**66.44**	**327**	P	**P**	**05 25 13.1**	**+0.3**
TIXI	**Tiksi**	**66.44**	**1**	LR	LR	05 54 48.5	
	comp=Z,18nm,21.9s,baz=197,slow=36						
TIXI	**Tiksi**	**66.44**	**1**	P	**P**	**05 25 11.7**	**-0.7**
TIXI				IAmb	IAmb	05 25 12.6	
	comp=Z,8.7nm,0.8s						
HRA	**Herat**	**66.48**	**305**	P	**P**	**05 25 12.2**	**-1.4**
ABKAR	**Akbulak array**	**71.35**	**320**	P	**P**	**05 25 43.2**	**-0.1**
AKTO	**Aktyubinsk**	**72.84**	**321**	LR	LR	05 59 35.2	
	comp=Z,32nm,20.5s,baz=199,slow=37						
ARTI	**Arti**	**74.08**	**327**	P	**P**	**05 25 59.0**	**-0.3**
	comp=Z,16nm,0.5s,baz=94,slow=3.3,SNR=23						
	comp=Z,16nm,0.5s						
ARTI	**Arti**	**74.08**	**327**	P	**P**	**05 25 58.6**	**-0.7**
ARTI	**Arti**	**74.08**	**327**	P	**P**	**05 25 59.0**	**-0.3**
ARTI	**Arti**	**74.08**	**327**	PcP	**PcP**	**05 26 14.3**	**+0.2**
L18K	**Granite Mounta**	**79.03**	**28**	P	**P**	**05 26 28.5**	**+1.3**
L18K				IAmb	IAmb	05 26 46.7	
	comp=Z,11nm,1.3s						
KIRV	**Kirov**	**79.26**	**329**	P	**P**	**05 26 28.6**	**+0.2**
	comp=Z,14nm,0.4s,baz=93,slow=2.6,SNR=8.1						
	comp=Z,14nm,0.4s						
C19K	**Lookout Ridge**	**79.28**	**20**	P	**P**	**05 26 29.1**	**+0.7**
C19K				IAmb	IAmb	05 26 31.5	
	comp=Z,20nm,1.1s						
BELG	**Belogornoye**	**79.57**	**322**	P	**P**	**05 26 30.0**	**-0.2**
	comp=Z,57nm,1.0s,baz=86,slow=0.5,SNR=17						
	comp=Z,57nm,1.0s						
H19K	**Roundabout Mou**	**79.72**	**24**	IAmb	IAmb	05 26 33.0	
	comp=Z,10nm,1.0s						
E19K	**Redstone River**	**79.77**	**22**	IAmb	IAmb	05 26 34.5	
	comp=Z,10nm,0.9s						
B20K	**Meade River**	**80.31**	**20**	P	**P**	**05 26 33.7**	**-0.2**
RAYN	**Ar Rayn**	**80.34**	**293**	P	**P**	**05 26 34.5**	**-0.6**
RAYN	**Ar Rayn**	**80.34**	**293**	pP	pP	05 26 54.9	+0.1
J20K	**Nowinta River**	**80.47**	**26**	P	**P**	**05 26 35.6**	**+0.7**
J20K				IAmb	IAmb	05 26 36.7	
	comp=Z,15nm,1.5s						
KDAK	**Kodiak Island**	**80.48**	**32**	LR	LR	05 57 30.4	
	comp=Z,52nm,21.8s,baz=230,slow=32						
M20K	**Styx River**	**80.64**	**28**	P	**P**	**05 26 37.2**	**+1.2**
M20K				IAmb	IAmb	05 26 47.5	
	comp=Z,18nm,1.4s						
IMAR	**Indian Mountai**	**80.89**	**24**	P	**P**	**05 26 37.9**	**+0.8**
G21K	**Allakaket**	**81.06**	**23**	IAmb	IAmb	05 26 39.6	
	comp=Z,8.0nm,0.9s						
H21K	**Melozitna Rive**	**81.23**	**24**	IAmb	IAmb	05 26 40.6	
	comp=Z,10nm,1.0s						
B22K	**Teshekpuk Lake**	**81.63**	**20**	P	**P**	**05 26 41.1**	**+0.2**
B22K				IAmb	IAmb	05 26 41.6	
	comp=Z,18nm,1.2s						
L22K	**Petersville**	**81.80**	**28**	P	**P**	**05 26 42.0**	**-0.1**
L22K				IAmb	IAmb	05 26 42.3	
	comp=Z,10.0nm,0.7s						
BPAW	**Bear Paw Mtn.**	**81.84**	**26**	IAmb	IAmb	05 26 42.9	
	comp=Z,14nm,1.2s						
H22K	**Ishtalitna Cre**	**81.85**	**24**	IAmb	IAmb	05 26 44.6	
	comp=Z,14nm,1.4s						
E22K	**Anaktuvuk Pass**	**81.91**	**22**	IAmb	IAmb	05 26 44.6	
	comp=Z,11nm,0.9s						
MLY	**Manley**	**82.03**	**25**	IAmb	IAmb	05 26 45.9	
	comp=Z,7.4nm,0.9s						
KBZ	**Khabaz**	**82.34**	**313**	P	**P**	**05 26 45.2**	**+0.1**
	comp=Z,4.6nm,0.9s,baz=86,slow=12,SNR=5.7						
	comp=Z,4.6nm,0.9s						
I23K	**Minto, Yukon-K**	**82.62**	**25**	IAmb	IAmb	05 26 47.2	
	comp=Z,22nm,1.4s						
**NEA

HFS	**Hagfors**	**96.99**	**332**	P		**P**	**05 27 53.3**	**-1.3**
	comp=Z,1.6nm,0.5s,baz=82,slow=3.1,SNR=11							
	comp=Z,1.6nm,0.5s							
NOA	**NORSAR Array B**	**97.73**	**334**	P		**P**	**05 27 57.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=65,slow=4.5,SNR=2.1							
NOA				LR		LR	06 15 27.1	
	comp=Z,42nm,19.3s,baz=30,slow=37							
	comp=Z,0.5nm,0.7s							
SCHQ	**Schefferville**	**119.12**	**9**	PKP		**PKiKP**	**05 33 12.4**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=356,slow=0.7,SNR=5.1							
TXAR	**Lajitas Array**	**120.39**	**52**	PKP		**PKPdf**	**05 33 15.1**	**0.0**
	comp=Z,0.3nm,0.8s,baz=327,slow=4.2,SNR=2.8							

*ASRS **21** 05:15:38.0±1.0,53.97N×86.58E,h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 05:15:41.4±2.9, 54.02N×86.59E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=22.3km s-min=13.6km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**267**	I	I	05 22 15.0	
	baz=87,slow=357,SNR=21						
ZALV	**Zalesovo Beam**	**1.05**	**267**	Pg	Pg	05 16 00.3	-1.1
	0.5nm,0.3s,baz=82,slow=15,SNR=6.5						
ZALV				Lg	Lg	05 16 16.6	
	0.7nm,0.3s,baz=85,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**6.00**	**239**	Pn	Pn	05 17 11.8	+0.5
	baz=56,slow=14,SNR=4.6						
KURBB				Lg	Lg	05 18 51.4	
	baz=55,slow=34,SNR=3.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**7.73**	**202**	Pn	Pn	05 17 36.6	+1.4
	0.7nm,0.3s,baz=26,slow=7.0,SNR=2.6						
MKAR				Lg	Lg	05 19 48.0	
	0.1nm,0.3s,baz=22,slow=28,SNR=2.4						
	0.9nm,0.3s						

*MEX **21** 05:15:49.5±0.9, 13.76N×93.26W, h8km±61km, MD4.2*
*GCG **21** 05:15:49.3±1.8, 13.76N×93.22W, h35km±53km, MD4.4*
*CATAC **21** 05:15:50.3±0.6, 14.1N±6.9×3.3W±, h68km±20km, M3.8/13, MLv3.8/13, Error ellipse: s-maj=15.4km s-min=5.0km az=31.3, confirmed*
*SNET **21** 05:16:01.1±1.1, 14.44N×91.81W, h191km±37km, ML3.1*

ISC 21 05:15:46.5±1.4, 13.63N±0.08×93.30W±0.04, h59km±46km, n58, σ2s59/76, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.62**	**38**	eP	**Pn**	**05 16 13.0**	**+0.2**
THIG				eS	**Sn**	**05 16 30.9**	**-1.7**
RTAL	**Retalhuleu**	**1.79**	**60**	eP	**Pn**	**05 16 16.3**	**+1.1**
RTAL				eS	**Sn**	**05 16 37.3**	**+0.4**
RTAL	**Retalhuleu**	**1.79**	**60**	P	**Pn**	**05 16 15.9**	**+0.8**
PATR	**El Naranjo**	**1.80**	**35**	eP	**Pn**	**05 16 15.2**	**-0.2**
PATR				eS	**Sn**	**05 16 36.1**	**-1.3**
CHUJ	**Union Juarez**	**1.86**	**38**	eP	**Pn**	**05 16 16.1**	**-0.1**
CHUJ				eS	**Sn**	**05 16 38.2**	**-0.5**
PAVE	**Pavencul**	**1.90**	**35**	eP	**Pn**	**05 16 16.6**	**-0.1**
PAVE				eS	**Sn**	**05 16 38.3**	**-1.4**
STG2	**El Palmar, Qui**	**2.03**	**67**	eP	**Pn**	**05 16 17.9**	**-0.6**
STG5	**El Palmar, Qui**	**2.04**	**68**	*i* P	**Pn**	**05 16 17.9**	**-0.8**
STG8	**El Palmar, Qui**	**2.06**	**67**	eP	**Pn**	**05 16 18.4**	**-0.6**
HUEH	**Huehuetenango**	**2.42**	**46**	eP	**Pn**	**05 16 25.0**	**+1.1**
QUIS	**Sacapulas**	**2.70**	**52**	eP	**Pn**	**05 16 30.3**	**+2.6**
CCIG	**Comitan**	**2.86**	**23**	eP	**Pn**	**05 16 33.3**	**+3.4**
CCIG				eS	**Sn**	**05 17 05.6**	**+2.3**
CCIG	**Comitan**	**2.86**	**23**	eP	**Pn**	**05 16 32.0**	**+2.0**
CCIG				eS	**Sn**	**05 17 04.7**	**+1.4**
APG	**El Apazote**	**3.07**	**63**	eP	**Pn**	**05 16 35.0**	**+2.2**
TGIG		**3.13**	**3**	eP	**Pn**	**05 16 35.8**	**+2.3**
TGIG				eS	**Sn**	**05 17 08.2**	**-1.5**
TGIG		**3.13**	**3**	eP	**Pn**	**05 16 35.8**	**+2.3**
TGIG				eS	**Sn**	**05 17 09.6**	**-0.1**
FAME	**Alcaldia de Sa**	**3.20**	**86**	S	**Sn**	**05 17 10.7**	**-0.7**
FAME	**Alcaldia de Sa**	**3.20**	**86**	P	**Pn**	**05 16 36.3**	**+1.9**
NUBE	**Las Nubes**	**3.43**	**85**	eP	**Pn**	**05 16 40.2**	**+2.5**
NUBE				eS	**Sn**	**05 17 09.6**	**-7.7**
NUBE	**Las Nubes**	**3.43**	**85**	eP	**Pn**	**05 16 40.3**	**+2.6**
NUBE	**Las Nubes**	**3.43**	**85**	S	**Sn**	**05 17 17.7**	**+0.5**
SLOZ	**Alcaldia de Sa**	**3.44**	**83**	S	**Sn**	**05 17 15.5**	**-1.8**
SLOZ	**Alcaldia de Sa**	**3.44**	**83**	P	**Pn**	**05 16 37.7**	**0.0**
HUIG	**Huatulco**	**3.44**	**308**	eP	**Pn**	**05 16 40.1**	**+2.3**
HUIG				eS	**Sn**	**05 17 13.5**	**-3.8**
HUIG	**Huatulco**	**3.44**	**308**	*i* P	**Pn**	**05 16 40.2**	**+2.5**
RBDL	**Robledal**	**3.54**	**82**	eP	**Pn**	**05 16 41.4**	**+2.2**
CEVE	**Cerro Verde**	**3.58**	**86**	S	**Sn**	**05 17 21.1**	**+0.1**
CEVE	**Cerro Verde**	**3.58**	**86**	P	**Pn**	**05 16 41.2**	**+1.4**
SBLS	**San Blas**	**3.58**	**86**	eP	**Pn**	**05 16 42.3**	**+2.5**
SBLS				eS	**Sn**	**05 17 15.7**	**-5.3**
SNJE	**San Jose**	**3.60**	**86**	eP	**Pn**	**05 16 42.1**	**+2.1**
JAYA	**Jayaque - finc**	**3.75**	**89**	eP	**Pn**	**05 16 44.6**	**+2.6**
JAYA				IAML		05 17 31.8	
	comp=Z,54nm,0.4s						
JAYA	**Jayaque - finc**	**3.75**	**89**	eP	**Pn**	**05 16 44.7**	**+2.6**
JAYA	**Jayaque - finc**	**3.75**	**89**	P	**Pn**	**05 16 44.4**	**+2.4**
JAYA	**Jayaque - finc**	**3.75**	**89**	S	**Sn**	**05 17 24.5**	**-0.5**
UXUV	**UXUV**	**3.75**	**348**	eP	**Pn**	**05 16 45.0**	**+3.1**
UXUV				eS	**Sn**	**05 17 23.0**	**-1.9**
PMON	**Piamonte**	**3.88**	**88**	S	**Sn**	**05 17 27.2**	**-0.9**
PMON	**Piamonte**	**3.88**	**88**	P	**Pn**	**05 16 46.4**	**+2.6**
MTO3	**Montecristo**	**3.90**	**78**	P	**Pn**	**05 16 45.7**	**+1.5**
PEIG	**Puerto Escondi**	**4.40**	**303**	eP	**Pn**	**05 16 53.6**	**+2.8**
PEIG				eS	**Sn**	**05 17 37.1**	**-3.7**
PETF	**Flores**	**4.65**	**45**	eP	**Pn**	**05 16 56.2**	**+2.0**
PETF				eS	**Sn**	**05 17 41.5**	**-5.5**
PETF	**Flores**	**4.65**	**45**	P	**Pn**	**05 16 56.3**	**+2.0**
NEUV	**Arroyo Zacate**	**4.72**	**330**	eP	**Pn**	**05 16 55.7**	**+0.6**
NEUV				eS	**Sn**	**05 17 44.9**	**-3.6**
NEUV				*i* S	**Sn**	**05 17 44.9**	**-3.6**
VHO	**Vista Hermosa**	**4.76**	**316**	eP	**Pn**	**05 16 54.7**	**-1.2**
VHO				eS	**Sn**	**05 17 48.5**	**-1.4**
PACA	**Pacayal**	**4.84**	**91**	eP	**Pn**	**05 16 58.0**	**+0.9**
PACA	**Pacayal**	**4.84**	**91**	P	**Pn**	**05 16 58.3**	**+1.3**
PMUV	**Sontecomapan**	**5.19**	**341**	eP	**Pn**	**05 17 01.3**	**-0.4**
PNIG	**Pinotepa**	**5.41**	**301**	eP	**Pn**	**05 17 08.6**	**+4.0**
TXIG	**Tlaxiaco**	**5.61**	**310**	eP	Pn	05 17 12.3	+4.7
SCIG	**Sabancuy**	**5.68**	**21**	eS	**Sn**	**05 18 11.3**	**-0.9**
TOIG	**Toxpalan**	**5.72**	**321**	eP	Pn	05 17 14.4	+5.4
TOIG				eS	**Sn**	**05 18 12.2**	**-1.4**
HLIG	**Huajuapan de L**	**6.01**	**314**	eP	**Pn**	**05 17 17.5**	**+4.4**
HLIG				eS	**Sn**	**05 18 19.5**	**-1.3**
MGIG	**Malinaltepec**	**6.26**	**306**	eP	Pn	05 17 22.3	+5.8
FTIG	**Fresnillo de T**	**6.30**	**313**	eP	Pn	05 17 22.8	+5.8
FTIG				eS	**Sn**	**05 18 30.8**	**+3.1**
TLIG	**Tlapa**	**6.40**	**308**	eP	Pn	05 17 23.5	+5.2
TLIG				eS	**Sn**	**05 18 27.8**	**-2.3**
CRIG	**Cruz Grande**	**6.42**	**299**	eP	**Pn**	**05 17 22.8**	**+4.4**
JAUV	**Jalcomulco**	**6.62**	**330**	eP	**Pn**	**05 17 22.9**	**+1.6**
JAUV				eS	**Sn**	**05 18 31.6**	**-3.7**
PPM	**Popocatepetl**	**7.43**	**317**	eP	**Pn**	**05 17 36.5**	**+3.6**
PPM				eS	**Sn**	**05 18 50.2**	**-5.8**
MAVM	**Malinalco, Edo**	**7.96**	**313**	eP	Pn	05 17 46.5	+6.7

MEX 21 05:17:50.2±0.8, 16.34N×98.30W, h5km±26km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.17**	**72**	*i* P	Pg	05 17 53.1	-0.5
PNIG				*i* S	Sg	05 17 55.9	+0.1
CRIG	**Cruz Grande**	**0.89**	**296**	eP	Pg	05 18 05.7	-1.6
CRIG				eS	Sg	05 18 17.2	-1.7
MGIG	**Malinaltepec**	**0.94**	**340**	eP	Pg	05 18 06.0	-2.3
MGIG				eS	Sg	05 18 18.6	-2.0
TXIG	**Tlaxiaco**	**1.04**	**29**	eP	Pg	05 18 07.4	-2.8
TXIG				eS	Sg	05 18 20.1	-3.5
TXIG	**Tlaxiaco**	**1.04**	**29**	eS	Pg	05 18 07.9	-2.3
PEIG	**Puerto Escondi**	**1.15**	**107**	eS	Sg	05 18 23.6	-3.7
HLIG	**Huajuapan de L**	**1.55**	**18**	eP	Pn	05 18 15.9	-2.8
HLIG				eS	Sn	05 18 35.0	-4.5
FTIG	**Fresnillo de T**	**1.57**	**6**	eP	Pn	05 18 16.7	-2.2
FTIG				eS	Sn	05 18 34.5	-5.1

*JMA **21** 05:23:14.4±0.4,23.2N×12.3E±, h46km, MV3.0/9, FAR S OFF ISHIGAKIJIMA*

*TAP **21** 05:23:14.9,22.59N×122.66E, h56km±1km, ML3.1, D*

ISC 21 05:23:12.4±1.2, 22.64N±0.04×122.71E±0.05, h25km, n52, σ1s04/88, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**1.15**	**272**	*i* P	**Pb**	**05 23 33.8**	**+0.2**
LDUT				S	**Sb**	**05 23 47.0**	**-1.0**
LYUB	**Lan-yu**	**1.22**	**239**	*i* P	**Pb**	**05 23 34.5**	**-0.3**
LYUB				*i* S	**Sb**	**05 23 49.2**	**-1.0**
CHKT	**Chengkung**	**1.32**	**291**	*i* P	**Pb**	**05 23 36.2**	**-0.4**
CHKT				S	**Sb**	**05 23 51.9**	**-1.2**
CHKH	**Chenggong**	**1.33**	**295**	*i* P	**Pb**	**05 23 36.6**	**-0.1**
CHKH				S	**Sb**	**05 23 51.9**	**-1.5**
EDH	**Donghe**	**1.34**	**285**	*i* P	**Pb**	**05 23 37.1**	**+0.2**
EDH				S	**Sb**	**05 23 52.7**	**-0.9**
ECBN	**Changbin**	**1.34**	**301**	eS	**Sb**	**05 23 52.2**	**-1.5**
FULB	**Fuli**	**1.42**	**293**	eP	**Pb**	**05 23 37.8**	**-0.4**
FULB				S	**Sb**	**05 23 54.7**	**-1.3**
ECS	**Chishang**	**1.45**	**289**	P	**Pb**	**05 23 39.0**	**+0.3**
TTN	**Taitung**	**1.45**	**275**	eP	**Pb**	**05 23 37.0**	**-1.7**
HGSD	**Ruisui**	**1.46**	**306**	*i* P	**Pb**	**05 23 38.2**	**-0.7**
HGSD				S	**Sn**	**05 23 54.7**	**-0.8**
EYUL	**Yuli**	**1.46**	**299**	P	**Pb**	**05 23 39.0**	**0.0**
EHD	**Haiduan**	**1.48**	**290**	*i* P	**Pb**	**05 23 38.8**	**-0.5**
EHD				S	**Sb**	**05 23 56.1**	**-1.5**
LONT	**Longtian**	**1.48**	**281**	eP	**Pb**	**05 23 39.4**	**0.0**
LONT				eS	**Sb**	**05 23 57.9**	**+0.2**
TWF1	**Yuli**	**1.48**	**299**	P	**Pb**	**05 23 39.0**	**-0.3**
YULB	**Yu-li**	**1.50**	**300**	P	**Pb**	**05 23 39.4**	**-0.2**
TWGBT	**Beinan**	**1.51**	**277**	P	**Pb**	**05 23 40.1**	**+0.3**
TWGBT				eS	**Sb**	**05 23 57.8**	**-0.9**
EHYH	**Wanrong**	**1.52**	**304**	P	**Pb**	**05 23 39.7**	**-0.3**
EHYH				S	**Sb**	**05 23 57.4**	**-1.4**
TWG	**Pinlang**	**1.52**	**277**	P	**Pb**	**05 23 40.2**	**+0.2**
TWG				*i* S	**Sb**	**05 23 57.9**	**-1.0**
EHY	**Hungye**	**1.54**	**304**	P	**Pb**	**05 23 39.8**	**-0.5**
EHY				eS	**Sn**	**05 23 57.5**	**-0.1**
SHUL	**Shoufeng**	**1.56**	**318**	*i* P	**Pb**	**05 23 40.2**	**-0.4**
SHUL				*i* S	**Sb**	**05 23 58.6**	**-1.3**
WARBT	**Fenglin Townsh**	**1.62**	**312**	eP	**Pb**	**05 23 41.0**	**-0.8**
WARBT				S	**Sb**	**05 24 00.0**	**-1.9**
ELDTW	**Lidau**	**1.65**	**290**	eP	**Pb**	**05 23 41.7**	**-0.6**
ETM	**Tongmen**	**1.73**	**320**	eP	**Pb**	**05 23 43.5**	**-0.1**
EAST	**Anshuo**	**1.74**	**262**	eP	**Pb**	**05 23 43.6**	**-0.1**
EAST				eS	**Sb**	**05 24 04.1**	**-1.1**
LXIB	**Xiulin Townshi**	**1.82**	**319**	eP	**Pb**	**05 23 44.0**	**-1.2**
LXIB				eS	**Sn**	**05 24 05.4**	**+0.7**
VWDT	**VWDT**	**1.82**	**308**	P	**Pb**	**05 23 44.7**	**-0.4**
VWDT				eS	**Sb**	**05 24 05.8**	**-1.6**
NACB	**Ninganchiao**	**1.84**	**326**	P	**Pb**	**05 23 43.9**	**-1.5**
NACB				eS	**Sn**	**05 24 05.1**	**+0.1**
STYH	**Taoyuan**	**1.86**	**287**	P	**Pb**	**05 23 45.2**	**-0.5**
TWKBT	**Hengchun**	**1.89**	**249**	eS	**Sb**	**05 24 06.6**	**-2.8**
TWK1	**Hengchun**	**1.89**	**249**	P	**Pb**	**05 23 44.7**	**-1.6**
TWK1				eS	**Sb**	**05 24 06.9**	**-2.7**
MASBT	**Mashibuluo**	**1.92**	**270**	P	**Pb**	**05 23 45.9**	**-0.8**
OWD	**Renai**	**1.93**	**313**	P	**Pb**	**05 23 45.7**	**-1.2**
OWD				S	**Sn**	**05 24 07.6**	**+0.3**
ETLH	**Xiulin Townshi**	**1.93**	**324**	eP	**Pb**	**05 23 45.3**	**-1.7**
ETLH				eS	**Sn**	**05 24 07.4**	**+0.2**
IRIF	**Iriomote-Funau**	**1.93**	**29**	eP	**Pn**	**05 23 45.2**	**+1.5**
ALS	**Alishan**	**1.96**	**297**	eP	**Pb**	**05 23 47.6**	**0.0**
SSLB	**Suanglung**	**1.98**	**306**	eP	**Pb**	**05 23 47.0**	**-0.9**
SSLB				eS	**Sn**	**05 24 09.2**	**+0.8**
WUSB	**Renai**	**1.99**	**313**	eP	**Pb**	**05 23 47.0**	**-1.1**
WUSB				eS	**Sb**	**05 24 10.4**	**-2.0**
WTP	**Ta-pu**	**2.02**	**288**	eP	**Pb**	**05 23 49.0**	**+0.4**
WTP				eS	**Sb**	**05 24 14.0**	**+0.7**
TPUB	**Ta-pu**	**2.03**	**289**	P	**Pb**	**05 23 49.0**	**+0.4**
TPUB				eS	**Sb**	**05 24 13.8**	**+0.3**
CHN1	**Nanshi**	**2.08**	**286**	P	**Pb**	**05 23 50.2**	**+0.6**
CHN1				eS	**Sb**	**05 24 16.0**	**+1.0**
FUSS	**Fushou**	**2.09**	**320**	eP	**Pb**	**05 23 47.0**	**-1.4**
FUSS				eS	**Sn**	**05 24 12.9**	**+1.4**
CHN5	**Tsauling**	**2.10**	**297**	eP	**Pb**	**05 23 50.6**	**+0.7**
CHN5				eS	**Sb**	**05 24 15.6**	**0.0**
SNST	**Tainan City**	**2.12**	**286**	eP	**Pb**	**05 23 50.7**	**+0.5**
TWK	**Hsinying**	**2.14**	**287**	P	**Pb**	**05 23 50.9**	**+0.4**
TWK				eS	**Sb**	**05 24 17.6**	**+0.8**
TDCB	**Techi**	**2.15**	**319**	eP	**Pb**	**05 23 49.5**	**-1.2**
TDCB				eS	**Sn**	**05 24 14.1**	**+1.3**
NNSB	**Datong**	**2.16**	**326**	P	**Pb**	**05 23 49.4**	**-1.5**
NNSB				eS	**Sn**	**05 24 14.0**	**+1.0**
JIJ	**Ishigaki jima**	**2.17**	**37**	eP	**Pn**	**05 23 48.0**	**+1.1**
WDLH	**Douliu**	**2.25**	**298**	eP	**Pb**	**05 23 52.5**	**0.0**
WDLH				eS	**Sb**	**05 24 19.6**	**-0.3**
WHP	**Taichung City**	**2.30**	**316**	eP	**Pb**	**05 23 53.5**	**+0.2**
YHNB	**Yeheng**	**2.36**	**329**	P	**Pb**	**05 23 52.6**	**-1.9**
YHNB				eS	**Sn**	**05 24 19.2**	**+1.1**
JISG	**Ishigakijimahi**	**2.44**	**37**	eP	**Pn**	**05 23 51.9**	**+1.2**
JISG				eS	**Sn**	**05 24 19.4**	**-0.2**
JTJ	**Tarama**	**2.71**	**42**	eP	**Pn**	**05 23 55.6**	**+1.2**
JTJ				eS	**Sn**	**05 24 27.3**	**+1.0**

*IDC **21** 05:31:09.4±7.8, 7.37S×129.39E, h124km±82km, mb3.3/3, mbtmp3.9/7, Error ellipse: s-maj=69.6km s-min=24.4km az=34.0*
*NEIC **21** 05:31:11.0±1.3, 7.35S±0.10×129.40E±0.09, h146km±13km, mb4.1/3, Error ellipse: s-maj=14.4km s-min=13.2km az=217.0*

ISC 21 05:31:11.3±0.8, 7.43S±0.09×129.33E±0.08, h150km, n21, σ0s99/22, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.02**	**106**	Pn	**Pn**	**05 31 45.9**	**-0.8**
FAKI	**Fak Fak**	**5.34**	**33**	Pn	**Pn**	**05 32 28.5**	**-0.8**
SOEI	**Soe**	**5.51**	**245**		**Pn**	**05 32 32.7**	**+1.0**
MTN	**Manton Dam**	**5.66**	**162**		**Pn**	**05 32 35.1**	**+1.6**
BATI	**Baumata**	**6.24**	**243**	P	**Pn**	**05 32 41.3**	**0.0**
	86nm,0.4s,baz=77,slow=4.5,SNR=6.2						
BATI				S	**Sn**	**05 33 51.0**	**-0.8**
	124nm,0.5s,baz=117,slow=11,SNR=11						
KNRA	**Kununurra**	**8.21**	**184**		**Pn**	**05 33 06.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**11.19**	**198**	P	**Pn**	**05 33 46.0**	**-1.1**
	4.0nm,0.5s,baz=27,slow=11,SNR=20						
FITZ				S	Sn	05 35 41.5	-9.4
	4.8nm,0.3s,baz=104,slow=16,SNR=6.4						
FITZ	**Fitzroy Crossi**	**11.19**	**198**		**Pn**	**05 33 46.4**	**-0.7**
WB0	**Warramunga Arr**	**13.21**	**159**	Pn	**Pn**	**05 34 12.9**	**-0.3**
WRA	**Warramunga Arr**	**13.35**	**159**	P	**Pn**	**05 34 13.8**	**-1.2**
	1.2nm,0.5s,baz=346,slow=13,SNR=20						
WRA				S	Sn	05 36 33.2	-10
	4.3nm,0.6s,baz=328,slow=23,SNR=13						
WRA	**Warramunga Arr**	**13.35**	**159**		**Pn**	**05 34 13.3**	**-1.7**
WR8	**Warramunga Arr**	**13.42**	**159**	Pn	**Pn**	**05 34 15.7**	**-0.2**
ASAR	**Alice Springs**	**16.73**	**165**	P	**Pn**	**05 34 58.6**	**+1.7**
	1.2nm,0.6s,baz=340,slow=9.9,SNR=14						
ASAR				S	S	05 37 52.7	-10
	0.5nm,0.3s,baz=342,slow=23,SNR=5.8						
ASAR	**Alice Springs**	**16.73**	**165**	P	**P**	**05 34 56.9**	**+0.3**
PSA00	**Pilbara Seismi**	**16.78**	**212**	P	**P**	**05 34 56.1**	**-1.1**
PSA00				IAmb	IAmb	05 35 00.9	
	comp=Z,6.9nm,0.6s						
FORT	**Forrest**	**23.26**	**183**	P	**P**	**05 36 06.1**	**+0.7**
FORT				IAmb	IAmb	05 36 10.2	
	comp=Z,6.5nm,0.8s						
BBOO	**Buckleboo**	**26.01**	**167**	P	**P**	**05 36 30.8**	**+0.5**
BBOO				IAmb	IAmb	05 36 52.0	
	comp=Z,2.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.51**	**311**	P	**P**	**05 38 28.3**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=128,slow=8.4,SNR=4.1						
	comp=Z,0.8nm,0.3s						
MKAR	**Makanchi Array**	**68.23**	**327**	P	**P**	**05 41 56.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=122,slow=7.5,SNR=4.3						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**68.23**	**327**	P	**P**	**05 41 54.9**	**-0.8**
KURBB	**Kurchatov Arra**	**72.53**	**329**	P	**P**	**05 42 22.6**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=138,slow=5.5,SNR=2.1						
	comp=Z,0.2nm,0.4s						

*NEIC **21** 05:33:22.2±0.5, 19.04N±0.05×65.79W±0.07, h35km±2km, ML2.9/12, Md3.6/10(RSPR), Error ellipse: s-maj=12.8km s-min=3.3km az=53.0*
*RSPR **21** 05:33:23.4, 19.08N×65.79W, h21km±22km, MD3.6/10*

ISC 21 05:33:21.2±2.9, 19.1N±0.1×65.78W±0.10, h29km±13km, n37, σ0s35/45, 12C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCPR	**Guaynabo City**	**0.80**	**201**		**Pn**	**05 33 36.5**	**0.0**
GCPR					**Sb**	**05 33 46.9**	**-0.1**
GCPR				IAML		05 33 47.5	
	comp=E,298nm,0.5s						
GCPR	**Guaynabo City**	**0.80**	**201**	*i*eP	**Pn**	**05 33 36.6**	**0.0**
GCPR	**Guaynabo City**	**0.80**	**201**	eS	**Sb**	**05 33 47.2**	**+0.2**
EMPR	**Esperanza - Ma**	**0.91**	**231**		**Pb**	**05 33 38.5**	**+0.1**
EMPR					**Sn**	**05 33 50.5**	**+0.2**
EMPR	**Esperanza - Ma**	**0.91**	**231**	*i*eP	**Pb**	**05 33 38.5**	**+0.1**
EMPR	**Esperanza - Ma**	**0.91**	**231**	eS	**Sn**	**05 33 50.5**	**+0.2**
HUMP	**Col San Antoni**	**0.91**	**184**		**Pn**	**05 33 38.3**	**+0.1**
HUMP					**Sn**	**05 33 50.0**	**-0.3**
HUMP				IAML		05 33 51.4	
	comp=N,660nm,0.2s						
HUMP	**Col San Antoni**	**0.91**	**184**	*i*eP	**Pb**	**05 33 38.4**	**-0.1**
HUMP	**Col San Antoni**	**0.91**	**184**	eS	**Sn**	**05 33 50.1**	**-0.2**
ECPR	**Experimental S**	**0.92**	**217**	*i*eP	**Pb**	**05 33 38.5**	**0.0**
ECPR	**Experimental S**	**0.92**	**217**	eS	**Sn**	**05 33 50.1**	**-0.4**
SJG	**San Juan**	**1.00**	**200**		**Pb**	**05 33 39.9**	**-0.1**
SJG				IAML		05 33 53.4	
	comp=N,520nm,0.6s						
SJG				IAML		05 33 53.5	
	comp=N,347nm,0.3s						
SJG	**San Juan**	**1.00**	**200**	*i*eP	**Pb**	**05 33 40.1**	**+0.1**
SJG	**San Juan**	**1.00**	**200**	eS	**Sn**	**05 33 53.0**	**+0.4**
AOPR	**Arecibo Observ**	**1.16**	**233**		**Pn**	**05 33 41.7**	**+0.1**
AOPR					**Sn**	**05 33 56.1**	**-0.4**
AOPR	**Arecibo Observ**	**1.16**	**233**	*i*eP	**Pb**	**05 33 42.1**	**-0.6**
AOPR	**Arecibo Observ**	**1.16**	**233**	eS	**Sn**	**05 33 56.1**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.19**	**228**		**Pn**	**05 33 42.5**	**+0.4**
UUPR					**Sn**	**05 33 57.0**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.19**	**228**	*i*eP	**Pn**	**05 33 42.5**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.19**	**228**	eS	**Sn**	**05 33 57.0**	**-0.4**
OBIP	**Obispado Ponce**	**1.27**	**218**		**Pn**	**05 33 43.1**	**0.0**
OBIP					**Sn**	**05 33 59.3**	**0.0**
OBIP				IAML		05 34 06.2	
	comp=E,150nm,0.8s						
OBIP	**Obispado Ponce**	**1.27**	**218**	*i*eP	**Pb**	**05 33 43.9**	**-0.7**
OBIP	**Obispado Ponce**	**1.27**	**218**	eS	**Sn**	**05 33 59.7**	**+0.4**
AGPR	**Aguadilla, PR**	**1.39**	**245**		**Pn**	**05 33 44.7**	**0.0**
AGPR					**Sn**	**05 34 01.7**	**-0.4**
AGPR	**Aguadilla, PR**	**1.39**	**245**	*i*eP	**Pn**	**05 33 44.7**	**0.0**
AGPR	**Aguadilla, PR**	**1.39**	**245**	eS	**Sn**	**05 34 01.7**	**-0.4**
PRSN	**Puerto Rico Se**	**1.54**	**237**		**Pn**	**05 33 46.9**	**+0.1**
PRSN					**Sn**	**05 34 05.6**	**-0.2**
PRSN	**Puerto Rico Se**	**1.54**	**237**	*i*eP	**Pn**	**05 33 46.9**	**+0.1**
PRSN	**Puerto Rico Se**	**1.54**	**237**	eS	**Sn**	**05 34 05.6**	**-0.2**
MLPR	**Magueyes Islan**	**1.61**	**228**	*i*eP	**Pn**	**05 33 48.5**	**+0.7**
MLPR	**Magueyes Islan**	**1.61**	**228**	eS	**Sn**	**05 34 08.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.64**	**231**		**Pn**	**05 33 48.6**	**+0.5**
CRPR				IAML		05 34 16.8	
	comp=N,107nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.64**	**231**	*i*eP	**Pn**	**05 33 48.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.64**	**231**	eS	**Sn**	**05 34 08.3**	**+0.1**
IDE	**Isla Desecheo**	**1.73**	**248**		**Pn**	**05 33 50.0**	**+0.5**
IDE	**Isla Desecheo**	**1.73**	**248**	*i*eP	**Pn**	**05 33 50.0**	**+0.5**
DR12	**Loma Pena Alta**	**3.42**	**266**	Pn	**Pn**	**05 34 12.8**

comp=Z,1.0nm,0.7s
QSPA South Pole Qui 72.49 180 P P 06 44 22.1 +1.4
PEA0B Petropavlovsk- 73.25 345 P P 06 44 24.9 -0.1
PETK Petropavlovsk- 73.25 345 P P 06 44 25.2 +0.3
comp=Z,3.7nm,0.8s,baz=117,slow=7.4,SNR=6.3
comp=Z,3.7nm,0.8s
PETK Petropavlovsk- 73.25 345 P P 06 44 24.6 -0.3
NVAR Mina Array Bea 79.43 44 P P 06 45 00.3 +0.8
comp=Z,1.1nm,0.7s,baz=226,slow=8.7,SNR=10
comp=Z,1.1nm,0.7s
SEY Seymchan 83.36 347 P P 06 45 18.9 +0.1
comp=Z,6.6nm,0.5s,baz=147,slow=10,SNR=5.3
comp=Z,6.6nm,0.5s
TRF Thorofare Moun 83.75 12 P P 06 45 20.4 -0.6
TRF IAmb IAmb 06 45 21.7
comp=Z,6.9nm,0.8s
BARN Barnard Glacie 83.81 17 P P 06 45 20.6 -0.7
BARN IAmb IAmb 06 45 37.3
comp=Z,7.2nm,1.1s
BPAW Bear Paw Mtn. 84.19 12 P P 06 45 22.2 -0.7
ILAR Eielson Array 85.64 13 P P 06 45 29.2 -0.6
comp=Z,0.8nm,0.4s,baz=224,slow=5.2,SNR=27
comp=Z,0.8nm,0.4s
TXAR Lajitas Array 86.12 58 P P 06 45 34.7 +1.5
comp=Z,1.0nm,0.7s,baz=217,slow=6.1,SNR=16
comp=Z,1.0nm,0.7s
PDAR Pinedale Array 87.36 44 P P 06 45 39.2 +0.4
comp=Z,0.8nm,0.5s,baz=212,slow=3.2,SNR=16
comp=Z,0.8nm,0.5s
SNAA Sanae 90.95 179 P P 06 45 53.4 -1.4
comp=Z,0.3nm,0.4s,baz=219,slow=17,SNR=15
SNAA Sanae 90.95 179 P P 06 45 53.7 -1.2
SNAA IAmb IAmb 06 46 14.9
comp=Z,1.0nm,1.0s
INK Inuvik 91.65 15 P P 06 45 57.4 -0.4
INK IAmb IAmb 06 45 58.3
comp=Z,3.5nm,1.1s
MKAR Makanchi Array 108.63 314 PKiKP PKiKP 06 51 15.1 -1.2
comp=Z,0.4nm,0.5s,baz=192,slow=0.9,SNR=4.5
KURBB Kurchatov Arra 111.38 318 PKiKP PKiKP 06 51 19.9 -1.4
comp=Z,0.5nm,0.7s,baz=109,slow=2.1,SNR=5.5
BVAR Borovoye Array 116.34 321 PKP PKPdf 06 51 29.7 -1.1
comp=Z,1.0nm,0.4s,baz=161,slow=0.2,SNR=3.7
SPITS Spitsbergen Ar 118.90 356 PKP PKPdf 06 51 34.3 -0.8
comp=Z,3.2nm,0.9s,baz=50,slow=7.8,SNR=4.9
ARCES ARCESS Array B 125.91 350 PKP PKPdf 06 51 47.5 -1.2
comp=Z,3.3nm,0.9s,baz=45,slow=3.6,SNR=4.6
FINES FINESS Array B 132.75 344 PKhKP PKPpre 06 51 58.9
comp=Z,1.0nm,0.7s,baz=124,slow=2.5,SNR=4.0
HFS Hagfors 136.53 351 PKhKP PKPpre 06 51 59.1
comp=Z,2.6nm,0.9s,baz=92,slow=3.5,SNR=4.6
EKA Eskdalemuir Ar 142.15 4 PKhKP PKPpre 06 52 15.0
comp=Z,2.8nm,1.0s,baz=25,slow=4.8,SNR=3.5
BNN Bunyan 143.15 312 PKPab 06 52 20.6 +1.0
BRTR Keskin Array B 144.28 315 PKP PKPbc 06 52 23.3 -0.2
comp=Z,2.9nm,0.8s,baz=108,slow=4.0,SNR=12
MMAI Mount Meron Ar 145.64 303 PKPbc PKPdf 06 52 28.0 +1.8
comp=Z,2.6nm,0.5s,baz=70,slow=3.6,SNR=4.0
GERES GERESS Array B 147.18 345 PKPbc PKPbc 06 52 31.6 +0.1
comp=Z,2.9nm,0.6s,baz=35,slow=4.9,SNR=16
CONA Conrad Observa 147.42 342 *e*PKP **PKPbc 06 52 32.7 +0.5**
comp=Z,4.0nm,0.6s
RONA Rosalia, Austr 147.49 341 *e*PKP **PKPbc 06 52 32.6 +0.4**
comp=Z,6.6nm,0.9s
LESA Schwarzleotal 148.76 345 *e*PKP **PKPbc 06 52 35.5 0.0**
comp=Z,2.7nm,0.4s
KBA Koelnbreinsper 148.91 344 *e*PKP **PKPbc 06 52 35.2 -0.8**
comp=Z,3.0nm,0.5s
WATA Walderalm 149.10 346 *e*PKP **PKPbc 06 52 36.1 -0.3**
comp=Z,4.0nm,0.4s
WTTA Wattenberg 149.16 346 *e*PKP **PKPbc 06 52 36.6 0.0**
comp=Z,3.9nm,0.4s
MYKA Terra Mystica 149.24 343 *e*PKP **PKPbc 06 52 35.8 -0.9**
comp=Z,4.2nm,0.5s
SQTA Sankt Quirin 149.29 347 *e*PKP **PKPbc 06 52 36.1 -0.7**
comp=Z,3.9nm,0.6s

PRU 21 06:58:44.4, 50.20N×19.11E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEB	**Steborice**	**0.90**	**253**	*e*SG	Sg	06 59 14.0	+0.7
MORC	**Moravsky Berou**	**1.10**	**248**	*e*PG	Pg	06 59 05.3	-0.1
MORC				*e*SG	Sg	06 59 19.2	-0.4
KRLC	**Kraliky**	**1.50**	**266**	*e*SG	Sg	06 59 31.1	-1.6
	comp=Z,3.4nm,0.3s						
DPC	**Dobruska-Polom**	**1.79**	**276**	*e*PG	Pn	06 59 17.2	+0.5
DPC				*e*SG	Sb	06 59 41.6	+0.4

*SOF **21** 07:00:46.5, 43.83N 0.02× 22.01E 0.02, h6km, 2km, MD2.6/2*
*BEO **21** 07:00:47.7 0.2, 43.87N 0.02× 22.05E 0.02, h5km, 9km, MD2.4/15*
ISC 21 07:00:47.2 1.0, 43.87N 0.02× 22.05E 0.02, h5km, 9km, n40, σ0°61/63, 8C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAGS	**Zajecar**	**0.14**	**113**	*e*Pg	**Pg**	**07 00 49.9**	**-0.1**
ZAGS				*e*Sg	**Sg**	**07 00 52.6**	**+0.7**
BORS2	**Bor- Borsko je**	**0.22**	**353**	*e*Pg	**Pg**	**07 00 50.9**	**-0.6**
BORS2				*e*Sg	**Sg**	**07 00 54.2**	**-0.3**
BOVS	**Bovan**	**0.34**	**227**	ǁS		07 00 59.5	
BOVS	**Bovan**	**0.34**	**227**	*e*Pg	**Pg**	**07 00 54.4**	**+0.6**
BOVS				*e*Sg	**Sg**	**07 00 59.5**	**+1.2**
BOVS	**Bovan**	**0.34**	**227**	ǁP	**Pg**	07 00 54.4	+0.3
BLKB	**Belogradchik**	**0.51**	**118**	ǁP	**Pg**	**07 00 57.3**	**+0.2**
BLKB				ǁS	**Sg**	**07 01 04.1**	**+0.3**
BLKB	**Belogradchik**	**0.51**	**118**	*e*Pg	**Pg**	**07 00 57.0**	**0.0**
BLKB				*e*Sg	**Sg**	**07 01 03.8**	**+0.1**
KUBS	**Kucevo**	**0.61**	**334**	*e*Pg	**Pg**	**07 00 57.6**	**-1.2**
KUBS				*e*Sg	**Sg**	**07 01 06.2**	**-0.6**
ZAPS	**Zavoj**	**0.73**	**144**	*e*Pg	**Pg**	**07 01 00.3**	**-0.9**
ZAPS				*e*Sg	**Sg**	**07 01 10.6**	**0.0**
PUNG	**Punghina**	**0.75**	**57**	ǁP	**Pb**	**07 01 02.8**	**+0.1**
PUNG				ǁS	**Sb**	**07 01 12.8**	**-0.5**
GOCS	**Kraljevo Serbi**	**0.91**	**251**	*e*Pg	**Pg**	**07 01 04.7**	**+0.1**
GOCS				*e*Sg	**Sb**	**07 01 17.9**	**0.0**
SELS	**Selova**	**0.94**	**227**	*e*Pg	**Pb**	**07 01 05.6**	**-0.3**
SELS				*e*Sg	**Sb**	**07 01 18.1**	**-0.6**
MDVR	**Moldovita**	**0.94**	**345**	*e*Pg	**Pg**	**07 01 05.1**	**-0.2**
MDVR				*e*Sg	**Sg**	**07 01 18.0**	**+0.5**
GRUS	**Gruza**	**0.97**	**272**	*e*Pg	**Pb**	**07 01 06.2**	**-0.2**
GRUS				*e*Sg	**Sb**	**07 01 19.8**	**+0.3**
VALD	**Valchedram**	**1.02**	**100**	Pg	**Pb**	**07 01 07.0**	**-0.2**
VALD				Sg	**Sb**	**07 01 20.7**	**-0.2**
HERR	**Herculane**	**1.04**	**14**	ǁP	**Pb**	**07 01 08.0**	**+0.3**
BARS	**Barje**	**1.07**	**189**	*e*Pg	**Pg**	**07 01 06.9**	**-0.7**
BARS				*e*Sg	**Sg**	**07 01 21.1**	**-0.3**
TRUS	**Trudelj**	**1.24**	**287**	*e*Pg	**Pn**	**07 01 11.4**	**+0.3**
TRUS				*e*Sg	**Sg**	**07 01 27.0**	**0.0**
MPEP	**Malo Peshtene**	**1.33**	**112**	*i* P	**Pb**	**07 01 12.7**	**+0.2**
MPEP				Sg	**Sn**	**07 01 30.6**	**+0.2**
BLSH	**Balsha**	**1.35**	**138**	*i* P	**Pn**	**07 01 12.3**	**-0.4**
BLSH				Sg	**Sn**	**07 01 31.0**	**0.0**
VRSS	**Vrsac**	**1.36**	**338**	*e*Pg	**Pn**	**07 01 12.2**	**-0.6**
VRSS				*e*Sg	**Sg**	**07 01 30.1**	**-0.7**
BOSS	**Bosilegrad**	**1.41**	**167**	*e*Pg	**Pn**	**07 01 12.6**	**-0.8**
BOSS				*e*Sg	**Sg**	**07 01 31.9**	**-0.5**
IVAS	**Ivanjica**	**1.41**	**259**	*e*Pg	**Pn**	**07 01 12.9**	**-0.2**
IVAS				*e*Sg	**Sg**	**07 01 32.2**	**-0.2**
DIVS	**Divibare**	**1.50**	**279**	*e*Pg	**Pb**	**07 01 15.7**	**+0.1**
DIVS				*e*Sg	**Sg**	**07 01 36.0**	**+0.5**
VTS	**Vitosha**	**1.52**	**145**	P	**Pn**	**07 01 15.3**	**+0.2**
VTS				Sg	**Sg**	**07 01 36.2**	**+0.2**
VTS	**Vitosha**	**1.52**	**145**	*e*Pg	**Pn**	**07 01 15.4**	**+0.3**
VTS				*e*Sg	**Sg**	**07 01 36.8**	**+0.8**
GZR	**Gura Zlata**	**1.61**	**18**	ǁP	**Pn**	**07 01 16.9**	**+0.7**
SJES	**Sjenica**	**1.63**	**249**	*e*Pg	**Pg**	**07 01 18.1**	**-0.3**
SJES				*e*Sg	**Sg**	**07 01 40.7**	**+1.2**
BZS	**Buzias**	**1.77**	**350**	ǁP	**Pb**	**07 01 19.8**	**-0.4**
BEY	**Berane**	**1.86**	**238**	*e*Pg	**Pb**	**07 01 21.9**	**+0.2**
SURR	**Surduc**	**1.89**	**2**	ǁP	**Pb**	**07 01 21.8**	**-0.3**
BBLS	**Lazi&#263i**	**1.92**	**271**	*e*Pn	**Pb**	**07 01 22.1**	**-0.5**
BBLS				*e*Sn	**Sb**	**07 01 47.2**	**+0.4**
PLVB	**Pleven**	**1.93**	**104**	ǁP	**Pb**	**07 01 21.9**	**-0.8**
PVY	**Plav**	**1.99**	**231**	*e*Pg	**Pb**	**07 01 24.2**	**+0.3**
LOT	**Lotru**	**2.00**	**37**	ǁP	**Pb**	**07 01 23.5**	**-0.5**
PGB	**Panagyurishte**	**2.06**	**130**	P	**Pb**	**07 01 24.4**	**-0.6**
KKB	**Krupnik**	**2.17**	**158**	P	**Pn**	**07 01 23.8**	**-0.2**
ARR	**Arges**	**2.38**	**50**	ǁP	**Pn**	**07 01 28.2**	**+1.4**
SIRR	**Siria**	**2.41**	**354**	ǁP	**Pn**	**07 01 29.1**	**+1.8**
VOIR		**2.65**	**53**	ǁP	**Pn**	**07 01 32.0**	**+1.4**

*IDC **21** 07:00:47.1 2.4, 19.29N 101.45E, h0km, mb3.7/2, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=31.4km s-min=19.5km az=130.0*
*BKK **21** 07:00:48.0 0.8, 20.N 4.× 10.1E, h2km, M4.1/12, Mjma4.0/12, ML4.2/12, MLv4.1/12*
ISC 21 07:00:50.5 1.6, 19.5N 0.1× 101.3E 0.2, h10km, n7, σ0°41/7, Laos

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAMP	**Lampang**	**1.84**	**239**	P	**Pn**	**07 01 22.6**	**+0.4**
UTTA	**Uttaradit**	**1.87**	**202**	P	**Pn**	**07 01 22.3**	**-0.3**
LOEI	**Loei**	**1.97**	**181**	P	**Pn**	**07 01 24.2**	**+0.2**
CMAI	**Chiengmai2**	**2.16**	**282**	P	**Pn**	**07 01 26.8**	**0.0**
CMAR	**Chiang Mai Arr**	**2.44**	**246**	Pn	**Pn**	**07 01 30.4**	**-0.1**
	2.6nm,0.3s,baz=64,slow=13,SNR=28						
CMAR				Lg	Lg	07 02 06.2	
	13nm,0.3s,baz=71,slow=32,SNR=7.2						
	7.0nm,0.7s						
MKAR	**Makanchi Array**	**31.37**	**335**	P	**P**	**07 07 11.0**	**-0.5**
	0.5nm,0.8s,baz=134,slow=8.2,SNR=5.3						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**36.65**	**344**	P	**P**	**07 07 57.5**	**+0.3**
	1.0nm,0.5s,baz=151,slow=10,SNR=5.0						
	1.0nm,0.5s						

*NEIC **21** 07:11:55.4 1.5, 35.99N 0.01× 119.89W 0.02, h10km 2km, Error ellipse: s-maj=3.1km s-min=2.5km az=222.0*
NCEDC 21 07:11:55.5 2.6, 35.96N 0.01× 119.94W 0.02, h7km 4km, ML3.2/43, ML3.0/70(NEIC), Error ellipse: s-maj=2.0km s-min=1.8km az=146.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVNL	**Avenal, CA USA**	**0.29**	**282**		Pb	07 12 02.6	-0.4
PMRM	**Maxey Ranch**	**0.29**	**235**		Pb	07 12 02.6	-0.5
CTM	**Castle Mountai**	**0.32**	**266**		Pb	07 12 03.4	-0.2
THIS	**South End of C**	**0.33**	**226**		Pb	07 12 03.3	-0.4
PAGB	**Antelope Grade**	**0.34**	**229**		Pb	07 12 03.3	-0.5
PKLM	**Kerr Lake**	**0.37**	**241**		Pb	07 12 04.1	-0.3
PHFM	**Heflinger Ranc**	**0.38**	**259**		Pb	07 12 04.3	-0.3
PBPM	**Bitterwater Pu**	**0.39**	**197**		Pb	07 12 04.7	-0.1
WSRE	**Westside REC,**	**0.41**	**339**		Pb	07 12 05.2	+0.1
TRAY	**Twisselman Ran**	**0.43**	**201**		Pb	07 12 05.3	-0.1
TCHL	**Shandon**	**0.46**	**235**		Pb	07 12 05.9	0.0
PSTM	**Stockdale Moun**	**0.46**	**267**		Pb	07 12 05.8	-0.1
PVCM	**Vineyard Canyo**	**0.48**	**266**		Pb	07 12 06.1	-0.3
PKD	**Bear Valley Ra**	**0.49**	**269**		Pb	07 12 06.0	-0.4
PKD	**Bear Valley Ra**	**0.49**	**269**	IAML		07 12 16.1	
	comp=E,1µm,0.9s						
PKD				IAML		07 12 17.9	
	comp=N,774nm,0.5s						
TSCN	**Private Proper**	**0.53**	**219**		Pb	07 12 07.3	+0.2
PHPM	**Hope Ranch**	**0.54**	**273**		Pb	07 12 07.1	-0.2
PSMM	**Smith Mountain**	**0.54**	**282**		Pb	07 12 07.5	+0.2
PPO	**Portuguese Can**	**0.56**	**261**		Pb	07 12 07.6	+0.1
VOG	**Valley Oaks Go**	**0.58**	**51**		Pg	07 12 07.0	+0.4
TCAS	**Cass Winery, P**	**0.61**	**236**		Pg	07 12 07.6	+0.3
SMMC	**Simmler**	**0.64**	**184**		Pb	07 12 09.0	0.0
CARC	**Carrizo Plain**	**0.65**	**173**		Pb	07 12 09.2	0.0
PPTM	**Peach Tree Val**	**0.65**	**284**		Pb	07 12 09.0	-0.2
VES	**Vestal, Richgr**	**0.70**	**99**		Pg	07 12 08.9	-0.1
VES	**Vestal, Richgr**	**0.70**	**99**	IAML		07 12 19.3	
	comp=N,455nm,0.7s						
VES				IAML		07 12 19.8	
	comp=E,476nm,0.5s						
LCUV	**Le Cuvier**	**0.71**	**245**		Pb	07 12 09.8	-0.4
CRGC	**Crocker Grade**	**0.73**	**166**		Pb	07 12 10.6	-0.1
KARE	**Kearney REC, C**	**0.73**	**29**		Pg	07 12 09.2	-0.4
PMPB	**Monarch Peak**	**0.74**	**291**		Pb	07 12 10.5	-0.3
PMPB	**Monarch Peak**	**0.74**	**291**	IAML		07 12 30.1	
	comp=N,470nm,0.6s						
PMPB				IAML		07 12 31.6	
	comp=E,587nm,0.8s						
PSAM	**San Ardo**	**0.77**	**276**		Pg	07 12 10.6	+0.2
RAMR	**Ramage Ranch**	**0.82**	**247**		Pb	07 12 12.0	-0.1
PTAM	**Tassajara Cree**	**0.84**	**228**		Pb	07 12 12.3	-0.1
BAKC	**Calstate**	**0.91**	**132**		Pg	07 12 12.8	-0.2
SPG2	**Springville 2**	**0.98**	**75**		Pg	07 12 13.3	-1.0
BMSM	**Mercy Hot Spri**	**0.98**	**316**		Pg	07 12 14.2	-0.2
LRV	**Little Rabbit**	**0.99**	**299**		Pg	07 12 14.4	-0.1
PCCM	**Crazy Canyon**	**1.00**	**278**		Pg	07 12 14.1	-0.6
PCBM	**Cambria**	**1.01**	**245**		Pg	07 12 14.7	-0.2
DCD	**Diablo Creek**	**1.04**	**225**		Pn	07 12 16.9	+0.4
PKM	**Mcpherson Peak**	**1.07**	**174**		Pg	07 12 15.6	-0.5
BBGB	**Big Mountain B**	**1.08**	**305**		Pg	07 12 15.9	-0.4
WASM	**Alta Sierra Ca**	**1.14**	**100**		Pg	07 12 16.2	-1.2
BSGM	**Shirttail Gulc**	**1.16**	**294**		Pg	07 12 16.6	-1.2
MHDM	**Hidden Dam**	**1.16**	**2**		Pg	07 12 16.0	-1.8
ISA	**Isabella, Lake**	**1.23**	**103**		Pg	07 12 17.4	-1.6
ISA	**Isabella, Lake**	**1.23**	**103**		Pg	07 12 17.5	-1.5
ISA				IAML		07 12 36.5	
	comp=E,311nm,0.2s						
ISA				IAML		07 12 37.7	
	comp=N,308nm,0.3s						
TEJ	**El Tejon**	**1.25**	**125**		Pn	07 12 17.4	-2.0
LEGD	**La Grand CA**	**1.27**	**352**		Pn	07 12 17.9	-1.7
LEGD	**La Grand CA**	**1.27**	**352**	IAML		07 12 35.7	
	comp=N,431nm,0.3s						
BJOM	**Mount Johnson**	**1.30**	**302**		Pn	07 12 18.8	-1.2
BJCM	**Johnson Can.**	**1.31**	**297**		Pn	07 12 19.4	-0.8
SCZ	**Santa Cruz**	**1.35**	**299**		Pn	07 12 19.6	-1.1
WORM	**Onyx Ranch**	**1.40**	**100**		Pn	07 12 20.7	-0.8
KCC	**Kaiser Creek**	**1.46**	**20**		Pn	07 12 20.8	-1.5
BSRM	**Salinas Radio**	**1.46**	**300**		Pn	07 12 20.5	-1.8
SAO	**San Andreas Ge**	**1.46**	**304**		Pn	07 12 21.4	-0.9
MMIM	**Miami Mountain**	**1.47**	**6**		Pn	07 12 21.4	-1.1
THC	**Tehachapi Micr**	**1.48**	**135**		Pn	07 12 20.9	-1.7
FRP	**Fremont Peak**	**1.48**	**303**		Pn	07 12 21.1	-1.5
BPRM	**Ponciano Ridge**	**1.52**	**288**		Pn	07 12 21.3	-1.7
HPCM	**Pacheco Lake**	**1.54**	**316**		Pn	07 12 21.8	-1.6
HFEM	**San Felipe**	**1.56**	**311**		Pn	07 12 22.4	-1.3
CWC	**Cottonwood Cre**	**1.58**	**72**		Pn	07 12 24.0	-0.1
HTUM	**Tustin Road**	**1.63**	**303**		Pn	07 12 22.8	-1.7
CDC	**Canada Road**	**1.64**	**311**		Pn	07 12 23.8	-0.9
WNMM	**Nine Mile Cany**	**1.66**	**93**		Pn	07 12 25.1	+0.2
OSI	**Osito Audit: C**	**1.67**	**143**		Pn	07 12 25.1	-0.1
MFS	**McCloud Flat S**	**1.70**	**84**		Pn	07 12 25.1	+0.5
BUCR	**Buckhorn Ranch**	**1.72**	**354**		Pn	07 12 25.5	-0.5
TIN	**Tinemaha, Big**	**1.76**	**51**		Pn	07 12 26.6	+0.1
TPO	**Tropico Hills**	**1.76**	**127**		Pn	07 12 26.2	-0.2
TPO				IAML		07 12 51.3	
	comp=E,106nm,0.9s						
MTUM	**Tungsten Hills**	**1.78**	**38**		Pn	07 12 27.3	+0.4
MRDM	**Red Cones**	**1.79**	**23**		Pn	07 12 27.0	0.0
SRTC	**Snort**	**1.80**	**98**		Pn	07 12 27.5	+0.5
MMPM	**Mammoth Pass**	**1.81**	**24**		Pn	07 12 27.4	+0.1
MDPB	**Devils Postpil**	**1.81**	**22**		Pn	07 12 27.3	0.0
MMSM	**Mammoth Summit**	**1.82**	**23**		Pn	07 12 29.2	-0.2
CGO	**Cerro Gordo**	**1.83**	**70**		Pb	07 12 28.6	-0.8
MLIM	**Lincoln Peak**	**1.83**	**24**		Pn	07 12 28.1	+0.4
MINS	**Minaret Summit**	**1.84**	**22**		Pn	07 12 28.0	+0.2
MLCM	**Laurel Creek C**	**1.85**	**26**		Pn	07 12 28.2	+0.3
MDYM	**Dry Creek**	**1.86**	**23**		Pn	07 12 28.5	+0.5
MCVM	**Convict Lake**	**1.86**	**28**		Pn	07 12 28.5	+0.5
MMLB	**Mammoth Lakes**	**1.87**	**24**		Pn	07 12 28.8	+0.6
MCBM	**Casa Benchmark**	**1.88**	**26**		Pn	07 12 29.1	+0.7
MEMM	**East Mammoth H**	**1.89**	**25**		Pn	07 12 29.0	+0.6
MCSM	**Casa Diablo Ho**	**1.89**	**26**		Pn	07 12 29.1	+0.7
MLAC	**Mammoth, Mammo**	**1.89**	**28**		Pn	07 12 29.2	+0.8
MDCM	**Deadman Creek**	**1.89**	**22**		Pn	07 12 28.8	+0.3
MDRNC	**Doe Ridge**	**1.90**	**27**		Pn	07 12 29.3	+0.8
CCOB	**Coe Ranch Numb**	**1.91**	**314**		Pn	07 12 27.2	-1.2
MFBM	**Five Bridges**	**1.91**	**39**		Pb	07 12 29.7	-1.0
OAT	**Oat Mountain**	**1.94**	**146**		Pb	07 12 30.4	-0.9
MLHM	**Little Hot Cre**	**1.94**	**27**		Pn	07 12 30.1	+1.0
MHC	**Mount Hamilton**	**1.95**	**316**		Pn	07 12 27.7	-1.4
MHC				IAML		07 13 11.9	
	comp=N,87nm,0.8s						
CMMM	**Mount Mocho**	**1.95**	**321**		Pn	07 12 28.1	-1.0
CMB	**Columbia Colle**	**2.11**	**350**		Pn	07 12 31.4	+0.2
CMB	**Columbia Colle**	**2.11**	**350**	IAML		07 13 05.8	
	comp=E,94nm,0.5s						
CMB				IAML		07 13 06.8	
	comp=N,84nm,0.5s						
MWC	**Mount Wilson**	**2.32**	**138**		Pn	07 12 32.8	-1.4
GRAC	**Grapevine Rang**	**2.32**	**63**		Pn	07 12 34.9	+0.7
BFSC	**Mount Baldy Ra**	**2.54**	**132**		Pn	07 12 36.7	-0.4
GMN	**Gold Mountain**	**2.54**	**57**		Pn	07 12 37.9	+0.5
GMN				IAML		07 13 19.7	
	comp=E,60nm,0.6s						
LHV	**Little Huntoon**	**2.56**	**26**		Pn	07 12 38.3	+1.0
LHV				IAML		07 13 22.4	
	comp=N,64nm,0.9s						
LHV				IAML		07 13 22.8	
	comp=E,65nm,0.8s						
WAKR	**Walker**	**2.58**	**9**		Pn	07 12 39.3	+1.5
WAKR				IAML		07 13 20.4	
	comp=E,111nm,0.4s						
WAKR				IAML		07 13 23.8	
	comp=N,86nm,0.8s						
NVAR	**Mina Array Bea**	**2.79**	**27**		Pn	07 12 41.1	+0.3
WCT	**Wildcat Mounta**	**2.80**	**72**		Pn	07 12 40.7	-0.1
NV11	**Mina Array Sit**	**2.85**	**29**		Pn	07 12 41.4	-0.2
RYN	**Ryan**	**2.90**	**23**		Pn	07 12 41.7	-0.5
RYN				IAML		07 13 31.2	
	comp=E,31nm,0.4s						
RYN				IAML		07 13 32.0	
	comp=N,29nm,0.4s						
TPNV	**Topopah Spring**	**3.14**	**70**		Pn	07 12 45.8	+0.4
TPNV				IAML		07 13 41.9	
	comp=N,32nm,1.0s						
TPNV				IAML		07 13 53.4	
	comp=N,24nm,0.8s						
PNTR	**Pine Nut**	**3.14**	**5**	Pn	Pn	07 12 45.9	+0.3
PNTR				IAML		07 13 40.2	
	comp=N,61nm,0.7s						
BELC	**Belle Mtn. Jos**	**3.78**	**120**	Pn	Pn	07 12 53.1	-1.1
BELC				IAML		07 13 58.8	
	comp=N,17nm,4.7s						
BELC				IAML		07 14 03.6	
	comp=E,18nm,1.4s						
ORV	**Oroville**	**3.80**	**341**	Pn	Pn	07 12 54.5	+0.1
ORV				IAML		07 13 56.1	
	comp=E,23nm,0.7s						
SHPR	**Sheep Range**	**3.90**	**81**		Pn	07 12 56.7	+0.7

TRN 21 07:13:14.6, 18.14N×61.07W, h6km, MD3.9, Far North-east of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.83**	**236**	*e*P	Pn	07 13 33.8	+1.0
ANWB				*e*S	Sn	07 13 48.2	+2.9
MBWH	**Windy Hill**	**1.75**	**218**	*e*P	Pb	07 13 47.7	+0.4
MBWH				*e*S	Sg	07 14 11.1	+0.1
SKI	**Saint Kitts**	**1.78**	**243**	*e*P	Pb	07 13 47.9	+0.2
SKI				*e*S	Sg	07 14 13.1	+1.2
DSDZ	**La Diserade, G**	**1.82**	**180**	*e*P	Pb	07 13 48.0	-0.3
DSDZ				*e*S	Sg	07 14 13.1	+0.1
DHSZ	**Broadband at M**	**1.97**	**200**	*e*P	Pb	07 13 50.8	-0.1
DHSZ				*e*S	Sg	07 14 17.3	-0.7
ATGZ	**Broadband at L**	**2.13**	**197**	*e*P	Pb	07 13 53.6	0.0
ATGZ				*e*S	Sb	07 14 20.1	-0.2
MMLZ	**Guadeloupe Bro**	**2.16**	**195**	*e*P	Pb	07 13 54.3	+0.2
MMLZ				*e*S	Sb	07 14 21.1	-0.1
TBG	**Guadaloupe-3**	**2.34**	**194**	*e*P	Pb	07 13 56.3	-0.9
TBG				*e*S	Sb	07 14 26.7	+0.3
DWS	**Wesley**	**2.57**	**185**	*e*P	Pb	07 13 59.2	-1.9
DWS				*e*S	Sb	07 14 30.9	-2.1
DSLB	**Salisbury**	**2.71**	**187**	*e*P	Pb	07 14 01.3	-2.2
DSLB				*e*S	Sb	07 14 35.0	-2.0
SVN	**Savane Anatole**	**3.28**	**182**	*e*P	Pn	07 14 08.7	+2.1
SVN				*e*S	Sb	07 14 50.7	-2.9
BIM	**Bigot**	**3.60**	**180**	*e*P	Pn	07 14 12.8	+1.8
BIM				*e*S	Sn	07 14 57.8	+3.8
SLBI	**Saint Lucia, B**	**4.09**	**179**	*e*P	Pn	07 14 19.8	+2.0
SLBI				*e*S	Sn	07 15 08.0	+2.0

DJA 21 07:24:31.8 0.3, 8.S 2.× 10.7E, h10km, M4.0/16, mB5.4/2, mb4.1/3, MLv4.0/16, Mw(mB)4.8/2, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.75**	**50**	P	Pb	07 24 46.8	-0.1
CNJI				S	Sg	07 24 56.6	+0.6
SKJI	**Sukabumi**	**0.78**	**0**	P	Pb	07 24 47.7	+0.2
SKJI				S	Sb	07 24 58.1	0.0
**DBJI

ZAA0	**Zalesovo Array**	**2.00**	**280**	⇑Pn		Pn		08 14 54.1	-0.4
	0.5nm,0.4s,baz=93,slow=16								
ZAA0				⇑Sn		Sb		08 15 21.4	-0.8
	0.8nm,0.4s,baz=100,slow=26								
ZALV	**Zalesovo Beam**	**2.00**	**280**	Pg		Pg		08 15 27.4	+30
	1.0nm,0.3s,baz=68,slow=17,SNR=4.3								
ZALV				Lg		Lg		08 15 39.5	
	2.4nm,0.3s,baz=68,slow=30,SNR=7.4								
KURBB	**Kurchatov Arra**	**6.65**	**247**	Pn		Pg		08 16 42.4	+16
	0.1nm,0.3s,baz=48,slow=14,SNR=5.2								
	0.4nm,0.3s								
KURBB	**Kurchatov Arra**	**6.65**	**247**	P		Pn		08 15 59.0	+0.6
	2.6nm,1.1s,baz=26,slow=13								
MK31	**Makanchi Array**	**7.82**	**211**	P		Pn		08 16 15.5	+1.0
	3.0nm,1.2s,baz=26,slow=13								
MKAR	**Makanchi Array**	**7.82**	**211**	Pn		Pg		08 17 10.0	+21
	0.1nm,0.3s,baz=24,slow=13,SNR=2.0								
	0.2nm,0.3s								

*ASRS **21** 08:16:51.0±1.4,51.67N×82.60E,h0km,M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 08:16:58.2±1.3,51.55N×82.45E,h0km,mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=17.5km s-min=11.2km az=135.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.64**	**251**	Pg	Pb	08 17 45.8	-0.6
	0.1nm,0.3s,baz=71,slow=18,SNR=5.2						
KURBB				Lg	Lg	08 18 20.3	
	0.3nm,0.3s,baz=71,slow=34,SNR=16						
ZALV	**Zalesovo Beam**	**2.80**	**30**	Pn	Pn	08 17 42.4	-1.8
	1.9nm,0.3s,baz=215,slow=14,SNR=10						
ZALV				Pg	Pb	08 17 49.2	+0.1
	0.7nm,0.3s,baz=215,slow=15,SNR=4.9						
ZALV				Sn	Sn	08 18 16.1	-2.5
	0.5nm,0.3s,baz=214,slow=23,SNR=4.1						
ZALV				Lg	Lg	08 18 28.3	
	0.6nm,0.3s,baz=213,slow=30,SNR=5.8						
	4.8nm,0.3s						
I46RU	**ZALESOVO INFRA**	**2.80**	**30**	I	I	08 32 30.0	
	0.3nm,0.9s,baz=206,slow=329,SNR=1.3						
MKAR	**Makanchi Array**	**4.76**	**181**	Pn	Pn	08 18 12.5	+1.2
	0.4nm,0.3s,baz=8.3,slow=11,SNR=9.9						
MKAR				Lg	Lg	08 19 24.9	
	0.4nm,0.3s,baz=11,slow=26,SNR=9.7						
	0.6nm,0.4s						

IDC 21 08:37:19.3±4.0,59.34S×148.16W,h0km,mb3.6/2, mbtmp3.6/2,MS3.3/8, Error ellipse: s-maj=367.7km s-min=66.9km az=165.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**24.52**	**204**	LR	LR	08 50 37.2	
	comp=Z,43nm,21.0s,baz=74,slow=32						
URZ	**Urewera**	**30.56**	**298**	LR	LR	08 53 33.5	
	comp=Z,45nm,19.8s,baz=334,slow=32						
QSPA	**South Pole Qui**	**30.80**	**180**	LR	LR	08 54 48.0	
	comp=Z,79nm,19.5s,baz=56,slow=34						
PMSA	**Palmer Station**	**37.02**	**135**	LR	LR	08 57 04.7	
	comp=Z,50nm,19.1s,baz=295,slow=32						
PPT	**Papeete**	**41.73**	**358**	LR	LR	08 59 48.7	
	comp=Z,42nm,18.8s,baz=206,slow=32						
SNAA	**Sanae**	**47.06**	**166**	LR	LR	09 03 08.6	
	comp=Z,27nm,19.4s,baz=193,slow=33						
H03S2	**Juan Fernandez**	**51.16**	**92**	T	T	09 41 41.4	
	baz=218,slow=74,SNR=20						
H03S1	**Juan Fernandez**	**51.16**	**92**	T	T	09 41 34.3	
	baz=218,slow=74,SNR=25						
H03S3	**Juan Fernandez**	**51.18**	**92**	T	T	09 41 34.3	
	baz=218,slow=74,SNR=27						
MAW	**Mawson**	**51.32**	**195**	LR	LR	09 07 26.2	
	comp=Z,31nm,18.7s,baz=188,slow=35						
H03N3	**Juan Fernandez**	**51.46**	**92**	T	T	09 41 51.9	
	baz=221,slow=72,SNR=55						
H03N2	**Juan Fernandez**	**51.47**	**92**	T	T	09 41 45.6	
	baz=221,slow=72,SNR=50						
H03N1	**Juan Fernandez**	**51.48**	**92**	T	T	09 41 50.9	
	baz=221,slow=72,SNR=73						
ASAR	**Alice Springs**	**63.83**	**267**	P	P	08 47 54.1	+0.7
	0.4nm,0.9s,baz=146,slow=6.3,SNR=2.0						
	0.4nm,0.9s						
H01W1	**Cape Leeuwin H**	**64.36**	**245**	T	T	09 59 45.2	
	baz=144						
H01W2	**Cape Leeuwin H**	**64.37**	**245**	T	T	09 59 38.9	
	baz=144						
H01W3	**Cape Leeuwin H**	**64.38**	**245**	T	T	09 59 45.9	
	baz=144						
WRA	**Warramunga Arr**	**66.70**	**270**	P	P	08 48 10.9	-1.0
	0.8nm,1.0s,baz=164,slow=7.0,SNR=3.4						
	0.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**72.69**	**264**	LR	LR	09 16 53.7	
	comp=Z,41nm,20.3s,baz=182,slow=33						
H10S2	**ASCENSION HYDR**	**02.46**	**133**	T	T	10 47 42.0	
	baz=204,slow=74,SNR=5.8						
H10S3	**ASCENSION HYDR**	**02.46**	**133**	T	T	10 47 55.2	
	baz=16,slow=74,SNR=3.3						
H10N3	**ASCENSION HYDR**	**03.54**	**133**	T	T	10 49 04.7	
	baz=204,slow=75,SNR=9.7						
H10N1	**ASCENSION HYDR**	**03.55**	**133**	T	T	10 49 14.7	
	baz=204,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**03.56**	**133**	T	T	10 49 10.4	
	baz=204,slow=75,SNR=10						
ILAR	**Eielson Array**	**123.80**	**1**	PKP	PKPdf	08 56 16.2	-1.1
	0.3nm,0.8s,baz=196,slow=2.6,SNR=2.7						
MKAR	**Makanchi Array**	**148.01**	**270**	PKPbc	PKPbc	08 57 05.8	+0.2
	2.6nm,0.7s,baz=108,slow=4.7,SNR=11						

IDC 21 08:37:52.8±41.0,24.48S×175.49W,h0km,mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=758.5km s-min=167.3km az=89.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.34**	**249**	P	P	08 45 14.6	-1.0
	0.8nm,0.5s,baz=80,slow=6.1,SNR=3.3						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**45.99**	**260**	P	P	08 46 18.2	+0.1
	1.2nm,0.4s,baz=95,slow=7.7,SNR=43						
	1.2nm,0.4s						
WRA	**Warramunga Arr**	**46.47**	**265**	P	P	08 46 22.1	+0.2
	1.3nm,0.5s,baz=104,slow=7.7,SNR=17						
	1.3nm,0.5s						

GCG 21 09:00:07.3±0.5,14.21N×91.40W,h59km±9km,MD3.4, ML3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.20**	**16**	*e*P	Pn	09 00 19.7	+2.9
STG5				*e*S	Sn	09 00 28.3	+4.8
STG2	**El Palmar, Qui**	**0.22**	**7**	*e*P	Pn	09 00 20.6	+3.6
STG2				*e*S	Sn	09 00 30.7	+6.8
STG8	**El Palmar, Qui**	**0.24**	**12**	*e*P	Pn	09 00 20.5	+3.3
STG8				*e*S	Sn	09 00 30.9	+6.6
ESSG	**Sabana Grande**	**0.58**	**73**	*e*P	Pn	09 00 20.2	+0.1
ESSG				*e*S	Sn	09 00 30.5	+0.9
SOKI	**Kika Raxquin**	**0.60**	**0**	*i* P	Pn	09 00 21.9	+1.1
SOKI				*e*S	Sn	09 00 33.2	+2.7
FG16	**Alotenango, Sa**	**0.87**	**86**	*e*P	Pn	09 00 20.7	-3.1
FG16				*e*S	Sn	09 00 31.3	-4.6
FG16				IAML		09 00 36.7	
	comp=E,3μm,0.2s						
SMCA	**Catarina**	**0.91**	**315**	*i* P	Pn	09 00 24.4	+0.2
PCG5	**San Vicente Pa**	**1.00**	**90**	*e*P	Pn	09 00 22.9	-2.5

RSNC 21 09:03:03.8±0.0,7.N±1.×7.W±.,h15km±3km,M2.7,mb3.7, ML2.3,MLv3.1, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.59**	**82**	P	Pg	09 03 14.3	-1.2
DBBC				S	Sg	09 03 23.6	+0.2
SOLC	**Bahia Solano**	**0.92**	**221**	P	Pb	09 03 20.3	-1.2
SOLC				S	Sg	09 03 33.8	-0.1
PTAC	**Punta Ardita,**	**1.02**	**282**	P	Pb	09 03 21.5	-1.7
PTAC				S	Sb	09 03 35.7	-0.8
CBOC	**Ciudad Bolivar**	**1.32**	**143**	P	Pn	09 03 25.4	-2.4
CBOC				S	Sb	09 03 42.3	-2.8
HELC	**Santa Helena**	**1.46**	**120**	P	Pn	09 03 28.6	-1.4
HELC				S	Sn	09 03 48.2	-0.9
UREC	**San Jos de Ur**	**1.50**	**57**	P	Pn	09 03 28.6	-1.6
UREC				S	Sn	09 03 47.6	-1.9
CAPC	**Capurgana**	**1.78**	**342**	P	Pn	09 03 30.6	-3.5
CAPC				S	Sn	09 03 56.8	+0.4
LCBC	**Los crdobas,**	**1.96**	**13**	P	Pn	09 03 35.0	-1.6
LCBC				S	Sn	09 04 02.1	+1.2
PIZC	**Pizarro, Choco**	**2.03**	**196**	P	Pb	09 03 39.9	-0.5
PIZC				S	Sb	09 04 04.1	-1.4
GUY2C	**Guyana, Caldas**	**2.22**	**140**	P	Pn	09 03 39.8	-0.7
GUY2C				S	Sn	09 04 07.6	-0.2
PTBC	**PUERTO BERRIO,**	**2.36**	**99**	P	Pn	09 03 41.4	-0.7
PTBC				S	Sn	09 04 11.4	+0.6
YOTC	**Yotoco, Valle**	**2.96**	**171**	P	Pn	09 03 47.0	-3.4
YOTC				S	Sn	09 04 19.5	-6.3
SJCC	**San Jacinto, C**	**3.35**	**28**	P	Pn	09 03 56.1	+0.3
SJCC				S	Sn	09 04 30.7	-4.7
ORTC	**Ortega, Tolima**	**3.38**	**153**	P	Pn	09 03 56.8	+0.7
ORTC				S	Sn	09 04 37.3	+1.4
BARC	**Barichara**	**3.61**	**95**	P	Pn	09 04 00.0	+0.6
BARC				S	Sn	09 04 41.0	-0.9
OCAC	**Ocana**	**3.69**	**69**	P	Pn	09 03 59.9	-0.5
OCAC				S	Sn	09 04 41.1	-2.7
JAMC	**Jamundi, Valle**	**3.69**	**178**	P	Pn	09 03 58.3	-2.3
JAMC				S	Sn	09 04 38.8	-5.2
RUSC	**La Rusia**	**3.83**	**105**	P	Pn	09 04 03.3	+0.5
RUSC				S	Sn	09 04 47.7	-0.2
PAMC	**Pamplona, Colo**	**4.09**	**84**	P	Pn	09 04 06.4	+0.1
PAMC				S	Sn	09 04 53.4	-0.7
POPC	**Popayan, Colom**	**4.36**	**178**	P	Pn	09 04 08.8	-1.0
POPC				S	Sn	09 04 57.1	-3.5
BBAC	**Balboa, Cauca**	**4.90**	**185**	P	Pn	09 04 18.4	+1.3
BBAC				S	Sn	09 05 17.6	+3.9
CRJC	**Cerrejon, Guaj**	**5.61**	**43**	P	Pn	09 04 24.2	-2.7
	8.5nm,0.8s						
CRJC				S	Sn	09 05 24.6	-6.6
	8.5nm,0.8s						
URIC	**Uribia, Colomb**	**6.71**	**45**	P	Pn	09 04 39.3	-2.5

*ASRS **21** 09:05:18.0±0.7,53.91N×86.54E,h0km,M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 09:05:20.8±3.0,53.97N×86.58E,h0km,mbtmp3.0/2, ML2.3/1, Error ellipse: s-maj=24.5km s-min=14.5km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**270**	I	I	09 11 30.0	
	baz=89,slow=357,SNR=5.1						
ZALV	**Zalesovo Beam**	**1.04**	**270**	Pg	Pg	09 05 39.5	-1.3
	0.9nm,0.3s,baz=88,slow=17,SNR=8.7						
ZALV				Lg	Lg	09 05 55.7	
	1.1nm,0.3s,baz=89,slow=23,SNR=5.5						
KURBB	**Kurchatov Arra**	**5.96**	**239**	Pn	Pn	09 06 51.7	+1.4
	0.1nm,0.3s,baz=56,slow=13,SNR=3.5						
	0.7nm,0.2s						
MKAR	**Makanchi Array**	**7.68**	**203**	Pn	Pn	09 07 14.7	+0.8
	0.2nm,0.4s,baz=20,slow=12,SNR=1.8						

*SOME **21** 09:15:03.0,41.42N×81.35E,h25km*
*NNC **21** 09:15:05.0±4.6,41.84N×81.90E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=38.3km s-min=20.5km az=170.0*

ISC 21 09:15:04.8±3.0,41.8N±0.2°×81.6E±0.1,h10km,n9, σ0=38/11,1C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.09**	**313**	Pg	**Pn**	**09 15 40.0**	**0.0**
	18nm,0.2s						
SHLS				Lg	Lg	09 16 06.7	
	71nm,0.4s						
SHLS	**Shalkode**	**2.09**	**313**	*e*P	**Pn**	**09 15 40.0**	**0.0**
	18nm,0.2s						
SHLS				*e*S	**Sn**	**09 16 06.7**	**+0.6**
	71nm,0.4s						
PDGK	**Podgornoye**	**2.19**	**317**	Pn	**Pb**	**09 15 44.3**	**-0.4**
	4.2nm,0.6s						
PDGK				⇓Sn	**Sg**	**09 16 15.1**	**-0.2**
	43nm,0.6s						
UZB	**Uzynbulak**	**2.33**	**308**	Pg	**Pb**	**09 15 47.5**	**+0.4**
	4.2nm,0.3s						
UZB				Lg	Lg	09 16 19.4	
	28nm,0.3s						
UZB	**Uzynbulak**	**2.33**	**308**	*e*P	**Pb**	**09 15 47.5**	**+0.4**
	4.2nm,0.3s						
UZB				*e*S	**Sg**	**09 16 19.4**	**-0.4**
	28nm,0.3s						
KPKS	**Kokpek**	**2.72**	**310**	Lg	Lg	09 16 28.0	
	17nm,0.5s						
KURS	**Kuram**	**3.04**	**306**	Lg	Lg	09 16 37.4	
	4.9nm,0.5s						
MDOK	**Medeo**	**3.62**	**294**	Pg	**Pb**	**09 16 08.6**	**-0.4**
	2.1nm,0.3s						
MDOK				Lg	Lg	09 16 55.7	
	2.5nm,0.5s						
MK31	**Makanchi Array**	**5.07**	**6**	⇑Pn	**Pn**	**09 16 20.9**	**0.0**
	0.4nm,0.5s,baz=183,slow=13,SNR=9.1						
MK31				⇓Sn	**Sn**	**09 17 19.6**	**+0.1**
	0.4nm,0.4s,baz=186,slow=25						

*IDC **21** 09:19:29.5±1.2,7.28N×34.69W,h0km,mb3.9/11, mbtmp3.9/11,MS3.8/46, Error ellipse: s-maj=38.8km s-min=22.6km az=160.0*
*GCMT **21** 09:19:48.6±0.4,7.66N±0.04×34.57W±0.03,h29km±1km, MW4.9/73, Moment Tensor Solution. s16,c16; s73,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.39±.23; Mθθ=0.07±.12; Mϕϕ=2.32±.14; Mrθ=0.88±.19; Mrϕ=-0.40±.07; Mθϕ=-0.20±.15; Best double couple: Mo=2.54400×10¹⁶ NP1:ϕs=186.00000°,δ43.00000°,λ-65.00000°. NP2: ϕs=333.00000°,δ52.00000°,λ-112.00000°. Principal axes: T 2.4170, Plg4.0000°, Azm79.0000°; N 0.2540, Plg17.0000°, Azm347.0000°; P -2.6720, Plg72.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **21** 09:19:50.6±2.1,7.2N±0.1×34.1W±0.1,h10km±2km, mb4.9/22 Error ellipse: s-maj=25.7km s-min=20.8km az=115.0*

ISC 21 09:19:49.8±0.8,7.3N±0.1×34.2W±0.1,h10km,n83, σ1=13/29,mb4.7/22,MS3.8/45,5D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.11**	**188**	Pn	**Pn**	**09 22 56.3**	**0.0**
MDP	**Montagnes des**	**18.51**	**264**	LR	LR	09 29 22.4	
	comp=Z,508nm,21.8s,baz=74,slow=33						
MAL2	**Monte Alegre,**	**22.01**	**246**	P	**P**	**09 24 46.3**	**+1.7**
H10N3	**ASCENSION HYDR**	**24.67**	**127**	T	T	09 51 34.2	
	baz=306,slow=75,SNR=63						
H10N2	**ASCENSION HYDR**	**24.67**	**127**	T	T	09 51 34.6	
	baz=306,slow=75,SNR=60						
H10N1	**ASCENSION HYDR**	**24.69**	**127**	T	T	09 51 35.8	
	baz=306,slow=75,SNR=61						
H10S3	**ASCENSION HYDR**	**25.23**	**129**	T	T	09 52 03.4	
	baz=306,slow=74,SNR=27						
H10S2	**ASCENSION HYDR**	**25.24**	**129**	T	T	09 52 04.7	
	baz=274,slow=74,SNR=22						
BDFB	**Brasilia**	**26.57**	**211**	LR	LR	09 35 10.0	
	comp=Z,291nm,18.3s,baz=308,slow=36						
BDFB	**Brasilia**	**26.57**	**211**	P	**P**	**09 25 28.5**	**0.0**
BOAV	**Boa Vista**	**26.71**	**261**	P	**P**	**09 25 28.5**	**-1.1**
MACI	**Morro de la Ar**	**26.73**	**36**	P	**P**	**09 25 29.1**	**-0.7**
MPOM	**Morne Pois Mar**	**27.17**	**288**	P	**P**	**09 25 34.6**	**+0.9**
MPOM				IAmb	IAmb	09 25 47.1	
	comp=Z,46nm,1.2s						
MAGL	**Barre de l'ile**	**27.92**	**290**	P	**P**	**09 25 39.5**	**-0.9**
CBE	**Ff, Capester**	**28.25**	**291**	P	**P**	**09 25 44.1**	**+0.7**
CBE				IAmb	IAmb	09 25 55.6	
	comp=Z,34nm,1.0s						
DBIC	**Dimbokro**	**29.08**	**89**	LR	LR	09 34 52.0	
	comp=Z,306nm,20.8s,baz=342,slow=31						
HUMP	**Col San Antoni**	**32.70**	**292**	P	**P**	**09 26 21.6**	**-1.1**
HUMP				IAmb	IAmb	09 26 24.5	
	comp=Z,20nm,1.1s						
SJG	**San Juan**	**32.97**	**292**	LR	LR	09 36 36.5	
	comp=Z,275nm,20.9s,baz=100,slow=32						
BAUV	**El Baul**	**33.59**	**275**	P	**P**	**09 26 29.1**	**-1.5**
BAUV				IAmb	IAmb	09 26 33.0	
	comp=Z,23nm,1.3s						
CRPR	**Cabo Rojo, PR**	**33.83**	**292**	P	**P**	**09 26 30.7**	**-1.9**
CRPR				IAmb	IAmb	09 26 36.0	
	comp=Z,20nm,1.2s						
SIV	**San Ignacio**	**35.27**	**229**	LR	LR	09 40 17.0	
	comp=Z,424nm,20.0s,baz=107,slow=36						
TORD	**Torodi Ar. Bea**	**35.73**	**78**	P	P	09 26 34.6	-15
	comp=Z,1.2nm,0.3s,baz=250,slow=8.6,SNR=1.4						
TORD				LR	LR	09 39 54.5	
	comp=Z,354nm,20.9s,baz=272,slow=34						
	comp=Z,1.2nm,0.3s						
DR12	**Loma Pena Alta**	**36.11**	**292**	P	**P**	**09 26 52.2**	**-0.2**
BANI	**BANI**	**36.92**	**291**	P	**P**	**09 26 58.7**	**-0.7**
MDT	**Midelt**	**37.40**	**43**	LR	LR	09 41 38.9	
	comp=Z,102nm,18.1s,baz=248,slow=35						
SC01	**Santiago de lo**	**37.50**	**292**	P	**P**	**09 27 03.9**	**-0.2**
SDDR	**Presa de Saban**	**37.91**	**292**		**P**	**09 27 07.4**	**-0.3**
SDDR				IAmb	IAmb	09 27 10.4	
	comp=Z,44nm,1.2s						
RUSC	**La Rusia**	**38.69**	**270**		**P**	**09 27 15.2**	**+0.4**
RUSC				IAmb	IAmb	09 27 19.3	
	comp=Z,21nm,1.3s						
ROSC	**El Rosal**	**40.01**	**269**	LR	LR	09 42 37.8	
	comp=Z,319nm,21.4s,baz=89,slow=35						
ROSC	**El Rosal**	**40.01**	**269**	P	**P**	**09 27 24.0**	**-1.7**
CPUP	**Villa Florida**	**40.26**	**213**	LR	LR	09 43 14.5	
	comp=Z,42nm,20.6s,baz=247,slow=36						
LPAZ	**La Paz**	**40.97**	**235**	P	P	09 27 11.2	-23
	comp=Z,0.9nm,0.7s,baz=30,slow=7.2,SNR=6.9						
LPAZ				LR	LR	09 43 44.7	
	comp=Z,200nm,19.7s,baz=60,slow=36						
	comp=Z,0.9nm,0.7s						
LPAZ	**La Paz**	**40.97**	**235**		**P**	**09 27 33.6**	**-0.2**
ESDC	**Sonseca Array**	**42.13**	**35**	LR	LR	09 41 46.9	
	comp=Z,90nm,19.6s,baz=237,slow=32						
PB06	**IPOC Station P**	**45.70**	**228**	P	**P**	**09 28 12.2**	**+0.7**
PB06				IAmb	IAmb	09 29 19.9	
	comp=Z,11nm,1.0s						
ATAH	**Atahualpa**	**46.39**	**253**	LR	LR	09 48 36.4	
	comp=Z,126nm,19.3s,baz=78,slow=38						
NNA	**Nana**	**46.56**	**246**	LR	LR	09 47 18.7	
	comp=Z,253nm,19.4s,baz=40,slow=36						
BRU2	**Volcan**	**48.07**	**275**		**P**	**09 28 31.1**	**+0.9**
KEST	**Kesra**	**48.82**	**48**	LR	LR	09 48 16.1	
	comp=Z,195nm,20.6s,baz=266,slow=35						
JTS	**Las Juntas de**	**50.26**	**277**	LR	LR	09 50 25.3	
	comp=Z,112nm,19.3s,baz=153,slow=37						
MMNY	**Mt. Morris Dam**	**52.21**	**320**	P	**P**	**09 29 01.7**	**+0.7**
MMNY				IAmb	IAmb	09 29 02.9	
	comp=Z,34nm,1.3s						
TKL	**Tuckaleechee C**	**53.41**	**309**	LR	LR	09 48 13.5	
	comp=Z,39nm,19.4s,baz=121,slow=32						
DOU	**Dourbes**	**53.54**	**30**	*d*P	**P**	**09 29 10.7**	**0.0**
DOU				*d*PcP	**PcP**	**09 30 15.3**	**-2.1**
DOU				*d*PP	**PP**	**09 31 13.5**	**+2.2**
BMRD	**Maredsous**	**53.75**	**30**	*d*P	**P**	**09 29 12.5**	**+0.2**
BMRD				*d*PcP	**PcP**	**09 30 16.4**	**-1.9**
SADO	**Sadowa**	**54.00**	**322**	LR	LR	09 47 31.2	
	comp=Z,55nm,20.0s,baz=130,slow=31						
SCHQ	**Schefferville**	**54.17**	**337**	P	P	09 28 54.7	-21
	comp=Z,5.1nm,0.8s,baz=131,slow=8.8,SNR=7.4						
	comp=Z,5.1nm,0.8s						
Q51A	**Peebles**	**54.29**	**313**		**P**	**09 29 16.4**	**-0.1**
Q51A				IAmb	IAmb	09 29 18.1	
	comp=Z,11nm,0.9s						
DAVOX	**Davos/Dischmat**	**54.46**	**36**	P	P	09 29 01.1	-17
	comp=Z,1.6nm,0.4s,baz=285,slow=7.0,SNR=3.9						
DAVOX				LR	LR	09 50 22.2	
	comp=Z,116nm,19.4s,baz=261,slow=34						
	comp=Z,1.6nm,0.4s						
TSUM	**Tsumeb**	**57.34**	**118**	LR	LR	09 48 38.0	
	comp=Z,199nm,21.5s,baz=324,slow=30						
BORG	**Borgarnes**	**58.11**	**6**	LR	LR	09 48 14.3	
	comp=Z,60nm,21.1s,baz=224,slow=30						
PLCA	**Paso Flores**	**58.31**	**212**	LR	LR	09 55 15.4	
	comp=Z,352nm,18.4s,baz=52,slow=37						
VRAC	**Vranov**	**59.62**	**36**	LR	LR	09 52 36.6	
	comp=Z,74nm,20.5s,baz=264,slow=33						
NOA	**NORSAR Array B**	**63.33**	**23**	LR	LR	09 54 04.1	
	comp=Z,57nm,20.5s,baz=225,slow=33						
MLR	**Muntele Rosu**	**64.08**	**43**	LR	LR	09 55 32.9	
	comp=Z,57nm,21.6s,baz=248,slow=34						
MBAR	**Mbarara**	**65.18**	**94**	LR	LR	09 56 48.1	
	comp=Z,100nm,21.2s,baz=288,slow=34						
LSZ	**Lusaka**	**65.69**	**110**	LR	LR	09 53 24.9	
	comp=Z,84nm,20.5s,baz=317,slow=31						
LBTB	**Lobatse**	**66.37**	**121**	LR	LR	09 54 48.7	
	comp=Z,58nm,20.0s,baz=307,slow=32						
BOSA	**Boshof**	**67.41**	**125**	LR	LR	09 54 56.4	
	comp=Z,76nm,18.0s,baz=276,slow=31						
AKASG	**Malin Array Be**	**67.69**	**38**	LR	LR	09 59 28.8	
	comp=Z,40nm,19.1s,baz=237,slow=35						
EIL	**Elat**	**68.30**	**61**	LR	LR	10 01 38.7	
	comp=Z,226nm,20.1s,baz=183,slow=37						
BRTR	**Keskin Array B**	**68.34**	**50**	P	P	09 30 36.3	-16
	comp=Z,0.4nm,0.6s,baz=256,slow=7.2,SNR=1.7						
BRTR				LR	LR	10 01 08.9	
	comp=Z,51nm,21.8s,baz=271,slow=36						
	comp=Z,0.4nm,0.6s						
TXAR	**Lajitas Array**	**68.64**	**299**	P	P	09 30 32.7	-21
	comp=Z,0.2nm,0.5s,baz=74,slow=5.3,SNR=6.5						
TXAR				LR	LR	09 56 49.5	
	comp=Z,30nm,21.4s,baz=48,slow=33						
	comp=Z,0.2nm,0.5s						
ALPN	**Alpine**	**68.68**	**300**		**P**	**09 30 54.6**	**+0.4**
ALPN				IAmb	IAmb	09 30 57.3	
	comp=Z,5.9nm,1.2s						
MMAI	**Mount Meron Ar**	**68.95**	**58**	LR	LR	10 04 40.3	
	comp=Z,21nm,19.1s,baz=250,slow=39						
FINES	**FINESS Array B**	**69.71**	**26**	LR	LR	09 57 30.4	
	comp=Z,79nm,21.7s,baz=224,slow=33						
ASF	**Jabal al Asfar**	**70.14**	**59**	LR	LR	10 01 37.0	
	comp=Z,36nm,21.9s,baz=273,slow=36						
ANMO	**Albuquerque**	**71.39**	**304**	LR	LR	09 57 48.5	
	comp=Z,106nm,22.0s,baz=177,slow=32						
**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.88**	**281**	⇓P	Pn	09 26 57.8	-0.3
	0.1nm,0.1s,baz=98,slow=15						
ZAA0				⇑S	Sb	09 27 23.4	-0.6
	1.9nm,0.5s,baz=99,slow=25						
KURBB	**Kurchatov Arra**	**6.53**	**246**	P	Pn	09 28 01.3	-0.8
	0.5nm,0.2s						
MK31	**Makanchi Array**	**7.75**	**210**	P	Pn	09 28 20.1	+1.2
	0.9nm,0.7s,baz=352,slow=9.2,SNR=7.1						

ASRS ***21*** *09:30:31.0±1.9, 54.°28N×86.°13E, h0km, M2.9, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 21 09:30:32.9±2.5, 54°24N×86°05E, h0km, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=18.0km s-min=10.6km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.78**	**249**	I	I	09 35 20.0	
	baz=68,slow=357,SNR=5.7						
ZALV	**Zalesovo Beam**	**0.78**	**248**	Pg	Pg	09 30 46.5	-1.4
	2.7nm,0.3s,baz=68,slow=18,SNR=15						
ZALV				Lg	Lg	09 30 59.5	
	5.5nm,0.3s,baz=67,slow=30,SNR=16						
ZALV				Rg	Rg	09 31 02.4	
	21nm,0.5s,baz=67,slow=30,SNR=18						
KURBB	**Kurchatov Arra**	**5.85**	**235**	Pn	Pn	09 32 02.0	+1.2
	0.4nm,0.3s,baz=51,slow=13,SNR=5.9						
KURBB				Lg	Lg	09 33 37.5	
	0.1nm,0.3s,baz=50,slow=34,SNR=1.1						
	1.4nm,0.4s						
MKAR	**Makanchi Array**	**7.83**	**199**	Pn	Pn	09 32 29.0	+0.9
	0.4nm,0.3s,baz=24,slow=13,SNR=7.8						
MKAR				Sn	Sn	09 33 57.4	0.0
	0.1nm,0.3s,baz=19,slow=26,SNR=3.4						
MKAR				Lg	Lg	09 34 40.7	
	0.1nm,0.3s,baz=20,slow=33,SNR=2.8						
	0.4nm,0.3s						

WEL 21 09:31:38.0±1.2, 33°S±7.°, 177°E±2.°0, h12km, M3.7/2, mB4.5/1, ML3.7/12, MLv3.7/2, Mw(mB)3.6/1, Error ellipse: s-maj=26.8km s-min=9.0km az=85.5, confirmed, North of New Zealand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.64**	**173**	S	Sn	09 33 41.4	-0.4
HAZ	**Te Kaha**	**4.81**	**179**	P	Pn	09 32 49.1	-1.0
HAZ				S	Sn	09 33 48.7	+3.0
WMGZ	**Waiomatatini S**	**4.91**	**173**	P	Pn	09 32 49.2	-2.4
WMGZ				S	Sn	09 33 50.1	+1.8
PKGZ	**Pakihiroa**	**4.93**	**176**	S	Sn	09 33 49.9	+1.0
RUGZ	**Raukumara Rang**	**5.01**	**180**	P	Pn	09 32 54.3	+1.1
RUGZ				S	Sn	09 33 54.1	+3.1
PUZ	**Puketiti**	**5.15**	**175**	P	Pn	09 32 54.5	-0.3
PUZ				S	Sn	09 33 53.6	-0.5
URZ	**Urewera**	**5.33**	**184**	P	Pn	09 32 58.9	+1.6
MWZ	**Matawai**	**5.38**	**181**	P	Pn	09 32 57.9	-0.3
MWZ				S	Sn	09 34 02.2	+2.2
MUGZ	**Murupara**	**5.57**	**187**	P	Pn	09 33 03.3	+2.7
RTZ	**Ruatahuna**	**5.69**	**185**	P	Pn	09 33 03.5	+1.1
RIGZ	**Rimuhau**	**5.75**	**179**	P	Pn	09 33 02.8	-0.4
MTHZ	**Maungataniwha**	**5.94**	**186**	P	Pn	09 33 07.4	+1.6
BKZ	**Black Stump Fm**	**6.28**	**188**	P	Pn	09 33 11.5	+1.0
KWHZ	**Kaweka Forest**	**6.55**	**188**	P	Pn	09 33 14.4	+0.3
PNHZ	**Pukenui**	**7.06**	**189**	P	Pn	09 33 19.9	-1.2
PNHZ				S	Sn	09 34 41.6	+0.3
PXZ	**Pawanui**	**7.11**	**185**	P	Pn	09 33 18.3	-3.4
PXZ				S	Sn	09 34 42.4	0.0
PRHZ	**Porangahau**	**7.36**	**186**	P	Pn	09 33 22.9	-2.3
DVHZ	**Dannevirke**	**7.44**	**189**	P	Pn	09 33 24.0	-2.3
DVHZ				S	Sn	09 34 49.5	-1.2

SOME ***21*** *09:35:10.6, 40.°77N×79.°65E, h10km*
KRNET ***21*** *09:35:11.5±0.1, 40.°68N×80.°00E, mb2.9*
NNC ***21*** *09:35:14.1±6.6, 40.°79N×80.°32E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=64.2km s-min=47.7km az=62.0*

ISC 21 09:35:14.0±2.3, 40°8N±0.°1×79°81E±0.°08, h10km, n17, σ2°24/27, 9C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**2.00**	**328**	⇑eP	**Pb**	**09 35 50.4**	**-0.1**
PRZ				⇑eS	**Sg**	**09 36 19.4**	**+1.2**
SHLS	**Shalkode**	**2.38**	**354**	Pg	**Pb**	**09 35 54.8**	**-2.2**
	18nm,0.1s						
SHLS				Lg	Lg	09 36 26.9	
	37nm,0.3s						
SHLS	**Shalkode**	**2.38**	**354**	*eP*	**Pb**	**09 35 54.8**	**-2.2**
	18nm,0.1s						
SHLS				*eS*	**Sb**	**09 36 26.9**	**+0.3**
	37nm,0.3s						
KDJ	**Kajisay**	**2.39**	**305**	⇓eP	**Pb**	**09 35 56.3**	**-0.9**
KDJ				⇓eS	**Sb**	**09 36 28.1**	**+1.3**
UZB	**Uzynbulak**	**2.43**	**346**	Pg	**Pb**	**09 35 55.4**	**-2.5**
	6.6nm,0.4s						
UZB				Lg	Lg	09 36 27.7	
	11nm,0.4s						
UZB	**Uzynbulak**	**2.43**	**346**	*eP*	**Pb**	**09 35 55.4**	**-2.5**
	6.6nm,0.4s						
UZB				*eS*	**Sb**	**09 36 27.7**	**-0.3**
	11nm,0.4s						
SATY	**Saty**	**2.50**	**336**	Pg	**Pb**	**09 35 56.3**	**-2.7**
	6.7nm,0.4s						
SATY				Lg	Lg	09 36 29.3	
	19nm,0.5s						
PDGK	**Podgornoye**	**2.55**	**355**	⇑P	**Pb**	**09 35 57.7**	**-2.3**
	3.0nm,0.4s						
PDGK				⇑S	**Sb**	**09 36 31.0**	**-0.4**
	18nm,0.6s						
KURS	**Kuram**	**2.96**	**336**	Pg	**Pb**	**09 36 04.9**	**-2.0**
	7.2nm,0.5s						
KURS				Lg	Lg	09 36 44.0	
	11nm,0.5s						
TNSS	**Tian-Shan**	**3.10**	**317**	Pg	**Pb**	**09 36 06.8**	**-2.6**
	1.9nm,0.2s						
TNSS				Lg	Lg	09 36 47.3	
	3.4nm,0.5s						
TNSS	**Tian-Shan**	**3.10**	**317**	*eP*	**Pb**	**09 36 06.8**	**-2.6**
	1.9nm,0.2s						
TNSS				*eS*	**Sb**	**09 36 47.3**	**-0.2**
	3.4nm,0.5s						
MDOK	**Medeo**	**3.14**	**320**	Pg	**Pb**	**09 36 07.4**	**-2.6**
	2.1nm,0.3s						
MDOK				Lg	Lg	09 36 48.3	
	5.1nm,0.6s						
JNKS	**Jany-Kuch**	**3.16**	**276**	⇑eP	**Pn**	**09 36 06.9**	**+2.8**
JNKS				⇑eS	**Sb**	**09 36 46.5**	**-2.6**
BOOM	**Boomskoye usch**	**3.36**	**302**	⇑eP	**Pn**	**09 36 10.0**	**+3.2**
BOOM				⇑eS	**Sb**	**09 36 52.0**	**-2.8**
KST	**Kastek**	**3.65**	**309**	Pg	**Pb**	**09 36 15.6**	**-3.1**
	1.6nm,0.5s						
KST				Lg	Lg	09 37 02.5	
	9.2nm,0.6s						
KST	**Kastek**	**3.65**	**309**	*eP*	**Pb**	**09 36 15.6**	**-3.1**
	1.6nm,0.5s						
KST				*eS*	**Sb**	**09 37 02.5**	**-0.6**
	9.2nm,0.6s						
MK31	**Makanchi Array**	**6.27**	**16**	Pn	**Pn**	**09 36 47.1**	**+0.6**
	1.5nm,0.8s,baz=202,slow=14,SNR=6.2						
MK31				⇑Sn	**Sn**	**09 37 59.8**	**+1.7**
	0.5nm,0.5s,baz=191,slow=24						

SDD ***21*** *09:50:45.1±1.0, 18.°70N×68.°90W, h121km±6km, MD3.4, ML3.0, MW3.3*
NEIC ***21*** *09:50:46.3±1.7, 18.°4N±0.°4×68.°95W±0.°08, h88km±13km, ML2.5/8, Md3.6/7(RSPR), Error ellipse: s-maj=64.2km s-min=6.5km az=188.0*
RSPR ***21*** *09:50:47.3, 17.°87N×68.°33W, h175km±3km, MD3.6/7*

ISC 21 09:50:43.2±1.9, 18.°7N±0.°2×68.°93W±0.°04, h126km±13km, n33, σ1°49/40, 12C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HIDR	**Higuey Centro**	**0.21**	**105**	⇑eP	**Pn**	**09 51 00.3**	**-0.1**
HIDR				⇓eSg	**Sn**	**09 51 12.5**	**-1.0**
HIDR				IAML		09 51 13.8	
	comp=N,409nm,0.2s						
MIDR	**Miches**	**0.35**	**341**	⇓eP	**Pn**	**09 51 01.3**	**+0.3**
MIDR				IAML		09 51 15.7	
	comp=N,130nm,0.1s						
DR12	**Loma Pena Alta**	**0.45**	**288**	Pn	**Pn**	**09 51 01.5**	**0.0**
HATOM	**Hato Mayor del**	**0.45**	**288**	⇓eP	**Pn**	**09 51 01.6**	**+0.1**
HATOM				⇓eSg	**Sn**	**09 51 14.8**	**-0.6**
HATOM				IAML		09 51 15.3	
	comp=N,276nm,0.3s						
DR08	**Loma La Naviza**	**1.08**	**287**	⇑eP	**Pn**	**09 51 07.0**	**+0.5**
DR08				⇓eSg	**Sn**	**09 51 24.0**	**-0.2**
DR08				IAML		09 51 26.3	
	comp=N,2μm,0.1s						
BANI	**BANI**	**1.38**	**260**	Pn	**Pn**	**09 51 10.7**	**+1.0**
BANI	**BANI**	**1.38**	**260**	⇓eP	**Pn**	**09 51 10.6**	**+0.9**
BANI				⇑eSg	**Sn**	**09 51 30.3**	**+0.4**
BANI				IAML		09 51 36.3	
	comp=N,144nm,0.2s						
AGPR	**Aguadilla, PR**	**1.73**	**96**	*eS*	**Sn**	**09 51 40.2**	**+3.3**
LSP	**Las Mesas**	**1.81**	**105**		**Pn**	**09 51 16.8**	**+2.1**
LSP					**Sn**	**09 51 40.4**	**+1.7**
LSP	**Las Mesas**	**1.81**	**105**	⇑*eP*	**Pn**	**09 51 16.8**	**+2.1**
LSP	**Las Mesas**	**1.81**	**105**	*eS*	**Sn**	**09 51 40.4**	**+1.7**
CRPR	**Cabo Rojo, PR**	**1.84**	**110**		**Pn**	**09 51 15.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.84**	**110**		**Sn**	**09 51 38.4**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.84**	**110**	IAML		09 51 32.3	
	comp=N,20nm,3.6s						
CRPR	**Cabo Rojo, PR**	**1.84**	**110**	⇑eP	**Pn**	**09 51 15.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.84**	**110**	*eS*	**Sn**	**09 51 38.4**	**-0.9**
MLPR	**Magueyes Islan**	**1.91**	**110**	⇑eP	**Pn**	**09 51 15.7**	**-0.1**
MLPR	**Magueyes Islan**	**1.91**	**110**	*eS*	**Sn**	**09 51 38.9**	**-1.9**
AOPR	**Arecibo Observ**	**2.08**	**98**		**Pn**	**09 51 20.3**	**+2.3**
AOPR					**Sn**	**09 51 44.6**	**0.0**
AOPR	**Arecibo Observ**	**2.08**	**98**	⇑eP	**Pn**	**09 51 18.5**	**+0.5**
AOPR				⇓eSg	**Sn**	**09 51 42.6**	**-2.1**
AOPR				IAML		09 51 47.3	
	comp=N,64nm,0.2s						
AOPR	**Arecibo Observ**	**2.08**	**98**	⇑eP	**Pn**	**09 51 20.3**	**+2.3**
AOPR	**Arecibo Observ**	**2.08**	**98**	*eS*	**Sn**	**09 51 44.6**	**0.0**
UUPR	**Utuado, UPR, P**	**2.13**	**100**		**Pn**	**09 51 19.9**	**+1.3**
UUPR					**Sn**	**09 51 45.1**	**-0.6**
UUPR	**Utuado, UPR, P**	**2.13**	**100**	⇑eP	**Pn**	**09 51 19.9**	**+1.3**
UUPR	**Utuado, UPR, P**	**2.13**	**100**	*eS*	**Sn**	**09 51 45.1**	**-0.6**
PODR	**Polo**	**2.28**	**258**	⇓ePg	**Pn**	**09 51 21.3**	**+0.7**
PODR				⇑eSg	**Sn**	**09 51 47.9**	**-1.5**
PODR				IAML		09 52 09.1	
	comp=N,41nm,2.5s						
OBIP	**Obispado Ponce**	**2.29**	**105**	Pn	**Pn**	**09 51 21.6**	**+1.1**
OBIP				IAML		09 52 10.4	
	comp=N,16nm,2.5s						
OBIP				IAML		09 52 47.2	
	comp=E,15nm,3.8s						
ECPR	**Experimental S**	**2.46**	**97**	⇑eP	**Pn**	**09 51 22.9**	**+0.2**
ECPR	**Experimental S**	**2.46**	**97**	*eS*	**Sn**	**09 51 51.1**	**-1.9**
HUMP	**Col San Antoni**	**2.97**	**99**		**Pn**	**09 51 28.4**	**-0.8**
HUMP	**Col San Antoni**	**2.97**	**99**	IAML		09 52 06.0	
	comp=E,20nm,0.2s						
HUMP				IAML		09 52 19.4	
	comp=N,15nm,2.0s						
HUMP	**Col San Antoni**	**2.97**	**99**	⇑eP	**Pn**	**09 51 28.4**	**-0.8**
HUMP	**Col San Antoni**	**2.97**	**99**	*eS*	**Sn**	**09 52 00.6**	**-4.1**

CATAC ***21*** *09:53:41.4±0.7, 13.°7N±5.°×9.°0W±.°, h49km±5km, M2.7/9, MLv2.7/9, Error ellipse: s-maj=11.5km s-min=8.3km az=23.1, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.15; $M_{\theta\theta}$2.95; $M_{\phi\phi}$-3.10; $M_{r\theta}$0.17; $M_{\theta\phi}$2.01; $M_{\phi r}$0.87; Fault plane solution: $M_0$3.74097×10^{16} NP1: ϕ_s117.83585°, δ77.07539°, λ-2.96981°. NP2:ϕ_d208.50067°, δ87.10549°, λ-167.05859°. Principal axes: T 3.6089, Plg7.0336°, Azm342.4778°; N 0.2515, Plg76.7442°, Azm220.8946°; P -3.8604, Plg11.1784°, Azm73.8749°; confirmed*
GCG ***21*** *09:53:42.6±0.5, 13.°63N×89.°95W, h64km±9km, MD4.0*

ISC 21 09:53:45.5±1.5, 13°63N±0.°09×89°78W±0.°05, h58km, n26, σ1°57/27, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**0.25**	**38**	S	**Sn**	**09 54 03.8**	**+1.3**
CEVE	**Cerro Verde**	**0.25**	**38**	P	**Pn**	**09 53 54.3**	**-1.1**
NUBE	**Las Nubes**	**0.27**	**0**	*i* P	**Pn**	**09 53 53.7**	**-1.7**
NUBE	**Las Nubes**	**0.27**	**0**	S	**Sn**	**09 54 03.1**	**+0.6**
NUBE	**Las Nubes**	**0.27**	**0**	P	**Pn**	**09 53 53.7**	**-1.7**
FAME	**Alcaldia de Sa**	**0.31**	**313**	S	**Sn**	**09 54 00.6**	**-2.1**
FAME	**Alcaldia de Sa**	**0.31**	**313**	P	**Pn**	**09 53 52.7**	**-2.8**
JAYA	**Jayaque - finc**	**0.33**	**86**	*eP*	**Pn**	**09 53 54.7**	**-1.1**
JAYA				*eS*	**Sn**	**09 54 04.2**	**+0.9**
JAYA	**Jayaque - finc**	**0.33**	**86**	P	**Pn**	**09 53 54.8**	**-1.1**
CEDA	**San Andres**	**0.41**	**65**	P	**Pn**	**09 53 55.5**	**-1.0**
CEDA	**San Andres**	**0.41**	**65**	S	**Sn**	**09 54 06.8**	**+2.3**
UNIC	**Universidad Ca**	**0.42**	**33**	S	**Sn**	**09 54 05.5**	**+1.0**
UNIC	**Universidad Ca**	**0.42**	**33**	P	**Pn**	**09 53 55.2**	**-1.4**
PMON	**Piamonte**	**0.46**	**80**	P	**Pn**	**09 53 55.8**	**-1.3**
PMON	**Piamonte**	**0.46**	**80**	S	**Sn**	**09 54 07.8**	**+2.4**
JUAM	**Asuncion Mita**	**0.70**	**6**	*i* P	**Pn**	**09 53 58.1**	**-1.7**
PCG5	**San Vicente Pa**	**0.82**	**315**	*eP*	**Pn**	**09 54 00.9**	**-0.4**
MTO3	**Montecristo**	**0.87**	**28**	*eP*	**Pn**	**09 54 00.8**	**-1.3**
MTO3	**Montecristo**	**0.87**	**28**	S	**Sn**	**09 54 15.4**	**+1.3**
MTO3	**Montecristo**	**0.87**	**28**	P	**Pn**	**09 54 00.7**	**-1.3**
FG16	**Alotenango, Sa**	**0.95**	**312**	*eP*	**Pn**	**09 54 04.3**	**+1.2**
LLGN	**La Laguna**	**0.97**	**57**	P	**Pn**	**09 54 02.0**	**-1.2**
LLGN	**La Laguna**	**0.97**	**57**	S	**Sn**	**09 54 17.9**	**+1.6**
TECO	**Alcaldia de Te**	**0.98**	**95**	P	**Pn**	**09 54 02.0**	**-1.2**
TECO	**Alcaldia de Te**	**0.98**	**95**	S	**Sn**	**09 54 17.6**	**+1.3**
STG8	**El Palmar, Qui**	**1.73**	**298**	*eP*	**Pn**	**09 54 14.4**	**+1.0**

NEIC ***21*** *09:55:54.2±0.3, 36.°366N±0.°007×97.°715W±0.°008, h8km±2km, mb_Lg2.2/21, ML2.5/57, ML2.3/24, Error ellipse: s-maj=1.3km s-min=0.4km az=219.0*

NEIC 21 09:55:54.1±0.3, 36°370N±0.°007×97°709W±0.°008, h7km±2km, Error ellipse: s-maj=1.3km s-min=0.4km az=219.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.26**	**301**		Pg	09 55 59.7	+0.4
CROK					Sg	09 56 03.6	+0.9
GC02	**Grant County #**	**0.50**	**346**		Pg	09 56 04.0	+0.3
GC02					Sg	09 56 11.0	+0.8
BLOK	**Blackwell**	**0.56**	**45**		Pg	09 56 05.2	+0.3
BLOK				IAML		09 56 15.7	
	comp=E,310nm,0.2s						
OK048	**Pawnee Station**	**0.62**	**85**		Pg	09 56 06.2	+0.1
KAN14	**Manchester OK**	**0.62**	**341**		Pg	09 56 06.3	+0.1
KAN14					Sg	09 56 14.8	+0.5
KAN14				IAML		09 56 18.4	
	comp=E,312nm,0.1s						
KAN14				IAML		09 56 20.8	
	comp=N,261nm,0.1s						
KAN13	**South Haven SW**	**0.67**	**16**		Pg	09 56 07.2	+0.2
KAN13					Sg	09 56 16.2	+0.4
OK051	**E0350 and S346**	**0.72**	**79**		Pg	09 56 07.9	-0.1
OK051				IAML		09 56 22.5	
	comp=N,270nm,0.2s						
OK051				IAML		09 56 27.7	
	comp=N,238nm,0.2s						
OK052	**Battle Ridge R**	**0.82**	**117**		Pg	09 56 10.0	0.0
OK052					Sg	09 56 21.0	+0.3
OK052				IAML		09 56 23.5	
	comp=N,192nm,0.3s						
QUOK	**Quay**	**0.83**	**103**		Pg	09 56 10.1	0.0
QUOK					Sg	09 56 21.2	+0.3
QUOK				IAML		09 56 24.6	
	comp=E,134nm,0.2s						
OK004	**Okla Sci Mus**	**0.87**	**167**		Pg	09 56 10.7	-0.1
OK004					Sb	09 56 22.7	-0.6
OKCFA	**Oklahoma City**	**0.97**	**168**		Pg	09 56 12.7	-0.2
OKCSW	**OKLAHOMA CITY**	**0.99**	**167**		Pg	09 56 12.7	-0.4
OKCSW				IAML		09 56 35.9	
	comp=N,173nm,0.4s						
OKCSW				IAML		09 56 35.9	
	comp=E,142nm,0.5s						
NOKA	**Waynoka**	**1.02**	**285**		Pg	09 56 13.5	-0.3
T35A	**Sooner Cattle**	**1.11**	**60**		Pg	09 56 15.1	-0.3
T35A				IAML		09 56 34.8	
	comp=E,88nm,0.2s						
T35A				IAML		09 56 35.0	
	comp=E,98nm,0.2s						
DEOK	**Depew**	**1.11**	**118**	IAML		09 56 35.3	
	comp=E,150nm,0.2s						
FNO	**Franklin**	**1.14**	**167**		Pg	09 56 15.5	-0.5
FNO				IAML		09 56 36.2	
	comp=E,70nm,0.2s						
ELIS	**Ellis County**	**1.42**	**258**		Pn	09 56 20.6	+0.2
SMWD	**Samnorwood**	**2.42**	**239**		Pn	09 56 34.4	+0.3
WTFS	**Witchita Falls**	**2.67**	**194**	IAmb_Lg		09 57 16.8	
	comp=Z,5.4nm,0.8s						
MIAR	**Mount Ida**	**3.83**	**117**	IAmb_Lg		09 58 03.0	
	comp=Z,6.6nm,0.9s						
UALR	**University of**	**4.65**	**108**	IAmb_Lg		09 58 31.2	
	comp=Z,9.6nm,0.9s						
LCAR	**Lake Charles**	**5.31**	**91**	IAmb_Lg		09 58 47.8	
	comp=Z,6.0nm,1.1s						
CCM	**Cathedral Cave**	**5.43**	**70**	IAmb_Lg		09 58 50.0	
	comp=Z,6.5nm,1.1s						
T25A	**Trinidad**	**5.44**	**280**	IAmb_Lg		09 58 48.3	
	comp=Z,5.7nm,0.9s						

KRNET ***21*** *09:57:24.9±0.1, 40.°86N×69.°29E, mb2.5*

ISC 21 09:57:27.2±4.4, 40°9N±0.°1×69°0E±0.°2, h35km, n6, σ0°92/10, 9C-2D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**1.73**	**69**	⇑eP	**Pn**	**09 57 53.5**	**-1.4**
TRKS				⇑eS	**Sn**	**09 58 15.0**	**-0.8**
ARK	**Arkit**	**2.40**	**68**	⇓eP	**Pn**	**09 58 05.0**	**+0.9**
ARK				⇓eS	**Sn**	**09 58 33.7**	**+1.4**
KK31	**Karatay Array**	**2.45**	**27**	Pn	Pn	09 58 12.3	+7.6
	0.7nm,0.2s,baz=204,slow=16,SNR=26						
KK31				⇑Lg	Lg	09 58 45.0	
	2.7nm,0.3s,baz=204,slow=17						
DRK	**Karamyk**	**2.58**	**123**	⇑eP	**Pn**	**09 58 07.0**	**+0.2**
DRK				⇑eS	**Sn**	**09 58 37.3**	**+0.1**
OHH	**Osh**	**2.91**	**97**	⇑eP	**Pn**	**09 58 10.6**	**-0.4**
OHH				⇑eS	**Sn**	**09 58 44.4**	**-0.4**
ARSB	**Arslanbob**	**3.04**	**81**	⇑eP	**Pn**	**09 58 13.0**	**+0.1**
ARSB				⇑eS	**Sn**	**09 58 48.4**	**+0.3**

IDC ***21*** *10:01:39.1±17.0, 51.°52N×37.°52E, h0km, mbtmp3.5/1, ML2.3/1, Error ellipse: s-maj=195.9km s-min=101.6km az=177.0*

VKMS 21 10:01:32.0, 51°23N×37°73E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**5.51**	**357**	I	I	10 32 15.0	
	baz=177,slow=332,SNR=8.6						
FINES	**FINESS Array B**	**12.08**	**332**	Pn	Pn	10 04 22.7	-2.5
	0.1nm,0.3s,baz=145,slow=13,SNR=1.2						
	1.1nm,0.8s						
I31KZ	**AKTYUBINSK INF**	**12.87**	**86**	I	I	11 22 30.0	
	0.1nm,0.9s,baz=281,slow=323,SNR=4.1						

TRN 21 10:13:58.2, 16°56N×59°70W, h51km, MD4.2, Far North-east of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSDZ	**La Diserade, G**	**1.33**	**260**	*eP*	Pn	10 14 21.4	+1.0
DSDZ				*eS*	Sn	10 14 37.3	+0.3
DWS	**Wesley**	**1.83**	**238**	*eP*	Pn	10 14 28.6	+1.3
DWS				*eS*	Sn	10 14 51.2	+1.8
DLPL	**La Plaine**	**1.92**	**231**	*e*	Pn	10 14 27.3	-1.2
DLPL				*eS*	Sn	10 14 53.6	+2.0
MMLZ	**Guadeloupe Bro**	**1.96**	**255**	*eP*	Pn	10 14 31.7	+2.7
MMLZ				*eS*	Sn	10 14 55.6	+3.2
DSLB	**Salisbury**	**1.99**	**236**	*eP*	Pn	10 14 31.4	+1.9
DSLB				*eS*	Sn	10 14 55.0	+1.7
TBG	**Guadaloupe-3**	**1.99**	**250**	*eP*	Pn	10 14 31.5	+2.0
TBG				*eS*	Sn	10 14 55.0	+1.6
ATGZ	**Broadband at L**	**2.00**	**257**	*eP*	Pn	10 14 32.1	+2.5
DHSZ	**Broadband at M**	**2.00**	**262**	*eP*	Pn	10 14 31.5	+1.9
DHSZ				*eS*	Sn	10 14 55.1	+1.7
SVN	**Savane Anatole**	**2.21**	**220**	*eP*	Pn	10 14 34.4	+1.8
SVN				*eS*	Sn	10 15 01.0	+2.2
ANWB	**Willy Bob**	**2.28**	**299**	*eP*	Pn	10 14 34.5	+1.1
ANWB				*eS*	Sn	10 15 01.1	+0.8
MBWH	**Windy Hill**	**2.39**	**275**	*eP*	Pn	10 14 37.5	+2.4
MBWH				*eS*	Sn	10 15 04.3	+1.2
BIM	**Bigot**	**2.42**	**213**	*eP*	Pn	10 14 37.1	+1.7
BIM				*eS*	Sn	10 15 05.0	+1.1
SLBI	**Saint Lucia, B**	**2.80**	**206**	*eP*	Pn	10 14 41.3	+0.7
SLBI				*eS*	Sn	10 15 13.3	+0.1
SLCP	**Castries, St.**	**2.82**	**206**	*eS*	Sn	10 15 14.9	+1.2
SLAC	**Saint Lucia, A**	**2.88**	**204**	*eP*	Pn	10 14 42.7	+0.9
SKI	**Saint Kitts**	**3.01**	**285**	*eP*	Pn	10 14 45.8	+2.4
SKI				*eS*	Sn	10 15 22.4	+4.1
MCLT	**Moule a Chique**	**3.07**	**203**	*eP*	Pn	10 14 46.7	+2.3
MCLT				*eS*	Sn	10 15 22.3	+2.3
SVB	**Belmont**	**3.59**	**205**	*eP*	Pn	10 14 53.6	+2.1
SVB				*eS*	Sn	10 15 34.1	+1.3
GCMP	**Grenada, Carri**	**4.38**	**203**	*eS*	Sn	10 15 52.5	+0.5
GRHS	**Sauteurs**	**4.70**	**204**	*eS*	Sn	10 15 51.9	-8.0

NOU ***21*** *10:27:23.3, 37.°41S×177.°52E, h148km, MLv3.8/14, Off E. Coast of N. Island, N.Z.*
WEL ***21*** *10:27:25.1±0.8, 37.°5S±5.°×177.°7E±.°, h135km±7km, M3.4/43, ML3.3/31, MLv3.4/43, Error ellipse: s-maj=7.2km s-min=5.7km az=53.3, confirmed*
IDC ***21*** *10:27:43.6±29.0, 36.°99S×176.°83E, h313km±252km, mb

SNGZ	**Shannon Statio**	**1.40**	**182**	P		**Pn**	**10 27 53.0**	**0.0**
GRRZ	**Galatos Road**	**1.42**	**226**	P		**Pn**	**10 27 53.8**	**+0.7**
ALRZ	**Allen Road**	**1.45**	**215**	P		**Pn**	**10 27 53.7**	**+0.2**
KUZ	**Kuaotunu**	**1.49**	**294**	P		**Pn**	**10 27 52.5**	**-1.4**
KUZ	**Kuaotunu**	**1.49**	**294**	P		**Pn**	**10 27 52.8**	**-1.1**
WPRZ	**Whakapapatarin**	**1.51**	**220**	P		**Pn**	**10 27 54.3**	**+0.2**
MTHZ	**Maungataniwha**	**1.54**	**197**	P		**Pn**	**10 27 54.1**	**-0.4**
RAHZ	**Arahi**	**1.56**	**189**	P		**Pn**	**10 27 54.8**	**+0.2**
TOZ	**Tahuroa Road**	**1.56**	**256**	P		**Pn**	**10 27 54.9**	**+0.3**
MRHZ	**Matea Rd**	**1.65**	**208**	P		**Pn**	**10 27 55.3**	**-0.3**
KNZ	**Kokohu**	**1.66**	**173**	P		**Pn**	**10 27 55.6**	**0.0**
KUTZ	**Kaahu Road**	**1.68**	**228**	P		**Pn**	**10 27 56.5**	**+0.6**
WHHZ	**Waihua**	**1.70**	**185**	P		**Pn**	**10 27 56.3**	**+0.1**
TLZ	**Tolley Road**	**1.75**	**237**	P		**Pn**	**10 27 57.5**	**+0.6**
NMHZ	**Naumai**	**1.78**	**195**	P		**Pn**	**10 27 57.5**	**+0.3**
MHGZ	**Mahia Peninsul**	**1.81**	**168**	P		**Pn**	**10 27 57.7**	**+0.3**
MKAZ	**Moumakai**	**1.82**	**278**	P		**Pn**	**10 27 57.5**	**0.0**
ARHZ	**Aropaoanui**	**1.91**	**190**	P		**Pn**	**10 27 58.6**	**0.0**
WIAZ	**Waiheke Island**	**1.91**	**287**	P		**Pn**	**10 27 58.4**	**-0.1**
BKZ	**Black Stump Fm**	**1.93**	**202**	P		**Pn**	**10 27 58.0**	**-0.8**
BKZ	**Black Stump Fm**	**1.93**	**202**	S		**Sn**	**10 28 24.4**	**-0.6**
BKZ	**Black Stump Fm**	**1.93**	**202**	P		**Pn**	**10 27 58.1**	**-0.6**
GRZ	**Great Barrier**	**1.93**	**305**	P		**Pn**	**10 27 57.8**	**-0.9**
RATZ	**Rangitukua**	**1.97**	**221**	P		**Pn**	**10 28 00.0**	**+0.7**
RITZ	**Rihia Road**	**2.01**	**217**	P		**Pn**	**10 28 00.1**	**+0.4**
ETAZ	**East Tamaki Re**	**2.03**	**281**	P		**Pn**	**10 28 00.2**	**+0.3**
KBAZ	**Karaka Road Bo**	**2.03**	**277**	P		**Pn**	**10 28 00.7**	**+0.8**
MBAZ	**Motutapu North**	**2.10**	**286**	P		**Pn**	**10 28 00.9**	**+0.1**
MCHZ	**McNeill Hill**	**2.14**	**195**	P		**Pn**	**10 28 01.0**	**-0.2**
KWHZ	**Kaweka Forest**	**2.19**	**201**	P		**Pn**	**10 28 01.3**	**-0.6**
EPAZ	**Eden Park BICE**	**2.19**	**282**	P		**Pn**	**10 28 02.3**	**+0.4**
NTVZ	**North Tongarir**	**2.20**	**218**	P		**Pn**	**10 28 02.3**	**+0.2**
TMVZ	**Te Maari**	**2.20**	**217**	P		**Pn**	**10 28 02.1**	**0.0**
ABAZ	**Army Bay**	**2.21**	**290**	P		**Pn**	**10 28 02.1**	**0.0**
HBAZ	**Herne Bay Bore**	**2.21**	**283**	P		**Pn**	**10 28 02.5**	**+0.5**
ETVZ	**East Tongariro**	**2.21**	**217**	P		**Pn**	**10 28 02.2**	**0.0**
KRVZ	**Karewarewa**	**2.21**	**219**	P		**Pn**	**10 28 02.5**	**+0.3**
AWAZ	**Awhitu Peninsu**	**2.23**	**277**	P		**Pn**	**10 28 02.7**	**+0.3**
NNVZ	**North Ngauruho**	**2.25**	**218**	P		**Pn**	**10 28 02.9**	**+0.2**
OTVZ	**Oturere**	**2.25**	**217**	P		**Pn**	**10 28 02.8**	**0.0**
WTVZ	**West Tongariro**	**2.25**	**219**	P		**Pn**	**10 28 02.8**	**+0.1**
CKHZ	**Cape Kidnapper**	**2.29**	**186**	P		**Pn**	**10 28 02.5**	**-0.5**
NGZ	**Ngauruhoe**	**2.29**	**218**	P		**Pn**	**10 28 03.4**	**+0.2**
TWVZ	**Taurewa**	**2.30**	**222**	P		**Pn**	**10 28 03.5**	**+0.2**
WTAZ	**Waiatarua**	**2.31**	**280**	P		**Pn**	**10 28 03.6**	**+0.3**
HIZ	**Hauiti**	**2.32**	**240**	P		**Pn**	**10 28 04.3**	**+1.0**
HIZ	**Hauiti**	**2.32**	**240**	P		**Pn**	**10 28 04.4**	**+1.0**
COVZ	**Chateau Observ**	**2.34**	**218**	P		**Pn**	**10 28 04.1**	**+0.3**
TUVZ	**Tukino**	**2.34**	**216**	P		**Pn**	**10 28 03.7**	**-0.1**
RVAZ	**Riverhead Bore**	**2.34**	**284**	P		**Pn**	**10 28 03.8**	**+0.1**
FWVZ	**Far West T-bar**	**2.38**	**217**	P		**Pn**	**10 28 04.2**	**-0.2**
WHVZ	**Whangaehu Hut**	**2.38**	**216**	P		**Pn**	**10 28 04.2**	**-0.2**
MAVZ	**Matarangi**	**2.38**	**217**	P		**Pn**	**10 28 05.5**	**+1.0**
KRHZ	**Kereru**	**2.41**	**200**	P		**Pn**	**10 28 03.4**	**-1.1**
MOVZ	**Moawhango**	**2.41**	**212**	P		**Pn**	**10 28 03.6**	**-1.0**
WNVZ	**Wahianoa**	**2.41**	**216**	P		**Pn**	**10 28 04.5**	**-0.2**
TRVZ	**Turoa**	**2.42**	**217**	P		**Pn**	**10 28 05.7**	**+0.9**
KAHZ	**Kahuranaki**	**2.45**	**190**	P		**Pn**	**10 28 04.5**	**-0.6**
PKVZ	**Pokaka**	**2.51**	**220**	P		**Pn**	**10 28 05.9**	**+0.1**
MTVZ	**Mangateitei**	**2.52**	**217**	P		**Pn**	**10 28 05.8**	**-0.1**
PXZ	**Pawanui**	**2.69**	**189**	P		**Pn**	**10 28 06.7**	**-1.2**
PNHZ	**Pukenui**	**2.71**	**200**	P		**Pn**	**10 28 06.7**	**-1.5**
VRZ	**Vera Road**	**2.72**	**229**	P		**Pn**	**10 28 10.4**	**+2.1**
WPHZ	**Waipukurau**	**2.79**	**196**	P		**Pn**	**10 28 07.8**	**-1.4**
WCZ	**Waipu Caves**	**2.85**	**299**	P		**Pn**	**10 28 09.5**	**-0.5**
TSZ	**Takapari Road**	**2.91**	**203**	P		**Pn**	**10 28 09.3**	**-1.5**
PRHZ	**Porangahau**	**2.92**	**192**	P		**Pn**	**10 28 09.9**	**-1.4**
DVHZ	**Dannevirke**	**3.08**	**198**	P		**Pn**	**10 28 10.8**	**-2.0**
ANWZ	**Angora Road**	**3.16**	**193**	P		**Pn**	**10 28 12.8**	**-1.2**
POWZ	**Post Office Ro**	**3.27**	**203**	P		**Pn**	**10 28 13.9**	**-1.5**
KHEZ	**Kahui Hut**	**3.29**	**233**	P		**Pn**	**10 28 15.4**	**-0.2**
BFZ	**Birch Farm**	**3.42**	**195**	P		**Pn**	**10 28 15.2**	**-2.1**
BFZ	**Birch Farm**	**3.42**	**195**	S		**Sn**	**10 28 55.7**	**-2.4**
BFZ	**Birch Farm**	**3.42**	**195**	P		**Pn**	**10 28 15.5**	**-1.8**
OUZ	**Omahuta**	**3.76**	**304**	P		**Pn**	**10 28 21.1**	**-0.6**
SNZO	**South Karori**	**4.45**	**207**	P		**Pn**	**10 28 30.3**	**-0.4**
QRZ	**Quartz Range**	**5.13**	**226**	P		**Pn**	**10 28 38.5**	**-1.2**
ASAR	**Alice Springs**	**39.55**	**278**	P		**P**	**10 34 40.9**	**-0.8**
	0.6nm,0.6s,baz=127,slow=8.3,SNR=15							
ASAR				PcP		**PcP**	**10 36 43.6**	**-2.5**
	0.3nm,0.5s,baz=121,slow=4.1,SNR=4.5							
	0.6nm,0.6s							
WRA	**Warramunga Arr**	**41.20**	**283**	P		**P**	**10 34 54.2**	**-1.0**
	0.6nm,0.5s,baz=122,slow=7.9,SNR=10							
	0.6nm,0.5s							
SNAA	**Sanae**	**71.25**	**180**	P		**P**	**10 38 31.1**	**+3.5**
	0.5nm,0.8s,baz=201,slow=8.6,SNR=1.8							
	0.5nm,0.8s							
ARCES	**ARCESS Array B**	**144.39**	**343**	PKP		**PKPab**	**10 46 39.6**	**-1.4**
	2.4nm,1.0s,baz=69,slow=3.6,SNR=6.4							
FINES	**FINESS Array B**	**150.00**	**333**	PKPbc		**PKPdf**	**10 46 54.7**	**+2.8**
	0.6nm,0.5s,baz=48,slow=2.1,SNR=5.4							

*NNC **21** 10:29:35.9±9.0, 43.°81N×69.°91E, h0km, mb4.3, mpv3.3, Error ellipse: s-maj=54.3km s-min=35.9km az=154.0, Suspected Mining explosion.*
*SOME **21** 10:29:35.5, 43.°62N×69.°77E*
*KRNET **21** 10:29:35.5±0.1, 43.°91N×69.°24E, mb3.2*

ISC 21 10:29:42.5±1.7, 43.°55N±0.°08×70.°07E±0.°06, h0km, n12, σ1≀50/19, 6C-8D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Boroldaу**	**0.55**	**198**	P	**Pg**	**10 29 52.5**	**-0.4**
	4.6nm,0.3s						
BRLS				S	**Sb**	**10 30 05.0**	**+1.6**
	52nm,0.3s						
KK31	**Karatay Array**	**0.55**	**144**	⇑P	**Pg**	**10 29 52.1**	**-0.9**
	1.8nm,0.2s,baz=319,slow=17,SNR=75						
KK31				⇑S	**Sb**	**10 30 03.7**	**+0.2**
	71nm,0.7s,baz=338,slow=18						
IUG	**luzhnay**	**1.40**	**181**	P	**Pg**	**10 30 06.1**	**-3.3**
	52nm,0.3s						
IUG				S	**Sb**	**10 30 28.3**	**+0.2**
	88nm,0.3s						
MNAS	**Manas**	**2.08**	**120**	⇑*i*P	**Pn**	**10 30 19.5**	**+0.8**
MNAS				⇑*i*S	**Sg**	**10 30 51.9**	**+2.6**
TRKS	**Terek-Say**	**2.17**	**158**	⇓*i*P	**Pn**	**10 30 20.3**	**+0.3**
TRKS				⇓*i*S	**Sg**	**10 30 53.1**	**+0.9**
ARK	**Arkit**	**2.24**	**141**	⇑*i*P	**Pn**	**10 30 21.7**	**+0.8**
ARK				⇑*i*S	**Sg**	**10 30 55.2**	**+0.7**
MRKS	**Merke**	**2.45**	**108**	Lg	Lg	10 31 03.8	
	17nm,0.3s						
EKS2	**Erkin-Say**	**2.86**	**107**	⇓*e*P	**Pn**	**10 30 30.4**	**+1.0**
EKS2				⇓*e*S	**Sb**	**10 31 10.5**	**+0.5**
ARSB	**Arslanbob**	**3.10**	**135**	⇓*e*P	**Pn**	**10 30 33.8**	**+1.0**
ARSB				⇓*e*S	**Sb**	**10 31 16.5**	**-0.5**
BTLS	**Baital**	**3.22**	**61**	Pg	**Pb**	**10 30 40.2**	**-0.3**
	22nm,0.4s						
BTLS				Lg	Lg	10 31 23.7	
	14nm,0.6s						
ARLS	**Aral**	**3.56**	**117**	⇓*e*P	**Pn**	**10 30 40.2**	**+1.1**
ARLS				⇓*e*S	**Sb**	**10 31 27.4**	**-2.9**
KRBS	**Karabastau**	**4.07**	**86**	Lg	Lg	10 31 53.3	
	2.0nm,0.7s						

UPA 21 10:30:08.7±3.0, 9.°05N×82.°54W, h18km±8km, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BC3P	**Paso Ancho**	**0.24**	**198**	*e*P	Pb	10 30 14.9	+0.5
BC3P				*e*S	Sb	10 30 18.4	0.0
LNBQ3	**Los Naranjos,**	**0.27**	**159**	*e*P	Pn	10 30 20.5	+2.5
BRU2	**Volcan**	**0.29**	**211**	*e*P	Pb	10 30 15.6	+0.1
BRU2				AMP		10 30 15.9	
	comp=Z,118nm,0.1s						
BRU2				*e*S	Sg	10 30 19.7	0.0
BQTLY	**Boquete Panama**	**0.30**	**165**	*e*S	Sb	10 30 21.1	+0.9
CLLRA	**Cordillera,**	**0.31**	**194**	⇑*i*P	Pb	10 30 16.4	+0.5
CLLRA				*e*S	Sg	10 30 20.0	-0.1
BQSF3	**Alto Boquete,**	**0.32**	**161**	*e*P	Pb	10 30 17.3	+1.3
BQSF3				*e*S	Sb	10 30 21.9	+1.0
RSRNO	**Rio Sereno**	**0.39**	**235**	*e*S	Sn	10 30 48.2	+21
CHGR2	**Aguacate**	**0.40**	**105**	*e*P	Pn	10 30 19.7	+0.1
CHGR2				*e*S	Sn	10 30 25.9	-0.9
RBALA	**Bur**	**0.41**	**114**	⇑*i*P	Pn	10 30 19.0	-0.8
RBALA				*e*S	Sn	10 30 25.6	-1.4
PSOM3	**Paja de Sombre**	**0.42**	**149**	*e*P	Pn	10 30 23.1	+3.2

*IDC **21** 11:00:39.4±1.2, 43.°69N×28.°88W, h0km, mb3.7/6, mbtmp3.6/7, ML4.1/1, MS3.5/8, Error ellipse: s-maj=44.4km s-min=22.0km az=8.0*

ISC 21 11:00:41.4±1.1, 43.°7N±0.°3×28.°8W±0.°2, h14km, n15, σ1≀08/7, mb3.9/5, MS3.4/8, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.98**	**94**	P	**P**	**11 05 00.7**	**-1.7**
	0.1nm,0.3s,baz=285,slow=10,SNR=1.3						
	0.4nm,0.7s						
SFJD	**Kangerlussuaq**	**26.14**	**341**	LR	LR	11 14 18.4	
	comp=Z,75nm,18.1s,baz=154,slow=31						
DAVOX	**Davos/Dischmat**	**27.24**	**70**	LR	LR	11 15 31.5	
	comp=Z,33nm,21.3s,baz=256,slow=33						
FRB	**Frobisher Bay**	**30.15**	**326**	LR	LR	11 16 36.9	
	comp=Z,87nm,18.1s,baz=254,slow=32						
SADO	**Sadowa**	**35.60**	**290**	LR	LR	11 21 08.1	
	comp=Z,45nm,20.3s,baz=115,slow=34						
TORD	**Torodi Ar. Bea**	**40.16**	**130**	P	**P**	**11 08 17.9**	**+0.7**
	1.1nm,0.3s,baz=330,slow=7.3,SNR=2.3						
	1.1nm,0.3s						
TKL	**Tuckaleechee C**	**42.37**	**278**	LR	LR	11 24 56.7	
	comp=Z,49nm,18.0s,baz=34,slow=34						
ULM	**Lac du Bonnet**	**44.81**	**303**	LR	LR	11 25 37.7	
	comp=Z,78nm,19.7s,baz=8.0,slow=34						
PDAR	**Pinedale Array**	**56.59**	**290**	P	**P**	**11 10 22.8**	**-0.5**
	0.5nm,0.9s,baz=65,slow=8.6,SNR=3.2						
	0.5nm,0.9s						
NEW	**Newport**	**58.22**	**308**	LR	LR	11 34 05.4	
	comp=Z,71nm,18.3s,baz=324,slow=34						
ANMO	**Albuquerque**	**58.65**	**290**	LR	LR	11 36 05.7	
	comp=Z,53nm,18.1s,baz=132,slow=36						
TXAR	**Lajitas Array**	**59.92**	**283**	P	**P**	**11 10 47.1**	**-0.1**
	0.7nm,0.7s,baz=50,slow=6.9,SNR=10.0						
	0.7nm,0.7s						
BVAR	**Borovoye Array**	**61.41**	**43**	P	**P**	**11 10 57.7**	**+0.9**
	0.7nm,0.7s,baz=308,slow=5.3,SNR=4.2						
	0.7nm,0.7s						
NVAR	**Mina Array Bea**	**64.45**	**299**	P	**P**	**11 11 17.3**	**-0.2**
	0.3nm,0.7s,baz=47,slow=6.6,SNR=2.1						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**66.86**	**41**	P	**P**	**11 11 33.2**	**+0.6**
	0.7nm,0.7s,baz=313,slow=6.6,SNR=6.7						
	0.7nm,0.7s						

*AFAD **21** 11:07:49.0, 39.°24N×28.°33E, h7km±7km, ML1.2*

ISK 21 11:07:47.5, 39.°25N×28.°14E, h5km, ML1.7/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.43**	**333**	Pg	Pb	11 07 56.8	-0.8
BALB				Sg	Sb	11 08 03.4	-1.1
DEMI	**Demirci**	**0.50**	**115**	P	Pg	11 07 52.0	-5.0
DEMI				*i* IAML		11 08 02.0	
	comp=N,88nm,0.2s						
DEMI				*i* IAML		11 08 02.0	
	comp=E,34nm,0.2s						
DEMI				S	Sg	11 08 02.5	-1.0
BKES	**Balkesir-Mer**	**0.51**	**342**	P	Pb	11 07 58.3	-0.6
BKES				S	Sg	11 08 03.4	-0.5
BKES				*i* IAML		11 08 06.0	
	comp=E,22nm,0.4s						
BKES				*i* IAML		11 08 07.0	
	comp=N,18nm,0.4s						
BALY	**Balya**	**0.63**	**321**	P	Pg	11 08 00.1	+0.5
BALY				S	Sg	11 08 08.7	+0.9
BALY				*i* IAML		11 08 16.0	
	comp=E,9.5nm,0.3s						
BALY				*i* IAML		11 08 17.0	
	comp=N,18nm,0.4s						
BLKS	**Balkesir-Sus**	**0.63**	**348**	P	Pg	11 07 58.9	-0.8
BLKS				S	Sg	11 08 06.2	-1.8
MANT	**Manisa**	**0.83**	**156**	P	Pg	11 08 03.6	+0.2
MANT				S	Sg	11 08 14.9	+0.7
MANT				*i* IAML		11 08 19.0	
	comp=N,14nm,0.2s						
MANT				*i* IAML		11 08 19.0	
	comp=E,23nm,0.3s						
KULA	**Kula-Manisa**	**0.84**	**151**	Pg	Pg	11 08 04.1	+0.4
KULA				Sg	Sb	11 08 16.2	-0.1
USAK	**Uak-Merkez**	**0.87**	**128**	P	Pb	11 08 05.4	+0.3
USAK				S	Sg	11 08 14.3	-1.3
USAK				*i* IAML		11 08 18.0	
	comp=N,7.9nm,0.5s						
USAK				*i* IAML		11 08 19.0	
	comp=E,5.9nm,0.5s						
YAYO	**Edremit-Balk**	**0.90**	**294**	Pg	Pg	11 08 05.1	+0.4
GDZ	**Gediz**	**1.06**	**98**	P	Pg	11 08 05.5	-2.3
GDZ				S	Sg	11 08 18.7	-2.8
GDZ				*i* IAML		11 08 22.0	
	comp=E,9.1nm,0.3s						
GDZ				*i* IAML		11 08 25.0	
	comp=N,9.1nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.32**	**188**	Pn	Pg	11 08 13.0	+0.2
AYDB				Sn	Sn	11 08 31.3	+0.7
CAVI	**Cavuskoy**	**1.62**	**54**	Pn	Pn	11 08 17.2	+0.5

IDC 21 11:26:27.0±6.2, 6.°77S×128.°28E, h279km±68km, mb2.8/1, mbtmp3.7/5, Error ellipse: s-maj=68.9km s-min=23.4km az=50.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.70**	**233**	P	Pn	11 27 52.8	+0.6
	9.4nm,0.3s,baz=14,slow=4.2,SNR=1.8						
BATI				S	S	11 29 00.6	-0.1
	17nm,0.4s,baz=29,slow=19,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.55**	**193**	P	Pn	11 29 04.3	-0.2
	1.0nm,0.6s,baz=24,slow=10.0,SNR=11						
FITZ				S	S	11 31 13.6	+0.1
	1.8nm,0.9s,baz=84,slow=15,SNR=2.1						
WRA	**Warramunga Arr**	**14.36**	**156**	P	P	11 29 36.6	-1.6
	0.5nm,0.5s,baz=337,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**17.66**	**163**	P	P	11 30 14.8	+0.6
	2.0nm,0.6s,baz=339,slow=11,SNR=52						
MKAR	**Makanchi Array**	**67.10**	**328**	P	P	11 36 50.8	0.0
	0.3nm,0.8s,baz=112,slow=8.1,SNR=1.7						
	0.3nm,0.8s						

*INMG **21** 11:29:36.3±1.7, 32.°86N×17.°07W, h28km±7km, ML3.0, Error ellipse: s-maj=9.0km s-min=3.8km az=123.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW S.Vicente (Madeira)*
*MDD **21** 11:29:37.8±1.4, 32.°51N×17.°29W, h0km, mb_Lg3.7/5, Error ellipse: s-maj=19.1km s-min=10.3km az=88.0*

ISC 21 11:29:32.9±1.4, 32.°75N±0.°05×17.°08W±0.°07, h35km, n20, σ2≀10/33, 2C-3D, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMOZ	**Porto Moniz, M**	**0.12**	**306**	⇓*i*P	**Pn**	**11 29 40.0**	**+0.8**
PMOZ				*e*S	**Sn**	**11 29 43.7**	**+0.1**
PMOZ				*i* IAML		11 29 44.9	
PMOZ				*i* IAML		11 29 46.4	
PMOZ				*i* IAML		11 29 48.5	
PMAR	**Madeira**	**0.14**	**100**	⇑*i*P	**Pn**	**11 29 40.8**	**+1.4**
PMAR				*e*S	**Sn**	**11 29 44.8**	**+0.9**
PMAR				*i* IAML		11 29 45.2	
PMAR				*i* IAML		11 29 45.2	
PMAR				*i* IAML		11 29 45.8	
FUL	**Funchal**	**0.19**	**123**	⇑*e*P	**Pn**	**11 29 41.5**	**+1.9**
FUL				*e*S	**Sn**	**11 29 45.9**	**+1.8**
FUL				*i* IAML		11 29 46.2	
FUL				*i* IAML		11 29 46.3	
FUL				*i* IAML		11 29 47.7	
PMPS	**Porto Santo**	**0.70**	**64**	⇓*i*P	**Pn**	**11 29 46.1**	**-0.2**
PMPS				*i* IAML		11 29 54.5	
PMPST	**Porto Santo, M**	**0.71**	**62**	⇓*i*P	**Pn**	**11 29 46.1**	**-0.3**
PMPST				*e*S	**Sn**	**11 29 54.0**	**-2.1**
PMPST				*i* IAML		11 29 54.6	
PMPST				*i* IAML		11 29 54.7	
PMPST				*i* IAML		11 29 55.5	
CGOR	**Puntagorda, La**	**4.04**	**192**	S	**Sn**	**11 31 16.0**	**-2.3**
CGOR				*i* IVmb_Lg		11 31 21.3	
CROM	**Garafia, La Pa**	**4.04**	**190**	P	**Pn**	**11 30 33.8**	**+1.3**
CROM				S	**Sn**	**11 31 15.1**	**-3.6**
CROM				*i* IVmb_Lg		11 31 18.8	
CPUN	**Puntallana, La**	**4.04**	**188**	P	**Pn**	**11 30 34.4**	**+2.0**
CPUN				S	**Sn**	**11 31 16.1**	**-2.4**
CPUN				*i* IVmb_Lg		11 31 20.2	
CMIR	**El Paso, La Pa**	**4.09**	**190**	S	**Sn**	**11 31 16.6**	**-3.3**
TBT	**Taburiente**	**4.12**	**190**	P	**Pn**	**11 30 35.0**	**+1.7**
TBT				S	**Sn**	**11 31 16.3**	**-4.0**
TBT				*i* IVmb_Lg		11 31 21.5	
CBRE	**Brena Baja,La**	**4.15**	**189**	P	**Pn**	**11 30 36.2**	**+2.3**
CBRE				S	**Sn**	**11 31 19.4**	**-1.8**
CBRE				*i* IVmb_Lg		11 31 23.7	
CVIE	**Villa de Mazo,**	**4.19**	**189**	P	**Pn**	**11 30 37.0**	**+2.5**
CVIE				S	**Sn**	**11 31 20.1**	**-2.3**
CNOR	**Icod de los Vi**	**4.44**	**175**	P	**Pn**	**11 30 40.0**	**+2.1**
CNOR				S	**Sn**	**11 31 27.8**	**-0.6**
CFOR	**Fortaleza, Los**	**4.44**	**174**	S	**Sn**	**11 31 27.9**	**-0.6**
CDOS	**Garachico, Isl**	**4.45**	**176**	P	**Pn**	**11 30 40.0**	**+1.9**
CDOS				S	**Sn**	**11 31 26.9**	**-1.9**
MACI	**Morro de la Ar**	**4.51**	**174**	P	**Pn**	**11 30 40.5**	**+1.6**
MACI				S	**Sn**	**11 31 28.6**	**-1.7**
CCHO	**La Orotava (Te**	**4.52**	**175**	S	**Sn**	**11 31 28.7**	**-1.9**
CCAN	**Las Canadas**	**4.53**	**175**	P	**Pn**	**11 30 40.7**	**+1.5**
CCAN				S	**Sn**	**11 31 27.8**	**-3.0**
CJUL	**El Julan, El H**	**5.08**	**190**	S	**Sn**	**11 31 42.5**	**-1.6**
CMCL	**Mercadel, El H**	**5.08**	**189**	S	**Sn**	**11 31 43.0**	**-1.3**

*IDC **21** 11:46:56.1±9.1, 17.°47S×178.°68W, h594km±113km, mb2.9/8, mbtmp3.9/8, Error ellipse: s-maj=86.4km s-min=32.7km az=151.0*

ISC 21 11:46:52.3±1.4, 17.°5S±0.°6×178.°6W±0.°3, h547km, n9, σ0≀78/10, mb3.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.67**	**241**	P	**P**	**11 53 29.7**	**+0.2**
	2.8nm,0.7s,baz=69,slow=17,SNR=3.3						
	2.8nm,0.7s						
WRA	**Warramunga Arr**	**44.52**	**259**	P	**P**	**11 54 15.7**	**-0.1**
	0.5nm,0.5s,baz=95,slow=7.6,SNR=19						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.72**	**254**	P	**P**	**11 54 17.6**	**+0.2**
	2.8nm,0.6s,baz=93,slow=8.0,SNR=70						
ASAR				PcP	**PcP**	**11 55 46.7**	**-1.3**
	0.2nm,0.7s,baz=97,slow=4.1,SNR=1.3						
	2.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.91**	**260**	P	**P**	**11 55 18.3**	**+0.3**
	1.4nm,0.9s,baz=101,slow=10,SNR=1.5						
	1.4nm,0.9s						
NVAR	**Mina Array Bea**	**79.24**	**44**	P	**P**	**11 58 01.6**	**+0.2**
	0.3nm,0.6s,baz=264,slow=4.2,SNR=2.4						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**85.49**	**13**	P	**P**	**11 58 31.6**	**-0.5**
	0.3nm,0.4s,baz=209,slow=4.8,SNR=8.1						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**85.92**	**58**	P	**P**	**11 58 34.7**	**-0.4**
	0.7nm,0.9s,baz=237,slow=4.0,SNR=5.5						
	0.7nm,0.9s						
PDAR	**Pinedale Array**	**87.16**	**44**	P	**P**	**11 58 40.5**	**-0.4**
	0.3nm,0.6s,baz=247,slow=4.2,SNR=5.0						
	0.3nm,0.6s						
ULM	**Lac du Bonnet**	**98.69**	**40**	P	**P**	**11 59 34.4**	**+1.3**
	2.5nm,0.4s,baz=302,slow=4.2,SNR=2.0						

*NNC **21** 11:50:15.9±1.0, 43.°00N×80.°47E, h0km, mb3.0, mpv3.1, Error ellipse: s-maj=9.3km s-min=4.1km az=174.0*
*SOME **21** 11:50:15.0, 42.°93N×80.°55E, h25km*
*KRNET **21** 11:50:16.2±0.1, 43.°16N×80.°52E, h16km, mb3.2*

ISC 21 11:50:11.3±2.1, 43.°4N±0.°1×80.°80E±0.°08, h4km±12km, n19, σ1≀51/31, 7C-7D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**0.96**	**266**	⇓P	**Pb**	**11 50 31.0**	**+0.4**
	4.9nm,0.3s						
PDGK				⇓S	**Sg**	**11 50 42.4**	**+0.3**
	38nm,0.6s						
UZB	**Uzynbulak**	**1.32**	**260**	P	**Pn**	**11 50 36.4**	**-0.4**
	8.0nm,0.1s						
UZB				S	**Sg**	**11 50 51.0**	**-2.8**
	49nm,0.1s						
UZB	**Uzynbulak**	**

TTSI	**Tana Toraja**	**8.93**	**238**	P		**Pn**	11 54 36.2	-0.3
BNSI	**Bone**	**9.48**	**230**	P		**Pn**	11 54 45.5	+1.6
	799nm74nm,1.1s							
SPSI	**Sidrap Palu**	**9.48**	**234**	P		**Pn**	11 54 45.4	+1.5
MYLDM	**Lahad Datu**	**9.55**	**292**			**Pn**	11 54 46.4	+1.6
BKSI	**Bulukumba**	**10.08**	**226**	P		**Pn**	11 54 54.3	+2.4
	725nm48nm,0.6s							
KAPI	**Kappang**	**10.15**	**229**	P		**Pn**	11 54 54.2	+1.4
	22nm,0.5s,baz=51,slow=6.5,SNR=14							
KAPI				S		**Sn**	11 56 40.7	-4.2
	14nm,0.3s,baz=53,slow=20,SNR=11							
KAPI	**Kappang**	**10.15**	**229**			**Pn**	11 54 54.9	+2.1
EDFI	**Ende, Flores**	**11.84**	**209**	P		**Pn**	11 55 20.1	+4.7
JAY	**Jayapura**	**13.93**	**107**	P		**Pn**	11 55 43.7	+1.3
	14nm,0.7s,baz=304,slow=15,SNR=6.4							
JAY	**Jayapura**	**13.93**	**107**	P		**P**	11 55 48.0	+1.6
	24nm,0.8s							
MTN	**Manton Dam**	**14.90**	**166**	Pn		**Pn**	11 55 53.7	-1.0
SBUM	**Sibu**	**15.20**	**273**			**Pn**	11 56 00.2	+1.7
SBUM				IAmb	IAmb		11 56 03.3	
	comp=Z,15nm,0.9s							
JAGI	**Jajag, Banyuwa**	**16.63**	**232**	P		**P**	11 56 18.5	+2.1
	comp=Z,22nm,0.8s							
GMJI	**Gumukmas**	**17.09**	**234**	P		**Pn**	11 56 25.2	+3.5
	comp=Z,31nm,1.1s							
KNRA	**Kununurra**	**17.31**	**176**	P		**P**	11 56 23.8	+0.1
PCJI	**Pacitan**	**18.94**	**239**	P		**P**	11 56 43.4	+1.8
	comp=Z,103nm,1.1s							
UGM	**Wanagama**	**19.36**	**240**	P		**P**	11 56 47.3	+1.0
UGM	**Wanagama**	**19.36**	**240**	P		**P**	11 56 48.6	+2.3
	comp=Z,60nm,1.9s							
FITZ	**Fitzroy Crossi**	**19.74**	**185**	P		**P**	11 56 48.7	-1.6
	comp=Z,1.8nm,0.6s,baz=5.6,slow=11,SNR=6.1							
FITZ	**Fitzroy Crossi**	**19.74**	**185**	P		**P**	11 56 49.9	-0.4
KPJI	**Karang Pucung**	**20.50**	**244**	P		**P**	11 56 59.8	+1.2
	comp=Z,37nm,1.0s							
PPBI	**Pangkal Pinang**	**21.62**	**260**	P		**P**	11 57 10.4	-0.1
COEN	**Coen**	**22.04**	**135**	P		**P**	11 57 14.8	-0.1
WB0	**Warramunga Arr**	**22.40**	**163**			**P**	11 57 17.5	-0.9
WB0				IAmb	IAmb		11 57 18.4	
	comp=Z,16nm,0.6s							
TPUB	**Ta-pu**	**22.47**	**343**	P		**P**	11 57 17.7	-1.5
WRAB	**Tennant Creek**	**22.54**	**163**	P		**P**	11 57 19.3	-0.6
WRAB				IAmb	IAmb		11 57 19.9	
	comp=Z,19nm,0.8s							
WRA	**Warramunga Arr**	**22.55**	**163**	P		**P**	11 57 18.9	-1.0
	comp=Z,16nm,0.7s,baz=342,slow=10.0,SNR=120							
WRA				PcP		**PcP**	12 01 08.3	-0.9
	comp=Z,1.2nm,0.7s,baz=341,slow=2.7,SNR=5.8							
WRA				S		**S**	12 01 14.5	-3.4
	comp=Z,1.3nm,0.7s,baz=339,slow=17,SNR=7.6							
WRA				ScP		**ScP**	12 04 31.9	-3.3
	comp=Z,0.4nm,0.7s,baz=347,slow=3.4,SNR=3.2							
	comp=Z,16nm,0.7s							
WRA	**Warramunga Arr**	**22.55**	**163**			**P**	11 57 18.4	-1.6
WR8	**Warramunga Arr**	**22.61**	**162**			**P**	11 57 19.7	-0.8
WR8				IAmb	IAmb		11 57 20.5	
	comp=Z,19nm,0.7s							
MYKOM	**Kota Tinggi**	**23.55**	**271**	P		**P**	11 57 30.1	+0.6
MYKOM				IAmb	IAmb		11 57 31.2	
	comp=Z,34nm,1.2s							
MDSI	**Maura Dua**	**24.02**	**255**	P		**P**	11 57 33.5	-0.1
	comp=Z,11nm,0.8s							
AS31	**Alice Springs**	**25.98**	**166**			**P**	11 57 50.6	-0.8
ASAR	**Alice Springs**	**25.98**	**166**	P		**P**	11 57 50.2	-1.2
	comp=Z,2.0nm,0.5s,baz=346,slow=8.9,SNR=68							
ASAR				PcP		**PcP**	12 01 15.4	-1.2
	comp=Z,0.6nm,0.6s,baz=347,slow=3.0,SNR=4.3							
ASAR				S		**S**	12 02 07.1	-5.6
	comp=Z,0.3nm,0.7s,baz=340,slow=22,SNR=2.6							
ASAR				ScP		**ScP**	12 04 41.2	-3.4
	comp=Z,0.4nm,0.7s,baz=343,slow=3.0,SNR=4.3							
	comp=Z,2.0nm,0.5s							
ASAR	**Alice Springs**	**25.98**	**166**	P		**P**	11 57 50.8	-0.6
JNU	**Nakatsue**	**31.44**	**6**	P		**P**	11 58 39.8	+0.1
	comp=Z,6.5nm,0.9s,baz=133,slow=16,SNR=1.4							
	comp=Z,6.5nm,0.9s							
JNU	**Nakatsue**	**31.44**	**6**	IAmb	IAmb		11 59 18.1	
	comp=Z,30nm,1.4s							
INKA	**Innaminka**	**31.95**	**157**			**P**	11 58 44.3	+0.1
INKA				IAmb	IAmb		11 58 44.9	
	comp=Z,6.1nm,0.5s							
CMAR	**Chiang Mai Arr**	**32.52**	**303**	P		**P**	11 58 50.3	+1.0
	comp=Z,0.4nm,0.3s,baz=120,slow=8.5,SNR=4.2							
CMAR				S		**S**	12 03 51.8	-3.5
	comp=Z,0.6nm,0.3s,baz=116,slow=38,SNR=3.6							
	comp=Z,0.4nm,0.3s							
HNR	**Honiara**	**34.24**	**109**	P		**P**	11 59 02.5	-1.8
	comp=Z,12nm,0.3s,baz=214,slow=7.3,SNR=1.4							
	comp=Z,12nm,0.3s							
BBOO	**Buckleboo**	**35.27**	**167**	P		**P**	11 59 12.1	-0.9
EIDS	**Eidsvold**	**35.34**	**141**	P		**P**	11 59 13.6	0.0
EIDS				IAmb	IAmb		11 59 46.1	
	comp=Z,13nm,1.2s							
KSRS	**Korea Array**	**35.59**	**1**	P		**P**	11 59 16.3	+0.7
	comp=Z,2.5nm,0.5s,baz=176,slow=9.7,SNR=15							
	comp=Z,2.5nm,0.5s							
STKA	**Stephens Creek**	**35.99**	**159**	P		**P**	11 59 18.8	-0.3
	comp=Z,22nm,0.7s,baz=334,slow=11,SNR=34							
STKA				LR	LR		12 17 47.5	
	comp=Z,23nm,20.1s,baz=24,slow=42							
	comp=Z,22nm,0.7s							
MJAR	**Matsushiro Arr**	**36.09**	**15**	P		**P**	11 59 19.1	-0.8
	comp=Z,1.6nm,0.6s,baz=182,slow=9.6,SNR=6.3							
	comp=Z,1.6nm,0.6s							
MJAR	**Matsushiro Arr**	**36.09**	**15**	IAmb	IAmb		11 59 19.6	
	comp=Z,5.4nm,1.5s							
ARMA	**Armidale**	**39.40**	**146**	P		**P**	11 59 48.9	+1.0
ARMA				IAmb	IAmb		12 00 11.3	
	comp=Z,24nm,1.4s							
CAN	**Canberra**	**41.99**	**153**	P		**P**	12 00 09.9	+0.8
CAN				IAmb	IAmb		12 00 49.2	
	comp=Z,38nm,1.3s							
TOO	**Toolangi**	**42.50**	**159**	P		**P**	12 00 14.1	+0.9
TOO				IAmb	IAmb		12 00 25.2	
	comp=Z,12nm,1.4s							
USRK	**Ussuriysk Ar.**	**42.52**	**5**	P		**P**	12 00 13.7	+0.5
	comp=Z,3.5nm,0.7s,baz=185,slow=8.1,SNR=5.3							
	comp=Z,3.5nm,0.7s							
ASAJ	**Asahikawa**	**44.35**	**16**	P		**P**	12 00 28.7	+0.9
	comp=Z,16nm,1.0s,baz=215,slow=15,SNR=2.9							
	comp=Z,16nm,1.0s							
JKA	**Kamikawa-asahi**	**44.35**	**16**	P		**P**	12 00 28.7	+0.9
JKA	**Kamikawa-asahi**	**44.35**	**16**	IAmb	IAmb		12 00 32.1	
	comp=Z,48nm,1.2s							
DZM	**Mont Dzumac**	**44.82**	**124**	P		**P**	12 00 31.3	-0.8
	comp=Z,4.6nm,0.7s,baz=282,slow=17,SNR=1.5							
	comp=Z,4.6nm,0.7s							
EVN	**Everest**	**46.76**	**308**			**P**	12 00 48.0	+0.1
EVN				IAmb	IAmb		12 00 51.8	
	comp=Z,4.3nm,0.5s							
HILR	**Hailar Array B**	**48.14**	**353**	P		**P**	12 00 57.7	+0.3
	comp=Z,0.9nm,0.4s,baz=164,slow=7.5,SNR=1.7							
	comp=Z,0.9nm,0.4s							
SONM	**Songino Array**	**49.44**	**341**	P		**P**	12 01 06.9	-0.6
	comp=Z,0.7nm,0.3s,baz=152,slow=7.4,SNR=4.9							
SONM				PcP		**PcP**	12 02 27.9	+0.1
	comp=Z,0.8nm,0.6s,baz=169,slow=2.9,SNR=3.7							
	comp=Z,0.7nm,0.3s							
PEA0B	**Petropavlovsk-**	**57.06**	**21**	P		**P**	12 02 03.6	+0.6
PETK	**Petropavlovsk-**	**57.06**	**21**	P		**P**	12 02 03.2	+0.2
	comp=Z,4.0nm,0.9s,baz=218,slow=7.2,SNR=11							
	comp=Z,4.0nm,0.9s							
PETK	**Petropavlovsk-**	**57.06**	**21**	P		**P**	12 02 02.8	-0.3
MKAR	**Makanchi Array**	**59.61**	**326**	P		**P**	12 02 21.3	+0.4
	comp=Z,2.1nm,0.4s,baz=122,slow=8.6,SNR=38							
	comp=Z,2.1nm,0.4s							
MKAR	**Makanchi Array**	**59.61**	**326**	P		**P**	12 02 21.5	+0.6
LBZ	**Lake Benmore**	**59.62**	**146**	P		**P**	12 02 20.4	-0.6
KURBB	**Kurchatov Array**	**63.82**	**328**	P		**P**	12 02 48.8	-0.2
	comp=Z,3.8nm,0.8s,baz=126,slow=6.6,SNR=22							
	comp=Z,3.8nm,0.8s							
KURK	**Kurchatov**	**63.82**	**328**			**P**	12 02 49.1	+0.2
KURK				IAmb	IAmb		12 02 49.6	
	comp=Z,4.7nm,0.8s							
BVAR	**Borovoye Array**	**69.39**	**327**	P		**P**	12 03 24.4	0.0
	comp=Z,1.2nm,0.6s,baz=134,slow=8.2,SNR=4.5							
	comp=Z,1.2nm,0.6s							
AB31	**Akbulak array**	**74.16**	**321**	P		**P**	12 03 52.4	-0.5
ABKAR	**Akbulak array**	**74.16**	**321**	P		**P**	12 03 52.4	-0.5
AKTO	**Aktyubinsk**	**75.67**	**322**	P		**P**	12 04 01.7	+0.1
	comp=Z,1.7nm,0.5s,baz=101,slow=5.2,SNR=3.6							
	comp=Z,1.7nm,0.5s							
M14K	**Bethel**	**79.14**	**28**	P		**P**	12 04 21.5	+0.8
VNDA	**Vanda**	**81.33**	**173**	P		**P**	12 04 31.0	-1.1
	comp=Z,2.6nm,0.9s,baz=323,slow=5.8,SNR=9.6							
	comp=Z,2.6nm,0.9s							
VNDA	**Vanda**	**81.33**	**173**	P		**P**	12 04 31.7	-0.4
MAW	**Mawson**	**82.09**	**200**	P		**P**	12 04 35.8	-0.5
	comp=Z,2.1nm,0.8s,baz=90,slow=8.1,SNR=1.5							
	comp=Z,2.1nm,0.8s							
J18K	**Innoko River**	**82.20**	**26**	P		**P**	12 04 38.1	+1.1
J18K				IAmb	IAmb		12 04 38.6	
	comp=Z,16nm,1.4s							
G19K	**Purcell Mounta**	**82.61**	**23**	P		**P**	12 04 40.4	+1.3
G19K				IAmb	IAmb		12 04 41.0	
	comp=Z,9.2nm,0.8s							
E19K	**Redstone River**	**82.85**	**22**	P		**P**	12 04 41.4	+1.1
E19K				IAmb	IAmb		12 04 42.4	
	comp=Z,10nm,0.9s							
IMAR	**Indian Mountai**	**83.92**	**24**	P		**P**	12 04 46.6	+0.8
PPLA	**Purkeypile**	**84.12**	**27**	P		**P**	12 04 47.7	+0.6
PPLA				IAmb	IAmb		12 05 23.3	
	comp=Z,21nm,1.4s							
E22K	**Anaktuvuk Pass**	**85.00**	**22**	P		**P**	12 04 52.1	+0.9
E22K				IAmb	IAmb		12 05 07.8	
	comp=Z,10nm,1.5s							
RC01	**Rabbit Creek A**	**85.06**	**29**	P		**P**	12 04 51.8	+0.2
RC01				IAmb	IAmb		12 05 02.6	
	comp=Z,24nm,1.3s							
TOLK	**Toolik Lake Re**	**85.88**	**21**	P		**P**	12 04 56.3	+0.7
ILAR	**Eielson Array**	**86.64**	**25**	P		**P**	12 04 57.5	-1.8
	comp=Z,0.3nm,0.6s,baz=256,slow=4.7,SNR=2.8							
	comp=Z,0.3nm,0.6s							
BMAR	**Burnt Mountain**	**87.68**	**23**	P		**P**	12 05 05.2	+0.9
QSPA	**South Pole Qui**	**91.61**	**180**	P		**P**	12 05 25.2	+2.4
	comp=Z,0.8nm,0.7s,baz=347,slow=0.9,SNR=8.4							
QSPA	**South Pole Qui**	**91.61**	**180**	IAmb	IAmb		12 05 44.2	
	comp=Z,5.4nm,1.4s							
BRTR	**Keskin Array B**	**91.84**	**310**	P		**P**	12 05 25.8	+1.2
	comp=Z,0.7nm,0.7s,baz=104,slow=6.1,SNR=2.6							
	comp=Z,0.7nm,0.7s							
ARCES	**ARCESS Array B**	**92.59**	**340**	P		**P**	12 05 26.3	-0.8
	comp=Z,5.4nm,1.1s,baz=76,slow=3.8,SNR=1.5							
	comp=Z,5.4nm,1.1s							
ARCES	**ARCESS Array B**	**92.59**	**340**	IAmb	IAmb		12 05 27.0	
	comp=Z,15nm,1.4s							
SPITS	**Spitsbergen Ar**	**92.60**	**349**	P		**P**	12 05 25.9	-1.1
	comp=Z,3.2nm,0.8s,baz=55,slow=5.8,SNR=5.9							
	comp=Z,3.2nm,0.8s							
FINES	**FINESS Array B**	**93.94**	**332**	P		**P**	12 05 32.7	-0.8
	comp=Z,1.3nm,0.8s,baz=103,slow=6.1,SNR=1.1							
	comp=Z,1.3nm,0.8s							
TXAR	**Lajitas Array**	**122.28**	**53**	PKP		**PKPdf**	12 11 10.9	-0.3
	comp=Z,0.2nm,0.7s,baz=8.0,slow=3.3,SNR=1.8							

JMA ***21*** *11:54:10.8±0.1,23°.1N±0°.7×12°.2E±°, h40km±3km,*
MV3.6/13,TAIWAN REGION
TAP ***21*** *11:54:11.4,23°.06N×121°.60E,h26km,ML3.3,C*

ISC 21 11:54:08.9±1.1,23°.01N±0°.02×121°.74E±0°.02,h21km±3km,
n123,σ1s06/231,3C-13D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.36**	**284**	*i*	P	**Pb**	11 54 17.2	+0.7
CHKT				*i*	S	**Sb**	11 54 21.2	-0.5
CHKH	**Chenggong**	**0.37**	**299**	↓*i*	P	**Pb**	11 54 17.2	+0.6
CHKH				*i*	S	**Sb**	11 54 21.1	-0.7
ECBN	**Changbin**	**0.41**	**318**	↓*i*	P	**Pb**	11 54 18.2	+0.9
ECBN				*i*	S	**Sb**	11 54 23.0	+0.1
EDH	**Donghe**	**0.41**	**264**	↑*i*	P	**Pn**	11 54 18.1	-1.5
EDH				*i*	S	**Sb**	11 54 22.9	-0.1
LDUT	**Ludao**	**0.42**	**217**	↑*i*	P	**Pn**	11 54 19.6	-0.2
LDUT				*i*	S	**Sn**	11 54 25.9	-1.0
FULB	**Fuli**	**0.45**	**294**	*i*	P	**Pb**	11 54 18.3	+0.1
FULB				*i*	S	**Sb**	11 54 23.6	-0.9
ECS	**Chishang**	**0.49**	**280**	*i*	P	**Pn**	11 54 19.6	-1.1
ECS				*i*	S	**Sb**	11 54 25.7	+0.1
EHD	**Haiduan**	**0.51**	**285**	↓*i*	P	**Pb**	11 54 19.2	-0.1
EHD					S	**Sb**	11 54 24.9	-1.4
EYUL	**Yuli**	**0.51**	**310**	*i*	P	**Pb**	11 54 19.8	+0.5
EYUL					S	**Sb**	11 54 25.9	-0.4
TWF1	**Yuli**	**0.53**	**309**	↓*i*	P	**Pb**	11 54 19.8	+0.1
TWF1					eS	**Sb**	11 54 26.2	-0.7
YULB	**Yu-li**	**0.56**	**313**		P	**Pb**	11 54 20.6	+0.5
YULB	**Yu-li**	**0.56**	**313**		S	**Sb**	11 54 27.2	-0.5
YULB	**Yu-li**	**0.56**	**313**	↓*i*	P	**Pb**	11 54 20.3	+0.2
YULB					S	**Sb**	11 54 27.4	-0.4
HGSD	**Ruisui**	**0.56**	**328**	↓*i*	P	**Pb**	11 54 20.2	0.0
HGSD				*i*	S	**Sb**	11 54 26.3	-1.5
LONT	**Longtian**	**0.58**	**259**	*i*	P	**Pn**	11 54 20.6	-1.3
LONT				*i*	S	**Sb**	11 54 28.3	+0.1
EHYH	**Wanrong**	**0.60**	**323**	*i*	P	**Pb**	11 54 21.2	+0.3
EHYH				*i*	S	**Sb**	11 54 29.1	0.0
TTN	**Taitung**	**0.61**	**245**	*i*	P	**Pb**	11 54 20.2	-0.7
TTN					eS	**Sn**	11 54 30.4	-1.1
EHY	**Hungye**	**0.63**	**322**	*i*	P	**Pb**	11 54 21.3	0.0
EHY				*i*	S	**Sb**	11 54 29.4	-0.3
TWGBT	**Beinan**	**0.64**	**252**		P	**Pb**	11 54 21.0	-0.4
TWGBT	**Beinan**	**0.64**	**252**		S	**Sb**	11 54 29.9	-0.2
TWGBT	**Beinan**	**0.64**	**252**	*i*	P	**Pn**	11 54 21.7	-1.1
TWGBT				*i*	S	**Sb**	11 54 29.8	-0.4
TWG	**Pinlang**	**0.65**	**253**	*i*	P	**Pn**	11 54 21.9	-1.0
TWG				*i*	S	**Sb**	11 54 29.9	-0.4
ELDTW	**Lidau**	**0.69**	**285**	↓*i*	P	**Pb**	11 54 21.9	-0.5
ELDTW				*i*	S	**Sb**	11 54 29.1	-2.5
EGFH	**Guangfu**	**0.71**	**336**	*i*	P	**Pn**	11 54 23.4	-0.4
EGFH				*i*	S	**Sb**	11 54 32.1	0.0
TEGC	**Jichi Village**	**0.72**	**345**	*i*	P	**Pn**	11 54 23.4	-0.4
TEGC				*i*	S	**Sb**	11 54 32.2	+0.1
WARBT	**Fenglin Townsh**	**0.78**	**335**	↓*i*	P	**Pb**	11 54 23.9	+0.2
WARBT				*i*	S	**Sb**	11 54 32.5	-1.4
SHUL	**Shoufeng**	**0.79**	**348**	*i*	P	**Pn**	11 54 24.6	-0.2
SHUL				*i*	S	**Sb**	11 54 34.7	+0.5
ECL	**Taimali**	**0.84**	**241**	↑*i*	P	**Pn**	11 54 24.6	-0.9
ECL				*i*	S	**Sb**	11 54 34.3	-1.3
ESL	**Shilin**	**0.85**	**340**	*i*	P	**Pn**	11 54 25.0	+0.1
ESL				*i*	S	**Sb**	11 54 34.7	-1.2
TEYL	**Yanliau Villag**	**0.86**	**351**	*i*	P	**Pn**	11 54 26.3	+0.5
TEYL				*i*	S	**Sn**	11 54 37.9	+0.1
YUS	**Yu-Shan**	**0.87**	**303**	*i*	P	**Pb**	11 54 25.4	-0.2
YUS					eS	**Sb**	11 54 36.5	-0.5
STYH	**Taoyuan**	**0.91**	**280**	*i*	P	**Pb**	11 54 24.6	-1.3
STYH				*i*	S	**Sb**	11 54 35.6	-1.9
STYT	**Tauyuan**	**0.92**	**280**	*i*	P	**Pn**	11 54 26.1	-0.6
STYT				*i*	S	**Sb**	11 54 36.2	-1.9
VWDT	**VWDT**	**0.92**	**323**	↓*i*	P	**Pb**	11 54 26.3	+0.1
VWDT					S	**Sb**	11 54 37.1	-0.9
HWA	**Hwalien**	**0.97**	**352**	*i*	P	**Pn**	11 54 27.3	+0.1
HWA					S	**Sb**	11 54 39.3	-0.1
ETM	**Tongmen**	**0.98**	**346**	*i*	P	**Pb**	11 54 27.0	-0.1
ETM				*i*	S	**Sb**	11 54 38.6	-1.0
LAY	**Lan-yu**	**0.99**	**190**		P	**Pn**	11 54 27.4	-0.2
LAY					eS	**Sn**	11 54 40.9	0.0
ALS	**Alishan**	**0.99**	**300**	↓*i*	P	**Pn**	11 54 27.7	-0.2
ALS					S	**Sb**	11 54 40.6	+0.2
LYUB	**Lan-yu**	**1.02**	**188**	*i*	P	**Pn**	11 54 27.7	-0.2
LYUB					S	**Sn**	11 54 40.2	-1.4
TAWH	**Dawu Township**	**1.04**	**230**	*i*	P	**Pb**	11 54 26.8	-1.3
TAWH				*i*	S	**Sb**	11 54 39.5	-1.9
EAST	**Anshuo**	**1.04**	**233**	*i*	P	**Pn**	11 54 28.0	-0.3
EAST					eS	**Sn**	11 54 40.9	-1.3
LXIB	**Xiulin Townshi**	**1.05**	**343**	*i*	P	**Pb**	11 54 28.0	-0.4
LXIB				*i*	S	**Sb**	11 54 40.1	-1.7
SSLB	**Suanglung**	**1.06**	**317**		P	**Pn**	11 54 28.2	-0.4
SSLB	**Suanglung**	**1.06**	**317**	*i*	P	**Pn**	11 54 28.2	-0.4
SSLB					S	**Sb**	11 54 40.9	-1.1
TSMG	**Majia**	**1.06**	**253**	*i*	P	**Pn**	11 54 28.4	-0.2
TSMG					S	**Sb**	11 54 39.9	-2.1
SSD	**Sandimen**	**1.06**	**256**	*i*	P	**Pn**	11 54 28.2	-0.3
SSD					eS	**Sb**	11 54 39.7	-2.3
TPUB	**Ta-pu**	**1.06**	**286**		P	**Pn**	11 54 29.0	+0.4
TPUB	**Ta-pu**	**1.06**	**286**		S	**Sb**	11 54 42.1	-0.1
TPUB	**Ta-pu**	**1.06**	**286**	*i*	P	**Pn**	11 54 29.0	+0.4
TPUB				*i*	S	**Sb**	11 54 42.0	-0.1
WTP	**Ta-pu**	**1.07**	**283**	↓*i*	P	**Pn**	11 54 29.0	+0.3
WTP				*i*	S	**Sn**	11 54 42.5	-0.3
TWD	**Chiawan**	**1.07**	**353**	*i*	P	**Pn**	11 54 28.5	-0.2
TWD				*i*	S	**Sb**	11 54 41.3	-1.0
SGST	**Jiashian**	**1.07**	**274**	↓*i*	P	**Pb**	11 54 28.5	-0.3
SGST				*i*	S	**Sb**	11 54 41.6	-0.8
MASBT	**Mashibuluo**	**1.10**	**249**	*i*	P	**Pb**	11 54 29.0	-0.2
MASBT					eS	**Sb**	11 54 42.1	-1.1
WUSB	**Renai**	**1.13**	**330**	*i*	P	**Pn**	11 54 29.6	0.0
WUSB				*i*	S	**Sb**	11 54 42.0	-2.2
CHN1	**Nanshi**	**1.13**	**279**	↓*i*	P	**Pb**	11 54 30.6	+0.8
CHN1				*i*	S	**Sn**	11 54 44.8	+0.3
CHN5	**Tsauling**	**1.14**	**301**	*i*	P	**Pb**	11 54 30.6	+0.6
CHN5				*i*	S	**Sn**	11 54 45.4	+0.6
ETL	**Fush Village**	**1.15**	**354**	*i*	P	**Pn**	11 54 29.6	-0.1
ETL					S	**Sb**	11 54 43.6	-0.9
SCST	**Cishan**	**1.16**	**264**	*i*	P	**Pb**	11 54 30.8	+0.5
SCST				*i*	S	**Sn**	11 54 46.6	+1.5
SMLT	**Sun Moon Lake**	**1.16**	**318**	*i*	P	**Pb**	11 54 30.2	-0.2
SMLT				*i*	S	**Sb**	11 54 45.3	+0.2
NACB	**Ninganchiao**	**1.16**	**353**		P	**Pn**	11 54 29.8	-0.2
NACB	**Ninganchiao**	**1.16**	**353**		S	**Sb**	11 54 43.5	-1.5
NACB	**Ninganchiao**	**1.16**	**353**	*i*	P	**Pn**	11 54 29.7	-0.3
NACB				*i*	S	**Sb**	11 54 43.5	-1.5
SLIU	**Shizi**	**1.18**	**228**	*i*	P	**Pb**	11 54 30.3	-0.3
SLIU				*i*	S	**Sn**	11 54 45.1	-0.5
TWK	**Hsinying**	**1.18**	**283**	*i*	P	**Pb**	11 54 31.1	+0.4
TWK				*i*	S	**Sn**	11 54 46.6	+0.8
SGLT	**Jiouru**	**1.19**	**256**		P	**Pb**	11 54 31.5	+0.7
SGLT					eS	**Sn**	11 54 46.6	+0.7
TYC	**Yuchr**	**1.20**	**318**	*i*	P	**Pb**	11 54 31.1	+0.1
TYC				*i*	S	**Sb**	11 54 45.9	-0.2
WHF	**Hehuan Shan**	**1.21**	**339**	*i*	P	**Pn**	11 54 30.7	-0.3
WHF				*i*	S	**Sb**	11 54 44.6	-2.1
ETLH	**Xiulin Townshi**	**1.21**	**349**	*i*	P	**Pn**	11 54 30.5	-0.2
ETLH				*i*	S	**Sb**	11 54 44.1	-2.4
SCZT	**Fangliau**	**1.22**	**239**	*i*	P	**Pb**	11 54 31.3	+0.1
SCZT					eS	**Sn**	11 54 45.9	-0.7
TWM1	**Shoushan**	**1.23**	**261**	*i*	P	**Pb**	11 54 33.2	+1.7
TWM1					S	**Sn**	11 54 49.8	+2.8
CHN3	**Shinhua**	**1.27**	**273**	*eP*		**Pb**	11 54 34.2	+2.0
CHN3				*i*	S	**Sb**	11 54 50.9	+2.9
WGK	**Gukeng**	**1.28**	**302**	*i*	P	**Pb**	11 54 33.4	+1.2
WGK				*i*	S	**Sb**	11 54 50.2	+2.0
SHHT	**Tainan City**	**1.29**	**271**	*i*	P	**Pb**	11 54 35.0	+2.6
SHHT					eS	**Sb**	11 54 51.6	+3.1
SMST	**Manzhou Townsh**	**1.30**	**220**	*i*	P	**Pb**	11 54 32.4	-0.2
SMST					S	**Sb**	11 54 48.3	-0.5
WDLH	**Douliu**	**1.30**	**301**	*i*	P	**Pb**	11 54 33.3	+0.7
WDLH				*i*	S	**Sb**	11 54 50.6	+1.8
WNT	**Mingjian**	**1.30**	**312**	*i*	P	**Pb**	11 54 33.3	+0.7
WNT				*i*	S	**Sb**	11 54 49.1	+0.2
CHY	**Chiayi**	**1.31**	**292**	*i*	P	**Pb**	11 54 33.7	+0.9
CHY				*i*	S	**Sb**	11 54 50.1	+1.0
EAHA	**Aohua**	**1.31**	**360**		P	**Pn**	11 54 31.6	-0.4
EAHA		

HATD	**Hatta, Dubai**	**2.90**	**224**	P	**Pg**	12 01 01.7	**-0.5**
HATD				S	**Sn**	12 01 30.3	**+2.1**
ASHO	**Ashiyiah**	**3.05**	**224**	P	**Pb**	12 01 02.0	**+0.8**
	SNR=10						
ASHO				S	**Sb**	12 01 38.4	**-0.2**
ASHO	**Ashiyiah**	**3.05**	**224**	P	**Pb**	12 01 00.8	**-0.3**
ASHO				S	**Sb**	12 01 36.6	**-1.9**
SOHO	**SOHO**	**3.23**	**211**	P	**Pb**	12 01 03.1	**-1.1**
SOHO	**SOHO**	**3.23**	**211**	P	**Pb**	12 01 02.1	**-2.2**
KRBR	**Kerman**	**3.36**	**336**	Pn	**Pb**	12 01 06.4	**-0.3**
HOQ	**Hoqain**	**3.46**	**196**	P	**Pb**	12 01 07.7	**-0.5**
	SNR=22						
HOQ				S	**Sb**	12 01 49.2	**-1.2**
SRVN	**Saravan**	**3.62**	**81**	Pn	**Pg**	12 01 17.6	**+1.5**
ALNE	**Al Ain**	**3.70**	**220**	P	**Pb**	12 01 12.2	**-0.1**
KHGB	**Koh Gabri**	**3.82**	**335**	Pn	**Pb**	12 01 12.2	**-2.4**
SMDO	**Samad**	**3.85**	**184**	P	**Pb**	12 01 15.1	**+0.1**
	SNR=8.4						
ARQ	**Araqi**	**3.94**	**205**	P	**Pb**	12 01 17.1	**+0.7**
BSY	**Bisya**	**4.29**	**195**	P	**Pb**	12 01 22.4	**0.0**
WBK	**Wadi Bani Khal**	**4.33**	**173**	P	**Pb**	12 01 22.1	**-0.8**
	SNR=18						
JLN	**Jalan Bani Buh**	**4.84**	**168**	P	**Pb**	12 01 29.5	**-2.3**
WHFO	**Wadi Hawf**	**9.91**	**206**	P	Pn	12 02 34.7	+5.1
ABTO	**Aybut**	**10.61**	**207**	P	Pn	12 02 43.2	+4.0

IDC 21 12:07:59.4±7.9, 18°.85S×175°.91W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=341.6km s-min=39.1km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.80**	**260**	P	P	12 16 30.7	-0.5
	0.6nm,0.4s,baz=96,slow=8.1,SNR=22						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**46.83**	**255**	P	P	12 16 31.7	+0.3
	1.3nm,0.7s,baz=90,slow=8.5,SNR=39						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**86.29**	**12**	P	P	12 20 42.6	0.0
	0.3nm,1.0s,baz=205,slow=5.0,SNR=4.3						
	0.3nm,1.0s						

*SJA **21** 12:11:52.0±0.7, 29°.79S×71°.63W, h15km±3km, ML3.6, MW3.6*
*GUC **21** 12:11:54.8±0.7, 29°.86S×71°.55W, h45km±2km, ML3.8*
ISC 21 12:11:53.9±1.3, 29°.84S±0°.02×71°.66W±0°.05, h14km±8km, n49, σ2s06/73, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.38**	**102**	⇑eP	**Pg**	12 12 02.6	**+1.1**
CO05				eS	**Sg**	12 12 08.3	**+1.7**
GO04	**Tololo Observa**	**0.82**	**114**	⇑eP	**Pg**	12 12 09.0	**-0.8**
GO04				eP	**Pg**	12 12 09.0	**-0.8**
GO04				eS	**Sg**	12 12 19.6	**-1.0**
GO04	**Tololo Observa**	**0.82**	**114**	eP	**Pg**	12 12 08.3	**-1.5**
CO06	**Fray Jorge**	**0.83**	**178**	⇑eP	**Pg**	12 12 09.9	**-0.1**
CO06				eS	**Sg**	12 12 21.9	**+1.1**
CO06				IAML		12 12 23.5	
	comp=N,4μm,0.2s						
LCO	**Las Campanas**	**1.18**	**46**	⇓eP	**Pg**	12 12 15.0	**-1.7**
LCO				eS	**Sg**	12 12 30.3	**-1.8**
LCO	**Las Campanas**	**1.18**	**46**	eP	Pg	12 12 14.0	-2.6
LCO				IAML		12 12 33.9	
	comp=Z,2μm,0.2s						
LCO				eS	**Sg**	12 12 34.1	**+2.0**
CO03	**El Pedregal**	**1.30**	**140**	eP	Pn	12 12 16.0	-1.7
CO03				eS	**Sb**	12 12 32.3	**-2.5**
CO03	**El Pedregal**	**1.30**	**140**	eP	Pn	12 12 10.5	-7.2
CO03				IAML		12 12 38.0	
	comp=Z,385nm,0.3s						
CO01	**Juntas del Tor**	**1.37**	**96**	⇓eP	**Pn**	12 12 17.4	**-1.3**
CO01				eS	**Sb**	12 12 33.9	**-2.9**
CO01	**Juntas del Tor**	**1.37**	**96**	eP	Pn	12 12 16.7	-2.1
CO01				eS	**Sb**	12 12 34.1	**-2.7**
CO01				IAML		12 12 34.5	
	comp=Z,2μm,1.1s						
CO02	**Combarbal**	**1.47**	**157**	⇑eP	**Pn**	12 12 19.2	**-0.9**
CO02				eS	**Sn**	12 12 38.2	**-1.0**
CO02				IAML		12 12 42.3	
	comp=E,4μm,0.3s						
CO02	**Combarbal**	**1.47**	**157**	eP	**Pn**	12 12 18.5	**-1.6**
CO02				IAML		12 12 41.2	
	comp=Z,878nm,0.4s						
AC05	**El Transito**	**1.57**	**51**	⇓eP	**Pn**	12 12 20.8	**-0.7**
AC05				eS	**Sn**	12 12 40.6	**-1.1**
AC05				IAML		12 12 41.8	
	comp=E,2μm,0.4s						
AC05	**El Transito**	**1.57**	**51**	eP	**Pn**	12 12 20.1	**-1.4**
AC05				IAML		12 12 42.5	
	comp=Z,573nm,0.3s						
AC04	**Llanos de Chal**	**1.71**	**18**	eP	**Pn**	12 12 22.1	**-1.1**
AC04				eS	**Sn**	12 12 44.1	**-0.8**
AC04	**Llanos de Chal**	**1.71**	**18**	eP	Pn	12 12 21.5	-1.7
AC04				IAML		12 12 50.7	
	comp=Z,468nm,0.6s						
AROD	**Rodeo**	**1.93**	**100**	eP	**Pn**	12 12 27.0	**+0.5**
ACDV	**Cuesta del Vie**	**2.23**	**99**	eP	**Pn**	12 12 31.3	**+0.7**
ACDV				IAML		12 13 02.4	
	comp=Z,216nm,0.4s						
CO04	**Los Peladeros**	**2.27**	**165**	⇓eP	**Pn**	12 12 31.3	**+0.1**
CO04				eS	**Sn**	12 12 58.0	**-1.2**
CO04				IAML		12 13 03.0	
	comp=N,564nm,0.4s						
ACCO	**Cerro Coronel**	**2.37**	**109**	eP	**Pn**	12 12 34.3	**+1.7**
ACCO				eS	**Sb**	12 13 06.8	**+1.1**
GO03	**Copiapo**	**2.57**	**30**	eP	**Pn**	12 12 34.8	**-0.3**
GO03				IAML		12 13 15.3	
	comp=E,512nm,0.6s						
GO03	**Copiapo**	**2.57**	**30**	eP	**Pn**	12 12 35.1	**0.0**
GO03				eS	**Sn**	12 13 06.5	**+0.4**
GO03				IAML		12 13 15.5	
	comp=Z,466nm,0.5s						
VA06	**Catapilco**	**2.73**	**173**	eP	**Pn**	12 12 36.8	**-0.4**
VA06				IAML		12 13 30.5	
	comp=E,557nm,0.4s						
AC06	**Mina Casimiro**	**2.73**	**25**	eP	**Pn**	12 12 36.8	**-0.5**
AC06				IAML		12 13 21.2	
	comp=E,266nm,0.2s						
RTLS	**Leoncito**	**2.82**	**134**	eP	**Pn**	12 12 40.6	**+1.9**
RTLS				IAML		12 13 24.3	
	comp=Z,563nm,0.6s						
VA03	**San Esteban**	**3.06**	**162**	eP	**Pn**	12 12 42.8	**+0.9**
VA03				IAML		12 13 27.5	
	comp=E,508nm,0.5s						
VA03	**San Esteban**	**3.06**	**162**	eP	**Pn**	12 12 42.8	**+0.9**
VA03				eS	**Sn**	12 13 19.2	**+0.8**
VA03				IAML		12 13 32.3	
	comp=Z,168nm,0.8s						
ZON	**Zonda**	**3.08**	**124**	eP	**Pn**	12 12 44.0	**+1.9**
ZON				eS	**Sn**	12 13 20.6	**+1.8**
ZON				IAML		12 13 37.4	
	comp=Z,111nm,0.6s						
RTLL	**Cerro Villicun**	**3.12**	**119**	eP	**Pn**	12 12 46.2	**+3.5**
RTLL				eS	**Sn**	12 13 20.7	**+0.9**
RTLL				IAML		12 13 37.7	
	comp=Z,160nm,0.8s						
ROCH	**El Roble**	**3.17**	**170**	eP	**Pn**	12 12 43.2	**-0.2**
ROCH				IAML		12 13 38.6	
	comp=N,401nm,0.4s						
VA01	**Torpederas**	**3.17**	**180**	eP	**Pn**	12 12 44.8	**+1.5**
ROC1	**El Roble**	**3.17**	**170**	eP	**Pn**	12 12 43.3	**-0.3**
ROC1				eS	**Sn**	12 13 24.6	**+3.3**
ROC1				eS		12 13 25.6	
VCA	**Vinchina**	**3.21**	**71**	eP	Pn	12 12 42.0	-2.0
VCA				eP		12 12 47.0	
VCA				eS	**Sn**	12 13 23.0	**+0.8**
VCA				IAML		12 13 35.9	
	comp=Z,485nm,0.3s						
PEL	**Peldehue**	**3.40**	**166**	eP	**Pn**	12 12 46.2	**-0.2**
PEL				eS	**Sn**	12 13 25.6	**-1.0**
PEL				IAML		12 13 44.8	
	comp=E,182nm,0.4s						
PEL	**Peldehue**	**3.40**	**166**	eP	**Pn**	12 12 47.0	**+0.5**
PEL				eS	**Sn**	12 13 28.9	**+2.4**
PEL				IAML		12 13 43.1	
	comp=Z,101nm,0.5s						
CFA	**Coronel Fontan**	**3.43**	**122**	eP	**Pn**	12 12 47.8	**+0.8**
CFA				eS	**Sn**	12 13 25.6	**-1.9**
MT02	**Curacav**	**3.44**	**173**	eP	**Pn**	12 12 46.3	**-0.7**
MT02				eS	**Sn**	12 13 26.3	**-1.2**
MT02				IAML		12 13 41.9	
	comp=E,107nm,0.6s						
MT02	**Curacav**	**3.44**	**173**	eP	**Pn**	12 12 46.7	**-0.3**
MT02				eS	Sn	12 13 21.9	-5.6
MT02				IAML		12 13 49.3	
	comp=Z,108nm,0.5s						
MT10	**Hacienda Santa**	**3.55**	**165**	eP	**Pn**	12 12 49.0	**+0.3**
MT10				eS	**Sn**	12 13 28.6	**-2.0**
ASAL	**Salagasta**	**3.66**	**139**	eP	**Pn**	12 12 52.7	**+2.7**
ASAL				eS	**Sn**	12 13 40.5	**+7.5**
AVFE	**Valle Fertil**	**3.73**	**104**	eP	**Pn**	12 12 51.7	**+0.6**
AVFE				eS	**Sn**	12 13 31.2	**-3.6**
AVFE				IAML		12 13 51.8	
	comp=Z,159nm,0.8s						
AC02	**Maricunga**	**3.74**	**37**	eP	**Pn**	12 12 51.8	**+0.3**
AC02				eS	**Sn**	12 13 37.0	**+1.4**
AC02				IAML		12 13 52.2	
	comp=Z,182nm,0.9s						
AC01	**Pan de Azucar**	**3.80**	**15**	eS	**Sn**	12 13 44.3	**+7.9**
AC01				IAML		12 13 54.1	
	comp=Z,96nm,0.6s						
MT08	**Bocatoma Ro**	**3.86**	**159**	eP	**Pn**	12 12 55.2	**+2.2**
MT08				IAML		12 13 57.9	
	comp=Z,59nm,0.8s						
TINO	**Tinogasta**	**4.00**	**65**	eS	**Sn**	12 13 47.0	**+5.3**
MT13	**San Alfonso**	**4.06**	**164**	eP	**Pn**	12 12 56.8	**+1.1**
LMEL	**Las Melosas**	**4.18**	**163**	eS	**Sn**	12 13 46.7	**+0.6**
LMEL				eS	**Sn**	12 13 46.7	**+0.6**
ACAN	**Cantantal**	**4.54**	**123**	eP	**Pn**	12 13 02.0	**-0.2**
BO02	**Sierra Bellavi**	**4.99**	**172**	eP	**Pn**	12 13 08.6	**+0.2**
BO02				eP	**Pn**	12 13 08.6	**+0.2**

*IDC **21** 12:15:34.9±1.4, 39°.31N×28°.27E, h0km, mb3.7/4, mbtmp3.7/8, ML3.8/4, MS3.0/8, Error ellipse: s-maj=23.4km s-min=17.4km az=175.0*
*ISK **21** 12:15:35.8, 39°.34N×28°.28E, h7km, ML3.9/94*
*AFAD **21** 12:15:36.7, 39°.38N×28°.28E, h12km±2km, MW3.9*
*THE **21** 12:15:36.9, 39°N±4°×2°8E±°, h8km±40km, M3.8/10, MLh3.8/10*
ISC 21 12:15:36.4±1.0, 39°.33N±0°.02×28°.28E±0°.02, h8km±8km, n163, σ0s70/186, mb3.2/3, MS3.4/3, 13C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.38**	**44**	Pg	**Pg**	12 15 43.4	**-0.5**
DST				Sg	**Sg**	12 15 49.0	**+0.1**
GORD	**Gordes-Manisa**	**0.43**	**191**	Pg	**Pg**	12 15 44.9	**+0.2**
BALB	**Balikesir**	**0.44**	**315**	Pg	**Pg**	12 15 45.1	**+0.2**
BALB				Sg	**Sg**	12 15 51.9	**+1.2**
BKES	**Balkesir-Mer**	**0.48**	**326**	P	**Pg**	12 15 45.5	**-0.3**
BKES				S	**Sg**	12 15 52.2	**0.0**
AKS	**Akhisar**	**0.58**	**219**	Pg	**Pg**	12 15 47.4	**-0.1**
SMAA	**Simav-Kutahya**	**0.59**	**112**	Pg	**Pg**	12 15 47.9	**+0.1**
SMAA				Sg	**Sg**	12 15 56.6	**+1.0**
BLKS	**Balkesir-Sus**	**0.59**	**336**	P	**Pg**	12 15 47.2	**-0.7**
BLKS				S	**Sg**	12 15 55.5	**-0.2**
SIMA	**Simav-Kutahya**	**0.60**	**114**	Pg	**Pg**	12 15 47.9	**-0.1**
SIMA				Sg	**Sg**	12 15 57.1	**+1.2**
SOMA	**Soma-Manisa**	**0.60**	**254**	Pg	**Pg**	12 15 47.5	**-0.5**
SUSR	**Susurluk-Balik**	**0.65**	**347**	Pg	**Pg**	12 15 48.6	**-0.6**
BALY	**Balya**	**0.65**	**309**	P	**Pg**	12 15 49.6	**+0.6**
BALY				S	**Sg**	12 15 57.7	**+0.1**
GOMA	**Golmarmara-Man**	**0.68**	**204**	Pg	**Pg**	12 15 49.6	**+0.1**
SHAP	**Saphane-Kutahy**	**0.80**	**112**	Pg	**Pg**	12 15 51.7	**0.0**
EMET	**Ktahya-Emet**	**0.81**	**86**	SPECP		12 15 52.0	
EMET				P	**Pg**	12 15 52.1	**+0.1**
EMET				S	**Sg**	12 16 03.3	**+0.7**
GONE	**Gonen-Balikesi**	**0.85**	**328**	Pg	**Pg**	12 15 52.3	**-0.4**
ORLT	**Orhaneli**	**0.86**	**33**	Pg	**Pg**	12 15 52.6	**-0.4**
KULA	**Kula-Manisa**	**0.87**	**160**	Pg	**Pg**	12 15 52.9	**-0.2**
GEDZ	**Gediz**	**0.93**	**108**	Pg	**Pg**	12 15 54.2	**0.0**
TVSB	**Tavsanli**	**0.93**	**82**	Pg	**Pg**	12 15 53.9	**-0.3**
KCTX	**Karacabey (Bur**	**0.94**	**4**	Pg	**Pg**	12 15 53.9	**-0.5**
YAYO	**Edremit-Balk**	**0.97**	**287**	Pg	**Pg**	12 15 54.5	**-0.6**
YENI	**Yenice-Canakka**	**1.00**	**308**	Pg	**Pg**	12 15 55.2	**-0.5**
BAND	**Balkesir-Ban**	**1.03**	**352**	SPECP		12 15 55.0	
BAND				P	**Pg**	12 15 55.6	**-0.7**
BAND				S	**Sg**	12 16 09.5	**-0.2**
BAND	**Balkesir-Ban**	**1.03**	**352**	⇓P	**Pg**	12 15 56.4	**+0.1**
ULDT	**Uludag**	**1.05**	**39**	SPECP		12 15 55.0	
ULDT				P	**Pg**	12 15 55.8	**-0.8**
ULDT				S	**Sn**	12 16 12.8	**+0.3**
YYLC	**Yaylacik**	**1.06**	**23**	P	**Pg**	12 15 56.8	**0.0**
YYLC				S	**Sn**	12 16 13.8	**+1.3**
ODEM	**Odemis-Izmir**	**1.06**	**189**	Pg	**Pg**	12 15 56.6	**-0.2**
EDC	**Edincik**	**1.06**	**343**	Pg	**Pg**	12 15 56.1	**-0.8**
DKL	**Dikili**	**1.10**	**257**	Pn	**Pg**	12 15 57.3	**-0.1**
MDNY	**Mudanya-Bursa**	**1.14**	**24**	Pn	**Pg**	12 15 57.9	**-0.4**
CANM	**Can-anakkale**	**1.17**	**306**	Pn	**Pg**	12 15 58.2	**-0.6**
AVDN	**Avdancik/Bursa**	**1.18**	**35**	SPECP		12 15 58.0	
AVDN				P	**Pg**	12 15 58.9	**-0.2**
AVDN				S	**Sn**	12 16 16.9	**+1.4**
KRBG	**Karabiga-Canak**	**1.30**	**325**	Pn	**Pn**	12 16 00.1	**-0.8**
ARMT	**Armutlu**	**1.31**	**20**	Pn	**Pn**	12 16 00.6	**-0.5**
BLCB	**Balcova**	**1.35**	**226**	Pn	**Pn**	12 16 00.9	**-0.6**
BLCB	**Balcova**	**1.35**	**226**	P	**Pn**	12 16 01.1	**-0.4**
BLCB				S	**Sn**	12 16 20.2	**+0.7**
NAZL	**Nazilli-Aydin**	**1.36**	**180**	Pn	**Pn**	12 16 01.3	**-0.4**
MRMT	**Marmara Adasi**	**1.38**	**338**	Pn	**Pn**	12 16 01.7	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.41**	**192**	Pn	**Pn**	12 16 02.3	**-0.2**
KURT	**Yalova, Merkez**	**1.45**	**29**	P	**Pn**	12 16 02.8	**-0.1**
KURT				S	**Sg**	12 16 23.6	**+0.6**
BILE	**Bilecik/Merkez**	**1.49**	**55**	SPECP		12 16 03.0	
BILE				P	**Pn**	12 16 03.5	**0.0**
BILE				S	**Sg**	12 16 24.5	**+0.3**
CAVI	**Cavuskoy**	**1.49**	**54**	Pn	**Pn**	12 16 03.4	**-0.1**
YLV	**Yalova**	**1.50**	**34**	Pn	**Pn**	12 16 03.1	**-0.5**
EZNE	**Ezine-Canakkal**	**1.54**	**287**	Pn	**Pn**	12 16 04.3	**+0.2**
PRK	**Paraskevi**	**1.56**	**268**	P	**Pn**	12 16 04.4	**0.0**
PRK				S	**Sg**	12 16 26.9	**+0.4**
LPK	**Lapseki**	**1.56**	**312**	Pn	**Pn**	12 16 04.4	**-0.1**
ADVT	**Abdulvahap**	**1.57**	**45**	Pn	**Pn**	12 16 04.6	**0.0**
EZN	**Ezine**	**1.59**	**289**	Pn	**Pn**	12 16 04.7	**-0.2**
EZN	**Ezine**	**1.59**	**289**	P	**Pn**	12 16 04.7	**0.0**
EZN				S	**Sg**	12 16 27.7	**+0.2**
EZN	**Ezine**	**1.59**	**289**	⇑P	**Pn**	12 16 04.7	**0.0**
COMU	**Canakkale**	**1.59**	**300**	Pn	**Pn**	12 16 04.9	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.60**	**328**	Pn	**Pn**	12 16 05.0	**0.0**
URLA	**Izmir**	**1.63**	**234**	Pn	**Pn**	12 16 04.9	**-0.5**
GMLD	**Gumuldur**	**1.64**	**221**	Pn	**Pn**	12 16 06.3	**+0.8**
LAFA	**Gebze-Kocaeli**	**1.65**	**30**	Pn	**Pn**	12 16 05.8	**+0.2**
KUSD	**Kusadasi-Aydin**	**1.66**	**208**	Pn	**Pn**	12 16 06.5	**+0.7**
HYBA	**Heybeliada-Ist**	**1.66**	**22**	Pn	**Pn**	12 16 05.2	**-0.6**
TUZL	**Tuzla-Istanbul**	**1.67**	**27**	Pn	**Pn**	12 16 05.5	**-0.3**
GPNR	**Gulpinar-Canak**	**1.67**	**275**	Pn	**Pn**	12 16 05.8	**0.0**
BRGA	**Burgazada-Ista**	**1.67**	**21**	Pn	**Pn**	12 16 06.0	**+0.1**
BUYA	**Buyukada-Istan**	**1.67**	**23**	Pn	**Pn**	12 16 06.1	**+0.2**
BOTS	**Marmara Eregli**	**1.68**	**352**	Pn	**Pn**	12 16 05.9	**-0.1**
OSMT	**Osmaniye**	**1.68**	**40**	Pn	**Pn**	12 16 04.7	**-1.4**
SINR	**Sinanoba-Istan**	**1.68**	**7**	Pn	**Pn**	12 16 06.2	**+0.2**
YKBL	**Yakuplu-Istanb**	**1.69**	**10**	Pn	**Pn**	12 16 06.3	**+0.2**
HVHR	**Bakirkoy-Istan**	**1.70**	**15**	Pn	**Pn**	12 16 06.0	**-0.2**
AVCI	**Avcilar-stanb**	**1.70**	**11**	Pn	**Pn**	12 16 06.4	**+0.1**
HISA	**Bilecik-Osmane**	**1.70**	**48**	SPECP		12 16 06.0	
HISA				P	**Pn**	12 16 06.2	**-0.2**
HISA				S	**Sg**	12 16 32.0	**+1.0**
GELI	**Tayfur-Gelibol**	**1.75**	**308**	Pn	**Pn**	12 16 07.2	**+0.2**
TKR	**Tekirdag**	**1.75**	**341**	Pn	**Pn**	12 16 07.3	**+0.2**
BOZC	**Bozcaada**	**1.79**	**287**	Pn	**Pn**	12 16 07.6	**0.0**
GCAM	**G?zelcaml?**	**1.82**	**207**	Pn	**Pn**	12 16 07.8	**-0.2**
HRT	**Hereke**	**1.83**	**35**	Pn	**Pn**	12 16 07.6	**-0.6**
ISK	**Istanbul-Kandi**	**1.83**	**19**	Pn	**Pn**	12 16 07.4	**-0.8**
GPA	**Golpazari**	**1.84**	**58**	Pn	**Pn**	12 16 08.2	**0.0**
CESE	**eme**	**1.84**	**238**	Pn	**Pn**	12 16 08.8	**+0.6**
CRLT	**Corlu**	**1.84**	**347**	Pn	**Pn**	12 16 08.5	**+0.2**
SIGR	**SIGRI**	**1.88**	**267**	Pn	**Pn**	12 16 08.2	**-0.6**
SIGR	**SIGRI**	**1.88**	**267**	P	**Pn**	12 16 08.6	**-0.3**
SIGR				S	**Sn**	12 16 34.2	**+1.4**
BGKT	**Bogazkoy**	**1.89**	**11**	Pn	**Pn**	12 16 08.1	**-0.8**
SLVT	**Silivri**	**1.90**	**358**	Pn	**Pn**	12 16 07.7	**-1.4**
SEMS	**Kocaeli-K¶rfe**	**1.91**	**36**	SPECP		12 16 12.0	
SEMS				P	**Pg**	12 16 12.5	**-0.4**
SEMS				S	**Sg**	12 16 36.7	**-1.0**
ERIK	**Erikli-Kesan**	**1.91**	**315**	Pn	**Pn**	12 16 09.2	**+0.1**
CTKS	**Kestanelik-??a**	**1.91**	**5**	Pn	**Pn**	12 16 08.6	**-0.6**
SHUT	**Suhut-Afyon**	**1.94**	**113**	Pn	**Pn**	12 16 10.5	**+0.8**
SMG	**Samos**	**1.97**	**215**	P	**Pn**	12 16 10.5	**+0.4**
SMG				S	**Sn**	12 16 35.0	**0.0**
CHOS	**Chios island**	**1.97**	**242**	Pn	**Pn**	12 16 09.5	**-0.7**
CHOS	**Chios island**	**1.97**	**242**	P	**Pn**	12 16 10.0	**-0.2**
CHOS				S	**Sn**	12 16 35.7	**+0.6**
BASM	**Basmaki-Afyon**	**1.98**	**135**	Pn	**Pn**	12 16 10.7	**+0.5**
KLYT	**Kilyos**	**2.01**	**17**	Pn	**Pn**	12 16 10.1	**-0.5**
KLYT	**Kilyos**	**2.01**	**17**	⇑P	**Pn**	12 16 10.3	**-0.3**
APMY	**Acipayam-Deniz**	**2.02**	**156**	Pn	**Pn**	12 16 10.8	**0.0**
GADA	**Gvkgeada**	**2.02**	**296**	Pn	**Pn**	12 16 11.1	**+0.3**
GADA	**Gvkgeada**	**2.02**	**296**	P	**Pn**	12 16 11.1	**+0.3**
GADA				S	**Sb**	12 16 38.9	**+0.1**
GULT	**Gulveren**	**2.04**	**57**	Pn	**Pn**	12 16 11.3	**+0.2**
MLSB	**Milas**	**2.07**	**191**	Pn	**Pn**	12 16 09.1	**-2.3**
ENZZ	**Sultanice-Enez**	**2.08**	**309**	Pn	**Pn**	12 16 11.9	**+0.4**
SAUV	**Serdivan-Sakar**	**2.11**	**48**	Pn	**Pn**	12 16 11.3	**-0.7**
CAVK	**Edirne/Enez-Ca**	**2.12**	**311**	⇓P	**Pn**	12 16 12.5	**+0.5**
CTYL	**Yalikoy Yolu**	**2.14**	**0**	Pn	**Pn**	12 16 12.1	**-0.3**
CTYL	**Yalikoy Yolu**	**2.14**	**0**	⇑P	**Pn**	12 16 12.2	**-0.2**
ENEZ	**Enez**	**2.15**	**311**	Pn	**Pn**	12 16 12.9	**+0.4**
ENEZ	**Enez**	**2.15**	**311**	P	**Pn**	12 16 13.1	**+0.6**
ENEZ				S	**Sn**	12 16 41.1	**+1.7**
CIFT	**Cifteler, Eski**	**2.16**	**88**	Pn	**Pn**	12 16 13.2	**+0.5**
YER	**Yerkesik**	**2.19**	**180**	Pn	**Pn**	12 16 13.0	**-0.1**
YER	**Yerkesik**	**2.19**	**180**	P	**Pn**	12 16 13.1	**-0.1**
YER				S	**Sn**	12 16 39.6	**-0.8**
UKOP	**Uzunkopru-Edir**	**2.19**	**326**	Pn	**Pn**	12 16 13.7	**+0.6**
ISP	**Isparta**	**2.31**	**130**	Pn	**Pn**	12 16 15.4	**+0.5**
YKAV	**Yalikavak-Bodr**	**2.34**	**200**	Pn	**Pn**	12 16 16.2	**+1.1**
PHSR	**Pinarhisar**	**2.37**	**346**	Pn	**Pn**	12 16 15.8	**+0.3**
BODT	**Bodrum**	**2.39**	**199**	Pn	**Pn**	12 16 16.2	**+0.4**
SMTH	**Samothraki Isl**	**2.40**	**299**	P	**Pn**	12 16 16.2	**+0.2**
LIA	**Limnos Island**	**2.46**	**284**	P	**Pn**	12 16 17.1	**+0.4**
SAHE	**Sakarya_HENDEK**	**2.49**	**52**	⇓P	**Pn**	12 16 17.5	**+0.2**
CAME	**Cameli-Denizli**	**2.52**	**161**	Pn	**Pn**	12 16 18.4	**+0.7**
SVRH	**Sivrihisar-ESK**	**2.52**	**86**	Pn	**Pn**	12 16 18.2	**+0.5**
MDUB	**Mudurnu**	**2.52**	**62**	Pn	**Pn**	12 16 18.2	**+0.5**
DALY	**Dalyan (Mula)**	**2.52**	**173**	Pn	**Pn**	12 16 17.9	**+0.3**
TURN	**Turunc**	**2.55**	**181**	Pn	**Pn**	12 16 17.4	**-0.6**
BCK	**Bucak**	**2.60**	**135**	Pn	**Pn**	12 16 19.7	**+0.9**
DAT	**Datca**	**2.65**	**192**	Pn	**Pn**	12 16 20.4	**+0.9**
FETY	**Fethiye**	**2.76**	**166**	P	**Pn**	12 16 21.1	**+0.1**
FETY				S	**Sn**	12 16 53.9	**-0.7**
EDRB	**Edirne**	**2.77**	**336**	Pn	**Pn**	12 16 21.0	**-0.1**
RDO	**Rodhopi**	**2.77**	**312**	Pn	**Pn**	12 16 21.5	**+0.4**
RDO	**Rodhopi**	**2.77**	**312**	P	**Pn**	12 16 21.6	**+0.5**
RDO				S	**Sn**	12 16 55.8	**+1.1**
YUVA	**Yuva-Kibriscik**	**2.83**	**67**	Pn	**Pn**	12 16 22.7	**+0.7**
KIZT	**Kizilcal**	**2.84**	**98**	Pn	**Pn**	12 16 21.2	**-0.9**
KORT	**Korkueli**	**2.84**	**144**	Pn	**Pn**	12 16 23.1	**+1.0**
ELL	**Elmali**	**2.88**	**153**	Pn	**Pn**	12 16 23.6	**+0.9**
POLA	**Polatl-ANKAR**	**3.03**	**82**	Pn	**Pn**	12 16 25.5	**+0.8**
ELND	**Elena**	**4.03**	**334**	⇑P	**Pn**	12 16 38.5	**+0.2**
BRTR	**Keskin Array B**	**4.17**	**83**	Pn	**Pn**	12 16 41.5

OBF0	**Syolatti, Pyha**	**2.87**	**266**	PB	**Pn**	**12 21 00.8**	**+2.0**
OBF0				smax	smax	12 21 35.3		
	comp=Z,12nm,0.2s							
APA0	**Apatity Array**	**2.93**	**16**	P	**Pn**	**12 21 02.0**	**+2.5**
SUF	**Sumiainen**	**2.97**	**227**	PB	**Pn**	**12 21 02.3**	**+2.1**
SUF				smax	smax	12 21 37.9		
	comp=Z,5.6nm,0.2s							
VRF	**Varrio**	**2.98**	**351**	PB	**Pn**	**12 21 02.6**	**+2.2**
VRF				smax	smax	12 21 40.7		
	comp=Z,4.3nm,0.2s							
TOF	**Tornio**	**3.01**	**298**	PB	**Pn**	**12 21 01.7**	**+1.1**
TOF				smax	smax	12 21 39.9		
	comp=Z,4.4nm,0.2s							
TOF				SG	**Sb**	**12 21 43.4**	**0.0**
OBF8	**Ulkokalla**	**3.24**	**265**	PN	**Pn**	**12 21 04.2**	**+0.4**
KALU	**Kalix**	**3.31**	**292**	PN	**Pn**	**12 21 06.0**	**+1.1**
	baz=105							
KALU				SG	**Sb**	**12 21 54.8**	**+2.6**
LVZ	**Lovozero**	**3.44**	**25**	PN	**Pn**	**12 21 08.4**	**+1.7**
RUF	**Ruokolahti**	**3.52**	**195**	PN	**Pn**	**12 21 09.0**	**+1.3**
KLF	**Kolari**	**3.71**	**314**	PN	**Pn**	**12 21 11.4**	**+1.0**
KEF	**Keuruu**	**3.78**	**228**	*e*P	**Pn**	**12 21 12.2**	**+0.9**
KEF	**Keuruu**	**3.78**	**228**	PB	**Pn**	**12 21 19.9**	**+4.5**
RAJF	**Raja–Jooseppi**	**3.81**	**346**	PN	**Pn**	**12 21 13.5**	**+1.8**
PAJU	**Pajala**	**3.87**	**308**	PN	**Pn**	**12 21 13.3**	**+0.7**
ERTU	**Ertsjaerv**	**3.98**	**300**	PN	**Pn**	**12 21 15.5**	**+1.4**
FIA0	**FINESS Array S**	**4.03**	**215**	PB	**Pn**	**12 21 18.9**	**+4.2**
	baz=27							
FIA0				SG	**Sb**	**12 22 16.5**	**+3.8**
FINES	**FINESS Array B**	**4.03**	**215**	Pn	**Pn**	**12 21 14.7**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=33,slow=14,SNR=12							
FINES				Pg	**Pb**	**12 21 22.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=31,slow=15,SNR=11							
FINES				Lg	Lg	12 22 15.7		
	comp=Z,1.3nm,0.3s,baz=33,slow=26,SNR=4.8							
	comp=Z,0.6nm,0.3s							
VAF	**Ylistaro**	**4.03**	**247**	*e*P	**Pn**	**12 21 16.4**	**+1.7**
VAF	**Ylistaro**	**4.03**	**247**	PB	**Pn**	**12 21 17.7**	**+3.0**
BURU	**Burvik**	**4.08**	**271**	PN	**Pn**	**12 21 17.1**	**+1.7**
UMAU	**Umeaa**	**4.53**	**263**	PN	**Pn**	**12 21 20.5**	**-1.0**
HEF	**Hetta**	**4.60**	**325**	PN	**Pn**	**12 21 23.0**	**+0.4**
	baz=139							
ARCES	**ARCESS Array B**	**5.17**	**339**	Pn	**Pn**	**12 21 30.7**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=155,slow=14,SNR=63							
ARCES				Sn	**Sn**	**12 22 29.2**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=154,slow=25,SNR=3.6							
ARCES				Lg	Lg	12 22 53.7		
	comp=Z,0.6nm,0.3s,baz=151,slow=29,SNR=7.5							
	comp=Z,2.4nm,0.2s							
ARCES	**ARCESS Array B**	**5.17**	**339**	P	**Pn**	**12 21 30.8**	**+0.4**
ARCES				S	**Sn**	**12 22 31.9**	**+1.3**
RAF	**Rauma**	**5.64**	**232**	*e*P	**Pn**	**12 21 36.9**	**+0.1**
FAUS	**Fauske**	**6.82**	**299**	S	**Sn**	**12 23 12.6**	**+1.3**
AAL	**Aland**	**6.85**	**232**	*e*P	**Pn**	**12 21 54.0**	**+0.6**
I43RU	**DUBNA INFRASON**	**8.70**	**156**	I	I	13 13 50.0		
	baz=347,slow=334,SNR=2.5							
HFS	**Hagfors**	**9.22**	**247**	Pn	**Pn**	**12 22 24.0**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=51,slow=14,SNR=5.5							
HFS				Sn	Sn	12 24 01.9	-8.2	
	comp=Z,0.1nm,0.3s,baz=56,slow=24,SNR=2.9							
HFS				Lg	Lg	12 24 56.1		
	comp=Z,0.5nm,0.3s,baz=58,slow=30,SNR=5.6							
	comp=Z,2.6nm,1.0s							
NOA	**NORSAR Array B**	**9.71**	**256**	Pn	**Pn**	**12 22 30.4**	**-2.2**
	baz=55,slow=12,SNR=1.2							
	comp=Z,0.3nm,0.5s							

*ISK **21** 12:27:20.2,39°.34N×28°.27E,h7km,ML3.6/53*
*AFAD **21** 12:27:21.1,39°.38N×28°.27E,h8km±2km,ML3.3*
*THE **21** 12:27:22.5,39°.N±3°×2°.8E±°,h15km±32km,M3.3/8,*
MLh3.3/8

ISC 21 12:27:20.7±1.0,**39°.34N**±0°.02×**28°.27E**±0°.02,**h8**km±9km,
n77,σ0§**41**/105,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DURS	**Dursunbey**	**0.31**	**31**	P	**Pg**	**12 27 36.3**	**-0.6**
DURS				S	**Sg**	**12 27 30.7**	**-0.3**
DURS				*i* IAML		12 27 33.0		
	comp=N,3μm,0.9s							
DURS				*i* IAML		12 27 34.0		
	comp=E,4μm,0.4s							
DST	**Dursunbey**	**0.38**	**45**	Pg	**Pg**	**12 27 27.6**	**-0.6**
BALB	**Balikesir**	**0.43**	**315**	Pg	**Pg**	**12 27 29.5**	**+0.4**
BALB				Sg	**Sb**	**12 27 36.6**	**-0.7**
GORD	**Gordes-Manisa**	**0.43**	**190**	Pg	**Pg**	**12 27 29.0**	**-0.1**
GORD				Sg	**Sg**	**12 27 35.4**	**+0.6**
BKES	**Balkesir-Mer**	**0.48**	**327**	P	**Pg**	**12 27 29.8**	**-0.2**
BKES				S	**Sg**	**12 27 36.5**	**+0.3**
BKES				*i* IAML		12 27 37.0		
	comp=E,2μm,0.5s							
AKS	**Akhisar**	**0.58**	**218**	Pg	**Pg**	**12 27 31.8**	**-0.1**
AKS				Sg	**Sb**	**12 27 40.7**	**-0.8**
BLKS	**Balkesir-Sus**	**0.59**	**337**	P	**Pg**	**12 27 31.7**	**-0.4**
BLKS				S	**Sg**	**12 27 39.6**	**-0.1**
SMAA	**Simav-Kutahya**	**0.60**	**113**	Pg	**Pg**	**12 27 32.5**	**+0.2**
SMAA				Sg	**Sb**	**12 27 41.3**	**-0.9**
SOMA	**Soma-Manisa**	**0.60**	**253**	Pg	**Pg**	**12 27 32.3**	**0.0**
SIMA	**Simav-Kutahya**	**0.61**	**114**	Pg	**Pg**	**12 27 32.4**	**-0.1**
SUSR	**Susurluk-Balik**	**0.64**	**347**	Pg	**Pg**	**12 27 32.9**	**-0.3**
GOMA	**Golmarmara-Man**	**0.68**	**204**	Pg	**Pg**	**12 27 33.8**	**-0.1**
GOMA				Sg	**Sg**	**12 27 43.5**	**+0.7**
SHAP	**Saphane-Kutahy**	**0.80**	**113**	Pg	**Pg**	**12 27 36.1**	**-0.1**
GONE	**Gonen-Balikesi**	**0.84**	**328**	Pg	**Pg**	**12 27 37.1**	**+0.2**
ORLT	**Orhaneli**	**0.86**	**34**	Pg	**Pb**	**12 27 37.9**	**-0.1**
ORLT				Sg	**Sb**	**12 27 49.4**	**-0.3**
KULA	**Kula-Manisa**	**0.87**	**159**	Pg	**Pg**	**12 27 37.3**	**-0.2**
TVSB	**Tavsanli**	**0.93**	**83**	Pg	**Pg**	**12 27 38.2**	**-0.4**
GEDZ	**Gediz**	**0.93**	**108**	Pg	**Pb**	**12 27 39.3**	**+0.1**
KCTX	**Karacabey (Bur**	**0.93**	**4**	Pg	**Pg**	**12 27 38.2**	**-0.5**
YAYO	**Edremit-Balk**	**0.97**	**287**	Pg	**Pg**	**12 27 38.8**	**-0.5**
YENI	**Yenice-Canakka**	**1.00**	**307**	Pg	**Pg**	**12 27 39.3**	**-0.6**
YENI				Sg	**Sb**	**12 27 53.7**	**+0.1**
BAND	**Balkesir-Ban**	**1.03**	**353**	P	**Pg**	**12 27 39.7**	**-0.8**
BAND				S	**Sg**	**12 27 54.0**	**+0.2**
BAND				*i* IAML		12 27 56.0		
	comp=E,1μm,0.2s							
BAND				*i* IAML		12 27 57.0		
	comp=N,919nm,0.4s							
ULDT	**Uludag**	**1.05**	**39**	P	**Pg**	**12 27 40.4**	**-0.5**
ULDT				S	**Sn**	**12 27 57.3**	**+0.4**
ULDT				*i* IAML		12 27 58.0		
	comp=E,2μm,0.2s							
YYLC	**Yaylacik**	**1.05**	**23**	P	**Pg**	**12 27 40.7**	**-0.3**
YYLC				S	**Sn**	**12 27 56.3**	**-0.5**
EDC	**Edincik**	**1.06**	**343**	Pg	**Pg**	**12 27 40.6**	**-0.5**
ODEM	**Odemis-Izmir**	**1.07**	**188**	Pg	**Pg**	**12 27 41.0**	**-0.2**
DKL	**Dikili**	**1.09**	**257**	Pn	**Pb**	**12 27 41.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.14**	**24**	Pn	**Pb**	**12 27 42.5**	**-0.2**
CANM	**Can-anakkale**	**1.16**	**306**	Pn	**Pg**	**12 27 43.3**	**+0.3**
KRBG	**Karabiga-Canak**	**1.30**	**325**	Pn	**Pn**	**12 27 45.2**	**0.0**
KRBG				Sn	**Sn**	**12 28 02.5**	**-0.2**
ARMT	**Armutlu**	**1.31**	**20**	Pn	**Pn**	**12 27 45.0**	**-0.4**
BLCB	**Balcova**	**1.35**	**226**	Pn	**Pn**	**12 27 45.8**	**-0.1**
BLCB	**Balcova**	**1.35**	**226**	P	**Pn**	**12 27 45.5**	**-0.4**
BLCB				S	**Sg**	**12 28 04.2**	**+0.1**
NAZL	**Nazilli-Aydin**	**1.37**	**179**	Pn	**Pb**	**12 27 46.6**	**0.0**
MRMT	**Marmara Adasi**	**1.37**	**338**	Pn	**Pb**	**12 27 46.9**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.42**	**192**	Pn	**Pn**	**12 27 46.9**	**-0.1**
KURT	**Yalova, Merkez**	**1.45**	**30**	P	**Pg**	**12 27 48.7**	**+0.2**
KURT				P	**Pb**	**12 27 48.8**	**+0.9**
KURT				S	**Sg**	**12 28 07.5**	**+0.2**
KURT				*i* IAML		12 28 09.0		
	comp=N,550nm,0.2s							
CAVI	**Cavuskoy**	**1.49**	**54**	Pn	**Pn**	**12 27 47.9**	**0.0**
YLV	**Yalova**	**1.49**	**34**	Pn	**Pn**	**12 27 47.5**	**-0.5**
PRK	**Paraskevi**	**1.55**	**267**	P	**Pn**	**12 27 48.6**	**-0.1**
PRK				S	**Sn**	**12 28 08.8**	**-0.2**
LPK	**Lapseki**	**1.56**	**312**	Pn	**Pn**	**12 27 48.9**	**+0.1**
ADVT	**Abdulvahap**	**1.57**	**45**	Pn	**Pn**	**12 27 48.9**	**-0.1**
EZN	**Ezine**	**1.58**	**289**	Pn	**Pn**	**12 27 48.9**	**-0.2**
EZN	**Ezine**	**1.58**	**289**	P	**Pn**	**12 27 48.9**	**-0.2**
EZN				S	**Sb**	**12 28 10.7**	**+0.3**
COMU	**Canakkale**	**1.58**	**299**	Pn	**Pn**	**12 27 49.1**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.59**	**329**	Pn	**Pn**	**12 27 49.4**	**+0.1**
YLVH	**Yalova**	**1.60**	**32**	Pn	**Pn**	**12 27 49.6**	**+0.2**
URLA	**Izmir**	**1.63**	**234**	Pn	**Pn**	**12 27 49.2**	**-0.6**
LAFA	**Gebze-Kocaeli**	**1.65**	**30**	Pn	**Pn**	**12 27 50.3**	**+0.3**
GPNR	**Gulpinar-Canak**	**1.66**	**275**	Pn	**Pn**	**12 27 50.4**	**+0.2**
KUSD	**Kusadasi-Aydin**	**1.66**	**208**	Pn	**Pn**	**12 27 50.5**	**+0.3**
OSMT	**Osmaniye**	**1.68**	**40**	Pn	**Pn**	**12 27 50.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.74**	**308**	Pn	**Pn**	**12 27 51.5**	**+0.2**
BOZC	**Bozcaada**	**1.79**	**287**	Pn	**Pn**	**12 27 51.9**	**0.0**
ELBA	**Catalca**	**1.81**	**4**	P	**Pb**	**12 27 54.2**	**0.0**
ELBA				S	**Sb**	**12 28 17.7**	**+0.6**
GCAM	**G?zelcaml?**	**1.82**	**207**	Pn	**Pn**	**12 27 52.7**	**+0.3**
GPA	**Golpazari**	**1.84**	**58**	Pn	**Pn**	**12 27 52.8**	**+0.1**
SIGR	**SIGRI**	**1.88**	**267**	P	**Pn**	**12 27 53.0**	**-0.2**
SIGR				S	**Sn**	**12 28 17.6**	**+0.6**
ERIK	**Erikli-Kesan**	**1.90**	**315**	Pn	**Pn**	**12 27 53.7**	**+0.2**
SHUT	**Suhut-Afyon**	**1.94**	**113**	Pn	**Pn**	**12 27 54.6**	**+0.4**
CHOS	**Chios island**	**1.97**	**242**	Pn	**Pn**	**12 27 54.3**	**-0.3**
CHOS	**Chios island**	**1.97**	**242**	P	**Pn**	**12 27 54.2**	**-0.3**
CHOS				S	**Sn**	**12 28 18.5**	**-1.0**
SMG	**Samos**	**1.98**	**215**	P	**Pn**	**12 27 54.7**	**+0.1**
SMG				S	**Sn**	**12 28 19.2**	**-0.4**
BASM	**Basmaki-Afyon**	**1.98**	**135**	Pn	**Pn**	**12 27 55.1**	**+0.4**
GADA	**Gvkgeada**	**2.02**	**296**	P	**Pn**	**12 27 55.4**	**+0.3**
GADA				S	**Sn**	**12 28 20.6**	**+0.1**
APMY	**Acipayam-Deniz**	**2.03**	**156**	Pn	**Pn**	**12 27 55.3**	**0.0**
GULT	**Gulveren**	**2.05**	**57**	Pn	**Pn**	**12 27 55.6**	**0.0**
SAUV	**Serdivan-Sakar**	**2.11**	**48**	Pn	**Pn**	**12 27 56.9**	**+0.5**
ENEZ	**Enez**	**2.15**	**311**	Pn	**Pn**	**12 27 57.3**	**+0.4**
ENEZ	**Enez**	**2.15**	**311**	P	**Pn**	**12 27 57.3**	**+0.4**
ENEZ				S	**Sn**	**12 28 23.9**	**+0.2**
CIFT	**Cifteler, Eski**	**2.17**	**88**	Pn	**Pn**	**12 27 57.8**	**+0.6**
YER	**Yerkesik**	**2.20**	**180**	P	**Pn**	**12 27 57.2**	**-0.4**
ISP	**Isparta**	**2.32**	**130**	Pn	**Pn**	**12 27 59.9**	**+0.5**
BODT	**Bodrum**	**2.39**	**199**	P	**Pn**	**12 28 00.9**	**+0.7**
BODT				S	**Sn**	**12 28 29.5**	**-0.3**
SMTH	**Samothraki Isl**	**2.39**	**299**	P	**Pn**	**12 28 00.8**	**+0.5**
SMTH				S	**Sn**	**12 28 31.0**	**+1.1**
MDUB	**Mudurnu**	**2.52**	**62**	Pn	**Pn**	**12 28 02.9**	**+0.8**
FETY	**Fethiye**	**2.77**	**166**	P	**Pn**	**12 28 06.2**	**+0.7**
FETY				S	**Sn**	**12 28 38.8**	**-0.4**

*IDC **21** 12:30:52.0±1.5,19°.41N×101°.41E,h0km,mb3.5/4,*
mbtmp3.6/6,ML4.1/2,Error ellipse: s-maj=28.5km
s-min=15.0km az=143.0
*BKK **21** 12:30:54.3±1.2,19°.N±5°×10°.1E±°,h4km±5km,M3.9/14,*
Mjma3.8/14,ML3.9/13,MLv3.9/14

ISC 21 12:30:53.9±0.9,**19°.46N**±0°.08×**101°.29E**±0°.08,**h10**km,**n12**,
σ0§**85**/**14**,**mb3.5/4**,**Laos**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAMP	**Lampang**	**1.82**	**239**	P	**Pn**	**12 31 25.8**	**+0.5**
UTTA	**Uttaradit**	**1.85**	**202**	P	**Pn**	**12 31 26.2**	**+0.6**
LOEI	**Loei**	**1.94**	**181**	P	**Pn**	**12 31 28.2**	**+1.2**
CMAI	**Chiengmai2**	**2.15**	**283**	P	**Pn**	**12 31 30.7**	**+0.6**
CHTO	**Chiang Mai**	**2.31**	**254**	P	**Pn**	**12 31 32.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**2.43**	**246**	Pn	**Pn**	**12 31 33.9**	**+0.2**
	5.6nm,0.3s,baz=66,slow=13,SNR=30							
CMAR				Pg	**Pg**	**12 31 39.6**	**-1.0**
	20nm,0.3s,baz=68,slow=17,SNR=55							
CMAR				Sn	**Sn**	**12 32 04.8**	**+1.3**
	10nm,0.3s,baz=63,slow=16,SNR=2.2							
CMAR				Lg	Lg	12 32 11.5		
	23nm,0.3s,baz=64,slow=38,SNR=17							
	10nm,0.3s							
CM05	**Chiang Mai Arr**	**2.45**	**245**	P	**Pn**	**12 31 34.3**	**+0.3**
LZDM	**Lanzhou Array**	**16.57**	**7**	Pn	**Pn**	**12 34 47.0**	**+0.3**
	baz=186,slow=8.5							
	2.5nm,0.4s							
SONM	**Songino Array**	**28.60**	**7**	P	**P**	**12 36 50.6**	**+0.2**
	0.3nm,0.4s,baz=194,slow=5.2,SNR=2.3							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**31.39**	**335**	P	**P**	**12 37 15.8**	**+0.8**
	0.3nm,0.5s,baz=140,slow=9.6,SNR=5.8							
	0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**36.67**	**344**	P	**P**	**12 38 00.3**	**-0.3**
	0.6nm,0.4s,baz=145,slow=8.3,SNR=6.9							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**53.38**	**142**	P	**P**	**12 40 12.6**	**-1.4**
	0.2nm,0.8s,baz=319,slow=7.4,SNR=1.2							
	0.2nm,0.8s							

*NEIC **21** 12:32:44.3±1.7,31°.4S±0°.1×81°.0W±0°.2,h10km±2km,*
mb4.2/6,Error ellipse: s-maj=22.3km s-min=18.2km
az=277.0
*GUC **21** 12:32:52.0±0.0,31°.28S×80°.49W,h14km,ML4.7*

ISC 21 12:32:40.1±4.0,**31°.3S**±0°.1×**81°.4W**±0°.4,**h10**km,**n41**,
σ1§**12**/**41**,**1C**,**Juan Fernandez Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA04	**Juan Fernndez**	**3.16**	**138**	*i*P	**Pn**	**12 33 29.3**	**-0.7**
VA04	**Juan Fernndez**	**3.16**	**138**	*i*P	**Pn**	**12 33 29.2**	**-0.7**
VA04				*i* S	Sn	12 33 58.0	-10	
VA04				IAML		12 34 00.5		
	comp=E,6μm,0.2s							
CO06	**Fray Jorge**	**8.39**	**88**	Pn	**Pn**	**12 34 40.4**	**-1.4**
CO06	**Fray Jorge**	**8.39**	**88**	*e*P	**Pn**	**12 34 40.4**	**-1.4**
VA06	**Catapilco**	**8.66**	**101**	Pn	**Pn**	**12 34 44.9**	**-0.6**
MT02	**Curacav**	**8.88**	**105**	Pn	**Pn**	**12 34 48.8**	**+0.2**
MT02	**Curacav**	**8.88**	**105**	*e*P	**Pn**	**12 34 48.0**	**-0.5**
CO02	**Combarbal**	**8.89**	**92**		**Pn**	**12 34 48.4**	**-0.3**
CO02	**Combarbal**	**8.89**	**92**	*e*P	**Pn**	**12 34 48.4**	**-0.3**
CO04	**Los Peladeros**	**8.90**	**97**	*e*P	**Pn**	**12 34 48.6**	**-0.4**
MT01	**Popeta**	**8.91**	**109**	Pn	**Pn**	**12 34 48.9**	**-0.1**
MT01	**Popeta**	**8.91**	**109**	*e*P	**Pn**	**12 34 48.4**	**-0.6**
MT09	**Talagante**	**9.11**	**108**	Pn	**Pn**	**12 34 52.1**	**+0.3**
GO04	**Tololo Observa**	**9.18**	**86**		**Pn**	**12 34 52.4**	**-0.4**
GO04	**Tololo Observa**	**9.18**	**86**	*e*P	**Pn**	**12 34 52.7**	**-0.1**
GO04				*i* S	Sn	12 36 19.6	-17	
CO03	**El Pedregal**	**9.18**	**90**		**Pn**	**12 34 52.5**	**-0.2**
PEL	**Peldehue**	**9.24**	**104**	Pn	**Pn**	**12 34 54.2**	**+0.7**
AC04	**Llanos de Chal**	**9.48**	**73**		**Pn**	**12 34 55.1**	**-1.6**
AC04	**Llanos de Chal**	**9.48**	**73**	*e*P	**Pn**	**12 34 54.5**	**-2.2**
AC04				*i* S	Sn	12 36 23.8	-20	
LCO	**Las Campanas**	**9.53**	**79**		**Pn**	**12 34 56.8**	**-0.8**
BO02	**Sierra Bellavi**	**9.54**	**114**		**Pn**	**12 34 58.6**	**+0.9**
CO01	**Juntas del Tor**	**9.81**	**85**		**Pn**	**12 35 02.0**	**+0.4**
MT08	**Bocatoma Ro**	**9.84**	**105**		**Pn**	**12 35 03.7**	**+1.8**
AC05	**El Transito**	**9.94**	**78**		**Pn**	**12 35 03.2**	**+0.1**
AC06	**Mina Casimiro**	**10.40**	**70**		**Pn**	**12 35 09.7**	**+0.3**
GO03	**Copiapo**	**10.40**	**72**		**Pn**	**12 35 09.6**	**+0.2**
AC01	**Pan de Azucar**	**10.77**	**64**		**Pn**	**12 35 13.4**	**-1.1**
AC02	**Maricunga**	**11.61**	**70**		**Pn**	**12 35 27.5**	**+1.2**
PB14	**IPOC Station P**	**11.77**	**58**		**Pn**	**12 35 27.9**	**-0.5**
GO02	**Mina Guanaco**	**12.06**	**62**		**Pn**	**12 35 33.0**	**+0.6**
PB05	**IPOC Station P**	**13.04**	**52**		**Pn**	**12 35 46.3**	**+0.7**
PB09	**IPOC Station P**	**14.41**	**52**		**Pn**	**12 36 02.7**	**+2.5**
TA01	**Diego Aracena**	**14.69**	**46**		**Pn**	**12 36 09.4**	**+1.4**
PB01	**IPOC Station P**	**14.78**	**49**		**Pn**	**12 36 11.7**	**+2.4**
HMBC	**Humberstone**	**15.09**	**46**		**Pn**	**12 36 15.1**	**+1.6**
PB11	**IPOC Station P**	**15.62**	**45**		**Pn**	**12 36 22.8**	**+2.2**
PB11				IAmb	IAmb	12 36 29.3		
	comp=Z,18nm,1.0s							
PB08	**IPOC Station P**	**15.65**	**48**	Pn	**P**	**12 36 24.5**	**-0.8**
GO01	**Chusmiza**	**15.97**	**46**	Pn	**P**	**12 36 28.0**	**-1.0**
GO01				IAmb	IAmb	12 36 30.0		
	comp=Z,11nm,0.6s							
PB12	**IPOC Station P**	**16.12**	**41**	Pn	**P**	**12 36 29.1**	**-1.2**
PB12				IAmb	IAmb	12 36 31.6		
	comp=Z,13nm,1.0s							
PB18	**Visviri**	**17.42**	**41**	Pn	**Pn**	**12 36 44.7**	**+0.8**
PB18				IAmb	IAmb	12 36 54.4		
	comp=Z,9.7nm,0.6s							
LPAZ	**La Paz**	**19.23**	**42**	P	**Pn**	**12 37 06.2**	**+0.1**

IDC 21 12:40:10.1±266.0,**56°.54N**×**42°.68E**,**h0**km,**Error ellipse:**
s-maj=111.7km s-min=61.2km az=98.0,**Baltic**
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.02**	**276**	I	I	12 58 50.0		
	0.3nm,0.7s,baz=91,slow=339,SNR=23							
I31KZ	**AKTYUBINSK INF**	**11.01**	**117**	I	I	13 43 40.0		
	0.1nm,0.6s,baz=312,slow=321,SNR=2.8							
I46RU	**ZALESOVO INFRA**	**23.89**	**78**	I	I	15 07 49.2		
	baz=289,slow=292,SNR=4.0							

*IDC **21** 12:55:29.0±1.6,19°.28N×101°.43E,h0km,mb3.2/3,*
mbtmp3.2/4,ML3.4/1,Error ellipse: s-maj=19.0km
s-min=17.7km az=124.0
*BKK **21** 12:55:29.4±1.6,20°.N±7°×10°.1E±1°.3,h2km,M3.5/12,*
Mjma3.4/12,ML3.5/12,MLv3.5/9

ISC 21 12:55:30.7±1.3,**19°.40N**±0°.10×**101°.3E**±0°.1,**h10**km,**n10**,
σ0§**98**/**11**,**mb3.2/3**,**Laos**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAMP	**Lampang**	**1.77**	**241**	P	**Pb**	**12 56 03.3**	**0.0**
UTTA	**Uttaradit**	**1.78**	**202**	P	**Pn**	**12 56 02.5**	**+1.0**
CMAI	**Chiengmai2**	**2.15**	**285**	P	**Pn**	**12 56 06.6**	**-0.2**
CHTO	**Chiang Mai**	**2.26**	**255**	P	**Pn**	**12 56 08.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**2.38**	**247**	Pn	**Pn**	**12 56 10.2**	**+0.3**
	2.4nm,0.3s,baz=64,slow=13,SNR=21							
CMAR				Pg	**Pg**	**12 56 15.9**	**-0.5**
	7.5nm,0.3s,baz=70,slow=19,SNR=26							
CMAR				Lg	Lg	12 56 47.4		
	6.9nm,0.3s,baz=69,slow=31,SNR=5.4							
	3.0nm,0.3s							
CM02	**Chiang Mai Arr**	**2.39**	**247**	P	**Pn**	**12 56 10.6**	**+0.6**
CM05	**Chiang Mai Arr**	**2.40**	**246**	P	**Pn**	**12 56 10.7**	**+0.5**
MKAR	**Makanchi Array**	**31.44**	**335**	P	**P**	**13 01 52.6**	**+0.4**
	0.2nm,0.6s,baz=144,slow=11,SNR=1.8							
	0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**36.73**	**344**	P	**P**	**13 02 39.6**	**+1.6**
	0.3nm,0.5s,baz=156,slow=7.6,SNR=2.0							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**53.35**	**142**	P	**P**	**13 04 48.9**	**-1.6**
	0.2nm,0.8s,baz=326,slow=7.2,SNR=1.5							
	0.2nm,0.8s							

*IDC **21** 13:15:38.2±1.6,20°.79N×94°.73E,h119km±16km,mb3.2/8,*
mbtmp3.6/9,Error ellipse: s-maj=44.6km s-min=12.5km
az=44.0

ISC 21 13:15:36.7±0.8,**20°.9N**±0°.2×**95°.0E**±0°.2,**h100**km,**n10**,
σ1§**34**/**14**,**mb3.4/8**,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**3.53**	**300**	P	**Pn**	**13 16 32.0**	**+2.4**
	270nm,0.4s,baz=103,slow=14,SNR=10.0							
BRDH				S	**Sn**	**13 17 10.5**	**0.0**
	480nm,0.4s,baz=163,slow=19,SNR=21							
CMAR	**Chiang Mai Arr**	**4.50**	**123**	P	**Pn**	**13 16 44.9**	**+2.2**
	6.6nm,0.5s,baz=303,slow=14,SNR=26							
MKAR	**Makanchi Array**	**27.77**	**341**	P	**P**	**13 21 16.8**	**+0.7**
	0.1nm,0.4s,baz=152,slow=9.5,SNR=1.4							
	0.1nm,0.4s							
KURBB	**Kurchatov Arra**	**32.32**	**340**	P	**P**	**13 21 56.3**	**+0.2**
	0.1nm,0.3s,baz=148,slow=8.8,SNR=2.0							
KURBB				PcP	**PcP**	**13 24 41.5**	**-0.4**
	0.3nm,0.5s,baz=156,slow=1.9,SNR=5.9							
	0.1nm,0.3s							
ZALV	**Zalesovo Beam**	**33.85**	**349**	P	**P**	**13 22 10.6**	**+1.1**
	0.5nm,0.3s,baz=165,slow=9.2,SNR=2.5							
	0.5nm,0.3s							
WRA	**Warramunga Arr**	**56.00**	**134**	P	**P**	**13 25 05.0**	**-0.3**
	0.2nm,0.6s,baz=317,slow=7.7,SNR=1.6							
WRA				PcP	**PcP**	**13 26 01.4**	**-1.1**
	0.2nm,0.5s,baz=320,slow=3.8,SNR=1.7							
	0.2nm,0.6s							
**ASA

GO02						IAML			13 24 38.4		
	comp=E,864nm,0.1s										
GO02	**Mina Guanaco**	**1.33**	**95**	*eP*		**Pn**		**13 24 20.1**	**-0.3**		
GO02				*eS*		**Sn**		**13 24 36.3**	**-0.8**		
GO02				IAML				13 24 37.4			
	comp=Z,755nm,0.3s										
PB05	**IPOC Station P**	**2.32**	**20⇓**	*eP*		**Pn**		**13 24 34.8**	**+0.9**		
PB05				*eS*		**Sn**		**13 25 00.5**	**-0.7**		
PB05	**IPOC Station P**	**2.32**	**20**	*eP*		**Pn**		**13 24 34.8**	**+0.9**		
PB05				*eS*		**Sn**		**13 25 01.4**	**+0.2**		
PB05				IAML				13 25 22.0			
	comp=Z,88nm,0.6s										
AC06	**Mina Casimiro**	**2.38**	**165**	*eP*		**Pn**		**13 24 36.0**	**+1.3**		
AC06				*eS*		**Sn**		**13 25 03.0**	**+0.2**		
AC06				IAML				13 25 05.0			
	comp=N,251nm,0.2s										
AC02	**Maricunga**	**2.48**	**136⇓**	*eP*		Pn		13 24 38.6	+2.1		
AC02				*eS*		**Sn**		**13 25 06.9**	**+1.0**		
AC02	**Maricunga**	**2.48**	**136**	*eP*		Pn		13 24 38.6	+2.1		
AC02				*eS*		**Sn**		**13 25 07.4**	**+1.6**		
AC02				IAML				13 25 07.5			
	comp=Z,289nm,0.3s										
GO03	**Copiapo**	**2.64**	**164⇓**	*eP*		**Pn**		**13 24 39.5**	**+1.2**		
GO03				*eS*		**Sn**		**13 25 09.6**	**+0.5**		
GO03				IAML				13 25 10.7			
	comp=E,246nm,0.6s										
GO03	**Copiapo**	**2.64**	**164**	*eP*		**Pn**		**13 24 39.6**	**+1.3**		
GO03				*eS*		**Sn**		**13 25 10.5**	**+1.3**		
GO03				IAML				13 25 10.7			
	comp=Z,212nm,0.3s										
PB06	**IPOC Station P**	**2.69**	**30**	*eP*		**Pn**		**13 24 40.4**	**+1.3**		
PB06				*eS*		**Sn**		**13 25 10.6**	**0.0**		
PB06				IAML				13 25 29.4			
	comp=E,106nm,0.2s										
PB06	**IPOC Station P**	**2.69**	**30**	*eP*		**Pn**		**13 24 40.5**	**+1.4**		
PB06				*eS*		Sn		13 24 58.6	-12		
PB06				IAML				13 25 15.2			
	comp=Z,88nm,0.3s										
AC04	**Llanos de Chal**	**3.15**	**180**	*eP*		**Pn**		**13 24 44.7**	**-0.5**		
AC04				*eS*		**Sn**		**13 25 18.9**	**-2.6**		
AC04				IAML				13 25 21.3			
AC04	**Llanos de Chal**	**3.15**	**180**	*eP*		**Pn**		**13 24 44.8**	**-0.5**		
AC04				*eS*		**Sn**		**13 25 20.9**	**-0.7**		
AC04				IAML				13 25 30.6			
	comp=Z,40nm,0.4s										
PB03	**IPOC Station P**	**3.21**	**22**	*eP*		**Pn**		**13 24 47.1**	**+0.9**		
PB03				*eS*		**Sn**		**13 25 22.8**	**-0.6**		
PB03				IAML				13 25 24.5			
	comp=E,72nm,0.3s										
PB03	**IPOC Station P**	**3.21**	**22**	*eP*		**Pn**		**13 24 47.2**	**+0.9**		
PB03				*eS*		**Sn**		**13 25 23.2**	**-0.2**		
PB03				IAML				13 25 55.4			
	comp=Z,67nm,0.6s										
AF01	**San Pedro de A**	**3.35**	**52**	*eP*		Pn		13 25 03.9	+16		
AF01				*eS*		Sn		13 25 44.1	+17		
AF01				IAML				13 25 59.2			
	comp=Z,270nm,0.4s										
PB07	**IPOC Station P**	**3.47**	**18**	*eP*		**Pn**		**13 24 50.6**	**+0.7**		
PB07				*eS*		**Sn**		**13 25 29.8**	**0.0**		
PB07				IAML				13 25 57.1			
	comp=Z,69nm,0.5s										
PB09	**IPOC Station P**	**3.63**	**28**	*eP*		**Pn**		**13 24 54.0**	**+1.9**		
PB09				*eS*		**Sn**		**13 25 35.1**	**+1.2**		
PB09				IAML				13 26 01.7			
	comp=Z,79nm,0.8s										
AC05	**El Transito**	**3.84**	**170**	*eP*		**Pn**		**13 24 56.5**	**+1.7**		
AC05				*eS*		**Sn**		**13 25 40.8**	**+2.0**		
AC05				IAML				13 25 58.4			
	comp=Z,42nm,0.6s										
LCO	**Las Campanas**	**3.96**	**176**	*eP*		**Pn**		**13 24 56.3**	**-0.4**		
LCO				*eS*		**Sn**		**13 25 41.4**	**-0.6**		
LCO				IAML				13 26 12.1			
	comp=Z,82nm,0.6s										
PB01	**IPOC Station P**	**4.24**	**20**	*eP*		**Pn**		**13 25 01.4**	**+1.1**		
PB01				*eS*		**Sn**		**13 25 48.0**	**-0.6**		
PB01				IAML				13 25 52.7			
	comp=Z,22nm,0.1s										
TA01	**Diego Aracena**	**4.53**	**10**	*eP*		**Pn**		**13 25 05.5**	**+1.2**		
TA01				*eS*		**Sn**		**13 25 53.5**	**-2.2**		
TA01				IAML				13 26 33.1			
	comp=Z,19nm,0.6s										
LPAZ	**La Paz**	**9.13**	**18**	Pn		**Pn**		**13 26 10.3**	**+2.3**		
	comp=Z,0.2nm,0.3s,baz=193,slow=4.3,SNR=4.8										
	comp=Z,0.6nm,0.4s										
H03N1	**Juan Fernandez**	**10.82**	**218**	T		T		13 37 50.0			
	baz=44,slow=72,SNR=102										
H03N2	**Juan Fernandez**	**10.83**	**218**	T		T		13 38 14.3			
	baz=44,slow=72,SNR=87										
H03N3	**Juan Fernandez**	**10.84**	**218**	T		T		13 38 13.3			
	baz=44,slow=72,SNR=117										
TXAR	**Lajitas Array**	**62.49**	**328**	P		P		13 34 22.3	+4.0		
	comp=Z,0.2nm,0.6s,baz=143,slow=9.8,SNR=2.6										
	comp=Z,0.2nm,0.6s										
QSPA	**South Pole Qui**	**65.16**	**180**	P		P		13 34 41.0	+5.5		
	comp=Z,0.2nm,0.5s,baz=178,slow=0.6,SNR=5.6										
TORD	**Torodi Ar. Bea**	**80.39**	**71**	P		**P**		**13 36 07.9**	**+1.5**		
	comp=Z,1.5nm,0.3s,baz=254,slow=5.6,SNR=1.6										
	comp=Z,1.5nm,0.3s										
ASAR	**Alice Springs**	**125.87**	**209**	PKP		**PKiKP**		**13 42 58.9**	**+1.4**		
	comp=Z,0.2nm,0.5s,baz=137,slow=1.6,SNR=9.3										
H11S2	**WAKE ISLAND Hyl**	**26.30**	**275**	T		T		16 02 31.1			
	baz=108,slow=74,SNR=16										
H11S1	**WAKE ISLAND Hyl**	**26.31**	**275**	T		T		16 02 41.2			
	baz=108,slow=74,SNR=12										
H11S3	**WAKE ISLAND Hyl**	**26.32**	**275**	T		T		16 02 32.4			
	baz=108,slow=74,SNR=9.5										
WRA	**Warramunga Arr**	**128.91**	**211**	PKP		**PKiKP**		**13 43 05.4**	**+1.9**		
	comp=Z,0.3nm,0.5s,baz=145,slow=2.0,SNR=4.6										
KURBB	**Kurchatov Arra**	**145.36**	**35**	PKPbc		**PKiKP**		**13 43 33.1**	**-2.9**		
	comp=Z,0.2nm,0.4s,baz=309,slow=3.2,SNR=4.6										
ZALV	**Zalesovo Beam**	**145.99**	**26**	PKPbc		**PKiKP**		**13 43 36.1**	**-1.0**		
	comp=Z,0.9nm,0.5s,baz=316,slow=4.0,SNR=5.6										
MKAR	**Makanchi Array**	**149.64**	**38**	PKPbc		**PKPab**		**13 43 45.7**	**-3.4**		
	comp=Z,0.7nm,0.4s,baz=328,slow=3.0,SNR=14										

*GUC **21** 13:56:53.6±0.7, 22.07S×67.67W, h223km±15km, ML2.5*
*SCB **21** 13:56:54.3±0.6, 22.10S×67.34W, h150km±14km, ML2.7/2,*
Error ellipse: s-maj=6.0km s-min=3.4km az=0.0
ISC 21 13:56:52.8±2.8, 22.09S±0.07×67.34W±0.05,
h175km±30km, n13, σ0.86/21, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.69**	**93**	Pg	**Pn**	**13 57 27.5**	**+0.8**
MOCB	**Mochara**	**1.79**	**62**	Pg	**Pn**	**13 57 28.1**	**+0.3**
MOCB				Sg	**Sn**	**13 57 53.6**	**-1.1**
MOCB				IAML		13 57 55.1	
	44nm,0.4s						
PB06	**IPOC Station P**	**2.16**	**253**	Pg	**Pn**	**13 57 32.1**	**+0.6**
PB03	**IPOC Station P**	**2.24**	**271**	*eP*	**Pn**	**13 57 33.1**	**+0.7**
PB03				*i* S	**Sn**	**13 58 02.9**	**-0.2**
PB03				IAML		13 58 05.0	
	comp=E,8.4nm,0.2s						
PB01	**IPOC Station P**	**2.26**	**297**	*eP*	**Pn**	**13 57 33.1**	**+0.6**
PB01				*i* S	**Sn**	**13 58 03.6**	**+0.3**
PB01				IAML		13 58 04.6	
	comp=N,33nm,0.4s						
PB01	**IPOC Station P**	**2.26**	**297**	Pg	**Pn**	**13 57 33.3**	**+0.8**
PB01				Sg	**Sn**	**13 58 02.7**	**-0.6**
PB01				IAML		13 58 04.5	
	comp=N,29nm,0.4s						
PB07	**IPOC Station P**	**2.40**	**278**	*eP*	**Pn**	**13 57 34.7**	**+0.5**
PB07				*i* S	**Sn**	**13 58 05.0**	**-1.3**
PB07				IAML		13 58 07.5	
	comp=N,12nm,0.2s						
PB02	**IPOC Station P**	**2.50**	**287**	*eP*	**Pn**	**13 57 35.7**	**+0.3**
PB02				*i* S	**Sn**	**13 58 07.2**	**-1.2**
PB02				IAML		13 58 09.4	
	comp=E,28nm,0.3s						
PB02	**IPOC Station P**	**2.50**	**287**	Pg	**Pn**	**13 57 35.8**	**+0.4**
PB08	**IPOC Station P**	**2.58**	**318**	*i* S	**Sn**	**13 58 11.2**	**+0.7**
PB08				IAML		13 58 12.9	
	comp=E,7.0nm,0.2s						
PB08	**IPOC Station P**	**2.58**	**318**	Pg	**Pn**	**13 57 37.8**	**+1.2**
PB11	**IPOC Station P**	**3.17**	**316**	*eP*	**Pn**	**13 57 43.3**	**-0.2**
PB11				*i* S	**Sn**	**13 58 21.6**	**-1.5**
GO02	**Mina Guanaco**	**3.69**	**214**	*eP*	**Pn**	**13 57 50.5**	**+0.4**
GO02				*i* S	**Sn**	**13 58 34.2**	**-0.7**

IDC 21 14:04:24.8±14.0, 6.13S×130.03E, h104km±150km,
mb3.1/1, mbtmp3.4/4, ML3.3/3, Error ellipse:
s-maj=90.2km s-min=58.9km az=37.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.65**	**199**	P	Pn	14 07 22.5	+1.6
	0.1nm,0.3s,baz=37,slow=13,SNR=12						
FITZ				S	Sn	14 09 38.5	-1.6
	1.5nm,0.7s,baz=259,slow=16,SNR=2.0						
	2.2nm,0.9s						
WRA	**Warramunga Arr**	**14.36**	**163**	P	Pn	14 07 41.4	-1.8
	0.2nm,0.3s,baz=341,slow=10,SNR=13						
WRA				S	Sn	14 10 05.3	-16
	0.7nm,0.9s,baz=328,slow=27,SNR=1.8						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**17.83**	**168**	P	Pn	14 08 26.4	+0.1
	0.1nm,0.3s,baz=353,slow=11,SNR=14						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**67.52**	**327**	P	P	14 15 09.7	-0.1
	0.2nm,0.3s,baz=110,slow=7.7,SNR=6.1						
	0.2nm,0.3s						

*KOLA **21** 14:09:03.7, 64.76N×30.69E, h0km, ML1.9, Error ellipse:*
s-maj=16.6km s-min=12.3km az=170.0, Kostomuksha,
Karelia
*IDC **21** 14:09:05.1±2.7, 64.76N×30.33E, h0km, mbtmp2.9/2,*
ML1.7/2, Error ellipse: s-maj=45.4km s-min=9.2km
az=101.0
*HEL **21** 14:09:11.5±0.4, 64.26N×30.85E, h0km, ML1.5, Explosion*
ISC 21 14:09:10.4±1.3, 64.28N±0.04×30.94E±0.07, h0km, n18,
σ1.35/18, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.44**	**262**	PG	**Pg**	**14 09 19.1**	**+0.2**
RMF				SG	**Sg**	**14 09 24.2**	**-0.5**
JOF	**Joensuu**	**1.38**	**173**	PG	**Pg**	**14 09 36.4**	**-0.4**
NIF	**Nilsia**	**1.65**	**239**	PG	**Pn**	**14 09 40.7**	**+0.1**
	baz=55						
NIF				smax	smax	14 09 59.5	
	comp=Z,4.6nm,0.2s						
NIF				SG	**Sn**	**14 10 01.7**	**-0.8**
KU6	**Riekki**	**1.81**	**346**	PG	**Pn**	**14 09 43.5**	**+0.7**
KU6				smax	smax	14 10 05.7	
	comp=Z,1.4nm,0.2s						
MSF	**Maaselka**	**1.82**	**335**	PG	**Pb**	**14 09 45.6**	**+1.0**
KVDA	**Kovda**	**2.55**	**18**	P	Pn	14 09 40.0	-13
KVDA				S	Sn	14 10 07.6	-17
SUF	**Sumiainen**	**2.66**	**236**	PN	**Pn**	**14 09 53.7**	**-0.7**
SUF				smax	smax	14 10 28.7	
	comp=Z,1.4nm,0.2s						
SUF				SG	**Sb**	**14 10 31.2**	**-0.7**
RUF	**Ruokolahti**	**3.01**	**199**	PG	**Pb**	**14 10 06.0**	**+1.2**
RUF				smax	smax	14 10 39.1	
	comp=Z,1.1nm,0.2s						
APA0	**Apatity Array**	**3.44**	**13**	P	Pn	14 09 52.4	-13
APA0				S	Sn	14 10 27.5	-19
KEF	**Keuruu**	**3.47**	**235**	SN	**Sn**	**14 10 48.5**	**+1.1**
FIA0	**FINESS Array S**	**3.62**	**220**	PN	**Pn**	**14 10 07.0**	**-0.6**
	baz=38						
FINES	**FINESS Array B**	**3.62**	**220**	Pn	**Pn**	**14 10 05.0**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=1.7						
FINES				Sn	**Sn**	**14 10 52.0**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=27,slow=22,SNR=1.6						
FINES				Lg	Lg	14 11 05.2	
	comp=Z,0.4nm,0.3s,baz=30,slow=28,SNR=7.1						
	comp=Z,2.8nm,1.0s						
VAF	**Ylistaro**	**3.89**	**255**	PN	**Pn**	**14 10 10.8**	**-0.5**
	baz=65						
VAF				SG	**Sb**	**14 11 08.8**	**+1.5**
KLF	**Kolari**	**4.13**	**319**	SN	**Sn**	**14 11 00.4**	**-3.1**
ERTU	**Ertsjaerv**	**4.31**	**306**	SN	**Sn**	**14 11 07.4**	**-0.6**
ARCES	**ARCESS Array B**	**5.69**	**340**	Pn	Pn	14 10 21.7	-14
	comp=Z,0.1nm,0.3s,baz=156,slow=14,SNR=21						
ARCES				Sn	Sn	14 11 18.3	-24
	baz=157,slow=25,SNR=2.0						
ARCES				Lg	Lg	14 11 40.1	
	comp=Z,0.1nm,0.3s,baz=156,slow=34,SNR=1.8						
	comp=Z,2.2nm,0.8s						
ARCES	**ARCESS Array B**	**5.69**	**340**	P	Pn	14 10 21.5	-15
ARCES				S	Sn	14 11 19.8	-22
I43RU	**DUBNA INFRASON**	**8.19**	**155**	I	I	15 02 30.0	
	baz=346,slow=337,SNR=2.3						

*BKK **21** 14:09:57.4±0.8, 20.20N±3.3×10.1E±1.1, h5km±3km, M4.3/12,*
Mjma4.2/12, ML4.4/11, MLv4.3/12
*IDC **21** 14:09:58.5±1.4, 19.17N×101.34E, h0km, mb3.7/3,*
mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=19.0km
s-min=15.3km az=179.0
ISC 21 14:09:57.4±0.9, 19.52N±0.05×101.37E±0.09, h10km, n13,
σ1.34/15, mb3.6/3, Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAMP	**Lampang**	**1.92**	**239**	P	**Pn**	**14 10 30.5**	**+0.4**
UTTA	**Uttaradit**	**1.92**	**204**	P	**Pn**	**14 10 30.7**	**+0.5**
LOEI	**Loei**	**2.00**	**183**	P	**Pb**	**14 10 33.1**	**-0.8**
LOEI				S	**Sb**	**14 10 59.3**	**+0.4**
CHTO	**Chiang Mai**	**2.39**	**253**	P	**Pn**	**14 10 37.0**	**+0.3**
CM31	**Chiang Mai Arr**	**2.52**	**246**	P	**Pn**	**14 10 38.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**2.52**	**246**	Pn	**Pn**	**14 10 38.8**	**+0.2**
	6.9nm,0.3s,baz=66,slow=13,SNR=71						
CMAR				Pg	**Pb**	**14 10 41.8**	**-1.1**
	16nm,0.3s,baz=73,slow=17,SNR=80						
CMAR				Lg	Lg	14 11 13.8	
	34nm,0.3s,baz=71,slow=36,SNR=9.5						
	16nm,0.4s						
CM05	**Chiang Mai Arr**	**2.54**	**245**	P	**Pn**	**14 10 39.0**	**+0.2**
MHMT	**Maesariang**	**3.52**	**248**	P	**Pb**	**14 10 58.6**	**-1.2**
PZH	**PanZhiHua**	**6.96**	**3**	Pg	**Pg**	**14 12 09.5**	**-1.3**
PZH				Sg	**Sg**	**14 13 41.3**	**+0.3**
PZH				smax	smax		
	comp=N,10.0nm,1.0s						
PZH				smax	smax		
	comp=E,30nm,1.5s						
BRDH	**Bariadhala**	**9.61**	**291**	Pn	**Pn**	**14 12 19.3**	**+3.4**
	comp=E,79nm,0.3s,baz=65,slow=19,SNR=6.3						
HILR	**Hailar Array B**	**33.39**	**22**	P	P	14 16 41.2	+5.1
	comp=E,1.0nm,0.4s,baz=199,slow=9.4,SNR=1.9						
	comp=E,1.0nm,0.4s						
WRA	**Warramunga Arr**	**50.81**	**139**	P	**P**	**14 19 00.3**	**+1.9**
	comp=E,0.6nm,0.9s,baz=321,slow=8.2,SNR=3.3						
	comp=E,0.6nm,0.9s						
ASAR	**Alice Springs**	**53.38**	**142**	P	**P**	**14 19 17.1**	**-0.4**
	comp=E,0.3nm,0.4s,baz=315,slow=7.1,SNR=2.8						
	comp=E,0.3nm,0.4s						

*DNK **21** 14:10:31.8±0.5, 58.82N×15.10E, h0km, ML1.5(UPP),*
Explosion
UPP 21 14:10:31.4±0.1, 58.82N×15.09E, h0km, ML1.5,
Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASKU	**Askersund**	**0.16**	**299**	P	Pg	14 10 34.6	+0.2
ASKU				S	Sg	14 10 36.9	+0.4
ASKU	**Askersund**	**0.16**	**299**	P	Pg	14 10 34.6	+0.2
ASKU				S	Sg	14 10 36.9	+0.4
LNKU	**Linkoeping**	**0.64**	**160**	P	Pg	14 10 43.4	-0.1
LNKU				S	Sg	14 10 51.8	0.0
LNKU	**Linkoeping**	**0.64**	**160**	P	Pg	14 10 43.4	-0.1
LNKU				S	Sg	14 10 51.8	0.0
NRAU	**Nora**	**0.76**	**358**	P	Pg	14 10 45.5	-0.3
NRAU				S	Sg	14 10 55.4	-0.2
NRAU	**Nora**	**0.76**	**358**	P	Pg	14 10 45.5	-0.3
NRAU				S	Sg	14 10 55.4	-0.2
ESKU	**Eskilstuna**	**0.79**	**58**	P	Pg	14 10 46.3	-0.3
ESKU				S	Sg	14 10 56.7	-0.1
ESKU	**Eskilstuna**	**0.79**	**58**	P	Pg	14 10 46.3	-0.3
ESKU				S	Sg	14 10 56.7	-0.1
VIKU	**Vikbolandet**	**0.90**	**110**	P	Pg	14 10 48.0	-0.5
VIKU	**Vikbolandet**	**0.90**	**110**	P	Pg	14 10 48.0	-0.5
NASU	**Vaermlandsnaes**	**1.00**	**277**	P	Pg	14 10 50.0	-0.5
NASU	**Vaermlandsnaes**	**1.00**	**277**	P	Pg	14 10 50.0	-0.5
EKSU	**Eksjoe**	**1.25**	**175**	P	Pg	14 10 54.5	-0.9
EKSU	**Eksjoe**	**1.25**	**175**	P	Pg	14 10 54.5	-0.9
VSTU	**Vaestervik**	**1.39**	**146**	P	Pn	14 10 56.9	-1.1
VSTU	**Vaestervik**	**1.39**	**146**	P	Pn	14 10 56.9	-1.1
FINU	**Finntorp**	**1.47**	**295**	P	Pn	14 10 58.5	-0.6
FINU	**Finntorp**	**1.47**	**295**	P	Pn	14 10 58.5	-0.6
NYNU	**Nynaeshamn**	**1.52**	**82**	P	Pn	14 10 59.4	-0.4
NYNU	**Nynaeshamn**	**1.52**	**82**	P	Pn	14 10 59.4	-0.4
OSKU	**Oskarshamn**	**1.71**	**161**	P	Pn	14 11 02.5	0.0
OSKU	**Oskarshamn**	**1.71**	**161**	P	Pn	14 11 02.5	0.0
FALU	**Falun**	**1.72**	**12**	P	Pn	14 11 03.1	+0.5
FALU	**Falun**	**1.72**	**12**	P	Pn	14 11 03.1	+0.5

*BJI **21** 14:11:05.7, 25.78N×91.11E, h46km, mB4.6/1, mb4.2/16*
*IDC **21** 14:11:07.7±1.0, 26.03N×90.99E, h23km±5km, mb3.9/11,*
mbtmp4.0/11, Error ellipse: s-maj=35.2km s-min=15.1km
az=59.0
*NDI **21** 14:11:08.3±2.8, 26.11N×91.19E, h10km, ML4.2, MW3.7*
*NEIC **21** 14:11:09.7±0.7, 26.11N±0.2×91.11E±0.1, h48km±9km,*
mb4.3/13, Error ellipse: s-maj=26.8km s-min=8.9km
az=210.0
*DMN **21** 14:11:12.4±0.0, 25.82N×90.90E, h10km, Ml4.5/10, Error*
ellipse: s-maj=0.0km s-min=0.0km az=0.0
ISC 21 14:11:08.6±0.7, 26.19N±0.04×91.13E±0.02, h29km±5km,
n63, σ1.76/86, mb4.2/16, 1D, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.92**	**132**		**Pb**	**14 11 25.7**	**-0.4**
SHL				Sn	**Sn**	**14 11 37.1**	**-1.0**
SHL	**Shillong**	**0.92**	**132**	*eP*	**Pb**	**14 11 25.8**	**-0.4**
SHL				*eS*	**Sn**	**14 11 36.9**	**-1.2**
SHL				IAML		14 11 38.1	
	comp=E,12μm,0.2s						
SHL				IAML		14 11 39.6	
	comp=N,8μm,0.1s						
DHUB	**DHUBRI**	**1.03**	**261**	*eP*	**Pb**	**14 11 28.9**	**+1.1**
DHUB				*eS*	**Sb**	**14 11 43.0**	**+2.0**
DHUB				IAML		14 11 45.0	
	comp=N,4μm,0.2s						
DHUB				IAML		14 11 46.1	
	comp=E,4μm,0.2s						
COBR	**COOCHBEHAR**	**1.50**	**274**	*eP*	**Pb**	**14 11 37.0**	**+1.3**
COBR				*eS*	**Sb**	**14 11 56.9**	**+2.5**
COBR				IAML		14 11 58.1	
	comp=N,5μm,0.4s						
COBR				IAML		14 11 59.2	
	comp=E,6μm,0.3s						
TAWA	**Tawang**	**1.55**	**25**	*eP*	**Pn**	**14 11 36.0**	**+1.4**
TAWA				*eS*	**Sb**	**14 11 56.6**	**+0.3**
TAWA				IAML		14 11 57.5	
	comp=E,8μm,0.2s						
TAWA				IAML		14 11 58.0	
	comp=N,13μm,0.3s						
TEZP	**TEZPUR**	**1.56**	**74**	*eP*	**Pn**	**14 11 35.3**	**+0.9**
TEZP				*eS*	**Sn**	**14 11 54.9**	**+1.2**
TEZP				IAML		14 11 56.7	
	comp=N,5μm,0.2s						
TEZP				IAML		14 11 57.3	
	comp=E,5μm,0.1s						
ITAN	**ITANAGAR**	**2.51**	**67**	*eS*	**Sn**	**14 12 19.4**	**+2.3**
ITAN				IAML		14 12 34.6	
	comp=E,2μm,0.4s						
ITAN				IAML		14 12 35.5	
	comp=N,2μm,0.3s						
GTK	**Tadong**	**2.52**	**297**	*eP*	**Pb**	**14 11 52.4**	**-0.9**
GTK				*eS*	**Sb**	**14 12 23.7**	**-0.3**
GTK				IAML		14 12 27.6	
	comp=N,615nm,0.2s						
GTK				IAML		14 12 29.6	
	comp=E,730nm,0.3s						
KOHI	**KOHIMA**	**2.73**	**99**	*eP*	**Pn**	**14 11 51.8**	**+1.3**
KOHI				*eS*	**Sn**	**14 12 23.8**	**+1.2**
KOHI				IAML		14 12 38.4	
	comp=E,1μm,1.0s						
KOHI				IAML		14 12 43.9	
	comp=N,905nm,0.5s						
ZIRO	**ZIRO**	**2.77**	**61**	*eP*	**Pn**	**14 11 53.9**	**+2.7**
ZIRO				*eS*	**Sn**	**14 12 27.1**	**+3.3**
ZIRO				IAML		14 12 39.0	
	comp=N,5μm,0.3s						
ZIRO				IAML		14 12 41.5	
	comp=E,6μm,0.5s						
JORH	**JORHAT**	**2.86**	**78**	*eS*	**Sn**	**14 12 26.6**	**+1.0**
IMP	**Imphal**	**2.88**	**117**	*eS*	**Sn**	**14 12 29.3**	**+2.8**
IMP				IAML		14 12 45.0	
	comp=E,271nm,0.6s						
IMP				IAML		14 12 46.0	
	comp=N,212nm,0.6s						
MOKO	**MOKOCHONG**	**3.05**	**87**	*eP*	**Pn**	**14 11 56.0**	**+1.0**
MOKO				*eS*	**Sn**	**14 12 30.2**	**-0.4**
MOKO				IAML		14 12 33.2	
	comp=E,1μm,0.5s						
MOKO				IAML		14 12 34.2	
	comp=N,977nm,0.3s						
ODAN	**Odare**	**3.41**	**282**	Pn	**Pn**	**14 12 02.8**	**+2.7**
	baz=289,slow=0.0						
ODAN				Sn	**Sn**	**14 12 39.3**	**-0.4**
	comp=N,1μm,0.4s,baz=289,slow=0.0						
LSA	**Lhasa**	**3.50**	**0**		**Pn**	**14 12 05.1**	**+3.6**
LSA	**Lhasa**	**3.50**	**0**	P	**Pb**	**14 12 09.0**	**-1.1**
LSA				S	**Sn**	**14 12 43.5**	**+1.4**
BRDH	**Bariadhala**	**3.53**	**172**	Pn	**Pn**	**14 12 04.7**	**+3.3**
	comp=N,3.3nm,0.3s,baz=270,slow=20,SNR=1.2						
BRDH				Lg	Lg	14 12 44.2	
	comp=N,228nm,0.3s,baz=225,slow=22,SNR=11						
DIBR	**DIBRUGARH**	**3.62**	**69**	IAML		14 13 05.9	
	comp=N,734nm,0.4s						
DIBR				IAML		14 13 10.0	
	comp=E,583nm,0.5s						
RAMN	**Ramite**	**4

KBL	**Kabul**	**20.76**	**299**		P	**P**	14 15 46.4	**-1.0**
KBL				IAmb	IAmb		14 15 50.6	
	comp=Z,8.6nm,0.8s							
DRK	**Karamyk**	**20.91**	**314**	P	P	**P**	**14 15 48.2**	**-0.7**
GAR	**Garm**	**21.63**	**311**	P	P	**P**	**14 15 56.4**	**-0.2**
GAR				IAmb	IAmb		14 16 10.8	
	comp=Z,13nm,1.1s							
MKAR	**Makanchi Array**	**21.73**	**343**	P	P	**P**	**14 15 58.7**	**+1.3**
	comp=Z,3.7nm,0.6s,baz=151,slow=13,SNR=49							
	comp=Z,3.7nm,0.6s							
MKAR	**Makanchi Array**	**21.73**	**343**			**P**	**14 15 57.2**	**-0.3**
MAKZ	**Makanchi**	**21.82**	**343**			**P**	**14 15 57.7**	**-0.8**
HHC	**Hu-ho-hao-te**	**22.38**	**44**	*e*P	P	**P**	**14 16 04.3**	**-0.3**
HHC				pmax	pmax			
	comp=Z,22nm,0.6s							
HHC				pmax	pmax			
	comp=Z,160nm,5.3s							
SONM	**Songino Array**	**24.72**	**25**	P	P	**P**	**14 16 29.6**	**+2.2**
	comp=Z,1.4nm,0.5s,baz=211,slow=9.5,SNR=9.5							
SONM				pP		**pP**	**14 16 36.2**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=210,slow=10,SNR=3.5							
	comp=Z,1.4nm,0.5s							
KURBB	**Kurchatov Arra**	**26.24**	**342**	P	P	**P**	**14 16 42.5**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=156,slow=9.5,SNR=4.3							
	comp=Z,1.3nm,0.6s							
ZALV	**Zalesovo Beam**	**28.12**	**352**	pP	pP		14 17 05.8	-0.6
	comp=Z,1.5nm,0.5s,baz=134,slow=8.3,SNR=2.8							
BVAR	**Borovoye Array**	**30.98**	**335**	P	P	**P**	**14 17 24.8**	**+1.7**
	comp=Z,1.2nm,0.5s,baz=133,slow=9.5,SNR=11							
BVAR				pP	pP	**pP**	**14 17 31.5**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=136,slow=8.9,SNR=10.0							
	comp=Z,1.2nm,0.5s							
AB31	**Akbulak array**	**33.36**	**322**	P	P	**P**	**14 17 42.8**	**-1.3**
AB31				IAmb	IAmb		14 17 46.2	
	comp=Z,1.8nm,0.6s							
ABKAR	**Akbulak array**	**33.36**	**322**	P	P	**P**	**14 17 44.0**	**0.0**
BNX	**BinXian**	**34.86**	**46**	⇓P	P	**P**	**14 17 59.0**	**+1.9**
BNX				pmax	pmax			
	comp=Z,7.0nm,0.8s							
JNU	**Nakatsue**	**35.07**	**69**	P	P	**P**	**14 17 57.1**	**-2.1**
ARTI	**Arti**	**38.27**	**331**	P	P	**P**	**14 18 24.7**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=129,slow=6.5,SNR=4.0							
	comp=Z,1.9nm,0.5s							
FINES	**FINESS Array B**	**55.45**	**328**	pP	pP		14 20 48.1	-1.1
	comp=Z,2.0nm,0.8s,baz=106,slow=14,SNR=1.6							
ARCES	**ARCESS Array B**	**57.23**	**338**	P	P	**P**	**14 20 53.9**	**+1.1**
	comp=Z,3.2nm,0.9s,baz=96,slow=8.3,SNR=2.0							
	comp=Z,3.2nm,0.9s							
HFS	**Hagfors**	**61.45**	**326**	P	P	**P**	**14 21 21.5**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=82,slow=3.1,SNR=4.7							
	comp=Z,2.0nm,0.6s							
WRA	**Warramunga Arr**	**62.15**	**133**	P	P	**P**	**14 21 27.7**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=326,slow=6.8,SNR=9.7							
WRA				pP		**pP**	**14 21 34.3**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=323,slow=7.0,SNR=3.1							
	comp=Z,0.3nm,0.6s							
ASAR	**Alice Springs**	**64.56**	**136**	P	P	**P**	**14 21 43.0**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=317,slow=6.3,SNR=6.3							
	comp=Z,0.4nm,0.6s							
ASAR	**Alice Springs**	**64.56**	**136**	P	P	**P**	**14 21 41.3**	**-2.0**
ILAR	**Eielson Array**	**78.90**	**22**	P	P	**P**	**14 23 08.7**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=309,slow=4.5,SNR=7.0							
ILAR				pP		**PcP**	**14 23 16.6**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=302,slow=4.6,SNR=3.5							
	comp=Z,0.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.81**	**282**	P	P	**P**	**14 23 35.5**	**-0.3**
	comp=Z,3.5nm,0.4s,baz=58,slow=7.7,SNR=2.3							
	comp=Z,3.5nm,0.4s							

DNK 21 14:11:13.6±0.9, 57.74N×12.98E, *h*0km, ML1.1 (UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BORU	**Boraas**	**0.16**	**227**	P		Pg	14 11 16.1	-0.5
BORU				*e*P			14 11 16.3	
BORU				S		Sg	14 11 18.7	+0.1
BORU				*i* S			14 11 19.0	
FKPU	**Falk**	**0.58**	**43**	P		Pg	14 11 24.0	-0.6
FKPU				S		Sg	14 11 32.2	0.0
GNOU	**Gnosjoe**	**0.61**	**137**	P		Pg	14 11 24.7	-0.7
GNOU				S		Sg	14 11 32.9	-0.4
ONAU	**Onsala**	**0.67**	**239**	*i* P		Pg	14 11 25.6	-0.8
ONAU				P		Pb	14 11 26.1	-2.0
ONAU				*i* S		Sg	14 11 34.2	-0.8
FABU	**Falkenberg**	**0.76**	**191**	*i* P		Pg	14 11 28.7	+0.7
TJOU	**Tjoern**	**0.78**	**293**	P		Pg	14 11 27.9	-0.7
TJOU				*i* P		Pb	14 11 27.9	-2.1
TJOU				*i* S		Sg	14 11 38.3	-0.4
VANU	**Vaenersborg**	**0.90**	**328**	P		Pg	14 11 29.5	-1.3
VANU				S		Sg	14 11 42.0	-0.3
NASU	**Vaermlandsnaes**	**1.20**	**5**	P		Pg	14 11 35.0	-1.5
VXJU	**Vaexsjoe**	**1.34**	**127**	P		Pg	14 11 38.3	-1.0
DEL	**Delary**	**1.36**	**159**	*i* P		Pg	14 11 38.3	-1.4
DEL				P		Pn	14 11 38.3	-1.5
DEL				*i* S		Sg	14 11 56.6	-0.7
STRU	**Stroemstad**	**1.61**	**325**	*i* S		Sn	14 12 04.0	-0.6
STRU				S		Sb	14 12 04.1	-0.8
BJUU	**Bjuv**	**1.67**	**179**	*i* S		Sn	14 12 05.5	-0.7

IDC 21 14:15:31.6±373.0, 57.30N×33.20E, *h*0km, Error ellipse: s-maj=156.9km s-min=53.6km az=99.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**2.27**	**103**	I		I	14 30 40.0	
	0.3nm,0.7s,baz=286,slow=308,SNR=1.3							
I31KZ	**AKTYUBINSK INF**	**16.13**	**105**	I		I	15 50 10.0	
	baz=305,slow=315,SNR=1.3							
I18DK	**QAANAAQ INFRAS**	**37.44**	**339**	I		I	18 03 50.0	
	baz=56,slow=339,SNR=0.9							

*IDC **21** 14:45:46.1±2.3, 1.62N×126.42E, *h*0km, mb3.0/3, mbtmp3.1/3, Error ellipse: s-maj=185.2km s-min=28.6km az=66.0*
*DJA **21** 14:45:48.1±0.4, 1.1N±5.5×12.6E±°, *h*10km, M3.0/6, MLv3.0/6*
ISC 21 14:45:50.7±3.5, 2.1N±1.1×12.7E±°, *h*35km, n4, σ1s24/5, mb3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.10**	**157**	P		**Pn**	**14 46 10.4**	**+0.8**
TNTI				S		**Sn**	**14 46 22.6**	**-1.0**
WRA	**Warramunga Arr**	**22.79**	**162**	P		**P**	**14 50 49.7**	**-0.8**
	0.4nm,0.6s,baz=339,slow=11,SNR=5.0							
	0.4nm,0.6s							
ASAR	**Alice Springs**	**26.19**	**165**	P		**P**	**14 51 23.2**	**+0.9**
	0.1nm,0.5s,baz=344,slow=8.0,SNR=5.2							
	0.1nm,0.5s							
MKAR	**Makanchi Array**	**59.26**	**326**	P		**P**	**14 55 48.4**	**-0.4**
	0.1nm,0.4s,baz=132,slow=8.1,SNR=1.4							
	0.1nm,0.4s							

*GUC **21** 15:13:56.8±0.8, 27.76S×70.57W, *h*65km±2km, ML4.4*
*SJA **21** 15:13:56.4±0.7, 27.76S×70.65W, *h*72km±2km, ML4.2, MW4.1*
*NEIC **21** 15:13:58.1±2.0, 27.75S±0.02×70.63W±0.06, *h*64km±3km, mb4.5/5, Mwr4.2/50, Mwr4.3(GUC), Error ellipse: s-maj=8.3km s-min=2.8km az=99.0, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr0.79; Mθθ1.23; Mφφ-2.02; Mrθ0.92; Mrφ0.34; Mθφ-1.09; Fault plane solution: M0 2.29000×10^15^ NP1:φs138.81000°, δ77.17000°, λ47.61000°. NP2:φs35.14000°, δ43.94000°, λ161.34000°. Principal axes: T 2.0026, Plg42.0000°, Azm9.0000°; N 0.4978, Plg41.0000°, Azm150.0000°; P -2.5004, Plg21.0000°, Azm259.0000°;*
*NEIC **21** 15:13:58.1, 27.75S×70.63W, *h*64km*
*IDC **21** 15:13:59.1±1.2, 27.53S×70.03W, *h*60km±5km, mb3.9/2, mbtmp4.1/5, MS3.0/3, Error ellipse: s-maj=57.7km s-min=13.6km az=80.0*
ISC 21 15:13:57.3±0.7, 27.76S±0.03×70.65W±0.04, *h*57km±5km, n121, σ2s25/160, 5C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GO03	**Copiapo**	**0.40**	**66**			**Pn**	**15 14 08.9**	**+0.8**
GO03					Sn	**Sn**	**15 14 16.3**	**+0.4**
GO03	**Copiapo**	**0.40**	**66**	*e*P		**Pn**	**15 14 08.8**	**+0.8**
GO03				*e*S		**Sn**	**15 14 17.1**	**+1.3**
GO03	**Copiapo**	**0.40**	**66**	*e*P		**Pn**	**15 14 08.9**	**+0.8**
GO03				*e*S		**Sn**	**15 14 19.0**	**+3.2**
GO03					IAML		15 14 20.4	
	comp=Z,5μm,0.1s							
AC06	**Mina Casimiro**	**0.47**	**33**			**Pn**	**15 14 09.9**	**+1.1**
AC06					Sn	**Sn**	**15 14 18.8**	**+1.7**
AC06	**Mina Casimiro**	**0.47**	**33**	⇑*e*P		**Pn**	**15 14 10.1**	**+1.2**
AC06				*e*S		**Sn**	**15 14 19.0**	**+1.8**
AC04	**Llanos de Chal**	**0.58**	**220**			**Pn**	**15 14 11.8**	**+1.7**
AC04					Sn	**Sn**	**15 14 21.8**	**+2.6**
AC04	**Llanos de Chal**	**0.58**	**220**	⇑*e*P		**Pn**	**15 14 11.9**	**+1.7**
AC04				*e*S		**Sn**	**15 14 22.3**	**+3.0**
AC04					IAML		15 14 23.5	
	comp=E,39μm,0.4s							
AC04	**Llanos de Chal**	**0.58**	**220**	*e*P		**Pn**	**15 14 11.7**	**+1.7**
AC04				*e*S		**Sn**	**15 14 23.2**	**+3.9**
AC04					IAML		15 14 24.9	
	comp=Z,10μm,0.4s							
AC05	**El Transito**	**1.12**	**163**			**Pn**	**15 14 18.0**	**+1.0**
AC05					Sn	**Sn**	**15 14 33.0**	**+1.4**
AC05	**El Transito**	**1.12**	**163**	*e*P		**Pn**	**15 14 18.2**	**+1.1**
AC05				*e*S		**Sn**	**15 14 33.6**	**+1.9**
AC05					IAML		15 14 34.7	
	comp=E,10μm,0.1s							
AC05	**El Transito**	**1.12**	**163**	*e*P		**Pn**	**15 14 18.1**	**+1.0**
AC05				*e*S		**Sn**	**15 14 34.0**	**+2.4**
AC05					IAML		15 14 36.9	
	comp=Z,5μm,0.7s							
LCO	**Las Campanas**	**1.25**	**182**			**Pn**	**15 14 19.5**	**+0.6**
LCO					Sn	**Sn**	**15 14 35.6**	**+0.7**
LCO	**Las Campanas**	**1.25**	**182**	*e*P		**Pn**	**15 14 19.6**	**+0.6**
LCO				*e*S		**Sn**	**15 14 36.8**	**+1.9**
LCO	**Las Campanas**	**1.25**	**182**	*e*P		**Pn**	**15 14 19.5**	**+0.6**
LCO				*e*S		**Sn**	**15 14 34.0**	**-0.9**
LCO					IAML		15 14 37.2	
	comp=Z,9μm,0.5s							
AC01	**Pan de Azucar**	**1.60**	**1**			**Pn**	**15 14 24.3**	**+0.8**
AC01	**Pan de Azucar**	**1.60**	**1**	⇓*e*P		**Pn**	**15 14 24.3**	**+0.8**
AC01				*e*S		**Sn**	**15 14 45.2**	**+2.1**
AC01					IAML		15 14 49.4	
	comp=N,4μm,0.7s							
AC01	**Pan de Azucar**	**1.60**	**1**	*e*P		**Pn**	**15 14 24.2**	**+0.8**
AC01				*e*S		**Sn**	**15 14 48.9**	**+5.9**
AC01					IAML		15 14 49.4	
	comp=Z,2μm,0.5s							
AC02	**Maricunga**	**1.63**	**56**			**Pn**	**15 14 25.8**	**+1.6**
AC02					Sn	**Sn**	**15 14 45.9**	**+1.4**
AC02	**Maricunga**	**1.63**	**56**	*e*P		**Pn**	**15 14 25.8**	**+1.6**
AC02				*e*S		**Sn**	**15 14 46.7**	**+2.2**
AC02					IAML		15 14 47.0	
	comp=N,9μm,0.3s							
AC02	**Maricunga**	**1.63**	**56**	*e*P		**Pn**	**15 14 25.9**	**+1.7**
AC02				*e*S		**Sn**	**15 14 46.7**	**+2.2**
AC02					IAML		15 14 47.2	
	comp=Z,2μm,0.3s							
CO05	**La Serena**	**2.21**	**193**			**Pn**	**15 14 31.7**	**0.0**
CO05					Sn	**Sn**	**15 14 59.2**	**+1.3**
CO05	**La Serena**	**2.21**	**193**	*e*P		**Pn**	**15 14 32.4**	**+0.7**
CO01	**Juntas del Tor**	**2.26**	**168**			**Pn**	**15 14 34.1**	**+1.5**
CO01					Sn	**Sn**	**15 14 59.9**	**+0.4**
CO01	**Juntas del Tor**	**2.26**	**168**	*e*P		**Pn**	**15 14 34.3**	**+1.7**
CO01				*e*S		**Sn**	**15 15 02.4**	**+2.9**
CO01	**Juntas del Tor**	**2.26**	**168**	*e*P		**Pn**	**15 14 33.8**	**+1.2**
CO01				*e*S		**Sn**	**15 15 03.3**	**+3.8**
CO01					IAML		15 15 07.4	
	comp=Z,852nm,0.2s							
VCA	**Vinchina**	**2.36**	**115**	⇓*e*P		**Pn**	**15 14 37.4**	**+3.5**
VCA	**Vinchina**	**2.36**	**115**	*e*P		**Pn**	**15 14 37.4**	**+3.5**
VCA				*e*S		**Sn**	**15 15 03.5**	**+1.7**
VCA					IAML		15 15 15.4	
	comp=Z,705nm,0.4s							
GO04	**Tololo Observa**	**2.41**	**183**			**Pn**	**15 14 35.5**	**+0.9**
GO04	**Tololo Observa**	**2.41**	**183**	*e*P		**Pn**	**15 14 35.8**	**+1.3**
GO04				*e*S		**Sn**	**15 15 06.2**	**+3.2**
GO04	**Tololo Observa**	**2.41**	**183**	*e*P		**Pn**	**15 14 35.9**	**+1.3**
GO04				*e*S		**Sn**	**15 15 07.8**	**+4.8**
GO04					IAML		15 15 09.6	
	comp=Z,3μm,0.3s							
AGUA	**GUANDACOL**	**2.56**	**133**	*e*P		**Pn**	**15 14 39.9**	**+3.4**
AGUA				*e*S		**Sn**	**15 15 00.8**	**-5.7**
AROD	**Rodeo**	**2.61**	**157**	*e*P		**Pn**	**15 14 40.7**	**+3.3**
AROD				*e*S		**Sn**	**15 15 08.4**	**+0.3**
TINO	**Tinogasta**	**2.74**	**97**	*e*P		**Pn**	**15 14 40.5**	**+1.5**
TINO				*e*S		Sn	15 14 57.5	-14
ACDV	**Cuesta del Vie**	**2.75**	**151**	*e*P		**Pn**	**15 14 42.8**	**+3.6**
ACDV				*e*S		Sn	15 15 02.4	-8.9
GO02	**Mina Guanaco**	**2.75**	**20**			**Pn**	**15 14 40.1**	**+0.7**
GO02	**Mina Guanaco**	**2.75**	**20**	⇑*e*P		**Pn**	**15 14 40.3**	**+0.9**
GO02				*e*S		**Sn**	**15 15 14.2**	**+2.7**
GO02					IAML		15 15 23.6	
	comp=N,2μm,0.6s							
GO02	**Mina Guanaco**	**2.75**	**20**	*e*P		**Pn**	**15 14 40.8**	**+1.5**
GO02				*e*S		**Sn**	**15 15 12.5**	**+1.0**
GO02					IAML		15 15 34.3	
	comp=Z,1μm,0.6s							
CO06	**Fray Jorge**	**3.03**	**196**			**Pn**	**15 14 42.0**	**-0.9**
CO06	**Fray Jorge**	**3.03**	**196**	*e*P		**Pn**	**15 14 42.1**	**-0.8**
CO06				*e*S		**Sn**	**15 15 20.5**	**+2.5**
CO06					IAML		15 15 37.1	
	comp=E,1μm,0.4s							
CO03	**El Pedregal**	**3.07**	**181**			**Pn**	**15 14 44.2**	**+0.7**
CO03	**El Pedregal**	**3.07**	**181**	*e*P		**Pn**	**15 14 44.5**	**+0.9**
CO03				*e*S		**Sn**	**15 15 21.3**	**+2.3**
CO03	**El Pedregal**	**3.07**	**181**	*e*P		**Pn**	**15 14 44.4**	**+0.9**
CO03				*e*S		**Sn**	**15 15 21.5**	**+2.5**
CO03					IAML		15 15 39.3	
	comp=Z,807nm,0.5s							
PB14	**IPOC Station P**	**3.13**	**4**			**Pn**	**15 14 44.0**	**-0.5**
PB14	**IPOC Station P**	**3.13**	**4**	*e*P		**Pn**	**15 14 44.3**	**-0.2**
PB14					IAML		15 15 39.9	
	comp=N,439nm,0.6s							
PB14	**IPOC Station P**	**3.13**	**4**	*e*P		Pn	15 14 39.2	-5.3
PB14				*e*S		**Sn**	**15 15 19.7**	**-1.1**
PB14					IAML		15 15 33.8	
	comp=Z,534nm,0.8s							
ACCO	**Cerro Coronel**	**3.14**	**154**	*e*P		**Pn**	**15 14 47.8**	**+3.1**
ACCO				*e*S		**Sn**	**15 15 21.4**	**+0.3**
AANI	**Anillaco**	**3.43**	**109**	*e*P		**Pn**	**15 14 45.6**	**-2.9**
AANI					IAML		15 15 35.1	
	comp=Z,899nm,0.9s							
CO02	**Combarbal**	**3.45**	**185**			**Pn**	**15 14 48.5**	**-0.2**
CO02	**Combarbal**	**3.45**	**185**	*e*P		**Pn**	**15 14 48.9**	**+0.3**
CO02				*e*S		**Sn**	**15 15 30.9**	**+2.5**
CO02	**Combarbal**	**3.45**	**185**	*e*P		**Pn**	**15 14 49.0**	**+0.3**
CO02				*e*S		**Sn**	**15 15 29.3**	**+0.9**
CO02					IAML		15 15 49.5	
	comp=Z,1μm,0.5s							
ACLC	**CERRO LA CRUZ**	**3.65**	**118**	*e*P		**Pn**	**15 14 53.6**	**+2.1**
ACLC				*e*S		**Sn**	**15 15 41.5**	**+8.1**
AVFE	**Valle Fertil**	**4.02**	**137**	*e*P		**Pn**	**15 14 58.0**	**+1.6**
AVFE				*e*S		**Sn**	**15 15 39.8**	**-2.5**
AVFE					IAML		15 15 53.8	
	comp=Z,147nm,0.3s							
RTLL	**Cerro Villicun**	**4.03**	**153**	*e*P		**Pn**	**15 14 54.9**	**-1.7**
RTLL				*e*S		Sn	15 15 26.1	-17
RTLL					IAML		15 15 26.1	
	comp=Z,479nm,1.1s							
ZON	**Zonda**	**4.14**	**156**			**Pn**	**15 14 57.1**	**-1.1**
RTLS	**Leoncito**	**4.19**	**164**	*e*P		**Pn**	**15 15 01.7**	**+2.7**
RTLS				*e*S		**Sn**	**15 15 48.2**	**+1.3**
RTLS					IAML		15 16 13.2	
	comp=Z,907nm,0.8s							
CO04	**Los Peladeros**	**4.28**	**184**	⇓*e*P		**Pn**	**15 15 00.1**	**-0.1**
CYA	**Choya**	**4.33**	**100**	*e*P		**Pn**	**15 15 01.9**	**+1.2**
CYA	**Choya**	**4.33**	**100**	*e*P		**Pn**	**15 15 02.2**	**+1.5**
CYA				*e*S		**Sn**	**15 15 49.9**	**-0.1**
CYA					IAML		15 15 55.2	
	comp=Z,167nm,0.5s							
CFA	**Coronel Fontan**	**4.37**	**152**	P		**Pn**	**15 15 03.0**	**+1.8**
	comp=Z,11nm,0.3s,baz=318,slow=11,SNR=66							
CFA				S		**Sn**	**15 15 53.5**	**+2.6**
	comp=Z,40nm,0.4s,baz=261,slow=20,SNR=6.7							
CFA	**Coronel Fontan**	**4.37**	**152**	*e*P		**Pn**	**15 15 03.2**	**+2.0**
CFA				*e*S		**Sn**	**15 15 50.7**	**-0.2**
APLL	**PUNTA DE LOS L**	**4.46**	**127**	IAML			15 16 00.1	
	comp=Z,100nm,0.3s							
VA06	**Catapilco**	**4.82**	**187**			**Pn**	**15 15 06.4**	**-1.0**
PB05	**IPOC Station P**	**4.90**	**5**			**Pn**	**15 15 06.6**	**-2.0**
PB05	**IPOC Station P**	**4.90**	**5**	⇑*e*P		**Pn**	**15 15 06.7**	**-2.0**
PB05	**IPOC Station P**	**4.90**	**5**	*e*S		Sn	15 16 20.7	+17
VA03	**San Esteban**	**4.99**	**179**			**Pn**	**15 15 09.3**	**-0.5**
VA03	**San Esteban**	**4.99**	**179**	*e*P		**Pn**	**15 15 10.1**	**+0.3**
PB06	**IPOC Station P**	**5.12**	**11**			**Pn**	**15 15 09.8**	**-1.9**
PB06	**IPOC Station P**	**5.12**	**11**	⇑*e*P		**Pn**	**15 15 10.2**	**-1.5**
SALTA		**5.23**	**49**	*e*P		**Pn**	**15 15 17.5**	**+4.0**
AF01	**San Pedro de A**	**5.28**	**26**			**Pn**	**15 15 13.0**	**-1.0**
AF01	**San Pedro de A**	**5.28**	**26**	*e*P		Pn	15 15 18.9	+4.9
VA01	**Torpederas**	**5.32**	**189**	Pn		**Pn**	**15 15 13.8**	**-0.3**
PEL	**Peldehue**	**5.37**	**180**			**Pn**	**15 15 14.5**	**-0.4**
MT02	**Curacav**	**5.50**	**184**			**Pn**	**15 15 15.2**	**-1.4**
SLA	**San Lorenzo**	**5.52**	**58**	*e*P		**Pn**	**15 15 18.9**	**+1.8**
MT05	**Renca**	**5.62**	**181**	Pn		**Pn**	**15 15 17.2**	**-1.1**
MT16	**CCHEN**	**5.65**	**179**	Pn		**Pn**	**15 15 16.8**	**-2.0**
MT08	**Bocatoma Ro**	**5.69**	**175**			**Pn**	**15 15 20.3**	**+0.8**
MT03	**Universidad Ad**	**5.72**	**179**			**Pn**	**15 15 18.7**	**-1.1**
PB03	**IPOC Station P**	**5.74**	**8**			**Pn**	**15 15 17.6**	**-2.6**
VA05	**Santo Domingo**	**5.94**	**188**			**Pn**	**15 15 20.2**	**-2.5**
MT13	**San Alfonso**	**5.97**	**177**			**Pn**	**15 15 23.0**	**-0.3**
MT09	**Talagante**	**6.01**	**183**			**Pn**	**15 15 22.7**	**-1.1**
PB07	**IPOC Station P**	**6.04**	**7**			**Pn**	**15 15 21.9**	**-2.4**
PB09	**IPOC Station P**	**6.07**	**12**			**Pn**	**15 15 23.6**	**-1.1**
LMEL	**Las Melosas**	**6.08**	**177**			**Pn**	**15 15 24.4**	**-0.5**
MT01	**Popeta**	**6.11**	**185**			**Pn**	**15 15 23.1**	**-1.9**
BO04	**La Punta**	**6.21**	**180**			**Pn**	**15 15 24.9**	**-1.6**
TCA	**Tanti**	**6.36**	**126**	*e*P		**Pn**	**15 15 28.2**	**-0.4**
PB02	**IPOC Station P**	**6.45**	**6**			**Pn**	**15 15 26.8**	**-3.0**
BO01	**Tunca**	**6.62**	**183**			**Pn**	**15 15 29.8**	**-2.3**
PB01	**IPOC Station P**	**6.77**	**9**			**Pn**	**15 15 31.4**	**-2.8**
PATCX	**Punta Patache**	**6.92**	**4**	Pn		**Pn**	**15 15 32.7**	**-3.6**
BO02	**Sierra Bellavi**	**7.01**	**181**			**Pn**	**15 15 35.6**	**-1.9**
TA01	**Diego Aracena**	**7.17**	**3**	Pn		**Pn**	**15 15 35.9**	**-3.7**
HMBC	**Humberstone**	**7.48**	**5**			**Pn**	**15 15 40.5**	**-3.5**
PB08	**IPOC Station P**	**7.70**	**11**	Pn		**Pn**	**15 15 44.2**	**-3.1**
PB11	**IPOC Station P**	**8.01**	**7**	Pn		**Pn**	**15 15 47.8**	**-3.5**
GO01	**Chusmiza**	**8.16**	**10**			**Pn**	**15 15 49.6**	**-4.1**
BI02	**San Fabin de**	**8.89**	**183**			**Pn**	**15 16 00.3**	**-3.0**
PB12	**IPOC Station P**	**9.11**	**2**	Pn		**Pn**	**15 16 02.5**	**-3.7**
VA04	**Juan Fernndez**	**9.16**	**228**	Pn		**Pn**	**15 16 03.7**	**-3.1**
PB18	**Visviri**	**10.18**	**6**	Pn		**Pn**	**15 16 18.6**	**-2.7**
LPAZ	**La Paz**	**11.65**	**12**	P		**Pn**	**15 16 39.1**	**-2.4**
	comp=Z,1.2nm,0.4s,baz=203,slow=8.7,SNR=11							
LPAZ				LR		LR	15 20 55.5	
	comp=Z,56nm,20.3s,baz=46,slow=37							
LPAZ	**La Paz**	**11.65**	**12**			**Pn**	**15 16 38.4**	**-3.1**
TRQA	**Tornquist**	**12.58**	**147**	Pn		**Pn**	**15 16 49.9**	**-3.6**
PLCA	**Paso Flores**	**12.94**	**180**	LR		LR	15 21 29.3	
	comp=Z,49nm,19.8s,baz=20,slow=34							
SIV	**San Ignacio**	**14.69**	**39**	P		Pn	15 17 16.3	-5.7
	comp=Z,1.5nm,0.3s,baz=209,slow=10,SNR=9.2							
SIV				pP		**P**	**15 17 30.6**	**+3.7**
	comp=Z,1.5nm,0.5s,baz=241,slow=9.7,SNR=4.1							
PLTB	**Pedras Altas**	**15.33**	**109**	Pn		**Pn**	**15 17 26.1**	**-4.1**
RUSC	**La Rusia**	**33.54**	**356**			**P**	**15 20 32.6**	**+0.3**
BAUV	**El Baul**	**36.57**	**4**	P		**P**	**15 20 57.3**	**-0.6**
PMSA	**Palmer Station**	**37.26**	**175**	LR		LR	15 34 41.8	
	comp=Z,38nm,20.6s,baz=344,slow=33							
SNAA	**Sanae**	**56.95**	**160**	P		**P**	**15 23 36.5**	**0.0**
	comp=Z,2.6nm,0.6s,baz=256,slow=6.6,SNR=10							
	comp=Z,2.6nm,0.6s							
SNAA	**Sanae**	**56.95**	**160**	P		**P**	**15 23 36.0**	**-0.5**
SNAA				IAmb		IAmb	15 23 37.1	
	comp=Z,3.2nm,0.8s							
QSPA	**South Pole Qui**	**62.46**	**180**	P		**P**	**15 24 18.2**	**+3.6**
	comp=Z,1.6nm,0.9s,baz=199,slow=0.6,SNR=8.1							
	comp=Z,1.6nm,0.9s							
QSPA	**South Pole Qui**	**62.46**	**180**	P		**P**	**15 24 17.

AB31	**Akbulak array**	**73.54**	**321**	P	**P**	**15 47 20.4 -0.8**
AB31				IAmb	IAmb	15 48 04.5
	comp=Z,2.9nm,1.4s					
ABKAR	**Akbulak array**	**73.54**	**321**	P	**P**	**15 47 20.3 -0.9**
VNDA	**Vanda**	**81.59**	**173**	P	**P**	**15 48 05.8 +0.2**
VNDA				IAmb	IAmb	15 48 20.8
	comp=Z,4.8nm,1.2s					
D19K	**Kuna River**	**82.89**	**21**		**P**	**15 48 13.5 +0.8**
H19K	**Roundabout Mou**	**82.90**	**24**	P	**P**	**15 48 14.7 +2.1**
LSZ	**Lusaka**	**98.64**	**255**	LR	LR	16 29 57.4
	comp=Z,30nm,18.1s,baz=286,slow=33					

IDC ***21*** *15:44:01.9±2.2, 6°.71N×93°.65E, h0km, mb3.7/6, mbtmp3.7/8, ML3.6/2, MS3.1/5, Error ellipse: s-maj=81.0km s-min=19.7km az=61.0*

ISC 21 15:44:07.2±1.9, **6.8N**±0°.2×**93°.8E**±0°.3, **h35**km, **n12**, σ1§**10**/8, **mb3.6**/6, **MS3.3**/3, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.46**	**127**	Pn	**Pn**	**15 45 39.2**	**-0.7**
	0.9nm,0.3s,baz=324,slow=16,SNR=4.3						
PSI				LR	LR	15 48 12.6	
	comp=Z,109nm,20.1s,baz=304,slow=38 4.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**12.68**	**23**	Pn	**Pn**	**15 47 05.1**	**0.0**
	0.2nm,0.3s,baz=205,slow=17,SNR=5.3						
CMAR				LR	LR	15 51 39.3	
	comp=Z,60nm,18.1s,baz=195,slow=36 0.3nm,0.3s						
H08S3	**Diego Garcia H**	**25.59**	**236**	T	T	16 16 15.3	
	baz=56,slow=76,SNR=12						
H08S2	**Diego Garcia H**	**25.59**	**236**	T	T	16 16 11.2	
	baz=56,slow=76,SNR=22						
H08S1	**Diego Carcia H**	**25.61**	**236**	T	T	16 16 12.1	
	baz=56,slow=76,SNR=15						
BATI	**Baumata**	**34.20**	**119**	LR	LR	16 05 29.7	
	comp=Z,76nm,18.2s,baz=297,slow=38						
MKAR	**Makanchi Array**	**41.10**	**348**	P	**P**	**15 51 46.2**	**-1.5**
	0.6nm,0.8s,baz=167,slow=7.0,SNR=3.9						
MKAR				LR	LR	16 10 30.6	
	comp=Z,17nm,20.6s,baz=334,slow=39 0.6nm,0.8s						
SONM	**Songino Array**	**42.33**	**13**	P	**P**	**15 51 57.8**	**0.0**
	0.5nm,0.4s,baz=204,slow=3.2,SNR=2.7						
SONM				LR	LR	16 13 28.3	
	comp=Z,39nm,18.8s,baz=259,slow=42 0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**45.54**	**346**	P	**P**	**15 52 23.5**	**+0.1**
	1.6nm,0.3s,baz=165,slow=6.4,SNR=2.3 1.6nm,0.3s						
ZALV	**Zalesovo Beam**	**47.62**	**353**	P	**P**	**15 52 40.7**	**+1.1**
	1.0nm,0.7s,baz=156,slow=7.5,SNR=5.1 1.0nm,0.7s						
WRA	**Warramunga Arr**	**47.92**	**124**	P	**P**	**15 52 43.9**	**+1.4**
	0.6nm,1.0s,baz=302,slow=7.6,SNR=2.3 0.6nm,1.0s						
ASAR	**Alice Springs**	**49.49**	**129**	P	**P**	**15 52 54.5**	**0.0**
	0.3nm,0.5s,baz=300,slow=7.7,SNR=11 0.3nm,0.5s						

BGSI ***21*** *15:46:24.3±1.1, 23°.80S×27°.69E, h20km±14km, ML2.7*
PRE ***21*** *15:46:25.6±0.7, 23°.60S×27°.39E, h0km, ML2.7, Suspected explosion*

ISC 21 15:46:24.8±0.9, **23°.60S**±0°.04×**27°.30E**±0°.04, **h0**km, **n21**, σ2§**03**/39, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEPH	**Lephalale, Lim**	**0.52**	**120**	*e*P	**Pg**	**15 46 33.9**	**-1.0**
LEPH				*e*S	**Sg**	**15 46 40.6**	**-1.0**
LEPH				IAML		15 46 43.5	
	comp=Z,2μm,0.5s						
MREMI	**Moremi**	**1.03**	**7**	*i* P	**Pg**	**15 46 44.5**	**-0.2**
LPHEP	**Lephephe**	**1.34**	**280**	*i* P	**Pb**	**15 46 51.4**	**+0.4**
LPHEP				*i* S	**Sn**	**15 47 12.4**	**+2.8**
LPHEP				IAML		15 47 24.6	
	comp=N,109nm,0.5s						
LBTB	**Lobatse**	**2.10**	**227**	*e*P	**Pb**	**15 47 03.9**	**+0.1**
LBTB				*e*S	**Sb**	**15 47 31.6**	**+1.1**
LBTB				IAML		15 47 38.5	
	comp=Z,51nm,0.3s						
HRAO	**HartRAO**	**2.31**	**171**	*e*P	**Pn**	**15 47 05.5**	**+1.2**
HRAO				*e*S	**Sn**	**15 47 35.2**	**+1.8**
HRAO				IAML		15 47 43.2	
	comp=Z,36nm,0.5s						
KDWAN	**Kaudwane**	**2.43**	**275**	*i* P	**Pn**	**15 47 07.2**	**+1.2**
KDWAN				*i* S	**Sn**	**15 47 38.2**	**+1.7**
KDWAN				IAML		15 48 04.7	
	comp=E,55nm,0.6s						
BROLN	**Tlhalogang**	**2.49**	**1**	*i* P	**Pn**	**15 47 05.4**	**-1.4**
BROLN				*i* S	**Sn**	**15 47 35.9**	**-2.0**
BROLN				IAML		15 47 53.7	
	comp=E,39nm,0.5s						
MUSN	**Musina, Limpop**	**2.70**	**62**	*e*P	**Pn**	**15 47 10.1**	**+0.6**
MUSN				*e*S	**Sn**	**15 47 42.3**	**-0.6**
MUSN				IAML		15 48 00.8	
	comp=Z,32nm,0.7s						
MAKGR	**Makgori**	**3.17**	**225**	*i* P	**Pn**	**15 47 14.2**	**-1.8**
MAKGR				*i* S	**Sn**	**15 47 49.6**	**-5.0**
MAKGR				IAML		15 48 19.0	
	comp=E,184nm,0.5s						
SKOMA	**Sekoma**	**3.21**	**253**	*i* P	**Pn**	**15 47 16.8**	**+0.1**
SKOMA				IAML		15 48 19.5	
	comp=N,34nm,0.8s						
CRLN	**Carolina, Mapu**	**3.44**	**135**	*e*P	**Pn**	**15 47 20.4**	**+0.6**
CRLN				*e*S	**Sn**	**15 48 00.9**	**-0.4**
CRLN				IAML		15 48 18.3	
	comp=Z,23nm,0.6s						
MOPA	**Mopani**	**3.76**	**90**	*e*P	**Pn**	**15 47 24.6**	**+0.4**
MOPA				*e*S	**Sn**	**15 48 07.5**	**-1.6**
MOPA				IAML		15 48 24.0	
	comp=Z,50nm,0.4s						
SNKL	**Senekal, Frees**	**4.67**	**175**	*e*P	**Pn**	**15 47 38.9**	**+2.1**
SNKL				*e*S	**Sn**	**15 48 32.2**	**+0.3**
SNKL				IAML		15 48 60.0	
	comp=Z,26nm,0.5s						
NWCL	**Newcastle**	**4.74**	**151**	*e*P	**Pn**	**15 47 38.8**	**+1.1**
NWCL				*e*S	**Sn**	**15 48 32.0**	**-1.4**
NWCL				IAML		15 48 59.8	
	comp=Z,21nm,0.4s						
KGCAE	**Kacgae**	**4.75**	**278**	*i* P	**Pn**	**15 47 37.8**	**0.0**
BOSA	**Boshof**	**5.32**	**200**	*e*P	**Pn**	**15 47 47.8**	**+2.1**
BOSA				*e*S	**Sn**	**15 48 48.2**	**+0.4**
BOSA				IAML		15 49 18.6	
	comp=Z,20nm,0.5s						
ALKP	**Alkanpan, Nort**	**7.76**	**214**	*e*P	**Pn**	**15 48 22.4**	**+3.2**
ALKP				*e*S	**Sn**	**15 49 45.9**	**-2.0**
ALKP				IAML		15 50 39.1	
	comp=Z,9.3nm,0.5s						
GRAF	**Camdeboo Natio**	**9.00**	**195**	*e*P	**Pn**	**15 48 39.0**	**+2.8**
GRAF				*e*S	**Sn**	**15 50 15.4**	**-2.8**
GRAF				IAML		15 50 46.3	
	comp=Z,2.0nm,0.4s						
BRAK	**Brakfontein**	**9.04**	**205**	*e*P	**Pn**	**15 48 39.2**	**+2.5**
BRAK				*e*S	**Sn**	**15 50 16.4**	**-2.8**
BRAK				IAML		15 50 23.8	
	comp=Z,3.3nm,0.3s						
GRAN	**Grantham**	**9.78**	**206**	*e*P	**Pn**	**15 48 48.9**	**+2.0**
GRAN				*e*S	**Sn**	**15 50 34.5**	**-3.0**
GRAN				IAML		15 50 47.8	
	comp=Z,1.3nm,0.6s						
FRAZ	**Fraserburg**	**9.80**	**211**	*e*P	**Pn**	**15 48 50.8**	**+3.6**
FRAZ				*e*S	**Sn**	**15 50 35.4**	**-2.6**
FRAZ				IAML		15 51 37.5	
	comp=Z,4.6nm,0.6s						

IDC ***21*** *16:01:29.1±2.4, 36°.79N×141°.43E, h0km, mb3.4/3, mbtmp3.3/4, ML2.2/1, Error ellipse: s-maj=51.6km s-min=28.0km az=40.0*
JMA ***21*** *16:01:32.1±0.1, 36°.8N±0°.2×141°.3E±0°.5, h32km, MV3.3/34, E OFF IBARAKI PREF*
JMA Felt I J1 at E OFF IBARAKI PREF .

ISC 21 16:01:33.9±1.4, **36°.78N**±0°.05×**141°.3E**±0°.1, **h35**km, **n26**, σ1§**84**/24, **mb3.5**/3, **6D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.49**	**311**	⇓P	**Pn**	**16 01 42.4**	**-2.1**
ONAJ				⇓S	**Sn**	**16 01 50.1**	**-1.7**
JHO	**Hitachi**	**0.58**	**253**	P	**Pn**	**16 01 43.4**	**-2.3**
JHO				S	**Sn**	**16 01 51.6**	**-2.3**
JFFD	**Fukushimafurud**	**0.64**	**299**	⇓P	**Pn**	**16 01 44.5**	**-2.0**
JFFD				⇓*e*S	**Sn**	**16 01 53.5**	**-1.9**
JFK	**Kawauchi**	**0.66**	**332**	*e*P	**Pn**	**16 01 45.2**	**-1.6**
JFK				*e*S	**Sn**	**16 01 54.5**	**-1.5**
JHYU	**Hitachinakayam**	**0.70**	**231**	*e*P	**Pn**	**16 01 45.0**	**-2.3**
JHYU				*e*S	**Sn**	**16 01 54.9**	**-1.9**
JYT	**Yasato**	**1.02**	**237**	⇓P	**Pn**	**16 01 49.8**	**-1.9**
JYT				⇓*e*S	**Sn**	**16 02 03.5**	**-1.2**
JOTO	**OTAMA OYAMA**	**1.07**	**317**	P	**Pn**	**16 01 52.1**	**-0.4**
JMM	**Marumori**	**1.14**	**341**	P	**Pn**	**16 01 52.9**	**-0.5**
JMM	**Marumori**	**1.14**	**341**	*e*P	**Pn**	**16 01 52.7**	**-0.7**
JMM				*e*S	**Sn**	**16 02 07.9**	**+0.1**
MJAR	**Matsushiro Arr**	**2.46**	**265**	Pn	**Pn**	**16 02 12.1**	**+0.5**
	0.4nm,0.3s,baz=83,slow=14,SNR=17						
MJAR				Sn	**Sn**	**16 02 45.1**	**+4.6**
	1.5nm,0.3s,baz=83,slow=15,SNR=13 2.2nm,0.3s						
MAJO	**Matsushiro**	**2.46**	**265**	P	**Pn**	**16 02 12.7**	**+1.1**
JSD	**Sado**	**2.69**	**299**	P	Pn	16 02 19.2	+4.4
JGF	**Kuroka**	**3.37**	**251**	P	**Pn**	**16 02 25.0**	**+0.9**
INU	**Inuyama**	**3.72**	**249**	P	**Pn**	**16 02 29.2**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**28.13**	**120**	T	T	16 36 47.2	
	baz=313,slow=75,SNR=171						
H11N1	**WAKE ISLAND Hy**	**28.14**	**120**	T	T	16 36 48.3	
	baz=313,slow=75,SNR=152						
H11N3	**WAKE ISLAND Hy**	**28.15**	**120**	T	T	16 36 49.1	
	baz=313,slow=75,SNR=124						
H11S1	**WAKE ISLAND Hy**	**28.83**	**122**	T	T	16 37 39.7	
	baz=314,slow=76,SNR=66						
H11S3	**WAKE ISLAND Hy**	**28.83**	**122**	T	T	16 37 39.6	
	baz=314,slow=76,SNR=69						
H11S2	**WAKE ISLAND Hy**	**28.84**	**122**	T	T	16 37 43.6	
	baz=314,slow=76,SNR=54						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**16 09 40.2**	**+1.2**
	0.3nm,0.6s,baz=95,slow=10,SNR=3.0 0.3nm,0.6s						
WRA	**Warramunga Arr**	**56.79**	**188**	P	**P**	**16 11 15.1**	**+0.4**
	0.6nm,0.8s,baz=5.7,slow=7.2,SNR=4.8 0.6nm,0.8s						
ASAR	**Alice Springs**	**60.52**	**188**	P	**P**	**16 11 41.4**	**+0.9**
	0.4nm,0.9s,baz=19,slow=12,SNR=3.9 0.4nm,0.9s						
H03N2	**Juan Fernandez**	**147.12**	**96**	T	T	19 05 38.6	
	baz=291,slow=76,SNR=17						
H03N3	**Juan Fernandez**	**147.13**	**96**	T	T	19 05 39.3	
	baz=291,slow=76,SNR=18						
H03N1	**Juan Fernandez**	**147.14**	**96**	T	T	19 05 39.9	
	baz=291,slow=76,SNR=16						

NEIC ***21*** *16:05:53.4±2.5, 16°.50N±0°.08×120°.8E±0°.1, h133km±9km, mb4.2/12, Error ellipse: s-maj=19.1km s-min=11.3km az=81.0*
IDC ***21*** *16:05:54.4±1.5, 16°.33N×120°.80E, h156km±17km, mb3.4/13, mbtmp3.9/14, Error ellipse: s-maj=28.1km s-min=15.9km az=60.0*

ISC 21 16:05:54.1±0.6, **16°.41N**±0°.07×**120°.82E**±0°.10, **h150**km, **n37**, σ1§**42**/36, **mb4.0**/19, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**2.30**	**177**	P	**Pn**	**16 06 33.9**	**+1.0**
	140nm,0.3s,baz=201,slow=3.5,SNR=8.0						
TGY				S	**Sn**	**16 07 01.9**	**-0.8**
	165nm,0.4s,baz=237,slow=11,SNR=5.0						
TPUB	**Ta-pu**	**6.86**	**359**	Pn	**Pn**	**16 07 30.8**	**-1.5**
YULB	**Yu-li**	**6.96**	**4**	Pn	**Pn**	**16 07 31.5**	**-2.1**
SSLB	**Suanglung**	**7.34**	**1**	Pn	**Pn**	**16 07 36.9**	**-1.9**
NACB	**Ninganchiao**	**7.76**	**5**	Pn	**Pn**	**16 07 41.8**	**-2.5**
YHNB	**Yeheng**	**8.24**	**4**	Pn	**Pn**	**16 07 47.9**	**-2.8**
KNMB	**Chin-men Tao**	**8.33**	**345**	Pn	Pn	16 07 48.0	-3.9
TATO	**Taipei**	**8.55**	**4**	Pn	Pn	16 07 50.8	-3.9
HKPS	**Hong Kong Po S**	**8.59**	**314**	Pn	**Pn**	**16 07 52.5**	**-2.9**
DAV	**Davao City (W)**	**10.38**	**153**	Pn	**Pn**	**16 08 18.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**20.97**	**279**	P	**P**	**16 10 26.5**	**+0.9**
	0.8nm,0.5s,baz=86,slow=10,SNR=5.7 0.8nm,0.5s						
KULM	**Kulim**	**22.66**	**243**	P	**P**	**16 10 43.0**	**+0.2**
MJB9	**Matsu-Tunnel**	**25.30**	**34**	P	**P**	**16 11 06.5**	**-0.2**
MJB9				IAmb	IAmb	16 11 23.6	
	comp=Z,19nm,1.5s						
EVN	**Everest**	**33.41**	**296**	P	**P**	**16 12 19.6**	**+0.3**
EVN				IAmb	IAmb	16 13 00.2	
	comp=Z,4.2nm,1.3s						
WB0	**Warramunga Arr**	**38.34**	**159**	P	**P**	**16 12 60.0**	**-0.7**
WB0				IAmb	IAmb	16 13 04.0	
	comp=Z,6.2nm,1.4s						
WRA	**Warramunga Arr**	**38.49**	**159**	P	**P**	**16 13 00.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=333,slow=9.8,SNR=1.8 comp=Z,0.1nm,0.3s						
WR8	**Warramunga Arr**	**38.56**	**159**	P	**P**	**16 13 01.7**	**-0.7**
WR8				IAmb	IAmb	16 13 36.8	
	comp=Z,9.5nm,1.5s						
ASAR	**Alice Springs**	**41.83**	**162**	P	**P**	**16 13 28.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=341,slow=7.2,SNR=11 comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**43.96**	**322**	P	**P**	**16 13 46.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=138,slow=7.3,SNR=2.8 comp=Z,0.2nm,0.4s						
PETK	**Petropavlovsk-**	**46.62**	**30**	P	**P**	**16 14 08.3**	**+1.3**
	comp=Z,13nm,1.2s,baz=204,slow=7.2,SNR=5.5 comp=Z,13nm,1.2s						
KURK	**Kurchatov**	**48.03**	**325**	P	**P**	**16 14 17.4**	**-0.5**
KURBB	**Kurchatov Arra**	**48.04**	**325**	P	**P**	**16 14 17.4**	**-0.6**
	comp=Z,0.8nm,0.2s,baz=117,slow=9.4,SNR=1.2 comp=Z,0.8nm,0.2s						
BVAR	**Borovoye Array**	**53.63**	**325**	P	**P**	**16 14 59.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=99,slow=8.9,SNR=4.3 comp=Z,0.7nm,0.6s						
AB31	**Akbulak array**	**58.79**	**318**	P	**P**	**16 15 37.1**	**+0.6**
AB31				IAmb	IAmb	16 15 37.6	
	comp=Z,1.4nm,0.6s						
ABKAR	**Akbulak array**	**58.79**	**318**	P	**P**	**16 15 36.8**	**+0.3**
D20K	**Etivluk River**	**72.14**	**22**	P	**P**	**16 17 03.5**	**+1.5**
G21K	**Allakaket**	**73.37**	**25**	P	**P**	**16 17 11.0**	**+1.8**
G21K				IAmb	IAmb	16 17 27.2	
	comp=Z,11nm,1.4s						
H22K	**Ishtalitna Cre**	**74.27**	**25**	P	**P**	**16 17 16.9**	**+2.4**
MLY	**Manley**	**74.61**	**26**	P	**P**	**16 17 18.2**	**+1.7**
I23K	**Minto, Yukon-K**	**75.18**	**26**	P	**P**	**16 17 21.5**	**+1.8**
I23K				IAmb	IAmb	16 17 57.3	
	comp=Z,5.3nm,1.3s						
ILAR	**Eielson Array**	**76.28**	**26**	P	**P**	**16 17 25.2**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=259,slow=5.3,SNR=4.5 comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B**	**76.61**	**339**	P	**P**	**16 17 27.1**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=76,slow=6.0,SNR=6.8 comp=Z,2.9nm,0.8s						
BMAR	**Burnt Mountain**	**76.75**	**23**	P	**P**	**16 17 30.8**	**+2.2**
SPITS	**Spitsbergen Ar**	**76.98**	**348**	P	**P**	**16 17 30.5**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=87,slow=7.5,SNR=11 comp=Z,0.9nm,0.4s						
FINES	**FINESS Array B**	**77.99**	**331**	P	**P**	**16 17 35.9**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=47,slow=5.1,SNR=15 comp=Z,1.2nm,0.5s						
HFS	**Hagfors**	**84.17**	**331**	P	**P**	**16 18 08.2**	**0.0**
	comp=Z,0.9nm,0.5s,baz=88,slow=4.6,SNR=6.1 comp=Z,0.9nm,0.5s						
NOA	**NORSAR Array B**	**84.92**	**333**	P	**P**	**16 18 11.9**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=63,slow=5.0,SNR=3.5 comp=Z,1.1nm,0.8s						

SJA 21 16:13:28.2±0.3, **33°.75S**×**67°.00W**, **h14**km, **ML3.5**, **MW3.5**, **Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVIZ	**Vizcacheras**	**1.29**	**282**	*e*P	Pg	16 13 52.9	-0.3
ACAN	**Cantantal**	**1.48**	**354**	*e*P	Pb	16 13 55.4	-0.2
ACAN				IAML		16 14 19.7	
	comp=Z,2μm,0.6s						
RFA	**San Rafael**	**1.58**	**230**	*e*P	Pb	16 13 57.2	-0.1
RFA				*e*S	Sg	16 14 19.9	+0.7
RFA				IAML		16 14 21.2	
	comp=Z,472nm,0.5s						
AAGR	**Agrelo**	**1.67**	**293**	*e*P	Pb	16 13 59.4	+0.6
AAGR				*e*S	Sg	16 14 23.5	+1.6
AAGR				IAML		16 14 23.9	
	comp=Z,405nm,0.3s						
MRA	**San Martin**	**1.71**	**39**	*e*P	Pb	16 13 59.7	+0.2
MRA				*e*S	Sg	16 14 24.8	+1.4
MRA				IAML		16 14 25.6	
	comp=Z,575nm,0.1s						
ARCO	**CERRO ARCO**	**1.85**	**299**	*e*P	Pb	16 14 01.8	-0.2
ARCO				*e*S	Sg	16 14 28.6	+0.6
ARCO				IAML		16 14 30.6	
	comp=Z,624nm,0.3s						
ASAL	**Salagasta**	**1.93**	**306**	*e*P	Pb	16 14 02.9	-0.3
ASAL				*e*S	Sg	16 14 32.8	+2.7
CFA	**Coronel Fontan**	**2.38**	**334**	*e*P	Pn	16 14 08.6	+1.7
CFA				*e*S	Sg	16 14 43.3	-1.5
MT08	**Bocatoma Ro**	**2.54**	**276**	*e*P	Pb	16 14 11.9	-1.7
MT08				*e*S	Sg	16 14 47.4	-2.3
MT08				IAML		16 14 56.0	
	comp=Z,186nm,1.1s						
SJA	**San Juan**	**2.58**	**329**	*e*P	Pn	16 14 10.3	+0.7
SJA				IAML		16 14 53.0	
	comp=Z,230nm,0.8s						
ACHE	**Chepes**	**2.60**	**6**	*e*P	Pn	16 14 11.6	+1.6
ACHE				*e*S	Sg	16 14 49.8	-2.0
ZON	**Zonda**	**2.62**	**327**	*e*P	Pb	16 14 13.1	-1.8
ZON				*e*S	Sb	16 14 49.1	+2.2
ZON				IAML		16 14 51.0	
	comp=Z,127nm,0.5s						
MT04	**Ro Olivares**	**2.64**	**277**	*e*P	Pb	16 14 14.2	-1.2
MT04				IAML		16 14 59.7	
	comp=Z,84nm,1.0s						
LMEL	**Las Melosas**	**2.67**	**267**	*e*P	Pb	16 14 14.5	-1.4
LMEL				*e*S	Sg	16 14 51.7	-2.3
LMEL				IAML		16 14 53.2	
	comp=Z,104nm,0.3s						
RTLL	**Cerro Villicun**	**2.72**	**332**	*e*P	Pn	16 14 01.9	-10
RTLL				*e*S	Sb	16 14 49.1	-0.8
RTLL				IAML		16 14 56.2	
	comp=Z,139nm,0.3s						
MT13	**San Alfonso**	**2.74**	**269**	*e*P	Pn	16 14 13.9	+2.1
MT13				*e*S	Sb	16 14 49.5	-1.0
MT13				IAML		16 15 07.5	
	comp=Z,86nm,0.6s						
RTLS	**Leoncito**	**2.75**	**315**	*e*P	Pn	16 14 14.5	+2.4
RTLS				*e*S	Sb	16 14 48.8	-2.1
RTLS				IAML		16 15 02.1	
	comp=Z,562nm,0.5s						
EDS3	**Malargue**	**2.82**	**224**	*e*P	Pb	16 14 15.9	-2.6
EDS3				*e*S	Sb	16 14 52.1	-0.7
MT03	**Universidad Ad**	**2.94**	**274**	*e*P	Pb	16 14 18.0	-2.5
MT03				*e*S	Sg	16 15 00.4	-2.3
MT03				IAML		16 15 03.8	
	comp=Z,106nm,0.8s						
AVFE	**Valle Fertil**	**3.11**	**353**	*e*P	Pn	16 14 18.9	+2.0
AVFE				*e*S	Sb	16 14 59.1	-2.0
AVFE				IAML		16 15 05.7	
	comp=Z,235nm,0.3s						
VA03	**San Esteban**	**3.13**	**287**	*e*P	Pn	16 14 20.1	+2.8
VA03				IAML		16 15 06.7	
	comp=Z,146nm,0.9s						
PEL	**Peldehue**	**3.14**	**280**	*e*P	Pn	16 14 17.9	+0.6
PEL				IAML		16 15 08.0	
	comp=Z,102nm,0.9s						
MT05	**Renca**	**3.14**	**276**	*e*P	Pb	16 14 26.0	+2.2
MT05				IAML		16 15 17.6	
	comp=Z,69nm,1.4s						
TCA	**Tanti**	**3.15**	**41**	*e*P	Pb	16 14 20.9	-3.2
APLL	**PUNTA DE LOS L**	**3.37**	**7**	*e*P	Pn	16 14 22.8	+2.3
BO01	**Tunca**	**3.45**	**258**	*e*P	Pb	16 14 26.8	-2.3
MT02	**Curacav**	**3.49**	**277**	IAML		16 15 29.8	
	comp=Z,62nm,1.1s						
ACCO	**Cerro Coronel**	**3.61**	**330**	*e*P	Pn	16 14 26.8	+2.7
ACCO				*e*S	Sb	16 15 15.8	+0.1
AROD	**Rodeo**	**4.15**	**329**	*e*P	Pn	16 14 34.8	+3.4
AROD				*e*S	Sg	16 15 37.7	-3.7
CO02	**Combarbal**	**4.23**	**306**	*e*S	Sg	16 15 41.5	-2.5
CO02				IAML		16 15 43.8	
	comp=Z,113nm,0.7s						
VCA	**Vinchina**	**5.11**	**348**	*e*P	Pn	16 14 47.9	+3.4
VCA				IAML		16 16 15.7	
	comp=Z,92nm,0.8s						

GCG 21 16:18:18.5±1.0, **13°.88N**×**90°.60W**, **h73**km±10km, **MD3.5**, **ML3.7**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG16	**Alotenango, Sa**	**0.40**	**13**	*i* P	Pn	16 18 33.4	+2.4
FG16				IAML		16 18 50.5	
	comp=N,4μm,0.3s						
PCG5	**San Vicente Pa**	**0.40**	**34**	*e*P	Pn	16 18 31.7	+0.8
STG5	**El Palmar, Qui**	**0.89**	**306**	*e*P	Pn	16 18 40.4	+4.5
STG5				*e*S	Sn	16 18 57.5	+8.6
STG8	**El Palmar, Qui**	**0.92**	**308**	*e*P	Pn	16 18 41.6	+5.2
STG8				*e*S	Sn	16 18 59.1	+9.5
STG8				IAML		16 19 01.5	
	comp=E,612nm,0.1s						
APG	**El Apazote**	**1.12**	**7**	*e*P	Pn	16 18 40.2	+1.3
JAYA	**Jayaque - finc**	**1.15**	**101**	*i* P	Pn	16 18 39.1	0.0
MTO3	**Montecristo**	**1.31**	**67**	*e*P	Pn	16 18 41.4	+0.1

BER ***21*** *16:26:04.8±2.8, 80°.74N×2°.88W, h10km, mb(Pn)2.6, ML1.2(DNK), Confirmed Earthquake*
DNK ***21*** *16:26:06.7±2.0, 80°.78N×2°.69W, h36km±18km, ML1.2*

ISC 21 16:25:59.4±0.9, **80°.81N**±0°.07×**3°.28W**±0°.04, **h10**km, **n13**, σ3§**54**/25, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.20**	**298**	*i* P	**Pg**	**16 26 41.8**	**+0.2**
NOR				*i* S	**Sb**	**16 27 05.9**	**-0.7**
NOR				IAML		16 27 15.1	
	comp=Z,1.5nm,0.4s						
NOR	**Nord**	**2.20**	**298**	*i* P	**Pg**	**16 26 41.8**	**+0.2**
NOR				*i* S	**Sb**	**16 27 05.9**	**-0.7**
NOR				IAML		16 27 15.1	
	comp=Z,1.5nm,0.4s						
KBS	**Kingsbay**	**3.28**	**117**	*e*P	**Pn**	**16 26 53.5**	**+2.7**
KBS				*e*S	**Sn**	**16 27 27.1**	**-2.6**
KBS				IAML		16 27 33.0	
	comp=Z,1.4nm,0.4s						
**

VNA3	Neumayer Olymp	16.97 161	⇑P		Pn	16 32 16.9	-0.5
	comp=Z,0.5nm,0.2s						
VNA2	Neumayer--Watz	17.16 158	⇑P		Pn	16 32 19.4	-0.4
	comp=Z,0.6nm,0.2s,baz=313,slow=13						
SNAA	Sanae	18.71 156	⇑P		P	16 32 36.8	-0.9
	comp=Z,17nm,0.3s						
SNAA	Sanae	18.71 156	P		P	16 32 37.0	-0.7
	comp=Z,0.6nm,0.3s,baz=297,slow=11,SNR=55						
	comp=Z,3.1nm,0.5s						
SNAA	Sanae	18.71 156	P		P	16 32 36.6	-1.1
PMSA	Palmer Station	20.01 229	P		P	16 32 51.9	0.0
PMSA			IAmb	IAmb		16 32 56.3	
	comp=Z,16nm,0.9s						
TROLL	Troll, Antarti	20.21 154	⇑P		P	16 32 53.0	-1.0
	comp=Z,53nm,0.3s						
BELA	Belgrano 2	22.11 184	P		P	16 33 11.6	-2.6
TRQA	Tornquist	29.43 293	P		P	16 34 21.6	-0.6
PLTB	Pedras Altas	30.58 311	P		P	16 34 33.4	+1.0
PLTB			IAmb	IAmb		16 34 50.7	
	comp=Z,18nm,1.5s						
QSPA	South Pole Qui	34.22 180	P		P	16 35 06.1	+2.1
	comp=Z,1.3nm,0.6s,baz=42,slow=23,SNR=15						
	comp=Z,1.3nm,0.6s						
QSPA	South Pole Qui	34.22 180			P	16 35 05.8	+1.8
QSPA			IAmb	IAmb		16 35 08.0	
	comp=Z,5.5nm,1.3s						
MT09	Talagante	37.43 288	P		P	16 35 29.9	-1.8
MT02	Curacav	37.90 288	P		P	16 35 33.6	-2.0
CO02	Combarbal	39.43 290	P		P	16 35 47.4	-1.1
GO02	Mina Guanaco	43.60 297	P		P	16 36 22.1	-0.8
GO02			IAmb	IAmb		16 36 22.8	
	comp=Z,4.7nm,1.1s						
VNDA	Vanda	46.60 183	P		P	16 36 47.5	+1.8
	comp=Z,0.8nm,0.6s,baz=161,slow=2.2,SNR=5.7						
	comp=Z,0.8nm,0.6s						
VNDA	Vanda	46.60 183	IAmb	IAmb		16 36 58.6	
	comp=Z,8.2nm,1.4s						
PB01	IPOC Station P	47.01 300	P		P	16 36 49.4	-0.3
PB01			IAmb	IAmb		16 36 50.8	
	comp=Z,5.1nm,1.0s						
PB16	IPOC Station P	49.34 302	P		P	16 37 08.5	+0.3
PB16			IAmb	IAmb		16 37 09.2	
	comp=Z,11nm,1.5s						
LPAZ	La Paz	50.47 305	P		P	16 37 18.0	+1.2
	comp=Z,4.5nm,0.5s,baz=154,slow=5.2,SNR=28						
	comp=Z,4.5nm,0.5s						
LPAZ	La Paz	50.47 305	P		P	16 37 17.4	+0.6
LPAZ			IAmb	IAmb		16 37 18.8	
	comp=Z,4.2nm,0.6s						
FINES	FINESS Array B	124.30 28	PKP		PKiKP	16 47 14.7	-0.3
	comp=Z,2.8nm,0.8s,baz=220,slow=1.5,SNR=7.9						
ILAR	Eielson Array	150.20 312	PKPbc		PKPbc	16 48 06.6	-0.3
	comp=Z,3.1nm,0.8s,baz=128,slow=1.6,SNR=30						
ILAR	Eielson Array	150.20 312			PKPbc	16 48 05.8	-1.1
SONM	Songino Array	150.60 86	PKPbc		PKiKP	16 48 08.5	-0.7
	comp=Z,0.6nm,0.5s,baz=249,slow=6.5,SNR=4.9						

*JMA **21** 16:29:14.0±0.1,38°.4N±0°.4×142°.1E±0°.8,h33km±1km, MD3.8/36,MV4.0/36,E OFF MIYAGI PREF*
JMA Felt I J1 at E OFF MIYAGI PREF .
*NIED **21** 16:29:14.0,38°.39N×142°.09E,h33km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}-2.20; $M_{\theta\theta}$0.60; $M_{\phi\phi}$1.60; $M_{r\theta}$3.35; $M_{\theta\phi}$0.18; $M_{\phi r}$2.32; Fault plane solution: M_{θ}4.44000×10¹⁴ NP1:ϕ_s17.00000°, δ14.00000°,λ-123.00000°. NP2:ϕ_s231.00000°, δ79.00000°,λ-83.00000°.*
*NEIC **21** 16:29:14.0±2.0,38°.30N±0°.06×142°.11E±0°.09,h33km±6km, mb4.1/8 Error ellipse: s-maj=12.6km s-min=5.7km az=125.0*
*IDC **21** 16:29:17.2±2.5,38°.38N×142°.07E,h57km±22km,mb3.7/9, mbtmp3.9/12,ML2.9/3,MS3.2/5,Error ellipse: s-maj=26.7km s-min=14.3km az=95.0*

ISC 21 16:29:14.6±1.5,38°.37N±0°.05×142°.02E±0°.08,h32km±9km, n61,σ1§10/56,mb4.0/13,MS3.1/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	Ishinomakibobu	0.44	263	*i* P		Pb	16 29 24.2	-0.1
JIKH				*e*S		Sb	16 29 30.9	+0.1
JIO	Ouri	0.54	280	*i* P		Pn	16 29 25.7	-0.3
JIO				S		Sb	16 29 33.7	+0.3
JKMT	Kesennumamotoy	0.62	316	*i* P		Pn	16 29 26.6	-0.5
JKMT				*e*S		Sb	16 29 35.3	-0.3
JKMT	Kesennumamotoy	0.62	316	A		A	16 29 26.6	
	comp=N,9.0nm,0.6s,comp=E,12nm,0.5s							
OFUJ	Ofunato	0.77	339	*i* P		Pn	16 29 28.1	-1.1
OFUJ				S		Sn	16 29 38.0	-1.6
OFUJ	Ofunato	0.77	339	A		A	16 29 28.1	
	comp=N,4.0nm,0.6s,comp=E,3.0nm,0.8s							
JMK	Ichinoseki	0.86	313	*i* P		Pn	16 29 30.1	-0.3
JMK				S		Sn	16 29 41.6	-0.3
JOFO	Osakifurukawao	0.90	286	A		A	16 29 31.2	
	comp=N,6.0nm,4.0s,comp=E,9.0nm,1.4s							
JOU	Okura	1.07	270	*i* P		Pn	16 29 33.9	+0.6
JOU				S		Sn	16 29 48.4	+1.3
JOU	Okura	1.07	270	A		A	16 29 33.9	
	comp=N,8.0nm,0.5s,comp=E,4.0nm,0.7s							
JMM	Marumori	1.09	243			Pn	16 29 32.9	-0.7
JMM						Sn	16 29 47.8	+0.2
JMM	Marumori	1.09	243	*i* P		Pn	16 29 33.4	-0.2
JOM	Ohasama	1.25	333	*i* P		Pn	16 29 35.6	-0.2
JOM				S		Sn	16 29 51.4	0.0
JOM	Ohasama	1.25	333	A		A	16 29 35.6	
	comp=N,2.0nm,0.6s,comp=E,3.0nm,0.3s							
JFK	Kawauchi	1.35	223	P		Pn	16 29 36.7	-0.5
JKEN	Kujiedanarisaw	1.85	353	A		A	16 29 44.3	
	comp=N,5.0nm,0.7s,comp=E,3.0nm,2.5s							
JTM	Tenmabayashi	2.53	343			Pn	16 29 53.6	+0.2
JTM						Sn	16 30 24.0	+0.9
JSD	Sado	2.98	265			Pn	16 30 00.5	+0.9
MAJO	Matsushiro	3.54	240			Pn	16 30 05.2	-2.1
MJAR	Matsushiro Arr	3.54	240	P		Pn	16 30 10.1	+2.8
	comp=E,0.2nm,0.3s,baz=56,slow=10.0,SNR=11							
	comp=E,1.5nm,0.5s							
MJAR	Matsushiro Arr	3.54	240			Pn	16 30 06.1	-1.2
MJB9	Matsu-Tunnel	3.54	240			Pn	16 30 05.8	-1.5
ERM	Erimo	3.75	13	Pn		Pn	16 30 09.0	-1.2
JGF	Kuroka	4.64	235			Pn	16 30 22.4	-0.2
INU	Inuyama	5.02	235	Pn		Pn	16 30 26.7	-0.9
JHJ2	Mitsune	5.54	200	Pn		Pn	16 30 34.2	-0.6
ASAJ	Asahikawa	5.76	4	P		Pn	16 30 38.6	+0.8
	comp=E,0.8nm,0.3s,baz=200,slow=14,SNR=7.8							
ASAJ				S		Sn	16 31 45.5	+2.7
	comp=E,7.0nm,0.6s,baz=322,slow=17,SNR=1.5							
ASAJ				LR		LR	16 33 21.5	
	comp=E,77nm,21.5s,baz=164,slow=42							
	comp=E,9.1nm,1.0s							
JKA	Kamikawa-asahi	5.76	4			Pn	16 30 37.9	0.0
JKA	Kamikawa-asahi	5.76	4			Sn	16 31 45.5	+2.7
USRK	Ussuriysk Ar.	9.54	311	P		Pn	16 31 32.2	+2.6
	comp=E,0.1nm,0.3s,baz=139,slow=11,SNR=4.0							
	comp=E,2.6nm,0.9s							
JOW	Kunigami	16.30	229	LR		LR	16 38 03.8	
	comp=E,301nm,21.5s,baz=142,slow=32							
MA2	Magadan	21.95	12	LR		LR	16 44 33.2	
	comp=E,31nm,18.2s,baz=248,slow=42							
YAK	Yakutsk	24.89	346	P		P	16 34 32.7	-1.4
YAK				IAmb		IAmb	16 34 34.4	
	comp=Z,7.2nm,0.8s							
H11N2	WAKE ISLAND Hy 28.45	124		T		T	17 04 57.1	
	baz=316,slow=75,SNR=84							
H11N1	WAKE ISLAND Hy 28.46	124		T		T	17 04 57.5	
	baz=316,slow=75,SNR=69							
H11N3	WAKE ISLAND Hy 28.47	124		T		T	17 04 50.2	
	baz=316,slow=75,SNR=78							
H11S1	WAKE ISLAND Hy 29.21	126		T		T	17 06 17.6	
	baz=318,slow=76,SNR=39							
H11S3	WAKE ISLAND Hy 29.21	126		T		T	17 06 18.0	
	baz=318,slow=76,SNR=40							
H11S2	WAKE ISLAND Hy 29.23	126		T		T	17 06 19.1	
	baz=318,slow=76,SNR=35							
TIXI	Tiksi	34.03	353	LR		LR	16 51 48.6	
	comp=Z,33nm,18.4s,baz=192,slow=40							
ZAA0	Zalesovo Array	41.39	311	P		P	16 36 56.2	-1.3
ZAA0				IAmb		IAmb	16 37 08.7	
	comp=Z,2.6nm,1.1s							
ZALV	Zalesovo Beam	41.39	311	P		P	16 36 56.9	-0.6
	comp=Z,1.4nm,0.5s,baz=84,slow=7.9,SNR=7.7							
	comp=Z,1.4nm,0.5s							
MKAR	Makanchi Array	43.83	301	P		P	16 37 18.2	+0.7
	comp=Z,1.0nm,0.7s,baz=88,slow=9.1,SNR=8.4							
	comp=Z,1.0nm,0.7s							
MKAR	Makanchi Array	43.83	301	P		P	16 37 17.3	-0.3
MAKZ	Makanchi	44.04	301	P		P	16 37 18.9	-0.4
MAKZ				IAmb		IAmb	16 37 31.0	
	comp=Z,2.4nm,1.1s							
KURK	Kurchatov	45.50	307	P		P	16 37 30.2	-0.5
KURBB	Kurchatov Arra	45.58	307	P		P	16 37 31.6	+0.3
	comp=Z,3.9nm,0.6s,baz=82,slow=8.1,SNR=25							
	comp=Z,3.9nm,0.6s							
ILAR	Eielson Array	48.12	33	P		P	16 37 51.1	+0.2
	comp=Z,0.3nm,0.7s,baz=282,slow=5.8,SNR=5.0							
	comp=Z,0.3nm,0.7s							
D25K	Kavik River	48.25	27	P		P	16 37 52.2	+0.2
D25K				IAmb		IAmb	16 38 03.8	
	comp=Z,5.5nm,1.4s							
ARTI	Arti	55.80	318	LR		LR	17 05 06.8	
	comp=Z,41nm,18.6s,baz=254,slow=38							
WB0	Warramunga Arr	58.27	188	P		P	16 39 05.9	-0.1
WRA	Warramunga Arr	58.44	188	P		P	16 39 07.0	-0.3
	comp=Z,1.8nm,0.7s,baz=6.0,slow=7.1,SNR=17							
	comp=Z,1.8nm,0.7s							
WRA	Warramunga Arr	58.44	188	P		P	16 39 06.0	-1.3
WRA				PcP		PcP	16 39 59.6	+1.9
AS31	Alice Springs	62.17	188	P		P	16 39 31.8	-0.9
ASAR	Alice Springs	62.17	188	P		P	16 39 32.9	+0.1
	comp=Z,1.0nm,0.7s,baz=6.0,slow=5.0,SNR=23							
	comp=Z,1.0nm,0.7s							
ASAR	Alice Springs	62.17	188	P		P	16 39 32.2	-0.6
FINES	FINESS Array B	67.86	332	P		P	16 40 08.4	-0.9
	comp=Z,2.4nm,0.7s,baz=67,slow=5.0,SNR=4.3							
	comp=Z,2.4nm,0.7s							
FINES	FINESS Array B	67.86	332	P		P	16 40 08.8	-0.5
HFS	Hagfors	73.08	336	P		P	16 40 41.4	+0.2
	comp=Z,1.6nm,0.8s,baz=81,slow=10,SNR=1.2							
	comp=Z,1.6nm,0.8s							
NB2	NORSAR Subarra	73.15	337	P		P	16 40 41.8	+0.2
	comp=Z,2.0nm,0.9s,baz=39,slow=6.2							
NOA	NORSAR Array B	73.15	337	P		P	16 40 40.8	-0.9
	comp=Z,0.8nm,0.7s,baz=38,slow=5.8,SNR=3.8							
	comp=Z,0.8nm,0.7s							

IDC 21 16:38:12.8±7.8,7°.40S×129°.57E,h188km±83km,mb3.1/1, mbtmp3.4/5,Error ellipse: s-maj=77.4km s-min=25.2km az=40.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BATI	Baumata	6.47	244	P		Pn	16 39 46.0	-0.1
	9.1nm,0.4s,baz=71,slow=2.1,SNR=7.9							
BATI				S		Sn	16 41 00.3	+0.5
	9.7nm,0.4s,baz=44,slow=23,SNR=7.9							
FITZ	Fitzroy Crossi	11.30	199	P		Pn	16 40 50.0	+0.8
	1.2nm,0.7s,baz=7.2,slow=13,SNR=1.1							
FITZ				S		Sn	16 42 48.6	-6.4
	2.2nm,0.8s,baz=151,slow=19,SNR=6.4							
WRA	Warramunga Arr	13.30	160	P		Pn	16 41 13.1	-1.5
	0.1nm,0.3s,baz=338,slow=13,SNR=2.2							
WRA				S		Sn	16 43 34.7	-8.2
	0.5nm,0.5s,baz=330,slow=23,SNR=7.0							
ASAR	Alice Springs	16.70	166	P		P	16 41 55.8	+0.4
	0.2nm,0.3s,baz=341,slow=8.0,SNR=13							
MKAR	Makanchi Array	68.32	327	P		P	16 48 53.7	0.0
	0.3nm,0.4s,baz=120,slow=7.7,SNR=5.4							
	0.3nm,0.4s							

*DJA **21** 16:40:46.0±0.2,6°.S±3°.×13°.0E±°.,h134km±6km, M4.3/15, mb4.1/13,mB5.0/5,MLv4.3/15,Mw(mB)4.4/5*
*IDC **21** 16:40:49.0±5.1,6°.61S×130°.32E,h173km±47km,mb3.6/2, mbtmp4.1/6,Error ellipse: s-maj=46.5km s-min=19.0km az=62.0*

ISC 21 16:40:45.8±0.7,6°.33S±0°.05×130°.42E±0°.07,h150km,n32, σ1§66/35,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAUI	Saumlaki	1.86	152	P		Pn	16 41 19.5	+0.2
SAUI	Saumlaki	1.86	152	P		Pn	16 41 19.5	+0.2
BNDI	Bandanaira	1.86	344	P		Pn	16 41 19.2	-0.2
BNDI	Bandanaira	1.86	344	P		Pn	16 41 19.1	-0.3
MSAI	Masohi	3.31	333	P		Pn	16 41 36.9	-0.3
MSAI				S		Sn	16 42 14.9	-2.1
FAKI	Fak Fak	3.84	28	P		Pn	16 41 41.9	-2.1
FAKI	Fak Fak	3.84	28	P		Pn	16 41 41.8	-2.2
KMPI	Kaimana, Papua	4.21	51	P		Pn	16 41 47.3	-1.4
NLAI	Namlea	4.51	313	P		Pn	16 41 53.7	+0.9
SWI	Sorong	5.49	9	P		Pn	16 42 03.5	-2.2
	0.5nm46nm,0.6s							
RKPI	Ransiki, Papua	6.07	38	P		Pn	16 42 12.7	-0.8
DRS	Darwin Rock St	6.08	176	P		Pn	16 42 13.3	-0.3
SANI	Sanana	6.13	314	P		Pn	16 42 15.4	+1.1
SANI	Sanana	6.13	314	P		Pn	16 42 15.2	+0.9
	0.1nm11nm,0.7s							
SOEI	Soe	6.98	240	P		Pn	16 42 26.9	+1.1
SOEI	Soe	6.98	240	P		Pn	16 42 26.7	+0.9
	0.1nm13nm,0.8s							
BAKI	Biak	7.63	48	P		Pn	16 42 35.8	+1.6
BATI	Baumata	7.72	240	P		Pn	16 42 36.4	+0.9
	9.8nm,0.3s,baz=77,slow=1.5,SNR=8.1							
BATI				S		Sn	16 43 59.5	-2.3
	13nm,0.3s,baz=344,slow=22,SNR=7.7							
BATI	Baumata	7.72	240	P		Pn	16 42 36.3	+0.8
EDFI	Ende, Flores	8.99	254	P		Pn	16 42 54.2	+1.7
WBSI	Waikabubak, Su	11.41	253	P		Pn	16 43 25.4	+0.9
	19nm,1.0s							
FITZ	Fitzroy Crossi	12.60	201	P		Pn	16 43 37.2	-2.7
	3.7nm,0.3s,baz=31,slow=11,SNR=10							
FITZ				S		Sn	16 45 49.3	-10
	4.0nm,0.5s,baz=1.4,slow=16,SNR=4.6							
FITZ	Fitzroy Crossi	12.60	201	P		Pn	16 43 39.1	-0.7
PLAI	Plampang	12.78	258	P		Pn	16 43 42.7	+0.4
	11nm,1.2s							
WRAB	Tennant Creek	14.05	165	P		Pn	16 43 59.7	+1.2
WRA	Warramunga Arr	14.06	165	P		Pn	16 43 57.9	-0.6
	0.4nm,0.3s,baz=347,slow=8.8,SNR=7.4							
WRA				S		Sn	16 46 22.9	-12
	3.7nm,0.5s,baz=342,slow=22,SNR=8.9							
COEN	Coen	14.66	122	P		Pn	16 44 07.1	+1.0
QIS	Mount Isa	16.72	149	P		Pn	16 44 32.7	+1.3
ASAR	Alice Springs	17.56	169	P		P	16 44 41.2	+0.8
	1.0nm,0.5s,baz=343,slow=9.0,SNR=20							
ASAR				S		S	16 47 50.4	-5.1
	1.9nm,0.8s,baz=358,slow=27,SNR=9.6							
PCJI	Pacitan	19.18	263	P		P	16 44 59.6	+1.5
MKAR	Makanchi Array	67.90	326	P		P	16 51 30.1	+2.0
	1.4nm,0.4s,baz=126,slow=7.5,SNR=46							
	1.4nm,0.4s							
KURBB	Kurchatov Arra	72.16	328	P		P	16 51 55.5	+1.6
	0.4nm,0.3s,baz=127,slow=5.6,SNR=5.7							
	0.4nm,0.3s							

IDC 21 16:47:12.8±3.3,10°.19S×149°.87E,h0km,mb3.4/1, mbtmp3.7/3,ML2.9/2,MS2.9/4,Error ellipse: s-maj=55.0km s-min=37.8km az=40.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	Port Moresby	2.78	286	Pn		Pn	16 47 56.7	-1.9
	21nm,0.3s,baz=109,slow=8.5,SNR=113							
PMG				Pg		Pb	16 48 04.0	+0.7
	32nm,0.3s,baz=108,slow=12,SNR=17							
PMG				Sn		Sn	16 48 27.7	-5.1
	50nm,0.3s,baz=36,slow=20,SNR=8.0							
PMG				Lg		Lg	16 48 35.3	
	78nm,0.3s,baz=330,slow=22,SNR=8.1							
PMG				LR		LR	16 48 50.2	
	comp=Z,66nm,18.2s,baz=96,slow=35							
	78nm,0.4s							
JAY	Jayapura	11.87	309	LR		LR	16 54 26.1	
	comp=Z,34nm,18.9s,baz=115,slow=36							
WRA	Warramunga Arr	17.84	235	P		Pn	16 51 22.7	0.0
	0.1nm,0.3s,baz=59,slow=12,SNR=3.5							
WRA				S		Sn	16 54 25.1	-17
	0.3nm,0.4s,baz=56,slow=24,SNR=7.0							
	0.5nm,0.4s							
ASAR	Alice Springs	20.29	227	P		P	16 51 51.0	+0.7
	1.2nm,0.5s,baz=60,slow=10,SNR=15							
ASAR				S		S	16 55 24.8	-14
	0.2nm,0.7s,baz=46,slow=24,SNR=3.0							
ASAR				LR		LR	16 58 59.9	
	comp=Z,43nm,19.7s,baz=116,slow=35							
	1.2nm,0.5s							
RAR	Rarotonga	49.52	109	LR		LR	17 14 46.1	
	comp=Z,31nm,19.4s,baz=26,slow=33							
TORD	Torodi Ar. Bea	148.70	279	PKPbc		PKPbc	17 07 02.8	-0.3
	2.8nm,0.4s,baz=65,slow=5.1,SNR=2.2							

*IDC **21** 17:02:41.8±1.6,1°.13N×125°.30E,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=169.4km s-min=24.0km az=65.0*
*DJA **21** 17:02:45.6±2.0,2°.N±3°.×12°.6E±°.,h20km±19km,M3.5/8, MLv3.5/8*

ISC 21 17:02:46.0±1.0,1°.79N±0°.08×126°.58E±0°.09,h35km,n9, σ1§23/10,mb3.8/4,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.28	142	P		Pn	17 03 07.5	+0.1
TNTI				S		Sn	17 03 24.5	+1.1
SGSI	Sangihe	2.16	331	P		Pn	17 03 20.5	+1.0
KMSI	Cibinong	2.87	245	P		Pn	17 03 28.6	-0.6
SANI	Sanana	3.86	189	P		Pn	17 03 44.6	+1.7
LUWI	Luwuk	4.74	234	P		Pn	17 03 56.2	+1.3
WRA	Warramunga Arr	22.90	161	P		P	17 07 45.7	-1.2
	2.7nm,0.7s,baz=336,slow=11,SNR=24							
	2.7nm,0.7s							
MKAR	Makanchi Array	59.06	326	P		P	17 12 42.9	+0.2
	0.3nm,0.4s,baz=127,slow=7.0,SNR=5.7							
	0.3nm,0.4s							
KURBB	Kurchatov Arra	63.29	328	P		P	17 13 11.5	+0.3
	0.3nm,0.5s,baz=129,slow=6.0,SNR=5.3							
	0.3nm,0.5s							
VNDA	Vanda	81.53	173	P		P	17 14 58.1	-1.3
	1.8nm,1.0s,baz=340,slow=6.2,SNR=2.6							
	1.8nm,1.0s							

*IDC **21** 17:10:31.7±2.1,1°.73N×126°.48E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=176.9km s-min=25.6km az=66.0*
*DJA **21** 17:10:34.4±0.3,2°.N±3°.×12°.6E±°.,h10km,M3.0/7,MLv3.0/7*

ISC 21 17:10:36.8±1.5,1.7N±0°.4×126°.5E±0°.4,h35km,n4,σ0§97/5, mb3.2/3,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.28	135	P		Pn	17 10 57.8	-0.4
TNTI				S		Sn	17 11 14.7	+0.5
WRA	Warramunga Arr	22.84	161	P		P	17 15 36.3	-0.8
	0.5nm,0.5s,baz=339,slow=11,SNR=8.4							
	0.5nm,0.5s							
ASAR	Alice Springs	26.22	164	P		P	17 16 09.5	+0.9
	0.2nm,0.6s,baz=344,slow=11,SNR=10							
	0.2nm,0.6s							
MKAR	Makanchi Array	59.08	326	P		P	17 20 33.7	+0.1
	0.2nm,0.4s,baz=124,slow=8.6,SNR=5.5							
	0.2nm,0.4s							

IDC 21 17:15:49.0±5.9,5°.89S×152°.45E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=176.9km s-min=39.0km az=108.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	Warramunga Arr	22.48	230	P		P	17 20 50.4	+0.2
	2.0nm,1.1s,baz=58,slow=10,SNR=5.5							
	2.0nm,1.1s							
ASAR	Alice Springs	25.12	223	P		P	17 21 15.4	-0.4
	0.2nm,0.4s,baz=46,slow=9.2,SNR=4.7							
	0.2nm,0.4s							
MKAR	Makanchi Array	80.91	319	P		P	17 28 05.5	+0.2
	0.3nm,0.5s,baz=97,slow=7.1,SNR=4.7							
	0.3nm,0.5s							

*IDC **21** 17:21:40.1±1.6,0°.25N×127°.05E,h0km,mb3.5/4, mbtmp3.5/4,MS3.7/1,Error ellipse: s-maj=173.3km s-min=22.6km az=66.0*
*DJA **21** 17:21:46.9±0.3,0°.S±4°.×12°.7E±°.,h10km,M4.0/10,mB5.1/1, mb4.5/4,MLv3.7/10,Mw(mB)4.5/1*

ISC 21 17:21:46.7±1.0,0°.05S±0°.08×126°.72E±0°.09,h35km,n11, σ1§73/11,mb3.5/4,Southern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.04	38	P		Pn	17 22 06.8	+2.0
SANI	Sanana	2.12	200	P		Pn	17 22 20.8	+1.2
KMSI	Cibinong	2.81	283	P		Pn	17 22 30.6	+1.5
TTSI	Tana Toraja	7.51	247	P		Pn	17 23 34.8	+1.0
	0.1nm24nm,0.7s							
BNSI	Bone	7.90	237	P		Pn	17 23 40.8	+1.7
	0.1nm18nm,0.8s							
SPSI	Sidrap Palu	7.96	241	P		Pn	17 23 42.1	+2.1
TGY	Tagaytay City	15.18	338	LR		LR	17 30 52.3	
	comp=Z,278nm,19.3s,baz=8.5,slow=37							
WRA	Warramunga Arr	21.13	160	P		P	17 26 28.4	-0.2
	1.0nm,0.4s,baz=340,slow=9.9,SNR=14							
	1.0nm,0.4s							
ASAR	Alice Springs	24.49	164	P		P	17 27 03.3	+0.5
	0.7nm,0.5s,baz=344,slow=11,SNR=44							
ASAR				PcP		PcP	17 30 39.2	-1.7
	0.2nm,0.5s,baz=2.7,slow=1.7,SNR=6.8							
	0.7nm,0.5s							
MKAR	Makanchi Array	60.66	327	P		P	17 31 52.5	-1.8
	0.1nm,0.4s,baz=124,slow=7.5,SNR=4.7							
	0.1nm,0.4s							
KURBB	Kurchatov Arra	64.91	328	P		P	17 32 21.6	-0.9
	0.3nm,0.3s,baz=132,slow=5.7,SNR=2.4							
	0.3nm,0.3s							

*SJ

PB02				IAML			17 34 41.9
	comp=Z,898nm,0.2s						
PB01	**IPOC Station P**	**1.39**	**341**	*e*P		**Pn**	**17 34 21.1 +0.6**
PB01				*i* S		**Sn**	**17 34 40.6 +0.1**
PB01				IAML			17 34 43.1
	comp=N,684nm,0.4s						
PB01	**IPOC Station P**	**1.39**	**341**	*e*P		**Pn**	**17 34 21.1 +0.6**
PB01				*e*S		**Sn**	**17 34 42.2 +1.7**
PB01				IAML			17 34 44.0
	comp=Z,532nm,0.5s						
PATCX	**Punta Patache**	**1.87**	**325**	*e*P		**Pn**	**17 34 26.6 +0.4**
PATCX				*i* S		**Sn**	**17 34 51.0 +0.4**
PATCX				IAML			17 34 59.5
	comp=E,422nm,0.5s						
PATCX	**Punta Patache**	**1.87**	**325**	*e*P		**Pn**	**17 34 26.8 +0.6**
PATCX				*e*S		**Sn**	**17 34 52.5 +1.9**
TA01	**Diego Aracena**	**2.10**	**328**	*e*P		**Pn**	**17 34 29.3 +0.4**
TA01				*i* S		**Sn**	**17 34 55.9 +0.4**
TA01				IAML			17 35 01.9
	comp=E,253nm,0.6s						
TA01	**Diego Aracena**	**2.10**	**328**	*e*P		**Pn**	**17 34 29.3 +0.4**
TA01				*e*S		**Sn**	**17 34 56.7 +1.2**
TA01				IAML			17 35 01.4
	comp=Z,156nm,0.7s						
HMBC	**Humberstone**	**2.23**	**338**	*e*P		**Pn**	**17 34 31.0 +0.3**
HMBC				*i* S		**Sn**	**17 34 59.3 +0.6**
HMBC	**Humberstone**	**2.23**	**338**	*e*P		**Pn**	**17 34 31.0 +0.3**
TA02	**Huaiquique**	**2.33**	**333**	*e*P		**Pn**	**17 34 32.2 +0.4**
TA02				*e*S		**Sn**	**17 34 53.5 -7.2**
TA02				IAML			17 34 58.8
	comp=Z,138nm,0.6s						
PB14	**IPOC Station P**	**2.60**	**209**	*e*P		**Pn**	**17 34 35.4 -0.1**
PB14				*e*S		**Sn**	**17 35 03.4 -3.9**
PB14				IAML			17 35 11.7
	comp=Z,150nm,0.4s						
PB11	**IPOC Station P**	**2.66**	**347**	*e*P		**Pn**	**17 34 36.8 +0.6**
PB11				IAML			17 35 11.6
	comp=Z,179nm,0.4s						
GO01	**Chusmiza**	**2.69**	**356**	*e*S		**Sn**	**17 35 02.0 -7.7**
GO01				IAML			17 35 02.1
	comp=Z,506nm,0.1s						
GO02	**Mina Guanaco**	**2.84**	**191**	*e*P		**Pn**	**17 34 39.5 +0.9**
GO02				*e*S		**Sn**	**17 35 13.3 +0.3**
GO02				IAML			17 35 14.8
	comp=Z,258nm,0.3s						
SALTA		**3.07**	**128**	*e*P		**Pn**	**17 34 43.6 +1.7**
SALTA				*e*P			17 34 44.3
YJA	**Yavi**	**3.24**	**87**	*e*P		**Pn**	**17 34 46.4 +2.4**
YJA				*e*S		**Sn**	**17 35 26.9 +4.5**
HJA	**Humahuaca**	**3.42**	**105**	*e*P		**Pn**	**17 34 43.4 -3.0**
HJA				*e*S		Sn	17 35 43.4 +17
SLA	**San Lorenzo**	**3.98**	**127**	*e*P		**Pn**	**17 34 51.1 -2.4**
AZAP	**Zapla**	**4.07**	**118**	*e*P		**Pn**	**17 34 55.6 +0.8**
AC02	**Maricunga**	**4.46**	**181**	*e*P		**Pn**	**17 35 01.3 +1.1**
AC02				*e*S		**Sn**	**17 35 52.5 +1.0**
AC02				IAML			17 35 58.1
	comp=Z,229nm,0.8s						

DJA ***21*** *17:36:56.5±0.6,5°S±3°×10°4E±°, h28km±5km, M4.7/24, mb4.7/16, mB5.3/5, MLv4.7/24, Mw(mB)4.7/5*
NEIC ***21*** *17:36:57.0±1.6, 5.°20S±0.°09×103.°7E±0.°1, h70km±6km, mb4.8/45, Error ellipse: s-maj=17.3km s-min=11.8km az=63.0*
IDC ***21*** *17:37:00.1±2.9, 5.°15S×103.°76E, h100km±24km, mb4.3/27, mbtmp4.7/27, MS3.4/12, Error ellipse: s-maj=17.6km s-min=8.4km az=40.0*

ISC 21 17:36:55.9±0.6, 5°33S±0.°05×103°64E±0.°05, h69km±4km, n172, σ1°33/155, mb4.7/52, 1C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LWLI	**Liwa**	**0.52**	**53**	P		**Pn**	**17 37 08.9**	**-0.1**
LWLI				S		**Sn**	**17 37 18.3**	**-0.3**
KASI	**Kota Agung**	**0.88**	**103**	P		**Pn**	**17 37 12.8**	**0.0**
KASI				S		**Sn**	**17 37 24.3**	**-1.1**
MDSI	**Maura Dua**	**1.00**	**33**	P		**Pn**	**17 37 15.5**	**+1.2**
KLI	**Kotabumi**	**1.30**	**69**	P		**Pn**	**17 37 19.4**	**+1.2**
BLSI	**Bandar Lampung**	**1.60**	**91**	P		**Pn**	**17 37 22.9**	**+0.7**
KSI	**Kapahiang**	**1.97**	**328**	P		**Pn**	**17 37 27.9**	**+0.7**
KSI				S		**Sn**	**17 37 52.0**	**+1.1**
MASI	**Maura Aman, Be**	**2.58**	**327**	P		**Pn**	**17 37 37.0**	**+1.5**
MASI				S		**Sn**	**17 38 06.9**	**+1.0**
SBJI	**Serang**	**2.60**	**108**	P		**Pn**	**17 37 37.7**	**+2.1**
PMBI	**Palembang**	**2.64**	**25**	P		**Pn**	**17 37 36.4**	**+0.1**
PMBI	**Palembang**	**2.64**	**25**	P		**Pn**	**17 37 38.0**	**+1.7**
PMBI	**Palembang**	**2.64**	**25**	P		**Pn**	**17 37 37.6**	**+1.3**
DBJI	**Dramaga**	**3.33**	**112**	P		**Pn**	**17 37 46.7**	**+1.2**
SKJI	**Sukabumi**	**3.34**	**120**	P		**Pn**	**17 37 49.3**	**+3.5**
KRJI	**Kerinci**	**3.88**	**326**	P		**Pn**	**17 37 55.3**	**+2.0**
CNJI	**Cibinong**	**3.99**	**120**	P		**Pn**	**17 37 55.0**	**+0.4**
PPBI	**Pangkal Pinang**	**4.02**	**38**	P		**Pn**	**17 37 56.8**	**+1.8**
PPSI	**Pulau Pagai**	**4.43**	**305**	P		**Pn**	**17 38 01.1**	**+0.5**
BBJI	**Bungbulang**	**4.51**	**118**	P		**Pn**	**17 38 02.6**	**+0.8**
BBJI	**Bungbulang**	**4.51**	**118**	S		**Sn**	**17 38 53.9**	**+0.8**
TPI	**Tanjungpandan**	**4.75**	**58**	P		**Pn**	**17 38 06.3**	**+1.3**
DSRI	**Dabo**	**4.91**	**11**	P		**Pn**	**17 38 08.9**	**+1.7**
PDSI	**Padang**	**5.42**	**324**	P		**Pn**	**17 38 15.0**	**+0.8**
	0.8nm2μm54nm,0.4s							
KPJI	**Karang Pucung**	**5.62**	**111**	P		Pn	17 38 22.0	+5.1
	0.3nm41nm,0.6s							
SISI	**Saibi**	**6.04**	**311**	P		**Pn**	**17 38 22.9**	**+0.3**
	0.6nm75nm,0.6s							
BTDF	**Bukit Timah Da**	**6.65**	**1**	P		**Pn**	**17 38 35.2**	**+4.2**
MYKOM	**Kota Tinggi**	**7.08**	**2**			**Pn**	**17 38 39.4**	**+2.6**
MYKOM	**Kota Tinggi**	**7.08**	**2**	P		**Pn**	**17 38 40.5**	**+3.6**
UGM	**Wanagama**	**7.30**	**111**			**Pn**	**17 38 40.8**	**+0.8**
UGM	**Wanagama**	**7.30**	**111**	P		**Pn**	**17 38 42.0**	**+2.0**
UGM	**Wanagama**	**7.30**	**111**	P		**Pn**	**17 38 43.2**	**+3.2**
	0.3nm54nm,1.2s							
PBSI	**Pulau Batu**	**7.49**	**314**	P		**Pn**	**17 38 43.0**	**+0.5**
	0.4nm71nm,1.3s							
PCJI	**Pacitan**	**8.01**	**111**	P		**Pn**	**17 38 51.5**	**+1.9**
	41nm,1.2s							
PSI	**Prapat**	**9.35**	**330**	LR		LR	17 43 12.5	
	comp=Z,140nm,21.6s,baz=136,slow=41							
COCO	**West Island**	**9.57**	**224**			**Pn**	**17 39 09.2**	**-1.8**
COCO	**West Island**	**9.57**	**224**	P		**Pn**	**17 39 09.9**	**-1.0**
GMJI	**Gumukmas**	**10.17**	**107**	P		**Pn**	**17 39 22.0**	**+2.9**
	33nm,0.7s							
ABJI	**Asem Bagus**	**10.81**	**104**	P		**Pn**	**17 39 32.1**	**+4.3**
JAGI	**Jajag, Banyuwa**	**10.89**	**107**			**Pn**	**17 39 28.6**	**-0.4**
SBUM	**Sibu**	**11.54**	**48**			**Pn**	**17 39 37.9**	**0.0**
SRBI	**Singaraja**	**11.82**	**104**	P		**Pn**	**17 39 41.7**	**+0.1**
	1μm47nm,0.7s							
TWSI	**Taliwang, Sumb**	**13.57**	**105**	P		**Pn**	**17 40 05.0**	**-0.4**
PLAI	**Plampang**	**14.45**	**105**	P		**Pn**	**17 40 14.9**	**-2.1**
PLAI	**Plampang**	**14.45**	**105**	P		**Pn**	**17 40 14.5**	**-2.5**
KAPI	**Kappang**	**16.05**	**90**	LR		LR	17 46 57.5	
	comp=Z,73nm,19.5s,baz=271,slow=38							
TOLI2	**Tolitoli**	**18.28**	**70**			**Pn**	**17 41 04.9**	**0.0**
TOLI2	**Tolitoli**	**18.28**	**70**	P		**Pn**	**17 41 06.4**	**+1.5**
MMRI	**Maumere**	**18.75**	**101**			**P**	**17 41 08.0**	**-1.4**
MMRI				IAmb		IAmb	17 41 11.3	
	comp=Z,48nm,0.5s							
MMRI	**Maumere**	**18.75**	**101**	P		**P**	**17 41 08.3**	**-1.1**
LUWI	**Luwuk**	**19.57**	**78**	P		**Pn**	**17 41 19.5**	**-0.8**
LUWI				IAmb		IAmb	17 41 27.6	
	comp=Z,25nm,0.7s							
BATI	**Baumata**	**20.42**	**105**	P		**P**	**17 41 28.2**	**+0.6**
	comp=Z,41nm,0.3s,baz=258,slow=1.7,SNR=21							
BATI				S		**S**	**17 45 12.0**	**-0.6**
	comp=Z,26nm,0.5s,baz=229,slow=21,SNR=5.2							
	comp=Z,41nm,0.3s							
SOEI	**Soe**	**20.91**	**103**			**P**	**17 41 31.4**	**-1.7**
SOEI				IAmb		IAmb	17 41 52.7	
	comp=Z,35nm,0.7s							
SOEI	**Soe**	**20.91**	**103**	P		**P**	**17 41 32.3**	**-0.8**
MBWA	**Marble Bar**	**22.16**	**137**	P		**P**	**17 41 44.4**	**-1.8**
CM31	**Chiang Mai Arr**	**24.09**	**349**	P		**P**	**17 42 04.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**24.09**	**349**	P		**P**	**17 42 04.5**	**-0.6**
	comp=Z,7.7nm,0.6s,baz=180,slow=9.4,SNR=97							
CMAR				PcP		**PcP**	**17 45 46.6**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=205,slow=2.6,SNR=7.4							
CMAR				LR		LR	17 51 30.9	
	comp=Z,52nm,18.7s,baz=170,slow=36							
	comp=Z,7.7nm,0.6s							
CMAR	**Chiang Mai Arr**	**24.09**	**349**			**P**	**17 42 03.9**	**-1.2**
CHTO	**Chiang Mai**	**24.44**	**349**	P		**P**	**17 42 07.3**	**-0.9**
CHTO	**Chiang Mai**	**24.44**	**349**	P		**P**	**17 42 07.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**24.96**	**122**	LR		LR	17 52 52.7	
	comp=Z,38nm,20.7s,baz=314,slow=38							
FITZ	**Fitzroy Crossi**	**24.96**	**122**	P		**P**	**17 42 13.7**	**+0.7**
PALK	**Pallekele**	**26.09**	**298**	LR		LR	17 52 39.4	
	comp=Z,26nm,18.4s,baz=131,slow=36							
KNRA	**Kununurra**	**26.72**	**115**			**P**	**17 42 28.9**	**-0.1**
KNRA				IAmb		IAmb	17 42 35.9	
	comp=Z,21nm,0.5s							
MTN	**Manton Dam**	**28.14**	**107**			**P**	**17 42 41.9**	**+0.2**
BRDH	**Bariadhala**	**30.21**	**338**	LR		LR	17 56 38.1	
	comp=Z,89nm,18.2s,baz=162,slow=39							
H01W3	**Cape Leeuwin H**	**30.97**	**163**	T		T	18 15 55.9	
	baz=340,slow=76,SNR=19							
H01W1	**Cape Leeuwin H**	**30.98**	**163**	T		T	18 15 52.0	
	baz=340,slow=76,SNR=28							
H01W2	**Cape Leeuwin H**	**30.98**	**163**	T		T	18 15 43.8	
	baz=340,slow=76,SNR=20							
H08S2	**Diego Garcia H**	**31.02**	**264**	T		T	18 15 46.8	
	baz=86,slow=76,SNR=10							
H08S3	**Diego Garcia H**	**31.03**	**264**	T		T	18 15 49.3	
	baz=86,slow=76,SNR=10							
H08S1	**Diego Garcia H**	**31.04**	**264**	T		T	18 15 53.7	
	baz=86,slow=76,SNR=14							
PZH	**PanZhiHua**	**31.70**	**357**	P		**P**	**17 43 15.0**	**+1.8**
SHL	**Shillong**	**32.77**	**340**			**P**	**17 43 21.6**	**-1.0**
SHL				IAmb		IAmb	17 43 22.1	
	comp=Z,11nm,0.4s							
WB0	**Warramunga Arr**	**33.18**	**118**			**P**	**17 43 26.3**	**+0.1**
WB0				IAmb		IAmb	17 43 27.7	
	comp=Z,8.4nm,0.8s							
WRA	**Warramunga Arr**	**33.20**	**119**	P		**P**	**17 43 26.7**	**+0.3**
	comp=Z,6.4nm,0.6s,baz=304,slow=9.1,SNR=62							
WRA				PcP		**PcP**	**17 46 08.8**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=302,slow=2.0,SNR=6.8							
WRA				S		**S**	**17 48 40.5**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=290,slow=15,SNR=4.8							
	comp=Z,6.4nm,0.6s							
WRA	**Warramunga Arr**	**33.20**	**119**			**P**	**17 43 26.6**	**+0.2**
WRAB	**Tennant Creek**	**33.21**	**119**	P		**P**	**17 43 26.6**	**+0.1**
WRAB				IAmb		IAmb	17 43 28.0	
	comp=Z,8.3nm,0.8s							
WRAB	**Tennant Creek**	**33.21**	**119**	P		**P**	**17 43 26.8**	**+0.4**
WRAB	**Tennant Creek**	**33.21**	**119**	pP		**pP**	**17 43 43.2**	**+0.2**
WRAB				PcP		**PcP**	**17 46 08.9**	**+1.1**
WR8	**Warramunga Arr**	**33.35**	**119**			**P**	**17 43 27.8**	**+0.2**
WR8				IAmb		IAmb	17 43 28.9	
	comp=Z,12nm,0.6s							
AS31	**Alice Springs**	**34.37**	**125**			**P**	**17 43 37.3**	**+0.8**
AS31				IAmb		IAmb	17 43 46.6	
	comp=Z,5.5nm,0.3s							
ASAR	**Alice Springs**	**34.37**	**125**	P		**P**	**17 43 37.5**	**+0.9**
	comp=Z,6.3nm,0.7s,baz=294,slow=7.3,SNR=79							
ASAR				PcP		**PcP**	**17 46 12.4**	**+1.3**
	comp=Z,2.9nm,0.5s,baz=306,slow=2.5,SNR=15							
ASAR				S		**S**	**17 48 57.9**	**-1.7**
	comp=Z,2.5nm,1.0s,baz=295,slow=16,SNR=11							
	comp=Z,6.3nm,0.7s							
ASAR	**Alice Springs**	**34.37**	**125**			**P**	**17 43 37.0**	**+0.5**
LSA	**Lhasa**	**36.84**	**342**	IAmb		IAmb	17 43 59.8	
	comp=Z,4.7nm,0.6s							
EVN	**Everest**	**36.86**	**335**	IAmb		IAmb	17 43 59.8	
	comp=Z,6.8nm,0.6s							
XAN	**Xi'an**	**39.48**	**7**	P		**P**	**17 44 18.9**	**-0.8**
XAN				pP		pP	17 44 34.9	-1.8
XAN				pmax		pmax		
	comp=Z,13nm,0.9s							
NJ2	**Nanjing**	**39.90**	**20**	*e*P		**P**	**17 44 24.3**	**+1.2**
NJ2				pmax		pmax		
	comp=Z,11nm,0.6s							
LZDM	**Lanzhou Array**	**41.07**	**0**	P		**P**	**17 44 33.0**	**-0.1**
	comp=Z,4.4nm,0.4s,baz=194,slow=12,SNR=8.9							
	comp=Z,4.4nm,0.4s							
LZH	**Lanzhou**	**41.20**	**0**	*e*P		**P**	**17 44 34.8**	**+0.8**
LZH				pP		pP	17 44 50.0	-1.2
LZH				pmax		pmax		
	comp=Z,30nm,0.8s							
STKA	**Stephens Creek**	**44.24**	**131**	P		**P**	**17 45 00.2**	**+1.6**
	comp=Z,12nm,0.6s,baz=309,slow=8.3,SNR=22							
STKA				PcP		**PP**	**17 46 43.4**	**+0.5**
	comp=Z,4.3nm,0.5s,baz=307,slow=1.7,SNR=4.7							
	comp=Z,12nm,0.6s							
GTA	**Gaotai**	**44.66**	**356**	*e*P		**P**	**17 45 02.9**	**+1.0**
GTA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**46.53**	**8**	*e*P		**P**	**17 45 20.6**	**+4.0**
HHC				pmax		pmax		
	comp=Z,11nm,0.6s							
HHC				pmax		pmax		
	comp=Z,240nm,4.6s							
KSRS	**Korea Array**	**48.21**	**26**	P		**P**	**17 45 29.9**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=228,slow=7.5,SNR=9.8							
KSRS				LR		LR	18 06 23.4	
	comp=Z,7μm,18.3s,baz=200,slow=37							
	comp=Z,1.6nm,0.6s							
WMQ	**Urumqi**	**51.00**	**345**	*e*P		**P**	**17 45 50.6**	**-0.2**
WMQ				pmax		pmax		
	comp=Z,24nm,1.3s							
WMQ	**Urumqi**	**51.00**	**345**	P		**P**	**17 45 51.1**	**+0.3**
WMQ	**Urumqi**	**51.00**	**345**	pP		**pP**	**17 46 09.0**	**+0.6**
WMQ				PcP		**PcP**	**17 47 05.2**	**-0.8**
KBL	**Kabul**	**51.35**	**323**			**P**	**17 45 53.0**	**-0.8**
KBL				IAmb		IAmb	17 45 55.2	
	comp=Z,4.5nm,0.7s							
KSH	**Kashi**	**51.42**	**333**	P		**P**	**17 45 52.8**	**-1.2**
KSH				pmax		pmax		
	comp=Z,11nm,0.6s							
MJAR	**Matsushiro Arr**	**52.73**	**35**	P		**P**	**17 46 02.9**	**-0.9**
	comp=Z,3.3nm,0.8s,baz=212,slow=7.3,SNR=12							
	comp=Z,3.3nm,0.8s							
MJAR	**Matsushiro Arr**	**52.73**	**35**	IAmb		IAmb	17 46 38.2	
	comp=Z,13nm,2.0s							
SONM	**Songino Array**	**53.00**	**2**	P		**P**	**17 46 06.0**	**+0.3**
	comp=Z,11nm,0.8s,baz=180,slow=9.3,SNR=49							
SONM				PcP		**PcP**	**17 47 14.0**	**+0.5**
	comp=Z,2.0nm,0.3s,baz=191,slow=4.0,SNR=12							
	comp=Z,11nm,0.8s							
ULN	**Ulaanbaatar**	**53.06**	**3**			**P**	**17 46 06.2**	**+0.1**
ULN				IAmb		IAmb	17 46 07.4	
	comp=Z,4.8nm,0.8s							
ULN	**Ulaanbaatar**	**53.06**	**3**	P		**P**	**17 46 06.2**	**+0.1**
ULN				pP		**pP**	**17 46 24.6**	**+0.7**
GAR	**Garm**	**53.81**	**328**			**P**	**17 46 10.6**	**-1.2**
AAK	**Ala-Archa**	**54.59**	**334**	P		**P**	**17 46 16.6**	**-0.8**
BNX	**BinXian**	**55.09**	**20**	⇑P		**P**	**17 46 20.9**	**+0.2**
BNX				pmax		pmax		
	comp=Z,21nm,0.8s							
MKAR	**Makanchi Array**	**55.24**	**342**	P		**P**	**17 46 21.4**	**-0.5**
	comp=Z,5.0nm,0.4s,baz=149,slow=8.9,SNR=89							
	comp=Z,5.0nm,0.4s							
MKAR	**Makanchi Array**	**55.24**	**342**	P		**P**	**17 46 20.9**	**-0.9**
MAKZ	**Makanchi**	**55.35**	**342**	P		**P**	**17 46 21.8**	**-0.8**
MAKZ	**Makanchi**	**55.35**	**342**	P		**P**	**17 46 22.0**	**-0.6**
USRK	**Yasuriysk Ar.**	**55.52**	**24**	P		**P**	**17 46 23.7**	**-0.2**
	comp=Z,15nm,0.7s,baz=193,slow=3.0,SNR=24							
	comp=Z,15nm,0.7s							
HNR	**Honiara**	**55.94**	**98**	P		**P**	**17 46 25.7**	**-1.7**
HILR	**Hailar Array B**	**56.43**	**13**	P		**P**	**17 46 29.9**	**-0.4**
	comp=Z,6.9nm,0.5s,baz=196,slow=9.0,SNR=9.4							
	comp=Z,6.9nm,0.5s							
KK31	**Karatay Array**	**56.78**	**331**			**P**	**17 46 31.6**	**-1.3**
KKAR	**Karatay Array**	**56.78**	**331**	P		**P**	**17 46 31.1**	**-1.8**
HEH	**HeiHe**	**59.06**	**18**	*e*P		**P**	**17 46 48.8**	**+0.1**
HEH				pmax		pmax		
	comp=Z,19nm,0.9s							
KURBB	**Kurchatov Arra**	**59.79**	**342**	P		**P**	**17 46 53.1**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=160,slow=6.2,SNR=19							
KURBB				PcP		**PcP**	**17 47 40.3**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=145,slow=3.4,SNR=5.4							
	comp=Z,2.2nm,0.5s							
KURK	**Kurchatov**	**59.84**	**342**			**P**	**17 46 53.6**	**-0.5**
KURK				IAmb		IAmb	17 46 55.0	
	comp=Z,5.3nm,0.8s							
KURK	**Kurchatov**	**59.84**	**342**			**PcP**	**17 47 40.3**	**+0.4**
H04N2	**CROZET ISLANDS**	**60.40**	**219**	T		T	18 53 06.0	
	baz=66,slow=75,SNR=127							
H04N1	**CROZET ISLANDS**	**60.41**	**219**	T		T	18 53 11.8	
	baz=66,slow=75,SNR=129							
H04N3	**CROZET ISLANDS**	**60.41**	**219**	T		T	18 53 11.5	
	baz=66,slow=75,SNR=115							
ASAJ	**Asahikawa**	**60.42**	**31**	P		**P**	**17 46 59.0**	**+0.8**
	comp=Z,12nm,0.6s,baz=220,slow=4.0,SNR=12							
ASAJ				LR		LR	18 14 17.8	
	comp=Z,24nm,19.2s,baz=84,slow=37							
	comp=Z,12nm,0.6s							
H04S1	**CROZET ISLANDS**	**60.62**	**218**	T		T	18 53 24.7	
	baz=63,slow=75,SNR=26							
H04S3	**CROZET ISLANDS**	**60.64**	**218**	T		T	18 53 25.2	
	baz=63,slow=75,SNR=24							
H04S2	**CROZET ISLANDS**	**60.64**	**218**	T		T	18 53 27.0	
	baz=63,slow=75,SNR=37							
ZAA0	**Zalesovo Array**	**61.14**	**347**	P		**P**	**17 47 01.4**	**-1.4**
ZALV	**Zalesovo Beam**	**61.14**	**347**	P		**P**	**17 47 01.9**	**-0.9**
	comp=Z,14nm,0.4s,baz=164,slow=5.2,SNR=80							
	comp=Z,14nm,0.4s							
ZALV	**Zalesovo Beam**	**61.14**	**347**	P		**P**	**17 47 01.6**	**-1.2**
BVAR	**Borovoye Array**	**64.57**	**338**	P		**P**	**17 47 25.0**	**-0.7**
	comp=Z,10.0nm,0.5s,baz=143,slow=8.7,SNR=70							
	comp=Z,10.0nm,0.5s							
BORK	**Borovoye**	**64.61**	**338**	P		**P**	**17 47 25.2**	**-0.7**
BORK	**Borovoye**	**64.61**	**338**	pP		**pP**	**17 47 43.1**	**-1.0**
BORK				sP		sP	17 47 51.6	-0.2
ABKAR	**Akbulak array**	**66.30**	**330**	P		**P**	**17 47 36.4**	**-0.5**
MAW	**Mawson**	**68.02**	**196**	LR		LR	18 10 16.3	
	comp=Z,70nm,22.0s,baz=42,slow=29							
YAK	**Yakutsk**	**70.10**	**13**	LR		LR	18 24 49.1	
	comp=Z,29nm,18.2s,baz=98,slow=41							
YAK	**Yakutsk**	**70.10**	**13**	P		**P**	**17 47 59.1**	**-1.3**
YAK				IAmb		IAmb	17 47 59.9	
	comp=Z,7.2nm,0.6s							
ARTI	**Arti**	**71.75**	**335**	P		**P**	**17 48 10.2**	**-0.3**
ARTI	**Arti**	**71.75**	**335**	P		**P**	**17 48 10.4**	**-0.1**
MARD	**Mardin**	**72.16**	**312**	P		**P**	**17 48 13.9**	**+0.3**
MARD				IAmb		IAmb	17 48 15.2	
	comp=Z,8.6nm,0.8s							
MBAR	**Mbarara**	**72.92**	**271**	LR		LR	18 16 15.3	
	comp=Z,30nm,19.1s,baz=321,slow=32							
KBZ	**Khabaz**	**73.19**	**319**	P		**P**	**17 48 18.6**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=98,slow=7.8,SNR=7.5							
	comp=Z,4.5nm,0.8s							
PETK	**Petropavlovsk-**	**73.82**	**31**	P		**P**	**17 48 21.5**	**-1.4**
	comp=Z,2.8nm,0.6s,baz=243,slow=2.5,SNR=8.6							
	comp=Z,2.8nm,0.6s							
MMAI	**Mount Meron Ar**	**74.92**	**306**	P		**P**	**17 48 30.9**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=95,slow=9.3,SNR=5.5							
	comp=Z,2.5nm,0.7s							
LBTB	**Lobatse**	**76.94**	**246**	LR		LR	18 15 35.4	
	comp=Z,49nm,19.5s,baz=18,slow=30							
CSS	**Mathiatis**	**77.12**	**308**	P		**P**	**17 48 42.9**	**+0.7**
CSS				IAmb		IAmb	17 48 43.8	
	comp=Z,5.6nm,0.7s							
BOSA	**Boshof**	**77.27**	**242**	LR		LR	18 15 47.2	
	comp=Z,41nm,20.7s,baz=339,slow=30							
BR131	**Keskin Array S**	**78.23**	**312**	IAmb		IAmb	17 48 49.6	
	comp=Z,31nm,1.9s							
BRTR	**Keskin Array B**	**78.23**	**312**	P		**P**	**17 48 48.8**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=131,slow=6.8,SNR=20							
	comp=Z,3.2nm,0.7s							
TIXI	**Tiksi**	**78.59**	**8**			**P**	**17 48 48.1**	**-1.4**
AKASG	**Malin Array Be**	**84.33**	**322**	P		**P**	**17 49 20.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=87,slow=4.8,SNR=7.8							
	comp=Z,0.6nm,0.3s							
AKASG	**Malin Array Be**	**84.33**	**322**	IAmb		IAmb	17 49 20.7	
	comp=Z,1.9nm,0.8s							
KIEV	**Kiev**	**84.33**	**322**	P		**P**	**17 49 20.2**	**-0.1**
KIEV	**Kiev**	**84.33**	**322**	sP		sP	17 49 46.7	+0.1
QSPA	**South Pole Qui**	**84.65**	**180**	P		**P**	**17 49 26.1**	**+4.2**
	comp=Z,1.0nm,0.7s,baz=296,slow=1.3,SNR=10							
QSPA	**South Pole Qui**	**84.65**	**180**	IAmb		IAmb	17 52 29.3	
	comp=Z,22nm,1.9s							
BURAR	**Bucovina Array**	**86.14**	**318**	P		**P**	**17 49 31.0**	**+1.4**
BURAR				IAmb		IAmb	17 49 32.1	
	comp=Z,4.1nm,0.7s							
BUR08	**Bucovina Ar. S**	**86.16**	**318**			**P**	**17 49 30.9**	**+1.2**
BUR08				IAmb		IAmb	17 50 02.3	
	comp=Z,22nm,1.8s	

JIM2	**Oshima 3**	**0.98**	**211**	*e*P	**Pn**	17 48 24.7	**0.0**	
JIM2				*e*S	**Sn**	17 48 38.5	**+0.9**	
JRY	**Ryogami san**	**1.03**	**296**	P	**Pn**	17 48 26.2	**+0.8**	
JRY				*e*S	**Sn**	17 48 40.6	**+1.9**	
JSG	**Sagara**	**1.76**	**240**	P	**Pn**	17 48 38.7	**+3.4**	
MJAR	**Matsushiro Arr**	**1.77**	**304**	P	**Pn**	17 48 35.8	**+0.3**	
	2.2nm,0.3s,baz=124,slow=9.7,SNR=148							
MJAR				LR	LR	17 49 16.7		
	comp=Z,65nm,20.2s,baz=156,slow=34							
	22nm,0.5s							
MAJO	**Matsushiro**	**1.78**	**304**	P	**Pn**	17 48 36.2	**+0.7**	
JGF	**Kuroka**	**2.19**	**272**	P	**Pn**	17 48 42.7	**+1.5**	
JGF	**Kuroka**	**2.19**	**272**	S	**Sn**	17 49 11.0	**+3.9**	
JMM	**Marumori**	**2.37**	**15**	P	**Pn**	17 48 44.7	**+1.0**	
JMM	**Marumori**	**2.37**	**15**	S	**Sn**	17 49 13.4	**+1.8**	
JHJ	**Hachijo jima 2**	**2.45**	**185**	P	**Pn**	17 48 45.2	**+0.5**	
	15nm,0.3s,baz=159,slow=23,SNR=10							
JHJ				S	**Sn**	17 49 13.1	**-0.4**	
	99nm,0.3s,baz=250,slow=20,SNR=7.4							
	68nm,0.4s							
JHJ2	**Mitsune**	**2.46**	**184**	P	**Pn**	17 48 48.1	**+3.3**	
INU	**Inuyama**	**2.48**	**266**	P	**Pn**	17 48 45.9	**+0.8**	
JSD	**Sado**	**2.85**	**330**	P	**Pn**	17 48 50.1	**-0.1**	
JMN	**Monobe**	**5.40**	**252**	P	**Pn**	17 49 28.2	**+3.0**	
KSRS	**Korea Array**	**9.94**	**284**	P	**Pn**	17 50 31.2	**+3.9**	
	0.1nm,0.3s,baz=99,slow=16,SNR=3.9							
	1.1nm,0.7s							
MA2	**Magadan**	**25.02**	**13**	LR	LR	18 03 50.4		
	comp=Z,25nm,20.3s,baz=84,slow=38							
ZALV	**Zalesovo Beam**	**42.10**	**314**	P	**P**	17 55 52.4	**-1.7**	
	1.1nm,0.7s,baz=101,slow=8.0,SNR=4.5							
	1.1nm,0.7s							
MKAR	**Makanchi Array**	**43.97**	**303**	P	**P**	17 56 07.6	**-1.8**	
	0.8nm,0.6s,baz=93,slow=9.7,SNR=7.3							
	0.8nm,0.6s							
KURBB	**Kurchatov Arra**	**46.04**	**309**	P	**P**	17 56 23.6	**-2.2**	
	0.8nm,0.2s,baz=84,slow=7.6,SNR=11							
	0.8nm,0.2s							
BVAR	**Borovoye Array**	**50.75**	**313**	LR	LR	18 20 49.6		
	comp=Z,29nm,18.0s,baz=326,slow=38							
WRA	**Warramunga Arr**	**55.47**	**187**	P	**P**	17 57 33.8	**-3.2**	
	0.3nm,0.4s,baz=360,slow=7.5,SNR=6.7							
	0.3nm,0.4s							
ASAR	**Alice Springs**	**59.20**	**187**	P	**P**	17 58 00.6	**-2.6**	
	0.2nm,0.8s,baz=18,slow=11,SNR=8.1							
	0.2nm,0.8s							

*NEIC **21** 17:54:26.7±0.5, 19°.23N±0°.02×155°.47W±0°.03, h37km±5km, Error ellipse: s-maj=4.4km s-min=1.5km az=121.0*

HVO 21 17:54:27.9±0.8, **19°.2N**±0°.2×**155°.5W**±0°.2, **h35**km±7km, **ML2.5**/37, **ML2.6**/38(NEIC), **Error ellipse: s-maj=46.3km s-min=5.7km az=138.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPO	**Honuapo**	**0.16**	**220**		Sn	17 54 38.0	+0.7
HLP	**Hilina Pali**	**0.16**	**57**		Pn	17 54 33.8	-0.1
HLP					Sb	17 54 38.3	-0.7
HLP				IAML		17 54 38.8	
	comp=N,572nm,0.3s						
HLP				IAML		17 54 43.9	
	comp=E,556nm,0.7s						
AIN	**Ainahou**	**0.16**	**357**		Pn	17 54 33.9	-0.1
AIN					Sb	17 54 38.5	-0.7
SDHHI	**Sand Hill**	**0.23**	**39**		Sn	17 54 39.1	-0.4
WRMHI	**West Rim**	**0.24**	**36**		Sn	17 54 39.3	-0.4
KKO	**Keanakako'i**	**0.26**	**43**		Sn	17 54 39.3	-0.8
UWE	**Uwekahuna**	**0.26**	**35**		Pn	17 54 34.6	-0.8
UWE	**Uwekahuna**	**0.26**	**35**		Sn	17 54 39.6	-0.6
OBL	**Observatory Le**	**0.26**	**37**		Sn	17 54 39.4	-0.8
UWB	**Uwekahuna Bluf**	**0.27**	**37**		Sn	17 54 39.3	-1.1
BYL	**Byron's Ledge**	**0.27**	**41**		Pn	17 54 34.5	-1.1
BYL				IAML		17 54 40.0	
	comp=E,462nm,0.1s						
BYL	**Byron's Ledge**	**0.27**	**41**		Sn	17 54 39.6	-0.9
PUH	**Pauahi**	**0.27**	**53**		Sn	17 54 39.6	-1.0
PUH	**Pauahi**	**0.27**	**53**		Pn	17 54 34.5	-1.1
PUH				IAML		17 54 39.7	
	comp=E,459nm,0.2s						
PUH				IAML		17 54 41.3	
	comp=N,412nm,0.2s						
HATHI	**Halema'uma'u T**	**0.28**	**40**		Sn	17 54 39.6	-1.1
HATHI	**Halema'uma'u T**	**0.28**	**40**		Pn	17 54 34.5	-1.2
HATHI				IAML		17 54 40.0	
	comp=E,699nm,0.4s						
HATHI				IAML		17 54 40.1	
	comp=N,432nm,0.5s						
MLH	**Mauna Loa**	**0.29**	**12**		Pn	17 54 34.9	-1.1
MLH				IAML		17 54 40.5	
	comp=N,797nm,1.0s						
RSD	**Rainshed**	**0.30**	**33**		Pn	17 54 35.0	-1.0
RSD				IAML		17 54 46.4	
	comp=N,422nm,3.2s						
MWH	**Mokuaweoweo**	**0.31**	**333**		Pn	17 54 35.1	-1.4
MWH				IAML		17 54 49.2	
	comp=E,395nm,1.6s						
MLOA	**Mauna Loa Obse**	**0.35**	**340**		Pb	17 54 35.4	-1.5
STCH	**Steam Cracks**	**0.35**	**60**		Pb	17 54 35.5	-1.2
HMH	**Humu'ula Sheep**	**0.39**	**355**		Pb	17 54 36.3	-1.1
HMH				IAML		17 54 42.8	
	comp=E,516nm,0.3s						
HMH				IAML		17 54 44.2	
	comp=N,399nm,0.2s						
POHA	**Pohakuloa**	**0.55**	**352**		Pn	17 54 37.6	-1.9
POHA	**Pohakuloa**	**0.55**	**352**	IAML		17 54 48.3	
	comp=N,218nm,3.5s						
KHLU	**Kahalu`u**	**0.57**	**312**		Pn	17 54 37.7	-1.9
KHLU	**Kahalu`u**	**0.57**	**312**	IAML		17 54 45.0	
	comp=E,469nm,0.3s						
KHLU				IAML		17 54 45.2	
	comp=N,520nm,0.1s						
HUH	**Hualalai**	**0.60**	**322**	IAML		17 54 52.1	
	comp=E,350nm,0.2s						

*UPP **21** 18:01:01.1±0.1, 67°.06N×20°.97E, h0km, ML1.6, Suspected explosion*

*HEL **21** 18:01:01.1±0.3, 67°.04N×20°.79E, h0km, ML1.4, Suspected explosion*

*IDC **21** 18:01:02.9±2.3, 67°.06N×21°.32E, h0km, mbtmp2.7/2, ML1.6/2, Error ellipse: s-maj=41.9km s-min=14.5km az=99.0*

ISC 21 18:01:01.2±0.8, **67°.07N**±0°.02×**21°.00E**±0°.03, **h0**km, **n36**, σ0**87**/49, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.18**	**287**	P	**Pg**	**18 01 04.6**	**0.0**
DUNU				S	**Sg**	**18 01 07.3**	**+0.5**
MASU	**Masugnsbyn**	**0.55**	**45**	P	**Pg**	**18 01 12.0**	**+0.3**
ERTU	**Ertsjaerv**	**0.70**	**137**	P	**Pg**	**18 01 14.3**	**-0.3**
ERTU	**Ertsjaerv**	**0.70**	**137**	PG	**Pg**	**18 01 14.5**	**-0.1**
ERTU				SG	**Sg**	**18 01 23.6**	**0.0**
PAJU	**Pajala**	**0.83**	**92**	P	**Pg**	**18 01 16.8**	**-0.3**
HARU	**Harads**	**0.91**	**181**	P	**Pg**	**18 01 17.9**	**-0.7**
KUA	**Kurravaara**	**0.92**	**344**	P	**Pg**	**18 01 18.2**	**-0.7**
RATU	**Laukkuluspa**	**0.93**	**325**	P	**Pg**	**18 01 18.4**	**-0.6**
SALU	**Saltoluokta**	**1.02**	**289**	P	**Pg**	**18 01 20.1**	**-0.6**
LANU	**Lannavaara**	**1.05**	**21**	P	**Pg**	**18 01 20.7**	**-0.6**
LANU				S	**Sg**	**18 01 35.2**	**+0.2**
LANU	**Lannavaara**	**1.05**	**21**	PG	**Pg**	**18 01 20.7**	**-0.6**
LANU				SB	**Sb**	**18 01 37.5**	**-1.1**
NIKU	**Nikkaluokta**	**1.10**	**317**	P	**Pg**	**18 01 21.5**	**-0.8**
KLF	**Kolari**	**1.17**	**81**	PG	**Pg**	**18 01 23.3**	**-0.2**
KLF				smax	smax	18 01 39.0	
	comp=Z,2.9nm,0.2s						
KLF				SB	**Sb**	**18 01 40.3**	**+0.4**
KALU	**Kalix**	**1.54**	**141**	P	**Pn**	**18 01 29.4**	**-0.5**
KALU	**Kalix**	**1.54**	**141**	PG	**Pn**	**18 01 29.4**	**-0.5**
KALU				SN	**Sg**	**18 01 50.8**	**+0.1**
SJUU	**Sjulsmark**	**1.59**	**171**	P	**Pn**	**18 01 30.1**	**-0.5**
TOF	**Tornio**	**1.66**	**125**	PG	**Pn**	**18 01 31.8**	**+0.3**
TOF				smax	smax	18 01 52.4	
	comp=Z,1.8nm,0.2s						
TOF				SN	**Sb**	**18 01 53.9**	**-0.1**
HEF	**Hetta**	**1.68**	**36**	*e*P	**Pn**	**18 01 31.6**	**-0.3**
HEF	**Hetta**	**1.68**	**36**	PB	**Pn**	**18 01 31.8**	**-0.1**
	baz=219						
HEF				smax	smax	18 01 53.5	
	comp=Z,2.7nm,0.2s						
HEF				SG	**Sg**	**18 01 55.2**	**+0.1**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*P	**Pb**	**18 01 36.7**	**-0.7**
KIF	**Kilpisjarvi**	**1.94**	**358**	PG	**Pb**	**18 01 37.3**	**-0.1**
KIF				smax	smax	18 02 01.0	
	comp=Z,4.4nm,0.2s						
KIF				SG	**Sg**	**18 02 04.2**	**+0.7**
RNF	**Rovaniemi**	**2.04**	**101**	PB	**Pb**	**18 01 37.8**	**-1.2**
RNF				SG	**Sg**	**18 02 06.0**	**-0.5**
KTK1	**Kautokeino**	**2.12**	**22**	PB	**Pb**	**18 01 40.0**	**-0.5**
KTK1				SG	**Sg**	**18 02 08.7**	**-0.6**
I37NO	**I37NO**	**2.20**	**337**	I	I	18 16 10.0	
	baz=148,slow=327,SNR=3.3						
BURU	**Burvik**	**2.50**	**176**	PG	**Pn**	**18 01 44.4**	**+1.3**
RANF	**Ranua**	**2.55**	**112**	PN	**Pn**	**18 01 44.4**	**+0.7**
RANF				SG	**Sb**	**18 02 20.4**	**+0.9**
TRO	**Tromso**	**2.69**	**344**	SG	**Sg**	**18 02 26.2**	**-1.2**
OBF8	**Ulkokalla**	**2.93**	**159**	PN	**Pn**	**18 01 47.4**	**-1.6**
OBF8				smax	smax	18 02 27.4	
	comp=Z,0.7nm,0.2s						
ARA0	**ARCESS Array S**	**2.99**	**32**	PN	**Pn**	**18 01 50.8**	**+1.0**
ARA0				SB	**Sb**	**18 02 32.5**	**+0.3**
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn	**Pn**	**18 01 50.7**	**+1.0**
	baz=214,slow=14,SNR=12						
ARCES				Sn	**Sn**	**18 02 28.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=218,slow=23,SNR=5.7						
	comp=Z,0.7nm,0.5s						
UMAU	**Umeaa**	**3.21**	**183**	PB	**Pn**	**18 01 54.8**	**+2.1**
KEV	**Kevo**	**3.49**	**37**	PN	**Pn**	**18 01 57.6**	**+1.0**
KU6	**Riekki**	**3.71**	**102**	SG	**Sg**	**18 02 59.3**	**-0.8**
KU1	**Kurvinen**	**3.77**	**110**	PN	**Pn**	**18 02 02.4**	**+1.9**
VAF	**Ylistaro**	**4.11**	**169**	PN	**Pn**	**18 02 06.5**	**+1.4**
	baz=345						
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**18 02 33.4**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=1.9						
	comp=Z,2.4nm,0.9s						

*IDC **21** 18:10:40.2±1.4, 15°.78N×95°.05W, h0km, mb3.6/5, mbtmp3.7/8, ML3.9/3, MS3.7/1, Error ellipse: s-maj=33.4km s-min=17.5km az=56.0*

*CATAC **21** 18:10:40.7±1.2, 16°.N±6°.×9°.5W±1°.2, h33km±38km, M5.0/8, mb5.2/3, mB5.3/2, MLv5.0/8, Mw(mB)4.8/2, MwMwp5.5/1, Mwp5.7/1, Error ellipse: s-maj=29.3km s-min=6.8km az=65.3, confirmed*

*MEX **21** 18:10:42.3±0.9, 15°.55N×95°.06W, h25km±19km, MD4.6*

*NEIC **21** 18:10:43.8±1.9, 15°.72N±0°.06×94°.98W±0°.05, h35km±2km, mb4.2/73, Md4.6/109(MEX), Error ellipse: s-maj=11.2km s-min=6.7km az=218.0*

ISC 21 18:10:38.5±1.4, **15°.60N**±0°.04×**95°.08W**±0°.03, **h2**km±9km, **n198**, σ2**79**/251, **mb4.3**/18, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.00**	**280**		Pb	**18 10 58.5**	**-0.1**
HUIG					Sg	**18 11 10.8**	**0.0**
HUIG	**Huatulco**	**1.00**	**280**	*e*P	Pb	**18 10 58.5**	**-0.1**
HUIG				*i* S	Sg	**18 11 10.8**	**0.0**
CMIG	**Matias Romero**	**1.49**	**7**	Pn	**Pn**	**18 11 05.8**	**-0.7**
	321nm,0.3s,baz=187,slow=11,SNR=1332						
CMIG				Sn	**Sg**	**18 11 23.4**	**-3.1**
	2µm,0.3s,baz=267,slow=19,SNR=70						
CMIG				LR	LR	18 11 41.9	
	comp=Z,149nm,19.6s,baz=0.5,slow=47						
CMIG	**Matias Romero**	**1.49**	**7**		**Pn**	**18 11 05.6**	**-0.9**
CMIG					**Sg**	**18 11 23.7**	**-2.8**
UXUV	**UXUV**	**1.93**	**28**		**Pn**	**18 11 12.3**	**-0.1**
UXUV	**UXUV**	**1.93**	**28**	*e*P	**Pn**	**18 11 12.3**	**-0.1**
PEIG	**Puerto Escondi**	**2.03**	**281**		**Pn**	**18 11 13.0**	**-0.8**
PEIG					**Sn**	**18 11 34.9**	**-4.9**
PEIG	**Puerto Escondi**	**2.03**	**281**	*e*P	**Pn**	**18 11 13.0**	**-0.8**
PEIG				*e*S	**Sn**	**18 11 34.9**	**-4.9**
OXLC	**Oaxaca**	**2.13**	**313**		**Pb**	**18 11 16.9**	**-1.1**
OXLC					**Sn**	**18 11 40.7**	**-1.8**
OXLC	**Oaxaca**	**2.13**	**313**	*e*P	**Pb**	**18 11 16.9**	**-1.1**
OXLC				*e*S	**Sn**	**18 11 40.7**	**-1.8**
OXBJ	**Oaxaca**	**2.15**	**313**		**Pg**	**18 11 20.2**	**+0.6**
OXBJ					**Sn**	**18 11 44.1**	**+1.1**
OXBJ	**Oaxaca**	**2.15**	**313**	*e*P	**Pg**	**18 11 20.2**	**+0.6**
OXBJ				*e*S	**Sn**	**18 11 44.1**	**+1.1**
OXIG	**Oaxaca**	**2.15**	**313**		**Pn**	**18 11 16.7**	**+0.9**
OXIG					**Sn**	**18 11 42.2**	**-1.0**
VHO	**Vista Hermosa**	**2.15**	**313**	*e*P	**Pn**	**18 11 16.7**	**+0.9**
VHO				*e*S	**Sn**	**18 11 42.2**	**-1.0**
NEUV	**Arroyo Zacate**	**2.21**	**342**		**Pn**	**18 11 16.1**	**-0.1**
NEUV					**Sn**	**18 11 42.3**	**-1.9**
NEUV	**Arroyo Zacate**	**2.21**	**342**	*e*P	**Pn**	**18 11 16.1**	**-0.1**
NEUV				*e*S	**Sn**	**18 11 42.3**	**-1.9**
TGIG		**2.22**	**58**		**Pn**	**18 11 15.8**	**-0.6**
TGIG					**Sn**	**18 11 43.4**	**-1.1**
TGIG		**2.22**	**58**	*e*P	**Pn**	**18 11 15.8**	**-0.6**
TGIG				*e*S	**Sn**	**18 11 43.4**	**-1.1**
TGBT	**Tuxtla Gutierr**	**2.24**	**58**		**Pn**	**18 11 16.1**	**-0.7**
TGBT					**Sn**	**18 11 41.8**	**-3.3**
TGBT	**Tuxtla Gutierr**	**2.24**	**58**	*e*P	**Pn**	**18 11 16.1**	**-0.7**
TGBT				*e*S	**Sn**	**18 11 41.8**	**-3.3**
TUIG	**Tuzandepetl**	**2.50**	**15**		**Pn**	**18 11 19.6**	**-0.6**
TUIG					**Sn**	**18 11 50.2**	**-1.2**
TUIG	**Tuzandepetl**	**2.50**	**15**	*e*P	**Pn**	**18 11 19.6**	**-0.6**
TUIG				*e*S	**Sn**	**18 11 50.2**	**-1.2**
PATR	**El Naranjo**	**2.79**	**100**		**Pn**	**18 11 23.1**	**-1.4**
PATR					**Sn**	**18 11 54.5**	**-4.4**
PATR	**El Naranjo**	**2.79**	**100**	*e*P	**Pn**	**18 11 23.1**	**-1.4**
PATR				*e*S	**Sn**	**18 11 54.5**	**-4.4**
THIG		**2.81**	**104**		**Pn**	**18 11 23.6**	**-0.9**
THIG					**Sn**	**18 11 51.9**	**-7.1**
THIG		**2.81**	**104**	*e*P	**Pn**	**18 11 23.6**	**-0.9**
THIG				*e*S	**Sn**	**18 11 51.9**	**-7.1**
PAVE	**Pavencul**	**2.83**	**98**		**Pn**	**18 11 24.2**	**-0.9**
PAVE					**Sn**	**18 11 56.4**	**-3.6**
PAVE	**Pavencul**	**2.83**	**98**	*e*P	**Pn**	**18 11 24.2**	**-0.9**
PAVE				*e*S	**Sn**	**18 11 56.4**	**-3.6**
CCIG	**Comitan**	**2.91**	**76**		**Pn**	**18 11 25.2**	**-1.0**
CCIG	**Comitan**	**2.91**	**76**		**Sn**	**18 11 59.5**	**-2.4**
CCIG	**Comitan**	**2.91**	**76**	*e*P	**Pn**	**18 11 26.1**	**-0.1**
CCIG				*e*S	**Sn**	**18 11 59.5**	**-2.4**
CHUJ	**Union Juarez**	**2.92**	**100**	*e*P	**Pn**	**18 11 24.6**	**-1.7**
CHUJ				*e*S	**Sn**	**18 11 58.0**	**-4.0**
PMUV	**Sontecomapan**	**2.93**	**359**		**Pn**	**18 11 24.7**	**-1.5**
PMUV					**Sn**	**18 11 58.8**	**-3.3**
PMUV	**Sontecomapan**	**2.93**	**359**	*e*P	**Pn**	**18 11 24.7**	**-1.5**
PMUV				*e*S	**Sn**	**18 11 58.8**	**-3.3**
PNIG	**Pinotepa**	**3.03**	**285**		**Pn**	**18 11 27.6**	**0.0**
PNIG					**Sn**	**18 11 58.3**	**-6.3**
PNIG	**Pinotepa**	**3.03**	**285**	*e*P	**Pn**	**18 11 27.6**	**0.0**
PNIG				*e*S	**Sn**	**18 11 58.3**	**-6.3**
TXIG	**Tlaxiaco**	**3.05**	**303**		**Pn**	**18 11 29.9**	**+1.7**
TXIG					**Sn**	**18 12 04.1**	**-1.4**
TXIG	**Tlaxiaco**	**3.05**	**303**	*e*P	**Pn**	**18 11 29.9**	**+1.7**
TXIG				*e*S	**Sn**	**18 12 04.1**	**-1.4**
TOIG	**Toxpalan**	**3.12**	**323**		**Pn**	**18 11 30.9**	**+2.0**
TOIG					**Sn**	**18 12 06.2**	**-0.7**
TOIG	**Toxpalan**	**3.12**	**323**	*e*P	**Pn**	**18 11 30.9**	**+2.0**
TOIG				*e*S	**Sn**	**18 12 06.2**	**-0.7**
HLIG	**Huajuapan de L**	**3.42**	**311**		**Pn**	**18 11 35.2**	**+2.1**
HLIG					**Sn**	**18 12 11.9**	**-2.6**
HLIG	**Huajuapan de L**	**3.42**	**311**	*e*P	**Pn**	**18 11 35.2**	**+2.1**
HLIG				*e*S	**Sn**	**18 12 11.9**	**-2.6**
RTAL	**Retalhuleu**	**3.44**	**108**		**Pn**	**18 11 33.4**	**+0.1**
RTAL	**Retalhuleu**	**3.44**	**108**	*e*P	**Pn**	**18 11 32.4**	**-0.9**
RTAL				*e*S	**Sn**	**18 12 10.9**	**-3.9**
RTAL	**Retalhuleu**	**3.44**	**108**	P	**Pn**	**18 11 33.4**	**+0.1**
HUEH	**Huehuetenango**	**3.46**	**94**		**Pn**	**18 11 35.2**	**+1.4**
HUEH	**Huehuetenango**	**3.46**	**94**		**Sn**	**18 12 16.4**	**+0.8**
HUEH	**Huehuetenango**	**3.46**	**94**	*e*P	**Pn**	**18 11 34.9**	**+1.1**
HUEH				*e*S	**Sn**	**18 12 16.4**	**+0.8**
HUEH	**Huehuetenango**	**3.46**	**94**	S	**Sn**	**18 12 18.9**	**+3.3**
HUEH	**Huehuetenango**	**3.46**	**94**	P	**Sn**	**18 11 34.6**	**+0.9**
TPIG	**Tehuac#an**	**3.55**	**322**		**Pb**	**18 11 39.0**	**-3.3**
TPIG					**Sn**	**18 12 17.7**	**+0.1**
TPIG	**Tehuac#an**	**3.55**	**322**	*e*P	**Pb**	**18 11 39.0**	**-3.3**
TPIG				*e*S	**Sn**	**18 12 17.7**	**+0.1**
FTIG	**Fresnillo de T**	**3.71**	**309**		**Pn**	**18 11 38.7**	**+1.6**
FTIG					**Sn**	**18 12 15.8**	**-5.7**
FTIG	**Fresnillo de T**	**3.71**	**309**	*e*P	**Pn**	**18 11 38.7**	**+1.6**
FTIG				*e*S	**Sn**	**18 12 15.8**	**-5.7**
MGIG	**Malinaltepec**	**3.77**	**296**		**Pn**	**18 11 38.9**	**+1.0**
MGIG					**Sn**	**18 12 19.8**	**-3.4**
MGIG	**Malinaltepec**	**3.77**	**296**	*e*P	**Pn**	**18 11 38.9**	**+1.0**
MGIG				*e*S	**Sn**	**18 12 19.8**	**-3.4**
TLIG	**Tlapa**	**3.87**	**301**		**Pn**	**18 11 41.1**	**+1.8**
TLIG					**Sn**	**18 12 21.5**	**-3.8**
TLIG	**Tlapa**	**3.87**	**301**	*e*P	**Pn**	**18 11 41.1**	**+1.8**
TLIG				*e*S	**Sn**	**18 12 21.5**	**-3.8**
CRIG	**Cruz Grande**	**4.05**	**287**		**Pn**	**18 11 41.2**	**-0.4**
CRIG					**Sn**	**18 12 23.1**	**-6.6**
CRIG	**Cruz Grande**	**4.05**	**287**	*e*P	**Pn**	**18 11 41.2**	**-0.4**
CRIG				*e*S	**Sn**	**18 12 23.1**	**-6.6**
JAUV	**Jalcomulco**	**4.09**	**337**		**Pn**	**18 11 41.4**	**-0.8**
JAUV					**Sn**	**18 12 26.3**	**-4.3**
JAUV	**Jalcomulco**	**4.09**	**337**	*e*P	**Pn**	**18 11 41.4**	**-0.8**
JAUV				*e*S	**Sn**	**18 12 26.3**	**-4.3**
LVIG	**Laguna Verde**	**4.29**	**343**		**Pn**	**18 11 43.4**	**-1.5**
LVIG					**Sn**	**18 12 31.8**	**-3.8**
LVIG	**Laguna Verde**	**4.29**	**343**	*e*P	**Pn**	**18 11 43.4**	**-1.5**
LVIG				*e*S	**Sn**	**18 12 31.8**	**-3.8**
APG	**El Apazote**	**4.50**	**97**	Pn	**Pn**	**18 11 48.4**	**+0.4**
	1.2nm,0.3s,baz=233,slow=22,SNR=27						
APG				Sn	**Sn**	**18 12 41.1**	**0.0**
	1.0nm,0.3s,baz=80,slow=18,SNR=4.4						
	4.7nm,0.5s						
DAIG	**Los Arroyos**	**4.61**	**288**		**Pn**	**18 11 49.8**	**+0.5**
DAIG					**Sn**	**18 12 35.4**	**-8.1**
DAIG	**Los Arroyos**	**4.61**	**288**	*e*P	**Pn**	**18 11 49.8**	**+0.5**
DAIG				*e*S	**Sn**	**18 12 35.4**	**-8.1**
PPCL	**Tochimilco**	**4.71**	**315**	*e*P	**Pn**	**18 11 51.6**	**+0.6**
PPPT	**Popocatepetl**	**4.76**	**315**	*e*P	**Pn**	**18 11 51.6**	**-0.3**
PPSX	**Xalitzintla**	**4.76**	**317**	*e*P	Pb	18 11 57.2	-5.8
PBXN	**Popocatepetl**	**4.81**	**315**	*e*P	**Pn**	**18 11 54.0**	**+1.4**
PPM	**Popocatepetl**	**4.83**	**316**	*e*P	**Pn**	**18 11 56.7**	**+3.9**
PPM				*e*S	**Sn**	**18 12 50.8**	**+1.2**
PPIG	**Popocatepetl**	**4.83**	**316**		**Pn**	**18 11 56.7**	**+3.9**
PPIG					**Sn**	**18 12 50.8**	**+1.2**
MEIG	**Mezcala**	**4.92**	**299**		**Pn**	**18 11 54.9**	**+1.2**
MEIG					**Sn**	**18 12 46.4**	**-4.9**
MEIG	**Mezcala**	**4.92**	**299**	*e*P	**Pn**	**18 11 54.9**	**+1.2**
MEIG				*e*S	**Sn**	**18 12 46.4**	**-4.9**
YAIG	**Yautepec**	**5.00**	**311**		**Pn**	**18 11 58.2**	**+3.4**
YAIG					**Sn**	**18 12 49.0**	**-4.4**
YAIG	**Yautepec**	**5.00**	**311**	*e*P	**Pn**	**18 11 58.2**	**+3.4**
YAIG				*e*S	**Sn**	**18 12 49.0**	**-4.4**
SCIG	**Sabancuy**	**5.00**	**48**		**Pn**	**18 11 53.5**	**-1.3**
SCIG					**Sn**	**18 12 47.6**	**-5.6**
SCIG	**Sabancuy**	**5.00**	**48**	*e*P	**Pn**	**18 11 53.5**	**-1.3**
SCIG				*e*S	**Sn**	**18 12 47.6**	**-5.6**
CXUV	**Coxquihui**	**5.13**	**333**		**Pn**	**18 11 56.9**	**+0.4**
CXUV					**Sn**	**18 12 53.7**	**-2.8**
CXUV	**Coxquihui**	**5.13**	**333**	*e*P	**Pn**	**18 11 56.9**	**+0.4**
CXUV				*e*S	**Sn**	**18 12 53.7**	**-2.8**
PETF	**Flores**	**5.18**	**75**		**Pn**	**18 11 57.2**	**+0.1**
PETF	**Flores**	**5.18**	**75**		**Sn**	**18 12 56.3**	**-1.2**
PETF	**Flores**	**5.18**	**75**	*e*P	**Pn**	**18 11 56.3**	**-0.9**
PETF				*e*S	**Sn**	**18 12 56.3**	**-1.2**
PETF	**Flores**	**5.18**	**75**	P	**Pn**	**18 11 57.9**	**+0.7**
PETF	**Flores**	**5.18**	**75**	S	**Sn**	**18 12 59.1**	**+1.5**
CAIG	**El Cayaco**	**5.18**	**287**		**Pn**	**18 11 57.0**	**-0.1**
CAIG					**Sn**	**18 12 49.4**	**-8.2**
CAIG	**El Cayaco**	**5.18**	**287**	*e*P	**Pn**	**18 11 57.0**	**-0.1**
CAIG				*e*S	**Sn**	**18 12 49.4**	**-8.2**
MPVM	**San Francisco**	**5.18**	**314**		**Pn**	**18 11 58.6**	**+1.2**
MPVM	**San Francisco**	**5.18**	**314**	*e*P	**Pn**	**18 11 58.6**	**+1.2**
THVM	**De Xico**	**5.23**	**315**		**Pn**	**18 11 59.5**	**+1.3**
THVM	**De Xico**	**5.23**	**315**	*e*P	**Pn**	**18 11 59.5**	**+1.3**
TLVM	**San Miguel Top**	**5.29**	**313**		**Pn**	**18 12 00.1**	**+1.1**
TLVM	**San Miguel Top**	**5.29**	**313**	*e*P	**Pn**	**18 12 00.1**	**+1.1**
XCVM	**Xochimilco**	**5.29**	**314**		**Pn**	**18 12 01.1**	**+2.2**
XCVM	**Xochimilco**	**5.29**

	comp=Z,12nm,0.7s						
MIAR	**Mount Ida**	**18.91**	**4**		**P**	**18 14 58.0**	**-2.6**
MIAR				IAmb	IAmb	18 15 13.6	
	comp=Z,6.7nm,0.7s						
WMOK	**Wichita Mounta**	**19.34**	**351**		**P**	**18 15 05.2**	**-0.2**
WMOK				IAmb	IAmb	18 15 31.5	
	comp=Z,14nm,1.1s						
MSTX	**Muleshoe**	**19.56**	**341**	IAmb	IAmb	18 15 13.7	
	comp=Z,15nm,0.9s						
AMTX	**Amarillo**	**20.09**	**344**	P	Pn	18 15 15.2	-0.3
AMTX				IAmb	IAmb	18 15 23.5	
	comp=Z,10nm,0.6s						
DEOK	**Depew**	**20.20**	**357**	P	**P**	**18 15 14.2**	**-0.5**
OK052	**Battle Ridge R**	**20.36**	**356**	P	**P**	**18 15 14.9**	**-1.6**
FCAR	**Ozark Folk Cen**	**20.38**	**7**	P	**P**	**18 15 14.5**	**-2.1**
FCAR				IAmb	IAmb	18 15 29.6	
	comp=Z,5.8nm,0.8s						
121A	**Cookes Peak, D**	**20.43**	**328**		Pn	18 15 19.3	-0.2
121A				IAmb	IAmb	18 15 27.6	
	comp=Z,8.2nm,0.8s						
QUOK	**Quay**	**20.54**	**356**	P	**P**	**18 15 16.3**	**-2.0**
U38A	**Gravette**	**20.76**	**2**		**P**	**18 15 19.6**	**-1.2**
U38A				IAmb	IAmb	18 15 36.8	
	comp=Z,6.4nm,0.8s						
Y22A	**Socorro**	**21.17**	**332**	IAmb	IAmb	18 15 34.6	
	comp=Z,12nm,0.8s						
T35A	**Sooner Cattle**	**21.27**	**357**		**P**	**18 15 25.5**	**-0.7**
T35A				IAmb	IAmb	18 15 26.5	
	comp=Z,12nm,0.6s						
ANMO	**Albuquerque**	**21.80**	**334**	P	**P**	**18 15 31.8**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=222,slow=14,SNR=4.6						
	comp=Z,1.5nm,0.7s						
ANMO	**Albuquerque**	**21.80**	**334**	P	**P**	**18 15 31.7**	**-0.5**
TASM	**ASL Pad, Albuq**	**21.80**	**334**	IAmb	IAmb	18 15 41.9	
	comp=Z,5.2nm,1.1s						
RTBA	**Rita Blanca**	**21.84**	**343**	IAmb	IAmb	18 15 45.1	
	comp=Z,10nm,0.8s						
T25A	**Trinidad**	**22.99**	**341**	IAmb	IAmb	18 15 57.0	
	comp=Z,6.2nm,1.0s						
RUSC	**La Rusia**	**23.64**	**112**		**P**	**18 15 51.7**	**-0.4**
RUSC				IAmb	IAmb	18 15 55.2	
	comp=Z,7.6nm,0.9s						
PV01	**Paradox Valley**	**25.41**	**335**	IAmb	IAmb	18 16 14.8	
	comp=Z,5.6nm,1.2s						
PV02	**Paradox Valley**	**25.54**	**334**	IAmb	IAmb	18 16 46.7	
	comp=Z,9.8nm,1.0s						
PV03	**Paradox Valley**	**25.62**	**334**	IAmb	IAmb	18 16 26.5	
	comp=Z,6.7nm,1.1s						
PV18	**Skein Mesa, Pa**	**25.64**	**334**	IAmb	IAmb	18 16 23.4	
	comp=Z,1.5nm,1.2s						
PV12	**Saucer Basin,**	**25.66**	**334**	IAmb	IAmb	18 16 22.2	
	comp=Z,8.5nm,0.9s						
PV16	**Nyswonger Mesa**	**25.70**	**334**	IAmb	IAmb	18 16 40.4	
	comp=Z,9.4nm,1.3s						
PV04	**Paradox Valley**	**25.76**	**334**	IAmb	IAmb	18 16 32.9	
	comp=Z,6.9nm,0.9s						
PV23	**Carpenter Ridg**	**25.86**	**334**	IAmb	IAmb	18 16 23.6	
	comp=Z,9.1nm,0.9s						
NVAR	**Mina Array Bea**	**30.57**	**322**	P	**P**	**18 16 55.7**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=144,slow=7.6,SNR=5.1						
	comp=Z,0.7nm,0.7s						
LPAZ	**La Paz**	**41.38**	**139**	P	**P**	**18 18 28.3**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=300,slow=8.1,SNR=3.6						
	comp=Z,0.6nm,0.5s						
SFJD	**Kangerlussuaq**	**58.93**	**19**	LR	LR	18 47 43.7	
	comp=Z,64nm,19.1s,baz=161,slow=38						
ILAR	**Eielson Array**	**60.21**	**337**	P	**P**	**18 20 48.6**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=130,slow=8.3,SNR=2.1						
	comp=Z,0.3nm,0.8s						
ESDC	**Sonseca Array**	**81.06**	**51**	P	**P**	**18 22 58.8**	**+3.2**
	comp=Z,1.3nm,1.0s,baz=293,slow=3.6,SNR=4.4						
	comp=Z,1.3nm,1.0s						
HHC	**Hu-ho-hao-te**	**118.63**	**337**	*eP*	**PKiKP**	**18 29 29.1**	**+0.3**
PZH	**PanZhiHua**	**135.06**	**338**	PKP	**PKPdf**	**18 29 59.1**	**-1.4**

*CNRM **21** 18:10:46.7, 35.03N×5.21W, h94km, ML3.0*
*MDD **21** 18:10:46.3±0.8, 34.96N×5.22W, h9km±6km, mb_Lg2.7/12, Error ellipse: s-maj=4.6km s-min=4.0km az=77.0*
*SFS **21** 18:10:48.7, 35.06N×5.13W, h20km, ML3.0/12, ML2.5/18, MLv2.3/18*
*IGIL **21** 18:10:49.5, 34.96N×5.43W, h19km, ML2.0*
*INMG **21** 18:10:49.9±1.7, 35.16N×5.15W, h17km±10km, ML2.2, Error ellipse: s-maj=9.1km s-min=5.5km az=3.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Tetuan (MARR)*
ISC 21 18:10:48.1±1.7, 35°04'N±0°02'×5°16'W±0°03, h33km±8km, n70, σ1°48/103, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSA	**Sarsar**	**0.56**	**254**	P	**Pn**	**18 11 02.5**	**+2.7**
RSA	**Sarsar**	**0.56**	**254**	S	**Sn**	**18 11 14.2**	**+6.2**
ECEU	**Ceuta**	**0.88**	**349**	Pg	**Pn**	**18 11 04.2**	**+0.1**
ECEU				Sg	**Sn**	**18 11 16.2**	**+0.5**
ECEU	**Ceuta**	**0.88**	**349**	Pn	**Pn**	**18 11 03.7**	**-0.4**
ECEU				*i* lVmb_Lg		18 11 21.6	
CEU	**Ceuta**	**0.88**	**349**	Pg	**Pn**	**18 11 03.9**	**-0.2**
CEU				Sg	**Sn**	**18 11 16.1**	**+0.4**
PALE	**Palemas**	**1.02**	**80**	P	**Pn**	**18 11 07.2**	**+1.1**
PALE	**Palemas**	**1.02**	**80**	S	**Sb**	**18 11 22.8**	**+2.4**
AKLM	**AKL**	**1.19**	**116**	P	**Pn**	**18 11 08.4**	**-0.1**
AKLM	**AKL**	**1.19**	**116**	S	**Sn**	**18 11 24.0**	**+0.4**
LCRM	**LCR**	**1.37**	**169**	P	**Pn**	**18 11 12.5**	**+1.5**
LCRM	**LCR**	**1.37**	**169**	S	**Sb**	**18 11 31.3**	**+0.8**
EJIF	**Jimena Fronter**	**1.43**	**350**	Pn	**Pn**	**18 11 12.0**	**+0.2**
IFR	**Ifrane**	**1.52**	**179**	Pn	**Pn**	**18 11 14.6**	**+1.5**
IFR				Sn	**Sb**	**18 11 34.1**	**-0.6**
EMIJ	**Mijas**	**1.56**	**12**	Pn	**Pn**	**18 11 12.2**	**-1.3**
EMIJ	**Mijas**	**1.56**	**12**	Pn	**Pn**	**18 11 12.6**	**-0.9**
EMIJ				Sn	**Sb**	**18 11 35.6**	**-0.1**
WMELI	**Melilla**	**1.83**	**81**	Sn	**Sn**	**18 11 40.3**	**+1.0**
WMELI				Pn	**Pn**	**18 11 17.0**	**-0.3**
ESPR	**Espera**	**1.91**	**343**	Sn	**Sn**	**18 11 39.2**	**-2.1**
EALB	**Alboran**	**1.96**	**62**	Pn	**Pn**	**18 11 17.3**	**-1.6**
EALB				Sn	**Sn**	**18 11 40.3**	**-2.0**
EALB	**Alboran**	**1.96**	**62**	Pn	**Pn**	**18 11 17.7**	**-1.2**
EALB				Sn	**Sn**	**18 11 43.0**	**+0.6**
EALB				*i* lVmb_Lg		18 12 18.7	
MD31	**MD31**	**2.19**	**171**	P	**Pn**	**18 11 21.8**	**-0.5**
MD31	**MD31**	**2.19**	**171**	S	**Sn**	**18 11 50.2**	**+1.9**
ELGU	**Los Guajares,**	**2.21**	**34**	Pn	**Pn**	**18 11 22.6**	**0.0**
ELGU				Sn	**Sn**	**18 11 49.6**	**+0.8**
ELGU	**Los Guajares,**	**2.21**	**34**	Pn	**Pn**	**18 11 23.6**	**+1.0**
ELGU				Sn	**Sn**	**18 11 51.0**	**+2.2**
ELGU				*i* lVmb_Lg		18 11 59.6	
EGOR	**Sierra Gorda,**	**2.24**	**22**	Pn	**Pn**	**18 11 24.9**	**+1.9**
EGOR				Sn	**Sn**	**18 11 49.3**	**-0.2**
JBK	**JBK**	**2.25**	**107**	P	**Pn**	**18 11 21.9**	**-1.3**
JBK	**JBK**	**2.25**	**107**	S	**Sn**	**18 11 49.1**	**-0.9**
MDT	**Midelt**	**2.27**	**168**	P	**Pn**	**18 11 22.9**	**-0.4**
MDT	**Midelt**	**2.27**	**168**	S	**Sn**	**18 11 51.3**	**+1.2**
EQTA	**Presa de Quent**	**2.57**	**32**	Pn	**Pn**	**18 11 28.8**	**+1.2**
EQTA				Sn	**Sn**	**18 11 56.3**	**-1.5**
EMIN	**Mina Concepcio**	**2.98**	**336**	Sn	**Sn**	**18 12 07.0**	**-0.8**
EMIN	**Mina Concepcio**	**2.98**	**336**	Pn	**Pn**	**18 11 33.8**	**+0.6**
EMIN				Sn	**Sn**	**18 12 07.2**	**-0.6**
EMIN				*i* lVmb_Lg		18 13 44.5	
ECAB	**El Cabril**	**3.04**	**356**	Sn	**Sn**	**18 12 08.6**	**-0.6**
ECAB				Pn	**Pn**	**18 11 35.2**	**+1.3**
ECAB	**El Cabril**	**3.04**	**356**	Pn	**Pn**	**18 11 34.7**	**+0.8**
ECAB				Sn	**Sn**	**18 12 10.6**	**+1.4**
ECAB				*i* lVmb_Lg		18 12 24.6	
EGRO	**El Granado**	**3.12**	**324**	Pn	**Pn**	**18 11 35.3**	**+0.4**
EGRO				Sn	**Sn**	**18 12 11.2**	**+0.1**
EGRO	**El Granado**	**3.12**	**324**	Pn	**Pn**	**18 11 35.3**	**+0.4**
EGRO				*i* lVmb_Lg		18 11 39.2	
EGRO				Sn	**Sn**	**18 12 11.0**	**0.0**
PVAQ	**Vaqueiros**	**3.14**	**320**	*eP*	**Pn**	**18 11 35.5**	**+0.3**
PVAQ				*eS*	**Sn**	**18 12 11.3**	**-0.2**
PVAQ				*i* IAML		18 12 11.9	
PVAQ				*i* IAML		18 12 13.1	
PVAQ				*i* IAML		18 12 13.7	
PVAQ	**Vaqueiros**	**3.14**	**320**	P	**Pn**	**18 11 35.4**	**+0.1**
PVAQ	**Vaqueiros**	**3.14**	**320**	S	**Sn**	**18 12 10.5**	**-1.0**
PBDV	**Barranco-do-Ve**	**3.14**	**315**	Pn	**Pn**	**18 11 35.4**	**+0.1**
PBDV				Sn	**Sn**	**18 12 11.6**	**0.0**
PBDV	**Barranco-do-Ve**	**3.14**	**315**	*eP*	**Pn**	**18 11 35.5**	**+0.3**
PBDV				*eS*	**Sn**	**18 12 11.7**	**0.0**
PBDV				*i* IAML		18 12 13.8	
PBDV				*i* IAML		18 12 16.9	
PBDV				*i* IAML		18 12 17.7	
EADA	**Adamuz**	**3.16**	**8**	Pn	**Pn**	**18 11 36.0**	**+0.5**
EADA	**Adamuz**	**3.16**	**8**	Pn	**Pn**	**18 11 35.9**	**+0.4**
EADA				*i* lVmb_Lg		18 12 07.9	
EADA				Sn	**Sn**	**18 12 13.0**	**+0.8**
EQES	**Quesada**	**3.23**	**31**	Pn	**Pn**	**18 11 38.1**	**+1.4**
EQES				*i* lVmb_Lg		18 12 01.8	
EQES				Sn	**Sn**	**18 12 16.4**	**+2.4**
SRHM	**Skhour des Reh**	**3.43**	**222**	P	**Pn**	**18 11 41.8**	**+2.6**
SRHM	**Skhour des Reh**	**3.43**	**222**	S	**Sb**	**18 12 23.8**	**-5.5**
PBAR	**Barrancos**	**3.48**	**335**	Pn	**Pn**	**18 11 41.5**	**+1.7**
PBAR				Sn	**Sn**	**18 12 18.4**	**-1.5**
PBAR	**Barrancos**	**3.48**	**335**	*eP*	**Pn**	**18 11 41.6**	**+1.7**
PBAR				*eS*	**Sn**	**18 12 18.6**	**-1.3**
PBAR				*i* IAML		18 12 21.4	
PBAR				*i* IAML		18 12 23.3	
PBAR				*i* IAML		18 12 32.2	
TISM	**Timmit**	**3.48**	**198**	P	**Pn**	**18 11 38.3**	**-1.6**
TISM	**Timmit**	**3.48**	**198**	S	**Sn**	**18 12 19.2**	**-0.6**
PCVE	**Castro Verde**	**3.48**	**319**	Pn	**Pn**	**18 11 41.6**	**+1.7**
PCVE				Sn	**Sn**	**18 12 18.6**	**-1.3**
PCVE	**Castro Verde**	**3.48**	**319**	*eP*	**Pn**	**18 11 41.6**	**+1.7**
PCVE				*eS*	**Sn**	**18 12 19.2**	**-0.8**
PCVE				*i* IAML		18 12 21.7	
PCVE				*i* IAML		18 12 22.6	
PCVE				*i* IAML		18 12 24.6	
MESJ	**Messejana**	**3.73**	**319**	*eP*	**Pn**	**18 11 43.6**	**+0.2**
MESJ				*eS*	**Sn**	**18 12 23.0**	**-3.1**
MESJ				IAML		18 12 28.6	
	comp=N,4.0nm,0.3s						
MESJ	**Messejana**	**3.73**	**319**	*eP*	**Pn**	**18 11 43.9**	**+0.6**
MESJ				*eS*	**Sn**	**18 12 25.6**	**-0.5**
MESJ				*i* IAML		18 12 28.5	
MESJ				*i* IAML		18 12 28.5	
MESJ				*i* IAML		18 12 30.0	
PSIM	**Granatula de C**	**3.94**	**16**	Pn	**Pn**	**18 11 47.3**	**+1.0**
PSIM				Sn	**Sn**	**18 12 32.6**	**+1.2**
EBAD	**Badajoz**	**4.00**	**339**	Pn	**Pn**	**18 11 47.5**	**+0.5**
EBAD				Sn	**Sn**	**18 12 32.2**	**-0.5**
EBAD				*i* lVmb_Lg		18 12 34.1	
PESTR	**Estremoz**	**4.29**	**334**	*eP*	**Pn**	**18 11 52.2**	**+1.2**
MOE	**Montemor**	**4.32**	**325**	*eP*	**Pn**	**18 11 52.3**	**+0.8**
MOE				*eS*	**Sn**	**18 12 40.6**	**0.0**
MOE				*i* IAML		18 12 42.2	
MOE				*i* IAML		18 12 42.4	
OUZM	**OUZ**	**4.33**	**199**	P	**Pn**	**18 11 52.0**	**+0.2**
OUZM	**OUZ**	**4.33**	**199**	S	**Sn**	**18 12 43.5**	**+2.4**
PARRA	**Arraiolos**	**4.42**	**329**	*eP*	Pn	18 11 54.1	-5.1
PARRA				*eS*	Sn	18 12 41.3	-13
PARRA				*i* IAML		18 12 43.4	
PARRA				*i* IAML		18 12 44.4	
PARRA				*i* IAML		18 12 47.2	
OUK	**Oukaimeden**	**4.44**	**211**	P	**Pn**	**18 11 51.3**	**-2.1**
OUK	**Oukaimeden**	**4.44**	**211**	S	**Sn**	**18 12 42.2**	**-2.0**
TIO	**Tiouine**	**4.46**	**204**	Pn	**Pn**	**18 11 53.3**	**-0.3**
TIO				Sn	**Sn**	**18 12 42.7**	**-1.7**
TIO	**Tiouine**	**4.46**	**204**	P	**Pn**	**18 11 52.7**	**-0.9**
TIO	**Tiouine**	**4.46**	**204**	S	**Sn**	**18 12 43.7**	**-0.8**
ETOB	**Tobarra**	**4.62**	**38**	Pn	**Pn**	**18 11 56.5**	**+0.8**
ETOB				*i* lVmb_Lg		18 13 15.8	
PMTG	**Montargil**	**4.71**	**330**	*eP*	**Pn**	**18 11 58.1**	**+1.3**
PMTG				*eS*	**Sn**	**18 12 50.6**	**+0.3**
PMTG				*i* IAML		18 12 52.0	
PMTG				*i* IAML		18 12 53.2	
PMTG				*i* IAML		18 13 03.9	
PCBR	**Castelo Branco**	**5.14**	**340**	*eP*	**Pn**	**18 12 03.9**	**+1.2**
PCBR				*eS*	**Sn**	**18 12 59.2**	**-1.6**
PCBR				*i* IAML		18 13 01.0	
PCBR				*i* IAML		18 13 01.1	
PCBR				*i* IAML		18 13 02.0	
PSARD	**Sardoal**	**5.14**	**333**	*eP*	**Pn**	**18 12 04.0**	**+1.2**
PSARD				*eS*	**Sn**	**18 13 00.5**	**-0.5**
PSARD				*i* IAML		18 13 00.9	
PSARD				*i* IAML		18 13 01.9	
PSARD				*i* IAML		18 13 03.3	
PSBE	**So Bento**	**5.33**	**328**	*eP*	**Pn**	**18 12 06.4**	**+1.1**

*IDC **21** 18:21:37.8±0.9, 0.04N×125.45E, h0km, mb3.8/6, mbtmp3.9/6, MS2.9/5, Error ellipse: s-maj=61.1km s-min=17.5km az=69.0*
*NEIC **21** 18:21:43.6±1.0, 0.00S±0.08×125.32E±0.06, h35km±2km, mb4.1/10, Error ellipse: s-maj=14.4km s-min=10.1km az=164.0*
*DJA **21** 18:21:43.9±0.2, 0.2S±2°×12.5E±°, h10km, M4.2/24, mB4.7/2, mb4.3/12, MLv4.2/24, Mw(mB)3.9/2*
ISC 21 18:21:44.6±0.6, 0.10S±0.07×125.33E±0.06, h49km, n56, σ1°83/49, mb4.0/11, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.50**	**296**	P	**Pn**	**18 22 08.8**	**-0.3**
SANI	**Sanana**	**2.05**	**161**	P	**Pn**	**18 22 14.8**	**-1.8**
SANI	**Sanana**	**2.05**	**161**	P	**Pn**	**18 22 14.9**	**-1.7**
TNTI	**Ternate**	**2.22**	**67**		**Pn**	**18 22 17.5**	**-1.4**
TNTI	**Ternate**	**2.22**	**67**	P	Pn	18 22 22.6	+3.7
TNTI	**Ternate**	**2.22**	**67**	S	**Sn**	**18 22 50.4**	**+5.3**
TNTI	**Ternate**	**2.22**	**67**	P	Pn	18 22 22.3	+3.4
LUWI	**Luwuk**	**2.72**	**250**		**Pn**	**18 22 25.0**	**-0.8**
LUWI	**Luwuk**	**2.72**	**250**	P	**Pn**	**18 22 26.9**	**+1.1**
LUWI	**Luwuk**	**2.72**	**250**	P	**Pn**	**18 22 28.9**	**+3.1**
MRSI	**Marisa**	**3.43**	**280**	P	**Pn**	**18 22 37.2**	**+1.6**
NLAI	**Namlea**	**3.59**	**150**	P	**Pn**	**18 22 36.9**	**-0.8**
APSI	**Ampana**	**3.77**	**258**	P	**Pn**	**18 22 42.8**	**+2.6**
TOLI2	**Tolitoli**	**4.70**	**285**		**Pn**	**18 22 52.5**	**-0.6**
TOLI2	**Tolitoli**	**4.70**	**285**	P	**Pn**	**18 22 54.1**	**+1.1**
MSAI	**Masohi**	**4.83**	**132**	P	**Pn**	**18 22 56.4**	**+1.5**
MPSI	**Mapaga**	**5.45**	**275**	P	**Pn**	**18 23 04.6**	**+1.3**
	0.1nm20nm,0.7s						
PCI	**Palu**	**5.55**	**262**	P	**Pn**	**18 23 08.7**	**+4.0**
SWI	**Sorong**	**5.98**	**97**	P	**Pn**	**18 23 13.4**	**+2.8**
	10nm,0.8s						
BBSI	**Bau Bau**	**6.02**	**207**	P	**Pn**	**18 23 13.7**	**+2.6**
	0.1nm19nm,0.8s						
TTSI	**Tana Toraja**	**6.23**	**242**	P	**Pn**	**18 23 15.9**	**+1.8**
	0.2nm491nm33nm,0.7s						
BNDI	**Bandanaira**	**6.34**	**134**	P	**Pn**	**18 23 16.5**	**+0.9**
BNDI	**Bandanaira**	**6.34**	**134**	P	**Pn**	**18 23 16.4**	**+0.9**
	35nm,0.6s						
BNSI	**Bone**	**6.74**	**231**	P	**Pn**	**18 23 21.8**	**+0.8**
	0.1nm21nm,1.1s						
SPSI	**Sidrap Palu**	**6.75**	**235**	P	**Pn**	**18 23 23.4**	**+2.2**
	0.1nm558nm26nm,0.6s						
DAV	**Davao City (W)**	**7.13**	**2**	LR	LR	18 26 17.6	
	comp=Z,131nm,20.6s,baz=197,slow=40						
BKSI	**Bulukumba**	**7.34**	**225**	P	**Pn**	**18 23 30.6**	**+1.3**
	0.1nm11nm,0.7s						
KAPI	**Kappang**	**7.40**	**229**	LR	LR	18 27 15.3	
	comp=Z,48nm,18.2s,baz=53,slow=44						
FAKI	**Fak Fak**	**7.46**	**112**	Pn	**Pn**	**18 23 30.2**	**-0.8**
FAKI	**Fak Fak**	**7.46**	**112**	P	**Pn**	**18 23 31.4**	**+0.4**
FAKI	**Fak Fak**	**7.46**	**112**	P	**Pn**	**18 23 31.3**	**+0.3**
	0.1nm17nm,0.9s						
BSSI	**Bau Bau, Buton**	**7.70**	**219**	P	**Pn**	**18 23 38.1**	**+3.8**
EDFI	**Ende, Flores**	**9.32**	**203**	P	**Pn**	**18 23 58.4**	**+1.8**
BATI	**Baumata**	**10.18**	**189**	LR	LR	18 28 32.4	
	comp=Z,108nm,18.3s,baz=314,slow=40						
WB0	**Warramunga Arr**	**21.47**	**156**	P	**P**	**18 26 28.0**	**-1.2**
WB0				IAmb	IAmb	18 26 30.5	
	comp=Z,6.7nm,1.3s						
WRAB	**Tennant Creek**	**21.60**	**156**	P	**P**	**18 26 30.4**	**-0.2**
WRA	**Warramunga Arr**	**21.61**	**156**	P	**P**	**18 26 29.6**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=336,slow=12,SNR=22						
	comp=Z,1.9nm,0.7s						
WR8	**Warramunga Arr**	**21.68**	**156**	P	**P**	**18 26 29.9**	**-1.6**
WR8				IAmb	IAmb	18 26 31.2	
	comp=Z,5.3nm,1.1s						
COEN	**Coen**	**22.40**	**129**	P	**P**	**18 26 40.7**	**+1.5**
GUMO	**Guam**	**23.66**	**54**	LR	LR	18 34 57.1	
	comp=Z,37nm,21.6s,baz=104,slow=34						
QIS	**Mount Isa**	**24.67**	**146**	P	**P**	**18 27 02.6**	**+1.5**
AS31	**Alice Springs**	**24.86**	**161**	P	**P**	**18 27 02.8**	**0.0**
ASAR	**Alice Springs**	**24.86**	**161**	P	**P**	**18 27 03.3**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=340,slow=9.6,SNR=30						
ASAR				PcP	**PcP**	**18 30 39.1**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=348,slow=2.1,SNR=4.1						
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.81**	**307**	LR	LR	18 42 07.7	
	comp=Z,11nm,18.3s,baz=110,slow=39						
STKA	**Stephens Creek**	**35.15**	**156**	P	**P**	**18 28 34.0**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=325,slow=15,SNR=3.6						
	comp=Z,0.9nm,0.5s						
MJAR	**Matsushiro Arr**	**38.37**	**17**	P	**P**	**18 28 59.4**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=185,slow=8.2,SNR=4.5						
	comp=Z,1.2nm,0.7s						
MJAR	**Matsushiro Arr**	**38.37**	**17**	IAmb	IAmb	18 29 02.7	
	comp=Z,3.9nm,1.4s						
EVN	**Everest**	**46.26**	**310**	P	**P**	**18 30 02.7**	**-3.5**
EVN				IAmb	IAmb	18 30 09.7	
	comp=Z,2.6nm,0.5s						
MKAR	**Makanchi Array**	**59.94**	**327**	P	**P**	**18 31 45.2**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=121,slow=8.0,SNR=14						
	comp=Z,1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**64.23**	**329**	P	**P**	**18 32 14.3**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=129,slow=6.0,SNR=12						
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**64.24**	**329**	P	**P**	**18 32 13.9**	**-0.7**
KKAR	**Karatay Array**	**65.11**	**319**	P	**P**	**18 32 20.6**	**+0.2**
TIXI	**Tiksi**	**71.67**	**1**	P	**P**	**18 33 01.4**	**+0.6**
TIXI				IAmb	IAmb	18 33 08.3	
	comp=Z,4.7nm,1.4s						
AB31	**Akbulak array**	**74.24**	**322**	P	**P**	**18 33 15.4**	**-1.1**
AB31				IAmb	IAmb	18 33 17.5	
	comp=Z,1.2nm,0.7s						
ABKAR	**Akbulak array**	**74.24**	**322**	P	**P**	**18 33 15.8**	**-0.7**
C16K	**Lisburne Hills**	**82.54**	**21**	P	**P**	**18 34 02.0**	**+0.2**

*CATAC **21** 18:45:16.4±0.4, 12°N±2°×8°8W±°, h21km±2km, M3.5/25, MLv3.5/25, Error ellipse: s-maj=4.6km s-min=2.0km az=21.7, confirmed*
*SNET **21** 18:45:17.8±1.2, 12.30N×87.97W, h17km±16km, ML3.5*
ISC 21 18:45:15.6±1.6, 12°24'N±0°06×87°90'W±0°03, h14km±10km, n62, σ0°69/76, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.80**	**24**	P	**Pn**	**18 45 32.5**	**-0.1**
CSGN				S	**Sn**	**18 45 44.5**	**+0.1**
POTN	**Potosi Cosigui**	**0.85**	**27**	P	**Pg**	**18 45 32.4**	**+0.4**
POTN				S	**Sn**	**18 45 45.3**	**-0.1**
CRIN	**San Cristobal**	**0.95**	**61**	P	**Pg**	**18 45 34.7**	**+0.8**
CRIN	**San Cristobal**	**0.95**	**61**	S	**Sn**	**18 45 48.4**	**+0.5**
PKGN	**Cerro Pekin**	**0.99**	**65**	P	**Pb**	**18 45 34.9**	**+0.3**
PKGN				S	**Sn**	**18 45 49.3**	**+0.3**
CNCH	**Conchagua**	**1.03**	**3**	P	**Pn**	**18 45 35.9**	**+0.2**
CNCH	**Conchagua**	**1.03**	**3**	S	**Sn**	**18 45 51.2**	**+1.1**
LCND	**La Caada**	**1.06**	**0**	*eP*	**Pb**	**18 45 35.7**	**-0.1**
LCND				IAML		18 45 58.9	
	comp=Z,551nm,0.3s						
LCND	**La Caada**	**1.06**	**0**	P	**Pn**	**18 45 36.1**	**0.0**
POLN	**Al Sur del Vol**	**1.14**	**69**	P	**Pn**	**18 45 35.2**	**-1.9**
POLN				S	**Sb**	**18 45 50.7**	**-1.0**
CNGA	**Al SSO del Vol**	**1.20**	**78**	P	**Pn**	**18 45 38.4**	**+0.5**
CNGA				S	**Sb**	**18 45 53.7**	**+0.3**
CNGN	**Cerro Negro**	**1.20**	**77**	P	**Pn**	**18 45 37.7**	**-0.4**
CNGN	**Cerro Negro**	**1.20**	**77**	S	**Sb**	**18 45 54.1**	**+0.5**
LCY	**Lacayo**	**1.24**	**342**	*eP*	**Pg**	**18 45 39.5**	**+0.1**
RANC	**El Ranchito**	**1.25**	**342**	*eP*	**Pn**	**18 45 38.7**	**-0.1**
RANC				*eS*	**Sg**	**18 45 55.3**	**-0.5**
COPN	**Copaltepe**	**1.28**	**93**	P	**Pn**	**18 45 38.4**	**-0.7**
PACA	**Pacayal**	**1.29**	**341**	*eP*	**Pb**	**18 45 39.8**	**+0.1**
PACA				*eS*	**Sg**	**18 45 56.8**	**-0.5**
PACA				*eS*	**Sn**	**18 45 57.2**	**+0.7**
PACA	**Pacayal**	**1.29**	**341**	P	**Pb**	**18 45 39.6**	**-0.1**
MOM3	**MOM3**	**1.38**	**79**	⇓P	**Pn**	**18 45 39.9**	**-0.5**
MOM3				S	**Sn**	**18 45 58.0**	**-0.4**
TECA	**Tecapa**	**1.38**	**335**	*eP*	**Pn**	**18 45 40.6**	**-0.1**
TECA				IAML		18 46 03.1	
	comp=Z,2μm,0.3s						
MOM2	**El Cardon**	**1.40**	**82**	⇑P	**Pn**	**18 45 40.0**	**-0.7**
MOM2				S	**Sn**	**18

comp=N,44µm,0.6s
CEVE Cerro Verde 1.35 80 *e*P **Pn 19 02 11.3 +0.3**
CEVE *e*S **Sn 19 02 29.0 +1.1**
CEVE Cerro Verde 1.35 80 ⇓P **Pn 19 02 11.6 +0.7**
CEVE Cerro Verde 1.35 80 S **Sn 19 02 27.8 -0.1**
SBLS San Blas 1.35 80 *e*P **Pn 19 02 11.3 +0.3**
SBLS *e*S **Sn 19 02 29.0 +1.0**
QUEO Labor Ovalle 1.36 338 *e*P **Pn 19 02 12.3 +1.2**
QUEO IAML 19 02 36.0
comp=E,23µm,0.5s
JUAM Asuncion Mita 1.45 60 *e*S **Sn 19 02 30.9 +0.9**
UNIC Universidad Ca 1.45 75 *e*P **Pn 19 02 12.9 +0.7**
UNIC *e*S **Sn 19 02 31.2 +1.0**
UNIC Universidad Ca 1.45 75 ⇑P **Pn 19 02 13.1 +0.9**
APG El Apazote 1.49 20 P **Pn 19 02 13.8 +1.0**
comp=E,61nm,0.4s,baz=176,slow=11,SNR=674
APG S **Sn 19 02 33.4 +2.2**
comp=E,466nm,0.8s,baz=86,slow=16,SNR=14
APG El Apazote 1.49 20 *i*P **Pn 19 02 13.8 +1.0**
APG *e*S **Sn 19 02 29.8 -1.4**
JAYA Jayaque - finc 1.50 88 *e*P **Pn 19 02 13.4 +0.4**
JAYA Jayaque - finc 1.50 88 S **Sn 19 02 32.3 +0.8**
JAYA Jayaque - finc 1.50 88 ⇓P **Pn 19 02 13.4 +0.4**
CEDA San Andres 1.57 82 P **Pn 19 02 15.6 +1.8**
CEDA San Andres 1.57 82 S **Sn 19 02 34.9 +2.0**
SMCA Catarina 1.63 320 *e*P **Pn 19 02 14.6 0.0**
LALI Alcalda de L 1.63 94 *e*P **Pn 19 02 15.4 +0.8**
LALI Alcalda de L 1.63 94 S **Sn 19 02 35.7 +1.3**
LALI Alcalda de L 1.63 94 ⇑P **Pn 19 02 15.6 +1.0**
PMON Piamonte 1.64 86 S **Sn 19 02 36.4 +1.7**
PMON Piamonte 1.64 86 ⇑P **Pn 19 02 15.8 +1.0**
QUIS Sacapulas 1.68 357 *e*P **Pn 19 02 16.8 +1.4**
QUIS *e*S **Sn 19 02 38.3 +2.4**
QUIS IAML 19 02 40.0
comp=E,16µm,0.6s
UEES Universidad Ev 1.71 86 P **Pn 19 02 17.4 +1.6**
UEES Universidad Ev 1.71 86 S **Sn 19 02 38.0 +1.5**
PANCS Alcalda de 1.76 89 S **Sn 19 02 39.1 +1.3**
PANCS Alcalda de 1.76 89 P **Pn 19 02 17.9 +1.4**
LOMA Loma Larga 1.77 88 ⇑P **Pn 19 02 17.4 +0.8**
MTO3 Montecristo 1.77 63 **Pn 19 02 17.3 +0.6**
MTO3 Montecristo 1.77 63 *i*P **Pn 19 02 17.3 +0.6**
MTO3 Montecristo 1.77 63 ⇑P **Pn 19 02 17.3 +0.6**
MTO3 Montecristo 1.77 63 S **Sn 19 02 39.3 +1.1**
HUEH Huehuetenango 1.78 344 **Pn 19 02 17.7 +0.9**
HUEH Huehuetenango 1.78 344 *e*S **Sn 19 02 40.3 +1.9**
HUEH Huehuetenango 1.78 344 *e*P **Pn 19 02 18.3 +1.5**
HUEH Huehuetenango 1.78 344 S **Sn 19 02 40.4 +2.0**
HUEH Huehuetenango 1.78 344 P **Pn 19 02 18.5 +1.7**
THIG 1.79 317 *e*P **Pn 19 02 17.4 +0.7**
THIG *e*S **Sn 19 02 38.2 -0.2**
UDBS Universidad Do 1.79 86 S **Sn 19 02 40.8 +2.3**
ESQI Esquipulas 1.86 59 **Pn 19 02 18.6 +0.7**
ESQI Esquipulas 1.86 59 ⇑P **Pn 19 02 18.9 +1.0**
ESQI Esquipulas 1.86 59 S **Sn 19 02 42.0 +1.6**
ZAFR2 Estanzuela, Za 1.87 58 *e*P **Pn 19 02 19.2 +1.3**
LFRS El Faro 1.88 89 *e*P **Pn 19 02 19.5 +1.4**
AVCB Coban 1.94 17 IAML 19 02 54.3
comp=E,22µm,0.8s
PAVA Las Pavas 2.00 87 S **Sn 19 02 47.1 +3.4**
PAVA Las Pavas 2.00 87 ⇑P **Pn 19 02 21.2 +1.4**
LLGN La Laguna 2.07 74 S **Sn 19 02 47.6 +2.3**
SNVI San Vicente 2.10 89 *e*P **Pn 19 02 23.7 +2.6**
UESV Universidad de 2.15 89 P **Pn 19 02 24.2 +2.5**
UESV Universidad de 2.15 89 S **Sn 19 02 50.8 +3.6**
TECO Alcaldia de Te 2.15 91 S **Sn 19 02 49.5 +2.2**
TECO Alcaldia de Te 2.15 91 ⇑P **Pn 19 02 23.2 +1.4**
SCLA Alcaldia de Sa 2.20 87 ⇑P **Pn 19 02 24.0 +1.6**
PACA Pacayal 2.60 93 S **Sn 19 03 01.9 +3.5**
PACA Pacayal 2.60 93 P **Pn 19 02 30.8 +2.8**
CCIG Comitan 2.89 338 **Pn 19 02 32.0 +0.1**
CCIG Comitan 2.89 338 *e*P **Pn 19 02 33.6 +1.6**
CCIG Comitan 2.89 338 S **Sn 19 03 08.2 +2.7**
CCIG Comitan 2.89 338 P **Pn 19 02 34.3 +2.4**
PETF Flores 3.47 18 **Pn 19 02 40.2 +0.4**
TGUH Tegucigalpa,Un 3.64 82 **Pn 19 02 43.2 +0.9**
TGIG 3.77 327 *e*P **Pn 19 02 46.1 +2.1**
CRIN San Cristobal 3.94 103 **Pn 19 02 46.6 +0.2**
HERN Volcan Telica 4.17 103 Pn **Pn 19 02 48.6 -1.0**
CNGN Cerro Negro 4.33 104 **Pn 19 02 52.2 +0.7**
MGAN Managua 4.85 107 **Pn 19 02 58.7 -0.1**
CMIG Matias Romero 5.11 313 P **Pn 19 03 03.4 +1.1**
comp=E,13nm,0.3s,baz=118,slow=10,SNR=49
CMIG S **Sn 19 03 58.1 -2.0**
comp=E,132nm,0.5s,baz=118,slow=14,SNR=7.1
CMIG LR LR 19 05 28.3
comp=E,307nm,21.3s,baz=146,slow=40
SIUN Universidad Ur 6.05 88 **Pn 19 03 16.7 +1.5**
JUD3 Juan Diaz 3 6.34 122 **Pn 19 03 22.0 +2.7**
ESPN Las Esperanzas 6.67 101 **Pn 19 03 25.4 +1.6**
JTS Las Juntas de 6.76 118 P **Pn 19 03 28.0 +3.0**
comp=E,11nm,0.3s,baz=304,slow=21,SNR=8.9
JTS S **Sn 19 04 41.7 +0.9**
comp=E,18nm,0.8s,baz=227,slow=19,SNR=0.9
JTS Las Juntas de 6.76 118 **Pn 19 03 27.0 +1.9**
SOCE Pocosol 7.01 116 Pn **Pn 19 03 29.8 +1.3**
TEIG Tepich 7.08 21 **Pn 19 03 30.6 +1.2**
BILN Bilwi Airport 7.41 86 Pn **Pn 19 03 36.3 +2.3**
BRU2 Volcan 9.44 120 **Pn 19 04 00.6 -1.3**
MORE Morelia 11.48 303 Pn **Pn 19 03 27.4 -2.8**
SOR Soroa 11.88 39 **Pn 19 04 31.7 -3.3**
553A Crawfordville 17.59 19 Pn **Pn 19 05 47.6 -2.2**
553A IAmb IAmb 19 05 57.4
comp=Z,63nm,1.1s
HNDO Hondo 17.61 335 **Pn 19 05 49.8 -0.4**
BRAL Brewton 17.86 11 P **P 19 05 53.4 +0.2**
DRIO Del Rio 18.10 332 **P 19 05 56.0 0.0**
352A Blakely 18.65 16 P **P 19 06 02.3 +0.4**
JCT Junction City 18.66 336 P **Pn 19 06 03.3 +0.4**
146A Union 19.03 5 P **P 19 06 03.5 -2.6**
146A IAmb IAmb 19 06 42.3
comp=Z,39nm,1.0s
BRDY Brady 19.08 339 P **P 19 06 05.8 -0.9**
HPIG 19.08 316 P **P 19 06 06.2 -0.9**
SAND Sanderson 19.26 329 **P 19 06 08.0 -0.7**
FLOC Florencia 19.31 127 P **P 19 06 10.8 +1.4**
FLOC IAmb IAmb 19 06 21.0
comp=Z,23nm,1.0s
TXAR Lajitas Array 19.57 325 P **Pn 19 06 14.4 +0.5**
comp=Z,2.2nm,0.5s,baz=148,slow=12,SNR=27
TXAR pP **sP 19 06 28.0 -2.1**
comp=Z,1.9nm,0.8s,baz=150,slow=13,SNR=6.5
TXAR PcP **PcP 19 10 31.4 +0.6**
comp=Z,0.2nm,0.5s,baz=134,slow=3.3,SNR=4.2
TXAR ScP **ScP 19 14 05.2 +2.3**
comp=Z,0.2nm,0.5s,baz=156,slow=6.6,SNR=4.6
TXAR Lajitas Array 19.57 325 P **P 19 06 13.2 +1.0**
TX31 Lajitas Ar. Si 19.57 325 P **Pn 19 06 14.0 +0.1**
OZNA Ozona 19.60 333 P **P 19 06 12.1 -0.4**
LRAL Lakeview Retre 19.69 10 P **P 19 06 11.0 -2.3**
LRAL IAmb IAmb 19 06 30.7
comp=Z,25nm,1.1s
152A Waverly Hall 19.83 16 P **P 19 06 14.0 -0.8**
152A IAmb IAmb 19 06 32.0
comp=Z,39nm,1.1s
154A Montrose 20.25 20 P **P 19 06 19.6 +0.1**
PLPT Palo Pinto 20.26 342 P **P 19 06 19.2 -0.3**
PLPT IAmb IAmb 19 06 34.9
comp=Z,29nm,0.9s
ALPN Alpine 20.37 327 P **P 19 06 21.7 +0.8**
ALPN IAmb IAmb 19 06 24.2
comp=Z,13nm,0.8s
SGCY Sterling City 20.46 335 P **P 19 06 20.8 -1.0**
ABTX Abilene, Hawle 20.52 339 P **P 19 06 21.9 -0.5**
ABTX IAmb IAmb 19 06 37.2
comp=Z,15nm,0.8s
MNHN Monahans 20.71 330 P **P 19 06 24.7 +0.3**
MNHN IAmb IAmb 19 06 27.1
comp=Z,14nm,1.0s
MIAR Mount Ida 20.98 354 P **P 19 06 25.9 -1.5**
LPIG La Paz 21.03 303 LR LR 19 13 47.3
comp=Z,34nm,20.1s,baz=36,slow=34
X48A Hartselle 21.07 9 P **P 19 06 28.8 +0.6**
X48A IAmb IAmb 19 06 45.2
comp=Z,19nm,0.9s
UALR University of 21.12 357 P **P 19 06 29.9 +1.1**
UALR IAmb IAmb 19 06 46.8
comp=Z,13nm,0.8s
Y52A Lilburn 21.13 16 P **P 19 06 29.3 +0.3**
PECS Pecos 21.28 328 P **P 19 06 31.5 +0.9**
PECS IAmb IAmb 19 06 34.8
comp=Z,19nm,1.4s
APMT Aspermont 21.32 339 P **P 19 06 30.8 -0.2**
APMT IAmb IAmb 19 06 58.0
comp=Z,16nm,1.0s
FPAL Fort Paine 21.41 12 IAmb IAmb 19 06 49.1
comp=Z,30nm,1.2s
VHRN Van Horn 21.42 325 P **P 19 06 32.8 +0.6**
VHRN IAmb IAmb 19 06 34.0
comp=Z,15nm,0.8s
WHAR Wooly Hollow 21.63 357 **P 19 06 33.0 -1.2**
WHAR IAmb IAmb 19 06 50.9
comp=Z,15nm,1.0s
SWET Sewanee 22.00 11 IAmb IAmb 19 06 55.9
comp=Z,19nm,1.0s
HODGE Hodges 22.02 20 P **P 19 06 38.3 -0.1**
HODGE IAmb IAmb 19 06 55.3
comp=Z,12nm,0.9s
FCAR Ozark Folk Cen 22.22 358 IAmb IAmb 19 06 54.7
comp=Z,12nm,0.9s
MNTX Cornudas Mount 22.33 326 IAmb IAmb 19 06 44.4
comp=Z,13nm,0.8s
LCAR Lake Charles 22.37 360 **P 19 06 40.1 -2.1**
LCAR IAmb IAmb 19 07 01.6
comp=Z,8.3nm,0.7s
CPCT Cooper Cave 22.52 14 IAmb IAmb 19 07 01.3
comp=Z,11nm,0.9s
WVT Waverly 22.61 7 P **P 19 06 44.6 -0.2**
HHAR Hobbs 22.74 354 P **P 19 06 43.7 -2.4**
TKL Tuckaleechee C 22.91 15 P **P 19 06 47.1 -0.7**
comp=Z,4.3nm,0.5s,baz=169,slow=8.4,SNR=12
TKL pP **pP 19 07 01.1 +1.5**
comp=Z,26nm,1.0s,baz=197,slow=9.9,SNR=10
TKL LR LR 19 16 17.5
comp=Z,149nm,20.8s,baz=204,slow=38
comp=Z,4.3nm,0.5s
SMWD Samnorwood 22.98 340 IAmb IAmb 19 07 05.2
comp=Z,21nm,1.2s
KMSC Kings Mountain 23.15 20 IAmb IAmb 19 07 06.3
comp=Z,21nm,1.1s
AMTX Amarillo 23.29 337 **P 19 06 51.4 -0.4**
AMTX IAmb IAmb 19 07 29.0
comp=Z,15nm,1.1s
U49A Red Boiling Sp 23.29 11 IAmb IAmb 19 07 19.2
comp=Z,19nm,1.3s
MGMO Mountain Grove 23.48 357 **P 19 06 53.2 -0.4**
T47A Sharon Grove 23.55 8 IAmb IAmb 19 07 16.5
comp=Z,18nm,0.8s
121A Cookes Peak, D 24.30 324 IAmb IAmb 19 07 05.3
comp=Z,17nm,1.1s
V58A Windy Hill, Pi 24.55 24 P **P 19 07 02.4 -0.9**
V58A IAmb IAmb 19 07 19.6
comp=Z,18nm,1.0s
Q51A Peebles 26.21 14 IAmb IAmb 19 07 34.1
comp=Z,18nm,1.0s
KNB Kanab 30.40 324 IAmb IAmb 19 07 58.6
comp=Z,5.5nm,0.8s
V12A Nelson 30.75 320 **P 19 07 58.1 -0.9**
MTPU Mount Pierson 30.77 326 IAmb IAmb 19 08 02.7
comp=Z,6.7nm,0.9s
PSUT Pine Spring 32.05 325 IAmb IAmb 19 08 28.4
comp=Z,4.6nm,1.0s
SADO Sadowa 32.67 16 LR LR 19 22 32.4
comp=Z,138nm,20.0s,baz=161,slow=38
R11B Troy Canyon, C 32.91 323 IAmb IAmb 19 08 35.6
comp=Z,5.4nm,1.2s
PDAR Pinedale Array 33.19 335 P **P 19 08 22.4 +1.9**
comp=Z,0.1nm,0.4s,baz=161,slow=4.0,SNR=2.1
comp=Z,0.1nm,0.4s
ELK Elko 34.36 326 P **P 19 08 32.3 +1.6**
comp=Z,1.4nm,0.6s,baz=135,slow=6.1,SNR=9.8
ELK pP **pP 19 08 45.9 +2.2**
comp=Z,2.8nm,0.9s,baz=125,slow=6.4,SNR=6.8
ELK PcP **PcP 19 11 04.5 -1.2**
comp=Z,0.2nm,0.3s,baz=270,slow=3.0,SNR=3.6
ELK LR LR 19 23 45.7
comp=Z,92nm,18.3s,baz=158,slow=38
comp=Z,1.4nm,0.6s
NV11 Mina Array Sit 34.51 321 IAmb IAmb 19 08 49.8
comp=Z,6.7nm,0.9s
NVAR Mina Array Bea 34.60 321 P **P 19 08 35.0 +2.3**
comp=Z,5.6nm,1.0s,baz=135,slow=8.6,SNR=16
NVAR pP **sP 19 08 50.0 -1.8**
comp=Z,6.5nm,0.7s,baz=137,slow=8.8,SNR=18
NVAR PcP **PcP 19 11 07.5 +1.0**
comp=Z,0.9nm,0.7s,baz=114,slow=2.6,SNR=3.6
NVAR pPcP 19 11 22.1
comp=Z,1.9nm,0.9s,baz=145,slow=5.0,SNR=4.9
NVAR ScP **ScP 19 14 48.6 +1.0**
comp=Z,0.5nm,0.6s,baz=121,slow=4.2,SNR=3.7
NVAR LR LR 19 24 21.9
comp=Z,89nm,21.0s,baz=108,slow=39
comp=Z,5.6nm,1.0s
BEKR Beckworth 36.74 321 IAmb IAmb 19 09 09.8
comp=Z,4.4nm,1.0s
ULM Lac du Bonnet 36.77 355 LR LR 19 26 34.6
comp=Z,108nm,19.9s,baz=192,slow=40
F10A Beach Ranch, E 39.13 331 IAmb IAmb 19 09 27.2
comp=Z,7.2nm,0.8s
YBH Yreka Blue Hor 39.28 322 LR LR 19 25 18.2
comp=Z,5.5nm,20.1s,baz=136,slow=36
H04A Detroit Lake 40.79 326 P **P 19 09 24.9 +0.2**
H04A IAmb IAmb 19 09 25.8
comp=Z,9.5nm,0.8s
HOOD Mount Hood Mea 40.91 327 P **P 19 09 26.9 +1.0**
SCHQ Schefferville 45.26 19 P **P 19 09 57.7 -3.0**
comp=Z,3.6nm,0.5s,baz=210,slow=12,SNR=8.5
SCHQ pP **pP 19 10 14.0 -0.2**
comp=Z,5.0nm,0.6s,baz=201,slow=6.6,SNR=3.8
SCHQ LR LR 19 29 28.2
comp=Z,109nm,18.2s,baz=188,slow=37
comp=Z,3.6nm,0.5s
YKA Yellowknife Ar 51.64 346 pP pP 19 11 03.5 +0.2
comp=Z,1.0nm,0.7s,baz=153,slow=7.0,SNR=5.4
FRB Frobisher Bay 52.49 12 LR LR 19 33 28.4
comp=Z,111nm,20.9s,baz=134,slow=36
DLBC Dease Lake 53.42 336 P **P 19 11 03.7 +0.8**
comp=Z,1.7nm,0.8s,baz=117,slow=4.5,SNR=1.8
DLBC pP **pP 19 11 18.4 +1.8**
comp=Z,1.6nm,0.7s,baz=131,slow=9.7,SNR=2.2
comp=Z,1.7nm,0.8s
SFJD Kangerlussuaq 59.60 17 LR LR 19 38 10.0
comp=Z,103nm,18.9s,baz=193,slow=37
RES Resolute Bay 61.12 359 LR LR 19 42 37.4
comp=Z,66nm,18.8s,baz=98,slow=40
F28M Old Crow 62.56 341 P **P 19 12 06.5 -0.2**
F28M IAmb IAmb 19 12 23.1
comp=Z,3.1nm,0.8s
ILAR Eielson Array 63.59 337 P **P 19 12 12.3 -1.2**
comp=Z,0.2nm,0.4s,baz=179,slow=5.0,SNR=8.9
ILAR pP **pP 19 12 28.0 +0.3**
comp=Z,1.3nm,0.9s,baz=158,slow=4.7,SNR=8.0
comp=Z,0.2nm,0.4s
PPT Papeete 65.58 243 LR LR 19 33 25.4
comp=Z,73nm,19.6s,baz=339,slow=29
BORG Borgarnes 69.14 25 LR LR 19 42 13.0
comp=Z,41nm,19.4s,baz=267,slow=35
PBAR Barrancos 77.03 54 *e*Sn **S 19 23 26.0 +4.8**
PBAR *e*Sg **SKSac 19 23 38.8 -5.9**
PBAR IAML 19 23 44.5
PBAR IAML 19 23 46.1
PBAR IAML 19 23 50.1
SPITS Spitsbergen Ar 80.28 12 LR LR 19 51 16.0
comp=Z,40nm,21.0s,baz=270,slow=37
NOA NORSAR Array B 84.03 29 LR LR 19 51 26.7
comp=Z,16nm,18.5s,baz=215,slow=36
DBIC Dimbokro 84.72 84 LR LR 19 51 31.1
comp=Z,22nm,18.6s,baz=352,slow=35
HFS Hagfors 85.47 29 LR LR 19 51 25.5
comp=Z,25nm,19.8s,baz=266,slow=35
ARCES ARCESS Array B 86.21 18 LR LR 19 53 37.0
comp=Z,49nm,19.1s,baz=303,slow=36
FINES FINESS Array B 90.44 25 LR LR 19 54 50.9
comp=Z,37nm,18.1s,baz=250,slow=35
TIXI Tiksi 90.85 348 LR LR 20 03 39.5
comp=Z,20nm,18.1s,baz=14,slow=41
VRAC Vranov 90.89 39 LR LR 19 53 22.5
comp=Z,21nm,20.0s,baz=285,slow=34
YAK Yakutsk 98.14 342 LR LR 20 07 03.1
comp=Z,40nm,18.0s,baz=49,slow=40
KURK Kurchatov 115.32 7 **PKiKP 19 20 22.5 -1.8**
KURBB Kurchatov Arra 115.40 7 PKP **PKiKP 19 20 22.5 -2.0**
comp=Z,0.1nm,0.5s,baz=342,slow=2.0,SNR=5.0
BOSA Boshof 119.30 115 PKP **PKPdf 19 20 30.7 -2.0**
comp=Z,1.3nm,0.7s,baz=234,slow=8.7,SNR=3.2
HHC Hu-ho-hao-te 121.93 340 *e*P **PKiKP 19 20 40.4 +2.7**
WRA Warramunga Arr 136.24 255 PKP **PKPdf 19 21 05.3 +0.3**
comp=Z,0.6nm,0.8s,baz=85,slow=1.9,SNR=8.8
ASAR Alice Springs 136.45 250 PKP **PKPdf 19 21 04.6 -0.8**
comp=Z,0.5nm,0.8s,baz=98,slow=1.9,SNR=5.2
ASAR pPKP **pPKPdf 19 21 21.2 +0.6**
comp=Z,0.4nm,0.8s,baz=54,slow=2.4,SNR=3.8
PZH PanZhiHua 138.26 343 PKP **PKPdf 19 21 06.4 -2.4**
FITZ Fitzroy Crossi 144.52 258 PKP **PKPab 19 21 17.4 -1.0**
comp=Z,3.1nm,0.8s,baz=90,slow=6.1,SNR=4.9
FITZ Fitzroy Crossi 144.52 258 **PKPab 19 21 18.5 +0.1**
SOEI Soe 145.28 272 PKPbc **PKPbc 19 21 22.3 +0.9**
CHTO Chiang Mai 146.33 343 PKPdf **PKPdf 19 21 22.1 -1.1**
CM31 Chiang Mai Arr 146.67 343 PKPdf **PKPdf 19 21 23.4 -0.3**
CMAR Chiang Mai Arr 146.67 343 PKPbc **PKPdf 19 21 24.6 +0.9**
comp=Z,3.4nm,0.6s,baz=343,slow=3.4,SNR=33
CMAR pPKPbc pPKPbc 19 21 41.0 +0.5
comp=Z,2.7nm,0.6s,baz=342,slow=3.3,SNR=8.6
CMAR Chiang Mai Arr 146.67 343 **PKPdf 19 21 24.8 +1.0**

*IDC **21** 19:06:38.7±1.2, 1.°19N×125.°45E, h0km, mb4.0/6, mbtmp4.1/6, Error ellipse: s-maj=176.2km s-min=16.9km az=64.0*
*DJA **21** 19:06:42.2±0.2, 2.°2N±2.°×12.°6E±.°, h10km, M4.4/12, mB4.9/1, mb4.9/1, MLv4.1/12, Mw(mB)4.2/1*
*NEIC **21** 19:06:43.4±1.9, 1.°7N±0.°1×126.°51E±0.°08, h35km±2km, mb4.1/11, Error ellipse: s-maj=20.5km s-min=7.8km az=217.0*
ISC 21 19:06:43.7±0.8,**1.°66N**±0.°06×**126.°50E**±0.°07,**h47**km,**n32,**
σ0=**92**/37,**mb4.1**/11,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**135**		**Pn**	**19 07 04.8**	**+0.3**
TNTI	**Ternate**	**1.23**	**135**	P	**Pn**	**19 07 04.8**	**+0.3**
SGSI	**Sangihe**	**2.24**	**334**	P	**Pn**	**19 07 18.9**	**+0.5**
SGSI				S	**Sn**	**19 07 45.6**	**+0.8**
KMSI	**Cibinong**	**2.74**	**247**	P	**Pn**	**19 07 24.8**	**-0.5**
KMSI				S	**Sn**	**19 07 56.4**	**-0.8**
SANI	**Sanana**	**3.72**	**188**	P	**Pn**	**19 07 38.1**	**-0.6**
LUWI	**Luwuk**	**4.59**	**234**		**Pn**	**19 07 51.3**	**+0.6**
LUWI	**Luwuk**	**4.59**	**234**	P	**Pn**	**19 07 51.3**	**+0.6**
LUWI				S	**Sn**	**19 08 43.9**	**+1.1**
MRSI	**Marisa**	**4.71**	**256**	P	**Pn**	**19 07 53.3**	**+1.0**
MRSI				S	**Sn**	**19 08 44.8**	**-0.9**
NLAI	**Namlea**	**4.90**	**173**	P	**Pn**	**19 07 56.2**	**+1.3**
APSI	**Ampana**	**5.48**	**242**	P	**Pn**	**19 08 03.4**	**+0.5**
TOLI2	**Tolitoli**	**5.75**	**265**		**Pn**	**19 08 04.9**	**-1.6**
MYLDM	**Lahad Datu**	**8.72**	**294**		**Pn**	**19 08 48.6**	**+1.2**
KAPI	**Kappang**	**9.46**	**225**	Pn	**Pn**	**19 08 58.8**	**+1.4**
SOEI	**Soe**	**11.55**	**191**		**Pn**	**19 09 26.0**	**-0.2**
MTN	**Manton Dam**	**15.12**	**162**	Pn	**Pn**	**19 10 14.6**	**+0.2**
MTN				IAmb	IAmb	19 10 34.5	
	comp=Z,12nm,1.2s						
KNRA	**Kununurra**	**17.37**	**173**	Pn	**Pn**	**19 10 41.0**	**-1.8**
KNRA				IAmb	IAmb	19 10 43.9	
	comp=Z,10nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.65**	**182**	P	**P**	**19 11 08.3**	**-0.4**
TPUB	**Ta-pu**	**22.26**	**346**	P	**P**	**19 11 35.0**	**-1.9**
WB0	**Warramunga Arr**	**22.65**	**160**	P	**P**	**19 11 40.2**	**-0.9**
WB0				IAmb	IAmb	19 11 42.6	
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**22.80**	**161**	P	**P**	**19 11 42.0**	**-0.6**
	comp=Z,3.9nm,0.6s,baz=336,slow=11,SNR=29						
	comp=Z,3.9nm,0.6s						
WRA	**Warramunga Arr**	**22.80**	**161**	P	**P**	**19 11 41.1**	**-1.6**
WR8	**Warramunga Arr**	**22.87**	**160**	P	**P**	**19 11 42.7**	**-0.7**
WR8				IAmb	IAmb	19 11 49.9	
	comp=Z,3.7nm,0.7s						
AS31	**Alice Springs**	**26.18**	**164**	P	**P**	**19 12 14.2**	**+0.2**
AS31				IAmb	IAmb	19 12 18.5	
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**26.18**	**164**	P	**P**	**19 12 14.7**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=345,slow=11,SNR=37						
ASAR				PcP	**PcP**	**19 15 41.3**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=345,slow=2.4,SNR=6.2						
	comp=Z,1.8nm,0.6s						
ASAR	**Alice Springs**	**26.18**	**164**	P	**P**	**19 12 14.2**	**+0.1**
BBOO	**Buckleboo**	**35.45**	**166**	P	**P**	**19 13 36.0**	**+0.3**
STKA	**Stephens Creek**	**36.29**	**158**	P	**P**	**19 13 43.8**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=318,slow=11,SNR=3.2						
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**19 16 39.9**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=120,slow=7.0,SNR=21						
	comp=Z,0.7nm,0.5s						
MAKZ	**Makanchi**	**59.31**	**326**	P	**P**	**19 16 40.5**	**-0.4**
MAKZ				IAmb	IAmb	19 17 09.6	
	comp=Z,2.9nm,1.2s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	**P**	**19 17 08.7**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=127,slow=6.2,SNR=18						
	comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**63.36**	**328**	P	**P**	**19 17 08.1**	**-0.1**
KURK				IAmb	IAmb	19 17 12.6	
	comp=Z,3.2nm,0.6s						
BVAR	**Borovoye Array**	**68.93**	**327**	P	**P**	**19 17 44.5**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=134,slow=8.3,SNR=4.7						
	comp=Z,0.7nm,0.4s						

*NEIC **21** 19:43:06.3±0.5, 19.°31N±0.°01×155.°24W±0.°01, h8km±2km, Error ellipse: s-maj=2.3km s-min=1.1km az=130.0*
HVO 21 19:43:06.1±0.4,**19.°318N**±0.°009×**155.°22W**±0.°02,
h7km±5km,**ML2.8**/44,**ML2.7**/44(NEIC),**Error ellipse:**
s-maj=2.7km s-min=1.3km az=87.0,Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUH	**Pauahi**	**0.06**	**360**		Pg	19 43 08.0	+0.2
PUH				IAML		19 43 09.9	
	comp=E,6µm,0.5s						
PUH				IAML		19 43 12.4	
	comp=N,5µm,0.3s						
KNHH	**Kane Nui o Ham**	**0.07**	**36**		Pg	19 43 08.3	+0.2
HLP	**Hilina Pali**	**0.09**	**256**		Pg	19 43 08.7	+0.5
KKO	**Keanakako'i**	**0.09**	**329**		Pg	19 43 08.8	+0.5
KKO					Sg	19 43 10.8	+0.9
RIM	**Rim**	**0.10**	**324**		Pg	19 43 08.8	+0.4
RIM					Sg	19 43 10.7	+0.8
BYL	**Byron's Ledge**	**0.10**	**336**		Pg	19 43 08.7	+0.2
BYL				IAML		19 43 11.2	
	comp=N,5µm,0.4s						
BYL				IAML		19 43 12.6	
	comp=E,4µm,0.5s						
SDHHI	**Sand Hill**	**0.10**	**314**		Pg	19 43 08.8	+0.3
SDHHI					Sg	19 43 10.8	+0.7
STCH	**Steam Cracks**	**0.11**	**52**		Pg	19 43 08.8	+0.3
STCH				IAML		19 43 11.3	
	comp=N,4µm,0.2s						
HATHI	**Halema'uma'u T**	**0.11**	**338**		Pg	19 43 08.9	+0.3
HATHI				IAML		19 43 11.7	
	comp=E,4µm,0.5s						
OBL	**Observatory Le**	**0.12**	**327**		Pg	19 43 09.1	+0.4
OBL					Sg	19 43 11.4	+0.8
SBLHI	**Steaming Bluff**	**0.12**	**336**		Pg	19 43 09.0	+0.3
SBLHI					Sg	19 43 11.2	+0.7
WRMHI	**West Rim**	**0.12**	**318**		Pg	19 43 09.0	+0.3
WRMHI					Sg	19 43 11.4	+0.9
UWB	**Uwekahuna Bluf**	**0.12**	**331**		Pg	19 43 09.1	+0.3
UWB					Sg	19 43 11.4	+0.8
NPOC	**North of Pu'u**	**0.12**	**53**		Pg	19 43 09.2	+0.4
NPOC					Sg	19 43 11.6	+0.9
JCUZ	**Jacuzzi**	**0.13**	**59**		Pg	19 43 09.3	+0.5
JCUZ					Sg	19 43 11.5	+0.8
UWE	**Uwekahuna**	**0.13**	**325**		Pg	19 43 09.2	+0.3
UWE				IAML		19 43 12.2	
	comp=E,3µm,0.5s						
RSD	**Rainshed**	**0.16**	**338**		Pg	19 43 09.4	0.0
HTC	**Hot Caves**	**0.19**	**245**		Pg	19 43 10.5	+0.6
AIN	**Ainahou**	**0.23**	**283**		Sg	19 43 15.1	+1.1
AIN	**Ainahou**	**0.23**	**283**		Pg	19 43 11.0	+0.2
AIN				IAML		19 43 16.9	
	comp=E,2µm,0.2s						
AIN				IAML		19 43 17.1	
	comp=N,2µm,0.2s						
MLH	**Mauna Loa**	**0.24**	**317**		Pg	19 43 11.2	+0.3
MLH				IAML		19 43 17.2	
	comp=E,1µm,0.2s						
HMH	**Humu'ula Sheep**	**0.38**	**318**		Pg	19 43 13.5	-0.1
KHU	**Kahuku**	**0.38**	**259**		Pg	19 43 13.7	0.0
KHU					Sg	19 43 19.6	+0.8
MWH	**Mokuaweoweo**	**0.40**	**295**		Pg	19 43 13.9	-0.1
MWH	**Mokuaweoweo**	**0.40**	**295**	IAML		19 43 21.1	
	comp=N,1µm,0.3s						
MWH				IAML		19

comp=E,2µm,0.3s
MLOA IAML 19 43 21.0
comp=N,1µm,0.4s
POHA Pohakuloa 0.53 326 Pg 19 43 16.1 -0.3
POHA Pohakuloa 0.53 326 IAML 19 43 24.1
comp=N,833nm,0.4s
POHA IAML 19 43 24.4
comp=N,596nm,0.5s
KHLU Kahalu`u 0.69 293 IAML 19 43 30.4
comp=E,467nm,0.2s
KHLU IAML 19 43 30.4
comp=N,340nm,0.3s

*FCIAR **21** 19:47:13.0, 84˚.38N× 4˚.88E, h10km, station ZFI2 has station magnitude of 3.30*
*BER **21** 19:47:13.1± 2.9, 84˚.23N× 0˚.25W, h10km, mb(Pn)3.7, Confirmed Earthquake*
*DNK **21** 19:47:15.8± 2.8, 84˚.23N× 0˚.45E, h36km± 53km, ML0.9*
ISC 21 19:47:12.5± 2.0, 83˚.8N± 0˚.1× 0˚.94W± 0˚.06, h10km, n21, σ26 64/32, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.98**	**230**	*i* P	**Pb**	**19 48 06.0**	**+0.5**
NOR				*i* S	**Sb**	**19 48 39.3**	**-2.6**
NOR	**Nord**	**2.98**	**230**	*i* P	**Pb**	**19 48 06.0**	**+0.5**
NOR				*i* S	**Sb**	**19 48 39.3**	**-2.6**
NOR				IAML		19 48 48.1	
	comp=Z,0.8nm,0.2s						
KBS	**Kingsbay**	**5.26**	**152**	P	**Pn**	**19 48 33.0**	**+2.2**
KBS				S	**Sn**	**19 49 34.7**	**+3.3**
KBS	**Kingsbay**	**5.26**	**152**	*eP*	**Pn**	**19 48 33.5**	**+2.6**
KBS				*eS*	**Sn**	**19 49 33.8**	**+2.4**
KBS				IAML		19 49 36.1	
	comp=Z,2.4nm,0.6s						
KBS	**Kingsbay**	**5.26**	**152**	*i* P	**Pn**	**19 48 33.1**	**+2.2**
BRBB	**Barentsburg B**	**6.18**	**150**	P	**Pn**	**19 48 43.9**	**+0.3**
BRBB				S	**Sn**	**19 49 54.6**	**+0.4**
BRBB	**Barentsburg B**	**6.18**	**150**	*eP*	**Pn**	**19 48 46.2**	**+2.6**
BRBB				*eS*	**Sn**	**19 49 54.6**	**+0.4**
BRBA	**Barentsburg A**	**6.22**	**150**	*eP*	**Pn**	**19 48 46.6**	**+2.6**
SPA0	**Spitsbergen Ar**	**6.23**	**146**	*eP*	**Pn**	**19 48 45.9**	**+1.7**
SPA0				*eS*	**Sn**	**19 49 54.8**	**-0.6**
SPA0	**Spitsbergen Ar**	**6.23**	**146**	*eP*	**Pn**	**19 48 45.9**	**+1.7**
SPA0				*eS*	**Sn**	**19 49 56.0**	**+0.6**
SPA0				IAML		19 50 00.8	
	comp=Z,1.7nm,0.6s						
SPITS	**Spitsbergen Ar**	**6.23**	**146**	P	**Pn**	**19 48 46.0**	**+1.7**
SPITS				S	**Sn**	**19 49 55.0**	**-0.4**
ZFI2	**Zemlya Franca-**	**6.93**	**89**	P	Pn	19 48 48.0	-5.8
ZFI2				*eS*	Sn	19 49 55.8	-17
	comp=Z,9.7nm,1.5s						
OMEGA	**Omega**	**6.95**	**89**	P	Pn	19 48 47.7	-6.4
OMEGA				S	Sn	19 49 55.1	-18
DAG	**Danmarks Havn**	**7.61**	**212**	*i* P	**Pn**	**19 49 07.8**	**+4.5**
DAG	**Danmarks Havn**	**7.61**	**212**	*i* P	**Pn**	**19 49 07.8**	**+4.5**
DAG				IAML		19 50 32.0	
	comp=Z,0.2nm,0.2s						
HOPEN	**Hopen**	**8.42**	**135**	P	**Pn**	**19 49 13.7**	**-0.6**
HOPEN				*eS*	**Sn**	**19 50 42.3**	**-6.8**
HOPEN	**Hopen**	**8.42**	**135**	*eP*	**Pn**	**19 49 15.1**	**+0.8**
HOPEN				*eS*	**Sn**	**19 50 45.3**	**-3.8**
HOPEN				IAML		19 50 53.3	
	comp=Z,5.9nm,0.9s						
NEEM	**North Greenlan**	**9.86**	**259**	*i* P	**Pn**	**19 49 34.5**	**+0.3**
NEEM				*i* S	Sn	19 51 15.4	-9.4
NEEM				IAML		19 51 20.6	
	comp=Z,2.8nm,0.9s						
NEEM	**North Greenlan**	**9.86**	**259**	*i* P	**Pn**	**19 49 34.5**	**+0.3**
NEEM				*i* S	Sn	19 51 15.4	-9.4
NEEM				IAML		19 51 28.4	
	comp=Z,0.5nm,0.2s						
DBG	**Daneborg**	**10.12**	**211**	*i* P	**Pn**	**19 49 39.7**	**+2.2**
DBG				*i* S	**Sn**	**19 51 27.6**	**-3.2**
DBG	**Daneborg**	**10.12**	**211**	*i* P	**Pn**	**19 49 39.7**	**+2.2**
DBG				*i* S	**Sn**	**19 51 27.6**	**-3.2**

*MOS **21** 20:23:47.5± 1.2, 36˚.07N× 139˚.84E, h51km, mb5.1/40, Error ellipse: s-maj=7.6km s-min=4.6km az=113.8*
*BJI **21** 20:23:47.8, 35˚.95N× 140˚.10E, h80km, mB4.7/9, mb4.6/48, Ms4.1/8, Ms7 3.9/6*
*JMA **21** 20:23:50.0± 0.1, 36˚.1N± 0˚.3× 139˚.9E± 0˚.4, h45km± 1km, MD4.5/40, MW4.6/40, SW IBARAKI PREF*
JMA Felt III J1 at SW IBARAKI PREF .
*NEIC **21** 20:23:49.6± 1.6, 36˚.06N± 0˚.05× 139˚.84E± 0˚.06, h53km± 6km, mb4.7/148, Error ellipse: s-maj=8.5km s-min=6.4km az=136.0*
*NIED **21** 20:23:50.0, 36˚.07N× 139˚.89E, h45km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr5.16; Mθθ-3.97; Mφφ-1.19; Mrθ3.80; Mrφ-1.50; Mθφ3.65; Fault plane solution: M0 7.17000×10^15^ NP1: φs256.00000°, δ23.00000°, λ112.00000°. NP2: φs52.00000°, δ69.00000°, λ81.00000°.*
*IDC **21** 20:23:51.1± 1.5, 36˚.06N× 139˚.78E, h66km± 13km, mb4.2/28, mbtmp4.5/33, MS3.6/39 Error ellipse: s-maj=13.5km s-min=11.3km az=72.0*
ISC 21 20:23:49.1± 0.5, 36˚.06N± 0˚.04× 139˚.94E± 0˚.04, h51km± 4km, n444, σ1↑33/348, mb4.7/155, MS3.7/41, 20C-26D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.27**	**50**	*i* P	**Pn**	**20 23 58.5**	**+0.5**
JYT				S	**Sn**	**20 24 04.7**	**+0.3**
JYT	**Yasato**	**0.27**	**50**	A	A	20 23 58.5	
	comp=N,118nm,0.3s,comp=E,63nm,0.3s						
TOK	**Tokyo**	**0.40**	**202**	P	**Pn**	**20 24 00.8**	**+1.6**
TOK				*eS*	**Sn**	**20 24 09.7**	**+3.4**
TOK	**Tokyo**	**0.40**	**202**	A	A	20 24 00.8	
	comp=N,125nm,0.8s,comp=E,112nm,0.9s						
JIHU	**Itakohorinouch**	**0.48**	**100**	A	A	20 24 01.1	
	comp=N,53nm,0.7s,comp=E,82nm,2.7s						
JAG	**Ashikaga**	**0.54**	**313**	⇓*i* P	**Pn**	**20 24 01.0**	**+0.1**
JAG				⇓S	**Sn**	**20 24 08.7**	**-0.6**
JAG	**Ashikaga**	**0.54**	**313**	A	A	20 24 01.0	
	comp=N,111nm,0.4s,comp=E,79nm,0.5s						
JSMT	**Sammumatsuo**	**0.58**	**135**	A	A	20 24 02.5	
	comp=N,36nm,0.9s,comp=E,34nm,1.1s						
JHYU	**Hitachinakayam**	**0.60**	**61**	A	A	20 24 02.5	
	comp=N,52nm,1.8s,comp=E,24nm,2.1s						
JSGW	**Sagamiharawaka**	**0.75**	**233**	A	A	20 24 03.8	
	comp=N,34nm,2.4s,comp=E,25nm,1.6s						
JHO	**Hitachi**	**0.75**	**42**	A	A	20 24 04.5	
	comp=N,23nm,1.8s,comp=E,10.0nm,0.2s						
JRY	**Ryogami san**	**0.84**	**268**	⇓*i*P	**Pn**	**20 24 04.7**	**-0.1**
JRY				⇓S	**Sn**	**20 24 15.0**	**-1.2**
JRY	**Ryogami san**	**0.84**	**268**	A	A	20 24 04.7	
	comp=N,20nm,1.8s,comp=E,12nm,1.2s						
JYO	**Yokosk**	**0.86**	**195**	A	A	20 24 05.8	
	comp=N,42nm,1.4s,comp=E,68nm,1.1s						
JKT	**Katashina**	**0.90**	**322**	⇓*i*P	**Pn**	**20 24 05.6**	**-0.1**
JKT	**Katashina**	**0.90**	**322**	A	A	20 24 05.6	
	comp=N,26nm,1.3s,comp=E,36nm,0.3s						
JSB	**Shiboa**	**0.91**	**359**	A	A	20 24 06.3	
	comp=N,34nm,2.8s,comp=E,48nm,2.3s						
JKUC	**kamogawauchiur**	**0.92**	**167**	A	A	20 24 07.0	
	comp=N,31nm,2.8s,comp=E,32nm,3.4s						
TATJ	**Tateyama 2**	**1.02**	**182**	A	A	20 24 08.2	
	comp=N,63nm,2.3s,comp=E,67nm,2.2s						
JOD2	**Odawara 2**	**1.05**	**222**	⇓P	**Pn**	**20 24 07.9**	**+0.4**
JOD2				⇓S	**Sn**	**20 24 21.6**	**+0.4**
JOD2	**Odawara 2**	**1.05**	**222**	A	A	20 24 07.9	
	comp=N,31nm,1.7s,comp=E,25nm,2.4s						
JFFD	**Fukushimafurud**	**1.15**	**26**	A	A	20 24 10.1	
	comp=N,10.0nm,1.0s,comp=E,17nm,2.7s						
JGK	**Kuni**	**1.17**	**296**	A	A	20 24 09.7	
	comp=N,11nm,0.7s,comp=E,11nm,3.4s						
ONAJ	**Iwakimizuishiy**	**1.25**	**33**	A	A	20 24 11.7	
	comp=N,14nm,1.2s,comp=E,29nm,0.3s						
JYN	**Shimob**	**1.26**	**244**	*i* P	**Pn**	**20 24 11.4**	**+0.9**
JYN	**Shimob**	**1.26**	**244**	A	A	20 24 11.4	
	comp=N,26nm,1.0s,comp=E,15nm,1.4s						
JHTM	**Izuhatsuma**	**1.33**	**215**	A	A	20 24 12.4	
	comp=N,40nm,1.3s,comp=E,44nm,1.0s						
BSO3	**Boso 3**	**1.33**	**159**	⇓*i*P	**Pn**	**20 24 11.8**	**+0.7**
JFNN	**Fujinakano**	**1.33**	**230**	A	A	20 24 12.3	
	comp=N,25nm,3.3s,comp=E,19nm,1.4s						
JUON	**Uonuma**	**1.35**	**329**	⇓*i*P	**Pn**	**20 24 12.0**	**+0.4**
JUON	**Uonuma**	**1.35**	**329**	A	A	20 24 12.0	
	comp=N,7.0nm,4.6s,comp=E,6.0nm,2.4s						
JFY	**Yanaizu**	**1.36**	**352**	⇓*i*P	**Pn**	**20 24 12.6**	**+0.8**
JFY				⇓S	**Sn**	**20 24 30.2**	**+1.5**
JFY	**Yanaizu**	**1.36**	**352**	A	A	20 24 12.6	
	comp=N,7.0nm,0.8s,comp=E,22nm,1.4s						
JIM2	**Oshima 3**	**1.40**	**197**	*i* P	**Pn**	**20 24 12.3**	**0.0**
JIM2	**Oshima 3**	**1.40**	**197**	A	A	20 24 12.3	
	comp=N,21nm,0.8s,comp=E,23nm,1.3s						
JNT	**Takato**	**1.47**	**264**	A	A	20 24 14.2	
	comp=N,16nm,1.9s,comp=E,24nm,0.7s						
MJAR	**Matsushiro Arr**	**1.48**	**290**	P	**Pn**	**20 24 13.9**	**+0.6**
	comp=E,920nm,0.3s,baz=90,slow=9.0,SNR=3206						
MJAR				LR	LR	20 25 02.7	
	comp=E,2µm,20.7s,baz=150,slow=52						
MJAR	**Matsushiro Arr**	**1.48**	**290**		**Pn**	**20 24 12.6**	**-0.7**
MJAR	**Matsushiro Arr**	**1.48**	**290**	P	**Pn**	**20 24 12.6**	**-0.7**
MAJO	**Matsushiro**	**1.48**	**290**		**Pn**	**20 24 12.4**	**-1.0**
MAJO	**Matsushiro**	**1.48**	**290**	P	**Pn**	**20 24 14.1**	**+0.7**
MAJO	**Matsushiro**	**1.48**	**290**	P	**Pn**	**20 24 12.4**	**-1.0**
MJB9	**Matsu-Tunnel**	**1.48**	**290**		**Pn**	**20 24 12.9**	**-0.5**
JFK	**Kawauchi**	**1.51**	**30**	A	A	20 24 15.2	
	comp=N,7.0nm,2.5s,comp=E,6.0nm,2.6s						
JOTO	**OTAMA OYAMA**	**1.54**	**12**	A	A	20 24 15.4	
	comp=N,17nm,0.5s,comp=E,26nm,1.9s						
JIZS	**Izushimoda**	**1.59**	**213**	A	A	20 24 16.2	
	comp=N,8.0nm,0.7s,comp=E,9.0nm,1.7s						
SHZ3	**Shizuoka 3**	**1.72**	**236**	A	A	20 24 17.8	
	comp=N,11nm,2.0s,comp=E,13nm,0.8s						
JJN	**Nakama**	**1.77**	**307**	A	A	20 24 18.4	
	comp=N,7.0nm,1.4s,comp=E,10.0nm,0.9s						
JIZZ	**Izumozaki**	**1.77**	**327**	A	A	20 24 18.6	
	comp=N,23nm,3.9s,comp=E,16nm,2.0s						
JNY	**Yasuok**	**1.83**	**248**	A	A	20 24 19.3	
	comp=N,13nm,1.3s,comp=E,12nm,1.3s						
JNS	**Sasagawa**	**1.83**	**344**	A	A	20 24 19.4	
	comp=N,3.0nm,2.7s,comp=E,4.0nm,1.9s						
JMST	**Minamisoumatoc**	**1.83**	**24**	A	A	20 24 19.8	
	comp=N,7.0nm,0.5s,comp=E,9.0nm,2.5s						
JYAR	**Yonezawaarcadi**	**1.86**	**5**	A	A	20 24 20.1	
	comp=N,10.0nm,1.1s,comp=E,13nm,1.2s						
JMM	**Marumori**	**1.93**	**20**		**Pn**	**20 24 20.2**	**+0.7**
JMM	**Marumori**	**1.93**	**20**	P	**Pn**	**20 24 20.9**	**+1.4**
JSG	**Sagara**	**1.99**	**227**		**Pn**	**20 24 20.8**	**+0.6**
JSG	**Sagara**	**1.99**	**227**	P	**Pn**	**20 24 22.6**	**+2.4**
JSG	**Sagara**	**1.99**	**227**	A	A	20 24 21.7	
	comp=N,14nm,2.2s,comp=E,14nm,4.1s						
JKKS	**Kakegawashinom**	**2.06**	**231**	A	A	20 24 22.7	
	comp=N,10.0nm,1.0s,comp=E,9.0nm,1.3s						
JGF	**Kuroka**	**2.15**	**259**		**Pn**	**20 24 23.4**	**+1.0**
JGF	**Kuroka**	**2.15**	**259**	P	**Pn**	**20 24 25.0**	**+2.5**
JGF	**Kuroka**	**2.15**	**259**	A	A	20 24 23.9	
	comp=N,7.0nm,1.9s,comp=E,6.0nm,1.2s						
HMMJ	**Hamamatsu 2**	**2.17**	**237**	A	A	20 24 24.4	
	comp=N,5.0nm,3.0s,comp=E,3.0nm,2.1s						
JTT	**Ttatey**	**2.17**	**285**	A	A	20 24 24.1	
	comp=N,3.0nm,4.3s,comp=E,5.0nm,2.3s						
JAO	**Obara**	**2.32**	**251**	A	A	20 24 26.4	
	comp=N,6.0nm,1.5s,comp=E,7.0nm,1.0s						
JOU	**Okura**	**2.38**	**14**	A	A	20 24 27.5	
	comp=N,7.0nm,3.2s,comp=E,6.0nm,1.0s						
JSD	**Sado**	**2.39**	**326**		**Pn**	**20 24 25.5**	**-0.3**
JSD	**Sado**	**2.39**	**326**	P	**Pn**	**20 24 26.3**	**+0.5**
JSD	**Sado**	**2.39**	**326**	S	**Sn**	**20 24 59.0**	**+5.1**
INU	**Inuyama**	**2.48**	**254**		**Pn**	**20 24 27.3**	**+0.3**
INU	**Inuyama**	**2.48**	**254**	P	**Pn**	**20 24 28.9**	**+1.9**
INU	**Inuyama**	**2.48**	**254**	S	**Sn**	**20 25 00.5**	**+4.4**
JYA	**Atsumi**	**2.54**	**356**	A	A	20 24 29.7	
	comp=N,4.0nm,1.0s,comp=E,6.0nm,1.4s						
JICN	**Ichinomiyachia**	**2.63**	**254**	A	A	20 24 30.7	
	comp=N,11nm,2.0s,comp=E,10.0nm,1.2s						
JOFO	**Osakifurukawao**	**2.66**	**17**	A	A	20 24 31.5	
	comp=N,19nm,3.2s,comp=E,28nm,2.9s						
JYK	**Kayama**	**2.88**	**7**	A	A	20 24 34.6	
	comp=N,4.0nm,2.8s,comp=E,3.0nm,2.1s						
JHJ	**Hachijo jima 2**	**2.93**	**183**	P	**Pn**	**20 24 33.7**	**+0.5**
	comp=E,618nm,0.3s,baz=301,slow=19,SNR=44						
JHJ				S	**Sn**	**20 25 06.2**	**-1.0**
	comp=E,659nm,0.4s,baz=238,slow=19,SNR=3.5						
JHJ2	**Mitsune**	**2.94**	**182**		**Pn**	**20 24 33.6**	**+0.3**
JHJ2	**Mitsune**	**2.94**	**182**	P	**Pn**	**20 24 33.8**	**+0.5**
JFM	**Mihama**	**3.26**	**262**	A	A	20 24 39.6	
	comp=N,4.0nm,1.1s,comp=E,2.0nm,1.4s						
JRG	**Rokugo**	**3.38**	**9**	A	A	20 24 41.7	
	comp=N,4.0nm,3.0s,comp=E,4.0nm,5.7s						
JSZI	**Iwateshizukuis**	**3.77**	**12**	A	A	20 24 47.1	
	comp=N,8.0nm,2.3s,comp=E,7.0nm,2.3s						
JKY	**Yasaka**	**3.95**	**265**	A	A	20 24 49.4	
	comp=N,3.0nm,1.7s,comp=E,2.0nm,2.8s						
JTM	**Tenmabayashi**	**4.81**	**10**		**Pn**	**20 24 59.7**	**+0.8**
JTM	**Tenmabayashi**	**4.81**	**10**	P	**Pn**	**20 25 01.5**	**+2.6**
JMN	**Monobe**	**5.49**	**247**		**Pn**	**20 25 09.2**	**+0.9**
JMN	**Monobe**	**5.49**	**247**	P	**Pn**	**20 25 09.3**	**+0.9**
ERM	**Erimo**	**6.46**	**22**	Pn	**Pn**	**20 25 22.1**	**+0.6**
ERM	**Erimo**	**6.46**	**22**	P	**Pn**	**20 25 22.5**	**+1.0**
ERM	**Erimo**	**6.46**	**22**	P	**Pn**	**20 25 22.1**	**+0.6**
JEM	**Erimo**	**6.46**	**22**	P	**Pn**	**20 25 23.6**	**+2.1**
JNU	**Nakatsue**	**8.02**	**251**	P	**Pn**	**20 25 45.1**	**+2.0**
	comp=E,20nm,0.8s,baz=90,slow=7.9,SNR=9.0						
JNU				LR	LR	20 29 09.8	
	comp=E,514nm,19.4s,baz=64,slow=40						
JNU	**Nakatsue**	**8.02**	**251**		**Pn**	**20 25 44.0**	**+0.9**
ASAJ	**Asahikawa**	**8.30**	**13**	P	**Pn**	**20 25 47.4**	**+0.5**
	comp=E,8.2nm,0.5s,baz=207,slow=14,SNR=15						
ASAJ				S	**Sn**	**20 27 18.6**	**-0.5**
	comp=E,8.3nm,0.6s,baz=223,slow=19,SNR=1.5						
ASAJ				LR	LR	20 29 22.6	
	comp=E,213nm,19.4s,baz=159,slow=40						
JKA	**Kamikawa-asahi**	**8.30**	**13**	Pn	**Pn**	**20 25 48.0**	**+1.2**
NMR	**Nemuro--Hokkai**	**8.56**	**30**	P	**Pn**	**20 25 48.9**	**-1.3**
NMR				*i* S	**Sn**	**20 27 19.3**	**-6.0**
GLVR	**Golovnino**	**8.79**	**27**	*eP*	**Pn**	**20 25 55.9**	**+2.5**
GLVR				*eS*	**Sn**	**20 27 27.7**	**-3.3**
GLVR				pmax	pmax		
	comp=Z,49nm,0.2s						
GLVR				pmax	pmax		
	comp=N,16nm,0.3s						
RUSJ	**Misakicho**	**9.01**	**25**	*eP*	**Pn**	**20 25 57.8**	**+1.4**
RUSJ				*eS*	**Sn**	**20 27 37.0**	**+0.6**
JCJ	**Chichijima**	**9.13**	**167**	P	Pn	20 25 47.1	-11
	comp=N,98nm,0.4s,baz=292,slow=14,SNR=4.3						
JCJ				LR	LR	20 29 23.3	
	comp=N,626nm,20.7s,baz=82,slow=36						
JCJ	**Chichijima**	**9.13**	**167**	Pn	**Pn**	**20 25 56.4**	**-1.9**
JCJ	**Chichijima**	**9.13**	**167**	P	**Pn**	**20 25 58.3**	**0.0**
YUK	**Yuzh-Kuril'sk**	**9.17**	**28**	P	**Pn**	**20 26 00.1**	**+1.5**
YUK				*eS*	**Sn**	**20 27 36.0**	**-4.3**
YUK				pmax	pmax		
	comp=Z,58nm,0.2s						
TEY	**Ternei**	**9.32**	**345**	*eP*	**Pn**	**20 26 04.7**	**+4.0**
VLA	**Vladivostok**	**9.40**	**321**	*eP*	**Pn**	**20 26 01.7**	**-0.1**
VLA				pmax	pmax		
	comp=Z,44nm,1.4s						
PSTR	**Posyet**	**9.66**	**316**	*i* P	**Pn**	**20 26 04.8**	**-0.6**
KSRS	**Korea Array**	**9.74**	**282**	P	**Pn**	**20 26 09.1**	**+2.6**
	comp=Z,7.4nm,0.6s,baz=92,slow=14,SNR=17						
KS19	**Wonju Array Si**	**9.79**	**282**		**Pn**	**20 26 06.5**	**-0.8**
USRK	**Ussuriysk Ar.**	**10.15**	**326**	P	Pn	20 26 17.0	+4.9
	comp=Z,21nm,0.8s,baz=132,slow=13,SNR=17						
USRK	**Ussuriysk Ar.**	**10.15**	**326**	P	Pn	20 26 17.0	+4.9
YSS	**Yuzhno-Sakhali**	**11.09**	**10**	*eP*	**Pn**	**20 26 26.2**	**+1.3**
YSS				*eS*	**Sn**	**20 28 27.6**	**+0.2**
YSS				pmax	pmax		
	comp=Z,40nm,0.5s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
MDJ	**Mudanjiang**	**11.63**	**320**		**Pn**	**20 26 32.2**	**-0.1**
MDJ	**Mudanjiang**	**11.63**	**320**	P	Pn	20 26 37.8	+5.5
MDJ				pmax	pmax		
	comp=Z,40nm,1.2s						
BNX	**BinXian**	**13.53**	**319**	⇓P	**Pn**	**20 26 59.8**	**+1.6**
BNX				pmax	pmax		
	comp=Z,13nm,1.3s						
CN2	**Changchun**	**13.53**	**309**	*eP*	**Pn**	**20 26 58.8**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DL2	**Dalian**	**14.82**	**287**	P	**P**	**20 27 19.5**	**-0.7**
DL2				pmax	pmax		
	comp=Z,15nm,0.7s						
DL2				LR	LR		
	comp=Z,460nm,13.0s						
DL2				LR	LR		
	comp=Z,540nm,11.6s						
TYV	**Tymovskoe**	**14.93**	**7**	*eP*	**Pn**	**20 27 18.9**	**+2.1**
TYV				*eS*	**Sn**	**20 30 07.3**	**+6.4**
TYV				pmax	pmax		
	comp=Z,16nm,0.7s						
TYV				pmax	pmax		
	comp=Z,200nm,2.7s						
TYV				smax	smax		
	comp=N,300nm,2.9s						
TYV				smax	smax		
	comp=E,200nm,2.9s						
TYV				smax	smax		
	comp=N,17nm,1.6s						
TYV				smax	smax		
	comp=E,17nm,1.6s						
HEH	**HeiHe**	**16.84**	**331**	*eP*	**Pn**	**20 27 39.8**	**-1.4**
HEH				LR	LR		
	comp=E,270nm,12.9s						
HEH				LR	LR		
	comp=E,300nm,12.8s						
HEH				LR	LR		
	comp=E,390nm,14.5s						
NJ2	**Nanjing**	**17.92**	**263**	*eP*	**Pn**	**20 27 53.8**	**-0.8**
NJ2				pmax	pmax		
	comp=E,11nm,0.5s						
TIA	**Tai'an**	**18.43**	**277**	P	**Pn**	**20 28 01.3**	**+0.5**
TIA				pmax	pmax		
	comp=E,17nm,0.9s						
BJI	**Beijing**	**19.12**	**289**	P	**Pn**	**20 28 10.9**	**+1.9**
BJI				pmax	pmax		
	comp=E,6.0nm,0.7s						
BJT	**Baijiatuau**	**19.12**	**289**	P	**P**	**20 28 07.0**	**-0.8**
BJT	**Baijiatuau**	**19.12**	**289**	P	**P**	**20 28 07.0**	**-0.8**
BJT				pmax	pmax		
	comp=Z,14nm,1.1s						
ZEA	**Zeya**	**19.78**	**337**	*eP*	**P**	**20 28 12.8**	**-2.1**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=E,20nm,0.6s						
ZEA				MLR	MLR		
	comp=N,200nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,20.0s						
HILR	**Hailar Array B**	**19.95**	**319**	P	**P**	**20 28 15.2**	**-1.7**
	comp=Z,6.5nm,0.6s,baz=116,slow=10,SNR=10						
HNS	**HongShan**	**20.26**	**281**	⇓P	**P**	**20 28 18.0**	**-2.2**
HNS				pmax	pmax		
	comp=Z,13nm,0.9s						
PETK	**Petropavlovsk-**	**21.13**	**31**	P	**P**	**20 28 31.3**	**+1.8**
	comp=Z,3.9nm,0.7s,baz=234,slow=5.0,SNR=5.7						
PETK				LR	LR	20 36 05.5	
	comp=Z,78nm,19.9s,baz=245,slow=35						
	comp=Z,3.9nm,0.7s						
HHC	**Hu-ho-hao-te**	**22.68**	**291**	*eP*	**P**	**20 28 44.8**	**-1.5**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.0s						
MA2	**Magadan**	**24.57**	**13**	LR	LR	20 41 13.1	
	comp=Z,59nm,18.9s,baz=190,slow=42						
MA2	**Magadan**	**24.57**	**13**	P	**P**	**20 29 04.5**	**+0.6**
	comp=Z,77nm,0.5s						
XAN	**Xi'an**	**25.42**	**275**	*eP*	**P**	**20 29 10.8**	**-1.2**
XAN				LR	LR		
	comp=Z,310nm,16.5s						
XAN				LR	LR		
	comp=Z,280nm,15.9s						
ENH	**Enshi**	**26.07**	**266**		**P**	**20 29 15.4**	**-2.5**
ENH				IAmb	IAmb	20 29 17.4	
	comp=Z,16nm,0.6s						
YAK	**Yakutsk**	**26.79**	**349**	LR	LR	20 39 54.2	
	comp=Z,126nm,19.3s,baz=114,slow=36						
YAK	**Yakutsk**	**26.79**	**349**		**P**	**20 29 23.1**	**-0.9**
YAK	**Yakutsk**	**26.79**	**349**	*ceP*	**P**	**20 29 23.6**	**-0.3**
YAK				pmax	pmax		
	comp=Z,33nm,0.8s						
ULN	**Ulaanbaatar**	**26.95**	**306**	*i* P	**P**	**20 29 26.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SONM	**Songino Array**	**27.37**	**306**	P	**P**	**20 29 30.2**	**+0.6**
	comp=Z,3.8nm,0.6s,baz=111,slow=9.8,SNR=6.3						
SONM				LR	LR	20 40 52.2	
	comp=Z,177nm,18.9s,baz=206,slow=38						
	comp=Z,3.8nm,0.6s						
SEY	**Seymchan**	**27.99**	**12**	LR	LR	20 41 19.4	
	comp=Z,106nm,19.3s,baz=165,slow=37						
SEY	**Seymchan**	**27.99**	**12**	*ceP*	**P**	**20 29 36.9**	**+2.2**
SEY				pmax	pmax		
	comp=Z,36nm,2.5s						
GTA	**Gaotai**	**31.73**	**288**	*eP*	**P**	**20 30 07.6**	**-0.7**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				LR	LR		
	comp=Z,170nm,18.5s						
PZH	**PanZhiHua**	**33.82**	**265**	P	**P**	**20 30 25.5**	**-1.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIXI	**Tiksi**	**36.13**	**354**	LR	LR	20 46 41.8	
	comp=Z,93nm,18.2s,baz=207,slow=38						
TIXI	**Tiksi**	**36.13**	**354**	P	**P**	**20 30 45.1**	**-0.7**
TIXI				IAmb	IAmb	20 30 50.2	
	comp=Z,6.5nm,0.6s						
TIXI	**Tiksi**	**36.13**	**354**	*ceP*	**P**	**20 30 45.4**	**-0.4**
TIX

G18K Tagagawik 46.09 30 P P 20 32 09.2 +1.5
G18K IAmb IAmb 20 32 11.3
comp=Z,8.1nm,0.9s
SHLS Shalkode 46.24 298 *e*P P 20 32 06.6 -2.9
SHLS Shalkode 46.24 298 *e*P P 20 32 06.5 -2.9
UZB Uzynbulak 46.56 298⇑ *i*P P 20 32 11.5 -0.5
UZB Uzynbulak 46.56 298 *c i*P P 20 32 11.4 -0.5
TDK Taldyqorghan 46.61 301 *e*P P 20 32 11.8 -0.4
comp=Z,7.2nm,0.7s
TDK Taldyqorghan 46.61 301 *e*P P 20 32 11.7 -0.4
TDK pmax pmax
comp=Z,7.0nm,0.7s
WUS Wushi 46.88 296 P P 20 32 14.2 -0.2
E19K Redstone River 46.90 28 IAmb IAmb 20 32 16.7
comp=Z,9.7nm,0.6s
SATY Saty 47.02 298 *e*P P 20 32 15.1 -0.4
SATY Saty 47.02 298 *e*P P 20 32 15.0 -0.4
D20K Etivluk River 47.33 26 IAmb IAmb 20 32 20.6
comp=Z,12nm,0.8s
MDOK Medeo 47.96 299 *e*P P 20 32 22.3 -0.5
MDOK Medeo 47.96 299 *e*P P 20 32 22.3 -0.5
AAA Alma-Ata 48.05 299 *e*P P 20 32 23.2 -0.2
comp=Z,25nm,1.1s
AAA Alma-Ata 48.05 299 *e*P P 20 32 23.2 -0.2
AAA pmax pmax
comp=Z,25nm,1.1s
TNSS Tian-Shan 48.07 299 *e*P P 20 32 23.5 -0.5
TNSS Tian-Shan 48.07 299 *e*P P 20 32 23.4 -0.5
HNR Honiara 49.02 153 LR LR 20 51 52.5
comp=Z,30nm,21.9s,baz=327,slow=34
E22K Anaktuvuk Pass 49.02 27 P 20 32 31.6 +1.1
E22K IAmb IAmb 20 32 36.6
comp=Z,6.6nm,0.7s
TKM2 Tokmak 2 49.05 299 P P 20 32 31.8 +0.5
SNR=15
MLY Manley 49.31 32 IAmb IAmb 20 32 37.0
comp=Z,5.6nm,0.9s
KBK Karagaybulak 49.58 299 P P 20 32 35.9 +0.6
SNR=18
SGDS Sogindy 49.60 300 *e*P P 20 32 34.1 -1.2
BTLS Baital 49.62 302 *e*P P 20 32 35.0 -0.3
comp=Z,12nm,1.1s
BTLS Baital 49.62 302 *e*P P 20 32 35.0 -0.3
BTLS pmax pmax
comp=Z,12nm,1.1s
KSH Kashi 49.72 294 P P 20 32 40.1 +3.8
KSH pmax pmax
comp=Z,9.0nm,0.8s
USP Ospenovka 49.74 299 P P 20 32 36.5 +0.2
SNR=6.6
E23K Chandalar 49.84 28 IAmb IAmb 20 32 43.0
comp=Z,9.4nm,0.7s
AAK Ala-Archa 49.91 299 P P 20 32 37.5 -0.2
comp=Z,9.8nm,0.8s,baz=48,slow=22,SNR=4.7
AAK LR LR 20 54 55.5
comp=Z,85nm,20.8s,baz=84,slow=37
comp=Z,9.8nm,0.8s
AAK Ala-Archa 49.91 299 P 20 32 37.2 -0.6
AAK IAmb IAmb 20 32 38.7
comp=Z,13nm,1.0s
AAK Ala-Archa 49.91 299 *ce*P P 20 32 38.1 +0.3
AAK pmax pmax
comp=Z,10.0nm,0.8s
UCH Uchtor 50.01 298 P P 20 32 39.8 +0.9
SNR=6.4
NEA2 Nenana 50.02 32 IAmb IAmb 20 32 40.5
comp=Z,7.9nm,1.0s
MCK McKinley 50.10 33 IAmb IAmb 20 32 43.6
comp=Z,8.4nm,1.0s
BVAR Borovoye Array 50.36 313 P P 20 32 40.2 -0.5
comp=Z,7.5nm,0.7s,baz=94,slow=8.0,SNR=22
BVAR LR LR 20 53 57.7
comp=Z,63nm,19.4s,baz=50,slow=36
comp=Z,7.5nm,0.7s
EKS2 Erkin-Say 50.41 299 P P 20 32 41.6 +0.1
SNR=7.2
WRH Wood River Hil 50.45 32 IAmb IAmb 20 32 43.5
comp=Z,4.1nm,0.8s
H24K Noodor Dome 50.50 31 IAmb IAmb 20 33 04.4
comp=Z,5.9nm,1.1s
HDA Harding Lake 50.95 32 IAmb IAmb 20 32 46.4
comp=Z,5.6nm,0.7s
IL31 50.95 32 P 20 32 45.4 +0.3
IL31 IAmb IAmb 20 32 49.5
comp=Z,6.7nm,0.8s
ILAR Eielson Array 50.95 32 P P 20 32 45.5 +0.5
comp=Z,3.9nm,0.6s,baz=270,slow=5.8,SNR=53
comp=Z,3.9nm,0.6s
E25K Arctic Village 51.36 28 IAmb IAmb 20 32 51.0
comp=Z,3.9nm,1.4s
PRP Porcupine Dome 51.49 31 IAmb IAmb 20 32 57.2
comp=Z,7.1nm,1.2s
F26K Sheenjek River 51.91 28 IAmb IAmb 20 32 57.3
comp=Z,6.0nm,0.8s
DZA Taraz 52.08 300 *e*P P 20 32 53.7 -0.2
comp=Z,7.0nm,0.7s
DZA Taraz 52.08 300 *e*P P 20 32 53.7 -0.2
DZA pmax pmax
comp=Z,7.0nm,0.7s
SCRK Sand Creek 52.27 33 P 20 32 55.5 +0.4
SCRK IAmb IAmb 20 33 00.5
comp=Z,14nm,1.4s
KNRA Kununurra 52.52 194 P 20 32 56.4 -0.9
KNRA IAmb IAmb 20 32 59.3
comp=Z,9.4nm,0.8s
KKAR Karatay Array 52.59 300 P 20 32 56.5 -1.1
KKAR Karatay Array 52.59 300 P P 20 32 56.5 -1.1
E27K Coleen River 52.84 27 IAmb IAmb 20 33 03.2
comp=Z,9.0nm,1.4s
H27K Steamboat Moun 53.06 30 IAmb IAmb 20 33 04.7
comp=Z,3.8nm,0.7s
BRLS Borolday 53.08 300⇑ *i*P P 20 33 02.5 +1.2
comp=Z,7.3nm,0.7s
BRLS Borolday 53.08 300 *c i*P P 20 33 02.5 +1.2
BRLS pmax pmax
comp=Z,7.0nm,0.7s
IUG luzhnay 53.22 299⇑ *i*P P 20 33 02.1 -0.3
comp=Z,13nm,0.9s
IUG luzhnay 53.22 299 *c i*P P 20 33 02.1 -0.3
IUG pmax pmax
comp=Z,13nm,0.9s
CHM Chimkent 53.47 300 *e*P P 20 33 04.0 -0.2
comp=Z,8.5nm,0.6s
CHM Chimkent 53.47 300 *e*P P 20 33 03.9 -0.2
CHM pmax pmax
comp=Z,8.0nm,0.6s
NIL Nilore 53.79 288 P P 20 33 05.3 -1.4
NIL Nilore 53.79 288 P P 20 33 05.3 -1.4
NIL pmax pmax
comp=Z,13nm,0.8s
I28M Miner Creek 53.81 31 IAmb IAmb 20 33 09.0
comp=Z,5.6nm,0.7s
E29M Blow River 54.18 27 IAmb IAmb 20 33 13.7
comp=Z,15nm,1.2s
L29M L29M 55.00 33 IAmb IAmb 20 33 18.9
comp=Z,15nm,1.4s
F30M Barrier River 55.09 28 IAmb IAmb 20 33 22.6
comp=Z,9.6nm,0.8s
SVE Sverdlovsk 55.10 319 *e*P P 20 33 16.0 +0.3
SVE pmax pmax
comp=Z,13nm,1.1s
WB0 Warramunga Arr 55.77 186 P P 20 33 20.0 -0.8
INK Inuvik 55.79 27 IAmb IAmb 20 33 26.0
comp=Z,4.7nm,0.8s
G31M Satah River 55.81 28 IAmb IAmb 20 33 22.5
comp=Z,5.4nm,0.6s
WRA Warramunga Arr 55.94 186 P P 20 33 21.7 -0.4
comp=Z,2.6nm,0.4s,baz=2.5,slow=7.6,SNR=56
comp=Z,2.6nm,0.4s
WRA Warramunga Arr 55.94 186 P 20 33 21.6 -0.4
WRA Warramunga Arr 55.94 186 *i*P P 20 33 22.3 +0.2
WRA pmax pmax
comp=Z,3.0nm,0.4s
H31M Peel River 56.02 30 IAmb IAmb 20 33 25.1
comp=Z,10nm,1.0s
ARTI Arti 56.41 319 P P 20 33 24.8 -0.4
comp=Z,32nm,0.5s,baz=83,slow=4.0,SNR=118
ARTI LR LR 21 00 31.4
comp=Z,56nm,18.3s,baz=18,slow=39
ARTI Arti 56.41 319 P 20 33 23.7 -1.4
ARTI Arti 56.41 319 *c i*P P 20 33 24.7 -0.4
ARTI *P pP 20 33 37.0 -2.1
ARTI 20 35 27.8
ARTI S S 20 41 12.5 +0.5
ARTI SS SS 20 44 58.4 -0.7
ARTI pmax pmax
comp=Z,19nm,0.5s
KBL Kabul 56.66 291 P 20 33 26.1 -1.4
KBL IAmb IAmb 20 33 27.5
comp=Z,9.0nm,0.8s
KBL Kabul 56.66 291 P P 20 33 26.1 -1.4
KBL pmax pmax
comp=Z,9.0nm,0.8s
ABKAR Akbulak array 57.66 310 P 20 33 33.2 -0.9
AKTO Aktyubinsk 58.45 312 P P 20 33 39.5 0.0
comp=Z,6.4nm,0.6s,baz=81,slow=6.9,SNR=8.8
AKTO LR LR 20 58 50.5
comp=Z,49nm,18.3s,baz=252,slow=36
comp=Z,6.4nm,0.6s
AS31 Alice Springs 59.67 186 IAmb IAmb 20 33 53.5
comp=Z,2.0nm,0.4s
ASAR Alice Springs 59.67 186 P P 20 33 48.5 +0.2
comp=Z,1.2nm,0.6s,baz=10,slow=6.0,SNR=20
ASAR PKP2bc P'P'bc 21 03 26.2 +5.4
comp=Z,0.8nm,0.9s,baz=132,slow=1.4,SNR=5.2
comp=Z,1.2nm,0.6s
KIRV Kirov 60.31 323 LR LR 21 00 16.8
comp=Z,90nm,21.4s,baz=63,slow=36
KIRV Kirov 60.31 323 *ce*P P 20 33 52.3 +0.1
PALK Pallekele 60.99 257 P P 20 33 57.5 -0.1
comp=Z,8.4nm,0.9s,baz=342,slow=3.2,SNR=3.1
PALK LR LR 21 02 16.6
comp=Z,28nm,19.4s,baz=22,slow=38
comp=Z,8.4nm,0.9s
PALK Pallekele 60.99 257 IAmb IAmb 20 33 58.0
comp=Z,17nm,1.0s
SPITS Spitsbergen Ar 61.25 349 P P 20 33 58.1 -0.3
comp=Z,1.5nm,0.5s,baz=84,slow=8.5,SNR=9.8
SPITS LR LR 21 01 49.8
comp=Z,45nm,18.9s,baz=32,slow=37
comp=Z,1.5nm,0.5s
KBS Kingsbay 61.41 350 *i*P P 20 34 00.6 +1.2
HRA Herat 61.82 294 P 20 34 02.6 -0.5
HRA IAmb IAmb 20 34 04.8
comp=Z,5.9nm,0.7s
NOR Nord 61.95 356 *i*P P 20 34 03.2 +0.2
NOR IAmb IAmb 20 34 04.0
comp=Z,2.7nm,0.8s
LVZ Lovozero 62.51 336 P P 20 34 07.2 +0.2
comp=Z,20nm,1.8s
APA Apatity 63.09 336 *e*P P 20 34 07.2 -3.6
APA MLR MLR
comp=Z,425nm,3.9s
BELG Belogornoye 63.70 317 *i*P P 20 34 14.5 -0.6
BELG pmax pmax
comp=Z,7.0nm,0.9s
KLMR Klimovskoe 63.95 328 *e*P P 20 34 14.3 -2.2
KLMR pmax pmax
comp=Z,13nm,0.6s
ARA0 ARCESS Array S 64.49 339 *e*P P 20 34 19.4 -0.6
ARCES ARCESS Array B 64.49 339 P P 20 34 20.1 +0.1
comp=Z,4.0nm,0.7s,baz=48,slow=7.6,SNR=13
ARCES LR LR 21 05 46.2
comp=Z,49nm,18.4s,baz=304,slow=39
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 64.49 339 IAmb IAmb 20 34 46.3
comp=Z,16nm,1.2s
YKA Yellowknife Ar 65.25 30 P P 20 34 25.5 +0.5
comp=Z,2.7nm,0.9s,baz=305,slow=7.0,SNR=5.8
comp=Z,2.7nm,0.9s
YKA Yellowknife Ar 65.25 30 *i*P P 20 34 25.2 +0.2
YKA pmax pmax
comp=Z,2.0nm,0.7s
NEEM North Greenlan 66.56 3 *i*P P 20 34 34.1 +0.5
NEEM IAmb IAmb 20 34 36.1
comp=Z,15nm,0.9s
DAG Danmarks Havn 66.64 355 *i*P P 20 34 33.7 0.0
DAG IAmb IAmb 20 34 34.3
comp=Z,5.8nm,0.8s
VRH Novokhopyorsk 67.50 318 *e*P P 20 34 37.0 -2.6
VRH pmax pmax
comp=Z,10.0nm,0.8s
STKA Stephens Creek 67.59 178 P P 20 34 40.7 +0.4
comp=Z,1.7nm,0.7s,baz=321,slow=9.8,SNR=5.7
comp=Z,1.7nm,0.7s
OBN Obninsk 68.16 323⇑ *e*P P 20 34 43.2 -0.5
OBN pmax pmax
comp=Z,11nm,0.5s
OBN MLR MLR
comp=Z,71nm,19.0s
OBN Obninsk 68.16 323 P P 20 34 43.5 -0.2
comp=Z,20nm,0.8s
LPSR Galich'ya Gora 68.29 320 *e*P P 20 34 42.0 -2.5
LPSR pmax pmax
comp=Z,10.0nm,0.9s
STEI Steigen 68.39 340 *e*P P 20 34 44.9 -0.1
VORR Voronezh 68.62 319 *e*P P 20 34 45.0 -1.6
VORR pmax pmax
comp=Z,10.0nm,0.8s
AKT Akhty 68.70 306 *e*P P 20 34 46.7 -0.8
AKT pmax pmax
comp=Z,34nm,1.3s
FAUS Fauske 68.77 340 *e*P P 20 34 46.5 -0.8
VSR Storozhevoye 68.88 319 *e*P P 20 34 45.5 -2.7
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 68.94 318 *e*P P 20 34 45.8 -2.8
VORD pmax pmax
comp=Z,9.0nm,0.9s
DBG Daneborg 69.12 354 *i*P P 20 34 49.2 -0.1
FINES FINESS Array B 69.12 332 P P 20 34 49.4 -0.2
comp=Z,9.5nm,0.8s,baz=71,slow=6.8,SNR=19
FINES LR LR 21 06 17.3
comp=Z,52nm,19.8s,baz=26,slow=37
comp=Z,9.5nm,0.8s
FINES FINESS Array B 69.12 332 *i*P P 20 34 49.4 -0.2
FINES pmax pmax
comp=Z,9.0nm,0.8s
RAUS Rausandaksla 69.79 340 *e*P P 20 34 53.0 -0.6
VAGH Vaagaholmen 69.79 340 *e*P P 20 34 53.0 -0.6
MOR8 Moi Rana 69.86 339 *e*P P 20 34 52.3 -1.8
STOK Stokkvaagen 70.15 340 *e*P P 20 34 56.2 +0.4
KBZ Khabaz 70.63 310 P P 20 34 59.9 +0.8
comp=Z,6.8nm,0.9s,baz=235,slow=2.2,SNR=6.5
KBZ LR LR 21 07 42.4
comp=Z,37nm,21.4s,baz=88,slow=37
comp=Z,6.8nm,0.9s
KBZ Khabaz 70.63 310 *ce*P P 20 34 59.8 +0.7
KBZ pmax pmax
comp=Z,30nm,2.8s
KIV Kislovodsk 70.64 311 P 20 34 59.4 0.0
KIV Kislovodsk 70.64 311 ⇓P P 20 35 00.9 +1.5
KIV Kislovodsk 70.64 311 *e*P P 20 34 58.6 -0.8
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,27nm,17.0s
KIV Kislovodsk 70.64 311 P P 20 34 59.9 +0.5
comp=Z,21nm,0.9s
D08A Wollman Farm, 71.30 45 IAmb IAmb 20 35 05.7
comp=Z,7.7nm,0.9s
GNI Garni 71.33 306 LR LR 21 09 10.5
comp=Z,55nm,18.3s,baz=59,slow=38
SUMG Summit 71.66 359 P 20 35 06.2 +0.9
SUMG Summit 71.66 359 P P 20 35 06.3 +0.9
SUMG pmax pmax
comp=Z,13nm,0.7s
SUMG Summit 71.66 359 *i*P P 20 35 06.3 +0.9
SUMG IAmb IAmb 20 35 07.7
comp=Z,30nm,1.3s
PINE Pine Mountain 71.88 49 P 20 35 08.9 +1.9
PINE IAmb IAmb 20 35 10.3
comp=Z,9.0nm,1.0s
E09A Wood Farm, Sta 72.05 45 P P 20 35 08.5 +0.8
E09A IAmb IAmb 20 35 10.3
comp=Z,8.7nm,1.1s
K05A Summer Lake 72.48 50 IAmb IAmb 20 35 14.5
comp=Z,16nm,1.4s
MNK Minsk 72.63 326 *i*P P 20 35 11.4 +0.4
MNK *i *PP pP 20 35 25.6 +0.2
MNK *i *SP sP 20 35 30.3 -0.8
MNK *i* 20 37 53.3
MNK *i* PPP PPP 20 39 38.1
MNK *i* S S 20 44 33.4 +1.5
MNK *i *SS sS 20 44 57.9 +1.7
MNK *i* SS SS 20 49 15.5 +4.6
MNK *i* SSS SSS 20 52 27.3
MNK pmax pmax
comp=E,35nm,0.9s
MNK pmax pmax
comp=Z,24nm,0.9s
MNK pmax pmax
comp=N,34nm,0.9s
MNK MLR MLR
comp=E,1μm,20.0s
MNK MLR MLR
comp=N,1μm,19.0s
MNK MLR MLR
comp=Z,82nm,18.0s
SCO Scoresbysund 72.96 354 *i*P P 20 35 12.9 +0.3
SCO IAmb IAmb 20 35 14.3
comp=Z,5.5nm,1.0s
GURO Guroymak-BITLI 73.96 306 IAmb IAmb 20 35 20.9
comp=Z,6.4nm,0.8s
AK03 Malin Array Si 74.32 322 P P 20 35 20.4 -0.6
AKASG Malin Array Be 74.34 322 P P 20 35 20.5 -0.5
comp=Z,2.1nm,0.4s,baz=50,slow=6.0,SNR=17
AKASG LR LR 21 10 29.8
comp=Z,91nm,19.5s,baz=56,slow=38
comp=Z,2.1nm,0.4s
AKASG Malin Array Be 74.34 322 P P 20 35 20.6 -0.4
AKBB Malin Array Si 74.34 322 IAmb IAmb 20 35 21.4
comp=Z,12nm,0.9s
AKBB Malin Array Si 74.34 322 *ce*P P 20 35 20.4 -0.7
AKBB pmax pmax
comp=Z,14nm,1.0s
AKBB Malin Array Si 74.34 322 P P 20 35 20.3 -0.8
AK23 Malin Array Si 74.35 322 P P 20 35 20.4 -0.7
AK01 Malin Array Si 74.35 322 P P 20 35 20.3 -0.8
KIEV Kiev 74.35 322 P 20 35 20.5 -0.6
KIEV IAmb IAmb 20 35 21.4
comp=Z,11nm,1.0s
KIEV Kiev 74.35 322 ⇓P P 20 35 20.8 -0.3
KIEV Kiev 74.35 322 P P 20 35 20.5 -0.6
KIEV pmax pmax
comp=Z,11nm,1.0s
KIEV Kiev 74.35 322 P P 20 35 20.3 -0.8
comp=Z,54nm,1.0s
BEKR Beckworth 74.39 52 P 20 35 23.4 +1.6
BEKR IAmb IAmb 20 35 24.9
comp=Z,7.5nm,1.0s
AK05 Malin Array Si 74.40 322 P P 20 35 20.7 -0.7
NC405 NORSAR Array S 74.41 337 IAmb IAmb 20 35 25.5
comp=Z,13nm,0.8s
HFS Hagfors 74.48 335 P P 20 35 21.4 -0.4
comp=Z,2.6nm,0.5s,baz=90,slow=5.9,SNR=11
HFS LR LR 21 10 07.2
comp=Z,68nm,18.7s,baz=60,slow=37
comp=Z,2.6nm,0.5s
DOMB Dombas 74.52 338 *e*P P 20 35 21.4 -0.6
MOL Molde 74.55 339 *e*P P 20 35 22.2 +0.1
NB2 NORSAR Subarra 74.62 337 P P 20 35 22.2 -0.4
comp=Z,2.5nm,0.5s,baz=41,slow=5.9
NOA NORSAR Array B 74.62 337 P P 20 35 22.4 -0.2
comp=Z,2.6nm,0.5s,baz=40,slow=5.8,SNR=21
NOA LR LR 21 11 09.0
comp=Z,62nm,19.5s,baz=30,slow=38
comp=Z,2.6nm,0.5s
NC602 NORSAR Array S 74.75 336 *e*P P 20 35 22.9 -0.4
MARD Mardin 75.47 306 P 20 35 26.4 -1.7
MARD IAmb IAmb 20 35 28.9
comp=Z,6.9nm,0.7s
RNPP9 Sopachiv 75.52 324 P P 20 35 28.0 +0.1
LUBAR Lubar, Ukraine 75.56 322 P P 20 35 27.8 -0.3
RNPP8 Varash 75.59 324 P P 20 35 28.4 +0.1
DLMT Dillon 75.87 44 IAmb IAmb 20 35 32.8
comp=Z,7.0nm,0.9s
LHV Little Huntoon 76.50 52 IAmb IAmb 20 35 39.7
comp=Z,7.1nm,0.9s
NVAR Mina Array Bea 76.53 52 P P 20 35 36.7 +2.5
comp=Z,3.6nm,0.8s,baz=283,slow=5.8,SNR=19
comp=Z,3.6nm,0.8s
SFJD Kangerlussuaq 76.95 4 LR LR 21 15 12.6
comp=Z,43nm,18.2s,baz=292,slow=40
SFJD Kangerlussuaq 76.95 4 *i*P P 20 35 36.8 +1.1
SFJD IAmb IAmb 20 35 37.4
comp=Z,10nm,0.9s
KMPD K-Podol'skiy 77.08 321 P P 20 35 36.3 -0.5
KMPD P P 20 35 36.3 -0.5
LVV L'vov 77.46 323 P P 20 35 39.5 +0.6
HVU Hansel Valley 77.94 47 IAmb IAmb 20 35 44.9
comp=Z,4.6nm,0.8s
KSV Kosov 77.95 322 P P 20 35 41.7 0.0
SHIU Shidnytsya 78.18 323 P P 20 35 43.8 +0.8
KWP Kalwaria Pacla 78.22 324 *e*P P 20 35 43.6 +0.5
KWP Kalwaria Pacla 78.22 324 P P 20 35 43.5 +0.3
comp=Z,25nm,1.1s
TESR Tescani 78.32 320 P P 20 35 43.6 -0.1
comp=Z,11nm,1.0s
BUR08 Bucovina Ar. S 78.32 321 IAmb IAmb 20 36 01.6
comp=Z,9.7nm,1.4s
BURAR Bucovina Array 78.33 321 ⇓P P 20 35 44.3 +0.3
BURAR Bucovina Array 78.33 321 ⇓P P 20 35 44.3 +0.3
BRTR Keskin Array B 78.60 311 P P 20 35 45.8 +0.2
comp=Z,1.3nm,0.5s,baz=144,slow=4.1,SNR=9.9
comp=Z,1.3nm,0.5s
BRTR Keskin Array B 78.60 311 *i*P P 20 35 46.0 +0.4
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BR106 Keskin Array S 78.61 311 P P 20 35 45.7 0.0
comp=Z,2.7nm,0.7s
BR104 Keskin Array S 78.61 311 P P 20 35 45.7 0.0
comp=Z,3.4nm,0.9s
VRI Vrincioaia 78.69 319 ⇑P P 20 35 47.1 +1.2
VRI Vrincioaia 78.69 319 ⇑P P 20 35 47.1 +1.2
VRI Vrincioaia 78.69 319 P P 20 35 46.7 +0.8
comp=Z,16nm,2.3s
MUKU Mukachevo 79.03 323 P P 20 35 47.8 +0.2
OJC Ojcow 79.18 326 *e*P P 20 35 46.5 -1.9
OJC Ojcow 79.18 326 P P 20 35 48.7 +0.3
comp=Z,12nm,1.1s
PDAR Pinedale Array 79.20 45 P P 20 35 49.8 +0.8
comp=Z,1.1nm,0.7s,baz=238,slow=1.5,SNR=8.6
comp=Z,1.1nm,0.7s
BERU Beregovo 79.20 323 P P 20 35 49.2 +0.7
MLR Muntele Rosu 79.36 319 LR LR 21 12 00.8
comp=Z,55nm,20.9s,baz=356,slow=36
NIE Niedzica 79.51 325 *e*P P 20 35 50.4 +0.1
NIE Niedzica 79.51 325 P P 20 35 50.3 +0.1
comp=Z,5.1nm,1.1s
ARR Arges 80.13 320 ⇓P P 20 35 55.0 +1.3
DRGR 80.15 322 ⇓P P 20 35 54.1 +0.3
DRGR 80.15 322 ⇓P P 20 35 54.1 +0.3
KSP Ksiaz 80.30 328 *e*P P 20 35 54.9 +0.4
KSP Ksiaz 80.30 328 P P 20 35 54.8 +0.4
comp=Z,11nm,0.9s
STEB Steborice 80.30 326 *e*P P 20 35 55.0 +0.5
MORC Moravsky Berou 80.52 326 IAmb IAmb 20 35 57.0
comp=Z,10nm,1.4s
MORC Moravsky Berou 80.52 326 ⇓P P 20 35 56.4 +0.7
MORC Moravsky Berou 80.52 326 *e*P P 20 35 56.1 +0.4
MORC Moravsky Berou 80.52 326 ⇓P P 20 35 56.4 +0.7
RAR Rarotonga 80.56 125 LR LR 21 04 37.7
comp=Z,30nm,20.8s,baz=67,slow=30
PFO Pinyon Flats O 80.57 55 LR LR 21 07 45.8
comp=Z,26nm,19.6s,baz=45,slow=33
P17A Butcher Ranch, 80.59 48 IAmb IAmb 20 35 59.3
comp=Z,6.3nm,0.7s
DPC Dobruska-Polom 80.65 327 *e*P P 20 35 56.8 +0.4
DPC Dobruska-Polom 80.65 327 *e*P P 20 35 56.8 +0.4
DPC Dobruska-Polom 80.65 327 P P 20 35 56.8 +0.4
comp=Z,7.8nm,1.6s
UPC Upice 80.67 328 *e*P P 20 35 56.9 +0.5
UPC Upice 80.67 328 *e*P P 20 35 56.9 +0.5
KNB Kanab 80.85 51 IAmb IAmb 20 36 01.8
comp=Z,11nm,1.2s
SRU San Rafael Swe 80.95 48 IAmb IAmb 20 36 00.9
comp=Z,4.9nm,0.6s
ULM Lac du Bonnet 80.97 33 P P 20 35 56.3 -1.7
comp=Z,2.1nm,0.5s,baz=301,slow=12,SNR=3.1
ULM Lac du Bonnet 80.97 33 IAmb IAmb 20 35 58.9
comp=Z,5.5nm,0.8s
ASF Jabal al Asfar 81.06 303 LR LR 21 14 17.8
comp=Z,37nm,18.8s,baz=291,slow=37
IRM Iron Mountain 81.11 54 IAmb IAmb 20 36 01.9
comp=Z,7.0nm,1.1s
JAVC Velka Javorina 81.12 326 *e*P P 20 36 00.3 +1.3
SURR Surduc 81.16 321 ⇓P P 20 35 59.6 +0.5
PVCC Panska Ves 81.27 328 *e*P P 20 36 00.0 +0.4
PVCC Panska Ves 81.27 328 *e*P P 20 36 00.0 +0.4
VRAC Vranov 81.29 326 LR LR 21 14 01.3
comp=Z,66nm,18.7s,baz=25,slow=37
VRAC Vranov 81.29 326 ⇓P P 20 36 00.6 +0.8
VRAC Vranov 81.29 326 *e*P P 20 36 00.1 +0.3
VRAC Vranov 81.29 326 ⇓P P 20 36 00.6 +0.8
CLL Collm 81.34 330 IAmb IAmb 20 36 03.8
comp=Z,7.8nm,1.0s
CLL Collm 81.34 330 *i*P P 20 36 00.0 0.0

CLL					pmax	pmax			
	comp=Z,7.0nm,0.8s								
CLL	**Collm**	**81.34**	**330**		P	**P**	**20**	**35**	**59.6 -0.4**
	comp=Z,9.1nm,1.1s								
CLL	**Collm**	**81.34**	**330**	*i*	P	**P**	**20**	**36**	**00.0 0.0**
	comp=Z,7.0nm,0.8s								
CLL				*i*	x	x	20	36	02.6
	comp=Z,10.0nm,1.1s								
CLL				*e*	PP	**PP**	**20**	**39**	**05.0 -0.5**
URZ	**Urewera**	**81.55**	**151**		LR	LR	21	07	24.0
	comp=Z,48nm,20.9s,baz=338,slow=32								
MMAI	**Mount Meron Ar**	**81.55**	**305**		P	**P**	**20**	**36**	**00.1 -1.5**
	comp=Z,1.0nm,0.5s,baz=66,slow=10,SNR=3.5								
MMAI					LR	LR	21	16	01.7
	comp=Z,40nm,18.6s,baz=50,slow=38								
	comp=Z,1.0nm,0.5s								
KRUC	**Moravsky**	**81.56**	**326**	*e*	P	**P**	**20**	**36**	**01.4 +0.2**
HSKC	**Hora Svate Kat**	**81.69**	**329**	*e*	P	**P**	**20**	**36**	**02.1 +0.2**
CSS	**Mathiatis**	**81.72**	**307**		P	**P**	**20**	**36**	**02.2 -0.1**
	comp=Z,6.4nm,1.1s								
BLYC	**Blythe**	**81.77**	**54**		IAmb	IAmb	20	36	05.3
	comp=Z,8.2nm,0.8s								
BALJ	**Balqa**	**81.96**	**304**		IAmb	IAmb	20	36	05.0
	comp=Z,9.3nm,0.7s								
ZVC	**Zvikov**	**82.25**	**328**	*e*	P	**P**	**20**	**36**	**05.4 +0.6**
PV11	**David Mesa, Pa**	**82.46**	**48**		IAmb	IAmb	20	36	10.0
	comp=Z,7.9nm,0.8s								
PV05	**Paradox Valley**	**82.47**	**48**		IAmb	IAmb	20	36	09.3
	comp=Z,7.6nm,0.7s								
PV13	**Radium Mtn., P**	**82.58**	**48**		IAmb	IAmb	20	36	11.2
	comp=Z,7.1nm,1.1s								
RONA	**Rosalia, Austr**	**82.60**	**325**	*e*	P	**P**	**20**	**36**	**07.5 +0.7**
	comp=Z,2.3nm,0.5s								
PV02	**Paradox Valley**	**82.60**	**48**		IAmb	IAmb	20	36	24.6
	comp=Z,18nm,1.5s								
CONA	**Conrad Observa**	**82.63**	**326**	*e*	P	**P**	**20**	**36**	**07.7 +0.7**
	comp=Z,2.0nm,0.5s								
CKRC	**Cesky Krumlov**	**82.66**	**327**	*e*	P	**P**	**20**	**36**	**07.1 +0.1**
CKRC	**Cesky Krumlov**	**82.66**	**327**	*e*	P	**P**	**20**	**36**	**07.1 +0.1**
KHC	**Kasperske Hory**	**82.75**	**328**	*ce*	P	**P**	**20**	**36**	**08.8 +1.3**
KHC					pmax	pmax			
	comp=Z,12nm,2.5s								
KHC	**Kasperske Hory**	**82.75**	**328**	*e*	P	**P**	**20**	**36**	**07.7 +0.3**
KHC	**Kasperske Hory**	**82.75**	**328**		P	**P**	**20**	**36**	**07.8 +0.3**
	comp=Z,5.4nm,2.6s								
GERES	**GERESS Array B**	**82.91**	**328**		P	**P**	**20**	**36**	**08.3 -0.1**
	comp=Z,0.8nm,0.5s,baz=40,slow=7.0,SNR=8.5								
	comp=Z,0.8nm,0.5s								
X16A	**Lo Mia Camp, P**	**83.35**	**52**		IAmb	IAmb	20	36	14.2
	comp=Z,5.7nm,1.0s								
MOA	**Molln**	**83.41**	**327**	*e*	P	**P**	**20**	**36**	**11.3 +0.4**
	comp=Z,4.0nm,0.4s								
EKA	**Eskdalemuir Ar**	**83.65**	**340**		P	**P**	**20**	**36**	**12.0 +0.1**
	comp=Z,1.5nm,0.6s,baz=35,slow=5.4,SNR=6.3								
	comp=Z,1.5nm,0.6s								
EKA	**Eskdalemuir Ar**	**83.65**	**340**		P	**P**	**20**	**36**	**12.0 +0.1**
BIOA	**Bad Ischl, Aus**	**83.81**	**327**	*e*	P	**P**	**20**	**36**	**13.7 +0.7**
	comp=Z,1.7nm,0.4s								
SOKA	**Soboth**	**83.93**	**325**	*e*	P	**P**	**20**	**36**	**13.8 +0.1**
	comp=Z,3.2nm,0.6s								
KBA	**Koelnbreinsper**	**84.40**	**327**	*e*	PcP	P	**20**	**36**	**17.0 +0.9**
	comp=Z,1.7nm,0.6s								
MYKA	**Terra Mystica**	**84.60**	**326**	*e*	P	**P**	**20**	**36**	**16.5 -0.6**
	comp=Z,1.1nm,0.3s								
PDG	**Podgorica**	**84.97**	**320**	⇓	P	**P**	**20**	**36**	**19.1 +0.2**
MOTA	**Moosalm**	**85.18**	**328**	*e*	P	**P**	**20**	**36**	**19.4 -0.7**
	comp=Z,0.9nm,0.5s								
PPT	**Papeete**	**85.27**	**116**		LR	LR	21	04	47.8
	comp=Z,42nm,22.0s,baz=358,slow=29								
PPT2	**Papeete2**	**85.28**	**116**	*e*	LR	LR	21	03	07.2
	comp=Z,135nm,30.0s								
PPT2				*e*	LR	LR	21	03	18.8
	comp=Z,98nm,26.5s								
FETA	**Feichten**	**85.59**	**328**	*i*	P	**P**	**20**	**36**	**22.2 +0.1**
	comp=Z,1.7nm,0.6s								
DAVA	**Damuels**	**85.75**	**328**	*e*	PcP	**P**	**20**	**36**	**23.0 +0.1**
	comp=Z,2.2nm,0.6s								
FUORN	**Ofenpass-Fuorn**	**86.10**	**328**		IAmb	IAmb	20	36	32.0
	comp=Z,5.7nm,1.0s								
TASM	**ASL Pad, Albuq**	**86.12**	**49**		IAmb	IAmb	20	36	27.9
	comp=Z,3.8nm,1.1s								
TASM	**ASL Pad, Albuq**	**86.12**	**49**		IAmb	IAmb	20	36	27.9
	comp=Z,3.7nm,1.1s								
ANMO	**Albuquerque**	**86.12**	**49**		P	**P**	**20**	**36**	**22.2 -2.8**
ANMO	**Albuquerque**	**86.12**	**49**		P	**P**	**20**	**36**	**22.2 -2.8**
ANMO					pmax	pmax			
	comp=Z,3.0nm,1.1s								
TBI	**Tubuai**	**89.06**	**120**	*e*	LR	LR	21	05	00.7
	comp=Z,608nm,29.0s								
TXAR	**Lajitas Array**	**91.66**	**51**		P	**P**	**20**	**36**	**52.8 +1.6**
	comp=Z,1.3nm,0.6s,baz=300,slow=3.1,SNR=15								
	comp=Z,1.3nm,0.6s								
SADO	**Sadowa**	**92.11**	**27**		LR	LR	21	20	44.1
	comp=Z,79nm,18.4s,baz=148,slow=37								
KEST	**Kesra**	**95.07**	**322**		LR	LR	21	25	51.5
	comp=Z,56nm,18.0s,baz=284,slow=39								
CLTN	**Cedars of Leba**	**96.32**	**36**		P	**P**	**20**	**37**	**10.0 -2.3**
V48A	**Smith Brothers**	**96.36**	**37**		P	**P**	**20**	**37**	**13.2 +0.6**
TORD	**Torodi Ar. Bea**	**117.16**	**313**		PKP	**PKPdf**	**20**	**42**	**28.1 -1.0**
	comp=Z,4.6nm,0.3s,baz=35,slow=3.2,SNR=2.3								
NVL	**N'lazarevskaya**	**135.94**	**202**	*e*	PKIKP	**PKPdf**	**20**	**43**	**03.9 +0.8**
NVL				*e*			20	45	40.6
NVL				*e*	PPP	PPP	20	48	39.5
NVL				*e*	SS	SS	21	03	39.5 +1.6
NVL				*e*	SSS	SSS	21	08	42.6
NVL					pmax	pmax			
	comp=Z,6.0nm,0.7s								
NVL					pmax	pmax			
	comp=E,43nm,16.0s								
LPAZ	**La Paz**	**148.21**	**59**		PKPbc	**PKPbc**	**20**	**43**	**31.6 +0.9**
	comp=E,2.0nm,0.7s,baz=254,slow=1.8,SNR=5.4								
LPAZ	**La Paz**	**148.21**	**59**			**PKPbc**	**20**	**43**	**31.7 +1.0**
LPAZ	**La Paz**	**148.21**	**59**		PKP2	**PKPbc**	**20**	**43**	**31.7 +1.0**

*NNC **21** 20:26:08.2±2.8, 36.91N×71.07E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=23.8km s-min=21.2km az=43.0*
*IDC **21** 20:26:11.1±6.9, 36.57N×71.51E, h158km±58km, mb3.6/5, mbtmp4.0/11, Error ellipse: s-maj=54.6km s-min=24.1km az=33.0*
*NEIC **21** 20:26:12.1±1.6, 36.64N±0.02×71.40E±0.10, h162km±8km, mb4.3/20, Error ellipse: s-maj=11.4km s-min=3.2km az=96.0*

ISC 21 20:26:10.3±0.6, **36.58N**±0.05×**71.39E**±0.07, **h150**km, **n76,** σ1§**78**/84, **mb4.3**/13, **4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.56**	**341**		**Pn**	**20 26 53.7**	**+1.4**
CHGR	**Chuyangaron**	**2.73**	**320**		**Pn**	**20 26 55.3**	**+0.9**
KBL	**Kabul**	**2.79**	**224**		**Pn**	**20 26 57.5**	**+2.2**
DRK	**Karamyk**	**2.91**	**6**		**Pn**	**20 26 58.9**	**+2.1**
NIL	**Nilore**	**3.30**	**152**		**Pn**	**20 27 05.2**	**+3.7**
JMU	**Jammu**	**4.82**	**142**	*e*P	**Pn**	**20 27 20.4**	**-1.0**
JMU				*e*S	**Sn**	**20 28 14.3**	**-2.4**
JMU				IAML		20 28 20.2	
	comp=E,124nm,0.4s						
JMU				IAML		20 28 26.5	
	comp=N,176nm,0.5s						
ARSB	**Arslanbob**	**4.89**	**14**		**Pn**	**20 27 22.6**	**+0.2**
ALCI	**Alchi Leh**	**5.29**	**115**	*e*P	**Pn**	**20 27 29.9**	**+2.0**
ALCI				*e*S	**Sn**	**20 28 29.4**	**+1.0**
ALCI				IAML		20 28 31.6	
	comp=E,104nm,0.3s						
ALCI				IAML		20 28 32.7	
	comp=N,185nm,0.3s						
TSSA	**Tissa**	**5.42**	**132**	*e*P	**Pn**	**20 27 31.7**	**+2.3**
TSSA				*e*S	**Sn**	**20 28 31.0**	**-0.2**
TSSA				IAML		20 28 33.5	
	comp=E,247nm,0.3s						
TSSA				IAML		20 28 33.5	
	comp=N,286nm,0.3s						
TLWR	**Talawar**	**5.96**	**139**	*e*S	**Sn**	**20 28 45.3**	**+1.3**
UCH	**Uchtor**	**6.13**	**22**	P	**Pn**	**20 27 40.8**	**+1.6**
	SNR=49						
EKS2	**Erkin-Say**	**6.34**	**16**	P	**Pn**	**20 27 44.7**	**+3.1**
	SNR=9.5						
AAK	**Ala-Archa**	**6.50**	**21**	P	**Pn**	**20 27 45.5**	**+1.7**
AAK	comp=N,26nm,0.4s,baz=175,slow=7.8,SNR=86			S	**Sn**	**20 28 55.4**	**-1.6**
	comp=N,30nm,0.5s,baz=337,slow=21,SNR=13						
AAK	**Ala-Archa**	**6.50**	**21**		**Pn**	**20 27 45.0**	**+1.1**
AAK	**Ala-Archa**	**6.50**	**21**	P	**Pn**	**20 27 46.4**	**+2.5**
	SNR=16						
AAK	**Ala-Archa**	**6.50**	**21**	⇓P	**Pn**	**20 27 43.2**	**-0.6**
	comp=N,4.3nm,0.4s						
AAK				⇑S	**Sn**	**20 28 55.6**	**-1.4**
	comp=N,56nm,1.0s						
KK31	**Karatay Array**	**6.55**	**354**		**Pn**	**20 27 44.8**	**+0.5**
KK31	**Karatay Array**	**6.55**	**354**	⇑P	**Pn**	**20 27 41.5**	**-2.8**
	comp=N,26nm,0.5s,baz=185,slow=14,SNR=369						
KK31				⇑S	**Sn**	**20 28 54.0**	**-3.9**
	comp=N,42nm,0.6s,baz=180,slow=23						
KKAR	**Karatay Array**	**6.55**	**354**		**Pn**	**20 27 44.7**	**+0.5**
BHK	**Bhakra**	**6.63**	**140**	*e*P	**Pn**	**20 27 48.3**	**+2.8**
BHK				IAML		20 29 02.5	
	comp=E,165nm,0.3s						
BHK				IAML		20 29 02.5	
	comp=N,162nm,0.3s						
BHK				*e*S	**Sn**	**20 29 02.8**	**+2.8**
KBK	**Karagaybulak**	**6.66**	**23**	P	**Pn**	**20 27 48.7**	**+2.8**
	SNR=13						
FRU1	**Bishkek**	**6.70**	**21**	Pn	**Pn**	**20 27 48.2**	**+1.8**
ULHL	**Ulahol**	**6.79**	**32**	P	**Pn**	**20 27 49.3**	**+1.6**
	SNR=18						
BOOM	**Boomskoye usch**	**6.87**	**29**		**Pn**	**20 27 50.2**	**+1.5**
CHMS	**Chumysh**	**6.91**	**21**	P	**Pn**	**20 27 51.7**	**+2.6**
	SNR=11						
USP	**Ospenovka**	**7.09**	**19**	P	**Pn**	**20 27 54.2**	**+2.7**
	SNR=10.0						
TKM2	**Tokmak 2**	**7.11**	**26**	P	**Pn**	**20 27 54.1**	**+2.1**
	SNR=16						
KDJ	**Kajisay**	**7.13**	**37**	Pn	**Pn**	**20 27 53.3**	**+1.1**
TARG	**Taragay, Kyrgy**	**7.16**	**42**		**Pn**	**20 27 53.9**	**+1.1**
SMLA	**Simla**	**7.26**	**137**	*e*P	**Pn**	**20 27 55.2**	**+1.5**
SMLA				*e*S	**Sn**	**20 29 13.8**	**-1.1**
SMLA				IAML		20 29 16.2	
	comp=E,141nm,0.4s						
SMLA				IAML		20 29 16.3	
	comp=N,181nm,0.4s						
WUS	**Wushi**	**7.65**	**51**	Pn	**Pn**	**20 28 00.6**	**+1.5**
HRA	**Herat**	**7.78**	**256**		**Pn**	**20 28 01.9**	**+1.0**
PRZ	**Przheval'sk**	**8.00**	**40**	Pn	**Pn**	**20 28 05.7**	**+1.9**
PDGK	**Podgornoye**	**9.16**	**40**	⇑P	**Pn**	**20 28 20.5**	**+1.2**
	comp=N,16nm,0.7s						
KUDL	**Kundal**	**9.45**	**151**	*e*P	**Pn**	**20 28 23.0**	**0.0**
KUDL				*e*S	**Sn**	**20 30 02.1**	**-5.7**
KUDL				IAML		20 30 07.1	
	comp=E,109nm,0.4s						
KUDL				IAML		20 30 08.1	
	comp=N,106nm,0.2s						
LGTI	**Lohaghat**	**10.28**	**131**	*e*P	**Pn**	**20 28 33.0**	**-1.0**
LGTI				*e*S	Sn	20 30 21.3	-6.6
MAKZ	**Makanchi**	**12.91**	**34**	P	**Pn**	**20 29 08.4**	**+0.2**
MAKZ	**Makanchi**	**12.91**	**34**	P	**Pn**	**20 29 10.1**	**+1.9**
MK31	**Makanchi Array**	**13.04**	**35**	P	**Pn**	**20 29 12.1**	**+2.1**
	comp=N,1.4nm,0.6s,baz=215,slow=14,SNR=18						
MKAR	**Makanchi Array**	**13.04**	**35**	P	**Pn**	**20 29 10.2**	**+0.3**
	comp=N,0.3nm,0.3s,baz=211,slow=14,SNR=15						
KURBB	**Kurchatov Arra**	**14.95**	**18**	P	**Pn**	**20 29 35.4**	**+1.6**
	comp=N,0.8nm,0.7s,baz=206,slow=11,SNR=6.8						
KURK	**Kurchatov**	**15.05**	**18**	P	**Pn**	**20 29 35.4**	**+0.2**
AB31	**Akbulak array**	**15.17**	**330**		**Pn**	**20 29 36.0**	**-0.6**
AB31				IAmb	IAmb	20 29 41.3	
	comp=Z,4.3nm,0.4s						
AB31	**Akbulak array**	**15.17**	**330**	P	**Pn**	**20 29 37.8**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=144,slow=12,SNR=91						
ABKAR	**Akbulak array**	**15.17**	**330**		**Pn**	**20 29 35.7**	**-0.9**
EVN	**Everest**	**15.61**	**119**	P	**Pn**	**20 29 43.7**	**+0.8**
EVN				IAmb	IAmb	20 29 50.4	
	comp=Z,6.1nm,0.5s						
BVA0	**Borovoye Array**	**16.46**	**358**	P	**P**	**20 29 56.7**	**+4.3**
	comp=Z,2.4nm,1.1s,baz=164,slow=15,SNR=5.9						
BVAR	**Borovoye Array**	**16.46**	**358**	P	**Pn**	**20 29 52.7**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=156,slow=9.2,SNR=6.5						
AKTO	**Aktyubinsk**	**16.87**	**329**	P	**P**	**20 29 58.0**	**+1.1**
	comp=Z,2.1nm,0.3s,baz=160,slow=6.5,SNR=6.7						
ZALV	**Zalesovo Beam**	**19.71**	**24**	P	**P**	**20 30 28.8**	**+0.9**
	comp=Z,2.5nm,0.3s,baz=222,slow=11,SNR=17						
ZALV	**Zalesovo Beam**	**19.71**	**24**		**P**	**20 30 28.6**	**+0.7**
FINES	**FINESS Array B**	**37.59**	**326**	P	**P**	**20 33 10.6**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=116,slow=8.9,SNR=8.3						
	comp=Z,2.8nm,0.9s						
ARCES	**ARCESS Array B**	**41.19**	**337**	P	**P**	**20 33 40.1**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=106,slow=8.9,SNR=8.9						
	comp=Z,2.9nm,0.8s						
ARCES	**ARCESS Array B**	**41.19**	**337**	IAmb	IAmb	20 33 42.2	
	comp=Z,28nm,1.4s						
HFS	**Hagfors**	**43.20**	**322**	P	**P**	**20 33 56.3**	**+0.3**
	comp=Z,2.4nm,0.5s,baz=96,slow=11,SNR=17						
	comp=Z,2.4nm,0.5s						
NC405	**NORSAR Array S**	**44.27**	**323**	P	**P**	**20 34 05.1**	**+0.5**
NC405				IAmb	IAmb	20 34 27.0	
	comp=Z,15nm,1.2s						
NC602	**NORSAR Array S**	**44.32**	**323**	P	**P**	**20 34 05.1**	**+0.1**
NC602				IAmb	IAmb	20 34 07.8	
	comp=Z,18nm,1.4s						
NC303	**NORSAR Array S**	**44.45**	**323**	P	**P**	**20 34 06.3**	**+0.4**
NC303				IAmb	IAmb	20 34 14.9	
	comp=Z,15nm,1.2s						
NB201	**NORSAR Array S**	**44.47**	**323**	P	**P**	**20 34 06.4**	**+0.2**
NB2	**NORSAR Subarra**	**44.50**	**323**	P	**P**	**20 34 06.5**	**0.0**
	comp=Z,0.8nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.50**	**323**	P	**P**	**20 34 06.5**	**0.0**
	comp=Z,0.8nm,0.5s,baz=106,slow=7.1,SNR=6.7						
	comp=Z,0.8nm,0.5s						
NBO00	**NORSAR Array S**	**44.72**	**323**	P	**P**	**20 34 08.2**	**0.0**
NBO00				IAmb	IAmb	20 34 10.6	
	comp=Z,17nm,1.2s						
NC204	**NORSAR Array S**	**44.74**	**323**	P	**P**	**20 34 08.8**	**+0.4**
NC204				IAmb	IAmb	20 34 11.3	
	comp=Z,12nm,1.2s						
TIXI	**Tiksi**	**45.58**	**22**	P	**P**	**20 34 14.8**	**+0.1**
JCJ	**Chichijima**	**59.67**	**77**	P	**P**	**20 35 57.0**	**-2.0**
D19K	**Kuna River**	**68.97**	**17**	P	**P**	**20 36 59.2**	**+0.4**
E19K	**Redstone River**	**69.98**	**18**	P	**P**	**20 37 02.3**	**-2.7**
E21K	**Killik River**	**69.98**	**16**	P	**P**	**20 37 02.4**	**-2.6**
E21K				IAmb	IAmb	20 37 24.3	
	comp=Z,7.5nm,1.4s						
C24K	**Franklin Bluff**	**70.03**	**14**	P	**P**	**20 37 02.5**	**-2.8**
C24K				IAmb	IAmb	20 37 32.5	
	comp=Z,9.0nm,1.4s						
C27K	**Jago River**	**71.02**	**12**	P	**P**	**20 37 11.4**	**+0.1**
C27K				IAmb	IAmb	20 37 26.9	
	comp=Z,5.8nm,1.4s						
IMAR	**Indian Mountai**	**72.00**	**18**	P	**P**	**20 37 16.9**	**-0.3**
BMAR	**Burnt Mountain**	**72.79**	**14**	P	**P**	**20 37 22.4**	**+0.5**
H29M	**Whitestone**	**74.98**	**12**	P	**P**	**20 37 35.0**	**+0.3**
I28M	**Miner Creek**	**75.41**	**13**	P	**P**	**20 37 36.9**	**-0.4**
H31M	**Peel River**	**76.01**	**11**	P	**P**	**20 37 40.4**	**-0.1**
ASAR	**Alice Springs**	**84.04**	**125**	P	**P**	**20 38 23.1**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=306,slow=4.2,SNR=4.2						
	comp=Z,0.5nm,0.7s						

*SCB **21** 20:27:08.8±1.1, 17.00S×65.57W, h1km±4km, ML3.5/3, Error ellipse: s-maj=3.3km s-min=2.4km az=0.0*
*IDC **21** 20:27:14.1±1.3, 16.03S×65.62W, h0km, mb4.2/2, mbtmp4.3/4, ML4.2/2, MS3.0/2, Error ellipse: s-maj=64.5km s-min=12.1km az=176.0*
*VAO **21** 20:27:15.6±0.5, 17.16S×65.65W, h152km±10km, mb4.1*
*NEIC **21** 20:27:16.8±1.0, 17.23S±0.08×65.59W±0.04, h47km±11km, mb4.2/5, Error ellipse: s-maj=13.1km s-min=1.2km az=152.0*

ISC 21 20:27:13.3±0.6, **17.24S**±0.04×**65.60W**±0.03, **h14**km, **n51,** σ1§**69**/56, **Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOET	**ToroToro**	**0.89**	**193**	Pg	**Pg**	**20 27 29.9**	**-0.8**
SOET				Sg	**Sn**	**20 27 45.8**	**+1.1**
SOET				IAML		20 27 46.8	
	630nm,0.3s						
AOEA	**Aiquile**	**1.00**	**159**	Pg	**Pb**	**20 27 31.6**	**-1.0**
BBOE	**La Paz, Chanca**	**2.32**	**280**	Pg	**Pn**	**20 27 53.3**	**+1.7**
BBOJ	**La Paz, Jacaqu**	**2.49**	**276**	Pn	**Pb**	**20 27 56.9**	**-1.3**
SOEO	**Opoqueri**	**2.54**	**239**	Pn	**Pb**	**20 27 59.2**	**+0.2**
LPAZ	**La Paz**	**2.60**	**291**	Pn	**Pn**	**20 27 56.2**	**+0.7**
	61nm,0.3s,baz=116,slow=13,SNR=358						
LPAZ				Pg	**Pb**	**20 27 58.3**	**-1.8**
	61nm,0.3s,baz=116,slow=12,SNR=272						
LPAZ				Lg	Lg	20 28 31.9	
	83nm,0.3s,baz=210,slow=20,SNR=14						
LPAZ				LR	LR	20 29 13.2	
	comp=Z,183nm,20.6s,baz=62,slow=49						
	315nm,0.5s						
LPAZ	**La Paz**	**2.60**	**291**		**Pn**	**20 27 55.8**	**+0.3**
LPAZ				Sn	**Sb**	**20 28 31.1**	**-1.1**
LPAZ	**La Paz**	**2.60**	**291**	Pn	**Pn**	**20 27 57.2**	**+1.7**
LPAZ				Sn	**Sb**	**20 28 32.8**	**+0.6**
LPAZ				IAML		20 28 36.3	
	264nm,0.3s						
LPAZ	**La Paz**	**2.60**	**291**	*e*P	**Pn**	**20 27 56.1**	**+0.6**
LPAZ				*e*S	**Sn**	**20 28 30.6**	**+3.3**
BBOB	**La Paz, Bander**	**2.66**	**294**	Pn	**Pn**	**20 27 57.0**	**+0.8**
BBOD	**La Paz, Gloria**	**2.93**	**281**	Pn	**Pn**	**20 28 02.2**	**+2.2**
PB18	**Visviri**	**3.72**	**264**	Pn	**Pn**	**20 28 13.5**	**+2.7**
PB16	**IPOC Station P**	**3.88**	**253**	Pn	**Pn**	**20 28 15.3**	**+2.2**
PB16	**IPOC Station P**	**3.88**	**253**	Pn	**Pn**	**20 28 16.8**	**+3.8**
MOCB	**Mochara**	**3.99**	**180**	Pn	**Pb**	**20 28 20.9**	**-2.8**
MOCB				Sn	**Sb**	**20 29 14.0**	**+2.0**
MOCB				IAML		20 29 19.2	
	81nm,0.4s						
PB08	**IPOC Station P**	**4.43**	**229**		**Pn**	**20 28 20.8**	**+0.3**
PB08	**IPOC Station P**	**4.43**	**229**	Pn	**Pn**	**20 28 25.0**	**+4.5**
SIV	**San Ignacio**	**4.52**	**75**	Pn	**Pn**	**20 28 22.5**	**+1.1**
	1.3nm,0.3s,baz=269,slow=8.8,SNR=218						
SIV				Pg	**Pb**	**20 28 33.3**	**+0.8**
	3.5nm,0.3s,baz=265,slow=12,SNR=21						
SIV				Lg	Lg	20 29 32.6	
	5.9nm,0.3s,baz=336,slow=19,SNR=16						
	28nm,0.4s						
SIV	**San Ignacio**	**4.52**	**75**	Pn	**Pn**	**20 28 22.5**	**+1.1**
PB11	**IPOC Station P**	**4.59**	**236**	Pn	**Pn**	**20 28 23.6**	**+1.1**
PB12	**IPOC Station P**	**4.70**	**252**	Pn	**Pn**	**20 28 25.4**	**+1.4**
YJA	**Yavi**	**4.91**	**179**	Pn	**Pn**	20 28 33.2	+6.1
HMBC	**Humberstone**	**5.06**	**233**		**Pn**	**20 28 31.4**	**+2.4**
PB01	**IPOC Station P**	**5.27**	**224**	Pn	**Pn**	**20 28 28.6**	**-3.1**
TA01	**Diego Aracena**	**5.45**	**232**	Pn	**Pn**	**20 28 33.9**	**-0.3**
PATCX	**Punta Patache**	**5.58**	**230**	Pn	**Pn**	**20 28 36.7**	**+0.6**
PB02	**IPOC Station P**	**5.74**	**224**	Pn	**Pn**	**20 28 39.6**	**+1.4**
PB02	**IPOC Station P**	**5.74**	**224**	Pn	**Pn**	20 28 43.5	+5.3
PB07	**IPOC Station P**	**6.02**	**221**	Pn	**Pn**	**20 28 44.1**	**+1.9**
PB03	**IPOC Station P**	**6.18**	**219**	Pn	**Pn**	**20 28 45.8**	**+1.5**
PTLB	**Pontes e Lacer**	**6.46**	**75**		**Pn**	**20 28 48.4**	**+0.4**
PTLB	**Pontes e Lacer**	**6.46**	**75**	Pn	**Pn**	**20 28 48.8**	**+0.7**
PTLB	**Pontes e Lacer**	**6.46**	**75**	*e*P	**Pn**	**20 28 48.7**	**+0.7**
PTLB				*e*S	**Sn**	**20 30 01.7**	**+0.1**
VILB	**Vilhena**	**6.74**	**51**	Pn	**Pn**	**20 28 52.4**	**+0.5**
VILB	**Vilhena**	**6.74**	**51**	*e*P	**Pn**	**20 28 52.0**	**0.0**
VILB				*e*S	**Sn**	**20 30 08.2**	**-0.3**
MURT	**Porto Murtinho**	**8.73**	**122**	*e*P	**Pn**	**20 29 19.2**	**0.0**
BDQN	**Bodoquena, MS**	**8.97**	**112**	*e*P	**Pn**	**20 29 23.4**	**+0.9**
SALV	**Santo Antonio**	**9.60**	**83**	*e*P	**Pn**	**20 29 32.4**	**+1.3**
AQDB	**Aquidauana**	**9.91**	**110**	Pn	**Pn**	**20 29 35.9**	**+0.5**
PDRB	**Porto dos Gac**	**10.25**	**58**	*e*P	**Pn**	**20 29 38.1**	**-2.0**
CLDB	**Colider**	**11.43**	**58**	*e*P	**Pn**	**20 29 55.0**	**-1.3**
SNDB	**Serra Nova Dou**	**14.80**	**71**	*e*P	Pn	20 30 37.2	-5.2
ATAH	**Atahualpa**	**16.03**	**307**	LR	LR	20 38 06.5	
	comp=Z,110nm,18.7s,baz=100,slow=43						
VA03	**San Esteban**	**16.09**	**195**	Pn	**Pn**	**20 30 59.6**	**+0.4**
VA03				IAmb	IAmb	20 31 41.3	
	comp=Z,35nm,1.5s						
PEL	**Peldehue**	**16.48**	**195**	Pn	**Pn**	**20 31 04.7**	**+0.4**
PEL				IAmb	IAmb	20 31 40.3	
	comp=Z,24nm,1.2s						
PLCA	**Paso Flores**	**23.80**	**189**	P	**P**	**20 32 24.8**	**-0.9**
RUSC	**La Rusia**	**24.15**	**342**	P	**P**	**20 32 28.2**	**-1.4**
RUSC				IAmb	IAmb	20 32 41.2	
	comp=Z,13nm,1.5s						
BAUV	**El Baul**	**26.13**	**355**	P	**P**	**20 32 48.1**	**+0.9**
PDAR	**Pinedale Array**	**72.10**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.25**	**351**	P	Pn	21 15 48.8	-7.6
	196nm,0.9s,baz=199,slow=18,SNR=2.5						
JCJ				S	Sn	21 16 33.6	-12
	149nm,0.5s,baz=282,slow=22,SNR=5.5						
JCJ	**Chichijima**	**4.25**	**351**	Pn	**Pn**	**21 15 54.9**	**-1.5**
JCJ				Sn	**Sn**	**21 16 45.1**	**-0.7**
INU	**Inuyama**	**13.45**	**339**	Pn	**Pn**	**21 17 55.4**	**-2.3**
JGF	**Kuroka**	**13.57**	**340**	Pn	**Pn**	**21 17 57.7**	**-1.6**
MJAR	**Matsushiro Arr**	**14.21**	**344**	P	**Pn**	**21 18 06.4**	**-1.0**
	0.9nm,0.6s,baz=129,slow=12,SNR=4.3						
JMM	**Marumori**	**15.05**	**354**	Pn	**Pn**	**21 18 16.8**	**-1.0**
JMM				IAmb	IAmb	21 18 47.0	
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**19.42**	**322**	P	**Pn**	**21 19 13.2**	**+3.0**
	comp=Z,1.8nm,0.4s,baz=145,slow=9.0,SNR=10						
KSAR	**Wonju Array Be**	**19.44**	**322**	P	**P**	**21 19 06.3**	**-1.4**
KS19	**Wonju Array Si**	**19.49**	**322**	P	**P**	**21 19 08.2**	**-0.1**
KS19				IAmb	IAmb	21 19 15.3	
	comp=Z,11nm,1.1s						
NACB	**Ninganchiao**	**19.58**	**278**	P	**P**	**21 19 08.9**	**-0.4**
SSLB	**Suanglung**	**20.17**	**277**	P	**P**	**21 19 16.5**	**+0.7**
SSLB				IAmb	IAmb	21 19 30.0	
	comp=Z,12nm,1.0s						
USRK	**Ussuriysk Ar.**	**23.09**	**340**	P	**P**	**21 19 46.8**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=141,slow=9.3,SNR=2.6						
	comp=Z,1.4nm,0.6s						
MTN	**Manton Dam**	**37.32**	**199**	P	**P**	**21 21 49.8**	**-1.0**
KNRA	**Kununurra**	**40.74**	**201**	P	**P**	**21 22 17.5**	**-1.6**
KNRA				IAmb	IAmb	21 22 54.1	
	comp=Z,8.7nm,1.1s						
WB0	**Warramunga Arr**	**43.19**	**192**	P	**P**	**21 22 38.2**	**-0.8**
WR8	**Warramunga Arr**	**43.35**	**192**	P	**P**	**21 22 39.4**	**-1.0**
WRA	**Warramunga Arr**	**43.37**	**192**	P	**P**	**21 22 40.0**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=11,slow=8.2,SNR=22						
	comp=Z,1.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**44.08**	**204**	P	**P**	**21 22 45.8**	**-0.4**
ASAR	**Alice Springs**	**47.08**	**191**	P	**P**	**21 23 09.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=13,slow=12,SNR=11						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**53.71**	**312**	P	**P**	**21 24 00.8**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=84,slow=9.1,SNR=8.2						
	comp=Z,0.4nm,0.5s						
FORT	**Forrest**	**55.22**	**196**	P	**P**	**21 24 09.1**	**-1.1**
KURK	**Kurchatov**	**56.44**	**317**	P	**P**	**21 24 19.7**	**+1.0**
KURK				IAmb	IAmb	21 24 54.7	
	comp=Z,1.8nm,1.1s						
KURBB	**Kurchatov Arra**	**56.49**	**316**	P	**P**	**21 24 20.1**	**+1.0**
	comp=Z,0.9nm,0.2s,baz=93,slow=7.7,SNR=7.1						
	comp=Z,0.9nm,0.2s						
BOOM	**Boomskoye usch**	**58.19**	**307**	P	**P**	**21 24 32.9**	**+1.4**
D20K	**Etivluk River**	**58.28**	**22**	P	**P**	**21 24 33.2**	**+1.7**
D20K				IAmb	IAmb	21 25 14.0	
	comp=Z,4.7nm,1.1s						
B20K	**Meade River**	**58.55**	**20**	P	**P**	**21 24 33.0**	**-0.2**
D22K	**Ayikyak River**	**59.70**	**22**	P	**P**	**21 24 43.4**	**+2.2**
D22K				IAmb	IAmb	21 24 56.0	
	comp=Z,3.2nm,1.0s						
C23K	**Itkillik River**	**60.65**	**21**	P	**P**	**21 24 48.8**	**+1.2**
C23K				IAmb	IAmb	21 25 22.4	
	comp=Z,3.3nm,1.1s						
BVAR	**Borovoye Array**	**61.61**	**319**	P	**P**	**21 24 55.6**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=84,slow=7.6,SNR=6.0						
	comp=Z,1.1nm,0.3s						
D25K	**Kavik River**	**62.00**	**22**	P	**P**	**21 24 58.6**	**+1.8**
KK31	**Karatay Array**	**62.12**	**308**	P	**P**	**21 24 59.2**	**+1.2**
KK31				IAmb	IAmb	21 25 27.1	
	comp=Z,1.7nm,1.1s						
KKAR	**Karatay Array**	**62.12**	**308**	P	**P**	**21 24 59.3**	**+1.2**
FINES	**FINESS Array B**	**82.01**	**334**	P	**P**	**21 26 55.3**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=63,slow=4.0,SNR=12						
	comp=Z,1.2nm,0.4s						
FINES	**FINESS Array B**	**82.01**	**334**	P	**P**	**21 26 55.5**	**-0.3**

*NEIC **21** 21:21:15.8±1.7, 37.734N±0.010×115.97W±0.03, h15km±8km, Error ellipse: s-maj=2.9km s-min=1.3km az=104.0*

REN 21 21:21:16.3±1.8, 37.71N±0.02×115.99W±0.03, h15km±6km, ML2.6/19, ML2.5/80(NEIC), Error ellipse: s-maj=3.3km s-min=1.9km az=125.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S11A	**Rachel**	**0.20**	**110**		Pg	21 21 20.8	-0.3
S11A					Sg	21 21 24.2	-0.2
S11A				IAML		21 21 25.1	
	comp=N,1μm,0.5s						
S11A				IAML		21 21 25.1	
	comp=E,1μm,0.4s						
R11B	**Troy Canyon, C**	**0.71**	**27**		Pg	21 21 28.6	-1.6
R11B					Sg	21 21 37.5	-2.1
R11B				IAML		21 21 37.7	
	comp=E,136nm,0.4s						
R11B				IAML		21 21 38.3	
	comp=N,120nm,0.2s						
TPNV	**Topopah Spring**	**0.79**	**195**		Pg	21 21 31.4	-0.3
TPNV				Sg	Sg	21 21 42.3	+0.2
TPNV				IAML		21 21 46.2	
	comp=N,145nm,0.5s						
TPNV				IAML		21 21 47.8	
	comp=N,150nm,0.4s						
PRN	**Pahroc Range**	**0.81**	**112**		Pg	21 21 31.6	-0.3
PRN				IAML		21 21 49.3	
	comp=E,245nm,0.5s						
NSP	**Numbskull Pass**	**1.00**	**190**		Pb	21 21 35.4	+0.1
WCT	**Wildcat Mounta**	**1.05**	**209**		Pb	21 21 35.9	-0.3
WCT				IAML		21 21 53.9	
	comp=E,78nm,0.5s						
MCY	**Mercury**	**1.05**	**179**		Pn	21 21 36.8	+0.2
GMN	**Gold Mountain**	**1.09**	**248**		Pb	21 21 36.4	-0.6
GMN				IAML		21 21 54.7	
	comp=N,142nm,0.5s						
SDH	**Striped Hills**	**1.10**	**195**		Pg	21 21 37.6	+0.1
SGV	**South Grapevin**	**1.11**	**229**		Pb	21 21 37.1	-0.1
AMDNV	**Amargosa**	**1.28**	**191**		Pg	21 21 40.6	-0.3
GRAC	**Grapevine Rang**	**1.31**	**237**		Pg	21 21 41.2	-0.3
GRAC	**Grapevine Rang**	**1.31**	**237**		Pb	21 21 40.6	0.0
GRAC				IAML		21 22 01.9	
	comp=N,188nm,0.2s						
GRAC				IAML		21 22 08.2	
	comp=E,110nm,0.3s						
SHPR	**Sheep Range**	**1.38**	**151**		Pb	21 21 41.6	-0.2
LCH	**Last Change Ra**	**1.40**	**250**		Pb	21 21 42.6	+0.4
FURC	**Furnace Creek,**	**1.43**	**210**		Pb	21 21 42.2	-0.4
Q09A	**Carvers**	**1.46**	**320**		Pn	21 21 42.3	0.0
Q09A				IAML		21 22 05.8	
	comp=N,112nm,0.3s						
DSP	**Deep Springs**	**1.61**	**258**		Pn	21 21 44.5	+0.3
DSP				Sg	Sg	21 22 08.3	+0.2
DSP				IAML		21 22 10.1	
	comp=N,44nm,0.7s						
DSP				IAML		21 22 10.5	
	comp=E,51nm,0.5s						
GWY	**Greenwater Val**	**1.62**	**200**		Pn	21 21 45.1	+0.7
GWY				Sg	Sg	21 22 09.2	+0.8
GWY				IAML		21 22 10.4	
	comp=E,54nm,0.5s						
GWY				IAML		21 22 19.1	
	comp=N,57nm,0.5s						
SHOC	**Shoshone, Teco**	**1.82**	**187**		Pn	21 21 45.4	-1.7
SHOC				IAML		21 22 19.7	
	comp=N,74nm,0.3s						
SPR3	**Spring Creek 3**	**1.83**	**45**		Pn	21 21 46.1	-1.4
SPR3				IAML		21 22 14.4	
	comp=N,27nm,0.2s						
NV11	**Mina Array Sit**	**1.85**	**293**		Pn	21 21 47.1	-0.5
PSUT	**Pine Spring**	**1.87**	**63**		Pn	21 21 46.9	-1.1
PSUT				IAML		21 22 15.1	
	comp=N,71nm,0.8s						
PSUT				IAML		21 22 15.5	
	comp=E,63nm,0.4s						
TIN	**Tinemaha, Big**	**1.90**	**250**		Pg	21 21 52.1	-0.7
NVAR	**Mina Array Bea**	**1.96**	**292**		Pn	21 21 49.4	+0.2
NV08	**Mina Array Sit**	**1.96**	**291**		Pn	21 21 49.2	0.0
LHV	**Little Huntoon**	**2.06**	**286**		Pn	21 21 51.5	+1.2
LHV				IAML		21 22 27.6	
	comp=N,50nm,1.0s						
CCUT	**Cedar City**	**2.09**	**94**		Pn	21 21 50.3	-0.7
CCUT				IAML		21 22 23.6	
	comp=N,23nm,0.7s						
CCUT				IAML		21 22 27.4	
	comp=E,33nm,0.5s						
CWC	**Cottonwood Cre**	**2.10**	**233**	Pn	Pn	21 21 49.2	-1.9
CWC					Pg	21 21 55.6	-1.0
V12A	**Nelson**	**2.18**	**155**	Pn	Pn	21 21 51.4	-0.7
V12A					Pg	21 21 57.9	-0.2
V12A				IAML		21 22 29.2	
	comp=E,27nm,0.7s						
V12A				IAML		21 22 29.4	
	comp=N,20nm,0.6s						
RYN	**Ryan**	**2.19**	**295**		Pn	21 21 51.4	-1.0
RYN				IAML		21 22 26.6	
	comp=N,37nm,0.6s						
RYN				IAML		21 22 27.0	
	comp=E,44nm,0.5s						
MTPC	**Mountain Pass**	**2.25**	**171**	Pn	Pn	21 21 52.6	-0.6
MTPC				IAML		21 22 32.9	
	comp=E,21nm,0.8s						
MTPC				IAML		21 22 34.6	
	comp=N,16nm,0.9s						
CLC	**China Lake**	**2.29**	**215**		Pg	21 21 59.2	-1.1
LCMT	**Little Creek M**	**2.30**	**107**		Pn	21 21 52.7	-1.1
SZCU	**Shurtz Canyon**	**2.31**	**92**		Pg	21 22 00.4	-0.1
SZCU				IAML		21 22 33.3	
	comp=N,32nm,0.3s						
SZCU				IAML		21 22 35.8	
	comp=E,42nm,0.3s						
WSHM	**Spangler Hills**	**2.43**	**210**		Pg	21 22 01.4	-1.5
CCCA	**Chr Cany lake**	**2.45**	**207**		Pg	21 22 02.9	-0.4
CCCA				IAML		21 22 56.4	
	comp=E,20nm,4.4s						
MDPB	**Devils Postpil**	**2.45**	**269**	Pg	Pb	21 22 01.3	+1.1
GSC	**Goldstone, Bar**	**2.50**	**196**		Pg	21 22 02.7	-1.4
GSC				IAML		21 22 38.7	
	comp=N,25nm,2.8s						
DUG	**Dugway, Tooele**	**3.50**	**44**	IAML		21 22 34.6	
	comp=N,9.3nm,4.9s						
DUG				IAML		21 24 18.7	
	comp=N,8.7nm,4.5s						

*VAO **21** 21:38:54.4±0.3, 13.87S×44.73W, h0km, mb3.6*
*OSUNB **21** 21:38:55.2±0.2, 13.84S×44.73W, h0km, mR3.2/13, Error ellipse: s-maj=1.4km s-min=1.4km az=0.0*

ISC 21 21:38:56.2±1.0, 13.81S±0.04×44.74W±0.04, h10km, n26, σ1§29/49, Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDBA	**SAO DESIDERIO**	**1.40**	**354**	P	**Pn**	**21 39 22.5**	**+0.6**
SDBA				S	**Sn**	**21 39 40.7**	**+0.3**
SDBA	**SAO DESIDERIO**	**1.40**	**354**	*eP*	**Pn**	**21 39 22.5**	**+0.6**
MC01	**Montes Claros**	**2.98**	**165**	P	**Pn**	**21 39 45.4**	**+1.7**
MC01				S	**Sn**	**21 40 21.2**	**+1.6**
JQT1	**Jequitai-MG**	**3.43**	**174**	P	**Pn**	**21 39 50.8**	**+0.9**
JQT1				S	**Sn**	**21 40 31.4**	**+0.8**
ANA01	**Lindo Horizont**	**3.94**	**101**	P	**Pn**	**21 39 59.0**	**+2.1**
ANA01				S	**Sn**	**21 40 44.0**	**+0.7**
BAT2	**UHE Batalha**	**4.40**	**216**	P	**Pn**	**21 40 04.1**	**+0.9**
BAT2				S	**Sn**	**21 40 55.0**	**+0.4**
BAT3	**Ipameri**	**4.47**	**217**	P	**Pn**	**21 40 05.1**	**+0.9**
BAT3				S	**Sn**	**21 40 56.3**	**-0.1**
DIAM	**Diamantina, MG**	**4.58**	**167**	P	**Pn**	**21 40 05.8**	**+0.1**
DIAM	**Diamantina, MG**	**4.58**	**167**	*eP*	**Pn**	**21 40 04.2**	**-1.6**
DIAM				*eS*	**Sn**	**21 40 58.2**	**-0.9**
PMNB	**Patos De Minas**	**4.98**	**199**	P	**Pn**	**21 40 12.9**	**+1.8**
PMNB				S	**Sn**	**21 41 08.7**	**-0.2**
PMNB	**Patos De Minas**	**4.98**	**199**	*eP*	**Pn**	**21 40 10.4**	**-0.8**
PMNB				*eS*	**Sn**	**21 41 08.7**	**-0.2**
SFA1	**Serra Facao**	**5.02**	**214**	P	**Pn**	**21 40 12.8**	**+1.1**
SFA1				S	**Sn**	**21 41 09.4**	**-0.5**
NBIT	**Itapeh - BA**	**5.26**	**103**	P	**Pn**	**21 40 15.6**	**+0.6**
NBIT				S	**Sn**	**21 41 13.7**	**-2.0**
CMC01	**Camacan, BA**	**5.29**	**108**	P	**Pn**	**21 40 17.1**	**+1.8**
CMC01				S	**Sn**	**21 41 15.7**	**-0.6**
NBPN	**Ponto Novo - B**	**5.33**	**57**	S	**Sn**	**21 41 15.5**	**-1.9**
IPMB	**Ipameri, GO**	**5.33**	**218**	P	**Pn**	**21 40 16.7**	**+0.8**
IPMB				S	**Sn**	**21 41 14.7**	**-2.7**
IPMB	**Ipameri, GO**	**5.33**	**218**	*eP*	**Pn**	**21 40 15.8**	**-0.1**
IPMB				*eS*	**Sn**	**21 41 16.0**	**-1.5**
GUA01	**Guaratinga, BA**	**5.51**	**121**	P	**Pn**	**21 40 20.8**	**+2.5**
GUA01				S	**Sn**	**21 41 19.6**	**-2.2**
GUA01	**Guaratinga, BA**	**5.51**	**121**	*eP*	**Pn**	**21 40 17.6**	**-0.7**
GUA01				*eS*	**Sn**	**21 41 19.8**	**-1.9**
SMTB	**Santa Maria do**	**5.65**	**330**	P	**Pn**	**21 40 21.4**	**+1.0**
SMTB				S	**Sn**	**21 41 24.6**	**-0.8**
SMTB	**Santa Maria do**	**5.65**	**330**	*eP*	**Pn**	**21 40 20.1**	**-0.3**
SMTB				*eS*	**Sn**	**21 41 25.9**	**+0.4**
ITU3	**Corumbazu**	**5.92**	**222**	P	**Pn**	**21 40 24.8**	**+0.8**
ITU3				S	**Sn**	**21 41 30.2**	**-1.8**
SJMB	**Sao Joao De Ma**	**5.95**	**145**	P	**Pn**	**21 40 24.3**	**-0.1**
SJMB				S	**Sn**	**21 41 31.0**	**-1.6**
SJMB	**Sao Joao De Ma**	**5.95**	**145**	*eP*	**Pn**	**21 40 23.3**	**-1.1**
SJMB				*eS*	**Sn**	**21 41 30.8**	**-1.8**
SNDB	**Serra Nova Dou**	**6.64**	**285**	P	**Pn**	**21 40 35.4**	**+1.4**
SNDB				S	**Sn**	**21 41 51.1**	**+1.3**
SNDB	**Serra Nova Dou**	**6.64**	**285**	*eP*	**Pn**	**21 40 33.6**	**-0.4**
SNDB				*eS*	**Sn**	**21 41 50.9**	**+1.0**

*NEIC **21** 22:07:19.2±2.4, 43.76N±0.03×105.27W±0.06, h0km±1km, ML3.7/88, Error ellipse: s-maj=8.3km s-min=2.9km az=236.0*
*IDC **21** 22:07:21.6±1.3, 43.90N×105.67W, h0km, mb4.0/4, mbtmp4.0/6, ML3.6/2, MS3.0/5, Error ellipse: s-maj=37.2km s-min=8.4km az=148.0*

ISC 21 22:07:20.5±0.8, 43.72N±0.06×105.39W±0.04, h0km, n42, σ1§09/31, mb4.2/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.06**	**67**		**Pg**	**22 07 40.6**	**-0.2**
K22A	**Casper**	**1.35**	**218**		**Pg**	**22 07 46.4**	**0.0**
K22A				IAML		22 08 08.2	
	652nm,0.6s						
K22A				IAML		22 08 10.6	
	700nm,0.3s						
RLMT	**Red Lodge**	**3.11**	**298**		**Pn**	**22 08 12.4**	**+1.5**
BW06	**Boulder Array**	**3.19**	**254**		**Pn**	**22 08 13.7**	**+1.7**
BW06				IAML		22 09 21.5	
	101nm,1.2s						
PD31	**Pinedale Array**	**3.19**	**254**		**Pn**	**22 08 13.6**	**+1.5**
PDAR	**Pinedale Array**	**3.19**	**254**	Pn	**Pn**	**22 08 14.7**	**+2.6**
	7.1nm,0.3s,baz=70,slow=16,SNR=43						
PDAR				Lg	Lg	22 08 57.0	
	22nm,0.3s,baz=333,slow=5.6,SNR=14						
	9.5nm,0.3s						
PDAR	**Pinedale Array**	**3.19**	**254**		**Pn**	**22 08 13.7**	**+1.5**
YNE	**Yellowstone No**	**3.55**	**293**		**Pn**	**22 08 17.5**	**+0.4**
YNE				IAML		22 09 18.7	
	comp=E,82nm,0.4s						
YNE				IAML		22 09 34.3	
	comp=N,93nm,0.9s						
YMP	**Mirror Lake Pl**	**3.57**	**288**		**Pn**	**22 08 18.4**	**+1.0**
YMP				IAML		22 09 21.6	
	comp=N,150nm,0.7s						
YMP				IAML		22 09 21.7	
	comp=E,130nm,0.3s						
LKWY	**Lake**	**3.70**	**285**		**Pn**	**22 08 19.4**	**+0.2**
LKWY				IAML		22 09 29.5	
	comp=E,82nm,1.5s						
LKWY				IAML		22 09 59.5	
	comp=E,71nm,1.8s						
OGNE	**Ogallala**	**3.73**	**137**		**Pn**	**22 08 20.5**	**+1.1**
LOHW	**Long Hollow**	**3.78**	**270**		**Pn**	**22 08 21.1**	**+0.9**
H17A	**Grant Village**	**3.79**	**282**		**Pn**	**22 08 21.9**	**+1.4**
H17A					**Pg**	**22 08 33.6**	**+0.4**
H17A				IAML		22 09 26.2	
	comp=E,82nm,2.3s						
H17A				IAML		22 09 31.1	
	comp=N,70nm,1.7s						
FLWY	**Flagg Ranch**	**3.85**	**277**		**Pn**	**22 08 21.3**	**+0.2**
FLWY				Pg	**Pg**	**22 08 33.5**	**-0.8**
FLWY				IAML		22 09 33.0	
	comp=N,127nm,1.5s						
FLWY				IAML		22 09 38.2	
	comp=N,160nm,2.1s						
MOOW	**Moose Ponds**	**3.88**	**272**		**Pn**	**22 08 22.8**	**+1.2**
SNOW	**Snow King Moun**	**3.90**	**268**		**Pn**	**22 08 22.4**	**+0.4**
SNOW				Pg	**Pg**	**22 08 35.7**	**+0.4**
SNOW				IAML		22 09 45.7	
	comp=N,131nm,1.3s						
SNOW				IAML		22 09 55.5	
	comp=N,130nm,1.6s						
ISCO	**Idaho Springs**	**3.92**	**182**		**Pn**	**22 08 22.5**	**+0.3**
ISCO				IAML		22 09 30.5	
YNR	**Norris Junctio**	**3.93**	**286**	Pg	**Pg**	**22 08 34.6**	**-1.1**
YPP	**Pitchstone Pla**	**3.94**	**280**		**Pn**	**22 08 23.2**	**+0.7**
YPP					**Pg**	**22 08 34.3**	**-1.7**
YFT	**Old Faithful**	**3.99**	**282**		**Pg**	**22 08 36.6**	**-0.2**
YMR	**Madison River**	**4.12**	**285**	IAML		22 09 51.7	
	comp=E,82nm,2.1s						
YMR				IAML		22 10 17.8	
	comp=N,92nm,1.4s						
YHB	**Horse Butte**	**4.29**	**286**	IAML		22 10 02.8	
	comp=N,46nm,2.0s						
YHL	**Hebgen Lake**	**4.31**	**287**	IAML		22 09 51.0	
	comp=N,59nm,1.4s						
YHL				IAML		22 09 51.0	
	comp=E,74nm,1.6s						
E28A	**Huff**	**4.38**	**48**	IAML		22 09 46.6	
	comp=E,128nm,0.7s						
RDMU	**Red Mountain**	**4.42**	**226**	IAML		22 09 46.2	
	comp=N,83nm,2.1s						
RDMU				IAML		22 10 25.7	
	comp=E,87nm,1.2s						
Q24A	**Divide**	**4.76**	**178**	IAML		22 09 52.5	
	comp=N,35nm,1.2s						
BOZ	**Bozeman (W)**	**4.83**	**295**	IAML		22 09 54.5	
	comp=N,40nm,2.0s						
HWUT	**Hardware Ranch**	**5.02**	**247**	IAML		22 10 11.4	
	comp=N,80nm,1.5s						
HWUT				IAML		22 10 13.9	
	comp=N,58nm,0.9s						
BSUT	**Blindstream Ca**	**5.11**	**233**	IAML		22 10 25.3	
	comp=E,42nm,2.8s						
BSUT				IAML		22 10 37.8	
	comp=N,36nm,2.5s						
ECSD	**EROS Data Cent**	**6.36**	**87**	Pn	**Pn**	**22 08 55.4**	**0.0**
Q16A	**Castle Valley**	**6.48**	**224**		**Pn**	**22 08 55.8**	**-1.4**
ELK	**Elko**	**7.89**	**251**	LR	LR	22 12 14.9	
	comp=N,31nm,21.8s,baz=5.5,slow=38						
I10CA	**LAC DU BONNET**	**9.11**	**41**	I	I	23 06 30.0	
	baz=222,slow=339,SNR=0.3						
ULM	**Lac du Bonnet**	**9.21**	**42**	Pn	**Pn**	**22 09 33.7**	**-0.8**
	comp=N,1.5nm,0.3s,baz=203,slow=10,SNR=6.5						
ULM				Lg	Lg	22 12 07.7	
	comp=N,0.4nm,0.3s,baz=315,slow=20,SNR=3.4						
	comp=N,2.6nm,0.3s						
NEW	**Newport**	**9.34**	**303**	LR	LR	22 13 22.2	
	comp=N,147nm,19.8s,baz=262,slow=40						
NVAR	**Mina Array Bea**	**11.08**	**246**	LR	LR	22 14 47.8	
	comp=N,189nm,18.1s,baz=354,slow=41						
TXAR	**Lajitas Array**	**14.43**	**174**	Pg	P	22 11 48.5	+55
	baz=354,slow=19,SNR=5.6						
TXAR				Lg	Lg	22 14 59.3	
	comp=N,0.1nm,0.3s,baz=0.6,slow=36,SNR=3.5						
TXAR				LR	LR	22 15 34.4	
	comp=N,51nm,21.5s,baz=352,slow=34						
TKL	**Tuckaleechee C**	**18.45**	**109**	LR	LR	22 18 36.0	
	comp=N,69nm,21.7s,baz=326,slow=36						
ARCES	**ARCESS Array B**	**61.46**	**18**	P	**P**	**22 17 38.1**	**-0.1**
	comp=N,3.4nm,1.0s,baz=340,slow=7.8,SNR=4.3						
	comp=N,3.4nm,1.0s						
FINES	**FINESS Array B**	**68.08**	**23**	P	**P**	**22 18 22.2**	**+0.7**
	comp=N,4.3nm,1.0s,baz=320,slow=7.8,SNR=3.5						
	comp=N,4.3nm,1.0s						
ZALV	**Zalesovo Beam**	**82.31**	**354**	P	**P**	**22 19 43.6**	**+0.1**
	comp=N,0.6nm,0.5s,baz=328,slow=5.1,SNR=2.4						
	comp=N,0.4nm,0.5s						
MKAR	**Makanchi Array**	**89.61**	**355**	P	**P**	**22 20 19.2**	**-0.7**
	comp=N,0.2nm,0.7s,baz=9.2,slow=4.5,SNR=3.5						
	comp=N,0.2nm,0.7s						

*MOS **21** 22:29:19.5±1.0, 0.91S×97.91E, h12km, mb5.3/49, MS4.6/7, Error ellipse: s-maj=9.5km s-min=4.8km az=108.1*
*BJI **21** 22:29:20.3, 1.33S×97.93E, h21km, mB5.3/36, mb5.0/73, Ms5.1/66, Ms7 4.8/65*
*IDC **21** 22:29:21.7±0.4, 0.88S×97.90E, h0km, mb4.5/29, mbtmp4.5/32, ML4.5/3, MS4.1/31, Error ellipse: s-maj=13.4km s-min=9.2km az=42.0*
*NEIC **21** 22:29:23.8, 0.90S×97.89E, h12km*
*NEIC **21** 22:29:23.7±2.0, 0.91S±0.06×97.89E±0.07, h10km±1km, mb5.2/86, Mww4.7/9, Error ellipse: s-maj=12.5km s-min=9.7km az=244.0*
*NEIC **21** 22:29:23.8, 0.50S×97.99E, h12km, Moment Tensor Solution. Duration: 1§2 Moment tensor: Scale 10^{16}Nm; M_{rr}1.14; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$-0.76; $M_{r\theta}$-0.78; $M_{\theta\phi}$0.29; $M_{\phi r}$0.65; Fault plane solution: $M_0$1.46000×10^{16} NP1: ϕ_s158.39000°, δ24.01000°, λ109.22000°. NP2: ϕ_s317.50000°, δ67.40000°, λ81.66000°. Principal axes: T 1.5723, Plg67.0000°, Azm213.0000°; N -0.2701, Plg8.0000°, Azm321.0000°; P -1.3022, Plg22.0000°, Azm54.0000°;*
*GCMT **21** 22:29:24.8±0.4, 1.08S±0.03×97.58E±0.02, h12km, MW4.9/67, Moment Tensor Solution. s20,c24; s67,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.25±.06; $M_{\theta\theta}$-0.47±.05; $M_{\phi\phi}$-0.78±.06; $M_{r\theta}$1.27±.19; $M_{\theta\phi}$0.49±.04; $M_{\phi r}$-2.32±.17; Best double couple: $M_0$2.90200×10^{16} NP1: ϕ_s320.00000°, δ12.00000°, λ79.00000°. NP2: ϕ_s151.00000°, δ78.00000°, λ92.00000°. Principal axes: T 2.9640, Plg57.0000°, Azm64.0000°; N -0.1280, Plg2.0000°, Azm330.0000°; P -2.8390, Plg33.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **21** 22:29:24.9±0.6, 1°S×2°×9°E±°, h25km±6km, M5.0/38, mb5.2/38, mB5.5/32, MLv5.3/24, Mw(mB)5.0/32, MwMwp4.7/7, Mwp5.0/7*

ISC 21 22:29:23.2±0.6, 0.95S±0.03×97.86E±0.04, h12km±3km, n426, σ1§70/416, mb5.0/150, MS4.4/56, 14C-13D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.98**	**26**	P	**Pn**	**22 29 42.4**	**-0.4**
PBSI				S	**Sn**	**22 29 56.6**	**-0.1**
SISI	**Saibi**	**1.29**	**107**	P	**Pn**	**22 29 46.7**	**-0.3**
SISI				S	**Sb**	**22 30 03.2**	**-0.8**
GSI	**Gunungsitoli**	**2.25**	**353**		**Pn**	**22 29 59.6**	**-0.7**
**

SBSI	**Sibolga**	**2.69**	**23**	P		**Pn**	**22 30 07.9**	**+1.6**		
PPSI	**Pulau Pagai**	**2.81**	**130**	P		**Pn**	**22 30 07.3**	**-0.7**		
PPSI				S		**Sn**	**22 30 38.0**	**-3.8**		
SNSI	**Sinabang, Aceh**	**3.67**	**335**	P		**Pn**	**22 30 19.7**	**-0.1**		
SNSI				S		**Sn**	**22 30 59.7**	**-3.3**		
RPSI	**Rantau Prapat**	**3.77**	**16**			**Pn**	**22 30 21.2**	**0.0**		
RPSI	**Rantau Prapat**	**3.77**	**16**			**Pn**	**22 30 21.1**	**0.0**		
KRJI	**Kerinci**	**3.78**	**108**	P		**Pn**	**22 30 22.0**	**+0.6**		
KRJI				S		**Sn**	**22 31 04.9**	**-1.0**		
PSI	**Prapat**	**3.87**	**16**	Pn		**Pn**	**22 30 21.1**	**-1.6**		
	26nm,0.3s,baz=186,slow=10.0,SNR=44									
	78nm,0.4s									
PSI	**Prapat**	**3.87**	**16**	P		**Pn**	**22 30 22.1**	**-0.6**		
KCSI	**Kotacane, Aceh**	**4.44**	**359**	P		**Pn**	**22 30 29.2**	**-1.3**		
KCSI				S		**Sn**	**22 31 16.4**	**-5.8**		
TSI	**Tuntungan**	**4.48**	**9**	P		**Pn**	**22 30 32.6**	**+1.7**		
MASI	**Maura Aman, Be**	**4.89**	**117**	P		**Pn**	**22 30 36.7**	**0.0**		
MLSI	**Meulaboh, Aceh**	**5.38**	**344**	P		**Pn**	**22 30 44.9**	**+1.6**		
	2.1nm4µm237nm,1.0s									
KSI	**Kapahiang**	**5.44**	**120**	P		**Pn**	**22 30 43.0**	**-1.3**		
LHMI	**Lhok Sumawe**	**6.20**	**352**	Pn		**Pn**	**22 30 53.1**	**-1.6**		
LHMI	**Lhok Sumawe**	**6.20**	**352**	P		**Pn**	**22 30 54.8**	**+0.1**		
	1.4nm3µm3µm96nm,0.5s									
IPM	**Ipoh**	**6.25**	**30**			**Pn**	**22 30 55.9**	**+0.5**		
IPM	**Ipoh**	**6.25**	**30**	P		**Pn**	**22 30 56.4**	**+1.0**		
BTDF	**Bukit Timah Da**	**6.35**	**69**	P		**Pn**	**22 30 57.9**	**+1.3**		
MYKOM	**Kota Tinggi**	**6.58**	**66**			**Pn**	**22 30 59.5**	**-0.4**		
MYKOM	**Kota Tinggi**	**6.58**	**66**	P		**Pn**	**22 31 00.6**	**+0.7**		
DSRI	**Dabo**	**6.74**	**86**	P		**Pn**	**22 31 03.2**	**+1.2**		
	1.2nm3µm4µm308nm,1.0s									
KULM	**Kulim**	**6.80**	**24**			**Pn**	**22 31 02.6**	**-0.2**		
KULM	**Kulim**	**6.80**	**24**	P		**Pn**	**22 31 03.6**	**+0.8**		
PMBI	**Palembang**	**7.19**	**106**	Pn		**Pn**	**22 31 07.5**	**-0.7**		
MDSI	**Maura Dua**	**7.23**	**119**	P		**Pn**	**22 31 08.7**	**0.0**		
	1.2nm4µm337nm,0.9s									
LWLI	**Liwa**	**7.40**	**123**	P		**Pn**	**22 31 10.1**	**-1.1**		
KLI	**Kotalumi**	**8.00**	**119**	P		**Pn**	**22 31 18.8**	**-0.6**		
	1.4nm2µm4µm375nm,1.2s									
KASI	**Kota Agung**	**8.04**	**125**	P		**Pn**	**22 31 18.1**	**-1.8**		
	2µm142nm,0.8s									
PPBI	**Pangkal Pinang**	**8.37**	**98**	P		**Pn**	**22 31 24.4**	**0.0**		
BLSI	**Bandar Lampung**	**8.58**	**121**	P		Pn	22 31 39.1	+12		
TPI	**Tanjungpandan**	**9.96**	**101**	P		**Pn**	**22 31 45.8**	**-0.4**		
DBJI	**Dramaga**	**10.47**	**122**	P		**Pn**	**22 31 53.6**	**+0.3**		
	91nm,0.7s									
COCO	**West Island**	**11.21**	**185**	Pn		**Pn**	**22 32 02.2**	**-1.3**		
COCO	**West Island**	**11.21**	**185**	P		**Pn**	**22 32 02.2**	**-1.3**		
BBJI	**Bungbulang**	**11.71**	**124**	P		**Pn**	**22 32 10.2**	**-0.2**		
KPJI	**Karang Pucung**	**12.73**	**120**	P		**Pn**	**22 32 22.8**	**-1.4**		
	1µm45nm,0.9s									
SMRI	**Semarang**	**13.94**	**116**	Pn		**Pn**	**22 32 38.0**	**-2.7**		
SMRI	**Semarang**	**13.94**	**116**	P		**Pn**	**22 32 42.6**	**+1.9**		
SMRI	**Semarang**	**13.94**	**116**	P		**Pn**	**22 32 41.6**	**+0.9**		
	140nm,1.0s									
SBUM	**Sibu**	**14.75**	**77**			**Pn**	**22 32 50.3**	**-1.6**		
SBUM	**Sibu**	**14.75**	**77**	P		**Pn**	**22 32 52.7**	**+0.8**		
NGJI	**Ngawi**	**14.99**	**116**	P		**P**	**22 33 03.6**	**+3.1**		
DLV	**Lat**	**16.60**	**39**	Pn		**Pn**	**22 33 12.4**	**-3.7**		
DLV	**Lat**	**16.60**	**39**	P		**Pn**	**22 33 16.9**	**+0.8**		
MTKI	**Muara Teweh, K**	**17.04**	**90**	P		**Pn**	**22 33 20.8**	**-0.7**		
	2µm79nm,0.9s									
BBKI	**Banjar Baru**	**17.16**	**99**	P		**Pn**	**22 33 22.5**	**-0.5**		
	7µm101nm,1.0s									
JAGI	**Jajag, Banyuwa**	**17.87**	**115**			**Pn**	**22 33 28.7**	**-3.2**		
JAGI	**Jajag, Banyuwa**	**17.87**	**115**	P		**P**	**22 33 33.8**	**+1.3**		
JAGI	**Jajag, Banyuwa**	**17.87**	**115**	P		P	22 33 43.5	+11		
PALK	**Pallekele**	**18.96**	**296**	P		**Pn**	**22 33 46.7**	**+1.4**		
	0.5nm,0.3s,baz=110,slow=8.6,SNR=16									
PALK				S		**Sn**	**22 37 18.3**	**+0.6**		
	7.4nm,0.9s,baz=187,slow=5.3,SNR=2.0									
	45nm,1.0s									
PALK	**Pallekele**	**18.96**	**296**			**P**	**22 33 43.5**	**-1.1**		
PALK	**Pallekele**	**18.96**	**296**	P		**P**	**22 33 43.5**	**-1.1**		
PALK				pmax	pmax					
	comp=Z,51nm,1.0s									
BKB	**Balikpapan**	**19.04**	**91**	P		**P**	**22 33 45.0**	**-0.4**		
BKB				IAmb	IAmb		22 33 55.3			
	comp=Z,211nm,1.2s									
BKB	**Balikpapan**	**19.04**	**91**	P		**Pn**	**22 33 47.0**	**+0.8**		
BKB	**Balikpapan**	**19.04**	**91**	P		Pn	22 33 54.6	+8.4		
CM31	**Chiang Mai Arr**	**19.31**	**3**	Pn		**Pn**	**22 33 49.4**	**0.0**		
CMAR	**Chiang Mai Arr**	**19.31**	**3**	P		**Pn**	**22 33 49.3**	**-0.2**		
	comp=Z,1.3nm,0.3s,baz=194,slow=10,SNR=39									
CMAR				LR	LR		22 40 45.4			
	comp=Z,367nm,19.8s,baz=205,slow=36									
	comp=Z,16nm,0.9s									
CMAR	**Chiang Mai Arr**	**19.31**	**3**	*i* P		**Pn**	**22 33 49.2**	**-0.2**		
CMAR				pmax	pmax					
	comp=Z,17nm,0.9s									
CHTO	**Chiang Mai**	**19.67**	**3**			**P**	**22 33 51.4**	**-0.9**		
CHTO	**Chiang Mai**	**19.67**	**3**	P		**Pn**	**22 33 53.6**	**-0.1**		
CHTO	**Chiang Mai**	**19.67**	**3**	P		**P**	**22 33 51.4**	**-0.9**		
CHTO				pmax	pmax					
	comp=Z,37nm,1.1s									
TWSI	**Taliwang, Sumb**	**20.46**	**113**	P		Pn	22 34 07.7	+4.6		
MYLDM	**Lahad Datu**	**21.50**	**73**	P		**P**	**22 34 11.8**	**-0.4**		
MYLDM				IAmb	IAmb		22 34 42.3			
	comp=Z,237nm,1.4s									
MYLDM	**Lahad Datu**	**21.50**	**73**	P		**P**	**22 34 12.8**	**+0.6**		
PCI	**Palu**	**21.98**	**90**	P		**P**	**22 34 17.3**	**0.0**		
	comp=Z,3µmcomp=Z,148nm,1.3s									
TTSI	**Tana Toraja**	**22.05**	**96**	P		**P**	**22 34 18.3**	**+0.2**		
	comp=Z,2µmcomp=Z,86nm,1.5s									
MPSI	**Mapaga**	**22.08**	**87**	P		**P**	**22 34 18.1**	**-0.3**		
	comp=Z,1µmcomp=Z,99nm,1.3s									
SPSI	**Sidrap Palu**	**22.09**	**98**	P		**P**	**22 34 21.0**	**+2.4**		
	comp=Z,1µmcomp=Z,54nm,1.4s									
KAPI	**Kappang**	**22.23**	**101**	P		**P**	**22 34 19.4**	**-0.6**		
	comp=Z,37nm,1.0s,baz=264,slow=11,SNR=10									
KAPI				S		**S**	**22 38 19.0**	**-5.8**		
	comp=Z,11nm,0.3s,baz=173,slow=17,SNR=4.1									
KAPI				LR	LR		22 43 37.8			
	comp=Z,941nm,19.1s,baz=242,slow=39									
	comp=Z,37nm,1.0s									
KAPI	**Kappang**	**22.23**	**101**			**P**	**22 34 19.3**	**-0.8**		
KAPI				IAmb	IAmb		22 34 49.0			
	comp=Z,84nm,1.0s									
KAPI	**Kappang**	**22.23**	**101**	P		**P**	**22 34 21.2**	**+1.1**		
KAPI	**Kappang**	**22.23**	**101**	*i* P		**P**	**22 34 20.1**	**0.0**		
KAPI				pmax	pmax					
	comp=Z,80nm,1.2s									
BNSI	**Bone**	**22.49**	**99**	P		**P**	**22 34 22.1**	**-0.7**		
	comp=Z,2µmcomp=Z,189nm,1.2s									
BKSI	**Bulukumba**	**22.65**	**102**	P		**P**	**22 34 23.4**	**-1.1**		
	comp=Z,1µmcomp=Z,64nm,0.9s									
TOLI2	**Tolitoli**	**23.02**	**85**			**P**	**22 34 26.2**	**-2.2**		
TOLI2				IAmb	IAmb		22 34 27.9			
	comp=Z,56nm,0.9s									
TOLI2	**Tolitoli**	**23.02**	**85**	P		**P**	**22 34 27.1**	**-1.3**		
QIZ	**Qiongzhong**	**23.08**	**30**	P		**P**	**22 34 28.9**	**-0.1**		
QIZ				S		**S**	**22 38 43.6**	**+3.5**		
QIZ				LR	LR					
	comp=Z,2µm,11.8s									
QIZ				LR	LR					
	comp=Z,1µm,11.4s									
QIZ				LR	LR					
	comp=Z,2µm,11.8s									
WBSI	**Waikabubak, Su**	**23.10**	**113**	P		**P**	**22 34 26.2**	**-3.0**		
	comp=Z,50nm,1.1s									
BSSI	**Bau Bau, Buton**	**23.17**	**103**	P		**P**	**22 34 30.2**	**+0.3**		
	comp=Z,1µmcomp=Z,107nm,1.0s									
APSI	**Ampana**	**23.79**	**90**	P		**P**	**22 34 40.7**	**+4.6**		
	comp=Z,2µmcomp=Z,146nm,1.3s									
MRSI	**Marisa**	**24.13**	**87**	P		**P**	**22 34 38.1**	**-1.2**		
	comp=Z,2µmcomp=Z,157nm,1.3s									
BRDH	**Bariadhala**	**24.25**	**346**	LR	LR		22 45 23.8			
	comp=Z,950nm,21.6s,baz=181,slow=40									
KAAM	**Kaadhehdhoo**	**24.90**	**273**	P		**P**	**22 34 46.9**	**+0.5**		
KAAM				IAmb	IAmb		22 34 51.7			
	comp=Z,71nm,1.1s									
LUWI	**Luwuk**	**24.91**	**90**			**P**	**22 34 45.2**	**-1.3**		
LUWI	**Luwuk**	**24.91**	**90**	P		**P**	**22 34 46.3**	**-0.1**		
LUWI	**Luwuk**	**24.91**	**90**	P		**P**	**22 34 46.7**	**+0.3**		
	comp=Z,2µmcomp=Z,128nm,1.1s									
EDFI	**Ende, Flores**	**24.96**	**109**	P		**P**	**22 34 42.4**	**-4.6**		
HMDM	**Hanimaadhoo**	**25.79**	**288**	P		**P**	**22 34 52.5**	**-1.8**		
TNCH	**TengChong**	**25.83**	**1**	P		**P**	**22 34 56.1**	**+1.3**		
TNCH				pP	sP		22 34 58.6	+0.2		
TNCH				S	S		**22 39 23.9**	**-0.6**		
TNCH				pmax	pmax					
	comp=Z,82nm,1.2s									
TNCH				pmax	pmax					
	comp=Z,450nm,4.8s									
TNCH				LR	LR					
	comp=Z,2µm,11.8s									
TNCH				LR	LR					
	comp=Z,1µm,10.0s									
TNCH				LR	LR					
	comp=Z,3µm,11.1s									
H08S2	**Diego Garcia H**	**26.14**	**255**	T		T	23 02 15.7			
	baz=76,slow=75,SNR=3102									
H08S3	**Diego Garcia H**	**26.14**	**255**	T		T	23 02 17.2			
	baz=76,slow=75,SNR=3528									
H08S1	**Diego Carcia H**	**26.16**	**255**	T		T	23 02 18.5			
	baz=76,slow=75,SNR=1774									
KMI	**Kunming**	**26.35**	**10**	⇑P		**P**	**22 35 01.6**	**+2.1**		
KMI				S		**S**	**22 39 41.3**	**+8.6**		
KMI				pmax	pmax					
	comp=Z,55nm,1.6s									
KMI				pmax	pmax					
	comp=Z,450nm,5.0s									
KMI				LR	LR					
	comp=Z,680nm,17.0s									
KMI				LR	LR					
	comp=Z,1µm,16.9s									
KMI				LR	LR					
	comp=Z,560nm,19.7s									
SHL	**Shillong**	**26.98**	**348**			**P**	**22 35 04.9**	**-0.4**		
SHL	**Shillong**	**26.98**	**348**	P		**P**	**22 35 04.9**	**-0.4**		
SHL				pmax	pmax					
	comp=Z,135nm,1.2s									
TGY	**Tagaytay City**	**27.32**	**56**	LR	LR		22 47 35.1			
	comp=Z,231nm,18.4s,baz=280,slow=40									
PZH	**PanZhiHua**	**27.55**	**8**	P		**P**	**22 35 10.9**	**+0.7**		
PZH				S		**S**	**22 39 54.3**	**+2.8**		
PZH				pmax	pmax					
	comp=Z,20nm,1.2s									
PZH				pmax	pmax					
	comp=Z,340nm,6.9s									
PZH				LR	LR					
	comp=Z,780nm,14.5s									
PZH				LR	LR					
	comp=Z,1µm,12.0s									
PZH				LR	LR					
	comp=Z,1µm,12.6s									
SOEI	**Soe**	**27.69**	**109**	P		**P**	**22 35 13.4**	**+1.7**		
SANI	**Sanana**	**28.14**	**93**	P		**P**	**22 35 14.7**	**-0.9**		
SANI	**Sanana**	**28.14**	**93**	P		**P**	**22 35 14.5**	**-1.1**		
GYA	**Guiyang**	**28.54**	**17**	⇑P		**P**	**22 35 20.1**	**+1.0**		
GYA				pmax	pmax					
	comp=Z,41nm,1.1s									
GYA				LR	LR					
	comp=Z,2µm,14.2s									
GYA				LR	LR					
	comp=Z,3µm,15.2s									
GYA				LR	LR					
	comp=Z,2µm,11.9s									
PSA00	**Pilbara Seismi**	**29.66**	**135**			**P**	**22 35 29.4**	**+0.4**		
EVN	**Everest**	**30.63**	**341**			**P**	**22 35 38.1**	**-0.1**		
EVN				IAmb	IAmb		22 35 55.6			
	comp=Z,21nm,1.0s									
LSA	**Lhasa**	**31.14**	**349**	P		**P**	**22 35 43.8**	**+1.3**		
LSA				IAmb	IAmb		22 35 54.2			
	comp=Z,49nm,1.0s									
LSA	**Lhasa**	**31.14**	**349**	P		**P**	**22 35 43.8**	**+1.3**		
LSA				pmax	pmax					
	comp=Z,49nm,1.0s									
FITZ	**Fitzroy Crossi**	**32.17**	**124**			**P**	**22 35 50.6**	**-0.6**		
CD2	**Chengdu**	**32.18**	**10**	P		**P**	**22 35 51.6**	**+0.5**		
CD2				pP	sP		22 35 55.3	+0.6		
CD2				S		**S**	**22 41 06.8**	**+2.9**		
CD2				pmax	pmax					
	comp=Z,40nm,1.1s									
CD2				pmax	pmax					
	comp=Z,250nm,4.9s									
CD2				LR	LR					
	comp=Z,2µm,11.4s									
CD2				LR	LR					
	comp=Z,4µm,12.4s									
CD2				LR	LR					
	comp=Z,2µm,12.2s									
CNSH	**ChangSha**	**32.38**	**25**	P		**P**	**22 35 53.3**	**+0.5**		
CNSH				S		**S**	**22 41 10.8**	**+3.8**		
CNSH				pmax	pmax					
	comp=Z,22nm,1.2s									
CNSH				LR	LR					
	comp=Z,1µm,11.7s									
CNSH				LR	LR					
	comp=Z,1µm,10.9s									
CNSH				LR	LR					
	comp=Z,1µm,11.8s									
MEEK	**Meekatharra**	**32.42**	**144**	P		**P**	**22 35 55.7**	**+2.4**		
MORW	**Morawa**	**32.91**	**150**	P		**P**	**22 35 60.0**	**+2.4**		
MORW				IAmb	IAmb		22 36 08.3			
	comp=Z,33nm,1.1s									
MORW	**Morawa**	**32.91**	**150**	P		**P**	**22 36 00.3**	**+2.8**		
ENH	**Enshi**	**32.97**	**19**	P		**P**	**22 35 56.9**	**-1.1**		
ENH	**Enshi**	**32.97**	**19**	P		**P**	**22 35 58.3**	**+0.3**		
SSLB	**Suanglung**	**33.29**	**41**	P		**P**	**22 36 00.5**	**-0.5**		
KNRA	**Kununurra**	**33.82**	**117**			**P**	**22 36 03.7**	**-1.9**		
KNRA				IAmb	IAmb		22 36 05.0			
	comp=Z,23nm,1.1s									
NACB	**Ninganchiao**	**33.98**	**41**	P		**P**	**22 36 04.4**	**-2.5**		
YHNB	**Yeheng**	**34.18**	**40**	P		**P**	**22 36 08.3**	**-0.5**		
FAKI	**Fak Fak**	**34.43**	**94**			**P**	**22 36 09.2**	**-1.8**		
FAKI				IAmb	IAmb		22 36 10.7			
	comp=Z,59nm,1.1s									
FAKI	**Fak Fak**	**34.43**	**94**	P		**P**	**22 36 09.9**	**-1.1**		
MTN	**Manton Dam**	**35.03**	**111**	P		**P**	**22 36 13.8**	**-2.3**		
KLBR	**Kellerberrin**	**35.82**	**150**	P		**P**	**22 36 24.8**	**+2.1**		
XAN	**Xi'an**	**36.32**	**16**	P		**P**	**22 36 27.3**	**+0.2**		
XAN				S		**S**	**22 42 08.4**	**+0.4**		
XAN				LR	LR					
	comp=Z,1µm,16.1s									
XAN				LR	LR					
	comp=Z,3µm,16.1s									
XAN				LR	LR					
	comp=Z,1µm,13.1s									
NWAO	**Narrogin (SRO)**	**36.66**	**152**	P		**P**	**22 36 31.4**	**+1.5**		
NWAO				IAmb	IAmb		22 36 42.3			
	comp=Z,66nm,1.4s									
NWAO	**Narrogin (SRO)**	**36.66**	**152**	P		**P**	**22 36 31.4**	**+1.5**		
NWAO				pmax	pmax					
	comp=Z,66nm,1.5s									
H01W3	**Cape Leeuwin H**	**37.02**	**157**	T		T	23 15 36.7			
	baz=334,slow=76,SNR=408									
H01W2	**Cape Leeuwin H**	**37.03**	**158**	T		T	23 15 37.6			
	baz=334,slow=76,SNR=366									
H01W1	**Cape Leeuwin H**	**37.04**	**157**	T		T	23 15 37.8			
	baz=334,slow=76,SNR=374									
GOMU	**GeErMu**	**37.06**	**356**	P		**P**	**22 36 34.3**	**+0.6**		
GOMU				pmax	pmax					
	comp=Z,7.0nm,1.3s									
LZDM	**Lanzhou Array**	**37.12**	**8**	P		**P**	**22 36 34.1**	**0.0**		
	comp=Z,7.3nm,0.6s,baz=193,slow=12,SNR=8.2									
	comp=Z,7.3nm,0.6s									
LZH	**Lanzhou**	**37.27**	**8**	⇑P		**P**	**22 36 36.1**	**+0.9**		
LZH				pP	sP		22 36 40.8	+2.0		
LZH				pmax	pmax					
	comp=Z,29nm,1.5s									
LZH				LR	LR					
	comp=Z,880nm,15.9s									
LZH				LR	LR					
	comp=Z,2µm,15.2s									
LZH				LR	LR					
	comp=Z,940nm,14.0s									
LYN	**LuoYang**	**37.88**	**20**	P		**P**	**22 36 41.8**	**+1.6**		
LYN				S		**S**	**22 42 39.5**	**+8.0**		
LYN				pmax	pmax					
	comp=Z,340nm,5.1s									
LYN				LR	LR					
	comp=Z,2µm,13.0s									
LYN				LR	LR					
	comp=Z,1µm,9.9s									
LYN				LR	LR					
	comp=Z,2µm,12.1s									
NJ2	**Nanjing**	**38.37**	**29**	*e*P		**P**	**22 36 45.8**	**+1.4**		
NJ2				pmax	pmax					
	comp=Z,11nm,0.6s									
NJ2				LR	LR					
	comp=Z,850nm,13.3s									
NJ2				LR	LR					
	comp=Z,1µm,15.2s									
NJ2				LR	LR					
	comp=Z,360nm,18.0s									
GTA	**Gaotai**	**40.20**	**2**	P		**P**	**22 37 00.6**	**+0.8**		
GTA				pP	sP		22 37 05.0	+1.6		
GTA				S		**S**	**22 43 03.3**	**-3.4**		
GTA				SS		**SnSn**	**22 46 10.1**	**+1.0**		
GTA				pmax	pmax					
	comp=Z,17nm,1.7s									
GTA				LR	LR					
	comp=Z,830nm,13.8s									
GTA				LR	LR					
	comp=Z,750nm,14.5s									
GTA				LR	LR					
	comp=Z,830nm,12.7s									
WB0	**Warramunga Arr**	**40.35**	**120**	P		**P**	**22 36 60.0**	**-1.2**		
WB0				IAmb	IAmb		22 37 01.8			
	comp=Z,62nm,0.9s									
WRA	**Warramunga Arr**	**40.37**	**120**	P		**P**	**22 37 00.6**	**-0.8**		
	comp=Z,31nm,0.8s,baz=298,slow=9.3,SNR=134									
WRA				PcP		**PcP**	**22 39 04.9**	**+0.2**		
WRA				S		**S**	**22 43 08.0**	**-1.6**		
	comp=Z,2.5nm,1.0s,baz=312,slow=3.2,SNR=2.7									
	comp=Z,1.4nm,1.0s,baz=293,slow=17,SNR=2.8									
	comp=Z,31nm,0.8s									
WRAB	**Tennant Creek**	**40.38**	**120**	P		**P**	**22 37 00.5**	**-0.8**		
WRAB				IAmb	IAmb		22 37 02.3			
	comp=Z,56nm,0.9s									
WRAB	**Tennant Creek**	**40.38**	**120**	P		**P**	**22 37 01.2**	**-0.2**		
WRAB	**Tennant Creek**	**40.38**	**120**	*i* P		**P**	**22 37 00.6**	**-0.8**		
WRAB				pmax	pmax					
	comp=Z,70nm,1.0s									
WR8	**Warramunga Arr**	**40.52**	**120**	P		**P**	**22 37 02.0**	**-0.6**		
WR8				IAmb	IAmb		22 37 03.5			
	comp=Z,68nm,1.0s									
TIA	**Tai'an**	**41.09**	**24**	P		**P**	**22 37 09.9**	**+2.9**		
TIA				pmax	pmax					
	comp=Z,19nm,1.1s									
TIA				LR	LR					
	comp=Z,1µm,13.1s									
TIA				LR	LR					
	comp=Z,2µm,11.9s									
TIA				LR	LR					
	comp=Z,3µm,12.9s									
HNS	**HongShan**	**41.22**	**21**	⇓P		**P**	**22 37 08.8**	**+0.8**		
HNS				ScP		**ScP**	**22 42 56.8**	**-0.2**		
HNS				S		**S**	**22 43 21.3**	**-0.3**		
HNS				pmax	pmax					
	comp=Z,50nm,1.0s									
HNS				LR	LR					
	comp=Z,1µm,13.8s									
HNS				LR	LR					
	comp=Z,500nm,12.7s									
HNS				LR	LR					
	comp=Z,950nm,12.5s									
FORT	**Forrest**	**41.23**	**139**	P		**P**	**22 37 07.4**	**-0.9**		
FORT				IAmb	IAmb		22 37 18.9			
	comp=Z,26nm,1.0s									
NIL	**Nilore**	**41.48**	**328**	P		**P**	**22 37 10.6**	**+0.4**		
NIL	**Nilore**	**41.48**	**328**	P		**P**	**22 37 10.6**	**+0.4**		
NIL				pmax	pmax					
	comp=Z,29nm,1.2s									
AS31	**Alice Springs**	**41.60**	**126**	P		**P**	**22 37 11.3**	**-0.2**		
ASAR	**Alice Springs**	**41.60**	**126**	P		**P**	**22 37 11.2**	**-0.2**		
	comp=Z,9.5nm,0.8s,baz=298,slow=7.2,SNR=88									
ASAR				PcP		**PcP**	**22 39 09.4**	**+0.7**		
	comp=Z,3.0nm,0.8s,baz=310,slow=5.2,SNR=4.2									
ASAR				S		**S**	**22 43 30.8**	**+3.0**		
	comp=Z,0.7nm,0.9s,baz=300,slow=16,SNR=2.4									
	comp=Z,9.5nm,0.8s									
BTO	**Baotou**	**42.82**	**14**	*e*P		**P**	**22 37 23.8**	**+2.6**		
BTO				pmax	pmax					
	comp=Z,45nm,1.7s									
BTO				pmax	pmax					
	comp=Z,740nm,5.3s									
BTO				LR	LR					
	comp=Z,2µm,12.5s									
BTO				LR	LR					
	comp=Z,4µm,14.8s									
BTO				LR	LR					
	comp=Z,3µm,12.3s									
HHC	**Hu-ho-hao-te**	**43.43**	**15**	*e*P		**P**	**22 37 28.3**	**+2.1**		
HHC				S		**S**	**22 43 59.8**	**+5.4**		
HHC				pmax	pmax					
	comp=Z,23nm,0.8s									
HHC				pmax	pmax					
	comp=Z,390nm,6.0s									
HHC				LR	LR					
	comp=Z,1µm,14.5s									
HHC				LR	LR					
	comp=Z,680nm,13.7s									
HHC				LR	LR					
	comp=Z,870nm,13.0s									
BJT	**Baijiatuao**	**44.07**	**20**	P		**P**	**22 37 32.0**	**+0.8**		
BJT				IAmb	IAmb		22 37 33.9			
	comp=Z,49nm,1.0s									
BJT	**Baijiatuau**	**44.07**	**20**	P		**P**	**22 37 32.7**	**+1.5**		
BJT	**Baijiatuau**	**44.07**	**20**	P		**P**	**22 37 32.0**	**+0.8**		
BJT				pmax	pmax					
	comp=Z,49nm,1.0s									
BJI	**Beijing**	**44.10**	**20**	P		**P**	**22 37 32.8**	**+1.5**		
BJI				pP		**sP**	**22 37 35.8**	**+0.8**

comp=Z,320nm,5.8s
XLT LR LR
comp=Z,98nm,13.5s
XLT LR LR
comp=Z,650nm,14.7s
XLT LR LR
comp=Z,780nm,12.3s
BOOM Boomskoye usch 47.54 338 P **P** **22 37 58.9 +0.1**
BOOM IAmb IAmb 22 38 13.2
comp=Z,37nm,1.2s
BOOM Boomskoye usch 47.54 338 P **P** **22 37 58.9 +0.1**
BOOM pmax pmax
comp=Z,37nm,1.2s
MDOK Medeo 47.73 339 *e*P **P** **22 38 00.6 +0.3**
MDOK Medeo 47.73 339 *e*P **P** **22 38 00.5 +0.3**
ARSB Arslanbob 47.75 335 **P** **22 38 00.7 +0.3**
ARSB Arslanbob 47.75 335 P **P** **22 38 00.7 +0.3**
ARSB pmax pmax
comp=Z,65nm,1.2s
AAA Alma-Ata 47.81 339 *e*P **P** **22 38 01.4 +0.6**
comp=Z,22nm,1.0s
AAA Alma-Ata 47.81 339 *e*P **P** **22 38 01.3 +0.6**
AAA pmax pmax
comp=Z,22nm,1.0s
BBOO Buckleboo 47.89 135 P **P** **22 38 03.7 +2.2**
AAK Ala-Archa 48.22 337 LR LR 23 01 02.2
comp=Z,306nm,20.3s,baz=152,slow=39
AAK Ala-Archa 48.22 337 P **P** **22 38 04.7 +0.6**
AAK Ala-Archa 48.22 337 P **P** **22 38 04.7 +0.6**
AAK pmax pmax
comp=Z,11nm,1.1s
JMN Monobe 48.33 41 P **P** **22 38 03.9 -1.0**
HRA Herat 48.47 320 P **P** **22 38 07.1 +0.9**
MTSU Mount Surprise 48.70 113 P **P** **22 38 08.3 +0.3**
TDK Taldyqorghan 48.91 342 *e*P **P** **22 38 09.6 +0.5**
TDK Taldyqorghan 48.91 342 *e*P **P** **22 38 09.6 +0.5**
INKA Innaminka 48.94 127 P **P** **22 38 09.6 0.0**
INKA IAmb IAmb 22 38 19.4
comp=Z,24nm,0.9s
WHYH Whyalla 49.08 135 P **P** **22 38 12.6 +2.0**
SONM Songino Array 49.15 8 P **P** **22 38 10.4 -0.7**
comp=Z,15nm,0.9s,baz=190,slow=8.6,SNR=12
comp=Z,15nm,0.9s
ULN Ulaanbaatar 49.27 8 P **P** **22 38 12.5 +0.5**
ULN Ulaanbaatar 49.27 8 *i* P **P** **22 38 11.1 -0.9**
ULN pmax pmax
comp=Z,88nm,1.1s
MK31 Makanchi Array 49.47 346 *i* P **P** **22 38 13.6 +0.2**
MKAR Makanchi Array 49.47 346 P **P** **22 38 14.3 +0.9**
comp=Z,14nm,0.8s,baz=155,slow=8.4,SNR=44
comp=Z,14nm,0.8s
ZSN Zaisan 49.52 348 *e*P **P** **22 38 14.3 +0.5**
comp=Z,23nm,1.1s
ZSN Zaisan 49.52 348 *e*P **P** **22 38 14.3 +0.5**
ZSN pmax pmax
comp=Z,23nm,1.1s
MAKZ Makanchi 49.56 346 P **P** **22 38 13.7 -0.4**
MAKZ IAmb IAmb 22 38 26.8
comp=Z,13nm,0.9s
MAKZ Makanchi 49.56 346 P **P** **22 38 13.7 -0.4**
MAKZ pmax pmax
comp=Z,13nm,1.0s
IUG luzhnay 49.71 333 *e*P **P** **22 38 15.9 +0.4**
comp=Z,32nm,1.1s
IUG luzhnay 49.71 333 *e*P **P** **22 38 15.8 +0.4**
IUG pmax pmax
comp=Z,32nm,1.1s
DZA Taraz 49.73 335 *e*P **P** **22 38 16.3 +0.7**
DZA Taraz 49.73 335 *e*P **P** **22 38 16.2 +0.7**
CHM Chimkent 50.05 333 *e*P **P** **22 38 18.6 +0.8**
CHM Chimkent 50.05 333 *e*P **P** **22 38 18.6 +0.8**
HTT Hallett 50.25 134 P **P** **22 38 21.1 +1.5**
KK31 Karatay Array 50.26 334 P **P** **22 38 19.4 -0.1**
KK31 IAmb IAmb 22 38 29.6
comp=Z,36nm,1.4s
KK31 Karatay Array 50.26 334 P **P** **22 38 19.4 -0.1**
KK31 pmax pmax
comp=Z,36nm,1.4s
BRLS Boroldoy 50.50 333 *e*P **P** **22 38 20.9 -0.4**
BRLS Boroldoy 50.50 333 *e*P **P** **22 38 20.9 -0.4**
CN2 Changchun 50.93 26 *e*P **P** **22 38 23.3 -1.2**
CN2 *e*S **S** **22 45 36.6 -4.4**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,800nm,16.0s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,900nm,14.0s
CTAO Charters Tower 50.98 115 P **P** **22 38 24.2 -1.0**
CTAO IAmb IAmb 22 38 26.6
comp=Z,50nm,0.9s
CTAO Charters Tower 50.98 115 P **P** **22 38 25.4 +0.1**
CTAO Charters Tower 50.98 115 P **P** **22 38 24.3 -1.0**
CTAO pmax pmax
comp=Z,50nm,1.0s
DGZ Jazzator, Alta 51.24 351 *i* P **P** **22 38 28.0 +1.1**
DGZ pmax pmax
comp=Z,51nm,1.1s
QLP Quilpie 51.32 124 P **P** **22 38 29.3 +1.6**
ZAK Zakamensk 51.34 4 *e*P **P** **22 38 26.4 -1.2**
ZAK pmax pmax
comp=Z,26nm,1.7s
KNGR Kungurtug, Tuv 51.36 360 *i* P **P** **22 38 28.8 +1.1**
KNGR pmax pmax
comp=Z,36nm,1.0s
INU Inuyama 51.37 41 P **P** **22 38 27.8 -0.1**
INU IAmb IAmb 22 39 06.9
comp=Z,36nm,1.5s
STKA Stephens Creek 51.45 131 P **P** **22 38 29.0 +0.4**
comp=Z,19nm,1.0s,baz=305,slow=6.4,SNR=15
comp=Z,19nm,1.0s
STKA Stephens Creek 51.45 131 P **P** **22 38 29.7 +1.1**
STKA Stephens Creek 51.45 131 P **P** **22 38 29.0 +0.4**
MOY Mondy 52.49 2 *e*P P 22 38 44.7 +8.6
MOY pmax pmax
comp=Z,42nm,2.1s
TLY Talaya 52.66 5 P **P** **22 38 37.8 +0.4**
TLY IAmb IAmb 22 38 56.6
comp=Z,19nm,0.9s
TLY Talaya 52.66 5 *i* P **P** **22 38 36.3 -1.0**
TLY pmax pmax
comp=Z,23nm,0.9s
OPO Ambohidratompo 52.67 247 LR LR 22 55 39.4
comp=Z,54nm,20.5s,baz=208,slow=30
ABPO Ambohimpanom 52.74 247 P **P** **22 38 39.5 +0.8**
ABPO Ambohimpanom 52.74 247 P **P** **22 38 39.5 +0.8**
ABPO pmax pmax
comp=Z,13nm,1.2s
MAJO Matsushiro 52.85 41 P **P** **22 38 37.4 -1.6**
MAJO IAmb IAmb 22 38 47.8
comp=Z,22nm,1.3s
MAJO Matsushiro 52.85 41 P **P** **22 38 37.4 -1.6**
MAJO pmax pmax
comp=Z,22nm,1.3s
MJAR Matsushiro Arr 52.85 41 P **P** **22 38 37.7 -1.3**
comp=Z,6.9nm,1.1s,baz=215,slow=7.4,SNR=5.9
MJAR LR LR 23 03 43.5
comp=Z,157nm,18.1s,baz=247,slow=39
comp=Z,6.9nm,1.1s
BNX BinXian 53.31 26 ⇑P **P** **22 38 42.1 -0.1**
BNX pmax pmax
comp=Z,12nm,0.9s
HIA Hailar 53.46 18 P **P** **22 38 44.6 +1.3**
HIA Hailar 53.46 18 *i* P **P** **22 38 42.9 -0.4**
HIA pmax pmax
comp=Z,32nm,1.3s
HILR Hailar Array B 53.72 18 P **P** **22 38 44.4 -0.8**
comp=Z,1.5nm,0.4s,baz=172,slow=12,SNR=4.9
HILR LR LR 23 03 39.4
comp=Z,316nm,18.5s,baz=145,slow=38
comp=Z,1.5nm,0.4s
KURBB Kurchatov Arra 53.96 345 P **P** **22 38 46.7 -0.1**
comp=Z,4.6nm,0.8s,baz=165,slow=6.9,SNR=25
KURBB LR LR 23 06 07.1
comp=Z,246nm,19.2s,baz=169,slow=41
comp=Z,4.6nm,0.8s
KURK Kurchatov 54.02 345 P **P** **22 38 46.9 -0.4**
KURK IAmb IAmb 22 39 01.4
comp=Z,17nm,1.0s
KURK Kurchatov 54.02 345 *i* P **P** **22 38 45.6 -1.7**
KURK pmax pmax
comp=Z,32nm,1.4s
USRK Ussuriysk Ar. 54.28 30 P **P** **22 38 48.6 -0.6**
comp=Z,22nm,0.8s,baz=226,slow=6.6,SNR=28
comp=Z,22nm,0.8s
CIT Chita 54.42 12 *e*P **P** **22 38 48.0 -2.2**
CIT *e* 22 38 52.6
CIT *e* 22 39 55.8
CIT *e* 22 40 51.4
CIT pmax pmax
comp=Z,151nm,2.0s
CMSA Cobar Meteorol 54.44 129 P **P** **22 38 52.0 +1.3**
AULRC Lightning Ridg 55.44 126 P **P** **22 39 00.2 +2.2**
ZALV Zalesovo Beam 55.77 351 P **P** **22 39 00.0 +0.2**
comp=Z,17nm,0.8s,baz=163,slow=5.7,SNR=73
ZALV LR LR 23 06 11.2
comp=Z,152nm,19.3s,baz=172,slow=40
comp=Z,17nm,0.8s
ZALV Zalesovo Beam 55.77 351 *i* P **P** **22 39 00.4 +0.5**
ZALV pmax pmax
comp=Z,17nm,0.8s
AUMTC Mt Clear Colle 55.85 136 P **P** **22 39 03.3 +2.5**
BRAT Ballarat 55.86 136 P **P** **22 39 03.2 +2.4**
EIDS Eidsvold 56.73 120 P **P** **22 39 07.5 +0.2**
EIDS IAmb IAmb 22 39 19.1
comp=Z,34nm,1.2s
EIDS Eidsvold 56.73 120 P **P** **22 39 08.1 +0.8**
HEH HeiHe 56.93 22 *e*P **P** **22 39 08.8 +0.6**
HEH LR LR
comp=Z,720nm,11.5s
HEH LR LR
comp=Z,620nm,12.0s
HEH LR LR
comp=Z,1µm,13.4s
AUPHS Peel High Scho 58.39 126 P **P** **22 39 21.2 +2.3**
BVAR Borovoye Array 58.48 341 P **P** **22 39 18.6 -0.5**
comp=Z,9.1nm,0.8s,baz=142,slow=7.5,SNR=17
BVAR LR LR 23 08 28.4
comp=Z,156nm,18.1s,baz=150,slow=40
comp=Z,9.1nm,0.8s
ARMA Armidale 58.75 125 P **P** **22 39 21.8 +0.2**
ARMA Armidale 58.75 125 P **P** **22 39 23.5 +1.9**
ZEA Zeya 59.72 20 *e*P **P** **22 39 28.5 +0.9**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,300nm,17.0s
ZEA MLR MLR
comp=N,300nm,13.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
KIBK Kibwezi 59.80 268 P **P** **22 39 28.7 -0.4**
KIBK IAmb IAmb 22 39 31.4
comp=Z,11nm,1.1s
H04N2 CROZET ISLANDS 60.39 215 T T 23 45 03.3
baz=56,slow=75,SNR=3811
H04N1 CROZET ISLANDS 60.40 215 T T 23 45 03.9
baz=56,slow=75,SNR=3700
H04N3 CROZET ISLANDS 60.41 215 T T 23 45 02.6
baz=56,slow=75,SNR=3119
KMBO Kilima Mbogo 60.59 269 P **P** **22 39 36.0 +1.2**
comp=Z,3.1nm,0.8s,baz=73,slow=7.1,SNR=10
KMBO LR LR 23 01 32.7
comp=Z,104nm,19.0s,baz=102,slow=32
comp=Z,3.1nm,0.8s
KMBO Kilima Mbogo 60.59 269 *i* P **P** **22 39 36.0 +1.2**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
H04S1 CROZET ISLANDS 60.71 214 T T 23 45 32.1
baz=55,slow=76,SNR=234
H04S3 CROZET ISLANDS 60.72 214 T T 23 45 33.9
baz=55,slow=76,SNR=389
H04S2 CROZET ISLANDS 60.73 214 T T 23 45 33.0
baz=55,slow=76,SNR=190
AKTO Aktyubinsk 61.42 332 LR LR 23 09 23.9
comp=Z,148nm,19.8s,baz=142,slow=39
YSS Yuzhno-Sakhali 61.76 33 *e*P P 22 39 34.5 -7.2
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=N,300nm,17.0s
YSS MLR MLR
comp=E,400nm,17.0s
YSS MLR MLR
comp=Z,600nm,17.0s
AKT Akhty 61.91 319 *e*P P 22 39 38.6 -4.4
AKT *e* 22 40 20.7
AKT pmax pmax
comp=Z,47nm,1.4s
LODK Lodwar 62.61 274 P **P** **22 39 49.2 +1.1**
MAK Makhachkala 62.79 321 *d* iP P 22 39 42.7 -6.0
MAK *e* 22 42 03.9
MAK *e*S **S** **22 48 10.0 -7.8**
MAK *e*SS **SS** **22 52 19.9 -3.0**
MAK *e*SSS SSS 22 55 12.3
MAK pmax pmax
comp=Z,657nm,1.4s
GURO Guroymak-BITLI 64.52 314 P **P** **22 40 01.1 +0.7**
GURO IAmb IAmb 22 40 21.9
comp=Z,14nm,1.3s
SVE Sverdlovsk 64.91 338 *e*P **P** **22 40 02.7 +0.3**
SVE pmax pmax
comp=Z,38nm,1.3s
MARD Mardin 64.95 312 P **P** **22 40 02.1 -1.1**
MARD IAmb IAmb 22 40 16.6
comp=Z,12nm,0.9s
ARTI Arti 65.44 337 LR LR 23 11 38.8
comp=Z,231nm,19.5s,baz=130,slow=39
ARTI Arti 65.44 337 P **P** **22 40 05.3 -0.5**
ARTI IAmb IAmb 22 40 14.8
comp=Z,33nm,1.2s
ARTI Arti 65.44 337 *d* iP **P** **22 40 04.2 -1.7**
ARTI 22 42 28.7
ARTI S **S** **22 48 49.4 -0.8**
ARTI SS **SS** **22 52 59.9 -3.9**
ARTI pmax pmax
comp=Z,9.0nm,1.1s
ARTI MLR MLR
comp=Z,218nm,19.0s
KBZ Khabaz 66.12 320 P **P** **22 40 11.4 +1.0**
comp=Z,5.0nm,0.8s,baz=126,slow=9.7,SNR=6.1
comp=Z,5.0nm,0.8s
ASF Jabal al Asfar 66.24 306 LR LR 23 08 47.6
comp=Z,105nm,20.6s,baz=113,slow=36
KIV Kislovodsk 66.36 320 *e*P **P** **22 40 12.4 +0.3**
KIV *e*S **S** **22 48 59.8 -2.2**
KIV pmax pmax
comp=Z,19nm,1.0s
MBAR Mbarara 67.11 270 LR LR 23 04 23.6
comp=Z,96nm,20.9s,baz=80,slow=31
MBAR Mbarara 67.11 270 P **P** **22 40 18.5 +0.8**
MBAR Mbarara 67.11 270 *i* P **P** **22 40 17.0 -0.6**
MBAR pmax pmax
comp=Z,8.0nm,1.0s
BALJ Balqa 67.24 305 P **P** **22 40 19.0 +1.2**
BALJ IAmb IAmb 22 40 46.4
comp=Z,8.8nm,1.0s
YAK Yakutsk 67.29 16 LR LR 23 12 05.8
comp=Z,352nm,18.2s,baz=216,slow=38
YAK Yakutsk 67.29 16 P **P** **22 40 17.4 -0.2**
YAK Yakutsk 67.29 16 *e*P **P** **22 40 17.2 -0.4**
YAK *e**PP **sP** **22 40 21.1 -0.2**
YAK *e* 22 40 42.6
YAK *e* 22 42 44.7
YAK *e*PPP PPP 22 44 21.3
YAK *e*S **S** **22 49 12.3 -0.1**
YAK *e* 22 50 14.4
YAK *e*SS **SS** **22 53 31.7 -0.5**
YAK pmax pmax
comp=Z,158nm,1.4s
YAK pmax pmax
comp=N,31nm,1.1s
YAK pmax pmax
comp=E,45nm,1.5s
YAK pmax pmax
comp=Z,565nm,6.3s
YAK pmax pmax
comp=N,212nm,4.3s
YAK pmax pmax
comp=E,267nm,4.2s
YAK smax smax
comp=E,222nm,3.5s
YAK smax smax
comp=N,88nm,2.0s
YAK MLR MLR
comp=Z,868nm,22.0s
YAK MLR MLR
comp=N,387nm,17.0s
YAK MLR MLR
comp=E,138nm,12.0s
GAZ Gaziantep 67.56 311 P **P** **22 40 20.0 0.0**
GAZ IAmb IAmb 22 40 33.4
comp=Z,9.1nm,0.8s
MMAI Mount Meron Ar 67.69 306 P **P** **22 40 22.4 +1.5**
comp=Z,0.2nm,0.3s,baz=92,slow=13,SNR=1.4
MMAI LR LR 23 10 02.9
comp=Z,92nm,20.1s,baz=92,slow=36
comp=Z,0.2nm,0.3s
BELG Belogornoye 67.73 329 *i* P **P** **22 40 20.7 +0.2**
BELG pmax pmax
comp=Z,6.0nm,1.0s
SOC Sochi 68.15 318 *e*P **P** **22 40 21.7 -1.7**
SOC *e* 22 42 50.8
SOC *e*PPP PPP 22 44 28.3
SOC *e*S **S** **22 49 22.8 -0.6**
SOC *e*SS **SS** **22 53 46.3 +0.1**
CSS Mathiatis 69.89 308 P **P** **22 40 34.5 +0.1**
CSS IAmb IAmb 22 41 01.9
comp=Z,12nm,1.0s
CSS Mathiatis 69.89 308 P **P** **22 40 34.5 +0.1**
comp=Z,14nm,1.4s
VRH Novokhopyorsk 70.26 326 *e*P **P** **22 40 35.4 -0.9**
VRH pmax pmax
comp=Z,37nm,1.2s
MAW Mawson 70.79 193 P **P** **22 40 40.9 +1.7**
comp=Z,5.3nm,0.8s,baz=21,slow=9.1,SNR=4.6
MAW LR LR 23 07 53.6
comp=Z,122nm,19.3s,baz=59,slow=33
comp=Z,5.3nm,0.8s
BR104 Keskin Array S 71.03 313 P **P** **22 40 41.2 -0.2**
comp=Z,3.6nm,1.1s
BRTR Keskin Array B 71.04 313 P **P** **22 40 40.6 -0.9**
comp=Z,0.9nm,0.8s,baz=118,slow=5.7,SNR=6.4
BRTR LR LR 23 12 41.4
comp=Z,82nm,21.7s,baz=100,slow=37
comp=Z,0.9nm,0.8s
VSR Storozhevoye 71.70 326 *e*P **P** **22 40 44.8 -0.2**
VSR pmax pmax
comp=Z,10.0nm,1.1s
ANTO Ankara 71.70 313 P **P** **22 40 45.3 -0.1**
comp=Z,5.1nm,1.9s
VORR Voronezh 71.87 326 *e*P **P** **22 40 46.7 +0.6**
VORR pmax pmax
comp=Z,19nm,0.4s
LPSR Galich'ya Gora 72.44 327 *e*P **P** **22 40 48.7 -0.7**
LPSR pmax pmax
comp=Z,36nm,1.4s
MDUB Mudurnu 73.05 313 P **P** **22 40 53.9 +0.4**
MDUB IAmb IAmb 22 41 07.5
comp=Z,34nm,1.0s
KSANE Kasane 73.24 252 P **P** **22 40 55.6 +0.6**
LBTB Lobatse 73.54 244 LR LR 23 09 15.9
comp=Z,194nm,18.3s,baz=70,slow=32
PHDHD Phuduhudu 74.02 249 P **P** **22 41 00.6 +0.9**
PHDHD IAmb IAmb 22 41 04.4
comp=Z,16nm,1.2s
BOSA Boshof 74.29 241 P **P** **22 41 01.4 +0.3**
comp=Z,5.0nm,1.1s,baz=88,slow=5.8,SNR=3.7
BOSA LR LR 23 07 49.1
comp=Z,122nm,20.7s,baz=38,slow=31
comp=Z,5.0nm,1.1s
BOSA Boshof 74.29 241 P **P** **22 41 00.0 -1.1**
BOSA IAmb IAmb 22 41 02.6
comp=Z,19nm,1.4s
BOSA Boshof 74.29 241 P **P** **22 41 00.0 -1.1**
BOSA pmax pmax
comp=Z,19nm,1.5s
MOS Moscow 74.50 329 *e*P **P** **22 41 00.3 -1.2**
MOS *e* 22 41 22.8
MOS *e*S **SKiKP** **22 50 32.3 +4.3**
MOS pmax pmax
comp=Z,59nm,1.4s
OBN Obninsk 74.78 329 *e*P **P** **22 41 02.6 -0.5**
OBN *e* 22 43 49.8
OBN *e*S **S** **22 50 41.0 +1.5**
OBN *e*SS **SS** **22 55 22.1 -5.3**
OBN pmax pmax
comp=Z,56nm,1.3s
OBN Obninsk 74.78 329 P **P** **22 41 03.0 -0.1**
comp=Z,786nmcomp=Z,44nm,1.6s
TIXI Tiksi 75.18 10 P **P** **22 41 04.8 -0.4**
TIXI Tiksi 75.18 10 *i* P **P** **22 41 04.6 -0.5**
TIXI pmax pmax
comp=Z,79nm,1.1s
SEY Seymchan 75.47 23 *i* P **P** **22 41 05.4 -1.6**
SEY pmax pmax
comp=Z,24nm,1.4s
KLMR Klimovskoe 75.96 335 *e*P **P** **22 41 08.5 -1.3**
KLMR pmax pmax
comp=Z,42nm,1.5s
PHPEN Phepeng 76.06 244 P **P** **22 41 10.0 -1.3**
PHPEN IAmb IAmb 22 41 25.5
comp=Z,21nm,1.4s
KGCAE Kacgae 76.41 247 P **P** **22 41 11.8 -1.5**
KGCAE IAmb IAmb 22 41 43.5
comp=Z,27nm,1.4s
QNGWA Qangwa 77.13 250 P **P** **22 41 17.3 -0.2**
AKASG Malin Array Be 77.35 323 P **P** **22 41 18.0 +0.1**
comp=Z,0.5nm,0.4s,baz=93,slow=4.8,SNR=6.2
comp=Z,0.5nm,0.4s
AKBB Malin Array Si 77.35 323 *i* P **P** **22 41 19.0 +1.1**
AKBB pmax pmax
comp=Z,30nm,3.0s
AK01 Malin Array Si 77.35 323 P **P** **22 41 17.8 -0.1**
AK11 Malin Array Si 77.38 323 P **P** **22 41 17.9 -0.2**
AK18 Malin Array Si 77.45 323 P **P** **22 41 18.6 +0.1**
AK19 Malin Array Si 77.48 323 P **P** **22 41 18.9 +0.2**
VRI Vrincioaia 77.63 317 ⇓P **P** **22 41 24.1 +4.4**
VRI Vrincioaia 77.63 317 ⇓P **P** **22 41 24.1 +4.4**
TESR Tescani 77.84 318 ⇑P P 22 41 25.6 +4.9
TESR Tescani 77.84 318 P **P** **22 41 20.6 -0.2**
comp=Z,22nm,1.1s
LUBAR Lubar, Ukraine 78.03 322 P **P** **22 41 21.6 -0.1**
MLR Muntele Rosu 78.07 317 LR LR 23 21 18.3
comp=Z,74nm,19.5s,baz=54,slow=40
MLR Muntele Rosu 78.07 317 ⇑P **P** **22 41 23.1 +0.8**
MLR Muntele Rosu 78.07 317 ⇑P **P** **22 41 23.1 +0.8**
KOOLE Kule 78.27 247 P **P** **22 41 22.7 -1.2**
VOIR 78.67 317 ⇓P **P** **22 41 29.6 +4.1**
VOIR 78.67 317 ⇓P **P** **22 41 29.6 +4.1**
BURAR Bucovina Array 79.06 319 ⇑P **P** **22 41 29.8 +2.2**
BURAR Bucovina Array 79.06 319 ⇑P **P** **22 41 29.8 +2.2**
MNK Minsk 79.26 326 *i* P **P** **22 41 25.9 -2.5**
MNK *i* 22 41 33.8
MNK *i* 22 44 24.4
MNK *i* PPP PPP 22 46 13.4
MNK *i* S **S** **22 51 26.9 -1.5**
MNK *i* SS **SS** **22 56 36.7 +1.6**
MNK *i* SSS SSS 22 59 58.9
MNK pmax pmax
comp=Z,7.0nm,0.8s
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=E,12nm,0.7s
MNK MLR MLR
comp=Z,139nm,17.0s
MNK MLR MLR
comp=E,933nm,16.0s
MNK MLR MLR
comp=N,963nm,17.0s
KSV Kosov 79.32 320 P **P** **22 41 29.0 +0.1**
ARCR ARCALIA 79.51 318 ⇓P P 22 41 39.2 +9.2
CJR Cluj-Napoca 79.94 318 ⇓P P 22 41 38.2 +5.9
CJR Cluj-Napoca 79.94 318 ⇓P P 22 41 38.2 +5.8
BLKB Belogradchik 79.95 315 ⇑P **P** **22 41 30.1 -2.4**
MARR Marisel-Cluj 80.25 318 ⇓P P 22 41 39.7 +5.6
TSUM Tsumeb 80.50 251 LR LR 23 14 47.4
comp=N,94nm,18.1s,baz=143,slow=34
TSUM Tsumeb 80.50 251 P **P** **22 41 36.8 +0.7**
BKZ Black Stump Fm 80.59 129 P **P** **22 41 35.5 -0.6**
BKZ Black Stump Fm 80.59 129 P **P** **22 41 37.4 +1.3**
BOVS Bovan 80.65 314 ⇓P **P** **22 41 32.1 -4.1**
RTZ Ruatahuna 80.91 129 P **P** **22 41 36.6 -1.2**
URZ Urewera 80.97 128 LR LR 23 19 36.3
comp=N,190nm,19.9s,baz=274,slow=37
BZS Buzias 81.07 316 ⇑P **P** **22 41 39.6 +1.2**
BZS Buzias 81.07 316 ⇑P **P** **22 41 39.6 +1.2**
KWP Kalwaria Pacla 81.13 320 *e*P **P** **22 41 40.6 +2.0**
APA Apatity 81.36 340 *e*P **P** **22 41 42.0 +2.6**
APA MLR MLR
comp=Z,358nm,13.8s
SUW Suwalki 81.80 325 *e*P **P** **22 41 40.3 -1.7**

STHS	Stebnicka Huta	82.02	320	*e*P		P		22 41 42.5	-0.9
STHS				pmax	pmax					
	comp=Z,4.0nm,1.1s									
STHS	Stebnicka Huta	82.02	320	*e*P		P		22 41 42.5	-0.9
FINES	FINESS Array B	82.19	333	P		P		22 41 44.5	+0.5
	comp=Z,1.0nm,0.6s,baz=109,slow=7.3,SNR=7.0									
FINES				LR	LR			23 22 00.7		
	comp=Z,74nm,19.6s,baz=112,slow=38									
	comp=Z,1.0nm,0.6s									
PDG	Podgorica	82.23	313	⇓P		P		22 41 44.5	-0.1
NIE	Niedzica	82.63	320	*e*P		P		22 41 46.9	+0.3
OJC	Ojcow	83.09	321	*e*P		P		22 41 48.3	-0.6
MORH	Mrgy, Hungar	83.22	317	⇑P		P		22 41 50.8	+1.2
VNDA	Vanda	83.60	169	P		P		22 41 51.5	+0.5
	comp=Z,1.0nm,0.9s,baz=275,slow=5.5,SNR=5.9									
	comp=Z,1.0nm,0.9s									
BLY	Banja Luka	84.03	315	⇑P		P		22 41 55.9	+2.0
JAVC	Velka Javorina	84.25	319	*e*P		P		22 42 04.0	+9.0
MORC	Moravsky Berou	84.46	320	*e*P		P		22 42 03.5	+7.5
ARCES	ARCESS Array B	84.77	340	P		P		22 41 57.5	+0.4
	comp=Z,3.8nm,0.9s,baz=110,slow=4.2,SNR=3.5									
	comp=Z,3.8nm,0.9s									
KRUC	Moravsky	85.11	319	*e*P		P		22 42 06.8	+7.6
KSP	Ksiaz	85.39	321	*e*P		P		22 42 02.9	+2.3
ARSA	Arzberg	85.48	317	*e*pP		pP		22 42 05.4	+1.4
	comp=Z,12nm,1.4s									
SOKA	Soboth	85.75	317	*e*PcP		PcP		22 42 04.6	-0.8
	comp=Z,9.0nm,1.2s									
CKRC	Cesky Krumlov	86.45	319	*e*P		P		22 42 11.6	+5.7
CKRC	Cesky Krumlov	86.45	319	*e*P		P		22 42 11.6	+5.7
MYKA	Terra Mystica	86.70	317	*e*pP		pP		22 42 11.1	+0.9
	comp=Z,4.6nm,1.1s									
BIOA	Bad Ischl, Aus	86.79	318	*e*pP		pP		22 42 15.8	+5.2
	comp=Z,5.8nm,1.2s									
GERES	GERESS Array B	86.85	319	P		P		22 42 08.7	+0.7
	comp=Z,0.7nm,0.8s,baz=95,slow=7.8,SNR=16									
GERES				LR	LR			23 26 59.9		
	comp=Z,40nm,18.1s,baz=74,slow=40									
	comp=Z,0.7nm,0.8s									
KBA	Koelnbreinsper	86.94	317	*e*pP		pP		22 42 16.8	+5.3
	comp=Z,4.4nm,1.2s									
LESA	Schwarzleotal	87.42	317	*e*pP		pP		22 42 18.8	+5.1
	comp=Z,8.8nm,1.5s									
CLL	Collm	87.51	321	*e*S		S		22 52 49.0	-3.1
CLL				*e*SS		SS		22 58 36.0	-1.4
CLL				*e*SSSS				23 05 12.0		
NVL	N'lazarevskaya	87.79	199	*e*P		P		22 42 11.2	-0.7
NVL				*e*				22 45 36.7		
NVL				*e*PPP	PPP			22 47 31.2		
NVL				*e*S		SKSac		22 52 38.9	-0.8
NVL				*e*SS		SS		22 58 42.2	+1.6
NVL				*e*SSS	SSS			23 02 15.8		
NVL				pmax	pmax					
	comp=Z,9.0nm,0.9s									
NVL				smax	smax					
	comp=N,245nm,14.1s									
NVL				MLR	MLR					
	comp=Z,143nm,18.3s									
HFS	Hagfors	87.90	330	LR		LR		23 26 26.5		
	comp=Z,101nm,18.2s,baz=86,slow=39									
WTTA	Wattenberg	88.12	317	*e*pP		pP		22 42 17.7	+0.5
	comp=Z,9.4nm,1.1s									
WATA	Walderalm	88.16	317	*e*pP		pP		22 42 22.6	+5.3
	comp=Z,6.3nm,1.0s									
MOTA	Moosalm	88.48	317	*e*pP		pP		22 42 24.2	+5.3
	comp=Z,5.2nm,1.0s									
QSPA	South Pole Qui	89.01	180	P		P		22 42 19.2	+1.2
	comp=Z,2.8nm,1.2s,baz=236,slow=1.3,SNR=4.4									
	comp=Z,2.8nm,1.2s									
SPITS	Spitsbergen Ar	89.17	348	LR		LR		23 29 51.5		
	comp=Z,197nm,18.3s,baz=81,slow=41									
NOA	NORSAR Array B	89.19	331	P		P		22 42 18.7	-0.1
	comp=Z,0.4nm,0.7s,baz=98,slow=8.1,SNR=2.1									
NOA				LR		LR		23 26 22.6		
	comp=Z,94nm,20.0s,baz=95,slow=38									
	comp=Z,0.4nm,0.7s									
DAVA	Damuels	89.31	317	*e*pP		pP		22 42 28.7	+5.9
	comp=Z,18nm,1.4s									
KEST	Kesra	89.33	306	P		P		22 42 20.3	+0.2
	comp=Z,3.0nm,1.0s,baz=2.7,slow=8.4,SNR=3.5									
	comp=Z,3.0nm,1.0s									
JMIC	Jan Mayen	96.19	342	LR		LR		23 30 29.5		
	comp=Z,49nm,19.2s,baz=160,slow=38									
ILAR	Eielson Array	101.40	23	PP		PP		22 47 22.6	-1.0
	comp=Z,0.7nm,1.0s,baz=314,slow=8.7,SNR=4.6									
TBI	Tubuai	110.36	115	*e*LQ		LQ		23 15 55.9		
	comp=Z,1μm,30.0s									
PPT2	Papeete2	111.17	109	*e*LQ		LQ		23 16 10.8		
PPT2	comp=Z,297nm,27.5s			*e*LR		LR		23 20 49.2		
	comp=Z,143nm,25.5s									
PPT2				*e*LR		LR		23 20 52.2		
	comp=Z,148nm,23.8s									
DLMT	Dillon	128.27	27			PKiKP		22 48 31.7	+0.9
BOZ	Bozeman (W)	128.52	26			PKiKP		22 48 31.6	+0.4
BOZ	Bozeman (W)	128.52	26	PKIKP		PKiKP		22 48 31.7	+0.4
NVAR	Mina Array Bea	130.11	37	PKP		PKiKP		22 48 35.1	+0.4
	comp=Z,0.9nm,0.8s,baz=287,slow=2.9,SNR=4.1									
PDAR	Pinedale Array	131.66	27	PKP		PKPdf		22 48 36.2	-0.6
	comp=Z,0.8nm,0.8s,baz=297,slow=3.1,SNR=4.6									
WMOK	Wichita Mounta	142.97	23			PKPdf		22 48 54.0	-3.6
WMOK	Wichita Mounta	142.97	23	PKIKP		PKPdf		22 48 54.0	-3.6
APMT	Aspermont	143.63	26			PKPbc		22 48 56.3	+0.2
CPUP	Villa Florida	143.82	220	PKP		PKPbc		22 48 57.2	+0.4
	comp=Z,2.8nm,1.0s,baz=95,slow=0.8,SNR=12									
MNHN	Monahans	144.02	31			PKPbc		22 48 58.5	+1.1
ALPN	Alpine	144.32	33			PKPbc		22 48 59.1	+0.6
SGCY	Sterling City	144.36	28			PKPbc		22 48 58.7	+0.2
VA03	San Esteban	144.73	197			PKPdf		22 49 00.9	+0.1
Z35A	Perchaven, San	144.80	22			PKPab		22 48 59.8	+0.2
CLTN	Cedars of Leba	144.82	6			PKPab		22 48 59.3	-0.3
SLBS	Sierra La Lagu	144.82	48			PKPdf		22 49 01.9	+0.7
TXAR	Lajitas Array	145.10	34	PKPbc		PKPbc		22 49 01.1	+0.2
	comp=Z,11nm,0.9s,baz=276,slow=2.1,SNR=42									
OZNA	Ozona	145.18	29			PKPbc		22 49 00.8	-0.3
V58A	Windy Hill, Pi	145.22	356			PKPab		22 49 01.4	+0.4
V55A	Taylorsville	145.26	359			PKPbc		22 49 01.2	+0.1
PLAL	Pickwick Lake	145.69	9			PKPdf		22 49 01.5	-0.8
X48A	Hartselle	146.36	7			PKPdf		22 49 03.6	+0.2
CO01	Juntas del Tor	147.17	200			PKPab		22 49 08.9	-0.1
LPAZ	La Paz	157.98	218	PKP		PKPdf		22 49 22.4	+0.5
	comp=Z,2.5nm,1.1s,baz=117,slow=4.5,SNR=5.1									
LPAZ				PKPab		PKPab		22 49 55.2	+0.4
	comp=Z,1.9nm,0.9s,baz=328,slow=1.1,SNR=3.9									

BJI ***21*** *22:31:56.4,32˚.53N×137˚.21E,h390km,mB4.8/18, mb4.9/66*

JMA ***21*** *22:31:57.1±0.3,33˚.N±2˚.×13˚.7E±˚,h420km±2km, MD4.9/38, MW5.0/38,FAR S OFF TOKAI DISTRICT*

JMA Felt I J1 at FAR S OFF TOKAI DISTRICT.

NIED ***21*** *22:31:57.1,32˚.56N×137˚.44E,h420km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.66; Mθθ-0.02; Mφφ-0.64; Mrθ2.32; Mθφ-0.75; Mφr-3.24; Fault plane solution: M₀4.03000×10¹⁶ NP1:φs47.00000°, δ9.00000°,λ169.00000°. NP2:φs148.00000°,δ88.00000°, λ81.00000°.*

MOS ***21*** *22:31:57.2±0.9,32˚.47N×137˚.25E,h403km,mb4.8/70 Error ellipse: s-maj=6.6km s-min=4.4km az=101.8*

NEIC ***21*** *22:31:58.4±1.2,32˚.49N±0˚.04×137˚.30E±0˚.08, h398km±5km,mb4.9/620,Error ellipse: s-maj=9.5km s-min=6.3km az=72.0*

IDC ***21*** *22:31:58.6±0.5,32˚.53N×137˚.31E,h403km±4km,mb4.2/32, mbtmp4.9/39,Error ellipse: s-maj=7.2km s-min=7.1km az=171.0*

ISC 21 22:31:58.2±0.4,32˚49N±0˚.03×137˚28E±0˚.03,h402km±3km, n1221,σ1º02/1148,mb4.9/416,12C-16D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TTO1	TONANKAI O.B.S	1.21	340	P		P	22 32 51.3	+1.5
TTO3	TONANKAI O.B.S	1.37	4	P		P	22 32 52.2	+1.5
TTO3				S		S	22 33 36.2	+3.0
TK02	Tokai 2	1.51	15	⇓P		P	22 32 52.5	+1.3
TK02				⇓S		S	22 33 36.7	+2.6
JWKM	Wakayamakushim	1.60	307	A		A	22 32 53.3	
	comp=N,15nm,2.7s,comp=E,9.0nm,1.9s							
JMMH	Miemihama	1.69	322	A		A	22 32 53.6	
	comp=N,5.0nm,3.2s,comp=E,7.0nm,2.8s							
JTNC	Tanabenakahech	1.93	314	*i* P		P	22 32 54.6	+0.8
JTNC				*e*S		S	22 33 39.3	+0.4
JTNC	Tanabenakahech	1.93	314	A		A	22 32 54.6	
	comp=N,7.0nm,2.7s,comp=E,5.0nm,6.2s							
JIE	Ise	1.96	346	P		P	22 32 54.8	+0.9
JIE				S		S	22 33 39.1	0.0
JIE	Ise	1.96	346	A		A	22 32 54.8	
	comp=N,5.0nm,4.2s,comp=E,8.0nm,2.6s							
JAOM	Aogashimamukai	2.10	90	*e*P		P	22 32 55.3	+0.4
JAOM				*e*S		S	22 33 42.0	+1.2
JWM	Minabe	2.11	310	A		A	22 32 56.2	
	comp=N,10.0nm,2.3s,comp=E,7.0nm,2.2s							
JNTK	Naratenkawa	2.13	327	A		A	22 32 56.0	
	comp=N,5.0nm,3.4s,comp=E,6.0nm,3.2s							
JHJ	Hachijo jima 2	2.20	73	P		P	22 32 55.6	+0.1
	comp=E,557nm,0.2s,baz=88,slow=22,SNR=59							
JHJ				S		S	22 33 43.0	+1.2
	comp=E,674nm,0.5s,baz=246,slow=24,SNR=7.1							
JHJ2	Mitsune	2.22	73			P	22 32 55.4	-0.3
JHJ2					Sn	S	22 33 41.1	-1.1
JHJ2	Mitsune	2.22	73	P		P	22 32 55.5	-0.1
JWY	Kouya	2.23	321	*i* P		P	22 32 57.0	+1.2
JWY				S		S	22 33 42.7	+0.2
JSG	Sagara	2.31	19			P	22 32 56.7	+0.5
JSG	Sagara	2.31	19	A		A	22 32 56.4	
	comp=N,8.0nm,4.4s,comp=E,8.0nm,4.7s							
HMMJ	Hamamatsu 2	2.39	9	A		A	22 32 57.1	
	comp=N,4.0nm,3.3s,comp=E,6.0nm,3.2s							
JIZS	Izushimoda	2.59	30	A		A	22 32 58.2	
	comp=N,2.0nm,1.8s,comp=E,3.0nm,1.7s							
SHZ3	Shizuoka 3	2.68	16	A		A	22 32 59.0	
	comp=N,5.0nm,2.1s,comp=E,3.0nm,3.0s							
JAI	Aioi	2.71	299	*i* P		P	22 33 00.5	+1.4
JAI				S		S	22 33 48.7	+0.2
JEG	Eigenji	2.74	345	A		A	22 32 60.0	
	comp=N,4.0nm,2.2s,comp=E,7.0nm,2.7s							
JAO	Obara	2.77	360	A		A	22 32 59.9	
	comp=N,6.0nm,3.2s,comp=E,6.0nm,3.6s							
JAWN	Awajishima-nag	2.81	316	A		A	22 33 01.1	
	comp=N,6.0nm,2.5s,comp=E,4.0nm,2.8s							
JHTM	Izuhatsuma	2.85	30	A		A	22 33 00.1	
	comp=N,9.0nm,2.5s,comp=E,11nm,1.4s							
INU	Inuyama	2.86	356			P	22 33 00.1	-0.1
INU	Inuyama	2.86	356	P		P	22 33 00.8	+0.6
INU	Inuyama	2.86	356	S		S	22 33 50.6	0.0
JNY	Yasuok	2.90	9	A		A	22 33 00.7	
	comp=N,4.0nm,5.1s,comp=E,3.0nm,2.2s							
JMIK	Miki	2.97	322	A		A	22 33 02.2	
	comp=N,6.0nm,3.7s,comp=E,7.0nm,1.8s							
JGF	Kuroka	3.10	1			P	22 33 02.6	+0.4
JGF					Sn	S	22 33 55.0	+0.6
JGF	Kuroka	3.10	1	P		P	22 33 02.1	-0.1
JGF	Kuroka	3.10	1	S		S	22 33 54.2	-0.1
JMN	Monobe	3.11	294			P	22 33 02.6	+0.3
JMN	Monobe	3.11	294	P		P	22 33 04.1	+1.8
JMN	Monobe	3.11	294	S		S	22 33 54.7	+0.2
JMN	Monobe	3.11	294	*i* P		P	22 33 04.1	+1.8
JMN				S		S	22 33 56.5	+1.9
JMN	Monobe	3.11	294	A		A	22 33 04.1	
	comp=N,7.0nm,2.8s,comp=E,4.0nm,1.9s							
JYTA	Yamagatataniai	3.13	352	⇓*i* P		P	22 33 03.2	+0.9
JYTA				⇓S		S	22 33 54.5	-0.1
JOD2	Odawara 2	3.15	28	P		P	22 33 02.0	-0.6
JYN	Shimob	3.18	19	⇓*i* P		P	22 33 02.9	+0.1
JWT	Wachi	3.19	331	*i* P		P	22 33 04.0	+1.1
JWT				S		S	22 33 55.0	-0.7
JWT	Wachi	3.19	331	A		A	22 33 04.0	
	comp=N,2.0nm,4.8s,comp=E,5.0nm,2.4s							
JFM	Mihama	3.22	341	A		A	22 33 03.8	
	comp=N,4.0nm,3.0s,comp=E,5.0nm,4.4s							
BSO1	Itso 1	3.76	54	*i* P		P	22 33 04.9	-2.4
JRY	Ryogami san	3.77	20	⇓*i* P		P	22 33 07.8	-0.1
JRY				⇓S		S	22 34 03.6	-1.2
TOK	Tokyo	3.79	32	A		A	22 33 07.7	
	comp=N,15nm,0.5s,comp=E,17nm,0.6s							
JTO	Tosashimizu	3.80	277	*i* P		P	22 33 10.0	+1.7
JTO				*e*S		S	22 34 07.5	+2.0
JKG	Kaga	3.86	348	P		P	22 33 09.4	+0.7
MAT	Matsushiro	4.11	10	*i* P		P	22 33 10.9	-0.3
MAT				*e*S		S	22 34 09.7	-1.1
MJAR	Matsushiro Arr	4.11	10	P		P	22 33 10.7	-0.5
	comp=E,798nm,0.6s,baz=183,slow=9.5,SNR=827							
MJAR				S		S	22 34 07.8	-3.0
	comp=E,55nm,0.6s,baz=179,slow=16,SNR=7.2							
MAJO	Matsushiro	4.12	10			P	22 33 11.0	-0.2
MAJO					Sn	S	22 34 10.7	-0.1
MAJO	Matsushiro	4.12	10	P		P	22 33 11.5	+0.3
MAJO	Matsushiro	4.12	10	*i* P		P	22 33 10.5	-0.7
MJB9	Matsu-Tunnel	4.12	10	Pn		P	22 33 11.2	0.0
MJB9					Sn	S	22 34 10.9	0.0
JHS	Saijyo	4.28	307	*i* P		P	22 33 14.1	+1.3
JAG	Ashikaga	4.32	24	⇓*i* P		P	22 33 11.0	-2.1
JHT	Toyohira	4.60	299	A		A	22 33 17.4	
	comp=N,3.0nm,3.3s,comp=E,2.0nm,5.8s							
JJN	Nakama	4.66	9	A		A	22 33 16.2	
	comp=N,4.0nm,2.7s,comp=E,4.0nm,2.1s							
JGT2	ShinenMisato	4.73	304	A		A	22 33 18.5	
	comp=N,3.0nm,5.4s,comp=E,5.0nm,2.9s							
JKI	Kunimi	4.93	285	A		A	22 33 21.0	
	comp=N,4.0nm,3.0s,comp=E,3.0nm,3.5s							
JSB	Shiboa	4.97	25	A		A	22 33 19.0	
	comp=N,6.0nm,1.9s,comp=E,7.0nm,2.4s							
JNKG	Nichinankitago	5.08	262	A		A	22 33 22.8	
	comp=N,3.0nm,3.2s,comp=E,8.0nm,3.1s							
JNU	Nakatsue	5.43	278	P		P	22 33 26.1	+1.6
	comp=E,199nm,0.9s,baz=85,slow=6.1,SNR=76							
JNU				S		S	22 34 36.4	+1.2
	comp=E,123nm,1.0s,baz=327,slow=22,SNR=10							
JNU	Nakatsue	5.43	278			P	22 33 25.3	+0.7
JNU					Sn	S	22 34 35.7	+0.5
JNU	Nakatsue	5.43	278	P		P	22 33 26.4	+1.9
JNU	Nakatsue	5.43	278	S		S	22 34 36.6	+1.3
ONAJ	Iwakimizuishiy	5.43	31	A		A	22 33 23.7	
	comp=N,7.0nm,1.2s,comp=E,10.0nm,0.7s							
JSD	Sado	5.59	8	P		P	22 33 24.5	-1.5
JSD	Sado	5.59	8	P		P	22 33 25.6	-0.5
JFK	Kawauchi	5.69	30	A		A	22 33 26.3	
	comp=N,6.0nm,1.3s,comp=E,4.0nm,2.4s							
JMM	Marumori	6.08	27			P	22 33 29.4	-2.0
JMM	Marumori	6.08	27	P		P	22 33 29.7	-1.6
JCJ	Chichijima	6.86	140	P		P	22 33 28.9	-12
	comp=E,202nm,0.4s,baz=280,slow=22,SNR=19							
JCJ				S		S	22 34 46.2	-18
	comp=E,703nm,0.5s,baz=322,slow=22,SNR=18							
JCJ	Chichijima	6.86	140			P	22 33 37.7	-3.3
JCJ	Chichijima	6.86	140	P		P	22 33 37.5	-3.5
JTU	Tsushima	6.89	289	P		P	22 33 41.8	+0.6
JTU	Tsushima	6.89	289	S		S	22 35 04.4	+0.1
JTM	Tenmabayashi	8.82	19			P	22 34 01.4	-1.1
JTM	Tenmabayashi	8.82	19	P		P	22 34 01.8	-0.7
TJN	Taejon	9.06	298			P	22 34 05.6	+0.3
TJN	Taejon	9.06	298	P		P	22 34 06.6	+1.3
TJN	Taejon	9.06	298	S		S	22 35 50.7	+1.0
TJN	Taejon	9.06	298	P		P	22 34 05.6	+0.3
KSRS	Korea Array	9.14	305	P		P	22 34 07.3	+1.2
	comp=E,32nm,0.5s,baz=120,slow=10,SNR=63							
KSRS				S		S	22 35 52.6	+1.4
	comp=E,12nm,1.0s,baz=109,slow=21,SNR=9.2							
KSRS				ScP		ScP	22 42 38.5	+0.7
	comp=E,6.0nm,1.1s,baz=138,slow=1.2,SNR=11							
KS19	Wonju Array Si	9.20	306			P	22 34 06.7	-0.1
JOW	Kunigami	9.65	237	P		P	22 34 14.1	+2.1
	comp=E,120nm,1.0s,baz=57,slow=8.6,SNR=8.0							
JOW	Kunigami	9.65	237	P		P	22 34 10.5	-1.4
JOW	Kunigami	9.65	237	P		P	22 34 12.8	+0.8
INCN	Inchon	10.05	303			P	22 34 17.5	+1.2
INCN	Inchon	10.05	303	P		P	22 34 17.5	+1.2
ERM	Erimo	10.59	25			P	22 34 21.0	-1.1
ERM	Erimo	10.59	25	P		P	22 34 22.1	0.0
ERM	Erimo	10.59	25	P		P	22 34 21.0	-1.1
JEM	Erimo	10.59	25	P		P	22 34 22.1	0.0
ASAJ	Asahikawa	12.33	18	P		P	22 34 42.5	+1.2
	comp=E,22nm,0.4s,baz=211,slow=14,SNR=17							
ASAJ				S		S	22 36 53.6	-2.5
	comp=E,38nm,0.7s,baz=175,slow=6.3,SNR=3.8							
ASAJ	Asahikawa	12.33	18	P		P	22 34 41.2	-0.1
JKA	Kamikawa-asahi	12.33	18	P		P	22 34 41.2	-0.1
USRK	Ussuriysk Ar.	12.40	342	P		P	22 34 42.4	+0.3
	comp=E,13nm,0.5s,baz=152,slow=11,SNR=22							
TEY	Ternei	12.54	358	⇑*e*P		P	22 34 43.9	+0.3
TEY				pmax	pmax			
	comp=N,20nm,0.6s							
TEY				pmax	pmax			
	comp=Z,20nm,0.6s							
NMR	Nemuro--Hokkai	12.73	29	⇓*i* P		P	22 34 47.7	+2.0
NMR				*i* S		S	22 37 04.8	+0.6
GLVR	Golovnino	12.96	28	P		P	22 34 51.8	+3.6
GLVR				*e*S		S	22 37 13.2	+4.5
JMJ	Miyako jima 2	13.01	237	P		P	22 34 50.3	+1.3
RUSJ	Misakicho	13.17	26	*e*P		P	22 34 54.3	+3.9
RUSJ				*e*S		S	22 37 17.3	+4.4
YUK	Yuzh-Kuril'sk	13.34	28	*e*P		P	22 34 56.6	+4.2
YUK				*i* S		S	22 37 19.3	+2.9
YUK				pmax	pmax			
	comp=Z,211nm,0.5s							
YUK				pmax	pmax			
	comp=N,126nm,0.2s							
YUK				pmax	pmax			
	comp=E,143nm,0.2s							
MDJ	Mudanjiang	13.51	336	P		P	22 34 53.8	-0.4
DL2	Dalian	14.23	301	P		P	22 35 03.1	+0.9
DL2				pmax	pmax			
	comp=E,130nm,1.0s							
CN2	Changchun	14.62	324	*e*P		P	22 35 05.0	-1.3
CN2				*e*S		S	22 37 39.8	-2.2
CN2				pmax	pmax			
	comp=E,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=E,100nm,3.0s							
CN2				LR	LR			
	comp=E,100nm,11.0s							
CN2				LR	LR			
	comp=E,200nm,11.0s							
CN2				LR	LR			
	comp=E,100nm,10.0s							
YOJ	Yonaguni jima	14.87	241	P		P	22 35 09.2	-0.1
YSS	Yuzhno-Sakhali	15.04	15			P	22 35 10.5	-0.3
YSS	Yuzhno-Sakhali	15.04	15	*e*P		P	22 35 11.4	+0.6
YSS				*e*S		S	22 37 49.5	-0.7
YSS				pmax	pmax			
	comp=Z,700nm,4.7s							
YSS				pmax	pmax			
	comp=Z,160nm,0.8s							
YSS				smax	smax			
	comp=N,700nm,3.2s							
YSS				smax	smax			
	comp=E,900nm,3.1s							
YSS				smax	smax			
	comp=N,60nm,1.1s							
YSS				smax	smax			
	comp=E,70nm,0.9s							
BNX	BinXian	15.27	333	⇓P		P	22 35 13.1	-0.3
BNX				S		S	22 37 53.3	-1.6
BNX				pmax	pmax			
	comp=E,40nm,0.7s							
NJ2	Nanjing	15.60	273	⇓*i* P		P	22 35 16.8	-0.3
NJ2				pmax	pmax			
	comp=E,70nm,0.8s							
YHNB	Yeheng	15.99	245	P		P	22 35 19.8	-1.6
NACB	Ninganchiao	16.09	243	P		P	22 35 20.3	-2.2
YULB	Yu-li	16.77	241	P		P	22 35 27.7	-2.0
YULB	Yu-li	16.77	241	P		P	22 35 29.3	-0.4
YULB	Yu-li	16.77	241	S		S	22 38 25.0	+0.3
SSLB	Suanglung	16.80	243			P	22 35 29.0	-1.1
SSLB	Suanglung	16.80	243	P		P	22 35 29.2	-0.8
SSLB	Suanglung	16.80	243	S		S	22 38 25.6	+0.3
TIA	Tai'an	17.05	288	P		P	22 35 31.8	-0.8
TIA				S		S	22 38 29.6	-0.5
TIA				pmax	pmax			
	comp=E,53nm,1.1s							
TWGBT	Beinan	17.27	240	P		P	22 35 35.0	0.0
TWG	Pinlang	17.27	240	P		P	22 35 34.3	-0.8
TPUB	Ta-pu	17.32	242			P	22 35 34.9	-0.7
TPUB	Ta-pu	17.32	242	P		P	22 35 35.2	-0.4
GRNR	Gornyy	18.28	358	⇑*i* P		P	22 35 45.8	+0.4
GRNR				pmax	pmax			
	comp=Z,30nm,0.7s							
BJT	Baijiatuan	18.59	300			P	22 35 47.7	-1.1
BJT	Baijiatuan	18.59	300	P		P	22 35 47.7	-1.1
BJT	Baijiatuan	18.59	300	P		P	22 35 47.7	-1.1
BJI	Beijing	18.59	300	P		P	22 35 47.6	-1.2
BJI				S		S	22 38 56.4	-2.2
BJI				pmax	pmax			
	comp=Z,130nm,3.7s							
TYV	Tymovskoe	18.78	11	*e*P		P	22 35 51.3	+0.7
TYV				*e*S		S	22 38 57.5	-4.1
TYV				pmax	pmax			
	comp=Z,68nm,0.7s							
TYV				pmax	pmax			
	comp=Z,300nm,2.4s							
TYV				smax	smax			
	comp=N,400nm,3.6s							

ULN IAmb IAmb 22 38 20.2
comp=Z,84nm,1.1s
ULN Ulaanbaatar 27.51 313 *ce*P **P 22 37 11.2 +1.2**
ULN pmax pmax
comp=Z,34nm,1.3s
LZH Lanzhou 27.78 287 *e*P **P 22 37 12.1 -0.4**
LZH pmax pmax
comp=Z,49nm,1.8s
LZDM Lanzhou Array 27.91 286 P **P 22 37 13.4 -0.4**
comp=Z,4.0nm,0.4s,baz=110,slow=8.1,SNR=7.1
LZDM S **S 22 41 29.6 +1.7**
comp=Z,1.1nm,0.4s,baz=93,slow=12,SNR=1.5
LZDM ScP **ScP 22 43 20.4 +1.0**
comp=Z,2.1nm,0.4s,baz=70,slow=4.7,SNR=6.5
comp=Z,4.0nm,0.4s
SONM Songino Array 27.91 312 P **P 22 37 14.3 +0.8**
comp=Z,9.1nm,0.7s,baz=117,slow=7.6,SNR=11
SONM ScP **ScP 22 43 19.7 +0.8**
comp=Z,2.6nm,0.7s,baz=112,slow=3.9,SNR=2.5
comp=Z,9.1nm,0.7s
MA2 Magadan 28.55 14 P 22 37 18.4 -0.3
MA2 Magadan 28.55 14 P **P 22 37 19.2 +0.5**
MA2 Magadan 28.55 14 *i*P **P 22 37 19.3 +0.5**
MA2 pmax pmax
comp=Z,122nm,0.8s
YAK Yakutsk 29.96 353 P 22 37 30.6 -0.5
YAK IAmb IAmb 22 37 32.2
comp=Z,55nm,0.9s
YAK Yakutsk 29.96 353 *e*P **P 22 37 30.6 -0.5**
YAK *e*S **S 22 41 56.1 -2.5**
YAK pmax pmax
comp=Z,69nm,1.3s
YAK pmax pmax
comp=N,41nm,2.1s
YAK pmax pmax
comp=E,9.0nm,1.5s
YAK smax smax
comp=N,564nm,4.1s
YAK smax smax
comp=E,339nm,5.3s
SGSI Sangihe 30.70 203 P P 22 37 33.8 -4.3
ZAK Zakamensk 30.77 316 *e*P **P 22 37 38.5 0.0**
ZAK pmax pmax
comp=Z,18nm,1.5s
GTA Gaotai 30.95 294 P P 22 37 40.8 +0.7
GTA S **S 22 42 13.4 -1.4**
GTA pmax pmax
comp=Z,40nm,1.4s
KMI Kunming 31.05 265 P P 22 37 43.3 +2.0
KMI pmax pmax
comp=Z,16nm,1.3s
PZH PanZhiHua 31.41 268 P P 22 37 43.8 -0.5
PZH S **S 22 42 19.5 -2.7**
PZH pmax pmax
comp=Z,60nm,0.9s
PZH pmax pmax
comp=Z,200nm,7.8s
SEY Seymchan 31.94 13 *i*P **P 22 37 47.8 -0.4**
SEY pmax pmax
comp=Z,28nm,0.9s
TNTI Ternate 32.91 198 P P 22 37 56.3 -0.8
TNTI Ternate 32.91 198 P **P 22 37 56.8 -0.3**
comp=Z,73nm,1.1s
DLV Lat 33.42 239 P 22 38 01.7 0.0
DLV IAmb IAmb 22 38 03.5
comp=Z,54nm,0.8s
UBPT Khong Chiam 33.58 247 P P 22 38 03.8 +0.9
SWI Sorong 33.66 191 P P 22 38 03.3 -0.2
comp=Z,1µmcomp=Z,139nm,0.9s
KMSI Cibinong 34.13 204 P P 22 38 07.8 +0.2
TNCH TengChong 34.64 268 ⇓P **P 22 38 12.3 +0.3**
TNCH pmax pmax
comp=Z,78nm,1.0s
TOLI2 Tolitoli 34.87 210 P 22 38 13.3 -0.5
TOLI2 IAmb IAmb 22 38 14.4
comp=Z,64nm,0.9s
TOLI2 Tolitoli 34.87 210 P P 22 38 13.3 -0.5
MRSI Marisa 34.98 207 P P 22 38 14.6 -0.1
comp=Z,2µmcomp=Z,217nm,0.8s
GOMU GeErMu 35.06 288 P P 22 38 15.3 -0.3
GOMU PcP **PcP 22 40 37.3 +0.2**
GOMU S **S 22 43 18.4 +0.1**
GOMU pmax pmax
comp=Z,78nm,1.0s
GOMU LR LR
comp=Z,330nm,12.9s
GOMU LR LR
comp=Z,370nm,14.5s
GOMU LR LR
comp=Z,22µm,12.2s
FAKI Fak Fak 35.54 189 P 22 38 19.2 -0.3
FAKI Fak Fak 35.54 189 P **P 22 38 19.4 0.0**
FAKI Fak Fak 35.54 189 P **P 22 38 19.7 +0.3**
comp=Z,1µmcomp=Z,132nm,0.9s
AMKA Amchitka 35.90 46 P **P 22 38 21.4 -0.6**
MPSI Mapaga 35.94 211 P **P 22 38 22.5 -0.3**
SANI Sanana 35.98 199 P **P 22 38 22.3 -0.8**
SANI Sanana 35.98 199 P **P 22 38 21.8 -1.3**
LUWI Luwuk 36.06 205 P 22 38 21.9 -2.0
LUWI Luwuk 36.06 205 P **P 22 38 21.7 -2.1**
comp=Z,210nm,1.1s
APSI Ampana 36.36 207 P P 22 38 26.8 +0.5
comp=Z,3µmcomp=Z,306nm,1.2s
CHTO Chiang Mai 36.94 258 P 22 38 30.9 -0.3
CHTO IAmb IAmb 22 38 33.1
comp=Z,43nm,0.9s
CHTO Chiang Mai 36.94 258 P P 22 38 31.2 0.0
CHTO Chiang Mai 36.94 258 P **P 22 38 30.9 -0.3**
CHTO pmax pmax
comp=Z,43nm,0.9s
CHTO Chiang Mai 36.94 258 P P 22 38 30.9 -0.3
PCI Palu 37.08 210 P P 22 38 32.7 +0.3
comp=Z,200nm,1.1s
CM31 Chiang Mai Arr 37.12 257 P P 22 38 32.5 -0.1
CMAR Chiang Mai Arr 37.12 257 P **P 22 38 33.0 +0.3**
comp=Z,11nm,0.8s,baz=48,slow=7.4,SNR=36
CMAR ScP **ScP 22 43 52.3 +1.1**
comp=Z,1.2nm,0.3s,baz=34,slow=2.5,SNR=10
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 37.12 257 *i*P **P 22 38 33.0 +0.3**
CMAR pmax pmax
comp=Z,11nm,0.7s
BNDI Bandanaira 37.47 192 P P 22 38 36.2 +0.7
SBUM Sibu 38.04 223 IAmb IAmb 22 38 41.8
comp=Z,60nm,1.1s
SBUM Sibu 38.04 223 P P 22 38 41.2 +0.9
ADK Adak 38.45 46 P **P 22 38 43.0 -0.1**
BKB Balikpapan 38.71 214 P 22 38 46.0 +0.3
BKB Balikpapan 38.71 214 P **P 22 38 46.8 +1.0**
comp=Z,317nm,1.0s
LSA Lhasa 39.37 279 P 22 38 51.2 -0.4
LSA Lhasa 39.37 279 P **P 22 38 48.1 -3.5**
LSA pmax pmax
comp=Z,28nm,1.0s
LSA Lhasa 39.37 279 P P 22 38 51.2 -0.4
LSA pmax pmax
comp=Z,26nm,1.0s
MTKI Muara Teweh, K 39.41 217 P P 22 38 53.2 +1.7
comp=Z,97nm,0.9s
TIXI Tiksi 39.48 356 P P 22 38 50.4 -0.9
TIXI Tiksi 39.48 356 *i*P **P 22 38 49.5 -1.8**
TIXI pmax pmax
comp=Z,24nm,0.9s
TIXI Tiksi 39.48 356 P P 22 38 50.5 -0.8
TIXI PcP **PcP 22 40 50.4 +0.9**
SPSI Sidrap Palu 39.89 208 P P 22 38 55.7 +0.4
comp=Z,64nm,1.1s
ATKA Atka Island 40.02 46 P P 22 38 56.1 +0.2
SHL Shillong 40.06 272 P P 22 38 55.9 -1.0
SHL Shillong 40.06 272 P P 22 38 55.9 -1.0
SHL pmax pmax
comp=Z,31nm,1.1s
WMQ Urumqi 40.06 301 *e*P **P 22 38 57.5 +1.0**
WMQ S **S 22 44 33.5 +1.4**
WMQ pmax pmax
comp=Z,32nm,0.9s
WMQ LR LR
comp=Z,400nm,16.3s
WMQ LR LR
comp=Z,510nm,18.7s
WMQ LR LR
comp=Z,190nm,23.3s
BNSI Bone 40.15 207 P P 22 38 59.2 +1.7
comp=Z,155nm,1.2s
SAUI Saumlaki 40.65 189 P P 22 39 01.8 +0.3
SAUI Saumlaki 40.65 189 P P 22 39 03.4 +1.9
KAPI Kappang 40.85 207 P P 22 39 03.7 +0.6
comp=Z,131nm,0.8s,baz=17,slow=5.0,SNR=38
KAPI S **S 22 44 42.4 -1.7**
comp=Z,3.4nm,0.3s,baz=0.0,slow=13,SNR=5.8
comp=Z,131nm,0.8s
KAPI Kappang 40.85 207 P P 22 39 03.0 -0.1
KAPI Kappang 40.85 207 *i*P **P 22 39 03.2 +0.1**
KAPI pmax pmax
comp=Z,221nm,0.9s
KAPI Kappang 40.85 207 P P 22 39 03.3 +0.2
BKSI Bulukumba 40.99 207 P P 22 39 04.2 0.0
comp=Z,81nm,0.8s
BRDH Bariadhala 41.35 268 P P 22 39 08.3 +1.2
comp=Z,186nm,0.4s,baz=68,slow=8.3,SNR=23
BBKI Banjar Baru 41.61 215 P P 22 39 09.3 0.0
comp=Z,150nm,1.3s
ZSN Zaisan 42.06 307 *e*P **P 22 39 12.9 +0.4**
ZSN Zaisan 42.06 307 *e*P **P 22 39 12.9 +0.4**
ZALV Zalesovo Beam 42.65 316 P P 22 39 17.1 +0.1
comp=Z,20nm,0.7s,baz=96,slow=6.8,SNR=5.7
ZALV PcP **PcP 22 41 00.4 0.0**
comp=Z,5.3nm,0.6s,baz=115,slow=3.4,SNR=3.4
ZALV ScP **ScP 22 44 12.4 +0.2**
comp=Z,4.3nm,0.8s,baz=113,slow=4.4,SNR=6.4
comp=Z,20nm,0.7s
SPIA Saint Paul Isl 43.22 39 P P 22 39 21.3 -0.2
baz=258
MMRI Maumere 43.34 202 P P 22 39 22.1 -0.9
MMRI Maumere 43.34 202 P P 22 39 23.0 +0.1
comp=Z,145nm,1.2s
NIKH Nikolski High 43.35 45 P P 22 39 22.1 -0.5
baz=264
P08K Saint George I 43.48 40 P P 22 39 23.5 0.0
baz=259
EVN Everest 43.52 278 P 22 39 24.9 -0.1
EVN IAmb IAmb 22 39 26.7
comp=Z,29nm,0.7s
KULM Kulim 43.59 240 P P 22 39 24.6 -0.4
KULM IAmb IAmb 22 39 26.6
comp=Z,63nm,1.0s
KULM Kulim 43.59 240 P P 22 39 25.3 +0.3
EDFI Ende, Flores 43.62 203 P P 22 39 24.1 -1.2
comp=Z,46nm,0.7s
SOEI Soe 43.81 199 P P 22 39 25.4 -1.3
SOEI Soe 43.81 199 P P 22 39 26.4 -0.3
SOEI Soe 43.81 199 P P 22 39 27.0 +0.3
comp=Z,107nm,1.2s
MK31 Makanchi Array 43.82 306 *ce*P **P 22 39 27.2 +0.8**
MKAR Makanchi Array 43.82 306 P **P 22 39 26.6 +0.2**
comp=Z,30nm,1.1s,baz=86,slow=9.3,SNR=27
MKAR PcP **PcP 22 41 05.1 +0.5**
comp=Z,2.8nm,0.9s,baz=122,slow=3.1,SNR=2.3
MKAR ScP **ScP 22 44 16.6 -0.6**
comp=Z,3.6nm,0.8s,baz=88,slow=4.2,SNR=10
MKAR S **S 22 45 27.0 +0.5**
comp=Z,0.5nm,0.9s,baz=104,slow=12,SNR=2.1
comp=Z,30nm,1.1s
MYKOM Kota Tinggi 43.82 233 P P 22 39 27.0 +0.2
MYKOM IAmb IAmb 22 39 28.6
comp=Z,48nm,1.0s
IPM Ipoh 43.87 238 P P 22 39 26.6 -0.6
IPM Ipoh 43.87 238 P P 22 39 26.8 -0.4
MAKZ Makanchi 44.03 306 P P 22 39 28.4 +0.4
MAKZ Makanchi 44.03 306 P P 22 39 28.5 +0.4
MAKZ pmax pmax
comp=Z,16nm,1.0s
GAMB Gambell 44.34 30 P P 22 39 30.7 +0.5
baz=250
BATI Baumata 44.41 199 P P 22 39 31.8 +0.5
comp=Z,2µmcomp=Z,146nm,1.0s
TPI Tanjungpandan 44.91 224 P P 22 39 36.1 +0.9
comp=Z,109nm,0.9s
PLAI Plampang 45.11 208 P P 22 39 35.4 -1.3
LVA Lava Point 45.14 44 P P 22 39 35.5 -1.0
AKUT Akutan 45.29 44 P P 22 39 37.6 -0.1
PPBI Pangkal Pinang 45.35 227 P P 22 39 41.0 +2.3
TWSI Taliwang, Sumb 45.38 209 P P 22 39 38.3 -0.6
comp=Z,76nm,1.0s
MTN Manton Dam 45.46 188 P 22 39 38.5 -0.9
MTN IAmb IAmb 22 39 40.5
comp=Z,30nm,0.7s
M11K Mekoryuk 45.93 35 P P 22 39 42.4 0.0
M11K Mekoryuk 45.93 35 P P 22 39 43.6 +1.1
baz=259
SHLS Shalkode 46.08 301 *e*P **P 22 39 41.5 -2.7**
SHLS Shalkode 46.08 301 *e*P **P 22 39 41.4 -2.7**
KURK Kurchatov 46.21 311 P P 22 39 44.4 -0.4
KURK Kurchatov 46.21 311 *ce*P **P 22 39 45.6 +0.8**
KURK pmax pmax
comp=Z,17nm,1.3s
KURBB Kurchatov Arra 46.26 311 P P 22 39 45.0 -0.2
comp=Z,5.2nm,0.4s,baz=92,slow=9.3,SNR=39
KURBB PcP **PcP 22 41 12.9 -0.1**
comp=Z,1.3nm,0.7s,baz=95,slow=3.7,SNR=4.5
KURBB ScP **ScP 22 44 25.9 -1.2**
comp=Z,2.0nm,0.9s,baz=103,slow=3.3,SNR=6.7
KURBB S **S 22 45 58.5 -2.5**
comp=Z,1.0nm,1.1s,baz=84,slow=20,SNR=4.3
comp=Z,5.2nm,0.4s
JAGI Jajag, Banyuwa 46.32 213 IAmb IAmb 22 39 47.6
comp=Z,53nm,1.1s
JAGI Jajag, Banyuwa 46.32 213 P P 22 39 45.8 -0.3
LHMI Lhok Sumawe 46.37 243 P P 22 39 46.1 -0.5
UZB Uzynbulak 46.40 301 *e*P **P 22 39 46.5 -0.2**
UZB Uzynbulak 46.40 301 *e*P **P 22 39 46.4 -0.2**
TNA Tin City 46.46 28 P P 22 39 47.7 +1.2
baz=252
COEN Coen 46.53 172 P 22 39 48.1 +0.5
COEN Coen 46.53 172 P P 22 39 48.6 +1.0
PSI Prapat 46.54 239 P P 22 39 47.5 -0.5
PSI pmax pmax
comp=Z,39nm,0.8s
RPSI Rantau Prapat 46.61 239 P 22 39 47.5 -0.9
RPSI IAmb IAmb 22 39 51.0
comp=Z,39nm,0.8s
TDK Taldyqorghan 46.63 303 *e*P **P 22 39 48.4 +0.1**
TDK Taldyqorghan 46.63 303 *e*P **P 22 39 48.3 +0.1**
PMBI Palembang 46.79 227 P P 22 39 50.0 +0.3
SATY Saty 46.86 301 *e*P **P 22 39 50.0 -0.2**
SATY Saty 46.86 301 *e*P **P 22 39 49.9 -0.2**
SMRI Semarang 46.90 218 P P 22 39 49.7 -0.9
SMRI IAmb IAmb 22 39 52.0
comp=Z,79nm,0.8s
K13K Kusilvak Mount 46.96 33 P P 22 39 50.7 +0.3
K13K Kusilvak Mount 46.96 33 P P 22 39 51.3 +0.9
baz=259
F14K Arctic Creek 47.07 28 P P 22 39 52.3 +1.1
baz=254
ANM Nome 47.23 30 P P 22 39 53.0 +0.7
baz=256
M13K Dall Lake 47.33 36 P P 22 39 53.6 +0.4
M13K IAmb IAmb 22 39 55.9
comp=Z,54nm,0.8s
M13K Dall Lake 47.33 36 P P 22 39 54.3 +1.1
baz=262
TARG Taragay, Kyrgy 47.49 299 P 22 39 54.7 -0.6
TARG Taragay, Kyrgy 47.49 299 P **P 22 39 54.7 -0.6**
TARG pmax pmax
comp=Z,36nm,1.1s
S12K Black Hills 47.54 42 P P 22 39 55.3 +0.4
baz=267
UGM Wanagama 47.59 217 P P 22 39 55.5 -0.3
J14K Nanvaranak Lak 47.62 32 IAmb IAmb 22 39 57.6
comp=Z,49nm,1.1s
J14K Nanvaranak Lak 47.62 32 P P 22 39 56.1 +0.8
baz=259
L14K Kuka Creek 47.79 34 P 22 39 57.8 +1.2
L14K IAmb IAmb 22 39 59.3
comp=Z,75nm,1.2s
L14K Kuka Creek 47.79 34 P P 22 39 57.2 +0.6
baz=261,SNR=8.2
F15K North Star Dit 47.81 28 P P 22 39 57.7 +0.9
F15K IAmb IAmb 22 39 59.4
comp=Z,49nm,0.7s
F15K North Star Dit 47.81 28 P P 22 39 57.6 +0.8
baz=255,SNR=7.2
MDOK Medeo 47.83 301 *e*P **P 22 39 57.6 0.0**
MDOK Medeo 47.83 301 *e*P **P 22 39 57.5 0.0**
G15K Niukluk 47.88 29 P P 22 39 58.3 +0.9
baz=257
TNSS Tian-Shan 47.92 301 *e*P **P 22 39 58.6 0.0**
TNSS Tian-Shan 47.92 301 *e*P **P 22 39 58.5 0.0**
KPJI Karang Pucung 47.94 219 P P 22 39 58.3 -0.1
comp=Z,104nm,1.0s
M14K Bethel 48.05 35 P 22 39 59.8 +1.2
M14K IAmb IAmb 22 40 01.0
comp=Z,78nm,0.8s
M14K Bethel 48.05 35 P P 22 39 59.3 +0.6
baz=262,SNR=12
N14K Kuskokwak Cree 48.09 36 P P 22 39 59.7 +0.8
baz=263
O14K Tigyukauivet M 48.23 37 P P 22 40 00.6 +0.6
baz=264
C16K Lisburne Hills 48.26 25 P P 22 40 00.8 +0.8
baz=252
KLI Kotabumi 48.26 226 P P 22 40 01.2 +0.3
MDSI Maura Dua 48.38 227 P P 22 40 01.6 -0.1
comp=Z,147nm,1.0s
L15K Ungalak Mounta 48.41 34 P P 22 40 02.2 +0.9
baz=262
SDPT Sand Point 48.42 43 P P 22 40 01.3 -0.2
SDPT Sand Point 48.42 43 P P 22 40 01.8 +0.2
baz=269
K15K Wolf Creek Mou 48.47 33 IAmb IAmb 22 40 04.3
comp=Z,66nm,1.6s
K15K Wolf Creek Mou 48.47 33 P P 22 40 02.5 +0.6
baz=262
GSI Gunungsitoli 48.54 238 P P 22 40 03.0 0.0
GSI Gunungsitoli 48.54 238 P P 22 40 03.4 +0.4
comp=Z,376nm,1.1s
H16K Elim 48.56 30 P P 22 40 02.9 +0.4
baz=259
KNRA Kununurra 48.58 191 P 22 40 03.5 +0.3
KNRA IAmb IAmb 22 40 04.2
comp=Z,90nm,1.2s
M15K Kasigluk River 48.67 35 P P 22 40 03.8 +0.4
baz=264,SNR=5.9
BBJI Bungbulang 48.74 221 P P 22 40 02.5 -2.1
LWLI Liwa 48.86 226 P P 22 40 06.5 +0.9
comp=Z,167nm,0.8s
N15K Kwethluk River 48.91 36 IAmb IAmb 22 40 07.2
comp=Z,48nm,0.8s
N15K Kwethluk River 48.91 36 P P 22 40 05.7 +0.5
baz=265
D17K Noatak River 48.91 26 P P 22 40 06.1 +1.0
baz=255
CHNA Chernabura Isl 48.93 43 P P 22 40 05.6 +0.3
baz=270
CNBA Chernabura Isl 48.93 43 P P 22 40 05.3 0.0
O15K Ungalikthiuk R 48.96 37 IAmb IAmb 22 40 07.4
comp=Z,43nm,0.7s
O15K Ungalikthiuk R 48.96 37 P P 22 40 06.3 +0.8
baz=266,SNR=6.6
KASI Kota Agung 49.00 226 P P 22 40 05.9 -0.5
J16K Anvik River 49.04 32 P P 22 40 06.8 +0.7
J16K Anvik River 49.04 32 P P 22 40 07.0 +0.9
baz=262
RDOG Red Dog Mine 49.07 25 P P 22 40 06.9 +0.6
RDOG Red Dog Mine 49.07 25 P P 22 40 06.4 +0.2
baz=255
C17K DeLong Mountai 49.08 25 P P 22 40 06.6 +0.3
baz=254
I17K Unalakleet 49.09 31 P P 22 40 07.4 +1.0
baz=261,SNR=7.8
E17K Hotham Inlet 49.24 27 P P 22 40 08.6 +1.1
baz=257
KSH Kashi 49.26 296 P P 22 40 12.3 +4.0
KSH pmax pmax
comp=Z,19nm,0.9s
F17K Baldwin Pennin 49.33 28 IAmb IAmb 22 40 10.5
comp=Z,44nm,0.7s
F17K Baldwin Pennin 49.33 28 P P 22 40 08.9 +0.8
baz=258,SNR=14
L16K Owhat River 49.36 34 P P 22 40 09.1 +0.7
baz=264
G17K Kiwalik Mounta 49.38 29 P P 22 40 09.6 +1.0
baz=260
M16K Timber Creek 49.54 35 P P 22 40 10.8 +0.9
baz=265,SNR=6.2
N16K Nishlik Lake 49.59 36 P P 22 40 11.2 +0.9
baz=266,SNR=8.1
H17K Granite Mounta 49.59 30 P P 22 40 11.2 +1.0
baz=261,SNR=7.3
BTLS Baital 49.70 304 *e*P **P 22 40 11.2 -0.1**
BTLS Baital 49.70 304 *e*P **P 22 40 11.1 -0.2**
J17K VABM Dome 49.74 32 IAmb IAmb 22 40 13.7
comp=Z,49nm,0.8s
J17K VABM Dome 49.74 32 P P 22 40 12.2 +0.9
baz=263
AAK Ala-Archa 49.76 301 P P 22 40 11.9 -0.1
AAK Ala-Archa 49.76 301 *i*P **P 22 40 09.8 -2.2**
AAK pmax pmax
comp=Z,15nm,1.4s
E18K Tukpahlearik C 49.78 27 P P 22 40 12.9 +1.4
E18K Tukpahlearik C 49.78 27 P P 22 40 12.6 +1.1
baz=258
B18K Kokolik River 49.80 24 P P 22 40 12.6 +1.0
baz=255
C18K Utukok River 49.83 25 IAmb IAmb 22 40 14.0
comp=Z,36nm,0.8s
C18K Utukok River 49.83 25 P P 22 40 12.8 +0.8
baz=256
O16K Kokwok River B 49.87 37 P P 22 40 13.0 +0.7
baz=267
P16K Nushagak River 49.90 38 P P 22 40 13.1 +0.6
baz=268
L17K Donlin 49.96 34 P P 22 40 14.2 +1.3
baz=265,SNR=7.0
F18K Selawik 49.98 28 P P 22 40 14.1 +1.1
baz=260
K17K Iditarod 50.01 33 IAmb IAmb 22 40 15.8
comp=Z,34nm,0.7s
K17K Iditarod 50.01 33 P P 22 40 14.5 +1.2
baz=264
R16K Pilot Point 50.08 40 P P 22 40 14.9 +1.1
baz=269
A19K Wainwright 50.26 23 P P 22 40 16.0 +1.0
baz=255
G18K Tagagawik 50.27 29 P P 22 40 15.8 +0.6
baz=261,SNR=12
H18K Honhosa River 50.28 30 P P 22 40 16.1 +0.8
baz=262,SNR=5.2
M17K Holitna River 50.31 35 IAmb IAmb 22 40 18.0
comp=Z,53nm,1.0s
M17K Holitna River 50.31 35 P P 22 40 16.5 +1.0
baz=266,SNR=9.2
N17K Nushagak Hills 50.38 36 P P 22 40 17.1 +1.1
baz=267,SNR=7.2
O17K Koliganek Bris 50.39 37 P P 22 40 16.9 +0.8
baz=268
C19K Lookout Ridge 50.50 25 P P 22 40 18.2 +1.2
C19K IAmb IAmb 22 40 19.5
comp=Z,49nm,0.8s
C19K Lookout Ridge 50.50 25 P P 22 40 18.2 +1.2
baz=258
P17K Kvichak River 50.70 38 P P 22 40 19.1 +0.7
baz=269
L18K Granite Mounta 50.72 34 P 22 40 19.7 +1.2
L18K Granite Mounta 50.72 34 P P 22 40 19.6 +1.0
baz=266
R17L Mt. Peulik Vol 50.73 40 P P 22 40 19.5 +0.8
baz=270
F19K Shaleruckik Mo 50.76 28 IAmb IAmb 22 40 20.7
comp=Z,82nm,1.8s
F19K Shaleruckik Mo 50.76 28 P P 22 40 19.2 +0.5
baz=261,SNR=5.2
J18K Innoko River 50.80 32 P P 22 40 19.0 -0.2
J18K Innoko River 50.80 32 P P 22 40 19.6 +0.5
baz=265
GCSA Galena City Sc 50.85 30 P P 22 40 19.7 +0.2
baz=264
D19K Kuna River 50.91 25 IAmb IAmb 22 40 22.0
comp=Z,107nm,1.5s
D19K Kuna River 50.91 25 P P 22 40 20.5 +0.6
baz=260,SNR=7.4
G19K Purcell Mounta 50.94 28 P P 22 40 20.3 +0.2
G19K Purcell Mounta 50.94 28 P P 22 40 20.6 +0.5
baz=262,SNR=7.3
N18K Kilae Creek 51.02 36 P 22 40 21.2 +0.3
N18K Kilae Creek 51.02 36 P P 22 40 21.6 +0.8
baz=268
E19K Redstone River 51.06 27 P P 22 40 21.2 +0.2
E19K IAmb IAmb 22 40 23.2
comp=Z,36nm,0.8s
E19K Redstone River 51.06 27 P P 22 40 21.9 +0.9
baz=261,SNR=15
M18K Stony River 51.09 35 P P 22 40 22.3 +1.0
baz=267
H19K Roundabout Mou 51.12 29 IAmb IAmb 22 40 23.6
comp=Z,34nm,0.8s
H19K Roundabout Mou 51.12 29 P P 22 40 22.5 +1.1
baz=264,SNR=18

BVAR **Borovoye Array** 51.22 315 P **P** 22 40 22.1 -0.3
comp=Z,5.4nm,0.5s,baz=99,slow=6.6,SNR=16
BVAR PcP **PcP** 22 41 31.4 +0.3
comp=Z,6.6nm,0.7s,baz=84,slow=3.8,SNR=5.5
BVAR ScP **ScP** 22 44 47.7 -0.7
comp=Z,7.9nm,0.8s,baz=104,slow=4.7,SNR=15
comp=Z,5.4nm,0.5s
P18K Big Mountain, 51.33 37 **P** 22 40 23.0 -0.2
P18K IAmb IAmb 22 40 24.8
comp=Z,48nm,0.8s
P18K Big Mountain, 51.33 37 P **P** 22 40 23.5 +0.3
baz=270
J19K Poorman 51.33 31 IAmb IAmb 22 40 24.8
comp=Z,35nm,0.7s
J19K Poorman 51.33 31 P **P** 22 40 23.7 +0.7
baz=266
O18K Koktuh Hills 51.34 37 P **P** 22 40 23.9 +0.7
O18K IAmb IAmb 22 40 26.0
comp=Z,34nm,0.7s
O18K Koktuh Hills 51.34 37 P **P** 22 40 24.1 +0.9
baz=269,SNR=6.0
Q18K Katmai Hardscr 51.44 38 P **P** 22 40 24.1 +0.1
baz=270
D20K Etivluk River 51.49 25 IAmb IAmb 22 40 26.3
comp=Z,77nm,1.2s
D20K Etivluk River 51.49 25 P **P** 22 40 25.1 +0.9
baz=261,SNR=13
B20K Meade River 51.52 24 P **P** 22 40 24.9 +0.6
B20K IAmb IAmb 22 40 26.5
comp=Z,50nm,0.8s
B20K Meade River 51.52 24 P **P** 22 40 25.1 +0.8
baz=259
FITZ Fitzroy Crossi 51.52 194 **P** 22 40 25.2 +0.2
FITZ Fitzroy Crossi 51.52 194 P **P** 22 40 25.3 +0.4
E20K Nigu River 51.57 26 P **P** 22 40 25.5 +0.6
baz=262
L19K White Mountain 51.57 34 **P** 22 40 25.5 +0.7
L19K White Mountain 51.57 34 P **P** 22 40 25.7 +0.9
baz=268
F20K Avaraart Lake 51.59 27 P **P** 22 40 25.4 +0.6
baz=263
N19K Bonanza Creek 51.72 35 **P** 22 40 25.6 -0.4
N19K Bonanza Creek 51.72 35 P **P** 22 40 26.4 +0.4
baz=269
R18K Karluk 51.76 40 P **P** 22 40 26.7 +0.5
baz=272
H20K Anotleneega Mo 51.77 29 P **P** 22 40 26.8 +0.6
baz=265,SNR=13
M19K Big River Lodg 51.78 34 P **P** 22 40 27.5 +1.1
M19K Big River Lodg 51.78 34 P **P** 22 40 27.4 +1.0
baz=268
O19K Port Alsworth 51.79 36 P **P** 22 40 26.9 +0.6
O19K IAmb IAmb 22 40 28.4
comp=Z,50nm,0.7s
O19K Port Alsworth 51.79 36 P **P** 22 40 27.2 +0.8
baz=270,SNR=6.9
I20K Naaghedeneel 51.88 30 P **P** 22 40 27.6 +0.7
I20K Naaghedeneel 51.88 30 P **P** 22 40 28.1 +1.1
baz=266
SII Sitkinak Islan 51.95 41 P **P** 22 40 28.3 +0.6
baz=273
K20K Telida 51.98 32 IAmb IAmb 22 40 30.3
comp=Z,56nm,0.8s
K20K Telida 51.98 32 P **P** 22 40 28.6 +0.7
baz=268
J20K Nowinta River 51.99 31 IAmb IAmb 22 40 30.2
comp=Z,49nm,0.8s
J20K Nowinta River 51.99 31 P **P** 22 40 28.7 +0.9
baz=267
DZA Taraz 52.00 302 *e*P **P** 22 40 28.3 -0.1
DZA Taraz 52.00 302 *e*P **P** 22 40 28.2 -0.1
WB0 Warramunga Arr 52.03 183 P **P** 22 40 28.0 -0.7
WB0 IAmb IAmb 22 40 29.4
comp=Z,32nm,0.8s
L20K Farewell, AK 52.04 33 P **P** 22 40 28.9 +0.7
L20K Farewell, AK 52.04 33 P **P** 22 40 29.0 +0.7
baz=268
Q19K Cape Douglas, 52.15 38 P **P** 22 40 28.3 -0.8
Q19K Cape Douglas, 52.15 38 P **P** 22 40 28.5 -0.6
baz=271
WRAB Tennant Creek 52.20 183 **P** 22 40 28.9 -1.0
WRAB Tennant Creek 52.20 183 P **P** 22 40 29.7 -0.2
WRAB Tennant Creek 52.20 183 *i*P **P** 22 40 28.6 -1.3
WRAB pmax pmax
comp=Z,17nm,0.6s
WRAB Tennant Creek 52.20 183 P **P** 22 40 29.7 -0.2
C21K Knifeblade Rid 52.21 25 P **P** 22 40 30.5 +1.2
baz=262,SNR=5.2
WRA Warramunga Arr 52.21 184 P **P** 22 40 29.6 -0.3
comp=Z,14nm,0.3s,baz=360,slow=7.6,SNR=103
WRA PcP **PcP** 22 41 36.2 +1.0
comp=Z,2.8nm,0.7s,baz=359,slow=4.5,SNR=0.8
WRA ScP **ScP** 22 44 53.1 +0.1
comp=Z,2.1nm,0.9s,baz=357,slow=3.9,SNR=6.1
WRA S **S** 22 47 21.1 -2.2
comp=Z,3.7nm,1.0s,baz=2.4,slow=14,SNR=10
comp=Z,14nm,0.3s
WRA Warramunga Arr 52.21 184 *i*P **P** 22 40 29.7 -0.3
WRA pmax pmax
comp=Z,19nm,0.4s
WR8 Warramunga Arr 52.22 183 P **P** 22 40 28.7 -1.3
WR8 IAmb IAmb 22 40 30.8
comp=Z,45nm,0.8s
B21K Ikpikpuk River 52.33 24 IAmb IAmb 22 40 32.6
comp=Z,56nm,0.9s
B21K Ikpikpuk River 52.33 24 P **P** 22 40 31.4 +1.2
baz=262
P19K Oil Pt 52.34 37 P **P** 22 40 30.6 +0.1
baz=271
M20K Styx River 52.38 34 P **P** 22 40 30.6 -0.2
M20K Styx River 52.38 34 P **P** 22 40 31.4 +0.6
baz=270
OHAK Old Harbor 52.40 40 P **P** 22 40 30.6 -0.3
baz=273
G21K Allakaket 52.41 28 P **P** 22 40 31.5 +0.6
G21K Allakaket 52.41 28 P **P** 22 40 31.5 +0.6
baz=266,SNR=7.3
E21K Killik River 52.41 26 P **P** 22 40 31.5 +0.6
baz=264
A22K Sinclair Lake 52.41 22 P **P** 22 40 31.7 +0.9
baz=261
DRK Karamyk 52.41 297 P **P** 22 40 31.8 +0.1
DRK Karamyk 52.41 297 P **P** 22 40 31.8 +0.1
DRK pmax pmax
comp=Z,22nm,1.0s
F21K Alatna River 52.48 27 P **P** 22 40 32.3 +1.0
baz=265
KK31 Karatay Array 52.55 302 P **P** 22 40 31.9 -0.4
KK31 Karatay Array 52.55 302 P **P** 22 40 31.9 -0.4
KK31 pmax pmax
comp=Z,21nm,0.9s
RED Redoubt Volcan 52.56 36 P **P** 22 40 32.1 0.0
RED IAmb IAmb 22 40 33.3
comp=Z,42nm,0.9s
H21K Melozitna Rive 52.64 29 P **P** 22 40 33.3 +0.7
baz=267
KDAK Kodiak Island 52.75 39 **P** 22 40 33.1 -0.3
KDAK IAmb IAmb 22 40 34.4
comp=Z,58nm,0.8s
KDAK Kodiak Island 52.75 39 *i*P **P** 22 40 33.1 -0.3
KDAK pmax pmax
comp=Z,82nm,0.8s
KDAK Kodiak Island 52.75 39 P **P** 22 40 33.1 -0.3
baz=273
CHUM Lake Minchumin 52.78 32 P **P** 22 40 34.1 +0.6
baz=269,SNR=18
QIS Mount Isa 52.79 177 P **P** 22 40 34.3 +0.1
Q20K Shuyak Island 52.81 38 P **P** 22 40 34.3 +0.4
baz=273
SYI Shuyak Island 52.81 38 P **P** 22 40 33.6 -0.3
N20K Mount Spurr 52.82 35 P **P** 22 40 34.7 +0.7
baz=271
SPCR Spurr Chakacha 52.82 35 P **P** 22 40 34.6 +0.6
baz=271,SNR=14
PPLA Purkeypile 52.83 33 P **P** 22 40 33.7 -0.4
PPLA Purkeypile 52.83 33 P **P** 22 40 34.5 +0.4
baz=270,SNR=6.6
B22K Teshekpuk Lake 52.83 23 **P** 22 40 34.5 +0.8
B22K IAmb IAmb 22 40 36.0
comp=Z,52nm,1.0s
B22K Teshekpuk Lake 52.83 23 P **P** 22 40 34.7 +0.9
baz=263,SNR=6.7
NIL Nilore 52.88 290 **P** 22 40 34.8 0.0
NIL IAmb IAmb 22 40 36.6
comp=Z,37nm,0.8s
NIL Nilore 52.88 290 P **P** 22 40 34.8 0.0
NIL pmax pmax
comp=Z,37nm,0.9s
SPU Mount Spurr 52.90 35 P **P** 22 40 34.7 +0.2
D22K Ayikyak River 52.93 25 P **P** 22 40 35.4 +0.8
D22K IAmb IAmb 22 40 37.1
comp=Z,74nm,1.2s
D22K Ayikyak River 52.93 25 P **P** 22 40 35.7 +1.1
baz=265,SNR=13
I21K Tanana 52.96 30 P **P** 22 40 35.8 +0.9
I21K Tanana 52.96 30 P **P** 22 40 36.0 +1.2
baz=268,SNR=12
CTAO Charters Tower 52.98 169 P **P** 22 40 36.1 +0.5
CTAO Charters Tower 52.98 169 P **P** 22 40 36.1 +0.5
CTAO pmax pmax
comp=Z,22nm,1.3s
F22K John River 53.00 27 P **P** 22 40 36.3 +1.2
baz=266
BRLS Boroldav 53.05 302 *e*P **P** 22 40 36.1 +0.2
BRLS Boroldav 53.05 302 *e*P **P** 22 40 36.9 +1.0
IUG luzhnay 53.10 301 *e*P **P** 22 40 36.5 +0.1
IUG luzhnay 53.10 301 *e*P **P** 22 40 36.4 +0.1
IUG pmax pmax
comp=Z,30nm,0.8s
SKT Skwentna 53.13 34 IAmb IAmb 22 40 38.0
comp=Z,80nm,1.5s
SKT Skwentna 53.13 34 P **P** 22 40 36.3 +0.1
baz=271,SNR=12
E22K Anaktuvuk Pass 53.19 26 IAmb IAmb 22 40 38.7
comp=Z,83nm,1.3s
E22K Anaktuvuk Pass 53.19 26 P **P** 22 40 37.3 +0.8
baz=266
G22K Bettles 53.23 28 P **P** 22 40 37.5 +0.7
baz=267
H22K Ishtalitna Cre 53.24 29 IAmb IAmb 22 40 39.5
comp=Z,72nm,1.2s
H22K Ishtalitna Cre 53.24 29 P **P** 22 40 37.8 +1.0
baz=268
CAPN Captain Cook N 53.35 35 P **P** 22 40 38.0 +0.4
baz=272
BPAW Bear Paw Mtn. 53.37 31 P **P** 22 40 38.8 +0.9
baz=270,SNR=9.3
CHM Chimkent 53.37 301 *e*P **P** 22 40 38.6 +0.3
CHM Chimkent 53.37 301 *e*P **P** 22 40 38.5 +0.3
KTH Kantishna Hill 53.40 32 IAmb IAmb 22 40 40.1
comp=Z,72nm,1.4s
L22K Petersville 53.48 33 IAmb IAmb 22 40 40.0
comp=Z,43nm,0.8s
MLY Manley 53.49 30 P **P** 22 40 39.7 +1.1
baz=269,SNR=16
SUA Susitna One 53.52 35 P **P** 22 40 39.7 +0.7
baz=272
BRSE Bradley Lake S 53.60 37 P **P** 22 40 40.8 +1.2
baz=273
GAR Garm 53.65 297 P **P** 22 40 40.3 -0.1
D23K Nanushuk River 53.66 25 P **P** 22 40 40.6 +0.8
D23K IAmb IAmb 22 40 42.5
comp=Z,69nm,1.2s
D23K Nanushuk River 53.66 25 P **P** 22 40 40.8 +1.1
baz=266,SNR=15
TRF Thorofare Moun 53.69 32 **P** 22 40 40.3 +0.1
TRF Thorofare Moun 53.69 32 P **P** 22 40 40.8 +0.5
baz=271,SNR=6.4
CUT Chulitna 53.72 33 P **P** 22 40 39.5 -0.7
CUT IAmb IAmb 22 40 42.1
comp=Z,121nm,1.4s
CUT Chulitna 53.72 33 P **P** 22 40 40.5 +0.2
baz=272,SNR=5.2
C23K Itkillik River 53.74 24 P **P** 22 40 41.2 +0.9
C23K IAmb IAmb 22 40 42.7
comp=Z,63nm,0.9s
C23K Itkillik River 53.74 24 P **P** 22 40 41.5 +1.2
baz=266,SNR=19
COLD Coldfoot 53.75 27 **P** 22 40 41.3 +0.8
COLD Coldfoot 53.75 27 P **P** 22 40 41.3 +0.8
baz=268,SNR=5.1
G23K Bananza Creek 53.81 28 P **P** 22 40 41.9 +0.9
baz=269,SNR=15
M22K Willow 53.81 34 P **P** 22 40 40.9 0.0
M22K IAmb IAmb 22 40 43.4
comp=Z,88nm,0.9s
M22K Willow 53.81 34 P **P** 22 40 41.6 +0.7
baz=272,SNR=5.5
H23K Yukon River 53.99 29 P **P** 22 40 43.5 +1.2
H23K IAmb IAmb 22 40 45.7
comp=Z,118nm,1.5s
H23K Yukon River 53.99 29 P **P** 22 40 43.6 +1.3
baz=270
E23K Chandalar 54.00 26 IAmb IAmb 22 40 45.0
comp=Z,67nm,1.1s
E23K Chandalar 54.00 26 P **P** 22 40 43.7 +1.3
baz=268
RC01 Rabbit Creek A 54.02 35 P **P** 22 40 41.4 -1.1
RC01 Rabbit Creek A 54.02 35 P **P** 22 40 42.0 -0.6
baz=273
TOLK Toolik Lake Re 54.04 26 P **P** 22 40 43.1 +0.5
TOLK IAmb IAmb 22 40 44.9
comp=Z,66nm,1.3s
TOLK Toolik Lake Re 54.04 26 P **P** 22 40 41.5 -1.1
baz=268,SNR=17
I23K Minto, Yukon-K 54.07 30 P **P** 22 40 43.3 +0.6
baz=270,SNR=12
NEA2 Nenana 54.20 31 IAmb IAmb 22 40 45.7
comp=Z,71nm,1.0s
NEA2 Nenana 54.20 31 P **P** 22 40 44.4 +0.7
baz=271,SNR=36
SEW Seward 54.23 36 P **P** 22 40 44.3 +0.4
baz=274
MCK McKinley 54.28 32 IAmb IAmb 22 40 46.4
comp=Z,98nm,1.4s
MCK McKinley 54.28 32 P **P** 22 40 44.2 -0.2
baz=272,SNR=21
PMR Palmer 54.29 34 IAmb IAmb 22 40 45.3
comp=Z,44nm,1.0s
PMR Palmer 54.29 34 P **P** 22 40 44.0 -0.4
baz=273,SNR=8.0
D24K Happy Valley 54.33 25 P **P** 22 40 45.4 +0.8
baz=268
RND Reindeer 54.33 32 IAmb IAmb 22 40 45.8
comp=Z,61nm,0.8s
GHO Glory Hole Cre 54.38 34 IAmb IAmb 22 40 46.5
comp=Z,94nm,1.3s
C24K Franklin Bluff 54.40 24 P **P** 22 40 45.2 +0.2
baz=268
E24K Your Creek 54.43 26 IAmb IAmb 22 40 48.7
comp=Z,56nm,1.4s
E24K Your Creek 54.43 26 P **P** 22 40 45.9 +0.5
baz=269
WAT1 Susitna Watana 54.49 33 P **P** 22 40 45.2 -0.7
baz=273
CHGR Chuyangaron 54.61 297 **P** 22 40 47.5 +0.4
CHGR Chuyangaron 54.61 297 P **P** 22 40 47.6 +0.4
CHGR pmax pmax
comp=Z,93nm,0.9s
KNK Knik Glacier 54.62 35 IAmb IAmb 22 40 48.6
comp=Z,79nm,1.3s
KNK Knik Glacier 54.62 35 P **P** 22 40 45.9 -0.9
baz=274
F24K Squaw Lake 54.65 27 P **P** 22 40 47.0 +0.1
baz=270
SML Sawmill 54.66 34 IAmb IAmb 22 40 48.4
comp=Z,61nm,1.1s
SML Sawmill 54.66 34 P **P** 22 40 46.6 -0.5
baz=274,SNR=10.0
H24K Noodor Dome 54.68 29 P **P** 22 40 47.6 +0.5
baz=271
COLA College 54.72 30 P **P** 22 40 47.8 +0.5
COLA IAmb IAmb 22 40 49.7
comp=Z,29nm,0.7s
COLA College 54.72 30 P **P** 22 40 48.2 +0.9
COLA College 54.72 30 *i*P **P** 22 40 48.0 +0.7
COLA pmax pmax
comp=Z,20nm,0.7s
COLA College 54.72 30 P **P** 22 40 47.3 0.0
baz=272
COLA College 54.72 30 P **P** 22 40 48.0 +0.7
PWL Port Wells 54.72 35 P **P** 22 40 47.4 -0.1
baz=274
G24K Hadweenzic Riv 54.82 28 P **P** 22 40 48.8 +0.6
G24K Hadweenzic Riv 54.82 28 P **P** 22 40 48.9 +0.8
baz=271,SNR=15
WAT6 Susitna Watana 54.88 33 P **P** 22 40 48.9 +0.1
baz=274,SNR=11
POKR Poker Plat Res 54.88 30 IAmb IAmb 22 40 50.8
comp=Z,45nm,0.8s
POKR Poker Plat Res 54.88 30 P **P** 22 40 49.3 +0.7
baz=272,SNR=15
M23K Glacier View 54.94 34 P **P** 22 40 50.1 +1.0
baz=274,SNR=5.7
DHY Denali Highway 55.02 33 P **P** 22 40 49.9 +0.2
baz=274
HDA Harding Lake 55.13 31 IAmb IAmb 22 40 51.0
comp=Z,37nm,0.8s
HDA Harding Lake 55.13 31 P **P** 22 40 49.8 -0.5
baz=273,SNR=21
SCM Sheep Creek Mo 55.13 34 P **P** 22 40 50.3 -0.1
SCM IAmb IAmb 22 40 52.6
comp=Z,54nm,0.9s
SCM Sheep Creek Mo 55.13 34 P **P** 22 40 50.3 -0.1
SCM pmax pmax
comp=Z,54nm,0.9s
SCM Sheep Creek Mo 55.13 34 P **P** 22 40 50.6 +0.2
baz=275,SNR=6.9
IL31 55.13 30 P **P** 22 40 49.7 -0.5
ILAR Eielson Array 55.13 30 P **P** 22 40 49.6 -0.7
comp=Z,9.4nm,0.8s,baz=262,slow=5.1,SNR=94
ILAR PcP **PcP** 22 41 44.7 -1.2
comp=Z,2.6nm,0.7s,baz=276,slow=3.9,SNR=5.8
comp=Z,9.4nm,0.8s
D25K Kavik River 55.21 25 P **P** 22 40 51.2 +0.3
D25K Kavik River 55.21 25 P **P** 22 40 51.5 +0.7
baz=270
P23K Montague Islan 55.26 36 P **P** 22 40 51.7 +0.5
baz=276
GLI Glacier Island 55.33 35 P **P** 22 40 51.4 -0.4
GLI IAmb IAmb 22 40 53.0
comp=Z,58nm,0.9s
GLI Glacier Island 55.33 35 P **P** 22 40 51.8 +0.1
baz=275
G25K Bearman Lake 55.37 28 P **P** 22 40 53.3 +1.4
baz=272,SNR=14
H25L Birch Creek 55.50 29 P **P** 22 40 54.2 +1.3
baz=273,SNR=10
F25K Christian Rive 55.51 27 P **P** 22 40 53.8 +0.7
F25K Christian Rive 55.51 27 P **P** 22 40 54.6 +1.5
baz=272,SNR=35
E25K Arctic Village 55.52 26 P **P** 22 40 54.6 +1.6
baz=272
FID Port Fidalgo 55.64 35 P **P** 22 40 53.6 -0.3
FID IAmb IAmb 22 40 55.2
comp=Z,69nm,1.1s
M24K Tolsona, Glenn 55.65 34 P **P** 22 40 55.5 +1.4
M24K IAmb IAmb 22 40 56.6
comp=Z,116nm,1.5s
M24K Tolsona, Glenn 55.65 34 P **P** 22 40 55.2 +1.1
baz=275
PRP Porcupine Dome 55.66 29 P **P** 22 40 54.4 +0.2
baz=274,SNR=14
HIN Hinchinbrook I 55.67 36 P **P** 22 40 55.1 +0.9
C26K Camden Bay 55.71 24 P **P** 22 40 55.7 +1.4
baz=271,SNR=22
FYU Fort Yukon 55.72 28 IAmb IAmb 22 40 57.3
comp=Z,89nm,1.3s
J25K Salcha River, 55.80 31 P **P** 22 40 55.4 +0.3
baz=274
KLU Klutina 55.83 34 P **P** 22 40 55.8 +0.5
KLU Klutina 55.83 34 P **P** 22 40 55.9 +0.5
baz=276
Q23K Middleton Isla 55.85 37 P **P** 22 40 56.3 +0.8
baz=277
PAX Paxson 55.89 33 P **P** 22 40 56.4 +0.7
baz=275,SNR=10
KBL Kabul 55.92 292 P **P** 22 40 56.2 -0.4
KBL Kabul 55.92 292 P **P** 22 40 56.2 -0.4
KBL pmax pmax
comp=Z,15nm,0.9s
MBWA Marble Bar 55.93 200 P **P** 22 40 55.8 -0.6
MBWA IAmb IAmb 22 40 57.1
comp=Z,27nm,0.6s
MBWA Marble Bar 55.93 200 P **P** 22 40 56.1 -0.3
MBWA Marble Bar 55.93 200 P **P** 22 40 56.1 -0.3
AS31 Alice Springs 55.93 184 P **P** 22 40 56.0 -0.4
ASAR Alice Springs 55.93 184 P **P** 22 40 56.6 +0.2
comp=Z,13nm,0.7s,baz=15,slow=12,SNR=82
ASAR PcP **PcP** 22 41 50.5 +1.0
comp=Z,1.4nm,0.6s,baz=357,slow=5.0,SNR=1.1
ASAR ScP **ScP** 22 45 09.6 +0.4
comp=Z,1.2nm,0.9s,baz=8.0,slow=5.5,SNR=3.7
ASAR S **S** 22 48 10.3 -2.4
comp=Z,1.0nm,0.9s,baz=13,slow=17,SNR=4.4
comp=Z,13nm,0.7s
DIV Divide 55.94 35 **P** 22 40 56.8 +0.7
DIV IAmb IAmb 22 40 57.9
comp=Z,82nm,1.4s
EYAK Cordova Ski Ar 56.02 35 P **P** 22 40 57.4 +0.8
EYAK Cordova Ski Ar 56.02 35 P **P** 22 40 57.1 +0.6
baz=277
F26K Sheenjek River 56.08 27 IAmb IAmb 22 41 00.0
comp=Z,52nm,1.0s
F26K Sheenjek River 56.08 27 P **P** 22 40 58.4 +1.4
baz=273,SNR=40
HARP HAARP 56.09 33 P **P** 22 40 57.9 +0.8
baz=276,SNR=5.2
RIDG Independent Ri 56.10 32 P **P** 22 40 57.1 -0.1
baz=275,SNR=9.1
C27K Jago River 56.14 24 IAmb IAmb 22 40 59.8
comp=Z,38nm,0.8s
C27K Jago River 56.14 24 P **P** 22 40 58.5 +1.2
baz=272
G26K Porcupine Rive 56.27 28 P **P** 22 40 58.8 +0.6
G26K Porcupine Rive 56.27 28 P **P** 22 40 59.5 +1.3
baz=274,SNR=15
PSA00 Pilbara Seismi 56.28 200 IAmb IAmb 22 40 59.8
comp=Z,63nm,1.4s
PSA00 Pilbara Seismi 56.28 200 P **P** 22 40 58.7 -0.2
KEKH Kekaha 56.29 84 P **P** 22 40 59.4 +0.3
N25K Chitina, Valde 56.45 34 **P** 22 40 59.6 -0.1
N25K IAmb IAmb 22 41 01.8
comp=Z,96nm,1.9s
N25K Chitina, Valde 56.45 34 P **P** 22 41 00.4 +0.7
baz=277
SCRK Sand Creek 56.45 31 IAmb IAmb 22 41 00.9
comp=Z,34nm,0.8s
SCRK Sand Creek 56.45 31 P **P** 22 40 59.6 -0.1
baz=276,SNR=25
DOT Dot Lake 56.45 32 P **P** 22 40 59.0 -0.6
DOT IAmb IAmb 22 41 00.7
comp=Z,33nm,0.7s
BMRM Bremner River 56.52 35 IAmb IAmb 22 41 02.0
comp=Z,84nm,1.1s
BMRM Bremner River 56.52 35 P **P** 22 41 00.7 +0.5
baz=278,SNR=11
J26L Joseph Creek 56.58 31 P **P** 22 41 00.0 -0.5
baz=276
I26K Coal Creek Min 56.67 30 P **P** 22 41 00.6 -0.5
baz=276
MENT Mentasta 56.69 32 IAmb IAmb 22 41 03.4
comp=Z,44nm,0.9s
KAIM Kayak Island 56.76 36 P **P** 22 41 01.7 -0.1
baz=278
HMT Hamilton 56.78 36 P **P** 22 41 01.4 -0.5
GLB Gilahina Butte 56.84 34 IAmb IAmb 22 41 04.3
comp=Z,43nm,1.2s
L26K Log Cabin Wild 56.85 32 IAmb IAmb 22 41 04.5
comp=Z,30nm,0.9s
L26K Log Cabin Wild 56.85 32 P **P** 22 41 03.0 +0.6
baz=277,SNR=11
E27K Coleen River 57.00 26 P **P** 22 41 04.4 +1.0
E27K IAmb IAmb 22 41 06.0
comp=Z,35nm,0.8s
E27K Coleen River 57.00 26 P **P** 22 41 04.3 +1.0
baz=275,SNR=28
BERG Berg Lake 57.05 36 P **P** 22 41 04.3 +0.6
FUNA Funafuti 57.09 128 P **P** 22 41 03.3 -1.4
M26K Nabesna, AK 57.09 33 P **P** 22 41 05.0 +0.9
baz=278
G27K Doyon Strip 57.12 28 P **P** 22 41 05.3 +1.1
baz=276,SNR=14
D27M Malcolm River 57.13 25 IAmb IAmb 22 41 06.7
comp=Z,32nm,0.8s
D27M Malcolm River 57.13 25 P **P** 22 41 05.5 +1.2
baz=275
MCARA McCarthy VSAT 57.22 34 IAmb IAmb 22 41 07.0
comp=Z,38nm,0.8s
MCARA McCarthy VSAT 57.22 34 P **P** 22 41 05.6 +0.6
baz=278,SNR=8.2
H27K Steamboat Moun 57.24 28 P **P** 22 41 06.1 +1.1
baz=277,SNR=14
CRQM Cirque 57.26 35 IAmb IAmb 22 41 07.9
comp=Z,54nm,1.0s
I27K Kandik River 57.28 29 P **P** 22 41 06.1 +0.8
baz=277
K27K Chicken 57.28 31 P **P** 22 41 06.1 +0.8
baz=278

CRQE Cirque 57.29 35 P P 22 41 06.0 +0.4
baz=279,SNR=6.2
TGL Tana Glacier 57.41 35 IAmb IAmb 22 41 08.1
comp=Z,41nm,1.0s
WAX Waxell Ridge 57.45 35 IAmb IAmb 22 41 08.6
comp=Z,51nm,0.7s
L27K Beaver Creek, 57.53 32 P P 22 41 07.6 +0.5
baz=278
M27K Edge Creek, AK 57.61 33 P P 22 41 08.6 +0.8
baz=279
F28M Old Crow 57.72 27 IAmb IAmb 22 41 10.9
comp=Z,53nm,1.1s
F28M Old Crow 57.72 27 P P 22 41 09.6 +1.3
baz=277
E28M Babbage River 57.72 26 IAmb IAmb 22 41 10.8
comp=Z,30nm,0.8s
E28M Babbage River 57.72 26 P P 22 41 09.5 +1.2
baz=277
D28M Stokes Point 57.91 25 P P 22 41 10.3 +0.8
baz=277,SNR=23
GRNC Granite Creek 57.94 35 IAmb IAmb 22 41 12.2
comp=Z,108nm,1.7s
MESA MESA 57.94 36 P P 22 41 10.8 +0.6
baz=280
I28M Miner Creek 57.99 29 IAmb IAmb 22 41 12.5
comp=Z,37nm,0.9s
I28M Miner Creek 57.99 29 P P 22 41 11.2 +0.9
baz=279,SNR=25
PALK Pallekele 58.06 257 P P 22 41 11.8 +0.3
comp=Z,22nm,0.8s,baz=52,slow=7.1,SNR=11
comp=Z,22nm,0.8s
PALK Pallekele 58.06 257 P P 22 41 11.3 -0.2
PALK Pallekele 58.06 257 P P 22 41 11.3 -0.2
PALK pmax pmax
comp=Z,29nm,0.9s
PALK Pallekele 58.06 257 P P 22 41 11.9 +0.3
BVCY Beaver Creek 58.07 33 P P 22 41 11.4 +0.6
baz=280
CTG Chitna Glacier 58.10 35 P P 22 41 11.6 +0.5
baz=280
CTGM Chitina Glacier 58.10 35 P P 22 41 11.0 -0.2
LOGN Logan Glacier 58.28 35 P P 22 41 12.7 +0.2
LOGN IAmb IAmb 22 41 19.8
comp=Z,48nm,1.4s
AB31 Akbulak array 58.32 311 P P 22 41 12.2 -0.5
E29M Blow River 58.34 26 P P 22 41 13.7 +1.2
baz=279,SNR=17
YUK3 Moose Creek 58.37 34 P P 22 41 13.3 +0.2
baz=280,SNR=8.8
H29M Whitestone 58.51 28 IAmb IAmb 22 41 16.1
comp=Z,47nm,1.2s
H29M Whitestone 58.51 28 P P 22 41 14.7 +1.0
baz=280,SNR=13
G29M Pine Creek 58.53 27 P P 22 41 15.0 +1.2
baz=279,SNR=28
O28M Mount Upton 58.69 35 IAmb IAmb 22 41 18.4
comp=Z,81nm,1.9s
O28M Mount Upton 58.69 35 P P 22 41 15.8 +0.5
baz=281
YUK8 Steele Glacier 58.79 34 P P 22 41 16.0 0.0
baz=281
PINM Pinnacle 58.79 36 P P 22 41 15.9 +0.1
baz=282
BCPM Bancas Point 59.12 36 P P 22 41 17.8 -0.2
EPYK Eagle Plains 59.14 28 P P 22 41 18.8 +0.8
baz=281,SNR=40
M29M Somme Creek 59.16 33 P P 22 41 19.1 +0.8
M29M Somme Creek 59.16 33 P P 22 41 19.4 +1.0
baz=282,SNR=13
L29M L29M 59.18 32 IAmb IAmb 22 41 21.8
comp=Z,72nm,1.4s
L29M L29M 59.18 32 P P 22 41 19.6 +1.3
baz=282,SNR=16
YKU2 Yakutat 59.20 36 P P 22 41 18.2 -0.2
G30M tAoh Zraii Nji 59.21 27 P P 22 41 19.1 +0.5
baz=281,SNR=46
F30M Barrier River 59.26 26 IAmb IAmb 22 41 21.1
comp=Z,63nm,0.8s
F30M Barrier River 59.26 26 P P 22 41 19.9 +1.2
baz=281,SNR=31
K29M Barlow Dome 59.30 31 P P 22 41 20.2 +1.0
baz=282,SNR=15
PNL Peninsula 59.30 36 P P 22 41 19.3 +0.1
PNL Peninsula 59.30 36 P P 22 41 19.8 +0.6
baz=282
YUK4 Talbot Arm 59.30 34 P P 22 41 20.5 +1.1
baz=282,SNR=6.4
I30M Mount Dempster 59.50 29 IAmb IAmb 22 41 23.4
comp=Z,38nm,0.8s
I30M Mount Dempster 59.50 29 P P 22 41 21.4 +0.8
baz=282,SNR=30
YUK6 Outpost Mounta 59.53 34 P P 22 41 22.2 +1.2
baz=283
O29M Mount Kennedy 59.56 35 P P 22 41 22.1 +1.0
O29M IAmb IAmb 22 41 23.8
comp=Z,50nm,0.9s
O29M Mount Kennedy 59.56 35 P P 22 41 22.4 +1.3
baz=283,SNR=11
J30M Hart River 59.66 30 P 22 41 21.9 +0.2
J30M Hart River 59.66 30 P P 22 41 22.4 +0.7
baz=282
M30M Minto, Yukon 59.89 32 P P 22 41 24.6 +1.4
baz=283,SNR=9.2
INK Inuvik 59.95 25 IAmb IAmb 22 41 24.8
comp=Z,28nm,0.7s
INK Inuvik 59.95 25 P P 22 41 23.7 +0.3
baz=282,SNR=29
HYT Haines Junctio 59.96 34 P 22 41 24.4 +0.6
HYT IAmb IAmb 22 41 26.2
comp=Z,35nm,1.0s
HYT Haines Junctio 59.96 34 P P 22 41 24.8 +1.0
baz=283,SNR=11
G31M Satah River 59.98 27 IAmb IAmb 22 41 24.9
comp=Z,36nm,0.8s
G31M Satah River 59.98 27 P P 22 41 23.8 +0.2
baz=283
INKA Innaminka 59.99 176 P P 22 41 24.3 +0.2
N30M Aishikik Lake 60.01 34 P P 22 41 25.3 +1.3
N30M Aishikik Lake 60.01 34 P P 22 41 24.8 +0.8
baz=283,SNR=7.2
F31M Tsiigehtchic 60.06 26 P P 22 41 24.2 +0.1
baz=283,SNR=13
P29M Windy Craggy 60.13 36 IAmb IAmb 22 41 27.5
comp=Z,49nm,0.9s
P29M Windy Craggy 60.13 36 P P 22 41 26.0 +1.2
baz=284,SNR=10
H31M Peel River 60.20 28 P P 22 41 25.9 +0.7
baz=283,SNR=53
P30M Million Dollar 60.39 35 P P 22 41 27.8 +1.2
baz=284
N31M Braeburn, Yuko 60.61 33 P 22 41 28.6 +0.6
N31M IAmb IAmb 22 41 30.5
comp=Z,39nm,0.9s
N31M Braeburn, Yuko 60.61 33 P P 22 41 29.0 +1.0
baz=284,SNR=12
O30N Mendenhall 60.65 34 P P 22 41 29.1 +0.8
baz=285,SNR=5.9
PLBC Pleasant Camp 60.85 36 P P 22 41 30.6 +1.1
baz=285,SNR=11
AIN Ainahou 61.01 85 P P 22 41 31.2 -0.3
M31M Drury Creek, Y 61.07 32 P P 22 41 31.8 +0.8
baz=285,SNR=12
WHY Whitehorse 61.25 34 P 22 41 33.7 +1.4
WHY Whitehorse 61.25 34 P P 22 41 33.5 +1.1
baz=286,SNR=13
HRA Herat 61.25 294 P P 22 41 32.4 -0.6
S31K Pelican 61.32 37 P P 22 41 33.7 +1.1
baz=286
SKAG Skagway 61.36 36 P P 22 41 33.9 +1.0
baz=286
MEEK Meekatharra 61.43 199 P P 22 41 33.5 -0.3
A36M Sachs Harbour 61.71 21 P P 22 41 35.5 +0.5
baz=288,SNR=41
KIRV Kirov 61.84 324 *ce* P P 22 41 37.2 +1.1
N32M Quiet Lake 61.96 33 P P 22 41 37.2 +0.3
baz=287
R32K Eaglecrest 62.10 37 P P 22 41 38.9 +1.0
baz=287
P32M Atlin 62.11 35 P P 22 41 38.9 +1.0
baz=287
S32K Killisnoo 62.31 38 P P 22 41 40.6 +1.4
baz=288
MMPY Sheldon Lake, 62.35 31 P P 22 41 40.9 +1.4
MMPY IAmb IAmb 22 41 41.9
comp=Z,37nm,1.3s
MMPY Sheldon Lake, 62.35 31 P P 22 41 40.4 +0.9
baz=288,SNR=10

P33M Teslin, Yukon 62.36 34 P P 22 41 40.4 +0.8
baz=287,SNR=8.0
C36M Paulatuk 62.95 23 P P 22 41 43.5 +0.3
baz=290,SNR=52
Q32M Nakina River 63.01 36 P P 22 41 44.8 +0.8
baz=288
R33M Jennings River 63.51 35 P P 22 41 48.0 +0.9
baz=289
FORT Forrest 63.53 189 P 22 41 48.1 +0.7
FORT IAmb IAmb 22 41 48.5
comp=Z,15nm,0.7s
HOPEN Hopen 63.61 346 *e* P P 22 41 47.3 0.0
S34M Telegraph Cree 63.92 36 IAmb IAmb 22 41 52.2
comp=Z,26nm,1.1s
S34M Telegraph Cree 63.92 36 P P 22 41 50.9 +1.3
baz=290,SNR=5.3
STKA Stephens Creek 64.15 176 P P 22 41 51.6 +0.3
comp=Z,10nm,0.8s,baz=339,slow=7.5,SNR=8.1
comp=Z,10nm,0.8s
STKA Stephens Creek 64.15 176 *i* P P 22 41 50.8 -0.6
CMSA Cobar Meteorol 64.18 172 P P 22 41 52.6 +1.1
DLBC Dease Lake 64.29 36 P P 22 41 53.7 +1.6
baz=290,SNR=5.8
SPA0 Spitsbergen Ar 64.31 349 *e* P P 22 41 52.1 +0.3
SPITS Spitsbergen Ar 64.31 349 P P 22 41 52.1 +0.3
comp=Z,6.8nm,0.6s,baz=70,slow=4.9,SNR=22
comp=Z,6.8nm,0.6s
MORW Morawa 64.46 201 P P 22 41 53.5 +0.1
KBS Kingsbay 64.53 350 P P 22 41 53.9 +0.7
KBS IAmb IAmb 22 41 55.0
comp=Z,15nm,0.7s
KBS Kingsbay 64.53 350 *e* P P 22 41 54.0 +0.7
KBS Kingsbay 64.53 350 P P 22 41 53.9 +0.7
KBS pmax pmax
comp=Z,15nm,0.7s
KBS Kingsbay 64.53 350 *i* P P 22 41 52.9 -0.3
KBS Kingsbay 64.53 350 P P 22 41 54.4 +1.1
T35M Bob Quinn 64.69 37 P 22 41 55.0 +0.4
T35M IAmb IAmb 22 41 57.3
comp=Z,28nm,0.8s
T35M Bob Quinn 64.69 37 P P 22 41 56.2 +1.5
baz=291,SNR=5.5
ALE Alert 64.82 3 P P 22 41 56.3 +1.2
BBOO Buckleboo 64.96 181 P P 22 41 57.1 +0.6
HSPB Hornsund (broa 65.16 348 *e* P P 22 41 57.5 +0.2
NOR Nord 65.35 356 *i* P P 22 41 58.6 +0.2
NOR IAmb IAmb 22 41 59.5
comp=Z,8.7nm,0.8s
APA Apatity 65.43 336 *ll e* P P 22 41 57.8 -1.3
APA e 22 42 21.6
APA e*PP pP 22 43 23.6 -1.8
APA MLR MLR
comp=Z,296nm,4.0s
WRGLY Wrigley 65.48 29 P P 22 42 00.3 +0.9
baz=294,SNR=9.7
VADS Vadso 65.58 339 *e* P P 22 41 59.3 -0.7
HTT Hallett 65.59 178 P P 22 42 00.4 -0.2
BLDU Ballidu 65.72 199 P P 22 42 01.5 +0.1
KLMR Klimovskoe 65.78 328 *e* P P 22 42 00.7 -0.7
KLMR pmax pmax
comp=Z,30nm,1.5s
LIRD Liard River Hi 65.82 34 P P 22 42 03.0 +1.2
baz=293,SNR=33
TOAD Toad River Com 66.45 34 P P 22 42 07.1 +1.3
baz=294,SNR=9.7
HAMF Hammerfest 66.97 341 *e* P P 22 42 07.0 -1.7
ARA0 ARCESS Array S 67.04 339 *e* P P 22 42 09.1 0.0
ARCES ARCESS Array B 67.04 339 P P 22 42 09.4 +0.2
comp=Z,12nm,0.6s,baz=59,slow=5.8,SNR=30
comp=Z,12nm,0.6s
NWAO Narrogin (SRO) 67.76 198 P P 22 42 14.4 +0.3
RES Resolute Bay 67.81 13 IAmb IAmb 22 42 15.3
comp=Z,24nm,0.8s
KTK1 Kautokeino 68.00 339 *e* P P 22 42 15.7 +0.6
JETT Jettan, Norway 68.51 340 *e* P P 22 42 17.6 -0.7
MOS Moscow 68.86 323 *e* P P 22 42 26.0 +5.4
MOS e 22 43 50.7
TRO Tromso 68.89 341 *e* P P 22 42 15.8 -4.7
AKT Akhty 69.04 306 *e* P P 22 42 20.3 -1.8
AKT e 22 42 41.0
AKT e*PP pP 22 43 47.5 -1.8
AKT *e*S S 22 50 51.7 -2.5
AKT pmax pmax
comp=Z,25nm,0.7s
YKA Yellowknife Ar 69.42 28 P P 22 42 23.6 -0.2
comp=Z,14nm,0.9s,baz=295,slow=6.5,SNR=32
comp=Z,14nm,0.9s
YKA Yellowknife Ar 69.42 28 *i* P P 22 42 24.3 +0.4
YKA pmax pmax
comp=Z,15nm,0.9s
OBN Obninsk 69.68 323 *ll e* P P 22 42 25.8 +0.3
OBN 22 45 07.6
OBN pmax pmax
comp=Z,23nm,1.1s
OBN Obninsk 69.68 323 P P 22 42 25.9 +0.4
comp=Z,23nm,1.1s
OBN Obninsk 69.68 323 P P 22 42 26.0 +0.4
DAG Danmarks Havn 69.97 354 *i* P P 22 42 25.6 -1.3
DAG IAmb IAmb 22 42 28.1
comp=Z,29nm,0.8s
NEEM North Greenlan 70.20 2 *i* P P 22 42 29.0 +0.3
NEEM IAmb IAmb 22 42 30.2
comp=Z,47nm,0.8s
STEI Steigen 71.00 340 *e* P P 22 42 32.7 -0.6
FINES FINESS Array B 71.22 332 P P 22 42 34.4 -0.3
comp=Z,13nm,0.5s,baz=60,slow=5.6,SNR=51
comp=Z,13nm,0.5s
FINES FINESS Array B 71.22 332 *i* P P 22 42 34.5 -0.1
FINES pmax pmax
comp=Z,13nm,0.5s
KBZ Khabaz 71.25 310 P P 22 42 35.8 +0.7
comp=Z,13nm,0.8s,baz=70,slow=6.3,SNR=12
comp=Z,13nm,0.8s
KBZ Khabaz 71.25 310 *ce* P P 22 42 35.6 +0.4
KBZ pmax pmax
comp=Z,16nm,0.9s
KIV Kislovodsk 71.29 311 *e* P P 22 42 36.9 +1.4
KIV pmax pmax
comp=Z,15nm,1.0s
KIV Kislovodsk 71.29 311 P P 22 42 36.0 +0.5
comp=Z,16nm,1.1s
LOF Lofoten 71.35 341 *e* P P 22 42 35.4 +0.1
FAUS Fauske 71.35 340 *e* P P 22 42 34.5 -0.8
CLRS Cowichan Lake 71.47 44 P P 22 42 37.0 +0.6
CLRS IAmb IAmb 22 42 38.5
comp=Z,26nm,1.0s
LLLB Lillooet 71.89 41 P P 22 42 39.1 +0.3
LLLB IAmb IAmb 22 42 40.6
comp=Z,29nm,1.0s
PGC Sidney 71.95 44 P P 22 42 39.9 +0.7
PGC IAmb IAmb 22 42 41.2
comp=Z,27nm,0.8s
B04A Port Angeles 72.20 44 P P 22 42 40.8 +0.1
B04A IAmb IAmb 22 42 43.2
comp=Z,36nm,1.1s
NLWA Neilton Lookou 72.31 45 P P 22 42 42.8 +1.4
POIN Pond Inlet 72.33 10 IAmb IAmb 22 42 42.2
comp=Z,55nm,1.8s
A04D Lummi Island 72.35 43 P P 22 42 42.4 +0.9
A04D IAmb IAmb 22 42 43.8
comp=Z,40nm,1.0s
RAUS Rausandaksla 72.35 339 *e* P P 22 42 41.2 0.0
VAGH Vaagaholmen 72.38 340 *e* P P 22 42 39.7 -1.6
MOR8 Moi Rana 72.41 339 *e* P P 22 42 40.6 -1.0
DBG Daneborg 72.43 354 *i* P P 22 42 40.6 -1.0
DBG IAmb IAmb 22 42 42.4
comp=Z,6.5nm,0.8s
WISH Wishkah 72.50 45 P P 22 42 44.0 +1.6
VSU Vasula 72.61 329 *ce* P P 22 42 43.9 +1.1
VSU pmax pmax
comp=Z,38nm,1.3s
STOK Stokkvaagen 72.72 340 *e* P P 22 42 42.4 -0.9
GNW Green Mountain 72.84 44 IAmb IAmb 22 42 47.0
comp=Z,39nm,1.3s
LEIR Leirfjorden 72.84 339 *e* P P 22 42 43.4 -0.7
E03A Lebam 72.90 45 P P 22 42 45.9 +1.1
E03A IAmb IAmb 22 42 47.2
comp=Z,44nm,1.1s
F03A Seaside 73.20 46 P P 22 42 47.8 +1.2
F04D Rainier, OR 73.46 46 P P 22 42 49.4 +1.4
D05A Enumclaw 73.52 44 P P 22 42 48.1 -0.3
D05A IAmb IAmb 22 42 51.0
comp=Z,23nm,1.0s
G03D McMinnville, O 73.74 47 P P 22 42 50.4 +0.8
G03D IAmb IAmb 22 42 52.1

comp=Z,42nm,1.0s
LON Longmire 73.85 45 P P 22 42 51.0 +0.7
LON Longmire 73.85 45 P P 22 42 51.1 +0.7
LON pmax pmax
comp=Z,17nm,1.4s
COR Corvallis 74.03 47 P P 22 42 52.4 +1.1
COR Corvallis 74.03 47 P P 22 42 52.4 +1.1
COR pmax pmax
comp=Z,76nm,1.1s
COR Corvallis 74.03 47 P P 22 42 53.5 +2.3
ANN Anapa 74.19 313 *e* P P 22 42 54.4 +2.2
ANN *e*S S 22 52 00.1 +8.1
ANN pmax pmax
comp=Z,60nm,1.1s
G04A Mulino 74.22 46 P P 22 42 53.2 +0.8
G04A IAmb IAmb 22 42 54.6
comp=Z,42nm,0.9s
KEBM Edson Butte 74.23 49 P P 22 42 53.0 +0.5
LTY Liberty 74.26 44 P P 22 42 52.1 -0.6
GURO Guroymak-BITLI 74.27 306 P P 22 42 53.4 +0.4
J01E Myrtle Point 74.34 49 P P 22 42 54.1 +1.0
J01E IAmb IAmb 22 44 11.9
comp=Z,17nm,0.8s
H04D Lebanon 74.41 47 P P 22 42 54.5 +1.1
BUCK Buck Mountain 74.42 47 P P 22 42 54.6 +1.0
I03D Drain, OR 74.44 48 P P 22 42 54.0 +0.3
B08A Colville Reser 74.46 42 IAmb IAmb 22 42 55.5
comp=Z,26nm,1.1s
ILON Igloolik, Nuna 74.48 13 IAmb IAmb 22 42 54.5
comp=Z,26nm,0.8s
KBO Bosley Butte 74.62 50 P P 22 42 54.9 0.0
KBO IAmb IAmb 22 42 58.0
comp=Z,43nm,1.1s
H04A Detroit Lake 74.67 47 IAmb IAmb 22 42 56.9
comp=Z,34nm,0.9s
HOOD Mount Hood Mea 74.67 46 P P 22 42 55.9 +0.7
K02D Willamette Mer 74.74 49 IAmb IAmb 22 42 57.7
comp=Z,31nm,1.0s
MXC Moxie City 74.83 44 P P 22 42 56.6 +0.7
MXC IAmb IAmb 22 42 58.0
comp=Z,29nm,0.9s
G05A Wamic 74.91 46 P P 22 42 57.2 +0.9
G05A IAmb IAmb 22 43 03.9
comp=Z,52nm,1.4s
KSXB Camp Six Broad 75.04 50 P P 22 42 57.5 +0.2
KSXB IAmb IAmb 22 42 59.7
comp=Z,32nm,1.1s
L02F Cave Junction 75.09 49 P P 22 42 57.8 +0.4
L02F IAmb IAmb 22 42 59.7
comp=Z,20nm,1.0s
WAH2 Wahluke Slope 75.17 44 P P 22 42 58.1 +0.3
WAH2 IAmb IAmb 22 42 59.5
comp=Z,30nm,1.0s
SUMG Summit 75.18 359 P P 22 42 58.5 +0.6
SUMG Summit 75.18 359 P P 22 42 58.5 +0.6
SUMG pmax pmax
comp=Z,39nm,0.8s
SUMG Summit 75.18 359 *i* P P 22 42 58.4 +0.6
SUMG IAmb IAmb 22 42 59.9
comp=Z,39nm,0.8s
WIFE Three Sisters- 75.21 47 IAmb IAmb 22 43 00.6
comp=Z,37nm,1.0s
BBOR Butler Butte 75.27 48 P P 22 42 59.3 +0.6
BBOR IAmb IAmb 22 43 00.8
comp=Z,32nm,1.3s
KRPM Rodgers 75.28 51 P P 22 42 59.0 +0.4
G06A Carlson Farm, 75.33 46 IAmb IAmb 22 43 00.9
comp=Z,42nm,1.2s
C09A Chrisman Ranch 75.36 42 IAmb IAmb 22 43 00.6
comp=Z,26nm,0.8s
I05D Terrebonne, OR 75.36 47 IAmb IAmb 22 43 01.1
comp=Z,23nm,0.8s
HAWA Hanford 75.38 44 IAmb IAmb 22 43 00.9
comp=Z,20nm,0.9s
D08A Wollman Farm, 75.39 43 IAmb IAmb 22 43 00.7
comp=Z,31nm,1.0s
F07A Phinny Hill Vi 75.41 45 P P 22 43 00.2 +1.1
F07A IAmb IAmb 22 43 01.3
comp=Z,32nm,0.9s
J04A Umpqua Nationa 75.45 48 P P 22 43 00.7 +1.1
KMPM Mount Pierce 75.59 51 P P 22 43 01.1 +0.7
KMPM IAmb IAmb 22 43 03.5
comp=Z,29nm,1.0s
KHMM Horse Mountain 75.62 51 P P 22 43 01.1 +0.5
KHMM IAmb IAmb 22 43 03.1
comp=Z,24nm,0.9s
MARD Mardin 75.74 305 P 22 43 01.8 +0.5
AK03 Malin Array Si 75.75 321 P P 22 43 00.5 -0.4
AKASG Malin Array Be 75.76 321 P P 22 43 00.8 -0.2
comp=Z,6.7nm,0.6s,baz=52,slow=6.1,SNR=28
comp=Z,6.7nm,0.6s
AKASG Malin Array Be 75.76 321 *i* P P 22 43 01.0 0.0
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKBB Malin Array Si 75.76 321 P P 22 43 01.0 +0.1
AKBB IAmb IAmb 22 43 01.9
comp=Z,16nm,0.8s
AKBB Malin Array Si 75.76 321 *ce* P P 22 43 01.3 +0.3
AKBB pmax pmax
comp=Z,16nm,0.8s
AKBB Malin Array Si 75.76 321 P P 22 43 00.6 -0.4
NEW Newport 75.76 42 P P 22 43 01.7 +0.6
NEW IAmb IAmb 22 43 02.8
comp=Z,20nm,0.8s
NEW Newport 75.76 42 P P 22 43 01.7 +0.6
NEW pmax pmax
comp=Z,20nm,0.9s
AK01 Malin Array Si 75.77 321 P P 22 43 00.6 -0.4
KIEV Kiev 75.77 321 P P 22 43 01.1 0.0
KIEV IAmb IAmb 22 43 01.9
comp=Z,14nm,0.8s
KIEV Kiev 75.77 321 P P 22 43 01.1 0.0
KIEV pmax pmax
comp=Z,14nm,0.8s
KIEV Kiev 75.77 321 P P 22 43 00.7 -0.3
comp=Z,87nm,0.9s
KIEV Kiev 75.77 321 P P 22 43 00.9 -0.1
YBH Yreka Blue Hor 75.84 49 IAmb IAmb 22 43 04.1
comp=Z,21nm,0.9s
PINE Pine Mountain 75.89 47 P P 22 43 03.5 +1.4
YPT Yellepit 75.90 44 P P 22 43 02.5 +0.6
YPT IAmb IAmb 22 43 03.9
comp=Z,26nm,1.0s
M02C Callahan 75.92 50 IAmb IAmb 22 43 04.8
comp=Z,22nm,0.8s
KMRM Mail Ridge 75.96 51 P P 22 43 03.2 +0.8
J05D Fort Rock, OR 75.97 48 P P 22 43 02.9 +0.4
K04D Chiloquin, OR 75.99 48 P P 22 43 03.3 +0.7
KHBM Hayfork Bally 76.06 51 P P 22 43 02.9 -0.2
KHBM IAmb IAmb 22 43 05.3
comp=Z,27nm,1.2s
E09A Wood Farm, Sta 76.13 44 P P 22 43 04.1 +1.0
E09A IAmb IAmb 22 43 05.1
comp=Z,35nm,0.9s
N02D Trinity Center 76.23 50 P P 22 43 04.8 +0.9
N02D IAmb IAmb 22 43 06.4
comp=Z,24nm,0.8s
SCO Scoresbysund 76.24 353 P P 22 43 04.0 +0.8
SCO IAmb IAmb 22 43 05.6
comp=Z,26nm,1.0s
SCO Scoresbysund 76.24 353 P P 22 43 04.0 +0.8
SCO pmax pmax
comp=Z,26nm,1.0s
SCO Scoresbysund 76.24 353 *i* P P 22 43 04.0 +0.8
SCO IAmb IAmb 22 43 05.4
comp=Z,25nm,1.0s
G08A Pilot Rock 76.30 45 P P 22 43 04.3 0.0
KCPM Cahto Peak 76.32 52 P P 22 43 05.3 +0.8
KCPM IAmb IAmb 22 43 06.7
comp=Z,38nm,1.1s
LNOR Lincton Mounta 76.39 44 P P 22 43 05.1 +0.4
M03C McCloud 76.46 50 P P 22 43 04.7 -0.5
K05A Summer Lake 76.48 48 P P 22 43 06.5 +1.1
O02D Mt. Diablo Mer 76.59 51 P P 22 43 07.0 +1.0
O02D IAmb IAmb 22 43 08.3
comp=Z,22nm,0.8s
DCMP DeCamp, Califo 76.59 52 P P 22 43 06.3 +0.5
I07A Izee 76.62 46 P P 22 43 06.5 +0.4
I07A IAmb IAmb 22 43 08.2
comp=Z,16nm,1.0s
HFS Hagfors 76.77 335 P P 22 43 06.1 -0.3
comp=Z,17nm,0.8s,baz=61,slow=5.7,SNR=24
comp=Z,17nm,0.8s
NC405 NORSAR Array S 76.78 336 P P 22 43 06.3 -0.2
NC405 IAmb IAmb 22 43 07.5

SUW Suwalki 76.83 326 P P 22 43 07.4 +0.6
comp=Z,28nm,0.8s
SUW Suwalki 76.83 326 P P 22 43 07.4 +0.6
F10A Beach Ranch, E 76.95 44 P P 22 43 08.1 +0.2
NB201 NORSAR Array S 76.97 336 P P 22 43 07.2 -0.4
NB201 IAmb IAmb 22 43 08.5
comp=Z,18nm,0.8s
LUBAR Lubar, Ukraine 76.98 321 P P 22 43 08.0 +0.2
NC204 NORSAR Array S 76.99 337 P P 22 43 07.0 -0.7
NC204 IAmb IAmb 22 43 08.8
comp=Z,23nm,0.8s
DOMB Dombas 76.99 338 eP P 22 43 06.1 -1.6
NB2 NORSAR Subarra 77.01 336 P P 22 43 07.3 -0.5
comp=Z,12nm,0.7s,baz=44,slow=5.9
NOA NORSAR Array B 77.01 336 P P 22 43 07.3 -0.5
comp=Z,12nm,0.8s,baz=45,slow=5.5,SNR=42
NOA S S 22 52 22.1 -0.1
comp=Z,0.7nm,0.8s,baz=43,slow=11,SNR=3.3
comp=Z,12nm,0.8s
RNPP9 Sopachiv 77.07 323 P P 22 43 08.4 +0.2
MOL Molde 77.08 339 eP P 22 43 08.7 +0.6
NC602 NORSAR Array S 77.11 336 eP P 22 43 07.4 -0.9
HATC Hat Creek Radi 77.12 50 P P 22 43 09.6 +0.8
NBO00 NORSAR Array S 77.16 336 P P 22 43 08.7 +0.1
O03E Paynes Creek 77.17 50 P P 22 43 09.2 +0.1
O03E IAmb IAmb 22 43 10.5
comp=Z,25nm,0.8s
RNPP5 Staryi Chortor 77.18 323 P P 22 43 08.9 0.0
NAO01 NORSAR Array S 77.26 336 P P 22 43 08.0 -1.1
NAO01 IAmb IAmb 22 43 09.9
comp=Z,18nm,1.0s
GDXM Geysers 77.30 52 P P 22 43 09.4 -0.4
GDXM IAmb IAmb 22 43 12.1
comp=Z,21nm,1.1s
MNRC McLaughlin Min 77.50 52 P P 22 43 11.0 +0.1
BMO Blue Mountains 77.53 45 IAmb IAmb 22 43 12.8
comp=Z,20nm,0.9s
AKN Aaknes 77.54 338 eP P 22 43 10.9 +0.3
FARB Farallon Islan 77.74 53 P P 22 43 11.5 -0.6
SUTB Sutter Butte 77.75 51 P P 22 43 11.9 -0.3
SUTB IAmb IAmb 22 43 13.4
comp=Z,20nm,0.8s
ORV Oroville 77.76 51 P P 22 43 12.0 -0.3
ORV IAmb IAmb 22 43 13.5
comp=Z,26nm,1.0s
ORV Oroville 77.76 51 P P 22 43 12.0 -0.3
ORV pmax pmax
comp=Z,26nm,1.0s
CVS Carmenet Viney 77.76 52 P P 22 43 12.7 +0.4
WVOR Wild Horse Val 78.04 47 IAmb IAmb 22 43 15.9
comp=Z,21nm,0.8s
PLID Pearl Lake 78.16 44 P P 22 43 14.6 0.0
GAZ Gaziantep 78.25 307 P P 22 43 14.9 -0.2
MSO Missoula 78.35 42 IAmb IAmb 22 43 16.2
comp=Z,30nm,1.7s
KMPD K-Podol'skiy 78.46 321 P PcP 22 43 15.9 -7.5
KMPD P P 22 43 15.5 -0.4
MHC Mount Hamilton 78.84 53 P P 22 43 18.1 -0.2
MHC IAmb IAmb 22 43 20.0
comp=Z,49nm,1.6s
MHC Mount Hamilton 78.84 53 P P 22 43 18.1 -0.2
MHC pmax pmax
comp=Z,49nm,1.6s
BPMT Black Pine Rid 78.86 42 P P 22 43 18.7 +0.3
MPK Martis Peak 78.86 50 P P 22 43 18.2 -0.4
MPK IAmb IAmb 22 43 20.4
comp=Z,41nm,1.3s
BRTR Keskin Array B 79.25 310 P P 22 43 20.6 +0.1
comp=Z,4.8nm,0.8s,baz=106,slow=4.1,SNR=12
comp=Z,4.8nm,0.8s
BRTR Keskin Array B 79.25 310 iP P 22 43 20.8 +0.3
BRTR pmax pmax
comp=Z,5.0nm,0.8s
PNTR Pine Nut 79.25 50 P P 22 43 20.5 -0.2
PNTR IAmb IAmb 22 43 22.6
comp=Z,22nm,0.9s
DEL Delary 79.25 332 iP P 22 43 19.4 -0.6
BR106 Keskin Array S 79.26 310 P P 22 43 21.0 +0.5
comp=Z,7.3nm,0.9s
BR105 Keskin Array S 79.27 310 P P 22 43 21.0 +0.4
comp=Z,7.3nm,1.0s
FFC Flin Flon 79.35 30 P 22 43 20.6 +0.1
FFC IAmb IAmb 22 43 21.5
comp=Z,26nm,0.9s
FFC Flin Flon 79.35 30 P P 22 43 20.6 +0.1
FFC pmax pmax
comp=Z,26nm,0.9s
ONAU Onsala 79.36 333 iP P 22 43 20.2 -0.3
STNU Starunia 79.41 322 P P 22 43 21.1 +0.1
TESR Tescani 79.58 319 P P 22 43 22.3 +0.4
comp=Z,16nm,1.0s
BBGB Big Mountain B 79.66 53 P P 22 43 22.8 +0.1
BBGB IAmb IAmb 22 43 24.6
comp=Z,33nm,0.9s
WAKR Walker 79.68 51 P P 22 43 22.9 0.0
BUR08 Bucovina Ar. S 79.69 320 P P 22 43 21.5 -1.1
SHIU Shidnytsya 79.69 322 P P 22 43 23.3 +0.8
ANTO Ankara 79.71 311 P P 22 43 23.1 +0.3
ANTO Ankara 79.71 311 P P 22 43 23.2 +0.3
ANTO pmax pmax
comp=Z,8.0nm,0.6s
BSD Bornholm Skovb 79.77 330 iP P 22 43 22.4 -0.3
KWP Kalwaria Pacla 79.77 323 eP P 22 43 23.9 +1.0
KWP Kalwaria Pacla 79.77 323 P P 22 43 23.9 +1.0
comp=Z,26nm,1.1s
HULI Fort Hunter Li 79.83 54 P P 22 43 23.2 -0.2
BJUU Bjuv 79.87 332 iP P 22 43 22.9 -0.4
VRI Vrincioaia 79.92 318 P P 22 43 24.9 +1.1
comp=Z,11nm,0.9s
EGMT Eagleton 79.93 39 P P 22 43 24.6 +0.7
DLMT Dillon 79.97 42 P P 22 43 24.6 +0.4
HLID Hailey 79.97 44 IAmb IAmb 22 43 26.5
comp=Z,18nm,1.1s
LUNU Lund 80.01 331 iP P 22 43 24.3 +0.3
PMPB Monarch Peak 80.02 53 P P 22 43 24.4 -0.2
PMPB IAmb IAmb 22 43 26.2
comp=Z,35nm,1.1s
BKZ Black Stump Fm 80.05 150 P P 22 43 24.4 0.0
MCMT McKenzie Canyo 80.14 43 P P 22 43 25.1 -0.2
RYN Ryan 80.21 50 P P 22 43 25.4 -0.2
RYN IAmb IAmb 22 43 27.5
comp=Z,21nm,1.0s
PKD Bear Valley Ra 80.34 54 P P 22 43 25.8 -0.4
PKD IAmb IAmb 22 43 27.9
comp=Z,39nm,1.1s
BOZ Bozeman (W) 80.38 42 IAmb IAmb 22 43 28.1
comp=Z,18nm,0.8s
MDUB Mudurnu 80.39 312 P P 22 43 25.4 -1.0
MDUB IAmb IAmb 22 43 29.6
comp=Z,23nm,0.8s
MDPB Devils Postpil 80.40 51 P P 22 43 26.6 -0.1
LHV Little Huntoon 80.43 51 P P 22 43 26.8 +0.3
LHV IAmb IAmb 22 43 29.1
comp=Z,37nm,1.1s
NVAR Mina Array Bea 80.46 50 P P 22 43 27.4 +0.3
comp=Z,13nm,0.8s,baz=282,slow=5.0,SNR=54
comp=Z,13nm,0.8s
MUKU Mukachevo 80.52 322 P P 22 43 27.4 +0.6
NV11 Mina Array Sit 80.56 50 P P 22 43 28.1 +0.6
SFJD Kangerlussuaq 80.64 3 P P 22 43 26.9 -0.2
SFJD IAmb IAmb 22 43 28.3
comp=Z,26nm,0.9s
SFJD Kangerlussuaq 80.64 3 P P 22 43 26.9 -0.2
SFJD pmax pmax
comp=Z,27nm,0.9s
STHS Stebnicka Huta 80.64 324 eP P 22 43 26.6 -0.9
STHS pmax pmax
comp=Z,4.0nm,0.7s
STHS Stebnicka Huta 80.64 324 eP P 22 43 26.6 -0.9
BERU Beregovo 80.68 322 P P 22 43 28.5 +0.9
OJC Ojcow 80.84 325 eP P 22 43 28.8 +0.3
OJC Ojcow 80.84 325 P P 22 43 28.8 +0.3
OJC Ojcow 80.84 325 P P 22 43 28.8 +0.3
OJC Ojcow 80.84 325 P P 22 43 29.4 +0.9
comp=Z,12nm,1.0s
QLMT Earthquake Lak 80.95 42 P P 22 43 30.1 +0.7

Q09A Carvers 80.96 50 P P 22 43 29.9 +0.3
Q09A IAmb IAmb 22 43 31.9
comp=Z,28nm,0.8s
YHL Hebgen Lake 81.08 42 P P 22 43 30.8 +0.6
YHL IAmb IAmb 22 43 32.5
comp=Z,29nm,1.0s
ELK Elko 81.10 47 P P 22 43 30.4 +0.1
ELK IAmb IAmb 22 43 32.5
comp=Z,16nm,1.0s
ELK Elko 81.10 47 P P 22 43 30.4 +0.1
ELK pmax pmax
comp=Z,16nm,1.0s
VOIR 81.11 319 P P 22 43 30.9 +0.8
comp=Z,6.6nm,1.4s
NIE Niedzica 81.12 324 eP P 22 43 31.3 +1.2
NIE Niedzica 81.12 324 P P 22 43 31.2 +1.2
comp=Z,4.2nm,1.1s
YHB Horse Butte 81.13 42 P P 22 43 30.6 +0.2
YHB IAmb IAmb 22 43 32.7
comp=Z,34nm,0.9s
DSP Deep Springs 81.27 51 P P 22 43 31.5 +0.6
DSP IAmb IAmb 22 43 33.2
comp=Z,19nm,1.0s
TIN Tinemaha, Big 81.28 52 P P 22 43 31.6 +0.4
TIN Tinemaha, Big 81.28 52 P P 22 43 31.6 +0.4
TIN pmax pmax
comp=Z,99nm,0.2s
YMR Madison River 81.31 42 IAmb IAmb 22 43 33.8
comp=Z,34nm,1.0s
VES Vestal, Richgr 81.39 53 P P 22 43 31.8 +0.2
YNM Yellowstone No 81.42 42 P P 22 43 33.4 +1.4
YNR Norris Junctio 81.44 42 P P 22 43 33.5 +1.4
YNR IAmb IAmb 22 43 35.7
comp=Z,34nm,1.2s
LTZ Lake Taylor 81.49 155 P P 22 43 32.8 +1.0
YFT Old Faithful 81.52 42 P P 22 43 32.8 +0.3
YFT IAmb IAmb 22 43 37.6
comp=Z,23nm,0.9s
BORG Borgarnes 81.64 351 P P 22 43 34.2 +1.9
BORG Borgarnes 81.64 351 P P 22 43 34.2 +1.9
BORG pmax pmax
comp=Z,292nm,1.9s
YNE Yellowstone No 81.64 41 P P 22 43 33.3 +0.2
YPP Pitchstone Pla 81.64 42 P P 22 43 34.4 +1.2
LKWY Lake 81.69 42 P P 22 43 35.1 +1.7
LKWY Lake 81.69 42 P P 22 43 35.1 +1.7
LKWY pmax pmax
comp=Z,40nm,1.0s
H17A Grant Village 81.70 42 P P 22 43 34.2 +0.8
CWC Cottonwood Cre 81.72 52 P P 22 43 32.8 -0.7
YMP Mirror Lake Pl 81.72 42 P P 22 43 34.0 +0.4
YMP IAmb IAmb 22 43 36.2
comp=Z,35nm,1.1s
MMAI Mount Meron Ar 81.74 304 P P 22 43 33.9 +0.3
comp=Z,0.7nm,0.4s,baz=60,slow=7.2,SNR=4.0
comp=Z,0.7nm,0.4s
LOT Lotru 81.82 319 ⇑P P 22 43 35.2 +1.4
FLWY Flagg Ranch 81.82 42 P P 22 43 34.5 +0.6
GRAC Grapevine Rang 81.88 51 P P 22 43 33.8 -0.4
GRAC IAmb IAmb 22 43 36.2
comp=Z,43nm,1.1s
ISA Isabella, Lake 81.90 53 P P 22 43 32.6 -1.7
ISA Isabella, Lake 81.90 53 P P 22 43 32.6 -1.7
ISA pmax pmax
comp=Z,9.0nm,0.9s
FXWY Fox Creek 81.90 43 P P 22 43 34.5 +0.1
FXWY IAmb IAmb 22 43 36.9
comp=Z,26nm,1.3s
RLMT Red Lodge 81.98 41 P P 22 43 35.1 +0.3
HVU Hansel Valley 82.00 45 P P 22 43 35.6 +0.7
HVU IAmb IAmb 22 43 37.1
comp=Z,22nm,0.7s
HVU Hansel Valley 82.00 45 P P 22 43 35.6 +0.7
HVU pmax pmax
comp=Z,22nm,0.7s
MOOW Moose Ponds 82.00 43 P P 22 43 35.5 +0.6
STEB Steborice 82.01 325 eP P 22 43 35.2 +0.6
BALJ Balqa 82.08 303 P P 22 43 34.8 -0.5
CSS Mathiatis 82.09 306 P P 22 43 35.0 -0.3
CSS Mathiatis 82.09 306 P P 22 43 35.7 +0.4
comp=Z,10nm,0.9s
KSP Ksiaz 82.09 327 eP P 22 43 35.3 +0.4
KSP Ksiaz 82.09 327 P P 22 43 35.4 +0.4
comp=Z,21nm,0.8s
LOHW Long Hollow 82.16 43 P P 22 43 36.0 +0.2
SNOW Snow King Moun 82.17 43 P P 22 43 36.2 +0.3
SNOW IAmb IAmb 22 43 38.2
comp=Z,17nm,0.8s
MORC Moravsky Berou 82.23 325 P P 22 43 35.4 -0.3
MORC Moravsky Berou 82.23 325 eP P 22 43 36.1 +0.4
MORC Moravsky Berou 82.23 325 P P 22 43 35.4 -0.3
MORC pmax pmax
comp=Z,5.0nm,0.8s
R11B Troy Canyon, C 82.27 49 P P 22 43 36.4 0.0
R11B IAmb IAmb 22 43 38.2
comp=Z,39nm,1.2s
PSZ Piszkesteto 82.30 323 P P 22 43 36.2 0.0
PSZ Piszkesteto 82.30 323 P P 22 43 36.2 0.0
PSZ pmax pmax
comp=Z,6.0nm,0.8s
OSI Osito Audit: C 82.31 54 P P 22 43 36.3 -0.2
BGU Big Grassy Mou 82.35 46 P P 22 43 36.8 +0.1
BGU IAmb IAmb 22 43 38.9
comp=Z,26nm,1.2s
CLC China Lake 82.40 52 P P 22 43 36.9 0.0
CLC IAmb IAmb 22 43 38.4
comp=Z,51nm,1.6s
CLC China Lake 82.40 52 P P 22 43 36.9 0.0
CLC pmax pmax
comp=Z,51nm,1.6s
DPC Dobruska-Polom 82.42 326 eP P 22 43 37.6 +0.9
DPC Dobruska-Polom 82.42 326 eP P 22 43 37.6 +0.9
DPC Dobruska-Polom 82.42 326 P P 22 43 37.6 +0.9
comp=Z,14nm,0.8s
UPC Upice 82.45 327 eP P 22 43 37.5 +0.7
UPC Upice 82.45 327 eP P 22 43 37.5 +0.7
SPUT South Promonto 82.47 45 P P 22 43 37.9 +0.6
SPUT IAmb IAmb 22 43 39.6
comp=Z,36nm,1.4s
TPO Tropico Hills 82.50 53 P P 22 43 37.0 -0.5
FURC Furnace Creek, 82.52 51 P P 22 43 37.5 +0.1
LRMC Laurel Mtn Rad 82.53 53 P P 22 43 37.4 -0.3
LRMC IAmb IAmb 22 43 39.1
comp=Z,24nm,1.1s
GHAJ Ghor Haditha 82.56 302 P P 22 43 37.5 -0.2
S11A Rachel 82.57 50 P P 22 43 38.2 +0.4
WSHM Spangler Hills 82.59 52 P P 22 43 37.6 -0.3
WSHM IAmb IAmb 22 43 39.4
comp=Z,26nm,1.2s
TPNV Topopah Spring 82.64 51 P P 22 43 38.5 +0.2
TPNV Topopah Spring 82.64 51 P P 22 43 38.5 +0.2
TPNV pmax pmax
comp=Z,42nm,1.0s
SPR3 Spring Creek 3 82.68 48 P P 22 43 39.0 +0.3
SPR3 IAmb IAmb 22 43 41.8
comp=Z,43nm,1.4s
CCCA Chr Cany lake 82.72 52 P P 22 43 38.5 0.0
JAVC Velka Javorina 82.78 325 eP P 22 43 40.1 +1.5
PASC Pasadena Art C 82.93 54 P P 22 43 39.3 -0.3
PASC IAmb IAmb 22 43 40.9
comp=Z,25nm,1.0s
MWC Mount Wilson 82.99 54 IAmb IAmb 22 43 41.5
comp=Z,35nm,1.1s
VRAC Vranov 83.00 325 eP P 22 43 40.1 +0.5
PVCC Panska Ves 83.11 327 eP P 22 43 40.9 +0.8
PVCC Panska Ves 83.11 327 eP P 22 43 40.9 +0.8
SMOL Smolenice 83.14 324 eP P 22 43 41.4 +1.1
SMOL pmax pmax
comp=Z,5.0nm,0.9s
PRN Pahroc Range 83.16 50 IAmb IAmb 22 43 43.5
comp=Z,36nm,1.1s
TCUT Toone Canyon 83.21 45 IAmb IAmb 22 43 43.3
comp=Z,30nm,0.9s
GSC Goldstone, Bar 83.22 52 IAmb IAmb 22 43 43.3
comp=Z,37nm,1.1s
SHOC Shoshone, Teco 83.23 52 P P 22 43 41.9 +0.8
SHOC IAmb IAmb 22 43 42.7
comp=Z,30nm,0.9s
BFSC Mount Baldy Ra 83.25 54 IAmb IAmb 22 43 42.5
comp=Z,41nm,1.3s
PSUT Pine Spring 83.26 48 IAmb IAmb 22 43 43.2
comp=Z,21nm,0.9s
CLL Collm 83.26 329 iP P 22 43 40.8 -0.1
CLL e*PP pP 22 45 12.0 +0.2

CLL pmax pmax
comp=Z,17nm,0.9s
CLL Collm 83.26 329 P P 22 43 40.6 -0.3
comp=Z,19nm,0.9s
CLL Collm 83.26 329 iP P 22 43 40.8 -0.1
comp=Z,17nm,0.9s
CLL epP pP 22 45 12.0 +0.2
KRUC Moravsky 83.26 325 eP P 22 43 40.7 -0.3
CTU Camp Tracy 83.27 46 IAmb IAmb 22 43 43.3
comp=Z,20nm,0.9s
BW06 Boulder Array 83.28 43 IAmb IAmb 22 43 42.8
comp=Z,17nm,0.9s
PD31 Pinedale Array 83.29 43 P P 22 43 41.2 -0.3
PD31 IAmb IAmb 22 43 42.9
comp=Z,17nm,0.9s
PDAR Pinedale Array 83.29 43 P P 22 43 41.9 +0.4
comp=Z,9.9nm,0.8s,baz=289,slow=2.4,SNR=67
comp=Z,9.9nm,0.8s
MODS Modra-Piesok 83.30 324 eP P 22 43 41.6 +0.4
MODS pmax pmax
comp=Z,10.0nm,0.9s
MODS Modra-Piesok 83.30 324 eP P 22 43 41.6 +0.4
TREC Trest 83.54 326 eP P 22 43 42.9 +0.5
TREC Trest 83.54 326 eP P 22 43 42.9 +0.5
ELS Elsinore Mount 83.75 54 IAmb IAmb 22 43 45.1
comp=Z,34nm,1.1s
MPU Maple Canyon 83.75 46 IAmb IAmb 22 43 45.8
comp=Z,29nm,0.8s
MTPC Mountain Pass 83.95 52 IAmb IAmb 22 43 46.5
comp=Z,24nm,0.8s
BSUT Blindstream Ca 83.96 45 P P 22 43 45.7 +0.6
ZVC Zvikov 84.04 327 eP P 22 43 45.0 +0.1
MORH Mrgy, Hungar 84.06 322 P P 22 43 45.3 +0.3
comp=Z,4.4nm,2.4s
TCRU Three Creeks R 84.10 48 P P 22 43 46.4 +0.7
TCRU IAmb IAmb 22 43 48.0
comp=Z,21nm,0.9s
V12A Nelson 84.27 51 IAmb IAmb 22 43 48.2
comp=Z,23nm,1.0s
CONA Conrad Observa 84.30 325 ePcP P 22 43 47.4 +1.2
comp=Z,1.5nm,0.5s
SZCU Shurtz Canyon 84.30 49 P P 22 43 46.6 0.0
CPE Camp Elliot 84.40 55 P P 22 43 47.0 0.0
CPE IAmb IAmb 22 43 48.3
comp=Z,22nm,0.9s
PFO Pinyon Flats O 84.43 54 P 22 43 47.8 +0.5
PFO Pinyon Flats O 84.43 54 P P 22 43 47.8 +0.5
PFO pmax pmax
comp=Z,34nm,0.9s
PFO Pinyon Flats O 84.43 54 P P 22 43 47.9 +0.7
PFO Pinyon Flats O 84.43 54 pP pP 22 45 18.6 +0.7
DPP Dos Picos Cty 84.45 54 IAmb IAmb 22 43 48.5
comp=Z,21nm,0.9s
BELC Belle Mtn. Jos 84.52 53 IAmb IAmb 22 43 48.8
comp=Z,18nm,0.7s
KHC Kasperske Hory 84.55 327 cePcP P 22 43 48.2 +0.8
KHC pmax pmax
comp=Z,22nm,2.5s
KHC Kasperske Hory 84.55 327 eP P 22 43 47.8 +0.3
KHC Kasperske Hory 84.55 327 P P 22 43 47.7 +0.3
comp=Z,10nm,1.0s
LCMT Little Creek M 84.55 49 IAmb IAmb 22 43 49.9
comp=Z,25nm,1.0s
MTPU Mount Pierson 84.61 48 IAmb IAmb 22 43 50.8
comp=Z,29nm,1.0s
BORC Borrego Spring 84.66 54 IAmb IAmb 22 43 49.5
comp=Z,21nm,1.0s
GERES GERESS Array B 84.69 326 P P 22 43 47.6 -0.6
comp=Z,1.5nm,0.7s,baz=37,slow=6.2,SNR=6.9
comp=Z,1.5nm,0.7s
BAR Barrett 84.82 54 IAmb IAmb 22 43 50.4
comp=Z,22nm,0.8s
P18A Preston Nutter 84.83 46 P P 22 43 49.7 +0.3
PKCU Pink Cliffs 84.89 48 P P 22 43 50.7 +1.0
PKCU IAmb IAmb 22 43 52.2
comp=Z,31nm,1.2s
NEE2 Needles Airpor 84.99 52 P P 22 43 49.7 -0.1
IRM Iron Mountain 85.00 53 IAmb IAmb 22 43 51.6
comp=Z,25nm,1.2s
CBX Cerro Bola 85.04 55 P P 22 43 50.3 0.0
BC3 Big Chuckawall 85.08 53 IAmb IAmb 22 43 52.0
comp=Z,19nm,0.9s
K22A Casper 85.08 42 P P 22 43 50.8 +0.4
K22A IAmb IAmb 22 43 51.6
comp=Z,14nm,0.8s
ULM Lac du Bonnet 85.15 31 P P 22 43 50.3 0.0
comp=Z,9.3nm,0.9s,baz=308,slow=6.8,SNR=5.0
comp=Z,9.3nm,0.9s
ULM Lac du Bonnet 85.15 31 P P 22 43 50.4 0.0
ULM IAmb IAmb 22 43 51.8
comp=Z,29nm,1.2s
ULM Lac du Bonnet 85.15 31 P P 22 43 50.4 +0.1
ULM pmax pmax
comp=Z,29nm,1.2s
MDND Maddock 85.17 34 P P 22 43 49.7 -0.8
W13A Hualapai Mount 85.28 51 P P 22 43 51.6 0.0
W13A IAmb IAmb 22 43 53.1
comp=Z,11nm,0.9s
YUH Yuha Desert 85.35 54 P P 22 43 51.8 +0.2
YUH IAmb IAmb 22 43 53.2
comp=Z,20nm,0.9s
RSSD Black Hills 85.48 39 P 22 43 52.7 +0.4
RSSD IAmb IAmb 22 43 54.5
comp=Z,13nm,0.8s
RSSD Black Hills 85.48 39 P P 22 43 52.7 +0.4
RSSD pmax pmax
comp=Z,13nm,0.8s
RSSD Black Hills 85.48 39 P P 22 43 52.7 +0.4
E28A Huff 85.53 36 P P 22 43 52.1 -0.2
E28A IAmb IAmb 22 43 53.7
comp=Z,34nm,1.3s
HMU Henry Mountain 85.57 47 IAmb IAmb 22 43 54.6
comp=Z,33nm,1.2s
SOKA Soboth 85.57 324 eP P 22 43 52.8 +0.3
comp=Z,1.0nm,0.4s
BLYC Blythe 85.65 53 IAmb IAmb 22 43 54.9
comp=Z,19nm,0.9s
ESJX Sierra Juarez 85.71 55 P P 22 43 53.5 -0.1
ESJX IAmb IAmb 22 43 55.4
comp=Z,19nm,0.9s
O20A White River Ci 85.71 44 IAmb IAmb 22 43 55.1
comp=Z,24nm,1.0s
GLA Glamis 85.86 53 P P 22 43 54.4 +0.2
GLA IAmb IAmb 22 43 55.9
comp=Z,29nm,1.1s
GLA Glamis 85.86 53 P P 22 43 54.4 +0.2
GLA pmax pmax
comp=Z,29nm,1.1s
HAYD Hayden 86.04 44 P P 22 43 55.9 +0.7
HAYD IAmb IAmb 22 43 57.2
comp=Z,15nm,0.7s
LESA Schwarzleotal 86.19 326 eP P 22 43 55.7 +0.2
comp=Z,1.0nm,0.3s
EKA Eskdalemuir Ar 86.19 339 P P 22 43 55.3 +0.1
comp=Z,1.8nm,0.5s,baz=38,slow=4.7,SNR=10
comp=Z,1.8nm,0.5s
EKB Eskdalemuir 86.20 339 P P 22 43 53.3 -1.9
PV21 Cone Mtn., Par 86.27 46 P P 22 43 56.5 +0.2
PV21 IAmb IAmb 22 43 58.3
comp=Z,25nm,0.9s
PV22 Blue Mesa, Par 86.40 46 IAmb IAmb 22 43 58.9
comp=Z,30nm,1.3s
PV16 Nyswonger Mesa 86.46 46 IAmb IAmb 22 43 59.2
comp=Z,28nm,1.1s
PV05 Paradox Valley 86.50 46 IAmb IAmb 22 43 59.4
comp=Z,30nm,1.0s
EPLO Experimental L 86.51 30 IAmb IAmb 22 43 57.8
comp=Z,26nm,0.9s
PV03 Paradox Valley 86.54 46 IAmb IAmb 22 43 59.5
comp=Z,30nm,1.2s
Y14A Wickenburg 86.56 52 IAmb IAmb 22 43 59.9
comp=Z,22nm,1.2s
PV13 Radium Mtn., P 86.61 46 P P 22 43 57.9 0.0
PV13 IAmb IAmb 22 43 59.8
comp=Z,18nm,1.0s
WUAZ Wupatki 86.66 50 IAmb IAmb 22 44 00.7
comp=Z,20nm,1.1s
113A Mohawk Valley, 86.75 53 IAmb IAmb 22 44 00.0
comp=Z,28nm,1.5s
PV01 Paradox Valley 86.78 46 IAmb IAmb 22 44 00.7
comp=Z,15nm,1.0s
WTTA Wattenberg 86.79 326 eP P 22 43 57.9 -0.6
comp=Z,1.0nm,0.4s
MOTA Moosalm 86.98 327 eP P 22 43 59.3 0.0
comp=Z,1.4nm,0.5s
SQTA Sankt Quirin 87.02 327 eP P 22 43 58.9 -0.6

comp=Z,0.9nm,0.3s
RETA Reutte 87.03 327 *e*P **P 22 43 59.3 -0.3**
comp=Z,0.8nm,0.3s
SFX San Felipe 87.03 55 P **P 22 44 00.5 +0.8**
SFX IAmb IAmb 22 46 47.8
comp=Z,22nm,0.8s
X16A Lo Mia Camp, P 87.29 50 P **P 22 44 01.7 +0.6**
FETA Feichten 87.39 327 *e*PcP **P 22 44 01.3 -0.1**
comp=Z,3.3nm,0.7s
ISCO Idaho Springs 87.47 43 IAmb IAmb 22 44 04.1
comp=Z,11nm,0.8s
DAVA Damuels 87.59 327 *i* P **P 22 44 02.1 -0.1**
comp=Z,4.8nm,0.7s
214A Organ Pipe Nat 87.88 53 P **P 22 44 02.8 -1.0**
214A IAmb IAmb 22 44 05.7
comp=Z,30nm,1.6s
FUORN Ofenpass-Fuorn 87.90 327 IAmb IAmb 22 44 05.2
comp=Z,12nm,0.8s
W18A Petrified Fore 87.96 49 P **P 22 44 05.1 +0.9**
S22A 4UR Ranch, Cre 88.09 46 P **P 22 44 05.6 +0.6**
X18A Snowflake 88.19 50 P **P 22 44 05.6 +0.3**
F33A 5 Mile Ranch, 88.20 34 P **P 22 44 05.3 +0.4**
Q24A Divide 88.29 44 P **P 22 44 04.9 -1.0**
TUE Stuetta 88.44 327 **P 22 44 05.7 -0.6**
TUE Stuetta 88.44 327 **P 22 44 06.3 0.0**
comp=Z,45nm,1.7s
OGNE Ogallala 88.72 41 P **P 22 44 05.5 -2.1**
EYMN Ely 88.78 30 P **P 22 44 06.4 -1.2**
EYMN IAmb IAmb 22 44 09.1
comp=Z,33nm,1.1s
K30B Basset 88.82 38 **P 22 44 07.9 0.0**
SDCO Great Sand Dun 88.88 45 P **P 22 44 07.9 -0.7**
TUC Tucson 89.02 52 P **P 22 44 08.3 -0.9**
TUC Tucson 89.02 52 P **P 22 44 08.3 -0.9**
TUC pmax pmax
comp=Z,6.0nm,1.2s
TBO Thunder Bay 89.10 29 P **P 22 44 08.7 -0.4**
ECSD EROS Data Cent 89.58 36 **P 22 44 11.0 -0.4**
ECSD IAmb IAmb 22 44 12.8
comp=Z,24nm,1.2s
KSCO Kaye Shedlock' 89.71 42 P **P 22 44 11.5 -0.8**
T25A Trinidad 89.94 45 **P 22 44 13.3 -0.2**
T25A IAmb IAmb 22 44 15.3
comp=Z,12nm,0.9s
DUN6 Lazy B Ranch 89.99 51 P **P 22 44 13.7 0.0**
TASM ASL Pad, Albuq 90.13 47 P **P 22 44 14.8 +0.4**
TASM ASL Pad, Albuq 90.13 47 P **P 22 44 14.2 -0.2**
TASM IAmb IAmb 22 44 16.5
comp=Z,14nm,1.3s
TASM ASL Pad, Albuq 90.13 47 P **P 22 44 14.0 -0.4**
TASM IAmb IAmb 22 44 16.6
comp=Z,14nm,1.2s
ANMO Albuquerque 90.13 47 P **P 22 44 14.4 -0.1**
ANMO Albuquerque 90.13 47 P **P 22 44 14.3 -0.1**
ANMO IAmb IAmb 22 44 16.5
comp=Z,15nm,1.2s
ANMO Albuquerque 90.13 47 P **P 22 44 14.8 +0.4**
ANMO IAmb IAmb 22 44 16.5
comp=Z,16nm,1.3s
ANMO Albuquerque 90.13 47 P **P 22 44 14.8 +0.4**
ANMO pmax pmax
comp=Z,16nm,1.3s
ABQ Albuquerque 90.14 47 **P 22 44 14.2 -0.2**
SBM South Baldy 90.31 49 P **P 22 44 16.1 +0.6**
LENM Lemitar 90.32 48 P **P 22 44 16.3 +1.0**
Y22A Socorro 90.47 48 **P 22 44 15.9 -0.1**
SCHQ Schefferville 90.59 14 P **P 22 44 15.9 0.0**
comp=Z,4.8nm,0.7s,baz=296,slow=6.4,SNR=3.7
comp=Z,4.8nm,0.7s
319A Douglas 90.60 52 P **P 22 44 16.7 +0.2**
319A IAmb IAmb 22 44 18.6
comp=Z,18nm,0.9s
CRNM Carthage 90.61 48 P **P 22 44 17.2 +0.6**
BNI Bardonecchia 90.73 327 P **P 22 44 17.4 +0.5**
BNI IAmb IAmb 22 45 47.2
comp=Z,50nm,1.9s
BNI Bardonecchia 90.73 327 P **P 22 44 17.4 +0.5**
BNI pmax pmax
comp=Z,50nm,1.9s
121A Cookes Peak, D 90.85 50 **P 22 44 18.0 +0.3**
121A IAmb IAmb 22 44 20.0
comp=Z,20nm,1.1s
I37A Lemond, Waseca 90.93 34 P **P 22 44 17.6 0.0**
HSIG 90.94 54 P **P 22 44 17.9 -0.2**
HSIG IAmb IAmb 22 44 20.0
comp=Z,15nm,0.9s
L34A Svendsen Farm, 90.99 37 P **P 22 44 17.5 -0.5**
RTBA Rita Blanca 91.40 44 **P 22 44 20.3 +0.1**
RTBA IAmb IAmb 22 44 22.4
comp=Z,29nm,1.5s
N35A Tabor 92.18 37 P **P 22 44 23.4 -0.1**
SCIA State Center 92.61 35 P **P 22 44 26.2 +0.7**
MNTX Cornudas Mount 92.94 49 **P 22 44 27.7 +0.5**
MNTX IAmb IAmb 22 44 28.9
comp=Z,8.8nm,0.9s
AMTX Amarillo 93.09 45 **P 22 44 28.2 +0.3**
GDL2 Guadalupe Moun 93.25 48 **P 22 44 28.5 -0.3**
L40A Anamosa 93.45 34 P **P 22 44 28.3 -0.9**
CLNB Carlsbad 93.52 48 P **P 22 44 30.5 +0.5**
SMWD Samnorwood 93.78 44 P **P 22 44 30.3 -0.7**
SMWD IAmb IAmb 22 44 32.7
comp=Z,11nm,0.9s
VHRN Van Horn 93.79 50 **P 22 44 31.9 +0.6**
VHRN IAmb IAmb 22 44 33.1
comp=Z,18nm,1.2s
CROK Carrier 94.09 42 P **P 22 44 32.8 +0.4**
I45A Fountain 94.11 30 P **P 22 44 32.4 +0.2**
PECS Pecos 94.12 49 P **P 22 44 32.9 +0.2**
PECS IAmb IAmb 22 44 34.2
comp=Z,9.0nm,0.9s
P38A Dawn 94.18 37 P **P 22 44 32.6 -0.1**
P38A IAmb IAmb 22 44 33.8
comp=Z,11nm,0.7s
DKNS Dickens 94.38 45 P **P 22 44 34.7 +0.9**
DKNS IAmb IAmb 22 44 36.3
comp=Z,8.8nm,0.7s
ODSA Odessa 94.44 47 P **P 22 44 33.6 -0.5**
MNHN Monahans 94.84 48 P **P 22 44 35.3 -0.6**
MNHN IAmb IAmb 22 47 15.0
comp=Z,5.6nm,0.5s
WMOK Wichita Mounta 94.89 43 P **P 22 44 35.5 -0.6**
WMOK IAmb IAmb 22 44 37.2
comp=Z,6.2nm,0.9s
WMOK Wichita Mounta 94.89 43 P **P 22 44 35.5 -0.6**
WMOK pmax pmax
comp=Z,6.0nm,1.0s
ALPN Alpine 94.93 49 **P 22 44 35.4 -1.1**
ALPN IAmb IAmb 22 44 37.5
comp=Z,12nm,1.5s
SLBS Sierra La Lagu 94.95 58 P **P 22 44 36.1 -0.5**
FNO Franklin 95.31 42 P **P 22 44 36.2 -1.7**
FNO IAmb IAmb 22 44 39.4
comp=Z,8.4nm,0.8s
X34A Smith Ranch, M 95.54 43 P **P 22 44 38.9 -0.1**
TX31 Lajitas Ar. Si 95.61 50 P **P 22 44 38.8 -0.7**
TX31 IAmb IAmb 22 44 41.3
comp=Z,7.8nm,0.8s
TXAR Lajitas Array 95.61 50 P **P 22 44 40.0 +0.5**
comp=Z,5.6nm,0.6s,baz=294,slow=2.8,SNR=56
comp=Z,5.6nm,0.6s
TXAR Lajitas Array 95.61 50 P **P 22 44 40.0 +0.5**
WTFS Witchita Falls 95.77 44 P **P 22 44 40.1 +0.1**
HPIG 95.87 53 P **P 22 44 40.4 -0.5**
HPIG IAmb IAmb 22 44 43.4
comp=Z,5.3nm,0.7s
TORD Torodi Ar. Bea 117.86 310 PKP **PKPdf 22 49 57.6 -0.8**
comp=Z,4.0nm,0.4s,baz=33,slow=4.1,SNR=2.7
BOSA Boshof 122.23 254 PKP **PKiKP 22 50 06.7 0.0**
comp=Z,1.0nm,0.7s,baz=105,slow=5.7,SNR=3.0
QSPA South Pole Qui 122.24 180 PKP **PKiKP 22 50 08.0 +2.5**
comp=Z,1.8nm,0.6s,baz=317,slow=1.0,SNR=21
DBIC Dimbokro 126.95 310 PKP **PKPdf 22 50 15.3 -0.5**
comp=Z,1.8nm,0.5s,baz=120,slow=1.6,SNR=3.7
SDV Santo Domingo 130.99 38 PKPpre PKPpre 22 50 12.5
SDV **PKPdf 22 50 24.2 +0.4**
SNAA Sanae 135.42 197 SKPbc **SKPbc 22 53 23.0 +0.2**
comp=Z,3.4nm,0.9s,baz=118,slow=4.3,SNR=8.1
MAL2 Monte Alegre, 147.83 22 **PKPbc 22 50 55.9 -1.5**
LPAZ La Paz 151.90 61 PKPbc **PKiKP 22 51 08.0 +0.1**
comp=Z,3.8nm,0.5s,baz=350,slow=5.2,SNR=13
PLCA Paso Flores 156.26 118 PKPab **PKPab 22 51 37.4 +1.3**
comp=Z,2.7nm,0.8s,baz=239,slow=5.9,SNR=5.3
PTLB Pontes e Lacer 157.41 45 **PKPab 22 51 41.8 +0.4**
BDFB Brasilia 162.55 17 PKPab **PKPab 22 52 03.7 -0.1**
baz=308,slow=3.6
CPUP Villa Florida 165.87 68 PKPab **PKPab 22 52 17.0 -1.4**
comp=Z,1.3nm,1.1s,baz=198,slow=6.4,SNR=3.5

MOS ***21*** *22:55:01.4±0.8, 7.°09S×129.°92E, h71km, mb5.4/39, Error ellipse: s-maj=10.0km s-min=5.7km az=120.6*
BJI ***21*** *22:55:02.3, 7.°30S×130.°29E, h104km, mB5.4/16, mb5.2/70*
NEIC ***21*** *22:55:03.8, 7.°11S×129.°99E, h90km*
NEIC ***21*** *22:55:03.8, 7.°31S×130.°09E, h90km, Moment Tensor Solution. Duration: 1ˢ5 Moment tensor: Scale 10¹⁶Nm; Mrr2.24; Mθθ-2.50; Mφφ 0.26; Mrθ 0.99; Mrφ 2.21; Mθφ1.72; Fault plane solution: Mo3.81000×10¹⁶ NP1: ϕs331.51000°, δ56.71000°, λ139.76000°. NP2: ϕs86.43000°, δ57.32000°, λ40.71000°. Principal axes: T 3.8792, Plg50.0000°, Azm299.0000°; N -0.1530, Plg40.0000°, Azm119.0000°; P -3.7262, Plg0.0000°, Azm209.0000°;*
NEIC ***21*** *22:55:04.3±1.5, 7.°03S±0.°05×129.°98E±0.°05, h78km±4km, mb5.2/92, Mww5.0/19 Error ellipse: s-maj=8.0km s-min=7.3km az=143.0*
IDC ***21*** *22:55:05.0±2.3, 7.°10S×130.°00E, h87km±20km, mb4.6/21, mbtmp5.0/25, MS3.7/26, Error ellipse: s-maj=17.1km s-min=11.2km az=69.0*
GCMT ***21*** *22:55:05.8±0.2, 7.°18S±0.°01×130.°01E±0.°02, h103km±2km, MW5.1/112, Moment Tensor Solution. s65,c78; s112,c175; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.84±.12; Mθθ-4.24±.13; Mφφ 1.40±.15; Mrθ1.40±.10; Mθφ3.55±.17; Mφr2.15±.09; Best double couple: Mo5.74800×10¹⁶ NP1:ϕ332.00000°, δ59.00000°, λ148.00000°. NP2:ϕ80.00000°, δ63.00000°, λ35.00000°. Principal axes: T 5.5300, Plg44.0000°, Azm297.0000°; N 0.4370, Plg46.0000°, Azm113.0000°; P -5.9670, Plg2.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***21*** *22:55:06.1±0.3, 7.°S±2.°×13.°0E±.°, h118km±9km, M5.3/23, mb5.5/23, mB5.7/21, MLv5.8/14, Mw(mB)5.2/21, MwMwp4.7/1, Mwp5.0/1*
ISC 21 22:55:04.6±0.4, **7.°19S**±0.°03×**130.°04E**±0.°04, **h91**km±3km, **h91**km:**pP-P, n462,** σ1s**63**/470, **mb5.1**/120, **31C-6D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SAUI	**Saumlaki**	**1.48**	**122**		**Pn**	**22 55 32.0**	**+1.8**
SAUI				Sn	**Sn**	**22 55 50.8**	**+1.3**
SAUI	**Saumlaki**	**1.48**	**122**	P	**Pn**	**22 55 32.3**	**+2.1**
SAUI	**Saumlaki**	**1.48**	**122**	P	**Pn**	**22 55 32.5**	**+2.3**
BNDI	**Bandanaira**	**2.65**	**357**	P	**Pn**	**22 55 48.4**	**+2.9**
BNDI	**Bandanaira**	**2.65**	**357**	P	**Pn**	**22 55 48.3**	**+2.8**
AAI	**Ambon**	**3.93**	**332**	P	**Pn**	**22 56 05.6**	**+2.8**
AAI				S	Sn	22 56 34.6	-13
MSAI	**Masohi**	**3.97**	**344**	P	**Pn**	**22 56 06.8**	**+3.4**
FAKI	**Fak Fak**	**4.78**	**28**		**Pn**	**22 56 13.9**	**-0.4**
FAKI				Sn	**Sn**	**22 57 04.7**	**-3.7**
FAKI	**Fak Fak**	**4.78**	**28**	P	**Pn**	**22 56 13.8**	**-0.5**
FAKI	**Fak Fak**	**4.78**	**28**	P	**Pn**	**22 56 13.4**	**-0.9**
FAKI				S	**Sn**	**22 57 05.6**	**-2.9**
NLAI	**Namlea**	**4.89**	**323**	P	**Pn**	**22 56 19.7**	**+3.8**
	2.9nm9µm602nm,0.5s						
KMPI	**Kaimana, Papua**	**5.06**	**46**	P	**Pn**	**22 56 17.6**	**-0.5**
KMPI				S	**Sn**	**22 57 10.7**	**-4.6**
DRS	**Darwin Rock St**	**5.28**	**171**	P	**Pn**	**22 56 21.2**	**+0.1**
MTN	**Manton Dam**	**5.72**	**169**	P	**Pn**	**22 56 27.0**	**-0.2**
MTN				S	**Sn**	**22 57 28.6**	**-2.8**
MTN	**Manton Dam**	**5.72**	**169**	P	**Pn**	**22 56 26.8**	**-0.3**
KDU	**Kakadu**	**5.97**	**157**	P	**Pn**	**22 56 29.9**	**-0.6**
	comp=Z,530nm,0.8s						
KDU				S	**Sn**	**22 57 33.3**	**-4.1**
SOEI	**Soe**	**6.25**	**246**		**Pn**	**22 56 33.6**	**-0.8**
SOEI				Sn	**Sn**	**22 57 43.9**	**-0.7**
SOEI	**Soe**	**6.25**	**246**	P	**Pn**	**22 56 36.4**	**+1.9**
SOEI	**Soe**	**6.25**	**246**	S	**Sn**	**22 57 45.2**	**+0.6**
SWI	**Sorong**	**6.40**	**11**	P	**Pn**	**22 56 35.1**	**-1.3**
	comp=Z,4.9nmcomp=Z,10µmcomp=Z,450nm,0.5s						
SWI				S	**Sn**	**22 57 44.3**	**-3.7**
	comp=Z,4.9nmcomp=Z,10µmcomp=Z,450nm,0.5s						
SANI	**Sanana**	**6.51**	**321**	P	**Pn**	**22 56 42.4**	**+4.6**
SANI	**Sanana**	**6.51**	**321**	P	**Pn**	**22 56 41.5**	**+3.7**
	comp=Z,4µmcomp=Z,381nm,1.2s						
SANI				S	**Sn**	**22 57 55.3**	**+4.6**
	comp=Z,4µmcomp=Z,381nm,1.2s						
BATI	**Baumata**	**6.98**	**244**	P	**Pn**	**22 56 45.6**	**+1.3**
	comp=Z,282nm,0.4s,baz=94,slow=3.4,SNR=48						
BATI				S	**Sn**	**22 57 60.0**	**-2.3**
	comp=Z,929nm,0.4s,baz=243,slow=22,SNR=17						
BATI	**Baumata**	**6.98**	**244**	P	**Pn**	**22 56 45.8**	**+1.5**
	comp=Z,9.9nmcomp=Z,7µmcomp=Z,443nm,0.8s						
RKPI	**Ransiki, Papua**	**6.99**	**36**	P	**Pn**	**22 56 44.4**	**0.0**
MMRI	**Maumere**	**7.86**	**259**		**Pn**	**22 56 56.1**	**-0.2**
MMRI				Sn	**Sn**	**22 58 21.6**	**-2.0**
MMRI	**Maumere**	**7.86**	**259**	P	**Pn**	**22 56 58.2**	**+1.9**
MMRI	**Maumere**	**7.86**	**259**	S	**Sn**	**22 58 25.1**	**+1.4**
MMRI	**Maumere**	**7.86**	**259**	P	**Pn**	**22 57 00.0**	**+3.7**
	comp=Z,9µmcomp=Z,202nm,0.8s						
KDI	**Kendari**	**8.05**	**293**	P	**Pn**	**22 57 03.3**	**+4.4**
TNTI	**Ternate**	**8.35**	**341**		**Pn**	**22 57 00.3**	**-2.6**
TNTI	**Ternate**	**8.35**	**341**	P	**Pn**	**22 57 06.1**	**+3.2**
TNTI	**Ternate**	**8.35**	**341**	S	**Sn**	**22 58 36.2**	**+0.7**
EDFI	**Ende, Flores**	**8.41**	**259**	P	**Pn**	**22 57 06.3**	**+2.4**
BAKI	**Biak**	**8.49**	**46**	P	**Pn**	**22 57 06.1**	**+1.2**
KNRA	**Kununurra**	**8.53**	**188**	P	**Pn**	**22 57 03.6**	**-1.7**
	comp=Z,2µm,0.6s						
KNRA	**Kununurra**	**8.53**	**188**		**Pn**	**22 57 04.5**	**-0.8**
LUWI	**Luwuk**	**9.47**	**310**	Pn	Pn	22 57 13.2	-5.1
LUWI	**Luwuk**	**9.47**	**310**	P	Pn	22 57 23.1	+4.8
	comp=Z,3µmcomp=Z,210nm,1.3s						
BSSI	**Bau Bau, Buton**	**9.54**	**276**	P	**Pn**	**22 57 22.2**	**+3.0**
KMSI	**Cibinong**	**9.80**	**322**	P	**Pn**	**22 57 26.8**	**+4.1**
	comp=Z,7µmcomp=Z,730nm,1.2s						
BKSI	**Bulukumba**	**10.03**	**280**	P	**Pn**	**22 57 28.8**	**+2.9**
	comp=Z,3µmcomp=Z,257nm,1.0s						
SMPI	**Sarmi**	**10.07**	**60**	P	**Pn**	**22 57 26.4**	**0.0**
	comp=Z,363nm,1.1s						
BNSI	**Bone**	**10.26**	**285**	P	**Pn**	**22 57 31.8**	**+2.8**
	comp=Z,2µmcomp=Z,198nm,1.2s						
APSI	**Ampana**	**10.43**	**306**	P	Pn	22 57 36.5	+5.1
	comp=Z,3µmcomp=Z,256nm,1.2s						
KAPI	**Kappang**	**10.45**	**281**	P	**Pn**	**22 57 34.7**	**+3.1**
	comp=Z,164nm,1.1s,baz=103,slow=6.1,SNR=37						
KAPI				LR	LR	23 01 26.4	
	comp=Z,284nm,19.8s,baz=110,slow=37						
KAPI	**Kappang**	**10.45**	**281**	Pn	**Pn**	**22 57 29.6**	**-2.0**
KAPI	**Kappang**	**10.45**	**281**	P	**Pn**	**22 57 34.0**	**+2.4**
KAPI	**Kappang**	**10.45**	**281**	S	**Sn**	**22 59 28.7**	**+1.7**
KAPI	**Kappang**	**10.45**	**281**	P	**Pn**	**22 57 29.6**	**-2.0**
GENI	**Genyem**	**11.07**	**66**	P	**Pn**	**22 57 41.1**	**+1.0**
GENI	**Genyem**	**11.07**	**66**	S	**Sn**	**22 59 44.4**	**+2.3**
MRSI	**Marisa**	**11.10**	**313**	P	**Pn**	**22 57 45.1**	**+4.6**
JAY	**Jayapura**	**11.60**	**67**	P	**Pn**	**22 57 46.6**	**-0.5**
	comp=Z,65nm,0.9s,baz=218,slow=12,SNR=13						
JAY				S	**Sn**	**22 59 47.0**	**-7.9**
	comp=Z,25nm,0.6s,baz=88,slow=22,SNR=1.2						
JAY				LR	LR	23 03 38.9	
	comp=Z,426nm,18.9s,baz=242,slow=44						
FITZ	**Fitzroy Crossi**	**11.66**	**201**	P	**Pn**	**22 57 44.1**	**-3.9**
FITZ	**Fitzroy Crossi**	**11.66**	**201**	P	**Pn**	**22 57 44.6**	**-3.4**
	comp=Z,283nm,0.4s,baz=25,slow=10.0,SNR=778						
FITZ				S	Sn	22 59 44.5	-12
	comp=Z,335nm,0.4s,baz=225,slow=14,SNR=9.5						
FITZ				LR	LR	23 03 04.1	
	comp=Z,683nm,18.0s,baz=23,slow=41						
FITZ	**Fitzroy Crossi**	**11.66**	**201**	Pn	**Pn**	**22 57 43.9**	**-4.1**
SGSI	**Sangihe**	**11.70**	**337**	P	**Pn**	**22 57 48.5**	**-0.1**
PLAI	**Plampang**	**12.25**	**262**	P	**Pn**	**22 57 55.8**	**-0.2**
TOLI2	**Tolitoli**	**12.38**	**311**	Pn	**Pn**	**22 57 56.7**	**-1.0**
TOLI2	**Tolitoli**	**12.38**	**311**	P	**Pn**	**22 58 01.7**	**+4.0**
WB0	**Warramunga Arr**	**13.20**	**162**	Pn	**Pn**	**22 58 04.1**	**-4.5**
WRAB	**Tennant Creek**	**13.34**	**162**	Pn	**Pn**	**22 58 06.4**	**-4.0**
WRAB	**Tennant Creek**	**13.34**	**162**	*i* P	**Pn**	**22 58 06.3**	**-4.1**
WRA	**Warramunga Arr**	**13.35**	**162**	P	**Pn**	**22 58 06.4**	**-4.1**
	comp=Z,46nm,0.5s,baz=343,slow=13,SNR=139						
WRA				S	Sn	23 00 24.5	-13
	comp=Z,197nm,0.9s,baz=346,slow=24,SNR=14						
WRA				LR	LR	23 04 05.6	
	comp=Z,621nm,19.0s,baz=355,slow=40						
WRA	**Warramunga Arr**	**13.35**	**162**		Pn	22 58 05.6	-4.9
WRA	**Warramunga Arr**	**13.35**	**162**	P	Pn	22 58 05.6	-4.9
WB1	**Warramunga Ar.**	**13.37**	**162**	P	**Pn**	**22 58 10.7**	**0.0**
WR8	**Warramunga Arr**	**13.41**	**162**		**Pn**	**22 58 07.1**	**-4.2**
BKB	**Balikpapan**	**14.36**	**294**		**P**	**22 58 27.1**	**-0.9**
BKB	**Balikpapan**	**14.36**	**294**	P	**Pn**	**22 58 25.7**	**+2.0**
COEN	**Coen**	**14.55**	**119**	P	**Pn**	**22 58 23.4**	**-2.8**
	comp=Z,135nm,0.8s						
COEN	**Coen**	**14.55**	**119**	Pn	**Pn**	**22 58 23.9**	**-2.3**
COEN	**Coen**	**14.55**	**119**	P	**Pn**	**22 58 23.8**	**-2.4**
DAV	**Davao City (W)**	**14.85**	**342**	P	**Pn**	**22 58 31.0**	**+1.1**
	comp=Z,70nm,0.3s,baz=212,slow=15,SNR=7.0						
DAV				LR	LR	23 04 48.1	
	comp=Z,317nm,18.9s,baz=117,slow=40						
DAV	**Davao City (W)**	**14.85**	**342**		**P**	**22 58 32.0**	**-1.4**
DAV	**Davao City (W)**	**14.85**	**342**	P	**P**	**22 58 32.0**	**-1.4**
JAGI	**Jajag, Banyuwa**	**15.79**	**264**	Pn	**Pn**	**22 58 40.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**15.79**	**264**	P	**Pn**	**22 58 41.9**	**0.0**
QIS	**Mount Isa**	**16.20**	**146**	P	**Pn**	**22 58 44.0**	**-3.0**
	comp=Z,145nm,1.2s						
QIS	**Mount Isa**	**16.20**	**146**	P	**Pn**	**22 58 44.1**	**-2.9**
AS31	**Alice Springs**	**16.80**	**168**	P	**Pn**	**22 58 52.2**	**-2.2**
ASAR	**Alice Springs**	**16.80**	**168**	P	**Pn**	**22 58 52.4**	**-1.9**
	comp=Z,51nm,0.6s,baz=338,slow=8.5,SNR=347						
ASAR				S	Sn	23 01 46.3	-15
	comp=Z,95nm,0.9s,baz=337,slow=23,SNR=6.8						
ASAR				LR	LR	23 06 04.0	
	comp=Z,459nm,19.5s,baz=340,slow=39						
ASAR	**Alice Springs**	**16.80**	**168**	P	**Pn**	**22 58 51.1**	**-3.2**
ASAR	**Alice Springs**	**16.80**	**168**	P	**Pn**	**22 58 51.1**	**-3.2**
AUALC	**St Philip's Co**	**16.82**	**168**	P	**Pn**	**22 58 54.8**	**+0.2**
PMG	**Port Moresby**	**17.08**	**99**	P	**P**	**22 59 00.0**	**+1.8**
	comp=Z,68nm,0.8s,baz=308,slow=4.3,SNR=21						
PMG				S	Sn	23 01 55.0	-13
	comp=Z,23nm,0.7s,baz=178,slow=22,SNR=6.9						
PMG				LR	LR	23 06 49.3	
	comp=Z,619nm,18.1s,baz=292,slow=41						
PMG	**Port Moresby**	**17.08**	**99**	P	**Pn**	**22 58 57.2**	**-0.7**
PMG	**Port Moresby**	**17.08**	**99**	P	**P**	**22 59 00.7**	**+2.5**
PMG	**Port Moresby**	**17.08**	**99**	*i* P	**P**	**22 58 59.1**	**+0.9**
MBWA	**Marble Bar**	**17.09**	**215**	P	**Pn**	**22 58 55.1**	**-2.9**
MBWA	**Marble Bar**	**17.09**	**215**	Pn	**Pn**	**22 58 55.2**	**-2.7**
MBWA	**Marble Bar**	**17.09**	**215**	P	**Pn**	**22 58 56.3**	**-1.7**
PSAD1	**Pilbara Seismi**	**17.28**	**214**	P	**Pn**	**22 58 58.6**	**-1.6**
	comp=Z,139nm,1.6s						
PSAC2	**Pilbara Seismi**	**17.32**	**213**	P	**P**	**22 58 58.5**	**-2.3**
PSAB2	**Pilbara Seismi**	**17.34**	**213**	P	**P**	**22 58 59.3**	**-1.7**
	comp=Z,164nm,1.1s						
PSA00	**Pilbara Seismi**	**17.36**	**214**		**P**	**22 58 59.5**	**-1.7**
PSA00	**Pilbara Seismi**	**17.36**	**214**	Pn	**P**	**22 58 58.8**	**-2.4**
PSA00	**Pilbara Seismi**	**17.36**	**214**	P	**P**	**22 58 59.5**	**-1.7**
MTSU	**Mount Surprise**	**17.66**	**129**	P	**P**	**22 59 03.6**	**-1.0**
	comp=Z,42nm,0.6s						
MTSU	**Mount Surprise**	**17.66**	**129**	P	**P**	**22 59 04.8**	**+0.2**
WRKA	**Warakurna**	**17.83**	**185**	P	**P**	**22 59 05.0**	**-1.4**
	comp=Z,101nm,0.6s						
MANU	**Manus Island**	**18.01**	**74**	P	**P**	**22 59 07.6**	**-0.8**
SBUM	**Sibu**	**20.20**	**298**	P	**P**	**22 59 32.0**	**-0.2**
SBUM	**Sibu**	**20.20**	**298**	P	Pn	22 59 34.5	-0.5
TV1H	**Townsville Har**	**20.23**	**128**	P	**P**	**22 59 33.0**	**+0.5**
CTA	**Charters Tower**	**20.29**	**131**	P	Pn	22 59 35.6	-0.4
CTAO	**Charters Tower**	**20.29**	**131**	P	**P**	**22 59 34.5**	**+1.3**
CTAO	**Charters Tower**	**20.29**	**131**	P	Pn	22 59 35.6	-0.4
CTAO	**Charters Tower**	**20.29**	**131**	P	**P**	**22 59 34.6**	**+1.3**
GIRL	**Giralia**	**21.63**	**223**	P	**P**	**22 59 48.3**	**+0.8**
MEEK	**Meekatharra**	**22.19**	**208**	P	**P**	**22 59 53.8**	**+0.3**
BBJI	**Bungbulang**	**22.21**	**268**	P	**P**	**22 59 52.4**	**-1.5**
INKA	**Innaminka**	**22.82**	**155**	P	**P**	**23 00 00.4**	**+0.4**
FORT	**Forrest**	**23.54**	**184**	P	**P**	**23 00 07.2**	**+0.4**
FORT				IAmb	IAmb	23 00 16.8	
	comp=Z,76nm,0.8s						
QLP	**Quilpie**	**23.55**	**147**	P	**P**	**23 00 08.3**	**+1.4**
MORW	**Morawa**	**25.45**	**210**	P	**P**	**23 00 24.7**	**+0.5**
MORW	**Morawa**	**25.45**	**210**	P	**P**	**23 00 25.3**	**+1.1**
BBOO	**Buckleboo**	**26.10**	**168**	P	**P**	**23 00 30.0**	**0.0**
BBOO				IAmb	IAmb	23 00 47.9	
	comp=Z,68nm,1.1s						
BBOO	**Buckleboo**	**26.10**	**168**	P	**P**	**23 00 30.3**	**+0.3**
BLDU	**Ballidu**	**26.45**	**207**	P	**P**	**23 00 34.6**	**+1.5**
WHYH	**Whyalla**	**26.65**	**166**	P	**P**	**23 00 35.8**	**+0.9**
STKA	**Stephens Creek**	**26.82**	**158**	P	**P**	**23 00 37.4**	**+0.9**
	comp=Z,13nm,0.6s,baz=334,slow=9.1,SNR=26						
STKA				S	**S**	**23 05 11.4**	**+5.1**
	comp=Z,5.5nm,0.7s,baz=269,slow=24,SNR=1.6						
	comp=Z,13nm,0.6s						
STKA	**Stephens Creek**	**26.82**	**158**	P	**P**	**23 00 37.1**	**+0.6**
STKA	**Stephens Creek**	**26.82**	**158**	*i* P	**P**	**23 00 36.4**	**-0.1**
KLBR	**Kellerberrin**	**26.85**	**204**	P	**P**	**23 00 37.5**	**+0.7**
HTT	**Hallett**	**27.38**	**164**	P	**P**	**23 00 42.8**	**+1.3**
MYKOM	**Kota Tinggi**	**27.61**	**288**	P	**P**	**23 00 45.2**	**+1.5**
NWAO	**Narrogin (SRO)**	**28.24**	**203**	LR	LR	23 14 01.1	
	comp=Z,208nm,18.0s,baz=54,slow=40						
NWAO	**Narrogin (SRO)**	**28.24**	**203**	P	**P**	**23 00 50.4**	**+1.3**
NWAO	**Narrogin (SRO)**	**28.24**	**203**	P	**P**	**23 00 50.4**	**+1.3**
NWAO				pmax	pmax		
	comp=Z,34nm,0.8s						
CMSA	**Cobar Meteorol**	**28.30**	**151**	P	**P**	**23 00 50.2**	**+0.6**
HNR	**Honiara**	**29.67**	**96**	LR	LR	23 12 32.8	
	comp=Z,300nm,21.9s,baz=278,slow=35						
IPM	**Ipoh**	**31.19**	**291**	P	**P**	**23 01 14.7**	**-0.7**
IPM				IAmb	IAmb	23 01 26.7	
	comp=Z,113nm,2.0s						
RPSI	**Rantau Prapat**	**32.57**	**286**	P	**P**	**23 01 27.3**	**-0.2**
RPSI				IAmb	IAmb	23 01 30.0	
	comp=Z,55nm,1.1s						
PSI	**Prapat**	**32.60**	**287**	LR	LR	23 15 01.0	
	comp=Z,242nm,21.8s,baz=113,slow=37						
PSI	**Prapat**	**32.60**	**287**	P	**P**	**23 01 27.3**	**-0.7**
PSI	**

MAJO Matsushiro 44.17 9 P **P** **23 03 03.3 -1.1**
MAJO pmax pmax
comp=Z,20nm,0.8s
MJAR Matsushiro Arr 44.17 9 P **P** **23 03 03.1 -1.3**
comp=Z,8.5nm,0.8s,baz=186,slow=9.2,SNR=20
MJAR PcP **PcP** **23 04 48.4 +0.5**
comp=Z,2.8nm,0.7s,baz=180,slow=3.6,SNR=3.5
MJAR LR LR 23 19 23.3
comp=Z,72nm,20.0s,baz=235,slow=33
comp=Z,8.5nm,0.8s
MJAR Matsushiro Arr 44.17 9 P **P** **23 03 03.0 -1.4**
MJB9 Matsu-Tunnel 44.17 9 P **P** **23 03 03.5 -1.0**
KSAR Wonju Array Be 44.44 358 P **P** **23 03 05.4 -1.1**
KSAR Wonju Array Be 44.44 358 P **P** **23 03 05.4 -1.1**
KSRS Korea Array 44.45 358 P **P** **23 03 05.6 -1.0**
comp=Z,5.3nm,0.7s,baz=175,slow=12,SNR=17
KSRS PcP **PcP** **23 04 49.5 +0.8**
comp=Z,3.9nm,0.7s,baz=192,slow=3.8,SNR=6.5
KSRS LR LR 23 23 45.8
comp=Z,22µm,18.4s,baz=190,slow=39
comp=Z,5.3nm,0.7s
LYN LuoYang 44.72 339 P **P** **23 03 08.9 +0.1**
LYN sP sP 23 03 40.3 +1.1
LYN pmax pmax
comp=Z,29nm,0.9s
TIA Tai'an 44.84 345 P **P** **23 03 09.0 -0.8**
TIA pmax pmax
comp=Z,15nm,1.3s
CD2 Chengdu 45.48 328 P **P** **23 03 14.3 -0.7**
CD2 pP pP 23 03 34.3 -1.6
CD2 pmax pmax
comp=Z,40nm,0.7s
XAN Xi'an 45.62 335 P **P** **23 03 15.3 -0.7**
XAN pP pP 23 03 38.3 +1.4
XAN pmax pmax
comp=Z,75nm,1.0s
XAN Xi'an 45.62 335 P **P** **23 03 14.6 -1.4**
JMM Marumori 45.93 12 P **P** **23 03 17.8 -0.5**
JMM IAmb IAmb 23 03 59.2
comp=Z,33nm,0.9s
JMM Marumori 45.93 12 P **P** **23 03 19.1 +0.8**
HNS HongShan 46.61 343 ⇑P **P** **23 03 23.1 -0.6**
HNS pmax pmax
comp=Z,44nm,1.0s
BRDH Bariadhala 47.89 309 LR LR 23 26 06.4
comp=Z,42nm,21.4s,baz=165,slow=39
BJT Baijiatuao 48.69 346 P **P** **23 03 39.4 -0.3**
BJT IAmb IAmb 23 03 40.5
comp=Z,31nm,1.0s
BJT Baijiatuao 48.69 346 P **P** **23 03 39.7 0.0**
BJT Baijiatuao 48.69 346 P **P** **23 03 39.4 -0.3**
BJT pmax pmax
comp=Z,31nm,1.0s
BJI Beijing 48.71 346 P **P** **23 03 39.3 -0.5**
BJI PcP **PcP** **23 05 05.0 +1.3**
BJI pmax pmax
comp=Z,17nm,0.9s
SHL Shillong 49.35 313 P **P** **23 03 44.0 -1.3**
SHL IAmb IAmb 23 03 47.4
comp=Z,25nm,0.9s
SHL Shillong 49.35 313 P **P** **23 03 44.0 -1.3**
SHL pmax pmax
comp=Z,25nm,0.9s
MSHR Mys Shultsa 49.54 1 *ce*P **P** **23 03 46.9 +0.8**
MSHR pmax pmax
comp=Z,29nm,1.7s
LZDM Lanzhou Array 49.55 332 P **P** **23 03 47.2 +0.4**
comp=Z,16nm,0.6s,baz=167,slow=10,SNR=36
LZDM PcP **PcP** **23 05 07.0 -0.3**
comp=Z,1.7nm,0.4s,baz=160,slow=4.6,SNR=1.5
comp=Z,16nm,0.6s
LZH Lanzhou 49.59 332 *e*P **P** **23 03 46.8 0.0**
LZH pmax pmax
comp=Z,82nm,2.2s
DSZ Denniston Nort 50.48 140 P **P** **23 03 54.4 +0.9**
HHC Hu-ho-hao-te 50.73 342 *e*P **P** **23 03 55.5 +0.2**
HHC pmax pmax
comp=Z,27nm,0.9s
CN2 Changchun 50.92 356 *e*P **P** **23 03 55.3 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
MRNZ Matariki Terra 50.93 139 P **P** **23 04 01.0 +4.3**
BTO Baotou 51.01 340 *e*P **P** **23 03 59.3 +1.9**
BTO pP **pwP** **23 04 22.5 -0.7**
BTO sP **sP** **23 04 34.1 +5.8**
BTO pmax pmax
comp=Z,21nm,1.4s
BTO pmax pmax
comp=Z,940nm,11.6s
USRK Ussuriysk Ar. 51.18 2 P **P** **23 03 58.6 +0.2**
comp=Z,11nm,0.6s,baz=181,slow=7.0,SNR=23
comp=Z,11nm,0.6s
PALK Pallekele 51.26 285 LR LR 23 27 39.5
comp=Z,92nm,18.1s,baz=108,slow=38
MDJ Mudanjiang 51.57 360 P **P** **23 04 00.7 -0.6**
MDJ IAmb IAmb 23 04 02.7
comp=Z,20nm,0.7s
MDJ Mudanjiang 51.57 360 P **P** **23 04 01.8 +0.5**
MDJ pmax pmax
comp=Z,32nm,0.8s
MDJ Mudanjiang 51.57 360 P **P** **23 04 01.6 +0.3**
MDJ sP **pwP** **23 04 29.4 +0.8**
MDJ PcP **PcP** **23 05 14.3 +0.2**
ASAJ Asahikawa 52.31 11 LR LR 23 25 27.8
comp=Z,42nm,21.6s,baz=184,slow=35
LSA Lhasa 52.36 316 P **P** **23 04 06.8 -1.2**
LSA Lhasa 52.36 316 P **P** **23 04 06.9 -1.2**
LSA pmax pmax
comp=Z,12nm,0.7s
XLT XiLinHaoTe 52.40 347 *e*P **P** **23 04 07.5 -0.1**
XLT pmax pmax
comp=Z,20nm,1.0s
XLT pmax pmax
comp=Z,340nm,10.8s
BNX BinXian 52.74 358 ⇓P **P** **23 04 09.6 -0.4**
BNX pmax pmax
comp=Z,8.0nm,0.7s
GTA Gaotai 54.16 331 P **P** **23 04 21.4 +0.7**
GTA S **S** **23 11 47.4 -3.4**
GTA pmax pmax
comp=Z,59nm,1.2s
GOMU GeErMu 54.37 325 P **P** **23 04 22.9 +0.3**
GOMU PcP **PcP** **23 05 27.1 +1.7**
GOMU pmax pmax
comp=Z,3.0nm,0.9s
EVN Everest 54.43 312 P **P** **23 04 22.6 -0.9**
EVN IAmb IAmb 23 04 25.9
comp=Z,45nm,1.3s
HYBB Hyderabad (bro 56.43 296 *e*P **P** **23 04 37.3 0.0**
HILR Hailar Array B 57.22 352 P **P** **23 04 42.4 +0.1**
comp=Z,2.9nm,0.4s,baz=161,slow=9.4,SNR=6.6
HILR PcP **PcP** **23 05 36.8 +1.0**
comp=Z,4.5nm,0.6s,baz=145,slow=5.3,SNR=5.8
comp=Z,2.9nm,0.4s
HEH HeiHe 57.25 358 *e*P **P** **23 04 42.5 +0.1**
HEH pmax pmax
comp=Z,32nm,1.0s
ULN Ulaanbaatar 58.45 342 P **P** **23 04 51.1 0.0**
ULN Ulaanbaatar 58.45 342 *ce*P **P** **23 04 52.0 +0.9**
ULN pmax pmax
comp=Z,30nm,0.8s
ULN Ulaanbaatar 58.45 342 P **P** **23 04 51.6 +0.5**
SONM Songino Array 58.63 342 P **P** **23 04 52.7 +0.4**
comp=Z,12nm,0.9s,baz=158,slow=5.9,SNR=19
comp=Z,12nm,0.9s
ZEA Zeya 60.74 358 *e*P **P** **23 05 07.0 +0.5**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZAK Zakamensk 61.85 341 *e*P **P** **23 05 14.3 +0.1**
ZAK pmax pmax
comp=Z,19nm,1.7s
TLY Talaya 62.86 342 P **P** **23 05 20.9 +0.1**
TLY Talaya 62.86 342 *ce*P **P** **23 05 22.5 +1.7**
TLY pmax pmax
comp=Z,16nm,1.7s
WMQ Urumqi 63.57 327 ⇑P **P** **23 05 26.0 +0.3**
WMQ pmax pmax
comp=Z,44nm,1.1s
WMQ pmax pmax
comp=Z,180nm,3.7s
WMQ Urumqi 63.57 327 P **P** **23 05 26.2 +0.5**
MOY Mondy 63.70 340 *e*P **P** **23 05 27.1 +0.6**
MOY pmax pmax
comp=Z,45nm,1.7s
KNGR Kungurtug, Tuv 64.07 338 *i* P **P** **23 05 29.3 +0.4**
KNGR pmax pmax
comp=Z,17nm,1.0s
PETK Petropavlovsk- 64.49 18 P **P** **23 05 32.7 +1.2**
comp=Z,28nm,0.7s,baz=192,slow=5.2,SNR=15
comp=Z,28nm,0.7s
PETK Petropavlovsk- 64.49 18 P **P** **23 05 31.8 +0.3**
WUS Wushi 66.95 321 P **P** **23 05 47.8 0.0**
NIL Nilore 67.37 311 **P** **23 05 49.8 -0.6**
NIL Nilore 67.37 311 P **P** **23 05 49.8 -0.6**
NIL pmax pmax
comp=Z,12nm,0.6s
ZSN Zaisan 67.45 329 *e*P **P** **23 05 50.9 +0.2**
ZSN *e*S **S** **23 14 40.3 +0.7**
ZSN Zaisan 67.45 329 *e*P **P** **23 05 50.8 +0.2**
ZSN *e*S **S** **23 14 40.2 +0.7**
DGZ Jazzator, Alta 67.69 332 *i* P **P** **23 05 51.9 -0.3**
DGZ pmax pmax
comp=Z,57nm,0.9s
SHLS Shalkode 67.89 322 ⇑*i*P **P** **23 05 52.2 -1.4**
comp=Z,23nm,1.1s
SHLS Shalkode 67.89 322 *c i*P **P** **23 05 52.2 -1.4**
SHLS pmax pmax
comp=Z,23nm,1.1s
UZB Uzunbulak 68.15 322 ⇑*i*P **P** **23 05 55.4 +0.1**
comp=Z,18nm,1.0s
UZB Uzunbulak 68.15 322 *c i*P **P** **23 05 55.4 +0.1**
UZB pmax pmax
comp=Z,18nm,1.0s
KSH Kashi 68.18 318 P **P** **23 05 56.1 +0.6**
KSH pmax pmax
comp=Z,17nm,0.9s
MK31 Makanchi Array 68.40 327 *ce*P **P** **23 05 56.9 +0.3**
MKAR Makanchi Array 68.40 327 P **P** **23 05 57.5 +0.9**
comp=Z,80nm,0.7s,baz=114,slow=8.6,SNR=531
comp=Z,80nm,0.7s
MKAR Makanchi Array 68.40 327 P **P** **23 05 56.6 0.0**
MKAR Makanchi Array 68.40 327 *ce*P **P** **23 05 56.9 +0.3**
MKAR pmax pmax
comp=Z,80nm,0.7s
SATY Saty 68.48 322 ⇑*i*P **P** **23 05 57.4 +0.1**
comp=Z,26nm,1.2s
SATY Saty 68.48 322 *c i*P **P** **23 05 57.4 +0.1**
SATY pmax pmax
comp=Z,26nm,1.2s
MAKZ Makanchi 68.58 327 **P** **23 05 57.5 -0.2**
MAKZ Makanchi 68.58 327 P **P** **23 05 57.5 -0.2**
MAKZ pmax pmax
comp=Z,65nm,0.8s
MAKZ Makanchi 68.58 327 P **P** **23 05 57.9 +0.2**
MAKZ pP **pP** **23 06 17.6 -2.1**
MAKZ PcP **PcP** **23 06 22.1 0.0**
YAK Yakutsk 69.01 360 **P** **23 06 00.3 +0.3**
YAK Yakutsk 69.01 360 *e*P **P** **23 06 00.4 +0.4**
YAK *e**PP **PcP** **23 06 23.1 -0.4**
YAK *e* 23 08 28.7
YAK *e*PPP PPP 23 10 15.5
YAK *e*S **S** **23 14 59.4 +2.0**
YAK *e**SS **SKiKP** **23 15 40.9 -1.3**
YAK *e* 23 15 52.4
YAK *e*SS **SS** **23 19 28.3 +3.1**
YAK pmax pmax
comp=Z,102nm,1.1s
YAK pmax pmax
comp=N,31nm,1.5s
YAK pmax pmax
comp=E,10.0nm,1.6s
YAK pmax pmax
comp=Z,480nm,5.6s
YAK pmax pmax
comp=N,195nm,3.0s
YAK pmax pmax
comp=E,193nm,3.4s
YAK smax smax
comp=N,621nm,4.3s
YAK smax smax
comp=E,481nm,7.3s
YAK Yakutsk 69.01 360 P **P** **23 06 00.1 +0.1**
YAK PcP **PcP** **23 06 24.2 +0.7**
TNSS Tian-Shan 69.37 321 *e*P **P** **23 06 03.0 -0.2**
TNSS Tian-Shan 69.37 321 *e*P **P** **23 06 02.9 -0.2**
MDOK Medeo 69.37 321 *e*P **P** **23 06 03.0 +0.1**
MDOK Medeo 69.37 321 *e*P **P** **23 06 03.0 +0.1**
AAA Alma-Ata 69.48 321 *e*P **P** **23 06 03.6 +0.2**
comp=E,24nm,1.0s
AAA Alma-Ata 69.48 321 *e*P **P** **23 06 03.6 +0.2**
AAA pmax pmax
comp=Z,24nm,1.0s
TDK Taldyqorghan 69.55 324 ⇑*i*P **P** **23 06 04.1 +0.3**
comp=Z,41nm,0.9s
TDK Taldyqorghan 69.55 324 *c i*P **P** **23 06 04.0 +0.3**
TDK pmax pmax
comp=Z,41nm,0.9s
BOOM Boomskoye usch 69.71 320 P **P** **23 06 04.9 -0.1**
BOOM IAmb IAmb 23 06 06.8
comp=Z,34nm,1.0s
BOOM Boomskoye usch 69.71 320 P **P** **23 06 04.9 -0.1**
BOOM pmax pmax
comp=Z,34nm,1.0s
TKM2 Tokmak 2 70.15 321 P **P** **23 06 08.8 +1.0**
SNR=15
KBK Karagaybulak 70.43 320 P **P** **23 06 10.3 +0.9**
SNR=8.5
UCH Uchtor 70.49 319 P **P** **23 06 11.0 +0.9**
SNR=20
AAK Ala-Archa 70.71 320 **P** **23 06 11.2 +0.1**
AAK IAmb IAmb 23 06 13.1
comp=Z,30nm,0.9s
AAK Ala-Archa 70.71 320 P **P** **23 06 12.0 +1.0**
SNR=13
AAK Ala-Archa 70.71 320 *ce*P **P** **23 06 12.2 +1.1**
AAK pmax pmax
comp=Z,63nm,1.7s
AAK Ala-Archa 70.71 320 P **P** **23 06 11.8 +0.7**
KBL Kabul 70.91 310 P **P** **23 06 12.3 -0.3**
KBL Kabul 70.91 310 P **P** **23 06 12.3 -0.3**
KBL pmax pmax
comp=Z,13nm,1.0s
DRK Karamyk 71.00 316 P **P** **23 06 12.9 -0.2**
DRK IAmb IAmb 23 06 14.8
comp=Z,24nm,0.8s
DRK Karamyk 71.00 316 P **P** **23 06 12.9 -0.2**
DRK pmax pmax
comp=Z,24nm,0.8s
USP Ospenovka 71.02 320 P **P** **23 06 13.1 +0.3**
SNR=24
SGDS Sogindy 71.03 321 *e*P **P** **23 06 13.0 +0.1**
ARSB Arslanbob 71.06 318 **P** **23 06 13.4 +0.2**
ARSB Arslanbob 71.06 318 P **P** **23 06 13.4 +0.2**
ARSB pmax pmax
comp=Z,46nm,0.8s
EKS2 Erkin-Say 71.18 320 P **P** **23 06 14.9 +1.0**
SNR=15
ZAA0 Zalesovo Array 71.77 334 **P** **23 06 15.8 -1.1**
ZAA0 IAmb IAmb 23 06 17.4
comp=Z,30nm,0.9s
ZALV Zalesovo Beam 71.77 334 P **P** **23 06 16.3 -0.7**
comp=Z,16nm,0.7s,baz=118,slow=5.0,SNR=84
comp=Z,16nm,0.7s
ZALV Zalesovo Beam 71.77 334 **P** **23 06 16.0 -0.9**
GAR Garm 71.83 315 **P** **23 06 17.7 -0.1**
SEY Seymchan 71.98 11 *ce*P **P** **23 06 19.4 +1.3**
SEY pmax pmax
comp=Z,96nm,1.7s
BTLS Baital 72.19 322 *e*P **P** **23 06 19.9 +0.2**
comp=Z,16nm,0.9s
BTLS Baital 72.19 322 *e*P **P** **23 06 19.9 +0.2**
BTLS pmax pmax
comp=Z,16nm,0.9s
VNDA Vanda 72.26 173 P **P** **23 06 20.5 +1.0**
comp=Z,0.7nm,0.4s,baz=327,slow=4.6,SNR=6.0
VNDA LR LR 23 36 00.5
comp=Z,55nm,20.3s,baz=354,slow=34
comp=Z,0.7nm,0.4s
CHGR Chuyangaron 72.50 314 P **P** **23 06 21.3 -0.5**
CHGR Chuyangaron 72.50 314 P **P** **23 06 21.3 -0.5**
KURBB Kurchatov Arra 72.69 329 P **P** **23 06 22.5 0.0**
comp=Z,22nm,0.7s,baz=128,slow=4.8,SNR=222
comp=Z,22nm,0.7s
KURK Kurchatov 72.70 329 **P** **23 06 22.2 -0.3**
KURK IAmb IAmb 23 06 23.7
comp=Z,34nm,0.8s
KURK Kurchatov 72.70 329 *ce*P **P** **23 06 22.6 +0.1**
KURK pmax pmax
comp=Z,71nm,1.3s
KURK Kurchatov 72.70 329 P **P** **23 06 22.7 +0.1**
KURK sP **pwP** **23 06 52.2 +1.6**
DZA Taraz 72.88 319 *e*P **P** **23 06 24.0 +0.1**
DZA Taraz 72.88 319 *e*P **P** **23 06 24.0 +0.1**
IUG luzhnay 73.40 318 ⇑*i*P **P** **23 06 27.2 +0.1**
comp=Z,16nm,0.4s
IUG *e*S **SKiKP** **23 15 49.2 -0.4**
IUG luzhnay 73.40 318 *c i*P **P** **23 06 27.1 +0.1**
IUG *e*S **SKiKP** **23 15 49.1 -0.4**
IUG pmax pmax
comp=Z,16nm,0.4s
KK31 Karatay Array 73.51 319 IAmb IAmb 23 06 29.0
comp=Z,41nm,1.2s
KKAR Karatay Array 73.51 319 **P** **23 06 27.1 -0.5**
KKAR Karatay Array 73.51 319 P **P** **23 06 27.1 -0.5**
BRLS Borolday 73.92 319 ⇑*i*P **P** **23 06 30.1 +0.1**
comp=Z,18nm,0.8s
BRLS Borolday 73.92 319 *c i*P **P** **23 06 30.1 +0.1**
BRLS pmax pmax
comp=Z,18nm,0.8s
KIWB Kanaga Island 74.07 31 P **P** **23 06 31.4 +0.8**
MAW Mawson 74.79 201 LR LR 23 37 47.1
comp=Z,71nm,18.3s,baz=84,slow=34
BRZS Berezniki 75.49 326 *e*P **P** **23 06 38.9 0.0**
BRZS Berezniki 75.49 326 *e*P **P** **23 06 38.9 0.0**
HRA Herat 76.10 308 **P** **23 06 42.3 -0.7**
BVAR Borovoye Array 78.24 328 P **P** **23 06 54.1 -0.1**
comp=Z,21nm,0.8s,baz=123,slow=5.5,SNR=69
comp=Z,21nm,0.8s
BORK Borovoye 78.29 328 P **P** **23 06 53.7 -0.8**
UOSS Minazif 78.54 297 P **P** **23 06 55.3 -1.2**
HATD Hatta, Dubai 78.58 297 P **P** **23 06 58.3 +1.5**
ASHO Ashiyiah 78.61 297 P **P** **23 06 57.0 0.0**
MSFE Esma-Masafi 78.68 298 P **P** **23 06 56.5 -0.8**
TIXI Tiksi 78.68 360 LR LR 23 41 43.4
comp=Z,36nm,21.7s,baz=182,slow=36
TIXI Tiksi 78.68 360 **P** **23 06 55.6 -0.6**
TIXI IAmb IAmb 23 06 57.1
comp=Z,23nm,0.6s
TIXI Tiksi 78.68 360 *ce*P **P** **23 06 55.7 -0.6**
TIXI pmax pmax
comp=Z,33nm,1.0s
TIXI Tiksi 78.68 360 P **P** **23 06 55.9 -0.4**
BANOM Banah 78.69 298 P **P** **23 06 58.3 +0.9**
PPT Papeete 78.73 106 P **P** **23 07 00.7 +2.9**
comp=Z,41nm,0.8s,baz=335,slow=6.5,SNR=4.1
comp=Z,41nm,0.8s
ALNE Al Ain 78.74 296 P **P** **23 06 58.0 +0.4**
SHME Shamm 78.86 298 P **P** **23 06 58.3 0.0**
MZR Muzera 80.55 295 P **P** **23 07 06.7 -0.8**
ABPO Ambohimpanom 80.92 252 **P** **23 07 09.2 -0.6**
ABPO Ambohimpanom 80.92 252 P **P** **23 07 09.2 -0.6**
ABPO pmax pmax
comp=Z,26nm,1.5s
VOI Vohitsoka 81.11 249 P **P** **23 07 10.0 -0.7**
VOI IAmb IAmb 23 07 12.7
comp=Z,27nm,0.9s
ABKAR Akbulak array 82.68 322 **P** **23 07 17.4 -0.7**
QSPA South Pole Qui 82.79 180 P **P** **23 07 22.0 +3.5**
comp=Z,2.6nm,0.4s,baz=164,slow=0.5,SNR=38
QSPA South Pole Qui 82.79 180 P **P** **23 07 22.1 +3.5**
SYO Syowa Base 83.50 201 ⇑*e*P **P** **23 07 22.8 +0.8**
SYO Syowa Base 83.50 201 ⇓*e*sP sP 23 07 54.2 -1.3
SVE Sverdlovsk 84.95 329 *e*P **P** **23 07 29.7 +0.2**
SVE pmax pmax
comp=Z,48nm,1.4s
L14K Kuka Creek 85.65 26 IAmb IAmb 23 07 35.1
comp=Z,27nm,1.0s
ARTI Arti 85.96 328 **P** **23 07 33.7 -0.8**
ARTI IAmb IAmb 23 07 35.2
comp=Z,19nm,0.8s
ARTI Arti 85.96 328 *d i*P **P** **23 07 34.1 -0.5**
ARTI *PP **pwP** **23 08 04.0 +0.8**
ARTI 23 10 57.0
ARTI S **SKSac** **23 17 49.9 -2.1**
ARTI SS **SS** **23 23 37.1 -3.5**
ARTI pmax pmax
comp=Z,21nm,0.9s
ARTI Arti 85.96 328 P **P** **23 07 33.8 -0.8**
K15K Wolf Creek Mou 86.53 26 IAmb IAmb 23 07 39.6
comp=Z,28nm,1.1s
M16K Timber Creek 87.21 27 P **P** **23 07 41.0 +0.4**
M16K IAmb IAmb 23 07 42.7
comp=Z,35nm,1.2s
L16K Owhat River 87.21 27 P **P** **23 07 40.6 +0.1**
L16K IAmb IAmb 23 07 42.6
comp=Z,18nm,1.0s
RAYN Ar Rayn 87.86 294 P **P** **23 07 44.6 +0.1**
J17K VABM Dome 87.98 25 P **P** **23 07 45.0 +0.8**
AKT Akhty 88.98 312 *e*P **P** **23 07 48.3 -1.3**
AKT pmax pmax
comp=Z,64nm,1.3s
MAK Makhachkala 89.41 313 *c i*P P 23 07 44.2 -7.1
MAK *e**PP pP 23 08 15.4 +1.1
MAK *e*SS SS 23 24 32.3 +0.8
MAK *e*SSS SSS 23 28 07.6
MAK pmax pmax
comp=Z,439nm,1.2s
G19K Purcell Mounta 89.70 23 P **P** **23 07 52.6 +0.5**
H19K Roundabout Mou 89.75 24 P **P** **23 07 52.9 +0.5**
H19K IAmb IAmb 23 07 54.0
comp=Z,18nm,1.2s
E19K Redstone River 90.06 22 P **P** **23 07 53.9 0.0**
E19K IAmb IAmb 23 07 55.1
comp=Z,19nm,1.1s
J20K Nowinta River 90.30 25 P **P** **23 07 55.4 +0.4**
GNI Garni 91.00 310 LR LR 23 55 24.1
comp=Z,14nm,19.0s,baz=96,slow=40
KIRV Kirov 91.22 329 *ce*P **P** **23 07 58.5 -0.8**
KIBK Kibwezi 91.69 267 P **P** **23 08 02.6 -0.2**
MLY Manley 91.94 25 P **P** **23 08 02.9 +0.2**
MLY IAmb IAmb 23 08 05.5
comp=Z,12nm,1.2s
E22K Anaktuvuk Pass 92.23 22 **P** **23 08 03.4 -0.6**
E22K IAmb IAmb 23 09 22.5
comp=Z,19nm,1.5s
RND Reindeer 92.41 26 P **P** **23 08 04.3 -0.6**
RND Reindeer 92.41 26 P **P** **23 08 04.3 -0.6**
RND pmax pmax
comp=Z,11nm,0.7s
I23K Minto, Yukon-K 92.53 25 P **P** **23 08 04.8 -0.6**
G23K Bananza Creek 92.59 23 P **P** **23 08 06.0 +0.3**
G23K IAmb IAmb 23 08 06.7
comp=Z,8.2nm,0.8s
KMBO Kilima Mbogo 92.62 269 P **P** **23 08 07.9 +0.7**
comp=Z,1.3nm,0.5s,baz=114,slow=1.4,SNR=8.7
comp=Z,1.3nm,0.5s
COLD Coldfoot 92.63 23 P **P** **23 08 05.6 -0.2**
COLD IAmb IAmb 23 08 07.2
comp=Z,8.9nm,1.0s
KBZ Khabaz 92.85 314 P **P** **23 08 07.5 +0.2**
comp=Z,2.9nm,0.9s,baz=98,slow=7.6,SNR=2.6
comp=Z,2.9nm,0.9s
GURO Guroymak-BITLI 92.87 308 P **P** **23 08 07.8 +0.1**
WRH Wood River Hil 92.94 25 P **P** **23 08 05.8 -1.5**
KIV Kislovodsk 93.03 314 *e*P **P** **23 08 06.0 -2.3**
KIV pmax pmax
comp=Z,5.0nm,1.0s
CCB Clear Creek Bu 93.09 25 P **P** **23 08 06.7 -1.3**
CCB IAmb IAmb 23 08 08.4
comp=Z,18nm,1.2s
TOLK Toolik Lake Re 93.15 21 P **P** **23 08 07.8 -0.4**
TOLK IAmb IAmb 23 08 09.7
comp=Z,18nm,1.3s
H24K Noodor Dome 93.27 24 P **P** **23 08 08.6 -0.2**
HDA Harding Lake 93.41 26 P **P** **23 08 08.4 -1.0**
HDA IAmb IAmb 23 08 09.7
comp=Z,7.9nm,1.0s
IL31 Eielson Array 93.50 25 P **P** **23 08 08.7 -1.1**
ILAR Eielson Array 93.50 25 P **P** **23 08 08.3 -1.5**
comp=Z,4.0nm,1.0s,baz=276,slow=4.5,SNR=21
comp=Z,4.0nm,1.0s
ILAR Eielson Array 93.50 25 P **P** **23 08 07.8 -2.0**
D24K Happy Valley 93.52 21 P **P** **23 08 10.2 +0.3**
D24K IAmb IAmb 23 08 12.0
comp=Z,16nm,1.3s
G24K Hadweenzic Riv 93.58 23 P **P** **23 08 10.1 0.0**
G24K IAmb IAmb 23 08 11.7
comp=Z,10nm,1.1s
MARD Mardin 93.72 307 P **P** **23 08 11.2 -0.5**
MARD IAmb IAmb 23 08 12.7
comp=Z,7.6nm,0.8s
BMRM Bremner River 93.98 29 P **P** **23 08 12.1 -0.1**

TROLL	**Troll, Antarti**	**93.99**	**194**	⇑P		**P**	**23 08 12.7**	**+0.5**
	comp=Z,113nm,0.7s								
F25K	**Christian Rive**	**94.42**	**22**	P		**P**	**23 08 14.4**	**+0.3**
F25K				IAmb		IAmb	23 08 15.9	
	comp=Z,8.9nm,1.1s								
BMAR	**Burnt Mountain**	**94.81**	**23**			**P**	**23 08 16.1**	**+0.2**
J26L	**Joseph Creek**	**94.88**	**26**	IAmb		IAmb	23 08 17.3	
	comp=Z,11nm,1.0s								
F26K	**Sheenjek River**	**95.01**	**22**	P		**P**	**23 08 17.1**	**+0.4**
F26K				IAmb		IAmb	23 08 18.6	
	comp=Z,8.7nm,1.1s								
G26K	**Porcupine Rive**	**95.06**	**23**	P		**P**	**23 08 17.4**	**+0.5**
G26K				IAmb		IAmb	23 08 18.9	
	comp=Z,13nm,1.1s								
SNAA	**Sanae**	**95.49**	**193**	⇑P		**P**	**23 08 19.8**	**+0.8**
	comp=Z,43nm,1.1s								
SNAA	**Sanae**	**95.49**	**193**	P		**P**	**23 08 18.1**	**-0.9**
	comp=Z,2.2nm,1.0s,baz=100,slow=7.0,SNR=6.5								
	comp=Z,2.2nm,1.0s								
SNAA	**Sanae**	**95.49**	**193**	*ce*P		**P**	**23 08 17.6**	**-1.4**
SNAA				pmax		pmax			
	comp=Z,9.0nm,2.2s								
BCAR	**Beaver Creek A**	**95.53**	**27**	P		**P**	**23 08 18.7**	**-0.6**
I27K	**Kandik River**	**95.81**	**25**	P		**P**	**23 08 19.4**	**-1.0**
H27K	**Steamboat Moun**	**95.89**	**24**	P		**P**	**23 08 21.5**	**+0.7**
E27K	**Coleen River**	**96.01**	**22**	P		**P**	**23 08 21.7**	**+0.4**
E27K				IAmb		IAmb	23 08 23.5	
	comp=Z,12nm,1.2s								
ASF	**Jabal al Asfar**	**96.43**	**302**	LR		LR	23 58 10.8	
	comp=Z,26nm,19.5s,baz=116,slow=39								
KLMR	**Klimovskoe**	**96.48**	**330**	*e*P		**P**	**23 08 19.6**	**-3.9**
KLMR				pmax		pmax			
	comp=Z,18nm,1.6s								
I28M	**Miner Creek**	**96.50**	**25**	P		**P**	**23 08 24.0**	**+0.3**
I28M				IAmb		IAmb	23 08 25.1	
	comp=Z,11nm,0.9s								
ANN	**Anapa**	**96.86**	**314**	*e*P		P	23 08 15.0	-11
ANN				pmax		pmax			
	comp=Z,81nm,1.1s								
G29M	**Pine Creek**	**97.32**	**23**	P		**P**	**23 08 26.7**	**-0.5**
K29M	**Barlow Dome**	**97.48**	**27**	P		**P**	**23 08 28.1**	**-0.1**
K29M				IAmb		IAmb	23 08 30.0	
	comp=Z,11nm,1.2s								
MMAI	**Mount Meron Ar**	**97.75**	**302**	P		Pdif	23 08 30.4	+0.4
	comp=Z,2.7nm,0.8s,baz=98,slow=7.4,SNR=4.9								
	comp=Z,2.7nm,0.8s								
EIL	**Elat**	**97.92**	**299**	LR		LR	23 59 57.6	
	comp=Z,36nm,19.1s,baz=338,slow=40								
APA	**Apatity**	**99.14**	**337**	⇓*e*P		**Pdif**	**23 08 23.9**	**-11**
APA				*e**PP		**pP**	**23 08 55.1**	**-3.2**
APA				MLR		MLR			
	comp=Z,300nm,3.1s								
BOSA	**Boshof**	**99.40**	**240**	LR		LR	23 48 04.6	
	comp=Z,30nm,20.1s,baz=28,slow=32								
BRTR	**Keskin Array B**	**99.46**	**309**	P		**Pdif**	**23 08 37.1**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=116,slow=6.6,SNR=3.8								
BRTR				LR		LR	00 01 29.9		
	comp=Z,21nm,18.2s,baz=84,slow=40								
	comp=Z,0.6nm,0.7s								
BRTR	**Keskin Array B**	**99.46**	**309**	*ce*P		**Pdif**	**23 08 37.9**	**+0.3**
BRTR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
LBTB	**Lobatse**	**99.92**	**243**	LR		LR	23 47 54.7	
	comp=Z,24nm,19.7s,baz=233,slow=32								
SPITS	**Spitsbergen Ar**	**101.76**	**349**	P		**Pdif**	**23 08 46.9**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=83,slow=12,SNR=1.3								
ARCES	**ARCESS Array B**	**101.77**	**340**	P		**Pdif**	**23 08 46.8**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=52,slow=5.9,SNR=4.6								
YKA	**Yellowknife Ar**	**107.90**	**26**	PKiKP		**PKiKP**	**23 13 21.4**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=290,slow=1.7,SNR=5.1								
NOA	**NORSAR Array B**	**109.96**	**333**	PKiKP		**PKiKP**	**23 13 25.2**	**0.0**
	comp=Z,1.6nm,0.9s,baz=261,slow=3.2,SNR=3.5								
NVAR	**Mina Array Bea**	**111.38**	**52**	PKiKP		**PKiKP**	**23 13 30.0**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=333,slow=3.7,SNR=3.9								
GERES	**GERESS Array B**	**112.59**	**320**	PKiKP		**PKiKP**	**23 13 31.0**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=58,slow=2.4,SNR=14								
KBA	**Koelnbreinsper**	**113.29**	**318**	*i* PKiKP		**PKiKP**	**23 13 31.9**	**-0.2**
	comp=Z,1.2nm,0.6s								
LESA	**Schwarzleotal**	**113.64**	**319**	*e*PKiKP		**PKiKP**	**23 13 33.4**	**+0.8**
	comp=Z,0.8nm,0.3s								
WTTA	**Wattenberg**	**114.36**	**319**	*e*PKiKP		**PKiKP**	**23 13 34.6**	**+0.5**
	comp=Z,4.7nm,0.3s								
WATA	**Walderalm**	**114.38**	**319**	*e*PKiKP		**PKiKP**	**23 13 35.5**	**+1.4**
	comp=Z,1.9nm,0.2s								
SQTA	**Sankt Quirin**	**114.65**	**319**	*e*PKiKP		PKPdf	23 13 35.2	+0.5
	comp=Z,0.8nm,0.3s								
MOTA	**Moosalm**	**114.68**	**319**	*e*PKiKP		PKPdf	23 13 35.1	+0.4
	comp=Z,4.4nm,0.8s								
RETA	**Reutte**	**114.86**	**319**	*e*PKiKP		PKPdf	23 13 35.2	+0.3
	comp=Z,1.9nm,0.8s								
FETA	**Feichten**	**115.02**	**319**	*e*PKiKP		**PKPdf**	**23 13 35.5**	**+0.1**
	comp=Z,0.8nm,0.4s								
EGMT	**Eagleton**	**115.29**	**40**			**PKiKP**	**23 13 35.3**	**-0.5**
DAVA	**Damuels**	**115.49**	**319**	*e*PKP		**PKiKP**	**23 13 35.7**	**-0.6**
	comp=Z,3.1nm,0.3s								
YHH	**Holmes Hill**	**115.53**	**44**	PKPdf		**PKiKP**	**23 13 36.1**	**-0.6**
PDAR	**Pinedale Array**	**116.99**	**45**	PKP		**PKiKP**	**23 13 39.8**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=274,slow=0.7,SNR=12								
O20A	**White River Ci**	**118.67**	**48**	PKPdf		**PKiKP**	**23 13 43.4**	**+0.7**
PV11	**David Mesa, Pa**	**118.68**	**50**	PKPdf		**PKiKP**	**23 13 43.4**	**+0.6**
PV03	**Paradox Valley**	**118.71**	**50**	PKPdf		**PKiKP**	**23 13 42.9**	**0.0**
PV12	**Saucer Basin,**	**118.72**	**50**	PKPdf		**PKiKP**	**23 13 43.9**	**+0.9**
W18A	**Petrified Fore**	**118.73**	**54**	PKPdf		**PKiKP**	**23 13 43.3**	**+0.3**
PV13	**Radium Mtn., P**	**118.75**	**50**	PKPdf		**PKiKP**	**23 13 43.6**	**+0.6**
PV02	**Paradox Valley**	**118.80**	**50**	PKPdf		**PKiKP**	**23 13 44.2**	**+1.1**
PV07	**Paradox Valley**	**118.81**	**50**	PKPdf		**PKiKP**	**23 13 43.6**	**+0.5**
PV01	**Paradox Valley**	**118.95**	**50**	PKPdf		**PKiKP**	**23 13 43.7**	**+0.3**
PV15	**Paradox Valley**	**118.96**	**50**	PKPdf		**PKPdf**	**23 13 42.9**	**-0.5**
KEST	**Kesra**	**118.97**	**307**	PKP		**PKiKP**	**23 13 43.6**	**+0.3**
	comp=Z,8.0nm,0.9s,baz=68,slow=3.9,SNR=6.6								
MVCO	**Mesa Verde**	**119.23**	**51**	PKPdf		**PKPdf**	**23 13 43.3**	**-0.6**
EKA	**Eskdalemuir Ar**	**119.35**	**331**	PKP		**PKiKP**	**23 13 43.7**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=26,slow=5.5,SNR=1.7								
RSSD	**Black Hills**	**120.37**	**43**			**PKiKP**	**23 13 46.0**	**0.0**
RSSD	**Black Hills**	**120.37**	**43**	PKIKP		**PKiKP**	**23 13 46.0**	**0.0**
ISCO	**Idaho Springs**	**120.70**	**48**	PKPdf		**PKiKP**	**23 13 46.9**	**0.0**
ISCO	**Idaho Springs**	**120.70**	**48**	PKIKP		**PKiKP**	**23 13 46.9**	**0.0**
121A	**Cookes Peak, D**	**120.86**	**56**	PKPdf		**PKiKP**	**23 13 48.1**	**+0.9**
SBM	**South Baldy**	**121.04**	**55**	PKPdf		**PKiKP**	**23 13 49.0**	**+1.1**
LENM	**Lemitar**	**121.16**	**54**	PKPdf		**PKiKP**	**23 13 48.6**	**+0.8**
Y22A	**Socorro**	**121.22**	**55**	PKPdf		**PKiKP**	**23 13 48.4**	**+0.5**
TASM	**ASL Pad, Albuq**	**121.39**	**53**	PKPdf		**PKiKP**	**23 13 48.4**	**+0.2**
TASM	**ASL Pad, Albuq**	**121.39**	**53**	PKPdf		**PKiKP**	**23 13 48.9**	**+0.6**
TASM	**ASL Pad, Albuq**	**121.39**	**53**	PKPdf		**PKiKP**	**23 13 48.2**	**0.0**
ANMO	**Albuquerque**	**121.39**	**53**	PKPdf		**PKiKP**	**23 13 49.3**	**+1.1**
ANMO	**Albuquerque**	**121.39**	**53**	PKIKP		**PKiKP**	**23 13 49.3**	**+1.1**
ABQ	**Albuquerque**	**121.39**	**53**	PKPdf		**PKiKP**	**23 13 48.9**	**+0.6**
SDCO	**Great Sand Dun**	**121.39**	**50**	PKPdf		**PKPdf**	**23 13 48.0**	**-0.1**
CRNM	**Carthage**	**121.40**	**55**	PKPdf		**PKiKP**	**23 13 48.6**	**+0.3**
BNM	**Barren Site**	**121.44**	**54**	PKPdf		**PKiKP**	**23 13 49.1**	**+0.7**
ULM	**Lac du Bonnet**	**122.58**	**33**	PKP		**PKPdf**	**23 13 49.1**	**-0.5**
	comp=Z,4.1nm,0.5s,baz=342,slow=2.1,SNR=3.8								
TXAR	**Lajitas Array**	**124.99**	**59**	PKP		**PKiKP**	**23 13 55.6**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=231,slow=1.6,SNR=13								
ECSD	**EROS Data Cent**	**125.40**	**40**			**PKPdf**	**23 13 53.7**	**-1.6**
BGNE	**Belgrade**	**125.42**	**43**	PKPdf		**PKPdf**	**23 13 54.3**	**-1.1**
DKNS	**Dickens**	**126.14**	**53**	PKPdf		**PKiKP**	**23 13 57.7**	**+0.2**
R32A	**Long Quarter,**	**126.22**	**47**	PKPdf		**PKiKP**	**23 13 58.0**	**+0.5**
SMWD	**Samnorwood**	**126.23**	**51**	PKPdf		**PKiKP**	**23 13 58.1**	**+0.5**
ESDC	**Sonseca Array**	**127.66**	**315**	PKP		**PKiKP**	**23 14 00.4**	**+0.1**
	comp=Z,2.2nm,1.1s,baz=47,slow=2.9,SNR=7.2								
ESDC				PP		**PP**	**23 16 02.1**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=72,slow=6.4,SNR=4.8								
ESDC	**Sonseca Array**	**127.66**	**315**			**PKiKP**	**23 14 01.3**	**+1.0**
TORD	**Torodi Ar. Bea**	**128.88**	**281**	PKP		**PKiKP**	**23 14 03.1**	**-0.2**
	comp=Z,3.8nm,0.3s,baz=45,slow=4.5,SNR=3.2								
SCHQ	**Schefferville**	**130.60**	**13**	PKP		**PKiKP**	**23 14 05.5**	**-0.2**
	comp=Z,5.3nm,0.9s,baz=270,slow=6.1,SNR=2.6								
DBIC	**Dimbokro**	**135.24**	**272**	PKP		**PKPdf**	**23 14 14.9**	**+0.2**
	comp=Z,10nm,0.7s,baz=152,slow=1.8,SNR=11								
CFA	**Coronel Fontan**	**137.65**	**157**	PKP		**PKPdf**	**23 14 18.6**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=242,slow=3.8,SNR=3.1								
CPUP	**Villa Florida**	**145.92**	**168**	PKPbc		**PKPab**	**23 14 35.1**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=83,slow=0.6,SNR=12								
CPUP	**Villa Florida**	**145.92**	**168**			**PKPbc**	**23 14 34.3**	**-0.1**
NNA	**Nana**	**147.18**	**125**	PKPbc		**PKPbc**	**23 14 39.2**	**+0.8**
	comp=Z,7.6nm,0.4s,baz=303,slow=5.2,SNR=5.2								
NNA	**Nana**	**147.18**	**125**			**PKPbc**	**23 14 37.9**	**-0.5**
LPAZ	**La Paz**	**150.55**	**142**	PKP		**PKPdf**	**23 14 43.9**	**+1.6**
	comp=Z,5.6nm,0.4s,baz=270,slow=1.3,SNR=9.2								
LPAZ				PKPbc		**PKiKP**	**23 14 48.8**	**+0.4**
	comp=Z,5.6nm,0.4s,baz=228,slow=1.5,SNR=56								
OTAV	**Otavalo**	**150.76**	**102**			**PKPdf**	**23 14 44.6**	**+2.1**
OTAV	**Otavalo**	**150.76**	**102**	PKIKP		**PKPdf**	**23 14 44.6**	**+2.1**

*MEX **21** 23:24:48.0±0.7, 14.2°N×92.2°W, h74km±15km, MD3.9*
*GCG **21** 23:24:49.7±0.6, 14.28°N×92.40°W, h27km±5km, MD3.7, ML3.3*

ISC 21 23:24:44.7±2.1, 14.09°N±0.09×92.50°W±0.06, h33km±8km, n17, σ1s22/28, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THIG		**0.85**	**16**	*e*P		**Pb**	**23 25 01.3**	**+0.3**
THIG				*e*S		**Sb**	**23 25 11.9**	**-0.2**
SMCA	**Catarina**	**0.87**	**28**	*e*P		**Pb**	**23 25 02.4**	**+1.0**
SMCA				IAML			23 25 13.4	
	comp=E,894nm,0.3s							
RTAL	**Retalhuleu**	**0.90**	**61**	*e*P		**Pn**	**23 25 00.2**	**-0.8**
RTAL				*i* S		**Sb**	**23 25 12.0**	**-1.6**
PATR	**El Naranjo**	**1.06**	**14**	*e*P		**Pn**	**23 25 03.4**	**-0.1**
PATR				*e*S		**Sn**	**23 25 16.1**	**-1.1**
CHUJ	**Union Juarez**	**1.07**	**21**	*e*P		**Pn**	**23 25 04.3**	**+0.7**
CHUJ				*e*S		**Sn**	**23 25 16.9**	**-0.6**
PAVE	**Pavencul**	**1.14**	**16**	*e*P		**Pn**	**23 25 05.1**	**+0.4**
PAVE				*e*S		**Sn**	**23 25 18.2**	**-1.2**
STG2	**El Palmar, Qui**	**1.15**	**72**	*e*P		**Pb**	**23 25 06.2**	**0.0**
STG2				*e*S		**Sn**	**23 25 19.2**	**-0.1**
STG5	**El Palmar, Qui**	**1.16**	**74**	*e*P		**Pb**	**23 25 06.5**	**+0.1**
STG5				*e*S		**Sn**	**23 25 19.1**	**-0.6**
STG8	**El Palmar, Qui**	**1.17**	**72**	*e*P		**Pb**	**23 25 06.8**	**+0.2**
SOKI	**Kika Raxquin**	**1.29**	**56**	*e*P		**Pb**	**23 25 10.6**	**+1.9**
ESSG	**Sabana Grande**	**1.65**	**80**	*e*P		**Pb**	**23 25 16.0**	**+1.4**
FG16	**Alotenango, Sa**	**1.94**	**84**	*e*P		**Pn**	**23 25 15.6**	**0.0**
CCIG	**Comitan**	**2.21**	**9**	*e*P		**Pn**	**23 25 19.8**	**+0.5**
CCIG				*e*S		**Sn**	**23 25 48.1**	**+2.5**
CCIG	**Comitan**	**2.21**	**9**	*e*P		**Pb**	**23 25 22.4**	**-1.8**
TGIG		**2.74**	**348**	*e*P		**Pn**	**23 25 27.8**	**+1.2**
TGIG				*e*S		**Sn**	**23 25 59.0**	**+0.4**
UXUV	**UXUV**	**3.58**	**334**	*e*P		**Pn**	**23 25 37.6**	**-0.4**
UXUV				*e*S		**Sn**	**23 26 21.7**	**+2.5**
NEUV	**Arroyo Zacate**	**4.80**	**319**	*e*P		**Pn**	**23 25 54.8**	**0.0**
NEUV				*e*S		**Sn**	**23 26 47.3**	**-2.1**

*IDC **21** 23:31:53.8±2.3, 10.43°S×120.70°E, h0km, mb3.3/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=185.3km s-min=28.0km az=54.0*
*DJA **21** 23:31:56.6±1.1, 11.1°S±7.1°×12.0°E±1.1°, h52km±10km, M3.5/5, MLv3.5/5*

ISC 21 23:31:56.5±1.0, 10.85°S±0.07×120.15°E±0.07, h35km, n9, σ1s79/15, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.75**	**34**	P		**Pn**	**23 32 10.8**	**+0.1**
BASI				S		**Sn**	**23 32 22.3**	**+1.5**
WSI	**Waingapu**	**1.18**	**7**	P		**Pn**	**23 32 16.6**	**0.0**
WSI				S		**Sn**	**23 32 31.4**	**0.0**
WBSI	**Waikabubak, Su**	**1.41**	**328**	P		**Pn**	**23 32 18.6**	**-1.2**
WBSI				S		**Sn**	**23 32 35.5**	**-1.7**
EDFI	**Ende, Flores**	**2.58**	**36**	P		**Pn**	**23 32 35.3**	**-0.6**
EDFI				S		**Sn**	**23 33 03.7**	**-2.4**
MMRI	**Maumere**	**3.01**	**43**	P		**Pn**	**23 32 41.5**	**-0.3**
MMRI				S		**Sn**	**23 33 15.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**8.96**	**144**	Pn		**Pn**	**23 34 04.3**	**+0.9**
	0.3nm,0.3s,baz=343,slow=6.8,SNR=15							
FITZ				Sn		**Sn**	**23 35 39.7**	**-3.4**
	0.4nm,0.3s,baz=191,slow=20,SNR=7.0							
	1.1nm,0.4s							
WRA	**Warramunga Arr**	**16.39**	**125**	Pn		**Pn**	**23 35 41.8**	**-2.2**
	0.1nm,0.3s,baz=304,slow=14,SNR=2.1							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**18.28**	**136**	P		**Pn**	**23 36 09.6**	**+2.0**
	0.2nm,0.3s,baz=315,slow=12,SNR=16							
	1.5nm,0.7s							
MKAR	**Makanchi Array**	**66.61**	**333**	P		**P**	**23 42 45.2**	**+1.8**
	0.2nm,0.5s,baz=145,slow=7.5,SNR=1.8							
	0.2nm,0.5s							

*IDC **21** 23:33:00.6±1.8, 1.60°N×126.43°E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=188.6km s-min=21.3km az=66.0*

DJA 21 23:33:03.9±0.3, 2.7°N±5.1°×127.6°E±1.1°, h10km, M3.3/7, MLv3.3/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**129**	P		Pb	23 33 25.4	-1.2
WRA	**Warramunga Arr**	**22.70**	**160**	P		P	23 38 04.8	-1.1
	0.9nm,0.5s,baz=339,slow=11,SNR=9.5							
	0.9nm,0.5s							
ASAR	**Alice Springs**	**26.08**	**164**	P		P	23 38 36.7	-1.2
	0.4nm,0.3s,baz=350,slow=9.8,SNR=7.1							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**59.20**	**326**	P		P	23 43 03.2	-2.1
	0.3nm,0.6s,baz=116,slow=8.0,SNR=5.6							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**63.43**	**328**	P		P	23 43 31.8	-2.1
	0.5nm,0.6s,baz=127,slow=6.5,SNR=8.6							
	0.5nm,0.6s							

IDC 21 23:44:49.3±5.7, 4.45°S×151.45E, h159km±50km, mb3.0/3, mbtmp3.6/4, MS2.3/1, Error ellipse: s-maj=177.7km s-min=35.1km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.51**	**221**	P		Pn	23 46 24.1	+1.2
	5.6nm,0.3s,baz=293,slow=7.6,SNR=2.0							
PMG				S		Sn	23 47 28.2	-8.2
	7.1nm,0.5s,baz=126,slow=22,SNR=1.4							
HNR	**Honiara**	**9.78**	**121**	LR		LR	23 50 27.2	
	comp=Z,15nm,18.4s,baz=324,slow=34							
WRA	**Warramunga Arr**	**22.69**	**226**	P		P	23 49 36.6	-1.0
	0.5nm,0.5s,baz=52,slow=9.7,SNR=8.6							
	0.5nm,0.5s							
ASAR	**Alice Springs**	**25.52**	**220**	P		P	23 50 04.0	+0.7
	0.4nm,0.6s,baz=48,slow=8.9,SNR=4.2							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**82.35**	**22**	P		P	23 56 53.0	0.0
	0.5nm,1.0s,baz=232,slow=5.6,SNR=2.1							
	0.5nm,1.0s							

*IDC **21** 23:47:54.0±2.6, 38.77°N×29.20°W, h0km, mb3.6/8, mbtmp3.5/9, ML4.0/1, MS3.5/11, Error ellipse: s-maj=82.9km s-min=29.3km az=169.0*

ISC 21 23:47:58.2±1.5, 38.7°N±0.2×29.1°W±0.2, h27km, n23, σ0s52/10, mb3.6/8, MS3.6/10, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMOZ	**Porto Moniz, M**	**11.35**	**118**	*e*P		**Pn**	**23 50 38.8**	**+0.1**
PMAR	**Madeira**	**11.61**	**117**	*e*P		Pn	23 50 37.5	-4.6
ESDC	**Sonseca Array**	**19.52**	**79**	P		**Pn**	**23 52 24.7**	**-0.1**
	0.1nm,0.3s,baz=291,slow=9.8,SNR=1.4							
ESDC				LR		LR	23 58 37.0	
	comp=Z,132nm,18.1s,baz=279,slow=33							
	0.3nm,0.7s							
MDT	**Midelt**	**20.73**	**99**	LR		LR	23 58 32.1	
	comp=Z,106nm,20.6s,baz=270,slow=31							
EKA	**Eskdalemuir Ar**	**24.05**	**38**	P		**P**	**23 53 11.7**	**+0.9**
	2.0nm,0.9s,baz=242,slow=9.6,SNR=1.3							
	2.0nm,0.9s							
GERES	**GERESS Array B**	**32.14**	**58**	P		**P**	**23 54 23.6**	**+0.2**
	0.1nm,0.3s,baz=250,slow=8.2,SNR=2.4							
	0.1nm,0.3s							
NOA	**NORSAR Array B**	**33.43**	**35**	LR		LR	00 06 10.5	
	comp=Z,54nm,20.2s,baz=90,slow=33							
FINES	**FINESS Array B**	**40.45**	**37**	LR		LR	00 10 19.2	
	comp=Z,70nm,19.8s,baz=246,slow=33							
ARCES	**ARCESS Array B**	**42.05**	**25**	P		**P**	**23 55 47.2**	**+0.2**
	1.8nm,0.8s,baz=260,slow=8.1,SNR=5.3							
ARCES				LR		LR	00 08 48.5	
	comp=Z,42nm,21.1s,baz=191,slow=30							
	1.8nm,0.8s							
AKASG	**Malin Array Be**	**42.11**	**54**	P		**P**	**23 55 47.1**	**-0.6**
	0.3nm,0.3s,baz=282,slow=7.2,SNR=5.0							
	0.3nm,0.3s							
H10N2	**ASCENSION HYDR**	**48.30**	**160**	T		T	00 47 43.3	
	baz=346,slow=75,SNR=70							
H10N3	**ASCENSION HYDR**	**48.30**	**160**	T		T	00 47 42.9	
	baz=346,slow=75,SNR=75							
H10N1	**ASCENSION HYDR**	**48.32**	**160**	T		T	00 47 44.8	
	baz=346,slow=75,SNR=88							
H10S3	**ASCENSION HYDR**	**49.33**	**161**	T		T	00 49 01.3	
	baz=235,slow=74,SNR=7.4							
H10S2	**ASCENSION HYDR**	**49.34**	**161**	T		T	00 49 00.5	
	baz=345,slow=74,SNR=4.9							
ARTI	**Arti**	**57.53**	**41**	LR		LR	00 21 16.5	
	comp=Z,41nm,20.0s,baz=250,slow=35							
AKTO	**Aktyubinsk**	**59.73**	**48**	LR		LR	00 23 34.2	
	comp=Z,76nm,18.2s,baz=59,slow=36							
ANMO	**Albuquerque**	**60.23**	**293**	LR		LR	00 23 08.6	
	comp=Z,76nm,19.1s,baz=110,slow=35							
TXAR	**Lajitas Array**	**60.93**	**286**	P		**P**	**23 58 09.0**	**+0.1**
	0.3nm,0.8s,baz=79,slow=6.5,SNR=3.5							
	0.3nm,0.8s							
BVAR	**Borovoye Array**	**65.26**	**41**	LR		LR	00 26 38.7	
	comp=Z,36nm,18.1s,baz=335,slow=36							
KURBB	**Kurchatov Arra**	**70.77**	**40**	P		**P**	**23 59 11.4**	**-0.5**
	0.4nm,0.7s,baz=314,slow=6.1,SNR=4.5							
	0.4nm,0.7s							
ZALV	**Zalesovo Beam**	**71.64**	**35**	P		**P**	**23 59 16.4**	**-0.7**
	0.2nm,0.3s,baz=330,slow=7.5,SNR=3.6							
ZALV				LR		LR	00 30 27.5	
	comp=Z,33nm,18.1s,baz=342,slow=36							
	0.2nm,0.3s							
MKAR	**Makanchi Array**	**75.13**	**41**	P		**P**	**23 59 37.9**	**+0.1**
	0.6nm,0.9s,baz=318,slow=6.5,SNR=4.0							
MKAR				LR		LR	00 31 55.5	
	comp=Z,32nm,20.2s,baz=320,slow=35							
	0.6nm,0.9s							

*NNC **22** 00:15:08.7±5.6, 37.99°N×71.99E, h199km±64km, mb2.7, mpv3.6, Error ellipse: s-maj=58.7km s-min=29.0km az=17.0*

ISC 22 00:15:02.4±3.3, 37.6°N±0.2×71.6°E±0.1, h109km, n10, σ2s04/13, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.13**	**25**	P		**Pn**	**00 16 17.7**	**+0.4**
	SNR=6.4							
EKS2	**Erkin-Say**	**5.32**	**17**	P		**Pn**	**00 16 21.3**	**+1.8**
	SNR=6.8							
AAK	**Ala-Archa**	**5.50**	**23**	P		**Pn**	**00 16 22.9**	**+1.0**
	SNR=8.0							
AAK	**Ala-Archa**	**5.50**	**23**	⇓P		**Pn**	**00 16 22.3**	**+0.3**
	2.0nm,0.4s							
AAK				⇑S		**Sn**	**00 17 22.1**	**-1.8**
	9.2nm,0.7s							
KK31	**Karatay Array**	**5.57**	**352**	⇑P		**Pn**	**00 16 26.0**	**+3.2**
	7.8nm,0.5s,baz=161,slow=11,SNR=45							
KK31				S		**Sn**	**00 17 28.7**	**+3.1**
	19nm,0.4s,baz=161,slow=18,SNR=20							
KBK	**Karagaybulak**	**5.66**	**26**	P		**Pn**	**00 16 25.4**	**+1.2**
	SNR=11							
CHMS	**Chumysh**	**5.90**	**23**	P		**Pn**	**00 16 27.5**	**+0.2**
	SNR=7.4							
MK31	**Makanchi Array**	**12.11**	**37**	P		**Pn**	**00 17 52.1**	**+0.9**
	0.7nm,0.6s,baz=209,slow=9.9,SNR=6.6							
AB31	**Akbulak array**	**14.40**	**328**	⇑P		**Pn**	**00 18 20.5**	**-0.4**
	2.2nm,0.6s,baz=138,slow=12,SNR=54							
AB31				S		**Sn**	**00 20 56.3**	**-3.3**
	1.1nm

CEVE	**Cerro Verde**	**1.38 319**	S	**Sn**	**00 46 26.4**	**+1.1**
SBLS	**San Blas**	**1.39 319**	*e*P	**Pn**	**00 46 08.7**	**+0.4**
LLGN	**La Laguna**	**1.39 350**	S	**Sn**	**00 46 25.3**	**-0.1**
LLGN	**La Laguna**	**1.39 350**	P	**Pn**	**00 46 07.7**	**-0.6**
UNIC	**Universidad Ca**	**1.45 325**	S	**Sn**	**00 46 27.3**	**+0.4**
NUBE	**Las Nubes**	**1.54 316**	*e*P	**Pn**	**00 46 10.5**	**+0.2**
NUBE	**Las Nubes**	**1.54 316**	*e*P	**Pn**	**00 46 10.5**	**+0.2**
NUBE	**Las Nubes**	**1.54 316**	P	**Pn**	**00 46 10.8**	**+0.5**
NUBE	**Las Nubes**	**1.54 316**	S	**Sn**	**00 46 29.0**	**-0.1**
CRIN	**San Cristobal**	**1.60 93**	S	**Sn**	**00 46 30.8**	**+0.2**
CRIN	**San Cristobal**	**1.60 93**	P	**Pn**	**00 46 10.6**	**-0.5**
RBDL	**Robledal**	**1.64 324**	*e*P	**Pn**	**00 46 12.1**	**+0.4**
FAME	**Alcaldia de Sa**	**1.66 309**	S	**Sn**	**00 46 31.2**	**-0.9**
PKGN	**Cerro Pekin**	**1.68 94**	P	**Pn**	**00 46 12.3**	**+0.2**
PKGN			S	**Sn**	**00 46 32.4**	**+0.1**
MTO3	**Montecristo**	**1.73 338**	*e*P	**Pn**	**00 46 13.1**	**+0.1**
MTO3	**Montecristo**	**1.73 338**	P	**Pn**	**00 46 13.1**	**+0.1**
MTO3	**Montecristo**	**1.73 338**	S	**Sn**	**00 46 33.5**	**-0.4**
POLN	**Al Sur del Vol**	**1.84 94**	P	**Pn**	**00 46 13.9**	**-0.4**
POLN			S	**Sn**	**00 46 35.2**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.87 47**	P	**Pn**	**00 46 14.7**	**-0.1**
TGUH			S	**Sn**	**00 46 38.0**	**+0.7**
ESQI	**Esquipulas**	**1.87 340**	P	**Pn**	**00 46 15.6**	**+0.8**
ESQI	**Esquipulas**	**1.87 340**	S	**Sn**	**00 46 37.7**	**+0.4**
CNGA	**Al SSO del Vol**	**1.96 98**	P	**Pn**	**00 46 16.0**	**0.0**
CNGA			S	**Sn**	**00 46 39.8**	**+0.4**
CNGN	**Cerro Negro**	**1.96 98**	P	**Pn**	**00 46 16.3**	**+0.2**
CNGN	**Cerro Negro**	**1.96 98**	S	**Sn**	**00 46 39.8**	**+0.3**
YUSH	**Yuscaran**	**2.14 57**	P	**Pn**	**00 46 18.4**	**-0.2**
YUSH	**Yuscaran**	**2.14 57**	S	**Sn**	**00 46 44.4**	**+0.5**
LIMN	**Finca el Limon**	**2.28 83**	P	**Pn**	**00 46 20.5**	**0.0**
LIMN			S	**Sn**	**00 46 47.8**	**+0.4**
OCON	**Estacion meteo**	**2.31 68**	P	**Pn**	**00 46 20.5**	**-0.4**
RCON	**San Juan de Ri**	**2.56 74**	S	**Sn**	**00 46 54.7**	**+0.3**
RCON	**San Juan de Ri**	**2.56 74**	P	**Pn**	**00 46 24.6**	**+0.2**
STG8	**El Palmar, Qui**	**3.07 303**	*e*P	Pn	00 46 37.5	+6.1

IDC ***22*** *00:50:30.7±0.9,6˚.30S×142˚.79E,h0km,mb4.0/8, mbtmp4.0/12,ML3.3/2,MS3.3/3,Error ellipse: s-maj=20.5km s-min=11.7km az=89.0*

ISC 22 00:50:34.9±0.8,6˚.35S±0˚.07×142˚.95E±0˚.09,h35km,n13, σ1§43/16,mb3.7/6,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.42 330**		Pn	**Pn**	**00 51 38.8**	**-0.8**
	0.3nm,0.3s,baz=156,slow=20,SNR=2.2						
JAY				Sn	**Sn**	**00 52 29.6**	**-0.3**
	0.8nm,0.3s,baz=151,slow=18,SNR=1.7						
JAY				Lg	Lg	00 52 47.2	
	1.1nm,0.3s,baz=61,slow=22,SNR=1.8 14nm,0.8s						
PMG	**Port Moresby**	**5.16 126**		Pn	**Pn**	**00 51 49.7**	**0.0**
	6.6nm,0.3s,baz=326,slow=7.3,SNR=4.3						
PMG				Sn	**Sn**	**00 52 46.7**	**-1.3**
	2.2nm,0.3s,baz=229,slow=19,SNR=6.9						
PMG				Lg	Lg	00 53 21.5	
	1.1nm,0.3s,baz=282,slow=9.1,SNR=2.3						
WRA	**Warramunga Arr**	**15.89 211**		Pn	**Pn**	**00 54 13.3**	**-2.7**
	0.2nm,0.3s,baz=32,slow=13,SNR=9.7						
WRA				Sn	**Sn**	**00 57 10.4**	**-0.7**
	0.1nm,0.3s,baz=76,slow=7.2,SNR=2.4						
WRA				Lg	Lg	00 58 56.2	
	0.1nm,0.3s,baz=125,slow=15,SNR=2.3 2.2nm,1.0s						
ASAR	**Alice Springs**	**19.29 206**		P	**P**	**00 54 56.9**	**0.0**
	12nm,0.9s,baz=23,slow=11,SNR=75						
ASAR				S	**S**	**00 58 34.7**	**+1.2**
	0.2nm,0.5s,baz=225,slow=39,SNR=2.8						
ASAR				Lg	Lg	01 00 45.5	
	0.1nm,0.3s,baz=13,slow=29,SNR=4.2						
ASAR				LR	LR	01 03 05.0	
	comp=Z,93nm,21.3s,baz=298,slow=39						
FITZ	**Fitzroy Crossi**	**20.53 234**		P	**P**	**00 55 10.5**	**+0.1**
	6.2nm,1.0s,baz=58,slow=11,SNR=6.8						
FITZ				LR	LR	01 03 08.3	
	comp=Z,68nm,18.1s,baz=148,slow=37 6.2nm,1.0s						
STKA	**Stephens Creek**	**25.42 183**		P	**P**	**00 56 02.0**	**+2.6**
	1.3nm,0.2s,baz=12,slow=9.3,SNR=3.7 1.3nm,0.2s						
MA2	**Magadan**	**66.01 4**		LR	LR	01 30 59.8	
	comp=Z,20nm,18.9s,baz=90,slow=37						
MKAR	**Makanchi Array**	**75.24 322**		P	**P**	**01 02 15.5**	**+1.3**
	0.8nm,0.9s,baz=104,slow=6.2,SNR=2.4 0.8nm,0.9s						
ZALV	**Zalesovo Beam**	**77.20 329**		P	**P**	**01 02 26.6**	**+1.4**
	0.3nm,0.4s,baz=123,slow=5.3,SNR=1.8 0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**79.13 324**		P	**P**	**01 02 35.5**	**-0.4**
	0.6nm,0.8s,baz=112,slow=4.6,SNR=2.5 0.6nm,0.8s						
BVAR	**Borovoye Array**	**84.70 325**		P	**P**	**01 03 05.5**	**+0.3**
	2.5nm,0.8s,baz=115,slow=6.5,SNR=6.0 2.5nm,0.8s						
ILAR	**Eielson Array**	**87.41 24**		P	**P**	**01 03 18.2**	**-0.1**
	0.5nm,0.9s,baz=255,slow=5.5,SNR=2.7 0.5nm,0.9s						
SNAA	**Sanae**	**98.96 190**		P	**Pdif**	**01 04 13.7**	**+2.1**
	0.5nm,0.6s,baz=215,slow=11,SNR=6.0 0.5nm,0.6s						

JMA 22 00:54:33.7±0.3,24˚N±1˚×124˚.0E±0˚.7,h19km±4km, MV1.3/6,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.16 112**		P	Pg	00 54 38.3	+0.1
JIJ				*e*S	Sg	00 54 41.3	0.0
JKRS	**Kuro-shima**	**0.19 172**		P	Pg	00 54 38.4	-0.2
IRIF	**Iriomote-Funau**	**0.24 249**	*i*	P	Pg	00 54 39.4	0.0
IRIF				*e*S	Sb	00 54 42.9	0.0
JISG	**Ishigakijimahi**	**0.34 62**		P	Pg	00 54 40.9	-0.1
JISG				*e*S	Sg	00 54 46.1	+0.1

TAP 22 00:55:31.7,24˚.82N×122˚.09E,h8km,ML2.0,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.14 282**		P	Pg	00 55 34.4	-0.3
EGS				S	Sg	00 55 36.6	-0.1
TWB1	**Santiao Chiao**	**0.21 335**		P	Pg	00 55 35.7	-0.3
TWB1				S	Sg	00 55 39.0	+0.1
TIPB	**Shuangxi**	**0.28 304**		P	Pg	00 55 37.3	-0.2
TIPB				S	Sg	00 55 41.0	-0.1
TWC	**Suao**	**0.30 226**		P	Pg	00 55 37.3	-0.2
TWC				S	Sg	00 55 41.8	+0.3
SXI1	**Grass Mountain**	**0.34 326**		P	Pg	00 55 38.3	0.0
SXI1				S	Sg	00 55 43.5	+0.7
WFSB	**Wu-fen Shan**	**0.38 313**		*e*P	Pg	00 55 38.5	-0.6
TWE	**Neicheng**	**0.39 256**		*e*P	Pg	00 55 39.1	-0.2
TWE				S	Sg	00 55 44.8	+0.3
FUSB	**Fushanzhiwuyua**	**0.46 263**		P	Pg	00 55 40.8	+0.2
FUSB				S	Sg	00 55 47.0	+0.5
EWUT	**Wuta**	**0.46 217**		P	Pg	00 55 40.7	0.0
EWUT				S	Sg	00 55 46.8	+0.1
ENA	**Nanau**	**0.50 219**		P	Pg	00 55 41.5	+0.2
ENA				*e*S	Sg	00 55 48.1	+0.3
ENTT	**Nioudou**	**0.50 250**		*e*P	Pg	00 55 41.5	+0.1
ENTT				S	Sg	00 55 48.5	+0.5
NWLT	**Wulai**	**0.53 266**		P	Pg	00 55 42.0	+0.1
NWLT				S	Sg	00 55 49.2	+0.3
LATG	**Datong**	**0.58 241**		P	Pg	00 55 42.6	-0.3
LATG				S	Sg	00 55 50.2	-0.3
YHNB	**Yeheng**	**0.66 258**		P	Pg	00 55 43.9	-0.5
NSK	**Sanguang**	**0.68 258**		P	Pg	00 55 44.2	-0.6
NSK				*e*S	Sg	00 55 52.0	-1.5
NNSB	**Datong**	**0.75 239**		P	Pg	00 55 45.7	-0.4
NNSB				*e*S	Sb	00 55 57.2	-0.2
NNS	**Nan Shan**	**0.75 240**		*e*P	Pb	00 55 46.9	-0.1
NNS				*e*S	Sb	00 55 57.4	-0.1
NACB	**Ninganchiao**	**0.78 215**		P	Pg	00 55 46.3	-0.4
NACB				S	Sg	00 55 56.8	0.0
ETLH	**Xiulin Townshi**	**0.82 222**		P	Pg	00 55 47.1	-0.3
ETLH				S	Sg	00 55 58.4	+0.3
LXIB	**Xiulin Townshi**	**1.00 218**		P	Pg	00 55 50.0	-0.9
LXIB				S	Sb	00 56 04.6	-0.2
WHF	**Hehuan Shan**	**1.00 228**		P	Pg	00 55 51.1	+0.1
WHF				S	Sg	00 56 03.8	-0.3
OWD	**Renai**	**1.19 224**		P	Pg	00 55 53.9	-0.7
OWD				*e*S	Sg	00 56 09.7	-0.4
WUSB	**Renai**	**1.21 227**		*e*P	Pg	00 55 54.5	-0.3
WUSB				*e*S	Sn	00 56 11.2	-0.4
WARBT	**Fenglin Townsh**	**1.27 210**		*e*P	Pn	00 55 54.1	-1.6
VWDT	**VWDT**	**1.36 219**		*e*P	Pb	00 55 57.6	+0.1
VWDT				*e*S	Sg	00 56 16.7	+1.2

NEIC ***22*** *01:07:58.9,61˚.33N×149˚.98W,h47km*
AEIC ***22*** *01:07:58.9±1.4,61˚.33N±0˚.03×149˚.98W±0˚.07,h47km±3km, ML4.0,mb4.2/19(NEIC),ML4.2/242(NEIC), Mwr4.1/76(NEIC),Error ellipse: s-maj=5.1km s-min=4.7km az=69.0*
ANF ***22*** *01:07:58.6±0.1,61˚.31N×150˚.01W,h39km±4km,ML4.4/87, Error ellipse: s-maj=1.0km s-min=0.8km az=171.0*
NEIC ***22*** *01:07:58.2±1.6,61˚.32N±0˚.04×150˚.00W±0˚.07,h51km±3km, Error ellipse: s-maj=5.2km s-min=4.9km az=129.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.11; Mθθ0.11; Mφφ 1.01; Mrθ-0.39; Mθφ-0.01; Mrφ1.27; Fault plane solution: M₀1.71000×10¹⁵ NP1:φ₁7.99000°, δ20.27000°,λ-70.20000°. NP2:φ₂166.99000°,δ70.98000°, λ-97.13000°. Principal axes: T 1.6242, Plg26.0000°, Azm263.0000°; N 0.1527, Plg7.0000°, Azm169.0000°; P -1.7770, Plg63.0000°, Azm66.0000°;*
IDC ***22*** *01:07:59.1±0.7,61˚.44N×150˚.26W,h64km±6km,mb3.8/25, mbtmp4.0/30,MS3.4/10 Error ellipse: s-maj=11.5km s-min=8.8km az=102.0*

ISC 22 01:07:58.2±0.5,61˚.34N±0˚.03×150˚.02W±0˚.02,h53km±4km, n497,σ0§90/487,mb4.2/45,MS3.4/8,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIS	**Fire Island**	**0.22 207**			**Pn**	**01 08 07.0**	**+0.1**
FIS					**Sn**	**01 08 14.5**	**+1.3**
RC01	**Rabbit Creek A**	**0.28 152**			**Pn**	**01 08 06.6**	**-0.9**
RC01					**Sn**	**01 08 13.3**	**-0.9**
RC01				IAML		01 08 13.6	
	comp=E,18μm,0.6s						
RC01				IAML		01 08 14.4	
	comp=N,16μm,0.5s						
RC01	**Rabbit Creek A**	**0.28 152**		P	**Pn**	**01 08 06.6**	**-0.9**
	baz=329,SNR=261						
RC01				S	**Sn**	**01 08 13.2**	**-0.9**
	baz=329						
SUA	**Susitna One**	**0.37 290**			**Pn**	**01 08 07.7**	**-0.7**
SUA					**Sn**	**01 08 15.2**	**-0.6**
SUA				IAML		01 08 15.7	
	comp=N,12μm,0.7s						
SUA				IAML		01 08 15.7	
	comp=E,21μm,0.7s						
SUA	**Susitna One**	**0.37 290**		P	**Pn**	**01 08 07.8**	**-0.7**
	baz=113,SNR=902						
SUA				S	**Sn**	**01 08 15.1**	**-0.6**
	baz=113						
M22K	**Willow**	**0.42 353**			**Pn**	**01 08 07.7**	**-1.1**
M22K					**Sn**	**01 08 15.5**	**-0.7**
M22K				IAML		01 08 18.6	
	comp=N,11μm,0.6s						
M22K				IAML		01 08 20.2	
	comp=E,9μm,0.4s						
M22K	**Willow**	**0.42 353**		P	**Pn**	**01 08 07.6**	**-1.1**
	baz=174,SNR=111						
M22K				S	**Sn**	**01 08 15.4**	**-0.8**
	baz=174						
PMR	**Palmer**	**0.49 59**			**Pn**	**01 08 08.7**	**-0.9**
PMR				Sn	**Sn**	**01 08 16.8**	**-0.9**
PMR				IAML		01 08 17.6	
	comp=N,8μm,0.6s						
PMR	**Palmer**	**0.49 59**		P	**Pn**	**01 08 08.6**	**-0.9**
	baz=237,SNR=288						
PMR				S	**Sn**	**01 08 16.8**	**-0.9**
	baz=237						
GHO	**Glory Hole Cre**	**0.68 50**			**Pn**	**01 08 11.3**	**-0.6**
GHO				IAML		01 08 23.4	
	comp=E,11μm,0.7s						
GHO				IAML		01 08 25.3	
	comp=N,7μm,0.6s						
GHO	**Glory Hole Cre**	**0.68 50**			**Sn**	**01 08 21.5**	**-0.4**
KNK	**Knik Glacier**	**0.75 84**			**Pn**	**01 08 12.4**	**-0.3**
KNK	**Knik Glacier**	**0.75 84**			**Sn**	**01 08 24.4**	**+1.0**
KNK	**Knik Glacier**	**0.75 84**		P	**Pn**	**01 08 12.5**	**-0.3**
	baz=263,SNR=504						
CAPN	**Captain Cook N**	**0.80 225**			**Pn**	**01 08 14.2**	**+0.9**
CAPN	**Captain Cook N**	**0.80 225**		P	**Pn**	**01 08 14.2**	**+0.9**
	baz=45,SNR=10						
SLKM	**Skilak Lake**	**0.84 187**			**Pn**	**01 08 13.2**	**-0.8**
SLKM				IAML		01 08 28.6	
	comp=E,6μm,0.6s						
SLKM	**Skilak Lake**	**0.84 187**			**Sn**	**01 08 25.1**	**-0.3**
O22K	**Cooper Landing**	**0.87 170**			**Pn**	**01 08 13.8**	**-0.5**
O22K	**Cooper Landing**	**0.87 170**			**Sn**	**01 08 26.4**	**+0.3**
O22K	**Cooper Landing**	**0.87 170**		P	**Pn**	**01 08 13.8**	**-0.5**
	baz=350,SNR=83						
O22K				S	**Sn**	**01 08 25.5**	**-0.5**
	baz=350						
STLK	**Strandline Lak**	**0.89 281**			**Pn**	**01 08 14.7**	**+0.1**
STLK	**Strandline Lak**	**0.89 281**			**Sn**	**01 08 26.9**	**+0.3**
SML	**Sawmill**	**0.93 59**			**Pn**	**01 08 14.8**	**-0.4**
SML				IAML		01 08 29.9	
	comp=N,10μm,0.7s						
SML				IAML		01 08 30.3	
	comp=E,8μm,0.8s						
SML	**Sawmill**	**0.93 59**			**Sn**	**01 08 27.9**	**+0.3**
SML	**Sawmill**	**0.93 59**		P	**Pn**	**01 08 14.7**	**-0.4**
	baz=239,SNR=418						
SML				S	**Sn**	**01 08 27.9**	**+0.3**
	baz=239						
PWL	**Port Wells**	**0.95 120**			**Pn**	**01 08 15.1**	**-0.2**
PWL	**Port Wells**	**0.95 120**			**Sn**	**01 08 27.9**	**0.0**
PWL	**Port Wells**	**0.95 120**		P	**Pn**	**01 08 15.1**	**-0.2**
	baz=300,SNR=260						
PWL				S	**Sn**	**01 08 28.4**	**+0.5**
	baz=300						
SKT	**Skwentna**	**0.97 312**			**Pn**	**01 08 15.3**	**-0.3**
SKT				IAML		01 08 31.0	
	comp=E,9μm,0.4s						
SKT				IAML		01 08 31.0	
	comp=N,8μm,0.4s						
SKT	**Skwentna**	**0.97 312**			**Sn**	**01 08 28.6**	**+0.2**
SKT	**Skwentna**	**0.97 312**		P	**Pn**	**01 08 15.3**	**-0.3**
	baz=132,SNR=477						
SKT				S	**Sn**	**01 08 28.8**	**+0.4**
	baz=132						
SPCG	**Spurr Capps Gl**	**0.97 268**			**Pn**	**01 08 15.6**	**-0.1**
SPCG					**Sn**	**01 08 28.9**	**+0.4**
SPU	**Mount Spurr**	**1.00 262**			**Pn**	**01 08 15.5**	**-0.5**
N20K	**Mount Spurr**	**1.07 263**		P	**Pn**	**01 08 16.7**	**-0.3**
	baz=83						
N20K				S	**Sn**	**01 08 30.8**	**-0.1**
	baz=83						
SPCR	**Spurr Chakacha**	**1.07 263**			**Pn**	**01 08 16.7**	**-0.3**
SPCR					**Sn**	**01 08 31.1**	**+0.2**
SPCR	**Spurr Chakacha**	**1.07 263**			**Pn**	**01 08 16.6**	**-0.3**
SPCR					**Sn**	**01 08 30.8**	**0.0**
SPCR	**Spurr Chakacha**	**1.07 263**		P	**Pn**	**01 08 16.7**	**-0.3**
	baz=83,SNR=378						
SPCR				S	**Sn**	**01 08 30.9**	**0.0**
	baz=83						
CUT	**Chulitna**	**1.08 354**			**Pn**	**01 08 17.1**	**0.0**
CUT				IAML		01 08 33.6	
	comp=N,8μm,0.4s						
CUT	**Chulitna**	**1.08 354**			**Sn**	**01 08 31.4**	**+0.5**
CUT	**Chulitna**	**1.08 354**		P	**Pn**	**01 08 17.0**	**0.0**
	baz=174,SNR=120						
CUT				S	**Sn**	**01 08 32.0**	**+1.1**
	baz=174						
SPBG	**Spurr Blockage**	**1.14 267**			**Pn**	**01 08 17.9**	**-0.1**
M23K	**Glacier View**	**1.19 66**		P	**Pn**	**01 08 18.7**	**+0.1**
	baz=247,SNR=681						
M23K				S	**Sn**	**01 08 34.9**	**+1.2**
	baz=247						
L22K	**Petersville**	**1.24 344**			**Pn**	**01 08 19.4**	**+0.1**
SEW	**Seward**	**1.27 167**			**Pn**	**01 08 19.0**	**-0.6**
SEW	**Seward**	**1.27 167**		P	**Pn**	**01 08 19.1**	**-0.6**
	baz=347,SNR=24						
SCM	**Sheep Creek Mo**	**1.38 68**			**Pn**	**01 08 21.4**	**+0.2**
SCM	**Sheep Creek Mo**	**1.38 68**		P	**Pn**	**01 08 21.2**	**+0.1**
	baz=249,SNR=376						
SCM				S	**Sn**	**01 08 39.5**	**+1.1**
	baz=249						
GLI	**Glacier Island**	**1.49 107**			**Pn**	**01 08 22.2**	**-0.4**
GLI				IAML		01 08 45.0	
	comp=N,4μm,0.6s						
GLI				IAML		01 08 47.3	
	comp=E,4μm,0.5s						
GLI	**Glacier Island**	**1.49 107**		P	**Pn**	**01 08 22.2**	**-0.4**
	baz=288,SNR=44						
GLI				S	**Sn**	**01 08 41.0**	**0.0**
	baz=288						
M20K	**Styx River**	**1.59 291**			**Pn**	**01 08 24.6**	**+0.5**
M20K	**Styx River**	**1.59 291**		IAML		01 08 47.4	
	comp=N,2μm,0.9s						
M20K	**Styx River**	**1.59 291**		P	**Pn**	**01 08 24.5**	**+0.5**
	baz=110						
WAT7	**Susitna Watana**	**1.60 20**			**Pn**	**01 08 24.5**	**+0.4**
RED	**Redoubt Volcan**	**1.63 237**			**Pn**	**01 08 24.6**	**-0.1**
RED				IAML		01 08 46.2	
	comp=N,3μm,0.9s						
RED				IAML		01 08 47.2	
	comp=E,4μm,0.8s						
BRLK	**Bradley Lake**	**1.64 196**		IAML		01 08 50.0	
	comp=E,2μm,0.6s						
BRLK				IAML		01 08 52.1	
	comp=N,2μm,0.5s						
BRSE	**Bradley Lake S**	**1.64 193**			**Pn**	**01 08 24.3**	**-0.4**
BRSE	**Bradley Lake S**	**1.64 193**		P	**Pn**	**01 08 24.3**	**-0.4**
	baz=12,SNR=29						
WAT6	**Susitna Watana**	**1.65 40**			**Pn**	**01 08 24.9**	**+0.1**
WAT6	**Susitna Watana**	**1.65 40**		P	**Pn**	**01 08 25.0**	**+0.1**
	baz=221,SNR=139						
WAT6				S	**Sn**	**01 08 45.6**	**+0.6**
	baz=221						
WAT1	**Susitna Watana**	**1.65 24**			**Pn**	**01 08 25.0**	**+0.2**
WAT1	**Susitna Watana**	**1.65 24**		P	**Pn**	**01 08 25.0**	**+0.2**
	baz=205						
WAT1				S	**Sn**	**01 08 46.0**	**+1.2**
	baz=205						
O20K	**Slope Mountain**	**1.80 227**		P	**Pn**	**01 08 27.5**	**+0.7**
	baz=45,SNR=58						
O20K				S	**Sn**	**01 08 48.5**	**-0.1**
	baz=45						
FID	**Port Fidalgo**	**1.82 107**		IAML		01 08 50.7	
	comp=N,2μm,0.6s						
FID				IAML		01 08 58.0	
	comp=E,2μm,0.6s						
P23K	**Montague Islan**	**1.86 135**			**Pn**	**01 08 26.8**	**-0.9**
P23K				IAML		01 08 58.1	
	comp=E,3μm,0.7s						
P23K				IAML		01 08 59.6	
	comp=N,3μm,0.8s						
P23K	**Montague Islan**	**1.86 135**		P	**Pn**	**01 08 26.4**	**-1.3**
	baz=317						
PPLA	**Purkeypile**	**1.87 328**			**Pn**	**01 08 28.3**	**+0.4**
PPLA				IAML		01 08 53.4	
	comp=E,3μm,0.7s						
PPLA				IAML		01 08 53.8	
	comp=N,2μm,0.7s						
PPLA	**Purkeypile**	**1.87 328**		P	**Pn**	**01 08 28.3**	**+0.4**
	baz=146,SNR=56						
PPLA				S	**Sn**	**01 08 51.0**	**+0.7**
	baz=146						
HOM	**Homer**	**1.87 206**			**Pn**	**01 08 28.2**	**+0.5**
HOM	**Homer**	**1.87 206**		P	**Pn**	**01 08 27.9**	**+0.2**
	baz=25						
HOM				S	**Sn**	**01 08 50.9**	**+0.8**
	baz=25						
CNPM	**China Poot**	**1.92 199**			**Pn**	**01 08 28.3**	**-0.2**
CNPM				IAML		01 08 55.9	
	comp=E,2μm,0.7s						
CNPM				IAML		01 08 57.6	
	comp=N,1μm,0.5s						
HIN	**Hinchinbrook I**	**1.96 117**			**Pn**	**01 08 28.4**	**-0.7**
HIN				IAML		01 09 02.3	
	comp=N,2μm,0.6s						
KLU	**Klutina**	**1.97 84**			**Pn**	**01 08 29.3**	**0.0**
KLU				IAML		01 09 01.6	
	comp=E,2μm,0.8s						
KLU	**Klutina**	**1.97 84**		P	**Pn**	**01 08 29.1**	**-0.1**
	baz=266,SNR=144						
KLU				S	**Sn**	**01 08 53.3**	**+0.4**
	baz=266						
M24K	**Tolsona, Glenn**	**1.98 65**		P	**Pn**	**01 08 30.4**	**+1.0**
	baz=248,SNR=171						
M24K				S	**Sn**	**01 08 55.1**	**+2.0**
	baz=248						
ILSW	**Iliamna Southw**	**2.05 230**			**Pn**	**01 08 30.8**	**+0.4**
ILSW				IAML		01 09 00.5	
	comp=E,1μm,0.8s						
ILSW				IAML		01 09 04.0	
	comp=N,1μm,1.0s						
DIV	**Divide**	**2.06 94**			**Pn**	**01 08 30.3**	**-0.2**
DIV				IAML		01 09 03.7	
	comp=N,3μm,0.6s						
DIV				IAML		01 09 05.3	
	comp=E,1μm,0.5s						
TRF	**Thorofare Moun**	**2.12 357**			**Pn**	**01 08 31.8**	**+0.4**
TRF				IAML		01 09 12.4	
	comp=N,1μm,0.6s						
TRF	**Thorofare Moun**	**2.12 357**		P	**Pn**	**01 08 31.8**	**+0.4**
	baz=176,SNR=47						
TRF				S	**Sn**	**01 08 57.5**	**+0.9**
	baz=176						
DHY	**Denali Highway**	**2.14 34**			**Pn**	**01 08 32.3**	**+0.7**
DHY				IAML		01 09 03.1	
	comp=E,1μm,0.7s						
DHY				IAML		01 09 04.9	
	comp=N,1μm,0.7s						
DHY	**Denali Highway**	**2.14 34**		P	**Pn**	**01 08 31.8**	**+0.2**
	baz=216,SNR=65						
DHY				S	**Sn**	**01 08 58.8**	**+1.9**
	baz=216						
RND	**Reindeer**	**2.15 14**			**Pn**	**01 08 32.1**	**+0.5**
L20K	**Farewell, AK**	**2.16 304**		IAML		01 09 01.0	
L20K	comp=N,2μm,0.9s			IAML		01 09 01.3	
	comp=E,2μm,0.7s						
L20K	**Farewell, AK**	**2.16 304**		P	**Pn**	**01 08 32.1**	**+0.4**
	baz=121						
L20K				S	**Sn**	**01 08 58.4**	**+1.1**
	baz=121						
M19K	**Big River Lodg**	**2.17 287**		P	**Pn**	**01 08 32.2**	**+0.4**
	baz=104						
M19K				S	**Sn**	**01 08 58.4**	**+0.9**
	baz=104						
EYAK	**Cordova Ski Ar**	**2.23 109**			**Pn**	**01 08 32.1**	**-0.6**
EYAK				IAML		01 09 11.0	
	comp=E,1μm,0.5s						
EYAK	**Cordova Ski Ar**	**2.23 109**		P	**Pn**	**01 08 32.0**	**-0.6**
	baz=292						
N19K	**Bonanza Creek**	**2.23 258**			**Pn**	**01 08 33.2**	**+0.4**
N19K	**Bonanza Creek**	**2.23 258**		P	**Pn**	**01 08 33.2**	**+0.4**
	baz=75,

N25K **Chitina, Valde** 2.61 82 P Pn 01 08 37.8 -0.2
baz=266,SNR=110
N25K S Sn 01 09 09.2 +0.7
baz=266
BMRM **Bremner River** 2.65 96 IAML 01 09 19.2
comp=E,1µm,0.6s
BMRM IAML 01 09 21.2
comp=N,1µm,0.7s
BMRM **Bremner River** 2.65 96 P Pn 01 08 37.7 -0.8
baz=280
PAX **Paxson** 2.69 51 Pn 01 08 40.4 +1.4
PAX IAML 01 09 22.2
comp=N,1µm,0.7s
PAX IAML 01 09 23.0
comp=E,715nm,0.6s
PAX **Paxson** 2.69 51 P Pn 01 08 40.2 +1.2
baz=234,SNR=122
CHUM **Lake Minchumin** 2.77 338 P Pn 01 08 40.1 +0.1
baz=157,SNR=58
CHUM S Sn 01 09 12.4 +0.3
baz=157
K20K **Telida** 2.77 319 Pn 01 08 40.4 +0.3
K20K **Telida** 2.77 319 IAML 01 09 22.0
comp=E,531nm,0.8s
K20K **Telida** 2.77 319 P Pn 01 08 40.4 +0.3
baz=136
K20K S Sn 01 09 11.9 -0.4
baz=136
WACK **Wrangell Chich** 2.79 74 Pn 01 08 40.7 +0.1
M18K **Stony River** 2.80 276 Pn 01 08 40.9 +0.4
M18K **Stony River** 2.80 276 P Pn 01 08 40.8 +0.4
baz=91,SNR=108
M18K S Sn 01 09 13.8 +0.9
baz=91
BPAW **Bear Paw Mtn.** 2.81 351 Pn 01 08 40.4 -0.2
BPAW **Bear Paw Mtn.** 2.81 351 P Pn 01 08 40.4 -0.2
baz=170,SNR=20
N18K **Kilae Creek** 2.94 260 Pn 01 08 42.4 0.0
N18K **Kilae Creek** 2.94 260 P Pn 01 08 42.4 0.0
baz=75
N18K S Sn 01 09 15.7 -0.7
baz=75
O18K **Koktuh Hills** 2.96 242 Pn 01 08 42.5 -0.3
O18K IAML 01 09 45.0
comp=N,602nm,0.9s
O18K **Koktuh Hills** 2.96 242 P Pn 01 08 42.4 -0.4
baz=58,SNR=25
SYI **Shuyak Island** 2.99 205 IAML 01 09 27.6
comp=N,443nm,0.6s
SYI IAML 01 09 28.9
comp=E,634nm,0.6s
GLB **Gilahina Butte** 2.99 85 IAML 01 09 29.8
comp=N,974nm,0.7s
GLB IAML 01 09 30.6
comp=E,530nm,0.8s
Q20K **Shuyak Island** 2.99 205 P Pn 01 08 42.9 -0.1
baz=23
Q19K **Cape Douglas,** 3.02 218 Pn 01 08 44.0 +0.5
Q19K **Cape Douglas,** 3.02 218 P Pn 01 08 43.5 -0.1
baz=36,SNR=40
VRDI **Verde Repeater** 3.17 89 Pn 01 08 45.2 -0.6
VRDI IAML 01 09 48.0
comp=N,482nm,0.9s
P18K **Big Mountain,** 3.24 235 P Pn 01 08 46.1 -0.5
baz=51
WRH **Wood River Hil** 3.27 15 Pn 01 08 48.2 +1.3
WRH **Wood River Hil** 3.27 15 IAML 01 09 42.6
comp=N,429nm,0.8s
L18K **Granite Mounta** 3.29 288 Pn 01 08 47.5 +0.4
L18K **Granite Mounta** 3.29 288 IAML 01 09 46.7
comp=N,349nm,1.1s
L18K **Granite Mounta** 3.29 288 P Pn 01 08 47.6 +0.4
baz=103
NEA2 **Nenana** 3.29 7 P Pn 01 08 48.1 +0.8
baz=188,SNR=25
MENT **Mentasta** 3.36 59 Pn 01 08 48.8 +0.5
MCARA **McCarthy VSAT** 3.37 86 Pn 01 08 48.7 +0.4
MCARA **McCarthy VSAT** 3.37 86 P Pn 01 08 48.7 +0.4
baz=272
HDA **Harding Lake** 3.39 23 IAML 01 09 45.7
comp=N,701nm,1.0s
HDA IAML 01 09 47.8
comp=E,706nm,1.0s
HDA **Harding Lake** 3.39 23 P Pn 01 08 49.9 +1.3
baz=206
CRQM **Cirque** 3.40 97 Pn 01 08 48.4 -0.4
RIDG **Independent Ri** 3.40 43 Pn 01 08 50.1 +1.4
RIDG **Independent Ri** 3.40 43 P Pn 01 08 49.7 +1.0
baz=227,SNR=65
CRQE **Cirque** 3.42 97 P Pn 01 08 48.6 -0.5
baz=282,SNR=58
J20K **Nowinta River** 3.42 328 IAML 01 09 29.6
comp=N,630nm,0.6s
J20K IAML 01 09 30.5
comp=E,470nm,0.3s
J20K **Nowinta River** 3.42 328 P Pn 01 08 49.2 +0.2
baz=145
KHIT **Khitrov Hills** 3.43 102 Pn 01 08 48.4 -0.8
CCB **Clear Creek Bu** 3.47 16 Pn 01 08 49.5 -0.1
M26K **Nabesna, AK** 3.49 69 IAML 01 09 54.7
comp=N,480nm,0.6s
M26K IAML 01 09 56.1
comp=E,396nm,1.0s
M26K **Nabesna, AK** 3.49 69 P Pn 01 08 50.3 +0.3
baz=255
TGL **Tana Glacier** 3.54 96 Pn 01 08 50.0 -0.8
TGL **Tana Glacier** 3.54 96 IAML 01 09 45.3
comp=E,629nm,0.5s
TGL IAML 01 09 52.2
comp=N,554nm,1.1s
L26K **Log Cabin Wild** 3.56 59 IAML 01 09 56.6
comp=N,604nm,0.6s
L26K **Log Cabin Wild** 3.56 59 P Pn 01 08 51.6 +0.8
baz=244,SNR=40
M17K **Holitna River** 3.57 274 IAML 01 09 58.0
comp=N,589nm,0.8s
M17K **Holitna River** 3.57 274 P Pn 01 08 51.5 +0.4
baz=88,SNR=99
N17K **Nushagak Hills** 3.59 260 Pn 01 08 51.5 +0.1
N17K **Nushagak Hills** 3.59 260 IAML 01 09 33.7
comp=E,294nm,0.7s
N17K IAML 01 09 55.1
comp=N,271nm,0.9s
N17K **Nushagak Hills** 3.59 260 P Pn 01 08 51.4 +0.1
baz=74,SNR=47
DOT **Dot Lake** 3.61 47 Pn 01 08 52.6 +1.1
WAX **Waxell Ridge** 3.61 101 IAML 01 09 52.9
comp=E,665nm,0.8s
PTPK **Patty Peak** 3.65 89 Pn 01 08 52.2 -0.2
KAHG **Katmai Hook Gl** 3.65 221 Pn 01 08 52.1 -0.1
COLA **College** 3.68 15 Pn 01 08 53.9 +1.3
COLA **College** 3.68 15 P Pn 01 08 54.0 +1.5
baz=196
Q18K **Katmai Hardscr** 3.68 225 P Pn 01 08 52.5 -0.2
baz=41
J19K **Poorman** 3.71 318 Pn 01 08 53.1 +0.1
J19K IAML 01 09 36.6
comp=N,343nm,0.8s
J19K IAML 01 09 54.8
comp=E,267nm,0.7s
J19K **Poorman** 3.71 318 P Pn 01 08 53.3 +0.3
baz=134
MLY **Manley** 3.72 355 P Pn 01 08 53.0 -0.1
baz=175,SNR=72
IL31 3.73 21 Pn 01 08 53.1 -0.1
ILAR **Eielson Array** 3.73 21 P Pn 01 08 52.6 -0.6
comp=E,8.3nm,0.4s,baz=206,slow=14,SNR=88
ILAR S Sn 01 09 36.2 +0.4
comp=E,23nm,0.5s,baz=29,slow=36,SNR=3.5
ILAR **Eielson Array** 3.73 21 Pn 01 08 52.2 -1.0
J18K **Innoko River** 3.78 307 Pn 01 08 54.2 +0.3
J18K **Innoko River** 3.78 307 IAML 01 09 38.4
comp=N,345nm,0.7s
J18K **Innoko River** 3.78 307 P Pn 01 08 54.2 +0.3
baz=122
KDAK **Kodiak Island** 3.80 201 P Pn 01 08 54.1 0.0
comp=N,9.3nm,0.3s,baz=28,slow=3.8,SNR=37
KDAK S Sn 01 09 39.1 +1.6
comp=N,67nm,0.7s,baz=56,slow=22,SNR=1.7
KDAK **Kodiak Island** 3.80 201 Pn 01 08 52.7 -1.4
KDAK IAML 01 09 55.9
comp=N,271nm,0.9s
KDAK IAML 01 09 56.8
comp=N,256nm,0.8s
KDAK **Kodiak Island** 3.80 201 P Pn 01 08 52.5 -1.6
baz=19

O17K **Koliganek Bris** 3.83 249 Pn 01 08 54.6 +0.1
O17K **Koliganek Bris** 3.83 249 P Pn 01 08 54.7 +0.1
baz=63
I23K **Minto, Yukon-K** 3.84 4 Pn 01 08 54.5 -0.1
I23K **Minto, Yukon-K** 3.84 4 IAML 01 10 03.4
comp=E,236nm,1.1s
I23K **Minto, Yukon-K** 3.84 4 P Pn 01 08 55.0 +0.4
baz=185,SNR=78
SCRK **Sand Creek** 3.84 44 Pn 01 08 55.2 +0.4
SCRK **Sand Creek** 3.84 44 IAML 01 09 57.9
comp=N,425nm,1.0s
SCRK IAML 01 09 58.3
comp=E,564nm,1.0s
SCRK **Sand Creek** 3.84 44 P Pn 01 08 55.2 +0.4
baz=229,SNR=32
P17K **Kvichak River** 3.85 239 P Pn 01 08 55.1 +0.1
baz=54
J25K **Salcha River,** 3.91 31 IAML 01 09 49.1
comp=E,420nm,0.6s
J25K IAML 01 09 53.0
comp=N,249nm,0.6s
J25K **Salcha River,** 3.91 31 P Pn 01 08 57.1 +1.3
baz=215
I21K **Tanana** 3.96 348 P Pn 01 08 57.5 +1.2
baz=166
POKR **Poker Plat Res** 3.97 16 Pn 01 08 57.6 +1.1
POKR **Poker Plat Res** 3.97 16 IAML 01 10 03.5
comp=E,310nm,1.1s
POKR **Poker Plat Res** 3.97 16 P Pn 01 08 57.6 +1.1
baz=198,SNR=18
M27K **Edge Creek, AK** 3.99 72 P Pn 01 08 57.7 +0.7
baz=258
L17K **Donlin** 4.02 285 Pn 01 08 57.5 +0.3
L17K **Donlin** 4.02 285 P Pn 01 08 57.4 +0.3
baz=98
I20K **Naaghedeneel** 4.02 332 P Pn 01 08 57.5 +0.4
baz=148
BARN **Barnard Glacie** 4.05 90 IAML 01 10 05.6
comp=E,256nm,1.0s
BARN IAML 01 10 10.3
comp=N,305nm,0.7s
GRNC **Granite Creek** 4.07 95 Pn 01 08 57.6 -0.4
GRNC **Granite Creek** 4.07 95 IAML 01 10 03.5
comp=E,205nm,0.8s
GRNC IAML 01 10 03.7
comp=N,403nm,0.6s
MESA **MESA** 4.12 103 IAML 01 10 08.8
comp=E,418nm,0.7s
MESA **MESA** 4.12 103 P Pn 01 08 58.4 -0.4
baz=290
MGLS **Mageik Landsli** 4.14 221 Pn 01 08 59.0 +0.1
K17K **Iditarod** 4.14 293 Pn 01 08 59.3 +0.5
K17K **Iditarod** 4.14 293 IAML 01 10 05.9
comp=N,325nm,0.8s
K17K IAML 01 10 06.7
comp=E,279nm,1.0s
K17K **Iditarod** 4.14 293 P Pn 01 08 59.3 +0.5
baz=106
YAH **Yahtse** 4.16 100 IAML 01 10 14.1
comp=E,306nm,1.0s
YAH IAML 01 10 20.6
comp=N,267nm,1.1s
BC01 **Beaver Creek A** 4.21 62 Pn 01 09 00.1 +0.3
L27K **Beaver Creek,** 4.21 62 Pn 01 09 00.1 +0.3
L27K **Beaver Creek,** 4.21 62 IAML 01 10 17.5
comp=N,218nm,1.1s
L27K **Beaver Creek,** 4.21 62 P Pn 01 09 00.1 +0.3
baz=106
CTG **Chitna Glacier** 4.22 91 P Pn 01 09 00.2 +0.1
baz=278,SNR=14
CTGM **Chitina Glacie** 4.22 91 Pn 01 08 60.0 -0.2
CTGM **Chitina Glacie** 4.22 91 IAML 01 10 08.0
comp=N,209nm,1.0s
BCAR **Beaver Creek A** 4.23 62 Pn 01 09 00.5 +0.4
CNTC **Contact Creek** 4.28 226 Pn 01 09 01.0 +0.2
Q17K **Contact Creek** 4.28 226 P Pn 01 09 01.0 +0.1
baz=42
J26L **Joseph Creek** 4.33 40 P Pn 01 09 02.5 +1.0
baz=226,SNR=80
M16K **Timber Creek** 4.34 270 Pn 01 09 02.0 +0.4
M16K **Timber Creek** 4.34 270 P Pn 01 09 02.0 +0.4
baz=82
N16K **Nishlik Lake** 4.36 262 P Pn 01 09 02.2 +0.3
baz=75,SNR=36
O16K **Kokwok River B** 4.36 250 Pn 01 09 01.9 0.0
O16K **Kokwok River B** 4.36 250 IAML 01 10 22.8
comp=E,150nm,0.8s
O16K IAML 01 10 32.5
comp=N,202nm,0.9s
O16K **Kokwok River B** 4.36 250 P Pn 01 09 02.0 +0.1
baz=63
LOGN **Logan Glacier** 4.41 93 Pn 01 09 02.3 -0.3
LOGN **Logan Glacier** 4.41 93 IAML 01 10 18.6
comp=N,162nm,0.8s
LOGN IAML 01 10 21.8
comp=E,187nm,0.7s
R18K **Karluk** 4.41 213 P Pn 01 09 01.9 -0.6
baz=29
YUK2 **White River** 4.41 80 Pn 01 09 02.4 -0.3
TABL **Table Mountain** 4.43 98 Pn 01 09 02.6 -0.4
TABL **Table Mountain** 4.43 98 IAML 01 10 14.8
comp=E,252nm,1.0s
TABL IAML 01 10 25.6
comp=N,298nm,0.8s
OHAK **Old Harbor** 4.46 204 Pn 01 09 01.3 -1.9
OHAK **Old Harbor** 4.46 204 IAML 01 10 13.8
comp=E,184nm,1.0s
OHAK **Old Harbor** 4.46 204 P Pn 01 09 01.3 -1.9
baz=21
BVCY **Beaver Creek** 4.47 72 P Pn 01 09 03.1 -0.2
baz=260,SNR=11
H23K **Yukon River** 4.51 2 P Pn 01 09 04.6 +0.6
baz=183
H21K **Melozitna Rive** 4.51 345 Pn 01 09 04.2 +0.2
H21K **Melozitna Rive** 4.51 345 P Pn 01 09 04.3 +0.4
baz=163
L16K **Owhat River** 4.54 279 Pn 01 09 04.5 +0.2
L16K **Owhat River** 4.54 279 IAML 01 10 32.2
comp=E,140nm,0.9s
L16K **Owhat River** 4.54 279 P Pn 01 09 04.5 +0.2
baz=91
K27K **Chicken** 4.55 50 IAML 01 10 18.8
comp=N,146nm,0.9s
K27K IAML 01 10 26.6
comp=E,184nm,1.1s
K27K **Chicken** 4.55 50 P Pn 01 09 04.7 +0.3
baz=237,SNR=13
YUK3 **Moose Creek** 4.59 80 Pn 01 09 05.0 -0.2
YUK3 **Moose Creek** 4.59 80 P Pn 01 09 05.4 +0.1
baz=268
P16K **Nushagak River** 4.60 243 P Pn 01 09 05.4 +0.2
baz=57
H22K **Ishtalitna Cre** 4.61 353 P Pn 01 09 06.0 +0.7
baz=172,SNR=29
H24K **Noodor Dome** 4.62 11 P Pn 01 09 06.6 +1.2
baz=193,SNR=20
GCSA **Galena City Sc** 4.63 321 Pn 01 09 06.3 +0.8
GCSA **Galena City Sc** 4.63 321 P Pn 01 09 06.3 +0.8
baz=135,SNR=9.5
PRP **Porcupine Dome** 4.65 24 Pn 01 09 06.4 +0.4
PRP **Porcupine Dome** 4.65 24 IAML 01 10 07.5
comp=N,282nm,0.7s
PRP IAML 01 10 27.1
comp=E,242nm,1.2s
PRP **Porcupine Dome** 4.65 24 P Pn 01 09 07.4 +1.4
baz=208,SNR=35
J17K **VABM Dome** 4.70 300 Pn 01 09 06.3 -0.1
J17K **VABM Dome** 4.70 300 IAML 01 10 28.5
comp=E,136nm,0.9s
J17K **VABM Dome** 4.70 300 P Pn 01 09 06.4 -0.1
baz=112
H20K **Anotleneega Mo** 4.71 334 P Pn 01 09 07.1 +0.5
baz=150,SNR=11
O28M **Mount Upton** 4.81 92 IAML 01 10 24.4
comp=N,160nm,0.7s
O28M IAML 01 10 33.2
comp=E,134nm,1.0s
O28M **Mount Upton** 4.81 92 P Pn 01 09 08.9 +0.6
baz=281
PLK4 **Peulik 4** 4.92 224 Pn 01 09 10.0 +0.3
PLK4 **Peulik 4** 4.92 224 IAML 01 10 34.1
comp=N,227nm,1.1s
PLK4 IAML 01 10 45.5
comp=E,182nm,0.9s
R17L **Mt. Peulik Vol** 4.93 224 P Pn 01 09 10.1 +0.4
baz=38,SNR=6.5
YUK8 **Steele Glacier** 4.94 86 P Pn 01 09 11.0 +0.9
baz=275
IMAR **Indian Mountai** 4.95 342 Pn 01 09 10.2 +0.3
PCA **Pinnacle** 4.95 100 Pn 01 09 09.1 -0.9
PINM **Pinnacle** 4.95 100 P Pn 01 09 09.4 -0.7
baz=288
I26K **Coal Creek Min** 5.04 35 P Pn 01 09 12.2 +1.1
baz=221
N15K **Kwethluk River** 5.08 261 Pn 01 09 12.2 +0.5
N15K **Kwethluk River** 5.08 261 IAML 01 10 44.9
comp=N,212nm,0.9s
N15K IAML 01 10 45.7
comp=E,219nm,0.9s
N15K **Kwethluk River** 5.08 261 P Pn 01 09 12.2 +0.5
baz=73
H19K **Roundabout Mou** 5.10 328 Pn 01 09 12.1 +0.1
H19K **Roundabout Mou** 5.10 328 IAML 01 10 36.6
comp=E,108nm,0.7s
H19K IAML 01 10 49.3
comp=N,112nm,1.1s
H19K **Roundabout Mou** 5.10 328 P Pn 01 09 12.2 +0.3
baz=143,SNR=10
M15K **Kasigluk River** 5.23 268 P Pn 01 09 13.8 +0.1
baz=79
SII **Sitkinak Islan** 5.26 206 P Pn 01 09 14.8 +0.6
baz=23
H25L **Birch Creek** 5.29 19 Pn 01 09 16.2 +1.8
H25L **Birch Creek** 5.29 19 P Pn 01 09 16.4 +1.9
baz=202,SNR=14
J16K **Anvik River** 5.31 296 IAML 01 10 47.5
comp=N,119nm,0.9s
J16K **Anvik River** 5.31 296 P Pn 01 09 14.9 +0.1
baz=107,SNR=14
O15K **Ungalikthiuk R** 5.34 250 Pn 01 09 15.7 +0.4
O15K **Ungalikthiuk R** 5.34 250 IAML 01 10 43.1
comp=E,130nm,0.8s
O15K IAML 01 10 45.8
comp=N,89nm,0.8s
O15K **Ungalikthiuk R** 5.34 250 P Pn 01 09 15.8 +0.5
baz=82
H18K **Honhosa River** 5.37 319 Pn 01 09 16.3 +0.6
H18K **Honhosa River** 5.37 319 IAML 01 10 50.5
comp=N,86nm,1.1s
H18K **Honhosa River** 5.37 319 P Pn 01 09 16.3 +0.6
baz=132
G23K **Bananza Creek** 5.39 360 P Pn 01 09 16.8 +0.7
baz=180,SNR=19
G21K **Allakaket** 5.42 345 P Pn 01 09 16.7 +0.4
baz=162
YUK4 **Talbot Arm** 5.47 85 P Pn 01 09 17.8 +0.5
baz=274
G24K **Hadweenzic Riv** 5.50 11 P Pn 01 09 18.2 +0.8
baz=193,SNR=13
L15K **Ungalak Mounta** 5.50 279 Pn 01 09 17.6 +0.1
L15K **Ungalak Mounta** 5.50 279 P Pn 01 09 17.6 +0.1
baz=89,SNR=8.0
PNL **Peninsula** 5.51 103 P Pn 01 09 17.7 +0.1
baz=292
K15K **Wolf Creek Mou** 5.54 285 P Pn 01 09 18.5 +0.5
baz=95,SNR=21
I17K **Unalakleet** 5.55 302 Pn 01 09 18.9 +0.8
I17K **Unalakleet** 5.55 302 P Pn 01 09 18.5 +0.4
baz=113
M29M **Somme Creek** 5.58 73 Pn 01 09 18.9 +0.3
M29M **Somme Creek** 5.58 73 P Pn 01 09 18.8 +0.2
baz=263,SNR=17
DAWY **Dawson** 5.60 56 P Pn 01 09 19.4 +0.5
baz=245
YUK6 **Outpost Mounta** 5.66 89 Pn 01 09 20.0 +0.2
YUK6 **Outpost Mounta** 5.66 89 P Pn 01 09 20.0 +0.2
baz=279
O29M **Mount Kennedy** 5.69 95 P Pn 01 09 20.1 -0.1
baz=285
I27K **Kandik River** 5.70 38 P Pn 01 09 20.3 +0.1
baz=225
G25K **Bearman Lake** 5.71 16 P Pn 01 09 20.5 +0.2
baz=199,SNR=11
G19K **Purcell Mounta** 5.75 330 P Pn 01 09 20.7 -0.2
baz=144
H17K **Granite Mounta** 5.76 313 Pn 01 09 21.8 +0.8
H17K **Granite Mounta** 5.76 313 P Pn 01 09 21.4 +0.4
baz=124,SNR=15
M14K **Bethel** 5.83 269 Pn 01 09 22.5 +0.5
M14K **Bethel** 5.83 269 P Pn 01 09 22.5 +0.5
baz=79
L29M **L29M** 5.83 67 Pn 01 09 22.5 +0.4
L29M **L29M** 5.83 67 P Pn 01 09 22.6 +0.4
baz=257
YUK5 **Granite Creek** 5.88 87 Pn 01 09 22.6 -0.2
COLD **Coldfoot** 5.91 359 Pn 01 09 24.2 +1.1
COLD **Coldfoot** 5.91 359 P Pn 01 09 23.8 +0.7
baz=179,SNR=8.8
N14K **Kuskokwak Cree** 5.92 261 P Pn 01 09 23.7 +0.5
baz=71,SNR=6.8
O14K **Tigyukauivet M** 5.97 254 Pn 01 09 24.4 +0.5
O14K **Tigyukauivet M** 5.97 254 P Pn 01 09 24.3 +0.4
baz=65
G18K **Tagagawik** 5.97 324 Pn 01 09 24.4 +0.5
G18K **Tagagawik** 5.97 324 P Pn 01 09 24.4 +0.5
baz=136
HYT **Haines Junctio** 6.09 89 Pn 01 09 25.7 0.0
HYT **Haines Junctio** 6.09 89 P Pn 01 09 25.6 -0.1
baz=280
F21K **Alatna River** 6.10 347 Pn 01 09 26.4 +0.8
F21K **Alatna River** 6.10 347 P Pn 01 09 26.2 +0.6
baz=164,SNR=13
L14K **Kuka Creek** 6.10 276 Pn 01 09 26.4 +0.9
L14K **Kuka Creek** 6.10 276 P Pn 01 09 26.5 +0.9
baz=85
I28M **Miner Creek** 6.12 43 P Pn 01 09 26.7 +0.6
baz=232,SNR=14
H27K **Steamboat Moun** 6.18 34 Pn 01 09 27.2 +0.4
H27K **Steamboat Moun** 6.18 34 P Pn 01 09 27.0 +0.2
baz=221
N30M **Aishikik Lake** 6.21 83 Pn 01 09 26.7 -0.5
N30M **Aishikik Lake** 6.21 83 P Pn 01 09 26.8 -0.5
baz=274
F20K **Avaraart Lake** 6.25 339 Pn 01 09 28.1 +0.4
F20K **Avaraart Lake** 6.25 339 P Pn 01 09 28.0 +0.3
baz=154
G26K **Porcupine Rive** 6.25 23 Pn 01 09 28.0 +0.2
G26K **Porcupine Rive** 6.25 23 P Pn 01 09 28.1 +0.4
baz=209
F22K **John River** 6.26 352 P Pn 01 09 28.9 +1.0
baz=170
F24K **Squaw Lake** 6.27 8 P Pn 01 09 28.7 +0.6
baz=189
K29M **Barlow Dome** 6.29 61 P Pn 01 09 28.2 -0.2
baz=252,SNR=6.5
P29M **Windy Craggy** 6.31 100 P Pn 01 09 28.7 +0.2
baz=291,SNR=8.7
G17K **Kiwalik Mounta** 6.34 316 Pn 01 09 29.3 +0.4
G17K **Kiwalik Mounta** 6.34 316 P Pn 01 09 29.8 +0.9
baz=126
M30M **Minto, Yukon** 6.36 73 P Pn 01 09 29.7 +0.4
baz=264
F19K **Shaleruckik Mo** 6.47 332 Pn 01 09 30.8 +0.1
F19K **Shaleruckik Mo** 6.47 332 P Pn 01 09 31.3 +0.6
baz=145
H16K **Elim** 6.47 306 Pn 01 09 30.6 -0.2
H16K **Elim** 6.47 306 P Pn 01 09 31.2 +0.4
baz=115
P30M **Million Dollar** 6.52 95 P Pn 01 09 31.4 -0.1
baz=286
J14K **Nanvaranak Lak** 6.52 288 P Pn 01 09 32.0 +0.6
baz=97,SNR=5.9
BMAR **Burnt Mountain** 6.55 19 Pn 01 09 33.0 +1.1
F25K **Christian Rive** 6.56 15 P Pn 01 09 32.7 +0.8
baz=199,SNR=16
M13K **Dall Lake** 6.58 268 Pn 01 09 33.0 +0.9
M13K **Dall Lake** 6.58 268 P Pn 01 09 32.9 +0.7
baz=76
BM01 **Burnt Mountain** 6.58 19 Pn 01 09 32.7 +0.5
G27K **Doyon Strip** 6.60 30 Pn 01 09 33.0 +0.5
G27K **Doyon Strip** 6.60 30 P Pn 01 09 33.1 +0.5
baz=218,SNR=10
E23K **Chandalar** 6.75 1 P Pn 01 09 35.0 +0.3
baz=182
F18K **Selawik** 6.77 325 P Pn 01 09 35.1 +0.3
baz=137
O30N **Mendenhall** 6.79 89 P Pn 01 09 34.7 -0.5
baz=281
E24K **Your Creek** 6.80 5 P Pn 01 09 36.2 +1.0
baz=186
N31M **Braeburn, Yuko** 6.83 83 P Pn 01 09 36.4 +0.6
baz=275
F26K **Sheenjek River** 6.86 19 Pn 01 09 37.0 +0.9
F26K **Sheenjek River** 6.86 19 P Pn 01 09 37.3 +1.2

baz=204,SNR=15
E22K Anaktuvuk Pass 6.87 354 P Pn 01 09 37.4 +1.2
baz=173
G16K Koyuk River 6.87 312 P Pn 01 09 37.3 +1.1
baz=121
E19K Redstone River 6.89 336 Pn 01 09 37.3 +0.9
E19K Redstone River 6.89 336 P Pn 01 09 37.6 +1.1
baz=150
K13K Kusilvak Mount 7.00 281 P Pn 01 09 38.5 +0.5
baz=89
PLBC Pleasant Camp 7.02 100 P Pn 01 09 38.9 +0.6
baz=291
J30M Hart River 7.03 57 P Pn 01 09 39.1 +0.6
baz=249,SNR=24
E25K Arctic Village 7.07 14 P Pn 01 09 40.1 +1.2
baz=198,SNR=10
S14K Fog Glacier 7.08 229 P Pn 01 09 39.6 +0.4
baz=40
H29M Whitestone 7.11 41 P Pn 01 09 39.9 +0.5
baz=232
F17K Baldwin Pennin 7.12 321 Pn 01 09 40.2 +0.6
F17K Baldwin Pennin 7.12 321 P Pn 01 09 40.9 +1.4
baz=131
I30M Mount Dempster 7.27 52 P Pn 01 09 42.9 +1.0
baz=244
G15K Niukluk 7.32 306 P Pn 01 09 43.4 +1.0
baz=114
E21K Killik River 7.33 348 P Pn 01 09 44.2 +1.7
baz=165
TOLK Toolik Lake Re 7.34 1 P Pn 01 09 44.2 +1.6
baz=182
WHY Whitehorse 7.39 89 Pn 01 09 42.8 -0.7
WHY Whitehorse 7.39 89 P Pn 01 09 43.2 -0.2
baz=282
E20K Nigu River 7.42 342 P Pn 01 09 44.6 +0.8
baz=156
M31M Drury Creek, Y 7.46 77 P Pn 01 09 45.2 +0.9
baz=270,SNR=5.4
E18K Tukpahlearik C 7.63 328 P Pn 01 09 47.9 +1.3
baz=138
D22K Ayikyak River 7.66 353 P Pn 01 09 48.3 +1.3
baz=170
G29M Pine Creek 7.66 38 P Pn 01 09 49.1 +2.1
baz=229
F28M Old Crow 7.66 30 Pn 01 09 47.3 +0.2
F28M Old Crow 7.66 30 P Pn 01 09 47.9 +0.9
baz=213,SNR=7.4
D23K Nanushuk River 7.67 358 P Pn 01 09 49.3 +2.3
baz=178
ANM Nome 7.71 301 P Pn 01 09 48.8 +1.2
baz=108
E17K Hotham Inlet 7.72 323 P Pn 01 09 49.1 +1.3
baz=133
E27K Coleen River 7.75 24 P Pn 01 09 48.9 +0.6
baz=212
F15K North Star Dit 7.86 310 P Pn 01 09 50.4 +0.7
baz=117
D24K Happy Valley 7.86 3 P Pn 01 09 50.5 +0.7
baz=184
D20K Etivluk River 7.91 342 P Pn 01 09 51.9 +1.5
baz=156
D19K Kuna River 7.96 338 P Pn 01 09 52.9 +1.8
baz=151
C21K Knifeblade Rid 8.10 348 P Pn 01 09 54.7 +1.8
baz=164
D25K Kavik River 8.16 9 P Pn 01 09 54.6 +0.7
baz=192
N32M Quiet Lake 8.17 84 P Pn 01 09 53.7 -0.3
baz=279
P32M Atlin 8.24 95 P Pn 01 09 55.1 0.0
baz=289
G30M tAoh Zraii Nji 8.25 41 P Pn 01 09 55.9 +0.7
baz=233,SNR=7.0
H31M Peel River 8.29 51 P Pn 01 09 57.2 +1.5
baz=244
R32K Eaglecrest 8.39 105 P Pn 01 09 58.6 +1.6
baz=298
F14K Arctic Creek 8.40 307 P Pn 01 09 59.3 +2.2
baz=112
C24K Franklin Bluff 8.44 3 P Pn 01 09 59.2 +1.7
baz=184
P33M Teslin, Yukon 8.49 90 P Pn 01 09 58.0 -0.4
baz=285
E28M Babbage River 8.53 27 P Pn 01 09 59.8 +0.9
baz=216
B21K Ikpikpuk River 8.53 349 P Pn 01 09 59.7 +0.8
baz=165
C23K Itkillik River 8.54 359 P Pn 01 10 00.4 +1.4
baz=178
C18K Utukok River 8.71 332 P Pn 01 10 03.4 +1.9
baz=142
C27K Jago River 8.72 15 P Pn 01 10 03.6 +2.1
baz=200
E29M Blow River 8.74 31 P Pn 01 10 02.9 +1.2
baz=222
F30M Barrier River 8.77 38 P Pn 01 10 03.9 +1.7
baz=231
D27M Malcolm River 8.78 22 P Pn 01 10 03.5 +1.1
baz=210
G31M Satah River 8.85 44 P Pn 01 10 04.5 +1.2
baz=238
C26K Camden Bay 8.87 12 P Pn 01 10 05.2 +1.7
baz=196
TNA Tin City 9.05 306 P Pn 01 10 07.8 +1.8
baz=110
B22K Teshekpuk Lake 9.14 353 P Pn 01 10 08.9 +1.7
baz=170
Q32M Nakina River 9.16 97 P Pn 01 10 07.6 -0.2
baz=292
B20K Meade River 9.18 344 P Pn 01 10 08.2 +0.4
baz=158
D28M Stokes Point 9.28 26 P Pn 01 10 10.9 +1.8
baz=216
R33M Jennings River 9.63 93 P Pn 01 10 14.8 +0.7
baz=290
INK Inuvik 9.88 38 P Pn 01 10 17.4 +0.2
comp=N,1.8nm,0.5s,baz=245,slow=12,SNR=13
INK S Sn 01 12 10.1 +3.6
comp=N,6.0nm,0.6s,baz=222,slow=24,SNR=6.1
INK LR LR 01 14 17.5
comp=N,153nm,20.7s,baz=292,slow=38
INK Inuvik 9.88 38 P Pn 01 10 17.9 +0.7
baz=233
DLBC Dease Lake 10.44 97 P Pn 01 10 26.8 +1.6
comp=N,1.9nm,0.7s,baz=302,slow=17,SNR=3.7
WRGLY Wrigley 12.47 70 P Pn 01 10 55.5 +2.8
baz=273
TOAD Toad River Com 12.59 90 P Pn 01 10 54.1 -0.3
baz=292
C36M Paulatuk 13.36 42 Pn 01 11 01.7 -3.1
C36M Paulatuk 13.36 42 P Pn 01 11 02.1 -2.7
baz=246
A36M Sachs Harbour 14.34 32 Pn 01 11 16.0 -2.0
A36M Sachs Harbour 14.34 32 P Pn 01 11 16.3 -1.7
baz=234
YKA Yellowknife Ar 16.59 70 P Pn 01 11 47.5 +0.7
comp=N,1.1nm,0.7s,baz=300,slow=13,SNR=18
YKA LR LR 01 17 53.7
comp=N,171nm,20.6s,baz=324,slow=36
NEW Newport 22.73 110 P P 01 12 57.9 +2.3
comp=N,0.6nm,0.5s,baz=301,slow=11,SNR=2.2
comp=N,0.6nm,0.5s
NEW Newport 22.73 110 IAmb IAmb 01 13 12.7
comp=Z,8.7nm,1.2s
RES Resolute Bay 23.38 33 P P 01 13 02.1 +0.5
comp=Z,3.5nm,0.9s,baz=262,slow=12,SNR=8.5
RES LR LR 01 23 58.8
comp=Z,33nm,19.2s,baz=30,slow=41
comp=Z,3.5nm,0.9s
F10A Beach Ranch, E 24.42 114 IAmb IAmb 01 13 14.7
comp=Z,4.0nm,0.9s
J05D Fort Rock, OR 24.89 123 P P 01 13 18.0 +2.0
J05D IAmb IAmb 01 13 19.0
comp=Z,9.8nm,1.3s
I07A Izee 24.95 120 P P 01 13 18.6 +2.1
BMO Blue Mountains 25.26 116 P P 01 13 19.2 -0.1
SEY Seymchan 26.20 299 LR LR 01 25 37.9
comp=Z,52nm,18.6s,baz=46,slow=41
N02D Trinity Center 26.28 128 P P 01 13 31.5 +3.0
N02D IAmb IAmb 01 13 32.1
comp=Z,3.6nm,0.6s
ELK Elko 29.48 118 P P 01 13 59.5 +2.2
HVU Hansel Valley 29.70 114 IAmb IAmb 01 14 02.0
comp=Z,3.4nm,1.0s
NVAR Mina Array Bea 30.18 125 P P 01 14 05.2 +1.7
comp=Z,1.1nm,0.6s,baz=320,slow=9.7,SNR=8.7
NVAR PcP PcP 01 17 03.8 +0.5
comp=Z,0.6nm,0.6s,baz=313,slow=4.0,SNR=3.5
comp=Z,1.1nm,0.6s
BW06 Boulder Array 30.36 109 P P 01 14 06.2 +1.2
BW06 IAmb IAmb 01 14 06.9
comp=Z,5.0nm,1.4s
PDAR Pinedale Array 30.36 109 P P 01 14 06.0 +1.0
comp=Z,0.7nm,0.6s,baz=311,slow=5.2,SNR=10
comp=Z,0.7nm,0.6s
PDAR Pinedale Array 30.36 109 P P 01 14 06.2 +1.2
ULM Lac du Bonnet 31.46 86 P P 01 14 14.9 +0.6
comp=Z,8.3nm,0.9s,baz=303,slow=8.9,SNR=3.8
ULM LR LR 01 28 36.7
comp=Z,66nm,20.6s,baz=80,slow=39
comp=Z,8.3nm,0.9s
ULM Lac du Bonnet 31.46 86 IAmb IAmb 01 14 16.2
comp=Z,9.3nm,1.0s
GMN Gold Mountain 31.57 125 P P 01 14 17.6 +1.9
BSUT Blindstream Ca 31.60 113 P P 01 14 18.7 +2.5
BSUT IAmb IAmb 01 14 19.1
comp=Z,7.6nm,1.3s
FRB Frobisher Bay 35.26 50 LR LR 01 28 31.1
comp=Z,68nm,18.0s,baz=152,slow=35
SUMG Summit 38.55 27 *i* **P P 01 15 16.2 +0.6**
SUMG IAmb IAmb 01 15 17.1
comp=Z,5.9nm,0.7s
DAG Danmarks Havn 38.81 16 *i* **P P 01 15 16.7 -0.5**
DAG IAmb IAmb 01 15 17.8
comp=Z,3.6nm,0.8s
SFJD Kangerlussuaq 39.22 38 *i* **P P 01 15 18.6 -2.1**
SPITS Spitsbergen Ar 40.48 4 P P 01 15 30.6 -0.5
comp=Z,2.3nm,0.4s,baz=18,slow=6.2,SNR=41
comp=Z,2.3nm,0.4s
DBG Daneborg 40.62 19 *i* **P P 01 15 31.9 -0.3**
DBG IAmb IAmb 01 15 32.1
comp=Z,4.0nm,0.9s
PBMO Poplar Bluff 44.09 96 P P 01 16 00.3 -0.6
PBMO IAmb IAmb 01 16 01.1
comp=Z,5.8nm,0.8s
TXAR Lajitas Array 44.14 115 P P 01 16 01.9 +0.4
comp=Z,7.7nm,0.8s,baz=330,slow=6.1,SNR=8.7
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 44.14 115 P P 01 16 02.7 +1.2
T50A Nancy 46.59 90 P P 01 16 21.0 +0.3
TKL Tuckaleechee C 48.19 91 LR LR 01 37 01.2
comp=Z,69nm,20.6s,baz=343,slow=36
ARCES ARCESS Array B 49.38 2 P P 01 16 38.8 -2.9
comp=Z,3.2nm,0.8s,baz=356,slow=6.7,SNR=6.2
comp=Z,3.2nm,0.8s
JHJ Hachijo jima 2 52.16 271 LR LR 01 40 15.2
comp=Z,18nm,20.2s,baz=44,slow=37
KSRS Korea Array 54.30 284 P P 01 17 18.9 +0.2
comp=Z,1.6nm,0.8s,baz=139,slow=29,SNR=4.4
KSRS pP pP 01 17 34.9 +1.9
comp=Z,2.0nm,0.8s,baz=31,slow=7.1,SNR=3.9
comp=Z,1.6nm,0.8s
SONM Songino Array 55.17 307 P P 01 17 24.2 -0.9
comp=Z,0.7nm,0.6s,baz=43,slow=6.5,SNR=2.2
SONM pP pP 01 17 41.8 +2.4
comp=Z,1.8nm,0.7s,baz=29,slow=6.7,SNR=4.0
comp=Z,0.7nm,0.6s
NB2 NORSAR Subarra 57.10 11 P P 01 17 37.4 -1.2
comp=Z,0.9nm,0.7s,baz=349,slow=6.9
NOA NORSAR Array B 57.10 11 P P 01 17 37.6 -0.9
comp=Z,1.4nm,0.7s,baz=350,slow=7.1,SNR=6.1
comp=Z,1.4nm,0.7s
ZALV Zalesovo Beam 57.14 325 P P 01 17 37.3 -1.6
comp=Z,0.6nm,0.4s,baz=23,slow=7.5,SNR=3.6
ZALV pP pP 01 17 53.0 -0.2
comp=Z,0.5nm,0.3s,baz=29,slow=10,SNR=2.3
comp=Z,0.6nm,0.4s
FINES FINESS Array B 57.51 2 P P 01 17 40.0 -1.4
comp=Z,2.0nm,0.6s,baz=355,slow=8.0,SNR=22
comp=Z,2.0nm,0.6s
HFS Hagfors 58.21 10 P P 01 17 45.0 -1.3
comp=Z,1.0nm,0.4s,baz=46,slow=4.3,SNR=9.2
comp=Z,1.0nm,0.4s
HHC Hu-ho-hao-te 58.85 299 *eP* **P 01 17 51.8 +0.6**
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,140nm,4.9s
EKA Eskdalemuir Ar 60.77 21 P P 01 18 02.7 -1.3
comp=Z,1.5nm,0.8s,baz=333,slow=5.7,SNR=8.7
comp=Z,1.5nm,0.6s
BVAR Borovoye Array 61.55 334 P P 01 18 08.2 -1.1
comp=Z,2.4nm,0.6s,baz=58,slow=9.2,SNR=6.1
comp=Z,2.4nm,0.6s
KURK Kurchatov 61.72 327 P P 01 18 09.8 -0.7
KURK Kurchatov 61.72 327 IAmb IAmb 01 18 10.1
comp=Z,6.6nm,1.5s
KURBB Kurchatov Arra 61.83 327 P P 01 18 09.8 -1.4
comp=Z,1.3nm,0.5s,baz=29,slow=6.6,SNR=12
comp=Z,1.3nm,0.5s
MKAR Makanchi Array 64.28 323 P P 01 18 25.5 -2.1
comp=Z,1.0nm,0.6s,baz=31,slow=6.3,SNR=13
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 68.31 1 P P 01 18 52.3 -0.9
comp=Z,1.4nm,0.4s,baz=2.8,slow=6.3,SNR=9.4
comp=Z,1.4nm,0.4s
AKASG Malin Array Be 68.31 1 IAmb IAmb 01 18 57.4
comp=Z,2.0nm,1.0s
MORC Moravsky Berou 68.79 9 *eP* **P 01 18 56.4 +0.1**
JTS Las Juntas de 69.17 107 LR LR 01 53 36.9
comp=Z,32nm,18.3s,baz=86,slow=40
VRAC Vranov 69.18 9 *eP* **P 01 18 58.8 +0.1**
GERES GERESS Array B 69.39 11 P P 01 19 00.0 -0.1
comp=Z,1.1nm,0.7s,baz=349,slow=5.4,SNR=8.1
comp=Z,1.1nm,0.7s
KRUC Mavsky 69.41 10 *eP* **P 01 19 00.1 0.0**
JAVC Velka Javorina 69.71 9 *eP* **P 01 19 03.1 +1.1**
CONA Conrad Observa 70.49 10 *eP* **P 01 19 07.1 +0.2**
comp=Z,4.1nm,0.8s
MOTA Moosalm 70.60 13 *i P* **P 01 19 07.6 0.0**
comp=Z,2.1nm,0.7s
WATA Walderalm 70.66 13 *eP* **P 01 19 08.3 +0.3**
comp=Z,2.1nm,0.5s
WTTA Wattenberg 70.74 13 *eP* **P 01 19 09.0 +0.4**
comp=Z,2.2nm,0.5s
RONA Rolla, Austri 70.75 10 *i P* **P 01 19 08.3 -0.1**
comp=Z,2.5nm,0.6s
FETA Feichten 70.88 14 *i P* **P 01 19 09.8 +0.5**
comp=Z,1.6nm,0.6s
KBA Koelnbreinsper 71.10 12 *eP* **P 01 19 11.0 +0.3**
comp=Z,6.9nm,0.7s
SOKA Soboth 71.66 11 *eP* **P 01 19 14.7 +0.7**
comp=Z,5.7nm,1.1s
OBKA Obir 71.78 11 *i P* **P 01 19 14.6 -0.2**
comp=Z,1.3nm,0.8s
PZH PanZhiHua 75.31 298 P P 01 19 36.3 +0.6
ESDC Sonseca Array 75.61 26 P P 01 19 36.5 -0.8
comp=Z,1.5nm,0.7s,baz=338,slow=5.3,SNR=11
comp=Z,1.5nm,0.7s
ROSC El Rosal 78.92 100 LR LR 01 59 07.7
comp=Z,116nm,18.1s,baz=72,slow=39
BRTR Keskin Array B 79.24 357 P P 01 19 56.3 -1.4
comp=Z,1.1nm,0.9s,baz=344,slow=7.9,SNR=2.6
comp=Z,1.1nm,0.9s
KEST Kesra 81.82 17 P P 01 20 10.8 -0.6
comp=Z,3.6nm,0.7s,baz=32,slow=6.0,SNR=4.0
comp=Z,3.6nm,0.7s
CMAR Chiang Mai Arr 83.60 297 P P 01 20 19.1 -1.7
comp=Z,1.8nm,0.3s,baz=226,slow=34,SNR=1.8
comp=Z,1.8nm,0.3s
MMAI Mount Meron Ar 85.88 355 P P 01 20 30.2 -2.0
comp=Z,0.1nm,0.3s,baz=350,slow=4.4,SNR=1.5
comp=Z,0.1nm,0.3s
BOSA Boshof 147.12 8 PKPbc PKPdf 01 27 34.0 +1.3
comp=Z,2.6nm,0.8s,baz=14,slow=3.6,SNR=5.7
QSPA South Pole Qui 151.15 180 PKPbc PKiKP 01 27 45.3 +1.0
comp=Z,3.1nm,0.6s,baz=75,slow=1.7,SNR=8.1

IDC 22 01:10:40.5±5.5, 21.94S×170.20E, h0km, mb4.0/3, mbtmp3.9/3, Error ellipse: s-maj=225.6km s-min=42.1km az=151.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.49**	**267**	Sn	Sn	01 12 11.8	-6.5
ASAR	**Alice Springs**	**33.45**	**260**	P	P	01 17 21.4	-0.1
	1.2nm,0.6s,baz=99,slow=8.6,SNR=18						
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**33.51**	**267**	P	P	01 17 21.9	-0.1
	1.1nm,0.7s,baz=98,slow=9.2,SNR=12						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**92.53**	**17**	P	P	01 23 53.1	0.0
	0.9nm,1.1s,baz=214,slow=6.2,SNR=2.4						
	0.9nm,1.1s						

WEL 22 01:12:24.2±0.9, 31.S±8.×17.9E±1.5, h280km, mB4.5/7, ML4.3/9, MLv4.6/7, Mw(mB)3.6/7, Error ellipse: s-maj=21.2km s-min=5.0km az=117.4, confirmed, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.82**	**63**	P	Pn	01 13 14.1	-2.7
GLKZ				S	S	01 13 57.3	-1.3
MXZ	**Matakaoa Point**	**7.02**	**186**	P	Pn	01 14 07.9	+2.5
MXZ				S	S	01 15 30.4	+3.4
WMGZ	**Waiomatatini S**	**7.27**	**185**	P	Pn	01 14 10.9	+2.4
WMGZ				S	S	01 15 35.0	+2.4
HAZ	**Te Kaha**	**7.27**	**189**	P	Pn	01 14 10.2	+1.7
HAZ				S	S	01 15 35.8	+3.2
PKGZ	**Pakihiroa**	**7.35**	**187**	P	Pn	01 14 10.7	+1.2
PKGZ				S	S	01 15 34.2	-0.2
RUGZ	**Raukumara Rang**	**7.49**	**189**	P	Pn	01 14 12.3	+1.0
RUGZ				S	S	01 15 37.1	-0.7
URZ	**Urewera**	**7.87**	**192**	P	Pn	01 14 15.9	+0.1
URZ				S	S	01 15 48.8	+2.5
MWZ	**Matawai**	**7.88**	**190**	P	Pn	01 14 18.1	+2.1
CNGZ	**Carnagh Statio**	**7.95**	**186**	P	Pn	01 14 17.3	+0.5
RAGZ	**Rawiri**	**8.05**	**190**	P	Pn	01 14 19.7	+1.5
MUGZ	**Murupara**	**8.15**	**194**	P	Pn	01 14 20.7	+1.3
RTZ	**Ruatahuna**	**8.24**	**192**	P	Pn	01 14 20.8	+0.3
SNGZ	**Shannon Statio**	**8.34**	**190**	P	Pn	01 14 18.8	-2.9
MTHZ	**Maungataniwha**	**8.49**	**193**	P	Pn	01 14 25.0	+1.3
MTHZ				S	S	01 16 01.3	+0.7
RAHZ	**Arahi**	**8.51**	**191**	P	Pn	01 14 23.5	-0.4
RAHZ				S	S	01 16 03.0	+2.0
NMHZ	**Naumai**	**8.74**	**192**	P	Pn	01 14 27.5	+0.7
BKZ	**Black Stump Fm**	**8.87**	**194**	P	Pn	01 14 27.8	-0.5
BKZ				S	S	01 16 11.1	+2.0
ARHZ	**Aropaoanui**	**8.87**	**191**	P	Pn	01 14 28.4	+0.1
OTVZ	**Oturere**	**9.06**	**198**	P	Pn	01 14 31.7	+0.9
CKHZ	**Cape Kidnapper**	**9.24**	**190**	P	Pn	01 14 32.3	-0.6
KRHZ	**Kereru**	**9.35**	**194**	P	Pn	01 14 33.0	-1.3
KRHZ				S	S	01 16 17.5	-2.6
KAHZ	**Kahuranaki**	**9.40**	**191**	P	Pn	01 14 33.7	-1.3
KAHZ				S	S	01 16 18.3	-3.1
PXZ	**Pawanui**	**9.64**	**191**	P	Pn	01 14 36.0	-1.8
PXZ				S	S	01 16 25.0	-1.6
BFZ	**Birch Farm**	**10.38**	**193**	P	Pn	01 14 42.6	-4.4
BFZ				S	S	01 16 37.9	-5.7
HOWZ	**Holdsworth Sta**	**10.74**	**195**	P	Pn	01 14 48.0	-3.5
HOWZ				S	S	01 16 45.0	-6.8
OGWZ	**Otaki Gorge**	**10.74**	**197**	P	Pn	01 14 48.6	-2.9
OGWZ				S	S	01 16 46.4	-5.5

CATAC ***22*** *01:26:18.2±0.6, 14.N±3.×9.2W±., h28km±5km, M3.8/12, MLv3.8/12, Error ellipse: s-maj=8.1km s-min=3.8km az=44.5, confirmed*
SNET ***22*** *01:26:19.0±1.2, 13.94N×91.65W, h22km±21km, ML3.7*
GCG ***22*** *01:26:19.5±1.7, 13.94N×91.64W, h41km±5km, MD4.3, ML4.6*

ISC 22 01:26:17.4±1.8, 13.84N±0.08×91.65W±0.07, h20km±8km, n42, σ1.58/51, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.63**	**27**	*i P*	**Pn**	**01 26 33.5**	**+2.2**
STG8	**El Palmar, Qui**	**0.67**	**25**	*eP*	**Pn**	**01 26 34.6**	**+2.7**
RTAL	**Retalhuleu**	**0.68**	**356**	*eP*	**Pn**	**01 26 31.8**	**-0.1**
RTAL				*eS*	**Sb**	**01 26 38.5**	**-1.1**
RTAL	**Retalhuleu**	**0.68**	**356**	P	**Pn**	**01 26 32.2**	**+0.3**
RTAL				S	**Sn**	**01 26 41.8**	**-0.1**
ESSG	**Sabana Grande**	**0.96**	**56**	*eP*	**Pn**	**01 26 35.9**	**+0.1**
ESSG				*eS*	**Sb**	**01 26 48.1**	**+0.4**
SOKI	**Kika Raxquin**	**1.00**	**14**	*eP*	**Pb**	**01 26 36.6**	**+0.3**
SOKI				*eS*	**Sn**	**01 26 49.2**	**-1.2**
QUEO	**Labor Ovalle**	**1.03**	**7**	*eS*	**Sn**	**01 26 50.6**	**-0.3**
SMCA	**Catarina**	**1.09**	**338**	*eP*	**Pn**	**01 26 37.0**	**-0.5**
ESSJ	**San Jos, E**	**1.15**	**104**	*eP*	**Pn**	**01 26 35.3**	**-2.9**
FG16	**Alotenango, Sa**	**1.19**	**69**	*eP*	**Pn**	**01 26 36.5**	**-2.5**
FG16				*eS*	**Sn**	**01 26 49.1**	**-5.5**
FG16				IAML		01 26 53.0	
	comp=E,28μm,0.3s						
THIG		**1.22**	**331**	*i P*	**Pn**	**01 26 39.3**	**+0.1**
PCG5	**San Vicente Pa**	**1.29**	**73**	*eP*	**Pn**	**01 26 38.5**	**-1.8**
PCG5				*eS*	**Sn**	**01 26 53.0**	**-4.2**
HUEH	**Huehuetenango**	**1.48**	**5**	P	**Pn**	**01 26 43.4**	**+0.4**
HUEH	**Huehuetenango**	**1.48**	**5**	S	**Sb**	**01 27 03.6**	**+0.9**
QUIS	**Sacapulas**	**1.54**	**20**	*eP*	**Pb**	**01 26 45.3**	**0.0**
QUIS				*eS*	**Sb**	**01 27 03.2**	**-1.2**
FAME	**Alcaldia de Sa**	**1.59**	**90**	S	**Sn**	**01 27 04.2**	**0.0**
FAME	**Alcaldia de Sa**	**1.59**	**90**	P	**Pn**	**01 26 44.9**	**+0.6**
APG	**El Apazote**	**1.63**	**45**	*eP*	**Pn**	**01 26 46.0**	**+0.9**
APG				*eS*	**Sb**	**01 27 07.2**	**+0.1**
NUBE	**Las Nubes**	**1.82**	**88**	*eP*	**Pn**	**01 26 48.6**	**+1.0**
NUBE	**Las Nubes**	**1.82**	**88**	*eP*	**Pn**	**01 26 48.5**	**+1.0**
NUBE	**Las Nubes**	**1.82**	**88**	S	**Sn**	**01 27 13.1**	**+0.1**
NUBE	**Las Nubes**	**1.82**	**88**	P	**Pn**	**01 26 48.6**	**+1.0**
SLOZ	**Alcaldia de Sa**	**1.82**	**84**	*eP*	**Pn**	**01 26 46.2**	**-1.4**
SLOZ				*eS*	**Sn**	**01 27 08.9**	**-1.2**
SLOZ	**Alcaldia de Sa**	**1.82**	**84**	P	**Pn**	**01 26 48.2**	**+0.6**
LOAL	**Lomas de Alarc**	**1.82**	**85**	*eP*	**Pn**	**01 26 49.1**	**+1.5**
LOAL	**Lomas de Alarc**	**1.82**	**85**	P	**Pn**	**01 26 49.4**	**+1.8**
RBDL	**Robledal**	**1.92**	**82**	*eP*	**Pn**	**01 26 50.6**	**+1.5**
CEVE	**Cerro Verde**	**1.97**	**90**	S	**Sn**	**01 27 14.6**	**+0.6**
SBLS	**San Blas**	**1.97**	**90**	*eP*	**Pn**	**01 26 51.3**	**+1.5**
SNJE	**San Jose**	**1.98**	**89**	*eP*	**Pn**	**01 26 51.5**	**+1.5**
JAYA	**Jayaque - finc**	**2.15**	**95**	*eP*	**Pn**	**01 26 53.7**	**+1.5**
JAYA	**Jayaque - finc**	**2.15**	**95**	*eS*	**Sn**	**01 27 18.2**	**0.0**
JAYA	**Jayaque - finc**	**2.15**	**95**	S	**Sn**	**01 27 18.5**	**+0.3**
JAYA	**Jayaque - finc**	**2.15**	**95**	P	**Pn**	**01 26 54.3**	**+2.1**
PMON	**Piamonte**	**2.27**	**93**	S	**Sn**	**01 27 22.6**	**+1.3**
MTO3	**Montecristo**	**2.29**	**76**	*eP*	**Pn**	**01 26 54.8**	**+0.6**
MTO3	**Montecristo**	**2.29**	**76**	*eP*	**Pn**	**01 26 54.7**	**+0.6**
MTO3	**Montecristo**	**2.29**	**76**	P	**Pn**	**01 26 54.9**	**+0.7**
MTO3	**Montecristo**	**2.29**	**76**	S	**Sn**	**01 27 22.8**	**+1.0**
LALI	**Alcalda de L**	**2.29**	**99**	S	**Sn**	**01 27 22.7**	**+1.1**
LALI	**Alcalda de L**	**2.29**	**99**	P	**Pn**	**01 26 54.0**	**0.0**
LOMA	**Loma Larga**	**2.42**	**94**	S	**Sn**	**01 27 26.1**	**+1.2**

ASRS ***22*** *01:27:31.1±0.3, 50.N±2.×9.9E±., h5km, MLh3.9/8, Error ellipse: s-maj=5.2km s-min=2.2km az=8.0, confirmed*
BYKL ***22*** *01:27:35.4±0.2, 50.36N×99.53E*

ISC 22 01:27:33.7±1.2, 50.42N±0.04×99.62E±0.02, h7km±15km, n31, σ2.68/58, 1D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**1.36**	**279**	Pg	**Pg**	**01 27 59.0**	**-0.7**
KNGR				Sg	**Sg**	**01 28 16.7**	**-0.7**
KNGR	**Kungurtug, Tuv**	**1.36**	**279**	*eP*g	**Pg**	**01 27 59.1**	**-0.7**
KNGR				*e*		01 28 02.3	
KNGR				*eS*g	**Sg**	**01 28 16.8**	**-0.6**
KNGR				*e*		01 28 23.2	
MOY	**Mondy**	**1.52**	**34**	Pg	**Pg**	**01 28 04.3**	**+1.4**
MOY				Sg	**Sg**	**01 28 25.2**	**+2.7**
MOY	**Mondy**	**1.52**	**34**	*i* Pg	**Pg**	**01 28 04.2**	**+1.4**
MOY				*eS*g	**Sg**	**01 28 25.6**	**+3.1**
MOY				*e*		01 28 29.8	
MOY				Pmax			
	51nm,0.6s						
MOY				max			
	320nm,0.5s						
ORL	**Orlik**	**2.12**	**3**	*eP*g	**Pg**	**01 28 15.3**	**+0.9**
ORL				*eS*g	**Sg**	**01 28 43.5**	**+1.5**
ORL				Pmax			
	26nm,0.5s						
ORL				Smax			
	147nm,0.9s						
ARS	**Arshan**	**2.31**	**48**	*eP*g	**Pg**	**01 28 18.3**	**+0.2**
ARS				*eS*g	**Sg**	**01 28 49.8**	**+1.7**
ARS				Pmax			
	42nm,0.7s						
ARS				Smax			
	206nm,0.6s						
ZAK	**Zakamensk**	**2.34**	**90**	Pg	**Pb**	**01 28 16.5**	**+0.2**
ZAK				Sg	**Sg**	**01 28 51.6**	**+2.7**
ZAK	**Zakamensk**	**2.34**	**90**	*e*Pn	**Pb**	**01 28 15.9**	**-0.4**
ZAK				*eP*g	**Pg**	**01 28 18.8**	**+0.3**
ZAK				*eS*g	**Sg**	**01 28 50.1**	**+1.2**
ZAK				Pmax			
	27nm,0.2s						
ZAK				Smax			
	325nm,1.0s						

TLY	**Talaya**	**2.83**	**62**	Pg	**Pg**	**01 28 27.6**	**-0.4**
TLY				Sg	**Sg**	**01 29 06.8**	**+2.2**
TLY	**Talaya**	**2.83**	**62**	*e*Pg	**Pg**	**01 28 27.8**	**-0.2**
TLY				*e*Sg	**Sg**	**01 29 06.5**	**+1.8**
TLY				Pmax			
	9.0nm,0.1s						
TLY				Smax			
	99nm,0.5s						
ERNS	**Erzin**	**2.87**	**269**	Pg	**Pg**	**01 28 26.5**	**-2.2**
ERNS				Sg	**Sg**	**01 29 04.0**	**-1.8**
TDJR	**Todzha**	**2.97**	**313**	Pg	**Pg**	**01 28 28.6**	**-1.9**
TDJR				Sg	**Sg**	**01 29 09.7**	**+0.8**
TDJR	**Todzha**	**2.97**	**313**	*e*Pg	**Pg**	**01 28 29.0**	**-1.5**
TDJR				*e*Sg	**Sg**	**01 29 08.0**	**-0.9**
IVK	**Ivanovka**	**3.32**	**64**	*e*Pg	**Pg**	**01 28 36.8**	**-0.5**
IVK				*e*Sg	**Sg**	**01 29 21.6**	**+1.3**
IVK				Pmax			
	5.0nm,0.2s						
IVK				Smax			
	101nm,1.3s						
IRK	**Irkutsk**	**3.44**	**56**	*e*Pg	**Pg**	**01 28 38.5**	**-1.1**
IRK				*e*Sg	**Sg**	**01 29 24.4**	**+0.3**
IRK				Pmax			
	110nm,0.2s						
IRK				Smax			
	247nm,0.6s						
LSTR	**Listvyanka**	**3.58**	**64**	*e*Pg	**Pg**	**01 28 41.1**	**-1.3**
LSTR				*e*Sg	**Sg**	**01 29 28.8**	**0.0**
LSTR				Pmax			
	11nm,1.0s						
LSTR				Smax			
	50nm,0.9s						
BGT	**Bolshoye Golou**	**3.98**	**64**	*e*Pg	**Pg**	**01 28 47.8**	**-2.2**
BGT				*e*Sg	**Sg**	**01 29 40.5**	**-1.0**
BGT				Pmax			
	15nm,0.3s						
BGT				Smax			
	131nm,1.4s						
ARDR	**Aradan**	**4.43**	**302**	Pn	**Pn**	**01 28 41.6**	**+0.2**
ARDR				Pg	**Pg**	**01 28 54.6**	**-4.0**
ARDR				Sg	**Sg**	**01 29 53.0**	**-3.0**
TRG	**Tyrgan**	**4.80**	**58**	*e*Pg	**Pg**	**01 29 02.7**	**-2.9**
TRG				*e*Sg	**Sg**	**01 30 05.9**	**-1.9**
TRG				Pmax			
	4.0nm,0.2s						
TRG				Smax			
	76nm,1.8s						
ULN	**Ulaanbaatar**	**5.50**	**115**	Pn	**Pn**	**01 28 55.3**	**-0.9**
ULN				Sg	**Sg**	**01 30 29.1**	**-1.3**
ULN	**Ulaanbaatar**	**5.50**	**115**	*e*Pn	**Pn**	**01 28 58.0**	**+1.8**
ULN				*e*Pg	**Pg**	**01 29 15.2**	**-3.9**
ULN				*e*Sg	**Sg**	**01 30 27.1**	**-3.3**
ULN				Pmax			
	4.0nm,0.4s						
ULN				Smax			
	34nm,1.1s						
MINR	**Mina**	**5.57**	**326**	Pg	**Pg**	**01 29 16.5**	**-3.8**
MINR				Sg	**Sg**	**01 30 31.1**	**-1.2**
MINR	**Mina**	**5.57**	**326**	*e*Pg	**Pg**	**01 29 17.2**	**-3.1**
MINR				*e*Sg	**Sg**	**01 30 31.5**	**-0.9**
CERR	**Cheremushki**	**5.66**	**299**	Sg	**Sg**	**01 30 30.4**	**-5.0**
DJO	**Djoy, Khakassi**	**5.75**	**298**	Pg	Pg	01 29 17.8	-5.9
DJO				Sg	**Sg**	**01 30 30.8**	**-7.3**
UZR	**Uzur**	**5.81**	**57**	*e*Sg	**Sg**	**01 30 36.8**	**-3.2**
UZR				Smax			
	45nm,1.3s						
OGRR	**Ongureny**	**5.88**	**54**	*e*Pg	**Pg**	**01 29 22.7**	**-3.6**
OGRR				*e*Sg	**Sg**	**01 30 40.5**	**-2.0**
OGRR				Pmax			
	12nm,0.4s						
OGRR				Smax			
	47nm,0.9s						
TEL	**Teeli**	**6.02**	**279**	Sg	**Sg**	**01 30 51.2**	**+4.4**
VEH	**Verkhnyaya Baz**	**6.43**	**300**	Pg	Pg	01 29 30.8	-6.0
VEH				Sg	**Sg**	**01 30 52.8**	**-7.1**
NIZB	**Nizh Angarsk**	**8.02**	**44**	*e*Sg	**Sg**	**01 31 46.5**	**-4.4**
NIZB				Smax			
	12nm,0.2s						
YLYR	**Ulyunkhan**	**8.31**	**53**	*e*Sg	**Sg**	**01 31 55.0**	**-5.2**
YLYR				Smax			
	11nm,1.0s						

ASRS ***22*** *01:34:21.0±0.4,50°N±2°×9°7E±°, h5km, MLh4.4/11, Error ellipse: s-maj=5.3km s-min=2.4km az=179.0, confirmed*
MOS ***22*** *01:34:27.5±2.0,49°.90N×97°.30E, h10km, mb3.7/1, Error ellipse: s-maj=14.4km s-min=11.0km az=98.0*
IDC ***22*** *01:34:33.0±2.2,47°.86N×97°.42E, h0km, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=62.7km s-min=15.6km az=4.0*

ISC 22 01:34:22.3±1.3,49°.91N±0°.07×97°.27E±0°.03,h10km,n32, σ2.64/43,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**0.71**	**13**	Pg	**Pn**	**01 34 40.5**	**+2.0**
KNGR				Sg	**Sn**	**01 34 50.7**	**+1.1**
KNGR	**Kungurtug, Tuv**	**0.71**	**13**	*e*PG	**Pn**	**01 34 40.5**	**+2.0**
KNGR				*e*S	**Sn**	**01 34 50.6**	**+1.0**
TDJR	**Todzha**	**2.60**	**344**	Pg	**Pg**	**01 35 15.9**	**+3.9**
TDJR				Sg	**Sg**	**01 35 50.9**	**+5.2**
TDJR	**Todzha**	**2.60**	**344**	*e*PN	**Pg**	**01 35 15.3**	**+3.3**
TDJR				*e*S	**Sg**	**01 35 50.1**	**+4.4**
MOY	**Mondy**	**2.94**	**52**	Pg	**Pg**	**01 35 19.6**	**+0.9**
MOY				Sg	**Sg**	**01 35 58.9**	**+2.0**
MOY	**Mondy**	**2.94**	**52**	*e*PN	**Pg**	**01 35 19.6**	**+0.9**
MOY				*e*		01 35 58.4	
MOY				pmax	pmax		
	comp=Z,85nm,0.6s						
MOY				smax	smax		
	comp=N,266nm,0.6s						
ARDR	**Aradan**	**3.60**	**319**	Pg	**Pg**	**01 35 32.4**	**+1.3**
ARDR				Sg	**Sg**	**01 36 19.0**	**+1.2**
ARDR	**Aradan**	**3.60**	**319**	*e*PN	**Pg**	**01 35 32.5**	**+1.3**
ARDR				*e*S	**Sg**	**01 36 20.5**	**+2.7**
ARS	**Arshan**	**3.83**	**56**	*e*PN	**Pg**	**01 35 35.3**	**-0.3**
ARS				*e*		01 36 25.4	
ARS				pmax	pmax		
	comp=Z,46nm,0.8s						
ARS				smax	smax		
	comp=E,410nm,0.9s						
ZAK	**Zakamensk**	**3.90**	**81**	Pg	**Pg**	**01 35 37.2**	**+0.3**
ZAK				Sg	**Sg**	**01 36 28.5**	**+1.2**
ZAK	**Zakamensk**	**3.90**	**81**	*e*PN	**Pb**	**01 35 29.9**	**-1.2**
ZAK				*e*		01 35 36.8	
ZAK				*e*		01 36 28.2	
ZAK				pmax	pmax		
	comp=Z,30nm,0.4s						
ZAK				smax	smax		
	comp=N,1μm,1.2s						
TLY	**Talaya**	**4.42**	**64**	Pg	**Pg**	**01 35 45.6**	**-1.2**
TLY				Sg	**Sg**	**01 36 45.5**	**+1.5**
TLY	**Talaya**	**4.42**	**64**	*e*PN	**Pg**	**01 35 46.9**	**+0.1**
TLY				*e*S	**Sg**	**01 36 43.9**	**-0.1**
TLY				smax	smax		
	comp=E,176nm,0.7s						
CERR	**Cheremushki**	**4.70**	**311**	Pg	**Pg**	**01 35 54.7**	**+2.4**
CERR				Sg	**Sg**	**01 36 54.2**	**+1.0**
CERR	**Cheremushki**	**4.70**	**311**	PN	**Pg**	**01 35 54.0**	**+1.7**
CERR						01 36 54.1	
DJO	**Djoy, Khakassi**	**4.76**	**309**	Pn	**Pb**	**01 35 42.2**	**-3.6**
DJO				Pg	**Pg**	**01 35 54.8**	**+1.5**
DJO				Sg	**Sg**	**01 36 59.0**	**+4.1**
DJO	**Djoy, Khakassi**	**4.76**	**309**	PN	**Pb**	**01 35 42.1**	**-3.6**
DJO						01 35 55.3	
IRK	**Irkutsk**	**4.99**	**59**	*e*PN	**Pg**	**01 35 56.8**	**-1.1**
IRK				*e*		01 37 00.4	
IRK				pmax	pmax		
	comp=Z,123nm,0.2s						
IRK				smax	smax		
	comp=E,337nm,0.4s						
MINR	**Mina**	**5.34**	**341**	Pg	**Pg**	**01 36 03.5**	**-0.9**
MINR				Sg	**Sg**	**01 37 16.3**	**+2.8**
MINR	**Mina**	**5.34**	**341**	PN	**Pg**	**01 36 02.9**	**-1.5**
MINR						01 37 03.9	
VEH	**Verkhnyaya Baz**	**5.47**	**310**	Pn	Pb	01 35 52.3	-5.7
VEH				Pg	**Pg**	**01 36 08.5**	**+1.5**
VEH				Sg	**Sg**	**01 37 19.8**	**+1.9**
VEH	**Verkhnyaya Baz**	**5.47**	**310**	PN	Pb	01 35 52.2	-5.7
VEH						01 36 06.1	
CUR	**Chagan-Uzun**	**5.75**	**275**	Sg	**Sg**	**01 37 26.9**	**+0.1**
ULGR	**Ulagan, Altay**	**6.01**	**280**	Pg	**Pg**	**01 36 16.9**	**-0.4**
ULGR				Sg	**Sg**	**01 37 40.9**	**+5.8**
AKAR	**Aktash**	**6.22**	**277**	Pn	Pb	01 36 01.8	-8.9
AKAR				Pg	**Pg**	**01 36 19.2**	**-2.1**
AKAR				Sg	**Sg**	**01 37 42.6**	**+0.8**
AKAR	**Aktash**	**6.22**	**277**	PN	Pb	01 36 01.8	-8.9
AKAR						01 36 19.2	
SONM	**Songino Array**	**6.37**	**106**	Pn	Pn	01 36 02.5	+6.3
	comp=E,1.4nm,0.3s,baz=291,slow=14,SNR=8.3						
SONM				Pg	**Pg**	**01 36 22.2**	**-2.0**
	comp=E,1.9nm,0.3s,baz=298,slow=17,SNR=11						
SONM				Lg	Lg	01 37 47.4	
	comp=E,4.6nm,0.3s,baz=294,slow=28,SNR=11 comp=E,1.1nm,0.3s						
SONM	**Songino Array**	**6.37**	**106**	PN	Pn	01 36 02.5	+6.2
SONM						01 36 22.2	
ZALV	**Zalesovo Beam**	**8.69**	**302**	Pn	Pg	01 37 00.1	-8.4
	comp=E,0.3nm,0.3s,baz=105,slow=13,SNR=4.6						
ZALV				Sn	**Sg**	**01 38 53.3**	**-7.5**
	comp=E,0.4nm,0.3s,baz=119,slow=24,SNR=6.8 comp=E,0.9nm,0.5s						
MKAR	**Makanchi Array**	**10.45**	**258**	Pn	Pn	01 37 03.2	+11
	comp=E,0.5nm,0.8s,baz=77,slow=14,SNR=2.0						
MKAR				Lg	Lg	01 40 00.5	
	comp=E,0.1nm,0.3s,baz=72,slow=34,SNR=6.1						
MKAR	**Makanchi Array**	**10.45**	**258**	P	Pn	01 37 03.2	+11
KURBB	**Kurchatov Arra**	**12.01**	**281**	Pn	Pn	01 37 32.4	+19
	baz=89,slow=14,SNR=3.0 comp=E,0.1nm,0.2s						

CATAC 22 01:39:25.6±0.4,12°N±3°×8°7W±°,h88km±3km,M3.1/19, MLv3.1/19,Error ellipse: s-maj=7.4km s-min=3.2km az=46.7,confirmed,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.21**	**57**	P	Pn	01 39 39.5	+1.0
AMTN	**Mateare**	**0.37**	**63**	S	Sn	01 39 52.7	+3.3
ALEN	**Leon**	**0.40**	**346**	S	Sn	01 39 51.7	+1.9
MOMN	**Momotombo**	**0.41**	**34**	P	Pn	01 39 40.5	+0.8
CNGA	**Al SSO del Vol**	**0.43**	**9**	P	Pn	01 39 40.8	+1.0
CNGA				S	Sn	01 39 53.3	+3.0
CNGN	**Cerro Negro**	**0.44**	**9**	P	Pn	01 39 40.7	+0.9
CNGN	**Cerro Negro**	**0.44**	**9**	S	Sn	01 39 53.3	+3.0
APQ3	**Volcan Apoyequ**	**0.44**	**62**	P	Pn	01 39 42.3	+2.5
APQ3				S	Sn	01 39 54.0	+3.7
ABCN	**Banco Central**	**0.45**	**83**	S	Sn	01 39 53.1	+2.6
ABCN	**Banco Central**	**0.45**	**83**	P	Pn	01 39 40.3	+0.4
APQ2	**Apoyeque**	**0.46**	**73**	P	Pn	01 39 40.3	+0.5
APQ2				S	Sn	01 39 53.3	+2.8
MOM2	**El Cardon**	**0.46**	**37**	P	Pn	01 39 41.1	+1.2
MOM2				S	Sn	01 39 53.0	+2.4
UNAN	**Cigeo UNAN**	**0.49**	**85**	P	Pn	01 39 40.7	+0.5
UNAN				S	Sn	01 39 53.9	+3.0
ALLN	**Telcor Managua**	**0.49**	**80**	S	Sn	01 39 53.8	+2.9
MOM3	**MOM3**	**0.51**	**29**	P	Pn	01 39 41.1	+0.8
MOM3				S	Sn	01 39 53.3	+2.2
MGAN	**Managua**	**0.52**	**81**	P	Pn	01 39 41.1	+0.8
MGAN	**Managua**	**0.52**	**81**	S	Sn	01 39 54.1	+2.8
WILN	**Americas 2**	**0.58**	**81**	S	Sn	01 39 55.2	+3.0
POLN	**Al Sur del Vol**	**0.58**	**356**	S	Sn	01 39 54.7	+2.3
MAS3	**Al N del Volca**	**0.58**	**94**	P	Pn	01 39 41.5	+0.6
MAS3				S	Sn	01 39 54.6	+2.2
PKGN	**Cerro Pekin**	**0.63**	**341**	P	Pn	01 39 42.2	+0.8
PKGN				S	Sn	01 39 56.0	+3.0
CRIN	**San Cristobal**	**0.69**	**337**	P	Pn	01 39 42.6	+0.6
CRIN	**San Cristobal**	**0.69**	**337**	S	Sn	01 39 56.5	+2.4
NADN	**Granada**	**0.79**	**114**	S	Sn	01 39 58.3	+2.5
LIMN	**Finca el Limon**	**1.07**	**22**	P	Pn	01 39 46.8	+0.7
LIMN				S	Sn	01 40 02.8	+1.3
POTN	**Potosi Cosigui**	**1.17**	**322**	S	Sn	01 40 04.7	+1.1
CSGN	**Cosiguina Volc**	**1.19**	**320**	P	Pn	01 39 47.9	+0.4
CSGN				S	Sn	01 40 05.2	+1.2
MATN	**Matagalpa**	**1.19**	**44**	P	Pn	01 39 47.1	-0.4
MATN	**Matagalpa**	**1.19**	**44**	S	Sn	01 40 03.9	-0.2
JAPN	**Al SSO del Vol**	**1.20**	**117**	P	Pn	01 39 48.1	+0.5
MORN	**Al O del Volca**	**1.22**	**115**	P	Pn	01 39 48.2	+0.4
MORN				S	Sn	01 40 05.5	+1.0
YUSH	**Yuscaran**	**1.88**	**358**	P	Pn	01 39 56.7	+0.4
YUSH	**Yuscaran**	**1.88**	**358**	S	Sn	01 40 20.2	+0.6

IDC ***22*** *01:47:22.8±2.1,1°.63N×126°.28E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=175.1km s-min=26.5km az=65.0*
DJA ***22*** *01:47:27.4±1.6,2°N±3°×12°7E±°, h18km±15km, M3.3/7, MLv3.3/7*

ISC 22 01:47:28.3±1.2,1°.70N±0°.10×126°.5E±0°.2,h35km,n6, σ1.12/7,mb3.6/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**138**	P	**Pn**	**01 47 49.7**	**+0.4**
TNTI				S	**Sn**	**01 48 06.0**	**+1.0**
SGSI	**Sangihe**	**2.21**	**333**	P	**Pn**	**01 48 03.4**	**+0.9**
SANI	**Sanana**	**3.77**	**188**	P	**Pn**	**01 48 24.7**	**+0.8**
WRA	**Warramunga Arr**	**22.84**	**161**	P	**P**	**01 52 27.3**	**-1.3**
	1.3nm,0.5s,baz=339,slow=11,SNR=16 1.3nm,0.5s						
ASAR	**Alice Springs**	**26.22**	**165**	P	**P**	**01 53 00.0**	**-0.1**
	0.3nm,0.4s,baz=344,slow=8.2,SNR=6.7 0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**01 57 24.5**	**-0.8**
	0.3nm,0.4s,baz=115,slow=6.8,SNR=4.3 0.3nm,0.4s						

IDC ***22*** *01:48:16.2±0.7,28°.84N×142°.28E, h0km, mb3.9/16, mbtmp3.9/20, ML3.6/4, MS3.2/4, Error ellipse: s-maj=22.9km s-min=12.8km az=78.0*
NEIC ***22*** *01:48:20.4±1.8,29°.2N±0°.1×142°.3E±0°.2, h10km±1km, mb4.5/9, Error ellipse: s-maj=24.9km s-min=17.6km az=73.0*

ISC 22 01:48:19.9±0.8,29°.19N±0°.09×142°.2E±0°.1,h10km,n40, σ0.99/29,mb4.1/21,MS3.2/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.09**	**181**	Pn	Pn	01 48 47.2	-7.7
	24nm,0.3s,baz=126,slow=22,SNR=5.5						
JCJ				Sn	Sn	01 49 12.9	-8.1
	38nm,0.3s,baz=281,slow=23,SNR=5.7						
JHJ2	**Mitsune**	**4.42**	**333**	Pn	**Pn**	**01 49 26.8**	**-0.1**
JHJ	**Hachijo jima 2**	**4.44**	**333**	Pn	**Pn**	**01 49 28.0**	**+0.7**
	10nm,0.3s,baz=298,slow=9.9,SNR=1.6						
JHJ				Sn	**Sn**	**01 50 16.1**	**-2.9**
	13nm,0.3s,baz=73,slow=22,SNR=2.6 192nm,0.9s						
MJAR	**Matsushiro Arr**	**8.07**	**336**	Pn	**Pn**	**01 50 18.3**	**+1.2**
	0.4nm,0.3s,baz=148,slow=11,SNR=7.5						
MJAR				Sn	**Sn**	**01 51 49.5**	**+1.0**
	0.1nm,0.3s,baz=14,slow=29,SNR=1.5 3.4nm,0.4s						
MAJO	**Matsushiro**	**8.07**	**336**	Pn	**Pn**	**01 50 18.2**	**+1.0**
JNU	**Nakatsue**	**10.47**	**295**	Pn	**Pn**	**01 50 51.6**	**+1.5**
	0.3nm,0.3s,baz=183,slow=5.8,SNR=1.6 3.3nm,0.6s						
JOW	**Kunigami**	**12.54**	**263**	LR	LR	01 55 58.6	
	comp=Z,95nm,18.7s,baz=143,slow=37						
KSRS	**Korea Array**	**14.50**	**308**	Pn	**Pn**	**01 51 45.0**	**-0.2**
	0.3nm,0.3s,baz=123,slow=12,SNR=5.3 0.6nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**24.32**	**107**	T	T	02 19 18.4	
	baz=297,slow=75,SNR=6.8						
H11N1	**WAKE ISLAND Hy**	**24.32**	**107**	T	T	02 19 22.7	
	baz=297,slow=75,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**24.33**	**107**	T	T	02 19 20.3	
	baz=297,slow=75,SNR=3.7						
H11S3	**WAKE ISLAND Hy**	**24.74**	**110**	T	T	02 19 41.9	
	baz=301						
H11S1	**WAKE ISLAND Hy**	**24.74**	**110**	T	T	02 19 44.3	
	baz=301						
H11S2	**WAKE ISLAND Hy**	**24.75**	**110**	T	T	02 19 46.2	
	baz=301						
SONM	**Songino Array**	**33.26**	**314**	P	**P**	**01 54 58.7**	**+1.2**
	2.0nm,1.1s,baz=17,slow=35,SNR=2.4 2.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.80**	**265**	P	**P**	**01 56 00.9**	**-0.8**
	0.9nm,0.3s,baz=44,slow=9.4,SNR=6.1						
CMAR				LR	LR	02 14 12.2	
	comp=Z,11nm,18.0s,baz=280,slow=38 0.9nm,0.3s						
HNR	**Honiara**	**42.03**	**153**	LR	LR	02 12 47.1	
	comp=Z,27nm,18.5s,baz=202,slow=35						
ZALV	**Zalesovo Beam**	**47.94**	**318**	P	**P**	**01 56 59.5**	**+1.1**
	1.2nm,0.7s,baz=104,slow=6.3,SNR=7.4 1.2nm,0.7s						
MK31	**Makanchi Array**	**49.19**	**308**	P	**P**	**01 57 07.8**	**-0.3**
MK31				IAmb	IAmb	01 57 09.4	
	comp=Z,29nm,0.9s						
MKAR	**Makanchi Array**	**49.19**	**308**	P	**P**	**01 57 07.1**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=88,slow=8.8,SNR=7.7 comp=Z,1.5nm,0.7s						
WB0	**Warramunga Arr**	**49.25**	**190**	P	**P**	**01 57 09.5**	**+0.7**
WB0				IAmb	IAmb	01 57 10.6	
	comp=Z,5.7nm,0.8s						
WR8	**Warramunga Arr**	**49.42**	**190**	P	**P**	**01 57 10.8**	**+0.6**
WR8				IAmb	IAmb	01 57 11.5	
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	**49.44**	**190**	P	P	01 57 04.7	-5.5
	comp=Z,0.7nm,1.0s,baz=7.7,slow=7.7,SNR=22 comp=Z,0.7nm,1.0s						
FITZ	**Fitzroy Crossi**	**49.66**	**201**	P	P	01 57 07.4	-4.5
	comp=Z,2.6nm,1.1s,baz=36,slow=6.8,SNR=3.6 comp=Z,2.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**49.66**	**201**	P	**P**	**01 57 11.0**	**-1.0**
KURK	**Kurchatov**	**51.56**	**313**	P	**P**	**01 57 26.2**	**+0.3**
KURK				IAmb	IAmb	01 57 27.7	
	comp=Z,5.8nm,0.8s						
KURBB	**Kurchatov Arra**	**51.62**	**313**	P	**P**	**01 57 25.1**	**-1.3**
	comp=Z,2.0nm,0.4s,baz=91,slow=7.0,SNR=18 comp=Z,2.0nm,0.4s						
B20K	**Meade River**	**52.91**	**22**	P	**P**	**01 57 35.8**	**+0.1**
ASAR	**Alice Springs**	**53.16**	**190**	P	P	01 57 33.9	-4.2
	comp=Z,0.4nm,0.7s,baz=358,slow=7.9,SNR=5.8 comp=Z,0.4nm,0.7s						
F24K	**Squaw Lake**	**55.70**	**26**	P	**P**	**01 57 56.9**	**+0.7**
F24K				IAmb	IAmb	01 58 15.5	
	comp=Z,6.9nm,1.5s						
ILAR	**Eielson Array**	**55.87**	**29**	P	**P**	**01 57 56.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=320,slow=33,SNR=1.6 comp=Z,0.3nm,0.6s						
BVAR	**Borovoye Array**	**56.54**	**317**	P	**P**	**01 58 01.8**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=80,slow=7.4,SNR=7.7 comp=Z,2.1nm,0.6s						
STKA	**Stephens Creek**	**60.73**	**181**	P	P	01 58 26.2	-5.4
	comp=Z,0.7nm,0.3s,baz=318,slow=7.2,SNR=2.9 comp=Z,0.7nm,0.3s						
ARTI	**Arti**	**62.90**	**322**	P	**P**	**01 58 46.2**	**+0.1**
AB31	**Akbulak array**	**63.67**	**314**	P	**P**	**01 58 51.6**	**+0.3**
FINES	**FINESS Array B**	**76.09**	**334**	P	**P**	**02 00 06.8**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=132,slow=2.8,SNR=4.0						
FINES				LR	LR	02 35 15.4	
	comp=Z,42nm,19.4s,baz=304,slow=37 comp=Z,2.1nm,0.9s						
KBZ	**Khabaz**	**76.61**	**313**	P	**P**	**02 00 11.4**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=64,slow=6.7,SNR=5.6 comp=Z,3.3nm,0.8s						
NVAR	**Mina Array Bea**	**79.21**	**52**	P	**P**	**02 00 25.4**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=307,slow=5.4,SNR=6.3 comp=Z,0.7nm,0.9s						
PDAR	**Pinedale Array**	**82.71**	**45**	P	**P**	**02 00 43.8**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=291,slow=7.3,SNR=3.4 comp=Z,0.5nm,0.9s						
BRTR	**Keskin Array B**	**84.60**	**313**	P	**P**	**02 00 53.8**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=134,slow=3.6,SNR=3.5 comp=Z,0.5nm,0.7s						

PRE ***22*** *01:58:37.4±0.9,26°.96S×26°.53E, h2km, ML2.6*
BGSI ***22*** *01:58:39.3±1.4,27°.16S×26°.75E, h16km±50km, ML3.0*

ISC 22 01:58:37.9±1.3,27°.00S±0°.04×26°.55E±0°.03,h13km±10km, n39,σ1.92/69,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.73**	**85**	*e*P	**Pb**	**01 58 52.1**	**-0.4**
PRYS				*e*S	**Sb**	**01 59 02.1**	**-0.4**
PRYS				IAML		01 59 06.7	
	comp=Z,222nm,0.7s						
SWZ	**Schweizer**	**1.10**	**260**	*e*P	**Pb**	**01 58 58.7**	**-0.2**
SWZ				*e*S	**Sg**	**01 59 13.4**	**-0.1**
SWZ				IAML		01 59 19.6	
	comp=Z,406nm,0.2s						
HRAO	**HartRAO**	**1.50**	**43**	*e*P	**Pb**	**01 59 06.4**	**+0.7**
HRAO				*e*S	**Sg**	**01 59 26.3**	**0.0**
HRAO				IAML		01 59 26.9	
	comp=Z,104nm,0.4s						
SNKL	**Senekal, Frees**	**1.67**	**140**	*e*P	**Pg**	**01 59 08.7**	**-1.4**
SNKL				*e*S	**Sg**	**01 59 32.1**	**+0.3**
SNKL				IAML		01 59 33.6	
	comp=Z,182nm,0.2s						
MAKGR	**Makgori**	**1.96**	**307**	*i* P	**Pn**	**01 59 14.4**	**+3.4**
MAKGR				IAML		01 59 42.9	
	comp=N,520nm,0.5s						
NWCL	**Newcastle**	**3.06**	**105**	*e*P	**Pn**	**01 59 28.4**	**+2.2**
NWCL				*e*S	**Sb**	**02 00 04.9**	**-4.8**
NWCL				IAML		02 00 16.4	
	comp=Z,66nm,0.4s						
CRLN	**Carolina, Mapu**	**3.27**	**73**	*e*P	**Pn**	**01 59 31.3**	**+2.2**
CRLN				*e*S	**Sn**	**02 00 09.1**	**+1.1**
CRLN				IAML		02 00 40.1	
	comp=Z,8.4nm,0.2s						
LEPH	**Lephalale, Lim**	**3.32**	**20**	*e*P	**Pn**	**01 59 31.1**	**+1.4**
LEPH				*e*S	**Sn**	**02 00 09.4**	**+0.3**
LEPH				IAML		02 00 24.8	
	comp=Z,39nm,0.4s						
SKOMA	**Sekoma**	**3.42**	**316**	*i* P	**Pn**	**01 59 34.5**	**+3.6**
SKOMA				IAML		02 00 33.7	
	comp=N,31nm,0.3s						
PHPEN	**Phepeng**	**3.64**	**294**	*i* P	**Pn**	**01 59 36.7**	**+2.6**
LPHEP	**Lephephe**	**3.67**	**350**	*i* P	**Pn**	**01 59 36.6**	**+2.2**
LPHEP				*i* S	**Sn**	**02 00 19.0**	**+1.3**
LPHEP				IAML		02 00 38.4	
	comp=E,27nm,0.4s						
HVD	**Gariep Dam**	**3.71**	**194**	*e*P	**Pn**	**01 59 37.3**	**+2.2**
HVD				*e*S	**Sn**	**02 00 20.5**	**+1.6**
KDWAN	**Kaudwane**	**3.98**	**334**	*i* P	**Pn**	**01 59 40.9**	**+2.0**
KDWAN				IAML		02 00 46.3	
	comp=E,107nm,0.3s						
PILG	**Pil

ROOI				*e*S	**Sn**	**02 01 16.8**	**0.0**
ROOI				IAML		02 01 53.4	
	comp=Z,7.4nm,0.4s						
ARMS	**Ukamas**	**6.13**	**259**	*e*P	**Pn**	**02 00 10.1**	**+1.8**
ARMS				*e*S	**Sn**	**02 01 17.7**	**-0.8**
GRHM	**Grahamstown, E**	**6.26**	**181**	*e*P	**Pn**	**02 00 11.5**	**+1.5**
GRHM				*e*S	**Sn**	**02 01 21.4**	**-0.1**
GRHM				IAML		02 02 06.0	
	comp=Z,4.4nm,0.4s						
GRAN	**Grantham**	**6.52**	**215**	*e*P	**Pn**	**02 00 15.6**	**+2.0**
GRAN				*e*S	**Sn**	**02 01 26.6**	**-1.3**
GRAN				IAML		02 02 13.5	
	comp=Z,11nm,0.5s						
FRAZ	**Fraserburg**	**6.65**	**221**	*e*P	**Pn**	**02 00 18.1**	**+2.6**
FRAZ				*e*S	**Sn**	**02 01 31.5**	**+0.3**
FRAZ				IAML		02 02 06.8	
	comp=Z,7.0nm,0.6s						
KOOLE	**Kule**	**7.01**	**303**	*i* P	**Pn**	**02 00 21.9**	**+1.5**
MERW	**Merweville**	**7.14**	**216**	*e*P	**Pn**	**02 00 24.0**	**+1.7**
MERW				*e*S	**Sn**	**02 01 41.8**	**-1.6**
MERW				IAML		02 02 25.4	
	comp=Z,4.3nm,0.4s						
SUR	**Sutherland**	**7.33**	**222**	*e*P	**Pn**	**02 00 26.9**	**+2.1**
SUR				*e*S	**Sn**	**02 01 46.8**	**-1.2**
SUR				IAML		02 02 39.4	
	comp=Z,5.0nm,0.8s						
CVNA	**Calvinia**	**7.42**	**231**	*e*P	**Pn**	**02 00 27.6**	**+1.5**
CVNA				*e*S	**Sn**	**02 01 48.9**	**-1.4**
CVNA				IAML		02 02 42.3	
	comp=Z,9.0nm,0.6s						
GRTLG	**Ghanzi**	**7.43**	**318**	*i* P	**Pn**	**02 00 26.8**	**+0.7**
KOMG	**Komaggas**	**8.46**	**249**	*e*P	**Pn**	**02 00 43.0**	**+2.8**
KOMG				*e*S	**Sn**	**02 02 12.6**	**-2.9**
KOMG				IAML		02 02 48.9	
	comp=Z,1.9nm,0.8s						
PRTV	**Porterville,We**	**8.85**	**225**	*e*P	**Pn**	**02 00 48.0**	**+2.4**
PRTV				*e*S	**Sn**	**02 02 22.9**	**-2.4**
PRTV				IAML		02 02 46.7	
	comp=Z,1.9nm,0.5s						
AUSN	**Aus**	**9.20**	**270**	*e*P	**Pn**	**02 00 51.7**	**+1.2**
AUSN				*e*S	**Sn**	**02 02 31.7**	**-2.2**

*BGSI **22** 02:03:00.7±1.2,27.45S×26.76E,h68km±21km,ML3.3*
*PRE **22** 02:03:01.3±1.0,27.02S×26.53E,h2km,ML2.7*
ISC 22 02:03:01.4±1.0,**27.02S**±0.03×**26.50E**±0.04,**h5**km,**n33,**
σ1§62/58,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**1.55**	**44**	*e*P	**Pn**	**02 03 30.2**	**+0.4**
HRAO				*e*S	**Sn**	**02 03 50.8**	**+0.4**
HRAO				IAML		02 03 51.0	
	comp=Z,142nm,0.5s						
BOSA	**Boshof**	**1.93**	**215**	*e*P	**Pn**	**02 03 36.4**	**+1.3**
BOSA				*e*S	**Sn**	**02 04 01.1**	**+1.2**
BOSA				IAML		02 04 01.7	
	comp=Z,80nm,0.3s						
MAKGR	**Makgori**	**1.94**	**308**	*i* P	**Pn**	**02 03 37.5**	**+2.2**
MAKGR				*i* S	**Sn**	**02 04 02.7**	**+2.5**
MAKGR				IAML		02 04 05.3	
	comp=N,846nm,0.4s						
LBTB	**Lobatse**	**2.16**	**338**	*e*P	**Pn**	**02 03 39.9**	**+1.8**
LBTB				*e*S	**Sn**	**02 04 07.3**	**+1.9**
LBTB				IAML		02 04 18.1	
	comp=Z,30nm,0.2s						
NWCL	**Newcastle**	**3.10**	**104**	*e*P	**Pn**	**02 03 51.8**	**+0.7**
NWCL				*e*S	**Sn**	**02 04 29.1**	**+0.5**
NWCL				IAML		02 04 38.8	
	comp=Z,90nm,0.4s						
CRLN	**Carolina, Mapu**	**3.31**	**73**	*e*P	**Pn**	**02 03 55.1**	**+1.0**
CRLN				*e*S	**Sn**	**02 04 33.9**	**-0.2**
CRLN				IAML		02 04 45.3	
	comp=Z,20nm,0.5s						
LEPH	**Lephalale, Lim**	**3.36**	**21**	*e*P	**Pn**	**02 03 55.7**	**+1.0**
LEPH				*e*S	**Sn**	**02 04 34.3**	**-0.8**
LEPH				IAML		02 04 47.4	
	comp=Z,60nm,0.5s						
SKOMA	**Sekoma**	**3.41**	**317**	*i* P	**Pn**	**02 03 56.8**	**+1.5**
PHPEN	**Phepeng**	**3.62**	**294**	*i* P	**Pn**	**02 03 58.3**	**0.0**
HVD	**Gariep Dam**	**3.68**	**194**	*e*P	**Pn**	**02 04 00.3**	**+1.2**
HVD				*e*S	**Sn**	**02 04 42.7**	**-0.2**
LPHEP	**Lephephe**	**3.69**	**351**	*i* P	**Pn**	**02 04 00.1**	**+0.8**
LPHEP				IAML		02 05 00.8	
	comp=E,45nm,0.4s						
KDWAN	**Kaudwane**	**3.99**	**335**	*i* P	**Pn**	**02 04 03.6**	**+0.2**
KDWAN				IAML		02 05 09.1	
	comp=N,170nm,0.4s						
PMBG	**Pietermaritzbu**	**4.32**	**126**	*e*P	**Pn**	**02 04 09.0**	**+1.2**
PMBG				*e*S	**Sn**	**02 04 58.2**	**-0.5**
PMBG				IAML		02 05 16.5	
	comp=Z,23nm,0.4s						
KSTD	**Kokstad**	**4.35**	**146**	*e*P	**Pn**	**02 04 09.6**	**+1.2**
KSTD				*e*S	**Sn**	**02 04 59.4**	**-0.1**
KSTD				IAML		02 05 25.6	
	comp=Z,13nm,0.3s						
MREMI	**Moremi**	**4.51**	**11**	*i* P	**Pn**	**02 04 09.3**	**-1.3**
MREMI				*i* S	**Sn**	**02 05 01.5**	**-2.1**
MREMI				IAML		02 05 22.3	
	comp=E,264nm,0.3s						
POGA	**Pongola**	**4.65**	**95**	*e*P	**Pn**	**02 04 14.0**	**+1.7**
POGA				*e*S	**Sn**	**02 05 05.2**	**-1.5**
POGA				IAML		02 05 31.5	
	comp=Z,24nm,0.4s						
ALKP	**Alkanpan, Nort**	**4.74**	**231**	*e*P	**Pn**	**02 04 14.9**	**+1.2**
ALKP				*e*S	**Sn**	**02 05 08.4**	**-0.8**
ALKP				IAML		02 05 36.4	
	comp=Z,28nm,0.4s						
BFON	**Badsfontein, M**	**5.36**	**207**	*e*P	**Pn**	**02 04 23.9**	**+1.7**
BFON				*e*S	**Sn**	**02 05 23.6**	**-0.8**
BFON				IAML		02 05 49.9	
	comp=Z,18nm,0.5s						
GRAF	**Camdeboo Natio**	**5.52**	**198**	*e*P	**Pn**	**02 04 26.2**	**+1.7**
GRAF				*e*S	**Sn**	**02 05 28.0**	**-0.4**
GRAF				IAML		02 06 01.1	
	comp=Z,18nm,0.7s						
LKGWB	**Lokgwabe**	**5.58**	**300**	IAML		02 05 50.0	
	comp=N,41nm,0.7s						
MUSN	**Musina, Limpop**	**5.62**	**34**	*e*P	**Pn**	**02 04 26.3**	**+0.6**
MUSN				*e*S	**Sn**	**02 05 28.8**	**-1.8**
MUSN				IAML		02 06 01.7	
	comp=Z,9.8nm,0.3s						
AUGR	**Augrabies**	**5.68**	**253**	*e*P	**Pn**	**02 04 28.3**	**+1.8**
AUGR				*e*S	**Sn**	**02 05 31.2**	**-1.1**
AUGR				IAML		02 06 00.5	
	comp=Z,29nm,0.5s						
BRAK	**Brakfontein**	**5.69**	**213**	*e*P	**Pn**	**02 04 28.2**	**+1.5**
BRAK				*e*S	**Sn**	**02 05 31.5**	**-1.1**
BRAK				IAML		02 05 53.4	
	comp=Z,17nm,0.7s						
KGCAE	**Kacgae**	**5.69**	**316**	*i* P	**Pn**	**02 04 26.4**	**-0.4**
BROLN	**Tlhalogang**	**5.94**	**8**	*i* P	**Pn**	**02 04 28.8**	**-1.5**
BROLN				*i* S	**Sn**	**02 04 34.4**	**-4.4**
BROLN				IAML		02 06 06.6	
	comp=E,20nm,0.5s						
ARMS	**Ukamas**	**6.09**	**259**	*e*P	**Pn**	**02 04 33.9**	**+1.7**
ARMS				*e*S	**Sn**	**02 05 42.0**	**-0.3**
GRHM	**Grahamstown, E**	**6.24**	**181**	*e*P	**Pn**	**02 04 36.1**	**+1.9**
GRHM				*e*S	**Sn**	**02 05 43.3**	**-2.5**
GRHM				IAML		02 05 52.9	
	comp=Z,7.6nm,0.4s						
GRAN	**Grantham**	**6.47**	**215**	*e*P	**Pn**	**02 04 38.8**	**+1.3**
GRAN				*e*S	**Sn**	**02 05 50.0**	**-1.7**
GRAN				IAML		02 06 35.9	
	comp=Z,15nm,0.5s						
FRAZ	**Fraserburg**	**6.61**	**221**	*e*P	**Pn**	**02 04 40.8**	**+1.5**
FRAZ				*e*S	**Sn**	**02 05 53.1**	**-2.0**
FRAZ				IAML		02 06 33.4	
	comp=Z,9.7nm,0.8s						
KOOLE	**Kule**	**6.99**	**304**	*i* P	**Pn**	**02 04 43.2**	**-1.5**
MERW	**Merweville**	**7.10**	**216**	*e*P	**Pn**	**02 04 48.1**	**+2.0**
MERW				*e*S	**Sn**	**02 06 04.8**	**-2.4**
MERW				IAML		02 06 07.0	
	comp=Z,6.0nm,0.6s						
CVNA	**Calvinia**	**7.38**	**231**	*e*P	**Pn**	**02 04 52.0**	**+2.1**
CVNA				*e*S	**Sn**	**02 06 11.6**	**-2.5**
CVNA				IAML		02 06 13.9	
	comp=Z,3.8nm,0.3s						
AUSN	**Aus**	**9.16**	**270**	*e*P	**Pn**	**02 05 16.0**	**+1.6**
AUSN				*e*S	**Sn**	**02 06 54.7**	**-3.3**

*ISK **22** 02:11:22.6,39.25N×26.16E,h2km,ML2.5/31*

*AFAD **22** 02:11:22.2,39.19N×26.10E,h7km±2km,ML2.2*
*ATH **22** 02:11:23.0,39.16N×26.08E,h28km±1km,ML2.3/3,*
Manual Solution by N.Liadopoulou First location:
2019/11/22 02:12:46, This location: 2020/07/03 09:14:37
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 0
km; Longitude uncertainty: 1 km
ISC 22 02:11:23.2±0.9,**39.20N**±0.02×**26.09E**±0.02,**h26**km±6km,
n61,σ1§03/83,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.18**	**275**	Pg	**Pb**	**02 11 29.7**	**+1.0**
SIGR				Sg	**Sb**	**02 11 32.8**	**+0.3**
SIGR	**SIGRI**	**0.18**	**275**	P	**Pb**	**02 11 29.6**	**+0.8**
SIGR				S	**Sb**	**02 11 33.0**	**+0.5**
GPNR	**Gulpinar-Canak**	**0.26**	**8**	Pg	**Pb**	**02 11 28.0**	**-1.8**
KOCA	**Canakkale, Ayv**	**0.31**	**8**	P	**Pb**	**02 11 28.9**	**-1.6**
KOCA				*i* IAML		02 11 33.0	
	comp=N,256nm,0.4s						
KOCA				S	**Sb**	**02 11 33.8**	**-1.6**
KOCA				*i* IAML		02 11 37.0	
	comp=E,305nm,0.4s						
AYVA	**Ayvalik**	**0.48**	**76**	P	**Pb**	**02 11 31.5**	**-1.7**
AYVA				S	**Sb**	**02 11 38.6**	**-1.3**
AYVA				*i* IAML		02 11 39.0	
	comp=N,241nm,0.6s						
AYVA				*i* IAML		02 11 41.0	
	comp=E,118nm,0.3s						
KARB	**zmir-Karabur**	**0.59**	**154**	P	**Pb**	**02 11 34.0**	**-1.0**
KARB				S	**Sb**	**02 11 42.3**	**-0.6**
KARB				*i* IAML		02 11 44.0	
	comp=N,182nm,0.2s						
KARB				*i* IAML		02 11 44.0	
	comp=E,299nm,0.3s						
EZNE	**Ezine-Canakkal**	**0.60**	**21**	Pg	**Pb**	**02 11 33.8**	**-1.3**
EZNE				Sg	**Sb**	**02 11 42.1**	**-1.1**
BOZC	**Bozcaada**	**0.65**	**358**	P	**Pb**	**02 11 34.7**	**-1.1**
BOZC				*i* IAML		02 11 44.0	
	comp=N,160nm,0.2s						
BOZC				S	**Sb**	**02 11 44.2**	**-0.3**
BOZC				*i* IAML		02 11 46.0	
	comp=E,128nm,0.2s						
BOZC	**Bozcaada**	**0.65**	**358**	Pg	**Pb**	**02 11 34.8**	**-1.1**
BOZC				Sg	**Sb**	**02 11 44.2**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.65**	**33**	P	**Pb**	**02 11 34.5**	**-1.5**
BAYC				S	**Sb**	**02 11 44.0**	**-0.7**
BAYC				*i* IAML		02 11 46.0	
	comp=E,109nm,0.4s						
BAYC				*i* IAML		02 11 50.0	
	comp=N,75nm,0.2s						
DKL	**Dikili**	**0.65**	**101**	Pg	**Pb**	**02 11 35.2**	**-0.7**
DKL				Sg	**Sb**	**02 11 44.4**	**-0.2**
EAG2	**Marmaro, Chios**	**0.65**	**178**	P	**Pb**	**02 11 35.3**	**-0.7**
EAG2				S	**Sb**	**02 11 44.4**	**-0.2**
EZN	**Ezine**	**0.66**	**16**	Pg	**Pb**	**02 11 34.9**	**-1.1**
EZN				Sg	**Sb**	**02 11 43.9**	**-0.9**
ZEDA	**zmir-Bergama**	**0.81**	**106**	P	**Pb**	**02 11 37.8**	**-0.8**
ZEDA				S	**Sb**	**02 11 49.1**	**+0.1**
ZEDA				*i* IAML		02 11 50.0	
	comp=N,65nm,0.2s						
ZEDA				*i* IAML		02 11 50.0	
	comp=E,65nm,0.3s						
CHOS	**Chios island**	**0.81**	**182**	P	**Pb**	**02 11 37.9**	**-0.8**
CHOS				S	**Sb**	**02 11 49.2**	**0.0**
BUHA	**Balikesir, Bur**	**0.83**	**68**	P	**Pb**	**02 11 37.7**	**-1.2**
BUHA				S	**Sb**	**02 11 49.0**	**-0.7**
BUHA				*i* IAML		02 11 50.0	
	comp=E,88nm,0.6s						
BUHA				*i* IAML		02 11 55.0	
	comp=N,40nm,0.3s						
ECEA	**Canakkale, Ece**	**0.85**	**5**	P	**Pb**	**02 11 39.0**	**-0.3**
ECEA				S	**Sb**	**02 11 51.0**	**+0.7**
ECEA				*i* IAML		02 11 52.0	
	comp=N,237nm,0.2s						
ECEA				*i* IAML		02 11 52.0	
	comp=E,205nm,0.2s						
YAYO	**Edremit-Balk**	**0.87**	**61**	Pg	**Pb**	**02 11 38.7**	**-1.0**
YAYO				Sg	**Sb**	**02 11 50.5**	**-0.4**
CNKL	**anakkale-Mer**	**0.90**	**15**	P	**Pb**	**02 11 39.1**	**-1.0**
CNKL				S	**Sn**	**02 11 52.7**	**+0.4**
CNKL				*i* IAML		02 11 55.0	
	comp=N,103nm,0.2s						
CNKL				*i* IAML		02 11 55.0	
	comp=E,110nm,0.3s						
EFSA	**Agios Efstrati**	**0.92**	**292**	P	**Pn**	**02 11 40.3**	**0.0**
EFSA				S	**Sb**	**02 11 52.9**	**+0.7**
URLA	**Izmir**	**0.93**	**154**	Pg	**Pn**	**02 11 40.3**	**-0.2**
COMU	**Canakkale**	**0.95**	**18**	Pg	**Pn**	**02 11 40.5**	**-0.3**
GOAD	**anakkale-G¶**	**0.97**	**352**	P	**Pn**	**02 11 40.6**	**-0.5**
GOAD				S	**Sb**	**02 11 54.0**	**+0.2**
GOAD				*i* IAML		02 11 55.0	
	comp=N,160nm,0.6s						
GOAD				*i* IAML		02 11 55.0	
	comp=E,140nm,0.2s						
LIA	**Limnos Island**	**0.99**	**315**	P	**Pn**	**02 11 41.4**	**+0.1**
LIA				S	**Sb**	**02 11 54.9**	**+0.6**
GADA	**Gvkgeada**	**1.00**	**352**	Pg	**Pn**	**02 11 41.1**	**-0.4**
LMN1	**MIRINA LIMNOU**	**1.04**	**311**	P	**Pn**	**02 11 42.1**	**0.0**
BLCB	**Balcova**	**1.10**	**137**	Pn	**Pb**	**02 11 44.4**	**+0.8**
CANM	**Can-anakkale**	**1.11**	**42**	Pg	**Pb**	**02 11 43.1**	**+0.2**
SOMA	**Soma-Manisa**	**1.13**	**92**	Pg	**Pb**	**02 11 43.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.24**	**14**	Pn	**Pb**	**02 11 45.7**	**-0.2**
SKY	**Skiros Island**	**1.24**	**256**	P	**Pn**	**02 11 44.3**	**-0.4**
LPK	**Lapseki**	**1.28**	**24**	Pn	**Pb**	**02 11 46.5**	**-0.2**
BALY	**Balya**	**1.31**	**65**	P	**Pb**	**02 11 47.4**	**+0.3**
BALY				S	**Sb**	**02 12 03.9**	**+0.4**
BALY				*i* IAML		02 12 06.0	
	comp=N,48nm,0.5s						
BALY				*i* IAML		02 12 08.0	
	comp=E,34nm,0.6s						
SMTH	**Samothraki Isl**	**1.34**	**342**	P	**Pn**	**02 11 46.6**	**+0.4**
BALB	**Balikesir**	**1.46**	**72**	Pn	**Pb**	**02 11 49.6**	**-0.1**
GONE	**Gonen-Balikesi**	**1.50**	**55**	Pn	**Pn**	**02 11 49.5**	**+1.1**
ERIK	**Erikli-Kesan**	**1.51**	**12**	Pn	**Pb**	**02 11 50.7**	**-0.3**
KRBG	**Karabiga-Canak**	**1.52**	**38**	Pn	**Pn**	**02 11 49.7**	**+1.1**
ENEZ	**Enez**	**1.54**	**2**	Pn	**Pb**	**02 11 51.1**	**+0.1**
SMG	**Samos**	**1.60**	**158**	P	**Pn**	**02 11 49.5**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.65**	**251**	P	**Pn**	**02 11 50.0**	**-0.4**
GORD	**Gordes-Manisa**	**1.65**	**99**	Pn	**Pb**	**02 11 52.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.71**	**29**	Pn	**Pb**	**02 11 53.5**	**-0.5**
SUSR	**Susurluk-Balik**	**1.72**	**63**	Pn	**Pn**	**02 11 52.6**	**+1.1**
KARY	**Karystos**	**1.74**	**229**	P	**Pn**	**02 11 51.0**	**-0.6**
AOS2	**Alonissos-2**	**1.74**	**269**	P	**Pn**	**02 11 51.8**	**+0.1**
ODEM	**Odemis-Izmir**	**1.81**	**120**	Pn	**Pb**	**02 11 55.2**	**-0.4**
MRMT	**Marmara Adasi**	**1.82**	**39**	Pn	**Pb**	**02 11 54.9**	**-1.0**
RDO	**Rodhopi**	**1.99**	**348**	Pn	**Pb**	**02 11 57.7**	**-1.0**
RDO	**Rodhopi**	**1.99**	**348**	P	**Pn**	**02 11 55.8**	**+0.6**
SFL1	**Soufli**	**2.00**	**5**	P	**Pn**	**02 11 55.8**	**+0.6**
KCTX	**Karacabey (Bur**	**2.05**	**58**	Pn	**Pn**	**02 11 57.7**	**+1.7**
KULA	**Kula-Manisa**	**2.12**	**108**	Pn	**Pb**	**02 11 59.5**	**-1.5**
KAVA	**Kavala**	**2.17**	**327**	P	**Pn**	**02 11 57.6**	**+0.1**
APE	**Apeiranthos**	**2.17**	**192**	P	**Pn**	**02 11 57.1**	**-0.5**
SIMA	**Simav-Kutahya**	**2.26**	**92**	Pn	**Pb**	**02 12 01.4**	**-1.9**
MDNY	**Mudanya-Bursa**	**2.45**	**61**	Pn	**Pn**	**02 12 03.7**	**+2.2**
ARMT	**Armutlu**	**2.54**	**57**	Pn	**Pn**	**02 12 04.9**	**+2.3**
TVSB	**Tavsanli**	**2.63**	**83**	Pn	**Pn**	**02 12 06.7**	**+2.7**
EDRB	**Edirne**	**2.69**	**11**	Pn	**Pn**	**02 12 07.5**	**+2.7**
YLV	**Yalova**	**2.88**	**61**	Pn	**Pn**	**02 12 09.8**	**+2.4**

*TEH **22** 02:14:40.8,38.31N×44.38E,h10km±107km*
*ISK **22** 02:14:40.8,38.19N×44.45E,h21km,ML2.7/8*
*AFAD **22** 02:14:40.6,38.38N×44.39E,h9km±3km,ML2.2*
ISC 22 02:14:41.1±1.2,**38.34N**±0.03×**44.39E**±0.02,**h7**km±10km,
n23,σ1§40/35,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.45**	**316**	P	**Pg**	**02 14 48.6**	**-1.3**
OZAP				S	**Sg**	**02 14 55.7**	**-0.1**
OZAP				*i* IAML		02 14 58.0	
	comp=N,153nm,0.5s						
OZAP				*i* IAML		02 14 59.0	
	comp=E,307nm,0.3s						
YOVA	**Hakkari_Yksek**	**0.75**	**186**	P	**Pn**	**02 14 56.6**	**-1.7**
YOVA				S	**Sn**	**02 15 10.9**	**+0.9**
YOVA				*i* IAML		02 15 13.0	
	comp=N,125nm,0.4s						
YOVA				*i* IAML		02 15 14.0	
	comp=E,88nm,1.0s						
TVAN	**Van**	**0.80**	**284**	P	**Pg**	**02 14 55.2**	**-1.3**
TVAN				S	**Sg**	**02 15 07.3**	**+0.5**
TVAN				*i* IAML		02 15 08.0	
	comp=N,128nm,0.5s						
TVAN				*i* IAML		02 15 10.0	
	comp=E,131nm,0.3s						
VANB	**Van**	**0.83**	**288**	Pg	**Pn**	**02 14 58.5**	**-0.8**
VANB				Sg	**Sn**	**02 15 11.0**	**-0.8**
VMUR	**Van-Muradiye**	**0.92**	**316**	P	**Pg**	**02 14 57.7**	**-0.9**
VMUR				S	**Sn**	**02 15 13.6**	**-0.4**
VMUR				*i* IAML		02 15 16.0	
	comp=E,65nm,0.8s						
VMUR				*i* IAML		02 15 22.0	
	comp=N,71nm,0.6s						
HAKT	**HAKKARI**	**0.95**	**215**	P	**Pn**	**02 14 59.5**	**-1.5**
HAKT				S	**Sn**	**02 15 15.5**	**+0.6**
HAKT				*i* IAML		02 15 17.0	
	comp=N,86nm,0.5s						
HAKT				*i* IAML		02 15 18.0	
	comp=E,171nm,0.4s						
ISHB	**Shabestar**	**0.96**	**93**	Pg	**Pg**	**02 14 58.8**	**-0.8**
IMRD	**Marand**	**1.09**	**70**	Pg	**Pg**	**02 15 01.6**	**-0.4**
IMRD				Sg	**Sn**	**02 15 18.0**	**-0.4**
AKDM	**Akdamar-Van**	**1.11**	**270**	Pn	**Pg**	**02 15 00.8**	**-1.6**
AKDM				Sn	**Sn**	**02 15 18.2**	**-0.6**
ITBZ	**Tabriz**	**1.38**	**94**	Pg	**Pn**	**02 15 06.3**	**-0.6**
ADCV	**BITLIS_Adilcev**	**1.39**	**290**	P	**Pn**	**02 15 06.3**	**-0.7**
ADCV				*i* IAML		02 15 30.0	
	comp=E,34nm,0.7s						
ADCV				*i* IAML		02 15 32.0	
	comp=N,33nm,0.9s						
IAZR	**Azarshahr**	**1.42**	**117**	Pg	**Pg**	**02 15 07.7**	**-0.5**
PERV	**Siirt/Pervari-**	**1.51**	**256**	P	**Pb**	**02 15 09.0**	**-0.5**
PERV				S	**Sg**	**02 15 34.7**	**+5.0**
PERV				*i* IAML		02 15 41.0	
	comp=E,91nm,0.5s						
PERV				*i* IAML		02 15 43.0	
	comp=N,90nm,0.5s						
TASB	**TASBURUN-IGDIR**	**1.65**	**356**	Pn	**Pb**	**02 15 11.4**	**-0.4**
TASB				Sn	**Sb**	**02 15 33.9**	**+1.1**
AGRB	**Hanur-Agry**	**1.65**	**319**	Pn	**Pn**	**02 15 10.6**	**0.0**
MLAZ	**Malazgirt-MUS**	**1.65**	**300**	Pn	**Pb**	**02 15 11.1**	**-0.8**
SIRN	**Sırnak**	**1.78**	**242**	P	**Pg**	**02 15 14.5**	**-0.7**
SIRN				S	**Sg**	**02 15 41.7**	**+3.5**
SIRN				*i* IAML		02 15 45.0	
	comp=N,45nm,0.6s						
SIRN				*i* IAML		02 15 51.0	
	comp=E,40nm,0.6s						
GNI	**Garni**	**1.83**	**8**	Pn	**Pn**	**02 15 13.8**	**+0.8**
GURO	**Guroymak-BITLI**	**1.87**	**277**	Pn	**Pn**	**02 15 13.2**	**-0.3**
SRTM	**Siirt_Merkez**	**1.98**	**261**	P	**Pg**	**02 15 18.7**	**-0.3**
SRTM				S	**Sg**	**02 15 44.5**	**-0.1**
IHRS	**Heris**	**2.08**	**90**	Pn	**Pb**	**02 15 18.9**	**-0.4**
SENK	**Senkaya-Erzuru**	**2.73**	**325**	Pn	**Pn**	**02 15 26.8**	**+1.4**
SVRC	**Sivrice-ELAZID**	**4.00**	**272**	Pn	**Pn**	**02 15 43.4**	**+0.5**

IDC 22 02:19:57.2±1.1,**11.79N**×**144.70E,h0**km,**mb3.6**/4,
mbtmp3.6/4,MS2.7/1,Error ellipse: s-maj=52.0km
s-min=18.4km az=105.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.79**	**5**	Pn	Pn	02 20 29.7	+0.3
	30nm,0.3s,baz=185,slow=11,SNR=5.1						
GUMO				Sn	Sn	02 20 52.8	-0.1
	129nm,0.3s,baz=181,slow=22,SNR=16						
H11S3	**WAKE ISLAND Hy 22.23**		**70**	T	T	02 49 09.2	
	baz=270,slow=76,SNR=4.3						
H11S1	**WAKE ISLAND Hy 22.25**		**70**	T	T	02 49 14.3	
	baz=270,slow=76,SNR=3.9						
H11S2	**WAKE ISLAND Hy 22.25**		**70**	T	T	02 49 13.3	
	baz=270,slow=76,SNR=4.7						
H11N1	**WAKE ISLAND Hy 22.75**		**67**	T	T	02 49 46.6	
	baz=255,slow=75,SNR=5.6						
H11N2	**WAKE ISLAND Hy 22.75**		**67**	T	T	02 49 48.6	
	baz=255,slow=75,SNR=4.8						
H11N3	**WAKE ISLAND Hy 22.76**		**67**	T	T	02 49 49.0	
	baz=255,slow=75,SNR=5.0						
WRA	**Warramunga Arr**	**33.14**	**198**	P	P	02 26 34.5	-0.9
	0.3nm,0.6s,baz=18,slow=8.9,SNR=7.3						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**36.79**	**197**	P	P	02 27 07.3	+0.4
	0.1nm,0.5s,baz=15,slow=7.7,SNR=7.5						
	0.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**44.57**	**284**	LR	LR	02 44 03.3	
	comp=Z,9.4nm,22.0s,baz=100,slow=32						
YKA	**Yellowknife Ar**	**84.52**	**27**	P	P	02 32 31.2	-0.7
	0.7nm,0.6s,baz=286,slow=5.2,SNR=7.8						
	0.7nm,0.6s						
NVAR	**Mina Array Bea**	**88.17**	**51**	P	P	02 32 51.8	+1.2
	0.4nm,0.6s,baz=261,slow=6.1,SNR=5.0						
	0.4nm,0.6s						

IDC 22 02:22:16.0±2.2,**1.73N**×**126.57E,h0**km,**mb3.4**/3,
mbtmp3.4/3,Error ellipse: s-maj=196.3km
s-min=25.5km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.84**	**161**	P	P	02 27 20.6	-0.4
	0.5nm,0.4s,baz=339,slow=10,SNR=7.4						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**26.23**	**165**	P	P	02 27 53.0	+

comp=Z,18μm,0.3s
ASAL Salagasta 0.15 348 *e*P Pg 03 04 12.7 +3.2
ASAL *e*S Sg 03 04 17.9 +5.9
AAGR Agrelo 0.34 185 *e*P Pb 03 04 15.2 +0.9
AVIZ Vizcacheras 0.77 162 *e*P Pg 03 04 16.9 -3.9
RTLS Leoncito 1.03 336 *e*P Pb 03 04 26.4 +0.3
RTLS IAML 03 04 41.6
comp=Z,1μm,1.3s
ZON Zonda 1.20 5 *e*P Pn 03 04 28.9 +0.1
ZON *e*S Sn 03 04 45.4 +0.1
ZON IAML 03 04 49.6
comp=Z,592nm,0.3s
SJA San Juan 1.23 9 *e*P Pn 03 04 15.8 -13
SJA IAML 03 04 31.8
comp=Z,665nm,0.7s
CFA Coronel Fontan 1.23 23 *e*P Pb 03 04 29.4 0.0
CFA *e*S Sn 03 04 46.6 +0.6
MT08 Bocatoma Ro 1.24 235 *e*P Pg 03 04 29.9 0.0
MT08 *e*S Sn 03 04 47.1 +0.5
MT04 Ro Olivares 1.31 239 *e*P Pg 03 04 31.0 -0.1
MT04 *e*S Sn 03 04 49.0 +0.9
ACAN Cantantal 1.44 71 *e*P Pb 03 04 32.6 -0.3
RTLL Cerro Villicun 1.44 11 *e*P Pg 03 04 33.4 -0.2
RTLL *e*S Sg 03 04 51.8 -0.4
RTLL IAML 03 04 54.8
comp=Z,3μm,0.3s
VA03 San Esteban 1.48 269 *e*P Pb 03 04 33.8 +0.1
VA03 *e*S Sg 03 04 54.0 +0.3
VA03 IAML 03 04 55.3
comp=Z,2μm,0.5s
MT13 San Alfonso 1.60 231 *e*P Pb 03 04 36.1 +0.4
MT13 *e*S Sg 03 04 58.5 +1.0
LMEL Las Melosas 1.61 227 *e*P Pb 03 04 36.4 +0.4
LMEL *e*S Sg 03 04 59.0 +1.1
LMEL IAML 03 04 59.4
comp=Z,333nm,0.4s
MT03 Universidad Ad 1.62 242 *e*P Pn 03 04 31.0 -3.8
MT03 *e*P Pg 03 04 36.6 -0.5
MT03 *e*S Sg 03 05 00.1 +1.8
MT03 IAML 03 05 02.0
comp=Z,327nm,0.6s
PEL Peldehue 1.64 255 *e*P Pb 03 04 36.5 +0.1
PEL *e*S Sg 03 04 58.6 -0.1
PEL IAML 03 04 59.3
comp=Z,356nm,0.9s
MT05 Renca 1.75 248 *e*P Pg 03 04 39.2 -0.5
MT05 IAML 03 05 05.6
comp=Z,272nm,0.7s
ROC1 El Roble 1.88 262 *e*P Pb 03 04 40.7 +0.1
ROC1 *e*S Sg 03 05 06.1 -0.5
MT02 Curacav 2.04 255 *e*P Pb 03 04 42.7 -0.4
MT02 *e*S Sg 03 05 10.4 -1.0
MT02 IAML 03 05 12.2
comp=Z,364nm,0.5s
RFA San Rafael 2.04 172 *e*P Pn 03 04 40.5 0.0
RFA *e*S Sn 03 05 07.2 +1.1
RFA IAML 03 05 14.6
comp=Z,794nm,0.5s
ACCO Cerro Coronel 2.16 354 *e*P Pb 03 04 45.2 -0.2
ACCO *e*S Sg 03 05 14.4 -1.1
MT01 Popeta 2.34 241 *e*P Pb 03 04 46.7 -1.6
MT01 *e*S Sg 03 05 20.3 -1.0
AVFE Valle Fertil 2.37 29 *e*P Pb 03 04 47.2 -1.7
AVFE *e*S Sn 03 05 14.7 +0.4
AVFE IAML 03 05 20.2
comp=Z,455nm,0.4s
ACHE Chepes 2.40 50 *e*P Pn 03 04 46.6 +1.1
VA01 Torpederas 2.42 263 *e*P Pb 03 04 48.7 -0.9
VA01 IAML 03 05 26.6
comp=Z,147nm,0.7s
CO02 Combarbal 2.42 309 *e*P Pb 03 04 48.8 -0.9
CO02 *e*S Sb 03 05 19.3 -0.4
CO02 IAML 03 05 27.1
comp=Z,324nm,0.4s
CO03 El Pedregal 2.49 319 *e*P Pb 03 04 50.0 -0.9
CO03 *e*S Sb 03 05 20.3 -1.4
CO03 IAML 03 05 26.7
comp=Z,315nm,1.1s
BO01 Tunca 2.52 229 *e*P Pb 03 04 49.5 -1.9
BO01 *e*S Sg 03 05 26.8 -0.2
MRA San Martin 2.62 84 *e*P Pn 03 04 49.1 +0.7
MRA *e*S Sg 03 05 29.7 -0.4
BO02 Sierra Bellavi 2.63 218 *e*P Pb 03 04 51.2 -2.1
AROD Rodeo 2.63 347 *e*P Pb 03 04 52.0 -1.5
AROD *e*S Sb 03 05 23.7 -2.3
CO01 Juntas del Tor 2.97 338 *e*P Pb 03 04 57.3 -1.9
CO01 *e*S Sb 03 05 33.6 -2.0
CO01 IAML 03 05 39.4
comp=Z,135nm,0.5s
APLL PUNTA DE LOS L 3.04 40 *e*P Pn 03 04 56.2 +2.1
APLL *e*S Sb 03 05 37.0 -0.3
APLL IAML 03 05 49.1
comp=Z,278nm,0.4s
EDS3 Malargue 3.06 189 *e*P Pn 03 04 49.1 -5.5
EDS3 *e*P Pb 03 04 50.8 -10
EDS3 *e*S Sb 03 05 35.3 -2.9
GO04 Tololo Observa 3.08 326 *e*P Pn 03 04 56.5 +1.6
GO04 *e*S Sb 03 05 39.5 +0.7
GO04 IAML 03 05 49.6
comp=Z,525nm,0.6s
AGUA GUANDACOL 3.26 5 *e*P Pg 03 05 06.4 -2.0
AGUA *e*S Sg 03 05 55.1 +4.4
AGUA IAML 03 06 03.0
comp=Z,169nm,0.5s
GO05 Hualane 3.45 228 *e*P Pn 03 05 02.2 +2.3
GO05 *e*S Sg 03 05 54.4 -2.5
GO05 IAML 03 05 56.5
comp=Z,60nm,0.8s
ACLC CERRO LA CRUZ 3.67 26 *e*P Pn 03 05 05.6 +2.6
ACLC *e*S Sb 03 05 59.3 +3.7
ACLC IAML 03 06 06.1
comp=Z,252nm,0.5s
TCA Tanti 3.83 70 *e*P Pn 03 05 05.6 +0.4
TCA *e*S Sg 03 06 05.7 -3.4
TCA IAML 03 06 15.4
comp=Z,241nm,0.4s
AC05 El Transito 4.10 342 *e*P Pn 03 05 10.9 +2.1
AC05 *e*S Sb 03 06 08.2 +0.3
AC05 IAML 03 06 18.4
comp=Z,67nm,0.6s
AC04 Llanos de Chal 4.93 336 *e*P Pn 03 05 20.5 +0.3
AC04 *e*S Sb 03 06 34.5 +2.7
AC04 IAML 03 06 41.4
comp=Z,52nm,0.8s
CYA Choya 5.00 32 *e*P Pn 03 05 25.3 +4.1
CYA *e*S Sb 03 06 36.3 +2.3
CYA IAML 03 06 57.6
comp=Z,128nm,0.8s

IDC 22 03:19:41.3±47.0, 17°09'S×175°83'W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=887.2km s-min=172.6km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.18**	**241**	P	P	03 27 27.8	0.0
	2.4nm,0.9s,baz=68,slow=5.4,SNR=2.8						
	2.4nm,0.9s						
WRA	**Warramunga Arr**	**47.20**	**258**	P	P	03 28 16.1	-0.2
	0.6nm,0.4s,baz=95,slow=7.1,SNR=26						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**47.38**	**253**	P	P	03 28 17.5	-0.2
	1.8nm,0.4s,baz=88,slow=8.8,SNR=33						
	1.8nm,0.4s						

*JMA **22** 03:23:57.7±0.4, 45°N-2°×14°8E±°, h108km, MV3.5/23, NEAR ETOROFU ISLAND*
*SKHL **22** 03:23:58.5±0.2, 44°10N×148°20E, h39km±4km, mb4.6/3*
ISC 22 03:23:56.5±3.1, 44°4N±0.1×148°1E±0.2, h117km±21km, n16, σ0°93/24, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.83**	**348**	*e*P	**Pn**	**03 24 17.0**	**+0.5**
KUR				AMB	AMB	03 24 17.4	
	60nm,0.3s						
KUR				*i* S	**Sn**	**03 24 30.9**	**-0.8**
KUR				A	A	03 24 31.6	
	150nm,0.3s						
KUR				A	A	03 24 31.6	
	130nm,0.3s						
SHO	**Shikotan**	**1.07**	**240**	*e*P	Pn	03 24 28.4	+10
SHO				AMB	AMB	03 24 28.5	
	170nm,0.2s						
SHO				*e*S	Sn	03 24 44.8	+9.0
SHO				A	A	03 24 45.3	
	390nm,0.4s						
SHO				A	A	03 24 45.3	
	860nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.66**	**257**	*e*P	**Pn**	**03 24 25.5**	**0.0**
YUK				AMB	AMB	03 24 25.7	
	330nm,0.3s						
YUK				*e*S	**Sn**	**03 24 45.8**	**-1.9**
YUK				A	A	03 24 46.5	
	230nm,0.4s						
YUK				A	A	03 24 46.5	
	370nm,0.4s						
GLVR	**Golovnino**	**1.99**	**251**	*e*P	**Pn**	**03 24 30.6**	**+1.1**
GLVR				AMB	AMB	03 24 31.1	
	60nm,0.2s						
GLVR				*e*S	**Sn**	**03 24 56.3**	**+1.5**
GLVR				A	A	03 25 02.1	
	380nm,0.2s						
GLVR				A	A	03 25 02.1	
	230nm,0.2s						
NEM2	**Nemuro 2**	**2.01**	**239**	*e*P	**Pn**	**03 24 30.5**	**+0.7**
NEM2				*e*S	**Sn**	**03 24 55.6**	**+0.3**
NMR	**Nemuro--Hokkai**	**2.02**	**239**	*i* P	**Pn**	**03 24 30.2**	**+0.3**
NMR				*i* S	**Sn**	**03 24 54.1**	**-1.4**
JKHN	**Kushirohamanak**	**2.52**	**239**	*e*P	**Pn**	**03 24 37.0**	**+0.7**
JNK	**Nakash**	**2.59**	**252**	*e*P	**Pn**	**03 24 37.4**	**+0.3**
JNK				*e*S	**Sn**	**03 25 08.5**	**0.0**
AKK	**Akkeshi**	**2.75**	**240**	*e*P	**Pn**	**03 24 39.6**	**+0.2**
JAK	**Akkeshi**	**2.86**	**241**	*e*P	**Pn**	**03 24 41.3**	**+0.6**
JAK				*e*S	**Sn**	**03 25 14.1**	**-0.6**
JAR	**Ashorobuto**	**3.33**	**252**	*e*P	**Pn**	**03 24 47.6**	**+0.6**
JAR				*e*S	**Sn**	**03 25 27.2**	**+1.2**
JCH	**Churui**	**3.90**	**244**	*e*P	**Pn**	**03 24 54.7**	**+0.2**
JCH				*e*S	**Sn**	**03 25 39.1**	**-0.4**
JKK2	**Kamakawa 2**	**3.90**	**264**	*e*P	**Pn**	**03 24 53.0**	**-1.5**
JSE	**Soyaes**	**3.98**	**280**	*e*P	**Pn**	**03 24 56.5**	**+1.0**
JNBK	**Urakawa-nobuka**	**4.46**	**243**	*e*P	**Pn**	**03 25 01.4**	**-0.5**
JANG	**Nango**	**6.34**	**233**	*e*P	**Pn**	**03 25 27.1**	**-0.3**

*SDD **22** 03:25:02.8±1.2, 18°13N×67°26W, h30km±10km, MD2.8, ML2.1, MW2.8*
*RSPR **22** 03:25:04.2, 18°14N×67°21W, h21km, MD2.5/12*
ISC 22 03:25:02.9±1.0, 18°13N±0°04×67°23W±0°03, h29km±6km, n31, σ0°41/36, 16C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRSN	**Puerto Rico Se**	**0.11**	**44**	↑*e*P	**Pb**	**03 25 08.2**	**+0.1**
PRSN	**Puerto Rico Se**	**0.11**	**44**	*e*S	**Sb**	**03 25 11.1**	**-0.7**
LSP	**Las Mesas**	**0.14**	**73**	↑*e*P	**Pb**	**03 25 08.5**	**+0.1**
LSP	**Las Mesas**	**0.14**	**73**	*e*S	**Sb**	**03 25 12.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.17**	**138**	↑*e*Pg	**Pb**	**03 25 08.7**	**0.0**
CRPR				↓*e*Sg	**Sb**	**03 25 12.3**	**-0.2**
CRPR				IAML		03 25 12.5	
	comp=N,346nm,0.1s						
CRPR	**Cabo Rojo, PR**	**0.17**	**138**	↑*e*P	**Pb**	**03 25 08.6**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.17**	**138**	*e*S	**Sb**	**03 25 12.0**	**-0.5**
MLPR	**Magueyes Islan**	**0.24**	**133**	↑*e*Pg	**Pb**	**03 25 09.5**	**+0.1**
MLPR				↓*e*Sg	**Sb**	**03 25 13.9**	**0.0**
MLPR				IAML		03 25 13.9	
	comp=N,92nm,0.2s						
MLPR	**Magueyes Islan**	**0.24**	**133**	↑*e*P	**Pb**	**03 25 09.5**	**+0.1**
MLPR	**Magueyes Islan**	**0.24**	**133**	*e*S	**Sb**	**03 25 13.6**	**-0.3**
IDE	**Isla Desecheo**	**0.34**	**317**	↑*e*P	**Pb**	**03 25 11.2**	**+0.3**
IDE	**Isla Desecheo**	**0.34**	**317**	*e*S	**Sb**	**03 25 16.9**	**+0.6**
AGPR	**Aguadilla, PR**	**0.35**	**18**	↓*e*Pg	**Pb**	**03 25 11.3**	**+0.3**
AGPR				↑*e*Sg	**Sb**	**03 25 16.2**	**-0.2**
AGPR				IAML		03 25 34.8	
	comp=N,105nm,1.4s						
AGPR	**Aguadilla, PR**	**0.35**	**18**	↑*e*P	**Pb**	**03 25 11.0**	**+0.1**
AGPR	**Aguadilla, PR**	**0.35**	**18**	*e*S	**Sb**	**03 25 16.4**	**0.0**
UUPR	**Utuado, UPR, P**	**0.50**	**76**	↑*e*P	**Pb**	**03 25 13.1**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.50**	**76**	*e*S	**Sb**	**03 25 19.8**	**-0.4**
AOPR	**Arecibo Observ**	**0.50**	**65**	↓*e*Pg	**Pb**	**03 25 12.3**	**-0.9**
AOPR				↓*e*Sg	**Sb**	**03 25 20.3**	**0.0**
AOPR				IAML		03 25 21.4	
	comp=N,67nm,0.6s						
AOPR	**Arecibo Observ**	**0.50**	**65**	↑*e*P	**Pb**	**03 25 13.0**	**-0.3**
AOPR	**Arecibo Observ**	**0.50**	**65**	*e*S	**Sb**	**03 25 19.8**	**-0.5**
OBIP	**Obispado Ponce**	**0.60**	**99**	↑*e*P	**Pb**	**03 25 14.8**	**-0.1**
OBIP	**Obispado Ponce**	**0.60**	**99**	*e*S	**Sb**	**03 25 23.1**	**0.0**
EMPR	**Esperanza - Ma**	**0.75**	**63**	*e*S	**Sb**	**03 25 27.5**	**+0.3**
ECPR	**Experimental S**	**0.84**	**77**	↓*e*P	**Pb**	**03 25 18.7**	**-0.3**
ECPR	**Experimental S**	**0.84**	**77**	*e*S	**Sb**	**03 25 29.6**	**-0.3**
GCPR	**Guaynabo City**	**1.10**	**81**	↓*e*P	**Pn**	**03 25 22.9**	**+0.5**
GCPR	**Guaynabo City**	**1.10**	**81**	*e*S	**Sn**	**03 25 36.6**	**0.0**
HUMP	**Col San Antoni**	**1.31**	**89**	↓*e*P	**Pb**	**03 25 26.9**	**+0.1**
HUMP	**Col San Antoni**	**1.31**	**89**	*e*S	**Sn**	**03 25 42.8**	**+1.0**
HIDR	**Higuey Centro**	**1.49**	**288**	↓*e*Pg	**Pn**	**03 25 27.9**	**+0.2**
HIDR				↓*e*Sg	**Sn**	**03 25 45.4**	**-0.8**
HIDR				IAML		03 25 53.9	
	comp=N,46nm,0.2s						
MIDR	**Miches**	**1.92**	**296**	↑*e*Pg	**Pn**	**03 25 33.2**	**-0.4**
MIDR				IAML		03 26 47.7	
	comp=N,38nm,4.6s						

*IDC **22** 03:28:02.0±2.6, 23°65S×179°64E, h501km±23km, mb3.5/7, mbtmp4.3/7, Error ellipse: s-maj=82.0km s-min=15.9km az=155.0*
*NEIC **22** 03:28:03.9±1.6, 24°4S±0°1×179°92E±0°09, h530km±7km, mb4.3/31, Error ellipse: s-maj=22.4km s-min=10.4km az=162.0*
*NOU **22** 03:28:04.1, 24°89S×178°23E, h339km, mb4.1/14, South of Fiji Islands*
ISC 22 03:28:00.6±0.6, 24°44S±0°08×179°9W±0°1, h505km, n70, σ1°49/65, mb4.2/25, 5C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.94**	**344**	P	**P**	**03 29 47.8**	**+1.2**
MSVF	**Nonsavu**	**6.94**	**344**	P	**P**	**03 29 47.8**	**+1.2**
MARNC	**Mare, Loyalty**	**11.51**	**282**	P	**P**	**03 30 35.0**	**+0.9**
PINNC	**Pines Island,**	**11.76**	**276**	P	**P**	**03 30 38.3**	**+1.7**
DZM	**Mont Dzumac**	**12.78**	**278**	P	**P**	**03 30 49.5**	**+1.9**
	25nm,0.7s,baz=44,slow=22,SNR=12						
URZ	**Urewera**	**14.01**	**190**	P	**P**	**03 31 02.8**	**+2.5**
	5.1nm,0.6s,baz=11,slow=2.3,SNR=6.9						
URZ				S	**S**	**03 33 28.7**	**+0.4**
	10nm,0.6s,baz=58,slow=22,SNR=17						
URZ	**Urewera**	**14.01**	**190**	P	**P**	**03 31 01.2**	**+1.0**
URZ	**Urewera**	**14.01**	**190**	S	**S**	**03 33 28.7**	**+0.4**
RTZ	**Ruatahuna**	**14.38**	**190**	P	**P**	**03 31 06.7**	**+2.5**
BKZ	**Black Stump Fm**	**15.00**	**191**	P	**P**	**03 31 12.4**	**+1.8**
BKZ	**Black Stump Fm**	**15.00**	**191**	S	**S**	**03 33 47.0**	**-0.3**
BFZ	**Birch Farm**	**16.52**	**190**	P	**P**	**03 31 27.6**	**+1.2**
QRZ	**Quartz Range**	**17.53**	**199**	P	**P**	**03 31 37.2**	**+1.0**
QRZ	**Quartz Range**	**17.53**	**199**	P	**P**	**03 31 36.1**	**-0.2**
KHZ	**Kahutara**	**18.74**	**195**	P	**P**	**03 31 49.8**	**+2.5**
JCZ	**Jackson Bay**	**21.67**	**203**	P	**P**	**03 32 19.4**	**+5.4**
ARMA	**Armidale**	**25.93**	**250**	P	**P**	**03 32 53.9**	**+1.6**
EIDS	**Eidsvold**	**26.33**	**262**	P	**P**	**03 32 55.9**	**+0.2**
EIDS				IAmb	IAmb	03 32 58.6	
	comp=Z,5.0nm,0.8s						
CMSA	**Cobar Meteorol**	**31.11**	**249**	P	**P**	**03 33 37.7**	**+0.4**
CTA	**Charters Tower**	**31.58**	**271**	P	**P**	**03 33 41.6**	**+0.1**
CTAO	**Charters Tower**	**31.58**	**271**		**P**	**03 33 41.5**	**+0.1**
CTAO	**Charters Tower**	**31.58**	**271**	P	**P**	**03 33 41.6**	**+0.1**
QLP	**Quilpie**	**32.39**	**258**	P	**P**	**03 33 47.4**	**-0.9**
STKA	**Stephens Creek**	**34.62**	**249**	P	**P**	**03 34 07.4**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=93,slow=11,SNR=16						
	comp=Z,3.2nm,0.5s						
STKA	**Stephens Creek**	**34.62**	**249**	P	**P**	**03 34 07.3**	**+0.3**
BBOO	**Buckleboo**	**39.33**	**248**	P	**P**	**03 34 45.3**	**-0.6**
AS31	**Alice Springs**	**42.05**	**261**		**P**	**03 35 07.2**	**-0.5**
ASAR	**Alice Springs**	**42.05**	**261**	P	**P**	**03 35 07.1**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=96,slow=7.2,SNR=53						
ASAR				ScP	**ScP**	**03 39 54.1**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=92,slow=3.9,SNR=5.5						
	comp=Z,3.1nm,0.5s						
ASAR	**Alice Springs**	**42.05**	**261**	P	**P**	**03 35 06.3**	**-1.4**
WR8	**Warramunga Arr**	**42.32**	**267**		**P**	**03 35 08.8**	**-1.1**
WR8				IAmb	IAmb	03 35 09.4	
	comp=Z,7.2nm,0.9s						
WRA	**Warramunga Arr**	**42.47**	**267**	P	**P**	**03 35 09.9**	**-1.2**
	comp=Z,8.4nm,0.8s,baz=98,slow=8.3,SNR=182						
WRA				ScP	**ScP**	**03 39 55.5**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=102,slow=3.4,SNR=14						
	comp=Z,8.4nm,0.5s						
WRA	**Warramunga Arr**	**42.47**	**267**	P	**P**	**03 35 10.0**	**-1.2**
FORT	**Forrest**	**46.22**	**250**	P	**P**	**03 35 39.0**	**-0.9**
FORT				IAmb	IAmb	03 35 39.4	
	comp=Z,9.5nm,0.7s						
KNRA	**Kununurra**	**48.79**	**270**		**P**	**03 35 59.0**	**-0.5**
KNRA				IAmb	IAmb	03 35 59.5	
	comp=Z,17nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.89**	**266**	P	**P**	**03 36 14.4**	**-0.5**
MBWA	**Marble Bar**	**55.38**	**260**	P	**P**	**03 36 45.8**	**-1.1**
MBWA				IAmb	IAmb	03 36 46.9	
	comp=Z,10.0nm,0.9s						
MORW	**Morawa**	**56.79**	**250**	P	**P**	**03 36 55.9**	**-0.7**
MORW				IAmb	IAmb	03 37 05.7	
	comp=Z,11nm,1.1s						
SLBS	**Sierra La Lagu**	**82.98**	**60**	P	**P**	**03 39 34.7**	**+1.9**
SLBS				IAmb	IAmb	03 39 35.4	
	comp=Z,5.8nm,0.7s						
TROLL	**Troll, Antarti**	**83.80**	**181**	↑P	**P**	**03 39 32.5**	**-3.6**
	comp=Z,410nm,0.8s						
SNAA	**Sanae**	**84.13**	**179**	↑P	**P**	**03 39 36.2**	**-1.5**
	comp=Z,19nm,0.5s						
SNAA	**Sanae**	**84.13**	**179**	P	**P**	**03 39 37.4**	**-0.3**
M02C	**Callahan**	**84.14**	**39**	P	**P**	**03 39 39.9**	**+1.7**
VNA3	**Neumayer Olymp**	**84.33**	**177**	↑P	**P**	**03 39 37.4**	**-1.3**
	comp=Z,5.6nm,1.1s						
VNA2	**Neumayer--Watz**	**84.75**	**178**	↑P	**P**	**03 39 38.8**	**-1.8**
	comp=Z,1.3nm,0.4s,baz=176,slow=4.3						
VNA1	**Neumayer--Stat**	**84.99**	**177**	↑P	**P**	**03 39 38.6**	**-3.2**
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**85.07**	**44**	P	**P**	**03 39 44.1**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=221,slow=9.0,SNR=9.0						
	comp=Z,1.0nm,0.8s						
J05D	**Fort Rock, OR**	**86.26**	**39**	IAmb	IAmb	03 39 51.0	
	comp=Z,4.6nm,1.0s						
PINE	**Pine Mountain**	**86.75**	**38**		**P**	**03 39 52.4**	**+1.5**
PINE				IAmb	IAmb	03 39 53.9	
	comp=Z,6.3nm,1.0s						
I07A	**Izee**	**87.74**	**39**	IAmb	IAmb	03 39 57.7	
	comp=Z,6.6nm,1.0s						
U15A	**North Rim**	**87.89**	**48**	IAmb	IAmb	03 39 59.2	
	comp=Z,5.4nm,1.2s						
G08A	**Pilot Rock**	**88.78**	**38**		**P**	**03 40 01.3**	**+1.1**
G08A				IAmb	IAmb	03 40 02.3	
	comp=Z,7.3nm,1.3s						
SRU	**San Rafael Swe**	**90.49**	**47**	IAmb	IAmb	03 40 10.3	
	comp=Z,4.0nm,0.9s						
TX31	**Lajitas Ar. Si**	**90.63**	**58**	IAmb	IAmb	03 40 11.7	
	comp=Z,3.2nm,0.9s						
TXAR	**Lajitas Array**	**90.63**	**58**	P	**P**	**03 40 11.0**	**+1.8**
	comp=Z,2.1nm,0.8s,baz=213,slow=6.6,SNR=29						
	comp=Z,2.1nm,0.8s						
TXAR	**Lajitas Array**	**90.63**	**58**	P	**P**	**03 40 10.7**	**+1.6**
ALPN	**Alpine**	**91.13**	**57**	IAmb	IAmb	03 40 13.6	
	comp=Z,2.5nm,0.8s						
ILAR	**Eielson Array**	**92.53**	**14**	P	**P**	**03 40 15.5**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=210,slow=6.3,SNR=4.6						
	comp=Z,0.4nm,0.8s						
PDAR	**Pinedale Array**	**93.01**	**44**	P	**P**	**03 40 20.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=186,slow=4.2,SNR=7.3						
	comp=Z,0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**115.70**	**316**	PKP	**PKiKP**	**03 45 44.5**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=97,slow=1.7,SNR=4.6						
BVAR	**Borovoye Array**	**120.91**	**318**	PKP	**PKPdf**	**03 45 54.1**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=114,slow=1.8,SNR=5.5						
ARCES	**ARCESS Array B**	**132.43**	**348**	PKP	**PKiKP**	**03 46 16.9**	**-0.8**
	comp=Z,4.7nm,1.1s,baz=350,slow=3.0,SNR=4.3						
NOA	**NORSAR Array B**	**142.63**	**351**	PKhKP	PKPpre	03 46 31.4	
	comp=Z,1.5nm,0.9s,baz=24,slow=2.2,SNR=3.3						
HFS	**Hagfors**	**143.09**	**349**	PKhKP	PKPpre	03 46 32.9	
	comp=Z,3.9nm,0.5s,baz=72,slow=4.8,SNR=38						
PABE	**Paberze**	**144.35**	**337**		**PKPdf**	**03 46 37.9**	**-0.6**
AKASG	**Malin Array Be**	**145.47**	**327**	PKP	**PKPdf**	**03 46 39.7**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=51,slow=3.8,SNR=5.9						
BRTR	**Keskin Array B**	**147.98**	**307**	PKPbc	**PKPbc**	**03 46 47.9**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=63,slow=1.6,SNR=4.3						
BRTR	**Keskin Array B**	**147.98**	**307**		**PKPbc**	**03 46 48.4**	**-0.8**
MMAI	**Mount Meron Ar**	**148.01**	**294**	PKPbc	**PKiKP**	**03 46 49.5**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=72,slow=5.4,SNR=4.5						
EKA	**Eskdalemuir Ar**	**149.05**	**4**	PKPbc	**PKPbc**	**03 46 49.4**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=354,slow=3.3,SNR=7.8						
CLL	**Collm**	**151.40**	**343**		**PKPbc**	**03 46 56.2**	**-0.5**

*SCB **22** 03:35:59.4±1.2, 22°74S×67°58W, h136km±15km, MB4.8, ML3.2/3, Error ellipse: s-maj=4.6km s-min=3.6km az=0.0*
*GUC **22** 03:35:59.3±0.6, 22°68S×67°75W, h184km±9km, ML3.4*
ISC 22 03:35:57.4±1.8, 22°73S±0°04×67°59W±0°05, h176km±18km, n31, σ1°29/47, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**1.79**	**301**	↓*i*P	**Pn**	**03 36 33.3**	**+1.2**
PB09				*i* S	**Sn**	**03 36 59.1**	**+0.1**
PB09	**IPOC Station P**	**1.79**	**301**	Pg	**Pn**	**03 36 33.1**	**+1.0**
PB06	**IPOC Station P**	**1.83**	**270**	↑*i*P	**Pn**	**03 36 33.3**	**+0.7**
PB06				*i* S	**Sn**	**03 37 00.2**	**+0.5**
PB06	**IPOC Station P**	**1.83**	**270**	Pg	**Pn**	**03 36 33.7**	**+1.2**
YJA	**Yavi**	**2.00**	**74**	Pg	**Pn**	**03 36 34.4**	**-0.2**
PB03	**IPOC Station P**	**2.11**	**288**	↑*i*P	**Pn**	**03 36 36.3**	**+0.7**
PB03				*i* S	**Sn**	**03 37 04.3**	**-0.8**
PB03				IAML		03 37 05.4	
	comp=E,238nm,0.3s						
MOCB	**Mochara**	**2.33**	**51**	Pg	**Pn**	**03 36 39.2**	**+0.8**
MOCB				Sg	**Sn**	**03 37 08.9**	**-1.2**
MOCB				IAML		03 37 11.0	
	comp=E,37nm,0.4s						
PB07	**IPOC Station P**	**2.35**	**295**	↑*i*P	**Pn**	**03 36 39.0**	**+0.7**
PB07				*i* S	**Sn**	**03 37 08.9**	**-1.1**
PB07				IAML		03 37 09.6	
	comp=N,211nm,0.4s						
PB05	**IPOC Station P**	**2.42**	**267**	*i* P	**Pn**	**03 36 39.7**	**+0.7**
PB05				*i* S	**Sn**	**03 37 10.3**	**-1.0**
PB01	**IPOC Station P**	**2.43**	**313**	*i* P	**Pn**	**03 36 39.6**	**+0.4**
PB01				*i* S	**Sn**	**03 37 10.7**	**-1.0**
PB01				IAML		03 37 12.1	
	comp=N,135nm,0.2s						
PB01	**IPOC Station P**	**2.43**	**313**	Pg	**Pn**	**03 36 40.1**	**+0.9**
PB01				Sg	**Sn**	**03 37 10.9**	**-0.7**
PB01				IAML		03 37 11.9	
	comp=N,127nm,0.2s						
PB02	**IPOC Station P**	**2.56**	**303**	*i* P	**Pn**	**03 36 41.0**	**+0.4**

GRAL ***22*** *03:47:02.5±0.4,32.°12N×35.°32E,h7km±6km,MD3.0*
GII 22 03:47:02.7±0.0,32.°132N±0.°002×35.°347E±0.°001,h16km,
Mws2.1,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEFR	**Maale Efrayim**	**0.08**	**141**	P	Pg	03 47 06.2	+0.2
HMRA	**Hamra**	**0.10**	**48**	P	Pb	03 47 06.4	+0.1
HMRA	**Hamra**	**0.10**	**48**	S	Sb	03 47 09.7	+1.0
ARIL	**Ariel Universi**	**0.12**	**257**	P	Pb	03 47 06.9	+0.2
ARIL	**Ariel Universi**	**0.12**	**257**	S	Sb	03 47 10.6	+1.3
PZL	**Pazael**	**0.12**	**137**	P	Pb	03 47 06.7	0.0
PZL	**Pazael**	**0.12**	**137**	S	Sb	03 47 10.1	+0.8
SLMZ	**Shlomzion**	**0.13**	**103**	P	Pb	03 47 06.8	0.0
SLMZ	**Shlomzion**	**0.13**	**103**	S	Sb	03 47 10.3	+0.9
SALP	**Salfit**	**0.15**	**245**	P	Pb	03 47 07.2	+0.1
SALP	**Salfit**	**0.15**	**245**	P	Pb	03 47 07.2	0.0
SALP	**Salfit**	**0.15**	**245**	S	Sb	03 47 10.4	+0.3
RGMN	**Argaman**	**0.15**	**76**	P	Pb	03 47 07.1	-0.1
RGMN	**Argaman**	**0.15**	**76**	S	Sb	03 47 10.9	+0.8
ROII	**Roi**	**0.17**	**46**	P	Pg	03 47 07.2	+0.2
ROII	**Roi**	**0.17**	**46**	S	Sb	03 47 10.7	+0.7
HMDT	**Nahal Hemdat**	**0.19**	**51**	P	Pg	03 47 07.6	+0.2
HMDT	**Nahal Hemdat**	**0.19**	**51**	P	Pg	03 47 07.3	-0.1
HMDT	**Nahal Hemdat**	**0.19**	**51**	S	Sb	03 47 11.3	-0.1
YITV	**Yitav**	**0.20**	**161**	P	Pg	03 47 07.4	0.0
UJAP	**Al Uja**	**0.20**	**151**	P	Pg	03 47 07.7	+0.2
UJAP	**Al Uja**	**0.20**	**151**	P	Pg	03 47 07.6	+0.1
BALJ	**Balqa**	**0.25**	**100**	P	Pg	03 47 08.3	0.0
MEHL	**Mehola**	**0.27**	**32**	P	Pg	03 47 08.8	+0.1
MEHL	**Mehola**	**0.27**	**32**	S	Sb	03 47 13.7	-0.1
QRNJ	**Al-Qirein**	**0.28**	**44**	P	Pg	03 47 09.0	+0.2
SLTI	**Sal'it**	**0.28**	**293**	P	Pg	03 47 09.1	+0.3
SLTI	**Sal'it**	**0.28**	**293**	P	Pg	03 47 08.9	+0.1
SLTI	**Sal'it**	**0.28**	**293**	S	Sb	03 47 14.0	+0.1
MMLI	**Mount Malkishu**	**0.31**	**12**	P	Pg	03 47 09.6	+0.2
MMLI				S	Sb	03 47 15.9	+1.0
MMLI	**Mount Malkishu**	**0.31**	**12**	P	Pg	03 47 09.5	+0.1
VJRH	**Vered Jericho**	**0.31**	**166**	P	Pg	03 47 09.3	0.0
VJRH	**Vered Jericho**	**0.31**	**166**	S	Sb	03 47 14.0	-0.1
KARV	**Kedem Haarava**	**0.35**	**158**	P	Pg	03 47 09.9	-0.1
KARV	**Kedem Haarava**	**0.35**	**158**	S	Sb	03 47 15.6	-0.2
JER	**Jerusalem**	**0.38**	**200**	P	Pg	03 47 10.4	-0.1
JER	**Jerusalem**	**0.38**	**200**	S	Sb	03 47 16.4	-0.5
IZRL	**Izrael**	**0.43**	**357**	P	Pg	03 47 11.3	-0.2
IZRL	**Izrael**	**0.43**	**357**	S	Sb	03 47 18.2	0.0
MLDT	**Moledet**	**0.46**	**10**	P	Pg	03 47 11.9	-0.1
MLDT	**Moledet**	**0.46**	**10**	S	Sb	03 47 19.1	-0.1
CVYN	**Cohav Hayarden**	**0.48**	**17**	P	Pg	03 47 12.2	-0.2
CVYN	**Cohav Hayarden**	**0.48**	**17**	S	Sb	03 47 20.1	+0.3
MNHA	**Menahamia**	**0.56**	**18**	P	Pg	03 47 13.3	-0.5
MNHA	**Menahamia**	**0.56**	**18**	S	Sb	03 47 22.2	+0.3
DSI	**Dead Sea**	**0.56**	**177**	P	Pg	03 47 12.9	-0.9
DSI	**Dead Sea**	**0.56**	**177**	P	Pg	03 47 12.9	-0.9
DSI	**Dead Sea**	**0.56**	**177**	S	Sg	03 47 21.4	0.0
MZS	**Mizpe Shalem**	**0.56**	**175**	P	Pg	03 47 13.4	-0.5
OFRI	**`Ofer**	**0.58**	**328**	P	Pg	03 47 13.9	-0.3
OFRI				S	Sb	03 47 22.5	0.0
OFRI	**`Ofer**	**0.58**	**328**	P	Pg	03 47 13.7	-0.5
AMOT	**Alumot**	**0.60**	**16**	P	Pg	03 47 14.2	-0.4
BLGI	**Bet Lehem HaGe**	**0.61**	**348**	P	Pg	03 47 14.5	-0.4
BLGI	**Bet Lehem HaGe**	**0.61**	**348**	P	Pg	03 47 14.8	-0.1
BLGI	**Bet Lehem HaGe**	**0.61**	**348**	S	Sb	03 47 23.9	+0.3
GOLA	**Golan Heights**	**0.63**	**24**	P	Pg	03 47 14.9	-0.3
GOLA	**Golan Heights**	**0.63**	**24**	S	Sb	03 47 25.1	+1.0
SHMJ	**Saham**	**0.69**	**31**	P	Pg	03 47 15.7	-0.6
AMAZ	**Amatzia**	**0.70**	**212**	P	Pg	03 47 16.2	-0.3
AMAZ	**Amatzia**	**0.70**	**212**	P	Pg	03 47 16.1	-0.3
AMAZ	**Amatzia**	**0.70**	**212**	S	Sb	03 47 26.2	+0.1
HSUJ	**Al Zarqa**	**0.72**	**92**	P	Pg	03 47 16.2	-0.6
HSUJ				S	Sg	03 47 26.0	-0.3
YTIR	**Yattir**	**0.79**	**194**	P	Pb	03 47 17.2	-1.0
YTIR	**Yattir**	**0.79**	**194**	P	Pb	03 47 17.2	-1.0
YTIR	**Yattir**	**0.79**	**194**	S	Sg	03 47 28.5	-0.2
MSBI	**Mazada**	**0.82**	**179**	P	Pb	03 47 17.6	-0.9
MSBI	**Mazada**	**0.82**	**179**	P	Pb	03 47 17.6	-0.9
GHAJ	**Ghor Haditha**	**0.85**	**167**	P	Pb	03 47 18.4	-0.6
GHAJ	**Ghor Haditha**	**0.85**	**167**	P	Pb	03 47 18.4	-0.7
MMA0B	**Mount Meron ar**	**0.88**	**3**	P	Pb	03 47 18.8	-0.9
MMA0B	**Mount Meron ar**	**0.88**	**3**	S	Sg	03 47 31.8	+0.2
MMC7	**Mount Meron ar**	**0.89**	**2**	P	Pb	03 47 19.0	-0.9
LISJ	**El Lisan**	**0.90**	**173**	P	Pb	03 47 19.8	-0.1
KSHT	**Keshet**	**0.93**	**25**	P	Pb	03 47 20.0	-0.6
KSHT	**Keshet**	**0.93**	**25**	S	Sg	03 47 33.3	+0.1
HNTI	**Hanita**	**0.96**	**351**	P	Pb	03 47 20.7	-0.3
SWQJ	**Swaqa**	**1.07**	**145**	P	Pb	03 47 20.4	-2.6
GEM	**Giv'at Ha'Em**	**1.11**	**14**	P	Pb	03 47 22.9	-0.7
GEM	**Giv'at Ha'Em**	**1.11**	**14**	P	Pb	03 47 22.8	-0.8
GEM	**Giv'at Ha'Em**	**1.11**	**14**	S	Sn	03 47 38.3	-0.3
NATI	**Neve Ativ**	**1.17**	**16**	P	Pn	03 47 22.9	-1.6
NATI	**Neve Ativ**	**1.17**	**16**	P	Pn	03 47 22.9	-1.6
NATI	**Neve Ativ**	**1.17**	**16**	S	Sn	03 47 40.4	+0.2
SHBL	**Chebaa**	**1.26**	**15**	*eP*	Pn	03 47 24.8	-1.0
SHBL				*eS*	Sb	03 47 41.5	-0.8
RCY	**Rachaya**	**1.42**	**17**	*eP*	Pn	03 47 27.7	-0.4
RCY				*eS*	Sn	03 47 46.2	-0.4
QRWL	**Qaraoun**	**1.44**	**11**	*eP*	Pn	03 47 27.8	-0.4
KZIT	**Kziot**	**1.47**	**214**	P	Pn	03 47 28.6	+0.1
KZIT	**Kziot**	**1.47**	**214**	P	Pn	03 47 28.2	-0.3
KZIT	**Kziot**	**1.47**	**214**	S	Sb	03 47 48.6	+0.6
DQRL	**Deir Qamar**	**1.58**	**7**	*eP*	Pn	03 47 29.7	-0.6
PRNI	**Paran**	**1.80**	**189**	P	Pn	03 47 33.1	0.0
PRNI	**Paran**	**1.80**	**189**	P	Pn	03 47 32.9	-0.3
PRNI	**Paran**	**1.80**	**189**	S	Sb	03 47 56.6	-1.0
KRMI	**Paran Flat**	**2.08**	**195**	P	Pn	03 47 36.9	-0.1
HRFI	**Mount Harif**	**2.10**	**187**	P	Pn	03 47 37.4	0.0
MBRI	**Mt Berech**	**2.36**	**189**	P	Pn	03 47 40.6	-0.3
MBRI	**Mt Berech**	**2.36**	**189**	P	Pn	03 47 40.7	-0.2

RSNC 22 03:51:35.2±0.0,4.°N±1.°×7.°6W±.°,h3km±2km,M3.2,mb4.2,
ML2.9,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOTC	**Yotoco, Valle**	**0.51**	**292**	P	Pg	03 51 44.1	-0.9
YOTC				S	Sg	03 51 51.3	-0.4
ORTC	**Ortega, Tolima**	**0.63**	**79**	P	Pg	03 51 45.9	-1.5
ORTC				S	Sg	03 51 54.1	-1.5
JAMC	**Jamundi, Valle**	**0.98**	**235**	P	Pg	03 51 52.6	-1.5
JAMC				S	Sg	03 52 06.6	-0.3
PRAC	**Prado**	**0.98**	**94**	P	Pg	03 51 52.3	-1.8
PRAC				S	Sg	03 52 05.7	-1.2
BETC	**Betania**	**1.18**	**159**	P	Pg	03 51 55.5	-2.4
BETC				S	Sg	03 52 10.1	-3.1
NIZA	**Niza - Manizal**	**1.32**	**18**	P	Pg	03 51 57.6	-3.0
NIZA				S	Sg	03 52 14.4	-3.3
POPC	**Popayan, Colom**	**1.48**	**213**	P	Pn	03 52 00.6	-2.4
POPC				S	Sb	03 52 21.1	-1.7
GUY2C	**Guyana, Caldas**	**1.51**	**19**	P	Pn	03 52 00.9	-2.7
GUY2C				S	Sg	03 52 21.9	-1.9
URMC	**La Uribe, Meta**	**1.58**	**110**	P	Pn	03 52 02.6	-1.7
URMC				S	Sn	03 52 23.1	-2.2
GARC	**Garzon, Huila**	**1.64**	**167**	P	Pn	03 52 04.1	-1.0
GARC				S	Sn	03 52 26.3	-0.6
ROSC	**El Rosal**	**1.86**	**56**	P	Pn	03 52 08.4	0.0
ROSC				S	Sn	03 52 32.1	-0.6
CVER	**Cruz Verde, Cu**	**1.93**	**68**	P	Pn	03 52 09.7	+0.3
CVER				S	Sn	03 52 34.5	0.0
CBOC	**Ciudad Bolivar**	**2.06**	**356**	P	Pn	03 52 09.7	-1.3
CBOC				S	Sn	03 52 36.8	-0.5
VILC	**Villavicencio,**	**2.19**	**82**	P	Pn	03 52 13.8	+1.1
VILC				P	Pb	03 52 14.3	-1.4
VILC				P	Pg	03 52 14.6	-2.7
FLOC	**Florencia**	**2.20**	**174**	P	Pn	03 52 12.6	-0.2
FLOC				S	Sn	03 52 42.0	+1.4
BBAC	**Balboa, Cauca**	**2.23**	**218**	P	Pn	03 52 12.6	-0.7
CHIC	**Chingaza**	**2.29**	**69**	P	Pn	03 52 14.7	+0.4
CHIC				P	Pb	03 52 15.2	-2.2
CHIC				P	Pb	03 52 15.2	-2.2
HELC	**Santa Helena**	**2.41**	**8**	P	Pn	03 52 16.0	+0.1
HELC				S	Sn	03 52 16.6	-2.9
CRUC	**La Cruz**	**2.46**	**206**	P	Pb	03 52 19.8	-0.5
SPBC	**San Pablo de B**	**2.58**	**44**	P	Pn	03 52 18.5	+0.6
MACC	**Macarena, Meta**	**2.60**	**129**	P	Pn	03 52 17.9	-0.3
MACC				P	Pb	03 52 18.5	-4.0
MACC				P	Pg	03 52 18.6	-6.4
CMBC	**Cumbal**	**3.44**	**215**	P	Pb	03 52 33.7	-3.4
TULM	**Tulcn-Chalpat**	**3.60**	**212**	P	Pn	03 52 36.0	+3.6
BRJC	**Barrancabermej**	**3.81**	**34**	P	Pn	03 52 35.9	+1.1
BARC	**Barichara**	**3.86**	**44**	P	Pn	03 52 35.9	+0.1
UREC	**San Jos de Ur**	**3.95**	**5**	P	Pn	03 52 37.9	+1.1
PAC1	**Pacto, Paraso**	**4.56**	**220**	P	Pn	03 52 47.3	+2.0
PAMC	**Pamplona, Colo**	**4.73**	**42**	P	Pn	03 52 50.7	+2.7
OCAC	**Ocana**	**5.10**	**30**	P	Pn	03 52 52.9	+0.2
	20nm,0.5s						
SJCC	**San Jacinto, C**	**6.11**	**6**	P	Pn	03 53 07.9	+1.4
	9.2nm,0.9s						
BCIP	**Isla Barro Col**	**6.64**	**324**	P	Pn	03 53 14.5	+0.8

CATAC ***22*** *03:53:09.6±0.3,13.°N±2.°×8.°9W±.°,h33km±5km,M4.6/45,*
MLv4.6/45,Error ellipse: s-maj=5.8km s-min=2.6km
az=28.2,Moment Tensor Solution. Moment tensor: Scale
10¹⁵Nm; Mrr-1.76; Mθθ0.93; Mϕϕ0.82; Mrθ-0.76; Mθϕ-0.53;
Mϕr0.27; Fault plane solution: M₀1.80469×10¹⁵ NP1:
ϕs123.10456°,δ58.22154°,λ-97.76116°. NP2:
ϕs317.61425°,δ32.61582°,λ-77.70266°. Principal axes:
T 1.5821, Plg12.8977°, Azm218.7264°; N 0.3834,
Plg6.5921°, Azm127.2100°; P -1.9656, Plg75.4632°,
Azm10.7438°; confirmed
SNET ***22*** *03:53:09.0±1.4, 12.°89N×88.°84W,h68km±5km,ML4.6*
IDC ***22*** *03:53:10.8±0.9, 13.°25N×88.°34W,h65km±7km,mb3.7/8,*
mbtmp3.9/9,MS3.4/11,Error ellipse: s-maj=23.8km
s-min=10.9km az=45.0
NEIC ***22*** *03:53:11.2±2.4, 12.°96N±0.°07×88.°74W±0.°07,h70km±4km,*
mb4.3/62,Error ellipse: s-maj=12.5km s-min=6.9km
az=47.0
GCG ***22*** *03:53:12.5±1.0, 13.°06N×88.°98W,h41km±27km,MD4.5,*
ML4.3
UCR ***22*** *03:53:21.9±1.2, 12.°60N×87.°89W,h70km,MW4.5*
ISC 22 03:53:10.0±0.7,12.°95N±0.°05×88.°80W±0.°03,h61km±5km,
n209,σ1$39/189,mb4.2/34,2C-18D,Off coast of central
America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TECO	**Alcaldia de Te**	**0.58**	**1**	*‖iP*	Pn	**03 53 22.4**	**-0.6**
TECO				*eS*	Sn	**03 53 31.7**	**-0.8**
TECO	**Alcaldia de Te**	**0.58**	**1**	P	Pn	**03 53 22.5**	**-0.6**
TECA	**Tecapa**	**0.61**	**28**	*‖iP*	Pn	**03 53 23.3**	**-0.2**
SNVI	**San Vicente**	**0.66**	**356**	*‖eP*	Pn	**03 53 23.6**	**-0.4**
LCY	**Lacayo**	**0.68**	**46**	*‖iP*	Pn	**03 53 24.0**	**-0.2**
UESV	**Universidad de**	**0.68**	**1**	P	Pn	**03 53 23.9**	**-0.3**
UESV	**Universidad de**	**0.68**	**1**	S	Sn	**03 53 34.5**	**0.0**
RANC	**El Ranchito**	**0.69**	**46**	*‖iP*	Pn	**03 53 24.2**	**-0.1**
PACA	**Pacayal**	**0.69**	**42**	*eP*	Pn	**03 53 24.4**	**+0.1**
PACA	**Pacayal**	**0.69**	**42**	P	Pn	**03 53 24.5**	**+0.1**
PQSS	**Presa 15 de Se**	**0.70**	**19**	P	Pn	**03 53 24.5**	**+0.1**
LFRS	**El Faro**	**0.71**	**339**	*‖iP*	Pn	**03 53 23.9**	**-0.7**
LALI	**Alcalda de L**	**0.74**	**316**	*eP*	Pn	**03 53 23.7**	**-1.1**
LALI				*eS*	Sn	**03 53 33.5**	**-2.1**
LALI	**Alcalda de L**	**0.74**	**316**	*i P*	Pn	**03 53 23.7**	**-1.1**
LALI	**Alcalda de L**	**0.74**	**316**	P	Pn	**03 53 23.8**	**-1.1**
SCLA	**Alcaldia de Sa**	**0.75**	**5**	*‖eP*	Pn	**03 53 25.0**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.75**	**5**	P	Pn	**03 53 25.1**	**+0.1**
PANCS	**Alcalda de**	**0.75**	**330**	*eP*	Pn	**03 53 24.1**	**-0.9**
PANCS	**Alcalda de**	**0.75**	**330**	P	Pn	**03 53 24.0**	**-0.7**
PANCS	**Alcalda de**	**0.75**	**330**	S	Sn	**03 53 34.9**	**-1.2**
PAVA	**Las Pavas**	**0.77**	**350**	*‖iP*	Pn	**03 53 25.0**	**-0.3**
PAVA	**Las Pavas**	**0.77**	**350**	P	Pn	**03 53 25.0**	**-0.3**
PAVA	**Las Pavas**	**0.77**	**350**	S	Sn	**03 53 36.3**	**-0.2**
LOMA	**Loma Larga**	**0.78**	**332**	*eP*	Pn	**03 53 24.1**	**-1.4**
LOMA	**Loma Larga**	**0.78**	**332**	P	Pn	**03 53 24.1**	**-1.4**
CNRM	**Centro Naciona**	**0.80**	**50**	*eP*	Pn	**03 53 25.6**	**+0.1**
CNRM	**Centro Naciona**	**0.80**	**50**	S	Sn	**03 53 38.4**	**+1.4**
CNRM	**Centro Naciona**	**0.80**	**50**	P	Pn	**03 53 25.6**	**+0.1**
LBRS	**Las Brisas**	**0.82**	**343**	*eP*	Pn	**03 53 25.6**	**-0.2**
UDBS	**Universidad Do**	**0.83**	**335**	S	Sn	**03 53 37.1**	**-0.8**
UDBS	**Universidad Do**	**0.83**	**335**	P	Pn	**03 53 25.6**	**-0.4**
IGN	**Direccin Gen**	**0.84**	**334**	*eP*	Pn	**03 53 25.6**	**-0.5**
IGN	**Direccin Gen**	**0.84**	**334**	P	Pn	**03 53 25.7**	**-0.5**
UTEC	**Universidad Te**	**0.84**	**332**	S	Sn	**03 53 37.5**	**-0.5**
UTEC	**Universidad Te**	**0.84**	**332**	P	Pn	**03 53 25.7**	**-0.5**
LFU	**La Fuente**	**0.85**	**339**	*‖eP*	Pn	**03 53 26.0**	**-0.3**
UEES	**Universidad Ev**	**0.87**	**330**	*eP*	Pn	**03 53 25.9**	**-0.6**
UEES	**Universidad Ev**	**0.87**	**330**	P	Pn	**03 53 26.0**	**-0.6**
PIC2	**El Picacho**	**0.91**	**330**	*eP*	Pn	**03 53 26.8**	**-0.3**
PMON	**Piamonte**	**0.91**	**326**	*eP*	Pn	**03 53 26.3**	**-0.7**
PMON	**Piamonte**	**0.91**	**326**	P	Pn	**03 53 26.4**	**-0.7**
BOQS	**Boqueron**	**0.91**	**329**	*‖eP*	Pn	**03 53 26.6**	**-0.5**
JAYA	**Jayaque - finc**	**0.94**	**318**	*i P*	Pn	**03 53 26.5**	**-1.1**
JAYA				*eS*	Sn	**03 53 39.4**	**-1.0**
JAYA	**Jayaque - finc**	**0.94**	**318**	*i P*	Pn	**03 53 26.4**	**-1.1**
JAYA	**Jayaque - finc**	**0.94**	**318**	P	Pn	**03 53 26.5**	**-1.1**
LCND	**La Caada**	**0.95**	**68**	*‖iP*	Pn	**03 53 27.4**	**0.0**
LCND	**La Caada**	**0.95**	**68**	P	Pn	**03 53 27.5**	**0.0**
CNCH	**Conchagua**	**0.99**	**71**	*‖iP*	Pn	**03 53 27.9**	**-0.1**
CNCH	**Conchagua**	**0.99**	**71**	P	Pn	**03 53 28.0**	**-0.1**
QUEZ	**Alcaldia de Qu**	**0.99**	**332**	*eP*	Pn	**03 53 28.0**	**0.0**
CEDA	**San Andres**	**1.03**	**325**	*eP*	Pn	**03 53 27.9**	**-0.6**
CEDA	**San Andres**	**1.03**	**325**	P	Pn	**03 53 28.2**	**-0.3**
CEVE	**Cerro Verde**	**1.19**	**317**	*eP*	Pn	**03 53 30.4**	**-0.3**
CEVE	**Cerro Verde**	**1.19**	**317**	P	Pn	**03 53 30.5**	**-0.3**
SBLS	**San Blas**	**1.19**	**318**	*eP*	Pn	**03 53 30.6**	**-0.2**
SNJE	**San Jose**	**1.20**	**319**	*‖eP*	Pn	**03 53 30.5**	**-0.5**
CSGN	**Cosiguina Volc**	**1.21**	**89**	P	Pn	**03 53 30.4**	**-0.5**
LLGN	**La Laguna**	**1.21**	**353**	*‖iP*	Pn	**03 53 31.0**	**+0.1**
LLGN	**La Laguna**	**1.21**	**353**	P	Pn	**03 53 31.1**	**+0.1**
RTR	**El Retiro**	**1.25**	**319**	*‖eP*	Pn	**03 53 31.4**	**-0.2**
POTN	**Potosi Cosigui**	**1.26**	**88**	P	Pn	**03 53 31.4**	**-0.1**
POTN	**Potosi Cosigui**	**1.26**	**88**	*eP*	Pn	**03 53 31.0**	**-0.4**
UNIC	**Universidad Ca**	**1.26**	**324**	P	Pn	**03 53 31.3**	**-0.3**
NUBE	**Las Nubes**	**1.34**	**315**	*‖eP*	Pn	**03 53 32.3**	**-0.5**
NUBE	**Las Nubes**	**1.34**	**315**	*i P*	Pn	**03 53 32.3**	**-0.5**
NUBE				*eS*	Sn	**03 53 48.8**	**-1.0**
NUBE	**Las Nubes**	**1.34**	**315**	P	Pn	**03 53 32.4**	**-0.5**
LOAL	**Lomas de Alarc**	**1.41**	**317**	*e*	Pn	**03 53 33.6**	**0.0**
LOAL				*eP*	Pn	**03 53 33.6**	**0.0**
LOAL	**Lomas de Alarc**	**1.41**	**317**	P	Pn	**03 53 33.8**	**+0.2**
SLOZ	**Alcaldia de Sa**	**1.44**	**318**	*‖eP*	Pn	**03 53 33.5**	**-3.1**
RBDL	**Robledal**	**1.44**	**323**	*‖eP*	Pn	**03 53 34.0**	**-0.2**
FAME	**Alcaldia de Sa**	**1.48**	**307**	P	Pn	**03 53 33.8**	**-0.7**
MTO3	**Montecristo**	**1.54**	**339**		Pn	**03 53 35.6**	**0.0**
MTO3	**Montecristo**	**1.54**	**339**	*‖iP*	Pn	**03 53 35.5**	**0.0**
MTO3	**Montecristo**	**1.54**	**339**	*i P*	Pn	**03 53 35.5**	**0.0**
MTO3	**Montecristo**	**1.54**	**339**	P	Pn	**03 53 35.5**	**0.0**
JUAM	**Asuncion Mita**	**1.63**	**327**	*eP*	Pn	**03 53 36.6**	**0.0**
JUAM				IAML		03 54 05.3	
	comp=N,2μm,0.6s						
ESQI	**Esquipulas**	**1.68**	**342**		Pn	**03 53 37.9**	**+0.6**
ESQI	**Esquipulas**	**1.68**	**342**	*‖iP*	Pn	**03 53 37.9**	**+0.6**
ESQI	**Esquipulas**	**1.68**	**342**	P	Pn	**03 53 37.9**	**+0.6**
ZAFR2	**Estanzuela, Za**	**1.70**	**342**	*eP*	Pn	03 53 43.3	+5.8
CRIN	**San Cristobal**	**1.72**	**98**		Pn	**03 53 38.2**	**+0.4**
CRIN	**San Cristobal**	**1.72**	**98**	P	Pn	**03 53 38.1**	**+0.3**
CRIN	**San Cristobal**	**1.72**	**98**	*eP*	Pn	**03 53 37.5**	**-0.3**
PKGN	**Cerro Pekin**	**1.80**	**99**	P	Pn	**03 53 38.5**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.84**	**53**		Pn	**03 53 40.1**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.84**	**53**	P	Pn	**03 53 40.1**	**+0.6**
TGUH				S	Sn	**03 54 02.3**	**+0.4**
ALEN	**Leon**	**1.94**	**105**	P	Pn	**03 53 40.5**	**-0.2**
POLN	**Al Sur del Vol**	**1.96**	**99**	P	Pn	**03 53 40.1**	**-0.9**
PCG5	**San Vicente Pa**	**1.98**	**309**	*eP*	Pn	**03 53 45.5**	**+4.0**
CNGA	**Al SSO del Vol**	**2.09**	**102**	P	Pn	**03 53 42.4**	**-0.4**
CNGA				S	Sn	**03 54 08.6**	**+0.8**
CNGN	**Cerro Negro**	**2.10**	**102**		Pn	**03 53 42.5**	**-0.4**
CNGN	**Cerro Negro**	**2.10**	**102**	P	Pn	**03 53 42.3**	**-0.5**
CNGN	**Cerro Negro**	**2.10**	**102**	*eP*	Pn	03 53 38.5	-4.4
FG16	**Alotenango, Sa**	**2.12**	**308**	*eP*	Pn	03 53 48.9	+5.6
YUSH	**Yuscaran**	**2.14**	**62**	P	Pn	**03 53 44.0**	**+0.5**
MOM3	**MOM3**	**2.27**	**101**	P	Pn	**03 53 44.5**	**-0.6**
MOMN	**Momotombo**	**2.27**	**104**	P	Pn	**03 53 44.7**	**-0.5**
COPN	**Copaltepe**	**2.29**	**109**	P	Pn	**03 53 44.5**	**-0.9**
COPN	**Copaltepe**	**2.29**	**109**	*eP*	Pn	**03 53 43.9**	**-1.5**
MOM2	**El Cardon**	**2.31**	**103**	P	Pn	**03 53 45.9**	**+0.2**
MOM2				S	Sn	**03 54 13.4**	**+0.3**
OCON	**Estacion meteo**	**2.35**	**73**	P	Pn	**03 53 46.4**	**0.0**
OCON				S	Sn	**03 54 14.7**	**+0.5**
LIMN	**Finca el Limon**	**2.37**	**87**	P	Pn	**03 53 46.7**	**+0.1**
AMTN	**Mateare**	**2.42**	**107**	S	Sn	**03 54 15.8**	**+0.1**
ESSG	**Sabana Grande**	**2.44**	**306**	*eP*	Pn	**03 53 47.3**	**-0.2**
APQ3	**Volcan Apoyequ**	**2.46**	**106**	S	Sn	**03 54 17.5**	**+0.7**
APYN	**Apoyeque**	**2.49**	**106**	P	Pn	**03 53 47.5**	**-0.7**
APYN				S	Sn	**03 54 17.3**	**-0.3**
TISN	**Laguna Tiscapa**	**2.59**	**108**	P	Pn	**03 53 48.4**	**-1.3**
APG	**El Apazote**	**2.60**	**322**	P	Pn	**03 53 50.5**	**+0.6**
	comp=N,1.0nm,0.4s,baz=142,slow=9.9,SNR=22						
APG				S	Sn	**03 54 24.9**	**+4.3**
	comp=N,6.8nm,0.5s,baz=80,slow=18,SNR=4.6						
APG	**El Apazote**	**2.60**	**322**	*eP*	Pn	**03 53 50.3**	**+0.3**
UNAN	**Cigeo UNAN**	**2.60**	**108**	P	Pn	**03 53 50.1**	**+0.4**
UNAN				S	Sn	**03 54 20.3**	**0.0**
RCVN	**Varillal2**	**2.61**	**76**	P	Pn	**03 53 50.2**	**+0.2**
MGAN	**Managua**	**2.61**	**108**		Pn	**03 53 49.8**	**0.0**
RCON	**San Juan de Ri**	**2.62**	**78**	S	Sn	**03 54 21.3**	**+0.4**
RCON	**San Juan de Ri**	**2.62**	**78**	P	Pn	**03 53 50.4**	**+0.3**
WILN	**Americas 2**	**2.67**	**107**	P	Pn	**03 53 50.5**	**-0.1**
WILN				S	Sn	**03 54 21.3**	**-0.4**
RCPN	**Sur Rio San Ju**	**2.69**	**77**	P	Pn	**03 53 51.2**	**+0.2**
MAS3	**Al N del Volca**	**2.72**	**110**	P	Pn	**03 53 51.2**	**-0.2**
MATN	**Matagalpa**	**2.80**	**90**	P	Pn	**03 53 51.4**	**-1.1**
STG5	**El Palmar, Qui**	**2.87**	**300**	*eP*	Pn	03 53 58.1	+4.7
STG8	**El Palmar, Qui**	**2.90**	**301**	*i P*	Pn	03 53 58.9	+5.0
STG2	**El Palmar, Qui**	**2.91**	**301**	*eS*	Sn	**03 54 34.8**	**+6.9**
RTAL	**Retalhuleu**	**3.22**	**299**		Pn	**03 53 59.6**	**+1.4**
LAPC	**Finca la Perla**	**3.94**	**123**	*eP*	Pn	**03 54 08.4**	**+0.3**
ALIBA	**Liberia Airpor**	**3.95**	**126**	*eP*	Pn	**03 54 09.3**	**+1.1**
SIUN	**Universidad Ur**	**3.99**	**79**		Pn	**03 54 09.4**	**+0.8**
PETF	**Flores**	**4.07**	**345**		Pn	**03 54 11.8**	**+2.0**
PETF	**Flores**	**4.07**	**345**	*eP*	Pn	**03 54 11.8**	**+2.0**
MESS	**Mesas**	**4.16**	**122**	*eP*	Pn	**03 54 11.3**	**+0.2**
CUI	**Cuipilapa**	**4.22**	**122**	*eP*	Pn	**03 54 12.4**	**+0.4**
JUD3	**Juan Diaz 3**	**4.23**	**131**		Pn	**03 54 13.4**	**+1.4**
JUD3	**Juan Diaz 3**	**4.23**	**131**	*eP*

comp=Z,2.4nm,0.6s
comp=Z,2.4nm,0.6s
BDFB Brasilia 49.34 124 IAmb IAmb 04 01 52.8
comp=Z,2.8nm,0.7s
CPUP Villa Florida 49.61 142 LR LR 04 22 09.3
comp=Z,14nm,20.5s,baz=242,slow=35
YKA Yellowknife Ar 52.79 345 P **P** **04 02 17.6 -1.1**
comp=Z,4.5nm,0.8s,baz=147,slow=7.0,SNR=67
YKA pP **pP** **04 02 33.7 -1.0**
comp=Z,1.5nm,0.7s,baz=150,slow=7.4,SNR=4.3
YKA LR LR 04 26 23.8
comp=Z,99nm,18.5s,baz=302,slow=38
comp=Z,4.5nm,0.8s
M29M Somme Creek 60.62 336 P **P** **04 03 14.0 -0.4**
INK Inuvik 62.34 343 P **P** **04 03 24.7 -1.0**
G30M tAoh Zraii Nji 62.34 341 P **P** **04 03 24.8 -1.1**
G30M IAmb IAmb 04 03 39.5
comp=Z,5.1nm,1.3s
H29M Whitestone 62.62 340 P **P** **04 03 27.1 -0.5**
H29M IAmb IAmb 04 03 46.3
comp=Z,2.6nm,1.2s
F28M Old Crow 63.87 341 P **P** **04 03 35.6 -0.3**
ILAR Eielson Array 65.03 336 P **P** **04 03 42.2 -1.4**
comp=Z,0.9nm,0.9s,baz=168,slow=4.7,SNR=12
ILAR pP **pP** **04 04 02.0 +1.9**
comp=Z,0.3nm,0.6s,baz=162,slow=5.8,SNR=2.3
comp=Z,0.9nm,0.9s
ILAR Eielson Array 65.03 336 P **P** **04 03 42.8 -0.8**
WRA Warramunga Arr 138.14 255 PKP **PKiKP** **04 12 29.4 -1.6**
comp=Z,0.8nm,0.6s,baz=92,slow=2.4,SNR=9.1
WRA pPKP **pPKPdf** **04 12 47.2 +0.3**
comp=Z,0.4nm,0.6s,baz=91,slow=1.6,SNR=2.0
ASAR Alice Springs 138.23 249 PKP **PKiKP** **04 12 30.2 -1.0**
comp=Z,0.5nm,0.7s,baz=119,slow=3.7,SNR=5.0

AUST 22 03:55:52.4±0.3, 20°S±3°×12°5E±°, h10km, mb3.8/1, ML2.8/5, Error ellipse: s-maj=6.0km s-min=5.5km az=118.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**1.47**	**13**	P	Pb	03 56 19.6	-0.3
FITZ				S	Sn	03 56 36.7	-1.6
CAAN	**Eighty Mile Be**	**3.58**	**274**	P	Pn	03 56 49.1	+1.1
CAAN				S	Sn	03 57 30.4	0.0
KNRA	**Kununurra**	**5.07**	**41**	P	Pn	03 57 09.9	+1.4
	comp=Z,0.0nmcomp=Z,11nm,1.1s						
KNRA				S	Sn	03 58 04.9	-2.3
MBWA	**Marble Bar**	**5.46**	**252**	P	Pn	03 57 13.4	-0.6
MBWA				S	Sn	03 58 14.7	-2.2
PSAD1	**Pilbara Seismi**	**5.46**	**249**	S	Sn	03 58 14.0	-3.0
PSA00	**Pilbara Seismi**	**5.49**	**247**	P	Pn	03 57 13.6	-0.7
PSA00				S	Sn	03 58 14.0	-3.5
WRKA	**Warakurna**	**6.14**	**154**	P	Pn	03 57 25.1	+1.9
WRKA				S	Sn	03 58 32.7	-0.8
WB2	**Warramunga Arr**	**8.54**	**94**	P	Pn	03 57 55.2	-1.0
MEEK	**Meekatharra**	**9.36**	**220**	P	Pn	03 58 08.4	+0.9

MRB ***22*** *04:41:02.6±0.3, 42°.33N×0°.65E, h0km±2km, ML3.3/45, Error ellipse: s-maj=0.9km s-min=0.6km az=261.0*
SFS ***22*** *04:41:02.9, 42°.31N×0°.62E, h0km, mb3.9/7, ML4.0/12, ML4.1/12, MLv4.1/12*
IDC ***22*** *04:41:03.1±1.4, 42°.32N×0°.48E, h0km, mb3.7/2, mbtmp3.7/7, ML3.7/5, Error ellipse: s-maj=30.0km s-min=15.8km az=140.0*
LDG ***22*** *04:41:03.8±0.1, 42°.31N×0°.65E, h2km, Md2.4/2, Ml3.7/37, Error ellipse: s-maj=1.6km s-min=1.3km az=120.0*
MDD ***22*** *04:41:03.7±0.1, 42°.28N×0°.66E, h0km, mb_Lg3.6/70, Error ellipse: s-maj=1.1km s-min=0.9km az=164.0*
INMG ***22*** *04:41:05.3±1.6, 42°.17N×0°.63E, h19km±6km, ML2.8, Error ellipse: s-maj=3.7km s-min=3.5km az=142.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Pirineus (ESP)*

ISC 22 04:41:02.9±0.8, 42°33N±0°.01×0°65E±0°.01, h12km±5km, n195, σ1s75/348, 8D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTRE	**Tremp**	**0.09**	**90**	P	**Pg**	**04 41 04.5**	**-1.3**
CTRE				S	**Sg**	**04 41 06.2**	**-1.6**
CTRM	**Tremp**	**0.24**	**132**	*e*Pg	**Pg**	**04 41 07.7**	**-0.3**
CTRM				*e*Sg	**Sg**	**04 41 12.1**	**+0.6**
CTRM	**Tremp**	**0.24**	**132**	P	**Pg**	**04 41 07.7**	**-0.3**
CTRM				S	**Sg**	**04 41 11.1**	**-0.4**
	6μm,0.3s						
CSOR	**Sort**	**0.36**	**82**	P	**Pg**	**04 41 10.0**	**-0.2**
CSOR				S	**Sg**	**04 41 15.6**	**+0.5**
	1μm,0.3s						
VIES	**Vielha - Hospi**	**0.39**	**16**	Pg	**Pg**	**04 41 10.1**	**-0.6**
VIES				Sg	**Sg**	**04 41 16.7**	**+0.7**
VIER	**Vielha - Casau**	**0.40**	**15**	Pg	**Pg**	**04 41 10.3**	**-0.6**
VIER				Sg	**Sg**	**04 41 16.1**	**0.0**
VIER	**Vielha - Casau**	**0.40**	**15**	P	**Pg**	**04 41 10.4**	**-0.4**
VIER				S	**Sg**	**04 41 16.0**	**0.0**
	5μm,0.2s						
CARA	**Val d'Aran**	**0.40**	**18**	P	**Pg**	**04 41 10.7**	**-0.3**
CARA				S	**Sg**	**04 41 16.5**	**+0.1**
	2μm,0.4s						
CAVN	**Les Avellanes**	**0.45**	**170**	P	**Pg**	**04 41 11.3**	**-0.4**
CAVN				S	**Sg**	**04 41 18.4**	**+0.7**
	3μm,0.3s						
CORG	**Organya**	**0.50**	**101**	P	**Pg**	**04 41 12.4**	**-0.4**
CORG				S	**Sb**	**04 41 20.4**	**-0.8**
	611nm,0.3s						
CEST	**Esterri de Car**	**0.52**	**58**	P	**Pg**	**04 41 12.8**	**-0.4**
CEST				S	**Sg**	**04 41 20.2**	**0.0**
	824nm,0.2s						
RESF	**Ens**	**0.54**	**335**	P	**Pg**	**04 41 12.6**	**-0.9**
RESF				S	**Sg**	**04 41 20.3**	**-0.3**
SALF	**Salau**	**0.59**	**42**	P	**Pg**	**04 41 14.2**	**-0.2**
SALF				S	**Sg**	**04 41 22.5**	**+0.2**
	704nm,0.1s						
EXSEU	**La Seu d''Urge**	**0.60**	**87**	P	**Pg**	**04 41 14.3**	**-0.4**
EXSEU				S	**Sg**	**04 41 23.0**	**+0.4**
	1μm,0.5s						
SCOL	**Santa Coloma**	**0.65**	**75**	Pg	**Pn**	**04 41 18.8**	**+0.7**
SCOL				Sg	**Sb**	**04 41 25.9**	**+0.5**
ARBS	**La Rabassa**	**0.68**	**79**	P	**Pg**	**04 41 15.3**	**-0.8**
ARBS				S	**Sb**	**04 41 25.6**	**-0.7**
	587nm,0.5s						
PAND	**Andorre**	**0.69**	**73**	P	**Pg**	**04 41 16.0**	**-0.4**
PAND				S	**Sb**	**04 41 26.0**	**-0.7**
	510nm,0.3s						
ILER	**Lleida**	**0.71**	**181**	Pg	**Pg**	**04 41 16.0**	**-0.6**
ILER				Sg	**Sg**	**04 41 25.5**	**-0.5**
MLS	**Moulis**	**0.71**	**27**	P	**Pg**	**04 41 16.4**	**-0.3**
MLS				S	**Sg**	**04 41 26.4**	**+0.3**
VIEF	**Viey**	**0.72**	**321**	P	**Pg**	**04 41 16.3**	**-0.7**
VIEF				S	**Sg**	**04 41 26.8**	**+0.2**
EPF	**Esparros**	**0.74**	**342**	*e*Pg	**Pb**	**04 41 17.9**	**+0.1**
EPF				*e*Sg	**Sg**	**04 41 27.4**	**+0.4**
	360nm,0.2s						
PYLO	**Lourdes**	**0.93**	**327**	P	**Pg**	**04 41 20.1**	**-0.7**
PYLO				S	**Sb**	**04 41 33.1**	**-0.2**
	371nm,0.3s						
CLLI	**Llivia**	**0.99**	**81**	P	**Pg**	**04 41 21.0**	**-1.1**
CLLI				S	**Sb**	**04 41 35.6**	**+0.3**
LLIS	**Llivia - Polie**	**0.99**	**82**	Pg	**Pg**	**04 41 21.0**	**-1.1**
LLIS				Sg	**Sn**	**04 41 36.1**	**-0.8**
EPOB	**Poblet**	**1.02**	**162**	Pg	**Pb**	**04 41 21.8**	**-0.9**
EPOB				Sg	**Sb**	**04 41 36.3**	**+0.3**
EPOB				*i* IVmb_Lg		04 41 41.3	
EPOB	**Poblet**	**1.02**	**162**	P	**Pb**	**04 41 21.8**	**-0.9**
EPOB				S	**Sb**	**04 41 36.4**	**+0.3**
	421nm,0.4s						
ESAC	**San Caprasio**	**1.03**	**235**	Pg	**Pb**	**04 41 22.1**	**-0.6**
ESAC				Sg	**Sg**	**04 41 35.9**	**-0.2**
ESAC				*i* IVmb_Lg		04 41 42.3	
ESAC	**San Caprasio**	**1.03**	**235**	P	**Pb**	**04 41 22.2**	**-0.6**
ESAC				S	**Sb**	**04 41 36.7**	**+0.4**
	1μm,0.3s						
VALC	**Valcebollere**	**1.03**	**86**	P	**Pg**	**04 41 22.0**	**-0.8**
VALC				S	**Sb**	**04 41 36.8**	**+0.3**
	622nm,0.2s						
ETSF	**Etsaut**	**1.06**	**303**	*e*Pg	**Pn**	**04 41 25.0**	**+1.3**
ETSF				*e*Sg	**Sn**	**04 41 39.5**	**+1.0**
	2μm,0.3s						
AVIN	**Avinyo**	**1.09**	**116**	Pg	**Pb**	**04 41 23.7**	**-0.1**
AVIN				Sg	**Sn**	**04 41 39.1**	**0.0**
CORI	**Orista**	**1.10**	**108**	P	**Pb**	**04 41 23.2**	**-0.7**
CORI				S	**Sn**	**04 41 38.8**	**-0.5**
	558nm,0.2s						
EXQUE	**Queralbs**	**1.12**	**88**	Pg	**Pb**	**04 41 24.0**	**-0.3**
EXQUE				Sg	**Sn**	**04 41 39.8**	**-0.3**
EXQUE	**Queralbs**	**1.12**	**88**	P	**Pb**	**04 41 23.7**	**-0.7**
EXQUE				S	**Sn**	**04 41 39.6**	**-0.5**
	1μm,0.2s						
CBRU	**Bruguera**	**1.14**	**91**	P	**Pb**	**04 41 24.0**	**-0.6**
CBRU				S	**Sn**	**04 41 40.0**	**-0.4**
	394nm,0.2s						
CARF	**Carcanieres**	**1.15**	**70**	P	**Pb**	**04 41 24.0**	**-0.7**
CARF				S	**Sn**	**04 41 40.4**	**-0.3**
	342nm,0.3s						
CMON	**Montserrat**	**1.15**	**129**	Pg	**Pb**	**04 41 24.4**	**-0.4**
CMON				Sg	**Sn**	**04 41 40.6**	**0.0**
CMON	**Montserrat**	**1.15**	**129**	P	**Pb**	**04 41 24.2**	**-0.6**
CMON				S	**Sn**	**04 41 40.3**	**-0.2**
	800nm,0.3s						
FNEB	**Nbias**	**1.22**	**61**	P	**Pn**	**04 41 25.4**	**-0.5**
FNEB				S	**Sn**	**04 41 42.6**	**+0.2**
	334nm,0.4s						
ATE	**Arette**	**1.25**	**308**	P	**Pn**	**04 41 26.0**	**-0.3**
ATE				S	**Sg**	**04 41 43.2**	**-0.1**
	484nm,0.2s						
VAN2	**Vandellos 2**	**1.38**	**174**	P	**Pn**	**04 41 28.0**	**0.0**
VAN2				S	**Sg**	**04 41 47.2**	**0.0**
	652nm,0.3s						
ERTA	**Horta de San J**	**1.39**	**190**	Pg	**Pn**	**04 41 27.8**	**-0.3**
ERTA				Sg	**Sg**	**04 41 47.4**	**-0.1**
ERTA				*i* IVmb_Lg		04 41 51.9	
ERTA	**Horta de San J**	**1.39**	**190**	P	**Pn**	**04 41 28.0**	**-0.2**
ERTA				S	**Sg**	**04 41 47.1**	**-0.5**
	505nm,0.2s						
CGAR	**Garraf**	**1.40**	**137**	P	**Pn**	**04 41 28.5**	**+0.2**
CGAR				S	**Sg**	**04 41 48.5**	**+0.6**
	213nm,0.2s						
FBR	**Fabra**	**1.43**	**129**	S	**Sg**	**04 41 48.5**	**-0.3**
	664nm,0.2s						
FILF	**Fillols**	**1.43**	**80**	P	**Pn**	**04 41 27.2**	**-1.6**
FILF				S	**Sn**	**04 41 45.7**	**-2.0**
	301nm,0.3s						
URDF	**Urds**	**1.44**	**321**	S	**Sg**	**04 41 48.9**	**-0.3**
	267nm,0.3s						
CFON	**Fontmartina**	**1.44**	**112**	P	**Pb**	**04 41 29.3**	**-0.5**
CFON				S	**Sg**	**04 41 49.9**	**+0.5**
ICJA	**ICTJA-CSIC, Ba**	**1.45**	**130**	P	**Pn**	**04 41 29.2**	**+0.3**
ICJA				S	**Sg**	**04 41 49.3**	**-0.1**
	519nm,0.2s						
CBEU	**Beuda**	**1.50**	**92**	P	**Pb**	**04 41 30.7**	**-0.1**
CBEU				S	**Sg**	**04 41 51.5**	**+0.1**
	525nm,0.3s						
EBR	**Ebro Roquetas**	**1.51**	**185**	P	**Pb**	**04 41 30.2**	**-0.6**
EBR				S	**Sg**	**04 41 51.4**	**0.0**
	658nm,0.3s						
MTLF	**Montolieu**	**1.54**	**48**	*e*Pg	**Pb**	**04 41 31.6**	**+0.2**
MTLF				*e*Sg	**Sg**	**04 41 51.6**	**-0.8**
	192nm,0.2s						
EORO	**Oroz-Betelu**	**1.55**	**292**	Pg	**Pb**	**04 41 31.5**	**-0.2**
EORO				Sg	**Sg**	**04 41 54.2**	**+1.3**
EORO				*i* IVmb_Lg		04 41 58.4	
SJPF	**Ste Jean**	**1.59**	**300**	*e*Pg	**Pg**	**04 41 33.1**	**-0.3**
SJPF				*e*Sg	**Sg**	**04 41 54.7**	**+0.6**
	494nm,0.3s						
CMAS	**Mas de Barbera**	**1.62**	**189**	P	**Pb**	**04 41 31.9**	**-0.8**
CMAS				S	**Sg**	**04 41 54.1**	**-0.8**
	536nm,0.2s						
CBUD	**Illa de Buda**	**1.62**	**175**	P	**Pb**	**04 41 32.2**	**-0.6**
CGIS	**Girona - Santa**	**1.65**	**101**	S	**Sg**	**04 41 55.4**	**-0.6**
	692nm,0.5s						
EJON	**La Jonquera**	**1.66**	**85**	P	**Pb**	**04 41 33.4**	**-0.1**
EJON				S	**Sg**	**04 41 56.0**	**-0.4**
EJON	**La Jonquera**	**1.66**	**85**	Pg	**Pb**	**04 41 33.8**	**+0.3**
EJON				Sg	**Sg**	**04 41 56.5**	**0.0**
EJON				*i* IVmb_Lg		04 42 04.6	
OSSF	**Osses**	**1.69**	**304**	P	**Pb**	**04 41 33.3**	**-0.6**
OSSF				S	**Sb**	**04 41 55.9**	**+0.8**
	263nm,0.3s						
EARA	**Aranguren**	**1.71**	**286**	Pg	**Pg**	**04 41 35.7**	**0.0**
EARA				Sg	**Sg**	**04 41 57.7**	**-0.1**
EARA				*i* IVmb_Lg		04 42 02.5	
CCAS	**Cassa de la Se**	**1.73**	**104**	P	**Pn**	**04 41 33.3**	**+0.4**
CCAS				S	**Sb**	**04 41 57.4**	**+1.0**
	234nm,0.3s						
CFAR	**Far de la Bany**	**1.76**	**180**	P	**Pn**	**04 41 34.0**	**+0.8**
CFAR				S	**Sb**	**04 41 57.5**	**+0.3**
	642nm,0.4s						
ALCN	**Alcanar**	**1.78**	**184**	P	**Pb**	**04 41 34.6**	**-0.8**
ALCN				S	**Sb**	**04 41 58.5**	**+0.8**
	362nm,0.4s						
CPAL	**Palau Saverder**	**1.86**	**90**	P	**Pn**	**04 41 35.3**	**+0.7**
CPAL				S	**Sb**	**04 42 00.0**	**-0.2**
	130nm,0.4s						
CLAF	**Gruissan**	**1.97**	**65**	P	**Pn**	**04 41 36.9**	**+0.7**
CLAF				S	**Sb**	**04 42 03.2**	**-0.1**
ALCX	**Castello**	**2.08**	**188**	P	**Pn**	**04 41 38.0**	**+0.4**
ALCX				S	**Sb**	**04 42 06.1**	**-0.4**
EMOS	**Mosqueruela**	**2.13**	**204**	Pg	**Pn**	**04 41 39.6**	**+1.1**
EMOS				Pn	**Pn**	**04 41 39.7**	**+1.1**
EMOS				Sg	**Sb**	**04 42 08.8**	**+0.6**
EMOS				*i* IVmb_Lg		04 42 15.9	
EMOS	**Mosqueruela**	**2.13**	**204**	P	**Pn**	**04 41 39.1**	**+0.6**
EMOS				S	**Sb**	**04 42 07.7**	**-0.4**
	140nm,0.4s						
E0901	**Celadas (Terue**	**2.28**	**217**	Pn	**Pn**	**04 41 40.7**	**+0.2**
E0901				Sn	**Sn**	**04 42 08.1**	**-0.4**
E0901				*i* IVmb_Lg		04 42 30.6	
ECOL	**Islas Columbre**	**2.42**	**179**	Pn	**Pn**	**04 41 43.3**	**+0.9**
ECOL				Pg	**Pb**	**04 41 47.5**	**+1.0**
ECOL				Sg	**Sg**	**04 42 19.5**	**-1.3**
ECOL	**Islas Columbre**	**2.42**	**179**	S	**Sn**	**04 42 13.5**	**+1.6**
	130nm,0.5s						
ETOR	**Torete**	**2.53**	**234**	Pn	**Pn**	**04 41 44.3**	**+0.4**
ETOR				Sn	**Sn**	**04 42 15.9**	**+1.3**
ETOR				Sg	**Sg**	**04 42 23.8**	**-0.2**
ETOR				*i* IVmb_Lg		04 42 34.7	
LFF	**La Frestale**	**2.62**	**1**	*e*P	**Pn**	**04 41 46.8**	**+1.8**
LFF				*e*Sn	**Sn**	**04 42 14.0**	**-2.7**
	29nm,0.2s						
CAF	**Calviac**	**2.80**	**21**	*e*Pn	**Pn**	**04 41 47.8**	**+0.3**
CAF				*e*Sn	**Sn**	**04 42 19.7**	**-1.5**
	107nm,0.2s						
LASF	**Ste Croix**	**2.93**	**52**	*e*Pn	**Pn**	**04 41 50.4**	**+1.1**
LASF				*e*Sg	**Sg**	**04 42 36.8**	**-0.1**
	22nm,0.2s						
ECHE	**Chera**	**2.99**	**205**	P	**Pn**	**04 41 50.6**	**+0.3**
ECHE	**Chera**	**2.99**	**205**	Pn	**Pn**	**04 41 50.9**	**+0.7**
ECHE				Sn	**Sn**	**04 42 26.1**	**0.0**
ECHE				Sg	**Sg**	**04 42 36.8**	**-2.2**
ECHE				*i* IVmb_Lg		04 42 44.2	
ETOS	**Mallorca**	**3.03**	**147**	S	**Sn**	**04 42 25.3**	**-1.8**
ETOS				P	**Pn**	**04 41 49.9**	**-0.9**
ETOS	**Mallorca**	**3.03**	**147**	Pn	**Pn**	**04 41 50.3**	**-0.5**
ETOS				Sn	**Sn**	**04 42 26.3**	**-0.8**
ETOS				*i* IVmb_Lg		04 42 38.6	
ETOS	**Mallorca**	**3.03**	**147**	S	**Sn**	**04 42 28.4**	**+1.3**
RJF	**Les Rejaudoux**	**3.04**	**12**	*e*Pn	**Pn**	**04 41 50.8**	**-0.1**
RJF				*e*Sn	**Sn**	**04 42 27.4**	**+0.1**
RJF				*e*Sg	**Sg**	**04 42 39.4**	**-1.3**
	106nm,0.2s						
ELAN	**Lanestosa**	**3.14**	**288**	Pn	**Pn**	**04 41 55.3**	**+3.0**
ELAN				Sn	**Sn**	**04 42 31.9**	**+2.2**
ELAN				*i* IVmb_Lg		04 42 56.7	
EIBI	**Ibiza**	**3.34**	**171**	P	**Pn**	**04 41 54.0**	**-0.9**
EIBI				S	**Sn**	**04 42 32.4**	**-2.1**
EIBI	**Ibiza**	**3.34**	**171**	Pn	**Pn**	**04 41 54.0**	**-0.9**
EIBI				Sn	**Sn**	**04 42 33.2**	**-1.3**
EIBI				*i* IVmb_Lg		04 43 01.1	
EIBI	**Ibiza**	**3.34**	**171**	S	**Sn**	**04 42 35.3**	**+0.8**
EVIV	**Cofrentes, Val**	**3.34**	**204**	Pn	**Pn**	**04 41 55.1**	**+0.1**
EVIV				Sg	**Sg**	**04 42 48.1**	**-2.0**
EVIV				*i* IVmb_Lg		04 43 04.0	
YEBES	**Yebes (Guadala**	**3.34**	**239**	Pn	**Pn**	**04 41 55.0**	**-0.1**
YEBES				Sn	**Sn**	**04 42 35.6**	**+0.9**
YEBES				Sg	**Sg**	**04 42 49.1**	**-1.0**
YEBES				*i* IVmb_Lg		04 42 59.7	
UCM	**Universidad Co**	**3.56**	**237**	P	**Pn**	**04 41 57.6**	**-0.4**
UCM				S	**Sn**	**04 42 38.1**	**-1.9**
MAHO	**Mahon**	**3.65**	**130**	S	**Sn**	**04 42 41.4**	**-0.8**
ALT01	**Santillana del**	**3.66**	**288**	Pn	**Pn**	**04 42 02.7**	**+3.4**
ALT01				Sn	**Sn**	**04 42 44.5**	**+2.0**
EBEN2	**Beniarda presa**	**3.70**	**190**	Pn	**Pn**	**04 41 59.7**	**-0.2**
EBEN2				Sn	**Sn**	**04 42 43.5**	**0.0**
EBEN2				*i* IVmb_Lg		04 43 15.7	
VIVF	**Saint-Julien-l**	**3.87**	**48**	*e*Pn	**Pn**	**04 42 02.8**	**+0.6**
VIVF				*e*Sg	**Sg**	**04 43 03.2**	**-3.8**
	32nm,0.3s						
SMRF	**Simiane la Rot**	**3.96**	**64**	*e*Pn	**Pn**	**04 42 04.5**	**+0.9**
SMRF				*e*Sn	**Sn**	**04 42 47.2**	**-2.8**
	46nm,0.6s						
ETOB	**Tobarra**	**4.04**	**205**	P	**Pn**	**04 42 04.7**	**+0.1**
ETOB				S	**Sn**	**04 42 51.7**	**-0.3**
ETOB	**Tobarra**	**4.04**	**205**	Pn	**Pn**	**04 42 05.3**	**+0.7**
ETOB				*i* IVmb_Lg		04 43 29.6	
TCF	**Toulx Ste Croi**	**4.12**	**15**	*e*Pn	**Pn**	**04 42 05.2**	**-0.5**
TCF				*e*Sn	**Sn**	**04 42 53.6**	**-0.2**
	32nm,0.2s						
MFF	**Saint Martin d**	**4.32**	**353**	*e*Pn	**Pn**	**04 42 08.3**	**-0.1**
MFF				*e*Sn	**Sn**	**04 42 55.9**	**-2.7**
	46nm,0.3s						
MFF				*e*Sn	**Sn**	**04 42 56.0**	**-2.7**
	42nm,0.3s						
MFF				*e*Sg	**Sg**	**04 43 18.7**	**-2.7**
	30nm,0.3s						
MFF				*e*Sg	**Sb**	**04 43 18.9**	**+8.2**
	34nm,0.3s						
ESBB	**Sonseca Array**	**4.38**	**234**	Pn	**Pn**	**04 42 08.4**	**-0.9**
ESBB				Sn	**Sn**	**04 42 59.7**	**-0.6**
ESDC	**Sonseca Array**	**4.38**	**234**	Pn	**Pn**	**04 42 08.4**	**-1.0**
ESDC				Sn	**Sn**	**04 42 59.7**	**-0.7**
ESDC				*i* IVmb_Lg		04 43 31.8	
ESDC	**Sonseca Array**	**4.38**	**234**	Pn	**Pn**	**04 42 08.4**	**-1.0**
	5.1nm,0.3s,baz=52,slow=14,SNR=47						
ESDC				Sn	**Sn**	**04 43 00.3**	**-0.1**
	3.3nm,0.3s,baz=49,slow=24,SNR=9.8						
ESDC				Lg	Lg	04 43 20.6	
	3.4nm,0.3s,baz=54,slow=29,SNR=5.2						
	11nm,0.4s						
LMR	**La Mourre**	**4.43**	**75**	*e*Pn	**Pn**	**04 42 10.9**	**+1.0**
LMR				*e*Sn	**Sn**	**04 42 59.5**	**-1.8**
	8.4nm,0.3s						
BGF	**Bois d'Agland**	**4.51**	**20**	*e*Pn	**Pn**	**04 42 11.9**	**+0.8**
BGF				*e*Sn	**Sn**	**04 43 01.9**	**-1.7**
BGF				*e*Sg	**Sg**	**04 43 25.0**	**-2.8**
	227nm,0.4s						
ORIF	**Oris-en-Rattie**	**4.60**	**54**	*e*P	**Pn**	**04 42 14.5**	**+2.2**
PAB	**San Pablo**	**4.69**	**235**	Pn	**Pn**	**04 42 12.8**	**-0.9**
PAB				Sn	**Sn**	**04 43 08.0**	**-0.1**
PAB				*i* IVmb_Lg		04 43 35.7	
EMUR	**La Murta**	**4.71**	**199**	P	**Pn**	**04 42 13.5**	**-0.3**
EMUR	**La Murta**	**4.71**	**199**	Pn	**Pn**	**04 42 14.4**	**+0.6**
EMUR				*i* IVmb_Lg		04 43 44.1	
PSIM	**Granatula de C**	**4.85**	**225**	Pn	**Pn**	**04 42 14.4**	**-1.4**
PSIM				Sn	**Sn**	**04 43 09.3**	**-2.6**
AVF	**Avril sur Loir**	**4.87**	**22**	*e*Pn	**Pn**	**04 42 16.3**	**+0.4**
AVF				*e*Sg	**Sg**	**04 43 36.0**	**-3.0**
	9.9nm,0.2s						
SMF	**Signal de Mont**	**4.89**	**27**	*e*Pn	**Pn**	**04 42 16.8**	**+0.6**
SMF				*e*Sg	**Sg**	**04 43 37.0**	**-2.7**
	13nm,0.3s						
CART	**Cartagena**	**4.90**	**196**	S	**Sn**	**04 43 11.0**	**-2.0**
MBDF	**Montbardon**	**5.06**	**60**	*e*P	**Pn**	**04 42 21.3**	**+2.6**
HYF	**Humbligny**	**5.14**	**15**	*e*Pn	**Pn**	**04 42 20.7**	**+1.0**
SSF	**Saint Saulge**	**5.16**	**22**	*e*Pn	**Pn**	**04 42 20.6**	**+0.7**
SSF				*e*Sg	**Sg**	**04 43 44.8**	**-3.5**
	15nm,0.3s						
SBF	**Sospel**	**5.20**	**71**	*e*Pn	**Pn**	**04 42 20.2**	**-0.4**
EQES	**Quesada**	**5.34**	**214**	Pn	**Pn**	**04 42 22.7**	**+0.1**
EQES				*i* IVmb_Lg		04 44 06.7	
LPL	**La Plagne**	**5.43**	**52**	*e*P	**Pn**	**04 42 27.3**	**+3.4**
LPG	**La Plagne**	**5.43**	**52**	*e*P	**Pn**	**04 42 26.6**	**+2.6**
LOR	**Lormes**	**5.45**	**24**	*e*Pn	**Pn**	**04 42 24.1**	**+0.2**
LOR				*e*Sg	**Sg**	**04 43 54.5**	**-3.1**
	12nm,0.2s						
ECAL	**Calabor**	**5.51**	**268**	P	**Pn**	**04 42 24.7**	**-0.1**
ECAL				S	**Sn**	**04 43 25.5**	**-2.7**
ECAL	**Calabor**	**5.51**	**268**	Pn	**Pn**	**04 42 24.9**	**+0.1**
ECAL				Sn	**Sn**	**04 43 25.8**	**-2.3**
ECAL				*i* IVmb_Lg		04 44 10.7	
PBRG	**Braganca**	**5.53**	**267**	*e*Pn	**Pn**	**04 42 25.7**	**+0.6**
PBRG				*e*Sn	**Sn**	**04 43 26.1**	**-2.5**
PBRG				*i* IAML		04 43 28.2	
PBRG				*i* IAML		04 43 29.1	
PBRG				*i* IAML		04 43 29.5	
EPLA	**Plasencia**	**5.56**	**248**	Pn	**Pn**	**04 42 25.2**	**-0.3**
EPLA				Sn	**Sn**	**04 43 27.7**	**-1.6**
EPLA				*i* IVmb_Lg		04 44 06.3	
EADA	**Adamuz**	**5.76**	**226**	P	**Pn**	**04 42 26.6**	**-1.7**
EADA				S	**Sn**	**04 43 30.7**	**-3.7**
EADA	**Adamuz**	**5.76**	**226**	Pn	**Pn**	**04 42 27.8**	**-0.5**
EADA				*i* IVmb_Lg		04 44 11.0	
ENIJ	**Nijar**	**5.78**	**203**	P	**Pn**	**04 42 26.3**	**-2.2**
ENIJ				S	**Sn**	**04 43 32.8**	**-2.5**
CABF	**La Chapelle**	**5.79**	**40**	*e*Pn	**Pn**	**04 42 29.3**	**+0.6**
CABF				*e*Sg	**Sg**	**04 44 04.8**	**-3.8**
	71nm,1.0s						
EPON	**Pontenova**	**5.82**	**283**	Pn	**Pn**	**04 42 31.5**	**+2.4**
EPON				Sn	**Sn**	**04 43 34.2**	**-1.6**
EPON				*i* IVmb_L

PCBR				*i* IAML			04 44 09.8		
PGAV	**Gavieira, Arco**	**6.64**	**270**	*e*Sn		**Sn**	**04 43 52.9**	**-3.1**	
SFTF	**Sexfontaines**	**6.64**	**26**	*e*Pn		**Pn**	**04 42 40.6**	**+0.2**	
FIESA	**Fiescheralp**	**6.74**	**50**	Pn		**Pn**	**04 42 43.9**	**+2.0**	
PMRV	**Marv??o**	**6.75**	**247**	*e*Pn		**Pn**	**04 42 41.2**	**-0.6**	
PMRV				*e*Sn		**Sn**	**04 43 54.4**	**-4.1**	
PMRV				*i* IAML			04 43 57.2		
PMRV				*i* IAML			04 43 59.9		
STS	**Santiago**	**6.81**	**278**	Pn		**Pn**	**04 42 43.3**	**+0.6**	
EBAD	**Badajoz**	**6.84**	**241**	P		**Pn**	**04 42 41.4**	**-1.7**	
EBAD				S		**Sn**	**04 43 55.5**	**-5.4**	
EBAD	**Badajoz**	**6.84**	**241**	Pn		**Pn**	**04 42 42.5**	**-0.5**	
EBAD				Sn		**Sn**	**04 43 58.7**	**-2.1**	
MEZF	**Maizieres J'vi**	**6.91**	**25**	*e*Pn		**Pn**	**04 42 45.3**	**+1.3**	
MEZF				*e*Sg		**Sg**	**04 44 39.9**	**-4.6**	
	22nm,0.5s								
HAU	**Haudompre**	**6.96**	**33**	*e*Pn		**Pn**	**04 42 44.9**	**+0.2**	
HAU				*e*Sg		**Sg**	**04 44 41.5**	**-4.7**	
	9.5nm,0.4s								
HINF	**Hinteralfeld**	**7.03**	**37**	*e*Pn		**Pn**	**04 42 45.1**	**-0.6**	
HINF				*e*Sg		**Sg**	**04 44 43.2**	**-5.2**	
	4.6nm,0.3s								
SAVF	**Savonnieres en**	**7.03**	**25**	*e*Pn		**Pn**	**04 42 46.2**	**+0.5**	
DGI	**Dorgali Grotta**	**7.03**	**104**	Pn		**Pn**	**04 42 46.2**	**+0.4**	
EMAZ	**Mazaricos**	**7.13**	**278**	Pn		**Pn**	**04 42 48.3**	**+1.3**	
PAGF	**Fort de Pagny**	**7.18**	**28**	*e*Pn		**Pn**	**04 42 48.2**	**+0.5**	
PBAR	**Barrancos**	**7.19**	**237**	*e*Pn		**Pn**	**04 42 46.8**	**-1.1**	
PBAR				*e*Sn		**Sn**	**04 44 04.7**	**-4.9**	
PBAR				*i* IAML			04 44 56.4		
PBAR				*i* IAML			04 44 58.0		
PSARD	**Sardoal**	**7.20**	**251**	*e*Pn		**Pn**	**04 42 49.4**	**+1.4**	
PSARD				*e*Sn		**Sn**	**04 44 06.7**	**-3.1**	
PSARD				*i* IAML			04 44 09.6		
PSARD				*i* IAML			04 44 12.4		
PSARD				*i* IAML			04 44 12.4		
EMIN	**Mina Concepcio**	**7.23**	**233**	Pn		**Pn**	**04 42 49.3**	**+0.9**	
PCAS	**Casmilo, Conde**	**7.26**	**255**	*e*Pn		**Pn**	**04 42 50.5**	**+1.6**	
PARRA	**Arraiolos**	**7.49**	**245**	*e*Pn		**Pn**	**04 42 52.0**	**+0.1**	
PARRA				*e*Sn		**Sn**	**04 44 11.8**	**-4.9**	
PMTG	**Montargil**	**7.49**	**247**	*e*Pn		**Pn**	**04 42 52.8**	**+0.9**	
CDF	**Champ du Feu**	**7.67**	**35**	*e*Pn		**Pn**	**04 42 53.3**	**-1.2**	
PSBE	**So Bento**	**7.68**	**252**	*e*Pn		**Pn**	**04 42 56.6**	**+1.9**	
MOE	**Montemor**	**7.84**	**244**	*e*Pn		**Pn**	**04 42 56.1**	**-0.8**	
DAVOX	**Davos/Dischmat**	**7.95**	**53**	Pn		Pn	04 43 03.3	+4.8	
	0.6nm,0.3s,baz=238,slow=17,SNR=6.7								
DAVOX				Sn			**04 44 29.7**	**+1.2**	
	0.1nm,0.3s,baz=305,slow=17,SNR=1.1								
	0.8nm,0.3s								
PVAQ	**Vaqueiros**	**8.10**	**235**	*e*Pn		**Pn**	**04 42 59.9**	**-0.4**	
PVAQ				*e*Sn		**Sn**	**04 44 26.0**	**-5.7**	
BAIF	**Baives**	**8.12**	**16**	*e*Pn		**Pn**	**04 43 01.0**	**+0.4**	
MESJ	**Messejana**	**8.14**	**240**	*e*Pn		**Pn**	**04 43 01.3**	**+0.4**	
PCVE	**Castro Verde**	**8.15**	**238**	*e*Pn		**Pn**	**04 43 00.8**	**-0.3**	
DOU	**Dourbes**	**8.24**	**18**	*d*P		**Pn**	**04 43 02.9**	**+0.7**	
DOU				*d*S		**Sn**	**04 44 34.1**	**-1.1**	
WLF	**Walferdange**	**8.28**	**26**	*d*P		**Pn**	**04 43 02.4**	**-0.4**	
PBDV	**Barranco-do-Ve**	**8.33**	**235**	*e*Pn		**Pn**	**04 43 03.6**	**+0.1**	
RCHB	**Rochefort**	**8.45**	**20**	*d*S		**Sn**	**04 44 41.3**	**+0.9**	
FETA	**Feichten**	**8.58**	**53**	*e*Pn		**Pn**	**04 43 10.3**	**+3.3**	
	0.6nm,0.2s								
BGES	**Gesves**	**8.62**	**19**	*d*P		**Pn**	**04 43 07.6**	**+0.1**	
BGES				*d*S		**Sn**	**04 44 45.8**	**+1.1**	
MORF	**Marmelete**	**8.74**	**238**	*e*Pn		**Pn**	**04 43 08.9**	**-0.2**	
RETA	**Reutte**	**8.84**	**51**	*e*Pn		**Pn**	**04 43 14.7**	**+4.2**	
	1.0nm,0.3s								
MOTA	**Moosalm**	**8.96**	**52**	*e*Pn		**Pn**	**04 43 16.5**	**+4.3**	
	0.7nm,0.1s								
MEM	**Membach**	**9.07**	**22**	*d*P		**Pn**	**04 43 16.2**	**+2.6**	
MEM				*d*S		**Sn**	**04 44 56.5**	**+0.9**	
KEST	**Kesra**	**9.44**	**131**	Pn		**Pn**	**04 43 22.6**	**+3.8**	
	0.1nm,0.3s,baz=295,slow=14,SNR=1.7								
KEST				Sn		**Sn**	**04 45 09.0**	**+4.2**	
	0.1nm,0.3s,baz=346,slow=19,SNR=1.8								
	2.2nm,0.9s								
GERES	**GERESS Array B**	**11.22**	**50**	Pn		**Pn**	**04 43 45.3**	**+2.1**	
	baz=246,slow=13,SNR=9.6								
GERES				Sn		**Sn**	**04 45 49.0**	**+0.4**	
	baz=239,slow=25,SNR=3.0								
	0.3nm,0.3s								
EKA	**Eskdalemuir Ar**	**13.26**	**350**	Pn		**Pn**	**04 44 10.8**	**0.0**	
	baz=166,slow=14								
EKA				Sn		**Sn**	**04 46 31.9**	**-6.1**	
	baz=166,slow=23								
	2.6nm,0.5s								
FINES	**FINESS Array B**	**24.47**	**30**	P		**P**	**04 46 24.1**	**+2.5**	
	3.9nm,1.1s,baz=242,slow=9.0,SNR=1.5								
	3.9nm,1.1s								
MKAR	**Makanchi Array**	**55.84**	**55**	P		**P**	**04 50 42.9**	**+2.8**	
	0.5nm,0.7s,baz=299,slow=6.5,SNR=1.9								
	0.5nm,0.7s								

IDC ***22*** *04:54:37.9±0.6, 8.°77S×124.°07E, h0km, mb4.5/16, mbtmp4.6/19, ML4.7/3, MS3.2/12, Error ellipse: s-maj=31.2km s-min=13.2km az=74.0*

NEIC ***22*** *04:54:49.7±1.9, 8.°90S±0.°06×123.°99E±0.°07, h93km±6km, mb5.0/26, Error ellipse: s-maj=11.0km s-min=8.2km az=57.0*

DJA ***22*** *04:54:50.0±0.3, 9.°S±3.°×12.°4E±.°, h82km±7km, M4.5/16, mB5.0/9, mb4.8/11, MLv4.7/16, Mw(mB)4.3/9*

ISC 22 04:54:47.7±0.3, 9.°00S±0.°04×124.°05E±0.°05, h74km, n139, σ2°29/132, mb4.8/36, 2D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**0.78**	**164**			**Pn**	**04 55 08.0**	**+4.1**
SOEI	**Soe**	**0.78**	**164**	P		**Pn**	**04 55 07.7**	**+3.7**
SOEI	**Soe**	**0.78**	**164**	P		**Pn**	**04 55 07.9**	**+3.9**
BATI	**Baumata**	**1.26**	**198**	Pn		**Pn**	**04 55 13.6**	**+3.9**
	1μm,0.3s,baz=29,slow=2.4,SNR=607							
BATI				Sn		**Sn**	**04 55 31.9**	**+5.6**
	989nm,0.3s,baz=108,slow=0.7,SNR=7.8							
BATI				LR		LR	04 55 49.1	
	comp=Z,699nm,19.4s,baz=107,slow=48							
BATI	**Baumata**	**1.26**	**198**	P		**Pn**	**04 55 13.4**	**+3.7**
MMRI	**Maumere**	**1.83**	**281**			**Pn**	**04 55 20.2**	**+3.0**
MMRI	**Maumere**	**1.83**	**281**	P		**Pn**	**04 55 20.6**	**+3.4**
MMRI	**Maumere**	**1.83**	**281**	S		**Sn**	**04 55 43.4**	**+3.9**
MMRI	**Maumere**	**1.83**	**281**	P		**Pn**	**04 55 20.1**	**+3.0**
MMRI				S		**Sn**	**04 55 43.3**	**+3.8**
EDFI	**Ende, Flores**	**2.35**	**276**	P		**Pn**	**04 55 27.0**	**+2.8**
EDFI				S		**Sn**	**04 55 55.4**	**+3.2**
BASI	**Baing, Sumba**	**3.63**	**250**	P		**Pn**	**04 55 43.8**	**+2.2**
WSI	**Waingapu**	**3.76**	**260**	P		**Pn**	**04 55 45.8**	**+2.4**
WSI				S		**Sn**	**04 56 29.1**	**+2.6**
BBSI	**Bau Bau**	**3.79**	**337**	P		**Pn**	**04 55 47.9**	**+4.2**
BSSI	**Bau Bau, Buton**	**4.53**	**309**	P		**Pn**	**04 55 57.6**	**+3.8**
WBSI	**Waikabubak, Su**	**4.64**	**262**	P		**Pn**	**04 55 56.9**	**+1.5**
KDI	**Kendari**	**5.21**	**344**	P		**Pn**	**04 56 06.6**	**+3.5**
BKSI	**Bulukumba**	**5.34**	**313**	P		**Pn**	**04 56 08.1**	**+3.2**
	707nm71nm,0.7s							
KAPI	**Kappang**	**5.82**	**313**	Pn		**Pn**	**04 56 14.5**	**+3.0**
	4.8nm,0.3s,baz=134,slow=8.9,SNR=11							
KAPI				LR		LR	04 58 39.1	
	comp=Z,218nm,21.6s,baz=144,slow=42							
BNSI	**Bone**	**6.02**	**319**	P		**Pn**	**04 56 18.3**	**+4.1**
	0.5nm1μm119nm,0.6s							
PLAI	**Plampang**	**6.20**	**271**	P		**Pn**	**04 56 19.1**	**+2.4**
PLAI	**Plampang**	**6.20**	**271**	P		**Pn**	**04 56 19.2**	**+2.5**
NLAI	**Namlea**	**6.48**	**28**	P		Pn	04 56 24.0	+3.6
SPSI	**Sidrap Palu**	**6.57**	**319**	P		**Pn**	**04 56 25.7**	**+4.0**
	0.1nm2μm34nm,0.8s							
TWSI	**Taliwang, Sumb**	**7.09**	**272**	P		**Pn**	**04 56 30.6**	**+1.8**
	2μm51nm,0.5s							
SANI	**Sanana**	**7.17**	**16**	P		Pn	04 56 34.2	+4.3
SANI	**Sanana**	**7.17**	**16**	P		Pn	04 56 33.4	+3.5
	0.3nm985nm81nm,0.6s							
DRS	**Darwin Rock St**	**7.54**	**117**	P		**Pn**	**04 56 35.4**	**+0.4**
MTN	**Manton Dam**	**7.93**	**119**			**Pn**	**04 56 40.9**	**+0.5**
KNRA	**Kununurra**	**8.07**	**146**			**Pn**	**04 56 41.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**9.18**	**170**	Pn		**Pn**	**04 56 55.8**	**-1.5**
	6.5nm,0.3s,baz=359,slow=9.7,SNR=152							
FITZ				Sn		**Sn**	**04 58 32.0**	**-7.0**
	36nm,0.3s,baz=341,slow=12,SNR=22							
FITZ				LR		LR	05 01 00.5	
	comp=Z,99nm,20.4s,baz=340,slow=41							
	24nm,0.4s							
JAGI	**Jajag, Banyuwa**	**9.80**	**272**			**Pn**	**04 57 05.5**	**-0.3**
JAGI	**Jajag, Banyuwa**	**9.80**	**272**	P		**Pn**	**04 57 05.9**	**0.0**
FAKI	**Fak Fak**	**10.14**	**54**			**Pn**	**04 57 13.1**	**+2.5**
FAKI	**Fak Fak**	**10.14**	**54**	P		Pn	04 57 13.7	+3.1
FAKI	**Fak Fak**	**10.14**	**54**	S		Sn	04 59 08.1	+5.3
MBWA	**Marble Bar**	**12.79**	**199**	P		**Pn**	**04 57 46.1**	**-0.5**
PSA00	**Pilbara Seismi**	**13.14**	**197**	P		**Pn**	**04 57 52.1**	**+0.8**
WB0	**Warramunga Arr**	**14.65**	**138**	P		**Pn**	**04 58 07.6**	**-3.6**
WRA	**Warramunga Arr**	**14.74**	**139**	Pn		**Pn**	**04 58 09.0**	**-3.4**
	4.1nm,0.3s,baz=320,slow=13,SNR=172							
WRA				Sn		Sn	05 00 41.6	-13
	3.0nm,0.3s,baz=309,slow=24,SNR=19							
WRA				LR		LR	05 04 47.0	
	comp=Z,123nm,18.1s,baz=274,slow=41							
	21nm,0.6s							
WRAB	**Tennant Creek**	**14.74**	**139**	P		**Pn**	**04 58 08.8**	**-3.5**
WR8	**Warramunga Arr**	**14.86**	**138**	P		**Pn**	**04 58 10.3**	**-3.5**
DAV	**Davao City (W)**	**16.04**	**5**	LR		LR	05 05 09.4	
	comp=Z,43nm,18.3s,baz=166,slow=40							
BBJI	**Bungbulang**	**16.30**	**274**	P		**P**	**04 58 34.9**	**+0.9**
AS31	**Alice Springs**	**17.37**	**148**	P		**Pn**	**04 58 43.8**	**-1.5**
ASAR	**Alice Springs**	**17.37**	**148**	P		**Pn**	**04 58 43.6**	**-1.7**
	2.0nm,0.3s,baz=324,slow=12,SNR=98							
ASAR				S		Sn	05 01 43.7	-14
	23nm,0.7s,baz=314,slow=19,SNR=18							
ASAR				LR		LR	05 06 19.9	
	comp=Z,70nm,21.0s,baz=306,slow=40							
	30nm,0.7s							
ASAR	**Alice Springs**	**17.37**	**148**	P		**Pn**	**04 58 43.8**	**-1.5**
MEEK	**Meekatharra**	**18.28**	**196**	P		**Pn**	**04 58 57.0**	**+0.6**
QIS	**Mount Isa**	**18.91**	**129**	P		**Pn**	**04 59 04.3**	**+0.4**
COEN	**Coen**	**19.37**	**106**	P		**Pn**	**04 59 09.0**	**-0.5**
COEN	**Coen**	**19.37**	**106**	P		**Pn**	**04 59 09.6**	**+0.1**
MORW	**Morawa**	**21.34**	**200**	P		**P**	**04 59 28.5**	**-0.3**
FORT	**Forrest**	**21.99**	**171**	P		**P**	**04 59 35.7**	**0.0**
BLDU	**Ballidu**	**22.57**	**197**	P		**P**	**04 59 41.6**	**-0.4**
PMG	**Port Moresby**	**22.81**	**93**	LR		LR	05 10 58.5	
	comp=Z,53nm,19.2s,baz=332,slow=43							
KLBR	**Kellerberrin**	**23.23**	**194**	P		**P**	**04 59 48.2**	**-0.4**
CTAO	**Charters Tower**	**24.12**	**120**	P		**P**	**04 59 57.5**	**+0.7**
TV1H	**Townsville Har**	**24.27**	**117**	P		**P**	**05 00 01.1**	**+3.0**
INKA	**Innaminka**	**24.41**	**142**	P		**P**	**05 00 00.5**	**+1.2**
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P		**P**	**05 00 00.9**	**-0.3**
NWAO	**Narrogin (SRO)**	**24.63**	**194**	P		**P**	**05 00 00.8**	**-0.5**
BBOO	**Buckleboo**	**26.17**	**157**	P		**P**	**05 00 15.7**	**+0.4**
BBOO	**Buckleboo**	**26.17**	**157**	P		**P**	**05 00 15.4**	**+0.1**
PSI	**Prapat**	**27.65**	**294**	LR		LR	05 12 11.1	
	comp=Z,74nm,19.5s,baz=90,slow=38							
HTT	**Hallett**	**27.91**	**153**	P		**P**	**05 00 32.3**	**+1.3**
STKA	**Stephens Creek**	**27.99**	**147**	P		**P**	**05 00 31.8**	**+0.2**
	4.2nm,0.6s,baz=319,slow=9.7,SNR=11							
STKA				LR		LR	05 12 33.0	
	comp=Z,78nm,18.5s,baz=21,slow=38							
	4.2nm,0.6s							
CMSA	**Cobar Meteorol**	**30.13**	**141**	P		**P**	**05 00 52.0**	**+1.4**
ARMA	**Armidale**	**33.42**	**133**	P		**P**	**05 01 22.5**	**+2.8**
ARMA				IAmb		IAmb	05 02 16.9	
	comp=Z,89nm,1.9s							
CMAR	**Chiang Mai Arr**	**36.85**	**318**	P		**P**	**05 01 48.5**	**-0.7**
	comp=Z,5.6nm,0.7s,baz=142,slow=6.8,SNR=27							
CMAR				LR		LR	05 18 45.8	
	comp=Z,15nm,21.6s,baz=145,slow=40							
	comp=Z,5.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**36.85**	**318**	P		**P**	**05 01 48.3**	**-0.8**
CHTO	**Chiang Mai**	**37.11**	**318**	P		**P**	**05 01 52.0**	**+0.7**
CHTO				IAmb		IAmb	05 01 52.3	
	comp=Z,8.3nm,0.8s							
CHTO	**Chiang Mai**	**37.11**	**318**	P		**P**	**05 01 51.5**	**+0.2**
CHTO				pP		**pwP**	**05 02 12.6**	**+0.7**
NJ2	**Nanjing**	**41.12**	**353**	*e*P		**P**	**05 02 27.1**	**+2.6**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
PZH	**PanZhiHua**	**41.41**	**329**	P		**P**	**05 02 28.8**	**+1.6**
JMN	**Monobe**	**43.51**	**12**	P		**P**	**05 02 43.8**	**-0.2**
JMN				IAmb		IAmb	05 02 43.9	
	comp=Z,25nm,0.8s							
XAN	**Xi'an**	**45.15**	**342**	P		**P**	**05 02 56.8**	**-0.3**
XAN				pmax		pmax		
	comp=Z,11nm,0.8s							
JGF	**Kuroka**	**46.10**	**15**	P		**P**	**05 03 03.2**	**-1.4**
PALK	**Pallekele**	**46.12**	**289**	LR		LR	05 23 52.8	
	comp=Z,20nm,18.3s,baz=85,slow=38							
KSRS	**Korea Array**	**46.35**	**4**	P		**P**	**05 03 04.8**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=190,slow=10,SNR=5.0							
KSRS				LR		LR	05 23 46.3	
	comp=Z,4μm,19.4s,baz=55,slow=38							
	comp=Z,1.5nm,0.5s							
SHL	**Shillong**	**46.48**	**318**	P		**P**	**05 03 06.6**	**-1.3**
SHL				IAmb		IAmb	05 03 07.0	
	comp=Z,15nm,0.5s							
MAJO	**Matsushiro**	**47.22**	**16**	P		**P**	**05 03 09.9**	**-3.3**
MAJO				pP		**pP**	**05 03 32.4**	**+1.4**
MJAR	**Matsushiro Arr**	**47.22**	**16**	P		**P**	**05 03 11.0**	**-2.3**
	comp=Z,9.4nm,0.7s,baz=190,slow=8.2,SNR=16							
	comp=Z,9.4nm,0.7s							
MJAR	**Matsushiro Arr**	**47.22**	**16**	P		**P**	**05 03 11.3**	**-1.9**
MJAR				IAmb		IAmb	05 03 11.8	
	comp=Z,19nm,1.6s							
LZH	**Lanzhou**	**48.72**	**338**	*e*P		**P**	**05 03 26.1**	**+1.1**
LZH				sP		sP	05 03 56.0	+5.3
LZH				pmax		pmax		
	comp=Z,24nm,1.7s							
HHC	**Hu-ho-hao-te**	**50.92**	**348**	*e*P		**P**	**05 03 45.6**	**+4.0**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,120nm,5.5s							
BTO	**Baotou**	**51.03**	**346**	*e*P		P	05 03 47.6	+5.2
BTO				pmax		pmax		
	comp=Z,17nm,0.4s							
BTO				pmax		pmax		
	comp=Z,180nm,6.1s							
EVN	**Everest**	**51.45**	**317**	P		**P**	**05 03 45.4**	**-1.0**
JTM	**Tenmabayashi**	**51.97**	**16**	P		**P**	**05 03 48.3**	**-1.0**
USRK	**Ussuriysk Ar.**	**53.44**	**7**	P		**P**	**05 03 58.8**	**-1.2**
	comp=Z,9.6nm,0.7s,baz=194,slow=7.9,SNR=20							
	comp=Z,9.6nm,0.7s							
MDJ	**Mudanjiang**	**53.60**	**5**	P		**P**	**05 04 00.1**	**-1.1**
MDJ				pmax		pmax		
	comp=Z,45nm,1.1s							
MDJ	**Mudanjiang**	**53.60**	**5**	P		**P**	**05 03 59.8**	**-1.4**
MDJ				sP		**sP**	**05 04 33.1**	**+5.9**
THZ	**Tophouse**	**53.89**	**136**	P		**P**	**05 04 04.8**	**+1.2**
BNX	**BinXian**	**54.57**	**3**	⇓P		**P**	**05 04 06.0**	**-2.3**
BNX				pmax		pmax		
	comp=Z,8.0nm,0.6s							
HILR	**Hailar Array B**	**58.43**	**357**	P		**P**	**05 04 34.5**	**-1.1**
	comp=Z,7.3nm,0.5s,baz=174,slow=10,SNR=14							
	comp=Z,7.3nm,0.5s							
SONM	**Songino Array**	**58.71**	**346**	P		**P**	**05 04 36.1**	**-1.7**
	comp=Z,2.4nm,0.6s,baz=164,slow=7.6,SNR=4.7							
	comp=Z,2.4nm,0.6s							
HEH	**HeiHe**	**59.08**	**3**	*e*P		**P**	**05 04 38.8**	**-1.3**
HEH				pmax		pmax		
	comp=Z,22nm,0.9s							
WMQ	**Urumqi**	**62.06**	**331**	*e*P		**P**	**05 05 02.5**	**+1.9**
NIL	**Nilore**	**64.21**	**314**			**P**	**05 05 13.1**	**-2.0**
NIL				IAmb		IAmb	05 05 14.5	
	comp=Z,24nm,0.6s							
KSH	**Kashi**	**65.67**	**321**	P		**P**	**05 05 23.6**	**-0.9**
KSH				pP		sP	05 05 49.5	-1.1
KSH				pmax		pmax		
	comp=Z,8.0nm,0.7s							
TARG	**Taragay, Kyrgy**	**65.90**	**324**	P		**P**	**05 05 25.7**	**-0.6**
TARG				IAmb		IAmb	05 05 48.4	
	comp=Z,65nm,1.7s							
CCD	**Concordia, Ant**	**66.07**	**180**	P		**P**	**05 05 28.2**	**+1.4**
CCD				x		x	05 05 55.7	
MKAR	**Makanchi Array**	**66.84**	**330**	P		**P**	**05 05 30.4**	**-1.3**
	comp=Z,11nm,0.8s,baz=137,slow=8.0,SNR=62							
	comp=Z,11nm,0.8s							
MAKZ	**Makanchi**	**67.00**	**330**	P		**P**	**05 05 31.0**	**-1.7**
MAKZ	**Makanchi**	**67.00**	**330**	P		**P**	**05 05 31.2**	**-1.5**
KBL	**Kabul**	**67.67**	**313**	P		**P**	**05 05 35.8**	**-1.7**
KBL				IAmb		IAmb	05 05 37.3	
	comp=Z,13nm,0.9s							
PEA0B	**Petropavlovsk-**	**68.17**	**21**	P		**P**	**05 05 39.2**	**-0.8**
PETK	**Petropavlovsk-**	**68.17**	**21**	P		**P**	**05 05 38.4**	**-1.5**
	comp=Z,3.5nm,0.5s,baz=210,slow=3.1,SNR=6.9							
	comp=Z,3.5nm,0.5s							
PETK	**Petropavlovsk-**	**68.17**	**21**	P		**P**	**05 05 39.0**	**-1.0**
AAK	**Ala-Archa**	**68.41**	**323**	P		**P**	**05 05 41.0**	**-0.9**
AAK				IAmb		IAmb	05 05 41.6	
	comp=Z,8.8nm,0.8s							
AAK	**Ala-Archa**	**68.41**	**323**	P		**P**	**05 05 40.8**	**-1.1**
ARSB	**Arslanbob**	**68.57**	**321**	IAmb		IAmb	05 05 42.5	
	comp=Z,13nm,0.6s							
ZAA0	**Zalesovo Array**	**70.92**	**337**			**P**	**05 05 54.3**	**-2.5**
ZALV	**Zalesovo Beam**	**70.92**	**337**	P		**P**	**05 05 54.2**	**-2.6**
	comp=Z,9.2nm,0.8s,baz=128,slow=4.3,SNR=30							
	comp=Z,9.2nm,0.8s							
MAW	**Mawson**	**70.97**	**201**	LR		LR	05 34 50.5	
	comp=Z,19nm,19.2s,baz=66,slow=34							
KKAR	**Karatay Array**	**71.09**	**321**			**P**	**05 05 56.5**	**-1.6**
KURBB	**Kurchatov Arra**	**71.27**	**331**	P		**P**	**05 05 56.9**	**-2.2**
	comp=Z,6.0nm,0.8s,baz=140,slow=5.0,SNR=61							
	comp=Z,6.0nm,0.8s							
KURK	**Kurchatov**	**71.29**	**331**			**P**	**05 05 57.0**	**-2.1**
KURK				IAmb		IAmb	05 05 58.4	
	comp=Z,11nm,0.8s							
KURK	**Kurchatov**	**71.29**	**331**	P		**P**	**05 05 56.8**	**-2.3**
BVAR	**Borovoye Array**	**76.72**	**330**	P		**P**	**05 06 29.1**	**-1.7**
	comp=Z,1.5nm,0.7s,baz=104,slow=9.1,SNR=3.1							
	comp=Z,1.5nm,0.7s							
AB31	**Akbulak array**	**80.49**	**323**	P		**P**	**05 06 49.6**	**-2.0**
ABKAR	**Akbulak array**	**80.49**	**323**	P		**P**	**05 06 49.4**	**-2.2**
TIXI	**Tiksi**	**80.54**	**2**			**P**	**05 06 49.1**	**-2.2**
TIXI	**Tiksi**	**80.54**	**2**	P		**P**	**05 06 49.2**	**-2.2**
QSPA	**South Pole Qui**	**80.99**	**180**	P		**P**	**05 06 57.1**	**+2.9**
	comp=Z,1.8nm,0.7s,baz=292,slow=0.4,SNR=7.5							
	comp=Z,1.8nm,0.7s							
QSPA	**South Pole Qui**	**80.99**	**180**	IAmb		IAmb	05 08 01.2	
	comp=Z,20nm,1.8s							
AKTO	**Aktyubinsk**	**82.12**	**324**	LR		LR	05 46 39.3	
	comp=Z,20nm,19.4s,baz=330,slow=38							
RAYN	**Ar Rayn**	**83.20**	**295**	P		**P**	**05 07 05.1**	**-1.4**
ARTI	**Arti**	**84.42**	**329**	P		**P**	**05 07 09.5**	**-2.3**
ARTI				IAmb		IAmb	05 07 10.7	
	comp=Z,11nm,0.6s							
ARTI	**Arti**	**84.42**	**329**	P		**P**	**05 07 09.6**	**-2.3**
ARTI				pP		**pwP**	**05 07 34.4**	**-0.5**
ELIB	**Princess Elisa**	**84.81**	**198**	*d*P		**P**	**05 07 15.0**	**+1.2**
KBZ	**Khabaz**	**89.82**	**314**	P		**P**	**05 07 37.0**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=110,slow=3.7,SNR=2.3							
	comp=Z,1.7nm,0.7s							
SNAA	**Sanae**	**92.30**	**195**	P		**P**	**05 07 50.3**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=221,slow=6.7,SNR=11							
	comp=Z,2.0nm,0.9s							
SNAA	**Sanae**	**92.30**	**195**	IAmb		IAmb	05 08 03.2	
	comp=Z,11nm,1.7s							
ILAR	**Eielson Array**	**97.67**	**26**	P		**P**	**05 08 11.4**	**-2.5**
	comp=Z,0.4nm,0.9s,baz=246,slow=5.1,SNR=2.2							
	comp=Z,0.4nm,0.9s							
PDAR	**Pinedale Array**	**122.46**	**45**	PKP		**PKiKP**	**05 13 35.1**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=299,slow=3.7,SNR=1.9							
SCHQ	**Schefferville**	**133.47**	**9**	PKP		**PKPdf**	**05 13 54.8**	**-0.7**
	comp=Z,3.0nm,0.7s,baz=326,slow=3.6,SNR=2.0							
GO02	**Mina Guanaco**	**143.53**	**159**			PKPbc	05 14 12.4	-0.2
CPUP	**Villa Florida**	**144.86**	**178**	PKPbc		**PKPdf**	**05 14 16.9**	**-0.1**
	comp=Z,1.2nm,0.7s,

OK052 Battle Ridge R 0.79 120 Pb 05 44 51.9 +0.5
OK052 IAML 05 45 05.5
comp=N,9μm,0.3s

QUOK Quay 0.79 106 Pb 05 44 51.8 +0.4
QUOK IAML 05 45 06.6
comp=E,6μm,0.2s

KAN08 Anthony NE Sta 0.87 343 Pb 05 44 52.8 0.0
OK038 West end E0370 0.88 276 Pg 05 44 51.9 -0.1
OKCSW OKLAHOMA CITY 1.00 170 Pb 05 44 54.5 -0.4
OKCSW Sg Sb 05 45 07.6 -0.8
OKCSW IAML 05 45 15.9
comp=N,7μm,0.6s
OKCSW IAML 05 45 16.1
comp=E,6μm,0.5s

T35A Sooner Cattle 1.06 60 Pn 05 44 57.0 +0.3
T35A IAML 05 45 17.0
comp=E,5μm,0.2s
T35A IAML 05 45 17.1
comp=E,3μm,0.2s

NOKA Waynoka 1.06 284 Pg 05 44 55.1 -0.2
NOKA Sg Sg 05 45 08.9 -0.2
NOKA IAML 05 45 13.2
comp=E,6μm,0.3s

DEOK Depew 1.08 120 Pn 05 44 56.9 -0.1
CSTR Hydro, Custer 1.12 229 Pg 05 44 56.4 -0.1
FNO Franklin 1.15 170 Pn 05 44 57.4 -0.6
FNO Sg Sb 05 45 12.1 -0.7
FNO IAML 05 45 18.2
comp=E,3μm,0.2s

ELIS Ellis County 1.46 258 Pn 05 45 02.2 -0.1
TUL3 Leonard 1.58 107 Pb 05 45 05.1 +0.2
TUL3 IAmb_Lg 05 45 28.0
comp=Z,794nm,0.7s

X34A Smith Ranch, M 1.79 185 Pb 05 45 08.4 -0.1
WMOK Wichita Mounta 1.89 209 Pn 05 45 08.4 +0.3
RLO Rose Lookout 2.14 95 Pb 05 45 14.2 -0.1
R32A Long Quarter, 2.20 338 Pb 05 45 14.5 -0.9
LOOK Love County 2.42 171 Pn 05 45 16.5 +1.1
LOOK IAmb_Lg 05 45 56.4
comp=Z,501nm,0.9s

SMWD Samnorwood 2.47 239 Pn 05 45 16.9 +0.8
U38A Gravette 2.63 88 Pb 05 45 20.4 -2.4
WTFS Witchita Falls 2.70 195 Pn 05 45 20.3 +1.0
KSU1 Kansas State U 2.83 17 IAmb_Lg 05 46 11.2
comp=Z,306nm,0.8s

CBKS Cedar Bluff 2.93 326 Pn 05 45 23.5 +1.0
HHAR Hobbs 3.00 91 Pb 05 45 26.0 -3.1
Z35A Perchaven, San 3.07 174 Pn 05 45 25.2 +0.9
FW06 Azle 3.41 179 Pn 05 45 30.9 +1.8
AMTX Amarillo 3.61 247 Pn 05 45 32.3 +0.5
AMTX IAmb_Lg 05 46 32.1
comp=Z,359nm,0.8s

PLPT Palo Pinto 3.61 189 Pn 05 45 32.8 +1.0
PLPT IAmb_Lg 05 46 32.2
comp=Z,149nm,0.7s

APMT Aspermont 3.67 214 IAmb_Lg 05 46 37.6
comp=Z,149nm,0.8s

MIAR Mount Ida 3.80 118 Pn 05 45 36.4 +2.0
MIAR IAmb_Lg 05 46 44.1
comp=Z,333nm,0.9s

Z38A Mt. Pleasant 3.82 144 Pn 05 45 35.9 +1.3
DKNS Dickens 3.82 226 Pn 05 45 35.7 +1.0
DKNS IAmb_Lg 05 46 42.5
comp=Z,211nm,0.9s

TREL Terrell 3.87 160 Pn 05 45 35.9 +0.5
TREL IAmb_Lg 05 46 47.1
comp=Z,239nm,0.9s

ABTX Abilene, Hawle 4.10 204 IAmb_Lg 05 46 46.6
comp=Z,131nm,0.7s

RTBA Rita Blanca 4.10 272 Pn 05 45 38.9 +0.3
RTBA IAmb_Lg 05 46 51.2
comp=Z,194nm,0.7s

SN07 Snyder 07 4.24 220 IAmb_Lg 05 46 54.2
comp=Z,230nm,0.9s

X40A Basin Creek Fa 4.37 114 Pn 05 45 43.9 +1.7
MGMO Mountain Grove 4.39 78 Pn 05 45 44.4 +1.9
MGMO IAmb_Lg 05 47 01.9
comp=Z,164nm,0.8s

WHTX Lake Whitney, 4.39 178 Pn 05 45 43.5 +1.0
WHAR Wooly Hollow 4.49 103 Pn 05 45 45.7 +1.8
WHAR IAmb_Lg 05 47 01.3
comp=Z,307nm,0.7s

P38A Dawn 4.58 44 IAmb_Lg 05 47 13.4
comp=Z,237nm,0.8s

POST Post 4.59 225 Pn 05 45 45.8 +0.5
POST IAmb_Lg 05 47 07.5
comp=Z,163nm,0.7s

WLAR White Oak Lake 4.60 125 IAmb_Lg 05 47 14.0
comp=Z,250nm,0.7s

UALR University of 4.62 109 Pn 05 45 45.6 0.0
237A Washetta, Mont 4.64 160 Pn 05 45 46.0 +0.1
R40A Maddies Statio 4.69 65 Pn 05 45 48.2 +1.6
R40A IAmb_Lg 05 47 06.7
comp=Z,160nm,0.8s

KSCO Kaye Shedlock' 4.73 305 IAmb_Lg 05 47 06.3
comp=Z,215nm,0.7s

BGNE Belgrade 5.03 356 Pn 05 45 51.8 +0.6
Z41A Richland Creek 5.07 127 Pn 05 45 52.0 +0.2
BRDY Brady 5.21 193 Pn 05 45 55.2 +1.3
BRDY IAmb_Lg 05 47 29.8
comp=Z,159nm,0.8s

LCAR Lake Charles 5.26 92 IAmb_Lg 05 47 26.4
comp=Z,179nm,0.8s

CCM Cathedral Cave 5.38 70 IAmb_Lg 05 47 38.4
comp=Z,150nm,0.8s

P40A Paris 5.42 53 IAmb_Lg 05 47 33.1
comp=Z,230nm,0.7s

435B Jarrell 5.59 179 IAmb_Lg 05 47 47.7
comp=Z,154nm,0.9s

SNAG San Augustine 5.65 148 Pn 05 46 00.8 +0.9
OGNE Ogallala 5.69 324 Pn 05 46 02.0 +1.5
OGNE IAmb_Lg 05 47 46.0
comp=Z,128nm,0.8s

HNVL Huntsville, TX 5.91 161 Pn 05 46 02.6 -0.7
FVM French Village 5.99 72 Pn 05 46 05.5 +1.1
FVM IAmb_Lg 05 47 51.2
comp=Z,164nm,0.8s

OZNA Ozona 6.17 209 IAmb_Lg 05 48 06.1
comp=Z,144nm,0.8s

SLM Saint Louis 6.31 67 Pn 05 46 09.8 +1.0
SLM IAmb_Lg 05 47 55.6
comp=Z,160nm,0.8s

143A Socs Landing, 6.33 124 IAmb_Lg 05 48 09.9
comp=Z,165nm,0.8s

SDCO Great Sand Dun 6.42 284 IAmb_Lg 05 48 04.9
comp=Z,126nm,1.0s

CLN7 Carlsbad 7 6.45 234 Pn 05 46 11.0 +0.1
K30B Basset 6.46 347 Pn 05 46 11.1 +0.2
CGM3 Cape Girardeau 6.47 80 IAmb_Lg 05 48 00.4
comp=Z,200nm,0.9s

Q24A Divide 6.48 296 IAmb_Lg 05 47 59.9
comp=Z,153nm,1.1s

MNHN Monahans 6.59 222 IAmb_Lg 05 48 03.7
comp=Z,86nm,0.7s

MLDN Muldoon 6.61 176 IAmb_Lg 05 48 14.4
comp=Z,82nm,0.8s

S44A Carbondale 6.84 77 Pn 05 46 16.9 +0.8
S44A IAmb_Lg 05 48 18.6
comp=Z,167nm,0.7s

SIUC Southern Illin 6.87 76 Pn 05 46 17.9 +1.3
SIUC IAmb_Lg 05 48 25.3
comp=Z,174nm,0.8s

HNDO Hondo 6.98 192 IAmb_Lg 05 48 27.1
comp=Z,110nm,0.9s

OXF Oxford 6.98 103 IAmb_Lg 05 48 26.5
comp=Z,183nm,0.9s

Y45A Yeager Farm, C 7.11 108 IAmb_Lg 05 48 32.0
comp=Z,180nm,0.8s

ISCO Idaho Springs 7.14 301 IAmb_Lg 05 48 30.8
comp=Z,107nm,0.9s

EF04 Eagle Ford 04 7.16 181 IAmb_Lg 05 48 39.9
comp=Z,182nm,1.1s

P43A Skaggs, Pawnee 7.19 61 Pn 05 46 22.8 +1.9
VBMS Vicksburg 7.22 123 IAmb_Lg 05 48 43.3
comp=Z,78nm,0.8s

ANMO Albuquerque 7.31 261 Pn Pn 05 46 23.5 +0.8
comp=Z,0.4nm,0.3s,baz=66,slow=10.0,SNR=8.3
ANMO Pg Pg 05 46 48.9 -6.1
comp=Z,1.6nm,0.3s,baz=34,slow=3.6,SNR=22
ANMO Lg Lg 05 48 22.2
comp=Z,8.5nm,0.3s,baz=75,slow=18,SNR=5.6
ANMO LR LR 05 49 30.9
comp=Z,98nm,20.8s,baz=158,slow=41

ANMO Albuquerque 7.31 261 IAmb_Lg 05 48 33.0
comp=Z,73nm,1.1s

TASM ASL Pad, Albuq 7.31 261 IAmb_Lg 05 48 41.9
comp=Z,44nm,0.9s

TASM ASL Pad, Albuq 7.31 261 IAmb_Lg 05 48 41.9
comp=Z,43nm,0.9s

ECSD EROS Data Cent 7.38 6 IAmb_Lg 05 48 40.6
comp=Z,85nm,0.9s

DRIO Del Rio 7.38 201 IAmb_Lg 05 48 34.1
comp=Z,115nm,0.9s

SAND Sanderson 7.43 212 Pn 05 46 23.2 -1.2
SAND IAmb_Lg 05 48 36.3
comp=Z,142nm,0.7s

S22A 4UR Ranch, Cre 7.46 283 IAmb_Lg 05 48 38.2
comp=Z,65nm,1.1s

735A Kenedy 7.51 181 IAmb_Lg 05 48 53.5
comp=Z,94nm,0.9s

ALPN Alpine 7.81 222 Pn 05 46 28.5 -1.2
ALPN IAmb_Lg 05 48 59.9
comp=Z,68nm,0.8s

PLAL Pickwick Lake 7.92 97 IAmb_Lg 05 48 52.2
comp=Z,78nm,0.7s

OLIL Olney 7.94 70 Pn 05 46 32.5 +1.3
OLIL IAmb_Lg 05 49 07.7
comp=Z,146nm,0.9s

WVT Waverly 7.94 89 IAmb_Lg 05 49 00.3
comp=Z,64nm,0.7s

Y22A Socorro 8.01 255 IAmb_Lg 05 48 53.3
comp=Z,56nm,0.7s

146A Union 8.02 115 IAmb_Lg 05 49 14.2
comp=Z,75nm,0.8s

SUSD Miller 8.11 353 Pn 05 46 33.1 -0.4
SUSD IAmb_Lg 05 49 05.8
comp=Z,123nm,0.8s

833A Chaparral WMA, 8.18 191 IAmb_Lg 05 49 05.4
comp=Z,86nm,0.9s

VHRN Van Horn 8.28 230 Pn 05 46 35.9 -0.2
L42A Oliver, Polo 8.36 45 Pn 05 46 37.9 +1.0
T47A Sharon Grove 8.49 83 Pn 05 46 38.7 -0.1
Z47A Carrollton 8.50 109 IAmb_Lg 05 49 17.0
comp=Z,70nm,0.8s

HAYD Hayden 8.59 302 IAmb_Lg 05 49 25.4
comp=Z,50nm,0.7s

JFWS Jewell Farm 8.66 39 Pn 05 46 40.7 -0.4
TX31 Lajitas Ar. Si 8.66 217 Pn 05 46 40.2 -1.1
TXAR Lajitas Array 8.66 217 Pn Pn 05 46 40.8 -0.5
comp=Z,0.3nm,0.3s,baz=38,slow=11,SNR=20
TXAR Pg Pg 05 47 13.2 -7.8
comp=Z,2.2nm,0.3s,baz=32,slow=16,SNR=8.6
TXAR Lg Lg 05 49 04.5
comp=Z,5.2nm,0.3s,baz=40,slow=28,SNR=6.9
comp=Z,0.5nm,0.4s

P46A Rosedale 8.85 66 Pn 05 46 44.2 +0.5
M44A Midewin, Midew 9.00 53 IAmb_Lg 05 49 29.1
comp=Z,119nm,0.8s

RSSD Black Hills 9.13 330 Pn 05 46 48.9 +1.1
RSSD IAmb_Lg 05 49 31.6
comp=Z,48nm,0.9s

SFIN Lafayette 9.19 61 Pn 05 46 49.7 +1.3
I40A Norwalk 9.22 34 Pn 05 46 48.7 -0.1
I40A IAmb_Lg 05 49 46.4
comp=Z,86nm,0.7s

WCI Wyandotte Cave 9.23 75 Pn 05 46 49.6 +0.6
BLO Bloomington 9.24 69 Pn 05 46 50.2 +1.2
K22A Casper 9.27 315 Pn 05 46 49.4 -0.3
HQIL Hanson Quary C 9.34 52 IAmb_Lg 05 49 42.7
comp=Z,119nm,0.9s

F33A 5 Mile Ranch, 9.50 6 Pn 05 46 52.7 +0.2
F33A IAmb_Lg 05 49 38.4
comp=Z,57nm,0.8s

SPMN Marine on St. 9.56 21 IAmb_Lg 05 49 49.1
comp=Z,90nm,0.9s

K43A Burlington 9.56 46 Pn 05 46 53.2 -0.3
U49A Red Boiling Sp 9.57 86 Pn 05 46 53.3 -0.3
R49A Shelbyville 10.12 75 Pn 05 47 01.3 +0.2
P48A Milroy 10.13 69 Pn 05 47 01.2 -0.1
T50A Nancy 10.31 83 Pn 05 47 04.2 +0.4
O49A Covington 11.13 66 Pn 05 47 14.9 -0.1
PD31 Pinedale Array 11.17 308 Pn 05 47 14.4 -1.3
PDAR Pinedale Array 11.17 308 Pn Pn 05 47 15.1 -0.7
comp=Z,0.4nm,0.3s,baz=106,slow=15,SNR=11
PDAR Pg 05 47 58.4
comp=Z,1.0nm,0.3s,baz=103,slow=20,SNR=8.5
PDAR Lg Lg 05 50 23.2
comp=Z,2.6nm,0.3s,baz=117,slow=28,SNR=8.2
comp=Z,0.5nm,0.4s

TKL Tuckaleechee C 11.27 90 Pn Pn 05 47 18.5 +1.7
comp=Z,0.4nm,0.3s,baz=202,slow=8.0,SNR=7.4
TKL Sn Sn 05 49 24.5 +1.3
comp=Z,0.6nm,0.3s,baz=246,slow=20,SNR=2.0
TKL Lg Lg 05 50 26.7
comp=Z,3.4nm,0.3s,baz=15,slow=19,SNR=9.7
TKL LR LR 05 52 06.0
comp=Z,64nm,19.4s,baz=324,slow=40
comp=Z,1.7nm,0.5s

S51A Beattyville 11.31 79 Pn 05 47 18.6 +1.1
N49A Columbus Grove 11.46 63 Pn 05 47 18.4 -1.0
Q51A Peebles 11.63 73 Pn 05 47 21.8 -0.1
Q52A Bidwell 12.46 73 Pn 05 47 33.2 +0.1
N51A Ashland 12.77 65 Pn 05 47 37.2 -0.1
P53A Whipple 13.21 72 Pn 05 47 42.0 -1.3
Q54A Coxs Mills 13.57 74 Pn Pn 05 47 47.8 -0.5
TBO Thunder Bay 13.66 24 Pn Pn 05 47 46.8 -2.7
M52A Chesterland 13.68 63 Pn Pn 05 47 48.6 -1.2
ULM Lac du Bonnet 13.91 5 Pn Pn 05 47 49.8 -3.1
comp=Z,0.5nm,0.3s,baz=102,slow=3.0,SNR=1.9
ULM Sn Sn 05 50 16.7 -11
comp=Z,0.9nm,0.3s,baz=168,slow=19,SNR=3.1
ULM Lg Lg 05 51 44.4
comp=Z,0.7nm,0.3s,baz=110,slow=13,SNR=4.3
comp=Z,2.4nm,0.5s

ELK Elko 14.43 293 Lg Lg 05 52 02.8
baz=158,slow=19,SNR=1.4

S57A Dark Hollow, R 14.99 79 Pn Pn 05 48 06.8 -0.9
V58A Windy Hill, Pi 15.00 87 Pn Pn 05 48 07.8 0.0
V58A IAmb IAmb 05 48 12.5
comp=Z,5.2nm,1.1s

SSPA Standing Stone 16.04 69 Pn Pn 05 48 19.2 -2.2
SSPA IAmb IAmb 05 48 48.4
comp=Z,8.3nm,1.1s

T59A Double "B" Far 16.14 82 Pn Pn 05 48 21.8 -0.9
SADO Sadowa 16.34 54 Pn Pn 05 48 23.8 -1.4
comp=Z,0.2nm,0.3s,baz=252,slow=13,SNR=1.5
SADO Lg Lg 05 53 03.7
comp=Z,0.8nm,0.3s,baz=184,slow=20,SNR=3.1
comp=Z,20nm,1.2s

SADO Sadowa 16.34 54 Pn Pn 05 48 22.9 -2.4
BUKO Buck Lake 16.47 51 Pn Pn 05 48 27.0 +0.1
BUKO IAmb IAmb 05 48 39.5
comp=Z,16nm,1.1s

M57A Sunshine Farm, 16.72 67 Pn Pn 05 48 29.4 -0.7
M57A IAmb IAmb 05 48 56.6
comp=Z,12nm,1.2s

TEIG Tepich 18.08 150 P P 05 48 47.5 -0.1
L59A Walton 18.41 65 P P 05 48 49.9 -1.3
FFC Flin Flon 18.58 352 P P 05 48 52.0 -0.9
J59A Piesco 19.07 61 P P 05 48 57.4 -1.1
J59A IAmb IAmb 05 49 07.8
comp=Z,8.1nm,1.1s

CMIG Matias Romero 19.38 172 P Pn 05 49 08.6 +5.6
comp=Z,0.7nm,0.3s,baz=360,slow=12,SNR=4.7

NCB Newcomb 19.40 60 P P 05 49 01.6 -0.3
NCB IAmb IAmb 05 49 18.5
comp=Z,5.0nm,0.9s

ILAR Eielson Array 40.58 330 P P 05 52 16.9 +1.6
comp=Z,0.8nm,0.7s,baz=101,slow=7.5,SNR=11
comp=Z,0.8nm,0.7s

*PRE **22** 05:46:27.9±0.8,26°.98S×26°.49E,h2km,ML2.2*
*BGSI **22** 05:46:31.0±1.0,27°.14S×25°.56E,h206km±11km,ML2.2*
ISC 22 05:46:31.7±2.7,27°.01S±0°.03×26°.51E±0°.04,h26km±24km, n26,σ1s12/43,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
HRAO	**HartRAO**	**1.54**	**44**	*e*P	**Pn**	**05 46 56.5**	**-1.1**
HRAO				*e*S	**Sn**	**05 47 18.0**	**+1.2**
HRAO				IAML		05 47 18.1	
	comp=E,41nm,0.2s						
SNKL	**Senekal, Frees**	**1.69**	**139**	*e*P	**Pn**	**05 46 59.6**	**0.0**
SNKL				*e*S	**Sb**	**05 47 22.7**	**-0.4**
SNKL				IAML		05 47 22.7	
	comp=Z,71nm,0.4s						
MAKGR	**Makgori**	**1.94**	**308**	*i* P	**Pn**	**05 47 04.0**	**+0.9**
MAKGR				*i* S	**Sn**	**05 47 27.9**	**+1.2**
MAKGR				IAML		05 47 31.5	
	comp=N,208nm,0.6s						

BOSA Boshof 1.94 214 *e*P Pn 05 47 02.9 -0.2
BOSA *e*S **Sn** 05 47 28.2 +1.4
BOSA IAML 05 47 29.9
comp=Z,18nm,0.4s

LBTB Lobatse 2.15 337 *e*P **Pn** 05 47 05.5 -0.5
LBTB *e*S **Sn** 05 47 32.6 +0.8
LBTB IAML 05 47 36.1
comp=Z,37nm,0.6s

NWCL Newcastle 3.10 104 *e*P **Pn** 05 47 19.3 +0.3
NWCL *e*S **Sn** 05 47 56.2 +1.0
NWCL IAML 05 48 05.2
comp=Z,23nm,0.6s

LEPH Lephalale, Lim 3.35 21 *e*P **Pn** 05 47 21.4 -1.1
LEPH *e*S **Sn** 05 48 01.5 0.0
LEPH IAML 05 48 17.7
comp=Z,9.0nm,0.3s

PHPEN Phepeng 3.62 294 *i* P Pn 05 47 18.5 -7.6
LPHEP Lephephe 3.68 351 *i* P **Pn** 05 47 28.1 +1.1
LPHEP IAML 05 48 30.1
comp=E,10nm,0.3s

KDWAN Kaudwane 3.98 335 *i* P **Pn** 05 47 30.0 -1.2
KDWAN IAML 05 48 35.4
comp=N,35nm,0.5s

PILG Pilgrimsrest, 4.31 62 *e*P **Pn** 05 47 35.6 -0.2
PILG *e*S **Sn** 05 48 24.8 -0.6
PILG IAML 05 48 44.0
comp=Z,8.8nm,0.6s

PMBG Pietermaritzbu 4.32 126 *e*P **Pn** 05 47 36.8 +1.0
PMBG *e*S **Sn** 05 48 25.5 +0.1
PMBG IAML 05 48 43.2
comp=Z,6.6nm,0.7s

KSTD Kokstad 4.35 146 *e*P **Pn** 05 47 37.5 +1.2
KSTD *e*S **Sn** 05 48 27.6 +1.4
KSTD IAML 05 48 47.3
comp=Z,4.5nm,0.7s

MREMI Moremi 4.50 11 *i* P **Pn** 05 47 41.6 +3.3
ALKP Alkanpan, Nort 4.75 231 *e*P **Pn** 05 47 41.2 -0.5
ALKP *e*S **Sn** 05 48 35.4 -0.6
ALKP IAML 05 48 57.6
comp=Z,5.1nm,0.2s

UPI Upington 4.85 253 *e*P **Pn** 05 47 43.4 +0.4
UPI *e*S **Sn** 05 48 37.7 -0.7
UPI IAML 05 49 04.5
comp=Z,6.2nm,0.3s

BFON Badsfontein, M 5.37 207 *e*P **Pn** 05 47 50.0 -0.2
BFON *e*S **Sn** 05 48 50.2 -1.0
BFON IAML 05 49 20.2
comp=Z,3.6nm,0.7s

GRAF Camdeboo Natio 5.53 198 *e*P **Pn** 05 47 53.1 +0.6
GRAF *e*S **Sn** 05 48 54.5 -0.8
GRAF IAML 05 49 27.8
comp=Z,4.7nm,0.6s

LKGWB Lokgwabe 5.58 300 IAML 05 49 12.0
comp=N,11nm,0.4s

MOPA Mopani 5.63 53 *e*P **Pn** 05 47 53.8 0.0
MOPA *e*S **Sn** 05 48 55.6 -2.1
MOPA IAML 05 49 22.7
comp=Z,9.9nm,0.5s

KGCAE Kacgae 5.69 316 *i* P Pn 05 47 46.2 -8.4
BRAK Brakfontein 5.70 213 *e*P **Pn** 05 47 55.0 +0.2
BRAK *e*S **Sn** 05 48 58.1 -1.3
BRAK IAML 05 49 26.8
comp=Z,3.9nm,0.7s

GRAN Grantham 6.48 215 *e*P **Pn** 05 48 06.4 +0.9
GRAN *e*S **Sn** 05 49 17.2 -1.4
GRAN IAML 05 49 52.5
comp=Z,3.4nm,0.6s

FRAZ Fraserburg 6.61 221 *e*P **Pn** 05 48 07.4 +0.1
FRAZ *e*S **Sn** 05 49 20.2 -1.7
FRAZ IAML 05 49 56.5
comp=Z,2.4nm,0.8s

MERW Merweville 7.11 216 *e*P **Pn** 05 48 14.7 +0.6
MERW *e*S **Sn** 05 49 32.6 -1.6
MERW IAML 05 49 32.8
comp=Z,2.0nm,0.4s

SUR Sutherland 7.29 221 *e*P **Pn** 05 48 16.5 -0.2
SUR *e*S **Sn** 05 49 37.0 -1.6
SUR IAML 05 50 22.5
comp=Z,2.5nm,0.7s

*IDC **22** 05:56:00.5±3.0, 17°.37S×179°.09W,h534km±35km,mb3.2/8, mbtmp4.1/9,Error ellipse: s-maj=57.5km s-min=13.7km az=151.0*
ISC 22 05:56:00.6±1.2,17°.4S±0°.4×179°.1W±0°.2,h539km,n14, σ0s55/15,mb3.5/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.40**	**249**	P	**P**	**05 59 03.6**	**-0.5**
	6.5nm,0.7s,baz=231,slow=23,SNR=1.8							
STKA	**Stephens Creek**	**38.31**	**240**	P	**P**	**06 02 35.8**	**+0.5**
	3.1nm,0.4s,baz=90,slow=10,SNR=7.4							
	3.1nm,0.4s							
WRA	**Warramunga Arr**	**44.10**	**259**	P	**P**	**06 03 21.1**	**-0.3**
	0.7nm,0.4s,baz=97,slow=7.2,SNR=15							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**44.32**	**254**	P	**P**	**06 03 23.1**	**+0.1**
	8.9nm,0.4s,baz=89,slow=8.1,SNR=146							
ASAR				S	**S**	**06 09 18.8**	**+0.5**
	0.2nm,0.7s,baz=83,slow=13,SNR=4.1							
	8.9nm,0.4s							
PETK	**Petropavlovsk-**	**73.06**	**346**	P	**P**	**06 06 36.5**	**+0.8**
	0.8nm,0.5s,baz=164,slow=5.1,SNR=0.8							
	0.8nm,0.5s							
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**06 07 11.9**	**+0.1**
	0.8nm,0.7s,baz=225,slow=9.0,SNR=6.7							
	0.8nm,0.7s							
ILAR	**Eielson Array**	**85.57**	**13**	P	**P**	**06 07 40.6**	**-0.8**
	0.4nm,0.4s,baz=225,slow=5.1,SNR=8.0							
	0.4nm,0.4s							
TXAR	**Lajitas Array**	**86.27**	**58**	P	**P**	**06 07 46.4**	**+0.6**
	0.6nm,0.7s,baz=214,slow=5.2,SNR=6.7							
	0.6nm,0.7s							
PDAR	**Pinedale Array**	**87.44**	**44**	P	**P**	**06 07 50.7**	**-0.4**
	0.4nm,0.5s,baz=228,slow=3.8,SNR=8.3							
	0.4nm,0.5s							
BRTR	**Keskin Array B**	**144.00**	**315**	PKP	**PKPdf**	**06 14 35.1**	**-0.1**
	0.5nm,0.5s,baz=99,slow=2.6,SNR=1.2							
GERES	**GERESS Array B**	**146.99**	**344**	PKPbc	**PKPbc**	**06 14 42.9**	**0.0**
	0.2nm,0.2s,baz=9.2,slow=2.6,SNR=3.7							
LESA	**Schwarzleotal**	**148.56**	**345**	*e*PKP	**PKPbc**	**06 14 46.8**	**-0.2**
	1.9nm,0.3s							
KBA	**Koelnbreinsper**	**148.71**	**344**	*e*PKP	**PKPbc**	**06 14 46.5**	**-0.9**
	0.8nm,0.3s							
WTTA	**Wattenberg**	**148.97**	**346**	*e*PKP	**PKPbc**	**06 14 47.9**	**-0.1**
	1.6nm,0.3s							

*NEIC **22** 06:14:19.3±0.6,36°.37N±0°.01×97°.71W±0°.01,h9km±7km, Error ellipse: s-maj=1.6km s-min=1.5km az=222.0*
NEIC 22 06:14:19.1±0.5,36°.370N±0°.004×97°.71W±0°.01,h5km±4km, mb_Lg2.6/30,ML2.8/72,ML2.5/29,Error ellipse: s-maj=1.3km s-min=0.5km az=92.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CROK	**Carrier**	**0.26**	**302**			Pg	06 14 24.6	+0.5
GC02	**Grant County #**	**0.49**	**346**			Pg	06 14 29.0	+0.4
GC02						Sg	06 14 36.1	+1.0
BLOK	**Blackwell**	**0.56**	**46**			Pg	06 14 30.2	+0.3
BLOK				IAML			06 14 49.0	
	comp=E,562nm,0.2s							
KAN14	**Manchester OK**	**0.62**	**341**			Pg	06 14 31.2	+0.2
KAN14						Sg	06 14 39.9	+0.8
OK048	**Pawnee Station**	**0.62**	**86**			Pg	06 14 31.2	+0.2
OK048				IAML			06 14 52.1	
	comp=E,349nm,0.5s							
KAN13	**South Haven SW**	**0.67**	**16**			Pg	06 14 32.2	+0.3
KAN13						Sg	06 14 41.5	+0.9
OK051	**E0350 and S346**	**0.72**	**79**			Pg	06 14 33.2	+0.3
ADOK	**Arcadia Dam**	**0.77**	**159**	Pg		Pg	06 14 33.8	0.0
KAN01	**Argonia South**	**0.78**	**357**			Pg	06 14 34.0	-0.1
KAN01						Sg	06 14 45.0	+0.6
KAN01				IAML			06 14 47.0	
	comp=N,353nm,0.1s							
KAN01				IAML			06 14 48.8	
	comp=E,352nm,0.1s							
OK052	**Battle Ridge R**	**0.83**	**117**			Pg	06 14 34.9	0.0
OK052						Sg	06 14 45.4	-0.3
OK052				IAML			06 14 59.3	
	comp=E,264nm,0.2s							
OK052				IAML			06 15 02.8	
	comp=E,269nm,0.2s							
QUOK	**Quay**	**0.83**	**103**			Pg	06 14 35.1	0.0

QUOK					Sg		06 14 46.8	+0.8
QUOK				IAML			06 14 50.1	
	comp=N,488nm,0.2s							
QUOK				IAML			06 15 01.1	
	comp=E,354nm,0.2s							
OK038	**West end E0370**	**0.84**	**278**		Pg	**Pb**	06 14 35.2	0.0
OK038					Sg	**Sb**	06 14 46.8	+0.7
OK004	**Okla Sci Mus**	**0.87**	**167**		Pg	**Pb**	06 14 35.9	+0.1
KAN08	**Anthony NE Sta**	**0.88**	**346**	Pg	Pg	**Pb**	06 14 36.2	+0.2
KAN08				IAML		**Sb**	06 14 49.8	
	comp=N,402nm,0.1s							
OKCSW	**OKLAHOMA CITY**	**0.99**	**167**		Pg	**Pb**	06 14 38.1	+0.1
OKCSW				IAmb_Lg		**Sb**	06 14 51.1	
	comp=Z,44nm,0.9s							
NOKA	**Waynoka**	**1.02**	**285**		Pg	**Pb**	06 14 38.3	-0.3
NOKA				IAML		**Sb**	06 14 58.9	
	comp=E,305nm,0.2s							
CSTR	**Hydro, Custer**	**1.07**	**228**		Pg	**Pb**	06 14 39.5	-0.1
T35A	**Sooner Cattle**	**1.11**	**60**		Pg	**Pb**	06 14 40.0	-0.3
T35A				IAML		**Sb**	06 14 59.9	
	comp=E,251nm,0.2s							
T35A				IAML			06 15 09.8	
	comp=E,208nm,0.3s							
DEOK	**Depew**	**1.11**	**118**		Pg	**Pb**	06 14 40.0	-0.4
DEOK				IAmb_Lg		**Sb**	06 14 54.7	
	comp=Z,37nm,1.0s							
DEOK				IAML			06 15 06.4	
	comp=E,197nm,0.1s							
DEOK				IAML			06 15 12.7	
	comp=N,175nm,0.2s							
FNO	**Franklin**	**1.14**	**167**		Pg	**Pb**	06 14 40.8	-0.2
TUL3	**Leonard**	**1.62**	**106**		Pn	**Pb**	06 14 48.3	-0.1
X34A	**Smith Ranch, M**	**1.77**	**183**		Pb	**Pb**	06 14 51.4	-0.7
WMOK	**Wichita Mounta**	**1.85**	**208**		Pn	**Pb**	06 14 51.9	+0.3
RLO	**Rose Lookout**	**2.18**	**95**	Pn	Pn	**Pb**	06 14 57.4	+1.3
SMWD	**Samnorwood**	**2.42**	**239**		Pn	**Pb**	06 14 59.9	+0.6
WTFS	**Witchita Falls**	**2.67**	**194**		Pn	**Pb**	06 15 03.3	+0.5
KSU1	**Kansas State U**	**2.86**	**17**	Pn	Pn	**Pb**	06 15 06.4	+0.9
CBKS	**Cedar Bluff**	**2.92**	**327**	Pn	Pn	**Pb**	06 15 06.9	+0.6
HHAR	**Hobbs**	**3.05**	**91**		Pn	**Pb**	06 15 08.7	+0.7
AMTX	**Amarillo**	**3.56**	**247**	IAmb_Lg		**Pb**	06 16 13.7	
	comp=Z,21nm,0.7s							
PLPT	**Palo Pinto**	**3.58**	**188**	Pn	Pn	**Pb**	06 15 15.8	+0.4
APMT	**Aspermont**	**3.63**	**214**	Pn	Pn	**Pb**	06 15 16.4	+0.4
Z38A	**Mt. Pleasant**	**3.83**	**143**	IAmb_Lg		**Pb**	06 16 23.6	
	comp=Z,12nm,0.8s							
MIAR	**Mount Ida**	**3.83**	**117**	Pn	Pn	**Pb**	06 15 19.4	+0.6
RTBA	**Rita Blanca**	**4.05**	**272**		Pn	**Pb**	06 15 22.3	+0.3
RTBA				IAmb_Lg		**Pb**	06 16 32.3	
	comp=Z,8.1nm,0.9s							
MGMO	**Mountain Grove**	**4.44**	**78**	IAmb_Lg		**Pb**	06 16 38.0	
	comp=Z,13nm,0.9s							
P38A	**Dawn**	**4.63**	**44**	IAmb_Lg		**Pb**	06 16 47.9	
	comp=Z,11nm,0.9s							
N35A	**Tabor**	**4.77**	**19**	IAmb_Lg		**Pb**	06 17 02.1	
	comp=Z,14nm,0.7s							
CCM	**Cathedral Cave**	**5.43**	**70**	IAmb_Lg		**Pb**	06 17 25.1	
	comp=Z,12nm,0.7s							
PBMO	**Poplar Bluff**	**5.88**	**84**	IAmb_Lg		**Pb**	06 17 36.4	
	comp=Z,17nm,0.9s							
JCT	**Junction City**	**6.13**	**197**	IAmb_Lg		**Pb**	06 17 50.0	
	comp=Z,15nm,1.1s							
K30B	**Basset**	**6.46**	**347**	IAmb_Lg		**Pb**	06 18 01.3	
	comp=Z,12nm,0.8s							
CGM3	**Cape Girardeau**	**6.53**	**79**	IAmb_Lg		**Pb**	06 17 44.7	
	comp=Z,10.0nm,0.7s							
HNDO	**Hondo**	**6.95**	**191**	IAmb_Lg		**Pb**	06 18 07.1	
	comp=Z,9.4nm,1.1s							

SDD 22 06:18:26.9±1.7, 19°89N×69°56W, h88km±53km, MD3.2, ML2.4, MW3.5, 2C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATOM	**Hato Mayor del**	**1.11**	**171**	⇓	*e*	Pg	Pn	06 18 46.6	-1.2
HATOM				⇓	*e*	Sg	Sn	06 19 01.3	-2.1
HATOM				IAML				06 19 24.1	
	comp=N,24nm,1.9s								
HIDR	**Higuey Centro**	**1.52**	**148**	⇓	*e*	Pg	Pn	06 18 52.8	0.0
HIDR				⇑	*e*	Sg	Sn	06 19 09.4	-2.9
HIDR				IAML				06 19 17.9	
	comp=N,27nm,1.1s								
BANI	**BANI**	**1.67**	**207**	⇓	*e*	Pg	Pn	06 18 52.6	-2.3
BANI				⇑	*e*	Sg	Sn	06 19 14.0	-2.0
BANI				IAML				06 19 20.0	
	comp=N,204nm,0.8s								

*ATH **22** 06:20:22.7, 36°.54N×28°.95E, h19km±2km, ML2.8/5, Manual Solution by N.Liadopoulou First location: 2019/11/22 06:22:00, This location: 2019/11/22 08:11:22 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*ISK **22** 06:20:22.9, 36°.63N×28°.87E, h26km, ML2.9/21*
*THE **22** 06:20:24.1, 37°.N±3°×2°.9E±°, h16km±5km, M2.8/7, MLh2.8/7*
*AFAD **22** 06:20:24.1, 36°.60N×28°.87E, h26km±1km, ML2.6*

ISC 22 06:20:22.9±1.0, 36°62N±0°.02×28°89E±0°.01, h16km±8km, n71, σ0°93/113, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.16**	**83**	P		**Pb**		**06 20 29.0**	**+1.5**
FETY				S		**Sb**		**06 20 33.8**	**+3.2**
FETY	**Fethiye**	**0.16**	**83**	Pg		**Pb**		**06 20 28.9**	**+1.4**
FETY				Sg		**Sb**		**06 20 33.3**	**+2.7**
FETY	**Fethiye**	**0.16**	**83**	P		**Pb**		**06 20 28.9**	**+1.4**
FETY				S		**Sb**		**06 20 32.9**	**+2.3**
SABU	**Mula-Dalaman**	**0.22**	**18**	P		**Pb**		**06 20 29.5**	**+1.0**
SABU				S		**Sb**		**06 20 34.0**	**+1.7**
SABU				*i*	IAML			06 20 36.0	
	comp=E,513nm,0.2s								
DALY	**Dalyan (Mula)**	**0.27**	**317**	Pg		**Pb**		**06 20 30.2**	**+0.8**
DALY				Sg		**Sb**		**06 20 35.0**	**+1.2**
IZZE	**Mula-Seydike**	**0.33**	**123**	P		**Pb**		**06 20 30.5**	**+0.2**
IZZE				S		**Sb**		**06 20 36.2**	**+0.8**
IZZE				*i*	IAML			06 20 41.0	
	comp=E,527nm,0.4s								
CAME	**Cameli-Denizli**	**0.47**	**46**	Pg		**Pb**		**06 20 33.1**	**+0.2**
CAME				Sg		**Sb**		**06 20 40.6**	**+1.0**
TURN	**Turunc**	**0.54**	**287**	P		**Pb**		**06 20 34.0**	**0.0**
TURN				S		**Sb**		**06 20 42.1**	**+0.7**
TURN				*i*	IAML			06 20 43.0	
	comp=N,747nm,0.3s								
TURN	**Turunc**	**0.54**	**287**	Pg		**Pb**		**06 20 34.1**	**+0.2**
TURN				Sg		**Sb**		**06 20 42.2**	**+0.7**
RDI1	**Rhodes Town Ha**	**0.56**	**253**	P		**Pb**		**06 20 34.4**	**+0.2**
RDI1				S		**Sb**		**06 20 42.7**	**+0.7**
RODB	**Rodos**	**0.56**	**253**	P		**Pb**		**06 20 34.4**	**+0.1**
RODB				S		**Sb**		**06 20 42.5**	**+0.5**
KNIK	**Mula-Seydike**	**0.60**	**67**	P		**Pb**		**06 20 35.3**	**+0.3**
KNIK				S		**Sn**		**06 20 44.1**	**-2.2**
KNIK				*i*	IAML			06 20 45.0	
	comp=E,289nm,0.3s								
CAEL	**Denizli, Camel**	**0.61**	**34**	P		**Pb**		**06 20 35.6**	**+0.3**
CAEL				S		**Sb**		**06 20 44.2**	**+0.4**
CAEL				*i*	IAML			06 20 56.0	
	comp=E,527nm,0.9s								
AKAS	**Kas**	**0.69**	**123**	P		**Pn**		**06 20 37.5**	**-0.7**
AKAS				S		**Sn**		**06 20 48.4**	**-0.3**
AKAS				*i*	IAML			06 20 52.0	
	comp=E,453nm,0.3s								
AKAS	**Kas**	**0.69**	**123**	Pg		**Pn**		**06 20 37.3**	**-0.9**
YER	**Yerkesik**	**0.71**	**317**	Pg		**Pb**		**06 20 37.2**	**+0.3**
YER	**Yerkesik**	**0.71**	**317**	P		**Pb**		**06 20 37.2**	**+0.3**
YER				S		**Sb**		**06 20 46.8**	**+0.4**
ARG	**Arkhangelos**	**0.73**	**237**	Pg		**Pg**		**06 20 37.0**	**-0.1**
ARG	**Arkhangelos**	**0.73**	**237**	P		**Pg**		**06 20 37.1**	**-0.1**
ARG				S		**Sb**		**06 20 48.3**	**+1.4**
ARG	**Arkhangelos**	**0.73**	**237**	P		**Sb**		**06 20 37.2**	**0.0**
ARG				S		**Sg**		**06 20 46.8**	**0.0**
MULA	**Mugla, Merkez-**	**0.78**	**325**	P		**Pb**		**06 20 38.7**	**+0.5**
MULA				S		**Sb**		**06 20 49.5**	**+0.9**
MULA				*i*	IAML			06 20 51.0	
	comp=E,224nm,0.3s								
GOLH	**Golhisar**	**0.82**	**41**	P		**Pn**		**06 20 39.5**	**-0.5**
GOLH				S		**Sn**		**06 20 51.5**	**-0.4**
GOLH				*i*	IAML			06 20 53.0	
	comp=E,308nm,0.3s								
ELL	**Elmali**	**0.83**	**81**	Pg		**Pb**		**06 20 38.9**	**-0.1**
TAVA	**DENIZLI_Tavas**	**0.85**	**2**	P		**Pg**		**06 20 39.7**	**+0.2**
TAVA				S		**Sg**		**06 20 50.1**	**-0.6**
TAVA				*i*	IAML			06 20 53.0	
	comp=E,414nm,0.3s								
APMY	**Acipayam-Deniz**	**0.92**	**21**	Pg		**Pg**		**06 20 40.6**	**-0.1**
DATC	**Datca-Mugla**	**0.99**	**279**	Pg		**Pb**		**06 20 41.7**	**0.0**
DNIZ	**Denizli-Tavas-**	**1.02**	**7**	P		**Pn**		**06 20 42.7**	**+0.1**
DNIZ				S		**Sb**		**06 20 54.8**	**-0.5**
DNIZ				*i*	IAML			06 20 58.0	
	comp=N,1μm,0.4s								
DAT	**Datca**	**1.06**	**277**	Pg		**Pb**		**06 20 43.1**	**+0.2**
DAT	**Datca**	**1.06**	**277**	P		**Pn**		**06 20 43.2**	**+0.1**
DAT				S		**Sb**		**06 20 57.0**	**+0.5**
YAZI	**Mula-Dat§a-**	**1.15**	**274**	P		**Pb**		**06 20 44.5**	**+0.1**
YAZI				S		**Sb**		**06 20 59.1**	**0.0**
YAZI				*i*	IAML			06 21 02.0	
	comp=N,140nm,0.2s								
AKUM	**Antalya-Kumluc**	**1.21**	**104**	P		**Pg**		**06 20 45.8**	**-0.5**
AKUM				S		**Sg**		**06 21 02.7**	**+0.7**
AKUM				*i*	IAML			06 21 08.0	
	comp=N,185nm,0.8s								
INCE	**Denizli-Bozkur**	**1.22**	**27**	P		**Pg**		**06 20 45.9**	**-0.6**
INCE				S		**Sg**		**06 21 01.9**	**-0.6**
INCE				*i*	IAML			06 21 05.0	
	comp=N,292nm,0.3s								
KORT	**Korkueli**	**1.24**	**71**	P		**Pg**		**06 20 46.8**	**0.0**
KORT				S		**Sg**		**06 21 05.2**	**+2.3**
KORT				*i*	IAML			06 21 10.0	
	comp=N,102nm,0.4s								
KORT	**Korkueli**	**1.24**	**71**	Pn		**Pg**		**06 20 45.8**	**-1.0**
BDRM	**Kayabasi**	**1.24**	**292**	P		**Pb**		**06 20 46.2**	**+0.3**
BDRM				S		**Sn**		**06 21 02.5**	**+0.5**
BDRM				*i*	IAML			06 21 06.0	
	comp=E,201nm,0.3s								
ESEN	**Aydn-Nazilli**	**1.26**	**340**	P		**Pn**		**06 20 45.9**	**+0.2**
ESEN				S		**Sn**		**06 21 03.1**	**+0.8**
ESEN				*i*	IAML			06 21 04.0	
	comp=N,248nm,0.2s								
BODT	**Bodrum**	**1.34**	**290**	P		**Pb**		**06 20 48.2**	**+0.5**
BODT				S		**Sn**		**06 21 05.0**	**+0.6**
YKAV	**Yalikavak-Bodr**	**1.38**	**292**	Pn		**Pn**		**06 20 46.3**	**-1.2**
NAZL	**Nazilli-Aydin**	**1.43**	**341**	Pn		**Pn**		**06 20 47.5**	**-0.7**
BRDR	**BURDUR-Merkez**	**1.43**	**41**	P		**Pn**		**06 20 48.1**	**-0.1**
BRDR				S		**Sg**		**06 21 09.2**	**+0.1**
BRDR				*i*	IAML			06 21 11.0	
	comp=E,125nm,0.5s								
BUCA	**Burdur, Bucak-**	**1.52**	**62**	P		**Pb**		**06 20 49.6**	**-1.1**
BUCA				S		**Sg**		**06 21 10.3**	**-1.5**
BUCA				*i*	IAML			06 21 16.0	
	comp=E,47nm,0.3s								
AYDB	**Zeytinkoy-Aydi**	**1.55**	**329**	Pn		**Pn**		**06 20 49.4**	**-0.5**
KIRA	**zmir-Kiraz**	**1.62**	**346**	P		**Pn**		**06 20 50.8**	**-0.1**
KIRA				S		**Sn**		**06 21 11.2**	**-0.4**
KIRA				*i*	IAML			06 21 17.0	
	comp=E,74nm,0.5s								
IZMR	**zmir-demi**	**1.69**	**334**	P		**Pn**		**06 20 52.3**	**+0.6**
IZMR				S		**Sg**		**06 21 17.0**	**-0.4**
IZMR				*i*	IAML			06 21 24.0	
	comp=N,34nm,0.8s								
KARP	**Karpathos**	**1.76**	**233**	Pn		**Pn**		**06 20 52.5**	**-0.2**
KARP	**Karpathos**	**1.76**	**233**	P		**Pn**		**06 20 52.5**	**-0.2**
KARP				S		**Sn**		**06 21 14.1**	**-0.6**
KARP	**Karpathos**	**1.76**	**233**	P		**Pn**		**06 20 52.6**	**-0.2**
ISP	**Isparta**	**1.78**	**47**	Pn		**Pn**		**06 20 52.1**	**-0.9**
ISP	**Isparta**	**1.78**	**47**	P		**Pn**		**06 20 53.4**	**+0.4**
ODEM	**Odemis-Izmir**	**1.78**	**339**	Pn		**Pn**		**06 20 52.9**	**-0.1**
PASA	**Karahalli, USA**	**1.79**	**15**	P		**Pn**		**06 20 53.0**	**-0.3**
PASA				S		**Sn**		**06 21 13.7**	**-2.1**
PASA				*i*	IAML			06 21 21.0	
	comp=N,30nm,0.5s								
MANT	**Manisa**	**1.89**	**352**	P		**Pn**		**06 20 54.3**	**-0.4**
MANT				S		**Sn**		**06 21 16.5**	**-1.8**
MANT				*i*	IAML			06 21 31.0	
	comp=N,24nm,0.6s								
KULA	**Kula-Manisa**	**1.90**	**355**	Pn		**Pn**		**06 20 53.9**	**-0.9**
KZIL	**AFYON_Kizioren**	**1.92**	**31**	P		**Pn**		**06 20 54.5**	**-0.6**
KZIL				S		**Sn**		**06 21 19.5**	**+0.6**
KZIL				*i*	IAML			06 21 28.0	
	comp=E,50nm,0.5s								
SMG	**Samos**	**1.97**	**304**	P		**Pn**		**06 20 55.8**	**+0.2**
SMG				S		**Sn**		**06 21 19.8**	**-0.1**
SMG	**Samos**	**1.97**	**304**	P		**Pn**		**06 20 56.0**	**+0.5**
BAGO	**Egridir - ISPA**	**2.05**	**47**	P		**Pn**		**06 20 56.2**	**-0.5**
BAGO				S		**Sb**		**06 21 24.5**	**-0.4**
BAGO				*i*	IAML			06 21 33.0	
	comp=E,26nm,0.9s								
USAK	**Uak-Merkez**	**2.10**	**3**	P		**Pn**		**06 20 56.6**	**-0.8**
USAK				S		**Sn**		**06 21 21.4**	**-1.8**
USAK				*i*	IAML			06 22 03.0	
	comp=N,15nm,2.0s								
BLCB	**Balcova**	**2.30**	**321**	Pn		**Pn**		**06 21 00.2**	**+0.1**
GORD	**Gordes-Manisa**	**2.36**	**346**	Pn		**Pn**		**06 21 00.3**	**-0.7**
YVAC	**Isparta, Yalva**	**2.50**	**48**	P		**Pn**		**06 21 03.0**	**+0.1**
YVAC				S		**Sn**		**06 21 35.0**	**+1.8**
YVAC				*i*	IAML			06 21 43.0	
	comp=E,8.2nm,1.0s								
URLA	**Izmir**	**2.52**	**314**	Pn		**Pn**		**06 21 03.2**	**0.0**
STIA	**Sitia Lasithi**	**2.67**	**239**	P		**Pn**		**06 21 05.6**	**+0.4**
APE	**Apeiranthos**	**2.73**	**281**	P		**Pn**		**06 21 06.7**	**+0.6**
APE				S		**Sn**		**06 21 38.1**	**-0.7**
APE	**Apeiranthos**	**2.73**	**281**	P		**Pn**		**06 21 06.7**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.82**	**267**	P		**Pn**		**06 21 07.7**	**+0.4**
CHOS	**Chios island**	**2.86**	**309**	P		**Pn**		**06 21 08.9**	**+1.0**
AKMS	**Akamas**	**3.23**	**119**	P		**Pn**		**06 21 11.6**	**-1.3**
ALFC	**Alefka**	**3.35**	**115**	P		**Pn**		**06 21 12.6**	**-2.0**
IDI	**Anoyia**	**3.50**	**249**	P		**Pn**		**06 21 16.1**	**-0.6**
NATA	**Nata**	**3.51**	**120**	P		**Pn**		**06 21 15.5**	**-1.4**

*ASRS **22** 06:24:39.0±0.9, 54°.21N×86°.40E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 22 06:24:42.5±2.9, 54°18N×86°44E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=22.5km s-min=12.5km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**257**	I		I	I	06 30 20.0	
	baz=75,slow=354,SNR=4.3								
ZALV	**Zalesovo Beam**	**0.98**	**257**	Pg		Pg		06 24 59.8	-1.5
	0.9nm,0.3s,baz=72,slow=17,SNR=11								
ZALV				Lg		Lg		06 25 15.8	
	6.3nm,0.3s,baz=78,slow=31,SNR=25								
KURBB	**Kurchatov Arra**	**6.01**	**237**	Pn		Pn		06 26 13.6	+1.1
	baz=53,slow=14,SNR=4.8								
MKAR	**Makanchi Array**	**7.85**	**201**	Pn		Pn		06 26 39.0	+1.1
	0.1nm,0.3s,baz=21,slow=12,SNR=1.9								
	0.2nm,0.3s								

BKK 22 06:54:54.9±0.9, 20°N±4°×10°1E±°, h2km, M3.9/8, Mjma3.7/8, ML4.1/8, MLv3.8/5, Laos

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAMP	**Lampang**	**1.91**	**240**	P		Pn		06 55 28.4	-0.1
LAMP				S		Sb		06 55 54.6	-0.2
UTTA	**Uttaradit**	**1.91**	**204**	P		Pn		06 55 27.9	-0.6
UTTA				S		Sn		06 55 53.7	+0.6
CHTO	**Chiang Mai**	**2.39**	**254**	P		Pn		06 55 34.3	-0.9
PHIT	**Phitsanulok**	**2.47**	**202**	P		Pn		06 55 36.6	+0.4
PHIT				S		Sg		06 56 12.7	-1.6
KHLT	**Khaolaem Dam**	**5.38**	**210**	P		Pn		06 56 17.1	+0.9
UBPT	**Khong Chiam**	**5.74**	**136**	P		Pn		06 56 22.1	+0.9

*ASRS **22** 07:00:18.0±1.7, 55°.63N×86°.26E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 22 07:00:21.7±2.8, 55°59N×86°44E, h0km, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=26.8km s-min=18.9km az=68.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.89**	**210**	I		I	I	07 11 20.0	
	0.1nm,0.9s,baz=25,slow=357,SNR=5.4								
ZALV	**Zalesovo Beam**	**1.89**	**210**	Pg		Pn		07 00 54.8	-0.4
	10nm,0.3s,baz=30,slow=16,SNR=28								
ZALV				Lg		Lg		07 01 22.4	
	6.4nm,0.3s,baz=24,slow=28,SNR=7.6								
KURBB	**Kurchatov Arra**	**6.88**	**227**	Pn		Pn		07 02 03.4	-0.3
	0.2nm,0.3s,baz=42,slow=14,SNR=6.5								
KURBB				Lg		Lg		07 04 03.0	
	0.1nm,0.3s,baz=42,slow=31,SNR=5.3								
	0.8nm,0.3s								
MKAR	**Makanchi Array**	**9.18**	**198**	Pn		Pn		07 02 34.9	-0.4
	0.1nm,0.3s,baz=15,slow=13,SNR=5.3								
MKAR				Sn		Sn		07 04 13.6	-5.7
	baz=21,slow=22,SNR=1.3								
MKAR				Lg		Lg		07 05 14.4	
	0.1nm,0.3s,baz=23,slow=27,SNR=1.7								
	0.2nm,0.4s								
BVAR	**Borovoye Array**	**9.73**	**261**	Pn		Pn		07 02 42.5	-0.2
	0.1nm,0.3s,baz=69,slow=14,SNR=5.7								
	1.0nm,0.3s								

*SNET **22** 07:18:27.0±0.8, 12°.88N×89°.07W, h39km±3km, ML3.4*
*CATAC **22** 07:18:27.1±0.4, 13°.N±2°×8°.9W±°, h30km±3km, M3.4/26, MLv3.4/26, Error ellipse: s-maj=6.1km s-min=2.4km az=34.1, confirmed*
*GCG **22** 07:18:28.8±0.8, 12°.95N×89°.21W, h51km±12km, MD4.0*

ISC 22 07:18:27.3±1.5, 12°.85N±0°.07×89°.10W±0°.05, h41km±43km, n87, σ0°63/98, 13C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.67**	**341**	⇑	*i*	P	**Pn**	**07 18 40.5**	**+0.2**
LALI					*e*	S	**Sn**	**07 18 49.6**	**-0.1**
LALI	**Alcalda de L**	**0.67**	**341**	*i*		P	**Pn**	**07 18 40.6**	**+0.2**
LALI					*e*	S	**Sn**	**07 18 49.6**	**-0.1**
LALI	**Alcalda de L**	**0.67**	**341**			P	**Pn**	**07 18 40.4**	**0.0**
TECO	**Alcaldia de Te**	**0.75**	**24**	⇑	*e*	P	**Pn**	**07 18 41.1**	**-0.4**
TECO					*e*	S	**Sn**	**07 18 51.1**	**-0.5**
TECO	**Alcaldia de Te**	**0.75**	**24**			P	**Pn**	**07 18 41.1**	**-0.4**
LFRS	**El Faro**	**0.77**	**3**	⇓	*i*	P	**Pn**	**07 18 41.6**	**-0.2**
LFRS					*e*	S	**Sn**	**07 18 52.3**	**0.0**
LOMA	**Loma Larga**	**0.79**	**355**	⇑	*i*	P	**Pn**	**07 18 41.4**	**-0.7**
LOMA	**Loma Larga**	**0.79**	**355**			P	**Pn**	**07 18 41.3**	**-0.9**
LOMA	**Loma Larga**	**0.79**	**355**			S	**Sn**	**07 18 52.6**	**-0.2**
UESV	**Universidad de**	**0.84**	**21**			S	**Sn**	**07 18 53.5**	**-0.3**
UESV	**Universidad de**	**0.84**	**21**			P	**Pn**	**07 18 42.3**	**-0.4**
UTEC	**Universidad Te**	**0.85**	**353**			P	**Pn**	**07 18 42.7**	**-0.2**
UTEC	**Universidad Te**	**0.85**	**353**			S	**Sn**	**07 18 54.4**	**+0.2**
TECA	**Tecapa**	**0.86**	**42**	⇑	*i*	P	**Pn**	**07 18 43.3**	**+0.1**
JAYA	**Jayaque - finc**	**0.87**	**337**	⇑	*i*	P	**Pn**	**07 18 43.2**	**0.0**
JAYA					*e*	S	**Sn**	**07 18 55.1**	**+0.3**
JAYA	**Jayaque - finc**	**0.87**	**337**		*i*	P	**Pn**	**07 18 43.2**	**0.0**
JAYA					*e*	S	**Sn**	**07 18 54.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.87**	**337**			P	**Pn**	**07 18 43.0**	**-0.2**
PAVA	**Las Pavas**	**0.87**	**10**	⇑	*e*	P	**Pn**	**07 18 43.1**	**-0.1**
PAVA	**Las Pavas**	**0.87**	**10**			S	**Sn**	**07 18 55.2**	**+0.4**
PAVA	**Las Pavas**	**0.87**	**10**			P	**Pn**	**07 18 42.8**	**-0.4**
UEES	**Universidad Ev**	**0.87**	**351**		*e*	P	**Pn**	**07 18 43.2**	**0.0**
UEES	**Universidad Ev**	**0.87**	**351**			P	**Pn**	**07 18 43.1**	**0.0**
UEES	**Universidad Ev**	**0.87**	**351**			S	**Sn**	**07 18 55.2**	**+0.4**
PMON	**Piamonte**	**0.88**	**346**		*e*	P	**Pn**	**07 18 43.3**	**0.0**
PMON	**Piamonte**	**0.88**	**346**			P	**Pn**	**07 18 43.2**	**-0.2**
PMON	**Piamonte**	**0.88**	**346**			S	**Sn**	**07 18 54.7**	**-0.3**
LBRS	**Las Brisas**	**0.88**	**3**	⇑	*e*	P	**Pn**	**07 18 43.5**	**+0.1**
LFU	**La Fuente**	**0.89**	**359**	⇑	*i*	P	**Pn**	**07 18 43.5**	**+0.1**
BOQS	**Boqueron**	**0.90**	**349**		*e*	P	**Pn**	**07 18 43.8**	**+0.1**
PIC2	**El Picacho**	**0.90**	**350**	⇑	*e*	P	**Pn**	**07 18 44.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.92**	**23**		*e*	P	**Pn**	**07 18 43.9**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.92**	**23**			S	**Sn**	**07 18 56.5**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.92**	**23**			P	**Pn**	**07 18 43.8**	**0.0**
LCY	**Lacayo**	**0.97**	**54**		*e*	P	**Pn**	**07 18 44.6**	**+0.1**
PACA	**Pacayal**	**0.97**	**51**		*e*	P	**Pn**	**07 18 45.0**	**+0.4**
PACA	**Pacayal**	**0.97**	**51**			P	**Pn**	**07 18 45.1**	**+0.5**
PACA	**Pacayal**	**0.97**	**51**			S	**Sn**	**07 18 57.8**	**+0.6**
RANC	**El Ranchito**	**0.98**	**54**		*e*	P	**Pn**	**07 18 44.6**	**0.0**
CEDA	**San Andres**	**0.

KURK	**Kurchatov**	**0.76**	**318**	⇑P	**Pn**	**07 19 54.7**	**+0.3**
	0.5nm,0.2s						
KURK				⇑S	**Sb**	**07 20 03.8**	**+0.4**
	8.0nm,0.6s						
KUR17	**Kurchatov Arra**	**0.77**	**309**	⇑P	**Pb**	**07 19 53.7**	**+1.0**
KUR17				⇓S	**Sb**	**07 20 03.2**	**-0.6**
MAKZ	**Makanchi**	**3.76**	**152**	⇑Pg	**Pg**	**07 20 48.5**	**+0.1**
	3.2nm,1.1s						
MAKZ				⇑Lg	Lg	07 21 38.0	
	6.1nm,0.6s						
MK31	**Makanchi Array**	**3.87**	**149**	⇑Pn	**Pn**	**07 20 36.8**	**-0.4**
	0.1nm,0.3s,baz=40,slow=16,SNR=22						
MK31				Pg	**Pb**	**07 20 46.9**	**+1.3**
	0.4nm,0.3s,baz=324,slow=9.8,SNR=15						
MK31				Lg	Lg	07 21 41.0	
	4.4nm,0.5s,baz=326,slow=27,SNR=14						
MKAR	**Makanchi Array**	**3.87**	**149**	Pn	**Pb**	**07 20 45.8**	**+0.3**
	0.4nm,0.3s,baz=322,slow=9.7,SNR=14						
MKAR				Lg	Lg	07 21 45.7	
	1.0nm,0.3s,baz=325,slow=28,SNR=18						
	0.2nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.06**	**39**	I	I	07 53 10.0	
	baz=220,slow=338,SNR=2.9						
ZALV	**Zalesovo Beam**	**5.06**	**39**	Pn	**Pb**	**07 21 06.2**	**+0.4**
	0.2nm,0.3s,baz=232,slow=12,SNR=5.1						
ZALV				Lg	Lg	07 22 36.3	
	0.2nm,0.3s,baz=231,slow=25,SNR=2.6						
	0.7nm,0.4s						
BVAR	**Borovoye Array**	**6.32**	**301**	Sn	**Sn**	**07 22 21.6**	**-2.0**
	baz=110,slow=23,SNR=4.2						
BVAR				Lg	Lg	07 22 52.4	
	baz=126,slow=28,SNR=2.8						

DJA ***22*** *07:23:25.7±1.5, 10°S±5°×11°6E±°, h27km±17km, M4.5/18, mB4.8/3, mb4.6/5, MLv4.4/18, Mw(mB)4.1/3*

IDC ***22*** *07:23:31.8±3.8, 9.63S×116.24E, h108km±31km, mb3.5/6, mbtmp4.0/7, MS3.1/5, Error ellipse: s-maj=32.7km s-min=11.6km az=43.0*

ISC 22 07:23:23.4±0.8, **9.98S**±0.07×**115.97E**±0.06, **h35**km, **n30, σ2s62/27, mb3.9/5, MS3.3/3, South of Bali**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**1.50**	**330**	P		**Pn**	**07 23 49.1**	**+1.3**
TWSI	**Taliwang, Sumb**	**1.53**	**36**	P		**Pn**	**07 23 48.9**	**+0.6**
SRBI	**Singaraja**	**2.03**	**338**	P		**Pn**	**07 23 56.7**	**+1.6**
PLAI	**Plampang**	**2.12**	**57**	P		**Pn**	**07 23 58.3**	**+1.9**
JAGI	**Jajag, Banyuwa**	**2.34**	**310**	P		**Pn**	**07 24 00.5**	**+1.1**
ABJI	**Asem Bagus**	**2.76**	**322**	P		**Pn**	**07 24 06.4**	**+1.1**
BLJI	**Banyuglugur**	**3.23**	**313**	P		**Pn**	**07 24 13.2**	**+1.6**
WBSI	**Waikabubak, Su**	**3.39**	**85**	P		**Pn**	**07 24 15.5**	**+1.5**
KMMI	**Kalianget**	**3.52**	**326**	P		**Pn**	**07 24 17.9**	**+2.2**
WSI	**Waingapu**	**4.28**	**86**	P		**Pn**	**07 24 29.6**	**+3.5**
BASI	**Baing, Sumba**	**4.55**	**93**	P		**Pn**	**07 24 32.2**	**+2.4**
PCJI	**Pacitan**	**5.05**	**290**	P		**Pn**	**07 24 38.5**	**+1.8**
	0.5nm32nm,0.9s							
UGM	**Wanagama**	**5.76**	**290**	P		**Pn**	**07 24 48.6**	**+2.2**
EDFI	**Ende, Flores**	**5.78**	**78**	P		**Pn**	**07 24 50.0**	**+3.1**
	0.2nm570nm40nm,0.7s							
BSSI	**Bau Bau, Buton**	**5.88**	**50**	P		**Pn**	**07 24 51.3**	**+3.1**
BKSI	**Bulukumba**	**6.20**	**42**	P		**Pn**	**07 24 54.6**	**+2.1**
KAPI	**Kappang**	**6.20**	**38**	P		**Pn**	**07 24 55.1**	**+2.6**
	20nm,0.2s,baz=219,slow=3.4,SNR=11							
KAPI				S		**Sn**	**07 26 01.5**	**-0.8**
	35nm,0.3s,baz=216,slow=19,SNR=17							
KAPI				LR		LR	07 27 37.3	
	comp=Z,120nm,19.2s,baz=226,slow=43							
FITZ	**Fitzroy Crossi**	**12.37**	**132**	P		**Pn**	**07 26 18.9**	**+1.7**
	4.8nm,0.6s,baz=326,slow=7.4,SNR=27							
FITZ				S		**Sn**	**07 28 29.2**	**-4.7**
	6.8nm,0.7s,baz=0.0,slow=20,SNR=7.8							
DAV	**Davao City (W)**	**19.46**	**30**	LR		LR	07 36 25.0	
	comp=Z,17nm,18.4s,baz=200,slow=41							
WRA	**Warramunga Arr**	**20.31**	**121**	P		Pn	07 27 59.4	+0.7
	3.2nm,0.9s,baz=294,slow=12,SNR=22							
WRA				S		**S**	**07 31 36.5**	**-6.0**
	0.4nm,0.6s,baz=288,slow=23,SNR=2.7							
	3.2nm,0.9s							
ASAR	**Alice Springs**	**21.87**	**131**	P		**P**	**07 28 16.6**	**+3.1**
	2.2nm,0.6s,baz=303,slow=9.1,SNR=28							
ASAR				S		**S**	**07 32 16.4**	**+3.0**
	1.1nm,0.8s,baz=305,slow=24,SNR=4.7							
ASAR				LR		LR	07 37 25.0	
	comp=Z,40nm,19.1s,baz=298,slow=38							
	2.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**32.88**	**329**	P		**P**	**07 29 54.3**	**0.0**
	2.0nm,0.3s,baz=156,slow=6.9,SNR=10.0							
	2.0nm,0.3s							
H08S2	**Diego Garcia H**	**43.00**	**269**	T		T	08 17 18.2	
	baz=95							
H08S3	**Diego Garcia H**	**43.01**	**269**	T		T	08 17 23.1	
	baz=95							
H08S1	**Diego Garcia H**	**43.02**	**269**	T		T	08 17 30.8	
	baz=95							
SONM	**Songino Array**	**58.19**	**352**	P		**P**	**07 33 12.1**	**-1.9**
	0.6nm,0.5s,baz=168,slow=8.8,SNR=2.8							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**64.02**	**335**	P		**P**	**07 33 52.4**	**-1.1**
	0.3nm,0.3s,baz=153,slow=8.2,SNR=3.7							
	0.3nm,0.3s							
ZALV	**Zalesovo Beam**	**68.94**	**341**	P		**P**	**07 34 23.0**	**-1.7**
	0.5nm,0.4s,baz=129,slow=3.9,SNR=2.5							
	0.5nm,0.4s							
VNDA	**Vanda**	**71.50**	**171**	LR		LR	08 03 14.5	
	comp=Z,20nm,21.9s,baz=0.5,slow=33							
QSPA	**South Pole Qui**	**80.02**	**180**	LR		LR	08 10 42.8	
	comp=Z,23nm,18.2s,baz=302,slow=35							

IDC ***22*** *07:25:18.8±6.6, 9.58S×116.18E, h54km±73km, mb3.5/7, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=159.4km s-min=29.2km az=47.0*

DJA ***22*** *07:25:19.3±2.2, 10°S±6°×11°6E±°, h26km±26km, M4.2/12, mb4.6/1, MLv4.0/12*

ISC 22 07:25:17.1±0.8, **9.82S**±0.08×**116.01E**±0.06, **h35**km, **n18, σ1s98/16, mb3.9/6, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.38**	**39**	P		**Pn**	**07 25 42.0**	**+2.1**
TWSI				S		**Sn**	**07 25 57.7**	**+0.8**
DNP	**Denpasar**	**1.38**	**325**	P		**Pn**	**07 25 41.0**	**+1.1**
SRBI	**Singaraja**	**1.90**	**336**	P		**Pn**	**07 25 49.7**	**+2.7**
PLAI	**Plampang**	**2.01**	**61**	P		**Pn**	**07 25 49.9**	**+1.4**
JAGI	**Jajag, Banyuwa**	**2.27**	**306**	P		**Pn**	**07 25 53.2**	**+1.0**
BLJI	**Banyuglugur**	**3.15**	**311**	P		**Pn**	**07 26 06.7**	**+2.4**
PCJI	**Pacitan**	**5.04**	**288**	P		**Pn**	**07 26 32.8**	**+2.6**
FITZ	**Fitzroy Crossi**	**12.45**	**132**	P		**Pn**	**07 28 13.2**	**+1.3**
	0.7nm,0.3s,baz=298,slow=9.3,SNR=6.8							
FITZ				S		**Sn**	**07 30 27.9**	**-1.5**
	1.7nm,0.5s,baz=26,slow=19,SNR=1.2							
	5.1nm,0.6s							
WRA	**Warramunga Arr**	**20.35**	**122**	P		Pn	07 29 52.1	-0.8
	1.3nm,0.8s,baz=297,slow=12,SNR=5.6							
	1.3nm,0.8s							
ASAR	**Alice Springs**	**21.95**	**131**	P		**P**	**07 30 09.3**	**+1.5**
	1.2nm,0.7s,baz=305,slow=9.1,SNR=5.2							
	1.2nm,0.7s							
CMAR	**Chiang Mai Arr**	**32.76**	**329**	P		**P**	**07 31 47.1**	**+0.2**
	1.0nm,0.3s,baz=153,slow=6.7,SNR=6.1							
	1.0nm,0.3s							
H08S2	**Diego Garcia H**	**43.04**	**269**	T		T	08 18 41.1	
	baz=95							
H08S3	**Diego Garcia H**	**43.05**	**269**	T		T	08 18 51.5	
	baz=95							
H08S1	**Diego Garcia H**	**43.06**	**269**	T		T	08 18 37.7	
	baz=95							
SONM	**Songino Array**	**58.03**	**352**	P		**P**	**07 35 04.9**	**-1.8**
	0.8nm,0.6s,baz=169,slow=8.7,SNR=2.2							
	0.8nm,0.6s							
MKAR	**Makanchi Array**	**63.89**	**335**	P		**P**	**07 35 44.1**	**-2.2**
	0.6nm,0.7s,baz=141,slow=7.1,SNR=3.6							
	0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**68.80**	**341**	P		**P**	**07 36 15.2**	**-2.3**
	0.8nm,0.5s,baz=152,slow=6.7,SNR=2.1							
	0.8nm,0.5s							
BVAR	**Borovoye Array**	**73.66**	**333**	P		**P**	**07 36 45.6**	**-1.4**
	1.0nm,0.7s,baz=156,slow=7.6,SNR=3.8							
	1.0nm,0.7s							

IDC ***22*** *07:26:59.8±1.2, 33.05N×92.34E, h0km, mb3.7/8, mbtmp3.7/11, ML3.5/1, MS2.8/3, Error ellipse: s-maj=40.8km s-min=18.4km az=58.0*

ISC 22 07:27:00.9±1.1, **33.1N**±0.1×**92.3E**±0.2, **h10**km, **n13, σ1s46/11, mb3.8/7, Qinghai**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.67**	**334**	Pn		**Pn**	**07 30 38.7**	**-3.1**
	0.2nm,0.3s,baz=141,slow=8.2,SNR=4.5							
	0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**15.74**	**156**	Pn		**Pn**	**07 30 41.8**	**-1.0**
	1.1nm,0.3s,baz=335,slow=16,SNR=4.3							
AAK	**Ala-Archa**	**16.94**	**309**	LR		LR	07 39 03.9	
	comp=Z,19nm,21.4s,baz=96,slow=43							
SONM	**Songino Array**	**18.21**	**32**	P		**Pn**	**07 31 12.9**	**-0.8**
	1.6nm,0.7s,baz=216,slow=13,SNR=4.5							
KURBB	**Kurchatov Arra**	**20.24**	**334**	P		**P**	**07 31 36.8**	**+0.7**
	1.0nm,0.2s,baz=148,slow=11,SNR=6.0							
KURBB				LR		LR	07 40 28.8	
	comp=Z,25nm,21.6s,baz=154,slow=40							
	1.0nm,0.2s							
ZALV	**Zalesovo Beam**	**21.53**	**348**	P		**P**	**07 31 50.8**	**+0.8**
	1.3nm,0.4s,baz=152,slow=9.4,SNR=0.8							
	1.3nm,0.4s							
BVAR	**Borovoye Array**	**25.38**	**328**	P		**P**	**07 32 29.0**	**+0.9**
	1.4nm,0.7s,baz=153,slow=10.0,SNR=4.9							
	1.4nm,0.7s							
KSRS	**Korea Array**	**29.33**	**71**	P		**P**	**07 33 04.4**	**+0.7**
	0.7nm,0.4s,baz=269,slow=8.9,SNR=1.7							
	0.7nm,0.4s							
ARTI	**Arti**	**32.96**	**325**	P		**P**	**07 33 37.2**	**+1.7**
	1.9nm,0.6s,baz=90,slow=9.1,SNR=2.1							
	1.9nm,0.6s							
NOA	**NORSAR Array B**	**57.45**	**325**	LR		LR	08 03 32.4	
	comp=Z,19nm,19.3s,baz=5.0,slow=38							
WRA	**Warramunga Arr**	**66.29**	**136**	P		**P**	**07 37 49.0**	**-0.5**
	0.4nm,1.0s,baz=328,slow=6.3,SNR=2.3							
	0.4nm,1.0s							
ASAR	**Alice Springs**	**68.99**	**139**	P		**P**	**07 38 07.2**	**+0.6**
	0.5nm,0.8s,baz=328,slow=7.3,SNR=4.9							
	0.5nm,0.8s							
ILAR	**Eielson Array**	**72.17**	**23**	P		**P**	**07 38 25.6**	**+0.1**
	0.6nm,0.8s,baz=305,slow=5.5,SNR=4.5							
	0.6nm,0.8s							

GII 22 07:38:45.8±0.0, **33.339N**±0.003×**35.383E**±0.001, **h2**km, **Mws1.6, confirmed, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GEM	**Giv'at Ha'Em**	**0.27**	**118**	P		Pg	07 38 52.0	+1.1
GEM	**Giv'at Ha'Em**	**0.27**	**118**	S		Sg	07 38 56.3	+1.9
NATI	**Neve Ativ**	**0.31**	**104**	P		Pg	07 38 52.4	+0.7
NATI	**Neve Ativ**	**0.31**	**104**	S		Sb	07 38 58.2	-1.3
HNTI	**Hanita**	**0.31**	**215**	P		Pg	07 38 52.6	+0.8
HNTI	**Hanita**	**0.31**	**215**	S		Sb	07 38 58.1	-1.6
MMA0B	**Mount Meron ar**	**0.32**	**177**	P		Pg	07 38 52.7	+0.6
MMA0B	**Mount Meron ar**	**0.32**	**177**	S		Sb	07 38 58.6	-1.5

IDC ***22*** *07:46:07.7±1.6, 53.06N×162.79W, h0km, mb3.6/5, mbtmp3.6/7, ML3.2/2, Error ellipse: s-maj=31.2km s-min=25.1km az=167.0*

NEIC ***22*** *07:46:08.2±1.6, 52.87N±0.08×162.84W±0.03, h10km±2km, mb3.6/10, ML3.4/14, ML3.2(AEIC), Error ellipse: s-maj=13.7km s-min=3.0km az=168.0*

AEIC ***22*** *07:46:11.0±1.6, 52.76N±0.09×162.82W±0.06, h3km±6km, Error ellipse: s-maj=13.5km s-min=4.0km az=165.0*

ISC 22 07:46:08.0±1.0, **52.86N**±0.07×**162.79W**±0.05, **h10**km, **n63, σ1s08/63, mb3.7/4, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SSLS	**Shishaldin Sou**	**1.99**	**339**			**Pn**	**07 46 41.8**	**+0.1**
SSLS						**Sn**	**07 47 06.4**	**-0.3**
FALS	**False Pass**	**2.03**	**350**			**Pn**	**07 46 42.0**	**-0.3**
FALS				IAML			07 47 13.3	
	comp=N,2μm,0.5s							
FALS	**False Pass**	**2.03**	**350**			**Sn**	**07 47 07.5**	**-0.2**
ISNN	**Isanotski Nort**	**2.06**	**344**			**Pn**	**07 46 43.3**	**+0.6**
ISNN						**Sn**	**07 47 08.7**	**+0.3**
ISNN						**Sb**	**07 47 09.9**	**-1.2**
SSBA	**Shishaldin**	**2.07**	**338**			**Pn**	**07 46 42.8**	**0.0**
SSBA						**Sn**	**07 47 08.8**	**0.0**
WEBT	**Westdahl Beart**	**2.09**	**327**			**Pn**	**07 46 43.8**	**+0.7**
AKUT	**Akutan**	**2.19**	**307**	Pn		**Pn**	**07 46 43.9**	**-0.5**
AKUT				IAML			07 47 12.5	
	comp=E,259nm,0.6s							
AKUT				IAML			07 47 12.6	
	comp=N,188nm,0.4s							
AKUT	**Akutan**	**2.19**	**307**			**Sn**	**07 47 09.7**	**-1.9**
DT1	**Dutton Round H**	**2.27**	**7**			**Pn**	**07 46 45.2**	**-0.3**
DT1						**Sn**	**07 47 12.4**	**-1.1**
AKRB	**Akutan Reef Bi**	**2.34**	**304**			**Pn**	**07 46 46.2**	**-0.2**
UNV	**Unalaska Valle**	**2.44**	**295**	Pn		**Pn**	**07 46 47.0**	**-0.8**
UNV				IAML			07 47 16.0	
	comp=N,170nm,0.2s							
UNV				IAML			07 47 16.8	
	comp=E,150nm,0.3s							
HAG	**Hague Volcano**	**2.51**	**12**			**Pn**	**07 46 49.9**	**+1.0**
MREP	**Makushin Rep't**	**2.56**	**293**			**Pn**	**07 46 48.8**	**-0.7**
PN7A	**Pavlof North-7**	**2.62**	**10**			**Pn**	**07 46 51.2**	**+0.8**
PS1A	**Pavlof South-1**	**2.64**	**13**			**Pn**	**07 46 51.8**	**+1.2**
CNBA	**Chernabura Isl**	**2.73**	**43**	Pn		**Pn**	**07 46 51.2**	**-0.6**
SDPT	**Sand Point**	**2.84**	**28**	Pn		**Pn**	**07 46 53.5**	**+0.1**
SDPT				IAML			07 48 02.1	
	comp=N,166nm,2.6s							
SDPT				IAML			07 48 06.5	
	comp=E,127nm,2.6s							
SDPT	**Sand Point**	**2.84**	**28**			**Sn**	**07 47 27.2**	**-0.4**
S12K	**Black Hills**	**2.88**	**8**	Pn		**Pn**	**07 46 54.9**	**+0.9**
S12K				IAML			07 47 39.5	
	comp=N,96nm,3.5s							
OKTU	**Okmok Mt. Tuli**	**3.21**	**281**			**Pn**	**07 46 56.9**	**-1.6**
VNKR	**Veniaminof 5**	**3.75**	**31**			**Pn**	**07 47 07.0**	**+1.1**
VNHG	**Veniaminof 1**	**3.97**	**31**			**Pn**	**07 47 10.2**	**+1.1**
CHIR	**Chirikof Islan**	**5.13**	**52**	Pn		**Pn**	**07 47 24.0**	**-0.8**
R16K	**Pilot Point**	**5.58**	**30**	Pn		**Pn**	**07 47 31.0**	**+0.1**
PLK4	**Peulik 4**	**6.03**	**35**	Pn		**Pn**	**07 47 37.8**	**+0.6**
O14K	**Tigyukauivest M**	**6.46**	**7**	Pn		**Pn**	**07 47 43.4**	**+0.3**
O15K	**Ungalikthiuk R**	**6.54**	**14**	Pn		**Pn**	**07 47 44.7**	**+0.5**
P16K	**Nushagak River**	**6.74**	**22**	Pn		**Pn**	**07 47 48.5**	**+1.6**
OHAK	**Old Harbor**	**6.99**	**48**	Pn		**Pn**	**07 47 49.5**	**-0.8**
N15K	**Kwethluk River**	**7.47**	**10**	Pn		**Pn**	**07 47 58.3**	**+1.3**
KDAK	**Kodiak Island**	**7.62**	**46**	Pn		**Pn**	**07 47 58.1**	**-0.9**
	comp=N,0.6nm,0.3s,baz=218,slow=6.4,SNR=1.3							
KDAK					Sn	**Sn**	**07 49 21.6**	**-3.8**
	baz=247,slow=23,SNR=0.9							
	comp=N,3.3nm,0.4s							
KDAK	**Kodiak Island**	**7.62**	**46**			**Pn**	**07 47 57.9**	**-1.1**
Q19K	**Cape Douglas,**	**7.96**	**37**	Pn		**Pn**	**07 48 03.2**	**-0.4**
O18K	**Koktuh Hills**	**8.17**	**28**	Pn		**Pn**	**07 48 06.4**	**-0.1**
M16K	**Timber Creek**	**8.44**	**13**	Pn		**Pn**	**07 48 10.2**	**0.0**
ILSW	**Iliamna Southw**	**8.91**	**33**	Pn		**Pn**	**07 48 17.2**	**+0.4**
N19K	**Bonanza Creek**	**9.17**	**26**	Pn		**Pn**	**07 48 20.9**	**+0.6**
K15K	**Wolf Creek Mou**	**9.48**	**4**	Pn		**Pn**	**07 48 25.1**	**+0.6**
ILAR	**Eielson Array**	**14.44**	**28**	Pn		**Pn**	**07 49 28.3**	**-3.9**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=4.4							
	comp=N,0.3nm,0.5s							
J26L	**Joseph Creek**	**15.27**	**33**	Pn		**Pn**	**07 49 43.1**	**-0.5**
J26L				IAmb		IAmb	07 49 54.0	
	comp=Z,3.3nm,1.0s							
C18K	**Utukok River**	**15.86**	**2**	Pn		**Pn**	**07 49 51.3**	**+0.2**
M29M	**Somme Creek**	**16.07**	**44**	Pn		**Pn**	**07 49 53.3**	**-0.6**
M29M				IAmb		IAmb	07 49 56.8	
	comp=Z,2.9nm,0.8s							
D22K	**Ayikyak River**	**16.76**	**13**	Pn		**Pn**	**07 50 02.9**	**+0.3**
D22K				IAmb		IAmb	07 50 12.1	
	comp=Z,5.1nm,1.1s							
I28M	**Miner Creek**	**17.07**	**34**	Pn		**Pn**	**07 50 06.7**	**+0.1**
H29M	**Whitestone**	**18.05**	**33**	P		**Pn**	**07 50 18.9**	**+0.2**
H29M				IAmb		IAmb	07 50 30.7	
	comp=Z,3.6nm,0.9s							
C27K	**Jago River**	**19.00**	**21**	P		**P**	**07 50 29.1**	**-0.3**
F30M	**Barrier River**	**19.69**	**31**	P		**P**	**07 50 37.5**	**+0.5**
F30M				IAmb		IAmb	07 50 41.0	
	comp=Z,5.1nm,0.9s							
F31M	**Tsiigehtchic**	**20.25**	**33**	P		**P**	**07 50 41.6**	**-1.5**
F31M				IAmb		IAmb	07 50 45.3	
	comp=Z,5.8nm,1.1s							
INK	**Inuvik**	**20.79**	**31**	P		**P**	**07 50 48.2**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=236,slow=11,SNR=14							
	comp=Z,1.3nm,0.6s							
INK	**Inuvik**	**20.79**	**31**	P		**P**	**07 50 49.2**	**+0.3**
PETK	**Petropavlovsk-**	**23.59**	**287**	P		**P**	**07 51 18.9**	**+0.3**
	comp=Z,4.5nm,1.0s,baz=76,slow=13,SNR=5.1							
	comp=Z,4.5nm,1.0s							

A36M	**Sachs Harbour**	**25.13**	**27**			**P**	**07 51 33.9**	**+1.2**
YKA	**Yellowknife Ar**	**26.87**	**50**	P		**P**	**07 51 50.2**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=270,slow=8.8,SNR=1.9							
	comp=Z,0.5nm,0.8s							
NVAR	**Mina Array Bea**	**33.70**	**97**	P		**P**	**07 52 50.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=311,slow=7.0,SNR=2.4							
	comp=Z,0.4nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**40.54**	**227**	T		T	08 36 50.9	
	baz=28,slow=76,SNR=8.4							
H11N3	**WAKE ISLAND Hy**	**40.55**	**227**	T		T	08 36 54.2	
	baz=28,slow=76,SNR=6.8							
H11N1	**WAKE ISLAND Hy**	**40.56**	**227**	T		T	08 36 57.1	
	baz=28,slow=76,SNR=7.7							
H11S1	**WAKE ISLAND Hy**	**41.70**	**226**	T		T	08 38 09.8	
	baz=33,slow=74							
H11S2	**WAKE ISLAND Hy**	**41.72**	**226**	T		T	08 38 10.6	
	baz=33,slow=74							
H11S3	**WAKE ISLAND Hy**	**41.72**	**226**	T		T	08 38 13.6	
	baz=33							
TX31	**Lajitas Ar. Si**	**48.75**	**95**	P		**P**	**07 54 54.1**	**+1.2**
TXAR	**Lajitas Array**	**48.75**	**95**	P		**P**	**07 54 54.2**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=302,slow=6.1,SNR=22							
	comp=Z,1.0nm,0.6s							
TXAR	**Lajitas Array**	**48.75**	**95**	P		**P**	**07 54 53.5**	**+0.6**

SNET ***22*** *07:50:11.7±0.7, 12.99N×89.18W, h32km±15km, ML3.0*

CATAC ***22*** *07:50:11.4±0.6, 13°N±3°×8.9W±°, h28km±3km, M2.8/15, MLv2.8/15, Error ellipse: s-maj=8.0km s-min=3.5km az=23.3, confirmed*

GCG ***22*** *07:50:12.8±0.3, 13.00N×89.40W, h34km±5km, MD3.5*

ISC 22 07:50:11.0±1.8, **12.94N**±0.08×**89.19W**±0.04, **h29**km±12km, **n53, σ0s30/60, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.56**	**347**	*e*P		**Pn**	**07 50 23.2**	**+0.2**
LALI	**Alcalda de L**	**0.56**	**347**	*e*P		**Pn**	**07 50 23.1**	**+0.2**
LALI	**Alcalda de L**	**0.56**	**347**	P		**Pn**	**07 50 23.1**	**+0.2**
LALI	**Alcalda de L**	**0.56**	**347**	S		**Sn**	**07 50 31.2**	**0.0**
LOMA	**Loma Larga**	**0.70**	**2**	S		**Sn**	**07 50 34.4**	**-0.5**
LOMA	**Loma Larga**	**0.70**	**2**	P		**Pb**	**07 50 24.3**	**-0.4**
TECO	**Alcaldia de Te**	**0.71**	**34**	*e*P		**Pb**	**07 50 24.6**	**-0.4**
TECO				*e*S		**Sn**	**07 50 34.7**	**-0.5**
TECO	**Alcaldia de Te**	**0.71**	**34**	P		**Pn**	**07 50 24.6**	**-0.4**
JAYA	**Jayaque - finc**	**0.75**	**341**	*i*P		**Pn**	**07 50 25.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.75**	**341**	*i* P		**Pn**	**07 50 25.6**	**-0.2**
JAYA				*e*S		**Sb**	**07 50 35.5**	**-0.1**
JAYA	**Jayaque - finc**	**0.75**	**341**	S		**Sn**	**07 50 36.4**	**+0.2**
JAYA	**Jayaque - finc**	**0.75**	**341**	P		**Pn**	**07 50 25.7**	**-0.2**
UEES	**Universidad Ev**	**0.77**	**357**	*e*P		**Pn**	**07 50 25.9**	**-0.1**
UEES				*e*S		**Sn**	**07 50 36.7**	**0.0**
UEES	**Universidad Ev**	**0.77**	**357**	P		**Pb**	**07 50 26.0**	**+0.1**
UEES	**Universidad Ev**	**0.77**	**357**	S		**Sn**	**07 50 37.1**	**+0.5**
PMON	**Piamonte**	**0.77**	**351**	*e*P		**Pn**	**07 50 25.8**	**-0.2**
PMON	**Piamonte**	**0.77**	**351**	S		**Sn**	**07 50 37.2**	**+0.5**
PMON	**Piamonte**	**0.77**	**351**	P		**Pn**	**07 50 26.0**	**0.0**
BOQS	**Boqueron**	**0.79**	**354**	*e*P		**Pb**	**07 50 26.5**	**+0.1**
BOQS				*e*S		**Sn**	**07 50 37.7**	**+0.3**
UESV	**Universidad de**	**0.79**	**30**	P		**Pn**	**07 50 26.1**	**-0.2**
UESV	**Universidad de**	**0.79**	**30**	S		**Sn**	**07 50 37.0**	**-0.2**
PIC2	**El Picacho**	**0.80**	**356**	*e*P		**Pb**	**07 50 26.7**	**+0.1**
PAVA	**Las Pavas**	**0.80**	**18**	*e*P		**Pb**	**07 50 26.6**	**+0.1**
PAVA	**Las Pavas**	**0.80**	**18**	P		**Pb**	**07 50 26.7**	**+0.1**
PAVA	**Las Pavas**	**0.80**	**18**	S		**Sn**	**07 50 37.6**	**+0.1**
TECA	**Tecapa**	**0.87**	**51**	*e*P		**Pn**	**07 50 27.5**	**0.0**
TECA				*e*S		**Sb**	**07 50 39.0**	**0.0**
SCLA	**Alcaldia de Sa**

	comp=N,129nm,3.2s							
O15K	**Ungalikthiuk R**	**3.32**	**11**			**Pn**	07 51 33.1	**+0.6**
O14K	**Tigyukauivet M**	**3.33**	**358**			**Pn**	07 51 33.5	**+0.8**
P16K	**Nushagak River**	**3.52**	**27**			**Pn**	07 51 36.3	**+1.2**
CNTC	**Contact Creek**	**3.66**	**48**			**Pn**	07 51 38.5	**+1.4**
UNV	**Unalaska Valle**	**3.78**	**239**	Pn		**Pn**	07 51 37.5	**-1.0**
UNV				IAML			07 53 07.6	
	comp=E,68nm,4.9s							
UNV				IAML			07 54 16.1	
	comp=N,75nm,4.5s							
ANCK	**Angle Creek**	**3.79**	**51**			**Pn**	07 51 40.4	**+1.7**
CAHL	**Cahill**	**3.80**	**54**			**Pn**	07 51 39.9	**+1.2**
ACHA	**Angle Creek He**	**3.87**	**52**			**Pn**	07 51 41.2	**+1.5**
O16K	**Kokwok River B**	**4.00**	**22**			**Pn**	07 51 42.0	**+0.8**
N14K	**Kuskokwak Cree**	**4.01**	**355**			**Pn**	07 51 41.5	**+0.1**
N14K				IAML			07 53 06.2	
	comp=N,102nm,1.9s							
N14K				IAML			07 54 37.5	
	comp=E,110nm,2.9s							
N15K	**Kwethluk River**	**4.28**	**7**	Pn		**Pn**	07 51 45.7	**+0.8**
N15K				IAML			07 52 58.1	
	comp=N,48nm,3.0s							
N15K				IAML			07 53 39.5	
	comp=E,48nm,3.1s							
OHAK	**Old Harbor**	**4.49**	**70**	Pn		**Pn**	07 51 47.4	**-0.2**
OHAK				IAML			07 53 46.9	
	comp=N,52nm,3.3s							
OHAK				IAML			07 54 17.1	
	comp=E,44nm,2.5s							
M13K	**Dall Lake**	**4.65**	**346**	Pn		**Pn**	07 51 50.9	**+1.2**
M14K	**Bethel**	**4.85**	**355**			**Pn**	07 51 52.5	**+0.2**
M14K				IAML			07 52 47.8	
	comp=E,68nm,2.4s							
M14K				IAML			07 54 44.8	
	comp=N,54nm,2.7s							
Q19K	**Cape Douglas,**	**5.00**	**50**			**Pn**	07 51 55.9	**+1.5**
KDAK	**Kodiak Island**	**5.01**	**65**	P		**Pn**	07 51 54.2	**-0.2**
	comp=N,4.2nm,0.3s,baz=256,slow=17,SNR=82							
KDAK				S		**Sn**	07 52 48.6	**-3.3**
	comp=N,14nm,0.3s,baz=294,slow=16,SNR=13							
O18K	**Koktuh Hills**	**5.02**	**36**	Pn		**Pn**	07 51 56.4	**+1.8**
O18K				IAML			07 52 42.9	
	comp=N,47nm,3.7s							
O18K				IAML			07 52 54.5	
	comp=E,44nm,3.6s							
N17K	**Nushagak Hills**	**5.04**	**22**	Pn		**Pn**	07 51 56.5	**+1.6**
N17K				IAML			07 54 24.9	
	comp=E,25nm,4.2s							
N17K				IAML			07 54 58.7	
	comp=N,26nm,3.3s							
SYI	**Shuyak Island**	**5.41**	**57**	Pn		**Pn**	07 52 00.6	**+0.8**
L14K	**Kuka Creek**	**5.49**	**352**			**Pn**	07 52 01.1	**+0.4**
M17K	**Holitna River**	**5.80**	**18**	Pn		**Pn**	07 52 06.2	**+1.4**
L16K	**Owhat River**	**5.85**	**7**	Pn		**Pn**	07 52 06.7	**+1.2**
N19K	**Bonanza Creek**	**5.99**	**33**	Pn		**Pn**	07 52 09.3	**+1.9**
K15K	**Wolf Creek Mou**	**6.38**	**358**	Pn		**Pn**	07 52 12.6	**0.0**
L18K	**Granite Mounta**	**6.69**	**18**	Pn		**Pn**	07 52 17.6	**+0.9**
K17K	**Iditarod**	**6.95**	**11**	Pn		**Pn**	07 52 20.6	**+0.5**
M20K	**Styx River**	**7.24**	**31**	Pn		**Pn**	07 52 26.6	**+2.6**
J16K	**Anvik River**	**7.38**	**2**	Pn		**Pn**	07 52 25.5	**-0.2**
SEW	**Seward**	**7.44**	**51**	Pn		**Pn**	07 52 26.7	**+0.1**
L20K	**Farewell, AK**	**7.52**	**26**	Pn		**Pn**	07 52 29.4	**+1.7**
J17K	**VABM Dome**	**7.55**	**7**	Pn		**Pn**	07 52 28.6	**+0.6**
SUA	**Susitna One**	**7.71**	**40**	Pn		**Pn**	07 52 30.8	**+0.5**
J18K	**Innoko River**	**7.86**	**14**	Pn		**Pn**	07 52 33.1	**+0.8**
K20K	**Telida**	**8.24**	**23**	Pn		**Pn**	07 52 38.7	**+1.5**
PWL	**Port Wells**	**8.30**	**48**	Pn		**Pn**	07 52 37.6	**-0.4**
J19K	**Poorman**	**8.53**	**16**	Pn		**Pn**	07 52 41.9	**+0.9**
H17K	**Granite Mounta**	**9.05**	**3**	Pn		**Pn**	07 52 48.7	**+0.7**
SCM	**Sheep Creek Mo**	**9.23**	**45**	Pn		**Pn**	07 52 49.9	**-0.6**
M24K	**Tolsona, Glenn**	**9.84**	**45**	Pn		**Pn**	07 52 57.6	**-0.8**
G18K	**Tagagawik**	**10.06**	**6**	Pn		**Pn**	07 53 02.3	**+1.0**
H21K	**Melozitna Rive**	**10.54**	**19**	Pn		**Pn**	07 53 08.7	**+1.1**
ILAR	**Eielson Array**	**11.27**	**32**	P		**Pn**	07 53 14.4	**-2.7**
	comp=N,0.3nm,0.3s,baz=225,slow=12,SNR=13							
ILAR				S		Sn	07 55 12.5	-9.2
	comp=N,0.4nm,0.6s,baz=344,slow=31,SNR=4.4							
E25K	**Arctic Village**	**14.15**	**24**	Pn		**Pn**	07 53 53.2	**-0.8**
BESE	**Bessie Mountai**	**14.39**	**69**	Pn		**Pn**	07 53 56.0	**-1.0**
J30M	**Hart River**	**14.92**	**45**	P		**Pn**	07 54 04.7	**+1.1**
J30M				IAmb	IAmb		07 54 08.7	
	comp=Z,4.7nm,0.6s							
H29M	**Whitestone**	**14.95**	**37**	P		**Pn**	07 54 04.8	**+1.0**
H29M				IAmb	IAmb		07 54 22.4	
	comp=Z,5.8nm,1.1s							
D25K	**Kavik River**	**14.96**	**20**			**Pn**	07 54 04.4	**+0.4**
I30M	**Mount Dempster**	**15.17**	**42**	P		**Pn**	07 54 07.8	**+1.1**
F28M	**Old Crow**	**15.29**	**32**	P		**Pn**	07 54 08.7	**+0.5**
F28M				IAmb	IAmb		07 54 44.8	
	comp=Z,6.4nm,1.4s							
EPYK	**Eagle Plains**	**15.60**	**38**	P		**Pn**	07 54 12.3	**+0.5**
EPYK				IAmb	IAmb		07 54 13.6	
	comp=Z,13nm,1.4s							
C27K	**Jago River**	**15.76**	**23**	P		**Pn**	07 54 13.0	**-0.8**
G30M	**tAoh Zraii Nji**	**16.08**	**37**			**Pn**	07 54 17.5	**-0.2**
G30M				IAmb	IAmb		07 54 21.9	
	comp=Z,10nm,1.3s							
H31M	**Peel River**	**16.19**	**42**	P		**Pn**	07 54 18.6	**-0.4**
H31M				IAmb	IAmb		07 54 22.6	
	comp=Z,6.1nm,0.5s							
E29M	**Blow River**	**16.36**	**31**	P		**P**	07 54 20.0	**-1.0**
DLBC	**Dease Lake**	**16.93**	**69**	S		**S**	07 57 27.6	**-7.8**
	comp=Z,1.6nm,1.0s,baz=72,slow=20,SNR=1.4							
INK	**Inuvik**	**17.65**	**35**	P		**P**	07 54 34.4	**-0.7**
	comp=Z,1.2nm,0.3s,baz=220,slow=15,SNR=16							
INK	**Inuvik**	**17.65**	**35**	P		**P**	07 54 34.1	**-1.1**
INK				IAmb	IAmb		07 55 05.5	
	comp=Z,4.3nm,1.2s							
A36M	**Sachs Harbour**	**21.94**	**29**	P		**P**	07 55 19.5	**-1.5**
A36M				IAmb	IAmb		07 55 23.4	
	comp=Z,8.6nm,0.9s							
PETK	**Petropavlovsk-**	**23.85**	**281**	P		**P**	07 55 42.2	**+3.1**
	comp=Z,3.9nm,0.9s,baz=52,slow=8.9,SNR=2.1							
	comp=Z,3.9nm,0.9s							
YKAW3	**Yellowknife Wh**	**24.19**	**55**	P		**P**	07 55 42.6	**+0.6**
YKA	**Yellowknife Ar**	**24.20**	**55**	P		**P**	07 55 43.7	**+1.6**
	comp=Z,0.9nm,0.6s,baz=240,slow=9.8,SNR=20							
	comp=Z,0.9nm,0.6s							
YKAW1	**Yellowknife Wh**	**24.25**	**55**	P		**P**	07 55 43.2	**+0.6**
PDAR	**Pinedale Array**	**35.19**	**90**	P		**P**	07 57 22.3	**+2.8**
	comp=Z,0.3nm,0.6s,baz=292,slow=2.1,SNR=6.4							
	comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**48.11**	**99**	P		**P**	07 59 07.2	**+2.8**
	comp=Z,0.6nm,0.6s,baz=303,slow=6.5,SNR=12							
	comp=Z,0.6nm,0.6s							
SCHQ	**Schefferville**	**49.44**	**49**	P		**P**	07 59 14.8	**+0.7**
	comp=Z,3.2nm,0.7s,baz=345,slow=12,SNR=1.5							
	comp=Z,3.2nm,0.7s							
HHC	**Hu-ho-hao-te**	**56.07**	**294**	*e*P		**P**	08 00 00.0	**-3.0**
HHC				pmax	pmax			
	comp=Z,8.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,100nm,6.1s							
FINES	**FINESS Array B**	**62.83**	**356**	P		**P**	08 00 48.4	**-0.4**
	comp=Z,1.6nm,0.5s,baz=14,slow=7.5,SNR=13							
	comp=Z,1.6nm,0.5s							
NOA	**NORSAR Array B**	**63.21**	**4**	P		**P**	08 00 51.7	**+0.3**
	comp=Z,0.6nm,0.6s,baz=296,slow=9.5,SNR=3.3							
	comp=Z,0.6nm,0.6s							
BVAR	**Borovoye Array**	**63.45**	**328**	P		**P**	08 00 52.9	**-0.1**
	comp=Z,0.5nm,0.5s,baz=64,slow=6.6,SNR=2.6							
	comp=Z,0.5nm,0.5s							
LZDM	**Lanzhou Array**	**63.80**	**296**	P		**P**	08 00 57.2	**+1.3**
	comp=Z,1.6nm,0.4s,baz=63,slow=4.2,SNR=2.1							
	comp=Z,1.6nm,0.4s							
HFS	**Hagfors**	**64.20**	**3**	P		**P**	08 00 57.9	**+0.1**
	comp=Z,1.9nm,0.4s,baz=31,slow=4.3,SNR=11							
	comp=Z,1.9nm,0.4s							
PZH	**PanZhiHua**	**72.32**	**291**	P		**P**	08 01 47.8	**-1.2**
AKASG	**Malin Array Be**	**73.39**	**353**	P		**P**	08 01 54.3	**-0.4**
	comp=Z,1.0nm,0.3s,baz=11,slow=6.2,SNR=5.5							
	comp=Z,1.0nm,0.3s							
QSPA	**South Pole Qui**	**145.72**	**180**	PKPbc		**PKiKP**	08 10 03.1	**+0.4**
	comp=Z,0.9nm,0.7s,baz=148,slow=0.4,SNR=11							

*ASRS **22** 08:06:33.0±1.2, 53.70N×91.03E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 22 08:06:40.5±6.2, 53.47N×90.68E, h0km, mbtmp2.6/3, ML2.2/3, Error ellipse: s-maj=67.1km s-min=30.2km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**3.52**	**280**	Pn	Pn	08 07 37.6	**+1.3**
	0.5nm,0.3s,baz=100,slow=15,SNR=4.8						
ZALV				Lg	Lg	08 08 32.5	
	0.5nm,0.3s,baz=96,slow=27,SNR=3.7						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**8.02**	**254**	Pn	Pn	08 08 37.3	-0.7
	baz=63,slow=15,SNR=5.5						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**8.58**	**222**	Pn	Pn	08 08 47.1	**+1.2**
	0.1nm,0.3s,baz=45,slow=13,SNR=2.0						
	0.1nm,0.3s						
I34MN	**SONGINO INFRAS**	**11.48**	**113**	I	I	09 13 10.0	
	baz=310,slow=337,SNR=1.2						

IDC 22 08:09:57.7±1.8, 4.04S×152.60E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=75.5km s-min=42.3km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.81**	**227**	P	P	08 15 12.6	**+0.1**
	2.1nm,0.6s,baz=54,slow=9.8,SNR=26						
WRA				PcP	PcP	08 18 55.8	-0.5
	0.3nm,0.5s,baz=50,slow=2.5,SNR=6.0						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**26.59**	**221**	P	P	08 15 37.5	-0.3
	0.2nm,0.3s,baz=55,slow=9.2,SNR=9.1						
ASAR				PcP	PcP	08 19 01.4	-1.1
	0.4nm,0.8s,baz=56,slow=2.1,SNR=3.0						
	0.2nm,0.3s						
QSPA	**South Pole Qui**	**85.92**	**180**	P	P	08 22 40.4	+0.9
	0.7nm,0.6s,baz=17,slow=8.7,SNR=6.7						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**149.88**	**289**	PKPbc	PKPbc	08 29 50.4	-0.6
	1.4nm,0.6s,baz=51,slow=6.4,SNR=1.1						

*IDC **22** 08:30:36.2±4.9, 23.73N×94.15E, h0km, mb3.3/3, mbtmp3.3/3, MS3.1/1, Error ellipse: s-maj=412.0km s-min=29.6km az=60.0*
*NDI **22** 08:30:39.7±2.5, 24.95N×93.93E, h30km±7km, ML3.5, MW3.3*

ISC 22 08:30:38.2±1.1, 24.89N±0.05×94.0E±0.1, h44km±8km, n10, σ1.79/14, mb3.4/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.09**	**230**	*e*P	**Pn**	**08 30 45.2**	**-0.2**
IMP				*e*S	**Sn**	**08 30 50.1**	**-0.2**
IMP				IAML		08 30 50.4	
	comp=N,2μm,0.5s						
IMP				IAML		08 30 50.5	
	comp=E,1μm,0.2s						
KOHI	**KOHIMA**	**0.83**	**5**	*e*P	**Pn**	**08 30 54.1**	**+0.5**
KOHI				*e*S	**Sn**	**08 31 06.1**	**+1.3**
KOHI				IAML		08 31 09.6	
	comp=E,1μm,0.4s						
KOHI				IAML		08 31 10.2	
	comp=N,1μm,0.4s						
MOKO	**MOKOCHONG**	**1.49**	**17**	*e*P	**Pn**	**08 31 03.9**	**+1.3**
MOKO				*e*S	**Sn**	**08 31 24.0**	**+3.0**
MOKO				IAML		08 31 26.2	
	comp=E,2μm,0.2s						
MOKO				IAML		08 31 26.6	
	comp=N,1μm,0.2s						
TEZP	**TEZPUR**	**2.04**	**328**	*e*P	**Pn**	**08 31 10.2**	**+0.1**
TEZP				*e*S	**Sn**	**08 31 35.0**	**+0.7**
TEZP				IAML		08 31 41.0	
	comp=N,844nm,0.1s						
TEZP				IAML		08 31 41.2	
	comp=E,679nm,0.1s						
SAIH	**SAIHA**	**2.57**	**202**	*e*P	**Pn**	**08 31 18.4**	**+1.0**
SAIH				*e*S	**Sn**	**08 31 50.8**	**+3.2**
ZIRO	**ZIRO**	**2.63**	**357**	*e*P	**Pn**	**08 31 18.5**	**+0.2**
ZIRO				*e*S	**Sn**	**08 31 49.1**	**0.0**
ZIRO				IAML		08 32 00.1	
	comp=N,727nm,0.4s						
ZIRO				IAML		08 32 00.5	
	comp=E,474nm,0.3s						
MKAR	**Makanchi Array**	**23.78**	**340**	P	P	08 36 00.9	+14
	comp=E,0.5nm,0.6s,baz=154,slow=9.9,SNR=4.5						
	comp=E,0.5nm,0.6s						
SONM	**Songino Array**	**24.91**	**20**	LR	LR	08 48 41.9	
	comp=E,42nm,19.6s,baz=350,slow=42						
WRA	**Warramunga Arr**	**59.37**	**135**	P	**P**	**08 40 34.1**	**-2.1**
	comp=E,0.2nm,0.6s,baz=322,slow=7.5,SNR=4.8						
	comp=E,0.2nm,0.6s						
ASAR	**Alice Springs**	**61.84**	**138**	P	**P**	**08 40 51.2**	**-1.8**
	comp=E,0.2nm,0.4s,baz=320,slow=6.6,SNR=5.1						
	comp=E,0.2nm,0.4s						

IDC 22 08:37:43.8±1.7, 54.62N×83.74E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=15.3km s-min=10.5km az=9.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**136**	I	I	08 43 20.0	
	0.3nm,1.0s,baz=316,slow=346,SNR=14						
ZALV	**Zalesovo Beam**	**0.93**	**136**	Pg	Pg	08 38 01.0	-0.6
	1.3nm,0.3s,baz=320,slow=16,SNR=14						
ZALV				Lg	Lg	08 38 15.0	
	3.7nm,0.3s,baz=317,slow=29,SNR=23						
ZALV				Rg	Rg	08 38 19.7	
	15nm,0.9s,baz=320,slow=26,SNR=11						
MKAR	**Makanchi Array**	**7.89**	**187**	Pn	Pn	08 39 40.3	+0.4
	0.1nm,0.3s,baz=11,slow=9.3,SNR=1.9						
	0.1nm,0.4s						
BVAR	**Borovoye Array**	**8.06**	**264**	Pn	Pn	08 39 41.3	-0.8
	0.1nm,0.3s,baz=69,slow=13,SNR=4.5						
	0.6nm,0.4s						

TAP 22 08:43:06.0, 24.14N×121.61E, h2km, ML1.4, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.02**	**36**	*i*P	Pg	08 43 06.8	+0.3
ETL				*i*S	Sg	08 43 07.2	+0.2
NACB	**Ninganchiao**	**0.03**	**333**	*i*P	Pg	08 43 07.3	+0.6
NACB				*i*S	Sg	08 43 08.0	+0.8
TWD	**Chiawan**	**0.07**	**192**	*i*P	Pg	08 43 07.9	+0.6
TWD				*i*S	Sg	08 43 09.2	+1.1
ETLH	**Xiulin Townshi**	**0.13**	**298**	*e*P	Pg	08 43 09.4	+0.8
ETLH				S	Sg	08 43 12.4	+2.0
LXIB	**Xiulin Townshi**	**0.22**	**236**	P	Pg	08 43 11.5	+1.4
LXIB				S	Sg	08 43 15.3	+2.2
TEYL	**Yanliau Villag**	**0.28**	**182**	*e*P	Pg	08 43 12.1	+0.8
ENA	**Nanau**	**0.31**	**23**	*e*P	Pb	08 43 13.3	-0.9
WHF	**Hehuan Shan**	**0.32**	**270**	P	Pb	08 43 13.5	-1.1
WHF				*e*S	Sb	08 43 19.1	-1.3
EWUT	**Wuta**	**0.34**	**27**	*e*P	Pb	08 43 14.0	-0.7
FUSS	**Fushou**	**0.35**	**287**	*e*S	Sg	08 43 19.2	+1.9

JMA 22 08:43:13.3±0.3, 24.2N±0.6×123.8E±0.7, h18km±1km, MV1.3/5, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.12**	**351**	*e*P	Pg	08 43 17.2	0.0
IRIF				*e*S	Sg	08 43 19.7	-0.1
HATJ	**Hateruma jima**	**0.17**	**163**	*e*S	Sg	08 43 20.5	-0.3
JKRS	**Kuro-shima**	**0.24**	**85**	*e*P	Pg	08 43 18.8	0.0
JKRS				*e*S	Sb	08 43 22.9	+0.2
JIJ	**Ishigaki jima**	**0.39**	**68**	*e*P	Pg	08 43 21.1	-0.3
JIJ				*e*S	Sg	08 43 26.4	-0.4
JISG	**Ishigakijimahi**	**0.63**	**54**	*e*P	Pb	08 43 25.6	-0.2
JISG				*e*S	Sb	08 43 33.9	-0.3

IDC 22 08:49:24.6±4.6, 46.33N×109.16E, h0km, mbtmp3.4/1, ML3.5/1, Error ellipse: s-maj=46.1km s-min=23.2km az=13.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	**SONGINO INFRAS**	**2.39**	**309**	I	I	09 05 50.0	
	baz=126,slow=336,SNR=0.4						
SONM	**Songino Array**	**2.42**	**310**	Pg	Pb	08 50 08.3	-0.7
	0.5nm,0.3s,baz=132,slow=17,SNR=4.1						
SONM				Lg	Lg	08 50 41.7	
	0.6nm,0.3s,baz=127,slow=29,SNR=6.7						
HILR	**Hailar Array B**	**7.81**	**62**	Pn	Pn	08 51 19.8	+0.3
	baz=256,slow=12						
	0.8nm,0.3s						

HEL 22 08:51:35.7±0.2, 65.19N×25.91E, h0km, ML0.8, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUL	**Oulu**	**0.10**	**183**	PG	Pg	08 51 37.6	0.0
OBF4	**Vikkela, Lumij**	**0.51**	**223**	PG	Pg	08 51 44.9	-0.5
OBF4				SG	Sg	08 51 51.4	-0.6
OBF4				smax	smax	08 51 52.0	
	comp=Z,1.1nm,0.2s						
RANF	**Ranua**	**0.91**	**23**	PG	Pg	08 51 52.4	-0.7
RANF				SB	Sg	08 52 04.9	0.0
OUF	**Merijarvi**	**0.96**	**212**	PB	Pg	08 51 53.2	-0.9
OUF				smax	smax	08 52 05.3	
	comp=Z,0.7nm,0.2s						
KU2	**Taivalkoski**	**1.10**	**60**	PG	Pg	08 51 54.9	-2.0
KU2				SN	Sn	08 52 13.6	-0.7
TOF	**Tornio**	**1.11**	**325**	PG	Pg	08 51 55.7	-1.3
TOF				smax	smax	08 52 09.4	
	comp=Z,0.4nm,0.2s						
KALU	**Kalix**	**1.26**	**304**	PN	Pg	08 51 59.5	-0.4
	baz=122						
KALU				SN	Sn	08 52 20.0	+1.9
RNF	**Rovaniemi**	**1.43**	**2**	PN	Pn	08 52 02.1	-0.7
	baz=181						
RNF				SN	Sn	08 52 22.4	+0.1
OLKF	**Oulanka, Finla**	**1.84**	**50**	smax	smax	08 52 30.4	
	comp=Z,0.5nm,0.2s						
OLKF				SN	Sg	08 52 34.6	0.0
KU6	**Riekki**	**1.86**	**61**	PG	Pb	08 52 09.7	-0.7
	baz=243						
KU6				smax	smax	08 52 30.9	
	comp=Z,0.4nm,0.2s						
KU6				SG	Sb	08 52 34.4	+0.2
RMF	**Romuvaara**	**1.98**	**118**	smax	smax	08 52 34.5	
	comp=Z,0.7nm,0.2s						
RMF				SG	Sg	08 52 39.4	+0.1
BURU	**Burvik**	**2.03**	**255**	SG	Sb	08 52 38.6	-0.4
ERTU	**Ertsjaerv**	**2.06**	**314**	SG	Sb	08 52 39.6	-0.3
PAJU	**Pajala**	**2.17**	**330**	SG	Sn	08 52 41.4	+0.8
KLF	**Kolari**	**2.20**	**340**	SB	Sn	08 52 41.0	-0.4
KLF				smax	smax	08 52 41.0	
	comp=Z,0.3nm,0.2s						
SUF	**Sumiainen**	**2.48**	**177**	smax	smax	08 52 48.8	
	comp=Z,0.3nm,0.2s						
KTK1	**Kautokeino**	**3.98**	**346**	PN	Pn	08 52 36.3	-1.6
KEV	**Kevo**	**4.61**	**5**	SN	Sn	08 53 36.8	-3.8
PVF	**Pernaja**	**4.66**	**180**	PB	Pb	08 52 52.9	-5.3

*IDC **22** 08:52:02.4±4.3, 60.78N×29.00E, h0km, Error ellipse: s-maj=25.9km s-min=24.2km az=24.0*
*HEL **22** 08:52:02.9±0.5, 60.71N×28.93E, h0km, ML1.6, Suspected explosion*

ISC 22 08:52:02.3±1.6, 60.71N±0.07×28.77E±0.07, h0km, n14, σ0.65/20, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.62**	**254**	PG	**Pb**	**08 52 16.0**	**0.0**
VJF				SG	**Sb**	**08 52 24.9**	**-0.4**
VJF				smax	smax	08 52 24.9	
	comp=Z,9.0nm,0.2s						
RUF	**Ruokolahti**	**0.72**	**7**	PB	**Pg**	**08 52 16.6**	**+0.5**
RUF				smax	smax	08 52 25.2	
	comp=Z,4.7nm,0.2s						
RUF				SG	**Sg**	**08 52 25.9**	**+0.6**
PVF	**Pernaja**	**1.44**	**265**	PG	**Pg**	**08 52 29.9**	**0.0**
	baz=87						
PVF				smax	smax	08 52 48.5	
	comp=Z,7.2nm,0.2s						
PVF				SG	**Sn**	**08 52 50.4**	**+1.2**
FIA0	**FINESS Array S**	**1.50**	**300**	PG	**Pb**	**08 52 30.8**	**-0.1**
	baz=118						
FIA0				smax	smax	08 52 49.8	
	comp=Z,6.4nm,0.2s						
FIA0				SN	**Sn**	**08 52 51.3**	**+0.7**
FINES	**FINESS Array B**	**1.50**	**300**	Pg	**Pn**	**08 52 30.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=118,slow=16,SNR=19						
FINES				Lg	Lg	08 52 51.5	
	comp=Z,3.1nm,0.3s,baz=113,slow=31,SNR=38						
FINES				Rg	Rg	08 52 56.9	
	comp=Z,29nm,0.8s,baz=118,slow=33,SNR=17						
NUR	**Nurmijarvi**	**2.04**	**266**	PG	**Pg**	**08 52 41.2**	**-0.1**
NUR				smax	smax	08 53 05.6	
	comp=Z,1.8nm,0.2s						
NUR				SG	**Sg**	**08 53 08.1**	**+0.3**
MEF	**Metsahovi**	**2.22**	**259**	smax	smax	08 53 10.8	
	comp=Z,2.6nm,0.2s						
MEF				SG	**Sg**	**08 53 12.8**	**-0.7**
SUF	**Sumiainen**	**2.37**	**329**	PG	**Pb**	**08 52 45.8**	**+0.1**
SUF				smax	smax	08 53 14.2	
	comp=Z,1.0nm,0.2s						
SUF				SG	**Sg**	**08 53 17.3**	**-1.0**
KEF	**Keuruu**	**2.37**	**310**	PG	**Pb**	**08 52 45.4**	**-0.4**
KEF				smax	smax	08 53 14.9	
	comp=Z,1.9nm,0.2s						
KEF				SG	**Sg**	**08 53 17.2**	**-1.2**
JOF	**Joensuu**	**2.52**	**28**	PG	**Pb**	**08 52 47.6**	**-0.7**
JOF				SG	**Sb**	**08 53 19.1**	**-0.8**
NIF	**Nilsia**	**2.72**	**351**	smax	smax	08 53 23.5	
	comp=Z,2.4nm,0.2s						
NIF				SG	**Sb**	**08 53 26.2**	**+0.5**
RAF	**Rauma**	**3.44**	**278**	SG	**Sg**	**08 53 52.4**	**-0.2**
I43RU	**DUBNA INFRASON**	**5.95**	**129**	I	I	09 28 40.0	
	baz=321,slow=328,SNR=1.8						
I31KZ	**AKTYUBINSK INF**	**19.33**	**109**

CNCH	Conchagua	1.07	69	P	Pn	08 52 26.4	-0.3
CNCH	Conchagua	1.07	69	S	Sn	08 52 40.4	-0.2
CEVE	Cerro Verde	1.19	321	*eP*	Pn	08 52 29.4	+0.8
CEVE	Cerro Verde	1.19	321	S	Sb	08 52 44.7	-0.5
CEVE	Cerro Verde	1.19	321	P	Pb	08 52 29.6	-0.4
SBLS	San Blas	1.20	322	*eP*	Pn	08 52 29.6	+0.8
LLGN	La Laguna	1.26	356	P	Pn	08 52 29.3	-0.2
LLGN	La Laguna	1.26	356	S	Sn	08 52 45.3	-0.1
CSGN	Cosiguina Volc	1.27	86	P	Pn	08 52 29.7	+0.2
CSGN				S	Sb	08 52 46.9	-0.4
POTN	Potosi Cosigui	1.32	85	P	Pn	08 52 30.3	+0.1
NUBE	Las Nubes	1.35	318	*eP*	Pn	08 52 31.0	+0.4
NUBE	Las Nubes	1.35	318	*i* P	Pn	08 52 31.0	+0.4
NUBE				*eS*	Sn	08 52 47.3	-0.3
NUBE	Las Nubes	1.35	318	P	Pn	08 52 31.0	+0.4
FAME	Alcaldia de Sa	1.47	310	S	Sn	08 52 49.7	-0.7
FAME	Alcaldia de Sa	1.47	310	P	Pn	08 52 33.5	+1.3
MTO3	Montecristo	1.57	342	P	Pn	08 52 33.9	0.0
MTO3	Montecristo	1.57	342	S	Sn	08 52 53.0	-0.3
PKGN	Cerro Pekin	1.85	97	S	Sn	08 52 59.3	-0.5
CNGN	Cerro Negro	2.14	100	S	Sn	08 53 07.6	+0.5
MOM3	MOM3	2.31	99	P	Pn	08 52 44.3	+0.5
COPN	Copaltepe	2.32	108	P	Pn	08 52 45.0	+1.1
LIMN	Finca el Limon	2.43	86	P	Pn	08 52 45.0	-0.5
LIMN				S	Sn	08 53 13.8	-0.6

BJI ***22*** *09:05:03.7, 31.65N× 132.28E, h42km, mB5.3/54, mb5.2/88, Ms5.1/92, Ms7.5.1/89*

NEIC ***22*** *09:05:05.4, 31.95N× 131.99E, h30km*

NEIC ***22*** *09:05:05.4, 31.85N× 131.87E, h30km, Moment Tensor Solution. Duration: 1s9 Moment tensor: Scale 10^16Nm; Mrr3.67; Mθθ-0.55; Mφφ-3.13; Mrθ1.49; Mθφ-2.00; Mφr2.96; Fault plane solution: M0 5.17000×10^16 NP1: φs210.15000°, δ25.03000°, λ92.60000°. NP2:φs27.28000°, δ65.00000°, λ88.79000°. Principal axes: T 4.8806, Plg70.0000°, Azm295.0000°; N 0.5386, Plg1.0000°, Azm28.0000°; P -5.4192, Plg20.0000°, Azm118.0000°;*

JMA ***22*** *09:05:08.2±0.1, 31.9N±0.3× 131.9E±0.6, h24km±1km, MD5.2/38, MW5.2/38, HYUGANADA REGION*

JMA Felt III J1 at HYUGANADA REGION .

MOS ***22*** *09:05:08.5±1.1, 31.97N× 131.72E, h49km, mb5.3/64, MS5.3/14, Error ellipse: s-maj=6.7km s-min=3.9km az=114.4*

NEIC ***22*** *09:05:08.7±2.4, 31.91N±0.06× 131.95E±0.06, h35km±2km, mb5.4/79, Mww5.1/20, Error ellipse: s-maj=9.6km s-min=8.4km az=185.0*

NIED ***22*** *09:05:08.2, 31.94N× 131.91E, h24km, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^16Nm; Mrr2.83; Mθθ-0.27; Mφφ-2.57; Mrθ2.57; Mθφ-2.69; Mφr4.03; Fault plane solution: M0 5.98000×10^16 NP1: φs215.00000°, δ18.00000°, λ93.00000°. NP2:φs32.00000°, δ72.00000°, λ89.00000°.*

GCMT ***22*** *09:05:08.7±0.2, 31.92N±0.01× 132.11E±0.02, h36km, MW5.2/104, Moment Tensor Solution. s85,c121; s104,c165; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.69±.02; Mθθ-0.11±.01; Mφφ-0.58±.01; Mrθ0.22±.01; Mθφ-0.24±.01; Mφr0.34±.01; Best double couple: M0 0.79600×10^17 NP1:φs198.00000°, δ30.00000°, λ82.00000°. NP2:φs27.00000°, δ60.00000°, λ95.00000°. Principal axes: T 0.8050, Plg74.0000°, Azm310.0000°; N -0.0160, Plg4.0000°, Azm205.0000°; P -0.7880, Plg15.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***22*** *09:05:13.2±1.0, 31.98N× 131.69E, h72km±8km, mb4.5/30, mbtmp4.8/34, MS4.8/55 Error ellipse: s-maj=12.3km s-min=8.5km az=69.0*

BGR ***22*** *09:05:19.9, 32.33N× 132.36E, h33km, mb5.3, Ms5.4*

ISC 22 09:05:09.2±0.3, 31°91N±0°03× 131°87E±0°03, h40km±2km, h40km:pP-P, n907, σ1§61/935, mb5.2/185, MS5.1/89, 49C-27D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.45**	**318**	⇓P		**Pn**	**09 05 17.4**	**-2.0**
JTSN				⇓S		**Sn**	**09 05 24.2**	**-2.3**
JTSN	**Tsuno**	**0.45**	**318**	A		A	09 05 17.4	
	comp=N,208nm,1.1s,comp=E,205nm,2.0s							
JNKG	**Nichinankitago**	**0.48**	**239**	⇓*i* P		**Pn**	**09 05 18.4**	**-1.4**
JNKG				⇓S		**Sn**	**09 05 26.4**	**-0.7**
JNKG	**Nichinankitago**	**0.48**	**239**	A		A	09 05 18.4	
	comp=N,360nm,2.0s,comp=E,163nm,2.4s							
JHHC	**Hyugahichiya**	**0.57**	**340**	⇓*i* P		**Pn**	**09 05 19.1**	**-1.7**
JHHC				⇓S		**Sn**	**09 05 27.1**	**-2.0**
JHHC	**Hyugahichiya**	**0.57**	**340**	A		A	09 05 19.1	
	comp=N,144nm,0.6s,comp=E,287nm,3.2s							
JNAR	**Kushima--Naru**	**0.64**	**233**	*i* P		**Pn**	**09 05 21.4**	**-0.4**
JNAR				S		**Sn**	**09 05 31.1**	**+0.4**
JNAR	**Kushima--Naru**	**0.64**	**233**	A		A	09 05 21.4	
	comp=N,387nm,2.0s,comp=E,204nm,4.2s							
JTZ	**Takazaki**	**0.66**	**269**	⇓P		**Pn**	**09 05 21.5**	**-0.7**
JTZ				⇓S		**Sn**	**09 05 31.1**	**-0.3**
JTZ	**Takazaki**	**0.66**	**269**	A		A	09 05 21.5	
	comp=N,261nm,1.4s,comp=E,173nm,2.1s							
JKIT	**Kitakata**	**0.79**	**334**	A		A	09 05 23.0	
	comp=N,168nm,0.6s,comp=E,332nm,0.8s							
JSKE	**Saikikamae**	**0.89**	**2**	A		A	09 05 24.1	
	comp=N,101nm,1.3s,comp=E,263nm,1.8s							
JIU3	**Izumi3**	**1.10**	**306**	*i* P		**Pn**	**09 05 28.3**	**+0.2**
JIU3				S		**Sn**	**09 05 44.2**	**+2.1**
JIU3	**Izumi3**	**1.10**	**306**	A		A	09 05 28.3	
	comp=N,163nm,1.7s,comp=E,115nm,1.8s							
JTSR	**Tashiro 2**	**1.10**	**228**	A		A	09 05 28.7	
	comp=N,96nm,0.8s,comp=E,131nm,0.7s							
JZO	**Okuchi**	**1.10**	**282**	*i* P		**Pn**	**09 05 28.2**	**0.0**
JZO				*eS*		**Sn**	**09 05 45.0**	**+2.7**
JZO	**Okuchi**	**1.10**	**282**	A		A	09 05 28.2	
	comp=N,164nm,0.7s,comp=E,222nm,1.2s							
JUS	**Usuki**	**1.16**	**355**	⇓*i* P		**Pn**	**09 05 29.4**	**+0.4**
JUS				⇓S		**Sn**	**09 05 45.4**	**+1.8**
JUS	**Usuki**	**1.16**	**355**	A		A	09 05 29.4	
	comp=N,111nm,2.2s,comp=E,269nm,1.4s							
JTO	**Tosashimizu**	**1.23**	**40**	⇓*i* P		**Pn**	**09 05 28.9**	**-1.1**
JTO	**Tosashimizu**	**1.23**	**40**	A		A	09 05 28.9	
	comp=N,40nm,4.5s,comp=E,55nm,1.4s							
JSU	**Suzuyama**	**1.27**	**252**	A		A	09 05 31.3	
	comp=N,66nm,1.5s,comp=E,52nm,3.0s							
UWA2	**Uwa jima 2**	**1.45**	**26**	A		A	09 05 32.8	
	comp=N,64nm,1.9s,comp=E,70nm,2.9s							
JTN	**Tanegashima 3**	**1.46**	**211**	A		A	09 05 34.2	
	comp=N,65nm,1.4s,comp=E,43nm,2.3s							
JNU	**Nakatsue**	**1.47**	**326**	P		**Pn**	**09 05 35.2**	**+1.9**
	comp=E,12μm,0.6s,baz=129,slow=4.1,SNR=2883							
JNU				S		**Sn**	**09 05 54.4**	**+3.1**
	comp=E,10μm,0.8s,baz=79,slow=16,SNR=7.4							
JNU				LR		LR	09 06 23.2	
	comp=E,44μm,18.3s,baz=148,slow=53							
JNU	**Nakatsue**	**1.47**	**326**			**Pn**	**09 05 34.5**	**+1.2**
JNU				Sn		**Sn**	**09 05 53.4**	**+2.1**
JNU	**Nakatsue**	**1.47**	**326**	P		**Pn**	**09 05 34.7**	**+1.4**
JNU	**Nakatsue**	**1.47**	**326**	A		A	09 05 33.7	
	comp=N,74nm,1.0s,comp=E,137nm,1.9s							
JBEP	**Beppuamama**	**1.47**	**345**	A		A	09 05 33.5	
	comp=N,266nm,1.2s,comp=E,356nm,2.0s							
JTA	**Tamana**	**1.54**	**313**	A		A	09 05 35.0	
	comp=N,111nm,1.8s,comp=E,113nm,1.7s							
JHD	**Hondo**	**1.57**	**291**	A		A	09 05 35.6	
	comp=N,69nm,2.9s,comp=E,108nm,2.2s							
JMTN	**Minamitane**	**1.72**	**209**	A		A	09 05 38.0	
	comp=N,36nm,1.4s,comp=E,42nm,3.6s							
JNA	**Nagahama**	**1.72**	**17**	A		A	09 05 36.9	
	comp=N,53nm,1.2s,comp=E,49nm,2.0s							
JKU	**Kubokawa**	**1.72**	**36**	A		A	09 05 36.8	
	comp=N,42nm,1.2s,comp=E,34nm,1.1s							
JKI	**Kunimi**	**1.73**	**352**	A		A	09 05 37.4	
	comp=N,150nm,1.7s,comp=E,94nm,1.2s							
JSJ	**Shimokoshiki**	**1.85**	**263**	A		A	09 05 39.9	
	comp=N,24nm,2.1s,comp=E,19nm,4.2s							
NGSJ	**Nagasakinomoza**	**1.89**	**293**	A		A	09 05 40.3	
	comp=N,42nm,3.8s,comp=E,63nm,2.0s							
JFI	**Itaya**	**1.96**	**321**	A		A	09 05 41.0	
	comp=N,46nm,2.0s,comp=E,51nm,2.2s							
JUR	**Ureshino**	**2.00**	**307**	A		A	09 05 41.8	
	comp=N,50nm,1.4s,comp=E,69nm,2.3s							
JFA	**Akaike**	**2.01**	**334**	A		A	09 05 41.6	
	comp=N,51nm,2.0s,comp=E,45nm,2.6s							
JYAK	**Yakushimahirau**	**2.03**	**215**	A		A	09 05 42.6	
	comp=N,29nm,3.7s,comp=E,28nm,2.5s							
JKHR	**Kochiharuno**	**2.11**	**40**	A		A	09 05 42.4	
	comp=N,33nm,1.3s,comp=E,25nm,2.9s							
JET	**Tanbara**	**2.11**	**28**	A		A	09 05 42.5	
	comp=N,40nm,2.1s,comp=E,24nm,2.5s							
JKD	**Kudamatsu**	**2.14**	**0**	A		A	09 05 43.1	
	comp=N,39nm,2.0s,comp=E,74nm,1.8s							
JTY	**Toyota**	**2.44**	**344**	A		A	09 05 47.7	
	comp=N,30nm,1.3s,comp=E,27nm,2.0s							
JMN	**Monobe**	**2.48**	**43**			**Pn**	**09 05 46.5**	**-0.7**
JMN					Sn	**Sn**	**09 06 11.8**	**-4.5**
JMN	**Monobe**	**2.48**	**43**	P		**Pn**	**09 05 48.3**	**+1.1**
JMN	**Monobe**	**2.48**	**43**	A		A	09 05 47.8	
	comp=N,27nm,1.1s,comp=E,19nm,1.8s							
JII	**Iki**	**2.60**	**317**	A		A	09 05 50.3	
	comp=N,78nm,1.7s,comp=E,64nm,2.2s							
JHIK	**Hikimi**	**2.61**	**1**	A		A	09 05 50.0	
	comp=N,25nm,2.8s,comp=E,75nm,1.8s							
JNN	**Nakanoshima**	**2.68**	**220**	A		A	09 05 51.9	
	comp=N,13nm,1.0s,comp=E,15nm,3.3s							
JFU	**Fukue jima 2**	**2.74**	**287**	A		A	09 05 52.6	
	comp=N,19nm,1.7s,comp=E,32nm,4.5s							
JHT	**Toyohira**	**2.78**	**9**	A		A	09 05 52.3	
	comp=N,32nm,1.4s,comp=E,64nm,3.4s							
JMAF	**Mimaanabuki**	**2.87**	**41**	A		A	09 05 53.3	
	comp=N,17nm,1.8s,comp=E,10.0nm,2.8s							
JHGM	**Hagimishima**	**2.93**	**348**	A		A	09 05 54.5	
	comp=N,52nm,1.7s,comp=E,38nm,2.7s							
JJG	**Jogo**	**2.93**	**21**	A		A	09 05 54.3	
	comp=N,33nm,3.4s,comp=E,26nm,1.5s							
JJS	**Sakaide**	**3.01**	**35**	A		A	09 05 55.3	
	comp=N,18nm,1.3s,comp=E,23nm,1.3s							
JGT2	**ShimaneMisato**	**3.19**	**9**	A		A	09 05 58.1	
	comp=N,36nm,1.5s,comp=E,31nm,2.4s							
JTSM	**Tsushimamitsus**	**3.19**	**320**	A		A	09 05 58.6	
	comp=N,25nm,3.6s,comp=E,33nm,3.7s							
JHS	**Saijyo**	**3.25**	**18**	A		A	09 05 58.9	
	comp=N,15nm,1.1s,comp=E,48nm,1.6s							
JTU	**Tsushima**	**3.33**	**322**	P		**Pn**	**09 05 59.6**	**+0.8**
JTU	**Tsushima**	**3.33**	**322**	A		A	09 06 00.6	
	comp=N,24nm,3.9s,comp=E,36nm,3.0s							
JWM	**Minabe**	**3.52**	**56**	A		A	09 06 02.4	
	comp=N,5.0nm,4.6s,comp=E,5.0nm,2.4s							
JAWN	**Awajishima-nag**	**3.62**	**44**	A		A	09 06 03.9	
	comp=N,14nm,2.8s,comp=E,7.0nm,3.2s							
JISK	**Izumosakaura**	**3.67**	**13**	A		A	09 06 04.9	
	comp=N,38nm,1.7s,comp=E,49nm,2.8s							
JNM	**Ikuma**	**3.71**	**15**	A		A	09 06 05.3	
	comp=N,68nm,1.5s,comp=E,59nm,1.5s							
JKR	**Kurayoshi**	**3.82**	**25**	A		A	09 06 06.9	
	comp=N,32nm,1.8s,comp=E,27nm,2.9s							
JMIK	**Miki**	**3.93**	**42**	A		A	09 06 08.4	
	comp=N,26nm,1.1s,comp=E,12nm,1.1s							
JKS	**Kasai**	**3.95**	**38**	A		A	09 06 08.6	
	comp=N,8.0nm,4.6s,comp=E,7.0nm,5.9s							
JKSM	**Kasumi**	**4.34**	**32**	A		A	09 06 14.3	
	comp=N,11nm,6.1s,comp=E,13nm,3.1s							
JOI	**OKI**	**4.52**	**14**	A		A	09 06 16.8	
	comp=N,22nm,1.7s,comp=E,37nm,5.1s							
JKY	**Yasaka**	**4.58**	**35**	A		A	09 06 17.6	
	comp=N,22nm,1.8s,comp=E,12nm,3.9s							
JFM	**Mihama**	**4.98**	**42**	A		A	09 06 23.1	
	comp=N,6.0nm,2.1s,comp=E,4.0nm,1.5s							
INU	**Inuyama**	**5.50**	**50**			**Pn**	**09 06 28.1**	**-0.5**
INU					Sn	**Sn**	**09 07 28.2**	**-2.3**
INU	**Inuyama**	**5.50**	**50**	P		**Pn**	**09 06 30.1**	**+1.5**
INU	**Inuyama**	**5.50**	**50**	S		**Sn**	**09 07 30.5**	**0.0**
TJN	**Taejon**	**5.81**	**321**			**Pn**	**09 06 34.0**	**+1.1**
TJN	**Taejon**	**5.81**	**321**	P		**Pn**	**09 06 34.7**	**+1.8**
TJN	**Taejon**	**5.81**	**321**	*i* P		**Pn**	**09 06 33.7**	**+0.8**
JGF	**Kuroka**	**5.87**	**50**			**Pn**	**09 06 34.3**	**+0.5**
JGF	**Kuroka**	**5.87**	**50**	P		**Pn**	**09 06 34.6**	**+0.9**
JOW	**Kunigami**	**5.95**	**213**	P		**Pn**	**09 06 35.3**	**+0.5**
	comp=E,21nm,0.3s,baz=123,slow=22,SNR=16							
JOW					S	**Sn**	**09 07 39.7**	**-2.1**
	comp=E,43nm,0.4s,baz=104,slow=30,SNR=1.2							
JSG	**Sagara**	**5.97**	**61**	Pn		**Pn**	**09 06 35.8**	**+0.8**
KSRS	**Korea Array**	**6.41**	**331**	P		**Pn**	**09 06 42.2**	**+1.1**
	comp=E,31nm,0.5s,baz=148,slow=14,SNR=124							
KSRS					S	**Sn**	**09 07 56.2**	**+3.2**
	comp=E,45nm,0.7s,baz=149,slow=26,SNR=4.2							
KSAR	**Wonju Array Be**	**6.42**	**330**			**Pn**	**09 06 42.5**	**+1.3**
KSAR	**Wonju Array Be**	**6.42**	**330**	P		**Pn**	**09 06 42.5**	**+1.3**
JJH	**Hakui**	**6.44**	**38**	A		A	09 06 43.6	
	comp=N,5.0nm,3.2s,comp=E,5.0nm,2.7s							
KS19	**Wonju Array Si**	**6.48**	**331**			**Pn**	**09 06 42.3**	**+0.3**
JTT	**Ttatey**	**6.51**	**43**	A		A	09 06 44.6	
	comp=N,7.0nm,1.9s,comp=E,7.0nm,4.5s							
JHJ	**Hachijo jima 2**	**6.79**	**78**	P		**Pn**	**09 06 45.8**	**-0.6**
	comp=E,311nm,0.3s,baz=110,slow=9.2,SNR=31							
JHJ					S	**Sn**	**09 08 01.8**	**-0.7**
	comp=E,211nm,0.6s,baz=88,slow=20,SNR=1.9							
JHJ					LR	LR	09 09 33.6	
	comp=E,3μm,18.9s,baz=276,slow=37							
JHJ2	**Mitsune**	**6.82**	**78**			**Pn**	**09 06 46.2**	**-0.5**
MAJO	**Matsushiro**	**6.99**	**47**			**Pn**	**09 06 49.9**	**+0.8**
MAJO	**Matsushiro**	**6.99**	**47**	P		**Pn**	**09 06 50.2**	**+1.1**
MAJO	**Matsushiro**	**6.99**	**47**	P		**Pn**	**09 06 49.9**	**+0.8**
MJAR	**Matsushiro Arr**	**6.99**	**47**	P		**Pn**	**09 06 50.7**	**+1.5**
	comp=E,30nm,0.5s,baz=244,slow=14,SNR=82							
MJAR					LR	LR	09 10 01.0	
	comp=E,3μm,19.1s,baz=222,slow=41							
MJAR	**Matsushiro Arr**	**6.99**	**47**			**Pn**	**09 06 50.1**	**+1.0**
MJAR	**Matsushiro Arr**	**6.99**	**47**	P		**Pn**	**09 06 50.1**	**+1.0**
MJB9	**Matsu-Tunnel**	**6.99**	**47**			**Pn**	**09 06 51.1**	**+2.0**
INCN	**Inchon**	**7.03**	**324**			**Pn**	**09 06 50.7**	**+1.0**
INCN	**Inchon**	**7.03**	**324**	P		**Pn**	**09 06 51.2**	**+1.6**
INCN				P		**Pn**	**09 06 51.2**	**+1.6**
INCN				S		**Sn**	**09 08 09.9**	**+1.6**
INCN				S		**Sn**	**09 08 09.9**	**+1.6**
INCN	**Inchon**	**7.03**	**324**	P		**Pn**	**09 06 51.3**	**+1.6**
INCN	**Inchon**	**7.03**	**324**	P		**Pn**	**09 06 50.7**	**+1.0**
JSD	**Sado**	**8.05**	**39**			**Pn**	**09 07 05.0**	**+1.3**
JSD	**Sado**	**8.05**	**39**	P		**Pn**	**09 07 04.9**	**+1.3**
JMM	**Marumori**	**9.43**	**49**			**Pn**	**09 07 24.2**	**+1.6**
JMM	**Marumori**	**9.43**	**49**	P		**Pn**	**09 07 24.5**	**+1.9**
MSHR	**Mys Shultsa**	**10.66**	**357**	*i* P		**Pn**	**09 07 40.8**	**+1.4**
PSTR	**Posyet**	**10.75**	**356**	*i* P		**Pn**	**09 07 42.2**	**+1.6**
DL2	**Dalian**	**10.88**	**313**	P		**Pn**	**09 07 46.6**	**+4.3**
DL2				sP			09 08 02.3	
DL2				S		**Sn**	**09 09 48.0**	**+5.3**
DL2				pmax	pmax			
	comp=E,43nm,1.0s							
DL2				pmax	pmax			
	comp=E,470nm,5.9s							
DL2				LR	LR			
	comp=E,6μm,16.1s							
DL2				LR	LR			
	comp=E,6μm,13.3s							
DL2				LR	LR			
	comp=E,11μm,17.1s							
NJ2	**Nanjing**	**11.05**	**274**	⇑P		**Pn**	**09 07 47.5**	**+2.8**
NJ2				PP			09 07 58.1	
NJ2				sP			09 08 00.4	
NJ2				pmax	pmax			
	comp=E,160nm,1.2s							
NJ2				pmax	pmax			
	comp=E,1μm,3.8s							
NJ2				LR	LR			
	comp=E,4μm,12.3s							
NJ2				LR	LR			
	comp=E,8μm,15.6s							
NJ2				LR	LR			
	comp=E,9μm,14.7s							
VLA	**Vladivostok**	**11.19**	**0**	*i* P		**Pn**	**09 07 47.0**	**+0.5**
JTM	**Tenmabayashi**	**11.55**	**37**			**Pn**	**09 07 53.7**	**+2.3**
JTM	**Tenmabayashi**	**11.55**	**37**	P		**Pn**	**09 07 52.4**	**+0.9**
YHNB	**Yeheng**	**11.72**	**235**	Pn		**Pn**	**09 07 54.7**	**+0.7**
SNY	**Shenyang**	**11.91**	**329**	⇑P		**Pn**	**09 08 00.8**	**+4.4**
SNY				S		Sn	09 10 23.4	+16
SNY				pmax	pmax			
	comp=E,110nm,1.1s							
SNY				LR	LR			
	comp=E,5μm,18.0s							
SNY				LR	LR			
	comp=E,4μm,17.3s							
SNY				LR	LR			
	comp=E,10μm,19.0s							
USRK	**Ussuriysk Ar.**	**12.27**	**0**	P		**Pn**	**09 08 03.9**	**+2.5**
	comp=E,6.5nm,0.7s,baz=185,slow=14,SNR=19							
SSLB	**Suanglung**	**12.59**	**233**			**Pn**	**09 08 04.7**	**-1.1**
SSLB	**Suanglung**	**12.59**	**233**	P		**P**	**09 08 17.0**	**+0.4**
YULB	**Yu-li**	**12.63**	**230**	P		**P**	**09 08 18.7**	**+1.7**
MDJ	**Mudanjiang**	**12.81**	**353**	P		**Pn**	**09 08 12.5**	**+3.8**
MDJ				PP		**P**	**09 08 22.4**	**+3.5**
MDJ				S		Sn	09 10 39.8	+10
MDJ				pmax	pmax			
	comp=E,45nm,1.6s							
MDJ				LR	LR			
	comp=E,4μm,18.0s							
MDJ				LR	LR			
	comp=E,2μm,17.1s							
MDJ				LR	LR			
	comp=E,5μm,19.3s							
MDJ	**Mudanjiang**	**12.81**	**353**	P		**Pn**	**09 08 08.4**	**-0.3**
CN2	**Changchun**	**12.90**	**339**	P		**Pn**	**09 08 13.5**	**+3.6**
CN2				pP		P	09 08 21.9	+2.0
CN2				S		**Sn**	**09 10 39.3**	**+7.2**
CN2				SS		**S**	**09 10 56.3**	**-0.3**
CN2				pmax	pmax			
	comp=E,20nm,0.8s							
CN2				pmax	pmax			
	comp=E,610nm,6.0s							
CN2				LR	LR			
	comp=E,5μm,13.0s							
CN2				LR	LR			
	comp=E,3μm,13.0s							
CN2				LR	LR			
	comp=E,5μm,16.0s							
TPUB	**Ta-pu**	**13.14**	**232**	P		**P**	**09 08 23.9**	**+1.2**
QZH	**Quanzhou**	**13.58**	**243**	*eP*		**Pn**	**09 08 19.3**	**0.0**
QZH				*eS*		**Sn**	**09 10 50.3**	**+1.4**
QZH				LR	LR			
	comp=E,4μm,13.1s							
QZH				LR	LR			
	comp=E,4μm,13.5s							
QZH				LR	LR			
	comp=E,7μm,13.4s							
BNX	**BinXian**	**14.24**	**347**	⇑P		**Pn**	**09 08 30.1**	**+2.0**
BNX				pmax	pmax			
	comp=E,210nm,1.0s							
BNX				pmax	pmax			
	comp=E,580nm,5.7s							
ASAJ	**Asahikawa**	**14.81**	**32**	P		**Pn**	**09 08 37.1**	**+1.2**
	comp=E,10.0nm,0.8s,baz=113,slow=2.3,SNR=7.3							
ASAJ	**Asahikawa**	**14.81**	**32**	P		**Pn**	**09 08 35.4**	**-0.5**
JKA	**Kamikawa-asahi**	**14.82**	**32**			**Pn**	**09 08 35.4**	**-0.5**
WHN	**Wuhan**	**15.05**	**269**	P		**Pn**	**09 08 39.8**	**+0.7**
WHN				pP		**P**	**09 08 46.6**	**+2.8**
WHN				S		**Sn**	**09 11 25.9**	**+1.3**
WHN				pmax	pmax			
	comp=E,86nm,0.9s							
WHN				LR	LR			
	comp=E,5μm,13.3s							
WHN				LR	LR			
	comp=E,30μm,14.5s							
WHN				LR	LR			
	comp=E,34μm,15.3s							
BJT	**Baijiatuan**	**15.05**	**307**	P		**P**	**09 08 43.0**	**-0.8**
BJI	**Beijing**	**15.06**	**307**	P		**Pn**	**09 08 40.0**	**+0.9**
BJI				sP		**pP**	**09 08 54.8**	**+1.1**
BJI				S		**S**	**09 11 34.8**	**-6.0**
BJI				pmax	pmax			
	comp=E,70nm,0.7s							
BJI				pmax	pmax			
	comp=E,440nm,5.7s							
BJI				LR	LR			
	comp=E,2μm,15.2s							
BJI				LR	LR			
	comp=E,3μm,14.3s							
BJI				LR	LR			
	comp=E,5μm,15.6s							
HNS	**HongShan**	**15.14**	**296**	⇓P		**P**	**09 08 44.3**	**-0.5**
HNS				S		**S**	**09 11 37.4**	**-5.1**
HNS				pmax	pmax			
	comp=E,52nm,1.0s							
HNS				LR	LR			
	comp=E,9μm,16.8s							
HNS				LR	LR			
	comp=E,9μm,16.3s							
HNS				LR	LR			
	comp=E,11μm,16.8s							
LYN	**LuoYang**	**16.44**	**284**	⇓*i* P		**Pn**	**09 08 58.0**	**+1.0**
LYN				pP		pP	09 09 07.6	-1.6
LYN				PP		**sP**	**09 09 11.0**	**-3.3**
LYN				sP		P	09 09 14.3	+15
LYN				S		**Sn**	**09 11 58.8**	**+0.4**
LYN				sS		S	09 12 15.5	+6.3
LYN				SS		**SnSn**	**09 12 25.5**	**+14**
LYN				pmax	pmax			
	comp=E,96nm,1.2s							
LYN				pmax	pmax			
	comp=E,1μm,3.9s							
LYN				LR	LR			
	comp=E,4μm,12.5s							
LYN				LR	LR			
	comp=E,9μm,17.0s							
LYN				LR	LR			
	comp=E,13μm,16.2s							
CNSH	**ChangSha**	**16.81**	**262**	P		**Pn**	**09 09 01.3**	**-0.3**
CNSH				S		**Sn**	**09 12 06.0**	**-1.4**
CNSH				pmax	pmax			
	comp=E,18nm,1.7s							
CNSH				LR	LR			
	comp=E,3μm,15.1s							
CNSH				LR	LR			
	comp=E,5μm,14.2s							
CNSH				LR	LR			
	comp=E,6μm,15.4s							
TIY	**Taiyuan**	**16.97**	**295**	*eP*		**P**	**09 09 07.3**	**+2.2**
TIY				sP		**sP**	**09 09 19

	comp=E,7μm,15.0s							
HEH	**HeiHe**	**18.62**	**351**	*e*P	**Pn**	**09 09 24.4**	**+0.6**
HEH				sP	**sP**	**09 09 37.1**	**-1.0**
HEH				S	**S**	**09 12 53.3**	**0.0**
HEH				pmax	pmax		
	comp=E,130nm,1.6s						
HEH				pmax	pmax		
	comp=E,980nm,6.2s						
HEH				LR	LR		
	comp=E,2μm,17.4s						
HEH				LR	LR		
	comp=E,2μm,17.1s						
HEH				LR	LR		
	comp=E,3μm,18.6s						
GRNR	**Gornyy**	**19.14**	**9⇑**	*i*P	**P**	**09 09 28.3**	**-0.6**
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,1μm,15.0s						
GRNR				MLR	MLR		
	comp=N,1μm,16.0s						
GRNR				MLR	MLR		
	comp=Z,2μm,16.0s						
XAN	**Xi'an**	**19.36**	**282**	⇑P	**P**	**09 09 31.8**	**+0.3**
XAN				pP	pP	09 09 41.6	+0.1
XAN				S	**Sn**	**09 13 10.8**	**+1.7**
XAN				pmax	pmax		
	comp=Z,91nm,1.4s						
XAN				pmax	pmax		
	comp=Z,1μm,4.0s						
XAN				LR	LR		
	comp=Z,3μm,13.7s						
XAN				LR	LR		
	comp=Z,8μm,15.0s						
XAN				LR	LR		
	comp=Z,10μm,15.3s						
HIA	**Hailar**	**19.59**	**336**	P	**P**	**09 09 34.5**	**+0.7**
BTO	**Baotou**	**19.60**	**302**	*e*P	**Pn**	**09 09 36.4**	**+0.7**
BTO				pP	**pP**	**09 09 46.3**	**+2.2**
BTO				S	**Sn**	**09 13 16.9**	**+2.1**
BTO				pmax	pmax		
	comp=Z,71nm,0.9s						
BTO				pmax	pmax		
	comp=Z,1μm,4.8s						
BTO				LR	LR		
	comp=Z,8μm,16.7s						
BTO				LR	LR		
	comp=Z,10μm,16.0s						
BTO				LR	LR		
	comp=Z,15μm,14.5s						
HILR	**Hailar Array B**	**19.83**	**336**	P	**P**	**09 09 37.2**	**+0.8**
	comp=Z,70nm,0.7s,baz=142,slow=13,SNR=68						
HILR				LR	LR	09 18 00.6	
	comp=Z,4μm,19.1s,baz=115,slow=39						
TGY	**Tagaytay City**	**20.36**	**212**	P	**P**	**09 09 43.1**	**+0.7**
	comp=Z,170nm,0.3s,baz=231,slow=6.7,SNR=1.2						
TYV	**Tymovskoe**	**20.55**	**20**	*e*P	Pn	09 09 47.2	+0.5
TYV				*e*S	Sn	09 13 35.4	-2.0
TYV				pmax	pmax		
	comp=Z,400nm,3.5s						
TYV				pmax	pmax		
	comp=Z,31nm,0.8s						
TYV				smax	smax		
	comp=N,14nm,1.7s						
TYV				smax	smax		
	comp=E,15nm,1.7s						
TYV				smax	smax		
	comp=N,800nm,3.4s						
TYV				smax	smax		
	comp=E,600nm,3.4s						
GUMO	**Guam**	**21.79**	**144**	P	**P**	**09 10 00.2**	**+2.4**
	comp=E,106nm,0.9s,baz=219,slow=16,SNR=1.9						
GUMO				LR	LR	09 16 44.2	
	comp=E,699nm,20.9s,baz=318,slow=32						
	comp=E,106nm,0.9s						
ZEA	**Zeya**	**22.07**	**353**	*e*P	**P**	**09 10 00.0**	**-0.5**
ZEA				*e*		09 10 11.6	
ZEA				*e*		09 10 31.6	
ZEA				*e*		09 14 02.9	
ZEA				pmax	pmax		
	comp=Z,200nm,1.1s						
ZEA				pmax	pmax		
	comp=N,70nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.9s						
ZEA				MLR	MLR		
	comp=E,500nm,11.0s						
ZEA				MLR	MLR		
	comp=N,800nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,17.0s						
GYA	**Guiyang**	**22.64**	**263**	⇓P	**P**	**09 10 06.1**	**-0.9**
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
LZH	**Lanzhou**	**23.57**	**288**	⇑P	**P**	**09 10 15.6**	**-0.7**
LZH				pP	pP	09 10 27.4	+0.5
LZH				sP	sP	09 10 32.4	+0.6
LZH				S	**S**	**09 14 30.1**	**+2.3**
LZH				pmax	pmax		
	comp=Z,190nm,1.8s						
LZH				pmax	pmax		
	comp=Z,510nm,4.6s						
LZH				LR	LR		
	comp=Z,2μm,15.6s						
LZH				LR	LR		
	comp=Z,3μm,14.9s						
LZH				LR	LR		
	comp=Z,5μm,15.9s						
QIZ	**Qiongzhong**	**23.60**	**242**	P	**P**	**09 10 17.0**	**+0.4**
QIZ				S	**S**	**09 14 30.4**	**+2.1**
QIZ				LR	LR		
	comp=Z,1μm,21.6s						
QIZ				LR	LR		
	comp=Z,2μm,15.1s						
QIZ				LR	LR		
	comp=Z,2μm,17.1s						
LZDM	**Lanzhou Array**	**23.68**	**288**	P	**P**	**09 10 17.1**	**-0.5**
	comp=Z,116nm,0.8s,baz=123,slow=7.3,SNR=89						
LZDM				LR	LR	09 20 31.2	
	comp=Z,3μm,18.9s,baz=120,slow=39						
	comp=Z,116nm,0.8s						
CD2	**Chengdu**	**23.99**	**275**	P	**P**	**09 10 19.1**	**-1.1**
CD2				pP	pP	09 10 30.3	-0.7
CD2				sP	sP	09 10 36.5	+0.7
CD2				S	**S**	**09 14 33.8**	**-0.6**
CD2				sS	sS	09 14 51.6	-0.6
CD2				pmax	pmax		
	comp=Z,290nm,0.9s						
CD2				pmax	pmax		
	comp=Z,530nm,2.6s						
CD2				LR	LR		
	comp=Z,6μm,14.8s						
CD2				LR	LR		
	comp=Z,10μm,12.8s						
CD2				LR	LR		
	comp=Z,14μm,12.8s						
CIT	**Chita**	**24.15**	**332**	*e*P	**P**	**09 10 22.0**	**+0.6**
CIT				*e*		09 10 30.0	
CIT				*e*		09 10 38.0	
CIT				*e*		09 10 58.2	
CIT				*e*		09 14 05.6	
CIT				*e*		09 15 21.2	
CIT				pmax	pmax		
	comp=Z,164nm,2.6s						
ULN	**Ulaanbaatar**	**24.67**	**317**	P	**P**	**09 10 26.1**	**-0.3**
ULN				IAmb	IAmb	09 10 38.4	
	comp=Z,153nm,1.0s						
ULN	**Ulaanbaatar**	**24.67**	**317**	P	**P**	**09 10 26.0**	**-0.4**
ULN				P	**P**	**09 10 26.0**	**-0.4**
ULN	**Ulaanbaatar**	**24.67**	**317**	*ce*P	**P**	**09 10 25.7**	**-0.7**
ULN				pmax	pmax		
	comp=Z,126nm,0.9s						
SONM	**Songino Array**	**25.04**	**317**	P	**P**	**09 10 29.0**	**-0.7**
	comp=Z,79nm,0.8s,baz=132,slow=8.8,SNR=155						
SONM				PcP	**PcP**	**09 14 03.6**	**0.0**
	comp=Z,3.3nm,0.6s,baz=112,slow=3.5,SNR=4.6						
SONM				LR	LR	09 21 17.3	
	comp=Z,5μm,20.7s,baz=125,slow=39						
	comp=Z,79nm,0.8s						
DAV	**Davao City (W)**	**25.40**	**195**	LR	LR	09 22 19.5	
	comp=Z,790nm,18.6s,baz=31,slow=40						
KMI	**Kunming**	**26.42**	**263**	P	**P**	**09 10 43.8**	**+1.3**
KMI				pP	pP	09 10 53.1	-0.3
KMI				S	**S**	**09 15 14.3**	**+0.7**
KMI				pmax	pmax		
	comp=Z,39nm,1.0s						
KMI				LR	LR		
	comp=Z,2μm,14.2s						
KMI				LR	LR		
	comp=Z,3μm,15.2s						
KMI				LR	LR		
	comp=Z,3μm,15.0s						
PZH	**PanZhiHua**	**26.79**	**266**	P	**P**	**09 10 47.0**	**+1.3**
PZH				pP	**pP**	**09 10 57.1**	**+0.4**
PZH				S	**S**	**09 15 17.8**	**-1.5**
PZH				sS	**sS**	**09 15 38.9**	**+1.7**
PZH				pmax	pmax		
	comp=Z,70nm,1.1s						
PZH				pmax	pmax		
	comp=Z,210nm,3.6s						
PZH				LR	LR		
	comp=Z,1μm,13.3s						
PZH				LR	LR		
	comp=Z,2μm,16.0s						
PZH				LR	LR		
	comp=Z,2μm,16.0s						
GTA	**Gaotai**	**26.99**	**295**	P	**P**	**09 10 46.8**	**-0.7**
GTA				pP	pP	09 10 57.4	-1.0
GTA				sS	sS	09 15 41.3	+1.1
GTA				pmax	pmax		
	comp=Z,41nm,1.2s						
GTA				pmax	pmax		
	comp=Z,260nm,8.9s						
GTA				LR	LR		
	comp=Z,2μm,18.2s						
GTA				LR	LR		
	comp=Z,5μm,17.8s						
GTA				LR	LR		
	comp=Z,6μm,17.1s						
ZAK	**Zakamensk**	**28.09**	**319**	*e*P	**P**	**09 10 54.7**	**-2.4**
ZAK				*e*		09 14 09.9	
ZAK				pmax	pmax		
	comp=Z,26nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,17nm,1.5s						
PEA0B	**Petropavlovsk-**	**28.21**	**34**	*ce*P	**P**	**09 10 59.0**	**+0.9**
PETK	**Petropavlovsk-**	**28.21**	**34**	P	**P**	**09 10 59.8**	**+1.7**
	comp=Z,15nm,1.0s,baz=258,slow=2.7,SNR=7.3						
	comp=Z,15nm,1.0s						
PETK	**Petropavlovsk-**	**28.21**	**34**	P	**P**	**09 10 57.3**	**-0.8**
PETK	**Petropavlovsk-**	**28.21**	**34**	P	**P**	**09 10 57.3**	**-0.8**
TLY	**Talaya**	**28.57**	**322**	P	**P**	**09 11 00.8**	**-0.4**
TLY	**Talaya**	**28.57**	**322**	*i* P	**P**	**09 11 00.9**	**-0.4**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PET	**Petropavlovsk**	**28.62**	**35**	*e*P	P	09 11 12.0	+10
PET				pmax	pmax		
	comp=Z,64nm,1.2s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
PET				MLR	MLR		
	comp=Z,1μm,19.0s						
MYLDM	**Lahad Datu**	**29.39**	**208**	P	**P**	**09 11 08.7**	**-0.1**
TNCH	**TengChong**	**30.02**	**265**	*e*P	**P**	**09 11 14.8**	**+0.2**
TNCH				PP	**PnPn**	**09 12 09.1**	**-3.2**
TNCH				S	**S**	**09 16 07.9**	**-2.4**
TNCH				sS	sS	09 16 27.8	-0.4
TNCH				pmax	pmax		
	comp=Z,32nm,0.5s						
TNCH				pmax	pmax		
	comp=Z,300nm,4.8s						
TNCH				LR	LR		
	comp=Z,2μm,15.5s						
TNCH				LR	LR		
	comp=Z,3μm,13.8s						
TNCH				LR	LR		
	comp=Z,4μm,16.9s						
YAK	**Yakutsk**	**30.17**	**358**	LR	LR	09 23 37.9	
	comp=Z,2μm,18.1s,baz=164,slow=37						
YAK	**Yakutsk**	**30.17**	**358**	P	**P**	**09 11 14.6**	**-0.6**
YAK				IAmb	IAmb	09 11 22.1	
	comp=Z,23nm,0.6s						
YAK	**Yakutsk**	**30.17**	**358**	*e*P	**P**	**09 11 16.4**	**+1.2**
YAK				*e**PP	**pP**	**09 11 27.6**	**+1.6**
YAK				*e*		09 12 16.5	
YAK				*e*		09 14 16.4	
YAK				*e*S	**S**	**09 16 12.9**	**+1.6**
YAK				*e**SS	**sS**	**09 16 32.4**	**+3.1**
YAK				*e*SS	**ScP**	**09 17 54.6**	**0.0**
YAK				*e*		09 21 50.6	
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,175nm,3.3s						
YAK				pmax	pmax		
	comp=E,118nm,3.2s						
YAK				pmax	pmax		
	comp=N,155nm,3.6s						
YAK				smax	smax		
	comp=N,174nm,3.0s						
YAK				smax	smax		
	comp=E,113nm,2.7s						
YAK				MLR	MLR		
	comp=Z,2μm,18.0s						
YAK				MLR	MLR		
	comp=N,1μm,20.0s						
YAK				MLR	MLR		
	comp=E,569nm,22.0s						
MA2	**Magadan**	**30.42**	**19**	LR	LR	09 24 09.6	
	comp=E,595nm,18.9s,baz=207,slow=37						
GOMU	**GeErMu**	**30.87**	**288**	P	**P**	**09 11 21.4**	**-0.8**
GOMU				pP	pP	09 11 33.1	-0.1
GOMU				PcP	**PcP**	**09 14 18.4**	**0.0**
GOMU				S	**S**	**09 16 22.8**	**-0.9**
GOMU				ScS	**ScS**	**09 21 54.3**	**-0.8**
GOMU				pmax	pmax		
	comp=E,22nm,0.7s						
GOMU				LR	LR		
	comp=E,870nm,17.3s						
GOMU				LR	LR		
	comp=E,870nm,17.8s						
KNGR	**Kungurtug, Tuv**	**31.48**	**316**	*i* P	**P**	**09 11 26.0**	**-1.1**
KNGR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CHTO	**Chiang Mai**	**32.34**	**254**	P	**P**	**09 11 34.4**	**-0.5**
CHTO	**Chiang Mai**	**32.34**	**254**	P	**P**	**09 11 34.9**	**0.0**
CHTO	**Chiang Mai**	**32.34**	**254**	P	**P**	**09 11 34.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,16nm,0.7s						
CM31	**Chiang Mai Arr**	**32.53**	**254**	P	**P**	**09 11 36.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**32.53**	**254**	P	**P**	**09 11 36.3**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=51,slow=6.9,SNR=31						
CMAR				PcP	**PcP**	**09 14 23.2**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=35,slow=0.8,SNR=7.9						
CMAR				ScP	**ScP**	**09 18 01.8**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=64,slow=4.7,SNR=4.9						
CMAR				LR	LR	09 26 16.3	
	comp=Z,1μm,19.4s,baz=55,slow=39						
	comp=Z,5.5nm,0.6s						
MPSI	**Mapaga**	**33.38**	**202**	P	P	09 11 49.8	+5.9
H11N2	**WAKE ISLAND Hy**	**33.64**	**103**	T	T	09 47 24.8	
	baz=299,slow=75,SNR=157						
H11N1	**WAKE ISLAND Hy**	**33.64**	**103**	T	T	09 47 20.9	
	baz=299,slow=75,SNR=92						
H11N3	**WAKE ISLAND Hy**	**33.66**	**103**	T	T	09 47 19.1	
	baz=299,slow=75,SNR=157						
SEY	**Seymchan**	**33.68**	**17**	LR	LR	09 26 08.7	
	comp=Z,606nm,18.9s,baz=214,slow=37						
SEY	**Seymchan**	**33.68**	**17**	*ce*P	**P**	**09 11 46.8**	**+0.7**
SEY				pmax	pmax		
	comp=Z,11nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**34.06**	**105**	T	T	09 48 08.1	
	baz=304,slow=76,SNR=49						
H11S1	**WAKE ISLAND Hy**	**34.07**	**105**	T	T	09 48 15.4	
	baz=304,slow=76,SNR=90						
H11S2	**WAKE ISLAND Hy**	**34.08**	**105**	T	T	09 48 20.2	
	baz=304,slow=76,SNR=43						
SANI	**Sanana**	**34.23**	**190**	P	P	09 11 58.2	+6.9
	comp=Z,46nm,0.8s						
FAKI	**Fak Fak**	**34.64**	**179**		**P**	**09 11 54.5**	**-0.3**
SBUM	**Sibu**	**34.66**	**216**	P	**P**	**09 11 54.9**	**-0.1**
LSA	**Lhasa**	**34.90**	**277**	P	**P**	**09 11 57.1**	**-0.5**
LSA				IAmb	IAmb	09 12 09.0	
	comp=Z,21nm,0.9s						
LSA	**Lhasa**	**34.90**	**277**	P	**P**	**09 11 56.5**	**-1.1**
LSA				P	**P**	**09 11 56.5**	**-1.1**
LSA	**Lhasa**	**34.90**	**277**	P	**P**	**09 11 57.1**	**-0.5**
LSA				pmax	pmax		
	comp=Z,21nm,0.9s						
JAY	**Jayapura**	**35.25**	**165**	LR	LR	09 25 18.9	
	comp=Z,466nm,19.8s,baz=8.0,slow=34						
SHL	**Shillong**	**35.48**	**270**	P	**P**	**09 12 00.2**	**-2.0**
SHL	**Shillong**	**35.48**	**270**	P	**P**	**09 12 01.4**	**-0.9**
SHL	**Shillong**	**35.48**	**270**	P	**P**	**09 12 00.2**	**-2.0**
SHL				pmax	pmax		
	comp=Z,28nm,1.3s						
WMQ	**Urumqi**	**36.44**	**302**	*e*P	**P**	**09 12 09.3**	**-0.9**
WMQ				pP	pP	09 12 20.3	-1.0
WMQ				PP	**PP**	**09 13 32.8**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,70nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,420nm,4.1s						
WMQ				LR	LR		
	comp=Z,2μm,18.3s						
WMQ				LR	LR		
	comp=Z,4μm,18.9s						
WMQ				LR	LR		
	comp=Z,3μm,18.3s						
WMQ	**Urumqi**	**36.44**	**302**	P	**P**	**09 12 09.2**	**-1.0**
WMQ				pP	**pP**	**09 12 19.8**	**-1.5**
BRDH	**Bariadhala**	**36.74**	**266**	LR	LR	09 30 19.4	
	comp=Z,3μm,18.1s,baz=101,slow=41						
SHEM	**Shemya Is, Ala**	**36.82**	**43**	LR	LR	09 26 07.4	
	comp=Z,187nm,21.8s,baz=250,slow=34						
DGZ	**Jazzator, Alta**	**37.40**	**312**	*i* P	**P**	**09 12 17.5**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,21nm,1.4s						
KAPI	**Kappang**	**38.49**	**200**	LR	LR	09 27 42.0	
	comp=Z,295nm,21.8s,baz=16,slow=35						
BBKI	**Banjar Baru**	**38.72**	**208**	P	**P**	**09 12 32.0**	**+2.4**
	comp=Z,61nm,0.8s						
ZSN	**Zaisan**	**38.74**	**308**	*e*P	**P**	**09 12 28.6**	**-1.0**
ZSN	**Zaisan**	**38.74**	**308**	*e*P	**P**	**09 12 28.5**	**-1.0**
EVN	**Everest**	**39.03**	**276**	P	**P**	**09 12 31.6**	**-1.3**
KULM	**Kulim**	**39.43**	**234**	P	**P**	**09 12 35.1**	**-0.4**
KULM				IAmb	IAmb	09 12 37.2	
	comp=Z,104nm,1.2s						
IPM	**Ipoh**	**39.75**	**233**		**P**	**09 12 38.0**	**-0.3**
IPM				IAmb	IAmb	09 12 39.3	
	comp=Z,114nm,1.0s						
TIXI	**Tiksi**	**39.83**	**359**	LR	LR	09 29 56.5	
	comp=Z,2μm,18.1s,baz=190,slow=37						
TIXI	**Tiksi**	**39.83**	**359**		**P**	**09 12 37.4**	**-0.8**
TIXI	**Tiksi**	**39.83**	**359**	*ce*P	**P**	**09 12 36.7**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAA0	**Zalesovo Array**	**39.93**	**318**	P	**P**	**09 12 37.6**	**-1.7**
ZALV	**Zalesovo Beam**	**39.93**	**318**	P	**P**	**09 12 37.9**	**-1.4**
	comp=Z,3.1nm,0.7s,baz=102,slow=6.8,SNR=5.0						
ZALV				PcP	**PcP**	**09 14 43.7**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=120,slow=4.5,SNR=5.2						
ZALV				ScP	**ScP**	**09 18 28.1**	**-1.8**
	comp=Z,1.9nm,0.7s,baz=105,slow=4.1,SNR=4.5						
ZALV				LR	LR	09 30 18.8	
	comp=Z,2μm,18.4s,baz=108,slow=38						
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**39.93**	**318**	*i* P	**P**	**09 12 38.2**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	**Makanchi Array**	**40.44**	**306**	P	**P**	**09 12 42.4**	**-1.2**
MK31	**Makanchi Array**	**40.44**	**306**	*i* P	**P**	**09 12 42.5**	**-1.2**
MK31				pmax	pmax		
	comp=Z,13nm,0.6s						
MKAR	**Makanchi Array**	**40.44**	**306**	P	**P**	**09 12 42.6**	**-1.1**
	comp=Z,10nm,0.5s,baz=92,slow=9.9,SNR=78						
MKAR				PcP	**PcP**	**09 14 45.6**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=76,slow=3.3,SNR=4.1						
MKAR				ScP	**ScP**	**09 18 30.5**	**-1.6**
	comp=Z,1.5nm,0.8s,baz=86,slow=6.4,SNR=5.4						
MKAR				LR	LR	09 30 49.9	
	comp=Z,2μm,18.8s,baz=98,slow=38						
	comp=Z,10nm,0.5s						
MKAR	**Makanchi Array**	**40.44**	**306**	P	**P**	**09 12 42.8**	**-0.9**
MAKZ	**Makanchi**	**40.65**	**306**	P	**P**	**09 12 44.6**	**-0.8**
MAKZ	**Makanchi**	**40.65**	**306**	P	**P**	**09 12 44.6**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,21nm,0.9s						
MAKZ	**Makanchi**	**40.65**	**306**	P	**P**	**09 12 44.0**	**-1.4**
MAKZ				pP	**pP**	**09 12 54.8**	**-1.8**
MAKZ				PcP	**PcP**	**09 14 46.4**	**-0.3**
BILL	**Bilibino**	**41.29**	**19**		**P**	**09 12 51.4**	**+1.1**
BILL				IAmb	IAmb	09 13 04.2	
	comp=Z,161nm,1.2s						
BILL	**Bilibino**	**41.29**	**19**	*ce*P	**P**	**09 12 51.3**	**+0.9**
BILL				pmax	pmax		
	comp=Z,32nm,0.6s						
TPI	**Tanjungpandan**	**41.44**	**218**	P	**P**	**09 12 53.7**	**+1.5**
	comp=Z,902nmcomp=Z,63nm,1.2s						
PPBI	**Pangkal Pinang**	**41.76**	**221**	P	**P**	**09 12 56.7**	**+1.9**
SOEI	**Soe**	**42.06**	**191**	P	**P**	**09 12 57.5**	**+0.1**
SOEI				IAmb	IAmb	09 13 20.1	
	comp=Z,61nm,0.8s						
SOEI	**Soe**	**42.06**	**191**	P	P	09 13 03.3	+6.0
	comp=Z,1μmcomp=Z,90nm,0.9s						
PSI	**Prapat**	**42.40**	**234**	LR	LR	09 31 43.0	
	comp=Z,535nm,19.6s,baz=38,slow=38						
PSI	**Prapat**	**42.40**	**234**	P	**P**	**09 12 59.9**	**-0.3**
PSI				pmax	pmax		
	comp=Z,42nm,1.0s						
SHLS	**Shalkode**	**42.42**	**301**	*e*P	**P**	**09 12 56.1**	**-4.1**
SHLS	**Shalkode**	**42.42**	**301**	*e*P	**P**	**09 12 56.0**	**-4.1**
RPSI	**Rantau Prapat**	**42.48**	**234**	P	**P**	**09 12 59.9**	**-0.8**
RPSI				IAmb	IAmb	09 13 01.3	
	comp=Z,42nm,1.0s						
BATI	**Baumata**	**42.61**	**192**	LR	LR	09 32 30.1	
	comp=Z,207nm,19.3s,baz=6.0,slow=38						
KCSI	**Kotacane, Aceh**	**42.69**	**236**	P	**P**	**09 13 01.8**	**-0.6**
	comp=Z,18nm,0.9s						
WUS	**Wushi**	**42.73**	**298**	P	**P**	**09 13 01.4**	**-1.2**
WUS				IAmb	IAmb	09 13 14.7	
	comp=Z,127nm,1.9s						
UZB	**Uzynbulak**	**42.74**	**301**	⇑*i* P	**P**	**09 13 01.4**	**-1.4**
UZB	**Uzynbulak**	**42.74**	**301**	*c i* P	**P**	**09 13 01.3**	**-1.4**
TWSI	**Taliwang, Sumb**	**42.88**	**202**	P	P	09 13 10.9	+7.0
	comp=Z,1μmcomp=Z,107nm,1.1s						
TDK	**Taldyqorghan**	**43.12**	**303**	*e*P	**P**	**09 13 04.5**	**-1.2**
	comp=Z,30nm,1.2s						
TDK	**Taldyqorghan**	**43.12**	**303**	*e*P	**P**	**09 13 04.4**	**-1.2**
TDK				pmax	pmax		
	comp=Z,30nm,1.2s						
MLSI	**Meulaboh, Aceh**	**43.14**	**238**	P	**P**	**09 13 05.7**	**-0.3**
KURK	**Kurchatov**	**43.15**	**312**	P	**P**	**09 13 04.5**	**-1.2**
KURK				IAmb	IAmb	09 13 17.6	
	comp=Z,111nm,1.6s						
KURK	**Kurchatov**	**43.15**	**312**	P	**P**	**09 13 04.9**	**-0.8**
KURK				P	**P**	**09 13 04.9**	**-0.8**
KURK	**Kurchatov**	**43.15**	**312**	*ce*P	**P**	**09 13 04.4**	**-1.3**
KURK				pmax	pmax		
	comp=Z,44nm,1.3s						
KURK	**Kurchatov**	**43.15**	**312**	P	**P**	**09 13 04.7**	**-1.1**
KURK				pP	**pP**	**09 13 14.9**	**-2.1**
KURK				PcP	**PcP**	**09 14 54.7**	**0.0**
KURBB	**Kurchatov Arra**	**43.20**	**312**	P	**P**	**09 13 05.2**	**-0.9**
	comp=Z,9.5nm,0.7s,baz=97,slow=9.0,SNR=55						
KURBB				PcP	**PcP**	**09 14 54.1**	**-0.8**
	comp=Z,2.7nm,0.7s,baz=103,slow=3.9,SNR=4.4						
KURBB				ScP	**ScP**	**09 18 40.8**	**-2.2**
	comp=Z,0.6nm,0.7s,baz=94,slow=3.6,SNR=4.5						
KURBB				LR	LR	09 32 54.1	
	comp=Z,4μm,18.1s,baz=95,slow=39						
	comp=Z,9.5nm,0.7s						
KURBB	**Kurchatov Arra**	**43.20**	**312**	P	**P**	**09 13 04.7**	**-1.4**
SATY	**Saty**	**43.20**	**301**	⇑*i* P	**P**	**09 13 05.2**	**-1.3**
SATY	**Saty**	**43.20**	**301**	*c i* P	**P**	**09 13 05.1**	**-1.3**
MNSI	**Mandailing Nat**	**43.44**	**231**	P	**P**	**09 13 08.9**	**+0.5**
	comp=Z,7μmcomp=Z,54nm,0.7s						
ARXS	**Arharly**	**43.56**	**302**	*e*P	**P**	**09 13 08.1**	**-1.1**
PMG	**Port Moresby**	**43.61**	**158**	P	**P**	**09 13 08.9**	**-0.8**
PMG	**Port Moresby**	**43.61**	**158**	P	**P**	**09 13 08.9**	**-0.8**
PMG				pmax	pmax		
	comp=Z,23nm,1.1s						
NGJI	**Ngawi**	**43.65**	**210**	P	**P**	**09 13 14.1**	**+4.0**
	comp=Z,780nmcomp=Z,47nm,1.2s						
TARG	**Taragay, Kyrgy**	**43.74**	**299**	P	**P**	**09 13 10.2**	**-1.0**
TARG				IAmb	IAmb	09 13 23.2	
	comp=Z,41nm,1.3s						
TARG	**Taragay, Kyrgy**	**43.74**	**299**	P	**P**	**09 13 10.2**	**-1.0**
TARG				pmax	pmax		
	comp=Z,41nm,1.3s						
PPI	**Padang Panjang**	**43.85**	**229**	P	**P**	**09 13 12.9**	**+

TNSS Tian-Shan 44.27 301 eP P 09 13 13.8 -1.5
AAA Alma-Ata 44.28 301 eP P 09 13 13.9 -1.1
comp=Z,26nm,0.8s
AAA Alma-Ata 44.28 301 eP P 09 13 13.9 -1.1
AAA pmax pmax
comp=Z,26nm,0.8s
GSI Gunungsitoli 44.41 234 P P 09 13 15.6 -0.7
GSI Gunungsitoli 44.41 234 P P 09 13 16.0 -0.3
comp=Z,8µmcomp=Z,208nm,1.2s
MTN Manton Dam 44.50 181 P P 09 13 16.8 -0.1
MTN IAmb IAmb 09 13 28.3
comp=Z,48nm,0.8s
UGM Wanagama 44.54 211 P P 09 13 17.1 -0.2
UGM Wanagama 44.54 211 P P 09 13 18.8 +1.5
comp=Z,102nm,1.6s
KPJI Karang Pucung 44.75 213 P P 09 13 21.3 +2.4
MDSI Maura Dua 44.77 221 P P 09 13 20.5 +1.4
comp=Z,1µmcomp=Z,116nm,1.1s
MASI Maura Aman, Be 44.80 224 P P 09 13 20.9 +1.5
PBSI Pulau Batu 44.93 232 P P 09 13 20.4 0.0
KSI Kapahiang 45.00 224 P P 09 13 24.8 +3.8
DBJI Dramaga 45.13 217 P P 09 13 24.3 +2.3
TKM2 Tokmak 2 45.26 301 P P 09 13 22.9 -0.2
SNR=30
LWLI Liwa 45.27 221 P P 09 13 24.1 +0.9
KSH Kashi 45.39 296 P P 09 13 26.8 +2.8
KSH pP sP 09 13 38.3 -1.6
KSH pmax pmax
comp=Z,12nm,1.1s
KSH pmax pmax
comp=Z,130nm,17.2s
KSH LR LR
comp=Z,1µm,14.4s
KSH LR LR
comp=Z,3µm,16.9s
KSH LR LR
comp=Z,4µm,17.1s
KBK Karagaybulak 45.77 300 P P 09 13 26.7 -0.3
SNR=12
CHMS Chumysh 45.88 301 P P 09 13 27.5 -0.1
SNR=9.6
SGDS Sogindy 45.92 302 eP P 09 13 26.9 -1.2
USP Ospenovka 46.03 301 P P 09 13 28.2 -0.7
SNR=11
AAK Ala-Archa 46.10 300 LR LR 09 35 19.3
comp=Z,2µm,19.0s,baz=80,slow=39
AAK Ala-Archa 46.10 300 P P 09 13 29.0 -0.6
AAK Ala-Archa 46.10 300 P P 09 13 29.2 -0.4
AAK P P 09 13 29.2 -0.4
AAK Ala-Archa 46.10 300 P P 09 13 29.4 -0.3
SNR=8.7
AAK Ala-Archa 46.10 300 ceP P 09 13 28.9 -0.7
AAK pmax pmax
comp=Z,16nm,1.1s
UCH Uchtor 46.13 300 P P 09 13 30.2 0.0
SNR=28
BTLS Baital 46.20 304↑ iP P 09 13 29.1 -1.0
comp=Z,19nm,1.3s
BTLS Baital 46.20 304 c iP P 09 13 29.1 -1.0
BTLS pmax pmax
comp=Z,19nm,1.3s
ARLS Aral 46.32 299 P P 09 13 31.4 +0.1
NIKH Nikolski High 47.02 45 P P 09 13 36.1 -0.4
baz=268
GAMB Gambell 47.14 30 P P 09 13 36.7 -0.5
baz=255
ARSB Arslanbob 47.39 299 P P 09 13 39.1 -0.5
ARSB IAmb IAmb 09 13 51.6
comp=Z,69nm,1.2s
ARSB Arslanbob 47.39 299 P P 09 13 39.1 -0.5
ARSB pmax pmax
comp=Z,69nm,1.2s
KNRA Kununurra 47.41 184 P P 09 13 39.5 -0.2
OHH Osh 47.66 298 P P 09 13 39.6 -2.1
ARK Arkit 48.07 300 P P 09 13 44.7 -0.2
ARK pmax pmax
comp=Z,34nm,1.2s
BVA0 Borovoye Array 48.35 315 i P P 09 13 45.8 -1.0
BVAR Borovoye Array 48.35 315 P P 09 13 45.7 -1.1
comp=Z,13nm,0.5s,baz=100,slow=9.4,SNR=72
BVAR PcP PcP 09 15 12.6 -0.3
comp=Z,6.8nm,0.6s,baz=131,slow=2.7,SNR=8.2
BVAR LR LR 09 34 59.8
comp=Z,720nm,21.8s,baz=91,slow=37
comp=Z,13nm,0.5s
DZA Taraz 48.38 301 eP P 09 13 46.2 -1.1
DZA Taraz 48.38 301 eP P 09 13 46.1 -1.1
BORK Borovoye 48.40 315 P P 09 13 46.1 -1.0
BORK pP pP 09 13 55.7 -2.8
BORK PcP PcP 09 15 12.9 -0.1
NIL Nilore 48.73 289 P P 09 13 49.3 -0.7
NIL Nilore 48.73 289 P P 09 13 49.8 -0.2
NIL P P 09 13 49.8 -0.2
NIL Nilore 48.73 289 P P 09 13 49.3 -0.7
NIL pmax pmax
comp=Z,176nm,1.7s
KK31 Karatay Array 48.95 302 P P 09 13 50.6 -0.9
KK31 IAmb IAmb 09 14 03.1
comp=Z,46nm,1.0s
KK31 Karatay Array 48.95 302 i P P 09 13 50.6 -0.9
KKAR Karatay Array 48.95 302 P P 09 13 50.5 -1.0
KKAR Karatay Array 48.95 302 P P 09 13 50.5 -1.0
M11K Mekoryuk 49.06 35 P P 09 13 51.5 -0.5
baz=264
TNA Tin City 49.15 29 P P 09 13 52.4 -0.2
baz=257
IUG Iuzhnay 49.44 300 eP P 09 13 54.2 -1.3
comp=Z,23nm,1.1s
IUG Iuzhnay 49.44 300 eP P 09 13 54.1 -1.3
IUG pmax pmax
comp=Z,23nm,1.1s
BRLS Borolday 49.45 302↑ iP P 09 13 55.4 0.0
BRLS Borolday 49.45 302 c iP P 09 13 55.4 0.0
CHM Chimkent 49.73 301 eP P 09 13 56.4 -1.1
comp=Z,9.4nm,0.4s
CHM Chimkent 49.73 301 eP P 09 13 56.4 -1.1
CHM pmax pmax
comp=Z,9.0nm,0.4s
F14K Arctic Creek 49.78 29 P P 09 13 57.8 +0.3
baz=259
GAR Garm 49.80 296 P P 09 13 57.2 -1.1
GAR IAmb IAmb 09 14 09.6
comp=Z,61nm,1.0s
K13K Kusilvak Mount 49.98 34 P P 09 13 59.3 +0.3
baz=264
ANM Nome 50.02 30 P P 09 13 59.4 +0.1
baz=261
FITZ Fitzroy Crossi 50.08 188 P P 09 14 01.0 +0.8
FALS False Pass 50.27 43 P P 09 14 01.4 +0.1
baz=271
M13K Dall Lake 50.47 36 P P 09 14 03.1 +0.4
baz=266
F15K North Star Dit 50.51 29 P P 09 14 03.1 +0.1
baz=260
J14K Nanvaranak Lak 50.58 33 P P 09 14 03.8 +0.3
baz=264
G15K Niukluk 50.65 30 P P 09 14 04.3 +0.2
baz=262
C16K Lisburne Hills 50.73 25 P P 09 14 05.0 +0.4
baz=258
L14K Kuka Creek 50.86 34 P P 09 14 05.8 +0.2
baz=266
M14K Bethel 51.17 35 P P 09 14 07.9 -0.2
baz=267
N14K Kuskokwak Cree 51.27 36 P P 09 14 08.6 -0.2
baz=268
H16K Elim 51.37 30 P P 09 14 10.1 +0.6
baz=264
G16K Koyuk River 51.41 29 P P 09 14 09.5 -0.3
baz=263
WB0 Warramunga Arr 51.44 177 P P 09 14 10.7 +0.2
WB0 IAmb IAmb 09 14 22.6
comp=Z,59nm,1.0s
L15K Ungalak Mounta 51.45 34 P P 09 14 09.8 -0.3
baz=267
D17K Noatak River 51.45 26 P P 09 14 09.8 -0.2
baz=260
O14K Tigyukauivet M 51.47 37 P P 09 14 10.1 -0.2
baz=269
K15K Wolf Creek Mou 51.47 33 P P 09 14 09.4 -0.9
baz=266
C17K DeLong Mountai 51.55 25 P P 09 14 11.2 +0.3
baz=260
RDOG Red Dog Mine 51.58 26 P P 09 14 12.6 +1.6
RDOG IAmb IAmb 09 14 28.7
comp=Z,46nm,1.2s
baz=260
WRAB Tennant Creek 51.60 177 ceP P 09 14 12.6 +0.9
WRAB pmax pmax
comp=Z,13nm,1.3s
WRAB Tennant Creek 51.60 177 P P 09 14 12.2 +0.5
WRAB pP pP 09 14 22.0 -1.0
WRA Warramunga Arr 51.61 177 P P 09 14 12.3 +0.5
comp=Z,5.9nm,0.9s,baz=353,slow=8.0,SNR=32
WRA S S 09 21 31.0 +0.9
comp=Z,0.3nm,0.8s,baz=355,slow=15,SNR=2.6
WRA PKP2bc P'P'bc 09 45 07.3 +7.5
comp=Z,0.7nm,0.8s,baz=157,slow=1.6,SNR=2.9
comp=Z,5.9nm,0.9s
WRA Warramunga Arr 51.61 177 P P 09 14 12.8 +1.0
M15K Kasigluk River 51.80 35 P P 09 14 12.7 0.0
baz=268
E17K Hotham Inlet 51.84 27 P P 09 14 12.5 -0.5
baz=262
KBL Kabul 51.86 291 P P 09 14 13.3 -0.6
KBL IAmb IAmb 09 14 27.7
comp=Z,28nm,1.1s
KBL Kabul 51.86 291 P P 09 14 13.8 -0.1
SNR=24
KBL P P 09 14 13.8 -0.1
SNR=24
KBL Kabul 51.86 291 P P 09 14 13.3 -0.6
KBL pmax pmax
comp=Z,28nm,1.1s
SDPT Sand Point 51.94 42 P P 09 14 12.9 -1.0
baz=273
J16K Anvik River 51.97 32 P P 09 14 13.4 -0.6
baz=266
I17K Unalakleet 51.97 31 P P 09 14 13.2 -0.7
baz=266
F17K Baldwin Pennin 51.98 28 P P 09 14 13.7 -0.3
baz=263
N15K Kwethluk River 52.08 36 P P 09 14 14.9 0.0
baz=269
G17K Kiwalik Mounta 52.13 29 P P 09 14 13.5 -1.7
baz=264
B18K Kokolik River 52.20 24 P P 09 14 13.9 -1.7
baz=260
O15K Ungalikthiuk R 52.21 37 P P 09 14 14.2 -1.6
baz=270
C18K Utukok River 52.30 25 P P 09 14 15.4 -1.1
baz=261
E18K Tukpahlearik C 52.36 27 P P 09 14 14.9 -1.9
baz=263
H17K Granite Mounta 52.39 30 P P 09 14 15.8 -1.2
baz=266
L16K Owhat River 52.41 34 P P 09 14 16.6 -0.7
baz=268,SNR=6.2
S14K Fog Glacier 52.42 41 P P 09 14 16.2 -1.4
baz=273
CHNA Chernabura Isl 52.48 43 P P 09 14 17.0 -0.9
baz=274
A19K Wainwright 52.59 23 P P 09 14 17.8 -0.6
baz=260
F18K Selawik 52.64 28 P P 09 14 17.5 -1.4
baz=264,SNR=5.9
M16K Timber Creek 52.65 35 P P 09 14 18.0 -1.1
baz=269
J17K VABM Dome 52.66 32 P P 09 14 18.5 -0.6
baz=268
N16K Nishlik Lake 52.74 36 P P 09 14 19.3 -0.5
baz=270
C19K Lookout Ridge 52.94 25 P P 09 14 20.9 -0.3
baz=263
L17K Donlin 52.98 34 P P 09 14 21.5 0.0
baz=269
G18K Tagagawik 52.98 29 P P 09 14 21.2 -0.3
baz=266
K17K Iditarod 52.99 33 P P 09 14 20.6 -0.9
baz=269
H18K Honhosa River 53.06 30 P P 09 14 21.5 -0.6
baz=267
O16K Kokwok River B 53.09 37 P P 09 14 22.5 +0.2
baz=271
M17K Holitna River 53.39 34 P P 09 14 24.5 -0.1
baz=270
F19K Shaleruckik Mo 53.40 28 P P 09 14 23.8 -0.7
baz=266
D19K Kuka River 53.41 26 P P 09 14 24.2 -0.4
baz=264
PALK Pallekele 53.47 254 LR LR 09 38 40.7
comp=Z,600nm,20.8s,baz=48,slow=38
PALK Pallekele 53.47 254 P P 09 14 25.6 -0.2
PALK IAmb IAmb 09 14 27.2
comp=Z,26nm,0.8s
PALK Pallekele 53.47 254 P P 09 14 26.4 +0.6
PALK Pallekele 53.47 254 P P 09 14 25.6 -0.2
PALK pmax pmax
comp=Z,26nm,0.8s
CTAO Charters Tower 53.51 163 P pP 09 14 35.9 -1.2
N17K Nushagak Hills 53.52 36 P P 09 14 26.1 +0.6
N17K IAmb IAmb 09 14 40.2
comp=Z,31nm,0.9s
N17K Nushagak Hills 53.52 36 P P 09 14 24.4 -1.1
baz=271
O17K Koliganek Bris 53.59 36 P P 09 14 25.2 -0.8
baz=272
G19K Purcell Mounta 53.64 29 P P 09 14 25.7 -0.6
baz=267
E19K Redstone River 53.66 27 P P 09 14 24.9 -1.5
baz=266
GCSA Galena City Sc 53.67 30 P P 09 14 25.5 -1.0
baz=268
J18K Innoko River 53.72 32 P P 09 14 26.6 -0.4
baz=270
L18K Granite Mounta 53.73 33 P P 09 14 27.6 +0.6
baz=270
SVE Sverdlovsk 53.85 320 eP P 09 14 27.4 -0.6
SVE pmax pmax
comp=Z,26nm,0.7s
Q16K King Salmon 53.87 38 P P 09 14 27.2 -0.8
baz=273
H19K Roundabout Mou 53.88 29 P P 09 14 27.8 -0.2
baz=268,SNR=16
B20K Meade River 53.89 24 P P 09 14 28.2 +0.1
baz=264
P17K Kvichak River 53.95 37 P P 09 14 28.8 +0.2
baz=273
D20K Etivluk River 53.97 25 P P 09 14 28.9 +0.2
baz=266
R17L Mt. Peulik Vol 54.09 39 P P 09 14 29.2 -0.5
baz=274
E20K Nigu River 54.10 26 P P 09 14 29.6 -0.1
baz=267
N18K Kilae Creek 54.16 35 P P 09 14 30.6 +0.4
baz=272
M18K Stony River 54.16 34 P P 09 14 30.2 +0.1
baz=272
A21K Barrow 54.21 22 P P 09 14 30.0 -0.3
baz=264
J19K Poorman 54.21 31 P P 09 14 31.3 +0.8
baz=270
F20K Avaraart Lake 54.22 27 P P 09 14 29.3 -1.2
baz=268
Q17K Contact Creek 54.30 38 P P 09 14 29.8 -1.5
baz=274
PSA00 Pilbara Seismi 54.41 194 P P 09 14 33.1 +0.8
H20K Anotleneega Mo 54.53 29 P P 09 14 31.4 -1.4
baz=270
O18K Koktuh Hills 54.54 36 P P 09 14 32.5 -0.5
baz=274
P18K Big Mountain, 54.56 37 P P 09 14 31.3 -1.9
baz=274
ACHA Angle Creek He 54.59 38 P P 09 14 33.9 +0.4
ACHA IAmb IAmb 09 14 46.8
comp=Z,27nm,1.0s
L19K White Mountain 54.59 33 P P 09 14 31.4 -1.9
baz=272
CHIR Chirikof Islan 54.66 41 P P 09 14 31.3 -2.5
baz=276
C21K Knifeblade Rid 54.66 25 P P 09 14 32.8 -0.9
baz=267
I20K Naaghedeneel 54.70 30 P P 09 14 33.4 -0.5
baz=271
A22K Sinclair Lake 54.71 23 P P 09 14 33.5 -0.4
baz=266
Q18K Katmai Hardscr 54.73 38 P P 09 14 33.6 -0.8
baz=275
B21K Ikpikpuk River 54.74 24 P P 09 14 33.7 -0.5
baz=267,SNR=7.9
M19K Big River Lodg 54.83 34 P P 09 14 34.7 -0.3
baz=273
N19K Bonanza Creek 54.84 35 P P 09 14 34.5 -0.8
baz=274
J20K Nowinta River 54.85 31 P P 09 14 34.3 -0.8
baz=271
K20K Telida 54.91 32 P P 09 14 34.3 -1.3
baz=272,SNR=9.0
E21K Killik River 54.93 26 P P 09 14 34.9 -0.8
baz=268
O19K Port Alsworth 54.96 36 P P 09 14 34.8 -1.2
baz=274
IMAR Indian Mountai 54.99 29 P P 09 14 37.7 +1.5
L20K Farewell, AK 55.04 33 P P 09 14 36.9 +0.3
baz=273
G21K Allakaket 55.09 28 P P 09 14 37.2 +0.3
baz=270
F21K Alatna River 55.10 27 P P 09 14 36.6 -0.3
baz=270,SNR=6.4
R18K Karluk 55.12 39 P P 09 14 36.8 -0.3
baz=276
ARTI Arti 55.13 319 LR LR 09 40 21.7
comp=Z,1µm,18.0s,baz=86,slow=38
ARTI Arti 55.13 319 P P 09 14 35.6 -1.7
ARTI Arti 55.13 319 c iP P 09 14 35.8 -1.5
ARTI *PP pP 09 14 46.6 -2.3
ARTI 09 15 30.9
ARTI 09 16 36.8
ARTI S S 09 22 16.1 -1.1
ARTI SS SS 09 26 04.7 +3.6
ARTI pmax pmax
comp=Z,27nm,0.7s
ARTI MLR MLR
comp=Z,1µm,14.0s
B22K Teshekpuk Lake 55.19 23 P P 09 14 37.5 +0.1
baz=268
AB31 Akbulak array 55.23 311 P P 09 14 36.9 -1.2
AB31 IAmb IAmb 09 14 50.2
comp=Z,16nm,0.7s
AB31 Akbulak array 55.23 311 i P P 09 14 36.8 -1.3
ABKAR Akbulak array 55.23 311 P P 09 14 36.6 -1.4
ASAR Alice Springs 55.30 178 P P 09 14 39.6 +0.9
ASAR S S 09 22 22.7 +2.7
comp=Z,7.4nm,1.0s,baz=359,slow=5.4,SNR=31
comp=Z,0.6nm,1.0s,baz=11,slow=17,SNR=5.8
ASAR PKP2bc 09 44 56.3
comp=Z,2.0nm,1.0s,baz=174,slow=3.3,SNR=5.7
comp=Z,7.4nm,1.0s
ASAR Alice Springs 55.30 178 P P 09 14 40.0 +1.2
SII Sitkinak Islan 55.37 40 P P 09 14 38.0 -1.1
baz=277
H21K Melozitna Rive 55.39 29 P P 09 14 38.1 -1.0
baz=272
Q19K Cape Douglas, 55.41 37 P P 09 14 38.7 -0.6
baz=276
D22K Ayikyak River 55.41 25 P P 09 14 39.1 0.0
baz=269,SNR=14
M20K Styx River 55.42 34 P P 09 14 39.1 -0.3
baz=274
P19K Oil Pt 55.55 36 P P 09 14 39.4 -0.9
baz=275
F22K John River 55.60 27 P P 09 14 40.5 0.0
baz=271
CHUM Lake Minchumin 55.67 31 P P 09 14 40.9 -0.1
baz=273,SNR=7.1
E22K Anaktuvuk Pass 55.73 26 P P 09 14 41.0 -0.5
baz=271
I21K Tanana 55.75 30 P P 09 14 41.5 -0.1
baz=273
OHAK Old Harbor 55.78 39 P P 09 14 41.3 -0.6
baz=277
PPLA Purkeypile 55.79 32 P P 09 14 41.9 -0.2
baz=274
O20K Slope Mountain 55.82 36 P P 09 14 41.7 -0.5
baz=276
G22K Bettles 55.88 28 P P 09 14 41.7 -0.8
baz=272,SNR=25
N20K Mount Spurr 55.92 35 P P 09 14 42.9 -0.1
baz=275
SPCR Spurr Chakacha 55.92 35 P P 09 14 42.8 -0.1
baz=275
H22K Ishtalitna Cre 55.97 29 P P 09 14 42.3 -0.8
baz=273,SNR=9.9
KDAK Kodiak Island 56.09 39 LR LR 09 38 58.1
comp=Z,330nm,21.6s,baz=230,slow=36
KDAK Kodiak Island 56.09 39 P P 09 14 45.2 +1.1
KDAK Kodiak Island 56.09 39 P P 09 14 45.2 +1.1
KDAK pmax pmax
comp=Z,73nm,1.0s
KDAK Kodiak Island 56.09 39 P P 09 14 43.3 -0.8
baz=277
KDAK Kodiak Island 56.09 39 P P 09 14 45.9 +1.8
KDAK pP pP 09 14 56.9 +1.4
Q20K Shuyak Island 56.09 38 P P 09 14 43.7 -0.4
baz=277
D23K Nanushuk River 56.13 25 P P 09 14 44.4 +0.2
baz=271
C23K Itkillik River 56.14 24 P P 09 14 44.8 +0.5
baz=271,SNR=11
SKT Skwentna 56.17 34 P P 09 14 44.5 -0.2
baz=275
AKTO Aktyubinsk 56.24 312 LR LR 09 42 23.9
comp=Z,955nm,18.2s,baz=93,slow=40
BPAW Bear Paw Mtn. 56.24 31 P P 09 14 45.2 0.0
baz=274
MLY Manley 56.28 30 P P 09 14 46.6 +1.2
baz=274,SNR=5.9
COLD Coldfoot 56.38 27 P P 09 14 45.9 -0.1
baz=273,SNR=7.1
CAPN Captain Cook N 56.47 35 P P 09 14 46.2 -0.5
baz=276
G23K Bananza Creek 56.47 28 P P 09 14 47.6 +0.8
baz=273,SNR=16
TOLK Toolik Lake Re 56.55 25 P P 09 14 47.7 +0.4
TOLK Toolik Lake Re 56.55 25 P P 09 14 47.8 +0.5
baz=272,SNR=9.1
E23K Chandalar 56.56 26 P P 09 14 47.9 +0.5
baz=273,SNR=40
SUA Susitna One 56.59 34 P 09 14 48.2 +0.4
SUA IAmb IAmb 09 15 02.6
comp=Z,59nm,0.8s
SUA Susitna One 56.59 34 P P 09 14 48.1 +0.4
baz=276
TRF Thorofare Moun 56.60 32 P P 09 14 47.6 -0.4
baz=275
CUT Chulitna 56.72 33 P P 09 14 48.5 +0.1
baz=276
H23K Yukon River 56.73 29 P P 09 14 49.5 +0.9
baz=274,SNR=22
D24K Happy Valley 56.79 25 P P 09 14 50.5 +1.6
D24K Happy Valley 56.79 25 P P 09 14 49.6 +0.6
baz=273,SNR=18
BRSE Bradley Lake S 56.80 36 P P 09 14 49.6 +0.4
baz=277
C24K Franklin Bluff 56.81 24 P P 09 14 49.9 +0.9
baz=272
I23K Minto, Yukon-K 56.86 30 P P 09 14 50.2 +0.7
I23K IAmb IAmb 09 15 07.8
comp=Z,24nm,0.9s
I23K Minto, Yukon-K 56.86 30 P P 09 14 48.9 -0.6
baz=275
M22K Willow 56.86 34 P P 09 14 50.0 +0.5
baz=276
E24K Your Creek 56.98 26 P P 09 14 51.0 +0.6
baz=274,SNR=20
NEA2 Nenana 57.03 30 P P 09 14 52.0 +1.3
baz=276,SNR=9.7
RC01 Rabbit Creek A 57.12 35 P P 09 14 53.0 +1.6
baz=277
MCK McKinley 57.18 31 P P 09 14 52.2 +0.4
MCK IAmb IAmb 09 15 05.4
comp=Z,34nm,0.9s
MCK McKinley 57.18 31 P P 09 14 52.2 +0.4
MCK pmax pmax
comp=Z,34nm,0.9s
MCK McKinley 57.18 31 P P 09 14 52.7 +0.9
baz=276
O22K Cooper Landing 57.21 35 P P 09 14 52.7 +0.7
baz=278
F24K Squaw Lake 57.25 27 P P 09 14 53.4 +1.2
baz=275
HRA Herat 57.27 293 P P 09 14 52.8 -0.4
HRA IAmb IAmb 09 15 04.8
comp=Z,59nm,1.6s
PMR Palmer 57.35 34 P P 09 14 54.6 +1.7
PMR Palmer 57.35 34 P P 09 14 53.7 +0.7
baz=278
SEW Seward 57.39 36 P P 09 14 54.6 +1.3
baz=278
H24K Noodor Dome 57.41 29 P P 09 14 54.9 +1.5

H24K IAmb IAmb 09 15 11.2
comp=Z,34nm,0.9s
H24K Noodor Dome 57.41 29 P P 09 14 53.5 +0.1
baz=276,SNR=9.1
WAT1 Susitna Watana 57.46 32 P P 09 14 54.2 +0.4
baz=277
G24K Hadweenzic Riv 57.48 28 P P 09 14 54.4 +0.5
baz=276,SNR=15
COLA College 57.52 30 P P 09 14 57.5 +3.4
COLA College 57.52 30 *i* P P 09 14 56.9 +2.8
COLA pmax pmax
comp=Z,21nm,0.8s
COLA College 57.52 30 P P 09 14 54.5 +0.4
baz=276
CCB Clear Creek Bu 57.57 30 P P 09 14 56.0 +1.5
CCB IAmb IAmb 09 15 10.5
comp=Z,30nm,0.9s
D25K Kavik River 57.65 25 P P 09 14 56.4 +1.3
baz=275
POKR Poker Plat Res 57.67 30 P P 09 14 56.1 +0.8
baz=277,SNR=9.5
KNK Knik Glacier 57.69 34 P P 09 14 55.1 -0.4
baz=278
SML Sawmill 57.69 34 P P 09 14 56.6 +1.1
baz=278
PWL Port Wells 57.83 35 P 09 14 55.9 -0.5
PWL Port Wells 57.83 35 P P 09 14 57.7 +1.2
baz=279
WAT6 Susitna Watana 57.86 33 P P 09 14 57.4 +0.6
baz=278
IL31 57.94 30 P P 09 14 58.0 +0.9
IL31 IAmb IAmb 09 15 11.9
comp=Z,21nm,0.7s
ILAR Eielson Array 57.94 30 P P 09 14 58.2 +1.1
comp=Z,4.5nm,0.7s,baz=263,slow=5.7,SNR=56
comp=Z,4.5nm,0.7s
ILAR Eielson Array 57.94 30 P P 09 14 58.4 +1.2
ILAR Eielson Array 57.94 30 P P 09 14 58.4 +1.2
HDA Harding Lake 57.97 30 P P 09 14 57.7 +0.4
HDA Harding Lake 57.97 30 P P 09 14 58.5 +1.2
baz=278,SNR=8.7
M23K Glacier View 57.98 34 P P 09 14 57.8 +0.3
baz=278
G25K Bearman Lake 58.02 28 P P 09 14 58.7 +1.1
baz=277,SNR=10
E25K Arctic Village 58.07 26 P P 09 14 59.3 +1.3
E25K IAmb IAmb 09 15 16.2
comp=Z,55nm,1.1s
E25K Arctic Village 58.07 26 P P 09 14 58.8 +0.8
baz=276,SNR=6.7
F25K Christian Rive 58.10 27 P P 09 14 59.0 +0.7
baz=277,SNR=30
C26K Camden Bay 58.11 24 P P 09 14 58.4 +0.3
baz=276,SNR=15
SCM Sheep Creek Mo 58.16 33 P P 09 15 00.1 +1.3
baz=279
H25L Birch Creek 58.19 28 P P 09 14 59.2 +0.3
baz=277,SNR=6.7
PRP Porcupine Dome 58.41 29 P P 09 15 02.0 +1.4
PRP IAmb IAmb 09 15 15.4
comp=Z,47nm,0.8s
PRP Porcupine Dome 58.41 29 P P 09 15 01.0 +0.4
baz=278,SNR=13
P23K Montague Islan 58.42 36 P P 09 15 00.7 +0.1
baz=280
BMAR Burnt Mountain 58.52 27 P P 09 15 02.9 +1.6
C27K Jago River 58.55 24 P P 09 15 02.1 +0.8
baz=277
K24K Donnelly Dome 58.56 31 P P 09 15 01.8 +0.3
baz=279,SNR=6.7
J25K Salcha River, 58.61 30 P P 09 15 02.8 +0.9
baz=279
F26K Sheenjek River 58.65 26 P P 09 15 03.0 +0.9
baz=278,SNR=32
M24K Tolsona, Glenn 58.66 33 P P 09 15 03.7 +1.5
baz=280
PAX Paxson 58.83 32 P P 09 15 03.7 +0.2
baz=280
KLU Klutina 58.88 34 P P 09 15 04.4 +0.6
baz=280
G26K Porcupine Rive 58.90 27 P P 09 15 05.7 +1.9
baz=279,SNR=18
RIDG Independent Ri 58.98 31 P P 09 15 05.3 +0.9
baz=280
Q23K Middleton Isla 59.05 36 P P 09 15 06.0 +1.1
baz=281
HARP HAARP 59.07 33 P P 09 15 06.1 +1.0
baz=280
EYAK Cordova Ski Ar 59.13 35 P P 09 15 06.3 +0.8
baz=281
SCRK Sand Creek 59.31 31 P P 09 15 07.1 +0.2
SCRK Sand Creek 59.31 31 P P 09 15 07.8 +1.0
baz=280,SNR=7.0
J26L Joseph Creek 59.40 30 P P 09 15 07.5 +0.1
baz=280,SNR=6.9
I26K Coal Creek Min 59.43 29 P P 09 15 07.9 +0.5
baz=280
N25K Chitina, Valde 59.48 33 P P 09 15 09.1 +1.1
baz=281
E27K Coleen River 59.53 26 P P 09 15 08.3 +0.1
baz=280,SNR=16
KIRV Kirov 59.56 323 LR LR 09 44 13.4
comp=Z,2µm,18.5s,baz=81,slow=39
KIRV Kirov 59.56 323 *ce* P P 09 15 07.5 -0.9
D27M Malcolm River 59.57 24 P P 09 15 10.2 +1.7
baz=280
BMRM Bremner River 59.60 34 P P 09 15 10.2 +1.4
baz=282
MENT Mentasta 59.62 32 P P 09 15 11.5 +2.6
G27K Doyon Strip 59.75 27 P P 09 15 10.6 +0.9
baz=281,SNR=12
L26K Log Cabin Wild 59.77 32 P P 09 15 11.2 +1.3
baz=281,SNR=5.1
KAIM Kayak Island 59.91 35 P P 09 15 11.9 +1.0
baz=282
H27K Steamboat Moun 59.91 28 P P 09 15 10.1 -0.7
baz=281,SNR=14
I27K Kandik River 60.00 29 P P 09 15 11.8 +0.3
baz=281
M26K Nabesna, AK 60.06 32 P P 09 15 11.4 -0.5
baz=282
K27K Chicken 60.13 30 P P 09 15 13.8 +1.5
K27K IAmb IAmb 09 15 26.9
comp=Z,34nm,0.8s
K27K Chicken 60.13 30 P P 09 15 13.0 +0.7
baz=282,SNR=7.9
E28M Babbage River 60.20 25 P P 09 15 13.3 +0.6
baz=282
MCARA McCarthy VSAT 60.27 34 P P 09 15 14.2 +0.9
baz=283
F28M Old Crow 60.28 26 P P 09 15 14.4 +1.2
baz=282,SNR=25
D28M Stokes Point 60.34 24 P P 09 15 15.2 +1.6
baz=282,SNR=11
CRQE Cirque 60.37 34 P P 09 15 15.2 +1.1
baz=283
BGLC Bering Glacier 60.42 35 P P 09 15 16.3 +2.0
baz=283
L27K Beaver Creek, 60.45 32 P P 09 15 14.9 +0.4
baz=283
M27K Edge Creek, AK 60.58 32 P P 09 15 16.3 +0.7
baz=283
I28M Miner Creek 60.72 29 P P 09 15 17.7 +1.3
baz=283,SNR=22
E29M Blow River 60.84 25 P P 09 15 18.7 +1.7
baz=283,SNR=25
BVCY Beaver Creek 61.03 32 P P 09 15 18.8 +0.3
baz=284
MESA MESA 61.06 35 P P 09 15 18.7 -0.3
baz=284
G29M Pine Creek 61.13 27 P P 09 15 20.2 +1.0
baz=284,SNR=13
CTG Chitna Glacier 61.16 34 P P 09 15 20.1 +0.6
baz=284
H29M Whitestone 61.17 28 P P 09 15 19.8 +0.5
baz=284,SNR=9.3
YUK3 Moose Creek 61.37 33 P P 09 15 21.7 +0.7
baz=284
O28M Mount Upton 61.75 34 P P 09 15 24.6 +0.9
baz=285
EPYK Eagle Plains 61.77 27 P P 09 15 24.2 +0.8
baz=285,SNR=18
F30M Barrier River 61.80 26 P P 09 15 24.6 +1.1
baz=285,SNR=20
G30M tAoh Zraii Nji 61.80 26 P P 09 15 25.0 +1.3
baz=285,SNR=35
YUK8 Steele Glacier 61.81 33 P P 09 15 24.8 +0.7
baz=285

PINM Pinnacle 61.90 35 P P 09 15 24.9 +0.4
baz=286
L29M L29M 62.06 31 P P 09 15 25.9 +0.4
baz=286,SNR=8.8
BELG Belogornoye 62.10 316 LR LR 09 44 26.4
comp=Z,2µm,20.2s,baz=94,slow=38
BELG Belogornoye 62.10 316 *i* P P 09 15 24.3 -1.5
BELG pmax pmax
comp=Z,8.0nm,1.0s
M29M Somme Creek 62.10 32 P P 09 15 26.9 +1.1
baz=286,SNR=6.1
K29M Barlow Dome 62.13 30 P P 09 15 26.8 +0.9
baz=286,SNR=7.8
I30M Mount Dempster 62.22 28 P P 09 15 27.0 +0.4
baz=286
YUK4 Talbot Arm 62.32 33 P P 09 15 28.4 +1.0
baz=286,SNR=5.4
J30M Hart River 62.42 29 P P 09 15 30.0 +2.0
baz=286
INK Inuvik 62.42 25 P P 09 15 29.2 +1.5
baz=287,SNR=15
PNL Peninsula 62.43 35 P P 09 15 29.9 +1.9
baz=286
YUK6 Outpost Mounta 62.56 33 P P 09 15 30.4 +1.4
baz=287
F31M Tsiigehtchic 62.60 26 P P 09 15 30.8 +1.9
baz=287,SNR=9.7
O29M Mount Kennedy 62.65 34 P P 09 15 30.0 +0.5
baz=287
M30M Minto, Yukon 62.80 31 P P 09 15 31.4 +0.9
baz=287
H31M Peel River 62.86 28 P P 09 15 32.6 +1.8
baz=288,SNR=14
MAYO Mayo, Yukon 62.89 30 P P 09 15 31.8 +0.8
baz=287
HYT Haines Junctio 63.00 33 P P 09 15 33.5 +1.6
baz=287,SNR=6.4
N30M Aishikik Lake 63.00 33 P P 09 15 32.3 +0.5
baz=287
DZM Mont Dzumac 63.06 144 P P 09 15 34.3 +1.6
comp=Z,12nm,0.7s,baz=311,slow=3.5,SNR=8.4
comp=Z,12nm,0.7s
P29M Windy Craggy 63.25 35 P P 09 15 34.7 +1.3
baz=288
P30M Million Dollar 63.47 34 P P 09 15 37.0 +2.1
baz=288
N31M Braeburn, Yuko 63.59 32 P P 09 15 36.9 +1.3
baz=288,SNR=6.6
O30N Mendenhall 63.68 33 P P 09 15 37.5 +1.2
baz=288
KLMR Klimovskoe 63.79 327 *e* P P 09 15 33.8 -3.1
KLMR *e**PP pP 09 15 46.0 -2.5
KLMR pmax pmax
comp=Z,49nm,1.4s
KLMR MLR MLR
comp=Z,3µm,16.0s
A36M Sachs Harbour 63.84 20 P P 09 15 38.4 +1.4
A36M Sachs Harbour 63.84 20 P P 09 15 38.5 +1.5
baz=292,SNR=24
PLBC Pleasant Camp 63.97 35 P P 09 15 39.1 +1.0
baz=289,SNR=6.1
M31M Drury Creek, Y 63.98 31 P P 09 15 39.7 +1.4
baz=289,SNR=5.2
APA Apatity 64.04 335 ⇓ *i* P P 09 15 33.6 -4.8
APA *i* 09 16 08.5
APA *e*S S 09 24 03.9 -7.7
APA *i* 09 25 24.0
APA MLR MLR
comp=Z,1µm,16.4s
STKA Stephens Creek 64.11 171 P P 09 15 40.5 +1.3
comp=Z,4.8nm,0.8s,baz=333,slow=7.6,SNR=11
comp=Z,4.8nm,0.8s
JLN Jalan Bani Buh 64.22 281 P P 09 15 40.1 -0.3
JLN P P 09 15 40.1 -0.3
WHY Whitehorse 64.28 33 P P 09 15 41.3 +1.1
baz=290,SNR=6.5
SKAG Skagway 64.47 34 P P 09 15 46.6 +5.3
SKAG Skagway 64.47 34 P P 09 15 42.6 +1.2
baz=290
S31K Pelican 64.53 36 P P 09 15 42.6 +0.8
baz=290
HSPB Hornsund (broa 64.72 347 *e* P P 09 15 43.0 +0.3
N32M Quiet Lake 64.93 32 P P 09 15 45.4 +0.9
baz=291
SMDO Samad 64.96 283 P P 09 15 44.4 -1.0
SMDO P P 09 15 44.4 -1.0
BANOM **Banah** 65.19 286 P P 09 15 47.1 +0.4
BANOM P P 09 15 47.1 +0.4
P32M Atlin 65.19 34 P P 09 15 46.2 0.0
baz=291
JMDO Jabal Madar 65.22 282 P P 09 15 46.7 -0.2
JMDO P P 09 15 46.7 -0.2
MAK Makhachkala 65.26 306 *e* P P 09 15 46.2 -0.6
MAK *e* 09 18 12.1
MAK *e*S S 09 24 27.8 +0.4
MAK *e*SS SS 09 28 45.1 +5.0
MAK pmax pmax
comp=Z,418nm,1.1s
MAK MLR MLR
comp=Z,3µm,16.0s
C36M Paulatuk 65.26 22 P P 09 15 47.4 +1.1
baz=295,SNR=24
SHME Shamm 65.27 286 P P 09 15 47.9 +0.8
SHME P P 09 15 47.9 +0.8
R32K Eaglecrest 65.28 35 P P 09 15 46.1 -0.5
baz=291
JIS Juneau Island 65.34 35 P P 09 15 53.7 +6.7
HOQ Hoqain 65.35 283 P P 09 15 47.8 +0.1
HOQ P P 09 15 47.8 +0.1
P33M Teslin, Yukon 65.39 33 P P 09 15 47.9 +0.4
baz=291,SNR=6.2
MDH Madha 65.45 285 P P 09 15 47.8 -0.5
S32K Killisnoo 65.54 36 P P 09 15 47.6 -0.7
baz=291
MASF Masafi 65.54 286 P P 09 15 49.4 +0.5
MASF P P 09 15 49.4 +0.5
NOR Nord 65.57 355 *i* P P 09 15 48.1 0.0
NOR IAmb IAmb 09 15 49.1
comp=Z,11nm,1.0s
ALE Alert 65.59 2 P P 09 15 49.7 +1.3
ALE pP pP 09 16 00.5 +0.5
AKT Akhty 65.64 305 *e* P P 09 15 48.4 -1.1
AKT *e**PP sP 09 16 04.1 -1.8
AKT *e**SP pP 09 16 08.5 +7.2
AKT *e* 09 16 17.2
AKT *e*S S 09 24 35.1 +2.6
AKT pmax pmax
comp=Z,33nm,0.7s
AKT MLR MLR
comp=Z,1µm,16.0s
UOSS Minazif 65.68 285 P P 09 15 50.8 +1.0
UOSS P P 09 15 50.8 +1.0
SOHO SOHO 65.76 284 P P 09 15 50.7 +0.4
SOHO P P 09 15 50.7 +0.4
HATD Hatta, Dubai 65.79 285 P P 09 15 51.2 +0.6
HATD P P 09 15 51.2 +0.6
BSY Bisya 65.81 283 P P 09 15 50.9 +0.2
ARCES ARCESS Array B 65.91 338 P P 09 15 49.1 -1.5
comp=Z,5.3nm,0.8s,baz=55,slow=10,SNR=9.7
ARCES LR LR 09 49 40.6
comp=Z,806nm,18.5s,baz=66,slow=40
comp=Z,5.3nm,0.8s
ASHO Ashiyiah 65.91 285 P P 09 15 51.6 +0.2
SNR=8.8
ASHO P P 09 15 51.6 +0.2
SNR=8.8
MHTO MHTO 65.94 281 P P 09 15 51.2 -0.3
SNR=10
MHTO P P 09 15 51.2 -0.3
SNR=10
VRH Novokhopyorsk 65.95 316 *e* P P 09 15 48.7 -2.4
VRH *e**SP pP 09 15 59.9 -3.0
VRH pmax pmax
comp=Z,17nm,0.9s
NAZ Nazwa, Dubai 66.11 285 P P 09 15 52.9 +0.3
ARQ Araqi 66.11 283 P P 09 15 52.7 0.0
SNR=5.8
ARQ P P 09 15 52.7 0.0
SNR=5.8
Q32M Nakina River 66.12 34 P P 09 15 52.0 -0.3
baz=292
ALNE Al Ain 66.43 284 P P 09 15 54.7 0.0
ALNE P P 09 15 54.7 0.0
MOS Moscow 66.53 322 *e* P P 09 15 51.7 -3.0
MOS *e* 09 16 03.7
MOS *e* 09 16 21.9
MOS *e* 09 18 18.3
MOS *e*S S 09 24 35.7 -6.8
MOS pmax pmax
comp=Z,76nm,0.9s
MOS MLR MLR
comp=Z,2µm,17.0s
ASUD Al Ashush, Dub 66.53 285 P P 09 15 55.4 +0.1
R33M Jennings River 66.57 34 P P 09 15 55.3 +0.2
baz=293,SNR=5.6
DQM DQM 66.77 280 P P 09 15 56.6 -0.3
DQM P P 09 15 56.6 -0.3
KTK1 Kautokeino 66.87 338 *e* P P 09 15 55.9 -0.8
LPSR Galich'ya Gora 67.03 319 *e* P P 09 15 56.6 -1.4
LPSR *e**SP pP 09 16 07.0 -2.6
LPSR pmax pmax
comp=Z,34nm,1.0s
S34M Telegraph Cree 67.08 35 P P 09 15 58.1 -0.1
baz=294
VORR Voronezh 67.23 318 *e* P P 09 15 55.0 -4.3
VORR pmax pmax
comp=Z,20nm,1.1s
OBN Obninsk 67.33 322 LR LR 09 49 06.0
comp=Z,2µm,18.7s,baz=15,slow=39
OBN Obninsk 67.33 322 *i* P P 09 15 58.1 -1.7
OBN *e**PP pP 09 16 09.2 -2.3
OBN *e* 09 16 22.0
OBN *e* 09 18 27.0
OBN *e*PPP PPP 09 20 04.9
OBN *e*S S 09 24 48.8 -3.3
OBN *e*SS SS 09 29 12.4 +0.8
OBN pmax pmax
comp=Z,77nm,1.6s
OBN MLR MLR
comp=Z,2µm,16.0s
DLBC Dease Lake 67.40 34 P P 09 16 00.3 -0.1
baz=294
VSR Storozhevoye 67.43 317 *e* P P 09 15 56.8 -3.8
VSR pmax pmax
comp=Z,20nm,1.1s
VORD Divnogorie 67.46 317 *e* P P 09 15 57.5 -3.2
VORD pmax pmax
comp=Z,10.0nm,0.9s
JETT Jettan, Norway 67.47 339 *e* P P 09 16 00.6 +0.1
UMZA Um Al Zommool 67.51 283 P P 09 16 00.9 -0.6
UMZA P P 09 16 00.9 -0.6
V35K Ketchikan 67.88 38 P P 09 16 03.9 +0.6
baz=294
T35M Bob Quinn 67.89 36 P P 09 16 04.4 +1.0
baz=295
KBZ Khabaz 68.07 309 P P 09 16 04.5 -0.3
comp=Z,23nm,0.8s,baz=84,slow=3.1,SNR=33
KBZ LR LR 09 50 01.0
comp=Z,2µm,18.2s,baz=68,slow=40
comp=Z,23nm,0.8s
KBZ Khabaz 68.07 309 *i* P P 09 16 03.7 -1.0
KBZ pmax pmax
comp=Z,35nm,0.9s
MZWR Madinat Zayed 68.10 285 P P 09 16 04.8 -0.4
MZWR P P 09 16 04.8 -0.4
KIV Kislovodsk 68.12 309 P P 09 16 04.4 -0.9
KIV Kislovodsk 68.12 309 ⇑ P P 09 16 04.7 -0.5
KIV Kislovodsk 68.12 309 *e* P P 09 16 04.3 -0.9
KIV pmax pmax
comp=Z,36nm,1.1s
KIV MLR MLR
comp=Z,1µm,17.0s
KIV Kislovodsk 68.12 309 P P 09 16 04.3 -0.9
KIV pP pP 09 16 14.7 -2.4
GNI Garni 68.25 304 LR LR 09 49 53.7
comp=Z,700nm,18.7s,baz=60,slow=39
JRN Qarnain Island 68.43 287 P P 09 16 06.5 -0.7
MZR Muzera 68.77 284 P P 09 16 08.8 -0.7
MZR P P 09 16 08.8 -0.7
LIRD Liard River Hi 68.82 32 P P 09 16 11.2 +2.1
baz=297
ERBR Yeremizino-Bor 68.84 311 *e* P P 09 16 06.8 -2.7
ERBR *e**PP pP 09 16 20.6 -0.8
ERBR *e*S S 09 25 07.1 -3.4
ERBR pmax pmax
comp=Z,21nm,0.9s
LABN Labinsk 69.13 310 *e* P P 09 16 09.5 -1.8
LABN *e**PP pP 09 16 22.6 -0.6
LABN *e*S S 09 25 12.0 -2.0
LABN pmax pmax
comp=Z,27nm,0.6s
LABN MLR MLR
comp=N,5µm,19.0s
LABN MLR MLR
comp=E,838nm,18.0s
LABN MLR MLR
comp=Z,3µm,18.0s
TOAD Toad River Com 69.47 33 P P 09 16 14.4 +1.2
baz=298
FIA1 FINESS Array S 69.50 330 P P 09 16 12.6 -0.7
FINES FINESS Array B 69.50 330 P P 09 16 11.9 -1.4
comp=Z,8.9nm,0.5s,baz=71,slow=5.6,SNR=71
FINES LR LR 09 49 31.3
comp=Z,1µm,19.5s,baz=62,slow=38
comp=Z,8.9nm,0.5s
FINES FINESS Array B 69.50 330 *i* P P 09 16 11.8 -1.5
FINES pmax pmax
comp=Z,9.0nm,0.5s
STEI Steigen 69.94 339 *e* P P 09 16 14.3 -1.6
DMTO DMTO 69.97 279 P P 09 16 16.9 0.0
DAG Danmarks Havn 70.04 353 *i* P P 09 16 16.0 -0.4
DAG IAmb IAmb 09 16 18.6
comp=Z,51nm,1.4s
DOK Doka 70.23 280 P P 09 16 18.1 -0.4
SOC Sochi 70.23 309 *e* P P 09 16 15.5 -2.6
SOC *e* 09 18 51.8
SOC *e*PPP PPP 09 20 34.0
SOC *e*S S 09 25 23.8 -3.2
SOC *e*SS SS 09 29 49.0 -8.0
SOC MLR MLR
comp=Z,1µm,18.0s
FAUS Fauske 70.25 338 *e* P P 09 16 16.9 -0.8
RBK Rabkut 70.69 279 P P 09 16 20.9 -0.4
WHFO Wadi Hawf 70.86 280 P P 09 16 21.7 -0.7
WHFO P P 09 16 21.7 -0.7
NEEM North Greenlan 70.88 1 *i* P P 09 16 22.8 +0.9
NEEM IAmb IAmb 09 16 23.4
comp=Z,73nm,0.9s
TULEG Thule 71.03 5 *i* P P 09 16 22.8 +0.4
TULEG IAmb IAmb 09 16 23.7
comp=Z,44nm,1.0s
ANN Anapa 71.18 311 *e* P P 09 16 21.8 -2.0
ANN *e**PP pP 09 16 34.2 -1.6
ANN *e*S S 09 25 35.5 -2.4
ANN pmax pmax
comp=Z,70nm,1.3s
ANN MLR MLR
comp=E,995nm,20.0s
ANN MLR MLR
comp=Z,2µm,19.0s
RAUS Rausandaksla 71.21 338 *e* P P 09 16 22.4 -1.2
MORB Moi Rana 71.25 338 *e* P P 09 16 21.3 -2.6
ABTO Aybut 71.52 279 P P 09 16 26.2 -0.2
ABTO P P 09 16 26.2 -0.2
STOK Stokkvaagen 71.60 338 *e* P P 09 16 24.6 -1.4
LEIR Leirfjorden 71.71 338 *e* P P 09 16 25.9 -0.7
YKA Yellowknife Ar 72.05 27 P P 09 16 29.5 +0.8
comp=Z,8.2nm,0.9s,baz=301,slow=6.2,SNR=24
comp=Z,8.2nm,0.9s
YKA Yellowknife Ar 72.05 27 *i* P P 09 16 30.2 +1.5
YKA pmax pmax
comp=Z,8.0nm,0.9s
MNK Minsk 72.09 324 *i* P P 09 16 29.0 -0.2
comp=E,23nm,0.9s
MNK *i* P P 09 16 29.0 -0.2
comp=N,25nm,0.9s
MNK *i* P P 09 16 29.0 -0.2
comp=Z,32nm,0.9s,baz=60
MNK *i* pP pP 09 16 42.0 +1.0
MNK *i* PP PP 09 19 05.6 -3.6
MNK *i* PPP PPP 09 20 53.5
MNK *i* S S 09 25 48.6 +0.4
MNK *i* SS SS 09 30 27.9 +2.9
MNK *i* SSS SSS 09 33 48.5
MNK *i* LQ LQ 09 44 05.1
MNK *i* LRM MLR 09 51 33.4
comp=N,3µm,18.8s
MNK Minsk 72.09 324 *i* P P 09 16 28.9 -0.3
MNK *i* *PP pP 09 16 42.0 +1.0
MNK *i* 09 19 05.5

MNK *i* PPP PPP 09 20 53.5
MNK *i* S **S** **09 25 48.5 +0.4**
MNK *i* SS **SS** **09 30 27.9 +2.9**
MNK pmax pmax
comp=N,25nm,0.9s
MNK pmax pmax
comp=E,23nm,0.9s
MNK pmax pmax
comp=Z,32nm,0.9s
MNK MLR MLR
comp=N,3μm,19.0s
MNK MLR MLR
comp=Z,2μm,17.0s
MARD Mardin 72.26 303 P **P** **09 16 30.0 -0.7**
MARD IAmb IAmb 09 16 31.1
comp=Z,29nm,0.8s
DBG Daneborg 72.44 352 *i* P **P** **09 16 30.6 -0.3**
DBG IAmb IAmb 09 16 31.4
comp=Z,7.4nm,1.0s
NACGM Naroch 72.44 324 ⇑*i* P **P** **09 16 30.5 -0.7**
comp=Z,53nm,0.9s,baz=59
AKASG Malin Array Be 73.28 320 P **P** **09 16 35.1 -1.2**
comp=Z,13nm,0.6s,baz=57,slow=6.3,SNR=40
AKASG LR LR 09 51 24.0
comp=Z,2μm,18.1s,baz=63,slow=38
comp=Z,13nm,0.6s
AKASG Malin Array Be 73.28 320 *i* P **P** **09 16 34.7 -1.6**
AKASG pmax pmax
comp=Z,14nm,0.6s
KIEV Kiev 73.30 320 P **P** **09 16 35.5 -0.9**
KIEV IAmb IAmb 09 16 47.0
comp=Z,36nm,0.9s
KIEV Kiev 73.30 320 ⇓P **P** **09 16 34.9 -1.4**
KIEV Kiev 73.30 320 P **P** **09 16 35.5 -0.9**
KIEV pmax pmax
comp=Z,36nm,0.9s
KIEV Kiev 73.30 320 P **P** **09 16 35.0 -1.4**
KIEV pP **pP** **09 16 45.3 -2.9**
JMIC Jan Mayen 73.60 347 LR LR 09 50 58.2
comp=Z,229nm,20.4s,baz=66,slow=37
KULLO Kullorsuaq 73.61 3 *i* P **P** **09 16 38.2 +0.4**
KULLO IAmb IAmb 09 16 39.0
comp=Z,56nm,0.8s
POIN Pond Inlet 73.67 9 P **P** **09 16 38.9 +0.7**
SUW Suwalki 74.70 325 *eP* **P** **09 16 43.9 -0.7**
BNN Bunyan 74.99 306 P **P** **09 16 45.6 -1.0**
BNN IAmb IAmb 09 17 01.6
comp=Z,30nm,1.3s
RAYN Ar Rayn 75.03 289 P **P** **09 16 46.3 -0.8**
RAYN pP **pP** **09 16 57.0 -2.0**
HFS Hagfors 75.26 333 P **P** **09 16 46.3 -1.4**
comp=Z,8.3nm,0.5s,baz=73,slow=5.1,SNR=47
HFS LR LR 09 54 60.0
comp=Z,459nm,18.0s,baz=50,slow=40
comp=Z,8.3nm,0.5s
NC405 NORSAR Array S 75.38 334 P **P** **09 16 47.5 -0.9**
NC405 IAmb IAmb 09 16 58.4
comp=Z,21nm,0.9s
UPNV Upernavik 75.44 2 *i* P **P** **09 16 49.0 +0.5**
UPNV IAmb IAmb 09 16 49.7
comp=Z,49nm,0.8s
SUMG Summit 75.58 357 P **P** **09 16 50.3 +0.5**
SUMG Summit 75.58 357 P **P** **09 16 50.3 +0.5**
SUMG pmax pmax
comp=Z,106nm,1.1s
SUMG Summit 75.58 357 *i* P **P** **09 16 51.2 +1.4**
SUMG IAmb IAmb 09 16 52.2
comp=Z,82nm,1.2s
NB2 NORSAR Subarra 75.61 334 P **P** **09 16 48.2 -1.5**
comp=Z,18nm,1.1s,baz=50,slow=5.9
NOA NORSAR Array B 75.61 334 P **P** **09 16 48.1 -1.5**
comp=Z,3.2nm,0.5s,baz=49,slow=5.7,SNR=24
comp=Z,3.2nm,0.5s
NC204 NORSAR Array S 75.62 335 *eP* **P** **09 16 49.2 -0.6**
BR131 Keskin Array S 76.05 308 *i* P **P** **09 16 52.2 -0.6**
BRTR Keskin Array B 76.05 308 P **P** **09 16 52.0 -0.7**
comp=Z,11nm,0.9s,baz=96,slow=5.2,SNR=33
BRTR LR LR 09 55 15.4
comp=Z,623nm,19.9s,baz=52,slow=40
comp=Z,11nm,0.9s
BRTR Keskin Array B 76.05 308 P **P** **09 16 51.5 -1.3**
KIRS Kirsehir-Merke 76.16 308 ⇑P **P** **09 16 51.3 -2.1**
ANTO Ankara 76.55 309 ⇑P P 09 16 44.4 -11
TESR Tescani 76.92 317 ⇓P P 09 16 46.0 -11
BEL Belsk 77.13 324 *eP* **P** **09 16 55.3 -3.1**
BURAR Bucovina Array 77.14 318 ⇑P **P** **09 16 57.5 -1.3**
BURAR Bucovina Array 77.14 318 ⇑P **P** **09 16 57.5 -1.3**
ONER Baraj Valea Uz 77.17 317 ⇑P **P** **09 16 58.4 -0.3**
VRI Vrincioaia 77.22 316 ⇑P **P** **09 16 59.6 +0.5**
VRI Vrincioaia 77.22 316 ⇑P **P** **09 16 59.6 +0.5**
KWP Kalwaria Pacla 77.40 321 *eP* **P** **09 16 59.9 -0.2**
BISRR Bisoca 77.41 316 ⇑P **P** **09 17 01.4 +1.2**
ASF Jabal al Asfar 77.51 300 LR LR 09 57 37.4
comp=Z,579nm,18.0s,baz=55,slow=41
SAATT Saattut 77.54 1 *i* P **P** **09 17 02.2 +1.8**
SAATT IAmb IAmb 09 17 02.9
comp=Z,49nm,1.0s
COR Corvallis 77.73 45 P **P** **09 17 04.9 +3.0**
COR pP **pP** **09 17 15.5 +1.8**
MLR Muntele Rosu 77.89 316 LR LR 09 54 25.5
comp=Z,2μm,20.5s,baz=61,slow=38
BSD Bornholm Skovb 77.93 328 *i* P P 09 17 12.4 +10
BSD IAmb IAmb 09 17 13.3
comp=Z,74nm,1.1s
MMAI Mount Meron Ar 78.18 301 P **P** **09 17 03.9 -0.8**
comp=Z,0.7nm,0.3s,baz=29,slow=1.9,SNR=4.6
MMAI LR LR 09 56 24.5
comp=Z,392nm,18.4s,baz=24,slow=39
comp=Z,0.7nm,0.3s
LUNU Lund 78.24 329 *i* P P 09 17 14.8 +10
STHS Stebnicka Huta 78.30 321 *eP* **P** **09 17 04.6 -0.5**
STHS pmax pmax
comp=Z,11nm,1.3s
STHS Stebnicka Huta 78.30 321 *eP* **P** **09 17 04.5 -0.5**
STHS *ep*P **PcP** **09 17 14.7 +0.4**
OJC Ojcow 78.59 323 *eP* **P** **09 17 06.2 -0.4**
ARR Arges 78.73 317 ⇑P **P** **09 17 07.3 -0.2**
NIE Niedzica 78.80 322 *eP* **P** **09 17 08.4 +0.6**
MARR Marisel-Cluj 78.86 318 ⇑P **P** **09 17 10.8 +2.5**
DRGR 79.02 319 ⇑P P 09 17 13.8 +4.7
DRGR 79.02 319 ⇑P P 09 17 13.8 +4.7
ILULI Ilulissat 79.15 1 *i* P **P** **09 17 10.2 +0.9**
ILULI IAmb IAmb 09 17 10.6
comp=Z,21nm,0.9s
ELND Elena 79.34 314 ⇑P **P** **09 17 11.0 +0.1**
LANS Liptovska Anna 79.40 322 *eP* **P** **09 17 12.2 +1.1**
LANS pmax pmax
comp=Z,9.0nm,1.5s
LANS Liptovska Anna 79.40 322 *eP* **P** **09 17 12.2 +1.1**
LANS *ep*P **pP** **09 17 22.5 -0.5**
OKC Ostrava-Krasne 79.67 323 AMS AMS 09 56 50.0
comp=Z,2μm,15.3s
GZR Gura Zlata 79.79 317 ⇓P P 09 17 21.2 +7.9
GZR Gura Zlata 79.79 317 ⇓P P 09 17 21.2 +7.9
STEB Steborice 79.80 323 *eP* **P** **09 17 13.5 +0.3**
STEB *ep*P **PcP** **09 17 22.7 +1.9**
PSZ Piszkesteto 79.91 321 ⇓P P 09 17 24.6 +11
SURR Surduc 79.95 318 ⇑P P 09 17 20.5 +6.4
SSRD Sdr. Stenderup 79.97 331 *i* P P 09 17 19.4 +5.4
SSRD IAmb IAmb 09 17 24.7
comp=Z,128nm,1.1s
KSP Ksiaz 79.98 324 *eP* **P** **09 17 14.2 0.0**
MORC Moravsky Berou 80.01 323 ⇑P **P** **09 17 13.4 -1.0**
MORC Moravsky Berou 80.01 323 *eP* **P** **09 17 13.7 -0.7**
MORC Moravsky Berou 80.01 323 ⇑P **P** **09 17 13.4 -1.0**
OSTC Ostas 80.19 324 AMS AMS 09 56 50.0
comp=Z,4μm,16.5s
KRLC Kraliky 80.21 324 *ep*P **pP** **09 17 26.3 -1.2**
KRLC AMS AMS 09 56 50.0
comp=Z,4μm,16.5s
EIL Elat 80.22 299 LR LR 09 59 03.3
comp=Z,311nm,18.1s,baz=24,slow=40
CHVC Chvalec 80.25 324 AMS AMS 09 56 50.0
comp=Z,4μm,16.0s
DPC Dobruska-Polom 80.27 324 *eP* **P** **09 17 16.4 +0.6**
DPC *e**PP **pP** **09 17 26.5 -1.3**
DPC MLR MLR
comp=Z,4μm,16.1s
DPC Dobruska-Polom 80.27 324 *eP* **P** **09 17 16.4 +0.6**
DPC *ep*P **pP** **09 17 26.5 -1.3**
DPC AMS AMS 09 57 00.0
comp=Z,4μm,16.1s
HERR Herculane 80.29 317 ⇑P P 09 17 23.5 +7.5
BZS Buzias 80.32 318 ⇑P P 09 17 25.7 +10
UPC Upice 80.33 324 AMS AMS 09 57 00.0
comp=Z,4μm,16.4s
JAVC Velka Javorina 80.51 322 *eP* **P** **09 17 17.8 +0.6**
VRAC Vranov 80.79 323 ⇓P P 09 17 29.5 +11
VRAC Vranov 80.79 323 *eP* **P** **09 17 16.4 -2.2**
SMOL Smolenice 80.85 322 *eP* **P** **09 17 19.4 +0.5**
SMOL pmax pmax
comp=Z,11nm,0.8s
MODS Modra-Piesok 81.02 322 *eP* **P** **09 17 20.2 +0.4**
MODS pmax pmax
comp=Z,79nm,1.6s
MODS Modra-Piesok 81.02 322 *eP* **P** **09 17 20.1 +0.3**
MODS *ep*P **pP** **09 17 30.6 -1.2**
PVCC Panska Ves 81.02 325 AMS AMS 09 57 10.0
comp=Z,3μm,17.1s
KRUC Moravsky 81.05 323 *eP* **P** **09 17 18.7 -1.2**
BRG Berggiesshubel 81.10 325 *eP* pP 09 17 30.3 -1.9
comp=Z,18nm,0.9s,baz=47,slow=5.2
CLL Collm 81.27 326 *eP* **P** **09 17 21.0 0.0**
CLL *i* *PP **pP** **09 17 31.0 -2.0**
CLL *eS* **S** **09 27 24.0 -4.5**
CLL pmax pmax
comp=Z,25nm,1.3s
CLL MLR MLR
comp=Z,3μm,18.0s
CLL Collm 81.27 326 *eP* pP 09 17 31.2 -1.8
comp=Z,47nm,0.9s,baz=47,slow=5.2
CLL Collm 81.27 326 *eP* **P** **09 17 21.0 0.0**
comp=Z,25nm,1.3s
CLL *i* pP **pP** **09 17 31.0 -2.0**
comp=Z,54nm,1.0s
CLL *ex* x 09 18 42.0
CLL *eP*P **PP** **09 20 27.0 +0.7**
CLL *ex* x 09 21 36.0
CLL *eP*PPP 09 23 48.0
CLL *eS* **S** **09 27 24.0 -4.5**
CLL *eP*S 09 28 18.0
CLL *eP*PS PPS 09 28 36.0
CLL *eSS* **SS** **09 32 54.0 +11**
CLL *ex* x 09 37 24.0
CLL *eSSSS* 09 38 42.0
CLL AMS AMS 09 57 00.0
comp=Z,3μm,18.0s
TREC Trest 81.36 324 AMS AMS 09 57 40.0
comp=Z,4μm,17.0s
PRU Pruhonice 81.39 325 *eP* **P** **09 17 24.6 +2.9**
PRU MLR MLR
comp=Z,3μm,16.9s
PRU Pruhonice 81.39 325 *eP* **P** **09 17 24.6 +2.9**
PRU *ep*P **pP** **09 17 32.4 -1.3**
PRU AMS AMS 09 57 40.0
comp=Z,3μm,16.9s
PRA Prague 81.39 325 AMS AMS 09 57 40.0
comp=Z,3μm,17.7s
SFJD Kangerlussuaq 81.39 1 LR LR 09 56 05.5
comp=Z,479nm,18.4s,baz=343,slow=38
SFJD Kangerlussuaq 81.39 1 *i* P **P** **09 17 21.4 +0.1**
SFJD IAmb IAmb 09 17 23.0
comp=Z,30nm,1.1s
BORG Borgarnes 81.40 349 LR LR 09 54 43.5
comp=Z,182nm,20.2s,baz=22,slow=36
BOVS Bovan 81.44 316 ⇑P P 09 17 32.4 +10
HSKC Hora Svate Kat 81.52 325 *eP* **P** **09 17 22.0 -0.5**
HSKC *ep*P **pP** **09 17 33.1 -1.3**
HSKC AMS AMS 09 57 30.0
comp=Z,4μm,16.5s
URZ Urewera 81.55 146 LR LR 09 49 27.5
comp=Z,63nm,18.7s,baz=340,slow=32
MORH Mrgy, Hungar 81.62 320 ⇑P **P** **09 17 20.8 -2.2**
NEUB Neuenburg 81.91 327 *eP* pP 09 17 34.9 -1.5
comp=Z,54nm,0.9s,baz=47,slow=5.2
RONA Rosalia, Austr 81.96 322 *eP* **P** **09 17 25.2 +0.4**
comp=Z,12nm,1.2s
RONA *ep*P **pP** **09 17 36.0 -0.8**
comp=Z,26nm,1.0s
RETH Rethem/Aller, 81.97 329 *eP* pP 09 17 34.6 -2.0
comp=Z,25nm,1.2s,baz=47,slow=5.2
CONA Conrad Observa 82.04 322 *eP* **P** **09 17 25.6 +0.3**
comp=Z,11nm,0.9s
CONA *ep*P **pP** **09 17 36.4 -0.8**
comp=Z,44nm,1.1s
FFC Flin Flon 82.10 28 P **P** **09 17 26.7 +1.3**
TANN Tannenbergstha 82.12 326 *eP* pP 09 17 35.6 -2.0
comp=Z,12nm,1.0s,baz=47,slow=5.2
CLZ Clausthal 82.13 328 *eP* pP 09 17 36.3 -1.4
comp=Z,35nm,1.0s,baz=47,slow=5.2
PLN Plauen 82.22 326 *eP* pP 09 17 36.4 -1.7
comp=Z,7.0nm,1.0s,baz=47,slow=5.2
CKRC Cesky Krumlov 82.26 324 *eP* **P** **09 17 27.0 +0.6**
CKRC *e**PP **pP** **09 17 36.6 -1.7**
CKRC MLR MLR
comp=Z,4μm,16.8s
CKRC Cesky Krumlov 82.26 324 *eP* **P** **09 17 27.0 +0.6**
CKRC *ep*P **pP** **09 17 36.6 -1.7**
CKRC *eS* S 09 27 58.7 +20
CKRC AMS AMS 09 58 10.0
comp=Z,4μm,16.8s
BPMT Black Pine Rid 82.28 39 P **P** **09 17 27.7 +0.8**
MOX Moxa 82.36 326 *eP* **pP** **09 17 36.7 -2.2**
comp=Z,19nm,1.0s,baz=47,slow=5.2
MOX *eL* L 09 57 48.7
comp=Z,2μm,19.3s
KHC Kasperske Hory 82.42 324 *eP* P 09 17 22.0 -5.2
KHC MLR MLR
comp=Z,4μm,15.8s
KHC Kasperske Hory 82.42 324 *eP* P 09 17 22.0 -5.2
KHC *ep*P **PcP** **09 17 27.9 -4.4**
KHC *eS* S 09 27 59.3 +19
KHC AMS AMS 09 58 10.0
comp=Z,4μm,15.8s
GEC2 GERESS Array S 82.55 324 *eP* pP 09 17 38.0 -2.0
comp=Z,16nm,1.0s,baz=47,slow=5.2
GERES GERESS Array B 82.55 324 LR LR 09 58 23.7
comp=Z,2μm,20.0s,baz=54,slow=39
MANZ Manzenberg 82.57 326 *eP* pP 09 17 38.2 -1.8
comp=Z,5.1nm,1.1s,baz=47,slow=5.2
ARSA Arzberg 82.65 322 *ep*P pP 09 17 38.6 -1.9
comp=Z,14nm,1.0s
ROTZ Rotzenmuhle 82.67 325 *eP* pP 09 17 38.7 -1.7
comp=Z,9.5nm,1.1s,baz=47,slow=5.2
WET Wettzell 82.76 325 *eP* pP 09 17 39.1 -1.8
comp=Z,15nm,1.1s,baz=47,slow=5.2
MOA Molln 82.91 323 *eP* **P** **09 17 30.1 +0.3**
comp=Z,12nm,1.4s
MOA *ep*P **pP** **09 17 40.9 -0.8**
comp=Z,34nm,1.4s
ATD Arta Tunnel 83.18 279 LR LR 09 57 41.2
comp=Z,7.2nm,19.2s,baz=48,slow=38
PERS Pernice 83.25 322 *eP* **P** **09 17 31.2 -0.4**
SOKA Soboth 83.27 322 *eP* **P** **09 17 31.5 -0.3**
comp=Z,38nm,1.9s
SOKA *ep*P **pP** **09 17 42.9 -0.9**
comp=Z,77nm,1.5s
FRB Frobisher Bay 83.30 9 LR LR 09 57 32.6
comp=Z,407nm,18.2s,baz=344,slow=38
BIOA Bad Ischl, Aus 83.33 323 *eP* **P** **09 17 32.4 +0.4**
comp=Z,19nm,1.4s
BIOA *ep*P **pP** **09 17 43.0 -0.9**
comp=Z,28nm,1.1s
PDG Podgorica 83.60 317 ⇓P **P** **09 17 33.8 +0.5**
OBKA Obir 83.64 322 *eP* **P** **09 17 31.7 -2.0**
comp=Z,6.8nm,0.8s
OBKA *ep*P **pP** **09 17 43.6 -2.0**
comp=Z,24nm,1.2s
RJOB Jochberg 83.73 324 *eP* pP 09 17 44.4 -1.6
comp=Z,46nm,1.1s,baz=47,slow=5.2
KBA Koelnbreinsper 83.89 323 *eP* **P** **09 17 35.3 +0.3**
comp=Z,6.6nm,0.8s
KBA *ep*P **pP** **09 17 46.3 -0.8**
comp=Z,39nm,1.2s
LESA Schwarzleotal 84.00 323 *eP* **P** **09 17 35.1 -0.4**
comp=Z,22nm,1.3s
LESA *ep*P **pP** **09 17 46.5 -1.0**
comp=Z,66nm,1.1s
MYKA Terra Mystica 84.03 322 *ep*P pP 09 17 45.4 -2.2
comp=Z,24nm,1.1s
CRNS Crni Vrh 84.07 322 *i* P **P** **09 17 34.8 -1.0**
CRNS *ep*P **pP** **09 17 45.1 -2.7**
NUUK Nuuk 84.19 2 *i* P **P** **09 17 36.6 +0.7**
NUUK IAmb IAmb 09 17 37.7
comp=Z,26nm,0.9s
CEY Cerknica 84.20 321 *i* P **P** **09 17 35.8 -0.6**
CEY *i* pP **pP** **09 17 46.1 -2.4**
FUR Furstenfeldbru 84.20 325 *eP* pP 09 17 47.3 -1.1
comp=Z,102nm,1.1s,baz=47,slow=5.2
IDI Anoyia 84.30 308 LR LR 10 00 29.9
comp=Z,294nm,18.2s,baz=54,slow=39
NVAR Mina Array Bea 84.32 48 P **P** **09 17 38.2 +0.8**
comp=Z,5.9nm,0.8s,baz=292,slow=5.0,SNR=24
comp=Z,5.9nm,0.8s
WATA Walderalm 84.61 324 *ep*P pP 09 17 49.1 -1.5
comp=Z,19nm,1.1s
WTTA Wattenberg 84.63 324 *eP* **P** **09 17 38.1 -0.7**
comp=Z,20nm,1.7s
WTTA *ep*P **pP** **09 17 49.6 -1.2**
comp=Z,64nm,1.7s
STU Stuttgart 84.79 326 *eP* pP 09 17 49.7 -1.7
comp=Z,100nm,0.8s,baz=47,slow=5.2
MOTA Moosalm 84.84 324 *eP* **P** **09 17 39.0 -0.8**
comp=Z,5.3nm,0.8s
MOTA *ep*P **pP** **09 17 49.5 -2.4**
comp=Z,16nm,1.1s
SQTA Sankt Quirin 84.88 324 *ePcP* **P** **09 17 40.9 +1.0**
comp=Z,6.0nm,0.8s
SQTA *i* pP **pP** **09 17 50.4 -1.6**
comp=Z,27nm,1.2s
RETA Reutte 84.92 324 *ePcP* **P** **09 17 40.7 +0.6**
comp=Z,19nm,1.5s
RETA *ep*P **pP** **09 17 51.3 -0.9**
comp=Z,35nm,1.3s
EKA Eskdalemuir Ar 84.95 336 P **P** **09 17 39.5 -0.5**
comp=Z,0.5nm,0.4s,baz=42,slow=4.3,SNR=4.5
comp=Z,0.5nm,0.4s
UBR Ueberruh 85.11 325 *eP* pP 09 17 50.8 -2.3
comp=Z,24nm,1.1s,baz=47,slow=5.2
ITM Ithomi 85.13 311 P **P** **09 17 39.4 -1.9**
ITM IAmb IAmb 09 17 53.9
comp=Z,22nm,0.8s
FETA Feichten 85.25 324 *eP* **P** **09 17 40.9 -1.0**
comp=Z,8.3nm,1.2s
FETA *ep*P **pP** **09 17 51.5 -2.4**
comp=Z,20nm,1.2s
DAVA Damuels 85.49 325 *eP* **P** **09 17 42.5 -0.5**
comp=Z,18nm,1.3s
DAVA *ep*P **pP** **09 17 52.9 -2.2**
comp=Z,49nm,1.4s
BFO Black Forest 85.51 326 P **P** **09 17 42.2 -0.8**
BFO IAmb IAmb 09 17 54.4
comp=Z,54nm,1.2s
BFO Black Forest 85.51 326 P **P** **09 17 42.2 -0.8**
BFO pmax pmax
comp=Z,54nm,1.2s
BFO Black Forest 85.51 326 *eP* pP 09 17 53.1 -2.0
comp=Z,46nm,1.1s,baz=47,slow=5.2
BFO Black Forest 85.51 326 P **P** **09 17 42.7 -0.3**
BFO pP **pP** **09 17 53.4 -1.7**
FUORN Ofenpass-Fuorn 85.76 324 P **P** **09 17 43.9 -0.6**
FUORN IAmb IAmb 09 17 55.7
comp=Z,48nm,1.1s
DAVOX Davos/Dischmat 85.84 324 LR LR 10 00 47.5
comp=Z,4μm,18.0s,baz=74,slow=39
PDAR Pinedale Array 86.77 40 P **P** **09 17 51.0 +1.4**
comp=Z,3.5nm,0.8s,baz=309,slow=1.3,SNR=21
comp=Z,3.5nm,0.8s
TIP Timpagrande 87.11 315 ⇑P **P** **09 17 50.0 -1.1**
IVI Ivigtut 87.22 0 *i* P **P** **09 17 50.3 -0.7**
IVI IAmb IAmb 09 17 51.7
comp=Z,23nm,1.0s
IVI Ivigtut 87.22 0 P **P** **09 17 50.2 -0.8**
IVI pP **pP** **09 18 01.4 -1.7**
ULM Lac du Bonnet 87.93 28 P **P** **09 17 54.7 0.0**
comp=Z,23nm,0.9s,baz=318,slow=5.0,SNR=11
comp=Z,23nm,0.9s
RSSD Black Hills 88.76 37 P **P** **09 18 00.7 +1.6**
RSSD pP **pP** **09 18 12.2 +1.1**
VAE Valguarnera 89.61 315 LR LR 10 01 19.7
comp=Z,368nm,21.2s,baz=40,slow=38
PPT Papeete 89.82 111 LR LR 09 49 54.2
comp=Z,124nm,21.0s,baz=240,slow=30
PPT2 Papeete2 89.83 111 *eLR* LR 09 46 44.1
comp=Z,247nm,22.2s
PPT2 *eLR* LR 09 46 52.8
comp=Z,227nm,24.2s
SCHQ Schefferville 92.12 11 P **P** **09 18 14.9 +0.7**
comp=Z,9.5nm,1.1s,baz=55,slow=6.7,SNR=3.2
SCHQ LR LR 10 01 38.2
comp=Z,380nm,20.5s,baz=328,slow=37
comp=Z,9.5nm,1.1s
TAOE Nuku Hiva Isla 92.92 99 *eSS* SS 09 35 29.0 -7.7
comp=Z,171nm,21.6s
TAOE Nuku Hiva Isla 92.92 99 *eLR* LR 09 48 09.9
comp=Z,314nm,24.3s
TBI Tubuai 93.08 116 *eLR* LR 09 48 20.6
comp=Z,2μm,30.5s
KEST Kesra 93.79 317 LR LR 10 06 35.5
comp=Z,526nm,18.9s,baz=10,slow=39
KMBO Kilima Mbogo 94.51 271 P **P** **09 18 24.3 -1.9**
comp=Z,1.6nm,0.3s,baz=45,slow=3.5,SNR=4.6
KMBO LR LR 10 04 00.6
comp=Z,148nm,18.6s,baz=95,slow=37
comp=Z,1.6nm,0.3s
KMBO Kilima Mbogo 94.51 271 *i* P **P** **09 18 25.7 -0.5**
KMBO pmax pmax
comp=Z,2.0nm,0.3s
ESDC Sonseca Array 97.83 327 LR LR 10 09 03.0
comp=Z,2μm,18.5s,baz=32,slow=39
TXAR Lajitas Array 99.43 47 P **Pdif** **09 18 49.1 +1.0**
comp=Z,0.5nm,0.6s,baz=290,slow=2.5,SNR=6.3
comp=Z,0.5nm,0.6s
BOSA Boshof 117.67 252 PKP **PKPdf** **09 23 51.2 -0.2**
comp=Z,2.0nm,0.6s,baz=48,slow=2.5,SNR=9.4
SYO Syowa Base 120.19 205⇓*eP*diff **Pdif** **09 20 20.4 +1.3**
SYO Syowa Base 120.19 205⇑*eP*diff pPdif 09 20 30.8 -0.5
QSPA South Pole Qui 121.67 180 PKP **PKiKP** **09 23 58.3 +0.3**
comp=Z,3.6nm,0.9s,baz=284,slow=1.2,SNR=18
DBIC Dimbokro 123.67 305 PKP **PKPdf** **09 24 02.7 -0.6**
comp=Z,9.8nm,0.8s,baz=76,slow=1.1,SNR=10
NVL N'lazarevskaya 129.60 202 *i* PKIKP **PKiKP** **09 24 13.8 +0.3**
NVL *e* 09 26 24.9
NVL *eP*PP PPP 09 29 12.1
NVL *eSS* SS 09 43 45.9 +2.6
NVL *eSSS* SSS 09 48 34.6
NVL pmax pmax
comp=Z,12nm,1.2s
NVL pmax pmax
comp=N,323nm,21.3s
TROLL Troll, Antarti 131.88 199 ⇓PKPdf **PKiKP** **09 24 18.8 +0.5**
comp=Z,212nm,0.8s
SNAA Sanae 133.50 198 ⇓PKPdf **PKPdf** **09 24 17.9 -2.4**
comp=Z,29nm,0.7s
VNA2 Neumayer--Watz 135.12 198 ⇑PKPdf **PKiKP** **09 24 24.8 0.0**
comp=Z,9.5nm,0.6s,baz=98,slow=1.8
VNA3 Neumayer Olymp 135.49 197 ⇓PKPdf **PKPdf** **09 24 24.3 +0.3**
comp=Z,3.7nm,0.8s
VNA1 Neumayer--Stat 135.52 198 ⇓PKPdf **PKPdf** **09 24 23.8 -0.2**
comp=Z,7.8nm,1.0s
TEFE Tefe 147.77 32 *eP* **PKPdf** **09 24 48.1 +0.5**
MACA Manacapuru-AM 149.06 25 *eP* **PKPdf** **09 24 51.2 +1.6**
RCBR Riachuelo 151.64 334 *eP* **PKPdf** **09 24 55.5 +1.8**
ITTB Itaituba 151.69 16 *eP* **PKPdf** **09 24 54.3 +0.6**
LPAZ La Paz 156.08 54 PKP **PKPdf** **09 25 01.2 +0.6**
comp=Z,1.4nm,0.5s,baz=36,slow=3.2,SNR=3.6
LPAZ PKPab **PKPab** **09 25 26.8 -1.3**
comp=Z,3.8nm,0.8s,baz=12,slow=4.0,SNR=5.8
LPAZ La Paz 156.08 54 *eP* **PKPdf** **09 25 01.6 +1.0**
CLDB Colider 157.90 20 *eP* **PKPdf** **09 25 04.3 +2.0**
SNDB Serra Nova Dou 159.95 9 *eP* **PKPdf** **09 25 06.8 +2.1**
PLCA Paso Flores 159.95 122 PKP **PKPdf** **09 25 03.7 -0.3**
comp=Z,0.7nm,0.9s,baz=247,slow=18,SNR=1.4
PLCA PKPab **PKPab** **09 25 44.4 +0.7**
comp=Z,0.8nm,0.8s,baz=61,slow=17,SNR=1.2
BDFB Brasilia 163.80 360 PKP **PKPdf** **09 25 08.9 +0.2**
baz=308,slow=2.1
BDFB PKPab **PKPab** **09 26 00.0 -0.8**
baz=128,slow=0.8
CPUP Villa Florida 170.23 58 PKP **PKPdf** **09 25 13.6 +0.6**
comp=Z,0.1nm,0.3s,baz=126,slow=8.3,SNR=1.4
CPUP PKPab **PKPab** **09 26 29.8 +0.7**
comp=Z,0.1nm,0.3s,baz=59,slow=18,SNR=1.3

IDC ***22*** *09:07:40.0*E*0.8, 9.˚68*N*×84.˚27*W*, h0km, mb4.3/14, mbtmp4.2/16, ML3.3/3, MS3.9/10, Error ellipse: s-maj=27.9km s-min=9.5km az=37.0*
NEIC ***22*** *09:07:42.4, 9.˚48*N*×84.˚66*W*, h4km*
UCR ***22*** *09:07:42.6*E*0.9, 9.˚44*N*×84.˚70*W*, h18km*E*2km, MW4.8, Fault plane solution: NP1*φ*s272.90000°, *δ*35.31000°, *λ*81.33000°.*
NEIC ***22*** *09:07:43.9*E*1.9, 9.˚47*N*E*0.˚05*×*84.˚68*W*E*0.˚05, h18km*E*5km, mb4.5/51, Mwr4.3/24, Error ellipse: s-maj=9.0km s-min=5.5km az=216.0, Moment Tensor Solution.*

Moment tensor: Scale 10^{15}Nm; M_{rr}1.50; $M_{\theta\theta}$-0.38; $M_{\theta\theta}$-1.12; $M_{\varphi\varphi}$2.66; $M_{\theta\varphi}$0.20; $M_{r\theta}$-1.99; Fault plane solution: $M_0$3.59000×10^{15} NP1:ϕ_s345.24000°,δ12.09000°,λ124.61000°. NP2:ϕ_s130.02000°,δ80.08000°,λ83.06000°. Principal axes: T 3.8654, Plg54.0000°, Azm32.0000°; N -0.6312, Plg7.0000°, Azm131.0000°; P -3.2342, Plg35.0000°, Azm226.0000°;

CATAC ***22*** *09:07:43.4±0.5,9°N±3°×8°5W±°,h6km±4km,M4.9/13, MLv4.9/13 Error ellipse: s-maj=6.7km s-min=5.9km az=177.9,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.20; $M_{\theta\theta}$-1.96; $M_{\varphi\varphi}$0.76; $M_{r\theta}$1.81; $M_{\theta\varphi}$1.12; $M_{r\varphi}$-1.69; Fault plane solution: $M_0$3.21435×10^{15} NP1:ϕ_s134.69625°,δ75.56457°,λ114.17319°. NP2: ϕ_s253.74350°,δ27.93136°,λ32.15410°. Principal axes: T 2.7946, Plg53.2266°, Azm73.6224°; N 0.7181, Plg23.3638°, Azm308.3117°; P -3.5127, Plg26.6450°, Azm205.7936°; confirmed*

ISC 22 09:07:42.6±0.8,9.44N±0.03×84.67W±0.02,h19km±3km, n302,σ1§16/293,mb4.5/38,MS3.9/8,20C-99D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BITO	**Garabito Jaco**	**0.18**	**16**	*eP*	**Pg**	**09 07 47.6**	**+0.2**
BITO				*eS*	**Sg**	**09 07 51.1**	**+0.5**
CBL1	**Cabuya**	**0.44**	**289**	*eP*	**Pb**	**09 07 52.0**	**+0.2**
PAQE	**Paquera**	**0.46**	**325**	*eP*	**Pg**	**09 07 51.8**	**-0.1**
OROT	**Orotina**	**0.49**	**17**	*eP*	**Pg**	**09 07 52.0**	**-0.5**
SVQ2	**Quepos**	**0.50**	**91**	*eP*	**Pb**	**09 07 52.9**	**+0.1**
QUEP	**Quepos**	**0.50**	**91**	P	**Pb**	**09 07 52.9**	**+0.1**
QUEP	**Quepos**	**0.50**	**91**	S	**Sb**	**09 08 00.6**	**+0.8**
QUEP	**Quepos**	**0.50**	**91**	*eP*	**Pb**	**09 07 52.9**	**+0.1**
PICV	**PH. Pirrs**	**0.50**	**69**	*eP*	**Pb**	**09 07 53.1**	**+0.2**
PURI	**Puriscal**	**0.54**	**41**	*eP*	**Pg**	**09 07 53.3**	**-0.2**
ROBF	**Roble, Puntare**	**0.54**	**353**	*eP*	**Pg**	**09 07 53.2**	**-0.2**
ARZA	**Esparza**	**0.54**	**0**	*eP*	**Pb**	**09 07 53.1**	**-0.4**
ENAS	**Puntarenas**	**0.56**	**343**	*eP*	**Pb**	**09 07 53.7**	**-0.1**
LLNJ	**Naranjito**	**0.56**	**87**	*eP*	**Pg**	**09 07 54.1**	**+0.2**
JCR1	**Jicaral**	**0.59**	**313**	*eP*	**Pb**	**09 07 54.2**	**-0.2**
ATEO	**Atenas**	**0.60**	**28**	*eP*	**Pb**	**09 07 54.3**	**-0.3**
ACOS	**Acosta**	**0.61**	**55**	*eP*	**Pb**	**09 07 54.3**	**-0.4**
PALD	**Palmares**	**0.65**	**21**	*eP*	**Pb**	**09 07 54.9**	**-0.5**
SRA1	**San Ramn**	**0.67**	**16**	*eP*	**Pb**	**09 07 55.1**	**-0.6**
RAMO	**San Ramon**	**0.67**	**17**	*eP*	**Pb**	**09 07 55.2**	**-0.6**
PITB	**Pirrs, San**	**0.67**	**71**	*eP*	**Pb**	**09 07 55.8**	**0.0**
RAZU	**San Marcos de**	**0.67**	**71**	*eP*	**Pb**	**09 07 55.8**	**-0.1**
SANTA	**Santa Ana**	**0.68**	**44**	*eP*	**Pb**	**09 07 55.3**	**-0.7**
BELE	**Belen**	**0.71**	**42**	*eP*	**Pb**	**09 07 56.1**	**-0.4**
NARAN	**Naranjo de Ala**	**0.71**	**24**	*eP*	**Pb**	**09 07 56.5**	**0.0**
SARCI	**Sarchi**	**0.72**	**26**	*eP*	**Pg**	**09 07 56.7**	**-0.1**
LCR2	**La Lucha 2**	**0.72**	**66**	S	**Sb**	**09 08 06.0**	**-0.3**
PIEC	**Cerro El Cedra**	**0.72**	**76**	*eP*	**Pb**	**09 07 56.9**	**-0.1**
UELA	**Alajuela**	**0.73**	**38**	*eP*	**Pb**	**09 07 55.3**	**-1.6**
PAVB	**Pavas, San Jos**	**0.73**	**48**	*eP*	**Pb**	**09 07 56.3**	**-0.6**
AMPA	**Desamparados**	**0.75**	**53**	*eP*	**Pb**	**09 07 56.5**	**-0.7**
POAS	**San Pedro de P**	**0.76**	**34**	*eP*	**Pb**	**09 07 57.4**	**0.0**
CENT	**San Jose**	**0.76**	**50**	*eP*	**Pg**	**09 07 57.9**	**+0.3**
MEXI	**Barrio Mexico**	**0.76**	**49**	*eP*	**Pb**	**09 07 57.0**	**-0.3**
HEME	**Heredia, Merce**	**0.76**	**44**	*eP*	**Pn**	**09 07 58.1**	**-0.5**
LUJA	**Lujan**	**0.76**	**51**	*eP*	**Pb**	**09 07 57.0**	**-0.4**
HDC	**Heredia**	**0.78**	**45**		**Pb**	**09 07 57.5**	**-0.2**
HDC	**Heredia**	**0.78**	**45**	*eP*	**Pb**	**09 07 57.5**	**-0.2**
HDC	**Heredia**	**0.78**	**45**	*eP*	**Pb**	**09 07 56.8**	**-0.9**
HDC				*eS*	**Sb**	**09 08 05.5**	**-2.5**
SJS	**Escuela Geolog**	**0.78**	**51**	*eP*	**Pb**	**09 07 57.4**	**-0.3**
ECI	**Escuela Centro**	**0.78**	**51**	*eP*	**Pb**	**09 07 57.4**	**-0.4**
SJS3	**Mercedes San J**	**0.78**	**51**	*eP*	**Pb**	**09 07 57.5**	**-0.2**
TIBA	**Tibas**	**0.78**	**49**	*eP*	**Pn**	**09 07 58.5**	**-0.4**
ZARE	**Zarcero**	**0.79**	**29**	*eP*	**Pb**	**09 07 57.1**	**-0.1**
NYURE	**Nandayure**	**0.80**	**314**	*eP*	**Pb**	**09 07 57.7**	**-0.2**
TRIO	**Tres Ros**	**0.81**	**55**	*eP*	**Pb**	**09 07 57.7**	**-0.5**
CORON	**Coronado**	**0.84**	**51**	*eP*	**Pb**	**09 07 58.7**	**-0.1**
VPS8	**V Poas**	**0.84**	**30**	*eP*	**Pb**	**09 07 58.9**	**-0.1**
TAGO	**Cartago**	**0.85**	**60**	*eP*	**Pb**	**09 07 58.6**	**-0.3**
VPS5	**V. Poas**	**0.86**	**30**	*eP*	**Pb**	**09 07 58.8**	**-0.3**
VPL1	**V. Platanar**	**0.86**	**20**	*eP*	**Pb**	**09 07 58.8**	**-0.4**
REPA	**Paraso**	**0.88**	**64**	*eP*	**Pb**	**09 07 59.1**	**-0.3**
JUNT	**Juntas**	**0.88**	**341**	*eP*	**Pb**	**09 07 58.6**	**-0.8**
MTEVE	**Monteverde**	**0.88**	**350**	*eP*	**Pb**	**09 07 58.9**	**-0.7**
JTS	**Las Juntas de** 568nm,0.3s,baz=13,slow=6.7,SNR=1721	**0.89**	**342**	Pg	**Pb**	**09 07 58.5**	**-1.0**
JTS	982nm,0.3s,baz=298,slow=22,SNR=11			Lg	Lg	09 08 09.8	
JTS	**Las Juntas de**	**0.89**	**342**		**Pb**	**09 07 58.7**	**-0.8**
JTS	**Las Juntas de**	**0.89**	**342**	*eP*	**Pb**	**09 07 58.6**	**-0.8**
JTS	**Las Juntas de**	**0.89**	**342**	P	**Pb**	**09 07 58.6**	**-0.8**
JTS				S	**Sb**	**09 08 10.5**	**-0.5**
QUEU	**Ciudad Quesada**	**0.90**	**15**	*eP*	**Pg**	**09 08 00.2**	**-0.1**
VPL2	**V. Platanar**	**0.90**	**18**	*eP*	**Pb**	**09 07 59.8**	**-0.1**
BUS1	**Rivas**	**0.92**	**83**	*eP*	**Pb**	**09 07 59.7**	**-0.5**
CVIMO	**Finca Echandi**	**0.92**	**51**	*eP*	**Pb**	**09 08 00.0**	**-0.1**
SOCE	**Pocosol**	**0.94**	**3**		**Pb**	**09 08 00.1**	**-0.2**
SOCE	**Pocosol**	**0.94**	**3**	P	**Pb**	**09 08 00.3**	**0.0**
SOCE	**Pocosol**	**0.94**	**3**	*eP*	**Pb**	**09 08 00.1**	**-0.2**
CMARA	**Lajas Hojancha**	**0.94**	**308**	*eP*	**Pb**	**09 07 59.7**	**-0.6**
VPL3	**V. Platanar**	**0.97**	**22**	*eP*	**Pb**	**09 08 00.7**	**-0.2**
PCAYA	**Pacayas**	**0.97**	**61**	*eP*	**Pb**	**09 08 00.7**	**-0.3**
VICA	**Volcano Irazu**	**0.98**	**56**	*eP*	**Pb**	**09 08 00.9**	**-0.4**
ZEDO	**Perez Zeledon**	**0.98**	**95**	*eP*	**Pb**	**09 08 00.5**	**-0.6**
CASO	**Castillo**	**0.99**	**356**	*eP*	**Pb**	**09 08 00.7**	**-0.5**
RAFA	**San Farael, Vo**	**0.99**	**59**		**Pb**	**09 08 01.2**	**-0.2**
RAFA	**San Farael, Vo**	**0.99**	**59**	*eP*	**Pb**	**09 08 01.2**	**-0.2**
ARTO	**Ro Cuarto**	**1.00**	**27**	*eP*	**Pb**	**09 08 01.1**	**-0.4**
VARE2	**V. Arenal**	**1.01**	**357**	*eP*	**Pb**	**09 08 01.5**	**-0.2**
VINA	**Juan Vinas**	**1.02**	**64**	*eP*	**Pb**	**09 08 01.6**	**-0.2**
FORC	**Fortuna**	**1.02**	**0**	*eP*	**Pb**	**09 08 01.5**	**-0.2**
CHIK	**Chiripa**	**1.02**	**347**	*eP*	**Pb**	**09 08 01.4**	**-0.4**
VACR	**Volcan Arenal**	**1.02**	**360**	*eP*	**Pb**	**09 08 01.6**	**-0.3**
NICO	**Nicoya**	**1.03**	**312**	*eP*	**Pb**	**09 08 01.2**	**-0.6**
CEDE	**Laguna Cedeo**	**1.04**	**358**	*eP*	**Pb**	**09 08 01.9**	**-0.2**
CVTQ	**Turrialba Volc**	**1.05**	**58**	*eP*	**Pb**	**09 08 02.4**	**-0.1**
TABAC	**Tabacon**	**1.05**	**355**	*eP*	**Pb**	**09 08 02.3**	**-0.1**
TILA	**Tilaran**	**1.06**	**344**	*eP*	**Pb**	**09 08 01.8**	**-0.7**
VTR0	**Volcan Turrial**	**1.06**	**57**	*eP*	**Pb**	**09 08 02.7**	**0.0**
CNAS	**Canas**	**1.07**	**337**	*eP*	**Pn**	**09 08 03.0**	**+0.4**
CVTR	**Volcan Turrial**	**1.07**	**57**	*eP*	**Pb**	**09 08 02.6**	**-0.1**
CVTV	**Tajo**	**1.07**	**58**	*eP*	**Pb**	**09 08 02.7**	**0.0**
OCHAL	**Ojochal**	**1.07**	**109**	P	**Pb**	**09 08 02.4**	**-0.2**
OCHAL	**Ojochal**	**1.07**	**109**	S	**Sg**	**09 08 17.4**	**-0.1**
VTCV	**VTCV, Calle Va**	**1.07**	**60**	*eP*	**Pb**	**09 08 02.7**	**-0.1**
TURIB	**Turrialba**	**1.07**	**65**	*eP*	**Pb**	**09 08 02.3**	**-0.4**
ITAL	**Pital**	**1.08**	**21**	*eP*	**Pb**	**09 08 02.4**	**-0.3**
REZ	**Monterrey de S**	**1.08**	**359**	*eP*	**Pn**	**09 08 03.0**	**+0.2**
VERB	**Verbena**	**1.08**	**63**	*eP*	**Pb**	**09 08 02.8**	**-0.1**
ABRB	**Las Abras (San**	**1.09**	**59**	*eP*	**Pb**	**09 08 03.1**	**0.0**
INVE	**Universidad In**	**1.10**	**339**	*eP*	**Pb**	**09 08 02.5**	**-0.6**
JUD3	**Juan Diaz 3**	**1.12**	**310**		**Pn**	**09 08 02.3**	**-1.1**
JUD3	**Juan Diaz 3**	**1.12**	**310**	*eP*	**Pn**	**09 08 02.3**	**-1.1**
EDPE	**Pejibaye, P**	**1.12**	**105**	*eP*	**Pn**	**09 08 03.0**	**-0.4**
PLVR	**Palo Verde**	**1.12**	**323**	*eP*	**Pn**	**09 08 02.8**	**-0.7**
CVTG	**V. Turrialba,**	**1.13**	**52**	*eP*	**Pn**	**09 08 03.5**	**0.0**
PILE	**Guapiles**	**1.16**	**48**	*eP*	**Pb**	**09 08 04.0**	**-0.1**
RESJ	**San Isidro (Tu**	**1.17**	**60**	*eP*	**Pb**	**09 08 04.4**	**+0.1**
TIMP	**Tierras Morena**	**1.18**	**343**	*eP*	**Pn**	**09 08 03.8**	**-0.5**
SARA	**Sarapiqu**	**1.19**	**33**	*eP*	**Pn**	**09 08 04.0**	**-0.3**
QUEB	**Quebradon, Cot**	**1.19**	**349**	*eP*	**Pn**	**09 08 04.2**	**-0.2**
SACU	**Santa Cruz**	**1.21**	**312**	*eP*	**Pn**	**09 08 03.8**	**-0.8**
BAGA	**Bagaces**	**1.23**	**332**	*eP*	**Pn**	**09 08 04.5**	**-0.3**
RVLA	**Villa Bonita**	**1.25**	**58**	*eP*	**Pb**	**09 08 05.9**	**+0.2**
LCOCO	**El Coco**	**1.27**	**60**	*eP*	**Pb**	**09 08 05.8**	**-0.2**
TENO	**El Achiote**	**1.29**	**346**	*eP*	**Pn**	**09 08 05.2**	**-0.6**
PANP	**Palmar Norte**	**1.29**	**112**	*eP*	**Pn**	**09 08 05.4**	**-0.3**
COVE	**Coope Vega, Sa**	**1.29**	**12**	P	**Pn**	**09 08 05.8**	**0.0**
COVE	**Coope Vega, Sa**	**1.29**	**12**	S	**Sg**	**09 08 24.8**	**+0.1**
MOTZ	**Rio Naranjo**	**1.30**	**342**	*eP*	**Pn**	**09 08 06.1**	**+0.2**
CARI	**Cariari**	**1.30**	**45**	*eP*	**Pb**	**09 08 06.2**	**-0.3**
CUI	**Cuipilapa**	**1.30**	**338**	*eP*	**Pb**	**09 08 05.8**	**-0.1**
EGUB	**Earth Guipi**	**1.31**	**54**	*eP*	**Pb**	**09 08 06.5**	**-0.2**
IRES	**Siquirres**	**1.32**	**60**	*eP*	**Pb**	**09 08 06.7**	**-0.1**
DELF	**Filadelfia**	**1.32**	**319**	*eP*	**Pn**	**09 08 05.7**	**-0.4**
BURE	**Buenos Aires**	**1.34**	**101**	*eP*	**Pn**	**09 08 06.3**	**-0.1**
HORNC	**Hornillas**	**1.36**	**338**	*eP*	**Pn**	**09 08 06.6**	**-0.1**
FIMO	**Fila Mora**	**1.38**	**109**	*eP*	**Pn**	**09 08 07.2**	**+0.2**
MESS	**Mesas**	**1.39**	**338**	*eP*	**Pn**	**09 08 07.2**	**+0.1**
ERIA	**Liberia**	**1.41**	**327**	*eP*	**Pn**	**09 08 07.6**	**+0.3**
VMAR	**Armenia, Volca**	**1.43**	**342**	*eP*	**Pn**	**09 08 08.0**	**+0.3**
ALIBA	**Liberia Airpor**	**1.43**	**323**	*eP*	**Pn**	**09 08 07.9**	**+0.2**
TAAN	**Batan**	**1.45**	**64**	*eP*	**Pn**	**09 08 09.1**	**0.0**
GPS2	**Hotel Rincn d**	**1.46**	**333**	*eP*	**Pn**	**09 08 08.6**	**+0.4**
GPS3	**Bodega del ICE**	**1.47**	**332**	*eP*	**Pg**	**09 08 11.4**	**+0.3**
ELI1	**Hacienda Flor**	**1.48**	**324**	*eP*	**Pn**	**09 08 08.5**	**+0.2**
UPAL	**Upala**	**1.48**	**347**	*eP*	**Pn**	**09 08 08.8**	**+0.5**
LAPC	**Finca la Perla**	**1.52**	**330**	*eP*	**Pn**	**09 08 08.8**	**0.0**
VORI	**VORI**	**1.52**	**334**	*eP*	**Pn**	**09 08 09.1**	**+0.1**
EDP2	**Potrero Grande**	**1.54**	**106**	*eP*	**Pn**	**09 08 09.5**	**+0.4**
VERH	**Veragua Rainfo**	**1.54**	**72**	*eP*	**Pb**	**09 08 10.0**	**-0.5**
BUAI	**Buenos Aires**	**1.57**	**335**	*eP*	**Pn**	**09 08 09.8**	**+0.2**
PEJA	**Penjamo Buenos**	**1.57**	**336**	*eP*	**Pb**	**09 08 10.5**	**-0.8**
JIME	**Puerto Jimenez**	**1.60**	**124**	*eP*	**Pg**	**09 08 13.5**	**-0.1**
LAES	**El Progreso Va**	**1.63**	**79**	*eP*	**Pn**	**09 08 11.1**	**+0.7**
PIRO	**Carate, Puerto**	**1.67**	**128**		**Pn**	**09 08 11.1**	**+0.1**
PIRO	**Carate, Puerto**	**1.67**	**128**	*eP*	**Pn**	**09 08 11.1**	**+0.1**
EDAD	**Golfito**	**1.68**	**118**	*eP*	**Pn**	**09 08 10.4**	**-0.7**
FITO	**Golfito**	**1.70**	**118**	*eP*	**Pn**	**09 08 10.5**	**-0.9**
CEUA	**Cerro Uatsi, L**	**1.72**	**84**	*eP*	**Pb**	**09 08 13.3**	**-0.3**
VITO	**San Vito**	**1.79**	**110**	*eP*	**Pg**	**09 08 16.3**	**-0.9**
BRIBI	**Bribri**	**1.84**	**84**	*eP*	**Pb**	**09 08 14.6**	**-1.1**
NELY	**Ciudad Neily**	**1.88**	**115**	*eP*	**Pn**	**09 08 13.7**	**-0.1**
ALCO	**Alturas Coton,**	**1.88**	**105**	*eP*	**Pn**	**09 08 13.7**	**-0.2**
LCRUZ	**La Cruz**	**1.88**	**330**	*eP*	**Pn**	**09 08 14.6**	**+0.7**
RSRNO	**Rio Sereno**	**1.89**	**109**	*eP*	**Pn**	**09 08 14.4**	**+0.4**
CARN	**Rivas**	**1.93**	**334**	P	**Pb**	**09 08 16.4**	**-0.8**
CARN				S	**Sg**	**09 08 44.4**	**-0.3**
CARN	**Rivas**	**1.93**	**334**	*eP*	**Pn**	**09 08 15.1**	**+0.6**
SCLRA	**Santa Clara, W**	**1.96**	**108**	*eP*	**Pn**	**09 08 16.1**	**+1.0**
DMCAL	**E. de Neily**	**2.01**	**112**	*eP*	**Pn**	**09 08 15.6**	**-0.1**
RGM0	**Gandoca**	**2.04**	**86**		**Pb**	**09 08 17.8**	**-1.4**
RGM0	**Gandoca**	**2.04**	**86**	*eP*	**Pb**	**09 08 18.0**	**-1.1**
BRU2	**Volcan**	**2.06**	**108**		**Pn**	**09 08 16.2**	**-0.2**
BRU2	**Volcan**	**2.06**	**108**	*eP*	**Pn**	**09 08 16.3**	**-0.2**
TBS2		**2.09**	**108**	*eP*	**Pn**	**09 08 17.8**	**+0.9**
LMNES	**Limones**	**2.23**	**127**	*eP*	**Pn**	**09 08 18.4**	**-0.3**
JEFFS	**S de V. Baru**	**2.25**	**110**	*eP*	**Pn**	**09 08 19.0**	**0.0**
BQTLY	**Boquete Panama**	**2.29**	**107**	*eP*	**Pn**	**09 08 19.3**	**-0.2**
JAPN	**Al SSO del Vol**	**2.29**	**334**	P	**Pb**	**09 08 22.0**	**-1.5**
JAPN	**Al SSO del Vol**	**2.29**	**334**	*eP*	**Pb**	**09 08 21.8**	**-1.6**
MORN	**Al O del Volca**	**2.30**	**335**	P	**Pn**	**09 08 21.0**	**+1.3**
CONN	**Concepcion**	**2.31**	**336**	P	**Pn**	**09 08 20.8**	**+1.1**
WILLF	**Boquete**	**2.31**	**107**	*eP*	**Pn**	**09 08 19.8**	**-0.1**
DAP26	**falda E V. Bar**	**2.31**	**106**	*eP*	**Pn**	**09 08 19.7**	**-0.2**
PBNVO	**Pueblo Nuevo,**	**2.51**	**102**	*eP*	**Pn**	**09 08 22.6**	**+0.1**
RBALA	**Bur**	**2.55**	**103**	*eP*	**Pn**	**09 08 23.0**	**0.0**
NADN	**Granada**	**2.65**	**330**	P	**Pn**	**09 08 26.9**	**+2.4**
NADN				S	**Sb**	**09 09 02.6**	**+0.8**
ESPN	**Las Esperanzas**	**2.76**	**8**		**Pn**	**09 08 26.7**	**+0.8**
ESPN	**Las Esperanzas**	**2.76**	**8**	P	**Pn**	**09 08 27.0**	**+1.1**
ESPN				S	**Sn**	**09 09 01.1**	**+2.3**
ESPN	**Las Esperanzas**	**2.76**	**8**	P	**Pn**	**09 08 26.7**	**+0.8**
ESPN				S	**Sn**	**09 09 02.4**	**+1.4**
KKNTU	**Kakint²**	**2.89**	**102**	*eP*	**Pn**	**09 08 28.3**	**+0.5**
MGAN	**Managua**	**3.10**	**330**		**Pn**	**09 08 31.9**	**+1.3**
CORNA	**Casa Canada**	**3.15**	**30**	*eP*	**Pn**	**09 08 32.5**	**+1.3**
COPN	**Copaltepe**	**3.31**	**325**	*eP*	**Pn**	**09 08 36.6**	**+3.1**
CNGN	**Cerro Negro**	**3.63**	**327**		**Pn**	**09 08 40.4**	**+2.4**
CNGN	**Cerro Negro**	**3.63**	**327**	*eP*	**Pn**	**09 08 41.4**	**+3.4**
CNGN	**Cerro Negro**	**3.63**	**327**	P	**Pn**	**09 08 41.4**	**+3.4**
CNGN				S	**Sn**	**09 09 22.4**	**+2.0**
GMAL	**Guarumal, Vera**	**3.79**	**116**	*eP*	**Pn**	**09 08 41.4**	**+1.3**
HERN	**Volcan Telica**	**3.79**	**326**		**Pn**	**09 08 42.0**	**+1.7**
CRIN	**San Cristobal**	**3.99**	**324**		**Pn**	**09 08 44.1**	**+1.2**
CRIN	**San Cristobal**	**3.99**	**324**	P	**Pn**	**09 08 46.9**	**+4.0**
CRIN				S	**Sn**	**09 09 30.2**	**+0.9**
SAIC	**Isla e San And**	**4.23**	**43**	P	**Pn**	**09 08 49.3**	**+3.2**
SAIC				S	**Sn**	**09 09 36.3**	**+1.2**
SIUN	**Universidad Ur**	**4.25**	**359**		**Pn**	**09 08 47.6**	**+1.2**
BCIP	**Isla Barro Col**	**4.78**	**93**		**Pn**	**09 08 54.5**	**+0.8**
BCIP	**Isla Barro Col**	**4.78**	**93**	*eP*	**Pn**	**09 08 54.6**	**+1.0**
BCIP	**Isla Barro Col**	**4.78**	**93**	P	**Pn**	**09 08 54.7**	**+1.0**
BCIP				S	**Sn**	**09 09 50.3**	**+1.7**
PRVC	**Isla de Provid**	**5.08**	**39**		**Pn**	**09 08 59.7**	**+1.8**
PRVC	**Isla de Provid**	**5.08**	**39**	P	**Pn**	**09 08 59.5**	**+1.7**
PRVC				S	**Sn**	**09 10 00.8**	**+4.8**
CAZU	**Cerro Azul, Pa**	**5.20**	**92**	*eP*	**Pn**	**09 09 00.5**	**+0.9**
TGUH	**Tegucigalpa,Un**	**5.25**	**331**		**Pn**	**09 09 03.0**	**+2.7**
TGUH	**Tegucigalpa,Un** 2µm239nm,0.8s	**5.25**	**331**	P	**Pn**	**09 09 03.5**	**+3.2**
RNCC	**Cayo Roncador,**	**6.08**	**47**	P	Pn	09 09 06.6	-5.0
MTO3	**Montecristo**	**6.73**	**317**		**Pn**	**09 09 23.1**	**+2.3**
ESQI	**Esquipulas**	**6.84**	**319**		**Pn**	**09 09 24.5**	**+2.4**
CAPC	**Capurgana**	**7.27**	**96**	P	**Pn**	**09 09 29.4**	**+1.4**
APG	**El Apazote** 0.1nm,0.3s,baz=120,slow=14,SNR=5.4	**7.91**	**315**	Pn	**Pn**	**09 09 37.2**	**+0.2**
OTAV	**Otavalo**	**11.04**	**146**	Pn	**Pn**	**09 10 20.6**	**+0.4**
OTAV	**Otavalo**	**11.04**	**146**	*eP*	**Pn**	**09 10 22.0**	**+1.8**
MTDJ	**Mount Denham**	**11.14**	**38**	Pn	**Pn**	**09 10 20.8**	**-0.4**
MTDJ	**Mount Denham**	**11.14**	**38**	*eP*	Pn	09 10 41.0	+20
SLOR	**San Lorenzo -**	**11.83**	**148**	Pn	**Pn**	**09 10 33.0**	**+2.0**
RUSC	**La Rusia**	**12.01**	**106**	Pn	**Pn**	**09 10 34.1**	**+0.7**
CMIG	**Matias Romero** 0.3nm,0.3s,baz=165,slow=8.2,SNR=5.2 5.0nm,1.0s	**12.51**	**308**	Pn	**Pn**	**09 10 41.0**	**+1.2**
LMGC	**Las Mercedes**	**12.90**	**34**	*eP*	**Pn**	**09 10 47.7**	**+2.7**
SOR	**Soroa**	**13.37**	**7**	*eP*	**Pn**	**09 10 55.9**	**+4.4**
MGV	**Manicaragua**	**13.38**	**19**	*eP*	**Pn**	**09 10 49.4**	**+3.8**
CCCC	**Ccccc**	**13.45**	**29**	*eP*	**P**	**09 10 58.9**	**-2.9**
MARVS	**Santiago de Cu**	**13.49**	**38**	*eP*	**Pn**	**09 10 55.9**	**+2.8**
RCC	**Rio Carpintero**	**13.61**	**39**	*eP*	**P**	**09 11 00.6**	**-3.0**
SDV	**Santo Domingo**	**13.87**	**91**		**Pn**	**09 10 59.6**	**+1.0**
SDV	**Santo Domingo**	**13.87**	**91**	*eP*	**Pn**	**09 10 58.5**	**-0.1**
GTBY	**Guantanamo Bay**	**13.93**	**40**	*eP*	**P**	**09 11 05.9**	**-1.2**
PINC	**Pinares de May**	**13.93**	**37**	*eP*	**Pn**	**09 11 01.2**	**+2.1**
HLGC	**Holguin**	**14.08**	**35**	*eP*	**Pn**	**09 11 03.7**	**+2.4**
QMBU	**Quimbuelo**	**14.31**	**41**	*eP*	**P**	**09 11 11.2**	**-0.3**
MOAC	**Moa**	**14.56**	**39**	*eP*	**P**	**09 11 12.4**	**-1.8**
TLIG	**Tlapa**	**15.73**	**302**		**Pn**	**09 11 23.1**	**-0.4**
BAUV	**El Baul**	**16.42**	**90**		**Pn**	**09 11 30.9**	**-1.4**
ATAH	**Atahualpa** 0.2nm,0.3s,baz=291,slow=21,SNR=1.8	**17.62**	**159**	P	**P**	**09 11 49.2**	**+0.6**
ATAH	comp=Z,353nm,19.0s,baz=345,slow=34 2.3nm,0.7s			LR	LR	09 17 49.3	
SJG	**San Juan** comp=Z,128nm,20.4s,baz=209,slow=35	**19.93**	**62**	LR	LR	09 19 00.5	
553A	**Crawfordville**	**20.64**	**1**	P	**P**	**09 12 21.6**	**+0.4**
456A	**Hilliard**	**21.32**	**6**	P	**P**	**09 12 29.5**	**+1.0**
ZAIG	**Zacatecas**	**21.67**	**310**	P	**P**	**09 12 33.0**	**+0.3**
HBVL	**Hebbronville**	**21.96**	**325**		**P**	**09 12 36.2**	**+0.7**
HBVL	comp=Z,32nm,1.1s			IAmb	IAmb	09 12 38.3	
152A	**Waverly Hall**	**23.11**	**360**	P	**P**	**09 12 47.8**	**+0.2**
LRAL	**Lakeview Retre**	**23.58**	**355**		**P**	**09 12 52.3**	**+0.1**
LRAL	comp=Z,25nm,1.3s			IAmb	IAmb	09 12 54.9	
TEFE	**Tefe**	**23.75**	**122**	*eP*	**P**	**09 12 55.5**	**+1.4**
Z47A	**Carrollton**	**23.85**	**353**	P	**P**	**09 12 54.8**	**0.0**
Z47A	comp=Z,18nm,0.8s			IAmb	IAmb	09 12 55.9	
HNDO	**Hondo**	**24.22**	**328**	P	**P**	**09 12 58.8**	**+0.4**
HNDO	comp=Z,9.8nm,0.8s			IAmb	IAmb	09 12 58.8	
TKL	**Tuckaleechee C** comp=Z,151nm,20.4s,baz=180,slow=35	**26.11**	**2**	LR	LR	09 22 54.0	
MIAR	**Mount Ida**	**26.29**	**343**		**P**	**09 13 17.9**	**+0.9**
MIAR	comp=Z,7.5nm,0.7s			IAmb	IAmb	09 13 19.3	
OZNA	**Ozona** comp=Z,5.5nm,0.7s	**26.30**	**327**	IAmb	IAmb	09 13 20.8	
HPIG		**26.39**	**314**	P	**P**	**09 13 18.0**	**-0.4**
TXAR	**Lajitas Array** comp=Z,3.5nm,0.8s,baz=141,slow=9.9,SNR=41	**26.62**	**321**	P	**P**	**09 13 21.0**	**+0.8**
TXAR	comp=Z,0.6nm,0.7s,baz=147,slow=5.5,SNR=5.0 comp=Z,3.5nm,0.8s			PcP	**PcP**	**09 16 46.0**	**+1.7**
TXAR	**Lajitas Array**	**26.62**	**321**	P	**P**	**09 13 20.3**	**+0.1**
MACA	**Manacapuru-AM**	**26.98**	**117**		**P**	**09 13 24.5**	**+0.9**
MACA	**Manacapuru-AM**	**26.98**	**117**	*eP*	**P**	**09 13 24.7**	**+1.1**
LCAR	**Lake Charles**	**27.15**	**348**	P	**P**	**09 13 24.8**	**0.0**
MNHN	**Monahans**	**27.52**	**325**		**P**	**09 13 29.1**	**+0.7**
MNHN	comp=Z,9.8nm,0.7s			IAmb	IAmb	09 13 31.0	
T57A	**Hurt**	**27.87**	**9**	P	**P**	**09 13 31.3**	**0.0**
T57A	comp=Z,7.8nm,0.6s			IAmb	IAmb	09 13 31.5	
S51A	**Beattyville**	**28.09**	**2**	P	**P**	**09 13 32.8**	**-0.4**
S51A	comp=Z,7.6nm,0.7s			IAmb	IAmb	09 13 33.3	
T59A	**Double "B" Far**	**28.15**	**12**	P	**P**	**09 13 33.7**	**-0.1**
T59A	comp=Z,19nm,1.4s			IAmb	IAmb	09 14 01.4	
VHRN	**Van Horn** comp=Z,9.6nm,1.2s	**28.44**	**321**	IAmb	IAmb	09 13 38.1	
Q51A	**Peebles**	**29.48**	**2**	P	**P**	**09 13 45.3**	**-0.3**
121A	**Cookes Peak, D** comp=Z,4.9nm,0.8s	**31.38**	**320**	IAmb	IAmb	09 14 05.6	
ITTB	**Itaituba**	**31.93**	**114**	*eP*	**P**	**09 14 08.5**	**+1.0**
MDP	**Montagnes des** comp=Z,156nm,20.1s,baz=288,sl

comp=E,12nm,0.3s
BEKR IAML 09 12 15.1
comp=N,11nm,0.8s
TPNV Topopah Spring 3.67 186 Pn 09 11 15.9 +0.9
SGV South Grapevin 3.75 195 Pn 09 11 17.0 +1.0
MDPB Devils Postpil 3.92 222 Pn 09 11 18.7 +0.3
MDPB IAML 09 12 27.6
comp=N,7.1nm,4.9s

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*ASRS **22** 09:10:16.0±1.3,54.30N×86.13E,h0km,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 22 09:10:18.9±2.5,54.29N×86.10E,h0km,mbtmp3.1/2, ML2.9/2,Error ellipse: s-maj=19.3km s-min=12.3km az=49.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.82**	**246**	I	I	09 15 10.0	
	baz=66,slow=352,SNR=0.4						
ZALV	**Zalesovo Beam**	**0.82**	**246**	Pg	Pg	09 10 32.9	-1.7
	1.1nm,0.3s,baz=64,slow=18,SNR=10						
ZALV				Lg	Lg	09 10 46.8	
	9.2nm,0.3s,baz=67,slow=27,SNR=16						
KURBB	**Kurchatov Arra**	**5.90**	**235**	Pn	Pn	09 11 48.7	+1.2
	0.2nm,0.3s,baz=52,slow=14,SNR=9.1						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.88**	**199**	Pn	Pn	09 12 15.5	+0.8
	0.4nm,0.3s,baz=23,slow=14,SNR=13						
MKAR				Lg	Lg	09 14 32.4	
	baz=17,slow=30						
	0.6nm,0.4s						

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*IDC **22** 09:15:53.8±4.2,61.88N×31.47E,h0km,mbtmp3.0/2, ML1.7/1,Error ellipse: s-maj=47.9km s-min=19.0km az=133.0*

*HEL **22** 09:15:53.9±0.5,61.95N×31.26E,h0km,ML1.5,Suspected explosion*

ISC 22 09:15:51.8±1.7,61.96N±0.06×31.33E±0.08,h0km,n12, σ0=63/18,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOF	**Joensuu**	**0.97**	**360**	PG	**Pb**	**09 16 11.5**	**+0.1**
JOF				SB	**Sb**	**09 16 24.6**	**-0.2**
RUF	**Ruokolahti**	**1.25**	**246**	PG	**Pg**	**09 16 15.8**	**0.0**
RUF				smax	smax	09 16 31.0	
	comp=Z,5.4nm,0.2s						
RUF				SG	**Sg**	**09 16 31.8**	**-0.2**
NIF	**Nilsia**	**2.17**	**313**	PG	**Pb**	**09 16 32.3**	**+0.4**
	baz=122						
NIF				smax	smax	09 16 57.6	
	comp=Z,3.9nm,0.2s						
NIF				SG	**Sg**	**09 17 01.7**	**+0.2**
VJF	**Virojoki**	**2.31**	**234**	smax	smax	09 17 01.5	
	comp=Z,1.7nm,0.2s						
VJF				SG	**Sb**	**09 17 03.8**	**+0.4**
RMF	**Romuvaara**	**2.36**	**345**	PG	**Pb**	**09 16 34.7**	**-0.5**
RMF				smax	smax	09 17 03.6	
	comp=Z,1.4nm,0.2s						
RMF				SG	**Sg**	**09 17 06.7**	**-0.8**
SUF	**Sumiainen**	**2.53**	**290**	PG	**Pb**	**09 16 38.6**	**+0.5**
	baz=105						
SUF				smax	smax	09 17 08.0	
	comp=Z,1.1nm,0.2s						
SUF				SG	**Sg**	**09 17 12.4**	**-0.8**
FIA0	**FINESS Array S**	**2.55**	**261**	PB	**Pb**	**09 16 37.5**	**-1.0**
	baz=73						
FIA0				smax	smax	09 17 08.3	
	comp=Z,1.8nm,0.2s						
FIA0				SG	**Sb**	**09 17 09.3**	**-1.0**
FINES	**FINESS Array B**	**2.55**	**261**	Pn	**Pb**	**09 16 37.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=82,slow=16,SNR=3.3						
FINES				Sn	**Sb**	**09 17 11.4**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=73,slow=25,SNR=16						
	comp=Z,4.4nm,0.6s						
KEF	**Keuruu**	**3.05**	**277**	smax	smax	09 17 22.5	
	comp=Z,1.2nm,0.2s						
KEF				SG	**Sb**	**09 17 24.8**	**+0.3**
NUR	**Nurmijarvi**	**3.54**	**249**	PN	**Pn**	**09 16 48.5**	**+0.5**
I43RU	**DUBNA INFRASON**	**6.05**	**148**	I	I	09 52 30.0	
	baz=339,slow=333,SNR=2.8						
ARCES	**ARCESS Array B**	**7.98**	**345**	Pn	**Pn**	**09 17 49.0**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=153,slow=14,SNR=1.1						

IDC 22 09:16:43.3±2.1,13.83S×168.24E,h0km,mb3.7/3, mbtmp3.8/4,ML3.5/1,MS3.7/1,Error ellipse: s-maj=62.0km s-min=33.2km az=127.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.38**	**192**	Pn	Pn	09 18 45.4	-0.8
	0.6nm,0.3s,baz=345,slow=20,SNR=8.5						
	9.3nm,0.7s						
PMG	**Port Moresby**	**21.11**	**280**	LR	LR	09 29 09.9	
	comp=Z,233nm,20.4s,baz=325,slow=35						
WRA	**Warramunga Arr**	**32.97**	**255**	P	P	09 23 20.0	-0.1
	0.9nm,0.8s,baz=83,slow=8.9,SNR=5.5						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**33.88**	**248**	P	P	09 23 28.2	+0.2
	0.3nm,0.5s,baz=74,slow=9.3,SNR=7.7						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**85.38**	**18**	P	P	09 29 22.2	0.0
	0.9nm,1.0s,baz=239,slow=6.6,SNR=4.4						
	0.9nm,1.0s						

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*NEIC **22** 09:21:15.3,31.38S×177.94W,h24km*

*NEIC **22** 09:21:15.3,31.38S×177.82W,h24km,Moment Tensor Solution. Duration: 1s8 Moment tensor: Scale 10^16Nm; Mrr3.05; Mθθ0.13; Mϕϕ-3.19; Mrθ-0.18; Mθϕ-1.39; Mϕr3.53; Fault plane solution: M0 4.91000×10^16 NP1: ϕ1±219.48000°,δ1±25.58000°,λ1±23.91000°. NP2:ϕ2±2.78000°, δ2±69.00000°,λ2±75.05000°. Principal axes: T 4.7631, Plg63.0000°, Azm249.0000°; N 0.2879, Plg14.0000°, Azm8.0000°; P -5.0510, Plg23.0000°, Azm104.0000°;*

*NEIC **22** 09:21:15.5±1.9,31.38S±0.06×178.10W±0.1,h10km±1km, mb5.3/198,Mww5.1/13 Error ellipse: s-maj=20.7km s-min=9.3km az=100.0*

*NOU **22** 09:21:16.3,31.56S×177.29W,h47km,mb5.3/80, Kermadec Islands Region*

*MOS **22** 09:21:19.2±1.1,31.18S×178.06W,h46km,mb5.4/18, Error ellipse: s-maj=10.7km s-min=9.0km az=87.6*

*IDC **22** 09:21:20.1±1.5,31.15S×178.17W,h41km±11km,mb4.6/17, mbtmp4.8/19,ML3.4/2,MS4.4/46,Error ellipse: s-maj=11.8km s-min=9.8km az=90.0*

*GCMT **22** 09:21:22.3±0.2,31.29S±0.01×177.93W±0.01,h40km, MW5.2/106,Moment Tensor Solution. s89,c136; s106,c165; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.72±.02; Mθθ-0.05±.01; Mϕϕ-0.66±.01; Mrθ0.03±.01; Mθϕ-0.12±.01; Mϕr0.41±.01; Best double couple: M0 0.81300×10^17 NP1:ϕ1=194.00000°,δ1=0.00000°, λ1=96.00000°. NP2:ϕ2=7.00000°,δ2=60.00000°,λ2=87.00000°. Principal axes: T 0.8310, Plg75.0000°, Azm268.0000°; N -0.0350, Plg3.0000°, Azm9.0000°; P -0.7960, Plg15.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 09:21:18.4±0.2,31.34S±0.04×177.90W±0.05,h35km, n546,σ1=72/470,mb5.3/154,MS4.4/52,20C-17D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.07**	**360**	P	**Pn**	**09 21 50.9**	**+0.2**
GLKZ				S	**Sn**	**09 22 12.0**	**-3.3**
RAO	**Raoul Island**	**2.08**	**360**	P	**Pn**	**09 21 50.3**	**-0.5**
	4μm,0.3s,baz=82,slow=22,SNR=32						
RAO				S	**Sn**	**09 22 12.7**	**-2.8**
	15μm,0.3s,baz=92,slow=22,SNR=9.3						
RAO				LR	LR	09 22 42.9	
	comp=Z,9μm,20.3s,baz=182,slow=44						
RAO	**Raoul Island**	**2.08**	**360**		**Pn**	**09 21 50.0**	**-0.8**
RAO	**Raoul Island**	**2.08**	**360**	P	**Pn**	**09 21 51.4**	**+0.6**
RIZ	**Raoul Island**	**2.09**	**359**	P	**Pn**	**09 21 51.8**	**+0.9**
RIZ				S	**Sn**	**09 22 11.2**	**-4.5**
MXZ	**Matakaoa Point**	**6.95**	**206**		**Pn**	**09 22 54.8**	**-2.9**
MXZ	**Matakaoa Point**	**6.95**	**206**	P	**Pn**	**09 22 55.0**	**-2.7**
MXZ	**Matakaoa Point**	**6.95**	**206**	S	**Sn**	**09 24 14.5**	**-1.1**
MXZ	**Matakaoa Point**	**6.95**	**206**	P	**Pn**	**09 22 54.7**	**-3.1**
MXZ				S	**Sn**	**09 24 12.2**	**-3.3**
WMGZ	**Waiomatatini S**	**7.14**	**204**	P	**Pn**	**09 22 58.3**	**-2.1**
WMGZ				S	**Sn**	**09 24 17.7**	**-2.6**
PKGZ	**Pakihiroa**	**7.30**	**206**	P	**Pn**	**09 22 60.0**	**-2.6**
PKGZ				S	**Sn**	**09 24 22.4**	**-1.9**
HAZ	**Te Kaha**	**7.32**	**208**	P	**Pn**	**09 23 00.6**	**-2.3**
HAZ				S	**Sn**	**09 24 24.7**	**0.0**
GRZ	**Great Barrier**	**7.38**	**227**	P	**Pn**	**09 23 05.6**	**+1.9**
PUZ	**Puketiti**	**7.42**	**204**	P	**Pn**	**09 23 00.8**	**-3.5**
RUGZ	**Raukumara Rang**	**7.54**	**208**	P	**Pn**	**09 23 02.8**	**-3.2**
RUGZ				S	**Sn**	**09 24 27.8**	**-2.5**
KUZ	**Kuaotunu**	**7.55**	**223**	P	**Pn**	**09 23 06.8**	**+0.8**
TWGZ	**Tauwhareparae**	**7.62**	**205**	P	**Pn**	**09 23 03.7**	**-3.2**
TWGZ				S	**Sn**	**09 24 29.7**	**-2.2**
MYRZ	**Mayor Island**	**7.65**	**218**	P	**Pn**	**09 23 10.2**	**+2.8**
WHRZ	**Whale Island**	**7.75**	**212**	P	**Pn**	**09 23 07.5**	**-1.3**
CNGZ	**Carnagh Statio**	**7.81**	**203**	P	**Pn**	**09 23 06.6**	**-2.9**
CNGZ				S	**Sn**	**09 24 35.4**	**-1.3**
TKGZ	**Te Karaka**	**7.89**	**205**	P	**Pn**	**09 23 06.2**	**-4.5**
MWZ	**Matawai**	**7.92**	**207**	P	**Pn**	**09 23 06.9**	**-4.2**
WCZ	**Waipu Caves**	**7.92**	**233**	P	Pn	09 23 16.5	+5.4
OPRZ	**Ohinepanea**	**7.94**	**214**	P	**Pn**	**09 23 10.2**	**-1.1**
TGRZ	**Tauranga**	**7.99**	**215**	P	Pn	09 23 16.8	+4.8
MARZ	**Manawahe**	**7.99**	**212**	P	**Pn**	**09 23 12.2**	**+0.1**
URZ	**Urewera**	**8.03**	**209**	P	**Pn**	**09 23 08.6**	**-3.9**
	19nm,0.3s,baz=273,slow=2.7,SNR=61						
URZ				S	**Sn**	**09 24 38.4**	**-3.6**
	205nm,0.4s,baz=218,slow=21,SNR=23						
URZ	**Urewera**	**8.03**	**209**	P	**Pn**	**09 23 08.6**	**-3.9**
EDRZ	**Edgecumbe**	**8.06**	**212**	P	**Pn**	**09 23 12.9**	**-0.1**
OUZ	**Omahuta**	**8.10**	**239**	P	**Pn**	**09 23 17.6**	**+4.1**
RAGZ	**Rawiri**	**8.11**	**207**	P	**Pn**	**09 23 09.7**	**-4.0**
RIGZ	**Rimuhau**	**8.16**	**205**	P	**Pn**	**09 23 10.0**	**-4.4**
MKRZ	**Makatiti**	**8.21**	**213**	P	**Pn**	**09 23 17.1**	**+1.9**
KARZ	**Kaharoa**	**8.22**	**214**	P	**Pn**	**09 23 14.3**	**-0.9**
OMRZ	**Omania**	**8.23**	**213**	P	**Pn**	**09 23 17.6**	**+2.2**
TARZ	**Mount Tarawera**	**8.27**	**212**	P	**Pn**	**09 23 16.7**	**+0.7**
PRGZ	**Paritu Road**	**8.31**	**203**	P	**Pn**	**09 23 12.4**	**-4.1**
RRRZ	**Republican Roa**	**8.35**	**212**	P	**Pn**	**09 23 17.1**	**0.0**
MUGZ	**Murupara**	**8.36**	**210**	P	**Pn**	**09 23 13.0**	**-4.0**
TOZ	**Tahuroa Road**	**8.38**	**219**	P	**Pn**	**09 23 18.8**	**+1.4**
RTZ	**Ruatahuna**	**8.38**	**209**	P	**Pn**	**09 23 14.0**	**-3.5**
SNGZ	**Shannon Statio**	**8.38**	**206**	P	**Pn**	**09 23 13.4**	**-4.0**
KNZ	**Kokohu**	**8.47**	**204**	P	Pn	09 23 13.0	-5.6
MHGZ	**Mahia Peninsul**	**8.51**	**203**	P	Pn	09 23 14.5	-4.7
PRRZ	**Plateau Road**	**8.54**	**212**	P	**Pn**	**09 23 17.4**	**-2.1**
RAHZ	**Arahi**	**8.60**	**207**	P	**Pn**	**09 23 16.7**	**-3.7**
MTHZ	**Maungataniwha**	**8.64**	**208**	P	**Pn**	**09 23 16.9**	**-4.1**
WPRZ	**Whakapapatarin**	**8.66**	**213**	P	**Pn**	**09 23 23.5**	**+2.3**
WHHZ	**Waihua**	**8.68**	**206**	P	**Pn**	**09 23 18.5**	**-3.1**
KUTZ	**Kaahu Road**	**8.80**	**214**	P	**Pn**	**09 23 23.4**	**+0.3**
MRHZ	**Matea Rd**	**8.80**	**210**	P	**Pn**	**09 23 19.1**	**-4.1**
NMHZ	**Naumai**	**8.87**	**208**	P	**Pn**	**09 23 19.5**	**-4.6**
ARHZ	**Aropaoanui**	**8.94**	**206**	P	Pn	09 23 20.0	-5.0
BKZ	**Black Stump Fm**	**9.05**	**209**	P	**Pn**	**09 23 25.9**	**-0.7**
BKZ	**Black Stump Fm**	**9.05**	**209**	P	Pn	09 23 21.6	-5.0
RATZ	**Rangitukua**	**9.12**	**213**	P	**Pn**	**09 23 27.2**	**-0.3**
MCHZ	**McNeill Hill**	**9.21**	**207**	P	Pn	09 23 23.6	-5.1
CKHZ	**Cape Kidnapper**	**9.25**	**205**	P	Pn	09 23 23.0	-6.3
KWHZ	**Kaweka Forest**	**9.30**	**208**	P	Pn	09 23 25.1	-5.0
TMVZ	**Te Maari**	**9.35**	**212**	P	**Pn**	**09 23 27.5**	**-3.3**
ETVZ	**East Tongariro**	**9.37**	**212**	P	**Pn**	**09 23 27.4**	**-3.6**
NNVZ	**North Ngauruho**	**9.41**	**213**	P	**Pn**	**09 23 29.5**	**-2.1**
OTVZ	**Oturere**	**9.41**	**212**	P	**Pn**	**09 23 28.0**	**-3.6**
TWVZ	**Taurewa**	**9.44**	**213**	P	**Pn**	**09 23 29.7**	**-2.3**
KAHZ	**Kahuranaki**	**9.45**	**205**	P	Pn	09 23 25.6	-6.4
PXZ	**Pawanui**	**9.66**	**205**	P	Pn	09 23 28.1	-6.7
QRZ	**Quartz Range**	**12.22**	**217**	P	**Pn**	**09 24 09.4**	**-0.5**
CTZ	**Chatham Island**	**12.41**	**176**	P	**Pn**	**09 24 08.5**	**-4.1**
CTZ	**Chatham Island**	**12.41**	**176**	S	Sn	09 26 19.7	-10
MSVF	**Nonsavu**	**14.04**	**344**		**Pn**	**09 24 36.0**	**+1.1**
MSVF	**Nonsavu**	**14.04**	**344**	P	**Pn**	**09 24 36.1**	**+1.1**
MSVF	**Nonsavu**	**14.04**	**344**	P	**Pn**	**09 24 36.0**	**+1.1**
NIUE	**Niue**	**14.18**	**32**	P	**Pn**	**09 24 34.5**	**-2.2**
	comp=Z,180nm,2.4s						
RPZ	**Rata Peaks**	**15.13**	**212**	P	**Pn**	**09 24 42.8**	**-6.6**
	comp=Z,11nm,0.5s,baz=342,slow=2.0,SNR=7.6						
RPZ				S	Sn	09 27 16.9	-19
	comp=Z,54nm,0.6s,baz=7.3,slow=21,SNR=10						
RPZ	**Rata Peaks**	**15.13**	**212**	P	**Pn**	**09 24 49.4**	**0.0**
PINNC	**Pines Island,**	**15.68**	**300**		**P**	**09 24 59.8**	**-0.6**
PINNC	**Pines Island,**	**15.68**	**300**	P	**P**	**09 25 02.8**	**+2.4**
MARNC	**Mare, Loyalty**	**15.96**	**305**		**P**	**09 25 02.4**	**-1.2**
MARNC				IAmb	IAmb	09 25 05.2	
	comp=Z,475nm,1.6s						
MARNC	**Mare, Loyalty**	**15.96**	**305**	P	**P**	**09 25 06.1**	**+2.5**
OUENC	**Ouen Island, N**	**16.24**	**299**	P	**P**	**09 25 08.0**	**+1.3**
ODZ	**Otahua Downs**	**16.35**	**210**	P	**Pn**	**09 25 01.9**	**-3.3**
YATNC	**Mamie plateau,**	**16.42**	**301**	P	**P**	**09 25 08.5**	**-0.2**
JCZ	**Jackson Bay**	**16.48**	**216**	P	**Pn**	**09 25 06.1**	**-0.8**
ONTNC	**Ouen Toro**	**16.60**	**299**		**P**	**09 25 11.7**	**+1.0**
ONTNC	**Ouen Toro**	**16.60**	**299**	P	**P**	**09 25 12.6**	**+2.0**
DZM	**Mont Dzumac**	**16.74**	**300**	P	**Pn**	**09 25 06.6**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=161,slow=16,SNR=1.2						
	comp=Z,5.0nm,0.9s						
AFI	**Afiamalu**	**18.24**	**19**		**P**	**09 25 27.4**	**-1.5**
AFI	**Afiamalu**	**18.24**	**19**	P	**P**	**09 25 28.4**	**-0.5**
AFI	**Afiamalu**	**18.24**	**19**	P	**P**	**09 25 27.4**	**-1.5**
AFI				pmax	pmax		
	comp=Z,71nm,0.7s						
RAR	**Rarotonga**	**19.11**	**62**	P	**Pn**	**09 25 39.1**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=261,slow=17,SNR=1.7						
RAR				S	Sn	09 28 53.2	-19
	comp=Z,19nm,0.8s,baz=79,slow=17,SNR=1.5						
RAR				LR	LR	09 33 48.3	
	comp=Z,824nm,18.1s,baz=236,slow=39						
	comp=Z,43nm,1.0s						
GC1S	**Gold Coast 1 S**	**24.99**	**270**	P	**P**	**09 26 40.4**	**+1.5**
AUWSH	**Wavell State H**	**25.59**	**271**	P	**P**	**09 26 46.5**	**+2.1**
AUBSH	**Beerwah State**	**25.82**	**273**	P	**P**	**09 26 48.2**	**+1.7**
ARMA	**Armidale**	**26.13**	**264**	P	**P**	**09 26 52.1**	**+2.7**
	comp=Z,57nm,1.1s						
ARMA	**Armidale**	**26.13**	**264**		**P**	**09 26 51.2**	**+1.8**
ARMA				IAmb	IAmb	09 27 08.9	
	comp=Z,74nm,1.2s						
ARMA	**Armidale**	**26.13**	**264**	P	**P**	**09 26 51.6**	**+2.2**
MGCD	**Mangrove Creek**	**26.22**	**258**	P	**P**	**09 26 51.0**	**+0.9**
	comp=Z,106nm,0.9s						
MGCD	**Mangrove Creek**	**26.22**	**258**	P	**P**	**09 26 51.8**	**+1.7**
TBI	**Tubuai**	**26.43**	**80**	*e*P	**P**	**09 26 56.5**	**+4.5**
	comp=Z,476nm,31.5s						
TBI				*e*S	**S**	**09 31 23.6**	**+0.2**
	comp=Z,2μm,29.2s						
TBI				*e*LR	LR	09 33 27.3	
	comp=Z,12μm,27.5s						
TBI				*e*LR	LR	09 33 30.7	
	comp=Z,2μm,30.2s						
TW1H	**Toowoomba 1 Ha**	**26.47**	**271**	P	**P**	**09 26 54.5**	**+2.1**
SYDH	**Sydney Hard Ro**	**26.49**	**256**	P	**P**	**09 26 54.3**	**+1.8**
AUPHS	**Peel High Scho**	**26.65**	**262**	P	**P**	**09 26 55.8**	**+1.8**
CNB	**Canberra Magne**	**27.57**	**253**	P	**P**	**09 27 03.9**	**+1.6**
	comp=Z,73nm,1.4s						
CNB	**Canberra Magne**	**27.57**	**253**	P	**P**	**09 27 04.1**	**+1.9**
MILA	**Mila**	**27.75**	**249**	P	**P**	**09 27 05.7**	**+1.9**
	comp=Z,33nm,2.1s						
AUDAR	**Daramalan Coll**	**27.75**	**253**	P	**P**	**09 27 05.3**	**+1.4**
AUSIS	**Research Schoo**	**27.77**	**253**	P	**P**	**09 27 05.8**	**+1.7**
AUMHS	**Melrose High S**	**27.79**	**253**	P	**P**	**09 27 05.7**	**+1.5**
AUMTS	**Mt Stromlo**	**27.86**	**253**	P	**P**	**09 27 06.4**	**+1.5**
CAN	**Canberra**	**27.86**	**253**	P	**P**	**09 27 06.7**	**+1.8**
	comp=Z,46nm,1.2s						
CAN	**Canberra**	**27.86**	**253**	P	**P**	**09 27 05.7**	**+0.8**
CAN				IAmb	IAmb	09 27 07.3	
	comp=Z,81nm,1.3s						
CAN	**Canberra**	**27.86**	**253**	P	**P**	**09 27 06.5**	**+1.6**
CAN	**Canberra**	**27.86**	**253**	P	**P**	**09 27 05.7**	**+0.8**
CAN				pmax	pmax		
	comp=Z,81nm,1.3s						
EIDS	**Eidsvold**	**27.88**	**274**	P	**P**	**09 27 06.1**	**+1.1**
	comp=Z,33nm,1.4s						
EIDS	**Eidsvold**	**27.88**	**274**	P	**P**	**09 27 05.2**	**+0.1**
EIDS	**Eidsvold**	**27.88**	**274**	P	**P**	**09 27 05.4**	**+0.4**
AUSMG	**Snowy Mountain**	**28.17**	**250**	P	**P**	**09 27 09.1**	**+1.4**
AUDCS	**Dubbo College**	**28.40**	**259**	P	**P**	**09 27 11.2**	**+1.6**
YNG	**Young**	**28.40**	**255**	P	**P**	**09 27 11.3**	**+1.6**
	comp=Z,61nm,1.2s						
GLAD	**Gladstone**	**29.00**	**241**	P	**P**	**09 27 16.0**	**+1.1**
AUNRC	**North Rockhamp**	**29.07**	**278**	P	**P**	**09 27 16.7**	**+1.0**
PPT2	**Papeete2**	**29.09**	**69**	*e*P	P	09 27 08.9	-7.0
	comp=Z,115nm,24.8s						
PPT2				*e*S	**S**	**09 32 05.0**	**-0.5**
	comp=Z,316nm,25.2s						
PPT2				*e*LR	LR	09 34 37.2	
	comp=Z,2μm,26.5s						
PPT2				*e*LR	LR	09 34 45.9	
	comp=Z,1μm,24.8s						
PPT	**Papeete**	**29.10**	**69**	P	**P**	**09 27 17.5**	**+1.6**
	comp=Z,31nm,0.9s,baz=226,slow=19,SNR=2.4						
PPT				LR	LR	09 38 46.2	
	comp=Z,688nm,18.2s,baz=243,slow=36						
	comp=Z,31nm,0.9s						
AULRC	**Lightning Ridg**	**29.43**	**265**	P	**P**	**09 27 20.4**	**+1.6**
RMQ	**Roma**	**29.52**	**271**	P	**P**	**09 27 22.6**	**+3.0**
	comp=Z,41nm,1.7s						
TAU	**Tasmania Unive**	**29.84**	**237**	P	**P**	**09 27 22.1**	**-0.1**
TAU				IAmb	IAmb	09 27 23.7	
	comp=Z,58nm,1.1s						
TAU	**Tasmania Unive**	**29.84**	**237**	P	**P**	**09 27 23.0**	**+0.8**
TAU	**Tasmania Unive**	**29.84**	**237**	P	**P**	**09 27 22.1**	**-0.1**
TAU				pmax	pmax		
	comp=Z,58nm,1.1s						
MOO	**Moorlands**	**29.84**	**238**	P	**P**	**09 27 23.5**	**+1.2**
	comp=Z,86nm,1.9s						
HNR	**Honiara**	**29.98**	**312**	LR	LR	09 37 43.1	
	comp=Z,862nm,19.5s,baz=154,slow=33						
HNR	**Honiara**	**29.98**	**312**	P	**P**	**09 27 23.7**	**0.0**
HNR	**Honiara**	**29.98**	**312**	P	**P**	**09 27 23.7**	**0.0**
HNR				pmax	pmax		
	comp=Z,107nm,0.7s						
TOO	**Toolangi**	**30.68**	**248**	P	**P**	**09 27 30.9**	**+1.1**
	comp=Z,31nm,1.1s						
TOO	**Toolangi**	**30.68**	**248**	P	**P**	**09 27 30.1**	**+0.3**
TOO				IAmb	IAmb	09 27 31.8	
	comp=Z,33nm,1.1s						
TOO	**Toolangi**	**30.68**	**248**	P	**P**	**09 27 30.1**	**+0.3**
TOO				pmax	pmax		
	comp=Z,33nm,1.1s						
CMSA	**Cobar Meteorol**	**30.98**	**260**	P	**P**	**09 27 33.6**	**+1.1**
	comp=Z,159nm,1.0s						
CMSA	**Cobar Meteorol**	**30.98**	**260**	P	**P**	**09 27 33.3**	**+0.9**
MLBS	**Spotswood, Mel**	**31.16**	**248**	P	**P**	**09 27 34.6**	**+0.6**
GEXS	**Deakin Univers**	**31.64**	**247**	P	**P**	**09 27 39.7**	**+1.5**
BRAT	**Ballarat**	**31.92**	**248**	P	**P**	**09 27 41.9**	**+1.2**
AUMTC	**Mt Clear Colle**	**31.96**	**248**	P	**P**	**09 27 42.3**	**+1.3**
QLP	**Quilpie**	**33.36**	**268**	P	**P**	**09 27 54.4**	**+1.0**
	comp=Z,294nm,1.4s						
QLP	**Quilpie**	**33.36**	**268**	P	**P**	**09 27 54.2**	**+0.8**
ARPS	**Mount Arapiles**	**33.62**	**250**	P	**P**	**09 27 56.1**	**+0.6**
	comp=Z,45nm,1.2s						
TV1H	**Townsville Har**	**33.96**	**282**	P	**P**	**09 27 59.6**	**+0.9**
CTA	**Charters Tower**	**34.04**	**281**	LR	LR	09 39 47.3	
	comp=Z,34nm,19.9s,baz=92,slow=33						
CTA	**Charters Tower**	**34.04**	**281**	P	**P**	**09 28 00.7**	**+1.3**
CTAO	**Charters Tower**	**34.04**	**281**	P	**P**	**09 27 59.3**	**-0.1**
CTAO	**Charters Tower**	**34.04**	**281**	P	**P**	**09 28 00.7**	**+1.3**
CTAO	**Charters Tower**	**34.04**	**281**	P	**P**	**09 27 59.3**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,300nm,1.1s						
STKA	**Stephens Creek**	**34.36**	**258**	P	**P**	**09 28 02.9**	**+0.8**
	comp=Z,644nm,1.6s						
STKA	**Stephens Creek**	**34.36**	**258**	P	**P**	**09 28 02.4**	**+0.3**
	comp=Z,95nm,0.9s,baz=95,slow=10.0,SNR=140						
STKA				LR	LR	09 40 47.6	
	comp=Z,710nm,19.0s,baz=53,slow=34						
	comp=Z,95nm,0.9s						
STKA	**Stephens Creek**	**34.36**	**258**	P	**P**	**09 28 02.6**	**+0.6**
MGBR	**Mount Gambier**	**34.58**	**248**	P	**P**	**09 28 03.5**	**-0.4**
AUMBR	**Murray Bridge**	**35.81**	**252**	P	**P**	**09 28 14.9**	**+0.4**
INKA	**Innaminka**	**36.01**	**265**	P	**P**	**09 28 17.1**	**+0.9**
HTT	**Hallett**	**36.33**	**255**	P	**P**	**09 28 18.6**	**-0.5**
	comp=Z,99nm,1.2s						
HTT	**Hallett**	**36.33**	**255**	P	**P**	**09 28 19.4**	**+0.4**
	comp=Z,40nm,1.2s						
HTT	**Hallett**	**36.33**	**255**	P	**P**	**09 28 19.0**	**-0.1**
AUMAR	**Marden Senior**	**36.36**	**252**	P	**P**	**09 28 19.6**	**+0.4**
MTSU	**Mount Surprise**	**36.56**	**282**	P	**P**	**09 28 22.3**	**+1.1**
	comp=Z,103nm,1.0s						
MTSU	**Mount Surprise**	**36.56**	**282**	P	**P**	**09 28 22.0**	**+0.9**
WHYH	**Whyalla**	**37.51**	**255**	P	**P**	**09 28 28.9**	**-0.1**
BBOO	**Buckleboo**	**38.80**	**255**	P	**P**	**09 28 39.2**	**-0.7**
	comp=Z,103nm,1.3s						
BBOO	**Buckleboo**	**38.80**	**255**	P	**P**	**09 28 39.0**	**-0.9**
BBOO	**Buckleboo**	**38.80**	**255**	P	**P**	**09 28 39.0**	**-0.9**
PMG	**Port

KLBR Kellerberrin 54.13 252 P **P** **09 30 38.3 -1.9**
NWAO Narrogin (SRO) 54.15 250 LR LR 09 51 25.6
comp=Z,387nm,21.9s,baz=74,slow=33
CASY Casey 54.35 208 P **P** **09 30 40.7 -0.5**
FAKI Fak Fak 54.75 291 P **P** **09 30 43.9 -0.9**
FAKI Fak Fak 54.75 291 P **P** **09 30 43.9 -0.9**
comp=Z,30nm,1.2s
MEEK Meekatharra 55.06 258 P **P** **09 30 44.9 -2.1**
BNDI Bandanaira 55.71 288 P **P** **09 30 51.1 -0.6**
BNDI Bandanaira 55.71 288 P **P** **09 30 49.2 -2.5**
comp=Z,82nm,0.9s
PSA00 Pilbara Seismi 55.95 264 P **P** **09 30 51.1 -2.2**
PSA00 IAmb IAmb 09 30 52.5
comp=Z,57nm,1.5s
PSA00 Pilbara Seismi 55.95 264 P **P** **09 30 51.9 -1.5**
MBWA Marble Bar 56.21 264 P **P** **09 30 53.3 -1.9**
MBWA IAmb IAmb 09 30 54.4
comp=Z,66nm,1.6s
MBWA Marble Bar 56.21 264 P **P** **09 30 53.5 -1.8**
MORW Morawa 56.35 254 P **P** **09 30 54.4 -1.8**
GUMO Guam 57.21 316 LR LR 09 51 41.6
comp=Z,285nm,22.0s,baz=132,slow=32
SOEI Soe 57.58 279 P **P** **09 31 03.4 -1.8**
comp=Z,37nm,0.8s
BATI Baumata 57.86 278 LR LR 09 56 34.1
comp=Z,1µm,18.2s,baz=152,slow=37
NLAI Namlea 58.73 287 P **P** **09 31 11.3 -1.8**
comp=Z,15nm,0.5s
QSPA South Pole Qui 58.77 180 P P 09 31 18.1 +5.3
comp=Z,40nm,0.9s,baz=35,slow=1.5,SNR=141
QSPA LR LR 09 54 26.8
comp=Z,268nm,19.2s,baz=34,slow=34
RPN Rapa Nui 59.11 105 LR LR 09 50 37.7
comp=Z,394nm,21.1s,baz=244,slow=30
EDFI Ende, Flores 60.27 278 P **P** **09 31 22.2 -1.7**
comp=Z,19nm,0.7s
SANI Sanana 60.32 287 P **P** **09 31 23.1 -0.9**
SANI Sanana 60.32 287 P **P** **09 31 22.1 -1.9**
comp=Z,23nm,1.1s
KAPI Kappang 63.86 281 LR LR 09 57 53.9
comp=Z,358nm,21.8s,baz=130,slow=34
TWSI Taliwang, Sumb 64.36 275 P **P** **09 31 49.8 -1.3**
comp=Z,48nm,0.9s
APSI Ampana 64.53 286 P **P** **09 31 50.2 -2.0**
comp=Z,31nm,1.4s
DAV Davao City (W) 66.10 295 LR LR 10 00 48.7
comp=Z,94nm,19.9s,baz=152,slow=36
MPSI Mapaga 66.67 286 P **P** **09 32 03.7 -2.3**
JAGI Jajag, Banyuwa 66.83 274 P **P** **09 32 04.9 -2.1**
JAGI Jajag, Banyuwa 66.83 274 P **P** **09 32 05.8 -1.2**
comp=Z,50nm,0.8s
KMMI Kalianget 67.70 275 P **P** **09 32 11.7 -0.9**
comp=Z,58nm,0.9s
BELA Belgrano 2 68.84 172 P **P** **09 32 19.8 +1.0**
PCJI Pacitan 69.50 273 P **P** **09 32 22.4 -1.4**
MYLDM Lahad Datu 70.58 289 P **P** **09 32 30.1 -0.3**
MYLDM IAmb IAmb 09 33 28.7
comp=Z,38nm,1.5s
PMSA Palmer Station 71.38 156 LR LR 09 56 17.8
comp=Z,128nm,20.2s,baz=284,slow=29
MAW Mawson 71.46 201 P **P** **09 32 35.7 +0.8**
comp=Z,22nm,0.9s,baz=148,slow=8.4,SNR=11
MAW LR LR 10 02 56.2
comp=Z,442nm,19.5s,baz=98,slow=35
comp=Z,22nm,0.9s
KPJI Karang Pucung 71.86 272 P **P** **09 32 36.8 -1.4**
comp=Z,55nm,1.1s
SBUM Sibu 74.21 283 P **P** **09 32 50.6 -1.4**
SBUM IAmb IAmb 09 32 52.4
comp=Z,41nm,1.6s
SBUM Sibu 74.21 283 P **P** **09 32 51.7 -0.4**
JHJ2 Mitsune 75.53 324 P **P** **09 32 58.6 -0.6**
JHJ Hachijo jima 2 75.55 324 LR LR 09 58 27.5
comp=Z,167nm,21.4s,baz=54,slow=30
ELIB Princess Elisa 75.93 187 *dP* **P** **09 33 02.7 +1.5**
comp=Z,25nm,1.0s
SYO Syowa Base 76.22 193 ⇓ *i*P **P** **09 33 03.1 +0.4**
SYO Syowa Base 76.22 193 ⇓ *ip*P **P** **09 33 06.7 +4.0**
SYO Syowa Base 76.22 193 ⇓ *i*PcP **PcP** **09 33 13.2 -1.4**
TROLL Troll, Antarti 76.94 180 ⇑P **P** **09 33 08.7 +1.7**
comp=Z,3µm,0.9s
TROLL ⇓PcP **pP** **09 33 14.3 -1.7**
SNAA Sanae 77.22 178 ⇑P **P** **09 33 09.9 +1.5**
comp=Z,772nm,0.7s
SNAA ⇓PcP **pP** **09 33 16.2 -1.3**
SNAA Sanae 77.22 178 P **P** **09 33 09.9 +1.5**
comp=Z,16nm,0.9s,baz=204,slow=5.2,SNR=48
comp=Z,16nm,0.9s
SNAA Sanae 77.22 178 P **P** **09 33 09.1 +0.7**
VNA3 Neumayer Olymp 77.36 176 ⇑P **P** **09 33 10.5 +1.3**
comp=Z,68nm,0.5s
VNA3 ⇓PcP **pP** **09 33 17.2 -1.1**
MDSI Maura Dua 77.37 272 P **P** **09 33 07.4 -2.7**
comp=Z,58nm,0.9s
VNA2 Neumayer--Watz 77.80 177 ⇑P **P** **09 33 13.2 +1.6**
comp=Z,78nm,0.7s,baz=164,slow=5.1
VNA2 ⇓PcP **pP** **09 33 19.8 -0.9**
baz=169,slow=5.2
NVL N'lazarevskaya 77.94 183 *eP* **P** **09 33 14.0 +1.6**
NVL *e* 09 36 09.6
NVL *eS* **S** **09 43 08.1 +5.2**
NVL *eSS* **SS** **09 48 09.5 +6.6**
NVL *eSSS* SSS 09 51 33.9
NVL pmax pmax
comp=Z,11nm,0.9s
NVL smax smax
comp=N,227nm,11.9s
NVL MLR MLR
comp=Z,117nm,19.0s
VNA1 Neumayer--Stat 78.03 176 ⇑P **P** **09 33 14.7 +1.9**
comp=Z,117nm,1.1s
VNA1 ⇓PcP **pP** **09 33 21.4 -0.5**
COYC Coyhaique 78.20 136 P **P** **09 33 15.9 +1.7**
MJAR Matsushiro Arr 79.06 325 P **P** **09 33 17.0 -2.0**
comp=Z,3.9nm,0.8s,baz=152,slow=4.7,SNR=5.8
MJAR LR LR 10 02 01.2
comp=Z,113nm,21.4s,baz=166,slow=31
comp=Z,3.9nm,0.8s
H03S2 Juan Fernandez 79.88 123 T T 11 02 33.9
baz=237,slow=74,SNR=152
H03S1 Juan Fernandez 79.89 123 T T 11 02 34.4
baz=237,slow=74,SNR=145
H03S3 Juan Fernandez 79.89 123 T T 11 02 37.3
baz=237,slow=74,SNR=160
H03N3 Juan Fernandez 80.07 123 T T 11 02 30.7
baz=241,slow=72,SNR=78
H03N2 Juan Fernandez 80.08 123 T T 11 02 47.1
baz=241,slow=72,SNR=82
H03N1 Juan Fernandez 80.09 123 T T 11 02 25.7
baz=241,slow=72,SNR=141
JNU Nakatsue 80.31 318 LR LR 10 04 22.1
comp=Z,156nm,21.8s,baz=127,slow=32
JNU Nakatsue 80.31 318 P **P** **09 33 26.7 +0.8**
JTM Tenmabayashi 81.18 330 P **P** **09 33 30.4 +0.1**
JTM IAmb IAmb 09 33 46.2
comp=Z,36nm,1.0s
JTM Tenmabayashi 81.18 330 P **P** **09 33 30.1 -0.2**
PLCA Paso Flores 81.81 133 P **P** **09 33 36.7 +2.8**
comp=Z,4.7nm,0.8s,baz=226,slow=6.2,SNR=9.8
PLCA LR LR 10 01 34.5
comp=Z,253nm,21.1s,baz=230,slow=29
comp=Z,4.7nm,0.8s
PLCA Paso Flores 81.81 133 P **P** **09 33 36.8 +2.8**
PLCA IAmb IAmb 09 33 53.1
comp=Z,24nm,1.1s
PLCA Paso Flores 81.81 133 P **P** **09 33 36.8 +2.8**
PLCA pmax pmax
comp=Z,24nm,1.1s
ASAJ Asahikawa 83.31 333 LR LR 10 07 19.7
comp=Z,145nm,19.0s,baz=164,slow=33
BI02 San Fabin de 83.64 129 P **P** **09 33 44.8 +1.2**
BI02 IAmb IAmb 09 34 03.2
comp=Z,12nm,0.8s
SHEM Shemya Is, Ala 84.00 355 LR LR 10 06 40.2
comp=Z,530nm,18.7s,baz=140,slow=32
LPIG La Paz 84.96 58 LR LR 10 06 33.2
comp=Z,414nm,18.1s,baz=238,slow=32
SLBS Sierra La Lagu 84.97 59 IAmb IAmb 09 33 54.8
comp=Z,35nm,1.4s
KSRS Korea Array 85.12 320 P **P** **09 33 50.5 -0.1**
comp=Z,3.2nm,0.8s,baz=142,slow=5.5,SNR=12
comp=Z,3.2nm,0.8s
PSI Prapat 85.62 276 LR LR 10 11 58.7
comp=Z,407nm,20.9s,baz=90,slow=36
YSS Yuzhno-Sakhali 85.63 334 P **P** **09 33 53.2 +0.3**
YSS IAmb IAmb 09 33 58.0
comp=Z,26nm,0.9s
YSS Yuzhno-Sakhali 85.63 334 *eP* **P** **09 33 52.8 -0.2**
YSS Yuzhno-Sakhali 85.63 334 *eP* **P** **09 33 53.7 +0.7**
YSS *e* 09 37 17.6
YSS *eS* **S** **09 44 26.7 +4.4**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,500nm,12.0s
YSS MLR MLR
comp=E,400nm,17.0s
SAO San Andreas Ge 85.91 42 IAmb IAmb 09 33 58.7
comp=Z,17nm,1.1s
ESJX Sierra Juarez 86.05 49 IAmb IAmb 09 34 15.1
comp=Z,15nm,1.1s
PASC Pasadena Art C 86.08 46 IAmb IAmb 09 33 59.3
comp=Z,16nm,1.1s
MHC Mount Hamilton 86.21 42 IAmb IAmb 09 34 00.4
comp=Z,16nm,1.0s
BFSC Mount Baldy Ra 86.45 46 IAmb IAmb 09 34 16.3
comp=Z,17nm,1.0s
GDXM Geysers 86.60 40 IAmb IAmb 09 34 03.0
comp=Z,26nm,1.4s
DNR Dunn Ranch,Anz 86.64 47 IAmb IAmb 09 34 17.8
comp=Z,19nm,0.8s
PETK Petropavlovsk- 86.74 346 P **P** **09 33 57.8 -0.6**
comp=Z,18nm,0.8s,baz=118,slow=6.7,SNR=29
comp=Z,18nm,0.8s
PFO Pinyon Flats O 86.78 47 LR LR 10 11 06.8
comp=Z,150nm,18.1s,baz=241,slow=34
PFO Pinyon Flats O 86.78 47 IAmb IAmb 09 34 17.7
comp=Z,52nm,2.0s
PFO Pinyon Flats O 86.78 47 *i* P **P** **09 34 00.8 +1.6**
PFO pmax pmax
comp=Z,8.0nm,0.9s
MNRC McLaughlin Min 86.84 40 IAmb IAmb 09 34 03.5
comp=Z,22nm,1.1s
ISA Isabella, Lake 86.91 45 IAmb IAmb 09 34 03.9
comp=Z,22nm,1.1s
NJ2 Nanjing 86.92 311 *eP* **P** **09 34 02.4 +2.7**
NJ2 pmax pmax
comp=Z,11nm,0.6s
CO02 Combarbal 86.92 125 IAmb IAmb 09 34 21.1
comp=Z,22nm,0.8s
LRMC Laurel Mtn Rad 87.26 45 IAmb IAmb 09 34 05.5
comp=Z,21nm,1.1s
BELC Belle Mtn. Jos 87.32 47 IAmb IAmb 09 34 21.1
comp=Z,14nm,0.9s
CO03 El Pedregal 87.35 125 IAmb IAmb 09 34 25.5
comp=Z,18nm,1.1s
CMB Columbia Colle 87.40 42 P **P** **09 34 02.7 +0.7**
CMB Columbia Colle 87.40 42 P **P** **09 34 02.7 +0.7**
CMB pmax pmax
comp=Z,8.0nm,0.8s
SUTB Sutter Butte 87.45 40 IAmb IAmb 09 34 20.1
comp=Z,11nm,0.8s
WSHM Spangler Hills 87.46 45 IAmb IAmb 09 34 21.2
comp=Z,15nm,0.9s
CLC China Lake 87.54 45 IAmb IAmb 09 34 22.9
comp=Z,21nm,0.9s
O02D Mt. Diablo Mer 87.57 39 IAmb IAmb 09 34 07.2
comp=Z,19nm,1.0s
CWC Cottonwood Cre 87.66 44 IAmb IAmb 09 34 07.4
comp=Z,19nm,1.6s
GSC Goldstone, Bar 87.68 46 IAmb IAmb 09 34 07.6
comp=Z,21nm,1.1s
USRK Ussuriysk Ar. 87.99 326 P **P** **09 34 04.5 0.0**
comp=Z,6.2nm,0.8s,baz=137,slow=4.4,SNR=9.3
comp=Z,6.2nm,0.8s
O03E Paynes Creek 88.19 39 IAmb IAmb 09 34 13.0
comp=Z,16nm,1.0s
CO01 Juntas del Tor 88.27 124 IAmb IAmb 09 34 29.9
comp=Z,20nm,1.4s
WAKR Walker 88.27 42 IAmb IAmb 09 34 10.3
comp=Z,31nm,1.4s
GWY Greenwater Val 88.34 45 IAmb IAmb 09 34 25.3
comp=Z,9.6nm,0.8s
DSP Deep Springs 88.35 44 IAmb IAmb 09 34 10.6
comp=Z,22nm,1.5s
GRAC Grapevine Rang 88.46 44 IAmb IAmb 09 34 11.3
comp=Z,27nm,1.2s
MPK Martis Peak 88.47 41 P **P** **09 34 07.8 +0.5**
MPK IAmb IAmb 09 34 25.9
comp=Z,16nm,0.8s
PNTR Pine Nut 88.58 41 IAmb IAmb 09 34 26.2
comp=Z,20nm,0.9s
LHV Little Huntoon 88.63 43 IAmb IAmb 09 34 15.9
comp=Z,18nm,1.1s
BEKR Beckworth 88.68 41 P **P** **09 34 08.0 -0.2**
M03C McCloud 88.71 39 IAmb IAmb 09 34 11.7
comp=Z,16nm,0.9s
YBH Yreka Blue Hor 88.72 38 LR LR 10 06 36.1
comp=Z,15nm,20.7s,baz=242,slow=31
HATC Hat Creek Radi 88.74 39 IAmb IAmb 09 34 26.8
comp=Z,20nm,0.9s
WCT Wildcat Mounta 88.77 45 IAmb IAmb 09 34 12.7
comp=Z,22nm,1.6s
NVAR Mina Array Bea 88.87 43 P **P** **09 34 11.3 +2.1**
comp=Z,6.5nm,0.8s,baz=222,slow=8.2,SNR=41
NVAR PKKPbc **PKKPbc** **09 51 48.8 -0.5**
comp=Z,0.7nm,0.7s,baz=81,slow=1.6,SNR=5.7
NVAR LR LR 10 08 34.4
comp=Z,226nm,19.0s,baz=240,slow=32
comp=Z,6.5nm,0.8s
TYV Tymovskoe 88.95 336 *eP* **P** **09 34 07.1 -1.8**
TYV pmax pmax
comp=Z,10.0nm,1.3s
TYV pmax pmax
comp=Z,100nm,2.7s
NV11 Mina Array Sit 88.96 43 IAmb IAmb 09 34 13.1
comp=Z,15nm,1.2s
WHN Wuhan 88.98 307 P **P** **09 34 11.4 +1.8**
TPNV Topopah Spring 89.10 45 IAmb IAmb 09 34 14.4
comp=Z,18nm,1.4s
Y14A Wickenburg 89.19 49 IAmb IAmb 09 34 31.3
comp=Z,15nm,0.9s
L04D Klamath Falls 89.28 38 P **P** **09 34 11.2 +0.3**
L04D IAmb IAmb 09 34 23.2
comp=Z,17nm,1.1s
W13A Hualapai Mount 89.36 47 IAmb IAmb 09 34 16.0
comp=Z,16nm,1.1s
MDJ Mudanjiang 89.45 325 P **P** **09 34 11.6 +0.2**
MDJ pmax pmax
comp=Z,12nm,1.4s
TUC Tucson 89.63 51 IAmb IAmb 09 34 34.0
comp=Z,13nm,0.9s
I03D Drain, OR 89.79 36 IAmb IAmb 09 34 17.0
comp=Z,35nm,1.4s
K04D Chiloquin, OR 89.85 38 IAmb IAmb 09 34 17.1
comp=Z,23nm,1.1s
S11A Rachel 89.86 45 IAmb IAmb 09 34 47.3
comp=Z,31nm,1.6s
BUCK Buck Mountain 90.33 36 IAmb IAmb 09 34 19.8
comp=Z,21nm,1.1s
I04A Tendick Farm, 90.34 37 P **P** **09 34 16.5 +0.8**
I04A IAmb IAmb 09 34 21.6
comp=Z,20nm,1.2s
X16A Lo Mia Camp, P 90.50 49 IAmb IAmb 09 34 37.9
comp=Z,17nm,1.0s
J05D Fort Rock, OR 90.59 38 IAmb IAmb 09 34 20.8
comp=Z,25nm,1.4s
AC02 Maricunga 90.78 122 IAmb IAmb 09 34 39.5
comp=Z,12nm,1.1s
WIFE Three Sisters- 90.83 37 IAmb IAmb 09 34 21.8
comp=Z,14nm,0.9s
CN2 Changchun 90.94 323 P **P** **09 34 18.0 -0.4**
CN2 PP **PP** **09 37 57.5 +2.2**
CN2 SKS **SKSac** **09 44 46.3 -1.1**
CN2 pmax pmax
comp=Z,20nm,0.9s
LCMT Little Creek M 90.98 46 IAmb IAmb 09 34 39.4
comp=Z,9.6nm,0.9s
H04A Detroit Lake 91.08 36 IAmb IAmb 09 34 22.2
comp=Z,22nm,1.2s
PINE Pine Mountain 91.09 37 IAmb IAmb 09 34 23.3
comp=Z,25nm,1.2s
PB14 IPOC Station P 91.13 120 IAmb IAmb 09 34 45.7
comp=Z,21nm,1.4s
U15A North Rim 91.20 47 IAmb IAmb 09 34 40.9
comp=Z,14nm,0.8s
WUAZ Wupatki 91.22 48 IAmb IAmb 09 34 43.0
comp=Z,11nm,0.9s
KNB Kanab 91.24 47 IAmb IAmb 09 34 39.6
comp=Z,12nm,0.9s
I05D Terrebonne, OR 91.27 37 IAmb IAmb 09 34 23.6
comp=Z,20nm,1.1s
KDAK Kodiak Island 91.30 13 LR LR 10 10 53.9
comp=Z,155nm,18.4s,baz=206,slow=33
BNX BinXian 91.33 325 ⇑P **P** **09 34 19.3 -0.9**
BNX pmax pmax
comp=Z,16nm,0.8s
WVOR Wild Horse Val 91.39 40 IAmb IAmb 09 34 25.0
comp=Z,12nm,1.3s
GO02 Mina Guanaco 91.42 121 IAmb IAmb 09 34 47.2
comp=Z,23nm,1.6s
HOOD Mount Hood Mea 91.80 36 IAmb IAmb 09 34 40.7
comp=Z,21nm,1.4s
PKCU Pink Cliffs 91.83 46 IAmb IAmb 09 34 27.9
comp=Z,19nm,1.2s
I07A Izee 92.05 38 IAmb IAmb 09 34 27.3
comp=Z,13nm,1.1s
ELK Elko 92.17 42 LR LR 10 10 37.4
comp=Z,214nm,19.2s,baz=236,slow=32
G06A Carlson Farm, 92.25 36 IAmb IAmb 09 34 27.4
comp=Z,11nm,1.0s
MTPU Mount Pierson 92.28 46 IAmb IAmb 09 34 30.1
comp=Z,18nm,1.4s
LYN LuoYang 92.66 309 ⇓P **P** **09 34 26.3 -0.3**
LYN pP PcP 09 34 30.1 +2.8
LYN sP pP 09 34 33.6 -2.6
LYN pmax pmax
comp=Z,18nm,0.8s
GNW Green Mountain 92.81 34 IAmb IAmb 09 34 45.9
comp=Z,8.9nm,1.1s
TXAR Lajitas Array 92.82 57 P **P** **09 34 29.6 +2.0**
comp=Z,1.7nm,1.1s,baz=207,slow=5.3,SNR=7.2
TXAR PKKPbc **PKKPdf** **09 51 35.5 -1.7**
comp=Z,0.4nm,0.9s,baz=122,slow=4.7,SNR=3.6
TXAR LR LR 10 11 30.6
comp=Z,302nm,18.1s,baz=286,slow=32
comp=Z,1.7nm,1.1s
HNS HongShan 92.93 313 ⇑P **P** **09 34 28.1 +0.3**
HNS pmax pmax
comp=Z,9.0nm,0.7s
CMIG Matias Romero 92.96 72 LR LR 10 08 42.1
comp=Z,125nm,19.7s,baz=272,slow=30
NNA Nana 93.08 106 LR LR 10 06 56.0
comp=Z,233nm,21.8s,baz=260,slow=29
G08A Pilot Rock 93.15 37 IAmb IAmb 09 34 32.2
comp=Z,16nm,1.3s
HAWA Hanford 93.61 36 IAmb IAmb 09 35 44.9
comp=Z,35nm,2.0s
CMAR Chiang Mai Arr 93.79 289 P **P** **09 34 33.3 +1.1**
comp=Z,2.0nm,0.5s,baz=140,slow=4.2,SNR=10
CMAR LR LR 10 17 38.4
comp=Z,66nm,21.6s,baz=185,slow=36
comp=Z,2.0nm,0.5s
BBB Bella Bella 93.88 28 LR LR 10 08 22.7
comp=Z,165nm,21.7s,baz=230,slow=30
TASM ASL Pad, Albuq 94.09 51 IAmb IAmb 09 34 52.9
comp=Z,4.1nm,1.2s
TASM ASL Pad, Albuq 94.09 51 IAmb IAmb 09 34 52.1
comp=Z,3.0nm,1.0s
ANMO Albuquerque 94.10 51 LR LR 10 11 52.5
comp=Z,336nm,18.6s,baz=22,slow=32
ANMO Albuquerque 94.10 51 *i* P **P** **09 34 32.3 -1.2**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
MA2 Magadan 94.22 345 LR LR 10 09 02.7
comp=Z,95nm,21.1s,baz=158,slow=30
MA2 Magadan 94.22 345 *ce*P **P** **09 34 32.3 -0.9**
MA2 pmax pmax
comp=Z,29nm,1.2s
HVU Hansel Valley 94.27 43 IAmb IAmb 09 34 52.3
comp=Z,7.7nm,0.9s
ATAH Atahualpa 94.38 101 LR LR 10 12 13.7
comp=Z,48nm,18.1s,baz=287,slow=32
HEH HeiHe 94.55 328 *eP* **P** **09 34 38.3 +3.4**
PLID Pearl Lake 94.58 39 IAmb IAmb 09 34 38.5
comp=Z,8.7nm,1.1s
BCYI Bear Canyon 95.50 41 IAmb IAmb 09 34 58.8
comp=Z,12nm,1.7s
APG El Apazote 95.52 76 LR LR 10 08 05.6
comp=Z,15nm,21.2s,baz=250,slow=29
PZH PanZhiHua 95.81 297 P **P** **09 34 43.4 +1.9**
NEW Newport 96.08 36 LR LR 10 13 19.4
comp=Z,232nm,18.7s,baz=234,slow=32
FXWY Fox Creek 96.43 42 IAmb IAmb 09 35 02.4
comp=Z,20nm,1.9s
SNOW Snow King Moun 96.48 42 IAmb IAmb 09 35 02.5
comp=Z,4.5nm,0.8s
LOHW Long Hollow 96.66 42 IAmb IAmb 09 35 17.1
comp=Z,11nm,1.8s
PDAR Pinedale Array 96.75 44 P **P** **09 34 47.0 +1.5**
comp=Z,0.7nm,0.8s,baz=190,slow=4.4,SNR=6.0
PDAR PKKPbc **PKKPbc** **09 51 28.6 -0.3**
comp=Z,1.4nm,0.7s,baz=99,slow=4.8,SNR=16
PDAR LR LR 10 14 24.1
comp=Z,123nm,18.4s,baz=244,slow=33
comp=Z,0.7nm,0.8s
SEY Seymchan 96.91 347 LR LR 10 14 48.9
comp=Z,251nm,19.7s,baz=154,slow=33
SEY Seymchan 96.91 347 *i* P **P** **09 34 44.7 -0.6**
SEY pmax pmax
comp=Z,35nm,3.2s
HHC Hu-ho-hao-te 96.95 314 *eP* **P** **09 34 48.4 +2.2**
HHC pmax pmax
comp=Z,5.0nm,0.6s
BOZ Bozeman (W) 97.28 40 IAmb IAmb 09 34 52.5
comp=Z,16nm,1.6s
LPAZ La Paz 97.68 114 P Pdif 09 34 52.7 +1.8
comp=Z,1.0nm,0.6s,baz=191,slow=7.3,SNR=2.5
LPAZ LR LR 10 13 35.0
comp=Z,28nm,18.1s,baz=4.5,slow=32
comp=Z,1.0nm,0.6s
LPAZ La Paz 97.68 114 P **P** **09 34 49.8 -1.1**
LPAZ IAmb IAmb 09 35 09.3
comp=Z,8.3nm,1.6s
LPAZ La Paz 97.68 114 P **P** **09 34 49.8 -1.1**
LPAZ pmax pmax
comp=Z,8.0nm,1.6s
BTO Baotou 97.76 313 *eP* **P** **09 34 49.3 -0.6**
BTO S **S** **09 46 14.3 +1.1**
BTO pmax pmax
comp=Z,16nm,0.7s
BTO LR LR
comp=Z,340nm,9.6s
BTO LR LR
comp=Z,340nm,5.7s
BTO LR LR
comp=Z,570nm,18.0s
JTS Las Juntas de 97.77 83 LR LR 10 09 24.7
comp=Z,131nm,20.8s,baz=323,slow=29
YNE Yellowstone No 97.84 42 IAmb IAmb 09 34 54.9
comp=Z,10.0nm,1.6s
DLBC Dease Lake 97.95 23 LR LR 10 11 00.7
comp=Z,158nm,21.0s,baz=268,slow=30
COLA College 98.73 12 *i* P **P** **09 34 53.3 -0.2**
COLA pmax pmax
comp=Z,22nm,2.3s
ILAR Eielson Array 98.82 13 P Pdif 09 34 54.3 +0.3
comp=Z,1.6nm,0.8s,baz=218,slow=5.2,SNR=16
ILAR PP **PP** **09 38 54.5 -1.7**
comp=Z,3.4nm,1.2s,baz=222,slow=7.9,SNR=5.9
ILAR LR LR 10 14 01.6
comp=Z,110nm,19.7s,baz=204,slow=32
comp=Z,1.6nm,0.8s
SONM Songino Array 103.89 318 PP **PP** **09 39 36.2 +1.1**
comp=Z,0.4nm,0.4s,baz=138,slow=8.9,SNR=1.9
YKA Yellowknife Ar 106.25 26 PKKPbc PKKPbc 09 50 59.8 -1.5
comp=Z,2.2nm,1.0s,baz=24,slow=3.1,SNR=6.8
WMQ Urumqi 113.87 308 *e*PKP **PKiKP** **09 39 54.3 +0.9**
DGZ Jazzator, Alta 116.03 314 *i* PKIKP **PKPdf** **09 39 56.7 -0.8**
BOSA Boshof 116.43 203 PKP **PKiKP** **09 39 59.6 +0.6**
comp=Z,0.8nm,0.5s,baz=198,slow=4.5,SNR=4.0
ZSN Zaisan 116.95 311 *e*PKP **PKPdf** **09 39 58.8 -0.3**
ZSN Zaisan 116.95 311 *e*PKIKP **PKPdf** **09 39 58.8 -0.3**
MK31 Makanchi Array 118.44 310 *c i*PKIKP **PKPdf** **09 40 01.5 -0.5**
MKAR Makanchi Array 118.44 310 PKP **PKPdf** **09 40 01.6 -0.4**
comp=Z,8.0nm,0.8s,baz=79,slow=1.1,SNR=47
MKAR PKKPbc **PKKPab** **09 50 21.3 +0.8**
comp=Z,0.4nm,0.7s,baz=287,slow=4.6,SNR=4.0
MKAR Makanchi Array 118.44 310 **PKPdf** **09 40 01.4 -0.7**
MAKZ Makanchi 118.65 310 **PKPdf** **09 40 01.8 -0.6**
MAKZ Makanchi 118.65 310 PKIKP **PKPdf** **09 40 01.8 -0.6**
ZAA0 Zalesovo Array 118.79 318 **PKPdf** **09 40 01.4 -1.0**
ZALV Zalesovo Beam 118.79 318 PKP **PKPdf** **09 40 01.7 -0.7**
comp=Z,3.2nm,0.6s,baz=100,slow=0.8,SNR=19
ZALV Zalesovo Beam 118.79 318 **PKPdf** **09 40 01.3 -1.1**
ZALV Zalesovo Beam 118.79 318 PKIKP **PKPdf** **09 40 01.3 -1.1**
WUS Wushi 118.92 303 PKPdf **PKPdf** **09 40 03.1 -0.2**
SHLS Shalkode 119.32 305 *e*PKP **PKPdf** **09 40 02.9 -1.1**
SHLS *e*PP **PP** **09 41 22.1 -3.8**
SHLS Shalkode 119.32 305 *e*PKIKP **PKPdf** **09 40 02.9 -1.1**
SHLS *e* 09 41 22.0

UZB	Uzynbulak	119.63	305	ePKP	PKPdf	09 40 04.1	-0.6
UZB	Uzynbulak	119.63	305	ePKIKP	PKPdf	09 40 04.0	-0.6
SATY	Saty	120.04	305	ePKP	PKPdf	09 40 04.9	-0.5
SATY				ePP	PP	09 41 29.1	-1.7
SATY	Saty	120.04	305	ePKIKP	PKPdf	09 40 04.8	-0.5
SATY				e		09 41 29.1	
KSH	Kashi	120.79	300	PKP	PKiKP	09 40 07.4	+0.4
MDOK	Medeo	121.02	304	ePKP	PKPdf	09 40 06.7	-0.6
MDOK				ePP	PP	09 41 35.8	-1.7
MDOK	Medeo	121.02	304	ePKIKP	PKPdf	09 40 06.7	-0.6
MDOK				e		09 41 35.7	
TNSS	Tian-Shan	121.06	304	ePKP	PKPdf	09 40 06.8	-0.9
TNSS	Tian-Shan	121.06	304	ePKIKP	PKPdf	09 40 06.8	-0.9
AAA	Alma-Ata	121.13	304	ePKP	PKPdf	09 40 06.9	-0.5
AAA	Alma-Ata	121.13	304	ePKIKP	PKPdf	09 40 06.9	-0.5
KURK	Kurchatov	121.76	313	*c* iPKIKP	PKPdf	09 40 07.8	-0.4
KURK				pmax	pmax		
	comp=Z,52nm,1.3s						
KURBB	Kurchatov Arra	121.79	313	PKP	PKPdf	09 40 07.7	-0.6
	comp=Z,22nm,0.7s,baz=106,slow=1.9,SNR=167						
KURBB				SKP	SKPdf	09 43 40.3	-0.7
	comp=Z,1.7nm,0.9s,baz=75,slow=2.1,SNR=4.5						
KURBB	Kurchatov Arra	121.79	313	PKIKP	PKPdf	09 40 07.6	-0.7
TKM2	Tokmak 2	121.99	304	P	PKPdf	09 40 08.9	-0.3
	SNR=9.3						
KBK	Karagaybulak	122.38	303	P	PKPdf	09 40 09.9	-0.1
	SNR=8.5						
UCH	Uchtor	122.59	303	P	PKiKP	09 40 11.2	+0.3
	SNR=24						
CHMS	Chumysh	122.61	304	P	PKPdf	09 40 10.0	-0.1
	SNR=8.7						
AAK	Ala-Archa	122.70	303	P	PKiKP	09 40 10.8	+0.1
	SNR=6.3						
AAK	Ala-Archa	122.70	303	*c* iPKIKP	PKiKP	09 40 10.7	0.0
AAK				pmax	pmax		
	comp=Z,16nm,1.3s						
SGDS	Sogindy	122.80	304	ePKP	PKPdf	09 40 10.1	-0.5
USP	Ospenovka	122.85	304	P	PKPdf	09 40 10.6	-0.1
	SNR=12						
EKS2	Erkin-Say	123.22	303	P	PKiKP	09 40 11.7	0.0
	SNR=6.6						
BTLS	Baital	123.57	306	ePKP	PKPdf	09 40 11.6	-0.4
BTLS	Baital	123.57	306	ePKIKP	PKPdf	09 40 11.5	-0.4
KK31	Karatay Array	125.66	303	*i* PKIKP	PKPdf	09 40 15.7	-0.3
IUG	luzhnay	125.81	302	ePKP	PKPdf	09 40 15.8	-0.6
IUG	luzhnay	125.81	302	ePKIKP	PKPdf	09 40 15.8	-0.6
BRLS	Borolday	126.13	303	ePKP	PKPdf	09 40 16.5	-0.4
BRLS	Borolday	126.13	303	ePKIKP	PKPdf	09 40 16.5	-0.4
CHM	Chimkent	126.16	302	ePKP	PKPdf	09 40 16.5	-0.6
CHM	Chimkent	126.16	302	ePKIKP	PKPdf	09 40 16.4	-0.6
SCHQ	Schefferville	126.88	42	PKP	PKPdf	09 40 18.0	+0.1
	comp=Z,5.2nm,1.1s,baz=189,slow=5.1,SNR=3.7						
BVA0	Borovoye Array	127.13	315	*i* PKIKP	PKPdf	09 40 17.1	-1.4
BVAR	Borovoye Array	127.13	315	PKP	PKPdf	09 40 18.0	-0.4
	comp=Z,23nm,0.7s,baz=93,slow=3.0,SNR=84						
NEEM	North Greenlan	128.12	13	*i* P	PKiKP	09 40 20.9	+0.2
NOR	Nord	129.13	3	*i* P	PKPdf	09 40 21.7	+0.2
KBS	Kingsbay	132.13	357	*i* P	PKiKP	09 40 28.5	+0.2
SFJD	Kangerlussuaq	132.81	25	*i* P	PKiKP	09 40 30.3	+0.4
DAG	Danmarks Havn	133.47	6	*i* P	PKPdf	09 40 29.4	-0.5
KMBO	Kilima Mbogo	133.58	233	PKP	PKiKP	09 40 33.2	-0.3
	comp=Z,1.2nm,0.3s,baz=143,slow=2.0,SNR=12						
KMBO				SKPab	SKPab	09 44 02.5	+2.0
	comp=Z,1.3nm,0.3s,baz=150,slow=3.3,SNR=4.7						
AB31	Akbulak array	133.58	310	PKIKP	PKPdf	09 40 30.0	-0.8
SUMG	Summit	133.58	16	*i* P	PKiKP	09 40 31.5	-0.4
ARTI	Arti	133.97	320	*i* PKIKP	PKPdf	09 40 31.7	+0.4
ARTI						09 42 58.5	
ARTI				SS	SS	10 00 37.9	-10
DBG	Daneborg	135.52	8	*i* P	PKPdf	09 40 33.2	-0.5
KIRV	Kirov	138.14	325	*c* iPKIKP	PKiKP	09 40 40.6	-0.4
APA	Apatity	139.33	342	⇓*i* PKIKP	PKPdf	09 40 41.3	+0.4
APA				*e*		09 43 34.5	
APA				MLR	MLR		
	comp=Z,414nm,19.8s						
ARCES	ARCESS Array B	139.52	348	PKhKP	PKPpre	09 40 33.1	
	comp=Z,2.7nm,0.5s,baz=46,slow=3.5,SNR=21						
ARCES				PKP	PKPdf	09 40 41.9	+0.6
	comp=Z,16nm,0.7s,baz=315,slow=0.5,SNR=12						
KLMR	Klimovskoe	141.63	331	ePKIKP	PKPdf	09 40 43.6	-1.6
KLMR				pmax	pmax		
	comp=Z,41nm,1.4s						
VAGH	Vaagaholmen	143.95	352	ePKPdf	PKPdf	09 40 50.5	+1.3
RAUS	Rausandaksla	144.14	352	ePKPdf	PKPdf	09 40 50.6	+1.1
LEIR	Leirfjorden	144.56	352	ePKPbc	PKPbc	09 40 49.6	+0.6
VRH	Novokhopyorsk	144.78	316	ePKIKP	PKPbc	09 40 50.1	-0.1
VRH				pmax	pmax		
	comp=Z,22nm,0.8s						
MOS	Moscow	145.15	325	*i* PKIKP	PKPbc	09 40 50.2	-1.0
MOS				pmax	pmax		
	comp=Z,50nm,0.8s						
GOF	Gofitskoye	145.41	305	*ce*PKIKP	PKPab	09 40 53.1	+0.5
KBZ	Khabaz	145.70	303	PKPbc	PKPdf	09 40 52.8	-0.1
	comp=Z,24nm,1.1s,baz=274,slow=0.1,SNR=17						
KBZ	Khabaz	145.70	303	*c* iPKIKP	PKPbc	09 40 53.4	+0.1
KIV	Kislovodsk	145.82	303	*i* PKP2	PKPbc	09 40 53.6	-0.3
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
LPSR	Galich'ya Gora	145.88	319	ePKIKP	PKPdf	09 40 50.7	-2.2
LPSR				pmax	pmax		
	comp=Z,120nm,0.9s						
PUL	Pulkovo	145.88	335	*c* iPKP2	PKPab	09 40 53.8	-0.1
PUL				pmax	pmax		
	comp=Z,136nm,0.4s						
OBN	Obninsk	145.99	324	⇓P	PKPbc	09 40 53.9	+0.1
OBN	Obninsk	145.99	324	*i* PKP2	PKPbc	09 40 53.5	-0.3
OBN				*e*		09 44 13.4	
OBN				pmax	pmax		
	comp=Z,255nm,1.7s						
FINES	FINESS Array B	146.05	340	PKPbc	PKPbc	09 40 53.6	-0.3
	comp=Z,134nm,0.8s,baz=64,slow=4.4,SNR=168						
VORR	Voronezh	146.09	318	ePKIKP	PKPdf	09 40 50.8	-2.5
VORR				pmax	pmax		
	comp=Z,90nm,0.9s						
NSS	Namsos	146.22	352	ePKPdf	PKPbc	09 40 54.3	0.0
VSR	Storozhevoye	146.28	317	ePKIKP	PKPdf	09 40 52.1	-1.6
VSR				pmax	pmax		
	comp=Z,70nm,1.0s						
VORD	Divnogorie	146.30	316	ePKIKP	PKPdf	09 40 52.8	-0.9
VORD				pmax	pmax		
	comp=Z,60nm,0.9s						
SOC	Sochi	148.00	303	ePKP2	PKPdf	09 40 58.3	+1.5
SOC				*e*SSS	SSS	10 09 08.4	
SOC				pmax	pmax		
	comp=Z,41nm,0.8s						
MOL	Molde	148.56	355	*e*	PKPbc	09 41 01.5	+0.7
AKN	Aaknes	148.99	356	ePKPbc	PKiKP	09 41 03.0	-0.2
FOO	Floro	149.67	357	*e*	PKiKP	09 41 04.1	-0.5
NB2	NORSAR Subarra	149.69	351	PKP	PKPbc	09 41 03.8	0.0
	comp=Z,77nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.69	351	PKPbc	PKPbc	09 41 04.0	+0.2
	comp=Z,30nm,0.7s,baz=14,slow=4.2,SNR=78						
HYA	Hoyanger	150.04	356	ePKPbc	PKiKP	09 41 05.1	-0.3
HFS	Hagfors	150.18	348	PKPbc	PKPbc	09 41 04.8	-0.1
	comp=Z,61nm,0.8s,baz=63,slow=0.3,SNR=58						
SUE	Sulen	150.22	357	ePKPbc	PKiKP	09 41 05.5	-0.2
SKAR	Skarslia	150.37	354	ePKPbc	PKiKP	09 41 06.1	-0.1
MNK	Minsk	150.43	329	*i* PKiKP	PKiKP	09 41 06.6	+0.2
MNK							
	comp=E,65nm,1.0s						
MNK				*i* PKiKP	PKiKP	09 41 06.6	+0.2
	comp=N,48nm,1.1s						
MNK				*i* PKiKP	PKiKP	09 41 06.6	+0.2
	comp=Z,165nm,1.0s,baz=47						
MNK				*i* PP	PP	09 44 46.4	+4.8
MNK				*i* SKS	SKSdf	09 48 06.3	+1.1
MNK				*i* PPP	PPP	09 48 12.0	
MNK				*i* SKKS	SKKSdf	09 56 54.0	-4.1
MNK				*i* SS	SS	10 04 04.4	+6.6
MNK				*i* SSS	SSS	10 10 01.1	
MNK	Minsk	150.43	329	*i* PKIKP	PKiKP	09 41 06.5	+0.1
MNK				*i*		09 44 46.3	
MNK				*i*		09 48 06.3	
MNK				pmax	pmax		
	comp=Z,165nm,1.0s						
MNK				pmax	pmax		
	comp=E,65nm,1.0s						
MNK				pmax	pmax		
	comp=N,48nm,1.1s						
ASK	Askoy	150.78	357	ePKPbc	PKiKP	09 41 07.1	+0.1
FKH	Fakeheh	151.09	285	eP	PKiKP	09 41 08.4	-0.3
KONO	Kongsberg	151.24	352	ePKPbc	PKiKP	09 41 08.0	+0.1
ODD1	Odda	151.26	355	ePKPbc	PKiKP	09 41 08.4	+0.3
BEIL	Beino	151.29	286	eP	PKiKP	09 41 08.8	-0.2
HWQ	Hawqa	151.48	285	eP	PKPbc	09 41 09.0	+0.1
RCY	Rachaya	151.51	283	eP	PKiKP	09 41 09.3	-0.2
SHBL	Chebaa	151.57	283	eP	PKPbc	09 41 09.4	+0.1
SIM	Simferopol'	151.59	308	*i* PKIKP	PKiKP	09 41 09.0	-0.1
SIM				pmax	pmax		
	comp=Z,54nm,0.9s						
STRU	Stroemstad	151.63	350	*i* P	PKiKP	09 41 08.8	+0.1
QRWL	Qaraoun	151.64	283	eP	PKPbc	09 41 09.4	+0.1
BHL	Bhannes	151.69	284	eP	PKiKP	09 41 09.6	-0.2
DQRL	Deir Qamar	151.75	284	eP	PKiKP	09 41 10.0	0.0
MMAI	Mount Meron Ar	151.82	282	PKPbc	PKiKP	09 41 10.8	+0.6
	comp=Z,21nm,0.6s,baz=78,slow=3.8,SNR=46						
KMY	Karmoy	152.05	357	ePKPbc	PKiKP	09 41 10.1	+0.5
AKASG	Malin Array Be	152.09	322	PKPbc	PKPbc	09 41 09.6	-0.1
	comp=Z,52nm,0.8s,baz=55,slow=2.6,SNR=97						
KIEV	Kiev	152.10	322	⇓P	PKPbc	09 41 09.5	-0.2
TJOU	Tjoern	152.52	349	*i* P	PKPbc	09 41 10.3	0.0
BORU	Boraas	152.70	347	*i* P	PKPbc	09 41 10.8	0.0
HOMB	Homborsund	152.72	353	*i* P	PKiKP	09 41 11.6	+0.6
SUW	Suwalki	152.75	332	ePKP	PKiKP	09 41 11.2	0.0
SNART	Snartemo	152.78	354	*i* P	PKiKP	09 41 11.2	+0.1
ONAU	Onsala	153.08	348	*i* P	PKPbc	09 41 11.6	0.0
BRTR	Keskin Array B	153.11	297	PKP	PKPdf	09 41 04.5	-0.6
	comp=Z,3.4nm,1.0s,baz=248,slow=1.3,SNR=12						
BRTR				PKPbc	PKPbc	09 41 11.9	-0.6
	comp=Z,14nm,0.9s,baz=126,slow=3.2,SNR=32						
BRTR				PKPab	PKPab	09 41 23.9	-0.3
	comp=Z,8.3nm,0.8s,baz=80,slow=1.6,SNR=7.5						
FABU	Falkenberg	153.30	347	*i* P	PKiKP	09 41 12.3	+0.1
DEL	Delary	153.56	345	*i* P	PKiKP	09 41 13.1	+0.3
ANTO	Ankara	153.73	297	⇓P	PKPdf	09 41 05.7	-0.2
BJUU	Bjuv	154.11	346	*i* P	PKiKP	09 41 14.6	+0.6
DBIC	Dimbokro	154.61	164	PKP	PKPdf	09 41 08.6	+0.8
	comp=Z,9.0nm,0.9s,baz=220,slow=4.3,SNR=3.9						
DBIC				PKPbc	PKiKP	09 41 16.7	+0.4
	comp=Z,4.8nm,0.7s,baz=231,slow=2.1,SNR=5.9						
DBIC				PKPab	PKPab	09 41 32.8	+2.0
	comp=Z,5.1nm,0.6s,baz=234,slow=8.6,SNR=3.7						
BEL	Belsk	155.34	332	ePKP	PKPdf	09 41 17.4	+10
GKP	Gorka Klasztor	155.49	338	ePKP	PKPdf	09 41 18.2	+10
EKA	Eskdalemuir Ar	155.73	7	PKP	PKPdf	09 41 08.0	0.0
	comp=Z,2.0nm,0.8s,baz=46,slow=2.1,SNR=3.7						
EKA				PKPab	PKPab	09 41 34.9	+0.4
	comp=Z,2.9nm,0.6s,baz=346,slow=3.0,SNR=6.2						
BURAR	Bucovina Array	156.00	319	⇑P	PKPdf	09 41 04.5	-4.3
KWP	Kalwaria Pacla	156.06	326	ePKP	PKPab	09 41 36.2	0.0
STHS	Stebnicka Huta	156.90	327	ePKIKP	PKPdf	09 41 08.8	-1.0
STHS	Stebnicka Huta	156.90	327	ePKP	PKPdf	09 41 08.8	-1.0
STHS				*e*		09 41 39.1	
OJC	Ojcow	156.97	330	ePKP	PKPdf	09 41 10.4	+0.6
NIE	Niedzica	157.34	328	ePKP	PKPdf	09 41 11.5	+1.2
ARR	Arges	157.55	315	⇑P	PKPdf	09 41 09.1	-1.7
LANS	Liptovska Anna	157.91	329	ePKIKP	PKPdf	09 41 13.7	+2.6
LANS	Liptovska Anna	157.91	329	ePKP	PKPdf	09 41 13.7	+2.6
MODS	Modra-Piesok	159.44	330	ePKIKP	PKPdf	09 41 14.4	+1.5
MODS	Modra-Piesok	159.44	330	ePKP	PKPdf	09 41 14.4	+1.5
MORH	Mrgy, Hungar	160.39	324	⇓P	PKPdf	09 41 14.0	0.0
GERES	GERESS Array B	160.43	337	PKP	PKPdf	09 41 14.5	+0.4
	comp=Z,0.3nm,0.4s,baz=1.5,slow=4.8,SNR=2.3						
GERES				PKPab	PKPab	09 41 54.8	-0.5
	comp=Z,1.4nm,0.7s,baz=19,slow=4.5,SNR=4.1						
BMRD	Maredsous	160.95	355	*d*PKP	PKPab	09 41 57.4	+0.2
WLF	Walferdange	161.44	352	*d*PKPdf	PKPdf	09 41 17.1	+2.0
WLF				*d*PKP	PKPdf	09 42 00.5	+1.1
TORD	Torodi Ar. Bea	161.89	179	PKP	PKPdf	09 41 17.4	+0.9
	comp=Z,2.4nm,1.1s,baz=180,slow=0.9,SNR=8.1						
TORD				PKPab	PKPab	09 42 03.5	+1.3
	comp=Z,13nm,0.9s,baz=104,slow=2.9,SNR=9.6						
TORD				PP	PP	09 45 46.7	+2.1
	comp=Z,2.5nm,1.1s,baz=134,slow=4.2,SNR=3.8						
ESDC	Sonseca Array	170.33	29	PKP	PKPdf	09 41 24.5	+1.9
	comp=Z,1.9nm,1.0s,baz=324,slow=1.5,SNR=5.6						
ESDC				PKPab	PKPab	09 42 39.2	+0.1
	comp=Z,2.9nm,0.9s,baz=330,slow=3.1,SNR=5.8						
ESDC				PP	PP	09 46 30.1	+1.3
	comp=Z,1.3nm,1.0s,baz=333,slow=5.0,SNR=4.3						

ISK **22** *09:32:14.8,38.27N×40.99E,h5km,ML1.9/5*
AFAD **22** *09:32:16.7,38.28N×40.99E,h7km±1km, ML2.5*

ISC 22 09:32:16.2±1.4, 38.28N±0.04×41.01E±0.03, h5km±13km, n12, σ1°07/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTMN	Batman	0.44	152	P	Pb	09 32 25.6	-0.9
BTMN				S	Sb	09 32 32.7	-0.8
MUSM	Mu-Merkez	0.60	42	P	Pb	09 32 28.4	-0.9
MUSM				S	Sb	09 32 36.9	-1.2
BNGB	Bingl	0.76	340	Pg	Pg	09 32 30.7	-0.1
BNGB				Sg	Sb	09 32 42.3	-0.4
SRTM	Siirt_Merkez	0.78	111	P	Pb	09 32 32.2	-0.1
SRTM				S	Sn	09 32 47.0	+0.9
GURO	Guroymak-BITLI	0.85	71	Pg	Pg	09 32 32.6	0.0
GURO				Sg	Sb	09 32 45.6	+0.2
MIDY	Mardin/Midyat-	0.92	160	P	Pn	09 32 35.2	-0.8
MIDY				S	Sn	09 32 50.1	+0.4
MARD	Mardin	0.98	191	P	Pn	09 32 36.0	-0.8
MARD				*i* IAML		09 32 52.0	
	comp=E,65nm,0.3s						
MARD				S	Sn	09 32 52.3	+1.2
MARD				*i* IAML		09 32 55.0	
	comp=N,94nm,0.3s						
YEDI	Yedisu-Bingol	1.21	343	Pn	Pg	09 32 39.1	-0.4
PERV	Siirt/Pervari-	1.26	105	P	Pn	09 32 40.2	-0.4
PERV				S	Sn	09 33 00.3	+2.3
PERV				*i* IAML		09 33 05.0	
	comp=N,170nm,0.4s						
PERV				*i* IAML		09 33 07.0	
	comp=E,187nm,0.4s						
SVRC	Sivrice-ELAZID	1.34	275	Pn	Pg	09 32 41.5	-0.4
SVRC				Sn	Sn	09 33 00.8	+0.7
ELZG	Elazig	1.60	278	P	Pb	09 32 45.7	-0.7
ELZG				S	Sg	09 33 10.3	+2.5
URFA	Urfa	1.92	245	Pn	Pn	09 32 49.5	-0.2

IDC **22** *09:35:10.1±3.4, 54.28N×87.27E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=30.3km s-min=19.1km az=54.0*
ASRS **22** *09:35:13.0±1.9, 54.27N×87.09E, h0km, M2.6, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 22 09:35:09.5±4.2, 54.4N±0.3×87.2E±0.2, h0km, n6, σ1°40/6, 1C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.48	252	I	I	09 43 10.0	
	baz=75,slow=356,SNR=8.3						
ZAA0	Zalesovo Array	1.48	252	⇑P	Pn	09 35 36.7	-0.7
	0.1nm,0.2s,baz=61,slow=16						
ZAA0				⇓S	Sg	09 35 56.6	-0.4
	0.5nm,0.5s,baz=70,slow=28						
ZALV	Zalesovo Beam	1.48	252	Pg	Pn	09 35 36.6	-0.7
	1.2nm,0.3s,baz=74,slow=16,SNR=11						
ZALV				Lg	Lg	09 35 56.9	
	1.8nm,0.3s,baz=77,slow=24,SNR=8.8						
KURBB	Kurchatov Arra	6.52	238	Pn	Pn	09 36 47.8	+1.2
	0.1nm,0.3s,baz=54,slow=13,SNR=8.0						
	0.8nm,0.5s						
KURBB	Kurchatov Arra	6.52	238	⇓Pn	Pn	09 36 48.3	+1.7
	1.1nm,0.6s						
MKAR	Makanchi Array	8.25	204	Pn	Pn	09 37 09.8	-0.5
	0.1nm,0.3s,baz=24,slow=14,SNR=1.7						
	0.1nm,0.4s						

IDC **22** *09:46:41.5±1.5, 0.01S×98.31E, h0km, mb3.7/9, mbtmp3.7/10, ML3.4/1, MS3.7/3, Error ellipse: s-maj=52.0km s-min=20.1km az=57.0*
DJA **22** *09:46:49.2±0.6, 0°N±3°×9°E±°, h15km±7km, M3.8/10, mb4.0/2, MLv3.7/10*

ISC 22 09:46:49.4±0.8, 0.28N±0.05×98.52E±0.06, h43km, n25, σ1°43/20, mb3.9/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.41	216	P	Pn	09 46 59.7	+0.5
MNSI	Mandailing Nat	1.18	64	P	Pn	09 47 10.0	+0.6
MNSI				S	Sn	09 47 24.9	+0.6
SBSI	Sibolga	1.31	16	P	Pn	09 47 13.1	+1.8
GSI	Gunungsitoli	1.39	317	P	Pn	09 47 13.7	+1.4
GSI				S	Sn	09 47 31.9	+2.4
SISI	Saibi	1.69	160	P	Pn	09 47 17.9	+1.4
PPI	Padang Panjang	2.02	111	P	Pn	09 47 22.5	+1.6
PDSI	Padang	2.27	121	P	Pn	09 47 27.3	+2.8
PSI	Prapat	2.54	9	Pn	Pn	09 47 27.8	-0.4
	6.1nm,0.3s,baz=165,slow=12,SNR=13						
PSI				LR	LR	09 48 43.1	
	comp=Z,183nm,18.0s,baz=25,slow=44						
	13nm,0.3s						
KCSI	Kotacane, Aceh	3.31	347	P	Pn	09 47 39.8	+1.1
H08S2	Diego Garcia H	27.12	253	T	T	10 19 59.0	
	baz=73,slow=76,SNR=70						
H08S3	Diego Garcia H	27.12	253	T	T	10 19 57.2	
	baz=73,slow=76,SNR=83						
H08S1	Diego Carcia H	27.14	253	T	T	10 19 55.9	
	baz=73,slow=76,SNR=45						
WRA	Warramunga Arr	40.43	122	P	P	09 54 22.2	-1.8
	0.2nm,0.5s,baz=299,slow=8.0,SNR=2.2						
	0.2nm,0.5s						
ASAR	Alice Springs	41.79	127	P	P	09 54 33.2	-1.9
	0.2nm,0.4s,baz=294,slow=7.4,SNR=8.3						
	0.2nm,0.4s						
KSRS	Korea Array	45.88	33	P	P	09 55 07.2	-0.4
	0.7nm,0.5s,baz=214,slow=9.5,SNR=4.2						
	0.7nm,0.5s						
SONM	Songino Array	47.86	7	P	P	09 55 24.1	+0.9
	0.8nm,0.6s,baz=185,slow=7.2,SNR=3.6						
SONM				LR	LR	10 18 09.9	
	comp=Z,120nm,21.8s,baz=124,slow=39						
	0.8nm,0.6s						
MKAR	Makanchi Array	48.45	345	P	P	09 55 27.1	-0.6
	0.7nm,0.5s,baz=152,slow=7.8,SNR=6.7						
	0.7nm,0.5s						
KURBB	Kurchatov Arra	52.96	344	P	P	09 56 01.5	0.0
	0.3nm,0.4s,baz=164,slow=7.7,SNR=4.1						
	0.3nm,0.4s						
ZALV	Zalesovo Beam	54.68	350	P	P	09 56 14.1	+0.1
	0.9nm,0.3s,baz=189,slow=8.6,SNR=1.5						
	0.9nm,0.3s						
BVAR	Borovoye Array	57.55	340	P	P	09 56 34.4	-0.1
	1.3nm,0.6s,baz=148,slow=8.5,SNR=2.1						
	1.3nm,0.6s						
AKTO	Aktyubinsk	60.66	332	P	P	09 56 55.0	-1.2
	1.2nm,0.6s,baz=122,slow=5.0,SNR=4.9						
	1.2nm,0.6s						
H04N2	CROZET ISLANDS	61.77	215	T	T	11 03 33.6	
	baz=56,slow=75,SNR=22						
H04N1	CROZET ISLANDS	61.78	215	T	T	11 03 34.2	
	baz=56,slow=75,SNR=27						
H04N3	CROZET ISLANDS	61.79	215	T	T	11 03 33.0	
	baz=56,slow=75,SNR=22						
ARCES	ARCESS Array B	83.84	340	LR	LR	10 41 18.7	
	comp=Z,149nm,19.8s,baz=27,slow=39						

IDC **22** *09:48:05.0±0.9, 30.24N×98.38E, h0km, mb3.6/7, mbtmp3.6/8, Error ellipse: s-maj=78.7km s-min=16.6km az=59.0*

ISC 22 09:48:10.1±1.2, 30.2N±0.2×98.2E±0.4, h35km, n8, σ0°34/8, mb3.6/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.68	177	Pn	Pn	09 50 54.4	0.0
	0.6nm,0.3s,baz=357,slow=12,SNR=4.8						
MKAR	Makanchi Array	20.70	328	P	P	09 52 47.8	+0.6
	0.4nm,0.7s,baz=138,slow=13,SNR=4.1						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	25.20	330	P	P	09 53 32.2	-0.1
	0.6nm,0.5s,baz=144,slow=9.1,SNR=4.3						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	25.67	342	P	P	09 53 36.3	-0.2
	0.8nm,0.5s,baz=163,slow=10,SNR=3.2						
	0.8nm,0.5s						
BVAR	Borovoye Array	30.56	326	P	P	09 54 20.0	-0.3
	0.5nm,0.4s,baz=120,slow=8.5,SNR=1.9						
	0.5nm,0.4s						
AKTO	Aktyubinsk	36.16	316	P	P	09 55 08.8	-0.2
	0.4nm,0.3s,baz=114,slow=10.0,SNR=1.6						
	0.4nm,0.3s						
WRA	Warramunga Arr	60.75	141	P	P	09 58 18.6	+0.2
	1.3nm,0.6s,baz=329,slow=7.7,SNR=17						
	1.3nm,0.6s						
ASAR	Alice Springs	63.55	143	P	P	09 58 37.2	0.0
	0.4nm,0.6s,baz=326,slow=7.2,SNR=8.8						
	0.4nm,0.6s						

NNC **22** *09:50:11.3±9.2, 37.47N×71.57E, h155km±147km, mb2.8, mpv3.3, Error ellipse: s-maj=89.5km s-min=59.

JOF	**Joensuu**	**1.87**	**169**	PG	**Pn**	**10 01 09.3**	**-0.5**
	baz=352							
OUL	**Oulu**	**2.01**	**282**	PG	**Pb**	**10 01 13.8**	**-0.1**
OUL				SG	**Sg**	**10 01 40.6**	**-0.3**
RANF	**Ranua**	**2.02**	**311**	PG	**Pb**	**10 01 13.9**	**-0.2**
	baz=130							
RANF				SG	**Sb**	**10 01 40.3**	**+0.5**
KVDA	**Kovda**	**2.18**	**25**	P	**Pn**	**10 01 13.7**	**-0.3**
KVDA				S	**Sn**	**10 01 43.0**	**+1.4**
OBF4	**Vikkela, Lumij**	**2.33**	**274**	PG	**Pb**	**10 01 18.8**	**-0.6**
	baz=86							
OBF4				smax	smax	10 01 48.1		
	comp=Z,8.8nm,0.2s							
OBF4				SG	**Sg**	**10 01 51.0**	**-0.3**
OUF	**Merijarvi**	**2.54**	**264**	PB	**Pb**	**10 01 21.2**	**-1.7**
	baz=83							
OUF				smax	smax	10 01 54.1		
	comp=Z,6.3nm,0.2s							
OUF				SG	**Sg**	**10 01 56.3**	**-1.6**
RNF	**Rovaniemi**	**2.64**	**317**	PB	**Pn**	**10 01 22.3**	**+1.9**
RNF				SG	**Sb**	**10 01 58.7**	**+1.0**
OBF0	**Syolatti, Pyha**	**2.73**	**268**	PB	**Pb**	**10 01 25.3**	**-0.8**
OBF0				smax	smax	10 01 59.5		
	comp=Z,4.4nm,0.2s							
OBF0				SG	**Sg**	**10 02 02.8**	**-1.2**
SUF	**Sumiainen**	**2.82**	**226**	PB	**Pb**	**10 01 25.7**	**-2.1**
SUF				smax	smax	10 02 01.3		
	comp=Z,1.4nm,0.2s							
TOF	**Tornio**	**2.92**	**300**	PB	**Pn**	**10 01 26.2**	**+2.0**
TOF				smax	smax	10 02 04.7		
	comp=Z,1.3nm,0.2s							
APA0	**Apatity Array**	**3.04**	**18**	P	**Pn**	**10 01 27.1**	**+1.3**
APA0				S	**Sn**	**10 02 04.6**	**+1.7**
KALU	**Kalix**	**3.21**	**294**	SG	**Sb**	**10 02 16.5**	**+2.4**
KLF	**Kolari**	**3.67**	**316**	SG	**Sg**	**10 02 34.1**	**-0.1**
PAJU	**Pajala**	**3.81**	**310**	SG	**Sg**	**10 02 37.1**	**-1.6**
RAJF	**Raja-Jooseppi**	**3.85**	**348**	PN	**Pn**	**10 01 37.3**	**+0.4**
VAF	**Ylistaro**	**3.88**	**247**	PN	**Pn**	**10 01 39.9**	**+2.6**
	baz=57							
FINES	**FINESS Array B**	**3.89**	**213**	Pn	**Pn**	**10 01 39.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=1.7							
FINES				Lg	Lg	10 02 39.8		
	comp=Z,0.3nm,0.3s,baz=32,slow=29,SNR=6.7							
	comp=Z,1.3nm,0.7s							
ERTU	**Ertsjaerv**	**3.90**	**301**	PB	**Pb**	**10 01 43.9**	**-2.3**
BURU	**Burvik**	**3.94**	**272**	PB	**Pn**	**10 01 43.7**	**-3.1**
UMAU	**Umeaa**	**4.38**	**263**	PN	**Pn**	**10 01 45.5**	**+1.3**
	baz=70							
HEF	**Hetta**	**4.58**	**326**	PN	**Pn**	**10 01 48.7**	**+1.6**
ARCES	**ARCESS Array B**	**5.19**	**340**	Pn	**Pn**	**10 01 55.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=13							
ARCES				Sn	**Sn**	**10 02 54.5**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=156,slow=23,SNR=1.6							
ARCES				Lg	Lg	10 03 18.9		
	comp=Z,0.2nm,0.3s,baz=147,slow=32,SNR=5.3							
	comp=Z,3.3nm,1.1s							
ARCES	**ARCESS Array B**	**5.19**	**340**	P	**Pn**	**10 01 55.5**	**+0.1**
ARCES				S	**Sn**	**10 02 54.9**	**-1.0**
VADS	**Vadso**	**5.42**	**356**	S	**Sn**	**10 03 01.1**	**-0.3**
I43RU	**DUBNA INFRASON**	**8.69**	**155**	I	I	10 55 40.0		
	baz=348,slow=328,SNR=2.0							
HFS	**Hagfors**	**9.06**	**247**	Pn	**Pn**	**10 02 48.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=1.6							
	comp=Z,2.4nm,0.9s							

*HLW **22** 10:03:13.3,26°.85N×34°.83E,h28km±3km,Ml3.7*
*SGS **22** 10:03:14.8,27°.03N×34°.79E,h16km, Ml2.6*
ISC 22 10:03:09.8±0.9,**26°.89N**±0°.03×**34°.81E**±0°.03,**h12**km,**n53,** σ1ŝ**40**/57,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWLHS	**Almuwaylih**	**1.06**	**36**	S	**Sn**	**10 03 45.0**	**-0.2**
MWLHS	**Almuwaylih**	**1.06**	**36**	P	**Pn**	**10 03 31.8**	**+1.2**
KRABS	**KRABS**	**1.27**	**18**	S	**Sb**	**10 03 49.0**	**-1.1**
KRABS				P	**Pg**	**10 03 34.3**	**0.0**
DESA	**DESA**	**1.35**	**63**	S	**Sg**	**10 03 53.6**	**+0.1**
DESA				P	**Pg**	**10 03 36.7**	**+0.9**
AYUS	**`Aynunah**	**1.36**	**17**	P	**Pg**	**10 03 35.8**	**-0.2**
AYUS	**`Aynunah**	**1.36**	**17**	S	**Sb**	**10 03 51.7**	**-0.9**
RSHS		**1.41**	**359**	P	**Pn**	**10 03 36.1**	**+0.8**
RSHS		**1.41**	**359**	S	**Sb**	**10 03 52.0**	**-2.1**
WJHS		**1.42**	**96**	P	**Pb**	**10 03 37.1**	**+0.8**
WJHS		**1.42**	**96**	S	**Sn**	**10 03 53.3**	**-0.8**
WTBKS	**WTBKS**	**1.54**	**39**	P	**Pg**	**10 03 39.6**	**+0.2**
WTBKS	**WTBKS**	**1.54**	**39**	S	**Sg**	**10 03 58.0**	**-1.6**
BDAS	**Al Bad`**	**1.56**	**9**	P	**Pb**	**10 03 38.4**	**-0.2**
NADB	**Abo Dabab**	**1.56**	**190**	P	**Pn**	**10 03 37.8**	**+0.4**
TR2	**Tor 2**	**1.78**	**327**	P	**Pn**	**10 03 41.7**	**+1.3**
URD07	**Al Anba**	**1.78**	**63**	P	**Pn**	**10 03 43.4**	**-0.6**
URD07	**Al Anba**	**1.78**	**63**	S	**Sg**	**10 04 06.0**	**-1.1**
HKAT	**Jabal Katrina**	**1.79**	**336**	P	**Pn**	**10 03 42.1**	**+1.5**
HKAT				S	**Sn**	**10 04 02.6**	**-0.7**
EWJHS	**Al Wajh**	**1.80**	**113**	S	**Sn**	**10 04 02.8**	**-0.7**
EWJHS	**Al Wajh**	**1.80**	**113**	P	**Pn**	**10 03 42.3**	**+1.6**
URD06	**Shuwaq**	**1.82**	**72**	S	**Sb**	**10 04 05.7**	**-0.4**
URD06	**Shuwaq**	**1.82**	**72**	P	**Pb**	**10 03 44.0**	**+0.7**
BIDS	**Bi'r al Bayda'**	**1.92**	**90**	P	**Pb**	**10 03 44.8**	**+0.1**
JLOS		**1.94**	**18**	P	**Pb**	**10 03 44.6**	**-0.6**
URD05	**Al Faraah**	**1.95**	**79**	P	**Pb**	**10 03 45.6**	**+0.3**
TBKS	**Tabuk**	**2.03**	**49**	P	**Pb**	**10 03 47.0**	**+0.3**
HAQS	**Haql**	**2.16**	**3**	P	Pg	10 03 58.7	+7.5
URD04	**Abu Rakah**	**2.19**	**84**	P	**Pb**	**10 03 49.1**	**-0.4**
HRDS	**Abu Rudays**	**2.26**	**324**	P	**Pn**	**10 03 49.2**	**+2.2**
GRB	**Gharib**	**2.27**	**308**	P	**Pn**	**10 03 48.6**	**+1.5**
JMOS	**Jabal al Moall**	**2.29**	**7**	P	**Pn**	**10 03 49.4**	**+2.0**
HBST	**Basata**	**2.32**	**358**	P	**Pn**	**10 03 49.6**	**+1.7**
URD03	**Al Ula**	**2.37**	**95**	P	**Pb**	**10 03 51.4**	**-1.0**
HQLS		**2.42**	**5**	P	**Pn**	**10 03 51.2**	**+2.0**
HAGS	**Hagol**	**2.50**	**176**	P	**Pn**	**10 03 51.4**	**+1.1**
HAGS				S	**Sn**	**10 04 18.8**	**-1.9**
URD01	**URD01**	**2.54**	**88**	P	**Pb**	**10 03 55.2**	**-0.3**
NEDF	**New Edfo**	**2.60**	**221**	P	**Pn**	**10 03 52.7**	**+1.0**
OLAS	**OLAS**	**2.60**	**103**	P	**Pn**	**10 03 54.8**	**+3.1**
URD02	**Al Ula**	**2.74**	**95**	P	**Pb**	**10 03 58.4**	**-0.4**
ASUT		**2.94**	**281**	P	**Pn**	**10 03 58.3**	**+1.9**
BRNS	**Bernies**	**3.08**	**192**	P	**Pn**	**10 04 00.0**	**+1.7**
ZAF	**Zafarana**	**3.11**	**321**	P	**Pn**	**10 04 00.6**	**+1.8**
AKUR	**Kurkur**	**3.50**	**212**	P	**Pn**	**10 04 05.0**	**+1.0**
TAMRE	**El Minia**	**3.56**	**284**	P	**Pn**	**10 04 06.7**	**+1.9**
NBNS	**Bani Suef**	**3.56**	**300**	P	**Pn**	**10 04 07.4**	**+2.5**
NAHD	**NAHD**	**3.58**	**211**	P	**Pn**	**10 04 06.8**	**+1.7**
NNMR	**New North Mara**	**3.74**	**213**	P	**Pn**	**10 04 09.2**	**+1.9**
NSKD	**New Sinn el Ka**	**3.89**	**215**	P	**Pn**	**10 04 11.4**	**+2.0**
NGMR	**NGMR**	**3.99**	**214**	P	**Pn**	**10 04 12.4**	**+1.6**
RYAN	**Fayoum**	**4.57**	**300**	P	**Pn**	**10 04 21.5**	**+2.8**
RYAN				S	**Sn**	**10 05 11.1**	**-0.7**
ASHG	**Umm Shaghir**	**4.60**	**219**	P	**Pn**	**10 04 20.2**	**+1.0**
HMSM	**Jabal Masmas**	**4.79**	**214**	P	**Pn**	**10 04 23.5**	**+1.7**
HFRF	**Wahat Farafira**	**5.80**	**274**	P	**Pn**	**10 04 37.0**	**+1.3**

*SDD **22** 10:18:45.7±2.5, 19°.30N×67°.15W,h23km±131km, MD3.7, ML3.1*
*NEIC **22** 10:18:46.3±0.8, 19°.196N±0°.005×67°.15W±0°.03, h10km±1km, ML3.1/14, Md3.0/14(RSPR), Error ellipse: s-maj=4.7km s-min=2.8km az=261.0*
*RSPR **22** 10:18:50.3, 19°.17N×67°.19W,h38km±17km, MD3.0/14*
ISC 22 10:18:45.7±1.4,**19°.26N**±0°.05×**67°.18W**±0°.03,**h26**km±13km, **n66,** σ1ŝ**43**/79,**14C-9D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.79**	**175**		**Pn**	**10 19 00.9**	**-0.3**
AGPR	**Aguadilla, PR**	**0.79**	**175**	*e*Pg	**Pn**	**10 19 00.8**	**-0.3**
AGPR				⇑*e*Sg	**Sn**	**10 19 11.4**	**-0.7**
AGPR				IAML		10 19 12.1	
	comp=N,1μm,0.2s						
AGPR				IAML		10 19 13.1	
	comp=E,597nm,0.3s						
AGPR	**Aguadilla, PR**	**0.79**	**175**	⇓*e*P	**Pn**	**10 19 01.1**	**-0.1**
AGPR	**Aguadilla, PR**	**0.79**	**175**	*e*S	**Sn**	**10 19 11.6**	**-0.6**
IDE	**Isla Desecheo**	**0.91**	**198**		**Pn**	**10 19 02.9**	**0.0**
IDE					**Sn**	**10 19 14.6**	**-0.5**
IDE	**Isla Desecheo**	**0.91**	**198**	⇓*e*P	**Pn**	**10 19 02.9**	**0.0**
IDE	**Isla Desecheo**	**0.91**	**198**	*e*S	**Sn**	**10 19 14.6**	**-0.5**
EMPR	**Esperanza - Ma**	**0.99**	**141**		**Pn**	**10 19 06.4**	**+2.4**
EMPR					**Sn**	**10 19 18.8**	**+1.7**
EMPR	**Esperanza - Ma**	**0.99**	**141**	⇓*e*P	**Pn**	**10 19 06.4**	**+2.4**
EMPR	**Esperanza - Ma**	**0.99**	**141**	*e*S	**Sn**	**10 19 18.8**	**+1.7**
AOPR	**Arecibo Observ**	**0.99**	**156**		**Pn**	**10 19 04.2**	**+0.2**
AOPR					**Sn**	**10 19 17.2**	**0.0**
AOPR				IAML		10 19 20.2	
	comp=N,840nm,0.3s						
AOPR	**Arecibo Observ**	**0.99**	**156**	*e*Pg	**Pn**	**10 19 04.3**	**+0.3**
AOPR				IAML		10 19 18.7	
	comp=E,1μm,0.5s						
AOPR				IAML		10 19 20.1	
	comp=N,780nm,0.2s						
AOPR	**Arecibo Observ**	**0.99**	**156**	⇓*e*P	**Pn**	**10 19 04.5**	**+0.4**
AOPR	**Arecibo Observ**	**0.99**	**156**	*e*S	**Sn**	**10 19 17.4**	**+0.1**
PRSN	**Puerto Rico Se**	**1.04**	**178**		**Pn**	**10 19 04.8**	**+0.2**
PRSN					**Sn**	**10 19 18.9**	**+0.7**
PRSN	**Puerto Rico Se**	**1.04**	**178**	*e*Pg	**Pn**	**10 19 04.8**	**+0.2**
PRSN	**Puerto Rico Se**	**1.04**	**178**	⇓*e*P	**Pn**	**10 19 04.8**	**+0.2**
PRSN	**Puerto Rico Se**	**1.04**	**178**	*e*S	**Sn**	**10 19 18.9**	**+0.7**
LSP	**Las Mesas**	**1.08**	**175**		**Pb**	**10 19 05.5**	**-0.3**
LSP					**Sn**	**10 19 19.9**	**+0.5**
LSP	**Las Mesas**	**1.08**	**175**	⇑*e*P	**Pb**	**10 19 05.5**	**-0.3**
LSP	**Las Mesas**	**1.08**	**175**	*e*S	**Sn**	**10 19 19.9**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.09**	**156**		**Pb**	**10 19 06.0**	**0.0**
UUPR					**Sn**	**10 19 19.5**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.09**	**156**	⇑*e*P	**Pb**	**10 19 06.0**	**0.0**
UUPR	**Utuado, UPR, P**	**1.09**	**156**	*e*S	**Sn**	**10 19 19.5**	**-0.1**
ECPR	**Experimental S**	**1.22**	**140**	⇑*e*P	**Pb**	**10 19 08.4**	**+0.3**
ECPR	**Experimental S**	**1.22**	**140**	*e*S	**Sn**	**10 19 24.1**	**+1.5**
CRPR	**Cabo Rojo, PR**	**1.25**	**177**		**Pb**	**10 19 07.9**	**-0.7**
CRPR					**Sb**	**10 19 24.1**	**-0.2**
CRPR				IAML		10 19 27.8	
	comp=N,504nm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.25**	**177**	*e*Pg	**Pb**	**10 19 07.9**	**-0.7**
CRPR				⇓*e*Sg	**Sb**	**10 19 23.5**	**-0.8**
CRPR				IAML		10 19 26.9	
	comp=E,360nm,0.5s						
CRPR				IAML		10 19 27.6	
	comp=N,583nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.25**	**177**	⇑*e*P	**Pb**	**10 19 08.4**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.25**	**177**	*e*S	**Sb**	**10 19 24.1**	**-0.2**
MLPR	**Magueyes Islan**	**1.29**	**174**	⇑*e*Pg	**Pb**	**10 19 08.6**	**-0.8**
MLPR				IAML		10 19 28.5	
	comp=E,100nm,0.5s						
MLPR				IAML		10 19 30.7	
	comp=N,95nm,0.2s						
MLPR	**Magueyes Islan**	**1.29**	**174**	⇑*e*P	**Pb**	**10 19 08.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.29**	**174**	*e*S	**Sb**	**10 19 24.9**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.31**	**167**		**Pb**	**10 19 09.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.31**	**167**	⇑*e*P	**Pb**	**10 19 09.6**	**-0.1**
OBIP	**Obispado Ponce**	**1.33**	**156**		**Pb**	**10 19 09.3**	**-0.6**
OBIP					**Sb**	**10 19 26.0**	**-0.6**
OBIP				IAML		10 19 27.9	
	comp=N,283nm,0.2s						
OBIP				IAML		10 19 28.4	
	comp=E,321nm,0.4s						
OBIP	**Obispado Ponce**	**1.33**	**156**	⇑*e*P	**Pb**	**10 19 09.7**	**-0.3**
OBIP	**Obispado Ponce**	**1.33**	**156**	*e*S	**Sb**	**10 19 26.1**	**-0.6**
PCDR	**Punta Cana, DR**	**1.36**	**237**	*e*Pg	**Pb**	**10 19 10.5**	**0.0**
GCPR	**Guaynabo City**	**1.41**	**132**		**Pb**	**10 19 11.0**	**-0.3**
GCPR	**Guaynabo City**	**1.41**	**132**	⇑*e*P	**Pb**	**10 19 11.3**	**0.0**
GCPR	**Guaynabo City**	**1.41**	**132**	*e*S	**Sb**	**10 19 29.4**	**+0.5**
SJG	**San Juan**	**1.50**	**139**		**Pb**	**10 19 12.3**	**-0.6**
SJG				IAML		10 19 37.1	
	comp=E,311nm,0.2s						
SJG				IAML		10 19 38.8	
	comp=E,306nm,0.3s						
SJG	**San Juan**	**1.50**	**139**	*e*Pg	**Pb**	**10 19 13.3**	**+0.3**
SJG	**San Juan**	**1.50**	**139**	⇑*e*P	**Pb**	**10 19 13.9**	**+0.9**
SJG	**San Juan**	**1.50**	**139**	*e*S	**Sb**	**10 19 30.6**	**-1.1**
HIDR	**Higuey Centro**	**1.60**	**246**	*e*Pg	**Pn**	**10 19 13.7**	**+1.4**
HIDR				IAML		10 19 39.6	
	comp=N,318nm,0.2s						
HIDR				IAML		10 19 43.8	
	comp=E,192nm,0.2s						
HIDR	**Higuey Centro**	**1.60**	**246**	⇓*e*P	**Pn**	**10 19 13.9**	**+1.6**
HIDR	**Higuey Centro**	**1.60**	**246**	*e*S	**Sb**	**10 19 34.6**	**+0.3**
HUMP	**Col San Antoni**	**1.68**	**131**		**Pb**	**10 19 15.0**	**-1.0**
HUMP				IAML		10 19 43.2	
	comp=N,217nm,0.2s						
HUMP				IAML		10 19 52.3	
	comp=E,223nm,0.2s						
HUMP	**Col San Antoni**	**1.68**	**131**	⇑*e*P	**Pb**	**10 19 15.0**	**-1.0**
HUMP	**Col San Antoni**	**1.68**	**131**	*e*S	**Sb**	**10 19 36.7**	**-0.1**
MIDR	**Miches**	**1.79**	**261**	*e*Pg	**Pb**	**10 19 18.1**	**+0.4**
MIDR				IAML		10 19 44.2	
	comp=E,100nm,0.2s						
MIDR				IAML		10 19 46.3	
	comp=N,94nm,1.1s						
MIDR	**Miches**	**1.79**	**261**	⇑*e*P	**Pn**	**10 19 17.1**	**+2.2**
MIDR	**Miches**	**1.79**	**261**	*e*S	**Sn**	**10 19 38.9**	**+2.1**
SMDR	**Samana, DR**	**1.90**	**271**	⇓*e*Pg	**Pn**	**10 19 17.8**	**+1.4**
DR12	**Loma Pena Alta**	**2.13**	**258**		**Pn**	**10 19 22.5**	**+2.8**
HATOM	**Hato Mayor del**	**2.13**	**258**	⇑*e*Pg	**Pn**	**10 19 22.6**	**+2.9**
HATOM				*e*Sg	**Sb**	**10 19 52.7**	**+2.9**
HATOM				IAML		10 19 53.6	
	comp=E,40nm,0.9s						
HATOM				IAML		10 19 54.7	
	comp=N,99nm,0.8s						
DR08	**Loma La Naviza**	**2.70**	**264**	*e*Pg	**Pn**	**10 19 30.9**	**+3.4**
SDDR	**Presa de Saban**	**3.89**	**267**		**Pn**	**10 19 48.2**	**+4.3**
MASC	**Masc**	**6.70**	**279**	*e*P	**Pn**	**10 20 20.6**	**-1.9**
MASC				*e*S	**Sn**	**10 21 35.5**	**-2.5**
MASC				IAML		10 21 36.8	
	comp=N,8.4nm,0.4s						
MASC				IAML		10 21 36.8	
	comp=E,15nm,0.7s						
QMBU	**Quimbuelo**	**7.25**	**279**	*e*P	**Pn**	**10 20 28.4**	**-1.6**
QMBU				*e*S	Sn	10 21 44.0	-7.5
MOAC	**Moa**	**7.45**	**282**	*e*P	**Pn**	**10 20 30.5**	**-2.2**
MOAC				*e*S	Sn	10 21 49.1	-7.3
NMDO	**Nuevo Mundo**	**7.45**	**281**	*e*P	**Pn**	**10 20 30.2**	**-2.6**
NMDO				*e*S	**Sn**	**10 21 51.5**	**-5.0**
RCC	**Rio Carpintero**	**8.06**	**277**	*e*P	**Pn**	**10 20 39.7**	**-1.4**
RCC				⇓*e*S	Sn	10 22 04.2	-7.2
PINC	**Pinares de May**	**8.19**	**280**	*e*P	**Pn**	**10 20 42.9**	**-0.1**
PINC				*e*S	Sn	10 22 07.4	-7.3

*IDC **22** 10:19:27.2±1.0, 13°.71N×56°.54E, h0km, mb3.9/10, mbtmp3.9/10,MS3.1/2, Error ellipse: s-maj=33.1km s-min=22.3km az=41.0*
*OMAN **22** 10:19:36.2±0.3, 14°.48N×56°.82E, h23km±11km, ml3.8/4, Error ellipse: s-maj=14.5km s-min=2.3km az=340.0*
ISC 22 10:19:31.0±1.0,**14°.2N**±0°.1×**56°.8E**±0°.1,**h15**km,**n27,** σ1ŝ**77**/24,**mb3.9/9,Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMTO	**DMTO**	**3.96**	**333**	P	**Pn**	**10 20 31.7**	**+0.5**
	SNR=26						
DMTO				S	**Sn**	**10 21 15.5**	**-1.8**
SHAO	**Shalim**	**4.00**	**344**	P	**Pn**	**10 20 31.6**	**-0.2**
	SNR=16						
SHAO				S	**Sn**	**10 21 14.7**	**-3.8**
RBK	**Rabkut**	**4.15**	**323**	P	**Pn**	**10 20 34.9**	**+0.9**
RBK				S	**Sn**	**10 21 21.1**	**-1.3**
ABTO	**Aybut**	**4.63**	**314**	P	**Pn**	**10 20 42.0**	**+1.5**
ABTO				S	**Sn**	**10 21 33.8**	**-0.3**
WHFO	**Wadi Hawf**	**4.73**	**322**	P	**Pn**	**10 20 43.8**	**+1.8**
	SNR=14						
WHFO				S	**Sn**	**10 21 36.3**	**-0.3**
DOK	**Doka**	**5.12**	**330**	P	**Pn**	**10 20 48.3**	**+1.1**
MHTO	**MHTO**	**6.88**	**9**	P	**Pn**	**10 21 11.5**	**+0.1**
KMBO	**Kilima Mbogo**	**24.61**	**233**	LR	LR	10 33 32.6	
	comp=Z,123nm,20.9s,baz=104,slow=35						
MKAR	**Makanchi Array**	**38.90**	**28**	P	**P**	**10 26 58.0**	**+1.9**
	0.3nm,0.5s,baz=224,slow=8.1,SNR=2.5						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**40.61**	**78**	LR	LR	10 45 11.5	
	comp=Z,9.1nm,18.4s,baz=255,slow=38						
AKASG	**Malin Array Be**	**42.74**	**334**	P	**P**	**10 27 28.5**	**+0.9**
	0.3nm,0.3s,baz=144,slow=7.3,SNR=5.0						
	0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**45.39**	**23**	P	**P**	**10 27 53.0**	**+4.2**
	0.8nm,0.8s,baz=218,slow=8.4,SNR=4.1						
	0.8nm,0.6s						
FINES	**FINESS Array B**	**52.13**	**342**	P	**P**	**10 28 41.4**	**+1.0**
	2.3nm,0.4s,baz=137,slow=9.2,SNR=32						
	2.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**53.45**	**276**	P	**P**	**10 28 48.3**	**-2.7**
	1.0nm,0.9s,baz=69,slow=9.4,SNR=5.6						
	1.0nm,0.9s						
HFS	**Hagfors**	**55.60**	**336**	P	**P**	**10 29 06.5**	**+0.5**
	1.2nm,0.6s,baz=100,slow=7.9,SNR=1.2						
	1.2nm,0.6s						
ESDC	**Sonseca Array**	**58.65**	**308**	P	**P**	**10 29 27.5**	**-0.5**
	0.8nm,0.7s,baz=93,slow=7.0,SNR=4.3						
	0.8nm,0.7s						
ARCES	**ARCESS Array B**	**58.73**	**348**	P	**P**	**10 29 28.4**	**+0.5**
	4.0nm,1.1s,baz=150,slow=8.4,SNR=7.4						
	4.0nm,1.1s						
H04N1	**CROZET ISLANDS**	**60.21**	**184**	T	T	11 35 17.6	
	baz=5.0						
H04N2	**CROZET ISLANDS**	**60.21**	**184**	T	T	11 35 10.7	
	baz=5.0						
H04N3	**CROZET ISLANDS**	**60.23**	**184**	T	T	11 35 17.3	
	baz=5.0						
H01W3	**Cape Leeuwin H**	**73.03**	**134**	T	T	11 50 31.5	
	baz=302,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**73.03**	**134**	T	T	11 50 30.0	
	baz=302,slow=75,SNR=13						
H01W1	**Cape Leeuwin H**	**73.04**	**134**	T	T	11 50 30.7	
	baz=302,slow=75,SNR=12						
WRA	**Warramunga Arr**	**83.43**	**112**	P	**P**	**10 31 57.3**	**-1.2**
	0.6nm,0.6s,baz=290,slow=5.0,SNR=7.9						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**84.18**	**116**	P	**P**	**10 32 01.4**	**-0.9**
	0.5nm,0.5s,baz=291,slow=4.8,SNR=16						
	0.5nm,0.5s						
PDAR	**Pinedale Array**	**121.98**	**348**	PKP	**PKPdf**	**10 38 25.4**	**-0.1**
	0.2nm,0.5s,baz=14,slow=1.9,SNR=3.6						
NVAR	**Mina Array Bea**	**127.48**	**355**	PKP	**PKPdf**	**10 38 34.0**	**-2.2**
	0.1nm,0.3s,baz=350,slow=3.3,SNR=1.8						

*INMG **22** 10:20:24.4±1.6, 36°.66N×11°.20W,h32km, ML2.1, Error ellipse: s-maj=10.4km s-min=7.4km az=109.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Gorringe*
*MDD **22** 10:20:24.7±1.3, 36°.87N×10°.87W, h0km, mb_Lg3.1/6, Error ellipse: s-maj=9.8km s-min=8.0km az=54.0*
*IGIL **22** 10:20:24.2, 36°.66N×11°.20W, h31km, ML2.1*
*CNRM **22** 10:20:30.1, 36°.02N×10°.78W, h48km, ML3.6*
ISC 22 10:20:21.3±2.0,**36°.55N**±0°.04×**11°.1W**±0°.1,**h32**km±15km, **n45,** σ2ŝ**17**/70,**Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.90**	**72**	Pn	**Pb**	**10 20 53.4**	**-2.0**
PFVI				Sn	**Sn**	**10 21 15.1**	**+0.7**
PFVI	**Vila Bisbo**	**1.90**	**72**	*e*P	**Pb**	**10 20 53.4**	**-2.0**
PFVI				*e*S	**Sn**	**10 21 15.5**	**+1.0**
PFVI				*i* IAML		10 21 16.6	
PFVI				*i* IAML		10 21 16.7	
PFVI				*i* IAML		10 21 17.1	
MORF	**Marmelete**	**2.09**	**68**	*e*P	**Pb**	**10 20 55.7**	**-2.9**
MORF				*e*S	**Sn**	**10 21 18.9**	**-0.3**
MORF				IAML		10 21 20.2	
	comp=N,13nm,0.1s						
MORF	**Marmelete**	**2.09**	**68**	*e*P	**Pb**	**10 20 56.9**	**-1.7**
MORF				*e*S	**Sn**	**10 21 19.7**	**+0.5**
MORF				*i* IAML		10 21 22.1	
MORF				*i* IAML		10 21 22.4	
MORF				*i* IAML		10 21 22.5	
PTEO	**Sao Teotonio**	**2.14**	**62**	*e*P	**Pb**	**10 20 56.6**	**-2.8**
PTEO				*e*S	**Sn**	**10 21 21.0**	**+0.8**
PTEO				*i* IAML		10 21 21.7	
PTEO				*i* IAML		10 21 21.8	
PTEO				*i* IAML		10 21 21.8	
PBDV	**Barranco-do-Ve**	**2.62**	**74**	Sn	**Sn**	**10 21 34.0**	**+1.8**
PBDV	**Barranco-do-Ve**	**2.62**	**74**	*e*P	**Pb**	**10 21 05.0**	**-2.7**
PBDV				*e*S	**Sn**	**10 21 34.4**	**+2.2**
MESJ	**Messejana**	**2.63**	**60**	*e*P	**Pb**	**10 21 04.8**	**-2.9**
MESJ				*e*S	**Sn**	**10 21 33.4**	**+1.2**
PCVE

RUSC	**La Rusia**	**0.97**	**176**	P		**Pn**	**10 27 57.8**	**-0.2**
RUSC				S		**Sn**	**10 28 16.3**	**-1.6**
PTBC	**PUERTO BERRIO,**	**1.33**	**256**	P		**Pn**	**10 28 00.3**	**-0.4**
PTBC				S		**Sn**	**10 28 21.4**	**-1.2**
OCAC	**Ocana**	**1.38**	**353**	P		**Pn**	**10 28 02.2**	**+0.9**
OCAC				S		**Sn**	**10 28 23.8**	**0.0**
SPBC	**San Pablo de B**	**1.51**	**217**	P		**Pn**	**10 28 02.8**	**+0.2**
SPBC				S		**Sn**	**10 28 24.4**	**-1.6**
CHIC	**Chingaza**	**2.29**	**195**	P		**Pn**	**10 28 11.9**	**+0.3**
CHIC				S		**Sn**	**10 28 41.4**	**-0.7**
ROSC	**El Rosal**	**2.32**	**210**	P		**Pn**	**10 28 13.6**	**+1.6**
ROSC				S		**Sn**	**10 28 42.4**	**-0.3**
HELC	**Santa Helena**	**2.45**	**254**	P		**Pn**	**10 28 14.2**	**+0.7**
HELC				S		**Sn**	**10 28 45.9**	**+0.5**
CVER	**Cruz Verde, Cu**	**2.50**	**202**	P		**Pn**	**10 28 15.3**	**+1.1**
CVER				S		**Sn**	**10 28 45.7**	**-0.9**
UREC	**San Jos de Ur**	**2.52**	**291**	P		**Pn**	**10 28 13.4**	**-0.5**
UREC				S		**Sn**	**10 28 44.6**	**-1.7**
GUY2C	**Guyana, Caldas**	**2.74**	**234**	P		**Pn**	**10 28 17.9**	**+0.8**
GUY2C				S		**Sn**	**10 28 53.2**	**+1.5**
VILC	**Villavicencio,**	**2.79**	**191**	P		**Pn**	**10 28 17.3**	**0.0**
VILC				S		**Sn**	**10 28 51.7**	**-0.7**
NIZA	**Niza - Manizal**	**2.92**	**232**	P		**Pn**	**10 28 23.2**	**+4.0**
NIZA				S		**Sn**	**10 28 59.1**	**+3.6**
CBOC	**Ciudad Bolivar**	**3.01**	**251**	P		**Pn**	**10 28 21.0**	**+0.8**
CBOC				S		**Sn**	**10 28 57.0**	**-0.3**
DBBC	**Dabeiba**	**3.04**	**273**	P		**Pn**	**10 28 21.0**	**+0.6**
DBBC				S		**Sn**	**10 28 57.0**	**-0.8**
ARGC	**Ariguani, Magd**	**3.17**	**340**	P		**Pn**	**10 28 23.8**	**+1.8**
ARGC				S		**Sn**	**10 29 02.1**	**+1.4**
SDV	**Santo Domingo**	**3.20**	**51**	P		**Pn**	**10 28 23.6**	**+1.0**
SDV				S		**Sn**	**10 28 59.4**	**-2.4**
PRAC	**Prado**	**3.57**	**209**	P		**Pn**	**10 28 27.7**	**+0.5**
PRAC				S		**Sn**	**10 29 09.2**	**-0.8**
PRAC	**Prado**	**3.57**	**209**	P		**Pn**	**10 28 27.1**	**-0.1**
PRAC				S		**Sn**	**10 29 09.0**	**-1.0**
ORTC	**Ortega, Tolima**	**3.60**	**215**	P		**Pn**	**10 28 28.0**	**+0.5**
ORTC				S		**Sn**	**10 29 08.8**	**-1.8**
SJCC	**San Jacinto, C**	**3.62**	**326**	P		**Pn**	**10 28 28.0**	**+0.2**
SJCC				S		**Sn**	**10 29 09.2**	**-1.9**
SJCC	**San Jacinto, C**	**3.62**	**326**	P		**Pn**	**10 28 27.6**	**-0.2**
SJCC				S		**Sn**	**10 29 08.7**	**-2.4**
LCBC	**Los crdobas,**	**3.75**	**302**	P		**Pn**	**10 28 29.7**	**+0.3**
LCBC				S		**Sn**	**10 29 10.5**	**-3.5**
URMC	**La Uribe, Meta**	**3.79**	**199**	P		**Pn**	**10 28 30.5**	**+0.4**
URMC				S		**Sn**	**10 29 14.3**	**-0.9**
CRJC	**Cerrejon, Guaj**	**4.14**	**4**	P		**Pn**	**10 28 34.3**	**-0.2**
CRJC				S		**Sn**	**10 29 21.9**	**-1.3**
YOTC	**Yotoco, Valle**	**4.28**	**228**	P		**Pn**	**10 28 36.4**	**0.0**
YOTC				S		**Sn**	**10 29 22.7**	**-3.7**
CAPC	**Capurgana**	**4.52**	**293**	P		**Pn**	**10 28 36.7**	**-2.7**
CAPC				S		Sn	10 29 24.4	-7.5
CAP2	**Capurgana**	**4.53**	**293**	P		**Pn**	**10 28 38.6**	**-1.0**
CAP2				S		Sn	10 29 23.7	-8.5
PIZC	**Pizarro, Choco**	**4.59**	**246**	P		**Pn**	**10 28 41.5**	**+1.2**
PTAC	**Punta Ardita,**	**4.63**	**274**	P		**Pn**	**10 28 41.0**	**+0.1**
URI	**Uribia**	**4.94**	**13**	P		**Pn**	**10 28 44.5**	**-0.5**
URIC	**Uribia, Colomb**	**4.94**	**13**	P		**Pn**	**10 28 44.5**	**-0.5**
URIC				S		**Sn**	**10 29 42.2**	**+0.3**
JAMC	**Jamundi, Valle**	**5.04**	**224**	P		**Pn**	**10 28 46.1**	**-0.4**
JAMC				S		**Sn**	**10 29 43.1**	**-1.5**
GARC	**Garzon, Huila**	**5.20**	**207**	P		**Pn**	**10 28 48.1**	**-0.5**
GARC				S		**Sn**	**10 29 44.2**	**-4.1**
POPC	**Popayan, Colom**	**5.55**	**219**	P		**Pn**	**10 28 53.9**	**+0.7**
	4.8nm,0.5s							
POPC				S		**Sn**	**10 29 55.9**	**-0.7**
	4.8nm,0.5s							
FLOC	**Florencia**	**5.81**	**206**	P		**Pn**	**10 28 56.3**	**-0.1**
FLOC				S		**Sn**	**10 30 01.7**	**-0.8**
FLOC	**Florencia**	**5.81**	**206**	P		**Pn**	**10 28 56.1**	**-0.4**
	437nm11nm,0.9s							
BBAC	**Balboa, Cauca**	**6.31**	**221**	P		**Pn**	**10 29 04.9**	**+1.6**
GTBY	**Guantanamo Bay**	**13.12**	**352**	*eP*		**P**	**10 30 37.4**	**+0.4**
RCC	**Rio Carpintero**	**13.29**	**350**	*eP*		**P**	**10 30 40.1**	**+1.3**
MARVS	**Santiago de Cu**	**13.33**	**349**	*eP*		**P**	**10 30 40.2**	**+1.0**
QMBU	**Quimbuelo**	**13.35**	**353**	*eP*		**P**	**10 30 39.6**	**+0.1**
PINC	**Pinares de May**	**13.78**	**350**	*eP*		**P**	**10 30 46.0**	**+1.7**

MOS ***22*** *10:36:13.6±0.7, 52°.39N×153°.03E, h470km, mb4.2/31, Error ellipse: s-maj=7.3km s-min=5.0km az=68.2*
KRSC ***22*** *10:36:13.1±1.7, 52°.14N×153°.60E, h490km±21km, Ml5.0*
SKHL ***22*** *10:36:13.7±0.3, 52°.30N×153°.10E, h502km±11km, mb5.4/6, mbv4.7/2, msh5.1/3, msha5.5/5*
IDC ***22*** *10:36:15.2±0.5, 52°.50N×152°.98E, h469km±5km, mb3.8/39, mbtmp4.6/47, Error ellipse: s-maj=8.2km s-min=6.6km az=150.0*
NEIC ***22*** *10:36:15.2±1.4, 52°.50N±0°.07×152°.9E±0°.1, h463km±7km, mb4.3/252, Error ellipse: s-maj=12.8km s-min=9.5km az=54.0*

ISC 22 10:36:14.4±0.4, 52°.36N±0°.05×153°.10E±0°.04, h467km±4km, h466km; pP-P, n686, σ1§21/667, mb4.2/175, 12C-5D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**2.25**	**91**	PN		**P**	**10 37 18.0**	**+0.3**
MIPR	**Malaya Ipel'ka**	**2.25**	**91**	*eP*		**P**	**10 37 18.0**	**+0.3**
PAU	**Pauzhetka**	**2.46**	**110**	PN		**P**	**10 37 19.2**	**+0.2**
PAU	**Pauzhetka**	**2.46**	**110**	*eP*		**P**	**10 37 19.3**	**+0.2**
PAU	**Pauzhetka**	**2.46**	**110**	*eP*		**P**	**10 37 19.2**	**+0.2**
PAU				AMB		AMB	10 37 20.1	
	2µm,0.5s							
PAU				*eS*		**S**	**10 38 10.6**	**-1.1**
PAU				A		A	10 38 13.0	
	240nm,0.5s							
PAU				A		A	10 38 13.0	
	260nm,0.5s							
PAU				A		A	10 38 13.6	
	2µm,2.0s							
PAU				A		A	10 38 13.6	
	1µm,2.0s							
SKR	**Severo-Kuril's**	**2.52**	**130**	||*i*	PN	**P**	**10 37 19.3**	**-0.1**
SKR				*eS*		**S**	**10 38 10.1**	**-2.2**
SKR				pmax		pmax		
	comp=Z,1µm,0.8s							
SKR				smax		smax		
	comp=E,444nm,0.8s							
SKR				smax		smax		
	comp=N,684nm,0.7s							
SKR	**Severo-Kuril's**	**2.52**	**130**	*eP*		**P**	**10 37 19.0**	**-0.4**
SKR				*eS*		**S**	**10 38 10.8**	**-1.5**
SKR	**Severo-Kuril's**	**2.52**	**130**	*eP*		**P**	**10 37 19.3**	**-0.1**
SKR				AMB		AMB	10 37 19.8	
	comp=N,1µm,0.8s							
SKR				*eS*		**S**	**10 38 10.3**	**-2.0**
SKR				A		A	10 38 11.0	
	comp=N,1µm,2.0s							
SKR				A		A	10 38 11.0	
	comp=N,1µm,2.0s							
SKR				A		A	10 38 12.7	
	comp=N,680nm,0.7s							
SKR				A		A	10 38 12.7	
	comp=N,440nm,0.7s							
APC	**Apacha**	**2.54**	**75**	PN		**P**	**10 37 19.4**	**0.0**
APC	**Apacha**	**2.54**	**75**	*eP*		**P**	**10 37 19.5**	**0.0**
PEA0B	**Petropavlovsk-**	**2.90**	**73**			**P**	**10 37 22.2**	**+0.4**
PEA0B	**Petropavlovsk-**	**2.90**	**73**	*ce*PN		**P**	**10 37 21.8**	**-0.1**
PETK	**Petropavlovsk-**	**2.90**	**73**	P		**P**	**10 37 21.7**	**-0.2**
	comp=N,154nm,0.4s,baz=249,slow=3.1,SNR=538							
PETK				S		**S**	**10 38 16.9**	**0.0**
	comp=N,26nm,0.6s,baz=257,slow=30,SNR=2.4							
PETK	**Petropavlovsk-**	**2.90**	**73**			**P**	**10 37 21.6**	**-0.3**
ASAK	**Asacha**	**2.94**	**88**	PN		**P**	**10 37 22.8**	**+0.5**
ASAK	**Asacha**	**2.94**	**88**	*eP*		**P**	**10 37 22.8**	**+0.5**
GRL	**Gorelyy**	**3.05**	**84**	PN		**P**	**10 37 23.8**	**+0.7**
GRL	**Gorelyy**	**3.05**	**84**	*eP*		**P**	**10 37 23.8**	**+0.7**
KRMR	**Karymshinskiy**	**3.10**	**79**	PN		**P**	**10 37 23.6**	**+0.3**
KRMR				S		**S**	**10 38 18.4**	**-1.1**
KRMR	**Karymshinskiy**	**3.10**	**79**	*eP*		**P**	**10 37 23.7**	**+0.3**
KRMR				*eS*		**S**	**10 38 18.5**	**-1.1**
KRMR	**Karymshinskiy**	**3.10**	**79**	*eP*		**P**	**10 37 23.6**	**+0.3**
MTVR	**Mutnovka**	**3.11**	**86**	PN		**P**	**10 37 24.0**	**+0.4**
MTVR	**Mutnovka**	**3.11**	**86**	*eP*		**P**	**10 37 24.1**	**+0.4**
KDTR	**Khodutka, Kamc**	**3.12**	**98**	PN		**P**	**10 37 22.3**	**-1.1**
KDTR				S		**S**	**10 38 15.6**	**-4.1**
KDTR	**Khodutka, Kamc**	**3.12**	**98**	*eP*		**P**	**10 37 22.4**	**-1.1**
KDTR				*eS*		**S**	**10 38 15.7**	**-4.1**
KDTR	**Khodutka, Kamc**	**3.12**	**98**	*eP*		**P**	**10 37 22.3**	**-1.1**
KDTR				*eS*		**S**	**10 38 15.6**	**-4.1**
GNL	**Ganaly**	**3.22**	**63**	PN		**P**	**10 37 24.5**	**+0.2**
GNL	**Ganaly**	**3.22**	**63**	*eP*		**P**	**10 37 24.5**	**+0.2**
INSR	**Institute**	**3.42**	**76**	PN		**P**	**10 37 26.1**	**+0.4**
INSR				S		**S**	**10 38 22.9**	**-1.0**
INSR	**Institute**	**3.42**	**76**	*eP*		**P**	**10 37 26.2**	**+0.4**
INSR				*eS*		**S**	**10 38 23.0**	**-1.0**
PET	**Petropavlovsk**	**3.44**	**77**			**P**	**10 37 26.4**	**+0.5**
PET	**Petropavlovsk**	**3.44**	**77**	*e*PN		**P**	**10 37 26.1**	**+0.2**
PET				*eS*		**S**	**10 38 22.1**	**-2.1**
PET				pmax		pmax		
	comp=Z,667nm,0.7s							
PET				smax		smax		
	comp=E,255nm,0.7s							
PET				smax		smax		
	comp=N,251nm,0.7s							
PET	**Petropavlovsk**	**3.44**	**77**	*eP*		**P**	**10 37 26.3**	**+0.4**
PET	**Petropavlovsk**	**3.44**	**77**	*eP*		**P**	**10 37 26.2**	**+0.4**
PET				AMB		AMB	10 37 27.9	
PET				*eS*		**S**	**10 38 22.7**	**-1.5**
PET				A		A	10 38 30.4	
	comp=N,1µm,0.6s							
PET				A		A	10 38 30.4	
	comp=N,1µm,0.6s							
KOK	**Koryaka**	**3.49**	**72**	PN		**P**	**10 37 27.3**	**+1.0**
KOK	**Koryaka**	**3.49**	**72**	*eP*		**P**	**10 37 27.3**	**+1.0**
KOK	**Koryaka**	**3.49**	**72**	*eP*		**P**	**10 37 27.3**	**+1.0**
DALK	**Dalny**	**3.50**	**77**	PN		**P**	**10 37 26.3**	**0.0**
DALK				S		**S**	**10 38 23.3**	**-1.8**
DALK	**Dalny**	**3.50**	**77**	*eP*		**P**	**10 37 26.4**	**0.0**
DALK				*eS*		**S**	**10 38 23.3**	**-1.8**
KRX	**Arik**	**3.51**	**71**	PN		**P**	**10 37 27.1**	**+0.5**
KRX	**Arik**	**3.51**	**71**	*eP*		**P**	**10 37 27.2**	**+0.5**
AVH	**Avacha**	**3.54**	**73**	PN		**P**	**10 37 27.6**	**+0.8**
AVH	**Avacha**	**3.54**	**73**	*eP*		**P**	**10 37 27.6**	**+0.8**
AVH	**Avacha**	**3.54**	**73**	*eP*		**P**	**10 37 27.6**	**+0.8**
KRER	**Koryakskii**	**3.56**	**72**	PN		**P**	**10 37 27.6**	**+0.6**
KRER	**Koryakskii**	**3.56**	**72**	*eP*		**P**	**10 37 27.7**	**+0.6**
SMAR	**Somma**	**3.58**	**73**	PN		**P**	**10 37 28.4**	**+1.2**
SMAR				S		**S**	**10 38 25.7**	**-0.9**
SMAR	**Somma**	**3.58**	**73**	*eP*		**P**	**10 37 28.4**	**+1.2**
SMAR				*eS*		**S**	**10 38 25.7**	**-0.9**
UGLR	**Uglovaya**	**3.58**	**74**	PN		**P**	**10 37 27.8**	**+0.7**
UGLR				S		**S**	**10 38 26.1**	**-0.3**
UGLR	**Uglovaya**	**3.58**	**74**	*eP*		**P**	**10 37 27.9**	**+0.7**
UGLR				*eS*		**S**	**10 38 26.1**	**-0.3**
SDLR	**Sedlovina**	**3.63**	**73**	PN		**P**	**10 37 27.8**	**+0.3**
SDLR				S		**S**	**10 38 25.2**	**-2.0**
SDLR	**Sedlovina**	**3.63**	**73**	*eP*		**P**	**10 37 27.9**	**+0.3**
SDLR				*eS*		**S**	**10 38 25.2**	**-2.0**
NLC	**Nalytchevo**	**3.88**	**75**	PN		**P**	**10 37 29.5**	**+0.1**
NLC				S		**S**	**10 38 28.7**	**-1.9**
NLC	**Nalytchevo**	**3.88**	**75**	*eP*		**P**	**10 37 29.5**	**+0.1**
NLC				*eS*		**S**	**10 38 28.7**	**-1.9**
NLC	**Nalytchevo**	**3.88**	**75**	*eP*		**P**	**10 37 29.5**	**+0.1**
SPN	**Mys Shipunski**	**4.27**	**77**	PN		**P**	**10 37 31.4**	**-1.4**
SPN				S		**S**	**10 38 30.6**	**-6.2**
SPN	**Mys Shipunski**	**4.27**	**77**	*eP*		**P**	**10 37 31.4**	**-1.4**
SPN				*eS*		**S**	**10 38 30.6**	**-6.2**
SPN	**Mys Shipunski**	**4.27**	**77**	*eP*		**P**	**10 37 31.4**	**-1.4**
KZV	**Kizimen**	**5.08**	**54**	PN		**P**	**10 37 42.1**	**+1.8**
KZV				S		**S**	**10 38 49.6**	**-1.1**
KZV	**Kizimen**	**5.08**	**54**	*eP*		**P**	**10 37 42.2**	**+1.8**
KZV				*eS*		**S**	**10 38 49.6**	**-1.1**
KMNR	**Kamenistaya**	**5.41**	**48**	PN		**P**	**10 37 45.2**	**+1.8**
KMNR	**Kamenistaya**	**5.41**	**48**	*eP*		**P**	**10 37 45.3**	**+1.8**
KPT	**Kopyto**	**5.53**	**46**	PN		**P**	**10 37 45.6**	**+1.1**
KPT	**Kopyto**	**5.53**	**46**	*eP*		**P**	**10 37 45.6**	**+1.1**
KIRR	**Kirishev**	**5.57**	**47**	PN		**P**	**10 37 45.6**	**+0.5**
KIRR	**Kirishev**	**5.57**	**47**	*eP*		**P**	**10 37 45.6**	**+0.5**
BZWR	**Bezymyannyi-We**	**5.65**	**47**	PN		**P**	**10 37 47.4**	**+1.6**
BZWR	**Bezymyannyi-We**	**5.65**	**47**	*eP*		**P**	**10 37 47.4**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**5.73**	**48**	PN		**P**	**10 37 48.0**	**+1.5**
BZGR	**Bezymyannyi-Gr**	**5.73**	**48**	*eP*		**P**	**10 37 48.1**	**+1.5**
ZLN	**Zelenaya**	**5.82**	**48**	PN		**P**	**10 37 50.4**	**+3.0**
ZLN	**Zelenaya**	**5.82**	**48**	*eP*		**P**	**10 37 50.4**	**+3.0**
CIRR	**Tsirk**	**5.85**	**47**	PN		**P**	**10 37 49.9**	**+2.1**
CIRR	**Tsirk**	**5.85**	**47**	*eP*		**P**	**10 37 50.0**	**+2.1**
KLY	**Klyuchi**	**5.93**	**45**	PN		**P**	**10 37 50.0**	**+1.6**
KLY	**Klyuchi**	**5.93**	**45**	*eP*		**P**	**10 37 50.0**	**+1.6**
SRKR	**Sorokina**	**6.37**	**44**	PN		**P**	**10 37 54.0**	**+1.1**
SRKR	**Sorokina**	**6.37**	**44**	*eP*		**P**	**10 37 54.0**	**+1.1**
SMKR	**Semkarok**	**6.46**	**46**	PN		**P**	**10 37 54.0**	**+0.2**
SMKR	**Semkarok**	**6.46**	**46**	*eP*		**P**	**10 37 54.0**	**+0.2**
TYV	**Tymovskoe**	**6.68**	**261**	*eP*		**P**	**10 37 58.3**	**+2.3**
TYV				*eS*		**S**	**10 39 22.3**	**+2.9**
TYV				pmax		pmax		
	comp=Z,98nm,0.7s							
TYV				pmax		pmax		
	comp=Z,200nm,3.1s							
TYV				smax		smax		
	comp=N,39nm,1.3s							
TYV				smax		smax		
	comp=E,35nm,1.3s							
TYV				smax		smax		
	comp=N,200nm,2.7s							
TYV				smax		smax		
	comp=E,200nm,2.7s							
TYV	**Tymovskoe**	**6.68**	**261**	*eP*		**P**	**10 37 56.5**	**+0.5**
TYV				AMB		AMB	10 37 58.8	
	comp=E,100nm,0.5s							
TYV				AMB		AMB	10 38 00.0	
	comp=E,340nm,3.1s							
TYV				*eS*		**S**	**10 39 18.3**	**-1.1**
TYV				A		A	10 39 22.6	
	comp=E,50nm,0.7s							
TYV				A		A	10 39 22.6	
	comp=E,40nm,0.7s							
TYV				A		A	10 39 29.0	
	comp=E,410nm,3.0s							
TYV				A		A	10 39 29.0	
	comp=E,460nm,3.0s							
KBG	**Krutoberegovo**	**6.84**	**51**	PN		**P**	**10 37 56.1**	**-1.4**
KBG	**Krutoberegovo**	**6.84**	**51**	*eP*		**P**	**10 37 56.2**	**-1.4**
KBG	**Krutoberegovo**	**6.84**	**51**	*eP*		**P**	**10 37 56.1**	**-1.4**
KBTR	**Krutoberegovo**	**6.87**	**52**	PN		**P**	**10 37 56.2**	**-1.7**
KBTR	**Krutoberegovo**	**6.87**	**52**	*eP*		**P**	**10 37 56.3**	**-1.7**
MA2	**Magadan**	**7.35**	**351**	P		**P**	**10 38 03.3**	**+0.4**
	comp=E,56nm,0.6s,baz=158,slow=11,SNR=24							
MA2	**Magadan**	**7.35**	**351**			**P**	**10 38 03.5**	**+0.6**
MA2	**Magadan**	**7.35**	**351**	*ce*PN		**P**	**10 38 03.5**	**+0.6**
MA2				pmax		pmax		
	comp=Z,53nm,1.3s							
MA2	**Magadan**	**7.35**	**351**	*eP*		**P**	**10 38 03.5**	**+0.6**
KUR	**Kuril'sk**	**7.92**	**208**	*e*PN		**P**	**10 38 08.7**	**-0.4**
KUR				pmax		pmax		
	comp=Z,244nm,0.4s							
KUR	**Kuril'sk**	**7.92**	**208**	*eP*		**P**	**10 38 08.7**	**-0.4**
KUR				AMB		AMB	10 38 11.6	
	comp=Z,240nm,0.4s							
BKI	**Bering**	**8.14**	**64**	PN		**P**	**10 38 12.6**	**+1.4**
BKI				S		**S**	**10 39 44.1**	**-3.2**
BKI	**Bering**	**8.14**	**64**	*eP*		**P**	**10 38 12.7**	**+1.4**
BKI				*eS*		**S**	**10 39 44.2**	**-3.2**
BKI	**Bering**	**8.14**	**64**	*eP*		**P**	**10 38 12.6**	**+1.4**
YSS	**Yuzhno-Sakhali**	**8.62**	**235**	P		**P**	**10 38 18.8**	**+2.3**
YSS	**Yuzhno-Sakhali**	**8.62**	**235**	*e*PN		**P**	**10 38 16.8**	**+0.3**
YSS				*eS*		**S**	**10 39 54.6**	**-2.3**
YSS				pmax		pmax		
	comp=Z,40nm,0.8s							
YSS				pmax		pmax		
	comp=N,30nm,0.5s							
YSS				pmax		pmax		
	comp=E,50nm,0.7s							
YSS				pmax		pmax		
	comp=Z,100nm,2.8s							
YSS				smax		smax		
	comp=N,20nm,0.7s							
YSS				smax		smax		
	comp=E,20nm,1.1s							
YSS	**Yuzhno-Sakhali**	**8.62**	**235**	*eP*		**P**	**10 38 16.8**	**+0.3**
YSS				AMB		AMB	10 38 19.8	
	comp=E,40nm,0.8s							
YSS				AMB		AMB	10 38 20.9	
	comp=E,150nm,3.0s							
YSS				*eS*		**S**	**10 39 54.6**	**-2.3**
YSS				A		A	10 40 02.0	
	comp=E,20nm,0.9s							
YSS				A		A	10 40 02.0	
	comp=E,200nm,0.9s							
OSSR	**Ossora**	**8.89**	**35**	PN		**P**	**10 38 20.7**	**+1.5**
OSSR	**Ossora**	**8.89**	**35**	*eP*		**P**	**10 38 20.7**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**9.62**	**213**	*e*PN		**P**	**10 38 27.4**	**0.0**
YUK				S		**S**	**10 40 14.8**	**-2.0**
YUK				pmax		pmax		
	comp=Z,388nm,0.7s							
YUK				pmax		pmax		
	comp=N,107nm,0.5s							
YUK				pmax		pmax		
	comp=E,85nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**9.62**	**213**	*eP*		**P**	**10 38 27.4**	**0.0**
YUK				AMB		AMB	10 38 30.5	
	comp=E,390nm,0.7s							
RUSJ	**Misakicho**	**9.77**	**215**	*e*PN		**P**	**10 38 30.3**	**+1.3**
GLVR	**Golovnino**	**10.00**	**213**	*e*PN		**P**	**10 38 31.7**	**+0.3**
GLVR				S		**S**	**10 40 24.2**	**-0.1**
GLVR				pmax		pmax		
	comp=Z,178nm,1.1s							
GLVR				pmax		pmax		
	comp=N,141nm,1.0s							
GLVR				pmax		pmax		
	comp=E,188nm,0.9s							
GLVR	**Golovnino**	**10.00**	**213**	*eP*		**P**	**10 38 31.7**	**+0.3**
NMR	**Nemuro--Hokkai**	**10.26**	**212**	*e*PN		**P**	**10 38 30.6**	**-3.7**
NMR	**Nemuro--Hokkai**	**10.26**	**212**	*eP*		**P**	**10 38 30.9**	**-3.4**
GRNR	**Gornyy**	**10.51**	**268**	||*i*	PN	**P**	**10 38 38.4**	**+1.6**
GRNR				pmax		pmax		
	comp=Z,5.0nm,0.7s							
GRNR	**Gornyy**	**10.51**	**268**	*eP*		**P**	**10 38 38.4**	**+1.6**
SEY	**Seymchan**	**10.61**	**358**	P		**P**	**10 38 39.0**	**+1.3**
	comp=Z,74nm,0.6s,baz=173,slow=9.9,SNR=288							
SEY	**Seymchan**	**10.61**	**358**	*ce*PN		**P**	**10 38 39.0**	**+1.3**
SEY				pmax		pmax		
	comp=Z,149nm,1.7s							
SEY	**Seymchan**	**10.61**	**358**	*eP*		**P**	**10 38 39.0**	**+1.3**
JKA	**Kamikawa-asahi**	**10.81**	**224**			**P**	**10 38 42.0**	**+1.8**
JKA	**Kamikawa-asahi**	**10.81**	**224**	*eP*		**P**	**10 38 41.9**	**+1.8**
ASAJ	**Asahikawa**	**10.81**	**224**	P		**P**	**10 38 41.9**	**+1.7**
	comp=Z,25nm,0.9s,baz=58,slow=8.8,SNR=12							
ASAJ				S		**S**	**10 40 42.6**	**+2.3**
	comp=Z,4.2nm,0.7s,baz=353,slow=32,SNR=1.4							
ERM	**Erimo**	**12.35**	**217**			**P**	**10 38 56.3**	**-0.4**
ERM	**Erimo**	**12.35**	**217**	PN		**P**	**10 38 56.3**	**-0.4**
SHEM	**Shemya Is, Ala**	**12.78**	**80**	P		**P**	**10 39 02.3**	**+1.1**
	comp=Z,89nm,0.6s,baz=302,slow=9.5,SNR=4.3							
JTM	**Tenmabayashi**	**14.20**	**220**	P		**P**	**10 39 16.6**	**0.0**
ZEA	**Zeya**	**15.58**	**285**	*eP*		**P**	**10 39 29.6**	**-1.4**
ZEA				*e*			10 42 10.1	
ZEA				pmax		pmax		
	comp=E,10.0nm,0.8s							
ZEA				pmax		pmax		
	comp=Z,20nm,0.6s							
ZEA	**Zeya**	**15.58**	**285**	*eP*		**P**	**10 39 29.6**	**-1.4**
YAK	**Yakutsk**	**15.87**	**317**	P		**P**	**10 39 32.9**	**-1.1**
	comp=Z,32nm,0.4s,baz=75,slow=12,SNR=11							
YAK				S		**S**	**10 42 17.5**	**-1.2**
	comp=Z,14nm,0.5s,baz=133,slow=22,SNR=8.5							
YAK	**Yakutsk**	**15.87**	**317**			**P**	**10 39 33.1**	**-0.8**
YAK	**Yakutsk**	**15.87**	**317**	*eP*		**P**	**10 39 32.6**	**-1.3**
YAK				*eS*		**S**	**10 42 18.0**	**-0.8**
YAK				pmax		pmax		
	comp=Z,36nm,0.8s							
YAK				pmax		pmax		
	comp=N,5.0nm,1.1s							
YAK				pmax		pmax		
	comp=E,11nm,1.1s							
YAK				smax		smax		
	comp=E,176nm,2.3s							
YAK				smax		smax		
	comp=N,102nm,1.9s							
YAK	**Yakutsk**	**15.87**	**317**	*eP*		**P**	**10 39 32.6**	**-1.3**
HEH	**HeiHe**	**16.18**	**273**	*eP*		**P**	**10 39 36.0**	**-1.3**
HEH				pmax		pmax		
	comp=Z,17nm,0.7s							
USRK	**Ussuriysk Ar.**	**16.21**	**248**	P		**P**	**10 39 37.9**	**+0.1**
	comp=Z,5.4nm,0.7s,baz=86,slow=8.2,SNR=12							
JMM	**Marumori**	**16.86**	**216**	P		**P**	**10 39 45.5**	**+0.8**
BILL	**Bilibino**	**16.97**	**17**			**P**	**10 39 44.9**	**-0.5**
BILL	**Bilibino**	**16.97**	**17**	*ce*P		**P**	**10 39 44.5**	**-0.9**
BILL				pmax		pmax		
	comp=Z,23nm,0.6s							
BILL	**Bilibino**	**16.97**	**17**	*eP*		**P**	**10 39 44.5**	**-0.9**
JSD	**Sado**	**17.68**	**222**			**P

		baz=270									
D17K	**Noatak River**	baz=256	25.98	37	P		P	10 41 08.4	+0.6		
O14K	**Tigyukauivet M**	baz=275	26.11	57	P		P	10 41 09.6	+0.5		
RDOG	**Red Dog Mine**	baz=256	26.13	36	P		P	10 41 09.4	+0.1		
C17K	**DeLong Mountai**	baz=254	26.15	35	P		P	10 41 09.4	0.0		
S12K	**Black Hills**	baz=282	26.20	65	P		P	10 41 10.8	+0.8		
M15K	**Kasigluk River**	baz=273	26.30	53	P		P	10 41 11.5	+0.6		
E17K	**Hotham Inlet**	baz=259	26.31	39	P		P	10 41 11.5	+0.7		
I17K	**Unalakleet**	baz=266	26.34	46	P		P	10 41 12.0	+0.9		
J16K	**Anvik River**	baz=268	26.35	47	P		P	10 41 12.2	+1.0		
F17K	**Baldwin Pennin**	baz=261	26.42	40	P		P	10 41 12.4	+0.7		
G17K	**Kiwalik Mounta**	baz=263	26.52	42	P		P	10 41 13.5	+0.8		
N15K	**Kwethluk River**	baz=274	26.63	54	P		P	10 41 14.9	+1.2		
H17K	**Granite Mounta**	comp=Z,14nm,0.8s	26.77	44	IAmb		IAmb	10 41 17.0			
H17K	**Granite Mounta**	baz=265	26.77	44	P		P	10 41 16.1	+1.2		
E18K	**Tukpahlearik C**	baz=259	26.85	38	P		P	10 41 16.3	+0.7		
O15K	**Ungalikthiuk R**	baz=276	26.85	57	P		P	10 41 16.9	+1.2		
L16K	**Owhat River**		26.86	51	P		P	10 41 16.5	+0.8		
L16K		comp=Z,18nm,1.3s			IAmb		IAmb	10 41 17.4			
L16K	**Owhat River**	baz=272	26.86	51	P		P	10 41 16.8	+1.1		
B18K	**Kokolik River**	baz=254	26.87	34	P		P	10 41 16.5	+0.8		
C18K	**Utukok River**	baz=256	26.90	35	P		P	10 41 16.5	+0.5		
J17K	**VABM Dome**	baz=269	27.04	47	P		P	10 41 18.6	+1.3		
F18K	**Selawik**	baz=262	27.08	40	P		P	10 41 18.9	+1.3		
M16K	**Timber Creek**	baz=274	27.13	52	P		P	10 41 19.3	+1.1		
SDPT	**Sand Point**	baz=284	27.15	65	P		P	10 41 19.0	+0.7		
N16K	**Nishlik Lake**	baz=275	27.26	54	P		P	10 41 20.7	+1.3		
G18K	**Tagagawik**	baz=264	27.39	42	P		P	10 41 21.4	+1.0		
K17K	**Iditarod**	baz=271	27.39	49	P		P	10 41 21.6	+1.2		
L17K	**Donlin**	baz=272	27.40	50	P		P	10 41 21.7	+1.2		
H18K	**Honhosa River**	baz=266,SNR=7.2	27.44	43	P		P	10 41 21.9	+1.1		
S14K	**Fog Glacier**	baz=282	27.46	63	P		P	10 41 21.8	+0.6		
C19K	**Lookout Ridge**	baz=257	27.57	35	P		P	10 41 22.7	+0.8		
O16K	**Kokwok River B**	baz=277	27.69	55	P		P	10 41 24.1	+1.0		
CHNA	**Chernabura Isl**	baz=285	27.77	66	P		P	10 41 24.8	+1.0		
M17K	**Holitna River**	baz=274,SNR=5.5	27.85	52	P		P	10 41 25.3	+0.8		
F19K	**Shaleruckik Mo**	comp=Z,14nm,0.8s	27.85	40	IAmb		IAmb	10 41 25.6			
F19K	**Shaleruckik Mo**	baz=263	27.85	40	P		P	10 41 25.1	+0.8		
D19K	**Kuna River**	baz=260	27.97	36	P		P	10 41 26.3	+0.8		
N17K	**Nushagak Hills**	baz=276	28.04	53	P		P	10 41 27.1	+0.9		
G19K	**Purcell Mounta**	baz=265	28.05	41	P		P	10 41 26.4	+0.2		
GCSA	**Galena City Sc**	baz=268	28.05	44	P		P	10 41 26.5	+0.3		
J18K	**Innoko River**	baz=271	28.11	47	P		P	10 41 27.5	+0.8		
E19K	**Redstone River**		28.14	39			P	10 41 28.1	+1.2		
E19K	**Redstone River**	baz=263,SNR=11	28.14	39	P		P	10 41 27.8	+0.9		
L18K	**Granite Mounta**	baz=273	28.15	50	P		P	10 41 28.0	+0.9		
O17K	**Koliganek Bris**	baz=277	28.17	55	P		P	10 41 28.3	+1.0		
H19K	**Roundabout Mou**	baz=267	28.27	43	P		P	10 41 29.2	+1.2		
D20K	**Etivluk River**	baz=261	28.55	36	P		P	10 41 31.3	+0.8		
Q16K	**King Salmon**	baz=280	28.55	57	P		P	10 41 31.5	+0.9		
P17K	**Kvichak River**	baz=279	28.58	56	P		P	10 41 32.2	+1.3		
J19K	**Poorman**	baz=271	28.59	46	P		P	10 41 31.4	+0.5		
B20K	**Meade River**	baz=258	28.60	33	P		P	10 41 31.7	+0.8		
M18K	**Stony River**	baz=275	28.61	51	P		P	10 41 32.4	+1.2		
E20K	**Nigu River**	baz=262,SNR=12	28.64	37	P		P	10 41 31.9	+0.6		
N18K	**Kilae Creek**	baz=277	28.66	53	P		P	10 41 32.6	+1.0		
F20K	**Avaraart Lake**	baz=265	28.67	40	P		P	10 41 32.2	+0.7		
R17L	**Mt. Peulik Vol**	baz=282	28.89	59	P		P	10 41 35.3	+1.6		
H20K	**Anotleneega Mo**	baz=269,SNR=6.5	28.92	43	P		P	10 41 34.7	+0.9		
L19K	**White Mountain**	baz=275	29.02	50	P		P	10 41 35.6	+0.9		
Q17K	**Contact Creek**	baz=281	29.02	58	P		P	10 41 35.9	+1.0		
I20K	**Naaghedeneel**	baz=270	29.08	44	P		P	10 41 36.1	+0.9		
O18K	**Koktuh Hills**	baz=279	29.10	55	P		P	10 41 36.5	+1.0		
P18K	**Big Mountain,**	baz=279	29.16	55	P		P	10 41 37.0	+1.0		
J20K	**Nowinta River**	comp=Z,13nm,0.8s	29.23	46	IAmb		IAmb	10 41 38.3			
J20K	**Nowinta River**	baz=272	29.23	46	P		P	10 41 37.4	+0.9		
M19K	**Big River Lodg**	baz=276	29.26	50	P		P	10 41 37.7	+0.9		
C21K	**Knifeblade Rid**	baz=262	29.27	35	P		P	10 41 37.8	+1.0		
K20K	**Telida**	baz=273	29.30	47	P		P	10 41 38.3	+1.1		
ACHA	**Angle Creek He**		29.32	58	P		P	10 41 38.4	+0.9		
ACHA		comp=Z,16nm,0.8s			IAmb		IAmb	10 41 38.7			
N19K	**Bonanza Creek**	baz=278	29.33	52	P		P	10 41 38.8	+1.2		
B21K	**Ikpikpuk River**	baz=262,SNR=8.5	29.40	34	P		P	10 41 38.8	+1.0		
IMAR	**Indian Mountai**		29.40	42	P		P	10 41 38.8	+0.8		
Q18K	**Katmai Hardscr**	baz=281,SNR=8.2	29.40	57	P		P	10 41 38.7	+0.5		
L20K	**Farewell, AK**	baz=275	29.44	49	P		P	10 41 39.5	+1.0		
ULN	**Ulaanbaatar**		29.48	280	P		P	10 41 39.8	+0.7		
ULN	**Ulaanbaatar**		29.48	280	*ce*P		P	10 41 39.0	-0.1		
ULN		comp=Z,5.0nm,1.0s				pmax	pmax				
ULN	**Ulaanbaatar**		29.48	280	*e*P		P	10 41 39.0	-0.1		
E21K	**Killik River**	baz=264	29.48	37	P		P	10 41 39.0	+0.4		
O19K	**Port Alsworth**	baz=279	29.49	54	P		P	10 41 40.0	+1.2		
G21K	**Allakaket**	baz=268	29.52	41	P		P	10 41 39.8	+0.8		
A22K	**Sinclair Lake**	baz=259	29.52	32	P		P	10 41 39.3	+0.4		
F21K	**Alatna River**	baz=267	29.56	39	P		P	10 41 40.0	+0.6		
CHIR	**Chirikof Islan**		29.71	63	P		P	10 41 42.2	+1.4		
CHIR	**Chirikof Islan**	baz=285	29.71	63	P		P	10 41 41.6	+0.8		
H21K	**Melozitna Rive**	baz=270	29.79	43	P		P	10 41 42.0	+0.7		
M20K	**Styx River**		29.85	50	P		P	10 41 42.6	+0.6		
		baz=277									
SONM	**Songino Array**	comp=Z,0.5nm,0.3s,baz=67,slow=6.7,SNR=5.0	29.89	280	P		P	10 41 42.8	+0.2		
SONM					PcP		PcP	10 44 30.6	-0.5		
SONM		comp=Z,1.2nm,0.7s,baz=44,slow=3.3,SNR=4.9			ScP		ScP	10 47 27.2	-1.1		
B22K	**Teshekpuk Lake**	comp=Z,2.3nm,1.0s,baz=74,slow=3.1,SNR=5.6 comp=Z,0.5nm,0.3s baz=262	29.92	33	P		P	10 41 42.8	+0.5		
TLY	**Talaya**		29.97	289	P		P	10 41 44.0	+0.9		
TLY		comp=Z,11nm,1.0s			IAmb		IAmb	10 41 44.9			
TLY	**Talaya**		29.97	289	P		P	10 41 44.1	+0.9		
TLY	**Talaya**		29.97	289	*ce*P		P	10 41 43.9	+0.8		
TLY		comp=Z,11nm,0.9s			pmax		pmax				
D22K	**Ayikyak River**	baz=265	29.99	36	P		P	10 41 44.0	+0.9		
Q19K	**Cape Douglas,**	baz=281	30.05	56	P		P	10 41 44.8	+1.1		
CHUM	**Lake Minchumin**	baz=274,SNR=6.0	30.05	46	P		P	10 41 45.1	+1.5		
F22K	**John River**	baz=268	30.08	39	P		P	10 41 44.9	+1.1		
P19K	**Oil Pt**	baz=280	30.12	55	P		P	10 41 45.5	+1.2		
I21K	**Tanana**	baz=272	30.14	43	P		P	10 41 45.1	+0.7		
PPLA	**Purkeypile**	baz=276	30.18	48	P		P	10 41 45.9	+0.9		
E22K	**Anaktuvuk Pass**	baz=267	30.25	38	P		P	10 41 46.1	+0.7		
G22K	**Bettles**	baz=269	30.32	40	P		P	10 41 46.3	+0.3		
O20K	**Slope Mountain**	baz=284	30.35	54	P		P	10 41 47.1	+0.8		
HHC	**Hu-ho-hao-te**		30.36	264	*e*P		P	10 41 46.1	-0.6		
HHC		comp=Z,8.0nm,0.5s			pmax		pmax				
HHC		comp=Z,86nm,5.0s			pmax		pmax				
H22K	**Ishtalitna Cre**	baz=271,SNR=8.5	30.37	42	P		P	10 41 47.7	+1.3		
SPCR	**Spurr Chakacha**	baz=278	30.38	51	P		P	10 41 47.8	+1.2		
N20K	**Mount Spurr**	baz=278	30.38	51	P		P	10 41 47.4	+0.8		
SPU	**Mount Spurr**		30.45	51	P		P	10 41 49.1	+1.8		
SPU		comp=Z,19nm,1.2s			IAmb		IAmb	10 41 49.6			
STLK	**Strandline Lak**		30.51	51	P		P	10 41 49.7	+1.9		
SKT	**Skwentna**	baz=278	30.59	50	P		P	10 41 49.1	+0.8		
OHAK	**Old Harbor**	baz=284	30.61	59	P		P	10 41 48.0	-0.5		
BPAW	**Bear Paw Mtn.**	baz=275	30.62	46	P		P	10 41 49.6	+1.0		
MLY	**Manley**	baz=273	30.67	44	P		P	10 41 49.8	+0.7		
ZAK	**Zakamensk**		30.67	287	*e*P		P	10 41 48.5	-0.8		
ZAK		comp=Z,11nm,1.3s			pmax		pmax				
D23K	**Nanushuk River**	baz=267	30.72	36	P		P	10 41 50.2	+0.8		
Q20K	**Shark Island**	baz=283	30.75	56	P		P	10 41 50.8	+1.0		
C23K	**Itkillik River**	comp=Z,22nm,1.1s	30.81	34	IAmb		IAmb	10 41 51.6			
C23K	**Itkillik River**	baz=265,SNR=5.6	30.81	34	P		P	10 41 50.9	+0.8		
COLD	**Coldfoot**		30.84	39			P	10 41 51.3	+0.9		
COLD	**Coldfoot**	baz=270,SNR=13	30.84	39	P		P	10 41 51.1	+0.7		
KDAK	**Kodiak Island**	baz=284	30.84	58	P		P	10 41 50.8	+0.3		
G23K	**Bananza Creek**	comp=Z,16nm,0.8s	30.91	40	IAmb		IAmb	10 41 52.5			
G23K	**Bananza Creek**	baz=271,SNR=8.3	30.91	40	P		P	10 41 51.6	+0.5		
TRF	**Thorofare Moun**		30.99	47			P	10 41 53.1	+1.2		
TRF	**Thorofare Moun**	baz=276	30.99	47	P		P	10 41 52.6	+0.6		
SUA	**Susitna One**	baz=279	31.03	51	P		P	10 41 52.9	+0.6		
E23K	**Chandalar**	baz=269,SNR=15	31.07	38	P		P	10 41 53.5	+1.0		
TOLK	**Toolik Lake Re**		31.10	37			P	10 41 53.7	+0.9		
TOLK		comp=Z,14nm,1.1s			IAmb		IAmb	10 41 54.1			
TOLK	**Toolik Lake Re**	baz=268,SNR=7.3	31.10	37	P		P	10 41 53.7	+0.9		
CUT	**Chulitna**	baz=278	31.12	49	P		P	10 41 53.7	+0.8		
H23K	**Yuon River**	baz=273	31.13	42	P		P	10 41 53.9	+0.9		
I23K	**Minto, Yukon-K**		31.25	43	P		P	10 41 55.2	+1.3		
I23K		comp=Z,12nm,0.6s			IAmb		IAmb	10 41 55.4			
I23K	**Minto, Yukon-K**	baz=274,SNR=7.6	31.25	43	P		P	10 41 55.2	+1.3		
BRSE	**Bradley Lake S**	baz=282	31.35	54	P		P	10 41 55.8	+0.9		
D24K	**Happy Valley**	baz=268	31.39	36	P		P	10 41 55.8	+0.7		
NEA2	**Nenana**	baz=275	31.41	44	P		P	10 41 56.3	+0.9		
C24K	**Franklin Bluff**	baz=267	31.46	35	P		P	10 41 56.6	+0.9		
E24K	**Your Creek**	baz=270,SNR=27	31.50	38	P		P	10 41 57.1	+1.0		
MCK	**McKinley**		31.56	46			P	10 41 57.9	+1.2		
MCK		comp=Z,11nm,0.7s			IAmb		IAmb	10 41 58.3			
MCK	**McKinley**		31.56	46	P		P	10 41 57.9	+1.2		
MCK		comp=Z,11nm,0.7s			pmax		pmax				
MCK	**McKinley**	baz=277	31.56	46	P		P	10 41 58.0	+1.3		
RC01	**Rabbit Creek A**	baz=280	31.58	51	P		P	10 41 57.6	+0.7		
O22K	**Cooper Landing**	baz=282	31.70	52	P		P	10 41 58.3	+0.5		
F24K	**Squaw Lake**	comp=Z,9.4nm,0.9s	31.73	39	IAmb		IAmb	10 42 00.3			
F24K	**Squaw Lake**	baz=272	31.73	39	P		P	10 41 59.1	+1.0		
PMR	**Palmer**	baz=280	31.78	50	P		P	10 41 59.3	+0.8		
H24K	**Noodor Dome**	comp=Z,10nm,1.0s	31.81	42	IAmb		IAmb	10 42 00.7			
H24K	**Noodor Dome**	baz=274,SNR=5.4	31.81	42	P		P	10 42 00.2	+1.3		
WAT1	**Susitna Watana**	baz=279	31.85	48	P		P	10 41 59.6	+0.4		
SEW	**Seward**	baz=282	31.91	53	P		P	10 42 00.1	+0.5		
COLA	**College**		31.91	44	P		P	10 42 00.9	+1.3		
COLA	**College**		31.91	44	*i* P		P	10 41 59.9	+0.3		
COLA		comp=Z,23nm,0.7s			pmax		pmax				
COLA	**College**	baz=276	31.91	44	P		P	10 42 01.0	+1.4		
G24K	**Hadweenzic Riv**	baz=273,SNR=15	31.92	40	P		P	10 42 01.1	+1.4		
CCB	**Clear Creek Bu**	comp=Z,11nm,0.6s	31.95	44	IAmb		IAmb	10 42 01.1			
POKR	**Poker Plat Res**	baz=276,SNR=7.2	32.06	43	P		P	10 42 02.2	+1.2		
SML	**Sawmill**	baz=280,SNR=5.4	32.12	50	P		P	10 42 02.7	+1.2		
KNK	**Knik Glacier**	baz=281	32.13	50	P		P	10 42 03.0	+1.4		
WAT6	**Susitna Watana**	baz=280	32.26	48	P		P	10 42 03.2	+0.4		
D25K	**Kavik River**	baz=270	32.27	35	P		P	10 42 03.5	+0.8		
PWL	**Port Wells**	baz=282	32.29	51	P		P	10 42 03.8	+0.8		
IL31		comp=Z,14nm,0.9s	32.33	44	IAmb		IAmb	10 42 04.6			
ILAR	**Eielson Array**	comp=Z,7.7nm,0.8s,baz=276,slow=9.5,SNR=134	32.33	44	P		P	10 42 03.8	+0.6		
ILAR					ScP		ScP	10 47 34.9	-1.2		
		comp=Z,0.5nm,0.7s,baz=282,slow=3.4,SNR=6.0 comp=Z,7.7nm,0.8s									
HDA	**Harding Lake**	baz=277	32.34	45	P		P	10 42 03.8	+0.4		
M23K	**Glacier View**	baz=281	32.40	50	P		P	10 42 04.7	+0.8		
G25K	**Bearman Lake**	baz=274	32.46	40	P		P	10 42 05.2	+0.9		
SCM	**Sheep Creek Mo**	baz=281	32.58	49	P		P	10 42 06.9	+1.4		
F25K	**Christian Rive**	baz=274,SNR=6.7	32.59	39	P		P	10 42 06.7	+1.2		
E25K	**Arctic Village**	comp=Z,10nm,0.9s	32.59	38	IAmb		IAmb	10 42 07.4			
E25K	**Arctic Village**	baz=273,SNR=5.8	32.59	38	P		P	10 42 06.7	+1.3		
H25L	**Birch Creek**	baz=275	32.62	41	P		P	10 42 06.8	+1.2		
C26K	**Camden Bay**	baz=270	32.78	34	P		P	10 42 08.2	+1.2		
PRP	**Porcupine Dome**	baz=277,SNR=18	32.81	42	P		P	10 42 08.8	+1.3		
GLI	**Glacier Island**	baz=283	32.88	51	P		P	10 42 09.5	+1.5		
P23K	**Montague Islan**	baz=284	32.93	53	P		P	10 42 09.3	+0.9		
K24K	**Donnelly Dome**	baz=279,SNR=6.2	32.94	46	P		P	10 42 08.8	+0.3		
J25K	**Salcha River,**	baz=278	32.99	44	P		P	10 42 09.3	+0.3		
BMAR	**Burnt Mountain**		33.01	39			P	10 42 10.7	+1.7		
M24K	**Tolsona, Glenn**	baz=282	33.06	49	P		P	10 42 09.4	-0.2		
F26K	**Sheenjek River**	comp=Z,12nm,0.8s	33.15	38	IAmb		IAmb	10 42 12.4			
F26K	**Sheenjek River**	baz=275,SNR=11	33.15	38	P		P	10 42 11.7	+1.4		
C27K	**Jago River**	baz=272	33.21	35	P		P	10 42 11.5	+0.9		
PAX	**Paxson**	baz=281	33.22	47	P		P	10 42 11.9	+1.0		
KLU	**Klutina**	baz=283	33.30	50	P		P	10 42 12.7	+1.0		
G26K	**Porcupine Rive**	baz=276,SNR=8.9	33.36	40	P		P	10 42 13.4	+1.5		
HARP	**HAARP**	baz=282	33.47	48	P		P	10 42 14.4	+1.4		
SCRK	**Sand Creek**	baz=280,SNR=10	33.69	45	P		P	10 42 14.9	0.0		
DOT	**Dot Lake**	comp=Z,17nm,0.8s	33.72	46	IAmb		IAmb	10 42 16.5			
J26L	**Joseph Creek**	comp=Z,12nm,1.4s	33.78	44	IAmb		IAmb	10 42 38.3			
J26L	**Joseph Creek**	baz=280	33.78	44	P		P	10 42 15.5	-0.2		
I26K	**Coal Creek Min**	baz=279	33.83	43	P		P	10 42 15.9	0.0		
LYN	**LuoYang**		33.89	255	⇓P		P	10 42 17.4	+0.5		
LYN		comp=Z,43nm,0.6s			pmax		pmax				
N25K	**Chitina, Valde**	baz=283	33.90	49	P		P	10 42 17.7	+1.0		
MENT	**Mentasta**	comp=Z,12nm,1.0s	34.01	47	IAmb		IAmb	10 42 22.6			
BMRM	**Bremner River**	baz=284	34.05	50	P		P	10 42 19.1	+1.2		
E27K	**Coleen River**	comp=Z,9.1nm,1.3s	34.07	37	IAmb		IAmb	10 42 19.3			
E27K	**Coleen River**	baz=276	34.07	37	P		P	10 42 18.9	+0.9		
L26K	**Log Cabin Wild**	baz=282	34.16	47	P		P	10 42 20.0	+1.2		
D27M	**Malcolm River**	baz=275	34.20	35	P		P	10 42 20.0	+0.9		
G27K	**Doyon Strip**	baz=278,SNR=8.1	34.21	40	P		P	10 42 21.6	+2.3		
H27K	**Steamboat Moun**	comp=Z,11nm,0.8s	34.35	41	IAmb		IAmb	10 42 22.9			
H27K	**Steamboat Moun**	baz=279,SNR=6.9	34.35	41	P		P	10 42 22.2	+1.8		
I27K	**Kandik River**	comp=Z,6.9nm,0.7s	34.41	42	IAmb		IAmb	10 42 23.3			
I27K	**Kandik River**	baz=280	34.41	42	P		P	10 42 22.6	+1.7		
M26K	**Nabesna, AK**	baz=283,SNR=7.0	34.45	48	P		P	10 42 23.3	+2.0		
K27K	**Chicken**	baz=282	34.51	45	P		P	10 42 22.5	+0.8		
MCARA	**McCarthy VSAT**	baz=285	34.68	49	P		P	10 42 25.1	+1.9		
E28M	**Babbage River**	baz=277	34.78	36	P		P	10 42 24.6	+0.6		
F28M	**Old Crow**	comp=Z,7.4nm,0.7s	34.79	38	IAmb		IAmb	10 42 26.0			
F28M	**Old Crow**	baz=278,SNR=7.2	34.79	38	P		P	10 42 25.3	+1.3		
CRQE	**Cirque**	baz=286	34.82	51	P		P	10 42 25.8	+1.3		
L27K	**Beaver Creek,**	baz=283	34.83	46	P		P	10 42 25.7	+1.3		
BCAR	**Beaver Creek A**		34.84	46			P	10 42 26.4	+1.8		
BGLC	**Bering Glacier**	baz=286	34.90	52	P		P	10 42 26.5	+1.5		
M27K	**Edge Creek, AK**	baz=284,SNR=10	34.97	48	P		P	10 42 27.8	+2.1		
D28M	**Stokes Point**	baz=277	34.98	35	P		P	10 42 26.3	+0.8		
I28M	**Miner Creek**	comp=Z,11nm,0.8s	35.13	42	IAmb		IAmb	10 42 29.8			
I28M	**Miner Creek**	baz=282,SNR=14	35.13	42	P		P	10 42 28.3	+1.3		
E29M	**Blow River**	comp=Z,7.1nm,0.7s	35.41	37	IAmb		IAmb	10 42 31.2			
E29M	**Blow River**	baz=279,SNR=11	35.41	37	P		P	10 42 30.6	+1.5		
BVCY	**Beaver Creek**	baz=285	35.41	47	P		P	10 42 30.9	+1.5		
CTG	**Chitna Glacier**	baz=287	35.58	50	P		P	10 42 32.5	+1.6		
H29M	**Whitestone**	baz=282	35.61	40	P		P	10 42 32.5	+1.6		
G29M	**Pine Creek**	baz=281	35.61	39	P		P	10 42 32.5	+1.5		
WHN	**Wuhan**		35.70	248	P		P	10 42 32.0	-0.1		
WHN		comp=Z,46nm,0.7s			pmax		pmax				
YUK3	**Moose Creek**	baz=286	35.77	48	P		P	10 42 34.0	+1.4		
O28M	**Mount Upton**	baz=288	36.18	50	P		P	10 42 37.8	+1.7		
YUK8	**Steele Glacier**	baz=287	36.22	49	P		P	10 42 37.5	+1.1		
EPYK	**Eagle Plains**	comp=Z,7.7nm,0.8s	36.23	40	IAmb		IAmb	10 42 37.6			
EPYK	**Eagle Plains**	baz=283	36.23	40	P		P	10 42 37.5	+1.4		
G30M	**tAoh Zraii Nji**	baz=282,SNR=6.5	36.29	39	P		P	10 42 37.7	+1.1		
F30M	**Barrier River**	baz=282,SNR=16	36.33	38	P		P	10 42 38.6	+1.8		
XAN	**Xi'an**		36.36	257	*e*P		P	10 42 37.3	-0.3		
XAN		comp=Z,8.0nm,0.7s			pmax		pmax				
L29M	**L29M**	baz=286,SNR=13	36.44	46	P		P	10 42 40.1	+2.1		
M29M	**Somme Creek**	baz=287,SNR=5.5	36.48	47	P		P	10 42 40.0	+1.7		
K29M	**Barlow Dome**	baz=286	36.51	44	P		P	10 42 39.2	+0.7		
I30M	**Mount Dempster**	comp=Z,13nm,0.8s	36.63	42	IAmb		IAmb	10 42 41.3			
I30M	**Mount Dempster**	baz=285	36.63	42	P		P	10 42 40.5	+1.0		
YUK4	**Talbot Arm**	baz=288	36.72	48	P		P	10 42 41.8	+1.3		
J30M	**Hart River**	baz=285	36.82	43	P		P	10 42 42.1	+1.0		
YUK6	**Outpost Mounta**	baz=289	36.98	49	P		P	10 42 43.6	+1.0		
INK	**Inuvik**	baz=283,SNR=9.0	37.02	36	P		P	10 42 43.3	+0.8		
F31M	**Tsiigehtchic**	comp=Z,12nm,0.6s	37.13	38	IAmb		IAmb	10 42 44.9			
F31M	**Tsiigehtchic**	baz=284,SNR=8.1	37.13	38	P		P	10 42 44.1	+0.6		
M30M	**Minto, Yukon**	baz=288	37.18	46	P		P	10 42 45.4	+1.3		
MAYO	**Mayo, Yukon**	baz=287	37.27	44	P		P	10 42 45.9	+1.1		
H31M	**Peel River**	comp=Z,11nm,0.9s	37.31	40	IAmb		IAmb	10 42 46.8			
H31M	**Peel River**		37.31	40	P		P	10 42 46.1	+1.1		

baz=285
N30M Aishikik Lake 37.40 48 P P 10 42 47.0 +1.1
baz=289
HYT Haines Junctio 37.41 49 P P 10 42 48.4 +2.4
baz=289,SNR=5.8
P29M Windy Craggy 37.71 51 P P 10 42 49.8 +1.4
baz=291
P30M Million Dollar 37.90 50 P P 10 42 51.7 +1.7
baz=291
N31M Braeburn, Yuko 37.98 48 P P 10 42 53.1 +2.5
baz=290
LZH Lanzhou 38.05 265 *e*P P 10 42 52.6 +0.9
LZH pmax pmax
comp=Z,19nm,1.4s
O30N Mendenhall 38.08 49 P P 10 42 53.7 +2.3
baz=290
LZDM Lanzhou Array 38.23 265 P P 10 42 54.1 +0.8
comp=Z,1.6nm,0.3s,baz=46,slow=4.2,SNR=5.9
comp=Z,1.6nm,0.3s
M31M Drury Creek, Y 38.36 46 P P 10 42 55.7 +2.0
baz=290
GTA Gaotai 38.42 272 P P 10 42 55.3 +0.7
GTA pmax pmax
comp=Z,20nm,1.1s
PLBC Pleasant Camp 38.42 51 P P 10 42 56.4 +2.3
baz=292
WHY Whitehorse 38.68 49 P P 10 42 58.4 +2.0
baz=291
ENH Enshi 38.71 253 P 10 42 56.6 -0.4
A36M Sachs Harbour 38.89 29 IAmb IAmb 10 42 59.3
comp=Z,11nm,0.8s
A36M Sachs Harbour 38.89 29 P P 10 42 58.5 +0.8
baz=285,SNR=8.3
S31K Pelican 39.06 53 P P 10 43 01.4 +2.0
baz=294
R31K City Hall, Gus 39.12 52 P P 10 43 02.1 +2.3
baz=293
N32M Quiet Lake 39.32 47 P P 10 43 01.9 +0.4
baz=292
ZAA0 Zalesovo Array 39.53 300 P 10 43 02.9 -0.4
ZAA0 IAmb IAmb 10 43 03.4
comp=Z,11nm,1.4s
ZALV Zalesovo Beam 39.53 300 P P 10 43 02.9 -0.4
comp=Z,3.3nm,0.4s,baz=59,slow=6.5,SNR=17
ZALV PP PP 10 44 45.0 -2.0
comp=Z,0.6nm,0.5s,baz=64,slow=9.8,SNR=2.1
ZALV PcP PcP 10 44 58.2 -1.1
comp=Z,1.2nm,0.5s,baz=90,slow=4.3,SNR=6.0
comp=Z,3.3nm,0.4s
ZALV Zalesovo Beam 39.53 300 P 10 43 03.1 -0.2
P32M Atlin 39.62 50 P P 10 43 04.9 +0.9
baz=293
P33M Teslin, Yukon 39.80 49 P P 10 43 06.9 +1.5
baz=293
C36M Paulatuk 40.04 33 IAmb IAmb 10 43 07.8
comp=Z,8.8nm,0.7s
C36M Paulatuk 40.04 33 P P 10 43 07.5 +0.4
baz=289,SNR=6.4
S32K Killisnoo 40.07 53 P P 10 43 07.9 +0.4
baz=295
DGZ Jazzator, Alta 40.11 293 *i* P P 10 43 08.9 +0.7
DGZ pmax pmax
comp=Z,7.0nm,0.7s
Q32M Nakina River 40.56 50 P P 10 43 13.9 +2.2
baz=295
R33M Jennings River 40.98 49 P P 10 43 17.2 +2.2
baz=295
U33K Whale Pass 41.38 54 P P 10 43 18.7 +0.6
baz=297
S34M Telegraph Cree 41.55 51 P P 10 43 21.6 +2.2
baz=297
WRAK Wrangell Islan 41.63 54 P P 10 43 20.4 +0.3
baz=297
WTLY Watson Lake, Y 41.67 47 IAmb IAmb 10 43 22.8
comp=Z,8.7nm,0.6s
WTLY Watson Lake, Y 41.67 47 P P 10 43 20.3 -0.1
baz=296
CRAG Craig 41.68 55 P P 10 43 19.1 -1.3
baz=298
DLBC Dease Lake 41.84 50 P P 10 43 22.4 +0.6
baz=297
T35M Bob Quinn 42.40 52 P P 10 43 25.9 -0.3
baz=298
V35K Ketchikan 42.51 55 P P 10 43 27.6 +0.6
baz=299
WRGLY Wrigley 42.61 42 P P 10 43 27.3 -0.4
baz=296
LIRD Liard River Hi 43.21 48 P P 10 43 33.6 +1.1
baz=298
KOTAN Kotaneelee Air 43.78 46 P P 10 43 35.8 -1.1
baz=299
TOAD Toad River Com 43.87 48 P P 10 43 37.0 -0.6
baz=299,SNR=8.3
KURK Kurchatov 44.44 299 P P 10 43 42.0 -0.1
KURK Kurchatov 44.44 299 P P 10 43 42.4 +0.3
KURK Kurchatov 44.44 299 *ce*P P 10 43 41.7 -0.4
KURK pmax pmax
comp=Z,20nm,0.3s
KURK Kurchatov 44.44 299 *e*P P 10 43 41.7 -0.4
KURBB Kurchatov Arra 44.54 299 P P 10 43 43.1 +0.2
comp=Z,13nm,0.5s,baz=67,slow=6.9,SNR=53
comp=Z,13nm,0.5s
MK31 Makanchi Array 44.57 292 *i* P P 10 43 42.8 -0.5
MK31 pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 44.57 292 P P 10 43 43.1 -0.2
comp=Z,5.4nm,0.6s,baz=57,slow=7.0,SNR=45
comp=Z,5.4nm,0.6s
MAKZ Makanchi 44.74 293 P 10 43 44.4 -0.2
MAKZ IAmb IAmb 10 43 45.3
comp=Z,7.7nm,0.8s
MAKZ Makanchi 44.74 293 P P 10 43 44.4 -0.2
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
RES Resolute Bay 45.54 20 P P 10 43 50.4 +0.1
RES IAmb IAmb 10 43 50.9
comp=Z,8.4nm,1.0s
RES Resolute Bay 45.54 20 P P 10 43 50.4 +0.1
RES pmax pmax
comp=Z,8.0nm,1.0s
YKAW3 Yellowknife Wh 46.48 40 P P 10 43 58.6 +0.9
YKAW3 IAmb IAmb 10 43 59.0
comp=Z,6.1nm,0.7s
YKA Yellowknife Ar 46.52 40 P P 10 43 58.5 +0.5
comp=Z,6.0nm,0.7s,baz=305,slow=7.6,SNR=60
YKA ScP ScP 10 48 31.6 +0.5
comp=Z,1.0nm,0.8s,baz=300,slow=4.3,SNR=5.7
comp=Z,6.0nm,0.7s
YKAW1 Yellowknife Wh 46.57 40 P P 10 43 59.2 +0.9
YKAW1 IAmb IAmb 10 44 23.3
comp=Z,11nm,1.4s
BVAR Borovoye Array 47.43 306 P P 10 44 04.8 -0.2
comp=Z,16nm,0.5s,baz=58,slow=7.6,SNR=46
BVAR PcP PcP 10 45 25.6 -0.8
comp=Z,3.1nm,0.4s,baz=78,slow=2.1,SNR=8.4
BVAR PP PP 10 45 57.4 -4.2
comp=Z,1.8nm,0.6s,baz=60,slow=12,SNR=4.0
comp=Z,16nm,0.5s
LLLB Lillooet 50.01 56 IAmb IAmb 10 44 26.5
comp=Z,9.9nm,1.1s
NLWA Neilton Lookou 50.94 60 P P 10 44 33.4 +2.2
ARTI Arti 51.07 315 P P 10 44 31.3 -0.7
comp=Z,15nm,0.8s,baz=53,slow=4.8,SNR=21
comp=Z,15nm,0.8s
ARTI Arti 51.07 315 P 10 44 32.4 +0.4
ARTI IAmb IAmb 10 44 32.7
comp=Z,20nm,0.8s
ARTI Arti 51.07 315 *d* *i*P P 10 44 31.3 -0.7
ARTI 10 45 39.9
ARTI *PP pP 10 46 04.3 +1.4
ARTI 10 46 31.0
ARTI S S 10 51 13.5 +0.1
ARTI SS SS 10 54 54.3 -1.1
ARTI pmax pmax
comp=Z,15nm,0.7s
AAK Ala-Archa 51.50 292 P P 10 44 36.2 +0.7
AAK IAmb IAmb 10 44 36.7
comp=Z,11nm,0.9s
AAK Ala-Archa 51.50 292 P P 10 44 36.1 +0.5
AAK Ala-Archa 51.50 292 *ce*P P 10 44 35.9 +0.3
AAK pmax pmax
comp=Z,12nm,0.9s
LON Longmire 52.44 60 P P 10 44 43.2 +1.1
LON Longmire 52.44 60 P P 10 44 43.2 +1.1
LON pmax pmax
comp=Z,6.0nm,1.5s
ARCES ARCESS Array B 52.57 339 P P 10 44 42.0 -0.6
comp=Z,1.0nm,0.3s,baz=37,slow=8.1,SNR=31
comp=Z,1.0nm,0.3s
ARCES ARCESS Array B 52.57 339 P P 10 44 41.9 -0.7
ARCES IAmb IAmb 10 45 03.8
comp=Z,17nm,1.5s
ARCES ARCESS Array B 52.57 339 P P 10 44 41.9 -0.7
ARCES pmax pmax
comp=Z,17nm,1.5s
KSH Kashi 52.68 289 P P 10 44 48.4 +4.3
KSH pmax pmax
comp=Z,10.0nm,0.9s
B08A Colville Reser 52.71 57 P 10 44 45.2 +1.2
B08A IAmb IAmb 10 44 45.9
comp=Z,8.8nm,0.8s
LTY Liberty 52.72 59 P P 10 44 45.2 +1.1
SHL Shillong 52.72 264 P 10 44 44.9 +0.3
SHL Shillong 52.72 264 P P 10 44 44.7 +0.2
SHL Shillong 52.72 264 P P 10 44 44.9 +0.3
SHL pmax pmax
comp=Z,44nm,0.5s
KIRV Kirov 53.36 321 P P 10 44 48.2 -0.1
comp=Z,11nm,0.5s,baz=12,slow=5.2,SNR=4.6
comp=Z,11nm,0.5s
KIRV Kirov 53.36 321 *ce*P P 10 44 47.4 -1.0
KK31 Karatay Array 53.44 295 P P 10 44 48.9 -0.4
KK31 Karatay Array 53.44 295 *i* P P 10 44 48.7 -0.6
KKAR Karatay Array 53.44 295 P P 10 44 48.9 -0.4
KKAR Karatay Array 53.44 295 P P 10 44 48.9 -0.4
HOOD Mount Hood Mea 53.44 61 IAmb IAmb 10 44 51.9
comp=Z,14nm,0.8s
CHTO Chiang Mai 53.60 253 P 10 44 51.0 +0.2
CHTO IAmb IAmb 10 44 52.2
comp=Z,19nm,1.1s
CHTO Chiang Mai 53.60 253 P P 10 44 51.2 +0.5
CHTO Chiang Mai 53.60 253 P P 10 44 51.0 +0.2
CHTO pmax pmax
comp=Z,19nm,1.1s
WAH2 Wahluke Slope 53.62 59 IAmb IAmb 10 44 52.2
comp=Z,8.7nm,0.6s
CMAR Chiang Mai Arr 53.88 252 P P 10 44 53.9 +1.1
comp=Z,5.3nm,0.8s,baz=26,slow=7.1,SNR=31
CMAR PcP PcP 10 45 51.6 +0.5
comp=Z,0.8nm,0.5s,baz=31,slow=2.9,SNR=4.5
comp=Z,5.3nm,0.8s
CMAR Chiang Mai Arr 53.88 252 P P 10 44 52.8 +0.1
CMAR Chiang Mai Arr 53.88 252 P P 10 44 52.8 +0.1
NEW Newport 53.90 56 P 10 44 53.1 +0.6
NEW Newport 53.90 56 P P 10 44 53.1 +0.6
NEW pmax pmax
comp=Z,7.0nm,1.1s
EVN Everest 54.09 270 P P 10 44 55.6 +0.7
E09A Wood Farm, Sta 54.52 58 IAmb IAmb 10 44 58.8
comp=Z,9.6nm,0.8s
PINE Pine Mountain 54.83 62 IAmb IAmb 10 45 02.5
comp=Z,12nm,0.9s
G08A Pilot Rock 54.90 60 P P 10 45 01.1 +1.3
AB31 Akbulak array 54.93 307 P P 10 44 59.6 -0.1
AB31 Akbulak array 54.93 307 P P 10 44 59.2 -0.5
ABKAR Akbulak array 54.93 307 P P 10 44 59.8 +0.1
J05D Fort Rock, OR 55.01 63 P 10 45 03.1 +2.6
J05D IAmb IAmb 10 45 03.8
comp=Z,17nm,0.7s
AKTO Aktyubinsk 55.08 309 P P 10 45 00.2 -0.6
comp=Z,5.3nm,0.4s,baz=63,slow=7.9,SNR=22
comp=Z,5.3nm,0.4s
L04D Klamath Falls 55.13 64 P 10 45 03.6 +2.2
L04D IAmb IAmb 10 45 04.4
comp=Z,15nm,0.9s
KHMM Horse Mountain 55.23 66 IAmb IAmb 10 45 05.7
comp=Z,20nm,1.1s
K05A Summer Lake 55.57 63 IAmb IAmb 10 45 08.0
comp=Z,13nm,1.0s
FFC Flin Flon 56.51 42 P P 10 45 11.6 +0.9
FFC IAmb IAmb 10 45 11.7
comp=Z,5.8nm,0.7s
FFC Flin Flon 56.51 42 P P 10 45 11.6 +0.9
FFC pmax pmax
comp=Z,6.0nm,0.7s
PLID Pearl Lake 56.59 58 IAmb IAmb 10 45 13.7
comp=Z,12nm,0.8s
FCC Fort Churchill 56.62 35 P P 10 45 11.3 0.0
FCC IAmb IAmb 10 45 36.5
comp=Z,32nm,1.4s
FCC Fort Churchill 56.62 35 P P 10 45 11.3 0.0
FCC pmax pmax
comp=Z,33nm,1.4s
WVOR Wild Horse Val 56.99 62 IAmb IAmb 10 45 17.2
comp=Z,9.0nm,1.0s
DLMT Dillon 58.15 56 P 10 45 24.2 +2.0
DLMT IAmb IAmb 10 45 24.6
comp=Z,9.5nm,0.9s
NIL Nilore 58.28 285 P 10 45 23.9 +0.8
NIL Nilore 58.28 285 P P 10 45 23.9 +0.8
NIL pmax pmax
comp=Z,44nm,1.0s
MPK Martis Peak 58.38 65 IAmb IAmb 10 45 26.7
comp=Z,8.3nm,0.8s
MCMT McKenzie Canyo 58.39 56 P P 10 45 25.3 +1.3
BELG Belogornoye 58.41 316 P P 10 45 23.0 -0.6
comp=Z,22nm,0.7s,baz=48,slow=0.4,SNR=6.3
comp=Z,22nm,0.7s
BELG Belogornoye 58.41 316 *i* P P 10 45 23.0 -0.6
BELG pmax pmax
comp=Z,4.0nm,0.8s
BOZ Bozeman (W) 58.47 55 IAmb IAmb 10 45 26.7
comp=Z,7.6nm,0.7s
FINES FINESS Array B 58.99 333 P P 10 45 26.8 -0.6
comp=Z,3.4nm,0.5s,baz=34,slow=7.1,SNR=22
comp=Z,3.4nm,0.5s
FINES FINESS Array B 58.99 333 P P 10 45 26.9 -0.5
YHL Hebgen Lake 59.22 55 IAmb IAmb 10 45 32.1
comp=Z,5.0nm,0.6s
YHB Horse Butte 59.29 56 IAmb IAmb 10 45 32.4
comp=Z,10nm,0.7s
YMR Madison River 59.46 55 IAmb IAmb 10 45 33.7
comp=Z,5.9nm,0.7s
NVAR Mina Array Bea 59.95 65 P P 10 45 36.3 +1.7
comp=Z,3.3nm,0.7s,baz=299,slow=6.3,SNR=34
NVAR pP pP 10 47 11.8 +2.0
comp=Z,0.4nm,0.7s,baz=315,slow=8.0,SNR=2.8
comp=Z,3.3nm,0.7s
NVAR Mina Array Bea 59.95 65 P P 10 45 36.7 +2.1
RLMT Red Lodge 59.99 54 IAmb IAmb 10 45 37.4
comp=Z,13nm,1.2s
MDPB Devils Postpil 60.08 66 P P 10 45 37.6 +2.1
KBL Kabul 60.12 289 P P 10 45 35.1 -0.6
KBL IAmb IAmb 10 45 35.3
comp=Z,16nm,0.8s
KBL Kabul 60.12 289 P P 10 45 34.6 -1.1
SNR=6.0
KBL Kabul 60.12 289 P P 10 45 35.1 -0.6
KBL pmax pmax
comp=Z,16nm,0.8s
OBN Obninsk 60.72 324 *e*P P 10 45 39.0 -0.1
OBN *e* 10 46 17.6
OBN *e**PP pP 10 47 14.3 0.0
OBN *e* 10 47 58.7
OBN *eS S 10 53 19.3 +0.7
OBN *eSS SS 10 57 26.4 0.0
OBN pmax pmax
comp=Z,9.0nm,0.5s
OBN Obninsk 60.72 324 *e*P P 10 45 39.0 -0.1
DSP Deep Springs 60.89 66 IAmb IAmb 10 45 43.6
comp=Z,5.9nm,1.0s
HWUT Hardware Ranch 61.33 58 IAmb IAmb 10 45 46.1
comp=Z,5.5nm,0.7s
GRAC Grapevine Rang 61.49 66 IAmb IAmb 10 45 47.4
comp=Z,4.9nm,0.7s
BW06 Boulder Array 61.53 56 IAmb IAmb 10 45 47.0
comp=Z,7.2nm,0.9s
PD31 Pinedale Array 61.53 56 IAmb IAmb 10 45 47.0
comp=Z,7.1nm,0.9s
PDAR Pinedale Array 61.53 56 P P 10 45 46.0 +1.1
comp=Z,5.2nm,0.8s,baz=328,slow=1.8,SNR=56
PDAR pP pP 10 47 21.7 +0.7
comp=Z,0.4nm,0.7s,baz=314,slow=7.5,SNR=3.1
comp=Z,5.2nm,0.8s
PDAR Pinedale Array 61.53 56 P P 10 45 46.2 +1.3
DUG Dugway, Tooele 61.69 60 IAmb IAmb 10 45 48.6
comp=Z,5.9nm,0.8s
SPR3 Spring Creek 3 61.73 62 IAmb IAmb 10 45 49.2
comp=Z,5.6nm,0.8s
S11A Rachel 61.93 64 IAmb IAmb 10 45 50.2
comp=Z,10nm,0.8s
TPNV Topopah Spring 62.15 65 IAmb IAmb 10 45 51.5
comp=Z,6.5nm,0.8s
FURC Furnace Creek, 62.15 66 IAmb IAmb 10 45 51.5
comp=Z,12nm,0.8s
CLC China Lake 62.21 67 IAmb IAmb 10 45 51.6
comp=Z,7.0nm,1.0s
ULM Lac du Bonnet 62.33 43 P P 10 45 49.1 -0.6
comp=Z,3.0nm,0.6s,baz=319,slow=3.8,SNR=2.3
comp=Z,3.0nm,0.6s
ULM Lac du Bonnet 62.33 43 P P 10 45 49.8 0.0
ULM IAmb IAmb 10 46 06.8
comp=Z,11nm,1.4s
ULM Lac du Bonnet 62.33 43 P P 10 45 49.8 0.0
ULM pmax pmax
comp=Z,11nm,1.4s
WSHM Spangler Hills 62.42 67 IAmb IAmb 10 45 53.0
comp=Z,5.5nm,0.9s
MPU Maple Canyon 62.44 60 IAmb IAmb 10 45 53.3
comp=Z,4.7nm,0.7s
GWY Greenwater Val 62.47 66 IAmb IAmb 10 45 53.4
comp=Z,5.8nm,0.8s
BSUT Blindstream Ca 62.52 59 IAmb IAmb 10 45 54.2
comp=Z,5.5nm,1.0s
CCCA Chr Cany lake 62.55 67 IAmb IAmb 10 45 54.0
comp=Z,10.0nm,0.6s
NB2 NORSAR Subarra 62.93 340 P P 10 45 52.5 -1.0
comp=Z,0.9nm,0.4s,baz=24,slow=6.5
NOA NORSAR Array B 62.93 340 P P 10 45 52.5 -1.0
comp=Z,1.8nm,0.5s,baz=25,slow=6.6,SNR=8.4
comp=Z,1.8nm,0.5s
RDMU Red Mountain 63.12 58 IAmb IAmb 10 45 57.6
comp=Z,8.7nm,1.0s
HFS Hagfors 63.21 339 P P 10 45 54.6 -0.7
comp=Z,3.9nm,0.3s,baz=43,slow=2.8,SNR=44
comp=Z,3.9nm,0.3s
RSSD Black Hills 63.28 52 P 10 45 57.1 +0.8
RSSD IAmb IAmb 10 45 57.8
comp=Z,9.3nm,0.9s
RSSD Black Hills 63.28 52 P P 10 45 57.1 +0.8
RSSD pmax pmax
comp=Z,9.0nm,1.0s
CCUT Cedar City 63.30 63 P P 10 45 57.9 +1.3
P17A Butcher Ranch, 63.31 59 IAmb IAmb 10 45 59.1
comp=Z,8.7nm,1.4s
SRU San Rafael Swe 63.69 60 IAmb IAmb 10 46 01.1
comp=Z,6.5nm,0.8s
HRA Herat 64.12 293 P P 10 46 01.9 +0.1
HRA IAmb IAmb 10 46 02.9
comp=Z,7.4nm,0.8s
O20A White River Ci 64.13 57 IAmb IAmb 10 46 03.6
comp=Z,7.9nm,0.7s
IRM Iron Mountain 64.79 66 IAmb IAmb 10 46 08.4
comp=Z,12nm,1.4s
PV22 Blue Mesa, Par 65.03 59 IAmb IAmb 10 46 09.4
comp=Z,6.9nm,0.7s
PV04 Paradox Valley 65.07 59 IAmb IAmb 10 46 10.0
comp=Z,5.4nm,0.8s
PV19 Morning Glory 65.09 59 IAmb IAmb 10 46 09.9
comp=Z,11nm,0.8s
PV16 Nyswonger Mesa 65.13 59 IAmb IAmb 10 46 10.3
comp=Z,5.6nm,1.0s
PV11 David Mesa, Pa 65.16 59 IAmb IAmb 10 46 10.5
comp=Z,13nm,1.3s
PV05 Paradox Valley 65.20 59 IAmb IAmb 10 46 10.8
comp=Z,8.4nm,0.7s
PV13 Radium Mtn., P 65.29 59 IAmb IAmb 10 46 11.3
comp=Z,5.5nm,0.7s
PV02 Paradox Valley 65.30 59 IAmb IAmb 10 46 10.7
comp=Z,6.4nm,0.9s
PV15 Paradox Valley 65.33 59 IAmb IAmb 10 46 11.4
comp=Z,8.1nm,0.7s
ISCO Idaho Springs 65.72 56 IAmb IAmb 10 46 14.5
comp=Z,7.5nm,1.4s
X16A Lo Mia Camp, P 66.66 64 IAmb IAmb 10 46 20.6
comp=Z,5.0nm,0.8s
AKASG Malin Array Bal 66.91 325 P P 10 46 17.8 -1.0
comp=Z,1.2nm,0.3s,baz=36,slow=6.6,SNR=8.8
comp=Z,1.2nm,0.3s
AKBB Malin Array Si 66.91 325 *i* P P 10 46 17.3 -1.5
AKBB pmax pmax
comp=Z,8.0nm,0.9s
KIV Kislovodsk 66.93 313 *e*P P 10 46 20.2 +1.0
KIV pmax pmax
comp=Z,7.0nm,1.1s
KBZ Khabaz 67.01 312 P P 10 46 19.9 +0.3
comp=Z,4.8nm,0.6s,baz=88,slow=2.3,SNR=16
comp=Z,4.8nm,0.6s
KBZ Khabaz 67.01 312 *ce*P P 10 46 19.7 +0.2
KBZ pmax pmax
comp=Z,9.0nm,1.1s
X18A Snowflake 67.39 63 IAmb IAmb 10 46 24.9
comp=Z,3.4nm,0.7s
SCHQ Schefferville 68.15 24 P P 10 46 24.6 -1.9
comp=Z,1.3nm,0.4s,baz=330,slow=8.2,SNR=6.6
comp=Z,1.3nm,0.4s
STHS Stebnicka Huta 70.68 329 *e*P P 10 46 41.0 -0.7
STHS Stebnicka Huta 70.68 329 *e*P P 10 46 41.0 -0.7
EKA Eskdalemuir Ar 70.89 346 P P 10 46 41.8 -1.0
comp=Z,1.2nm,0.5s,baz=15,slow=5.3,SNR=7.8
comp=Z,1.2nm,0.5s
BUR08 Bucovina Ar. S 70.91 326 P P 10 46 43.0 -0.2
BUR08 IAmb IAmb 10 46 45.9
comp=Z,5.0nm,0.8s
BURAR Bucovina Array 70.92 326 P P 10 46 42.9 -0.4
BURAR IAmb IAmb 10 46 43.8
comp=Z,4.5nm,0.8s
KNRA Kununurra 70.96 205 P P 10 46 44.8 +1.1
KNRA IAmb IAmb 10 46 57.1
comp=Z,14nm,1.1s
VLDQ Val d'Or 71.03 33 P P 10 46 42.4 -1.4
CLL Collm 71.37 335 P P 10 46 45.3 -0.4
CLL IAmb IAmb 10 46 45.8
comp=Z,5.8nm,1.0s
CLL Collm 71.37 335 P P 10 46 45.3 -0.4
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 71.37 335 *i* P P 10 46 45.1 -0.6
comp=Z,5.0nm,0.5s
LANS Liptovska Anna 71.47 330 *e*P P 10 46 46.5 +0.1
LANS Liptovska Anna 71.47 330 *e*P P 10 46 46.5 +0.1
MORC Moravsky Berou 71.49 331 P P 10 46 46.7 +0.2
MORC IAmb IAmb 10 46 47.4
comp=Z,5.7nm,0.8s
MORC Moravsky Berou 71.49 331 P P 10 46 46.7 +0.2
MORC pmax pmax
comp=Z,6.0nm,0.8s
MNTX Cornudas Mount 72.02 61 P P 10 46 51.7 +1.8
MNTX IAmb IAmb 10 46 52.2
comp=Z,3.2nm,0.7s
VRAC Vranov 72.18 332 P P 10 46 48.9 -1.7
comp=Z,5.3nm,0.6s,baz=13,slow=7.5,SNR=5.1
comp=Z,5.3nm,0.6s
MLR Muntele Rosu 72.49 324 P P 10 46 52.6 +0.1
comp=Z,5.8nm,0.6s,baz=194,slow=5.0,SNR=4.9
comp=Z,5.8nm,0.6s
MODS Modra-Piesok 72.82 331 *e*P P 10 46 54.8 +0.5
MODS Modra-Piesok 72.82 331 *e*P P 10 46 54.8 +0.5
KHC Kasperske Hory 73.19 334 *ce*P P 10 46 57.2 +0.8
KHC pmax pmax
comp=Z,8.0nm,1.7s
GERES GERESS Array B 73.42 333 P P 10 46 56.5 -1.3
comp=Z,1.6nm,0.5s,baz=38,slow=6.8,SNR=7.4
comp=Z,1.6nm,0.5s
CONA Conrad Observa 73.64 332 *e*P P 10 46 59.5 +0.4
comp=Z,3.3nm,0.6s
WB0 Warramunga Arr 73.65 198 IAmb IAmb 10 47 00.4
comp=Z,7.1nm,0.7s
RONA Rosalia, Austr 73.72 331 *e*P P 10 47 00.2 +0.8
comp=Z,8.3nm,1.1s
WR8 Warramunga Arr 73.81 198 P 10 47 01.2 +1.0
WR8 IAmb IAmb 10 47 01.7
comp=Z,6.3nm,0.8s
WRAB Tennant Creek 73.82 198 P P 10 47 01.2 +1.1
WRAB IAmb IAmb 10 47 01.8
comp=Z,6.4nm,0.8s
WRAB Tennant Creek 73.82 198 *ce*P P 10 47 01.6 +1.4
WRAB pmax pmax
comp=Z,15nm,2.5s
WB2 Warramunga Arr 73.83 198 P P 10 47 01.2 +0.9
WB2 IAmb IAmb 10 47 01.9
comp=Z,9.8nm,0.8s
WRA Warramunga Arr 73.83 198 P P 10 47 01.0 +0.7
comp=Z,6.6nm,0.7s,baz=14,slow=6.0,SNR=43
comp=Z,6.6nm,0.7s
WRA Warramunga Arr 73.83 198 P P 10 47 01.1 +0.9
SHME Shamm 73.85 292 P P 10 47 00.0 -0.5
SHME Shamm 73.85 292 P P 10 46 60.0 -0.5
BANOM Banah 73.86 291 P P 10 47 00.3 -0.4
BANOM Banah 73.86 291 P P 10 47 00.2 -0.4

FITZ	**Fitzroy Crossi**	**74.11**	**207**	P	**P**	**10 47 03.1**	**+1.2**
BR131	**Keskin Array S**	**74.33**	**316**	IAmb	IAmb	10 47 05.1	
	comp=Z,4.7nm,0.8s						
BR131	**Keskin Array S**	**74.33**	**316**	*i* P	**P**	**10 47 03.1**	**-0.1**
BRTR	**Keskin Array B**	**74.33**	**316**	P	**P**	**10 47 02.8**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=28,slow=3.3,SNR=9.5						
	comp=Z,4.1nm,0.9s						
BRTR	**Keskin Array B**	**74.33**	**316**	P	**P**	**10 47 03.1**	**-0.1**
BRTR	**Keskin Array B**	**74.33**	**316**	*i* P	**P**	**10 47 02.7**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MDH	**Madha**	**74.34**	**291**	P	**P**	**10 47 02.0**	**-1.3**
MDH	**Madha**	**74.34**	**291**	P	**P**	**10 47 02.0**	**-1.3**
MASF	**Masafi**	**74.36**	**291**	P	**P**	**10 47 02.4**	**-1.1**
MSFE	**Esma-Masafi**	**74.37**	**291**	P	**P**	**10 47 02.7**	**-0.9**
UOSS	**Minazif**	**74.67**	**291**	P	**P**	**10 47 04.8**	**-0.4**
UOSS	**Minazif**	**74.67**	**291**	P	**P**	**10 47 04.6**	**-0.6**
TXAR	**Lajitas Array**	**74.79**	**62**	P	**P**	**10 47 07.4**	**+1.5**
	comp=Z,2.5nm,0.6s,baz=296,slow=4.3,SNR=31						
TXAR				pP	**pP**	**10 48 48.0**	**+1.6**
	comp=Z,0.8nm,0.8s,baz=316,slow=6.4,SNR=5.2						
	comp=Z,2.5nm,0.6s						
HATD	**Hatta, Dubai**	**74.80**	**291**	P	**P**	**10 47 05.5**	**-0.5**
ASHO	**Ashiyiah**	**74.95**	**291**	P	**P**	**10 47 06.4**	**-0.4**
	SNR=5.9						
ASHO	**Ashiyiah**	**74.95**	**291**	P	**P**	**10 47 06.1**	**-0.7**
JLN	**Jalan Bani Buh**	**74.96**	**287**	P	**P**	**10 47 07.2**	**+0.3**
LESA	**Schwarzleotal**	**75.00**	**333**	*e*P	**P**	**10 47 07.2**	**+0.4**
	comp=Z,4.2nm,0.6s						
SOKA	**Soboth**	**75.01**	**332**	*i* P	**P**	**10 47 07.1**	**+0.2**
	comp=Z,7.0nm,1.0s						
SMDO	**Samad**	**75.06**	**288**	P	**P**	**10 47 07.3**	**-0.2**
HOQ	**Hoqain**	**75.08**	**289**	P	**P**	**10 47 07.1**	**-0.4**
SOHO	**SOHO**	**75.11**	**290**	P	**P**	**10 47 07.0**	**-0.6**
KBA	**Koelnbreinsper**	**75.13**	**333**	*e*P	**P**	**10 47 08.1**	**+0.5**
	comp=Z,9.5nm,0.5s						
JMDO	**Jabal Madar**	**75.56**	**288**	P	**P**	**10 47 09.9**	**-0.3**
ALNE	**Al Ain**	**75.61**	**291**	P	**P**	**10 47 10.2**	**-0.3**
ALNE	**Al Ain**	**75.61**	**291**	P	**P**	**10 47 10.0**	**-0.5**
ARQ	**Araqi**	**75.73**	**290**	P	**P**	**10 47 11.0**	**-0.2**
	SNR=18						
BSY	**Bisya**	**75.79**	**289**	P	**P**	**10 47 11.4**	**-0.1**
DAVOX	**Davos/Dischmat**	**76.34**	**335**	P	**P**	**10 47 14.6**	**+0.2**
	comp=Z,3.6nm,0.5s,baz=358,slow=10.0,SNR=5.8						
	comp=Z,3.6nm,0.5s						
JRN	**Qarnain Island**	**76.58**	**293**	P	**P**	**10 47 14.8**	**-1.0**
MHTO	**MHTO**	**76.71**	**287**	P	**P**	**10 47 16.6**	**0.0**
	SNR=20						
TUE	**Stuetta**	**76.76**	**335**		**P**	**10 47 17.2**	**+0.5**
TUE				IAmb	IAmb	10 47 17.7	
	comp=Z,6.4nm,0.8s						
AS31	**Alice Springs**	**77.54**	**198**		**P**	**10 47 22.5**	**+1.6**
AS31				IAmb	IAmb	10 47 22.9	
	comp=Z,3.7nm,0.6s						
ASAR	**Alice Springs**	**77.54**	**198**	P	**P**	**10 47 22.3**	**+1.4**
	comp=Z,8.8nm,0.7s,baz=11,slow=5.2,SNR=212						
ASAR				pP	**pP**	**10 49 03.6**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=15,slow=3.9,SNR=1.6						
	comp=Z,8.8nm,0.7s						
ASAR	**Alice Springs**	**77.54**	**198**		**P**	**10 47 22.4**	**+1.5**
MZR	**Muzera**	**77.73**	**292**	P	**P**	**10 47 21.6**	**-0.5**
MZR	**Muzera**	**77.73**	**292**	P	**P**	**10 47 21.4**	**-0.7**
DQM	**DQM**	**77.78**	**287**	P	**P**	**10 47 21.0**	**-1.4**
NRCA	**Norcia**	**79.08**	**331**	IAmb	IAmb	10 47 30.2	
	comp=Z,12nm,1.0s						
MMAI	**Mount Meron Ar**	**79.12**	**311**	P	**P**	**10 47 29.9**	**+0.4**
	comp=Z,6.9nm,0.5s,baz=41,slow=7.7,SNR=11						
	comp=Z,6.9nm,0.5s						
WHFO	**Wadi Hawf**	**81.56**	**288**	P	**P**	**10 47 41.3**	**-1.2**
EIL	**Elat**	**82.12**	**309**	P	**P**	**10 47 44.4**	**-0.8**
	comp=Z,9.6nm,0.7s,baz=346,slow=3.6,SNR=9.6						
	comp=Z,9.6nm,0.7s						
STKA	**Stephens Creek**	**84.48**	**190**	P	**P**	**10 47 57.6**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=341,slow=9.7,SNR=4.7						
	comp=Z,2.9nm,0.8s						
LPAZ	**La Paz**	**131.54**	**58**	SKPbc	**SKPbc**	**10 57 14.4**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=2.2,slow=10,SNR=6.0						
QSPA	**South Pole Qui**	**142.10**	**180**	PKP	**PKPdf**	**10 54 49.9**	**-1.3**
	comp=Z,3.4nm,0.6s,baz=179,slow=1.5,SNR=39						
QSPA				SKPbc	**SKiKP**	**10 57 44.7**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=4.4,slow=1.6,SNR=6.7						
PLCA	**Paso Flores**	**148.28**	**86**	PKPbc	**PKPbc**	**10 55 06.8**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=256,slow=2.1,SNR=6.6						
PLCA	**Paso Flores**	**148.28**	**86**		**PKiKP**	**10 55 07.9**	**+0.1**

TEH ***22*** *10:41:44.9,38˚.79N×44˚.33E,h10km±110km*
AZER ***22*** *10:41:48.5,38˚.45N×44˚.54E,h10km, ml3.4*
ISK ***22*** *10:41:48.7,38˚.23N×44˚.53E,h18km, ML3.5/11*
AFAD ***22*** *10:41:49.4,38˚.50N×44˚.51E,h7km±3km, MW3.5*
TIF ***22*** *10:41:49.8,37˚.90N×44˚.38E,h42km±3km*
NSSP ***22*** *10:41:49.3,38˚.50N×44˚.55E,h10km, Ms3.5*

ISC 22 10:41:49.6±1.1,38˚.45N±0˚.02×44˚.52E±0˚.02,h4km±10km, n56,σ1§32/99,2C,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**298**	SPECP		10 41 57.0	
OZAP				P	**Pg**	**10 41 58.0**	**-0.6**
OZAP				S	**Sg**	**10 42 04.8**	**+0.1**
TVAN	**Van**	**0.87**	**276**	P	**Pg**	**10 42 05.3**	**-1.1**
TVAN				S	**Sg**	**10 42 18.4**	**+0.6**
YOVA	**Hakkari_Yksek**	**0.88**	**192**	SPECP		10 42 07.0	
YOVA				P	**Pb**	**10 42 07.7**	**+0.2**
YOVA				S	**Sn**	**10 42 21.0**	**-1.2**
ISHB	**Shabestar**	**0.88**	**100**	Pg	**Pg**	**10 42 06.5**	**0.0**
VANB	**Van**	**0.90**	**280**	Pg	**Pg**	**10 42 07.2**	**+0.4**
VANB				Sg	**Sb**	**10 42 20.4**	**+0.2**
VMUR	**Van-Muradiye**	**0.92**	**307**	SPECP		10 42 06.0	
VMUR				P	**Pg**	**10 42 06.6**	**-0.6**
VMUR				S	**Sb**	**10 42 19.9**	**-1.0**
NAX	**Nakhchivan**	**1.06**	**46**	P	**Pb**	**10 42 10.3**	**-0.2**
NAX				S	**Sn**	**10 42 27.9**	**+1.4**
HAKT	**HAKKARI**	**1.09**	**216**	P	**Pg**	**10 42 09.9**	**-0.7**
HAKT				S	**Sn**	**10 42 28.1**	**+0.5**
HAKT	**HAKKARI**	**1.09**	**216**	P	**Pg**	**10 42 10.9**	**+0.3**
HAKT				S	**Sn**	**10 42 28.9**	**+1.3**
AKDM	**Akdamar-Van**	**1.21**	**265**	Pn	**Pn**	**10 42 11.3**	**-1.9**
AKDM				Sn	**Sb**	**10 42 28.2**	**-1.1**
SBZ	**Shahbuz**	**1.25**	**40**	P	**Pg**	**10 42 13.5**	**-0.1**
SBZ				S	**Sn**	**10 42 32.5**	**+1.2**
ORD	**Ordubad**	**1.25**	**67**	P	**Pg**	**10 42 13.9**	**+0.2**
ORD				S	**Sn**	**10 42 32.7**	**+1.3**
DYDN	**Diyadin**	**1.27**	**330**	SPECP		10 42 13.0	
DYDN				P	**Pn**	**10 42 13.4**	**-1.0**
DYDN				S	**Sb**	**10 42 29.5**	**-1.6**
HYR	**Heyderabad**	**1.30**	**12**	P	**Pg**	**10 42 15.3**	**+0.8**
HYR				S	**Sn**	**10 42 35.3**	**+2.8**
ITBZ	**Tabriz**	**1.30**	**99**	Pg	**Pn**	**10 42 14.1**	**-0.7**
VAYK	**Vayk**	**1.44**	**29**	*i* P	**Pb**	**10 42 16.6**	**-0.5**
VAYK				*i* S	**Sg**	**10 42 36.6**	**+0.9**
ADCV	**BITLIS_Adilcev**	**1.45**	**285**	SPECP		10 42 17.0	
ADCV				P	**Pg**	**10 42 17.5**	**+0.1**
ADCV				S	**Sg**	**10 42 37.9**	**+1.7**
IGDI	**IGDIR**	**1.46**	**347**	P	**Pg**	**10 42 17.5**	**-0.2**
IGDI				S	**Sg**	**10 42 39.1**	**+2.5**
IGDI	**IGDIR**	**1.46**	**347**	P	**Pg**	**10 42 17.4**	**-0.2**
IGDI				S	**Sg**	**10 42 39.9**	**+3.3**
TASB	**TASBURUN-IGDIR**	**1.55**	**352**	Pn	**Pg**	**10 42 19.3**	**-0.1**
TASB				Sn	**Sg**	**10 42 41.5**	**+2.0**
NRKZ	**NAREK**	**1.56**	**4**	*e*P	**Pg**	**10 42 19.1**	**-0.3**
NRKZ				*e*S	**Sg**	**10 42 40.4**	**+0.7**
PERV	**Siirt/Pervari-**	**1.63**	**253**	P	**Pg**	**10 42 21.2**	**+0.3**
PERV				S	**Sg**	**10 42 44.9**	**+2.8**
AGRB	**Hanur-Agry**	**1.64**	**314**	Pn	**Pb**	**10 42 19.9**	**-0.6**
DORK	**Agr/Tutak/Do**	**1.65**	**305**	SPECP		10 42 19.0	
DORK				P	**Pn**	**10 42 19.1**	**-0.4**
DORK				S	**Sg**	**10 42 42.0**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.69**	**295**	Pn	**Pn**	**10 42 20.1**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.69**	**323**	SPECP		10 42 20.0	
KOTA				P	**Pb**	**10 42 21.0**	**-0.5**
KOTA				S	**Sg**	**10 42 43.5**	**-0.6**
GNI	**Garni**	**1.71**	**6**	Pg	Pn	10 42 11.5	-6.9
GNI	**Garni**	**1.71**	**6**	Pn	**Pb**	**10 42 21.4**	**-0.3**
GNI				Sn	**Sg**	**10 42 45.1**	**+0.5**
GNI	**Garni**	**1.71**	**6⇑**	*i*P	**Pg**	**10 42 22.7**	**+0.2**
GNI			⇑	*i*S	**Sg**	**10 42 47.2**	**+2.6**
VNNZ	**Vanand**	**1.74**	**342**	*e*P	**Pg**	**10 42 22.6**	**-0.4**
VNNZ				*e*S	**Sg**	**10 42 46.4**	**+0.8**
EGVZ	**Egvard**	**1.77**	**63**	*e*P	**Pb**	**10 42 22.3**	**-0.4**
EGVZ				*e*S	**Sg**	**10 42 45.8**	**-0.6**
KAPZ	**Kaputan**	**1.88**	**4**	*e*P	**Pg**	**10 42 25.2**	**-0.5**
KAPZ				*e*S	**Sg**	**10 42 50.8**	**+0.8**
MAHB	**Mahabad**	**1.92**	**150**	Pn	**Pb**	**10 42 24.8**	**-0.5**
AYRK	**Ayrk**	**1.94**	**30**	*e*P	**Pb**	**10 42 25.7**	**+0.1**
AYRK				*e*S	**Sg**	**10 42 51.6**	**-0.3**
AMBZ	**Amberd**	**1.95**	**354**	*e*P	**Pb**	**10 42 25.0**	**-0.9**
AMBZ				*e*S	**Sb**	**10 42 50.5**	**-0.2**
GURO	**Guroymak-BITLI**	**1.95**	**274**	Pn	**Pn**	**10 42 22.7**	**-1.0**
SRTM	**Siirt_Merkez**	**2.09**	**258**	P	**Pb**	**10 42 27.8**	**-0.4**
SRTM				S	**Sb**	**10 42 55.2**	**+0.6**
QRD	**Qoradiz**	**2.41**	**64**	P	**Pn**	**10 42 31.0**	**+1.1**
QRD				S	**Sb**	**10 43 01.9**	**-1.8**
GDB	**GEDABAY**	**2.47**	**22**	P	**Pb**	**10 42 32.5**	**-2.1**
GDB				S	**Sb**	**10 43 05.8**	**+0.3**
LSVT	**Lusahovit**	**2.52**	**12**	*e*P	**Pg**	**10 42 37.2**	**-0.8**
LSVT				*e*S	**Sg**	**10 43 11.0**	**+0.3**
ISRB	**Sarab**	**2.56**	**103**	Pn	**Pn**	**10 42 32.6**	**+0.5**
KOPR	**Koprukoy-ERZUR**	**2.58**	**308**	Pn	**Pn**	**10 42 33.3**	**+0.9**
GANJ	**Ganja**	**2.60**	**32**	P	**Pn**	**10 42 33.8**	**+1.2**
GANJ				S	**Sb**	**10 43 08.9**	**-0.3**
AGDM	**Agdam**	**2.61**	**50**	P	**Pb**	**10 42 34.5**	**-2.5**
AGDM				S	**Sb**	**10 43 09.3**	**-0.1**
QZX	**Qazax, Azerbai**	**2.69**	**14**	P	**Pb**	**10 42 35.6**	**-2.8**
QZX				S	**Sb**	**10 43 10.5**	**-1.3**
SENK	**Senkaya-Erzuru**	**2.70**	**322**	Pn	**Pn**	**10 42 34.9**	**+0.9**
KARO	**Karliova-Bingo**	**2.84**	**289**	Pn	**Pn**	**10 42 36.3**	**+0.4**
YRD	**Yardimli**	**2.95**	**80**	P	**Pn**	**10 42 38.4**	**+0.9**
YRD				S	**Sn**	**10 43 14.7**	**+1.2**
LRK	**Lerik**	**3.01**	**85**	P	**Pn**	**10 42 39.4**	**+1.3**
LRK				S	**Sb**	**10 43 18.3**	**-2.6**
BNGB	**Bingl**	**3.05**	**281**	Pn	**Pn**	**10 42 38.1**	**-0.6**
DGRG	**David-gareji**	**3.07**	**12**	P	**Pg**	**10 42 47.6**	**-1.0**
DGRG				S	**Sg**	**10 43 28.5**	**+0.2**
TRLG	**Trialeti**	**3.11**	**354**	P	**Pb**	**10 42 46.4**	**+0.8**
TRLG				S	**Sg**	**10 43 28.2**	**-1.2**
GLBA	**Clilabad**	**3.13**	**74**	P	**Pn**	**10 42 41.1**	**+1.4**
GLBA				S	**Sb**	**10 43 20.6**	**-3.8**
VSHL	**Vashlovani**	**3.14**	**27**	P	**Pb**	**10 42 44.2**	**-1.7**
VSHL				S	**Sg**	**10 43 33.4**	**+3.0**
ASTR	**Astara**	**3.36**	**87**	P	**Pn**	**10 42 43.7**	**+0.9**
ASTR				S	**Sn**	**10 43 26.0**	**+2.8**
XNQ	**Khinaliq**	**3.90**	**45**	P	**Pn**	**10 42 51.4**	**+0.8**
XNQ				S	**Sn**	**10 43 34.2**	**-2.7**

IDC 22 10:46:31.6±265.0,56˚.42N×42˚.94E,h0km,Error ellipse: s-maj=111.8km s-min=63.4km az=100.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.18**	**278**	I	I	11 05 50.0	
	baz=93,slow=344,SNR=11						
I31KZ	**AKTYUBINSK INF**	**10.82**	**117**	I	I	11 46 30.0	
	baz=314,slow=294,SNR=0.8						
I46RU	**ZALESOVO INFRA**	**23.77**	**78**	I	I	13 15 10.0	
	baz=288,slow=319,SNR=2.0						

CATAC ***22*** *10:47:54.8±0.7, 14˚.N±3˚×9˚.1W±˚, h22km±4km, M3.2/11, MLv3.2/11, Error ellipse: s-maj=8.0km s-min=3.9km az=38.3, confirmed*
GCG ***22*** *10:47:57.0±1.6, 13˚.99N×91˚.46W, h40km±54km, MD3.9, ML4.0, MW3.1*
SNET ***22*** *10:47:57.6±0.8, 14˚.06N×91˚.25W, h17km±5km, ML3.3*

ISC 22 10:47:51.8±2.0,13˚.82N±0˚.07×91˚.46W±0˚.06,h3km±12km, n40,σ1§65/51,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.59**	**10**	*i* P	**Pn**	**10 48 10.5**	**+3.3**
STG5				*e*S	**Sn**	**10 48 20.6**	**+3.1**
STG2	**El Palmar, Qui**	**0.62**	**7**	*e*P	**Pn**	**10 48 11.3**	**+3.6**
STG8	**El Palmar, Qui**	**0.64**	**9**	*e*P	**Pn**	**10 48 11.5**	**+3.5**
STG8				*i* S	**Sn**	**10 48 23.0**	**+4.1**
STG8				IAML		10 48 24.4	
	comp=E,6μm,0.2s						
RTAL	**Retalhuleu**	**0.74**	**342**	*e*P	**Pn**	**10 48 09.2**	**0.0**
RTAL				*e*S	**Sn**	**10 48 18.7**	**-2.3**
RTAL	**Retalhuleu**	**0.74**	**342**	P	**Pn**	**10 48 09.3**	**0.0**
RTAL	**Retalhuleu**	**0.74**	**342**	S	**Sn**	**10 48 19.8**	**-1.2**
ESSG	**Sabana Grande**	**0.83**	**47**	*e*P	**Pn**	**10 48 10.6**	**+0.1**
ESSJ	**San Jos, E**	**0.96**	**105**	*e*P	**Pb**	**10 48 09.9**	**-1.2**
SOKI	**Kika Raxquin**	**1.00**	**3**	*e*P	**Pn**	**10 48 13.0**	**-0.2**
SOKI				*i* S	**Sn**	**10 48 25.8**	**-2.2**
FG16	**Alotenango, Sa**	**1.02**	**64**	*i* P	**Pb**	**10 48 11.7**	**-0.6**
FG16				*e*S	**Sb**	**10 48 21.8**	**-4.5**
FG16				IAML		10 48 24.2	
	comp=N,14μm,0.2s						
QUEO	**Labor Ovalle**	**1.05**	**357**	*i* P	**Pn**	**10 48 14.2**	**+0.5**
PCG5	**San Vicente Pa**	**1.12**	**69**	*e*P	**Pb**	**10 48 13.2**	**-0.7**
SMCA	**Catarina**	**1.20**	**330**	*e*P	**Pb**	**10 48 15.3**	**+0.2**
FAME	**Alcaldia de Sa**	**1.40**	**89**	P	**Pn**	**10 48 19.2**	**+0.9**
FAME	**Alcaldia de Sa**	**1.40**	**89**	S	**Sb**	**10 48 37.1**	**+0.2**
HUEH	**Huehuetenango**	**1.49**	**358**	*e*P	**Pg**	**10 48 20.3**	**-0.1**
HUEH				*e*S	**Sg**	**10 48 39.2**	**-0.6**
HUEH	**Huehuetenango**	**1.49**	**358**	P	**Pg**	**10 48 20.8**	**+0.3**
QUIS	**Sacapulas**	**1.51**	**13**	*i* P	**Pg**	**10 48 21.2**	**+0.5**
APG	**El Apazote**	**1.52**	**39**	*e*P	**Pg**	**10 48 21.2**	**+0.1**
NUBE	**Las Nubes**	**1.63**	**87**	*e*P	**Pb**	**10 48 22.9**	**+0.3**
NUBE				*e*S	**Sn**	**10 48 42.1**	**-1.1**
NUBE	**Las Nubes**	**1.63**	**87**	*i* P	**Pb**	**10 48 22.9**	**+0.3**
NUBE	**Las Nubes**	**1.63**	**87**	P	**Pb**	**10 48 22.9**	**+0.3**
NUBE	**Las Nubes**	**1.63**	**87**	S	**Sb**	**10 48 43.5**	**-0.2**
RTR	**El Retiro**	**1.76**	**87**	*e*P	**Pb**	**10 48 25.7**	**+0.8**
CEVE	**Cerro Verde**	**1.78**	**89**	*e*P	**Pb**	**10 48 25.6**	**+0.3**
CEVE				*e*S	**Sb**	**10 48 47.3**	**-0.7**
CEVE				IAML		10 48 52.0	
	comp=Z,352nm,0.2s						
SBLS	**San Blas**	**1.78**	**89**	*e*P	**Pb**	**10 48 25.5**	**+0.2**
SBLS				*e*S	**Sb**	**10 48 46.9**	**-1.2**
SNJE	**San Jose**	**1.80**	**88**	*e*P	**Pb**	**10 48 25.8**	**+0.2**
JAYA	**Jayaque - finc**	**1.96**	**94**	*e*P	**Pn**	**10 48 27.6**	**+1.6**
JAYA				*e*S	**Sn**	**10 48 50.5**	**-0.8**
JAYA				IAML		10 48 55.0	
	comp=Z,231nm,0.2s						
JAYA	**Jayaque - finc**	**1.96**	**94**	*e*P	**Pn**	**10 48 27.6**	**+1.6**
JAYA	**Jayaque - finc**	**1.96**	**94**	P	**Pn**	**10 48 27.7**	**+1.6**
JAYA	**Jayaque - finc**	**1.96**	**94**	S	**Sn**	**10 48 51.3**	**0.0**
PMOM	**Piamonte**	**2.08**	**93**	S	**Sn**	**10 48 55.4**	**+0.7**
MTO3	**Montecristo**	**2.11**	**74**	*e*P	**Pn**	**10 48 29.2**	**+1.0**
MTO3	**Montecristo**	**2.11**	**74**	*e*P	**Pn**	**10 48 29.3**	**+1.0**
MTO3	**Montecristo**	**2.11**	**74**	P	**Pn**	**10 48 28.4**	**+0.1**
MTO3	**Montecristo**	**2.11**	**74**	S	**Sb**	**10 48 55.4**	**-2.3**
ESQI	**Esquipulas**	**2.18**	**70**	*e*P	**Pn**	**10 48 30.2**	**+1.1**
ESQI	**Esquipulas**	**2.18**	**70**	P	**Pn**	**10 48 30.4**	**+1.3**
LOMA	**Loma Larga**	**2.23**	**94**	S	**Sb**	**10 48 59.4**	**-1.5**
LFRS	**El Faro**	**2.33**	**94**	*e*P	**Pn**	**10 48 33.1**	**+1.9**
LFRS				*e*S	**Sn**	**10 49 01.2**	**+0.7**

THE ***22*** *10:48:40.5,37˚.N±4˚×2˚.1E±˚, h0km±7km, M3.2/11, MLh3.2/11*
ATH ***22*** *10:48:40.3±0.5,36˚.93N×20˚.89E, h5km±2km, ML3.2/30, Manual Solution by N.Liadopoulou First location: 2019/11/22 10:49:46, This location: 2019/11/22 10:59:38 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
IDC ***22*** *10:48:41.9±21.0,37˚.52N×21˚.68E, h0km, mb3.8/5, mbtmp3.9/5, Error ellipse: s-maj=395.5km s-min=47.3km az=33.0*
BEO ***22*** *10:48:51.2±0.8,37˚.80N×20˚.40E, h10km, ML3.2/4*

ISC 22 10:48:39.1±1.6,36˚.93N±0˚.05×20˚.84E±0˚.05,h15km±10km, n91,σ1§12/105,mb3.8/5,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL1	**Pylos**	**0.69**	**91**	P	**Pb**	**10 48 52.8**	**+0.1**
PYL1				S	**Sb**	**10 49 03.4**	**+1.4**
MTHA	**Methoni**	**0.70**	**98**	P	**Pb**	**10 48 54.2**	**+1.2**
MTHA				S	**Sb**	**10 49 03.2**	**+0.8**
PYL	**PYLOS**	**0.72**	**92**	P	**Pg**	**10 48 53.3**	**+0.1**
PYL				S	**Sb**	**10 49 04.2**	**+1.1**
LTHK	**Lithakia**	**0.78**	**360**	P	**Pb**	**10 48 54.4**	**+0.1**
LTHK				S	**Sb**	**10 49 06.0**	**+1.2**
LTHK	**Lithakia**	**0.78**	**360**	P	**Pb**	**10 48 54.6**	**+0.2**
LTHK				S	**Sn**	**10 49 06.9**	**-0.1**
ZARO	**Zacharo**	**0.85**	**49**	P	**Pb**	**10 48 56.4**	**+0.8**
KYPS	**Kipseli, Zakin**	**0.89**	**359**	P	**Pb**	**10 48 57.0**	**+0.8**
KYPS				S	**Sn**	**10 49 10.4**	**+0.7**
ITM	**Ithomi**	**0.91**	**73**	P	**Pg**	**10 48 56.0**	**-0.7**
ITM				S	**Sb**	**10 49 08.3**	**-0.1**
ITM	**Ithomi**	**0.91**	**73**	P	**Pg**	**10 48 56.1**	**-0.5**
ITM				S	**Sb**	**10 49 08.9**	**+0.5**
AMT	**Artemida-Makis**	**0.92**	**49**	P	**Pb**	**10 48 57.6**	**+0.9**
AMT				S	**Sb**	**10 49 09.7**	**+0.9**
ORTH	**Orthonies,Zaky**	**0.93**	**353**	P	**Pn**	**10 48 58.1**	**+0.4**
ORTH				S	**Sn**	**10 49 11.7**	**+0.9**
KLMT	**Kalamata**	**0.99**	**82**	P	**Pn**	**10 48 59.2**	**+0.9**
CLEM	**Kyllini,Ilia,G**	**0.99**	**14**	P	**Pn**	**10 48 59.0**	**+0.5**
CLEM				S	**Sn**	**10 49 12.4**	**+0.2**
LCHA	**Lechaina**	**1.06**	**18**	P	**Pn**	**10 49 01.1**	**+1.6**
LCHA				S	**Sn**	**10 49 14.7**	**+0.8**
RTZL	**Ratzakli, Kefa**	**1.15**	**357**	P	**Pn**	**10 49 00.9**	**-0.4**
RTZL				S	**Sn**	**10 49 17.5**	**+1.4**
PSDA	**Pessada-Kefalo**	**1.20**	**350**	P	**Pb**	**10 49 02.1**	**+0.6**
PSDA	**Pessada-Kefalo**	**1.20**	**350**	P	**Pb**	**10 49 02.1**	**+0.6**
RLS	**Riolos of Patr**	**1.23**	**24**	P	**Pn**	**10 49 02.6**	**+0.8**
RLS	**Riolos of Patr**	**1.23**	**24**	P	**Pn**	**10 49 02.6**	**+0.8**
DRO	**Drossia**	**1.24**	**34**	P	**Pg**	**10 49 02.3**	**-0.6**
DRO	**Drossia**	**1.24**	**34**	P	**Pg**	**10 49 02.3**	**-0.6**
VLS	**Valsamata**	**1.27**	**351**	P	**Pg**	**10 49 03.0**	**-0.5**
VLS	**Valsamata**	**1.27**	**351**	P	**Pg**	**10 49 03.1**	**-0.4**
ARG2	**Argostoli**	**1.28**	**348**	P	**Pg**	**10 49 03.9**	**+0.2**
LXR1	**Lixouri, Cepha**	**1.31**	**346**	P	**Pg**	**10 49 05.1**	**+0.8**
SMHA	**Samh**	**1.33**	**353**	P	**Pg**	**10 49 05.0**	**+0.3**
AXS	**Araxos**	**1.34**	**18**	P	**Pg**	**10 49 04.5**	**-0.3**
DMLN	**Damoulianata-K**	**1.36**	**344**	P	**Pb**	**10 49 04.8**	**+0.5**
DMLN	**Damoulianata-K**	**1.36**	**344**	P	**Pg**	**10 49 05.2**	**-0.1**
KLV	**Kalavryta, Ach**	**1.53**	**43**	P	**Pn**	**10 49 06.9**	**+1.0**
KLV	**Kalavryta, Ach**	**1.53**	**43**	P	**Pb**	**10 49 06.2**	**0.0**
FSK	**Fiskardo**	**1.55**	**352**	P	**Pb**	**10 49 08.1**	**+0.7**
UPR	**University Cam**	**1.55**	**29**	P	**Pg**	**10 49 09.2**	**+0.4**
GUR	**Goura**	**1.56**	**49**	P	**Pn**	**10 49 07.5**	**+1.1**
VLI	**Veliai**	**1.70**	**96**	P	**Pb**	**10 49 10.7**	**+0.7**
VLI	**Veliai**	**1.70**	**96**	P	**Pb**	**10 49 10.5**	**+0.6**
EVGI	**Lefkada island**	**1.70**	**355**	P	**Pb**	**10 49 10.6**	**+0.6**
EFP	**Efpalio**	**1.72**	**29**	P	**Pb**	**10 49 10.8**	**+0.4**
TRIZ	**Trizonia**	**1.74**	**34**	P	**Pg**	**10 49 11.5**	**-1.0**
SERG	**Sergoula**	**1.77**	**33**	P	**Pb**	**10 49 11.7**	**+0.4**
PVO	**Paravola**	**1.77**	**18**	P	**Pb**	**10 49 11.8**	**+0.5**
MNVA	**Monemvasia**	**1.78**	**97**	P	**Pn**	**10 49 11.0**	**+1.7**
KALE	**Kalithea**	**1.79**	**35**	P	**Pb**	**10 49 11.9**	**+0.3**
LKD2	**Lefkada island**	**1.87**	**356**	P	**Pb**	**10 49 13.3**	**+0.5**
ANX	**Ano Chora**	**1.87**	**27**	P	**Pb**	**10 49 13.6**	**+0.5**
TSLK	**Tsoukalades, L**	**1.90**	**356**	P	**Pb**	**10 49 13.8**	**+0.3**
KTHA	**Kythira Island**	**1.91**	**110**	P	**Pb**	**10 49 13.5**	**-0.1**
KTHA	**Kythira Island**	**1.91**	**110**	P	**Pb**

HARU				S	**Sn**	**10 49 33.3**	**+2.2**
KTK1	**Kautokeino**	**1.64**	**28**	PG	**Pb**	**10 49 15.2**	**-0.3**
KTK1				SG	**Sg**	**10 49 37.3**	**+0.2**
I37NO	**I37NO**	**1.75**	**330**	I	I	11 00 40.0	
	baz=142,slow=327,SNR=2.4						
TOF	**Tornio**	**1.98**	**138**	PG	**Pb**	**10 49 21.8**	**+0.4**
TOF				smax	smax	10 49 46.1	
	comp=Z,4.7nm,0.2s						
TOF				SG	**Sg**	**10 49 49.3**	**+1.1**
RNF	**Rovaniemi**	**2.17**	**115**	PB	**Pb**	**10 49 24.4**	**-0.1**
RNF				SB	**Sg**	**10 49 53.8**	**-0.2**
ARA0	**ARCESS Array S**	**2.54**	**38**	PN	**Pn**	**10 49 28.6**	**+1.6**
ARA0				SN	**Sb**	**10 50 01.4**	**-1.3**
ARCES	**ARCESS Array B**	**2.54**	**38**	Pn	**Pn**	**10 49 28.1**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=14,SNR=18						
ARCES				Sn	**Sb**	**10 50 00.7**	**-2.1**
	comp=Z,0.8nm,0.3s,baz=218,slow=23,SNR=17						
	comp=Z,0.5nm,0.3s						
RANF	**Ranua**	**2.76**	**122**	PG	**Pb**	**10 49 35.0**	**+0.4**
RANF				SG	**Sg**	**10 50 11.8**	**-1.1**
RAJF	**Raja-Jooseppi**	**2.86**	**69**	PB	**Pb**	**10 49 36.3**	**0.0**
RAJF				SB	**Sb**	**10 50 12.2**	**+0.4**
BURU	**Burvik**	**3.02**	**178**	PG	**Pb**	**10 49 36.9**	**-2.1**
	baz=355						
BURU				SG	**Sb**	**10 50 16.8**	**+0.4**
KEV	**Kevo**	**3.07**	**42**	PN	**Pn**	**10 49 35.5**	**+1.4**
KEV				SN	**Sn**	**10 50 12.3**	**+0.7**
VRF	**Varrio**	**3.26**	**83**	PG	**Pg**	**10 49 46.0**	**-0.9**
	baz=269						
VRF				SB	**Sb**	**10 50 25.8**	**+2.5**
KU2	**Taivalkoski**	**3.41**	**120**	PB	**Pb**	**10 49 42.5**	**-3.3**
OUF	**Merijarvi**	**3.56**	**154**	SB	**Sb**	**10 50 29.8**	**-2.2**
FINES	**FINESS Array B**	**6.53**	**158**	Pn	**Pn**	**10 50 23.4**	**+1.7**
	comp=Z,2.8nm,0.9s,baz=350,slow=16,SNR=1.5						
FINES				Sn	**Sn**	**10 51 37.4**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=349,slow=21,SNR=1.2						
FINES				Lg	Lg	10 52 07.9	
	comp=Z,0.2nm,0.3s,baz=350,slow=30,SNR=2.4						

RSNC 22 10:52:25.1±0.0, 7°N±1°×7°3W±°, h148km±1km, M3.5, mB4.5, mb4.0, ML3.2, Mw(mB)3.7, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**196**	P	Pn	10 52 45.2	-0.3
BARC				S	Sn	10 53 00.1	-0.9
BRJC	**Barrancabermej**	**0.64**	**285**	P	Pn	10 52 46.9	-0.1
BRJC				S	Sn	10 53 03.4	-0.2
PAMC	**Pamplona, Colo**	**0.67**	**38**	P	Pn	10 52 47.9	+0.1
PAMC				S	Sn	10 53 05.1	+0.1
RUSC	**La Rusia**	**0.91**	**178**	P	Pn	10 52 48.9	-0.7
RUSC				S	Sn	10 53 07.8	-0.4
PTBC	**PUERTO BERRIO,**	**1.35**	**259**	P	Pn	10 52 51.6	-1.4
PTBC				S	Sn	10 53 13.1	-1.2
OCAC	**Ocana**	**1.43**	**352**	P	Pn	10 52 53.1	-0.9
OCAC				S	Sn	10 53 16.0	-0.1
SPBC	**San Pablo de B**	**1.49**	**219**	P	Pn	10 52 53.9	-0.6
SPBC				S	Sn	10 53 16.1	-0.9
CHIC	**Chingaza**	**2.25**	**196**	P	Pn	10 53 03.0	-0.5
CHIC				S	Sn	10 53 32.3	-0.7
ROSC	**El Rosal**	**2.29**	**211**	P	Pn	10 53 04.7	+0.7
ROSC				S	Sn	10 53 34.4	+0.5
CVER	**Cruz Verde, Cu**	**2.46**	**203**	P	Pn	10 53 06.3	+0.1
CVER				S	Sn	10 53 38.4	+0.6
HELC	**Santa Helena**	**2.47**	**256**	P	Pn	10 53 05.6	-0.5
HELC				S	Sn	10 53 35.3	-2.4
UREC	**San Jos de Ur**	**2.57**	**291**	P	Pn	10 53 05.0	-2.0
UREC				S	Sn	10 53 36.6	-2.7
GUY2C	**Guyana, Caldas**	**2.73**	**235**	P	Pn	10 53 10.1	+0.6
GUY2C				S	Sn	10 53 44.2	+0.5
VILC	**Villavicencio,**	**2.74**	**192**	P	Pn	10 53 07.9	-1.4
VILC				S	Sn	10 53 41.6	-1.8
CBOC	**Ciudad Bolivar**	**3.02**	**252**	P	Pn	10 53 12.7	-0.2
CBOC				S	Sn	10 53 49.4	-0.4
DBBC	**Dabeiba**	**3.07**	**274**	P	Pn	10 53 12.4	-1.0
DBBC				S	Sn	10 53 49.5	-1.3
SDV	**Santo Domingo**	**3.21**	**50**	P	Pn	10 53 14.3	-1.0
SDV				S	Sn	10 53 51.3	-2.9
ARGC	**Ariguani, Magd**	**3.23**	**340**	P	Pn	10 53 15.1	-0.2
ARGC				S	Sn	10 53 53.7	-0.5
PRAC	**Prado**	**3.54**	**210**	P	Pn	10 53 18.7	-0.7
PRAC				S	Sn	10 54 00.3	-1.3
ORTC	**Ortega, Tolima**	**3.58**	**216**	P	Pn	10 53 19.2	-0.7
ORTC				S	Sn	10 54 02.6	+0.3
SJCC	**San Jacinto, C**	**3.68**	**327**	P	Pn	10 53 19.0	-2.2
SJCC				S	Sn	10 54 00.4	-4.4
URMC	**La Uribe, Meta**	**3.75**	**200**	P	Pn	10 53 21.7	-0.5
URMC				S	Sn	10 54 04.9	-1.7
LCBC	**Los crdobas,**	**3.81**	**303**	P	Pn	10 53 21.4	-1.4
LCBC				S	Sn	10 54 08.2	+0.6
CRJC	**Cerrejon, Guaj**	**4.19**	**3**	P	Pn	10 53 25.3	-2.6
CRJC				S	Sn	10 54 13.9	-2.9
YOTC	**Yotoco, Valle**	**4.26**	**229**	P	Pn	10 53 27.8	-1.1
CAPC	**Capurgana**	**4.57**	**294**	P	Pn	10 53 29.1	-3.7
CAPC				S	Sn	10 54 20.3	-5.2
URIC	**Uribia, Colomb**	**4.99**	**13**	P	Pn	10 53 35.3	-3.0
JAMC	**Jamundi, Valle**	**5.03**	**225**	P	Pn	10 53 37.6	-1.5
	349nm11nm,0.8s						
JAMC				S	Sn	10 54 33.5	-3.3
	349nm11nm,0.8s						
GARC	**Garzon, Huila**	**5.17**	**207**	P	Pn	10 53 39.2	-1.8
POPC	**Popayan, Colom**	**5.53**	**220**	P	Pn	10 53 44.8	-1.0
	14nm,0.8s						
FLOC	**Florencia**	**5.77**	**206**	P	Pn	10 53 47.6	-1.3
	19nm,1.1s						
BBAC	**Balboa, Cauca**	**6.29**	**221**	P	Pn	10 53 55.6	-0.3

STR 22 10:52:46.3±0.1, 45.7°N±0.2°×5.3°E±0.3°, h0km, MLv1.5/7, LOCSAT earthModelID haslach_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGSM	**Saint Maurice**	**0.29**	**109**	Pg	Pg	10 52 51.7	-0.3
OGSM				Sg	Sg	10 52 56.2	+0.4
OG35	**Corcelles**	**0.39**	**29**	Pg	Pg	10 52 53.5	-0.2
OG35				Sg	Sg	10 52 59.2	+0.4
OGMY	**Moye**	**0.45**	**67**	Pg	Pg	10 52 54.6	-0.3
OGMY				Sg	Sg	10 53 01.4	+0.8
GRN	**Grenoble**	**0.56**	**146**	Sg	Sg	10 53 05.0	+0.7
SSB	**Saint Sauveur**	**0.69**	**232**	Pg	Pg	10 52 59.0	-0.4
RIVEL	**MONT RIVEL**	**1.14**	**22**	Pg	Pg	10 53 08.3	+0.2

*SDD **22** 11:01:15.8±1.1, 19.°12N×67.°07W, h31km±20km, MD3.5, ML2.7, MW3.1*
*NEIC **22** 11:01:15.2±1.5, 19.°06N±0.°04×67.°15W±0.°02, h10km±2km, ML2.6/12, Md3.2/9(RSPR), Error ellipse: s-maj=6.2km s-min=4.0km az=1.0*
*RSPR **22** 11:01:16.0, 19.°19N×67.°26W, h24km±25km, MD3.2/9*
ISC 22 11:01:14.0±1.8, 19.°12N±0.°07×67.°10W±0.°03, h3km±11km, n45, σ0°47/58, 15C-8D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.65**	**181**	⇑eP	**Pb**	**11 01 27.8**	**-0.2**
AGPR				⇑eSg	**Sb**	**11 01 37.1**	**-0.3**
AGPR				IAML		11 01 38.0	
	comp=N,496nm,0.3s						
AGPR	**Aguadilla, PR**	**0.65**	**181**	⇑eP	**Pb**	**11 01 28.3**	**+0.3**
AGPR	**Aguadilla, PR**	**0.65**	**181**	eS	**Sb**	**11 01 37.8**	**+0.3**
IDE	**Isla Desecheo**	**0.81**	**206**		**Pg**	**11 01 29.6**	**0.0**
IDE					**Sg**	**11 01 41.1**	**+1.0**
IDE	**Isla Desecheo**	**0.81**	**206**	⇓iP	**Pg**	**11 01 29.6**	**0.0**
IDE	**Isla Desecheo**	**0.81**	**206**	eS	**Sg**	**11 01 41.1**	**+1.0**
AOPR	**Arecibo Observ**	**0.83**	**157**		**Pb**	**11 01 31.1**	**-0.1**
AOPR					**Sb**	**11 01 43.1**	**+0.3**
AOPR	**Arecibo Observ**	**0.83**	**157**	⇑eP	**Pb**	**11 01 31.4**	**+0.2**
AOPR				⇑eSg	**Sb**	**11 01 42.5**	**-0.4**
AOPR				IAML		11 01 51.6	
	comp=N,339nm,0.2s						
AOPR	**Arecibo Observ**	**0.83**	**157**	⇑iP	**Pb**	**11 01 31.4**	**+0.2**
AOPR	**Arecibo Observ**	**0.83**	**157**	eS	**Sb**	**11 01 43.2**	**+0.3**
EMPR	**Esperanza - Ma**	**0.83**	**140**		**Pn**	**11 01 32.7**	**0.0**
EMPR					**Sn**	**11 01 45.3**	**-0.2**
EMPR	**Esperanza - Ma**	**0.83**	**140**	⇑eP	**Pn**	**11 01 32.7**	**0.0**
EMPR	**Esperanza - Ma**	**0.83**	**140**	eS	**Sn**	**11 01 45.3**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.93**	**157**		**Pb**	**11 01 32.9**	**0.0**
UUPR					**Sb**	**11 01 46.0**	**+0.3**
UUPR	**Utuado, UPR, P**	**0.93**	**157**	⇑eP	**Pb**	**11 01 32.9**	**0.0**
UUPR	**Utuado, UPR, P**	**0.93**	**157**	eS	**Sb**	**11 01 46.0**	**+0.3**
LSP	**Las Mesas**	**0.94**	**179**		**Pg**	**11 01 32.5**	**+0.4**
LSP					**Sb**	**11 01 45.6**	**-0.3**
LSP	**Las Mesas**	**0.94**	**179**	⇑eP	**Pg**	**11 01 32.5**	**+0.4**
LSP	**Las Mesas**	**0.94**	**179**	eS	**Sb**	**11 01 45.6**	**-0.3**
ECPR	**Experimental S**	**1.06**	**139**	⇓eP	**Pn**	**11 01 35.7**	**-0.1**
ECPR	**Experimental S**	**1.06**	**139**	eS	**Sb**	**11 01 49.9**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.11**	**181**		**Pg**	**11 01 34.8**	**-0.5**
CRPR					**Sg**	**11 01 49.8**	**+0.2**
CRPR				IAML		11 01 54.1	
	comp=E,136nm,0.2s						
CRPR				IAML		11 01 58.8	
	comp=N,137nm,0.5s						
CRPR	**Cabo Rojo, PR**	**1.11**	**181**	⇑eP	**Pg**	**11 01 34.8**	**-0.5**
CRPR				⇑eSg	**Sg**	**11 01 48.9**	**-0.8**
CRPR				IAML		11 01 58.8	
	comp=N,163nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.11**	**181**	⇑iP	**Pg**	**11 01 34.8**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.11**	**181**	eS	**Sb**	**11 01 50.2**	**-0.5**
MLPR	**Magueyes Islan**	**1.15**	**178**	⇓eP	**Pg**	**11 01 35.3**	**-0.6**
MLPR				⇓eSg	**Sg**	**11 01 50.6**	**-0.3**
MLPR				IAML		11 01 59.9	
	comp=N,52nm,0.2s						
MLPR	**Magueyes Islan**	**1.15**	**178**	⇑iP	**Pg**	**11 01 35.4**	**-0.6**
MLPR	**Magueyes Islan**	**1.15**	**178**	eS	**Sb**	**11 01 51.1**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.16**	**170**		**Pb**	**11 01 36.8**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.16**	**170**	⇑eP	**Pb**	**11 01 36.8**	**+0.1**
OBIP	**Obispado Ponce**	**1.17**	**156**		**Pg**	**11 01 36.4**	**0.0**
OBIP					**Sb**	**11 01 52.6**	**+0.2**
OBIP				IAML		11 01 56.0	
	comp=N,131nm,0.5s						
OBIP	**Obispado Ponce**	**1.17**	**156**	⇓eP	**Pb**	**11 01 36.7**	**-0.2**
OBIP	**Obispado Ponce**	**1.17**	**156**	eS	**Sb**	**11 01 52.3**	**-0.1**
GCPR	**Guaynabo City**	**1.25**	**130**		**Pb**	**11 01 38.3**	**0.0**
GCPR	**Guaynabo City**	**1.25**	**130**	⇓eP	**Pn**	**11 01 39.4**	**+0.9**
GCPR	**Guaynabo City**	**1.25**	**130**	eS	**Sn**	**11 01 55.6**	**-0.3**
SJG	**San Juan**	**1.35**	**138**		**Pg**	**11 01 39.5**	**-0.4**
SJG				IAML		11 02 07.2	
	comp=N,94nm,0.3s						
SJG	**San Juan**	**1.35**	**138**	⇑eP	**Pn**	**11 01 41.1**	**+1.4**
SJG	**San Juan**	**1.35**	**138**	eS	**Sg**	**11 01 56.7**	**-0.6**
HUMP	**Col San Antoni**	**1.53**	**129**		**Pn**	**11 01 41.4**	**-0.9**
HUMP				IAML		11 02 10.1	
	comp=N,76nm,0.2s						
HUMP				IAML		11 02 13.8	
	comp=E,90nm,0.2s						
HUMP	**Col San Antoni**	**1.53**	**129**	⇓eP	**Pg**	**11 01 43.7**	**+0.3**
HUMP	**Col San Antoni**	**1.53**	**129**	eS	**Sn**	**11 02 02.8**	**+0.1**
MIDR	**Miches**	**1.85**	**266**	⇓eSg	**Sn**	**11 02 10.5**	**-0.1**
MIDR				⇑eSg	**Sb**	**11 02 11.3**	**-0.9**
MIDR				IAML		11 02 11.8	
	comp=N,68nm,0.9s						
DR12	**Loma Pena Alta**	**2.19**	**262**	Pn	**Pn**	**11 01 51.4**	**0.0**
HATOM	**Hato Mayor del**	**2.19**	**262**	⇓eP	**Pn**	**11 01 51.7**	**+0.3**
HATOM				⇑eSg	**Sn**	**11 02 19.4**	**+0.4**
HATOM				IAML		11 02 28.8	
	comp=N,47nm,1.6s						

*NEIC **22** 11:05:44.2±2.1, 6.°14S±0.°08×149.°89E±0.°09, h35km±2km, mb4.7/26, Error ellipse: s-maj=16.1km s-min=10.8km az=125.0*
*IDC **22** 11:05:44.4±2.4, 6.°00S×149.°84E, h49km±21km, mb3.8/16, mbtmp4.1/16, ML2.9/1, MS3.6/30, Error ellipse: s-maj=23.8km s-min=11.5km az=103.0*
*DJA **22** 11:05:44.0±0.6, 6.°5S±4.°×15.°0E±°, h40km±6km, M5.1/19, mb4.8/19, mB5.1/1, MLv5.3/1, Mw(mB)4.5/1*
ISC 22 11:05:45.0±0.4, 6.°17S±0.°05×149.°89E±0.°07, h52km, n93, σ1°73/79, mb4.3/30, MS3.7/30, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.00**	**49**		**Pn**	**11 06 30.1**	**+0.1**
PMG	**Port Moresby**	**4.20**	**220**	P	**Pn**	**11 06 47.8**	**+1.1**
	50nm,0.3s,baz=43,slow=5.7,SNR=189						
PMG				S	**Sn**	**11 07 34.1**	**-0.3**
	689nm,0.7s,baz=309,slow=22,SNR=9.7						
PMG	**Port Moresby**	**4.20**	**220**		**Pn**	**11 06 48.0**	**+1.4**
MANU	**Manus Island**	**4.81**	**328**		**Pn**	**11 06 54.7**	**-0.2**
JAY	**Jayapura**	**9.85**	**291**	P	**Pn**	**11 08 01.6**	**-2.5**
	22nm,1.1s						
COEN	**Coen**	**10.18**	**220**		**Pn**	**11 08 07.0**	**-1.5**
GENI	**Genyem**	**10.32**	**290**	P	Pn	11 08 05.2	-5.3
	34nm,0.5s						
HNR	**Honiara**	**10.48**	**109**	LR	LR	11 10 58.4	
	comp=Z,139nm,21.0s,baz=296,slow=30						
CTA	**Charters Tower**	**14.28**	**194**	LR	LR	11 14 36.9	
	comp=Z,5.9nm,18.4s,baz=40,slow=37						
CTAO	**Charters Tower**	**14.28**	**194**		**Pn**	**11 09 04.5**	**0.0**
FAKI	**Fak Fak**	**17.88**	**280**	P	**P**	**11 09 51.2**	**+0.9**
EIDS	**Eidsvold**	**19.13**	**177**	P	**P**	**11 10 04.0**	**+0.1**
MTN	**Manton Dam**	**19.64**	**249**		**P**	**11 10 10.0**	**+0.4**
MTN				IAmb	IAmb	11 10 20.0	
	comp=Z,26nm,0.8s						
WB0	**Warramunga Arr**	**20.24**	**227**		**P**	**11 10 16.6**	**+0.5**
WB0				IAmb	IAmb	11 10 26.5	
	comp=Z,23nm,0.7s						
GUMO	**Guam**	**20.25**	**346**	LR	LR	11 18 05.8	
	comp=Z,108nm,18.4s,baz=142,slow=37						
WR8	**Warramunga Arr**	**20.28**	**226**		**P**	**11 10 17.3**	**+0.8**
WR8				IAmb	IAmb	11 10 27.4	
	comp=Z,21nm,0.9s						
WRAB	**Tennant Creek**	**20.38**	**226**	P	**P**	**11 10 18.3**	**+0.7**
WRAB				IAmb	IAmb	11 10 36.9	
	comp=Z,21nm,0.6s						
WRA	**Warramunga Arr**	**20.39**	**226**	P	**P**	**11 10 18.1**	**+0.4**
	comp=Z,18nm,0.7s,baz=49,slow=10,SNR=48						
WRA				S	**S**	**11 13 59.0**	**-4.4**
	comp=Z,2.3nm,0.9s,baz=52,slow=22,SNR=6.2						
WRA				PcP	**PcP**	**11 14 29.5**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=52,slow=1.9,SNR=5.2						
WRA				LR	LR	11 18 50.0	
	comp=Z,252nm,19.6s,baz=52,slow=38						
	comp=Z,18nm,0.7s						
KNRA	**Kununurra**	**22.77**	**244**		**P**	**11 10 42.8**	**-0.5**
KNRA				IAmb	IAmb	11 10 46.5	
	comp=Z,38nm,0.6s						
INKA	**Innaminka**	**23.15**	**201**		**P**	**11 10 47.9**	**+0.9**
ASAR	**Alice Springs**	**23.22**	**220**	P	**P**	**11 10 48.2**	**+0.4**
	comp=Z,3.8nm,0.6s,baz=53,slow=9.3,SNR=32						
ASAR				PcP	**PcP**	**11 14 35.3**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=55,slow=3.5,SNR=3.9						
ASAR				S	**S**	**11 14 58.4**	**+2.3**
	comp=Z,3.6nm,1.0s,baz=32,slow=22,SNR=9.9						
ASAR				LR	LR	11 19 20.7	
	comp=Z,233nm,21.7s,baz=25,slow=35						
	comp=Z,3.8nm,0.6s						
ASAR	**Alice Springs**	**23.22**	**220**	P	**P**	**11 10 48.9**	**+1.1**
ARMA	**Armidale**	**24.18**	**176**	P	**P**	**11 10 57.8**	**+1.1**
SOEI	**Soe**	**25.62**	**260**		**P**	**11 11 10.4**	**+0.3**
SOEI				IAmb	IAmb	11 11 38.0	
	comp=Z,53nm,1.3s						
SOEI	**Soe**	**25.62**	**260**	P	**P**	**11 11 10.2**	**+0.2**
	comp=Z,31nm,0.7s						
FITZ	**Fitzroy Crossi**	**26.46**	**241**	LR	LR	11 23 31.3	
	comp=Z,150nm,18.5s,baz=33,slow=40						
FITZ	**Fitzroy Crossi**	**26.46**	**241**	P	**P**	**11 11 17.7**	**+0.3**
FITZ				IAmb	IAmb	11 11 30.1	
	comp=Z,14nm,1.0s						
LHI	**Lord Howe Isla**	**26.64**	**162**	P	**P**	**11 11 16.1**	**-2.8**
STKA	**Stephens Creek**	**26.73**	**196**	P	**P**	**11 11 20.7**	**+1.0**
	comp=Z,4.3nm,0.7s,baz=340,slow=9.0,SNR=9.4						
STKA				LR	LR	11 22 11.6	
	comp=Z,216nm,20.3s,baz=16,slow=37						
	comp=Z,4.3nm,0.7s						
MMRI	**Maumere**	**27.53**	**263**	P	**P**	**11 11 25.9**	**-1.3**
DAV	**Davao City (W)**	**27.59**	**298**	LR	LR	11 21 59.7	
	comp=Z,27nm,21.7s,baz=154,slow=36						
EDFI	**Ende, Flores**	**28.07**	**263**	P	**P**	**11 11 29.0**	**-3.1**
	comp=Z,29nm,0.9s						
BBOO	**Buckleboo**	**29.47**	**204**	P	**P**	**11 11 44.5**	**+0.3**
BBOO				IAmb	IAmb	11 11 50.8	
	comp=Z,8.2nm,0.8s						
KAPI	**Kappang**	**30.02**	**271**	LR	LR	11 26 47.7	
	comp=Z,54nm,18.2s,baz=79,slow=42						
TOO	**Toolangi**	**31.51**	**187**	P	**P**	**11 12 01.3**	**-0.9**
FORT	**Forrest**	**31.93**	**217**	P	**P**	**11 12 06.0**	**+0.1**
FORT				IAmb	IAmb	11 12 16.5	
	comp=Z,8.8nm,0.7s						
MBWA	**Marble Bar**	**32.78**	**240**	P	**P**	**11 12 13.5**	**0.0**
MBWA				IAmb	IAmb	11 12 23.9	
	comp=Z,16nm,0.9s						
PSA00	**Pilbara Seismi**	**32.84**	**239**	P	**P**	**11 12 13.9**	**-0.2**
PSA00				IAmb	IAmb	11 12 36.1	
	comp=Z,6.0nm,0.8s						
JAGI	**Jajag, Banyuwa**	**35.51**	**264**	P	**P**	**11 12 35.6**	**-1.6**
GIRL	**Giralia**	**38.08**	**241**	P	**P**	**11 12 58.1**	**-0.8**
URZ	**Urewera**	**40.37**	**146**	LR	LR	11 28 00.2	
	comp=Z,170nm,21.0s,baz=300,slow=33						
NWAO	**Narrogin (SRO)**	**40.38**	**224**	LR	LR	11 31 03.0	
	comp=Z,193nm,18.4s,baz=316,slow=38						
KPJI	**Karang Pucung**	**40.68**	**266**	P	**P**	**11 13 21.2**	**+0.4**
MJAR	**Matsushiro Arr**	**43.87**	**346**	P	**P**	**11 13 43.6**	**-2.8**
	comp=Z,2.2nm,0.8s,baz=162,slow=8.1,SNR=3.4						
MJAR				LR	LR	11 29 14.5	
	comp=Z,102nm,21.9s,baz=162,slow=32						
	comp=Z,2.2nm,0.8s						
KSRS	**Korea Array**	**48.00**	**336**	P	**P**	**11 14 17.6**	**-1.2**
	comp=Z,2.2nm,0.8s,baz=154,slow=8.4,SNR=11						
	comp=Z,2.2nm,0.8s						
NJ2	**Nanjing**	**48.16**	**324**	eP	**P**	**11 14 23.9**	**+3.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.67**	**344**	P	**P**	**11 14 52.1**	**-2.0**
	comp=Z,1.9nm,0.7s,baz=174,slow=9.1,SNR=3.3						
	comp=Z,1.9nm,0.7s						
BNX	**BinXian**	**55.45**	**341**	⇓P	**P**	**11 15 15.5**	**+1.2**
BNX				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**55.88**	**297**	P	**P**	**11 15 15.5**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=112,slow=8.0,SNR=1.0						
CMAR				LR	LR	11 41 40.2	
	comp=Z,8.0nm,18.5s,baz=190,slow=39						
	comp=Z,0.4nm,0.3s						
PZH	**PanZhiHua**	**56.83**	**307**	P	**P**	**11 15 28.9**	**+4.2**
HHC	**Hu-ho-hao-te**	**58.52**	**327**	eP	**P**	**11 15 40.8**	**+4.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
HHC				LR	LR		
	comp=Z,130nm,16.9s						
PETK	**Petropavlovsk-**	**59.42**	**5**	P	**P**	**11 15 41.3**	**-0.8**
	comp=Z,2.1nm,0.5s,baz=154,slow=5.5,SNR=14						
PETK				LR	LR	11 36 58.8	
	comp=Z,63nm,21.9s,baz=180,slow=32						
	comp=Z,2.1nm,0.5s						
PETK	**Petropavlovsk-**	**59.42**	**5**	P	**P**	**11 15 42.5**	**+0.3**
HEH	**HeiHe**	**59.47**	**343**	eP	**P**	**11 15 42.8**	**+0.3**
SHEM	**Shemya Is, Ala**	**62.17**	**16**	LR	LR	11 39 16.7	
	comp=Z,97nm,21.5s,baz=108,slow=32						
GTA	**Gaotai**	**64.73**	**319**	eP	**P**	**11 16 21.4**	**+3.2**
GTA				pP	sP	11 16 36.6	-2.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MA2	**Magadan**	**65.54**	**0**	LR	LR	11 41 40.4	
	comp=Z,44nm,21.8s,baz=136,slow=33						
CASY	**Casey**	**65.88**	**196**	P	**P**	**11 16 25.5**	**+0.5**
SONM	**Songino Array**	**65.98**	**329**	P	**P**	**11 16 25.1**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=140,slow=4.3,SNR=7.5						
SONM				LR	LR	11 47 56.3	
	comp=Z,43nm,18.1s,baz=100,slow=38						
	comp=Z,1.7nm,0.8s						
SEY	**Seymchan**	**68.93**	**1**	LR	LR	11 46 41.1	
	comp=Z,17nm,19.6s,baz=162,slow=36						
YAK	**Yakutsk**	**69.77**	**350**	LR	LR	11 45 57.0	
	comp=Z,22nm,22.0s,baz=98,slow=35						
VNDA	**Vanda**	**71.59**	**177**	P	**P**	**11 17 00.9**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=319,slow=4.9,SNR=5.2						
	comp=Z,2.2nm,0.7s						
VNDA	**Vanda**	**71.59**	**177**	P	**P**	**11 17 01.2**	**+0.8**
VNDA				IAmb	IAmb	11 17 03.0	
	comp=Z,7.3nm,1.1s						
SBA	**Scott Base**	**72.19**	**176**	P	**P**	**11 17 05.7**	**+1.7**
KDAK	**Kodiak Island**	**78.71**	**27**	LR	LR	11 45 32.0	
	comp=Z,51nm,22.0s,baz=210,slow=30						
TIXI	**Tiksi**	**78.89**	**353**	LR	LR	11 55 16.1	
	comp=Z,22nm,18.0s,baz=248,slow=38						
MKAR	**Makanchi Array**	**79.47**	**320**	P	**P**	**11 17 46.2**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=100,slow=6.8,SNR=4.0						
MKAR				LR	LR	11 52 05.9	
	comp=Z,40nm,19.7s,baz=334,slow=35						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**79.47**	**320**	P	**P**	**11 17 45.1**	**-1.0**
ZALV	**Zalesovo Beam**	**80.70**	**327**	P	**P**	**11 17 50.8**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=102,slow=6.2,SNR=5.6	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHZ	**Kahuranaki**	**0.10**	**55**	P	**Pn**	**11 18 12.2**	**+0.2**
KAHZ				S	**Sn**	**11 18 18.4**	**+0.5**
WPWS	**Waipawa Distri**	**0.17**	**237**	P	**Pn**	**11 18 12.1**	**-0.2**
PWZ	**Pawanui**	**0.19**	**157**	P	**Pn**	**11 18 12.9**	**+0.5**
PXZ	**Pawanui**	**0.19**	**157**	P	**Pn**	**11 18 13.0**	**+0.6**
PXZ				S	**Sn**	**11 18 19.7**	**+1.1**
HCDS	**Hastings Civil**	**0.22**	**16**	P	**Pn**	**11 18 12.2**	**-0.3**
CKHZ	**Cape Kidnapper**	**0.31**	**51**	P	**Pn**	**11 18 13.7**	**+0.4**
WPHZ	**Waipukurau**	**0.33**	**230**	P	**Pn**	**11 18 14.0**	**+0.5**
WPHZ				S	**Sn**	**11 18 21.0**	**+0.6**
NCDS	**Napier Civil D**	**0.36**	**14**	P	**Pn**	**11 18 13.8**	**0.0**
NCDS				S	**Sn**	**11 18 21.1**	**+0.2**
KRHZ	**Kereru**	**0.37**	**305**	P	**Pn**	**11 18 13.1**	**-0.7**
KRHZ				S	**Sn**	**11 18 19.4**	**-1.6**
WAKS	**Wakarara Rangi**	**0.40**	**281**	P	**Pn**	**11 18 13.8**	**-0.3**
MCHZ	**McNeill Hill**	**0.41**	**353**	P	**Pn**	**11 18 14.2**	**-0.1**
PRHZ	**Porangahau**	**0.42**	**193**	P	**Pn**	**11 18 15.5**	**+1.1**
PNHZ	**Pukenui**	**0.44**	**262**	P	**Pn**	**11 18 14.5**	**-0.1**
KWHZ	**Kaweka Forest**	**0.50**	**328**	P	**Pn**	**11 18 14.8**	**-0.5**
ARHZ	**Aropaoanui**	**0.62**	**17**	P	**Pn**	**11 18 17.1**	**+0.5**
DVHZ	**Dannevirke**	**0.64**	**226**	P	**Pn**	**11 18 17.5**	**+0.6**
ANWZ	**Angora Road**	**0.65**	**200**	P	**Pn**	**11 18 18.0**	**+1.1**
TSZ	**Takapari Road**	**0.65**	**251**	P	**Pn**	**11 18 17.3**	**+0.2**
BKZ	**Black Stump Fm**	**0.72**	**343**	P	**Pn**	**11 18 17.6**	**-0.4**
BKZ	**Black Stump Fm**	**0.72**	**343**	S	**Sn**	**11 18 27.7**	**-0.5**
BKZ	**Black Stump Fm**	**0.72**	**343**	P	**Pn**	**11 18 17.8**	**-0.1**
NMHZ	**Naumai**	**0.76**	**2**	P	**Pn**	**11 18 18.9**	**+0.4**
WHHZ	**Waihua**	**0.86**	**25**	P	**Pn**	**11 18 20.2**	**+0.5**
MOVZ	**Moawhango**	**0.90**	**299**	P	**Pn**	**11 18 20.8**	**+0.5**
BFZ	**Birch Farm**	**0.92**	**205**	P	**Pn**	**11 18 21.0**	**+0.5**
BFZ	**Birch Farm**	**0.92**	**205**	S	**Sn**	**11 18 32.3**	**-0.5**
BFZ	**Birch Farm**	**0.92**	**205**	P	**Pn**	**11 18 21.3**	**+0.8**
PRWZ	**Pori Road**	**0.93**	**221**	P	**Pn**	**11 18 21.7**	**+1.0**
POWZ	**Post Office Ro**	**0.93**	**235**	P	**Pn**	**11 18 21.4**	**+0.7**
RAHZ	**Arahi**	**0.97**	**15**	P	**Pn**	**11 18 21.5**	**+0.3**
MTHZ	**Maungataniwha**	**1.00**	**3**	P	**Pn**	**11 18 21.8**	**+0.1**
TUVZ	**Tukino**	**1.04**	**304**	P	**Pn**	**11 18 23.2**	**+1.0**
WNVZ	**Wahianoa**	**1.04**	**300**	P	**Pn**	**11 18 23.3**	**+0.9**
MRHZ	**Matea Rd**	**1.05**	**345**	P	**Pn**	**11 18 22.8**	**+0.4**
WHVZ	**Whangaehu Hut**	**1.07**	**302**	P	**Pn**	**11 18 23.6**	**+0.9**
ETVZ	**East Tongariro**	**1.09**	**311**	P	**Pn**	**11 18 23.6**	**+0.8**
KNZ	**Kokohu**	**1.09**	**41**	P	**Pn**	**11 18 22.8**	**+0.1**
TRVZ	**Turoa**	**1.09**	**300**	P	**Pn**	**11 18 23.9**	**+0.9**
HATZ	**Hinemaiaia**	**1.09**	**331**	P	**Pn**	**11 18 23.5**	**+0.6**
OTVZ	**Oturere**	**1.09**	**309**	P	**Pn**	**11 18 23.7**	**+0.7**
SNVZ	**South Ngauruho**	**1.10**	**307**	P	**Pn**	**11 18 24.1**	**+1.0**
MAVZ	**Matarangi**	**1.10**	**302**	P	**Pn**	**11 18 24.4**	**+1.2**
TMVZ	**Te Maari**	**1.10**	**312**	P	**Pn**	**11 18 23.9**	**+0.8**
MTVZ	**Mangateitei**	**1.10**	**295**	P	**Pn**	**11 18 24.0**	**+0.9**
FWVZ	**Far West T-bar**	**1.11**	**302**	P	**Pn**	**11 18 24.1**	**+0.8**
RITZ	**Rihia Road**	**1.12**	**321**	P	**Pn**	**11 18 24.2**	**+1.0**
NGZ	**Ngauruhoe**	**1.13**	**307**	P	**Pn**	**11 18 24.2**	**+0.8**
MHGZ	**Mahia Peninsul**	**1.13**	**52**	P	**Pn**	**11 18 23.9**	**+0.6**
NTVZ	**North Tongarir**	**1.13**	**311**	P	**Pn**	**11 18 24.2**	**+0.7**
CPWZ	**Castlepoint**	**1.14**	**202**	P	**Pn**	**11 18 24.7**	**+1.3**
TIWZ	**Tintock**	**1.14**	**216**	P	**Pn**	**11 18 24.2**	**+0.7**
NNVZ	**North Ngauruho**	**1.15**	**309**	P	**Pn**	**11 18 24.7**	**+1.0**
COVZ	**Chateau Observ**	**1.15**	**304**	P	**Pn**	**11 18 24.7**	**+1.0**
KRVZ	**Karewarewa**	**1.15**	**311**	P	**Pn**	**11 18 24.5**	**+0.7**
SNGZ	**Shannon Statio**	**1.16**	**23**	P	**Pn**	**11 18 24.0**	**+0.2**
OHWZ	**Ohakea**	**1.17**	**252**	P	**Pn**	**11 18 25.6**	**+1.8**
WTVZ	**West Tongariro**	**1.17**	**309**	P	**Pn**	**11 18 25.1**	**+1.1**
KATZ	**Kakaramea**	**1.21**	**316**	P	**Pn**	**11 18 25.4**	**+0.9**
MRZ	**Mangatainoka R**	**1.21**	**228**	P	**Pn**	**11 18 24.8**	**+0.4**
PKVZ	**Pokaka**	**1.23**	**297**	P	**Pn**	**11 18 25.6**	**+0.8**
RTZ	**Ruatahuna**	**1.25**	**8**	P	**Pn**	**11 18 25.1**	**+0.1**
RATZ	**Rangitukua**	**1.25**	**322**	P	**Pn**	**11 18 25.6**	**+0.6**
PRGZ	**Paritu Road**	**1.27**	**43**	P	**Pn**	**11 18 25.6**	**+0.4**
TWVZ	**Taurewa**	**1.29**	**307**	P	**Pn**	**11 18 26.3**	**+0.7**
WHTZ	**Whakaora**	**1.34**	**332**	P	**Pn**	**11 18 27.0**	**+0.7**
WAZ	**Wanganui**	**1.37**	**274**	P	**Pn**	**11 18 28.5**	**+1.9**
MUGZ	**Murupara**	**1.38**	**0**	P	**Pn**	**11 18 26.7**	**+0.1**
PRRZ	**Plateau Road**	**1.38**	**348**	P	**Pn**	**11 18 27.0**	**+0.3**
RIGZ	**Rimuhau**	**1.38**	**34**	P	**Pn**	**11 18 26.8**	**0.0**
WATZ	**Wairara**	**1.40**	**325**	P	**Pn**	**11 18 27.2**	**+0.2**
WPRZ	**Whakapapatarin**	**1.41**	**340**	P	**Pn**	**11 18 27.3**	**+0.2**
HOWZ	**Holdsworth Sta**	**1.41**	**222**	P	**Pn**	**11 18 27.3**	**+0.1**
TMWZ	**Te Maipa**	**1.42**	**208**	P	**Pn**	**11 18 27.4**	**+0.2**
RAGZ	**Rawiri**	**1.45**	**21**	P	**Pn**	**11 18 27.7**	**0.0**
HRRZ	**Handcock Road**	**1.51**	**346**	P	**Pn**	**11 18 28.7**	**+0.2**
RRRZ	**Republican Roa**	**1.52**	**353**	P	**Pn**	**11 18 28.8**	**+0.1**
KUTZ	**Kaahu Road**	**1.55**	**331**	P	**Pn**	**11 18 29.3**	**+0.3**
OGTZ	**Otaki Gorge**	**1.55**	**231**	P	**Pn**	**11 18 29.1**	**+0.1**
GRRZ	**Galatos Road**	**1.59**	**341**	P	**Pn**	**11 18 30.0**	**+0.5**
HSRZ	**Hossack Road**	**1.59**	**345**	P	**Pn**	**11 18 30.0**	**+0.4**
URZ	**Urewera**	**1.61**	**10**	P	**Pn**	**11 18 29.6**	**-0.3**
URZ	**Urewera**	**1.61**	**10**	S	**Sn**	**11 18 50.1**	**+0.5**
URZ	**Urewera**	**1.61**	**10**	P	**Pn**	**11 18 29.5**	**-0.4**
MTW	**Mount Morrison**	**1.62**	**216**	P	**Pn**	**11 18 29.6**	**-0.4**
TARZ	**Mount Tarawera**	**1.63**	**353**	P	**Pn**	**11 18 30.5**	**+0.3**
MWZ	**Matawai**	**1.63**	**22**	P	**Pn**	**11 18 29.8**	**-0.3**
HLRZ	**Highlands Stat**	**1.63**	**349**	P	**Pn**	**11 18 31.2**	**+1.1**
TKGZ	**Te Karaka**	**1.65**	**31**	P	**Pn**	**11 18 30.0**	**-0.3**
VRZ	**Vera Road**	**1.71**	**295**	P	**Pn**	**11 18 32.2**	**+0.9**
MKRZ	**Makatiti**	**1.73**	**352**	P	**Pn**	**11 18 31.9**	**+0.4**
UTU	**Utuhina**	**1.73**	**345**	P	**Pn**	**11 18 32.0**	**+0.5**
KIW	**Kapiti Island**	**1.74**	**234**	P	**Pn**	**11 18 31.8**	**+0.2**
EDRZ	**Edgecumbe**	**1.75**	**359**	P	**Pn**	**11 18 31.7**	**0.0**
TRWZ	**Traveller**	**1.75**	**208**	P	**Pn**	**11 18 31.4**	**-0.3**
CNGZ	**Carnagh Statio**	**1.77**	**40**	P	**Pn**	**11 18 31.9**	**-0.1**
OMRZ	**Omania**	**1.77**	**350**	P	**Pn**	**11 18 32.1**	**0.0**
CAW	**Cannon Point**	**1.80**	**225**	P	**Pn**	**11 18 32.1**	**-0.4**
PAWZ	**Paruwai Farm**	**1.83**	**213**	P	**Pn**	**11 18 32.4**	**-0.5**
MARZ	**Manawahe**	**1.87**	**358**	P	**Pn**	**11 18 33.5**	**+0.1**
KARZ	**Kaharoa**	**1.88**	**347**	P	**Pn**	**11 18 33.8**	**+0.3**
TWGZ	**Tauwhareparae**	**1.92**	**30**	P	**Pn**	**11 18 34.0**	**-0.1**
MSWZ	**Moikau Station**	**1.94**	**216**	P	**Pn**	**11 18 33.4**	**-0.9**
HIZ	**Hauiti**	**2.00**	**311**	P	**Pn**	**11 18 35.6**	**+0.5**
WHRZ	**Whale Island**	**2.00**	**5**	P	**Pn**	**11 18 35.1**	**-0.1**
OPRZ	**Ohinepanea**	**2.01**	**355**	P	**Pn**	**11 18 35.1**	**-0.3**
RUGZ	**Raukumara Rang**	**2.02**	**21**	P	**Pn**	**11 18 35.1**	**-0.4**
PLWZ	**Palliser**	**2.06**	**213**	P	**Pn**	**11 18 35.1**	**-1.0**
DREZ	**Durham Road**	**2.09**	**288**	P	**Pn**	**11 18 39.3**	**+2.9**
BHW	**Baring Head**	**2.12**	**222**	P	**Pn**	**11 18 36.0**	**-0.8**
SNZO	**South Karori**	**2.14**	**226**	P	**Pn**	**11 18 36.4**	**-0.6**
SNZO	**South Karori**	**2.14**	**226**	S	**Sn**	**11 19 01.7**	**-0.7**
PKGZ	**Pakihiroa**	**2.23**	**28**	P	**Pn**	**11 18 37.7**	**-0.6**
TCW	**Tory Channel**	**2.33**	**234**	P	**Pn**	**11 18 35.9**	**-0.7**
DUWZ	**D'Urville Isla**	**2.37**	**246**	P	**Pn**	**11 18 39.9**	**-0.4**
MXZ	**Matakaoa Point**	**2.59**	**28**	P	**Pn**	**11 18 42.6**	**-0.6**
MXZ	**Matakaoa Point**	**2.59**	**28**	S	**Sn**	**11 19 14.5**	**+1.1**
KUZ	**Kuaotunu**	**3.21**	**345**	P	**Pn**	**11 18 52.0**	**+0.3**
QRZ	**Quartz Range**	**3.38**	**252**	P	**Pn**	**11 18 53.1**	**-0.9**
QRZ	**Quartz Range**	**3.38**	**252**	S	**Sn**	**11 19 32.1**	**-0.8**
KHZ	**Kahutara**	**3.53**	**223**	P	**Pn**	**11 18 55.6**	**-0.5**
OUZ	**Omahuta**	**5.27**	**330**	P	**Pn**	**11 19 20.9**	**+1.0**
RPZ	**Rata Peaks**	**5.75**	**226**	P	**Pn**	**11 19 26.3**	**-0.3**
CTZ	**Chatham Island**	**6.28**	**130**	P	**Pn**	**11 19 35.6**	**+1.8**
ODZ	**Otahua Downs**	**6.88**	**219**	P	**Pn**	**11 19 40.4**	**-1.6**
SYZ	**Scrubby Hill**	**8.69**	**217**	P	**Pn**	**11 20 06.7**	**-0.1**

*IDC **22** 11:49:51.9±2.4, 18°.53S×172°.73W, h0km, mb3.5/6, mbtmp3.5/6, MS2.9/1, Error ellipse: s-maj=159.0km s-min=24.2km az=152.0*

ISC 22 11:49:57.3±2.2, 18°.6S±0°.8×172°.8W±0°.5, h35km, n14, σ0s56/6, mb3.6/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	**22.08**	**91**	LR	LR	12 01 04.9	
	comp=Z,31nm,18.4s,baz=312,slow=30						
ASAR	**Alice Springs**	**49.78**	**254**	P	**P**	**11 58 47.2**	**+0.4**
	1.3nm,0.7s,baz=91,slow=8.4,SNR=18						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**49.78**	**259**	P	**P**	**11 58 46.4**	**-0.5**
	0.6nm,0.5s,baz=97,slow=8.0,SNR=9.9						
	0.6nm,0.5s						
H06S1	**SOCORRO T**	**71.11**	**62**	T	T	13 18 22.0	
	SNR=8.4						
NVAR	**Mina Array Bea**	**76.27**	**41**	P	**P**	**12 01 42.4**	**-0.4**
	0.1nm,0.3s,baz=236,slow=4.4,SNR=1.6						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**81.88**	**55**	P	**P**	**12 02 13.7**	**+0.2**
	0.2nm,0.7s,baz=268,slow=9.5,SNR=2.4						
	0.2nm,0.7s						
H03S2	**Juan Fernandez**	**82.98**	**123**	T	T	13 33 12.3	
	baz=250,slow=75,SNR=56						
H03S1	**Juan Fernandez**	**82.99**	**123**	T	T	13 33 13.3	
	baz=250,slow=75,SNR=49						
H03S3	**Juan Fernandez**	**83.00**	**123**	T	T	13 33 08.4	
	baz=250,slow=75,SNR=56						
H03N2	**Juan Fernandez**	**83.09**	**123**	T	T	13 33 12.5	
	baz=257,slow=73,SNR=18						
H03N3	**Juan Fernandez**	**83.09**	**123**	T	T	13 33 13.3	
	baz=257,slow=73,SNR=16						
H03N1	**Juan Fernandez**	**83.11**	**123**	T	T	13 33 12.7	
	baz=257,slow=73,SNR=19						
PDAR	**Pinedale Array**	**84.21**	**41**	P	**P**	**12 02 25.0**	**-0.4**
	0.3nm,0.6s,baz=225,slow=3.7,SNR=3.7						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**85.40**	**11**	P	**P**	**12 02 31.0**	**+0.4**
	0.3nm,0.8s,baz=199,slow=4.3,SNR=1.2						
	0.3nm,0.8s						

*IDC **22** 12:17:53.6±0.6, 1°.63N×126°.37E, h0km, mb4.1/15, mbtmp4.1/17, ML4.0/2, MS3.0/6, Error ellipse: s-maj=31.8km s-min=12.3km az=80.0*
*DJA **22** 12:17:58.7±1.4, 2°N±3°×12°6E±°, h20km±14km, M4.3/16, mB4.9/4, mb4.4/6, MLv4.3/16, Mw(mB)4.1/4*
*NEIC **22** 12:17:58.8±2.2, 1°.71N±0°.08×126°.65E±0°.08, h35km±2km, mb4.3/19, Error ellipse: s-maj=16.8km s-min=10.2km az=222.0*

ISC 22 12:17:58.6±0.5, 1°.63N±0°.05×126°.53E±0°.07, h35km, n69, σ1s36/66, mb4.3/26, MS3.2/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**136**		**Pn**	**12 18 20.5**	**+1.7**
TNTI	**Ternate**	**1.19**	**136**	P	**Pn**	**12 18 20.3**	**+1.5**
SGSI	**Sangihe**	**2.27**	**334**	P	**Pn**	**12 18 34.1**	**+0.4**
SGSI				S	**Sn**	**12 19 00.7**	**+0.1**
KMSI	**Cibinong**	**2.76**	**248**	P	**Pn**	**12 18 41.3**	**+0.9**
SANI	**Sanana**	**3.70**	**188**	P	**Pn**	**12 18 54.6**	**+1.3**
LUWI	**Luwuk**	**4.60**	**235**	P	**Pn**	**12 19 05.0**	**-0.8**
MRSI	**Marisa**	**4.73**	**256**	P	**Pn**	**12 19 09.3**	**+1.8**
NLAI	**Namlea**	**4.87**	**173**	P	**Pn**	**12 19 13.5**	**+4.1**
APSI	**Ampana**	**5.50**	**243**	P	**Pn**	**12 19 20.9**	**+2.8**
TOLI2	**Tolitoli**	**5.77**	**265**		**Pn**	**12 19 21.3**	**-0.6**
MPSI	**Mapaga**	**6.76**	**259**	P	**Pn**	**12 19 36.0**	**+0.6**
	0.1nm21nm,0.8s						
FAKI	**Fak Fak**	**7.29**	**128**	Pn	**Pn**	**12 19 41.1**	**-1.6**
TTSI	**Tana Toraja**	**8.16**	**235**	P	**Pn**	**12 19 55.4**	**+0.7**
MYLDM	**Lahad Datu**	**8.76**	**294**		**Pn**	**12 20 05.3**	**+2.4**
KAPI	**Kappang**	**9.46**	**226**	Pn	**Pn**	**12 20 11.6**	**-0.8**
	2.3nm,0.3s,baz=40,slow=6.4,SNR=10.0						
KAPI				Sn	**Sn**	**12 21 56.2**	**-1.4**
	1.7nm,0.3s,baz=165,slow=22,SNR=2.1						
	6.4nm,0.6s						
KAPI	**Kappang**	**9.46**	**226**		**Pn**	**12 20 14.4**	**+2.0**
SAUI	**Saumlaki**	**10.67**	**154**	Pn	**Pn**	**12 20 28.9**	**-0.1**
SOEI	**Soe**	**11.53**	**191**	Pn	**Pn**	**12 20 43.0**	**+2.0**
BATI	**Baumata**	**12.10**	**194**	LR	LR	12 25 56.6	
	comp=Z,41nm,20.1s,baz=349,slow=40						
JAY	**Jayapura**	**14.75**	**106**	LR	LR	12 27 16.5	
	comp=Z,61nm,18.4s,baz=177,slow=38						
MTN	**Manton Dam**	**15.09**	**163**	Pn	**Pn**	**12 21 29.2**	**-0.1**
KNRA	**Kununurra**	**17.34**	**173**	P	**Pn**	**12 21 57.3**	**-0.7**
KNRA				IAmb	IAmb	12 22 07.6	
	comp=Z,17nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.62**	**183**	P	**P**	**12 22 22.6**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=21,slow=13,SNR=7.2						
	comp=Z,3.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.62**	**183**	P	**P**	**12 22 22.9**	**-1.4**
WB0	**Warramunga Arr**	**22.62**	**160**		**P**	**12 22 56.6**	**0.0**
WB0				IAmb	IAmb	12 23 01.8	
	comp=Z,12nm,0.6s						
WRAB	**Tennant Creek**	**22.76**	**161**	P	**P**	**12 22 58.2**	**+0.2**
WRAB				IAmb	IAmb	12 23 03.8	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**12 22 57.8**	**-0.3**
	comp=Z,7.2nm,0.5s,baz=338,slow=11,SNR=54						
WRA				PcP	**PcP**	**12 26 50.6**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=320,slow=2.6,SNR=2.2						
WRA				S	**S**	**12 27 01.2**	**-3.6**
	comp=Z,0.6nm,0.7s,baz=331,slow=21,SNR=1.7						
	comp=Z,7.2nm,0.5s						
WRA	**Warramunga Arr**	**22.77**	**161**		**P**	**12 22 56.2**	**-2.0**
WR8	**Warramunga Arr**	**22.83**	**160**		**P**	**12 22 59.0**	**+0.1**
WR8				IAmb	IAmb	12 23 09.0	
	comp=Z,8.8nm,0.6s						
MBWA	**Marble Bar**	**23.61**	**196**	P	**P**	**12 23 07.0**	**+0.5**
MBWA				IAmb	IAmb	12 23 08.8	
	comp=Z,7.8nm,0.8s						
PSA00	**Pilbara Seismi**	**23.97**	**195**	P	**P**	**12 23 11.1**	**+1.2**
PSA00				IAmb	IAmb	12 23 21.5	
	comp=Z,5.6nm,0.8s						
AS31	**Alice Springs**	**26.15**	**165**	P	**P**	**12 23 30.9**	**+1.1**
ASAR	**Alice Springs**	**26.15**	**165**	P	**P**	**12 23 30.4**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=339,slow=6.3,SNR=54						
ASAR				PcP	**PcP**	**12 26 57.8**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=332,slow=2.4,SNR=7.0						
ASAR				S	**S**	**12 27 59.1**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=348,slow=22,SNR=1.3						
	comp=Z,1.6nm,0.5s						
ASAR	**Alice Springs**	**26.15**	**165**	P	**P**	**12 23 30.7**	**+0.9**
JNU	**Nakatsue**	**31.59**	**7**	LR	LR	12 40 12.0	
	comp=Z,50nm,18.4s,baz=338,slow=42						
JNU	**Nakatsue**	**31.59**	**7**	P	**P**	**12 24 17.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**31.81**	**303**	LR	LR	12 36 49.0	
	comp=Z,18nm,20.3s,baz=110,slow=36						
FORT	**Forrest**	**32.26**	**178**	P	**P**	**12 24 22.4**	**-1.6**
FORT				IAmb	IAmb	12 24 26.8	
	comp=Z,8.1nm,1.0s						
BBOO	**Buckleboo**	**35.42**	**166**	P	**P**	**12 24 52.0**	**+0.5**
KSRS	**Korea Array**	**35.67**	**2**	P	**P**	**12 24 53.9**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=178,slow=9.5,SNR=5.8						
KSRS				LR	LR	12 42 24.7	
	comp=Z,8μm,18.0s,baz=25,slow=41						
	comp=Z,0.7nm,0.5s						
STKA	**Stephens Creek**	**36.26**	**158**	P	**P**	**12 24 58.9**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=343,slow=8.9,SNR=7.9						
	comp=Z,3.6nm,0.7s						
MJAR	**Matsushiro Arr**	**36.38**	**16**	P	**P**	**12 25 00.2**	**+0.6**
	comp=Z,4.1nm,1.1s,baz=181,slow=10,SNR=3.7						
MJAR				LR	LR	12 38 45.7	
	comp=Z,19nm,19.7s,baz=188,slow=34						
	comp=Z,4.1nm,1.1s						
JMM	**Matumori**	**38.37**	**18**	P	**P**	**12 25 15.9**	**-0.6**
USRK	**Ussuriysk Ar.**	**42.66**	**6**	P	**P**	**12 25 52.0**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=219,slow=6.5,SNR=5.1						
	comp=Z,3.5nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**42.78**	**64**	T	T	13 13 03.8	
	baz=256						
H11S2	**WAKE ISLAND Hy**	**42.80**	**64**	T	T	13 13 11.6	
	baz=256						
H11S1	**WAKE ISLAND Hy**	**42.80**	**64**	T	T	13 13 09.0	
	baz=256						
EVN	**Everest**	**46.10**	**308**		**P**	**12 26 19.6**	**-0.9**
EVN				IAmb	IAmb	12 26 23.1	
	comp=Z,4.2nm,1.1s						
HILR	**Hailar Array B**	**48.10**	**354**	P	**P**	**12 26 35.1**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=182,slow=10,SNR=2.5						
	comp=Z,1.8nm,0.5s						
SONM	**Songino Array**	**49.22**	**342**	P	**P**	**12 26 43.9**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=164,slow=7.7,SNR=6.7						
	comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**12 27 44.6**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=225,slow=7.8,SNR=7.2						
	comp=Z,2.5nm,0.8s						
PETK	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**12 27 41.5**	**-2.3**
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**12 27 55.5**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=121,slow=8.3,SNR=21						
	comp=Z,2.1nm,0.6s						
MAKZ	**Makanchi**	**59.35**	**326**		**P**	**12 27 56.8**	**-0.5**
MAKZ				IAmb	IAmb	12 28 01.1	
	comp=Z,4.3nm,1.1s						
KSH	**Kashi**	**59.40**	**316**	P	**P**	**12 28 01.8**	**+3.9**
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
ZALV	**Zalesovo Beam**	**62.36**	**334**	P	**P**	**12 28 16.4**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=111,slow=7.9,SNR=2.9						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**62.36**	**334**	P	**P**	**12 28 16.6**	**-1.0**
KURBB	**Kurchatov Arra**	**63.40**	**328**	P	**P**	**12 28 24.0**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=130,slow=6.3,SNR=17						
	comp=Z,1.9nm,0.5s						
KURK	**Kurchatov**	**63.40**	**328**	P	**P**	**12 28 24.3**	**-0.3**
KKAR	**Karatay Array**	**64.63**	**318**	P	**P**	**12 28 33.4**	**+0.5**
BVAR	**Borovoye Array**	**68.97**	**327**	P	**P**	**12 28 59.8**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=123,slow=11,SNR=5.9						
	comp=Z,1.3nm,0.6s						
AB31	**Akbulak array**	**73.65**	**321**	P	**P**	**12 29 28.2**	**-0.4**
AB31				IAmb	IAmb	12 29 33.7	
	comp=Z,2.1nm,1.1s						
ABKAR	**Akbulak array**	**73.65**	**321**	P	**P**	**12 29 28.0**	**-0.6**
RAR	**Rarotonga**	**75.42**	**112**	LR	LR	13 00 48.3	
	comp=Z,18nm,19.8s,baz=217,slow=34						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**12 30 11.9**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=306,slow=2.5,SNR=2.4						
	comp=Z,1.8nm,0.8s						
VNDA	**Vanda**	**81.38**	**173**	P	**P**	**12 30 10.7**	**-0.6**
VNDA				IAmb	IAmb	12 30 30.4	
	comp=Z,4.3nm,1.1s						
ILAR	**Eielson Array**	**87.07**	**25**	P	**P**	**12 30 40.8**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=255,slow=5.8,SNR=4.2						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**87.07**	**25**	P	**P**	**12 30 39.9**	**-0.6**
QSPA	**South Pole Qui**	**91.55**	**180**	P	P	12 31 07.5	+5.9
	comp=Z,0.6nm,0.8s,baz=244,slow=5.2,SNR=1.9						

*TAP **22** 12:23:35.9, 24°.06N×122°.27E, h47km, ML3.0, C*
*JMA **22** 12:23:35.4±0.1, 24°.0N±0°.8×122°.3E±0°.4, h48km±3km, MV2.5/9, TAIWAN REGION*

ISC 22 12:23:34.0±1.3, 23°.97N±0°.02×122°.31E±0°.02, h21km±4km, n107, σ0s74/179, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS4	**EOS4**	**0.15**	**2**	*eP*	Pb	12 23 43.5	+4.1
EAHA	**Aohua**	**0.63**	**304**	P	**Pn**	**12 23 47.8**	**0.0**
EAHA				*eS*	**Sn**	**12 23 56.9**	**-0.4**
ETL	**Fush Village**	**0.66**	**287**	P	**Pn**	**12 23 48.1**	**-0.1**
ETL				S	**Sn**	**12 23 56.9**	**-0.9**
TEYL	**Yanliau Villag**	**0.66**	**261**	S	**Sn**	**12 23 57.7**	**-0.2**
TWD	**Chiawan**	**0.66**	**280**	S	**Sn**	**12 23 56.9**	**-1.1**
EWUT	**Wuta**	**0.68**	**314**	P	**Pn**	**12 23 48.1**	**-0.3**
EWUT				S	**Sb**	**12 23 57.4**	**+1.2**
NACB	**Ninganchiao**	**0.69**	**287**	P	**Pn**	**12 23 48.1**	**-0.4**
NACB	**Ninganchiao**	**0.69**	**287**	*i* P	**Pn**	**12 23 48.2**	**-0.4**
NACB				S	**Sn**	**12 23 57.2**	**-1.3**
ENA	**Nanau**	**0.69**	**311**	*i* P	**Pn**	**12 23 48.5**	**-0.1**
ENA				*i* S	**

WNT				eS		Sb	12 24 20.6	+1.1
NMLH	**Miaoli**	**1.50**	**292**	P		**Pb**	**12 24 01.0**	**-0.1**
LDUT	**Ludao**	**1.51**	**211**	*eP*		**Pn**	**12 23 57.9**	**-1.8**
LDUT				eS		Sb	12 24 18.8	-1.1
TCU	**Taichung**	**1.51**	**277**	*eP*		**Pb**	**12 24 01.6**	**+0.3**
TCU				eS		Sb	12 24 20.7	+0.8
CHN5	**Tsauling**	**1.54**	**256**	*eP*		**Pb**	**12 24 02.6**	**+0.7**
CHN5				eS		Sb	12 24 21.7	+0.7
JKRS	**Kuro-shima**	**1.57**	**80**	P		**Pb**	**12 24 02.4**	**+0.1**
JKRS				eS		Sb	12 24 21.7	-0.1
WCHH	**Zhanghua**	**1.61**	**274**	*eP*		**Pb**	**12 24 02.8**	**-0.1**
WCHH				eS		Sb	12 24 23.4	+0.6
TWGBT	**Beinan**	**1.61**	**225**	P		**Pb**	**12 24 01.6**	**-1.4**
TWG	**Pinlang**	**1.61**	**225**	*eP*		**Pb**	**12 24 01.8**	**-1.3**
TWG				eS		Sb	12 24 21.4	-1.6
STYH	**Taoyuan**	**1.62**	**241**	P		**Pb**	**12 24 03.0**	**-0.1**
STYH				S		Sb	12 24 23.0	-0.1
WDLH	**Douliu**	**1.65**	**261**	*i* P		**Pb**	**12 24 04.0**	**+0.4**
WDLH				eS		Sb	12 24 24.6	+0.6
TPUB	**Ta-pu**	**1.68**	**247**	P		**Pb**	**12 24 04.9**	**+0.7**
TPUB	**Ta-pu**	**1.68**	**247**	*eP*		**Pb**	**12 24 04.9**	**+0.7**
TPUB				S		Sb	12 24 25.7	+0.7
WTP	**Ta-pu**	**1.72**	**245**	P		**Pb**	**12 24 05.2**	**+0.4**
WTP				eS		Sb	12 24 26.8	+0.8
JIJ	**Ishigaki jima**	**1.72**	**76**	S		**Sn**	**12 24 23.7**	**-0.3**
WTK	**Tuku**	**1.78**	**261**	*eP*		**Pb**	**12 24 06.1**	**+0.2**
WTK				eS		Sb	12 24 28.7	+0.9
CHY	**Chiayi**	**1.79**	**255**	*i* S		**Sb**	**12 24 28.3**	**+0.2**
CHN1	**Nanshi**	**1.81**	**245**	*eP*		**Pb**	**12 24 07.6**	**+1.1**
CHN1				eS		Sb	12 24 29.4	+0.6
TWK	**Hsinying**	**1.81**	**248**	S		**Sb**	**12 24 28.0**	**-0.8**
SGST	**Jiashian**	**1.82**	**241**	*eP*		**Pb**	**12 24 06.0**	**-0.5**
SGST				eS		Sb	12 24 28.6	-0.2
JISG	**Ishigakijimahi**	**1.93**	**71**	P		**Pn**	**12 24 06.4**	**+0.9**
JISG				S		Sn	12 24 28.5	-0.6
WSL	**Shuilin Townsh**	**1.96**	**257**	P		**Pb**	**12 24 08.1**	**-0.9**
WSL				S		Sb	12 24 31.5	-1.5
SSD	**Sandimen**	**1.97**	**232**	*eP*		**Pb**	**12 24 08.1**	**-1.0**
SSD				S		Sb	12 24 34.2	+1.0
TSMG	**Majia**	**1.98**	**231**	*eP*		**Pb**	**12 24 09.1**	**-0.3**
SCST	**Cishan**	**1.99**	**237**	P		**Pb**	**12 24 10.4**	**+1.0**
MASBT	**Mashibuluo**	**2.05**	**229**	*eP*		**Pb**	**12 24 09.1**	**-1.5**
MASBT				eS		Sb	12 24 34.1	-1.5
TSCK	**Chigu Township**	**2.20**	**249**	*eS*		**Sb**	**12 24 37.8**	**-2.1**
PHUB	**P'eng-hu**	**2.55**	**260**	*eP*		**Pn**	**12 24 14.8**	**+0.7**
PHUB				eS		**Sn**	**12 24 44.8**	**+0.2**

IDC 22 12:25:45.0±4.6, 31°.64N×67°.31E, h0km, mb3.5/4, mbtmp3.6/5, ML3.0/1, MS2.7/3, Error ellipse: s-maj=142.0km s-min=36.5km az=85.0, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**12.38**	**26**	LR	LR	12 34 07.5	
	comp=Z,29nm,18.4s,baz=94,slow=41						
MKAR	**Makanchi Array**	**19.03**	**33**	P	Pn	12 30 09.5	+0.4
	baz=206,slow=10,SNR=4.0						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**20.72**	**21**	P	P	12 30 26.7	-0.2
	1.3nm,0.2s,baz=210,slow=9.5,SNR=2.1						
	1.3nm,0.2s						
BVAR	**Borovoye Array**	**21.49**	**5**	P	P	12 30 35.6	+0.4
	0.9nm,0.6s,baz=180,slow=10,SNR=3.8						
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**25.60**	**24**	P	P	12 31 15.0	-0.8
	1.1nm,0.6s,baz=212,slow=11,SNR=6.8						
	1.1nm,0.6s						
ASF	**Jabal al Asfar**	**25.78**	**279**	LR	LR	12 43 10.7	
	comp=Z,20nm,18.6s,baz=117,slow=41						
CMAR	**Chiang Mai Arr**	**31.40**	**107**	LR	LR	12 45 55.6	
	comp=Z,11nm,20.6s,baz=120,slow=39						
ASAR	**Alice Springs**	**84.13**	**122**	P	P	12 38 18.3	+0.2
	0.2nm,0.7s,baz=308,slow=5.5,SNR=1.7						
	0.2nm,0.7s						

*IDC **22** 12:46:52.7±0.8, 1°.71N×126°.20E, h0km, mb4.0/7, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=45.5km s-min=15.4km az=73.0*
*DJA **22** 12:46:56.3±0.2, 2°.N±2°×12°.6E±°, h10km, M4.3/13, mB4.8/2, mb4.6/3, MLv4.2/13, Mw(mB)4.0/2*
*NEIC **22** 12:46:58.8±1.8, 1°.72N±0°.05×126°.50E±0°.09, h35km±2km, mb4.4/18, Error ellipse: s-maj=16.3km s-min=5.0km az=64.0*

ISC 22 12:46:57.9±0.6, 1°.72N±0°.06×126°.48E±0°.07, h35km, n47, σ1§04/50, mb4.2/16, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**137**		**Pn**	**12 47 20.4**	**+1.0**
TNTI	**Ternate**	**1.29**	**137**	P	**Pn**	**12 47 20.7**	**+1.3**
SGSI	**Sangihe**	**2.17**	**334**	P	**Pn**	**12 47 31.9**	**+0.3**
SGSI				S	Sn	12 47 58.3	+1.0
KMSI	**Cibinong**	**2.75**	**246**	P	**Pn**	**12 47 39.7**	**+0.3**
KMSI				S	Sn	12 48 12.3	+0.9
SANI	**Sanana**	**3.77**	**187**	P	**Pn**	**12 47 54.4**	**+0.8**
LUWI	**Luwuk**	**4.61**	**234**		**Pn**	**12 48 05.2**	**+0.1**
LUWI	**Luwuk**	**4.61**	**234**	P	**Pn**	**12 48 06.0**	**+0.9**
MRSI	**Marisa**	**4.70**	**255**	P	**Pn**	**12 48 06.7**	**+0.3**
NLAI	**Namlea**	**4.96**	**173**	P	**Pn**	**12 48 11.5**	**+1.5**
	0.1nm680nm25nm,0.5s						
APSI	**Ampana**	**5.49**	**242**	P	**Pn**	**12 48 17.9**	**+0.7**
TOLI2	**Tolitoli**	**5.73**	**264**		**Pn**	**12 48 19.8**	**-0.7**
MYLDM	**Lahad Datu**	**8.68**	**294**		**Pn**	**12 49 03.1**	**+2.1**
KAPI	**Kappang**	**9.48**	**225**	Pn	**Pn**	**12 49 09.3**	**-2.7**
	2.6nm,0.3s,baz=113,slow=20,SNR=4.2						
	7.7nm,0.4s						
KAPI	**Kappang**	**9.48**	**225**		**Pn**	**12 49 12.8**	**+0.8**
SBUM	**Sibu**	**14.27**	**273**	Pn	**Pn**	**12 50 18.3**	**+0.8**
KNRA	**Kununurra**	**17.43**	**173**	P	**Pn**	**12 50 58.8**	**+0.4**
KNRA				IAmb	IAmb	12 51 06.4	
	comp=Z,58nm,1.8s						
FITZ	**Fitzroy Crossi**	**19.71**	**182**	P	**P**	**12 51 23.8**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=6.4,slow=9.4,SNR=12						
	comp=Z,1.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.71**	**182**	P	**P**	**12 51 24.4**	**0.0**
TPUB	**Ta-pu**	**22.19**	**346**	P	**P**	**12 51 49.2**	**-2.1**
WB0	**Warramunga Arr**	**22.72**	**160**		**P**	**12 51 57.2**	**+0.3**
WB0				IAmb	IAmb	12 52 18.1	
	comp=Z,12nm,1.2s						
COEN	**Coen**	**22.72**	**134**	P	**P**	**12 51 56.9**	**-0.1**
COEN				IAmb	IAmb	12 52 01.3	
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**22.86**	**161**	P	**P**	**12 51 58.9**	**+0.5**
WRAB				IAmb	IAmb	12 52 06.4	
	comp=Z,7.0nm,0.7s						
WRA	**Warramunga Arr**	**22.87**	**161**	P	**P**	**12 51 58.6**	**+0.1**
	comp=Z,5.0nm,0.5s,baz=337,slow=11,SNR=42						
WRA				PcP	**PcP**	**12 55 47.6**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=350,slow=2.3,SNR=1.3						
WRA				S	**S**	**12 56 06.1**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=332,slow=18,SNR=4.7						
	comp=Z,5.0nm,0.5s						
WRA	**Warramunga Arr**	**22.87**	**161**		**P**	**12 51 56.3**	**-2.1**
WR8	**Warramunga Arr**	**22.93**	**160**		**P**	**12 51 59.4**	**+0.2**
PMG	**Port Moresby**	**23.38**	**119**	P	**P**	**12 52 02.6**	**-1.0**
PMG				IAmb	IAmb	12 52 21.8	
	comp=Z,7.0nm,0.9s						
MBWA	**Marble Bar**	**23.68**	**196**	P	**P**	**12 52 04.3**	**-2.1**
MBWA				IAmb	IAmb	12 52 05.9	
	comp=Z,72nm,2.4s						
AS31	**Alice Springs**	**26.25**	**164**	P	**P**	**12 52 30.5**	**+0.6**
ASAR	**Alice Springs**	**26.25**	**164**	P	**P**	**12 52 30.6**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=343,slow=7.8,SNR=76						
ASAR				PcP	**PcP**	**12 55 56.9**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=349,slow=2.4,SNR=4.3						
ASAR				S	**S**	**12 57 01.1**	**+0.9**
	comp=Z,0.2nm,0.9s,baz=346,slow=18,SNR=1.7						
	comp=Z,1.8nm,0.5s						
ASAR	**Alice Springs**	**26.25**	**164**	P	**P**	**12 52 30.9**	**+1.0**
MORW	**Morawa**	**32.20**	**197**	P	**P**	**12 53 22.4**	**-0.4**
FORT	**Forrest**	**32.35**	**177**	P	**P**	**12 53 24.1**	**+0.1**
FORT				IAmb	IAmb	12 53 52.6	
	comp=Z,8.0nm,0.9s						
BBOO	**Buckleboo**	**35.52**	**166**	P	**P**	**12 53 52.0**	**+0.4**
KSRS	**Korea Array**	**35.59**	**2**	P	**P**	**12 53 52.7**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=184,slow=10,SNR=1.7						
	comp=Z,0.3nm,0.4s						
STKA	**Stephens Creek**	**36.36**	**158**	P	**P**	**12 53 59.7**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=312,slow=12,SNR=3.3						
	comp=Z,1.0nm,0.3s						

H11N1	**WAKE ISLAND Hy**	**43.36**	**63**	T	T	13 41 47.4		
	baz=252							
H11N2	**WAKE ISLAND Hy**	**43.38**	**63**	T	T	13 41 17.1		
	baz=252							
H11N3	**WAKE ISLAND Hy**	**43.38**	**63**	T	T	13 41 42.0		
	baz=252							
EVN	**Everest**	**46.01**	**308**	P	**P**	**12 55 19.4**	**+0.5**
EVN				IAmb	IAmb	12 55 29.9		
	comp=Z,12nm,1.7s							
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**12 56 53.6**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=123,slow=7.3,SNR=16							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**12 56 53.9**	**-0.7**
TARG	**Taragay, Kyrgy**	**59.08**	**319**	P	**P**	**12 56 57.0**	**+1.7**
MAKZ	**Makanchi**	**59.25**	**326**	P	**P**	**12 56 55.3**	**-0.6**
MAKZ				IAmb	IAmb	12 56 55.7		
	comp=Z,3.1nm,1.1s							
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	**P**	**12 57 22.1**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=125,slow=6.3,SNR=8.6							
	comp=Z,1.0nm,0.5s							
KK31	**Karatay Array**	**64.53**	**318**	P	**P**	**12 57 30.9**	**-0.6**
KK31				IAmb	IAmb	12 57 45.6		
	comp=Z,12nm,2.0s							
KKAR	**Karatay Array**	**64.53**	**318**	P	**P**	**12 57 31.2**	**-0.3**
BVAR	**Borovoye Array**	**68.86**	**327**	P	**P**	**12 57 58.4**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=126,slow=7.3,SNR=3.9							
	comp=Z,0.5nm,0.4s							

*GCG **22** 12:47:37.5±1.5, 13°.70N×91°.04W, h55km±36km, MD3.8, ML3.5, MW3.4*
*CATAC **22** 12:47:37.4±0.7, 14°.N±4°×9°.1W±°, h23km±5km, M3.4/10, MLv3.4/10, Error ellipse: s-maj=9.0km s-min=3.3km az=31.2, confirmed*
*SNET **22** 12:47:39.5±0.8, 13°.76N×90°.88W, h50km±23km, ML3.4*

ISC 22 12:47:40.6±1.9, 13°.7N±0°.1×90°.86W±0°.06, h60km±24km, n36, σ1§62/45, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG16	**Alotenango, Sa**	**0.63**	**33**	*i* P	**Pn**	**12 47 53.2**	**-1.0**
ESSG	**Sabana Grande**	**0.64**	**3**	*i* P	**Pn**	**12 47 51.8**	**-2.4**
PCG5	**San Vicente Pa**	**0.67**	**45**	*eP*	**Pn**	**12 47 52.5**	**-2.1**
STG5	**El Palmar, Qui**	**0.81**	**324**	*eP*	**Pn**	**12 47 57.3**	**+1.0**
FAME	**Alcaldia de Sa**	**0.83**	**83**	P	**Pn**	**12 47 55.0**	**-1.4**
FAME	**Alcaldia de Sa**	**0.83**	**83**	S	**Sn**	**12 48 08.0**	**-0.1**
STG8	**El Palmar, Qui**	**0.85**	**326**	*eP*	**Pn**	**12 47 58.3**	**+1.4**
STG8				eS	**Sn**	**12 48 13.2**	**+4.3**
STG8				IAML		12 48 15.9	
	comp=E,1μm,0.1s						
STG2	**El Palmar, Qui**	**0.85**	**324**	*eP*	**Pn**	**12 47 58.3**	**+1.5**
STG2				eS	**Sn**	**12 48 13.0**	**+4.2**
NUBE	**Las Nubes**	**1.06**	**81**	*eP*	**Pn**	**12 47 58.5**	**-1.1**
NUBE				eS	**Sn**	**12 48 13.5**	**-0.2**
NUBE	**Las Nubes**	**1.06**	**81**	*eP*	**Pn**	**12 47 58.6**	**-1.1**
NUBE				*i* S	**Sn**	**12 48 14.1**	**+0.4**
NUBE	**Las Nubes**	**1.06**	**81**	P	**Pn**	**12 47 58.8**	**-0.8**
LOAL	**Lomas de Alarc**	**1.08**	**76**	P	**Pn**	**12 47 59.9**	**+0.2**
LOAL	**Lomas de Alarc**	**1.08**	**76**	S	**Sn**	**12 48 15.9**	**+1.9**
RTAL	**Retalhuleu**	**1.12**	**314**	P	**Pn**	**12 47 56.9**	**-3.3**
RTAL	**Retalhuleu**	**1.12**	**314**	S	**Sn**	**12 48 11.3**	**-3.6**
RTR	**El Retiro**	**1.19**	**82**	*eP*	**Pn**	**12 48 00.9**	**-0.4**
SOKI	**Kika Raxquin**	**1.19**	**334**	*eS*	**Sn**	**12 48 15.2**	**-1.9**
SOKI				IAML		12 48 16.1	
	comp=N,894nm,0.4s						
CEVE	**Cerro Verde**	**1.21**	**86**	*eP*	**Pn**	**12 48 00.8**	**-0.8**
CEVE				eS	**Sn**	**12 48 18.2**	**+1.0**
CEVE				IAML		12 48 20.6	
	comp=Z,683nm,0.2s						
CEVE	**Cerro Verde**	**1.21**	**86**	P	**Pn**	**12 48 01.0**	**-0.6**
SBLS	**San Blas**	**1.21**	**85**	*eP*	**Pn**	**12 48 00.9**	**-0.7**
SBLS				eS	**Sn**	**12 48 17.5**	**+0.3**
SNJE	**San Jose**	**1.23**	**84**	*eP*	**Pn**	**12 48 01.2**	**-0.6**
APG	**El Apazote**	**1.31**	**17**	*i* P	**Pn**	**12 48 02.7**	**-0.3**
JAYA	**Jayaque - finc**	**1.38**	**93**	*eP*	**Pn**	**12 48 02.6**	**-1.1**
JAYA				eS	**Sn**	**12 48 20.7**	**-0.4**
JAYA				IAML		12 48 23.7	
	comp=Z,576nm,0.2s						
JAYA	**Jayaque - finc**	**1.38**	**93**	*i* P	**Pn**	**12 48 02.8**	**-1.0**
JAYA	**Jayaque - finc**	**1.38**	**93**	P	**Pn**	**12 48 02.8**	**-1.0**
PMON	**Piamonte**	**1.50**	**91**	*eP*	**Pn**	**12 48 04.9**	**-0.5**
PMON				eS	**Sn**	**12 48 24.7**	**+0.6**
PMON	**Piamonte**	**1.50**	**91**	S	**Sn**	**12 48 26.1**	**+2.0**
PMON	**Piamonte**	**1.50**	**91**	P	**Pn**	**12 48 04.9**	**-0.5**
MTO3	**Montecristo**	**1.60**	**66**	*eP*	**Pn**	**12 48 06.3**	**-0.5**
MTO3	**Montecristo**	**1.60**	**66**	*eP*	**Pn**	**12 48 06.3**	**-0.5**
MTO3	**Montecristo**	**1.60**	**66**	P	**Pn**	**12 48 06.7**	**-0.1**
PANCS	**Alcalda de**	**1.64**	**94**	S	**Sn**	**12 48 28.9**	**+1.5**
LOMA	**Loma Larga**	**1.65**	**93**	*eP*	**Pn**	**12 48 07.1**	**-0.2**
LOMA				eS	**Sn**	**12 48 27.8**	**+0.2**
LOMA	**Loma Larga**	**1.65**	**93**	P	**Pn**	**12 48 07.3**	**-0.1**
LOMA	**Loma Larga**	**1.65**	**93**	S	**Sn**	**12 48 29.7**	**+2.1**
LFRS	**El Faro**	**1.75**	**94**	*eP*	**Pn**	**12 48 08.7**	**-0.1**

*IDC **22** 12:59:45.2±5.2, 36°.61N×71°.21E, h217km±45km, mb3.2/5, mbtmp3.9/11, Error ellipse: s-maj=44.5km s-min=19.4km az=43.0*
*NNC **22** 12:59:48.2±2.7, 36°.90N×70°.99E, h208km±28km, mb2.8, mpv3.5, Error ellipse: s-maj=24.5km s-min=15.8km az=13.0*

ISC 22 12:59:43.5±1.2, 36°.57N±0°.10×71°.1E±0°.1, h200km, n17, σ1§22/20, mb3.7/5, 5C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.54**	**356**	P	**Pn**	**13 01 18.8**	**+1.1**
	1.4nm,0.3s,baz=187,slow=14,SNR=26			⇑S			
KK31					**Sn**	**13 02 29.6**	**-2.9**
	16nm,0.5s,baz=180,slow=22,SNR=7.3						
AAK	**Ala-Archa**	**6.61**	**22**	P	**Pn**	**13 01 20.6**	**+1.9**
	3.7nm,0.3s,baz=172,slow=4.5,SNR=17						
AAK				S	**Sn**	**13 02 32.7**	**-1.4**
	5.8nm,0.4s,baz=154,slow=4.0,SNR=5.0						
AAK	**Ala-Archa**	**6.61**	**22**	⇑P	**Pn**	**13 01 19.2**	**+0.6**
	4.0nm,0.8s						
AAK				⇑S	**Sn**	**13 02 33.7**	**-0.5**
	7.4nm,0.6s						
MK31	**Makanchi Array**	**13.19**	**36**	P	**Pn**	**13 02 44.2**	**+1.0**
	0.5nm,0.4s,baz=222,slow=18,SNR=11						
MKAR	**Makanchi Array**	**13.19**	**36**	P	**Pn**	**13 02 43.8**	**+0.6**
	1.2nm,0.6s,baz=219,slow=9.6,SNR=11						
KURBB	**Kurchatov Arra**	**15.03**	**19**	P	**Pn**	**13 03 05.4**	**-0.5**
	0.7nm,0.3s,baz=207,slow=12,SNR=6.5						
AB31	**Akbulak array**	**15.06**	**331**	⇑P	**Pn**	**13 03 07.2**	**+0.9**
	1.5nm,0.8s,baz=144,slow=12,SNR=13						
BVA0	**Borovoye Array**	**16.46**	**359**	P	**P**	**13 03 23.4**	**+1.1**
	3.4nm,0.8s,baz=159,slow=12,SNR=7.3						
BVAR	**Borovoye Array**	**16.46**	**359**	P	**P**	**13 03 23.8**	**+1.5**
	2.7nm,0.6s,baz=156,slow=13,SNR=13						
AKTO	**Aktyubinsk**	**16.76**	**330**	P	**P**	**13 03 26.1**	**+0.6**
	6.5nm,0.7s,baz=139,slow=9.6,SNR=16						
AKTO	**Aktyubinsk**	**16.76**	**330**	⇑P	**P**	**13 03 25.7**	**+0.2**
	3.6nm,0.7s						
ZALV	**Zalesovo Beam**	**19.82**	**24**	P	**P**	**13 03 58.9**	**+0.2**
	2.2nm,0.4s,baz=220,slow=11,SNR=16						
ARTI	**Arti**	**21.60**	**341**	P	**P**	**13 04 18.5**	**+1.1**
	1.7nm,0.4s,baz=168,slow=9.0,SNR=2.4						
	1.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**30.42**	**119**	P	**P**	**13 05 37.3**	**0.0**
	0.2nm,0.3s,baz=310,slow=9.2,SNR=1.2						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**37.47**	**326**	P	**P**	**13 06 37.0**	**-0.4**
	1.3nm,0.6s,baz=128,slow=12,SNR=4.0						
	1.3nm,0.6s						
ARCES	**ARCESS Array B**	**41.11**	**338**	P	**P**	**13 07 07.2**	**-0.2**
	1.6nm,0.7s,baz=92,slow=9.2,SNR=3.7						
	1.6nm,0.7s						
ASAR	**Alice Springs**	**84.23**	**125**	P	**P**	**13 11 51.3**	**-1.4**
	0.3nm,1.0s,baz=303,slow=4.3,SNR=2.2						
	0.3nm,1.0s						

*IDC **22** 13:14:00.7±5.3, 6°.86S×129°.36E, h101km±55km, mb3.2/1, mbtmp3.9/6, Error ellipse: s-maj=47.4km s-min=18.8km az=48.0*

ISC 22 13:14:03.6±1.5, 7°.0S±0°.1×129°.3E±0°.1, h139km, n6, σ1§99/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.38**	**240**	P	**Pn**	**13 15 35.3**	**-0.1**
	17nm,0.5s,baz=75,slow=16,SNR=2.6						
BATI				S	**Sn**	**13 16 47.5**	**+0.4**
	12nm,0.3s,baz=90,slow=3.0,SNR=2.0						
KAPI	**Kappang**	**9.66**	**281**	P	**Pn**	**13 16 18.0**	**-1.4**
	6.1nm,0.4s,baz=54,slow=19,SNR=3.7						
FITZ	**Fitzroy Crossi**	**11.57**	**197**	P	**Pn**	**13 16 44.5**	**-0.2**
	1.4nm,0.4s,baz=205,slow=9.2,SNR=9.5						
FITZ				S	Sn	13 18 43.8	-8.7
	1.8nm,0.3s,baz=308,slow=19,SNR=7.4						
WRA	**Warramunga Arr**	**13.77**	**160**	P	**Pn**	**13 17 13.6**	**+0.4**
	0.4nm,0.5s,baz=347,slow=13,SNR=8.2						
WRA				S	**Sn**	**13 19 42.1**	**-3.4**
	0.4nm,0.3s,baz=332,slow=23,SNR=5.9						
ASAR	**Alice Springs**	**17.16**	**165**	P	**Pn**	**13 17 56.7**	**+1.6**
	1.5nm,0.4s,baz=339,slow=9.6,SNR=80						
ASAR				S	**Sn**	**13 21 09.4**	**+2.6**
	0.2nm,0.4s,baz=350,slow=26,SNR=2.3						
MKAR	**Makanchi Array**	**67.83**	**327**	P	**P**	**13 24 47.5**	**+0.7**
	0.2nm,0.4s,baz=117,slow=8.2,SNR=7.7						
	0.2nm,0.4s						

*SJA **22** 13:21:12.3±0.7, 21°.97S×68°.84W, h125km±4km, ML3.6, MW3.6*
*GUC **22** 13:21:13.3±0.8, 21°.97S×68°.80W, h121km±3km, ML3.6*

ISC 22 13:21:12.3±1.4, 21°.96S±0°.03×68°.84W±0°.05, h130km±9km, n38, σ1§21/63, 6C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.41**	**294**	⇓*iP*	**Pn**	**13 21 31.3**	**+0.1**
PB09				eS	**Sn**	**13 21 44.3**	**-1.1**
PB09				IAML		13 21 46.7	
	comp=N,2μm,0.4s						
PB09	**IPOC Station P**	**0.41**	**294**	*eP*	**Pn**	**13 21 31.2**	**+0.1**
PB09				eS	**Sn**	**13 21 44.7**	**-0.7**
PB09				IAML		13 21 45.4	
	comp=Z,1μm,0.5s						
PB03	**IPOC Station P**	**0.85**	**264**	⇓*iP*	**Pn**	**13 21 34.4**	**+0.3**
PB03				eS	**Sn**	**13 21 49.9**	**-0.7**
PB03				IAML		13 21 51.4	
	comp=N,2μm,0.4s						
PB03	**IPOC Station P**	**0.85**	**264**	*eP*	**Pn**	**13 21 34.2**	**+0.1**
PB03				eS	**Sn**	**13 21 50.5**	**-0.2**
PB03				IAML		13 21 51.4	
	comp=Z,1μm,0.4s						
PB07	**IPOC Station P**	**1.00**	**283**	*i* P	**Pn**	**13 21 36.0**	**+0.5**
PB07				eS	**Sn**	**13 21 52.7**	**-0.3**
PB07				IAML		13 21 53.2	
	comp=N,2μm,0.4s						
PB07	**IPOC Station P**	**1.00**	**283**	*eP*	**Pn**	**13 21 35.3**	**-0.1**
PB07				eS	**Sn**	**13 21 52.8**	**-0.3**
PB07				IAML		13 21 54.8	
	comp=Z,1μm,0.3s						
PB06	**IPOC Station P**	**1.00**	**223**	*i* P	**Pn**	**13 21 35.7**	**+0.2**
PB06				eS	**Sn**	**13 21 52.7**	**-0.3**
PB06				IAML		13 21 53.6	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**1.00**	**223**	*eP*	**Pn**	**13 21 35.6**	**+0.2**
PB06				eS	**Sn**	**13 21 53.1**	**+0.1**
PB06				IAML		13 21 55.4	
	comp=Z,592nm,0.2s						
PB01	**IPOC Station P**	**1.10**	**326**	⇑*iP*	**Pn**	**13 21 36.5**	**+0.2**
PB01				eS	**Sn**	**13 21 54.0**	**-0.5**
PB01				IAML		13 21 55.2	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.10**	**326**	*eP*	**Pn**	**13 21 36.5**	**+0.2**
PB01				eS	**Sn**	**13 21 54.9**	**+0.4**
PB01				IAML		13 21 55.2	
	comp=Z,979nm,0.2s						
AF01	**San Pedro de A**	**1.16**	**148**	*eP*	**Pn**	**13 21 36.8**	**-0.3**
AF01	**San Pedro de A**	**1.16**	**148**	*eP*	**Pn**	**13 21 37.5**	**+0.4**
AF01				eP	Sn	13 21 40.0	-16
AF01				eS	Sn	13 21 40.0	-16
AF01				IAML		13 22 09.9	
	comp=Z,839nm,1.5s						
PB02	**IPOC Station P**	**1.18**	**303**	⇑*iP*	**Pn**	**13 21 37.6**	**+0.6**
PB02				eS	**Sn**	**13 21 55.5**	**-0.3**
PB02				IAML		13 21 56.2	
	comp=N,2μm,0.2s						
PB02	**IPOC Station P**	**1.18**	**303**	*eP*	**Pn**	**13 21 37.6**	**+0.6**
PB02				eS	**Sn**	**13 21 55.8**	**-0.1**
PB05	**IPOC Station P**	**1.54**	**235**	⇓*iP*	**Pn**	**13 21 41.4**	**+0.4**
PB05				e

ISC 22 13:25:31.5±0.8, 1°53'N±0'.06×126°58'E±0'.06, h35km, n18, σ1°80/20, mb4.0/5, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.09**	**134**	P	**Pn**	**13 25 51.8**	**+1.5**
TNTI				S	**Sn**	**13 26 06.9**	**+2.7**
SGSI	**Sangihe**	**2.38**	**334**	P	**Pn**	**13 26 08.6**	**+0.5**
SGSI				S	**Sn**	**13 26 39.4**	**+3.3**
KMSI	**Cibinong**	**2.77**	**250**	P	**Pn**	**13 26 12.8**	**-0.6**
KMSI				S	**Sn**	**13 26 46.8**	**+1.1**
SANI	**Sanana**	**3.61**	**189**	P	**Pn**	**13 26 24.7**	**-0.3**
LUWI	**Luwuk**	**4.59**	**236**	P	**Pn**	**13 26 39.9**	**+1.4**
NLAI	**Namlea**	**4.77**	**174**	P	**Pn**	**13 26 43.0**	**+2.1**
APSI	**Ampana**	**5.50**	**244**	P	**Pn**	**13 26 53.9**	**+2.9**
MPSI	**Mapaga**	**6.79**	**260**	P	**Pn**	**13 27 10.2**	**+1.5**
TTSI	**Tana Toraja**	**8.15**	**236**	P	**Pn**	**13 27 28.9**	**+1.5**
	744nm16nm,0.7s						
TGY	**Tagaytay City**	**13.68**	**336**	LR	LR	13 33 54.8	
	comp=Z,312nm,19.5s,baz=258,slow=37						
JAY	**Jayapura**	**14.68**	**106**	Pn	Pn	13 28 49.7	-7.1
	1.0nm,0.3s,baz=288,slow=19,SNR=8.7						
	20nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.53**	**183**	P	**P**	**13 29 55.2**	**-0.9**
	0.3nm,0.3s,baz=11,slow=12,SNR=6.7						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**22.66**	**161**	P	**P**	**13 30 27.4**	**-2.5**
	2.7nm,0.4s,baz=338,slow=10,SNR=22						
WRA				PcP	**PcP**	**13 34 20.9**	**-1.1**
	0.2nm,0.8s,baz=339,slow=2.6,SNR=1.4						
	2.7nm,0.4s						
ASAR	**Alice Springs**	**26.04**	**165**	P	**P**	**13 31 01.2**	**-0.5**
	0.6nm,0.3s,baz=341,slow=9.4,SNR=30						
ASAR				PcP	**PcP**	**13 34 29.1**	**-0.2**
	0.1nm,0.4s,baz=356,slow=2.5,SNR=0.8						
	0.6nm,0.3s						
STKA	**Stephens Creek**	**36.15**	**158**	P	**P**	**13 32 29.6**	**-1.1**
	1.9nm,0.3s,baz=330,slow=5.4,SNR=3.0						
	1.9nm,0.3s						
PALK	**Pallekele**	**46.07**	**279**	LR	LR	13 56 25.4	
	comp=Z,19nm,19.1s,baz=66,slow=40						
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**13 35 29.4**	**-0.3**
	0.4nm,0.3s,baz=123,slow=7.7,SNR=7.2						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**63.50**	**328**	P	**P**	**13 35 56.4**	**-1.7**
	0.5nm,0.3s,baz=134,slow=2.7,SNR=1.8						
	0.5nm,0.3s						

*NEIC **22** 13:46:38.7±0.9, 12°.73S±0°.08×113°.3E±0°.1, h10km±1km, mb4.1/10, Error ellipse: s-maj=21.6km s-min=13.0km az=252.0*

*IDC **22** 13:46:39.2±1.8, 12°.71S×113°.54E, h0km, mb3.5/4, mbtmp3.9/6, ML4.3/2, MS3.0/2, Error ellipse: s-maj=53.0km s-min=14.1km az=38.0*

ISC 22 13:46:38.3±0.7, 12°80S±0°.07×113°32'E±0°.06, h10km, n52, σ1°94/53, mb4.0/9, Northwest of Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**4.38**	**11**		**Pn**	**13 47 44.5**	**-0.5**
JAGI	**Jajag, Banyuwa**	**4.38**	**11**	P	**Pn**	**13 47 45.1**	**+0.1**
JAGI	**Jajag, Banyuwa**	**4.38**	**11**	P	**Pn**	**13 47 45.3**	**+0.3**
JAGI				S	**Sn**	**13 48 32.4**	**-3.7**
DNP	**Denpasar**	**4.50**	**25**	P	**Pn**	**13 47 49.4**	**+2.8**
BLJI	**Banyuglugur**	**5.03**	**3**	P	**Pn**	**13 47 54.6**	**+0.7**
PCJI	**Pacitan**	**5.04**	**335**	P	**Pn**	**13 47 53.6**	**-0.4**
SRBI	**Singaraja**	**5.05**	**22**	P	**Pn**	**13 47 53.1**	**-0.9**
ABJI	**Asem Bagus**	**5.06**	**10**	P	**Pn**	**13 47 54.3**	**+0.1**
TWSI	**Taliwang, Sumb**	**5.35**	**41**	P	**Pn**	**13 47 58.9**	**+0.7**
UGM	**Wanagama**	**5.58**	**330**	Pn	**Pn**	**13 48 00.8**	**-0.7**
UGM	**Wanagama**	**5.58**	**330**	P	**Pn**	**13 48 00.6**	**-0.9**
UGM	**Wanagama**	**5.58**	**330**	P	**Pn**	**13 48 00.1**	**-1.4**
	0.5nm79nm,0.7s						
PLAI	**Plampang**	**5.90**	**48**	P	**Pn**	**13 48 07.0**	**+1.2**
PLAI	**Plampang**	**5.90**	**48**	P	**Pn**	**13 48 05.2**	**-0.6**
	0.3nm37nm,0.7s						
WBSI	**Waikabubak, Su**	**6.74**	**63**	P	**Pn**	**13 48 18.8**	**+1.4**
	0.5nm35nm,1.0s						
KPJI	**Karang Pucung**	**6.94**	**321**	P	**Pn**	**13 48 18.4**	**-1.7**
	0.2nm43nm,0.7s						
WSI	**Waingapu**	**7.52**	**66**	P	**Pn**	**13 48 32.2**	**+4.1**
BASI	**Baing, Sumba**	**7.57**	**71**	P	**Pn**	**13 48 31.3**	**+2.6**
	55nm,1.5s						
BBJI	**Bungbulang**	**7.70**	**313**	P	**Pn**	**13 48 29.4**	**-1.2**
XMI	**Christmas Isla**	**7.83**	**287**	P	**Pn**	**13 48 30.2**	**-2.1**
GIRL	**Giralia**	**9.82**	**175**	Pn	**Pn**	**13 49 00.3**	**+0.7**
MBWA	**Marble Bar**	**10.33**	**144**	Pn	**Pn**	**13 49 07.0**	**+0.5**
MBWA	**Marble Bar**	**10.33**	**144**	P	**Pn**	**13 49 07.6**	**+1.0**
BATI	**Baumata**	**10.46**	**77**	Pn	**Pn**	**13 49 08.4**	**-0.1**
	1.0nm,0.3s,baz=270,slow=20,SNR=1.2						
BATI				Sn	**Sn**	**13 51 04.5**	**-1.4**
	5.0nm,0.3s,baz=270,slow=20,SNR=5.6						
	6.3nm,0.4s						
PSA00	**Pilbara Seismi**	**10.72**	**145**	Pn	**Pn**	**13 49 11.5**	**-0.4**
PSA00	**Pilbara Seismi**	**10.72**	**145**	Pn	**Pn**	**13 49 12.1**	**+0.1**
PSA00	**Pilbara Seismi**	**10.72**	**145**	P	**Pn**	**13 49 14.0**	**+2.0**
FITZ	**Fitzroy Crossi**	**12.99**	**115**	Pn	**Pn**	**13 49 44.5**	**+1.4**
	2.3nm,0.3s,baz=292,slow=8.3,SNR=72						
FITZ				Sn	**Sn**	**13 51 58.8**	**-9.0**
	1.2nm,0.3s,baz=88,slow=20,SNR=6.7						
	7.6nm,0.4s						
FITZ	**Fitzroy Crossi**	**12.99**	**115**		**Pn**	**13 49 44.2**	**+1.2**
FITZ	**Fitzroy Crossi**	**12.99**	**115**	P	**Pn**	**13 49 45.1**	**+2.0**
MEEK	**Meekatharra**	**14.63**	**161**	P	**Pn**	**13 50 06.6**	**+1.1**
KNRA	**Kununurra**	**15.24**	**103**	Pn	**Pn**	**13 50 15.3**	**+1.6**
MTN	**Manton Dam**	**17.38**	**92**		**P**	**13 50 42.1**	**-0.3**
MTN				IAmb	IAmb	13 50 48.5	
	comp=Z,17nm,1.2s						
WB0	**Warramunga Arr**	**21.37**	**112**	P	**P**	**13 51 27.0**	**+0.9**
WB0				IAmb	IAmb	13 51 37.6	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**21.37**	**112**	P	**P**	**13 51 28.0**	**+1.9**
	comp=Z,1.7nm,0.9s,baz=289,slow=9.3,SNR=9.6						
WRA				S	**S**	**13 55 22.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=281,slow=24,SNR=4.7						
	comp=Z,1.7nm,0.9s						
WB2	**Warramunga Arr**	**21.38**	**112**	P	**P**	**13 51 26.3**	**+0.1**
WB2				IAmb	IAmb	13 51 49.1	
	comp=Z,11nm,1.4s						
WR8	**Warramunga Arr**	**21.52**	**112**	P	**P**	**13 51 27.6**	**0.0**
ASAR	**Alice Springs**	**22.31**	**122**	P	**P**	**13 51 38.8**	**+2.7**
	comp=Z,0.9nm,0.4s,baz=299,slow=9.7,SNR=37						
ASAR				S	**S**	**13 55 43.4**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=280,slow=23,SNR=4.9						
ASAR				LR	LR	14 00 57.6	
	comp=Z,56nm,18.0s,baz=304,slow=39						
	comp=Z,0.9nm,0.4s						
ASAR	**Alice Springs**	**22.31**	**122**	P	**P**	**13 51 36.3**	**+0.2**
AS31	**Alice Springs**	**22.31**	**122**	P	**P**	**13 51 35.5**	**-0.7**
FORT	**Forrest**	**22.48**	**145**	P	**P**	**13 51 39.1**	**+1.2**
PMG	**Port Moresby**	**33.37**	**88**	LR	LR	14 07 23.4	
	comp=Z,20nm,20.2s,baz=169,slow=38						
CMAR	**Chiang Mai Arr**	**34.15**	**335**	P	**P**	**13 53 25.9**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=175,slow=8.1,SNR=4.6						
	comp=Z,0.5nm,0.3s						
H08S2	**Diego Garcia H**	**40.47**	**273**	T	T	14 37 02.6	
	baz=100,slow=75,SNR=62						
H08S3	**Diego Garcia H**	**40.48**	**273**	T	T	14 37 03.5	
	baz=100,slow=75,SNR=92						
H08S1	**Diego Garcia H**	**40.48**	**273**	T	T	14 37 04.8	
	baz=100,slow=75,SNR=49						
MK31	**Makanchi Array**	**65.52**	**337**	P	**P**	**13 57 21.4**	**-0.5**
MK31				IAmb	IAmb	13 57 28.5	
	comp=Z,1.3nm,1.0s						
MKAR	**Makanchi Array**	**65.52**	**337**	P	**P**	**13 57 23.8**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=135,slow=7.5,SNR=2.5						
	comp=Z,0.2nm,0.5s						
MKAR	**Makanchi Array**	**65.52**	**337**	P	**P**	**13 57 21.6**	**-0.2**
QSPA	**South Pole Qui**	**77.22**	**180**	P	**P**	**13 58 32.4**	**0.0**
QSPA				IAmb	IAmb	13 59 04.0	
	comp=Z,2.8nm,1.4s						
AB31	**Akbulak array**	**77.59**	**327**	P	**P**	**13 58 34.5**	**0.0**
AB31				IAmb	IAmb	13 58 41.0	
	comp=Z,3.1nm,1.5s						
ABKAR	**Akbulak array**	**77.59**	**327**	P	**P**	**13 58 34.7**	**+0.2**

*IDC **22** 14:18:14.0±0.7, 4°.62S×152°.97E, h0km, mb4.3/18, mbtmp4.4/19, ML4.3/1, MS3.3/21, Error ellipse: s-maj=20.9km s-min=12.7km az=103.0*

*NEIC **22** 14:18:20.9±1.0, 4°.62S±0°.10×153°.15E±0°.08, h51km±8km, mb4.7/28, Error ellipse: s-maj=14.9km s-min=11.0km az=207.0*

ISC 22 14:18:20.8±0.4, 4°70S±0°.06×153°10E±0°.06, h55km, n81, σ1°36/73, mb4.5/30, MS3.4/20, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.06**	**299**		**Pn**	**14 18 39.5**	**0.0**
RABL				Sn	**Sn**	**14 18 53.6**	**+0.2**
MANU	**Manus Island**	**6.30**	**295**		**Pn**	**14 19 50.5**	**-0.7**
PMG	**Port Moresby**	**7.52**	**231**	Pn	**Pn**	**14 20 08.2**	**+0.3**
	1.5nm,0.3s,baz=35,slow=10,SNR=7.6						
PMG				Sn	**Sn**	**14 21 30.5**	**-1.3**
	5.9nm,0.3s,baz=294,slow=20,SNR=6.2						
PMG	**Port Moresby**	**7.52**	**231**		**Pn**	**14 20 08.8**	**+0.9**
HNR	**Honiara**	**8.26**	**125**	Pn	**Pn**	**14 20 19.0**	**+0.9**
	3.4nm,0.3s,baz=359,slow=0.8,SNR=2.7						
HNR				Sn	**Sn**	**14 21 49.9**	**-0.2**
	5.5nm,0.3s,baz=188,slow=5.2,SNR=1.1						
HNR				LR	LR	14 22 44.9	
	comp=Z,62nm,21.8s,baz=328,slow=32						
	68nm,0.9s						
JAY	**Jayapura**	**12.56**	**280**	Pn	**Pn**	**14 21 14.8**	**-2.1**
	2.8nm,0.3s,baz=124,slow=18,SNR=19						
GUMO	**Guam**	**19.93**	**336**	LR	LR	14 31 22.2	
	comp=Z,52nm,18.4s,baz=118,slow=40						
FAKI	**Fak Fak**	**20.88**	**274**	P	**P**	**14 22 58.6**	**0.0**
FAKI				IAmb	IAmb	14 23 34.1	
	comp=Z,38nm,1.4s						
DZM	**Mont Dzumac**	**21.57**	**144**	P	**P**	**14 23 06.2**	**+0.1**
	comp=Z,22nm,1.1s,baz=330,slow=20,SNR=8.2						
DZM				LR	LR	14 29 03.8	
	comp=Z,57nm,19.6s,baz=270,slow=30						
	comp=Z,22nm,1.1s						
DZM	**Mont Dzumac**	**21.57**	**144**	*e*P	**P**	**14 23 09.9**	**+3.8**
	comp=Z,26nm,23.6s						
DZM				*e*S	**S**	**14 26 55.6**	**-6.7**
	comp=Z,138nm,28.6s						
DZM				*e*LR	LR	14 28 12.0	
	comp=Z,296nm,26.5s						
WB0	**Warramunga Arr**	**23.58**	**229**		**P**	**14 23 26.9**	**0.0**
WB0				IAmb	IAmb	14 23 28.7	
	comp=Z,21nm,0.8s						
WR8	**Warramunga Arr**	**23.62**	**228**		**P**	**14 23 27.2**	**0.0**
WR8				IAmb	IAmb	14 23 28.6	
	comp=Z,52nm,1.5s						
WRAB	**Tennant Creek**	**23.72**	**229**	P	**P**	**14 23 28.6**	**+0.6**
WRAB				IAmb	IAmb	14 23 29.9	
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**23.73**	**229**	P	**P**	**14 23 28.2**	**+0.1**
	comp=Z,14nm,0.6s,baz=52,slow=9.9,SNR=60						
WRA				S	**S**	**14 27 39.2**	**-0.4**
	comp=Z,1.6nm,1.1s,baz=42,slow=16,SNR=4.7						
WRA				LR	LR	14 33 43.4	
	comp=Z,50nm,18.9s,baz=70,slow=39						
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**23.73**	**229**		**P**	**14 23 27.5**	**-0.7**
FUNA	**Funafuti**	**26.20**	**100**	P	**P**	**14 23 48.7**	**-1.9**
TNTI	**Ternate**	**26.27**	**281**	P	**P**	**14 23 51.4**	**0.0**
TNTI				IAmb	IAmb	14 24 18.8	
	comp=Z,7.9nm,0.5s						
KNRA	**Kununurra**	**26.28**	**244**		**P**	**14 23 51.8**	**+0.4**
AS31	**Alice Springs**	**26.42**	**223**		**P**	**14 23 52.8**	**+0.2**
ASAR	**Alice Springs**	**26.42**	**223**	P	**P**	**14 23 52.4**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=55,slow=9.1,SNR=45						
ASAR				S	**S**	**14 28 27.4**	**+4.9**
	comp=Z,1.2nm,1.0s,baz=48,slow=17,SNR=6.1						
ASAR				LR	LR	14 35 25.3	
	comp=Z,60nm,18.0s,baz=74,slow=39						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**26.42**	**223**	P	**P**	**14 23 52.8**	**+0.2**
STKA	**Stephens Creek**	**29.11**	**200**	P	**P**	**14 24 16.4**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=40,slow=11,SNR=3.4						
STKA				LR	LR	14 35 21.2	
	comp=Z,118nm,20.9s,baz=26,slow=35						
	comp=Z,1.1nm,0.3s						
BATI	**Baumata**	**29.68**	**258**	LR	LR	14 36 22.6	
	comp=Z,102nm,21.2s,baz=106,slow=37						
DAV	**Davao City (W)**	**29.85**	**293**	LR	LR	14 36 37.9	
	comp=Z,23nm,18.3s,baz=111,slow=37						
FITZ	**Fitzroy Crossi**	**29.96**	**241**	P	**P**	**14 24 23.4**	**-0.9**
	comp=Z,20nm,0.8s,baz=77,slow=6.3,SNR=19						
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.96**	**241**	P	**P**	**14 24 23.5**	**-0.7**
TOLI2	**Tolitoli**	**32.80**	**279**	P	**P**	**14 24 48.8**	**-0.5**
TOLI2				IAmb	IAmb	14 25 08.8	
	comp=Z,5.8nm,0.9s						
MYLDM	**Lahad Datu**	**35.92**	**285**	P	**P**	**14 25 16.8**	**+0.5**
MBWA	**Marble Bar**	**36.27**	**240**		**P**	**14 25 18.7**	**-0.6**
PSA00	**Pilbara Seismi**	**36.33**	**239**	P	**P**	**14 25 18.9**	**-0.8**
PSA00				IAmb	IAmb	14 25 21.6	
	comp=Z,5.7nm,1.1s						
PSA00	**Pilbara Seismi**	**36.33**	**239**	P	**P**	**14 25 19.1**	**-0.6**
PSA00				IAmb	IAmb	14 25 19.5	
	comp=Z,11nm,0.8s						
TGY	**Tagaytay City**	**36.97**	**301**	LR	LR	14 37 58.5	
	comp=Z,62nm,21.8s,baz=152,slow=32						
URZ	**Urewera**	**39.92**	**150**	LR	LR	14 39 14.2	
	comp=Z,43nm,20.5s,baz=2.0,slow=32						
MJAR	**Matsushiro Arr**	**43.33**	**342**	LR	LR	14 41 52.3	
	comp=Z,51nm,21.1s,baz=160,slow=33						
KSRS	**Korea Array**	**48.05**	**333**	P	**P**	**14 26 53.5**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=152,slow=9.1,SNR=6.4						
KSRS				LR	LR	14 47 14.5	
	comp=Z,8μm,18.1s,baz=160,slow=36						
	comp=Z,1.8nm,0.8s						
ASAJ	**Asahikawa**	**49.51**	**350**	LR	LR	14 45 10.5	
	comp=Z,26nm,21.3s,baz=148,slow=33						
USRK	**Ussuriysk Ar.**	**52.25**	**341**	P	**P**	**14 27 26.9**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=179,slow=5.8,SNR=3.0						
	comp=Z,2.5nm,0.6s						
PPT2	**Papeete2**	**57.48**	**108**	*e*LR	LR	14 44 56.2	
	comp=Z,42nm,24.0s						
PEA0B	**Petropavlovsk-**	**57.73**	**3**	P	**P**	**14 28 06.1**	**+0.3**
PETK	**Petropavlovsk-**	**57.73**	**3**	P	**P**	**14 28 06.8**	**+1.0**
	comp=Z,3.6nm,0.8s,baz=169,slow=6.0,SNR=8.9						
PETK				LR	LR	14 48 11.7	
	comp=Z,38nm,21.9s,baz=152,slow=31						
	comp=Z,3.6nm,0.8s						
PETK	**Petropavlovsk-**	**57.73**	**3**	P	**P**	**14 28 06.2**	**+0.3**
CM31	**Chiang Mai Arr**	**58.10**	**295**	P	**P**	**14 28 09.4**	**+0.2**
CM31				IAmb	IAmb	14 28 10.4	
	comp=Z,4.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**58.10**	**295**	P	**P**	**14 28 10.1**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=112,slow=5.4,SNR=18						
CMAR				LR	LR	14 51 13.1	
	comp=Z,14nm,21.4s,baz=100,slow=34						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**58.10**	**295**	P	**P**	**14 28 09.5**	**+0.3**
TBI	**Tubuai**	**58.33**	**114**	*e*LR	LR	14 45 15.9	
	comp=Z,778nm,36.5s						
HILR	**Hailar Array B**	**61.29**	**336**	P	**P**	**14 28 30.0**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=114,slow=9.6,SNR=2.0						
	comp=Z,1.3nm,0.5s						
LZDM	**Lanzhou Array**	**61.41**	**315**	P	**P**	**14 28 32.2**	**+0.2**
	comp=Z,2.2nm,0.4s,baz=124,slow=13,SNR=1.6						
	comp=Z,2.2nm,0.4s						
MA2	**Magadan**	**64.11**	**359**	LR	LR	14 53 06.0	
	comp=Z,19nm,20.6s,baz=132,slow=33						
GTA	**Gaotai**	**65.79**	**317**	P	**P**	**14 29 02.3**	**+1.7**
GTA				sP	sP	14 29 24.0	+1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.9s						
BRDH	**Bariadhala**	**65.88**	**297**	LR	LR	14 59 06.3	
	comp=Z,27nm,19.4s,baz=205,slow=37						
TAOE	**Nuku Hiva Isla**	**66.35**	**98**	*e*LR	LR	14 48 55.9	
	comp=Z,140nm,29.0s						
SONM	**Songino Array**	**66.40**	**328**	P	**P**	**14 29 04.5**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=121,slow=5.7,SNR=4.3						
SONM				LR	LR	14 56 01.3	
	comp=Z,35nm,21.8s,baz=344,slow=34						
	comp=Z,0.7nm,0.5s						
SHL	**Shillong**	**66.51**	**300**	P	**P**	**14 29 05.0**	**-0.6**
SHL				IAmb	IAmb	14 29 06.2	
	comp=Z,8.5nm,1.0s						
YAK	**Yakutsk**	**68.94**	**348**	LR	LR	15 00 06.7	
	comp=Z,21nm,18.5s,baz=106,slow=36						
J17K	**VABM Dome**	**76.79**	**20**	P	**P**	**14 30 08.1**	**+1.8**
CNPM	**China Poot**	**77.50**	**26**	P	**P**	**14 30 09.9**	**-0.5**
H17K	**Granite Mounta**	**77.53**	**19**	P	**P**	**14 30 10.6**	**+0.1**
H17K				IAmb	IAmb	14 30 42.2	
	comp=Z,13nm,1.4s						
E19K	**Redstone River**	**80.01**	**17**	P	**P**	**14 30 24.3**	**+0.3**
E19K				IAmb	IAmb	14 31 01.6	
	comp=Z,14nm,1.4s						
IMAR	**Indian Mountai**	**80.19**	**19**	P	**P**	**14 30 24.6**	**-0.4**
MKAR	**Makanchi Array**	**80.45**	**319**	P	**P**	**14 30 27.1**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=96,slow=7.3,SNR=17						
MKAR				LR	LR	15 08 04.9	
	comp=Z,18nm,18.2s,baz=353,slow=37						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**80.45**	**319**		**P**	**14 30 26.8**	**0.0**
MAKZ	**Makanchi**	**80.66**	**319**		**P**	**14 30 28.3**	**+0.3**
ZAA0	**Zalesovo Array**	**81.24**	**326**	P	**P**	**14 30 30.4**	**-0.5**
ZALV	**Zalesovo Beam**	**81.24**	**326**	P	**P**	**14 30 30.7**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=121,slow=6.8,SNR=6.7						
	comp=Z,1.1nm,0.5s						
ZALV	**Zalesovo Beam**	**81.24**	**326**	P	**P**	**14 30 30.5**	**-0.4**
ILAR	**Eielson Array**	**81.96**	**22**	P	**P**	**14 30 33.7**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=247,slow=6.1,SNR=8.4						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**81.96**	**22**	P	**P**	**14 30 34.2**	**-0.2**
KURK	**Kurchatov**	**83.88**	**322**	P	**P**	**14 30 44.2**	**-0.5**
KURBB	**Kurchatov Arra**	**83.91**	**322**	P	**P**	**14 30 44.5**	**-0.3**
	comp=Z,1.7nm,0.2s,baz=99,slow=4.2,SNR=2.4						
	comp=Z,1.7nm,0.2s						
QSPA	**South Pole Qui**	**85.26**	**180**	P	**P**	**14 30 54.5**	**+3.0**
	comp=Z,1.2nm,0.6s,baz=47,slow=4.5,SNR=11						
	comp=Z,1.2nm,0.6s						
QSPA	**South Pole Qui**	**85.26**	**180**	P	**P**	**14 30 52.6**	**+1.1**
QSPA				IAmb	IAmb	14 31 16.5	
	comp=Z,9.0nm,1.2s						
KK31	**Karatay Array**	**87.78**	**313**	P	**P**	**14 31 04.3**	**+0.1**
KK31				IAmb	IAmb	14 31 04.6	
	comp=Z,4.7nm,1.4s						
KKAR	**Karatay Array**	**87.78**	**313**	P	**P**	**14 31 04.3**	**+0.1**
BVAR	**Borovoye Array**	**89.34**	**323**	P	**P**	**14 31 10.6**	**-0.7**
	comp=Z,5.5nm,0.6s,baz=104,slow=5.8,SNR=39						
BVAR				LR	LR	15 10 42.2	
	comp=Z,24nm,21.2s,baz=20,slow=35						
	comp=Z,5.5nm,0.6s						
AB31	**Akbulak array**	**95.59**	**319**	P	**P**	**14 31 38.9**	**-1.4**
ABKAR	**Akbulak array**	**95.59**	**319**	P	**P**	**14 31 38.7**	**-1.5**
ARTI	**Arti**	**96.50**	**326**	LR	LR	15 18 59.9	
	comp=Z,21nm,18.1s,baz=314,slow=38						
GERES	**GERESS Array B**	**124.13**	**329**	PKP	**PKiKP**	**14 37 14.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=31,slow=2.3,SNR=3.3						
EKA	**Eskdalemuir Ar**	**126.02**	**343**	PKP	**PKiKP**	**14 37 17.8**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=29,slow=3.8,SNR=1.4						
TORD	**Torodi Ar. Bea**	**150.56**	**288**	PKPbc	**PKPbc**	**14 38 07.5**	**-0.2**
	comp=Z,5.2nm,0.7s,baz=88,slow=4.5,SNR=4.7						
DBIC	**Dimbokro**	**157.98**	**276**	PKPab	**PKPab**	**14 38 45.9**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=133,slow=3.9,SNR=3.7						

IDC 22 14:21:18.6±2.2, 16°08S×173°68W, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=144.7km s-min=27.0km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.43**	**257**	P	P	14 30 10.4	-0.4
	0.1nm,0.2s,baz=82,slow=7.7,SNR=1.3						
	0.1nm,0.2s						
ASAR	**Alice Springs**	**49.65**	**252**	P	P	14 30 12.6	+0.1
	0.3nm,0.4s,baz=89,slow=7.6,SNR=12						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**81.21**	**56**	P	P	14 33 37.1	+0.3
	0.5nm,1.0s,baz=242,slow=5.9,SNR=2.6						
	0.5nm,1.0s						
PDAR	**Pinedale Array**	**82.94**	**42**	P	P	14 33 45.6	-0.2
	0.6nm,0.7s,baz=200,slow=4.6,SNR=5.7						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**83.16**	**11**	P	P	14 33 46.2	+0.1
	0.5nm,0.9s,baz=213,slow=4.8,SNR=2.5						
	0.5nm,0.9s						

*SDD **22** 14:29:58.5±1.5, 19°.34N×66°.26W, h23km±145km, MD3.6, ML2.5, MW3.3*

*NEIC **22** 14:29:58.5±0.7, 19°.14N±0°.06×65°.89W±0°.06, h35km±2km, ML2.6/12, Md3.1/5(RSPR), Error ellipse: s-maj=12.5km s-min=8.1km az=39.0*

*RSPR **22** 14:29:59.2, 19°.16N×65°.88W, h43km±13km, MD3.1/5*

ISC 22 14:29:55.6±3.2, 19°2N±0°.1×65°92W±0°.07, h14km±11km, n40, σ0°99/39, 4C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCPR	**Guaynabo City**	**0.89**

ISC 22 14:36:43.1±0.8, 40°61'N±0'02×28°94'E±0'02, h11km±6km, n75, σ0°70/95, 19C-11D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	**Armutlu**	**0.07**	**236**	Pg	**Pg**	**14 36 45.2**	**-0.3**
ARMT				Sg	**Sg**	**14 36 46.9**	**-0.3**
KURT	**Yalova, Merkez**	**0.20**	**95**	P	**Pg**	**14 36 47.3**	**-0.1**
KURT				S	**Sg**	**14 36 50.6**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.24**	**191**	Pg	**Pg**	**14 36 48.4**	**+0.3**
MDNY				Sg	**Sg**	**14 36 51.5**	**+0.1**
HYBA	**Heybeliada-Ist**	**0.29**	**22**	Pg	**Pb**	**14 36 49.5**	**-0.9**
HYBA				Sg	**Sb**	**14 36 53.9**	**-1.3**
BRGA	**Burgazada-Ista**	**0.29**	**18**	Pg	**Pb**	**14 36 49.7**	**-0.7**
BUYA	**Buyukada-Istan**	**0.30**	**28**	Pg	**Pb**	**14 36 49.8**	**-0.7**
YYLC	**Yaylacik**	**0.32**	**198**	SPECP		14 36 50.0	
YYLC				P	**Pb**	**14 36 50.0**	**-0.8**
YYLC				S	**Sg**	**14 36 54.4**	**+0.6**
YYLC				*i* IAML		14 36 56.0	
	comp=E,1μm,0.3s						
TUZL	**Tuzla-Istanbul**	**0.32**	**50**	Pg	**Pg**	**14 36 49.9**	**+0.3**
TUZL				Sg	**Sg**	**14 36 54.7**	**+0.8**
YLV	**Yalova**	**0.33**	**97**	Pg	**Pg**	**14 36 49.9**	**+0.1**
YLVH	**Yalova**	**0.34**	**75**	Pg	**Pb**	**14 36 50.8**	**-0.4**
LAFA	**Gebze-Kocaeli**	**0.35**	**64**	Pg	**Pg**	**14 36 50.3**	**+0.2**
AVDN	**Avdancik/Bursa**	**0.36**	**152**	SPECP		14 36 50.0	
AVDN				P	**Pg**	**14 36 50.0**	**-0.2**
AVDN				*i* IAML		14 36 55.0	
	comp=N,10μm,0.4s						
AVDN				*i* IAML		14 36 55.0	
	comp=E,10μm,0.5s						
AVDN				S	**Sb**	**14 36 56.0**	**-1.1**
HVHR	**Bakirkoy-Istan**	**0.37**	**348**	Pg	**Pb**	**14 36 51.3**	**-0.4**
AVCI	**Avcilar-stanb**	**0.42**	**337**	Pg	**Pb**	**14 36 51.9**	**-0.7**
YKBL	**Yakuplu-Istanb**	**0.44**	**332**	Pg	**Pb**	**14 36 52.6**	**-0.3**
ISK	**Istanbul-Kandi**	**0.47**	**11**	Pg	**Pb**	**14 36 52.6**	**-0.8**
SINB	**Sinanoba-Istan**	**0.50**	**322**	Pg	**Pb**	**14 36 53.9**	**0.0**
ORLT	**Orhaneli**	**0.56**	**184**	Pg	**Pb**	**14 36 54.3**	**-0.7**
KCTX	**Karacabey (Bur**	**0.56**	**233**	Pg	**Pg**	**14 36 53.7**	**-0.4**
OSMT	**Osmaniye**	**0.58**	**90**	Pg	**Pg**	**14 36 54.1**	**-0.3**
BGKT	**Bogazkoy**	**0.59**	**347**	Pg	**Pg**	**14 36 54.7**	**+0.1**
HRT	**Hereke**	**0.59**	**68**	Pg	**Pg**	**14 36 54.6**	**0.0**
ADVT	**Abdulvahap**	**0.63**	**106**	Pg	**Pg**	**14 36 55.5**	**+0.1**
KLYT	**Kilyos**	**0.65**	**7**	Pg	**Pb**	**14 36 56.1**	**-0.4**
KLYT	**Kilyos**	**0.65**	**7**	⇑P	**Pb**	**14 36 55.9**	**-0.6**
KLYT				⇑S	**Sg**	**14 37 02.8**	**-1.4**
SEMS	**Kocaeli-K¶rfe**	**0.66**	**66**	SPECP		14 36 55.0	
SEMS				P	**Pg**	**14 36 55.5**	**-0.5**
SEMS				S	**Sb**	**14 37 05.8**	**-0.2**
CTKS	**Kestanelik-??a**	**0.71**	**332**	Pg	**Pg**	**14 36 56.8**	**-0.1**
HISA	**Bilecik-Osmane**	**0.76**	**100**	SPECP		14 36 57.0	
HISA				P	**Pg**	**14 36 57.6**	**-0.2**
HISA				S	**Sg**	**14 37 07.4**	**-0.4**
HISA				*i* IAML		14 37 09.0	
	comp=N,3μm,0.4s						
HISA				*i* IAML		14 37 09.0	
	comp=E,4μm,0.4s						
CAVI	**Cavuskoy**	**0.80**	**120**	Pg	**Pg**	**14 36 58.4**	**-0.1**
BOTS	**Marmara Eregli**	**0.82**	**298**	Pg	**Pb**	**14 36 59.3**	**-0.2**
SLVT	**Silivri**	**0.83**	**319**	Pg	**Pb**	**14 36 59.4**	**-0.3**
BILE	**Bilecik/Merkez**	**0.84**	**122**	SPECP		14 36 58.0	
BILE				P	**Pg**	**14 36 58.7**	**-0.6**
BILE				S	**Sb**	**14 37 10.6**	**-0.5**
BILE				*i* IAML		14 37 15.0	
	comp=N,1μm,0.2s						
BILE				*i* IAML		14 37 16.0	
	comp=E,1μm,0.2s						
EDC	**Edincik**	**0.86**	**253**	Pg	**Pg**	**14 36 59.4**	**-0.4**
SUSR	**Susurluk-Balik**	**0.92**	**226**	Pg	**Pb**	**14 37 00.7**	**-0.4**
CTYL	**Yalikoy Yolu**	**1.00**	**331**	Pg	**Pg**	**14 37 02.0**	**-0.3**
CTYL	**Yalikoy Yolu**	**1.00**	**331**	⇑P	**Pb**	**14 37 02.4**	**0.0**
CTYL				⇓S	**Sb**	**14 37 15.7**	**0.0**
MRMT	**Marmara Adasi**	**1.03**	**270**	Pg	**Pn**	**14 37 03.1**	**-0.5**
DST	**Dursunbey**	**1.03**	**194**	Pg	**Pb**	**14 37 02.9**	**-0.2**
SAUV	**Serdivan-Sakar**	**1.06**	**82**	Pg	**Pb**	**14 37 03.5**	**0.0**
KAND	**Kocaeli-Kandir**	**1.07**	**62**	S	**Sb**	**14 37 17.7**	**+0.1**
GPA	**Golpazari**	**1.09**	**106**	Pn	**Pn**	**14 37 04.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.11**	**240**	Pn	**Pb**	**14 37 04.2**	**-0.2**
KAYN	**Sakarya, Kayna**	**1.12**	**71**	SPECP		14 37 03.0	
KAYN				P	**Pg**	**14 37 03.6**	**-1.1**
BKES	**Balkesir-Mer**	**1.17**	**222**	SPECP		14 37 05.0	
BKES				P	**Pn**	**14 37 05.8**	**+0.3**
BKES				S	**Sn**	**14 37 21.4**	**0.0**
BKES				*i* IAML		14 37 24.0	
	comp=N,1μm,0.3s						
BKES				*i* IAML		14 37 24.0	
	comp=E,3μm,0.3s						
GULT	**Gulveren**	**1.21**	**98**	Pn	**Pn**	**14 37 06.4**	**+0.3**
TVSB	**Tavsanli**	**1.22**	**161**	Pn	**Pb**	**14 37 06.1**	**-0.2**
BALB	**Balikesir**	**1.26**	**221**	Pn	**Pn**	**14 37 06.8**	**-0.1**
EMET	**Ktahya-Emet**	**1.26**	**167**	SPECP		14 37 06.0	
EMET				P	**Pb**	**14 37 06.8**	**-0.2**
EMET				S	**Sn**	**14 37 24.2**	**+0.3**
EMET				*i* IAML		14 37 26.0	
	comp=E,856nm,0.4s						
KRBG	**Karabiga-Canak**	**1.27**	**261**	Pn	**Pg**	**14 37 07.0**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.34**	**274**	Pn	**Pn**	**14 37 07.8**	**-0.1**
BIGA	**Biga-Canakkale**	**1.41**	**257**	Pn	**Pb**	**14 37 08.9**	**-0.5**
SAHE	**Sakarya_HENDEK**	**1.47**	**80**	SPECP		14 37 10.0	
SAHE				P	**Pb**	**14 37 10.1**	**-0.5**
SAHE				S	**Sb**	**14 37 29.6**	**+0.3**
SAHE				*i* IAML		14 37 32.0	
	comp=N,1μm,0.5s						
SAHE	**Sakarya_HENDEK**	**1.47**	**80**	⇑P	**Pb**	**14 37 10.7**	**+0.1**
SAHE				⇑S	**Sg**	**14 37 30.4**	**-0.1**
PHSR	**Pinarhisar**	**1.48**	**314**	⇑P	**Pg**	**14 37 11.0**	**-0.5**
PHSR				⇓S	**Sg**	**14 37 30.1**	**-0.7**
GDZ	**Gediz**	**1.57**	**165**	SPECP		14 37 11.0	
GDZ				P	**Pb**	**14 37 11.7**	**-0.6**
GDZ				S	**Sg**	**14 37 35.0**	**+1.3**
GDZ				*i* IAML		14 37 37.0	
	comp=E,641nm,0.4s						
CAVK	**Edirne/Enez-Ca**	**2.11**	**273**	⇑P	**Pb**	**14 37 21.9**	**+0.4**
CAVK				⇓S	**Sb**	**14 37 48.3**	**+0.6**
EZN	**Ezine**	**2.15**	**250**	⇓P	**Pb**	**14 37 22.8**	**+0.8**
EZN				⇓S	**Sg**	**14 37 51.1**	**-1.1**
ANTO	**Ankara**	**3.04**	**103**	⇑P	**Pn**	**14 37 32.7**	**+1.5**
ELND	**Elena**	**3.26**	**316**	⇓P	**Pn**	**14 37 34.7**	**+0.4**
LOZB	**Loznitsa**	**3.27**	**328**	⇓P	**Pn**	**14 37 35.9**	**+1.5**
RAZG	**Razgrad**	**3.47**	**329**	⇓P	**Pn**	**14 37 38.0**	**+0.9**
TIRR	**Tirgusor**	**3.87**	**354**	⇓P	**Pn**	**14 37 43.7**	**+1.1**
TPGR	**Topolog**	**4.26**	**355**	⇓P	**Pn**	**14 37 49.0**	**+1.0**
CFR	**Carcaliu**	**4.61**	**353**	⇓P	**Pn**	**14 37 53.1**	**+0.4**
MLR	**Muntele Rosu**	**5.35**	**337**	⇑P	**Pn**	**14 38 04.2**	**+1.2**
VRI	**Vrincioaia**	**5.50**	**344**	⇑P	**Pn**	**14 38 05.5**	**+0.5**
VOIR		**5.61**	**331**	⇑P	**Pn**	**14 38 07.0**	**+0.5**
ARR	**Arges**	**5.71**	**328**	⇑P	**Pn**	**14 38 08.6**	**+0.6**
TURR	**Turia**	**5.85**	**340**	⇓P	**Pn**	**14 38 11.2**	**+1.4**
ONER	**Baraj Valea Uz**	**6.02**	**343**	⇑P	**Pn**	**14 38 13.1**	**+1.0**
LOT	**Lotru**	**6.15**	**324**	⇑P	**Pn**	**14 38 15.2**	**+1.2**
BOVS	**Bovan**	**6.17**	**302**	⇑P	**Pn**	**14 38 16.1**	**+1.9**
GZR	**Gura Zlata**	**6.58**	**319**	⇑P	**Pn**	**14 38 21.7**	**+1.9**
MARR	**Marisel-Cluj**	**7.39**	**327**	⇓P	**Pn**	**14 38 31.9**	**+0.9**
SORM	**Soroca**	**7.54**	**357**	⇑P	**Pn**	**14 38 33.2**	**+0.2**

IDC 22 14:38:32.0±5.2, 6°52S×129°44E, h59km±64km, mb3.4/2, mbtmp3.8/6, ML3.9/4, MS3.7/2, Error ellipse: s-maj=57.5km s-min=27.7km az=117.0

ISC 22 14:38:40.4±1.1, 6°74S±0°07×130°2E±0°1, h150km, n14, σ2s76/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.62**	**140**	P	Pn	14 39 18.3	+7.0
BNDI	**Bandanaira**	**2.23**	**351**	P	**Pn**	**14 39 19.4**	**+1.1**
FAKI	**Fak Fak**	**4.29**	**28**	P	**Pn**	**14 39 44.9**	**+0.4**
DRS	**Darwin Rock St**	**5.69**	**174**	P	**Pn**	**14 40 06.6**	**+3.5**
JAY	**Jayapura**	**11.24**	**69**	P	**Pn**	**14 41 18.4**	**+1.4**
	0.4nm,0.3s,baz=30,slow=20,SNR=2.0						
JAY				S	**Sn**	**14 43 18.6**	**-2.7**
	15nm,0.7s,baz=3.9,slow=18,SNR=5.9 12nm,0.9s						
FITZ	**Fitzroy Crossi**	**12.15**	**201**	P	Pn	14 41 22.0	-6.7
	1.1nm,0.3s,baz=18,slow=20,SNR=17						
FITZ				S	Sn	14 43 33.9	-9.2
	2.0nm,0.4s,baz=76,slow=18,SNR=4.3 2.1nm,1.0s						
WRAB	**Tennant Creek**	**13.71**	**163**	P	**Pn**	**14 41 49.7**	**+0.9**
WRA	**Warramunga Arr**	**13.72**	**164**	P	**Pn**	**14 41 49.4**	**+0.6**
	0.8nm,0.3s,baz=342,slow=13,SNR=13						
WRA				S	**Sn**	**14 44 15.6**	**-5.2**
	0.5nm,0.3s,baz=342,slow=21,SNR=6.1 0.6nm,0.3s						
COEN	**Coen**	**14.60**	**120**	P	**P**	**14 42 04.9**	**+2.6**
ASAR	**Alice Springs**	**17.20**	**169**	P	**Pn**	**14 42 34.0**	**+2.2**
	0.2nm,0.3s,baz=348,slow=12,SNR=30						
ASAR				S	**S**	**14 45 40.9**	**-1.8**
	0.2nm,0.5s,baz=0.6,slow=28,SNR=4.7 0.8nm,0.5s						
STKA	**Stephens Creek**	**27.17**	**158**	LR	LR	14 57 07.6	
	comp=Z,426nm,19.4s,baz=218,slow=40						
RPZ	**Rata Peaks**	**51.30**	**143**	LR	LR	15 09 39.3	
	comp=Z,286nm,20.6s,baz=25,slow=36						
MKAR	**Makanchi Array**	**68.14**	**327**	P	**P**	**14 49 22.4**	**-1.9**
	0.6nm,0.4s,baz=124,slow=7.2,SNR=14 0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**72.41**	**328**	P	**P**	**14 49 47.7**	**-2.5**
	0.2nm,0.4s,baz=117,slow=5.5,SNR=1.2 0.2nm,0.4s						

REN 22 14:39:32.9±0.7, 38°354N±0°010×119°29W±0°01, h8km±7km, Error ellipse: s-maj=1.9km s-min=0.9km az=225.0

NEIC 22 14:39:33.0±0.8, 38°34N±0°01×119°29W±0°01, h5km±1km, Error ellipse: s-maj=2.9km s-min=1.8km az=251.0

NCEDC 22 14:39:33.1±0.7, 38°354N±0°010×119°29W±0°01, h4km±3km, ML3.5/62, ML3.2/139(NEIC), ML3.3/15(REN), Error ellipse: s-maj=1.5km s-min=1.4km az=54.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAKR	**Walker**	**0.19**	**323**		Pg	14 39 37.1	+0.3
WAKR					IAML	14 39 40.6	
	comp=E,6μm,1.0s						
WAKR					IAML	14 39 40.9	
	comp=N,5μm,0.8s						
WAKR	**Walker**	**0.19**	**323**		Sg	14 39 40.4	+1.0
TVH1	**TV Hill, Hawth**	**0.43**	**76**		Pg	14 39 41.7	+0.3
TVH1					Sg	14 39 47.8	+0.7
EBP	**Ebbets Pass**	**0.46**	**300**		Pg	14 39 42.3	+0.3
EBP					Sg	14 39 48.8	+0.7
LHV	**Little Huntoon**	**0.63**	**99**		Pg	14 39 45.6	+0.5
LHV				IAML		14 39 58.2	
	comp=N,2μm,0.6s						
LHV				IAML		14 39 59.7	
	comp=E,2μm,0.5s						
LHV	**Little Huntoon**	**0.63**	**99**		Sg	14 39 53.8	+0.4
RYN	**Ryan**	**0.66**	**65**		Pg	14 39 46.0	+0.1
RYN					Sg	14 39 55.2	+0.7
MDCM	**Deadman Creek**	**0.67**	**163**		Pg	14 39 46.0	0.0
LMCR	**Lookout Mounta**	**0.68**	**156**		Pg	14 39 46.0	-0.2
MINS	**Minaret Summit**	**0.72**	**165**		Pg	14 39 46.9	-0.1
MINS					Sg	14 39 56.7	+0.4
MDYM	**Dry Creek**	**0.73**	**162**		Pg	14 39 47.3	+0.2
MDYM					Sb	14 39 57.9	-1.2
MMLB	**Mammoth Lakes**	**0.74**	**160**		Pg	14 39 47.5	+0.2
MMLB					Sb	14 39 58.6	-0.7
MDPB	**Devils Postpil**	**0.74**	**167**		Pg	14 39 47.1	-0.2
MDPB					Sg	14 39 57.3	+0.4
MDPB	**Devils Postpil**	**0.74**	**167**	IAML		14 39 57.7	
	comp=E,814nm,0.6s						
MEMM	**East Mammoth H**	**0.74**	**158**		Pg	14 39 47.6	+0.3
MLIM	**Lincoln Peak**	**0.75**	**163**		Pg	14 39 47.7	+0.2
NV09	**Mina Array Sit**	**0.76**	**84**		Pg	14 39 47.6	-0.1
NV09					Sg	14 39 58.1	+0.7
MCSM	**Casa Diablo Ho**	**0.76**	**156**		Pg	14 39 48.0	+0.2
NV08	**Mina Array Sit**	**0.77**	**86**		Pg	14 39 47.7	-0.1
NV08					Sg	14 39 58.5	+0.7
MMPM	**Mammoth Pass**	**0.77**	**164**		Pg	14 39 47.9	-0.1
PNTR	**Pine Nut**	**0.77**	**342**		Pg	14 39 47.9	-0.1
PNTR				IAML		14 40 02.9	
	comp=N,676nm,0.5s						
PNTR				IAML		14 40 04.4	
	comp=E,887nm,0.6s						
PNTR	**Pine Nut**	**0.77**	**342**		Sb	14 40 00.1	-0.1
MLHM	**Little Hot Cre**	**0.77**	**151**		Pg	14 39 48.3	+0.4
MCBM	**Casa Benchmark**	**0.78**	**156**		Pg	14 39 48.1	+0.2
MCBM					Sb	14 39 59.7	-0.6
MRDM	**Red Cones**	**0.78**	**166**		Pg	14 39 48.0	-0.1
NVAR	**Mina Array Bea**	**0.78**	**84**		Pg	14 39 48.0	-0.2
MGPM	**Gravel Pit**	**0.79**	**157**		Pg	14 39 48.5	+0.3
MLCM	**Laurel Creek C**	**0.80**	**158**		Pg	14 39 48.5	+0.1
MDRNC	**Doe Ridge**	**0.80**	**153**		Pg	14 39 48.6	+0.1
MLAC	**Mammoth, Mammo**	**0.81**	**153**		Pg	14 39 48.7	+0.1
MCVM	**Convict Lake**	**0.85**	**154**		Pg	14 39 49.3	0.0
NV11	**Mina Array Sit**	**0.90**	**85**		Pg	14 39 50.0	-0.3
CMB	**Columbia Colle**	**0.92**	**250**	Pg	Pg	14 39 50.2	-0.5
CMB				IAML		14 40 06.1	
	comp=N,522nm,0.7s						
CMB	**Columbia Colle**	**0.92**	**250**		Sg	14 40 02.5	-0.1
BUCR	**Buckhorn Ranch**	**0.96**	**225**		Pg	14 39 51.1	-0.4
BUCR					Sg	14 40 03.6	-0.3
MMIM	**Miami Mountain**	**1.00**	**201**		Pg	14 39 51.9	-0.3
KCC	**Kaiser Creek**	**1.03**	**181**		Pg	14 39 51.9	-1.0
KCC	**Kaiser Creek**	**1.03**	**181**		Sg	14 40 05.5	-0.6
MPK	**Martis Peak**	**1.10**	**329**		Pg	14 39 54.1	-0.2
MPK				IAML		14 40 11.0	
	comp=E,561nm,0.8s						
MPK				IAML		14 40 20.9	
	comp=N,709nm,0.9s						
MPK	**Martis Peak**	**1.10**	**329**		Sb	14 40 09.8	0.0
WELL	**Weller Preserv**	**1.13**	**275**		Pg	14 39 53.9	-0.8
WELL	**Weller Preserv**	**1.13**	**275**	IAML		14 40 09.6	
	comp=N,1μm,0.3s						
WELL				IAML		14 40 12.2	
	comp=E,826nm,0.2s						
MFBM	**Five Bridges**	**1.15**	**143**		Pg	14 39 55.1	0.0
DONR	**Donner Summit**	**1.28**	**321**		Sb	14 40 15.0	+0.2
DONR	**Donner Summit**	**1.28**	**321**		Pg	14 39 57.1	-0.5
LEGD	**La Grand CA**	**1.32**	**211**		Pn	14 39 57.8	-0.6
MHDM	**Hidden Dam**	**1.32**	**201**		Pn	14 39 57.7	-0.7
PAHR	**Pah Rah Range**	**1.35**	**357**		Pn	14 39 58.3	-0.6
PAHR				IAML		14 40 22.5	
	comp=N,226nm,0.8s						
PAHR	**Pah Rah Range**	**1.35**	**357**		Sg	14 40 15.6	-1.0
PEAR	**Peavine Mounta**	**1.36**	**338**		Pn	14 39 58.7	-0.4
PEAR	**Peavine Mounta**	**1.36**	**338**		Sn	14 40 17.7	+0.1
YUBA	**Cisco Grove, Y**	**1.38**	**316**		Pn	14 39 58.9	-0.5
FRI	**Friant**	**1.40**	**194**		Pn	14 39 59.0	-0.4
DSP	**Deep Springs**	**1.44**	**133**		Pb	14 40 00.2	-0.2
TIN	**Tinemaha, Big**	**1.55**	**147**		Pg	14 40 03.5	+0.7
TIN				IAML		14 40 33.5	
	comp=E,325nm,0.9s						
TIN				IAML		14 40 40.0	
	comp=N,316nm,0.9s						
LCH	**Last Change Ra**	**1.72**	**130**		Pb	14 40 04.7	-0.7
BEKR	**Beckworth**	**1.72**	**332**		Pn	14 40 04.2	+0.1
BEKR	**Beckworth**	**1.72**	**332**	IAML		14 40 29.2	
	comp=N,236nm,0.6s						
BEKR				IAML		14 40 29.3	
	comp=E,456nm,0.8s						
Q09A	**Carvers**	**1.72**	**73**		Pb	14 40 04.9	-0.5
KARE	**Kearney REC, C**	**1.76**	**186**		Pn	14 40 04.9	+0.5
SFRE	**Sierra Foothil**	**1.82**	**300**		Pn	14 40 06.0	+0.7
SCKWR	**San Luis Creek**	**1.83**	**231**		Pb	14 40 07.2	0.0
CSTL	**Corral Hollow**	**1.88**	**248**		Pb	14 40 07.6	-0.5
TWIT	**Twitchell Isla**	**1.90**	**263**		Pb	14 40 08.8	+0.5
GMN	**Gold Mountain**	**1.92**	**123**		Pn	14 40 06.9	+0.1
CBSNC	**Byron Hot Spri**	**1.93**	**255**		Pb	14 40 08.7	-0.1
CMMM	**Mount Mocho**	**1.96**	**243**		Pb	14 40 08.3	-1.1
HMR	**Hamilton Ranch**	**1.98**	**265**		Pb	14 40 10.0	+0.3
KPK	**Kanaka Peak**	**1.99**	**309**		Pn	14 40 08.3	+0.7
SLD	**San Luis Dam**	**1.99**	**231**		Pn	14 40 08.5	+0.9
JEPS	**Jepson Natural**	**2.00**	**268**		Pb	14 40 10.1	+0.1
CBZL	**Buffer Zone**	**2.02**	**252**		Pb	14 40 09.6	-0.8
RUSS	**Russell Ranch**	**2.03**	**276**		Pb	14 40 10.7	+0.2
HPCM	**Pacheco Lake**	**2.04**	**231**		Pn	14 40 09.2	+1.0
ARN	**Arnold Ranch**	**2.04**	**241**		Pb	14 40 09.5	-1.2
GRAC	**Grapevine Rang**	**2.04**	**131**		Pb	14 40 09.8	-1.1
GRAC	**Grapevine Rang**	**2.04**	**131**	Pn	Pn	14 40 08.6	+0.3
GRAC				IAML		14 40 45.0	
	comp=N,156nm,0.9s						
GRAC				IAML		14 40 46.0	
	comp=E,122nm,0.4s						
CMOB	**Morgan Territo**	**2.05**	**255**		Pb	14 40 10.6	-0.4
CMLM	**Mount Lewis**	**2.06**	**246**		Pb	14 40 09.9	-1.2
OSTM	**Stimpson Lane**	**2.06**	**300**		Pb	14 40 10.3	-0.8
BDM	**Black Diamond**	**2.07**	**260**		Pb	14 40 10.8	-0.4
BMSM	**Mercy Hot Spri**	**2.07**	**216**		Pb	14 40 10.8	-0.5
WENL	**Wente Vineyard**	**2.08**	**250**		Pb	14 40 10.1	-1.3
ORV	**Oroville**	**2.10**	**306**		Pb	14 40 10.4	-1.3
ORV	**Oroville**	**2.10**	**306**		Pn	14 40 09.9	+0.9
ORV	**Oroville**	**2.10**	**306**	IAML		14 40 41.8	
	comp=N,192nm,0.6s						
NADM	**Allendale**	**2.11**	**274**		Pb	14 40 11.8	-0.1
MHC	**Mount Hamilton**	**2.12**	**242**		Pb	14 40 10.9	-1.2
SUTB	**Sutter Butte**	**2.13**	**295**		Pn	14 40 09.5	0.0
CVLM	**Vallecito**	**2.14**	**251**		Pb	14 40 11.4	-0.9
CWC	**Cottonwood Cre**	**2.14**	**153**		Pn	14 40 10.7	+0.9
CWC				IAML		14 40 49.2	
	comp=E,147nm,0.2s						
CWC				IAML		14 40 52.7	
	comp=N,148nm,0.3s						
HFEM	**San Felipe**	**2.16**	**231**		Pn	14 40 11.3	+1.4
CALM	**Calaveras Res.**	**2.18**	**246**		Pb	14 40 11.7	-1.3
CRHM	**Round Hill Res**	**2.19**	**258**		Pb	14 40 12.6	-0.6
SPG2	**Springville 2**	**2.19**	**169**		Pb	14 40 13.2	-0.1
OSUM	**Sutter Buttes**	**2.20**	**295**		Pb	14 40 12.0	-1.4
OGOM	**Van Goodin Ran**	**2.22**	**306**		Pb	14 40 13.2	-0.6
BGC	**Bolinger Road**	**2.25**	**257**		Pb	14 40 13.3	-1.0
BBGB	**Big Mountain B**	**2.25**	**219**		Pb	14 40 13.5	-0.9
SGV	**South Grapevin**	**2.26**	**127**		Pn	14 40 12.0	+0.6
NLHM	**Lake Herman**	**2.26**	**265**		Pb	14 40 13.2	-1.3
CLCB	**Lake Chabot**	**2.27**	**255**		Pb	14 40 13.5	-1.2
JLAB	**Laurel Hill**	**2.28**	**239**		Pn	14 40 12.7	+1.2
BRIB	**Briones**	**2.29**	**260**		Pb	14 40 13.6	-1.4
CSLM	**San Leandro Hi**	**2.32**	**255**		Pn	14 40 13.7	+1.7
NAPC	**Atlas Peak**	**2.33**	**273**		Pn	14 40 13.8	+1.6
SAO	**San Andreas Ge**	**2.33**	**228**		Pn	14 40 13.8	+1.5
SAO	**San Andreas Ge**	**2.33**	**228**	Pn	Pn	14 40 12.7	+0.4
AVNL	**Avenal, CA USA**	**2.47**	**199**		Pb	14 40 16.7	-1.3
CVS	**Carmenet Viney**	**2.49**	**271**		Pn	14 40 15.2	+0.8
CVS				IAML		14 40 51.9	
	comp=E,142nm,0.7s						
CVS				IAML		14 40 54.2	
	comp=N,94nm,0.5s						
VES	**Vestal, Richgr**	**2.51**	**176**		Pb	14 40 18.2	-0.6
JRSC	**Jasper Ridge**	**2.52**	**249**		Pn	14 40 15.7	+1.0
JRSC				IAML		14 40 53.1	
	comp=E,67nm,1.2s						
JRSC				IAML		14 41 07.3	
	comp=N,77nm,1.9s						
MNRC	**McLaughlin Min**	**2.52**	**283**	IAML		14 41 08.8	
	comp=N,155nm,1.1s						
MNRC				IAML		14 41 09.4	
	comp=E,161nm,0.8s						
FURC	**Furnace Creek,**	**2.70**	**133**	IAML		14 41 19.6	
	comp=N,70nm,1.5s						
FURC				IAML		14 41 24.8	
	comp=E,76nm,1.2s						
O03E	**Paynes Creek**	**2.75**	**316**		Pn	14 40 19.9	+1.9
ISA	**Isabella, Lake**	**2.77**	**166**		Pb	14 40 22.9	-0.2
TPNV	**Topopah Spring**	**2.79**	**119**		Pn	14 40 20.6	+1.8
TPNV				IAML		14 41 15.1	
	comp=E,104nm,1.5s						
TPNV				IAML		14 41 23.1	
	comp=E,66nm,1.3s						
HULI	**Fort Hunter Li**	**2.80**	**214**		Pn	14 40 19.7	+1.1
MCCM	**Marconi Confer**	**2.83**	**267**		Pn	14 40 20.6	+1.5
MCCM				IAML		14 40 59.3	
	comp=E,89nm,1.0s						
MCCM				IAML		14 40 59.9	
	comp=N,72nm,1.0s						
S11A	**Rachel**	**2.89**	**103**		Pn	14 40 22.3	+2.2
S11A				IAML		14 41 28.7	
	comp=E,156nm,1.4s						
R11B	**Troy Canyon, C**	**2.92**	**89**		Pn	14 40 20.0	-0.5
LBCM	**Butte Creek Ri**	**2.94**	**328**		Pn	14 40 22.3	+1.5
HATC	**Hat Creek Radi**	**2.98**	**326**		Pb	14 40 27.7	+1.0
HATC				IAML		14 41 14.8	
	comp=N,122nm,2.3s						
FARB	**Farallon Islan**	**3.

PNTR				IAML			14 43 27.0	
	comp=E,579nm,0.6s							
PNTR	**Pine Nut**	**0.77 342**			Sg		14 43 21.2	+0.6
MLHM	**Little Hot Cre**	**0.77 151**			Pg		14 43 10.9	+0.4
MCBM	**Casa Benchmark**	**0.78 156**			Pg		14 43 10.9	+0.4
MCBM	**Casa Benchmark**	**0.78 156**			Sb		14 43 22.1	-1.0
MRDM	**Red Cones**	**0.78 166**			Pg		14 43 10.6	0.0
NVAR	**Mina Array Bea**	**0.78 84**			Pg		14 43 10.6	-0.1
MGPM	**Gravel Pit**	**0.79 157**			Pg		14 43 11.2	+0.4
MLCM	**Laurel Creek C**	**0.80 158**			Pg		14 43 11.1	+0.1
MDRNC	**Doe Ridge**	**0.80 153**			Pg		14 43 11.2	+0.2
MCVM	**Convict Lake**	**0.85 154**			Pg		14 43 12.0	+0.1
NV11	**Mina Array Sit**	**0.90 85**			Pg		14 43 12.7	-0.2
NV11					Sg		14 43 24.8	+0.3
CMB	**Columbia Colle**	**0.92 250**			Pg		14 43 12.9	-0.4
CMB				IAML			14 43 28.7	
	comp=N,264nm,0.7s							
CMB	**Columbia Colle**	**0.92 250**			Sg		14 43 25.2	-0.1
BUCR	**Buckhorn Ranch**	**0.96 225**			Pg		14 43 13.7	-0.4
BUCR					Sg		14 43 26.2	-0.4
MMIM	**Miami Mountain**	**1.00 201**			Pg		14 43 14.5	-0.4
KCC	**Kaiser Creek**	**1.03 181**			Pg		14 43 14.5	-0.9
KCC					Sg		14 43 28.3	-0.5
MPK	**Martis Peak**	**1.10 329**			Pg		14 43 16.7	-0.1
MPK					Sb		14 43 32.1	-0.4
MPK	**Martis Peak**	**1.10 329**		IAML			14 43 35.3	
	comp=E,360nm,0.6s							
MPK				IAML			14 43 42.9	
	comp=N,419nm,1.1s							
WELL	**Weller Preserv**	**1.13 275**			Pg		14 43 16.6	-0.7
WELL	**Weller Preserv**	**1.13 275**		IAML			14 43 34.9	
	comp=E,484nm,0.3s							
MFBM	**Five Bridges**	**1.15 143**			Pg		14 43 17.8	0.0
MTUM	**Tungsten Hills**	**1.15 150**			Pg		14 43 17.6	-0.3
DONR	**Donner Summit**	**1.28 321**			Pg		14 43 19.7	-0.5
MHDM	**Hidden Dam**	**1.32 201**			Pg		14 43 20.3	-0.8
LEGD	**La Grand CA**	**1.33 211**			Pg		14 43 20.3	-0.8
PAHR	**Pah Rah Range**	**1.35 357**			Pg		14 43 20.9	-0.7
PAHR				IAML			14 43 41.5	
	comp=N,162nm,0.3s							
PAHR				IAML			14 43 45.2	
	comp=E,140nm,0.9s							
PAHR	**Pah Rah Range**	**1.35 357**			Sg		14 43 39.3	+0.2
PEAR	**Peavine Mounta**	**1.35 338**			Pg		14 43 21.3	-0.4
PEAR	**Peavine Mounta**	**1.35 338**			Sg		14 43 39.1	-0.1
YUBA	**Cisco Grove, Y**	**1.38 316**			Pg		14 43 21.6	-0.6
FRI	**Friant**	**1.40 194**			Pn		14 43 21.6	-0.6
DSP	**Deep Springs**	**1.44 133**			Pn		14 43 22.7	+0.1
LCH	**Last Change Ra**	**1.72 130**			Pn		14 43 27.1	+0.3
Q09A	**Carvers**	**1.72 73**			Pb		14 43 28.0	-0.1
BEKR	**Beckworth**	**1.72 332**			Pb		14 43 27.6	-0.6
BEKR				IAML			14 43 51.8	
	comp=N,135nm,0.6s							
BEKR				IAML			14 43 51.9	
	comp=E,261nm,0.8s							
KARE	**Kearney REC, C**	**1.76 186**			Pb		14 43 28.0	-0.7
SFRE	**Sierra Foothil**	**1.82 300**			Pn		14 43 28.6	+0.5
CSTL	**Corral Hollow**	**1.88 248**			Pb		14 43 30.2	-0.6
GMN	**Gold Mountain**	**1.92 123**			Pn		14 43 29.5	-0.1
GMN	**Gold Mountain**	**1.92 123**		IAML			14 43 38.0	
	comp=N,56nm,0.8s							
GMN				IAML			14 44 03.2	
	comp=E,57nm,0.6s							
CBSNC	**Byron Hot Spri**	**1.93 255**			Pb		14 43 31.3	-0.2
CMMM	**Mount Mocho**	**1.96 243**			Pn		14 43 30.9	+0.9
SLD	**San Luis Dam**	**1.99 231**			Pb		14 43 31.6	-1.1
RUSS	**Russell Ranch**	**2.03 276**			Pb		14 43 33.3	0.0
CMOB	**Morgan Territo**	**2.06 255**			Pb		14 43 32.9	-0.8
BDM	**Black Diamond**	**2.07 260**			Pb		14 43 33.4	-0.5
BMSM	**Mercy Hot Spri**	**2.07 216**			Pb		14 43 33.3	-0.7
ORV	**Oroville**	**2.10 306**			Pn		14 43 32.9	+1.1
ORV	**Oroville**	**2.10 306**		IAML			14 44 02.5	
	comp=N,113nm,0.3s							
NADM	**Allendale**	**2.11 274**			Pb		14 43 34.4	-0.2
MHC	**Mount Hamilton**	**2.12 242**			Pn		14 43 33.5	+1.3
MHC	**Mount Hamilton**	**2.12 242**		IAML			14 44 06.9	
	comp=N,177nm,0.9s							
SUTB	**Sutter Butte**	**2.14 295**			Pn		14 43 33.4	+1.1
HFEM	**San Felipe**	**2.16 231**			Pn		14 43 34.0	+1.3
CALM	**Calaveras Res.**	**2.18 246**			Pn		14 43 34.3	+1.3
CDC	**Canada Road**	**2.19 233**			Pb		14 43 34.7	-1.3
SPG2	**Springville 2**	**2.19 169**			Pb		14 43 35.8	-0.2
OSUM	**Sutter Buttes**	**2.20 295**			Pb		14 43 34.7	-1.4
OGOM	**Van Goodin Ran**	**2.23 306**			Pn		14 43 34.6	+1.1
BGC	**Bolinger Road**	**2.25 257**			Pb		14 43 35.9	-1.1
BBGB	**Big Mountain B**	**2.25 219**			Pb		14 43 36.3	-0.8
SGV	**South Grapevin**	**2.26 127**			Pn		14 43 34.3	+0.2
SAO	**San Andreas Ge**	**2.34 228**			Pn		14 43 36.5	+1.4
SAO	**San Andreas Ge**	**2.34 228**		Pn	Pn		14 43 36.3	+1.2
FRP	**Fremont Peak**	**2.37 228**			Pn		14 43 36.6	+1.0
CVS	**Carmenet Viney**	**2.49 271**			Pn		14 43 38.1	+0.9
CVS	**Carmenet Viney**	**2.49 271**		IAML			14 44 14.4	
	comp=E,70nm,0.7s							
CVS				IAML			14 44 23.4	
	comp=N,51nm,0.6s							
JRSC	**Jasper Ridge**	**2.52 249**			Pn		14 43 38.9	+1.3
JRSC				IAML			14 44 21.3	
	comp=N,45nm,2.0s							
JRSC				IAML			14 44 29.7	
	comp=E,52nm,1.1s							
MNRC	**McLaughlin Min**	**2.52 283**		IAML			14 44 31.0	
	comp=E,82nm,1.0s							
MNRC				IAML			14 44 31.4	
	comp=N,73nm,1.2s							
O03E	**Paynes Creek**	**2.75 316**			Pn		14 43 42.9	+2.1
ISA	**Isabella, Lake**	**2.77 166**			Pn		14 43 42.2	+1.2
HULI	**Fort Hunter Li**	**2.80 214**			Pn		14 43 43.3	+1.9
HULI				IAML			14 44 42.1	
	comp=E,92nm,1.2s							
MCCM	**Marconi Confer**	**2.83 267**		IAML			14 44 21.4	
	comp=E,60nm,2.6s							
MCCM				IAML			14 44 24.7	
	comp=N,46nm,1.6s							
R11B	**Troy Canyon, C**	**2.91 89**			Pn		14 43 42.9	-0.3
HATC	**Hat Creek Radi**	**2.98 326**			Pn		14 43 45.2	+1.2
HATC				IAML			14 44 45.1	
	comp=N,68nm,1.6s							
HATC				IAML			14 44 55.3	
	comp=E,75nm,1.6s							
GWY	**Greenwater Val**	**3.01 135**			Pn		14 43 44.2	-0.3
GWY	**Greenwater Val**	**3.01 135**		IAML			14 44 45.5	
	comp=N,27nm,4.9s							
HOPS	**Hopland Field**	**3.03 283**	Pn	Pn			14 43 45.9	+1.3
SHPR	**Sheep Range**	**3.77 118**	Pn	Pn			14 43 55.2	+0.2
SPR3	**Spring Creek 3**	**3.94 79**	Pn	Pn			14 43 57.7	+0.3
SPR3				IAML			14 45 01.6	
	comp=E,24nm,0.7s							
SPR3				IAML			14 45 06.7	
	comp=N,25nm,0.7s							
ELK	**Elko**	**3.94 51**			Pn		14 43 57.0	-0.3
ELK	**Elko**	**3.94 51**		IAML			14 45 02.5	
	comp=N,23nm,0.4s							
ELK				IAML			14 45 02.6	
	comp=N,17nm,0.6s							
WVOR	**Wild Horse Val**	**4.11 7**	Pn	Pn			14 43 59.3	-0.2
YBH	**Yreka Blue Hor**	**4.27 323**	Pn	Pn			14 44 02.7	+0.9
YBH				IAML			14 45 34.5	
	comp=N,13nm,2.1s							
DUG	**Dugway, Tooele**	**5.35 68**	Pn	Pn			14 44 16.3	-0.3
BGU	**Big Grassy Mou**	**5.47 60**	Pn	Pn			14 44 19.2	+0.9

WEL 22 14:52:48.8±1.1,36°S±14″×17°9W±1°5,h12km,ML3.7/1,
Error ellipse: s-maj=25.4km s-min=8.3km az=134.1,
confirmed,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
MXZ	**Matakaoa Point**	**2.99**	**231**	P	Pn	14	53	35.0	-1.0
MXZ				S	Sn	14	54	12.5	+0.7
WMGZ	**Waiomatatini S**	**3.08**	**227**	P	Pn	14	53	37.7	+0.4
WMGZ				S	Sn	14	54	15.3	+1.3
PKGZ	**Pakihiroa**	**3.32**	**229**	P	Pn	14	53	41.0	+0.5
PKGZ				S	Sn	14	54	20.8	+1.0
PUZ	**Puketiti**	**3.35**	**225**	P	Pn	14	53	40.5	-0.4
PUZ				S	Sn	14	54	21.7	+1.1
HAZ	**Te Kaha**	**3.44**	**233**	P	Pn	14	53	43.1	+0.9
HAZ				S	Sn	14	54	25.8	+3.0
TWGZ	**Tauwhareparae**	**3.58**	**226**	P	Pn	14	53	44.5	+0.3
TWGZ				S	Sn	14	54	26.5	+0.2
RUGZ	**Raukumara Rang**	**3.63**	**231**	P	Pn	14	53	45.0	+0.1
RUGZ				S	Sn	14	54	30.6	+2.9
CNGZ	**Carnagh Statio**	**3.67**	**221**	P	Pn	14	53	46.2	+0.9
TKGZ	**Te Karaka**	**3.83**	**224**	P	Pn	14	53	47.2	-0.3
TKGZ				S	Sn	14	54	34.1	+1.6
MWZ	**Matawai**	**3.95**	**228**	P	Pn	14	53	49.6	+0.3
MWZ				S	Sn	14	54	36.2	+0.6
RIGZ	**Rimuhau**	**4.07**	**222**	P	Pn	14	53	50.7	-0.2
RIGZ				S	Sn	14	54	39.2	+0.8
URZ	**Urewera**	**4.16**	**231**	P	Pn	14	53	51.4	-0.8
URZ				S	Sn	14	54	40.4	-0.3
MHGZ	**Mahia Peninsul**	**4.33**	**217**	P	Pn	14	53	54.3	-0.1
KNZ	**Kokohu**	**4.34**	**220**	P	Pn	14	53	53.6	-1.0
KNZ				S	Sn	14	54	45.5	+0.3
BKZ	**Black Stump Fm**	**5.10**	**226**	P	Pn	14	54	04.4	-0.7
BKZ				S	Sn	14	55	04.1	0.0

*NEIC **22** 14:55:33.9±1.5, 18°.4S±0°.1×176°.22E±0°.10, h10km±1km, mb4.5/18, Error ellipse: s-maj=26.7km s-min=12.9km az=337.0*
*IDC **22** 14:55:34.1±0.6, 18°.27S×176°.06E, h0km, mb4.3/14, mbtmp4.4/16, ML3.9/2, MS4.0/36, Error ellipse: s-maj=22.6km s-min=17.9km az=127.0*
*GCMT **22** 14:55:38.8±0.2, 18°.38S±0°.01×176°.13E±0°.01, h12km, MW5.0/122, Moment Tensor Solution. s64,c83; s122,c203; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-3.65±.07; $M_{\theta\theta}$-0.03±.07; $M_{\phi\phi}$3.68±.05; $M_{r\theta}$-1.80±.24; $M_{\theta\phi}$1.19±.05; $M_{\phi r}$-0.40±.18; Best double couple: M_o4.26600×10¹⁶ NP1:ϕ_s176.00000°, δ42.00000°, λ-123.00000°. NP2:ϕ_s37.00000°, δ56.00000°, λ-64.00000°. Principal axes: T 4.1380, Plg7.0000°, Azm109.0000°; N 0.2520, Plg21.0000°, Azm202.0000°; P -4.3940, Plg67.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 14:55:36.4±0.4, 18°.46S±0°.08×176°.29E±0°.06, h23km, n120, σ1§69/91, mb4.6/30, MS4.1/33, 3C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
MSVF	**Nonsavu**	**1.82**	**67**		**Pn**	**14**	**56**	**04.9**	**-1.6**
MSVF				Sn	**Sn**	**14**	**56**	**30.1**	**+1.2**
SANVU	**Saraoutou**	**9.20**	**288**	Pn	**Pn**	**14**	**57**	**47.0**	**-0.7**
DZM	**Mont Dzumac**	**9.91**	**247**	Pn	**Pn**	**14**	**57**	**56.3**	**-1.3**
	0.2nm,0.3s,baz=81,slow=13,SNR=6.8								
DZM				LR	LR	15	01	17.0	
	comp=Z,2μm,20.9s,baz=59,slow=35 14nm,1.0s								
DZM	**Mont Dzumac**	**9.91**	**247**	*e*P	**Pn**	**14**	**57**	**59.3**	**+1.7**
	213nm,1.6s								
DZM				*e*LR	LR	15	00	09.0	
	4μm,26.1s								
ONTNC	**Ouen Toro**	**9.98**	**246**	Pn	**Pn**	**14**	**57**	**59.4**	**+0.9**
RAO	**Raoul Island**	**11.97**	**155**	LR	LR	15	01	42.0	
	comp=Z,533nm,20.7s,baz=272,slow=30								
HNR	**Honiara**	**18.21**	**297**	LR	LR	15	05	39.3	
	comp=Z,748nm,19.3s,baz=134,slow=34								
URZ	**Urewera**	**19.74**	**178**	P	**Pn**	**15**	**00**	**08.3**	**+2.2**
	2.3nm,0.3s,baz=22,slow=3.7,SNR=24								
URZ				LR	LR	15	06	20.8	
	comp=Z,191nm,18.6s,baz=11,slow=32 28nm,0.8s								
BKZ	**Black Stump Fm**	**20.63**	**180**		**P**	**15**	**00**	**13.2**	**-1.1**
BKZ				IAmb	IAmb	15	00	29.2	
	comp=Z,57nm,1.5s								
RAR	**Rarotonga**	**22.68**	**101**	LR	LR	15	07	27.9	
	comp=Z,395nm,21.6s,baz=246,slow=31								
TUWZ	**Tuamarina**	**22.98**	**185**	P	**P**	**15**	**00**	**36.0**	**-3.3**
CTA	**Charters Tower**	**28.38**	**262**	LR	LR	15	11	02.3	
	comp=Z,18nm,21.2s,baz=78,slow=33								
PMG	**Port Moresby**	**29.63**	**284**	LR	LR	15	11	56.3	
	comp=Z,717nm,19.6s,baz=126,slow=33								
TBI	**Tubuai**	**32.31**	**105**	*e*P	P	15	01	58.6	-5.3
	comp=Z,654nm,36.0s								
TBI				*e*S	**S**	**15**	**07**	**19.6**	**+3.0**
	comp=Z,720nm,25.8s								
TBI				*e*SS	**SS**	**15**	**09**	**26.1**	**-10**
	comp=Z,1μm,29.0s								
TBI				*e*LR	LR	15	10	28.0	
	comp=Z,1μm,31.0s								
TBI				*e*LR	LR	15	10	31.6	
	comp=Z,7μm,30.8s								
PPT2	**Papeete2**	**32.44**	**94**	*e*P	**P**	**15**	**02**	**05.1**	**-0.1**
	comp=Z,48nm,28.2s								
PPT2	**Papeete2**	**32.44**	**94**	*e*PP	PP	15	03	14.8	-3.9
	comp=Z,58nm,25.2s								
PPT2				*e*S	**S**	**15**	**07**	**16.4**	**-2.5**
	comp=Z,278nm,26.5s								
PPT2				*e*SS	**SS**	**15**	**09**	**37.7**	**-0.9**
	comp=Z,339nm,24.8s								
PPT2				*e*LR	LR	15	10	32.4	
	comp=Z,2μm,26.2s								
PPT2				*e*LR	LR	15	10	33.6	
	comp=Z,1μm,28.8s								
PPT	**Papeete**	**32.45**	**94**	LR	LR	15	11	59.3	
	comp=Z,382nm,21.9s,baz=256,slow=30								
TOO	**Toolangi**	**32.97**	**228**	P	**P**	**15**	**02**	**08.2**	**-1.4**
TOO				IAmb	IAmb	15	02	13.8	
	comp=Z,2.8nm,0.9s								
INKA	**Innaminka**	**33.87**	**248**	P	**P**	**15**	**02**	**15.5**	**-2.0**
STKA	**Stephens Creek**	**33.97**	**240**	P	**P**	**15**	**02**	**18.1**	**-0.2**
	comp=Z,4.7nm,1.1s,baz=88,slow=11,SNR=3.8								
STKA				LR	LR	15	14	26.7	
	comp=Z,404nm,21.4s,baz=56,slow=33 comp=Z,4.7nm,1.1s								
H11S2	**WAKE ISLAND Hy**	**37.91**	**345**	T	T	15	43	04.5	
	baz=166,slow=76,SNR=14								
H11S3	**WAKE ISLAND Hy**	**37.92**	**345**	T	T	15	43	05.1	
	baz=166,slow=76,SNR=9.0								
H11S1	**WAKE ISLAND Hy**	**37.93**	**345**	T	T	15	43	03.8	
	baz=166,slow=76,SNR=9.5								
BBOO	**Buckleboo**	**38.74**	**240**	P	**P**	**15**	**02**	**56.6**	**-2.4**
BBOO				IAmb	IAmb	15	03	20.1	
	comp=Z,5.7nm,1.0s								
H11N1	**WAKE ISLAND Hy**	**39.04**	**346**	T	T	15	44	27.2	
	baz=165,slow=76,SNR=4.2								
H11N3	**WAKE ISLAND Hy**	**39.04**	**346**	T	T	15	44	34.3	
	baz=165,slow=76,SNR=6.0								
H11N2	**WAKE ISLAND Hy**	**39.06**	**346**	T	T	15	44	37.5	
	baz=165,slow=76,SNR=3.8								
WR8	**Warramunga Arr**	**39.42**	**261**	P	**P**	**15**	**03**	**02.5**	**-2.4**
WB0	**Warramunga Arr**	**39.54**	**261**		**P**	**15**	**03**	**04.9**	**-1.0**
WB0				IAmb	IAmb	15	03	14.9	
	comp=Z,5.9nm,0.9s								
WRA	**Warramunga Arr**	**39.57**	**261**	P	**P**	**15**	**03**	**05.2**	**-1.0**
	comp=Z,3.5nm,0.9s,baz=92,slow=8.7,SNR=14								
WRA				LR	LR	15	17	41.0	
	comp=Z,356nm,20.6s,baz=72,slow=34 comp=Z,3.5nm,0.9s								
WRA	**Warramunga Arr**	**39.57**	**261**	P	**P**	**15**	**03**	**03.3**	**-2.9**
AS31	**Alice Springs**	**39.78**	**255**		**P**	**15**	**03**	**05.5**	**-2.5**
ASAR	**Alice Springs**	**39.78**	**255**	P	**P**	**15**	**03**	**08.1**	**+0.1**
	comp=Z,9.1nm,1.1s,baz=84,slow=8.8,SNR=29								
ASAR				PcP	**PcP**	**15**	**05**	**13.8**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=95,slow=3.6,SNR=5.4								
ASAR				LR	LR	15	19	29.2	
	comp=Z,744nm,18.2s,baz=72,slow=36 comp=Z,9.1nm,1.1s								
ASAR	**Alice Springs**	**39.78**	**255**		**P**	**15**	**03**	**07.5**	**-0.5**
TAOE	**Nuku Hiva Isla**	**43.30**	**83**	*e*S	**S**	**15**	**10**	**03.4**	**0.0**
	comp=Z,185nm,25.7s								
TAOE				*e*LR	LR	15	15	30.9	
	comp=Z,489nm,28.1s								
MTN	**Manton Dam**	**43.75**	**271**	P	**P**	**15**	**03**	**38.1**	**-2.3**
MTN				IAmb	IAmb	15	03	49.1	
	comp=Z,12nm,0.9s								
GUMO	**Guam**	**44.43**	**314**	LR	LR	15	20	09.9	
	comp=Z,183nm,21.9s,baz=148,slow=33								
FORT	**Forrest**	**45.22**	**245**	P	**P**	**15**	**03**	**50.1**	**-1.9**
FORT				IAmb	IAmb	15	04	09.4	
	comp=Z,8.7nm,0.9s								
FITZ	**Fitzroy Crossi**	**47.96**	**262**	LR	LR	15	23	59.9	
	comp=Z,934nm,20.6s,baz=64,slow=36								
FITZ	**Fitzroy Crossi**	**47.96**	**262**		**P**	**15**	**04**	**11.9**	**-1.7**
FITZ				IAmb	IAmb	15	04	23.6	
	comp=Z,11nm,1.5s								
SOEI	**Soe**	**51.04**	**272**	P	**P**	**15**	**04**	**36.0**	**-1.3**
VNDA	**Vanda**	**59.52**	**184**	LR	LR	15	27	40.5	
	comp=Z,73nm,20.2s,baz=10,slow=32								
TGY	**Tagaytay City**	**63.42**	**297**	LR	LR	15	29	35.9	
	comp=Z,84nm,21.1s,baz=129,slow=32								
CASY	**Casey**	**63.54**	**204**	P	**P**	**15**	**06**	**05.1**	**+0.4**
MJAR	**Matsushiro Arr**	**65.47**	**327**	P	**P**	**15**	**06**	**16.9**	**-0.8**
	comp=Z,2.4nm,0.9s,baz=153,slow=5.7,SNR=3.7 comp=Z,2.4nm,0.9s								
JNU	**Nakatsue**	**67.17**	**320**	LR	LR	15	31	20.5	
	comp=Z,88nm,22.0s,baz=160,slow=32								
RPN	**Rapa Nui**	**68.25**	**112**	LR	LR	15	28	53.9	
	comp=Z,137nm,21.3s,baz=252,slow=29								
ASAJ	**Asahikawa**	**69.48**	**335**	LR	LR	15	31	43.3	
	comp=Z,197nm,21.8s,baz=168,slow=31								
QSPA	**South Pole Qui**	**71.59**	**180**	P	**P**	**15**	**06**	**59.6**	**+3.8**
	comp=Z,14nm,1.1s,baz=12,slow=1.8,SNR=19 comp=Z,14nm,1.1s								
QSPA	**South Pole Qui**	**71.59**	**180**	P	**P**	**15**	**06**	**56.1**	**+0.4**
PETK	**Petropavlovsk-**	**73.07**	**348**	LR	LR	15	33	35.6	
	comp=Z,95nm,19.7s,baz=162,slow=31								
PSI	**Prapat**	**78.92**	**277**	LR	LR	15	44	20.5	
	comp=Z,137nm,18.9s,baz=119,slow=37								
KDAK	**Kodiak Island**	**80.24**	**16**	LR	LR	15	38	50.9	
	comp=Z,175nm,19.0s,baz=214,slow=32								
MAW	**Mawson**	**81.59**	**201**	P	**P**	**15**	**07**	**53.4**	**+1.3**
	comp=Z,9.8nm,0.9s,baz=143,slow=4.1,SNR=6.9 comp=Z,9.8nm,0.9s								
BELA	**Belgrano 2**	**82.21**	**174**	P	**P**	**15**	**07**	**55.1**	**-0.1**
XAN	**Xi'an**	**82.65**	**309**	*e*P	**P**	**15**	**08**	**00.0**	**+1.8**
XAN				pmax	pmax				
	comp=Z,11nm,1.2s								
LPIG	**La Paz**	**83.11**	**62**	LR	LR	15	36	37.0	
	comp=Z,85nm,20.7s,baz=262,slow=30								
SEY	**Seymchan**	**83.28**	**349**	LR	LR	15	41	53.8	
	comp=Z,73nm,20.0s,baz=154,slow=34								
NVAR	**Mina Array Bea**	**83.37**	**46**	P	**P**	**15**	**08**	**03.6**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=226,slow=7.4,SNR=7.1								
NVAR				LR	LR	15	41	39.3	
	comp=Z,86nm,19.2s,baz=265,slow=33 comp=Z,1.1nm,0.8s								
L19K	**White Mountain**	**83.57**	**13**	P	**P**	**15**	**08**	**02.1**	**-0.2**
L19K				IAmb	IAmb	15	08	10.0	
	comp=Z,5.2nm,1.0s								
HHC	**Hu-ho-hao-te**	**84.13**	**316**	*e*P	**P**	**15**	**08**	**05.3**	**-0.5**
HHC				pmax	pmax				
	comp=Z,14nm,0.6s								
HHC				pmax	pmax				
	comp=Z,140nm,4.5s								
CMAR	**Chiang Mai Arr**	**84.36**	**291**	P	**P**	**15**	**08**	**08.3**	**+1.0**
	comp=Z,3.5nm,0.9s,baz=125,slow=3.7,SNR=23								
CMAR				LR	LR	15	42	09.2	
	comp=Z,46nm,21.7s,baz=105,slow=33 comp=Z,3.5nm,0.9s								
PZH	**PanZhiHua**	**85.01**	**300**	P	**P**	**15**	**08**	**09.9**	**-0.7**
PMSA	**Palmer Station**	**85.23**	**158**	LR	LR	15	42	01.7	
	comp=Z,17nm,18.3s,baz=316,slow=33								
LZH	**Lanzhou**	**87.29**	**309**	*e*P	**P**	**15**	**08**	**24.5**	**+2.8**
LZH				pP	pwP	15	08	35.5	+3.4
LZH				pmax	pmax				
	comp=Z,22nm,1.4s								
LZDM	**Lanzhou Array**	**87.34**	**309**	P	**P**	**15**	**08**	**22.6**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=100,slow=7.5,SNR=1.7 comp=Z,1.4nm,0.3s								
ILAR	**Eielson Array**	**87.64**	**15**	P	**P**	**15**	**08**	**22.6**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=242,slow=5.7,SNR=13								
ILAR				LR	LR	15	41	04.6	
	comp=Z,102nm,19.4s,baz=218,slow=31 comp=Z,1.2nm,0.8s								
ILAR	**Eielson Array**	**87.64**	**15**	P	**P**	**15**	**08**	**21.1**	**-1.3**
ELIB	**Princess Elisa**	**87.96**	**188**	*d*P	**P**	**15**	**08**	**24.7**	**+0.4**
	comp=Z,4.4nm,0.8s								
YAK	**Yakutsk**	**88.29**	**340**	LR	LR	15	41	49.6	
	comp=Z,97nm,21.3s,baz=99,slow=32								
NEW	**Newport**	**88.98**	**38**	LR	LR	15	49	08.5	
	comp=Z,49nm,18.0s,baz=260,slow=36								
TROLL	**Troll, Antarti**	**89.66**	**182**	⇓P	**P**	**15**	**08**	**32.9**	**+0.6**
	comp=Z,477nm,1.1s								
SNAA	**Sanae**	**90.10**	**180**	⇑P	**P**	**15**	**08**	**34.0**	**-0.2**
	comp=Z,57nm,0.7s								
SNAA	**Sanae**	**90.10**	**180**	P	**P**	**15**	**08**	**34.9**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=174,slow=8.0,SNR=8.4 comp=Z,2.4nm,0.7s								
SNAA	**Sanae**	**90.10**	**180**	P	**P**	**15**	**08**	**33.6**	**-0.6**
SNAA				IAmb	IAmb	15	08	38.0	
	comp=Z,8.4nm,

ML3.6/4, Error ellipse: s-maj=18.1km s-min=7.6km az=252.0
*FUNV **22** 15:05:10.3, 10.83N× 71.31W, h7km, MW3.7*
ISC 22 15:05:09.8±3.6, 10.83N±0.05×71.29W±0.03, h14km±26km, n27, σ1s02/43, 1D, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URIC	**Uribia, Colomb**	**1.10**	**322**	P	**Pb**	**15 05 30.3**	**-0.3**
URIC				S	**Sn**	**15 05 45.3**	**-0.5**
MCQV	**Machiques**	**1.45**	**238**	*eP*	**Pn**	**15 05 36.0**	**+0.4**
MCQV				*eS*	**Sn**	**15 05 55.3**	**+0.9**
CRJC	**Cerrejon, Guaj**	**1.57**	**277**	P	**Pn**	**15 05 36.9**	**-0.4**
CRJC				S	**Sn**	**15 05 57.6**	**+0.1**
SDV	**Santo Domingo**	**2.04**	**161**		**Pn**	**15 05 44.6**	**+0.7**
SDV				Sn	**Sn**	**15 06 11.1**	**+1.8**
SDV				IAML		15 06 13.7	
	596nm,0.6s						
SDV	**Santo Domingo**	**2.04**	**161**	P	**Pn**	**15 05 44.9**	**+1.0**
SDV				S	**Sn**	**15 06 08.3**	**-1.0**
TEPV	**Terepaima**	**2.24**	**112**	*eP*	**Pn**	**15 05 47.0**	**+0.5**
JACV	**Jacura**	**2.43**	**84**	*eP*	**Pn**	**15 05 49.7**	**+0.6**
JACV				*eS*	**Sn**	**15 06 19.1**	**+0.4**
SMRC	**Santa Marta, M**	**2.90**	**277**		**Pn**	**15 05 53.6**	**-1.9**
SMRC	**Santa Marta, M**	**2.90**	**277**	P	**Pn**	**15 05 55.0**	**-0.5**
SMRC				S	**Sn**	**15 06 31.1**	**+1.0**
MAPV	**Macapo**	**2.96**	**109**	*eP*	**Pn**	**15 05 56.6**	**+0.1**
MAPV				*eS*	**Sn**	**15 06 31.8**	**-0.1**
ARGC	**Ariguani, Magd**	**3.06**	**252**	P	**Pn**	**15 05 57.4**	**-0.4**
ARGC				S	**Sb**	**15 06 41.5**	**+0.1**
CAPV	**Capacho**	**3.12**	**199**	*eP*	**Pn**	**15 05 59.2**	**+0.5**
CAPV				*eS*	**Sn**	**15 06 35.2**	**-0.8**
OCAC	**Ocana**	**3.26**	**218**	P	**Pn**	**15 05 59.9**	**-0.8**
OCAC				S	**Sb**	**15 06 47.2**	**0.0**
TURV	**Turiamo**	**3.42**	**96**	*eS*	**Sn**	**15 06 42.6**	**-0.4**
BAUV	**El Baul**	**3.71**	**120**		**Pn**	**15 06 06.8**	**0.0**
BAUV				IAML		15 07 25.3	
	comp=N,70nm,0.7s						
BAUV	**El Baul**	**3.71**	**120**	*eP*	**Pn**	**15 06 06.9**	**+0.2**
BAUV				*eS*	**Sn**	**15 06 49.2**	**-1.2**
BENV	**Beln**	**3.74**	**103**	*eP*	**Pn**	**15 06 08.2**	**+1.1**
BENV				*eS*	**Sn**	**15 06 49.5**	**-1.6**
PAMC	**Pamplona, Colo**	**3.74**	**202**	P	**Pn**	**15 06 06.7**	**-0.8**
SJCC	**San Jacinto, C**	**3.93**	**257**	P	**Pn**	**15 06 10.3**	**+0.4**
SJCC				S	**Sn**	**15 06 57.5**	**+1.6**
TACV	**Tcata**	**4.25**	**99**	*eP*	**Pn**	**15 06 15.1**	**+0.8**
TACV				*eS*	**Sn**	**15 07 02.4**	**-1.4**
BARC	**Barichara**	**4.61**	**204**	P	**Pn**	**15 06 19.6**	**+0.3**
RUSC	**La Rusia**	**5.22**	**200**	Pn	**Pn**	**15 06 27.0**	**-0.9**
RUSC	**La Rusia**	**5.22**	**200**	P	**Pn**	**15 06 27.0**	**-0.9**
PTBC	**PUERTO BERRIO,**	**5.29**	**216**	P	**Pn**	**15 06 26.8**	**-1.7**
PTBC				S	**Sn**	**15 07 28.7**	**-0.6**
ROSC	**El Rosal**	**6.67**	**207**	Pn	**Pn**	**15 06 49.3**	**+1.5**
SDDR	**Presa de Saban**	**8.10**	**0**	Pn	**Pn**	**15 07 09.8**	**+2.6**
DR12	**Loma Pena Alta**	**8.12**	**13**	Pn	**Pn**	**15 07 06.6**	**-0.8**

*IDC **22** 15:14:28.0±0.5, 3.10S× 127.46E, h0km, mb4.3/17, mbtmp4.3/21, ML4.4/4, MS3.9/23, Error ellipse: s-maj=21.3km s-min=8.1km az=72.0*
*DJA **22** 15:14:33.6±0.2, 3.5S±2.2× 127.7E±*, h10km, M4.7/26, mB5.2/13, mb5.0/13, MLv4.8/26, Mw(mB)4.6/13*
*NEIC **22** 15:14:35.0±2.2, 3.09S±0.06× 127.39E±0.07, h48km±8km, mb4.6/17, Error ellipse: s-maj=10.9km s-min=8.7km az=69.0*
ISC 22 15:14:34.2±0.4, 3.12S±0.04×127.25E±0.05, h42km, n95, σ2s11/92, mb4.5/27, MS3.9/22, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.19**	**232**	P	**Pn**	**15 14 39.5**	**-2.2**
NLAI				S	**Sn**	**15 14 43.6**	**-3.2**
AAI	**Ambon**	**1.10**	**121**	P	**Pn**	**15 14 54.8**	**+1.6**
AAI				S	**Sn**	**15 15 11.0**	**+3.9**
SANI	**Sanana**	**1.65**	**310**	P	**Pn**	**15 14 59.3**	**-1.5**
MSAI	**Masohi**	**1.69**	**98**	P	Pn	15 15 04.3	+3.0
MSAI				S	Sn	15 15 28.6	+6.8
BNDI	**Bandanaira**	**2.99**	**118**	P	**Pn**	**15 15 21.7**	**+2.5**
TNTI	**Ternate**	**3.87**	**2**		**Pn**	**15 15 28.9**	**-2.3**
TNTI				Sn	**Sn**	**15 16 17.1**	**+1.6**
TNTI	**Ternate**	**3.87**	**2**	P	**Pn**	**15 15 30.8**	**-0.5**
SWI	**Sorong**	**4.59**	**61**	P	**Pn**	**15 15 40.4**	**-0.8**
KDI	**Kendari**	**4.70**	**260**	P	**Pn**	**15 15 45.7**	**+3.1**
KMSI	**Cibinong**	**4.92**	**318**	P	**Pn**	**15 15 47.7**	**+2.1**
LUWI	**Luwuk**	**4.93**	**295**	Pn	**Pn**	**15 15 44.6**	**-1.2**
LUWI	**Luwuk**	**4.93**	**295**	P	**Pn**	**15 15 47.0**	**+1.2**
FAKI	**Fak Fak**	**5.00**	**88**		**Pn**	**15 15 46.3**	**-0.4**
FAKI	**Fak Fak**	**5.00**	**88**	P	**Pn**	**15 15 48.0**	**+1.2**
BBSI	**Bau Bau**	**5.22**	**243**	P	Pn	15 15 56.0	+6.1
	0.8nm2μm115nm,1.2s						
APSI	**Ampana**	**6.01**	**291**	P	**Pn**	**15 16 02.4**	**+1.7**
	1.0nm2μm211nm,0.7s						
SAUI	**Saumlaki**	**6.29**	**140**		**Pn**	**15 16 04.0**	**-0.6**
SAUI	**Saumlaki**	**6.29**	**140**	P	**Pn**	**15 16 08.3**	**+3.8**
MRSI	**Marisa**	**6.40**	**304**	P	**Pn**	**15 16 07.0**	**+1.0**
	0.5nm2μm172nm,0.8s						
SGSI	**Sangihe**	**6.98**	**346**	P	**Pn**	**15 16 14.0**	**0.0**
	194nm,0.6s						
RKPI	**Ransiki, Papua**	**7.10**	**77**	P	**Pn**	**15 16 15.4**	**-0.3**
SOEI	**Soe**	**7.22**	**204**	P	**Pn**	**15 16 22.1**	**+4.6**
	2μm171nm,1.1s						
BNSI	**Bone**	**7.24**	**260**	P	**Pn**	**15 16 20.0**	**+2.4**
	0.2nm815nm52nm,0.7s						
BSSI	**Bau Bau, Buton**	**7.38**	**246**	P	Pn	15 16 24.5	+5.1
	0.6nm2μm180nm,0.8s						
MMRI	**Maumere**	**7.41**	**222**		**Pn**	**15 16 22.9**	**+3.0**
TTSI	**Tana Toraja**	**7.42**	**270**	P	**Pn**	**15 16 21.6**	**+1.5**
	0.2nm38nm,0.6s						
BKSI	**Bulukumba**	**7.44**	**253**	P	**Pn**	**15 16 23.8**	**+3.5**
	0.3nm1μm103nm,0.8s						
SPSI	**Sidrap Palu**	**7.51**	**263**	P	**Pn**	**15 16 23.4**	**+2.1**
KAPI	**Kappang**	**7.71**	**256**	Pn	**Pn**	**15 16 25.9**	**+1.9**
	3.1nm,0.3s,baz=113,slow=8.6,SNR=6.2						
KAPI				Sn	**Sn**	**15 17 54.8**	**+4.6**
	3.9nm,0.3s,baz=223,slow=21,SNR=6.6						
KAPI				LR	LR	15 19 45.4	
	comp=Z,1μm,18.7s,baz=74,slow=40 7.5nm,0.4s						
KAPI	**Kappang**	**7.71**	**256**		**Pn**	**15 16 27.3**	**+3.2**
TOLI2	**Tolitoli**	**7.71**	**303**		**Pn**	**15 16 25.5**	**+1.4**
BATI	**Baumata**	**7.89**	**207**	Pn	**Pn**	**15 16 24.3**	**-2.2**
	5.3nm,0.3s,baz=354,slow=18,SNR=7.2						
BATI				Sn	**Sn**	**15 18 00.6**	**+6.0**
	0.5nm,0.3s,baz=36,slow=8.7,SNR=1.1						
BATI				LR	LR	15 19 42.9	
	comp=Z,3μm,19.1s,baz=32,slow=39 19nm,0.3s						
MTN	**Manton Dam**	**10.39**	**159**	Pn	**Pn**	**15 16 59.4**	**-1.5**
KNRA	**Kununurra**	**12.56**	**173**	Pn	**Pn**	**15 17 30.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**14.97**	**186**	Pn	**Pn**	**15 18 03.5**	**+0.4**
	0.3nm,0.3s,baz=12,slow=12,SNR=16 18nm,0.9s						
FITZ	**Fitzroy Crossi**	**14.97**	**186**		**Pn**	**15 18 04.6**	**+1.6**
WB0	**Warramunga Arr**	**17.95**	**158**		**Pn**	**15 18 36.4**	**-4.5**
WRA	**Warramunga Arr**	**18.09**	**158**	P	**Pn**	**15 18 41.9**	**-0.7**
	3.2nm,0.3s,baz=342,slow=12,SNR=102						
WRA				S	**Sn**	**15 22 04.7**	**+1.1**
	2.8nm,0.8s,baz=344,slow=21,SNR=2.7						
WRA				LR	LR	15 26 29.4	
	comp=Z,368nm,18.3s,baz=28,slow=40						
WRA				ScP	**ScP**	**15 26 50.2**	**+2.6**
	0.9nm,0.8s,baz=316,slow=2.3,SNR=1.5 26nm,0.8s						
WRA	**Warramunga Arr**	**18.09**	**158**		**Pn**	**15 18 40.0**	**-2.6**
WR8	**Warramunga Arr**	**18.17**	**158**		**P**	**15 18 37.8**	**-5.6**
WR8				IAmb	IAmb	15 18 48.9	
	comp=Z,76nm,1.1s						
COEN	**Coen**	**19.06**	**125**		**P**	**15 18 49.7**	**-3.5**
COEN				IAmb	IAmb	15 19 07.2	
	comp=Z,31nm,1.1s						
MBWA	**Marble Bar**	**19.36**	**202**		**P**	**15 18 53.2**	**-3.3**
MBWA				IAmb	IAmb	15 19 01.7	
	comp=Z,48nm,1.3s						
PSA00	**Pilbara Seismi**	**19.70**	**201**		**P**	**15 18 56.9**	**-3.3**
PMG	**Port Moresby**	**20.74**	**108**	P	**P**	**15 19 09.6**	**-1.9**
	comp=Z,5.2nm,0.9s,baz=274,slow=14,SNR=3.2						
PMG				LR	LR	15 29 27.2	
	comp=Z,380nm,18.5s,baz=311,slow=44 comp=Z,5.2nm,0.9s						
AS31	**Alice Springs**	**21.41**	**163**	P	**P**	**15 19 21.5**	**+2.8**
AS31				IAmb	IAmb	15 19 23.6	
	comp=Z,17nm,0.8s						
ASAR	**Alice Springs**	**21.41**	**163**	P	**P**	**15 19 18.9**	**+0.1**
	comp=Z,56nm,0.8s,baz=344,slow=11,SNR=171						
ASAR				S	**S**	**15 23 14.5**	**+0.2**
	comp=Z,13nm,1.1s,baz=345,slow=21,SNR=13						
ASAR				ScP	**ScP**	**15 26 57.2**	**+2.0**
	comp=Z,1.5nm,1.0s,baz=325,slow=2.1,SNR=5.3						
ASAR				LR	LR	15 28 10.2	
	comp=Z,181nm,19.6s,baz=354,slow=38 comp=Z,56nm,0.8s						
GUMO	**Guam**	**24.11**	**46**	LR	LR	15 29 25.2	
	comp=Z,96nm,20.0s,baz=115,slow=38						
CTA	**Charters Tower**	**25.06**	**134**	LR	LR	15 32 05.7	
	comp=Z,9.9nm,19.7s,baz=313,slow=42						
FORT	**Forrest**	**27.52**	**178**		**P**	**15 20 17.0**	**+0.1**
FORT				IAmb	IAmb	15 20 17.6	
	comp=Z,8.7nm,0.7s						
INKA	**Innaminka**	**27.67**	**154**		**P**	**15 20 17.2**	**-1.1**
BBOO	**Buckleboo**	**30.67**	**165**	P	**P**	**15 20 43.5**	**-1.5**
BBOO				IAmb	IAmb	15 20 55.1	
	comp=Z,25nm,1.4s						
NWAO	**Narrogin (SRO)**	**31.10**	**196**	P	**P**	**15 20 47.9**	**-0.8**
STKA	**Stephens Creek**	**31.63**	**156**	P	**P**	**15 20 53.0**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=337,slow=7.8,SNR=8.5						
STKA				LR	LR	15 34 35.7	
	comp=Z,277nm,19.3s,baz=357,slow=38 comp=Z,1.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**35.17**	**309**	P	**P**	**15 21 24.9**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=138,slow=7.5,SNR=8.5						
CMAR				PcP	**PcP**	**15 23 56.5**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=144,slow=2.0,SNR=7.2 comp=Z,0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**35.17**	**309**	P	**P**	**15 21 24.5**	**0.0**
CMAR					**PcP**	**15 23 57.2**	**+2.0**
NJ2	**Nanjing**	**35.88**	**348**	*eP*	**P**	**15 21 31.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CAN	**Canberra**	**37.85**	**150**		**P**	**15 21 46.2**	**-1.0**
PZH	**PanZhiHua**	**38.41**	**322**	P	**P**	**15 21 54.5**	**+2.4**
KSRS	**Korea Array**	**40.37**	**1**	P	**P**	**15 22 07.1**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=184,slow=10,SNR=8.0 comp=Z,2.5nm,0.9s						
MJAR	**Matsushiro Arr**	**40.76**	**14**	P	**P**	**15 22 09.9**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=138,slow=7.4,SNR=1.6 comp=Z,0.5nm,0.4s						
XAN	**Xi'an**	**40.80**	**336**	*eP*	**P**	**15 22 12.8**	**+1.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LZDM	**Lanzhou Array**	**44.68**	**333**	P	**P**	**15 22 43.8**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=149,slow=5.9,SNR=1.7 comp=Z,0.9nm,0.3s						
LZH	**Lanzhou**	**44.72**	**333**	*eP*	**P**	**15 22 39.6**	**-4.1**
LZH				pP	pwP	15 22 58.3	+3.2
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
HHC	**Hu-ho-hao-te**	**46.05**	**343**	*eP*	**P**	**15 22 55.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,77nm,3.7s						
USRK	**Ussuriysk Ar.**	**47.30**	**5**	P	**P**	**15 23 02.8**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=99,slow=8.9,SNR=2.6 comp=Z,2.5nm,0.7s						
GTA	**Gaotai**	**49.28**	**332**	*eP*	**P**	**15 23 21.5**	**+2.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HEH	**HeiHe**	**53.17**	**0**	*eP*	**P**	**15 23 48.0**	**+0.1**
HEH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**53.94**	**343**	P	**P**	**15 23 54.2**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=163,slow=7.8,SNR=10 comp=Z,2.3nm,0.9s						
URZ	**Urewera**	**57.31**	**134**	LR	LR	15 49 54.7	
	comp=Z,51nm,20.2s,baz=330,slow=37						
WMQ	**Urumqi**	**58.67**	**327**	*eP*	**P**	**15 24 28.9**	**+1.3**
WMQ				LR	LR		
	comp=Z,110nm,20.7s						
MKAR	**Makanchi Array**	**63.50**	**327**	P	**P**	**15 25 01.3**	**+1.1**
	comp=Z,4.2nm,0.8s,baz=127,slow=7.9,SNR=38						
MKAR				PcP	**PcP**	**15 25 36.0**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=128,slow=6.2,SNR=3.6						
MKAR				LR	LR	15 54 01.5	
	comp=Z,86nm,21.8s,baz=85,slow=37 comp=Z,4.2nm,0.8s						
MKAR	**Makanchi Array**	**63.50**	**327**		**P**	**15 25 00.4**	**+0.2**
MAKZ	**Makanchi**	**63.68**	**327**		**P**	**15 25 00.3**	**-1.1**
MAKZ				IAmb	IAmb	15 25 03.0	
	comp=Z,7.6nm,1.3s						
AAK	**Ala-Archa**	**65.83**	**320**	LR	LR	15 57 47.0	
	comp=Z,38nm,19.9s,baz=95,slow=39						
ZALV	**Zalesovo Beam**	**66.92**	**334**	P	**P**	**15 25 22.2**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=120,slow=6.0,SNR=8.4						
ZALV				LR	LR	15 56 34.5	
	comp=Z,69nm,20.8s,baz=114,slow=38 comp=Z,1.9nm,0.7s						
KURBB	**Kurchatov Arra**	**67.80**	**329**	P	**P**	**15 25 28.6**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=129,slow=5.7,SNR=30						
KURBB				LR	LR	15 58 29.0	
	comp=Z,37nm,19.3s,baz=171,slow=39 comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**67.80**	**329**		**P**	**15 25 27.5**	**-0.3**
KURK				IAmb	IAmb	15 25 29.2	
	comp=Z,6.8nm,0.8s						
BVAR	**Borovoye Array**	**73.34**	**328**	P	**P**	**15 26 01.1**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=131,slow=8.1,SNR=11						
BVAR				LR	LR	16 02 01.4	
	comp=Z,67nm,19.9s,baz=85,slow=39 comp=Z,2.9nm,0.9s						
VNDA	**Vanda**	**76.61**	**173**	P	**P**	**15 26 19.6**	**-0.3**
	comp=Z,4.0nm,0.9s,baz=311,slow=3.9,SNR=5.8						
VNDA				LR	LR	16 00 36.1	
	comp=Z,104nm,18.1s,baz=338,slow=36 comp=Z,4.0nm,0.9s						
VNDA	**Vanda**	**76.61**	**173**	P	**P**	**15 26 19.2**	**-0.8**
VNDA				IAmb	IAmb	15 26 33.8	
	comp=Z,8.3nm,1.1s						
MAW	**Mawson**	**77.56**	**201**	LR	LR	15 56 23.8	
	comp=Z,109nm,21.9s,baz=64,slow=32						
AKTO	**Aktyubinsk**	**79.35**	**323**	LR	LR	16 05 21.4	
	comp=Z,26nm,20.4s,baz=48,slow=38						
KIRV	**Kirov**	**86.32**	**329**	LR	LR	16 10 16.4	
	comp=Z,68nm,18.2s,baz=64,slow=39						
QSPA	**South Pole Qui**	**86.83**	**180**	P	**P**	**15 27 15.6**	**+1.4**
	comp=Z,5.7nm,1.1s,baz=314,slow=3.2,SNR=12						
QSPA				LR	LR	16 04 42.6	
	comp=Z,130nm,21.0s,baz=348,slow=35 comp=Z,5.7nm,1.1s						
QSPA	**South Pole Qui**	**86.83**	**180**	P	**P**	**15 27 15.0**	**+0.8**
KDAK	**Kodiak Island**	**87.38**	**32**	LR	LR	16 10 44.3	
	comp=Z,106nm,18.0s,baz=218,slow=39						
KBZ	**Khabaz**	**88.05**	**314**	LR	LR	16 11 57.2	
	comp=Z,36nm,20.0s,baz=66,slow=39						
ILAR	**Eilson Array**	**91.03**	**25**	P	**P**	**15 27 33.0**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=267,slow=5.1,SNR=4.5 comp=Z,0.5nm,0.8s						
OBN	**Obninsk**	**92.93**	**325**	LR	LR	16 11 32.2	
	comp=Z,76nm,21.8s,baz=36,slow=37						
ARCES	**ARCESS Array B**	**97.02**	**340**	P	**P**	**15 28 00.9**	**-0.4**
	comp=Z,3.3nm,1.1s,baz=84,slow=3.9,SNR=4.0 comp=Z,3.3nm,1.1s						
BOSA	**Boshof**	**99.01**	**241**	LR	LR	16 08 24.9	
	comp=Z,48nm,19.6s,baz=79,slow=33						
LBTB	**Lobatse**	**99.22**	**244**	LR	LR	16 06 22.4	
	comp=Z,70nm,21.3s,baz=138,slow=31						
PDAR	**Pinedale Array**	**116.05**	**43**	PKP	**PKPdf**	**15 33 13.7**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=272,slow=1.4,SNR=2.0						
TXAR	**Lajitas Array**	**125.17**	**56**	PKP	**PKPdf**	**15 33 30.5**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=256,slow=2.6,SNR=3.9						
PLCA	**Paso Flores**	**133.42**	**161**	PKP	**PKiKP**	**15 33 47.5**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=228,slow=2.5,SNR=3.8						

WEL 22 15:45:41.0±1.2, 36°S±14.1°, 179°W±1.9, h183km±24km, M3.6/9, ML3.5/10, MLv3.6/9, Error ellipse: s-maj=28.2km s-min=14.1km az=120.9, confirmed, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.00**	**229**	P	Pn	15 46 28.4	-1.4
MXZ				S	Sn	15 47 05.1	-2.8
WMGZ	**Waiomatatini S**	**3.11**	**224**	P	Pn	15 46 30.9	-0.1
WMGZ				S	Sn	15 47 10.6	+0.4
PKGZ	**Pakihiroa**	**3.34**	**227**	P	Pn	15 46 33.8	-0.1
PKGZ				S	Sn	15 47 15.8	+0.5
PUZ	**Puketiti**	**3.38**	**223**	P	Pn	15 46 33.8	-0.6
PUZ				S	Sn	15 47 15.2	-0.9
HAZ	**Te Kaha**	**3.45**	**231**	P	Pn	15 46 35.5	+0.3
HAZ				S	Sn	15 47 18.7	+1.0
TWGZ	**Tauwhareparae**	**3.61**	**224**	P	Pn	15 46 37.8	+0.6
TWGZ				S	Sn	15 47 22.4	+1.1
RUGZ	**Raukumara Rang**	**3.65**	**229**	P	Pn	15 46 38.2	+0.4
RUGZ				S	Sn	15 47 24.5	+2.3
CNGZ	**Carnagh Statio**	**3.71**	**219**	P	Pn	15 46 39.1	+0.7
CNGZ				S	Sn	15 47 26.1	+2.6
TKGZ	**Te Karaka**	**3.87**	**222**	P	Pn	15 46 41.1	+0.7
TKGZ				S	Sn	15 47 28.0	+1.0
MWZ	**Matawai**	**3.97**	**226**	P	Pn	15 46 42.2	+0.4
MWZ				S	Sn	15 47 29.3	-0.3
URZ	**Urewera**	**4.18**	**230**	P	Pn	15 46 44.4	+0.1
URZ				S	Sn	15 47 34.2	+0.2
KUZ	**Kuaotunu**	**4.54**	**254**	P	Pn	15 46 49.1	+0.2
BKZ	**Black Stump Fm**	**5.13**	**225**	P	Pn	15 46 55.7	-1.0
BKZ				S	Sn	15 47 56.8	+0.5
BFZ	**Birch Farm**	**6.37**	**216**	S	Sn	15 48 23.8	-1.4

*NEIC **22** 15:47:20.8±2.0, 5.17N±0.07× 124.75E±0.1, h65km±11km, mb4.2/8, Error ellipse: s-maj=16.1km s-min=8.9km az=72.0*
*IDC **22** 15:47:22.8±2.2, 5.35N× 124.61E, h79km±21km, mb3.6/8, mbtmp4.0/9, MS3.2/1, Error ellipse: s-maj=24.1km s-min=13.8km az=76.0*
*DJA **22** 15:47:22.2±0.9, 5.7N±4.4× 12.5E±*, h24km±10km, M4.5/13, mB5.0/4, mb4.7/7, MLv4.5/13, Mw(mB)4.4/4*
ISC 22 15:47:18.1±0.6, 5.23N±0.05×124.62E±0.07, h35km, n34, σ1s98/39, mb4.2/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.78**	**149**	P	**Pn**	**15 47 47.5**	**+1.1**
SGSI				S	**Sn**	**15 48 09.1**	**+1.3**
DAV	**Davao City (W)**	**2.07**	**28**	P	Pn	15 47 55.1	+4.7
	225nm,0.4s,baz=247,slow=7.7,SNR=6.9						
DAV				S	**Sn**	**15 48 18.4**	**+3.5**
	529nm,0.4s,baz=222,slow=20,SNR=10						
KMSI	**Cibinong**	**4.66**	**188**	P	**Pn**	**15 48 30.2**	**+4.1**
KMSI				S	**Sn**	**15 49 18.4**	**-0.6**
TNTI	**Ternate**	**5.21**	**148**		**Pn**	**15 48 36.4**	**+2.8**
TNTI	**Ternate**	**5.21**	**148**	P	**Pn**	**15 48 36.9**	**+3.4**
MRSI	**Marisa**	**5.42**	**210**	P	**Pn**	**15 48 38.7**	**+2.2**
MRSI				S	**Sn**	**15 49 39.0**	**+1.3**
TOLI2	**Tolitoli**	**5.60**	**223**		**Pn**	**15 48 39.2**	**+0.3**
APSI	**Ampana**	**6.78**	**206**	P	**Pn**	**15 48 59.2**	**+4.1**
	0.3nm908nm33nm,0.9s						
APSI				S	**Sn**	**15 50 14.5**	**+3.4**
	0.3nm908nm33nm,0.9s						
SANI	**Sanana**	**7.36**	**169**	P	**Pn**	**15 49 04.3**	**+1.2**
	0.2nm60nm,0.8s						
NLAI	**Namlea**	**8.77**	**164**	P	**Pn**	**15 49 22.9**	**+0.5**
	37nm,0.8s						
TGY	**Tagaytay City**	**9.54**	**338**	P	**Pn**	**15 49 36.2**	**+3.2**
	249nm,0.5s,baz=155,slow=14,SNR=1.9						
AAI	**Ambon**	**9.55**	**158**	P	**Pn**	**15 49 34.4**	**+1.2**
	25nm,0.5s						
FAKI	**Fak Fak**	**11.12**	**137**	Pn	**Pn**	**15 49 55.1**	**+0.4**
SOEI	**Soe**	**14.89**	**181**	Pn	**Pn**	**15 50 46.3**	**0.0**
BATI	**Baumata**	**15.36**	**184**	P	**P**	**15 50 56.9**	**+0.2**
	5.7nm,0.4s,baz=301,slow=12,SNR=3.6						
BATI				LR	LR	15 58 22.6	
	comp=Z,81nm,19.5s,baz=346,slow=43						
KNRA	**Kununurra**	**21.17**	**169**	P	**P**	**15 52 00.9**	**+0.4**
KNRA				IAmb	IAmb	15 52 06.4	
	comp=Z,14nm,1.0s						
FITZ	**Fitzroy Crossi**	**23.20**	**178**	P	**P**	**15 52 22.8**	**+0.8**
WB0	**Warramunga Arr**	**26.63**	**159**	P	**P**	**15 52 52.5**	**-1.2**
WB0				IAmb	IAmb	15 53 27.4	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**26.78**	**159**	P	**P**	**15 52 56.7**	**+1.7**
	comp=Z,2.1nm,1.0s,baz=332,slow=10,SNR=7.2 comp=Z,2.1nm,1.0s						
WR8	**Warramunga Arr**	**26.84**	**159**	P	**P**	**15 52 53.3**	**-2.2**
WR8				IAmb	IAmb	15 53 36.9	
	comp=Z,4.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.30**	**300**	P	**P**	**15 53 09.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=107,slow=6.5,SNR=5.2 comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**28.30**	**300**	P	**P**	**15 53 07.4**	**-1.2**
AS31	**Alice Springs**	**30.11**	**163**	P	**P**	**15 53 22.4**	**-2.3**
ASAR	**Alice Springs**	**30.11**	**163**	P	**P**	**15 53 26.0**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=338,slow=6.4,SNR=11						
ASAR				PcP	**PcP**	**15 56 23.9**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=346,slow=2.4,SNR=4.8 comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**30.11**	**163**

	comp=N,30nm,0.8s,comp=E,31nm,1.1s							
JUS	**Usuki**	**1.17**	**354**	A	A	16 02 45.2		
	comp=N,14nm,0.9s,comp=E,23nm,1.4s							
JTO	**Tosashimizu**	**1.23**	**38**	*i* P	**Pn**	**16 02 45.4**	**-0.4**	
JTO				S	**Sn**	**16 03 00.7**	**-0.6**	
JTO	**Tosashimizu**	**1.23**	**38**	A	A	16 02 45.4		
	comp=N,4.0nm,2.2s,comp=E,4.0nm,1.7s							
JSU	**Suzuyama**	**1.29**	**253**	A	A	16 02 47.5		
	comp=N,7.0nm,1.3s,comp=E,5.0nm,0.9s							
UWA2	**Uwa jima 2**	**1.45**	**25**	*i* P	**Pn**	**16 02 49.1**	**+0.2**	
UWA2	**Uwa jima 2**	**1.45**	**25**	A	A	16 02 49.1		
	comp=N,6.0nm,2.4s,comp=E,7.0nm,1.7s							
JTN	**Tanegashima 3**	**1.47**	**213**	P	**Pn**	**16 02 49.8**	**+0.7**	
JTN	**Tanegashima 3**	**1.47**	**213**	A	A	16 02 49.8		
	comp=N,9.0nm,1.2s,comp=E,5.0nm,1.3s							
JBEP	**Beppuamama**	**1.50**	**344**	A	A	16 02 50.0		
	comp=N,28nm,0.8s,comp=E,29nm,1.0s							
JNU	**Nakatsue**	**1.50**	**325**	Pg	**Pb**	**16 02 51.0**	**-1.1**	
	comp=E,416nm,0.3s,baz=136,slow=12,SNR=1256							
JNU				Lg	Lg	16 03 07.3		
	comp=E,154nm,0.3s,baz=165,slow=20,SNR=6.4							
JNU				LR	LR	16 03 39.4		
	comp=E,3µm,18.3s,baz=140,slow=54							
JNU	**Nakatsue**	**1.50**	**325**		**Pb**	**16 02 50.4**	**-1.7**	
JNU	**Nakatsue**	**1.50**	**325**	A	A	16 02 50.1		
	comp=N,10.0nm,1.0s,comp=E,12nm,1.6s							
JTA	**Tamana**	**1.57**	**313**	A	A	16 02 51.2		
	comp=N,13nm,0.9s,comp=E,16nm,0.9s							
JHD	**Hondo**	**1.60**	**291**	A	A	16 02 51.7		
	comp=N,8.0nm,1.2s,comp=E,14nm,1.5s							
JKU	**Kubokawa**	**1.72**	**35**	A	A	16 02 53.7		
	comp=N,4.0nm,4.2s,comp=E,4.0nm,9.6s							
JMTN	**Minamitane**	**1.72**	**210**	A	A	16 02 54.4		
	comp=N,4.0nm,4.2s,comp=E,6.0nm,2.1s							
JNA	**Nagahama**	**1.73**	**16**	A	A	16 02 53.7		
	comp=N,5.0nm,4.9s,comp=E,5.0nm,1.2s							
JKI	**Kunimi**	**1.75**	**351**	A	A	16 02 53.9		
	comp=N,11nm,1.2s,comp=E,11nm,0.9s							
JFI	**Itaya**	**1.99**	**321**	A	A	16 02 57.3		
	comp=N,5.0nm,2.6s,comp=E,5.0nm,3.3s							
JUR	**Ureshino**	**2.04**	**306**	A	A	16 02 58.0		
	comp=N,6.0nm,1.1s,comp=E,8.0nm,2.0s							
JFA	**Akaike**	**2.04**	**333**	A	A	16 02 58.0		
	comp=N,6.0nm,1.3s,comp=E,5.0nm,1.0s							
JMN	**Monobe**	**2.48**	**42**		**Pn**	**16 03 03.4**	**+0.4**	
JMN	**Monobe**	**2.48**	**42**	A	A	16 03 04.7		
	comp=N,3.0nm,2.6s,comp=E,2.0nm,4.1s							
JHIK	**Hikimi**	**2.63**	**1**	A	A	16 03 06.6		
	comp=N,2.0nm,2.4s,comp=E,8.0nm,1.6s							
JII	**Iki**	**2.63**	**317**	A	A	16 03 06.5		
	comp=N,7.0nm,1.5s,comp=E,6.0nm,2.7s							
JHT	**Toyohira**	**2.79**	**9**	A	A	16 03 09.0		
	comp=N,3.0nm,2.3s,comp=E,7.0nm,2.7s							
JJG	**Jouge**	**2.93**	**21**	A	A	16 03 11.1		
	comp=N,3.0nm,3.3s,comp=E,3.0nm,1.4s							
JHGM	**Hagimishima**	**2.95**	**348**	A	A	16 03 11.0		
	comp=N,5.0nm,1.5s,comp=E,4.0nm,2.8s							
JJS	**Sakaide**	**3.00**	**34**	A	A	16 03 12.2		
	comp=N,3.0nm,4.1s,comp=E,2.0nm,3.7s							
JTU	**Tsushima**	**3.36**	**322**	A	A	16 03 16.9		
	comp=N,3.0nm,3.2s,comp=E,3.0nm,3.0s							
JISK	**Izumosakaura**	**3.68**	**12**	A	A	16 03 21.6		
	comp=N,4.0nm,1.5s,comp=E,5.0nm,1.6s							
JNM	**Ikuma**	**3.71**	**14**	A	A	16 03 22.1		
	comp=N,9.0nm,4.3s,comp=E,6.0nm,1.5s							
INU	**Inuyama**	**5.49**	**50**		**Pn**	**16 03 43.7**	**-0.6**	
JGF	**Kuroka**	**5.86**	**49**		**Pn**	**16 03 49.8**	**+0.3**	
JOW	**Kunigami**	**5.95**	**213**	Pn	**Pn**	**16 03 50.8**	**0.0**	
	comp=E,5.4nm,0.3s,baz=65,slow=14,SNR=2.0							
JOW				Sn	**Sn**	**16 04 56.0**	**-1.9**	
	comp=E,5.4nm,0.3s,baz=55,slow=23,SNR=1.3							
	comp=E,58nm,0.8s							
KSRS	**Korea Array**	**6.44**	**331**	Pn	**Pn**	**16 03 58.1**	**+0.7**	
	comp=E,1.8nm,0.3s,baz=147,slow=14,SNR=30							
KSRS				Sn	**Sn**	**16 05 11.7**	**+2.0**	
	comp=E,0.6nm,0.3s,baz=5.8,slow=20,SNR=1.3							
	comp=E,4.9nm,0.4s							
KSAR	**Wonju Array Be**	**6.45**	**330**	Pn	**Pn**	**16 03 59.1**	**+1.6**	
KS19	**Wonju Array Si**	**6.50**	**330**		**Pn**	**16 03 58.8**	**+0.4**	
JHJ	**Hachijo jima 2**	**6.77**	**78**	LR	LR	16 06 50.1		
	comp=E,253nm,18.7s,baz=260,slow=38							
MAJO	**Matsushiro**	**6.98**	**47**		**Pn**	**16 04 04.6**	**-0.4**	
MJB9	**Matsu-Tunnel**	**6.98**	**47**		**Pn**	**16 04 05.6**	**+0.7**	
MJAR	**Matsushiro Arr**	**6.99**	**47**	Pn	**Pn**	**16 04 07.3**	**+2.3**	
	comp=E,0.3nm,0.3s,baz=244,slow=14,SNR=17							
MJAR				LR	LR	16 07 18.5		
	comp=E,189nm,20.2s,baz=222,slow=41							
	comp=E,4.1nm,0.5s							
MJAR	**Matsushiro Arr**	**6.99**	**47**	Pn	**Pn**	**16 04 07.4**	**+2.5**	
JCJ	**Chichijima**	**10.16**	**115**	LR	LR	16 07 31.7		
	comp=E,98nm,20.5s,baz=159,slow=30							
DL2	**Dalian**	**10.91**	**313**	P	**Pn**	**16 05 02.8**	**+4.1**	
DL2				S	**Sn**	**16 07 02.1**	**+2.5**	
DL2				pmax	pmax			
	comp=E,40nm,1.2s							
DL2				pmax	pmax			
	comp=E,180nm,4.8s							
DL2				LR	LR			
	comp=E,660nm,12.3s							
DL2				LR	LR			
	comp=E,470nm,14.2s							
DL2				LR	LR			
	comp=E,820nm,10.3s							
NJ2	**Nanjing**	**11.08**	**274**	*e*P	**Pn**	**16 05 03.8**	**+2.7**	
NJ2				pmax	pmax			
	comp=E,25nm,1.0s							
USRK	**Ussuriysk Ar.**	**12.29**	**0**	Pn	**Pn**	**16 05 18.1**	**+0.6**	
	comp=E,0.2nm,0.3s,baz=195,slow=14,SNR=5.2							
	comp=E,1.8nm,0.8s							
BNX	**BinXian**	**14.26**	**347**	⇓P	**P**	**16 05 53.1**	**+1.8**	
BNX				pmax	pmax			
	comp=E,27nm,0.9s							
WHN	**Wuhan**	**15.08**	**269**	P	**Pn**	**16 05 55.4**	**-0.2**	
BJT	**Baijiatuau**	**15.08**	**307**	P	**P**	**16 06 02.6**	**+2.1**	
BJT				IAmb	IAmb	16 06 03.8		
	comp=E,22nm,0.7s							
BJI	**Beijing**	**15.09**	**307**	P	**P**	**16 06 02.3**	**+1.8**	
BJI				pmax	pmax			
	comp=E,15nm,0.6s							
BJI				LR	LR			
	comp=N,170nm,16.6s							
BJI				LR	LR			
	comp=E,150nm,14.1s							
BJI				LR	LR			
	comp=E,370nm,15.2s							
HNS	**HongShan**	**15.17**	**296**	⇑P	**P**	**16 06 02.4**	**+0.9**	
HNS				pmax	pmax			
	comp=E,27nm,0.8s							
HNS				LR	LR			
	comp=E,670nm,15.7s							
HNS				LR	LR			
	comp=E,630nm,15.3s							
HNS				LR	LR			
	comp=E,880nm,15.2s							
LYN	**LuoYang**	**16.48**	**284**	⇓P	**P**	**16 06 17.3**	**+1.3**	
LYN				pP	sP	16 06 26.8	-1.6	
LYN				pmax	pmax			
	comp=E,42nm,1.2s							
HHC	**Hu-ho-hao-te**	**18.62**	**304**	*e*P	**Pn**	**16 06 41.1**	**+0.9**	
HHC				pP	pP	16 06 50.3	+2.1	
HHC				pmax	pmax			
	comp=E,12nm,0.6s							
HHC				pmax	pmax			
	comp=E,160nm,5.0s							
HHC				LR	LR			
	comp=E,250nm,12.9s							
HHC				LR	LR			
	comp=E,440nm,12.7s							
HHC				LR	LR			
	comp=E,510nm,12.6s							
HEH	**HeiHe**	**18.64**	**351**	*e*P	**Pn**	**16 06 40.8**	**+0.5**	
HEH				pmax	pmax			
	comp=E,12nm,1.0s							
ENH	**Enshi**	**19.26**	**271**		**P**	**16 06 46.7**	**0.0**	
ENH				IAmb	IAmb	16 06 49.2		
	comp=E,22nm,0.9s							
XAN	**Xi'an**	**19.39**	**283**	P	**P**	**16 06 47.8**	**-0.4**	
XAN				pP	pP	16 06 58.5	+1.7	
XAN				pmax	pmax			
	comp=E,15nm,1.3s							
XAN				LR	LR			
	comp=E,450nm,14.4s							
XAN				LR	LR			
	comp=E,610nm,15.1s							
XAN				LR	LR			
	comp=E,790nm,16.5s							
BTO	**Baotou**	**19.63**	**302**	*e*P	**Pn**	**16 06 54.6**	**+2.3**	
BTO				PP	**PnPn**	**16 07 14.8**	**+8.6**	
BTO				S	**Sn**	**16 10 34.8**	**+2.9**	
BTO				pmax	pmax			
	comp=Z,18nm,0.5s							
BTO				pmax	pmax			
	comp=Z,290nm,4.5s							
BTO				LR	LR			
	comp=Z,640nm,14.7s							
BTO				LR	LR			
	comp=Z,710nm,14.4s							
BTO				LR	LR			
	comp=Z,1µm,13.1s							
HILR	**Hailar Array B**	**19.86**	**336**	P	**Pn**	**16 06 53.9**	**-0.9**	
	baz=145,slow=13							
	comp=Z,7.9nm,0.7s							
LZH	**Lanzhou**	**23.60**	**288**	*e*P	**P**	**16 07 32.1**	**-0.9**	
LZH				pP	pP	16 07 42.3	+0.3	
LZH				sP	sP	16 07 49.8	+3.9	
LZH				pmax	pmax			
	comp=Z,33nm,1.7s							
LZH				LR	LR			
	comp=Z,300nm,13.3s							
LZH				LR	LR			
	comp=Z,360nm,15.2s							
LZH				LR	LR			
	comp=Z,410nm,16.2s							
LZDM	**Lanzhou Array**	**23.71**	**288**	P	**P**	**16 07 33.3**	**-1.0**	
	comp=Z,9.0nm,0.5s,baz=125,slow=7.4,SNR=10							
LZDM				pP	**pP**	**16 07 43.6**	**+0.2**	
	comp=Z,3.8nm,0.5s,baz=88,slow=12,SNR=2.2							
	comp=Z,9.0nm,0.5s							
CD2	**Chengdu**	**24.02**	**275**	P	**P**	**16 07 35.4**	**-1.5**	
CD2				S	**S**	**16 11 50.3**	**-1.7**	
CD2				pmax	pmax			
	comp=Z,40nm,0.9s							
CD2				pmax	pmax			
	comp=Z,350nm,4.9s							
CD2				LR	LR			
	comp=Z,920nm,12.0s							
CD2				LR	LR			
	comp=Z,940nm,10.4s							
CD2				LR	LR			
	comp=Z,1µm,11.4s							
ULN	**Ulaanbaatar**	**24.70**	**317**		**P**	**16 07 40.1**	**-3.0**	
ULN				IAmb	IAmb	16 07 54.6		
	comp=Z,19nm,0.8s							
SONM	**Songino Array**	**25.07**	**317**	P	**P**	**16 07 45.8**	**-0.6**	
	comp=Z,10.0nm,0.8s,baz=130,slow=9.0,SNR=39							
SONM				pP	**pP**	**16 07 56.5**	**+1.0**	
	comp=Z,11nm,0.8s,baz=138,slow=8.8,SNR=17							
SONM				LR	LR	16 18 33.4		
	comp=Z,364nm,20.4s,baz=145,slow=39							
	comp=Z,10.0nm,0.8s							
DAV	**Davao City (W)**	**25.39**	**195**	LR	LR	16 19 26.5		
	comp=Z,52nm,18.7s,baz=348,slow=40							
PZH	**PanZhiHua**	**26.82**	**266**	P	**P**	**16 08 05.6**	**+3.2**	
PZH				pmax	pmax			
	comp=Z,10.0nm,1.2s							
GTA	**Gaotai**	**27.03**	**295**	*e*P	**P**	**16 08 04.6**	**+0.4**	
GTA				pP	pP	16 08 13.6	+0.1	
GTA				S	**S**	**16 12 41.6**	**+1.7**	
GTA				pmax	pmax			
	comp=Z,6.0nm,1.2s							
GTA				LR	LR			
	comp=Z,270nm,16.0s							
GTA				LR	LR			
	comp=Z,370nm,17.1s							
GTA				LR	LR			
	comp=Z,470nm,17.8s							
GOMU	**GeErMu**	**30.90**	**288**	P	**P**	**16 08 38.0**	**-1.0**	
GOMU				pP	pP	16 08 49.1	+0.8	
GOMU				pmax	pmax			
	comp=Z,3.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**32.55**	**254**	LR	LR	16 23 21.7		
	comp=Z,99nm,20.0s,baz=60,slow=39							
SEY	**Seymchan**	**33.69**	**17**	LR	LR	16 23 15.3		
	comp=Z,54nm,18.7s,baz=218,slow=37							
WMQ	**Urumqi**	**36.47**	**302**	*e*P	**P**	**16 09 28.8**	**+1.9**	
WMQ				LR	LR			
	comp=Z,360nm,17.7s							
WMQ				LR	LR			
	comp=Z,260nm,20.3s							
KAPI	**Kappang**	**38.48**	**200**	LR	LR	16 26 28.8		
	comp=Z,22nm,21.5s,baz=4.5,slow=38							
EVN	**Everest**	**39.06**	**276**	P	**P**	**16 09 47.8**	**-1.8**	
ZALV	**Zalesovo Beam**	**39.96**	**318**	P	**P**	**16 09 55.9**	**-0.1**	
	comp=Z,0.5nm,0.4s,baz=96,slow=10,SNR=1.8							
ZALV				PcP	**PcP**	**16 11 59.7**	**-1.1**	
	comp=Z,0.7nm,0.4s,baz=131,slow=5.9,SNR=4.1							
ZALV				LR	LR	16 27 34.8		
	comp=Z,168nm,18.2s,baz=99,slow=38							
	comp=Z,0.5nm,0.4s							
MKAR	**Makanchi Array**	**40.47**	**306**	P	**P**	**16 09 59.1**	**-1.3**	
	comp=Z,1.7nm,0.5s,baz=89,slow=11,SNR=51							
MKAR				pP	**pP**	**16 10 08.2**	**-1.6**	
	comp=Z,2.2nm,0.6s,baz=92,slow=10,SNR=10							
MKAR				PcP	**PcP**	**16 12 01.6**	**-1.1**	
	comp=Z,0.5nm,0.7s,baz=80,slow=3.6,SNR=2.1							
MKAR				LR	LR	16 28 15.1		
	comp=Z,187nm,18.1s,baz=90,slow=38							
	comp=Z,1.7nm,0.5s							
MKAR	**Makanchi Array**	**40.47**	**306**		**P**	**16 09 58.6**	**-1.8**	
MKAR				PcP	**PcP**	**16 12 02.1**	**-0.6**	
MAKZ	**Makanchi**	**40.68**	**306**		**P**	**16 10 00.5**	**-1.7**	
PSI	**Prapat**	**42.42**	**234**	LR	LR	16 28 59.3		
	comp=Z,67nm,18.4s,baz=36,slow=38							
KURK	**Kurchatov**	**43.18**	**312**		**P**	**16 10 21.0**	**-1.5**	
KURBB	**Kurchatov Arra**	**43.23**	**312**	P	**P**	**16 10 21.6**	**-1.3**	
	comp=Z,1.3nm,0.6s,baz=97,slow=9.0,SNR=9.5							
KURBB				LR	LR	16 30 10.0		
	comp=Z,324nm,18.1s,baz=170,slow=39							
	comp=Z,1.3nm,0.6s							
AAK	**Ala-Archa**	**46.13**	**300**	LR	LR	16 32 35.2		
	comp=Z,179nm,19.2s,baz=64,slow=39							
BVAR	**Borovoye Array**	**48.38**	**315**	P	**P**	**16 11 02.5**	**-1.1**	
	comp=Z,2.4nm,0.5s,baz=98,slow=9.7,SNR=24							
BVAR				pP	**pP**	**16 11 14.3**	**+1.2**	
	comp=Z,2.8nm,0.6s,baz=98,slow=9.6,SNR=7.3							
BVAR				PcP	**PcP**	**16 12 29.0**	**-0.7**	
	comp=Z,1.1nm,0.4s,baz=118,slow=3.9,SNR=6.5							
BVAR				LR	LR	16 32 00.1		
	comp=Z,66nm,19.9s,baz=78,slow=37							
	comp=Z,2.4nm,0.5s							
KKAR	**Karatay Array**	**48.98**	**302**		**P**	**16 11 07.1**	**-1.2**	
WRA	**Warramunga Arr**	**51.59**	**177**	P	**P**	**16 11 28.6**	**+0.4**	
	comp=Z,1.0nm,0.7s,baz=353,slow=8.1,SNR=9.7							
WRA				pP	**pP**	**16 11 38.3**	**+0.5**	
	comp=Z,7.3nm,0.8s,baz=352,slow=8.0,SNR=26							
	comp=Z,1.0nm,0.7s							
WR8	**Warramunga Arr**	**51.62**	**177**		**P**	**16 11 29.2**	**+0.9**	
WR8				IAmb	IAmb	16 11 40.5		
	comp=Z,9.9nm,0.8s							
PALK	**Pallekele**	**53.49**	**254**	LR	LR	16 36 05.5		
	comp=Z,60nm,19.3s,baz=50,slow=38							
ARTI	**Arti**	**55.16**	**319**	LR	LR	16 37 37.7		
	comp=Z,84nm,18.4s,baz=71,slow=38							
AB31	**Akbulak array**	**55.26**	**311**	IAmb	IAmb	16 12 05.5		
	comp=Z,2.4nm,0.7s							
ABKAR	**Akbulak array**	**55.26**	**311**		**P**	**16 11 53.0**	**-1.8**	
ASAR	**Alice Springs**	**55.28**	**178**	P	**P**	**16 11 55.8**	**+0.6**	
	comp=Z,0.9nm,0.8s,baz=8.5,slow=6.5,SNR=12							
ASAR				pP	**pP**	**16 12 06.2**	**+1.3**	
	comp=Z,5.4nm,0.8s,baz=5.7,slow=6.9,SNR=31							
ASAR				LR	LR	16 35 54.6		
	comp=Z,23nm,20.4s,baz=42,slow=36							
	comp=Z,0.9nm,0.8s							
AKTO	**Aktyubinsk**	**56.27**	**312**	LR	LR	16 39 31.0		
	comp=Z,104nm,18.1s,baz=285,slow=40							
E24K	**Your Creek**	**56.98**	**26**	P	**P**	**16 12 06.6**	**-0.4**	
ILAR	**Eielson Array**	**57.94**	**30**	P	**P**	**16 12 15.2**	**+1.4**	
	comp=Z,0.7nm,0.6s,baz=264,slow=5.5,SNR=16							
ILAR				pP	**sP**	**16 12 26.1**	**-0.9**	
	comp=Z,1.3nm,0.7s,baz=295,slow=5.0,SNR=8.2							
	comp=Z,0.7nm,0.6s							
F25K	**Christian Rive**	**58.10**	**27**	P	**P**	**16 12 13.6**	**-1.2**	
F25K				IAmb	IAmb	16 12 29.4		
	comp=Z,3.8nm,0.8s							
J26L	**Joseph Creek**	**59.40**	**30**		**P**	**16 12 24.7**	**+0.7**	
J26L				IAmb	IAmb	16 12 40.7		
	comp=Z,4.3nm,1.1s							
E27K	**Coleen River**	**59.53**	**26**	IAmb	IAmb	16 12 42.5		
	comp=Z,7.8nm,1.0s							
D27M	**Malcolm River**	**59.58**	**24**	IAmb	IAmb	16 12 38.4		
	comp=Z,12nm,1.4s							
KIRV	**Kirov**	**59.59**	**323**	LR	LR	16 41 29.6		
	comp=Z,128nm,19.1s,baz=73,slow=39							
I30M	**Mount Dempster**	**62.22**	**28**		**P**	**16 12 44.5**	**+1.3**	
A36M	**Sachs Harbour**	**63.84**	**20**		**P**	**16 12 53.7**	**+0.1**	
STKA	**Stephens Creek**	**64.09**	**171**	P	**P**	**16 12 54.6**	**-1.1**	
	comp=Z,1.2nm,0.5s,baz=5.7,slow=10,SNR=1.2							
	comp=Z,1.2nm,0.5s							
ARCES	**ARCESS Array B**	**65.93**	**338**	P	**P**	**16 13 06.0**	**-1.3**	
	comp=Z,4.1nm,1.1s,baz=51,slow=6.4,SNR=3.6							
ARCES				pP	**pP**	**16 13 16.4**	**-0.7**	
	comp=Z,2.2nm,0.8s,baz=51,slow=9.9,SNR=1.5							
	comp=Z,4.1nm,1.1s							
KBZ	**Khabaz**	**68.10**	**309**	P	**P**	**16 13 20.1**	**-1.4**	
	comp=Z,3.1nm,0.8s,baz=66,slow=5.9,SNR=6.3							
KBZ				pP	**pP**	**16 13 30.6**	**-0.7**	
	comp=Z,3.7nm,0.9s,baz=131,slow=2.5,SNR=4.3							
KBZ				LR	LR	16 47 07.5		
	comp=Z,120nm,18.4s,baz=108,slow=40							
	comp=Z,3.1nm,0.8s							
GNI	**Garni**	**68.28**	**305**	LR	LR	16 47 09.7		
	comp=Z,55nm,19.0s,baz=66,slow=39							
FINES	**FINESS Array B**	**69.53**	**330**	P	**P**	**16 13 29.0**	**-1.1**	
	comp=Z,2.3nm,0.5s,baz=69,slow=5.9,SNR=28							
FINES				pP	**pP**	**16 13 38.5**	**-1.4**	
	comp=Z,1.6nm,0.4s,baz=67,slow=8.1,SNR=2.9							
	comp=Z,2.3nm,0.5s							
FINES	**FINESS Array B**	**69.53**	**330**	P	**P**	**16 13 28.2**	**-1.9**	
YKA	**Yellowknife Ar**	**72.05**	**27**	P	**P**	**16 13 45.1**	**-0.2**	
	comp=Z,1.0nm,0.9s,baz=299,slow=6.4,SNR=3.0							
YKA				pP	**pP**	**16 13 54.9**	**-0.2**	
	comp=Z,1.7nm,0.8s,baz=304,slow=6.2,SNR=8.0							
	comp=Z,1.0nm,0.9s							
AKASG	**Malin Array Be**	**73.31**	**320**	P	**P**	**16 13 51.6**	**-1.5**	
	comp=Z,1.1nm,0.4s,baz=56,slow=6.2,SNR=5.7							
AKASG				pP	**pP**	**16 14 01.8**	**-1.3**	
	comp=Z,1.4nm,0.5s,baz=56,slow=6.1,SNR=3.5							
AKASG				LR	LR	16 48 31.1		
	comp=Z,90nm,18.1s,baz=54,slow=38							
	comp=Z,1.1nm,0.4s							
HFS	**Hagfors**	**75.28**	**333**	P	**P**	**16 14 02.8**	**-1.6**	
	comp=Z,2.6nm,0.5s,baz=87,slow=7.6,SNR=15							
	comp=Z,2.6nm,0.5s							
NB2	**NORSAR Subarra**	**75.64**	**334**	P	**P**	**16 14 05.3**	**-1.2**	
	comp=Z,1.1nm,0.5s,baz=50,slow=5.9							
NOA	**NORSAR Array B**	**75.64**	**334**	P	**P**	**16 14 05.1**	**-1.3**	
	comp=Z,0.8nm,0.5s,baz=49,slow=5.7,SNR=5.5							
NOA				pP	**pP**	**16 14 15.5**	**-0.9**	
	comp=Z,1.0nm,0.8s,baz=47,slow=5.5,SNR=3.3							
	comp=Z,0.8nm,0.5s							
BRTR	**Keskin Array B**	**76.09**	**308**	P	**P**	**16 14 08.8**	**-0.7**	
	comp=Z,1.2nm,0.8s,baz=89,slow=5.3,SNR=6.0							
	comp=Z,1.2nm,0.8s							
ASF	**Jabal al Asfar**	**77.54**	**300**	LR	LR	16 54 52.9		
	comp=Z,40nm,18.2s,baz=34,slow=41							
MLR	**Muntele Rosu**	**77.92**	**316**	LR	LR	16 51 41.1		
	comp=Z,138nm,20.4s,baz=82,slow=38							
MMAI	**Mount Meron Ar**	**78.21**	**301**	LR	LR	16 53 30.1		
	comp=Z,33nm,18.1s,baz=282,slow=39							
VRAC	**Vranov**	**80.82**	**323**	LR	LR	16 54 54.8		
	comp=Z,102nm,19.1s,baz=64,slow=39							
SFJD	**Kangerlussuaq**	**81.40**	**1**	LR	LR	16 53 04.5		
	comp=Z,43nm,19.7s,baz=151,slow=37							
GERES	**GERESS Array B**	**82.57**	**324**	P	**P**	**16 14 45.0**	**+0.2**	
	comp=Z,0.2nm,0.5s,baz=75,slow=9.2,SNR=1.4							
GERES				pP	**pP**	**16 14 54.9**	**+0.2**	
	comp=Z,0.7nm,0.7s,baz=28,slow=6.2,SNR=4.1							
	comp=Z,0.2nm,0.5s							
FRB	**Frobisher Bay**	**83.31**	**9**	LR	LR	16 53 51.7		
	comp=Z,63nm,18.9s,baz=68,slow=37							
NVAR	**Mina Array Bea**	**84.31**	**48**	P	**P**	**16 14 54.0**	**0.0**	
	comp=Z,0.7nm,0.5s,baz=292,slow=6.1,SNR=5.2							
NVAR				pP	**sP**	**16 15 07.2**	**-0.4**	
	comp=Z,4.6nm,0.9s,baz=293,slow=5.3,SNR=10							
	comp=Z,0.7nm,0.5s							
NVAR	**Mina Array Bea**	**84.31**	**48**	P	**P**	**16 14 54.2**	**+0.2**	
DAVOX	**Davos/Dischmat**	**85.87**	**324**	LR	LR	16 58 03.9		
	comp=Z,272nm,18.3s,baz=78,slow=39							
PDAR	**Pinedale Array**	**86.77**	**40**	P	**P**	**16 15 07.6**	**+1.4**	
	comp=Z,0.5nm,0.8s,baz=318,slow=8.3,SNR=4.3							
PDAR				pP	**pP**	**16 15 18.8**	**+2.6**	
	comp=Z,1.6nm,0.8s,baz=313,slow=2.0,SNR=11							
	comp=Z,0.5nm,0.8s							
ESDC	**Sonseca Array**	**97.86**	**327**	LR	LR	17 06 45.5		
	comp=Z,101nm,18.9s,baz=347,slow=40							
QSPA	**South Pole Qui**	**121.65**	**180**	PKP	**PKiKP**	**16 21 15.9**	**+1.3**	
	comp=Z,0.9nm,1.0s,baz=251,slow=1.2,SNR=7.1							
QSPA				pPKP	**pPKPdf**	**16 21 27.4**	**+2.5**	
	comp=Z,1.5nm,0.8s,baz=250,slow=2.0,SNR=3.7							
DBIC	**Dimbokro**	**123.70**	**305**	PKP	**PKPdf**	**16 21 19.6**	**-0.3**	
	comp=Z,1.4nm,0.7s,baz=65,slow=4.2,SNR=3.5							

NEIC ***22*** *16:04:09.0±1.3,35.15N±0.02×95.37W±0.02,h5km±1km, mb_Lg2.6/11,ML2.6/6,ML2.7/14,Error ellipse: s-maj=3.7km s-min=2.6km az=140.0*

NEIC 22 16:04:08.7±1.1,35.13N±0.02×95.35W±0.02,h7km±2km, Error ellipse: s-maj=2.7km s-min=2.2km az=151.0, Oklahoma

| Code | Station Name

*IDC **22** 16:57:12.2±3.6,21°.81S×68°.50W,h118^{km}±40^{km},mb2.9/1, mbtmp3.3/4,Error ellipse: s-maj=66.1km s-min=24.3km az=72.0*

*GUC **22** 16:57:12.8±0.9,21°.72S×68°.67W,h109^{km}±6^{km},ML3.7*

ISC 22 16:57:12.4±0.9,21°.73S±0°.03×68°.86W±0°.06,h126^{km}±6^{km}, n37,σ1^{s}35/61,8C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.36**	**259**	*eP*		**Pn**		**16 57 29.9**	**-0.6**
PB09				*eS*		**Sn**		**16 57 42.8**	**-1.3**
PB09				IAML				16 57 45.8	
	comp=N,2μm,0.3s								
PB09	**IPOC Station P**	**0.36**	**259**	*eP*		**Pn**		**16 57 29.7**	**-0.8**
PB09				*eS*		**Sn**		**16 57 43.9**	**-0.2**
PB09				IAML				16 57 44.4	
	comp=Z,2μm,0.3s								
PB01	**IPOC Station P**	**0.90**	**319**	*eP*		**Pn**		**16 57 33.7**	**-0.4**
PB01				*eS*		**Sn**		**16 57 49.7**	**-0.8**
PB01				IAML				16 57 52.0	
	comp=E,1μm,0.2s								
PB01	**IPOC Station P**	**0.90**	**319**	*eP*		**Pn**		**16 57 33.7**	**-0.4**
PB01				*eS*		**Sn**		**16 57 51.5**	**+1.0**
PB01				IAML				16 57 52.2	
	comp=Z,1μm,0.4s								
PB07	**IPOC Station P**	**0.95**	**270**	*eP*		**Pn**		**16 57 35.0**	**+0.3**
PB07				*eS*		**Sn**		**16 57 52.4**	**+0.8**
PB07				IAML				16 57 53.7	
	comp=N,1μm,0.2s								
PB07	**IPOC Station P**	**0.95**	**270**	*eP*		**Pn**		**16 57 35.0**	**+0.3**
PB07				*eS*		**Sn**		**16 57 53.9**	**+2.3**
PB07				IAML				16 57 55.7	
	comp=Z,1μm,0.5s								
PB02	**IPOC Station P**	**1.05**	**293**	*eP*		**Pn**		**16 57 35.8**	**+0.3**
PB02				*eS*		**Sn**		**16 57 53.1**	**+0.1**
PB02				IAML				16 57 59.4	
	comp=E,2μm,0.4s								
PB02	**IPOC Station P**	**1.05**	**293**	*eP*		**Pn**		**16 57 35.8**	**+0.3**
PB02				*eS*		**Sn**		**16 57 55.0**	**+2.1**
PB02				IAML				16 57 56.3	
	comp=Z,2μm,0.2s								
PB06	**IPOC Station P**	**1.18**	**214**	*eP*		**Pn**		**16 57 36.9**	**0.0**
PB06				*eS*		**Sn**		**16 57 55.5**	**0.0**
PB06				IAML				16 57 57.0	
	comp=E,3μm,0.2s								
PB06	**IPOC Station P**	**1.18**	**214**	*eP*		**Pn**		**16 57 36.9**	**0.0**
PB06				*eS*		**Sn**		**16 57 56.2**	**+0.7**
PB06				IAML				16 57 57.1	
	comp=Z,2μm,0.2s								
AF01	**San Pedro de A**	**1.37**	**153**	*eP*		**Pn**		**16 57 39.0**	**-0.1**
AF01				*eS*		**Sn**		**16 57 59.6**	**+0.3**
AF01				IAML				16 58 16.0	
	comp=Z,859nm,0.7s								
PX03	**IPOC Station P**	**1.50**	**331**	*eP*		**Pn**		**16 57 39.8**	**-0.6**
PX03				*eS*		**Sn**		**16 58 01.0**	**-0.7**
PX03				IAML				16 58 02.3	
	comp=N,2μm,0.5s								
PATCX	**Punta Patache**	**1.51**	**307**	*eP*		**Pn**		**16 57 41.0**	**+0.6**
PATCX				*eS*		**Sn**		**16 58 02.5**	**+0.8**
PATCX				IAML				16 58 06.0	
	comp=N,1μm,0.5s								
PATCX	**Punta Patache**	**1.51**	**307**	*eP*		**Pn**		**16 57 40.5**	**+0.1**
PATCX				IAML				16 58 05.1	
	comp=Z,701nm,1.1s								
PB05	**IPOC Station P**	**1.67**	**228**	*eP*		**Pn**		**16 57 42.5**	**+0.2**
PB05				*eS*		**Sn**		**16 58 05.0**	**-0.2**
PB05				IAML				16 58 13.3	
	comp=E,878nm,0.5s								
PB05	**IPOC Station P**	**1.67**	**228**	*eP*		**Pn**		**16 57 42.8**	**+0.4**
PB05				*eS*		**Sn**		**16 58 00.3**	**-4.9**
PB05				IAML				16 58 12.8	
	comp=Z,469nm,0.4s								
TA01	**Diego Aracena**	**1.69**	**313**	*eP*		**Pn**		**16 57 42.7**	**+0.2**
TA01				*eS*		**Sn**		**16 58 05.9**	**+0.6**
TA01				IAML				16 58 07.6	
	comp=E,1μm,0.4s								
TA01	**Diego Aracena**	**1.69**	**313**	*eP*		**Pn**		**16 57 42.7**	**+0.2**
TA01				*eS*		**Sn**		**16 58 01.5**	**-3.8**
TA01				IAML				16 58 09.1	
	comp=Z,400nm,0.8s								
TA02	**Huaiquique**	**1.88**	**320**	*eP*		**Pn**		**16 57 44.5**	**-0.1**
TA02				*eS*		**Sn**		**16 58 09.2**	**0.0**
TA02	**Huaiquique**	**1.88**	**320**	*eP*		**Pn**		**16 57 44.6**	**-0.1**
TA02				*eS*		**Sn**		**16 58 03.9**	**-5.3**
TA02				IAML				16 58 14.6	
	comp=Z,395nm,0.6s								
GO01	**Chusmiza**	**2.07**	**351**	*eP*		**Pn**		**16 57 47.8**	**+0.2**
GO01				*eS*		**Sn**		**16 58 14.8**	**+0.4**
GO01				IAML				16 58 17.1	
	comp=N,956nm,0.2s								
GO01	**Chusmiza**	**2.07**	**351**	*eP*		**Pn**		**16 57 48.4**	**+0.7**
GO01				*eS*		**Sn**		**16 58 15.4**	**+1.0**
GO01				IAML				16 58 17.6	
	comp=Z,222nm,0.2s								
PB11	**IPOC Station P**	**2.09**	**339**	*eP*		**Pn**		**16 57 47.2**	**-0.3**
PB11				*eS*		**Sn**		**16 58 13.3**	**-1.0**
PB11				IAML				16 58 17.0	
	comp=E,681nm,0.3s								
PB11	**IPOC Station P**	**2.09**	**339**	*eP*		**Pn**		**16 57 47.4**	**-0.2**
PB11				*eS*		**Sn**		**16 58 14.8**	**+0.5**
PB11				IAML				16 58 16.1	
	comp=Z,308nm,0.3s								
PB14	**IPOC Station P**	**3.21**	**206**	*eP*		**Pn**		**16 58 02.2**	**+0.2**
PB14	**IPOC Station P**	**3.21**	**206**	*eP*		**Pn**		**16 58 01.9**	**-0.2**
PB14				IAML				16 58 52.0	
	comp=Z,184nm,0.5s								
PB12	**IPOC Station P**	**3.39**	**336**	*eP*		**Pn**		**16 58 02.8**	**-1.4**
PB12				*eS*		**Sn**		**16 58 43.2**	**-0.9**
PB12				IAML				16 59 09.6	
	comp=Z,123nm,0.7s								
SALTA		**3.40**	**137**	*eP*		**Pn**		**16 58 04.3**	**-0.3**
AZAP	**Zapla**	**4.29**	**126**	*eP*		**Pn**		**16 58 15.0**	**-1.2**
AC01	**Pan de Azucar**	**4.68**	**200**	*eP*		**Pn**		**16 58 19.1**	**-2.1**
AC01				IAML				16 59 29.5	
	comp=Z,62nm,0.7s								
AC02	**Maricunga**	**5.09**	**183**	*eP*		**Pn**		**16 58 26.6**	**-0.6**
AC02				*eS*		**Sn**		**16 59 26.5**	**+1.3**
LPAZ	**La Paz**	**5.46**	**7**	P		**Pn**		**16 58 33.7**	**+1.5**
	comp=Z,2.3nm,0.3s,baz=191,slow=5.3,SNR=22								
LPAZ				S			Sn	16 59 19.9	-14
	comp=Z,8.8nm,0.9s,baz=170,slow=7.6,SNR=6.3								
CPUP	**Villa Florida**	**11.49**	**116**	P			Pn	16 59 46.8	-6.0
	comp=Z,0.3nm,0.5s,baz=128,slow=16,SNR=3.5								
PLCA	**Paso Flores**	**19.00**	**184**	P		**P**		**17 01 23.9**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=359,slow=11,SNR=4.1								
TXAR	**Lajitas Array**	**60.84**	**325**	P		**P**		**17 07 12.6**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=132,slow=9.5,SNR=2.0								
	comp=Z,0.2nm,0.5s								
ASAR	**Alice Springs**	**129.73**	**207**	PKP		**PKiKP**		**17 16 09.4**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=113,slow=1.6,SNR=4.3								
WRA	**Warramunga Arr**	**132.78**	**210**	PKP		**PKiKP**		**17 16 14.5**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=141,slow=1.7,SNR=1.7								

*IDC **22** 16:57:44.2±1.4,56°.06N×157°.23W,h0^{km},mb3.6/5, mbtmp3.6/8,ML3.6/3,MS3.6/1,Error ellipse: s-maj=29.9km s-min=21.5km az=177.0*

*NEIC **22** 16:57:52.8±0.9,56°.39N±0°.04×156°.56W±0°.06, h46^{km}±26^{km},Error ellipse: s-maj=5.8km s-min=4.5km az=202.0*

*AEIC **22** 16:57:53.4±0.9,56°.39N±0°.03×156°.56W±0°.05,h44^{km}±9^{km}, ML3.3,MLv3.3/58(NEIC),Error ellipse: s-maj=5.7km s-min=1.2km az=218.0*

ISC 22 16:57:53.2±0.9,56°.43N±0°.04×156°.55W±0°.04, h54^{km}±11^{km},n113,σ1^{s}27/111,mb3.6/5,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.80**	**139**			**Pn**		**16 58 07.1**	**-1.3**
CHIR						**Sn**		**16 58 18.4**	**-1.1**
CHIR	**Chirikof Islan**	**0.80**	**139**	IAML				16 58 24.7	
	comp=E,1μm,0.6s								
CHIR	**Chirikof Islan**	**0.80**	**139**	P		**Pn**		**16 58 08.0**	**-0.4**
CHIR	**Chirikof Islan**	**0.80**	**139**	S		**Sn**		**16 58 18.8**	**-0.6**
ANNE	**Aniakchak Nort**	**0.96**	**301**			**Pn**		**16 58 09.7**	**-0.9**
ANNE						**Sn**		**16 58 22.5**	**-0.9**
ANPB	**Aniakchak Plen**	**1.03**	**292**			**Pn**		**16 58 10.5**	**-0.9**
ANPB						**Sn**		**16 58 24.2**	**-0.6**
PLK4	**Peulik 4**	**1.21**	**5**			**Pn**		**16 58 14.1**	**+0.1**
PLK4	**Peulik 4**	**1.21**	**5**			**Sn**		**16 58 30.2**	**+0.7**
R16K	**Pilot Point**	**1.27**	**334**			**Pn**		**16 58 14.3**	**-0.3**
R16K						**Sn**		**16 58 31.2**	**+0.5**
R16K	**Pilot Point**	**1.27**	**334**	IAML				16 58 32.3	
	comp=E,498nm,0.6s								
R16K				IAML				16 58 32.5	
	comp=N,559nm,0.6s								
PLK3	**Peulik 3**	**1.28**	**7**			**Pn**		**16 58 15.1**	**+0.4**
PLK3						**Sn**		**16 58 31.8**	**+1.0**
SII	**Sitkinak Islan**	**1.32**	**83**			**Pn**		**16 58 14.3**	**-1.1**
SII						**Sn**		**16 58 31.9**	**0.0**
SII	**Sitkinak Islan**	**1.32**	**83**	P		**Pn**		**16 58 15.3**	**0.0**
SII	**Sitkinak Islan**	**1.32**	**83**	S		**Sn**		**16 58 32.5**	**+0.6**
PLK2	**Peulik 2**	**1.35**	**5**			**Pn**		**16 58 14.8**	**-0.9**
PLK1	**Peulik 1**	**1.38**	**359**			**Pn**		**16 58 16.3**	**+0.2**
VNSG	**Veniaminof 6**	**1.44**	**259**			**Pn**		**16 58 16.3**	**-0.7**
VNSG						**Sn**		**16 58 35.1**	**+0.2**
PLK5	**Peulik 5**	**1.59**	**354**			**Pn**		**16 58 19.2**	**+0.3**
R18K	**Karluk**	**1.62**	**44**			**Pn**		**16 58 19.4**	**0.0**
R18K				IAML				16 58 54.2	
	comp=N,477nm,0.4s								
R18K				IAML				16 58 58.7	
	comp=E,522nm,0.5s								
VNKR	**Veniaminof 5**	**1.62**	**257**			**Pn**		**16 58 18.9**	**-0.5**
KJL	**Kejulik**	**1.72**	**18**			**Pn**		**16 58 21.2**	**+0.4**
ANCK	**Angle Creek**	**1.87**	**17**			**Pn**		**16 58 23.2**	**+0.4**
CNTC	**Contact Creek**	**1.88**	**11**			**Pn**		**16 58 22.9**	**-0.1**
CNTC						**Sn**		**16 58 46.2**	**+0.6**
ACHA	**Angle Creek He**	**1.91**	**20**			**Pn**		**16 58 23.7**	**+0.3**
OHAK	**Old Harbor**	**1.96**	**65**			**Pn**		**16 58 23.0**	**-1.1**
OHAK	**Old Harbor**	**1.96**	**65**	IAML				16 58 59.5	
	comp=N,172nm,0.7s								
OHAK	**Old Harbor**	**1.96**	**65**	P		**Pn**		**16 58 23.1**	**-0.9**
KAKN	**Katmai Knife C**	**2.04**	**23**			**Pn**		**16 58 25.5**	**+0.3**
KAWH	**Katmai**	**2.18**	**25**			**Pn**		**16 58 26.8**	**-0.3**
Q16K	**King Salmon**	**2.26**	**359**			**Pn**		**16 58 28.2**	**+0.1**
KARR	**Katmai Rainbow**	**2.31**	**25**			**Pn**		**16 58 28.8**	**0.0**
KAHG	**Katmai Hook Gl**	**2.34**	**27**			**Pn**		**16 58 29.4**	**+0.1**
CHNA	**Chernabura Isl**	**2.35**	**228**	P		**Pn**		**16 58 28.7**	**-0.6**
KAHC	**Katmai Hardscr**	**2.38**	**20**			**Pn**		**16 58 29.9**	**+0.1**
SDPT	**Sand Point**	**2.46**	**246**			**Pn**		**16 58 30.1**	**-0.7**
SDPT	**Sand Point**	**2.46**	**246**	P		**Pn**		**16 58 30.1**	**-0.7**
KDAK	**Kodiak Island**	**2.56**	**56**	Pn		**Pn**		**16 58 31.4**	**-0.7**
	comp=N,11nm,0.3s,baz=203,slow=5.6,SNR=284								
KDAK						Sn	**Sn**	**16 59 08.8**	**+6.8**
	comp=N,10nm,0.3s,baz=22,slow=19,SNR=7.8								
	comp=N,30nm,0.3s								
KDAK	**Kodiak Island**	**2.56**	**56**			**Pn**		**16 58 31.3**	**-0.9**
KDAK	**Kodiak Island**	**2.56**	**56**	IAML				16 59 16.9	
	comp=N,131nm,0.7s								
KDAK				IAML				16 59 19.9	
	comp=N,113nm,0.8s								
Q19K	**Cape Douglas,**	**2.96**	**31**			**Pn**		**16 58 37.8**	**+0.2**
P18K	**Big Mountain,**	**3.06**	**13**			**Pn**		**16 58 38.9**	**-0.2**
PS1A	**Pavlof South-1**	**3.09**	**253**			**Pn**		**16 58 38.9**	**-0.6**
SYI	**Shuyak Island**	**3.14**	**44**			**Pn**		**16 58 39.8**	**-0.3**
SYI	**Shuyak Island**	**3.14**	**44**	IAML				16 59 28.1	
	comp=N,92nm,1.0s								
SYI				IAML				16 59 28.5	
	comp=E,93nm,0.7s								
S12K	**Black Hills**	**3.17**	**259**			**Pn**		**16 58 39.8**	**-0.8**
PS4A	**Pavlof South-4**	**3.18**	**252**			**Pn**		**16 58 40.0**	**-0.7**
PN7A	**Pavlof North-7**	**3.22**	**254**			**Pn**		**16 58 41.5**	**+0.2**
DOL	**Dolgoi Island**	**3.26**	**249**			**Pn**		**16 58 40.6**	**-1.2**
O15K	**Ungalikthiuk R**	**3.27**	**329**			**Pn**		**16 58 41.7**	**-0.2**
O15K	**Ungalikthiuk R**	**3.27**	**329**	IAML				16 59 20.4	
	comp=N,66nm,0.8s								
O15K				IAML				16 59 20.9	
	comp=E,70nm,0.8s								
O16K	**Kokwok River B**	**3.28**	**346**			**Pn**		**16 58 42.1**	**0.0**
O14K	**Tigyukauivet M**	**3.79**	**320**			**Pn**		**16 58 49.2**	**+0.2**
O14K	**Tigyukauivet M**	**3.79**	**320**	IAML				17 00 01.6	
	comp=N,32nm,1.2s								
ILSW	**Iliamna Southw**	**4.00**	**25**			**Pn**		**16 58 52.0**	**0.0**
ILSW				IAML				16 59 48.0	
	comp=E,41nm,1.1s								
N15K	**Kwethluk River**	**4.19**	**335**			**Pn**		**16 58 55.1**	**+0.6**
N15K				IAML				16 59 44.6	
	comp=E,46nm,0.6s								
N15K				IAML				17 00 01.7	
	comp=N,30nm,0.9s								
FALS	**False Pass**	**4.20**	**251**			**Pn**		**16 58 54.2**	**-0.4**
FALS	**False Pass**	**4.20**	**251**	P		**Pn**		**16 58 54.2**	**-0.4**
FALS	**False Pass**	**4.20**	**251**	S		**Sn**		**16 59 42.6**	**+0.4**
CNPM	**China Poot**	**4.20**	**40**	IAML				16 59 57.0	
	comp=E,51nm,0.8s								
N18K	**Kilae Creek**	**4.28**	**4**	Pn		**Pn**		**16 58 55.8**	**0.0**
N18K				IAML				16 59 57.2	
	comp=N,28nm,0.7s								
N18K				IAML				16 59 57.6	
	comp=E,22nm,0.8s								
ISNN	**Isanotski Nort**	**4.40**	**252**			**Pn**		**16 58 57.0**	**-0.4**
N14K	**Kuskokwak Cree**	**4.44**	**324**			**Pn**		**16 58 57.5**	**-0.4**
N14K				IAML				16 59 50.5	
	comp=E,43nm,0.7s								
N14K				IAML				17 00 16.6	
	comp=N,47nm,1.1s								
RED	**Redoubt Volcan**	**4.47**	**25**			**Pn**		**16 58 59.9**	**+1.4**
RED				IAML				16 59 58.5	
	comp=E,29nm,0.8s								
RED				IAML				17 00 01.7	
	comp=N,36nm,1.1s								
RDSO	**Redoubt South**	**4.51**	**25**			**Pn**		**16 58 59.6**	**+0.6**
RDWB	**Redoubt West**	**4.52**	**24**			**Pn**		**16 58 59.5**	**+0.4**
N19K	**Bonanza Creek**	**4.53**	**13**			**Pn**		**16 58 59.8**	**+0.5**
BRSE	**Bradley Lake S**	**4.53**	**40**			**Pn**		**16 58 58.3**	**-0.9**
SSBA	**Shishaldin**	**4.60**	**252**			**Pn**		**16 58 59.3**	**-1.0**
RDT	**Redoubt**	**4.69**	**26**			**Pn**		**16 59 01.9**	**+0.4**
M16K	**Timber Creek**	**4.78**	**346**			**Pn**		**16 59 03.2**	**+0.6**
M15K	**Kasigluk River**	**4.80**	**335**			**Pn**		**16 59 03.1**	**+0.3**
M17K	**Holitna River**	**5.01**	**355**			**Pn**		**16 59 05.8**	**+0.1**
M17K	**Holitna River**	**5.01**	**355**	IAML				17 00 29.8	
	comp=N,27nm,0.7s								
M17K				IAML				17 01 02.5	
	comp=E,22nm,1.1s								
M18K	**Stony River**	**5.09**	**4**			**Pn**		**16 59 07.3**	**+0.4**
M14K	**Bethel**	**5.18**	**329**			**Pn**		**16 59 08.2**	**+0.2**
M14K				IAML				17 00 44.3	
	comp=E,22nm,1.1s								
M14K				IAML				17 00 49.8	
	comp=N,20nm,1.1s								
SEW	**Seward**	**5.26**	**43**			**Pn**		**16 59 07.4**	**-1.7**
SEW	**Seward**	**5.26**	**43**	IAML				17 00 16.4	
	comp=E,14nm,1.1s								
SEW				IAML				17 00 27.6	
	comp=N,18nm,1.1s								
CKL	**Chakachamna La**	**5.26**	**23**			**Pn**		**16 59 09.8**	**+0.5**
SPWE	**Spurr West**	**5.29**	**21**			**Pn**		**16 59 10.3**	**+0.7**
SPU	**Mount Spurr**	**5.31**	**24**			**Pn**		**16 59 10.7**	**+0.8**
M13K	**Dall Lake**	**5.36**	**321**			**Pn**		**16 59 11.0**	**+0.6**
M13K	**Dall Lake**	**5.36**	**321**	IAML				17 00 30.0	
	comp=E,14nm,1.1s								
L16K	**Owhat River**	**5.51**	**345**			**Pn**		**16 59 12.6**	**0.0**
M20K	**Styx River**	**5.75**	**16**			**Pn**		**16 59 16.4**	**+0.5**
L17K	**Donlin**	**5.80**	**352**			**Pn**		**16 59 16.3**	**-0.1**
L19K	**Granite Mounta**	**5.81**	**359**			**Pn**		**16 59 16.8**	**+0.1**
L15K	**Ungalak Mounta**	**5.85**	**336**			**Pn**		**16 59 16.9**	**-0.3**
L14K	**Kuka Creek**	**5.86**	**330**			**Pn**		**16 59 17.4**	**+0.1**
SUA	**Susitna One**	**5.88**	**28**			**Pn**		**16 59 17.6**	**-0.1**
PWL	**Port Wells**	**6.17**	**41**			**Pn**		**16 59 20.2**	**-1.5**
K17K	**Iditarod**	**6.37**	**353**			**Pn**		**16 59 24.2**	**-0.1**
HIN	**Hinchinbrook I**	**6.61**	**49**			**Pn**		**16 59 26.4**	**-1.3**
FID	**Port Fidalgo**	**6.82**	**46**			**Pn**		**16 59 28.1**	**-2.4**
K13K	**Kusilvak Mount**	**6.91**	**326**			**Pn**		**16 59 31.9**	**+0.1**
EYAK	**Cordova Ski Ar**	**7.01**	**49**	P		**Pn**		**16 59 32.8**	**-0.2**
K20K	**Telida**	**7.06**	**9**			**Pn**		**16 59 34.8**	**+0.9**
J17K	**VABM Dome**	**7.11**	**351**			**Pn**		**16 59 34.1**	**-0.4**
SCM	**Sheep Creek Mo**	**7.20**	**37**			**Pn**		**16 59 34.5**	**-1.3**
J14K	**Nanvaranak Lak**	**7.27**	**334**			**Pn**		**16 59 37.0**	**+0.4**
KLU	**Klutina**	**7.48**	**43**			**Pn**		**16 59 38.2**	**-1.4**
WAX	**Waxell Ridge**	**8.24**	**55**			**Pn**		**16 59 49.0**	**-1.0**
BAGL	**Bagley Icefiel**	**8.60**	**56**			**Pn**		**16 59 54.6**	**-0.3**
BALM	**Baldy**	**8.71**	**52**			**Pn**		**16 59 55.8**	**-0.6**
GRNC	**Granite Creek**	**8.85**	**55**			**Pn**		**16 59 58.0**	**-0.4**
ILAR	**Eielson Array**	**9.61**	**26**	Pn		**Pn**		**17 00 05.0**	**-3.7**
	comp=E,0.2nm,0.3s,baz=215,slow=13,SNR=14								
ILAR						Sn	**Sn**	**17 01 49.9**	**-5.2**
	comp=E,0.1nm,0.3s,baz=214,slow=22,SNR=1.4								
	comp=E,0.8nm,0.5s								
PNL	**Peninsula**	**9.65**	**63**	P		**Pn**		**17 00 09.6**	**+0.3**
INK	**Inuvik**	**15.86**	**32**	Pn		**Pn**		**17 01 34.2**	**+1.7**
	comp=E,0.2nm,0.3s,baz=238,slow=12,SNR=7.2								
	comp=E,1.4nm,0.5s								
YKA	**Yellowknife Ar**	**21.83**	**57**	P		**P**		**17 02 44.7**	**+4.0**
	comp=E,0.6nm,0.5s,baz=283,slow=14,SNR=4.3								
	comp=E,0.6nm,0.5s								
PETK	**Petropavlovsk-**	**26.22**	**282**	P		**P**		**17 03 18.8**	**-3.9**
	comp=E,1.1nm,0.5s,baz=73,slow=9.2,SNR=4.9								
	comp=E,1.1nm,0.5s								
PDAR	**Pinedale Array**	**32.69**	**94**	P		**P**		**17 04 21.2**	**+0.8**
	comp=E,0.6nm,0.6s,baz=313,slow=4.7,SNR=8.0								
	comp=E,0.6nm,0.6s								
TXAR	**Lajitas Array**	**45.73**	**104**	P		**P**		**17 06 09.1**	**+0.1**
	comp=E,0.3nm,0.5s,baz=322,slow=4.7,SNR=4.2								
	comp=E,0.3nm,0.5s								
JHJ	**Hachijo jima 2**	**48.78**	**269**	LR		LR		17 25 51.7	
	comp=E,74nm,20.4s,baz=66,slow=35								
BVAR	**Borovoye Array**	**64.31**	**331**	P		**P**		**17 08 20.8**	**-1.8**
	comp=E,0.4nm,0.5s,baz=32,slow=5.8,SNR=4.2								
	comp=E,0.4nm,0.5s								

*SJA **22** 17:09:28.8±0.7,23°.31S×70°.05W,h81^{km}±4^{km},ML3.3, MW3.5*

*GUC **22** 17:09:30.7±0.9,23°.33S×69°.88W,h68^{km}±6^{km},ML3.4*

ISC 22 17:09:31.4±1.3,23°.35S±0°.03×69°.98W±0°.06,h57^{km}±13^{km}, n31,σ1^{s}94/43,4C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB05	**IPOC Station P**	**0.54**	**337**	*iP*		**Pn**		**17 09 43.6**	**-0.1**
PB05				*eS*		**Sn**		**17 09 53.5**	**+1.0**
PB05				IAML				17 09 55.8	
	comp=E,1μm,0.2s								
PB05	**IPOC Station P**	**0.54**	**337**	*eP*		**Pn**		**17 09 43.4**	**-0.2**
PB05				*eS*		**Sn**		**17 09 54.1**	**+1.6**
PB05				IAML				17 09 55.1	
	comp=Z,631nm,0.1s								
PB06	**IPOC Station P**	**0.74**	**30**	*iP*		**Pn**		**17 09 44.9**	**-1.2**
PB06				*eS*		**Sn**		**17 09 55.5**	**-1.4**
PB06				IAML				17 09 56.6	
	comp=N,1μm,0.2s								
PB06	**IPOC Station P**	**0.74**	**30**	*eP*		**Pn**		**17 09 44.9**	**-1.2**
PB06				*eS*		**Sn**		**17 09 56.5**	**-0.4**
PB06				IAML				17 09 57.0	
	comp=Z,1μm,0.2s								
PB03	**IPOC Station P**	**1.31**	**9**	*eP*		Pn		17 09 47.1	-6.6
PB03				*eS*		**Sn**		**17 10 09.7**	**-0.5**
PB14	**IPOC Station P**	**1.33**	**197**	*eP*		**Pn**		**17 09 52.9**	**-1.1**
PB14	**IPOC Station P**	**1.33**	**197**	*eP*		**Pn**		**17 09 53.3**	**-0.7**
PB14				*eS*		**Sn**		**17 10 12.5**	**+1.6**
PB14				IAML				17 10 13.1	
	comp=Z,330nm,0.2s								
PB07	**IPOC Station P**	**1.62**	**3**	*iP*		**Pn**		**17 09 56.9**	**-0.8**
PB07				IAML				17 10 18.0	
	comp=N,455nm,0.3s								
PB07	**IPOC Station P**	**1.62**	**3**	*eP*		**Pn**		**17 09 56.5**	**-1.3**
PB07				*eS*		**Sn**		**17 10 17.6**	**0.0**
PB07				IAML				17 10 17.8	
	comp=Z,382nm,0.2s								
PB09	**IPOC Station P**	**1.69**	**24**	*eP*		**Pn**		**17 09 58.6**	**-0.2**
PB09				*eS*		**Sn**		**17 10 19.6**	**+0.2**
PB09				IAML				17 10 23.9	
	comp=E,320nm,0.3s								
PB09	**IPOC Station P**	**1.69**	**24**	*eP*		**Pn**		**17 09 58.6**	**-0.2**
PB09				*eS*		**Sn**		**17 10 20.6**	**+1.2**
PB09				IAML				17 10 23.4	
	comp=Z,270nm,0.6s								
AF01	**San Pedro de A**	**1.70**	**77**	*eP*		**Pn**		**17 09 59.3**	**+0.2**
AF01				*eS*		**Sn**		**17 10 18.1**	**-1.9**
AF01				IAML				17 10 22.5	
	comp=E,3μm,0

BILE				S	Sg	17 49 34.6	-0.2
BILE				*i* IAML		17 49 57.0	
	comp=N,23nm,1.1s						
BLKS	**Balkesir-Sus**	**1.03**	**224**	P	Pn	17 49 27.9	+0.2
BLKS				S	Sb	17 49 40.6	0.0

NEIC ***22*** *17:50:11.9±1.9, 19°.9S±0°.1×178°.2W±0°.1, h580km±7km, mb4.3/34, Error ellipse: s-maj=16.7km s-min=13.7km az=151.0*
NOU ***22*** *17:50:11.2, 19°.89S×177°.94W, h604km, mb4.3/13, Fiji Islands Region*
IDC ***22*** *17:50:16.0±2.2, 19°.76S×178°.44W, h620km±25km, mb3.5/15, mbtmp4.5/16, Error ellipse: s-maj=16.9km s-min=11.5km az=155.0*

ISC 22 17:50:11.8±0.4, **19°.87S**±0°.08×**178°.11W**±0°.07, **h600**km, **n131**,σ1§**73**/132, **mb4.2**/31, **12C-12D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.22**	**300**			**P**	**17 51 39.1**	**+0.1**
MSVF	**Nonsavu**	**4.22**	**300**	P		**P**	**17 51 39.3**	**+0.3**
NIUE	**Niue**	**7.76**	**86**	P		**P**	**17 52 08.4**	**-0.5**
NIUE	**Niue**	**7.76**	**86**	P		**P**	**17 52 08.4**	**-0.5**
AFI	**Afiamalu**	**8.47**	**47**			**P**	**17 52 14.3**	**-1.6**
AFI						**S**	**17 53 51.5**	**-6.0**
AFI	**Afiamalu**	**8.47**	**47**	P		**P**	**17 52 13.4**	**-2.5**
FUNA	**Funafuti**	**11.58**	**347**	P		**P**	**17 52 44.2**	**-2.3**
PINNC	**Pines Island,**	**13.74**	**256**	P		**P**	**17 53 07.1**	**-1.1**
PINNC	**Pines Island,**	**13.74**	**256**	P		**P**	**17 53 09.3**	**+1.1**
DZM	**Mont Dzumac**	**14.60**	**259**	P		**P**	**17 53 17.9**	**+1.4**
	8.8nm,0.5s,baz=112,slow=20,SNR=15							
ONTNC	**Quen Toro**	**14.61**	**258**	P		**P**	**17 53 16.6**	**+0.1**
SANVU	**Saraoutou**	**14.67**	**285**	P		**P**	**17 53 15.0**	**-1.2**
SANVU	**Saraoutou**	**14.67**	**285**	P		**P**	**17 53 17.3**	**+0.2**
RAR	**Rarotonga**	**17.22**	**98**	P		**P**	**17 53 42.0**	**+1.5**
MXZ	**Matakaoa Point**	**17.90**	**189**	P		**P**	**17 53 46.8**	**+0.4**
TOZ	**Tahuroa Road**	**18.65**	**196**	P		**P**	**17 53 53.8**	**+0.6**
TOZ				IAmb		IAmb	17 54 32.7	
	comp=Z,14nm,1.3s							
URZ	**Urewera**	**18.79**	**192**	P		**P**	**17 53 53.1**	**-1.3**
	comp=Z,6.3nm,0.3s,baz=256,slow=2.4,SNR=23							
URZ				S		**S**	**17 56 46.1**	**-8.8**
	comp=Z,3.3nm,0.6s,baz=48,slow=21,SNR=6.1							
URZ	**Urewera**	**18.79**	**192**	P		**P**	**17 53 53.1**	**-1.3**
BKZ	**Black Stump Fm**	**19.79**	**192**	P		**P**	**17 54 01.3**	**-2.3**
QRZ	**Quartz Range**	**22.37**	**199**	P		**P**	**17 54 26.5**	**-0.1**
THZ	**Tophouse**	**23.12**	**197**	P		**P**	**17 54 33.1**	**-0.3**
JCZ	**Jackson Bay**	**26.50**	**201**	P		**P**	**17 55 03.6**	**+0.4**
MLZ	**Mavora Lakes**	**27.86**	**201**	P		**P**	**17 55 15.7**	**+0.7**
EIDS	**Eidsvold**	**28.93**	**253**	P		**P**	**17 55 24.6**	**+0.2**
EIDS				IAmb		IAmb	17 55 26.9	
	comp=Z,18nm,1.4s							
ARMA	**Armidale**	**29.26**	**243**	P		**P**	**17 55 27.1**	**-0.2**
ARMA	**Armidale**	**29.26**	**243**	P		**P**	**17 55 28.5**	**+1.1**
CAN	**Canberra**	**32.78**	**235**	P		**P**	**17 55 57.2**	**-0.1**
CAN				IAmb		IAmb	17 56 27.2	
	comp=Z,15nm,1.5s							
TV1H	**Townsville Har**	**33.04**	**265**	P		**P**	**17 55 59.5**	**-0.1**
CTAO	**Charters Tower**	**33.46**	**263**	P		**P**	**17 56 03.5**	**+0.4**
CMSA	**Cobar Meteorol**	**34.48**	**243**	P		**P**	**17 56 11.6**	**+0.2**
PMG	**Port Moresby**	**35.11**	**282**	P		**P**	**17 56 16.4**	**-0.4**
PMG				IAmb		IAmb	17 56 18.4	
	comp=Z,11nm,0.8s							
QLP	**Quilpie**	**35.15**	**252**	P		**P**	**17 56 17.3**	**+0.2**
TOO	**Toolangi**	**36.19**	**233**	P		**P**	**17 56 25.5**	**0.0**
TOO				IAmb		IAmb	17 56 58.4	
	comp=Z,8.1nm,1.4s							
COEN	**Coen**	**37.45**	**273**	P		**P**	**17 56 36.7**	**+0.6**
COEN				IAmb		IAmb	17 56 37.6	
	comp=Z,12nm,0.9s							
STKA	**Stephens Creek**	**37.98**	**243**	P		**P**	**17 56 40.3**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=80,slow=9.6,SNR=7.6							
	comp=Z,4.6nm,0.8s							
INKA	**Innaminka**	**38.31**	**250**	P		**P**	**17 56 43.8**	**+0.9**
INKA				IAmb		IAmb	17 56 44.5	
	comp=Z,3.5nm,0.8s							
BBOO	**Buckleboo**	**42.74**	**243**	P		**P**	**17 57 17.9**	**0.0**
JAY	**Jayapura**	**43.75**	**288**	P		**P**	**17 57 27.2**	**+1.2**
	comp=Z,16nm,0.5s,baz=172,slow=3.9,SNR=7.9							
	comp=Z,16nm,0.5s							
WR8	**Warramunga Ar**	**44.44**	**261**			**P**	**17 57 30.7**	**-0.5**
WR8				IAmb		IAmb	17 57 32.3	
	comp=Z,6.7nm,0.9s							
WR8				PcP		**PcP**	**17 59 02.1**	**+0.6**
AS31	**Alice Springs**	**44.57**	**256**			**P**	**17 57 32.4**	**+0.2**
AS31				IAmb		IAmb	17 57 33.5	
	comp=Z,10.0nm,1.2s							
AS31				PcP		**PcP**	**17 59 01.9**	**0.0**
WB0	**Warramunga Arr**	**44.57**	**262**			**P**	**17 57 31.9**	**-0.3**
ASAR	**Alice Springs**	**44.57**	**256**	P		**P**	**17 57 32.4**	**+0.2**
	comp=Z,18nm,0.7s,baz=88,slow=7.8,SNR=312							
ASAR				PcP		**PcP**	**17 59 02.9**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=106,slow=4.0,SNR=8.7							
ASAR				S		**S**	**18 03 23.4**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=91,slow=15,SNR=6.1							
	comp=Z,18nm,0.7s							
WRA	**Warramunga Ar**	**44.59**	**261**	P		**P**	**17 57 32.0**	**-0.4**
	comp=Z,7.5nm,0.5s,baz=98,slow=7.0,SNR=192							
WRA				PcP		**PcP**	**17 59 03.0**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=91,slow=3.8,SNR=5.1							
WRA				S		**S**	**18 03 23.6**	**-2.4**
	comp=Z,0.8nm,1.0s,baz=106,slow=12,SNR=3.2							
	comp=Z,7.5nm,0.5s							
WRA	**Warramunga Ar**	**44.59**	**261**			**P**	**17 57 31.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**53.01**	**262**	P		**P**	**17 58 35.0**	**+0.6**
	comp=Z,2.9nm,0.4s,baz=72,slow=3.5,SNR=31							
	comp=Z,2.9nm,0.4s							
FITZ	**Fitzroy Crossi**	**53.01**	**262**	P		**P**	**17 58 34.7**	**+0.3**
SOEI	**Soe**	**56.38**	**271**	P		**P**	**17 58 59.8**	**+1.7**
SOEI				IAmb		IAmb	17 59 09.7	
	comp=Z,19nm,0.8s							
MJAR	**Matsushiro Arr**	**69.65**	**324**	P		**P**	**18 00 23.3**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=164,slow=6.1,SNR=11							
	comp=Z,2.1nm,0.6s							
QSPA	**South Pole Qui**	**70.19**	**180**	P		P	18 00 29.9	+4.6
	comp=Z,4.2nm,0.6s,baz=58,slow=0.6,SNR=41							
	comp=Z,4.2nm,0.6s							
QSPA	**South Pole Qui**	**70.19**	**180**	P		P	18 00 30.0	+4.7
QSPA				IAmb		IAmb	18 00 30.7	
	comp=Z,4.7nm,0.7s							
PETK	**Petropavlovsk-**	**75.64**	**345**	P		**P**	**18 00 57.4**	**+1.1**
	comp=Z,3.5nm,0.8s,baz=176,slow=8.1,SNR=2.3							
	comp=Z,3.5nm,0.8s							
PETK	**Petropavlovsk-**	**75.64**	**345**	P		**P**	**18 00 57.6**	**+1.3**
KSRS	**Korea Array**	**76.35**	**319**	P		**P**	**18 01 02.8**	**+2.2**
	comp=Z,0.8nm,0.5s,baz=136,slow=6.7,SNR=4.8							
	comp=Z,0.8nm,0.5s							
NVAR	**Mina Array Bea**	**80.64**	**43**	P		**P**	**18 01 26.2**	**+2.6**
	comp=Z,2.0nm,0.8s,baz=229,slow=9.8,SNR=6.9							
	comp=Z,2.0nm,0.8s							
NVAR	**Mina Array Bea**	**80.64**	**43**	P		**P**	**18 01 25.6**	**+1.9**
J05D	**Fort Rock, OR**	**81.67**	**38**	P		**P**	**18 01 32.0**	**+3.3**
J05D				IAmb		IAmb	18 01 33.0	
	comp=Z,7.1nm,0.7s							
I07A	**Izee**	**83.16**	**38**	P		**P**	**18 01 39.3**	**+3.2**
F10A	**Beach Ranch, E**	**85.57**	**38**	P		**P**	**18 01 49.1**	**+1.3**
F10A				IAmb		IAmb	18 01 51.1	
	comp=Z,4.6nm,0.8s							
HLID	**Hailey**	**85.92**	**41**	P		**P**	**18 01 52.9**	**+3.2**
TX31	**Lajitas Ar. Si**	**86.80**	**57**	IAmb		IAmb	18 01 58.4	
	comp=Z,3.8nm,1.1s							
TXAR	**Lajitas Array**	**86.80**	**57**	P		**P**	**18 01 57.2**	**+3.2**
	comp=Z,1.3nm,0.7s,baz=216,slow=7.1,SNR=16							
	comp=Z,1.3nm,0.7s							
CCB	**Clear Creek Bu**	**87.43**	**13**	P		**P**	**18 01 57.0**	**+1.0**
ILAR	**Eielson Array**	**87.73**	**13**	P		**P**	**18 01 58.5**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=214,slow=5.2,SNR=40							
	comp=Z,2.2nm,0.6s							
ILAR	**Eielson Array**	**87.73**	**13**	P		**P**	**18 01 58.2**	**+0.9**
PDAR	**Pinedale Array**	**88.57**	**43**	P		**P**	**18 02 04.6**	**+2.4**
	comp=Z,1.3nm,0.6s,baz=210,slow=4.1,SNR=11							
	comp=Z,1.3nm,0.6s							
PDAR	**Pinedale Array**	**88.57**	**43**	P		**P**	**18 02 04.0**	**+1.8**
SNAA	**Sanae**	**88.64**	**179**	⇓P		**P**	**18 02 01.9**	**+0.1**
	comp=Z,25nm,0.9s							
SNAA	**Sanae**	**88.64**	**179**	P		**P**	**18 02 03.0**	**+1.2**
	comp=Z,1.3nm,1.0s,baz=225,slow=11,SNR=5.9							
	comp=Z,1.3nm,1.0s							
SNAA	**Sanae**	**88.64**	**179**	P		**P**	**18 02 02.1**	**+0.3**
SNAA				IAmb		IAmb	18 02 14.3	
	comp=Z,5.0nm,1.5s							
VNA3	**Neumayer Olymp**	**88.77**	**176**	⇓P		**P**	**18 02 02.9**	**+0.6**
	comp=Z,10nm,0.6s							
VNA2	**Neumayer--Watz**	**89.21**	**177**	⇓P		**P**	**18 02 05.1**	**+0.7**
	comp=Z,6.0nm,0.6s,baz=184,slow=4.4							
VNA1	**Neumayer--Stat**	**89.44**	**177**	⇓P		**P**	**18 02 06.3**	**+0.9**
	comp=Z,3.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**89.81**	**290**	P		**P**	**18 02 10.7**	**+2.6**
	comp=Z,2.4nm,0.9s,baz=119,slow=2.7,SNR=21							
	comp=Z,2.4nm,0.9s							
CMAR	**Chiang Mai Arr**	**89.81**	**290**	P		**P**	**18 02 08.1**	**0.0**
CHTO	**Chiang Mai**	**89.94**	**290**	P		**P**	**18 02 08.6**	**-0.2**
CHTO				IAmb		IAmb	18 02 11.8	
	comp=Z,3.4nm,0.8s							
ZALV	**Zalesovo Beam**	**109.94**	**321**	PKiKP		**PKiKP**	**18 07 35.7**	**0.0**
	comp=Z,0.5nm,0.4s,baz=149,slow=2.2,SNR=3.8							
ZALV	**Zalesovo Beam**	**109.94**	**321**			**PKiKP**	**18 07 35.1**	**-0.6**
MKAR	**Makanchi Array**	**110.69**	**314**	PKiKP		**PKiKP**	**18 07 37.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=142,slow=1.6,SNR=10							
MKAR	**Makanchi Array**	**110.69**	**314**			**PKiKP**	**18 07 37.3**	**0.0**
KURK	**Kurchatov**	**113.47**	**318**			**PKiKP**	**18 07 42.1**	**-0.3**
KURBB	**Kurchatov Arra**	**113.52**	**317**	PKiKP		**PKiKP**	**18 07 42.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=104,slow=1.8,SNR=16							
BVAR	**Borovoye Array**	**118.53**	**320**	PKP		**PKiKP**	**18 07 52.8**	**+0.6**
	comp=Z,2.3nm,0.4s,baz=111,slow=2.3,SNR=23							
ARCES	**ARCESS Array B**	**128.29**	**350**	PKP		**PKiKP**	**18 08 11.9**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=51,slow=1.2,SNR=21							
ARCES	**ARCESS Array B**	**128.29**	**350**			**PKiKP**	**18 08 11.4**	**+0.3**
FINES	**FINESS Array B**	**135.14**	**344**	PKP		**PKiKP**	**18 08 24.7**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=100,slow=4.5,SNR=6.6							
NB2	**NORSAR Subarra**	**138.35**	**353**	PKP		PKPpre	18 08 23.4	
	comp=Z,1.0nm,0.7s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**138.35**	**353**	PKhKP		PKPpre	18 08 22.4	
	comp=Z,0.7nm,0.6s,baz=8.5,slow=2.3,SNR=3.8							
NOA				PKP		**PKiKP**	**18 08 32.6**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=28,slow=2.0,SNR=1.7							
HFS	**Hagfors**	**138.91**	**351**	PKhKP		PKPpre	18 08 22.9	
	comp=Z,2.2nm,0.4s,baz=40,slow=4.8,SNR=20							
AKASG	**Malin Array Be**	**142.42**	**331**	PKhKP		PKPpre	18 08 34.6	
	comp=Z,2.6nm,0.3s,baz=44,slow=4.2,SNR=22							
AKBB	**Malin Array Si**	**142.42**	**331**			PKPpre	18 08 34.4	
KIEV	**Kiev**	**142.43**	**331**			PKPpre	18 08 34.8	
EKA	**Eskdalemuir Ar**	**144.39**	**5**	PKP		**PKiKP**	**18 08 41.2**	**-3.1**
	comp=Z,2.0nm,0.6s,baz=335,slow=3.5,SNR=8.1							
BR131	**Keskin Array S**	**146.34**	**313**			**PKiKP**	**18 08 47.1**	**-1.9**
BRTR	**Keskin Array B**	**146.34**	**313**	PKPbc		**PKPab**	**18 08 47.8**	**-1.7**
	comp=Z,2.8nm,0.5s,baz=128,slow=3.1,SNR=19							
BRTR	**Keskin Array B**	**146.34**	**313**			**PKiKP**	**18 08 47.3**	**-1.8**
BURAR	**Bucovina Array**	**146.47**	**331**	⇑P		**PKPab**	**18 08 48.8**	**-0.8**
BIZ	**Bicaz**	**146.54**	**329**	⇑P		**PKPab**	**18 08 48.7**	**-1.1**
CFR	**Carcaliu**	**146.71**	**325**	⇑P		**PKPab**	**18 08 48.4**	**-2.1**
ONER	**Baraj Valea Uz**	**146.83**	**328**	⇑P		**PKPab**	**18 08 50.0**	**-1.0**
ANTO	**Ankara**	**146.85**	**314**	⇓P		**PKiKP**	**18 08 48.8**	**-1.2**
TURR	**Turia**	**147.21**	**328**	⇓P		**PKPab**	**18 08 50.5**	**-2.1**
OZUR		**147.30**	**329**	⇑P		**PKPbc**	**18 08 46.9**	**-2.2**
TSMN	**Mangalia Port-**	**147.34**	**323**	⇓P		**PKPab**	**18 08 59.1**	**+6.0**
MMAI	**Mount Meron Ar**	**147.41**	**301**	PKPbc		**PKPab**	**18 08 51.8**	**-2.1**
	comp=Z,5.6nm,0.6s,baz=74,slow=6.2,SNR=22							
CLL	**Collm**	**147.43**	**347**			**PKiKP**	**18 08 49.0**	**-1.7**
CLL	**Collm**	**147.43**	**347**	⇓*i*	PKPbc	**PKPab**	**18 08 50.7**	**-2.5**
	comp=Z,15nm,0.9s							
CLL				⇑*i*	PKPab	**PKiKP**	**18 08 54.5**	**+3.8**
	comp=Z,7.0nm,0.8s							
DOPR	**Dopca**	**147.58**	**329**	⇑P		**PKiKP**	**18 08 50.9**	**-0.3**
MLR	**Muntele Rosu**	**147.64**	**328**	⇓P		**PKiKP**	**18 08 50.9**	**-0.6**
MORC	**Moravsky Berou**	**147.65**	**341**	⇑P		**PKiKP**	**18 08 50.8**	**-0.4**
VOIR		**148.13**	**328**	⇓P		**PKPab**	**18 08 52.9**	**-3.6**
KRUC	**Moravsky**	**148.63**	**342**	*e*	PKP	**PKiKP**	**18 08 53.8**	**+0.6**
SIRR	**Siria**	**149.07**	**333**	⇑P		**PKiKP**	**18 08 55.1**	**+0.9**
SURR	**Surduc**	**149.27**	**332**	⇓P		**PKiKP**	**18 08 55.1**	**+0.4**
ELND	**Elena**	**149.42**	**324**	⇑P		**PKiKP**	**18 08 55.2**	**+0.2**
GERES	**GERESS Array B**	**149.57**	**345**	PKPbc		**PKiKP**	**18 08 56.1**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=35,slow=3.3,SNR=22							
BAND	**Balkesir-Ban**	**149.68**	**318**	⇓P		**PKiKP**	**18 08 54.2**	**-1.5**
HERR	**Herculane**	**149.80**	**330**	⇑P		**PKiKP**	**18 08 55.7**	**-0.1**
CONA	**Conrad Observa**	**149.81**	**341**	*e*	PKiKP	**PKiKP**	**18 08 57.0**	**+1.2**
	comp=Z,8.4nm,1.2s							
RONA	**Rosalia, Austr**	**149.87**	**340**	*i*	PKiKP	**PKiKP**	**18 08 57.2**	**+1.3**
	comp=Z,4.4nm,0.5s,SNR=4.6							
MOA	**Molln**	**150.34**	**343**	*e*	PKiKP	**PKiKP**	**18 08 57.7**	**+0.9**
	comp=Z,2.8nm,0.7s							
BIOA	**Bad Ischl, Aus**	**150.65**	**344**	*i*	PKiKP	**PKiKP**	**18 08 58.1**	**+0.6**
	comp=Z,1.0nm,0.2s							
BOVS	**Bovan**	**151.07**	**329**	⇑P		**PKiKP**	**18 08 59.3**	**+0.8**
LESA	**Schwarzleotal**	**151.15**	**345**	*e*	PKiKP	**PKiKP**	**18 08 59.5**	**+1.0**
	comp=Z,2.8nm,0.4s							
SOKA	**Soboth**	**151.18**	**341**	*e*	PKP	**PKiKP**	**18 08 58.0**	**-0.6**
	comp=Z,0.4nm,0.4s							
KBA	**Koelnbreinsper**	**151.29**	**344**	*e*	PKiKP	**PKiKP**	**18 08 59.6**	**+0.5**
	comp=Z,1.6nm,0.5s							
WATA	**Walderalm**	**151.49**	**346**	*e*	PKiKP	**PKiKP**	**18 09 00.4**	**+1.1**
	comp=Z,4.3nm,0.5s							
RETA	**Reutte**	**151.52**	**347**	*e*	PKiKP	**PKiKP**	**18 09 00.6**	**+1.3**
	comp=Z,0.6nm,0.4s							
WTTA	**Wattenberg**	**151.54**	**346**	*i*	PKiKP	**PKiKP**	**18 09 00.6**	**+1.0**
	comp=Z,3.8nm,0.4s,SNR=6.9							
MYKA	**Terra Mystica**	**151.63**	**343**	*i*	PKP	**PKiKP**	**18 08 59.7**	**+0.1**
	comp=Z,2.7nm,0.4s,SNR=4.1							
SQTA	**Sankt Quirin**	**151.68**	**347**	*e*	PKP	**PKiKP**	**18 08 59.9**	**+0.1**
	comp=Z,4.6nm,0.6s							
ABTA	**Abfaltersbach**	**151.82**	**344**	*i*	PKiKP	**PKiKP**	**18 09 00.7**	**+0.7**
	comp=Z,4.4nm,0.5s,SNR=5.1							

NEIC ***22*** *17:51:46.3±1.2, 19°.49N±0°.03×67°.12W±0°.05, h10km±2km, ML2.6/14, Md3.2/15(RSPR), Error ellipse: s-maj=9.0km s-min=4.0km az=64.0*
SDD ***22*** *17:51:47.4±1.6, 19°.69N×67°.09W, h43km±160km, MD3.5, ML2.7, MW3.0*
RSPR ***22*** *17:51:47.8, 19°.66N×67°.15W, h17km±4km, MD3.2/15*

ISC 22 17:51:46.6±3.1, **19°.6N**±0°.1×**67°.14W**±0°.05, **h18**km±10km, **n53**,σ0§**67**/64, **11C-11D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.08**	**178**	*e*Pg		**Pn**	**17 52 06.5**	**-0.3**
AGPR				⇑*e*Sg		**Sb**	**17 52 20.8**	**+0.3**
AGPR				IAML			17 52 21.3	
	comp=E,116nm,0.3s							
AGPR				IAML			17 52 21.9	
	comp=N,180nm,0.2s							
AGPR	**Aguadilla, PR**	**1.08**	**178**	⇓*e*P		**Pn**	**17 52 06.5**	**-0.3**
AGPR	**Aguadilla, PR**	**1.08**	**178**	*e*S		**Sb**	**17 52 21.3**	**+0.7**
IDE	**Isla Desecheo**	**1.21**	**195**			**Pn**	**17 52 08.8**	**+0.3**
IDE	**Isla Desecheo**	**1.21**	**195**	⇑*e*P		**Pn**	**17 52 08.8**	**+0.3**
AOPR	**Arecibo Observ**	**1.26**	**163**			**Pn**	**17 52 08.5**	**-0.7**
AOPR						**Sb**	**17 52 25.0**	**-0.6**
AOPR				IAML			17 52 28.9	
	comp=N,145nm,0.3s							
AOPR	**Arecibo Observ**	**1.26**	**163**	⇓*e*Pg		**Pn**	**17 52 09.0**	**-0.2**
AOPR				⇑*e*Sg		**Sb**	**17 52 24.9**	**-0.7**
AOPR				IAML			17 52 28.8	
	comp=N,135nm,0.2s							
AOPR				IAML			17 52 29.9	
	comp=E,263nm,0.3s							
AOPR	**Arecibo Observ**	**1.26**	**163**	⇓*e*P		**Pn**	**17 52 09.1**	**-0.2**
AOPR	**Arecibo Observ**	**1.26**	**163**	*e*S		**Sb**	**17 52 25.2**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.36**	**163**			**Pn**	**17 52 10.5**	**-0.1**
UUPR						**Sn**	**17 52 27.8**	**-0.4**
UUPR	**Utuado, UPR, P**	**1.36**	**163**	⇓*e*P		**Pn**	**17 52 10.5**	**-0.1**
UUPR	**Utuado, UPR, P**	**1.36**	**163**	*e*S		**Sn**	**17 52 27.8**	**-0.4**
LSP	**Las Mesas**	**1.37**	**178**			**Pn**	**17 52 10.8**	**-0.1**
LSP						**Sb**	**17 52 29.5**	**+0.5**
LSP	**Las Mesas**	**1.37**	**178**	⇑*e*P		**Pn**	**17 52 10.8**	**-0.1**
LSP	**Las Mesas**	**1.37**	**178**	*e*S		**Sb**	**17 52 29.5**	**+0.5**
ECPR	**Experimental S**	**1.44**	**149**	⇓*e*P		**Pn**	**17 52 11.2**	**-0.4**
ECPR	**Experimental S**	**1.44**	**149**	*e*S		**Sn**	**17 52 30.0**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.54**	**179**			**Pn**	**17 52 12.9**	**-0.2**
CRPR						**Sn**	**17 52 31.5**	**-1.2**
CRPR				IAML			17 52 34.1	
	comp=E,83nm,0.4s							
CRPR				IAML			17 52 34.4	
	comp=N,62nm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.54**	**179**	*e*Pg		**Pn**	**17 52 13.1**	**0.0**
CRPR				⇑*e*Sg		**Sb**	**17 52 33.7**	**0.0**
CRPR				IAML			17 52 33.9	
	comp=E,94nm,0.3s							
CRPR				IAML			17 52 37.0	
	comp=N,64nm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.54**	**179**	⇓*e*P		**Pn**	**17 52 13.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.54**	**179**	*e*S		**Sn**	**17 52 32.9**	**+0.3**
PCDR	**Punta Cana, DR**	**1.56**	**229**	*e*Pg		**Pn**	**17 52 13.7**	**+0.3**
PCDR				IAML			17 52 36.2	
	comp=N,250nm,0.3s							
MLPR	**Magueyes Islan**	**1.58**	**177**	*e*Pg		**Pn**	**17 52 13.7**	**+0.1**
MLPR				IAML			17 52 38.3	
	comp=N,21nm,0.3s							
MLPR				IAML			17 52 41.5	
	comp=E,14nm,0.5s							
MLPR	**Magueyes Islan**	**1.58**	**177**	⇓*e*P		**Pn**	**17 52 13.7**	**+0.1**
MLPR	**Magueyes Islan**	**1.58**	**177**	*e*S		**Sb**	**17 52 34.8**	**-0.1**
OBIP	**Obispado Ponce**	**1.59**	**161**			**Pn**	**17 52 13.0**	**-0.7**
OBIP						**Sn**	**17 52 33.8**	**0.0**
OBIP				IAML			17 52 34.1	
	comp=E,91nm,0.4s							
OBIP				IAML			17 52 34.3	
	comp=N,60nm,0.7s							
OBIP	**Obispado Ponce**	**1.59**	**161**	⇓*e*P		**Pn**	**17 52 13.8**	**0.0**
OBIP	**Obispado Ponce**	**1.59**	**161**	*e*S		**Sn**	**17 52 34.3**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.59**	**171**			**Pn**	**17 52 14.5**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.59**	**171**	⇑*e*P		**Pn**	**17 52 14.5**	**+0.7**
GCPR	**Guaynabo City**	**1.60**	**141**			**Pn**	**17 52 13.4**	**-0.5**
GCPR	**Guaynabo City**	**1.60**	**141**			**Sn**	**17 52 34.6**	**+0.6**
GCPR	**Guaynabo City**	**1.60**	**141**	⇑*e*P		**Pn**	**17 52 13.6**	**-0.3**
GCPR	**Guaynabo City**	**1.60**	**141**	*e*S		**Sn**	**17 52 34.6**	**+0.6**
SJG	**San Juan**	**1.72**	**147**			**Pn**	**17 52 14.6**	**-0.9**
SJG				IAML			17 52 38.7	
	comp=N,60nm,0.4s							
SJG				IAML			17 52 40.1	
	comp=N,57nm,0.4s							
SJG	**San Juan**	**1.72**	**147**	⇑*e*P		**Pn**	**17 52 15.4**	**-0.2**
SJG	**San Juan**	**1.72**	**147**	*e*S		**Sn**	**17 52 37.1**	**+0.1**
HIDR	**Higuey Centro**	**1.77**	**237**	⇓*e*Pg		**Pn**	**17 52 16.4**	**+0.2**
HIDR				⇓*e*Sg		**Sn**	**17 52 37.7**	**-0.6**
HIDR				IAML			17 52 39.2	
	comp=N,146nm,0.4s							
HIDR				IAML			17 52 39.6	
	comp=E,114nm,0.2s							
HIDR	**Higuey Centro**	**1.77**	**237**	⇓*e*P		**Pn**	**17 52 16.4**	**+0.2**
HIDR	**Higuey Centro**	**1.77**	**237**	*e*S		**Sn**	**17 52 37.8**	**-0.6**
HUMP	**Col San Antoni**	**1.87**	**139**			**Pn**	**17 52 17.2**	**-0.3**
HUMP						**Sn**	**17 52 40.2**	**-0.4**
HUMP				IAML			17 52 43.0	
	comp=E,45nm,0.3s							
HUMP	**Col San Antoni**	**1.87**	**139**	⇑*e*P		**Pn**	**17 52 17.7**	**+0.2**
HUMP	**Col San Antoni**	**1.87**	**139

	comp=Z,1.9nm,1.0s							
QSPA	**South Pole Qui**	**67.11**	**180**	P	**P**	**18 21 36.1**	**+2.0**	
G08A	**Pilot Rock**	**68.12**	**357**		**P**	**18 21 41.7**	**+1.1**	
G08A				IAmb	IAmb	18 21 44.5		
	comp=Z,5.0nm,1.2s							
YKA	**Yellowknife Ar**	**85.24**	**360**	P	**P**	**18 23 16.8**	**0.0**	
	comp=Z,0.3nm,0.4s,baz=191,slow=4.4,SNR=6.1							
	comp=Z,0.3nm,0.4s							
ILAR	**Eielson Array**	**91.03**	**347**	P	**P**	**18 23 45.1**	**+0.7**	
	comp=Z,0.3nm,0.8s,baz=178,slow=6.3,SNR=2.1							
	comp=Z,0.3nm,0.8s							
ILAR	**Eielson Array**	**91.03**	**347**	P	**P**	**18 23 43.9**	**-0.6**	
INK	**Inuvik**	**92.14**	**353**	P	**P**	**18 23 48.8**	**-0.7**	
	comp=Z,0.6nm,0.5s,baz=337,slow=22,SNR=4.1							
	comp=Z,0.6nm,0.5s							
ZALV	**Zalesovo Beam**	**145.84**	**340**	PKPbc	**PKPdf**	**18 30 18.3**	**-0.8**	
	comp=Z,0.9nm,0.6s,baz=28,slow=4.8,SNR=6.2							
ZALV	**Zalesovo Beam**	**145.84**	**340**		**PKPdf**	**18 30 18.0**	**-1.2**	
CMAR	**Chiang Mai Arr**	**148.35**	**268**	PKPbc	**PKPbc**	**18 30 27.2**	**-0.6**	
	comp=Z,1.0nm,0.6s,baz=54,slow=1.0,SNR=7.4							
CMAR	**Chiang Mai Arr**	**148.35**	**268**	PKPdf	**PKPdf**	**18 30 21.7**	**-2.7**	
CMAR					**pPKPdf**	**18 30 26.3**	**-0.5**	
BRTR	**Keskin Array B**	**148.41**	**51**	PKPbc	**PKPbc**	**18 30 27.6**	**+0.1**	
	comp=Z,1.6nm,0.9s,baz=259,slow=2.9,SNR=6.0							
BVAR	**Borovoye Array**	**149.83**	**354**	PKPbc	**PKPbc**	**18 30 30.6**	**+0.1**	
	comp=Z,1.6nm,0.5s,baz=3.2,slow=2.1,SNR=10							
KURK	**Kurchatov**	**150.52**	**343**		**PKPbc**	**18 30 31.6**	**-0.6**	
KURBB	**Kurchatov Arra**	**150.53**	**343**	PKPbc	**PKPbc**	**18 30 31.6**	**-0.9**	
	comp=Z,1.1nm,0.6s,baz=30,slow=1.9,SNR=13							
KBZ	**Khabaz**	**152.26**	**37**	PKPbc	**PKPbc**	**18 30 35.0**	**-1.4**	
	comp=Z,2.4nm,0.9s,baz=162,slow=3.2,SNR=3.6							
MKAR	**Makanchi Array**	**152.67**	**334**	PKPbc	**PKPbc**	**18 30 36.5**	**-0.9**	
	comp=Z,1.2nm,0.6s,baz=19,slow=1.8,SNR=15							
MKAR	**Makanchi Array**	**152.67**	**334**	PKPdf	**PKPdf**	**18 30 29.2**	**-1.1**	
MKAR					**PKPbc**	**18 30 36.2**	**-1.2**	

*IDC **22** 18:16:33.5±0.7, 22.°95S×114.°62W, h0km, mb3.9/8, mbtmp3.9/8, MS3.8/10, Error ellipse: s-maj=38.2km s-min=21.0km az=70.0*
*NEIC **22** 18:16:35.5±1.3, 23.°0S±0.°1×114.°1W±0.°2, h10km±1km, mb4.2/7, Error ellipse: s-maj=34.2km s-min=19.0km az=242.0*
ISC 22 18:16:35.2±0.8, 23.°0S±0.°2×114.°1W±0.°2, h10km, n45, σ1§47/23, mb4.1/10, MS3.8/9, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA02	**Isla de Pascua**	**5.94**	**135**	Pn	**Pn**	**18 18 00.7**	**-2.5**
RPN	**Rapa Nui**	**5.98**	**134**	LR	LR	18 20 05.6	
	comp=Z,1μm,18.0s,baz=313,slow=33						
TAOE	**Nuku Hiva Isla**	**28.63**	**295**	*e*LR	LR	18 29 26.1	
	473nm,25.9s						
TBI	**Tubuai**	**32.43**	**262**	*e*LR	LR	18 30 58.2	
	2μm,27.2s						
H03N2	**Juan Fernandez**	**32.58**	**116**	T	T	18 58 11.4	
	baz=283,slow=75,SNR=19						
H03N3	**Juan Fernandez**	**32.58**	**116**	T	T	18 58 13.0	
	baz=283,slow=75,SNR=19						
H03N1	**Juan Fernandez**	**32.59**	**116**	T	T	18 58 12.7	
	baz=283,slow=75,SNR=20						
PPT2	**Papeete2**	**33.62**	**273**	*e*LR	LR	18 31 10.0	
	226nm,29.2s						
PPT2				*e*LR	LR	18 31 25.3	
	224nm,25.0s						
PPT	**Papeete**	**33.63**	**273**	LR	LR	18 32 16.7	
	comp=Z,189nm,18.9s,baz=108,slow=28						
NNA	**Nana**	**37.11**	**79**	LR	LR	18 35 04.0	
	comp=Z,274nm,21.3s,baz=228,slow=30						
ATAH	**Atahualpa**	**37.80**	**71**	LR	LR	18 35 37.0	
	comp=Z,189nm,20.9s,baz=238,slow=30						
PLCA	**Paso Flores**	**40.55**	**126**	P	**P**	**18 24 18.3**	**+3.4**
	2.5nm,0.9s,baz=293,slow=5.1,SNR=4.4						
PLCA				LR	LR	18 36 55.2	
	comp=Z,130nm,21.9s,baz=297,slow=30						
	2.5nm,0.9s						
PLCA	**Paso Flores**	**40.55**	**126**	P	**P**	**18 24 15.3**	**+0.4**
PLCA				IAmb	IAmb	18 24 23.2	
	comp=Z,7.4nm,1.4s						
RAR	**Rarotonga**	**42.19**	**263**	LR	LR	18 36 56.0	
	comp=Z,151nm,20.3s,baz=85,slow=29						
LPAZ	**La Paz**	**43.70**	**90**	P	**P**	**18 24 44.1**	**+2.6**
	comp=Z,1.2nm,0.8s,baz=268,slow=9.6,SNR=4.4						
LPAZ				LR	LR	18 38 55.3	
	comp=Z,122nm,20.7s,baz=262,slow=30						
	comp=Z,1.2nm,0.8s						
LPAZ	**La Paz**	**43.70**	**90**	P	**P**	**18 24 40.7**	**-0.8**
JTS	**Las Juntas de**	**43.72**	**44**	LR	LR	18 38 31.5	
	comp=Z,47nm,18.2s,baz=186,slow=30						
CPUP	**Villa Florida**	**51.38**	**106**	LR	LR	18 44 14.9	
	comp=Z,18nm,18.3s,baz=175,slow=32						
SHPR	**Sheep Range**	**59.20**	**359**	P	**P**	**18 26 36.5**	**-0.1**
SHPR				IAmb	IAmb	18 26 42.1	
	comp=Z,2.0nm,1.0s						
URZ	**Urewera**	**59.84**	**238**	LR	LR	18 48 05.1	
	comp=Z,69nm,18.3s,baz=113,slow=32						
NVAR	**Mina Array Bea**	**61.23**	**356**	P	**P**	**18 26 49.6**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=181,slow=9.8,SNR=5.3						
	comp=Z,0.8nm,0.7s						
ELK	**Elko**	**63.43**	**359**	P	**P**	**18 27 05.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=225,slow=3.7,SNR=3.1						
	comp=Z,0.2nm,0.3s						
ELK	**Elko**	**63.43**	**359**	P	**P**	**18 27 05.1**	**-0.2**
ELK				IAmb	IAmb	18 27 08.4	
	comp=Z,2.5nm,1.3s						
PDAR	**Pinedale Array**	**65.58**	**4**	P	**P**	**18 27 19.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=161,slow=6.3,SNR=4.0						
	comp=Z,0.4nm,0.7s						
HLID	**Hailey**	**66.24**	**360**	P	**P**	**18 27 23.3**	**-0.2**
HLID				IAmb	IAmb	18 27 48.0	
	comp=Z,1.5nm,1.0s						
QSPA	**South Pole Qui**	**67.15**	**180**	P	**P**	**18 27 30.1**	**+1.0**
	comp=Z,2.3nm,1.0s,baz=110,slow=2.2,SNR=4.1						
	comp=Z,2.3nm,1.0s						
QSPA	**South Pole Qui**	**67.15**	**180**	P	**P**	**18 27 28.9**	**-0.2**
DZM	**Mont Dzumac**	**72.42**	**253**	*e*LR	LR	18 49 18.6	
	comp=Z,145nm,24.8s						
SNAA	**Sanae**	**74.77**	**162**	P	**P**	**18 28 16.0**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=301,slow=6.2,SNR=3.9						
	comp=Z,1.5nm,0.9s						
SNAA	**Sanae**	**74.77**	**162**	IAmb	IAmb	18 28 16.2	
	comp=Z,8.3nm,1.4s						
DLBC	**Dease Lake**	**82.20**	**352**	P	**P**	**18 28 57.1**	**+0.9**
	comp=Z,2.3nm,0.8s,baz=168,slow=13,SNR=3.2						
	comp=Z,2.3nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**87.60**	**291**	T	T	20 05 25.1	
	baz=116,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**87.61**	**291**	T	T	20 05 29.0	
	baz=116,slow=75,SNR=8.5						
H11S3	**WAKE ISLAND Hy**	**87.61**	**291**	T	T	20 05 28.7	
	baz=116,slow=75,SNR=8.8						
H11N3	**WAKE ISLAND Hy**	**87.94**	**292**	T	T	20 05 52.2	
	baz=117						
H11N1	**WAKE ISLAND Hy**	**87.95**	**292**	T	T	20 05 59.0	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**87.96**	**292**	T	T	20 05 53.3	
	baz=117						
ZALV	**Zalesovo Beam**	**145.95**	**340**	PKPbc	**PKPdf**	**18 36 12.7**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=0.0,slow=6.5,SNR=4.2						
ZALV	**Zalesovo Beam**	**145.95**	**340**		**PKPdf**	**18 36 12.8**	**-1.3**
BRTR	**Keskin Array B**	**148.05**	**51**	PKPbc	**PKiKP**	**18 36 22.8**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=250,slow=3.6,SNR=6.4						
BRTR	**Keskin Array B**	**148.05**	**51**		**PKPdf**	**18 36 17.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**148.78**	**268**	PKPbc	**PKPdf**	**18 36 22.0**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=91,slow=1.7,SNR=4.6						
BVAR	**Borovoye Array**	**149.83**	**355**	PKPbc	**PKPbc**	**18 36 24.4**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=339,slow=3.8,SNR=8.2						
KURBB	**Kurchatov Arra**	**150.71**	**343**	PKPbc	**PKPbc**	**18 36 25.8**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=19,slow=1.8,SNR=13						
MKAR	**Makanchi Array**	**152.82**	**335**	PKPbc	**PKPbc**	**18 36 31.1**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=47,slow=2.5,SNR=7.8						

*IDC **22** 18:21:18.2±16.0, 40.°15N×140.°42E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=405.9km s-min=36.7km az=169.0*
*JMA **22** 18:22:03.6±0.5, 44.°N±1.°×14.°0E±.°, h223km±4km, MV2.8/35, NW OFF SHAKOTAN PEN*
*SKHL **22** 18:22:05.6±0.0, 43.°70N×140.°20E, h210km±9km, mb4.1/3, msha4.9/2*
ISC 22 18:22:03.6±0.9, 43.°46N±0.°06×139.°87E±0.°06, h250km, n30, σ1§84/37, mb3.4/6, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**0.46**	**103**	P	**Pn**	**18 22 33.6**	**-2.7**
JSH	**Shimam**	**0.83**	**171**	P	**Pn**	**18 22 35.5**	**-2.3**
JHST	**Hiyamasetana**	**1.04**	**180**	*e*P	**Pn**	**18 22 37.0**	**-1.9**
JNB	**Noboribetsu**	**1.31**	**139**	*e*P	**Pn**	**18 22 39.3**	**-1.2**
JEW	**Eniwo**	**1.31**	**118**	*e*P	**Pn**	**18 22 39.8**	**-0.7**
JOSM	**Okushiri--Mats**	**1.41**	**192**	*e*P	**Pn**	**18 22 39.7**	**-1.5**
JSS	**Shosan**	**1.71**	**56**	*e*P	**Pn**	**18 22 42.2**	**-1.3**
JKB	**Kayabe**	**1.79**	**151**	*e*P	**Pn**	**18 22 43.4**	**-0.8**
JOMM	**Oshimamatsumae**	**1.94**	**177**	*e*P	**Pn**	**18 22 44.7**	**-0.8**
JKK2	**Kamakawa 2**	**2.13**	**78**	*e*P	**Pn**	**18 22 46.8**	**-0.4**
JKK2					**S**	**18 23 20.5**	**-1.1**
JRBN	**Rebuntou**	**2.14**	**23**	*e*P	**Pn**	**18 22 44.2**	**-3.0**
JOT	**Ohata**	**2.25**	**157**	*e*P	**Pn**	**18 22 47.6**	**-0.8**
JWK2	**Keihoku**	**2.36**	**37**	*e*P	**Pn**	**18 22 47.9**	**-1.4**
JNBK	**Urakawa-nobuka**	**2.43**	**118**	*e*P	**Pn**	**18 22 49.7**	**-0.4**
JCH	**Churui**	**2.70**	**107**	*e*P	**Pn**	**18 22 51.3**	**-1.5**
JCH					**S**	**18 23 28.1**	**-3.7**
JAR	**Ashorobuto**	**2.85**	**92**	*e*P	**Pn**	**18 22 54.8**	**+0.3**
JAR					**S**	**18 23 33.9**	**-0.7**
JIW	**Iwasaki**	**2.87**	**178**	*e*P	**Pn**	**18 22 54.6**	**-0.1**
JIW					**S**	**18 23 34.6**	**-0.5**
JTKR	**Abashiri--Toko**	**2.97**	**79**	*e*P	**Pn**	**18 22 55.4**	**-0.3**
JANG	**Nango**	**3.32**	**158**	*e*P	**Pn**	**18 22 58.8**	**-0.9**
JANG					**S**	**18 23 41.9**	**-2.1**
JAK	**Akkeshi**	**3.56**	**96**	*e*P	**Pn**	**18 23 02.6**	**+0.4**
JAK					**S**	**18 23 46.0**	**-2.7**
AKK	**Akkeshi**	**3.66**	**95**	*e*P	**Pn**	**18 23 02.8**	**-0.6**
AKK					**S**	**18 23 47.4**	**-3.4**
AKK				A	A	18 23 53.2	
	50nm,0.3s						
AKK				A	A	18 23 53.2	
	50nm,0.3s						
YSS	**Yuzhno-Sakhali**	**4.05**	**29**	*e*P	**Pn**	**18 23 06.3**	**-1.5**
YSS				AMB	AMB	18 23 06.8	
	20nm,0.7s						
NMR	**Nemuro--Hokkai**	**4.27**	**89**	*e*P	**Pn**	**18 23 09.7**	**-0.8**
NMR					**S**	**18 23 59.7**	**-4.0**
SHO	**Shikotan**	**5.07**	**83**	*e*P	Pn	18 23 26.9	+6.8
SHO				AMB	AMB	18 23 31.6	
	20nm,0.5s						
SHO				*e*S	**S**	**18 24 24.1**	**+3.0**
SHO				A	A	18 24 30.6	
	20nm,0.3s						
SHO				A	A	18 24 30.6	
	30nm,0.3s						
ZALV	**Zalesovo Beam**	**36.92**	**306**	P	**P**	**18 28 48.6**	**+0.2**
	0.5nm,0.4s,baz=88,slow=9.9,SNR=3.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**39.98**	**295**	P	P	18 29 08.2	-5.7
	0.6nm,0.9s,baz=65,slow=7.7,SNR=4.0						
	0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**41.34**	**302**	P	**P**	**18 29 25.1**	**+0.3**
	1.5nm,0.5s,baz=77,slow=8.9,SNR=24						
	1.5nm,0.5s						
BVAR	**Borovoye Array**	**45.54**	**308**	P	**P**	**18 29 58.6**	**+0.4**
	0.6nm,0.3s,baz=75,slow=9.0,SNR=8.0						
	0.6nm,0.3s						
INK	**Inuvik**	**49.28**	**29**	P	**P**	**18 30 29.4**	**+2.7**
	0.6nm,0.4s,baz=270,slow=6.1,SNR=6.8						
	0.6nm,0.4s						
FINES	**FINESS Array B**	**62.62**	**330**	P	**P**	**18 32 02.3**	**+1.3**
	0.7nm,0.4s,baz=46,slow=6.0,SNR=7.0						
	0.7nm,0.4s						

*DNK **22** 18:35:22.4±1.0, 51.°24N×16.°90E, h40km±47km, ML3.1*
*PRU **22** 18:35:25.9, 51.°39N×16.°26E, h0km*
*VIE **22** 18:35:25.5±0.6, 51.°37N×16.°34E, h0km, mb2.6/5, ml2.7/7, Error ellipse: s-maj=5.5km s-min=3.8km az=72.0 56 km NW of Wroclaw Suspected Mining induced.*
ISC 22 18:35:23.1±0.8, 51.°47N±0.°03×16.°21E±0.°02, h0km, n33, σ0§99/67, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.63**	**175**	*e*Pg	**Pb**	**18 35 36.2**	**-0.7**
KSP				*e*Sg	**Sg**	**18 35 43.9**	**+0.8**
CHVC	**Chvalec**	**0.88**	**186**	*e*PG	**Pb**	**18 35 41.3**	**0.0**
CHVC				*e*SG	**Sb**	**18 35 53.0**	**-0.6**
OSTC	**Ostas**	**0.91**	**180**	*e*PG	**Pb**	**18 35 41.6**	**-0.1**
OSTC				*e*SG	**Sb**	**18 35 53.7**	**-0.7**
UPC	**Upice**	**0.97**	**187**	*e*PG	**Pb**	**18 35 42.5**	**-0.2**
UPC				*e*SG	**Sb**	**18 35 55.3**	**-0.7**
	comp=Z,114nm,0.5s						
DPC	**Dobruska-Polom**	**1.12**	**176**	*e*PG	**Pb**	**18 35 45.1**	**-0.2**
DPC				*e*SG	**Sb**	**18 36 00.0**	**-0.4**
	comp=Z,30nm,0.5s						
PVCC	**Panska Ves**	**1.40**	**228**	*e*PG	**Pb**	**18 35 51.4**	**+1.4**
PVCC				*e*SG	**Sn**	**18 36 10.3**	**+1.4**
	comp=Z,134nm,0.4s						
KRLC	**Kraliky**	**1.44**	**165**	*e*PG	**Pb**	**18 35 50.7**	**0.0**
KRLC				*e*SG	**Sb**	**18 36 09.5**	**-0.1**
PRU	**Pruhonice**	**1.82**	**216**	*e*PG	**Pg**	**18 35 58.1**	**+0.2**
PRU				*e*SG	**Sg**	**18 36 21.8**	**+0.4**
	comp=Z,16nm,0.4s						
STEB	**Steborice**	**1.83**	**146**	*e*PG	**Pb**	**18 35 57.0**	**-0.3**
STEB				*e*SG	**Sn**	**18 36 19.8**	**+0.2**
	comp=Z,40nm,0.5s						
MORC	**Moravsky Berou**	**1.89**	**153**	*e*PN	**Pn**	**18 35 56.5**	**-0.1**
MORC				*e*SG	**Sn**	**18 36 21.1**	**-0.1**
HSKC	**Hora Svate Kat**	**1.95**	**245**	*e*PG	**Pg**	**18 35 59.9**	**-0.5**
HSKC				*e*SG	**Sg**	**18 36 26.4**	**+0.7**
	comp=Z,31nm,0.3s						
CLL	**Collm**	**2.01**	**267**	*e*Pn	**Pn**	**18 35 59.0**	**+0.7**
CLL				*e*Pg	**Pg**	**18 36 02.0**	**+0.4**
CLL				*e*Sg	**Sg**	**18 36 30.0**	**+2.3**
	comp=Z,18nm,0.7s						
OKC	**Ostrava-Krasne**	**2.04**	**142**	*e*PG	**Pg**	**18 36 01.7**	**-0.5**
OKC				*e*SG	**Sb**	**18 36 26.9**	**-0.1**
VRAC	**Vranov**	**2.17**	**173**	*e*PN	**Pn**	**18 36 01.6**	**+1.1**
VRAC				*e*SG	**Sg**	**18 36 31.7**	**-1.1**
TREC	**Trest**	**2.22**	**192**	*e*SG	**Sg**	**18 36 34.0**	**-0.4**
KRUC	**Moravsky**	**2.41**	**177**	*e*PN	**Pn**	**18 36 04.6**	**+0.9**
KRUC				*e*SG	**Sg**	**18 36 39.3**	**-1.1**
OJC	**Ojcow**	**2.60**	**117**	*e*Pg	**Pg**	**18 36 14.6**	**+1.8**
OJC				*e*Sg	**Sg**	**18 36 47.9**	**+1.5**
KHC	**Kasperske Hory**	**2.88**	**217**	*e*PN	**Pn**	**18 36 11.8**	**+1.6**
KHC				*e*PG	**Pg**	**18 36 17.6**	**-0.6**
KHC				*e*SN	**Sn**	**18 36 45.2**	**-0.4**
KHC				*e*SG	**Sg**	**18 36 55.2**	**-0.4**
	comp=Z,12nm,0.5s						
CKRC	**Cesky Krumlov**	**2.92**	**205**	*e*PN	**Pn**	**18 36 12.1**	**+1.4**
CKRC				*e*PG	**Pg**	**18 36 18.0**	**-0.9**
CKRC				*e*SG	**Sg**	**18 36 54.8**	**-1.9**
	comp=Z,20nm,0.7s						
LANS	**Liptovska Anna**	**3.12**	**137**	*e*PG	**Pg**	**18 36 23.9**	**+1.1**
LANS				*e*SG	**Sg**	**18 37 02.9**	**-0.4**
MODS	**Modra-Piesok**	**3.17**	**167**	*e*PG	**Pg**	**18 36 24.7**	**+0.9**
MODS				*e*SG	**Sg**	**18 37 04.5**	**-0.4**
CONA	**Conrad Observa**	**3.55**	**184**	*i* Pn	**Pn**	**18 36 20.8**	**+1.4**
	comp=Z,0.4nm,0.2s						
CONA				*e*Sg	**Sg**	**18 37 15.3**	**-1.7**
	comp=Z,4.5nm,0.3s						
BSD	**Bornholm Skovb**	**3.74**	**349**	*i* P	**Pn**	**18 36 22.7**	**+0.8**
BSD				*i* S	**Sn**	**18 37 05.6**	**-1.0**
BSD				IAML		18 37 16.4	
	comp=Z,19nm,1.2s						
STHS	**Stebnicka Huta**	**3.82**	**121**	*e*PN	**Pn**	**18 36 23.2**	**+0.1**
STHS				*e*PG	**Pg**	**18 36 36.3**	**+0.1**
STHS				*e*SG	**Sg**	**18 37 25.9**	**+0.3**
MOA	**Molln**	**3.83**	**200**	*e*Pg	**Pg**	**18 36 35.8**	**-0.7**
MOA	comp=Z,1.4nm,0.2s			*e*Sg	**Sg**	**18 37 24.9**	**-1.3**
	comp=Z,0.1nm,0.1s						
BIOA	**Bad Ischl, Aus**	**4.13**	**205**	*e*Sg	**Sg**	**18 37 35.9**	**+0.2**
	comp=Z,2.5nm,0.3s						
ARSA	**Arzberg**	**4.24**	**186**	*i* Pn	**Pn**	**18 36 30.0**	**+1.1**
	comp=Z,0.2nm,0.2s						
LUNU	**Lund**	**4.49**	**340**	*i* P	**Pn**	**18 36 33.0**	**+0.8**
LUNU				*i* S	**Sn**	**18 37 25.5**	**+0.4**
LESA	**Schwarzleotal**	**4.65**	**211**	*e*Pg	**Pg**	**18 36 51.8**	**-0.4**
	comp=Z,0.1nm,0.1s						
LESA				*e*Sg	**Sg**	**18 37 51.6**	**-0.9**
	comp=Z,1.1nm,0.3s						
KBA	**Koelnbreinsper**	**4.77**	**204**	*e*Sg	**Sg**	**18 37 56.9**	**+0.6**
	comp=Z,5.4nm,0.5s						
BJUU	**Bjuv**	**4.99**	**339**	*i* P	**Pn**	**18 36 39.1**	**0.0**
BJUU				*i* S	**Sn**	**18 37 36.4**	**-1.0**
DEL	**Delary**	**5.20**	**346**	*i* P	**Pn**	**18 36 42.1**	**+0.1**
DEL				*i* S	**Sn**	**18 37 40.3**	**-2.3**
FABU	**Falkenberg**	**5.91**	**341**	*i* P	**Pn**	**18 36 52.0**	**+0.2**
FABU				*i* S	**Sn**	**18 37 57.3**	**-2.9**

*CATAC **22** 18:40:51.1±0.6, 13.°N±4.°×9.°0W±.°, h28km±3km, M3.2/13, MLv3.2/13, Error ellipse: s-maj=8.1km s-min=4.6km az=24.1, confirmed*
*GCG **22** 18:40:52.8±0.9, 13.°46N×89.°99W, h38km±50km, MD3.6, ML3.6*
*SNET **22** 18:40:52.5±1.6, 13.°39N×89.°97W, h39km, ML3.2*
ISC 22 18:40:53.5±1.6, 13.°38N±0.°07×89.°87W±0.°04, h27km±13km, n44, σ1§04/50, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.48**	**344**	P	**Pn**	**18 41 02.8**	**-1.9**
JAYA	**Jayaque - finc**	**0.50**	**56**	*e*P	**Pb**	**18 41 03.7**	**-0.2**
JAYA	**Jayaque - finc**	**0.50**	**56**	*i* P	**Pb**	**18 41 03.6**	**-0.2**
JAYA	**Jayaque - finc**	**0.50**	**56**	P	**Pb**	**18 41 03.7**	**-0.2**
JAYA	**Jayaque - finc**	**0.50**	**56**	S	**Sn**	**18 41 13.8**	**+1.0**
CEVE	**Cerro Verde**	**0.51**	**28**	*e*P	**Pn**	**18 41 04.3**	**-1.0**
CEVE				*e*S	**Sn**	**18 41 14.7**	**+1.4**
CEVE	**Cerro Verde**	**0.51**	**28**	P	**Pn**	**18 41 04.2**	**-1.0**
SBLS	**San Blas**	**0.52**	**28**	*e*P	**Pn**	**18 41 04.2**	**-1.1**
SBLS				*e*S	**Sn**	**18 41 14.2**	**+0.7**
NUBE	**Las Nubes**	**0.53**	**10**	*i* P	**Pn**	**18 41 04.2**	**-1.3**
NUBE				*e*S	**Sn**	**18 41 13.8**	**+0.1**
NUBE	**Las Nubes**	**0.53**	**10**	*i* P	**Pn**	**18 41 04.2**	**-1.3**
NUBE	**Las Nubes**	**0.53**	**10**	P	**Pn**	**18 41 04.2**	**-1.3**
LOAL	**Lomas de Alarc**	**0.62**	**8**	P	**Pn**	**18 41 05.8**	**-0.9**
LOAL	**Lomas de Alarc**	**0.62**	**8**	S	**Sn**	**18 41 16.5**	**+0.7**
CEDA	**San Andres**	**0.63**	**48**	P	**Pb**	**18 41 05.7**	**-0.3**
CEDA	**San Andres**	**0.63**	**48**	S	**Sn**	**18 41 17.1**	**+1.3**
PMON	**Piamonte**	**0.64**	**58**	*e*P	**Pb**	**18 41 05.8**	**-0.4**
PMON				*e*S	**Sn**	**18 41 16.7**	**+0.6**
PMON	**Piamonte**	**0.64**	**58**	P	**Pb**	**18 41 05.8**	**-0.4**
PMON	**Piamonte**	**0.64**	**58**	S	**Sn**	**18 41 17.6**	**+1.4**
BOQS	**Boqueron**	**0.68**	**58**	*e*P	**Pb**	**18 41 06.5**	**-0.4**
BOQS				*e*S	**Sn**	**18 41 18.0**	**+0.6**
UNIC	**Universidad Ca**	**0.68**	**28**	S	**Sn**	**18 41 18.3**	**+1.1**
UNIC	**Universidad Ca**	**0.68**	**28**	P	**Pb**	**18 41 06.5**	**-0.4**
UEES	**Universidad Ev**	**0.70**	**61**	S	**Sn**	**18 41 19.4**	**+1.6**
UEES	**Universidad Ev**	**0.70**	**61**	P	**Pn**	**18 41 06.8**	**-1.0**
LOMA	**Loma Larga**	**0.73**	**69**	S	**Sn**	**18 41 20.1**	**+1.5**
LOMA	**Loma Larga**	**0.73**	**69**	P	**Pb**	**18 41 08.0**	**+0.2**
RBDL	**Robledal**	**0.76**	**14**	*i* P	**Pb**	**18 41 07.6**	**-0.6**
UDBS	**Universidad Do**	**0.78**	**64**	S	**Sn**	**18 41 20.9**	**+1.4**
PAVA	**Las Pavas**	**0.97**	**70**	P	**Pn**	**18 41 10.8**	**-0.6**
PAVA	**Las Pavas**	**0.97**	**70**	S	**Sn**	**18 41 25.0**	**+0.6**
TECO	**Alcaldia de Te**	**1.07**	**81**	P	**Pn**	**18 41 12.2**	**-0.6**
TECO	**Alcaldia de Te**	**1.07**	**81**	S	**Sn**	**18 41 26.3**	**-0.6**
FG16	**Ilotenango, Sa**	**1.09**	**325**	*e*P	**Pb**	**18 41 15.3**	**+1.5**
UESV	**Universidad de**	**1.09**	**76**	S	**Sn**	**18 41 27.4**	**+0.3**
UESV	**Universidad de**	**1.09**	**76**	P	**Pb**	**18 41 13.3**	**-0.4**
MTO3	**Montecristo**	**1.13**	**26**	*i* P	**Pn**	**18 41 12.7**	**-1.1**
MTO3	**Montecristo**	**1.13**	**26**	P	**Pn**	**18 41 12.6**	**-1.2**
MTO3	**Montecristo**	**1.13**	**26**	S	**Sb**	**18 41 29.4**	**+0.4**
LLGN	**La Laguna**	**1.19**	**49**	P	**Pn**	**18 41 13.3**	**-1.3**
LLGN	**La Laguna**	**1.19**	**49**	S	**Sn**	**18 41 31.3**	**+1.4**
ESQI	**Esquipulas**	**1.29**	**24**	P	**Pn**	**18 41 14.8**	**-1.0**
ESQI	**Esquipulas**	**1.29**	**24**	S	**Sn**	**18 41 32.4**	**+0.3**
PACA	**Pacayal**	**1.51**	**86**	S	**Sn**	**18 41 38.7**	**+1.0**
APG	**El Apazote**	**1.72**	**341**	*e*P	**Pn**	**18 41 19.9**	**-1.9**
STG8	**El Palmar, Qui**	**1.79**

PLCA				LR	LR	19 03 41.7		
	comp=Z,506nm,21.5s,baz=274,slow=30							
	comp=Z,2.6nm,1.1s							
PLCA	**Paso Flores**	**40.76**	**126**		**P**	**18 51 04.9**	**+0.8**	
GO02	**Mina Guanaco**	**41.04**	**102**		**P**	**18 51 06.6**	**-0.3**	
GO02				IAmb	IAmb	18 51 11.1		
	comp=Z,22nm,1.2s							
PB07	**IPOC Station P**	**41.32**	**97**	P	**P**	**18 51 08.6**	**-0.5**	
PB07				IAmb	IAmb	18 51 13.1		
	comp=Z,27nm,1.3s							
PB02	**IPOC Station P**	**41.39**	**96**	P	**P**	**18 51 09.8**	**+0.2**	
PB02				IAmb	IAmb	18 51 13.7		
	comp=Z,13nm,0.8s							
ZON	**Zonda**	**41.41**	**112**		**P**	**18 51 09.9**	**+0.4**	
ZON				IAmb	IAmb	18 51 14.2		
	comp=Z,26nm,1.3s							
RAR	**Rarotonga**	**41.60**	**264**	LR	LR	19 03 44.0		
	comp=Z,362nm,19.3s,baz=104,slow=29							
CFA	**Coronel Fontan**	**41.78**	**112**	LR	LR	19 04 37.3		
	comp=Z,363nm,19.4s,baz=34,slow=30							
PB01	**IPOC Station P**	**41.82**	**96**	P	**P**	**18 51 13.8**	**+0.7**	
PB01				IAmb	IAmb	18 51 17.3		
	comp=Z,11nm,0.8s							
PB09	**IPOC Station P**	**41.89**	**97**	P	**P**	**18 51 14.9**	**+1.2**	
PB11	**IPOC Station P**	**41.94**	**94**		**P**	**18 51 14.5**	**+0.3**	
PB11				IAmb	IAmb	18 51 17.9		
	comp=Z,14nm,0.9s							
PB11				IAMs_20	IAMs_20	19 03 30.9		
	comp=Z,654nm,20.0s							
PB08	**IPOC Station P**	**42.32**	**95**	IAmb	IAmb	18 51 21.6		
	comp=Z,16nm,1.3s							
LPAZ	**La Paz**	**44.25**	**90**	P	**P**	**18 51 36.0**	**+2.5**	
	comp=Z,9.0nm,0.9s,baz=257,slow=4.1,SNR=26							
LPAZ				LR	LR	19 05 43.4		
	comp=Z,370nm,20.2s,baz=254,slow=30							
	comp=Z,9.0nm,0.9s							
LPAZ	**La Paz**	**44.25**	**90**		**P**	**18 51 34.4**	**+1.0**	
JTS	**Las Juntas de**	**44.39**	**44**	LR	LR	19 05 15.9		
	comp=Z,113nm,20.2s,baz=194,slow=30							
CMIG	**Matias Romero**	**44.69**	**27**	LR	LR	19 06 15.4		
	comp=Z,129nm,20.1s,baz=196,slow=31							
LPIG	**La Paz**	**47.43**	**5**	LR	LR	19 06 18.2		
	comp=Z,82nm,21.1s,baz=228,slow=29							
ROSC	**El Rosal**	**48.40**	**60**	LR	LR	19 07 59.2		
	comp=Z,134nm,19.2s,baz=221,slow=31							
SIV	**San Ignacio**	**50.82**	**92**	LR	LR	19 11 01.0		
	comp=Z,241nm,21.0s,baz=288,slow=33							
CPUP	**Villa Florida**	**51.79**	**106**	P	**P**	**18 52 31.2**	**+0.2**	
	comp=Z,0.4nm,0.4s,baz=109,slow=3.4,SNR=3.0							
CPUP				LR	LR	19 10 42.7		
	comp=Z,62nm,19.0s,baz=119,slow=32							
	comp=Z,0.4nm,0.4s							
PTLB	**Pontes e Lacer**	**52.76**	**92**		**P**	**18 52 39.2**	**+0.9**	
PTLB				IAmb	IAmb	18 52 41.5		
	comp=Z,13nm,1.2s							
TXAR	**Lajitas Array**	**53.51**	**12**	P	**P**	**18 52 41.6**	**-2.0**	
	comp=Z,0.5nm,0.8s,baz=202,slow=6.5,SNR=5.3							
TXAR				LR	LR	19 09 58.9		
	comp=Z,61nm,19.5s,baz=192,slow=30							
	comp=Z,0.5nm,0.8s							
SAND	**Sanderson**	**54.43**	**13**		**P**	**18 52 50.8**	**+0.5**	
AQDB	**Aquidauana**	**54.51**	**99**		**P**	**18 52 51.9**	**+0.8**	
VHRN	**Van Horn**	**54.70**	**10**		**P**	**18 52 52.5**	**+0.2**	
MNTX	**Cornudas Mount**	**55.53**	**10**	P	**P**	**18 52 58.1**	**0.0**	
DUN6	**Lazy B Ranch**	**55.91**	**6**	P	**P**	**18 53 01.4**	**+0.4**	
121A	**Cookes Peak, D**	**56.03**	**7**		**P**	**18 53 02.3**	**+0.4**	
121A				IAmb	IAmb	18 53 12.0		
	comp=Z,9.6nm,1.1s							
RAO	**Raoul Island**	**56.35**	**250**	LR	LR	19 13 49.1		
	comp=Z,54nm,18.4s,baz=25,slow=32							
BORC	**Borrego Spring**	**56.39**	**358**	P	**P**	**18 53 04.3**	**+0.1**	
BORC				IAmb	IAmb	18 53 13.1		
	comp=Z,7.5nm,1.1s							
PFO	**Pinyon Flats O**	**56.73**	**358**	LR	LR	19 10 10.9		
	comp=Z,56nm,19.8s,baz=180,slow=28							
BELC	**Belle Mtn. Jos**	**57.11**	**359**	P	**P**	**18 53 09.8**	**+0.3**	
X16A	**Lo Mia Camp, P**	**57.60**	**3**	P	**P**	**18 53 13.4**	**+0.4**	
LENM	**Lemitar**	**57.73**	**8**	P	**P**	**18 53 14.4**	**+0.5**	
X18A	**Snowflake**	**57.80**	**5**	IAmb	IAmb	18 53 23.6		
	comp=Z,6.7nm,0.9s							
ANMO	**Albuquerque**	**58.57**	**8**	LR	LR	19 13 33.7		
	comp=Z,151nm,19.8s,baz=285,slow=31							
LRMC	**Laurel Mtn Rad**	**58.64**	**357**	IAmb	IAmb	18 53 28.9		
	comp=Z,6.0nm,1.0s							
WSHM	**Spangler Hills**	**58.75**	**357**	IAmb	IAmb	18 53 29.6		
	comp=Z,5.4nm,1.0s							
URZ	**Urewera**	**59.16**	**238**	LR	LR	19 12 35.6		
	comp=Z,91nm,18.5s,baz=94,slow=30							
U15A	**North Rim**	**59.56**	**2**	IAmb	IAmb	18 53 35.5		
	comp=Z,8.0nm,1.2s							
SHPR	**Sheep Range**	**59.60**	**360**	IAmb	IAmb	18 53 36.3		
	comp=Z,4.7nm,0.9s							
CWC	**Cottonwood Cre**	**59.61**	**357**	IAmb	IAmb	18 53 35.9		
	comp=Z,6.1nm,1.2s							
WCT	**Wildcat Mounta**	**59.91**	**358**	P	**P**	**18 53 30.1**	**+1.1**	
WCT				IAmb	IAmb	18 53 38.4		
	comp=Z,6.0nm,1.1s							
TPNV	**Topopah Spring**	**60.05**	**359**	IAmb	IAmb	18 53 41.5		
	comp=Z,5.3nm,1.1s							
PRN	**Pahroc Range**	**60.50**	**360**	IAmb	IAmb	18 53 46.1		
	comp=Z,9.1nm,1.2s							
CCUT	**Cedar City**	**60.65**	**1**	IAmb	IAmb	18 53 44.3		
	comp=Z,10nm,1.3s							
HMU	**Henry Mountain**	**61.14**	**4**	IAmb	IAmb	18 53 53.3		
	comp=Z,4.3nm,0.9s							
CMB	**Columbia Colle**	**61.35**	**355**	P	**P**	**18 53 39.3**	**+0.6**	
CMB				IAmb	IAmb	18 53 47.5		
	comp=Z,6.5nm,0.9s							
LHV	**Little Huntoon**	**61.44**	**357**	IAmb	IAmb	18 53 48.7		
	comp=Z,6.3nm,1.1s							
R11B	**Troy Canyon, C**	**61.44**	**359**	IAmb	IAmb	18 53 48.8		
	comp=Z,5.2nm,1.2s							
SDCO	**Great Sand Dun**	**61.45**	**8**	IAmb	IAmb	18 53 48.1		
	comp=Z,4.5nm,1.1s							
OK038	**West end E0370**	**61.45**	**15**	IAMs_20	IAMs_20	19 15 05.2		
	comp=Z,474nm,18.0s							
NVAR	**Mina Array Bea**	**61.61**	**357**	P	**P**	**18 53 40.2**	**-0.5**	
	comp=Z,2.9nm,0.8s,baz=188,slow=9.7,SNR=14							
NVAR				LR	LR	19 12 53.9		
	comp=Z,51nm,20.8s,baz=200,slow=29							
	comp=Z,2.9nm,0.8s							
NVAR	**Mina Array Bea**	**61.61**	**357**	P	**P**	**18 53 40.8**	**+0.1**	
PSUT	**Pine Spring**	**61.63**	**1**	IAmb	IAmb	18 53 58.1		
	comp=Z,5.4nm,1.1s							
SPR3	**Spring Creek 3**	**62.09**	**0**	P	**P**	**18 53 44.0**	**0.0**	
SJG	**San Juan**	**62.88**	**53**	LR	LR	19 18 07.9		
	comp=Z,68nm,18.5s,baz=153,slow=33							
BDFB	**Brasilia**	**62.89**	**96**	LR	LR	19 18 14.9		
	comp=Z,178nm,19.8s,baz=308,slow=33							
BDFB	**Brasilia**	**62.89**	**96**	P	**P**	**18 53 49.7**	**+0.1**	
BDFB				IAmb	IAmb	18 53 52.0		
	comp=Z,5.6nm,0.9s							
DUG	**Dugway, Tooele**	**63.30**	**2**	IAmb	IAmb	18 54 00.9		
	comp=Z,7.6nm,1.2s							
BSUT	**Blindstream Ca**	**63.73**	**3**	IAmb	IAmb	18 54 12.8		
	comp=Z,6.3nm,1.1s							
MGMO	**Mountain Grove**	**63.85**	**20**		**P**	**18 53 55.6**	**+0.2**	
MGMO				IAmb	IAmb	18 53 56.2		
	comp=Z,6.4nm,1.0s							
WVT	**Waverly**	**64.45**	**24**	P	**P**	**18 53 58.4**	**-1.0**	
WVT				IAmb	IAmb	18 54 01.1		
	comp=Z,6.4nm,0.9s							
N02D	**Trinity Center**	**64.48**	**353**	P	**P**	**18 53 59.7**	**+0.2**	
CPCT	**Cooper Cave**	**65.16**	**27**	P	**P**	**18 54 03.5**	**-0.5**	
CPCT				IAmb	IAmb	18 54 06.3		
	comp=Z,6.5nm,1.1s							
BELA	**Belgrano 2**	**65.19**	**167**	P	**P**	**18 54 04.7**	**+1.0**	
BELA				IAmb	IAmb	18 54 07.9		
	comp=Z,4.2nm,0.9s							
YBH	**Yreka Blue Hor**	**65.24**	**353**	LR	LR	19 15 34.3		
	comp=Z,8.8nm,18.6s,baz=276,slow=30							
T47A	**Sharon Grove**	**65.48**	**24**	P	**P**	**18 54 05.4**	**-0.6**	
WVOR	**Wild Horse Val**	**65.62**	**357**	IAmb	IAmb	18 54 16.0		
	comp=Z,6.3nm,1.0s							
TKL	**Tuckaleechee C**	**65.66**	**27**	LR	LR	19 19 22.9		
	comp=Z,62nm,20.6s,baz=202,slow=33							
VNDA	**Vanda**	**65.89**	**194**	LR	LR	19 16 24.9		
	comp=Z,115nm,20.8s,baz=102,slow=30							
PDAR	**Pinedale Array**	**66.02**	**4**	P	**P**	**18 54 08.8**	**-0.9**	
	comp=Z,0.5nm,0.7s,baz=163,slow=5.6,SNR=5.9							
PDAR				LR	LR	19 17 21.5		
	comp=Z,46nm,20.2s,baz=231,slow=31							
	comp=Z,0.5nm,0.7s							
PDAR	**Pinedale Array**	**66.02**	**4**	P	**P**	**18 54 08.4**	**-1.3**	
Q44A	**Meyer Farm, Va**	**66.50**	**22**	P	**P**	**18 54 11.9**	**-0.7**	
TZTN	**Tazewell**	**66.50**	**27**	P	**P**	**18 54 11.7**	**-1.0**	
J05D	**Fort Rock, OR**	**66.64**	**355**	P	**P**	**18 54 14.4**	**+0.8**	
HLID	**Hailey**	**66.64**	**0**	P	**P**	**18 54 13.9**	**+0.3**	
HLID				IAmb	IAmb	18 54 22.4		
	comp=Z,8.2nm,1.2s							
QSPA	**South Pole Qui**	**66.74**	**180**	P	**P**	**18 54 18.1**	**+4.1**	
	comp=Z,3.8nm,0.9s,baz=112,slow=2.0,SNR=11							
QSPA				LR	LR	19 19 26.0		
	comp=Z,75nm,18.5s,baz=97,slow=32							
	comp=Z,3.8nm,0.9s							
QSPA	**South Pole Qui**	**66.74**	**180**	P	**P**	**18 54 17.3**	**+3.3**	
MDP	**Montagnes des**	**66.83**	**73**	LR	LR	19 20 25.1		
	comp=Z,202nm,18.9s,baz=246,slow=33							
W57A	**Gilead**	**66.91**	**31**	P	**P**	**18 54 14.5**	**-0.7**	
I07A	**Izee**	**67.31**	**356**	IAmb	IAmb	18 54 26.1		
	comp=Z,6.3nm,1.1s							
R50A	**Paris**	**67.68**	**26**	P	**P**	**18 54 19.5**	**-0.6**	
R50A				IAmb	IAmb	18 54 20.4		
	comp=Z,5.7nm,0.9s							
MCMT	**McKenzie Canyo**	**67.93**	**1**	P	**P**	**18 54 21.0**	**-0.9**	
G08A	**Pilot Rock**	**68.48**	**357**	IAmb	IAmb	18 54 33.5		
	comp=Z,7.7nm,1.1s							
NEW	**Newport**	**71.38**	**358**	LR	LR	19 20 05.8		
	comp=Z,130nm,20.1s,baz=205,slow=31							
DZM	**Mont Dzumac**	**71.78**	**253**	eLR	LR	19 16 46.7		
	comp=Z,367nm,26.4s							
VNA3	**Neumayer Olymp**	**72.74**	**161**	⇑P	**P**	**18 54 51.2**	**+0.4**	
	comp=Z,15nm,0.8s							
VNA1	**Neumayer--Stat**	**73.40**	**161**	⇑P	**P**	**18 54 55.7**	**+1.1**	
	comp=Z,6.1nm,0.8s							
VNA2	**Neumayer--Watz**	**73.55**	**161**	⇑P	**P**	**18 54 56.7**	**+1.2**	
	comp=Z,7.5nm,0.7s,baz=293,slow=4.6							
SNAA	**Sanae**	**74.55**	**162**	⇑P	**P**	**18 55 02.3**	**+0.9**	
	comp=Z,90nm,0.7s							
SNAA	**Sanae**	**74.55**	**162**	P	**P**	**18 55 02.3**	**+0.9**	
	comp=Z,3.3nm,0.9s,baz=244,slow=6.3,SNR=18							
SNAA				LR	LR	19 23 10.3		
	comp=Z,31nm,19.5s,baz=193,slow=32							
	comp=Z,3.3nm,0.9s							
SNAA	**Sanae**	**74.55**	**162**	P	**P**	**18 55 02.0**	**+0.6**	
SNAA				IAmb	IAmb	18 55 08.4		
	comp=Z,6.5nm,0.9s							
ULM	**Lac du Bonnet**	**75.22**	**12**	LR	LR	19 24 45.8		
	comp=Z,80nm,18.3s,baz=196,slow=33							
SADO	**Sadowa**	**75.24**	**25**	LR	LR	19 26 36.6		
	comp=Z,84nm,19.4s,baz=192,slow=35							
TROLL	**Troll, Antarti**	**75.83**	**163**	⇑P	**P**	**18 55 10.4**	**+1.5**	
	comp=Z,223nm,0.7s							
HNR	**Honiara**	**82.06**	**263**	LR	LR	19 24 15.7		
	comp=Z,121nm,19.3s,baz=180,slow=30							
YKA	**Yellowknife Ar**	**85.61**	**0**	P	**P**	**18 55 59.8**	**-1.1**	
	comp=Z,1.4nm,0.9s,baz=189,slow=4.9,SNR=8.1							
	comp=Z,1.4nm,0.9s							
YKA	**Yellowknife Ar**	**85.61**	**0**	P	**P**	**18 56 00.8**	**-0.1**	
YKAW3	**Yellowknife Wh**	**85.68**	**0**	P	**P**	**18 56 02.7**	**+1.5**	
H11S2	**WAKE ISLAND Hy**	**87.23**	**291**	T	T	20 32 23.4		
	baz=116,slow=75,SNR=359							
H11S1	**WAKE ISLAND Hy**	**87.25**	**291**	T	T	20 32 32.4		
	baz=116,slow=75,SNR=202							
H11S3	**WAKE ISLAND Hy**	**87.25**	**291**	T	T	20 32 19.7		
	baz=116,slow=75,SNR=178							
H11N3	**WAKE ISLAND Hy**	**87.59**	**293**	T	T	20 32 53.6		
	baz=117,slow=75,SNR=25							
H11N1	**WAKE ISLAND Hy**	**87.60**	**293**	T	T	20 32 52.9		
	baz=117,slow=75,SNR=12							
H11N2	**WAKE ISLAND Hy**	**87.61**	**293**	T	T	20 32 48.2		
	baz=117,slow=75,SNR=64							
L26K	**Log Cabin Wild**	**89.08**	**347**	P	**P**	**18 56 18.0**	**+0.4**	
MAW	**Mawson**	**89.24**	**179**	LR	LR	19 32 10.0		
	comp=Z,107nm,19.1s,baz=161,slow=33							
ILAR	**Eielson Array**	**91.36**	**347**	P	**P**	**18 56 27.1**	**-1.1**	
	comp=Z,0.2nm,0.8s,baz=182,slow=4.9,SNR=4.3							
	comp=Z,0.2nm,0.8s							
PMG	**Port Moresby**	**93.66**	**258**	LR	LR	19 31 22.3		
	comp=Z,84nm,21.5s,baz=143,slow=31							
FRB	**Frobisher Bay**	**94.07**	**19**	LR	LR	19 35 09.3		
	comp=Z,69nm,20.1s,baz=234,slow=33							
SHEM	**Shemya Is, Ala**	**97.66**	**324**	LR	LR	19 32 29.4		
	comp=Z,69nm,19.0s,baz=138,slow=30							
RES	**Resolute Bay**	**98.70**	**5**	LR	LR	19 40 14.9		
	comp=Z,63nm,18.4s,baz=24,slow=35							
SONM	**Songino Array**	**139.31**	**317**	PKP	**PKPdf**	**19 02 48.7**	**-1.6**	
	comp=Z,1.3nm,1.0s,baz=7.1,slow=4.6,SNR=4.4							
ZAA0	**Zalesovo Array**	**146.14**	**339**		**PKPdf**	**19 03 01.6**	**-0.3**	
ZALV	**Zalesovo Beam**	**146.14**	**339**	PKPbc	**PKPdf**	**19 03 02.1**	**+0.2**	
	comp=Z,4.9nm,0.9s,baz=25,slow=3.9,SNR=13							
ZALV	**Zalesovo Beam**	**146.14**	**339**		**PKPdf**	**19 03 01.3**	**-0.6**	
CMAR	**Chiang Mai Arr**	**148.21**	**267**	PKPbc	**PKPbc**	**19 03 10.5**	**+0.7**	
	comp=Z,3.5nm,0.9s,baz=100,slow=0.7,SNR=18							
CMAR	**Chiang Mai Arr**	**148.21**	**267**		**PKPdf**	**19 03 05.1**	**-1.4**	
CMAR				PKPbc	**pPKPdf**	**19 03 09.7**	**+0.8**	
CHTO	**Chiang Mai**	**148.30**	**268**		**PKPdf**	**19 03 08.8**	**+2.2**	
BRTR	**Keskin Array B**	**148.73**	**51**	PKP	**PKPdf**	**19 03 07.5**	**+0.6**	
	comp=Z,3.4nm,0.8s,baz=225,slow=2.8,SNR=14							
BRTR				PKPbc	**PKPbc**	**19 03 11.3**	**+0.6**	
	comp=Z,3.4nm,0.8s,baz=233,slow=2.6,SNR=11							
BRTR	**Keskin Array B**	**148.73**	**51**		**PKPbc**	**19 03 09.6**	**-1.1**	
BVAR	**Borovoye Array**	**150.18**	**354**	PKP	**PKPdf**	**19 03 09.1**	**+0.5**	
	comp=Z,4.7nm,0.8s,baz=85,slow=1.6,SNR=4.5							
BVAR				PKPbc	**PKPbc**	**19 03 13.4**	**-0.2**	
	comp=Z,4.4nm,0.7s,baz=320,slow=2.3,SNR=12							
KURK	**Kurchatov**	**150.84**	**342**		**PKPbc**	**19 03 14.8**	**-0.5**	
KURBB	**Kurchatov Arra**	**150.94**	**342**	PKP	**PKPdf**	**19 03 10.2**	**+0.4**	
	comp=Z,3.7nm,0.8s,baz=21,slow=1.8,SNR=6.5							
KURBB				PKPbc	**PKPbc**	**19 03 14.8**	**-0.7**	
	comp=Z,5.7nm,0.9s,baz=20,slow=1.8,SNR=33							
KBZ	**Nhabaz**	**152.62**	**37**	PKPbc	**PKiKP**	**19 03 20.2**	**+0.5**	
	comp=Z,4.6nm,0.9s,baz=269,slow=1.8,SNR=6.6							
MKAR	**Makanchi Array**	**152.95**	**334**	PKP	**PKPdf**	**19 03 12.8**	**-0.2**	
	comp=Z,0.7nm,0.9s,baz=48,slow=2.0,SNR=4.3							
MKAR				PKPbc	**PKPbc**	**19 03 19.2**	**-1.0**	
	comp=Z,2.4nm,0.8s,baz=36,slow=1.7,SNR=14							
MKAR	**Makanchi Array**	**152.95**	**334**		**PKPdf**	**19 03 11.4**	**-1.7**	
MKAR					**PKPbc**	**19 03 19.0**	**-1.3**	
MAKZ	**Makanchi**	**153.06**	**334**	PKPdf	**PKPdf**	**19 03 12.1**	**-1.1**	
MAKZ					**sPKPdf**	**19 03 18.2**	**+1.9**	
AB31	**Akbulak array**	**153.87**	**8**	PKPdf	**PKPdf**	**19 03 12.4**	**-1.9**	
AB31					**PKPbc**	**19 03 20.5**	**-1.6**	

WEL 22 19:11:10.2±1.0,36°S±10°×17°9W±1°2,h12km,M4.0/12, ML3.9/17,MLv4.0/12,Error ellipse: s-maj=18.4km s-min=7.7km az=125.9,confirmed,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.04**	**227**	P	P	Pn	19 11 57.7	-0.5
MXZ				S	S	Sn	19 12 34.6	0.0
WMGZ	**Waiomatatini S**	**3.16**	**222**	P	P	Pn	19 12 00.1	+0.4
WMGZ				S	S	Sn	19 12 39.9	+2.6
PKGZ	**Pakihiroa**	**3.38**	**225**	P	P	Pn	19 12 03.6	+0.7
PKGZ				S	S	Sn	19 12 43.3	+0.4
PUZ	**Puketiti**	**3.43**	**221**	P	P	Pn	19 12 03.3	-0.2
PUZ				S	S	Sn	19 12 45.0	+1.0
HAZ	**Te Kaha**	**3.49**	**229**	P	P	Pn	19 12 04.6	+0.3
HAZ				S	S	Sn	19 12 46.7	+1.2
TWGZ	**Tauwhareparae**	**3.66**	**222**	P	P	Pn	19 12 07.1	+0.5
TWGZ				S	S	Sn	19 12 49.5	-0.2
RUGZ	**Raukumara Rang**	**3.69**	**227**	P	P	Pn	19 12 07.4	+0.4
RUGZ				S	S	Sn	19 12 53.0	+2.5
CNGZ	**Carnagh Statio**	**3.77**	**217**	P	P	Pn	19 12 07.8	-0.3
CNGZ				S	S	Sn	19 12 56.3	+4.0
TKGZ	**Te Karaka**	**3.92**	**221**	P	P	Pn	19 12 09.5	-0.7
TKGZ				S	S	Sn	19 12 56.8	+0.7
MWZ	**Matawai**	**4.02**	**224**	P	P	Pn	19 12 12.3	+0.7
MWZ				S	S	Sn	19 12 59.1	+0.4
RIGZ	**Rimuhau**	**4.16**	**219**	P	P	Pn	19 12 13.4	-0.2
RIGZ				S	S	Sn	19 13 03.3	+1.2
RAGZ	**Rawiri**	**4.20**	**224**	P	P	Pn	19 12 14.0	-0.1
RAGZ				S	S	Sn	19 13 02.1	-0.9
URZ	**Urewera**	**4.22**	**228**	P	P	Pn	19 12 13.7	-0.6
OPRZ	**Ohinepanea**	**4.33**	**236**	P	P	Pn	19 12 16.2	+0.3
SNGZ	**Shannon Statio**	**4.44**	**222**	P	P	Pn	19 12 17.8	+0.4
MHGZ	**Mahia Peninsul**	**4.44**	**214**	P	P	Pn	19 12 17.1	-0.3
KNZ	**Kokohu**	**4.45**	**217**	P	P	Pn	19 12 16.3	-1.1
RTZ	**Ruatahuna**	**4.53**	**226**	P	P	Pn	19 12 18.4	-0.2
KUZ	**Kuaotunu**	**4.53**	**253**	P	P	Pn	19 12 18.1	-0.5
RAHZ	**Arahi**	**4.67**	**222**	P	P	Pn	19 12 20.9	+0.3
OUZ	**Omahuta**	**6.14**	**271**	P	P	Pn	19 12 40.5	-0.2

*IDC **22** 19:18:22.6±0.7,23°.18S×114°.89W,h0km,mb3.8/8, mbtmp3.8/8,MS3.7/19,Error ellipse: s-maj=33.9km s-min=21.3km az=72.0*
*NEIC **22** 19:18:25.2±1.1,23°.4S±0°.1×114°.8W±0°.2,h10km±1km, mb4.5/37,Error ellipse: s-maj=28.8km s-min=22.8km az=257.0*
*GCMT **22** 19:18:28.2±0.4,23°.41S±0°.02×114°.85W±0°.02,h17kmb±2km, MW4.8/77,Moment Tensor Solution. s14,c17; s77,c93; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.27±.10; Mθθ=-0.60±.10; Mφφ=0.86±.10; Mrθ=-0.36±.25; Mθφ=1.53±.08; Mφr=-0.22±.26; Best double couple: M=1.74500×10^16 NP1:φs167.00000°,δ77.00000°,λ179.00000°. NP2: φs257.00000°,δ89.00000°,λ13.00000°. Principal axes: T 1.8990, Plg10.0000°, Azm123.0000°; N -0.3060, Plg77.0000°, Azm262.0000°; P -1.5920, Plg8.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 19:18:24.2±0.6,23°.4S±0°.1×114°.8W±0°.1,h10km,n82, σ1s23/55,mb4.4/21,MS3.8/18,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.20**	**128**		LR	LR	19 21 51.5	
	comp=Z,2μm,18.0s,baz=302,slow=33							
TAOE	**Nuku Hiva Isla**	**28.25**	**297**	eLR	LR	LR	19 31 21.4	
	564nm,24.5s							
TBI	**Tubuai**	**31.80**	**263**	eLR	LR	LR	19 32 46.7	
	836nm,26.2s							
H03N2	**Juan Fernandez**	**32.95**	**116**	T	T	T	20 00 02.1	
	baz=282,slow=75,SNR=36							
H03N3	**Juan Fernandez**	**32.96**	**116**	T	T	T	19 59 56.1	
	baz=282,slow=75,SNR=29							
H03N1	**Juan Fernandez**	**32.97**	**116**	T	T	T	20 00 03.4	
	baz=282,slow=75,SNR=35							
PPT2	**Papeete2**	**33.05**	**273**	eS	S	S	19 29 53.4	-26
	44nm,24.5s							
PPT2				eSS	**SnSn**		**19 32 17.7**	**+0.3**
	301nm,25.0s							
PPT2				eLR	LR	LR	19 33 10.7	
	240nm,25.8s							
PPT2				eLR	LR	LR	19 33 17.4	
	156nm,42.2s							
PPT	**Papeete**	**33.05**	**273**	LR	LR	LR	19 34 43.2	
	comp=Z,134nm,20.2s,baz=85,slow=30							
ATAH	**Atahualpa**	**38.47**	**71**	LR	LR	LR	19 37 24.2	
	comp=Z,168nm,18.5s,baz=344,slow=30							
LCO	**Las Campanas**	**39.78**	**108**	P	**P**		**19 25 56.7**	**-1.1**
LCO				IAmb	IAmb		19 26 06.1	
	comp=Z,8.0nm,1.1s							
AC06	**Mina Casimiro**	**40.18**	**105**	P	**P**		**19 26 00.6**	**-0.3**
AC06				IAmb	IAmb		19 26 09.7	
	comp=Z,6.4nm,0.8s							
PLCA	**Paso Flores**	**40.83**	**126**	LR	LR		19 38 43.2	
	comp=Z,236nm,21.4s,baz=268,slow=30							
PB07	**IPOC Station P**	**41.37**	**97**	P	**P**		**19 26 10.6**	**-0.3**
PB07				IAmb	IAmb		19 26 23.7	
	comp=Z,12nm,1.1s							
PB03	**IPOC Station P**	**41.43**	**97**	P	**P**		**19 26 11.1**	**-0.3**
PB03				IAmb	IAmb		19 26 14.6	
	comp=Z,13nm,1.4s							
ZON	**Zonda**	**41.47**	**112**	P	**P**		**19 26 10.9**	**-0.6**
RAR	**Rarotonga**	**41.57**	**264**	LR	LR		19 38 13.0	
	comp=Z,136nm,21.0s,baz=78,slow=29							
PB09	**IPOC Station P**	**41.94**	**97**	P	**P**		**19 26 15.4**	**-0.2**
PB09				IAmb	IAmb		19 26 19.5	
	comp=Z,13nm,1.1s							
PB11	**IPOC Station P**	**41.99**	**94**	P	**P**		**19 26 15.3**	**-0.8**
PB11				IAmb	IAmb		19 26 17.5	
	comp=Z,13nm,1.1s							
PB16	**IPOC Station P**	**42.47**	**92**	P	**P**		**19 26 20.2**	**-0.2**
LPAZ

baz=118,slow=75,SNR=20
H11N1 WAKE ISLAND Hy 87.54 293 T T 21 07 46.0
baz=118,slow=75,SNR=13
H11N2 WAKE ISLAND Hy 87.54 293 T T 21 07 50.9
baz=118,slow=75,SNR=46
MAW Mawson 89.31 179 LR LR 20 09 04.4
comp=Z,46nm,18.1s,baz=290,slow=34
ILAR Eielson Array 91.28 347 P **P** **19 31 30.0 +0.6**
comp=Z,0.7nm,1.1s,baz=191,slow=4.2,SNR=4.6
comp=Z,0.7nm,1.1s
SHEM Shemya Is, Ala 97.59 325 LR LR 20 08 50.8
comp=Z,48nm,18.7s,baz=86,slow=31
SONM Songino Array 139.23 317 PKP **PKPdf** **19 37 52.3 +0.7**
comp=Z,0.6nm,0.9s,baz=114,slow=3.7,SNR=3.6
ZALV Zalesovo Beam 146.06 339 PKPbc **PKPdf** **19 38 00.7 -2.6**
comp=Z,1.2nm,0.7s,baz=28,slow=2.7,SNR=5.0
CMAR Chiang Mai Arr 148.17 268 PKPbc **PKPbc** **19 38 11.6 +0.5**
comp=Z,2.8nm,1.0s,baz=13,slow=0.5,SNR=4.9
CMAR Chiang Mai Arr 148.17 268 **PKPdf** **19 38 04.4 -3.4**
BRTR Keskin Array B 148.72 51 PKPbc **PKPbc** **19 38 11.7 -0.4**
comp=Z,2.0nm,0.8s,baz=164,slow=1.1,SNR=7.6
BVAR Borovoye Array 150.11 354 PKPbc **PKPbc** **19 38 14.2 -0.8**
comp=Z,0.7nm,0.6s,baz=295,slow=1.9,SNR=6.4
KURK Kurchatov 150.76 342 **PKPdf** **19 38 11.2 +0.2**
KURBB Kurchatov Arra 150.87 342 PKPbc **PKPbc** **19 38 15.7 -1.1**
comp=Z,2.1nm,0.5s,baz=24,slow=1.9,SNR=13
KBZ Khabaz 152.59 37 PKPbc **PKPbc** **19 38 18.8 -2.2**
comp=Z,1.7nm,0.8s,baz=287,slow=6.1,SNR=3.9
MKAR Makanchi Array 152.87 334 PKPbc **PKPbc** **19 38 19.4 -2.2**
comp=Z,1.0nm,0.9s,baz=14,slow=5.6,SNR=4.6
MKAR Makanchi Array 152.87 334 **PKPdf** **19 38 14.0 -0.4**

*JMA **22** 19:40:51.1±0.2,25°N×2°×122°.4E±0°.7, h0km, NW OFF ISHIGAKIJIMA IS*
*TAP **22** 19:40:51.6, 24°.90N×122°.45E, h22km, ML3.0, D*
ISC 22 19:40:51.7±1.2,**24°.87N**±0°.04×**122°.44E**±0°.03,**h11**km±10km, **n37**,σ0**s34**/59,**3D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**289**	⇓	*e*P		**Pb**	**19 41 00.5**	**-0.8**
TWB1						S	**Sb**	**19 41 07.0**	**-0.8**
SXI1	**Grass Mountain**	**0.56**	**294**	⇓	*i*P		**Pb**	**19 41 03.1**	**-0.4**
TIPB	**Shuangxi**	**0.56**	**281**		P		**Pb**	**19 41 03.3**	**-0.3**
TIPB						S	**Sb**	**19 41 11.6**	**-0.1**
TWC	**Suao**	**0.59**	**245**	⇓	P		**Pg**	**19 41 03.4**	**+0.2**
TWC						S	**Sb**	**19 41 11.8**	**-0.7**
ESAO	**Su ao**	**0.61**	**242**		P		**Pb**	**19 41 04.2**	**-0.2**
ESAO						S	**Sg**	**19 41 12.0**	**+0.4**
JYNG	**Yonagunijimaku**	**0.62**	**132**		P		**Pg**	**19 41 03.5**	**-0.2**
JYNG						*e*S	**Sg**	**19 41 12.4**	**+0.5**
NWF	**Wu-fen Shan**	**0.63**	**289**		P		**Pb**	**19 41 04.7**	**-0.1**
NWF						S	**Sb**	**19 41 14.4**	**-0.2**
WFSB	**Wu-fen Shan**	**0.63**	**289**		P		**Pb**	**19 41 04.8**	**+0.1**
WFSB						S	**Sb**	**19 41 13.8**	**+0.2**
YOJ	**Yonaguni jima**	**0.66**	**127**		P		**Pg**	**19 41 04.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.66**	**127**		P		**Pg**	**19 41 04.4**	**-0.1**
TNOU	**National Taiwa**	**0.67**	**295**		*e*P		**Pb**	**19 41 05.1**	**-0.2**
NDS	**Dongshan**	**0.69**	**251**		P		**Pb**	**19 41 05.8**	**-0.1**
NDS						*e*S	**Sb**	**19 41 15.2**	**-0.2**
TWE	**Neicheng**	**0.71**	**259**		*e*P		**Pb**	**19 41 05.8**	**-0.4**
TWE						*e*S	**Sb**	**19 41 15.4**	**-0.6**
EWUT	**Wuta**	**0.73**	**235**		*e*P		**Pg**	**19 41 06.0**	**+0.1**
EWUT						*e*S	**Sg**	**19 41 15.7**	**+0.3**
ENA	**Nanau**	**0.77**	**236**		*e*P		**Pb**	**19 41 07.0**	**-0.1**
ENA						*e*S	**Sg**	**19 41 16.6**	**0.0**
FUSB	**Fushanzhiwuyua**	**0.78**	**262**		*e*P		**Pg**	**19 41 06.7**	**-0.1**
TWA	**Mucha**	**0.78**	**279**		*e*P		**Pg**	**19 41 06.6**	**-0.2**
ENTT	**Nioudou**	**0.82**	**254**		*e*P		**Pb**	**19 41 08.0**	**0.0**
ENTT						*e*S	**Sb**	**19 41 19.3**	**+0.1**
EAHA	**Aohua**	**0.83**	**230**		*e*P		**Pb**	**19 41 08.0**	**-0.1**
EAHA						*e*S	**Sg**	**19 41 18.8**	**+0.3**
YM08	**YM08**	**0.83**	**293**		*e*P		**Pb**	**19 41 08.2**	**0.0**
NHDH	**Xindian Distri**	**0.83**	**277**		*e*P		**Pb**	**19 41 08.0**	**-0.2**
NHDH						*e*S	**Sb**	**19 41 20.0**	**+0.5**
YM01	**YM01**	**0.83**	**290**		*e*P		**Pg**	**19 41 07.7**	**-0.1**
NWLT	**Wulai**	**0.85**	**264**		*e*P		**Pb**	**19 41 08.4**	**-0.2**
NWLT						*e*S	**Sb**	**19 41 20.2**	**+0.1**
ZUZH	**Zhuzihu**	**0.86**	**290**		*e*P		**Pb**	**19 41 08.9**	**+0.2**
TWY	**Chenhua**	**0.86**	**298**		*e*P		**Pb**	**19 41 08.8**	**+0.1**
TWY						*e*S	**Sb**	**19 41 20.9**	**+0.6**
LATG	**Datong**	**0.89**	**249**		P		**Pb**	**19 41 09.1**	**-0.2**
LATG						*e*S	**Sb**	**19 41 21.1**	**-0.1**
NTST	**Danshui**	**0.94**	**289**		P		**Pn**	**19 41 11.1**	**+0.1**
YHNB	**Yeheng**	**0.98**	**259**		*e*P		**Pg**	**19 41 10.4**	**-0.3**
NSK	**Sanguang**	**1.00**	**259**		*e*P		**Pg**	**19 41 10.7**	**-0.2**
ETL	**Fush Village**	**1.02**	**227**		*e*P		**Pg**	**19 41 11.0**	**-0.3**
ETL						*e*S	**Sb**	**19 41 25.2**	**+0.3**
NACB	**Ninganchiao**	**1.03**	**228**		*e*P		**Pg**	**19 41 10.9**	**-0.6**
NACB						*e*S	**Sg**	**19 41 24.9**	**0.0**
NNSB	**Datong**	**1.05**	**246**		*e*P		**Pg**	**19 41 11.8**	**-0.2**
NNSB						*e*S	**Sg**	**19 41 25.7**	**0.0**
NNS	**Nan Shan**	**1.06**	**247**		*e*P		**Pb**	**19 41 11.9**	**-0.2**
NNS						*e*S	**Sb**	**19 41 26.6**	**+0.6**
ETLH	**Xiulin Townshi**	**1.09**	**233**		*e*P		**Pb**	**19 41 12.5**	**-0.2**
ETLH						*e*S	**Sb**	**19 41 26.5**	**-0.4**
LXIB	**Xiulin Townshi**	**1.26**	**228**		*e*S		**Sn**	**19 41 32.8**	**+0.5**
WHF	**Hehuan Shan**	**1.29**	**236**		*e*S		**Sb**	**19 41 32.8**	**-0.1**
IRIF	**Iriomote-Funau**	**1.29**	**114**		*e*P		**Pg**	**19 41 16.0**	**-0.4**

*IDC **22** 20:07:49.8±1.0, 18°.01N×95°.54W, h0km, mb3.9/8, mbtmp3.8/9, ML3.1/2, MS3.2/4, Error ellipse: s-maj=32.4km s-min=10.0km az=59.0*
*NEIC **22** 20:07:54.1±2.7, 17°.96N±0°.03×95°.41W±0°.03, h31km±2km, mb4.0/22, Md4.3/109(MEX), Error ellipse: s-maj=4.8km s-min=4.6km az=156.0*
*MEX **22** 20:07:55.9±1.9, 17°.93N×95°.45W, h11km±16km, MD4.3*
ISC 22 20:07:53.4±1.0,**17°.98N**±0°.03×**95°.42W**±0°.02,**h26**km±8km, **n141**,σ1**s66**/223,**mb4.0**/9,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEUV	**Arroyo Zacate**	**0.44**	**234**				**Pb**	**20 08 02.9**	**+0.2**
NEUV							**Sb**	**20 08 09.3**	**+0.2**
NEUV	**Arroyo Zacate**	**0.44**	**234**	*i*	P		**Pb**	**20 08 02.9**	**+0.2**
NEUV						*e*S	**Sb**	**20 08 09.3**	**+0.2**
PMUV	**Sontecomapan**	**0.64**	**27**				**Pn**	**20 08 07.0**	**+0.2**
PMUV							**Sn**	**20 08 16.6**	**+0.5**
PMUV	**Sontecomapan**	**0.64**	**27**	*e*	P		**Pn**	**20 08 07.0**	**+0.2**
PMUV						*e*S	**Sn**	**20 08 16.6**	**+0.5**
TUIG	**Tuzandepetl**	**0.95**	**86**				**Pb**	**20 08 12.5**	**+1.2**
TUIG							**Sn**	**20 08 25.5**	**+1.7**
TUIG	**Tuzandepetl**	**0.95**	**86**	*e*	P		**Pb**	**20 08 12.5**	**+1.2**
TUIG						*e*S	**Sn**	**20 08 25.5**	**+1.7**
CMIG	**Matias Romero**	**1.02**	**150**		Pg		**Pb**	**20 08 12.3**	**-0.1**
	39nm,0.3s,baz=332,slow=12,SNR=105								
CMIG					Lg		Lg	20 08 24.9	
	172nm,0.3s,baz=332,slow=12,SNR=17								
CMIG	**Matias Romero**	**1.02**	**150**				**Pn**	**20 08 12.1**	**+0.2**
CMIG							**Sb**	**20 08 21.8**	**-3.6**
UXUV	**UXUV**	**1.38**	**118**				**Pn**	**20 08 17.4**	**+0.5**
UXUV							**Sn**	**20 08 33.7**	**-0.7**
UXUV	**UXUV**	**1.38**	**118**	*e*	P		**Pn**	**20 08 17.4**	**+0.5**
UXUV						*e*S	**Sn**	**20 08 33.7**	**-0.7**
OXLC	**Oaxaca**	**1.52**	**234**				**Pn**	**20 08 19.3**	**+0.3**
OXLC							**Sn**	**20 08 37.1**	**-0.9**
OXLC	**Oaxaca**	**1.52**	**234**	*e*	P		**Pn**	**20 08 19.3**	**+0.3**
OXLC						*e*S	**Sn**	**20 08 37.1**	**-0.9**
OXBJ	**Oaxaca**	**1.53**	**234**				**Pb**	**20 08 22.1**	**+0.9**
OXBJ							**Sb**	**20 08 40.6**	**+0.2**
OXBJ	**Oaxaca**	**1.53**	**234**	*e*	P		**Pb**	**20 08 22.1**	**+0.9**
OXBJ						*e*S	**Sb**	**20 08 40.6**	**+0.2**
OXIG	**Oaxaca**	**1.54**	**234**				**Pn**	**20 08 19.7**	**+0.4**
OXIG							**Sn**	**20 08 38.8**	**+0.3**
VHO	**Vista Hermosa**	**1.54**	**234**	*e*	P		**Pn**	**20 08 19.7**	**+0.4**
VHO						*e*S	**Sn**	**20 08 38.8**	**+0.3**
TOIG	**Toxpalan**	**1.56**	**275**				**Pn**	**20 08 19.9**	**+0.3**
TOIG							**Sn**	**20 08 37.8**	**-1.3**
TOIG	**Toxpalan**	**1.56**	**275**	*e*	P		**Pn**	**20 08 19.9**	**+0.3**
TOIG						*e*S	**Sn**	**20 08 37.8**	**-1.3**
TPIG	**Tehuac#an**	**1.89**	**284**				**Pn**	**20 08 24.9**	**+0.8**
TPIG							**Sn**	**20 08 46.1**	**-1.1**
TPIG	**Tehuac#an**	**1.89**	**284**	*e*	P		**Pn**	**20 08 24.9**	**+0.8**
TPIG						*e*S	**Sn**	**20 08 46.1**	**-1.1**
JAUV	**Jalcomulco**	**1.90**	**317**				**Pn**	**20 08 23.3**	**-0.9**
JAUV							**Sn**	**20 08 44.9**	**-2.4**
JAUV	**Jalcomulco**	**1.90**	**317**	*e*	P		**Pn**	**20 08 23.3**	**-0.9**
JAUV						*e*S	**Sn**	**20 08 44.9**	**-2.4**
LVIG	**Laguna Verde**	**1.98**	**332**				**Pn**	**20 08 23.9**	**-1.2**
LVIG							**Sn**	**20 08 44.6**	**-4.4**
LVIG	**Laguna Verde**	**1.98**	**332**	*e*	P		**Pn**	**20 08 23.9**	**-1.2**
LVIG						*e*S	**Sn**	**20 08 44.6**	**-4.4**
HLIG	**Huajuapan de L**	**2.27**	**267**				**Pn**	**20 08 29.5**	**+0.1**
HLIG							**Sn**	**20 08 55.8**	**-0.8**
HLIG	**Huajuapan de L**	**2.27**	**267**	*e*	P		**Pn**	**20 08 29.5**	**+0.1**
HLIG						*e*S	**Sn**	**20 08 55.8**	**-0.8**
HUIG	**Huatulco**	**2.29**	**197**				**Pn**	**20 08 29.5**	**+0.1**
HUIG							**Sn**	**20 08 55.2**	**-1.6**
HUIG	**Huatulco**	**2.29**	**197**	*e*	P		**Pn**	**20 08 29.5**	**+0.1**
HUIG						*e*S	**Sn**	**20 08 55.2**	**-1.6**
YOIG	**Yosondua**	**2.31**	**242**				**Pn**	**20 08 31.0**	**+1.0**
YOIG							**Sn**	**20 08 58.6**	**+0.9**
YOIG	**Yosondua**	**2.31**	**242**	*e*	P		**Pn**	**20 08 31.0**	**+1.0**
YOIG						*e*S	**Sn**	**20 08 58.6**	**+0.9**
TXIG	**Tlaxiaco**	**2.35**	**253**				**Pn**	**20 08 31.4**	**+0.9**
TXIG							**Sn**	**20 08 57.9**	**-0.7**
TXIG	**Tlaxiaco**	**2.35**	**253**	*e*	P		**Pn**	**20 08 31.4**	**+0.9**
TXIG						*e*S	**Sn**	**20 08 57.9**	**-0.7**
TGIG		**2.50**	**118**				**Pn**	**20 08 33.0**	**+0.6**
TGIG							**Sn**	**20 09 01.6**	**-0.5**
TGIG		**2.50**	**118**	*e*	P		**Pn**	**20 08 33.0**	**+0.6**
TGIG						*e*S	**Sn**	**20 09 01.6**	**-0.5**
PEIG	**Puerto Escondi**	**2.57**	**220**				**Pn**	**20 08 33.0**	**-0.3**
PEIG							**Sn**	**20 09 04.3**	**+0.6**
PEIG	**Puerto Escondi**	**2.57**	**220**	*e*	P		**Pn**	**20 08 33.0**	**-0.3**
PEIG						*e*S	**Sn**	**20 09 04.3**	**+0.6**
FTIG	**Fresnillo de T**	**2.58**	**269**				**Pn**	**20 08 34.4**	**+0.8**
FTIG							**Sn**	**20 09 04.3**	**+0.2**
FTIG	**Fresnillo de T**	**2.58**	**269**	*e*	P		**Pn**	**20 08 34.4**	**+0.8**
FTIG						*e*S	**Sn**	**20 09 04.3**	**+0.2**
CXUV	**Coxquihui**	**3.00**	**317**				**Pn**	**20 08 38.7**	**-0.5**
CXUV							**Sn**	**20 09 13.8**	**-0.5**
CXUV	**Coxquihui**	**3.00**	**317**	*e*	P		**Pn**	**20 08 38.7**	**-0.5**
CXUV						*e*S	**Sn**	**20 09 13.8**	**-0.5**
PNIG	**Pinotepa**	**3.02**	**239**				**Pn**	**20 08 39.2**	**-0.4**
PNIG							**Sn**	**20 09 12.7**	**-2.3**
PNIG	**Pinotepa**	**3.02**	**239**	*e*	P		**Pn**	**20 08 39.2**	**-0.4**
PNIG						*e*S	**Sn**	**20 09 12.7**	**-2.3**
PPSX	**Xalitzintla**	**3.13**	**291**	*e*	P		**Pn**	**20 08 43.4**	**+2.1**
PPSX						*e*S	**Sn**	**20 09 18.3**	**+0.3**
MGIG	**Malinaltepec**	**3.15**	**257**				**Pn**	**20 08 41.2**	**-0.2**
MGIG							**Sn**	**20 09 18.7**	**+0.5**
MGIG	**Malinaltepec**	**3.15**	**257**	*e*	P		**Pn**	**20 08 41.2**	**-0.2**
MGIG						*e*S	**Sn**	**20 09 18.7**	**+0.5**
PPCL	**Tochimilco**	**3.17**	**288**	*e*	P		**Pn**	**20 08 43.9**	**+2.0**
PPCL						*e*S	**Sn**	**20 09 18.8**	**-0.2**
PPPT	**Popocatepetl**	**3.19**	**289**	*e*	P		**Pn**	**20 08 44.1**	**+1.7**
PPPT						*e*S	**Sn**	**20 09 17.3**	**-2.6**
PBPN	**Popocatepetl**	**3.22**	**290**	*e*	P		**Pn**	**20 08 45.3**	**+2.6**
PBPN						*e*S	**Sn**	**20 09 21.4**	**+0.9**
PPM	**Popocatepetl**	**3.23**	**290**	*e*	P		**Pn**	**20 08 45.3**	**+2.5**
PPM						*e*S	**Sn**	**20 09 19.6**	**-1.1**
PPIG	**Popocatepetl**	**3.23**	**290**				**Pn**	**20 08 45.3**	**+2.5**
PPIG							**Sn**	**20 09 19.6**	**-1.1**
PBXN	**Popocatepetl**	**3.23**	**289**	*e*	P		**Pn**	**20 08 44.9**	**+2.0**
PBXN						*e*S	**Sn**	**20 09 20.7**	**-0.2**
CCIG	**Comitan**	**3.57**	**118**				**Pn**	**20 08 47.8**	**+0.6**
CCIG							**Sn**	**20 09 31.1**	**+2.5**
CCIG	**Comitan**	**3.57**	**118**	*e*	P		**Pn**	**20 08 47.8**	**+0.6**
CCIG						*e*S	**Sn**	**20 09 31.1**	**+2.5**
YAIG	**Yautepec**	**3.57**	**285**				**Pn**	**20 08 48.6**	**+1.4**
YAIG							**Sn**	**20 09 27.4**	**-1.2**
YAIG	**Yautepec**	**3.57**	**285**	*e*	P		**Pn**	**20 08 48.6**	**+1.4**
YAIG						*e*S	**Sn**	**20 09 27.4**	**-1.2**
MPVM	**San Francisco**	**3.61**	**290**				**Pn**	**20 08 51.2**	**+3.3**
MPVM							**Sn**	**20 09 32.2**	**-1.6**
MPVM	**San Francisco**	**3.61**	**290**	*e*	P		**Pn**	**20 08 51.2**	**+3.3**
MPVM						*e*S	**Sn**	**20 09 28.2**	**-1.6**
VTVM	**Tizayuca**	**3.64**	**300**				**Pn**	**20 08 48.8**	**+0.5**
VTVM							**Sn**	**20 09 29.7**	**-0.8**
VTVM	**Tizayuca**	**3.64**	**300**	*e*	P		**Pn**	**20 08 48.8**	**+0.5**
VTVM						*e*S	**Sn**	**20 09 29.7**	**-0.8**
TLVM	**San Miguel Top**	**3.74**	**290**				**Pn**	**20 08 52.9**	**+3.1**
TLVM							**Sn**	**20 09 31.5**	**-1.7**
TLVM	**San Miguel Top**	**3.74**	**290**	*e*	P		**Pn**	**20 08 52.9**	**+3.1**
TLVM						*e*S	**Sn**	**20 09 31.5**	**-1.7**
CRIG	**Cruz Grande**	**3.75**	**251**				**Pn**	**20 08 48.0**	**-1.5**
CRIG							**Sn**	**20 09 32.1**	**-0.7**
CRIG	**Cruz Grande**	**3.75**	**251**	*e*	P		**Pn**	**20 08 48.0**	**-1.5**
CRIG						*e*S	**Sn**	**20 09 32.1**	**-0.7**
AOVM	**Tlapan**	**3.91**	**290**				**Pn**	**20 08 53.0**	**+0.8**
AOVM							**Sn**	**20 09 39.1**	**+1.5**
AOVM	**Tlapan**	**3.91**	**290**	*e*	P		**Pn**	**20 08 53.0**	**+0.8**
AOVM						*e*S	**Sn**	**20 09 39.1**	**+1.5**
INVM	**La Marquesa**	**3.98**	**290**				**Pn**	**20 08 54.0**	**+1.0**
INVM							**Sn**	**20 09 37.8**	**-1.2**
INVM	**La Marquesa**	**3.98**	**290**	*e*	P		**Pn**	**20 08 54.0**	**+1.0**
INVM						*e*S	**Sn**	**20 09 37.8**	**-1.2**
MAVM	**Malinalco, Edo**	**3.98**	**285**				**Pn**	**20 08 55.1**	**+2.2**
MAVM							**Sn**	**20 09 36.2**	**-2.7**
MAVM	**Malinalco, Edo**	**3.98**	**285**	*e*	P		**Pn**	**20 08 55.1**	**+2.2**
MAVM						*e*S	**Sn**	**20 09 36.2**	**-2.7**
MEIG	**Mezcala**	**3.99**	**270**				**Pn**	**20 08 53.7**	**+0.7**
MEIG							**Sn**	**20 09 36.0**	**-3.0**
MEIG	**Mezcala**	**3.99**	**270**	*e*	P		**Pn**	**20 08 53.7**	**+0.7**
MEIG						*e*S	**Sn**	**20 09 36.0**	**-3.0**
DEIG	**Demacu**	**4.12**	**305**	*e*	P		**Pn**	**20 08 52.5**	**-2.5**
DHIG	**Demacu**	**4.12**	**305**				**Pn**	**20 08 52.5**	**-2.4**
SCIG	**Sabancuy**	**4.14**	**76**				**Pn**	**20 08 56.3**	**+1.4**
SCIG							**Sn**	**20 09 40.0**	**-2.5**
SCIG	**Sabancuy**	**4.14**	**76**	*e*	P		**Pn**	**20 08 56.3**	**+1.4**
SCIG						*e*S	**Sn**	**20 09 40.0**	**-2.5**
DAIG	**Los Arroyos**	**4.14**	**257**				**Pn**	**20 08 53.5**	**-1.5**
DAIG							**Sn**	**20 09 44.4**	**+1.8**
DAIG	**Los Arroyos**	**4.14**	**257**	*e*	P		**Pn**	**20 08 53.5**	**-1.5**
DAIG						*e*S	**Sn**	**20 09 44.4**	**+1.8**
TOVM	**TOLUCA**	**4.24**	**289**				**Pn**	**20 08 59.6**	**+3.1**
TOVM							**Sn**	**20 09 47.5**	**+2.1**
TOVM	**TOLUCA**	**4.24**	**289**	*e*	P		**Pn**	**20 08 59.6**	**+3.1**
TOVM						*e*S	**Sn**	**20 09 47.5**	**+2.1**
HUEH	**Huehuetenango**	**4.59**	**125**		Pn		**Pn**	**20 09 00.8**	**-0.6**
ARIG	**Puente Sto Nin**	**4.69**	**274**				**Pn**	**20 09 03.4**	**+0.9**
ARIG							**Sn**	**20 09 51.7**	**-4.4**
ARIG	**Puente Sto Nin**	**4.69**	**274**	*e*	P		**Pn**	**20 09 03.4**	**+0.9**
ARIG						*e*S	**Sn**	**20 09 51.7**	**-4.4**
CAIG	**El Cayaco**	**4.71**	**259**				**Pn**	**20 09 00.8**	**-2.0**
CAIG							**Sn**	**20 09 55.1**	**-1.5**
CAIG	**El Cayaco**	**4.71**	**259**	*e*	P		**Pn**	**20 09 00.8**	**-2.0**
CAIG						*e*S	**Sn**	**20 09 55.1**	**-1.5**
RTAL	**Retalhuleu**	**4.96**	**133**		Pn		**Pn**	**20 09 06.5**	**+0.3**
PETF	**Flores**	**5.41**	**100**				**Pn**	**20 09 10.9**	**-1.4**
PETF	**Flores**	**5.41**	**100**				**Sn**	**20 10 12.7**	**-1.1**
PETF	**Flores**	**5.41**	**100**	*e*	P		**Pn**	**20 09 14.5**	**+2.2**
PETF						*e*S	**Sn**	**20 10 12.7**	**-1.1**
APG	**El Apazote**	**5.60**	**121**		Pn		**Pn**	**20 09 16.7**	**+1.5**
	0.2nm,0.3s,baz=223,slow=17,SNR=8.3								
APG						Sn	**Sn**	**20 10 14.5**	**-4.4**
	1.1nm,0.3s,baz=206,slow=13,SNR=12								
MTO3	**Montecristo**	**6.83**	**121**		Pn		**Pn**	**20 09 30.7**	**-1.3**
TEIG	**Tepich**	**7.12**	**71**		Pn		**Pn**	**20 09 37.0**	**+1.2**
	baz=310,slow=24,SNR=48								
TEIG						Sn	**Sn**	**20 10 50.5**	**-5.4**
	baz=313,slow=24,SNR=25								
TEIG	**Tepich**	**7.12**	**71**				**Pn**	**20 09 35.2**	**-0.6**
INCO	**Volcan de Coli**	**7.90**	**283**	*e*	P		**Pn**	**20 09 50.0**	**+3.0**
INCO						*e*S	**Sn**	**20 11 21.1**	**+5.3**
MNGA	**Volcan de Coli**	**7.91**	**282**	*e*	P		**Pn**	**20 09 50.1**	**+3.2**
MNGA						*e*S	**Sn**	**20 11 17.6**	**+1.9**
SOMAC	**Volcano de Col**	**7.93**	**283**	*e*	P		**Pn**	**20 09 50.5**	**+3.2**
SOMAC						*e*S	**Sn**	**20 11 16.1**	**-0.2**
CEGR	**Campo Tres**	**8.12**	**281**	*e*	P		**Pn**	**20 09 51.9**	**+2.2**
CEGR						*e*S	**Sn**	**20 11 19.9**	**-0.8**
CDAR	**Ciudad de Arme**	**8.21**	**278**	*e*	P		**Pn**	**20 09 53.5**	**+2.7**
833A	**Chaparral WMA,**	**10.93**	**341**				**Pn**	**20 10 26.0**	**-2.1**
HNDO	**Hondo**	**12.03**	**344**				**Pn**	**20 10 44.8**	**+1.6**
DRIO	**Del Rio**	**12.35**	**338**		Pn		**Pn**	**20 10 46.7**	**-0.8**
SOR	**Soroa**	**12.59**	**66**		Pn		**Pn**	**20 10 50.7**	**-0.1**
TXAR	**Lajitas Array**	**13.59**	**328**		Pn		**Pn**	**20 11 03.8**	**-0.7**
	baz=152,slow=9.2,SNR=1.2								
	0.1nm,0.4s								
TXAR	**Lajitas Array**	**13.59**	**328**				**Pn**	**20 11 02.7**	**-1.9**
BRDY	**Brady**	**13.64**	**347**				**Pn**	**20 11 03.9**	**-1.3**
LPIG	**La Paz**	**15.17**	**296**		LR		LR	20 17 33.5	
	comp=Z,94nm,20.6s,baz=179,slow=39								
APMT	**Aspermont**	**15.86**	**345**				**Pn**	**20 11 35.8**	**+0.9**
WTFS	**Witchita Falls**	**15.96**	**351**				**Pn**	**20 11 37.3**	**+1.2**
POST	**Post**	**15.99**	**341**		P		**Pn**	**20 11 37.6**	**+1.0**
POST						IAmb	IAmb	20 11 42.6	
	comp=Z,6.8nm,0.6s								
Z47A	**Carrollton**	**16.54**	**22**		P		**Pn**	**20 11 44.7**	**+1.2**
MIAR	**Mount Ida**	**16.59**	**5**				**P**	**20 11 45.5**	**-1.0**
MIAR						IAmb	IAmb	20 11 51.1	
	comp=Z,16nm,1.2s								
X34A	**Smith Ranch, M**	**16.70**	**353**				**Pn**	**20 11 46.6**	**+1.1**
WHAR	**Wooly Hollow**	**17.47**	**9**		P		**P**	**20 11 56.9**	**+0.7**
FCAR	**Ozark Folk Cen**	**18.08**	**9**		P		**P**	**20 12 05.0**	**+2.1**
FCAR						IAmb	IAmb	20 12 08.1	
	comp=Z,13nm,1.2s								
LCAR	**Lake Charles**	**18.42**	**11**				**Pn**	**20 12 08.2**	**+1.4**
U38A	**Gravette**	**18.42**	**3**		P		**Pn**	**20 12 08.6**	**+1.8**
T35A	**Sooner Cattle**	**18.89**	**357**		P		**Pn**	**20 12 12.5**	**-0.1**
T35A						IAmb	IAmb	20 12 19.7	
	comp=Z,11nm,0.9s								
MGMO	**Mountain Grove**	**19.31**	**8**				**Pn**	**20 12 17.4**	**-0.2**
MGMO						IAmb	IAmb	20 12 50.0	
	comp=Z,11nm,1.4s								
ANMO	**Albuquerque**	**19.55**	**332**		LR		LR	20 20 38.4	
	comp=Z,51nm,20.9s,baz=67,slow=40								
W52A	**Murphy**	**19.88**	**29**		P		**P**	**20 12 22.6**	**-0.2**
W52A						IAmb	IAmb	20 12 24.6	
	comp=Z,10nm,0.6s								
CCM	**Cathedral Cave**	**20.34**	**10**				Pn	20 12 28.9	-0.9
CCM						IAmb	IAmb	20 12 33.2	
	comp=Z,12nm,1.1s								
TKL	**Tuckaleechee C**	**20.42**	**28**		P		**P**	**20 12 29.3**	**+0.8**
	comp=Z,8.0nm,0.6s,baz=153,slow=15,SNR=9.5								
	comp=Z,8.0nm,0.6s								
TKL	**Tuckaleechee C**	**20.42**	**28**		P		**P**	**20 12 29.4**	**+0.8**
TKL						IAmb	IAmb	20 12 45.9	
	comp=Z,9.5nm,0.8s								
T50A	**Nancy**	**21.14**	**24**		P		**P**	**20 12 35.0**	**-1.4**
X16A	**Lo Mia Camp, P**	**21.74**	**322**		P		**P**	**20 12 42.8**	**-0.2**
X16A						IAmb	IAmb	20 12 46.0	
	comp=Z,7.2nm,1.5s								
VTX	**Valle De

ESL				eS	**Sn**	**20 11 44.9**	**-1.1**	
LIOB	**Emei**	**1.06 273**		P	**Pn**	**20 11 32.7**	**+0.6**	
LIOB				eS	**Sn**	**20 11 47.0**	**+0.5**	
NSTT	**Nanjuang**	**1.07 272**		eP	**Pn**	**20 11 32.9**	**+0.7**	
NSTT				eS	**Sn**	**20 11 47.1**	**+0.3**	
SBCB	**Hsinchu**	**1.10 280**		eS	**Sn**	**20 11 47.7**	**+0.3**	
OWD	**Renai**	**1.12 235**	⇑	P	**Pn**	**20 11 33.0**	**+0.1**	
OWD				eS	**Sn**	**20 11 47.5**	**-0.5**	
WARBT	**Fenglin Townsh**	**1.14 220**		eP	**Pn**	**20 11 32.1**	**-0.9**	
WARBT				eS	**Sn**	**20 11 47.0**	**-1.2**	
WUSB	**Renai**	**1.14 238**	⇑	P	**Pn**	**20 11 33.6**	**+0.5**	
WUSB				eS	**Sn**	**20 11 48.9**	**+0.4**	
EGFH	**Guangfu**	**1.15 217**		eP	**Pn**	**20 11 32.6**	**-0.6**	
WHP	**Taichung City**	**1.17 254**		eP	**Pn**	**20 11 34.9**	**+1.4**	
WHP				eS	**Sn**	**20 11 50.2**	**+1.1**	
NMLH	**Miaoli**	**1.27 268**		eS	**Sn**	**20 11 51.4**	**+0.2**	
VWDT	**VWDT**	**1.27 229**		eP	**Pn**	**20 11 35.0**	**+0.3**	
VWDT				eS	**Sn**	**20 11 50.6**	**-0.6**	
WCS	**Beigang Elemen**	**1.27 245**		eP	**Pn**	**20 11 35.9**	**+1.1**	
WCS				eS	**Sn**	**20 11 52.8**	**+1.5**	
HGSD	**Ruisui**	**1.30 212**		eP	**Pn**	**20 11 34.8**	**-0.3**	
HGSD				eS	**Sn**	**20 11 51.9**	**0.0**	
NSY	**Sanyi**	**1.30 262**		eS	**Sn**	**20 11 52.6**	**+0.5**	
TWQ1	**Liyutan**	**1.30 259**		eS	**Sn**	**20 11 52.4**	**+0.3**	
EHYH	**Wanrong**	**1.34 215**		eP	**Pn**	**20 11 34.6**	**-1.0**	
EHY	**Hungye**	**1.34 216**		eP	**Pn**	**20 11 34.7**	**-0.9**	
SMLT	**Sun Moon Lake**	**1.37 239**		eP	**Pn**	**20 11 36.8**	**+0.8**	
SMLT				eS	**Sn**	**20 11 55.1**	**+1.4**	
SSLB	**Suanglung**	**1.38 234**		eP	**Pn**	**20 11 36.4**	**+0.2**	
SSLB				eS	**Sn**	**20 11 55.8**	**+2.0**	
TYC	**Yuchr**	**1.39 240**		eP	**Pn**	**20 11 37.2**	**+0.9**	
TYC				eS	**Sn**	**20 11 55.0**	**+1.0**	
IRIF	**Iriomote-Funau**	**1.44 100**		P	**Pn**	**20 11 36.9**	**0.0**	
IRIF				S	**Sn**	**20 11 55.2**	**0.0**	
ECBN	**Changbin**	**1.44 208**		eS	**Sn**	**20 11 54.2**	**-1.0**	
YULB	**Yu-li**	**1.45 214**		eP	**Pn**	**20 11 35.9**	**-1.1**	
TWF1	**Yuli**	**1.48 213**		eP	**Pn**	**20 11 36.4**	**-1.0**	
WHYT	**Xinyi Township**	**1.51 234**		eP	**Pn**	**20 11 39.2**	**+1.3**	
WHYT				eS	**Sn**	**20 11 58.6**	**+1.7**	
WJS	**Zhushan**	**1.53 240**		eP	**Pn**	**20 11 39.8**	**+1.6**	
WJS				eS	**Sn**	**20 11 59.4**	**+2.0**	
WNT	**Mingjian**	**1.54 243**		eP	**Pn**	**20 11 39.7**	**+1.5**	
WNT				eS	**Sn**	**20 11 59.0**	**+1.4**	
YUS	**Yu-Shan**	**1.57 226**		eP	**Pn**	**20 11 39.6**	**+0.5**	
YUS				eS	**Sn**	**20 11 59.2**	**+0.1**	
WCH1	**Changhua City**	**1.58 251**		eS	**Sn**	**20 11 59.0**	**+0.6**	
FULB	**Fuli**	**1.61 210**		eP	**Pn**	**20 11 39.0**	**-0.3**	
FULB				eS	**Sn**	**20 11 58.7**	**-0.6**	
ALS	**Alishan**	**1.66 230**		eP	**Pn**	**20 11 41.0**	**+0.9**	
ALS				eS	**Sn**	**20 12 03.0**	**+2.2**	
CHKT	**Chengkung**	**1.67 207**		eP	**Pn**	**20 11 39.0**	**-0.9**	
CHKT				eS	**Sn**	**20 11 57.9**	**-2.7**	
EHD	**Haiduan**	**1.69 212**		eP	**Pn**	**20 11 38.8**	**-1.5**	
EHD				eS	**Sn**	**20 11 58.7**	**-2.6**	
JKRS	**Kuro-shima**	**1.71 102**		eP	**Pn**	**20 11 40.9**	**+0.5**	
JKRS				eS	**Sn**	**20 12 02.2**	**+0.8**	
WGK	**Gukeng**	**1.73 239**		eP	**Pn**	**20 11 42.6**	**+1.8**	
WGK				eS	**Sn**	**20 12 03.4**	**+1.3**	
WDLH	**Douliu**	**1.75 239**		eP	**Pn**	**20 11 42.1**	**+1.1**	
WDLH				eS	**Sn**	**20 12 03.4**	**+0.9**	
ELDTW	**Lidau**	**1.76 217**		eP	**Pn**	**20 11 40.8**	**-0.4**	
ELDTW				eS	**Sn**	**20 12 01.8**	**-1.1**	
JIJ	**Ishigaki jima**	**1.80 97**		P	**Pn**	**20 11 41.8**	**+0.1**	
JIJ				S	**Sn**	**20 12 03.7**	**-0.1**	
EDH	**Donghe**	**1.81 207**		eP	**Pn**	**20 11 40.9**	**-0.8**	
EDH				eS	**Sn**	**20 12 01.7**	**-2.2**	
STYH	**Taoyuan**	**1.92 222**		eP	**Pn**	**20 11 44.1**	**+0.9**	
STYH				eS	**Sn**	**20 12 07.0**	**+0.5**	
TPUB	**Ta-pu**	**1.92 228**		eP	**Pn**	**20 11 44.8**	**+1.5**	
TPUB				eS	**Sn**	**20 12 07.8**	**+1.2**	
JISG	**Ishigakijimahi**	**1.94 90**		P	**Pn**	**20 11 43.9**	**+0.4**	
JISG				S	**Sn**	**20 12 08.0**	**+1.0**	
LDUT	**Ludao**	**2.02 199**		eP	**Pn**	**20 11 43.3**	**-1.4**	
LDUT				eS	**Sn**	**20 12 06.8**	**-2.2**	
TWK	**Hsinying**	**2.04 230**		eP	**Pn**	**20 11 46.2**	**+1.3**	
CHN1	**Nanshi**	**2.06 227**		eP	**Pn**	**20 11 46.5**	**+1.3**	
SGST	**Jiashian**	**2.10 224**		eP	**Pn**	**20 11 46.2**	**+0.5**	
SGST				eS	**Sn**	**20 12 11.9**	**+1.0**	
JTJ	**Tarama**	**2.30 88**		P	**Pn**	**20 11 49.3**	**+1.0**	
SSD	**Sandimen**	**2.33 218**		eP	**Pn**	**20 11 49.9**	**+1.1**	
SSD				eS	**Sn**	**20 12 18.7**	**+2.3**	
MASBT	**Mashibuluo**	**2.43 216**		eP	**Pn**	**20 11 51.6**	**+1.4**	
MASBT				eS	**Sn**	**20 12 20.1**	**+1.1**	
MATB	**Ma-tsu**	**2.54 308**		eP	**Pn**	**20 11 50.9**	**-0.8**	
MATB				eS	**Sn**	**20 12 19.9**	**-1.8**	
PHUB	**P'eng-hu**	**2.62 246**		eS	**Sn**	**20 12 20.9**	**-2.5**	
SCZT	**Fangliau**	**2.64 213**		eP	**Pn**	**20 11 54.3**	**+1.4**	
SCZT				eS	**Sn**	**20 12 26.5**	**+2.5**	
LYUB	**Lan-yu**	**2.64 192**		eP	**Pn**	**20 11 51.6**	**-1.5**	
LYUB				eS	**Sn**	**20 12 18.9**	**-5.1**	
JIRB	**Irabujima**	**2.73 85**		eS	**Sn**	**20 12 26.6**	**+0.4**	
JIKM	**Ikemajima**	**2.81 83**		eS	**Sn**	**20 12 29.8**	**+1.7**	
PTMZ	**Houxiangcun**	**2.81 280**		eP	**Pn**	**20 11 54.4**	**-0.9**	
PTMZ				eS	**Sn**	**20 12 24.6**	**-3.6**	

*HVO **22** 20:19:18.2±1.8, 19°.32N±0°.01×155°.88W±0°.02, h1km±9km, Error ellipse: s-maj=3.1km s-min=0.9km az=57.0*

NEIC 22 20:19:19.4±2.1, 19°.371N±0°.006×155°.82W±0°.02, h10km±1km, ML3.0/46, ML3.0/36(HVO), Error ellipse: s-maj=3.1km s-min=2.2km az=255.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.23**	**123**		Pg	20 19 24.6	+0.4
KHU					Sg	20 19 28.6	+1.1
KHLU	**Kahalu`u**	**0.23**	**342**		Pg	20 19 24.1	-0.1
KHLU				IAML		20 19 27.8	
	comp=N,1μm,0.1s						
ALEP	**Alea Permanent**	**0.23**	**44**		Pg	20 19 25.2	+0.7
ALEP					Sg	20 19 29.6	+1.7
MWH	**Mokuaweoweo**	**0.24**	**61**		Pg	20 19 24.9	+0.4
MLOA	**Mauna Loa Obse**	**0.28**	**54**		Pg	20 19 25.5	+0.3
MLOA				IAML		20 19 30.9	
	comp=E,2μm,0.2s						
MLOA				IAML		20 19 31.2	
	comp=N,2μm,0.3s						
HUH	**Hualalai**	**0.31**	**357**		Pg	20 19 26.3	+0.5
HUH				IAML		20 19 36.3	
	comp=N,1μm,0.2s						
HUH				IAML		20 19 37.2	
	comp=E,1μm,0.4s						
HUH	**Hualalai**	**0.31**	**357**		Sb	20 19 31.4	-1.2
AIN	**Ainahou**	**0.34**	**90**		Pg	20 19 26.3	+0.1
AIN					Sg	20 19 31.7	+1.0
HPO	**Honuapo**	**0.37**	**139**		Pg	20 19 27.1	+0.3
HPO					Sg	20 19 31.1	-0.7
HMH	**Humu'ula Sheep**	**0.39**	**54**		Pg	20 19 27.2	0.0
HMH	**Humu'ula Sheep**	**0.39**	**54**		Sg	20 19 33.5	+1.1
HTC	**Hot Caves**	**0.42**	**108**		Pg	20 19 27.6	0.0
MLH	**Mauna Loa**	**0.42**	**73**		Pg	20 19 27.6	-0.2
MLH				IAML		20 19 35.8	
	comp=E,2μm,0.3s						
MLH				IAML		20 19 35.8	
	comp=N,2μm,0.4s						
MLH	**Mauna Loa**	**0.42**	**73**		Sb	20 19 34.7	-1.0
POHA	**Pohakuloa**	**0.47**	**35**		Pg	20 19 28.2	-0.4
POHA				IAML		20 19 43.3	
	comp=N,879nm,0.3s						
POHA				IAML		20 19 43.9	
	comp=N,841nm,0.4s						
POHA	**Pohakuloa**	**0.47**	**35**		Sg	20 19 35.0	+0.1
HLP	**Hilina Pali**	**0.48**	**99**		Pg	20 19 28.5	-0.4
HLP				IAML		20 19 43.1	
	comp=N,1μm,0.6s						
HLP				IAML		20 19 46.1	
	comp=E,1μm,0.6s						
HLP	**Hilina Pali**	**0.48**	**99**		Sg	20 19 36.3	+0.9
WRMHI	**West Rim**	**0.49**	**86**		Pg	20 19 28.4	-0.6
WRMHI					Sg	20 19 36.3	+0.8
SDHHI	**Sand Hill**	**0.49**	**88**		Pg	20 19 28.4	-0.6
SDHHI					Sb	20 19 37.2	-0.4
UWE	**Uwekahuna**	**0.50**	**84**		Pg	20 19 28.5	-0.6
UWE	**Uwekahuna**	**0.50**	**84**		Sb	20 19 37.4	-0.3
OBL	**Observatory Le**	**0.50**	**85**		Pg	20 19 28.6	-0.7
OBL					Sb	20 19 37.2	-0.7
UWB	**Uwekahuna Bluf**	**0.51**	**84**		Pg	20 19 28.6	-0.8
UWB					Sb	20 19 37.5	-0.6
RIM	**Rim**	**0.51**	**87**		Pg	20 19 28.7	-0.7
RIM					Sb	20 19 37.8	-0.4
RSD	**Rainshed**	**0.52**	**80**		Pg	20 19 28.7	-0.8
RSD				IAML		20 19 39.4	
	comp=E,1μm,0.1s						
RSD				IAML		20 19 40.7	
	comp=N,772nm,0.4s						
KKO	**Keanakako'i**	**0.52**	**87**		Pg	20 19 28.8	-0.8
KKO					Sb	20 19 37.7	-0.7
SBLHI	**Steaming Bluff**	**0.52**	**84**		Pg	20 19 28.9	-0.7
SBLHI					Sb	20 19 37.9	-0.5
BYL	**Byron's Ledge**	**0.53**	**85**		Pg	20 19 28.7	-1.0
BYL				IAML		20 19 44.6	
	comp=N,909nm,1.6s						
BYL				IAML		20 19 45.2	
	comp=E,892nm,0.6s						
HATHI	**Halema'uma'u T**	**0.53**	**84**		Pg	20 19 28.8	-1.0
HATHI				IAML		20 19 43.2	
	comp=N,1μm,0.4s						
HATHI	**Halema'uma'u T**	**0.53**	**84**		Sb	20 19 37.9	-0.7
PUH	**Pauahi**	**0.57**	**90**		Pg	20 19 29.2	-1.3
PUH					Sg	20 19 37.4	-0.5
PUH				IAML		20 19 39.2	
	comp=E,804nm,0.4s						
PUH				IAML		20 19 39.2	
	comp=N,664nm,0.5s						
KNHH	**Kane Nui o Ham**	**0.61**	**89**		Pg	20 19 30.0	-1.3
STCH	**Steam Cracks**	**0.65**	**89**		Pg	20 19 30.3	-1.8
HPAH	**Hawaii Prepara**	**0.67**	**10**		Pg	20 19 30.6	-1.7
NPOC	**North of Pu'u**	**0.67**	**88**		Pg	20 19 30.9	-1.4

*IDC **22** 20:33:28.2±1.2, 1°.32N×125°.82E, h0km, mb3.6/7, mbtmp3.7/8, ML3.6/1, MS3.4/3, Error ellipse: s-maj=92.5km s-min=16.2km az=65.0*

*DJA **22** 20:33:32.5±0.3, 1°.N±3°×12°.6E±°, h10km, M3.8/12, mB4.8/1, mb3.8/3, MLv3.8/12, Mw(mB)4.0/1, MwMwp4.2/1, Mwp4.7/1*

ISC 22 20:33:33.5±0.8, 1°.35N±0°.06×126°.28E±0°.07, h35km, n19, σ1§97/18, mb3.7/7, MS3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.23**	**118**	P	**Pn**	**20 33 55.3**	**+1.1**
KMSI	**Cibinong**	**2.42**	**251**	P	**Pn**	**20 34 10.5**	**-0.1**
SGSI	**Sangihe**	**2.44**	**342**	P	**Pn**	**20 34 13.1**	**+2.3**
SGSI				S	**Sn**	**20 34 41.8**	**+2.4**
SANI	**Sanana**	**3.39**	**185**	P	**Pn**	**20 34 25.3**	**+1.4**
LUWI	**Luwuk**	**4.24**	**236**	P	**Pn**	**20 34 37.1**	**+1.5**
MRSI	**Marisa**	**4.42**	**259**	P	**Pn**	**20 34 41.0**	**+2.8**
APSI	**Ampana**	**5.15**	**244**	P	**Pn**	**20 34 50.4**	**+2.3**
	0.3nm844nm90nm,1.1s						
KDI	**Kendari**	**6.42**	**215**	P	**Pn**	**20 35 07.9**	**+2.3**
MPSI	**Mapaga**	**6.46**	**261**	P	**Pn**	**20 35 07.5**	**+1.3**
	0.1nm869nm9.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.34**	**182**	P	**P**	**20 37 55.0**	**-0.9**
	0.2nm,0.3s,baz=358,slow=9.9,SNR=1.6 2.2nm,0.8s						
WRA	**Warramunga Arr**	**22.59**	**160**	P	**P**	**20 38 31.4**	**+0.2**
	1.3nm,0.4s,baz=336,slow=11,SNR=16 1.3nm,0.4s						
PMG	**Port Moresby**	**23.38**	**118**	LR	LR	20 50 24.9	
	comp=Z,80nm,19.7s,baz=328,slow=43						
ASAR	**Alice Springs**	**25.35**	**164**	P	**P**	**20 39 03.8**	**+1.0**
	0.5nm,0.3s,baz=347,slow=12,SNR=17 0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.75**	**304**	P	**P**	**20 39 51.0**	**-3.6**
	0.2nm,0.3s,baz=129,slow=16,SNR=1.4						
CMAR				LR	LR	20 53 06.8	
	comp=Z,37nm,20.2s,baz=130,slow=38 0.2nm,0.3s						
STKA	**Stephens Creek**	**36.10**	**158**	P	**P**	**20 40 33.3**	**+1.2**
	0.7nm,0.5s,baz=339,slow=8.6,SNR=3.0 0.7nm,0.5s						
PALK	**Pallekele**	**45.80**	**279**	LR	LR	21 02 25.1	
	comp=Z,67nm,19.7s,baz=99,slow=38						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**20 43 30.2**	**-1.3**
	0.3nm,0.3s,baz=121,slow=7.5,SNR=14 0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**62.50**	**334**	P	**P**	**20 43 52.2**	**-1.2**
	0.2nm,0.3s,baz=84,slow=11,SNR=1.5 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.50**	**328**	P	**P**	**20 43 58.6**	**-1.5**
	0.5nm,0.6s,baz=128,slow=6.2,SNR=4.8 0.5nm,0.6s						

*IDC **22** 20:36:11.9±0.9, 23°.38S×115°.33W, h0km, mb3.5/5, mbtmp3.5/5, MS3.7/18, Error ellipse: s-maj=43.1km s-min=30.1km az=76.0*

*GCMT **22** 20:36:21.0±0.4, 23°.12S±0°.02×114°.74W±0°.02, h15km±2km, MW4.7/72, Moment Tensor Solution. s11,c14; s72,c90; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.41±.08; Mθθ=0.48±.07; Mϕϕ=0.89±.09; Mrθ=0.14±.16; Mrϕ=1.37±.07; Mθϕ=0.34±.16; Best double couple: M0=1.56600×10^16 NP1:ϕ8=77.00000°, δ81.00000°, λ4.00000°. NP2: ϕ=346.00000°, δ86.00000°, λ171.00000°. Principal axes: T 1.7970, Plg10.0000°, Azm301.0000°; N -0.4630, Plg80.0000°, Azm144.0000°; P -1.3340, Plg4.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 22 20:36:13.3±0.9, 23°.4S±0°.2×115°.3W±0°.3, h10km, n40, σ1§30/14, mb3.6/5, MS3.7/17, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.60**	**126**	LR	LR	20 39 45.8	
	comp=Z,2μm,18.3s,baz=318,slow=32						
TAOE	**Nuku Hiva Isla**	**27.80**	**297**	eLR	LR	20 49 13.9	
	617nm,26.1s						
TBI	**Tubuai**	**31.30**	**263**	eLR	LR	20 50 45.3	
	536nm,25.8s						
PPT2	**Papeete2**	**32.55**	**274**	eLR	LR	20 51 06.0	
	211nm,26.8s						
PPT2				eLR	LR	20 51 13.6	
	149nm,30.2s						
PPT	**Papeete**	**32.55**	**274**	LR	LR	20 52 12.0	
	comp=Z,90nm,21.9s,baz=67,slow=30						
H03N2	**Juan Fernandez**	**33.41**	**116**	T	T	21 17 47.4	
	baz=283,slow=75,SNR=78						
H03N3	**Juan Fernandez**	**33.41**	**116**	T	T	21 17 52.8	
	baz=283,slow=75,SNR=92						
H03N1	**Juan Fernandez**	**33.42**	**116**	T	T	21 17 44.4	
	baz=283,slow=75,SNR=91						
ATAH	**Atahuaipa**	**38.95**	**72**	LR	LR	20 55 20.8	
	comp=Z,87nm,19.2s,baz=184,slow=30						
RAR	**Rarotonga**	**41.07**	**264**	LR	LR	20 56 30.6	
	comp=Z,46nm,21.7s,baz=60,slow=30						
PLCA	**Paso Flores**	**41.24**	**126**	LR	LR	20 56 36.2	
	comp=Z,213nm,21.4s,baz=280,slow=30						
JTS	**Las Juntas de**	**44.73**	**45**	LR	LR	20 58 01.5	
	comp=Z,107nm,20.6s,baz=213,slow=29						
LPAZ	**La Paz**	**44.79**	**90**	P	**P**	**20 44 27.4**	**-0.8**
	0.7nm,0.8s,baz=287,slow=7.2,SNR=2.1						
LPAZ				LR	LR	20 58 11.6	
	comp=Z,101nm,21.7s,baz=278,slow=30 0.7nm,0.8s						
CMIG	**Matias Romero**	**44.88**	**28**	LR	LR	20 59 02.0	
	comp=Z,86nm,20.2s,baz=188,slow=30						
ROSC	**El Rosal**	**48.84**	**60**	LR	LR	21 01 16.1	
	comp=Z,139nm,18.4s,baz=191,slow=31						
CPUP	**Villa Florida**	**52.34**	**106**	LR	LR	21 03 35.8	
	comp=Z,28nm,19.2s,baz=177,slow=31						
PMSA	**Palmer Station**	**52.95**	**155**	LR	LR	21 02 48.3	
	comp=Z,97nm,18.1s,baz=304,slow=30						
TXAR	**Lajitas Array**	**53.57**	**13**	P	**P**	**20 45 35.6**	**+1.0**
	0.1nm,0.3s,baz=206,slow=11,SNR=4.3 0.1nm,0.3s						
ANMO	**Albuquerque**	**58.58**	**9**	LR	LR	21 06 12.0	
	comp=Z,42nm,21.6s,baz=272,slow=31						
URZ	**Urewera**	**58.73**	**238**	LR	LR	21 07 21.7	
	comp=Z,66nm,18.4s,baz=110,slow=32						
NVAR	**Mina Array Bea**	**61.52**	**357**	P	**P**	**20 46 32.9**	**+2.3**
	0.4nm,0.6s,baz=194,slow=9.1,SNR=6.9 0.4nm,0.6s						
YBH	**Yreka Blue Hor**	**65.11**	**354**	LR	LR	21 08 31.9	
	comp=Z,10nm,20.8s,baz=276,slow=30						
VNDA	**Vanda**	**65.82**	**194**	LR	LR	21 09 44.0	
	comp=Z,58nm,19.1s,baz=74,slow=31						
TKL	**Tuckaleechee C**	**65.85**	**28**	LR	LR	21 12 38.3	
	comp=Z,38nm,18.4s,baz=170,slow=33						
PDAR	**Pinedale Array**	**66.00**	**5**	P	**P**	**20 46 59.8**	**-0.3**
	0.3nm,0.8s,baz=182,slow=4.6,SNR=2.4 0.3nm,0.8s						
SNAA	**Sanae**	**74.77**	**162**	P	**P**	**20 47 55.1**	**+1.8**
	1.1nm,1.0s,baz=237,slow=7.9,SNR=3.1						
SNAA				LR	LR	21 14 38.8	
	comp=Z,41nm,21.6s,baz=182,slow=31						
	1.1nm,1.0s						
SADO	**Sadowa**	**75.41**	**26**	LR	LR	21 18 52.3	
	comp=Z,42nm,20.1s,baz=93,slow=34						
H11S2	**WAKE ISLAND Hy**	**86.70**	**292**	T	T	22 25 13.0	
	baz=116,slow=75,SNR=49						
H11S1	**WAKE ISLAND Hy**	**86.72**	**292**	T	T	22 25 09.7	
	baz=116,slow=75,SNR=26						
H11S3	**WAKE ISLAND Hy**	**86.72**	**292**	T	T	22 25 14.3	
	baz=116,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**87.06**	**293**	T	T	22 25 40.0	
	baz=117,slow=74						
H11N1	**WAKE ISLAND Hy**	**87.08**	**293**	T	T	22 25 36.5	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**87.08**	**293**	T	T	22 25 40.8	
	baz=117,slow=74						
USRK	**Ussuriysk Ar.**	**121.92**	**309**	PKP	**PKPdf**	**20 55 07.2**	**-0.6**
	1.9nm,0.8s,baz=47,slow=6.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**145.88**	**339**	PKPbc	**PKPbc**	**20 55 52.9**	**+0.2**
	0.3nm,0.4s,baz=45,slow=2.2,SNR=2.0						
CMAR	**Chiang Mai Arr**	**147.67**	**268**	PKPbc	**PKPbc**	**20 55 57.9**	**-1.0**
	0.3nm,0.4s,baz=100,slow=4.1,SNR=1.1						
BRTR	**Keskin Array B**	**149.11**	**51**	PKPbc	**PKPbc**	**20 56 01.2**	**-1.1**
	1.0nm,1.0s,baz=290,slow=5.5,SNR=3.7						
BVAR	**Borovoye Array**	**150.05**	**353**	PKPbc	**PKPbc**	**20 56 03.8**	**-0.1**
	1.1nm,0.7s,baz=5.7,slow=2.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**150.71**	**342**	PKPbc	**PKPbc**	**20 56 05.5**	**0.0**
	0.2nm,0.6s,baz=46,slow=5.3,SNR=2.1						
MKAR	**Makanchi Array**	**152.65**	**333**	PKP	**PKPdf**	**20 56 02.6**	**-0.6**
	0.6nm,1.0s,baz=18,slow=3.1,SNR=1.7						
MKAR				PKPbc	**PKiKP**	**20 56 10.6**	**+0.2**
	0.3nm,0.5s,baz=24,slow=3.3,SNR=5.1						
MKAR				PKPab	**PKPab**	**20 56 18.4**	**-2.3**
	0.3nm,0.5s,baz=42,slow=2.2,SNR=4.0						

*IDC **22** 20:56:39.5±1.8, 0°.66N×98°.05E, h0km, mb3.3/5, mbtmp3.3/6, ML2.7/1, Error ellipse: s-maj=47.2km s-min=28.4km az=72.0*

*DJA **22** 20:56:44.6±0.5, 1°.N±5°×9°.9E±°, h34km±16km, M3.3/8, MLv3.3/8*

ISC 22 20:56:45.6±0.9, 0°.62N±0°.05×98°.46E±0°.05, h43km, n19, σ1§49/17, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.69**	**195**	P	**Pn**	**20 56 58.3**	**-0.7**
PBSI				S	**Sn**	**20 57 08.8**	**+0.2**
SBSI	**Sibolga**	**1.02**	**25**	P	**Pn**	**20 57 05.6**	**+2.1**
GSI	**Gunungsitoli**	**1.12**	**308**	P	**Pn**	**20 57 04.8**	**0.0**
GSI				S	**Sn**	**20 57 20.6**	**+1.5**
MNSI	**Mandailing Nat**	**1.13**	**81**	P	**Pn**	**20 57 03.7**	**-1.3**
MNSI				S	**Sn**	**20 57 18.4**	**-1.0**
PSI	**Prapat**	**2.22**	**12**	Pn	**Pn**	**20 57 18.0**	**-2.1**
	2.0nm,0.3s,baz=197,slow=11,SNR=5.0						
PSI				Sn	**Sn**	**20 57 46.5**	**+0.2**
	1.7nm,0.3s,baz=166,slow=11,SNR=4.0 4.4nm,0.3s						
SNSI	**Sinabang, Aceh**	**2.78**	**310**	P	**Pn**	**20 57 25.6**	**-2.0**
KCSI	**Kotacane, Aceh**	**2.97**	**347**	P	**Pn**	**20 57 29.8**	**-0.4**
H08S2	**Diego Garcia H**	**27.17**	**252**	T	T	21 29 53.6	
	baz=73,slow=76,SNR=4.9						
H08S3	**Diego Garcia H**	**27.17**	**252**	T	T	21 29 52.6	
	baz=73,slow=76,SNR=8.2						
H08S1	**Diego Garcia H**	**27.18**	**252**	T	T	21 29 50.9	
	baz=73,slow=76,SNR=6.7						
WRA	**Warramunga Arr**	**40.66**	**122**	P	**P**	**21 04 24.7**	**+2.7**
	0.3nm,0.8s,baz=308,slow=9.3,SNR=2.0 0.3nm,0.8s						
SONM	**Songino Array**	**47.53**	**7**	P	**P**	**21 05 16.1**	**-0.7**
	0.2nm,0.4s,baz=191,slow=8.0,SNR=2.0 0.2nm,0.4s						
MKAR	**Makanchi Array**	**48.12**	**345**	P	**P**	**21 05 20.1**	**-1.1**
	0.3nm,0.5s,baz=158,slow=8.9,SNR=6.8 0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**52.63**	**344**	P	**P**	**21 05 54.0**	**-1.1**
	0.2nm,0.7s,baz=150,slow=7.5,SNR=2.0 0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**54.34**	**350**	P	**P**	**21 06 06.5**	**-1.2**
	0.3nm,0.3s,baz=152,slow=6.5,SNR=2.4 0.3nm,0.3s						
H04N2	**CROZET ISLANDS**	**62.01**	**215**	T	T	22 13 30.5	
	baz=56,slow=75,SNR=2.7						
H04N1	**CROZET ISLANDS**	**62.02**	**215**	T	T	22 13 32.8	
	baz=56,slow=75,SNR=3.6						
H04N3	**CROZET ISLANDS**	**62.03**	**215**	T	T	22 13 31.1	
	baz=56,slow=75,SNR=2.9						
TXAR	**Lajitas Array**	**143.48**	**34**	PKP	**PKPdf**	**21 16 17.5**	**+1.0**
	0.1nm,0.5s,baz=311,slow=10,SNR=2.1						

*TIP **22** 21:06:48.2, 35°.95N×53°.30E, h23km±1km

ZNJK				IAML			21 08 31.2
	comp=Z,4.4nm,1.0s						
ICHK	**Chekchek**	**3.84**	**166**	Pn		**Pn**	**21 07 49.9 +1.3**
TABS	**Tabas**	**3.92**	**125**	*i* P		**Pn**	**21 07 51.4 +1.9**
TABS				IAML			21 09 10.4
	comp=Z,400nm,1.0s						
TKDS	**Koohdasht(Taba**	**3.94**	**126**	Pn		**Pn**	**21 07 51.9 +2.0**
ISFR	**Sfrayin**	**3.94**	**73**	Pn		**Pn**	**21 07 52.4 +2.4**
TPRV	**Parvadeh(Tabas**	**4.07**	**135**	Pn		**Pn**	**21 07 53.5 +2.0**
GAS1	**Astara - Iran**	**4.29**	**305**	Pn		**Pn**	**21 07 56.6 +2.1**
IPAY	**Payeh**	**4.64**	**82**	Pn		**Pn**	**21 08 01.8 +2.2**
IMEH	**Mehriz**	**4.71**	**166**	Pn		**Pn**	**21 08 02.5 +1.9**
IBAF	**Bafgh**	**4.77**	**156**	Pn		**Pn**	**21 08 03.1 +1.8**
ISRB	**Sarab**	**4.87**	**294**	Pn		**Pn**	**21 08 05.5 +2.8**
IMOG	**Moghan**	**4.91**	**87**	Pn		**Pn**	**21 08 05.7 +2.4**
GTMR	**Gotvand**	**4.92**	**226**	*e*Pn		**Pn**	**21 08 06.8 +3.6**
GTMR				IAML			21 09 49.9
	comp=Z,76nm,1.0s						
SNGE	**Sanandaj**	**4.92**	**261**	*e*Pn		**Pn**	**21 08 06.9 +3.4**
SNGE				IAML			21 08 55.1
	comp=Z,41nm,1.0s						
IHSH	**Hashtrud**	**5.02**	**287**	Pn		**Pn**	**21 08 07.7 +2.7**
IKRD	**Kardeh**	**5.09**	**79**	Pn		**Pn**	**21 08 08.2 +2.5**
GRMI	**Germi**	**5.14**	**305**	*i* P		**Pn**	**21 08 08.0 +1.6**
GRMI				IAML			21 09 13.6
	comp=Z,48nm,1.0s						
ITEG	**Tejag**	**5.46**	**123**	Pn		**Pn**	**21 08 13.0 +2.2**
IHRS	**Heris**	**5.51**	**297**	Pn		**Pn**	**21 08 13.8 +2.2**
IMYA	**Miami**	**5.52**	**84**	Pn		**Pn**	**21 08 14.1 +2.4**
ZRDN	**Zarand Kerman**	**5.69**	**151**	Pn		**Pn**	**21 08 16.2 +2.2**
JRKH	**Jarkhoshk**	**5.73**	**89**	Pn		**Pn**	**21 08 16.9 +2.5**
IKOO	**Kooshah**	**5.92**	**125**	Pn		**Pn**	**21 08 19.4 +2.3**
KHGB	**Koh Gabri**	**6.19**	**154**	Pn		**Pn**	**21 08 23.2 +2.2**
SHRT	**Shahrakht**	**6.21**	**110**	*e*Pn		**Pn**	**21 08 23.3 +2.3**
SHRT				IAML			21 10 18.6
	comp=Z,60nm,1.0s						
BSRN	**Basiran**	**6.29**	**128**	Pn		**Pn**	**21 08 24.0 +1.9**
BSRN	**Basiran**	**6.29**	**128**	*e*Pn		**Pn**	**21 08 23.9 +1.8**
BSRN				IAML			21 10 30.1
	comp=Z,41nm,1.0s						
IDAH	**Dahanechah**	**6.33**	**119**	Pn		**Pn**	**21 08 25.1 +2.2**
KRM1	**Kerman Provinc**	**6.40**	**147**	Pn		**Pn**	**21 08 26.0 +2.2**
NGRK	**Negar Kerman**	**6.95**	**154**	Pn		**Pn**	**21 08 33.7 +2.3**
CHMN	**Cheshme madani**	**7.07**	**148**	Pn		**Pn**	**21 08 35.3 +2.3**
NHDN	**Nehbandan**	**7.26**	**127**	Pn		**Pn**	**21 08 37.7 +2.3**
VSHL	**Vashlovani**	**7.52**	**316**	P		**Pn**	**21 08 40.8 +1.8**
VSHL				S		**Sn**	**21 10 03.8 -0.5**
GNI	**Garni**	**7.92**	**304**	Pn		Pn	21 08 49.8 +5.2
	comp=Z,1.6nm,0.3s,baz=34,slow=4.6,SNR=18						
GNI				Sn		**Sn**	**21 10 21.1 +6.7**
	comp=Z,0.1nm,0.3s,baz=31,slow=13,SNR=1.3						
GNI				LR		LR	21 12 05.6
	comp=Z,81nm,19.4s,baz=108,slow=40						
	comp=Z,23nm,0.8s						
LGD	**Lagodekhi**	**8.02**	**319**	P		**Pn**	**21 08 47.2 +1.4**
LGD				S		**Sn**	**21 10 15.3 -1.3**
DGRG	**David-gareji**	**8.25**	**314**	P		**Pn**	**21 08 51.3 +2.3**
DGRG				S		**Sn**	**21 10 22.0 -0.3**
SHTL	**Shatili**	**9.17**	**319**	P		**Pn**	**21 09 04.5 +2.8**
GARIG	**Gari**	**10.08**	**314**	P		**Pn**	**21 09 16.5 +2.4**
KBZ	**Khabaz**	**11.12**	**317**	Pn		**Pn**	**21 09 31.1 +3.0**
	comp=Z,0.1nm,0.3s,baz=131,slow=7.6,SNR=4.3						
KBZ				Sn		**Sn**	**21 11 33.2 +0.8**
	comp=Z,0.1nm,0.3s,baz=146,slow=18,SNR=1.6						
	comp=Z,1.7nm,0.8s						
KVAR	**Kislovodsk Arr**	**11.37**	**318**	Pn		Pn	21 09 36.3 +4.5
	comp=Z,1.9nm,0.5s,baz=100,slow=18						
KVAR				Sn		**Sn**	**21 11 38.5 -0.5**
	baz=134,slow=11						
ASF	**Jabal al Asfar**	**14.11**	**259**	Pn		**P**	**21 10 15.5 -1.4**
	comp=Z,0.1nm,0.3s,baz=128,slow=17,SNR=1.8						
ASF				LR		LR	21 16 39.0
	comp=Z,153nm,18.2s,baz=58,slow=42						
AB31	**Akbulak array**	**14.14**	**18**	Pn		**Pn**	**21 10 08.5 -0.9**
	comp=Z,1.8nm,0.6s,baz=201,slow=13,SNR=21						
AB31				Sn		**Sn**	**21 12 39.8 -6.4**
	comp=Z,1.1nm,0.5s,baz=203,slow=27,SNR=12						
AKTO	**Aktyubinsk**	**14.85**	**12**	Pn		**Pn**	**21 10 16.1 -3.0**
	comp=Z,0.2nm,0.3s,baz=197,slow=11,SNR=7.7						
AKTO				Sn		Sn	21 12 53.0 -11
	comp=Z,0.4nm,0.3s,baz=205,slow=19,SNR=5.7						
AKTO				LR		LR	21 18 21.0
	comp=Z,58nm,18.1s,baz=252,slow=46						
	comp=Z,2.2nm,0.7s						
AKTO	**Aktyubinsk**	**14.85**	**12**	⇑Pn		**Pn**	**21 10 15.6 -3.5**
	comp=Z,2.2nm,0.7s						
AKTO				⇑Sn		**Sn**	**21 12 55.1 -8.5**
	comp=Z,5.3nm,1.0s						
MMAI	**Mount Meron Ar**	**15.04**	**264**	LR		LR	21 16 55.9
	comp=Z,50nm,18.9s,baz=50,slow=40						
KK31	**Karatay Array**	**15.06**	**57**	⇑P		**Pn**	**21 10 19.7 -2.3**
	comp=Z,1.2nm,0.6s,baz=334,slow=2.7,SNR=7.5						
BRTR	**Keskin Array B**	**15.96**	**289**	Pn		**P**	**21 10 38.1 +0.5**
	comp=Z,0.1nm,0.3s,baz=104,slow=6.1,SNR=6.0						
BRTR				LR		LR	21 16 15.8
	comp=Z,20nm,20.9s,baz=89,slow=35						
	comp=Z,0.9nm,0.8s						
EIL	**Elat**	**16.64**	**253**	LR		LR	21 18 23.2
	comp=Z,168nm,19.2s,baz=32,slow=42						
BELG	**Belogornoye**	**16.90**	**348**	Pn		**Pn**	**21 10 44.9 -0.8**
	comp=Z,1.1nm,0.3s,baz=126,slow=7.5,SNR=7.8						
BELG				Sn		Sn	21 13 40.8 -12
	comp=Z,0.2nm,0.3s,baz=143,slow=21,SNR=1.2						
AAK	**Ala-Archa**	**17.68**	**61**	P		**P**	**21 10 55.8 -0.8**
	comp=Z,0.2nm,0.3s,baz=199,slow=9.8,SNR=8.3						
AAK				LR		LR	21 19 05.6
	comp=Z,62nm,20.7s,baz=258,slow=42						
	comp=Z,2.9nm,0.8s						
KSH	**Kashi**	**18.27**	**72**	P		**Pn**	**21 10 59.8 -3.2**
KSH				pP		P	21 11 03.1 -0.1
KSH				pmax		pmax	
	comp=Z,3.0nm,0.9s						
ARTI	**Arti**	**20.71**	**8**	P		Pn	21 11 31.9 +0.2
	comp=Z,3.3nm,0.6s,baz=189,slow=8.7,SNR=7.2						
ARTI				S		S	21 15 07.7 -13
	comp=Z,0.4nm,0.3s,baz=150,slow=20,SNR=1.1						
ARTI				LR		LR	21 22 07.9
	comp=Z,34nm,18.2s,baz=202,slow=44						
	comp=Z,3.3nm,0.6s						
BVA0	**Borovoye Array**	**20.87**	**30**	⇑P		Pn	21 11 32.5 -1.2
	comp=Z,9.2nm,1.2s,baz=213,slow=9.6,SNR=22						
BVAR	**Borovoye Array**	**20.87**	**30**	P		Pn	21 11 33.0 -0.7
	comp=Z,5.5nm,0.7s,baz=210,slow=8.6,SNR=30						
BVAR				S		**S**	**21 15 18.6 -5.2**
	comp=Z,0.6nm,0.7s,baz=210,slow=25,SNR=2.1						
	comp=Z,5.5nm,0.7s						
AKASG	**Malin Array Be**	**22.73**	**318**	P		**P**	**21 11 53.4 +2.3**
	comp=Z,2.3nm,0.7s,baz=124,slow=12,SNR=7.5						
	comp=Z,2.3nm,0.7s						
KURBB	**Kurchatov Arra**	**23.34**	**43**	P		**P**	**21 11 59.6 +2.2**
	comp=Z,1.0nm,1.0s,baz=241,slow=9.6,SNR=4.8						
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**24.16**	**54**	P		**P**	**21 12 06.9 +1.4**
	comp=Z,0.9nm,0.8s,baz=256,slow=4.9,SNR=5.6						
	comp=Z,0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**28.30**	**41**	P		**P**	**21 12 46.2 +3.4**
	comp=Z,0.5nm,0.5s,baz=231,slow=9.4,SNR=4.6						
	comp=Z,0.5nm,0.5s						
HFS	**Hagfors**	**35.00**	**326**	P		**P**	**21 13 43.6 +2.2**
	comp=Z,2.2nm,0.9s,baz=118,slow=14,SNR=1.5						
	comp=Z,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**36.88**	**344**	P		**P**	**21 14 01.3 +3.8**
	comp=Z,1.6nm,0.9s,baz=147,slow=9.0,SNR=1.7						
	comp=Z,1.6nm,0.9s						
PALK	**Pallekele**	**38.01**	**132**	LR		LR	21 30 20.7
	comp=Z,28nm,18.6s,baz=313,slow=37						
CMAR	**Chiang Mai Arr**	**43.76**	**101**	P		**P**	**21 14 56.3 +1.2**
	comp=Z,0.6nm,0.3s,baz=302,slow=8.5,SNR=9.2						
	comp=Z,0.6nm,0.3s						
TIXI	**Tiksi**	**51.77**	**23**	LR		LR	21 40 38.7
	comp=Z,57nm,19.4s,baz=202,slow=39						
KSRS	**Korea Array**	**58.32**	**64**	P		**P**	**21 16 45.2 +0.9**
	comp=Z,0.7nm,0.6s,baz=286,slow=7.5,SNR=2.9						
	comp=Z,0.7nm,0.6s						
BOSA	**Boshof**	**69.46**	**206**	P		**P**	**21 17 59.2 +1.4**
	comp=Z,1.6nm,0.6s,baz=36,slow=4.6,SNR=5.7						
	comp=Z,1.6nm,0.6s						
YKA	**Yellowknife Ar**	**81.39**	**354**	P		P	21 19 10.0 +4.2
	comp=Z,0.5nm,0.8s,baz=10,slow=4.6,SNR=2.9						
	comp=Z,0.5nm,0.8s						

*SDD **22** 21:16:22.6±2.2, 19.°40N×67.°08W, h23km±131km, MD3.5, ML2.6, MW3.0*
*NEIC **22** 21:16:24.7±1.4, 19.°23N±0.°03×67.°14W±0.°03, h10km±1km, ML2.4/14, Md3.0/12(RSPR), Error ellipse: s-maj=5.6km s-min=4.8km az=284.0*
*RSPR **22** 21:16:26.8, 19.°25N×67.°35W, h25km±28km, MD3.0/12*

ISC 22 21:16:26.8±1.5, 19.°17N±0.°06×67.°18W±0.°03, h26km±13km, n51, σ1s12/63, 18C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.70**	**175**			**Pb**	**21 16 39.9**	**-0.5**
AGPR						**Sn**	**21 16 50.6**	**-0.4**
AGPR	**Aguadilla, PR**	**0.70**	**175**	⇑*e*Pg		**Pb**	**21 16 39.5**	**-0.8**
AGPR				⇑*e*Sg		**Sn**	**21 16 50.5**	**-0.4**
AGPR				IAML			21 16 55.7	
	comp=N,201nm,0.2s							
AGPR	**Aguadilla, PR**	**0.70**	**175**	⇓*i*P		**Pb**	**21 16 39.9**	**-0.5**
AGPR	**Aguadilla, PR**	**0.70**	**175**	*e*S		**Sn**	**21 16 50.6**	**-0.4**
IDE	**Isla Desecheo**	**0.83**	**200**			**Pb**	**21 16 41.4**	**-1.1**
IDE						**Sb**	**21 16 53.7**	**+0.4**
IDE	**Isla Desecheo**	**0.83**	**200**	⇓*i*P		**Pb**	**21 16 41.4**	**-1.1**
IDE	**Isla Desecheo**	**0.83**	**200**	*e*S		**Sb**	**21 16 53.7**	**+0.4**
AOPR	**Arecibo Observ**	**0.91**	**154**			**Pb**	**21 16 41.3**	**-2.6**
AOPR						**Sn**	**21 16 56.4**	**+0.2**
AOPR				IAML			21 17 10.3	
	comp=N,160nm,0.3s							
AOPR	**Arecibo Observ**	**0.91**	**154**	*e*Pg		**Pn**	**21 16 43.1**	**-0.8**
AOPR				⇑*e*Sg		**Sn**	**21 16 56.7**	**+0.5**
AOPR				IAML			21 17 02.9	
	comp=N,134nm,0.5s							
AOPR	**Arecibo Observ**	**0.91**	**154**	⇑*i*P		**Pn**	**21 16 43.1**	**-0.8**
AOPR	**Arecibo Observ**	**0.91**	**154**	*e*S		**Sn**	**21 16 56.8**	**+0.5**
LSP	**Las Mesas**	**0.99**	**175**			**Pn**	**21 16 44.2**	**-0.8**
LSP						**Sn**	**21 16 59.7**	**+1.5**
LSP	**Las Mesas**	**0.99**	**175**	⇑*e*P		**Pn**	**21 16 44.2**	**-0.8**
LSP	**Las Mesas**	**0.99**	**175**	*e*S		**Sn**	**21 16 59.7**	**+1.5**
UUPR	**Utuado, UPR, P**	**1.01**	**154**			**Pb**	**21 16 45.4**	**-0.2**
UUPR	**Utuado, UPR, P**	**1.01**	**154**	⇑*e*P		**Pb**	**21 16 45.4**	**-0.2**
ECPR	**Experimental S**	**1.14**	**137**	⇓*i*P		**Pb**	**21 16 48.0**	**+0.1**
ECPR	**Experimental S**	**1.14**	**137**	*e*S		**Sb**	**21 17 05.3**	**+3.0**
CRPR	**Cabo Rojo, PR**	**1.16**	**177**			**Pn**	**21 16 46.5**	**-0.7**
CRPR						**Sn**	**21 17 02.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.16**	**177**	IAML			21 17 04.2	
	comp=N,77nm,0.3s							
CRPR				IAML			21 17 06.9	
	comp=E,76nm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.16**	**177**	⇓*e*Pg		**Pn**	**21 16 46.4**	**-0.9**
CRPR				⇑*e*Sg		**Sb**	**21 17 03.2**	**+0.5**
CRPR				IAML			21 17 07.0	
	comp=N,87nm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.16**	**177**	⇑*e*P		**Pn**	**21 16 46.5**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.16**	**177**	*e*S		**Sn**	**21 17 02.4**	**+0.2**
MLPR	**Magueyes Islan**	**1.20**	**174**	⇑*e*Pg		**Pn**	**21 16 47.2**	**-0.7**
MLPR				⇑*e*Sg		**Sb**	**21 17 05.5**	**+1.6**
MLPR				IAML			21 17 07.9	
	comp=N,19nm,0.5s							
MLPR	**Magueyes Islan**	**1.20**	**174**	⇑*i*P		**Pn**	**21 16 47.2**	**-0.7**
MLPR	**Magueyes Islan**	**1.20**	**174**	*e*S		**Sn**	**21 17 03.7**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.22**	**167**			**Pb**	**21 16 48.5**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.22**	**167**	⇑*e*P		**Pb**	**21 16 48.5**	**-0.6**
OBIP	**Obispado Ponce**	**1.24**	**154**			**Pb**	**21 16 48.4**	**-1.1**
OBIP				IAML			21 17 06.5	
	comp=E,69nm,0.4s							
OBIP				IAML			21 17 11.8	
	comp=N,74nm,0.5s							
OBIP	**Obispado Ponce**	**1.24**	**154**			**Sb**	**21 17 05.7**	**+0.5**
OBIP	**Obispado Ponce**	**1.24**	**154**	⇑*e*P		**Pb**	**21 16 48.6**	**-1.0**
OBIP	**Obispado Ponce**	**1.24**	**154**	*e*S		**Sb**	**21 17 05.7**	**+0.5**
PCDR	**Punta Cana, DR**	**1.31**	**241**	⇑*e*Pg		**Pb**	**21 16 49.7**	**-1.1**
PCDR				⇑*e*Sg		**Sb**	**21 17 09.4**	**+2.2**
PCDR				IAML			21 17 32.2	
	comp=N,112nm,1.5s							
GCPR	**Guaynabo City**	**1.34**	**129**			**Pb**	**21 16 49.7**	**-1.6**
GCPR						**Sb**	**21 17 08.6**	**+0.5**
GCPR	**Guaynabo City**	**1.34**	**129**	⇓*e*P		**Pb**	**21 16 49.7**	**-1.6**
GCPR	**Guaynabo City**	**1.34**	**129**	*e*S		**Sb**	**21 17 08.6**	**+0.5**
SJG	**San Juan**	**1.43**	**137**			**Pb**	**21 16 51.8**	**-1.0**
SJG				IAML			21 17 16.8	
	comp=N,63nm,0.2s							
SJG				IAML			21 17 18.1	
	comp=N,45nm,0.3s							
SJG	**San Juan**	**1.43**	**137**	⇓*e*P		**Pb**	**21 16 51.9**	**-0.9**
SJG	**San Juan**	**1.43**	**137**	*e*S		**Sb**	**21 17 13.2**	**+2.6**
HIDR	**Higuey Centro**	**1.57**	**249**	⇑*e*Pg		**Pn**	**21 16 52.5**	**-0.4**
HIDR				⇑*e*Sg		**Sb**	**21 17 16.1**	**+1.6**
HIDR				IAML			21 17 49.0	
	comp=N,113nm,0.2s							
HUMP	**Col San Antoni**	**1.62**	**129**			**Pb**	**21 16 54.7**	**-1.3**
HUMP						**Sb**	**21 17 17.9**	**+1.9**
HUMP	**Col San Antoni**	**1.62**	**129**	IAML			21 17 23.3	
	comp=E,51nm,0.2s							
HUMP	**Col San Antoni**	**1.62**	**129**	⇓*e*P		**Pb**	**21 16 54.7**	**-1.3**
HUMP	**Col San Antoni**	**1.62**	**129**	*e*S		**Sb**	**21 17 17.9**	**+1.9**
MIDR	**Miches**	**1.78**	**264**	⇑*e*Pg		**Pn**	**21 16 55.3**	**-0.6**
MIDR				IAML			21 17 26.4	
	comp=N,50nm,2.5s							
MIDR	**Miches**	**1.78**	**264**	⇓*e*P		**Pn**	**21 16 55.7**	**-0.1**
DR12	**Loma Pena Alta**	**2.12**	**260**	Pn		**Pn**	**21 17 00.3**	**-0.3**
HATOM	**Hato Mayor del**	**2.12**	**260**	⇑*e*Pg		**Pn**	**21 17 00.1**	**-0.5**
HATOM				⇑*e*Sg		**Sb**	**21 17 29.8**	**-0.6**
HATOM				IAML			21 17 38.7	
	comp=N,23nm,1.9s							
BANI	**BANI**	**3.11**	**256**	Pn		**Pn**	**21 17 14.5**	**+0.2**
SDDR	**Presa de Saban**	**3.89**	**268**			**Pn**	**21 17 25.2**	**+0.3**
SDDR	**Presa de Saban**	**3.89**	**268**	⇓*e*P		**Pn**	**21 17 25.8**	**+0.8**

*IDC **22** 21:42:36.3±2.1, 5.°68S×103.°80E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=106.5km s-min=17.5km az=54.0*
*NEIC **22** 21:42:48.5±1.7, 5.°53S±0.°09×104.°3E±0.°1, h88km±6km, mb4.1/9, Error ellipse: s-maj=21.3km s-min=12.5km az=70.0*
*DJA **22** 21:42:49.4±0.3, 6.°S±3.°×10.°4E±.°, h51km±8km, M4.2/16, mb4.5/2, MLv4.0/16*

ISC 22 21:42:49.1±0.6, 5.°55S±0.°07×104.°27E±0.°07, h100km, n53, σ1s24/46, mb3.9/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KASI	**Kota Agung**	**0.23**	**83**	P		**Pn**	**21 43 00.8**	**-2.5**
LWLI	**Liwa**	**0.57**	**338**	P		**Pn**	**21 43 03.9**	**-1.7**
LWLI				S		**Sn**	**21 43 14.7**	**-3.1**
KLI	**Kotabumi**	**0.90**	**40**	P		**Pn**	**21 43 07.8**	**-0.6**
KLI				S		**Sn**	**21 43 16.6**	**-1.4**
BLSI	**Bandar Lampung**	**0.99**	**79**	P		**Pn**	**21 43 08.3**	**-1.0**
BLSI				S		**Sn**	**21 43 22.6**	**-2.0**
MDSI	**Maura Dua**	**1.06**	**355**	P		**Pn**	**21 43 09.6**	**-0.6**
MDSI				S		**Sn**	**21 43 24.8**	**-1.3**
SBJI	**Serang**	**1.93**	**107**	P		**Pn**	**21 43 20.9**	**+0.1**
KSI	**Kapahiang**	**2.52**	**318**	P		**Pn**	**21 43 28.2**	**-0.3**
DBJI	**Dramaga**	**2.66**	**112**	P		**Pn**	**21 43 30.3**	**0.0**
SKJI	**Sukabumi**	**2.69**	**123**	P		**Pn**	**21 43 30.3**	**-0.4**
MASI	**Maura Aman, Be**	**3.14**	**320**	P		**Pn**	**21 43 37.9**	**+1.2**
CNJI	**Cibinong**	**3.33**	**122**	P		**Pn**	**21 43 39.4**	**+0.1**
TPI	**Tanjungpandan**	**4.37**	**51**	P		**Pn**	**21 43 54.1**	**+0.8**
PPSI	**Pulau Pagai**	**5.07**	**303**	P		**Pn**	**21 44 01.6**	**-1.2**
	0.4nm102nm,1.1s							
UGM	**Wanagama**	**6.64**	**111**	Pn		**Pn**	**21 44 24.8**	**+0.7**
JAGI	**Jajag, Banyuwa**	**10.23**	**107**			**Pn**	**21 45 12.4**	**-0.5**
TOLI2	**Tolitoli**	**17.77**	**69**	P		**Pn**	**21 46 50.1**	**0.0**
SOEI	**Soe**	**20.25**	**103**	P		**P**	**21 47 15.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**24.31**	**123**	P		**P**	**21 47 56.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**24.43**	**348**	P		**P**	**21 47 57.3**	**-1.2**
	0.5nm,0.7s,baz=182,slow=9.6,SNR=5.3							
	0.5nm,0.7s							
KNRA	**Kununurra**	**26.06**	**115**	P		**P**	**21 48 12.8**	**-0.6**
KNRA				IAmb		IAmb	21 48 21.1	
	comp=Z,3.5nm,0.4s							
MTN	**Manton Dam**	**27.47**	**107**			**P**	**21 48 23.3**	**-2.7**
MTN				IAmb		IAmb	21 48 32.9	
	comp=Z,2.7nm,0.3s							
H01W3	**Cape Leeuwin H**	**30.58**	**164**	T		T	22 21 00.8	
	baz=342,slow=76,SNR=4.3							
H01W1	**Cape Leeuwin H**	**30.59**	**164**	T		T	22 20 58.7	
	baz=342,slow=76,SNR=5.0							
H01W2	**Cape Leeuwin H**	**30.59**	**164**	T		T	22 21 02.3	
	baz=342,slow=76,SNR=4.3							
H08S2	**Diego Garcia H**	**31.63**	**264**	T		T	22 22 49.3	
	baz=88,slow=76,SNR=14							
H08S3	**Diego Garcia H**	**31.64**	**264**	T		T	22 22 46.4	
	baz=88,slow=76,SNR=15							
H08S1	**Diego Carcia H**	**31.65**	**264**	T		T	22 22 42.0	
	baz=88,slow=76,SNR=14							
WB0	**Warramunga Arr**	**32.52**	**118**	P		**P**	**21 49 09.7**	**-1.0**
WB0				IAmb		IAmb	21 49 21.1	
	comp=Z,0.5nm,0.4s							
WRA	**Warramunga Arr**	**32.54**	**119**	P		**P**	**21 49 11.8**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=288,slow=9.9,SNR=19							
	comp=Z,0.4nm,0.4s							
WRA	**Warramunga Arr**	**32.54**	**119**	P		**P**	**21 49 12.4**	**+1.5**
WR8	**Warramunga Arr**	**32.69**	**119**	P		**P**	**21 49 11.9**	**-0.3**
WR8				IAmb		IAmb	21 49 19.0	
	comp=Z,1.4nm,0.3s							
AS31	**Alice Springs**	**33.73**	**125**	P		**P**	**21 49 22.1**	**+0.9**
AS31				IAmb		IAmb	21 49 31.0	
	comp=Z,1.2nm,0.4s							
ASAR	**Alice Springs**	**33.73**	**125**	P		**P**	**21 49 22.8**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=294,slow=8.0,SNR=7.5							
	comp=Z,0.3nm,0.4s							
COEN	**Coen**	**39.19**	**105**	P		**P**	**21 50 07.1**	**-0.6**
STKA	**Stephens Creek**	**43.62**	**132**	P		**P**	**21 50 45.1**	**+1.4**
	comp=Z,1.7nm,0.5s,baz=320,slow=8.9,SNR=3.8							
	comp=Z,1.7nm,0.5s							
SONM	**Songino Array**	**53.19**	**2**	P		**P**	**21 51 58.1**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=183,slow=10,SNR=4.5							
SONM				PcP		**PcP**	**21 53 04.4**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=196,slow=2.5,SNR=2.1							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**55.64**	**342**	P		**P**	**21 52 13.9**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=151,slow=8.7,SNR=5.8							
	comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**55.64**	**342**	P		**P**	**21 52 13.7**	**-0.9**
KURBB	**Kurchatov Arra**	**60.20**	**341**	P		**P**	**21 52 44.5**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=150,slow=7.4,SNR=3.9							
	comp=Z,0.5nm,0.9s							
H04N2	**CROZET ISLANDS**	**60.63**	**219**	T		T	22 58 59.0	
	baz=66,slow=75,SNR=78							
H04N1	**CROZET ISLANDS**	**60.64**	**219**	T		T	22 58 59.4	
	baz=66,slow=75,SNR=288							
H04N3	**CROZET ISLANDS**	**60.64**	**219**	T		T	22 58 58.1	
	baz=66,slow=75,SNR=120							
H04S1	**CROZET ISLANDS**	**60.85**	**218**	T		T	22 59 07.4	
	baz=64,slow=75,SNR=17							
H04S3	**CROZET ISLANDS**	**60.86**	**219**	T		T	22 59 06.8	
	baz=64,slow=75,SNR=17							
H04S2	**CROZET ISLANDS**	**60.86**	**218**	T		T	22 59 07.8	
	baz=64,slow=75,SNR=25							
ZALV	**Zalesovo Beam**	**61.49**	**347**	P		**P**	**21 52 55.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=179,slow=5.4,SNR=3.9							
	comp=Z,0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**61.49**	**347**	P		**P**	**21 52 55.4**	**+0.3**
AB31	**Akbulak array**	**66.80**	**330**	P		**P**	**21 53 30.2**	**+0.3**
ABKAR	**Akbulak array**	**66.80**	**330**	P		**P**	**21 53 30.1**	**+0.2**
VNDA	**Vanda**	**77.89**	**169**	P		**P**	**21 54 35.8**	**+0.5**
QSPA	**South Pole Qui**	**84.43**	**180**	P		**P**	**21 55 11.3**	**+1.0**
FINES	**FINESS Array B**	**89.22**	**332**	P		**P**	**21 55 34.1**	**+0.6**
	comp=Z,4.3nm,1.0s,baz=188,slow=9.5,SNR=3.5							
	comp=Z,

KSU1				Pg	Pg	21 55 03.1	-1.0	
KSU1				lAmb_Lg		21 55 50.7		
	comp=Z,336nm,0.9s							
U38A	**Gravette**	**3.06**	**87**	lAmb_Lg		21 55 49.0		
	comp=Z,231nm,0.7s							
AMTX	**Amarillo**	**3.20**	**244**	lAmb_Lg		21 55 47.9		
	comp=Z,274nm,1.0s							
DKNS	**Dickens**	**3.48**	**221**	lAmb_Lg		21 56 01.3		
	comp=Z,254nm,0.8s							
PLPT	**Palo Pinto**	**3.50**	**182**	lAmb_Lg		21 55 56.6		
	comp=Z,197nm,0.9s							
SN07	**Snyder 07**	**3.92**	**216**	lAmb_Lg		21 56 12.8		
	comp=Z,262nm,0.7s							
MIAR	**Mount Ida**	**4.15**	**114**	lAmb_Lg		21 56 27.2		
	comp=Z,207nm,0.8s							
POST	**Post**	**4.25**	**221**	lAmb_Lg		21 56 27.6		
	comp=Z,205nm,0.8s							
KSCO	**Kaye Shedlock'**	**4.44**	**309**	lAmb_Lg		21 56 39.2		
	comp=Z,253nm,0.8s							
237A	**Washetta, Mont**	**4.73**	**155**	lAmb_Lg		21 56 42.5		
	comp=Z,158nm,0.7s							
MGMO	**Mountain Grove**	**4.81**	**78**	lAmb_Lg		21 56 42.3		
	comp=Z,162nm,0.8s							
WHAR	**Wooly Hollow**	**4.89**	**100**	lAmb_Lg		21 56 53.7		
	comp=Z,149nm,0.9s							
WLAR	**White Oak Lake**	**4.91**	**121**	lAmb_Lg		21 56 48.3		
	comp=Z,155nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.91**	**93**	lAmb_Lg		21 56 45.1		
	comp=Z,102nm,0.9s							
UALR	**University of**	**4.99**	**106**	lAmb_Lg		21 56 57.9		
	comp=Z,165nm,1.1s							
SGCY	**Sterling City**	**5.03**	**210**	lAmb_Lg		21 56 49.3		
	comp=Z,238nm,0.8s							
BRDY	**Brady**	**5.07**	**188**	lAmb_Lg		21 56 53.6		
	comp=Z,177nm,0.9s							
T25A	**Trinidad**	**5.08**	**281**	lAmb_Lg		21 56 55.6		
	comp=Z,151nm,0.8s							
R40A	**Maddies Statio**	**5.10**	**66**	lAmb_Lg		21 56 53.6		
	comp=Z,140nm,0.8s							
Z41A	**Richland Creek**	**5.37**	**123**	lAmb_Lg		21 57 10.1		
	comp=Z,166nm,0.8s							
NATX	**Nacogdoches**	**5.40**	**146**	lAmb_Lg		21 57 11.1		
	comp=Z,115nm,0.9s							
OGNE	**Ogallala**	**5.52**	**328**	lAmb_Lg		21 57 07.6		
	comp=Z,205nm,0.7s							
LCAR	**Lake Charles**	**5.68**	**90**	lAmb_Lg		21 57 11.0		
	comp=Z,87nm,0.9s							
CCAR	**Cane Creek**	**5.76**	**113**	lAmb_Lg		21 57 20.4		
	comp=Z,112nm,0.7s							
CCM	**Cathedral Cave**	**5.79**	**71**	lAmb_Lg		21 57 15.3		
	comp=Z,152nm,0.7s							
Q24A	**Divide**	**6.13**	**298**	lAmb_Lg		21 57 24.6		
	comp=Z,73nm,0.8s							
FVM	**French Village**	**6.41**	**73**	lAmb_Lg		21 57 31.9		
	comp=Z,141nm,0.7s							
143A	**Socs Landing,**	**6.65**	**121**	lAmb_Lg		21 57 39.3		
	comp=Z,77nm,0.8s							
ISCO	**Idaho Springs**	**6.82**	**303**	lAmb_Lg		21 57 48.9		
	comp=Z,89nm,1.1s							
ANMO	**Albuquerque**	**6.89**	**261**	Pn	**Pn**	**21 55 48.0**	**+1.6**	
	comp=Z,0.1nm,0.3s,baz=39,slow=20,SNR=1.6							
ANMO				Pg	Pb	21 56 10.1	+4.8	
	comp=Z,0.6nm,0.3s,baz=168,slow=18,SNR=11							
ANMO				Lg	Lg	21 57 39.5		
	comp=Z,4.3nm,0.3s,baz=72,slow=22,SNR=5.6							
TASM	**ASL Pad, Albuq**	**6.89**	**261**	lAmb_Lg		21 57 58.0		
	comp=Z,33nm,0.7s							
TASM	**ASL Pad, Albuq**	**6.89**	**261**	lAmb_Lg		21 57 58.1		
	comp=Z,32nm,0.8s							
CGM3	**Cape Girardeau**	**6.90**	**79**	lAmb_Lg		21 57 43.3		
	comp=Z,136nm,0.7s							
EF04	**Eagle Ford 04**	**7.09**	**177**	lAmb_Lg		21 57 51.7		
	comp=Z,122nm,0.7s							
HALT	**Halls**	**7.16**	**91**	lAmb_Lg		21 58 05.1		
	comp=Z,135nm,0.9s							
N41A	**Harden Midland**	**7.22**	**50**	lAmb_Lg		21 58 06.3		
	comp=Z,117nm,0.7s							
S44A	**Carbondale**	**7.26**	**76**	lAmb_Lg		21 57 57.0		
	comp=Z,118nm,0.8s							
SIUC	**Southern Illin**	**7.30**	**76**	lAmb_Lg		21 57 56.1		
	comp=Z,144nm,0.9s							
OXF	**Oxford**	**7.38**	**102**	lAmb_Lg		21 58 07.9		
	comp=Z,59nm,0.7s							
735A	**Kenedy**	**7.45**	**178**	lAmb_Lg		21 58 21.8		
	comp=Z,122nm,0.9s							
Y45A	**Yeager Farm, C**	**7.48**	**107**	lAmb_Lg		21 58 22.4		
	comp=Z,65nm,0.9s							
ECSD	**EROS Data Cent**	**7.50**	**9**	lAmb_Lg		21 58 19.2		
	comp=Z,59nm,0.9s							
VBMS	**Vicksburg**	**7.54**	**121**	lAmb_Lg		21 58 21.9		
	comp=Z,55nm,1.1s							
MNTX	**Cornudas Mount**	**7.55**	**234**	lAmb_Lg		21 58 12.3		
	comp=Z,57nm,0.9s							
833A	**Chaparral WMA,**	**8.04**	**188**	lAmb_Lg		21 58 28.2		
	comp=Z,92nm,0.8s							
TXAR	**Lajitas Array**	**8.36**	**215**	Pn	**Pn**	**21 56 06.8**	**+0.1**	
	comp=Z,1.6nm,0.3s,baz=37,slow=10,SNR=78							
TXAR				Pg	**Pb**	**21 56 31.8**	**+1.4**	
	comp=Z,1.1nm,0.3s,baz=44,slow=12,SNR=6.0							
TXAR				Sn	**Sn**	**21 57 40.4**	**-0.4**	
	comp=Z,2.2nm,0.3s,baz=48,slow=19,SNR=4.3							
TXAR				Lg	Lg	21 58 26.9		
	comp=Z,4.5nm,0.3s,baz=42,slow=28,SNR=7.2							
I37A	**Lemond, Waseca**	**8.51**	**24**	lAmb_Lg		21 58 43.2		
	comp=Z,84nm,0.8s							
L42A	**Oliver, Polo**	**8.71**	**47**	lAmb_Lg		21 58 58.4		
	comp=Z,101nm,0.8s							
RSSD	**Black Hills**	**8.99**	**332**	lAmb_Lg		21 59 10.5		
	comp=Z,77nm,0.8s							
K22A	**Casper**	**9.04**	**317**	lAmb_Lg		21 59 10.0		
	comp=Z,112nm,1.0s							
I40A	**Norwalk**	**9.52**	**35**	lAmb_Lg		21 59 12.3		
	comp=Z,66nm,0.9s							
F33A	**5 Mile Ranch,**	**9.62**	**8**	lAmb_Lg		21 59 13.9		
	comp=Z,43nm,1.0s							
SPMN	**Marine on St.**	**9.78**	**23**	lAmb_Lg		21 59 17.9		
	comp=Z,70nm,1.1s							
PDAR	**Pinedale Array**	**10.89**	**310**	Pn	**Pn**	**21 56 40.5**	**-1.0**	
	comp=Z,0.7nm,0.5s,baz=124,slow=15,SNR=5.7							
PDAR				Pg		21 57 25.3		
	comp=Z,0.8nm,0.3s,baz=116,slow=16,SNR=7.0							
PDAR				Lg	Lg	21 59 39.3		
	comp=Z,0.6nm,0.3s,baz=124,slow=20,SNR=3.7							
TKL	**Tuckaleechee C**	**11.68**	**89**	Pn	**Pn**	**21 56 52.1**	**0.0**	
	comp=Z,0.2nm,0.3s,baz=334,slow=7.6,SNR=2.5							
TKL				Lg	Lg	22 00 06.7		
	comp=Z,1.9nm,0.3s,baz=289,slow=18,SNR=5.0							
	comp=Z,2.0nm,0.5s							
TZTN	**Tazewell**	**11.78**	**85**	Pn	**Pn**	**21 56 54.9**	**+1.5**	
Q51A	**Peebles**	**12.05**	**73**		**Pn**	**21 56 56.8**	**-0.3**	
ULM	**Lac du Bonnet**	**14.03**	**6**	Pn	Pn	21 57 18.6	-5.4	
	comp=Z,0.4nm,0.3s,baz=167,slow=14,SNR=1.3							
ULM				Sn	Sn	21 59 45.4	-14	
	comp=Z,0.3nm,0.3s,baz=112,slow=19,SNR=1.5							
ULM				Lg	Lg	22 01 15.2		
	comp=Z,0.3nm,0.3s,baz=136,slow=12,SNR=3.0							
	comp=Z,1.7nm,0.5s							
SADO	**Sadowa**	**16.72**	**54**	Pn	**Pn**	**21 57 55.0**	**-4.4**	
	comp=Z,0.3nm,0.3s,baz=290,slow=5.7,SNR=2.4							
SADO				Sn	Sn	22 00 52.5	-12	
	comp=Z,0.4nm,0.3s,baz=267,slow=16,SNR=1.2							
SADO				Lg	Lg	22 02 39.1		
	comp=Z,0.5nm,0.3s,baz=174,slow=12,SNR=1.1							
	comp=Z,8.0nm,0.9s							
CMIG	**Matias Romero**	**19.37**	**170**	P	**Pn**	**21 58 35.2**	**+2.9**	
	comp=Z,0.1nm,0.3s,baz=17,slow=13,SNR=1.9							
	comp=Z,1.0nm,0.3s							
YBH	**Yreka Blue Hor**	**19.79**	**293**	P	**Pn**	**21 58 37.2**	**0.0**	
	baz=172,slow=16,SNR=2.9							
YKA	**Yellowknife Ar**	**28.12**	**344**	P	**P**	**21 59 56.7**	**-0.3**	
	comp=Z,0.3nm,0.6s,baz=201,slow=8.6,SNR=2.1							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**40.43**	**330**	P	**P**	**22 01 44.0**	**+0.7**	
	comp=Z,0.6nm,0.8s,baz=111,slow=7.9,SNR=6.2							
	comp=Z,0.6nm,0.8s							
ZALV	**Zalesovo Beam**	**90.06**	**358**	P	**P**	**22 07 03.4**	**-1.4**	
	comp=Z,0.5nm,0.6s,baz=358,slow=10,SNR=3.8							
	comp=Z,0.5nm,0.6s							

NEIC 22 21:54:49.6±0.8, 36.290N±0.008×98.20W±0.01, h5km±1km, mb_Lg3.6/103, ML3.6/7, ML3.5/24, Error ellipse: s-maj=2.2km s-min=1.5km az=58.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.28**	**39**		Pg	21 54 55.2	+0.2
CROK					Sb	21 55 00.8	-1.3
CROK				IAML		21 55 02.1	
	comp=E,7μm,0.5s						
CROK				IAML		21 55 04.1	
	comp=N,7μm,0.6s						
GC02	**Grant County #**	**0.62**	**26**		Pg	21 54 60.0	-1.7
GC02					Sg	21 55 10.3	+0.6
KAN14	**Manchester OK**	**0.69**	**16**		Pg	21 55 01.3	-1.7
KAN14					Sg	21 55 12.6	+0.6
BLOK	**Blackwell**	**0.92**	**59**	Pg	Pg	21 55 07.0	-0.3
ADOK	**Arcadia Dam**	**0.93**	**133**	Pg	Pb	21 55 07.8	-0.4
KAN08	**Anthony NE Sta**	**0.95**	**11**	Pg	Pg	21 55 04.7	-3.3
KAN08				IAML		21 55 32.7	
	comp=N,1μm,0.4s						
OK048	**Pawnee Station**	**1.02**	**83**	Pg	Pg	21 55 08.8	-0.4
OK051	**E0350 and S346**	**1.12**	**79**	Pg	Pg	21 55 11.1	0.0
OK052	**Battle Ridge R**	**1.17**	**104**	Pg	Pg	21 55 11.6	-0.5
WMOK	**Wichita Mounta**	**1.62**	**197**	lAmb_Lg		21 55 43.5	
	comp=Z,544nm,0.7s						
AMTX	**Amarillo**	**3.17**	**245**	lAmb_Lg		21 56 32.0	
	comp=Z,177nm,0.7s						
APMT	**Aspermont**	**3.35**	**209**	lAmb_Lg		21 56 39.1	
	comp=Z,116nm,0.8s						
DKNS	**Dickens**	**3.44**	**221**	lAmb_Lg		21 56 45.0	
	comp=Z,145nm,0.9s						
SN07	**Snyder 07**	**3.89**	**216**	lAmb_Lg		21 56 54.8	
	comp=Z,123nm,0.8s						
Z38A	**Mt. Pleasant**	**4.02**	**138**	lAmb_Lg		21 57 02.1	
	comp=Z,172nm,0.8s						
MIAR	**Mount Ida**	**4.16**	**113**	lAmb_Lg		21 57 05.3	
	comp=Z,135nm,1.0s						
POST	**Post**	**4.21**	**221**	lAmb_Lg		21 57 07.6	
	comp=Z,142nm,0.8s						
237A	**Washetta, Mont**	**4.71**	**154**	lAmb_Lg		21 57 20.3	
	comp=Z,97nm,0.8s						
X40A	**Basin Creek Fa**	**4.74**	**111**	lAmb_Lg		21 57 24.2	
	comp=Z,84nm,0.9s						
MGMO	**Mountain Grove**	**4.84**	**78**	lAmb_Lg		21 57 32.0	
	comp=Z,70nm,0.7s						
WHAR	**Wooly Hollow**	**4.91**	**100**	lAmb_Lg		21 57 29.7	
	comp=Z,69nm,0.9s						
WLAR	**White Oak Lake**	**4.92**	**120**	lAmb_Lg		21 57 35.2	
	comp=Z,134nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.94**	**93**	lAmb_Lg		21 57 29.8	
	comp=Z,70nm,0.8s						
P38A	**Dawn**	**4.97**	**47**	lAmb_Lg		21 57 37.1	
	comp=Z,138nm,0.9s						
UALR	**University of**	**5.01**	**106**	lAmb_Lg		21 57 39.5	
	comp=Z,74nm,0.8s						
BRDY	**Brady**	**5.04**	**188**	lAmb_Lg		21 57 26.3	
	comp=Z,103nm,0.7s						
T25A	**Trinidad**	**5.06**	**281**	Pn	Pn	21 56 01.8	-4.6
T25A				lAmb_Lg		21 57 34.5	
	comp=Z,114nm,1.0s						
R40A	**Maddies Statio**	**5.13**	**65**	lAmb_Lg		21 57 35.7	
	comp=Z,71nm,0.9s						
Z41A	**Richland Creek**	**5.37**	**123**	lAmb_Lg		21 57 38.1	
	comp=Z,86nm,0.8s						
NATX	**Nacogdoches**	**5.39**	**146**	lAmb_Lg		21 57 43.7	
	comp=Z,70nm,0.8s						
435B	**Jarrell**	**5.52**	**174**	lAmb_Lg		21 57 54.0	
	comp=Z,131nm,0.7s						
OGNE	**Ogallala**	**5.53**	**328**	lAmb_Lg		21 57 55.3	
	comp=Z,119nm,0.8s						
CCAR	**Cane Creek**	**5.78**	**112**	lAmb_Lg		21 58 02.4	
	comp=Z,76nm,0.8s						
CCM	**Cathedral Cave**	**5.83**	**70**	lAmb_Lg		21 57 58.8	
	comp=Z,88nm,0.9s						
P40A	**Paris**	**5.84**	**55**	lAmb_Lg		21 58 01.7	
	comp=Z,113nm,0.8s						
FVM	**French Village**	**6.44**	**72**	lAmb_Lg		21 58 15.7	
	comp=Z,73nm,0.8s						
143A	**Socs Landing,**	**6.65**	**121**	lAmb_Lg		21 58 31.6	
	comp=Z,61nm,0.7s						
TASM	**ASL Pad, Albuq**	**6.86**	**261**	lAmb_Lg		21 58 42.1	
	comp=Z,20nm,0.7s						
TASM	**ASL Pad, Albuq**	**6.86**	**261**	lAmb_Lg		21 58 42.4	
	comp=Z,20nm,0.8s						
CGM3	**Cape Girardeau**	**6.93**	**79**	lAmb_Lg		21 58 27.6	
	comp=Z,69nm,0.8s						
EF04	**Eagle Ford 04**	**7.07**	**177**	lAmb_Lg		21 58 35.0	
	comp=Z,112nm,0.7s						
N41A	**Harden Midland**	**7.25**	**50**	lAmb_Lg		21 58 53.7	
	comp=Z,91nm,0.8s						
S44A	**Carbondale**	**7.29**	**76**	lAmb_Lg		21 58 42.5	
	comp=Z,100nm,1.0s						
SIUC	**Southern Illin**	**7.33**	**76**	lAmb_Lg		21 58 44.5	
	comp=Z,76nm,0.8s						
OXF	**Oxford**	**7.39**	**101**	lAmb_Lg		21 58 57.5	
	comp=Z,74nm,1.0s						
Y45A	**Yeager Farm, C**	**7.50**	**106**	lAmb_Lg		21 58 48.6	
	comp=Z,46nm,0.9s						
MNTX	**Cornudas Mount**	**7.52**	**235**	lAmb_Lg		21 58 56.3	
	comp=Z,41nm,0.8s						
Y22A	**Socorro**	**7.56**	**254**	lAmb_Lg		21 59 08.9	
	comp=Z,37nm,0.7s						
EPT	**El Paso**	**8.23**	**239**	lAmb_Lg		21 59 15.1	
	comp=Z,37nm,1.0s						
HAYD	**Hayden**	**8.27**	**303**	lAmb_Lg		21 59 25.6	
	comp=Z,33nm,1.0s						
121A	**Cookes Peak, D**	**8.76**	**247**	lAmb_Lg		21 59 43.3	
	comp=Z,34nm,1.1s						
RSSD	**Black Hills**	**9.00**	**332**	lAmb_Lg		21 59 46.6	
	comp=Z,46nm,0.9s						
JFWS	**Jewell Farm**	**9.02**	**40**	lAmb_Lg		21 59 37.5	
	comp=Z,69nm,0.9s						
F33A	**5 Mile Ranch,**	**9.65**	**8**	lAmb_Lg		21 59 48.0	
	comp=Z,25nm,0.9s						

RSNC 22 22:18:16.3±0.0, 7.N±1.×7.2W±., h64km±7km, M2.8, mB4.4, mb3.6, ML2.6, Mw(mB)3.6, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.98**	**320**	P	Pn	22 18 34.1	-0.6
PAMC				S	Sn	22 18 47.7	-0.6
BARC	**Barichara**	**1.11**	**270**	P	Pn	22 18 35.5	-0.7
BARC				S	Sn	22 18 50.6	-0.4
RUSC	**La Rusia**	**1.23**	**236**	P	Pn	22 18 37.4	-0.6
RUSC				S	Sn	22 18 52.9	-1.2
OCAC	**Ocana**	**2.06**	**323**	P	Pn	22 18 48.7	-0.1
OCAC				S	Sn	22 19 14.3	+0.8
SPBC	**San Pablo de B**	**2.21**	**245**	P	Pn	22 18 49.3	-1.4
SPBC				S	Sn	22 19 17.2	+0.2
PTGC	**Puerto Gaitan,**	**2.38**	**182**	P	Pn	22 18 51.9	-1.1
PTGC				S	Sn	22 19 19.1	-2.0
PTBC	**PUERTO BERRIO,**	**2.38**	**269**	P	Pn	22 18 51.2	-1.8
CHIC	**Chingaza**	**2.56**	**221**	P	Pn	22 18 56.2	+0.3
CHIC				S	Sn	22 19 23.7	-2.4
SDV	**Santo Domingo**	**2.68**	**32**	P	Pn	22 18 57.9	+0.6
SDV				S	Sn	22 19 27.6	-1.2
CVER	**Cruz Verde, Cu**	**2.87**	**224**	P	Pn	22 19 01.0	+0.9
CVER				S	Sn	22 19 33.2	-0.6
VILC	**Villavicencio,**	**2.95**	**214**	P	Pn	22 19 01.0	+0.1
VILC				S	Sn	22 19 33.2	-2.1
NORC	**Norcasia**	**2.97**	**250**	P	Pn	22 19 00.1	-1.1
NORC				S	Sn	22 19 36.7	+1.0
HELC	**Santa Helena**	**3.47**	**264**	P	Pn	22 19 07.2	-1.0
HELC				S	Sn	22 19 45.7	-2.6
GUY2C	**Guyana, Caldas**	**3.56**	**248**	P	Pn	22 19 09.8	+0.3
GUY2C				S	Sn	22 19 48.9	-1.7
PRAC	**Prado**	**4.01**	**225**	P	Pn	22 19 15.6	+0.3
PRAC				S	Sn	22 19 59.7	-1.4
URMC	**La Uribe, Meta**	**4.04**	**215**	P	Pn	22 19 16.8	+0.9
URMC				S	Sn	22 19 59.1	-3.0
ORTC	**Ortega, Tolima**	**4.14**	**230**	P	Pn	22 19 16.8	-0.3
ORTC				S	Sn	22 20 02.7	-1.7
SJCC	**San Jacinto, C**	**4.51**	**317**	P	Pn	22 19 22.5	+0.3
SJCC				S	Sn	22 20 13.8	+0.4
MACC	**Macarena, Meta**	**4.76**	**202**	P	Pn	22 19 23.7	-1.9
MACC				S	Sn	22 20 13.8	-5.7
URIC	**Uribia, Colomb**	**5.08**	**1**	P	Pn	22 19 27.4	-2.5
URIC				S	Sn	22 20 22.4	-4.9

DJA 22 22:24:29.5±0.6, 8.S±3.×10.8E±., h31km±7km, M4.0/10, mb4.5/1, MLv3.8/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**1.09**	**318**	P	Pn	22 24 48.7	+0.1
CNJI				S	Sn	22 25 02.8	+0.1
KPJI	**Karang Pucung**	**1.31**	**53**	P	Pn	22 24 52.2	+0.5
KPJI				S	Sb	22 25 09.9	-0.1
SKJI	**Sukabumi**	**1.71**	**310**	P	Pn	22 24 57.4	+0.2
SKJI				S	Sn	22 25 18.6	+0.6
PCJI	**Pacitan**	**3.27**	**92**	P	Pn	22 25 19.0	+0.3
PCJI				S	Sn	22 25 54.5	-2.2

*IDC **22** 22:27:11.9±1.1, 33.16N×92.92E, h0km, mb3.5/7, mbtmp3.6/11, ML3.6/4, MS3.0/6, Error ellipse: s-maj=45.9km s-min=18.3km az=59.0*

*NDI **22** 22:27:15.2±2.8, 33.33N×92.61E, h10km, ML3.7, MW3.5*

ISC 22 22:27:17.2±0.7, 33.19N±0.06×92.7E±0.1, h35km, n23, σ2s=04/27, mb3.6/6, MS3.1/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAWA	**Tawang**	**5.62**	**187**	*eP*	**Pn**	**22 28 42.5**	**+3.9**
TAWA				*eS*	**Sn**	**22 29 44.2**	**+2.1**
TAWA				IAML		22 29 48.2	
	comp=E,50nm,0.5s						
ZIRO	**ZIRO**	**5.74**	**169**	*eP*	**Pn**	**22 28 42.3**	**+2.3**
ZIRO				*eS*	**Sn**	**22 29 45.5**	**+0.7**
ZIRO				IAML		22 29 55.0	
	comp=N,218nm,0.9s						
ZIRO				IAML		22 30 01.0	
	comp=E,241nm,0.7s						
ITAN	**ITANAGAR**	**6.09**	**171**	*eP*	**Pn**	**22 28 48.9**	**+4.1**
ITAN				*eS*	**Sn**	**22 29 55.2**	**+1.9**
ITAN				IAML		22 30 12.8	
	comp=E,99nm,0.7s						
ITAN				IAML		22 30 15.1	
	comp=N,92nm,0.7s						
TEZP	**TEZPUR**	**6.55**	**179**	*eP*	**Pn**	**22 28 51.5**	**+0.4**
TEZP				*eS*	**Sn**	**22 30 04.3**	**-0.3**
TEZP				IAML		22 30 09.6	
	comp=N,18nm,0.2s						
TEZP				IAML		22 30 11.7	
	comp=E,20nm,0.2s						
GTK	**Tadong**	**6.82**	**212**	*eS*	**Sn**	**22 30 10.9**	**-0.6**
DHUB	**DHUBRI**	**7.51**	**199**	*eS*	**Sn**	**22 30 25.1**	**-3.0**
KOHI	**KOHIMA**	**7.55**	**170**	*eP*	**Pn**	**22 29 07.2**	**+2.3**
KOHI				*eS*	**Sn**	**22 30 27.4**	**-1.9**
KOHI				IAML		22 30 36.4	
	comp=E,53nm,0.6s						
KOHI				IAML		22 30 41.0	
	comp=N,69nm,0.9s						
SHL	**Shillong**	**7.62**	**185**	*eP*	**Pn**	**22 29 06.5**	**+0.5**
SHL				*eS*	**Sn**	**22 30 28.9**	**-2.4**
SHL				IAML		22 30 30.5	
	comp=E,150nm,0.5s						
SHL				IAML		22 30 31.8	
	comp=N,82nm,0.4s						
SAIH	**SAIHA**	**10.66**	**178**	*eP*	**Pn**	**22 29 47.4**	**-0.2**
SAIH				*eS*	**Sn**	**22 31 42.1**	**-3.7**
SAIH				IAML		22 31 54.5	
	comp=E,20nm,0.8s						
SAIH				IAML		22 31 55.0	
	comp=N,13nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.71**	**157**	Pn	**Pn**	**22 30 54.1**	**-1.9**
	comp=N,0.6nm,0.3s,baz=335,slow=12,SNR=4.4						
	comp=N,0.8nm,0.3s						
MKAR	**Makanchi Array**	**15.72**	**333**	Pn	**Pn**	**22 30 55.5**	**-0.5**
	baz=133,slow=14,SNR=3.4						
MKAR				LR	LR	22 37 57.3	
	comp=N,36nm,19.8s,baz=18,slow=41						
	comp=N,0.7nm,1.0s						
AAK	**Ala-Archa**	**17.13**	**309**	P	**P**	**22 31 16.8**	**+1.5**
	comp=N,0.1nm,0.3s,baz=84,slow=18,SNR=3.7						
AAK				LR	LR	22 37 43.0	
	comp=N,22nm,20.1s,baz=78,slow=36						
	comp=N,1.6nm,0.8s						
SONM	**Songino Array**	**17.93**	**31**	P	**P**	**22 31 23.5**	**-0.6**
	comp=N,0.2nm,0.3s,baz=222,slow=14,SNR=8.0						
	comp=N,0.5nm,0.9s						
KURBB	**Kurchatov Arra**	**20.29**	**333**	P	**P**	**22 31 49.2**	**-0.5**
	comp=N,1.1nm,0.9s,baz=145,slow=11,SNR=8.0						
	comp=N,1.1nm,0.9s						
ZALV	**Zalesovo Beam**	**21.49**	**347**	P	**P**	**22 32 03.5**	**+0.9**
	comp=N,1.4nm,0.7s,baz=146,slow=11,SNR=6.1						
	comp=N,1.4nm,0.7s						
BVAR	**Borovoye Array**	**25.46**	**328**	P	**P**	**22 32 43.5**	**+1.8**
	comp=N,1.6nm,0.7s,baz=145,slow=10,SNR=5.0						
BVAR				LR	LR	22 43 23.1	
	comp=N,47nm,19.1s,baz=160,slow=38						
	comp=N,1.6nm,0.7s						
JNU	**Nakatsue**	**31.88**	**79**	LR	LR	22 47 55.3	
	comp=N,23nm,21.4s,baz=348,slow=39						
ARTI	**Arti**	**33.05**	**325**	LR	LR	22 48 48.1	
	comp=N,47nm,18.4s,baz=173,slow=39						
MMAI	**Mount Meron Ar**	**47.43**	**286**	LR	LR	22 58 13.1	
	comp=N,30nm,20.8s,baz=2.5,slow=39						
NOA	**NORSAR Array B**	**57.55**	**325**	P	**P**	**22 37 02.7**	**-0.3**
	comp=N,0.7nm,0.7s,baz=80,slow=7.0,SNR=2.2						
	comp=N,0.7nm,0.7s						
WRA	**Warramunga Ar**	**66.14**	**137**	P	**P**	**22 38 01.9**	**+0.7**
	comp=N,0.5nm,0.9s,baz=339,slow=7.2,SNR=2.7						
	comp=N,0.5nm,0.9s						
ASAR	**Alice Springs**	**68.86**	**140**	P	**P**	**22 38 16.4**	**-1.9**
	comp=N,0.4nm,0.9s,baz=328,slow=6.5,SNR=4.6						
	comp=N,0.4nm,0.9s						
**IL

PEL **Peldehue** 0.67 228 Pn 22 27 49.7 0.0
PEL Sn **Sn** 22 28 03.9 +0.7
PEL Peldehue 0.67 228⇓ *eP* **Pn** 22 27 49.7 0.0
PEL *eS* **Sn** 22 28 03.0 -0.2
PEL IAML 22 28 05.3
comp=E,153µm,0.4s
PEL Peldehue 0.67 228 *eP* **Pn** 22 27 49.6 -0.1
PEL *eS* **Sn** 22 28 04.6 +1.4
PEL IAML 22 28 13.2
comp=Z,38µm,0.8s
MT10 Hacienda Santa 0.68 213⇓ *iP* **Pn** 22 27 50.3 +0.4
MT10 *eS* **Sn** 22 28 04.3 +0.6
MT10 IAML 22 28 06.4
comp=E,409µm,0.5s
MT04 Ro Olivares 0.70 183⇓ *eP* **Pn** 22 27 50.6 +0.3
MT04 *eS* **Sn** 22 28 04.4 +0.2
MT04 IAML 22 28 06.3
comp=E,38µm,0.5s
MT04 Ro Olivares 0.70 183 *eP* **Pn** 22 27 50.5 +0.3
MT04 *eS* **Sn** 22 28 05.5 +1.4
MT04 IAML 22 28 08.6
comp=Z,27µm,0.5s
MT08 Bocatoma Ro 0.75 175 **Pn** 22 27 51.0 +0.4
MT08 Sn **Sn** 22 28 05.8 +1.0
MT08 Bocatoma Ro 0.75 175⇓ *iP* **Pn** 22 27 51.1 +0.5
MT08 *eS* **Sn** 22 28 05.6 +0.7
MT08 IAML 22 28 11.7
comp=N,29µm,0.7s
MT08 Bocatoma Ro 0.75 175 *eP* **Pn** 22 27 51.0 +0.4
MT08 *eS* **Sn** 22 28 06.4 +1.6
MT08 IAML 22 28 09.6
comp=Z,24µm,0.9s
MT14 Cerro Cal¡n 0.79 208⇓ *eP* **Pn** 22 27 51.1 +0.3
MT14 *eS* **Sn** 22 28 06.0 +0.9
MT14 IAML 22 28 09.0
comp=E,197µm,0.4s
MT16 CCHEN 0.81 206 **Pn** 22 27 51.4 +0.4
MT16 **Sn** 22 28 06.1 +0.6
ROCH El Roble 0.82 250⇓ *eP* **Pn** 22 27 51.3 +0.1
ROCH *eS* **Sn** 22 28 05.9 0.0
ROCH IAML 22 28 09.3
comp=N,194µm,0.4s
ROC1 El Roble 0.82 250 *eP* **Pn** 22 27 50.6 -0.7
ROC1 *eS* **Sn** 22 28 06.6 +0.6
MT03 Universidad Ad 0.86 204 **Pn** 22 27 52.0 +0.4
MT03 Sn **Sn** 22 28 07.9 +1.4
MT03 Universidad Ad 0.86 204⇓ *iP* **Pn** 22 27 51.8 +0.3
MT03 Universidad Ad 0.86 204 *eP* **Pn** 22 27 51.9 +0.3
MT03 *eS* **Sn** 22 28 08.2 +1.7
MT05 Renca 0.88 218 **Pn** 22 27 51.9 +0.3
MT05 Sn **Sn** 22 28 07.9 +1.3
MT05 Renca 0.88 218⇓ *eP* **Pn** 22 27 52.0 +0.4
MT05 *eS* **Sn** 22 28 07.5 +0.9
MT05 IAML 22 28 09.1
comp=E,357µm,0.2s
MT05 Renca 0.88 218 *eP* **Pn** 22 27 51.6 +0.1
MT05 *eS* **Sn** 22 28 08.0 +1.3
MT15 Las Vizcachas 0.96 201 *eP* **Pn** 22 27 52.8 +0.3
MT15 IAML 22 28 12.3
comp=E,152µm,0.4s
CO04 Los Peladeros 0.99 311⇓ *eP* **Pn** 22 27 53.0 0.0
CO04 *eS* **Sn** 22 28 09.2 +0.2
CO04 IAML 22 28 13.3
comp=E,58µm,0.4s
ARCO CERRO ARCO 0.99 99 *eP* **Pn** 22 27 53.0 +0.2
ARCO *eS* **Sn** 22 28 10.0 +1.2
ARCO IAML 22 28 11.6
comp=Z,31µm,0.7s
VA06 Catapilco 1.02 277 **Pn** 22 27 52.8 -0.2
VA06 Catapilco 1.02 277⇓ *eP* **Pn** 22 27 52.8 -0.2
VA06 *eS* **Sn** 22 28 09.0 0.0
VA06 IAML 22 28 10.5
comp=E,166µm,0.4s
MT02 Curacav 1.04 237 **Pn** 22 27 53.0 -0.1
MT02 Curacav 1.04 237⇓ *iP* **Pn** 22 27 53.0 -0.1
MT02 *eS* **Sn** 22 28 09.2 -0.2
MT02 IAML 22 28 11.2
comp=N,41µm,0.5s
MT02 Curacav 1.04 237 *eP* **Pn** 22 27 53.0 -0.1
MT02 *eS* **Sn** 22 28 10.1 +0.7
MT02 IAML 22 28 13.3
comp=Z,25µm,0.4s
MT13 San Alfonso 1.05 189 **Pn** 22 27 54.1 +0.7
MT13 San Alfonso 1.05 189⇓ *eP* **Pn** 22 27 54.2 +0.7
MT13 IAML 22 28 14.4
comp=E,98µm,0.4s
MT13 San Alfonso 1.05 189 *eP* **Pn** 22 27 54.0 +0.5
MT13 *eS* **Sn** 22 28 11.8 +1.9
MT13 IAML 22 28 13.4
comp=Z,39µm,0.4s
ASAL Salagasta 1.07 85 *eP* **Pn** 22 27 53.8 +0.3
ASAL *eS* **Sn** 22 28 12.4 +2.3
RTLS Leoncito 1.12 37 *eP* **Pn** 22 27 55.2 +0.8
RTLS *eS* **Sn** 22 28 13.7 +2.2
RTLS IAML 22 28 16.5
comp=Z,46µm,1.0s
AAGR Agrelo 1.13 110 *eP* **Pn** 22 27 54.5 +0.2
LMEL Las Melosas 1.15 184 **Pn** 22 27 54.9 +0.4
LMEL Las Melosas 1.15 184⇓ *iP* **Pn** 22 27 55.1 +0.5
LMEL IAML 22 28 18.5
comp=N,45µm,0.4s
LMEL Las Melosas 1.15 184 *eP* **Pn** 22 27 55.3 +0.7
LMEL *eS* **Sn** 22 28 14.3 +2.5
LMEL IAML 22 28 19.6
comp=Z,25µm,0.3s
MT09 Talagante 1.31 215 **Pn** 22 27 56.4 +0.1
VA01 Torpederas 1.34 256 **Pn** 22 27 56.1 -0.4
VA01 Sn **Sn** 22 28 16.8 +1.4
VA01 Torpederas 1.34 256 *eP* **Pn** 22 27 56.3 -0.2
VA01 IAML 22 28 22.2
comp=N,58µm,0.4s
VA01 Torpederas 1.34 256 *eP* **Pn** 22 27 56.4 -0.1
VA01 *eS* **Sn** 22 28 16.5 +1.1
VA01 IAML 22 28 20.6
comp=Z,28µm,0.8s
BO04 La Punta 1.36 198 **Pn** 22 27 57.2 +0.5
BO04 Sn **Sn** 22 28 17.1 +1.3
BO04 La Punta 1.36 198⇑ *eP* **Pn** 22 27 57.3 +0.5
BO04 *eS* **Sn** 22 28 16.6 +0.8
BO04 IAML 22 28 18.1
comp=E,75µm,0.5s
MT01 Popeta 1.51 219 **Pn** 22 27 58.3 -0.2
MT01 Sn **Sn** 22 28 18.6 -0.3
MT01 Popeta 1.51 219⇑ *iP* **Pn** 22 27 58.3 -0.2
MT01 Popeta 1.51 219 *eP* **Pn** 22 27 58.3 -0.2
MT01 *eS* **Sn** 22 28 18.9 0.0
MT01 IAML 22 28 20.6
comp=Z,19µm,0.2s
AVIZ Vizcacheras 1.53 121 *eP* **Pn** 22 27 59.2 +0.3
VA05 Santo Domingo 1.59 233 **Pn** 22 27 59.2 -0.2
VA05 Sn **Sn** 22 28 19.3 -1.4
VA05 Santo Domingo 1.59 233⇑ *iP* **Pn** 22 27 59.3 -0.2
ZON Zonda 1.66 47 **Pn** 22 28 00.7 +0.2
ZON Zonda 1.66 47 P **Pn** 22 28 00.7 +0.2
ZON Zonda 1.66 47 *eP* **Pn** 22 28 00.6 +0.1
ZON *eS* **Sn** 22 28 23.7 +1.3
CO02 Combarbal 1.68 333 **Pn** 22 28 01.1 +0.3
CO02 Combarbal 1.68 333 *eP* **Pn** 22 28 01.1 +0.3
CO02 Combarbal 1.68 333 *eP* **Pn** 22 28 01.0 +0.3
CO02 *eS* **Sn** 22 28 24.1 +1.3
CO02 IAML 22 28 25.2
comp=Z,27µm,0.4s
SJA San Juan 1.75 49 *eP* **Pn** 22 28 01.6 0.0
SJA *eS* **Sn** 22 28 24.9 +0.6
SJA IAML 22 28 27.1
comp=Z,6µm,0.2s
BO01 Tunca 1.88 206 **Pn** 22 28 02.8 -0.3
BO01 Tunca 1.88 206⇑ *eP* **Pn** 22 28 02.8 -0.3
BO01 Tunca 1.88 206 *eP* **Pn** 22 28 02.2 -0.9
BO01 *eS* **Sn** 22 28 27.2 +0.2
BO01 IAML 22 28 37.3
comp=Z,6µm,0.5s
CFA Coronel Fontan 1.92 56 P **Pn** 22 28 03.5 -0.1
comp=Z,4µm,0.5s,baz=234,slow=13,SNR=9148
CFA S **Sn** 22 28 27.0 -1.0
comp=Z,4µm,0.4s,baz=143,slow=20,SNR=41
CFA Coronel Fontan 1.92 56 *eP* **Pn** 22 28 03.3 -0.3
CFA *eS* **Sn** 22 28 28.1 +0.1
CO03 El Pedregal 1.92 345 **Pn** 22 28 04.1 +0.3
CO03 El Pedregal 1.92 345⇑ *eP* **Pn** 22 28 04.5 +0.7
CO03 *eS* **Sn** 22 28 29.6 +1.4
CO03 El Pedregal 1.92 345 *eP* **Pn** 22 28 04.5 +0.7
CO03 *eS* **Sn** 22 28 30.0 +1.9
CO03 IAML 22 28 32.0
comp=Z,6µm,0.9s
RTLL Cerro Villicun 1.94 46⇑ *iP* **Pn** 22 28 04.1 +0.2
RTLL Cerro Villicun 1.94 46 *eP* **Pn** 22 28 04.0 +0.1
RTLL *eS* **Sn** 22 28 29.2 +0.7
RTLL IAML 22 28 30.2
comp=Z,12µm,1.0s
BO02 Sierra Bellavi 2.16 195 **Pn** 22 28 07.3 +0.5
BO02 Sierra Bellavi 2.16 195⇑ *eP* **Pn** 22 28 07.2 +0.5
BO02 Sierra Bellavi 2.16 195 *eP* **Pn** 22 28 06.9 +0.1
BO02 *eS* **Sn** 22 28 35.8 +2.2
BO02 IAML 22 28 38.8
comp=Z,11µm,0.5s
ACCO Cerro Coronel 2.28 23 *eP* **Pn** 22 28 09.1 +0.5
ACCO *eS* **Sn** 22 28 38.7 +1.9
BO03 Pichilemu 2.37 220⇑ *eP* **Pn** 22 28 08.1 -1.3
BO03 *eS* **Sn** 22 28 33.9 -4.4
BO03 IAML 22 28 44.0
comp=E,12µm,0.7s
CO06 Fray Jorge 2.41 327 **Pn** 22 28 09.8 0.0
CO06 Fray Jorge 2.41 327⇑ *eP* **Pn** 22 28 10.0 +0.1
RFA San Rafael 2.47 147 *eP* **Pn** 22 28 09.9 -0.9
RFA *eS* **Sn** 22 28 39.5 -1.2
RFA IAML 22 28 41.2
comp=Z,2µm,0.5s
ACAN Cantantal 2.49 81 *eP* **Pn** 22 28 10.0 -1.0
ACAN IAML 22 28 40.6
comp=Z,43µm,0.4s
ACAN IAML 22 28 43.5
comp=Z,39µm,0.7s
AROD Rodeo 2.58 12 *eP* **Pn** 22 28 13.7 +1.2
GO04 Tololo Observa 2.59 346 **Pn** 22 28 12.2 -0.3
GO04 Tololo Observa 2.59 346⇑ *eP* **Pn** 22 28 12.5 0.0
GO04 Tololo Observa 2.59 346 *eP* **Pn** 22 28 12.9 +0.4
GO04 *eS* **Sn** 22 28 42.9 -0.8
GO04 IAML 22 28 49.4
comp=Z,16µm,1.0s
ACDV Cuesta del Vie 2.66 19 *eP* **Pn** 22 28 14.7 +1.4
ACDV *eS* **Sn** 22 28 45.9 +0.7
ACDV IAML 22 28 47.8
comp=Z,6µm,1.1s
CO01 Juntas del Tor 2.71 0 **Pn** 22 28 15.5 +1.4
CO01 Juntas del Tor 2.71 0 *eP* **Pn** 22 28 15.6 +1.5
CO01 Juntas del Tor 2.71 0 *eP* **Pn** 22 28 15.4 +1.2
CO01 *eS* **Sn** 22 28 49.6 +2.9
GO05 Hualane 2.76 213⇑ *eP* **Pn** 22 28 13.3 -1.3
GO05 Hualane 2.76 213 *eP* **Pn** 22 28 13.8 -0.8
GO05 *eS* **Sn** 22 28 47.7 +0.2
GO05 IAML 22 28 53.6
comp=Z,6µm,1.4s
CO05 La Serena 2.94 340 **Pn** 22 28 16.3 -0.5
CO05 La Serena 2.94 340 *eP* **Pn** 22 28 16.6 -0.2
AVFE Valle Fertil 3.03 49 *eP* **Pn** 22 28 17.9 -0.3
AVFE *eS* **Sn** 22 28 53.2 -0.8
AVFE IAML 22 28 53.8
comp=Z,7µm,0.7s
EDS3 Malargue 3.12 170 *eP* **Pn** 22 28 20.4 +1.1
ML02 Panimavida 3.25 199 **Pn** 22 28 20.1 -0.8
ML02 Panimavida 3.25 199⇑ *eP* **Pn** 22 28 20.3 -0.6
ML02 Panimavida 3.25 199 *eP* **Pn** 22 28 20.3 -0.6
ML02 *eS* **Sn** 22 28 57.9 -1.0
ML02 IAML 22 29 25.8
comp=Z,6µm,0.6s
ACHE Chepes 3.30 63 *eP* **Pn** 22 28 21.1 -0.6
AGUA GUANDACOL 3.49 24 *eP* **Pn** 22 28 24.9 +0.7
AGUA *eS* **Sn** 22 29 08.7 +3.9
MRA San Martin 3.71 87 *eP* **Pn** 22 28 26.1 -1.1
MRA *eS* **Sn** 22 29 07.2 -2.9
MRA IAML 22 29 10.7
comp=Z,7µm,1.0s
MRA IAML 22 29 11.4
comp=Z,4µm,0.6s
LCO Las Campanas 3.71 352 **Pn** 22 28 27.0 -0.4
LCO Las Campanas 3.71 352 P **Pn** 22 28 27.0 -0.4
LCO Las Campanas 3.71 352 *eP* **Pn** 22 28 26.8 -0.6
APLL PUNTA DE LOS L 3.81 54 *eP* **Pn** 22 28 27.6 -1.0
APLL IAML 22 29 13.3
comp=Z,2µm,1.1s
AC05 El Transito 3.85 358⇑ *eP* **Pn** 22 28 29.5 +0.3
AC05 El Transito 3.85 358 *eP* **Pn** 22 28 29.8 +0.6
AC05 IAML 22 29 51.9
comp=Z,1µm,0.8s
BI02 San Fabin de 4.07 193⇑ *eP* **Pn** 22 28 31.6 -0.5
ACLC CERRO LA CRUZ 4.23 40 *eP* **Pn** 22 28 33.3 -1.0
ACLC *eS* **Sn** 22 29 23.2 +0.3
ACLC IAML 22 29 48.4
comp=Z,2µm,0.6s
VCA Vinchina 4.27 23⇑ *eP* **Pn** 22 28 34.9 0.0
VCA Vinchina 4.27 23 *eS* **Sn** 22 29 25.6 +1.8
VCA IAML 22 29 30.6
comp=Z,3µm,0.6s
AC04 Llanos de Chal 4.56 349 *eP* **Pn** 22 28 37.9 -0.7
AC04 Llanos de Chal 4.56 349 *eP* **Pn** 22 28 37.3 -1.2
AC04 IAML 22 29 42.4
comp=Z,2µm,1.0s
BI05 Punta Hualpn 4.78 211 **Pn** 22 28 38.9 -2.5
BI05 Punta Hualpn 4.78 211 *eP* **Pn** 22 28 38.3 -3.1
BI05 Punta Hualpn 4.78 211 *eP* **Pn** 22 28 38.4 -3.1
BI05 IAML 22 29 34.2
comp=Z,1µm,0.6s
TCA Tanti 4.87 75⇑ *eP* **Pn** 22 28 40.9 -1.9
TCA Tanti 4.87 75 *eP* **Pn** 22 28 41.1 -1.7
TCA *eS* **Sn** 22 29 34.2 -3.8
TCA IAML 22 29 35.5
comp=Z,3µm,1.2s
GO03 Copiapo 5.09 359 *eS* **Sn** 22 29 45.3 +1.9
GO03 IAML 22 30 24.1
comp=Z,741nm,0.5s
CYA Choya 5.63 42⇑ *eP* **Pn** 22 28 50.5 -2.6
AC02 Maricunga 5.90 8 Pn **Pn** 22 28 56.1 -1.1
LC02 Puerto Saavedr 6.64 203 **Pn** 22 29 04.0 -2.7
LR03 Panguipulli 7.15 194 **Pn** 22 29 10.9 -2.7
VA04 Juan Fernndez 7.38 260 **Pn** 22 29 15.4 -1.3
VA04 Juan Fernndez 7.38 260 *eP* **Pn** 22 29 16.3 -0.8
H03N1 Juan Fernandez 7.44 262 P **Pn** 22 29 18.2 +1.0
baz=125,slow=21,SNR=432
H03N1 S **Sn** 22 30 26.2 -14
SNR=3.9
H03N1 T T 22 36 12.3
baz=86,slow=73,SNR=541
H03N3 Juan Fernandez 7.45 262 P **Pn** 22 29 18.5 +1.1
baz=354,slow=74,SNR=460
H03N3 S **Sn** 22 30 26.1 -14
H03N3 T T 22 36 11.8
baz=86,slow=73,SNR=512
H03N2 Juan Fernandez 7.45 262 P **Pn** 22 29 18.7 +1.3
baz=154,slow=74,SNR=248
H03N2 S **Sn** 22 30 26.3 -14
H03N2 T T 22 36 12.1
baz=86,slow=73,SNR=311
H03S1 Juan Fernandez 7.47 259 P **Pn** 22 29 17.3 -0.3
H03S1 S **Sn** 22 30 32.4 -8.2
baz=125,slow=29,SNR=9.9
H03S1 T T 22 35 46.1
baz=85,slow=75,SNR=260
H03S3 Juan Fernandez 7.47 259 P **Pn** 22 29 17.6 -0.1
baz=125,slow=29,SNR=273
H03S3 S **Sn** 22 30 32.9 -7.7
H03S3 T T 22 35 52.9
baz=85,slow=75,SNR=478
H03S2 Juan Fernandez 7.48 259 P **Pn** 22 29 17.5 -0.4
SNR=211
H03S2 S **Sn** 22 30 32.5 -8.4
baz=125,slow=29,SNR=12
H03S2 T T 22 35 49.1
baz=85,slow=75,SNR=350
GO02 Mina Guanaco 7.52 4 **Pn** 22 29 16.4 -2.7
LR04 Corral 7.65 200 **Pn** 22 29 16.0 -4.4
LR05 Currie 7.67 191 **Pn** 22 29 17.5 -3.1
PLCA Paso Flores 8.03 182 P **Pn** 22 29 24.4 -1.1
comp=Z,17nm,0.5s,baz=358,slow=11,SNR=114
TRQA Tornquist 8.51 131 **Pn** 22 29 30.4 -1.7
TRQA Tornquist 8.51 131 P **Pn** 22 29 30.4 -1.7
LL05 Los Muermos 9.10 196 Pn Pn 22 29 35.1 -4.9
AF01 San Pedro de A 9.86 10 Pn **Pn** 22 29 49.9 -0.8
PB06 IPOC Station P 9.97 3 **Pn** 22 29 51.3 -0.8
LL02 Futaleuf 10.56 187 **Pn** 22 29 56.4 -3.5
PB03 IPOC Station P 10.61 2 **Pn** 22 29 58.5 -2.4
PSAL Palomas, Salto 10.74 85 *eP* Pn 22 29 55.8 -6.5
PB09 IPOC Station P 10.89 4 **Pn** 22 30 03.3 -1.2
PB07 IPOC Station P 10.93 1 **Pn** 22 30 03.1 -2.0
PB02 IPOC Station P 11.34 1 Pn **Pn** 22 30 08.3 -2.2
AY01 Puyuhuapi 11.87 189 **Pn** 22 30 14.3 -3.0
TA01 Diego Aracena 12.09 360 Pn **Pn** 22 30 19.0 -1.3
PB08 IPOC Station P 12.54 4 **Pn** 22 30 25.7 -0.9
CPUP Villa Florida 12.80 64 P Pn 22 30 24.3 -5.3
comp=Z,1.3nm,0.3s,baz=284,slow=19,SNR=7.6
CPUP S Sn 22 32 41.3 -9.2
comp=Z,13nm,1.0s,baz=142,slow=18,SNR=3.5
CPUP LR LR 22 36 16.3
comp=Z,48nm,20.8s,baz=116,slow=41
CPUP Villa Florida 12.80 64 **Pn** 22 30 25.0 -4.7
CPUP Villa Florida 12.80 64 P **Pn** 22 30 25.0 -4.7
CPUP Villa Florida 12.80 64 *eP* **Pn** 22 30 25.6 -4.1
PB11 IPOC Station P 12.89 2 **Pn** 22 30 31.5 +0.4
COYC Coyhaique 12.95 186 **Pn** 22 30 29.7 -1.7
GO01 Chusmiza 13.00 4 **Pn** 22 30 31.7 -1.1
PSGCX Pisagua 13.05 360 Pn **Pn** 22 30 32.8 -0.2
PLTB Pedras Altas 13.99 91 Pn **Pn** 22 30 43.0 -2.2
PLTB Pedras Altas 13.99 91 *eP* **Pn** 22 30 40.8 -4.5
PLTB *eS* **Sn** 22 33 17.0 -2.5
PB12 IPOC Station P 14.03 359 **Pn** 22 30 45.1 -0.7
AP01 Chacalluta 14.27 359 P **P** 22 30 53.2 +0.5
PB16 IPOC Station P 14.31 2 P **Pn** 22 30 50.3 +0.4
CPSB Cacapava Do Su 14.39 85 *eP* **Pn** 22 30 46.2 -4.0
PB18 Visviri 15.06 2 P **Pn** 22 31 00.6 +1.3
MURT Porto Murtinho 15.62 48 *eP* **Pn** 22 31 04.2 -1.6
LPAZ La Paz 16.44 7 P **P** 22 31 17.5 +0.1
comp=Z,37nm,0.8s,baz=175,slow=8.6,SNR=99
LPAZ S **Sn** 22 34 18.9 -0.4
comp=Z,5.0nm,1.1s,baz=191,slow=16,SNR=1.3
LPAZ La Paz 16.44 7 P **Pn** 22 31 16.8 +0.2
LPAZ La Paz 16.44 7 *eP* **Pn** 22 31 14.4 -2.2
LPAZ *eS* **Sn** 22 34 18.6 -0.7
ITAB Concordia 16.49 75 P **Pn** 22 31 14.9 -1.6
ITAB Concordia 16.49 75 *eP* **Pn** 22 31 14.4 -2.2
AMBA Amambai (Brazi 16.52 58 *eP* **Pn** 22 31 15.6 -1.3
AMBA *eS* **Sn** 22 34 21.6 +1.2
BDQN Bodoquena, MS 17.05 48 *eP* **Pn** 22 31 22.8 -0.6
BDQN *eS* **S** 22 34 35.0 -0.7
PTGB Pitanga 17.69 68 *eP* **P** 22 31 29.4 -1.2
PTGB *eS* **S** 22 34 49.2 +0.3
AQDB Aquidauana 17.70 50 P **P** 22 31 29.2 -1.4
AQDB Aquidauana 17.70 50 *eP* **P** 22 31 29.8 -0.8
AQDB *eS* **Sn** 22 34 48.2 -0.5
SIV San Ignacio 18.54 28 P **P** 22 31 39.3 -0.7
comp=Z,48nm,0.9s,baz=201,slow=8.7,SNR=136
SIV S **S** 22 35 04.5 -1.4
comp=Z,1.4nm,0.4s,baz=266,slow=22,SNR=0.8
GO09 Cerro Castillo 18.63 184 P **P** 22 31 38.9 -1.7
MG05 Puerto Natales 19.05 185 P **P** 22 31 43.3 -1.8
PTLB Pontes e Lacer 19.85 33 P **P** 22 31 53.6 -0.6
PTLB Pontes e Lacer 19.85 33 *eP* **P** 22 31 53.1 -1.0
PP1B Ponte de Pedra 20.35 46 *eP* **P** 22 31 59.1 -0.5
FRTB Fartura 20.35 68 *eP* **P** 22 31 59.0 -0.6
EFI East Falkland 20.90 159 P **P** 22 32 04.5 -0.7
EFI East Falkland 20.90 159 *i P* **P** 22 32 05.7 +0.5
EFI pmax pmax
comp=Z,72nm,0.9s
SALV Santo Antonio 21.22 41 *eP* **P** 22 32 07.7 -1.1
NNA Nana 21.53 342 P **P** 22 32 12.6 +0.3
comp=Z,46nm,0.7s,baz=187,slow=11,SNR=25
comp=Z,46nm,0.7s
NNA Nana 21.53 342 P **P** 22 32 12.4 +0.1
NNA Nana 21.53 342 *ceP* **P** 22 32 12.5 +0.3
NNA pmax pmax
comp=Z,261nm,1.7s
VILB Vilhena 21.64 27 P **P** 22 32 11.5 -2.0
VILB Vilhena 21.64 27 *eP* **P** 22 32 12.6 -0.8
PET01 Itanhaem-SP 21.70 73 *eP* **P** 22 32 13.1 -1.0
ITRB Iturama 21.89 59 *eP* **P** 22 32 14.5 -1.5
SPB Sao Paulo 21.91 71 P **P** 22 32 14.7 -1.5
SPB Sao Paulo 21.91 71 *eP* **P** 22 32 15.5 -0.7
MG01 Puerto William 22.29 176 P **P** 22 32 18.9 -0.9
BB19B Bebedouro 22.41 64 *eP* **P** 22 32 19.4 -2.1
RCLB Rio Claro- Sao 22.43 69 *eP* **P** 22 32 19.9 -1.8
VAO Valinhos 22.58 71 P **P** 22 32 21.4 -1.8
VAO Valinhos 22.58 71 *eP* **P** 22 32 22.4 -0.8
PARB Paraibuna 23.49 73 *eP* **P** 22 32 29.5 -2.4
PDRB Porto dos Gac 24.32 33 *eP* **P** 22 32 38.9 -0.4
IPMB Ipameri, GO 24.54 59 *eP* **P** 22 32 40.5 -1.0
BSCB Bom Sucesso 25.35 69 *eP* **P** 22 32 47.9 -0.9
CLDB Colider 25.40 34 *eP* **P** 22 32 49.2 +0.1
PMNB Patos De Minas 25.50 62 *eP* **P** 22 32 49.6 -0.5
VAS01 Vassouras-RJ 25.76 73 *eP* **P** 22 32 52.7 +0.4
BDFB Brasilia 26.26 55 P **P** 22 32 56.0 -1.0
comp=Z,74nm,0.9s,baz=308,slow=1.4
BDFB PcP **PcP** 22 36 20.5 -0.4
baz=308,slow=2.2
comp=Z,74nm,0.9s
BDFB Brasilia 26.26 55 P **P** 22 32 55.6 -1.5
BDFB IAmb IAmb 22 32 57.1
comp=Z,86nm,1.0s
DUB01 Friburgo-RJ 26.72 74 *eP* **P** 22 33 00.8 -0.2
SNDB Serra Nova Dou 26.89 44 *eP* **P** 22 33 01.8 -0.8
CAM01 Campos-RJ 27.42 74 *eP* **P** 22 33 07.0 -0.2
DIAM Diamantina, MG 27.73 65 *eP* **P** 22 33 10.0 -0.3
NPGB Novo Progresso 28.97 31 *eP* **P** 22 33 19.6 -1.5
JANB Januaria 29.27 59 *eP* **P** 22 33 22.6 -1.2
SJMB Sao Joao De Ma 29.43 69 *eP* **P** 22 33 24.8 -0.4
TEFE Tefe 29.49 11 *eP* **P** 22 33 25.4 -0.3
BSFB Barra de Sao F 29.63 69 *eP* **P** 22 33 26.2 -0.7
MCRA Macar, Loja 29.66 340 P **P** 22 33 28.7 +1.5
comp=Z,41nm,1.4s
SDBA SAO DESIDERIO 30.67 55 *eP* **P** 22 33 35.3 -0.9
MACA Manacapuru-AM 30.68 19 P **P** 22 33 34.9 -1.2
MACA IAmb IAmb 22 34 16.0
comp=Z,40nm,0.9s
MACA Manacapuru-AM 30.68 19 *eP* **P** 22 33 35.4 -0.8
ITTB Itaituba 31.23 28 *eP* **P** 22 33 39.9 -1.1
SMTB Santa Maria do 31.57 46 *eP* **P** 22 33 43.3 -0.7
GUA01 Guaratinga, BA 31.72 67 *eP* **P** 22 33 44.3 -1.0
PMSA Palmer Station 32.32 175 *eP* P 22 33 43.4 -6.6
PRPB Parauapebas 32.46 40 *eP* **P** 22 33 50.6 -1.3
SGC2 Sao Gabriel da 32.51 6 P **P** 22 33 51.5 -0.7
comp=Z,1µmcomp=Z,164nm,0.8s
CMC01 Camacan, BA 32.66 65 *eP* **P** 22 33 52.7 -0.9
PTLC Puerto Leguiza 32.99 351 P **P** 22 33 55.7 -0.8
OTAV Otavalo 33.70 345 P **P** 22 34 03.2 +0.1
OTAV IAmb IAmb 22 34 08.2
comp=Z,43nm,1.4s
OTAV Otavalo 33.70 345 P **P** 22 34 03.2 +0.1
OTAV pmax pmax
comp=Z,43nm,1.4s
OTAV Otavalo 33.70 345 *eP* **P** 22 34 00.6 -2.4
OTAV Otavalo 33.70 345 P **P** 22 34 06.0 +2.9
comp=Z,24nm,1.5s
OTAV Otavalo 33.70 345 P **P** 22 34 05.2 +2.1
PAC1 Pacto, Paraso 33.80 344 P **P** 22 34 06.4 +2.8
comp=Z,735nmcomp=Z,87nm,0.9s
MAL2 Monte Alegre, 33.99 29 P **P** 22 34 03.9 -1.2
RPN Rapa Nui 34.32 269 LR LR 22 44 32.6
comp=Z,222nm,18.5s,baz=126,slow=30
FLOC Florencia 34.50 350 P **P** 22 34 08.8 -0.7
FLOC IAmb IAmb 22 34 12.8
comp=Z,43nm,1.0s
GARC Garzon, Huila 35.07 351 P **P** 22 34 17.0 +2.3
comp=Z,1µmcomp=Z,38nm,1.1s
BBAC Balboa, Cauca 35.19 348 P **P** 22 34 18.6 +2.9
comp=Z,693nmcomp=Z,47nm,1.4s
POPC Popayan, Colom 35.60 349 P **P** 22 34 21.8 +2.6
comp=Z,398nmcomp=Z,27nm,1.4s
BOAV Boa Vista 36.06 16 P **P** 22 34 21.7 -1.2
BOAV Boa Vista 36.06 16 *eP* **P** 22 34 22.4 -0.5
BOAV Boa Vista 36.06 16 P **P** 22 34 22.6 -0.3
comp=Z,34nm,0.8s
PRAC Prado 36.50 352 P **P** 22 34 29.6 +3.0
comp=Z,1µmcomp=Z,67nm,1.7s
TMAB Tom-Au,PA,Br 36.56 39 *eP* **P** 22 34 26.9 -0.3
ORTC Ortega, Tolima 36.73 351 P **P** 22 34 31.6 +3.0
comp=Z,1µmcomp=Z,75nm,1.2s
VILC Villavicencio, 36.77 354 P **P** 22 34 32.2 +3.2
comp=Z,1µmcomp=Z,148nm,0.7s
ROSC El Rosal 37.55 353 P **P** 22 34 37.5 +1.6
comp=Z,29nm,0.8s,baz=168,slow=6.3,SNR=10
comp=Z,29nm,0.8s
ROSC El Rosal 37.55 353 P **P** 22 34 36.1 +0.2
ROSC IAmb IAmb 22 34 41.5
comp=Z,57nm,1.2s
ROSC El Rosal 37.55 353 P **P** 22 34 36.1 +0.2
ROSC pmax pmax
comp=Z,57nm,1.2s
RUSC La Rusia 38.48 355 P **P** 22 34 43.2 -0.7
RUSC La Rusia 38.48 355 P **P** 22 34 46.8 +2.9
comp=Z,2µmcomp=Z,246nm,1.0s

NBAN Anadia - AL 38.71 61 eP P 22 34 43.8 -1.4
HELC Santa Helena 39.02 351 P P 22 34 50.0 +1.8
comp=Z,1µmcomp=Z,146nm,1.0s
PAMC Pamplona, Colo 39.89 356 P P 22 34 56.4 +0.8
comp=Z,169nmcomp=Z,21nm,0.8s
DBBC Dabeiba 39.92 351 P P 22 34 58.1 +2.7
UREC San Jos de Ur 40.56 352 P P 22 35 01.3 +0.8
comp=Z,20nm,1.0s
MPGF Montagnes des 41.09 27 P P 22 35 03.4 -1.6
MPGF PcP PcP 22 37 03.7 +1.1
SDV Santo Domingo 41.36 359 P P 22 35 05.8 -1.4
SDV IAmb IAmb 22 35 08.1
comp=Z,29nm,0.8s
SDV Santo Domingo 41.36 359 eP P 22 35 07.0 -0.3
SDV Santo Domingo 41.36 359 P P 22 35 07.2 -0.1
comp=Z,37nm,0.9s
BAUV El Baul 41.46 3 P P 22 35 06.8 -1.0
RCBR Riachuelo 41.58 57 P P 22 35 07.3 -1.7
RCBR IAmb IAmb 22 35 10.1
comp=Z,64nm,1.4s
RCBR Riachuelo 41.58 57 P P 22 35 07.3 -1.7
RCBR pmax pmax
comp=Z,64nm,1.4s
RCBR Riachuelo 41.58 57 eP P 22 35 08.2 -0.8
SJCC San Jacinto, C 42.63 353 P P 22 35 19.6 +2.1
comp=Z,106nm,1.2s
BRU2 Volcan 42.97 342 P P 22 35 19.3 -1.1
SMRC Santa Marta, M 43.79 354 P P 22 35 24.3 -2.5
SMRC IAmb IAmb 22 35 28.4
comp=Z,34nm,0.8s
SOCE Pocosol 45.03 340 P P 22 35 35.7 -1.0
JTS Las Juntas de 45.04 339 LR LR 22 54 03.2
comp=Z,36nm,19.6s,baz=118,slow=35
JTS Las Juntas de 45.04 339 i P P 22 35 36.8 +0.1
JTS pmax pmax
comp=Z,35nm,1.8s
GRGR Grenville 45.30 12 P P 22 35 38.8 0.0
comp=Z,2µmcomp=Z,229nm,0.9s
MPOM Morne Pois Mar 47.70 12 P P 22 35 56.1 -1.4
BIM Bigot 47.74 12 P P 22 35 56.7 -1.1
BELA Belgrano 2 47.88 170 P P 22 35 58.8 +0.6
BELA IAmb IAmb 22 36 01.0
comp=Z,38nm,1.0s
TGUH Tegucigalpa,Un 49.31 338 P P 22 36 08.0 -1.9
VNA3 Neumayer Olymp 49.96 158 ⇓P P 22 36 14.9 +0.8
comp=Z,24nm,0.7s
VNA1 Neumayer--Stat 50.24 158 ⇓P P 22 36 17.1 +0.8
comp=Z,23nm,1.0s
SABA Saba 50.46 8 P P 22 36 15.8 -2.7
ESQI Esquipulas 50.47 336 P P 22 36 16.8 -1.9
CRPR Cabo Rojo, PR 50.50 4 P P 22 36 16.8 -1.9
OBIP Obispado Ponce 50.56 4 P P 22 36 17.7 -1.6
VNA2 Neumayer--Wintz 50.59 158 ⇓P P 22 36 19.7 +0.8
comp=Z,28nm,0.6s,baz=281,slow=7.5
SJG San Juan 50.66 5 P P 22 36 17.9 -2.0
SJG San Juan 50.66 5 P P 22 36 18.0 -2.0
SJG pmax pmax
comp=Z,81nm,1.1s
SJG San Juan 50.66 5 P P 22 36 19.7 -0.3
SJG San Juan 50.66 5 P P 22 36 19.4 -0.6
HUMP Col San Antoni 50.72 5 P P 22 36 18.7 -1.7
BANI BANI 50.80 360 P P 22 36 19.6 -1.6
DR12 Loma Pena Alta 51.20 1 P P 22 36 21.7 -2.4
RTAL Retalhuleu 51.30 333 P P 22 36 21.2 -3.7
SDDR Presa de Saban 51.40 359 P P 22 36 24.1 -1.5
SDDR IAmb IAmb 22 36 28.4
comp=Z,32nm,1.1s
SC01 Santiago de lo 51.84 359 P P 22 36 29.1 +0.3
SNAA Sanae 52.18 158 ⇓P P 22 36 31.6 +0.8
comp=Z,985nm,0.7s
SNAA Sanae 52.18 158 P P 22 36 31.7 +0.8
comp=Z,46nm,0.8s,baz=281,slow=6.7,SNR=252
SNAA pP pP 22 36 58.9 +1.1
comp=Z,28nm,1.0s,baz=253,slow=5.6,SNR=5.5
SNAA S S 22 43 52.8 +6.0
comp=Z,1.2nm,0.8s,baz=194,slow=20,SNR=6.0
comp=Z,46nm,0.8s
SNAA Sanae 52.18 158 P P 22 36 30.6 -0.2
SNAA Sanae 52.18 158 ce P P 22 36 31.6 +0.8
SNAA pmax pmax
comp=Z,78nm,1.0s
PETF Flores 52.84 336 P P 22 36 34.8 -1.3
CCIG Comitan 53.08 333 P P 22 36 37.6 -0.5
CCIG IAmb IAmb 22 36 40.5
comp=Z,23nm,0.8s
TROLL Troll, Antarti 53.89 158 ⇓P P 22 36 44.4 +1.0
comp=Z,2µm,0.6s
SOR Soroa 56.54 346 P P 22 37 01.9 -0.9
SOR Soroa 56.54 346 P P 22 37 01.9 -0.9
SOR pmax pmax
comp=Z,34nm,0.8s
NVL N'lazarevskaya 56.87 157 eP P 22 37 05.9 +1.3
NVL e 22 39 13.4
NVL eS S 22 44 51.2 +1.8
NVL eSS SS 22 48 42.7 +4.1
NVL pmax pmax
comp=Z,58nm,0.7s
NVL smax smax
comp=N,242nm,21.3s
QSPA South Pole Qui 57.53 180 P P 22 37 14.5 +4.9
comp=N,44nm,0.8s,baz=155,slow=2.0,SNR=132
QSPA pP pP 22 37 40.4 +3.3
comp=N,24nm,0.9s,baz=83,slow=1.2,SNR=5.2
QSPA sP sP 22 37 53.6 +4.0
comp=N,16nm,0.9s,baz=117,slow=2.3,SNR=2.9
QSPA S S 22 45 02.5 +3.9
comp=N,1.3nm,1.0s,baz=101,slow=10,SNR=2.1
QSPA LR LR 23 00 04.9
comp=N,42nm,22.0s,baz=140,slow=34
QSPA PKP2bc P'P'bc 23 07 05.3 -3.3
comp=N,15nm,1.1s,baz=299,slow=1.8,SNR=14
QSPA South Pole Qui 57.53 180 P P 22 37 14.4 +4.9
QSPA South Pole Qui 57.53 180 P P 22 37 15.2 +5.6
DWPF Disney Wildern 61.43 349 P P 22 37 35.7 -0.8
DWPF Disney Wildern 61.43 349 P P 22 37 35.4 -1.0
DWPF pP pP 22 38 02.3 -2.0
656A Willston 62.85 348 P P 22 37 44.1 -1.8
ZAIG Zacatecas 63.28 326 P P 22 37 48.8 -0.5
BBSR BB Station 64.92 5 P P 22 37 58.7 -0.8
TIGA Tifton 65.06 347 P P 22 37 59.3 -1.1
TIGA IAmb IAmb 22 38 01.5
comp=Z,29nm,1.0s
352A Blakely 65.36 346 P P 22 38 01.1 -1.2
HBVL Hebbronville 65.36 332 P P 22 38 02.8 +0.4
HBVL IAmb IAmb 22 38 05.7
comp=Z,25nm,0.8s
VNDA Vanda 65.69 191 P P 22 38 06.2 +2.2
comp=Z,4.8nm,0.9s,baz=127,slow=7.3,SNR=8.1
comp=Z,4.8nm,0.9s
VNDA Vanda 65.69 191 IAmb IAmb 22 38 36.4
comp=Z,58nm,2.0s
CSU Charleston Sou 66.01 351 P P 22 38 06.5 +0.1
154A Montrose 66.11 348 P P 22 38 07.2 +0.1
250A Grady 66.12 345 P P 22 38 07.5 +0.3
NHSC New Hope 66.14 351 P P 22 38 07.0 -0.2
346A Big Creek Wild 66.32 342 P P 22 38 08.0 -0.5
152A Waverly Hall 66.47 347 P P 22 38 08.3 -1.1
SYO Syowa Base 66.47 158‖ eP P 22 38 07.8 -1.2
SYO Syowa Base 66.47 158‖ epP pP 22 38 30.0 -7.2
735A Kenedy 66.63 334 P P 22 38 10.4 -0.1
833A Chaparral WMA, 66.77 332 P P 22 38 10.2 -1.2
Y58A Scranton 66.86 351 P P 22 38 10.7 -1.1
HKT Hockley 66.91 336 P P 22 38 12.1 -0.1
HKT IAmb IAmb 22 38 15.2
comp=Z,63nm,1.5s
HKT Hockley 66.91 336 i P P 22 38 12.9 +0.7
HKT pmax pmax
comp=Z,18nm,1.5s
GOGA Godfrey 66.95 348 P P 22 38 12.6 +0.1
GOGA IAmb IAmb 22 38 13.7
comp=Z,52nm,1.4s
GOGA Godfrey 66.95 348 P P 22 38 12.6 +0.1
GOGA pmax pmax
comp=Z,52nm,1.4s
Y57A Sumter 67.07 351 P P 22 38 12.8 -0.4
MLDN Muldoon 67.20 335 P P 22 38 14.3 +0.2
LRAL Lakeview Retre 67.30 345 P P 22 38 14.2 -0.4
VBMS Vicksburg 67.39 341 P P 22 38 14.3 -0.9
146A Union 67.41 343 P P 22 38 15.2 -0.2
JSC Jenkinsville 67.45 350 P P 22 38 15.0 -0.6
JSC IAmb IAmb 22 38 17.1
comp=Z,32nm,1.2s
JSC Jenkinsville 67.45 350 P P 22 38 15.0 -0.6
JSC pmax pmax
comp=Z,33nm,1.2s
X58A Rowland 67.46 352 P P 22 38 14.7 -1.0
Y52A Lilburn 67.50 347 P P 22 38 15.2 -0.8
HODGE Hodges 67.55 349 P P 22 38 15.7 -0.6
BIRD Birdtown, Kers 67.69 351 P P 22 38 15.9 -1.1
BIRD IAmb IAmb 22 38 18.8
comp=Z,52nm,1.5s
SLBS Sierra La Lagu 67.75 321 P P 22 38 20.2 +2.4
HNDO Hondo 67.80 333 P P 22 38 17.7 -0.2
HNDO IAmb IAmb 22 38 20.8
comp=Z,44nm,0.9s
Y49A Blount Mountai 67.96 345 P P 22 38 18.4 -0.5
PAULI Pauline 68.06 350 P P 22 38 18.9 -0.6
PAULI IAmb IAmb 22 38 21.7
comp=Z,36nm,1.1s
143A Socs Landing, 68.09 341 P P 22 38 19.9 +0.3
W57A Gilead 68.13 351 P P 22 38 19.0 -0.8
W57A IAmb IAmb 22 38 20.9
comp=Z,23nm,0.9s
NATX Nacogdoches 68.19 338 P P 22 38 20.2 -0.1
DRIO Del Rio 68.23 332 P P 22 38 20.1 -0.5
HPIG 68.28 326 P P 22 38 20.9 -0.4
435B Jarrell 68.29 335 P P 22 38 20.8 -0.1
435B IAmb IAmb 22 38 23.7
comp=Z,64nm,1.3s
KMSC Kings Mountain 68.31 350 P P 22 38 20.1 -0.9
KMSC IAmb IAmb 22 38 22.4
comp=Z,40nm,1.3s
X51A Calhoun 68.33 347 P P 22 38 20.4 -0.7
BG3 Lake Jocassee 68.41 349 P P 22 38 21.1 -0.4
BG3 IAmb IAmb 22 38 23.3
comp=Z,68nm,1.3s
FPAL Fort Paine 68.46 346 P P 22 38 22.0 +0.1
TAOE Nuku Hiva Isla 68.50 273 eLR LR 22 59 15.6
comp=Z,77nm,23.3s
V58A Windy Hill, Pi 68.66 352 P P 22 38 23.0 -0.1
V58A IAmb IAmb 22 38 24.7
comp=Z,57nm,1.3s
X48A Hartselle 68.67 345 P P 22 38 23.0 -0.2
X48A IAmb IAmb 22 38 25.0
comp=Z,56nm,1.1s
W52A Murphy 68.68 348 P P 22 38 22.9 -0.4
W52A IAmb IAmb 22 38 24.9
comp=Z,41nm,1.1s
Y45A Yeager Farm, C 68.70 343 P P 22 38 23.6 +0.2
237A Washetta, Mont 68.78 337 P P 22 38 23.5 -0.5
JCT Junction City 68.85 333 P P 22 38 24.1 -0.3
JCT IAmb IAmb 22 38 26.9
comp=Z,58nm,1.1s
JCT Junction City 68.85 333 P P 22 38 24.2 -0.3
JCT pmax pmax
comp=Z,58nm,1.1s
V55A Taylorsville 68.98 350 P P 22 38 24.7 -0.4
Z41A Richland Creek 69.01 340 P P 22 38 24.6 -0.7
W50A Signal Mountai 69.04 347 P P 22 38 25.0 -0.5
W50A IAmb IAmb 22 38 27.1
comp=Z,68nm,1.1s
V53A Saluda 69.05 349 P P 22 38 24.2 -1.4
V53A IAmb IAmb 22 38 27.1
comp=Z,76nm,1.4s
CPCT Cooper Cave 69.13 347 P P 22 38 25.3 -0.8
CPCT IAmb IAmb 22 38 27.6
comp=Z,56nm,1.2s
TKL Tuckaleechee C 69.20 348 P P 22 38 25.9 -0.6
TKL IAmb IAmb 22 38 27.7
comp=Z,71nm,1.3s
TKL Tuckaleechee C 69.20 348 P P 22 38 25.9 -0.6
TKL pmax pmax
comp=Z,71nm,1.3s
TBI Tubuai 69.21 255 eS S 22 47 19.2 -5.4
comp=Z,601nm,31.0s
TBI Tubuai 69.21 255 eLR LR 22 59 37.7
comp=Z,1µm,30.2s
BRDY Brady 69.26 334 P P 22 38 27.2 +0.2
OXF Oxford 69.28 343 P P 22 38 26.5 -0.5
OXF Oxford 69.28 343 P P 22 38 26.5 -0.5
OXF pmax pmax
comp=Z,109nm,1.2s
SAND Sanderson 69.31 331 P P 22 38 27.0 -0.4
SAND IAmb IAmb 22 38 30.1
comp=Z,51nm,1.1s
CCAR Cane Creek 69.33 341 P P 22 38 27.7 +0.4
CCAR IAmb IAmb 22 38 29.9
comp=Z,70nm,1.3s
WHTX Lake Whitney, 69.34 335 P P 22 38 27.5 +0.1
WHTX IAmb IAmb 22 38 29.6
comp=Z,45nm,1.1s
U56A King 69.36 351 P P 22 38 26.9 -0.6
U56A IAmb IAmb 22 38 29.4
comp=Z,77nm,1.3s
PLAL Pickwick Lake 69.41 344 P P 22 38 27.3 -0.5
PLAL IAmb IAmb 22 38 29.2
comp=Z,43nm,1.2s
TX31 Lajitas Ar. Si 69.43 329 P P 22 38 27.9 -0.3
TX31 IAmb IAmb 22 38 30.8
comp=Z,57nm,1.8s
TXAR Lajitas Array 69.43 329 P P 22 38 29.6 +1.4
comp=Z,7.8nm,0.7s,baz=151,slow=8.5,SNR=69
TXAR PKP2bc P'P'bc 23 06 38.7 +4.7
comp=Z,0.6nm,1.0s,baz=297,slow=5.5,SNR=4.1
comp=Z,7.8nm,0.7s
TXAR Lajitas Array 69.43 329 P P 22 38 28.3 +0.2
WLAR White Oak Lake 69.50 340 P P 22 38 29.0 +0.6
T59A Double "B" Far 69.66 354 P P 22 38 29.2 0.0
T59A IAmb IAmb 22 38 31.4
comp=Z,42nm,0.9s
Z38A Mt. Pleasant 69.67 338 P P 22 38 30.1 +0.6
Z38A IAmb IAmb 22 38 32.0
comp=Z,80nm,1.3s
U54A Nelsons Funny 69.73 350 P P 22 38 28.8 -1.0
OZNA Ozona 69.76 332 P P 22 38 30.1 0.0
OZNA IAmb IAmb 22 38 32.4
comp=Z,32nm,0.8s
T57A Hurt 69.86 352 P P 22 38 30.0 -0.5
T57A IAmb IAmb 22 38 32.3
comp=Z,42nm,1.3s
V48A Smith Brothers 69.86 346 P P 22 38 30.5 0.0
TZTN Tazewell 70.03 349 P P 22 38 30.3 -1.2
TZTN IAmb IAmb 22 38 32.9
comp=Z,59nm,1.4s
CLTN Cedars of Leba 70.10 346 P P 22 38 30.5 -1.5
BLA Blacksburg 70.22 351 P P 22 38 31.7 -1.0
BLA Blacksburg 70.22 351 P P 22 38 31.7 -1.0
BLA pmax pmax
comp=Z,27nm,1.2s
FW06 Azle 70.27 336 P P 22 38 31.8 -1.2
FW06 IAmb IAmb 22 38 35.4
comp=Z,46nm,1.4s
UALR University of 70.30 341 P P 22 38 33.0 -0.2
ALPN Alpine 70.32 330 P P 22 38 32.5 -1.1
PLPT Palo Pinto 70.39 335 P P 22 38 34.9 +1.0
U49A Red Boiling Sp 70.40 347 P P 22 38 33.0 -0.8
U49A IAmb IAmb 22 38 35.2
comp=Z,56nm,1.6s
MIAR Mount Ida 70.44 340 P P 22 38 34.1 0.0
MIAR IAmb IAmb 22 38 36.2
comp=Z,41nm,1.2s
MIAR Mount Ida 70.44 340 P P 22 38 34.1 0.0
MIAR pmax pmax
comp=Z,41nm,1.3s
WVT Waverly 70.46 345 P P 22 38 34.1 -0.1
WVT Waverly 70.46 345 P P 22 38 34.1 -0.1
WVT pmax pmax
comp=Z,102nm,0.9s
WVT Waverly 70.46 345 P P 22 38 34.5 +0.3
WVT pP pP 22 39 02.7 +0.2
Z35A Perchaven, San 70.49 336 P P 22 38 33.6 -0.8
HBAR Harrisburg 70.58 342 P P 22 38 34.9 0.0
S57A Dark Hollow, R 70.58 353 P P 22 38 34.5 -0.4
S57A IAmb IAmb 22 38 36.9
comp=Z,75nm,1.3s
HALT Halls 70.59 344 P P 22 38 35.4 +0.4
SGCY Sterling City 70.64 332 P P 22 38 35.1 -0.3
R58B Mineral 70.67 353 P P 22 38 34.9 -0.5
R58B IAmb IAmb 22 38 38.0
comp=Z,54nm,1.2s
ABTX Abilene, Hawle 70.70 334 P P 22 38 34.5 -1.3
ABTX IAmb IAmb 22 38 37.9
comp=Z,47nm,0.9s
T50A Nancy 70.72 348 P P 22 38 34.8 -0.9
WHAR Wooly Hollow 70.77 341 P P 22 38 34.8 -1.2
WHAR IAmb IAmb 22 38 38.0
comp=Z,42nm,1.3s
MNHN Monahans 70.79 331 P P 22 38 36.1 -0.3
MNHN IAmb IAmb 22 38 38.7
comp=Z,30nm,0.8s
GNAR Gosnell 70.81 343 P P 22 38 35.9 -0.4
LNXT Lenox 70.81 343 P P 22 38 36.6 +0.3
CBN Corbin Frederi 70.87 354 P P 22 38 36.5 0.0
CBN IAmb IAmb 22 38 38.3
comp=Z,62nm,1.4s
UTMT University of 70.89 344 P P 22 38 37.3 +0.5
PEBM Pemiscott Bayo 70.91 343 P P 22 38 37.2 +0.3
S54A Dingess, Beckl 70.91 351 P P 22 38 36.8 -0.1
S54A IAmb IAmb 22 38 38.3
comp=Z,61nm,1.2s
S51A Beattyville 71.10 349 P P 22 38 37.8 -0.2
S51A IAmb IAmb 22 38 39.3
comp=Z,38nm,1.0s
T47A Sharon Grove 71.13 346 P P 22 38 38.2 0.0
T47A IAmb IAmb 22 38 39.4
comp=Z,56nm,1.1s
HICK Hickman 71.17 344 P P 22 38 37.8 -0.6
LCAR Lake Charles 71.20 342 P P 22 38 38.4 -0.2
R55A Marlinton 71.23 352 P P 22 38 39.1 +0.2
R55A IAmb IAmb 22 38 41.2
comp=Z,59nm,1.0s
VHRN Van Horn 71.25 329 P P 22 38 39.2 -0.1
PECS Pecos 71.28 330 P P 22 38 39.7 +0.3
FCAR Ozark Folk Cen 71.28 341 P P 22 38 38.7 -0.5
WTFS Witchita Falls 71.30 335 P P 22 38 40.2 +0.9
ODSA Odessa 71.38 331 P P 22 38 40.8 +0.8
PARMO Parma 71.41 343 P P 22 38 40.4 +0.5
T45A Paducah 71.49 344 P P 22 38 40.7 +0.3
APMT Aspermont 71.51 334 P P 22 38 41.0 +0.4
APMT IAmb IAmb 22 38 42.7
comp=Z,38nm,0.7s
SN07 Snyder 07 71.59 333 P P 22 38 41.0 -0.1
SN07 IAmb IAmb 22 38 43.0
comp=Z,34nm,1.1s
PBMO Poplar Bluff 71.69 343 P P 22 38 41.5 -0.1
POST Post 71.80 333 P P 22 38 43.1 +0.7
X34A Smith Ranch, M 71.84 336 P P 22 38 43.4 +0.8
X34A IAmb IAmb 22 38 44.7
comp=Z,66nm,1.1s
R50A Paris 71.85 348 P P 22 38 42.4 -0.1
R50A IAmb IAmb 22 38 43.8
comp=Z,35nm,1.1s
CGM3 Cape Girardeau 71.99 344 P P 22 38 43.0 -0.4
CGM3 IAmb IAmb 22 38 44.8
comp=Z,48nm,1.5s
R49A Shelbyville 72.01 348 P P 22 38 43.7 +0.2
R49A IAmb IAmb 22 38 44.6
comp=Z,38nm,1.2s
Q54A Coxs Mills 72.02 351 P P 22 38 43.5 0.0
SDMD Soldier's Deli 72.02 355 P P 22 38 43.4 -0.1
PPT2 Papeete2 72.04 260 eS S 22 47 57.6 -0.1
comp=Z,70nm,23.0s
PPT2 Papeete2 72.04 260 eLR LR 23 00 49.8
comp=Z,145nm,33.0s
PPT2 eLR LR 23 00 50.1
comp=Z,100nm,35.2s
PPT Papeete 72.05 260 P P 22 38 47.9 +3.5
comp=Z,22nm,0.4s,baz=68,slow=19,SNR=3.6
comp=Z,22nm,0.4s
CLNB Carlsbad 72.06 330 P P 22 38 44.4 +0.4
CLN7 Carlsbad 7 72.16 330 P P 22 38 45.9 +1.3
HHAR Hobbs 72.16 340 P P 22 38 44.3 -0.2
HHAR IAmb IAmb 22 38 46.1
comp=Z,51nm,1.1s
WCI Wyandotte Cave 72.16 347 P P 22 38 43.9 -0.5
WCI Wyandotte Cave 72.16 347 P P 22 38 43.9 -0.5
WCI pmax pmax
comp=Z,26nm,1.0s
WCI Wyandotte Cave 72.16 347 P P 22 38 44.3 -0.1
WCI PcP PcP 22 39 02.6 +0.5
WCI pP pP 22 39 12.6 -0.3
USIN University of 72.19 345 P P 22 38 44.0 -0.5
Q52A Bidwell 72.19 350 P P 22 38 44.3 -0.2
Q52A IAmb IAmb 22 38 45.9
comp=Z,57nm,1.1s
P57A Homestead Farm 72.19 354 P P 22 38 45.1 +0.6
P57A IAmb IAmb 22 38 47.2
comp=Z,38nm,0.9s
GDL2 Guadalupe Moun 72.20 330 P P 22 38 46.2 +1.3
MNTX Cornudas Mount 72.21 329 P P 22 38 44.7 -0.1
S44A Carbondale 72.28 344 P P 22 38 45.4 +0.3
S44A IAmb IAmb 22 38 46.4
comp=Z,41nm,1.1s
SIUC Southern Illin 72.29 344 P P 22 38 44.3 -0.9
SIUC IAmb IAmb 22 38 46.5
comp=Z,37nm,1.1s
FNO Franklin 72.29 337 P P 22 38 45.7 +0.4
FNO IAmb IAmb 22 38 47.1
comp=Z,24nm,0.8s
WMOK Wichita Mounta 72.29 335 P P 22 38 44.8 -0.5
WMOK Wichita Mounta 72.29 335 P P 22 38 44.8 -0.5
WMOK pmax pmax
comp=Z,11nm,0.8s
RLO Rose Lookout 72.37 339 P P 22 38 45.4 -0.3
TUL3 Leonard 72.37 338 P P 22 38 46.1 +0.4
TUL3 IAmb IAmb 22 38 47.3
comp=Z,36nm,0.8s
Q51A Peebles 72.42 349 P P 22 38 45.9 0.0
Q51A IAmb IAmb 22 38 47.3
comp=Z,37nm,0.9s
U38A Gravette 72.44 340 P P 22 38 45.1 -1.0
OKCSW OKLAHOMA CITY 72.44 337 P P 22 38 45.3 -0.8
MGMO Mountain Grove 72.51 342 P P 22 38 46.4 -0.2
MGMO IAmb IAmb 22 38 48.4
comp=Z,33nm,1.1s
DEOK Depew 72.53 338 P P 22 38 47.0 +0.3
DEOK IAmb IAmb 22 38 48.2
comp=Z,40nm,0.7s
MCWV Mont Chateau 72.56 352 P P 22 38 46.6 -0.1
MCWV IAmb IAmb 22 38 48.7
comp=Z,36nm,1.1s
MVL Millersville 72.57 355 P P 22 38 48.0 +1.3
MVL IAmb IAmb 22 38 49.2
comp=Z,44nm,1.2s
P53A Whipple 72.58 351 P P 22 38 47.1 +0.3
P53A IAmb IAmb 22 38 48.5
comp=Z,45nm,1.2s
HSIG 72.60 323 P P 22 38 48.1 +0.9
HSIG IAmb IAmb 22 38 50.3
comp=Z,41nm,1.2s
CPRX Cap Rock 72.72 331 P P 22 38 49.0 +1.0
EPT El Paso 72.77 328 P P 22 38 48.4 +0.1
EPT IAmb IAmb 22 38 50.6
comp=Z,31nm,1.0s
OK052 Battle Ridge R 72.77 338 P P 22 38 48.4 +0.3
OK052 IAmb IAmb 22 38 49.8
comp=Z,74nm,1.2s
P51A Williamsport 72.82 350 P P 22 38 48.1 -0.2
P51A IAmb IAmb 22 38 49.4
comp=Z,46nm,1.0s
PAGS Pennsylvania G 72.82 355 P P 22 38 48.9 +0.6
PAGS IAmb IAmb 22 38 50.3
comp=Z,51nm,1.0s
FVM French Village 72.83 343 P P 22 38 48.7 +0.3
FVM French Village 72.83 343 P P 22 38 48.7 +0.3
FVM pmax pmax
comp=Z,81nm,1.1s
P52A Corning 72.83 350 P P 22 38 47.7 -0.6
P52A IAmb IAmb 22 38 49.5
comp=Z,45nm,1.0s
QUOK Quay 72.90 338 P P 22 38 49.3 +0.5
QUOK IAmb IAmb 22 38 50.7
comp=Z,60nm,1.2s
OLIL Olney 73.02 345 P P 22 38 49.2 -0.2
MSTX Muleshoe 73.09 332 P P 22 38 50.7 +0.5
MSTX IAmb IAmb 22 38 52.1
comp=Z,47nm,0.8s
CCM Cathedral Cave 73.10 343 P P 22 38 50.1 +0.2
CCM Cathedral Cave 73.10 343 P P 22 38 50.2 +0.2
CCM pmax pmax
comp=Z,81nm,1.1s
BLO Bloomington 73.12 347 P P 22 38 49.7 -0.3
BLO Bloomington 73.12 347 P P 22 38 49.7 -0.3
BLO pmax pmax
comp=Z,22nm,0.8s
O54A Avella 73.14 352 P P 22 38 50.3 +0.1
O54A IAmb IAmb 22 39 03.9
comp=Z,71nm,1.8s
P49A Miami Univ. Ec 73.14 348 P P 22 38 48.7 -1.4
SMWD Samnorwood 73.14 335 P P 22 38 51.1 +0.7
SMWD IAmb IAmb 22 38 52.4
comp=Z,40nm,0.9s

P48A Milroy 73.19 348 P **P** **22 38 50.0 -0.5**
P48A IAmb IAmb 22 38 51.3
comp=Z,67nm,1.2s
OK048 Pawnee Station 73.20 338 P **P** **22 38 51.0 +0.5**
DBIC Dimbokro 73.22 70 P **P** **22 38 51.4 +0.2**
comp=Z,70nm,0.7s,baz=252,slow=5.8,SNR=63
DBIC LR LR 23 10 35.5
comp=Z,27nm,18.7s,baz=264,slow=35
comp=Z,70nm,0.7s
DBIC Dimbokro 73.22 70 P **P** **22 38 51.3 +0.1**
DBIC Dimbokro 73.22 70 P **P** **22 38 51.3 +0.1**
DBIC pmax pmax
comp=Z,70nm,0.8s
OK051 E0350 and S346 73.25 338 P **P** **22 38 51.2 +0.3**
O52A Adamsville 73.26 351 P **P** **22 38 50.8 -0.1**
O53A New Philadelph 73.31 351 P **P** **22 38 51.7 +0.6**
O53A IAmb IAmb 22 39 34.2
comp=Z,65nm,1.6s
SSPA Standing Stone 73.33 354 P **P** **22 38 52.0 +0.8**
Q44A Meyer Farm, Va 73.38 345 P **P** **22 38 50.6 -1.0**
SLM Saint Louis 73.40 344 P **P** **22 38 51.9 +0.2**
SLM IAmb IAmb 22 38 53.2
comp=Z,56nm,1.0s
SLM Saint Louis 73.40 344 P **P** **22 38 51.9 +0.2**
SLM pmax pmax
comp=Z,56nm,1.0s
N58A Sunbury 73.43 355 P **P** **22 38 52.9 +1.1**
AMTX Amarillo 73.48 333 P **P** **22 38 52.8 +0.4**
AMTX IAmb IAmb 22 38 54.6
comp=Z,70nm,1.2s
T35A Sooner Cattle 73.52 338 P **P** **22 38 52.8 +0.3**
T35A IAmb IAmb 22 38 54.5
comp=Z,39nm,0.9s
ACSO Alum Creek Sta 73.54 350 P **P** **22 38 52.8 +0.3**
ACSO IAmb IAmb 22 38 53.8
comp=Z,60nm,0.9s
R40A Maddies Statio 73.58 342 P **P** **22 38 52.8 +0.1**
BLOK Blackwell 73.60 338 P **P** **22 38 53.4 +0.5**
CROK Carrier 73.62 337 P **P** **22 38 53.7 +0.6**
CROK IAmb IAmb 22 38 54.8
comp=Z,61nm,1.1s
P46A Rosedale 73.68 346 P **P** **22 38 52.8 -0.5**
P46A IAmb IAmb 22 38 54.1
comp=Z,55nm,1.1s
ELIS Ellis County 73.71 336 P **P** **22 38 54.2 +0.5**
ELIS IAmb IAmb 22 38 56.0
comp=Z,55nm,1.1s
O49A Covington 73.71 349 P **P** **22 38 53.3 -0.2**
O49A IAmb IAmb 22 38 54.7
comp=Z,66nm,1.1s
319A Douglas 73.71 326 P **P** **22 38 54.6 +0.8**
319A IAmb IAmb 22 38 57.2
comp=Z,45nm,0.9s
N53A Lisbon 73.81 352 P **P** **22 38 53.3 -0.8**
N53A IAmb IAmb 22 38 56.3
comp=Z,39nm,1.1s
O48B Farmland 73.92 348 P **P** **22 38 54.0 -0.6**
O48B IAmb IAmb 22 38 55.6
comp=Z,38nm,1.1s
MAW Mawson 73.95 163 P **P** **22 38 55.4 +0.7**
comp=Z,4.8nm,1.0s
MAW Mawson 73.95 163 P **P** **22 38 55.7 +1.0**
comp=Z,14nm,0.8s,baz=194,slow=6.8,SNR=13
MAW pP **pP** **22 39 24.4 +1.0**
comp=Z,29nm,1.1s,baz=225,slow=8.2,SNR=6.9
comp=Z,14nm,0.8s
SUR Sutherland 74.02 118 P **P** **22 38 56.7 +0.7**
SUR IAmb IAmb 22 38 58.3
comp=Z,35nm,0.8s
SUR Sutherland 74.02 118 P **P** **22 38 57.2 +1.2**
KAN14 Manchester OK 74.03 337 IAmb IAmb 22 38 57.4
comp=Z,47nm,1.2s
NOKA Waynoka 74.06 336 P **P** **22 38 56.4 +0.7**
NOKA IAmb IAmb 22 38 57.9
comp=Z,24nm,0.7s
N51A Ashland 74.12 350 P **P** **22 38 55.3 -0.6**
N51A IAmb IAmb 22 38 57.1
comp=Z,38nm,1.0s
KAN01 Argonia South 74.14 337 IAmb IAmb 22 38 58.3
comp=Z,65nm,1.1s
P43A Skaggs, Pawnee 74.20 345 P **P** **22 38 56.1 -0.2**
KAN08 Anthony NE Sta 74.27 337 P **P** **22 38 57.6 +0.8**
PAOC Oil Creek Stat 74.38 353 P **P** **22 38 57.0 -0.3**
SFIN Lafayette 74.39 347 P **P** **22 38 57.0 -0.5**
N49A Columbus Grove 74.40 349 P **P** **22 38 56.7 -0.8**
N49A IAmb IAmb 22 38 58.8
comp=Z,57nm,1.0s
M52A Chesterland 74.60 351 P **P** **22 38 58.5 -0.2**
M52A IAmb IAmb 22 39 00.1
comp=Z,52nm,0.9s
DUN6 Lazy B Ranch 74.60 327 P **P** **22 38 59.2 +0.2**
N47A Urbana 74.62 348 P **P** **22 38 58.1 -0.6**
N47A IAmb IAmb 22 38 59.4
comp=Z,63nm,1.1s
L59A Walton 74.66 356 P **P** **22 38 59.0 0.0**
L59A IAmb IAmb 22 39 00.8
comp=Z,63nm,1.1s
P40A Paris 74.69 343 P **P** **22 38 58.8 -0.4**
M50A Fremont 74.70 350 P **P** **22 38 58.3 -0.9**
M50A IAmb IAmb 22 39 00.4
comp=Z,39nm,1.0s
CRNM Carthage 74.72 329 P **P** **22 39 00.7 +0.9**
BINY Binghamton 74.73 355 P **P** **22 38 59.8 +0.5**
L56A Greenwood 74.79 354 P **P** **22 38 59.9 +0.1**
L56A IAmb IAmb 22 39 01.2
comp=Z,33nm,0.9s
L61B Northampton 74.82 358 P **P** **22 39 00.8 +0.9**
L61B IAmb IAmb 22 39 02.1
comp=Z,38nm,0.8s
BNM Barren Site 74.84 329 P **P** **22 39 01.2 +0.7**
SBM South Baldy 74.94 329 P **P** **22 39 02.2 +0.9**
LENM Lemitar 75.01 329 P **P** **22 39 02.8 +1.4**
TRY Troy 75.14 357 P **P** **22 39 02.5 +0.8**
TRY IAmb IAmb 22 39 04.3
comp=Z,61nm,1.0s
P38A Dawn 75.17 341 IAmb IAmb 22 39 03.4
comp=Z,54nm,1.0s
TUC Tucson 75.20 325 P **P** **22 39 02.8 +0.4**
TUC Tucson 75.20 325 P **P** **22 39 02.8 +0.4**
TUC pmax pmax
comp=Z,33nm,1.7s
RTBA Rita Blanca 75.25 333 P **P** **22 39 03.2 +0.6**
MMNY Mt. Morris Dam 75.41 354 P **P** **22 39 03.1 -0.1**
MMNY IAmb IAmb 22 39 05.1
comp=Z,83nm,1.3s
ABQ Albuquerque 75.45 330 P **P** **22 39 04.5 +0.6**
ANMO Albuquerque 75.45 330 LR LR 23 07 06.9
comp=Z,41nm,20.8s,baz=204,slow=31
ANMO Albuquerque 75.45 330 P **P** **22 39 03.9 -0.1**
ANMO Albuquerque 75.45 330 P **P** **22 39 03.4 -0.5**
ANMO IAmb IAmb 22 39 07.0
comp=Z,40nm,1.3s
ANMO Albuquerque 75.45 330 P **P** **22 39 03.1 -0.8**
ANMO IAmb IAmb 22 39 07.1
comp=Z,43nm,1.4s
ANMO Albuquerque 75.45 330 *i* P **P** **22 39 04.4 +0.5**
ANMO pmax pmax
comp=Z,13nm,0.9s
ANMO Albuquerque 75.45 330 P **P** **22 39 05.5 +1.6**
ANMO pP **pP** **22 39 33.7 +1.2**
TASM ASL Pad, Albuq 75.45 330 P **P** **22 39 04.8 +0.9**
TASM IAmb IAmb 22 39 07.1
comp=Z,40nm,1.3s
TASM ASL Pad, Albuq 75.45 330 P **P** **22 39 04.6 +0.7**
TASM IAmb IAmb 22 39 07.1
comp=Z,40nm,1.3s
TASM ASL Pad, Albuq 75.45 330 P **P** **22 39 03.9 -0.1**
TASM IAmb IAmb 22 39 07.1
comp=Z,41nm,1.3s
M44A Midewin, Midew 75.56 346 IAmb IAmb 22 39 05.2
comp=Z,51nm,0.9s
KSU1 Kansas State U 75.56 339 P **P** **22 39 04.7 +0.5**
KSU1 IAmb IAmb 22 41 14.7
comp=Z,27nm,0.6s
R32A Long Quarter, 75.60 337 IAmb IAmb 22 39 06.7
comp=Z,53nm,1.0s
L46A Eue Claire 75.83 348 IAmb IAmb 22 39 06.3
comp=Z,49nm,1.0s
N38A Joes South For 76.19 342 IAmb IAmb 22 39 09.2
comp=Z,57nm,0.9s
ACRG Accra 76.35 74 P **P** **22 39 09.2 -0.1**
ACRG IAmb IAmb 22 39 10.3
comp=Z,46nm,1.0s
L42A Oliver, Polo 76.49 345 IAmb IAmb 22 39 10.6
comp=Z,42nm,1.0s

LBNH Lisbon 76.59 359 IAmb IAmb 22 39 13.0
comp=Z,51nm,0.9s
J47A Sunmer 76.77 349 IAmb IAmb 22 39 11.8
comp=Z,31nm,0.8s
W18A Petrified Fore 77.03 328 IAmb IAmb 22 39 16.1
comp=Z,42nm,1.1s
LONY Lake Ozonia 77.06 357 IAmb IAmb 22 39 14.5
comp=Z,36nm,1.1s
SCIA State Center 77.23 343 IAmb IAmb 22 39 15.3
comp=Z,54nm,1.1s
FRNY Flat Rock 77.23 357 IAmb IAmb 22 39 15.7
comp=Z,44nm,0.9s
JFWS Jewell Farm 77.48 345 IAmb IAmb 22 39 16.5
comp=Z,35nm,0.9s
PKME Peaks-Kenny Pk 77.60 1 IAmb IAmb 22 39 18.0
comp=Z,40nm,0.8s
TSUM Tsumeb 77.99 105 LR LR 23 08 40.7
comp=Z,32nm,21.5s,baz=148,slow=32
TSUM Tsumeb 77.99 105 P **P** **22 39 18.9 +0.3**
TSUM Tsumeb 77.99 105 P **P** **22 39 18.9 +0.3**
I42A Draeger Farm, 78.14 346 IAmb IAmb 22 39 20.0
comp=Z,36nm,0.9s
KOOLE Kule 78.18 110 IAmb IAmb 22 39 21.1
comp=Z,47nm,0.8s
KOOLE Kule 78.18 110 *i* P **P** **22 39 19.2 -0.4**
F64A Sherman 78.21 1 IAmb IAmb 22 39 21.6
comp=Z,53nm,0.9s
H43A Windswept, Lux 78.47 347 IAmb IAmb 22 39 21.8
comp=Z,44nm,0.9s
RAR Rarotonga 78.59 252 LR LR 23 05 48.8
comp=Z,49nm,19.3s,baz=62,slow=29
TRQ Mont Tremblant 78.66 357 IAmb IAmb 22 39 23.2
comp=Z,55nm,0.9s
E62A Clayton Lake 78.95 0 IAmb IAmb 22 39 25.5
comp=Z,36nm,0.8s
PHPEN Phepeng 79.00 113 IAmb IAmb 22 39 25.3
comp=Z,31nm,0.8s
PHPEN Phpeng 79.00 113 *i* P **P** **22 39 22.2 -1.8**
PFO Pinyon Flats O 79.09 322 *i* P **P** **22 39 25.1 +0.9**
PFO pmax pmax
comp=Z,27nm,1.0s
PFO Pinyon Flats O 79.09 322 P **P** **22 39 26.3 +2.1**
PFO pP **pP** **22 39 54.2 +1.2**
PV13 Radium Mtn., P 79.18 330 IAmb IAmb 22 39 27.5
comp=Z,35nm,1.0s
PV02 Paradox Valley 79.18 330 IAmb IAmb 22 39 27.6
comp=Z,57nm,1.1s
BOSA Boshof 79.22 117 P **P** **22 39 25.2 -0.1**
comp=Z,37nm,0.8s,baz=243,slow=4.0,SNR=81
comp=Z,37nm,0.8s
BOSA Boshof 79.22 117 IAmb IAmb 22 39 26.5
comp=Z,47nm,0.9s
PV05 Paradox Valley 79.23 330 IAmb IAmb 22 39 27.6
comp=Z,32nm,1.0s
PV18 Skein Mesa, Pa 79.29 330 IAmb IAmb 22 39 27.9
comp=Z,40nm,0.9s
PV12 Sauer Basin, 79.31 330 IAmb IAmb 22 39 28.2
comp=Z,32nm,1.0s
PV11 David Mesa, Pa 79.32 330 IAmb IAmb 22 39 28.2
comp=Z,50nm,1.5s
PV19 Morning Glory 79.38 330 IAmb IAmb 22 39 28.4
comp=Z,38nm,1.2s
PV20 West Nyswonger 79.39 330 IAmb IAmb 22 39 28.5
comp=Z,50nm,1.3s
D62A Allapoint, All 79.42 1 IAmb IAmb 22 39 27.8
comp=Z,45nm,0.9s
PV10 Paradox Valley 79.45 330 IAmb IAmb 22 39 28.4
comp=Z,47nm,1.0s
PV23 Carpenter Ridg 79.51 330 IAmb IAmb 22 39 29.3
comp=Z,37nm,1.1s
BATG Bathurst New B 79.69 3 IAmb IAmb 22 39 28.9
comp=Z,25nm,0.8s
E46A Sault Ste Mari 79.74 350 IAmb IAmb 22 39 28.5
comp=Z,45nm,0.9s
F42A Maple Grove Fa 79.78 347 IAmb IAmb 22 39 29.1
comp=Z,29nm,0.8s
GRTLG Ghanzi 79.82 109 *i* P **P** **22 39 28.4 -0.2**
KGCAE Kacgae 79.84 111 IAmb IAmb 22 39 30.1
comp=Z,49nm,1.4s
KGCAE Kacgae 79.84 111 *i* P **P** **22 39 28.1 -0.6**
KNB Kanab 80.01 327 IAmb IAmb 22 39 32.6
comp=Z,42nm,1.1s
MAKGR Makgori 80.33 114 *i* P **P** **22 39 30.5 -0.8**
O20A White River Ci 80.61 331 IAmb IAmb 22 39 35.1
comp=Z,46nm,1.5s
VLDQ Val d'Or 80.72 355 IAmb IAmb 22 39 34.3
comp=Z,45nm,0.9s
QNGWA Qangwa 80.73 107 IAmb IAmb 22 39 35.2
comp=Z,37nm,1.1s
QNGWA Qangwa 80.73 107 *i* P **P** **22 39 33.2 -0.2**
P18A Preston Nutter 81.02 330 IAmb IAmb 22 39 37.5
comp=Z,33nm,0.9s
CASY Casey 81.34 180 P **P** **22 39 37.5 +1.8**
CASY IAmb IAmb 22 39 38.1
comp=Z,29nm,0.9s
LBTB Lobatse 81.36 114 P **P** **22 39 36.8 +0.1**
LBTB pP **pP** **22 40 06.1 +0.4**
XAUDM Khaudum 81.38 106 *i* P **P** **22 39 36.3 -0.6**
KDWAN Kaudwane 81.49 112 IAmb IAmb 22 39 38.9
comp=Z,62nm,1.1s
KDWAN Kaudwane 81.49 112 *i* P **P** **22 39 36.9 -0.5**
RDMU Red Mountain 81.52 331 IAmb IAmb 22 39 39.6
comp=Z,33nm,1.0s
K22A Casper 82.09 334 IAmb IAmb 22 39 42.7
comp=Z,39nm,1.0s
TORD Torodi Ar. Bea 82.23 69 P **P** **22 39 41.6 +0.4**
comp=Z,38nm,0.7s,baz=300,slow=3.6,SNR=22
TORD pP **pP** **22 40 10.9 +0.4**
comp=Z,16nm,0.9s,baz=294,slow=3.5,SNR=3.9
comp=Z,38nm,0.7s
SPR3 Spring Creek 3 82.31 327 IAmb IAmb 22 39 44.2
comp=Z,32nm,1.1s
LPHEP Lephephe 82.44 113 IAmb IAmb 22 39 43.9
comp=Z,45nm,0.9s
LPHEP Lephephe 82.44 113 *i* P **P** **22 39 41.8 -0.6**
RSSD Black Hills 82.49 336 P **P** **22 39 43.5 +1.4**
RSSD IAmb IAmb 22 39 44.4
comp=Z,39nm,0.9s
RSSD Black Hills 82.49 336 P **P** **22 39 43.5 +1.4**
RSSD pmax pmax
comp=Z,39nm,0.9s
RSSD Black Hills 82.49 336 P **P** **22 39 43.1 +1.0**
DUG Dugway, Tooele 82.60 328 IAmb IAmb 22 39 45.8
comp=Z,84nm,1.9s
TCUT Toone Canyon 82.75 330 IAmb IAmb 22 39 46.3
comp=Z,75nm,1.7s
KHWEE KHWEE 82.87 111 IAmb IAmb 22 39 46.2
comp=Z,50nm,1.1s
SLIND Selinda 83.08 108 *i* P **P** **22 39 45.8 0.0**
PDAR Pinedale Array 83.36 332 P **P** **22 39 47.3 +0.6**
comp=Z,5.7nm,0.7s,baz=135,slow=6.5,SNR=48
PDAR PKKPbc **PKKPbc** **22 58 05.5 -1.9**
comp=Z,0.8nm,0.6s,baz=220,slow=2.0,SNR=4.0
comp=Z,5.7nm,0.7s
LHV Little Huntoon 83.73 324 IAmb IAmb 22 39 51.9
comp=Z,39nm,0.8s
NVAR Mina Array Bea 83.77 324 P **P** **22 39 50.8 +1.9**
comp=Z,14nm,0.8s,baz=156,slow=6.0,SNR=78
NVAR pP **pP** **22 40 18.4 +0.5**
comp=Z,3.2nm,0.8s,baz=158,slow=6.5,SNR=2.8
comp=Z,14nm,0.8s
AGMN Agassiz Nation 83.87 343 IAmb IAmb 22 39 50.3
comp=Z,26nm,0.9s
HVU Hansel Valley 83.87 329 IAmb IAmb 22 39 51.3
comp=Z,23nm,0.9s
MREMI Moremi 84.09 113 IAmb IAmb 22 39 52.4
comp=Z,34nm,0.9s
MREMI Moremi 84.09 113 *i* P **P** **22 39 50.7 -0.2**
EPLO Experimental L 84.66 345 IAmb IAmb 22 39 54.0
comp=Z,27nm,1.1s
POGA Pongola 84.71 119 IAmb IAmb 22 39 55.4
comp=Z,34nm,1.1s
BROLN Tlhalogang 84.80 112 *i* P **P** **22 39 54.0 -0.5**
KSANE Kasane 84.85 108 *i* P **P** **22 39 54.7 -0.1**
FLWY Flagg Ranch 84.92 332 IAmb IAmb 22 39 57.2
comp=Z,41nm,1.1s
RPZ Rata Peaks 85.68 220 P **P** **22 39 59.4 +1.0**
comp=Z,13nm,0.7s,baz=45,slow=10.0,SNR=3.6
comp=Z,13nm,0.7s
ULM Lac du Bonnet 85.69 344 P **P** **22 39 57.5 -0.4**
comp=Z,25nm,0.9s,baz=146,slow=4.5,SNR=17
comp=Z,25nm,0.9s
ULM Lac du Bonnet 85.69 344 IAmb IAmb 22 39 59.2
comp=Z,29nm,0.9s
ULM Lac du Bonnet 85.69 344 *i* P **P** **22 39 58.2 +0.3**
YHL Hebgen Lake 85.75 332 IAmb IAmb 22 40 01.6
comp=Z,81nm,1.9s

BEKR Beckworth 85.90 324 IAmb IAmb 22 40 02.5
comp=Z,28nm,1.3s
HLID Hailey 86.03 329 IAmb IAmb 22 40 02.9
comp=Z,34nm,1.2s
BCYI Bear Canyon 86.21 330 IAmb IAmb 22 40 03.9
comp=Z,28nm,1.0s
ORV Oroville 86.24 323 IAmb IAmb 22 40 04.2
comp=Z,48nm,1.4s
DSZ Denniston Nort 86.59 221 P **P** **22 40 05.0 +2.0**
O03E Paynes Creek 86.94 323 IAmb IAmb 22 40 06.3
comp=Z,27nm,1.1s
WVOR Wild Horse Val 87.03 326 IAmb IAmb 22 40 07.6
comp=Z,24nm,1.2s
SCHQ Schefferville 87.22 2 P **P** **22 40 05.2 -0.1**
comp=Z,20nm,0.9s,baz=190,slow=4.9,SNR=15
SCHQ pP **pP** **22 40 35.8 +1.1**
comp=Z,22nm,1.1s,baz=153,slow=3.6,SNR=5.6
SCHQ LR LR 23 22 30.0
comp=Z,38nm,18.3s,baz=148,slow=38
comp=Z,20nm,0.9s
M03C McCloud 87.84 324 IAmb IAmb 22 40 11.0
comp=Z,31nm,1.2s
KHBM Hayfork Bally 87.94 322 IAmb IAmb 22 40 12.5
comp=Z,22nm,1.0s
BPMT Black Pine Rid 87.96 332 P **P** **22 40 10.7 +1.3**
KMPM Mount Pierce 88.23 322 P **P** **22 40 11.4 +0.8**
KMPM IAmb IAmb 22 40 14.1
comp=Z,30nm,0.9s
OVMT Ovando 88.29 332 P **P** **22 40 11.7 +0.9**
M02C Callahan 88.29 323 P **P** **22 40 11.5 +0.7**
M02C IAmb IAmb 22 40 13.6
comp=Z,20nm,1.1s
BMO Blue Mountains 88.31 329 P **P** **22 40 10.6 -0.3**
BMO Blue Mountains 88.31 329 P **P** **22 40 10.6 -0.3**
BMO pmax pmax
comp=Z,10.0nm,0.9s
K05A Summer Lake 88.33 325 P **P** **22 40 12.4 +1.3**
KHMM Horse Mountain 88.36 322 P **P** **22 40 12.3 +1.0**
KHMM IAmb IAmb 22 40 14.7
comp=Z,29nm,0.9s
JCC Jacoby Creek, 88.47 322 P **P** **22 40 11.4 -0.1**
MSO Missoula 88.47 332 P **P** **22 40 12.5 +0.9**
MSO IAmb IAmb 22 40 14.3
comp=Z,62nm,1.9s
L04D Klamath Falls 88.63 324 P **P** **22 40 12.8 +0.3**
I07A Izee 88.70 327 IAmb IAmb 22 40 15.8
comp=Z,28nm,1.0s
J05D Fort Rock, OR 88.91 325 IAmb IAmb 22 40 16.8
comp=Z,35nm,1.1s
PINE Pine Mountain 89.15 326 P **P** **22 40 16.6 +1.6**
F10A Beach Ranch, E 89.16 329 P **P** **22 40 14.7 -0.1**
L02F Cave Junction 89.19 323 P **P** **22 40 15.1 +0.2**
L02F IAmb IAmb 22 40 18.3
comp=Z,20nm,1.1s
J04A Umpqua Nationa 89.30 325 P **P** **22 40 16.1 +0.4**
J04A IAmb IAmb 22 40 18.5
comp=Z,21nm,0.9s
I05D Terrebonne, OR 89.75 326 IAmb IAmb 22 40 20.7
comp=Z,26nm,1.1s
WIFE Three Sisters- 89.77 326 IAmb IAmb 22 40 20.8
comp=Z,14nm,0.8s
G06A Carlson Farm, 90.11 327 IAmb IAmb 22 40 22.4
comp=Z,29nm,1.3s
H04A Detroit Lake 90.42 326 IAmb IAmb 22 40 22.7
comp=Z,16nm,0.9s
HAWA Hanford 90.49 328 P **P** **22 40 21.4 +0.5**
HAWA IAmb IAmb 22 40 23.6
comp=Z,17nm,0.8s
D08A Wollman Farm, 90.73 329 P **P** **22 40 22.6 +0.6**
D08A IAmb IAmb 22 40 24.2
comp=Z,16nm,0.8s
E07A Sunnyside 90.76 328 P **P** **22 40 22.4 +0.3**
E07A IAmb IAmb 22 40 24.7
comp=Z,15nm,1.0s
WAH2 Wahluke Slope 90.78 328 P **P** **22 40 21.8 -0.4**
WAH2 IAmb IAmb 22 40 24.5
comp=Z,16nm,1.2s
TAM Tamanrasset 90.79 63 P **P** **22 40 22.7 -0.4**
TAM Tamanrasset 90.79 63 P **P** **22 40 22.7 -0.4**
TAM pmax pmax
comp=Z,82nm,0.2s
NEW Newport 90.92 331 LR LR 23 18 20.2
comp=Z,60nm,18.0s,baz=266,slow=34
MXC Moxie City 90.97 328 IAmb IAmb 22 40 25.9
comp=Z,15nm,1.1s
FFC Flin Flon 91.30 342 P **P** **22 40 25.0 +0.6**
FFC IAmb IAmb 22 40 25.8
comp=Z,18nm,1.1s
FFC Flin Flon 91.30 342 P **P** **22 40 25.0 +0.6**
FFC pmax pmax
comp=Z,18nm,1.2s
LTY Liberty 91.66 328 IAmb IAmb 22 40 28.4
comp=Z,17nm,1.2s
B08A Colville Reser 91.92 330 IAmb IAmb 22 40 28.9
comp=Z,30nm,1.7s
ESDC Sonseca Array 94.51 45 P **P** **22 40 39.5 -0.2**
comp=Z,2.2nm,0.8s,baz=247,slow=5.9,SNR=6.7
comp=Z,2.2nm,0.8s
KPA Kalaupapa 98.66 290 P **P** **22 40 57.7 -1.1**
KPA Kalaupapa 98.66 290 P **P** **22 40 57.7 -1.1**
MBAR Mbarara 98.79 96 LR LR 23 24 16.6
comp=Z,36nm,19.3s,baz=251,slow=34
YKA Yellowknife Ar 101.36 341 P **Pdif** **22 41 09.4 -0.4**
comp=Z,1.5nm,0.8s,baz=152,slow=3.7,SNR=11
DZM Mont Dzumac 103.32 233 *e*LR LR 23 15 18.7
comp=Z,271nm,36.9s
GERES GERESS Array B 110.09 44 PKiKP **PKiKP** **22 45 50.7 +0.4**
comp=Z,1.1nm,0.7s,baz=186,slow=1.3,SNR=8.5
MORH Mrgy, Hungar 111.97 48 ⇑P **PKiKP** **22 45 54.3 +0.6**
APE Apeiranthos 112.88 60 ⇑P **PKiKP** **22 45 48.8 -7.1**
APE Apeiranthos 112.88 60 ⇑PKiKP **PKiKP** **22 45 48.8 -7.1**
ILAR Eielson Array 113.78 333 PKiKP **PKiKP** **22 45 57.2 +0.6**
comp=Z,1.9nm,0.9s,baz=171,slow=1.3,SNR=13
ILAR PKKPbc **PKKPbc** **22 56 38.5 -2.7**
comp=Z,0.9nm,1.1s,baz=250,slow=4.5,SNR=4.6
HERR Herculane 113.85 51 ⇓P **PKiKP** **22 45 57.9 +0.5**
SIRR Siria 113.90 49 ⇓P **PKiKP** **22 45 58.4 +0.9**
SURR Surduc 114.00 50 ⇓P **PKiKP** **22 45 58.1 +0.5**
NOA NORSAR Array B 114.06 32 PKKPbc PKKPbc 22 56 41.8 +1.6
comp=Z,0.8nm,0.9s,baz=66,slow=4.5,SNR=3.3
DRGR 114.77 49 ⇓P **PKiKP** **22 45 59.7 +0.5**
DRGR 114.77 49 ⇓PKiKP **PKiKP** **22 45 59.7 +0.5**
MARR Marisel-Cluj 114.99 49 ⇑P **PKiKP** **22 46 02.9 +3.3**
ARR Arges 115.49 51 ⇑P **PKiKP** **22 46 01.1 +0.5**
R9F13 Warsaw-Wawer 115.79 43 ePKiKP **PKiKP** **22 45 55.4 -5.4**
BURAR Bucovina Array 116.66 49 ⇑P **PKiKP** **22 46 03.6 +0.8**
BURAR Bucovina Array 116.66 49 ⇑PKiKP **PKiKP** **22 46 03.6 +0.8**
VRI Vrincioaia 117.04 51 ⇓P **PKPdf** **22 46 02.5 -1.0**
VRI Vrincioaia 117.04 51 ⇓PKiKP **PKPdf** **22 46 02.5 -1.0**
GHRR 117.55 51 ⇑P **PKiKP** **22 46 04.8 +0.3**
CFR Carcaliu 117.74 52 ⇑P **PKiKP** **22 46 05.5 +0.6**
CFR Carcaliu 117.74 52 ⇑PKiKP **PKiKP** **22 46 05.5 +0.6**
VLDR Vladesti 117.92 52 ⇑P **PKiKP** **22 46 05.9 +0.7**
MMAI Mount Meron Ar 118.74 67 PKP **PKPdf** **22 46 06.9 -0.3**
comp=Z,1.1nm,0.6s,baz=218,slow=3.5,SNR=2.2
MILM Milestii Mici 118.75 51 ⇑P **PKPdf** **22 46 05.7 -1.0**
MILM Milestii Mici 118.75 51 ⇑PKiKP **PKPdf** **22 46 05.7 -1.0**
SORM Soroca 118.83 49 ⇓P **PKPdf** **22 46 06.1 -0.7**
SORM Soroca 118.83 49 ⇓PKiKP **PKPdf** **22 46 06.1 -0.7**
ANTO Ankara 119.21 59 ⇑P **PKiKP** **22 46 09.1 +1.1**
ANTO Ankara 119.21 59 ⇑PKiKP **PKiKP** **22 46 09.1 +1.1**
ASAR Alice Springs 119.45 205 PKP **PKPdf** **22 46 08.5 -0.5**
comp=Z,2.9nm,0.8s,baz=150,slow=2.3,SNR=29
ASAR PKKPbc **PKKPbc** **22 56 20.4 0.0**
comp=Z,2.2nm,0.8s,baz=338,slow=3.3,SNR=18
ASAR PKKP **PKKPdf** **22 56 51.3 +1.0**
comp=Z,1.8nm,1.1s,baz=339,slow=3.7,SNR=5.7
BRTR Keskin Array B 119.78 60 PKP **PKPdf** **22 46 09.1 -0.1**
comp=Z,2.6nm,0.8s,baz=170,slow=2.3,SNR=14
KIEV Kiev 120.11 47 **PKPdf** **22 46 09.1 -0.1**
KIEV Kiev 120.11 47 ⇓P **PKPdf** **22 46 08.7 -0.5**
KIEV Kiev 120.11 47 PKiKP **PKPdf** **22 46 09.1 -0.1**
AKASG Malin Array Be 120.12 47 PKP **PKPdf** **22 46 08.7 -0.6**
comp=Z,4.3nm,0.5s,baz=263,slow=2.7,SNR=19
AKBB Malin Array Si 120.12 47 *c* PKiKP **PKPdf** **22 46 09.2 0.0**
MNK Minsk 120.33 42 *i* PKiKP **PKiKP** **22 46 09.7 +0.1**
MNK *i* 22 46 40.1
MNK *i* PPP PPP 22 50 11.9
MNK *i* 22 53 08.4
MNK *i* SS SS 23 03 57.7 +0.4
MNK *i* SSS SSS 23 08 26.0
MNK pmax pmax
comp=Z,28nm,0.9s
MNK pmax pmax
comp=E,7.0nm,0.8s

MNK pmax pmax
comp=N,14nm,0.9s
FINES FINESS Array B 121.00 34 PKP **PKPdf 22 46 10.3 -0.3**
comp=N,4.3nm,0.9s,baz=190,slow=1.8,SNR=8.1
ARCES ARCESS Array B 122.16 24 PKP **PKPdf 22 46 12.4 -0.2**
comp=N,4.2nm,0.7s,baz=251,slow=3.8,SNR=21
WRA Warramunga Arr 122.67 208 PKP **PKPdf 22 46 15.2 0.0**
comp=N,7.4nm,0.7s,baz=170,slow=1.5,SNR=66
WRA pPKP **pPKPdf 22 46 44.9 -1.2**
comp=N,1.3nm,0.4s,baz=160,slow=1.7,SNR=3.3
WRA PKKPbc **PKKPbc 22 56 08.7 +0.4**
comp=N,1.3nm,0.7s,baz=352,slow=4.1,SNR=10
WRAB Tennant Creek 122.68 208*c i*PKIKP **PKiKP 22 46 17.0 +1.6**
WRAB pmax pmax
comp=Z,26nm,2.5s
ANN Anapa 123.94 55 *i* PKIKP **PKiKP 22 46 21.4 +4.4**
ANN *e* 22 46 48.4
ANN *e* 22 53 14.9
ANN pmax pmax
comp=Z,30nm,0.7s
APA Apatity 124.89 27⇓*i*PKIKP **PKPdf 22 46 17.7 -0.2**
APA *e**PP **pPKPdf 22 46 47.7 -1.4**
APA MLR MLR
comp=Z,197nm,3.7s
PMG Port Moresby 125.09 227*c i*PKIKP **PKiKP 22 46 21.6 +1.3**
PMG pmax pmax
comp=Z,13nm,1.7s
LVZ Lovozero 125.37 27⇑PKIKP **PKPdf 22 46 18.3 -0.6**
OBN Obninsk 125.38 42*c i*PKIKP **PKiKP 22 46 20.0 +0.5**
OBN *e* 22 46 48.3
OBN *e* 22 48 09.7
OBN *e*PPP PPP 22 50 49.7
OBN pmax pmax
comp=Z,33nm,1.3s
MOS Moscow 126.06 42 *i* PKIKP **PKPdf 22 46 19.7 -0.7**
MOS *e* 22 46 50.5
MOS pmax pmax
comp=Z,28nm,1.0s
VSR Storozhevoye 126.37 48 *e*PKIKP **PKPdf 22 46 18.9 -2.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 126.41 48 *e*PKIKP **PKPdf 22 46 18.8 -2.5**
VORD pmax pmax
comp=Z,9.0nm,0.9s
LPSR Galich'ya Gora 126.42 46 *e*PKIKP **PKPdf 22 46 21.4 +0.2**
LPSR pmax pmax
comp=Z,27nm,1.0s
VORR Voronezh 126.46 47 *e*PKIKP **PKPdf 22 46 21.4 +0.1**
VORR pmax pmax
comp=Z,13nm,0.6s
KLMR Klimovskoe 127.40 35 *e*PKIKP **PKiKP 22 46 23.3 -0.1**
KLMR *e* 22 46 53.6
KLMR pmax pmax
comp=Z,55nm,1.2s
H11S2 WAKE ISLAND Hyl 27.42 269 T T 01 06 02.6
baz=118,slow=75,SNR=112
KIV Kislovodsk 127.42 57 ⇓P **PKiKP 22 46 24.7 +0.5**
KIV Kislovodsk 127.42 57 *e*PKIKP **PKiKP 22 46 24.6 +0.5**
KIV pmax pmax
comp=Z,16nm,1.1s
H11S1 WAKE ISLAND Hyl 27.43 269 T T 01 06 06.4
baz=118,slow=75,SNR=118
H11S3 WAKE ISLAND Hyl 27.44 269 T T 01 06 04.0
baz=118,slow=75,SNR=59
KBZ Khabaz 127.53 57 PKP **PKiKP 22 46 24.1 0.0**
comp=Z,7.5nm,1.0s,baz=235,slow=3.5,SNR=8.7
KBZ Khabaz 127.53 57*c i*PKIKP **PKiKP 22 46 24.9 +0.7**
H11N3 WAKE ISLAND Hyl 27.80 271 T T 01 06 32.4
baz=117,slow=76,SNR=11
H11N1 WAKE ISLAND Hyl 27.81 270 T T 01 06 34.2
baz=117,slow=76,SNR=3.7
H11N2 WAKE ISLAND Hyl 27.81 271 T T 01 06 33.9
baz=117,slow=76,SNR=26
VRH Novokhopyorsk 127.96 48 *e*PKIKP **PKPdf 22 46 24.4 +0.2**
VRH pmax pmax
comp=Z,13nm,0.8s
AKT Akhty 130.58 61 *e*PKIKP **PKiKP 22 46 31.3 +0.7**
AKT pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 132.36 335*c i*PKIKP **PKiKP 22 46 35.0 +1.8**
BILL pmax pmax
comp=Z,13nm,1.7s
KIRV Kirov 132.50 38*c i*PKIKP **PKiKP 22 46 34.9 +1.2**
WSI Waingapu 136.72 195 PKP **PKPdf 22 46 42.2 +0.3**
EDFI Ende, Flores 137.28 197 PKP **PKPdf 22 46 43.4 +0.3**
ARTI Arti 137.62 40 **PKPdf 22 46 42.5 +0.3**
ARTI Arti 137.62 40 *i* PKIKP **PKiKP 22 46 44.0 -0.2**
ARTI 22 49 30.0
ARTI SS SS 23 07 29.6 -0.5
TWSI Taliwang, Sumb 138.26 190 PKP **PKiKP 22 46 47.0 +0.1**
SVE Sverdlovsk 138.73 39 *e*PKIKP **PKiKP 22 46 45.4 -1.1**
SVE pmax pmax
comp=Z,11nm,1.1s
AB31 Akbulak array 139.60 51⇑*e*PKIKP **PKPdf 22 46 46.4 +0.3**
AB31 pmax pmax
comp=Z,9.0nm,0.6s
SEY Seymchan 139.69 331*c i*PKIKP **PKiKP 22 46 48.4 +0.2**
SEY pmax pmax
comp=Z,23nm,1.3s
PETK Petropavlovsk- 140.39 316 PKhKP PKPpre 22 46 40.3
comp=Z,5.5nm,0.8s,baz=98,slow=4.4,SNR=5.4
PETK PKP **PKPdf 22 46 47.6 +0.1**
comp=Z,7.4nm,0.8s,baz=103,slow=4.6,SNR=4.2
BNSI Bone 141.85 197 PKP **PKPdf 22 46 52.5 +1.2**
SANI Sanana 142.24 207 PKP **PKPdf 22 46 49.1 -2.9**
SPSI Sidrap Palu 142.35 196 PKP **PKiKP 22 46 56.1 +0.8**
MDSI Maura Dua 142.62 171 PKP **PKPdf 22 46 49.4 -3.3**
PALK Pallekele 142.92 127 PKhKP PKPpre 22 46 50.3
comp=Z,11nm,0.9s,baz=271,slow=3.2,SNR=4.2
MASI Maura Aman, Be 143.62 167 PKP PKPbc 22 46 53.3 +1.1
LUWI Luwuk 144.31 202 PKP **PKPdf 22 46 55.6 -0.1**
KRJI Kerinci 144.49 165 PKP **PKPdf 22 46 56.3 +0.2**
SISI Saibi 144.65 161 PKP **PKPdf 22 46 57.8 +1.6**
TPI Tanjungpandan 144.67 176 PKP PKPbc 22 46 55.7 +0.4
APSI Ampana 144.78 201 PKP **PKiKP 22 47 00.4 +0.1**
PPBI Pangkal Pinang 145.15 173 PKP **PKPdf 22 46 58.9 +1.8**
BVAR Borovoye Array 145.22 42 PKPbc **PKPab 22 46 57.1 +1.0**
comp=Z,55nm,0.6s,baz=295,slow=3.2,SNR=371
BVAR pPKPbc **pPKPdf 22 47 28.1 +0.9**
comp=Z,6.5nm,0.5s,baz=306,slow=2.5,SNR=2.6
PCI Palu 145.28 198 PKP **PKPab 22 46 59.3 +1.9**
PDSI Padang 145.40 163 PKP **PKPab 22 46 58.0 +0.1**
PPI Padang Panjang 145.82 163 PKP **PKPab 22 46 59.5 +0.1**
MPSI Mapaga 146.46 198 PKP **PKPbc 22 47 00.6 -0.2**
DSRI Dabo 146.62 170 PKP **PKPbc 22 47 01.6 +0.3**
GSI Gunungsitoli 146.68 157 PKP **PKPab 22 47 03.1 +0.3**
MNSI Mandailing Nat 146.81 161 PKP **PKPbc 22 47 01.9 +0.1**
SBSI Sibolga 147.33 159 PKP **PKPbc 22 47 03.5 +0.2**
KK31 Karatay Array 147.49 60⇑*e*PKP2 **PKPbc 22 47 02.7 -0.2**
KK31 pmax pmax
comp=Z,32nm,0.8s
HYBB Hyderabad (bro 147.93 111 *e*PKPdf **PKPdf 22 47 00.6 -1.1**
HYBB *e*PKiKP **PKPbc 22 47 05.7 +0.8**
YAK Yakutsk 148.02 342 *e*PKIKP **PKPdf 22 47 01.1 +0.7**
YAK *e* 22 47 33.8
YAK *e* 22 50 33.7
YAK pmax pmax
comp=Z,118nm,1.0s
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,13nm,1.3s
YAK pmax pmax
comp=Z,109nm,4.6s
YAK pmax pmax
comp=N,92nm,4.0s
PSI Prapat 148.52 159 PKPbc **PKPbc 22 47 06.0 -0.6**
comp=N,50nm,0.8s,baz=229,slow=2.9,SNR=38
PSI pPKPbc **pPKPbc 22 47 37.1 0.0**
comp=N,18nm,0.7s,baz=194,slow=8.5,SNR=3.0
PSI Prapat 148.52 159 PKP2 **PKPbc 22 47 06.0 -0.6**
KCSI Kotacane, Aceh 148.83 156 PKP **PKPbc 22 47 07.1 -0.1**
MLSI Meulaboh, Aceh 149.02 153 PKP **PKPdf 22 47 03.5 -0.1**
MLSI PKP **PKPbc 22 47 07.8 +0.1**
TYV Tymovskoe 149.92 317 *e*PKP2 **PKiKP 22 47 09.6 0.0**
TYV pmax pmax
comp=Z,38nm,0.8s
TYV pmax pmax
comp=Z,300nm,3.6s
EKS2 Erkin-Say 149.93 60 P **PKPdf 22 47 06.2 +1.9**
SNR=7.1
USP Ospenovka 150.37 59 P **PKPdf 22 47 06.5 +1.7**
SNR=5.5
AAK Ala-Archa 150.45 60 P **PKPdf 22 47 07.1 +1.9**
SNR=7.0
UCH Uchtor 150.52 61 P **PKPdf 22 47 07.4 +1.7**
SNR=7.0
CHMS Chumysh 150.59 59 P **PKiKP 22 47 11.9 +0.5**
SNR=34
KBK Karagaybulak 150.78 60 P **PKiKP 22 47 12.7 +0.8**
SNR=20
KURBB Kurchatov Arra 150.81 43 PKP **PKPdf 22 47 06.5 +1.2**
comp=Z,14nm,1.3s,baz=295,slow=2.6,SNR=20
KURBB PKPbc **PKiKP 22 47 11.9 +0.4**
comp=Z,61nm,0.8s,baz=302,slow=3.0,SNR=97
KURBB pPKPbc **pPKPbc 22 47 42.6 +0.9**
comp=Z,15nm,0.9s,baz=299,slow=3.2,SNR=3.7
KURBB PP **PP 22 50 43.1 -6.0**
comp=Z,1.6nm,1.0s,baz=284,slow=6.6,SNR=2.6
KURK Kurchatov 150.82 43 **PKiKP 22 47 11.9 +0.4**
KURK Kurchatov 150.82 43 PKiKP **PKPdf 22 47 06.5 +1.3**
KURK 22 47 42.6
TKM2 Tokmak 2 151.22 59 P **PKPdf 22 47 07.7 +1.3**
SNR=6.2
YSS Yuzhno-Sakhali 151.27 309*c i*PKIKP **PKiKP 22 47 13.5 +0.9**
YSS pmax pmax
comp=Z,62nm,1.7s
ULHL Ulahol 151.79 61 P **PKiKP 22 47 15.4 +1.3**
SNR=5.0
KSH Kashi 151.87 66 PKPbc **PKPdf 22 47 08.3 +0.9**
KSH sPKP sPKPdf 22 47 45.8 -4.3
ZALV Zalesovo Beam 152.26 33 PKP **PKPdf 22 47 07.8 +0.5**
comp=Z,8.6nm,1.0s,baz=284,slow=3.3,SNR=13
ZALV PKPbc **PKiKP 22 47 15.0 +0.6**
comp=Z,136nm,0.6s,baz=310,slow=3.0,SNR=295
ZALV pPKPbc **pPKPbc 22 47 45.4 +0.5**
comp=Z,21nm,0.6s,baz=298,slow=3.0,SNR=3.3
MK31 Makanchi Array 154.69 48*c i*PKIKP **PKiKP 22 47 20.4 +0.7**
MKAR Makanchi Array 154.69 48 PKP **PKPdf 22 47 11.7 +0.6**
comp=Z,2.6nm,0.8s,baz=321,slow=1.6,SNR=15
MKAR PKPbc **PKiKP 22 47 20.2 +0.5**
comp=Z,11nm,0.9s,baz=285,slow=1.6,SNR=24
MKAR PKPab **pPKPab 22 47 34.9 -0.1**
comp=Z,23nm,0.9s,baz=264,slow=4.5,SNR=4.0
ZEA Zeya 155.59 335 *e*PKIKP PKPdf 22 47 21.9 +10
ZEA *e* 22 47 39.3
ZEA pmax pmax
comp=Z,10.0nm,1.3s
MJAR Matsushiro Arr 156.43 287 PKP **PKPdf 22 47 13.0 -0.7**
comp=Z,1.2nm,0.9s,baz=97,slow=3.9,SNR=2.0
MJAR PKPab **pPKPdf 22 47 44.8 +0.3**
comp=Z,6.4nm,0.8s,baz=129,slow=2.5,SNR=10
HEH HeiHe 158.19 329 PKP PKPdf 22 47 07.4 -8.0
USRK Ussuriysk Ar. 159.31 310 PKP **PKPdf 22 47 16.9 -0.1**
comp=Z,1.5nm,0.7s,baz=5.4,slow=7.7,SNR=4.4
USRK PKPab **pPKPab 22 47 55.8 +0.8**
comp=Z,4.9nm,0.8s,baz=80,slow=6.2,SNR=8.2
WMQ Urumqi 159.39 51 *e*PKP **PKPdf 22 47 17.0 -0.2**
BNX BinXian 161.25 319⇑P **PKPab 22 48 05.0 +1.6**
BNX pmax pmax
comp=Z,18nm,1.0s
HILR Hailar Array B 161.63 339 PKPab **PKPab 22 48 05.3 +0.4**
comp=Z,6.3nm,0.7s,baz=76,slow=6.3,SNR=5.8
CMAR Chiang Mai Arr 162.73 143 PKP **PKPdf 22 47 22.0 +0.6**
comp=Z,5.6nm,0.9s,baz=249,slow=2.7,SNR=26
CMAR pPKP **pPKPdf 22 47 52.8 +0.4**
comp=Z,0.8nm,0.4s,baz=256,slow=2.4,SNR=2.1
CMAR PKPab **PKPab 22 48 10.4 0.0**
comp=Z,4.0nm,0.9s,baz=230,slow=5.0,SNR=15
CMAR pPKPab **pPKPab 22 48 41.1 +0.8**
comp=Z,0.5nm,0.3s,baz=208,slow=3.3,SNR=1.2
CN2 Changchun 163.54 317 PKP **PKPdf 22 47 22.3 +0.9**
KSRS Korea Array 164.51 293 PKP **PKPdf 22 47 22.4 -0.1**
comp=Z,7.7nm,0.8s,baz=141,slow=0.8,SNR=10
KSRS PKPab **PKPab 22 48 20.4 +2.4**
comp=Z,3.6nm,0.8s,baz=84,slow=5.3,SNR=9.0
SONM Songino Array 164.65 9 PKP **PKPdf 22 47 22.6 +0.1**
comp=Z,2.5nm,0.9s,baz=303,slow=0.7,SNR=12
SONM PKPab **PKPab 22 48 18.9 +0.6**
comp=Z,5.6nm,0.8s,baz=324,slow=4.4,SNR=20
SONM pPKPab **pPKPab 22 48 49.4 +1.4**
comp=Z,3.3nm,0.9s,baz=324,slow=3.7,SNR=5.2
SONM PP **PP 22 52 04.8 +0.5**
comp=Z,2.0nm,1.1s,baz=327,slow=2.5,SNR=5.9
GOMU GeErMu 167.07 70 PKP **PKPdf 22 47 24.6 -0.5**
TNCH TengChong 167.44 125 PKP **PKPdf 22 47 25.9 +0.4**
TNCH PKPab **PKPab 22 48 31.8 +0.4**
GTA Gaotai 169.44 48 PKP **PKPdf 22 47 27.3 +1.0**
GTA pPKP pPKPdf 22 47 57.3 -0.2
GTA PKPab **PKPab 22 48 40.6 +0.7**
GTA PP **PP 22 52 30.1 +0.3**
PZH PanZhiHua 170.59 129 PKP **PKPdf 22 47 27.8 +0.5**
PZH PKPab **PKPab 22 48 46.0 +0.7**
HHC Hu-ho-hao-te 171.76 351 *e*PKP **PKPdf 22 47 27.9 +0.4**
NJ2 Nanjing 172.40 268 *e*PKP **PKPdf 22 47 27.4 -0.5**
TIA Tai'an 173.08 302 PKP **PKPdf 22 47 28.9 +0.8**
HNS HongShan 173.88 321⇓PKP **PKPdf 22 47 29.4 +1.1**
LZDM Lanzhou Array 173.92 56 PKP **PKPdf 22 47 29.4 +0.7**
comp=Z,1.0nm,0.4s,baz=242,slow=2.2,SNR=4.6
LZDM PKPab **PKPab 22 49 00.2 +0.1**
comp=Z,3.4nm,0.5s,baz=316,slow=4.1,SNR=9.5
XAN Xi'an 178.43 31 PKP **PKPdf 22 47 30.6 +1.1**

IDC ***22*** *22:28:03.9±3.5, 35.2°S×179.47°W, h0km, mb3.7/2, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=79.6km s-min=37.5km az=122.0*
WEL ***22*** *22:28:05.2±1.5, 36.3°S×35.17°W±2.9, h39km±197km, M4.0/19, mB4.8/1, ML3.9/18, MLv4.0/19, Mw(mB)4.1/1, Error ellipse: s-maj=51.5km s-min=28.3km az=34.9, confirmed*

ISC 22 22:28:00.9±2.0, 35.5°S±0.1×178.6°W±0.2, h10km, n42, σ1§13/51, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.20**	**230**	P	**Pn**	**22 28 51.4**	**+0.2**
MXZ				S	**Sn**	**22 29 29.0**	**-0.4**
WMGZ	**Waiomatatini S**	**3.30**	**226**	P	**Pn**	**22 28 53.7**	**+1.1**
PKGZ	**Pakihiroa**	**3.53**	**228**	P	**Pn**	**22 28 57.0**	**+1.3**
PUZ	**Puketiti**	**3.56**	**224**	P	**Pn**	**22 28 57.1**	**+0.8**
PUZ				S	**Sn**	**22 29 38.6**	**+0.2**
HAZ	**Te Kaha**	**3.65**	**232**	P	**Pn**	**22 28 59.2**	**+1.8**
TWGZ	**Tauwhareparae**	**3.79**	**225**	P	**Pn**	**22 29 00.4**	**+1.0**
RUGZ	**Raukumara Rang**	**3.84**	**230**	P	**Pn**	**22 29 01.4**	**+1.3**
CNGZ	**Carnagh Statio**	**3.89**	**220**	P	**Pn**	**22 29 02.4**	**+1.8**
TKGZ	**Te Karaka**	**4.05**	**223**	P	**Pn**	**22 29 04.3**	**+1.4**
TKGZ				S	**Sn**	**22 29 52.1**	**+1.7**
MWZ	**Matawai**	**4.16**	**227**	P	**Pn**	**22 29 06.0**	**+1.5**
MWZ				S	**Sn**	**22 29 53.3**	**0.0**
RIGZ	**Rimuhau**	**4.29**	**221**	P	**Pn**	**22 29 07.1**	**+0.9**
RIGZ				S	**Sn**	**22 29 55.9**	**-0.4**
RAGZ	**Rawiri**	**4.34**	**226**	P	**Pn**	**22 29 08.4**	**+1.4**
URZ	**Urewera**	**4.37**	**230**	Pn	**Pn**	**22 29 07.4**	**+0.1**
	6.5nm,0.3s,baz=41,slow=4.2,SNR=31						
URZ				Sn	**Sn**	**22 29 57.5**	**-0.8**
	5.9nm,0.3s,baz=328,slow=16,SNR=12						
	14nm,0.3s						
URZ	**Urewera**	**4.37**	**230**	P	**Pn**	**22 29 07.6**	**+0.2**
URZ				S	**Sn**	**22 29 57.8**	**-0.5**
PRGZ	**Paritu Road**	**4.38**	**219**	P	**Pn**	**22 29 08.4**	**+0.9**
PRGZ				S	**Sn**	**22 29 58.3**	**-0.4**
MHGZ	**Mahia Peninsul**	**4.55**	**217**	P	**Pn**	**22 29 10.9**	**+1.2**
KNZ	**Kokohu**	**4.56**	**219**	P	**Pn**	**22 29 10.0**	**0.0**
KNZ				S	**Sn**	**22 30 03.2**	**+0.1**
SNGZ	**Shannon Statio**	**4.57**	**224**	P	**Pn**	**22 29 11.3**	**+1.2**
RTZ	**Ruatahuna**	**4.67**	**228**	P	**Pn**	**22 29 12.9**	**+1.6**
MUGZ	**Murupara**	**4.72**	**230**	P	**Pn**	**22 29 13.7**	**+1.6**
RAHZ	**Arahi**	**4.81**	**224**	P	**Pn**	**22 29 15.0**	**+1.6**
WHHZ	**Waihua**	**4.84**	**222**	P	**Pn**	**22 29 15.2**	**+1.4**
MTHZ	**Maungataniwha**	**4.91**	**226**	P	**Pn**	**22 29 16.3**	**+1.5**
NMHZ	**Naumai**	**5.09**	**224**	P	**Pn**	**22 29 18.9**	**+1.6**
ARHZ	**Aropaoanui**	**5.10**	**222**	P	**Pn**	**22 29 18.2**	**+0.8**
BKZ	**Black Stump Fm**	**5.32**	**226**	P	**Pn**	**22 29 20.4**	**0.0**
CKHZ	**Cape Kidnapper**	**5.35**	**219**	P	**Pn**	**22 29 21.0**	**+0.2**
MCHZ	**McNeill Hill**	**5.39**	**222**	P	**Pn**	**22 29 22.8**	**+1.4**
KRHZ	**Kereru**	**5.71**	**223**	P	**Pn**	**22 29 25.8**	**0.0**
TMVZ	**Te Maari**	**5.76**	**230**	P	**Pn**	**22 29 27.0**	**+0.4**
NTVZ	**North Tongarir**	**5.77**	**230**	P	**Pn**	**22 29 27.8**	**+1.1**
OTVZ	**Oturere**	**5.82**	**230**	P	**Pn**	**22 29 27.5**	**+0.1**
SNVZ	**South Ngauruho**	**5.85**	**230**	P	**Pn**	**22 29 29.1**	**+1.4**
PNHZ	**Pukenui**	**6.00**	**222**	P	**Pn**	**22 29 28.7**	**-1.0**
TSZ	**Takapari Road**	**6.23**	**222**	P	**Pn**	**22 29 31.9**	**-1.0**
DVHZ	**Dannevirke**	**6.29**	**219**	P	**Pn**	**22 29 34.2**	**+0.5**
BFZ	**Birch Farm**	**6.54**	**217**	P	**Pn**	**22 29 36.2**	**-1.0**
MRZ	**Mangatainoka R**	**6.86**	**220**	P	**Pn**	**22 29 40.1**	**-1.5**
HOWZ	**Holdsworth Sta**	**7.07**	**219**	P	**Pn**	**22 29 43.6**	**-0.8**
ASAR	**Alice Springs**	**42.58**	**273**	P	**P**	**22 35 56.1**	**-1.2**
	1.0nm,0.7s,baz=117,slow=7.3,SNR=14						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**44.03**	**278**	P	**P**	**22 36 07.2**	**-1.8**
	0.5nm,0.5s,baz=119,slow=7.7,SNR=5.9						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**149.72**	**337**	PKPbc	**PKiKP**	**22 47 52.9**	**+1.8**
	2.0nm,0.8s,baz=68,slow=12,SNR=1.8						

SNET ***22*** *22:32:47.2±1.4, 13.69°N×89.10°W, h2km, ML3.7*
GCG ***22*** *22:32:47.7±1.5, 13.71°N×89.16°W, h1km±12km, MD4.3, ML4.0*
CATAC ***22*** *22:32:48.1±0.1, 14.1°N±1.1°×89.1°W±0.8, h4km, M3.8/33, MLv3.8/33, Error ellipse: s-maj=2.7km s-min=1.6km az=23.1, confirmed*
NEIC ***22*** *22:32:49.5±1.3, 13.76°N±0.05°×89.04°W±0.06, h10km±2km, ML3.9/18, Error ellipse: s-maj=11.1km s-min=5.8km az=234.0*

ISC 22 22:32:48.5±0.9, 13.69°N±0.02°×89.09°W±0.02, h5km±6km, n94, σ0§88/112, 9C-15D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGN	**Direccin Gen**	**0.08**	**286**	*e*P	**Pg**	**22 32 50.3**	**+0.1**
IGN	**Direccin Gen**	**0.08**	**286**	S	**Sg**	**22 32 52.1**	**+0.7**
IGN	**Direccin Gen**	**0.08**	**286**	⇓P	**Pg**	**22 32 50.2**	**0.0**
LOMA	**Loma Larga**	**0.09**	**238**	*i* P	**Pg**	**22 32 50.1**	**-0.3**
LOMA				*e*S	**Sg**	**22 32 52.0**	**+0.1**
LOMA	**Loma Larga**	**0.09**	**238**	⇑P	**Pg**	**22 32 50.1**	**-0.3**
UTEC	**Universidad Te**	**0.10**	**275**	S	**Sg**	**22 32 52.7**	**+0.5**
UTEC	**Universidad Te**	**0.10**	**275**	⇓P	**Pg**	**22 32 50.6**	**-0.1**
PANCS	**Alcalda de**	**0.12**	**226**	S	**Sg**	**22 32 52.0**	**-0.5**
PANCS	**Alcalda de**	**0.12**	**226**	⇑P	**Pg**	**22 32 50.2**	**-0.7**
UEES	**Universidad Ev**	**0.14**	**280**	S	**Sg**	**22 32 53.7**	**+0.4**
UEES	**Universidad Ev**	**0.14**	**280**	⇓P	**Pg**	**22 32 51.2**	**-0.2**
PAVA	**Las Pavas**	**0.15**	**82**	*e*P	**Pg**	**22 32 52.1**	**+0.5**
PAVA	**Las Pavas**	**0.15**	**82**	⇑P	**Pg**	**22 32 52.1**	**+0.5**
BOQS	**Boqueron**	**0.19**	**283**	*i* P	**Pg**	**22 32 52.2**	**-0.1**
PMON	**Piamonte**	**0.22**	**275**	S	**Sg**	**22 32 55.9**	**+0.3**
PMON	**Piamonte**	**0.22**	**275**	⇓P	**Pg**	**22 32 52.5**	**-0.2**
LALI	**Alcalda de L**	**0.30**	**228**	*i* P	**Pg**	**22 32 53.8**	**-0.5**
LALI				*e*S	**Sg**	**22 32 58.5**	**+0.3**
LALI	**Alcalda de L**	**0.30**	**228**	*i* P	**Pg**	**22 32 53.8**	**-0.5**
LALI				*i* S	**Sg**	**22 32 58.4**	**+0.1**
LALI				IAML		22 32 58.9	
	comp=N,16μm,0.2s						
LALI	**Alcalda de L**	**0.30**	**228**	⇑P	**Pg**	**22 32 53.8**	**-0.5**
UESV	**Universidad de**	**0.30**	**100**	⇑P	**Pg**	**22 32 54.6**	**+0.2**
UESV	**Universidad de**	**0.30**	**100**	S	**Sg**	**22 32 59.3**	**+0.9**
CEDA	**San Andres**	**0.31**	**291**	S	**Sg**	**22 32 59.0**	**+0.3**
CEDA	**San Andres**	**0.31**	**291**	⇓P	**Pg**	**22 32 54.2**	**-0.4**
TECO	**Alcaldia de Te**	**0.34**	**117**	⇓P	**Pg**	**22 32 54.8**	**-0.2**
TECO	**Alcaldia de Te**	**0.34**	**117**	S	**Sg**	**22 32 60.0**	**+0.4**
JAYA	**Jayaque - finc**	**0.35**	**264**	*i* P	**Pg**	**22 32 54.6**	**-0.7**
JAYA				*e*S	**Sg**	**22 32 59.7**	**-0.2**
JAYA	**Jayaque - finc**	**0.35**	**264**	*i* P	**Pg**	**22 32 54.6**	**-0.7**
JAYA				*e*S	**Sg**	**22 32 59.1**	**-0.8**
JAYA	**Jayaque - finc**	**0.35**	**264**	⇑P	**Pg**	**22 32 54.6**	**-0.7**
LLGN	**La Laguna**	**0.49**	**17**	⇑P	**Pg**	**22 32 57.7**	**-0.2**
LLGN	**La Laguna**	**0.49**	**17**	S	**Sg**	**22 33 05.1**	**+0.8**
UNIC	**Universidad Ca**	**0.53**	**303**	S	**Sg**	**22 33 05.4**	**-0.2**
UNIC	**Universidad Ca**	**0.53**	**303**	⇓P	**Pg**	**22 32 57.9**	**-0.8**
CEVE	**Cerro Verde**	**0.53**	**285**	⇓P	**Pg**	**22 32 58.7**	**-0.1**
CEVE	**Cerro Verde**	**0.53**	**285**	S	**Sg**	**22 33 06.0**	**+0.2**
NUBE	**Las Nubes**	**0.70**	**287**	*i* P	**Pg**	**22 33 01.1**	**-0.8**
NUBE	**Las Nubes**	**0.70**	**287**	S	**Sg**	**22 33 10.8**	**-0.2**
NUBE	**Las Nubes**	**0.70**	**287**	⇓P	**Pg**	**22 33 00.9**	**-1.0**
LOAL	**Lomas de Alarc**	**0.73**	**295**	P	**Pg**	**22 33 01.9**	**-0.7**
LOAL	**Lomas de Alarc**	**0.73**	**295**	S	**Sg**	**22 33 12.5**	**+0.4**
SLOZ	**Alcaldia de Sa**	**0.75**	**296**	P	**Pg**	**22 33 01.9**	**-1.0**
MTO3	**Montecristo**	**0.75**	**340**	Pg	**Pg**	**22 33 01.9**	**-1.0**
MTO3				Sg	**Sg**	**22 33 12.3**	**-0.4**
MTO3				IAML		22 33 13.0	
	comp=E,4μm,0.3s						
MTO3	**Montecristo**	**0.75**	**340**	*i* P	**Pg**	**22 33 02.0**	**-0.9**
MTO3	**Montecristo**	**0.75**	**340**	⇓P	**Pg**	**22 33 02.0**	**-0.9**
MTO3	**Montecristo**	**0.75**	**340**	S	**Sg**	**22 33 12.5**	**-0.1**
PACA	**Pacayal**	**0.78**	**106**	⇓P	**Pg**	**22 33 03.1**	**-0.4**
PACA	**Pacayal**	**0.78**	**106**	S	**Sg**	**22 33 14.7**	**-0.9**
JUAM	**Asuncion Mita**	**0.87**	**317**	*e*S	**Sg**	**22 33 15.9**	**-0.7**
JUAM				IAML		22 33 16.7	
	comp=N,4μm,0.3s						
ESQI	**Esquipulas**	**0.90**	**344**	Pg	**Pg**	**22 33 05.0**	**-0.7**
ESQI				Sg	**Sg**	**22 33 17.5**	**+0.2**
ESQI				IAML		22 33 18.1	
	comp=E,5μm,0.2s						
ESQI				IAML		22 33 18.8	
	comp=N,2μm,0.2s						
ESQI	**Esquipulas**	**0.90**	**344**	*e*P	**Pg**	**22 33 05.0**	**-0.7**
ESQI				*e*S	**Sg**	**22 33 17.6**	**+0.2**
ESQI	**Esquipulas**	**0.90**	**344**	⇓P	**Pg**	**22 33 04.9**	**-0.7**
FAME	**Alcaldia de Sa**	**0.91**	**280**	⇓P	**Pg**	**22 33 04.3**	**-1.6**
ZAFR2	**Estanzuela, Za**	**0.92**	**344**	*e*P	Pn	22 33 12.9	+4.9
ZAFR2				*e*S	Sn	22 33 30.4	+8.8
CNRM	**Centro Naciona**	**0.92**	**103**	S	**Sb**	**22 33 19.6**	**0.0**
LCND	**La Caada**	**1.23**	**108**	P	**Pg**	**22 33 10.7**	**-1.4**
CSGN	**Cosiguina Volc**	**1.66**	**115**	P	**Pn**	**22 33 16.9**	**-1.4**
CSGN				S	**Sb**	**22 33 40.5**	**-0.2**
POTN	**Potosi Cosigui**	**1.69**	**114**	P	**Pn**	**22 33 17.6**	**-1.1**
POTN				S	**Sb**	**22 33 41.5**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.81**	**78**		**Pn**	**22 33 20.4**	**0.0**
TGUH				IAML		22 33 47.0	
	comp=N,998nm,0.6s						
TGUH				IAML		22 33 49.8	
	comp=N,947nm,0.7s						
TGUH	**Tegucigalpa,Un**	**1.81**	**78**	⇑P	**Pn**	**22 33 20.5**	**+0.1**
TGUH				S	**Sb**	**22 33 45.2**	**+0.1**
APG	**El Apazote**	**1.86**	**315**	*i* P	**Pn**	**22 33 21.3**	**0.0**
APG				*e*S	**Sb**	**22 33 46.4**	**-0.5**
IZABA	**Izabal, Puerto**	**2.08**	**14**	P	**Pb**	**22 33 25.3**	**-1.5**
IZABA	**Izabal, Puerto**	**2.08**	**14**	S	**Sg**	**22 33 55.0**	**-0.5**
YUSH	**Yuscaran**	**2.20**	**83**	P	**Pn**	**22 33 26.9**	**+1.1**
YUSH	**Yuscaran**	**2.20**	**83**	S	**Sb**	**22 33 57.0**	**+0.5**
CRIN	**San Cristobal**	**2.22**	**116**	Pn	**Pn**	**22 33 26.7**	**+0.6**
CRIN				IAML		22 34 05.3	
	comp=E,1μm,0.4s						
CRIN				IAML		22 34 05.5	

MAS3	**Al N del Volca**	**3.29**	**120**	P	**Pn**	**22 33 40.5**	**-0.3**
MAS3				S	**Sn**	**22 34 20.3**	**0.0**
CCIG	**Comitan**	**3.91**	**312**	Pn	**Pn**	**22 33 50.1**	**+0.7**
SIUN	**Universidad Ur**	**4.20**	**89**	Pn	**Pn**	**22 33 52.5**	**-0.7**
JUD3	**Juan Diaz 3**	**4.94**	**135**	Pn	**Pn**	**22 34 03.2**	**-0.3**
TEIG	**Tepich**	**6.54**	**7**	Pn	**Pn**	**22 34 24.9**	**-0.6**

*SJA **22** 22:46:04.5±0.5,21°.07S×68°.66W,h143km±3km, ML3.4, MW3.5*
*GUC **22** 22:46:06.3±0.5,21°.08S×68°.56W,h132km±3km, ML3.6*
ISC 22 22:46:05.7±1.5,**21°.08S**±0°.03×**68°.71W**±0°.06, **h145**km±10km,**n33,**σ0**966**/60,**4C-3D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.73**	**273**	*e*P		**Pn**		**22 46 27.5**	**-0.5**
PB01				*e*S		**Sn**		**22 46 44.0**	**-0.9**
PB01				IAML				22 46 45.8	
	comp=E,1μm,0.1s								
PB01	**IPOC Station P**	**0.73**	**273**	*e*P		**Pn**		**22 46 27.5**	**-0.5**
PB01				*e*S		**Sn**		**22 46 45.2**	**+0.3**
PB01				IAML				22 46 46.1	
	comp=Z,548nm,0.2s								
PB09	**IPOC Station P**	**0.87**	**215**	↑*i*P		**Pn**		**22 46 29.0**	**0.0**
PB09				*e*S		**Sn**		**22 46 46.6**	**-0.3**
PB09				IAML				22 46 48.8	
	comp=E,483nm,0.2s								
PB09	**IPOC Station P**	**0.87**	**215**	*e*P		**Pn**		**22 46 29.1**	**0.0**
PB09				*e*S		**Sn**		**22 46 47.2**	**+0.3**
PB09				IAML				22 46 48.0	
	comp=Z,380nm,0.9s								
PB08	**IPOC Station P**	**1.03**	**336**	*i* P		**Pn**		**22 46 30.3**	**-0.3**
PB08				*e*S		**Sn**		**22 46 48.9**	**-0.8**
PB08				IAML				22 46 49.7	
	comp=N,682nm,0.2s								
PB08	**IPOC Station P**	**1.03**	**336**	*e*P		**Pn**		**22 46 30.4**	**-0.3**
PB08				*e*S		**Sn**		**22 46 49.5**	**-0.1**
PB08				IAML				22 46 50.7	
	comp=Z,366nm,0.4s								
PB02	**IPOC Station P**	**1.13**	**258**	*e*P		**Pn**		**22 46 31.5**	**+0.2**
PB02				*e*S		**Sn**		**22 46 50.9**	**+0.1**
PB02				IAML				22 46 52.9	
	comp=E,2μm,0.3s								
PB02	**IPOC Station P**	**1.13**	**258**	*e*P		**Pn**		**22 46 31.5**	**+0.2**
PB02				*e*S		**Sn**		**22 46 51.2**	**+0.5**
PB07	**IPOC Station P**	**1.27**	**240**	↑*i*P		**Pn**		**22 46 33.0**	**+0.3**
PB07				*e*S		**Sn**		**22 46 53.3**	**0.0**
PB07				IAML				22 46 54.7	
	comp=E,1μm,0.4s								
PB07	**IPOC Station P**	**1.27**	**240**	*e*P		**Pn**		**22 46 33.0**	**+0.3**
PB07				*e*S		**Sn**		**22 46 53.7**	**+0.4**
PB07				IAML				22 46 55.5	
	comp=Z,675nm,0.3s								
PB03	**IPOC Station P**	**1.37**	**225**	↑*i*P		**Pn**		**22 46 33.8**	**+0.2**
PB03				*e*S		**Sn**		**22 46 54.7**	**-0.3**
PB03				IAML				22 46 55.7	
	comp=N,595nm,0.2s								
PB03	**IPOC Station P**	**1.37**	**225**	*e*P		**Pn**		**22 46 33.8**	**+0.2**
PB03				*e*S		**Sn**		**22 46 55.1**	**+0.1**
PB03				IAML				22 46 57.7	
	comp=Z,480nm,0.3s								
PATCX	**Punta Patache**	**1.38**	**281**	↓*i*P		**Pn**		**22 46 34.1**	**+0.4**
PATCX				*e*S		**Sn**		**22 46 55.6**	**+0.7**
PATCX				IAML				22 46 57.4	
	comp=E,867nm,0.2s								
PATCX	**Punta Patache**	**1.38**	**281**	*e*P		**Pn**		**22 46 34.0**	**+0.4**
PATCX				*e*S		**Sn**		**22 46 56.8**	**+1.8**
PATCX				IAML				22 46 58.5	
	comp=Z,395nm,0.5s								
TA01	**Diego Aracena**	**1.47**	**290**	↓*i*P		**Pn**		**22 46 34.6**	**+0.1**
TA01				*e*S		**Sn**		**22 46 56.6**	**0.0**
TA01	**Diego Aracena**	**1.47**	**290**	*e*P		**Pn**		**22 46 34.6**	**+0.1**
TA01				IAML				22 46 59.7	
	comp=Z,178nm,0.1s								
GO01	**Chusmiza**	**1.48**	**342**	*i* P		**Pn**		**22 46 35.0**	**-0.2**
GO01				IAML				22 47 01.0	
	comp=E,2μm,0.1s								
GO01	**Chusmiza**	**1.48**	**342**	*e*P		**Pn**		**22 46 35.0**	**-0.2**
GO01				*e*S		**Sn**		**22 46 58.4**	**+0.7**
GO01				IAML				22 47 00.8	
	comp=Z,376nm,0.1s								
TA02	**Huaiquique**	**1.56**	**301**	*e*P		**Pn**		**22 46 35.5**	**0.0**
TA02	**Huaiquique**	**1.56**	**301**	*e*P		**Pn**		**22 46 35.3**	**-0.2**
TA02				*e*S		**Sn**		**22 46 58.5**	**+0.2**
TA02				IAML				22 47 00.0	
	comp=Z,430nm,0.1s								
PB11	**IPOC Station P**	**1.59**	**326**	↓*i*P		**Pn**		**22 46 35.6**	**-0.4**
PB11				*e*S		**Sn**		**22 46 58.6**	**-0.5**
PB11				IAML				22 47 01.3	
	comp=E,1μm,0.2s								
PB11	**IPOC Station P**	**1.59**	**326**	*e*P		**Pn**		**22 46 35.7**	**-0.4**
PB11				*e*S		**Sn**		**22 46 59.1**	**-0.1**
PB11				IAML				22 47 01.2	
	comp=Z,423nm,0.2s								
PB06	**IPOC Station P**	**1.80**	**206**	↑*i*P		**Pn**		**22 46 38.5**	**+0.1**
PB06				*e*S		**Sn**		**22 47 03.2**	**-0.3**
PB06				IAML				22 47 04.4	
	comp=E,324nm,0.2s								
PB06	**IPOC Station P**	**1.80**	**206**	*e*P		**Pn**		**22 46 38.5**	**+0.1**
PB06				*e*S		**Sn**		**22 47 03.6**	**+0.1**
PB06				IAML				22 47 12.0	
	comp=Z,162nm,0.3s								
AF01	**San Pedro de A**	**1.92**	**165**	*e*P		**Pn**		**22 46 40.4**	**+0.5**
AF01				IAML				22 47 27.4	
	comp=Z,104nm,0.8s								
PB05	**IPOC Station P**	**2.24**	**218**	*e*P		**Pn**		**22 46 43.7**	**+0.1**
PB05				IAML				22 47 14.0	
	comp=E,160nm,0.2s								
PB05	**IPOC Station P**	**2.24**	**218**	*e*P		**Pn**		**22 46 43.6**	**+0.1**
PB05				*e*S		**Sn**		**22 47 13.4**	**+0.8**
PB05				IAML				22 47 16.0	
	comp=Z,97nm,0.3s								
PB12	**IPOC Station P**	**2.89**	**328**	*e*P		**Pn**		**22 46 50.7**	**-0.9**
PB12				*e*S		**Sn**		**22 47 26.4**	**-0.6**
PB12				IAML				22 47 34.8	
	comp=Z,108nm,0.4s								
AP01	**Chacalluta**	**3.11**	**330**	*e*P		**Pn**		**22 46 55.3**	**+1.1**
AP01				*e*S		**Sn**		**22 47 33.2**	**+1.5**
AP01				IAML				22 47 36.1	
	comp=Z,216nm,0.1s								
HJA	**Humahuaca**	**3.72**	**125**	*e*P		**Pn**		**22 47 02.4**	**-0.1**
HJA				*e*S		**Sn**		**22 47 47.5**	**+1.0**
PB14	**IPOC Station P**	**3.86**	**204**	*e*P		**Pn**		**22 47 03.2**	**-1.0**
PB14				*e*S		**Sn**		**22 47 48.8**	**-0.8**
PB14				IAML				22 47 50.6	
	comp=Z,19nm,0.2s								
GO02	**Mina Guanaco**	**4.14**	**191**	*e*P		**Pn**		**22 47 07.2**	**-0.7**
GO02				*e*S		**Sn**		**22 47 58.2**	**+1.9**
GO02				IAML				22 48 27.8	
	comp=Z,24nm,0.6s								
AC01	**Pan de Azucar**	**5.33**	**199**	*e*P		**Pn**		**22 47 21.5**	**-1.9**
AC01				IAML				22 49 00.1	
	comp=Z,8.0nm,1.6s								

*TXNET **22** 22:49:08.2,31°.7N±0°.8×104°.2W±1°.0,h8km±1km, ML3.0/7, Error ellipse: s-maj=1.7km s-min=0.7km az=53.0,final*
NEIC 22 22:49:08.1±0.7,**31°.65N**±0°.01×**104°.20W**±0°.01,**h5**km±1km, **mb_Lg2.6**/40,**ML2.9**/70,**1C-2D,Error ellipse: s-maj=2.9km s-min=2.0km az=298.0,Western Texas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.15**	**326**	↓P		Pg		22 49 12.2	+0.9
TPB09				S		Sg		22 49 14.5	+1.2
TPB13	**Reeves - Culbe**	**0.32**	**107**	S		Sg		22 49 20.0	+1.5
TPB11	**China Draw**	**0.32**	**26**	↑P		Pg		22 49 15.0	+0.5
TPB11				S		Sg		22 49 19.5	+0.8
PECS	**Pecos**	**0.40**	**134**			Pg		22 49 16.4	+0.6
PECS						Sg		22 49 22.4	+1.3
PECS	**Pecos**	**0.40**	**134**	P		Pg		22 49 16.5	+0.6
PECS				S		Sg		22 49 22.1	+1.1
TPB07	**Mentone**	**0.46**	**98**	P		Pb		22 49 18.1	-0.7
TPB07				S		Sg		22 49 24.5	+1.4
TPB12	**Southwest of T**	**0.48**	**154**	P		Pg		22 49 18.0	+0.7
TPB12				S		Sg		22 49 24.5	+0.9
TPB10	**Southeast of T**	**0.53**	**133**	P		Pg		22 49 19.0	+0.7
TPB10				S		Sg		22 49 26.5	+1.4
GDL2	**Guadalupe Moun**	**0.57**	**346**			Pg		22 49 19.6	+0.5
GDL2	**Guadalupe Moun**	**0.57**	**346**	P		Pg		22 49 19.6	+0.5
PCOS	**Crockett Middl**	**0.64**	**112**	S		Sb		22 49 29.9	-1.1
LWM1	**Layne Water Mi**	**0.64**	**130**	P		Pb		22 49 21.2	-0.7
LWM1				S		Sb		22 49 30.7	-0.5
LWM2	**Layne Water Mi**	**0.65**	**125**	P		Pb		22 49 21.3	-0.6
LWM2				S		Sb		22 49 30.6	-0.8
CLNB	**Carlsbad**	**0.67**	**24**			Pg		22 49 21.1	0.0
CLNB	**Carlsbad**	**0.67**	**24**	P		Pg		22 49 21.5	+0.3
CLNB				S		Sb		22 49 31.1	-1.1
TPB01	**Permian Basin**	**0.79**	**153**	P		Pg		22 49 23.1	-0.2
TPB01				S		Sg		22 49 33.7	+0.3
TPB03	**Saragosa**	**0.81**	**133**	↓P		Pg		22 49 24.2	+0.4
TPB03				S		Sb		22 49 35.5	-0.6
CLN7	**Carlsbad 7**	**0.83**	**24**	P		Pg		22 49 24.3	+0.1
TPB04	**Verhalen**	**0.92**	**120**	P		Pg		22 49 26.1	+0.3
TPB04				S		Sb		22 49 38.5	-0.6
HTMS	**Hat Mesa**	**0.95**	**30**			Pg		22 49 26.4	+0.1
TPB16	**Coyonosa**	**0.96**	**122**	S		Sb		22 49 39.9	-0.6
MNTX	**Cornudas Mount**	**1.01**	**273**			Pg		22 49 27.4	-0.1
MNTX	**Cornudas Mount**	**1.01**	**273**	P		Pg		22 49 27.4	-0.1
MNTX				S		Sg		22 49 40.4	-0.1
TPB05	**Hovey Rd**	**1.04**	**134**	P		Pg		22 49 28.1	-0.1
TPB05				S		Sg		22 49 42.2	+0.5
TPB15	**Southwest of C**	**1.05**	**114**	P		Pg		22 49 28.2	0.0
TPB15				S		Sg		22 49 42.4	+0.5
VHRN	**Van Horn**	**1.09**	**218**			Pg		22 49 28.5	-0.5
VHRN	**Van Horn**	**1.09**	**218**	P		Pg		22 49 28.6	-0.5
MNHN	**Monahans**	**1.27**	**104**			Pg		22 49 31.5	-0.9
MNHN	**Monahans**	**1.27**	**104**	P		Pg		22 49 31.7	-0.8
MNHN				S		Sg		22 49 47.7	-1.2
ALPN	**Alpine**	**1.36**	**159**			Pn		22 49 32.7	-1.2
ALPN	**Alpine**	**1.36**	**159**	P		Pn		22 49 32.9	-1.0
ALPN				S		Sg		22 49 50.3	-1.5
CPRX	**Cap Rock**	**1.41**	**12**	P		Pn		22 49 34.4	-0.2
ODSA	**Odessa**	**1.48**	**71**			Pn		22 49 35.5	0.0
ODSA	**Odessa**	**1.48**	**71**	P		Pn		22 49 35.6	0.0
ODSA				S		Sn		22 49 54.7	-0.7
TMB04	**Seminole**	**1.75**	**56**	P		Pn		22 49 40.0	+0.8
TMB04				S		Sb		22 50 03.1	0.0
TMB02	**Rankin**	**1.90**	**103**	P		Pb		22 49 42.6	-0.8
TMB02				S		Sb		22 50 07.5	0.0
EPT	**El Paso**	**1.97**	**274**	Pn		Pn		22 49 39.8	-2.5
TMB05	**Klondike**	**2.21**	**63**	P		Pb		22 49 47.9	-0.9
TMB05				S		Sb		22 50 16.7	+0.2
MSTX	**Muleshoe**	**2.61**	**27**			Pn		22 49 52.7	+1.6
SGCY	**Sterling City**	**2.63**	**83**			Pn		22 49 52.7	+1.3
SGCY				IAmb_Lg				22 50 35.4	
	comp=Z,25nm,0.8s								
POST	**Post**	**2.69**	**58**			Pn		22 49 52.6	+0.4
OZNA	**Ozona**	**2.73**	**105**			Pb		22 49 55.7	-1.8
CRNM	**Carthage**	**3.14**	**318**			Pn		22 49 59.7	+1.3
SN07	**Snyder 07**	**3.15**	**62**			Pn		22 49 58.7	+0.2
121A	**Cookes Peak, D**	**3.17**	**287**			Pn		22 49 59.0	+0.1
121A				IAML				22 50 52.4	
	comp=E,23nm,0.6s								
121A				IAML				22 50 58.8	
	comp=N,23nm,1.1s								
BNM	**Barren Site**	**3.23**	**321**	Pn		Pn		22 50 00.9	+1.2
Y22A	**Socorro**	**3.26**	**315**			Pn		22 50 01.3	+1.2
Y22A				IAML				22 50 55.9	
	comp=N,23nm,0.5s								
Y22A				IAmb_Lg				22 50 58.6	
	comp=Z,16nm,0.8s								
SBM	**South Baldy**	**3.42**	**314**			Pn		22 50 03.7	+1.3
DKNS	**Dickens**	**3.42**	**53**			Pn		22 50 01.5	-0.7
ABQ	**Albuquerque**	**3.79**	**331**	IAML				22 51 07.2	
	comp=Z,16nm,0.9s								
ABQ				IAML				22 51 07.8	
	comp=Z,17nm,0.5s								
ANMO	**Albuquerque**	**3.79**	**331**	IAML				22 51 07.2	
	comp=Z,15nm,0.9s								
TASM	**ASL Pad, Albuq**	**3.79**	**331**	IAML				22 51 11.8	
	comp=Z,18nm,0.8s								
TASM	**ASL Pad, Albuq**	**3.79**	**331**	IAML				22 51 07.0	
	comp=Z,21nm,0.9s								
TASM				IAML				22 51 11.7	
	comp=Z,20nm,0.8s								
TASM				IAmb_Lg				22 51 12.9	
	comp=Z,14nm,1.0s								
TASM	**ASL Pad, Albuq**	**3.79**	**331**	IAML				22 51 07.9	
	comp=Z,20nm,0.6s								
TASM				IAML				22 51 11.8	
	comp=Z,18nm,0.8s								
TASM				IAmb_Lg				22 51 13.4	
	comp=Z,12nm,0.9s								
APMT	**Aspermont**	**3.83**	**63**	IAmb_Lg				22 51 19.1	
	comp=Z,18nm,0.7s								
AMTX	**Amarillo**	**3.86**	**33**	IAmb_Lg				22 51 21.5	
	comp=Z,20nm,0.7s								
JCT	**Junction City**	**3.95**	**106**	IAmb_Lg				22 51 24.3	
	comp=Z,18nm,1.0s								
ABTX	**Abilene, Hawle**	**3.99**	**75**	IAmb_Lg				22 51 17.1	
	comp=Z,11nm,0.7s								
BRDY	**Brady**	**4.46**	**93**	IAmb_Lg				22 51 33.4	
	comp=Z,13nm,0.7s								
HNDO	**Hondo**	**4.74**	**115**	IAmb_Lg				22 51 42.3	
	comp=Z,14nm,0.8s								
PLPT	**Palo Pinto**	**5.12**	**75**	IAmb_Lg				22 52 02.9	
	comp=Z,12nm,1.0s								
NOKA	**Waynoka**	**6.62**	**40**	IAmb_Lg				22 52 47.4	
	comp=Z,8.2nm,0.8s								

*IDC **22** 22:50:25.3±1.1,34°.63N×25°.21E,h0km,mb3.7/9, mbtmp3.6/17,ML3.4/8,MS3.7/1, Error ellipse: s-maj=19.4km s-min=9.6km az=53.0*
*HLW **22** 22:50:27.5,34°.67N×25°.27E,h10km±7km,Md3.5,Ml3.3*
*ATH **22** 22:50:27.6,34°.68N×25°.05E,h15km±3km,ML3.4/16, Manual Solution by G.Panopoulou First location: 2019/11/22 22:51:41, This location: 2019/11/22 23:11:26 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*
*THE **22** 22:50:28.9,35°.N±5°.×2°.5E±°,h16km±8km, M3.5/10, MLh3.5/10*
*ISK **22** 22:50:29.3,34°.82N×24°.99E,h27km, ML3.3/18*
*GII **22** 22:50:30.8±0.0,34°.586N±0°.001×25°.618E±0°.001,h10km, Mws3.9,confirmed*
*AFAD **22** 22:50:34.8,35°.16N×25°.43E,h6km±4km,ML3.0*
ISC 22 22:50:26.5±1.3,**34°.63N**±0°.04×**25°.18E**±0°.03,**h15**km±8km, **n182,**σ2**903**/213,**mb3.5**/9,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IACM	**Heraklion**	**0.68**	**352**	P		**Pb**		**22 50 41.1**	**+1.0**
IACM				S		**Sb**		**22 50 50.2**	**+0.9**
IACM	**Heraklion**	**0.68**	**352**	P		**Pg**		**22 50 40.5**	**+0.7**
IACM				S		**Sg**		**22 50 47.5**	**-1.3**
IDI	**Anoyia**	**0.70**	**340**	Pg		**Pg**		**22 50 40.3**	**+0.1**
	143nm,0.3s,baz=193,slow=9.1,SNR=1693								
IDI				Lg		Lg		22 50 47.9	
	997nm,0.3s,baz=96,slow=10,SNR=59								
IDI				LR		LR		22 51 03.4	
	comp=Z,166nm,21.4s,baz=120,slow=54								
IDI	**Anoyia**	**0.70**	**340**	Pg		**Pg**		**22 50 40.1**	**-0.1**
IDI				Sg		**Sg**		**22 50 47.5**	**-2.0**
IDI	**Anoyia**	**0.70**	**340**	P		**Pg**		**22 50 40.4**	**+0.1**
IDI				S		**Sg**		**22 50 48.4**	**-1.0**
IDI	**Anoyia**	**0.70**	**340**	P		**Pg**		**22 50 40.2**	**-0.1**
IDI				S		**Sg**		**22 50 48.1**	**-1.4**
GVD	**Gavdhos**	**0.92**	**283**	Pg		**Pb**		**22 50 43.9**	**-0.3**
GVD				Sg		**Sb**		**22 50 55.3**	**-1.0**
GVD	**Gavdhos**	**0.92**	**283**	P		**Pb**		**22 50 44.7**	**+0.5**
GVD				S		**Sb**		**22 50 57.5**	**+1.1**
GVD	**Gavdhos**	**0.92**	**283**	P		**Pb**		**22 50 43.6**	**-0.6**
GVD				S		**Sb**		**22 50 53.2**	**-3.2**
SIT2	**Siteia**	**0.95**	**53**	P		**Pn**		**22 50 46.7**	**+1.3**
SIT2				S		**Sn**		**22 51 00.2**	**+1.5**
CHAN	**Chania**	**1.29**	**314**	P		**Pn**		**22 50 49.8**	**-0.2**
CHAN				S		**Sb**		**22 51 07.1**	**+0.2**
CHAN	**Chania**	**1.29**	**314**	P		**Pn**		**22 50 49.5**	**-0.5**
CHAN				S		**Sb**		**22 51 05.2**	**-1.6**
CH01	**Chania**	**1.30**	**313**	P		**Pn**		**22 50 49.8**	**-0.3**
CH01				S		**Sb**		**22 51 05.4**	**-1.7**
KNDR	**Palaiochora Ch**	**1.41**	**296**	Pn		**Pn**		**22 50 50.9**	**-0.8**
KNDR				Sn		**Sn**		**22 51 06.5**	**-3.6**
KNDR	**Palaiochora Ch**	**1.41**	**296**	P		**Pn**		**22 50 51.6**	**0.0**
KNDR				S		**Sn**		**22 51 09.8**	**-0.3**
KNDR	**Palaiochora Ch**	**1.41**	**296**	P		**Pn**		**22 50 51.6**	**0.0**
KNDR				S		**Sn**		**22 51 08.2**	**-1.8**
THERA	**Ancient Thera,**	**1.75**	**8**	P		**Pn**		**22 50 57.5**	**+1.1**
THERA	**Ancient Thera,**	**1.75**	**8**	P		**Pn**		**22 50 57.0**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.78**	**6**	P		**Pn**		**22 50 58.0**	**+1.2**
SNT5	**Nea Kammeni, S**	**1.78**	**6**	P		**Pn**		**22 50 57.5**	**+0.7**
THRA	**Thira**	**1.79**	**7**	P		**Pn**		**22 50 58.2**	**+1.3**
SAP3	**Santorini-Thir**	**1.81**	**4**	P		**Pn**		**22 50 58.1**	**+1.0**
SAP3	**Santorini-Thir**	**1.81**	**4**	P		**Pn**		**22 50 58.2**	**+1.0**
KARP	**Karpathos**	**1.87**	**60**	Pn		**Pb**		**22 51 01.3**	**+1.0**
KARP	**Karpathos**	**1.87**	**60**	P		**Pb**		**22 51 01.5**	**+1.2**
ANKY	**Antikythira Is**	**1.97**	**309**	P		**Pn**		**22 50 59.9**	**+0.5**
ANKY				S		**Sn**		**22 51 23.5**	**-0.4**
ANKY	**Antikythira Is**	**1.97**	**309**	P		**Pn**		**22 51 00.1**	**+0.7**
ANKY				S		**Sn**		**22 51 23.2**	**-0.7**
KTHA	**Kythira Island**	**2.37**	**314**	Pn		**Pn**		**22 51 04.2**	**-0.7**
KTHA	**Kythira Island**	**2.37**	**314**	P		**Pn**		**22 51 04.9**	**0.0**
APE	**Apeiranthos**	**2.45**	**7**	Pn		**Pn**		**22 51 06.1**	**+0.1**
APE	**Apeiranthos**	**2.45**	**7**	P		**Pn**		**22 51 06.3**	**+0.3**
APE	**Apeiranthos**	**2.45**	**7**	P		**Pn**		**22 51 06.4**	**+0.3**
NAX1	**Naxos Island**	**2.47**	**4**	P		**Pn**		**22 51 06.2**	**0.0**
NPS1	**Neapolis Lacon**	**2.55**	**318**	P		**Pn**		**22 51 07.1**	**-0.2**
YAZI	**Mula-Dat§a-**	**2.76**	**41**	P		**Pn**		**22 51 11.9**	**+1.6**
YAZI				S		**Sn**		**22 51 42.2**	**-1.1**
VLI	**Veliai**	**2.77**	**319**	P		**Pn**		**22 51 11.1**	**+0.7**
VLI				S		**Sn**		**22 51 40.3**	**-3.3**
VLI	**Veliai**	**2.77**	**319**	P		**Pn**		**22 51 09.5**	**-0.9**
VLI				S		**Sn**		**22 51 40.0**	**-3.6**
DAT	**Datca**	**2.86**	**42**	P		**Pn**		**22 51 13.6**	**+1.8**
DAT	**Datca**	**2.86**	**42**	Pn		**Pn**		**22 51 14.4**	**+2.6**
ARG	**Arkhangelos**	**2.88**	**56**	Pn		**Pb**		**22 51 15.5**	**-2.1**
ARG	**Arkhangelos**	**2.88**	**56**	P		**Pn**		**22 51 14.7**	**+2.8**
BODT	**Bodrum**	**2.98**	**35**	Pn		**Pn**		**22 51 15.4**	**+2.1**
BDRM	**Kayabasi**	**3.05**	**36**	P		**Pn**		**22 51 17.5**	**+3.2**
BDRM				S		**Sn**		**22 51 46.9**	**-3.6**
SLUM	**Salum**	**3.13**	**179**	P		**Pn**		**22 51 17.2**	**+1.9**
SLUM				S		**Sn**		**22 51 53.1**	**+0.9**
TURN	**Turunc**	**3.29**	**48**	P		**Pn**		**22 51 20.1**	**+2.6**
TURN				S		**Sn**		**22 51 53.2**	**-3.1**
TURN	**Turunc**	**3.29**	**48**	Pn		**Pn**		**22 51 20.4**	**+2.9**
MET5	**Makryloggos,Me**	**3.33**	**334**	P		**Pn**		**22 51 18.1**	**0.0**
MET2	**Kameni Chora,**	**3.33**	**334**	P		**Pn**		**22 51 18.1**	**0.0**
MLSB	**Milas**	**3.39**	**38**	Pn		**Pn**		**22 51 21.5**	**+2.5**
VLY	**Voula,Athens**	**3.41**	**341**	P		**Pn**		**22 51 18.7**	**-0.5**
KARY	**Karystos**	**3.45**	**350**	P		**Pn**		**22 51 19.9**	**+0.2**
GCAM	**G?zelcaml?**	**3.49**	**28**	P		**Pn**		**22 51 21.4**	**+1.2**
GCAM	**G?zelcaml?**	**3.49**	**28**	Pn		**Pn**		**22 51 22.1**	**+1.9**
YER	**Yerkesik**	**3.55**	**44**	Pn		**Pn**		**22 51 24.3**	**+3.1**
DALY	**Dalyan (Mula)**	**3.57**	**51**	Pn		**Pn**		**22 51 24.9**	**+3.5**
PTL	**Penteli**	**3.58**	**343**	P		**Pn**		**22 51 21.2**	**-0.3**
DION	**Dionisos Attik**	**3.59**	**344**	P		**Pn**		**22 51 21.4**	**-0.2**
MULA	**Mugla, Merkez-**	**3.66**	**43**	P		**Pn**		**22 51 20.8**	**-1.8**
MULA				S		**Sn**		**22 52 00.5**	**-5.1**
ITM	**Ithomi**	**3.67**	**315**	Pn		**Pn**		**22 51 21.9**	**-0.8**
ITM	**Ithomi**	**3.67**	**315**	P		**Pn**		**22 51 21.7**	**+1.0**
ZEYE	**Izmir, Urla-Ze**	**3.76**	**16**	P		**Pn**		**22 51 24.4**	**+0.4**
IZZE	**Mula-Seydike**	**3.76**	**60**	P		**Pn**		**22 51 26.0**	**+2.0**
IZZE				S		**Sn**		**22 52 01.4**	**-6.6**
IZZE				*i* IAML				22 52 11.0	
	comp=E,47nm,0.4s								
IZZE				*i* IAML				22 52 14.0	
	comp=N,57nm,0.5s								
STFN	**Stefani**	**3.78**	**340**	P		**Pn**		**22 51 24.8**	**+0.5**
SABU	**Mula-Dalaman**	**3.78**	**54**	P		**Pn**		**22 51 27.3**	**+3.0**
SABU				S		**Sn**		**22 52 10.0**	**+1.4**
SABU				*i* IAML				22 52 33.0	
	comp=N,30nm,0.7s								
CHOS	**Chios island**	**3.82**	**10**	Pn		**Pn**		**22 51 25.8**	**+1.0**
CHOS	**Chios island**	**3.82**	**10**	P		**Pn**		**22 51 24.8**	**0.0**
LTK	**Loutraki**	**3.83**	**333**	P		**Pn**		**22 51 24.4**	**-0.5**
VIL2	**Platees**	**3.89**	**337**	P		**Pn**		**22 51 24.5**	**-1.3**
URLA	**Izmir**	**3.90**	**17**	P		**

RMNI	Mount Ramon	9.03	114	P		Pn	22 52 37.4	+1.0	
RMNI	Mount Ramon	9.03	114	S		Sn	22 54 15.2	-2.6	
DSI	Dead Sea	9.08	107	P		Pn	22 52 37.4	+0.3	
DSI	Dead Sea	9.08	107	S		Sn	22 54 16.0	-3.1	
MSBI	Mazada	9.17	108	P		Pn	22 52 38.4	+0.2	
MSBI	Mazada	9.17	108	S		Sn	22 54 17.7	-3.4	
VAE	Valguarnera	9.17	291	Pn		Pn	22 52 42.6	+4.3	
	0.4nm,0.3s,baz=63,slow=14,SNR=1.7								
KRMI	Paran Flat	9.24	116	P		Pn	22 52 39.8	+0.5	
KRMI	Paran Flat	9.24	116	S		Sn	22 54 20.0	-3.0	
IDAN	Idan	9.31	111	P		Pn	22 52 40.6	+0.5	
IDAN	Idan	9.31	111	S		Sn	22 54 21.2	-3.3	
PRNI	Paran	9.33	114	P		Pn	22 52 40.6	+0.2	
PRNI	Paran	9.33	114	S		Sn	22 54 22.5	-2.7	
GHAJ	Ghor Haditha	9.33	108	P		Pn	22 52 40.6	+0.1	
GHAJ	Ghor Haditha	9.33	108	S		Sn	22 54 22.2	-3.0	
ZFRI	Zfri	9.36	113	P		Pn	22 52 41.1	+0.3	
ZFRI	Zfri	9.36	113	S		Sn	22 54 23.0	-2.9	
HRFI	Mount Harif	9.51	116	P		Pn	22 52 43.6	+0.6	
HRFI	Mount Harif	9.51	116	S		Sn	22 54 27.0	-2.7	
MBRI	Mt Berech	9.55	118	P		Pn	22 52 44.1	+0.6	
MBRI	Mt Berech	9.55	118	S		Sn	22 54 27.7	-3.0	
EIL	Elat	9.64	118	Pn		Pn	22 52 45.9	+1.1	
	0.7nm,0.3s,baz=335,slow=4.1,SNR=8.1								
	2.0nm,0.3s								
EIL	Elat	9.64	118	P		Pn	22 52 45.4	+0.6	
EIL	Elat	9.64	118	S		Sn	22 54 29.2	-3.7	
ASF	Jabal al Asfar	10.10	101	Pn		Pn	22 52 51.4	+0.3	
	0.1nm,0.3s,baz=295,slow=17,SNR=1.8								
	0.8nm,0.7s								
MLR	Muntele Rosu	10.87	3	Pn		Pn	22 53 06.7	+5.1	
	0.1nm,0.3s,baz=169,slow=16,SNR=1.2								
VRAC	Vranov	15.98	339	Pn		Pn	22 54 11.3	+0.6	
	0.1nm,0.3s,baz=221,slow=20,SNR=1.9								
	1.4nm,0.7s								
AKASG	Malin Array Be	16.33	9	Pn		Pn	22 54 14.4	-0.7	
	0.7nm,0.3s,baz=203,slow=11,SNR=4.5								
	0.2nm,0.3s								
KBZ	Khabaz	16.45	51	Pn		P	22 54 21.3	+2.0	
	0.1nm,0.3s,baz=218,slow=10,SNR=7.7								
	3.0nm,0.8s								
GERES	GERESS Array B	16.56	333	Pn		Pn	22 54 18.5	+0.3	
	baz=134,slow=11,SNR=5.0								
	0.8nm,0.7s								
ESDC	Sonseca Array	23.71	291	P		P	22 55 40.6	+2.7	
	1.3nm,1.0s,baz=82,slow=10,SNR=4.1								
	1.3nm,1.0s								
FINES	FINESS Array B	26.84	1	P		P	22 56 08.1	+2.1	
	3.2nm,1.0s,baz=167,slow=9.4,SNR=4.4								
	3.2nm,1.0s								
EKA	Eskdalemuir Ar	28.48	325	P		P	22 56 22.9	+2.0	
	0.2nm,0.4s,baz=126,slow=10,SNR=2.1								
	0.2nm,0.4s								
TORD	Torodi Ar. Bea	30.16	231	P		P	22 56 35.8	-0.4	
	2.4nm,0.4s,baz=33,slow=12,SNR=1.4								
	2.4nm,0.4s								
ARCES	ARCESS Array B	34.96	0	P		P	22 57 16.8	-0.8	
	0.6nm,0.5s,baz=177,slow=9.6,SNR=4.3								
	0.6nm,0.5s								
DBIC	Dimbokro	39.25	232	P		P	22 57 53.0	-1.6	
	0.8nm,0.4s,baz=90,slow=8.1,SNR=1.2								
KURBB	Kurchatov Arra	41.44	51	P		P	22 58 12.6	+0.2	
	0.3nm,0.4s,baz=280,slow=8.6,SNR=2.5								
	0.3nm,0.4s								
MKAR	Makanchi Array	44.05	56	P		P	22 58 32.7	-1.0	
	0.4nm,0.6s,baz=267,slow=8.6,SNR=6.0								
	0.4nm,0.6s								
ZALV	Zalesovo Beam	45.36	46	P		P	22 58 45.7	+1.8	
	0.4nm,0.4s,baz=260,slow=8.1,SNR=2.4								
	0.4nm,0.4s								
SONM	Songino Array	59.81	50	P		P	23 00 34.0	+2.7	
	0.2nm,0.5s,baz=297,slow=8.5,SNR=1.9								
	0.2nm,0.5s								
MDP	Montagnes des	77.10	267	LR		LR	23 39 10.3		
	comp=Z,46nm,18.1s,baz=97,slow=38								

*AZER **22** 22:54:14.6,38°.31N×48°.08E,h4km,ml3.0*
*TEH **22** 22:54:14.2,38°.22N×47°.97E,h10km±997km*
*NSSP **22** 22:54:15.8,38°.22N×47°.93E,h10km,Ms3.2*

ISC 22 22:54:14.2±1.2,38°.19N±0°.03×48°.01E±0°.02,h6km±11km, n44,σ1§40/82,1C-3D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISRB	Sarab	0.45	217	Pg	Pg	22 54 23.6	+0.6
LRK	Lerik	0.52	29	P	Pg	22 54 24.4	0.0
LRK				S	Sg	22 54 32.0	+0.9
GAS1	Astara - Iran	0.68	73	Pg	Pg	22 54 27.7	+0.4
ASTR	Astara	0.72	58	P	Pg	22 54 28.3	+0.3
ASTR				S	Sg	22 54 37.4	+0.1
YRD	Yardimli	0.75	14	P	Pg	22 54 28.7	0.0
YRD				S	Sb	22 54 39.5	-0.8
IHRS	Heris	0.78	280	Pg	Pg	22 54 28.9	-0.2
LKRN	Lenkeran, Azer	0.80	49	P	Pg	22 54 29.7	+0.2
LKRN				S	Sb	22 54 40.9	-0.6
CSN1	Caspian	1.06	126	Pg	Pn	22 54 36.0	+0.4
IHSH	Hashtrud	1.06	214	Pg	Pb	22 54 34.5	-0.7
GLBA	Clilabad	1.09	16	P	Pn	22 54 36.0	-0.1
GLBA				S	Sn	22 54 52.2	+0.7
QRD	Qoradiz	1.38	337	P	Pb	22 54 40.2	-0.3
QRD				S	Sg	22 54 59.8	+1.2
EGVZ	Egvard	1.55	313	eP	Pb	22 54 43.0	-0.4
EGVZ				eS	Sg	22 55 03.8	-0.3
BLQ	Beylaqan	1.57	347	P	Pg	22 54 43.8	-0.6
BLQ				S	Sg	22 55 05.5	+0.8
SAAT	Saatly	1.70	11	P	Pg	22 54 45.7	-0.2
SAAT				S	Sg	22 55 09.8	+0.9
ORD	Ordubad	1.75	296	P	Pb	22 54 47.0	+0.3
ORD				S	Sg	22 55 11.2	+0.9
GRS	Goris	1.85	316	iP	Pg	22 54 52.0	+2.2
GRS				iS	Sg	22 55 15.0	+1.2
AGDM	Agdam	2.04	340	P	Pb	22 54 51.4	-0.3
AGDM				S	Sg	22 55 19.8	-0.1
ZRD	Zardab	2.10	353	P	Pb	22 54 52.9	+0.2
ZRD				S	Sg	22 55 22.7	+0.8
BRDA	Brd	2.17	343	P	Pb	22 54 54.3	+0.4
BRDA				S	Sg	22 55 25.9	+1.9
KDMR	Kurdemir	2.19	3	P	Pb	22 54 54.2	0.0
KDMR				S	Sg	22 55 24.3	-0.3
NAX	Nakhchivan	2.20	297	P	Pg	22 54 56.4	-0.1
NAX				S	Sg	22 55 25.0	0.0
SBZ	Shahbuz	2.27	303	P	Pb	22 54 56.0	+0.3
SBZ				S	Sg	22 55 26.8	-0.4
GBS	Qobustan	2.45	17	P	Pb	22 54 58.4	-0.4
GBS				S	Sb	22 55 30.2	+1.0
VAYK	Vayk	2.52	308	eP	Pb	22 55 00.1	+0.2
VAYK				eS	Sb	22 55 32.4	+1.3
AYRK	Ayrk	2.59	319	eP	Pb	22 55 00.6	-0.6
AYRK				eS	Sb	22 55 33.3	0.0
IML	Ismayilli	2.61	3	P	Pb	22 54 59.7	-1.7
IML				S	Sb	22 55 33.1	-0.5
PQL	Pirkuli	2.64	10	P	Pb	22 55 01.0	-0.9
PQL				S	Sb	22 55 35.7	+1.1
QBL	Gabala	2.76	357	P	Pb	22 55 02.3	-1.6
QBL				S	Sb	22 55 37.5	-0.5
ATGJ	Altiaghaj	2.77	15	P	Pb	22 55 04.4	+0.3
ATGJ				S	Sg	22 55 45.7	+2.7
GANJ	Ganja	2.78	332	P	Pb	22 55 02.0	-2.4
GANJ				S	Sb	22 55 37.9	-0.8
HYR	Heyderabad	2.90	303	P	Pb	22 55 06.9	+0.5
HYR				S	Sg	22 55 44.5	-2.9
SIZA	Siyzn	2.96	13	P	Pb	22 55 05.3	-2.2
SIZA				S	Sb	22 55 42.0	-2.0
XNQ	Khinaliq	2.98	2	P	Pb	22 55 05.0	-2.9
XNQ				S	Sb	22 55 42.7	-2.0
GDB	GEDABAY	3.08	326	P	Pb	22 55 07.6	-1.8
GDB				S	Sb	22 55 47.3	0.0
SEKA	Sheki	3.08	348	P	Pb	22 55 06.0	-3.5
SEKA				S	Sb	22 55 46.2	-1.2
NRKZ	NAREK	3.17	306	eP	Pb	22 55 10.6	-0.5
NRKZ				eS	Sb	22 55 50.9	+0.9
QUBA	Quba, Azerbaij	3.19	7	P	Pb	22 55 09.6	-1.6
QUBA				S	Sg	22 55 54.6	-2.0
GNI	Garni	3.21	309	eP	Pb	22 55 12.8	+1.1
GNI				eS	Sg	22 55 54.4	-2.9
KAPZ	Kaputan	3.34	311	eP	Pb	22 55 15.5	+1.6
KAPZ				eS	Sg	22 55 59.3	-2.2
HAKT	HAKKARI	3.46	261	P	Pg	22 55 19.5	-1.1
LSVT	Lusahovit	3.49	322	eP	Pb	22 55 15.1	-1.4
LSVT				eS	Sb	22 55 58.4	-0.8
IGDI	IGDIR	3.49	300	P	Pb	22 55 15.3	-1.2
IGDI				S	Sg	22 56 04.2	-2.3
QZX	Qazax, Azerbai	3.52	325	P	Pb	22 55 14.6	-2.2
QZX				S	Sb	22 56 02.5	+2.6
ZKTA	Zakatala	3.61	343	P	Pn	22 55 13.4	+2.7
ZKTA				S	Sb	22 55 59.6	-2.8

*IDC **22** 23:11:54.5±0.7,26°.00S×70°.78E,h0km,mb4.0/12, mbtmp4.0/12,MS3.5/12,Error ellipse: s-maj=24.8km s-min=19.7km az=97.0*
*NEIC **22** 23:11:55.9±1.1,26°.0S±0°.1×70°.83E±0°.10,h10km±1km, mb4.8/22,Error ellipse: s-maj=19.8km s-min=15.0km az=172.0*

ISC 22 23:11:55.9±0.6,26°.01S±0°.09×70°.9E±0°.1,h11km,n60, σ1§09/38,mb4.2/18,MS3.5/12,1C,Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	13.04	156	Pn	Pn	23 15 00.2	-0.9
H08S1	Diego Garcia H	18.32	5	T	T	23 34 59.9	
	baz=186,slow=75,SNR=39						
H08S2	Diego Garcia H	18.33	5	T	T	23 35 07.9	
	baz=186,slow=75,SNR=54						
H08S3	Diego Garcia H	18.34	5	T	T	23 35 01.0	
	baz=186,slow=75,SNR=56						
H04N2	CROZET ISLANDS	25.23	212	T	T	23 43 29.2	
	baz=44,slow=74,SNR=507						
H04N1	CROZET ISLANDS	25.24	212	T	T	23 43 32.5	
	baz=44,slow=74,SNR=500						
H04N3	CROZET ISLANDS	25.25	212	T	T	23 43 36.1	
	baz=44,slow=74,SNR=830						
H04S1	CROZET ISLANDS	25.67	211	T	T	23 44 11.0	
	baz=32,slow=70,SNR=10						
H04S3	CROZET ISLANDS	25.68	211	T	T	23 44 10.7	
	baz=32,slow=70,SNR=15						
H04S2	CROZET ISLANDS	25.69	211	T	T	23 44 12.5	
	baz=32,slow=70,SNR=13						
PALK	Pallekele	34.43	17	LR	LR	23 29 46.8	
	comp=Z,95nm,19.5s,baz=202,slow=31						
H01W2	Cape Leeuwin H	38.07	114	T	T	23 59 39.4	
	baz=271,slow=75,SNR=34						
H01W3	Cape Leeuwin H	38.07	114	T	T	23 59 35.1	
	baz=271,slow=75,SNR=26						
H01W1	Cape Leeuwin H	38.08	114	T	T	23 59 37.2	
	baz=271,slow=75,SNR=28						
PSI	Prapat	39.44	48	LR	LR	23 31 46.8	
	comp=Z,79nm,19.8s,baz=178,slow=30						
MREMI	Moremi	39.62	265	P	P	23 19 26.6	-1.3
BOSA	Boshof	40.45	256	P	P	23 19 33.7	-1.1
	1.3nm,0.8s,baz=112,slow=9.7,SNR=2.1						
BOSA				LR	LR	23 33 13.1	
	comp=Z,142nm,18.3s,baz=86,slow=32						
	1.3nm,0.8s						
BOSA	Boshof	40.45	256	IAmb	IAmb	23 19 38.8	
	comp=Z,36nm,1.9s						
NWAO	Nangin (SRO)	40.67	111	P	P	23 19 36.2	-0.2
LBTB	Lobatse	40.74	261	LR	LR	23 33 30.2	
	comp=Z,133nm,19.5s,baz=111,slow=32						
LBTB	Lobatse	40.74	261	P	P	23 19 35.7	-1.5
LBTB				IAmb	IAmb	23 19 52.7	
	comp=Z,29nm,1.9s						
KHWEE	KHWEE	41.57	266	P	P	23 19 42.8	-1.3
KHWEE				IAmb	IAmb	23 20 02.7	
	comp=Z,15nm,1.2s						
MAW	Mawson	41.90	185	LR	LR	23 33 42.2	
	comp=Z,112nm,18.6s,baz=346,slow=31						
MYKOM	Kota Tinggi	42.16	54	P	P	23 19 47.3	-1.5
PHDHD	Phuduhudu	42.86	268	P	P	23 19 52.2	-2.4
KOOLE	Kule	46.01	262	P	P	23 20 18.6	-1.2
MBAR	Mbarara	46.19	297	LR	LR	23 35 38.5	
	comp=Z,39nm,18.4s,baz=294,slow=31						
XAUDM	Khaudum	46.24	269	P	P	23 20 20.8	-0.9
XAUDM				IAmb	IAmb	23 20 37.2	
	comp=Z,9.4nm,1.4s						
SYO	Syowa Base	46.85	195	eP	P	23 20 27.5	+1.9
TSUM	Tsumeb	49.41	266	LR	LR	23 40 53.6	
	comp=Z,30nm,18.1s,baz=166,slow=35						
FITZ	Fitzroy Crossi	51.04	93	LR	LR	23 39 48.2	
	comp=Z,64nm,20.5s,baz=169,slow=33						
FITZ	Fitzroy Crossi	51.04	93	P	P	23 20 58.3	-0.2
KAPI	Kappang	51.12	75	LR	LR	23 41 55.7	
	comp=Z,26nm,18.0s,baz=228,slow=35						
KAPI	Kappang	51.12	75	P	P	23 20 58.8	-0.3
KAPI				IAmb	IAmb	23 21 01.3	
	comp=Z,16nm,0.7s						
CMAR	Chiang Mai Arr	51.93	35	P	P	23 21 07.1	+2.1
	comp=Z,0.9nm,0.3s,baz=222,slow=7.0,SNR=10.0						
CMAR				LR	LR	23 38 48.3	
	comp=Z,32nm,21.2s,baz=290,slow=31						
	comp=Z,0.9nm,0.3s						
CMAR	Chiang Mai Arr	51.93	35	P	P	23 21 06.2	+1.2
LUWI	Luwuk	55.71	72	P	P	23 21 31.6	-1.3
ASAR	Alice Springs	56.73	102	P	P	23 21 40.2	0.0
	comp=Z,1.5nm,0.7s,baz=250,slow=6.4,SNR=12						
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	56.73	102	P	P	23 21 39.7	-0.4
MTN	Manton Dam	57.86	89	P	P	23 21 47.3	-0.8
WRA	Warrunga Arr	58.24	98	P	P	23 21 51.4	+0.6
	comp=Z,1.4nm,0.8s,baz=254,slow=7.2,SNR=8.8						
	comp=Z,1.4nm,0.8s						
WRAB	Tennant Creek	58.25	98	P	P	23 21 50.8	-0.1
WB0	Warramunga Arr	58.34	98	P	P	23 21 51.3	-0.2
KBL	Kabul	60.24	358	P	P	23 22 05.6	+1.1
KBL				IAmb	IAmb	23 22 13.7	
	comp=Z,5.7nm,1.1s						
SNAA	Sanae	60.43	200	P	P	23 22 04.9	-0.3
	comp=Z,0.9nm,0.9s,baz=52,slow=13,SNR=4.2						
SNAA				LR	LR	23 42 56.3	
	comp=Z,18nm,19.0s,baz=9.0,slow=31						
	comp=Z,0.9nm,0.9s						
SNAA	Sanae	60.43	200	P	P	23 22 05.0	-0.3
SNAA				IAmb	IAmb	23 23 29.9	
	comp=Z,14nm,1.9s						
QSPA	South Pole Qui	64.12	180	P	P	23 22 31.9	+1.8
	comp=Z,2.0nm,1.0s,baz=238,slow=6.1,SNR=5.0						
	comp=Z,2.0nm,1.0s						
QSPA	South Pole Qui	64.12	180	P	P	23 22 31.3	+1.1
QSPA				IAmb	IAmb	23 22 43.2	
	comp=Z,18nm,2.0s						
MKAR	Makanchi Array	73.19	8	P	P	23 23 26.8	+0.2
	comp=Z,1.9nm,0.8s,baz=208,slow=5.5,SNR=11						
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	73.19	8	P	P	23 23 26.9	+0.3
BRTR	Keskin Array B	74.05	331	P	P	23 23 32.5	+0.4
	comp=Z,0.9nm,0.8s,baz=110,slow=5.4,SNR=3.8						
	comp=Z,0.9nm,0.8s						
KURBB	Kurchatov Arra	76.59	5	P	P	23 23 46.3	+0.2
	comp=Z,1.4nm,0.8s,baz=200,slow=6.3,SNR=7.2						
	comp=Z,1.4nm,0.8s						
KURK	Kurchatov	76.69	5	P	P	23 23 46.6	-0.1
BVAR	Borovoye Array	78.70	360	P	P	23 23 56.8	-1.1
	comp=Z,0.2nm,0.4s,baz=177,slow=5.8,SNR=4.4						
	comp=Z,0.2nm,0.4s						
SONM	Songino Array	80.14	23	P	P	23 24 07.2	+1.2
	comp=Z,2.3nm,0.9s,baz=192,slow=5.1,SNR=12						
	comp=Z,2.3nm,0.9s						
DBIC	Dimbokro	80.23	282	LR	LR	23 56 33.5	
	comp=Z,37nm,18.1s,baz=164,slow=33						
ULN	Ulaanbaatar	80.40	24	P	P	23 24 06.2	-1.2
ULN				IAmb	IAmb	23 26 08.1	
	comp=Z,7.5nm,1.2s						
ZAA0	Zalesovo Array	80.53	8	P	P	23 24 07.3	-0.5
ZALV	Zalesovo Beam	80.53	8	P	P	23 24 08.0	+0.2
	comp=Z,1.9nm,0.7s,baz=172,slow=4.1,SNR=11						
	comp=Z,1.9nm,0.7s						
ZALV	Zalesovo Beam	80.53	8		P	23 24 07.5	-0.3

*IDC **22** 23:18:01.1±1.2,5°.89N×126°.89E,h114km±9km,mb4.0/28, mbtmp4.4/30,MS3.3/3,Error ellipse: s-maj=20.5km s-min=8.9km az=70.0*
*NEIC **22** 23:18:01.1±1.4,5°.89N±0°.05×126°.80E±0°.08,h103km±7km, mb4.6/48,Error ellipse: s-maj=12.4km s-min=7.1km az=70.0*
*DJA **22** 23:18:01.0±0.5,6°N±4°×12°7E±°,h106km±4km,M4.9/25, mb4.9/25,mB5.3/15,MLv5.1/13,Mw(mB)4.8/15*

ISC 22 23:18:00.7±0.8,5°.85N±0°.04×126°.89E±0°.06,h107km±7km, n156,σ1§34/161,mb4.5/54,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.78	313	P	Pn	23 18 30.8	0.0
	976nm,0.3s,baz=162,slow=1.3,SNR=28						
DAV				S	Sn	23 18 54.5	+0.7
	2µm,0.4s,baz=65,slow=17,SNR=10						
DAV				LR	LR	23 19 10.8	
	comp=Z,685nm,20.1s,baz=226,slow=40						
DAV	Davao City (W)	1.78	313		Pn	23 18 30.7	-0.2
DAV				Sn	Sn	23 18 50.6	-3.2
DAV	Davao City (W)	1.78	313	P	Pn	23 18 30.7	-0.2
DAV	Davao City (W)	1.78	313	S	Sn	23 18 56.1	+2.3
SGSI	Sangihe	2.54	212	P	Pn	23 18 41.7	+1.0
TNTI	Ternate	5.07	175		Pn	23 19 15.1	+0.6
TNTI				Sn	Sn	23 20 11.9	0.0
TNTI	Ternate	5.07	175	S	Sn	23 20 11.6	-0.3
TNTI	Ternate	5.07	175	P	Pn	23 19 15.1	+0.6
	1.3nm4µm273nm,0.6s						
KMSI	Cibinong	5.99	209	P	Pn	23 19 29.0	+2.0
MRSI	Marisa	7.28	223	P	Pn	23 19 45.6	+1.2
TOLI2	Tolitoli	7.70	233		Pn	23 19 50.0	-0.3
TOLI2				Sn	Sn	23 21 14.5	-1.5
TOLI2	Tolitoli	7.70	233	P	Pn	23 19 50.0	-0.3
SANI	Sanana	7.90	187	P	Pn	23 19 49.8	-3.1
SANI	Sanana	7.90	187	P	Pn	23 19 49.9	-3.0
	3µm69nm,0.6s						
SWI	Sorong	7.97	147	P	Pn	23 19 55.1	+1.2
	0.2nm1µm33nm,0.4s						
LUWI	Luwuk	7.99	211		Pn	23 19 51.6	-2.5
LUWI	Luwuk	7.99	211	P	Pn	23 19 57.2	+3.1
	5µm195nm,1.1s						
APSI	Ampana	8.52	218	P	Pn	23 20 05.8	+4.5
	54nm,1.0s						
MPSI	Mapaga	8.87	232	P	Pn	23 20 05.7	-0.5
NLAI	Namlea	9.03	179	P	Pn	23 20 07.1	-1.2
AAI	Ambon	9.56	172	P	Pn	23 20 15.6	+0.1
	70nm,0.5s						
FAKI	Fak Fak	10.22	148	Pn	Pn	23 20 25.2	+0.6
FAKI	Fak Fak	10.22	148	P	Pn	23 20 21.8	-2.7
FAKI	Fak Fak	10.22	148	S	Sn	23 22 12.6	-4.7
FAKI	Fak Fak	10.22	148	P	Pn	23 20 24.1	-0.4
TTSI	Tana Toraja	11.31	219	P	Pn	23 20 39.9	+0.7
	1µm29nm,0.7s						
SPSI	Sidrap Palu	12.07	216	P	Pn	23 20 48.7	-0.6
	15nm,0.7s						
KAPI	Kappang	12.94	214	P	Pn	23 21 00.1	-0.5
	18nm,0.7s,baz=30,slow=8.8,SNR=11						
SBUM	Sibu	15.02	258	P	P	23 21 31.8	+1.5
SBUM	Sibu	15.02	258	P	P	23 21 31.9	+1.6
MMRI	Maumere	15.12	198	P	Pn	23 21 29.7	+0.9
	49nm,0.6s						
EDFI	Ende, Flores	15.40	200	P	Pn	23 21 32.3	-0.1
	528nm31nm,0.4s						
SOEI	Soe	15.72	190		Pn	23 21 36.4	0.0
SOEI	Soe	15.72	190	P	Pn	23 21 36.3	-0.1
SOEI	Soe	15.72	190	P	Pn	23 21 37.7	+1.3
	82nm,0.7s						
BATI	Baumata	16.27	191	P	P	23 21 45.2	+1.0
	68nm,0.6s,baz=15,slow=12,SNR=8.7						
BATI	Baumata	16.27	191	P	P	23 21 44.5	+0.3
	79nm,0.6s						
WSI	Waingapu	16.76	203	P	Pn	23 21 44.8	-4.3
PLAI	Plampang	17.18	212	P	Pn	23 21 57.0	+2.7
TPUB	Ta-pu	18.37	341	P	P	23 22 06.9	-0.3
TPUB	Ta-pu	18.37	341	P	Pn	23 22 09.6	+1.1
DRS	Darwin Rock St	18.60	168	P	P	23 22 10.4	+0.7
MTN	Manton Dam	19.05	167		P	23 22 15.5	+0.9
MTN				IAmb	IAmb	23 22 20.9	
	comp=Z,15nm,0.6s						
JAGI	Jajag, Banyuwa	19.07	222	P	P	23 22 15.9	+1.0
JAGI				IAmb	IAmb	23 22 25.4	
	comp=Z,18nm,0.9s						
JAGI	Jajag, Banyuwa	19.07	222	P	Pn	23 22 18.3	+1.4
DLV	Lat	19.16	290	P	P	23 22 16.1	0.0
DLV				IAmb	IAmb	23 22 17.6	
	comp=Z,20nm,0.9s						
YHNB	Yeheng	19.45	345	P	Pn	23 22 21.0	-0.3
JOW	Kunigami	20.91	3	LR	LR	23 32 18.7	
	comp=Z,46nm,19.1s,baz=154,slow=41						
KNRA	Kununurra	21.47	175		P	23 22 41.4	+0.6
FITZ	Fitzroy Crossi	23.83	183		P	23 23 04.7	+0.6
COEN	Coen	25.47	141		P	23 23 19.0	-0.1
COEN				IAmb	IAmb	23 23 20.1	
	comp=Z,8.0nm,0.6s						
COEN	Coen	25.47	141	P	P	23 23 17.2	-1.8
WB0	Warramunga Arr	26.51	164	P	P	23 23 28.2	-0.1
WB0				IAmb	IAmb	23 23 34.1	
	comp=Z,23nm,1.1s						
WRAB	Tennant Creek	26.65	164	P	P	23 23 30.3	+0.6
WRAB				IAmb	IAmb	23 23 49.8	
	comp=Z,14nm,0.6s						
WRAB	Tennant Creek	26.65	164	P	P	23 23 29.9	+0.2
WRA	Warramunga Arr	26.66	164	P	P	23 23 29.2	-0.5
	comp=Z,5.9nm,0.6s,baz=345,slow=10,SNR=36						
WRA				ScP	ScP	23 30 20.8	-0.7
	comp=Z,0.9nm,0.8s,baz=340,slow=3.6,SNR=4.7						
	comp=Z,5.9nm,0.6s						
WRA	Warramunga Arr	26.66	164	P	P	23 23 29.1	-0.7
WR8	Warramunga Arr	26.72	164	P	P	23 23 29.9	-0.3
WR8				IAmb	IAmb	23 23 35.7	
	comp=Z,8.5nm,0.7s						
NJ2	Nanjing	27.13	345	eP	P	23 23 36.0	+2.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s				

KLBR Kellerberrin 38.24 193 P P 23 25 11.2 +0.7
USRK Ussuriysk Ar. 38.46 6 P P 23 25 12.3 +0.2
comp=Z,3.6nm,0.5s,baz=174,slow=6.1,SNR=11
comp=Z,3.6nm,0.5s
SHL Shillong 38.79 304 P P **23 25 15.2 -0.3**
SHL IAmb IAmb 23 25 15.7
comp=Z,6.3nm,0.6s
EIDS Eidsvold 38.94 144 P P **23 25 16.0 -0.4**
MUN Mundaring 38.97 195 P P **23 25 17.2 +0.6**
BBOO Buckleboo 39.42 168 P P **23 25 20.8 +0.5**
BBOO Buckleboo 39.42 168 P P **23 25 20.8 +0.5**
NWAO Narrogin (SRO) 39.64 193 P P **23 25 23.1 +1.0**
NWAO Narrogin (SRO) 39.64 193 P P **23 25 23.1 +1.0**
STKA Stephens Creek 40.05 160 P P **23 25 25.9 +0.3**
comp=Z,13nm,0.4s,baz=336,slow=8.7,SNR=34
comp=Z,13nm,0.4s
STKA Stephens Creek 40.05 160 P P **23 25 26.0 +0.5**
JKA Kamikawa-asahi 40.53 17 P P **23 25 30.4 +1.1**
JKA IAmb IAmb 23 25 39.4
comp=Z,8.0nm,1.0s
HTT Hallett 40.70 164 P P **23 25 31.2 +0.3**
H11S3 WAKE ISLAND Hy 40.77 68 T T 00 09 40.7
baz=257,slow=75,SNR=10
H11S1 WAKE ISLAND Hy 40.79 68 T T 00 09 40.1
baz=257,slow=75,SNR=11
H11S2 WAKE ISLAND Hy 40.79 68 T T 00 09 40.4
baz=257,slow=75,SNR=12
H11N1 WAKE ISLAND Hy 41.24 67 T T 00 10 41.9
baz=253
H11N2 WAKE ISLAND Hy 41.25 67 T T 00 10 35.9
baz=253
H11N3 WAKE ISLAND Hy 41.26 67 T T 00 10 59.9
baz=253
CMSA Cobar Meteorol 41.29 155 P P **23 25 36.5 +0.8**
GTA Gaotai 41.38 328 *e*P P **23 25 36.6 0.0**
GTA pP pP 23 26 00.8 +0.4
GTA PcP **PcP** **23 27 35.3 +2.4**
GTA pmax pmax
comp=Z,10.0nm,1.2s
ARMA Armidale 43.16 148 P P **23 25 51.9 +0.8**
ARMA IAmb IAmb 23 25 52.9
comp=Z,17nm,0.8s
ARMA Armidale 43.16 148 P P **23 25 52.5 +1.5**
EVN Everest 43.89 305 P P **23 25 57.0 -0.6**
EVN IAmb IAmb 23 25 58.4
comp=Z,6.5nm,0.6s
HILR Hailar Array B 43.97 353 P P **23 25 56.4 -0.8**
comp=Z,1.0nm,0.4s,baz=168,slow=8.8,SNR=2.0
comp=Z,1.0nm,0.4s
ULN Ulaanbaatar 45.17 341 P P **23 26 07.3 +0.4**
SONM Songino Array 45.36 341 P P **23 26 08.3 -0.1**
comp=Z,0.8nm,0.4s,baz=162,slow=9.2,SNR=8.6
SONM PcP **PcP** **23 27 45.7 -0.4**
comp=Z,0.3nm,0.6s,baz=161,slow=4.4,SNR=1.6
comp=Z,0.8nm,0.4s
CAN Canberra 45.94 155 P P **23 26 14.7 +1.7**
CAN IAmb IAmb 23 26 15.0
comp=Z,8.4nm,0.8s
CAN Canberra 45.94 155 P P **23 26 14.4 +1.4**
CNB Canberra Magne 46.09 154 P P **23 26 14.5 +0.3**
TOO Toolangi 46.55 160 P P **23 26 19.3 +1.6**
PETK Petropavlovsk- 53.42 23 P P **23 27 09.3 -0.1**
comp=Z,2.7nm,0.7s,baz=283,slow=1.5,SNR=1.7
comp=Z,2.7nm,0.7s
PETK Petropavlovsk- 53.42 23 P P **23 27 10.3 +0.9**
MKAR Makanchi Array 55.92 324 P P **23 27 27.1 -0.6**
comp=Z,3.9nm,0.6s,baz=116,slow=7.5,SNR=75
MKAR PcP **PcP** **23 28 25.6 +0.5**
comp=Z,1.6nm,0.6s,baz=133,slow=4.1,SNR=5.5
MKAR ScP **ScP** **23 32 12.3 -2.1**
comp=Z,0.6nm,0.7s,baz=134,slow=3.5,SNR=3.5
comp=Z,3.9nm,0.6s
MAKZ Makanchi 56.11 324 P P **23 27 28.5 -0.5**
MAKZ IAmb IAmb 23 27 29.3
comp=Z,6.6nm,0.9s
TARG Taragay, Kyrgy 56.30 317 P P **23 27 30.0 -1.0**
TARG IAmb IAmb 23 27 36.7
comp=Z,2.9nm,0.7s
KDJ Kajisay 56.89 317 P P **23 27 34.5 -0.3**
ZAA0 Zalesovo Array 58.79 332 P P **23 27 47.1 -0.5**
ZAA0 IAmb IAmb 23 27 48.4
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 58.79 332 P P **23 27 46.7 -0.9**
comp=Z,2.4nm,0.3s,baz=120,slow=6.5,SNR=14
comp=Z,2.4nm,0.3s
ZALV Zalesovo Beam 58.79 332 P P **23 27 47.1 -0.5**
AAK Ala-Archa 58.91 317 P P **23 27 48.5 -0.4**
SEY Seymchan 59.94 13 LR LR 23 57 54.2
comp=Z,22nm,18.4s,baz=33,slow=40
KURK Kurchatov 60.06 327 P P **23 27 56.0 -0.3**
KURBB Kurchatov Arra 60.06 327 P P **23 27 55.7 -0.7**
comp=Z,4.3nm,0.5s,baz=125,slow=6.0,SNR=26
comp=Z,4.3nm,0.5s
GAR Garm 60.63 312 P P **23 27 59.8 -0.9**
KK31 Karatay Array 61.81 316 P P **23 28 07.1 -1.3**
KK31 IAmb IAmb 23 28 08.3
comp=Z,4.8nm,0.8s
KKAR Karatay Array 61.81 316 P P **23 28 07.4 -1.0**
DSZ Denniston Nort 62.61 143 P P **23 28 14.0 +0.2**
RAO Raoul Island 63.45 127 P P **23 28 20.2 +0.7**
LTZ Lake Taylor 63.52 144 P P **23 28 19.8 0.0**
BVAR Borovoye Array 65.65 326 P P **23 28 33.0 -0.4**
comp=Z,10nm,0.9s,baz=120,slow=8.8,SNR=38
comp=Z,10nm,0.9s
TIXI Tiksi 65.73 1 P P **23 28 33.1 -0.4**
comp=Z,1.5nm,0.3s,baz=205,slow=6.7,SNR=5.0
comp=Z,1.5nm,0.3s
AB31 Akbulak array 70.62 320 P P **23 29 03.7 -0.9**
AB31 IAmb IAmb 23 29 04.7
comp=Z,7.5nm,0.8s
ABKAR Akbulak array 70.62 320 P P **23 29 03.6 -1.0**
ARTI Arti 73.33 327 P P **23 29 19.4 -1.2**
comp=Z,3.7nm,0.6s,baz=101,slow=1.4,SNR=10
ARTI LR LR 00 02 06.1
comp=Z,25nm,19.8s,baz=37,slow=36
comp=Z,3.7nm,0.6s
ARTI Arti 73.33 327 P P **23 29 19.2 -1.4**
ARTI IAmb IAmb 23 29 20.4
comp=Z,8.6nm,0.5s
KIRV Kirov 78.50 329 P P **23 29 49.8 -0.1**
comp=Z,7.3nm,0.4s,baz=105,slow=4.7,SNR=6.1
comp=Z,7.3nm,0.4s
KBZ Khabaz 81.65 313 P P **23 30 07.7 +0.5**
comp=Z,1.5nm,0.8s,baz=76,slow=8.3,SNR=2.5
comp=Z,1.5nm,0.8s
GURO Guroymak-BITLI 82.37 308 P P **23 30 11.1 -0.2**
ILAR Eielson Array 83.13 26 P P **23 30 13.2 -1.3**
comp=Z,0.3nm,0.4s,baz=248,slow=4.7,SNR=10
comp=Z,0.3nm,0.4s
KLU Klutina 83.55 29 P P **23 30 18.4 +1.6**
KLU IAmb IAmb 23 30 33.2
comp=Z,11nm,1.2s
VNDA Vanda 85.50 173 P P **23 30 25.7 -0.4**
comp=Z,2.8nm,0.6s,baz=313,slow=6.9,SNR=9.2
comp=Z,2.8nm,0.6s
MMAI Mount Meron Ar 88.10 303 P P **23 30 40.2 +0.3**
comp=Z,0.3nm,0.4s,baz=72,slow=5.7,SNR=4.5
comp=Z,0.3nm,0.4s
ARCES ARCESS Array B 88.53 340 P P **23 30 39.6 -1.4**
comp=Z,0.5nm,0.4s,baz=80,slow=5.2,SNR=11
comp=Z,0.5nm,0.4s
BRTR Keskin Array B 88.80 310 P P **23 30 40.6 -2.5**
comp=Z,1.6nm,0.9s,baz=126,slow=5.6,SNR=7.0
comp=Z,1.6nm,0.9s
FINES FINESS Array B 90.05 332 P P **23 30 47.3 -1.0**
comp=Z,2.0nm,0.5s,baz=58,slow=5.0,SNR=22
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 90.36 321 P P **23 30 49.4 -0.5**
comp=Z,0.2nm,0.3s,baz=72,slow=3.0,SNR=2.1
comp=Z,0.2nm,0.3s
QSPA South Pole Qui 95.74 180 P P **23 31 15.0 +0.5**
comp=Z,3.8nm,0.9s,baz=0.0,slow=4.0,SNR=14
comp=Z,3.8nm,0.9s
HFS Hagfors 96.22 332 P P **23 31 14.8 -1.9**
comp=Z,0.6nm,0.4s,baz=108,slow=9.7,SNR=5.2
comp=Z,0.6nm,0.4s
NOA NORSAR Array B 96.97 334 P P **23 31 18.0 -2.2**
comp=Z,0.7nm,0.8s,baz=63,slow=4.7,SNR=2.3
comp=Z,0.7nm,0.8s

*NAO **22** 23:36:05.1,33˙.47N×24˙.78E,h10km, MB4.2*
*IDC **22** 23:36:37.1±0.8,36˙.84N×21˙.55E,h0km,mb4.0/17, mbtmp3.8/28,ML2.9/9,MS2.8/4, Error ellipse: s-maj=16.2km s-min=13.2km az=11.0*
*NEIC **22** 23:36:39.2±2.0,36˙.81N±0˙.05×21˙.43E±0˙.06,h10km±1km, mb4.3/15, Error ellipse: s-maj=9.6km s-min=6.6km az=143.0*
*THE **22** 23:36:39.7,37˚N±2˚×2˚1E±˚,h0km±1km,M3.5/18, MLh3.5/18*
*ATH **22** 23:36:41.3,36˚.68N×21˙.50E,h12km±1km,ML3.7/55, Manual Solution by G.Panopoulou First location: 2019/11/22 23:37:49, This location: 2020/11/09 17:15:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
ISC 22 23:36:38.4±1.0,36˙60N±0˙.03×21˙.44E±0˙.02,h14km±6km, n184,σ1°48/226,mb4.1/20,MS4.4/5,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MTHA	**Methoni**	**0.31**	**44**	P	**Pb**	**23 36 46.3**	**+0.6**
MTHA				S	**Sg**	23 36 49.2	+0.1
PYL1	**Pylos**	**0.38**	**33**	P	**Pg**	**23 36 46.2**	**+0.3**
PYL1				S	**Sg**	23 36 50.8	-0.4
PYL	**PYLOS**	**0.38**	**40**	P	**Pg**	**23 36 46.3**	**+0.3**
PYL				S	**Sg**	23 36 51.8	+0.4
PYL	**PYLOS**	**0.38**	**40**	P	**Pg**	**23 36 46.1**	**0.0**
PYL				S	**Sg**	23 36 51.3	-0.1
ITM	**Ithomi**	**0.70**	**34**	P	**Pg**	**23 36 50.8**	**-1.2**
ITM	**Ithomi**	**0.70**	**34**	P	**Pg**	**23 36 52.3**	**+0.2**
ITM				S	**Sg**	23 37 02.2	+1.0
ITM	**Ithomi**	**0.70**	**34**	P	**Pg**	**23 36 52.0**	**0.0**
ITM				S	**Sg**	23 37 01.3	+0.1
ZARO	**Zacharo**	**0.90**	**11**	P	**Pg**	**23 36 55.2**	**-0.6**
ZARO				S	**Sg**	23 37 07.9	+0.3
AMT	**Artemida-Makis**	**0.96**	**13**	P	**Pb**	**23 36 56.2**	**-0.6**
AMT				S	**Sg**	23 37 09.1	-0.3
VLX	**Vlachokerasia**	**1.08**	**44**	P	**Pb**	**23 36 59.1**	**+0.2**
VLX				S	**Sn**	23 37 15.1	+1.0
LTHK	**Lithakia**	**1.21**	**337**	P	**Pn**	**23 37 00.8**	**-0.1**
LTHK				S	**Sg**	23 37 18.3	+0.9
LTHK	**Lithakia**	**1.21**	**337**	P	**Pn**	**23 37 00.7**	**-0.1**
LTHK				S	**Sg**	23 37 17.8	+0.4
VLI	**Veliai**	**1.21**	**84**	P	**Pg**	**23 37 03.4**	**+1.6**
VLI				S	**Sg**	23 37 20.5	+3.0
VLI	**Veliai**	**1.21**	**84**	P	**Pg**	**23 37 02.7**	**+1.0**
VLI				S	**Sg**	23 37 18.6	+1.1
MNVA	**Monemvasia**	**1.29**	**86**	P	**Pg**	**23 37 04.3**	**+1.1**
MNVA				S	**Sg**	23 37 20.5	+0.5
CLEM	**Kyllini,Ilia,G**	**1.31**	**349**	P	**Pb**	**23 37 02.7**	**-0.1**
CLEM				S	**Sb**	23 37 20.6	+1.1
NPS1	**Neapolis Lacon**	**1.31**	**93**	P	**Pg**	**23 37 04.8**	**+1.2**
NPS1				S	**Sg**	23 37 22.1	+1.5
KYPS	**Kipseli, Zakin**	**1.31**	**338**	P	**Pb**	**23 37 03.0**	**+0.2**
KYPS				S	**Sn**	23 37 20.6	+1.0
LCHA	**Lechaina**	**1.34**	**354**	P	**Pb**	**23 37 03.8**	**+0.4**
KTHA	**Kythira Island**	**1.35**	**104**	P	**Pg**	**23 37 05.6**	**+1.2**
DRO	**Drossia**	**1.37**	**9**	P	**Pb**	**23 37 03.7**	**-0.1**
DRO				S	**Sg**	23 37 23.3	+0.8
DRO	**Drossia**	**1.37**	**9**	P	**Pb**	**23 37 04.1**	**+0.3**
DRO				S	**Sb**	23 37 22.2	+1.0
ORTH	**Orthonies,Zaky**	**1.38**	**335**	P	**Pg**	**23 37 04.4**	**-0.6**
ORTH				S	**Sg**	23 37 24.6	+1.6
ORTH	**Orthonies,Zaky**	**1.38**	**335**	P	**Pg**	**23 37 04.5**	**-0.5**
ORTH				S	**Sg**	23 37 23.2	+0.3
NPLA	**Nafplio**	**1.46**	**48**	P	**Pb**	**23 37 05.7**	**+0.5**
RLS	**Riolos of Patr**	**1.46**	**1**	P	**Pb**	**23 37 05.2**	**0.0**
RLS				S	**Sb**	23 37 25.3	+1.7
RLS	**Riolos of Patr**	**1.46**	**1**	P	**Pn**	**23 37 04.8**	**+0.5**
ARS1	**Argos**	**1.46**	**45**	P	**Pg**	**23 37 06.0**	**-0.4**
GUR	**Goura**	**1.52**	**28**	P	**Pb**	**23 37 06.2**	**-0.2**
GUR				S	**Sg**	23 37 27.8	+0.5
GUR	**Goura**	**1.52**	**28**	P	**Pb**	**23 37 06.3**	**-0.2**
GUR				S	**Sn**	23 37 25.5	+0.7
KLV1	**Kalavrita**	**1.53**	**20**	P	**Pb**	**23 37 06.3**	**-0.2**
KLV1				S	**Sn**	23 37 26.1	+1.0
KLV	**Kalavryta, Ach**	**1.55**	**21**	P	**Pb**	**23 37 06.6**	**-0.3**
KLV				S	**Sg**	23 37 28.6	+0.3
KLV	**Kalavryta, Ach**	**1.55**	**21**	P	**Pb**	**23 37 06.8**	**-0.1**
KLV				S	**Sn**	23 37 25.3	-0.3
RTZL	**Ratzakli, Kefa**	**1.57**	**340**	P	**Pb**	**23 37 06.7**	**-0.4**
RTZL				S	**Sg**	23 37 28.8	-0.1
AXS	**Araxos**	**1.59**	**358**	P	**Pb**	**23 37 08.1**	**+0.5**
AXS				S	**Sb**	23 37 28.4	+0.7
PATG	**Patra B**	**1.65**	**8**	P	**Pb**	**23 37 09.5**	**+0.8**
PSDA	**Pessada-Kefalo**	**1.66**	**336**	P	**Pb**	**23 37 08.5**	**-0.2**
PSDA				S	**Sb**	23 37 29.9	+0.4
PSDA	**Pessada-Kefalo**	**1.66**	**336**	P	**Pb**	**23 37 08.2**	**-0.5**
PSDA				S	**Sb**	23 37 29.8	+0.3
ANKY	**Antikythira Is**	**1.68**	**115**	P	**Pg**	**23 37 10.5**	**0.0**
ANKY				S	**Sg**	23 37 32.7	+0.4
ANKY	**Antikythira Is**	**1.68**	**115**	P	**Pg**	**23 37 10.7**	**+0.1**
PATC	**Patra C**	**1.69**	**9**	P	**Pb**	**23 37 09.8**	**+0.6**
UPR	**University Cam**	**1.70**	**9**	P	**Pb**	**23 37 09.9**	**+0.4**
VLS	**Valsamata**	**1.71**	**337**	P	**Pb**	**23 37 09.4**	**-0.3**
VLS				S	**Sb**	23 37 32.8	+1.7
VLS	**Valsamata**	**1.71**	**337**	P	**Pb**	**23 37 09.0**	**-0.7**
ARG2	**Argostoli**	**1.75**	**335**	P	**Pb**	**23 37 09.4**	**-0.8**
YDRA	**Hydra**	**1.79**	**65**	P	**Pb**	**23 37 11.3**	**+0.4**
MET2	**Kameni Chora,**	**1.82**	**56**	P	**Pb**	**23 37 11.4**	**-0.1**
TRIZ	**Trizonia**	**1.83**	**16**	P	**Pb**	**23 37 11.8**	**+0.1**
DMLN	**Damoulianata-K**	**1.84**	**333**	P	**Pb**	**23 37 12.1**	**+0.2**
MET5	**Makryloggos,Me**	**1.84**	**56**	P	**Pb**	**23 37 11.9**	**0.0**
EFP	**Efpalio**	**1.86**	**11**	P	**Pb**	**23 37 12.0**	**-0.3**
EFP				S	**Sb**	23 37 36.0	+0.6
EFP	**Efpalio**	**1.86**	**11**	P	**Pb**	**23 37 11.9**	**-0.3**
LTK	**Loutraki**	**1.87**	**40**	P	**Pb**	**23 37 11.8**	**-0.6**
LTK				S	**Sb**	23 37 37.6	+1.9
LTK	**Loutraki**	**1.87**	**40**	P	**Pb**	**23 37 11.8**	**-0.6**
KALE	**Kalithea**	**1.87**	**17**	P	**Pb**	**23 37 12.4**	**-0.1**
KALE				S	**Sb**	23 37 36.2	+0.4
KALE	**Kalithea**	**1.87**	**17**	P	**Pb**	**23 37 12.2**	**-0.2**
SERG	**Sergoula**	**1.88**	**15**	P	**Pb**	**23 37 12.3**	**-0.2**
SERG				S	**Sb**	23 37 36.7	+0.9
SERG	**Sergoula**	**1.88**	**15**	P	**Pb**	**23 37 12.4**	**0.0**
FSK	**Fiskardo**	**1.98**	**340**	P	**Pb**	**23 37 13.8**	**-0.5**
PVO	**Paravola**	**2.02**	**2**	P	**Pb**	**23 37 14.7**	**-0.1**
ANX	**Ano Chora**	**2.03**	**11**	P	**Pb**	**23 37 15.4**	**+0.3**
EVGI	**Lefkada island**	**2.11**	**343**	P	**Pb**	**23 37 15.8**	**-0.6**
VIL2	**Platees**	**2.17**	**42**	P	**Pn**	**23 37 15.2**	**+1.0**
NYDR	**Nydri-Lefkada**	**2.19**	**345**	P	**Pb**	**23 37 17.1**	**-0.7**
MAGU	**Magoula**	**2.22**	**48**	P	**Pn**	**23 37 16.2**	**+1.4**
VLY	**Voula,Athens**	**2.26**	**56**	P	**Pn**	**23 37 17.0**	**+1.6**
LKD2	**Lefkada island**	**2.27**	**344**	P	**Pb**	**23 37 18.5**	**-0.7**
ATH	**Athens Observa**	**2.28**	**52**	P	**Pn**	**23 37 17.4**	**+1.8**
STFN	**Stefani**	**2.30**	**46**	P	**Pb**	**23 37 18.1**	**-1.6**
TSLK	**Tsoukalades, L**	**2.31**	**345**	P	**Pb**	**23 37 18.4**	**-1.4**
EVR	**Evrytania**	**2.33**	**7**	P	**Pb**	**23 37 18.9**	**-1.3**
AXAR	**Agios Charalam**	**2.37**	**24**	P	**Pn**	**23 37 18.8**	**+1.9**
CHAN	**Chania**	**2.37**	**116**	P	**Pb**	**23 37 20.2**	**-0.6**
LKR	**Loutraki**	**2.39**	**31**	P	**Pn**	**23 37 18.4**	**+1.2**
PTL	**Penteli**	**2.42**	**52**	P	**Pn**	**23 37 18.9**	**+1.4**
ATAL	**Atalanti**	**2.44**	**31**	P	**Pn**	**23 37 19.9**	**+2.1**
MAKR	**Makrakomi, Fth**	**2.47**	**13**	P	**Pn**	**23 37 20.4**	**+2.1**
DION	**Dionisos Attik**	**2.48**	**53**	P	**Pn**	**23 37 19.8**	**+1.4**
AGG	**Agios Georgios**	**2.52**	**16**	P	**Pb**	**23 37 21.7**	**-1.8**
TETR	**Tetrakomo, Epi**	**2.74**	**357**	P	**Pb**	**23 37 24.8**	**-2.5**
GVD	**Gavdhos**	**2.78**	**128**	P	**Pb**	**23 37 25.6**	**-2.3**
KARY	**Karystos**	**2.79**	**58**	P	**Pn**	**23 37 23.6**	**+1.0**
KYMI	**Kymi, Euboea I**	**2.93**	**45**	P	**Pn**	**23 37 25.5**	**+0.9**
NEO	**Neokhori**	**3.05**	**27**	P	**Pn**	**23 37 27.9**	**+1.6**
IGT	**Igoumenitsa**	**3.06**	**344**	P	**Pn**	**23 37 27.4**	**+1.1**
IDI	**Anoyia**	**3.09**	**114**	Pn	**Pn**	**23 37 27.7**	**+0.8**
IDI	3.7nm,0.4s,baz=277,slow=8.1,SNR=21			Sn	**Sb**	**23 38 08.4**	**-2.4**
	12nm,0.3s,baz=306,slow=17,SNR=7.0						
IDI	**Anoyia**	**3.09**	**114**		**Pb**	**23 37 29.4**	**-3.8**
IDI	**Anoyia**	**3.09**	**114**	P	**Pb**	**23 37 30.0**	**-3.2**
SAP3	**Santorini-Thir**	**3.15**	**92**	P	**Pn**	**23 37 29.7**	**+2.1**
AOS2	**Alonissos-2**	**3.18**	**36**	P	**Pn**	**23 37 29.1**	**+1.2**
SNT5	**Nea Kammeni, S**	**3.19**	**92**	P	**Pn**	**23 37 30.9**	**+2.7**
THERA	**Ancient Thera,**	**3.26**	**93**	P	**Pn**	**23 37 31.0**	**+1.8**
APE	**Apeiranthos**	**3.32**	**81**	P	**Pn**	**23 37 31.5**	**+1.6**
KEK	**Kerkira**	**3.37**	**338**	Pn	**Pn**	**23 37 28.9**	**-1.6**
LIT	**Litokhoron**	**3.59**	**13**		**Pn**	**23 37 31.9**	**-1.8**
PENT	**Pentalofos**	**3.60**	**356**	P	**Pn**	**23 37 36.9**	**+3.1**
KZN	**Kozani**	**3.71**	**4**	P	**Pn**	**23 37 37.3**	**+2.0**
LIA	**Limnos Island**	**4.42**	**41**	P	**Pn**	**23 37 46.9**	**+1.9**
SMG	**Samos**	**4.45**	**74**	P	**Pn**	**23 37 47.2**	**+1.7**
TIP	**Timpagrande**	**4.51**	**306**		**Pn**	**23 37 44.5**	**-1.9**
TIP	**Timpagrande**	**4.51**	**306**	P	**Pn**	**23 37 47.5**	**+1.1**
OHR	**Ohrid**	**4.53**	**354**	*i* Pn	**Pn**	**23 37 49.0**	**+2.4**
CEL	**Celeste**	**4.71**	**292**		**Pn**	**23 37 49.5**	**+0.4**
KARP	**Karpathos**	**4.75**	**101**	Pn	**Pn**	**23 37 51.4**	**+1.7**
VAY	**Valandovo**	**4.80**	**10**	*i* Pn	**Pn**	**23 37 52.5**	**+2.3**
RDO	**Rodhopi**	**5.55**	**34**	Pn	**Pn**	**23 37 59.1**	**-1.5**
CUC	**Castrocucco**	**5.57**	**309**		**Pn**	**23 38 00.7**	**-0.2**
VAE	**Valguarnera**	**5.69**	**281**	Pn	**Pn**	**23 38 05.8**	**+3.2**
	1.9nm,0.3s,baz=135,slow=8.6,SNR=7.3						
VAE				Sn	**Sn**	**23 39 08.6**	**+1.0**
	2.1nm,0.3s,baz=28,slow=15,SNR=2.0						
	13nm,0.8s						
RAFF	**Raffo Rosso**	**5.70**	**278**		**Pn**	**23 38 03.6**	**+0.9**
ACER	**Acerenza**	**6.00**	**316**		**Pn**	**23 38 07.1**	**+0.3**
PDG	**Podgorica**	**6.06**	**345**		**Pn**	**23 38 05.5**	**-2.1**
AKAS	**Kas**	**6.60**	**91**	Pn	**Pn**	**23 38 18.0**	**+2.9**
SGRT	**San Giovanni R**	**6.79**	**321**		**Pn**	**23 38 18.2**	**+0.5**
ELL	**Elmali**	**6.81**	**86**	Pn	**Pn**	23 38 23.0	+5.0
NRCA	**Norcia**	**8.93**	**317**	Pn	**Pn**	**23 38 49.0**	**+1.9**
FDMO	**Fiordimonte**	**9.09**	**318**	Pn	**Pn**	**23 38 50.7**	**+1.6**
MLR	**Muntele Rosu**	**9.51**	**20**	Pn	**Pn**	**23 38 56.3**	**+1.3**
	0.2nm,0.3s,baz=217,slow=12,SNR=5.1						
KEST	**Kesra**	**9.82**	**269**	Pn	**Pn**	**23 39 02.8**	**+3.5**
	0.1nm,0.3s,baz=42,slow=16,SNR=1.5						
KEST				Sn	**Sn**	**23 40 47.8**	**-1.5**
	0.1nm,0.3s,baz=70,slow=18,SNR=1.9						
	3.5nm,1.0s						
BRTR	**Keskin Array B**	**10.10**	**68**	Pn	**Pn**	**23 39 04.4**	**+1.3**
	baz=241,slow=18,SNR=2.6						
	0.7nm,0.9s						
BRTR	**Keskin Array B**	**10.10**	**68**		**Pn**	**23 39 02.1**	**-1.1**
SABO	**M.te Sabotino**	**11.06**	**330**	Pn	**Pn**	**23 39 15.3**	**-0.9**
SOKA	**Soboth**	**11.15**	**337**	*e*Pn	**Pn**	**23 39 16.3**	**-1.1**
	1.1nm,0.5s						
OBKA	**Obir**	**11.16**	**335**	*e*Pn	**Pn**	**23 39 19.6**	**+2.0**
	0.9nm,0.3s						
OBKA				*e*Sn	**Sn**	**23 41 19.8**	**-2.4**
	0.6nm,0.3s						
MYKA	**Terra Mystica**	**11.59**	**332**	*i* Pn	**Pn**	**23 39 26.0**	**+2.6**
	0.3nm,0.4s						
MYKA				*e*Sn	**Sn**	**23 41 32.4**	**-0.2**
	0.5nm,0.4s						
MMAI	**Mount Meron Ar**	**12.02**	**103**	Pn	**Pn**	**23 39 27.4**	**-2.0**
	0.6nm,0.3s,baz=285,slow=13,SNR=6.5						
MMAI				Sn	Sn	23 41 33.4	-10
	0.3nm,0.3s,baz=266,slow=12,SNR=1.6						
	0.1nm,0.3s						
CONA	**Conrad Observa**	**12.05**	**342**	*e*Pn	**Pn**	**23 39 32.3**	**+2.6**
	0.3nm,0.4s						
KBA	**Koelnbreinsper**	**12.08**	**333**	*e*Pn	**Pn**	**23 39 30.9**	**+0.8**
	5.4nm,1.2s						
ABTA	**Abfaltersbach**	**12.13**	**329**	*e*Pn	**Pn**	**23 39 33.7**	**+3.0**
	1.4nm,0.5s						
ABTA				*e*Sn	**Sn**	**23 41 43.2**	**-2.6**
	5.6nm,0.8s						
MOA	**Molln**	**12.43**	**337**	*e*Pn	**Pn**	**23 39 34.2**	**-0.6**
	1.6nm,0.6s						
MOA				*e*Sn	**Sn**	**23 41 50.8**	**-2.2**
	0.5nm,0.6s						
BIOA	**Bad Ischl, Aus**	**12.49**	**335**	*e*Pn	**Pn**	**23 39 37.1**	**+1.4**
	0.1nm,0.2s						
LESA	**Schwarzleotal**	**12.62**	**332**	*e*Pn	**Pn**	**23 39 38.4**	**+1.0**
	1.3nm,0.4s						
LESA				Sn	**Sn**	**23 42 02.2**	**+4.4**
	3.3nm,0.8s						
WTTA	**Wattenberg**	**12.90**	**329**	*e*Pn	**Pn**	**23 39 43.1**	**+1.6**
	2.3nm,0.9s						
WATA	**Walderalm**	**12.98**	**329**	*e*Pn	**Pn**	**23 39 44.4**	**+1.9**
	5.5nm,1.4s						
WATA				*e*Sn	**Sn**	**23 42 09.3**	**+2.5**
	0.9nm,0.4s						
SQTA	**Sankt Quirin**	**13.05**	**328**	*e*Pn	**Pn**	**23 39 45.8**	**+2.4**
	0.1nm,0.2s						
MOTA	**Moosalm**	**13.19**	**328**	*e*Pn	**Pn**	**23 39 46.9**	**+1.5**
	2.2nm,0.8s						
EIL	**Elat**	**13.26**	**118**	Pn	**Pn**	**23 39 45.1**	**-1.2**
	0.3nm,0.3s,baz=3.8,slow=20,SNR=1.3						
EIL				Sn	Sn	23 42 03.7	-10
	0.2nm,0.3s,baz=357,slow=9.9,SNR=2.3						
EIL				LR	LR	23 45 52.4	
	comp=Z,34nm,18.9s,baz=172,slow=42						
	1.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**13.33**	**323**	Pn	**Pn**	**23 39 44.8**	**-2.5**
	0.1nm,0.3s,baz=195,slow=20,SNR=2.1						
DAVOX				Sn	Sn	23 42 05.2	-10
	0.1nm,0.3s,baz=54,slow=15,SNR=1.9						
	1.8nm,0.9s						
GERES	**GERESS Array B**	**13.48**	**338**	Pn	**Pn**	**23 39 47.5**	**-1.8**
	baz=160,slow=13,SNR=4.3						
GERES				LR	LR	23 45 46.5	
	comp=Z,39nm,18.4s,baz=134,slow=41						
	0.2nm,0.4s						
ASF	**Jabal al Asfar**	**13.51**	**105**	Pn	**Pn**	**23 39 50.7**	**+1.0**
	0.1nm,0.3s,baz=296,slow=15,SNR=1.3						
ASF				Sn	**Sn**	**23 42 20.3**	**+0.6**
	0.1nm,0.3s,baz=241,slow=5.2,SNR=1.8						
	0.4nm,0.3s						
AKASG	**Malin Array Be**	**15.17**	**19**	Pn	**Pn**	**23 40 06.2**	**-5.9**
	0.2nm,0.3s,baz=207,slow=12,SNR=1.6						
AKASG	**Malin Array Be**	**15.17**	**19**	P	**P**	**23 40 14.8**	**-2.4**
CLL	**Collm**	**15.89**	**340**	*i* PP	**P**	**23 40 26.9**	**+1.7**
KBZ	**Khabaz**	**17.85**	**60**	P	**Pn**	**23 40 45.6**	**-0.7**
	0.1nm,0.3s,baz=302,slow=19,SNR=1.2						
	1.0nm,0.8s						
PABE	**Paberze**	**18.99**	**4**	P	**P**	**23 40 57.9**	**-1.5**
PABE				IAmb	I

ZAA0						IAmb	IAmb	23 45 05.1		
	comp=Z,2.2nm,0.7s									
ZALV	**Zalesovo Beam**	**46.22**	**47**	P		**P**		**23 45 01.5**	**-1.3**	
	comp=Z,2.4nm,0.6s,baz=272,slow=9.0,SNR=11									
	comp=Z,2.4nm,0.6s									
ZALV	**Zalesovo Beam**	**46.22**	**47**	P		**P**		**23 45 00.6**	**-2.2**	
NRS	**Narsarsuaq**	**47.74**	**323**	P		**P**		**23 45 13.8**	**-0.7**	
TULEG	**Thule**	**54.81**	**343**	P		**P**		**23 46 07.7**	**+0.3**	
EVN	**Everest**	**55.01**	**79**	P		**P**		**23 46 09.2**	**-1.1**	
SONM	**Songino Array**	**60.90**	**50**	P		**P**		**23 46 52.0**	**+1.3**	
	comp=Z,0.2nm,0.5s,baz=304,slow=3.3,SNR=1.1									
	comp=Z,0.2nm,0.5s									
BOSA	**Boshof**	**64.97**	**176**	P		**P**		**23 47 20.6**	**+2.8**	
BOSA					IAmb	IAmb		23 47 32.0		
	comp=Z,1.7nm,0.9s									
YAK	**Yakutsk**	**66.12**	**29**	P		**P**		**23 47 25.3**	**+0.5**	
SEY	**Seymchan**	**73.34**	**21**	LR		LR		00 22 53.4		
	comp=Z,431nm,18.3s,baz=187,slow=38									
ILAR	**Eielson Array**	**78.55**	**355**	P		**P**		**23 48 37.7**	**-1.2**	
	comp=Z,0.2nm,0.8s,baz=27,slow=2.2,SNR=2.0									
	comp=Z,0.2nm,0.8s									
ILAR	**Eielson Array**	**78.55**	**355**	P		**P**		**23 48 39.0**	**+0.1**	
JOW	**Kunigami**	**86.66**	**59**	LR		LR		00 32 26.9		
	comp=Z,178nm,19.6s,baz=166,slow=39									
DAV	**Davao City (W)**	**97.04**	**76**	LR		LR		00 38 44.2		
	comp=Z,128nm,20.4s,baz=48,slow=38									

*IDC **22** 23:39:15.2±5.5,20°.51S×178°.65W,h480km±63km,mb3.0/9, mbtmp3.8/10,Error ellipse: s-maj=27.7km s-min=22.5km az=27.0*

ISC 22 23:39:24.5±0.8,20°.9S±0°.1×178°.9W±0°.1,h600km,n14, σ1s04/14,mb3.3/9,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.68**	**191**	P			**P**	**23 42 55.6**	**-1.5**
	3.6nm,0.3s,baz=290,slow=2.6,SNR=11								
URZ				S			**S**	**23 45 48.4**	**-1.4**
	3.8nm,0.9s,baz=88,slow=7.7,SNR=1.6								
ASAR	**Alice Springs**	**43.66**	**257**	P			**P**	**23 46 39.6**	**+1.7**
	0.4nm,0.4s,baz=92,slow=7.7,SNR=7.1								
ASAR				S			**S**	**23 52 24.9**	**-0.5**
	0.3nm,0.5s,baz=96,slow=15,SNR=2.9								
	0.4nm,0.4s								
WRA	**Warramunga Arr**	**43.76**	**263**	P			**P**	**23 46 39.2**	**+0.5**
	0.6nm,0.5s,baz=97,slow=7.6,SNR=17								
WRA				S			**S**	**23 52 26.5**	**-0.5**
	0.3nm,0.9s,baz=98,slow=14,SNR=1.7								
	0.6nm,0.5s								
VNDA	**Vanda**	**57.48**	**185**	P			**P**	**23 48 18.8**	**+1.8**
	2.0nm,1.0s,baz=13,slow=3.3,SNR=1.6								
	2.0nm,1.0s								
QSPA	**South Pole Qui**	**69.20**	**180**	P			P	23 49 36.6	+4.5
	1.2nm,0.4s,baz=3.9,slow=6.5,SNR=3.3								
	1.2nm,0.4s								
MJAR	**Matsushiro Arr**	**70.03**	**324**	P			**P**	**23 49 37.0**	**-0.3**
	0.7nm,0.5s,baz=165,slow=5.0,SNR=1.6								
	0.7nm,0.5s								
NVAR	**Mina Array Bea**	**81.84**	**44**	P			**P**	**23 50 42.5**	**0.0**
	0.2nm,0.3s,baz=234,slow=5.0,SNR=2.1								
	0.2nm,0.3s								
TXAR	**Lajitas Array**	**87.92**	**58**	P			**P**	**23 51 12.2**	**+0.2**
	0.2nm,0.7s,baz=259,slow=4.9,SNR=2.1								
	0.2nm,0.7s								
ILAR	**Eielson Array**	**88.85**	**13**	P			**P**	**23 51 14.5**	**-0.8**
	0.3nm,0.5s,baz=206,slow=4.7,SNR=6.0								
	0.3nm,0.5s								
PDAR	**Pinedale Array**	**89.78**	**44**	P			**P**	**23 51 20.6**	**+0.2**
	0.2nm,0.5s,baz=228,slow=8.9,SNR=2.6								
	0.2nm,0.5s								
HFS	**Hagfors**	**139.77**	**350**	PKhKP		PKPpre		23 57 37.6	
	1.7nm,0.9s,baz=2.9,slow=3.0,SNR=5.8								
AKASG	**Malin Array Be**	**142.94**	**330**	PKhKP		PKPpre		23 57 48.0	
	1.1nm,0.3s,baz=44,slow=4.1,SNR=7.3								
BRTR	**Keskin Array B**	**146.49**	**311**	PKPbc		**PKPbc**		**23 57 59.6**	**-0.3**
	0.4nm,0.5s,baz=93,slow=2.3,SNR=1.4								
MMAI	**Mount Meron Ar**	**147.29**	**299**	PKPbc		**PKiKP**		**23 58 03.3**	**-0.4**
	0.7nm,0.5s,baz=92,slow=7.0,SNR=4.6								

*IDC **22** 23:44:40.2±1.3,36°.38N×141°.00E,h0km,mb3.6/7, mbtmp3.6/10,ML3.5/3,MS2.6/1,Error ellipse: s-maj=26.4km s-min=22.7km az=68.0*

*NIED **22** 23:44:43.9,36°.27N×140°.90E,h38km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.39; $M_{\theta\theta}$0.80; $M_{\phi\phi}$-0.41; $M_{r\theta}$1.04; $M_{\theta\phi}$0.17; $M_{\phi r}$2.57; Fault plane solution: $M_0$2.83000×10^{14} NP1: ϕ_s107.00000°,δ12.00000°,λ-9.00000°. NP2:ϕ_s205.00000°, δ88.00000°,λ-102.00000°.*

*JMA **22** 23:44:43.9±0.1,36°.3N±0°.3×140°.9E±0°.8,h38km±1km, MD3.7/39,MV3.7/39,E OFF IBARAKI PREF*

JMA Felt II J1 at E OFF IBARAKI PREF .

ISC 22 23:44:44.6±1.1,36°.37N±0°.03×140°.87E±0°.06,h29km±8km, n30,σ0s88/30,mb3.5/7,2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.23**	**264**	||P		**Pn**	**23 44 51.6**	**-0.5**
JHYU				||S		**Sb**	**23 44 56.3**	**+1.0**
JHYU	**Hitachinakayam**	**0.23**	**264**	A		A		23 44 51.6	
	comp=N,23nm,0.4s,comp=E,24nm,1.5s								
JHO	**Hitachi**	**0.34**	**315**	*i* P			**Pn**	**23 44 53.4**	**-0.2**
JHO				S			**Sn**	**23 44 59.8**	**+0.2**
JHO	**Hitachi**	**0.34**	**315**	A		A		23 44 53.4	
	comp=N,6.0nm,1.0s,comp=E,7.0nm,0.9s								
JIHU	**Itakohorinouch**	**0.49**	**215**	P			**Pb**	**23 44 54.3**	**-0.5**
JIHU				S			**Sb**	**23 45 01.6**	**0.0**
JYT	**Yasato**	**0.56**	**256**	*i* P			**Pb**	**23 44 55.5**	**-0.5**
JYT				*eS*			**Sb**	**23 45 03.2**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.74**	**356**	P			**Pb**	**23 44 59.0**	**0.0**
ONAJ				eS			**Sn**	**23 45 10.0**	**+0.6**
JFK	**Kawauchi**	**1.00**	**0**	*eP*			**Pb**	**23 45 02.5**	**-0.9**
JFK				S			**Sb**	**23 45 15.5**	**-0.6**
JAG	**Ashikaga**	**1.15**	**273**	*i* P			**Pn**	**23 45 04.2**	**-0.4**
JAG				S			**Sb**	**23 45 18.8**	**-1.5**
JOTO	**OTAMA OYAMA**	**1.27**	**340**	*i* P			**Pb**	**23 45 07.8**	**0.0**
JOTO				S			**Sb**	**23 45 24.8**	**+1.0**
JKT	**Katashina**	**1.36**	**288**	*i* P			**Pn**	**23 45 08.4**	**+0.7**
JKT				S			**Sn**	**23 45 26.2**	**+1.2**
MJAR	**Matsushiro Arr**	**2.15**	**275**	Pn			**Pn**	**23 45 18.5**	**0.0**
	comp=E,5.5nm,0.3s,baz=112,slow=8.8,SNR=189								
MJAR				Sn			**Sn**	**23 45 46.4**	**+2.1**
	comp=E,2.5nm,0.3s,baz=76,slow=15,SNR=4.0								
MJAR				LR			LR	23 46 21.5	
	comp=E,132nm,20.2s,baz=101,slow=45								
	comp=E,15nm,0.3s								
JHJ	**Hachijo jima 2**	**3.36**	**196**	Pn			**Pn**	**23 45 36.4**	**+1.2**
	comp=E,18nm,0.3s,baz=64,slow=21,SNR=1.4								
JHJ				Sn			**Sn**	**23 46 14.2**	**+0.1**
	comp=E,12nm,0.3s,baz=74,slow=22,SNR=1.1								
	comp=E,163nm,0.6s								
USRK	**Uesuriysk Ar.**	**10.35**	**322**	Pn			**Pn**	**23 47 10.8**	**-0.2**
	comp=E,0.5nm,0.3s,baz=165,slow=12,SNR=2.7								
	comp=E,0.7nm,0.5s								
SONM	**Songino Array**	**27.80**	**305**	P			**P**	**23 50 31.2**	**0.0**
	comp=E,0.5nm,0.6s,baz=110,slow=10,SNR=4.1								
	comp=E,0.5nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**28.19**	**119**	T		T		00 19 54.5	
	baz=312,slow=75,SNR=40								
H11N1	**WAKE ISLAND Hy**	**28.20**	**119**	T		T		00 19 54.5	
	baz=312,slow=75,SNR=48								
H11N3	**WAKE ISLAND Hy**	**28.21**	**119**	T		T		00 19 55.9	
	baz=312,slow=75,SNR=35								
H11S1	**WAKE ISLAND Hy**	**28.88**	**121**	T		T		00 20 42.7	
	baz=314,slow=76,SNR=152								
H11S3	**WAKE ISLAND Hy**	**28.88**	**121**	T		T		00 20 42.5	
	baz=314,slow=76,SNR=104								
H11S2	**WAKE ISLAND Hy**	**28.89**	**121**	T		T		00 20 48.7	
	baz=314,slow=76,SNR=84								
ZALV	**Zalesovo Beam**	**42.05**	**313**	P			**P**	**23 52 34.4**	**+1.0**
	comp=E,0.8nm,0.4s,baz=98,slow=11,SNR=6.3								
	comp=E,0.8nm,0.4s								
MKAR	**Makanchi Array**	**44.11**	**303**	P			**P**	**23 52 51.6**	**+1.4**
	comp=E,0.9nm,0.7s,baz=87,slow=10.0,SNR=7.6								
	comp=E,0.9nm,0.7s								
KURBB	**Kurchatov Arra**	**46.07**	**308**	P			**P**	**23 53 05.8**	**+0.2**
	comp=E,0.9nm,0.4s,baz=85,slow=7.8,SNR=6.1								
	comp=E,0.9nm,0.4s								
ILAR	**Eielson Array**	**50.29**	**32**	P			**P**	**23 53 38.3**	**+0.3**
	comp=E,0.1nm,0.5s,baz=216,slow=7.1,SNR=4.0								
	comp=E,0.1nm,0.5s								
WRA	**Warramunga Arr**	**56.34**	**187**	P			**P**	**23 54 22.3**	**-0.7**
	comp=E,0.2nm,0.4s,baz=3.7,slow=7.2,SNR=5.0								
	comp=E,0.2nm,0.4s								
NOA	**NORSAR Array B**	**74.63**	**337**	P			**P**	**23 56 19.4**	**-1.4**
	comp=E,0.3nm,0.7s,baz=45,slow=6.7,SNR=1.4								
	comp=E,0.3nm,0.7s								
H03N2	**Juan Fernandez**	**147.38**	**97**	T		T		02 49 00.7	
	baz=291,slow=76,SNR=26								
H03N3	**Juan Fernandez**	**147.40**	**97**	T		T		02 49 02.7	
	baz=291,slow=76,SNR=17								
H03N1	**Juan Fernandez**	**147.40**	**97**	T		T		02 49 17.9	
	baz=291,slow=76,SNR=16								

IDC 23 00:00:01.6±9.0,15°.08S×171°.77W,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=398.0km s-min=37.4km az=138.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**51.44**	**256**	P			P	00 09 09.1	0.0
	0.3nm,0.4s,baz=92,slow=7.3,SNR=6.9								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**51.70**	**252**	P			P	00 09 10.8	-0.2
	2.1nm,0.6s,baz=88,slow=8.3,SNR=34								
	2.1nm,0.6s								
ILAR	**Eielson Array**	**81.84**	**10**	P			P	00 12 22.2	0.0
	0.2nm,0.7s,baz=198,slow=4.7,SNR=4.8								
	0.2nm,0.7s								

*IDC **23** 00:07:52.5±1.7,16°.14S×173°.17W,h0km,mb3.9/6, mbtmp3.9/6,MS3.3/4,Error ellipse: s-maj=101.0km s-min=21.8km az=146.0*

ISC 23 00:07:56.5±1.5,16°.0S±0°.5×173°.2W±0°.4,h26km,n15, σ0s51/10,mb4.0/6,MS3.3/3,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**13.76**	**114**	LR			LR	00 15 01.5	
	comp=Z,67nm,20.0s,baz=332,slow=31								
DZM	**Mont Dzumac**	**20.11**	**250**	LR			LR	00 19 08.5	
	comp=Z,116nm,18.5s,baz=145,slow=34								
PPT	**Papeete**	**22.70**	**97**	LR			LR	00 20 13.7	
	comp=Z,32nm,18.5s,baz=232,slow=33								
PPT2	**Papeete2**	**22.70**	**97**	*e*LR			LR	00 18 12.6	
	59nm,23.5s								
TBI	**Tubuai**	**23.52**	**112**	*e*LR			LR	00 18 39.9	
	714nm,41.5s								
HNR	**Honiara**	**26.95**	**281**	LR			LR	00 22 47.9	
	comp=Z,138nm,18.7s,baz=71,slow=33								
STKA	**Stephens Creek**	**43.85**	**241**	P			**P**	**00 16 01.0**	**+0.1**
	1.2nm,0.4s,baz=88,slow=12,SNR=6.9								
	1.2nm,0.4s								
WRA	**Warramunga Arr**	**49.85**	**257**	P			**P**	**00 16 47.3**	**-0.6**
	0.5nm,0.4s,baz=95,slow=6.5,SNR=16								
WRA				PcP			**PcP**	**00 18 09.3**	**+0.9**
	0.4nm,0.8s,baz=95,slow=2.9,SNR=1.8								
	0.5nm,0.4s								
ASAR	**Alice Springs**	**50.06**	**252**	P			**P**	**00 16 49.2**	**-0.3**
	2.5nm,0.6s,baz=89,slow=8.3,SNR=65								
	2.5nm,0.6s								
TXAR	**Lajitas Array**	**80.84**	**56**	P			**P**	**00 20 08.4**	**-0.2**
	0.1nm,0.5s,baz=241,slow=4.9,SNR=1.9								
	0.1nm,0.5s								
PDAR	**Pinedale Array**	**82.64**	**42**	P			**P**	**00 20 17.9**	**0.0**
	0.4nm,0.7s,baz=189,slow=3.1,SNR=4.6								
	0.4nm,0.7s								
ILAR	**Eielson Array**	**83.04**	**11**	P			**P**	**00 20 19.1**	**-0.1**
	1.8nm,0.6s,baz=228,slow=6.0,SNR=12								
	1.8nm,0.6s								
BRTR	**Keskin Array B**	**146.75**	**321**	PKPbc			**PKPab**	**00 27 38.4**	**+0.5**
	2.0nm,0.7s,baz=82,slow=2.2,SNR=8.3								
GERES	**GERESS Array B**	**146.79**	**352**	PKPbc			**PKPbc**	**00 27 36.7**	**+0.3**
	0.5nm,0.5s,baz=6.9,slow=4.2,SNR=3.0								
MMAI	**Mount Meron Ar**	**149.08**	**308**	PKPbc			**PKiKP**	**00 27 43.9**	**-0.4**
	0.2nm,0.3s,baz=90,slow=4.3,SNR=1.8								

*NEIC **23** 00:12:15.6,46°.16N×149°.45E,h22km*

*NEIC **23** 00:12:15.6,46°.06N×149°.89E,h22km,Moment Tensor Solution. Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}2.70; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-1.97; $M_{r\theta}$-0.41; $M_{\theta\phi}$-1.83; $M_{\phi r}$0.06; Fault plane solution: $M_0$3.06000×10^{16} NP1:ϕ_s26.13000°, δ43.98000°,λ76.28000°. NP2:ϕ_s224.87000°,δ47.58000°, λ102.89000°. Principal axes: T 2.7675, Plg80.0000°, Azm205.0000°; N 0.5249, Plg9.0000°, Azm36.0000°; P -3.2923, Plg2.0000°, Azm306.0000°;*

*NEIC **23** 00:12:16.2±1.5,46°.18N±0°.07×149°.5E±0°.1,h11km±2km, mb5.2/647,Mww4.9/11 Error ellipse: s-maj=11.8km s-min=8.5km az=137.0*

*SKHL **23** 00:12:17.7±0.6,46°.20N×149°.70E,h42km±2km,mb5.5/10, mbv5.5/3,ms4.8/5,msh5.2/3*

*IDC **23** 00:12:17.4±2.2,46°.29N×149°.48E,h20km±13km,mb4.6/28, mbtmp4.8/34,ML4.4/7,MS4.0/68,Error ellipse: s-maj=11.2km s-min=10.2km az=138.0*

*BJI **23** 00:12:17.7,46°.16N×150°.05E,h58km,mB5.1/36,mb5.0/70, Ms4.7/62,Ms7 4.5/60*

*MOS **23** 00:12:18.3±0.9,46°.19N×149°.39E,h42km,mb5.3/73, MS4.1/13,Error ellipse: s-maj=5.9km s-min=4.7km az=97.8*

*GCMT **23** 00:12:20.2±0.2,46°.26N±0°.01×149°.59E±0°.02,h17km, MW5.0/104,Moment Tensor Solution. s45,c63; s104,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.21±.12; $M_{\theta\theta}$-0.66±.08; $M_{\phi\phi}$-1.55±.08; $M_{r\theta}$-2.45±.26; $M_{\theta\phi}$-2.18±.06; $M_{\phi r}$-0.93±.19; Best double couple: $M_0$3.90500×10^{16} NP1:ϕ_s11.00000°,δ32.00000°, λ42.00000°. NP2:ϕ_s243.00000°,δ69.00000°,λ115.00000°. Principal axes: T 3.6320, Plg58.0000°, Azm187.0000°; N 0.5430, Plg23.0000°, Azm54.0000°; P -4.1780, Plg20.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 00:12:20.4±0.5,46°.19N±0°.03×149°.41E±0°.03,h42km±3km, h42km:pP-P,n1209,σ1s09/1105,mb5.1/400,MS4.2/85, 47C-20D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.44**	**229**	*c i*	PN		**Pn**	**00 12 41.5**	**-2.5**
KUR				*i*	S		**Sn**	**00 13 01.1**	**-0.6**
KUR					pmax	pmax			
	comp=E,6μm,2.4s								
KUR					pmax	pmax			
	comp=E,3μm,0.5s								
KUR					pmax	pmax			
	comp=N,965nm,0.3s								
KUR					pmax	pmax			
	comp=E,768nm,0.3s								
KUR					smax	smax			
	comp=N,36μm,2.0s								
KUR					smax	smax			
	comp=E,22μm,2.0s								
KUR					smax	smax			
	comp=N,10μm,0.7s								
KUR					smax	smax			
	comp=E,11μm,0.7s								
KUR	**Kuril'sk**	**1.44**	**229**	*i* P		AMB	**Pn**	**00 12 41.5**	**-2.5**
KUR						AMB		00 12 42.9	
	comp=E,6μm,2.4s								
KUR						AMB	AMB	00 12 43.9	
	comp=E,3μm,0.5s								
KUR				*i*	S		**Sn**	**00 13 01.1**	**-0.6**
KUR						A	A	00 13 03.5	
	comp=E,36μm,2.0s								
KUR						A	A	00 13 03.5	
	comp=E,22μm,2.0s								
KUR						A	A	00 13 04.7	
	comp=E,10μm,0.7s								
KUR						A	A	00 13 04.7	
	comp=E,11μm,0.7s								
YUK	**Yuzh-Kuril'sk**	**3.31**	**231**	*e*PN			**Pn**	**00 13 12.8**	**+3.2**
YUK					pmax	pmax			
	comp=E,2μm,0.5s								
YUK					pmax	pmax			
	comp=N,253nm,0.3s								
YUK					pmax	pmax			
	comp=E,293nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**3.31**	**231**	*e*P			**Pn**	**00 13 11.0**	**+1.4**
YUK						AMB	AMB	00 13 14.5	
	comp=E,2μm,0.5s								
YUK				*e*S			**Sn**	**00 13 50.7**	**+3.0**
YUK						A	A	00 13 59.8	
	comp=E,2μm,0.5s								
YUK						A	A	00 13 59.8	
	comp=E,3μm,0.5s								
YUK						AMS	AMS	00 14 38.2	
	comp=E,16μm,13.0s								
YUK						AMS	AMS	00 14 38.2	
	comp=E,14μm,13.0s								
RUSJ	**Misakicho**	**3.61**	**236**	*e*PN			**Pn**	**00 13 15.9**	**+2.2**
GLVR	**Golovnino**	**3.69**	**230**	*e*PN			**Pn**	**00 13 18.7**	**+3.8**
GLVR						pmax	pmax		
	comp=Z,660nm,0.7s								
GLVR						pmax	pmax		
	comp=N,367nm,0.4s								
GLVR						pmax	pmax		
	comp=E,374nm,0.5s								
GLVR	**Golovnino**	**3.69**	**230**	*eP*			**Pn**	**00 13 18.7**	**+3.8**
GLVR						AMB	AMB	00 13 24.2	
	comp=E,660nm,0.7s								
GLVR				*e*S			Sn	00 14 07.5	+10
GLVR						A	A	00 14 13.6	
	comp=E,920nm,0.3s								
GLVR						A	A	00 14 13.6	
	comp=E,2μm,0.3s								
NMR	**Nemuro--Hokkai**	**3.85**	**224**	*e*PN			**Pn**	**00 13 16.2**	**-0.9**
NMR				*i*	S		**Sn**	**00 14 04.1**	**+3.1**
NMR	**Nemuro--Hokkai**	**3.85**	**224**	*eP*			**Pn**	**00 13 16.2**	**-0.9**
NMR				*e*S			**Sn**	**00 14 03.2**	**+2.2**
AKK	**Akkeshi**	**4.55**	**227**	*eP*			**Pn**	**00 13 26.6**	**-0.1**
YSS	**Yuzhno-Sakhali**	**4.65**	**282**				**Pn**	**00 13 28.3**	**+0.2**
YSS	**Yuzhno-Sakhali**	**4.65**	**282**	P			**Pn**	**00 13 29.1**	**+1.1**
YSS	**Yuzhno-Sakhali**	**4.65**	**282**	*k i*	PN		**Pn**	**00 13 28.5**	**+0.5**
YSS				*e*S			**Sn**	**00 14 20.7**	**0.0**
YSS					pmax	pmax			
	comp=Z,300nm,4.8s								
YSS					pmax	pmax			
	comp=N,300nm,3.0s								
YSS					pmax	pmax			
	comp=E,300nm,3.5s								
YSS					pmax	pmax			
	comp=Z,350nm,0.9s								
YSS					pmax	pmax			
	comp=N,180nm,0.6s								
YSS					pmax	pmax			
	comp=E,290nm,1.0s								
YSS					smax	smax			
	comp=N,320nm,1.1s								
YSS					smax	smax			
	comp=E,560nm,0.7s								
YSS					smax	smax			
	comp=N,900nm,2.9s								
YSS					MLR	MLR			
	comp=Z,2μm,14.0s								
YSS					MLR	MLR			
	comp=N,4μm,18.0s								
YSS					MLR	MLR			
	comp=E,2μm,14.0s								
YSS	**Yuzhno-Sakhali**	**4.65**	**282**	*i* P			**Pn**	**00 13 28.7**	**+0.7**
YSS						AMB	AMB	00 13 30.5	
	comp=E,300nm,4.8s								
YSS						AMB	AMB	00 13 39.8	
	comp=E,350nm,0.9s								
YSS					*e*S		**Sn**	**00 14 23.1**	**+2.4**
YSS						A	A	00 14 25.2	
	comp=E,900nm,2.9s								
YSS						A	A	00 14 25.2	
	comp=E,320nm,2.9s								
YSS						A	A	00 14 25.2	
	comp=E,320nm,0.9s								
YSS						A	A	00 14 25.2	
	comp=E,560nm,0.9s								
YSS						AMS	AMS	00 15 37.0	
	comp=E,4μm,16.0s								
YSS						AMS	AMS	00 15 37.0	
	comp=E,2μm,16.0s								
JKA	**Kamikawa-asahi**	**5.24**	**249**				**Pn**	**00 13 35.3**	**-0.9**
JKA	**Kamikawa-asahi**	**5.24**	**249**	*eP*			**Pn**	**00 13 37.7**	**+1.5**
ASAJ	**Asahikawa**	**5.25**	**249**	Pn			**Pn**	**00 13 37.6**	**+1.4**
	comp=E,2.3nm,0.3s,baz=120,slow=2.7,SNR=8.7								
ASAJ				Sn			**Sn**	**00 14 34.2**	**-1.1**
	comp=E,9.1nm,0.3s,baz=311,slow=2.7,SNR=5.5								
UGL	**Uglegorsk**	**5.74**	**303**	*e*PN			**Pn**	**00 13 44.4**	**+1.4**
UGL						pmax	pmax		
	comp=Z,667nm,0.5s								
UGL						MLR	MLR		
	comp=N,3μm,5.3s								
UGL						MLR	MLR		
	comp=E,2μm,7.0s								
UGL	**Uglegorsk**	**5.74**	**303**	*eP*			**Pn**	**00 13 44.4**	**+1.4**
UGL						AMB	AMB	00 13 45.3	
	comp=E,670nm,0.5s								
UGL					*e*S		**Sn**	**00 14 48.0**	**+0.5**
UGL						A	A	00 14 51.3	
	comp=E,1μm,2.8s								
UGL						A	A	00 14 51.3	
	comp=E,2μm,2.8s								
UGL						AMS	AMS	00 17 17.0	
	comp=E,3μm,7.0s								
UGL						AMS	AMS	00 17 17.0	
	comp=E,2μm,7.0s								
JEM	**Erimo**	**6.14**	**229**	P			**Pn**	**00 13 50.2**	**+1.7**
ERM	**Erimo**	**6.14**	**229**				**Pn**	**00 13 47.1**	**-1.4**
ERM	**Erimo**	**6.14**	**229**	P			**Pn**	**00 13 50.0**	**+1.5**
ERM	**Erimo**	**6.14**	**229**	PN			**Pn**	**00 13 47.1**	**-1.4**
SKR	**Severo-Kuril's**	**6.33**	**42**	*e*PN			Pn	00 13 57.2	+6.1
SKR				*e*S			Sn	00 15 14.8	+13
SKR					pmax	pmax			
	comp=Z,1μm,4.4s								
SKR					pmax	pmax			
	comp=Z,224nm,0.7s								
SKR					smax	smax			
	comp=N,121nm,0.8s								
SKR					smax	smax			
	comp=E,87nm,0.6s								
SKR					MLR	MLR			
	comp=Z,4μm,17.0s								
SKR	**Severo-Kuril's**	**6.33**	**42**	*eP*			Pn	00 13 45.4	-5.7
SKR						AMB	AMB	00 13 59.5	
	comp=Z,1μm,4.4s								
SKR						AMB	AMB	00 14 00.2	
	comp=Z,220nm,0.6s								
SKR				

comp=E,2μm,13.0s
PEA0B Petropavlovsk- 8.76 35 Pn 00 14 25.1 +0.7
PEA0B Petropavlovsk- 8.76 35 *i* PN **Pn 00 14 25.8 +1.4**
PETK Petropavlovsk- 8.76 35 Pn **Pn 00 14 24.6 +0.2**
comp=E,1.0nm,0.3s,baz=210,slow=8.6,SNR=11
PETK LR LR 00 17 55.2
comp=E,2μm,18.1s,baz=208,slow=39
PETK Petropavlovsk- 8.76 35 Pn 00 14 26.2 +1.8
PETK Petropavlovsk- 8.76 35 PN **Pn 00 14 26.2 +1.8**
TEY Ternei 9.05 267 *e*PN **Pn 00 14 32.0 +3.6**
TEY 00 16 17.2
TEY Ternei 9.05 267 *e*P **Pn 00 14 32.0 +3.6**
PET Petropavlovsk 9.09 38 Pn **Pn 00 14 30.4 +1.5**
PET Petropavlovsk 9.09 38 *e*PN Pn 00 14 36.2 +7.3
PET *e*S **Sn 00 16 18.2 +8.4**
PET MLR MLR
comp=Z,1μm,13.0s
PET MLR MLR
comp=Z,2μm,12.0s
GRNR Gornyy 9.76 303 ⇑ *i* PN **Pn 00 14 39.1 +1.0**
GRNR pmax pmax
comp=E,10.0nm,1.1s
GRNR MLR MLR
comp=E,580nm,15.0s
GRNR MLR MLR
comp=N,940nm,14.0s
GRNR MLR MLR
comp=Z,760nm,14.0s
GRNR Gornyy 9.76 303 *e*P **Pn 00 14 39.1 +1.0**
JMM Marumori 10.49 221 Pn 00 14 44.7 -3.5
JSD Sado 11.61 229 Pn 00 15 01.2 -2.2
JSD Sado 11.61 229 P **Pn 00 15 02.9 -0.5**
USRK Uesuriysk Ar. 12.45 267 Pn **Pn 00 15 18.7 +3.9**
comp=Z,0.7nm,0.3s,baz=80,slow=13,SNR=32
MJB9 Matsu-Tunnel 12.78 225 Pn 00 15 17.6 -1.9
MAJO Matsushiro 12.78 225 Pn 00 15 17.1 -2.3
MAJO Matsushiro 12.78 225 P **Pn 00 15 18.4 -1.1**
MAJO Matsushiro 12.78 225 *i* PN **Pn 00 15 17.6 -1.9**
MJAR Matsushiro Arr 12.78 225 Pn **Pn 00 15 17.4 -2.1**
comp=Z,0.4nm,0.3s,baz=29,slow=13,SNR=84
MJAR LR LR 00 21 04.1
comp=Z,2μm,18.1s,baz=34,slow=41
comp=Z,45nm,0.8s
MJAR Matsushiro Arr 12.78 225 PN **Pn 00 15 17.5 -2.0**
MA2 Magadan 13.43 3 Pn **Pn 00 15 24.2 -3.9**
comp=Z,2.2nm,0.3s,baz=179,slow=11,SNR=6.3
MA2 LR LR 00 20 51.4
comp=Z,495nm,18.4s,baz=181,slow=39
PSTR Posyet 13.76 262 *i* P **Pn 00 15 36.1 +3.4**
JGF Kuroka 13.95 225 Pn 00 15 32.9 -2.5
JGF Kuroka 13.95 225 P **Pn 00 15 34.0 -1.4**
MDJ Mudanjiang 14.01 271 P **Pn 00 15 38.1 +1.9**
INU Inuyama 14.31 225 Pn 00 15 38.2 -2.1
INU Inuyama 14.31 225 P **Pn 00 15 38.6 -1.7**
JHJ Hachijo jima 2 15.00 213 Pn **Pn 00 15 48.2 -1.1**
comp=Z,10.0nm,0.3s,baz=58,slow=9.3,SNR=3.8
JHJ LR LR 00 20 25.0
comp=Z,485nm,21.8s,baz=308,slow=32
comp=Z,222nm,0.7s
HEH HeiHe 15.20 293 *e*P **Pn 00 15 54.3 +2.4**
HEH pP **pP 00 16 02.8 -2.7**
HEH pmax pmax
comp=Z,61nm,1.2s
HEH pmax pmax
comp=Z,530nm,3.9s
HEH LR LR
comp=Z,500nm,10.8s
HEH LR LR
comp=Z,880nm,11.0s
HEH LR LR
comp=Z,980nm,13.8s
BNX BinXian 15.30 276 ⇑ P **P 00 15 56.6 -0.9**
BNX S **S 00 18 51.8 -4.8**
BNX pmax pmax
comp=Z,47nm,1.0s
BNX pmax pmax
comp=Z,260nm,5.4s
BNX LR LR
comp=Z,1μm,14.6s
BNX LR LR
comp=Z,880nm,14.1s
BNX LR LR
comp=Z,1μm,14.1s
ZEA Zeya 16.09 306 *e*P **Pn 00 16 03.7 +0.4**
ZEA pmax pmax
comp=E,100nm,3.4s
ZEA pmax pmax
comp=Z,200nm,3.7s
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,400nm,13.0s
ZEA MLR MLR
comp=Z,500nm,12.0s
ZEA Zeya 16.09 306 *e*P **Pn 00 16 03.7 +0.4**
SEY Seymchan 16.86 5 PN **Pn 00 16 09.7 -3.3**
comp=Z,0.4nm,0.3s,baz=176,slow=9.7,SNR=10
comp=Z,4.9nm,1.1s
SEY Seymchan 16.86 5 *ce*P **Pn 00 16 13.1 +0.1**
SEY pmax pmax
comp=Z,24nm,1.3s
CN2 Changchun 17.10 271 *e*P **P 00 16 17.1 -0.3**
CN2 *e*S **Sn 00 19 24.8 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=Z,700nm,12.0s
CN2 LR LR
comp=Z,800nm,12.0s
CN2 LR LR
comp=Z,800nm,13.0s
JMN Monobe 17.18 229 Pn 00 16 14.4 -2.9
JMN Monobe 17.18 229 P **Pn 00 16 17.3 0.0**
SHEM Shemya Is, Ala 17.28 59 LR LR 00 22 20.5
comp=Z,257nm,19.8s,baz=266,slow=35
KSRS Korea Array 18.20 249 P **P 00 16 29.1 -0.4**
comp=Z,1.2nm,0.3s,baz=56,slow=12,SNR=37
KSRS PcP **PcP 00 21 02.0 +1.2**
comp=Z,6.5nm,0.8s,baz=63,slow=0.3,SNR=14
comp=Z,36nm,0.8s
KS19 Wonju Array Si 18.20 249 P **P 00 16 29.0 -0.6**
KSAR Wonju Array Be 18.23 249 P **P 00 16 29.0 -0.9**
KSAR Wonju Array Be 18.23 249 P **P 00 16 29.0 -0.9**
INCN Inchon 19.02 251 P **Pn 00 16 39.6 -0.1**
INCN IAmb IAmb 00 16 42.0
comp=Z,96nm,0.8s
INCN Inchon 19.02 251 P **Pn 00 16 41.0 +1.3**
INCN Inchon 19.02 251 P **Pn 00 16 39.6 -0.1**
INCN pmax pmax
comp=Z,96nm,0.8s
SNY Shenyang 19.05 266 ⇓ P **Pn 00 16 40.0 +0.1**
SNY S **S 00 20 13.8 +1.1**
SNY pmax pmax
comp=Z,19nm,0.8s
SNY pmax pmax
comp=Z,190nm,5.5s
SNY LR LR
comp=Z,720nm,12.6s
SNY LR LR
comp=Z,1μm,12.2s
SNY LR LR
comp=Z,2μm,13.3s
TJN Taejon 19.20 247 P **P 00 16 40.8 +0.3**
TJN Taejon 19.20 247 P **Pn 00 16 42.3 +0.6**
TJN Taejon 19.20 247 P **P 00 16 40.8 +0.3**
TJN pmax pmax
comp=Z,242nm,0.8s
JNU Nakatsue 19.28 234 P **P 00 16 41.7 +0.2**
comp=Z,2.3nm,0.3s,baz=47,slow=9.5,SNR=36
JNU LR LR 00 24 05.5
comp=Z,498nm,20.5s,baz=36,slow=36
comp=Z,91nm,0.8s
JNU Nakatsue 19.28 234 P **P 00 16 41.6 +0.2**
JNU IAmb IAmb 00 16 45.9
comp=Z,122nm,0.9s
JNU Nakatsue 19.28 234 P **Pn 00 16 43.5 +0.7**
YAK Yakutsk 19.50 332 P **P 00 16 43.6 0.0**
comp=Z,6.5nm,0.3s,baz=138,slow=12,SNR=27
YAK LR LR 00 24 35.7
comp=Z,507nm,19.3s,baz=130,slow=38
comp=Z,112nm,0.7s
YAK Yakutsk 19.50 332 P **Pn 00 16 44.6 -0.4**
YAK IAmb IAmb 00 16 46.5
comp=Z,129nm,0.8s
YAK Yakutsk 19.50 332 *e*P **Pn 00 16 44.7 -0.4**
YAK pmax pmax
comp=Z,35nm,1.0s
YAK pmax pmax
comp=E,23nm,0.9s
YAK pmax pmax
comp=N,28nm,1.0s
YAK pmax pmax
comp=Z,104nm,0.6s
YAK pmax pmax
comp=N,159nm,1.7s
YAK pmax pmax
comp=E,38nm,0.8s
YAK MLR MLR
comp=Z,610nm,16.0s
YAK MLR MLR
comp=N,392nm,10.0s
YAK MLR MLR
comp=E,270nm,11.0s
YAK Yakutsk 19.50 332 *e*P **Pn 00 16 44.7 -0.4**
JCJ Chichijima 19.91 199 P P 00 16 38.4 -10
comp=E,115nm,0.6s,baz=66,slow=20,SNR=7.7
JCJ LR LR 00 23 08.1
comp=E,199nm,21.7s,baz=106,slow=32
HILR Hailar Array B 20.11 290 P **P 00 16 51.3 +0.8**
comp=E,8.4nm,0.5s,baz=97,slow=12,SNR=15
HILR PcP **PcP 00 21 04.6 +0.5**
comp=E,6.5nm,0.6s,baz=107,slow=2.7,SNR=6.4
comp=E,8.4nm,0.5s
HIA Hailar 20.13 290 P Pn 00 16 52.1 -0.7
DL2 Dalian 21.65 260 P **P 00 17 06.5 -0.5**
DL2 S **S 00 21 05.6 +1.2**
DL2 pmax pmax
comp=E,63nm,1.2s
DL2 pmax pmax
comp=E,150nm,8.0s
DL2 LR LR
comp=E,710nm,12.2s
DL2 LR LR
comp=E,640nm,12.5s
DL2 LR LR
comp=E,910nm,15.3s
XLT XiLinHaoTe 23.56 277 *e*P **P 00 17 27.5 +0.5**
XLT S **S 00 21 38.5 +0.4**
XLT PcS **PcS 00 24 53.0 +2.5**
XLT pmax pmax
comp=E,55nm,1.1s
XLT pmax pmax
comp=E,170nm,7.5s
XLT LR LR
comp=E,750nm,12.5s
XLT LR LR
comp=E,760nm,13.1s
BJI Beijing 24.90 268 P **P 00 17 40.8 +1.6**
BJI S **S 00 22 00.6 +1.1**
BJI pmax pmax
comp=E,11nm,1.1s
BJI LR LR
comp=E,290nm,14.0s
BJI LR LR
comp=E,520nm,13.8s
BJI LR LR
comp=E,740nm,14.1s
BJT Baijiatuau 24.92 268 P **P 00 17 41.4 +2.1**
JOW Kunigami 25.59 228 P **P 00 17 45.2 -0.3**
JOW Kunigami 25.59 228 P **P 00 17 46.7 +1.2**
TIA Tai'an 26.10 259 P **P 00 17 51.8 +1.7**
TIA pmax pmax
comp=E,26nm,0.6s
TIA LR LR
comp=E,490nm,13.7s
TIA LR LR
comp=E,740nm,14.4s
TIA LR LR
comp=E,720nm,14.4s
SPIA Saint Paul Isl 26.92 51 P **P 00 17 56.4 -0.9**
baz=263
HNS HongShan 27.14 264 ⇑ P **P 00 18 00.8 +1.3**
HNS PcP **PcP 00 21 20.5 +1.4**
HNS S **S 00 22 31.9 -3.0**
HNS pmax pmax
comp=E,30nm,1.1s
HNS LR LR
comp=E,810nm,13.5s
HNS LR LR
comp=E,400nm,13.5s
HNS LR LR
comp=E,860nm,13.0s
TIXI Tiksi 27.33 346 LR LR 00 28 21.2
comp=E,226nm,20.8s,baz=184,slow=35
TIXI Tiksi 27.33 346 P **P 00 17 59.6 -1.3**
TIXI Tiksi 27.33 346 *ce*P **P 00 18 00.5 -0.3**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
TIXI Tiksi 27.33 346 *e*P **P 00 18 00.5 -0.3**
NJ2 Nanjing 27.39 250 *e*P **P 00 18 02.3 +0.6**
NJ2 pmax pmax
comp=Z,31nm,1.0s
NJ2 pmax pmax
comp=Z,760nm,3.9s
NJ2 LR LR
comp=Z,1μm,11.9s
NJ2 LR LR
comp=Z,1μm,11.5s
NJ2 LR LR
comp=Z,2μm,18.1s
NIKH Nikolski High 27.58 60 P **P 00 18 02.2 -1.1**
baz=273
HHC Hu-ho-hao-te 27.77 273 *e*P **P 00 18 06.1 +0.9**
HHC S **S 00 22 45.0 0.0**
HHC pmax pmax
comp=Z,13nm,0.5s
HHC pmax pmax
comp=Z,200nm,3.9s
HHC LR LR
comp=Z,1μm,10.2s
HHC LR LR
comp=Z,660nm,10.8s
HHC LR LR
comp=Z,570nm,10.0s
GAMB Gambell 27.79 37 P **P 00 18 03.9 -1.1**
baz=249
ULN Ulaanbaatar 28.66 289 P **P 00 18 13.8 +0.6**
ULN Ulaanbaatar 28.66 289 *ce*P **P 00 18 12.9 -0.2**
ULN pmax pmax
comp=Z,20nm,1.0s
ULN Ulaanbaatar 28.66 289 *e*P **P 00 18 12.9 -0.2**
BTO Baotou 28.94 273 *e*P **P 00 18 15.8 +0.2**
BTO S **S 00 23 04.8 +1.4**
BTO pmax pmax
comp=Z,19nm,0.5s
BTO pmax pmax
comp=Z,290nm,5.0s
BTO LR LR
comp=Z,2μm,14.5s
BTO LR LR
comp=Z,1μm,15.7s
BTO LR LR
comp=Z,930nm,15.0s
UNV Unalaska Valle 28.94 58 P **P 00 18 14.1 -1.2**
baz=273
SONM Songino Array 29.10 289 P **P 00 18 16.8 -0.2**
comp=Z,7.3nm,0.9s,baz=77,slow=10.0,SNR=26
SONM PcP **PcP 00 21 24.3 +0.3**
comp=Z,7.7nm,0.9s,baz=96,slow=2.0,SNR=11
SONM ScP **ScP 00 25 05.0 +3.0**
comp=Z,0.3nm,0.8s,baz=90,slow=2.9,SNR=3.6
SONM LR LR 00 32 24.5
comp=Z,298nm,19.1s,baz=49,slow=42
comp=Z,7.3nm,0.9s
M11K Mekoryuk 29.44 45 P **P 00 18 18.6 -1.1**
baz=261
TNA Tin City 29.93 34 P **P 00 18 22.9 -1.0**
baz=251
H11N2 WAKE ISLAND Hy 30.06 146 T T 00 49 32.9
baz=337,slow=76,SNR=4885
H11N1 WAKE ISLAND Hy 30.07 146 T T 00 49 34.0
baz=337,slow=76,SNR=4187
H11N3 WAKE ISLAND Hy 30.07 146 T T 00 49 34.3
baz=337,slow=76,SNR=4674
LYN LuoYang 30.19 261 P **P 00 18 28.4 +1.8**
LYN sS sS 00 23 48.0 +7.7
LYN pmax pmax
comp=Z,68nm,0.6s
LYN pmax pmax
comp=Z,350nm,3.8s
LYN LR LR
comp=Z,660nm,10.6s
LYN LR LR
comp=Z,870nm,17.7s
LYN LR LR
comp=Z,810nm,17.8s
K13K Kusilvak Mount 30.43 42 P **P 00 18 27.7 -0.7**
baz=260
F14K Arctic Creek 30.53 35 P **P 00 18 28.6 -0.7**
baz=253
ANM Nome 30.67 37 P **P 00 18 29.9 -0.7**
baz=255
J14K Nanvaranak Lak 31.07 41 P **P 00 18 33.5 -0.6**
baz=260
H11S1 WAKE ISLAND Hy 31.09 147 T T 00 50 51.4
baz=337,slow=76,SNR=3552
H11S3 WAKE ISLAND Hy 31.10 147 T T 00 50 52.0
baz=337,slow=76,SNR=1809
H11S2 WAKE ISLAND Hy 31.11 147 T T 00 50 52.8
baz=337,slow=76,SNR=2794
L14K Kuka Creek 31.27 44 P **P 00 18 35.4 -0.5**
baz=263
WHN Wuhan 31.32 252 P **P 00 18 37.3 +0.8**
WHN pmax pmax
comp=Z,130nm,0.9s
G15K Niukluk 31.33 36 P **P 00 18 35.8 -0.6**
baz=256
M14K Bethel 31.56 45 P **P 00 18 36.7 -1.6**
baz=265
N14K Kuskokwak Cree 31.64 46 P **P 00 18 37.6 -1.4**
baz=266
O14K Tigyukauivet M 31.82 48 P **P 00 18 39.4 -1.2**
baz=268
C16K Lisburne Hills 31.82 30 P **P 00 18 40.1 -0.5**
baz=249
K15K Wolf Creek Mou 31.93 42 P **P 00 18 40.4 -1.2**
baz=263
H16K Elim 32.00 37 P **P 00 18 41.6 -0.6**
baz=258
G16K Koyuk River 32.12 36 P **P 00 18 42.9 -0.4**
baz=257
M15K Kasigluk River 32.18 45 P **P 00 18 43.5 -0.3**
baz=266
SDPT Sand Point 32.34 55 P **P 00 18 44.8 -0.5**
baz=275
D17K Noatak River 32.44 32 P **P 00 18 45.5 -0.6**
baz=253
N15K Kwethluk River 32.45 46 P **P 00 18 45.6 -0.6**
baz=268
J16K Anvik River 32.48 40 P **P 00 18 45.2 -1.4**
baz=262
I17K Unalakleet 32.53 39 P **P 00 18 46.2 -0.6**
baz=261
O15K Ungalikthiuk R 32.55 48 P **P 00 18 46.6 -0.5**
baz=269
TPUB Ta-pu 32.57 235 P **P 00 18 47.4 -0.3**
TPUB Ta-pu 32.57 235 P **P 00 18 48.8 +1.1**
RDOG Red Dog Mine 32.61 31 P **P 00 18 47.3 -0.3**
baz=252
C17K DeLong Mountai 32.64 30 P **P 00 18 47.6 -0.3**
baz=251
TWGBT Beinan 32.70 234 P **P 00 18 49.5 +0.8**
TWG Pinlang 32.70 234 P **P 00 18 47.3 -1.5**
TWG IAmb IAmb 00 18 57.9
comp=Z,27nm,1.0s
GUMO Guam 32.72 188 LR LR 00 32 56.7
comp=Z,206nm,19.0s,baz=19,slow=38
E17K Hotham Inlet 32.73 33 P **P 00 18 48.6 0.0**
baz=255
F17K Baldwin Pennin 32.80 34 P **P 00 18 49.0 -0.1**
baz=257
G17K Kiwalik Mounta 32.84 36 P **P 00 18 49.2 -0.3**
baz=259
L16K Owhat River 32.84 43 P **P 00 18 49.1 -0.5**
baz=266
CHNA Chernabura Isl 32.90 56 P **P 00 18 48.8 -1.3**
baz=276
XAN Xi'an 32.91 263 P **P 00 18 51.5 +0.9**
XAN pmax pmax
comp=Z,74nm,0.9s
XAN LR LR
comp=Z,920nm,15.8s
XAN LR LR
comp=Z,800nm,15.1s
XAN LR LR
comp=Z,1μm,13.7s
KNMB Chin-men Tao 32.99 240 P **P 00 18 51.1 -0.2**
H17K Granite Mounta 33.04 37 P **P 00 18 50.5 -0.8**
baz=260
M16K Timber Creek 33.04 44 P **P 00 18 51.4 -0.1**
baz=267
N16K Nishlik Lake 33.12 45 P **P 00 18 51.9 -0.2**
baz=268
J17K VARM Dome 33.18 40 P **P 00 18 52.2 -0.4**
baz=263
E18K Tukpahlearik C 33.28 33 P **P 00 18 52.8 -0.6**
baz=256
C18K Utukok River 33.39 30 IAmb IAmb 00 18 56.1
comp=Z,41nm,1.2s
C18K Utukok River 33.39 30 P **P 00 18 54.1 -0.4**
baz=253
B18K Kokolik River 33.40 29 P **P 00 18 54.3 -0.1**
baz=252
L17K Donlin 33.42 42 P **P 00 18 54.8 +0.1**
baz=266
O16K Kokwok River B 33.44 47 P **P 00 18 54.7 -0.2**
baz=270
F18K Selawik 33.46 34 P **P 00 18 54.9 -0.1**
baz=258
K17K Iditarod 33.47 41 P **P 00 18 55.3 +0.2**
baz=265
P16K Nushagak River 33.50 48 P **P 00 18 55.4 0.0**
baz=271
G18K Tagagawik 33.72 36 P **P 00 18 56.1 -1.2**
baz=260
H18K Honhosa River 33.72 37 P **P 00 18 56.7 -0.6**
baz=262
M17K Holitna River 33.80 44 P **P 00 18 57.5 -0.4**
baz=268
N17K Nushagak Hills 33.90 45 P **P 00 18 57.6 -1.2**
baz=270
A19K Wainwright 33.91 28 P **P 00 18 58.3 -0.5**
baz=251
O17K Koliganek Bris 33.95 47 P **P 00 18 59.3 0.0**
baz=271
C19K Lookout Ridge 34.08 30 IAmb IAmb 00 19 01.8
comp=Z,61nm,1.2s
C19K Lookout Ridge 34.08 30 P **P 00 19 00.2 -0.2**
baz=254,SNR=5.2
L18K Granite Mounta 34.18 42 P **P 00 19 01.5 +0.2**
baz=268
Q16K King Salmon 34.21 49 P **P 00 19 01.6 +0.1**
baz=273
F19K Shaleruckik Mo 34.23 34 P **P 00 19 01.9 +0.2**
baz=260
J18K Innoko River 34.24 40 P **P 00 19 01.9 0.0**
baz=266
GCSA Galena City Sc 34.29 38 P **P 00 19 02.6 +0.4**
baz=264
P17K Kvichak River 34.30 48 P **P 00 19 01.8 -0.4**
baz=272
G19K Purcell Mounta 34.39 35 P **P 00 19 03.0 -0.1**
baz=261
R17L Mt. Peulik Vol 34.43 51 P **P 00 19 02.4 -1.1**
baz=274
D19K Kuna River 34.45 31 IAmb IAmb 00 19 04.9
comp=Z,52nm,1.2s
D19K Kuna River 34.45 31 P **P 00 19 03.0 -0.5**
baz=257
N18K Kilae Creek 34.54 45 P **P 00 19 04.2 -0.3**
baz=270
E19K Redstone River 34.56 33 IAmb IAmb 00 19 05.5
comp=Z,29nm,1.2s
E19K Redstone River 34.56 33 P **P 00 19 03.7 -0.8**
baz=259
H19K Roundabout Mou 34.57 37 P **P 00 19 03.7 -0.8**
baz=263
M18K Stony River 34.57 44 P **P 00 19 03.6 -1.0**
baz=269
Q17K Contact Creek 34.63 49 P **P 00 19 04.1 -1.3**
baz=274
ENH Enshi 34.74 257 P **P 00 19 07.1 +0.6**
J19K Poorman 34.77 39 P **P 00 19 06.3 -0.1**
baz=266
O18K Koktuh Hills 34.90 47 P **P 00 19 07.2 -0.3**
baz=272
P18K Big Mountain, 34.91 47 P **P 00 19 07.2 -0.4**
baz=273
CHIR Chirikof Islan 35.03 54 P **P 00 19 08.0 -0.6**

baz=278
D20K Etivluk River 35.03 31 IAmb IAmb 00 19 10.0
comp=Z,51nm,0.9s
D20K Etivluk River 35.03 31 P P **00 19 08.2 -0.4**
baz=258,SNR=15
L19K White Mountain 35.04 42 P P **00 19 08.0 -0.8**
baz=269
F20K Avaraart Lake 35.07 34 P P **00 19 08.2 -0.6**
baz=261
Q18K Katmai Hardscr 35.07 49 P P **00 19 08.2 -0.9**
baz=274
E20K Nigu River 35.09 32 P P **00 19 09.1 -0.1**
baz=259,SNR=13
B20K Meade River 35.13 29 P P **00 19 09.3 -0.1**
baz=256
H20K Anotleneega Mo 35.21 37 P P **00 19 10.2 0.0**
baz=264
N19K Bonanza Creek 35.23 45 P P **00 19 10.3 -0.2**
baz=272
I20K Naaghedeneel 35.32 38 P P **00 19 09.9 -1.2**
baz=266
O19K Port Alsworth 35.33 46 P P **00 19 10.0 -1.2**
baz=272
LZH Lanzhou 35.34 270 *e*P P **00 19 13.0 +1.3**
LZH PP **PP** **00 20 35.5 +3.2**
LZH PcP **PcP** **00 21 43.0 +1.7**
LZH SS SS 00 27 13.8 -3.9
LZH pmax pmax
comp=Z,25nm,1.1s
LZH LR LR
comp=Z,700nm,16.7s
LZH LR LR
comp=Z,420nm,16.7s
LZH LR LR
comp=Z,750nm,14.8s
J20K Nowinta River 35.43 39 P P **00 19 11.4 -0.6**
baz=267
K20K Telida 35.43 40 P P **00 19 11.2 -0.8**
baz=268
R18K Karluk 35.46 50 P P **00 19 11.2 -1.1**
baz=276
L20K Farewell, AK 35.50 42 P P **00 19 12.0 -0.7**
baz=270
LZDM Lanzhou Array 35.51 270 P P **00 19 14.6 +1.3**
comp=Z,1.2nm,0.3s,baz=53,slow=7.6,SNR=7.0
LZDM PcP **PcP** **00 21 42.8 +0.8**
comp=Z,1.8nm,0.4s,baz=340,slow=1.7,SNR=3.5
comp=Z,1.2nm,0.3s
IMAR Indian Mountai 35.73 36 P P **00 19 13.9 -0.6**
SII Sitkinak Islan 35.73 52 P P **00 19 14.0 -0.7**
baz=278
Q19K Cape Douglas, 35.76 48 P P **00 19 14.7 -0.3**
baz=275
C21K Knifeblade Rid 35.77 30 P P **00 19 14.8 -0.1**
baz=259,SNR=6.3
M20K Styx River 35.85 43 P P **00 19 15.8 -0.1**
baz=271
G21K Allakaket 35.87 35 P P **00 19 15.7 -0.1**
baz=264
P19K Oil Pt 35.91 47 P P **00 19 15.8 -0.5**
baz=274
B21K Ikpikpuk River 35.91 30 P P **00 19 15.8 -0.2**
baz=259,SNR=22
E21K Killik River 35.94 32 P P **00 19 16.1 -0.2**
baz=261
F21K Alatna River 35.96 34 P P **00 19 16.4 -0.1**
baz=263
A22K Sinclair Lake 36.09 27 P P **00 19 16.9 -0.7**
baz=257
H21K Melozitna Rive 36.09 37 P P **00 19 17.1 -0.6**
baz=266
OHAK Old Harbor 36.13 51 P P **00 19 17.2 -0.9**
baz=277
O20K Slope Mountain 36.18 46 P P **00 19 17.8 -0.9**
baz=274
CHUM Lake Minchumin 36.22 40 P P **00 19 17.9 -0.9**
baz=269
PPLA Purkeypile 36.28 41 P P **00 19 18.7 -0.8**
baz=271
N20K Mount Spurr 36.32 44 P P **00 19 19.0 -0.8**
baz=273
SPCR Spurr Chakacha 36.32 44 P P **00 19 18.9 -0.9**
baz=273
SPU Mount Spurr 36.40 44 P P **00 19 20.0 -0.4**
I21K Tanana 36.41 37 P P **00 19 19.8 -0.6**
baz=268
KDAK Kodiak Island 36.43 50 LR LR 00 33 33.1
comp=Z,265nm,20.9s,baz=274,slow=35
KDAK Kodiak Island 36.43 50 P P **00 19 19.9 -0.8**
baz=277
Q20K Shuyak Island 36.43 49 P P **00 19 19.2 -1.5**
baz=276
B22K Teshekpuk Lake 36.45 29 P P **00 19 20.0 -0.7**
baz=259,SNR=6.9
D22K Ayikyak River 36.47 31 P P **00 19 19.9 -1.0**
baz=262
STLK Strandline Lak 36.49 44 P P **00 19 20.6 -0.5**
F22K John River 36.49 33 P P **00 19 20.6 -0.5**
baz=264
GTA Gaotai 36.52 278 P P **00 19 23.0 +1.2**
GTA pP pP 00 19 34.4 +2.1
GTA PP **PP** **00 20 49.3 +4.1**
GTA PcP **PcP** **00 21 46.3 +1.6**
GTA S **S** **00 25 02.8 +1.7**
GTA SS **SS** **00 27 39.8 -1.8**
GTA pmax pmax
comp=Z,39nm,1.2s
GTA LR LR
comp=Z,700nm,17.5s
GTA LR LR
comp=Z,350nm,15.3s
GTA LR LR
comp=Z,420nm,15.3s
SKT Skwentna 36.61 43 P P **00 19 21.1 -1.0**
baz=272
H22K Ishtalitna Cre 36.69 36 P P **00 19 22.5 -0.3**
baz=267
E22K Anaktuvuk Pass 36.69 32 P P **00 19 22.4 -0.4**
baz=264
G22K Bettles 36.70 34 P P **00 19 22.5 -0.3**
baz=266
BPAW Bear Paw Mtn. 36.81 39 P P **00 19 23.0 -0.9**
BPAW Bear Paw Mtn. 36.81 39 P P **00 19 23.4 -0.4**
baz=270
KTH Kantishna Hill 36.84 40 P P **00 19 24.1 -0.1**
CAPN Captain Cook N 36.86 45 P P **00 19 23.4 -0.9**
baz=274
MLY Manley 36.93 38 P P **00 19 24.7 -0.2**
MLY Manley 36.93 38 P P **00 19 24.8 0.0**
baz=269
SUA Susitna One 37.01 44 P P **00 19 25.1 -0.6**
baz=274
TRF Thorofare Moun 37.13 40 P P **00 19 26.6 -0.2**
baz=272
BRSE Bradley Lake S 37.16 46 P P **00 19 26.8 -0.1**
baz=276
CUT Chulitna 37.18 42 P P **00 19 26.6 -0.4**
baz=273
D23K Nanushuk River 37.20 31 P P **00 19 26.9 -0.1**
baz=264,SNR=8.9
COLD Coldfoot 37.23 34 P P **00 19 26.9 -0.5**
COLD Coldfoot 37.23 34 P P **00 19 27.2 -0.2**
baz=267,SNR=6.4
G23K Bananza Creek 37.27 35 P P **00 19 27.7 -0.1**
baz=267,SNR=7.1
C23K Itkillik River 37.32 30 P P **00 19 28.1 0.0**
baz=263
SLKM Skilak Lake 37.34 45 P P **00 19 28.3 -0.1**
H23K Yukon River 37.44 36 P P **00 19 29.0 -0.2**
baz=269
BWN Browne 37.48 39 P P **00 19 29.7 +0.2**
BWN IAmb IAmb 00 19 31.4
comp=Z,91nm,1.3s
E23K Chandalar 37.51 33 IAmb IAmb 00 19 31.0
comp=Z,27nm,0.9s
E23K Chandalar 37.51 33 P P **00 19 30.1 +0.3**
baz=266,SNR=15
I23K Minto, Yukon-K 37.51 37 P P **00 19 29.8 +0.1**
baz=270
TOLK Toolik Lake Re 37.57 32 P P **00 19 30.1 -0.2**
TOLK P **00 19 30.5 +0.2**
TOLK Toolik Lake Re 37.57 32 P P **00 19 29.9 -0.3**
baz=265,SNR=7.9
NEA2 Nenana 37.64 38 P P **00 19 30.7 -0.1**
NEA2 Nenana 37.64 38 P P **00 19 30.8 -0.1**
baz=271,SNR=8.8
MCK McKinley 37.73 40 P P **00 19 30.7 -0.9**
MCK McKinley 37.73 40 P P **00 19 30.7 -0.9**
MCK pmax pmax
comp=Z,19nm,1.1s
MCK McKinley 37.73 40 P P **00 19 31.4 -0.3**
baz=272
RND Reindeer 37.78 40 P P **00 19 31.0 -1.1**
RND Reindeer 37.78 40 P P **00 19 31.0 -1.1**
RND pmax pmax
comp=Z,16nm,1.0s
D24K Happy Valley 37.88 31 P P **00 19 32.7 -0.1**
D24K IAmb IAmb 00 19 34.3
comp=Z,36nm,1.1s
D24K Happy Valley 37.88 31 P P **00 19 32.8 -0.1**
baz=265,SNR=18
E24K Your Creek 37.93 33 P P **00 19 33.2 -0.1**
baz=267
WAT1 Susitna Watana 37.95 41 P P **00 19 32.8 -0.7**
baz=274
C24K Franklin Bluff 37.97 30 P P **00 19 32.9 -0.6**
C24K P **00 19 33.3 -0.2**
C24K IAmb IAmb 00 19 35.0
comp=Z,57nm,0.8s
C24K Franklin Bluff 37.97 30 P P **00 19 33.1 -0.4**
baz=265,SNR=29
WRH Wood River Hil 38.07 39 P P **00 19 33.5 -1.0**
KNK Knik Glacier 38.11 44 P P **00 19 34.5 -0.4**
baz=276
H24K Noodor Dome 38.13 36 P P **00 19 34.6 -0.4**
baz=270
SML Sawmill 38.13 43 P P **00 19 34.5 -0.6**
SML IAmb IAmb 00 19 35.5
comp=Z,32nm,0.8s
SML Sawmill 38.13 43 P P **00 19 34.7 -0.4**
baz=275,SNR=6.5
F24K Squaw Lake 38.14 34 P P **00 19 34.9 -0.1**
baz=268,SNR=10
COLA College 38.16 38 P P **00 19 34.8 -0.4**
COLA IAmb IAmb 00 19 36.1
comp=Z,24nm,0.7s
COLA College 38.16 38 P P **00 19 35.2 0.0**
COLA College 38.16 38 *i* P P **00 19 34.8 -0.4**
COLA pmax pmax
comp=Z,21nm,0.8s
COLA College 38.16 38 P P **00 19 35.1 -0.1**
baz=272
CCB Clear Creek Bu 38.18 38 P P **00 19 34.6 -0.8**
CD2 Chengdu 38.27 263 P P **00 19 37.3 +0.7**
CD2 S S **00 25 26.8 -1.0**
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,380nm,5.0s
CD2 LR LR
comp=Z,980nm,14.3s
CD2 LR LR
comp=Z,1μm,11.5s
CD2 LR LR
comp=Z,770nm,14.0s
G24K Hadweenzic Riv 38.29 35 P P **00 19 36.4 +0.1**
baz=270,SNR=19
POKR Poker Plat Res 38.33 37 P **00 19 36.3 -0.4**
POKR P **00 19 37.3 +0.6**
POKR Poker Plat Res 38.33 37 P P **00 19 36.9 +0.3**
baz=272,SNR=8.1
WAT6 Susitna Watana 38.34 42 P P **00 19 36.3 -0.7**
baz=275
M23K Glacier View 38.42 43 P P **00 19 36.9 -0.5**
baz=276
DHY Denali Highway 38.47 41 P P **00 19 36.9 -1.1**
DHY Denali Highway 38.47 41 P P **00 19 36.9 -1.1**
baz=274
HDA Harding Lake 38.57 39 P P **00 19 37.0 -1.6**
HDA Harding Lake 38.57 39 P P **00 19 38.2 -0.4**
baz=273,SNR=6.2
IL31 38.57 38 P P **00 19 37.7 -0.9**
IL31 P **00 19 38.2 -0.4**
ILAR Eielson Array 38.57 38 P P **00 19 37.4 -1.3**
comp=Z,7.0nm,0.9s,baz=270,slow=6.8,SNR=45
ILAR PcP **PcP** **00 21 49.1 -1.3**
comp=Z,2.9nm,0.7s,baz=277,slow=3.2,SNR=11
ILAR LR LR 00 36 30.0
comp=Z,264nm,19.1s,baz=285,slow=38
comp=Z,7.0nm,0.9s
ILAR Eielson Array 38.57 38 P P **00 19 38.1 -0.6**
ILAR P **00 19 38.3 -0.4**
ILAR PcP **00 21 48.6 -1.8**
SCM Sheep Creek Mo 38.60 43 P P **00 19 38.8 -0.3**
SCM IAmb IAmb 00 19 59.1
comp=Z,56nm,1.4s
SCM Sheep Creek Mo 38.60 43 P P **00 19 38.8 -0.3**
SCM pmax pmax
comp=Z,56nm,1.4s
SCM Sheep Creek Mo 38.60 43 P P **00 19 38.7 -0.3**
baz=276
D25K Kavik River 38.76 31 P P **00 19 39.6 -0.7**
baz=268
P23K Montague Islan 38.80 46 P P **00 19 40.3 -0.3**
baz=278
GLI Glacier Island 38.83 44 P P **00 19 40.5 -0.4**
baz=278
G25K Bearman Lake 38.83 35 P P **00 19 41.1 +0.3**
baz=271,SNR=5.6
H25L Birch Creek 38.96 36 P P **00 19 42.2 +0.4**
baz=272,SNR=7.8
F25K Christian Rive 39.00 33 P P **00 19 42.3 -0.1**
baz=270,SNR=9.6
E25K Arctic Village 39.03 33 P P **00 19 43.1 +0.6**
E25K P **00 19 43.4 +0.8**
E25K Arctic Village 39.03 33 P P **00 19 42.7 +0.2**
baz=270,SNR=15
GYA Guiyang 39.09 255 ⇓P P **00 19 44.8 +1.2**
GYA pmax pmax
comp=Z,51nm,0.8s
PRP Porcupine Dome 39.11 37 P P **00 19 42.8 -0.5**
PRP Porcupine Dome 39.11 37 P P **00 19 43.1 -0.3**
baz=273,SNR=12
M24K Tolsona, Glenn 39.11 42 P P **00 19 43.1 -0.3**
baz=277
FYU Fort Yukon 39.18 35 P P **00 19 44.2 +0.5**
FYU IAmb IAmb 00 19 45.5
comp=Z,45nm,1.0s
J25K Salcha River, 39.23 38 P P **00 19 43.5 -0.8**
baz=274
C26K Camden Bay 39.30 30 P P **00 19 44.6 0.0**
baz=268
KLU Klutina 39.31 43 P P **00 19 44.3 -0.7**
baz=278
PAX Paxson 39.34 41 P P **00 19 44.9 -0.4**
baz=276
BMAR Burnt Mountain 39.41 34 P P **00 19 46.0 +0.2**
Q23K Middleton Isla 39.41 46 P P **00 19 45.3 -0.5**
baz=280
EYAK Cordova Ski Ar 39.53 45 P P **00 19 46.5 -0.2**
baz=279
RIDG Independent Ri 39.54 40 P P **00 19 45.3 -1.6**
RIDG Independent Ri 39.54 40 P P **00 19 46.3 -0.6**
baz=276
HARP HAARP 39.55 42 P P **00 19 46.7 -0.2**
baz=277
F26K Sheenjek River 39.57 33 P P **00 19 47.0 0.0**
baz=272,SNR=14
C27K Jago River 39.71 30 P P **00 19 48.4 +0.2**
baz=270
G26K Porcupine Rive 39.74 34 P P **00 19 49.0 +0.6**
baz=273,SNR=30
SCRK Sand Creek 39.89 39 P P **00 19 48.6 -1.2**
SCRK Sand Creek 39.89 39 P P **00 19 49.2 -0.7**
baz=276,SNR=8.0
DOT Dot Lake 39.90 40 P P **00 19 49.0 -0.8**
N25K Chitina, Valde 39.92 43 P P **00 19 49.9 -0.2**
baz=279
BMRM Bremner River 40.02 44 P P **00 19 50.8 -0.1**
baz=279
J26L Joseph Creek 40.02 38 P P **00 19 50.8 -0.1**
baz=276
L26K Log Cabin Wild 40.30 41 P P **00 19 53.8 +0.7**
L26K Log Cabin Wild 40.30 41 P P **00 19 53.8 +0.7**
baz=278
E27K Coleen River 40.51 32 P P **00 19 55.3 +0.5**
baz=273
M26K Nabesna, AK 40.55 41 P P **00 19 55.6 +0.4**
baz=279,SNR=5.9
G27K Doyon Strip 40.59 35 P P **00 19 55.9 +0.4**
baz=275,SNR=7.7
DGZ Jazzator, Alta 40.62 298 *i* P P **00 19 56.2 +0.1**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
D27M Malcolm River 40.69 31 P P **00 19 56.5 +0.2**
baz=273
H27K Steamboat Moun 40.69 35 P P **00 19 56.9 +0.6**
baz=276,SNR=21
K27K Chicken 40.72 39 P P **00 19 56.7 +0.1**
baz=278
I27K Kandik River 40.72 36 P P **00 19 57.4 +0.8**
baz=276
CRQM Cirque 40.76 44 P P **00 19 57.4 +0.2**
CRQM IAmb IAmb 00 20 09.1
comp=Z,58nm,1.1s
CRQE Cirque 40.78 44 P P **00 19 57.8 +0.5**
baz=281
ZAA0 Zalesovo Array 40.85 305 P P **00 19 58.0 +0.3**
ZALV Zalesovo Beam 40.85 305 P P **00 19 56.2 -1.5**
comp=Z,1.9nm,0.6s,baz=77,slow=6.7,SNR=8.7
ZALV PcP **PcP** **00 21 58.1 +0.4**
comp=Z,12nm,0.7s,baz=89,slow=2.5,SNR=23
ZALV ScP **ScP** **00 25 45.3 +1.5**
comp=Z,2.1nm,1.1s,baz=51,slow=5.7,SNR=3.0
ZALV LR LR 00 36 47.8
comp=Z,167nm,18.0s,baz=65,slow=36
comp=Z,1.9nm,0.6s
ZALV Zalesovo Beam 40.85 305 P P **00 19 57.0 -0.8**
ZALV P **00 21 58.0 +0.3**
ZALV Zalesovo Beam 40.85 305 *i* P P **00 19 57.4 -0.3**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
L27K Beaver Creek, 40.98 40 P P **00 19 59.0 +0.2**
L27K IAmb IAmb 00 20 00.4
comp=Z,61nm,1.4s
L27K Beaver Creek, 40.98 40 P P **00 19 59.5 +0.7**
baz=279,SNR=13
BCAR Beaver Creek A 40.99 40 P P **00 19 59.0 +0.1**
M27K Edge Creek, AK 41.07 41 P P **00 20 00.6 +1.0**
baz=280,SNR=7.8
ISLE Juniper Island 41.18 44 P P **00 20 00.1 -0.4**
ISLE IAmb IAmb 00 20 07.2
comp=Z,104nm,1.4s
F28M Old Crow 41.21 33 P P **00 20 00.3 -0.2**
F28M Old Crow 41.21 33 P P **00 20 01.1 +0.6**
baz=276,SNR=17
E28M Babbage River 41.24 32 P P **00 20 01.2 +0.4**
baz=275,SNR=18
BARN Barnard Glacie 41.41 43 P P **00 20 02.8 +0.3**
BARN IAmb IAmb 00 20 14.4
comp=Z,50nm,1.3s
GRNC Granite Creek 41.43 44 P P **00 20 02.5 -0.2**
GRNC IAmb IAmb 00 20 15.6
comp=Z,31nm,0.7s
I28M Miner Creek 41.44 37 P P **00 20 02.7 +0.1**
baz=278,SNR=25
MESA MESA 41.45 45 P P **00 20 02.9 +0.1**
baz=282
D28M Stokes Point 41.47 31 P P **00 20 03.1 +0.5**
baz=275
BVCY Beaver Creek 41.52 41 P P **00 20 03.3 +0.1**
baz=281
GOMU GeErMu 41.54 276 P P **00 20 03.8 -0.3**
GOMU PcP **PcP** **00 22 01.3 +0.4**
GOMU S **S** **00 26 16.4 -0.8**
GOMU pmax pmax
comp=Z,13nm,0.9s
GOMU LR LR
comp=Z,310nm,13.9s
CTG Chitna Glacier 41.58 43 P P **00 20 03.7 -0.2**
baz=282
YUK3 Moose Creek 41.83 42 P P **00 20 06.0 0.0**
baz=282
E29M Blow River 41.87 32 P P **00 20 06.4 +0.5**
baz=276
H29M Whitestone 41.97 35 P P **00 20 07.2 +0.5**
baz=278,SNR=8.9
G29M Pine Creek 42.00 34 P P **00 20 07.9 +0.8**
baz=278
O28M Mount Upton 42.17 44 P P **00 20 08.9 +0.1**
baz=283
YUK8 Steele Glacier 42.26 43 P P **00 20 09.5 0.0**
baz=283
QIZ Qiongzhong 42.29 244 P P **00 20 09.8 -0.1**
QIZ S **S** **00 26 29.9 +2.1**
QIZ LR LR
comp=Z,210nm,12.3s
QIZ LR LR
comp=Z,400nm,16.2s
QIZ LR LR
comp=Z,490nm,14.2s
PINM Pinnacle 42.30 45 P P **00 20 09.4 -0.3**
baz=284
PZH PanZhiHua 42.40 259 P P **00 20 11.8 +0.9**
PZH pmax pmax
comp=Z,10.0nm,1.2s
EPYK Eagle Plains 42.60 35 P P **00 20 12.0 0.0**
EPYK IAmb IAmb 00 20 13.4
comp=Z,42nm,1.1s
EPYK Eagle Plains 42.60 35 P P **00 20 12.3 +0.3**
baz=280,SNR=14
M29M Somme Creek 42.61 41 P P **00 20 12.8 +0.6**
baz=282
KMI Kunming 42.62 257 ⇑P P **00 20 14.0 +1.2**
KMI PcP **PcP** **00 22 05.8 +1.4**
KMI pmax pmax
comp=Z,34nm,1.1s
KMI LR LR
comp=Z,320nm,15.8s
KMI LR LR
comp=Z,360nm,14.7s
KMI LR LR
comp=Z,460nm,14.2s
L29M L29M 42.62 40 P P **00 20 13.0 +0.8**
baz=282
G30M tAoh Zraii Nji 42.69 34 P P **00 20 13.4 +0.6**
baz=279
WMQ Urumqi 42.73 290 *e*P P **00 20 14.9 +1.6**
WMQ LR LR
comp=Z,620nm,20.5s
WMQ LR LR
comp=Z,460nm,19.3s
WMQ LR LR
comp=Z,190nm,22.5s
K29M Barlow Dome 42.74 39 P P **00 20 13.8 +0.6**
baz=282
F30M Barrier River 42.76 33 P P **00 20 14.0 +0.8**
baz=279
I30M Mount Dempster 42.95 37 P P **00 20 15.2 +0.3**
baz=281
YUK6 Outpost Mounta 43.00 43 P P **00 20 16.2 +0.7**
baz=284
ZSN Zaisan 43.03 296 *e*P P **00 20 15.5 -0.2**
ZSN Zaisan 43.03 296 *e*P P **00 20 15.4 -0.2**
O29M Mount Kennedy 43.06 44 P P **00 20 16.4 +0.6**
baz=285
J30M Hart River 43.10 37 P P **00 20 16.4 +0.3**
baz=282,SNR=10
M30M Minto, Yukon 43.34 40 P P **00 20 18.6 +0.7**
baz=284
HYT Haines Junctio 43.44 43 P P **00 20 19.3 +0.4**
HYT IAmb IAmb 00 20 21.5
comp=Z,33nm,0.9s
HYT Haines Junctio 43.44 43 P P **00 20 19.6 +0.7**
baz=285,SNR=8.4
G31M Satah River 43.46 34 P P **00 20 18.8 0.0**
baz=281
INK Inuvik 43.48 32 LR LR 00 39 07.5
comp=Z,212nm,21.3s,baz=336,slow=37
INK Inuvik 43.48 32 P P **00 20 17.9 -1.0**
INK Inuvik 43.48 32 P P **00 20 17.9 -1.0**
INK pmax pmax
comp=Z,20nm,1.0s
INK Inuvik 43.48 32 P P **00 20 19.2 +0.2**
baz=280,SNR=18
F31M Tsiigehtchic 43.56 33 P P **00 20 19.3 -0.3**
F31M IAmb IAmb 00 20 20.8
comp=Z,30nm,0.8s
F31M Tsiigehtchic 43.56 33 P P **00 20 20.1 +0.5**
baz=281
P29M Windy Craggy 43.65 45 P P **00 20 20.8 +0.3**
baz=286
H31M Peel River 43.66 35 P P **00 20 20.8 +0.3**
baz=282
P30M Million Dollar 43.89 44 P P **00 20 22.7 +0.3**
baz=286
N31M Braeburn, Yuko 44.07 42 P P **00 20 24.0 +0.1**
N31M IAmb IAmb 00 20 27.9
comp=Z,61nm,1.4s
N31M Braeburn, Yuko 44.07 42 P P **00 20 24.5 +0.6**

baz=286
O30N Mendenhall 44.12 43 P **P** 00 20 24.6 +0.3
baz=286
PLBC Pleasant Camp 44.37 45 P **P** 00 20 27.1 +0.9
baz=287
M31M Drury Creek, Y 44.52 40 P **P** 00 20 28.1 +0.7
baz=286,SNR=7.3
WHY Whitehorse 44.73 43 P **P** 00 20 29.5 +0.3
WHY IAmb IAmb 00 20 31.1
comp=Z,32nm,1.0s
WHY Whitehorse 44.73 43 P **P** 00 20 29.5 +0.3
baz=287
S31K Pelican 44.89 47 P **P** 00 20 31.1 +0.7
baz=289
MK31 Makanchi Array 44.91 296 *i* P **P** 00 20 29.5 -1.2
MK31 pmax pmax
comp=Z,9.0nm,1.0s
MKAR Makanchi Array 44.91 296 P **P** 00 20 29.8 -0.9
comp=Z,2.5nm,0.8s,baz=70,slow=7.6,SNR=12
MKAR PcP **PcP** 00 22 11.9 +0.3
comp=Z,9.0nm,0.8s,baz=54,slow=3.5,SNR=11
MKAR ScP **ScP** 00 26 02.6 +2.2
comp=Z,0.8nm,0.8s,baz=69,slow=4.8,SNR=3.0
MKAR LR LR 00 40 30.3
comp=Z,321nm,18.1s,baz=59,slow=38
comp=Z,2.5nm,0.8s
MKAR Makanchi Array 44.91 296 P **P** 00 20 30.6 -0.1
MKAR PcP **PcP** 00 22 11.5 -0.1
MKAR Makanchi Array 44.91 296 *ce* P **P** 00 20 33.0 +2.3
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 44.91 296 *e* P **P** 00 20 33.0 +2.3
MAKZ Makanchi 45.10 296 P **P** 00 20 31.4 -0.8
MAKZ Makanchi 45.10 296 P **P** 00 20 31.4 -0.8
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
N32M Quiet Lake 45.42 42 P **P** 00 20 34.7 0.0
baz=288
A36M Sachs Harbour 45.48 26 IAmb IAmb 00 20 35.8
comp=Z,33nm,0.8s
A36M Sachs Harbour 45.48 26 P **P** 00 20 35.0 +0.1
baz=284,SNR=22
KURK Kurchatov 45.52 303 P **P** 00 20 35.0 -0.5
KURK Kurchatov 45.52 303 **ScP** 00 26 03.7 +0.9
KURK Kurchatov 45.52 303 *ce* P **P** 00 20 35.3 -0.2
KURK pmax pmax
comp=Z,17nm,0.8s
KURK Kurchatov 45.52 303 *e* P **P** 00 20 35.3 -0.2
TNCH TengChong 45.56 260 ⇑P **P** 00 20 37.8 +1.5
TNCH S **S** 00 27 12.8 -2.9
TNCH pmax pmax
comp=Z,130nm,1.1s
TNCH LR LR
comp=Z,250nm,9.1s
TNCH LR LR
comp=Z,460nm,8.6s
TNCH LR LR
comp=Z,500nm,13.7s
P32M Atlin 45.61 44 P **P** 00 20 36.8 +0.6
baz=289
KURBB Kurchatov Arra 45.61 303 P **P** 00 20 35.3 -1.0
comp=Z,11nm,0.7s,baz=70,slow=8.6,SNR=62
KURBB PcP **PcP** 00 22 14.1 +0.2
comp=Z,12nm,1.0s,baz=66,slow=3.4,SNR=11
KURBB ScP **ScP** 00 26 03.7 +0.5
comp=Z,0.8nm,1.0s,baz=82,slow=6.6,SNR=3.3
KURBB LR LR 00 40 10.5
comp=Z,142nm,18.1s,baz=164,slow=37
comp=Z,11nm,0.7s
R32K Eaglecrest 45.65 46 P **P** 00 20 36.8 +0.4
baz=290
SIT Sitka 45.65 48 P **P** 00 20 37.3 +0.9
baz=290
P33M Teslin, Yukon 45.84 43 P **P** 00 20 37.8 -0.1
P33M IAmb IAmb 00 20 40.3
comp=Z,22nm,1.0s
P33M Teslin, Yukon 45.84 43 P **P** 00 20 38.3 +0.3
baz=289,SNR=6.0
S32K Killisnoo 45.89 47 P **P** 00 20 38.8 +0.5
baz=290
Q32M Nakina River 46.52 44 P **P** 00 20 43.4 -0.1
baz=290
C36M Paulatuk 46.57 29 IAmb IAmb 00 20 44.4
comp=Z,18nm,0.9s
C36M Paulatuk 46.57 29 P **P** 00 20 43.2 -0.2
baz=287,SNR=14
R33M Jennings River 46.99 43 P **P** 00 20 47.3 +0.1
baz=291,SNR=6.0
U33K Whale Pass 47.13 48 P **P** 00 20 47.9 -0.1
baz=292
CRAG Craig 47.38 49 P **P** 00 20 49.7 -0.3
CRAG Craig 47.38 49 P **P** 00 20 50.5 +0.6
baz=293
S34M Telegraph Cree 47.46 45 P **P** 00 20 51.4 +0.9
baz=292
LSA Lhasa 47.73 271 P **P** 00 20 51.4 -2.2
LSA pmax pmax
comp=Z,17nm,0.8s
WTLY Watson Lake, Y 47.76 42 P **P** 00 20 53.8 +0.9
baz=292
DLBC Dease Lake 47.80 44 LR LR 00 42 35.3
comp=Z,195nm,19.2s,baz=271,slow=38
DLBC Dease Lake 47.80 44 P **P** 00 20 54.4 +1.1
baz=292
UBPT Khong Chiam 47.84 245 P **P** 00 20 56.2 +2.2
TDK Taldyqorghan 48.13 296 *eP* **P** 00 20 56.0 -0.1
comp=Z,24nm,1.3s
TDK Taldyqorghan 48.13 296 *eP* **P** 00 20 55.9 -0.1
TDK pmax pmax
comp=Z,24nm,1.3s
T35M Bob Quinn 48.26 46 P **P** 00 20 56.8 0.0
T35M IAmb IAmb 00 20 59.7
comp=Z,19nm,0.9s
T35M Bob Quinn 48.26 46 P **P** 00 20 58.2 +1.4
baz=293
SHLS Shalkode 48.35 293 *eP* **P** 00 20 55.5 -2.4
SHLS Shalkode 48.35 293 *eP* **P** 00 20 55.4 -2.4
UZB Uzynbulak 48.63 293 *eP* **P** 00 20 59.8 -0.3
UZB Uzynbulak 48.63 293 *eP* **P** 00 20 59.8 -0.3
MYLDM Lahad Datu 48.84 223 P **P** 00 21 04.0 +2.3
WRGLY Wrigley 48.92 37 P **P** 00 21 02.6 +0.8
WRGLY IAmb IAmb 00 21 03.6
comp=Z,23nm,1.0s
WRGLY Wrigley 48.92 37 P **P** 00 21 02.9 +1.1
baz=293
SATY Saty 49.07 293 ⇑ *i* P **P** 00 21 03.2 -0.3
SATY Saty 49.07 293 *c i* P **P** 00 21 03.1 -0.3
JAY Jayapura 49.11 192 LR LR 00 40 36.0
comp=Z,76nm,20.3s,baz=324,slow=34
TNTI Ternate 49.20 210 P **P** 00 21 03.3 -1.1
TNTI IAmb IAmb 00 21 11.4
comp=Z,26nm,1.1s
BVA0 Borovoye Array 49.22 308 P **P** 00 21 02.8 -1.4
BVAR Borovoye Array 49.22 308 P **P** 00 21 04.4 +0.2
comp=Z,3.8nm,0.8s,baz=60,slow=8.8,SNR=22
BVAR PcP **PcP** 00 22 27.1 +0.3
comp=Z,11nm,0.6s,baz=62,slow=3.4,SNR=20
BVAR ScP **ScP** 00 26 20.3 +2.0
comp=Z,0.9nm,0.8s,baz=66,slow=3.6,SNR=2.8
BVAR LR LR 00 42 07.2
comp=Z,180nm,19.0s,baz=50,slow=36
comp=Z,3.8nm,0.8s
LIRD Liard River Hi 49.29 42 P **P** 00 21 05.9 +1.3
baz=294
CHTO Chiang Mai 49.50 254 P **P** 00 21 07.7 +0.9
CHTO Chiang Mai 49.50 254 P **P** 00 21 08.4 +1.6
CHTO Chiang Mai 49.50 254 P **P** 00 21 07.7 +0.9
CHTO pmax pmax
comp=Z,41nm,0.8s
CM31 Chiang Mai Arr 49.75 254 P **P** 00 21 09.5 +0.8
CM31 IAmb IAmb 00 21 11.4
comp=Z,25nm,0.6s
CMAR Chiang Mai Arr 49.75 254 P **P** 00 21 10.2 +1.5
comp=Z,14nm,0.6s,baz=38,slow=7.4,SNR=74
CMAR PcP **PcP** 00 22 30.8 +1.6
comp=Z,5.5nm,0.7s,baz=8.7,slow=3.0,SNR=12
CMAR LR LR 00 43 03.7
comp=Z,99nm,18.9s,baz=55,slow=37
comp=Z,14nm,0.6s
CMAR Chiang Mai Arr 49.75 254 P **P** 00 21 08.8 +0.1
CMAR PcP **PcP** 00 22 30.4 +1.2
CMAR Chiang Mai Arr 49.75 254 *ce* P **P** 00 21 10.3 +1.6
CMAR pmax pmax
comp=Z,15nm,0.6s
SHL Shillong 49.79 266 P **P** 00 21 09.5 +0.4
SHL Shillong 49.79 266 P **P** 00 21 09.5 +0.4
SHL pmax pmax
comp=Z,35nm,0.8s
MDOK Medeo 49.88 294 *eP* **P** 00 21 09.2 -0.4
MDOK Medeo 49.88 294 *eP* **P** 00 21 09.1 -0.5
TOAD Toad River Com 49.93 43 P **P** 00 21 10.5 +0.9
baz=295,SNR=6.6
KOTAN Kotaneelee Air 49.93 41 P **P** 00 21 10.9 +1.4
baz=295
AAA Alma-Ata 49.94 294 *eP* **P** 00 21 09.7 -0.3
comp=Z,8.4nm,0.8s
AAA Alma-Ata 49.94 294 *eP* **P** 00 21 09.7 -0.3
AAA pmax pmax
comp=Z,8.0nm,0.8s
AAA Alma-Ata 49.94 294 *eP* **P** 00 21 09.7 -0.3
TNSS Tian-Shan 50.01 294 *eP* **P** 00 21 10.3 -0.6
TNSS Tian-Shan 50.01 294 *eP* **P** 00 21 10.2 -0.6
BTLS Baital 50.82 298 *eP* **P** 00 21 16.3 -0.1
BTLS Baital 50.82 298 *eP* **P** 00 21 16.3 -0.1
FAKI Fak Fak 51.21 202 P **P** 00 21 18.2 -1.4
FAKI IAmb IAmb 00 21 20.1
comp=Z,24nm,0.9s
FAKI Fak Fak 51.21 202 P **P** 00 21 19.5 -0.1
FAKI Fak Fak 51.21 202 P **P** 00 21 19.3 -0.3
comp=Z,37nm,1.0s
SGDS Sogindy 51.26 296 ⇑ *i* P **P** 00 21 19.7 -0.2
TOLI2 Tolitoli 51.43 218 P **P** 00 21 20.1 -1.2
TOLI2 IAmb IAmb 00 21 22.2
comp=Z,28nm,1.0s
TOLI2 Tolitoli 51.43 218 P **P** 00 21 21.4 +0.1
BBB Bella Bella 51.48 51 LR LR 00 42 33.8
comp=Z,71nm,19.0s,baz=359,slow=35
MRSI Marisa 51.52 216 P **P** 00 21 21.9 0.0
AAK Ala-Archa 51.76 295 LR LR 00 42 45.0
comp=Z,246nm,21.8s,baz=52,slow=35
AAK Ala-Archa 51.76 295 P **P** 00 21 22.7 -1.1
AAK Ala-Archa 51.76 295 *ce* P **P** 00 21 23.4 -0.4
AAK pmax pmax
comp=Z,8.0nm,1.5s
AAK Ala-Archa 51.76 295 *e* P **P** 00 21 23.4 -0.4
EVN Everest 51.80 272 P **P** 00 21 25.5 +0.7
EVN IAmb IAmb 00 21 39.1
comp=Z,46nm,1.2s
BRDH Bariadhala 51.83 264 LR LR 00 44 35.8
comp=Z,101nm,20.1s,baz=115,slow=37
RES Resolute Bay 52.16 18 LR LR 00 45 55.1
comp=Z,167nm,19.2s,baz=340,slow=39
RES Resolute Bay 52.16 18 P **P** 00 21 24.7 -1.3
RES Resolute Bay 52.16 18 P **P** 00 21 24.7 -1.3
RES pmax pmax
comp=Z,13nm,1.0s
SANI Sanana 52.30 210 P **P** 00 21 27.0 -0.8
SANI Sanana 52.30 210 P **P** 00 21 26.6 -1.2
comp=Z,645nmcomp=Z,54nm,1.0s
KSH Kashi 52.48 291 P **P** 00 21 33.3 +4.2
KSH pmax pmax
comp=Z,5.0nm,1.2s
KSH LR LR
comp=Z,340nm,13.7s
KSH LR LR
comp=Z,330nm,12.7s
KSH LR LR
comp=Z,480nm,13.9s
SVE Sverdlovsk 52.48 316 *de* P **P** 00 21 28.6 0.0
SVE pmax pmax
comp=Z,44nm,0.8s
MPSI Mapaga 52.50 218 P **P** 00 21 29.1 -0.2
comp=Z,485nmcomp=Z,28nm,1.2s
LUWI Luwuk 52.57 214 P **P** 00 21 28.8 -0.9
LUWI Luwuk 52.57 214 P **P** 00 21 28.9 -0.8
comp=Z,1μmcomp=Z,41nm,0.7s
YKAW3 Yellowknife Wh 52.84 35 P **P** 00 21 30.6 -0.7
YKAW3 IAmb IAmb 00 21 32.3
comp=Z,19nm,0.8s
YKA Yellowknife Ar 52.88 35 P **P** 00 21 31.5 0.0
comp=Z,12nm,0.8s,baz=300,slow=7.7,SNR=50
YKA PcP **PcP** 00 22 40.1 0.0
comp=Z,6.4nm,0.9s,baz=300,slow=4.9,SNR=10.0
YKA LR LR 00 47 42.6
comp=Z,148nm,18.4s,baz=345,slow=40
comp=Z,12nm,0.8s
YKAW1 Yellowknife Wh 52.94 35 P **P** 00 21 31.3 -0.6
DZA Taraz 53.61 297 *eP* **P** 00 21 37.1 -0.2
DZA Taraz 53.61 297 *eP* **P** 00 21 37.0 -0.2
ARTI Arti 53.78 316 LR LR 00 46 06.5
comp=Z,208nm,20.9s,baz=45,slow=38
ARTI Arti 53.78 316 P **P** 00 21 37.3 -0.9
ARTI Arti 53.78 316 *d i* P **P** 00 21 37.3 -0.9
ARTI *PP **pP** 00 21 48.5 -0.7
ARTI 00 22 42.4
ARTI 00 23 35.2
ARTI S **S** 00 29 09.9 +0.5
ARTI SS **SS** 00 32 49.5 -0.4
ARTI pmax pmax
comp=Z,41nm,0.8s
ARK Arkit 53.80 295 P **P** 00 21 39.6 +0.8
ARK pmax pmax
comp=Z,17nm,1.1s
KK31 Karatay Array 54.00 297 P **P** 00 21 39.4 -0.7
KK31 Karatay Array 54.00 297 P **P** 00 21 39.4 -0.7
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 54.00 297 P **P** 00 21 39.8 -0.3
KKAR Karatay Array 54.00 297 P **P** 00 21 39.8 -0.3
CBB Campbell River 54.05 53 P **P** 00 21 39.3 -1.0
SBUM Sibu 54.31 228 P **P** 00 21 41.4 -1.1
SBUM Sibu 54.31 228 P **P** 00 21 43.3 +0.8
BRLS Borolday 54.46 298 *eP* **P** 00 21 44.7 +1.2
BRLS Borolday 54.46 298 *eP* **P** 00 21 44.6 +1.2
TRKS Terek-Say 54.47 295 P **P** 00 21 44.0 +0.3
IUG Iuzhnay 54.82 297 ⇑ *i* P **P** 00 21 46.0 -0.2
comp=Z,12nm,0.9s
IUG Iuzhnay 54.82 297 *c i* P **P** 00 21 45.9 -0.2
IUG pmax pmax
comp=Z,12nm,0.9s
CHM Chimkent 54.99 297 *eP* **P** 00 21 47.1 -0.2
CHM Chimkent 54.99 297 *eP* **P** 00 21 47.0 -0.2
BKB Balikpapan 55.25 221 P **P** 00 21 47.8 -1.5
BKB Balikpapan 55.25 221 P **P** 00 21 50.0 +0.6
PMG Port Moresby 55.38 183 LR LR 00 45 51.9
comp=Z,52nm,19.1s,baz=310,slow=36
PMG Port Moresby 55.38 183 P **P** 00 21 49.2 -1.0
PMG IAmb IAmb 00 21 51.0
comp=Z,19nm,1.1s
PMG Port Moresby 55.38 183 *ce* P **P** 00 21 51.1 +0.9
PMG pmax pmax
comp=Z,30nm,1.7s
LLLB Lillooet 55.64 51 P **P** 00 21 51.3 -0.6
LLLB IAmb IAmb 00 21 52.9
comp=Z,23nm,1.0s
MTKI Muara Teweh, K 55.90 223 P **P** 00 21 54.9 +0.8
HNR Honiara 56.17 167 LR LR 00 42 14.5
comp=Z,96nm,21.8s,baz=356,slow=32
SAUI Saumlaki 56.31 202 P **P** 00 21 56.7 -0.2
SAUI Saumlaki 56.31 202 P **P** 00 21 58.5 +1.6
GAR Garm 56.41 293 P **P** 00 21 58.0 +0.4
SPSI Sidrap Palu 56.43 216 P **P** 00 21 58.2 +0.4
comp=Z,672nmcomp=Z,20nm,0.6s
KIRV Kirov 56.66 322 LR LR 00 48 15.7
comp=Z,151nm,18.6s,baz=53,slow=38
KIRV Kirov 56.66 322 *ce* P **P** 00 21 58.4 -0.5
BNSI Bone 56.69 216 P **P** 00 22 04.2 +4.6
comp=Z,31nm,1.1s
AB31 Akbulak array 56.79 308 P **P** 00 21 59.1 -0.9
AB31 IAmb IAmb 00 22 00.5
comp=Z,13nm,0.7s
AB31 Akbulak array 56.79 308 P **P** 00 21 59.6 -0.4
ABKAR Akbulak array 56.79 308 P **P** 00 21 59.3 -0.7
APA Apatity 56.81 336 ⇓ *eP* **P** 00 22 00.4 +0.5
APA pmax pmax
comp=Z,313nm,22.4s
E03A Lebam 56.95 55 P **P** 00 22 01.1 -0.1
E03A IAmb IAmb 00 22 04.0
comp=Z,45nm,1.3s
AKTO Aktyubinsk 57.16 310 LR LR 00 46 19.6
comp=Z,169nm,21.4s,baz=305,slow=36
D05A Enumclaw 57.48 54 P **P** 00 22 04.9 0.0
D05A IAmb IAmb 00 22 06.4
comp=Z,24nm,1.0s
ARCES ARCESS Array B 57.51 340 P **P** 00 22 04.7 -0.1
comp=Z,2.5nm,0.7s,baz=40,slow=7.4,SNR=4.5
ARCES PcP **PcP** 00 22 57.5 -0.4
comp=Z,3.2nm,0.7s,baz=46,slow=5.2,SNR=5.2
ARCES LR LR 00 50 44.8
comp=Z,111nm,18.6s,baz=33,slow=40
comp=Z,2.5nm,0.7s
BKSI Bulukumba 57.52 215 P **P** 00 22 05.5 0.0
comp=Z,24nm,0.7s
NIL Nilore 57.63 286 P **P** 00 22 07.1 +0.9
NIL IAmb IAmb 00 22 08.2
comp=Z,29nm,1.1s
NIL Nilore 57.63 286 P **P** 00 22 07.1 +0.9
NIL pmax pmax
comp=Z,29nm,1.1s
LON Longmire 57.83 54 P **P** 00 22 07.7 +0.2
LON Longmire 57.83 54 P **P** 00 22 07.7 +0.2
LON pmax pmax
comp=Z,5.0nm,1.0s
BBKI Banjar Baru 58.14 222 P **P** 00 22 11.3 +1.4
comp=Z,80nm,0.9s
LTY Liberty 58.18 53 P **P** 00 22 08.9 -1.0
B08A Colville Reser 58.28 52 P **P** 00 22 10.2 -0.3
B08A IAmb IAmb 00 22 11.3
comp=Z,16nm,0.8s
KULM Kulim 58.54 241 P **P** 00 22 12.7 0.0
KULM **P** 00 22 14.1 +1.4
KULM Kulim 58.54 241 P **P** 00 22 14.0 +1.3
BLKN Baker Lake 58.57 28 IAmb IAmb 00 22 12.3
comp=Z,18nm,0.7s
HOOD Mount Hood Mea 58.74 56 P **P** 00 22 13.6 -0.4
MXC Moxie City 58.78 54 P **P** 00 22 14.3 +0.3
H04A Detroit Lake 58.81 56 P **P** 00 22 14.4 +0.1
IPM Ipoh 58.95 240 P **P** 00 22 14.8 -0.8
IPM IAmb IAmb 00 22 17.1
comp=Z,17nm,1.0s
G05A Wamic 58.98 56 P **P** 00 22 15.7 +0.2
G05A IAmb IAmb 00 22 22.8
comp=Z,25nm,0.8s
E07A Sunnyside 59.04 54 P **P** 00 22 16.0 +0.1
E07A IAmb IAmb 00 22 17.0
comp=Z,16nm,1.0s
KBO Bosley Butte 59.05 60 P **P** 00 22 15.7 -0.4
WAH2 Wahluke Slope 59.08 53 P **P** 00 22 15.5 -0.6
C09A Chrisman Ranch 59.18 52 P **P** 00 22 16.4 -0.4
C09A IAmb IAmb 00 22 17.5
comp=Z,18nm,0.8s
I04A Tendick Farm, 59.20 57 P **P** 00 22 16.1 -0.9
I04A IAmb IAmb 00 22 18.4
comp=Z,24nm,1.2s
KLMR Klimovskoe 59.23 328 *e* P **P** 00 22 15.1 -1.8
KLMR pmax pmax
comp=Z,20nm,0.8s
KLMR MLR MLR
comp=Z,225nm,19.0s
HAWA Hanford 59.32 54 P **P** 00 22 17.3 -0.4
HAWA IAmb IAmb 00 22 18.9
comp=Z,18nm,1.2s
G06A Carlson Farm, 59.38 55 P **P** 00 22 18.6 +0.4
F07A Phinny Hill Vi 59.39 54 P **P** 00 22 18.6 +0.3
F07A IAmb IAmb 00 22 19.6
comp=Z,28nm,1.0s
WIFE Three Sisters- 59.39 57 P **P** 00 22 18.7 +0.2
WIFE IAmb IAmb 00 22 20.1
comp=Z,20nm,1.1s
I05D Terrebonne, OR 59.50 56 P **P** 00 22 19.2 +0.1
I05D IAmb IAmb 00 22 19.8
comp=Z,19nm,1.0s
NEW Newport 59.53 51 LR LR 00 48 44.1
comp=Z,78nm,18.9s,baz=320,slow=37
NEW Newport 59.53 51 P **P** 00 22 18.5 -0.8
NEW IAmb IAmb 00 22 20.1
comp=Z,24nm,1.1s
NEW Newport 59.53 51 P **P** 00 22 18.5 -0.8
NEW pmax pmax
comp=Z,24nm,1.1s
BBOR Butler Butte 59.58 58 P **P** 00 22 19.6 -0.3
J04A Umpqua Nationa 59.70 58 P **P** 00 22 20.3 -0.4
MMRI Maumere 59.75 212 P **P** 00 22 20.4 -0.6
MMRI Maumere 59.75 212 P **P** 00 22 21.3 +0.3
MMRI Maumere 59.75 212 P **P** 00 22 21.8 +0.8
comp=Z,3μmcomp=Z,42nm,0.6s
YPT Yellepit 59.84 54 P **P** 00 22 21.4 0.0
YPT IAmb IAmb 00 22 22.5
comp=Z,17nm,1.1s
KBL Kabul 59.87 290 P **P** 00 22 21.3 -0.7
KBL IAmb IAmb 00 22 22.2
comp=Z,18nm,0.9s
KBL Kabul 59.87 290 P **P** 00 22 21.3 -0.7
KBL pmax pmax
comp=Z,18nm,0.9s
E09A Wood Farm, Sta 60.02 53 P **P** 00 22 22.4 -0.1
E09A IAmb IAmb 00 22 23.5
comp=Z,22nm,0.9s
EDFI Ende, Flores 60.05 212 P **P** 00 22 21.9 -1.3
comp=Z,37nm,1.2s
PINE Pine Mountain 60.06 57 P **P** 00 22 22.9 -0.3
PINE IAmb IAmb 00 22 24.9
comp=Z,18nm,0.9s
SOEI Soe 60.08 209 P **P** 00 22 22.3 -1.1
SOEI Soe 60.08 209 P **P** 00 22 23.0 -0.4
SOEI Soe 60.08 209 P **P** 00 22 22.9 -0.4
comp=Z,997nmcomp=Z,56nm,0.9s
COEN Coen 60.13 187 P **P** 00 22 24.1 +0.5
comp=Z,60nm,1.0s
COEN Coen 60.13 187 P **P** 00 22 23.9 +0.3
COEN Coen 60.13 187 P **P** 00 22 24.1 +0.5
J05D Fort Rock, OR 60.19 57 P **P** 00 22 24.4 +0.4
J05D IAmb IAmb 00 22 25.7
comp=Z,22nm,1.0s
L04D Klamath Falls 60.20 59 P **P** 00 22 23.7 -0.4
YBH Yreka Blue Hor 60.25 59 P **P** 00 22 24.3 0.0
YBH Yreka Blue Hor 60.25 59 P **P** 00 22 24.3 0.0
YBH pmax pmax
comp=Z,8.0nm,0.8s
G08A Pilot Rock 60.29 54 P **P** 00 22 24.2 -0.5
LNOR Lincton Mounta 60.32 53 P **P** 00 22 24.7 -0.1
M02C Callahan 60.37 60 P **P** 00 22 25.1 0.0
KDU Kakadu 60.56 199 P **P** 00 22 26.0 -0.4
comp=Z,20nm,1.2s
N02D Trinity Center 60.71 60 P **P** 00 22 26.8 -0.6
N02D IAmb IAmb 00 22 29.0
comp=Z,13nm,0.7s
I07A Izee 60.71 56 P **P** 00 22 26.7 -0.8
K05A Summer Lake 60.73 58 P **P** 00 22 27.1 -0.6
F10A Beach Ranch, E 60.85 53 P **P** 00 22 28.1 -0.3
M03C McCloud 60.88 60 P **P** 00 22 28.7 +0.1
M03C IAmb IAmb 00 22 29.9
comp=Z,16nm,0.9s
MTN Manton Dam 61.02 200 P **P** 00 22 29.3 -0.3
comp=Z,58nm,1.0s
TPI Tanjungpandan 61.10 229 P **P** 00 22 31.5 +1.2
comp=Z,30nm,1.0s
O02D Mt. Diablo Mer 61.14 61 P **P** 00 22 30.7 +0.3
O02D IAmb IAmb 00 22 32.1
comp=Z,22nm,1.2s
BELG Belogornoye 61.22 317 *i* P **P** 00 22 30.3 -0.3
BELG pmax pmax
comp=Z,8.0nm,0.7s
SUMG Summit 61.41 3 *i* P **P** 00 22 31.0 -1.1
WSI Waingapu 61.42 213 P **P** 00 22 32.6 +0.3
BMO Blue Mountains 61.49 54 P **P** 00 22 33.0 +0.3
BMO Blue Mountains 61.49 54 P **P** 00 22 33.1 +0.3
BMO pmax pmax
comp=Z,6.0nm,0.9s
PSI Prapat 61.55 241 LR LR 00 50 34.0
comp=Z,62nm,19.6s,baz=29,slow=37
PSI Prapat 61.55 241 P **P** 00 22 34.4 +0.9
HATC Hat Creek Radi 61.55 60 IAmb IAmb 00 22 34.5
comp=Z,23nm,0.8s
RPSI Rantau Prapat 61.63 241 IAmb IAmb 00 22 35.1
comp=Z,20nm,0.9s
O03E Paynes Creek 61.67 60 IAmb IAmb 00 22 35.2
comp=Z,23nm,1.1s
WBSI Waikabubak, Su 61.74 214 P **P** 00 22 34.1 -0.5
comp=Z,49nm,0.8s
TWSI Taliwang, Sumb 61.94 217 P **P** 00 22 36.4 +0.6
comp=Z,1μmcomp=Z,22nm,1.2s
MLSI Meulaboh, Aceh 61.96 244 P **P** 00 22 37.6 +1.5
comp=Z,68nm,0.8s
GDXM Geysers 61.98 62 P **P** 00 22 35.1 -1.0
MNRC McLaughlin Min 62.15 62 P **P** 00 22 37.5 +0.3
MNRC IAmb IAmb 00 22 38.8
comp=Z,25nm,1.1s
WVOR Wild Horse Val 62.22 57 IAmb IAmb 00 22 38.9
comp=Z,20nm,0.9s
SUTB Sutter Butte 62.33 61 P **P** 00 22 37.3 -1.0
SUTB IAmb IAmb 00 22 38.6
comp=Z,34nm,1.5s
FFC Flin Flon 62.79 38 P **P** 00 22 41.0 -0.1
FFC IAmb IAmb 00 22 42.0
comp=Z,17nm,0.7s

FFC Flin Flon 62.79 38 P **P** **00 22 41.0 -0.1**
FFC pmax pmax
comp=Z,17nm,0.7s
BEKR Beckworth 62.80 60 IAmb IAmb 00 22 42.4
comp=Z,20nm,0.8s
FCC Fort Churchill 63.10 32 IAmb IAmb 00 22 43.5
comp=Z,17nm,0.7s
MPK Martis Peak 63.36 60 P **P** **00 22 45.6 +0.1**
SMRI Semarang 63.36 224 P **P** **00 22 45.6 +0.2**
SMRI Semarang 63.36 224 P **P** **00 22 46.9 +1.5**
FINES FINESS Array B 63.42 333 P **P** **00 22 43.4 -1.8**
comp=Z,13nm,0.8s,baz=27,slow=8.1,SNR=34
FINES LR LR 00 52 57.9
comp=Z,204nm,18.1s,baz=31,slow=38
comp=Z,13nm,0.8s
FINES FINESS Array B 63.42 333 P **P** **00 22 44.0 -1.2**
FINES FINESS Array B 63.42 333 *i* P **P** **00 22 43.9 -1.2**
FINES pmax pmax
comp=Z,13nm,0.8s
MOS Moscow 63.42 324 *e*P **P** **00 22 42.4 -2.9**
MOS pmax pmax
comp=Z,22nm,0.7s
PAHR Pah Rah Range 63.48 60 IAmb IAmb 00 22 47.1
comp=Z,18nm,0.9s
GSI Gunungsitoli 63.55 241 P **P** **00 22 46.5 -0.1**
MHC Mount Hamilton 63.60 63 P **P** **00 22 45.6 -1.3**
MHC Mount Hamilton 63.60 63 P **P** **00 22 45.6 -1.3**
MHC pmax pmax
comp=Z,11nm,1.3s
PNTR Pine Nut 63.74 60 P **P** **00 22 48.1 +0.1**
DLMT Dillon 63.77 51 IAmb IAmb 00 22 49.9
comp=Z,16nm,1.0s
HLID Hailey 63.92 54 P **P** **00 22 48.5 -0.6**
CMB Columbia Colle 63.94 62 IAmb IAmb 00 22 50.0
comp=Z,10nm,0.9s
BOZ Bozeman (W) 64.14 50 IAmb IAmb 00 22 51.6
comp=Z,18nm,0.8s
MTSU Mount Surprise 64.19 185 P **P** **00 22 51.0 +0.3**
comp=Z,14nm,1.0s
MTSU Mount Surprise 64.19 185 P **P** **00 22 51.6 +0.9**
WAKR Walker 64.21 61 P **P** **00 22 51.0 -0.1**
WAKR IAmb IAmb 00 22 52.3
comp=Z,12nm,0.8s
OBN Obninsk 64.29 324 LR LR 00 53 37.9
comp=Z,160nm,18.0s,baz=291,slow=39
OBN Obninsk 64.29 324 P **P** **00 22 49.3 -1.6**
OBN Obninsk 64.29 324*ce*P **P** **00 22 49.3 -1.6**
OBN *e* 00 23 26.9
OBN *e* 00 25 11.2
OBN *e*S **S** **00 31 19.6 -5.8**
OBN *e*SS **SS** **00 35 33.0 -1.6**
OBN pmax pmax
comp=Z,39nm,1.3s
OBN MLR MLR
comp=Z,156nm,17.0s
OBN Obninsk 64.29 324 *e*P **P** **00 22 49.3 -1.6**
MDSI Maura Dua 64.42 232 P **P** **00 22 53.6 +1.3**
HYBB Hyderabad (bro 64.44 269 *e*P **P** **00 22 52.9 +0.4**
HYBB *e*sP **pP** **00 22 58.3 -5.5**
HYBB *e*S **S** **00 31 32.6 +4.2**
RYN Ryan 64.69 60 IAmb IAmb 00 22 55.1
comp=Z,17nm,0.8s
HULI Fort Hunter Li 64.69 64 P **P** **00 22 54.3 +0.3**
HULI IAmb IAmb 00 22 55.0
comp=Z,23nm,0.8s
VRH Novokhopyorsk 64.76 318 *e*P **P** **00 22 52.5 -1.6**
VRH pmax pmax
comp=Z,24nm,0.8s
YHL Hebgen Lake 64.86 51 IAmb IAmb 00 22 56.6
comp=Z,12nm,0.9s
YHB Horse Butte 64.92 51 IAmb IAmb 00 22 56.9
comp=Z,18nm,0.9s
NVAR Mina Array Bea 64.95 60 P **P** **00 22 55.9 0.0**
comp=Z,13nm,0.7s,baz=290,slow=6.9,SNR=66
comp=Z,13nm,0.7s
MDPB Devils Postpil 64.99 61 IAmb IAmb 00 22 57.2
comp=Z,10nm,0.9s
NV11 Mina Array Sit 65.03 60 IAmb IAmb 00 22 57.4
comp=Z,12nm,0.8s
LPSR Galich'ya Gora 65.05 321 *e*P **P** **00 22 54.5 -1.5**
LPSR pmax pmax
comp=Z,40nm,0.8s
YMR Madison River 65.10 51 P **P** **00 22 56.2 -0.5**
YMR IAmb IAmb 00 22 58.2
comp=Z,14nm,0.9s
PKD Bear Valley Ra 65.17 63 IAmb IAmb 00 22 57.4
comp=Z,11nm,0.8s
TV1H Townsville Har 65.19 183 P **P** **00 22 57.7 +0.6**
YNM Yellowstone No 65.20 51 P **P** **00 22 57.7 +0.2**
YNM IAmb IAmb 00 23 02.0
comp=Z,15nm,0.7s
YNR Norris Junctio 65.22 51 P **P** **00 22 58.4 +0.8**
YNR IAmb IAmb 00 23 00.8
comp=Z,18nm,1.2s
ELK Elko 65.26 56 P **P** **00 22 57.5 -0.4**
ELK Elko 65.26 56 P **P** **00 22 57.5 -0.4**
ELK pmax pmax
comp=Z,4.0nm,0.8s
YFT Old Faithful 65.31 51 P **P** **00 22 58.4 +0.2**
YFT IAmb IAmb 00 23 00.7
comp=Z,13nm,0.9s
YNE Yellowstone No 65.39 50 P **P** **00 22 58.7 +0.1**
YNE IAmb IAmb 00 22 59.8
comp=Z,12nm,0.9s
YPP Pitchstone Pla 65.44 51 P **P** **00 22 59.9 +0.8**
YPP IAmb IAmb 00 23 26.6
comp=Z,18nm,1.5s
LKWY Lake 65.47 51 P **P** **00 23 00.0 +0.8**
LKWY IAmb IAmb 00 23 01.9
comp=Z,13nm,0.8s
LKWY Lake 65.47 51 P **P** **00 23 00.0 +0.8**
LKWY pmax pmax
comp=Z,13nm,0.8s
YMP Mirror Lake Pl 65.48 50 P **P** **00 22 59.5 +0.2**
YMP IAmb IAmb 00 23 12.5
comp=Z,20nm,1.4s
H17A Grant Village 65.49 51 P **P** **00 23 00.3 +1.0**
H17A IAmb IAmb 00 23 02.2
comp=Z,24nm,1.0s
VORR Voronezh 65.58 320 *e*P **P** **00 22 56.1 -3.3**
VORR pmax pmax
comp=Z,20nm,0.9s
FLWY Flagg Ranch 65.63 51 P **P** **00 23 00.4 +0.2**
FLWY IAmb IAmb 00 23 02.3
comp=Z,16nm,1.1s
RLMT Red Lodge 65.70 50 P **P** **00 23 00.8 +0.1**
RLMT IAmb IAmb 00 23 03.0
comp=Z,17nm,1.0s
FXWY Fox Creek 65.74 52 P **P** **00 23 00.7 -0.2**
FXWY IAmb IAmb 00 23 02.8
comp=Z,24nm,1.4s
MOOW Moose Ponds 65.82 52 P **P** **00 23 01.5 +0.1**
MOOW IAmb IAmb 00 23 03.3
comp=Z,19nm,1.1s
DSP Deep Springs 65.83 61 IAmb IAmb 00 23 02.8
comp=Z,18nm,0.9s
TIN Tinemaha, Big 65.88 61 P **P** **00 23 01.4 -0.4**
TIN Tinemaha, Big 65.88 61 P **P** **00 23 01.4 -0.4**
TIN pmax pmax
comp=Z,27nm,1.0s
VSR Storozhevoye 65.91 320 *e*P **P** **00 22 57.7 -3.9**
VSR pmax pmax
comp=Z,10.0nm,0.9s
LOHW Long Hollow 65.99 52 P **P** **00 23 02.9 +0.3**
LOHW IAmb IAmb 00 23 04.4
comp=Z,26nm,1.2s
HVU Hansel Valley 66.00 54 P **P** **00 23 02.6 +0.2**
HVU IAmb IAmb 00 23 03.8
comp=Z,12nm,0.9s
HVU Hansel Valley 66.00 54 P **P** **00 23 02.7 +0.2**
HVU pmax pmax
comp=Z,12nm,0.9s
SNOW Snow King Moun 66.00 52 P **P** **00 23 03.2 +0.5**
SNOW IAmb IAmb 00 23 04.6
comp=Z,26nm,1.1s
CTA Charters Tower 66.03 183 P **P** **00 23 02.9 +0.4**
CTAO Charters Tower 66.03 183 P **P** **00 23 02.3 -0.3**
CTAO IAmb IAmb 00 23 03.7
comp=Z,20nm,0.9s
CTAO Charters Tower 66.03 183 P **P** **00 23 03.0 +0.4**
CTAO Charters Tower 66.03 183 P **P** **00 23 02.3 -0.3**
CTAO pmax pmax
comp=Z,20nm,0.9s
VORD Divnogorie 66.03 319 *e*P **P** **00 22 59.8 -2.6**
VORD pmax pmax
comp=Z,20nm,0.9s
SFJD Kangerlussuaq 66.11 8 LR LR 00 53 55.1
comp=Z,129nm,19.0s,baz=344,slow=38
FRB Frobisher Bay 66.38 17 LR LR 00 56 18.5
comp=Z,136nm,18.7s,baz=298,slow=40
R11B Troy Canyon, C 66.62 59 IAmb IAmb 00 23 07.4
comp=Z,11nm,0.9s
HWUT Hardware Ranch 66.79 54 IAmb IAmb 00 23 08.9
comp=Z,31nm,1.3s
MPMC Manual Prospec 66.98 62 IAmb IAmb 00 23 09.7
comp=Z,17nm,1.0s
S11A Rachel 66.99 59 P **P** **00 23 09.0 +0.1**
DUG Dugway, Tooele 67.02 56 IAmb IAmb 00 23 10.3
comp=Z,25nm,1.1s
WCT Wildcat Mounta 67.02 60 IAmb IAmb 00 23 09.9
comp=Z,14nm,1.2s
QIS Mount Isa 67.03 190 P **P** **00 23 08.4 -0.6**
comp=Z,31nm,1.2s
QIS Mount Isa 67.03 190 P **P** **00 23 08.5 -0.5**
CLC China Lake 67.07 62 IAmb IAmb 00 23 10.1
comp=Z,22nm,0.9s
BW06 Boulder Array 67.12 52 IAmb IAmb 00 23 10.6
comp=Z,26nm,1.1s
PD31 Pinedale Array 67.12 52 IAmb IAmb 00 23 10.6
comp=Z,23nm,1.1s
PDAR Pinedale Array 67.12 52 P **P** **00 23 09.4 -0.4**
PDAR comp=Z,13nm,0.9s,baz=300,slow=4.8,SNR=96 LR LR 00 54 58.2
comp=Z,33nm,18.9s,baz=336,slow=38
comp=Z,13nm,0.9s
TPNV Topopah Spring 67.14 60 IAmb IAmb 00 23 10.9
comp=Z,16nm,0.8s
OSI Osito Audit: C 67.17 63 IAmb IAmb 00 23 10.8
comp=Z,23nm,0.8s
TCUT Toone Canyon 67.20 54 IAmb IAmb 00 23 11.6
comp=Z,18nm,1.0s
WRAB Tennant Creek 67.21 195 P **P** **00 23 09.3 -0.9**
WRAB Tennant Creek 67.21 195 P **P** **00 23 09.8 -0.4**
WRAB Tennant Creek 67.21 195*ce*P **P** **00 23 09.4 -0.8**
WRAB pmax pmax
comp=Z,64nm,1.3s
WRA Warramunga Arr 67.22 195 P **P** **00 23 09.6 -0.6**
comp=Z,38nm,0.9s,baz=11,slow=6.5,SNR=162
WRA LR LR 00 53 58.4
comp=Z,45nm,18.8s,baz=143,slow=37
comp=Z,38nm,0.9s
WRA Warramunga Arr 67.22 195 P **P** **00 23 08.9 -1.4**
WSHM Spangler Hills 67.28 62 IAmb IAmb 00 23 11.3
comp=Z,17nm,0.9s
CTU Camp Tracy 67.29 55 IAmb IAmb 00 23 11.8
comp=Z,9.7nm,0.7s
TPO Tropico Hills 67.30 63 IAmb IAmb 00 23 11.8
comp=Z,28nm,1.0s
MAK Makhachkala 67.46 309*c i* P **P** **00 23 09.6 -2.0**
MAK *e*PPP PPP 00 27 17.2
MAK *e*S **S** **00 32 02.3 -2.2**
MAK *e*SS **SS** **00 36 28.4 +4.0**
MAK pmax pmax
comp=Z,150nm,1.1s
NC204 NORSAR Array S 67.79 340 IAmb IAmb 00 23 23.0
comp=Z,23nm,1.2s
MPU Maple Canyon 67.81 55 IAmb IAmb 00 23 15.2
comp=Z,14nm,0.8s
SHOC Shoshone, Teco 67.82 61 IAmb IAmb 00 23 14.8
comp=Z,16nm,0.9s
MWC Mount Wilson 67.84 63 IAmb IAmb 00 23 14.4
comp=Z,23nm,1.1s
NB2 NORSAR Subarra 67.89 340 P **P** **00 23 12.8 -1.3**
comp=Z,1.8nm,0.7s,baz=28,slow=6.5
NOA NORSAR Array B 67.89 340 P **P** **00 23 12.6 -1.5**
comp=Z,3.8nm,0.7s,baz=29,slow=6.4,SNR=14
NOA LR LR 00 57 03.3
comp=Z,84nm,18.1s,baz=40,slow=40
comp=Z,3.8nm,0.7s
BSUT Blindstream Ca 67.96 54 IAmb IAmb 00 23 17.0
comp=Z,19nm,1.0s
HFS Hagfors 68.05 338 P **P** **00 23 13.5 -1.5**
comp=Z,3.9nm,0.7s,baz=35,slow=5.3,SNR=9.5
HFS LR LR 00 57 01.3
comp=Z,112nm,18.1s,baz=32,slow=40
comp=Z,3.9nm,0.7s
BFSC Mount Baldy Ra 68.07 63 IAmb IAmb 00 23 16.3
comp=Z,12nm,0.8s
MNK Minsk 68.13 328 *i* P **P** **00 23 15.1 -0.5**
MNK *i* *PP **pP** **00 23 27.0 0.0**
MNK *i* 00 23 40.4
MNK *i* 00 25 45.8
MNK *i* PPP PPP 00 27 24.7
MNK *i* S **S** **00 32 13.3 +1.2**
MNK *i* *SS **sS** **00 32 33.7 +2.7**
MNK *i* SS **SS** **00 36 34.0 -0.2**
MNK pmax pmax
comp=Z,30nm,0.8s
MNK pmax pmax
comp=E,23nm,1.0s
MNK pmax pmax
comp=N,7.0nm,0.7s
MNK MLR MLR
comp=E,550nm,21.0s
MNK MLR MLR
comp=N,465nm,21.0s
MNK MLR MLR
comp=Z,183nm,16.0s
AKT Akhty 68.34 308 *e*P **P** **00 23 16.3 -1.1**
AKT *e**SP **pP** **00 23 30.2 +1.5**
AKT *e* 00 23 40.7
AKT pmax pmax
comp=Z,29nm,0.8s
CCUT Cedar City 68.46 58 IAmb IAmb 00 23 19.5
comp=Z,18nm,1.3s
MTPC Mountain Pass 68.54 61 P **P** **00 23 18.6 -0.1**
TMUT Trail Mountain 68.54 55 IAmb IAmb 00 23 19.8
comp=Z,15nm,1.1s
ULM Lac du Bonnet 68.59 39 P **P** **00 23 17.2 -1.4**
comp=Z,6.9nm,0.6s,baz=333,slow=4.6,SNR=6.5
ULM LR LR 00 55 16.6
comp=Z,170nm,18.6s,baz=3.5,slow=38
comp=Z,6.9nm,0.6s
ULM Lac du Bonnet 68.59 39 P **P** **00 23 17.6 -0.9**
ULM Lac du Bonnet 68.59 39 P **P** **00 23 17.6 -0.9**
ULM pmax pmax
comp=Z,7.0nm,0.6s
RDMU Red Mountain 68.60 53 P **P** **00 23 19.3 +0.2**
ELS Elsinore Mount 68.61 63 P **P** **00 23 18.6 -0.5**
ELS IAmb IAmb 00 23 19.6
comp=Z,14nm,0.8s
MDND Maddock 68.65 42 P **P** **00 23 19.1 0.0**
P17A Butcher Ranch, 68.69 55 IAmb IAmb 00 23 20.7
comp=Z,26nm,1.1s
MTPU Mount Pierson 68.82 57 P **P** **00 23 20.9 +0.1**
K22A Casper 68.84 50 IAmb IAmb 00 23 29.5
comp=Z,13nm,1.0s
P18A Preston Nutter 68.86 55 IAmb IAmb 00 23 22.0
comp=Z,17nm,1.1s
LCMT Little Creek M 68.90 58 IAmb IAmb 00 23 22.1
comp=Z,15nm,0.9s
RSSD Black Hills 69.11 48 P **P** **00 23 21.8 -0.5**
RSSD IAmb IAmb 00 23 22.8
comp=Z,26nm,0.9s
RSSD Black Hills 69.11 48 P **P** **00 23 21.8 -0.5**
RSSD pmax pmax
comp=Z,26nm,1.0s
KNB Kanab 69.14 58 P **P** **00 23 22.5 0.0**
KNB IAmb IAmb 00 23 23.9
comp=Z,16nm,0.9s
KNB Kanab 69.14 58 P **P** **00 23 22.5 0.0**
KNB pmax pmax
comp=Z,16nm,0.9s
PKCU Pink Cliffs 69.15 57 P **P** **00 23 23.6 +0.9**
PKCU IAmb IAmb 00 23 24.4
comp=Z,22nm,1.3s
DNR Dunn Ranch,Anz 69.16 63 P **P** **00 23 22.1 -0.4**
DNR IAmb IAmb 00 23 23.3
comp=Z,21nm,0.9s
NCK Nalchik 69.17 311 *i* P **P** **00 23 22.6 +0.3**
NCK pmax pmax
comp=Z,21nm,0.8s
DANC Danby, Needles 69.21 61 P **P** **00 23 22.2 -0.5**
DANC IAmb IAmb 00 23 23.8
comp=Z,22nm,0.8s
AUNRC North Rockhamp 69.22 179 P **P** **00 23 23.4 +0.8**
PFO Pinyon Flats O 69.23 63 LR LR 00 54 21.3
comp=Z,73nm,18.0s,baz=298,slow=36
PFO Pinyon Flats O 69.23 63 P **P** **00 23 21.9 -1.1**
PFO Pinyon Flats O 69.23 63 P **P** **00 23 21.9 -1.1**
PFO pmax pmax
comp=Z,7.0nm,1.1s
BELC Belle Mtn. Jos 69.26 62 IAmb IAmb 00 23 23.4
comp=Z,12nm,0.9s
CPE Camp Elliot 69.32 64 P **P** **00 23 22.6 -0.8**
CPE IAmb IAmb 00 23 23.9
comp=Z,29nm,1.2s
KIV Kislovodsk 69.32 312 P **P** **00 23 24.0 +0.7**
KIV Kislovodsk 69.32 312 *e*P **P** **00 23 23.4 +0.1**
KIV pmax pmax
comp=Z,38nm,1.1s
KIV MLR MLR
comp=Z,124nm,17.0s
KIV Kislovodsk 69.32 312 *e*P **P** **00 23 24.0 +0.7**
KIV Kislovodsk 69.32 312 P **P** **00 23 24.3 +1.0**
comp=Z,37nm,0.9s
DPP Dos Picos Cty 69.34 64 P **P** **00 23 22.9 -0.7**
DPP IAmb IAmb 00 23 24.1
comp=Z,20nm,1.4s
KBZ Khabaz 69.37 312 P **P** **00 23 23.9 +0.4**
comp=Z,16nm,0.8s,baz=65,slow=4.8,SNR=26
KBZ LR LR 00 57 09.8
comp=Z,243nm,18.6s,baz=33,slow=39
comp=Z,16nm,0.8s
KBZ Khabaz 69.37 312*ce*P **P** **00 23 23.8 +0.4**
KBZ pmax pmax
comp=Z,18nm,0.8s
BORC Borrego Spring 69.49 63 P **P** **00 23 23.7 -0.8**
NEE2 Needles Airpor 69.58 61 P **P** **00 23 23.8 -1.2**
NEE2 IAmb IAmb 00 23 25.5
comp=Z,17nm,1.1s
O20A White River Ci 69.64 53 IAmb IAmb 00 23 26.2
comp=Z,21nm,1.1s
DZM Mont Dzumac 69.67 163 P **P** **00 23 25.9 +0.3**
comp=Z,25nm,0.8s,baz=3.2,slow=7.9,SNR=11
comp=Z,25nm,0.8s
DZM Mont Dzumac 69.67 163 *e*LR LR 00 44 42.4
comp=Z,89nm,22.8s
IRM Iron Mountain 69.67 62 IAmb IAmb 00 23 26.5
comp=Z,18nm,0.9s
BC3 Big Chuckawall 69.82 62 IAmb IAmb 00 23 27.1
comp=Z,14nm,1.0s
EPLO Experimental L 69.94 38 IAmb IAmb 00 23 27.0
comp=Z,30nm,1.1s
AGMN Agassiz Nation 70.04 40 IAmb IAmb 00 23 27.6
comp=Z,24nm,1.1s
PALK Pallekele 70.08 259 LR LR 00 57 42.4
comp=Z,92nm,18.9s,baz=41,slow=39
PALK Pallekele 70.08 259 P **P** **00 23 28.5 +0.2**
PALK IAmb IAmb 00 23 30.0
comp=Z,22nm,0.9s
PALK Pallekele 70.08 259 P **P** **00 23 28.5 +0.2**
PALK pmax pmax
comp=Z,22nm,0.9s
YUH Yuha Desert 70.21 63 P **P** **00 23 27.8 -1.1**
YUH IAmb IAmb 00 23 29.3
comp=Z,14nm,1.0s
SUW Suwalki 70.22 330 P **P** **00 23 27.2 -1.4**
SUW Suwalki 70.22 330 P **P** **00 23 27.2 -1.4**
PV21 Cone Mtn., Par 70.31 55 IAmb IAmb 00 23 30.6
comp=Z,21nm,0.8s
BLYC Blythe 70.33 62 IAmb IAmb 00 23 30.5
comp=Z,22nm,0.9s
PV10 Paradox Valley 70.40 55 P **P** **00 23 30.4 +0.1**
PV14 Lion Creek, Pa 70.42 55 IAmb IAmb 00 23 30.7
comp=Z,15nm,0.8s
PV22 Blue Mesa, Par 70.44 55 IAmb IAmb 00 23 31.2
comp=Z,26nm,1.0s
PV04 Paradox Valley 70.47 55 IAmb IAmb 00 23 31.6
comp=Z,25nm,0.9s
AKASG Malin Array Be 70.55 324 P **P** **00 23 29.4 -1.2**
comp=Z,12nm,0.7s,baz=37,slow=6.3,SNR=39
AKASG LR LR 00 56 44.7
comp=Z,111nm,18.2s,baz=39,slow=38
comp=Z,12nm,0.7s
AKASG Malin Array Be 70.55 324 P **P** **00 23 30.1 -0.5**
AKASG Malin Array Be 70.55 324*ce*P **P** **00 23 29.3 -1.3**
AKASG pmax pmax
comp=Z,12nm,0.7s
AKBB Malin Array Si 70.55 324 IAmb IAmb 00 23 30.6
comp=Z,21nm,0.9s
AKBB Malin Array Si 70.55 324*ce*P **P** **00 23 28.7 -1.9**
AKBB pmax pmax
comp=Z,17nm,0.9s
PV11 David Mesa, Pa 70.55 55 P **P** **00 23 31.0 -0.1**
KIEV Kiev 70.56 324 P **P** **00 23 29.5 -1.2**
KIEV IAmb IAmb 00 23 30.6
comp=Z,18nm,0.9s
KIEV Kiev 70.56 324 P **P** **00 23 29.5 -1.2**
KIEV pmax pmax
comp=Z,19nm,0.9s
KIEV Kiev 70.56 324 P **P** **00 23 28.9 -1.8**
comp=Z,102nm,0.9s
PV12 Saucer Basin, 70.58 55 IAmb IAmb 00 23 43.1
comp=Z,21nm,0.8s
PV07 Paradox Valley 70.58 55 P **P** **00 23 31.1 -0.3**
PV07 IAmb IAmb 00 23 32.1
comp=Z,24nm,1.1s
PV03 Paradox Valley 70.60 55 IAmb IAmb 00 23 32.3
comp=Z,22nm,0.9s
GLA Glamis 70.62 62 IAmb IAmb 00 23 32.3
comp=Z,18nm,0.8s
ESJX Sierra Juarez 70.63 64 IAmb IAmb 00 23 32.5
comp=Z,17nm,0.9s
PV02 Paradox Valley 70.69 55 IAmb IAmb 00 23 33.0
comp=Z,27nm,1.0s
PV15 Paradox Valley 70.74 55 IAmb IAmb 00 23 33.2
comp=Z,25nm,1.0s
GNI Garni 70.90 308 LR LR 00 56 58.1
comp=Z,102nm,18.7s,baz=37,slow=38
GNI Garni 70.90 308 P **P** **00 23 34.8 +1.6**
GNI IAmb IAmb 00 23 47.6
comp=Z,16nm,1.0s
GNI Garni 70.90 308*ce*P **P** **00 23 34.1 +0.9**
GNI pmax pmax
comp=Z,19nm,1.3s
AS31 Alice Springs 70.94 195 IAmb IAmb 00 23 34.6
comp=Z,14nm,0.6s
ASAR Alice Springs 70.94 195 P **P** **00 23 33.7 +0.5**
comp=Z,44nm,0.7s,baz=6.3,slow=5.4,SNR=425
ASAR LR LR 00 56 30.5
comp=Z,34nm,18.4s,baz=348,slow=37
comp=Z,44nm,0.7s
ASAR Alice Springs 70.94 195 P **P** **00 23 33.1 -0.1**
ASAR Alice Springs 70.94 195 P **P** **00 23 33.1 -0.1**
AUALC St Philip's Co 70.96 195 P **P** **00 23 34.0 +0.6**
WUAZ Wupatki 71.02 58 P **P** **00 23 33.8 -0.2**
SOC Sochi 71.09 314 *e*P **P** **00 23 32.2 -1.8**
SOC *e* 00 26 10.2
SOC *e*PPP PPP 00 27 53.3
SOC *e*S **S** **00 32 46.0 -1.3**
SOC MLR MLR
comp=Z,139nm,17.0s
Y14A Wickenburg 71.13 61 IAmb IAmb 00 23 35.4
comp=Z,17nm,1.0s
VTX Valle De La Tr 71.15 64 P **P** **00 23 34.8 0.0**
VTX IAmb IAmb 00 23 35.4
comp=Z,12nm,0.9s
EIDS Eidsvold 71.24 178 P **P** **00 23 35.9 +1.0**
comp=Z,39nm,1.8s
EIDS Eidsvold 71.24 178 P **P** **00 23 35.6 +0.6**
EIDS Eidsvold 71.24 178 P **P** **00 23 36.4 +1.5**
SUSD Miller 71.43 45 P **P** **00 23 35.4 -0.8**
MVCO Mesa Verde 71.52 55 IAmb IAmb 00 23 37.9
comp=Z,18nm,0.8s
F33A 5 Mile Ranch, 71.67 42 IAmb IAmb 00 23 37.9
comp=Z,18nm,0.8s
X16A Lo Mia Camp, P 71.74 59 P **P** **00 23 38.4 0.0**
MBWA Marble Bar 72.23 209 P **P** **00 23 41.0 0.0**
comp=Z,52nm,1.1s
MBWA Marble Bar 72.23 209 P **P** **00 23 41.1 +0.2**
MBWA Marble Bar 72.23 209 P **P** **00 23 41.2 +0.2**
K30B Basset 72.40 46 P **P** **00 23 41.5 -0.5**
OGNE Ogallala 72.42 49 P **P** **00 23 42.2 0.0**
PIX Pinacate 72.48 63 P **P** **00 23 41.6 -1.0**
PIX IAmb IAmb 00 23 43.2
comp=Z,25nm,1.0s
X18A Snowflake 72.54 58 P **P** **00 23 43.2 0.0**
PSAC2 Pilbara Seismi 72.55 209 P **P** **00 23 42.9 0.0**
comp=Z,56nm,0.9s
PSAC1 Pilbara Seismi 72.55 209 P **P** **00 23 42.9 0.0**
comp=Z,54nm,0.9s
PSA00 Pilbara Seismi 72.58 209 P **P** **00 23 43.0 0.0**
PSA00 Pilbara Seismi 72.58 209 P **P** **00 23 42.7 -0.4**
PSA00 Pilbara Seismi 72.58 209 P **P** **00 23 42.9 -0.2**
PSA00 IAmb IAmb 00 23 43.5
comp=Z,15nm,0.7s
PSA00 Pilbara Seismi 72.58 209 P **P** **00 23 43.5 +0.4**

QLP Quilpie 72.58 185 P **P** **00 23 43.7 +0.8**
QLP Quilpie 72.58 185 P **P** **00 23 44.0 +1.0**
PSAB3 Pilbara Seismi 72.59 209 P **P** **00 23 43.2 +0.1**
214A Organ Pipe Nat 72.61 62 P **P** **00 23 42.5 -0.9**
AUBSH Beerwah State 72.78 177 P **P** **00 23 45.4 +1.3**
BEL Belsk 72.84 330 *e*P **P** **00 23 44.7 +0.4**
SORM Soroca 72.90 323 ⇓P **P** **00 23 43.9 -0.9**
SORM Soroca 72.90 323 ⇓P **P** **00 23 43.9 -0.9**
AUWSH Wavell State H 73.32 177 P **P** **00 23 49.1 +1.8**
WRKA Warakurna 73.44 200 P **P** **00 23 48.8 +0.6**
KSCO Kaye Shedlock' 73.50 51 P **P** **00 23 48.0 -0.7**
KSCO IAmb IAmb 00 23 57.7
comp=Z,17nm,0.5s
GURO Guroymak-BITLI 73.51 309 P **P** **00 23 49.6 +0.8**
GURO IAmb IAmb 00 23 50.8
comp=Z,15nm,0.8s
TUC Tucson 73.59 60 P **P** **00 23 48.8 -0.5**
TUC Tucson 73.59 60 P **P** **00 23 48.8 -0.5**
TUC pmax pmax
comp=Z,14nm,1.3s
SPMN Marine on St. 73.74 41 IAmb IAmb 00 23 49.9
comp=Z,24nm,1.0s
T25A Trinidad 73.87 53 IAmb IAmb 00 23 51.8
comp=Z,20nm,0.9s
KWP Kalwaria Pacla 73.94 327 *e*P **P** **00 23 50.8 -0.1**
INKA Innaminka 74.00 188 P **P** **00 23 52.2 +0.9**
INKA IAmb IAmb 00 23 53.5
comp=Z,24nm,0.9s
TASM ASL Pad, Albuq 74.29 56 P **P** **00 23 53.2 -0.3**
ANMO Albuquerque 74.29 56 P **P** **00 23 53.0 -0.4**
ANMO Albuquerque 74.29 56 P **P** **00 23 53.2 -0.3**
ANMO IAmb IAmb 00 23 54.5
comp=Z,10nm,0.9s
ANMO Albuquerque 74.29 56 P **P** **00 23 53.5 0.0**
ANMO IAmb IAmb 00 23 54.5
comp=Z,8.9nm,0.8s
ANMO Albuquerque 74.29 56*ce*P **P** **00 23 52.8 -0.7**
ANMO pmax pmax
comp=Z,14nm,1.3s
DUN6 Lazy B Ranch 74.44 59 P **P** **00 23 54.2 -0.1**
DUN6 IAmb IAmb 00 23 55.5
comp=Z,29nm,0.9s
OJC Ojcow 74.53 329 P **P** **00 23 54.2 -0.1**
OJC Ojcow 74.53 329 P **P** **00 23 54.2 -0.1**
SBM South Baldy 74.56 57 P **P** **00 23 55.4 +0.1**
BURAR Bucovina Array 74.60 325 P **P** **00 23 54.1 -0.8**
Y22A Socorro 74.71 57 P **P** **00 23 55.8 -0.1**
SCHQ Schefferville 74.78 21 P **P** **00 23 54.9 -0.8**
comp=Z,4.1nm,0.7s,baz=337,slow=6.1,SNR=8.6
SCHQ LR LR 00 59 24.7
comp=Z,113nm,19.0s,baz=354,slow=38
comp=Z,4.1nm,0.7s
CRNM Carthage 74.83 57 P **P** **00 23 56.5 -0.1**
G40A Rib Lake 74.86 39 IAmb IAmb 00 23 56.4
comp=Z,30nm,1.2s
MARD Mardin 75.09 309 P **P** **00 23 58.5 +0.5**
MARD IAmb IAmb 00 23 59.8
comp=Z,21nm,0.8s
BZK Bozkurt 75.11 316 P **P** **00 23 58.9 +1.1**
ONER Baraj Valea Uz 75.14 323 ⇑P **P** **00 23 57.8 -0.2**
319A Douglas 75.16 60 P **P** **00 23 58.8 +0.3**
CBKS Cedar Bluff 75.18 49 P **P** **00 23 57.9 -0.5**
CBKS Cedar Bluff 75.18 49 P **P** **00 23 57.9 -0.5**
CBKS pmax pmax
comp=Z,13nm,0.9s
121A Cookes Peak, D 75.23 58 IAmb IAmb 00 24 00.5
comp=Z,21nm,1.0s
CFR Carcaliu 75.32 321 ⇑P **P** **00 23 59.7 +0.8**
CFR Carcaliu 75.32 321 ⇑P **P** **00 23 59.7 +0.8**
TPGR Topolog 75.45 321 ⇓P **P** **00 23 59.4 -0.3**
TURR Turia 75.52 323 ⇓P **P** **00 24 00.9 +0.7**
BISRR Bisoca 75.63 322 ⇓P **P** **00 24 01.2 +0.3**
MORC Moravsky Berou 75.69 330 P **P** **00 23 59.8 -1.3**
MORC Moravsky Berou 75.69 330 *e*P **P** **00 24 00.3 -0.8**
MORC Moravsky Berou 75.69 330 P **P** **00 23 59.8 -1.3**
MORC pmax pmax
comp=Z,14nm,1.0s
I40A Norwalk 75.76 40 P **P** **00 24 00.3 -1.2**
I40A IAmb IAmb 00 24 00.9
comp=Z,16nm,0.6s
TIRR Tirgusor 75.76 321 P **P** **00 24 02.7 +1.2**
TIRR IAmb IAmb 00 24 03.8
comp=Z,39nm,1.2s
TIRR Tirgusor 75.76 321 P **P** **00 24 02.7 +1.2**
TIRR pmax pmax
comp=Z,39nm,1.2s
HSIG 75.80 63 P **P** **00 24 01.6 -0.4**
CLL Collm 75.87 333 IAmb IAmb 00 24 02.3
comp=Z,22nm,1.3s
CLL Collm 75.87 333 *i* P **P** **00 24 00.4 -1.6**
CLL pmax pmax
comp=Z,24nm,1.4s
CLL Collm 75.87 333 *i* P **P** **00 24 00.4 -1.6**
comp=Z,24nm,1.4s
CLL *e*(SS) 00 39 12.0
CLL AMS AMS 00 55 00.0
comp=N,200nm,21.3s
CLL AMS AMS 00 55 00.0
comp=E,200nm,18.7s
CLL AMS AMS 01 01 00.0
comp=Z,200nm,18.3s
MLR Muntele Rosu 76.00 323 LR LR 01 01 17.6
comp=Z,147nm,19.1s,baz=41,slow=39
MLR Muntele Rosu 76.00 323 ⇓P **P** **00 24 03.9 +0.9**
MLR Muntele Rosu 76.00 323 ⇓P **P** **00 24 03.9 +0.9**
DRGR 76.27 325 ⇑P **P** **00 24 04.0 -0.5**
DRGR 76.27 325 ⇑P **P** **00 24 04.0 -0.5**
ARMA Armidale 76.28 178 P **P** **00 24 01.3 -3.2**
ARMA Armidale 76.28 178 P **P** **00 24 03.9 -0.6**
ARMA IAmb IAmb 00 24 06.9
comp=Z,20nm,0.8s
ARMA Armidale 76.28 178 P **P** **00 24 06.3 +1.8**
ICOR Ion Corvin 76.30 321 ⇓P **P** **00 24 04.9 +0.3**
HSKC Hora Svate Kat 76.34 333 *e*P **P** **00 24 04.8 0.0**
PSZ Piszkesteto 76.41 328 P **P** **00 24 04.7 -0.6**
PSZ Piszkesteto 76.41 328 P **P** **00 24 04.7 -0.6**
PSZ pmax pmax
comp=Z,7.0nm,0.9s
VRAC Vranov 76.42 330 LR LR 01 00 45.4
comp=Z,73nm,18.4s,baz=32,slow=38
VOIR 76.42 323 ⇑P **P** **00 24 05.7 +0.3**
VOIR 76.42 323 ⇑P **P** **00 24 05.7 +0.3**
I42A Draeger Farm, 76.51 39 P **P** **00 24 04.8 -1.1**
I42A IAmb IAmb 00 24 05.8
comp=Z,22nm,0.9s
EPT El Paso 76.53 58 P **P** **00 24 05.0 -1.3**
EPT IAmb IAmb 00 24 07.1
comp=Z,19nm,1.0s
H43A Windswept, Lux 76.55 38 P **P** **00 24 04.2 -1.8**
BNN Bunyan 76.55 313 P **P** **00 24 06.2 -0.1**
ARR Arges 76.65 323 ⇑P **P** **00 24 05.0 -1.6**
L40A Anamosa 76.91 42 IAmb IAmb 00 24 07.8
comp=Z,22nm,0.9s
AUPHS Peel High Scho 76.94 179 P **P** **00 24 10.0 +1.9**
N38A Joes South For 76.95 44 P **P** **00 24 07.2 -1.1**
MODS Modra-Piesok 76.97 329 *e*P **P** **00 24 09.2 +0.8**
MODS Modra-Piesok 76.97 329 *e*P **P** **00 24 09.2 +0.8**
BR131 Keskin Array S 77.00 315 P **P** **00 24 08.3 -0.5**
BR131 Keskin Array S 77.00 315 *i* P **P** **00 24 08.9 +0.1**
BRTR Keskin Array B 77.00 315 P **P** **00 24 08.2 -0.5**
comp=Z,5.3nm,1.1s,baz=35,slow=3.0,SNR=12
BRTR LR LR 01 02 19.3
comp=Z,54nm,19.6s,baz=80,slow=39
comp=Z,5.3nm,1.1s
BRTR Keskin Array B 77.00 315 P **P** **00 24 08.5 -0.3**
BRTR Keskin Array B 77.00 315*ce*P **P** **00 24 08.6 -0.2**
BRTR pmax pmax
comp=Z,5.0nm,1.1s
MSTX Muleshoe 77.09 54 P **P** **00 24 08.8 -0.6**
MSTX IAmb IAmb 00 24 10.0
comp=Z,19nm,1.0s
GAZ Gaziantep 77.11 311 P **P** **00 24 08.9 -0.5**
SIRR Siria 77.11 326 ⇑P **P** **00 24 08.6 -0.6**
NOKA Waynoka 77.22 50 IAmb IAmb 00 24 10.2
comp=Z,26nm,1.0s
MNTX Cornudas Mount 77.25 57 IAmb IAmb 00 24 11.1
comp=Z,12nm,0.8s
KAN08 Anthony NE Sta 77.29 49 P **P** **00 24 08.8 -1.5**
KAN08 IAmb IAmb 00 24 10.0
comp=Z,28nm,0.9s
ANTO Ankara 77.30 315 P **P** **00 24 10.5 +0.1**
ANTO IAmb IAmb 00 24 12.8
comp=Z,12nm,0.8s
ANTO Ankara 77.30 315 P **P** **00 24 10.5 +0.1**
ANTO pmax pmax
comp=Z,12nm,0.8s
SURR Surduc 77.35 325 ⇑P **P** **00 24 10.3 -0.1**
ELIS Ellis County 77.39 51 P **P** **00 24 10.1 -0.8**
CMSA Cobar Meteorol 77.44 183 P **P** **00 24 12.5 +1.6**
CMSA Cobar Meteorol 77.44 183 P **P** **00 24 12.2 +1.3**
KAN01 Argonia South 77.45 49 P **P** **00 24 10.5 -0.8**
KAN01 IAmb IAmb 00 24 11.1
comp=Z,30nm,1.0s
GDL2 Guadalupe Moun 77.47 56 P **P** **00 24 11.2 -0.4**
KAN14 Manchester OK 77.50 49 P **P** **00 24 10.7 -0.8**
KAN14 IAmb IAmb 00 24 11.3
comp=Z,19nm,1.1s
VLDQ Val d'Or 77.55 30 P **P** **00 24 09.3 -2.2**
VLDQ IAmb IAmb 00 24 15.4
comp=Z,18nm,1.1s
I45A Fountain 77.55 38 P **P** **00 24 10.4 -1.2**
KHC Kasperske Hory 77.58 332*ce*P **P** **00 24 11.5 -0.3**
KHC pmax pmax
comp=Z,11nm,1.3s
KHC Kasperske Hory 77.58 332 *e*P **P** **00 24 11.2 -0.6**
CKRC Cesky Krumlov 77.61 331 *e*P **P** **00 24 11.1 -0.8**
CKRC Cesky Krumlov 77.61 331 *e*P **P** **00 24 11.1 -0.8**
CLN7 Carlsbad 7 77.64 56 P **P** **00 24 11.5 -0.9**
SMWD Samnorwood 77.66 52 IAmb IAmb 00 24 13.4
comp=Z,35nm,1.1s
L42A Oliver, Polo 77.67 41 IAmb IAmb 00 24 11.7
comp=Z,14nm,0.7s
MEEK Meekatharra 77.68 208 P **P** **00 24 12.4 -0.1**
HTMS Hat Mesa 77.70 56 P **P** **00 24 12.3 -0.5**
CLNB Carlsbad 77.71 56 P **P** **00 24 12.5 -0.3**
P38A Dawn 77.71 45 IAmb IAmb 00 24 12.8
comp=Z,24nm,0.8s
GERES GERESS Array B 77.78 332 P **P** **00 24 12.1 -0.9**
comp=Z,1.1nm,0.6s,baz=40,slow=6.3,SNR=9.2
GERES LR LR 01 02 44.8
comp=Z,138nm,18.2s,baz=43,slow=39
comp=Z,1.1nm,0.6s
CROK Carrier 77.83 50 P **P** **00 24 12.7 -0.6**
CROK IAmb IAmb 00 24 13.6
comp=Z,28nm,0.9s
CONA Conrad Observa 77.85 330 *e*P **P** **00 24 13.0 -0.4**
comp=Z,7.2nm,1.2s
RONA Rosalia, Austr 77.89 330 *e*P **P** **00 24 13.1 -0.5**
comp=Z,9.1nm,1.0s
STKA Stephens Creek 78.03 187 P **P** **00 24 15.2 +1.1**
STKA Stephens Creek 78.03 187 P **P** **00 24 14.6 +0.4**
comp=Z,17nm,0.8s,baz=345,slow=7.8,SNR=31
STKA LR LR 01 00 25.6
comp=Z,92nm,19.2s,baz=23,slow=37
comp=Z,17nm,0.8s
STKA Stephens Creek 78.03 187 P **P** **00 24 14.8 +0.6**
AUDCS Dubbo College 78.06 181 P **P** **00 24 16.2 +1.9**
VHRN Van Horn 78.14 58 IAmb IAmb 00 24 16.2
comp=Z,15nm,0.8s
DKNS Dickens 78.35 53 IAmb IAmb 00 24 18.0
comp=Z,16nm,0.8s
PECS Pecos 78.37 57 P **P** **00 24 16.0 -0.5**
PECS IAmb IAmb 00 24 17.3
comp=Z,26nm,1.1s
BORA Eskisehir 78.43 317 P **P** **00 24 15.9 -0.7**
OK051 E0350 and S346 78.43 49 P **P** **00 24 15.4 -1.2**
OK051 IAmb IAmb 00 24 16.9
comp=Z,30nm,0.9s
POST Post 78.47 54 IAmb IAmb 00 24 17.7
comp=Z,30nm,0.9s
ARSA Arzberg 78.55 330 P **P** **00 24 17.5 +0.4**
ODSA Odessa 78.58 55 P **P** **00 24 17.0 -0.6**
QUOK Quay 78.75 49 IAmb IAmb 00 24 18.9
comp=Z,42nm,1.2s
SN07 Snyder 07 78.80 54 P **P** **00 24 18.1 -0.7**
J47A Sunmer 78.80 37 P **P** **00 24 18.1 -0.5**
BIOA Bad Ischl, Aus 78.81 331 *e*P **P** **00 24 17.1 -1.5**
comp=Z,7.6nm,1.2s
OK052 Battle Ridge R 78.83 49 IAmb IAmb 00 24 19.4
comp=Z,37nm,1.1s
M44A Midewin, Midew 78.90 40 IAmb IAmb 00 24 19.6
comp=Z,30nm,0.9s
OKCSW OKLAHOMA CITY 78.94 50 P **P** **00 24 18.9 -0.6**
FORT Forrest 79.02 199 P **P** **00 24 20.6 +0.9**
MNHN Monahans 79.03 56 IAmb IAmb 00 24 20.8
comp=Z,18nm,0.8s
APMT Aspermont 79.05 53 IAmb IAmb 00 24 20.5
comp=Z,24nm,0.8s
FNO Franklin 79.08 50 P **P** **00 24 19.6 -0.6**
FNO IAmb IAmb 00 24 21.0
comp=Z,33nm,1.0s
DEOK Depew 79.11 49 IAmb IAmb 00 24 20.9
comp=Z,40nm,1.2s
L46A Eue Claire 79.17 39 P **P** **00 24 20.1 -0.5**
SOKA Soboth 79.21 330 *i* P **P** **00 24 20.1 -0.8**
comp=Z,7.2nm,1.1s
X34A Smith Ranch, M 79.34 51 IAmb IAmb 00 24 22.7
comp=Z,22nm,1.0s
LESA Schwarzleotal 79.36 332 *e*P **P** **00 24 20.6 -1.1**
comp=Z,12nm,1.4s
R40A Maddies Statio 79.36 45 IAmb IAmb 00 24 21.7
comp=Z,24nm,0.8s
TUL3 Leonard 79.43 49 IAmb IAmb 00 24 22.0
comp=Z,15nm,0.7s
KBA Koelnbreinsper 79.44 331 *e*P **P** **00 24 21.3 -1.0**
comp=Z,12nm,1.2s
SGCY Sterling City 79.54 55 IAmb IAmb 00 24 23.5
comp=Z,30nm,0.9s
BBOO Buckleboo 79.56 191 P **P** **00 24 23.7 +1.1**
BBOO Buckleboo 79.56 191 IAmb IAmb 00 24 24.1
comp=Z,27nm,1.3s
WHYH Whyalla 79.58 190 P **P** **00 24 23.7 +1.1**
P43A Skaggs, Pawnee 79.61 42 IAmb IAmb 00 24 23.2
comp=Z,24nm,0.8s
AUJCS Jamestown Cent 79.63 189 P **P** **00 24 24.0 +1.1**
RLO Rose Lookout 79.63 48 IAmb IAmb 00 24 23.4
comp=Z,19nm,0.7s
WTFS Witchita Falls 79.63 52 IAmb IAmb 00 24 23.6
comp=Z,31nm,1.1s
U38A Gravette 79.74 47 IAmb IAmb 00 24 23.8
comp=Z,17nm,0.8s
SADO Sadowa 79.79 33 LR LR 01 01 48.5
comp=Z,106nm,18.0s,baz=7.5,slow=37
WATA Walderalm 79.80 332 *e*P **P** **00 24 22.9 -1.2**
comp=Z,16nm,1.3s
HTT Hallett 79.82 189 P **P** **00 24 25.6 +1.6**
HTT Hallett 79.82 189 P **P** **00 24 25.0 +1.0**
ABTX Abilene, Hawle 79.84 53 P **P** **00 24 24.1 -0.4**
ABTX IAmb IAmb 00 24 25.1
comp=Z,28nm,1.4s
WTTA Wattenberg 79.84 332 *e*P **P** **00 24 24.0 -0.5**
comp=Z,11nm,0.7s
RETA Reutte 79.92 333 *e*P **P** **00 24 23.0 -1.7**
comp=Z,3.6nm,0.6s
MOTA Moosalm 79.94 333 *i* P **P** **00 24 25.0 +0.1**
comp=Z,15nm,1.2s
TX31 Lajitas Ar. Si 79.98 58 IAmb IAmb 00 24 26.2
comp=Z,21nm,0.8s
TXAR Lajitas Array 79.98 58 P **P** **00 24 25.1 -0.2**
comp=Z,21nm,0.7s,baz=299,slow=4.1,SNR=234
TXAR PKKPbc **PKKPbc** **00 43 10.3 +2.5**
comp=Z,0.6nm,0.8s,baz=120,slow=2.8,SNR=8.1
comp=Z,21nm,0.7s
SQTA Sankt Quirin 80.02 333 *e*P **P** **00 24 24.8 -0.5**
comp=Z,12nm,1.3s
CCM Cathedral Cave 80.05 44 P **P** **00 24 24.7 -0.7**
CCM IAmb IAmb 00 24 25.6
comp=Z,26nm,0.8s
CCM Cathedral Cave 80.05 44 P **P** **00 24 24.7 -0.7**
CCM pmax pmax
comp=Z,26nm,0.9s
AAM Ann Arbor 80.06 37 P **P** **00 24 24.3 -1.1**
AAM IAmb IAmb 00 24 25.6
comp=Z,16nm,0.8s
AAM Ann Arbor 80.06 37 P **P** **00 24 24.3 -1.1**
AAM pmax pmax
comp=Z,16nm,0.8s
SLM Saint Louis 80.08 43 P **P** **00 24 24.7 -0.9**
SLM IAmb IAmb 00 24 25.8
comp=Z,27nm,0.7s
SLM Saint Louis 80.08 43 P **P** **00 24 24.7 -0.9**
SLM pmax pmax
comp=Z,27nm,0.7s
HHAR Hobbs 80.09 47 P **P** **00 24 24.2 -1.5**
HHAR IAmb IAmb 00 24 25.7
comp=Z,17nm,0.8s
YNG Young 80.12 181 P **P** **00 24 27.1 +1.5**
SFIN Lafayette 80.13 40 P **P** **00 24 24.6 -1.3**
MGMO Mountain Grove 80.25 46 IAmb IAmb 00 24 26.4
comp=Z,27nm,1.2s
OZNA Ozona 80.28 55 IAmb IAmb 00 24 27.2
comp=Z,18nm,0.7s
N47A Urbana 80.35 39 P **P** **00 24 25.3 -1.7**
LMQ La Malbaie 80.37 26 P **P** **00 24 25.9 -1.1**
LMQ IAmb IAmb 00 24 37.7
comp=Z,38nm,1.1s
MANT Manisa 80.42 317 P **P** **00 24 26.7 -1.1**
PLPT Palo Pinto 80.43 52 P **P** **00 24 26.7 -0.9**
PLPT IAmb IAmb 00 24 28.1
comp=Z,19nm,0.9s
Q44A Meyer Farm, Va 80.44 42 IAmb IAmb 00 24 27.8
comp=Z,26nm,0.9s
FVM French Village 80.50 44 IAmb IAmb 00 24 28.1
comp=Z,18nm,0.7s
HPIG 80.54 61 IAmb IAmb 00 24 29.1
comp=Z,13nm,0.7s
Z35A Perchaven, San 80.62 51 P **P** **00 24 27.5 -1.1**
Z35A IAmb IAmb 00 24 28.7
comp=Z,30nm,1.1s
FW06 Azle 80.73 52 P **P** **00 24 28.1 -1.1**
FW06 IAmb IAmb 00 24 29.5
comp=Z,43nm,1.4s
DAVOX Davos/Dischmat 80.83 333 LR LR 01 03 59.5
comp=Z,111nm,19.2s,baz=77,slow=38
N49A Columbus Grove 80.97 38 IAmb IAmb 00 24 30.6
comp=Z,44nm,1.2s
OLIL Olney 81.00 42 IAmb IAmb 00 24 32.3
comp=Z,30nm,1.0s
ASF Jabal al Asfar 81.05 308 LR LR 01 06 01.3
comp=Z,55nm,19.3s,baz=57,slow=40
M50A Fremont 81.06 37 P **P** **00 24 29.5 -1.2**
M50A IAmb IAmb 00 24 30.9
comp=Z,22nm,0.8s
KMBL Kambalda 81.12 204 P **P** **00 24 28.5 -2.5**
CAN Canberra 81.14 180 P **P** **00 24 31.9 +0.8**
CAN Canberra 81.14 180 P **P** **00 24 30.8 -0.3**
CAN IAmb IAmb 00 24 33.1
comp=Z,16nm,1.0s
CAN Canberra 81.14 180 P **P** **00 24 30.8 -0.3**
CAN pmax pmax
comp=Z,16nm,1.0s
BRDY Brady 81.21 54 P **P** **00 24 30.9 -0.9**
BRDY IAmb IAmb 00 24 32.3
comp=Z,19nm,1.1s
MMAI Mount Meron Ar 81.22 309 P **P** **00 24 32.2 +0.3**
comp=Z,7.0nm,0.8s,baz=28,slow=5.7,SNR=17
MMAI LR LR 01 03 23.8
comp=Z,70nm,19.4s,baz=22,slow=38
comp=Z,7.0nm,0.8s
PDG Podgorica 81.26 325 P **P** **00 24 30.7 -1.2**
AUMAR Marden Senior 81.29 189 P **P** **00 24 33.3 +1.5**
FCAR Ozark Folk Cen 81.32 46 IAmb IAmb 00 24 32.1
comp=Z,22nm,0.7s
RAR Rarotonga 81.33 133 LR LR 00 56 22.8
comp=Z,29nm,21.3s,baz=298,slow=32
JCT Junction City 81.36 55 IAmb IAmb 00 24 33.1
comp=Z,27nm,0.8s
CGM3 Cape Girardeau 81.42 44 IAmb IAmb 00 24 33.1
comp=Z,29nm,1.3s
PBMO Poplar Bluff 81.45 45 IAmb IAmb 00 24 33.0
comp=Z,23nm,0.7s
AUMBR Murray Bridge 81.47 188 P **P** **00 24 33.3 +0.6**
O49A Covington 81.51 39 P **P** **00 24 32.2 -1.0**
O49A IAmb IAmb 00 24 33.4
comp=Z,20nm,1.0s
WHTX Lake Whitney, 81.53 52 P **P** **00 24 31.3 -2.2**
P48A Milroy 81.63 40 IAmb IAmb 00 24 33.9
comp=Z,22nm,0.8s
MIAR Mount Ida 81.63 48 IAmb IAmb 00 24 34.5
comp=Z,22nm,0.9s
LCAR Lake Charles 81.66 45 P **P** **00 24 33.2 -0.9**
WHAR Wooly Hollow 81.70 47 IAmb IAmb 00 24 34.6
comp=Z,24nm,0.8s
N51A Ashland 81.74 37 P **P** **00 24 33.5 -1.0**
N51A IAmb IAmb 00 24 34.5
comp=Z,34nm,1.1s
BALJ Balqa 81.80 308 IAmb IAmb 00 24 36.6
comp=Z,20nm,0.9s
ACSO Alum Creek Sta 82.05 38 P **P** **00 24 35.0 -1.1**
ACSO IAmb IAmb 00 24 36.4
comp=Z,21nm,1.1s
X40A Basin Creek Fa 82.06 48 P **P** **00 24 35.4 -0.8**
X40A IAmb IAmb 00 24 36.8
comp=Z,21nm,1.1s
UALR University of 82.08 47 P **P** **00 24 35.1 -1.2**
WCI Wyandotte Cave 82.24 41 P **P** **00 24 35.9 -1.2**
WCI IAmb IAmb 00 24 37.6
comp=Z,26nm,0.9s
WCI Wyandotte Cave 82.24 41 P **P** **00 24 35.9 -1.2**
WCI pmax pmax
comp=Z,26nm,0.9s
PEBM Pemiscott Bayo 82.26 45 P **P** **00 24 36.6 -0.6**
HBAR Harrisburg 82.31 45 P **P** **00 24 37.1 -0.4**
HNDO Hondo 82.37 55 P **P** **00 24 36.9 -1.0**
GHAJ Ghor Haditha 82.44 308 P **P** **00 24 38.2 0.0**
LNXT Lenox 82.45 44 P **P** **00 24 38.1 -0.1**
KLBR Kellerberrin 82.55 207 P **P** **00 24 38.9 +0.4**
UTMT University of 82.56 44 P **P** **00 24 38.5 -0.3**
ZCCA Zocca 82.63 331 P **P** **00 24 39.2 +0.1**
HALT Halls 82.68 44 P **P** **00 24 39.1 -0.3**
O53A New Philadelph 82.78 37 P **P** **00 24 38.9 -1.0**
ARPS Mount Arapiles 82.87 186 P **P** **00 24 40.5 +0.5**
MILA Mila 82.87 180 P **P** **00 24 41.9 +1.7**
T47A Sharon Grove 82.87 42 P **P** **00 24 40.1 -0.3**
Z41A Richland Creek 83.03 48 P **P** **00 24 40.5 -0.8**
Z41A IAmb IAmb 00 24 41.7
comp=Z,25nm,1.2s
R50A Paris 83.08 40 IAmb IAmb 00 24 42.1
comp=Z,12nm,1.0s
TAOE Nuku Hiva Isla 83.12 110 *e*LR LR 00 50 29.6
comp=Z,147nm,25.3s
833A Chaparral WMA, 83.22 56 IAmb IAmb 00 24 43.5
comp=Z,27nm,1.4s
NATX Nacogdoches 83.22 50 P **P** **00 24 42.1 -0.2**
WVT Waverly 83.23 43 P **P** **00 24 41.9 -0.4**
WVT IAmb IAmb 00 24 42.8
comp=Z,18nm,0.9s
WVT Waverly 83.23 43 P **P** **00 24 41.9 -0.4**
WVT pmax pmax
comp=Z,18nm,0.9s
TOO Toolangi 83.46 183 P **P** **00 24 44.1 +1.0**
BRAT Ballarat 83.51 184 P **P** **00 24 45.1 +1.8**
AUMTC Mt Clear Colle 83.57 184 P **P** **00 24 45.7 +2.1**
U49A Red Boiling Sp 83.88 42 P **P** **00 24 44.6 -1.0**
U49A IAmb IAmb 00 24 46.1
comp=Z,18nm,0.7s
S51A Beattyville 83.94 40 IAmb IAmb 00 24 46.2
comp=Z,12nm,0.8s
NWAO Narrogin (SRO) 83.95 207 P **P** **00 24 44.9 -0.8**
NWAO Narrogin (SRO) 83.95 207 P **P** **00 24 44.9 -0.8**
NWAO Narrogin (SRO) 83.95 207 P **P** **00 24 44.7 -1.0**
NWAO Narrogin (SRO) 83.95 207 P **P** **00 24 44.7 -1.0**
NWAO pmax pmax
comp=Z,32nm,1.0s
PPT Papeete 83.96 123 LR LR 00 54 51.5
comp=Z,83nm,20.6s,baz=292,slow=30
ACER Acerenza 83.96 326 P **P** **00 24 44.7 -1.3**
ACER IAmb IAmb 00 24 46.6
comp=Z,32nm,1.3s
CLTN Cedars of Leba 83.97 42 P **P** **00 24 44.8 -1.2**
CLTN IAmb IAmb 00 24 46.7
comp=Z,19nm,1.0s
PPT2 Papeete2 83.97 123 *e*LR LR 00 51 03.0
PPT2 *e*LR LR 00 51 05.9
comp=Z,187nm,25.2s
comp=Z,152nm,24.2s
Q54A Coxs Mills 84.00 37 P **P** **00 24 45.5 -0.7**
EIL Elat 84.03 307 LR LR 01 07 19.0
comp=Z,102nm,18.9s,baz=2.5,slow=39
PLAL Pickwick Lake 84.03 44 IAmb IAmb 00 24 46.1
comp=Z,16nm,0.7s
143A Socs Landing, 84.19 48 P **P** **00 24 46.6 -0.7**
Y45A Yeager Farm, C 84.21 46 P **P** **00 24 47.3 0.0**
ITM Ithomi 84.53 320 IAmb IAmb 00 24 55.5
comp=Z,18nm,0.9s
HBVL Hebbronville 84.59 56 P **P** **00 24 49.9 +0.6**
TZTN Tazewell 84.87 40 P **P** **00 24 50.0 -0.6**
TZTN IAmb IAmb 00 24 51.2
comp=Z,19nm,1.1s
R55A Marlinton 84.90 37 P **P** **00 24 50.5 -0.3**
R55A IAmb IAmb 00 24 51.5
comp=Z,23nm,1.0s
X48A Hartselle 84.96 44 IAmb IAmb 00 24 51.0
comp=Z,18nm,0.8s
VBMS Vicksburg 85.03 47 P **P** **00 24 51.6 +0.1**

CPCT	Cooper Cave	85.33	41	P	P	00 24 51.7	-1.2
PSUB	Penn St. - Bra	85.34	33	P	P	00 24 54.4	+1.5
146A	Union	85.44	46	P	P	00 24 53.6	+0.1
TKL	Tuckaleechee C	85.50	41	LR	LR	01 06 02.0	
	comp=Z,187nm,18.1s,baz=340,slow=38						
TKL	Tuckaleechee C	85.50	41	IAmb	IAmb	00 24 54.8	
	comp=Z,25nm,1.0s						
ZAIG	Zacatecas	85.50	62	P	P	00 24 53.6	-0.8
ZAIG				IAmb	IAmb	00 24 55.4	
	comp=Z,17nm,1.0s						
FPAL	Fort Paine	85.57	43	IAmb	IAmb	00 24 54.5	
	comp=Z,14nm,1.0s						
Y49A	Blount Mountai	85.75	44	IAmb	IAmb	00 24 55.2	
	comp=Z,22nm,0.9s						
W52A	Murphy	85.90	41	P	P	00 24 55.1	-0.7
W52A				IAmb	IAmb	00 24 56.4	
	comp=Z,16nm,1.1s						
X51A	Calhoun	85.90	42	P	P	00 24 55.5	-0.3
X51A				IAmb	IAmb	00 24 57.5	
	comp=Z,16nm,1.0s						
CBN	Corbin Frederi	86.08	35	P	P	00 24 55.9	-0.7
LRAL	Lakeview Retre	86.13	45	IAmb	IAmb	00 24 57.0	
	comp=Z,12nm,0.9s						
346A	Big Creek Wild	86.23	47	P	P	00 24 57.4	-0.1
BG3	Lake Jocassee	86.43	41	P	P	00 24 57.8	-0.7
V55A	Taylorsville	86.48	39	P	P	00 24 58.0	-0.6
Y52A	Lilburn	86.85	42	P	P	00 25 00.3	-0.2
Y52A				IAmb	IAmb	00 25 01.2	
	comp=Z,21nm,0.9s						
KMSC	Kings Mountain	87.02	39	P	P	00 25 00.7	-0.6
KMSC				IAmb	IAmb	00 25 01.7	
	comp=Z,20nm,1.0s						
PAULI	Pauline	87.08	40	P	P	00 25 00.9	-0.6
PAULI				IAmb	IAmb	00 25 02.0	
	comp=Z,20nm,1.0s						
MXZ	Matakaoa Point	87.33	157	P	P	00 25 01.1	-1.2
250A	Grady	87.35	45	P	P	00 25 02.4	-0.5
HODGE	Hodges	87.37	41	P	P	00 25 02.5	-0.5
HODGE				IAmb	IAmb	00 25 04.4	
	comp=Z,24nm,1.2s						
VAE	Valguarnera	87.42	326	LR	LR	01 06 46.7	
	comp=Z,82nm,18.1s,baz=103,slow=37						
152A	Waverly Hall	87.53	43	IAmb	IAmb	00 25 04.2	
	comp=Z,18nm,0.9s						
W57A	Gilead	87.60	39	P	P	00 25 02.9	-1.2
W57A				IAmb	IAmb	00 25 04.6	
	comp=Z,18nm,1.0s						
URZ	Urewera	87.67	159	LR	LR	00 59 47.5	
	comp=Z,69nm,19.8s,baz=356,slow=32						
BIRD	Birdtown, Kers	87.83	39	IAmb	IAmb	00 25 06.4	
	comp=Z,20nm,1.2s						
W59A	Clinton	88.25	37	P	P	00 25 06.6	-0.6
154A	Montrose	88.33	42	P	P	00 25 07.2	-0.3
Y57A	Sumter	88.39	39	P	P	00 25 07.4	-0.5
Y57A				IAmb	IAmb	00 25 14.8	
	comp=Z,13nm,1.0s						
X58A	Rowland	88.39	38	P	P	00 25 07.2	-0.6
352A	Blakely	88.41	44	P	P	00 25 07.5	-0.4
TBI	Tubuai	88.58	126	eLR	LR	00 52 57.0	
	comp=Z,968nm,30.8s						
TIGA	Tifton	89.08	43	P	P	00 25 10.9	-0.2
NNZ	Nelson	89.62	162	P	P	00 25 13.3	+0.2
MRNZ	Matariki Terra	89.66	163	P	P	00 25 12.6	-0.7
KEST	Kesra	90.87	329	LR	LR	01 10 41.7	
	comp=Z,148nm,19.6s,baz=356,slow=39						
ESDC	Sonseca Array	91.25	340	LR	LR	01 10 41.9	
	comp=Z,90nm,20.8s,baz=334,slow=38						
OXZ	Oxford	91.37	164	P	P	00 25 21.4	+0.3
MDT	Midelt	97.92	338	LR	LR	01 16 27.3	
	comp=Z,57nm,18.0s,baz=47,slow=39						
DBIC	Dimbokro	122.59	329	PKP	PKPdf	00 31 10.6	-1.1
	comp=Z,6.1nm,0.6s,baz=32,slow=1.7,SNR=11						
VNDA	Vanda	123.68	177	PKP	PKPdf	00 31 11.4	-0.4
	comp=Z,2.9nm,0.7s,baz=322,slow=4.7,SNR=8.1						
MREMI	Moremi	127.91	276		PKiKP	00 31 22.1	-0.2
LPHEP	Lephephe	129.53	277	PKPdf	PKiKP	00 31 25.1	-0.4
MAW	Mawson	130.42	210	PKP	PKiKP	00 31 25.5	-0.2
	comp=Z,3.1nm,0.8s,baz=80,slow=5.0,SNR=8.8						
MAL2	Monte Alegre,	131.41	32		PKiKP	00 31 29.1	-0.4
KOOLE	Kule	133.16	282		PKPdf	00 31 32.2	+0.5
BOSA	Boshof	133.28	272	PKP	PKPdf	00 31 32.2	+0.5
	comp=Z,2.7nm,0.8s,baz=50,slow=3.2,SNR=7.6						
QSPA	South Pole Qui	135.93	180	PKhKP	PKPpre	00 31 25.5	
QSPA				PP	PP	00 34 14.5	-1.0
	comp=Z,1.1nm,0.3s,baz=333,slow=2.3,SNR=5.5						
	comp=Z,3.9nm,0.9s,baz=345,slow=3.8,SNR=4.6						
LPAZ	La Paz	136.84	59	PKP	PKPdf	00 31 39.4	+0.1
	comp=Z,3.6nm,0.8s,baz=301,slow=1.1,SNR=13						
SIV	San Ignacio	140.60	50	PKhKP	PKPpre	00 31 36.5	
	comp=Z,1.8nm,0.5s,baz=301,slow=3.8,SNR=12						
SIV				PKP	PKPdf	00 31 44.6	-0.8
	comp=Z,5.3nm,1.0s,baz=324,slow=2.7,SNR=8.4						
PTLB	Pontes e Lacer	141.16	47		PKPdf	00 31 46.4	0.0
H03N2	Juan Fernandez	141.32	88	T	T	03 08 41.0	
	baz=307,slow=77,SNR=146						
H03N1	Juan Fernandez	141.33	88	T	T	03 08 42.2	
	baz=307,slow=77,SNR=146						
H03N3	Juan Fernandez	141.33	88	T	T	03 08 40.9	
	baz=307,slow=77,SNR=143						
LCO	Las Campanas	144.33	75		PKPbc	00 31 50.6	+0.1
LCO	Las Campanas	144.33	75	PKIKP	PKPbc	00 31 50.6	+0.1
SLA	San Lorenzo	144.81	65	eP	PKPab	00 31 51.4	-0.5
FSA	Cafayete	145.49	67	eP	PKPdf	00 31 53.4	-0.6
TINO	Tinogasta	145.80	71	eP	PKPbc	00 31 54.8	-0.2
VCA	Vinchina	145.82	73	eP	PKPbc	00 31 54.8	-0.3
AROD	Rodeo	145.89	76	eP	PKPbc	00 31 55.1	-0.4
ACDV	Cuesta del Vie	146.13	75	eP	PKPdf	00 31 46.7	-8.3
BDFB	Brasilia	146.23	31	PKPbc	PKPdf	00 31 55.9	+0.4
	baz=308,slow=2.9						
ACCO	Cerro Coronel	146.43	76	eP	PKPbc	00 31 56.5	-0.6
AANI	Anillaco	146.71	71	eP	PKPdf	00 31 55.4	-0.6
MT05	Renca	146.96	82		PKPdf	00 31 56.9	+0.7
RTLS	Leoncito	147.01	78	eP	PKPbc	00 31 57.9	-0.8
ACLC	CERRO LA CRUZ	147.10	72	eP	PKPdf	00 31 56.2	-0.5
AUSP	Uspallata	147.21	79	eP	PKPbc	00 31 59.6	+0.4
CYA	Choya	147.21	70	eP	PKPbc	00 31 57.9	-1.1
AVFE	Valle Fertil	147.56	74	eP	PKPdf	00 31 58.5	+1.2
CFA	Coronel Fontan	147.61	77	PKPbc	PKPbc	00 31 58.6	-1.4
	comp=Z,24nm,0.7s,baz=288,slow=2.9,SNR=68						
ARCO	CERRO ARCO	147.88	79	eP	PKPdf	00 31 59.0	+1.2
APLL	PUNTA DE LOS L	148.01	73	eP	PKPdf	00 31 59.0	+1.0
NVL	N'lazarevskaya	148.06	205	PKIKP	PKPdf	00 31 56.7	0.0
NVL				e		00 35 30.1	
NVL				ePPP	PPP	00 38 46.8	
NVL				eSS	SS	00 54 33.0	+1.6
NVL				eSSS	SSS	01 00 08.2	
NVL				PKPbc	PKPbc		
	comp=Z,68nm,0.7s			pmax	pmax		
AAGR	Agrelo	148.09	79	eP	PKPbc	00 32 00.1	-1.2
ACAN	Cantantal	148.73	77	eP	PKPbc	00 32 02.4	-0.5
TROLL	Troll, Antarti	149.83	200	⇑PKPbc	PKPbc	00 32 04.9	+0.3
	comp=Z,3µm,0.7s						
LL01	San Ignacio de	150.07	98	PKPbc	PKiKP	00 32 06.3	-0.4
PLCA	Paso Flores	150.72	94	PKP	PKPdf	00 32 01.4	-0.6
	comp=Z,4.0nm,0.9s,baz=277,slow=3.3,SNR=6.8						
PLCA				PKPbc	PKPbc	00 32 07.7	+0.1
	comp=Z,34nm,0.8s,baz=268,slow=2.6,SNR=60						
CPUP	Villa Florida	150.94	56	PKP	PKPdf	00 32 01.8	-0.9
	comp=Z,1.2nm,1.0s,baz=295,slow=1.5,SNR=5.1						
CPUP				PKPbc	PKPbc	00 32 07.9	-0.5
	comp=Z,5.1nm,0.8s,baz=309,slow=3.0,SNR=31						
SMAI	San Martin Ant	151.18	152		PKiKP	00 32 07.9	-0.2
SNAA	Sanae	151.27	198	⇑PKPbc	PKPbc	00 32 07.6	-0.3
	comp=Z,572nm,0.7s						
SNAA	Sanae	151.27	198	PKPbc	PKPbc	00 32 07.3	-0.6
	comp=Z,25nm,0.7s,baz=158,slow=2.1,SNR=68						
SNAA				PP	PP	00 35 45.0	-2.3
	comp=Z,2.4nm,1.0s,baz=131,slow=11,SNR=3.5						
SNAA	Sanae	151.27	198		PKPdf	00 32 01.4	-0.5
SNAA	Sanae	151.27	198	PKIKP	PKPdf	00 32 01.4	-0.5
SNAA						00 35 45.0	
GO09	Cerro Castillo	152.29	116	PKPab	PKPab	00 32 22.1	+1.2
VNA2	Neumayer--Watz	152.78	196	⇑PKPbc	PKPbc	00 32 11.2	0.0
	baz=121,slow=4.5						
VNA2				⇓PKPdf	PKPdf	00 32 03.7	-0.3
	comp=Z,43nm,0.6s,baz=115,slow=1.7						
VNA3	Neumayer Olymp	152.94	195	⇑PKPab	PKPab	00 32 23.0	-0.1
VNA3				⇓PKPdf	PKPdf	00 32 03.5	-0.8
	comp=Z,37nm,0.7s						
VNA3				⇑PKPbc	PKPbc	00 32 11.4	-0.2
VNA1	Neumayer--Stat	153.18	196	⇑PKPab	PKPab	00 32 24.1	+0.1
VNA1				⇓PKPdf	PKPdf	00 32 05.5	+0.9
	comp=Z,23nm,1.0s						
VNA1				⇑PKPbc	PKPbc	00 32 12.1	0.0

*IPEC **23** 00:23:15.3±0.2,50.07N×18.42E,h0km,ML1.7/6, Error ellipse: s-maj=1.7km s-min=1.4km az=52.0*

PRU 23 00:23:16.9,50.05N×18.32E,h0km,1C,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.09	292	ePG	Pg	00 23 19.1	+0.5
RAC				eSG	Sg	00 23 22.4	+2.7
OKC	Ostrava-Krasne	0.24	208	ePG	Pg	00 23 21.1	-0.4
OKC				eSG	Sg	00 23 25.1	+0.5
	comp=Z,66nm,0.8s						
STEB	Steborice	0.37	252	ePG	Pg	00 23 23.9	-0.1
STEB				eSG	Sg	00 23 30.1	+1.3
	comp=Z,78nm,0.3s						
MORC	Moravsky Berou	0.57	242	⇑P	Pg	00 23 28.0	+0.1
MORC	Moravsky Berou	0.57	242	ePG	Pg	00 23 27.5	-0.3
MORC				eSG	Sg	00 23 35.4	+0.2
MORC	Moravsky Berou	0.57	242	ePg	Pg	00 23 27.4	-0.4
	baz=62						
MORC				eSg	Sg	00 23 35.3	+0.1
	17nm,0.3s,baz=62						
ANAC	Anensky vrch	0.61	273	ePg	Pg	00 23 28.0	-0.5
	baz=90						
ANAC				eSg	Sg	00 23 36.3	-0.1
	12nm,0.3s,baz=90						
LOSC	Losov	0.75	235	ePg	Pg	00 23 30.8	-0.4
	baz=56						
LOSC				eSg	Sg	00 23 40.8	-0.1
	14nm,0.3s,baz=56						
OJC	Ojcow	0.97	79	ePg	Pg	00 23 31.6	-3.8
OJC				eSg	Sg	00 23 43.7	-4.2
OJC	Ojcow	0.97	79	eP	Pg	00 23 32.5	-2.9
KRLC	Kraliky	0.99	272	ePG	Pg	00 23 34.5	-1.4
KRLC				eSG	Sg	00 23 48.4	-0.3
LANS	Liptovska Anna	1.17	140	ePG	Pg	00 23 37.0	-2.3
LANS				eSG	Sg	00 23 49.7	-4.7
LANS				eLG	Lg	00 23 57.6	
DPC	Dobruska-Polom	1.32	284	ePG	Pg	00 23 41.1	-1.1
DPC				eSG	Sg	00 23 59.2	0.0
	comp=Z,14nm,0.4s						
VRAC	Vranov	1.34	237	ePg	Pg	00 23 41.1	-1.6
	baz=56						
VRAC				eSg	Sg	00 23 59.6	-0.5
	12nm,0.5s,baz=56						
NIE	Niedzica	1.43	115	ePg	Pn	00 23 41.4	-2.7
NIE				eSg	Sg	00 24 00.7	-2.2
NIE	Niedzica	1.43	115	eP	Pn	00 23 41.7	-2.5
OSTC	Ostas	1.44	291	ePG	Pn	00 23 42.3	-2.0
OSTC				eSG	Sg	00 24 03.0	-0.2
KRUC	Moravsky	1.60	232	ePn	Pn	00 23 45.6	-0.8
	baz=52						
KRUC				eSg	Sn	00 24 07.2	-0.5
	7.8nm,0.4s,baz=52						
TREC	Trest	1.99	249	eSG	Sb	00 24 19.4	+0.1
STHS	Stebnicka Huta	2.00	107	e	Sn	00 24 16.7	-1.0
STHS	Stebnicka Huta	2.00	107	ePN	Pn	00 23 51.0	-1.0
STHS				eSN	Sn	00 24 16.7	-1.0
STHS				eLG	Lg	00 24 21.6	
STHS	Stebnicka Huta	2.00	107	eP	Pn	00 23 51.0	-1.0
PRU	Pruhonice	2.44	270	eSG	Sb	00 24 32.4	+0.2
PVCC	Panska Ves	2.45	283	eSG	Sg	00 24 35.6	-0.1
KHC	Kasperske Hory	3.22	255	eSG	Sg	00 24 58.0	-2.3
	comp=Z,4.3nm,0.6s						

IDC 23 00:27:39.8±5.8,5.32S×150.77E,h96km±50km,mb2.9/3, mbtmp3.4/4,MS2.7/1,Error ellipse: s-maj=126.2km s-min=36.7km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.41	221	P	Pn	00 28 57.1	-1.0
	13nm,0.5s,baz=51,slow=6.9,SNR=8.2						
PMG				S	Sn	00 30 00.8	+1.7
	11nm,0.4s,baz=31,slow=23,SNR=3.7						
PMG				LR	LR	00 30 51.6	
	comp=Z,74nm,20.7s,baz=329,slow=35						
WRA	Warramunga Arr	21.61	226	P	P	00 32 22.7	+0.5
	0.4nm,0.8s,baz=53,slow=10,SNR=4.8						
	0.4nm,0.8s						
ASAR	Alice Springs	24.43	220	P	P	00 32 48.9	-0.7
	0.7nm,0.7s,baz=55,slow=8.8,SNR=8.2						
	0.7nm,0.7s						
ILAR	Eielson Array	83.40	22	P	P	00 39 56.6	+0.4
	0.2nm,0.6s,baz=259,slow=5.8,SNR=2.1						
	0.2nm,0.6s						

*NOU **23** 00:33:29.7, 17.65S×177.60W, h610km, mb4.6/13, Fiji Islands Region*
*IDC **23** 00:33:32.7±3.1, 17.93S×178.01W, h570km±34km, mb3.6/18, mbtmp4.5/19, Error ellipse: s-maj=18.0km s-min=14.9km az=118.0*
*NEIC **23** 00:33:33.8±2.4, 18.0S±0.1×177.9W±0.1, h582km±7km, mb4.3/104, Error ellipse: s-maj=17.4km s-min=15.0km az=166.0*

ISC 23 00:33:33.8±0.3,18.04S±0.08×177.96W±0.06,h590km, n257,σ0892/260,mb4.3/73,1C-16D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.81	274	P	P	00 34 57.5	+0.2
MSVF	Nonsavu	3.81	274	P	P	00 34 57.2	-0.1
MSVF	Nonsavu	3.81	274	S	S	00 36 08.5	+3.2
AFI	Afiamalu	7.23	56	P	P	00 35 20.7	-4.9
NIUE	Niue	7.69	99	P	P	00 35 29.3	-0.5
NIUE	Niue	7.69	99	P	P	00 35 29.3	-0.5
MARNC	Mare, Loyalty	13.62	253	P	P	00 36 27.6	-1.4
MARNC	Mare, Loyalty	13.62	253	P	P	00 36 29.2	+0.2
PINNC	Pines Island,	14.42	249	P	P	00 36 36.7	-0.1
SANVU	Saraoutou	14.44	278	P	P	00 36 38.5	+1.4
DZM	Mont Dzumac	15.19	252	P	P	00 36 44.0	-0.1
	6.9nm,0.7s,baz=117,slow=22,SNR=6.9						
RAR	Rarotonga	17.42	103	P	P	00 37 04.5	-0.1
OUZ	Omahuta	18.68	202	P	P	00 37 15.8	0.0
OUZ	Omahuta	18.68	202	P	P	00 37 18.6	+2.8
WCZ	Waipu Caves	19.08	199	P	P	00 37 21.8	+2.3
KUZ	Kuaotunu	19.45	195	P	P	00 37 22.8	+0.1
KUZ	Kuaotunu	19.45	195	P	P	00 37 25.8	+3.0
MXZ	Matakaoa Point	19.72	189	P	P	00 37 25.0	-0.3
HAZ	Te Kaha	19.99	190	P	P	00 37 26.1	-1.6
TOZ	Tahuroa Road	20.43	195	P	P	00 37 31.9	+0.2
TOZ				IAmb	IAmb	00 37 33.8	
	comp=Z,17nm,1.2s						
TOZ	Tahuroa Road	20.43	195	P	P	00 37 32.8	+1.1
MWZ	Matawai	20.60	190	P	P	00 37 31.1	-2.1
URZ	Urewera	20.60	191	P	P	00 37 31.3	-1.8
URZ	Urewera	20.60	191	P	P	00 37 30.6	-2.5
BKZ	Black Stump Fm	21.59	192	P	P	00 37 40.3	-1.9
BKZ	Black Stump Fm	21.59	192	P	P	00 37 40.2	-1.9
VRZ	Vera Road	21.94	195	P	P	00 37 44.9	-0.3
TSZ	Takapari Road	22.56	192	P	P	00 37 50.1	-0.6
BFZ	Birch Farm	23.11	191	P	P	00 37 54.3	-1.2
BFZ	Birch Farm	23.11	191	P	P	00 37 55.0	-0.5
MRZ	Mangatainoka R	23.22	193	P	P	00 37 54.5	-2.0
BHW	Baring Head	24.08	193	P	P	00 38 02.1	-2.0
QRZ	Quartz Range	24.13	198	P	P	00 38 04.2	-0.4
QRZ	Quartz Range	24.13	198	P	P	00 38 04.9	+0.3
PLWZ	Palliser	24.16	193	P	P	00 38 03.6	-1.2
PLWZ	Palliser	24.16	193	P	P	00 38 03.2	-1.7
TKNZ	Takaka Hill	24.20	197	P	P	00 38 04.9	-0.4
NNZ	Nelson	24.26	196	P	P	00 38 04.9	-0.9
THZ	Tophouse	24.90	196	P	P	00 38 10.5	-0.9
THZ	Tophouse	24.90	196	P	P	00 38 10.1	-1.4
DSZ	Denniston Nort	25.19	198	P	P	00 38 14.2	+0.2
KHZ	Kahutara	25.35	195	P	P	00 38 14.9	-0.4
KHZ	Kahutara	25.35	195	P	P	00 38 13.9	-1.4
GVZ	Greta Valley S	25.99	195	P	P	00 38 19.5	-1.5
LTZ	Lake Taylor	26.02	197	P	P	00 38 19.5	-1.7
LTZ	Lake Taylor	26.02	197	P	P	00 38 19.6	-1.7
OXZ	Oxford	26.59	196	P	P	00 38 25.2	-1.0
WVZ	Waitaha Valley	26.73	199	P	P	00 38 26.7	-0.7
FOZ	Fox Glacier	27.43	200	P	P	00 38 33.0	-0.5
JCZ	Jackson Bay	28.25	200	P	P	00 38 39.9	-0.9
JCZ	Jackson Bay	28.25	200	P	P	00 38 40.3	-0.5
ODZ	Otahua Downs	28.56	197	P	P	00 38 43.4	+0.1
MLZ	Mavora Lakes	29.61	200	P	P	00 38 52.5	0.0
EIDS	Eidsvold	29.62	250	P	P	00 38 53.2	+0.4
EIDS				IAmb	IAmb	00 38 53.4	
	comp=Z,4.7nm,0.6s						
TUZ	Tuapeka	29.68	198	P	P	00 38 53.1	+0.1
ARMA	Armidale	30.24	240	P	P	00 38 58.9	+0.7
CAN	Canberra	33.96	233	P	P	00 39 30.4	+0.9
CAN				IAmb	IAmb	00 39 31.4	
	comp=Z,4.4nm,0.7s						
PMG	Port Moresby	34.90	280		P	00 39 38.2	+0.6
TOO	Toolangi	37.41	231	P	P	00 39 59.0	+1.0
TOO				IAmb	IAmb	00 40 00.0	
	comp=Z,6.0nm,0.9s						
COEN	Coen	37.53	270		P	00 39 59.8	+0.6
STKA	Stephens Creek	38.94	241	P	P	00 40 10.9	+0.5
	comp=Z,4.3nm,0.5s,baz=82,slow=10,SNR=11						
	comp=Z,4.3nm,0.5s						
INKA	Innaminka	39.09	248		P	00 40 12.9	+1.2
INKA				IAmb	IAmb	00 40 13.6	
	comp=Z,4.9nm,0.7s						
WR8	Warramunga Arr	44.87	260		P	00 40 56.4	-0.7
WR8				IAmb	IAmb	00 40 56.9	
	comp=Z,8.0nm,1.1s						
WB0	Warramunga Arr	44.99	260		P	00 40 57.4	-0.6
WRA	Warramunga Arr	45.02	260	P	P	00 40 57.5	-0.7
	comp=Z,9.0nm,0.7s,baz=95,slow=7.2,SNR=183						
WRA				PcP	PcP	00 42 26.9	+0.5
	comp=Z,0.9nm,0.5s,baz=88,slow=4.2,SNR=5.7						
WRA				S	S	00 46 52.2	-2.9
	comp=Z,0.7nm,0.9s,baz=98,slow=14,SNR=3.6						
	comp=Z,9.0nm,0.7s						
WRA	Warramunga Arr	45.02	260		P	00 40 57.7	-0.6
AS31	Alice Springs	45.16	254		P	00 40 59.4	+0.1
AS31				IAmb	IAmb	00 41 00.1	
	comp=Z,8.8nm,0.9s						
ASAR	Alice Springs	45.16	254	P	P	00 40 59.0	-0.3
	comp=Z,32nm,0.8s,baz=86,slow=8.9,SNR=340						
ASAR				PcP	PcP	00 42 27.4	+0.5
	comp=Z,2.0nm,0.6s,baz=105,slow=4.7,SNR=6.5						
ASAR				PP	PP	00 42 52.8	-2.5
	comp=Z,0.9nm,0.8s,baz=95,slow=7.9,SNR=2.3						
ASAR				S	S	00 46 56.0	-1.0
	comp=Z,2.5nm,0.7s,baz=93,slow=15,SNR=23						
	comp=Z,32nm,0.8s						
ASAR	Alice Springs	45.16	254		P	00 40 59.5	+0.2
MTN	Manton Dam	49.22	268	P	P	00 41 28.5	-1.2
MTN				IAmb	IAmb	00 41 29.7	
	comp=Z,15nm,0.8s						
FORT	Forrest	50.33	245	P	P	00 41 36.7	-1.0
FORT				IAmb	IAmb	00 41 38.0	
	comp=Z,7.8nm,0.8s						
KNRA	Kununurra	50.90	264	P	P	00 41 41.7	-0.2
FITZ	Fitzroy Crossi	53.42	261	P	P	00 42 00.1	+0.1
SOEI	Soe	56.49	270	P	P	00 42 22.9	+1.3
SOEI				IAmb	IAmb	00 42 23.8	
	comp=Z,33nm,0.9s						
MBWA	Marble Bar	58.45	256	P	P	00 42 34.2	-0.4
MBWA				IAmb	IAmb	00 43 17.8	
	comp=Z,29nm,1.4s						
VNDA	Vanda	60.35	185	P	P	00 42 47.7	+1.5
	comp=Z,1.4nm,0.5s,baz=359,slow=9.2,SNR=6.9						
	comp=Z,1.4nm,0.5s						
VNDA	Vanda	60.35	185	P	P	00 42 48.2	+2.1
VNDA				IAmb	IAmb	00 43 30.1	
	comp=Z,17nm,1.4s						
TOLI2	Tolitoli	63.16	281	P	P	00 43 05.9	+0.4
TOLI2				IAmb	IAmb	00 43 06.2	
	comp=Z,7.1nm,0.8s						
JAGI	Jajag, Banyuwa	66.46	268	P	P	00 43 25.1	-1.2
MJAR	Matsushiro Arr	68.27	323	P	P	00 43 36.2	-0.6
	comp=Z,4.1nm,0.5s,baz=159,slow=6.0,SNR=11						
	comp=Z,4.1nm,0.5s						
MJAR	Matsushiro Arr	68.27	323	P	P	00 43 36.6	-0.2
MJAR				IAmb	IAmb	00 43 37.2	
	comp=Z,7.6nm,1.2s						
MAJO	Matsushiro	68.27	323	P	P	00 43 35.8	-1.1
MAJO				IAmb	IAmb	00 43 36.9	
	comp=Z,9.1nm,0.6s						
MJB9	Matsu-Tunnel	68.27	323	P	P	00 43 37.0	+0.1
MJB9				IAmb	IAmb	00 43 37.9	
	comp=Z,8.7nm,0.6s						
ADK	Adak	69.64	1	P	P	00 43 44.1	-0.5
JKA	Kamikawa-asahi	71.60	331	P	P	00 43 57.7	+1.3
QSPA	South Pole Qui	72.01	180	P	P	00 44 03.5	+4.9
	comp=Z,7.2nm,0.6s,baz=33,slow=1.5,SNR=20						
UNV	Unalaska Valle	72.27	7	P	P	00 43 59.0	-0.9
SSLB	Suanglung	72.66	303	P	P	00 44 02.3	-0.7
SSLB				IAmb	IAmb	00 44 03.3	
	comp=Z,16nm,0.9s						
TPUB	Ta-pu	72.69	302	P	P	00 44 02.2	-0.9
PETK	Petropavlovsk-	73.92	345	P	P	00 44 09.3	-0.2
	comp=Z,8.5nm,0.7s,baz=134,slow=8.6,SNR=7.8						
	comp=Z,8.5nm,0.7s						
PETK	Petropavlovsk-	73.92	345	P	P	00 44 09.0	-0.5
SDPT	Sand Point	74.60	10	P	P	00 44 12.3	-0.9
KSRS	Korea Array	75.08	318	P	P	00 44 16.7	+0.4
	comp=Z,1.5nm

ELK	Elko	82.47	43			P	00 44 55.6	-0.1
WUAZ	Wupatki	82.51	49	P		P	00 44 56.3	+0.4
WUAZ				IAmb		IAmb	00 44 58.0	
	comp=Z,5.4nm,1.1s							
G08A	Pilot Rock	82.66	38	P		P	00 44 56.9	+0.5
G08A				IAmb		IAmb	00 44 58.2	
	comp=Z,10nm,1.3s							
GHO	Glory Hole Cre	82.84	13	P		P	00 44 56.6	-0.2
HAWA	Hanford	82.96	36	P		P	00 44 58.9	+1.2
HAWA				IAmb		IAmb	00 44 59.1	
	comp=Z,4.5nm,0.8s							
L22K	Petersville	83.12	12	P		P	00 44 57.5	-0.7
L22K				IAmb		IAmb	00 44 58.0	
	comp=Z,11nm,1.1s							
MTPU	Mount Pierson	83.15	46	P		P	00 45 00.6	+1.2
BMRM	Bremner River	83.17	16	P		P	00 44 58.4	-0.1
BMRM				IAmb		IAmb	00 44 59.0	
	comp=Z,21nm,1.1s							
PPLA	Purkeypile	83.18	12	P		P	00 44 58.0	-0.6
PPLA				IAmb		IAmb	00 45 13.0	
	comp=Z,18nm,1.4s							
MESA	MESA	83.22	17	P		P	00 44 59.5	+0.5
SCM	Sheep Creek Mo	83.25	14	P		P	00 44 58.7	-0.2
CRQM	Cirque	83.38	16	P		P	00 44 60.0	+0.3
TGL	Tana Glacier	83.46	17	P		P	00 44 59.7	-0.3
J19K	Poorman	83.59	10	P		P	00 45 01.0	+0.6
J19K				IAmb		IAmb	00 45 25.1	
	comp=Z,9.1nm,1.4s							
TABL	Table Mountain	83.67	17	P		P	00 45 01.5	+0.4
D08A	Wollman Farm,	83.69	36	P		P	00 45 01.3	0.0
KTH	Kantishna Hill	84.02	12	P		P	00 45 01.6	-1.1
KTH				IAmb		IAmb	00 45 02.2	
	comp=Z,11nm,1.0s							
F10A	Beach Ranch, E	84.05	38	P		P	00 45 03.0	-0.3
F10A				IAmb		IAmb	00 45 04.6	
	comp=Z,7.4nm,1.0s							
RPSI	Rantau Prapat	84.28	275	P		P	00 45 03.5	-1.5
RPSI				IAmb		IAmb	00 45 05.9	
	comp=Z,9.1nm,0.8s							
PLID	Pearl Lake	84.29	39			P	00 45 04.5	-0.1
RND	Reindeer	84.31	13	P		P	00 45 03.7	-0.4
HLID	Hailey	84.45	41	P		P	00 45 05.8	+0.4
CCB	Clear Creek Bu	85.62	13	P		P	00 45 08.9	-1.4
CCB				IAmb		IAmb	00 45 10.4	
	comp=Z,9.7nm,1.2s							
TX31	Lajitas Ar. Si	85.71	57	P		P	00 45 12.5	+0.8
TX31				IAmb		IAmb	00 45 14.8	
	comp=Z,4.5nm,1.1s							
TXAR	Lajitas Array	85.71	57	P		P	00 45 13.4	+1.7
	comp=Z,1.9nm,0.8s,baz=218,slow=6.1,SNR=23							
	comp=Z,1.9nm,0.8s							
TXAR	Lajitas Array	85.71	57	P		P	00 45 12.4	+0.8
IL31		85.92	13	P		P	00 45 10.9	-0.8
IL31				IAmb		IAmb	00 45 11.2	
	comp=Z,7.3nm,1.1s							
ILAR	Eielson Array	85.92	13	P		P	00 45 10.6	-1.1
	comp=Z,1.5nm,0.4s,baz=220,slow=5.2,SNR=38							
	comp=Z,1.5nm,0.4s							
MCMT	McKenzie Canyo	86.07	40	P		P	00 45 14.2	+1.0
J25K	Salcha River,	86.11	13	P		P	00 45 12.2	-0.5
J25K				IAmb		IAmb	00 45 12.7	
	comp=Z,3.2nm,0.6s							
XAN	Xi'an	86.68	307	P		P	00 45 17.8	+1.7
XAN				pmax		pmax		
	comp=Z,17nm,1.0s							
HILR	Hailar Array B	86.87	325	P		P	00 45 17.1	+0.5
	comp=Z,0.6nm,0.3s,baz=126,slow=9.4,SNR=2.1							
	comp=Z,0.6nm,0.3s							
YHB	Horse Butte	87.05	41	P		P	00 45 18.8	+1.0
YHB				IAmb		IAmb	00 45 20.6	
	comp=Z,5.7nm,0.9s							
OVMT	Ovando	87.10	38	P		P	00 45 17.6	-0.3
YHL	Hebgen Lake	87.11	41	P		P	00 45 19.4	+1.2
YHL				IAmb		IAmb	00 45 20.8	
	comp=Z,6.6nm,0.9s							
BW06	Boulder Array	87.16	43	P		P	00 45 18.5	+0.1
PD31	Pinedale Array	87.16	43	P		P	00 45 18.3	-0.1
PDAR	Pinedale Array	87.16	43	P		P	00 45 18.6	+0.3
	comp=Z,1.3nm,0.7s,baz=221,slow=2.8,SNR=18							
	comp=Z,1.3nm,0.7s							
PDAR	Pinedale Array	87.16	43	P		P	00 45 17.7	-0.7
BOZ	Bozeman (W)	87.20	40	P		P	00 45 18.6	+0.3
BOZ				IAmb		IAmb	00 45 20.1	
	comp=Z,5.1nm,1.4s							
HHC	Hu-ho-hao-te	87.67	314	*e*P		P	00 45 20.5	-0.1
HHC				pmax		pmax		
	comp=Z,15nm,0.6s							
HHC				pmax		pmax		
	comp=Z,60nm,4.5s							
CMAR	Chiang Mai Arr	89.33	290	P		P	00 45 30.2	+1.4
	comp=Z,1.4nm,0.3s,baz=107,slow=2.7,SNR=16							
	comp=Z,1.4nm,0.3s							
CMAR	Chiang Mai Arr	89.33	290	P		P	00 45 29.4	+0.7
PZH	PanZhiHua	89.59	298	P		P	00 45 31.4	+1.5
PZH				pmax		pmax		
	comp=Z,10.0nm,1.2s							
TROLL	Troll, Antarti	90.17	180	⇓P		P	00 45 32.4	+0.6
	comp=Z,116nm,0.5s							
G30M	tAoh Zrail Nji	90.22	15	P		P	00 45 30.8	-1.0
G30M				IAmb		IAmb	00 45 32.5	
	comp=Z,7.4nm,0.9s							
SNAA	Sanae	90.45	178	⇓P		P	00 45 33.2	+0.2
	comp=Z,41nm,0.7s							
SNAA	Sanae	90.45	178	P		P	00 45 33.5	+0.5
	comp=Z,1.4nm,0.7s,baz=204,slow=8.2,SNR=11							
	comp=Z,1.4nm,0.7s							
VNA3	Neumayer Olymp	90.58	176	⇓P		P	00 45 33.9	+0.4
	comp=Z,6.2nm,0.6s							
VNA2	Neumayer--Watz	91.02	177	⇓P		P	00 45 36.4	+0.8
	comp=Z,4.7nm,0.7s,baz=175,slow=4.5							
VNA1	Neumayer--Stat	91.25	177	⇓P		P	00 45 37.8	+1.2
	comp=Z,3.9nm,0.8s							
LZDM	Lanzhou Array	91.37	307	P		P	00 45 38.5	+0.3
	comp=Z,1.3nm,0.3s,baz=97,slow=12,SNR=1.5							
	comp=Z,1.3nm,0.3s							
SONM	Songino Array	93.93	319	P		P	00 45 48.5	-0.9
	comp=Z,0.5nm,0.7s,baz=126,slow=2.9,SNR=3.3							
	comp=Z,0.5nm,0.7s							
YKA	Yellowknife Ar	94.28	25	P		P	00 45 49.7	-0.6
	comp=Z,0.7nm,0.7s,baz=242,slow=4.2,SNR=4.5							
	comp=Z,0.7nm,0.7s							
ZON	Zonda	96.20	126	P		P	00 46 00.4	+0.4
MKAR	Makanchi Array	109.53	314	PKiKP		PKiKP	00 50 57.5	-0.6
	comp=Z,0.5nm,0.4s,baz=208,slow=0.9,SNR=11							
KURBB	Kurchatov Arra	112.26	318	PKiKP		PKiKP	00 51 02.2	-0.8
	comp=Z,0.9nm,0.7s,baz=94,slow=1.9,SNR=9.9							
BVAR	Borovoye Array	117.22	321	PKP		PKPdf	00 51 12.0	-0.6
	comp=Z,1.3nm,0.5s,baz=96,slow=1.7,SNR=10							
KBL	Kabul	118.72	300			PKPdf	00 51 16.2	-0.1
ARTI	Arti	123.30	326			PKPdf	00 51 24.2	+0.1
AKTO	Aktyubinsk	125.25	320	PKP		PKPdf	00 51 28.1	0.0
	comp=Z,1.6nm,0.7s,baz=0.6,slow=1.4,SNR=6.6							
ARCES	ARCESS Array B	126.52	350	PKP		PKPdf	00 51 29.7	-0.3
	comp=Z,1.1nm,0.5s,baz=93,slow=1.7,SNR=13							
FINES	FINESS Array B	133.43	344	PKP		PKPdf	00 51 43.5	+0.3
	comp=Z,1.4nm,0.8s,baz=94,slow=2.5,SNR=4.3							
NOA	NORSAR Array B	136.56	354	PKP		PKiKP	00 51 50.6	-0.4
	comp=Z,0.4nm,0.5s,baz=14,slow=3.7,SNR=2.0							
AKASG	Malin Array Be	140.88	333	PKP		PKiKP	00 51 58.8	-1.3
	comp=Z,1.0nm,0.5s,baz=38,slow=2.5,SNR=2.5							
EKA	Eskdalemuir Ar	142.57	5	PKP		PKPdf	00 51 58.4	-1.7
	comp=Z,0.7nm,0.6s,baz=36,slow=2.2,SNR=3.9							
OJC	Ojcow	144.88	340			PKPdf	00 52 02.7	-1.6
BUR08	Bucovina Ar. S	144.91	332			PKPdf	00 52 04.6	0.0
STHS	Stebnicka Huta	145.07	338	*e*PKP		PKPbc	00 52 05.3	-0.4
BRTR	Keskin Array B	145.18	315	PKPbc		PKPbc	00 52 06.5	+0.1
	comp=Z,6.0nm,0.7s,baz=127,slow=4.8,SNR=28							
BRTR	Keskin Array B	145.18	315			PKPdf	00 52 04.6	-0.8
ASF	Jabal al Asfar	145.61	301	PKPbc		PKPbc	00 52 08.2	+0.4
	comp=Z,5.9nm,0.8s,baz=71,slow=2.4,SNR=10							
OSTC	Ostas	145.64	344	*e*PKP		PKPab	00 52 08.4	-0.5
CHVC	Chvalec	145.65	344	*e*PKP		PKPbc	00 52 08.0	+0.7
ANTO	Ankara	145.67	316			PKPbc	00 52 08.1	+0.3
CLL	Collm	145.69	348			PKPbc	00 52 07.6	+0.2
CLL	Collm	145.69	348	*i* PKPbc		PKPbc	00 52 07.7	+0.4
	comp=Z,23nm,1.0s							
UPC	Upice	145.74	344	*e*PKP		PKPbc	00 52 08.2	+0.7
STEB	Steborice	145.76	342	*e*PKP		PKPbc	00 52 08.2	+0.6
DPC	Dobruska-Polom	145.80	344	*e*PKP		PKPbc	00 52 08.5	+0.8
LANS	Liptovska Anna	145.92	339	*e*PKP		PKPab	00 52 09.6	-0.5
MORC	Moravsky Berou	145.97	342	*e*PKP		PKPbc	00 52 08.4	+0.2
PVCC	Panska Ves	146.08	346	*e*PKP		PKPbc	00 52 08.6	+0.2
MAUC	Maruska	146.25	341	*e*PKP		PKPbc	00 52 10.2	+1.2
HSKC	Hora Svate Kat	146.26	347	*e*PKP		PKPbc	00 52 09.6	+0.6
CJR	Cluj-Napoca	146.33	333	⇑P		PKPbc	00 52 10.1	+0.7
MMAI	Mount Meron Ar	146.57	303	PKPbc		PKPbc	00 52 11.3	+0.8
	comp=Z,6.5nm,0.5s,baz=72,slow=5.4,SNR=78							
PRU	Pruhonice	146.58	345	*e*PKP		PKPbc	00 52 10.1	+0.3
BALJ	Balqa	146.66	301			PKPbc	00 52 10.7	0.0
VRAC	Vranov	146.67	343	*e*PKP		PKPbc	00 52 10.5	+0.4
JAVC	Velka Javorina	146.75	341	*e*PKP		PKiKP	00 52 12.1	-0.3
PSZ	Piszkesteto	146.82	338	⇓P		PKPbc	00 52 10.4	-0.3
KRUC	Moravsky	146.94	343	*e*PKP		PKPbc	00 52 11.1	+0.3
TREC	Trest	146.98	344	*e*PKP		PKPbc	00 52 11.4	+0.4
MODS	Modra-Piesok	147.30	341	*e*PKP		PKPbc	00 52 12.4	+0.6
MEM	Membach	147.36	355	*d*PKP		PKPbc	00 52 12.2	+0.3
BTNL	Ternell	147.37	355	*d*PKP		PKPbc	00 52 12.5	+0.6
BSTI	Sart Tilman	147.41	356	*d*PKP		PKPbc	00 52 12.3	+0.8
SIRR	Siria	147.50	334	⇓P		PKPbc	00 52 13.0	+0.6
KHC	Kasperske Hory	147.61	346	*e*PKP		PKPbc	00 52 13.3	+0.7
BGES	Gesves	147.64	356	*d*PKP		PKPbc	00 52 13.3	+0.7
CKRC	Cesky Krumlov	147.72	345	*e*PKP		PKiKP	00 52 13.7	-0.6
BMRD	Maredsous	147.74	357	*d*PKP		PKPbc	00 52 13.3	+0.5
GERES	GERESS Array B	147.85	345	PKPbc		PKPbc	00 52 13.7	+0.4
	comp=Z,5.5nm,0.6s,baz=24,slow=3.3,SNR=32							
EIL	Elat	147.86	297	PKPbc		PKPbc	00 52 14.4	+0.6
	comp=Z,7.0nm,0.8s,baz=339,slow=4.5,SNR=5.0							
RCHB	Rochefort	147.86	356	*d*PKP		PKPbc	00 52 13.1	0.0
DOU	Dourbes	147.96	357	*d*PKP		PKPbc	00 52 13.8	+0.4
CONA	Conrad Observa	148.12	342	*e*PKiKP		PKiKP	00 52 14.8	-0.4
	comp=Z,5.5nm,0.6s							
RONA	Rosalia, Austr	148.20	342	*i* PKP		PKiKP	00 52 14.9	-0.5
	comp=Z,6.1nm,0.6s							
WLF	Walferdange	148.28	355	*d*PKP		PKPbc	00 52 14.9	+0.6
ARSA	Arzberg	148.83	342	*e*PKP		PKPbc	00 52 14.0	-1.7
	comp=Z,1.8nm,0.8s							
BIOA	Bad Ischl, Aus	148.94	345	*i* PKP		PKPbc	00 52 16.1	+0.2
	comp=Z,8.6nm,1.2s							
LESA	Schwarzleotal	149.42	346	*e*PKP		PKiKP	00 52 17.7	-0.2
	comp=Z,2.9nm,0.5s							
SOKA	Soboth	149.49	342	*i* PKP		PKPbc	00 52 17.2	-0.2
	comp=Z,5.2nm,1.0s							
KBA	Koelnbreinsper	149.58	345	*i* PKP		PKPbc	00 52 17.5	-0.2
	comp=Z,3.9nm,0.5s							
WATA	Walderalm	149.75	347	*i* PKP		PKPbc	00 52 18.2	+0.1
	comp=Z,6.1nm,0.6s							
RETA	Reutte	149.77	348	*i* PKP		PKPbc	00 52 18.3	+0.3
	comp=Z,3.2nm,0.5s							
WTTA	Wattenberg	149.81	347	*i* PKP		PKPbc	00 52 18.5	+0.3
	comp=Z,12nm,0.6s,SNR=7.4							
DOBS	Dobrina	149.84	341	*i* PKPbc		PKPbc	00 52 18.0	-0.1
MOTA	Moosalm	149.84	348	*i* PKP		PKPbc	00 52 18.3	0.0
	comp=Z,5.7nm,0.9s							
MYKA	Terra Mystica	149.92	344	*i* PKP		PKPbc	00 52 17.8	-0.6
	comp=Z,5.8nm,0.6s							
SQTA	Sankt Quirin	149.94	347	*i* PKP		PKPbc	00 52 18.7	+0.2
	comp=Z,8.8nm,0.6s,SNR=4.7							
ABTA	Abfaltersbach	150.10	345	*i* PKP		PKPbc	00 52 18.5	-0.3
	comp=Z,13nm,0.6s							
DAVA	Damuels	150.13	349	*i* PKiKP		PKiKP	00 52 20.1	+0.6
	comp=Z,16nm,1.0s,SNR=4.2							
FETA	Feichten	150.23	348	*i* PKP		PKiKP	00 52 19.6	-0.2
	comp=Z,10nm,1.0s							
FUORN	Ofenpass-Fuorn	150.70	348			PKiKP	00 52 21.4	+0.5
TORD	Torodi Ar. Bea	175.12	176	PKPab		PKPab	00 54 17.9	+0.6
	comp=Z,4.4nm,0.4s,baz=117,slow=1.6,SNR=1.4							

*GCG **23** 00:34:13.5±2.6, 15°.46N×94°.60W, h20km±999km, MD4.7*
*CATAC **23** 00:34:15.6±1.1, 16°.N±4°×9°.5W±°, h28km±9km, M4.4/7, mb5.0/1, mB5.0/1, MLv4.2/7, Mw(mB)4.3/1, Error ellipse: s-maj=9.6km s-min=4.2km az=37.0, confirmed*
*MEX **23** 00:34:16.1±0.9, 15°.44N×94°.61W, h26km±15km, MD4.3*
ISC 23 00:34:14.3±2.1, 15°.47N±0°.05×94°.58W±0°.03, h26km±20km, n66, σ2^{S}29/107, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
HUIG	Huatulco	1.50	282	*e*P	Pn	00 34 39.3	-0.3	
HUIG				*e*S	Sn	00 34 56.2	-2.3	
HUIG	Huatulco	1.50	282	*e*P	Pn	00 34 39.0	-0.6	
HUIG				*e*S	Sn	00 34 55.3	-3.2	
UXUV	UXUV	1.89	13	*e*P	Pn	00 34 45.3	+0.4	
UXUV				*e*S	Sn	00 35 07.1	-0.7	
TGIG		1.91	47	*e*P	Pn	00 34 45.0	-0.2	
TGIG				*e*S	Sn	00 35 08.7	+0.1	
TGIG		1.91	47	*e*P	Pn	00 34 45.3	0.0	
TGBT	Tuxtla Gutierr	1.93	47	*e*P	Pn	00 34 45.8	+0.2	
TGBT				*e*S	Sn	00 35 09.7	+0.7	
CCIG	Comitan	2.48	71	*e*P	Pn	00 34 54.0	+0.7	
CCIG				*e*S	Sn	00 35 25.3	+2.5	
CCIG	Comitan	2.48	71	*e*P	Pn	00 34 53.9	+0.6	
CCIG	Comitan	2.48	71	P	Pn	00 34 55.0	+1.7	
SMCA	Catarina	2.49	104	*i* P	Pn	00 34 53.1	-0.1	
NEUV	Arroyo Zacate	2.52	332	*e*P	Pn	00 34 53.5	-0.1	
NEUV				*e*S	Sn	00 35 23.9	+0.4	
PEIG	Puerto Escondi	2.53	282	*e*P	Pn	00 34 53.7	0.0	
PEIG				*e*S	Sn	00 35 20.3	-3.5	
TUIG	Tuzandepetl	2.56	3	*e*P	Pn	00 34 53.7	-0.4	
TUIG				*e*S	Sn	00 35 24.3	-0.1	
OXLC	Oaxaca	2.59	308	*e*P	Pn	00 34 56.4	+1.7	
OXLC				*e*S	Sn	00 35 27.1	+1.7	
OXBJ	Oaxaca	2.60	308	*e*P	Pb	00 34 59.6	-0.8	
OXBJ				*e*S	Sn	00 35 28.6	+2.7	
VHO	Vista Hermosa	2.61	308	*e*P	Pn	00 34 57.0	+2.0	
VHO				*e*S	Sn	00 35 25.5	+0.4	
RTAL	Retalhuleu	2.94	108	*e*P	Pn	00 34 59.0	-0.4	
RTAL				*e*S	Sn	00 35 33.9	0.0	
RTAL	Retalhuleu	2.94	108	P	Pn	00 34 59.6	+0.2	
RTAL	Retalhuleu	2.94	108	S	Sn	00 35 34.8	+0.9	
HUEH	Huehuetenango	2.97	92	*e*P	Pn	00 35 01.5	+1.5	
HUEH				*e*S	Sn	00 35 36.9	+2.0	
HUEH	Huehuetenango	2.97	92	S	Sn	00 35 35.9	+1.0	
PMUV	Sontecomapan	3.10	350	*e*P	Pn	00 34 57.2	-4.5	
PMUV				*e*S	Sn	00 35 35.9	-2.1	
YOIG	Yosondua	3.17	296	*e*P	Pn	00 35 03.8	+1.1	
YOIG				*e*S	Sn	00 35 39.7	-0.3	
STG8	El Palmar, Qui	3.28	108	*e*P	Pn	00 34 60.0	-4.3	
STG5	El Palmar, Qui	3.30	108	*e*P	Pn	00 35 00.2	-4.2	
STG5				*e*S	Sn	00 35 32.4	-10	
PNIG	Pinotepa	3.54	286	*e*P	Pn	00 35 07.9	+0.3	
PNIG				*e*S	Sn	00 35 45.1	-3.5	
TOIG	Toxpalan	3.54	318	*e*P	Pn	00 35 09.7	+2.1	
TOIG				*e*S	Sn	00 35 49.8	+1.1	
TXIG	Tlaxiaco	3.54	301	*e*P	Pn	00 35 09.7	+1.9	
TXIG				*e*S	Sn	00 35 49.6	+0.5	
HLIG	Huajuapan de L	3.88	308	*e*P	Pn	00 35 14.9	+2.4	
HLIG				*e*S	Sn	00 35 57.0	-0.5	
TPIG	Tehuac#an	3.96	318	*e*P	Pn	00 35 12.6	-1.0	
TPIG				*e*S	Sn	00 36 01.5	+2.1	
FTIG	Fresnillo de T	4.18	306	*e*P	Pn	00 35 18.5	+1.9	
FTIG				*e*S	Sn	00 36 03.7	-1.0	
MGIG	Malinaltepec	4.27	295	*e*P	Pn	00 35 19.9	+2.0	
MGIG				*e*S	Sn	00 36 07.0	0.0	
TLIG	Tlapa	4.36	299	*e*P	Pn	00 35 21.4	+2.4	
TLIG				*e*S	Sn	00 36 10.7	+1.6	
TLIG	Tlapa	4.36	299	P	Pn	00 35 21.7	+2.7	
JAUV	Jalcomulco	4.42	332	*e*P	Pn	00 35 18.6	-1.2	
JAUV				*e*S	Sn	00 36 05.5	-5.0	
CRIG	Cruz Grande	4.55	287	*e*P	Pn	00 35 22.4	+0.8	
CRIG				*e*S	Sn	00 36 08.4	-5.3	
LVIG	Laguna Verde	4.58	338	*e*P	Pn	00 35 21.8	-0.1	
LVIG				*e*S	Sn	00 36 08.4	-6.0	
PETF	Flores	4.75	72	*e*P	Pn	00 35 23.8	-0.5	
PETF				*e*S	Sn	00 36 13.3	-5.2	
PETF	Flores	4.75	72	P	Pn	00 35 25.5	+1.3	
SCIG	Sabancuy	4.76	42	*e*P	Pn	00 35 22.8	-1.5	
SCIG				*e*S	Sn	00 36 16.4	-2.2	
SCIG	Sabancuy	4.76	42	P	Pn	00 35 25.0	+0.6	
NUBE	Las Nubes	4.90	108	P	Pn	00 35 27.5	+1.1	
CEVE	Cerro Verde	5.06	108	S	Sn	00 36 28.8	+2.1	
CEVE	Cerro Verde	5.06	108	P	Pn	00 35 29.9	+1.1	
DAIG	Los Arroyos	5.11	288	*e*P	Pn	00 35 30.6	+1.4	
DAIG				*e*S	Sn	00 36 24.3	-3.2	
MTO3	Montecristo	5.15	101	P	Pn	00 35 31.6	+1.6	
PPCL	Tochimilco	5.16	312	*e*P	Pn	00 35 31.2	+1.0	
PPCL				*e*S	Sn	00 36 28.2	-0.9	
PPSX	Xalitzintla	5.20	314	*e*P	Pn	00 35 33.8	+3.1	
PPSX				*e*S	Sn	00 36 33.8	+3.7	
PPPT	Popocatepetl	5.21	313	*e*P	Pn	00 35 34.6	+3.6	
PPPT				*e*S	Sn	00 36 31.3	+0.8	
PBXN	Popocatepetl	5.25	313	*e*P	Pn	00 35 34.9	+3.2	
PBXN				*e*S	Sn	00 36 33.2	+1.5	
PPM	Popocatepetl	5.27	313	*e*P	Pn	00 35 35.8	+3.9	
PPM				*e*S	Sn	00 36 31.6	-0.5	
PMON	Piamonte	5.39	108	P	Pn	00 35 34.4	+1.2	
MEIG	Mezcala	5.42	298	*e*P	Pn	00 35 34.8	+1.3	
MEIG				*e*S	Sn	00 36 33.2	-1.9	
YAIG	Yautepec	5.46	309	*e*P	Pn	00 35 37.1	+2.9	
YAIG				*e*S	Sn	00 36 34.5	-1.8	
CXUV	Coxquihui	5.49	329	*e*P	Pn	00 35 33.5	-1.0	
CXUV				*e*S	Sn	00 36 35.7	-1.1	
CAIG	El Cayaco	5.69	287	*e*P	Pn	00 35 38.5	+1.4	
CAIG				*e*S	Sn	00 36 36.1	-5.5	
MAVM	Malinalco, Edo	5.84	307	*e*P	Pn	00 35 41.4	+1.9	
MAVM				*e*S	Sn	00 36 45.1	-0.6	
AOVM	Tlapan	5.90	311	*e*P	Pn	00 35 42.8	+2.3	
AOVM				*e*S	Sn	00 36 44.1	-3.4	
ARIG	Puente Sto Nin	6.19	298	*e*P	Pn	00 35 46.3	+2.2	
ARIG				*e*S	Sn	00 36 52.3	-1.9	
ZIIG	Zihuatanejo	6.94	289	*e*P	Pn	00 35 56.5	+2.2	
MMIG	Aquila	8.85	290	*e*P	Pn	00 36 23.0	+2.5	
MNGA	Volcan de Coli	9.50	296	*e*P	Pn	00 36 34.4	+4.7	
INCO	Volcan de Coli	9.51	296	*e*P	Pn	00 36 34.5	+4.5	
SOMAC	Volcano de Col	9.53	296	*e*P	Pn	00 36 35.4	+5.1	
CDAR	Ciudad de Arme	9.65	292	*e*P	Pn	00 36 32.4	+0.8	
CEGR	Campo Tres	9.68	295	*e*P	Pn	00 36 36.0	+3.9	
CEGR				*e*S	Sn	00 38 23.4	+3.3	

*IDC **23** 00:42:03.1±1.5, 28°.56N×51°.99E, h0km, mb3.9/13, mbtmp3.8/16, ML3.2/3, Error ellipse: s-maj=32.3km s-min=20.1km az=177.0*
*TEH **23** 00:42:08.0, 28°.71N×52°.07E, h23km±22km*
*OMAN **23** 00:42:10.5±0.6, 28°.41N×52°.32E, h10km, mb4.4/9, ml3.8/13, Error ellipse: s-maj=4.9km s-min=2.8km az=159.0*
*DSN **23** 00:42:12.0±1.2, 28°.37N×52°.35E, h10km, ML3.4/14, Error ellipse: s-maj=15.1km s-min=5.1km az=2.0*
ISC 23 00:42:05.4±0.5, 28°.65N±0°.04×52°.03E±0°.04, h15km, n85, σ1^{S}96/110, mb3.7/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
DSBU	Dashti - Bushe	0.73	247	Pg	Pn	00 42 23.5	+2.2	
QIR1	Qir	0.91	101	Pg	Pn	00 42 24.7	+1.0	
KAZ2	Kazeron-Fars-I	1.01	342	Pg	Pn	00 42 26.2	+1.0	
SHI	Shiraz	1.08	23	Pg	Pg	00 42 27.0	+0.7	
JHRM	Jahrom	1.37	96	Pg	Pg	00 42 33.3	+1.4	
LMD1	Lamerd	1.65	142	Pg	Pg	00 42 37.9	+0.8	
LAR1	LAR	2.29	115	Pn	Pb	00 42 45.9	-0.6	
KLNJ	Kolanjah	2.38	351	Pn	Pn	00 42 46.2	+1.9	
SHMA	Al-Shehemyia	2.94	199	P	Pb	00 42 56.1	-1.5	
	SNR=9.5							
SHMA				S	Sb	00 43 31.3	-2.0	
IBRJ	Brojen	3.31	349	Pn	Pn	00 42 59.1	+2.1	
IMEH	Mehriz	3.53	39	Pn	Pn	00 43 02.8	+2.8	
ZNGN	Zangian	3.60	344	Pn	Pn	00 43 03.8	+2.8	
JHBN	Jahan bin	3.76	342	Pn	Pn	00 43 05.9	+2.7	
GENO	Geno	3.87

WHFO	**Wadi Hawf**	**10.80**	**171**	P		**Pn**	**00 44 39.0**	**-0.7**
	SNR=38							
DMTO	**DMTO**	**11.21**	**166**	P		**Pn**	**00 44 45.0**	**-0.2**
	SNR=7.1							
RBK	**Rabkut**	**11.27**	**169**	P		**Pn**	**00 44 46.1**	**0.0**
ABTO	**Aybut**	**11.30**	**174**	P		**Pn**	**00 44 46.0**	**-0.6**
	SNR=50							
ASF	**Jabal al Asfar**	**13.52**	**289**	Pn		**Pn**	**00 45 14.4**	**-2.4**
	baz=92,slow=18,SNR=1.5							
ASF				Sn		**Sn**	**00 47 40.4**	**-6.5**
	0.1nm,0.3s,baz=163,slow=22,SNR=1.4							
	0.4nm,0.4s							
MMAI	**Mount Meron Ar**	**14.93**	**291**	Pn		**Pn**	**00 45 36.2**	**+0.1**
	0.3nm,0.3s,baz=100,slow=15,SNR=1.8							
	0.1nm,0.2s							
BRTR	**Keskin Array B**	**18.76**	**311**	P		**Pn**	**00 46 24.7**	**+0.2**
	baz=118,slow=12,SNR=1.7							
	0.4nm,0.9s							
AKTO	**Aktyubinsk**	**22.23**	**10**	P		**P**	**00 47 02.7**	**+1.3**
	1.3nm,0.7s,baz=204,slow=11,SNR=4.0							
	1.3nm,0.7s							
BVAR	**Borovoye Array**	**27.87**	**24**	P		**P**	**00 47 55.4**	**+1.0**
	0.3nm,0.6s,baz=219,slow=11,SNR=2.9							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**29.69**	**35**	P		**P**	**00 48 12.1**	**+1.5**
	1.0nm,0.8s,baz=232,slow=8.9,SNR=12							
	1.0nm,0.8s							
MKAR	**Makanchi Array**	**29.76**	**44**	P		**P**	**00 48 12.7**	**+1.4**
	0.6nm,0.7s,baz=242,slow=8.7,SNR=5.7							
	0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**34.77**	**34**	P		**P**	**00 48 55.6**	**+0.5**
	1.5nm,0.5s,baz=242,slow=9.3,SNR=8.5							
	1.5nm,0.5s							
FINES	**FINESS Array B**	**37.06**	**340**	P		**P**	**00 49 14.5**	**0.0**
	1.5nm,0.5s,baz=145,slow=12,SNR=9.5							
	1.5nm,0.5s							
HFS	**Hagfors**	**40.71**	**332**	P		**P**	**00 49 45.6**	**+0.4**
	2.8nm,0.8s,baz=133,slow=8.3,SNR=8.1							
	2.8nm,0.8s							
NOA	**NORSAR Array B**	**42.23**	**332**	P		**P**	**00 49 57.6**	**-0.2**
	0.5nm,0.7s,baz=111,slow=9.6,SNR=1.0							
	0.5nm,0.7s							
ARCES	**ARCESS Array B**	**43.69**	**347**	P		**P**	**00 50 09.9**	**+0.5**
	1.5nm,1.0s,baz=145,slow=7.7,SNR=9.0							
	1.5nm,1.0s							
TORD	**Torodi Ar. Bea**	**49.13**	**263**	P		**P**	**00 50 53.5**	**+0.7**
	4.0nm,0.3s,baz=51,slow=9.5,SNR=1.7							
	4.0nm,0.3s							
KSRS	**Korea Array**	**62.66**	**60**	P		**P**	**00 52 29.4**	**-0.1**
	1.0nm,0.5s,baz=284,slow=6.7,SNR=2.2							
	1.0nm,0.5s							
ILAR	**Eielson Array**	**85.72**	**8**	P		**P**	**00 54 43.3**	**-0.2**
	0.4nm,0.8s,baz=339,slow=6.1,SNR=3.2							
	0.4nm,0.8s							
ASAR	**Alice Springs**	**94.39**	**114**	P		**P**	**00 55 24.6**	**-0.4**
	0.3nm,0.7s,baz=310,slow=5.8,SNR=2.5							
	0.3nm,0.7s							

*IDC **23** 00:58:59.5±1.4,6.7°78S×128.4°45E,h0km,mb4.0/4, mbtmp4.0/7,ML4.3/4,Error ellipse: s-maj=52.7km s-min=22.4km az=83.0*
*DJA **23** 00:59:18.2±0.3,8.3°S±4.4°×12.7°8E±.9°,h181km±8km,M4.4/13, mB5.0/4,mb4.3/8,MLv4.6/13,Mw(mB)4.3/4*
ISC 23 00:59:18.2±0.8,7.88S±0.07°×127.71E±0.05°,h200km,n19, σ1§96/25,mb3.7/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.56**	**92**	P		**Pn**	**01 00 15.3**	**+0.8**
SAUI				S		**Sn**	**01 00 59.1**	**+0.5**
SOEI	**Soe**	**3.88**	**241**	P		**Pn**	**01 00 19.5**	**+0.8**
SOEI				S		**Sn**	**01 01 05.4**	**-0.7**
BATI	**Baumata**	**4.62**	**240**	Pn		**Pn**	**01 00 28.6**	**+0.8**
	66nm,0.3s,baz=45,slow=3.0,SNR=30							
BATI				Sn		**Sn**	**01 01 21.5**	**-1.2**
	23nm,0.3s,baz=198,slow=20,SNR=11							
BATI	**Baumata**	**4.62**	**240**	P		**Pn**	**01 00 28.5**	**+0.7**
BATI				S		**Sn**	**01 01 21.4**	**-1.2**
MMRI	**Maumere**	**5.47**	**262**	P		**Pn**	**01 00 38.4**	**-0.3**
	0.3nm46nm,0.5s							
EDFI	**Ende, Flores**	**6.02**	**261**	P		**Pn**	**01 00 45.4**	**-0.5**
	21nm,0.7s							
SANI	**Sanana**	**6.04**	**343**	P		**Pn**	**01 00 43.1**	**-2.9**
	7.3nm,0.9s							
FAKI	**Fak Fak**	**6.68**	**43**	P		**Pn**	**01 00 51.6**	**-2.8**
BASI	**Baing, Sumba**	**7.42**	**251**	P		**Pn**	**01 01 03.5**	**-0.5**
	52nm,0.7s							
WSI	**Waingapu**	**7.54**	**256**	P		**Pn**	**01 01 03.8**	**-1.7**
WBSI	**Waikabubak, Su**	**8.41**	**257**	P		Pn	01 01 11.3	-5.6
	1µm32nm,0.8s							
PLAI	**Plampang**	**9.88**	**264**	P		**Pn**	**01 01 35.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**10.36**	**191**	Pn		**Pn**	**01 01 44.1**	**+2.0**
	1.2nm,0.3s,baz=11,slow=16,SNR=31							
FITZ				Sn		**Sn**	**01 03 35.2**	**-2.6**
	3.2nm,0.3s,baz=82,slow=21,SNR=9.6							
	2.6nm,0.3s							
WRA	**Warramunga Arr**	**13.61**	**153**	Pn		**Pn**	**01 02 23.3**	**0.0**
	1.0nm,0.3s,baz=329,slow=13,SNR=26							
WRA				Sn		**S**	**01 04 52.7**	**-2.3**
	1.9nm,0.3s,baz=331,slow=22,SNR=14							
	0.4nm,0.3s							
ASAR	**Alice Springs**	**16.79**	**160**	P		**Pn**	**01 03 07.2**	**+5.2**
	0.7nm,0.3s,baz=338,slow=12,SNR=34							
ASAR				S		**Sn**	**01 06 09.7**	**-1.5**
	2.1nm,0.8s,baz=321,slow=21,SNR=7.5							
	3.3nm,0.4s							
MKAR	**Makanchi Array**	**67.74**	**328**	P		**P**	**01 09 56.1**	**+1.9**
	1.0nm,0.8s,baz=128,slow=7.9,SNR=5.9							
	1.0nm,0.8s							
ZALV	**Zalesovo Beam**	**71.39**	**335**	P		**P**	**01 10 16.5**	**+0.2**
	1.0nm,0.5s,baz=138,slow=5.8,SNR=6.4							
	1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**72.09**	**330**	P		**P**	**01 10 22.2**	**+1.7**
	0.9nm,0.5s,baz=132,slow=5.1,SNR=14							
	0.9nm,0.5s							
BVAR	**Borovoye Array**	**77.61**	**329**	P		**P**	**01 10 54.6**	**+2.4**
	0.3nm,0.3s,baz=126,slow=7.3,SNR=4.7							
	0.3nm,0.3s							

GCG 23 01:00:45.7±0.9,14.23N×91.94W,h58km±18km,MD3.9, ML3.5,Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.60**	**73**	*e*P		Pn	01 00 58.2	-0.4
STG8	**El Palmar, Qui**	**0.61**	**69**	*e*P		Pn	01 00 59.0	0.0
STG8				IAML			01 01 12.8	
	comp=N,2µm,0.1s							
SMCA	**Catarina**	**0.64**	**348**	*e*P		Pn	01 00 58.7	-0.4
QUEO	**Labor Ovalle**	**0.76**	**32**	*e*P		Pn	01 01 01.8	+0.9
QUEO				*e*S		Sn	01 01 14.6	+2.6
QUEO				IAML			01 01 15.1	
	comp=E,2µm,0.4s							
SOKI	**Kika Raxquin**	**0.78**	**41**	*i* P		Pn	01 01 02.0	+0.7
ESSG	**Sabana Grande**	**1.08**	**82**	*e*P		Pn	01 01 05.0	+0.1
ESSG				*i* S		Sn	01 01 20.0	+0.9
FG16	**Alotenango, Sa**	**1.38**	**88**	*e*P		Pn	01 01 05.4	-3.5
FG16				*i* S		Sn	01 01 19.7	-6.7
PCG5	**San Vicente Pa**	**1.51**	**90**	*e*P		Pn	01 01 07.9	-2.7
PCG5				*e*S		Sn	01 01 25.0	-4.5
APG	**El Apazote**	**1.62**	**61**	*e*P		Pn	01 01 14.0	+1.7

*ASRS **23** 01:00:44.2±0.6,48.7°N±3.3°×8.6°6E±.5°,h9km,MLh3.3/8,Error ellipse: s-maj=8.0km s-min=3.2km az=143.1,confirmed*
*SOME **23** 01:00:46.6,48.17°N×84.80E,h0km*
*NNC **23** 01:00:48.1±3.7,47.31N×85.65E,h20km±12km,mb3.3, mpv3.1,Error ellipse: s-maj=25.0km s-min=11.3km az=84.0*
ISC 23 01:00:47.7±1.0,47.23N±0.05×85.54E±0.05,h10km,n25, σ2§14/38,7C-6D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**0.51**	**296**	P		**Pn**	**01 01 01.2**	**+0.2**
	14nm,0.1s							
ZSN				S		**Sn**	**01 01 10.3**	**+0.4**
	96nm,0.1s							
ZSN	**Zaisan**	**0.51**	**296**	*e*P		**Pn**	**01 01 00.9**	**-0.1**
	14nm,0.2s							
ZSN				*e*S		**Sn**	**01 01 10.1**	**+0.2**
	64nm,0.4s							
MK31	**Makanchi Array**	**2.26**	**260**	⇑Pg		**Pg**	**01 01 30.2**	**-0.9**
	2.3nm,0.3s,baz=80,slow=18,SNR=75							
MK31				⇓Lg		Lg	01 02 03.8	
	4.7nm,0.3s,baz=80,slow=34,SNR=6.9							
MAKZ	**Makanchi**	**2.47**	**262**	⇓Pg		**Pg**	**01 01 35.2**	**+0.1**
	1.1nm,0.3s							
MAKZ				⇑Lg		Lg	01 02 09.9	
	8.3nm,0.5s							
MAKZ	**Makanchi**	**2.47**	**262**	Pg		**Pg**	**01 01 34.2**	**-0.9**
MAKZ				Sg		**Sg**	**01 02 10.5**	**+3.4**
DGZ	**Jazzator, Alta**	**2.78**	**26**	Pg		**Pn**	**01 01 32.4**	**0.0**
DGZ				Sg		**Sn**	**01 02 05.1**	**-1.0**
CHBI	**Chibit, Altay**	**3.35**	**22**	Pg		**Pn**	**01 01 40.2**	**0.0**
CHBI				Sg		**Sb**	**01 02 26.6**	**-1.5**
AKAR	**Aktash**	**3.39**	**23**	Pg		**Pn**	**01 01 40.7**	**0.0**
AKAR				Sg		**Sb**	**01 02 27.4**	**-1.7**
CUR	**Chagan-Uzun**	**3.43**	**32**	Pg		**Pb**	**01 01 46.1**	**-2.4**
CUR				Sg		**Sb**	**01 02 29.0**	**-1.3**
ULGR	**Ulagan, Altay**	**3.76**	**24**	Sg		**Sb**	**01 02 38.6**	**-1.1**
ELDR	**Elanda**	**4.01**	**5**	Pg		**Pb**	**01 01 57.6**	**-0.7**
ELDR				Sg		**Sb**	**01 02 47.9**	**+0.9**
ARTR	**Artybash**	**4.71**	**13**	Pg		**Pb**	**01 02 08.5**	**-1.9**
ARTR				Sg		**Sb**	**01 03 09.5**	**+2.4**
SEM	**Semipalatinsk**	**4.72**	**314**	Pg		**Pg**	**01 02 20.4**	**+2.2**
	2.5nm,0.2s							
SEM				Lg		Lg	01 03 25.7	
	8.0nm,0.5s							
YALR	**Yailyu, Altay**	**4.74**	**16**	Sg		**Sb**	**01 03 10.2**	**+2.2**
TEL	**Teeli**	**4.88**	**37**	Pg		**Pb**	**01 02 14.2**	**+1.0**
TEL				Sg		**Sb**	**01 03 15.9**	**+4.0**
KTMS	**Ketmen**	**5.26**	**226**	Pg		**Pg**	**01 02 28.7**	**+0.4**
	0.4nm,0.1s							
KTMS				Lg		Lg	01 03 39.6	
	6.8nm,0.3s							
KNOS	**Konyrlen**	**5.29**	**239**	Pg		**Pg**	**01 02 26.6**	**-2.4**
	1.3nm,0.2s							
KNOS				Lg		Lg	01 03 35.8	
	6.4nm,0.6s							
KURBB	**Kurchatov Arra**	**5.73**	**309**	⇑Pn		**Pn**	**01 02 12.0**	**-0.8**
	0.3nm,0.4s							
KURBB				⇑Sn		**Sn**	**01 03 17.8**	**-0.8**
	3.5nm,0.5s							
KURBB				⇑Lg		Lg	01 03 50.9	
	25nm,0.8s							
KURK	**Kurchatov**	**5.74**	**310**	⇑Pn		**Pn**	**01 02 12.1**	**-0.7**
	0.2nm,0.8s							
KURK				⇓Sn		**Sn**	**01 03 15.2**	**-3.5**
	0.5nm,0.4s							
KURK				⇓Lg		Lg	01 03 53.0	
	4.9nm,0.5s							
KURK	**Kurchatov**	**5.74**	**310**	Sg		**Sg**	**01 03 50.8**	**-1.0**
TASR	**Tashtagol**	**5.74**	**14**	Pg		**Pb**	**01 02 27.1**	**-0.7**
TASR				Sg		**Sb**	**01 03 43.2**	**+6.5**
PDGK	**Podgornoye**	**5.78**	**230**	⇑Pn		Pn	01 02 17.2	+3.6
	0.8nm,0.6s							
PDGK				⇓Sn		**Sn**	**01 03 24.5**	**+4.5**
	1.4nm,0.5s							
PDGK				⇓Lg		Lg	01 03 55.0	
	7.9nm,0.7s							
SHLS	**Shalkode**	**5.92**	**229**	Pg		Pb	01 02 34.6	+3.7
	4.1nm,0.6s							
SHLS				Lg		Lg	01 03 49.8	
	8.3nm,0.9s							
KPKS	**Kokpek**	**6.12**	**235**	Pg		**Pg**	**01 02 43.4**	**-1.5**
	0.4nm,0.3s							
KPKS				Lg		Lg	01 04 04.7	
	4.3nm,0.5s							
ARXS	**Arharly**	**6.18**	**244**	*e*P		**Pg**	**01 02 43.3**	**-2.8**
ARXS				*e*S		**Sg**	**01 04 06.2**	**+0.1**

IDC 23 01:07:22.3±2.2,5.06S×151.69E,h0km,mb3.7/3, mbtmp3.7/3,Error ellipse: s-maj=140.8km s-min=29.9km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.45**	**227**	P		P	01 12 23.2	0.0
	2.0nm,0.6s,baz=53,slow=10,SNR=21							
	2.0nm,0.6s							
ASAR	**Alice Springs**	**25.22**	**221**	P		P	01 12 50.0	-0.1
	1.8nm,0.6s,baz=57,slow=9.1,SNR=21							
	1.8nm,0.6s							
ILAR	**Eielson Array**	**82.82**	**22**	P		P	01 19 48.1	-0.2
	0.3nm,0.9s,baz=238,slow=5.2,SNR=1.9							
	0.3nm,0.9s							
TORD	**Torodi Ar. Bea**	**149.33**	**287**	PKPbc		PKPbc	01 27 14.2	-0.1
	0.3nm,0.7s,baz=95,slow=3.0,SNR=3.0							

*IDC **23** 01:17:40.8±0.7,2.30N×84.77W,h0km,mb4.2/10, mbtmp4.3/14,ML3.6/5,MS3.8/41,Error ellipse: s-maj=33.4km s-min=14.4km az=58.0*
*NEIC **23** 01:17:44.0±0.3,2.37N±0.06×84.52W±0.08,h10km±1km, mb4.5/168,Error ellipse: s-maj=13.5km s-min=10.1km az=245.0*
*GCMT **23** 01:17:46.0±0.3,2.29N±0.02×84.48W±0.02,h22km±1km, MW4.8/95,Moment Tensor Solution. s26,c29; s95,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.60±.14; $M_{\theta\theta}$=0.99±.10; $M_{\phi\phi}$=-0.38±.12; $M_{r\theta}$=-0.11±.15; $M_{r\phi}$=2.19±.07; $M_{\theta\phi}$=-0.28±.18; Best double couple: M_o=2.31600×10^{16} NP1:ϕ_s=279.00000°,δ82.00000°,λ=-2.00000°. NP2: ϕ_s=9.00000°,δ88.00000°,λ=-172.00000°. Principal axes: T 2.6190, Plg5.0000°, Azm144.0000°; N -0.6050, Plg82.0000°, Azm20.0000°; P -2.0140, Plg7.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 01:17:45.2±0.4,2.36N±0.06×84.46W±0.07,h26km,n176, σ1§59/82,mb4.5/81,MS3.8/37,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**5.75**	**95**	Pn		**Pn**	**01 19 08.4**	**-0.5**
OTAV	**Otavalo**	**6.37**	**109**			**Pn**	**01 19 16.2**	**-1.6**
OTAV	**Otavalo**	**6.37**	**109**	*e*P		**Pn**	**01 19 15.5**	**-2.3**
PAYG	**Puerto Ayora**	**6.56**	**243**			**Pn**	**01 19 19.7**	**-0.4**
JUD3	**Juan Diaz 3**	**7.83**	**352**			**Pn**	**01 19 35.5**	**-2.0**
JTS	**Las Juntas de**	**7.89**	**356**	Pn		**Pn**	**01 19 37.2**	**-1.2**
	4.5nm,0.3s,baz=247,slow=13,SNR=17							
JTS				Sn		**Sn**	**01 21 02.4**	**-4.6**
	0.6nm,0.3s,baz=255,slow=23,SNR=1.3							
JTS				LR		LR	01 22 08.3	
	comp=Z,821nm,21.4s,baz=170,slow=34							
	21nm,0.4s							
JTS	**Las Juntas de**	**7.89**	**356**			**Pn**	**01 19 37.6**	**-0.8**
SOCE	**Pocosol**	**7.97**	**359**			**Pn**	**01 19 39.7**	**+0.2**
FLOC	**Florencia**	**8.83**	**95**			**Pn**	**01 19 52.5**	**+1.1**
ESPN	**Las Esperanzas**	**9.77**	**1**			**Pn**	**01 20 04.7**	**+0.6**
ROSC	**El Rosal**	**10.41**	**76**	Pn		**Pn**	**01 20 15.8**	**+2.5**
	1.9nm,0.3s,baz=45,slow=23,SNR=13							
ROSC				LR		LR	01 24 01.6	
	comp=Z,472nm,19.1s,baz=246,slow=36							
	21nm,0.8s							
ROSC	**El Rosal**	**10.41**	**76**			**Pn**	**01 20 16.1**	**+2.7**
ATAH	**Atahualpa**	**11.21**	**147**	Pn		**Pn**	**01 20 26.2**	**+2.0**
	0.9nm,0.3s,baz=326,slow=6.3,SNR=16							
ATAH				Sn		**Sn**	**01 22 25.2**	**-3.7**
	0.3nm,0.3s,baz=283,slow=18,SNR=1.3							
ATAH				LR		LR	01 24 15.9	
	comp=Z,866nm,18.7s,baz=322,slow=35							
	14nm,0.8s							
RUSC	**La Rusia**	**11.87**	**72**			**Pn**	**01 20 36.6**	**+3.2**
TGUH	**Tegucigalpa,Un**	**11.95**	**347**			**Pn**	**01 20 37.2**	**+3.1**
MTO3	**Montecristo**	**12.90**	**338**			**Pn**	**01 20 49.8**	**+2.5**
ESQI	**Esquipulas**	**13.05**	**339**			**Pn**	**01 20 51.3**	**+2.2**
APG	**El Apazote**	**13.89**	**335**	Pn		**Pn**	**01 20 59.8**	**-1.0**
	0.1nm,0.3s,baz=165,slow=11,SNR=7.2							
SDV	**Santo Domingo**	**15.20**	**64**	P		**Pn**	**01 21 20.9**	**+2.4**
SDV				IAmb		IAmb	01 21 39.7	
	comp=Z,26nm,1.1s							
SDV	**Santo Domingo**	**15.20**	**64**	*e*P		**Pn**	**01 21 20.9**	**+2.4**
CCIG	**Comitan**	**15.77**	**332**	P		**Pn**	**01 21 27.2**	**+1.4**
NNA	**Nana**	**16.14**	**152**	Pn		**Pn**	**01 21 30.1**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=325,slow=15,SNR=5.1							
	comp=Z,4.2nm,0.3s							
NNA	**Nana**	**16.14**	**152**	IAmb		IAmb	01 21 34.8	
	comp=Z,29nm,1.3s							
BAUV	**El Baul**	**17.59**	**68**	P		**Pn**	**01 21 47.1**	**-1.6**
CMIG	**Matias Romero**	**17.87**	**326**	P		**P**	**01 21 52.9**	**+0.3**
	comp=Z,12nm,1.0s,baz=128,slow=8.4,SNR=18							
CMIG				LR		LR	01 27 23.7	
	comp=Z,422nm,21.7s,baz=150,slow=33							
TLIG	**Tlapa**	**20.50**	**318**	P		**P**	**01 22 22.2**	**+0.6**
TLIG				IAmb		IAmb	01 22 27.4	
	comp=Z,22nm,1.0s							
TEFE	**Tefe**	**20.65**	**106**	*e*P		**P**	**01 22 23.1**	**-0.1**
SJG	**San Juan**	**23.82**	**48**	LR		LR	01 31 58.4	
	comp=Z,136nm,21.5s,baz=238,slow=36							
BOAV	**Boa Vista**	**23.91**	**89**	P		**P**	**01 22 58.8**	**+1.5**
MACA	**Manacapuru-AM**	**24.39**	**103**	*e*P		**P**	**01 23 01.7**	**0.0**
LPAZ	**La Paz**	**24.57**	**140**	P		**P**	**01 23 04.2**	**+0.2**
	comp=Z,21nm,1.1s,baz=337,slow=10,SNR=29							
LPAZ				LR		LR	01 33 35.7	
	comp=Z,607nm,18.2s,baz=300,slow=39							
	comp=Z,21nm,1.1s							
LPAZ	**La Paz**	**24.57**	**140**	P		**P**	**01 23 04.5**	**+0.6**
LPAZ	**La Paz**	**24.57**	**140**	*e*P		**P**	**01 23 02.7**	**-1.2**
PB18	**Visviri**	**24.72**	**144**	P		**P**	**01 23 07.9**	**+2.7**
PB12	**IPOC Station P**	**25.06**	**147**	P		**P**	**01 23 09.3**	**+1.6**
PB16	**IPOC Station P**	**25.29**	**145**	P		**P**	**01 23 11.5**	**+1.1**
PB11	**IPOC Station P**	**26.35**	**147**	P		**P**	**01 23 21.2**	**+1.6**
GO01	**Chusmiza**	**26.53**	**146**	P		**P**	**01 23 23.9**	**+2.3**
GO01				IAmb		IAmb	01 23 36.8	
	comp=Z,9.1nm,0.9s							
SIV	**San Ignacio**	**29.44**	**129**	LR		LR	01 36 06.6	
	comp=Z,807nm,18.7s,baz=319,slow=37							
NPGB	**Novo Progresso**	**30.51**	**108**	*e*P		**P**	**01 23 54.9**	**-1.7**
LRAL	**Lakeview Retre**	**30.61**	**356**	P		**P**	**01 23 57.2**	**0.0**
LRAL				IAmb		IAmb	01 24 00.4	
	comp=Z,6.6nm,0.9s							
HODGE	**Hodges**	**31.77**	**3**	P		**P**	**01 24 08.1**	**+0.7**
MDP	**Montagnes des**	**31.86**	**84**	LR		LR	01 37 25.9	
	comp=Z,190nm,19.3s,baz=280,slow=37							
BRDY	**Brady**	**31.88**	**336**	P		**P**	**01 24 09.1**	**+0.6**
BRDY				IAmb		IAmb	01 24 09.6	
	comp=Z,8.7nm,1.2s							
TXAR	**Lajitas Array**	**32.45**	**328**	P		**P**	**01 24 12.6**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=147,slow=9.5,SNR=10							
TXAR				LR		LR	01 36 22.5	
	comp=Z,159nm,21.5s,baz=129,slow=35							
	comp=Z,0.9nm,0.8s							
TXAR	**Lajitas Array**	**32.45**	**328**	P		**P**	**01 24 12.4**	**-1.2**
BG3	**Lake Jocassee**	**32.50**	**2**	P		**P**	**01 24 13.6**	**-0.3**
TKL	**Tuckaleechee C**	**33.14**	**1**	LR		LR	01 36 25.7	
	comp=Z,96nm,21.2s,baz=182,slow=34							
MNHN	**Monahans**	**33.61**	**331**	IAmb		IAmb	01 24 24.9	
	comp=Z,7.9nm,1.0s							
LCAR	**Lake Charles**	**34.11**	**350**	IAmb		IAmb	01 24 34.5	
	comp=Z,14nm,1.4s							
PECS	**Pecos**	**34.18**	**330**	IAmb		IAmb	01 24 30.0	
	comp=Z,8.6nm,1.1s							
DKNS	**Dickens**	**34.75**	**335**	IAmb		IAmb	01 24 34.6	
	comp=Z,8.7nm,0.8s							
MNTX	**Cornudas Mount**	**35.22**	**328**	IAmb		IAmb	01 24 38.5	
	comp=Z,8.3nm,1.1s							
MGMO	**Mountain Grove**	**35.37**	**349**	IAmb		IAmb	01 24 39.1	
	comp=Z,11nm,1.1s							
MSTX	**Muleshoe**	**35.80**	**333**	IAmb		IAmb	01 24 43.2	
	comp=Z,8.5nm,1.0s							
H03N2	**Juan Fernandez**	**35.99**	**172**	T		T	02 02 43.9	
	baz=351,slow=76,SNR=140							
H03N1	**Juan Fernandez**	**35.99**	**172**	T		T	02 02 44.9	
	baz=351,slow=76,SNR=143							
H03N3	**Juan Fernandez**	**36.00**	**172**	T		T	02 02 40.2	
	baz=351,slow=76,SNR=227							
Q51A	**Peebles**	**36.51**	**1**	P		**P**	**01 24 47.8**	**-0.7**
Q51A				IAmb		IAmb	01 24 50.9	
	comp=Z,10nm,0.9s							
121A	**Cookes Peak, D**	**37.16**	**326**	IAmb		IAmb	01 24 56.8	
	comp=Z,10nm,0.9s							
319A	**Douglas**	**37.17**	**324**	P		**P**	**01 24 55.4**	**+1.0**
319A				IAmb		IAmb	01 24 56.4	
	comp=Z,10nm,0.9s							
VA03	**San Esteban**	**37.33**	**160**	IAmb		IAmb	01 24 56.4	
	comp=Z,14nm,1.0s							
VA03				P		**P**	**01 24 56.4**	**+0.7**
RPN	**Rapa Nui**	**37.88**	**218**	LR		LR	01 36 09.3	
	comp=Z,158nm,22.0s,baz=44,slow=30							
RTBA	**Rita Blanca**	**37.88**	**336**	IAmb		IAmb	01 25 01.5	
	comp=Z,9.8nm,1.0s							
R32A	**Long Quarter,**	**38.19**	**342**	IAmb		IAmb	01 25 03.9	
	comp=Z,16nm,1.1s							
ANMO	**Albuquerque**	**38.34**	**330**	LR		LR	01 40 19.4	
	comp=Z,111nm,20.5s,baz=226,slow=36							
ANMO	**Albuquerque**	**38.34**	**330**	P		**P**	**01 25 04.5**	**+0.2**
ANMO				IAmb		IAmb	01 25 06.0	
	comp=Z,7.9nm,1.0s							
TASM	**ASL Pad, Albuq**	**38.34**	**330**	IAmb		IAmb	01 25 06.0	
	comp=Z,8.0nm,1.0s							
TASM	**ASL Pad, Albuq**	**38.34**	**330**	IAmb		IAmb	01 25 06.0	
	comp=Z,8.5nm,1.0s							
TASM	**ASL Pad, Albuq**	**38.34**	**330**	IAmb		IAmb	01 25 06.0	
	comp=Z,8.3nm,1.0s							
TUC	**Tucson**	**38.73**	**323**	P		**P**	**01 25 08.2**	**+0.7**
CPUP	**

comp=Z,4.9nm,0.8s
HVU Hansel Valley 46.76 331 IAmb IAmb 01 26 13.2
comp=Z,3.6nm,0.9s
ELK Elko 47.25 328 IAmb IAmb 01 26 17.6
comp=Z,3.7nm,0.9s
NV11 Mina Array Sit 47.30 324 IAmb IAmb 01 26 18.5
comp=Z,4.7nm,0.8s
NVAR Mina Array Bea 47.38 324 P **P** **01 26 17.3 -0.4**
comp=Z,3.3nm,0.7s,baz=137,slow=7.4,SNR=21
NVAR PcP **PcP** **01 27 47.0 -1.1**
comp=Z,0.5nm,0.6s,baz=97,slow=2.7,SNR=2.5
NVAR LR LR 01 45 25.8
comp=Z,134nm,20.4s,baz=140,slow=35
comp=Z,3.3nm,0.7s
NVAR Mina Array Bea 47.38 324 P **P** **01 26 17.1 -0.5**
LHV Little Huntoon 47.39 323 IAmb IAmb 01 26 19.3
comp=Z,6.1nm,0.9s
YHL Hebgen Lake 48.43 335 IAmb IAmb 01 26 27.9
comp=Z,8.3nm,1.3s
ULM Lac du Bonnet 48.69 350 P **P** **01 26 26.1 -1.1**
comp=Z,7.9nm,0.8s,baz=165,slow=8.3,SNR=6.3
ULM LR LR 01 49 42.0
comp=Z,65nm,19.4s,baz=180,slow=39
comp=Z,7.9nm,0.8s
HLID Hailey 48.90 331 IAmb IAmb 01 26 33.5
comp=Z,4.3nm,1.0s
BOZ Bozeman (W) 49.22 335 IAmb IAmb 01 26 32.3
comp=Z,5.2nm,0.9s
WVOR Wild Horse Val 50.25 327 IAmb IAmb 01 26 40.1
comp=Z,8.6nm,1.1s
PLID Pearl Lake 50.80 331 IAmb IAmb 01 26 43.5
comp=Z,4.6nm,0.8s
K05A Summer Lake 51.68 326 IAmb IAmb 01 26 57.4
comp=Z,6.0nm,0.8s
F10A Beach Ranch, E 52.03 331 IAmb IAmb 01 26 57.2
comp=Z,5.5nm,0.8s
YBH Yreka Blue Hor 52.09 324 LR LR 01 47 23.1
comp=Z,13nm,19.8s,baz=143,slow=34
J05D Fort Rock, OR 52.24 326 IAmb IAmb 01 26 55.2
comp=Z,5.7nm,0.8s
E09A Wood Farm, Sta 52.86 331 IAmb IAmb 01 27 02.8
comp=Z,6.6nm,1.0s
NEW Newport 53.67 333 LR LR 01 53 06.1
comp=Z,58nm,18.3s,baz=134,slow=40
MXC Moxie City 53.96 330 IAmb IAmb 01 27 14.3
comp=Z,7.7nm,1.2s
SCHQ Schefferville 54.25 12 LR LR 01 50 30.8
comp=Z,67nm,19.3s,baz=198,slow=36
LLLB Lillooet 57.51 333 IAmb IAmb 01 27 35.8
comp=Z,6.1nm,0.8s
FRB Frobisher Bay 62.36 8 LR LR 01 55 28.7
comp=Z,45nm,18.1s,baz=322,slow=36
YKA Yellowknife Ar 64.06 345 P **P** **01 28 15.2 -1.4**
comp=Z,2.9nm,0.9s,baz=147,slow=6.3,SNR=12
YKA LR LR 01 57 57.0
comp=Z,94nm,18.7s,baz=252,slow=38
comp=Z,2.9nm,0.9s
YKAW3 Yellowknife Wh 64.12 345 P **P** **01 28 15.8 -1.2**
DLBC Dease Lake 66.25 336 LR LR 01 57 57.2
comp=Z,106nm,19.9s,baz=88,slow=36
PPT Papeete 67.12 250 LR LR 01 50 06.5
comp=Z,231nm,19.3s,baz=70,slow=29
PPT2 Papeete2 67.13 250 *e*LR LR 01 48 45.9
comp=Z,227nm,29.0s
PPT2 *e*LR LR 01 48 45.9
comp=Z,271nm,25.8s
TBI Tubuai 68.17 244 *e*LR LR 01 49 12.1
comp=Z,742nm,32.2s
TBI *e*LR LR 01 49 16.9
comp=Z,677nm,28.6s
PMSA Palmer Station 68.63 171 LR LR 01 52 32.0
comp=Z,46nm,20.5s,baz=319,slow=30
SFJD Kangerlussuaq 68.67 14 LR LR 02 01 46.1
comp=Z,32nm,18.2s,baz=208,slow=38
RES Resolute Bay 72.51 357 LR LR 02 02 09.9
comp=Z,49nm,18.8s,baz=14,slow=37
INK Inuvik 73.66 343 LR LR 02 03 10.5
comp=Z,127nm,18.8s,baz=306,slow=37
INK Inuvik 73.66 343 P **P** **01 29 16.4 +0.3**
INK IAmb IAmb 01 29 17.7
comp=Z,7.5nm,1.1s
A36M Sachs Harbour 74.08 348 IAmb IAmb 01 29 19.3
comp=Z,6.6nm,0.9s
K27K Chicken 74.20 337 IAmb IAmb 01 29 21.1
comp=Z,4.4nm,0.9s
G29M Pine Creek 74.24 341 P **P** **01 29 19.7 +0.1**
J26L Joseph Creek 74.99 337 IAmb IAmb 01 29 29.0
comp=Z,6.3nm,0.9s
SUMG Summit 75.64 13 *i* P **P** **01 29 27.0 -1.1**
SUMG IAmb IAmb 01 29 30.3
comp=Z,1.8nm,0.7s
E28M Babbage River 75.64 342 IAmb IAmb 01 29 33.5
comp=Z,4.8nm,1.1s
E27K Coleen River 76.08 341 P **P** **01 29 30.6 +0.3**
E27K IAmb IAmb 01 29 31.5
comp=Z,4.7nm,1.1s
ILAR Eielson Array 76.40 337 P **P** **01 29 31.1 -1.1**
comp=Z,2.2nm,0.9s,baz=134,slow=3.3,SNR=13
ILAR LR LR 02 04 39.2
comp=Z,164nm,19.2s,baz=152,slow=37
comp=Z,2.2nm,0.9s
D27M Malcolm River 76.42 342 IAmb IAmb 01 29 38.0
comp=Z,6.6nm,1.2s
BORG Borgarnes 76.66 23 LR LR 01 59 19.1
comp=Z,46nm,20.1s,baz=246,slow=32
NEEM North Greenlan 77.15 7 *i* P **P** **01 29 37.3 +0.8**
NEEM IAmb IAmb 01 29 40.8
comp=Z,7.9nm,0.7s
E25K Arctic Village 77.36 340 IAmb IAmb 01 29 38.9
comp=Z,7.1nm,1.1s
DBIC Dimbokro 79.41 84 LR LR 02 01 47.9
comp=Z,11nm,18.4s,baz=302,slow=33
ESDC Sonseca Array 81.18 50 P **P** **01 30 01.1 +2.1**
comp=Z,1.0nm,0.8s,baz=277,slow=5.2,SNR=2.6
ESDC LR LR 02 05 31.8
comp=Z,32nm,18.7s,baz=278,slow=35
comp=Z,1.0nm,0.8s
ESDC Sonseca Array 81.18 50 IAmb IAmb 01 30 22.2
comp=Z,6.2nm,1.4s
DAG Danmarks Havn 82.29 12 *i* P **P** **01 30 04.0 0.0**
DAG IAmb IAmb 01 30 04.9
comp=Z,2.4nm,0.7s
EKA Eskdalemuir Ar 83.11 35 P **P** **01 30 09.8 +1.1**
comp=Z,3.1nm,0.8s,baz=280,slow=3.0,SNR=3.7
comp=Z,3.1nm,0.8s
JMIC Jan Mayen 83.22 19 LR LR 02 07 02.9
comp=Z,28nm,18.3s,baz=114,slow=36
TORD Torodi Ar. Bea 85.72 77 P **P** **01 30 25.4 +2.6**
comp=Z,0.8nm,1.0s,baz=282,slow=7.2,SNR=4.2
TORD Torodi Ar. Bea 85.72 77 IAmb IAmb 01 30 30.4
comp=Z,20nm,1.0s
NOA NORSAR Array B 90.71 29 LR LR 02 06 58.4
comp=Z,16nm,21.5s,baz=230,slow=32
HFS Hagfors 92.03 30 LR LR 02 09 47.5
comp=Z,22nm,19.2s,baz=260,slow=34
QSPA South Pole Qui 92.39 180 P **P** **01 30 57.2 +3.8**
comp=Z,3.9nm,0.7s,baz=118,slow=2.3,SNR=3.7
QSPA South Pole Qui 92.39 180 IAmb IAmb 01 31 03.8
comp=Z,3.8nm,0.9s
ARCES ARCESS Array B 94.69 19 LR LR 02 13 54.7
comp=Z,25nm,18.0s,baz=270,slow=36
VRAC Vranov 95.42 40 LR LR 02 07 23.5
comp=Z,57nm,21.9s,baz=266,slow=31
FINES FINESS Array B 97.62 27 LR LR 02 08 16.6
comp=Z,33nm,21.9s,baz=248,slow=31
DZM Mont Dzumac 108.57 248 *e*LR LR 02 07 58.1
comp=Z,295nm,30.2s
ZALV Zalesovo Beam 123.18 8 PKP **PKiKP** **01 36 40.2 +0.4**
comp=Z,0.4nm,0.4s,baz=2.4,slow=4.1,SNR=2.5
KURK Kurchatov 125.18 13 **PKPdf** **01 36 42.4 -1.2**
KURBB Kurchatov Arra 125.24 13 PKP **PKPdf** **01 36 42.4 -1.3**
comp=Z,0.2nm,0.5s,baz=348,slow=1.7,SNR=2.7
SONM Songino Array 129.12 351 PKP **PKPdf** **01 36 50.5 -0.9**
comp=Z,0.2nm,0.4s,baz=29,slow=3.3,SNR=2.4
ASAR Alice Springs 137.28 237 PKP **PKPdf** **01 37 07.6 +0.3**
comp=Z,0.7nm,0.8s,baz=85,slow=2.0,SNR=6.0
WRA Warramunga Arr 138.28 242 PKP **PKPdf** **01 37 07.3 -1.9**
comp=Z,0.9nm,0.7s,baz=106,slow=2.2,SNR=14
H01W1 Cape Leeuwin H 143.29 206 T T 04 17 46.8
baz=152
H01W2 Cape Leeuwin H 143.29 206 T T 04 17 42.8
baz=152
H01W3 Cape Leeuwin H 143.31 206 T T 04 17 41.2
baz=152

*SJA **23** 01:30:25.0±2.1,27.°88S×71.°18W,h51km±10km,ML3.7, MW3.5*

*GUC **23** 01:30:27.8±0.8,28.°01S×70.°94W,h50km±2km,ML3.9*
*IDC **23** 01:30:32.6±5.2,27.°60S×70.°63W,h70km±42km,mb3.1/3, mbtmp3.3/5,ML3.4/2,Error ellipse: s-maj=51.9km s-min=27.1km az=58.0*
ISC 23 01:30:26.0±0.8,27.°91S±0.°03×71.°19W±0.°06,h25km±5km, n56,σ1s32/64,mb3.5/3,3C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.31**	**160**	*i* P		**Pn**	**01 30 36.0**	**+1.1**
AC04				*e*S		**Sn**	**01 30 41.9**	**+1.2**
AC04				IAML			01 30 42.5	
	comp=E,21μm,0.2s							
AC04	**Llanos de Chal**	**0.31**	**160**	*i* P		**Pn**	**01 30 35.1**	**+0.2**
AC04				*e*P			01 30 36.0	
AC04				*e*S		**Sn**	**01 30 42.2**	**+1.5**
AC04				IAML			01 30 45.9	
	comp=Z,3μm,0.6s							
GO03	**Copiapo**	**0.91**	**70**	*i* P		**Pb**	**01 30 42.9**	**-0.2**
GO03				*e*S		**Sb**	**01 30 53.6**	**-1.1**
GO03				IAML			01 30 55.4	
	comp=E,9μm,0.3s							
GO03	**Copiapo**	**0.91**	**70**	*i* P		**Pb**	**01 30 42.8**	**-0.2**
GO03				*e*S		**Sb**	**01 30 53.5**	**-1.3**
GO03				IAML			01 30 57.6	
	comp=Z,1μm,0.8s							
AC06	**Mina Casimiro**	**0.93**	**54**	*i* P		**Pn**	**01 30 43.7**	**+0.3**
AC06				*e*S		**Sb**	**01 30 55.5**	**+0.3**
AC06				IAML			01 30 56.2	
	comp=E,7μm,0.2s							
LCO	**Las Campanas**	**1.18**	**159**	*e*P		**Pn**	**01 30 46.7**	**-0.4**
LCO				*e*S		**Sn**	**01 31 00.7**	**-1.8**
LCO	**Las Campanas**	**1.18**	**159**	*i* P		**Pn**	**01 30 46.6**	**-0.5**
LCO				*e*S		**Sn**	**01 31 01.2**	**-1.3**
LCO				IAML			01 31 06.6	
	comp=Z,2μm,0.6s							
AC05	**El Transito**	**1.23**	**139**	*i* P		**Pn**	**01 30 47.0**	**-0.6**
AC05				*e*S		**Sn**	**01 31 01.0**	**-2.5**
AC05				IAML			01 31 01.6	
	comp=E,3μm,0.3s							
AC05	**El Transito**	**1.23**	**139**	*i* P		**Pn**	**01 30 47.1**	**-0.6**
AC05				*e*S		**Sn**	**01 31 01.0**	**-2.5**
AC05				IAML			01 31 04.7	
	comp=Z,647nm,0.5s							
AC01	**Pan de Azucar**	**1.83**	**17**	*i* P		**Pn**	**01 30 56.5**	**+0.6**
AC01	**Pan de Azucar**	**1.83**	**17**	*i* P		**Pn**	**01 30 55.8**	**-0.1**
AC01				IAML			01 31 30.3	
	comp=Z,617nm,0.6s							
CO05	**La Serena**	**2.00**	**181**	*e*P		**Pn**	**01 30 58.9**	**+0.7**
CO05				*e*S		**Sb**	**01 31 25.2**	**-1.0**
CO05				IAML			01 31 29.5	
	comp=N,1μm,0.2s							
AC02	**Maricunga**	**2.12**	**60**	*e*P		**Pn**	**01 31 01.9**	**+1.6**
AC02				*e*S		**Sn**	**01 31 27.0**	**+0.9**
AC02	**Maricunga**	**2.12**	**60**	*i* P		**Pn**	**01 31 02.1**	**+1.7**
AC02				*e*S		**Sn**	**01 31 26.6**	**+0.5**
AC02				IAML			01 31 33.6	
	comp=Z,468nm,0.2s							
CO01	**Juntas del Tor**	**2.27**	**155**	*e*P		**Pn**	**01 31 03.0**	**+0.8**
CO01				IAML			01 31 31.6	
	comp=N,1μm,0.3s							
CO01	**Juntas del Tor**	**2.27**	**155**	*i* P		**Pn**	**01 31 02.8**	**+0.7**
CO01				IAML			01 31 45.0	
	comp=Z,564nm,0.5s							
GO04	**Tololo Observa**	**2.28**	**171**	*e*P		**Pn**	**01 31 03.5**	**+1.2**
GO04	**Tololo Observa**	**2.28**	**171**	*i* P		**Pn**	**01 31 03.4**	**+1.1**
GO04				IAML			01 31 49.5	
	comp=Z,1μm,0.6s							
AROD	**Rodeo**	**2.71**	**147**	*i* P		**Pn**	**01 31 10.5**	**+2.3**
CO06	**Fray Jorge**	**2.78**	**188**	*i* P		**Pn**	**01 31 08.5**	**-0.4**
AGUA	**GUANDACOL**	**2.85**	**124**	*i* P		**Pn**	**01 31 12.8**	**+2.9**
AGUA				IAML			01 32 02.2	
	comp=Z,342nm,1.0s							
CO03	**El Pedregal**	**2.95**	**172**	*e*P		**Pn**	**01 31 13.1**	**+1.7**
CO03	**El Pedregal**	**2.95**	**172**	*i* P		**Pn**	**01 31 12.1**	**+0.8**
CO03				IAML			01 31 59.2	
	comp=Z,369nm,0.5s							
GO02	**Mina Guanaco**	**3.09**	**28**	*e*P		**Pn**	**01 31 14.0**	**+0.5**
GO02				IAML			01 32 08.4	
	comp=E,613nm,0.4s							
GO02	**Mina Guanaco**	**3.09**	**28**	*i* P		**Pn**	**01 31 13.5**	**+0.1**
GO02				IAML			01 32 10.5	
	comp=Z,447nm,0.5s							
ACCO	**Cerro Coronel**	**3.25**	**146**	*i* P		**Pn**	**01 31 18.3**	**+2.6**
CO02	**Combarbal**	**3.29**	**177**	*e*P		**Pn**	**01 31 16.2**	**+0.2**
CO02	**Combarbal**	**3.29**	**177**	*i* P		**Pn**	**01 31 16.2**	**+0.2**
CO02				IAML			01 32 12.1	
	comp=Z,696nm,0.5s							
PB14	**IPOC Station P**	**3.35**	**12**	*i* P		**Pn**	**01 31 16.6**	**-0.4**
PB14				IAML			01 32 16.7	
	comp=Z,164nm,0.5s							
ACLC	**CERRO LA CRUZ**	**4.02**	**113**	*i* P		**Pn**	**01 31 27.1**	**+1.0**
ACLC				IAML			01 32 32.8	
	comp=Z,86nm,2.1s							
RTLL	**Cerro Villicun**	**4.15**	**146**	*i* P		**Pn**	**01 31 29.6**	**+1.8**
RTLL				IAML			01 32 49.1	
	comp=Z,334nm,1.3s							
AVFE	**Valle Fertil**	**4.26**	**131**	*i* P		**Pn**	**01 31 30.2**	**+0.8**
AVFE				IAML			01 32 26.9	
	comp=Z,151nm,0.5s							
CFA	**Coronel Fontan**	**4.49**	**146**	*i* P		**Pn**	**01 31 34.3**	**+1.9**
CFA				IAML			01 32 34.8	
	comp=Z,84nm,0.5s							
APLL	**PUNTA DE LOS L**	**4.77**	**122**	*i* P		**Pn**	**01 31 36.7**	**+0.4**
APLL				IAML			01 32 37.5	
	comp=Z,86nm,0.4s							
CYA	**Choya**	**4.79**	**98**	*e*P		**Pn**	**01 31 36.8**	**+0.2**
CYA	**Choya**	**4.79**	**98**	*i* P		**Pn**	**01 31 36.6**	**+0.1**
CYA				IAML			01 32 36.7	
	comp=Z,63nm,0.4s							
VA03	**San Esteban**	**4.87**	**174**	*i* P		**Pn**	**01 31 38.5**	**+0.8**
VA03				IAML			01 32 57.1	
	comp=Z,192nm,0.4s							
ASAL	**Salagasta**	**5.09**	**157**	*i* P		**Pn**	**01 31 43.2**	**+2.5**
ASAL				IAML			01 32 52.2	
	comp=Z,0.1nm,0.7s							
ACHE	**Chepes**	**5.10**	**130**	*i* P		**Pn**	**01 31 41.6**	**+0.6**
PB05	**IPOC Station P**	**5.12**	**10**	*i* P		**Pn**	**01 31 39.2**	**-2.0**
PB05				IAML			01 33 12.3	
	comp=Z,60nm,0.4s							
H03N1	**Juan Fernandez**	**8.63**	**228**	T		T	01 41 32.6	
	baz=55,slow=72,SNR=488							
H03N2	**Juan Fernandez**	**8.65**	**229**	T		T	01 41 33.3	
	baz=55,slow=72,SNR=628							
H03N3	**Juan Fernandez**	**8.65**	**228**	T		T	01 41 32.6	
	baz=55,slow=72,SNR=559							
LPAZ	**La Paz**	**11.91**	**14**	P		**Pn**	**01 33 13.8**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=148,slow=4.4,SNR=3.9							
	comp=Z,0.6nm,0.7s							
CPUP	**Villa Florida**	**12.45**	**86**	P		**Pn**	**01 33 20.9**	**-0.7**
	baz=120,slow=14,SNR=3.1							
	comp=Z,0.2nm,0.4s							
SNAA	**Sanae**	**56.98**	**159**	P		**P**	**01 40 11.0**	**+2.0**
	comp=Z,0.7nm,0.9s,baz=256,slow=8.3,SNR=1.7							
	comp=Z,0.7nm,0.9s							
TXAR	**Lajitas Array**	**64.85**	**329**	P		**P**	**01 41 04.3**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=143,slow=8.6,SNR=4.3							
	comp=Z,0.3nm,0.8s							
PDAR	**Pinedale Array**	**78.70**	**332**	P		**P**	**01 42 27.5**	**+1.3**
	comp=Z,0.1nm,0.6s,baz=147,slow=7.6,SNR=1.9							
	comp=Z,0.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**81.46**	**70**	P		**P**	**01 42 38.5**	**-2.9**
	comp=Z,4.2nm,0.3s,baz=268,slow=4.2,SNR=1.1							
TORD				pP		**sP**	**01 42 53.4**	**+0.9**
	comp=Z,3.6nm,0.3s,baz=248,slow=2.7,SNR=1.4							
H11S2	**WAKE ISLAND Hyl**	**126.38**	**273**	T		T	04 08 41.7	
	baz=112							
H11S1	**WAKE ISLAND Hyl**	**126.39**	**273**	T		T	04 08 42.2	
	baz=112							
H11S3	**WAKE ISLAND Hyl**	**126.40**	**273**	T		T	04 08 43.3	
	baz=112							
WRA	**Warramunga Arr**	**126.40**	**210**	PKP		**PKiKP**	**01 49 28.7**	**+0.9**
	comp=Z,0.5nm,1.1s,baz=148,slow=1.6,SNR=2.2							
KURBB	**Kurchatov Arra**	**147.75**	**37**	PKPbc		**PKPbc**	**01 50 07.7**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=296,slow=2.9,SNR=5.5							
KURBB				pPKPbc		**sPKPab**	**01 50 21.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=306,slow=3.3,SNR=3.1							
ZALV	**Zalesovo Beam**	**148.60**	**27**	PKPbc		**PKPbc**	**01 50 09.6**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=298,slow=2.0,SNR=3.7							
MKAR	**Makanchi Array**	**151.93**	**41**	PKPbc		**PKPbc**	**01 50 17.6**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=307,slow=3.6,SNR=2.1							

*SJA **23** 01:48:01.5±0.5,23.°00S×66.°67W,h244km±6km,ML3.6, MW3.5*

*GUC **23** 01:48:05.9±0.7,23.°04S×67.°14W,h252km±12km,ML4.1*
ISC 23 01:48:05.5±1.6,23.°05S±0.°05×66.°88W±0.°08,h208km,n32, σ1s59/47,6C-1D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.20**	**274**	*e*P		Pn	01 48 30.2	-7.6
AF01				*e*S		**S**	**01 49 08.9**	**+6.2**
SALTA		**1.27**	**157**	*e*P		Pn	01 48 24.1	-15
SALTA				*e*P			01 48 38.3	
HJA	**Humahuaca**	**1.37**	**97**	*e*P		**Pn**	**01 48 38.1**	**-1.1**
SLA	**San Lorenzo**	**2.09**	**143**	*e*P		Pn	01 48 41.9	-3.8
PB06	**IPOC Station P**	**2.50**	**277**	*e*P		**Pn**	**01 48 50.7**	**+0.6**
PB06				*i* S		**S**	**01 49 25.2**	**+0.8**
PB06	**IPOC Station P**	**2.50**	**277**	*e*P		**Pn**	**01 48 50.8**	**+0.7**
PB06				IAML			01 49 29.3	
	comp=Z,88nm,0.4s							
PB09	**IPOC Station P**	**2.51**	**299**	*e*P		**Pn**	**01 48 51.4**	**+1.1**
PB09	**IPOC Station P**	**2.51**	**299**	*e*P		**Pn**	**01 48 51.8**	**+1.5**
PB09				IAML			01 50 04.1	
	comp=Z,153nm,1.7s							
PB03	**IPOC Station P**	**2.83**	**290**	*e*P		**Pn**	**01 48 54.1**	**+0.2**
PB03				*i* S		**S**	**01 49 30.5**	**-0.5**
PB03				IAML			01 49 33.3	
	comp=E,228nm,0.2s							
PB03	**IPOC Station P**	**2.83**	**290**	*e*P		**Pn**	**01 48 54.2**	**+0.3**
PB03				IAML			01 49 35.9	
	comp=Z,165nm,0.1s							
PB05	**IPOC Station P**	**3.06**	**273**	*e*P		**Pn**	**01 48 56.8**	**+0.4**
PB05				*e*S		**S**	**01 49 35.3**	**-0.5**
PB05	**IPOC Station P**	**3.06**	**273**	*e*P		**Pn**	**01 48 56.9**	**+0.4**
PB05				*e*S		**S**	**01 49 35.7**	**-0.1**
PB05				IAML			01 49 38.9	
	comp=Z,45nm,0.3s							
PB07	**IPOC Station P**	**3.07**	**295**	*e*P		**Pn**	**01 48 57.0**	**+0.3**
PB07				*i* S		**S**	**01 49 35.3**	**-0.8**
PB07				IAML			01 49 36.3	
	comp=N,310nm,0.3s							
PB07	**IPOC Station P**	**3.07**	**295**	*e*P		**Pn**	**01 48 56.8**	**+0.2**
PB07				IAML			01 49 40.7	
	comp=Z,103nm,0.2s							
PB01	**IPOC Station P**	**3.13**	**309**	*e*P		**Pn**	**01 48 57.5**	**+0.2**
PB01				*i* S		**S**	**01 49 37.0**	**-0.2**
PB01				IAML			01 49 39.6	
	comp=N,165nm,0.2s							
PB01	**IPOC Station P**	**3.13**	**309**	*e*P		**Pn**	**01 48 57.6**	**+0.4**
PB01				*e*S		**S**	**01 49 38.0**	**+0.8**
PB01				IAML			01 49 40.6	
	comp=Z,138nm,0.2s							
GO02	**Mina Guanaco**	**3.25**	**229**	*e*P		**Pn**	**01 48 59.3**	**+0.5**
GO02	**Mina Guanaco**	**3.25**	**229**	*e*P		**Pn**	**01 48 59.4**	**+0.5**
GO02				*e*S		**S**	**01 49 42.1**	**+2.0**
GO02				IAML			01 49 43.3	
	comp=Z,107nm,0.1s							
PB02	**IPOC Station P**	**3.28**	**301**	*e*P		**Pn**	**01 48 59.0**	**+0.1**
PB02				*e*S		**S**	**01 49 39.5**	**-0.9**
PB02				IAML			01 49 40.7	
	comp=N,224nm,0.2s							
PB02	**IPOC Station P**	**3.28**	**301**	*e*P		**Pn**	**01 48 59.2**	**+0.2**
PB02				IAML			01 49 47.2	
	comp=Z,175nm,0.3s							
PB08	**IPOC Station P**	**3.58**	**323**	*e*P		**Pn**	**01 49 03.8**	**+0.9**
PB08	**IPOC Station P**	**3.58**	**323**	*e*P		**Pn**	**01 49 04.1**	**+1.2**
PB08				*e*S		**S**	**01 49 48.8**	**+1.4**
PB08				IAML			01 49 50.6	
	comp=Z,24nm,0.5s							
PB14	**IPOC Station P**	**3.59**	**243**	*e*P		**Pn**	**01 49 03.0**	**+0.2**
PB14	**IPOC Station P**	**3.59**	**243**	*e*P		**Pn**	**01 49 03.1**	**+0.2**
PB14				*e*S		**S**	**01 49 46.7**	**-0.7**
PB14				IAML			01 49 49.3	
	comp=Z,46nm,0.4s							
PATCX	**Punta Patache**	**3.76**	**305**	*e*P		**Pn**	**01 49 03.7**	**-1.1**
PATCX	**Punta Patache**	**3.76**	**305**	*e*P		**Pn**	**01 49 04.2**	**-0.6**
PATCX				*e*S		**S**	**01 49 44.7**	**-6.1**
PATCX				IAML			01 49 55.5	
	comp=Z,46nm,0.3s							
HMBC	**Humberstone**	**3.92**	**314**	*e*P		**Pn**	**01 49 06.2**	**-0.6**
HMBC				*e*S		**S**	**01 49 53.6**	**-0.9**
HMBC				IAML			01 49 56.3	
	comp=Z,103nm,0.5s							
TA01	**Diego Aracena**	**3.93**	**308**	*e*P		**Pn**	**01 49 05.8**	**-1.0**
TA01	**Diego Aracena**	**3.93**	**308**	*e*P		**Pn**	**01 49 06.5**	**-0.4**
TA01				*e*S		**S**	**01 49 54.2**	**-0.3**
TA01				IAML			01 49 55.5	
	comp=Z,31nm,0.2s							
GO01	**Chusmiza**	**3.99**	**327**	*e*P		**Pn**	**01 49 08.4**	**+0.4**
GO01				*e*S		**S**	**01 49 58.7**	**+2.1**
GO01				IAML			01 50 02.4	
	comp=Z,36nm,0.3s							
PB11	**IPOC Station P**	**4.17**	**321**	*e*P		**Pn**	**01 49 09.2**	**-0.7**
PB11				*e*S		**S**	**01 49 59.1**	**-0.9**
PB11				IAML			01 50 02.5	
	comp=Z,44nm,0.3s							
AC01	**Pan de Azucar**	**4.58**	**227**	*e*P		**Pn**	**01 49 13.9**	**-0.9**
AC01				*e*S		**S**	**01 50 06.4**	**-2.6**
AC01				IAML			01 50 13.3	
	comp=Z,12nm,2.6s							

*IDC **23** 01:50:03.7±1.6,4.°70S×153.°23E,h45km±14km,mb4.1/14, mbtmp4.4/16,ML3.0/1,MS3.6/31,Error ellipse: s-maj=15.0km s-min=11.9km az=111.0*
*NEIC **23** 01:50:06.3±1.8,4.°71S±0.°08×153.°195E±0.°010,h59km±6km, mb4.8/23,Error ellipse: s-maj=11.3km s-min=1.5km az=178.0*
*DJA **23** 01:50:09.3±0.9,5.°5S±6.°×15.°3E±.°,h86km±8km,M4.8/16, mb4.5/16,mB4.8/3,MLv5.0/2,Mw(mB)4.1/3*
ISC 23 01:50:06.1±0.5,4.°75S±0.°06×153.°21E±0.°06,h55km,n112, σ1s35/90,mb4.6/29,MS3.6/29,1D,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.18**	**298**			**Pn**	**01 50 25.3**	**-1.1**
MANU	**Manus Island**	**6.42**	**295**			**Pn**	**01 51 40.6**	**+2.4**
PMG	**Port Moresby**	**7.58**	**232**	P		**Pn**	**01 51 53.4**	**-0.7**
	12nm,0.3s,baz=44,slow=9.9,SNR=22							
PMG				S		**Sn**	**01 53 17.8**	**-0.9**
	307nm,0.7s,baz=174,slow=20,SNR=15							
	54nm,0.5s							
PMG	**Port Moresby**	**7.58**	**232**			**Pn**	**01 51 54.4**	**+0.3**
PMG	**Port Moresby**	**7.58**	**232**	P		**Pn**	**01 51 54.7**	**+0.6**
PMG	**Port Moresby**	**7.58**	**232**	S		**Sn**	**01 53 20.0**	**+1.3**
PMG	**Port Moresby**	**7.58**	**232**	P		**Pn**	**01 51 55.7**	**+1.6**
PMG	**Port Moresby**	**7.58**	**232**	S		**Sn**	**01 53 20.2**	**+1.5**
SAVO	**Savo Central**	**7.88**	**124**	P		**Pn**	**01 51 59.1**	**+0.9**
HNR	**Honiara**	**8.14**	**125**	P		**Pn**	**01 52 01.1**	**-0.7**
	72nm,0.5s,baz=156,slow=6.7,SNR=8.0							
HNR				S		**Sn**	**01 53 32.5**	**0.0**
	256nm,0.8s,baz=22,slow=3.5,SNR=4.5							
HNR				LR		LR	01 55 22.4	
	comp=Z,618nm,18.5s,baz=295,slow=39							
HNR	**Honiara**	**8.14**	**125**			**Pn**	**01 52 02.8**	**+1.0**
**J

WRAB	**Tennant Creek**	**23.77**	**229**	P		**P**	**01 55 12.7**	**-1.2**
WRAB	**Tennant Creek**	**23.77**	**229**	P		**P**	**01 55 11.8**	**-2.1**
WRA	**Warramunga Arr**	**23.79**	**229**	P		**P**	**01 55 12.4**	**-1.6**
	comp=Z,18nm,0.8s,baz=55,slow=9.9,SNR=81							
WRA				S		**S**	**01 59 27.1**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=45,slow=16,SNR=5.2							
WRA				ScP		**ScP**	**02 02 30.6**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=54,slow=3.0,SNR=2.2							
WRA				LR		LR	02 04 29.9	
	comp=Z,161nm,20.9s,baz=55,slow=36							
	comp=Z,18nm,0.8s							
ARMA	**Armidale**	**25.58**	**183**	P		**P**	**01 55 30.6**	**+0.2**
ARMA				IAmb		IAmb	01 55 31.1	
	comp=Z,25nm,1.0s							
ARMA	**Armidale**	**25.58**	**183**	P		**P**	**01 55 30.1**	**-0.2**
INKA	**Innaminka**	**25.77**	**206**	P		**P**	**01 55 31.1**	**-0.8**
INKA				IAmb		IAmb	01 55 34.2	
	comp=Z,14nm,0.8s							
KNRA	**Kununurra**	**26.36**	**244**	P		**P**	**01 55 38.0**	**+0.6**
AS31	**Alice Springs**	**26.46**	**223**	P		**P**	**01 55 36.5**	**-1.9**
ASAR	**Alice Springs**	**26.47**	**223**	P		**P**	**01 55 36.6**	**-1.8**
	comp=Z,8.2nm,0.7s,baz=58,slow=8.8,SNR=44							
ASAR				PcP		**PcP**	**01 59 02.2**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=42,slow=3.8,SNR=3.1							
ASAR				S		**S**	**02 00 10.7**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=41,slow=20,SNR=2.0							
ASAR				ScP		**ScP**	**02 02 38.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=33,slow=2.1,SNR=2.5							
ASAR				LR		LR	02 06 02.2	
	comp=Z,133nm,20.2s,baz=70,slow=36							
	comp=Z,8.2nm,0.7s							
ASAR	**Alice Springs**	**26.47**	**223**			**P**	**01 55 36.7**	**-1.7**
SANI	**Sanana**	**27.30**	**275**	P		P	01 56 06.0	+20
STKA	**Stephens Creek**	**29.11**	**201**	P		**P**	**01 56 00.4**	**-1.4**
	comp=Z,5.9nm,0.9s,baz=16,slow=10.0,SNR=8.7							
STKA				LR		LR	02 06 56.2	
	comp=Z,190nm,22.0s,baz=25,slow=35							
	comp=Z,5.9nm,0.9s							
BATI	**Baumata**	**29.78**	**258**	LR		LR	02 09 48.5	
	comp=Z,258nm,18.2s,baz=84,slow=40							
DAV	**Davao City (W)**	**29.97**	**293**	LR		LR	02 08 15.0	
	comp=Z,77nm,18.1s,baz=14,slow=36							
FITZ	**Fitzroy Crossi**	**30.04**	**242**	LR		LR	02 10 12.6	
	comp=Z,257nm,18.1s,baz=45,slow=40							
FITZ	**Fitzroy Crossi**	**30.04**	**242**	P		**P**	**01 56 08.6**	**-1.6**
FITZ	**Fitzroy Crossi**	**30.04**	**242**	P		**P**	**01 56 08.6**	**-1.6**
HTT	**Hallett**	**31.49**	**203**	P		**P**	**01 56 21.7**	**-1.2**
KAPI	**Kappang**	**33.34**	**268**	LR		LR	02 12 34.8	
	comp=Z,59nm,22.0s,baz=86,slow=40							
JCJ	**Chichijima**	**33.40**	**342**	LR		LR	02 06 59.3	
	comp=Z,126nm,21.7s,baz=122,slow=30							
MBWA	**Marble Bar**	**36.35**	**240**	P		**P**	**01 57 03.7**	**-1.5**
MBWA				IAmb		IAmb	01 57 04.2	
	comp=Z,22nm,1.0s							
MBWA	**Marble Bar**	**36.35**	**240**	P		**P**	**01 57 03.6**	**-1.6**
PSA00	**Pilbara Seismi**	**36.41**	**240**	P		**P**	**01 57 04.3**	**-1.4**
PSA00				IAmb		IAmb	01 57 04.7	
	comp=Z,8.3nm,1.1s							
PSA00	**Pilbara Seismi**	**36.41**	**240**	IAmb		IAmb	01 57 04.7	
	comp=Z,8.3nm,1.2s							
MEEK	**Meekatharra**	**39.56**	**233**	P		**P**	**01 57 30.7**	**-1.5**
URZ	**Urewera**	**39.83**	**150**	LR		LR	02 13 28.7	
	comp=Z,128nm,19.9s,baz=310,slow=35							
QRZ	**Quartz Range**	**39.89**	**157**	P		**P**	**01 57 34.9**	**+0.2**
QRZ	**Quartz Range**	**39.89**	**157**	P		**P**	**01 57 34.6**	**-0.1**
BKZ	**Black Stump Fm**	**40.24**	**152**	P		**P**	**01 57 36.1**	**-1.6**
BKZ				IAmb		IAmb	01 58 48.9	
	comp=Z,48nm,1.6s							
BKZ	**Black Stump Fm**	**40.24**	**152**	P		**P**	**01 57 37.0**	**-0.7**
BFZ	**Birch Farm**	**41.34**	**153**	P		**P**	**01 57 46.5**	**-0.1**
RPZ	**Rata Peaks**	**41.89**	**161**	LR		LR	02 13 18.2	
	comp=Z,332nm,21.8s,baz=330,slow=33							
JNU	**Nakatsue**	**43.20**	**332**	LR		LR	02 14 33.7	
	comp=Z,41nm,19.2s,baz=102,slow=34							
MJAR	**Matsushiro Arr**	**43.40**	**342**	LR		LR	02 13 31.5	
	comp=Z,91nm,18.9s,baz=152,slow=32							
NWAO	**Narrogin (SRO)**	**43.72**	**226**	LR		LR	02 16 40.9	
	comp=Z,124nm,19.9s,baz=264,slow=36							
KSRS	**Korea Array**	**48.14**	**333**	P		**P**	**01 58 40.3**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=138,slow=9.5,SNR=4.2							
	comp=Z,1.5nm,0.6s							
RAR	**Rarotonga**	**48.43**	**114**	LR		LR	02 16 14.6	
	comp=Z,53nm,21.4s,baz=272,slow=32							
MDSI	**Maura Dua**	**48.87**	**268**	P		P	01 58 56.6	+10
NJ2	**Nanjing**	**49.06**	**321**	*eP*		**P**	**01 58 48.9**	**+0.9**
NJ2				pmax		pmax		
	comp=Z,11nm,0.7s							
ASAJ	**Asahikawa**	**49.57**	**350**	LR		LR	02 17 10.4	
	comp=Z,45nm,21.0s,baz=224,slow=33							
WHN	**Wuhan**	**51.10**	**316**	P		**P**	**01 59 01.8**	**-1.6**
HNS	**HongShan**	**55.15**	**323**	⇓P		**P**	**01 59 35.9**	**+2.8**
HNS				pmax		pmax		
	comp=Z,7.0nm,1.5s							
PPT2	**Papeete2**	**57.35**	**108**	*e*LR		LR	02 16 36.0	
	comp=Z,52nm,22.2s							
PPT2				*e*LR		LR	02 16 41.3	
	comp=Z,111nm,42.0s							
PETK	**Petropavlovsk-**	**57.76**	**3**	LR		LR	02 20 33.9	
	comp=Z,44nm,21.9s,baz=163,slow=32							
TBI	**Tubuai**	**58.21**	**114**	*e*LR		LR	02 17 00.2	
	comp=Z,686nm,26.0s							
CMAR	**Chiang Mai Arr**	**58.23**	**295**	P		**P**	**01 59 54.1**	**-1.2**
	comp=Z,1.3nm,0.2s,baz=108,slow=5.4,SNR=7.8							
	comp=Z,1.3nm,0.2s							
PZH	**PanZhiHua**	**58.68**	**305**	P		**P**	**02 00 00.3**	**+1.8**
HHC	**Hu-ho-hao-te**	**59.24**	**324**	*eP*		**P**	**02 00 04.1**	**+2.0**
HHC				pmax		pmax		
	comp=Z,11nm,0.6s							
HHC				pmax		pmax		
	comp=Z,110nm,4.4s							
SHEM	**Shemya Is, Ala**	**59.93**	**15**	LR		LR	02 22 37.0	
	comp=Z,50nm,19.1s,baz=98,slow=33							
DRV	**Dumont d'Urvil**	**62.49**	**186**	P		**P**	**02 00 22.9**	**-0.7**
DRV	**Dumont d'Urvil**	**62.49**	**186**	pP		pP	02 00 38.6	+0.9
MA2	**Magadan**	**64.15**	**359**	LR		LR	02 28 25.2	
	comp=Z,32nm,19.3s,baz=114,slow=36							
GTA	**Gaotai**	**65.89**	**317**	*eP*		**P**	**02 00 47.6**	**+1.0**
GTA				pP		pP	02 00 58.4	-3.3
GTA				pmax		pmax		
	comp=Z,4.0nm,1.2s							
BRDH	**Bariadhala**	**66.00**	**297**	LR		LR	02 27 28.1	
	comp=Z,32nm,22.0s,baz=216,slow=34							
TAOE	**Nuku Hiva Isla**	**66.23**	**98**	*e*LR		LR	02 20 46.4	
	comp=Z,96nm,24.4s							
SONM	**Songino Array**	**66.50**	**328**	P		**P**	**02 00 49.0**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=117,slow=5.0,SNR=1.8							
SONM				LR		LR	02 30 35.2	
	comp=Z,42nm,18.2s,baz=104,slow=37							
	comp=Z,0.4nm,0.5s							
VNDA	**Vanda**	**72.87**	**178**	P		**P**	**02 01 28.0**	**-0.8**
	comp=Z,6.0nm,0.7s,baz=324,slow=6.3,SNR=18							
	comp=Z,6.0nm,0.7s							
VNDA	**Vanda**	**72.87**	**178**	P		**P**	**02 01 28.8**	**0.0**
VNDA				IAmb		IAmb	02 01 28.9	
	comp=Z,12nm,1.0s							
VNDA	**Vanda**	**72.87**	**178**	P		**P**	**02 01 28.4**	**-0.4**
MKAR	**Makanchi Array**	**80.55**	**319**	P		**P**	**02 02 11.8**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=98,slow=6.8,SNR=15							
MKAR				LR		LR	02 37 33.3	
	comp=Z,51nm,21.9s,baz=322,slow=35							
	comp=Z,1.6nm,0.5s							
MKAR	**Makanchi Array**	**80.55**	**319**	P		**P**	**02 02 12.0**	**-0.8**
MAKZ	**Makanchi**	**80.76**	**319**	P		**P**	**02 02 13.7**	**-0.2**
MAKZ				IAmb		IAmb	02 02 14.2	
	comp=Z,7.2nm,0.8s							
MAKZ	**Makanchi**	**80.76**	**319**	P		**P**	**02 02 13.7**	**-0.2**
MAKZ	**Makanchi**	**80.76**	**319**	PcP		**PcP**	**02 02 19.9**	**-0.5**
MAKZ				pP		**pP**	**02 02 29.6**	**+1.0**
MAKZ				sP		**sP**	**02 02 36.8**	**+2.4**
ZALV	**Zalesovo Beam**	**81.33**	**326**	P		**P**	**02 02 15.0**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=105,slow=6.8,SNR=4.3							
ZALV				LR		LR	02 37 13.9	
	comp=Z,22nm,21.9s,baz=88,slow=35							
	comp=Z,0.6nm,0.4s							
ILAR	**Eielson Array**	**81.95**	**22**	P		**P**	**02 02 19.2**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=258,slow=5.7,SNR=2.0							
ILAR				LR		LR	02 34 41.4	
	comp=Z,30nm,20.1s,baz=193,slow=33							
	comp=Z,0.4nm,0.9s							
KURK	**Kurchatov**	**83.98**	**322**	P		**P**	**02 02 29.3**	**-1.2**
KURK	**Kurchatov**	**83.98**	**322**	P		**P**	**02 02 29.7**	**-0.8**
KURK				sP		**sP**	**02 02 52.8**	**+1.6**
KURBB	**Kurchatov Arra**	**84.01**	**322**	P		**P**	**02 02 29.6**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=110,slow=4.0,SNR=11							
	comp=Z,2.0nm,0.8s							
AAK	**Ala-Archa**	**84.93**	**313**	P		**P**	**02 02 35.9**	**+0.1**
AAK				IAmb		IAmb	02 02 36.5	
	comp=Z,3.7nm,0.7s							
AAK	**Ala-Archa**	**84.93**	**313**	P		**P**	**02 02 35.7**	**0.0**
QSPA	**South Pole Qui**	**85.22**	**180**	P		**P**	**02 02 38.7**	**+2.1**
	comp=Z,10nm,0.6s,baz=348,slow=1.3,SNR=36							
QSPA	**South Pole Qui**	**85.22**	**180**	P		**P**	**02 02 39.2**	**+2.6**
QSPA	**South Pole Qui**	**85.22**	**180**	P		**P**	**02 02 39.9**	**+3.2**
MAW	**Mawson**	**85.78**	**203**	P		**P**	**02 02 38.1**	**-1.1**
	comp=Z,4.2nm,0.8s,baz=109,slow=6.9,SNR=6.2							
	comp=Z,4.2nm,0.8s							
ARSB	**Arslanbob**	**85.79**	**312**	IAmb		IAmb	02 02 41.0	
	comp=Z,16nm,1.2s							
DLBC	**Dease Lake**	**87.12**	**31**	LR		LR	02 36 17.8	
	comp=Z,78nm,19.6s,baz=260,slow=32							
BVAR	**Borovoye Array**	**89.44**	**323**	P		**P**	**02 02 55.2**	**-1.9**
	comp=Z,3.9nm,0.6s,baz=97,slow=4.9,SNR=17							
BVAR				LR		LR	02 45 39.8	
	comp=Z,27nm,18.0s,baz=29,slow=37							
	comp=Z,3.9nm,0.6s							
ARTI	**Arti**	**96.60**	**326**	LR		LR	02 47 54.8	
	comp=Z,34nm,20.5s,baz=154,slow=36							
AKTO	**Aktyubinsk**	**96.94**	**320**	LR		LR	02 50 36.8	
	comp=Z,18nm,19.0s,baz=120,slow=38							
PDAR	**Pinedale Array**	**98.51**	**48**	LR		LR	02 44 17.2	
	comp=Z,43nm,18.0s,baz=262,slow=33							
GERES	**GERESS Array B**	**124.22**	**329**	PKP		**PKPdf**	**02 08 57.0**	**-1.9**
	comp=Z,0.9nm,0.7s,baz=70,slow=3.2,SNR=5.8							
TORD	**Torodi Ar. Bea**	**150.68**	**288**	PKPbc		**PKPdf**	**02 09 49.5**	**+1.8**
	comp=Z,1.2nm,0.2s,baz=79,slow=3.1,SNR=3.8							
BDFB	**Brasilia**	**150.81**	**134**	PKPbc		**PKPdf**	**02 09 50.2**	**+2.2**

*KRNET **23** 01:51:20.9±0.1, 41.69N×74.76E, h29km, mb3.2*
*KNET **23** 01:51:21.9±0.6, 41.74N×74.82E, h18km±3km, ml2.0, Error ellipse: s-maj=4.7km s-min=2.2km az=16.0*
*NNC **23** 01:51:22.5±0.7, 41.73N×74.78E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=4.9km s-min=2.9km az=15.0*

ISC 23 01:51:18.9±1.2, 41.60N±0.02×74.81E±0.02, h4km±10km, n47, σ0°78/79, 48C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**0.45**	**306**	⇑*i*P	**Pb**	**01 51 28.8**	**-0.7**
ARLS				⇑*i*S	**Sg**	**01 51 34.3**	**+0.9**
UCH	**Uchtor**	**0.67**	**341**	⇑P	**Pb**	**01 51 32.8**	**-0.6**
	32nm,0.2s,SNR=163						
UCH				⇑S	**Sg**	**01 51 41.2**	**+0.8**
	77nm,0.2s						
UCH	**Uchtor**	**0.67**	**341**	⇑*i*P	**Pg**	**01 51 32.4**	**+0.7**
UCH				⇑*i*S	**Sg**	**01 51 40.6**	**+0.2**
JNKS	**Jany-Kuch**	**0.83**	**130**	⇑*i*P	**Pn**	**01 51 38.3**	**+0.7**
JNKS				⇑*i*S	**Sn**	**01 51 50.8**	**+0.3**
SALK	**Salom-Alik**	**1.03**	**227**	⇑*i*P	**Pn**	**01 51 40.9**	**+0.6**
SALK				⇑*i*S	**Sn**	**01 51 55.2**	**-0.1**
KBK	**Karagaybulak**	**1.06**	**6**	⇑P	**Pb**	**01 51 39.7**	**-0.2**
	20nm,0.1s,SNR=62						
KBK				⇑S	**Sg**	**01 51 53.2**	**+0.1**
	124nm,0.2s						
KBK	**Karagaybulak**	**1.06**	**6**	⇑*i*P	**Pg**	**01 51 39.3**	**0.0**
KBK				⇑*i*S	**Sg**	**01 51 52.5**	**-0.6**
AAK	**Ala-Archa**	**1.06**	**347**	⇑P	**Pb**	**01 51 39.9**	**-0.1**
	7.9nm,0.1s,SNR=28						
AAK				⇑S	**Sg**	**01 51 53.0**	**-0.2**
	23nm,0.2s						
AAK	**Ala-Archa**	**1.06**	**347**	⇑P	**Pb**	**01 51 40.0**	**0.0**
	0.8nm,0.3s						
AAK				⇓S	**Sg**	**01 51 53.3**	**+0.1**
	6.2nm,0.6s						
AAK	**Ala-Archa**	**1.06**	**347**	⇑*i*P	**Pg**	**01 51 39.1**	**-0.2**
AAK				⇑*i*S	**Sg**	**01 51 52.3**	**-0.9**
FRU1	**Bishkek**	**1.22**	**354**	⇓*e*P	**Pg**	**01 51 42.3**	**0.0**
FRU1				⇓*e*S	**Sg**	**01 51 57.8**	**-0.3**
BOOM	**Boomskoye usch**	**1.23**	**43**	⇓*i*P	**Pb**	**01 51 42.8**	**+0.1**
BOOM				⇓*i*S	**Sg**	**01 51 58.7**	**+0.4**
ULHL	**Ulahol**	**1.25**	**58**	⇓P	**Pn**	**01 51 43.4**	**+0.1**
	6.5nm,0.1s,SNR=27						
ULHL				⇓S	**Sg**	**01 51 59.9**	**+0.8**
	18nm,0.1s						
ULHL	**Ulahol**	**1.25**	**58**	⇑*i*P	**Pn**	**01 51 43.6**	**+0.3**
ULHL				⇑*i*S	**Sb**	**01 52 00.2**	**+0.5**
EKS2	**Erkin-Say**	**1.31**	**325**	⇑P	**Pb**	**01 51 44.5**	**+0.4**
	4.1nm,0.2s,SNR=13						
EKS2				⇑S	**Sg**	**01 52 01.2**	**+0.2**
	9.4nm,0.2s						
EKS2	**Erkin-Say**	**1.31**	**325**	⇑*i*P	**Pg**	**01 51 43.3**	**-0.7**
EKS2				⇑*i*S	**Sg**	**01 51 59.7**	**-1.3**
ARSB	**Arslanbob**	**1.40**	**259**	⇑*e*P	**Pb**	**01 51 46.4**	**+0.7**
ARSB				⇑*e*S	**Sn**	**01 52 04.4**	**+0.1**
CHMS	**Chumysh**	**1.40**	**358**	⇑P	**Pg**	**01 51 46.0**	**+0.3**
	7.4nm,0.1s,SNR=7.7						
CHMS				⇑S	**Sb**	**01 52 03.7**	**-0.2**
	15nm,0.2s						
CHMS	**Chumysh**	**1.40**	**358**	⇑*i*P	**Pn**	**01 51 44.9**	**-0.4**
CHMS				⇑*i*S	**Sb**	**01 52 02.2**	**-1.7**
TKM2	**Tokmak 2**	**1.45**	**24**	⇑P	**Pb**	**01 51 46.7**	**+0.2**
	9.1nm,0.2s,SNR=23						
TKM2				⇓S	**Sb**	**01 52 05.1**	**-0.2**
	34nm,0.1s						
MRKS	**Merke**	**1.64**	**315**	P	**Pg**	**01 51 50.8**	**+0.4**
	8.0nm,0.3s						
MRKS				S	**Sg**	**01 52 11.6**	**-0.1**
	22nm,0.2s						
USP	**Ospenovka**	**1.68**	**352**	⇑P	**Pb**	**01 51 50.8**	**+0.3**
	18nm,0.2s,SNR=21						
USP				⇓S	**Sb**	**01 52 12.7**	**+0.7**
	19nm,0.2s						
USP	**Ospenovka**	**1.68**	**352**	⇑*i*P	**Pn**	**01 51 49.6**	**+0.4**
USP				⇑*i*S	**Sn**	**01 52 10.5**	**-0.7**
DGS	**Degeres**	**1.79**	**23**	P	**Pg**	**01 51 54.0**	**+0.8**
	15nm,0.2s						
DGS				S	**Sg**	**01 52 17.0**	**+0.6**
	27nm,0.2s						
KDJ	**Kajisay**	**1.85**	**72**	⇑*i*P	**Pb**	**01 51 53.7**	**+0.3**
KDJ				⇑*i*S	**Sb**	**01 52 17.4**	**+0.5**
SGDS	**Sogindy**	**1.86**	**356**	P	**Pg**	**01 51 54.6**	**+0.1**
	9.9nm,0.1s						
SGDS				S	**Sb**	**01 52 18.3**	**+1.2**
	26nm,0.3s						
SFK	**Sufi-Kurgan**	**1.87**	**212**	⇑*i*P	**Pg**	**01 51 54.4**	**-0.3**
SFK				⇑*i*S	**Sg**	**01 52 18.8**	**-0.1**
MNAS	**Manas**	**1.93**	**298**	⇑*i*P	**Pb**	**01 51 53.5**	**-1.3**
MNAS				⇑*i*S	**Sn**	**01 52 17.4**	**-0.1**
MTBS	**Maitube**	**1.95**	**38**	P	**Pg**	**01 51 56.5**	**+0.3**
	8.0nm,0.2s						
MTBS				S	**Sg**	**01 52 21.4**	**0.0**
	24nm,0.2s						
IZV	**Izvestkoviy**	**1.96**	**42**	Pg	**Pg**	**01 51 57.7**	**+1.2**
	7.7nm,0.1s						
IZV				Lg	Lg	01 52 23.3	
	19nm,0.2s						
ARK	**Arkit**	**2.14**	**276**	⇓*i*P	**Pb**	**01 51 56.8**	**-1.5**
ARK				⇓*i*S	**Sn**	**01 52 22.8**	**+0.2**
KRBS	**Karabastau**	**2.19**	**17**	Pg	**Pg**	**01 52 00.9**	**0.0**
	16nm,0.3s						
KRBS				Lg	Lg	01 52 29.1	
	119nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.25**	**86**	⇑*i*P	**Pb**	**01 51 59.6**	**-0.7**
TARG				⇑*e*S	**Sb**	**01 52 27.6**	**-1.0**
KNDC	**Almaty**	**2.27**	**44**	⇑Pg	**Pg**	**01 52 03.7**	**+1.3**
	20nm,0.4s						
KNDC				⇓Lg	Lg	01 52 33.8	
	24nm,0.4s						
MDOK	**Medeo**	**2.28**	**46**	Pg	**Pg**	**01 52 02.4**	**-0.1**
	6.5nm,0.3s						
MDOK				Lg	Lg	01 52 31.4	
	14nm,0.5s						
KOTS	**Kotyrbulak**	**2.36**	**45**	Pg	**Pg**	**01 52 04.4**	**+0.2**
	14nm,0.3s						
KOTS				Lg	Lg	01 52 34.7	
	43nm,0.3s						
TRKS	**Terek-Say**	**2.75**	**270**	⇑*i*P	**Pn**	**01 52 05.3**	**+1.3**
TRKS				⇑*i*S	**Sn**	**01 52 37.5**	**-0.3**
SATY	**Saty**	**3.04**	**60**	Pg	**Pg**	**01 52 16.8**	**-0.4**
	2.5nm,0.3s						
SATY				Lg	Lg	01 52 56.2	
	17nm,0.5s						
KPKS	**Kokpek**	**3.42**	**56**	Pg	**Pg**	**01 52 22.4**	**-2.0**
	0.5nm,0.3s						
KPKS				Lg	Lg	01 53 05.7	
	18nm,0.3s						
ARXS	**Arharly**	**3.43**	**39**	Pg	**Pb**	**01 52 21.7**	**+1.5**
	3.6nm,0.4s						
ARXS				Lg	Lg	01 53 06.6	
	31nm,0.5s						
UZB	**Uzynbulak**	**3.48**	**62**	Pg	**Pg**	**01 52 23.5**	**-2.1**
	2.9nm,0.3s						
UZB				Lg	Lg	01 53 07.8	
	7.4nm,0.5s						
KK31	**Karatay Array**	**3.52**	**297**	⇑Pg	**Pg**	**01 52 26.4**	**0.0**
	2.1nm,0.6s,baz=111,slow=17,SNR=14						
KK31				⇓Lg	Lg	01 53 10.6	
	2.6nm,0.4s,baz=108,slow=29,SNR=10						
IUG	**Iuzhnay**	**3.61**	**280**	Pg	**Pg**	**01 52 28.6**	**+0.6**
	3.1nm,0.3s						
IUG				Lg	Lg	01 53 16.3	
	13nm,0.4s						
BLB	**Baldybastay**	**3.68**	**46**	Pg	**Pg**	**01 52 27.3**	**-2.0**
	50nm,0.8s						
BLB				Lg	Lg	01 53 14.7	
	18nm,0.3s						
PDGK	**Podgornoye**	**3.87**	**62**	⇑Pg	**Pg**	**01 52 32.8**	**-0.2**
	1.7nm,0.7s						
PDGK				⇓Lg	Lg	01 53 20.7	
	4.4nm,0.5s						
BRLS	**Borolday**	**3.96**	**293**	Pg	**Pg**	**01 52 34.1**	**-0.6**
	0.8nm,0.4s						
BRLS				Lg	Lg	01 53 25.5	
	3.3nm,0.4s						
KNOS	**Konyrlen**	**4.23**	**48**	Pg	**Pg**	**01 52 38.0**	**-1.9**
	3.0nm,0.5s						
KNOS				Lg	Lg	01 53 32.3	
	4.7nm,0.5s						

CATAC 23 02:00:54.6±0.4, 12°N±3°×87°W±°, h118km±3km, M2.7/18, MLv2.7/18, Error ellipse: s-maj=6.9km s-min=3.5km az=28.4, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALEN	**Leon**	**0.20**	**55**	S	Sn	02 01 25.1	+1.8
PKGN	**Cerro Pekin**	**0.33**	**10**	P	Pn	02 01 12.8	+1.4
PKGN				S	Sn	02 01 27.3	+3.2
CRIN	**San Cristobal**	**0.35**	**357**	P	Pn	02 01 13.2	+1.6
CNGA	**Al SSO del Vol**	**0.36**	**65**	P	Pn	02 01 13.0	+1.4
CNGN	**Cerro Negro**	**0.36**	**65**	P	Pn	02 01 12.9	+1.3
CNGN	**Cerro Negro**	**0.36**	**65**	S	Sn	02 01 26.9	+2.4
POLN	**Al Sur del Vol**	**0.37**	**36**	S	Sn	02 01 26.3	+1.8
COPN	**Copaltepe**	**0.46**	**111**	P	Pn	02 01 13.6	+1.5
COPN				S	Sn	02 01 27.3	+2.1
MOMN	**Momotombo**	**0.49**	**83**	P	Pn	02 01 13.5	+1.2
MOM3	**MOM3**	**0.53**	**72**	P	Pn	02 01 13.7	+1.2
MOM3				S	Sn	02 01 28.0	+2.1
MOM2	**El Cardon**	**0.55**	**80**	P	Pn	02 01 14.2	+1.7
MOM2				S	Sn	02 01 29.2	+3.1
AMTN	**Mateare**	**0.60**	**100**	P	Pn	02 01 14.2	+1.2
UNAN	**Cigeo UNAN**	**0.78**	**107**	S	Sn	02 01 31.2	+1.8
POTN	**Potosi Cosigui**	**0.80**	**325**	P	Pn	02 01 15.5	+0.9
POTN				S	Sn	02 01 31.5	+1.9
CSGN	**Cosiguina Volc**	**0.81**	**321**	P	Pn	02 01 15.3	+0.8
CSGN				S	Sn	02 01 31.5	+1.5
WILN	**Americas 2**	**0.85**	**102**	P	Pn	02 01 15.7	+0.7
LIMN	**Finca el Limon**	**0.97**	**42**	P	Pn	02 01 16.7	+0.4
LIMN				S	Sn	02 01 34.0	+1.4
CNCH	**Conchagua**	**1.21**	**320**	P	Pn	02 01 19.1	+0.3
MATN	**Matagalpa**	**1.23**	**62**	P	Pn	02 01 18.2	-0.8
MATN	**Matagalpa**	**1.23**	**62**	S	Sn	02 01 38.2	+0.8
LCND	**La Caada**	**1.27**	**319**	P	Pn	02 01 19.0	-0.3
LCND	**La Caada**	**1.27**	**319**	S	Sn	02 01 38.9	+0.8
RCON	**San Juan de Ri**	**1.42**	**37**	P	Pn	02 01 21.1	0.0
ARIN	**Rivas**	**1.47**	**127**	S	Sn	02 01 42.6	+0.6
RCVN	**Varillal2**	**1.48**	**34**	P	Pn	02 01 21.6	-0.2
RCVN	**Varillal2**	**1.48**	**34**	S	Sn	02 01 42.7	+0.2
YUSH	**Yuscaran**	**1.61**	**7**	S	Sn	02 01 45.6	+0.4
YUSH	**Yuscaran**	**1.61**	**7**	P	Pn	02 01 23.0	-0.3
PACA	**Pacayal**	**1.68**	**312**	P	Pn	02 01 24.8	+0.6
CARN	**Rivas**	**1.88**	**128**	S	Sn	02 01 51.0	+0.6
JAYA	**Jayaque - finc**	**2.69**	**299**	P	Pn	02 01 37.0	0.

MSVF	Nonsavu	6.94	343	P		P	02 14 17.3	+0.7
URZ	Urewera	14.05	190	P		P	02 15 31.3	+0.7
	1.6nm,0.3s,baz=258,slow=2.1,SNR=5.8							
QRZ	Quartz Range	17.58	200	P		P	02 16 06.4	-0.4
INZ	Inchbonnie	19.64	199	P		P	02 16 25.3	-0.2
CTAO	Charters Tower	31.65	271	P		P	02 18 13.1	+0.9
CTAO				IAmb	IAmb		02 18 13.5	
	comp=Z,7.3nm,0.5s							
TOO	Toolangi	32.31	238	P		P	02 18 18.0	+0.4
TOO				IAmb	IAmb		02 18 37.7	
	comp=Z,2.5nm,0.9s							
STKA	Stephens Creek	34.69	249	P		P	02 18 38.0	+0.3
	comp=Z,1.0nm,0.4s,baz=88,slow=10,SNR=5.5							
	comp=Z,1.0nm,0.4s							
BBOO	Buckleboo	39.40	247	P		P	02 19 16.1	-0.4
BBOO				IAmb	IAmb		02 19 59.9	
	comp=Z,16nm,1.4s							
ASAR	Alice Springs	42.12	261	P		P	02 19 38.1	-0.3
	comp=Z,1.1nm,0.5s,baz=97,slow=7.4,SNR=20							
	comp=Z,1.1nm,0.5s							
ASAR	Alice Springs	42.12	261	P		P	02 19 38.3	0.0
WR8	Warramunga Arr	42.39	267	P		P	02 19 40.0	-0.5
WR8				IAmb	IAmb		02 20 05.6	
	comp=Z,7.3nm,1.4s							
WRA	Warramunga Arr	42.54	267	P		P	02 19 41.0	-0.7
	comp=Z,3.5nm,0.5s,baz=102,slow=8.1,SNR=48							
	comp=Z,3.5nm,0.5s							
WRA	Warramunga Arr	42.54	267	P		P	02 19 41.1	-0.7
KNRA	Kununurra	48.85	270	P		P	02 20 30.1	+0.2
KNRA				IAmb	IAmb		02 21 05.1	
	comp=Z,31nm,1.4s							
FITZ	Fitzroy Crossi	50.96	266	P		P	02 20 45.8	+0.4
TXAR	Lajitas Array	90.56	58	P		P	02 24 39.3	+0.4
	comp=Z,0.3nm,0.8s,baz=244,slow=3.4,SNR=4.0							
	comp=Z,0.3nm,0.8s							
TXAR	Lajitas Array	90.56	58	P		P	02 24 39.9	+1.0
KURBB	Kurchatov Arra	115.73	316	PKP		PKPdf	02 30 13.0	-2.0
	comp=Z,0.2nm,0.7s,baz=108,slow=1.2,SNR=2.3							
HFS	Hagfors	143.08	349	PKiKP	PKPpre		02 31 03.0	
	comp=Z,1.1nm,0.3s,baz=48,slow=3.1,SNR=15							
PABE	Paberze	144.35	337	PKPbc		PKPab	02 31 08.0	-0.7
AKASG	Malin Array Be	145.49	327	PKPbc		PKPdf	02 31 10.5	-0.2
	comp=Z,0.3nm,0.3s,baz=43,slow=4.8,SNR=2.9							
MMAI	Mount Meron Ar	148.06	294	PKPbc		PKiKP	02 31 19.9	-0.9
	comp=Z,0.7nm,0.3s,baz=90,slow=3.2,SNR=20							

*ISK **23** 02:21:28.4, 38.4′40N×44.4′51E, h5km, ML3.5/14*
*TIF **23** 02:21:28.1, 38.4′41N×44.4′52E, h3km±2km*
*AFAD **23** 02:21:28.6, 38.4′43N×44.4′45E, h5km±3km, MW3.7*
*NSSP **23** 02:21:29.5, 38.4′52N×44.4′58E, h10km, Ms3.3*
*TEH **23** 02:21:29.2, 38.4′41N×44.4′53E, h6km±48km*
*AZER **23** 02:21:31.6, 38.4′64N×44.4′71E, h8km, ml3.5*

ISC 23 02:21:28.8±1.1, 38.4′3N±0.0′2×44.4′50E±0.0′2, h3km±10km, n99, σ1§67/155, 3C-1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.46	300	SPECP			02 21 37.0	
OZAP				P		Pg	02 21 37.5	-0.2
OZAP				S		Sg	02 21 44.2	+0.6
YOVA	Hakkari_Yksek	0.86	191	SPECP			02 21 45.0	
YOVA				P		Pg	02 21 45.8	+0.6
YOVA				S		Sg	02 21 57.1	+0.7
TVAN	Van	0.86	277	P		Pg	02 21 44.3	-1.0
VANB	Van	0.89	281	Pg		Pg	02 21 46.1	+0.3
VANB	Van	0.89	281	Pg		Pg	02 21 46.1	+0.3
VANB				Sg		Sb	02 21 59.6	+0.5
ISHB	Shabestar	0.89	99	Pg		Pg	02 21 45.3	-0.6
VMUR	Van-Muradiye	0.92	308	SPECP			02 21 45.0	
VMUR				P		Pg	02 21 45.8	-0.6
VMUR				S		Sg	02 21 58.1	-0.2
IMRD	Marand	0.99	73	Pg		Pg	02 21 47.5	-0.2
HAKT	HAKKARI	1.07	216	SPECP			02 21 49.0	
HAKT				P		Pg	02 21 49.3	-0.1
HAKT				S		Sn	02 22 04.9	-1.4
HAKT	HAKKARI	1.07	216	Pg		Pg	02 21 49.0	-0.3
HAKT	HAKKARI	1.07	216	P		Pg	02 21 49.1	-0.3
HAKT				S		Sn	02 22 09.0	+2.6
NAX	Nakhchivan	1.08	46	Pg		Pg	02 21 49.0	-0.4
NAX	Nakhchivan	1.08	46	P		Pg	02 21 49.1	-0.4
NAX				S		Sn	02 22 05.6	-0.7
ERCV	ERCIS-VAN	1.08	303	Pg		Pn	02 21 50.7	-0.3
ERCV	ERCIS-VAN	1.08	303	Pn		Pn	02 21 50.9	-0.1
AKDM	Akdamar-Van	1.20	266	Pn		Pb	02 21 50.6	-1.6
SBZ	Shahbuz	1.27	40	Pg		Pn	02 21 52.8	-0.7
SBZ	Shahbuz	1.27	40	P		Pn	02 21 52.8	-0.7
SBZ				S		Sb	02 22 09.2	-0.9
ORD	Ordubad	1.27	66	Pg		Pg	02 21 53.2	0.0
ORD				S		Sn	02 22 11.7	+0.6
DYDN	Diyadin	1.28	331	P		Pn	02 21 53.0	-0.8
DYDN				S		Sb	02 22 08.3	-2.2
ITBZ	Tabriz	1.31	98	Pg		Pn	02 21 52.8	-1.3
ITBZ				Sg		Sn	02 22 11.7	-0.5
HYR	Heyderabad	1.32	12	P		Pb	02 21 53.7	-0.4
HYR				S		Sg	02 22 12.1	+1.0
ADCV	BITLIS_Adilcev	1.44	286	SPECP			02 21 55.0	
ADCV				P		Pn	02 21 55.5	-0.4
VAYK	Vayk	1.46	29	*i* P		Pn	02 21 55.2	-0.8
VAYK				*i* S		Sn	02 22 14.0	-1.7
IGDI	IGDIR	1.47	347	SPECP			02 21 56.0	
IGDI				P		Pb	02 21 56.1	-0.7
IGDI				S		Sn	02 22 13.5	-2.6
IGDI	IGDIR	1.47	347	Pg		Pg	02 21 57.5	+0.5
IGDI	IGDIR	1.47	347	P		Pg	02 21 57.5	+0.5
IGDI				S		Sg	02 22 17.1	+1.0
TASB	TASBURUN-IGDIR	1.57	353	Pn		Pg	02 21 58.6	-0.2
TASB				Sn		Sg	02 22 21.3	+2.2
NRKZ	NAREK	1.57	5	*e*P		Pb	02 21 57.8	-0.8
NRKZ				*e*S		Sb	02 22 18.3	-0.6
PERV	Siirt/Pervari-	1.62	253	P		Pb	02 21 58.9	-0.4
PERV				S		Sg	02 22 20.9	+0.3
AGRB	Hanur-Agry	1.64	315	Pn		Pb	02 21 59.1	-0.6
AGRB				Sn		Sg	02 22 22.8	+1.3
DORK	Agr/Tutak/Do	1.65	306	SPECP			02 21 58.0	
DORK				P		Pn	02 21 58.2	-0.6
KOTA	Agri, Merkez-K	1.70	324	SPECP			02 21 59.0	
KOTA				P		Pn	02 21 59.4	-0.1
GNI	Garni	1.73	6	Pn		Pb	02 22 01.2	0.0
GNI	Garni	1.73	6	*i*/*i*P		Pb	02 22 01.0	-0.3
GNI				⇑*i*S		Sg	02 22 24.5	+0.2
METS	Metsamor	1.75	349	*e*P		Pg	02 22 01.9	-0.4
METS				*e*S		Sg	02 22 25.4	+0.4
VNNZ	Vanand	1.75	343	*e*P		Pb	02 22 01.4	-0.2
VNNZ				*e*S		Sg	02 22 24.5	-0.6
EGVZ	Egvard	1.78	63	*e*P		Pb	02 22 01.1	-1.1
EGVZ				*e*S		Sb	02 22 24.0	-1.0
GRS	Goris	1.79	53	⇑*i*P		Pg	02 22 06.0	+3.0
GRS				⇑*i*S		Sg	02 22 33.0	+6.8
BLIS	Bitlis-Merkez	1.87	270	SPECP			02 22 02.0	
BLIS				P		Pn	02 22 02.2	+0.4
ARUZ	Aruch	1.88	350	*e*P		Pb	02 22 03.6	-0.2
ARUZ				*e*S		Sg	02 22 28.4	-0.7
SIRN	Sirnak	1.89	241	P		Pg	02 22 05.5	+0.4
SIRN				S		Sg	02 22 30.2	+0.6
KAPZ	Kaputan	1.90	5	*e*P		Pb	02 22 03.3	-0.8
KAPZ				*e*S		Sb	02 22 27.9	-0.4
MAHB	Mahabad	1.92	150	Pn		Pg	02 22 05.4	-0.1
GURO	Guroymak-BITLI	1.94	274	Pn		Pb	02 22 03.9	-0.9
AYRK	Ayrk	1.96	30	*e*P		Pb	02 22 04.0	-1.2
AYRK				*e*S		Sb	02 22 29.0	-1.1
IHRS	Heris	2.00	92	Pn		Pb	02 22 05.3	-0.6
SRTM	Siirt_Merkez	2.08	259	P		Pb	02 22 06.4	-0.7
SRTM				S		Sb	02 22 33.4	0.0
EATA	Eleskirt	2.12	313	P		Pb	02 22 07.3	-0.7
DIGO	Kars	2.17	337	P		Pg	02 22 09.7	-0.6
EAK	Akyaka	2.36	343	P		Pb	02 22 11.6	-0.3
MUSM	Mu-Merkez	2.36	278	P		Pb	02 22 10.9	-1.1
QRD	Qoradiz	2.43	64	P		Pb	02 22 11.1	-2.0
QRD				S		Sb	02 22 40.8	-2.7
BOZK	Kars-Merkez-Bo	2.46	332	P		Pg	02 22 15.8	-0.1
GDB	GEDABAY	2.49	23	P		Pb	02 22 11.8	-2.4
GDB				S		Sb	02 22 42.8	-2.4
VRTB	Varto-Mus	2.49	288	Pn		Pb	02 22 12.1	-2.1
LSVT	Lusahovit	2.54	12	*e*P		Pb	02 22 12.9	-2.2
LSVT				*e*S		Sb	02 22 44.3	-2.4
ISRB	Sarab	2.57	103	Pn		Pb	02 22 13.3	-2.3
KOPR	Koprukoy-ERZUR	2.58	308	Pn		Pb	02 22 13.5	-2.3
BTMN	Batman	2.60	259	P		Pb	02 22 13.8	-2.3
GANJ	Ganja	2.62	32	P		Pb	02 22 14.1	-2.3
GANJ				S		Sb	02 22 46.1	-2.9
AGDM	Agdam	2.63	50	P		Pb	02 22 14.5	-2.0
AGDM				S		Sb	02 22 45.9	-3.3
SRTK	Saratovka	2.64	357	*e*P		Pb	02 22 16.1	-0.6
SRTK				*e*S		Sb	02 22 50.2	+0.6
MIDY	Mardin/Midyat-	2.66	248	P		Pb	02 22 14.5	-2.5
GRMI	Germi	2.69	81	Pn		Pn	02 22 14.5	+1.5
SENK	Senkaya-Erzuru	2.70	323	Pn		Pb	02 22 15.2	-2.6
BLQ	Beylaqan	2.71	61	P		Pb	02 22 15.8	-2.1
BLQ				S		Sb	02 22 47.8	-3.7
QZX	Qazax, Azerbai	2.71	14	P		Pn	02 22 14.3	+1.1
QZX				S		Sn	02 22 48.0	+1.4
BRDA	Brd	2.77	48	P		Pn	02 22 15.0	+1.0
BRDA				S		Sn	02 22 49.2	+1.3
SLHN	Bingol, Solhan	2.77	282	P		Pn	02 22 19.9	+1.0
GOLE	Ardahan-Gölle	2.82	329	P		Pg	02 22 21.8	-1.0
KARO	Karliova-Bingo	2.83	289	Pn		Pn	02 22 17.1	+2.1
ERZM	Erzurum	2.85	302	P		Pg	02 22 22.5	-0.8
YRD	Yardimli	2.97	79	P		Pb	02 22 19.8	-2.6
YRD				S		Sn	02 22 54.6	+1.5
LRK	Lerik	3.02	85	P		Pb	02 22 20.2	-3.1
LRK				S		Sn	02 22 56.0	+1.7
BNGB	Bingl	3.04	282	Pn		Pn	02 22 19.9	+2.1
ZRD	Zardab	3.08	52	P		Pb	02 22 21.2	-3.0
ZRD				S		Sn	02 22 56.9	+1.3
DGRG	David-gareji	3.09	12	P		Pb	02 22 23.6	-0.9
TRLG	Trialeti	3.12	355	P		Pb	02 22 24.6	-0.4
GLBA	Clilabad	3.15	74	P		Pb	02 22 22.1	-3.2
GLBA				S		Sn	02 22 59.0	+1.8
VSHL	Vashlovani	3.16	27	P		Pb	02 22 23.0	-2.5
YEDI	Yedisu-Bingol	3.24	289	Pn		Pn	02 22 22.9	+2.2
LKRN	Lenkeran, Azer	3.37	84	P		Pn	02 22 24.9	+2.7
LKRN				S		Sn	02 23 04.9	+2.3
ASTR	Astara	3.37	86	P		Pb	02 22 25.5	-3.6
ASTR				S		Sn	02 23 04.7	+2.0
KDMR	Kurdemir	3.45	55	P		Pn	02 22 24.5	+1.1
KDMR				S		Sn	02 23 04.6	-0.2
DYBB	Diyarbakir	3.47	263	Pn		Pn	02 22 25.9	+2.2
SEKA	Sheki	3.47	36	P		Pn	02 22 25.7	+2.0
SEKA				S		Sn	02 23 07.0	+1.8
ZKTA	Zakatala	3.60	26	P		Pn	02 22 27.8	+2.4
ZKTA				S		Sn	02 23 10.8	+2.5
QBL	Gabala	3.60	45	P		Pn	02 22 28.2	+2.8
QBL				S		Sn	02 23 08.5	+0.1
IML	Ismayilli	3.70	49	P		Pn	02 22 30.0	+3.2
IML				S		Sn	02 23 09.3	-1.6
XNQ	Khinaliq	3.92	45	P		Pn	02 22 32.3	+2.3
XNQ				S		Sn	02 23 19.3	+2.7
PQL	Pirkuli	3.94	52	P		Pn	02 22 31.9	+1.7
PQL				S		Sn	02 23 17.9	+0.8
GBS	Qobustan	4.03	57	P		Pn	02 22 32.9	+1.5
GBS				S		Sn	02 23 20.3	+1.2
SVRC	Sivrice-ELAZID	4.08	271	Pn		Pn	02 22 34.5	+2.3
ATGJ	Altiaghaj	4.20	53	P		Pn	02 22 35.8	+2.0
ATGJ				S		Sn	02 23 24.1	+0.8
QSAR	Qusar	4.23	42	P		Pn	02 22 35.4	+1.4
QSAR				S		Sn	02 23 24.7	+0.8
QUBA	Quba, Azerbaij	4.24	45	P		Pn	02 22 36.0	+1.8
QUBA				S		Sn	02 23 25.1	+0.8
SHTL	Shatili	4.25	7	P		Pb	02 22 45.4	+1.2
SIZA	Siyzn	4.30	51	P		Pn	02 22 37.2	+2.0
SIZA				S		Sn	02 23 26.0	+0.2

CATAC 23 02:23:00.2±0.6, 12°N±8°×87°W±°, h93km±5km, M2.8/12, MLv2.8/12, Error ellipse: s-maj=20.8km s-min=6.1km az=31.8, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.27	343	P		Pn	02 23 14.9	+1.0
UNAN	Cigeo UNAN	0.30	51	P		Pn	02 23 15.0	+1.0
UNAN				S		Sn	02 23 26.6	+2.4
TISN	Laguna Tiscapa	0.32	47	P		Pn	02 23 14.9	+0.8
MOM2	El Cardon	0.51	3	P		Pn	02 23 16.3	+0.9
MOM2				S		Sn	02 23 28.4	+1.7
CNGA	Al SSO del Vol	0.60	342	P		Pn	02 23 17.1	+0.9
CNGN	Cerro Negro	0.60	342	P		Pn	02 23 16.9	+0.7
CNGN	Cerro Negro	0.60	342	S		Sn	02 23 30.5	+2.4
POLN	Al Sur del Vol	0.78	338	P		Pn	02 23 18.6	+0.8
POLN				S		Sn	02 23 33.0	+2.0
PKGN	Cerro Pekin	0.87	329	P		Pn	02 23 19.6	+0.9
PKGN				S		Sn	02 23 34.0	+1.4
CONN	Concepcion	0.94	112	P		Pn	02 23 19.6	+0.1
CONN				S		Sn	02 23 34.2	+0.3
CRIN	San Cristobal	0.94	326	P		Pn	02 23 20.3	+0.8
CSGN	Cosiguina Volc	1.47	316	P		Pn	02 23 26.4	+0.6
CSGN				S		Sn	02 23 45.6	+0.5

*BJI **23** 02:33:10.9, 19.6′68S×169.8′1E, h122km, mB5.4/29, mb5.5/75*
*MOS **23** 02:33:11.5±1.2, 20.1′7S×169.6′8E, h142km, mb5.6/28, Error ellipse: s-maj=8.4km s-min=7.5km az=129.6*
*IDC **23** 02:33:11.7±0.4, 20.2′1S×169.6′8E, h132km±2km, mb5.1/25, mbtmp5.4/28, MS3.9/22, Error ellipse: s-maj=9.8km s-min=7.9km az=117.0*
*NOU **23** 02:33:12.3, 20.1′7S×169.6′4E, h126km, mb5.4/88, Vanuatu Islands*
*NEIC **23** 02:33:12.8, 20.0′7S×169.6′6E, h130km, Moment Tensor Solution. Duration: 2§3 Moment tensor: Scale 10^17^Nm; Mrr=1.01; Mθθ=0.46; Mφφ=0.55; Mrθ=-0.23; Mrφ=-0.38; Mθφ=0.34; Fault plane solution: Mo=1.04000×10^17^ NP1: φs=316.34000°, δ=33.35000°, λ=94.19000°. NP2: φs=141.36000°, δ=56.75000°, λ=87.25000°. Principal axes: T 0.9692, Plg12.0000°, Azm229.0000°; N 0.1297, Plg2.0000°, Azm320.0000°; P -1.0990, Plg78.0000°, Azm61.0000°;*
*NEIC **23** 02:33:12.7±2.0, 20.1′6S±0.0′7×169.6′6E±0.0′7, h129km±3km, mb5.6/539, Mww5.3/30 Error ellipse: s-maj=10.8km s-min=8.3km az=131.0*
*NEIC **23** 02:33:12.8, 20.1′7S×169.6′6E, h130km*
*GCMT **23** 02:33:13.8±0.1, 20.2′4S±0.0′1×169.6′2E±0.0′1, h143km, MW5.3/144, Moment Tensor Solution. s110,c172; s144,c248; Duration: 1§1 Moment tensor: Scale 10^17^ Nm; Mrr=1.09±.01; Mθθ=0.54±.02; Mφφ=0.55±.02; Mrθ=0.16±.01; Mrφ=-0.52±.02; Mθφ=0.53±.01; Best double couple: Mo=1.20700×10^17^ NP1:φs=305.00000°, δ=34.00000°, λ=109.00000°. NP2:φs=147.00000°, δ=58.00000°, λ=78.00000°. Principal axes: T 1.1680, Plg13.0000°, Azm228.0000°; N 0.0740, Plg10.0000°, Azm321.0000°; P -1.2460, Plg74.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 02:33:11.7±0.3, 20.2′1S±0.0′3×169.7′3E±0.0′3, h134km±2km, h134km:pP-P, n1240, σ1§33/1090, mb5.5/373, 44C-73D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.03	231			Pn	02 33 45.8	-0.4
MARNC	Mare, Loyalty	2.03	231	P		Pn	02 33 45.6	-0.6
MARNC	Mare, Loyalty	2.03	231	P		Sn	02 34 11.0	-1.6
PINNC	Pines Island,	3.20	221			Pn	02 34 00.7	-0.3
PINNC	Pines Island,	3.20	221	P		Pn	02 34 00.9	-0.1
PINNC	Pines Island,	3.20	221	S		Sn	02 34 38.0	-1.1
YATNC	Mamie plateau,	3.22	235	P		Pn	02 34 00.2	-1.1
YATNC	Mamie plateau,	3.22	235	S		Sn	02 34 38.1	-1.6
OUENC	Ouen Island, N	3.47	230	P		Pn	02 34 05.2	+0.6
OUENC	Ouen Island, N	3.47	230	S		Sn	02 34 45.9	+0.4
DZM	Mont Dzumac	3.58	238	P		Pn	02 34 06.1	0.0
	7μm,0.6s,baz=63,slow=14,SNR=8504							
DZM				S		Sn	02 34 46.3	-1.8
	5μm,0.5s,baz=309,slow=22,SNR=24							
DZM				LR		LR	02 35 10.4	
	comp=Z,5μm,18.6s,baz=358,slow=34							
DZM	Mont Dzumac	3.58	238	*e*Pn		Pn	02 34 04.2	-1.9
	8μm,0.7s							
DZM				*e*Sn		Sn	02 34 46.7	-1.5
	35μm,1.1s							
ONTNC	Ouen Toro	3.70	235			Pn	02 34 07.9	+0.4
ONTNC	Ouen Toro	3.70	235	P		Pn	02 34 08.2	+0.7
ONTNC	Ouen Toro	3.70	235	S		Sn	02 34 50.1	-0.7
KOUNC	Koumac, New Ca	5.11	265	P		Pn	02 34 27.3	+1.0
KOUNC	Koumac, New Ca	5.11	265	S		Sn	02 35 24.3	-0.2
SANVU	Saraoutou	5.31	333			Pn	02 34 28.5	-0.6
SANVU	Saraoutou	5.31	333	P		Pn	02 34 29.1	+0.1
SANVU	Saraoutou	5.31	333	S		Sn	02 35 28.6	-0.7
MSVF	Nonsavu	8.25	74			Pn	02 35 13.4	+4.7
MSVF	Nonsavu	8.25	74	P		Pn	02 35 11.1	+2.5
MSVF	Nonsavu	8.25	74	*i* P		Pn	02 35 11.2	+2.6
NFK	Norfolk Island	8.94	190	P		Pn	02 35 19.3	+1.6
	comp=Z,2μm,0.8s							
NFK	Norfolk Island	8.94	190	P		Pn	02 35 20.2	+2.4
NFK				S		Sn	02 36 56.0	-0.9
HNR	Honiara	14.28	317	P		Pn	02 36 28.2	+0.4
	comp=Z,101nm,0.5s,baz=190,slow=11,SNR=8.6							
HNR				LR		LR	02 41 16.9	
	comp=Z,199nm,20.3s,baz=156,slow=34							
HNR	Honiara	14.28	317			Pn	02 36 28.7	+0.8
RAO	Raoul Island	14.38	131	LR		LR	02 40 09.6	
	comp=Z,386nm,20.4s,baz=58,slow=29							
SAVO	Savo Central	14.58	318	P		Pn	02 36 32.6	+0.9
LHI	Lord Howe Isla	14.78	218	P		P	02 36 35.5	-1.1
	comp=Z,855nm,0.9s							
LHI	Lord Howe Isla	14.78	218			P	02 36 35.9	-0.7
LHI	Lord Howe Isla	14.78	218	P		P	02 36 38.4	+1.9
OUZ	Omahuta	15.34	168	P		P	02 36 42.5	-0.1
OUZ	Omahuta	15.34	168	P		P	02 36 44.0	+1.4
WCZ	Waipu Caves	16.19	166	P		P	02 36 56.2	+4.2
KUZ	Kuaotunu	17.29	164	P		Pn	02 37 06.3	+1.5
EIDS	Eidsvold	17.93	250	P		Pn	02 37 13.7	+1.0
	comp=Z,384nm,0.8s							
EIDS	Eidsvold	17.93	250	P		Pn	02 37 14.3	+1.6
EIDS	Eidsvold	17.93	250	P		Pn	02 37 13.4	+0.7
TOZ	Tahuroa Road	18.17	165			Pn	02 37 16.6	+1.4
TOZ	Tahuroa Road	18.17	165	P		Pn	02 37 16.7	+1.4
TLZ	Tolley Road	18.75	166	P		Pn	02 37 23.2	+1.1
AFI	Afiamalu	18.75	73			P	02 37 20.9	+0.4
AFI	Afiamalu	18.75	73	P		P	02 37 20.9	+0.4
HIZ	Hauiti	18.77	167	P		Pn	02 37 23.9	+1.5
HIZ	Hauiti	18.77	167	P		Pn	02 37 23.0	+0.6
HIZ	Hauiti	18.77	167	P		Pn	02 37 23.9	+1.5
HAZ	Te Kaha	18.84	160	P		Pn	02 37 24.0	+0.9
MXZ	Matakaoa Point	18.84	158	P		Pn	02 37 24.2	+1.1
MXZ	Matakaoa Point	18.84	158	P		Pn	02 37 23.2	+0.1
MXZ	Matakaoa Point	18.84	158	P		Pn	02 37 24.4	+1.3
URZ	Urewera	19.09	162	P		Pn	02 37 25.8	-0.3
	comp=Z,94nm,0.9s,baz=337,slow=4.3,SNR=48							
URZ				S		S	02 40 56.2	+2.9
	comp=Z,7.1nm,0.7s,baz=16,slow=17,SNR=1.9							
URZ				LR		LR	02 44 05.6	
	comp=Z,567nm,18.6s,baz=350,slow=34							
URZ	Urewera	19.09	162	P		Pn	02 37 26.5	+0.4
URZ	Urewera	19.09	162	P		Pn	02 37 26.6	+0.4
NIUE	Niue	19.20	90	P		Pn	02 37 26.9	-0.7
	comp=Z,807nm,0.9s							
NIUE	Niue	19.20	90	P		Pn	02 37 26.6	-1.0
NIUE	Niue	19.20	90	P		Pn	02 37 26.9	-0.7
ARMA	Armidale	19.23	235	P		Pn	02 37 28.1	+0.1
	comp=Z,407nm,1.3s,comp=Z,0.0nm							
ARMA	Armidale	19.23	235			Pn	02 37 28.8	+0.8
ARMA	Armidale	19.23	235	P		Pn	02 37 28.0	0.0
PUZ	Puketiti	19.28	159	P		Pn	02 37 28.2	-0.2
MWZ	Matawai	19.29	161	P		Pn	02 37 28.2	-0.2
RTZ	Ruatahuna	19.39	163	P		Pn	02 37 29.5	-0.2
RTZ	Ruatahuna	19.39	163	P		Pn	02 37 29.6	0.0
NGZ	Ngauruhoe	19.57	166	P		Pn	02 37 32.2	+0.3
BKZ	Black Stump Fm	19.77	164	P		Pn	02 37 33.6	-0.5
BKZ	Black Stump Fm	19.77	164	P		Pn	02 37 33.6	-0.5
BKZ				S		Sn	02 41 13.1	-4.3
KNZ	Kokohu	19.96	162	P		Pn	02 37 35.1	-1.2
WAZ	Wanganui	20.00	168	P		Pn	02 37 37.4	+0.6
RMQ	Roma	20.23	248	P		Pn	02 37 38.9	-0.7
	comp=Z,70nm,0.7s							
RMQ	Roma	20.23	248	P		Pn	02 37 38.0	-1.6
TSZ	Takapari Road	20.49	166	P		Pn	02 37 41.6	-1.0
MRZ	Mangatainoka R	20.99	167	P		P	02 37 45.3	+1.0
MRZ				S		S	02 41 30.7	+0.2
MGCD	Mangrove Creek	21.03	228	P		P	02 37 46.8	+2.0
	comp=Z,158nm,1.0s							
MGCD	Mangrove Creek	21.03	228	P		P	02 37 46.2	+1.4
BFZ	Birch Farm	21.15	166	P		P	02 37 46.5	+0.5
BFZ	Birch Farm	21.15	166	P		P	02 37 46.5	+0.5
BFZ				S		S	02 41 32.3	-1.3
NNZ	Nelson	21.17	172	P		P	02 37 50.4	+4.2
RIV	River

STKA ScP **ScP** 02 45 29.9 +0.4
comp=Z,10.0nm,0.9s,baz=109,slow=3.7,SNR=5.2
STKA LR LR 02 49 05.0
comp=Z,500nm,21.3s,baz=87,slow=34
comp=Z,49nm,0.7s
STKA Stephens Creek 27.73 240 P **P** 02 38 48.5 +0.8
QIS Mount Isa 28.22 264 P **P** 02 38 52.5 +0.4
comp=Z,34nm,0.7s
QIS Mount Isa 28.22 264 P **P** 02 38 52.7 +0.6
MANU Manus Island 28.34 307 P **P** 02 38 52.9 -0.3
MOO Moorlands 29.19 216 P **P** 02 39 01.6 +1.2
comp=Z,63nm,1.3s
MOO Moorlands 29.19 216 P **P** 02 39 01.8 +1.4
ARPS Mount Arapiles 29.40 230 P **P** 02 39 03.5 +1.2
comp=Z,35nm,0.9s
HTT Hallett 30.35 238 P **P** 02 39 11.7 +0.8
comp=Z,28nm,0.9s
HTT Hallett 30.35 238 P **P** 02 39 11.9 +1.0
BBOO Buckleboo 32.49 240 P **P** 02 39 29.9 +0.3
comp=Z,67nm,0.8s
BBOO Buckleboo 32.49 240 P **P** 02 39 30.3 +0.7
WR8 Warramunga Arr 33.05 264 P **P** 02 39 34.1 -0.5
WB0 Warramunga Arr 33.17 265 P **P** 02 39 35.0 -0.7
WRAB Tennant Creek 33.19 264 P **P** 02 39 35.4 -0.4
WRAB Tennant Creek 33.19 264 *ce*P **P** 02 39 35.0 -0.8
WRAB pmax pmax
comp=Z,34nm,1.3s
WRAB Tennant Creek 33.19 264 P **P** 02 39 35.1 -0.7
WRAB pP **pP** 02 40 02.8 -0.4
WRAB PcP **PcP** 02 42 15.9 +0.2
WRA Warramunga Arr 33.20 264 P **P** 02 39 35.1 -0.8
comp=Z,12nm,0.5s,baz=92,slow=8.4,SNR=113
WRA PcP **PcP** 02 42 15.6 -0.1
comp=Z,19nm,0.9s,baz=94,slow=2.5,SNR=9.8
WRA S **S** 02 44 42.6 -3.4
comp=Z,24nm,1.0s,baz=90,slow=14,SNR=5.7
WRA ScP **ScP** 02 45 48.2 +0.6
comp=Z,14nm,0.9s,baz=89,slow=3.7,SNR=9.1
WRA PKiKP **PKiKP** 02 49 39.9 -1.5
comp=Z,2.9nm,0.6s,baz=21,slow=0.3,SNR=23
WRA LR LR 02 52 08.9
comp=Z,243nm,20.6s,baz=95,slow=34
comp=Z,12nm,0.5s
JAY Jayapura 33.34 298 LR LR 02 52 01.4
comp=Z,275nm,20.2s,baz=98,slow=34
JAY Jayapura 33.34 298 P **P** 02 39 37.4 +0.2
comp=Z,43nm,1.2s
ASAR Alice Springs 33.35 257 P **P** 02 39 37.1 -0.1
comp=Z,58nm,0.7s,baz=81,slow=9.1,SNR=396
ASAR pP **pP** 02 40 04.8 0.0
comp=Z,45nm,0.8s,baz=82,slow=9.2,SNR=3.8
ASAR PcP **PcP** 02 42 15.8 -0.3
comp=Z,21nm,0.8s,baz=100,slow=3.2,SNR=9.4
ASAR S **S** 02 44 45.1 -3.2
comp=Z,12nm,0.9s,baz=82,slow=17,SNR=12
ASAR ScP **ScP** 02 45 48.5 +0.3
comp=Z,11nm,0.9s,baz=95,slow=3.8,SNR=11
ASAR PKiKP **PKiKP** 02 49 40.0 -1.5
comp=Z,1.9nm,0.7s,baz=104,slow=1.4,SNR=14
ASAR LR LR 02 51 47.2
comp=Z,255nm,20.9s,baz=92,slow=34
ASAR P3KPbc 03 10 49.6
comp=Z,3.3nm,0.9s,baz=275,slow=4.0,SNR=23
comp=Z,58nm,0.7s
GENI Genyem 33.74 297 P **P** 02 39 41.4 +0.8
comp=Z,4µmcomp=Z,336nm,1.2s
KDU Kakadu 36.44 276 P **P** 02 40 03.9 +0.1
comp=Z,8.1nm,1.4s
MTN Manton Dam 37.65 275 P **P** 02 40 14.4 +0.4
comp=Z,51nm,0.8s
MTN Manton Dam 37.65 275 IAmb IAmb 02 40 17.6
comp=Z,40nm,0.5s
BAKI Biak 37.91 296 P **P** 02 40 18.7 +2.5
comp=Z,2µmcomp=Z,226nm,1.2s
TBI Tubuai 37.94 102 *e*P **P** 02 40 18.3 +1.9
comp=Z,516nm,31.8s
TBI *e*S **S** 02 45 54.9 -3.5
comp=Z,530nm,27.8s
TBI *e*SS **SS** 02 48 50.9 +0.2
comp=Z,4µm,27.2s
TBI *e*LR LR 02 50 49.1
comp=Z,3µm,35.5s
TBI *e*LR LR 02 50 55.5
comp=Z,853nm,32.0s
DRS Darwin Rock St 37.98 276 P **P** 02 40 17.4 +0.6
WRKA Warakurna 38.44 255 P **P** 02 40 20.9 +0.3
comp=Z,18nm,1.4s
PPT2 Papeete2 38.53 93 *e*PKP2 **P** 02 40 22.5 +1.1
comp=Z,98nm,28.0s
PPT2 *e*S **S** 02 46 06.6 -0.9
comp=Z,137nm,26.5s
PPT2 *e*SS **SS** 02 49 03.0 +0.3
comp=Z,778nm,27.8s
PPT2 *e*LR LR 02 50 57.0
comp=Z,530nm,37.5s
PPT2 *e*LR LR 02 51 05.1
comp=Z,965nm,35.5s
PPT Papeete 38.53 93 P **P** 02 40 22.0 +0.6
comp=Z,61nm,0.8s,baz=234,slow=8.4,SNR=5.6
comp=Z,61nm,0.8s
FORT Forrest 38.86 246 P **P** 02 40 23.9 -0.1
comp=Z,47nm,0.7s
XMAS Kiritimati 39.06 59 P **P** 02 40 26.1 +0.3
KNRA Kununurra 39.16 270 P **P** 02 40 26.9 +0.3
comp=Z,47nm,0.8s
FAKI Fak Fak 40.38 290 P **P** 02 40 37.2 +0.5
FAKI Fak Fak 40.38 290 P **P** 02 40 36.3 -0.5
comp=Z,2µmcomp=Z,208nm,0.9s
BNDI Bandanaira 41.75 287 P **P** 02 40 47.9 -0.1
comp=Z,206nm,1.0s
JOHN Johnston Islan 41.99 30 P **P** 02 40 51.0 +1.3
SWI Sorong 42.23 292 P **P** 02 40 50.7 -1.2
comp=Z,2µmcomp=Z,163nm,0.8s
KMBL Kambalda 44.19 245 P **P** 02 41 07.1 -0.3
comp=Z,17nm,1.0s
NLAI Namlea 44.83 286 P **P** 02 41 13.6 +0.9
comp=Z,2µmcomp=Z,189nm,1.3s
SOEI Soe 44.99 276 IAmb IAmb 02 42 25.1
comp=Z,85nm,1.0s
SOEI Soe 44.99 276 P **P** 02 41 15.1 +1.0
comp=Z,1µmcomp=Z,60nm,0.9s
BATI Baumata 45.41 276 P **P** 02 41 19.1 +1.7
comp=Z,985nmcomp=Z,89nm,1.2s
SANI Sanana 46.34 287 P **P** 02 41 25.0 +0.4
SANI Sanana 46.34 287 P **P** 02 41 24.9 +0.4
comp=Z,2µmcomp=Z,206nm,0.8s
PSAC2 Pilbara Seismi 46.41 259 P **P** 02 41 25.2 +0.1
comp=Z,49nm,1.0s
PSAB3 Pilbara Seismi 46.45 259 P **P** 02 41 25.6 +0.3
comp=Z,31nm,0.7s
PSA00 Pilbara Seismi 46.46 259 P **P** 02 41 25.5 +0.1
comp=Z,39nm,0.9s
PSA00 Pilbara Seismi 46.46 259 P **P** 02 41 25.7 +0.3
PSA00 Pilbara Seismi 46.46 259 P **P** 02 41 24.9 -0.5
PSA00 IAmb IAmb 02 41 57.0
comp=Z,33nm,1.2s
PSA00 Pilbara Seismi 46.46 259 P **P** 02 41 25.9 +0.5
PSAC1 Pilbara Seismi 46.50 259 P **P** 02 41 26.1 +0.4
comp=Z,28nm,0.7s
MBWA Marble Bar 46.62 260 P **P** 02 41 27.0 +0.3
comp=Z,42nm,0.9s
MBWA Marble Bar 46.62 260 P **P** 02 41 26.9 +0.2
MBWA IAmb IAmb 02 41 58.2
comp=Z,118nm,1.4s
MBWA Marble Bar 46.62 260 P **P** 02 41 27.3 +0.6
MBWA Marble Bar 46.62 260 P **P** 02 41 27.0 +0.3
MBWA pP **pP** 02 41 56.3 +0.5
MEEK Meekatharra 47.09 252 P **P** 02 41 30.4 0.0
MEEK Meekatharra 47.09 252 P **P** 02 41 30.3 0.0
MMRI Maumere 47.25 277 IAmb IAmb 02 43 02.4
comp=Z,81nm,0.8s
MMRI Maumere 47.25 277 P **P** 02 41 32.2 +0.5
comp=Z,70nm,1.0s
KLBR Kellerberrin 47.72 245 P **P** 02 41 34.7 -0.4
comp=Z,126nm,0.8s
KLBR Kellerberrin 47.72 245 P **P** 02 41 35.8 +0.7
NWAO Narrogin (SRO) 48.18 244 P **P** 02 41 38.7 0.0
comp=Z,45nm,1.2s
NWAO Narrogin (SRO) 48.18 244 LR LR 03 01 54.9
comp=Z,528nm,19.9s,baz=143,slow=36
NWAO Narrogin (SRO) 48.18 244 P **P** 02 41 38.9 +0.3
NWAO Narrogin (SRO) 48.18 244 P **P** 02 41 38.9 +0.3
NWAO Narrogin (SRO) 48.18 244 P **P** 02 41 38.9 +0.3
NWAO pmax pmax
comp=Z,43nm,0.9s
BLDU Ballidu 48.61 247 P **P** 02 41 42.8 +0.8
MUN Mundaring 49.04 245 P **P** 02 41 46.7 +1.5

MORW Morawa 49.24 249 P **P** 02 41 46.7 -0.1
comp=Z,43nm,1.4s
MORW Morawa 49.24 249 IAmb IAmb 02 42 18.1
comp=Z,59nm,1.1s
KMSI Cibinong 49.31 289 P **P** 02 41 50.1 +2.7
comp=Z,226nm,0.9s
WBSI Waikabubak, Su 49.59 275 P **P** 02 41 49.7 +0.1
comp=Z,2µmcomp=Z,165nm,0.8s
TAOE Nuku Hiva Isla 49.64 84 P **P** 02 41 52.0 +1.9
TAOE Nuku Hiva Isla 49.64 84 *e*LR LR 02 56 12.3
comp=Z,370nm,36.0s
BSSI Bau Bau, Buton 49.74 279 P **P** 02 41 50.2 -0.5
comp=Z,39nm,1.0s
DRV Dumont d'Urvil 50.21 195 P **P** 02 41 53.6 +0.2
DRV pP **pP** 02 42 23.8 0.0
DRV PcP **PcP** 02 43 10.7 +0.1
BKSI Bulukumba 50.38 280 P **P** 02 41 55.7 +0.2
comp=Z,830nmcomp=Z,98nm,1.0s
BNSI Bone 50.74 281 P **P** 02 41 59.5 +1.3
comp=Z,2µmcomp=Z,125nm,1.2s
KAPI Kappang 50.83 280 P **P** 02 42 00.4 +1.4
KAPI IAmb IAmb 02 42 01.3
comp=Z,106nm,0.9s
KAPI Kappang 50.83 280 P **P** 02 42 00.4 +1.4
KAPI pmax pmax
comp=Z,106nm,1.0s
KAPI Kappang 50.83 280 P **P** 02 42 00.1 +1.2
SPSI Sidrap Palu 51.21 282 P **P** 02 42 01.6 -0.2
comp=Z,970nmcomp=Z,79nm,1.0s
PLAI Plampang 51.36 275 P **P** 02 42 03.5 +0.6
PLAI Plampang 51.36 275 P **P** 02 42 03.3 +0.4
TWSI Taliwang, Sumb 52.22 275 P **P** 02 42 09.8 +0.5
comp=Z,962nmcomp=Z,60nm,1.0s
TOLI2 Tolitoli 52.40 288 P **P** 02 42 11.0 +0.4
TOLI2 Tolitoli 52.40 288 P **P** 02 42 11.3 +0.7
MPSI Mapaga 52.85 287 P **P** 02 42 14.0 +0.1
comp=Z,179nm,0.9s
JAGI Jajag, Banyuwa 54.86 274 IAmb IAmb 02 42 29.3
comp=Z,161nm,1.4s
JAGI Jajag, Banyuwa 54.86 274 P **P** 02 42 27.3 -1.3
comp=Z,850nmcomp=Z,78nm,1.2s
BBKI Banjar Baru 55.95 280 P **P** 02 42 37.7 +1.3
comp=Z,160nm,1.1s
MYLDM Lahad Datu 56.29 291 P **P** 02 42 39.9 +1.2
MYLDM IAmb IAmb 02 43 23.3
comp=Z,69nm,1.2s
VNDA Vanda 57.48 182 P **P** 02 42 46.5 +0.4
comp=Z,18nm,0.8s,baz=1.7,slow=7.6,SNR=33
VNDA LR LR 03 04 20.5
comp=Z,64nm,18.6s,baz=24,slow=32
comp=Z,18nm,0.8s
VNDA Vanda 57.48 182 P **P** 02 42 47.1 +0.9
VNDA IAmb IAmb 02 42 48.2
comp=Z,204nm,2.0s
VNDA Vanda 57.48 182 P **P** 02 42 47.1 +0.9
VNDA pmax pmax
comp=Z,204nm,2.0s
SBA Scott Base 57.70 181 P **P** 02 42 49.8 +2.1
SBA Scott Base 57.70 181 P **P** 02 42 49.8 +2.1
SBA pmax pmax
comp=Z,196nm,0.9s
SBA Scott Base 57.70 181 P **P** 02 42 49.6 +1.9
PCJI Pacitan 57.74 273 P **P** 02 42 50.0 +1.0
comp=Z,137nm,1.0s
UGM Wanagama 58.44 273 P **P** 02 42 54.9 +1.0
CASY Casey 59.42 204 P **P** 02 42 59.8 0.0
CASY IAmb IAmb 02 43 00.9
comp=Z,48nm,0.9s
CCD Concordia, Ant 60.05 192 P **P** 02 43 04.5 0.0
CCD pP **pP** 02 43 35.9 +0.1
KPJI Karang Pucung 60.12 273 P **P** 02 43 05.9 +0.5
comp=Z,41nm,0.9s
JHJ Hachijo jima 2 60.25 331 LR LR 03 07 30.0
comp=Z,139nm,19.9s,baz=100,slow=34
STKI Sintang 60.41 282 P **P** 02 43 08.9 +1.5
comp=Z,186nm,0.9s
SBUM Sibu 60.69 285 P **P** 02 43 10.3 +1.1
JOW Kunigami 61.65 318 P **P** 02 43 16.4 +0.9
CNJI Cibinong 61.82 272 P **P** 02 43 16.5 -0.4
comp=Z,2µmcomp=Z,57nm,1.0s
DBJI Dramaga 62.42 273 P **P** 02 43 21.3 +0.3
TPI Tanjungpandan 62.88 277 P **P** 02 43 24.4 +0.4
comp=Z,846nmcomp=Z,65nm,1.2s
SBJI Serang 63.15 273 P **P** 02 43 26.3 +0.6
INU Inuyama 63.37 330 IAmb IAmb 02 43 28.7
comp=Z,80nm,1.3s
JGF Kuroka 63.42 331 IAmb IAmb 02 43 29.6
comp=Z,33nm,0.7s
JGF Kuroka 63.42 331 P **P** 02 43 27.8 +0.7
YOJ Yonaguni jima 63.55 312 P **P** 02 43 28.9 +0.8
JMN Monobe 63.60 327 IAmb IAmb 02 43 30.7
comp=Z,122nm,1.2s
JMN Monobe 63.60 327 P **P** 02 43 29.4 +1.1
MJAR Matsushiro Arr 63.82 332 P **P** 02 43 29.5 -0.1
comp=Z,44nm,0.9s,baz=168,slow=7.5,SNR=81
MJAR pP **pP** 02 44 01.4 -0.7
comp=Z,20nm,0.8s,baz=167,slow=6.1,SNR=4.6
MJAR PKPPKP **P'P'bc** 03 12 23.7 -3.5
comp=Z,3.2nm,1.0s,baz=349,slow=2.6,SNR=5.4
comp=Z,44nm,0.9s
MJAR Matsushiro Arr 63.82 332 P **P** 02 43 30.1 +0.4
MJAR IAmb IAmb 02 43 31.1
comp=Z,61nm,1.0s
MAJO Matsushiro 63.82 332 P **P** 02 43 30.2 +0.5
MAJO IAmb IAmb 02 43 30.6
comp=Z,52nm,0.8s
MAJO Matsushiro 63.82 332 P **P** 02 43 30.5 +0.8
MAJO Matsushiro 63.82 332 *i*P **P** 02 43 28.5 -1.2
MAJO pmax pmax
comp=Z,51nm,0.9s
MJB9 Matsu-Tunnel 63.83 332 IAmb IAmb 02 43 31.6
comp=Z,51nm,0.8s
JMM Marumori 63.86 335 IAmb IAmb 02 43 32.0
comp=Z,80nm,0.9s
JMM Marumori 63.86 335 P **P** 02 43 30.6 +0.8
NACB Ninganchiao 64.36 311 P **P** 02 43 34.1 +0.7
PPBI Pangkal Pinang 64.51 277 P **P** 02 43 33.8 -0.9
TPUB Ta-pu 64.51 310 P **P** 02 43 34.7 +0.2
SSLB Suanglung 64.58 310 IAmb IAmb 02 43 35.6
comp=Z,112nm,0.9s
SSLB Suanglung 64.58 310 P **P** 02 43 35.1 +0.2
JNU Nakatsue 64.72 324 IAmb IAmb 02 43 37.4
comp=Z,105nm,1.0s
JNU Nakatsue 64.72 324 P **P** 02 43 36.5 +0.9
YHNB Yeheng 64.83 311 P **P** 02 43 37.8 +1.2
KASI Kota Agung 64.88 273 P **P** 02 43 36.1 -0.9
comp=Z,1µmcomp=Z,157nm,0.9s
TATO Taipei 64.94 312 P **P** 02 43 37.1 -0.1
JSD Sado 65.05 333 IAmb IAmb 02 43 39.6
comp=Z,72nm,0.8s
JSD Sado 65.05 333 P **P** 02 43 39.1 +1.5
LWLI Liwa 65.46 274 P **P** 02 43 40.8 -0.1
MDSI Maura Dua 65.53 274 P **P** 02 43 39.6 -1.6
comp=Z,1µmcomp=Z,109nm,1.0s
JTM Tenmabayashi 66.28 337 IAmb IAmb 02 44 19.2
comp=Z,86nm,1.1s
JTM Tenmabayashi 66.28 337 P **P** 02 43 46.1 +0.7
DSRI Dabo 66.57 279 P **P** 02 43 48.9 +1.0
comp=Z,79nm,1.0s
ERM Erimo 66.61 339 P **P** 02 43 49.0 +1.5
ERM Erimo 66.61 339 P **P** 02 43 48.5 +1.0
ERM Erimo 66.61 339 P **P** 02 43 49.0 +1.5
ERM pmax pmax
comp=Z,26nm,0.8s
MASI Maura Aman, Be 67.80 275 P **P** 02 43 55.0 -0.7
comp=Z,187nm,1.0s
MYKOM Kota Tinggi 68.10 281 IAmb IAmb 02 43 59.6
comp=Z,92nm,1.0s
JKA Kamikawa-asahi 68.67 339 P **P** 02 44 02.3 +1.9
JKA IAmb IAmb 02 44 03.3
comp=Z,95nm,1.0s
ASAJ Asahikawa 68.67 339 LR LR 03 10 21.9
comp=Z,40nm,21.6s,baz=136,slow=32
ASAJ Asahikawa 68.67 339 P **P** 02 44 02.3 +1.9
ASAJ pmax pmax
comp=Z,95nm,1.0s
KSRS Korea Array 69.56 326 P **P** 02 44 06.4 +0.4
comp=Z,8.3nm,0.9s,baz=151,slow=6.3,SNR=24
KSRS pP **pP** 02 44 38.8 +0.1
comp=Z,5.0nm,0.8s,baz=142,slow=6.2,SNR=2.6
KSRS PKP2bc **P'P'bc** 03 12 09.4 -1.6
comp=Z,3.4nm,1.0s,baz=316,slow=3.9,SNR=6.3
comp=Z,8.3nm,0.9s
KSAR Wonju Array Be 69.57 325 P **P** 02 44 07.3 +1.2
KSAR Wonju Array Be 69.57 325 P **P** 02 44 07.3 +1.2
KS19 Wonju Array Si 69.63 326 IAmb IAmb 02 44 08.4
comp=Z,91nm,1.6s
QSPA South Pole Qui 69.85 180 P **P** 02 44 11.7 +4.1
comp=Z,147nm,0.8s,baz=19,slow=1.9,SNR=412
QSPA S **S** 02 53 10.4 +4.2
comp=Z,4.9nm,1.0s,baz=336,slow=22,SNR=19
QSPA LR LR 03 10 59.7
comp=Z,66nm,19.1s,baz=32,slow=32
QSPA PKP2bc **P'P'bc** 03 12 09.3 -2.5
comp=Z,5.2nm,1.1s,baz=245,slow=1.7,SNR=6.8
QSPA South Pole Qui 69.85 180 P **P** 02 44 11.6 +4.0
QSPA South Pole Qui 69.85 180 P **P** 02 44 12.3 +4.7
PDSI Padang 70.25 277 P **P** 02 44 10.5 -0.3
comp=Z,49nm,0.7s
INCN Inchon 70.28 325 P **P** 02 44 11.6 +1.1
INCN IAmb IAmb 02 44 12.7
comp=Z,126nm,1.1s
INCN Inchon 70.28 325 P **P** 02 44 11.6 +1.1
INCN pmax pmax
comp=Z,126nm,1.2s
QIZ Qiongzhong 70.46 300 IAmb IAmb 02 44 14.5
comp=Z,51nm,0.9s
QIZ Qiongzhong 70.46 300 P **P** 02 44 12.9 +1.0
YSS Yuzhno-Sakhali 71.14 341 P **P** 02 44 17.0 +1.5
YSS Yuzhno-Sakhali 71.14 341 *ke*P **P** 02 44 17.3 +1.9
YSS *e* 02 44 35.9
YSS *e**PP **pP** 02 44 48.2 +0.2
YSS *e* 02 46 58.0
YSS *e*S **S** 02 53 21.5 +0.3
YSS pmax pmax
comp=Z,40nm,1.0s
YSS pmax pmax
comp=Z,300nm,5.8s
NJ2 Nanjing 71.22 316 *e*P **P** 02 44 17.1 +0.9
NJ2 pP **pP** 02 44 48.8 -0.1
NJ2 pmax pmax
comp=Z,53nm,1.1s
MNSI Mandailing Nat 71.69 278 P **P** 02 44 18.9 -0.6
comp=Z,97nm,0.6s
IPM Ipoh 71.73 282 IAmb IAmb 02 44 21.3
comp=Z,106nm,0.7s
AMKA Amchitka 71.77 6 P **P** 02 44 19.8 +0.7
MSHR Mys Shultsa 71.89 331 *ce*P **P** 02 44 20.4 +0.4
MSHR pmax pmax
comp=Z,36nm,0.9s
PSTR Posyet 72.11 331 *i*P **P** 02 44 22.8 +1.5
KULM Kulim 72.39 283 IAmb IAmb 02 44 25.2
comp=Z,56nm,0.8s
KULM Kulim 72.39 283 P **P** 02 44 24.6 +0.9
SHEM Shemya Is, Ala 72.73 3 P **P** 02 44 25.5 +0.8
comp=Z,119nm,0.5s,baz=19,slow=5.1,SNR=10
SHEM LR LR 03 10 04.2
comp=Z,114nm,19.7s,baz=253,slow=30
comp=Z,119nm,0.5s
SMY Shemya 72.73 3 P **P** 02 44 25.7 +1.0
ADK Adak 72.76 9 P **P** 02 44 25.7 +0.7
ADK Adak 72.76 9 P **P** 02 44 25.8 +0.8
ADK Adak 72.76 9 P **P** 02 44 25.7 +0.7
ADK pmax pmax
comp=Z,199nm,1.1s
ADK Adak 72.76 9 P **P** 02 44 25.1 +0.2
ADK PcP **PcP** 02 44 43.3 +1.9
USRK Ussuriysk Ar. 72.81 333 P **P** 02 44 26.3 +0.9
comp=Z,44nm,0.8s,baz=150,slow=4.3,SNR=50
USRK pP **pP** 02 44 58.4 0.0
comp=Z,12nm,0.9s,baz=125,slow=4.8,SNR=2.8
comp=Z,44nm,0.8s
RPSI Rantau Prapat 72.99 279 P **P** 02 44 26.9 -0.3
RPSI IAmb IAmb 02 44 28.2
comp=Z,121nm,1.1s
PSI Prapat 73.03 280 P **P** 02 44 26.9 -0.7
PSI pmax pmax
comp=Z,121nm,1.1s
GULI GuiLin 73.30 306 P P 02 44 20.9 -7.9
GULI pmax pmax
comp=Z,75nm,1.0s
WHN Wuhan 73.34 312 P **P** 02 44 29.6 +0.7
WHN pP **pP** 02 45 01.3 -0.3
WHN pmax pmax
comp=Z,190nm,0.9s
ATKA Atka Island 73.46 10 P **P** 02 44 29.6 +0.5
ATKA Atka Island 73.46 10 P **P** 02 44 29.5 +0.5
PET Petropavlovsk 73.56 353 *e*P P 02 44 38.2 +8.6
PET *e**PP sP 02 45 12.3 -4.3
PET pmax pmax
comp=Z,100nm,14.1s
GSI Gunungsitoli 73.74 278 P **P** 02 44 32.8 +1.1
GSI Gunungsitoli 73.74 278 P **P** 02 44 32.2 +0.6
PEA0B Petropavlovsk- 73.75 352 IAmb IAmb 02 44 33.2
comp=Z,119nm,1.4s
PEA0B Petropavlovsk- 73.75 352 *ce*P **P** 02 44 30.8 0.0
PETK Petropavlovsk- 73.75 352 P **P** 02 44 31.7 +0.9
comp=Z,21nm,0.9s,baz=148,slow=7.0,SNR=12
PETK pP **pP** 02 45 03.4 -0.2
comp=Z,19nm,0.9s,baz=143,slow=5.2,SNR=3.2
comp=Z,21nm,0.9s
PETK Petropavlovsk- 73.75 352 P **P** 02 44 31.4 +0.7
DL2 Dalian 74.06 323 P **P** 02 44 34.1 +1.2
DL2 pmax pmax
comp=Z,250nm,1.0s
MDJ Mudanjiang 74.19 331 IAmb IAmb 02 44 35.9
comp=Z,63nm,1.0s
MDJ Mudanjiang 74.19 331 P **P** 02 44 34.8 +1.3
MDJ pP pP 02 45 07.8 +1.2
MDJ S **S** 02 53 57.8 +1.8
MDJ ScS **ScS** 02 54 30.6 -0.9
MDJ pmax pmax
comp=Z,73nm,1.2s
MDJ pmax pmax
comp=Z,570nm,3.6s
MDJ Mudanjiang 74.19 331 P **P** 02 44 34.1 +0.6
MDJ PcP **PcP** 02 44 48.4 +0.6
KCSI Kotacane, Aceh 74.37 280 P **P** 02 44 34.6 -0.7
comp=Z,741nmcomp=Z,45nm,1.3s
TYV Tymovskoe 74.67 343 *e*P **P** 02 44 33.0 -3.1
TYV *e*S **SKiKP** 02 53 53.0 +4.9
TYV pmax pmax
comp=Z,300nm,3.6s
TYV pmax pmax
comp=Z,21nm,1.3s
TYV smax smax
comp=N,700nm,9.2s
TYV smax smax
comp=E,2µm,9.2s
TIA Tai'an 74.97 318 P **P** 02 44 38.9 +0.7
TIA pmax pmax
comp=E,140nm,0.7s
SNY Shenyang 75.04 326 ⇓P **P** 02 44 39.0 +0.5
SNY pmax pmax
comp=E,30nm,0.8s
NIKH Nikolski High 75.21 13 P **P** 02 44 39.9 +0.7
NIKH Nikolski High 75.21 13 P **P** 02 44 39.6 +0.4
baz=201,SNR=9.7
SNSI Sinabang, Aceh 75.30 278 P **P** 02 44 41.7 +1.1
CN2 Changchun 75.52 329 ⇓P **P** 02 44 41.9 +0.7
CN2 *ep*P pP 02 45 14.9 +0.7
CN2 *e*S **S** 02 54 10.3 -0.5
CN2 pmax pmax
comp=E,80nm,0.8s
CN2 pmax pmax
comp=E,300nm,5.0s
MLSI Meulaboh, Aceh 75.91 280 P **P** 02 44 44.1 0.0
BNX BinXian 76.04 331 ⇓P **P** 02 44 44.1 0.0
BNX pmax pmax
comp=E,71nm,0.8s
GRNR Gornyy 76.52 339 ⇓*i*P **P** 02 44 48.6 +1.9
GRNR pmax pmax
comp=Z,30nm,1.1s
UNV Unalaska Valle 76.55 14 IAmb IAmb 02 44 47.6
comp=Z,125nm,1.0s
UNV Unalaska Valle 76.55 14 P **P** 02 44 46.8 +0.1
baz=203,SNR=7.0
ENH Enshi 76.64 309 IAmb IAmb 02 44 49.5
comp=Z,85nm,1.0s
GYA Guiyang 76.75 305 ⇑P **P** 02 44 49.9 +1.2
GYA pmax pmax
comp=Z,58nm,0.8s
LYN LuoYang 76.97 315 P **P** 02 44 50.9 +1.3
LYN pP pP 02 45 23.5 +0.8
LYN S **S** 02 54 28.3 +1.3
LYN pmax pmax
comp=Z,300nm,0.8s
LYN pmax pmax
comp=Z,260nm,7.6s
HNS HongShan 77.22 318 ⇓P **P** 02 44 52.3 +1.4
HNS S **S** 02 54 32.8 +3.2

HNS pmax pmax
comp=Z,62nm,1.5s
MAW Mawson 77.71 202 P **P** **02 44 54.5 +1.3**
comp=Z,14nm,1.4s
MAW Mawson 77.71 202 P **P** **02 44 54.3 +1.1**
comp=Z,37nm,0.8s,baz=117,slow=7.1,SNR=31
MAW LR LR 03 15 23.3
comp=Z,74nm,19.5s,baz=104,slow=33
comp=Z,37nm,0.8s
BJT Baijiatuau 77.97 321 P **P** **02 44 55.9 +0.8**
BJI Beijing 77.98 321 P **P** **02 44 56.0 +1.0**
BJI PcP **PcP** **02 45 06.1 +1.8**
BJI S **S** **02 54 41.6 +4.0**
BJI pmax pmax
comp=Z,30nm,0.8s
FALS False Pass 78.21 15 P **P** **02 44 56.3 +0.3**
baz=206
P08K Saint George I 78.48 12 P **P** **02 44 57.9 +0.5**
baz=200
TIY Taiyuan 78.86 317 P **P** **02 45 01.3 +1.2**
TIY pmax pmax
comp=Z,54nm,1.2s
SPIA Saint Paul Isl 78.90 11 P **P** **02 45 00.2 +0.5**
baz=199
XAN Xi'an 79.10 312 ⇓P **P** **02 45 02.6 +1.1**
XAN pP pP 02 45 34.9 +0.2
XAN pmax pmax
comp=Z,170nm,0.8s
XAN LR LR
comp=Z,320nm,19.9s
XAN LR LR
comp=Z,340nm,20.6s
KMI Kunming 79.17 302 ⇓P **P** **02 45 04.3 +2.0**
KMI pP pP 02 45 36.1 +0.7
KMI pmax pmax
comp=Z,130nm,0.9s
CM31 Chiang Mai Arr 79.32 294 IAmb IAmb 02 45 06.0
comp=Z,78nm,0.8s
CMAR Chiang Mai Arr 79.32 294 P **P** **02 45 04.3 +1.3**
comp=Z,45nm,0.8s,baz=131,slow=4.1,SNR=162
CMAR pP **pP** **02 45 36.2 -0.1**
comp=Z,24nm,1.0s,baz=133,slow=3.8,SNR=3.6
CMAR PKKPbc **PKKPbc** **03 03 52.9 +0.6**
comp=Z,1.3nm,0.3s,baz=296,slow=3.8,SNR=6.9
CMAR PKPPKP **P'P'df** **03 11 55.2 -1.2**
comp=Z,1.0nm,0.3s,baz=295,slow=4.4,SNR=4.1
CMAR LR LR 03 20 54.6
comp=Z,44nm,19.9s,baz=105,slow=36
comp=Z,45nm,0.8s
CMAR Chiang Mai Arr 79.32 294 P **P** **02 45 04.6 +1.7**
CMAR Chiang Mai Arr 79.32 294 *ce*P **P** **02 45 05.0 +2.1**
CMAR pmax pmax
comp=Z,49nm,0.8s
S12K Black Hills 79.32 16 IAmb IAmb 02 45 03.7
comp=Z,153nm,0.9s
S12K Black Hills 79.32 16 P **P** **02 45 02.4 +0.3**
baz=207
SDPT Sand Point 79.42 17 P **P** **02 45 03.0 +0.4**
SDPT Sand Point 79.42 17 P **P** **02 45 02.8 +0.2**
baz=208
CHTO Chiang Mai 79.47 295 P **P** **02 45 05.7 +2.0**
CHTO IAmb IAmb 02 45 06.5
comp=Z,76nm,0.8s
CHTO Chiang Mai 79.47 295 P **P** **02 45 05.3 +1.6**
CHTO Chiang Mai 79.47 295 P **P** **02 45 05.7 +2.0**
CHTO pmax pmax
comp=Z,76nm,0.8s
CHTO Chiang Mai 79.47 295 P **P** **02 45 05.4 +1.6**
CHTO PcP **PcP** **02 45 13.1 +1.8**
HEH HeiHe 79.48 334 *eP* **P** **02 45 03.5 +0.4**
HEH pmax pmax
comp=Z,54nm,0.9s
XLT XiLinHaoTe 80.49 324 *e*P **P** **02 45 09.8 +1.0**
XLT pmax pmax
comp=Z,56nm,0.9s
PZH PanZhiHua 80.61 303 P **P** **02 45 11.8 +1.9**
PZH pP **pP** **02 45 43.6 +0.4**
PZH pmax pmax
comp=Z,70nm,0.8s
MA2 Magadan 81.00 350 LR LR 03 18 46.0
comp=Z,41nm,18.5s,baz=168,slow=34
BELA Belgrano 2 81.09 175 P **P** **02 45 11.1 -0.4**
BELA IAmb IAmb 02 45 12.3
comp=Z,130nm,1.0s
CD2 Chengdu 81.19 307 P **P** **02 45 13.5 +0.8**
CD2 pP pP 02 45 45.6 -0.5
CD2 sP sP 02 45 59.4 -0.8
CD2 S **S** **02 55 15.3 +3.3**
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 pmax pmax
comp=Z,300nm,5.4s
CHIR Chirikof Islan 81.23 19 P **P** **02 45 13.2 +1.0**
baz=213
HHC Hu-ho-hao-te 81.25 319 *e*P **P** **02 45 14.3 +1.4**
HHC pP pP 02 45 46.3 +0.1
HHC pmax pmax
comp=Z,53nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.4s
BTO Baotou 82.06 318 *e*P **P** **02 45 18.3 +1.1**
BTO pP **pP** **02 45 53.6 +3.0**
BTO S **S** **02 55 19.4 -1.3**
BTO pmax pmax
comp=Z,62nm,0.9s
BTO pmax pmax
comp=Z,550nm,4.5s
BTO LR LR
comp=Z,170nm,5.3s
BTO LR LR
comp=Z,250nm,5.4s
BTO LR LR
comp=Z,160nm,5.7s
R16K Pilot Point 82.15 17 P **P** **02 45 17.4 +0.4**
baz=211
HIA Hailar 82.18 330 *i* P **P** **02 45 17.3 -0.2**
HIA Hailar 82.18 330 P **P** **02 45 17.6 +0.2**
HIA pP **pP** **02 45 50.2 -0.8**
ZEA Zeya 82.23 336 *eP* **P** **02 45 18.9 +1.3**
ZEA *e* 02 45 54.3
ZEA pmax pmax
comp=N,20nm,1.4s
ZEA pmax pmax
comp=Z,40nm,1.5s
SII Sitkinak Islan 82.29 19 P **P** **02 45 19.1 +1.2**
baz=214
HILR Hailar Array B 82.37 330 P **P** **02 45 18.8 +0.4**
comp=Z,9.8nm,0.7s,baz=120,slow=8.8,SNR=16
comp=Z,9.8nm,0.7s
TNCH TengChong 82.53 300 ⇓P **P** **02 45 21.3 +1.2**
TNCH pP pP 02 45 53.6 +0.1
TNCH pmax pmax
comp=Z,80nm,1.2s
R17L Mt. Peulik Vol 82.55 18 P **P** **02 45 20.2 +1.1**
baz=212,SNR=16
M11K Mekoryuk 82.66 12 P **P** **02 45 21.5 +1.9**
baz=203
O14K Tigyukauivet M 82.68 15 P **P** **02 45 20.7 +0.9**
baz=207
SMAI San Martin Ant 82.77 162 P **P** **02 45 21.3 +1.0**
O15K Ungalikthiuk R 82.96 15 P **P** **02 45 21.7 +0.4**
baz=209
OHAK Old Harbor 83.11 19 P **P** **02 45 23.3 +1.2**
baz=215
N14K Kuskokwak Cree 83.18 14 P **P** **02 45 23.3 +1.0**
baz=207
Q17K Contact Creek 83.22 17 P **P** **02 45 23.4 +0.7**
baz=212
M13K Dall Lake 83.26 13 P **P** **02 45 23.3 +0.6**
baz=205
P16K Nushagak River 83.30 16 P **P** **02 45 23.0 +0.1**
baz=210
ACHA Angle Creek He 83.33 18 IAmb IAmb 02 45 25.1
comp=Z,56nm,0.9s
Q16K King Salmon 83.36 17 P **P** **02 45 23.9 +0.7**
baz=212,SNR=26
LZH Lanzhou 83.72 312 ⇓*i*P **P** **02 45 27.9 +2.0**
LZH pP pP 02 46 01.3 +1.9
LZH sP sP 02 46 10.9 -2.6
LZH S **S** **02 55 42.4 +4.7**
LZH pmax pmax
comp=Z,170nm,0.9s
LZH pmax pmax
comp=Z,410nm,5.7s
LZH LR LR
comp=Z,460nm,17.2s
LZH LR LR
comp=Z,330nm,16.8s
LZDM Lanzhou Array 83.75 312 P **P** **02 45 27.4 +1.1**
comp=Z,43nm,0.8s,baz=123,slow=5.5,SNR=33
LZDM pP **pP** **02 45 59.9 +0.1**
comp=Z,10nm,0.6s,baz=134,slow=4.3,SNR=3.9
comp=Z,43nm,0.8s
O16K Kokwok River B 83.76 16 IAmb IAmb 02 45 26.3
comp=Z,69nm,1.0s
O16K Kokwok River B 83.76 16 P **P** **02 45 25.3 0.0**
baz=210
N15K Kwethluk River 83.77 15 P **P** **02 45 26.9 +1.5**
baz=208,SNR=17
Q18K Katmai Hardscr 83.79 18 P **P** **02 45 26.3 +0.6**
baz=213,SNR=45
KDAK Kodiak Island 83.79 19 P **P** **02 45 26.7 +1.2**
comp=Z,100nm,1.0s,baz=223,slow=4.9,SNR=3.8
KDAK LR LR 03 21 46.5
comp=Z,137nm,18.3s,baz=198,slow=35
comp=Z,100nm,1.0s
KDAK Kodiak Island 83.79 19 P **P** **02 45 26.9 +1.4**
KDAK IAmb IAmb 02 45 27.8
comp=Z,125nm,1.1s
KDAK Kodiak Island 83.79 19 *i* P **P** **02 45 26.5 +1.0**
KDAK pmax pmax
comp=Z,158nm,1.1s
KDAK Kodiak Island 83.79 19 P **P** **02 45 26.8 +1.2**
baz=215
P17K Kvichak River 83.86 17 P **P** **02 45 25.9 +0.2**
baz=212
M14K Bethel 83.86 14 P **P** **02 45 26.5 +0.7**
baz=207,SNR=17
SEY Seymchan 83.99 352 *ce*P **P** **02 45 26.4 0.0**
SEY pmax pmax
comp=Z,20nm,1.1s
M15K Kasigluk River 84.10 14 P **P** **02 45 28.0 +1.0**
baz=208
SYO Syowa Base 84.13 196 ⇓*i*P **P** **02 45 27.2 0.0**
SYO Syowa Base 84.13 196 *ie*PcP **PcP** **02 45 29.6 -1.2**
O17K Koliganek Bris 84.18 16 P **P** **02 45 27.9 +0.5**
baz=211,SNR=13
L14K Kuka Creek 84.24 13 IAmb IAmb 02 45 30.2
comp=Z,116nm,1.1s
L14K Kuka Creek 84.24 13 P **P** **02 45 29.0 +1.4**
baz=206,SNR=12
P18K Big Mountain, 84.35 17 P **P** **02 45 28.7 +0.3**
baz=213,SNR=28
N16K Nishlik Lake 84.36 15 P **P** **02 45 30.2 +1.8**
baz=210,SNR=16
K13K Kusilvak Mount 84.38 12 IAmb IAmb 02 45 31.0
comp=Z,87nm,1.2s
K13K Kusilvak Mount 84.38 12 P **P** **02 45 29.5 +1.1**
baz=204
Q19K Cape Douglas, 84.42 18 P **P** **02 45 29.7 +1.0**
baz=214,SNR=10
Q20K Shuyak Island 84.53 19 P **P** **02 45 30.6 +1.4**
baz=215,SNR=6.4
O18K Koktuh Hills 84.75 17 IAmb IAmb 02 45 32.0
comp=Z,97nm,0.9s
O18K Koktuh Hills 84.75 17 P **P** **02 45 30.9 +0.6**
baz=213,SNR=9.9
M16K Timber Creek 84.79 15 P **P** **02 45 31.8 +1.3**
baz=209
L15K Ungalak Mounta 84.80 13 P **P** **02 45 31.5 +1.0**
baz=207
N17K Nushagak Hills 84.80 16 IAmb IAmb 02 45 33.8
comp=Z,80nm,1.1s
N17K Nushagak Hills 84.80 16 P **P** **02 45 31.8 +1.2**
baz=211
GAMB Gambell 84.96 8 P **P** **02 45 32.0 +0.8**
baz=198
P19K Oil Pt 85.14 18 P **P** **02 45 32.6 +0.3**
baz=215,SNR=13
N18K Klae Creek 85.27 16 P **P** **02 45 33.8 +0.8**
baz=212
L16K Owhat River 85.28 14 IAmb IAmb 02 45 36.0
comp=Z,88nm,1.1s
L16K Owhat River 85.28 14 P **P** **02 45 34.0 +1.2**
baz=209
O19K Port Alsworth 85.28 17 IAmb IAmb 02 45 34.6
comp=Z,131nm,1.0s
O19K Port Alsworth 85.28 17 P **P** **02 45 33.6 +0.7**
baz=214,SNR=16
J14K Nanvaranak Lak 85.34 12 IAmb IAmb 02 45 35.8
comp=Z,94nm,1.1s
J14K Nanvaranak Lak 85.34 12 P **P** **02 45 34.6 +1.4**
baz=205
K15K Wolf Creek Mou 85.34 13 P **P** **02 45 34.8 +1.6**
baz=207
ILSW Iliamna Southw 85.44 18 IAmb IAmb 02 45 35.9
comp=Z,140nm,1.0s
FARB Farallon Islan 85.49 47 IAmb IAmb 02 45 37.6
comp=Z,89nm,1.1s
M17K Holitna River 85.49 15 IAmb IAmb 02 45 38.3
comp=Z,88nm,0.8s
M17K Holitna River 85.49 15 P **P** **02 45 36.1 +2.1**
baz=211
HOM Homer 85.61 19 P **P** **02 45 36.1 +1.5**
baz=216
CNPM China Poot 85.62 19 IAmb IAmb 02 45 37.5
comp=Z,74nm,1.0s
O20K Slope Mountain 85.67 18 P **P** **02 45 36.6 +1.7**
baz=215
N19K Bonanza Creek 85.75 17 P **P** **02 45 36.1 +0.7**
baz=213
MCCM Marconi Confer 85.79 47 IAmb IAmb 02 45 39.6
comp=Z,112nm,0.9s
PMSA Palmer Station 85.84 160 LR LR 03 15 18.6
comp=Z,40nm,20.8s,baz=160,slow=29
PMSA Palmer Station 85.84 160 P **P** **02 45 36.6 +0.7**
PMSA Palmer Station 85.84 160 *eP* **P** **02 45 36.0 +0.1**
PMSA Palmer Station 85.84 160 P **P** **02 45 36.1 +0.2**
JRSC Jasper Ridge 85.87 48 IAmb IAmb 02 45 40.3
comp=Z,111nm,1.1s
RED Redoubt Volcan 85.90 18 IAmb IAmb 02 45 37.4
comp=Z,42nm,0.9s
BRLK Bradley Lake 85.92 19 IAmb IAmb 02 45 46.3
comp=Z,160nm,1.7s
BRSE Bradley Lake S 85.95 19 P **P** **02 45 37.7 +1.4**
baz=217
M18K Stony River 85.97 16 P **P** **02 45 37.7 +1.4**
baz=212
SAO San Andreas Ge 86.12 49 IAmb IAmb 02 45 40.9
comp=Z,106nm,1.2s
DCMP DeCamp, Califo 86.14 46 IAmb IAmb 02 45 41.0
comp=Z,71nm,1.4s
GDXM Geysers 86.18 46 IAmb IAmb 02 45 41.6
comp=Z,102nm,1.3s
PMPB Monarch Peak 86.31 49 IAmb IAmb 02 45 42.2
comp=Z,119nm,1.2s
PKD Bear Valley Ra 86.37 50 IAmb IAmb 02 45 43.6
comp=Z,108nm,1.1s
L18K Granite Mounta 86.38 15 IAmb IAmb 02 45 42.5
comp=Z,54nm,1.0s
L18K Granite Mounta 86.38 15 P **P** **02 45 39.5 +1.2**
baz=211
J16K Anvik River 86.42 13 IAmb IAmb 02 45 41.4
comp=Z,35nm,0.8s
J16K Anvik River 86.42 13 P **P** **02 45 40.2 +1.7**
baz=208
K17K Iditarod 86.42 14 P **P** **02 45 39.8 +1.3**
baz=210
MNRC McLaughlin Min 86.45 46 IAmb IAmb 02 45 42.9
comp=Z,148nm,1.2s
SEW Seward 86.63 19 P **P** **02 45 41.2 +1.7**
baz=218
CAPN Captain Cook N 86.65 18 P **P** **02 45 41.1 +1.5**
baz=216
ANM Nome 86.67 10 P **P** **02 45 41.0 +1.4**
baz=203
N20K Mount Spurr 86.70 17 P **P** **02 45 41.6 +1.6**
baz=216
SPCR Spurr Chakacha 86.70 17 P **P** **02 45 41.6 +1.6**
baz=216
SLKM Skilak Lake 86.72 19 IAmb IAmb 02 45 43.0
comp=Z,38nm,0.6s
L19K White Mountain 86.80 16 IAmb IAmb 02 45 44.6
comp=Z,63nm,1.0s
L19K White Mountain 86.80 16 P **P** **02 45 41.6 +1.1**
baz=213
J17K VABM Dome 86.84 14 P **P** **02 45 41.6 +1.1**
baz=209,SNR=7.5
O22K Cooper Landing 86.85 19 P **P** **02 45 41.8 +1.2**
baz=218
I17K Unalakleet 86.93 13 P **P** **02 45 42.2 +1.3**
baz=208
KSXB Camp Six Broad 86.97 43 IAmb IAmb 02 45 45.3
comp=Z,167nm,1.6s
M20K Styx River 87.01 17 P **P** **02 45 42.5 +1.0**
baz=215
OSI Osito Audit: C 87.08 52 IAmb IAmb 02 45 45.7
comp=Z,124nm,1.4s
Q23K Middleton Isla 87.10 21 P **P** **02 45 43.3 +1.5**
baz=221
TNA Tin City 87.19 9 P **P** **02 45 43.9 +1.8**
baz=201
P23K Montague Islan 87.19 20 P **P** **02 45 44.0 +1.7**
baz=220
PASC Pasadena Art C 87.28 52 IAmb IAmb 02 45 45.9
comp=Z,52nm,1.0s
G15K Niukluk 87.29 11 P **P** **02 45 44.0 +1.3**
baz=205
H16K Elim 87.30 12 P **P** **02 45 43.9 +1.2**
baz=206
L20K Farewell, AK 87.30 16 IAmb IAmb 02 45 47.0
comp=Z,56nm,1.0s
L20K Farewell, AK 87.30 16 P **P** **02 45 43.6 +0.7**
baz=214
L02F Cave Junction 87.31 43 IAmb IAmb 02 45 47.0
comp=Z,181nm,1.8s
RC01 Rabbit Creek A 87.33 18 P **P** **02 45 43.7 +0.8**
baz=218
SUA Susitna One 87.33 18 P **P** **02 45 43.4 +0.3**
baz=217
F14K Arctic Creek 87.35 10 P **P** **02 45 43.4 +0.4**
baz=202
VES Vestal, Richgr 87.37 50 IAmb IAmb 02 45 46.3
comp=Z,138nm,1.3s
M02C Callahan 87.42 44 IAmb IAmb 02 45 48.6
comp=Z,105nm,1.0s
ORV Oroville 87.42 46 IAmb IAmb 02 45 47.6
comp=Z,77nm,1.1s
J18K Innoko River 87.44 14 P **P** **02 45 43.8 +0.3**
baz=211,SNR=7.8
CMB Columbia Colle 87.46 48 IAmb IAmb 02 45 47.0
comp=Z,167nm,1.6s
SKT Skwentna 87.52 17 P **P** **02 45 44.0 +0.1**
baz=216
CPE Camp Elliot 87.53 54 IAmb IAmb 02 45 47.3
comp=Z,80nm,1.1s
K02D Willamette Mer 87.55 43 IAmb IAmb 02 46 24.0
comp=Z,83nm,1.3s
PWL Port Wells 87.57 19 IAmb IAmb 02 45 49.4
comp=Z,41nm,1.0s
PWL Port Wells 87.57 19 P **P** **02 45 44.1 0.0**
baz=219
TROLL Troll, Antarti 87.60 184 ⇓P **P** **02 45 44.4 -0.1**
comp=Z,5μm,0.8s
J01E Myrtle Point 87.61 42 IAmb IAmb 02 45 48.9
comp=Z,53nm,0.9s
ELS Elsinore Mount 87.61 53 IAmb IAmb 02 45 47.9
comp=Z,72nm,1.4s
YBH Yreka Blue Hor 87.68 44 IAmb IAmb 02 45 49.5
comp=Z,40nm,0.9s
DPP Dos Picos Cty 87.70 54 IAmb IAmb 02 45 48.1
comp=Z,82nm,1.0s
ISA Isabella, Lake 87.73 51 IAmb IAmb 02 45 48.7
comp=Z,114nm,1.1s
M22K Willow 87.74 18 IAmb IAmb 02 45 47.5
comp=Z,54nm,0.9s
M22K Willow 87.74 18 P **P** **02 45 45.2 +0.4**
baz=217
BAR Barrett 87.76 54 IAmb IAmb 02 45 48.5
comp=Z,44nm,1.1s
F15K North Star Dit 87.84 10 P **P** **02 45 46.0 +0.7**
baz=204
VTX Valle De La Tr 87.89 56 IAmb IAmb 02 45 49.7
comp=Z,112nm,1.2s
PMR Palmer 87.90 18 P **P** **02 45 46.3 +0.7**
baz=218,SNR=5.3
ULN Ulaanbaatar 87.91 323 P **P** **02 45 47.1 +0.8**
ULN Ulaanbaatar 87.91 323 *ce*P **P** **02 45 47.1 +0.8**
ULN pmax pmax
comp=Z,110nm,1.3s
YAK Yakutsk 87.93 342 P **P** **02 45 46.1 +0.4**
YAK IAmb IAmb 02 46 23.0
comp=Z,76nm,1.1s
YAK Yakutsk 87.93 342 *eP* **P** **02 45 45.8 +0.1**
YAK *e**PP **pP** **02 46 20.4 +0.9**
YAK *e* 02 49 12.7
YAK *e*PPP PPP 02 51 08.4
YAK *e*S **SKSac** **02 56 00.2 -0.9**
YAK *e* 02 56 22.0
YAK *e*SS **SS** **03 02 07.3 -1.3**
YAK *e*SSS SSS 03 05 41.0
YAK pmax pmax
comp=Z,27nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK pmax pmax
comp=Z,99nm,3.0s
YAK pmax pmax
comp=N,92nm,2.3s
YAK pmax pmax
comp=E,96nm,4.2s
YAK smax smax
comp=N,132nm,3.1s
YAK smax smax
comp=E,111nm,4.0s
NVL N'lazarevskaya 87.96 187 *eP* **P** **02 45 47.8 +1.8**
NVL *e* 02 49 14.2
NVL *e*PPP PPP 02 51 09.7
NVL *e*S **S** **02 56 12.9 -4.8**
NVL pmax pmax
comp=Z,113nm,0.7s
NVL MLR MLR
comp=Z,150nm,19.0s
G16K Koyuk River 87.96 11 P **P** **02 45 46.1 +0.2**
baz=206
KNK Knik Glacier 87.96 19 IAmb IAmb 02 45 52.4
comp=Z,57nm,1.1s
KNK Knik Glacier 87.96 19 P **P** **02 45 45.8 -0.2**
baz=219
GLI Glacier Island 87.97 20 P **P** **02 45 45.7 -0.3**
baz=220
K20K Telida 87.99 15 P **P** **02 45 46.3 +0.2**
baz=214
H17K Granite Mounta 88.03 12 P **P** **02 45 46.8 +0.6**
baz=208
BILL Bilibino 88.03 359 P **P** **02 45 46.4 +0.2**
BILL IAmb IAmb 02 45 47.6
comp=Z,59nm,1.1s
BILL Bilibino 88.03 359 *ce*P **P** **02 45 45.9 -0.2**
BILL pmax pmax
comp=Z,65nm,1.1s
ESJX Sierra Juarez 88.03 55 IAmb IAmb 02 45 50.6
comp=Z,79nm,1.3s
GTA Gaotai 88.12 313 P **P** **02 45 48.8 +1.4**
GTA pP pP 02 46 21.3 0.0
GTA pmax pmax
comp=Z,91nm,1.1s
GTA LR LR
comp=Z,230nm,19.6s
GTA LR LR
comp=Z,190nm,18.5s
GTA LR LR
comp=Z,150nm,19.6s
KAIM Kayak Island 88.12 21 P **P** **02 45 47.3 +0.5**
baz=222
EYAK Cordova Ski Ar 88.15 20 P **P** **02 45 46.7 -0.1**
baz=221
J19K Poorman 88.15 15 P **P** **02 45 46.6 -0.1**
baz=212
DNR Dunn Ranch,Anz 88.18 53 IAmb IAmb 02 45 50.9
comp=Z,106nm,1.3s
L04D Klamath Falls 88.18 44 IAmb IAmb 02 45 51.6
comp=Z,71nm,0.9s
MDPB Devils Postpil 88.19 49 IAmb IAmb 02 45 51.0
comp=Z,112nm,1.4s
BORC Borrego Spring 88.21 54 IAmb IAmb 02 45 50.8
comp=Z,86nm,1.0s
SNAA Sanae 88.22 182 ⇓P **P** **02 45 45.7 -1.6**
comp=Z,903nm,0.7s
SNAA Sanae 88.22 182 P **P** **02 45 47.0 -0.3**
comp=Z,49nm,0.9s,baz=187,slow=5.1,SNR=273
SNAA pP **pP** **02 46 21.8 +0.7**
comp=Z,10nm,0.7s,baz=175,slow=3.6,SNR=2.3
comp=Z,49nm,0.9s
SNAA Sanae 88.22 182 P **P** **02 45 47.0 -0.3**
SNAA Sanae 88.22 182 *i* P **P** **02 45 46.7 -0.6**
SNAA pmax pmax
comp=Z,161nm,1.6s
CUT Chulitna 88.22 17 P **P** **02 45 47.2 +0.1**

baz=217
LRMC **Laurel Mtn Rad** 88.23 51 IAmb IAmb 02 45 51.9
comp=Z,73nm,1.1s
I03D **Drain, OR** 88.25 42 IAmb IAmb 02 45 50.2
comp=Z,45nm,0.9s
SONM **Songino Array** 88.27 323 P **P** **02 45 48.2 +0.3**
comp=Z,35nm,0.9s,baz=147,slow=4.6,SNR=159
SONM pP **pP** **02 46 21.6 -0.1**
comp=Z,14nm,0.9s,baz=108,slow=4.0,SNR=4.5
SONM PKKPbc **PKKPbc** **03 03 31.2 -1.8**
comp=Z,1.7nm,0.8s,baz=281,slow=3.4,SNR=5.6
SONM LR LR 03 24 16.9
comp=Z,40nm,19.2s,baz=168,slow=35
comp=Z,35nm,0.9s
SML **Sawmill** 88.31 19 P **P** **02 45 47.7 +0.1**
baz=219
YUH **Yuha Desert** 88.32 54 IAmb IAmb 02 45 51.4
comp=Z,69nm,1.1s
PFO **Pinyon Flats O** 88.33 53 P **P** **02 45 49.9 +1.3**
PFO IAmb IAmb 02 45 51.5
comp=Z,69nm,1.2s
PFO **Pinyon Flats O** 88.33 53 *i* P **P** **02 45 49.6 +1.1**
PFO pmax pmax
comp=Z,102nm,1.3s
PFO **Pinyon Flats O** 88.33 53 P **P** **02 45 49.6 +1.1**
CWC **Cottonwood Cre** 88.37 50 IAmb IAmb 02 45 51.6
comp=Z,52nm,1.1s
G17K **Kiwalik Mounta** 88.38 12 P **P** **02 45 47.9 +0.1**
baz=208,SNR=5.5
PMD **Palm Desert** 88.40 53 IAmb IAmb 02 45 51.6
comp=Z,72nm,1.1s
WSHM **Spangler Hills** 88.42 51 IAmb IAmb 02 45 51.9
comp=Z,113nm,1.4s
SFX **San Felipe** 88.47 56 IAmb IAmb 02 45 51.8
comp=Z,51nm,1.0s
M23K **Glacier View** 88.48 19 P **P** **02 45 48.3 -0.1**
baz=220
PNTR **Pine Nut** 88.50 47 IAmb IAmb 02 45 52.4
comp=Z,74nm,1.1s
GCSA **Galena City Sc** 88.50 14 P **P** **02 45 48.8 +0.4**
baz=211
H18K **Honhosa River** 88.53 13 P **P** **02 45 48.9 +0.3**
baz=210
DIV **Divide** 88.58 20 IAmb IAmb 02 45 52.5
comp=Z,115nm,1.8s
SCM **Sheep Creek Mo** 88.63 19 IAmb IAmb 02 45 53.5
comp=Z,37nm,1.0s
SCM **Sheep Creek Mo** 88.63 19 P **P** **02 45 49.2 0.0**
baz=220
J20K **Nowinta River** 88.65 15 P **P** **02 45 49.1 0.0**
baz=214
COR **Corvallis** 88.72 41 P **P** **02 45 51.8 +1.9**
COR IAmb IAmb 02 45 53.2
comp=Z,61nm,0.9s
COR **Corvallis** 88.72 41 P **P** **02 45 51.8 +1.9**
COR pmax pmax
comp=Z,61nm,1.0s
BUCK **Buck Mountain** 88.73 42 IAmb IAmb 02 45 53.2
comp=Z,63nm,0.9s
K04D **Chiloquin, OR** 88.73 43 IAmb IAmb 02 45 53.1
comp=Z,54nm,0.9s
VNA3 **Neumayer Olymp** 88.79 180 ⇓P **P** **02 45 49.5 -0.5**
comp=Z,148nm,0.8s
KLU **Klutina** 88.81 20 P **P** **02 45 49.1 -1.0**
baz=221
BMRM **Bremner River** 88.83 20 P **P** **02 45 49.4 -0.8**
baz=222
DSP **Deep Springs** 88.86 49 IAmb IAmb 02 45 54.0
comp=Z,77nm,1.0s
CHUM **Lake Minchumin** 88.87 16 P **P** **02 45 48.7 -1.4**
baz=215
LHV **Little Huntoon** 88.88 48 IAmb IAmb 02 45 57.0
comp=Z,84nm,1.2s
I04A **Tendick Farm,** 88.89 42 IAmb IAmb 02 45 53.3
comp=Z,46nm,0.8s
PAHR **Pah Rah Range** 88.93 47 IAmb IAmb 02 45 54.2
comp=Z,86nm,1.3s
RYN **Ryan** 89.04 48 IAmb IAmb 02 45 54.6
comp=Z,43nm,1.0s
QSM **Queen of Sheba** 89.04 51 IAmb IAmb 02 45 54.4
comp=Z,81nm,1.2s
H04D **Lebanon** 89.04 41 IAmb IAmb 02 45 54.6
comp=Z,75nm,0.9s
WAT1 **Susitna Watana** 89.04 18 P **P** **02 45 50.0 -1.1**
baz=219
TRF **Thorofare Moun** 89.05 17 P **P** **02 45 50.1 -1.1**
baz=217
G03D **McMinnville, O** 89.06 41 IAmb IAmb 02 45 54.1
comp=Z,71nm,0.9s
VNA2 **Neumayer--Watz** 89.09 181 ⇓P **P** **02 45 51.1 -0.2**
comp=Z,139nm,0.7s,baz=169,slow=4.5
WAT6 **Susitna Watana** 89.09 18 P **P** **02 45 50.8 -0.7**
baz=219
NVAR **Mina Array Bea** 89.10 48 P **P** **02 45 53.5 +1.3**
comp=Z,26nm,0.8s,baz=226,slow=8.5,SNR=190
NVAR pP **pwP** **02 46 27.3 -1.0**
comp=Z,7.6nm,0.7s,baz=226,slow=8.5,SNR=3.9
NVAR PP **PP** **02 49 22.6 -1.8**
comp=Z,1.7nm,1.1s,baz=243,slow=8.1,SNR=2.2
NVAR PKKPbc **PKKPbc** **03 03 30.1 -0.5**
comp=Z,0.4nm,0.6s,baz=81,slow=4.1,SNR=4.2
NVAR PKPPKP **P'P'df** **03 11 32.9 -4.6**
comp=Z,0.6nm,0.8s,baz=83,slow=4.0,SNR=5.3
comp=Z,26nm,0.8s
BC3 **Big Chuckawall** 89.10 54 IAmb IAmb 02 45 55.5
comp=Z,78nm,1.1s
F17K **Baldwin Pennin** 89.11 11 IAmb IAmb 02 45 54.7
comp=Z,33nm,0.8s
F17K **Baldwin Pennin** 89.11 11 P **P** **02 45 51.3 +0.1**
baz=207,SNR=8.4
G18K **Tagagawik** 89.12 12 P **P** **02 45 50.6 -0.7**
baz=210
MESA **MESA** 89.16 22 P **P** **02 45 52.1 +0.2**
baz=225
CRQE **Cirque** 89.18 21 P **P** **02 45 51.8 0.0**
baz=224
M24K **Tolsona, Glenn** 89.19 19 P **P** **02 45 52.4 +0.6**
baz=221
NV11 **Mina Array Sit** 89.20 48 IAmb IAmb 02 45 55.4
comp=Z,67nm,1.1s
FURC **Furnace Creek,** 89.26 51 IAmb IAmb 02 45 55.6
comp=Z,85nm,1.0s
H19K **Roundabout Mou** 89.27 13 P **P** **02 45 52.6 +0.6**
baz=212
GWY **Greenwater Val** 89.28 51 IAmb IAmb 02 45 55.6
comp=Z,76nm,1.1s
N25K **Chitina, Valde** 89.31 20 IAmb IAmb 02 45 55.9
comp=Z,30nm,0.8s
N25K **Chitina, Valde** 89.31 20 P **P** **02 45 52.4 0.0**
baz=222,SNR=5.4
K05A **Summer Lake** 89.34 44 IAmb IAmb 02 45 56.2
comp=Z,61nm,0.9s
VNA1 **Neumayer--Stat** 89.37 181 ⇓P **P** **02 45 52.6 -0.1**
comp=Z,104nm,1.0s
BPAW **Bear Paw Mtn.** 89.39 16 P **P** **02 45 52.8 +0.1**
baz=216
SHOC **Shoshone, Teco** 89.44 51 IAmb IAmb 02 45 56.4
comp=Z,100nm,1.1s
H04A **Detroit Lake** 89.47 41 IAmb IAmb 02 45 55.8
comp=Z,68nm,0.9s
F18K **Selawik** 89.55 12 P **P** **02 45 53.6 +0.4**
baz=209
CRAG **Craig** 89.56 29 P **P** **02 45 53.5 -0.1**
baz=232
WCT **Wildcat Mounta** 89.57 50 IAmb IAmb 02 45 57.2
comp=Z,73nm,1.1s
DHY **Denali Highway** 89.58 18 P **P** **02 45 53.0 -0.7**
baz=220
SLBS **Sierra La Lagu** 89.58 65 P **P** **02 45 57.2 +2.7**
SLBS **Sierra La Lagu** 89.58 65 P **P** **02 45 57.2 +2.7**
E17K **Hotham Inlet** 89.58 11 P **P** **02 45 54.1 +0.7**
baz=207
H20K **Anotleneega Mo** 89.59 14 P **P** **02 45 53.5 0.0**
baz=213
SIT **Sitka** 89.60 27 P **P** **02 45 53.7 0.0**
baz=230
MCK **McKinley** 89.64 17 P **P** **02 45 54.3 +0.4**
baz=218
G19K **Purcell Mounta** 89.66 13 P **P** **02 45 54.3 +0.5**
baz=211
MCARA **McCarthy VSAT** 89.66 21 P **P** **02 45 54.2 +0.2**
baz=224
OZB **Mount Ozzard** 89.69 37 IAmb IAmb 02 45 57.1
comp=Z,83nm,0.9s
PINM **Pinnacle** 89.71 23 P **P** **02 45 54.4 +0.2**
baz=226
PNL **Peninsula** 89.72 23 P **P** **02 45 54.4 +0.1**
baz=227
HARP **HAARP** 89.73 19 P **P** **02 45 54.6 +0.3**
baz=222
MTPC **Mountain Pass** 89.80 52 IAmb IAmb 02 45 58.4
comp=Z,64nm,1.2s
NLWA **Neilton Lookou** 89.80 39 IAmb IAmb 02 45 58.2
comp=Z,80nm,0.9s
I05D **Terrebonne, OR** 89.83 42 IAmb IAmb 02 45 58.0
comp=Z,58nm,0.9s
BARN **Barnard Glacie** 89.89 21 IAmb IAmb 02 45 56.6
comp=Z,70nm,1.2s
TPNV **Topopah Spring** 89.91 50 IAmb IAmb 02 45 58.9
comp=Z,81nm,1.1s
D17K **Noatak River** 89.92 10 P **P** **02 45 54.6 -0.4**
baz=206
CTG **Chitna Glacier** 89.93 22 P **P** **02 45 55.2 -0.2**
baz=225,SNR=5.8
CTGM **Chitina Glacie** 89.94 22 IAmb IAmb 02 45 56.6
comp=Z,55nm,1.1s
U33K **Whale Pass** 89.95 28 P **P** **02 45 56.3 +0.9**
baz=232,SNR=5.9
I21K **Tanana** 90.01 15 P **P** **02 45 56.1 +0.6**
baz=216
113A **Mohawk Valley,** 90.02 55 IAmb IAmb 02 45 59.4
comp=Z,87nm,1.2s
BBB **Bella Bella** 90.03 33 P **P** **02 45 57.1 +1.3**
comp=Z,46nm,0.9s,baz=217,slow=2.2,SNR=4.1
comp=Z,46nm,0.9s
PAX **Paxson** 90.06 19 P **P** **02 45 56.0 +0.1**
baz=222
Q09A **Carvers** 90.07 48 IAmb IAmb 02 45 59.5
comp=Z,73nm,1.0s
E18K **Tukpahlearik C** 90.10 11 P **P** **02 45 56.1 +0.2**
baz=208
HOOD **Mount Hood Mea** 90.11 41 IAmb IAmb 02 46 00.5
comp=Z,75nm,0.9s
F19K **Shaleruckik Mo** 90.12 12 IAmb IAmb 02 45 58.4
comp=Z,46nm,1.6s
F19K **Shaleruckik Mo** 90.12 12 P **P** **02 45 55.9 0.0**
baz=210
V35K **Ketchikan** 90.15 29 P **P** **02 45 55.8 -0.6**
baz=233,SNR=6.4
S32K **Killisnoo** 90.17 27 P **P** **02 45 56.1 -0.2**
baz=231
O28M **Mount Upton** 90.20 22 P **P** **02 45 55.9 -0.9**
baz=226
MLY **Manley** 90.20 16 P **P** **02 45 55.6 -0.8**
baz=217
H21K **Melozitna Rive** 90.20 15 P **P** **02 45 55.8 -0.6**
baz=215
GOMU **GeErMu** 90.24 309 P **P** **02 45 58.3 +0.6**
GOMU pmax pmax
comp=Z,15nm,0.9s
IMAR **Indian Mountai** 90.25 14 P **P** **02 45 56.8 +0.2**
RDOG **Red Dog Mine** 90.27 10 P **P** **02 45 55.8 -0.9**
baz=206
G05A **Wamic** 90.28 41 IAmb IAmb 02 46 06.7
comp=Z,48nm,0.9s
NEA2 **Nenana** 90.29 17 P **P** **02 45 56.4 -0.4**
baz=218
P29M **Windy Craggy** 90.32 24 P **P** **02 45 56.9 -0.2**
baz=228,SNR=8.4
CLRS **Cowichan Lake** 90.38 37 IAmb IAmb 02 46 00.4
comp=Z,71nm,0.9s
M26K **Nakena, AK** 90.41 20 P **P** **02 45 57.1 -0.4**
baz=224
V12A **Nelson** 90.42 52 IAmb IAmb 02 46 01.3
comp=Z,65nm,1.3s
LSA **Lhasa** 90.42 301 P **P** **02 45 55.4 -3.5**
214A **Organ Pipe Nat** 90.44 56 IAmb IAmb 02 46 01.6
comp=Z,92nm,1.2s
O29M **Mount Kennedy** 90.46 23 P **P** **02 45 57.3 -0.6**
baz=228
T33K **Petersburg** 90.46 28 P **P** **02 45 57.4 -0.3**
baz=232
WRAK **Wrangell Islan** 90.48 28 P **P** **02 45 58.6 +0.7**
baz=233,SNR=8.1
SHPR **Sheep Range** 90.52 51 IAmb IAmb 02 46 02.0
comp=Z,39nm,1.3s
GO09 **Cerro Castillo** 90.53 146 P **P** **02 45 59.6 +1.2**
GO09 IAmb IAmb 02 46 00.8
comp=Z,85nm,1.2s
S11A **Rachel** 90.57 50 IAmb IAmb 02 46 01.7
comp=Z,52nm,1.0s
K24K **Donelly Dome** 90.60 18 P **P** **02 45 58.2 -0.2**
baz=221
C17K **DeLong Mountai** 90.61 10 P **P** **02 45 57.6 -0.6**
baz=205
I23K **Minto, Yukon-K** 90.65 16 P **P** **02 45 58.2 -0.2**
baz=218
WVOR **Wild Horse Val** 90.68 45 IAmb IAmb 02 46 02.2
comp=Z,54nm,1.1s
MG01 **Puerto William** 90.68 151 IAmb IAmb 02 46 01.1
comp=Z,90nm,1.3s
G06A **Carlson Farm,** 90.70 41 IAmb IAmb 02 46 01.7
comp=Z,31nm,1.0s
YUK8 **Steele Glacier** 90.70 22 P **P** **02 45 58.9 -0.3**
baz=226,SNR=15
LON **Longmire** 90.70 40 IAmb IAmb 02 46 01.5
comp=Z,25nm,0.9s
R32K **Eaglecrest** 90.71 26 P **P** **02 45 59.1 +0.2**
baz=231
F20K **Avaraart Lake** 90.72 13 P **P** **02 45 58.9 +0.2**
baz=212,SNR=8.0
HDA **Harding Lake** 90.72 17 P **P** **02 45 58.5 -0.3**
baz=220,SNR=9.0
PLBC **Pleasant Camp** 90.73 24 P **P** **02 45 59.4 +0.5**
baz=229,SNR=6.2
H22K **Ishtalitna Cre** 90.74 15 P **P** **02 45 58.6 -0.3**
baz=216
M27K **Edge Creek, AK** 90.74 20 IAmb IAmb 02 46 00.6
comp=Z,68nm,1.7s
M27K **Edge Creek, AK** 90.74 20 P **P** **02 45 58.8 -0.3**
baz=225
G21K **Allakaket** 90.75 14 P **P** **02 45 59.1 +0.2**
baz=214
L26K **Log Cabin Wild** 90.75 19 P **P** **02 45 58.5 -0.6**
baz=223
E19K **Redstone River** 90.76 12 IAmb IAmb 02 46 01.1
comp=Z,41nm,1.3s
E19K **Redstone River** 90.76 12 P **P** **02 45 59.5 +0.5**
baz=211
YUK3 **Moose Creek** 90.81 21 P **P** **02 45 59.7 +0.2**
baz=226,SNR=7.6
RIDG **Independent Ri** 90.82 18 P **P** **02 45 58.8 -0.6**
baz=222
COLA **College** 90.83 17 P **P** **02 45 58.2 -1.1**
COLA IAmb IAmb 02 46 00.6
comp=Z,22nm,0.8s
COLA **College** 90.83 17 *i* P **P** **02 45 58.1 -1.2**
COLA pmax pmax
comp=Z,23nm,1.0s
COLA **College** 90.83 17 P **P** **02 45 58.4 -0.8**
baz=219
I07A **Izee** 90.87 43 IAmb IAmb 02 46 03.0
comp=Z,47nm,1.0s
W13A **Hualapai Mount** 90.88 53 IAmb IAmb 02 46 03.6
comp=Z,51nm,1.1s
P30M **Million Dollar** 90.94 24 P **P** **02 46 00.5 +0.5**
baz=229
YUK6 **Outpost Mounta** 90.97 23 P **P** **02 46 00.5 +0.2**
baz=228
ILAR **Eielson Array** 91.02 17 P **P** **02 45 59.1 -1.0**
comp=Z,7.7nm,0.7s,baz=236,slow=5.2,SNR=20
ILAR pP **pP** **02 46 34.3 +0.2**
comp=Z,3.2nm,0.7s,baz=238,slow=4.7,SNR=1.6
ILAR PKiKP **PKiKP** **02 50 51.2 -1.4**
comp=Z,0.3nm,0.6s,baz=246,slow=2.8,SNR=4.5
ILAR PKKPbc **PKKPdf** **03 03 22.7 -0.6**
comp=Z,0.6nm,0.7s,baz=17,slow=3.3,SNR=8.2
ILAR PKPPKP **P'P'df** **03 11 33.0 +1.3**
comp=Z,1.7nm,1.2s,baz=348,slow=2.1,SNR=6.4
comp=Z,7.7nm,0.7s
ILAR **Eielson Array** 91.02 17 P **P** **02 45 58.7 -1.5**
Y14A **Wickenburg** 91.08 54 IAmb IAmb 02 46 04.1
comp=Z,35nm,1.0s
C18K **Utukok River** 91.09 10 P **P** **02 46 00.8 +0.3**
baz=207
BVCY **Beaver Creek** 91.12 21 P **P** **02 46 00.7 -0.1**
baz=226
SKAG **Skagway** 91.14 25 IAmb IAmb 02 46 03.1
comp=Z,62nm,1.0s
SKAG **Skagway** 91.14 25 P **P** **02 46 01.5 +0.7**
baz=230,SNR=5.9
POKR **Poker Plat Res** 91.14 17 P **P** **02 46 00.9 +0.1**
baz=220
H23K **Yukon River** 91.14 16 P **P** **02 46 00.7 -0.1**
baz=218
YUK4 **Talbot Arm** 91.14 22 P **P** **02 46 01.2 +0.1**
baz=228,SNR=6.1
HYT **Haines Junctio** 91.20 23 IAmb IAmb 02 46 02.6
comp=Z,50nm,1.0s
HYT **Haines Junctio** 91.20 23 P **P** **02 46 01.0 -0.3**
baz=228,SNR=12
SCRK **Sand Creek** 91.26 19 P **P** **02 46 01.5 0.0**
baz=223,SNR=9.2
L27K **Beaver Creek,** 91.26 20 P **P** **02 46 01.1 -0.3**
baz=225
BCAR **Beaver Creek A** 91.28 20 P **P** **02 46 01.6 +0.2**
J25K **Salcha River,** 91.33 18 P **P** **02 46 01.3 -0.4**
baz=222
F21K **Alatna River** 91.34 13 IAmb IAmb 02 46 03.2
comp=Z,33nm,1.2s
F21K **Alatna River** 91.34 13 P **P** **02 46 02.1 +0.4**
baz=214
ZAK **Zakamensk** 91.35 324 *eP* **P** **02 46 00.2 -2.0**
ZAK *e* 02 46 35.8
ZAK pmax pmax
comp=Z,66nm,1.5s
ZAK pmax pmax
comp=Z,36nm,1.4s
F07A **Phinny Hill Vi** 91.44 41 IAmb IAmb 02 46 41.8
comp=Z,35nm,1.1s
D19K **Kuna River** 91.49 11 IAmb IAmb 02 46 05.6
comp=Z,26nm,1.0s
D19K **Kuna River** 91.49 11 P **P** **02 46 02.8 +0.4**
baz=210
MXC **Moxie City** 91.54 40 IAmb IAmb 02 46 07.1
comp=Z,25nm,0.9s
G22K **Bettles** 91.54 14 P **P** **02 46 02.9 +0.4**
baz=216
PALK **Pallekele** 91.56 277 LR LR 03 32 24.9
comp=Z,58nm,18.3s,baz=103,slow=39
PALK **Pallekele** 91.56 277 P **P** **02 46 05.3 +1.3**
PALK IAmb IAmb 02 46 05.7
comp=Z,36nm,1.1s
PALK **Pallekele** 91.56 277 *i* P **P** **02 46 05.0 +1.0**
PALK pmax pmax
comp=Z,62nm,1.5s
H24K **Noodor Dome** 91.58 16 P **P** **02 46 04.0 +1.2**
baz=219
B18K **Kokolik River** 91.63 10 P **P** **02 46 04.0 +1.1**
baz=207
LTY **Liberty** 91.63 40 IAmb IAmb 02 46 42.4
comp=Z,49nm,1.2s
E20K **Nigu River** 91.66 12 P **P** **02 46 03.8 +0.7**
baz=212
O30N **Mendenhall** 91.69 23 IAmb IAmb 02 46 04.8
comp=Z,57nm,1.1s
O30N **Mendenhall** 91.69 23 P **P** **02 46 03.7 +0.2**
baz=230,SNR=9.8
G23K **Bananza Creek** 91.72 15 P **P** **02 46 04.0 +0.6**
baz=217
T35M **Bob Quinn** 91.75 28 IAmb IAmb 02 46 06.5
comp=Z,31nm,1.1s
T35M **Bob Quinn** 91.75 28 P **P** **02 46 04.7 +0.9**
baz=234,SNR=6.1
C19K **Lookout Ridge** 91.77 11 P **P** **02 46 04.8 +1.1**
baz=209
J26L **Joseph Creek** 91.77 18 P **P** **02 46 04.0 +0.3**
baz=223,SNR=6.1
G08A **Pilot Rock** 91.77 42 IAmb IAmb 02 46 08.2
comp=Z,43nm,0.9s
N30M **Aishikik Lake** 91.77 23 P **P** **02 46 04.0 +0.1**
baz=229
E07A **Sunnyside** 91.80 41 IAmb IAmb 02 46 08.4
comp=Z,35nm,0.8s
TLY **Talaya** 91.81 325 P **P** **02 46 04.5 +0.3**
TLY IAmb IAmb 02 46 05.7
comp=Z,32nm,0.8s
TLY **Talaya** 91.81 325 *ceP* **P** **02 46 05.0 +0.8**
TLY pmax pmax
comp=Z,33nm,0.8s
P32M **Atlin** 91.86 25 IAmb IAmb 02 46 06.3
comp=Z,63nm,1.1s
P32M **Atlin** 91.86 25 P **P** **02 46 04.7 +0.5**
baz=232,SNR=6.9
F22K **John River** 91.87 14 P **P** **02 46 05.1 +1.0**
baz=216
K27K **Chicken** 91.88 19 IAmb IAmb 02 46 06.7
comp=Z,26nm,1.1s
K27K **Chicken** 91.88 19 P **P** **02 46 05.1 +0.9**
baz=224
S34M **Telegraph Cree** 91.91 27 P **P** **02 46 05.6 +1.1**
baz=234,SNR=14
HAWA **Hanford** 91.92 41 IAmb IAmb 02 46 44.8
comp=Z,56nm,1.1s
M29M **Somme Creek** 91.95 21 IAmb IAmb 02 46 06.0
comp=Z,31nm,0.9s
M29M **Somme Creek** 91.95 21 P **P** **02 46 05.1 +0.4**
baz=228,SNR=9.4
PRP **Porcupine Dome** 91.96 17 P **P** **02 46 05.4 +0.7**
baz=221
D20K **Etivluk River** 91.96 12 IAmb IAmb 02 46 06.7
comp=Z,32nm,1.0s
D20K **Etivluk River** 91.96 12 P **P** **02 46 05.6 +1.1**
baz=211
Q32M **Nakina River** 92.06 26 P **P** **02 46 06.1 +0.7**
baz=233
WAH2 **Wahluke Slope** 92.07 40 IAmb IAmb 02 46 44.7
comp=Z,44nm,1.2s
WHY **Whitehorse** 92.08 24 P **P** **02 46 05.5 +0.2**
baz=231,SNR=6.0
COLD **Coldfoot** 92.10 15 IAmb IAmb 02 46 07.2
comp=Z,23nm,0.9s
COLD **Coldfoot** 92.10 15 P **P** **02 46 05.2 +0.1**
baz=217,SNR=11
LCMT **Little Creek M** 92.13 51 IAmb IAmb 02 46 09.2
comp=Z,32nm,1.1s
SPR3 **Spring Creek 3** 92.15 49 IAmb IAmb 02 46 10.1
comp=Z,36nm,1.5s
TUC **Tucson** 92.16 56 P **P** **02 46 08.4 +2.0**
TUC IAmb IAmb 02 46 09.6
comp=Z,55nm,1.1s
TUC **Tucson** 92.16 56 P **P** **02 46 08.4 +2.0**
TUC pmax pmax
comp=Z,55nm,1.1s
E21K **Killik River** 92.26 13 IAmb IAmb 02 46 07.6
comp=Z,54nm,1.2s
E21K **Killik River** 92.26 13 P **P** **02 46 06.4 +0.5**
baz=214
CCUT **Cedar City** 92.26 51 IAmb IAmb 02 46 11.2
comp=Z,35nm,1.2s
N31M **Braeburn, Yuko** 92.27 23 P **P** **02 46 06.1 0.0**
baz=230,SNR=9.0
PSUT **Pine Spring** 92.30 50 IAmb IAmb 02 46 10.9
comp=Z,27nm,1.3s
G24K **Hadweenzic Riv** 92.35 16 P **P** **02 46 06.8 +0.4**
baz=220
KNB **Kanab** 92.44 51 IAmb IAmb 02 46 11.9
comp=Z,53nm,1.3s
X16A **Lo Mia Camp, P** 92.46 54 IAmb IAmb 02 46 11.1
comp=Z,53nm,1.0s
E22K **Anaktuvuk Pass** 92.46 13 IAmb IAmb 02 46 08.8
comp=Z,60nm,1.4s
E22K **Anaktuvuk Pass** 92.46 13 P **P** **02 46 07.2 +0.4**
baz=216
I26K **Coal Creek Min** 92.48 18 IAmb IAmb 02 46 09.0
comp=Z,46nm,1.2s
I26K **Coal Creek Min** 92.48 18 P **P** **02 46 07.1 +0.2**
baz=224
SZCU **Shurtz Canyon** 92.48 51 IAmb IAmb 02 46 12.1
comp=Z,38nm,1.2s
L29M **L29M** 92.51 21 IAmb IAmb 02 46 08.7
comp=Z,47nm,1.0s
L29M **L29M** 92.51 21 P **P** **02 46 07.2 0.0**
baz=228,SNR=12
LLLB **Lilloet** 92.54 36 IAmb IAmb 02 46 11.0
comp=Z,39nm,0.9s
P33M **Teslin, Yukon** 92.60 25 IAmb IAmb 02 46 09.2
comp=Z,27nm,0.9s
P33M **Teslin, Yukon** 92.60 25 P **P** **02 46 07.8 +0.1**
baz=232,SNR=5.9
D08A **Wollman Farm,** 92.60 40 IAmb IAmb 02 46 47.2
comp=Z,28nm,1.2s
U15A **North Rim** 92.60 52 IAmb IAmb 02 46 12.7
comp=Z,48nm,1.0s
M30M **Minto, Yukon** 92.62 22 P **P** **02 46 08.1 +0.4**
baz=229,SNR=26
AY03 **Cochrane** 92.63 143 P **P** **02 46 09.4 +1.2**
DLBC **Dease Lake** 92.69 27 P **P** **02 46 09.0 +0.8**
comp=Z,44nm,1.0s,baz=203,slow=6.2,SNR=28
comp=Z,44nm,1.0s
DLBC **Dease Lake** 92.69 27 P **P** **02 46 09.0 +0.8**
baz=235,SNR=16
C21K **Knifeblade Rid** 92.69 12 P **P** **02 46 08.6 +0.8**
baz=213,SNR=10

DAWY **Dawson** 92.75 20 IAmb IAmb 02 46 09.5
comp=Z,22nm,0.9s

G25K **Bearman Lake** 92.75 16 P **P** **02 46 08.8 +0.7**
baz=221

R33M **Jennings River** 92.85 26 IAmb IAmb 02 46 11.9
comp=Z,48nm,1.0s

R33M **Jennings River** 92.85 26 P **P** **02 46 09.8 +0.9**
baz=234,SNR=13

F24K **Squaw Lake** 92.88 15 P **P** **02 46 09.4 +0.6**
baz=219,SNR=8.7

D22K **Ayikyak River** 92.89 13 P **P** **02 46 09.7 +0.9**
baz=215,SNR=9.8

E23K **Chandalar** 92.89 14 IAmb IAmb 02 46 10.7
comp=Z,28nm,1.0s

E23K **Chandalar** 92.89 14 P **P** **02 46 08.6 -0.4**
baz=218

WUAZ **Wupatki** 92.93 53 IAmb IAmb 02 46 13.1
comp=Z,54nm,1.1s

B08A **Colville Reser** 92.94 39 IAmb IAmb 02 46 12.2
comp=Z,17nm,0.9s

B20K **Meade River** 92.98 11 P **P** **02 46 09.6 +0.5**
baz=211

PKCU **Pink Cliffs** 92.98 51 IAmb IAmb 02 46 15.4
comp=Z,67nm,1.2s

N32M **Quiet Lake** 93.07 24 P **P** **02 46 09.8 0.0**
baz=232

B21K **Ikpikpuk River** 93.12 12 IAmb IAmb 02 46 11.8
comp=Z,24nm,0.9s

B21K **Ikpikpuk River** 93.12 12 P **P** **02 46 10.3 +0.5**
baz=213

I27K **Kandik River** 93.14 18 IAmb IAmb 02 46 11.4
comp=Z,15nm,0.8s

I27K **Kandik River** 93.14 18 P **P** **02 46 10.5 +0.4**
baz=225,SNR=5.6

F10A **Beach Ranch, E** 93.16 42 IAmb IAmb 02 46 13.4
comp=Z,22nm,0.9s

E24K **Your Creek** 93.17 15 P **P** **02 46 10.1 -0.1**
baz=219

K29M **Barlow Dome** 93.21 21 IAmb IAmb 02 46 11.9
comp=Z,20nm,0.8s

K29M **Barlow Dome** 93.21 21 P **P** **02 46 10.6 +0.1**
baz=228

M31M **Drury Creek, Y** 93.23 23 IAmb IAmb 02 46 11.2
comp=Z,32nm,1.1s

M31M **Drury Creek, Y** 93.23 23 P **P** **02 46 10.2 -0.3**
baz=231,SNR=7.3

EVN **Everest** 93.30 298 IAmb IAmb 02 46 14.0
comp=Z,31nm,0.9s

TOLK **Toolik Lake Re** 93.37 14 IAmb IAmb 02 46 12.9
comp=Z,25nm,1.2s

TOLK **Toolik Lake Re** 93.37 14 P **P** **02 46 11.6 +0.6**
baz=218,SNR=5.7

D23K **Nanushuk River** 93.38 13 IAmb IAmb 02 46 13.4
comp=Z,57nm,1.1s

D23K **Nanushuk River** 93.38 13 P **P** **02 46 11.1 0.0**
baz=217,SNR=19

F25K **Christian Rive** 93.50 16 P **P** **02 46 12.4 +0.7**
baz=221

G26K **Porcupine Rive** 93.50 17 IAmb IAmb 02 46 14.2
comp=Z,65nm,1.4s

G26K **Porcupine Rive** 93.50 17 P **P** **02 46 12.1 +0.6**
baz=223,SNR=15

I28M **Miner Creek** 93.53 19 IAmb IAmb 02 46 13.0
comp=Z,15nm,0.8s

I28M **Miner Creek** 93.53 19 P **P** **02 46 11.7 -0.2**
baz=226,SNR=6.6

MAYO **Mayo, Yukon** 93.59 21 P **P** **02 46 12.8 +0.7**
baz=230,SNR=9.1

H27K **Steamboat Moun** 93.61 18 IAmb IAmb 02 46 13.9
comp=Z,21nm,1.1s

H27K **Steamboat Moun** 93.61 18 P **P** **02 46 12.5 +0.3**
baz=225,SNR=7.6

X18A **Snowflake** 93.64 55 IAmb IAmb 02 46 16.2
comp=Z,23nm,1.1s

BMAR **Burnt Mountain** 93.64 16 P **P** **02 46 11.3 -1.0**

COYC **Coyhaique** 93.86 142 IAmb IAmb 02 46 15.9
comp=Z,24nm,1.0s

E25K **Arctic Village** 93.91 15 P **P** **02 46 14.6 +1.0**
baz=222,SNR=7.2

D24K **Happy Valley** 93.94 14 IAmb IAmb 02 46 15.6
comp=Z,32nm,1.2s

D24K **Happy Valley** 93.94 14 P **P** **02 46 14.0 +0.5**
baz=219

B22K **Teshekpuk Lake** 93.95 12 IAmb IAmb 02 46 15.4
comp=Z,42nm,1.3s

B22K **Teshekpuk Lake** 93.95 12 P **P** **02 46 13.4 -0.1**
baz=214

F26K **Sheenjek River** 93.95 16 P **P** **02 46 13.4 -0.3**
baz=223

G27K **Doyon Strip** 93.98 17 P **P** **02 46 14.3 +0.5**
baz=225,SNR=7.8

J30M **Hart River** 94.08 20 P **P** **02 46 15.5 +1.0**
baz=230

C23K **Itkillik River** 94.10 13 P **P** **02 46 15.1 +0.9**
baz=217,SNR=18

WTLY **Watson Lake, Y** 94.17 26 IAmb IAmb 02 46 17.5
comp=Z,28nm,1.0s

WTLY **Watson Lake, Y** 94.17 26 P **P** **02 46 15.8 +0.9**
baz=236,SNR=9.9

A21K **Barrow** 94.20 10 P **P** **02 46 15.0 +0.4**
baz=212

A22K **Sinclair Lake** 94.21 11 P **P** **02 46 15.6 +0.8**
baz=213

C24K **Franklin Bluff** 94.41 13 P **P** **02 46 16.2 +0.5**
baz=219

I30M **Mount Dempster** 94.49 20 IAmb IAmb 02 46 17.2
comp=Z,31nm,0.9s

I30M **Mount Dempster** 94.49 20 P **P** **02 46 15.7 -0.6**
baz=230

TMUT **Trail Mountain** 94.50 50 IAmb IAmb 02 46 21.6
comp=Z,19nm,1.1s

H29M **Whitestone** 94.53 19 IAmb IAmb 02 46 17.7
comp=Z,32nm,1.1s

H29M **Whitestone** 94.53 19 P **P** **02 46 15.9 -0.5**
baz=228,SNR=7.6

121A **Cookes Peak, D** 94.60 57 IAmb IAmb 02 46 20.7
comp=Z,19nm,1.1s

D25K **Kavik River** 94.63 14 IAmb IAmb 02 46 18.1
comp=Z,32nm,1.2s

D25K **Kavik River** 94.63 14 P **P** **02 46 17.0 +0.2**
baz=221,SNR=9.1

KNGR **Kungurtug, Tuv** 94.69 322 *i* P **P** **02 46 18.2 +0.6**
KNGR pmax pmax
comp=Z,26nm,0.9s

LIRD **Liard River Hi** 94.93 28 P **P** **02 46 18.5 +0.2**
baz=238,SNR=6.5

E27K **Coleen River** 94.98 16 IAmb IAmb 02 46 20.4
comp=Z,22nm,1.0s

E27K **Coleen River** 94.98 16 P **P** **02 46 18.8 +0.4**
baz=225,SNR=16

TOAD **Toad River Com** 95.01 28 P **P** **02 46 18.9 +0.1**
baz=239,SNR=11

F28M **Old Crow** 95.05 17 P **P** **02 46 19.0 +0.2**
baz=227,SNR=8.1

TCUT **Toone Canyon** 95.05 48 IAmb IAmb 02 46 29.0
comp=Z,31nm,1.1s

G29M **Pine Creek** 95.10 18 IAmb IAmb 02 46 20.1
comp=Z,36nm,1.1s

G29M **Pine Creek** 95.10 18 P **P** **02 46 19.4 +0.4**
baz=228

EPYK **Eagle Plains** 95.13 19 P **P** **02 46 19.3 +0.2**
baz=229,SNR=16

LL02 **Futaleuf** 95.32 140 IAmb IAmb 02 46 22.3
comp=Z,25nm,1.1s

EPT **El Paso** 95.34 58 IAmb IAmb 02 46 23.5
comp=Z,24nm,0.9s

C26K **Camden Bay** 95.42 14 P **P** **02 46 21.3 +1.0**
baz=222

C27K **Jago River** 95.48 15 IAmb IAmb 02 46 23.3
comp=Z,40nm,1.1s

C27K **Jago River** 95.48 15 P **P** **02 46 21.6 +0.9**
baz=223

H31M **Peel River** 95.51 20 IAmb IAmb 02 46 21.4
comp=Z,22nm,0.9s

H31M **Peel River** 95.51 20 P **P** **02 46 21.1 +0.2**
baz=231

PV05 **Paradox Valley** 95.58 52 IAmb IAmb 02 46 27.0
comp=Z,30nm,1.6s

ZAIG **Zacatecas** 95.59 68 IAmb IAmb 02 46 25.9
comp=Z,12nm,0.9s

G30M **tAoh Zraii Nji** 95.68 19 P **P** **02 46 21.4 -0.2**
baz=230

MVCO **Mesa Verde** 95.71 53 IAmb IAmb 02 46 37.7
comp=Z,26nm,1.9s

PV10 **Paradox Valley** 95.73 51 IAmb IAmb 02 46 31.4
comp=Z,20nm,0.9s

PV19 **Morning Glory** 95.75 51 IAmb IAmb 02 46 32.2
comp=Z,15nm,0.9s

PV20 **West Nyswonger** 95.77 51 IAmb IAmb 02 46 32.3
comp=Z,17nm,0.9s

PV23 **Carpenter Ridg** 95.78 51 IAmb IAmb 02 46 32.5
comp=Z,25nm,0.9s

PV18 **Skein Mesa, Pa** 95.78 51 IAmb IAmb 02 46 32.6
comp=Z,18nm,1.1s

TIXI **Tiksi** 95.78 348 *ce*P **P** **02 46 21.4 -0.5**
TIXI pmax pmax
comp=Z,7.0nm,1.7s

E28M **Babbage River** 95.82 17 IAmb IAmb 02 46 23.9
comp=Z,26nm,0.9s

E28M **Babbage River** 95.82 17 P **P** **02 46 22.8 +0.6**
baz=227,SNR=32

PV21 **Cone Mtn., Par** 95.84 51 IAmb IAmb 02 46 32.5
comp=Z,16nm,1.0s

DLMT **Dillon** 95.87 44 IAmb IAmb 02 46 35.7
comp=Z,12nm,0.9s

PV12 **Saucer Basin,** 95.88 51 IAmb IAmb 02 46 34.7
comp=Z,15nm,0.9s

D27M **Malcolm River** 95.89 16 IAmb IAmb 02 46 24.7
comp=Z,38nm,1.2s

D27M **Malcolm River** 95.89 16 P **P** **02 46 23.4 +0.8**
baz=226,SNR=22

PV02 **Paradox Valley** 95.89 52 IAmb IAmb 02 46 33.2
comp=Z,18nm,1.2s

E29M **Blow River** 96.12 17 IAmb IAmb 02 46 24.5
comp=Z,24nm,1.3s

E29M **Blow River** 96.12 17 P **P** **02 46 23.5 0.0**
baz=228

RDMU **Red Mountain** 96.14 49 IAmb IAmb 02 46 29.8
comp=Z,18nm,1.4s

LR04 **Corral** 96.15 136 IAmb IAmb 02 46 26.2
comp=Z,27nm,0.9s

F30M **Barrier River** 96.21 18 IAmb IAmb 02 46 25.8
comp=Z,34nm,1.0s

F30M **Barrier River** 96.21 18 P **P** **02 46 23.8 -0.3**
baz=230

G31M **Satah River** 96.23 19 P **P** **02 46 24.2 +0.2**
baz=232

TASM **ASL Pad, Albuq** 96.47 55 IAmb IAmb 02 46 31.8
comp=Z,5.6nm,1.0s

ANMO **Albuquerque** 96.47 55 P **P** **02 46 26.4 +0.3**

ANMO **Albuquerque** 96.47 55 *i* P **P** **02 46 26.5 +0.3**
ANMO pmax pmax
comp=Z,6.0nm,0.9s

D28M **Stokes Point** 96.52 16 P **P** **02 46 25.6 +0.3**
baz=228

BOZ **Bozeman (W)** 96.59 44 IAmb IAmb 02 47 08.4
comp=Z,26nm,1.9s

F31M **Tsiigehtchic** 96.72 19 P **P** **02 46 26.2 -0.1**
baz=232,SNR=28

TX31 **Lajitas Ar. Si** 96.83 61 IAmb IAmb 02 46 30.6
comp=Z,14nm,1.1s

TXAR **Lajitas Array** 96.83 61 P **P** **02 46 29.0 +1.2**
comp=Z,7.6nm,0.9s,baz=229,slow=4.6,SNR=66

TXAR PP **PP** **02 50 22.1 -2.9**
comp=Z,0.4nm,0.8s,baz=278,slow=8.6,SNR=2.3

TXAR PKKPbc **PKKPbc** **03 03 09.4 -0.4**
comp=Z,1.6nm,0.9s,baz=98,slow=4.1,SNR=13
comp=Z,7.6nm,0.9s

TXAR **Lajitas Array** 96.83 61 P **P** **02 46 29.3 +1.5**

LR05 **Currie** 96.87 137 IAmb IAmb 02 46 29.5
comp=Z,34nm,1.3s

PDAR **Pinedale Array** 96.94 47 P **P** **02 46 28.5 +0.3**
comp=Z,1.7nm,0.8s,baz=180,slow=2.5,SNR=11

PDAR pP **pP** **02 47 02.6 +0.6**
comp=Z,3.0nm,1.0s,baz=220,slow=3.9,SNR=2.6

PDAR PP **PP** **02 50 25.6 0.0**
comp=Z,2.6nm,1.0s,baz=242,slow=6.4,SNR=8.4

PDAR PKKP **PKKPbc** **03 03 08.4 -1.8**
comp=Z,1.2nm,0.9s,baz=75,slow=6.3,SNR=8.9
comp=Z,1.7nm,0.8s

PDAR **Pinedale Array** 96.94 47 P **P** **02 46 28.1 -0.1**

INK **Inuvik** 97.32 18 P **P** **02 46 28.5 -0.4**
comp=Z,18nm,1.1s,baz=242,slow=4.1,SNR=18

INK pP **pP** **02 47 02.5 -0.3**
comp=Z,4.7nm,0.8s,baz=300,slow=31,SNR=2.3

INK PKiKP **PKiKP** **02 51 02.4 -0.9**
comp=Z,1.0nm,0.4s,baz=150,slow=0.7,SNR=6.6
comp=Z,18nm,1.1s

INK **Inuvik** 97.32 18 IAmb IAmb 02 46 29.8
comp=Z,41nm,1.3s

INK **Inuvik** 97.32 18 P **P** **02 46 28.6 -0.4**
baz=232,SNR=21

PLCA **Paso Flores** 97.51 138 P Pdif 02 46 31.2 +0.4
comp=Z,5.2nm,1.1s,baz=240,slow=6.9,SNR=5.0

PLCA PKKP **PKKPbc** **03 03 07.2 -0.7**
comp=Z,1.2nm,0.8s,baz=165,slow=4.3,SNR=3.8
comp=Z,5.2nm,1.1s

PLCA **Paso Flores** 97.51 138 IAmb IAmb 02 46 32.4
comp=Z,17nm,1.4s

PLCA **Paso Flores** 97.51 138 *e*P Pdif 02 46 31.5 +0.7

WRGLY **Wrigley** 97.98 25 P Pdif 02 46 32.4 +0.4
baz=241

WMQ **Urumqi** 98.20 314 *e*P Pdif 02 46 34.8 +1.1
WMQ pP pP 02 47 09.3 +1.6
WMQ pmax pmax
comp=Z,27nm,0.9s

WMQ LR LR
comp=Z,250nm,20.9s

WMQ LR LR
comp=Z,270nm,24.3s

WMQ LR LR
comp=Z,97nm,22.1s

EGMT **Eagleton** 98.67 42 IAmb IAmb 02 46 48.2
comp=Z,25nm,1.6s

MSTX **Muleshoe** 99.03 57 IAmb IAmb 02 46 39.4
comp=Z,16nm,1.0s

C36M **Paulatuk** 100.76 19 P **Pdif** **02 46 44.7 +0.5**
baz=241

YKA **Yellowknife Ar** 101.32 27 P **Pdif** **02 46 47.2 +0.3**
comp=Z,2.0nm,0.8s,baz=259,slow=5.6,SNR=5.7

A36M **Sachs Harbour** 101.71 17 P **Pdif** **02 46 48.4 0.0**
baz=240

MKAR **Makanchi Array** 102.75 315 P **Pdif** **02 46 54.4 +0.7**
comp=Z,3.0nm,0.6s,baz=104,slow=5.6,SNR=23

MKAR pP **pPdif** **02 47 27.8 +0.1**
comp=Z,2.0nm,0.7s,baz=105,slow=4.4,SNR=3.2

MKAR PP **PP** **02 51 04.8 -4.5**
comp=Z,1.2nm,0.8s,baz=104,slow=6.1,SNR=3.9

MKAR PKiKP **PKiKP** **02 51 12.1 -1.6**
comp=Z,3.1nm,1.0s,baz=105,slow=3.2,SNR=4.6

MKAR PKKPbc **PKKPbc** **03 02 51.2 -2.4**
comp=Z,0.6nm,0.5s,baz=270,slow=4.0,SNR=9.4

ZALV **Zalesovo Beam** 103.16 323 Pdiff **Pdif** **02 46 55.3 -0.1**
comp=Z,4.1nm,0.6s,baz=117,slow=4.4,SNR=20

ZALV PKiKP **PP** **02 51 12.7 +0.5**
comp=Z,1.0nm,0.6s,baz=207,slow=1.0,SNR=4.0

KURBB **Kurchatov Arra** 106.09 318 Pdiff **Pdif** **02 47 08.7 +0.3**
comp=Z,0.9nm,0.8s,baz=102,slow=4.1,SNR=6.7

KURBB PKiKP **PKiKP** **02 51 18.8 -0.9**
comp=Z,2.4nm,0.8s,baz=94,slow=2.1,SNR=14

KURBB PP **PP** **02 51 33.9 -0.1**
comp=Z,0.7nm,0.4s,baz=110,slow=6.3,SNR=6.8

KURBB PKKPbc **PKKPbc** **03 02 41.9 -1.6**
comp=Z,2.5nm,0.9s,baz=285,slow=3.3,SNR=12

KURBB PKKPab **PKKPdf** **03 02 55.1 +0.1**
comp=Z,0.9nm,0.9s,baz=282,slow=5.1,SNR=6.2

KURBB PKPPKP **P'P'df** **03 11 04.7 +0.2**
comp=Z,0.3nm,0.4s,baz=254,slow=2.5,SNR=4.2

ULM **Lac du Bonnet** 108.03 42 PKiKP **PKiKP** **02 51 21.6 -1.7**
comp=Z,3.3nm,0.6s,baz=182,slow=1.0,SNR=3.3

RES **Resolute Bay** 110.76 16 PKKPbc PKKPbc 03 02 27.4 -1.9
comp=Z,1.9nm,0.8s,baz=162,slow=3.2,SNR=3.6

BVAR **Borovoye Array** 111.45 320 Pdiff **Pdif** **02 47 32.7 +0.4**
comp=Z,2.0nm,0.7s,baz=97,slow=5.3,SNR=10

BVAR PKiKP **PKiKP** **02 51 28.9 -0.8**
comp=Z,3.9nm,0.8s,baz=111,slow=2.0,SNR=14

BVAR PP **PP** **02 52 11.0 -1.8**
comp=Z,3.0nm,0.9s,baz=92,slow=7.2,SNR=4.7

BVAR PKKPbc **PKKPbc** **03 02 24.4 -2.1**
comp=Z,1.7nm,0.7s,baz=290,slow=4.3,SNR=6.6

LPAZ **La Paz** 112.59 118 PKiKP **PKiKP** **02 51 33.2 -0.6**
comp=Z,2.3nm,0.9s,baz=236,slow=3.5,SNR=6.3

LPAZ PKKPbc **PKKPbc** **03 02 21.3 -1.1**
comp=Z,1.8nm,0.7s,baz=30,slow=6.9,SNR=8.5

CPUP **Villa Florida** 115.01 134 PKP **PKiKP** **02 51 36.4 -1.0**
comp=Z,1.8nm,1.2s,baz=257,slow=1.0,SNR=6.4

CPUP PKKPbc **PKKPbc** **03 02 12.8 -1.0**
comp=Z,0.9nm,0.9s,baz=92,slow=5.6,SNR=4.5

ROSC **El Rosal** 116.00 95 PKP **PKPdf** **02 51 38.6 -1.4**
comp=Z,7.0nm,0.6s,baz=287,slow=14,SNR=4.5

SVE **Sverdlovsk** 117.11 324 *e*PKiKP **PKPdf** **02 51 40.1 -0.3**
SVE pmax pmax
comp=Z,10.0nm,0.7s

ABKAR **Akbulak array** 117.89 316 **PKPdf** **02 51 41.5 -0.6**

ARTI **Arti** 118.39 324 **PKPdf** **02 51 42.2 -0.7**

ARTI **Arti** 118.39 324 *i* PKiKP **PKPdf** **02 51 42.2 -0.7**

ARTI 02 52 58.7

ARTI 02 58 40.9

SIV **San Ignacio** 118.48 122 PKP **PKPdf** **02 51 43.3 -1.1**
comp=Z,5.1nm,0.9s,baz=244,slow=2.5,SNR=20

NOR **Nord** 118.49 1 *i* P **PKPdf** **02 51 39.5 -3.0**

NEEM **North Greenlan** 119.39 9 *i* P **PKPdf** **02 51 43.7 -1.0**

PTGB **Pitanga** 119.61 136 *e*P **PKPdf** **02 51 46.1 -0.3**

SUR **Sutherland** 119.83 210 **PKiKP** **02 51 47.4 +0.5**

PTLB **Pontes e Lacer** 120.33 123 **PKPdf** **02 51 47.3 -0.5**

PTLB **Pontes e Lacer** 120.33 123 *e*P **PKPdf** **02 51 47.4 -0.5**

BOSA **Boshof** 120.56 216 PKP **PKPdf** **02 51 48.1 -0.1**
comp=Z,6.3nm,0.6s,baz=157,slow=1.5,SNR=35

BOSA PKKPbc **PKKPbc** **03 01 53.1 -1.3**
comp=Z,2.0nm,0.8s,baz=346,slow=3.7,SNR=3.8

SDV **Santo Domingo** 120.78 92 *e*P **PKPdf** **02 51 48.0 -1.1**

VILB **Vilhena** 120.86 120 *e*P **PKPdf** **02 51 48.7 -0.3**

UPNV **Upernavik** 121.51 15 *i* P **PKPdf** **02 51 47.4 -1.0**

TEFE **Tefe** 121.69 108 *e*P **PKPdf** **02 51 50.1 -0.5**

FRTB **Fartura** 122.19 137 *e*P **PKiKP** **02 51 51.6 0.0**

PP1B **Ponte de Pedra** 122.31 128 *e*P **PKPdf** **02 51 51.4 -0.3**

KIRV **Kirov** 122.74 327 *c i*PKIKP **PKPdf** **02 51 50.9 -0.2**

SALV **Santo Antonio** 122.74 125 *e*P **PKPdf** **02 51 52.4 -0.1**

PET01 **Itanhaem-SP** 122.95 139 *e*P **PKPdf** **02 51 52.6 -0.2**

MAKGR **Makgori** 122.96 218 *i* P **PKPdf** **02 51 52.5 -0.4**

NUUG **Nuugaatsiaq** 123.00 15 *i* P **PKPdf** **02 51 50.4 -0.9**

DAG **Danmarks Havn** 123.24 2 *i* P **PKPdf** **02 51 50.0 -1.6**

NIAQ **Niaqornat** 123.37 16 *i* P **PKiKP** **02 51 52.4 +0.1**

MREMI **Moremi** 123.75 223 *i* P **PKPdf** **02 51 54.1 -0.3**

LPHEP **Lephephe** 124.17 221 *i* P **PKPdf** **02 51 54.3 -1.0**

SAQQ **Saqqaq** 124.31 16 *i* P **PKPdf** **02 51 52.4 -1.5**

PHPEN **Phepeng** 124.33 217 *i* P **PKPdf** **02 51 55.0 -0.6**

PDRB **Porto dos Gac** 124.42 121 *e*P **PKPdf** **02 51 55.5 -0.4**

BB19B **Bebedouro** 124.48 135 *e*P **PKiKP** **02 51 56.8 +0.7**

LVZ **Lovozero** 124.72 341 *c i*PKIKP **PKiKP** **02 51 55.0 -0.1**
LVZ pmax pmax
comp=Z,25nm,1.7s

VADS **Vadso** 124.76 345 *e*P **PKPdf** **02 51 54.1 -0.6**

BROLN **Tlhalogang** 124.88 224 *i* P **PKPdf** **02 51 56.4 -0.3**

KDWAN **Kaudwane** 124.89 220 *i* P **PKPdf** **02 51 56.3 -0.3**

ILULI **Ilulissat** 125.06 17 *i* P **PKPdf** **02 51 53.9 -1.4**

SUMG **Summit** 125.23 10 *i* P **PKPdf** **02 51 54.0 -2.1**

APA **Apatity** 125.30 341 || *i*PKIKP **PKPdf** **02 51 52.6 -3.2**
APA MLR MLR
comp=Z,250nm,5.3s

MACA **Manacapuru-AM** 125.37 109 *e*P **PKPdf** **02 51 57.2 -0.5**

SCHQ **Schefferville** 125.42 36 PKP **PKPdf** **02 51 55.4 -1.1**
comp=Z,8.6nm,0.9s,baz=289,slow=6.5,SNR=5.2

CLDB **Colider** 125.59 120 *e*P **PKPdf** **02 51 57.8 -0.3**

DBG **Daneborg** 125.61 3 *i* P **PKPdf** **02 51 55.2 -1.1**

HAMF **Hammerfest** 125.70 347 *e*P **PKPdf** **02 51 55.8 -0.7**

ARA0 **ARCESS Array S** 126.12 345 *e*P **PKPdf** **02 51 57.0 -0.4**

ARCES **ARCESS Array B** 126.12 345 PKP **PKPdf** **02 51 56.9 -0.5**
comp=Z,7.2nm,0.5s,baz=65,slow=1.8,SNR=71

ARCES pPKP **pPKPdf** **02 52 31.5 -1.5**
comp=Z,4.0nm,0.7s,baz=80,slow=2.1,SNR=2.2

ARCES PKKPab **PKKPab** **03 01 31.3 +2.3**
comp=Z,1.6nm,0.9s,baz=218,slow=2.5,SNR=5.2

LKGWB **Lokgwabe** 126.32 216 *i* P **PKPdf** **02 51 58.1 -1.2**

KLMR **Klimovskoe** 126.60 332 *e*PKIKP **PKPdf** **02 51 56.2 -2.3**
KLMR pmax pmax
comp=Z,36nm,0.9s

KGCAE **Kacgae** 126.74 218 *i* P **PKPdf** **02 51 59.6 -0.6**

IPMB **Ipameri, GO** 126.84 133 *e*P **PKPdf** **02 51 59.3 -1.1**

AKT **Akhty** 126.91 307 *i* PKIKP **PKPdf** **02 51 59.9 0.0**
AKT *e* 02 52 38.3
AKT *e* 02 52 54.1
AKT *e* 02 54 00.9
AKT *e*PS **PS** **03 04 03.1 -2.7**
AKT pmax pmax
comp=Z,24nm,1.0s

MAK **Makhachkala** 126.93 309 *e*P **Pdif** **02 48 37.2 -4.1**
MAK *i* 02 52 00.0
MAK *e* 02 52 32.8
MAK *e* 02 53 57.1
MAK *e*PPP PPP 02 56 41.1
MAK *e* 02 58 56.2
MAK pmax pmax
comp=Z,295nm,1.5s

KTK1 **Kautokeino** 127.05 346 *e*P **PKPdf** **02 51 58.1 -1.1**

JETT **Jettan, Norway** 127.25 347 *e*P **PKPdf** **02 51 58.9 -0.6**

TRO **Tromso** 127.50 348 *e*P **PKPdf** **02 51 58.3 -1.7**

PMNB **Patos De Minas** 127.65 135 *e*P **PKPdf** **02 52 02.0 0.0**

HUMP **Col San Antoni** 127.67 82 **PKPdf** **02 52 01.6 -0.2**

KOOLE **Kule** 127.77 216 *i* P **PKPdf** **02 51 01.8 -0.4**

BOAV **Boa Vista** 127.90 103 *e*P **PKPdf** **02 52 02.0 -0.5**

NPGB **Novo Progresso** 128.05 117 *e*P **PKPdf** **02 52 02.2 -0.6**

GRTLG **Ghanzi** 128.47 218 *i* P **PKPdf** **02 52 03.0 -0.6**

SNDB **Serra Nova Dou** 128.50 125 *e*P **PKPdf** **02 52 03.3 -0.3**

BDFB **Brasilia** 128.57 131 PKP **PKPdf** **02 52 03.5 -0.3**
baz=128,slow=0.4

KSANE **Kasane** 128.66 225 *i* P **PKPdf** **02 52 04.1 +0.2**

KMBO **Kilima Mbogo** 128.85 251 PKP **PKPdf** **02 52 04.7 +0.1**
comp=Z,6.9nm,0.8s,baz=135,slow=1.4,SNR=10

VRH **Novokhopyorsk** 129.10 320 *e*PKIKP **PKPdf** **02 52 02.8 -0.8**
VRH pmax pmax
comp=Z,19nm,0.8s

ITTB **Itaituba** 129.12 114 *e*P **PKPdf** **02 52 04.7 -0.1**

SLIND **Selinda** 129.15 223 *i* P **PKiKP** **02 52 05.5 -0.1**

GNI **Garni** 129.29 306 *c i*PKIKP **PKiKP** **02 52 06.2 +0.9**
GNI pmax pmax
comp=Z,24nm,1.7s

DIAM **Diamantina, MG** 129.63 137 *e*P **PKPdf** **02 52 05.4 -0.4**

STEI **Steigen** 129.66 348 *e*P **PKPdf** **02 52 02.4 -1.8**

MOS **Moscow** 129.74 327 *e*PKIKP **PKPdf** **02 52 03.3 -1.3**
MOS *e* 02 52 37.6
MOS pmax pmax
comp=Z,30nm,0.7s

LOF **Lofoten** 129.81 349 *e*P **PKiKP** **02 52 06.2 +1.0**

QNGWA **Qangwa** 129.91 220 *i* P **PKPdf** **02 52 06.1 -0.2**

FAUS **Fauske** 130.12 347 *e*P **PKPdf** **02 52 04.0 -1.0**

KBZ **Khabaz** 130.14 311 PKP **PKiKP** **02 52 06.3 -0.3**
comp=Z,2.4nm,0.9s,baz=80,slow=6.3,SNR=6.0

KBZ **Khabaz** 130.14 311 *c i*PKIKP **PKiKP** **02 52 07.5 +0.9**

KIV **Kislovodsk** 130.25 311 *i* PKIKP **PKiKP** **02 52 06.6 -0.4**
KIV pmax pmax
comp=Z,6.0nm,1.0s

KIV MLR MLR
comp=Z,37nm,23.0s

LPSR **Galich'ya Gora** 130.27 323 *e*PKIKP **PKPdf** **02 52 02.9 -2.9**
LPSR pmax pmax
comp=Z,20nm,1.0s

VORR **Voronezh** 130.44 322 *e*PKIKP **PKPdf** **02 52 02.6 -3.5**
VORR pmax pmax
comp=Z,20nm,0.9s

OBN **Obninsk** 130.55 327 *de*PKIKP **PKPdf** **02 52 05.4 -0.8**
OBN *e* 02 54 22.2
OBN *e*PPP PPP 02 57 09.3
OBN *e* 02 58 58.2
OBN *e*SS SS 03 11 36.7 -3.1
OBN pmax pmax
comp=Z,13nm,0.6s

XAUDM **Khaudum** 130.56 221 *i* P **PKPdf** **02 52 07.5 -0.1**

VSR **Storozhevoye** 130.62 321 *e*PKIKP **PKPdf** **02 52 04.2 -2.3**
VSR pmax pmax
comp=Z,7.0nm,0.8s

RIB01 **Linhares ES** 130.87 141 *e*P **PKPdf** **02 52 07.6 -0.4**

SJMB **Sao Joao De Ma** 130.87 140 *e*P **PKPdf** **02 52 07.5 -0.5**

BSFB **Barra de Sao F** 130.97 140 *e*P **PKPdf** **02 52 07.5 -0.7**

VAGH **Vaagaholmen** 131.09 348 *e*P **PKPdf** **02 52 06.1 -0.8**

RAUS **Rausandaksla** 131.19 347 *e*P **PKPdf** **02 52 07.4 +0.2**

IVI **Ivigtut** 131.25 23 *i* P **PKPdf** **02 52 05.8 -1.6**

MOR8 **Moi Rana** 131.33 347 *e*P **PKPdf** **02 52 05.6 -1.8**

STOK **Stokkvaagen** 131.49 348 *e*P **PKPdf** **02 52 06.8 -0.8**

JANB **Januaria** 131.55 134 *e*P **PKPdf** **02 52 08.6 -0.8**

FINES **FINESS Array B** 131.66 338 PKhKP PKPpre 02 51 53.9
comp=Z,0.9nm,0.5s,baz=54,slow=3.3,SNR=5.6

FINES PKP **PKPdf** **02 52 08.1 0.0**
comp=Z,4.4nm,0.6s,baz=55,slow=3.1,SNR=14

FINES SKPbc **SKPbc** **02 55 20.5 -0.8**
comp=Z,7.0nm,0.9s,baz=59,slow=2.9,SNR=10

LEIR **Leirfjorden** 131.66 348 *e*P **PKPdf** **02 52 07.4 -0.6**

SOC **Sochi** 132.43 311 *e*PKIKP **PKPdf** **02 52 08.8 -1.3**
SOC *e* 02 54 31.6
SOC *e*PPP PPP 02 57 25.2
SOC *e*PS **PS** **03 04 49.9 -3.3**
SOC *e*SS SS 03 12 03.3 -0.4
SOC *e*SSS SSS 03 16 53.9

SDBA **SAO DESIDERIO** 132.97 131 *e*P **PKPdf** **02 52 12.0 -0.1**

PRPB **Parauapebas** 133.11 120 *e*P **PKPdf** **02 52 12.3 -0.1**

SMTB **Santa Maria do** 133.28 125 *e*P **PKPdf** **02 52 12.7 0.0**

GUA01 **Guaratinga, BA** 133.33 139 *e*P **PKPdf** **02 52 12.3 -0.4**

CMC01 **Camacan, BA** 134.44 139 *e*P **PKPdf** **02 52 13.7 -1.1**

NACGM	**Naroch**	135.50 330	*e*PKP	**PKPdf**	02 52 15.7	+0.2		
	comp=Z,26nm,0.8s,baz=54							
NB2	**NORSAR Subarra**	136.50 345	PKPdf	**PKPdf**	02 52 11.6	-5.7		
	comp=Z,5.4nm,0.8s,baz=31,slow=1.9							
NOA	**NORSAR Array B**	136.50 345	PKhKP	PKPpre	02 52 06.5			
	comp=Z,1.1nm,0.7s,baz=46,slow=1.8,SNR=4.2							
NOA			PKP	**PKPdf**	02 52 17.4	+0.1		
	comp=Z,2.6nm,0.7s,baz=52,slow=2.3,SNR=13							
NOA			pPKP	pPKPdf	02 52 52.5	-0.4		
	comp=Z,0.6nm,0.6s,baz=35,slow=2.0,SNR=1.5							
NOA			SKPbc	**SKPbc**	02 55 36.9	-0.4		
	comp=Z,0.7nm,0.9s,baz=339,slow=2.9,SNR=3.3							
AKASG	**Malin Array Be**	136.54 324	PKhKP	PKPpre	02 52 06.8			
	comp=Z,1.8nm,0.6s,baz=58,slow=3.2,SNR=7.0							
AKASG			PKP	**PKPdf**	02 52 16.9	-0.7		
	comp=Z,6.7nm,0.7s,baz=67,slow=1.5,SNR=15							
AKASG			pPKP	pPKPdf	02 52 52.0	-1.3		
	comp=Z,1.5nm,0.7s,baz=56,slow=1.6,SNR=1.2							
AKASG			PP	**PP**	02 54 56.3	-4.4		
	comp=Z,0.3nm,0.4s,baz=40,slow=7.3,SNR=4.1							
AKASG			SKPbc	**SKPbc**	02 55 37.4	-0.4		
	comp=Z,4.7nm,1.0s,baz=50,slow=3.5,SNR=9.0							
AKBB	**Malin Array Si**	136.54 324	*c i*PKIKP	**PKPdf**	02 52 17.6	0.0		
HFS	**Hagfors**	136.62 343	PKhKP	PKPpre	02 52 03.6			
	comp=Z,3.0nm,0.6s,baz=88,slow=4.7,SNR=9.9							
HFS			PKP	**PKPdf**	02 52 16.9	-0.6		
	comp=Z,8.3nm,0.8s,baz=90,slow=4.4,SNR=7.4							
MMAI	**Mount Meron Ar**	137.52 297	PKhKP	PKPpre	02 52 08.7			
	comp=Z,0.4nm,0.4s,baz=96,slow=5.1,SNR=5.8							
MMAI			PKP	**PKPdf**	02 52 18.6	-1.5		
	comp=Z,5.6nm,0.8s,baz=64,slow=1.9,SNR=11							
MMAI			pPKP	pPKPdf	02 52 54.8	-0.8		
	comp=Z,3.0nm,0.8s,baz=99,slow=4.3,SNR=2.6							
MMAI			SKPbc	**SKPbc**	02 55 41.4	0.0		
	comp=Z,8.3nm,1.0s,baz=64,slow=5.7,SNR=9.8							
SUW	**Suwalki**	137.71 331	*e*PKP	**PKiKP**	02 52 21.1	-0.5		
BRTR	**Keskin Array B**	137.76 307	PKhKP	PKPpre	02 52 09.6			
	comp=Z,1.4nm,0.6s,baz=144,slow=4.4,SNR=7.3							
BRTR			PKP	**PKPdf**	02 52 18.9	-1.5		
	comp=Z,6.5nm,1.0s,baz=100,slow=2.9,SNR=12							
BRTR			PP	**PP**	02 55 09.2	+0.1		
	comp=Z,3.3nm,1.1s,baz=68,slow=5.3,SNR=4.8							
BRTR			SKPbc	**SKPbc**	02 55 41.0	-1.0		
	comp=Z,2.1nm,0.8s,baz=120,slow=5.2,SNR=3.5							
BRTR	**Keskin Array B**	137.76 307	*c i*PKIKP	**PKPdf**	02 52 21.2	+0.8		
BRTR			pmax	pmax				
	comp=Z,7.0nm,1.0s							
BIZ	**Bicaz**	140.20 321	⇓P	**PKiKP**	02 52 27.1	+0.1		
BEL	**Belsk**	140.22 330	*e*PKP	**PKPdf**	02 52 24.8	+0.5		
ONER	**Baraj Valea Uz**	140.32 320	⇓P	**PKPdf**	02 52 18.7	-6.0		
BURAR	**Bucovina Array**	140.38 322	⇑P	**PKPdf**	02 52 18.1	-6.8		
BURAR	**Bucovina Array**	140.38 322	⇑PKHKP	PKPpre	02 52 18.1			
KWP	**Kalwaria Pacla**	140.64 326	*e*PKP	**PKPdf**	02 52 20.3	-4.9		
NBAN	**Anadia - AL**	140.81 137	*e*P	**PKPdf**	02 52 20.2	-6.3		
MLR	**Muntele Rosu**	140.99 319	⇓P	**PKPdf**	02 52 20.2	-5.9		
MLR	**Muntele Rosu**	140.99 319	⇓PKHKP	PKPpre	02 52 20.2			
DOPR	**Dopca**	141.11 320	⇑P	**PKPdf**	02 52 21.4	-4.8		
ARCR	**ARCALIA**	141.15 322	⇓P	**PKPdf**	02 52 21.7	-4.5		
STHS	**Stebnicka Huta**	141.53 327	*e*PKIKP	**PKPdf**	02 52 22.8	-4.0		
STHS	**Stebnicka Huta**	141.53 327	*e*PKP	**PKPdf**	02 52 22.8	-4.0		
VOIR		141.57 319	⇑P	**PKPdf**	02 52 22.7	-4.4		
VOIR		141.57 319	⇑PKIKP	**PKPdf**	02 52 22.7	-4.4		
OJC	**Ojcow**	141.75 329	*e*PKP	**PKPdf**	02 52 23.5	-3.7		
CJR	**Cluj-Napoca**	141.79 322	⇓P	**PKPdf**	02 52 23.6	-3.8		
CJR	**Cluj-Napoca**	141.79 322	⇓PKIKP	**PKPdf**	02 52 23.6	-3.8		
ARR	**Arges**	141.86 319	⇓P	**PKPdf**	02 52 24.4	-3.2		
NIE	**Niedzica**	142.01 327	*e*PKP	**PKPdf**	02 52 24.0	-3.7		
COPA	**Copaceanca**	142.08 317	⇓P	**PKPdf**	02 52 22.8	-5.2		
MARR	**Marisel-Cluj**	142.09 322	⇑P	**PKPdf**	02 52 26.6	-1.4		
ELND	**Elena**	142.19 315	⇑P	**PKPdf**	02 52 24.2	-4.0		
DRGR		142.26 322	⇓P	**PKPdf**	02 52 24.6	-3.7		
DRGR		142.26 322	⇓PKIKP	**PKPdf**	02 52 24.6	-3.7		
LOT	**Lotru**	142.35 320	⇑P	**PKPdf**	02 52 24.7	-3.9		
LANS	**Liptovska Anna**	142.60 328	*e*PKIKP	**PKPdf**	02 52 26.1	-2.7		
LANS	**Liptovska Anna**	142.60 328	*e*PKP	**PKPdf**	02 52 26.1	-2.7		
DEV	**Deva**	142.64 321	⇑P	**PKPdf**	02 52 25.5	-3.4		
DEV	**Deva**	142.64 321	⇑PKIKP	**PKPdf**	02 52 25.5	-3.4		
VLAD	**Vladila**	142.67 317	⇑P	**PKPdf**	02 52 25.8	-3.2		
OKC	**Ostrava-Krasne**	142.80 329	*e*PKIKP	**PKPdf**	02 52 25.4	-3.6		
OKC	**Ostrava-Krasne**	142.80 329	*e*PKP	**PKPdf**	02 52 25.4	-3.6		
PLVB	**Pleven**	142.81 316	⇑P	**PKPdf**	02 52 26.5	-2.7		
STEB	**Steborice**	142.91 330	*e*PKP	**PKPdf**	02 52 25.8	-3.4		
STEB			*ep*PKP	**pPKPdf**	02 53 01.6	-3.2		
KSP	**Ksiaz**	142.95 332	*e*PKP	**PKPdf**	02 52 26.5	-2.8		
GZR	**Gura Zlata**	142.97 320	⇑P	**PKPdf**	02 52 26.5	-3.1		
GZR	**Gura Zlata**	142.97 320	⇑PKIKP	**PKPdf**	02 52 26.5	-3.1		
SRE	**Strehaia**	143.09 319	⇑P	PKPbc	02 52 27.5	+0.5		
SRE	**Strehaia**	143.09 319	⇑PKIKP	PKPbc	02 52 27.5	+0.5		
EZN	**Ezine**	143.10 310	⇑P	PKPbc	02 52 26.4	-0.7		
EZN	**Ezine**	143.10 310	⇑PKIKP	PKPbc	02 52 26.4	-0.7		
MORC	**Moravsky Berou**	143.13 330	⇓P	PKPbc	02 52 26.7	-0.3		
MORC	**Moravsky Berou**	143.13 330	*e*PKP	PKPbc	02 52 26.5	-0.5		
MORC	**Moravsky Berou**	143.13 330	⇓PKIKP	PKPbc	02 52 26.7	-0.3		
PSZ	**Piszkesteto**	143.16 326	⇑P	PKPbc	02 52 26.9	-0.3		
PSZ	**Piszkesteto**	143.16 326	⇑PKIKP	PKPbc	02 52 26.9	-0.2		
OSTC	**Ostas**	143.19 332	*e*PKIKP	PKPbc	02 52 27.0	-0.1		
OSTC	**Ostas**	143.19 332	*e*PKP	PKPbc	02 52 27.0	-0.1		
CHVC	**Chvalec**	143.24 332	*e*PKIKP	PKPbc	02 52 27.0	-0.2		
CHVC	**Chvalec**	143.24 332	*e*PKP	PKPbc	02 52 27.0	-0.2		
MAUC	**Maruska**	143.27 329	*e*PKP	PKPbc	02 52 27.8	+0.4		
PLD	**Plovdiv**	143.28 314	P	PKPbc	02 52 27.8	+0.2		
DPC	**Dobruska-Polom**	143.29 331	*e*PKIKP	PKPbc	02 52 27.6	+0.2		
DPC			*e*		02 53 03.3			
DPC	**Dobruska-Polom**	143.29 331	*e*PKP	PKPbc	02 52 27.6	+0.2		
DPC			*ep*PKP	pPKPdf	02 53 03.3	-2.2		
UPC	**Upice**	143.32 332	*e*PKIKP	PKPbc	02 52 27.6	+0.2		
UPC	**Upice**	143.32 332	*e*PKP	PKPbc	02 52 27.6	+0.2		
BAIL	**Bailesti**	143.32 318	⇓P	PKPbc	02 52 28.6	+1.0		
MPEP	**Malo Peshtene**	143.39 317	*e*P	PKPbc	02 52 28.6	+0.7		
RMGR	**Halanga-Turnu**	143.41 319	⇑P	PKPbc	02 52 27.6	-0.2		
VALD	**Valchedram**	143.43 317	P	**PKPdf**	02 52 29.3	-1.0		
RZN	**Rozhen**	143.48 314	P	PKPbc	02 52 28.8	+0.4		
PGB	**Panagyurishte**	143.50 315	P	PKPbc	02 52 29.1	+0.9		
DJES	**Djerdap**	143.51 319	⇑P	PKPab	02 52 27.5	+0.4		
BZS	**Buzias**	143.54 321	⇓P	PKPbc	02 52 28.2	0.0		
BZS	**Buzias**	143.54 321	⇓PKIKP	PKPbc	02 52 28.2	0.0		
JAVC	**Velka Javorina**	143.69 328	*e*PKP	**PKPdf**	02 52 29.8	-0.9		
SHEL	**Horse Pasture**	143.78 187		**PKPdf**	02 52 31.4	-0.4		
SHEL	**Horse Pasture**	143.78 187	PKIKP	**PKPdf**	02 52 31.4	-0.4		
LAWE	**Loch Awe, Argy**	143.82 355	*e*P	PKPab	02 52 27.9	0.0		
RCBR	**Riachuelo**	143.88 133		PKPab	02 52 29.2	-0.3		
RCBR	**Riachuelo**	143.88 133	PKIKP	PKPab	02 52 29.2	-0.3		
VRAC	**Vranov**	143.90 330	⇓P	PKPbc	02 52 29.8	+0.7		
VRAC	**Vranov**	143.90 330	*e*PKP	PKPbc	02 52 29.1	0.0		
VRAC	**Vranov**	143.90 330	⇓PKIKP	PKPbc	02 52 29.8	+0.7		
BLSH	**Balsha**	143.93 316	P	**PKPdf**	02 52 31.1	-0.2		
PVCC	**Panska Ves**	143.93 333	*e*PKIKP	PKPbc	02 52 29.8	+0.6		
PVCC	**Panska Ves**	143.93 333	*e*PKP	PKPbc	02 52 29.8	+0.6		
MDVR	**Moldovita**	143.94 320	⇑P	PKPbc	02 52 29.8	+0.3		
CLL	**Collm**	143.99 335	*i* PKIKP	PKPbc	02 52 29.2	-0.1		
CLL			pmax	pmax				
	comp=Z,162nm,0.9s							
CLL	**Collm**	143.99 335	*i* PKPbc	PKPbc	02 52 29.2	-0.1		
	comp=Z,162nm,0.9s							
PLNA	**Plana**	144.01 316	P	**PKPdf**	02 52 31.1	-0.5		
SMOL	**Smolenice**	144.04 328	*e*PKIKP	**PKPdf**	02 52 30.8	-0.5		
SRO	**Srobarova**	144.05 327	*e*PKIKP	**PKPdf**	02 52 30.8	-0.5		
SRO	**Srobarova**	144.05 327	*e*PKP	**PKPdf**	02 52 30.8	-0.5		
VTS	**Vitosha**	144.07 316	P	**PKPdf**	02 52 31.1	-0.6		
RICC	**Richard**	144.12 333	*e*PKP	PKPbc	02 52 30.5	+0.8		
KRUC	**Moravsky**	144.16 330	*e*PKP	PKPbc	02 52 30.2	+0.3		
PGBU	**Glenifferbraes**	144.19 354	*e*P	**PKPab**	02 52 29.1	-0.2		
MODS	**Modra-Piesok**	144.21 328	*e*PKIKP	**PKPdf**	02 52 31.3	-0.3		
MODS	**Modra-Piesok**	144.21 328	*e*PKP	**PKPdf**	02 52 31.3	-0.3		
MMB	**Musomishta**	144.21 314	P	PKPbc	02 52 31.1	+0.7		
PRA	**Prague**	144.33 332	*e*PKIKP	PKPbc	02 52 30.9	+0.5		
PRA	**Prague**	144.33 332	*e*PKP	PKPbc	02 52 30.9	+0.5		
TRAN	**Tran**	144.34 317	P	**PKPdf**	02 52 31.9	-0.1		
PRU	**Pruhonice**	144.34 332	*e*PKIKP	PKPbc	02 52 30.9	+0.5		
PRU	**Pruhonice**	144.34 332	*e*PKP	PKPbc	02 52 30.9	+0.5		
HSKC	**Hora Svate Kat**	144.35 334	*e*PKP	PKPbc	02 52 30.8	+0.3		
TREC	**Trest**	144.42 331	*e*PKIKP	PKPbc	02 52 30.9	+0.2		
TREC	**Trest**	144.42 331	*e*PKP	PKPbc	02 52 30.9	+0.2		
KKB	**Krupnik**	144.50 315	P	**PKPdf**	02 52 32.2	-0.1		
EKA	**Eskdalemuir Ar**	144.52 353	PKP	**PKPab**	02 52 30.5	-0.1		
	comp=Z,19nm,0.5s,baz=0.0,slow=2.6,SNR=134							
BOVS	**Bovan**	144.54 318	⇓P	PKPbc	02 52 31.7	+0.5		
ESK	**Eskdalemuir**	144.54 353		PKPbc	02 52 30.8	0.0		
ESK	**Eskdalemuir**	144.54 353	*e*P	**PKPab**	02 52 30.5	-0.2		
ESK	**Eskdalemuir**	144.54 353	PKIKP	PKPbc	02 52 30.8	-0.1		
APE	**Apeiranthos**	144.62 306	⇑P	**PKPab**	02 52 30.5	-1.1		
APE	**Apeiranthos**	144.62 306	⇑PKIKP	**PKPab**	02 52 30.5	-1.1		
NEWG	**New Galloway**	144.85 354	*e*P	**PKPab**	02 52 31.6	-0.2		
EDMD	**Edmundbyers**	144.86 352	*e*P	**PKPab**	02 52 31.6	-0.3		
MORH	**Mrgy, Hungar**	144.88 324	⇓P	**PKPdf**	02 52 32.6	-0.2		
CLGH	**Cloghs, Cushen**	145.04 356	*e*P	**PKPbc**	02 52 32.2	-0.3		
GDLE	**Glaisdale, N Y**	145.09 350	*e*P	**PKPdf**	02 52 33.0	+0.1		
VAY	**Valandovo**	145.11 314	*i* P	**PKPbc**	02 52 32.5	-0.6		
IDGL	**Inch Island, C**	145.13 357	PKP	**PKPbc**	02 52 31.9	-0.8		
IDGL	**Inch Island, C**	145.13 357	*e*P	**PKPbc**	02 52 31.6	-1.1		
GAL1	**Galloway**	145.14 354	*e*P	**PKPbc**	02 52 32.7	-0.1		
RONA	**Rosalia, Austr**	145.15 328	*e*PKP	**PKPdf**	02 52 34.1	+0.8		
	comp=Z,455nm,1.2s,SNR=154							
RONA			*i* pPKP	pPKPab	02 53 08.0	+0.2		
	comp=Z,103nm,1.7s							
CONA	**Conrad Observa**	145.21 329	*i* PKP	**PKPab**	02 52 34.3	+0.8		
	comp=Z,292nm,0.8s,SNR=150							
CONA			*i* pPKP	pPKPbc	02 53 08.3	-0.1		
	comp=Z,152nm,2.0s							
KESW	**Keswick, Cumbr**	145.25 353	*e*P	**PKPbc**	02 52 32.4	-0.7		
CKRC	**Cesky Krumlov**	145.30 331	*e*PKP2	**PKPab**	02 52 33.8	0.0		
CKRC	**Cesky Krumlov**	145.30 331	*e*PKP	**PKPab**	02 52 33.8	0.0		
CKRC			*ep*PKP	**pPKPdf**	02 53 09.3	+0.3		
KHC	**Kasperske Hory**	145.40 332	*e*PKP2	**PKPbc**	02 52 33.9	+0.1		
KHC	**Kasperske Hory**	145.40 332	*e*PKP	**PKPbc**	02 52 33.9	+0.1		
KHC			*ep*PKP	**pPKPdf**	02 53 10.6	+1.4		
SKO	**Skopje**	145.55 316	*i* P	**PKPab**	02 52 35.1	+0.2		
GERES	**GERESS Array B**	145.56 332	PKPbc	**PKPdf**	02 52 33.7	-0.3		
	comp=Z,85nm,0.8s,baz=32,slow=3.8,SNR=382							
GERES			pPKP	pPKPab	02 53 09.1	-0.3		
	comp=Z,33nm,0.8s,baz=20,slow=4.3,SNR=5.4							
HPK	**Haverah Park**	145.66 351	*e*P	**PKPbc**	02 52 34.3	-0.1		
BEHE	**Becsehely**	145.72 326	⇓P	**PKPab**	02 52 35.3	-0.1		
IOMK	**Kirk Michael**	145.73 354	*e*P	**PKPdf**	02 52 34.2	+0.2		
ARSA	**Arzberg**	145.84 328	*i* PKP	**PKPdf**	02 52 34.1	-0.3		
	comp=Z,3.0nm,0.8s							
ARSA			*e*PKP	**PKPab**	02 52 35.6	-0.3		
	comp=Z,63nm,0.9s,SNR=27							
ARSA			*ep*PKP	**pPKPdf**	02 53 09.7	-0.4		
	comp=Z,62nm,1.2s							
WIM	**Isle of Man**	145.85 354	*e*P	**PKPbc**	02 52 34.8	-0.2		
LMK	**Market Rasen**	145.94 349	*e*P	**PKPbc**	02 52 35.0	-0.2		
RUDO	**Rudo**	145.99 320	*e*P	**PKPbc**	02 52 35.7	-0.1		
KOGS	**Kog**	146.01 326	*i* PKPbc	**PKPbc**	02 52 35.8	+0.1		
KOGS			*i* pPKPbc	**pPKPdf**	02 53 10.5	+0.1		
MOA	**Molln**	146.03 330	*i* PKP	**PKPdf**	02 52 34.0	-0.8		
	comp=Z,3.2nm,1.0s							
MOA			*i* PKP	**PKPbc**	02 52 36.2	+0.4		
	comp=Z,136nm,0.8s,SNR=40							
MOA			*i* pPKP	**pPKPdf**	02 53 10.1	-0.3		
	comp=Z,150nm,1.5s							
IVA	**Berane**	146.07 319	⇓*i* PKP	**PKPbc**	02 52 36.2	0.0		
ILTH	**Belurgan, Co L**	146.11 356	PKPdf	**PKPbc**	02 52 35.4	-0.3		
ILTH	**Belurgan, Co L**	146.11 356	*e*P	**PKPdf**	02 52 34.9	+0.3		
PLE	**Pljevlja**	146.13 320	⇓*i* PKP	**PKPbc**	02 52 36.7	+0.3		
PVY	**Plav**	146.18 318	⇓*i* PKP	**PKPbc**	02 52 36.5	0.0		
LBWR	**Ladybower, Pea**	146.22 351	*e*P	**PKPdf**	02 52 35.3	+0.5		
KOME	**Kolasin**	146.32 319	⇓*i* PKP	**PKPbc**	02 52 37.1	+0.2		
OHR	**Ohrid**	146.38 315	*i* P	**PKPbc**	02 52 37.5	+0.4		
BIOA	**Bad Ischl, Aus**	146.43 330	*i* PKP	**PKPdf**	02 52 34.8	-0.6		
	comp=Z,13nm,1.1s							
BIOA			*i* PKP	**PKPbc**	02 52 36.9	0.0		
	comp=Z,88nm,1.0s,SNR=19							
BIOA			*ep*PKP	**pPKPdf**	02 53 10.8	-0.3		
	comp=Z,34nm,1.2s							
WACR	**West Acre**	146.46 348	*e*P	**PKPbc**	02 52 37.0	+0.2		
SOKA	**Soboth**	146.47 328	*i* PKP	**PKPdf**	02 52 35.1	-0.5		
	comp=Z,11nm,1.1s							
SOKA			*e*PKP	**PKPbc**	02 52 37.2	-0.1		
	comp=Z,111nm,1.1s,SNR=54							
SOKA			*i* pPKP	pPKPab	02 53 12.6	-0.3		
	comp=Z,55nm,1.2s							
UPM	**Unac-Piva**	146.50 320	⇓*i* PKP	**PKPbc**	02 52 37.2	-0.3		
WME	**Myndd Eilian**	146.56 354	*e*P	**PKPbc**	02 52 36.8	-0.3		
BLY	**Banja Luka**	146.59 323	⇓*i* P	**PKPbc**	02 52 38.0	+0.5		
BLY	**Banja Luka**	146.59 323	⇓P	**PKPbc**	02 52 38.2	+0.7		
WLF1	**Llynfaes**	146.67 354	*e*P	**PKPbc**	02 52 36.9	-0.4		
PDG	**Podgorica**	146.71 318	⇓P	**PKPbc**	02 52 37.9	+0.1		
PDG	**Podgorica**	146.71 318	⇓*i* PKP	**PKPbc**	02 52 37.9	0.0		
NKME	**Niksic**	146.71 319	⇓*i* PKP	**PKPbc**	02 52 37.9	-0.1		
CWF	**Charnwood Fore**	146.80 350	*e*P	**PKPbc**	02 52 37.4	-0.4		
OBKA	**Obir**	146.83 328	*i* PKP	**PKPdf**	02 52 35.4	-0.9		
	comp=Z,12nm,1.8s							
OBKA			*e*PKP	**PKPbc**	02 52 37.8	-0.4		
	comp=Z,56nm,0.9s,SNR=15							
OBKA			*i* pPKP	**pPKPdf**	02 53 11.8	-0.2		
	comp=Z,24nm,0.9s							
IGLA	**Glengowla, Co**	146.84 359	PKP	**PKPbc**	02 52 37.4	-0.5		
CEME	**Cevo**	146.85 319	⇓*i* PKP	**PKPbc**	02 52 38.1	-0.3		
DRME	**Dracevica, Mon**	146.88 318	⇓*i* PKP	**PKPbc**	02 52 38.5	+0.1		
BRY	**Bratogost**	146.89 320	⇓*i* PKP	**PKPbc**	02 52 37.7	-0.9		
DSB	**Dublin**	146.89 356	PKPdf	**PKPbc**	02 52 37.7	-0.3		
FOEL	**Foel Wylfa**	146.92 352	*e*P	**PKPbc**	02 52 37.9	-0.3		
ULC	**Ulcinj**	146.96 318	⇓*i* PKP	**PKPbc**	02 52 38.4	-0.3		
BEBN	**Eben Emael**	146.98 341	*d*PKP	**PKPab**	02 52 39.4	-0.7		
BUM	**Brajici-Budva**	147.00 318	⇓*i* PKP	**PKPdf**	02 52 37.7	+1.1		
KBA	**Koelnbreinsper**	147.01 330	*e*PKP	**PKPdf**	02 52 35.6	-1.0		
	comp=Z,5.9nm,0.9s							
KBA			*i* PKP	**PKPbc**	02 52 38.3	-0.5		
	comp=Z,62nm,1.0s,SNR=27							
KBA			*i* pPKP	**pPKPbc**	02 53 13.6	-0.3		
	comp=Z,48nm,1.0s							
LLW	**Llanuwchllyn**	147.02 353	*e*P	**PKPbc**	02 52 37.7	-0.7		
BTNL	**Ternell**	147.03 341	*d*PKP	**PKPbc**	02 52 38.8	+0.2		
MEM	**Membach**	147.04 341	*d*PKP	**PKPbc**	02 52 38.7	+0.1		
LESA	**Schwarzleotal**	147.07 331	*i* PKP	**PKPdf**	02 52 36.1	-0.5		
	comp=Z,8.7nm,1.0s							
LESA			*e*PKP	**PKPbc**	02 52 38.7	-0.1		
	comp=Z,90nm,0.8s,SNR=26							
LESA			*i* pPKP	**pPKPdf**	02 53 12.6	+0.3		
	comp=Z,23nm,0.6s							
TREB	**Trebinje**	147.11 319	⇓*i* P	**PKPbc**	02 52 38.4	-0.6		
BOJS	**Bojanci**	147.16 326	*i* PKPdf	**PKPdf**	02 52 35.9	-0.8		
BOJS			*i* PKPbc	**PKPbc**	02 52 39.6	+0.5		
LJU	**Ljubljana**	147.16 327	*i* PKPbc	**PKPbc**	02 52 39.3	+0.2		
LJU			*i* pPKPbc	**pPKPbc**	02 53 14.0	-0.4		
HCY	**Herceg Novi**	147.17 319	⇓*i* PKP	**PKPbc**	02 52 38.6	-0.6		
MYKA	**Terra Mystica**	147.19 329	*i* PKP	**PKPdf**	02 52 36.2	-0.6		
	comp=Z,3.7nm,0.6s							
MYKA			*i* PKP	**PKPbc**	02 52 38.6	-0.6		
	comp=Z,59nm,0.9s,SNR=23							
MYKA			*i* pPKP	**pPKPdf**	02 53 12.7	+0.2		
	comp=Z,24nm,0.8s							
BSTI	**Sart Tilman**	147.20 341	*d*PKP	**PKPbc**	02 52 39.5	+0.5		
HLM1	**Long Mynd**	147.25 352	*e*P	**PKPbc**	02 52 38.7	-0.3		
BHOU	**Houvegnez**	147.27 341	*d*PKP	**PKPbc**	02 52 39.7	+0.5		
UCC	**Uccle**	147.36 343	*d*PKP	**PKPbc**	02 52 39.5	+0.1		
BCLA	**Clavier**	147.43 341	*d*PKPdf	**PKPbc**	02 52 39.6	0.0		
BGES	**Gesves**	147.52 342	*d*PKP	**PKPbc**	02 52 39.9	0.0		
WATA	**Walderalm**	147.63 332	*e*PKP	**PKPdf**	02 52 36.9	-0.7		
	comp=Z,8.5nm,0.9s,SNR=15							
WATA			*i* PKP	**PKPbc**	02 52 40.3	-0.2		
	comp=Z,70nm,1.0s							
WATA			*i* pPKP	**pPKPdf**	02 53 14.2	+0.9		
	comp=Z,43nm,1.2s							
ABTA	**Abfaltersbach**	147.65 330	*i* PKP	**PKPdf**	02 52 36.6	-1.0		
	comp=Z,18nm,0.9s							
ABTA			*i* PKP	**PKPbc**	02 52 39.9	-0.6		
	comp=Z,81nm,0.9s,SNR=23							
ABTA			*ep*PKP	**pPKPdf**	02 53 13.7	+0.4		
	comp=Z,40nm,1.0s							
WTTA	**Wattenberg**	147.66 332	*i* PKP	**PKPdf**	02 52 37.0	-0.7		
	comp=Z,18nm,1.1s,SNR=28							
WTTA			*i* PKP	**PKPbc**	02 52 40.7	0.0		
	comp=Z,161nm,1.4s							
WTTA			*i* pPKP	**pPKPdf**	02 53 14.5	+1.1		
	comp=Z,58nm,1.3s							
RCHB	**Rochefort**	147.68 341	*d*PKP	**PKPbc**	02 52 40.2	-0.1		
BMRD	**Maredsous**	147.69 342	*d*PKP	**PKPbc**	02 52 40.4	+0.1		
MCH1	**Michaelchurch**	147.77 352	*e*P	**PKPbc**	02 52 39.7	-0.8		
IWEX	**Carrickbyrne,**	147.78 356	PKPdf	**PKPbc**	02 52 40.0	-0.5		
IWEX	**Carrickbyrne,**	147.78 356	*e*P	**PKPbc**	02 52 40.1	-0.4		
LPW	**Lampeter**	147.79 353	*e*P	**PKPbc**	02 52 39.6	-1.0		
WLF	**Walferdange**	147.82 340	*d*PKP	**PKPbc**	02 52 41.5	+0.8		
WLF			*dp*PKP	**pPKPdf**	02 53 13.7	+0.5		
MOTA	**Moosalm**	147.84 332	*e*PKP	**PKPdf**	02 52 37.2	-0.7		
	comp=Z,16nm,1.2s,SNR=22							
MOTA			*i* PKP	**PKPbc**	02 52 41.0	-0.1		
	comp=Z,122nm,0.9s							
MOTA			*i* pPKP

SEW	Seward	2.93	55			Pn	02 41 56.3	-0.3	
O15K	Ungalikthiuk R	3.00	286			Pn	02 41 58.0	+0.4	
O15K	Ungalikthiuk R	3.00	286		IAML		02 42 32.3		
	comp=N,184nm,0.8s								
O15K					IAML		02 42 50.8		
	comp=E,182nm,0.8s								
O22K	Cooper Landing	3.04	47			Pn	02 41 58.8	+0.7	
M18K	Stony River	3.11	346			Pn	02 41 59.7	+0.5	
STLK	Strandline Lak	3.24	21			Pn	02 42 02.0	+1.0	
M17K	Holitna River	3.33	332			Pn	02 42 02.9	+0.8	
M17K	Holitna River	3.33	332		IAML		02 42 59.2		
	comp=N,270nm,0.7s								
M17K					IAML		02 43 07.4		
	comp=E,266nm,0.7s								
FIS	Fire Island	3.34	36			Pn	02 42 03.3	+1.1	
FIS	Fire Island	3.34	36		IAML		02 42 48.4		
	comp=E,308nm,0.7s								
N15K	Kwethluk River	3.45	302			Pn	02 42 04.5	+0.8	
N15K					IAML		02 42 44.5		
	comp=N,122nm,0.8s								
RC01	Rabbit Creek A	3.45	39			Pn	02 42 03.9	+0.2	
RC01					IAML		02 42 44.5		
	comp=N,256nm,0.4s								
SUA	Susitna One	3.45	29		IAML		02 42 46.5		
	comp=N,228nm,0.9s								
L19K	White Mountain	3.71	355			Pn	02 42 08.1	+0.8	
L19K	White Mountain	3.71	355		IAML		02 43 17.0		
	comp=N,110nm,0.8s								
L19K					IAML		02 43 18.3		
	comp=E,108nm,0.7s								
VNKR	Veniaminof 5	3.73	231			Pn	02 42 07.6	0.0	
O14K	Tigyukauivet M	3.74	285			Pn	02 42 08.0	+0.4	
O14K	Tigyukauivet M	3.74	285		IAML		02 43 16.4		
	comp=N,81nm,1.1s								
SKT	Skwentna	3.74	20		IAML		02 42 56.0		
	comp=E,67nm,0.3s								
PWL	Port Wells	3.81	49			Pn	02 42 08.5	-0.1	
M22K	Willow	3.86	30			Pn	02 42 09.9	+0.7	
L18K	Granite Mounta	3.93	343		IAML		02 43 09.0		
	comp=N,128nm,1.1s								
M15K	Kasigluk River	3.96	307			Pn	02 42 11.0	+0.4	
L20K	Farewell, AK	4.00	2			Pn	02 42 12.2	+1.0	
L20K	Farewell, AK	4.00	2		IAML		02 43 18.8		
	comp=E,80nm,0.9s								
L20K					IAML		02 43 29.0		
	comp=N,72nm,1.0s								
PMR	Palmer	4.02	37		IAML		02 42 56.2		
	comp=E,68nm,0.2s								
PMR					IAML		02 42 59.2		
	comp=N,71nm,0.2s								
PMR	Palmer	4.02	37	P		Pn	02 42 10.2	-1.2	
N14K	Kuskokwak Cree	4.10	294			Pn	02 42 13.0	+0.5	
N14K	Kuskokwak Cree	4.10	294		IAML		02 43 15.9		
	comp=E,84nm,1.1s								
N14K					IAML		02 43 43.2		
	comp=N,90nm,0.8s								
KNK	Knik Glacier	4.12	42			Pn	02 42 12.4	-0.4	
KNK	Knik Glacier	4.12	42		IAML		02 43 01.6		
	comp=N,131nm,0.7s								
L16K	Owhat River	4.16	323			Pn	02 42 13.9	+0.6	
L16K					IAML		02 43 34.5		
	comp=E,54nm,1.0s								
L17K	Donlin	4.18	333			Pn	02 42 13.9	+0.4	
MID	Middleton Isla	4.18	74			Pn	02 42 13.6	0.0	
GHO	Glory Hole Cre	4.22	37			Pn	02 42 13.8	-0.4	
GHO	Glory Hole Cre	4.22	37		IAML		02 43 02.0		
	comp=E,110nm,0.5s								
GHO					IAML		02 43 02.8		
	comp=N,142nm,0.5s								
GLI	Glacier Island	4.33	53			Pn	02 42 14.6	-1.1	
GLI	Glacier Island	4.33	53		IAML		02 43 06.0		
	comp=N,101nm,0.3s								
HIN	Hinchinbrook I	4.37	61			Pn	02 42 16.4	+0.2	
CUT	Chulitna	4.38	25			Pn	02 42 17.1	+0.8	
CUT	Chulitna	4.38	25		IAML		02 43 12.8		
	comp=N,105nm,0.4s								
L22K	Petersville	4.39	21			Pn	02 42 17.0	+0.5	
L22K					IAML		02 43 08.2		
	comp=E,79nm,0.4s								
L22K					IAML		02 43 14.9		
	comp=N,51nm,0.3s								
SML	Sawmill	4.43	39			Pn	02 42 16.6	-0.5	
SML	Sawmill	4.43	39		IAML		02 43 13.1		
	comp=E,57nm,0.6s								
SML					IAML		02 43 26.0		
	comp=N,67nm,0.8s								
PPLA	Purkeypile	4.53	12			Pn	02 42 19.9	+1.5	
PPLA	Purkeypile	4.53	12		IAML		02 43 46.0		
	comp=N,45nm,1.1s								
FID	Port Fidalgo	4.53	57			Pn	02 42 17.0	-1.4	
M14K	Bethel	4.54	303			Pn	02 42 19.0	+0.6	
M23K	Glacier View	4.63	42			Pn	02 42 19.3	-0.5	
SDPT	Sand Point	4.66	230			Pn	02 42 19.2	-0.9	
SDPT	Sand Point	4.66	230		IAML		02 43 22.1		
	comp=N,46nm,1.2s								
SDPT					IAML		02 43 24.2		
	comp=E,43nm,1.0s								
SDPT	Sand Point	4.66	230	P		Pn	02 42 19.2	-0.9	
K17K	Iditarod	4.69	336			Pn	02 42 20.8	+0.3	
K17K	Iditarod	4.69	336		IAML		02 43 45.9		
	comp=E,82nm,1.1s								
K17K					IAML		02 43 50.8		
	comp=N,62nm,1.1s								
EYAK	Cordova Ski Ar	4.78	61			Pn	02 42 21.3	-0.3	
EYAK	Cordova Ski Ar	4.78	61		IAML		02 43 14.5		
	comp=E,70nm,0.5s								
EYAK					IAML		02 43 19.2		
	comp=N,71nm,1.2s								
EYAK	Cordova Ski Ar	4.78	61	P		Pn	02 42 21.7	0.0	
SCM	Sheep Creek Mo	4.80	43			Pn	02 42 21.7	-0.4	
SCM	Sheep Creek Mo	4.80	43		IAML		02 43 19.3		
	comp=N,84nm,0.6s								
L15K	Ungalak Mounta	4.84	314			Pn	02 42 22.8	+0.3	
K20K	Telida	4.88	1			Pn	02 42 23.7	+0.6	
K20K	Telida	4.88	1		IAML		02 43 58.4		
	comp=E,31nm,1.0s								
DIV	Divide	5.01	55			Pn	02 42 25.0	0.0	
DIV	Divide	5.01	55		IAML		02 43 22.5		
	comp=E,71nm,0.4s								
DIV					IAML		02 43 24.0		
	comp=N,78nm,0.4s								
M13K	Dall Lake	5.04	296			Pn	02 42 25.8	+0.6	
WAT7	Susitna Watana	5.09	29			Pn	02 42 25.9	-0.1	
S12K	Black Hills	5.11	240			Pn	02 42 26.5	+0.2	
S12K	Black Hills	5.11	240		IAML		02 43 25.0		
	comp=E,66nm,0.8s								
L14K	Kuka Creek	5.13	307			Pn	02 42 26.8	+0.4	
L14K	Kuka Creek	5.13	307		IAML		02 44 10.8		
	comp=E,32nm,1.1s								
L14K					IAML		02 44 20.0		
	comp=N,35nm,1.1s								
J18K	Innoko River	5.13	347			Pn	02 42 26.9	+0.4	
J18K	Innoko River	5.13	347		IAML		02 43 54.2		
	comp=E,36nm,0.8s								
J18K					IAML		02 43 54.8		
	comp=N,31nm,0.8s								
KLU	Klutina	5.13	51			Pn	02 42 26.3	-0.3	
PS1A	Pavlof South-1	5.14	236			Pn	02 42 26.5	-0.2	
WAT1	Susitna Watana	5.16	30			Pn	02 42 26.8	-0.1	
WAT6	Susitna Watana	5.20	35			Pn	02 42 27.2	-0.3	
RAGM	Ragged Mountai	5.22	65			Pn	02 42 28.0	+0.2	
KAIM	Kayak Island	5.23	70			Pn	02 42 28.5	+0.6	
K15K	Wolf Creek Mou	5.26	320			Pn	02 42 29.3	+1.1	
GOAT	Goat Mountain	5.26	63			Pn	02 42 28.3	-0.1	
TRF	Thorofare Moun	5.33	19			Pn	02 42 28.9	-0.4	
TRF	Thorofare Moun	5.33	19		IAML		02 43 32.2		
	comp=E,41nm,0.9s								
TRF					IAML		02 43 33.2		
	comp=N,39nm,0.6s								
M24K	Tolsona, Glenn	5.39	44			Pn	02 42 30.1	0.0	
HMT	Hamilton	5.41	66			Pn	02 42 30.4	+0.1	
BMRM	Bremner River	5.46	59			Pn	02 42 30.6	-0.3	
CHUM	Lake Minchumin	5.48	9			Pn	02 42 31.9	+0.6	
NICHA	Nichawak Mount	5.52	67			Pn	02 42 32.1	+0.2	
J19K	Poorman	5.56	354			Pn	02 42 32.8	+0.5	
RND	Reindeer	5.58	26			Pn	02 42 32.4	-0.2	
SUCK	Suckling Hills	5.58	69			Pn	02 42 32.5	-0.1	
DHY	Denali Highway	5.68	33			Pn	02 42 33.8	-0.3	
BERG	Berg Lake	5.69	66			Pn	02 42 33.9	-0.2	
J20K	Nowinta River	5.70	0			Pn	02 42 34.6	+0.4	
J16K	Anvik River	5.72	330			Pn	02 42 34.8	+0.3	
N25K	Chitina, Valde	5.74	53			Pn	02 42 34.7	-0.2	
BPAW	Bear Paw Mtn.	5.83	14			Pn	02 42 35.9	-0.2	
MCK	McKinley	5.84	24			Pn	02 42 36.4	+0.2	
GRIN	Grindle Hills	5.85	68			Pn	02 42 36.3	0.0	
KHIT	Khitrov Hills	5.92	66			Pn	02 42 37.3	-0.1	
HARP	HAARP	5.95	45			Pn	02 42 37.8	+0.2	
GLB	Gilahina Butte	6.00	56			Pn	02 42 38.2	-0.2	
WACK	Wrangell Chich	6.04	50			Pn	02 42 39.0	-0.1	
CRQM	Cirque	6.06	63			Pn	02 42 39.3	0.0	
SNH	Sunshine Point	6.06	69			Pn	02 42 39.5	+0.3	
WASW	Wrangell South	6.07	51			Pn	02 42 39.6	+0.1	
VRDI	Verde Repeater	6.07	59			Pn	02 42 39.2	-0.3	
WAX	Waxell Ridge	6.11	66			Pn	02 42 39.8	-0.1	
TGL	Tana Glacier	6.20	64			Pn	02 42 41.2	+0.1	
PAX	Paxson	6.21	40			Pn	02 42 41.2	+0.1	
K13K	Kusilvak Mount	6.24	308			Pn	02 42 42.0	+0.5	
I17K	Unalakleet	6.25	333			Pn	02 42 43.0	+1.4	
J14K	Nanvaranak Lak	6.27	317			Pn	02 42 43.2	+1.3	
BARK	Barkley Ridge	6.28	67			Pn	02 42 42.6	+0.4	
MCARA	McCarthy VSAT	6.32	58			Pn	02 42 42.8	+0.1	
KIAG	Kiagna River	6.47	63			Pn	02 42 44.8	-0.1	
BAGL	Bagley Icefiel	6.49	67			Pn	02 42 45.5	+0.6	
MESA	MESA	6.50	70			Pn	02 42 45.7	+0.4	
PTPK	Patty Peak	6.51	61			Pn	02 42 45.5	+0.1	
BALM	Baldy	6.51	62			Pn	02 42 44.8	-0.6	
NEA2	Nenana	6.59	20			Pn	02 42 45.1	-1.3	
YAH	Yahtse	6.63	68			Pn	02 42 47.4	+0.2	
WRH	Wood River Hil	6.67	23			Pn	02 42 46.3	-1.1	
K24K	Donnelly Dome	6.71	34			Pn	02 42 49.0	+1.0	
GRNC	Granite Creek	6.71	65			Pn	02 42 48.6	+0.5	
I21K	Tanana	6.79	8			Pn	02 42 49.2	+0.2	
RKAV	Rock Avalanche	6.82	69			Pn	02 42 50.3	+0.7	
BARN	Barnard Glacie	6.84	63			Pn	02 42 50.1	+0.2	
CCB	Clear Creek Bu	6.88	24			Pn	02 42 49.0	-1.3	
CHX	Chaix Hills	6.89	71			Pn	02 42 51.3	+0.8	
TABL	Table Mountain	6.94	68			Pn	02 42 52.1	+0.7	
RIDG	Independent Ri	6.94	37			Pn	02 42 51.5	+0.3	
H18K	Honhosa River	6.96	345			Pn	02 42 52.4	+1.0	
CTGM	Chitina Glacie	6.97	64			Pn	02 42 52.0	+0.4	
L26K	Log Cabin Wild	6.99	45			Pn	02 42 52.3	+0.5	
H20K	Anotleneega Mo	7.03	358			Pn	02 42 53.0	+0.7	
I23K	Minto, Yukon-K	7.06	17			Pn	02 42 51.9	-0.7	
SAMH	Samovar Hills	7.07	71			Pn	02 42 54.1	+1.1	
COLA	College	7.08	23			Pn	02 42 52.0	-0.9	
COLA	College	7.08	23	P		Pn	02 42 52.3	-0.6	
LOGN	Logan Glacier	7.09	65			Pn	02 42 53.5	+0.2	
IL31		7.20	26			Pn	02 42 53.4	-1.1	
ILAR	Eielson Array	7.20	26	P		Pn	02 42 52.9	-1.7	
	comp=N,2.4nm,0.3s,baz=214,slow=14,SNR=72								
ILAR				S		Sn	02 44 10.3	-4.3	
	comp=N,2.7nm,0.3s,baz=244,slow=17,SNR=6.7								
	comp=N,3.5nm,0.3s								
M27K	Edge Creek, AK	7.23	52			Pn	02 42 55.7	+0.6	
PCA	Pinnacle	7.33	71			Pn	02 42 56.7	+0.3	
SCRK	Sand Creek	7.38	38			Pn	02 42 56.0	-1.2	
YUK2	White River	7.44	58			Pn	02 42 58.5	+0.4	
J25K	Salcha River,	7.44	31			Pn	02 42 57.5	-0.5	
O28M	Mount Upton	7.46	66			Pn	02 42 59.2	+0.7	
IMAR	Indian Mountai	7.52	1			Pn	02 42 59.5	+0.6	
L27K	Beaver Creek,	7.59	48			Pn	02 43 00.5	+0.5	
BCAR	Beaver Creek A	7.61	48			Pn	02 43 01.1	+0.9	
YUK3	Moose Creek	7.61	59			Pn	02 43 01.3	+0.9	
G17K	Kiwalik Mounta	7.65	339			Pn	02 43 02.6	+1.9	
H23K	Yukon River	7.67	15			Pn	02 43 00.3	-0.7	
G18K	Tagagawik	7.71	346			Pn	02 43 02.2	+0.6	
PNL	Peninsula	7.72	75			Pn	02 43 02.1	+0.3	
PNL	Peninsula	7.72	75	P		Pn	02 43 02.1	+0.3	
J26L	Joseph Creek	7.88	36			Pn	02 43 03.3	-0.7	
K27K	Chicken	8.05	41			Pn	02 43 05.9	-0.3	
G21K	Allakaket	8.06	2			Pn	02 43 06.7	+0.5	
ANM	Nome	8.08	324			Pn	02 43 08.1	+1.5	
PRP	Porcupine Dome	8.14	26			Pn	02 43 06.7	-0.8	
O29M	Mount Kennedy	8.18	71			Pn	02 43 08.4	+0.2	
UNV	Unalaska Valle	8.29	241			Pn	02 43 07.9	-1.5	
MNAT	Makushin Natee	8.34	242			Pn	02 43 09.2	-1.1	
YUK6	Outpost Mounta	8.38	66			Pn	02 43 11.9	+1.1	
G23K	Bananza Creek	8.47	11			Pn	02 43 11.0	-0.9	
P29M	Windy Craggy	8.57	75			Pn	02 43 13.6	+0.3	
M29M	Somme Creek	8.72	56			Pn	02 43 15.9	+0.4	
G24K	Hadweenzic Riv	8.79	18			Pn	02 43 14.8	-1.5	
P30M	Million Dollar	8.97	72			Pn	02 43 19.5	+0.6	
N30M	Aishikik Lake	9.08	64			Pn	02 43 20.0	-0.3	
G25K	Tanaran Lake	9.09	21			Pn	02 43 19.1	-1.2	
L29M	L29M	9.11	53			Pn	02 43 20.7	+0.1	
I27K	Kandik River	9.25	34			Pn	02 43 21.7	-0.8	
O30N	Mendenhall	9.45	68			Pn	02 43 25.2	-0.1	
F24K	Squaw Lake	9.49	15			Pn	02 43 24.3	-1.6	
M30M	Minto, Yukon	9.50	57			Pn	02 43 26.2	+0.3	
I28M	Miner Creek	9.66	38			Pn	02 43 28.1	-0.2	
K29M	Barlow Dome	9.66	49			Pn	02 43 29.0	+0.7	
G26K	Porcupine Rive	9.72	25			Pn	02 43 27.4	-1.6	
SKAG	Skagway	9.80	76	P		Pn	02 43 32.4	+2.5	
F25K	Christian River	9.91	19			Pn	02 43 29.7	-1.9	
BM03	Burnt Mountain	9.95	22			Pn	02 43 30.1	-2.0	
JIS	Juneau Island	10.41	83	P		Pn	02 43 39.5	+1.2	
J30M	Hart River	10.46	47			Pn	02 43 40.5	+1.4	
G31M	Satah River	12.39	39			Pn	02 44 04.3	-0.6	
DLBC	Dease Lake	12.64	80	P		Pn	02 44 09.8	+1.3	
	comp=N,2.1nm,0.3s,baz=262,slow=15,SNR=38								
DLBC				S		Sn	02 46 25.0	-2.3	
	comp=N,2.9nm,0.5s,baz=60,slow=24,SNR=5.9								
	comp=N,4.8nm,0.3s								
INK	Inuvik	13.43	34	P		Pn	02 44 18.1	-0.6	
	comp=N,0.3nm,0.3s,baz=256,slow=14,SNR=14								
	comp=N,1.0nm,0.4s								
YKA	Yellowknife Ar	19.68	62	P		P	02 45 35.0	+1.2	
	comp=N,0.2nm,0.3s,baz=276,slow=12,SNR=14								
	comp=N,2.1nm,0.7s								
TXAR	Lajitas Array	45.08	108	P		P	02 49 21.2	+2.1	
	comp=N,0.5nm,0.8s,baz=322,slow=7.4,SNR=3.1								
	comp=N,0.5nm,0.8s								
SONM	Songino Array	55.17	306	P		P	02 50 35.2	0.0	
	comp=N,0.9nm,0.6s,baz=48,slow=5.9,SNR=5.3								
	comp=N,0.9nm,0.6s								
QSPA	South Pole Qui	148.29	180	PKPbc		PKPab	03 00 49.9	+0.2	
	comp=N,0.5nm,0.4s,baz=51,slow=0.2,SNR=1.6								

*IDC **23** 02:40:20.0±1.8, 15°.42S×172°.60W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=54.0km s-min=40.0km az=130.0*

*NEIC **23** 02:41:38.9±2.7, 20°.1S±0°.1×177°.0W±0°.2, h416km±13km, mb4.3/10, Error ellipse: s-maj=24.4km s-min=15.8km az=66.0*

ISC 23 02:41:50.9±1.4, 20°.3S±0°.2×177°.2W±0°.2, h550km, n18, σ1§71/14, mb4.2/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.15	299	P		02 43 17.9	-4.2
RAO	Raoul Island	8.92	184	P	P	02 43 46.6	-11
FUNA	Funafuti	12.22	343	P	P	02 44 17.4	-14
PINNC	Pines Island,	14.45	258	P	P	02 44 49.9	-4.8
BBOO	Buckleboo	43.27	243	P	P	02 49 03.6	-0.8
BBOO				IAmb	IAmb	02 49 31.5	
	comp=Z,30nm,1.5s						
WR8	Warramunga Arr	45.19	262	P	P	02 49 19.2	-0.1
WR8				IAmb	IAmb	02 49 40.6	
	comp=Z,4.3nm,0.7s						
AS31	Alice Springs	45.26	256	P	P	02 49 22.7	+2.8
ASAR	Alice Springs	45.26	256	P	P	02 49 22.9	+2.9
	comp=Z,3.7nm,0.5s,baz=89,slow=7.8,SNR=44						
	comp=Z,3.7nm,0.5s						
ASAR	Alice Springs	45.26	256	P	P	02 49 22.4	+2.4
WB0	Warramunga Arr	45.32	262	P	P	02 49 20.1	-0.2
WB0				IAmb	IAmb	02 49 33.2	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	45.34	262	P	P	02 49 20.7	+0.2
	comp=Z,0.5nm,0.5s,baz=96,slow=7.3,SNR=7.2						
	comp=Z,0.5nm,0.5s						
KNRA	Kununurra	51.39	266	P	P	02 50 04.0	-1.4
KNRA				IAmb	IAmb	02 50 21.3	
	comp=Z,35nm,1.5s						
FITZ	Fitzroy Crossi	53.77	262	P	P	02 50 23.7	+1.3
VNDA	Vanda	58.16	185	P	P	02 50 51.3	-0.5
	comp=Z,5.9nm,1.3s,baz=28,slow=8.3,SNR=2.1						
	comp=Z,5.9nm,1.3s						
VNDA	Vanda	58.16	185	P	P	02 50 51.5	-0.2
VNDA				IAmb	IAmb	02 51 25.8	
	comp=Z,11nm,1.4s						
INU	Inuyama	70.33	322	P	P	02 52 07.5	-2.0
MJB9	Matsu-Tunnel	70.50	323	P	P	02 52 11.0	+0.4
MJB9				IAmb	IAmb	02 52 26.2	
	comp=Z,15nm,1.3s						
SLKM	Skilak Lake	83.46	13	P	P	02 53 21.4	+0.8

*NEIC **23** 02:51:24.0±0.7, 6°.5S±0°.1×155°.13E±0°.08, h49km±11km, mb4.2/7, Error ellipse: s-maj=16.5km s-min=10.9km az=204.0*

*IDC **23** 02:51:26.1±3.2, 6°.68S×155°.09E, h77km±29km, mb3.6/6, mbtmp4.1/8, MS3.6/9, Error ellipse: s-maj=32.1km s-min=20.9km az=153.0*

ISC 23 02:51:23.7±0.7, 6°.54S±0°.09×155°.11E±0°.06, h56km, n30, σ1§70/24, mb3.9/9, MS3.6/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.75	308		Pn	02 52 19.1	+0.1
HNR	Honiara	5.59	121	P	Pn	02 52 45.1	+0.8
	186nm,0.9s,baz=270,slow=7.0,SNR=5.2						
HNR				S	Sn	02 53 43.9	-3.3
	104nm,0.5s,baz=210,slow=11,SNR=1.6						
HNR	Honiara	5.59	121		Pn	02 52 44.1	-0.1
PMG	Port Moresby	8.37	250	P	Pn	02 53 25.1	+2.7
	26nm,0.7s,baz=54,slow=11,SNR=12						
PMG				S	Sn	02 54 51.3	-4.2
	6.6nm,0.3s,baz=223,slow=4.9,SNR=2.8						
PMG				LR	LR	02 56 46.0	
	comp=Z,271nm,18.5s,baz=15,slow=38						
PMG	Port Moresby	8.37	250		Pn	02 53 24.7	+2.3
COEN	Coen	13.86	237		Pn	02 54 37.8	+0.4
JAY	Jayapura	14.90	285	LR	LR	03 01 16.5	
	comp=Z,219nm,18.6s,baz=9.5,slow=40						
CTAO	Charters Tower	15.97	212		P	02 55 07.5	-0.1
CTAO				IAmb	IAmb	02 55 38.4	
	comp=Z,14nm,1.3s						
DZM	Mont Dzumac	18.93	146	LR	LR	03 01 58.4	
	comp=Z,158nm,18.5s,baz=291,slow=34						
DZM	Mont Dzumac	18.93	146	eLR	LR	03 00 30.5	
	comp=Z,320nm,25.6s						
TARA	Tarawa	19.44	67	P	Pn	02 55 46.4	-1.0
TARA				IAmb	IAmb	02 56 27.6	
	comp=Z,11nm,0.8s						
GUMO	Guam	22.43	333	LR	LR	03 05 05.8	
	comp=Z,63nm,18.6s,baz=137,slow=36						
FUNA	Funafuti	23.96	96	P	P	02 56 33.4	+0.3
WB0	Warramunga Arr	24.03	235	P	P	02 56 34.2	+0.5
WB0				IAmb	IAmb	02 56 56.2	
	comp=Z,8.0nm,0.9s						
WR8	Warramunga Arr	24.04	234	P	P	02 56 34.2	+0.4
WR8				IAmb	IAmb	02 56 56.1	
	comp=Z,7.5nm,0.9s						
WRA	Warramunga Arr	24.17	235	P	P	02 56 34.5	-0.4
	comp=Z,3.4nm,0.8s,baz=58,slow=9.6,SNR=22						
	comp=Z,3.4nm,0.8s						
ASAR	Alice Springs	26.56	228	P	P	02 56 55.3	-1.3
	comp=Z,1.2nm,0.7s,baz=60,slow=8.8,SNR=14						
ASAR				LR	LR	03 05 33.2	
	comp=Z,88nm,18.4s,baz=118,slow=32						
	comp=Z,1.2nm,0.7s						
STKA	Stephens Creek	28.19	205	P	P	02 57 10.8	-0.3
	comp=Z,1.4nm,0.8s,baz=2.0,slow=5.0,SNR=2.9						
	comp=Z,1.4nm,0.8s						
FITZ	Fitzroy Crossi	30.94	246	P	P	02 57 35.9	+0.3
	comp=Z,6.2nm,0.7s,baz=85,slow=7.5,SNR=7.1						
FITZ				LR	LR	03 09 23.2	
	comp=Z,153nm,19.4s,baz=50,slow=35						
	comp=Z,6.2nm,0.7s						
FITZ	Fitzroy Crossi	30.94	246	P	P	02 57 35.9	+0.3
DAV	Davao City (W)	32.41	294	LR	LR	03 09 23.0	
	comp=Z,393nm,20.4s,baz=323,slow=33						
PPT	Papeete	55.02	107	LR	LR	03 20 00.0	
	comp=Z,41nm,20.4s,baz=242,slow=31						
PPT2	Papeete2	55.02	107	eLR	LR	03 17 34.3	
	comp=Z,50nm,22.8s						
SONM	Songino Array	69.02	327	P	P	03 02 23.9	+0.3
	comp=Z,0.3nm,0.5s,baz=117,slow=6.5,SNR=1.3						
	comp=Z,0.3nm,0.5s						
ILAR	Eielson Array	82.91	21	P	P	03 03 43.3	+1.2
	comp=Z,0.6nm,0.9s,baz=253,slow=5.8,SNR=5.6						
	comp=Z,0.6nm,0.9s						
QSPA	South Pole Qui	83.43	180	P	P	03 03 47.6	+2.5
	comp=Z,2.0nm,0.7s,baz=286,slow=1.2,SNR=8.0						
QSPA	South Pole Qui	83.43	180	P	P	03 03 47.5	+2.5
QSPA				IAmb	IAmb	03 03 58.5	
	comp=Z,3.7nm,0.8s						
NEW	Newport	93.35	42	LR	LR	03 44 08.2	
	comp=Z,59nm,18.5s,baz=274,slow=34						
BDFB	Brasilia	148.22	134	PKPbc	PKPbc	03 11

EVGI	Lefkada island	0.85	357	P		Pg		02 51 47.8	-1.0
EVGI	Lefkada island	0.85	357	P		Pg		02 51 47.9	-0.9
EVGI				S		Sb		02 52 00.3	+0.3
PATG	Patra B	0.93	60	P		Pg		02 51 50.3	0.0
NYDR	Nydri-Lefkada	0.94	360	P		Pb		02 51 49.4	-0.9
NYDR	Nydri-Lefkada	0.94	360	P		Pb		02 51 49.6	-0.8
PATC	Patra C	0.97	59	P		Pb		02 51 50.7	-0.1
UPR	University Cam	0.99	59	P		Pb		02 51 51.2	0.0
LKD2	Lefkada island	1.02	358	P		Pb		02 51 51.1	-0.6
LKD2	Lefkada island	1.02	358	P		Pb		02 51 50.9	-0.7
TSLK	Tsoukalades, L	1.05	358	P		Pb		02 51 52.0	-0.3
TSLK	Tsoukalades, L	1.05	358	P		Pb		02 51 51.8	-0.5
PVO	Paravola	1.06	37	P		Pb		02 51 52.4	0.0
PVO	Paravola	1.06	37	P		Pb		02 51 52.2	-0.2
ITM	Ithomi	1.14	121	P		Pn		02 51 53.9	+0.2
ITM	Ithomi	1.14	121	P		Pn		02 51 53.8	+0.1
KLV1	Kalavrita	1.14	76	P		Pn		02 51 53.8	0.0
EFP	Efpalio	1.15	55	P		Pn		02 51 53.4	-0.5
EFP	Efpalio	1.15	55	P		Pn		02 51 53.4	-0.5
KLV	Kalavryta, Ach	1.17	76	P		Pn		02 51 54.0	-0.3
KLV	Kalavryta, Ach	1.17	76	P		Pn		02 51 53.7	-0.6
PYL	PYLOS	1.20	136	P		Pn		02 51 54.4	-0.2
PYL	PYLOS	1.20	136	P		Pn		02 51 54.2	-0.4
AMPL	Ampelaki	1.22	19	P		Pn		02 51 54.5	-0.4
TRIZ	Trizonia	1.23	61	P		Pn		02 51 54.5	-0.4
SERG	Sergoula	1.24	59	P		Pn		02 51 54.8	-0.4
SERG	Sergoula	1.24	59	P		Pn		02 51 54.9	-0.3
ANX	Ano Chora	1.26	49	P		Pn		02 51 55.2	-0.3
ANX	Ano Chora	1.26	49	P		Pn		02 51 55.0	-0.5
KALE	Kalithea	1.29	61	P		Pn		02 51 55.0	-0.9
KALE	Kalithea	1.29	61	P		Pn		02 51 55.4	-0.5
GUR	Goura	1.30	82	P		Pn		02 51 56.3	+0.2
VLX	Vlachokerasia	1.39	106	P		Pb		02 51 58.1	+0.1
EVR	Evrytania	1.43	37	P		Pb		02 51 58.6	-0.2
TETR	Tetrakomo, Epi	1.63	16	P		Pn		02 52 01.3	+0.7
MAKR	Makrakomi, Fth	1.67	42	P		Pn		02 52 01.8	+0.7
IGT	Igoumenitsa	1.78	351	P		Pn		02 52 03.6	+1.0
AGG	Agios Georgios	1.78	45	P		Pn		02 52 03.0	+0.4
LTK	Loutraki	1.80	81	P		Pn		02 52 03.1	+0.2
AXAR	Agios Charalam	1.83	56	P		Pn		02 52 03.4	+0.1
ATAL	Atalanti	2.04	62	P		Pn		02 52 06.2	+0.1
THL	Klokotos Trika	2.06	29	P		Pn		02 52 06.5	+0.1
VLI	Veliai	2.07	120	P		Pn		02 52 07.0	+0.6
VIL2	Platees	2.07	77	P		Pn		02 52 06.9	+0.3
MET2	Kameni Chora,	2.08	94	P		Pn		02 52 06.9	+0.1
MET5	Makryloggos,Me	2.11	93	P		Pn		02 52 07.1	0.0
MET4	Agioi Theodoro	2.14	93	P		Pn		02 52 07.2	-0.3
STFN	Stefani	2.28	79	P		Pn		02 52 10.1	+0.7
VLY	Voula,Athens	2.44	87	P		Pn		02 52 11.6	-0.1
NEO	Neokhori	2.50	51	P		Pn		02 52 12.5	0.0
DION	Dionisos Attik	2.57	82	P		Pn		02 52 13.9	+0.5
NEST	Nestorio	2.65	6	P		Pn		02 52 14.9	+0.2
LIT	Litokhoron	2.71	30	P		Pn		02 52 15.3	-0.1
KARY	Karystos	2.96	84	P		Pn		02 52 18.1	-0.7

*IDC **23** 03:04:12.0±0.6, 11°.92N×124°.07E, h0km, mb4.0/18, mbtmp4.1/19, ML4.2/1, MS3.4/8, Error ellipse: s-maj=27.5km s-min=13.2km az=67.0*

*NEIC **23** 03:04:18.8±2.4, 11°.97N±0°.09×124°.0E±0°.1, h35km±2km, mb4.5/15, Error ellipse: s-maj=22.2km s-min=13.2km az=249.0*

ISC 23 03:04:14.3±0.6, 11°.98N±0°.08×124°.2E±0°.1, h13km, n53, σ1§19/45, mb4.3/26, MS3.4/7, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TGY	**Tagaytay City**	**3.77**	**304**	Pn		**Pn**	**03 05 11.6**	**-0.7**
	19nm,0.3s,baz=173,slow=13,SNR=3.9							
TGY				Sn		**Sn**	**03 05 57.6**	**+1.1**
	baz=158,slow=19							
	127nm,0.3s							
MYLDM	**Lahad Datu**	**8.77**	**220**			**Pn**	**03 06 20.7**	**-0.1**
KAPI	**Kappang**	**17.44**	**195**	LR		LR	03 15 17.1	
	comp=Z,127nm,19.8s,baz=10.0,slow=38							
KAPI	**Kappang**	**17.44**	**195**			**P**	**03 08 21.6**	**+2.9**
GUMO	**Guam**	**20.27**	**83**	LR		LR	03 14 55.8	
	comp=Z,47nm,21.5s,baz=134,slow=32							
JAY	**Jayapura**	**21.87**	**130**	LR		LR	03 15 59.6	
	comp=Z,112nm,21.9s,baz=342,slow=32							
BATI	**Baumata**	**22.05**	**181**	LR		LR	03 20 34.2	
	comp=Z,136nm,18.0s,baz=82,slow=45							
CMAR	**Chiang Mai Arr**	**25.14**	**288**	P		**P**	**03 09 38.2**	**-1.2**
	3.1nm,0.3s,baz=100,slow=9.6,SNR=6.0							
	3.1nm,0.3s							
KSRS	**Korea Array**	**25.59**	**7**	P		**P**	**03 09 43.1**	**-0.1**
	1.4nm,0.7s,baz=187,slow=10.0,SNR=4.4							
	1.4nm,0.7s							
USRK	**Ussuriysk Ar.**	**32.81**	**10**	P		**P**	**03 10 47.2**	**-0.2**
	1.3nm,0.6s,baz=186,slow=6.8,SNR=5.0							
	1.3nm,0.6s							
WRA	**Warramunga Arr**	**33.27**	**162**	P		**P**	**03 10 50.4**	**-1.3**
	0.8nm,0.6s,baz=344,slow=8.4,SNR=10							
WRA				PcP		**PcP**	**03 13 32.1**	**-1.9**
	0.4nm,0.7s,baz=346,slow=2.9,SNR=2.3							
	0.8nm,0.6s							
WRA	**Warramunga Arr**	**33.27**	**162**	P		**P**	**03 10 50.1**	**-1.6**
WR8	**Warramunga Arr**	**33.33**	**162**	P		**P**	**03 10 50.4**	**-1.9**
WR8				IAmb		IAmb	03 10 58.9	
	comp=Z,9.3nm,1.4s							
ASAJ	**Asahikawa**	**35.74**	**23**	LR		LR	03 25 43.5	
	comp=Z,48nm,21.4s,baz=204,slow=36							
AS31	**Alice Springs**	**36.69**	**165**	P		**P**	**03 11 21.5**	**+0.3**
ASAR	**Alice Springs**	**36.69**	**165**	P		**P**	**03 11 21.1**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=347,slow=7.2,SNR=23							
ASAR				PcP		**PcP**	**03 13 42.5**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=354,slow=3.1,SNR=1.9							
ASAR				LR		LR	03 27 37.4	
	comp=Z,51nm,18.0s,baz=290,slow=38							
	comp=Z,1.8nm,0.7s							
ASAR	**Alice Springs**	**36.69**	**165**	P		**P**	**03 11 21.3**	**+0.1**
SONM	**Songino Array**	**38.71**	**341**	P		**P**	**03 11 37.2**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=162,slow=6.0,SNR=4.1							
	comp=Z,0.6nm,0.5s							
HNR	**Honiara**	**41.46**	**119**	LR		LR	03 26 05.0	
	comp=Z,77nm,20.3s,baz=318,slow=32							
H11N1	**WAKE ISLAND Hy**	**41.74**	**74**	T		T	03 56 09.6	
	baz=267,slow=74,SNR=6.9							
H11N2	**WAKE ISLAND Hy**	**41.75**	**74**	T		T	03 56 16.1	
	baz=267,slow=74,SNR=7.0							
H11N3	**WAKE ISLAND Hy**	**41.76**	**74**	T		T	03 56 22.8	
	baz=267,slow=74,SNR=8.0							
BBOO	**Buckleboo**	**45.97**	**166**	P		**P**	**03 12 37.7**	**+0.4**
STKA	**Stephens Creek**	**46.70**	**159**	P		**P**	**03 12 43.1**	**0.0**
	comp=Z,4.5nm,0.7s,baz=329,slow=9.4,SNR=10							
	comp=Z,4.5nm,0.7s							
MKAR	**Makanchi Array**	**49.41**	**323**	P		**P**	**03 13 04.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=112,slow=9.1,SNR=5.0							
MKAR				PcP		**PcP**	**03 14 25.3**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=123,slow=4.2,SNR=1.0							
	comp=Z,0.8nm,0.6s							
MKAR	**Makanchi Array**	**49.41**	**323**	P		**P**	**03 13 04.6**	**+0.7**
ZALV	**Zalesovo Beam**	**52.14**	**332**	P		**P**	**03 13 24.1**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=120,slow=8.8,SNR=4.4							
	comp=Z,1.4nm,0.8s							
ZALV	**Zalesovo Beam**	**52.14**	**332**	P		**P**	**03 13 23.1**	**-1.2**
KURK	**Kurchatov**	**53.48**	**326**	P		**P**	**03 13 34.5**	**+0.2**
KURK				IAmb		IAmb	03 13 35.8	
	comp=Z,4.6nm,0.7s							
KURBB	**Kurchatov Arra**	**53.49**	**326**	P		**P**	**03 13 34.4**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=125,slow=7.5,SNR=17							
	comp=Z,3.0nm,0.8s							
GAR	**Garm**	**54.60**	**309**			**P**	**03 13 43.1**	**+0.3**
KK31	**Karatay Array**	**55.57**	**314**	P		**P**	**03 13 50.5**	**+0.8**
KK31				IAmb		IAmb	03 13 56.8	
	comp=Z,2.7nm,0.8s							
KKAR	**Karatay Array**	**55.57**	**314**			**P**	**03 13 50.3**	**+0.6**
BVAR	**Borovoye Array**	**59.08**	**325**	P		**P**	**03 14 14.8**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=123,slow=5.5,SNR=8.0							
	comp=Z,1.1nm,0.6s							
TIXI	**Tiksi**	**59.70**	**2**	P		**P**	**03 14 18.0**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=178,slow=5.9,SNR=4.0							
	comp=Z,1.3nm,0.5s							
AB31	**Akbulak array**	**64.22**	**319**			**P**	**03 14 49.5**	**+0.5**
AB31				IAmb		IAmb	03 14 50.2	
	comp=Z,3.1nm,0.8s							
ABKAR	**Akbulak array**	**64.22**	**319**	P		**P**	**03 14 49.3**	**+0.3**
IMAR	**Indian Mountai**	**75.92**	**25**	P		**P**	**03 16 02.9**	**+2.4**
C23K	**Itkillik River**	**77.19**	**21**	P		**P**	**03 16 09.0**	**+1.4**
C23K				IAmb		IAmb	03 16 32.1	
	comp=Z,7.9nm,1.3s							
D25K	**Kavik River**	**78.70**	**21**	IAmb		IAmb	03 16 55.6	
	comp=Z,6.1nm,1.2s							
ILAR	**Eielson Array**	**78.82**	**26**	P		**P**	**03 16 16.7**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=271,slow=5.4,SNR=4.3							
	comp=Z,0.3nm,0.6s							
BMAR	**Burnt Mountain**	**79.52**	**23**	P		**P**	**03 16 22.7**	**+2.1**
D27M	**Malcolm River**	**80.62**	**21**			**P**	**03 16 28.1**	**+1.6**
D27M				IAmb		IAmb	03 16 34.7	
	comp=Z,2.1nm,0.7s							
F28M	**Old Crow**	**81.29**	**23**	IAmb		IAmb	03 16 37.8	
	comp=Z,2.9nm,0.7s							
ARCES	**ARCESS Array B**	**81.87**	**339**	P		**P**	**03 16 32.6**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=69,slow=6.6,SNR=6.2							
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**81.87**	**339**	P		**P**	**03 16 33.0**	**-0.1**
BRTR	**Keskin Array B**	**82.84**	**309**	P		**P**	**03 16 37.4**	**-1.6**
	comp=Z,1.1nm,1.1s,baz=46,slow=4.2,SNR=1.1							
	comp=Z,1.1nm,1.1s							
FINES	**FINESS Array B**	**83.40**	**331**	P		**P**	**03 16 41.3**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=51,slow=6.5,SNR=11							
	comp=Z,1.8nm,0.6s							
FINES	**FINESS Array B**	**83.40**	**331**	P		**P**	**03 16 39.0**	**-2.2**
INK	**Inuvik**	**83.46**	**21**	P		**P**	**03 16 43.1**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=295,slow=5.7,SNR=4.9							
	comp=Z,1.5nm,0.8s							
INK	**Inuvik**	**83.46**	**21**	P		**P**	**03 16 42.8**	**+1.5**
INK				IAmb		IAmb	03 16 52.2	
	comp=Z,7.4nm,1.4s							
AKASG	**Malin Array Be**	**83.93**	**320**	LR		LR	03 55 02.3	
	comp=Z,39nm,20.8s,baz=52,slow=36							
HFS	**Hagfors**	**89.57**	**332**	P		**P**	**03 17 12.8**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=72,slow=4.7,SNR=4.5							
	comp=Z,1.0nm,0.6s							

*NEIC **23** 03:08:27.6±1.1, 19°.28N±0°.04×67°.25W±0°.05, h10km±2km, ML2.3/12, Md2.9/12(RSPR), Error ellipse: s-maj=7.5km s-min=6.6km az=289.0*

*RSPR **23** 03:08:30.6, 19°.30N×67°.31W, h46km±10km, MD2.9/12*

*SDD **23** 03:08:31.3±1.1, 19°.21N×67°.19W, h31km±41km, MD3.3, ML2.2, MW2.7*

ISC 23 03:08:31.8±2.2, 19°.15N±0°.08×67°.16W±0°.04, h19km±4km, n42, σ0§93/50, 13C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.68**	**176**	Pn		**Pb**	**03 08 44.4**	**-0.6**
AGPR	**Aguadilla, PR**	**0.68**	**176**	*e*Pg		**Pb**	**03 08 44.7**	**-0.2**
AGPR				*e*Sg		**Sb**	**03 08 54.6**	**+0.6**
AGPR				IAML			03 09 04.7	
	comp=N,142nm,1.7s							
AGPR	**Aguadilla, PR**	**0.68**	**176**	⇑*e*P		**Pb**	**03 08 44.8**	**-0.2**
AGPR	**Aguadilla, PR**	**0.68**	**176**	*e*S		**Sg**	**03 08 55.8**	**+1.4**
IDE	**Isla Desecheo**	**0.82**	**202**			**Pb**	**03 08 46.9**	**-0.5**
IDE						**Sb**	**03 08 58.7**	**+0.6**
IDE	**Isla Desecheo**	**0.82**	**202**	⇑*e*P		**Pb**	**03 08 46.9**	**-0.5**
IDE	**Isla Desecheo**	**0.82**	**202**	*e*S		**Sb**	**03 08 58.7**	**+0.6**
AOPR	**Arecibo Observ**	**0.89**	**154**			**Pb**	**03 08 47.7**	**-0.9**
AOPR						**Sn**	**03 09 02.8**	**+1.1**
AOPR	**Arecibo Observ**	**0.89**	**154**	*e*Pg		**Pb**	**03 08 47.5**	**-1.0**
AOPR				⇑*e*Sg		**Sb**	**03 09 00.1**	**+0.1**
AOPR				IAML			03 09 02.9	
	comp=N,122nm,0.2s							
AOPR	**Arecibo Observ**	**0.89**	**154**	⇑*e*P		**Pb**	**03 08 47.7**	**-0.9**
AOPR	**Arecibo Observ**	**0.89**	**154**	*e*S		**Sn**	**03 09 02.8**	**+1.1**
PRSN	**Puerto Rico Se**	**0.93**	**179**			**Pb**	**03 08 48.4**	**-0.9**
PRSN						**Sg**	**03 09 02.6**	**+0.4**
PRSN	**Puerto Rico Se**	**0.93**	**179**	⇑*e*P		**Pb**	**03 08 48.4**	**-0.9**
PRSN	**Puerto Rico Se**	**0.93**	**179**	*e*S		**Sg**	**03 09 02.6**	**+0.4**
LSP	**Las Mesas**	**0.97**	**176**			**Pb**	**03 08 49.1**	**-1.0**
LSP						**Sb**	**03 09 03.6**	**+1.0**
LSP	**Las Mesas**	**0.97**	**176**	⇑*e*P		**Pb**	**03 08 49.1**	**-1.0**
LSP	**Las Mesas**	**0.97**	**176**	*e*S		**Sb**	**03 09 03.6**	**+1.0**
UUPR	**Utuado, UPR, P**	**0.99**	**155**			**Pb**	**03 08 49.9**	**-0.4**
UUPR	**Utuado, UPR, P**	**0.99**	**155**	⇑*e*P		**Pb**	**03 08 49.9**	**-0.4**
ECPR	**Experimental S**	**1.12**	**138**	⇑*e*P		**Pn**	**03 08 51.4**	**-1.0**
ECPR	**Experimental S**	**1.12**	**138**	*e*S		**Sb**	**03 09 08.2**	**+1.4**
CRPR	**Cabo Rojo, PR**	**1.14**	**178**			**Pn**	**03 08 51.4**	**-1.3**
CRPR						**Sb**	**03 09 07.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.14**	**178**	IAML			03 09 10.9	
	comp=E,60nm,2.2s							
CRPR	**Cabo Rojo, PR**	**1.14**	**178**	*e*Pg		**Pn**	**03 08 51.8**	**-0.9**
CRPR				*e*Sg		**Sb**	**03 09 07.6**	**+0.3**
CRPR				IAML			03 09 10.1	
	comp=N,49nm,1.0s							
CRPR	**Cabo Rojo, PR**	**1.14**	**178**	⇑*e*P		**Pn**	**03 08 51.4**	**-1.3**
CRPR	**Cabo Rojo, PR**	**1.14**	**178**	*e*S		**Sb**	**03 09 07.1**	**-0.2**
MLPR	**Magueyes Islan**	**1.18**	**175**	*e*Pg		**Pn**	**03 08 51.8**	**-1.5**
MLPR				*e*Sg		**Sb**	**03 09 07.3**	**-1.2**
MLPR				IAML			03 09 11.4	
	comp=N,12nm,1.1s							
MLPR	**Magueyes Islan**	**1.18**	**175**	⇑*e*P		**Pn**	**03 08 52.1**	**-1.2**
MLPR	**Magueyes Islan**	**1.18**	**175**	*e*S		**Sb**	**03 09 08.8**	**+0.3**
OBIP	**Obispado Ponce**	**1.22**	**155**			**Pn**	**03 08 52.7**	**-1.2**
OBIP						**Sb**	**03 09 09.6**	**0.0**
OBIP	**Obispado Ponce**	**1.22**	**155**	IAML			03 09 10.8	
	comp=N,58nm,1.4s							
OBIP				IAML			03 09 14.1	
	comp=E,53nm,0.3s							
OBIP	**Obispado Ponce**	**1.22**	**155**	⇑*e*P		**Pn**	**03 08 52.7**	**-1.2**
OBIP	**Obispado Ponce**	**1.22**	**155**	*e*S		**Sb**	**03 09 09.6**	**0.0**
GCPR	**Guaynabo City**	**1.32**	**129**			**Pn**	**03 08 54.4**	**-0.7**
GCPR						**Sn**	**03 09 13.7**	**+1.5**
GCPR	**Guaynabo City**	**1.32**	**129**	⇑*e*P		**Pn**	**03 08 54.4**	**-0.7**
GCPR	**Guaynabo City**	**1.32**	**129**	*e*S		**Sn**	**03 09 13.7**	**+1.5**
SJG	**San Juan**	**1.41**	**137**	Pn		**Pn**	**03 08 56.1**	**-0.3**
SJG				IAML			03 09 26.1	
	comp=E,39nm,0.3s							
SJG				IAML			03 09 28.7	
	comp=E,40nm,0.3s							
HUMP	**Col San Antoni**	**1.59**	**129**			**Pn**	**03 08 58.0**	**-1.0**
HUMP	**Col San Antoni**	**1.59**	**129**	IAML			03 09 26.8	
	comp=N,29nm,0.2s							
HUMP	**Col San Antoni**	**1.59**	**129**	⇑*e*P		**Pn**	**03 08 58.0**	**-1.0**
MIDR	**Miches**	**1.80**	**265**	*e*Pg		**Pn**	**03 09 00.9**	**-0.8**
MIDR				IAML			03 09 35.6	
	comp=N,26nm,3.3s							
HATOM	**Hato Mayor del**	**2.14**	**261**	*e*Pg		**Pn**	**03 09 06.6**	**+0.1**
HATOM				IAML			03 09 40.7	
	comp=N,22nm,2.4s							

CATAC 23 03:23:23.2±0.7, 11°.N±6°×8°.6W±°, h66km±6km, M2.6/12, MLv2.6/12, Error ellipse: s-maj=15.6km s-min=5.0km az=40.6, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAPN	**Al SSO del Vol**	**0.56**	**58**	P		Pn	03 23 37.8	+1.5
CONN	**Concepcion**	**0.63**	**58**	P		Pn	03 23 37.7	+0.7
CONN				S		Sn	03 23 49.4	+2.2
CARN	**Rivas**	**0.64**	**93**	P		Pn	03 23 38.3	+1.3
CARN				S		Sn	03 23 49.9	+2.7
MASN	**Masaya**	**0.76**	**1**	S		Sn	03 23 52.0	+2.2
UNAN	**Cigeo UNAN**	**0.89**	**353**	P		Pn	03 23 40.6	+0.6
UNAN				S		Sn	03 23 53.7	+1.3
TISN	**Laguna Tiscapa**	**0.92**	**354**	P		Pn	03 23 40.9	+0.4
COPN	**Copaltepe**	**1.03**	**336**	P		Pn	03 23 41.7	-0.2
MOMN	**Momotombo**	**1.23**	**343**	P		Pn	03 23 44.5	0.0
MOM3	**MOM3**	**1.32**	**345**	P		Pn	03 23 45.4	-0.2
MOM3				S		Sn	03 24 03.5	+1.0
CNGA	**Al SSO del Vol**	**1.36**	**338**	P		Pn	03 23 46.3	0.0
CNGA				S		Sn	03 24 03.7	+0.1
CNGN	**Cerro Negro**	**1.37**	**338**	S		Sn	03 24 04.3	+0.6
CNGN	**Cerro Negro**	**1.37**	**338**	P		Pn	03 23 46.4	0.0
POLN	**Al Sur del Vol**	**1.55**	**336**	P		Pn	03 23 48.6	-0.1
POLN				S		Sn	03 24 08.4	+0.5
PKGN	**Cerro Pekin**	**1.64**	**331**	P		Pn	03 23 50.2	+0.3
MATN	**Matagalpa**	**1.71**	**8**	P		Pn	03 23 50.3	-0.6
LIMN	**Finca el Limon**	**1.83**	**354**	P		Pn	03 23 52.6	0.0

*ROM **23** 03:33:22.0±0.2, 45°.286N±0°.007×7°.19E±0°.01, h9km±1km, ML1.9/16, Error ellipse: s-maj=1.2km s-min=0.1km az=115.0*

*LDG **23** 03:33:22.6±0.1, 45°.29N×7°.22E, h5km, Md2.1/2, Ml2.2/9, Error ellipse: s-maj=1.5km s-min=1.0km az=115.0*

*GEN **23** 03:33:22.1, 45°.30N×7°.18E, h5km±1km, Ml1.8*

STR 23 03:33:22.8±0.0, 45°.28N±0°.04×7°.23E±0°.05, h5km, MLv2.0/25, 2D, LOCSAT earthModelID alpes_taup-2.11 preliminary, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RSP	**Reno Superiore**	**0.13**	**168**	P		Pg	03 33 26.0	+0.5
RSP						S		Sg	03 33 28.1	+0.7
RSP	**Reno Superiore**	**0.13**	**168**	P		Pg	03 33 26.1	+0.5
RSP						S		Sg	03 33 28.2	+0.8
RSP					AML	AML		
	comp=E,516μm,0.7s							
RSP					AML	AML		
	comp=N,392μm,0.2s							
RSP					AML	AML		
	comp=N,439μm,0.1s							
RSP					AML	AML		
	comp=E,515μm,0.7s							
RSP					AML	AML		
	comp=E,588μm,0.7s							
RSP					AML	AML		
	comp=E,545μm,0.1s							
RSP					AML	AML		
	comp=N,439μm,0.1s							
RSP					AML	AML		
	comp=E,497μm,0.1s							
RSP					AML	AML		
	comp=N,368μm,0.1s							
RSP	**Reno Superiore**	**0.13**	**168**	Pg		Pg	03 33 26.0	+0.4
RSP						Sg	03 33 28.2	+0.8
LSD	**Lago del Serru**	**0.19**	**341**	P		Pg	03 33 26.5	-0.2
LSD				S		Sg	03 33 28.7	-0.6
LSD	**Lago del Serru**	**0.19**	**341**	⇓*i*P		Pg	03 33 26.5	-0.2
LSD				S		Sg	03 33 28.7	-0.6
LSD					AML	AML		
	comp=E,1028μm,0.2s							
LSD					AML	AML		
	comp=N,906μm,0.1s							
LSD					AML	AML		
	comp=E,1027μm,0.2s							
LSD					AML	AML		
	comp=N,907μm,0.1s							
LSD	**Lago del Serru**	**0.19**	**341**	Pg		Pg	03 33 26.5	-0.2
LSD						Sg	03 33 28.8	-0.6
OGMO	**Fort Saint-Gob**	**0.39**	**260**	P		Pg	03 33 29.8	-0.5
OGMO				S		Sg	03 33 34.9	-0.6
OGMO	**Fort Saint-Gob**	**0.39**	**260**	Pg		Pg	03 33 29.7	-0.6
OGMO						Sg	03 33 35.2	-0.3
LPG	**La Plagne**	**0.40**	**304**	*e*Pg		Pg	03 33 30.0	-0.7
LPG				*e*Sg		Sg	03 33 34.7	-1.3
	comp=N,91nm,0.2s							
CIRO	**Champorcher**	**0.40**	**36**	P		Pg	03 33 30.8	0.0
CIRO				S		Sg	03 33 35.8	-0.3
CIRO	**Champorcher**	**0.40**	**36**	⇓*i*P		Pg	03 33 30.8	0.0
CIRO				S		Sg	03 33 36.2	+0.1
CIRO					AML	AML		
	comp=E,246μm,0.1s							
CIRO					AML	AML		
	comp=N,186μm,0.1s							
CIRO					AML	AML		
	comp=N,186μm,0.1s							
CIRO					AML	AML		
	comp=E,246μm,0.1s							
CIRO	**Champorcher**	**0.40**	**36**	Pg		Pg	03 33 30.7	0.0
CIRO						Sg	03 33 36.2	+0.1
LPL	**La Plagne**	**0.42**	**305**	*e*Pg		Pg	03 33 30.2	-0.8
LPL				*e*Sg		Sg	03 33 35.1	-1.5
	comp=E,58nm,0.3s							
TRAV	**Traversella**	**0.44**	**57**	P		Pg	03 33 31.6	+0.3
TRAV				S		Sg	03 33 37.6	+0.6
TRAV	**Traversella**	**0.44**	**57**	P		Pg	03 33 31.7	+0.5
TRAV				S		Sg	03 33 37.6	+0.6
TRAV					AML	AML		
	comp=E,440μm,0.3s							
TRAV					AML	AML		
	comp=N,474μm,0.7s							
TRAV					AML	AML		
	comp=E,429μm,0.3s							
TRAV					AML	AML		
	comp=N,394μm,0.1s							
TRAV	**Traversella**	**0.44**	**57**	Pg		Pg	03 33 31.6	+0.4
BNI	**Bardonecchia**	**0.45**	**240**	P		Pg	03 33 31.2	-0.3
BNI				S		Sg	03 33 37.1	-0.2
BNI	**Bardonecchia**	**0.45**	**240**	P		Pg	03 33 31.2	-0.3
BNI				S		Sg	03 33 36.9	-0.

AIGLE	**Aigle**	**1.08**	**350**		Pg	Pg	03 33 43.6	0.0
AIGLE					Sg	Sg	03 33 58.0	+0.4
SIMPL	**Simplonpass**	**1.11**	**30**		P	Pg	03 33 43.1	-1.0
SIMPL					S	Sg	03 33 58.0	-0.5
OGMY	**Moye**	**1.12**	**303**		Pg	Pn	03 33 46.5	+1.4
OGMY					Sg	Sg	03 33 58.7	0.0
OGSM	**Saint Maurice**	**1.13**	**288**		Pg	Pg	03 33 44.1	-0.3
OGSM					Sg	Sg	03 33 59.3	+0.3
PCP	**Piancastagn**	**1.19**	**128**		Pg	Pg	03 33 45.3	-0.4
ENAUX	**Enaux**	**1.21**	**196**		Pg	Pg	03 33 46.2	+0.1
ENAUX					Sg	Sb	03 34 02.7	+0.4
CANO	**Canova, Maglio**	**1.29**	**146**		Pg	Pn	03 33 47.1	-0.5
FIESA	**Fiescheralp**	**1.31**	**28**		P	Pg	03 33 47.1	-0.9
FIESA					S	Sg	03 34 04.5	-0.6
OGDI	**Digne**	**1.34**	**210**		Pg	Pg	03 33 49.6	+1.1
OG35	**Corcelles**	**1.39**	**304**		Pn	Pb	03 33 49.2	-0.2
OG35					Pg	Pg	03 33 50.7	+1.2
SBF	**Sospel**	**1.42**	**174**	*e*Pn	Pn	Pn	03 33 48.2	-1.2
SBF				*e*Sg	Sg	Sg	03 34 08.4	-0.1
	comp=E,14nm,0.2s							
GIMEL	**St. Georges /**	**1.43**	**332**		Pn	Pg	03 33 50.4	+0.3
TORNY	**Torny/Romont**	**1.51**	**353**		Pg	Pg	03 33 53.4	+1.6
TORNY					Sg	Sg	03 34 14.7	+3.4
FUSIO	**Fusio**	**1.55**	**40**		P	Pn	03 33 51.1	-0.1
FUSIO					S	Sn	03 34 11.8	0.0
CABF	**La Chapelle**	**1.55**	**330**	*e*Pg	Pb	Pb	03 33 51.8	-0.3
CABF				*e*Sg	Sg	Sg	03 34 12.6	-0.1
	comp=E,2.6nm,0.2s							
TRIGF	**Trigance**	**1.64**	**201**		Pg	Pg	03 33 55.1	+0.9
MLYF	**Mely**	**1.66**	**219**		Pg	Pg	03 33 55.7	+1.1
SSB	**Saint Sauveur**	**1.90**	**271**		Pg	Pg	03 33 58.7	-0.4
SSB					Sn	Sg	03 34 23.1	-0.6
ARTF	**Artigues**	**1.97**	**212**		Pg	Pb	03 33 59.4	+0.2
LMR	**La Mourre**	**2.01**	**195**	*e*Pg	Pb	Pb	03 34 00.0	+0.2
LMR				*e*Sg	Sb	Sb	03 34 26.2	+1.1
	comp=E,1.9nm,0.2s							
CHMF	**Charmoille**	**2.01**	**349**		Pn	Pn	03 33 58.2	+0.7
CHMF					Sg	Sg	03 34 27.7	+0.2
SMF	**Signal de Mont**	**2.73**	**301**	*e*Pn	Pn	Pn	03 34 05.5	-1.8
SMF				*e*Sg	Sb	Sb	03 34 48.0	+2.1
	comp=E,1.4nm,0.2s							
LOR	**Lormes**	**3.07**	**312**	*e*P	Pn	Pn	03 34 13.2	+1.2
LOR				*e*Sg	Sb	Sb	03 34 58.5	+2.9
	comp=E,1.9nm,0.5s							
AVF	**Avril sur Loir**	**3.09**	**301**	*e*P	Pn	Pn	03 34 13.0	+0.7
AVF				*e*Sg	Sg	Sg	03 34 59.4	-2.7
	comp=E,0.4nm,0.2s							
SSF	**Saint Saulge**	**3.14**	**306**	*e*P	Pn	Pn	03 34 13.7	+0.7
SSF	**Saint Saulge**	**3.14**	**306**	*e*Pg	Pb	Pb	03 34 20.7	+1.6
BGF	**Bois d'Agland**	**3.31**	**294**	*e*P	Pn	Pn	03 34 16.5	+1.2
TCF	**Toulx Ste Croi**	**3.65**	**288**	*e*P	Pn	Pn	03 34 21.2	+1.2

IDC 23 03:37:00.8±35.0, 10°.94N×124°.43E, h0km, mb3.8/3, mbtmp3.8/3, MS3.0/4, Error ellipse: s-maj=628.0km s-min=319.0km az=146.0, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**16.52**	**197**	LR	LR	03 47 57.5	
	comp=Z,49nm,21.1s,baz=40,slow=40						
GUMO	**Guam**	**20.14**	**80**	LR	LR	03 51 40.0	
	comp=Z,18nm,18.1s,baz=94,slow=44						
CMAR	**Chiang Mai Arr**	**25.74**	**290**	LR	LR	03 53 26.2	
	comp=Z,24nm,18.0s,baz=120,slow=38						
HHC	**Hu-ho-hao-te**	**31.88**	**341**	*e*P	P	03 43 27.9	-0.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,47nm,4.2s						
HHC				LR	LR		
	comp=N,160nm,11.5s						
HHC				LR	LR		
	comp=E,61nm,11.9s						
HHC				LR	LR		
	comp=Z,150nm,10.6s						
WRA	**Warramunga Arr**	**32.20**	**162**	P	P	03 43 30.6	-0.3
	comp=Z,0.4nm,0.6s,baz=340,slow=9.7,SNR=4.5						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**35.62**	**165**	P	P	03 44 00.8	+0.2
	comp=Z,0.9nm,0.6s,baz=351,slow=7.2,SNR=18						
	comp=Z,0.9nm,0.6s						
STKA	**Stephens Creek**	**45.64**	**159**	P	P	03 45 22.9	-0.3
	comp=Z,2.3nm,0.8s,baz=349,slow=8.8,SNR=4.3						
	comp=Z,2.3nm,0.8s						
TIXI	**Tiksi**	**60.72**	**2**	LR	LR	04 15 13.8	
	comp=Z,24nm,18.5s,baz=204,slow=38						

*KRSC **23** 03:37:00.2±1.9, 49°.67N×157°.07E, h7km±34km, Ml4.9, Felt [II-III] at Severo-Kurilsk.*
*MOS **23** 03:37:02.7±0.9, 49°.70N×156°.16E, h63km, mb4.7/11, Error ellipse: s-maj=11.4km s-min=3.7km az=76.6*
MOS Felt (II-III) at Severo-Kuril'sk.
*NEIC **23** 03:37:05.0±1.4, 49°.77N±0°.08×156°.09E±0°.08, h63km±6km, mb4.6/36, Error ellipse: s-maj=12.7km s-min=6.8km az=160.0*
*IDC **23** 03:37:05.3±2.0, 49°.77N×156°.14E, h70km±16km, mb3.7/24, mbtmp4.1/31, MS3.4/17, Error ellipse: s-maj=15.8km s-min=10.5km az=137.0*

ISC 23 03:37:03.4±0.5, 49°.63N±0°.07×156°.47E±0°.06, h57km, n176, σ1s56/181, mb4.5/48, MS3.5/11, 5C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.08**	**348**	*e*P	**Pn**	**03 37 21.6**	**-0.8**
SKR				*e*S	**Sn**	**03 37 35.8**	**-0.7**
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				smax	smax		
	comp=N,11μm,0.4s						
SKR				smax	smax		
	comp=E,8μm,0.4s						
SKR	**Severo-Kuril's**	**1.08**	**348**	*e*P	**Pn**	**03 37 21.6**	**-0.8**
SKR				*e*S	**Sn**	**03 37 36.1**	**-0.4**
PAU	**Pauzhetka**	**1.86**	**7**	PN	**Pn**	**03 37 32.8**	**0.0**
PAU				S	**Sn**	**03 37 55.9**	**+0.8**
PAU	**Pauzhetka**	**1.86**	**7**	*e*P	**Pn**	**03 37 32.8**	**0.0**
PAU				*e*S	**Sn**	**03 37 56.0**	**+0.8**
KDTR	**Khodutka, Kamc**	**2.41**	**24**	PN	**Pn**	**03 37 40.0**	**-0.4**
KDTR				S	**Sn**	**03 38 08.3**	**-0.4**
KDTR	**Khodutka, Kamc**	**2.41**	**24**	*e*P	**Pn**	**03 37 40.0**	**-0.4**
KDTR				*e*S	**Sn**	**03 38 08.3**	**-0.4**
MIPR	**Malaya Ipel'ka**	**2.66**	**4**	PN	**Pn**	**03 37 44.6**	**+0.8**
MIPR	**Malaya Ipel'ka**	**2.66**	**4**	*e*P	**Pn**	**03 37 44.6**	**+0.8**
ASAK	**Asacha**	**2.91**	**18**	PN	**Pn**	**03 37 47.6**	**+0.4**
ASAK	**Asacha**	**2.91**	**18**	*e*P	**Pn**	**03 37 47.7**	**+0.4**
MTVR	**Mutnovka**	**3.06**	**20**	PN	**Pn**	**03 37 49.7**	**+0.4**
MTVR				S	**Sn**	**03 38 25.8**	**+1.1**
MTVR	**Mutnovka**	**3.06**	**20**	*e*P	**Pn**	**03 37 49.8**	**+0.4**
MTVR				*e*S	**Sn**	**03 38 25.9**	**+1.1**
RUS	**Russkaya**	**3.09**	**24**	PN	**Pn**	**03 37 49.2**	**-0.4**
RUS				S	**Sn**	**03 38 24.9**	**-0.5**
RUS	**Russkaya**	**3.09**	**24**	*e*P	**Pn**	**03 37 49.3**	**-0.4**
RUS				*e*S	**Sn**	**03 38 24.9**	**-0.5**
GRL	**Gorelyy**	**3.10**	**18**	PN	**Pn**	**03 37 50.7**	**+0.8**
GRL				S	**Sn**	**03 38 27.0**	**+1.3**
GRL	**Gorelyy**	**3.10**	**18**	*e*P	**Pn**	**03 37 50.7**	**+0.8**
GRL				*e*S	**Sn**	**03 38 27.1**	**+1.3**
APC	**Apacha**	**3.33**	**7**	PN	**Pn**	**03 37 53.7**	**+0.8**
APC	**Apacha**	**3.33**	**7**	*e*P	**Pn**	**03 37 53.8**	**+0.8**
KRMR	**Karymshinskiy**	**3.37**	**17**	PN	**Pn**	**03 37 54.8**	**+1.3**
KRMR				S	**Sn**	**03 38 36.4**	**+4.1**
KRMR	**Karymshinskiy**	**3.37**	**17**	*e*P	**Pn**	**03 37 54.9**	**+1.3**
KRMR				*e*S	**Sn**	**03 38 36.4**	**+4.1**
PEA0B	**Petropavlovsk-**	**3.57**	**12**		**Pn**	**03 37 57.9**	**+1.6**
PEA0B	**Petropavlovsk-**	**3.57**	**12**	*ce*PN	**Pn**	**03 37 57.3**	**+1.0**
PETK	**Petropavlovsk-**	**3.57**	**12**	P	**Pn**	**03 37 56.9**	**+0.6**
	comp=E,19nm,0.4s,baz=174,slow=12,SNR=56						
PETK				S	**Sn**	**03 38 37.8**	**+0.6**
	comp=E,33nm,0.5s,baz=171,slow=10,SNR=4.1						
PETK				LR	LR	03 39 41.8	
	comp=E,376nm,18.7s,baz=186,slow=45						
PETK	**Petropavlovsk-**	**3.57**	**12**		**Pn**	**03 37 57.1**	**+0.8**
PET	**Petropavlovsk**	**3.67**	**21**		**Pn**	**03 37 58.3**	**+0.8**
PET	**Petropavlovsk**	**3.67**	**21**	*e*PN	**Pn**	**03 37 59.0**	**+1.5**
PET				*e*S	**Sn**	**03 38 41.1**	**+1.6**
PET				pmax	pmax		
	comp=Z,51nm,0.4s						
PET				smax	smax		
	comp=E,574nm,0.6s						
PET				smax	smax		
	comp=N,1μm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
DALK	**Dalny**	**3.70**	**22**	PN	**Pn**	**03 37 58.5**	**+0.6**
DALK				S	**Sn**	**03 38 42.0**	**+1.8**
DALK	**Dalny**	**3.70**	**22**	*e*P	**Pn**	**03 37 58.5**	**+0.6**
DALK				*e*S	**Sn**	**03 38 42.1**	**+1.8**
UGLR	**Uglovaya**	**3.88**	**21**	PN	**Pn**	**03 38 01.6**	**+1.0**
UGLR	**Uglovaya**	**3.88**	**21**	*e*P	**Pn**	**03 38 01.6**	**+1.0**
AVH	**Avacha**	**3.91**	**20**	PN	**Pn**	**03 38 02.9**	**+2.0**
AVH	**Avacha**	**3.91**	**20**	*e*P	**Pn**	**03 38 03.0**	**+2.0**
KOK	**Koryaka**	**3.91**	**19**	PN	**Pn**	**03 38 03.0**	**+2.0**
KOK	**Koryaka**	**3.91**	**19**	*e*P	**Pn**	**03 38 03.1**	**+2.0**
SMAR	**Somma**	**3.92**	**21**	PN	**Pn**	**03 38 02.6**	**+1.4**
SMAR	**Somma**	**3.92**	**21**	*e*P	**Pn**	**03 38 02.7**	**+1.4**
KRER	**Koryakskii**	**3.95**	**20**	PN	**Pn**	**03 38 03.1**	**+1.5**
KRER	**Koryakskii**	**3.95**	**20**	*e*P	**Pn**	**03 38 03.2**	**+1.5**
SDLR	**Sedlovina**	**3.96**	**21**	PN	**Pn**	**03 38 02.1**	**+0.5**
SDLR	**Sedlovina**	**3.96**	**21**	*e*P	**Pn**	**03 38 02.2**	**+0.5**
KRX	**Arik**	**3.98**	**19**	PN	**Pn**	**03 38 03.4**	**+1.5**
KRX	**Arik**	**3.98**	**19**	*e*P	**Pn**	**03 38 03.4**	**+1.5**
NLC	**Nalytchevo**	**3.98**	**26**	PN	**Pn**	**03 38 00.6**	**-1.2**
NLC	**Nalytchevo**	**3.98**	**26**	*e*P	**Pn**	**03 38 00.6**	**-1.2**
SPN	**Mys Shipunski**	**4.13**	**31**	PN	**Pn**	**03 38 03.5**	**-0.3**
SPN				S	**Sn**	**03 38 49.7**	**-1.1**
SPN	**Mys Shipunski**	**4.13**	**31**	*e*P	**Pn**	**03 38 03.6**	**-0.3**
SPN				*e*S	**Sn**	**03 38 49.8**	**-1.1**
GNL	**Ganaly**	**4.18**	**12**	PN	**Pn**	**03 38 06.3**	**+1.7**
GNL	**Ganaly**	**4.18**	**12**	*e*P	**Pn**	**03 38 06.4**	**+1.7**
KZV	**Kizimen**	**5.97**	**22**	PN	**Pn**	**03 38 30.8**	**+1.5**
KZV	**Kizimen**	**5.97**	**22**	*e*P	**Pn**	**03 38 30.8**	**+1.5**
KMNR	**Kamenistaya**	**6.55**	**19**	PN	**Pn**	**03 38 40.5**	**+3.4**
KMNR	**Kamenistaya**	**6.55**	**19**	*e*P	**Pn**	**03 38 40.6**	**+3.4**
KPT	**Kopyto**	**6.75**	**18**	PN	**Pn**	**03 38 42.3**	**+2.5**
KPT	**Kopyto**	**6.75**	**18**	*e*P	**Pn**	**03 38 42.3**	**+2.5**
BZWR	**Bezymyannyi-We**	**6.80**	**19**	PN	**Pn**	**03 38 43.2**	**+2.6**
BZWR	**Bezymyannyi-We**	**6.80**	**19**	*e*P	**Pn**	**03 38 43.2**	**+2.6**
KUR	**Kuril'sk**	**7.30**	**236**	*e*PN	**Pn**	**03 38 48.7**	**+1.4**
KUR				*e*S	**Sn**	**03 40 14.4**	**+5.6**
KUR				pmax	pmax		
	comp=Z,47nm,0.4s						
YSS	**Yuzhno-Sakhali**	**9.53**	**259**	*e*PN	**Pn**	**03 39 21.6**	**+3.8**
YSS				*e*S	**Sn**	**03 41 08.8**	**+5.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS				MLR	MLR		
	comp=N,200nm,16.0s						
MA2	**Magadan**	**10.50**	**344**	P	**Pn**	**03 39 31.2**	**+0.2**
	comp=N,10nm,0.4s,baz=155,slow=11,SNR=6.3						
MA2				LR	LR	03 43 45.6	
	comp=N,100nm,18.2s,baz=182,slow=39						
JKA	**Kamikawa-asahi**	**10.97**	**245**		**Pn**	**03 39 38.9**	**+1.3**
ASAJ	**Asahikawa**	**10.98**	**245**	P	**Pn**	**03 39 38.0**	**+0.4**
	comp=N,11nm,0.8s,baz=70,slow=15,SNR=8.9						
ASAJ				LR	LR	03 43 27.2	
	comp=N,123nm,18.2s,baz=150,slow=35						
ASAJ	**Asahikawa**	**10.98**	**245**	PN	**Pn**	**03 39 38.9**	**+1.3**
SHEM	**Shemya Is, Ala**	**11.49**	**68**	LR	LR	03 44 12.0	
	comp=N,52nm,20.3s,baz=306,slow=37						
ERM	**Erimo**	**12.00**	**236**		**Pn**	**03 39 49.2**	**-2.3**
ERM	**Erimo**	**12.00**	**236**	PN	**Pn**	**03 39 49.2**	**-2.3**
SEY	**Seymchan**	**13.53**	**352**	P	**Pn**	**03 40 13.4**	**+1.2**
	comp=N,1.5nm,0.5s,baz=160,slow=12,SNR=5.6						
SEY				LR	LR	03 45 54.6	
	comp=N,91nm,19.6s,baz=154,slow=40						
JTM	**Tenmabayashi**	**13.98**	**237**	Pn	Pn	03 40 13.4	-5.0
TEY	**Ternei**	**14.22**	**259**	*e*P	**P**	**03 40 28.6**	**+1.2**
USRK	**Ussuriysk Ar.**	**17.55**	**261**	P	**Pn**	**03 41 01.1**	**-2.7**
	comp=N,1.5nm,0.5s,baz=58,slow=12,SNR=6.4						
MJA0	**Matsu Arr-Jizo**	**18.59**	**232**	*e*P	**Pn**	**03 41 15.9**	**-0.8**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAJO	**Matsushiro**	**18.62**	**232**	P	**Pn**	**03 41 16.0**	**-0.9**
MAJO	**Matsushiro**	**18.62**	**232**	P	**Pn**	**03 41 16.0**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s						
MJAR	**Matsushiro Arr**	**18.62**	**232**	P	**P**	**03 41 14.7**	**-1.4**
	comp=Z,3.5nm,0.8s,baz=37,slow=11,SNR=8.9						
HEH	**HeiHe**	**18.67**	**283**	*e*P	**Pn**	**03 41 17.4**	**0.0**
HEH				pmax	pmax		
	comp=Z,12nm,1.8s						
BILL	**Bilibino**	**19.11**	**11**		**P**	**03 41 20.4**	**-0.8**
BILL	**Bilibino**	**19.11**	**11**	*ce*P	**P**	**03 41 19.9**	**-1.3**
BILL				pmax	pmax		
	comp=Z,16nm,1.7s						
YAK	**Yakutsk**	**19.33**	**320**	P	**P**	**03 41 21.5**	**-2.2**
	comp=Z,19nm,0.5s,baz=133,slow=19,SNR=4.2						
YAK				LR	LR	03 48 41.1	
	comp=Z,131nm,21.8s,baz=96,slow=36						
YAK	**Yakutsk**	**19.33**	**320**	IAmb	IAmb	03 41 37.2	
	comp=Z,31nm,0.5s						
YAK	**Yakutsk**	**19.33**	**320**	*i* P	**P**	**03 41 21.5**	**-2.2**
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
JGF	**Kuroka**	**19.78**	**232**	P	**P**	**03 41 29.2**	**+0.4**
KSRS	**Korea Array**	**23.85**	**250**	P	**P**	**03 42 10.8**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=50,slow=10,SNR=6.9						
	comp=Z,2.8nm,0.8s						
KSRS	**Korea Array**	**23.85**	**250**	*e*P	**P**	**03 42 11.2**	**0.0**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	**Tiksi**	**25.43**	**340**	LR	LR	03 54 23.8	
	comp=Z,54nm,18.2s,baz=218,slow=41						
TIXI	**Tiksi**	**25.43**	**340**		**P**	**03 42 22.1**	**-3.1**
TIXI				IAmb	IAmb	03 42 24.6	
	comp=Z,13nm,0.6s						
TIXI	**Tiksi**	**25.43**	**340**	*i* P	**P**	**03 42 23.7**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,11nm,0.6s						
IMAR	**Indian Mountai**	**30.12**	**39**	P	**P**	**03 43 08.0**	**+0.8**
B21K	**Ikpikpuk River**	**30.54**	**31**		**P**	**03 43 12.1**	**+1.2**
B21K				IAmb	IAmb	03 43 12.9	
	comp=Z,11nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**30.97**	**161**	T	T	04 16 13.6	
	baz=347,slow=76,SNR=53						
H11N1	**WAKE ISLAND Hy**	**30.99**	**161**	T	T	04 16 16.6	
	baz=347,slow=76,SNR=55						
H11N3	**WAKE ISLAND Hy**	**30.99**	**161**	T	T	04 16 13.8	
	baz=347,slow=76,SNR=110						
E22K	**Anaktuvuk Pass**	**31.21**	**35**	P	**P**	**03 43 17.8**	**+0.9**
C23K	**Itkillik River**	**31.95**	**32**		**P**	**03 43 24.4**	**+1.2**
C23K				IAmb	IAmb	03 43 24.7	
	comp=Z,7.5nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**32.12**	**162**	T	T	04 17 35.8	
	baz=347,slow=76,SNR=759						
H11S3	**WAKE ISLAND Hy**	**32.12**	**162**	T	T	04 17 40.3	
	baz=347,slow=76,SNR=1081						
H11S2	**WAKE ISLAND Hy**	**32.13**	**162**	T	T	04 17 40.8	
	baz=347,slow=76,SNR=713						
E24K	**Your Creek**	**32.44**	**35**	P	**P**	**03 43 28.8**	**+1.1**
E24K				IAmb	IAmb	03 43 32.1	
	comp=Z,14nm,1.4s						
D24K	**Happy Valley**	**32.45**	**33**	P	**P**	**03 43 28.7**	**+1.0**
D24K				IAmb	IAmb	03 43 38.1	
	comp=Z,7.1nm,1.0s						
SONM	**Songino Array**	**32.59**	**286**	P	**P**	**03 43 27.1**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=57,slow=5.5,SNR=1.4						
SONM				PcP	**PcP**	**03 46 13.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=2.6						
SONM				LR	LR	03 57 13.8	
	comp=Z,50nm,18.6s,baz=31,slow=37						
	comp=Z,0.3nm,0.6s						
F24K	**Squaw Lake**	**32.61**	**36**		**P**	**03 43 29.9**	**+0.7**
ILAR	**Eielson Array**	**32.90**	**41**	P	**P**	**03 43 31.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=255,slow=7.4,SNR=14						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**32.90**	**41**	*e*P	**P**	**03 43 32.3**	**+0.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NJ2	**Nanjing**	**33.01**	**252**	*e*P	**P**	**03 43 31.8**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
C27K	**Jago River**	**34.30**	**32**	IAmb	IAmb	03 43 46.5	
	comp=Z,5.9nm,0.7s						
L27K	**Beaver Creek,**	**35.24**	**44**	P	**P**	**03 43 54.3**	**+2.3**
L27K				IAmb	IAmb	03 43 55.5	
	comp=Z,9.9nm,1.1s						
D27M	**Malcolm River**	**35.26**	**33**	IAmb	IAmb	03 43 54.3	
	comp=Z,6.7nm,0.7s						
F28M	**Old Crow**	**35.68**	**36**	P	**P**	**03 43 57.5**	**+1.8**
E29M	**Blow River**	**36.39**	**35**	IAmb	IAmb	03 44 05.5	
	comp=Z,4.0nm,0.5s						
INK	**Inuvik**	**38.01**	**35**	P	**P**	**03 44 17.0**	**+1.6**
INK				IAmb	IAmb	03 44 19.5	
	comp=Z,14nm,1.4s						
INK	**Inuvik**	**38.01**	**35**	P	**P**	**03 44 17.0**	**+1.6**
INK				pmax	pmax		
	comp=Z,14nm,1.4s						
A36M	**Sachs Harbour**	**40.27**	**28**		**P**	**03 44 36.0**	**+1.9**
A36M				IAmb	IAmb	03 44 36.5	
	comp=Z,6.1nm,0.7s						
ZALV	**Zalesovo Beam**	**42.80**	**304**	P	**P**	**03 44 53.0**	**-2.1**
	comp=Z,1.6nm,0.4s,baz=59,slow=7.1,SNR=10						
ZALV				LR	LR	04 02 46.6	
	comp=Z,24nm,20.8s,baz=56,slow=36						
	comp=Z,1.6nm,0.4s						
ZALV	**Zalesovo Beam**	**42.80**	**304**	*e*P	**P**	**03 44 53.3**	**-1.8**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YKA	**Yellowknife Ar**	**47.27**	**39**	P	**P**	**03 45 31.4**	**+0.9**
	comp=Z,3.1nm,1.0s,baz=304,slow=9.2,SNR=5.3						
	comp=Z,3.1nm,1.0s						
YKA	**Yellowknife Ar**	**47.27**	**39**	*e*P	**P**	**03 45 32.1**	**+1.6**
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	**47.64**	**297**	*i* P	**P**	**03 45 31.7**	**-1.9**
MKAR	**Makanchi Array**	**47.64**	**297**	P	**P**	**03 45 31.8**	**-1.9**
	comp=Z,1.0nm,0.4s,baz=54,slow=5.9,SNR=11						
MKAR				LR	LR	04 06 19.4	
	comp=Z,104nm,21.5s,baz=35,slow=37						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.64**	**297**	*e*P	**P**	**03 45 32.3**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**47.67**	**303**		**P**	**03 45 32.2**	**-1.5**
KURK	**Kurchatov**	**47.67**	**303**	*ce*P	**P**	**03 45 32.2**	**-1.5**
KURK				pmax	pmax		
	comp=Z,13nm,1.3s						
KURBB	**Kurchatov Arra**	**47.77**	**303**	P	**P**	**03 45 32.8**	**-1.7**
	comp=Z,3.2nm,0.5s,baz=65,slow=7.7,SNR=25						
KURBB				PcP	**PcP**	**03 47 02.7**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=57,slow=3.3,SNR=5.0						
KURBB				LR	LR	04 05 49.9	
	comp=Z,47nm,21.9s,baz=168,slow=36						
	comp=Z,3.2nm,0.5s						
BVAR	**Borovoye Array**	**50.78**	**309**	P	**P**	**03 45 55.8**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=52,slow=7.5,SNR=10						
BVAR				PcP	**PcP**	**03 47 12.9**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=57,slow=5.3,SNR=4.4						
	comp=Z,0.9nm,0.3s						
BLKN	**Baker Lake**	**53.24**	**31**	P	**P**	**03 46 16.4**	**+0.8**
L04D	**Klamath Falls**	**54.39**	**65**	P	**P**	**03 46 27.7**	**+3.3**
ARTI	**Arti**	**54.52**	**317**	LR	LR	04 12 19.4	
	comp=Z,49nm,18.3s,baz=32,slow=39						
CHTO	**Chiang Mai**	**54.95**	**257**	P	**P**	**03 46 29.3**	**+0.7**
CHTO				IAmb	IAmb	03 46 30.1	
	comp=Z,6.0nm,0.7s						
CHTO	**Chiang Mai**	**54.95**	**257**	P	**P**	**03 46 29.3**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**55.22**	**257**	P	**P**	**03 46 31.2**	**+0.7**
	comp=Z,2.1nm,0.4s,baz=28,slow=7.6,SNR=14						
CMAR				LR	LR	04 11 36.0	
	comp=Z,22nm,18.1s,baz=185,slow=38						
	comp=Z,2.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**55.22**	**257**	*e*P	**P**	**03 46 31.8**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	**ARCESS Array B**	**55.86**	**341**	P	**P**	**03 46 32.1**	**-2.4**
	comp=Z,0.5nm,0.4s,baz=37,slow=7.2,SNR=8.6						
	comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**	**55.86**	**341**	P	**P**	**03 46 31.4**	**-3.1**
ARCES	**ARCESS Array B**	**55.86**	**341**	*e*P	**P**	**03 46 33.5**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	**Karatay Array**	**56.58**	**299**	P	**P**	**03 46 39.0**	**-1.0**
KKAR	**Karatay Array**	**56.58**	**299**	P	**P**	**03 46 39.0**	**-1.0**
KIRV	**Kirov**	**56.83**	**323**	LR	LR	04 12 40.7	
	comp=Z,44nm,18.9s,baz=3.9,slow=38						
SUMG	**Summit**	**57.65**	**5**	P	**P**	**03 46 47.8**	**+0.2**
SUMG	**Summit**	**57.65**	**5**	P	**P**	**03

comp=Z,4.6nm,0.5s

H03N2	Juan Fernandez	136.50	90	T	T	06 28 28.3
	baz=313,slow=77,SNR=82					
H03N1	Juan Fernandez	136.52	90	T	T	06 28 26.7
	baz=313,slow=77,SNR=88					
H03N3	Juan Fernandez	136.52	90	T	T	06 28 29.9
	baz=313,slow=77,SNR=87					

NAO ***23*** *03:40:02.1,35°.66N×22°.52E,h10km,MB3.2*
IDC ***23*** *03:40:10.5±0.9,37°.02N×23°.40E,h0km,mb3.7/11, mbtmp3.7/12,ML1.4/2,Error ellipse: s-maj=20.4km s-min=16.9km az=48.0*
ISK ***23*** *03:40:11.5,37°.04N×23°.10E,h2km,ML3.4/24*
AFAD ***23*** *03:40:14.7,37°.14N×23°.15E,h7km±5km,MW3.7*
ATH ***23*** *03:40:14.7,37°.02N×23°.17E,h14km±1km,ML3.8/33, Manual Solution by M.Kolligri First location: 2019/11/23 03:41:08, This location: 2020/07/30 20:23:37 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 1 km*
THE ***23*** *03:40:14.3,37°.N±1°×2°.3E±°,h2km±2km,M3.5/19, MLh3.5/19*

ISC 23 03:40:14.5±0.6,37°.00N±0°.02×23°.16E±0°.02,h20km±2km, n136,σ1§36/166,mb3.7/11,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVA	**Monemvasia**	**0.33**	**198**	P	**Pb**	**03 40 21.8**	**+0.3**
MNVA				S	**Sb**	**03 40 26.9**	**+0.5**
VLI	**Veliai**	**0.33**	**213**	P	**Pb**	**03 40 20.5**	**-1.1**
VLI				S	**Sb**	**03 40 25.3**	**-1.2**
VLI	**Veliai**	**0.33**	**213**	P	**Pb**	**03 40 21.1**	**-0.5**
VLI				S	**Sb**	**03 40 25.9**	**-0.6**
YDRA	**Hydra**	**0.43**	**35**	P	**Pb**	**03 40 23.2**	**-0.1**
YDRA				S	**Sb**	**03 40 28.6**	**-0.7**
NPS1	**Neapolis Lacon**	**0.49**	**189**	P	**Pb**	**03 40 24.6**	**+0.2**
NPS1				S	**Sb**	**03 40 32.0**	**+0.9**
MET2	**Kameni Chora,**	**0.63**	**12**	P	**Pb**	**03 40 26.5**	**-0.4**
MET2				S	**Sb**	**03 40 34.5**	**-0.8**
NPLA	**Nafplio**	**0.63**	**333**	P	**Pb**	**03 40 27.0**	**0.0**
NPLA				S	**Sb**	**03 40 35.3**	**-0.1**
MET5	**Makryloggos,Me**	**0.64**	**14**	P	**Pb**	**03 40 27.1**	**0.0**
MET5				S	**Sb**	**03 40 34.5**	**-1.2**
MET4	**Agioi Theodoro**	**0.65**	**17**	P	**Pb**	**03 40 27.0**	**-0.2**
MET4				S	**Sb**	**03 40 36.4**	**+0.5**
ARS1	**Argos**	**0.72**	**332**	P	**Pn**	**03 40 29.3**	**-0.3**
VLX	**Vlachokerasia**	**0.72**	**301**	P	**Pb**	**03 40 28.1**	**-0.5**
VLX				S	**Sb**	**03 40 37.7**	**-0.4**
VLX	**Vlachokerasia**	**0.72**	**301**	P	**Pb**	**03 40 28.0**	**-0.5**
VLX				S	**Sb**	**03 40 37.4**	**-0.6**
KTHA	**Kythira Island**	**0.74**	**186**	Pg	**Pb**	**03 40 27.2**	**-1.6**
KTHA				Sg	**Sb**	**03 40 38.9**	**+0.4**
KTHA	**Kythira Island**	**0.74**	**186**	P	**Pb**	**03 40 28.9**	**+0.1**
VLY	**Voula,Athens**	**0.99**	**30**	P	**Pb**	**03 40 32.7**	**-0.3**
VLY	**Voula,Athens**	**0.99**	**30**	P	**Pb**	**03 40 33.3**	**+0.3**
VLY				S	**Sb**	**03 40 46.8**	**+1.2**
ITM	**Ithomi**	**1.00**	**281**	Pg	**Pb**	**03 40 30.6**	**-2.6**
ITM				Sg	**Sb**	**03 40 44.5**	**-1.4**
ITM	**Ithomi**	**1.00**	**281**	P	**Pn**	**03 40 33.0**	**-0.4**
ITM	**Ithomi**	**1.00**	**281**	P	**Pn**	**03 40 33.7**	**+0.3**
LVRA	**Laurium**	**1.01**	**45**	P	**Pn**	**03 40 33.4**	**-0.1**
LTK	**Loutraki**	**1.03**	**352**	P	**Pb**	**03 40 33.6**	**-0.1**
LTK	**Loutraki**	**1.03**	**352**	P	**Pb**	**03 40 34.0**	**+0.3**
MHLO	**Agia Marina, M**	**1.04**	**107**	P	**Pn**	**03 40 34.9**	**+0.9**
KIAA	**Kiato**	**1.06**	**342**	P	**Pn**	**03 40 34.4**	**+0.1**
ATH	**Athens Observa**	**1.07**	**24**	P	**Pn**	**03 40 34.4**	**+0.1**
ATH				S	**Sn**	**03 40 49.7**	**+1.1**
ATH	**Athens Observa**	**1.07**	**24**	P	**Pb**	**03 40 35.3**	**+1.0**
NOAC	**Athens-Thissio**	**1.07**	**24**	P	**Pn**	**03 40 34.8**	**+0.4**
ATH5	**Athens Parliam**	**1.08**	**25**	P	**Pn**	**03 40 34.1**	**-0.3**
ELFA	**Athens-Elefsin**	**1.09**	**16**	P	**Pb**	**03 40 35.4**	**+0.8**
MAGU	**Magoula**	**1.11**	**15**	P	**Pn**	**03 40 35.3**	**+0.3**
MAGU				S	**Sn**	**03 40 50.6**	**+0.9**
MAGU	**Magoula**	**1.11**	**15**	P	**Pn**	**03 40 35.6**	**+0.7**
ANKY	**Antikythira Is**	**1.14**	**174**	P	**Pb**	**03 40 36.1**	**+0.7**
ANKY				S	**Sn**	**03 40 51.7**	**+1.6**
ANKY	**Antikythira Is**	**1.14**	**174**	P	**Pn**	**03 40 36.3**	**+0.9**
GUR	**Goura**	**1.14**	**325**	P	**Pn**	**03 40 35.4**	**0.0**
GUR				S	**Sn**	**03 40 51.6**	**+1.1**
GUR	**Goura**	**1.14**	**325**	P	**Pb**	**03 40 35.6**	**0.0**
PYL	**PYLOS**	**1.14**	**265**	P	**Pb**	**03 40 36.5**	**+0.9**
PYL				S	**Sn**	**03 40 52.4**	**+2.1**
PYL	**PYLOS**	**1.14**	**265**	P	**Pb**	**03 40 36.3**	**+0.8**
VILL	**Villia**	**1.17**	**6**	P	**Pn**	**03 40 36.4**	**+0.6**
VILL				S	**Sn**	**03 40 52.3**	**+1.1**
PTL	**Penteli**	**1.19**	**28**	P	**Pn**	**03 40 36.4**	**+0.4**
PTL				S	**Sb**	**03 40 52.9**	**+1.5**
PTL	**Penteli**	**1.19**	**28**	P	**Pn**	**03 40 36.4**	**+0.4**
VIL2	**Platees**	**1.21**	**4**	P	**Pn**	**03 40 35.4**	**-1.0**
STFN	**Stefani**	**1.22**	**14**	P	**Pn**	**03 40 36.6**	**+0.3**
STFN	**Stefani**	**1.22**	**14**	P	**Pn**	**03 40 37.0**	**+0.6**
DION	**Dionisos Attik**	**1.24**	**29**	P	**Pn**	**03 40 36.8**	**+0.1**
DION	**Dionisos Attik**	**1.24**	**29**	P	**Pn**	**03 40 36.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.32**	**323**	P	**Pb**	**03 40 38.8**	**+0.3**
KLV				S	**Sb**	**03 40 56.8**	**+1.8**
KLV	**Kalavryta, Ach**	**1.32**	**323**	P	**Pb**	**03 40 38.6**	**+0.1**
KARY	**Karystos**	**1.45**	**44**	P	**Pn**	**03 40 39.6**	**+0.1**
KARY	**Karystos**	**1.45**	**44**	P	**Pn**	**03 40 39.7**	**+0.1**
DRO	**Drossia**	**1.50**	**310**	P	**Pb**	**03 40 42.0**	**+0.4**
DRO	**Drossia**	**1.50**	**310**	P	**Pb**	**03 40 43.1**	**+1.5**
KALE	**Kalithea**	**1.61**	**330**	P	**Pb**	**03 40 43.1**	**-0.4**
KALE	**Kalithea**	**1.61**	**330**	P	**Pb**	**03 40 42.9**	**-0.6**
TRIZ	**Trizonia**	**1.61**	**328**	P	**Pn**	**03 40 42.6**	**+0.8**
CHAN	**Chania**	**1.64**	**154**	P	**Pn**	**03 40 44.2**	**+0.2**
CHAN	**Chania**	**1.64**	**154**	P	**Pb**	**03 40 44.5**	**+0.5**
LKR	**Lokris**	**1.65**	**356**	P	**Pn**	**03 40 43.1**	**+0.8**
LKR	**Lokris**	**1.65**	**356**	P	**Pn**	**03 40 43.3**	**+0.9**
SERG	**Sergoula**	**1.66**	**329**	P	**Pb**	**03 40 44.0**	**-0.4**
UPR	**University Cam**	**1.68**	**320**	P	**Pb**	**03 40 44.7**	**0.0**
ATAL	**Atalanti**	**1.69**	**356**	P	**Pb**	**03 40 44.4**	**-0.6**
ATAL	**Atalanti**	**1.69**	**356**	P	**Pb**	**03 40 43.9**	**+0.9**
RLS	**Riolos of Patr**	**1.71**	**309**	P	**Pb**	**03 40 45.0**	**+0.3**
RLS	**Riolos of Patr**	**1.71**	**309**	P	**Pb**	**03 40 45.5**	**+0.3**
EFP	**Efpalio**	**1.74**	**325**	P	**Pb**	**03 40 44.7**	**-1.0**
EFP	**Efpalio**	**1.74**	**325**	P	**Pb**	**03 40 44.7**	**-1.0**
KYMI	**Kymi, Euboea I**	**1.79**	**24**	P	**Pn**	**03 40 44.8**	**+0.6**
KNDR	**Palaiochora Ch**	**1.80**	**168**	Pn	**Pn**	**03 40 45.0**	**+0.7**
KNDR	**Palaiochora Ch**	**1.80**	**168**	P	**Pb**	**03 40 47.8**	**+1.0**
APE	**Apeiranthos**	**1.90**	**87**	Pn	**Pn**	**03 40 46.2**	**+0.4**
IDI	**Anoyia**	**2.21**	**140**	Pn	**Pn**	**03 40 46.4**	**-3.7**
	4.3nm,0.3s,baz=302,slow=21,SNR=24						
IDI				Sn	**Sn**	**03 41 15.9**	**-0.8**
	18nm,0.3s,baz=271,slow=22,SNR=7.2						
IDI	**Anoyia**	**2.21**	**140**	Pn	**Pn**	**03 40 50.9**	**+0.9**
IDI				Sn	**Sb**	**03 41 20.1**	**-0.6**
GVD	**Gavdhos**	**2.28**	**160**	Pn	**Pn**	**03 40 52.2**	**+1.2**
GVD				Sn	**Sb**	**03 41 21.9**	**-0.9**
CHOS	**Chios island**	**2.68**	**58**	Pn	**Pn**	**03 40 56.9**	**+0.3**
CHOS				Sn	**Sn**	**03 41 30.5**	**+2.0**
ZEYE	**Izmir, Urla-Ze**	**2.93**	**64**	SPECP		03 41 00.0	
ZEYE				P	**Pn**	**03 41 00.2**	**+0.3**
URLA	**Izmir**	**3.05**	**62**	SPECP		03 40 56.0	
URLA				P	Pn	03 40 56.5	-5.0
URLA				S	**Sn**	**03 41 31.1**	**-6.3**
URLA	**Izmir**	**3.05**	**62**	Pn	**Pn**	**03 41 02.8**	**+1.3**
KARB	**zmir-Karabur**	**3.06**	**56**	SPECP	Pn	03 41 02.0	+0.3
KARB				P	**Pn**	**03 41 02.0**	**+0.3**
KARB				S	**Sn**	**03 41 36.0**	**-1.8**
SIGR	**SIGRI**	**3.07**	**43**	Pn	**Pn**	**03 41 02.7**	**+0.9**
DDIM	**Aydin, Didim**	**3.29**	**81**	P	**Pn**	**03 41 07.6**	**+2.8**
GCAM	**G?zelcami?**	**3.32**	**77**	P	**Pn**	**03 41 08.2**	**+3.0**
GCAM	**G?zelcami?**	**3.32**	**77**	Pn	**Pn**	**03 41 07.1**	**+1.9**
BODT	**Bodrum**	**3.32**	**88**	Pn	**Pn**	**03 41 07.3**	**+2.0**
BLCB	**Balcova**	**3.38**	**65**	Pn	**Pn**	**03 41 06.7**	**+0.7**
OUR	**Ouranopolis**	**3.39**	**11**	Pn	**Pn**	**03 41 06.3**	**+0.1**
BDRM	**Kayabasi**	**3.43**	**88**	SPECP		03 41 08.0	
BDRM				P	**Pn**	**03 41 08.9**	**+2.1**
YAZI	**Mula-Dat§a-**	**3.46**	**94**	SPECP		03 41 09.0	
YAZI				P	**Pn**	**03 41 09.2**	**+2.1**
KARP	**Karpathos**	**3.54**	**113**	Pn	**Pn**	**03 41 10.4**	**+2.0**
DAT	**Datca**	**3.55**	**93**	SPECP		03 41 08.0	
DAT				P	**Pn**	**03 41 08.6**	**0.0**
DAT	**Datca**	**3.55**	**93**	Pn	**Pn**	**03 41 10.1**	**+1.5**
DKL	**Dikili**	**3.61**	**54**	Pn	**Pn**	**03 41 10.5**	**+1.3**
AYVA	**Ayvalik**	**3.61**	**49**	SPECP		03 41 09.0	
AYVA				P	**Pn**	**03 41 09.5**	**+0.2**
AYVA				S	**Sn**	**03 41 51.7**	**+0.4**
BOZC	**Bozcaada**	**3.64**	**38**	P	**Pn**	**03 41 09.6**	**0.0**
BOZC	**Bozcaada**	**3.64**	**38**	Pn	**Pn**	**03 41 10.1**	**+0.5**
ZEDA	**zmir-Bergama**	**3.67**	**56**	SPECP		03 41 11.0	
ZEDA				P	**Pn**	**03 41 11.1**	**+1.1**
ZEDA				S	**Sn**	**03 41 53.5**	**+0.9**
EZN	**Ezine**	**3.76**	**40**	Pn	**Pn**	**03 41 12.4**	**+1.1**
KEK	**Kerkira**	**3.78**	**317**	Pn	**Pn**	**03 41 12.2**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**3.82**	**43**	P	**Pn**	**03 41 12.4**	**+0.3**
GOAD	**anakkale-G¶**	**3.82**	**33**	P	**Pn**	**03 41 13.1**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**3.88**	**74**	Pn	**Pn**	**03 41 14.4**	**+1.3**
BUHA	**Balikesir, Bur**	**3.97**	**50**	SPECP		03 41 14.0	
BUHA				P	**Pn**	**03 41 14.1**	**-0.1**
CNKL	**anakkale-Mer**	**3.97**	**39**	P	**Pn**	**03 41 14.3**	**+0.1**
IZMR	**zmir-demi**	**3.97**	**72**	P	**Pn**	**03 41 17.0**	**+2.8**
ARG	**Arkhangelos**	**4.07**	**100**	Pn	**Pn**	**03 41 18.2**	**+2.6**
TURN	**Turunc**	**4.08**	**92**	Pn	**Pn**	**03 41 18.5**	**+2.8**
YER	**Yerkesik**	**4.10**	**87**	Pn	**Pn**	**03 41 18.2**	**+2.2**
ODEM	**Odemis-Izmir**	**4.10**	**70**	Pn	**Pn**	**03 41 17.5**	**+1.4**
ESEN	**Aydn-Nazilli**	**4.21**	**78**	SPECP		03 41 18.0	
ESEN				P	**Pn**	**03 41 18.8**	**+1.3**
STEP	**BALIKESIR_Sava**	**4.30**	**55**	P	Pn	03 41 24.4	+5.5
KIRA	**zmir-Kiraz**	**4.33**	**72**	P	**Pn**	**03 41 21.2**	**+1.9**
MANT	**Manisa**	**4.53**	**69**	SPECP		03 41 23.0	
MANT				P	**Pn**	**03 41 23.7**	**+1.6**
BKES	**Balkesir-Mer**	**4.64**	**52**	P	**Pn**	**03 41 25.1**	**+1.8**
BLKS	**Balkesir-Sus**	**4.74**	**51**	P	**Pn**	**03 41 26.4**	**+1.6**
DURS	**Dursunbey**	**4.92**	**57**	SPECP		03 41 28.0	
DURS				P	**Pn**	**03 41 28.6**	**+1.2**
DURS				S	Sn	03 42 10.9	-13
USAK	**Uak-Merkez**	**4.94**	**68**	P	**Pn**	**03 41 28.7**	**+1.1**
VAE	**Valguarnera**	**7.00**	**277**	Pn	**Pn**	**03 41 57.2**	**+1.4**
	0.5nm,0.3s,baz=52,slow=12,SNR=1.6						
VAE				Sn	**Sn**	**03 43 16.5**	**+1.7**
	0.7nm,0.3s,baz=199,slow=20,SNR=1.5						
	5.4nm,0.7s						
BRTR	**Keskin Array B**	**8.67**	**69**	Pn	**Pn**	**03 42 19.6**	**+0.7**
	0.1nm,0.3s,baz=257,slow=14,SNR=3.5						
MLR	**Muntele Rosu**	**8.74**	**13**	Pn	**Pn**	**03 42 21.0**	**+1.2**
	baz=170,slow=11						
MMAI	**Mount Meron Ar**	**10.80**	**108**	Pn	**Pn**	**03 42 47.8**	**-0.2**
	1.1nm,0.3s,baz=308,slow=12,SNR=10.0						
MMAI				Sn	**Sn**	**03 44 44.0**	**-4.2**
	0.3nm,0.3s,baz=297,slow=22,SNR=2.4						
EIL	**Elat**	**12.27**	**123**	Pn	**Pn**	**03 43 08.6**	**+0.6**
	0.2nm,0.3s,baz=319,slow=20,SNR=3.2						
EIL				Sn	Sn	03 45 16.3	-7.8
	0.2nm,0.3s,baz=321,slow=16,SNR=1.4						
ASF	**Jabal al Asfar**	**12.30**	**109**	Pn	**Pn**	**03 43 09.7**	**+1.1**
	0.1nm,0.3s,baz=286,slow=14,SNR=1.2						
GERES	**GERESS Array B**	**13.70**	**333**	Pn	**Pn**	**03 43 31.4**	**+3.8**
	baz=146,slow=14,SNR=2.4						
DAVOX	**Davos/Dischmat**	**13.89**	**319**	Pn	**Pn**	**03 43 33.4**	**+3.2**
	0.3nm,0.3s,baz=132,slow=16,SNR=5.7						
ESDC	**Sonseca Array**	**21.41**	**285**	P	**P**	**03 45 03.9**	**+2.8**
	0.9nm,0.6s,baz=88,slow=9.7,SNR=9.4						
	0.9nm,0.6s						
HFS	**Hagfors**	**23.93**	**348**	P	**P**	**03 45 25.5**	**-1.4**
	2.2nm,0.4s,baz=152,slow=9.5,SNR=27						
	2.2nm,0.4s						
FINES	**FINESS Array B**	**24.54**	**3**	P	**P**	**03 45 31.3**	**-1.1**
	1.2nm,0.7s,baz=171,slow=13,SNR=5.1						
	1.2nm,0.7s						
NB2	**NORSAR Subarra**	**25.22**	**346**	P	**P**	**03 45 38.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**25.22**	**346**	P	**P**	**03 45 37.6**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=153,slow=9.5,SNR=11						
	comp=Z,0.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**25.61**	**324**	P	**P**	**03 45 42.0**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=125,slow=9.4,SNR=16						
	comp=Z,1.3nm,0.4s						
ARCES	**ARCESS Array B**	**32.62**	**2**	P	**P**	**03 46 43.0**	**-1.4**
	comp=Z,1.5nm,1.0s,baz=181,slow=8.6,SNR=3.6						
	comp=Z,1.5nm,1.0s						
DBIC	**Dimbokro**	**39.54**	**227**	P	**P**	**03 47 43.7**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=55,slow=9.7,SNR=1.6						
	comp=Z,0.9nm,0.4s						
KURBB	**Kurchatov Arra**	**41.26**	**53**	P	**P**	**03 47 55.9**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=272,slow=8.6,SNR=3.0						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.14**	**58**	P	**P**	**03 48 20.1**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=269,slow=7.8,SNR=7.0						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**44.93**	**47**	P	**P**	**03 48 25.1**	**-2.6**
	comp=Z,1.1nm,0.3s,baz=266,slow=9.0,SNR=5.5						
	comp=Z,1.1nm,0.3s						
ILAR	**Eielson Array**	**78.26**	**356**	P	**P**	**03 52 11.8**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=351,slow=3.8,SNR=4.7						
	comp=Z,0.1nm,0.5s						
ASAR	**Alice Springs**	**119.94**	**98**	PKP	**PKPdf**	**03 59 02.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=298,slow=2.3,SNR=4.5						

NAO ***23*** *03:43:09.9,34°.95N×24°.51E,h10km,MB3.9*
IDC ***23*** *03:43:28.8±0.6,37°.05N×23°.24E,h0km,mb4.0/17, mbtmp3.9/24,ML3.5/6,MS3.0/2,Error ellipse: s-maj=15.2km s-min=12.4km az=42.0*
ISK ***23*** *03:43:30.7,37°.07N×23°.17E,h4km,ML3.8/24*
NEIC ***23*** *03:43:31.0±1.7,37°.01N±0°.06×23°.07E±0°.05,h10km±1km, mb4.7/18,Error ellipse: s-maj=10.4km s-min=6.8km az=197.0*
ATH ***23*** *03:43:32.2,37°.01N×23°.16E,h17km,Mw4.0,Moment Tensor Solution. s5 Moment tensor: Mrr-1.23; Mθθ0.11; Mθθ1.11; Mrθ-0.28; Mrθ-0.75; Mθr-0.44; Fault plane solution: NP1:φs352.00000°,δ54.00000°,λ-63.00000°. NP2:φs131.00000°,δ44.00000°,λ-122.00000°.*
THE ***23*** *03:43:32.2,37°.0N±1°.0×2°.3E±°,h9km±2km,M3.8/12, MLh3.8/12*
HLW ***23*** *03:43:32.2,36°.55N×22°.81E,h9km±5km,Md4.2,Ml4.0*
AFAD ***23*** *03:43:34.6,37°.19N×23°.37E,h7km±5km,MW3.9*

ISC 23 03:43:32.2±0.8,37°.00N±0°.02×23°.17E±0°.02,h20km±3km, n257,σ1§36/286,mb4.4/24,5C-12D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNVA	**Monemvasia**	**0.32**	**198**	P	**Pg**	**03 43 39.6**	**+0.3**
MNVA				S	**Sg**	**03 43 44.6**	**+0.6**
VLI	**Veliai**	**0.33**	**214**	P	**Pg**	**03 43 38.8**	**-0.6**
VLI				S	**Sg**	**03 43 43.9**	**-0.4**
VLI	**Veliai**	**0.33**	**214**	P	**Pg**	**03 43 39.3**	**-0.1**
VLI				S	**Sg**	**03 43 44.1**	**-0.1**
YDRA	**Hydra**	**0.43**	**34**	P	**Pg**	**03 43 40.7**	**-0.4**
NPS1	**Neapolis Lacon**	**0.49**	**190**	P	**Pb**	**03 43 41.2**	**-0.9**
NPS1				S	**Sb**	**03 43 50.1**	**+1.2**
MET2	**Kameni Chora,**	**0.63**	**12**	P	**Pb**	**03 43 44.3**	**-0.2**
MET2				S	**Sb**	**03 43 53.4**	**+0.5**
NPLA	**Nafplio**	**0.64**	**333**	P	**Pb**	**03 43 44.6**	**-0.1**
MET5	**Makryloggos,Me**	**0.65**	**14**	P	**Pb**	**03 43 44.9**	**+0.1**
MET5				S	**Sb**	**03 43 53.7**	**+0.4**
MET4	**Agioi Theodoro**	**0.65**	**17**	P	**Pb**	**03 43 44.9**	**0.0**
MET4				S	**Sb**	**03 43 54.2**	**+0.6**
ARS1	**Argos**	**0.73**	**332**	P	**Pb**	**03 43 45.9**	**-0.3**
VLX	**Vlachokerasia**	**0.73**	**301**	P	**Pb**	**03 43 46.3**	**-0.1**
VLX				S	**Sb**	**03 43 56.3**	**+0.3**
KTHA	**Kythira Island**	**0.74**	**186**	Pg	**Pb**	**03 43 46.7**	**+0.3**
KTHA				Sg	**Sn**	**03 43 58.9**	**+0.6**
KTHA	**Kythira Island**	**0.74**	**186**	P	**Pb**	**03 43 46.8**	**+0.3**
KTHA	**Kythira Island**	**0.74**	**186**	P	**Pb**	**03 43 46.8**	**+0.3**
VLY	**Voula,Athens**	**0.99**	**30**	P	**Pb**	**03 43 50.5**	**-0.2**
VLY				S	**Sg**	**03 44 05.2**	**+0.6**
VLY	**Voula,Athens**	**0.99**	**30**	P	**Pb**	**03 43 50.7**	**-0.1**
VLY				S	**Sb**	**03 44 04.4**	**+1.0**
ITM	**Ithomi**	**1.01**	**281**	Pg	**Pb**	**03 43 50.6**	**-0.4**
ITM				Sg	**Sb**	**03 44 04.7**	**+0.8**
ITM	**Ithomi**	**1.01**	**281**	P	**Pb**	**03 43 50.7**	**-0.4**
ITM				Sn	**Sb**	**03 44 03.0**	**-0.8**
ITM	**Ithomi**	**1.01**	**281**	P	**Pb**	**03 43 51.3**	**+0.3**
ITM				S	**Sn**	**03 44 05.2**	**+0.3**
ITM	**Ithomi**	**1.01**	**281**	P	**Pb**	**03 43 51.0**	**0.0**
LVRA	**Laurium**	**1.01**	**44**	P	**Pb**	**03 43 51.0**	**+0.1**
LVRA				S	**Sb**	**03 44 04.5**	**+0.7**
MHLO	**Agia Marina, M**	**1.04**	**107**	P	**Pb**	**03 43 51.8**	**+0.3**
MHLO				S	**Sn**	**03 44 06.7**	**+1.0**
MHLO	**Agia Marina, M**	**1.04**	**107**	P	**Pb**	**03 43 52.1**	**+0.6**
MHLO				S	**Sb**	**03 44 05.3**	**+0.6**
LTK	**Loutraki**	**1.04**	**351**	P	**Pb**	**03 43 52.0**	**+0.4**
LTK				S	**Sg**	**03 44 07.0**	**+0.9**
LTK	**Loutraki**	**1.04**	**351**	P	**Pb**	**03 43 51.4**	**-0.1**
ATH	**Athens Observa**	**1.07**	**24**	P	**Pb**	**03 43 52.0**	**0.0**
ATH				S	**Sg**	**03 44 08.2**	**+1.2**
ATH	**Athens Observa**	**1.07**	**24**	P	**Pb**	**03 43 52.5**	**+0.4**
KIAA	**Kiato**	**1.07**	**342**	P	**Pb**	**03 43 52.5**	**+0.5**
NOAC	**Athens-Thissio**	**1.07**	**24**	P	**Pb**	**03 43 52.5**	**+0.4**
NOAC				S	**Sb**	**03 44 06.3**	**+0.6**
ATH5	**Athens Parliam**	**1.08**	**25**	P	**Pb**	**03 43 51.7**	**-0.5**
ELFA	**Athens-Elefsin**	**1.09**	**16**	P	**Pb**	**03 43 52.8**	**+0.3**
ATHP	**Athens-Neo Psi**	**1.11**	**26**	P	**Pn**	**03 43 52.9**	**+0.2**
MAGU	**Magoula**	**1.12**	**14**	P	**Pn**	**03 43 52.8**	**0.0**
MAGU				S	**Sn**	**03 44 07.9**	**+0.4**
MAGU	**Magoula**	**1.12**	**14**	P	**Pn**	**03 43 53.0**	**+0.2**
ANKY	**Antikythira Is**	**1.13**	**174**	P	**Pn**	**03 43 53.9**	**+1.0**
ANKY				S	**Sn**	**03 44 09.3**	**+1.4**
ANKY	**Antikythira Is**	**1.13**	**174**	P	**Pb**	**03 43 54.1**	**+1.0**
ANKY				S	**Sb**	**03 44 07.9**	**+0.5**
PYL	**PYLOS**	**1.14**	**265**	P	**Pn**	**03 43 53.2**	**+0.1**
PYL	**PYLOS**	**1.14**	**265**	P	**Pn**	**03 43 53.5**	**+0.4**
GUR	**Goura**	**1.15**	**325**	P	**Pn**	**03 43 52.9**	**-0.3**
GUR				S	**Sg**	**03 44 09.7**	**+0.1**
GUR	**Goura**	**1.15**	**325**	P	**Pn**	**03 43 53.0**	**-0.3**
ACHAR	**Athens-Acharne**	**1.17**	**23**	P	**Pn**	**03 43 53.8**	**+0.3**
VILL	**Villia**	**1.17**	**6**	P	**Pn**	**03 43 54.0**	**+0.4**
VILL				S	**Sg**	**03 44 10.4**	**+0.1**
PYL1	**Pylos**	**1.18**	**267**	P	**Pn**	**03 43 54.1**	**+0.5**
PTL	**Penteli**	**1.19**	**28**	P	**Pn**	**03 43 53.5**	**-0.3**
PTL				S	**Sg**	**03 44 11.3**	**+0.4**
PTL	**Penteli**	**1.19**	**28**	P	**Pn**	**03 43 53.8**	**-0.1**
STFN	**Stefani**	**1.22**	**14**	P	**Pn**	**03 43 54.7**	**+0.5**
STFN	**Stefani**	**1.22**	**14**	P	**Pn**	**03 43 54.7**	**+0.5**
VIL2	**Platees**	**1.22**	**4**	P	**Pn**	**03 43 53.1**	**-1.0**
DION	**Dionisos Attik**	**1.24**	**29**	P	**Pn**	**03 43 54.4**	**-0.1**
DION	**Dionisos Attik**	**1.24**	**29**	P	**Pn**	**03 43 54.8**	**+0.2**
AMT	**Artemida-Makis**	**1.28**	**295**	P	**Pn**	**03 43 55.8**	**+0.8**
KLV	**Kalavryta, Ach**	**1.32**	**323**	P	**Pn**	**03 43 56.1**	**+0.5**
KLV				S	**Sb**	**03 44 14.4**	**+1.4**
KLV	**Kalavryta, Ach**	**1.32**	**323**	P	**Pn**	**03 43 55.9**	**+0.3**
KLV1	**Kalavrita**	**1.33**	**321**	P	**Pn**	**03 43 56.1**	**+0.3**
KARY	**Karystos**	**1.45**	**44**	P	**Pn**	**03 43 57.3**	**0.0**
KARY	**Karystos**	**1.45**	**44**	P	**Pn**	**03 43 57.5**	**+0.2**
DRO	**Drossia**	**1.50**	**310**	P	**Pn**	**03 43 59.2**	**+1.1**
DRO	**Drossia**	**1.50**	**310**	P	**Pn**	**03 43 59.0**	**+1.0**
RODP	**Rodopos**	**1.51**	**161**	P	**Pn**	**03 43 59.1**	**+0.9**
KALE	**Kalithea**	**1.61**	**330**	P	**Pn**	**03 44 00.5**	**+0.8**
KALE	**Kalithea**	**1.61**	**330**	P	**Pn**	**03 44 00.0**	**+0.3**
TRIZ	**Trizonia**	**1.62**	**328**	P	**Pn**	**03 43 59.9**	**+0.3**
CH01	**Chania**	**1.63**	**155**	P	**Pn**	**03 44 00.6**	**+0.8**
CHAN	**Chania**	**1.63**	**154**	P	**Pn**	**03 44 01.3**	**+1.5**
CHAN	**

KNT	**Kendrikon**	**4.17**	**357**	P		**Pn**	**03 44 35.0**	**+0.3**
ESEN	**Aydn-Nazilli**	**4.21**	**77**	SPECP			03 44 35.0	
ESEN				P		**Pn**	**03 44 35.5**	**+0.3**
STEP	**BALIKESIR_Sava**	**4.30**	**55**	P		**Pn**	**03 44 37.8**	**+1.2**
KIRA	**zmir-Kiraz**	**4.33**	**72**	P		**Pn**	**03 44 34.8**	**-2.2**
OHR	**Ohrid**	**4.50**	**337**	*i* Pn		**Pn**	**03 44 43.2**	**+3.8**
OHR				*i* Sn		**Sn**	**03 45 34.5**	**+3.2**
MANT	**Manisa**	**4.53**	**69**	P		**Pn**	**03 44 41.8**	**+1.9**
RDO	**Rodhopi**	**4.54**	**23**			**Pn**	**03 44 39.3**	**-0.5**
BALB	**Balikesir**	**4.55**	**53**			**Pn**	**03 44 41.2**	**+1.3**
BKES	**Balkesir-Mer**	**4.64**	**52**	P		**Pn**	**03 44 43.0**	**+1.8**
DURS	**Dursunbey**	**4.92**	**56**	SPECP			03 44 46.0	
DURS				P		**Pn**	**03 44 46.3**	**+1.2**
USAK	**Uak-Merkez**	**4.94**	**68**	P		**Pn**	**03 44 46.9**	**+1.6**
ELL	**Elmali**	**5.41**	**91**			Pn	03 44 56.9	+5.0
TIP	**Timpagrande**	**5.50**	**295**			**Pn**	**03 44 53.7**	**+0.5**
TIP	**Timpagrande**	**5.50**	**295**	⇓P		**Pn**	**03 44 54.2**	**+1.1**
SLUM	**Salum**	**5.75**	**162**	P		**Pn**	**03 44 53.4**	**-3.0**
SLUM				S		Sn	03 45 52.3	-9.5
CEL	**Celeste**	**5.91**	**285**			**Pn**	**03 44 56.3**	**-2.4**
PDG	**Podgorica**	**6.21**	**332**	⇓P		**Pn**	**03 45 04.0**	**+1.3**
ELND	**Elena**	**6.28**	**19**	⇑P		**Pn**	**03 45 02.9**	**-0.8**
BORA	**Eskisehir**	**6.41**	**61**	Pn		**Pn**	**03 45 07.2**	**+1.7**
PLVB	**Pleven**	**6.48**	**9**	⇓P		Pn	03 45 12.2	+5.7
CUC	**Castrocucco**	**6.50**	**300**			**Pn**	**03 45 07.3**	**+0.6**
MATC	**Matruh**	**6.56**	**148**	P		**Pn**	**03 45 06.0**	**-1.6**
BOVS	**Bovan**	**6.73**	**351**	⇓P		**Pn**	**03 45 11.3**	**+1.5**
ACER	**Acerenza**	**6.79**	**306**			**Pn**	**03 45 09.5**	**-1.2**
VAE	**Valguarnera**	**7.00**	**277**	Pn		**Pn**	**03 45 17.5**	**+3.8**
	1.3nm,0.3s,baz=282,slow=18,SNR=2.5							
VAE				Sn		**Sn**	**03 46 34.7**	**+1.9**
	1.1nm,0.3s,baz=350,slow=23,SNR=1.3							
RAFF	**Raffo Rosso**	**7.04**	**274**			**Pn**	**03 45 14.4**	**+0.2**
MDVR	**Moldovita**	**7.86**	**352**	⇓P		Pn	03 45 31.9	+6.5
HERR	**Herculane**	**7.90**	**356**	⇑P		**Pn**	**03 45 28.6**	**+2.7**
SWA2		**7.96**	**165**	P		**Pn**	**03 45 23.2**	**-3.7**
ARR	**Arges**	**8.44**	**7**	⇓P		**Pn**	**03 45 34.0**	**+0.6**
VOIR		**8.55**	**9**	⇓P		**Pn**	**03 45 35.8**	**+0.8**
BRTR	**Keskin Array B**	**8.67**	**68**	Pn		**Pn**	**03 45 37.8**	**+1.1**
	0.3nm,0.3s,baz=255,slow=13,SNR=8.1							
	1.5nm,0.8s							
BRTR	**Keskin Array B**	**8.67**	**68**			**Pn**	**03 45 38.5**	**+1.8**
BZS	**Buzias**	**8.69**	**353**	⇓P		**Pn**	**03 45 38.7**	**+1.9**
MLR	**Muntele Rosu**	**8.74**	**13**	Pn		**Pn**	**03 45 39.8**	**+2.1**
	baz=196,slow=15							
MLR	**Muntele Rosu**	**8.74**	**13**			**Pn**	**03 45 38.5**	**+0.9**
MLR	**Muntele Rosu**	**8.74**	**13**	⇓P		**Pn**	**03 45 40.1**	**+2.5**
PLOR	**Plostina**	**9.23**	**15**	⇑P		**Pn**	**03 45 47.7**	**+3.5**
VRI	**Vrincioaia**	**9.26**	**16**	⇓P		Pn	03 45 50.4	+5.9
MORH	**Mrgy, Hungar**	**9.81**	**341**	⇓P		**Pn**	**03 45 51.1**	**-1.0**
HFRF	**Wahat Farafira**	**10.74**	**155**	P		**Pn**	**03 46 03.6**	**-1.4**
NBNS	**Bani Suef**	**10.79**	**138**	P		**Pn**	**03 46 06.4**	**+0.8**
MMAI	**Mount Meron Ar**	**10.79**	**108**	Pn		**Pn**	**03 46 04.0**	**-1.7**
	1.6nm,0.3s,baz=302,slow=13,SNR=8.5							
MMAI				Sn		**Sn**	**03 48 01.3**	**-4.6**
	1.4nm,0.3s,baz=306,slow=22,SNR=2.5							
	0.4nm,0.3s							
BALJ	**Balqa**	**11.39**	**112**	Pn		**Pn**	**03 46 14.0**	**+0.2**
GHAJ	**Ghor Haditha**	**11.73**	**115**			**Pn**	**03 46 17.9**	**-0.6**
MODS	**Modra-Piesok**	**12.16**	**341**	*e*PN		Pn	03 46 18.4	-5.9
EIL	**Elat**	**12.26**	**123**	Pn		**Pn**	**03 46 24.2**	**-1.5**
	0.8nm,0.3s,baz=233,slow=1.9,SNR=6.4							
EIL				Sn		Sn	03 48 32.7	-9.1
	0.5nm,0.3s,baz=290,slow=19,SNR=1.8							
	3.6nm,0.7s							
ASF	**Jabal al Asfar**	**12.29**	**109**	Pn		**Pn**	**03 46 24.7**	**-1.6**
	0.2nm,0.3s,baz=290,slow=15,SNR=2.5							
	1.5nm,0.7s							
LESA	**Schwarzleotal**	**12.99**	**327**	*e*Pn		**Pn**	**03 46 38.1**	**+2.5**
	1.2nm,0.4s							
FETA	**Feichten**	**13.62**	**321**	*e*Pn		**Pn**	**03 46 47.4**	**+3.1**
	1.6nm,0.5s							
GERES	**GERESS Array B**	**13.71**	**333**	Pn		**Pn**	**03 46 47.4**	**+1.9**
	0.1nm,0.3s,baz=144,slow=11,SNR=19							
	0.3nm,0.6s							
DAVOX	**Davos/Dischmat**	**13.89**	**319**	Pn		**Pn**	**03 46 50.3**	**+2.1**
	0.2nm,0.3s,baz=124,slow=9.0,SNR=8.3							
DAVOX				LR		LR	03 54 46.7	
	comp=Z,57nm,18.7s,baz=83,slow=49							
RETA	**Reutte**	**13.92**	**323**	*e*Pn		**P**	**03 46 53.1**	**-3.4**
	1.8nm,0.4s							
DAVA	**Damuels**	**14.22**	**320**	*e*Pn		**Pn**	**03 46 56.8**	**+4.2**
	6.3nm,0.8s							
CLL	**Collm**	**16.04**	**336**	P		**P**	**03 47 18.9**	**-0.9**
CLL	**Collm**	**16.04**	**336**	*i* sP		**P**	**03 47 21.8**	**+2.0**
	comp=Z,42nm,1.8s							
KBZ	**Khabaz**	**16.46**	**60**	Pn		**Pn**	**03 47 23.9**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=246,slow=13,SNR=9.0							
	comp=Z,1.7nm,0.9s							
GNI	**Garni**	**17.16**	**73**	LR		LR	03 54 01.1	
	comp=Z,56nm,21.0s,baz=81,slow=37							
ESDC	**Sonseca Array**	**21.42**	**285**	P		**P**	**03 48 19.6**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=82,slow=9.6,SNR=17							
	comp=Z,1.9nm,0.6s							
PAB	**San Pablo**	**21.72**	**285**	P		**P**	**03 48 24.0**	**+1.8**
HFS	**Hagfors**	**23.94**	**348**	P		**P**	**03 48 43.5**	**-1.2**
	comp=Z,3.5nm,0.5s,baz=157,slow=8.8,SNR=21							
	comp=Z,3.5nm,0.5s							
FINES	**FINESS Array B**	**24.54**	**3**	P		**P**	**03 48 48.3**	**-2.0**
	comp=Z,2.3nm,0.8s,baz=175,slow=10,SNR=5.3							
	comp=Z,2.3nm,0.8s							
FINES	**FINESS Array B**	**24.54**	**3**	P		**P**	**03 48 50.1**	**-0.2**
NB2	**NORSAR Subarra**	**25.23**	**346**	P		**P**	**03 48 55.3**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=156,slow=9.3							
NOA	**NORSAR Array B**	**25.23**	**346**	P		**P**	**03 48 55.4**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=153,slow=9.6,SNR=11							
	comp=Z,1.3nm,0.7s							
NC303	**NORSAR Array S**	**25.37**	**347**	P		**P**	**03 48 57.0**	**-0.9**
NC303				IAmb		IAmb	03 49 08.8	
	comp=Z,35nm,1.5s							
EKA	**Eskdalemuir Ar**	**25.61**	**324**	P		**P**	**03 48 59.9**	**-0.1**
	comp=Z,3.7nm,0.5s,baz=122,slow=9.0,SNR=18							
	comp=Z,3.7nm,0.5s							
ESK	**Eskdalemuir**	**25.62**	**324**	P		**P**	**03 49 01.0**	**+0.9**
TORD	**Torodi Ar. Bea**	**30.55**	**225**	P		**P**	**03 49 45.2**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=32,slow=12,SNR=1.0							
	comp=Z,0.8nm,0.3s							
ARCES	**ARCESS Array B**	**32.62**	**2**	P		**P**	**03 50 01.3**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=194,slow=8.7,SNR=3.5							
ARCES				PcP		**PcP**	**03 52 47.0**	**-0.9**
	comp=Z,7.3nm,1.3s,baz=182,slow=3.4,SNR=2.7							
	comp=Z,1.6nm,0.8s							
ARCES	**ARCESS Array B**	**32.62**	**2**	P		**P**	**03 50 01.4**	**-0.9**
ARCES				IAmb		IAmb	03 50 32.1	
	comp=Z,15nm,1.4s							
DBIC	**Dimbokro**	**39.54**	**227**	P		**P**	**03 51 01.9**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=66,slow=8.6,SNR=4.1							
	comp=Z,2.4nm,0.6s							
DBIC	**Dimbokro**	**39.54**	**227**	P		**P**	**03 51 00.7**	**-1.2**
KURBB	**Kurchatov Arra**	**41.26**	**53**	P		**P**	**03 51 14.9**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=280,slow=8.7,SNR=4.7							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**44.14**	**58**	P		**P**	**03 51 37.8**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=268,slow=8.0,SNR=15							
	comp=Z,0.9nm,0.3s							
MKAR	**Makanchi Array**	**44.14**	**58**	P		**P**	**03 51 38.3**	**-1.0**
ZAA0	**Zalesovo Array**	**44.93**	**47**	IAmb		IAmb	03 51 49.0	
	comp=Z,4.1nm,0.8s							
ZALV	**Zalesovo Beam**	**44.93**	**47**	P		**P**	**03 51 45.1**	**-0.4**
	comp=Z,3.5nm,0.6s,baz=268,slow=8.2,SNR=10							
	comp=Z,3.5nm,0.6s							
ZALV	**Zalesovo Beam**	**44.93**	**47**	P		**P**	**03 51 45.2**	**-0.2**
SONM	**Songino Array**	**59.58**	**51**	P		**P**	**03 53 34.3**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=319,slow=4.2,SNR=1.8							
	comp=Z,0.6nm,0.9s							
SCHQ	**Schefferville**	**60.74**	**318**	P		**P**	**03 53 42.5**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=63,slow=5.8,SNR=5.2							
	comp=Z,3.1nm,0.7s							
BOSA	**Boshof**	**65.29**	**178**	P		**P**	**03 54 13.3**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=18,slow=6.4,SNR=1.8							
	comp=Z,1.3nm,0.8s							
BOSA	**Boshof**	**65.29**	**178**	P		**P**	**03 54 13.4**	**+0.7**
BOSA				IAmb		IAmb	03 54 16.1	
	comp=Z,7.3nm,1.2s							
CMAR	**Chiang Mai Arr**	**67.96**	**83**	P		**P**	**03 54 29.3**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=310,slow=7.5,SNR=5.8							
	comp=Z,1.8nm,0.3s							
C27K	**Jago River**	**73.25**	**355**	P		**P**	**03 55 01.5**	**-0.1**
C27K				IAmb		IAmb	03 55 24.0	
	comp=Z,9.5nm,1.4s							
E28M	**Babbage River**	**73.93**	**353**	P		**P**	**03 55 06.4**	**+0.8**
E29M	**Blow River**	**73.98**	**353**	IAmb		IAmb	03 55 07.0	
	comp=Z,14nm,1.4s							
ILAR	**Eielson Array**	**78.27**	**356**	P		**P**	**03 55 29.5**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=345,slow=5.1,SNR=8.3							
	comp=Z,0.3nm,0.6s							

ILAR	**Eielson Array**	**78.27**	**356**	P		**P**	**03 55 30.3**	**+0.1**
PPLA	**Purkeypile**	**80.38**	**358**	P		**P**	**03 55 42.6**	**+0.6**
PPLA				IAmb		IAmb	03 55 44.0	
	comp=Z,20nm,1.4s							
STLK	**Strandline Lak**	**81.77**	**358**	IAmb		IAmb	03 55 55.0	
	comp=Z,5.6nm,0.9s							
YNE	**Yellowstone No**	**88.07**	**329**	IAmb		IAmb	03 56 23.9	
	comp=Z,3.7nm,0.8s							
PDAR	**Pinedale Array**	**89.69**	**327**	P		**P**	**03 56 28.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=72,slow=5.3,SNR=5.5							
	comp=Z,0.6nm,0.8s							
HWUT	**Hardware Ranch**	**91.50**	**328**	IAmb		IAmb	03 56 41.4	
	comp=Z,2.4nm,0.9s							
WRA	**Warramunga Arr**	**118.37**	**94**	PKP		**PKPdf**	**04 02 17.2**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=329,slow=1.5,SNR=2.8							
ASAR	**Alice Springs**	**119.94**	**98**	PKP		**PKPdf**	**04 02 20.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=300,slow=1.9,SNR=5.0							
QSPA	**South Pole Qui**	**126.85**	**180**	PKP		**PKiKP**	**04 02 36.5**	**+2.4**
	comp=Z,0.5nm,0.5s,baz=279,slow=5.2,SNR=1.6							

IDC 23 03:55:09.6±4.2, 6.17°S×133.59°E, h0km, mb3.6/2, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=249.1km s-min=20.5km az=82.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.71**	**177**	Pn	Pn	03 58 25.0	-0.5
	0.1nm,0.3s,baz=360,slow=13,SNR=4.9						
WRA				Sn	Sn	04 00 55.8	-2.9
	0.1nm,0.3s,baz=356,slow=26,SNR=1.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**17.40**	**179**	P	P	03 59 15.5	+0.1
	0.1nm,0.3s,baz=7.6,slow=11,SNR=16						
ASAR				S	Sn	04 02 28.9	+0.5
	0.2nm,0.7s,baz=4.7,slow=27,SNR=1.7						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**69.54**	**325**	P	P	04 06 18.8	-1.5
	0.5nm,0.8s,baz=110,slow=7.8,SNR=2.8						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**72.47**	**332**	P	P	04 06 39.4	+1.5
	0.3nm,0.3s,baz=141,slow=5.2,SNR=1.8						
	0.3nm,0.3s						

*IDC **23** 03:57:06.2±2.7, 31.97°N×136.26°E, h0km, mb3.4/2, mbtmp3.3/3, ML2.4/1, MS3.2/1, Error ellipse: s-maj=201.8km s-min=32.5km az=103.0*
*JMA **23** 03:57:21.9±0.1, 34.1°N±2.1×13.7°E±0.9°, h384km, MV2.6/26, SE OFF KII PENINSULA*

ISC 23 03:57:19.6±1.5, 34.3°N±0.2×137.0°E±0.1, h400km, n16, σ1.9 97/15, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.24**	**294**	*e*P	**Pn**	**03 58 09.8**	**+0.8**
JAA	**Atsumi**	**0.37**	**23**	*e*P	**Pn**	**03 58 09.7**	**+0.7**
JWY	**Kouya**	**1.14**	**267**	P	**Pn**	**03 58 11.9**	**+0.7**
JTNC	**Tanabenakahech**	**1.22**	**248**	*e*P	**Pn**	**03 58 12.2**	**+0.6**
JYTA	**Yamagatataniai**	**1.31**	**352**	P	**Pn**	**03 58 12.9**	**+1.1**
JWT	**Iwachi**	**1.63**	**308**	P	**Pn**	**03 58 14.1**	**+0.8**
JKG	**Kaga**	**2.05**	**345**	P	**Pn**	**03 58 16.9**	**+1.2**
JAI	**Aioi**	**2.15**	**257**	*e*P	**Pn**	**03 58 17.4**	**+0.9**
JRY	**Ryogami san**	**2.34**	**42**	*e*P	**Pn**	**03 58 20.0**	**+2.3**
MAT	**Matsushiro**	**2.46**	**24**	*e*P	**Pn**	**03 58 20.4**	**+1.8**
MJAR	**Matsushiro Arr**	**2.46**	**24**	Pn	**Pn**	**03 58 20.3**	**+1.8**
	0.1nm,0.3s,baz=194,slow=12,SNR=11						
	2.5nm,0.7s						
JAG	**Ashikaga**	**2.94**	**43**	*e*P	**Pn**	**03 58 24.0**	**+1.8**
JAG				*e*S	**S**	**03 59 08.2**	**-4.8**
JHS	**Saijyo**	**3.25**	**284**	*e*P	**Pn**	**03 58 26.5**	**+1.5**
BSO1	**Boso 1**	**3.33**	**83**	*e*S	**S**	**03 59 17.3**	**-0.6**
WRA	**Warramunga Arr**	**53.99**	**183**	P	P	04 06 14.5	+10
	0.2nm,0.3s,baz=0.1,slow=7.5,SNR=5.6						
WRA				LR	LR	04 27 46.1	
	comp=Z,20nm,19.0s,baz=200,slow=36						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**57.71**	**183**	P	P	04 06 42.3	+12
	0.2nm,0.6s,baz=1.3,slow=7.2,SNR=3.7						
	0.2nm,0.6s						

*IDC **23** 04:01:50.2±1.2, 23.65°S×115.08°W, h0km, mb4.1/4, mbtmp4.1/4, MS3.8/23, Error ellipse: s-maj=50.3km s-min=26.6km az=29.0*
*NEIC **23** 04:01:54.5±2.7, 23.37°S±0.06°×114.7°W±0.2, h10km±1km, mb4.6/10, Error ellipse: s-maj=36.3km s-min=9.5km az=275.0*
*GCMT **23** 04:01:56.5±0.4, 23.46°S±0.02°×114.93°W±0.02, h14km±2km, MW4.8/78, Moment Tensor Solution. s9,c12; s78,c95; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.29±.08; Mθθ-0.69±.08; Mϕϕ0.97±.10; Mrθ-0.19±.18; Mrϕ0.11±.19; Best double couple: Mo1.78600×10^16 NP1:ϕs166.00000°, δ83.00000°, λ-174.00000°. NP2: ϕs76.00000°, δ84.00000°, λ-7.00000°. Principal axes: T 1.9150, Plg0.0000°, Azm121.0000°; N -0.2580, Plg81.0000°, Azm212.0000°; P -1.6580, Plg9.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 04:01:50.3±1.3, 23.9°S±0.3×115.3°W±0.2, h10km, n54, σ0.8 71/20, mb4.5/8, MS3.8/22, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**6.23**	**122**	LR	LR	04 05 11.5	
	comp=Z,1µm,18.7s,baz=318,slow=32						
TAOE	**Nuku Hiva Isla**	**28.12**	**298**	*e*LR	LR	04 14 38.0	
	821nm,25.9s						
TBI	**Tubuai**	**31.30**	**264**	*e*LR	LR	04 15 55.4	
	915nm,27.2s						
PPT2	**Papeete2**	**32.65**	**275**	*e*S	S	04 13 20.4	-19
	35nm,23.5s						
PPT2				*e*LR	LR	04 16 40.1	
	266nm,27.0s						
PPT2				*e*LR	LR	04 16 45.6	
	147nm,37.8s						
H03N2	**Juan Fernandez**	**33.11**	**115**	T	T	04 43 28.8	
	baz=282,slow=75,SNR=48						
H03N3	**Juan Fernandez**	**33.12**	**115**	T	T	04 43 29.6	
	baz=282,slow=75,SNR=52						
H03N1	**Juan Fernandez**	**33.12**	**115**	T	T	04 43 24.8	
	baz=282,slow=75,SNR=36						
ATAH	**Atahualpa**	**39.07**	**71**	LR	LR	04 21 13.1	
	comp=Z,3.3nm,19.5s,baz=209,slow=30						
PLCA	**Paso Flores**	**40.86**	**125**	LR	LR	04 22 22.5	
	comp=Z,183nm,20.6s,baz=270,slow=30						
RAR	**Rarotonga**	**41.08**	**265**	LR	LR	04 22 07.7	
	comp=Z,94nm,18.3s,baz=90,slow=30						
LPAZ	**La Paz**	**44.73**	**89**	P	P	**04 10 05.2**	**+0.4**
	10nm,1.0s,baz=258,slow=5.1,SNR=23						
LPAZ				LR	LR	04 24 04.5	
	comp=Z,124nm,20.9s,baz=255,slow=30						
	10nm,1.0s						
LPAZ	**La Paz**	**44.73**	**89**	P	P	**04 10 05.2**	**+0.4**
LPAZ				IAmb	IAmb	04 10 06.6	
	comp=Z,15nm,1.1s						
JTS	**Las Juntas de**	**45.09**	**45**	LR	LR	04 23 47.3	
	comp=Z,131nm,20.6s,baz=249,slow=29						
LPIG	**La Paz**	**47.98**	**6**	LR	LR	04 24 18.3	
	comp=Z,68nm,19.1s,baz=206,slow=28						
ROSC	**El Rosal**	**49.07**	**60**	LR	LR	04 26 30.8	
	comp=Z,138nm,19.2s,baz=213,slow=30						
CPUP	**Villa Florida**	**52.12**	**106**	LR	LR	04 30 23.8	
	comp=Z,37nm,18.1s,baz=128,slow=33						
PMSA	**Palmer Station**	**52.41**	**155**	LR	LR	04 28 09.1	
	comp=Z,126nm,19.4s,baz=317,slow=30						
VILB	**Vilhena**	**53.07**	**88**	P	P	**04 11 07.4**	**-0.8**
PTLB	**Pontes e Lacer**	**53.22**	**92**	P	P	**04 11 09.1**	**-0.2**
PTLB				IAmb	IAmb	04 11 10.0	
	comp=Z,7.3nm,1.1s						
BFSC	**Mount Baldy Ra**	**57.88**	**358**	P	P	**04 11 43.4**	**+0.9**
BFSC				IAmb	IAmb	04 11 54.4	
	comp=Z,6.3nm,1.2s						
ANMO	**Albuquerque**	**59.13**	**8**	LR	LR	04 32 18.7	
	comp=Z,62nm,20.0s,baz=243,slow=31						
SHPR	**Sheep Range**	**60.10**	**0**	P	P	**04 11 59.5**	**+1.6**
KNB	**Kanab**	**60.65**	**2**	P	P	**04 12 01.1**	**-0.6**
KNB				IAmb	IAmb	04 12 07.4	
	comp=Z,7.2nm,1.4s						
NVAR	**Mina Array Bea**	**62.08**	**357**	P	P	**04 12 11.4**	**0.0**
	comp=Z,1.0nm,0.8s,baz=187,slow=7.9,SNR=6.9						
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**62.08**	**357**	P	P	**04 12 10.7**	**-0.8**
BDFB	**Brasilia**	**63.31**	**96**	P	P	**04 12 20.1**	**+0.1**
	comp=Z,6.7nm,1.0s,baz=128,slow=1.8						
	comp=Z,6.7nm,1.0s						
VNDA	**Vanda**	**65.28**	**194**	LR	LR	04 35 00.7	
	comp=Z,54nm,18.9s,baz=82,slow=30						
QSPA	**South Pole Qui**	**66.24**	**180**	P	P	04 12 47.9	+10
	comp=Z,2.0nm,0.9s,baz=98,slow=6.2,SNR=6.6						
QSPA				LR	LR	04 35 41.0	
	comp=Z,51nm,21.9s,baz=74,slow=30						
QSPA	**South Pole Qui**	**66.24**	**180**	P	P	04 12 46.1	+7.7
QSPA				IAmb	IAmb	04 12 59.2	
	comp=Z,5.0nm,1.1s						
TKL	**Tuckaleechee C**	**66.32**	**28**	LR	LR	04 38 04.9	
	comp=Z,57nm,20.6s,baz=178,slow=33						
PDAR	**Pinedale Array**	**66.56**	**5**	P	P	**04 12 40.9**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=207,slow=4.4,SNR=3.2						
	comp=Z,0.3nm,0.7s						
DZM	**Mont Dzumac**	**71.17**	**254**	*e*LR	LR	04 34 44.8	
	comp=Z,64nm,29.2s						
SNAA	**Sanae**	**74.21**	**162**	LR	LR	04 41 57.2	
	comp=Z,18nm,18.4s,baz=351,slow=32						
SADO	**Sadowa**	**75.90**	**26**	LR	LR	04 46 05.4	
	comp=Z,36nm,18.4s,baz=245,slow=35						
HNR	**Honiara**	**81.52**	**263**	LR	LR	04 42 51.3	
	comp=Z,30nm,21.6s,baz=212,slow=30						
H11S2	**WAKE ISLAND Hy**	**86.97**	**292**	T	T	05 50 39.4	
	baz=116,slow=75,SNR=296						
H11S1	**WAKE ISLAND Hy**	**86.98**	**292**	T	T	05 50 49.3	
	baz=116,slow=75,SNR=160						
H11S3	**WAKE ISLAND Hy**	**86.99**	**292**	T	T	05 50 41.1	
	baz=116,slow=75,SNR=104						
KDAK	**Kodiak Island**	**87.17**	**341**	LR	LR	04 46 29.8	
	comp=Z,147nm,18.1s,baz=115,slow=31						
H11N3	**WAKE ISLAND Hy**	**87.34**	**293**	T	T	05 51 10.2	
	baz=117,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**87.35**	**293**	T	T	05 51 14.2	
	baz=117,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy**	**87.36**	**293**	T	T	05 51 11.5	
	baz=117,slow=75,SNR=78						
SCHQ	**Schefferville**	**88.71**	**26**	LR	LR	04 51 40.1	
	comp=Z,43nm,20.8s,baz=220,slow=34						
MAW	**Mawson**	**88.75**	**179**	LR	LR	04 49 25.2	
	comp=Z,60nm,21.5s,baz=170,slow=32						
PMG	**Port Moresby**	**93.08**	**258**	LR	LR	04 49 25.3	
	comp=Z,42nm,19.9s,baz=152,slow=31						
FRB	**Frobisher Bay**	**94.70**	**19**	LR	LR	04 54 36.6	
	comp=Z,64nm,18.5s,baz=198,slow=34						
ASAR	**Alice Springs**	**97.91**	**240**	LR	LR	04 55 18.3	
	comp=Z,58nm,19.2s,baz=114,slow=33						
ZALV	**Zalesovo Beam**	**146.44**	**338**	PKPbc	**PKPab**	**04 21 31.7**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=25,slow=2.7,SNR=6.1						
ARTI	**Arti**	**147.23**	**7**	PKPbc	**PKPab**	**04 21 34.5**	**-0.7**
	comp=Z,4.6nm,0.9s,baz=270,slow=2.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**147.71**	**267**	PKPbc	**PKPab**	**04 21 38.3**	**0.0**
	comp=Z,1.3nm,0.3s,baz=77,slow=3.5,SNR=5.4						
BRTR	**Keskin Array B**	**149.42**	**52**	PKPbc	**PKiKP**	**04 21 41.1**	**0.0**
	comp=Z,1.2nm,0.9s,baz=259,slow=1.3,SNR=3.7						
BVAR	**Borovoye Array**	**150.62**	**353**	PKPbc	**PKiKP**	**04 21 43.5**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=250,slow=3.0,SNR=14						
BVAR				PKPab	**PKPab**	**04 21 48.5**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=343,slow=1.5,SNR=5.7						
KURBB	**Kurchatov Arra**	**151.27**	**342**	PKPbc	**PKPbc**	**04 21 43.5**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=23,slow=2.0,SNR=10						
KURBB				PKPab	**PKPab**	**04 21 51.0**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=25,slow=2.1,SNR=17						
MKAR	**Makanchi Array**	**153.18**	**333**	PKPbc	**PKiKP**	**04 21 49.7**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=19,slow=1.7,SNR=5.4						

JMA 23 04:19:10.9±0.4, 24.3°N±0.7×12.4°E±0.9°, h18km±3km, MV1.2/7, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

| Code |

IDC 23 04:23:13.2±4.6,2°.96S×150°.73E,h0km,mb3.2/2, mbtmp3.2/2,Error ellipse: s-maj=208.2km s-min=51.4km az=115.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.26**	**222**	P	P	04 28 22.7	+0.1
	0.4nm,0.5s,baz=51,slow=10,SNR=5.1						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.24**	**217**	P	P	04 28 50.6	+0.4
	0.3nm,0.8s,baz=46,slow=9.0,SNR=5.2						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**147.76**	**290**	PKPbc	PKPbc	04 42 59.9	-1.3
	0.4nm,0.3s,baz=45,slow=4.7,SNR=1.1						

IPEC 23 04:29:03.7±0.1,50°.12N×19°.12E,h1km,ML2.5/6,Error ellipse: s-maj=1.7km s-min=0.8km az=2.0
PRU 23 04:29:04.3,50°.13N×19°.07E,h0km

ISC 23 04:29:03.4±0.8,50°.11N±0°.04×19°.08E±0°.02,h0km,n23, σ0s48/38,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**76**	*e*Pg	**Pg**	**04 29 12.4**	**0.0**
OJC				*e*Sg	**Sg**	**04 29 18.7**	**+0.2**
STEB	**Steborice**	**0.86**	**259**	*e*PG	**Pb**	**04 29 21.2**	**0.0**
STEB				*e*SG	**Sb**	**04 29 32.7**	**-0.6**
	comp=Z,73nm,0.4s						
LANS	**Liptovska Anna**	**0.99**	**165**	*e*PG	**Pg**	**04 29 22.6**	**+0.3**
LANS				*e*SG	**Sb**	**04 29 36.1**	**-0.9**
LANS				*e*LG	Lg	04 29 40.7	
NIE	**Niedzica**	**1.05**	**131**	*e*Pg	**Pg**	**04 29 23.2**	**-0.2**
NIE				*e*Sg	**Sn**	**04 29 40.7**	**+0.1**
MORC	**Moravsky Berou**	**1.05**	**252**	*e*Pg	**Pb**	**04 29 24.4**	**0.0**
	baz=71						
MORC				*e*Sg	**Sg**	**04 29 37.3**	**+0.3**
	65nm,0.4s,baz=71						
ANAC	**Anensky vrch**	**1.10**	**269**	*e*Pg	**Pb**	**04 29 25.1**	**-0.2**
	baz=87						
ANAC				*e*Sg	**Sg**	**04 29 38.8**	**+0.2**
	93nm,0.5s,baz=87						
LOSC	**Losov**	**1.21**	**247**	*e*Pg	**Pb**	**04 29 27.2**	**+0.1**
	baz=66						
LOSC				*e*Sg	**Sg**	**04 29 42.3**	**+0.1**
	57nm,0.6s,baz=66						
KRLC	**Kraliky**	**1.48**	**270**	*e*PG	**Pn**	**04 29 30.7**	**-0.6**
KRLC				*e*SG	**Sg**	**04 29 50.8**	**-0.2**
	comp=Z,21nm,0.3s						
JAVC	**Velka Javorina**	**1.55**	**217**	*e*PN	**Pb**	**04 29 32.9**	**-0.1**
JAVC	**Velka Javorina**	**1.55**	**217**	*e*Pn	**Pb**	**04 29 32.8**	**-0.2**
	baz=36						
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*PG	**Pn**	**04 29 32.2**	**-0.2**
STHS				*e*SG	**Sg**	**04 29 54.3**	**+0.8**
STHS				*e*LG	Lg	04 30 05.6	
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*PG	**Pn**	**04 29 35.7**	**+0.1**
DPC				*e*SG	**Sb**	**04 29 59.7**	**-0.4**
VRAC	**Vranov**	**1.80**	**245**	*e*Pn	**Pn**	**04 29 36.3**	**+0.6**
	baz=63						
VRAC				*e*Sg	**Sg**	**04 30 00.9**	**-0.4**
	24nm,0.6s,baz=63						
KECS	**Kecovo**	**1.87**	**150**	*e*PN	**Pg**	**04 29 38.7**	**-0.4**
KECS				*e*SG	**Sn**	**04 30 01.2**	**+0.4**
KECS				*e*LG	Lg	04 30 10.6	
OSTC	**Ostas**	**1.89**	**285**	*e*PG	**Pb**	**04 29 38.0**	**-0.8**
OSTC				*e*SG	**Sb**	**04 30 02.7**	**-0.3**
	comp=Z,15nm,0.5s						
KSP	**Ksiaz**	**1.93**	**294**	*e*Pg	**Pg**	**04 29 40.3**	**0.0**
KSP				*e*Sg	**Sg**	**04 30 06.4**	**+1.1**
UPC	**Upice**	**2.01**	**283**	*e*SG	**Sg**	**04 30 07.9**	**0.0**
KRUC	**Moravsky**	**2.04**	**240**	*e*Pn	**Pn**	**04 29 39.6**	**+0.7**
	baz=58						
KRUC				*e*Sg	**Sg**	**04 30 08.3**	**-0.5**
	18nm,0.6s,baz=58						
MODS	**Modra-Piesok**	**2.10**	**215**	*e*SN	**Sb**	**04 30 09.0**	**+0.1**
TREC	**Trest**	**2.47**	**252**	*e*SG	**Sb**	**04 30 20.9**	**+1.2**
PVCC	**Panska Ves**	**2.92**	**280**	*e*SG	**Sg**	**04 30 37.2**	**-0.1**
	comp=Z,18nm,0.5s						
KHC	**Kasperske Hory**	**3.71**	**257**	*e*SG	**Sg**	**04 31 02.4**	**-0.1**
	comp=Z,7.7nm,0.4s						
CLL	**Collm**	**4.05**	**290**	*e*Sg	**Sg**	**04 31 14.0**	**+0.7**

DJA 23 04:57:22.7±1.3,4°N±9°×12°7E±°,h120km±12km,M3.5/5, MLv3.5/5
IDC 23 04:57:25.9±2.2,2°.57N×125°.83E,h0km,mb3.5/3, mbtmp3.5/3,MS3.3/1,Error ellipse: s-maj=199.2km s-min=27.8km az=65.0

ISC 23 04:57:16.2±9.0,4°N±1°×127°.2E±0°.1,h10km,n5,σ0s73/4, mb3.5/3,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.75**	**250**	P	**Pg**	**04 57 49.8**	**0.0**
SGSI				S	**Sb**	**04 58 10.5**	**0.0**
WRA	**Warramunga Arr**	**25.08**	**164**	P	**P**	**05 02 40.5**	**-0.6**
	0.4nm,0.3s,baz=338,slow=10,SNR=10						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**28.54**	**167**	P	**P**	**05 03 12.7**	**+0.4**
	0.2nm,0.3s,baz=345,slow=8.5,SNR=3.7						
	0.2nm,0.3s						
BRDH	**Bariadhala**	**38.93**	**301**	LR	LR	05 23 13.4	
	comp=Z,44nm,20.1s,baz=172,slow=40						
MKAR	**Makanchi Array**	**57.36**	**325**	P	P	05 07 20.3	+16
	0.2nm,0.4s,baz=117,slow=8.2,SNR=2.7						
	0.2nm,0.4s						

KRSC 23 05:09:43.4±1.1,55°.91N×163°.34E,h19km±17km,Ml4.5, Felt [I-II] at Krutoberegovo.
MOS 23 05:09:46.1±1.0,56°.06N×163°.20E,h45km,mb4.4/14,Error ellipse: s-maj=7.8km s-min=4.8km az=66.4
NEIC 23 05:09:48.6±1.4,56°.1N±0°.1×162°.7E±0°.2,h45km±8km, mb4.3/19,Error ellipse: s-maj=22.3km s-min=11.4km az=160.0
IDC 23 05:09:53.4±3.1,55°.66N×162°.81E,h105km±31km, mb3.7/14,mbtmp4.0/16,MS3.5/15,Error ellipse: s-maj=25.0km s-min=18.2km az=173.0

ISC 23 05:09:46.1±1.0,55°.94N±0°.03×163°.15E±0°.03,h29km±7km, n167,σ1s87/188,mb4.4/37,MS3.6/10,4C-1D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.33**	**326**	PN	**Pb**	**05 09 52.5**	**-1.4**
KBTR	**Krutoberegovo**	**0.33**	**326**	*e*P	**Pb**	**05 09 52.5**	**-1.4**
KBG	**Krutoberegovo**	**0.41**	**322**	PN	**Pb**	**05 09 53.5**	**-1.5**
KBG	**Krutoberegovo**	**0.41**	**322**	*e*P	**Pb**	**05 09 53.6**	**-1.5**
SMKR	**Semkarok**	**1.14**	**305**	PN	**Pn**	**05 10 06.1**	**-0.1**
SMKR				S	**Sb**	**05 10 22.3**	**+0.6**
SMKR	**Semkarok**	**1.14**	**305**	*e*P	**Pn**	**05 10 06.1**	**-0.1**
SMKR				*e*S	**Sb**	**05 10 22.4**	**+0.6**
BDR	**Baidarnaya**	**1.26**	**301**	*e*S	**Sb**	**05 10 25.6**	**+0.5**
SRKR	**Sorokina**	**1.32**	**304**	PN	**Pn**	**05 10 09.2**	**+0.5**
SRKR				S	**Sb**	**05 10 27.8**	**+1.0**
SRKR	**Sorokina**	**1.32**	**304**	*e*P	**Pn**	**05 10 09.3**	**+0.5**
SRKR				*e*S	**Sb**	**05 10 27.8**	**+1.0**
ZLN	**Zelenaya**	**1.32**	**274**	PN	**Pb**	**05 10 10.0**	**-0.4**
ZLN	**Zelenaya**	**1.32**	**274**	*e*P	**Pb**	**05 10 10.0**	**-0.4**
CIRR	**Tsirk**	**1.36**	**279**	PN	**Pn**	**05 10 10.2**	**+0.9**
CIRR				S	**Sb**	**05 10 28.7**	**+0.6**
CIRR	**Tsirk**	**1.36**	**279**	*e*P	**Pn**	**05 10 10.2**	**+0.9**
CIRR				*e*S	**Sb**	**05 10 28.8**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**1.38**	**271**	PN	**Pn**	**05 10 10.3**	**+0.7**
BZGR				S	**Sb**	**05 10 29.5**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**1.38**	**271**	*e*P	**Pn**	**05 10 10.3**	**+0.7**
BZGR				*e*S	**Sb**	**05 10 29.6**	**+0.8**
LGNR	**Loginova**	**1.39**	**277**	*e*S	**Sb**	**05 10 30.6**	**+1.5**
KLY	**Klyuchi**	**1.45**	**286**	PN	**Pn**	**05 10 09.6**	**-0.8**
KLY				S	**Sn**	**05 10 27.8**	**-0.6**
KLY	**Klyuchi**	**1.45**	**286**	*e*P	**Pn**	**05 10 09.6**	**-0.8**
KLY				*e*S	**Sn**	**05 10 27.8**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.50**	**272**	PN	**Pb**	**05 10 12.3**	**-1.0**
BZWR	**Bezymyannyi-We**	**1.50**	**272**	*e*P	**Pb**	**05 10 12.3**	**-1.0**
BZMR	**Bezymyannaya**	**1.50**	**271**	PN	**Pn**	**05 10 12.2**	**+1.0**
BZMR	**Bezymyannaya**	**1.50**	**271**	*e*P	**Pn**	**05 10 12.2**	**+1.0**
KIRR	**Kirishev**	**1.58**	**272**	PN	**Pn**	**05 10 13.3**	**+1.0**
KIRR				S	**Sb**	**05 10 34.5**	**+0.1**
KIRR	**Kirishev**	**1.58**	**272**	*e*P	**Pn**	**05 10 13.4**	**+1.0**
KIRR				*e*S	**Sb**	**05 10 34.6**	**+0.1**
KPT	**Kopyto**	**1.65**	**272**	PN	**Pn**	**05 10 14.4**	**+1.2**
KPT				S	**Sb**	**05 10 36.6**	**+0.3**
KPT	**Kopyto**	**1.65**	**272**	*e*P	**Pn**	**05 10 14.5**	**+1.2**
KPT				*e*S	**Sb**	**05 10 36.7**	**+0.3**
KMNR	**Kamenistaya**	**1.66**	**265**	PN	**Pn**	**05 10 14.6**	**+1.3**
KMNR				S	**Sb**	**05 10 37.6**	**+1.2**
KMNR	**Kamenistaya**	**1.66**	**265**	*e*P	**Pn**	**05 10 14.6**	**+1.3**
KMNR				*e*S	**Sb**	**05 10 37.7**	**+1.2**
TUMD	**Tumrok D**	**1.73**	**246**	PN	**Pn**	**05 10 15.4**	**+1.2**
TUMD				S	**Sb**	**05 10 37.3**	**-1.2**
TUMD	**Tumrok D**	**1.73**	**246**	*e*P	**Pn**	**05 10 15.4**	**+1.2**
TUMD				*e*S	**Sb**	**05 10 37.3**	**-1.2**
BKI	**Bering**	**1.76**	**113**	PN	**Pn**	**05 10 14.7**	**+0.1**
BKI				S	**Sn**	**05 10 37.2**	**+1.2**
BKI	**Bering**	**1.76**	**113**	*e*P	**Pn**	**05 10 14.8**	**+0.1**
BKI				*e*S	**Sn**	**05 10 37.3**	**+1.2**
KZV	**Kizimen**	**1.82**	**244**	PN	**Pn**	**05 10 16.7**	**+1.0**
KZV	**Kizimen**	**1.82**	**244**	*e*P	**Pn**	**05 10 16.7**	**+1.0**
TUMR	**Tumrok**	**1.83**	**250**	PN	**Pb**	**05 10 17.6**	**-1.3**
TUMR	**Tumrok**	**1.83**	**250**	*e*P	**Pb**	**05 10 17.7**	**-1.3**
KOZ	**Kozyrevsk**	**1.85**	**275**	PN	**Pb**	**05 10 17.7**	**-1.5**
KOZ				S	**Sb**	**05 10 42.7**	**+0.9**
KOZ	**Kozyrevsk**	**1.85**	**275**	*e*P	**Pb**	**05 10 17.8**	**-1.5**
KOZ				*e*S	**Sb**	**05 10 42.8**	**+0.9**
SRDR	**Sredinnyy**	**1.96**	**283**	PN	**Pb**	**05 10 19.8**	**-1.4**
SRDR				S	**Sb**	**05 10 45.3**	**+0.1**
SRDR	**Sredinnyy**	**1.96**	**283**	*e*P	**Pb**	**05 10 19.9**	**-1.4**
SRDR				*e*S	**Sb**	**05 10 45.4**	**+0.1**
ESO	**Esso**	**2.51**	**272**	PN	**Pn**	**05 10 26.4**	**+1.5**
ESO				S	**Sn**	**05 10 57.5**	**+3.0**
ESO	**Esso**	**2.51**	**272**	*e*P	**Pn**	**05 10 26.4**	**+1.5**
ESO				*e*S	**Sn**	**05 10 57.5**	**+3.0**
KII	**Karymskiy**	**2.86**	**230**	PN	**Pn**	**05 10 32.1**	**+2.3**
KII	**Karymskiy**	**2.86**	**230**	*e*P	**Pn**	**05 10 32.2**	**+2.3**
OSSR	**Ossora**	**3.32**	**359**	PN	**Pn**	**05 10 36.6**	**+0.5**
OSSR	**Ossora**	**3.32**	**359**	*e*P	**Pn**	**05 10 36.7**	**+0.5**
SPN	**Mys Shipunski**	**3.38**	**214**	PN	**Pn**	**05 10 36.4**	**-0.5**
SPN	**Mys Shipunski**	**3.38**	**214**	*e*P	**Pn**	**05 10 36.4**	**-0.5**
SPN				*e*S	**Sn**	**05 11 14.7**	**-1.3**
NLC	**Nalytchevo**	**3.55**	**220**	PN	**Pn**	**05 10 41.1**	**+1.9**
NLC				S	**Sn**	**05 11 21.3**	**+1.2**
NLC	**Nalytchevo**	**3.55**	**220**	*e*P	**Pn**	**05 10 41.2**	**+1.9**
NLC				*e*S	**Sn**	**05 11 21.4**	**+1.2**
SDLR	**Sedlovina**	**3.64**	**225**	PN	**Pn**	**05 10 42.5**	**+1.9**
SDLR	**Sedlovina**	**3.64**	**225**	*e*P	**Pn**	**05 10 42.5**	**+1.9**
KRER	**Koryakskii**	**3.68**	**226**	PN	**Pn**	**05 10 43.6**	**+2.4**
KRER	**Koryakskii**	**3.68**	**226**	*e*P	**Pn**	**05 10 43.6**	**+2.4**
KRX	**Arik**	**3.68**	**227**	PN	**Pn**	**05 10 43.5**	**+2.4**
KRX	**Arik**	**3.68**	**227**	*e*P	**Pn**	**05 10 43.5**	**+2.4**
SMAR	**Somma**	**3.69**	**225**	PN	**Pn**	**05 10 43.5**	**+2.1**
SMAR	**Somma**	**3.69**	**225**	*e*P	**Pn**	**05 10 43.5**	**+2.1**
AVH	**Avacha**	**3.71**	**226**	PN	**Pn**	**05 10 44.0**	**+2.5**
AVH	**Avacha**	**3.71**	**226**	*e*P	**Pn**	**05 10 44.1**	**+2.5**
UGLR	**Uglovaya**	**3.72**	**224**	PN	**Pn**	**05 10 43.7**	**+2.1**
UGLR	**Uglovaya**	**3.72**	**224**	*e*P	**Pn**	**05 10 43.8**	**+2.1**
KOK	**Koryaka**	**3.73**	**227**	PN	**Pn**	**05 10 46.2**	**+4.4**
KOK	**Koryaka**	**3.73**	**227**	*e*P	**Pn**	**05 10 46.3**	**+4.4**
GNL	**Ganaly**	**3.76**	**235**	PN	**Pn**	**05 10 44.9**	**+2.7**
GNL	**Ganaly**	**3.76**	**235**	*e*P	**Pn**	**05 10 44.9**	**+2.7**
DALK	**Dalny**	**3.88**	**223**	PN	**Pn**	**05 10 45.8**	**+2.0**
DALK				S	**Sn**	**05 11 30.3**	**+2.0**
DALK	**Dalny**	**3.88**	**223**	*e*P	**Pn**	**05 10 45.8**	**+2.0**
DALK				*e*S	**Sn**	**05 11 30.4**	**+2.0**
PET	**Petropavlovsk**	**3.92**	**224**		**Pn**	**05 10 45.4**	**+1.0**
PET	**Petropavlovsk**	**3.92**	**224**	*e*PN	**Pn**	**05 10 47.3**	**+2.9**
PET				*e*S	**Sn**	**05 11 32.3**	**+2.9**
PET				pmax	pmax		
	comp=Z,94nm,0.6s						
PET				smax	smax		
	comp=E,217nm,0.5s						
PET				smax	smax		
	comp=N,264nm,0.7s						
PET				MLR	MLR		
	comp=Z,100nm,11.0s						
PEA0B	**Petropavlovsk-**	**4.26**	**231**	Pn	**Pn**	**05 10 51.7**	**+2.8**
PEA0B	**Petropavlovsk-**	**4.26**	**231**	PN	**Pn**	**05 10 52.2**	**+3.2**
PETK	**Petropavlovsk-**	**4.26**	**231**	P	**Pn**	**05 10 51.5**	**+2.5**
	comp=Z,5.4nm,0.5s,baz=64,slow=18,SNR=5.2						
PETK				S	**Sb**	**05 11 46.7**	**-4.4**
	comp=Z,21nm,0.6s,baz=8.3,slow=11,SNR=5.1						
PETK				LR	LR	05 12 45.7	
	comp=Z,272nm,19.0s,baz=5.6,slow=44						
KRMR	**Karymshinskiy**	**4.28**	**225**	PN	**Pn**	**05 10 52.9**	**+3.7**
KRMR				S	**Sn**	**05 11 42.6**	**+4.5**
KRMR	**Karymshinskiy**	**4.28**	**225**	*e*P	**Pn**	**05 10 53.0**	**+3.7**
KRMR				*e*S	**Sn**	**05 11 42.7**	**+4.5**
GRL	**Gorelyy**	**4.51**	**223**	PN	**Pn**	**05 10 55.9**	**+3.3**
GRL	**Gorelyy**	**4.51**	**223**	*e*P	**Pn**	**05 10 56.0**	**+3.3**
MTVR	**Mutnovka**	**4.53**	**222**	PN	**Pn**	**05 10 55.4**	**+2.6**
MTVR	**Mutnovka**	**4.53**	**222**	*e*P	**Pn**	**05 10 55.4**	**+2.6**
TILK	**Tilichiki**	**4.79**	**18**	PN	**Pn**	**05 10 58.3**	**+2.1**
TILK	**Tilichiki**	**4.79**	**18**	*e*P	**Pn**	**05 10 58.4**	**+2.1**
KMSK	**Kamenskaya**	**6.74**	**12**	PN	**Pn**	**05 11 25.3**	**+2.4**
KMSK	**Kamenskaya**	**6.74**	**12**	*e*P	**Pn**	**05 11 25.3**	**+2.4**
SKR	**Severo-Kuril's**	**6.74**	**222**	*ce*PN	**Pn**	**05 11 26.5**	**+3.5**
SHEM	**Shemya Is, Ala**	**7.16**	**112**	LR	LR	05 14 24.6	
	comp=Z,133nm,18.5s,baz=288,slow=37						
MA2	**Magadan**	**7.56**	**304**	LR	LR	05 14 42.7	
	comp=Z,218nm,21.8s,baz=105,slow=38						
SEY	**Seymchan**	**8.90**	**326**	LR	LR	05 15 36.8	
	comp=Z,328nm,18.7s,baz=143,slow=38						
BILL	**Bilibino**	**12.23**	**6**	*i* PN	**Pn**	**05 12 38.3**	**+0.2**
SPIA	**Saint Paul Isl**	**14.69**	**74**	Pn	**P**	**05 13 14.9**	**-2.6**
K13K	**Kusilvak Mount**	**17.52**	**57**	P	**P**	**05 13 50.4**	**+1.4**
JKA	**Kamikawa-asahi**	**17.65**	**237**	P	**Pn**	**05 13 47.6**	**-2.0**
JKA				IAmb	IAmb	05 14 28.4	
	comp=Z,53nm,1.5s						
ASAJ	**Asahikawa**	**17.65**	**237**	P	**Pn**	**05 13 49.1**	**-0.5**
	comp=Z,7.8nm,0.9s,baz=126,slow=15,SNR=4.0						
ASAJ	**Asahikawa**	**17.65**	**237**	P	**Pn**	**05 13 47.7**	**-1.9**
ASAJ				pmax	pmax		
	comp=Z,53nm,1.5s						
YAK	**Yakutsk**	**18.14**	**303**	LR	LR	05 21 20.8	
	comp=Z,106nm,18.9s,baz=74,slow=38						
YAK	**Yakutsk**	**18.14**	**303**	*e*P	**Pn**	**05 13 53.0**	**-2.5**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.7s						
L14K	**Kuka Creek**	**18.43**	**59**	P	**Pn**	**05 13 59.3**	**+0.2**
ERM	**Erimo**	**19.04**	**231**	P	**P**	**05 14 03.6**	**-2.1**
ERM				IAmb	IAmb	05 14 19.8	
	comp=Z,36nm,1.4s						
ERM	**Erimo**	**19.04**	**231**	P	**P**	**05 14 03.6**	**-2.1**
ERM				pmax	pmax		
	comp=Z,36nm,1.4s						
N15K	**Kwethluk River**	**19.72**	**62**	P	**Pn**	**05 14 15.4**	**+0.7**
F17K	**Baldwin Pennin**	**19.80**	**44**	P	**Pn**	**05 14 14.9**	**-0.6**
F17K				IAmb	IAmb	05 14 48.3	
	comp=Z,27nm,1.4s						
O15K	**Ungalikthiuk R**	**19.95**	**65**	P	**Pn**	**05 14 18.4**	**+1.0**
O15K				IAmb	IAmb	05 14 33.6	
	comp=Z,15nm,1.1s						
F19K	**Shalieruckik Mo**	**21.24**	**43**	P	**P**	**05 14 32.9**	**+3.4**
TIXI	**Tiksi**	**21.35**	**331**	P	**P**	**05 14 34.1**	**+3.6**
	comp=Z,4.7nm,0.5s,baz=121,slow=8.5,SNR=13						
TIXI				LR	LR	05 23 33.7	
	comp=Z,123nm,20.7s,baz=197,slow=38						
	comp=Z,4.7nm,0.5s						
TIXI	**Tiksi**	**21.35**	**331**	P	**P**	**05 14 32.9**	**+2.3**
TIXI	**Tiksi**	**21.35**	**331**	*ce*P	**P**	**05 14 33.1**	**+2.5**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
D20K	**Etivluk River**	**22.11**	**39**	P	**P**	**05 14 40.3**	**+1.5**
D20K				IAmb	IAmb	05 14 52.1	
	comp=Z,13nm,1.2s						
C24K	**Franklin Bluff**	**25.08**	**38**	P	**P**	**05 15 09.3**	**+1.6**
C24K				IAmb	IAmb	05 15 10.4	
	comp=Z,7.7nm,0.8s						
ILAR	**Eielson Array**	**25.57**	**49**	P	**P**	**05 15 13.2**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=271,slow=9.2,SNR=6.0						
	comp=Z,0.5nm,0.8s						
MJA0	**Matsu Arr-Jizo**	**25.70**	**231**	*e*P	**P**	**05 15 14.6**	**+1.0**
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJB9	**Matsu-Tunnel**	**25.72**	**232**	P	**P**	**05 15 14.0**	**+0.2**
MJB9				IAmb	IAmb	05 15 21.0	
	comp=Z,11nm,1.0s						
MJAR	**Matsushiro Arr**	**25.72**	**232**	P	**P**	**05 15 13.8**	**0.0**
	comp=Z,3.0nm,0.7s,baz=29,slow=6.6,SNR=7.6						
MJAR				LR	LR	05 26 57.5	
	comp=Z,67nm,18.7s,baz=44,slow=40						
D25K	**Kavik River**	**25.85**	**39**	P	**P**	**05 15 15.7**	**+1.0**
D25K				IAmb	IAmb	05 15 16.9	
	comp=Z,5.2nm,0.8s						
C36M	**Paulatuk**	**33.70**	**38**	P	**P**	**05 16 25.4**	**+1.3**
SONM	**Songino Array**	**35.05**	**281**	P	**P**	**05 16 35.8**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=64,slow=7.4,SNR=4.4						
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**35.05**	**281**	*e*P	**P**	**05 16 36.2**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**36.26**	**174**	T	T	05 55 18.0	
	baz=357,slow=76,SNR=188						
H11N3	**WAKE ISLAND Hy**	**36.27**	**174**	T	T	05 55 19.6	
	baz=357,slow=76,SNR=141						
H11N1	**WAKE ISLAND Hy**	**36.27**	**174**	T	T	05 55 19.0	
	baz=357,slow=76,SNR=243						
H11S1	**WAKE ISLAND Hy**	**37.46**	**174**	T	T	05 57 03.2	
	baz=355,SNR=7.4						
H11S3	**WAKE ISLAND Hy**	**37.47**	**174**	T	T	05 57 11.4	
	baz=355,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**37.48**	**174**	T	T	05 57 11.4	
	baz=355,SNR=5.5						
ZALV	**Zalesovo Beam**	**42.77**	**302**	LR	LR	05 36 48.6	
	comp=Z,30nm,18.4s,baz=56,slow=38						
DGZ	**Jazzator, Alta**	**44.04**	**295**	*i* P	**P**	**05 17 50.3**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURK	**Kurchatov**	**47.76**	**301**	P	**P**	**05 18 18.5**	**-1.7**
KURK	**Kurchatov**	**47.76**	**301**	*ce*P	**P**	**05 18 18.7**	**-1.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	**Kurchatov Arra**	**47.87**	**301**	P	**P**	**05 18 19.3**	**-1.7**
	comp=Z,3.0nm,0.5s,baz=54,slow=7.8,SNR=28						
	comp=Z,3.0nm,0.5s						
MK31	**Makanchi Array**	**48.55**	**295**	*i* P	**P**	**05 18 24.5**	**-1.8**
MKAR	**Makanchi Array**	**48.55**	**295**	P	**P**	**05 18 24.6**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=51,slow=5.8,SNR=8.7						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**48.55**	**295**	*e*P	**P**	**05 18 24.8**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**50.03**	**308**	P	**P**	**05 18 36.2**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=66,slow=7.6,SNR=5.1						
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**51.13**	**342**	P	**P**	**05 18 46.0**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=19,slow=9.0,SNR=4.7						
	comp=Z,2.3nm,0.8s						
ARCES	**ARCESS Array B**	**51.13**	**342**	*e*P	**P**	**05 18 49.2**	**+3.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
APA	**Apatity**	**51.30**	**338**	*e*P	**P**	**05 18 42.7**	**-4.2**
APA				MLR	MLR		
	comp=Z,189nm,3.5s						
ARTI	**Arti**	**52.61**	**317**	LR	LR	05 42 53.4	
	comp=Z,61nm,19.4s,baz=62,slow=38						
ARTI	**Arti**	**52.61**	**317**	*d* P	**P**	**05 18 55.4**	**-1.4**
ARTI				S	**S**	**05 26 20.0**	**-1.8**
ARTI				SS	**SS**	**05 29 58.6**	**-0.8**
ARTI				pmax	pmax		
	comp=Z,7.0nm,2.1s						
KIRV	**Kirov**	**54.16**	**324**	LR	LR	05 45 14.8	
	comp=Z,61nm,18.0s,baz=336,slow=39						
PDAR	**Pinedale Array**	**54.63**	**64**	P	**P**	**05 19 14.7**	**+2.6**
	comp=Z,0.4nm,0.8s,baz=316,slow=4.6,SNR=2.9						
	comp=Z,0.4nm,0.8s						
KLMR	**Klimovskoe**	**55.37**	**330**	*e*P	**P**	**05 19 15.5**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KK31	**Karatay Array**	**57.05**	**299**	P	**P**	**05 19 27.5**	**-1.7**
KK31	**Karatay Array**	**57.05**	**299**	P	**P**	**05 19 27.5**	**-1.7**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	**Aktyubinsk**	**57.21**	**313**	LR	LR	05 48 52.9	
	comp=Z,50nm,18.1s,baz=222,slow=41						
AB31	**Akbulak array**	**57.30**	**311**	P	**P**	**05 19 29.3**	**-1.5**
AB31				IAmb	IAmb	05 19 30.5	
	comp=Z,1.9nm,0.5s						
FINES	**FINESS Array B**	**58.

AFI	**Afiamalu**	**7.65**	**43**		**Pn**	05 14 13.4	**-4.3**
AFI	**Afiamalu**	**7.65**	**43**	P	**Pn**	05 14 13.9	**-3.8**
AFI	**Afiamalu**	**7.65**	**43**	P	**Pn**	05 14 14.0	**-3.8**
AFI				S	S	05 15 37.2	-10
GLKZ	**Green Lake**	**9.64**	**184**	P	**Pn**	05 14 38.2	**-2.8**
GLKZ				S	S	05 16 20.9	-10
MARNC	**Mare, Loyalty**	**14.01**	**260**		**P**	05 15 31.7	**+0.4**
PINNC	**Pines Island,**	**14.69**	**256**		**Pn**	05 15 40.3	**-0.4**
PINNC	**Pines Island,**	**14.69**	**256**	P	**Pn**	05 15 40.2	**-0.5**
PINNC	**Pines Island,**	**14.69**	**256**	S	**S**	05 18 19.9	**+2.7**
OUENC	**Ouen Island, N**	**15.21**	**257**	P	**Pn**	05 15 46.1	**-0.7**
DZM	**Mont Dzumac**	**15.54**	**258**	P	**Pn**	05 15 50.0	**-0.7**
	74nm,0.8s,baz=77,slow=18,SNR=42						
ONTNC	**Ouen Toro**	**15.55**	**257**		**P**	05 15 49.0	**+0.9**
ONTNC	**Ouen Toro**	**15.55**	**257**	P	**Pn**	05 15 50.3	**-0.5**
OUZ	**Omahuta**	**17.57**	**206**	P	**P**	05 16 10.7	**+1.0**
WCZ	**Waipu Caves**	**17.91**	**203**	P	**P**	05 16 14.6	**+1.2**
KUZ	**Kuaotunu**	**18.18**	**199**	P	**P**	05 16 16.8	**+0.6**
MXZ	**Matakaoa Point**	**18.33**	**192**	P	**P**	05 16 18.5	**+0.8**
MXZ				S	**S**	05 19 25.0	**-3.7**
HAZ	**Te Kaha**	**18.62**	**193**	P	**P**	05 16 19.9	**-0.9**
HAZ				S	**S**	05 19 27.8	**-6.5**
PUZ	**Puketiti**	**18.83**	**191**	P	**P**	05 16 24.1	**+1.1**
PUZ				S	**S**	05 19 33.4	**-5.0**
TOZ	**Tahuroa Road**	**19.16**	**198**	P	**P**	05 16 26.6	**0.0**
TOZ	**Tahuroa Road**	**19.16**	**198**	P	**P**	05 16 28.8	**+2.2**
MWZ	**Matawai**	**19.23**	**193**	P	**P**	05 16 27.7	**+0.3**
URZ	**Urewera**	**19.25**	**194**	P	**P**	05 16 25.9	**-1.6**
	15nm,0.3s,baz=256,slow=8.5,SNR=26						
URZ	**Urewera**	**19.25**	**194**	P	**P**	05 16 26.4	**-1.1**
RTZ	**Ruatahuna**	**19.61**	**194**	P	**P**	05 16 31.1	**-0.3**
TLZ	**Tolley Road**	**19.71**	**197**	P	**P**	05 16 34.2	**+1.8**
HIZ	**Hauiti**	**20.08**	**199**	P	**P**	05 16 37.5	**+1.5**
BKZ	**Black Stump Fm**	**20.25**	**194**	P	**P**	05 16 35.4	**-2.3**
NGZ	**Ngauruhoe**	**20.48**	**196**	P	**P**	05 16 40.9	**+1.0**
TUVZ	**Tukino**	**20.56**	**196**	P	**P**	05 16 40.7	**+0.1**
WNVZ	**Wahianoa**	**20.63**	**196**	P	**P**	05 16 41.0	**-0.3**
VRZ	**Vera Road**	**20.67**	**198**	P	**P**	05 16 44.2	**+2.7**
KRHZ	**Kereru**	**20.74**	**194**	P	**P**	05 16 41.6	**-0.5**
PXZ	**Pawanui**	**21.00**	**193**	P	**P**	05 16 45.3	**+0.9**
PNHZ	**Pukenui**	**21.03**	**194**	P	**P**	05 16 43.8	**-0.9**
DVHZ	**Dannevirke**	**21.41**	**194**	P	**P**	05 16 47.8	**-0.3**
BFZ	**Birch Farm**	**21.75**	**194**	P	**P**	05 16 50.8	**-0.5**
MRZ	**Mangatainoka R**	**21.89**	**195**	P	**P**	05 16 50.7	**-1.8**
OGWZ	**Otaki Gorge**	**22.14**	**196**	P	**P**	05 16 54.1	**-0.7**
KIWZ	**Kapiti Island**	**22.25**	**196**	P	**P**	05 16 54.9	**-0.9**
CAW	**Cannon Point**	**22.44**	**196**	P	**P**	05 16 57.7	**+0.2**
DUWZ	**D'Urville Isla**	**22.46**	**198**	P	**P**	05 16 57.3	**-0.5**
TRWZ	**Traveller**	**22.56**	**194**	P	**P**	05 16 58.6	**0.0**
PAWZ	**Paruwai Farm**	**22.61**	**195**	P	**P**	05 16 58.8	**-0.3**
MSWZ	**Moikau Station**	**22.68**	**195**	P	**P**	05 16 59.2	**-0.6**
TCW	**Tory Channel**	**22.74**	**197**	P	**P**	05 16 59.5	**-0.8**
BHW	**Baring Head**	**22.77**	**196**	P	**P**	05 17 00.6	**+0.1**
PLWZ	**Palliser**	**22.83**	**195**	P	**P**	05 17 01.3	**+0.2**
QRZ	**Quartz Range**	**22.92**	**200**	P	**P**	05 17 02.7	**+0.8**
QRZ	**Quartz Range**	**22.92**	**200**	P	**P**	05 17 01.9	**0.0**
TKNZ	**Takaka Hill**	**22.97**	**199**	P	**P**	05 17 01.7	**-0.6**
NNZ	**Nelson**	**23.01**	**199**	P	**P**	05 17 02.6	**0.0**
TUWZ	**Tuamarina**	**23.04**	**197**	P	**P**	05 17 03.4	**+0.5**
MRNZ	**Matariki Terra**	**23.36**	**199**	P	**P**	05 17 06.5	**+0.7**
THZ	**Tophouse**	**23.65**	**199**	P	**P**	05 17 08.1	**-0.4**
DSZ	**Denniston Nort**	**23.98**	**201**	P	**P**	05 17 11.6	**0.0**
KHZ	**Kahutara**	**24.07**	**197**	P	**P**	05 17 08.8	**-3.3**
GVZ	**Greta Valley S**	**24.72**	**197**	P	**P**	05 17 17.3	**-0.7**
LTZ	**Lake Taylor**	**24.77**	**199**	P	**P**	05 17 17.7	**-0.9**
INZ	**Inchbonnie**	**24.98**	**200**	P	**P**	05 17 19.9	**-0.5**
OXZ	**Oxford**	**25.34**	**199**	P	**P**	05 17 23.9	**+0.4**
MQZ	**McQueen's Vall**	**25.51**	**197**	P	**P**	05 17 24.5	**-0.6**
WVZ	**Waitaha Valley**	**25.53**	**201**	P	**P**	05 17 26.1	**+0.9**
RPZ	**Rata Peaks**	**25.99**	**200**	P	**P**	05 17 32.7	**+3.3**
FOZ	**Fox Glacier**	**26.25**	**202**	P	**P**	05 17 31.1	**-0.5**
TMZ	**Timaru**	**26.61**	**199**	P	**P**	05 17 35.0	**+0.1**
LBZ	**Lake Benmore**	**26.88**	**200**	P	**P**	05 17 35.2	**-2.1**
JCZ	**Jackson Bay**	**27.09**	**203**	P	**P**	05 17 39.1	**-0.1**
AUWSH	**Wavell State H**	**28.37**	**248**	P	**P**	05 17 51.5	**+0.9**
MLZ	**Mavora Lakes**	**28.44**	**202**	P	**P**	05 17 51.1	**0.0**
WHZ	**Wether Hill Ro**	**28.96**	**202**	P	**P**	05 17 56.5	**+0.9**
WHZ				IAmb	IAmb	05 17 57.9	
	comp=Z,34nm,0.7s						
WHZ	**Wether Hill Ro**	**28.96**	**202**	P	**P**	05 17 56.6	**+1.0**
TW1H	**Toowoomba 1 Ha**	**29.33**	**249**	P	**P**	05 18 00.8	**+1.6**
EIDS	**Eidsvold**	**29.86**	**253**		**P**	05 18 03.4	**-0.4**
EIDS	**Eidsvold**	**29.86**	**253**	P	**P**	05 18 03.7	**-0.2**
ARMA	**Armidale**	**30.18**	**243**	P	**P**	05 18 07.3	**+0.7**
ARMA				IAmb	IAmb	05 18 08.8	
	comp=Z,25nm,0.7s						
ARMA	**Armidale**	**30.18**	**243**	P	**P**	05 18 07.4	**+0.7**
AUPHS	**Peel High Scho**	**30.96**	**242**	P	**P**	05 18 14.3	**+0.9**
SYDH	**Sydney Hard Ro**	**31.82**	**237**	P	**P**	05 18 21.5	**+0.8**
WOLH	**Wollongong Har**	**31.92**	**236**	P	**P**	05 18 21.8	**+0.2**
AULRC	**Lightning Ridg**	**33.09**	**246**	P	**P**	05 18 32.2	**+0.4**
AULRC	**Lightning Ridg**	**33.09**	**246**	S	**S**	05 23 26.3	**+1.7**
CNB	**Canberra Magne**	**33.39**	**235**	P	**P**	05 18 35.1	**+0.7**
AUDAR	**Daramalan Coll**	**33.54**	**235**	P	**P**	05 18 36.4	**+0.8**
AUSIS	**Research Schoo**	**33.58**	**235**	P	**P**	05 18 36.6	**+0.7**
AUMHS	**Melrose High S**	**33.62**	**235**	P	**P**	05 18 36.6	**+0.3**
AUMTS	**Mt Stromlo**	**33.67**	**235**	P	**P**	05 18 37.2	**+0.4**
CAN	**Canberra**	**33.67**	**235**	P	**P**	05 18 36.7	**-0.1**
CAN				IAmb	IAmb	05 18 37.9	
	comp=Z,39nm,1.0s						
CAN	**Canberra**	**33.67**	**235**	P	**P**	05 18 37.2	**+0.4**
AUSMG	**Snowy Mountain**	**34.34**	**234**	P	**P**	05 18 43.2	**+0.8**
CTA	**Charters Tower**	**34.38**	**263**	P	**P**	05 18 43.0	**0.0**
CTAO	**Charters Tower**	**34.38**	**263**		**P**	05 18 42.3	**-0.7**
CTAO	**Charters Tower**	**34.38**	**263**	P	**P**	05 18 42.9	**0.0**
CMSA	**Cobar Meteorol**	**35.40**	**243**	P	**P**	05 18 51.6	**+0.2**
QLP	**Quilpie**	**36.09**	**252**	P	**P**	05 18 57.3	**0.0**
MTSU	**Mount Surprise**	**36.44**	**266**	P	**P**	05 19 00.0	**-0.4**
TOO	**Toolangi**	**37.07**	**233**		**P**	05 19 05.1	**-0.3**
TAU	**Tasmania Unive**	**37.82**	**224**	P	**P**	05 19 11.6	**+0.1**
TAU				IAmb	IAmb	05 19 23.2	
	comp=Z,62nm,1.2s						
BRAT	**Ballarat**	**38.24**	**234**	P	**P**	05 19 15.7	**+0.6**
AUMTC	**Mt Clear Colle**	**38.30**	**234**	P	**P**	05 19 16.2	**+0.7**
COEN	**Coen**	**38.34**	**272**		**P**	05 19 15.4	**-0.8**
COEN	**Coen**	**38.34**	**272**	P	**P**	05 19 15.9	**-0.3**
STKA	**Stephens Creek**	**38.90**	**243**	P	**P**	05 19 20.7	**+0.1**
	comp=Z,25nm,0.7s,baz=87,slow=11,SNR=55						
	comp=Z,25nm,0.7s						
STKA	**Stephens Creek**	**38.90**	**243**	P	**P**	05 19 21.1	**+0.5**
INKA	**Innaminka**	**39.25**	**250**		**P**	05 19 23.5	**0.0**
AUMBR	**Murray Bridge**	**41.33**	**239**	P	**P**	05 19 40.1	**-0.1**
HTT	**Hallett**	**41.35**	**241**	P	**P**	05 19 40.4	**-0.2**
AUJCS	**Jamestown Cent**	**41.58**	**242**	P	**P**	05 19 42.7	**+0.3**
AUMAR	**Marden Senior**	**41.81**	**239**	P	**P**	05 19 43.8	**-0.3**
WHYH	**Whyalla**	**42.42**	**242**	P	**P**	05 19 48.7	**-0.3**
BBOO	**Buckleboo**	**43.66**	**243**		**P**	05 19 58.4	**-0.6**
BBOO	**Buckleboo**	**43.66**	**243**	P	**P**	05 19 58.3	**-0.6**
GENI	**Genyem**	**44.99**	**287**	P	**P**	05 20 09.6	**+0.1**
GENI	**Genyem**	**44.99**	**287**	P	**P**	05 20 15.4	**+5.9**
ASAR	**Alice Springs**	**45.51**	**256**	P	**P**	05 20 13.1	**-0.5**
	comp=Z,52nm,0.6s,baz=92,slow=8.3,SNR=825						
ASAR				S	**S**	05 26 25.5	**-3.1**
	comp=Z,1.6nm,0.9s,baz=91,slow=16,SNR=6.3						
WRAB	**Tennant Creek**	**45.52**	**261**	P	**P**	05 20 12.8	**-0.8**
WRAB				IAmb	IAmb	05 20 13.2	
	comp=Z,18nm,0.5s						
WRAB	**Tennant Creek**	**45.52**	**261**	P	**P**	05 20 12.0	**-1.6**
WRA	**Warramunga Arr**	**45.52**	**261**	P	**P**	05 20 12.4	**-1.3**
	comp=Z,16nm,0.5s,baz=98,slow=5.8,SNR=203						
WRA				S	**S**	05 26 24.0	**-4.8**
	comp=Z,0.7nm,0.8s,baz=101,slow=12,SNR=4.3						
	comp=Z,16nm,0.5s						
AUALC	**St Philip's Co**	**45.52**	**256**	P	**P**	05 20 13.0	**-0.7**
MTN	**Manton Dam**	**49.96**	**270**		**P**	05 20 46.4	**-1.1**
KNRA	**Kununurra**	**51.52**	**265**		**P**	05 20 58.1	**-0.8**
KNRA				IAmb	IAmb	05 20 59.6	
	comp=Z,26nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.95**	**262**	P	**P**	05 21 16.5	**0.0**
SOEI	**Soe**	**57.28**	**271**		**P**	05 21 40.6	**+0.4**
SOEI	**Soe**	**57.28**	**271**	P	**P**	05 21 40.0	**-0.2**
SOEI	**Soe**	**57.28**	**271**	P	**P**	05 21 41.2	**+1.0**
	comp=Z,65nm,0.5s						
PSA00	**Pilbara Seismi**	**58.65**	**256**	P	**P**	05 21 49.1	**-0.3**
SBA	**Scott Base**	**58.81**	**184**	P	**P**	05 21 52.4	**+2.9**
SBA				IAmb	IAmb	05 22 07.6	
	comp=Z,64nm,1.4s						
MBWA	**Marble Bar**	**58.83**	**257**	P	**P**	05 21 50.2	**-0.5**
VNDA	**Vanda**	**58.87**	**185**	P	**P**	05 21 51.9	**+2.0**
	comp=Z,2.0nm,0.7s,baz=357,slow=8.5,SNR=8.5						
	comp=Z,2.0nm,0.7s						

MEEK	**Meekatharra**	**58.97**	**250**	P	**P**	05 21 50.7	**-0.9**
KLBR	**Kellerberrin**	**59.16**	**244**	P	**P**	05 21 52.3	**-0.5**
NWAO	**Narrogin (SRO)**	**59.49**	**243**		**P**	05 21 54.5	**-0.4**
NWAO				IAmb	IAmb	05 21 56.4	
	comp=Z,23nm,0.7s						
NWAO	**Narrogin (SRO)**	**59.49**	**243**	P	**P**	05 21 54.8	**-0.1**
NWAO	**Narrogin (SRO)**	**59.49**	**243**	P	**P**	05 21 54.9	**0.0**
EDFI	**Ende, Flores**	**60.01**	**271**	P	**P**	05 21 58.1	**-0.7**
	comp=Z,36nm,0.8s						
BLDU	**Ballidu**	**60.15**	**245**	P	**P**	05 21 58.6	**-0.8**
MUN	**Mundaring**	**60.44**	**244**	P	**P**	05 22 01.4	**+0.1**
MORW	**Morawa**	**60.91**	**247**	P	**P**	05 22 04.2	**-0.4**
PLAI	**Plampang**	**63.67**	**270**	P	**P**	05 22 22.7	**-0.2**
PLAI	**Plampang**	**63.67**	**270**	P	**P**	05 22 22.5	**-0.4**
	comp=Z,73nm,0.7s						
TOLI2	**Tolitoli**	**64.21**	**281**	P	**P**	05 22 27.5	**+1.1**
TOLI2				IAmb	IAmb	05 23 04.2	
	comp=Z,13nm,1.0s						
TWSI	**Taliwang, Sumb**	**64.54**	**269**	P	**P**	05 22 28.1	**-0.4**
CASY	**Casey**	**65.11**	**205**	P	**P**	05 22 31.4	**+0.2**
CASY				IAmb	IAmb	05 22 41.7	
	comp=Z,30nm,1.1s						
JAGI	**Jajag, Banyuwa**	**67.20**	**269**	P	**P**	05 22 44.0	**-1.3**
MJAR	**Matsushiro Arr**	**69.97**	**323**	P	**P**	05 23 01.1	**-0.7**
	comp=Z,2.4nm,0.8s,baz=166,slow=5.8,SNR=4.7						
	comp=Z,2.4nm,0.8s						
JOW	**Kunigami**	**70.22**	**309**	P	**P**	05 23 02.3	**-1.2**
QSPA	**South Pole Qui**	**70.46**	**180**	P	P	05 23 09.4	**+4.9**
	comp=Z,14nm,0.7s,baz=291,slow=0.3,SNR=76						
QSPA	**South Pole Qui**	**70.46**	**180**	P	**P**	05 23 08.8	**+4.3**
QSPA				IAmb	IAmb	05 23 10.2	
	comp=Z,14nm,0.8s						
UGM	**Wanagama**	**70.79**	**268**	P	**P**	05 23 06.8	**-0.4**
UNV	**Unalaska Valle**	**73.72**	**7**	P	**P**	05 23 23.2	**-0.2**
TPUB	**Ta-pu**	**74.17**	**302**	P	**P**	05 23 26.8	**0.0**
SMAI	**San Martin Ant**	**79.15**	**159**	P	**P**	05 23 55.9	**+2.2**
SMAI				IAmb	IAmb	05 23 56.6	
	comp=Z,11nm,0.7s						
NVAR	**Mina Array Bea**	**79.83**	**43**	P	**P**	05 24 00.9	**+2.9**
	comp=Z,1.2nm,0.7s,baz=229,slow=8.2,SNR=8.4						
NVAR				pP	**pwP**	05 25 23.1	**+2.2**
	comp=Z,0.1nm,0.3s,baz=238,slow=2.2,SNR=2.2						
	comp=Z,1.2nm,0.7s						
N14K	**Kuskokwak Cree**	**80.24**	**8**	P	**P**	05 23 59.9	**+0.5**
BELA	**Belgrano 2**	**80.34**	**173**	P	**P**	05 24 00.0	**+0.2**
BELA				IAmb	IAmb	05 24 01.4	
	comp=Z,6.8nm,0.8s						
N15K	**Kwethluk River**	**80.69**	**9**	P	**P**	05 24 02.5	**+0.7**
N15K				IAmb	IAmb	05 24 06.7	
	comp=Z,16nm,1.1s						
J05D	**Fort Rock, OR**	**80.91**	**38**	P	**P**	05 24 04.0	**+0.5**
O18K	**Koktuh Hills**	**81.18**	**11**	P	**P**	05 24 04.6	**+0.3**
O18K				IAmb	IAmb	05 24 06.2	
	comp=Z,18nm,1.0s						
N19K	**Bonanza Creek**	**82.20**	**11**	P	**P**	05 24 08.8	**-0.9**
N19K				IAmb	IAmb	05 24 20.3	
	comp=Z,20nm,1.4s						
L16K	**Owhat River**	**82.26**	**8**	P	**P**	05 24 10.8	**+1.0**
L16K				IAmb	IAmb	05 24 25.2	
	comp=Z,19nm,1.5s						
K15K	**Wolf Creek Mou**	**82.56**	**7**	P	**P**	05 24 13.2	**+1.8**
K15K				IAmb	IAmb	05 24 19.7	
	comp=Z,25nm,1.4s						
TXAR	**Lajitas Array**	**85.90**	**57**	P	**P**	05 24 32.7	**+3.7**
	comp=Z,0.6nm,0.8s,baz=218,slow=7.3,SNR=5.8						
TXAR				pP	**pwP**	05 25 53.6	**+0.3**
	comp=Z,0.8nm,1.0s,baz=256,slow=5.0,SNR=4.0						
	comp=Z,0.6nm,0.8s						
CCB	**Clear Creek Bu**	**86.98**	**12**	P	**P**	05 24 33.1	**0.0**
ILAR	**Eielson Array**	**87.27**	**12**	P	**P**	05 24 34.9	**+0.3**
	comp=Z,0.5nm,0.4s,baz=220,slow=4.9,SNR=30						
ILAR				pP	**pwP**	05 25 56.9	**-1.9**
	comp=Z,1.2nm,1.0s,baz=225,slow=6.0,SNR=4.1						
	comp=Z,0.5nm,0.4s						
PDAR	**Pinedale Array**	**87.77**	**43**	P	**P**	05 24 40.2	**+2.4**
	comp=Z,0.3nm,0.7s,baz=286,slow=4.4,SNR=3.3						
	comp=Z,0.3nm,0.7s						
XAN	**Xi'an**	**88.23**	**307**	*e*P	**P**	05 24 39.5	**-0.4**
TROLL	**Troll, Antarti**	**88.62**	**180**	⇑P	**P**	05 24 41.5	**+0.3**
	comp=Z,239nm,0.8s						
SNAA	**Sanae**	**88.88**	**178**	⇑P	**P**	05 24 42.0	**-0.3**
	comp=Z,12nm,0.5s						
SNAA	**Sanae**	**88.88**	**178**	P	**P**	05 24 42.5	**+0.2**
	comp=Z,0.7nm,0.5s,baz=211,slow=9.4,SNR=12						
	comp=Z,0.7nm,0.5s						
VNA3	**Neumayer Olymp**	**88.97**	**176**	⇑P	**P**	05 24 43.0	**+0.3**
	comp=Z,17nm,0.7s						
HHC	**Hu-ho-hao-te**	**89.31**	**314**	*e*P	**P**	05 24 43.4	**-1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,50nm,3.7s						
VNA2	**Neumayer--Watz**	**89.43**	**177**	⇑P	**P**	05 24 45.5	**+0.7**
	comp=Z,12nm,0.6s,baz=177,slow=4.3						
VNA1	**Neumayer--Stat**	**89.65**	**176**	⇑P	**P**	05 24 46.1	**+0.4**
	comp=Z,9.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.58**	**289**	P	**P**	05 24 52.9	**+1.8**
	comp=Z,3.7nm,0.8s,baz=121,slow=2.9,SNR=18						
	comp=Z,3.7nm,0.8s						
CHTO	**Chiang Mai**	**90.70**	**290**	P	**P**	05 24 53.5	**+1.9**
PZH	**PanZhiHua**	**91.00**	**298**	P	**P**	05 24 54.8	**+1.8**
BVAR	**Borovoye Array**	**118.91**	**320**	PKP	**PKiKP**	05 30 34.0	**-0.4**
	comp=Z,0.6nm,0.3s,baz=137,slow=3.4,SNR=4.5						
ARCES	**ARCESS Array B**	**128.19**	**350**	PKP	**PKiKP**	05 30 51.7	**-0.7**
	comp=Z,0.4nm,0.4s,baz=354,slow=2.4,SNR=6.3						
FINES	**FINESS Array B**	**135.14**	**344**	PKP	**PKPdf**	05 31 04.8	**-0.3**
	comp=Z,1.5nm,0.9s,baz=147,slow=2.8,SNR=4.3						
HFS	**Hagfors**	**138.78**	**352**	PKhKP	PKPpre	05 31 05.0	
	comp=Z,1.3nm,0.7s,baz=321,slow=3.8,SNR=4.2						
AKASG	**Malin Array Be**	**142.61**	**332**	PKhKP	PKPpre	05 31 15.2	
	comp=Z,0.7nm,0.4s,baz=42,slow=3.9,SNR=4.7						
EKA	**Eskdalemuir Ar**	**144.04**	**6**	PKP	**PKPdf**	05 31 20.2	**-1.2**
	comp=Z,0.8nm,0.6s,baz=341,slow=2.4,SNR=2.3						
BRTR	**Keskin Array B**	**146.82**	**314**	PKPbc	**PKPbc**	05 31 29.0	**-0.2**
	comp=Z,0.9nm,0.5s,baz=140,slow=5.1,SNR=7.5						
MMAI	**Mount Meron Ar**	**148.05**	**301**	PKPbc	**PKiKP**	05 31 33.5	**-0.6**
	comp=Z,1.5nm,0.4s,baz=64,slow=3.8,SNR=7.2						
GERES	**GERESS Array B**	**149.55**	**346**	PKPbc	**PKiKP**	05 31 36.5	**-0.2**
	comp=Z,0.1nm,0.3s,baz=61,slow=3.8,SNR=3.6						

PRU **23** *05:20:24.4,51°.42N×16°.22E,h0km,***Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.84**	**187**		*e*PG	Pg		05 20 40.2	-0.3
CHVC					*e*SG	Sg		05 20 52.0	+0.7
OSTC	**Ostas**	**0.86**	**180**		*e*PG	Pg		05 20 40.4	-0.5
OSTC					*e*SG	Sg		05 20 52.5	+0.4
UPC	**Upice**	**0.92**	**188**		*e*PG	Pg		05 20 41.3	-0.8
UPC					*e*SG	Sg		05 20 53.8	-0.2
	comp=Z,5.7nm,0.3s								
DPC	**Dobruska-Polom**	**1.07**	**177**		*e*PG	Pg		05 20 43.5	-1.4
DPC					*e*SG	Sg		05 20 58.7	-0.1
PVCC	**Panska Ves**	**1.37**	**230**		*e*	Sb		05 21 08.8	-0.2
PVCC	**Panska Ves**	**1.37**	**230**		*e*PG	Pg		05 20 49.7	-1.0
PVCC					*e*SG	Sb		05 21 08.8	-0.2
	comp=Z,10.0nm,0.2s								
PVCC	**Panska Ves**	**1.37**	**230**		*e*P	Pg		05 20 49.7	-1.0
STEB	**Steborice**	**1.79**	**146**		*e*SG	Sb		05 21 21.3	+0.4
KHC	**Kasperske Hory**	**2.85**	**218**		*e*SG	Sb		05 21 53.5	+1.9

SNET **23** *05:29:04.9±1.5,13°.31N×87°.93W,h6km,ML3.0*
CATAC 23 05:29:04.5±0.2,**13°.N**±2°×**8°8W**±°,**h7**km±1km,**M2.9**/13,
MLv2.9/13,**3C,Error ellipse: s-maj=3.9km s-min=1.8km az=26.3,confirmed,Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.09**	**41**	⇑	*i*P	Pg		05 29 07.3	+0.7
LCND				⇑	*i*P	Pg		05 29 07.3	+0.7
LCND					*e*S	Sg		05 29 09.1	+0.8
LCND	**La Caada**	**0.09**	**41**		P	Pg		05 29 07.3	+0.7
CNCH	**Conchagua**	**0.12**	**72**	⇑	*i*P	Pg		05 29 08.0	+0.8
CNCH					*e*S	Sg		05 29 09.9	+0.7
CNCH	**Conchagua**	**0.12**	**72**		P	Pg		05 29 08.0	+0.8
CNCH					S	Sg		05 29 11.0	+1.9
CNRM	**Centro Naciona**	**0.32**	**318**		P	Pg		05 29 11.2	+0.6
CNRM	**Centro Naciona**	**0.32**	**318**		S	Sb		05 29 16.3	-1.4
LCY	**Lacayo**	**0.38**	**299**		*e*P	Pb		05 29 12.8	-0.8
RANC	**El Ranchito**	**0.38**	**301**		*e*P	Pg		05 29 12.6	+0.7
PACA	**Pacayal**	**0.43**	**303**		*e*P	Pb		05 29 13.6	-0.8
PACA	**Pacayal**	**0.43**	**303**		P	Pg		05 29 13.5	+0.7
PACA	**Pacayal**	**0.43**	**303**		S	Sb		05 29 19.8	-1.3
CSGN	**Cosiguina Volc**	**0.47**	**124**		P	Pg		05 29 14.0	+0.5
CSGN					S	Sb		05 29 21.0	-1.1
POTN	**Potosi Cosigui**	**0.50**	**118**		P	Pg		05 29 14.8	+0.7
POTN					S	Sb		05 29 22.3	-0.6
TECA	**Tecapa**	**0.59**	**296**		*e*P	Pb		05 29 16.7	-0.5
TECO	**Alcaldia de Te**	**0.86**	**290**		*e*P	Pg		05 29 20.8	-0.2
TECO					*e*S	Sg		05 29 32.6	+0.4
TECO	**Alcaldia de Te**	**0.86**	**290**		P	Pg		05 29 20.9	0.0
UESV	**Universidad de**	**0.90**	**296**		S	Sb		05 29 34.3	-0.4
UESV	**Universidad de**	**0.90**	**296**		P	Pg		05 29 22.0	+0.2
TGUH	**Tegucigalpa,Un**	**1.05**	**39**		P	Pg		05 29 24.1	-0.5
TGUH					S	Sg		05 29 38.6	+0.2
PAVA	**Las Pavas**	**1.07**	**296**		P	Pg		05 29 24.8	-0.2
PAVA	**Las Pavas**	**1.07**	**296**		S	Sb		05 29 39.8	+0.3
PKGN	**Cerro Pekin**	**1.11**	**121**		P	Pg		05 29 25.1	-0.6
PKGN					S	Sb		05 29 40.9	+0.3
PANCS	**Alcalda de**	**1.25**	**287**		S	Sg		05 29 44.3	-0.4
LOMA	**Loma Larga**	**1.25**	**289**		S	Sg		05 29 44.8	0.0
LOMA	**Loma Larga**	**1.25**	**289**		P	Pb		05 29 27.7	-0.8
POLN	**Al Sur del Vol**	**1.26**	**118**		P	Pn		05 29 27.3	-1.1
POLN					S	Sb		05 29 44.9	-0.1
YUSH	**Yuscaran**	**1.29**	**57**		P	Pn		05 29 28.1	-1.0
YUSH	**Yuscaran**	**1.29**	**57**		S	Sb		05 29 45.8	-0.3
LLGN	**La Laguna**	**1.33**	**314**		S	Sb		05 29 46.6	-0.5
LLGN	**La Laguna**	**1.33**	**314**		P	Pn		05 29 28.7	-0.8
UEES	**Universidad Ev**	**1.34**	**291**		S	Sg		05 29 47.6	0.0
PMON	**Piamonte**	**1.40**	**290**		*e*P	Pn		05 29 30.3	-0.3
PMON	**Piamonte**	**1.40**	**290**		P	Pn		05 29 30.5	-0.1
CNGN	**Cerro Negro**	**1.43**	**121**		P	Pn		05 29 30.2	-0.6
JAYA

AGUA IAML 05 36 55.4
comp=Z,131nm,0.6s
AROD Rodeo 3.37 155 *i* P **Pb 05 35 55.6 -0.7**
CO03 El Pedregal 3.74 174 *i* P **Pn 05 35 55.9 +1.5**
CO03 IAML 05 36 56.9
comp=Z,106nm,1.2s
ACCO Cerro Coronel 3.91 153 *i* P **Pb 05 36 02.5 -2.8**
CO02 Combarbal 4.08 179 *i* P **Pn 05 35 59.9 +0.7**
CO02 IAML 05 37 10.0
comp=Z,153nm,0.8s
PB05 IPOC Station P 4.32 11 *i* P **Pn 05 36 02.0 -0.4**
PB05 IAML 05 37 22.4
comp=Z,36nm,0.8s
PB06 IPOC Station P 4.60 18 *i* P **Pn 05 36 06.5 +0.2**
PB06 IAML 05 37 27.6
comp=Z,37nm,0.3s
AVFE Valle Fertil 4.78 139 *i* P **Pn 05 36 13.0 +4.3**
AVFE IAML 05 37 28.8
comp=Z,26nm,0.4s
CYA Choya 4.89 107 *e*P **Pn 05 36 13.3 +3.1**
CYA Choya 4.89 107 *i* P **Pn 05 36 12.9 +2.7**
CYA IAML 05 37 35.7
comp=Z,14nm,1.4s
RTLS Leoncito 4.94 162 *i* P Pn 05 36 16.0 +5.0
RTLS IAML 05 37 34.7
comp=Z,122nm,0.6s
CFA Coronel Fontan 5.14 151 *i* P **Pn 05 36 17.6 +4.0**
CFA IAML 05 37 27.6
comp=Z,14nm,0.7s
PB03 IPOC Station P 5.18 14 *i* P **Pn 05 36 14.4 0.0**
PB03 IAML 05 37 50.0
comp=Z,52nm,0.4s

VIE ***23*** *05:44:12.4±0.8,51°.53N×16°.17E,h0km,mb2.6/6,ml2.6/9, Error ellipse: s-maj=10.3km s-min=4.6km az=65.0 76 km NW of Wroclaw Suspected Mining induced.*
PRU ***23*** *05:44:14.7,51°.51N×16°.08E,h0km*
ISC 23 05:44:10.0±1.0,51°.67N±0°.04×16°.16E±0°.03,h0km,n34, σ0s99/59,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.83**	**174**	*e*Pg	**Pg**	**05 44 26.6**	**+0.8**
KSP				*e*Sg	**Sg**	**05 44 37.2**	**+0.7**
CHVC	**Chvalec**	**1.08**	**184**	*e*PG	**Pb**	**05 44 31.7**	**+0.1**
CHVC				*e*SG	**Sg**	**05 44 45.0**	**+0.3**
OSTC	**Ostas**	**1.11**	**178**	*e*PG	**Pb**	**05 44 31.9**	**-0.2**
OSTC				*e*SG	**Sg**	**05 44 45.8**	**+0.1**
comp=Z,42nm,0.4s							
UPC	**Upice**	**1.16**	**185**	*e*PG	**Pb**	**05 44 32.9**	**-0.1**
UPC				*e*SG	**Sg**	**05 44 46.9**	**-0.5**
comp=Z,74nm,0.5s							
DPC	**Dobruska-Polom**	**1.32**	**176**	*e*PG	**Pg**	**05 44 35.5**	**+0.2**
DPC				*e*SG	**Sg**	**05 44 51.8**	**-0.6**
comp=Z,36nm,0.6s							
PVCC	**Panska Ves**	**1.52**	**222**	*e*PG	**Pg**	**05 44 39.5**	**+0.4**
PVCC				*e*SG	**Sg**	**05 44 58.6**	**-0.2**
comp=Z,111nm,0.6s							
KRLC	**Kraliky**	**1.64**	**166**	*e*PG	**Pb**	**05 44 41.0**	**-0.1**
KRLC				*e*SG	**Sn**	**05 45 01.4**	**-0.6**
comp=Z,31nm,0.5s							
PRA	**Prague**	**1.94**	**215**	*e*PN	**Pn**	**05 44 44.5**	**+0.3**
PRU	**Pruhonice**	**1.97**	**212**	*e*PG	**Pb**	**05 44 46.8**	**+0.1**
PRU				*e*SG	**Sb**	**05 45 11.1**	**-0.7**
comp=Z,27nm,0.4s							
CLL	**Collm**	**2.01**	**261**	*i* Pn	**Pn**	**05 44 45.1**	**0.0**
comp=Z,6.0nm,0.6s							
CLL				*i* Pg	**Pg**	**05 44 48.5**	**0.0**
CLL				*i* x	x	05 44 52.3	
CLL				*i* Sg	**Sg**	**05 45 14.5**	**0.0**
comp=Z,16nm,0.9s							
STEB	**Steborice**	**2.01**	**149**	*e*PN	**Pn**	**05 44 45.6**	**+0.4**
STEB				*e*PG	**Pg**	**05 44 48.5**	**0.0**
STEB				*e*SG	**Sg**	**05 45 14.9**	**+0.3**
comp=Z,33nm,0.3s							
MORC	**Moravsky Berou**	**2.08**	**155**	*e*PN	**Pn**	**05 44 46.1**	**-0.1**
MORC				*e*SG	**Sb**	**05 45 14.6**	**-0.6**
OKC	**Ostrava-Krasne**	**2.22**	**145**	*e*PG	**Pg**	**05 44 53.3**	**+0.7**
VRAC	**Vranov**	**2.38**	**173**	*e*PN	**Pn**	**05 44 50.9**	**+0.7**
VRAC				*e*SG	**Sb**	**05 45 24.1**	**+0.6**
TREC	**Trest**	**2.41**	**191**	*e*SG	**Sb**	**05 45 25.3**	**+0.7**
KRUC	**Moravsky**	**2.61**	**177**	*e*PN	**Pn**	**05 45 54.7**	**+1.3**
KRUC				*e*SG	**Sb**	**05 45 31.8**	**+1.5**
OJC	**Ojcow**	**2.72**	**121**	*e*Pg	**Pg**	**05 45 02.4**	**+0.3**
OJC				*e*SG	**Sg**	**05 45 38.6**	**+1.3**
KHC	**Kasperske Hory**	**3.03**	**214**	*e*PN	**Pn**	**05 44 59.4**	**+0.2**
KHC				*e*PG	**Pb**	**05 45 05.8**	**+1.0**
KHC				*e*SN	**Sn**	**05 45 35.0**	**-1.2**
KHC				*e*SG	**Sb**	**05 45 44.0**	**+1.7**
comp=Z,9.3nm,0.4s							
CKRC	**Cesky Krumlov**	**3.09**	**203**	*e*SG	**Sg**	**05 45 48.2**	**-0.9**
LANS	**Liptovska Anna**	**3.29**	**139**	*e*PN	**Pn**	**05 44 59.6**	**-3.2**
LANS				*e*PG	**Pg**	**05 45 13.7**	**+0.7**
LANS				*e*SG	**Sg**	**05 45 55.0**	**-0.6**
MODS	**Modra-Piesok**	**3.37**	**167**	*e*SG	**Sg**	**05 45 58.7**	**+0.4**
BSD	**Bornholm Skovb**	**3.53**	**348**	*i* P	**Pn**	**05 45 06.0**	**-0.1**
BSD				IAML		05 45 29.1	
comp=Z,0.6nm,0.4s							
CONA	**Conrad Observa**	**3.75**	**183**	*i* Pn	**Pn**	**05 45 09.9**	**+0.8**
comp=Z,0.4nm,0.1s							
CONA				*e*Sg	**Sg**	**05 46 08.1**	**-2.2**
comp=Z,6.9nm,0.4s							
RONA	**Rosalia, Austr**	**3.97**	**179**	*e*Sg	**Sg**	**05 46 15.3**	**-2.3**
comp=Z,4.3nm,0.4s							
MOA	**Molln**	**4.01**	**199**	*i* Pn	**Pn**	**05 45 13.4**	**+0.7**
comp=Z,3.0nm,0.4s							
MOA				*e*Sg	**Sg**	**05 46 16.5**	**-2.4**
comp=Z,5.5nm,0.4s							
LUNU	**Lund**	**4.29**	**339**	*i* P	**Pn**	**05 45 16.1**	**-0.4**
BIOA	**Bad Ischl, Aus**	**4.30**	**203**	*i* Pn	**Pn**	**05 45 17.3**	**+0.6**
comp=Z,1.3nm,0.2s							
BIOA				*e*Sg	**Sg**	**05 46 27.1**	**-1.1**
comp=Z,14nm,0.5s							
ARSA	**Arzberg**	**4.44**	**186**	*e*Sg	**Sg**	**05 46 31.3**	**-1.2**
comp=Z,7.0nm,0.6s							
BJUU	**Bjuv**	**4.79**	**338**	*i* P	**Pn**	**05 45 22.9**	**-0.4**
KBA	**Koelnbreinsper**	**4.95**	**203**	*i* Pn	**Pn**	**05 45 26.7**	**+1.0**
comp=Z,1.6nm,0.4s							
KBA				*e*Sg	**Sg**	**05 46 48.0**	**-0.9**
comp=Z,5.8nm,0.8s							
DEL	**Delary**	**5.00**	**345**	*i* P	**Pn**	**05 45 26.8**	**+0.6**
SOKA	**Soboth**	**5.05**	**189**	*e*Sg	**Sg**	**05 46 50.6**	**-1.5**
comp=Z,2.2nm,0.6s							
MYKA	**Terra Mystica**	**5.30**	**199**	*e*Sg	**Sg**	**05 46 59.4**	**-1.0**
comp=Z,2.9nm,0.6s							
ABTA	**Abfaltersbach**	**5.47**	**207**	*e*Sg	**Sg**	**05 47 05.2**	**-0.6**
comp=Z,3.2nm,0.7s							

IDC ***23*** *06:09:57.6±0.9,60°.25S×47°.80W,h0km,mb3.9/4, mbtmp4.0/5,ML4.1/1,MS3.5/14,Error ellipse: s-maj=36.4km s-min=27.2km az=27.0*
NEIC ***23*** *06:09:57.4±1.4,60°.15S±0°.04×47°.4W±0°.1,h10km±1km, mb4.6/18, Error ellipse: s-maj=13.6km s-min=4.9km az=245.0*
ISC 23 06:09:57.5±0.5,60°.14S±0°.07×47°.46W±0°.08,h10km,n52, σ1s52/39,mb4.6/10,MS3.5/13,5C,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESPZ	**Base Esperanza**	**5.58**	**230**		**Pn**	**06 11 19.0**	**-1.5**
HOPE	**Hope Point**	**8.35**	**50**	Pn	**Pn**	**06 11 57.0**	**-1.4**
PMSA	**Palmer Station**	**8.97**	**232**	Pn	**Pn**	**06 12 06.2**	**-0.6**
2.1nm,0.3s,baz=63,slow=11,SNR=8.9							
PMSA				LR	LR	06 15 35.3	
comp=Z,403nm,18.1s,baz=120,slow=38 11nm,0.8s							
EFI	**East Falkland**	**10.35**	**320**	Pn	**Pn**	**06 12 26.8**	**+1.0**
SMAI	**San Martin Ant**	**11.68**	**218**	Pn	**Pn**	**06 12 42.4**	**-1.5**
MG05	**Puerto Natales**	**16.31**	**290**	Pn	**Pn**	**06 13 45.4**	**-0.9**
BELA	**Belgrano 2**	**18.31**	**171**	P	**Pn**	**06 14 10.7**	**-0.5**
VNA3	**Neumayer Olymp**	**18.71**	**142**	⇑P	**P**	**06 14 12.9**	**-2.8**
comp=Z,5.6nm,0.6s							
VNA1	**Neumayer--Stat**	**19.00**	**140**	⇑P	**P**	**06 14 16.2**	**-2.7**
comp=Z,1.1nm,0.8s							
VNA2	**Neumayer--Watz**	**19.34**	**140**	⇑P	**P**	**06 14 20.2**	**-2.4**
comp=Z,6.4nm,0.8s,baz=293,slow=15							
SNAA	**Sanae**	**20.93**	**142**	⇑P	**P**	**06 14 41.4**	**+1.4**
comp=Z,165nm,1.1s							
SNAA	**Sanae**	**20.93**	**142**	P	**P**	**06 14 41.4**	**+1.4**
comp=Z,14nm,1.2s,baz=273,slow=11,SNR=20							
SNAA				LR	LR	06 21 50.0	
comp=Z,124nm,18.4s,baz=5.0,slow=34							
SNAA	**Sanae**	**20.93**	**142**	P	**P**	**06 14 40.1**	**+0.1**
SNAA				IAmb	IAmb	06 14 43.0	
comp=Z,28nm,1.3s							
TROLL	**Troll, Antarti**	**22.65**	**142**	⇑P	**P**	**06 14 58.5**	**0.0**
comp=Z,509nm,1.1s							
TRQA	**Tornquist**	**23.95**	**331**	P	**P**	**06 15 11.4**	**-0.3**
TRQA				IAmb	IAmb	06 15 26.4	
comp=Z,23nm,1.3s							
PLCA	**Paso Flores**	**24.14**	**313**	P	**P**	**06 15 15.7**	**+2.3**
comp=Z,1.0nm,0.7s,baz=153,slow=6.8,SNR=4.2							
PLCA				LR	LR	06 24 39.8	
comp=Z,120nm,19.6s,baz=166,slow=37 comp=Z,1.0nm,0.7s							
PLCA	**Paso Flores**	**24.14**	**313**	P	**P**	**06 15 12.9**	**-0.5**
QSPA	**South Pole Qui**	**30.10**	**180**	P	**P**	**06 16 10.5**	**+3.6**
comp=Z,3.3nm,1.0s,baz=192,slow=3.3,SNR=6.1							
QSPA	**South Pole Qui**	**30.10**	**180**	P	**P**	**06 16 06.2**	**-0.7**
QSPA				IAmb	IAmb	06 16 17.9	
comp=Z,16nm,1.2s							
MT09	**Talagante**	**30.54**	**319**	P	**P**	**06 16 11.2**	**+0.2**
MT09				IAmb	IAmb	06 16 36.9	
comp=Z,18nm,1.5s							
MT03	**Universidad Ad**	**30.64**	**320**	P	**P**	**06 16 12.0**	**+0.1**
MT03				IAmb	IAmb	06 16 50.8	
comp=Z,4.8nm,0.8s							
MT05	**Renca**	**30.81**	**320**	P	**P**	**06 16 13.4**	**+0.1**
CO01	**Juntas del Tor**	**33.78**	**323**	P	**P**	**06 16 39.6**	**0.0**
CPUP	**Villa Florida**	**34.47**	**344**	LR	LR	06 31 36.9	
comp=Z,10nm,18.9s,baz=30,slow=38							
AC04	**Llanos de Chal**	**35.73**	**323**	P	**P**	**06 16 56.8**	**+0.6**
SBA	**Scott Base**	**40.67**	**191**	P	**P**	**06 17 38.7**	**+1.5**
VNDA	**Vanda**	**41.40**	**189**	LR	LR	06 36 38.7	
comp=Z,97nm,18.2s,baz=162,slow=39							
MAW	**Mawson**	**42.86**	**148**	LR	LR	06 35 17.6	
comp=Z,95nm,18.6s,baz=260,slow=36							
PSGCX	**Pisagua**	**43.61**	**328**	P	**P**	**06 18 01.6**	**-0.3**
PSGCX				IAmb	IAmb	06 18 39.9	
comp=Z,19nm,1.4s							
SIV	**San Ignacio**	**45.18**	**341**	LR	LR	06 36 15.9	
comp=Z,63nm,21.5s,baz=132,slow=35							
LPAZ	**La Paz**	**46.29**	**332**	LR	LR	06 38 22.2	
comp=Z,38nm,19.6s,baz=146,slow=37							
SUR	**Sutherland**	**51.82**	**90**	P	**P**	**06 19 05.0**	**-0.6**
H10S2	**ASCENSION HYDR**	**56.67**	**40**	T	T	07 21 29.1	
baz=200,slow=74,SNR=20							
H10S3	**ASCENSION HYDR**	**56.67**	**40**	T	T	07 21 29.6	
baz=20,slow=74,SNR=14							
BOSA	**Boshof**	**57.10**	**91**	P	**P**	**06 19 48.1**	**+4.2**
comp=Z,1.7nm,0.7s,baz=207,slow=7.5,SNR=4.7							
BOSA				LR	LR	06 39 38.8	
comp=Z,61nm,18.7s,baz=207,slow=31 comp=Z,1.7nm,0.7s							
BOSA	**Boshof**	**57.10**	**91**	P	**P**	**06 19 43.5**	**-0.5**
BOSA				IAmb	IAmb	06 20 17.4	
comp=Z,8.4nm,1.2s							
H10N3	**ASCENSION HYDR**	**57.77**	**40**	T	T	07 22 49.3	
baz=199,slow=75,SNR=22							
H10N1	**ASCENSION HYDR**	**57.77**	**40**	T	T	07 22 49.5	
baz=199,slow=75,SNR=27							
H10N2	**ASCENSION HYDR**	**57.78**	**40**	T	T	07 22 52.9	
baz=199,slow=75,SNR=27							
LBTB	**Lobatse**	**60.24**	**89**	LR	LR	06 40 28.0	
comp=Z,61nm,20.6s,baz=209,slow=30							
LBTB	**Lobatse**	**60.24**	**89**	P	**P**	**06 20 04.8**	**-1.1**
LBTB				IAmb	IAmb	06 20 38.0	
comp=Z,10nm,1.4s							
QNGWA	**Qangwa**	**62.63**	**82**	P	**P**	**06 20 21.5**	**-0.6**
QNGWA				IAmb	IAmb	06 20 25.6	
comp=Z,8.6nm,1.4s							
OTAV	**Otavalo**	**64.82**	**325**	P	**P**	**06 20 35.4**	**-1.5**
OTAV				IAmb	IAmb	06 20 41.7	
comp=Z,7.0nm,1.4s							
DBIC	**Dimbokro**	**74.57**	**44**	LR	LR	06 47 55.7	
comp=Z,54nm,18.4s,baz=204,slow=30							
PPT	**Papeete**	**80.82**	**251**	LR	LR	06 49 38.7	
comp=Z,23nm,21.1s,baz=106,slow=30							
TORD	**Torodi Ar. Bea**	**82.93**	**48**	P	**P**	**06 22 24.3**	**+2.0**
comp=Z,1.0nm,0.9s,baz=218,slow=8.7,SNR=5.7 comp=Z,1.0nm,0.9s							
MBAR	**Mbarara**	**83.61**	**80**	LR	LR	06 57 20.6	
comp=Z,32nm,18.3s,baz=278,slow=34							
CMIG	**Matias Romero**	**85.93**	**315**	LR	LR	06 58 38.3	
comp=Z,18nm,19.2s,baz=129,slow=34							
ILAR	**Eielson Array**	**144.82**	**313**	PKP	**PKPab**	**06 29 31.9**	**-0.1**
comp=Z,0.6nm,0.5s,baz=142,slow=1.2,SNR=11							
BVAR	**Borovoye Array**	**146.22**	**74**	PKP	**PKPdf**	**06 29 35.8**	**+0.1**
comp=Z,2.3nm,0.6s,baz=211,slow=0.8,SNR=6.9							
BVAR				PKPbc	**sPKPdf**	**06 29 38.9**	**-0.5**
comp=Z,3.3nm,0.8s,baz=242,slow=3.1,SNR=11							
MKAR	**Makanchi Array**	**148.09**	**92**	PKP	**PKPdf**	**06 29 40.0**	**+0.9**
comp=Z,0.7nm,0.6s,baz=247,slow=3.8,SNR=6.1							
MKAR				PKPbc	**pPKPbc**	**06 29 45.4**	**+0.3**
comp=Z,1.3nm,0.6s,baz=239,slow=3.3,SNR=9.2							
KURBB	**Kurchatov Arra**	**148.73**	**83**	PKPbc	**PKPbc**	**06 29 44.2**	**+0.5**
comp=Z,0.5nm,0.4s,baz=222,slow=3.7,SNR=6.1							

DJA ***23*** *06:17:15.5±0.5,8°S±6°×11°.0E±°,h104km±5km,M3.3/12, MLv3.3/12*
IDC ***23*** *06:17:30.0±21.0,10°.43S×111°.87E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=375.8km s-min=174.8km az=152.0*
ISC 23 06:17:14.8±1.0,7°.9S±0°.1×109°.66E±0°.05,h100km,n11, σ2s16/15,mb3.3/3,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOGI	**Yogyakarta**	**0.64**	**79**	P	**Pn**	**06 17 33.6**	**+1.9**
YOGI				S	**Sn**	**06 17 47.7**	**+3.3**
KPJI	**Karang Pucung**	**0.94**	**310**	P	**Pn**	**06 17 35.6**	**+1.0**
KPJI				S	**Sn**	**06 17 52.1**	**+2.6**
SMRI	**Semarang**	**1.18**	**41**	P	**Pn**	**06 17 36.2**	**-1.0**
SMRI				S	**Sn**	**06 17 55.9**	**+1.8**
CMJI	**Cimerak**	**1.21**	**277**	P	**Pn**	**06 17 38.6**	**+1.0**
PCJI	**Pacitan**	**1.52**	**100**	P	**Pn**	**06 17 42.4**	**+1.1**
PCJI				S	**Sn**	**06 18 04.9**	**+3.5**
NGJI	**Ngawi**	**1.87**	**72**	P	**Pn**	**06 17 47.0**	**+1.3**
TBJI	**Tambak Boyo**	**2.44**	**63**	P	**Pn**	**06 17 52.7**	**-0.4**
CNJI	**Cibinong**	**2.59**	**284**	P	**Pn**	**06 17 55.6**	**+0.5**
WRA	**Warramunga Arr**	**26.71**	**119**	P	**P**	**06 22 42.4**	**-2.6**
0.3nm,0.5s,baz=292,slow=9.7,SNR=2.2 0.3nm,0.5s							
ASAR	**Alice Springs**	**28.00**	**127**	P	**P**	**06 22 55.0**	**-1.6**
0.5nm,0.6s,baz=301,slow=8.3,SNR=8.6 0.6s							
STKA	**Stephens Creek**	**38.06**	**133**	P	**P**	**06 24 21.9**	**-1.9**
1.8nm,0.3s,baz=305,slow=7.6,SNR=6.9 1.8nm,0.3s							

IDC ***23*** *06:31:36.5±0.7,1°.71N×96°.92E,h0km,mb4.3/18, mbtmp4.3/19,ML3.2/1,MS3.5/4,Error ellipse: s-maj=21.9km s-min=16.2km az=48.0*
NEIC ***23*** *06:31:40.2±1.5,1°.80N±0°.10×96°.98E±0°.08,h17km±5km, mb4.7/30,Error ellipse: s-maj=16.0km s-min=9.0km az=217.0*
DJA ***23*** *06:31:40.7±0.6,2°.N±3°×9°.7E±°,h22km±8km,M4.1/11, MLv4.1/11*
ISC 23 06:31:41.0±0.4,1°.77N±0°.05×96°.96E±0°.06,h28km,n106, σ0s73/101,mb4.6/43,MS3.6/3,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.77**	**127**		**Pb**	**06 31 55.7**	**-0.1**
GSI	**Gunungsitoli**	**0.77**	**127**	P	**Pn**	**06 31 55.9**	**-0.1**
GSI				S	**Sn**	**06 32 06.7**	**+0.1**
SNSI	**Sinabang, Aceh**	**0.90**	**315**	P	**Pb**	**06 31 57.9**	**-0.1**
SNSI				S	**Sn**	**06 32 10.5**	**+0.6**
KCSI	**Kotacane, Aceh**	**1.92**	**25**	P	**Pn**	**06 32 12.2**	**+0.3**
KCSI				S	**Sn**	**06 32 36.0**	**+0.9**
RPSI	**Rantau Prapat**	**2.17**	**65**		**Pn**	**06 32 14.7**	**-0.5**
PSI	**Prapat**	**2.21**	**62**	Pn	**Pn**	**06 32 15.6**	**-0.4**
7.2nm,0.3s,baz=251,slow=4.8,SNR=12							
PBSI	**Pulau Batu**	**2.24**	**144**	P	**Pn**	**06 32 16.1**	**-0.1**
MLSI	**Meulaboh, Aceh**	**2.54**	**347**	P	**Pn**	**06 32 20.8**	**+0.4**
MNSI	**Mandailing Nat**	**2.79**	**110**	P	**Pn**	**06 32 24.0**	**+0.2**
LHMI	**Lhok Sumawe**	**3.44**	**360**	Pn	**Pn**	**06 32 33.0**	**+0.3**
SISI	**Saibi**	**3.74**	**145**	P	**Pn**	**06 32 36.9**	**0.0**
PPI	**Padang Panjang**	**4.08**	**123**	P	**Pn**	**06 32 43.1**	**+1.5**
IPM	**Ipoh**	**4.87**	**56**	Pn	**Pn**	**06 32 52.6**	**+0.2**
KULM	**Kulim**	**5.08**	**46**	Pn	**Pn**	**06 32 55.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**16.70**	**7**	Pn	**P**	**06 35 34.6**	**-0.7**
0.7nm,0.4s,baz=191,slow=10,SNR=5.3							
PALK	**Pallekele**	**17.10**	**289**	LR	LR	06 41 10.4	
comp=Z,116nm,21.2s,baz=108,slow=34							
BKB	**Balikpapan**	**20.16**	**98**	P	**P**	**06 36 12.8**	**-0.5**
MYLDM	**Lahad Datu**	**21.76**	**80**	P	**P**	**06 36 29.3**	**-1.3**
SHL	**Shillong**	**24.16**	**349**		**P**	**06 36 53.7**	**-1.5**
SHL				IAmb	IAmb	06 36 55.8	
comp=Z,16nm,0.9s							
PZH	**PanZhiHua**	**25.02**	**10**	P	**P**	**06 37 04.5**	**+1.6**
H08S2	**Diego Garcia H**	**26.14**	**249**	T	T	07 04 28.6	
baz=69,slow=76,SNR=2062							
H08S3	**Diego Garcia H**	**26.14**	**249**	T	T	07 04 28.9	
baz=69,slow=76,SNR=3412							
H08S1	**Diego Garcia H**	**26.16**	**249**	T	T	07 04 30.0	
baz=69,slow=76,SNR=1273							
EVN	**Everest**	**27.79**	**340**	P	**P**	**06 37 27.6**	**-0.9**
MBWA	**Marble Bar**	**31.87**	**137**	P	**P**	**06 38 03.1**	**-0.9**
MBWA				IAmb	IAmb	06 38 40.2	
comp=Z,17nm,1.4s							
PSA00	**Pilbara Seismi**	**32.23**	**137**	P	**P**	**06 38 07.1**	**-0.1**
XAN	**Xi'an**	**34.00**	**18**	P	**P**	**06 38 21.5**	**-1.0**
XAN				pmax	pmax		
comp=Z,12nm,0.7s							
NJ2	**Nanjing**	**36.51**	**32**	*e*P	**P**	**06 38 45.6**	**+1.5**
NJ2				pmax	pmax		
comp=Z,15nm,0.6s							
GTA	**Gaotai**	**37.56**	**4**	*e*P	**P**	**06 38 53.1**	**0.0**
GTA				pmax	pmax		
comp=Z,5.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**41.09**	**17**	*e*P	**P**	**06 39 25.3**	**+2.8**
HHC				pmax	pmax		
comp=Z,9.0nm,0.6s							
HHC				pmax	pmax		
comp=Z,120nm,4.5s							
KSH	**Kashi**	**42.16**	**336**	P	**P**	**06 39 30.5**	**-0.8**
KSH				pmax	pmax		
comp=Z,5.0nm,0.6s							
WRA	**Warramunga Arr**	**42.54**	**122**	P	**P**	**06 39 33.7**	**-0.9**
comp=Z,1.4nm,0.7s,baz=302,slow=9.1,SNR=11 comp=Z,1.4nm,0.7s							
WR8	**Warramunga Arr**	**42.68**	**122**	P	**P**	**06 39 34.7**	**-1.0**
WR8				IAmb	IAmb	06 39 42.6	
comp=Z,6.4nm,0.5s							
TARG	**Taragay, Kyrgy**	**43.36**	**339**		**P**	**06 39 42.2**	**+0.9**
TARG				IAmb	IAmb	06 39 43.5	
comp=Z,9.9nm,0.7s							
FORT	**Forrest**	**43.86**	**140**	P	**P**	**06 39 45.1**	**0.0**
ASAR	**Alice Springs**	**43.93**	**127**	P	**P**	**06 39 45.5**	**-0.3**
comp=Z,1.1nm,0.7s,baz=298,slow=7.5,SNR=12 comp=Z,1.1nm,0.7s							
KDJ	**Kajisay**	**43.94**	**339**	P	**P**	**06 39 45.9**	**+0.1**
KDJ				IAmb	IAmb	06 39 47.9	
comp=Z,15nm,0.9s							
ARSB	**Arslanbob**	**44.93**	**334**	P	**P**	**06 39 53.8**	**+0.1**
AAK	**Ala-Archa**	**45.39**	**337**	LR	LR	07 00 31.9	
comp=Z,67nm,18.9s,baz=240,slow=38							
KSRS	**Korea Array**	**45.52**	**35**	P	**P**	**06 39 57.7**	**-0.4**
comp=Z,0.6nm,0.4s,baz=234,slow=9.8,SNR=2.5 comp=Z,0.6nm,0.4s							
SONM	**Songino Array**	**46.61**	**9**	P	**P**	**06 40 07.0**	**+0.2**
comp=Z,2.3nm,0.4s,baz=190,slow=9.7,SNR=16							
SONM				PcP	**PcP**	**06 41 40.5**	**0.0**
comp=Z,1.0nm,0.5s,baz=172,slow=5.6,SNR=3.6 comp=Z,2.3nm,0.4s							
MKAR	**Makanchi Array**	**46.64**	**346**	P	**P**	**06 40 07.5**	**+0.6**
comp=Z,12nm,0.7s,baz=160,slow=7.8,SNR=63							
MKAR				LR	LR	07 01 52.1	
comp=Z,42nm,21.1s,baz=138,slow=39 comp=Z,12nm,0.7s							
MKAR	**Makanchi Array**	**46.64**	**346**		**P**	**06 40 07.0**	**+0.1**
MAKZ	**Makanchi**	**46.73**	**346**	P	**P**	**06 40 08.4**	**+0.8**
KK31	**Karatay Array**	**47.45**	**334**		**P**	**06 40 14.0**	**+0.7**
KKAR	**Karatay Array**	**47.45**	**334**		**P**	**06 40 13.6**	**+0.3**
TLY	**Talaya**	**50.05**	**5**	P	**P**	**06 40 33.8**	**+0.6**
TLY				IAmb	IAmb	06 40 35.1	
comp=Z,4.4nm,0.6s							
KURBB	**Kurchatov Arra**	**51.12**	**345**	P	**P**	**06 40 41.7**	**+0.5**
comp=Z,7.2nm,0.7s,baz=165,slow=6.8,SNR=18 comp=Z,7.2nm,0.7s							
KURK	**Kurchatov**	**51.19**	**345**		**P**	**06 40 41.8**	**+0.1**
KURK				IAmb	IAmb	06 40 42.8	
comp=Z,5.5nm,0.8s							
ZAA0	**Zalesovo Array**	**52.96**	**351**	P	**P**	**06 40 54.7**	**-0.1**
ZALV	**Zalesovo Beam**	**52.96**	**351**	P	**P**	**06 40 55.1**	**+0.2**
comp=Z,15nm,0.5s,baz=178,slow=6.9,SNR=86 comp=Z,15nm,0.5s							
CTAO	**Charters Tower**	**52.97**	**117**	P	**P**	**06 40 55.8**	**+0.2**
CTAO				IAmb	IAmb	06 41 17.8	
comp=Z,12nm,1.2s							
BVAR	**Borovoye Array**	**55.64**	**341**	P	**P**	**06 41 14.2**	**-0.2**
comp=Z,5.5nm,0.6s,baz=143,slow=8.3,SNR=32 comp=Z,5.5nm,0.6s							
AB31	**Akbulak array**	**56.90**	**332**		**P**	**06 41 23.3**	**-0.1**
AB31				IAmb	IAmb	06 41 24.2	
comp=Z,7.4nm,0.8s							
ABKAR	**Akbulak array**	**56.90**	**332**		**P**	**06 41 23.1**	**-0.4**
CAN	**Canberra**	**60.98**	**132**	P	**P**	**06 41 54.5**	**+2.4**
CAN				IAmb	IAmb	06 41 55.1	
comp=Z,5.8nm,0.8s							
H04N2	**

LUBAR	**Lubar, Ukraine**	**75.36**	**321**	P	**P**	**06 43 21.3**	**-0.7**
KMPD	**K-Podol'skiy**	**75.85**	**320**	P	**P**	**06 43 24.3**	**-0.5**
KMPD				P	**P**	**06 43 24.2**	**-0.5**
BURAR	**Bucovina Array**	**76.44**	**319**	P	**P**	**06 43 28.4**	**0.0**
BUR08	**Bucovina Ar. S**	**76.46**	**319**	P	**P**	**06 43 28.5**	**0.0**
BUR08				IAmb	IAmb	06 43 30.6	
	comp=Z,4.7nm,0.8s						
RNPP5	**Staryi Chortor**	**76.84**	**322**	P	**P**	**06 43 30.0**	**-0.4**
KORU	**Korolevo**	**77.93**	**319**	P	**P**	**06 43 35.8**	**-0.7**
STHS	**Stebnicka Huta**	**79.38**	**320**	*eP*	**P**	**06 43 44.8**	**+0.2**
FINES	**FINESS Array B**	**79.39**	**332**	P	**P**	**06 43 44.2**	**0.0**
	comp=Z,2.3nm,0.6s,baz=108,slow=5.3,SNR=14						
	comp=Z,2.3nm,0.6s						
FINES	**FINESS Array B**	**79.39**	**332**	P	**P**	**06 43 43.6**	**-0.7**
MORH	**Mrgy, Hungar**	**80.64**	**316**	P	**P**	**06 43 51.3**	**-0.1**
ARCES	**ARCESS Array B**	**81.92**	**340**	P	**P**	**06 43 58.0**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=97,slow=4.8,SNR=41						
	comp=Z,1.6nm,0.4s						
ARCES	**ARCESS Array B**	**81.92**	**340**	P	**P**	**06 43 57.9**	**+0.2**
ARCES				IAmb	IAmb	06 43 58.8	
	comp=Z,13nm,1.3s						
GERES	**GERESS Array B**	**84.23**	**319**	P	**P**	**06 44 10.5**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=87,slow=4.5,SNR=12						
	comp=Z,2.3nm,0.9s						
HFS	**Hagfors**	**85.11**	**330**	P	**P**	**06 44 13.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=91,slow=7.6,SNR=5.1						
	comp=Z,0.9nm,0.6s						
NB2	**NORSAR Subarra**	**86.40**	**331**	P	**P**	**06 44 20.2**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=92,slow=4.8						
NOA	**NORSAR Array B**	**86.40**	**331**	P	**P**	**06 44 20.4**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=93,slow=4.8,SNR=5.6						
	comp=Z,1.5nm,0.8s						
TXAR	**Lajitas Array**	**143.31**	**31**	PKhKP	PKPpre	06 51 07.6	
	comp=Z,0.1nm,0.5s,baz=40,slow=1.2,SNR=4.0						
CPUP	**Villa Florida**	**145.26**	**223**	PKPbc	**PKPdf**	**06 51 16.8**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=341,slow=3.0,SNR=13						

IDC ***23*** *06:33:50.8±1.2, 1.°47N×124.°87E, h0km, mb3.9/7, mbtmp3.9/8, ML3.8/1, Error ellipse: s-maj=86.6km s-min=16.2km az=64.0*

DJA ***23*** *06:34:20.1±1.0, 0.°1N±8.°8×12.°4E±.°, h261km±14km, M3.7/9, MLv3.7/9*

ISC 23 06:34:19.9±0.9, **0.°43N**±0.°09×**123.°62E**±0.°07, **h264**km, **n21,** σ**0**§**70**/19, **mb3.6**/7, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.39**	**69**	P	**Pn**	**06 34 54.7**	**+0.5**
MRSI	**Marisa**	**1.68**	**271**	P	**Pn**	**06 35 00.4**	**-0.5**
LUWI	**Luwuk**	**1.69**	**210**	P	**Pn**	**06 35 01.0**	**-0.1**
LUWI	**Luwuk**	**1.69**	**210**	P	**Pn**	**06 35 00.9**	**-0.1**
APSI	**Ampana**	**2.38**	**236**	P	**Pn**	**06 35 06.8**	**-0.3**
TOLI2	**Tolitoli**	**2.92**	**283**	P	**Pn**	**06 35 12.6**	**+0.2**
SANI	**Sanana**	**3.42**	**136**	P	**Pn**	**06 35 17.3**	**-0.6**
SANI	**Sanana**	**3.42**	**136**	P	**Pn**	**06 35 17.2**	**-0.6**
MPSI	**Mapaga**	**3.72**	**269**	P	**Pn**	**06 35 21.1**	**-0.1**
TNTI	**Ternate**	**3.76**	**85**	P	**Pn**	**06 35 21.6**	**-0.1**
TNTI	**Ternate**	**3.76**	**85**	P	**Pn**	**06 35 21.6**	**-0.1**
JAGI	**Jajag, Banyuwa**	**12.93**	**227**	P	Pn	06 37 07.2	-7.6
FITZ	**Fitzroy Crossi**	**18.52**	**174**	P	**P**	**06 38 17.9**	**+0.5**
	0.2nm,0.3s,baz=18,slow=5.6,SNR=6.7						
	1.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.52**	**174**	P	P	06 38 09.0	-8.4
WRA	**Warramunga Arr**	**22.81**	**153**	P	**P**	**06 39 01.3**	**+0.9**
	3.7nm,0.5s,baz=335,slow=10,SNR=28						
	3.7nm,0.5s						
ASAR	**Alice Springs**	**25.96**	**158**	P	**P**	**06 39 29.9**	**+1.2**
	0.4nm,0.5s,baz=348,slow=15,SNR=12						
	0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.13**	**308**	P	**P**	**06 40 06.7**	**+0.9**
	0.9nm,0.3s,baz=107,slow=11,SNR=2.0						
	0.9nm,0.3s						
STKA	**Stephens Creek**	**36.36**	**154**	P	**P**	**06 40 59.1**	**-0.2**
	1.2nm,0.6s,baz=347,slow=11,SNR=3.5						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**58.58**	**328**	P	**P**	**06 43 48.5**	**-0.8**
	1.0nm,0.6s,baz=124,slow=7.2,SNR=4.9						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**62.90**	**330**	P	**P**	**06 44 17.1**	**-1.1**
	1.0nm,0.6s,baz=127,slow=5.7,SNR=5.6						
	1.0nm,0.6s						
BVAR	**Borovoye Array**	**68.44**	**329**	P	**P**	**06 44 52.5**	**-1.0**
	0.8nm,0.7s,baz=138,slow=9.7,SNR=4.0						
	0.8nm,0.7s						

NEIC ***23*** *06:38:53.4±1.7, 6.°07S±0.°06×130.°09E±0.°08, h10km±1km, mb4.6/24, Error ellipse: s-maj=13.2km s-min=9.5km az=72.0*

IDC ***23*** *06:38:54.6±0.6, 6.°18S×130.°23E, h28km±3km, mb4.1/13, mbtmp4.3/17, ML4.2/4, MS3.5/18, Error ellipse: s-maj=23.3km s-min=13.2km az=84.0*

DJA ***23*** *06:38:56.6±1.3, 6.°5S±2.°×13.°0E±.°, h23km±11km, M4.7/12, mB5.1/6, mb5.1/8, MLv4.7/12, Mw(mB)4.5/6*

ISC 23 06:38:56.2±0.4, **6.°07S**±0.°04×**130.°12E**±0.°05, **h35**km, **n103,** σ1§**84**/99, **mb4.6**/30, **MS3.5**/14, **1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.55**	**352**	P	**Pn**	**06 39 19.8**	**-1.6**
BNDI				S	**Sn**	**06 39 40.5**	**+0.1**
SAUI	**Saumlaki**	**2.23**	**148**		**Pn**	**06 39 31.1**	**+0.3**
SAUI	**Saumlaki**	**2.23**	**148**	P	**Pn**	**06 39 32.3**	**+1.5**
SAUI				S	**Sn**	**06 40 02.3**	**+5.2**
MSAI	**Masohi**	**2.96**	**336**	P	**Pn**	**06 39 41.1**	**+0.4**
AAI	**Ambon**	**3.05**	**321**	P	**Pn**	**06 39 39.6**	**-2.4**
FAKI	**Fak Fak**	**3.79**	**34**		**Pn**	**06 39 52.1**	**0.0**
FAKI	**Fak Fak**	**3.79**	**34**	P	**Pn**	**06 39 52.8**	**+0.6**
FAKI				S	**Sn**	**06 40 36.4**	**+0.9**
NLAI	**Namlea**	**4.12**	**313**	P	Pn	06 40 00.9	+4.2
KMPI	**Kaimana, Papua**	**4.30**	**56**	P	**Pn**	**06 40 01.0**	**+1.8**
KMPI				S	**Sn**	**06 40 50.9**	**+2.7**
SWI	**Sorong**	**5.30**	**12**	P	**Pn**	**06 40 13.3**	**+0.3**
SANI	**Sanana**	**5.74**	**314**	P	**Pn**	**06 40 19.7**	**+0.7**
	0.4nm124nm,1.0s						
RKPI	**Ransiki, Papua**	**6.08**	**42**	P	**Pn**	**06 40 25.7**	**+2.0**
MTN	**Manton Dam**	**6.80**	**172**		**Pn**	**06 40 32.3**	**-1.3**
SOEI	**Soe**	**6.85**	**237**		**Pn**	**06 40 32.9**	**-1.5**
SOEI	**Soe**	**6.85**	**237**	P	**Pn**	**06 40 38.9**	**+4.5**
TNTI	**Ternate**	**7.33**	**338**	Pn	**Pn**	**06 40 39.5**	**-1.4**
BATI	**Baumata**	**7.59**	**237**	Pn	**Pn**	**06 40 42.8**	**-1.7**
	4.3nm,0.3s,baz=265,slow=14,SNR=5.5						
BATI					Sn	**Sn**	**06 42 15.3**	**+5.8**
	2.9nm,0.3s,baz=90,slow=20,SNR=1.2						
BATI				LR	LR	06 44 06.6	
	comp=Z,1μm,19.5s,baz=78,slow=41						
	59nm,0.8s						
BATI	**Baumata**	**7.59**	**237**	P	**Pn**	**06 40 45.7**	**+1.2**
	0.4nm122nm,0.9s						
BAKI	**Biak**	**7.70**	**51**	P	**Pn**	**06 40 47.6**	**+1.7**
	0.7nm204nm,0.8s						
MMRI	**Maumere**	**8.22**	**251**		**Pn**	**06 40 53.0**	**-0.1**
MMRI	**Maumere**	**8.22**	**251**	P	Pn	06 40 59.1	+6.0
EDFI	**Ende, Flores**	**8.77**	**252**	P	**Pn**	**06 41 01.6**	**+0.9**
	1μm76nm,1.2s						
LUWI	**Luwuk**	**8.87**	**304**	Pn	**Pn**	**06 41 01.1**	**-0.9**
BSSI	**Bau Bau, Buton**	**9.57**	**269**	P	**Pn**	**06 41 12.1**	**+0.4**
KNRA	**Kununurra**	**9.64**	**188**		**Pn**	**06 41 09.4**	**-3.1**
KAPI	**Kappang**	**10.37**	**275**	Pn	**Pn**	**06 41 22.3**	**-0.3**
	1.4nm,0.3s,baz=97,slow=8.2,SNR=9.2						
KAPI				LR	LR	06 45 12.8	
	comp=Z,699nm,18.5s,baz=95,slow=36						
	4.6nm,0.3s						
TOLI2	**Tolitoli**	**11.74**	**307**	Pn	**Pn**	**06 41 41.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**12.73**	**200**	Pn	Pn	06 41 50.8	-4.1
	1.1nm,0.3s,baz=42,slow=8.9,SNR=19						
FITZ					Sn	Sn	06 44 04.7	-11
	1.1nm,0.3s,baz=76,slow=18,SNR=6.0						
FITZ				LR	LR	06 47 27.6	
	comp=Z,371nm,20.0s,baz=22,slow=40						
	8.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.73**	**200**		**Pn**	**06 41 51.8**	**-3.1**
DAV	**Davao City (W)**	**13.82**	**341**	LR	LR	06 48 17.5	
	comp=Z,221nm,18.6s,baz=154,slow=40						
WRAB	**Tennant Creek**	**14.38**	**164**		Pn	06 42 12.8	-4.6
WRA	**Warramunga Arr**	**14.38**	**164**	Pn	Pn	06 42 11.7	-5.9
	1.0nm,0.3s,baz=343,slow=13,SNR=15						
WRA					Sn	Sn	06 44 43.1	-13
	1.0nm,0.3s,baz=343,slow=22,SNR=10						
WRA	**Warramunga Arr**	**14.38**	**164**		Pn	06 42 11.3	-6.3
MYLDM	**Lahad Datu**	**16.11**	**314**	Pn	**Pn**	**06 42 38.6**	**-1.6**
MYLDM					IAmb	IAmb	06 43 02.0	
	comp=Z,42nm,1.2s						

PMG	**Port Moresby**	**17.21**	**102**	P	**Pn**	**06 42 54.1**	**+0.1**
	comp=Z,29nm,1.0s,baz=305,slow=7.8,SNR=9.2						
PMG	**Port Moresby**	**17.21**	**102**		**Pn**	**06 42 52.3**	**-1.8**
AS31	**Alice Springs**	**17.87**	**169**		**Pn**	**06 42 58.5**	**-3.7**
ASAR	**Alice Springs**	**17.87**	**169**	P	**Pn**	**06 42 57.7**	**-4.5**
	comp=Z,0.6nm,0.3s,baz=347,slow=11,SNR=30						
ASAR				S	Sn	06 46 06.0	-15
	comp=Z,5.9nm,0.8s,baz=334,slow=16,SNR=5.3						
	comp=Z,6.2nm,0.7s						
ASAR	**Alice Springs**	**17.87**	**169**		**Pn**	**06 43 00.0**	**-2.2**
MBWA	**Marble Bar**	**18.06**	**213**	P	**Pn**	**06 43 03.5**	**-1.1**
PSA00	**Pilbara Seismi**	**18.34**	**212**	P	**P**	**06 43 06.7**	**-1.1**
PSA00				IAmb	IAmb	06 43 12.4	
	comp=Z,27nm,0.8s						
PSA00	**Pilbara Seismi**	**18.34**	**212**		**P**	**06 43 06.3**	**-1.5**
PSA00				IAmb	IAmb	06 43 12.4	
	comp=Z,14nm,0.9s						
SBUM	**Sibu**	**19.77**	**295**		**Pn**	**06 43 23.5**	**-1.8**
SBUM				IAmb	IAmb	06 43 43.9	
	comp=Z,25nm,1.0s						
CTAO	**Charters Tower**	**20.97**	**133**		**P**	**06 43 35.7**	**-0.8**
CTAO				IAmb	IAmb	06 43 48.7	
	comp=Z,35nm,1.4s						
INKA	**Innaminka**	**23.80**	**156**		**P**	**06 44 05.2**	**-0.7**
FORT	**Forrest**	**24.65**	**184**	P	**P**	**06 44 14.2**	**+0.4**
FORT				IAmb	IAmb	06 44 40.4	
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**27.83**	**159**	P	**P**	**06 44 41.0**	**-1.5**
	comp=Z,2.5nm,0.5s,baz=337,slow=9.8,SNR=5.8						
	comp=Z,2.5nm,0.5s						
PSI	**Prapat**	**32.37**	**285**	LR	LR	06 59 25.7	
	comp=Z,210nm,19.5s,baz=90,slow=38						
CAN	**Canberra**	**33.91**	**152**	P	**P**	**06 45 36.2**	**+0.1**
DZM	**Mont Dzumac**	**38.52**	**118**	*e*S	**S**	**06 52 08.9**	**-0.5**
	comp=Z,48nm,29.9s						
DZM				*e*SS	**SnSn**	**06 54 54.3**	**-3.7**
	comp=Z,43nm,24.5s						
DZM				*e*LR	LR	06 56 47.4	
	comp=Z,180nm,27.6s						
JNU	**Nakatsue**	**38.98**	**1**	LR	LR	07 04 07.1	
	comp=Z,76nm,18.1s,baz=186,slow=39						
CMAR	**Chiang Mai Arr**	**39.23**	**309**	P	**P**	**06 46 21.7**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=154,slow=7.2,SNR=4.4						
CMAR				LR	LR	07 04 47.9	
	comp=Z,20nm,20.6s,baz=165,slow=39						
	comp=Z,1.3nm,0.3s						
NJ2	**Nanjing**	**39.40**	**345**	*e*P	**P**	**06 46 25.4**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WHN	**Wuhan**	**39.42**	**338**	P	**P**	**06 46 24.3**	**+1.4**
PZH	**PanZhiHua**	**42.49**	**321**	P	**P**	**06 46 50.8**	**+2.3**
MJAR	**Matsushiro Arr**	**43.06**	**10**	P	**P**	**06 46 51.7**	**-1.1**
	comp=Z,5.3nm,0.8s,baz=187,slow=9.2,SNR=11						
MJAR				pP	**pP**	**06 47 01.6**	**-0.5**
	comp=Z,13nm,1.0s,baz=176,slow=9.3,SNR=11						
	comp=Z,5.3nm,0.8s						
MJAR	**Matsushiro Arr**	**43.06**	**10**	P	**P**	**06 46 53.6**	**+0.8**
MAJO	**Matsushiro**	**43.06**	**10**	P	**P**	**06 46 53.2**	**+0.4**
MJB9	**Matsu-Tunnel**	**43.07**	**10**	P	**P**	**06 46 53.9**	**+1.0**
MJB9				IAmb	IAmb	06 47 03.2	
	comp=Z,20nm,0.9s						
KSRS	**Korea Array**	**43.35**	**357**	P	**P**	**06 46 55.2**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=204,slow=11,SNR=1.6						
KSRS				pP	**pP**	**06 47 04.5**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=174,slow=11,SNR=3.5						
	comp=Z,0.8nm,0.7s						
XAN	**Xi'an**	**44.65**	**335**	P	**P**	**06 47 05.5**	**-0.2**
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
JMM	**Marumori**	**44.83**	**12**	P	**P**	**06 47 08.4**	**+1.5**
HNS	**HongShan**	**45.58**	**343**	*e*P	**P**	**06 47 13.0**	**+0.1**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRDH	**Bariadhala**	**47.25**	**309**	LR	LR	07 10 25.8	
	comp=Z,40nm,18.4s,baz=242,slow=40						
LZH	**Lanzhou**	**48.65**	**331**	*e*P	**P**	**06 47 39.5**	**+2.4**
LZH				sP	pP	06 47 46.8	+0.2
LZH				ScP	**ScP**	**06 52 59.8**	**+5.2**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC	**Hu-ho-hao-te**	**49.70**	**342**	*e*P	**P**	**06 47 48.5**	**+3.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,97nm,4.3s						
PALK	**Pallekele**	**51.05**	**284**	LR	LR	07 08 59.3	
	comp=Z,63nm,21.6s,baz=106,slow=35						
ASAJ	**Asahikawa**	**51.21**	**12**	LR	LR	07 10 02.5	
	comp=Z,22nm,19.4s,baz=171,slow=36						
GTA	**Gaotai**	**53.22**	**331**	P	**P**	**06 48 12.8**	**+1.4**
GTA				sP	sP	06 48 22.4	-2.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
EVN	**Everest**	**53.76**	**311**	P	**P**	**06 48 15.4**	**-0.7**
EVN				IAmb	IAmb	06 48 25.5	
	comp=Z,5.4nm,0.7s						
HEH	**HeiHe**	**56.15**	**358**	*e*P	**P**	**06 48 32.3**	**+0.1**
HEH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**57.42**	**342**	P	**P**	**06 48 42.3**	**+0.7**
ULN				IAmb	IAmb	06 48 52.9	
	comp=Z,4.8nm,0.8s						
SONM	**Songino Array**	**57.60**	**341**	P	**P**	**06 48 43.8**	**+1.0**
	comp=Z,4.2nm,1.2s,baz=168,slow=7.6,SNR=14						
	comp=Z,4.2nm,1.2s						
WMQ	**Urumqi**	**62.69**	**327**	*e*P	**P**	**06 49 19.0**	**+1.3**
WMQ				sP	pP	06 49 27.3	-0.1
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
PETK	**Petropavlovsk-**	**63.41**	**18**	P	**P**	**06 49 22.0**	**-0.2**
	comp=Z,11nm,1.1s,baz=207,slow=9.3,SNR=3.3						
PETK				pP	**pP**	**06 49 31.8**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=214,slow=7.2,SNR=4.2						
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**63.41**	**18**	P	**P**	**06 49 22.4**	**+0.2**
KSH	**Kashi**	**67.42**	**317**	P	**P**	**06 49 49.0**	**+0.4**
KSH				sP	pP	06 49 58.5	+0.1
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MKAR	**Makanchi Array**	**67.52**	**327**	P	**P**	**06 49 49.5**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=129,slow=7.9,SNR=16						
MKAR				pP	**pP**	**06 49 58.8**	**0.0**
	comp=Z,17nm,1.1s,baz=118,slow=8.7,SNR=11						
	comp=Z,3.8nm,0.8s						
MKAR	**Makanchi Array**	**67.52**	**327**	P	**P**	**06 49 49.2**	**+0.3**
ARSB	**Arslanbob**	**70.28**	**318**	P	**P**	**06 50 06.0**	**-0.4**
ARSB				IAmb	IAmb	06 50 16.9	
	comp=Z,6.3nm,0.8s						
ZAA0	**Zalesovo Array**	**70.81**	**334**		**P**	**06 50 08.5**	**-0.6**
ZALV	**Zalesovo Beam**	**70.81**	**334**	P	**P**	**06 50 08.8**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=108,slow=4.8,SNR=13						
ZALV				pP	**pP**	**06 50 17.9**	**-1.1**
	comp=Z,4.6nm,0.6s,baz=123,slow=5.6,SNR=11						
	comp=Z,2.7nm,0.8s						
KURBB	**Kurchatov Arra**	**71.79**	**328**	P	**P**	**06 50 15.7**	**+0.6**
	comp=Z,7.2nm,0.9s,baz=128,slow=4.8,SNR=24						
KURBB				pP	**pP**	**06 50 24.6**	**-0.3**
	comp=Z,7.5nm,0.6s,baz=128,slow=4.8,SNR=12						
	comp=Z,7.2nm,0.9s						
KURK	**Kurchatov**	**71.79**	**328**		**P**	**06 50 15.2**	**0.0**
KK31	**Karatay Array**	**72.72**	**319**	P	**P**	**06 50 21.3**	**+0.3**
KK31				IAmb	IAmb	06 50 22.3	
	comp=Z,6.8nm,1.2s						
KKAR	**Karatay Array**	**72.72**	**319**	P	**P**	**06 50 21.9**	**+0.9**
VNDA	**Vanda**	**73.35**	**173**	P	**P**	**06 50 22.7**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=343,slow=8.9,SNR=3.6						
VNDA				pP	**pP**	**06 50 32.2**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=274,slow=4.3,SNR=3.6						
	comp=Z,1.0nm,0.8s						
MAW	**Mawson**	**75.85**	**201**	P	**P**	**06 50 39.2**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=73,slow=11,SNR=2.0						
MAW				LR	LR	07 22 40.3	
	comp=Z,35nm,18.1s,baz=74,slow=35						
	comp=Z,2.5nm,0.7s						
BVAR	**Borovoye Array**	**77.35**	**328**	P	**P**	**06 50 47.6**	**+0.2**
	comp=Z,3.1nm,1.0s,baz=122,slow=7.2,SNR=9.7						
BVAR				pP	**pP**	**06 50 55.7**	**-1.6**
	comp=Z,3.4nm,0.8s,baz=124,slow=7.9,SNR=9.0						
	comp=Z,3.1nm,1.0s						
TIXI	**Tiksi**	**77.57**	**360**	LR	LR	07 25 37.8	
	comp=Z,22nm,21.7s,baz=200,slow=36						
TIXI	**Tiksi**	**77.57**	**360**	P	**P**	**06 50 47.8**	**-0.4**
TBI	**Tubuai**	**78.84**	**113**	*e*LR	LR	07 15 20.2	
	comp=Z,636nm,40.0s						
PPT2	**Papeete2**	**78.97**	**107**	*e*LR	LR	07 15 22.6	
	comp=Z,86nm,34.0s						
PPT2				*e*LR	LR	07 15 30.1	

	comp=Z,57nm,28.5s						
AB31	**Akbulak array**	**81.86**	**321**	P	**P**	**06 51 11.3**	**-0.6**
AB31				IAmb	IAmb	06 51 21.2	
	comp=Z,3.2nm,0.8s						
ABKAR	**Akbulak array**	**81.86**	**321**	P	**P**	**06 51 11.5**	**-0.5**
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**06 51 26.2**	**+3.8**
	comp=Z,0.8nm,0.6s,baz=101,slow=3.0,SNR=5.6						
QSPA	**South Pole Qui**	**83.90**	**180**	P	**P**	**06 51 23.4**	**+1.0**
QSPA				IAmb	IAmb	06 52 05.0	
	comp=Z,5.4nm,1.3s						
ILAR	**Eielson Array**	**92.46**	**25**	P	**P**	**06 52 00.9**	**-2.4**
	comp=Z,0.4nm,0.9s,baz=208,slow=6.1,SNR=2.7						
ILAR				pP	**pP**	**06 52 10.5**	**-2.9**
	comp=Z,0.9nm,0.8s,baz=262,slow=4.3,SNR=6.5						
ILAR				LR	LR	07 28 53.8	
	comp=Z,36nm,19.8s,baz=221,slow=32						
	comp=Z,0.4nm,0.9s						
KMBO	**Kilima Mbogo**	**92.73**	**269**	LR	LR	07 29 05.8	
	comp=Z,12nm,20.3s,baz=88,slow=32						
ASF	**Jabal al Asfar**	**95.92**	**302**	LR	LR	07 43 11.2	
	comp=Z,17nm,18.2s,baz=81,slow=40						
SNAA	**Sanae**	**96.59**	**193**	LR	LR	07 37 10.5	
	comp=Z,52nm,18.0s,baz=189,slow=36						
MMAI	**Mount Meron Ar**	**97.22**	**302**	LR	LR	07 43 56.7	
	comp=Z,9.7nm,18.1s,baz=154,slow=40						
BRTR	**Keskin Array B**	**98.83**	**309**	LR	LR	07 44 59.3	
	comp=Z,11nm,19.1s,baz=104,slow=40						

MOS ***23*** *06:57:47.8±1.0, 40.°19N×71.°72E, h20km, mb4.3/5, Error ellipse: s-maj=8.1km s-min=4.9km az=60.3*

KRNET ***23*** *06:57:50.0±0.1, 40.°44N×72.°01E, h10km, mb4.3*

IDC ***23*** *06:57:50.9±0.7, 40.°39N×72.°02E, h28km±3km, mb3.7/15, mbtmp3.8/22, ML3.2/7, MS2.9/1, Error ellipse: s-maj=13.6km s-min=8.5km az=151.0*

ISU ***23*** *06:57:50, 40.°42N×71.°97E, h22km*

SOME ***23*** *06:57:54.8, 40.°65N×72.°00E, h10km*

NNC ***23*** *06:57:55.5±1.9, 40.°64N×72.°02E, h24km±10km, mb4.3, mpv4.0, Error ellipse: s-maj=16.4km s-min=5.1km az=8.0*

ISC 23 06:57:50.1±0.4, **40.°50N**±0.°02×**72.°05E**±0.°01, **h18**km±1km, **n173,** σ**2**§**13**/251, **mb4.0**/17, **MS2.9**/3, **69C-37D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.23**	**238**	P	**Pb**	**06 57 56.7**	**+1.0**
FRG				S	**Sb**	**06 58 00.7**	**+1.2**
TSTA	**Tashata**	**0.34**	**76**	P	**Pn**	**06 57 59.9**	**-0.3**
TSTA				S	**Sn**	**06 58 06.5**	**-0.2**
CHMI	**Chimion**	**0.46**	**240**	P	**Pg**	**06 57 59.6**	**+0.2**
CHMI				S	**Sg**	**06 58 05.6**	**-0.1**
OHH	**Osh**	**0.56**	**87**	⇑*i*P	**Pb**	**06 58 01.6**	**+0.1**
OHH				⇑*e*S	**Sb**	**06 58 10.7**	**+0.7**
OHH	**Osh**	**0.56**	**87**	⇓*e*P	**Sn**	**06 58 13.7**	**+1.4**
OHH				⇓*e*S	Sb	06 58 22.1	+13
OHH	**Osh**	**0.56**	**87**	*i* PG	**Pb**	**06 58 01.6**	**+0.1**
NAM	**Namangan**	**0.57**	**329**	P	**Pn**	**06 58 04.0**	**+0.6**
MINT	**Mingtut**	**0.82**	**268**	P	**Pn**	**06 58 06.5**	**-0.2**
MINT				S	**Sg**	**06 58 17.6**	**+0.7**
DRK	**Karamyk**	**1.03**	**191**	⇑*i*P	**Pb**	**06 58 08.6**	**-1.0**
DRK				⇑*e*S	**Sb**	**06 58 22.3**	**-0.7**
DRK	**Karamyk**	**1.03**	**191**	⇓*e*P	**Sb**	**06 58 22.1**	**-0.9**
DRK				⇓*e*S	Sn	06 58 36.4	+12
DRK	**Karamyk**	**1.03**	**191**	*i* PG	**Pb**	**06 58 08.6**	**-1.0**
DRK				S	**Pb**	**06 58 09.1**	**-0.5**
ARSB	**Arslanbob**	**1.09**	**40**	⇑*i*P	**Pg**	**06 58 12.0**	**+0.8**
ARSB				⇑*e*S	**Sg**	**06 58 28.0**	**+2.5**
ARSB	**Arslanbob**	**1.09**	**40**	⇑*e*P	**Sb**	**06 58 23.5**	**-0.9**
ARSB				⇑*e*S	Sg	06 58 38.9	+13
ARSB	**Arslanbob**	**1.09**	**40**	*e*PG	**Pg**	**06 58 12.0**	**+0.8**
CHDK	**Chadak**	**1.09**	**296**	P	**Pg**	**06 58 12.4**	**+1.2**
CHDK				S	**Sg**	**06 58 27.7**	**+2.2**
SFK	**Sufi-Kurgan**	**1.22**	**113**	⇑*e*P	**Pb**	**06 58 13.2**	**+0.5**
SFK				⇑*e*S	**Sg**	**06 58 30.2**	**+0.6**
SFK	**Sufi-Kurgan**	**1.22**	**113**	⇓*e*P	**Sb**	**06 58 25.8**	**-2.4**
SFK				⇑*e*S	Sg

AAK	**Ala-Archa**	**2.82**	**40**	⇓	*e*P		**Pb**	**06 58 39.4**	**-0.6**
AAK				⇓	*i*S		**Sb**	**06 59 15.4**	**+1.2**
AAK	**Ala-Archa**	**2.82**	**40**	⇓	*e*P		Pg	06 58 51.2	+7.1
AAK				⇓	*e*S		**Sg**	**06 59 26.6**	**+5.9**
AAK	**Ala-Archa**	**2.82**	**40**	*i*	PN		**Pb**	**06 58 38.5**	**-1.5**
AAK					pmax	pmax			
	comp=Z,47nm,0.6s								
KK31	**Karatay Array**	**2.84**	**337**	⇑	Pn		**Pn**	**06 58 37.1**	**+2.5**
	comp=Z,1.9nm,0.3s,baz=155,slow=12,SNR=697								
KK31				⇑	Pg		**Pg**	**06 58 44.2**	**-0.4**
	comp=Z,28nm,0.3s,baz=151,slow=14,SNR=7.3								
KK31				⇑	Lg	Lg		06 59 22.5	
	comp=Z,264nm,0.5s,baz=153,slow=29,SNR=4.0								
KK31	**Karatay Array**	**2.84**	**337**	*e*	PN		**Pn**	**06 58 37.3**	**+2.7**
KK31								06 58 43.5	
KK31								06 59 22.6	
FRU1	**Bishkek**	**3.02**	**39**	⇑	*e*P		**Pb**	**06 58 42.2**	**-1.1**
FRU1				⇑	*e*S		**Sb**	**06 59 20.2**	**+0.4**
FRU1	**Bishkek**	**3.02**	**39**	⇑	*e*P		Pg	06 58 53.9	+6.0
FRU1				⇑	*e*S		**Sg**	**06 59 31.4**	**+4.5**
FRU1	**Bishkek**	**3.02**	**39**	*e*	PN		**Pb**	**06 58 42.2**	**-1.1**
FRU1					S		**Sb**	**06 59 20.2**	**+0.4**
BRLS	**Borolday**	**3.02**	**328**		Pg		**Pb**	**06 58 44.5**	**+1.1**
	comp=Z,122nm,0.3s								
BRLS					Lg	Lg		06 59 20.5	
	comp=Z,317nm,0.5s								
BRLS	**Borolday**	**3.02**	**328**	*e*	P		**Pb**	**06 58 44.5**	**+1.1**
	comp=Z,122nm,0.3s								
BRLS					*e*S		**Sb**	**06 59 20.5**	**+0.5**
	comp=Z,317nm,0.5s								
KBK	**Karagaybulak**	**3.06**	**44**		P		**Pb**	**06 58 43.3**	**-0.8**
	SNR=8.8								
KBK	**Karagaybulak**	**3.06**	**44**	⇑	*i*P		**Pb**	**06 58 42.7**	**-1.5**
KBK				⇑	*i*S		**Sb**	**06 59 21.2**	**-0.1**
KBK	**Karagaybulak**	**3.06**	**44**	⇓	*e*P		Pg	06 58 54.5	+5.7
KBK				⇓	*e*S		**Sg**	**06 59 32.6**	**+4.0**
KBK	**Karagaybulak**	**3.06**	**44**	*i*	PN		**Pb**	**06 58 42.7**	**-1.5**
KBK					S		**Sb**	**06 59 21.2**	**-0.1**
KSH	**Kashi**	**3.17**	**107**		Pn		**Pn**	**06 58 41.4**	**+2.2**
KSH					Sn		**Sn**	**06 59 20.6**	**+3.9**
KSH					smax	smax			
	comp=N,360nm,0.8s								
KSH					smax	smax			
	comp=E,330nm,0.6s								
BXML	**Bakhmal**	**3.18**	**257**		P		**Pn**	**06 58 41.7**	**+2.3**
BXML					S		**Sb**	**06 59 25.5**	**+0.8**
CHMS	**Chumysh**	**3.22**	**38**		P		**Pb**	**06 58 44.3**	**-2.3**
	SNR=7.5								
CHMS	**Chumysh**	**3.22**	**38**		Pg		**Pn**	**06 58 39.8**	**0.0**
	comp=E,302nm,0.2s								
CHMS					Lg	Lg		06 59 13.2	
	comp=E,2μm,0.3s								
CHMS	**Chumysh**	**3.22**	**38**	⇑	*e*P		**Pb**	**06 58 44.6**	**-2.1**
CHMS				⇑	*e*S		**Sb**	**06 59 24.8**	**-0.7**
CHMS	**Chumysh**	**3.22**	**38**	⇓	*e*P		Pg	06 58 56.5	+4.8
CHMS				⇓	*e*S		**Sg**	**06 59 36.0**	**+2.6**
CHMS	**Chumysh**	**3.22**	**38**	*e*	PN		**Pb**	**06 58 44.6**	**-2.1**
CHMS					S		**Sb**	**06 59 24.8**	**-0.7**
DZI	**Dzhizak**	**3.25**	**265**		S		**Sn**	**06 59 20.3**	**+1.9**
USP	**Ospenovka**	**3.32**	**33**		P		**Pb**	**06 58 45.4**	**-3.0**
	SNR=21								
USP	**Ospenovka**	**3.32**	**33**	⇑	*i*P		**Pb**	**06 58 45.9**	**-2.5**
USP				⇑	*e*S		**Sb**	**06 59 27.1**	**-1.4**
USP	**Ospenovka**	**3.32**	**33**	⇓	*e*P		**Pg**	**06 58 57.9**	**+4.2**
USP				⇓	*e*S		**Sg**	**06 59 38.5**	**+1.8**
USP	**Ospenovka**	**3.32**	**33**	*i*	PN		**Pb**	**06 58 45.9**	**-2.5**
BOOM	**Boomskoye usch**	**3.54**	**55**	⇓	*e*P		**Pb**	**06 58 49.3**	**-3.0**
BOOM				⇓	*e*S		**Sb**	**06 59 32.5**	**-2.5**
BOOM	**Boomskoye usch**	**3.54**	**55**	⇓	*e*P		**Pg**	**06 59 01.1**	**+3.2**
BOOM				⇓	*e*S		**Sg**	**06 59 44.0**	**+0.3**
BOOM	**Boomskoye usch**	**3.54**	**55**	*e*	PN		**Pb**	**06 58 49.3**	**-3.0**
BOOM					S		**Sb**	**06 59 32.5**	**-2.5**
TKM2	**Tokmak 2**	**3.60**	**47**		P		**Pb**	**06 58 49.7**	**-3.5**
	SNR=16								
TKM2	**Tokmak 2**	**3.60**	**47**	⇑	*i*P		**Pb**	**06 58 49.9**	**-3.4**
TKM2				⇑	*e*S		**Sb**	**06 59 34.0**	**-2.6**
TKM2	**Tokmak 2**	**3.60**	**47**	⇓	*e*P		**Pg**	**06 59 01.9**	**+2.9**
TKM2				⇓	*e*S		**Sg**	**06 59 45.5**	**-0.1**
TKM2	**Tokmak 2**	**3.60**	**47**	*i*	PN		**Pb**	**06 58 49.9**	**-3.4**
ULHL	**Ulahol**	**3.61**	**60**	⇑	*e*P		**Pb**	**06 58 50.2**	**-3.3**
ULHL				⇑	*i*S		**Sb**	**06 59 34.2**	**-2.8**
ULHL	**Ulahol**	**3.61**	**60**	⇑	*e*P		**Pg**	**06 59 02.1**	**+2.9**
ULHL				⇑	*e*S		**Sg**	**06 59 45.8**	**-0.2**
ULHL	**Ulahol**	**3.61**	**60**	*e*	PN		**Pb**	**06 58 50.2**	**-3.3**
ULHL					S		**Sb**	**06 59 34.2**	**-2.8**
KST	**Kastek**	**3.88**	**48**		Pg		**Pg**	**06 59 04.7**	**+0.3**
	comp=E,14nm,0.3s								
KST					Lg	Lg		06 59 54.6	
	comp=E,111nm,0.5s								
KST	**Kastek**	**3.88**	**48**	*e*	P		**Pg**	**06 59 04.7**	**+0.3**
	comp=E,14nm,0.3s								
KST					*e*S		**Sg**	**06 59 54.6**	**0.0**
	comp=E,111nm,0.5s								
DGS	**Degeres**	**3.91**	**44**		Pg		**Pg**	**06 59 04.8**	**-0.1**
	comp=E,18nm,0.4s								
DGS					Lg	Lg		06 59 55.5	
	comp=E,173nm,0.5s								
AGL	**Agalyk**	**4.08**	**258**		P		**Pn**	**06 58 50.0**	**-1.7**
KRBS	**Karabastau**	**4.18**	**39**		Pg		**Pg**	**06 59 10.1**	**-0.1**
	comp=E,11nm,0.4s								
KRBS					Lg	Lg		07 00 03.9	
	comp=E,20nm,0.5s								
KDJ	**Kajisay**	**4.20**	**65**	⇑	*e*P		Pb	06 58 58.5	-5.0
KDJ				⇑	*e*S		**Sb**	**06 59 48.4**	**-5.5**
KDJ	**Kajisay**	**4.20**	**65**	⇑	*e*P		**Pg**	**06 59 10.5**	**0.0**
KDJ				⇑	*e*S		**Sg**	**07 00 00.1**	**-4.7**
KDJ	**Kajisay**	**4.20**	**65**	*e*	PN		Pb	06 58 58.5	-5.0
BAYS	**Baysun**	**4.39**	**240**		P		**Pn**	**06 58 56.7**	**+0.7**
TNSS	**Tian-Shan**	**4.46**	**54**		Pg		**Pg**	**06 59 15.8**	**+0.4**
	comp=E,6.5nm,0.6s								
TNSS					Lg	Lg		07 00 14.0	
	comp=E,22nm,0.7s								
TNSS	**Tian-Shan**	**4.46**	**54**	*e*	P		**Pg**	**06 59 15.8**	**+0.4**
	comp=E,6.5nm,0.6s								
TNSS					*e*S		**Sg**	**07 00 14.0**	**+0.8**
	comp=E,22nm,0.7s								
TARG	**Taragay, Kyrgy**	**4.52**	**72**	⇓	*e*P		Pn	06 59 02.9	+4.9
TARG				⇓	*i*S		**Sn**	**06 59 56.1**	**+5.7**
TARG	**Taragay, Kyrgy**	**4.52**	**72**	⇓	*e*P		**Pg**	**06 59 14.9**	**-1.8**
TARG				⇓	*e*S		**Sb**	**07 00 07.9**	**+4.4**
TARG	**Taragay, Kyrgy**	**4.52**	**72**	*e*	PN		Pn	06 59 02.9	+4.9
TARG					S		**Sn**	**06 59 56.1**	**+5.7**
MDOK	**Medeo**	**4.59**	**53**		Pg		**Pg**	**06 59 17.4**	**-0.5**
	comp=E,12nm,0.3s								
MDOK					Lg	Lg		07 00 16.6	
	comp=E,45nm,0.7s								
KUU	**Kurty**	**4.66**	**42**		Pg		**Pg**	**06 59 18.5**	**-0.7**
	comp=E,2.8nm,0.1s								
KUU					Lg	Lg		07 00 18.4	
	comp=E,109nm,0.5s								
KUU	**Kurty**	**4.66**	**42**	*e*	P		**Pg**	**06 59 18.5**	**-0.7**
	comp=E,2.8nm,0.1s								
KUU					*e*S		**Sg**	**07 00 18.4**	**-1.1**
	comp=E,109nm,0.5s								
KOTS	**Kotyrbulak**	**4.67**	**52**		Pg		**Pg**	**06 59 20.0**	**+0.6**
	comp=E,26nm,0.4s								
KOTS					Lg	Lg		07 00 21.5	
	comp=E,122nm,0.6s								
KOTS	**Kotyrbulak**	**4.67**	**52**	*e*	P		**Pg**	**06 59 20.0**	**+0.6**
	comp=E,26nm,0.4s								
KOTS					*e*S		**Sg**	**07 00 21.5**	**+1.6**
	comp=E,122nm,0.6s								
KTBS	**Karatobe**	**4.71**	**46**		Pg		**Pg**	**06 59 19.8**	**-0.5**
	comp=E,7.3nm,0.3s								
KTBS					Lg	Lg		07 00 20.6	
	comp=E,76nm,0.3s								
BTLS	**Baital**	**4.77**	**17**		Pg		**Pg**	**06 59 20.0**	**-1.4**
	comp=E,26nm,0.4s								
BTLS					Lg	Lg		07 00 21.5	
	comp=E,28nm,0.5s								
BTLS	**Baital**	**4.77**	**17**	*e*	P		**Pg**	**06 59 20.0**	**-1.4**
	comp=E,26nm,0.4s								
BTLS					*e*S		**Sg**	**07 00 21.5**	**-1.8**
	comp=E,28nm,0.5s								
PKMR	**Pachkamar**	**4.79**	**248**		P		**Pn**	**06 59 01.9**	**+0.5**
ZRB	**Zarabog**	**5.07**	**244**		P		**Pn**	**06 59 04.2**	**-1.1**
ZRB					S		**Sn**	**07 00 09.9**	**+6.5**
PRZ	**Przheval'sk**	**5.17**	**65**	⇑	*i*P		Pn	06 59 11.7	+5.0
PRZ				⇑	*e*S		**Sn**	**07 00 11.4**	**+5.4**
PRZ	**Przheval'sk**	**5.17**	**65**	⇓	*e*P		**Pb**	**06 59 24.2**	**+4.2**
PRZ				⇓	*e*S		**Sb**	**07 00 23.5**	**+1.6**
PRZ	**Przheval'sk**	**5.17**	**65**	*i*	PN		Pn	06 59 11.7	+5.0
SATY	**Saty**	**5.40**	**60**		Pg		**Pg**	**06 59 34.9**	**+1.5**
	comp=E,7.3nm,0.4s								
SATY					Lg	Lg		07 00 46.6	
	comp=E,41nm,0.5s								
ARXS	**Arharly**	**5.67**	**47**		Pg		**Pg**	**06 59 37.5**	**-1.1**
	comp=E,5.6nm,0.3s								
ARXS					Lg	Lg		07 00 51.4	
	comp=E,51nm,0.5s								
ARXS	**Arharly**	**5.67**	**47**	*e*	P		**Pg**	**06 59 37.5**	**-1.1**
ARXS					*e*S		**Sg**	**07 00 51.4**	**-0.5**
KPKS	**Kokpek**	**5.77**	**57**		Pg		**Pg**	**06 59 40.6**	**+0.1**
	comp=E,0.5nm,0.2s								
KPKS					Lg	Lg		07 00 56.7	
	comp=E,54nm,0.4s								
UZB	**Uzynbulak**	**5.85**	**61**		Pg		**Pg**	**06 59 42.3**	**+0.3**
	comp=E,7.6nm,0.6s								
UZB					Lg	Lg		07 00 59.3	
	comp=E,20nm,0.4s								
UZB	**Uzynbulak**	**5.85**	**61**	*e*	P		**Pg**	**06 59 42.3**	**+0.3**
	comp=E,7.6nm,0.6s								
UZB					*e*S		**Sg**	**07 00 59.3**	**+1.7**
	comp=E,20nm,0.4s								
BLB	**Baldybastay**	**5.97**	**51**		Pg		**Pg**	**06 59 42.9**	**-1.5**
	comp=E,4.9nm,0.7s								
BLB					Lg	Lg		07 01 00.6	
	comp=E,35nm,0.7s								
SHLS	**Shalkode**	**6.14**	**62**		Pg		**Pg**	**06 59 51.5**	**+3.8**
	comp=E,4.9nm,0.4s								
SHLS					Lg	Lg		07 01 15.2	
	comp=E,29nm,0.4s								
PDGK	**Podgornoye**	**6.23**	**61**	⇑	Pg		**Pg**	**06 59 47.9**	**-1.5**
	comp=E,14nm,0.8s								
PDGK				⇓	Lg	Lg		07 01 10.4	
	comp=E,96nm,1.2s								
PDGK	**Podgornoye**	**6.23**	**61**		P*		**Pg**	**06 59 50.8**	**+1.4**
PDGK								07 01 11.2	
KNOS	**Konyrlen**	**6.54**	**51**		Pg		**Pg**	**06 59 54.7**	**-0.5**
	comp=E,3.0nm,0.5s								
KNOS					Lg	Lg		07 01 20.9	
	comp=E,14nm,0.5s								
MK31	**Makanchi Array**	**9.73**	**46**	*i*	P		Pn	07 00 15.1	+6.0
MKAR	**Makanchi Array**	**9.73**	**46**		Pn		**Pn**	**07 00 12.5**	**+3.4**
	comp=E,0.1nm,0.3s,baz=235,slow=15,SNR=5.1								
MKAR					Lg	Lg		07 02 57.4	
	comp=E,0.3nm,0.3s,baz=234,slow=25,SNR=2.9								
	comp=E,1.7nm,0.8s								
KURBB	**Kurchatov Arra**	**11.09**	**22**		Pn		**Pn**	**07 00 28.4**	**+0.6**
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=13								
KURBB					Lg	Lg		07 03 40.4	
	comp=E,0.2nm,0.3s,baz=213,slow=29,SNR=4.8								
	comp=E,0.8nm,0.5s								
KURBB	**Kurchatov Arra**	**11.09**	**22**		P		**Pn**	**07 00 29.2**	**+1.5**
KURK	**Kurchatov**	**11.20**	**22**		P		**Pn**	**07 00 28.4**	**-0.8**
AB31	**Akbulak array**	**12.25**	**320**	⇑	Pn		**Pn**	**07 00 43.8**	**+0.3**
	comp=E,0.9nm,0.3s,baz=128,slow=14,SNR=66								
AB31				⇓	Sn		**Sn**	**07 03 02.7**	**+3.2**
	comp=E,2.3nm,0.4s,baz=128,slow=23,SNR=4.5								
AB31	**Akbulak array**	**12.25**	**320**		P		**Pn**	**07 00 41.6**	**-1.9**
BVA0	**Borovoye Array**	**12.58**	**355**	*i*	P		**P**	**07 00 56.3**	**-3.2**
BVAR	**Borovoye Array**	**12.58**	**355**		Pn		**Pn**	**07 00 48.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=163,slow=11,SNR=5.0								
	comp=E,0.4nm,0.3s								
AKTO	**Aktyubinsk**	**13.96**	**320**		Pn		**Pn**	**07 01 05.5**	**-1.4**
	comp=E,0.3nm,0.3s,baz=148,slow=9.1,SNR=6.0								
	comp=E,1.1nm,0.3s								
AKTO	**Aktyubinsk**	**13.96**	**320**	⇓	Pn		**Pn**	**07 01 07.6**	**+0.7**
	comp=E,1.4nm,0.8s								
AKTO				⇓	Sn		**Sn**	**07 03 47.3**	**+5.9**
	comp=E,2.4nm,0.6s								
AKTO	**Aktyubinsk**	**13.96**	**320**		P		**Pn**	**07 01 04.1**	**-2.8**
DGZ	**Jazzator, Alta**	**14.21**	**45**	*i*	P		**P**	**07 01 14.4**	**-3.5**
ZALV	**Zalesovo Beam**	**15.97**	**28**		Pn		**P**	**07 01 36.0**	**-1.2**
	comp=E,0.3nm,0.3s,baz=215,slow=9.8,SNR=7.2								
	comp=E,1.2nm,0.5s								
ZALV	**Zalesovo Beam**	**15.97**	**28**	*e*	P		**P**	**07 01 38.2**	**+1.0**
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.5s								
ARTI	**Arti**	**18.24**	**335**		P		**Pn**	**07 02 01.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=135,slow=4.3,SNR=3.3								
	comp=Z,1.0nm,0.4s								
ARTI	**Arti**	**18.24**	**335**	*d*	iP		**Pn**	**07 02 01.4**	**-0.7**
ARTI					S		**S**	**07 05 33.3**	**+3.1**
ARTI					pmax	pmax			
	comp=Z,3.0nm,1.0s								
AKT	**Akhty**	**18.37**	**281**	*e*	P		**P**	**07 01 59.8**	**-4.1**
AKT					pmax	pmax			
	comp=Z,5.0nm,0.7s								
MAK	**Makhachkala**	**18.47**	**286**	*c*	iP		P	07 01 56.5	-8.3
MAK					*e*S		Sn	07 05 19.1	-12
MAK					pmax	pmax			
	comp=Z,262nm,1.2s								
MAK					MLR	MLR			
	comp=Z,117nm,18.0s								
GNI	**Garni**	**20.79**	**278**	*ce*	P		**P**	**07 02 29.8**	**-0.6**
GNI					pmax	pmax			
	comp=Z,10.0nm,1.0s								
KBZ	**Khabaz**	**21.81**	**288**		P		**P**	**07 02 39.6**	**-1.5**
	comp=Z,2.0nm,0.7s,baz=99,slow=9.6,SNR=11								
	comp=Z,2.0nm,0.7s								
KBZ	**Khabaz**	**21.81**	**288**	*i*	P		**P**	**07 02 40.1**	**-1.0**
KBZ					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KIV	**Kislovodsk**	**21.96**	**289**	*e*	P		**P**	**07 02 41.7**	**-1.1**
KIV					pmax	pmax			
	comp=Z,9.0nm,1.0s								
SONM	**Songino Array**	**25.55**	**62**		P		**P**	**07 03 19.8**	**+2.0**
	comp=Z,0.9nm,0.8s,baz=266,slow=10,SNR=4.0								
	comp=Z,0.9nm,0.8s								
OBN	**Obninsk**	**27.59**	**314**	⇑	*e*P		**P**	**07 03 36.4**	**+0.4**
OBN					*e*			07 04 25.5	
OBN					pmax	pmax			
	comp=Z,7.0nm,0.4s								
OBN					MLR	MLR			
	comp=Z,20nm,13.0s								
BRTR	**Keskin Array B**	**29.23**	**281**		P		**P**	**07 03 51.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=81,slow=7.9,SNR=3.9								
	comp=Z,1.0nm,0.7s								
BRTR	**Keskin Array B**	**29.23**	**281**	*e*	P		**P**	**07 03 52.7**	**+1.7**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
MNK	**Minsk**	**32.38**	**311**	*i*	P		**P**	**07 04 17.4**	**-1.0**
	comp=E,12nm,0.7s								
MNK				*i*	P		**P**	**07 04 17.4**	**-1.0**
	comp=N,5.0nm,0.7s								
MNK				*i*	P		**P**	**07 04 17.4**	**-1.0**
	comp=Z,5.0nm,0.5s,baz=98								
MNK				*i*	PP		**PnPn**	**07 05 24.1**	**-0.9**
MNK				*i*	PPP		PPP	07 05 33.9	
MNK				*i*	S		**S**	**07 09 32.6**	**+1.0**
MNK				*i*	SS		**SnSn**	**07 11 26.3**	**+2.2**
MNK				*i*	SSS		SSS	07 11 41.7	
MNK	**Minsk**	**32.38**	**311**	*i*	P		**P**	**07 04 17.4**	**-1.0**
MNK				*i*				07 05 24.1	
MNK				*i*	S		**S**	**07 09 32.5**	**+1.0**
MNK				*i*	SS		**SnSn**	**07 11 26.3**	**+2.2**
MNK					pmax	pmax			
	comp=N,5.0nm,0.7s								
MNK					pmax	pmax			
	comp=E,12nm,0.7s								
MNK					pmax	pmax			
	comp=Z,5.0nm,0.5s								
MNK					MLR	MLR			
	comp=Z,40nm,17.0s								
FINES	**FINESS Array B**	**34.71**	**323**		P		**P**	**07 04 38.6**	**0.0**
	comp=Z,0.7nm,0.3s,baz=113,slow=9.7,SNR=14								
FINES					pP		**sP**	**07 04 47.0**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=115,slow=10,SNR=2.4								
	comp=Z,0.7nm,0.3s								
FINES	**FINESS Array B**	**34.71**	**323**	*e*	P		**P**	**07 04 38.7**	**+0.1**
FINES					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ARCES	**ARCESS Array B**	**37.81**	**335**		P		**P**	**07 05 05.5**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=107,slow=8.4,SNR=18								
ARCES					pP		**sP**	**07 05 14.1**	**+1.1**
	comp=Z,1.3nm,0.4s,baz=106,slow=8.9,SNR=2.8								
	comp=Z,1.8nm,0.6s								
ZEA	**Zeya**	**38.84**	**51**	*e*	P		**P**	**07 05 10.5**	**-3.4**
HFS	**Hagfors**	**40.51**	**319**		P		**P**	**07 05 27.4**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=97,slow=11,SNR=11								
HFS					pP		**sP**	**07 05 35.7**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=96,slow=12,SNR=3.4								
	comp=Z,1.8nm,0.4s								
GERES	**GERESS Array B**	**41.41**	**302**		P		**P**	**07 05 36.0**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=46,slow=9.5,SNR=5.5								
GERES					pP		**sP**	**07 05 44.3**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=61,slow=6.3,SNR=3.9								
	comp=Z,0.6nm,0.6s								
GERES	**GERESS Array B**	**41.41**	**302**	*e*	P		**P**	**07 05 35.8**	**+0.5**
GERES					pmax	pmax			
	comp=Z,1.0nm,0.6s								
NB2	**NORSAR Subarra**	**41.75**	**320**		P		**P**	**07 05 36.9**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=92,slow=8.6								
NOA	**NORSAR Array B**	**41.75**	**320**		P		**P**	**07 05 37.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=93,slow=7.6,SNR=4.2								
NOA					pP		**sP**	**07 05 46.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=91,slow=8.2,SNR=4.7								
NOA					LR		LR	07 24 04.2	
	comp=Z,14nm,18.2s,baz=240,slow=38								
	comp=Z,0.5nm,0.6s								
NOA	**NORSAR Array B**	**41.75**	**320**	*e*	P		**P**	**07 05 37.3**	**-0.6**
EKA	**Eskdalemuir Ar**	**50.05**	**314**		P		**P**	**07 06 42.2**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=70,slow=6.1,SNR=2.3								
	comp=Z,0.6nm,0.5s								
TORD	**Torodi Ar. Bea**	**66.67**	**268**		P		**P**	**07 08 38.2**	**-1.8**
	comp=Z,2.2nm,0.4s,baz=42,slow=8.8,SNR=3.7								
	comp=Z,2.2nm,0.4s								
ILAR	**Eielson Array**	**70.72**	**17**		P		**P**	**07 09 04.4**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=318,slow=8.1,SNR=8.1								
ILAR					pP		**sP**	**07 09 13.3**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=327,slow=4.7,SNR=7.1								
	comp=Z,0.8nm,0.8s								
ILAR	**Eielson Array**	**70.72**	**17**	*e*	P		**P**	**07 09 04.2**	**-0.3**
ILAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
DBIC	**Dimbokro**	**75.74**	**267**		P		**P**	**07 09 33.2**	**-1.7**
	comp=Z,1.9nm,0.4s,baz=64,slow=5.0,SNR=4.5								
DBIC					pP		**sP**	**07 09 43.5**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=58,slow=5.2,SNR=2.7								
	comp=Z,1.9nm,0.4s								
YKA	**Yellowknife Ar**	**77.22**	**3**		P		**P**	**07 09 42.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=20,slow=8.1,SNR=9.7								
YKA					pP		**sP**	**07 09 51.5**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=340,slow=9.0,SNR=3.3								
	comp=Z,1.1nm,0.6s								
WRA	**Warramunga Arr**	**83.44**	**123**		P		**P**	**07 10 15.6**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=331,slow=5.0,SNR=2.3								
WRA					pP		**sP**	**07 10 24.1**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=319,slow=5.0,SNR=3.6								
	comp=Z,0.5nm,0.8s								
ASAR	**Alice Springs**	**85.90**	**126**		P		**P**	**07 10 27.4**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=301,slow=4.2,SNR=5.1								
ASAR					pP		**sP**	**07 10 37.0**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=308,slow=5.0,SNR=6.6								
	comp=Z,0.4nm,0.7s								

NEIC ***23*** *07:45:03.8±1.4, 19.12N±0.03×67.13W±0.02, h10km±1km, ML2.5/12, Md2.9/16(RSPR), Error ellipse: s-maj=5.7km s-min=3.2km az=159.0*
SDD ***23*** *07:45:04.0±1.6, 19.21N×67.08W, h30km±58km, MD3.3, ML2.7, MW3.2*

RSPR 23 07:45:06.9, 19.03N×67.13W, h7km±1km, MD2.9/16, 10C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.56**	**178**			Pg	07 45 16.8	-0.9
AGPR						Sb	07 45 26.1	-1.0
AGPR	**Aguadilla, PR**	**0.56**	**178**	*e*	Pg	Pg	07 45 16.8	-0.9
AGPR				*e*	Sg	Sb	07 45 27.4	+0.2
AGPR					IAML		07 45 33.1	
	comp=N,349nm,0.2s							
AGPR	**Aguadilla, PR**	**0.56**	**178**	⇓ *e*	P	Pg	07 45 16.8	-0.9
AGPR	**Aguadilla, PR**	**0.56**	**178**	*e*

MXZ	**Matakaoa Point**	**3.02**	**229**	P	Pn	07 48 28.2	-1.0
MXZ				S	Sn	07 49 05.0	-0.4
WMGZ	**Waiomatatini S**	**3.12**	**224**	P	Pn	07 48 31.3	+0.6
WMGZ				S	Sn	07 49 07.0	-0.9
PKGZ	**Pakihiroa**	**3.35**	**227**	P	Pn	07 48 33.5	-0.3
PKGZ				S	Sn	07 49 14.8	+1.2
PUZ	**Puketiti**	**3.39**	**223**	P	Pn	07 48 33.9	-0.5
PUZ				S	Sn	07 49 15.2	+0.7
HAZ	**Te Kaha**	**3.47**	**231**	P	Pn	07 48 35.3	-0.1
HAZ				S	Sn	07 49 18.2	+1.8
TWGZ	**Tauwhareparae**	**3.62**	**224**	P	Pn	07 48 37.8	+0.2
TWGZ				S	Sn	07 49 22.8	+2.5
RUGZ	**Raukumara Rang**	**3.66**	**229**	P	Pn	07 48 38.4	+0.2
RUGZ				S	Sn	07 49 22.2	+0.9
CNGZ	**Carnagh Statio**	**3.72**	**219**	P	Pn	07 48 39.4	+0.5
TKGZ	**Te Karaka**	**3.88**	**222**	P	Pn	07 48 41.6	+0.6
TKGZ				S	Sn	07 49 27.3	+0.8
MWZ	**Matawai**	**3.99**	**226**	P	Pn	07 48 42.8	+0.2
MWZ				S	Sn	07 49 30.7	+1.4
RIGZ	**Rimuhau**	**4.12**	**221**	P	Pn	07 48 43.2	-1.2
RIGZ				S	Sn	07 49 32.9	+0.4
CTZ	**Chatham Island**	**8.29**	**169**	P	Pn	07 49 41.6	+0.1
CTZ				S	Sn	07 51 08.1	-6.9

IDC ***23*** *07:50:36.6±0.7,2.˚50S×121.˚96E, h0km, mb4.1/10, mbtmp4.2/11, ML4.7/1, MS3.5/23, Error ellipse: s-maj=32.8km s-min=14.5km az=68.0*
NEIC ***23*** *07:50:38.7±1.9, 2.˚67S±0.˚06×122.˚03E±0.˚07, h10km±1km, mb4.4/13, Error ellipse: s-maj=12.5km s-min=9.2km az=106.0*
DJA ***23*** *07:50:39.6±0.2, 3.˚5S±2.˚3×12.˚2E±.˚, h10km, M4.7/24, mB5.1/6, mb4.8/9, MLv4.8/24, Mw(mB)4.5/6*
ISC 23 07:50:42.5±0.5, 2.˚68S±0.˚04×122.˚02E±0.˚04, h35km, n94, σ1ŝ76/80, mb4.3/16, MS3.6/20, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.41**	**155**	P	**Pn**	**07 51 04.4**	**-1.2**
APSI	**Ampana**	**1.79**	**348**	P	**Pn**	**07 51 08.6**	**-2.4**
APSI				S	**Sn**	**07 51 33.1**	**+0.6**
LUWI	**Luwuk**	**1.79**	**25**		**Pn**	**07 51 08.5**	**-2.4**
LUWI	**Luwuk**	**1.79**	**25**	P	**Pn**	**07 51 10.0**	**-0.9**
LUWI	**Luwuk**	**1.79**	**25**	P	**Pn**	**07 51 11.4**	**+0.5**
LUWI				S	**Sn**	**07 51 35.4**	**+2.9**
TTSI	**Tana Toraja**	**2.22**	**261**	P	**Pn**	**07 51 14.1**	**-2.8**
TTSI				S	**Sn**	**07 51 43.0**	**-0.1**
BNSI	**Bone**	**2.56**	**228**	P	**Pn**	**07 51 20.6**	**-0.9**
SPSI	**Sidrap Palu**	**2.58**	**240**	P	**Pn**	**07 51 20.5**	**-1.3**
PCI	**Palu**	**2.80**	**309**	P	**Pn**	**07 51 25.1**	**+0.3**
BBSI	**Bau Bau**	**2.84**	**169**	P	**Pn**	**07 51 25.0**	**-0.4**
MRSI	**Marisa**	**3.13**	**359**	P	**Pn**	**07 51 27.6**	**-1.8**
BKSI	**Bulukumba**	**3.23**	**216**	P	**Pn**	**07 51 30.1**	**-0.7**
KAPI	**Kappang**	**3.24**	**224**	Pn	**Pn**	**07 51 30.6**	**-0.2**
	71nm,0.3s,baz=35,slow=6.4,SNR=26						
KAPI				Sn	**Sn**	**07 52 06.8**	**-1.4**
	42nm,0.3s,baz=68,slow=20,SNR=5.9						
	121nm,0.3s						
KAPI	**Kappang**	**3.24**	**224**		**Pn**	**07 51 29.7**	**-1.1**
MPSI	**Mapaga**	**3.67**	**325**	P	**Pn**	**07 51 33.8**	**-2.9**
BSSI	**Bau Bau, Buton**	**3.76**	**204**	P	**Pn**	**07 51 37.4**	**-0.7**
KMSI	**Cibinong**	**3.78**	**31**	P	**Pn**	**07 51 37.9**	**-0.4**
TOLI2	**Tolitoli**	**3.96**	**342**		**Pn**	**07 51 39.6**	**-1.1**
TOLI2	**Tolitoli**	**3.96**	**342**	P	**Pn**	**07 51 40.7**	**-0.1**
TOLI2	**Tolitoli**	**3.96**	**342**	S	**Sn**	**07 52 25.2**	**-0.8**
SANI	**Sanana**	**4.02**	**81**	P	**Pn**	**07 51 41.7**	**+0.1**
SANI	**Sanana**	**4.02**	**81**	S	**Sn**	**07 52 24.8**	**-2.7**
SANI	**Sanana**	**4.02**	**81**	P	**Pn**	**07 51 40.2**	**-1.4**
NLAI	**Namlea**	**5.11**	**96**	P	**Pn**	**07 51 56.7**	**+0.1**
	54nm,0.7s						
BKB	**Balikpapan**	**5.31**	**285**	Pn	**Pn**	**07 51 58.0**	**-1.3**
BKB	**Balikpapan**	**5.31**	**285**	P	Pn	07 52 07.0	+7.7
BKB	**Balikpapan**	**5.31**	**285**	P	**Pn**	**07 51 57.4**	**-1.9**
	1.0nm232nm,0.8s						
LBMI	**Labuha**	**5.85**	**70**	P	**Pn**	**07 52 05.5**	**-1.2**
MMRI	**Maumere**	**5.92**	**178**	Pn	**Pn**	**07 52 07.2**	**-0.6**
EDFI	**Ende, Flores**	**6.04**	**183**	P	**Pn**	**07 52 09.0**	**-0.5**
	830nm29nm,0.5s						
AAI	**Ambon**	**6.25**	**99**	P	**Pn**	**07 52 12.9**	**+0.6**
	0.3nm69nm,0.8s						
TNTI	**Ternate**	**6.35**	**57**	Pn	**Pn**	**07 52 11.6**	**-2.1**
MTKI	**Muara Teweh, K**	**7.32**	**283**	P	**Pn**	**07 52 28.4**	**+1.4**
SOEI	**Soe**	**7.38**	**162**	Pn	**Pn**	**07 52 26.0**	**-1.9**
SOEI	**Soe**	**7.38**	**162**	P	Pn	07 52 35.1	+7.2
SOEI	**Soe**	**7.38**	**162**	P	**Pn**	**07 52 27.8**	**-0.1**
BATI	**Baumata**	**7.66**	**168**	LR	LR	07 56 16.3	
	comp=Z,1μm,18.4s,baz=348,slow=43						
MYLDM	**Lahad Datu**	**8.56**	**336**		**Pn**	**07 52 43.1**	**-0.9**
MYLDM	**Lahad Datu**	**8.56**	**336**	P	**Pn**	**07 52 45.4**	**+1.4**
DAV	**Davao City (W)**	**10.32**	**20**	LR	LR	07 57 02.2	
	comp=Z,218nm,18.4s,baz=319,slow=38						
KNRA	**Kununurra**	**14.53**	**153**	Pn	**Pn**	**07 54 03.0**	**-2.7**
FITZ	**Fitzroy Crossi**	**15.73**	**167**	Pn	**P**	**07 54 24.9**	**-0.3**
	0.5nm,0.3s,baz=12,slow=6.6,SNR=10						
FITZ				LR	LR	08 00 55.9	
	comp=Z,278nm,20.7s,baz=342,slow=39						
FITZ	**Fitzroy Crossi**	**15.73**	**167**	P	**P**	**07 54 26.7**	**+1.5**
WB0	**Warramunga Arr**	**20.85**	**145**	P	**P**	**07 55 20.1**	**-1.3**
WB0				IAmb	IAmb	07 55 29.1	
	comp=Z,16nm,0.9s						
WRAB	**Tennant Creek**	**20.96**	**146**	P	**P**	**07 55 25.1**	**+2.5**
WRA	**Warramunga Arr**	**20.96**	**146**	P	**P**	**07 55 22.9**	**+0.2**
	comp=Z,7.1nm,0.9s,baz=324,slow=12,SNR=24						
WRA				LR	LR	08 04 46.7	
	comp=Z,202nm,18.6s,baz=316,slow=40						
	comp=Z,7.1nm,0.9s						
WRA	**Warramunga Arr**	**20.96**	**146**	P	**P**	**07 55 20.0**	**-2.6**
WR8	**Warramunga Arr**	**21.06**	**146**	P	**P**	**07 55 22.7**	**-1.0**
WR8				IAmb	IAmb	07 55 30.5	
	comp=Z,17nm,0.9s						
IPM	**Ipoh**	**22.15**	**289**	P	**P**	**07 55 37.1**	**+1.6**
PSI	**Prapat**	**23.71**	**283**	LR	LR	08 06 51.3	
	comp=Z,227nm,18.8s,baz=94,slow=41						
PSI	**Prapat**	**23.71**	**283**	P	**P**	**07 55 54.8**	**+3.1**
COEN	**Coen**	**23.72**	**119**	P	**P**	**07 55 50.3**	**-1.3**
COEN				IAmb	IAmb	07 56 30.6	
	comp=Z,10nm,1.1s						
AS31	**Alice Springs**	**23.83**	**152**	P	**P**	**07 55 53.1**	**+0.6**
ASAR	**Alice Springs**	**23.83**	**152**	P	**P**	**07 55 53.0**	**+0.5**
	comp=Z,9.7nm,0.9s,baz=329,slow=8.4,SNR=48						
ASAR				LR	LR	08 06 33.2	
	comp=Z,193nm,18.1s,baz=311,slow=40						
	comp=Z,9.7nm,0.9s						
ASAR	**Alice Springs**	**23.83**	**152**	P	**P**	**07 55 52.0**	**-0.5**
AUALC	**St Philip's Co**	**23.84**	**152**	P	**P**	**07 55 55.9**	**+3.3**
QIS	**Mount Isa**	**24.70**	**137**	P	**P**	**07 56 01.8**	**+1.3**
JOW	**Kunigami**	**29.95**	**11**	LR	LR	08 09 06.0	
	comp=Z,86nm,20.1s,baz=300,slow=37						
CMAR	**Chiang Mai Arr**	**30.94**	**314**	P	**P**	**07 56 53.7**	**-2.7**
	comp=Z,1.1nm,0.3s,baz=122,slow=8.1,SNR=10						
CMAR				LR	LR	08 11 32.4	
	comp=Z,76nm,18.3s,baz=130,slow=41						
	comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	**34.40**	**150**	P	**P**	**07 57 26.9**	**+0.3**
	comp=Z,8.2nm,0.8s,baz=316,slow=10,SNR=14						
STKA				LR	LR	08 12 46.4	
	comp=Z,129nm,18.9s,baz=342,slow=38						
	comp=Z,8.2nm,0.8s						
STKA	**Stephens Creek**	**34.40**	**150**	P	**P**	**07 57 28.9**	**+2.4**
HTT	**Hallett**	**34.44**	**155**	P	**P**	**07 57 29.2**	**+2.3**
PZH	**PanZhiHua**	**35.01**	**327**	P	**P**	**07 57 35.5**	**+3.5**
CMSA	**Cobar Meteorol**	**36.36**	**145**	P	**P**	**07 57 45.7**	**+2.3**
AUDCS	**Dubbo College**	**38.60**	**143**	P	**P**	**07 58 05.1**	**+2.7**
SHL	**Shillong**	**40.50**	**316**	P	**P**	**07 58 16.2**	**-2.3**
SHL				IAmb	IAmb	07 58 21.6	
	comp=Z,6.6nm,1.0s						
CAN	**Canberra**	**41.01**	**146**	P	**P**	**07 58 22.9**	**+0.5**
MJAR	**Matsushiro Arr**	**41.84**	**20**	P	**P**	**07 58 27.7**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=190,slow=9.8,SNR=6.4						
	comp=Z,1.7nm,0.6s						
PALK	**Pallekele**	**42.40**	**284**	LR	LR	08 18 00.4	
	comp=Z,47nm,19.1s,baz=99,slow=39						
JMM	**Marumori**	**43.93**	**22**	P	**P**	**07 58 46.0**	**0.0**
HHC	**Hu-ho-hao-te**	**44.36**	**349**	*eP*	**P**	**07 58 52.0**	**+2.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,56nm,3.8s						
EVN	**Everest**	**45.54**	**314**		**P**	**07 58 58.8**	**-1.0**
EVN				IAmb	IAmb	07 59 18.9	
	comp=Z,7.5nm,1.0s						
DZM	**Mont Dzumac**	**47.23**	**118**	LR	LR	08 23 10.8	
	comp=Z,40nm,18.4s,baz=29,slow=41						
HILR	**Hailar Array B**	**52.06**	**358**	P	**P**	**07 59 47.2**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=172,slow=12,SNR=5.0						
	comp=Z,2.4nm,0.6s						
MKAR	**Makanchi Array**	**60.39**	**330**	P	**P**	**08 00 47.2**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=129,slow=9.3,SNR=11						
MKAR				PcP	**PcP**	**08 01 33.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=144,slow=5.7,SNR=3.6						
	comp=Z,1.6nm,0.6s						
URZ	**Urewera**	**61.41**	**133**	LR	LR	08 31 07.9	
	comp=Z,42nm,18.1s,baz=295,slow=40						
AAK	**Ala-Archa**	**62.19**	**322**	LR	LR	08 31 14.9	
	comp=Z,25nm,18.6s,baz=162,slow=39						
ZALV	**Zalesovo Beam**	**64.35**	**337**	P	**P**	**08 01 11.1**	**-3.5**
	comp=Z,0.4nm,0.4s,baz=140,slow=7.5,SNR=2.2						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**64.79**	**331**	P	**P**	**08 01 14.9**	**-2.6**
	comp=Z,0.8nm,0.7s,baz=138,slow=6.6,SNR=9.3						
	comp=Z,0.8nm,0.7s						
KURK	**Kurchatov**	**64.81**	**331**		**P**	**08 01 16.1**	**-1.6**
KURK				IAmb	IAmb	08 01 21.6	
	comp=Z,3.1nm,0.8s						
MA2	**Magadan**	**66.06**	**16**	LR	LR	08 31 28.4	
	comp=Z,16nm,19.6s,baz=131,slow=37						
SEY	**Seymchan**	**69.33**	**14**	LR	LR	08 32 44.5	
	comp=Z,26nm,19.8s,baz=69,slow=36						
BVAR	**Borovoye Array**	**70.27**	**330**	LR	LR	08 35 21.8	
	comp=Z,41nm,18.8s,baz=131,slow=38						
VNDA	**Vanda**	**77.75**	**172**	P	**P**	**08 02 36.8**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=288,slow=5.9,SNR=3.7						
VNDA				LR	LR	08 35 56.3	
	comp=Z,40nm,21.1s,baz=331,slow=35						
	comp=Z,1.2nm,0.9s						
VNDA	**Vanda**	**77.75**	**172**	P	**P**	**08 02 36.4**	**+0.9**
VNDA				IAmb	IAmb	08 03 09.6	
	comp=Z,4.8nm,1.2s						
SBA	**Scott Base**	**78.72**	**171**	P	**P**	**08 02 39.5**	**-1.2**
GNI	**Garni**	**82.02**	**311**	LR	LR	08 45 25.2	
	comp=Z,11nm,18.6s,baz=113,slow=40						
QSPA	**South Pole Qui**	**87.27**	**180**	P	**P**	**08 03 28.5**	**+3.1**
	comp=Z,0.9nm,0.8s,baz=287,slow=1.9,SNR=7.6						
QSPA	**South Pole Qui**	**87.27**	**180**	P	**P**	**08 03 28.0**	**+2.6**
ASF	**Jabal al Asfar**	**87.28**	**302**	LR	LR	08 47 53.9	
	comp=Z,22nm,18.0s,baz=98,slow=39						
MMAI	**Mount Meron Ar**	**88.60**	**303**	LR	LR	08 49 29.5	
	comp=Z,21nm,18.5s,baz=160,slow=40						
BRTR	**Keskin Array B**	**90.44**	**310**	LR	LR	08 51 00.4	
	comp=Z,20nm,18.5s,baz=31,slow=40						
MBAR	**Mbarara**	**91.25**	**269**	LR	LR	08 43 37.8	
	comp=Z,25nm,19.3s,baz=17,slow=35						
BOSA	**Boshof**	**94.66**	**241**	LR	LR	08 40 23.0	
	comp=Z,29nm,20.2s,baz=73,slow=32						

IDC ***23*** *07:58:48.8±1.3, 36.˚16N×101.˚42E, h0km, mb3.4/4, mbtmp3.5/4, MS3.3/1, Error ellipse: s-maj=40.3km s-min=20.4km az=37.0*
ISC 23 07:58:53.8±1.4, 36.˚2N±0.˚2×101.˚4E±0.˚1, h35km, n7, σ1ŝ12/8, mb3.5/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**1.88**	**95**	Pn	**Pn**	**07 59 22.4**	**-1.3**
	baz=272,slow=14						
LZDM				Sn	**Sn**	**07 59 46.0**	**-0.3**
	baz=289,slow=13						
LZH	**Lanzhou**	**1.98**	**91**	Pg	**Pn**	**07 59 26.8**	**+1.7**
LZH				Sg	**Sn**	**07 59 48.3**	**-0.5**
LZH				smax	smax		
	comp=N,370nm,0.8s						
LZH				smax	smax		
	comp=E,400nm,0.8s						
LZH				LR	LR		
	comp=N,900nm,4.8s						
LZH				LR	LR		
	comp=E,660nm,5.5s						
LZH				LR	LR		
	comp=Z,350nm,6.2s						
ZALV	**Zalesovo Beam**	**21.21**	**332**	P	**P**	**08 03 36.4**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=144,slow=12,SNR=2.5						
	comp=Z,0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**21.90**	**318**	P	**P**	**08 03 42.9**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=125,slow=11,SNR=6.1						
	comp=Z,1.5nm,0.9s						
KAPI	**Kappang**	**44.42**	**153**	LR	LR	08 25 10.6	
	comp=Z,35nm,21.3s,baz=41,slow=36						
WRA	**Warramunga Arr**	**63.91**	**145**	P	**P**	**08 09 23.1**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=320,slow=7.8,SNR=3.7						
	comp=Z,0.6nm,0.9s						
ASAR	**Alice Springs**	**66.96**	**148**	P	**P**	**08 09 43.6**	**+0.7**
	comp=Z,0.5nm,1.0s,baz=343,slow=8.1,SNR=3.2						
	comp=Z,0.5nm,1.0s						

IDC ***23*** *08:07:30.8±7.0, 8.˚35S×124.˚75E, h44km±75km, mb3.9/5, mbtmp4.3/9, ML4.5/4, Error ellipse: s-maj=94.4km s-min=24.1km az=45.0*
NEIC ***23*** *08:07:38.4±1.9, 8.˚84S±0.˚10×124.˚1E±0.˚1, h116km±8km, mb4.4/12, Error ellipse: s-maj=17.6km s-min=9.8km az=45.0*
DJA ***23*** *08:07:40.3±0.3, 9.˚5S±3.˚3×12.˚4E±.˚, h10km, M4.3/9, mB4.8/1, mb4.8/1, MLv4.1/9, Mw(mB)4.1/1*
ISC 23 08:07:36.3±0.5, 8.˚86S±0.˚06×124.˚16E±0.˚07, h100km, n44, σ2ŝ21/48, mb4.2/11, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.89**	**173**		**Pn**	**08 07 59.5**	**+3.7**
SOEI	**Soe**	**0.89**	**173**	P	**Pn**	**08 07 59.7**	**+3.9**
SOEI				S	**Sn**	**08 08 15.2**	**+4.9**
BATI	**Baumata**	**1.43**	**200**	P	**Pn**	**08 08 04.5**	**+2.8**
	357nm,0.3s,baz=32,slow=2.7,SNR=85						
BATI				S	**Sn**	**08 08 21.4**	**+0.5**
	2μm,0.5s,baz=143,slow=20,SNR=11						
	1000nm,0.4s						
BATI	**Baumata**	**1.43**	**200**	P	**Pn**	**08 08 04.4**	**+2.8**
BATI				S	**Sn**	**08 08 23.5**	**+2.6**
MMRI	**Maumere**	**1.92**	**277**		**Pn**	**08 08 09.6**	**+1.8**
MMRI	**Maumere**	**1.92**	**277**	P	**Pn**	**08 08 09.8**	**+2.0**
MMRI				S	**Sn**	**08 08 33.0**	**+1.1**
EDFI	**Ende, Flores**	**2.45**	**272**	P	**Pn**	**08 08 15.8**	**+1.0**
BASI	**Baing, Sumba**	**3.79**	**249**	P	**Pn**	**08 08 35.2**	**+2.6**
BSSI	**Bau Bau, Buton**	**4.54**	**306**	P	**Pn**	**08 08 45.3**	**+2.6**
WBSI	**Waikabubak, Su**	**4.78**	**260**	P	**Pn**	**08 08 49.6**	**+3.6**
KAPI	**Kappang**	**5.81**	**311**	Pn	**Pn**	**08 09 01.5**	**+1.4**
PLAI	**Plampang**	**6.31**	**270**	P	**Pn**	**08 09 09.5**	**+2.6**
MTN	**Manton Dam**	**7.91**	**121**		**Pn**	**08 09 30.8**	**+2.2**
KNRA	**Kununurra**	**8.13**	**147**		**Pn**	**08 09 32.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**9.29**	**171**	P	**Pn**	**08 09 46.4**	**-1.1**
	2.4nm,0.3s,baz=3.0,slow=9.7,SNR=44						
FITZ				S	Sn	08 11 19.4	-11
	44nm,0.7s,baz=81,slow=7.0,SNR=14						
	6.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.29**	**171**		**Pn**	**08 09 46.2**	**-1.2**
TOLI2	**Tolitoli**	**10.46**	**341**	Pn	**Pn**	**08 10 05.0**	**+1.6**
PSA00	**Pilbara Seismi**	**13.30**	**198**	Pn	Pn	08 10 38.8	-2.4
WB0	**Warramunga Arr**	**14.68**	**139**		**Pn**	**08 10 58.0**	**-1.1**
WRA	**Warramunga Arr**	**14.77**	**139**	P	**Pn**	**08 10 57.6**	**-2.6**
	2.1nm,0.3s,baz=236,slow=12,SNR=53						
WRA				S	Sn	08 13 34.0	-9.2
	7.3nm,0.5s,baz=311,slow=24,SNR=7.7						
	4.8nm,0.5s						
WRA	**Warramunga Arr**	**14.77**	**139**		**Pn**	**08 10 58.9**	**-1.3**
AS31	**Alice Springs**	**17.42**	**149**		**P**	**08 11 32.9**	**-0.1**
ASAR	**Alice Springs**	**17.43**	**149**	P	**P**	**08 11 33.5**	**+0.5**
	1.4nm,0.3s,baz=324,slow=12,SNR=82						
ASAR				S	**Sn**	**08 14 39.3**	**-8.0**
	1.8nm,0.5s,baz=330,slow=25,SNR=6.0						
	7.0nm,0.7s						
ASAR	**Alice Springs**	**17.43**	**149**	P	**P**	**08 11 33.1**	**+0.1**
COEN	**Coen**	**19.31**	**107**	P	**Pn**	**08 11 55.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**24.79**	**194**	P	**P**	**08 12 47.9**	**-1.1**
NWAO				IAmb	IAmb	08 13 10.2	
	comp=Z,28nm,1.4s						
BBOO	**Buckleboo**	**26.25**	**157**	P	**P**	**08 13 03.5**	**+1.3**
BBOO				IAmb	IAmb	08 13 45.0	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**28.05**	**147**	P	**P**	**08 13 19.1**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=322,slow=13,SNR=3.9						
	comp=Z,0.8nm,0.4s						
LHMI	**Lhok Sumawe**	**30.53**	**296**	P	**P**	**08 13 38.5**	**-2.0**
CMAR	**Chiang Mai Arr**	**36.83**	**318**	P	**P**	**08 14 34.7**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=126,slow=8.2,SNR=4.6						
	comp=Z,0.9nm,0.3s						
EVN	**Everest**	**51.42**	**317**	P	**P**	**08 16 31.1**	**-1.0**
MKAR	**Makanchi Array**	**66.77**	**330**	P	**P**	**08 18 17.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=139,slow=6.7,SNR=7.9						
	comp=Z,1.6nm,0.6s						
MKAR	**Makanchi Array**	**66.77**	**330**	P	**P**	**08 18 16.4**	**-0.7**
BOOM	**Boomskoye usch**	**67.42**	**323**	P	**P**	**08 18 21.3**	**-0.1**
BOOM				IAmb	IAmb	08 18 24.2	
	comp=Z,5.3nm,1.0s						
KBL	**Kabul**	**67.66**	**313**	P	**P**	**08 18 22.9**	**-0.3**
KBL				IAmb	IAmb	08 18 24.0	
	comp=Z,4.1nm,0.8s						
PETK	**Petropavlovsk-**	**68.01**	**21**	P	**P**	**08 18 25.4**	**+0.8**
AAK	**Ala-Archa**	**68.37**	**323**	P	**P**	**08 18 27.0**	**-0.3**
AAK				IAmb	IAmb	08 18 37.3	
	comp=Z,3.6nm,1.2s						
ZALV	**Zalesovo Beam**	**70.83**	**337**	P	**P**	**08 18 41.2**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=176,slow=5.8,SNR=6.1						
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**70.83**	**337**	P	**P**	**08 18 40.5**	**-1.5**
VOI	**Vohitsoka**	**75.08**	**250**	P	**P**	**08 19 08.8**	**+0.8**
AB31	**Akbulak array**	**80.45**	**323**	P	**P**	**08 19 36.4**	**-0.6**
ABKAR	**Akbulak array**	**80.45**	**323**	P	**P**	**08 19 36.0**	**-1.0**
AKTO	**Aktyubinsk**	**82.07**	**324**	P	**P**	**08 19 45.8**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=106,slow=7.0,SNR=4.5						
	comp=Z,1.4nm,0.5s						
BELA	**Belgrano 2**	**92.59**	**184**	P	**P**	**08 20 37.2**	**+1.1**
BELA				IAmb	IAmb	08 21 19.9	
	comp=Z,3.7nm,1.5s						

IDC ***23*** *08:12:15.2±2.7, 39.˚09N×74.˚87E, h0km, mb3.7/3, mbtmp3.6/7, ML2.9/4, MS2.8/1, Error ellipse: s-maj=42.3km s-min=30.7km az=29.0*
KRNET ***23*** *08:12:16.0±0.1, 39.˚33N×74.˚92E, h23km, mb4.0*
SOME ***23*** *08:12:18.5, 39.˚48N×74.˚85E, h15km*
NNC ***23*** *08:12:22.1±1.4, 39.˚60N×74.˚87E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=11.4km s-min=6.1km az=169.0*
ISC 23 08:12:18.5±1.0, 39.˚44N±0.˚06×74.˚78E±0.˚03, h10km, n68, σ2ŝ39/100, mb3.6/3, 30C-24D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.14**	**301**	⇑*iP*	**Pb**	**08 12 39.7**	**-0.8**
SFK				⇑*iS*	**Sn**	**08 12 57.0**	**+0.4**
SALK	**Salom-Alik**	**1.62**	**333**	⇓*iP*	**Pb**	**08 12 48.0**	**-0.7**
SALK				⇓*iS*	**Sg**	**08 13 11.3**	**+0.6**
JNKS	**Jany-Kuch**	**1.75**	**22**	⇑*eP*	**Pn**	**08 12 48.6**	**-0.6**
JNKS				⇑*iS*	**Sn**	**08 13 12.5**	**+0.8**
OHH	**Osh**	**1.88**	**306**	⇓*iP*	**Pb**	**08 12 51.5**	**-1.5**
OHH				⇓*iS*	**Sb**	**08 13 17.5**	**+0.9**
DRK	**Karamyk**	**2.31**	**272**	⇑*eP*	**Pn**	**08 12 57.2**	**+0.3**
DRK				⇑*iS*	**Sb**	**08 13 27.3**	**-1.8**
ARSB	**Arslanbob**	**2.33**	**324**	⇑*eP*	**Pn**	**08 12 57.8**	**+0.7**
ARSB				⇑*iS*	**Sb**	**08 13 28.4**	**-1.3**
ARLS	**Aral**	**2.45**	**352**	⇓*iP*	**Pn**	**08 12 59.0**	**+0.3**
ARLS				⇓*iS*	**Sn**	**08 13 30.3**	**+1.5**
UCH	**Uchtor**	**2.80**	**356**	P	**Pb**	**08 13 07.8**	**-1.1**
	SNR=78						
UCH	**Uchtor**	**2.80**	**356**	⇑*eP*	**Pn**	**08 13 04.1**	**+0.4**
UCH				⇑*eS*	**Sn**	**08 13 39.1**	**+1.3**
ULHL	**Ulahol**	**3.02**	**21**	P	**Pb**	**08 13 13.7**	**+1.2**
	SNR=13						
ULHL	**Ulahol**	**3.02**	**21**	⇑*eP*	**Pn**	**08 13 06.1**	**-0.5**
ULHL				⇑*iS*	**Sn**	**08 13 42.8**	**-0.1**
BOOM	**Boomskoye usch**	**3.17**	**16**	⇑*eP*	**Pn**	**08 13 08.5**	**-0.2**
BOOM				⇑*iS*	**Sn**	**08 13 46.9**	**+0.2**
ARK	**Arkit**	**3.19**	**319**	⇑*iP*	**Pn**	**08 13 09.8**	**+1.0**
ARK				⇑*iS*	**Sn**	**08 13 49.1**	**+2.1**
AAK	**Ala-Archa**	**3.21**	**356**	Pn	**Pb**	**08 13 13.7**	**-2.0**
	6.1nm,0.3s,baz=172,slow=8.0,SNR=61						
AAK				Sn	**Sb**	**08 13 55.0**	**+0.2**
	6.3

KUU	**Kurty**	**4.60**	**14**	Pg	**Pg**	**08 13 43.2**	**-3.4**
	2.6nm,0.1s							
KUU				Lg	Lg	08 14 43.2		
	51nm,1.1s							
KUU	**Kurty**	**4.60**	**14**	*e*P	**Pg**	**08 13 43.8**	**-2.9**
	2.5nm,0.0s							
KUU				*e*S	**Sg**	**08 14 44.3**	**-2.0**
	51nm,1.1s							
KK31	**Karatay Array**	**4.88**	**320**	Pn	**Pn**	**08 13 34.8**	**+2.9**
	0.9nm,0.3s,baz=126,slow=12,SNR=27							
KK31				⇓Pg	**Pb**	**08 13 47.2**	**+3.2**
	2.5nm,0.3s,baz=131,slow=11,SNR=8.6							
KK31				⇑Sn	**Sn**	**08 14 33.8**	**+5.4**
	5.6nm,0.4s,baz=160,slow=22,SNR=2.6							
KK31				⇑Lg	Lg	08 14 55.9		
	13nm,0.6s,baz=125,slow=26,SNR=3.5							
UZB	**Uzynbulak**	**4.89**	**39**	Pg	**Pb**	**08 13 45.7**	**+1.3**
	11nm,0.4s							
UZB				Lg	Lg	08 14 46.6		
	20nm,0.8s							
UZB	**Uzynbulak**	**4.89**	**39**	*e*P	**Pb**	**08 13 45.6**	**+1.2**
	11nm,0.4s							
UZB				*e*S	**Sb**	**08 14 47.8**	**+4.4**
	20nm,0.8s							
KPKS	**Kokpek**	**4.98**	**35**	Pg	**Pg**	**08 13 51.3**	**-2.6**
	16nm,0.2s							
KPKS				Lg	Lg	08 14 56.2		
	37nm,0.8s							
BRLS	**Boroldaу**	**5.18**	**316**	Pg	**Pb**	**08 13 52.4**	**+3.3**
	9.2nm,0.5s							
BRLS				Lg	Lg	08 14 58.7		
	15nm,0.8s							
BRLS	**Boroldaу**	**5.18**	**316**	*e*P	**Pb**	**08 13 52.3**	**+3.2**
	9.2nm,0.5s							
BRLS				*e*S	**Sg**	**08 14 59.4**	**-5.2**
	15nm,0.8s							
PDGK	**Podgornoye**	**5.26**	**41**	⇑Pn	**Pn**	**08 13 40.3**	**+3.1**
	8.4nm,0.8s							
PDGK				⇑Pg	**Pb**	**08 13 53.2**	**+2.6**
	27nm,0.8s							
PDGK				⇓Lg	Lg	08 15 07.0		
	25nm,0.7s							
ARXS	**Arharly**	**5.29**	**24**	Pg	**Pb**	**08 13 55.0**	**+3.9**
	14nm,0.6s							
ARXS				Lg	Lg	08 15 02.6		
	18nm,0.7s							
ARXS	**Arharly**	**5.29**	**24**	*e*P	**Pb**	**08 13 54.6**	**+3.5**
ARXS				*e*S	**Sg**	**08 15 03.3**	**-4.9**
BLB	**Baldybastay**	**5.42**	**29**	Pg	**Pg**	**08 13 57.4**	**-4.8**
	36nm,0.5s							
BLB				Lg	Lg	08 15 06.8		
	24nm,0.6s							
BTLS	**Baital**	**5.63**	**355**	Pg	**Pg**	**08 14 02.4**	**-3.9**
	4.3nm,0.6s							
BTLS				Lg	Lg	08 15 15.1		
	12nm,0.7s							
BTLS	**Baital**	**5.63**	**355**	*e*P	**Pb**	**08 13 59.4**	**+2.6**
	4.3nm,0.6s							
BTLS				*e*S	**Sb**	**08 15 11.5**	**+7.2**
	12nm,0.7s							
MKAR	**Makanchi Array**	**9.17**	**34**	Pn	**Pn**	**08 14 34.7**	**+3.8**
	0.1nm,0.3s,baz=216,slow=15,SNR=2.4							
	0.7nm,0.8s							
KURBB	**Kurchatov Arra**	**11.49**	**12**	Lg	Lg	08 18 21.2		
	baz=200,slow=30,SNR=11							
BVAR	**Borovoye Array**	**13.92**	**349**	Pn	**Pn**	**08 15 37.8**	**+2.0**
	baz=178,slow=10,SNR=1.9							
BVAR				Lg	Lg	08 19 36.9		
	0.1nm,0.3s,baz=212,slow=42,SNR=3.1							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**16.04**	**22**	Pn	**P**	**08 16 05.6**	**-1.8**
	0.1nm,0.3s,baz=213,slow=10,SNR=3.9							
	0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**29.57**	**128**	LR	LR	08 31 44.3		
	comp=Z,19nm,20.0s,baz=120,slow=40							
ARCES	**ARCESS Array B**	**39.65**	**335**	P	**P**	**08 19 50.8**	**+0.7**
	1.4nm,1.0s,baz=116,slow=8.9,SNR=5.1							
	1.4nm,1.0s							
NOA	**NORSAR Array B**	**43.91**	**321**	P	**P**	**08 20 26.5**	**+1.5**
	0.3nm,0.5s,baz=89,slow=8.1,SNR=1.9							
	0.3nm,0.5s							
MJAR	**Matsushiro Arr**	**49.15**	**72**	P	**P**	**08 21 04.9**	**-1.6**
	1.5nm,0.7s,baz=284,slow=10,SNR=4.2							
	1.5nm,0.7s							

*IDC **23** 08:22:18.5±1.6,2°.53S×122°.05E,h0km,mb3.7/4, mbtmp3.7/5,MS3.9/1,MS2.6/1,Error ellipse: s-maj=35.4km s-min=26.6km az=59.0*
*NEIC **23** 08:22:20.9±1.8,2°.61S±0°.05×121°.96E±0°.08,h10km±1km, mb4.1/7,Error ellipse: s-maj=14.9km s-min=6.6km az=241.0*
*DJA **23** 08:22:21.5±0.2,3°S±2°×12°2E±°,h10km,M4.0/16,mb4.0/2, MLv4.0/16*
ISC 23 08:22:23.9±0.7,2°.56S±0°.05×121°.88E±0°.05,h35km,n35, σ1$: 16/35,mb3.8/8,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDI	**Kendari**	**1.57**	**152**	P	**Pn**	**08 22 49.8**	**+0.5**
APSI	**Ampana**	**1.65**	**352**	P	**Pn**	**08 22 50.5**	**+0.1**
LUWI	**Luwuk**	**1.75**	**31**		**Pn**	**08 22 51.1**	**-0.6**
LUWI	**Luwuk**	**1.75**	**31**	P	**Pn**	**08 22 51.9**	**+0.2**
TTSI	**Tana Toraja**	**2.12**	**257**	P	**Pn**	**08 22 57.9**	**+1.1**
SPSI	**Sidrap Palu**	**2.53**	**236**	P	**Pn**	**08 23 02.7**	**+0.2**
BNSI	**Bone**	**2.55**	**224**	P	**Pn**	**08 23 02.4**	**-0.3**
PCI	**Palu**	**2.62**	**309**	P	**Pn**	**08 23 02.1**	**-1.7**
MRSI	**Marisa**	**3.01**	**1**	P	**Pn**	**08 23 07.7**	**-1.4**
KAPI	**Kappang**	**3.24**	**221**	Pn	**Pn**	**08 23 12.5**	**+0.3**
	11nm,0.3s,baz=228,slow=10.0,SNR=8.0							
KAPI				Sn	**Sn**	**08 23 52.1**	**+2.6**
	6.2nm,0.3s,baz=229,slow=20,SNR=3.9							
	26nm,0.4s							
KAPI	**Kappang**	**3.24**	**221**		**Pn**	**08 23 12.3**	**+0.1**
BKSI	**Bulukumba**	**3.26**	**213**	P	**Pn**	**08 23 13.0**	**+0.5**
MPSI	**Mapaga**	**3.49**	**325**	P	**Pn**	**08 23 15.7**	**0.0**
KMSI	**Cibinong**	**3.75**	**34**	P	**Pn**	**08 23 19.9**	**+0.6**
TOLI2	**Tolitoli**	**3.81**	**343**		**Pn**	**08 23 21.3**	**+1.3**
BSSI	**Bau Bau, Buton**	**3.82**	**201**	P	**Pn**	**08 23 20.9**	**+0.6**
SANI	**Sanana**	**4.13**	**83**	P	**Pn**	**08 23 26.5**	**+2.0**
EDFI	**Ende, Flores**	**6.16**	**182**	P	**Pn**	**08 23 50.7**	**-1.8**
SOEI	**Soe**	**7.53**	**162**	Pn	**Pn**	**08 24 09.7**	**-1.7**
MYLDM	**Lahad Datu**	**8.39**	**336**		**Pn**	**08 24 22.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**15.88**	**167**	Pn	**P**	**08 26 07.3**	**-0.9**
	0.1nm,0.3s,baz=342,slow=6.4,SNR=2.0							
MYKOM	**Kota Tinggi**	**18.54**	**283**	P	**Pn**	**08 26 38.5**	**+0.5**
MYKOM				IAmb	IAmb	08 26 48.0		
	comp=Z,35nm,1.4s							
WB0	**Warramunga Arr**	**21.02**	**145**	P	**P**	**08 27 02.8**	**-2.0**
WB0				IAmb	IAmb	08 27 11.4		
	comp=Z,4.6nm,1.0s							
WRA	**Warramunga Arr**	**21.13**	**146**	P	**P**	**08 27 04.5**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=326,slow=11,SNR=13							
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**21.13**	**146**	P	**P**	**08 27 04.8**	**-1.1**
AS31	**Alice Springs**	**23.99**	**152**	P	**P**	**08 27 33.7**	**-1.8**
AS31				IAmb	IAmb	08 27 39.4		
	comp=Z,1.7nm,1.2s							
ASAR	**Alice Springs**	**24.00**	**152**	P	**P**	**08 27 34.8**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=330,slow=8.9,SNR=27							
	comp=Z,2.5nm,0.9s							
FORT	**Forrest**	**28.67**	**169**	P	**P**	**08 28 17.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**30.76**	**314**	LR	LR	08 41 42.7		
	comp=Z,11nm,19.2s,baz=175,slow=38							
STKA	**Stephens Creek**	**34.57**	**150**	P	**P**	**08 29 08.3**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=337,slow=13,SNR=3.6							
	comp=Z,1.8nm,0.8s							
MKAR	**Makanchi Array**	**60.22**	**330**	P	**P**	**08 32 29.0**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=135,slow=8.6,SNR=2.5							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**60.22**	**330**	P	**P**	**08 32 28.1**	**-0.5**
KURK	**Kurchatov**	**64.64**	**331**	P	**P**	**08 32 58.6**	**+0.7**
KURK				IAmb	IAmb	08 33 43.4		
	comp=Z,1.8nm,0.6s							
VNDA	**Vanda**	**77.89**	**172**	P	**P**	**08 34 19.1**	**+1.5**
VNDA				IAmb	IAmb	08 34 48.3		
	comp=Z,4.4nm,1.4s							
IMAR	**Indian Mountai**	**90.02**	**24**	P	**P**	**08 35 19.4**	**-0.2**

IDC 23 08:27:10.5±5.7,9°.09N×93°.37E,h87km±44km,mb3.2/3, mbtmp3.7/5,Error ellipse: s-maj=88.3km s-min=23.8km az=64.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**8.33**	**138**	P	Pn	08 29 09.6	+0.9
	3.4nm,0.4s,baz=315,slow=18,SNR=4.2						
CMAR	**Chiang Mai Arr**	**10.77**	**30**	P	Pn	08 29 42.0	+0.2
	1.2nm,0.3s,baz=204,slow=14,SNR=4.5						
H08S3	**Diego Garcia H**	**26.62**	**232**	T	T	08 59 40.2	
	baz=51,slow=76,SNR=27						
H08S2	**Diego Garcia H**	**26.63**	**232**	T	T	08 59 44.6	
	baz=51,slow=76,SNR=26						
H08S1	**Diego Garcia H**	**26.64**	**232**	T	T	08 59 55.6	
	baz=51,slow=76,SNR=20						
WRA	**Warramunga Arr**	**49.58**	**126**	P	P	08 35 53.6	+0.4
	0.3nm,0.5s,baz=306,slow=8.6,SNR=5.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**51.27**	**130**	P	P	08 36 05.7	-0.3
	0.3nm,0.9s,baz=306,slow=8.2,SNR=2.6						
	0.3nm,0.9s						
H04N2	**CROZET ISLANDS**	**66.38**	**210**	T	T	09 49 51.6	
	baz=45,slow=75,SNR=9.3						
H04N1	**CROZET ISLANDS**	**66.39**	**210**	T	T	09 49 42.7	
	baz=45,slow=75,SNR=9.4						
H04N3	**CROZET ISLANDS**	**66.39**	**210**	T	T	09 49 21.0	
	baz=45,slow=75,SNR=9.1						
ARCES	**ARCESS Array B**	**73.88**	**340**	P	P	08 38 35.6	-0.1
	0.3nm,0.4s,baz=99,slow=6.1,SNR=4.8						
	0.3nm,0.4s						

*IDC **23** 08:29:41.2±3.5,6°.27S×146°.35E,h115km±34km,mb3.3/4, mbtmp3.7/6,MS3.5/1,Error ellipse: s-maj=54.6km s-min=18.2km az=122.0*
ISC 23 08:29:40.9±1.5,6°.3S±0°.1×146°.5E±0°.2,h110km,n7, σ1$: 24/8,mb3.5/4,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.14**	**167**	P	**Pn**	**08 30 30.1**	**+1.4**
	40nm,0.4s,baz=53,slow=7.2,SNR=26						
PMG				S	**Sn**	**08 31 03.8**	**-1.9**
	61nm,0.3s,baz=272,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**17.93**	**220**	P	**P**	**08 33 42.3**	**-0.1**
	0.7nm,0.5s,baz=48,slow=12,SNR=12						
ASAR	**Alice Springs**	**21.04**	**214**	P	**P**	**08 34 16.9**	**+0.8**
	1.3nm,0.9s,baz=51,slow=8.5,SNR=18						
ASAR				S	**S**	**08 38 04.5**	**+0.1**
	0.6nm,0.9s,baz=32,slow=21,SNR=4.1						
	1.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.43**	**238**	P	**P**	**08 34 39.3**	**-1.1**
	1.5nm,0.6s,baz=47,slow=12,SNR=6.3						
	1.5nm,0.6s						
STKA	**Stephens Creek**	**25.82**	**190**	P	**P**	**08 35 02.3**	**+0.3**
	0.6nm,0.5s,baz=347,slow=14,SNR=3.0						
	0.6nm,0.5s						
TGY	**Tagaytay City**	**32.45**	**309**	LR	LR	08 50 41.7	
	comp=Z,17nm,19.4s,baz=176,slow=39						
ILAR	**Eielson Array**	**86.00**	**23**	P	**P**	**08 42 08.2**	**-0.4**
	0.4nm,0.6s,baz=253,slow=4.7,SNR=7.6						
	0.4nm,0.6s						

*IDC **23** 08:42:25.8±1.3,51°.05N×73°.84E,h0km,mbtmp2.7/4, ML2.0/4,Error ellipse: s-maj=28.9km s-min=9.3km az=32.0*
*NNC **23** 08:42:26.3±2.0,51°.43N×74°.04E,h0km,mb3.3,mpv3.0, Error ellipse: s-maj=59.2km s-min=6.4km az=25.0, Suspected Mining explosion.*
ISC 23 08:42:24.4±1.2,51°.0N±0°.1×73°.82E±0°.06,h0km,n9, σ1$: 27/9,3C-4D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BVA0	**Borovoye Array**	**2.92**	**315**	⇓Pg	**Pb**	**08 43 16.9**	**-0.4**
	3.6nm,0.8s,baz=123,slow=14,SNR=11						
BVA0				⇑Lg	Lg	08 43 54.1	
	18nm,0.7s,baz=122,slow=23,SNR=14						
BVAR	**Borovoye Array**	**2.92**	**315**	Pn	**Pn**	**08 43 13.4**	**+1.3**
	0.1nm,0.3s,baz=128,slow=16,SNR=8.1						
BVAR				Lg	Lg	08 43 56.3	
	0.3nm,0.3s,baz=124,slow=28,SNR=11						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**3.02**	**96**	Pn	**Pn**	**08 43 15.3**	**+1.9**
	0.1nm,0.3s,baz=278,slow=14,SNR=29						
KURBB				Lg	Lg	08 43 59.5	
	0.2nm,0.3s,baz=279,slow=31,SNR=7.4						
	4.6nm,0.8s						
KURBB	**Kurchatov Arra**	**3.02**	**96**	⇑Pg	**Pb**	**08 43 19.1**	**+0.1**
	8.4nm,0.6s						
KURBB				⇑Lg	Lg	08 44 02.8	
	110nm,0.8s						
KURK	**Kurchatov**	**3.06**	**94**	⇓Pg	**Pb**	**08 43 20.2**	**+0.5**
	2.3nm,0.7s						
KURK				⇓Lg	Lg	08 44 01.2	
	14nm,0.8s						
MK31	**Makanchi Array**	**7.00**	**124**	⇓Lg	Lg	08 46 15.3	
	8.2nm,0.8s,baz=322,slow=25,SNR=6.5						
MKAR	**Makanchi Array**	**7.00**	**124**	Pn	**Pn**	**08 44 08.0**	**-0.2**
	0.1nm,0.3s,baz=296,slow=12,SNR=1.7						
MKAR				Sn	**Sn**	**08 45 26.8**	**-1.8**
	0.1nm,0.3s,baz=340,slow=21,SNR=4.6						
MKAR				Lg	Lg	08 46 02.6	
	0.2nm,0.3s,baz=323,slow=25,SNR=4.3						
	0.5nm,0.8s						
I46RU	**ZALESOVO INFRA**	**7.33**	**62**	I	I	09 24 00.0	
	baz=250,slow=339,SNR=6.1						
ZALV	**Zalesovo Beam**	**7.33**	**62**	Pn	**Pn**	**08 44 12.4**	**-0.3**
	0.2nm,0.3s,baz=257,slow=12,SNR=2.1						
ZALV				Sn	**Sn**	**08 45 35.7**	**-0.8**
	0.1nm,0.3s,baz=228,slow=17,SNR=1.3						
	0.4nm,0.4s						

*NEIC **23** 08:51:19.9±1.5,15°.3N±0°.2×145°.7E±0°.3,h95km±5km, mb3.9/7,Error ellipse: s-maj=45.1km s-min=26.2km az=105.0*
*IDC **23** 08:51:20.0±3.2,15°.35N×145°.95E,h105km±32km,mb3.7/7, mbtmp4.0/8,Error ellipse: s-maj=41.5km s-min=30.4km az=89.0*
ISC 23 08:51:19.7±1.0,15°.35N±0°.10×145°.7E±0°.2,h100km,n22, σ1$: 23/22,mb3.9/12,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.91**	**204**	P	**Pn**	**08 51 53.2**	**+2.0**
	68nm,0.3s,baz=342,slow=7.7,SNR=19						
GUMO				S	**Sn**	**08 52 13.7**	**-1.5**
	132nm,0.3s,baz=178,slow=21,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**20.35**	**78**	T	T	09 17 10.5	
	baz=263,slow=74,SNR=22						
H11S1	**WAKE ISLAND Hy**	**20.37**	**78**	T	T	09 17 10.7	
	baz=263,slow=74,SNR=13						
H11S2	**WAKE ISLAND Hy**	**20.37**	**78**	T	T	09 16 58.9	
	baz=263,slow=74,SNR=18						
WB0	**Warramunga Arr**	**36.61**	**198**	P	**P**	**08 58 15.8**	**-0.7**
WB0				IAmb	IAmb	08 58 17.9	
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**36.80**	**198**	P	**P**	**08 58 18.6**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=19,slow=8.6,SNR=2.9						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**36.80**	**198**	P	**P**	**08 58 16.4**	**-1.7**
SONM	**Songino Array**	**45.76**	**323**	P	**P**	**08 59 32.7**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=120,slow=8.5,SNR=3.1						
	comp=Z,0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**60.66**	**324**	P	**P**	**09 01 20.6**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=92,slow=7.2,SNR=6.5						
	comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**60.78**	**315**	P	**P**	**09 01 18.6**	**-2.6**
J17K	**VABM Dome**	**61.16**	**25**	P	**P**	**09 01 22.5**	**-0.9**
KURBB	**Kurchatov Arra**	**63.80**	**319**	P	**P**	**09 01 42.9**	**+1.6**
	comp=Z,5.1nm,0.7s,baz=99,slow=6.8,SNR=43						
	comp=Z,5.1nm,0.7s						
ILAR	**Eielson Array**	**66.66**	**26**	P	**P**	**09 01 58.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=247,slow=6.1,SNR=7.6						
	comp=Z,0.3nm,0.5s						
KKAR	**Karatay Array**	**68.89**	**311**	P	**P**	**09 02 13.0**	**-0.9**
BVAR	**Borovoye Array**	**69.04**	**321**	P	**P**	**09 02 15.0**	**+0.4**
	comp=Z,3.4nm,0.7s,baz=106,slow=8.4,SNR=13						
	comp=Z,3.4nm,0.7s						
H27K	**Steamboat Moun**	**69.14**	**24**	P	**P**	**09 02 15.0**	**0.0**
H27K				IAmb	IAmb	09 02 22.4	
	comp=Z,2.4nm,1.1s						
D27M	**Malcolm River**	**69.87**	**21**	P	**P**	**09 02 20.6**	**+1.1**
M29M	**Somme Creek**	**69.98**	**29**	P	**P**	**09 02 21.2**	**+0.8**
M29M				IAmb	IAmb	09 02 45.7	
	comp=Z,1.1nm,0.9s						
L29M	**L29M**	**70.19**	**28**	P	**P**	**09 02 22.4**	**+0.8**
L29M				IAmb	IAmb	09 02 30.1	
	comp=Z,1.6nm,0.9s						
AB31	**Akbulak array**	**75.77**	**318**	P	**P**	**09 02 55.7**	**+1.1**
AB31				PcP	**PcP**	**09 03 07.2**	**+0.3**
AB31				IAmb	IAmb	09 03 07.3	
	comp=Z,2.4nm,0.6s						
ABKAR	**Akbulak array**	**75.77**	**318**	P	**P**	**09 02 55.2**	**+0.5**
ABKAR				PcP	**PcP**	**09 03 07.0**	**+0.1**
AKTO	**Aktyubinsk**	**76.85**	**319**	P	**P**	**09 03 00.2**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=67,slow=7.7,SNR=2.4						
	comp=Z,1.1nm,0.5s						

*IDC **23** 08:51:35.7±8.0,0°.38N×124°.03E,h150km±77km,mb3.3/5, mbtmp3.7/6,Error ellipse: s-maj=78.0km s-min=17.1km az=60.0*
*DJA **23** 08:51:37.1±0.4,0°N±4°×12°4E±°,h126km±7km,M4.4/13, mB5.2/1,mb4.7/1,MLv4.3/13,Mw(mB)4.5/1*
ISC 23 08:51:36.1±0.8,0°.09N±0°.07×123°.57E±0°.06,h157km,n20, σ1$: 99/23,mb3.4/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.63**	**41**	P	**Pn**	**08 51 59.4**	**+0.4**
LUWI	**Luwuk**	**1.38**	**215**	P	**Pn**	**08 52 03.3**	**-1.7**
LUWI				S	**Sn**	**08 52 23.3**	**-3.9**
MRSI	**Marisa**	**1.67**	**283**	P	**Pn**	**08 52 06.4**	**-1.6**
MRSI				S	**Sn**	**08 52 28.6**	**-3.9**
APSI	**Ampana**	**2.16**	**243**	P	**Pn**	**08 52 12.2**	**-1.3**
SANI	**Sanana**	**3.22**	**131**	P	**Pn**	**08 52 24.5**	**-2.1**
MPSI	**Mapaga**	**3.68**	**274**	P	**Pn**	**08 52 33.3**	**+0.9**
TNTI	**Ternate**	**3.86**	**80**	P	**Pn**	**08 52 35.0**	**+0.3**
NLAI	**Namlea**	**4.84**	**133**	P	**Pn**	**08 52 47.7**	**+0.2**
TTSI	**Tana Toraja**	**4.87**	**230**	P	**Pn**	**08 52 47.7**	**-0.3**
SPSI	**Sidrap Palu**	**5.54**	**223**	P	**Pn**	**08 52 57.8**	**+1.0**
BNSI	**Bone**	**5.64**	**218**	P	**Pn**	**08 53 01.6**	**+3.4**
BSSI	**Bau Bau, Buton**	**6.91**	**206**	P	**Pn**	**08 53 17.5**	**+2.4**
FITZ	**Fitzroy Crossi**	**18.19**	**174**	P	**Pn**	**08 55 38.2**	**-0.6**
	2.8nm,1.0s,baz=7.6,slow=15,SNR=2.4						
WRA	**Warramunga Arr**	**22.53**	**153**	P	**P**	**08 56 23.4**	**+0.3**
	0.6nm,0.5s,baz=334,slow=10,SNR=10						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**25.66**	**158**	P	**P**	**08 56 53.4**	**+1.9**
	0.1nm,0.3s,baz=348,slow=14,SNR=4.0						
ASAR				PcP	**PcP**	**09 00 19.0**	**+0.9**
	0.2nm,0.4s,baz=339,slow=2.1,SNR=4.6						
	0.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.30**	**308**	P	**P**	**08 57 35.4**	**+2.4**
	1.2nm,0.3s,baz=124,slow=8.9,SNR=4.2						
	1.2nm,0.3s						
SONM	**Songino Array**	**49.84**	**345**	P	**P**	**09 00 13.8**	**+0.4**
	0.6nm,0.7s,baz=147,slow=8.6,SNR=2.3						
	0.6nm,0.7s						
KSH	**Kashi**	**58.49**	**318**	P	P	09 01 25.6	+10
MKAR	**Makanchi Array**	**58.84**	**328**	P	**P**	**09 01 17.9**	**-0.3**
	0.8nm,0.4s,baz=117,slow=9.0,SNR=14						
MKAR				PcP	**PcP**	**09 02 04.5**	**-1.6**
	0.5nm,0.5s,baz=132,slow=2.1,SNR=4.2						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	**58.84**	**328**	PcP	**PcP**	**09 02 04.5**	**-0.4**

*DNK **23** 08:55:33.6±1.2,51°.42N×15°.76E,h30km,ML2.5*
*MCSM **23** 08:55:36.4±0.5,52°N±6°×1°6E±°,h10km,mb4.3,mB5.2, MLv3.7,Mw(mB)4.6*
*IPEC **23** 08:55:36.7±0.2,51°.59N×16°.13E,h1km,ML3.1/6,Error ellipse: s-maj=2.9km s-min=1.4km az=75.0*
*IDC **23** 08:55:37.0±0.6,51°.58N×15°.93E,h0km,mb3.5/1, mbtmp3.4/9,ML2.8/8,Error ellipse: s-maj=13.4km s-min=6.2km az=103.0*
*VIE **23** 08:55:38.9±0.6,51°.41N×15°.76E,h0km,mb3.0/11, ml2.9/15,Error ellipse: s-maj=4.0km s-min=3.5km az=45.0 83 km NE of Liberec Suspected Mining induced.*
*PRU **23** 08:55:39.4,51°.51N×16°.07E,h0km*
ISC 23 08:55:34.8±0.6,51°.66N±0°.03×15°.97E±0°.02,h0km,n83, σ1$: 55/131,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.85**	**166**	*e*Pg	**Pg**	**08 55 51.5**	**+0.5**
KSP				*e*Sg	**Sg**	**08 56 01.8**	**-0.2**
CHVC	**Chvalec**	**1.08**	**177**	*e*PG	**Pb**	**08 55 56.3**	**0.0**
CHVC				*e*SG	**Sg**	**08 56 09.4**	**0.0**
	comp=Z,123nm,0.5s						
OSTC	**Ostas**	**1.12**	**172**	*e*PG	**Pb**	**08 55 57.1**	**+0.1**
OSTC				*e*SG	**Sg**	**08 56 10.8**	**+0.1**
	comp=Z,250nm,0.6s						
UPC	**Upice**	**1.16**	**179**	*e*PG	**Pb**	**08 55 57.6**	**-0.1**
UPC				*e*SG	**Sg**	**08 56 11.4**	**-0.5**
	comp=Z,348nm,0.4s						
DPC	**Dobruska-Polom**	**1.33**	**170**	*e*PG	**Pg**	**08 56 00.1**	**-0.2**
DPC				*e*SG	**Sg**	**08 56 16.7**	**-0.9**
	comp=Z,119nm,0.7s						
PVCC	**Panska Ves**	**1.44**	**218**	*e*PG	**Pb**	**08 56 03.6**	**+1.1**
PVCC				*e*SG	**Sn**	**08 56 22.6**	**+0.9**
	comp=Z,270nm,0.4s						
PIVO	**Bartosovice**	**1.52**	**166**	*e*Pg	Pn	**08 56 03.2**	**-0.1**
	baz=350						
PIVO				*e*Sg	**Sg**	**08 56 21.4**	**-2.3**
	215nm,0.7s,baz=350						
KRLC	**Kraliky**	**1.67**	**162**	*e*PG	Pn	**08 56 05.6**	**+0.3**
KRLC				*e*SG	**Sn**	**08 56 26.1**	**-1.4**
	comp=Z,193nm,0.6s						
RYBC	**Ceska Rybna**	**1

MODS	**Modra-Piesok**	**3.40**	**165**	*e*PG		**Pg**	**08 56 38.7**	**-1.2**
MODS				*e*SG		**Sg**	**08 57 25.3**	**+1.4**
BSD	**Bornholm Skovb**	**3.51**	**350**	*i* P		**Pn**	**08 56 30.0**	**-0.6**
BSD				*i* S		**Sn**	**08 57 10.3**	**-2.6**
BSD				IAML			08 57 31.7	
	comp=Z,5.4nm,0.3s							
NIE	**Niedzica**	**3.56**	**127**	*e*Pg		**Pg**	**08 56 42.5**	**-0.5**
NIE				*e*Sg		**Sg**	**08 57 28.7**	**-0.4**
NIE	**Niedzica**	**3.56**	**127**	Pn		**Pn**	**08 56 34.4**	**+3.1**
CONA	**Conrad Observa**	**3.74**	**181**	*i* Pn		**Pn**	**08 56 34.6**	**+0.8**
	comp=Z,6.3nm,0.5s,SNR=5.6							
CONA				*e*Sg		**Sg**	**08 57 32.9**	**-2.0**
	comp=Z,53nm,0.5s							
RONA	**Rosalia, Austr**	**3.97**	**177**	*e*Sg		**Sg**	**08 57 39.9**	**-2.5**
	comp=Z,24nm,0.4s							
MOA	**Molln**	**3.98**	**197**	*i* Pn		**Pn**	**08 56 38.2**	**+1.2**
	comp=Z,14nm,0.4s,SNR=8.3							
MOA				*e*Sg		**Sg**	**08 57 41.2**	**-1.3**
	comp=Z,36nm,0.6s							
STHS	**Stebnicka Huta**	**4.05**	**122**	*e*PN		**Pn**	**08 56 37.5**	**-0.5**
STHS				*e*PG		**Pg**	**08 56 50.8**	**-1.5**
STHS				*e*SG		**Sg**	**08 57 45.0**	**+0.3**
LUNU	**Lund**	**4.25**	**340**	*i* P		**Pn**	**08 56 39.0**	**-1.7**
LUNU				*i* S		**Sn**	**08 57 28.2**	**-2.8**
BIOA	**Bad Ischl, Aus**	**4.25**	**202**	*i* Pn		**Pn**	**08 56 40.3**	**-0.5**
	comp=Z,3.8nm,0.3s							
BIOA				*e*Sg		**Sg**	**08 57 50.9**	**-0.5**
	comp=Z,64nm,0.6s							
KECS	**Kecovo**	**4.31**	**136**	*e*PN		**Pn**	**08 56 43.0**	**+1.4**
KECS				*e*PG		**Pg**	**08 56 58.4**	**+1.0**
KECS				*e*SG		**Sg**	**08 57 55.2**	**+2.0**
ARSA	**Arzberg**	**4.43**	**184**	*i* Pn		**Pn**	**08 56 43.5**	**+0.3**
	comp=Z,1.8nm,0.3s							
ARSA				*e*Sg		**Sg**	**08 57 56.7**	**-0.2**
	comp=Z,37nm,0.6s							
LESA	**Schwarzleotal**	**4.75**	**208**	*i* Pn		**Pn**	**08 56 48.4**	**+0.6**
	comp=Z,1.6nm,0.3s							
LESA				*e*Sg		**Sg**	**08 58 06.8**	**-0.6**
	comp=Z,18nm,0.5s							
KBA	**Koelnbreinsper**	**4.90**	**202**	*i* Pn		**Pn**	**08 56 51.4**	**+1.5**
	comp=Z,8.4nm,0.4s,SNR=11							
KBA				*e*Sg		**Sg**	**08 58 11.3**	**-0.8**
	comp=Z,22nm,0.8s							
DEL	**Delary**	**4.97**	**346**	*i* P		**Pn**	**08 56 49.0**	**-1.6**
DEL				*i* S		**Sn**	**08 57 45.0**	**-3.8**
SOKA	**Soboth**	**5.03**	**187**	*i* Pn		**Pn**	**08 56 53.1**	**+1.6**
	comp=Z,2.0nm,0.5s							
SOKA				*e*Sg		**Sg**	**08 58 12.3**	**-3.9**
	comp=Z,9.6nm,0.7s							
UZHM	**Uzhgorod**	**5.07**	**124**	Pn		**Pn**	**08 56 55.2**	**+3.2**
WTTA	**Wattenberg**	**5.23**	**214**	*i* Pn		**Pn**	**08 56 54.1**	**-0.3**
	comp=Z,3.8nm,0.6s							
WTTA				*e*Sg		**Sg**	**08 58 20.7**	**-2.1**
	comp=Z,25nm,0.8s							
OBKA	**Obir**	**5.24**	**191**	*e*Sg		**Sg**	**08 58 22.1**	**-1.1**
	comp=Z,29nm,0.8s							
MOTA	**Moosalm**	**5.36**	**218**	*e*Sg		**Sg**	**08 58 24.5**	**-2.4**
	comp=Z,19nm,0.7s							
RETA	**Reutte**	**5.38**	**221**	*i* Pn		**Pn**	**08 56 57.8**	**+1.4**
	comp=Z,1.4nm,0.3s							
RETA				*e*Sg		**Sg**	**08 58 26.7**	**-0.8**
	comp=Z,24nm,0.7s							
ABTA	**Abfaltersbach**	**5.42**	**206**	*e*Pn		**Pn**	**08 56 58.2**	**+1.4**
	comp=Z,2.6nm,0.6s							
ABTA				Sg		**Sg**	**08 58 25.9**	**-2.8**
	comp=Z,23nm,0.8s							
SQTA	**Sankt Quirin**	**5.42**	**217**	Sg		**Sg**	**08 58 28.8**	**-0.1**
	comp=Z,16nm,0.8s							
FETA	**Feichten**	**5.77**	**218**	*e*Sg		**Sg**	**08 58 37.0**	**-3.1**
	comp=Z,9.7nm,0.7s							
RNPP9	**Sopachiv**	**6.20**	**88**	Pn		**Pn**	**08 57 09.3**	**+1.9**
RNPP2	**Kostyukhnivka**	**6.21**	**89**	Pn		**Pn**	**08 57 10.1**	**+2.5**
DAVOX	**Davos/Dischmat**	**6.31**	**222**	Pn		**Pn**	**08 57 11.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=354,slow=19,SNR=3.7							
DAVOX				Lg		Lg	08 58 58.0	
	comp=Z,1.1nm,0.3s,baz=197,slow=23,SNR=7.0							
	comp=Z,2.7nm,0.6s							
RAKU	**Rahkiv**	**6.43**	**121**	Pn		**Pn**	**08 57 11.9**	**+1.2**
NACGM	**Naroch**	**7.25**	**59**	*e*P		**Pn**	**08 57 26.2**	**+4.4**
	comp=Z,11nm,0.8s,baz=247							
LUBAR	**Lubar, Ukraine**	**7.67**	**99**	Pn		**Pn**	**08 57 30.0**	**+2.3**
MI30	**MI30,Zelenitsa**	**7.73**	**92**	Pn		**Pn**	**08 57 28.8**	**+0.3**
	comp=Z,0.1nmcomp=Z,19nm,0.7s							
NDNU	**Novodnistrovsk**	**7.94**	**108**	Pn		**Pn**	**08 57 34.7**	**+3.3**
AK19	**Malin Array Si**	**8.25**	**91**	Pn		**Pn**	**08 57 38.0**	**+2.4**
AK18	**Malin Array Si**	**8.28**	**91**	Pn		**Pn**	**08 57 37.3**	**+1.2**
AK17	**Malin Array Si**	**8.29**	**92**	Pn		**Pn**	**08 57 37.1**	**+1.0**
AK13	**Malin Array Si**	**8.30**	**92**	Pn		**Pn**	**08 57 37.9**	**+1.6**
AK16	**Malin Array Si**	**8.32**	**92**	Pn		**Pn**	**08 57 37.8**	**+1.3**
AK15	**Malin Array Si**	**8.32**	**92**	Pn		**Pn**	**08 57 37.6**	**+1.0**
AK04	**Malin Array Si**	**8.35**	**91**	Pn		**Pn**	**08 57 38.0**	**+1.1**
AK12	**Malin Array Si**	**8.35**	**92**	Pn		**Pn**	**08 57 38.2**	**+1.2**
AK11	**Malin Array Si**	**8.36**	**92**	Pn		**Pn**	**08 57 38.2**	**+1.2**
KIEV	**Kiev**	**8.38**	**91**	Pn		**Pn**	**08 57 38.3**	**+1.0**
	comp=Z,32nm,0.8s							
AK03	**Malin Array Si**	**8.38**	**91**	Pn		**Pn**	**08 57 38.4**	**+1.0**
AK01	**Malin Array Si**	**8.38**	**91**	Pn		**Pn**	**08 57 38.1**	**+0.7**
AKASG	**Malin Array Be**	**8.38**	**91**	Pn		**Pn**	**08 57 36.5**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=280,slow=12,SNR=6.7							
	comp=Z,2.0nm,0.6s							
AKBB	**Malin Array Si**	**8.38**	**91**	Pn		**Pn**	**08 57 38.3**	**+0.8**
AK06	**Malin Array Si**	**8.39**	**92**	Pn		**Pn**	**08 57 38.7**	**+1.1**
AK08	**Malin Array Si**	**8.42**	**92**	Pn		**Pn**	**08 57 38.9**	**+1.0**
AK10	**Malin Array Si**	**8.42**	**92**	Pn		**Pn**	**08 57 39.0**	**+1.0**
HFS	**Hagfors**	**8.59**	**352**	Pn		**Pn**	**08 57 41.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=166,slow=13,SNR=7.0							
HFS				Sn		**Sn**	**08 59 15.7**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=180,slow=28,SNR=1.5							
	comp=Z,1.0nm,0.6s							
NOA	**NORSAR Array B**	**9.76**	**346**	Pn		**Pn**	**08 57 56.5**	**+0.2**
	baz=156,slow=13,SNR=4.7							
	comp=Z,0.4nm,0.6s							
FINES	**FINESS Array B**	**11.26**	**26**	Pn		**Pn**	**08 58 15.6**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=215,slow=11,SNR=6.8							
FINES				Sn		**Sn**	**09 00 18.5**	**-4.7**
	comp=Z,0.4nm,0.3s,baz=214,slow=20,SNR=6.2							
	comp=Z,1.9nm,0.6s							
EKA	**Eskdalemuir Ar**	**11.96**	**295**	Pn		**Pn**	**08 58 25.0**	**-1.4**
	baz=106,slow=13							
ARCES	**ARCESS Array B**	**18.49**	**11**	Pn		**P**	**08 59 50.3**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=199,slow=14,SNR=5.9							
	comp=Z,0.6nm,0.5s							
PDAR	**Pinedale Array**	**74.77**	**322**	P		**P**	**09 07 18.9**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=52,slow=5.8,SNR=4.3							
	comp=Z,0.3nm,0.6s							

*DJA **23** 09:11:11.2±1.4,6˚N±14˚×12˚7E±˚,h102km±16km,M4.7/11, mb4.8/7,mB5.1/6,MLv4.8/11,Mw(mB)4.4/6*
*NEIC **23** 09:11:13.0±1.0,5˚.61N±0˚.07×126˚.6E±0˚.1,h91km±6km, mb4.4/23,Error ellipse: s-maj=15.1km s-min=9.2km az=74.0*
*IDC **23** 09:11:15.4±1.5,5˚.64N×126˚.66E,h111km±12km,mb3.8/15, mbtmp4.2/16,MS3.2/1,Error ellipse: s-maj=32.7km s-min=10.1km az=73.0*

ISC 23 09:11:13.8±0.5,5˚52N±0˚.05×126˚55E±0˚.09,h100km,n63, σ1s11/68,mb4.2/27,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.81**	**328**	P		**Pn**	**Pn**	**09 11 45.3**	**+1.3**
	242nm,0.4s,baz=98,slow=15,SNR=1.9								
DAV				S		**Sn**	**Sn**	**09 12 09.1**	**+2.1**
	603nm,0.4s,baz=112,slow=18,SNR=5.9								
DAV	**Davao City (W)**	**1.81**	**328**			**Pn**	**Pn**	**09 11 44.2**	**+0.2**
SGSI	**Sangihe**	**2.08**	**209**	P		**Pn**	**Pn**	**09 11 47.3**	**-0.2**
SGSI				S		**Sn**	**Sn**	**09 12 14.9**	**+1.7**
TNTI	**Ternate**	**4.79**	**170**			**Pn**	**Pn**	**09 12 23.5**	**-0.1**
TNTI	**Ternate**	**4.79**	**170**	P		**Pn**	**Pn**	**09 12 23.2**	**-0.4**
	0.5nm2µm56nm,0.5s								
MRSI	**Marisa**	**6.80**	**223**	P		**Pn**	**Pn**	**09 12 51.9**	**+0.9**
TOLI2	**Tolitoli**	**7.23**	**233**			**Pn**	**Pn**	**09 12 55.7**	**-1.1**
LUWI	**Luwuk**	**7.53**	**210**			**Pn**	**Pn**	**09 13 01.4**	**+0.4**
LUWI	**Luwuk**	**7.53**	**210**	P		**Pn**	**Pn**	**09 13 02.5**	**+1.6**
	0.4nm2µm107nm,0.6s								
SANI	**Sanana**	**7.54**	**184**	P		**Pn**	**Pn**	**09 12 57.7**	**-3.4**
MYLDM	**Lahad Datu**	**8.02**	**268**	Pn		**Pn**	**Pn**	**09 13 08.2**	**+0.7**
APSI	**Ampana**	**8.04**	**218**	P		**Pn**	**Pn**	**09 13 08.5**	**+0.6**
NLAI	**Namlea**	**8.72**	**176**	P		**Pn**	**Pn**	**09 13 16.3**	**-0.8**
KAPI	**Kappang**	**12.47**	**213**	P		**P**	**P**	**09 14 12.7**	**-2.8**
	8.6nm,0.6s,baz=9.5,slow=13,SNR=5.2								
SBUM	**Sibu**	**14.61**	**259**			**Pn**	**Pn**	**09 14 35.7**	**0.0**
SOEI	**Soe**	**15.34**	**189**	Pn		**Pn**	**Pn**	**09 14 45.8**	**+0.8**
SOEI				IAmb		IAmb	IAmb	09 15 01.0	
	comp=Z,20nm,1.0s								

KNRA	**Kununurra**	**21.18**	**174**			**P**	**09 15 52.5**	**+1.3**
FITZ	**Fitzroy Crossi**	**23.48**	**182**	P		**P**	**09 16 17.1**	**+2.4**
	comp=Z,3.7nm,0.8s,baz=7.7,slow=8.0,SNR=4.2							
	comp=Z,3.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**23.48**	**182**	P		**P**	**09 16 14.9**	**+0.2**
WB0	**Warramunga Arr**	**26.29**	**163**	P		**P**	**09 16 40.3**	**+0.2**
WB0				IAmb		IAmb	09 16 46.9	
	comp=Z,8.4nm,0.5s							
WRA	**Warramunga Arr**	**26.44**	**163**	P		**P**	**09 16 41.9**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=344,slow=10,SNR=12							
	comp=Z,1.4nm,0.4s							
WRA	**Warramunga Arr**	**26.44**	**163**	P		**P**	**09 16 40.8**	**-0.7**
WB2	**Warramunga Arr**	**26.44**	**163**	P		**P**	**09 16 41.3**	**-0.2**
WB2				IAmb		IAmb	09 17 07.1	
	comp=Z,7.0nm,0.8s							
WR8	**Warramunga Arr**	**26.50**	**163**	P		**P**	**09 16 41.5**	**-0.5**
WR0	**Warramunga Arr**	**26.51**	**163**	P		**P**	**09 16 41.5**	**-0.6**
PSA00	**Pilbara Seismi**	**27.71**	**194**	P		**P**	**09 16 53.2**	**+0.4**
PSA00				IAmb		IAmb	09 17 01.3	
	comp=Z,5.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**29.84**	**298**	P		**P**	**09 17 13.0**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=94,slow=8.1,SNR=2.6							
	comp=Z,1.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**29.84**	**298**	P		**P**	**09 17 11.0**	**-0.8**
AS31	**Alice Springs**	**29.88**	**166**	P		**P**	**09 17 11.7**	**-0.4**
AS31				IAmb		IAmb	09 17 17.9	
	comp=Z,1.4nm,0.3s							
ASAR	**Alice Springs**	**29.89**	**166**	P		**P**	**09 17 13.1**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=343,slow=6.9,SNR=14							
ASAR				PcP		**PcP**	**09 20 14.1**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=357,slow=2.2,SNR=9.9							
ASAR				ScP		**ScP**	**09 23 49.1**	**+3.0**
	comp=Z,0.5nm,0.7s,baz=350,slow=2.8,SNR=5.3							
	comp=Z,1.0nm,0.4s							
ASAR	**Alice Springs**	**29.89**	**166**	P		**P**	**09 17 12.3**	**+0.2**
FORT	**Forrest**	**36.12**	**178**	P		**P**	**09 18 06.8**	**+0.5**
FORT				IAmb		IAmb	09 18 08.6	
	comp=Z,4.0nm,0.8s							
USRK	**Ussuriysk Ar.**	**38.82**	**6**	P		**P**	**09 18 28.6**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=194,slow=7.2,SNR=5.0							
	comp=Z,3.0nm,0.6s							
BBOO	**Buckleboo**	**39.18**	**167**	P		**P**	**09 18 33.2**	**+1.2**
BBOO				IAmb		IAmb	09 18 33.9	
	comp=Z,6.2nm,0.6s							
NWAO	**Narrogin (SRO)**	**39.24**	**192**	P		**P**	**09 18 33.5**	**+0.9**
NWAO				IAmb		IAmb	09 18 38.0	
	comp=Z,12nm,1.1s							
STKA	**Stephens Creek**	**39.86**	**160**	P		**P**	**09 18 39.2**	**+1.5**
	comp=Z,3.5nm,0.5s,baz=336,slow=8.6,SNR=14							
STKA				LR		LR	09 36 21.6	
	comp=Z,29nm,18.0s,baz=203,slow=38							
	comp=Z,3.5nm,0.5s							
JKA	**Kamikawa-asahi**	**40.95**	**18**	P		**P**	**09 18 44.9**	**-1.6**
EVN	**Everest**	**43.80**	**305**	P		**P**	**09 19 09.8**	**-0.9**
EVN				IAmb		IAmb	09 19 15.7	
	comp=Z,1.9nm,0.5s							
HILR	**Hailar Array B**	**44.26**	**354**	P		**P**	**09 19 14.5**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=182,slow=13,SNR=1.7							
	comp=Z,1.0nm,0.4s							
SONM	**Songino Array**	**45.55**	**341**	P		**P**	**09 19 24.4**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=163,slow=10,SNR=2.6							
	comp=Z,0.5nm,0.5s							
MKAR	**Makanchi Array**	**55.99**	**325**	P		**P**	**09 20 41.6**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=118,slow=7.5,SNR=11							
MKAR				PcP		**PcP**	**09 21 38.6**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=103,slow=4.6,SNR=4.2							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**55.99**	**325**	P		**P**	**09 20 41.4**	**-0.6**
MAKZ	**Makanchi**	**56.18**	**325**	P		**P**	**09 20 42.5**	**-0.8**
NIL	**Nilore**	**56.70**	**307**	P		**P**	**09 20 46.1**	**-1.1**
ZAA0	**Zalesovo Array**	**58.92**	**333**	P		**P**	**09 21 01.5**	**-0.8**
ZAA0				IAmb		IAmb	09 21 07.1	
	comp=Z,1.4nm,0.7s							
ZALV	**Zalesovo Beam**	**58.92**	**333**	P		**P**	**09 21 03.6**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=122,slow=7.0,SNR=5.9							
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**58.92**	**333**	P		**P**	**09 21 01.0**	**-1.3**
KURBB	**Kurchatov Arra**	**60.15**	**327**	P		**P**	**09 21 10.6**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=125,slow=6.6,SNR=6.1							
	comp=Z,1.0nm,0.3s							
KURK	**Kurchatov**	**60.15**	**327**	P		**P**	**09 21 10.7**	**-0.1**
KURK				IAmb		IAmb	09 21 16.5	
	comp=Z,2.8nm,0.5s							
GAR	**Garm**	**60.59**	**312**	P		**P**	**09 21 14.3**	**+0.1**
KKAR	**Karatay Array**	**61.81**	**316**	P		**P**	**09 21 22.1**	**-0.2**
BVAR	**Borovoye Array**	**65.73**	**327**	P		**P**	**09 21 47.1**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=134,slow=6.4,SNR=5.6							
	comp=Z,0.9nm,0.4s							
AB31	**Akbulak array**	**70.66**	**320**	P		**P**	**09 22 18.0**	**-0.7**
ABKAR	**Akbulak array**	**70.66**	**320**	P		**P**	**09 22 18.0**	**-0.7**
ILAR	**Eielson Array**	**83.58**	**26**	P		**P**	**09 23 29.7**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=258,slow=6.1,SNR=8.5							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**83.58**	**26**	P		**P**	**09 23 29.8**	**-0.8**
ARCES	**ARCESS Array B**	**88.72**	**340**	P		**P**	**09 23 55.6**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=91,slow=6.2,SNR=11							
	comp=Z,1.6nm,0.6s							
ARCES	**ARCESS Array B**	**88.72**	**340**	P		**P**	**09 23 55.2**	**-0.6**
ARCES				IAmb		IAmb	09 24 17.6	
	comp=Z,2.8nm,1.0s							
FINES	**FINESS Array B**	**90.18**	**332**	P		**P**	**09 24 02.7**	**0.0**
	comp=Z,1.0nm,0.5s,baz=50,slow=3.2,SNR=11							
	comp=Z,1.0nm,0.5s							
QSPA	**South Pole Qui**	**95.41**	**180**	P		**P**	**09 24 27.3**	**+0.4**
QSPA				IAmb		IAmb	09 24 37.7	
	comp=Z,2.8nm,1.2s							
HFS	**Hagfors**	**96.36**	**332**	P		**P**	**09 24 30.5**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=90,slow=11,SNR=4.1							
TORD	**Torodi Ar. Bea**	**122.17**	**289**	PKP		**PKiKP**	**09 29 59.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=71,slow=4.1,SNR=0.9							
PLCA	**Paso Flores**	**141.73**	**159**	PKP		**PKiKP**	**09 30 36.3**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=270,slow=4.0,SNR=3.2							

IDC 23 09:12:09.6±1.8,6˚71S×130˚42E,h0km,mb3.7/2, mbtmp3.6/5,ML3.6/3,Error ellipse: s-maj=82.3km s-min=20.5km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.24**	**202**	Pn		**Pn**	**Pn**	**09 15 03.5**	**-1.8**
	0.3nm,0.3s,baz=32,slow=9.1,SNR=6.4								
	1.3nm,0.6s								
WRA	**Warramunga Arr**	**13.69**	**164**	Pn		**Pn**	**Pn**	**09 15 24.9**	**-0.2**
	0.3nm,0.3s,baz=349,slow=13,SNR=9.3								
WRA				Sn		**Sn**	**Sn**	**09 17 52.5**	**-5.6**
	baz=347,slow=22								
	0.3nm,0.3s								
ASAR	**Alice Springs**	**17.18**	**169**	P		**P**	**P**	**09 16 12.8**	**-0.1**
	0.2nm,0.3s,baz=360,slow=11,SNR=11								
ASAR				S		**Sn**	**Sn**	**09 19 24.4**	**+1.2**
	0.8nm,0.8s,baz=348,slow=26,SNR=4.1								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**68.22**	**327**	P		**P**	**P**	**09 23 12.6**	**+0.6**
	0.5nm,0.5s,baz=131,slow=7.9,SNR=2.7								
	0.5nm,0.5s								
ZALV	**Zalesovo Beam**	**71.51**	**334**	P		**P**	**P**	**09 23 31.7**	**-0.4**
	0.4nm,0.5s,baz=132,slow=10,SNR=1.9								
	0.4nm,0.5s								

SJA 23 09:12:18.3±0.5,22˚52S×66˚11W,h300km,ML3.8,MW3.5, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**0.94**	**137**	*e*P		Pn	Pn	09 12 49.6	-9.3
SALTA		**1.71**	**187**	*e*P		Pn	Pn	09 13 03.8	+0.3
PB09	**IPOC Station P**	**2.99**	**283**	*e*P		Pn	Pn	09 13 14.7	+0.5
PB09				*e*S		S	S	09 13 56.9	-1.9
PB06	**IPOC Station P**	**3.20**	**266**	*e*P		Pn	Pn	09 13 16.6	+0.3
PB06				*e*S		S	S	09 14 00.2	-2.3
PB06				IAML				09 14 03.0	
	comp=Z,56nm,0.1s								
PB03	**IPOC Station P**	**3.41**	**277**	*e*P		Pn	Pn	09 13 18.8	+0.4
PB03				*e*P				09 13 18.9	
PB03				*e*S		S	S	09 14 02.6	-3.7
PB03				IAML				09 14 04.8	
	comp=Z,177nm,0.2s								
PB01	**IPOC Station P**	**3.46**	**294**	*e*P		Pn	Pn	09 13 18.9	-0.1
PB01				*e*S		S	S	09 14 04.3	-3.0
PB01				IAML				09 14 05.7	
	comp=Z,59nm,0.2s								
PB07	**IPOC Station P**	**3.59**	**282**	*e*P		Pn	Pn	09 13 20.8	+0.4
PB07				*e*S		S	S	09 14 06.8	-3.1
PB07				IAML				09 14 06.9	
	comp=Z,80nm,0.2s								

PB08	**IPOC Station P**	**3.69**	**309**	*e*P		Pn	Pn	09 13 22.4	+0.7
PB08				*e*S		S	S	09 14 10.9	-1.4
PB02	**IPOC Station P**	**3.71**	**288**	*e*P		Pn	Pn	09 13 21.8	+0.2
PB02				*e*S		S	S	09 14 08.3	-3.8
PB02				IAML				09 14 09.8	
	comp=Z,194nm,0.4s								
PB05	**IPOC Station P**	**3.79**	**264**	*e*P		Pn	Pn	09 13 22.6	+0.2
PB05				*e*S		S	S	09 14 10.4	-3.3
PB05				*e*S		S	S	09 14 10.9	-2.8
GO01	**Chusmiza**	**4.04**	**314**	*e*P		Pn	Pn	09 13 26.1	+0.6
GO01				*e*S		S	S	09 14 19.3	0.0
PATCX	**Punta Patache**	**4.12**	**293**	*e*P		Pn	Pn	09 13 26.2	+0.2
PATCX				*e*P				09 13 26.6	
PATCX				*e*S		S	S	09 14 16.8	-3.4
PATCX				IAML				09 14 20.7	
	comp=Z,29nm,0.5s								
GO02	**Mina Guanaco**	**4.13**	**230**	*e*P		Pn	Pn	09 13 26.6	+0.3
GO02				*e*S		S	S	09 14 18.6	-2.1
GO02				*e*S		S	S	09 14 18.8	-2.0
GO02				IAML				09 14 20.0	
	comp=Z,80nm,0.3s								
HMBC	**Humberstone**	**4.17**	**302**	*e*P		Pn	Pn	09 13 26.6	+0.1
HMBC				*e*S		S	S	09 14 17.7	-3.5
HMBC				IAML				09 14 20.1	
	comp=Z,74nm,0.3s								
TA01	**Diego Aracena**	**4.26**	**296**	*e*P		Pn	Pn	09 13 27.8	+0.3
TA01				*e*S		S	S	09 14 18.8	-4.1
TA01				IAML				09 14 22.5	
	comp=Z,30nm,0.3s								
PB11	**IPOC Station P**	**4.30**	**309**	*e*P		Pn	Pn	09 13 28.1	+0.1
PB11				*e*S		S	S	09 14 20.4	-3.5
PB11				*e*S		S	S	09 14 20.8	-3.2
PB11				IAML				09 14 23.2	
	comp=Z,46nm,0.1s								
PB14	**IPOC Station P**	**4.46**	**241**	*e*P		Pn	Pn	09 13 30.5	+0.5
PB14				*e*S		S	S	09 14 23.7	-3.8
PB14				IAML				09 14 27.7	
	comp=Z,60nm,0.2s								
AC02	**Maricunga**	**5.10**	**212**	*e*P		Pn	Pn	09 13 38.2	+0.8
PB16	**IPOC Station P**	**5.24**	**322**	*e*P		Pn	Pn	09 13 40.6	+1.3
PB16				*e*S		S	S	09 14 40.0	-4.2

IDC 23 09:25:06.3±4.3,16˚83S×178˚20W,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=185.8km s-min=35.3km az=138.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.33**	**240**	P		P	P	09 32 36.5	-1.0
	2.6nm,0.9s,baz=66,slow=10.0,SNR=3.6								
	2.6nm,0.9s								
WRA	**Warramunga Arr**	**45.04**	**258**	P		P	P	09 33 24.0	-0.2
	0.3nm,0.4s,baz=91,slow=7.8,SNR=11								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**45.29**	**253

HYT	**Haines Junctio**	**1.29**	**39**			**Pg**	**09 25 33.2**	**-0.5**
HYT					IAML		09 25 54.7	
	comp=E,514nm,0.6s							
HYT	**Haines Junctio**	**1.29**	**39**	Pn		**Pg**	**09 25 33.2**	**-0.5**
HYT				Sg		**Sg**	**09 25 50.6**	**+0.1**
HYT	**Haines Junctio**	**1.29**	**39**	P		**Pg**	**09 25 33.1**	**-0.6**
	baz=220,SNR=193							
HYT				S		**Sg**	**09 25 50.5**	**+0.1**
	baz=220							
LOGN	**Logan Glacier**	**1.36**	**318**			**Pn**	**09 25 33.8**	**-1.3**
LOGN					IAML		09 25 58.4	
	comp=N,312nm,0.5s							
LOGN	**Logan Glacier**	**1.36**	**318**	P		**Pn**	**09 25 33.6**	**-1.6**
YAH	**Yahtse**	**1.41**	**294**			**Pn**	**09 25 35.0**	**-0.8**
MESA	**MESA**	**1.45**	**285**			**Pn**	**09 25 35.5**	**-0.9**
MESA	**MESA**	**1.45**	**285**	Pn		**Pn**	**09 25 35.1**	**-1.3**
MESA				Sg		**Sb**	**09 25 55.2**	**-0.6**
MESA	**MESA**	**1.45**	**285**	P		**Pn**	**09 25 35.2**	**-1.3**
	baz=103,SNR=76							
MESA				S		**Sb**	**09 25 55.4**	**-0.4**
	baz=103							
YUK5	**Granite Creek**	**1.46**	**25**			**Pn**	**09 25 36.4**	**0.0**
YUK5	**Granite Creek**	**1.46**	**25**	Pn		**Pn**	**09 25 36.5**	**0.0**
YUK5				Sg		**Sg**	**09 25 56.4**	**+0.7**
PLBC	**Pleasant Camp**	**1.46**	**104**			**Pn**	**09 25 35.3**	**-1.1**
PLBC						**Sb**	**09 25 54.4**	**-1.5**
PLBC	**Pleasant Camp**	**1.46**	**104**	Pn		**Pn**	**09 25 35.3**	**-1.1**
PLBC				Sg		**Sb**	**09 25 54.2**	**-1.6**
PLBC	**Pleasant Camp**	**1.46**	**104**	P		**Pn**	**09 25 35.2**	**-1.1**
	baz=286,SNR=259							
PLBC				S		**Sb**	**09 25 54.7**	**-1.2**
	baz=286							
YUK8	**Steele Glacier**	**1.49**	**348**			**Pn**	**09 25 36.5**	**-0.7**
YUK8	**Steele Glacier**	**1.49**	**348**	Pn		**Pn**	**09 25 36.4**	**-0.7**
YUK8				Sg		**Sb**	**09 25 56.9**	**-0.3**
YUK8	**Steele Glacier**	**1.49**	**348**	P		**Pn**	**09 25 36.3**	**-0.8**
	baz=168,SNR=85							
YUK8				S		**Sb**	**09 25 56.8**	**-0.3**
	baz=168							
YUK4	**Talbot Arm**	**1.54**	**9**	Pn		**Pg**	**09 25 40.0**	**+1.5**
YUK4	**Talbot Arm**	**1.54**	**9**	Pb		**Pg**	**09 25 40.0**	**+1.5**
	baz=191,SNR=68							
YUK4				S		**Sg**	**09 26 00.8**	**+2.3**
	baz=191							
BRWY	**Burwash Landin**	**1.55**	**2**	Pn		**Pb**	**09 25 38.0**	**-0.4**
BRWY				Sn		**Sg**	**09 25 59.1**	**+0.4**
BRWY				Sg		**Sb**	**09 26 02.3**	**+3.8**
CTGM	**Chitina Glacie**	**1.58**	**317**			**Pn**	**09 25 37.3**	**-0.7**
CTGM					IAML		09 26 02.3	
	comp=N,384nm,0.5s							
CTGM					IAML		09 26 02.3	
	comp=E,268nm,0.5s							
CTGM	**Chitina Glacie**	**1.58**	**317**	Pn		**Pn**	**09 25 37.2**	**-0.9**
CTGM				Sn		**Sn**	**09 25 57.9**	**-1.2**
CTGM				Sg		**Sg**	**09 26 00.8**	**+1.2**
CTG	**Chitna Glacier**	**1.58**	**317**	P		**Pn**	**09 25 37.5**	**-0.6**
	baz=135,SNR=238							
CTG				S		**Sn**	**09 25 58.3**	**-0.9**
	baz=135							
GRNC	**Granite Creek**	**1.58**	**306**			**Pn**	**09 25 36.9**	**-1.4**
GRNC					IAML		09 26 01.6	
	comp=N,393nm,0.6s							
GRNC					IAML		09 26 03.0	
	comp=E,295nm,0.9s							
GRNC	**Granite Creek**	**1.58**	**306**	Pn		**Pn**	**09 25 36.6**	**-1.6**
GRNC				Sg		**Sg**	**09 25 59.8**	**0.0**
BAGL	**Bagley Icefiel**	**1.61**	**296**			**Pn**	**09 25 38.0**	**-0.4**
BARN	**Barnard Glacie**	**1.76**	**316**			**Pn**	**09 25 40.5**	**-0.1**
BARN					IAML		09 26 06.2	
	comp=N,273nm,0.4s							
BARK	**Barkley Ridge**	**1.77**	**291**			**Pn**	**09 25 40.0**	**-0.7**
ISLE	**Juniper Island**	**1.77**	**297**			**Pn**	**09 25 40.2**	**-0.6**
ISLE					IAML		09 26 05.8	
	comp=E,354nm,0.3s							
ISLE					IAML		09 26 06.8	
	comp=N,257nm,0.4s							
O30N	**Mendenhall**	**1.79**	**57**			**Pb**	**09 25 41.8**	**-0.7**
O30N					IAML		09 26 08.4	
	comp=E,217nm,0.7s							
O30N					IAML		09 26 08.4	
	comp=N,225nm,0.8s							
O30N	**Mendenhall**	**1.79**	**57**	Pn		**Pn**	**09 25 41.6**	**+0.6**
O30N				Sg		**Sg**	**09 26 06.1**	**-0.4**
O30N	**Mendenhall**	**1.79**	**57**	P		**Pn**	**09 25 41.5**	**+0.6**
	baz=239,SNR=922							
O30N				S		**Sb**	**09 26 04.7**	**-0.8**
	baz=239							
SNH	**Sunshine Point**	**1.89**	**282**	Pn		**Pn**	**09 25 42.0**	**-0.2**
SNH					IAML		09 26 09.1	
	comp=N,273nm,1.0s							
SNH					IAML		09 26 09.2	
	comp=E,196nm,0.5s							
N30M	**Aishikik Lake**	**1.93**	**31**			**Pn**	**09 25 43.6**	**+0.8**
N30M					IAML		09 26 12.6	
	comp=N,209nm,0.5s							
N30M					IAML		09 26 13.4	
	comp=E,246nm,0.8s							
N30M	**Aishikik Lake**	**1.93**	**31**	Pn		**Pn**	**09 25 43.6**	**+0.8**
N30M	**Aishikik Lake**	**1.93**	**31**	P		**Pn**	**09 25 43.5**	**+0.7**
	baz=213,SNR=401							
N30M				S		**Sb**	**09 26 08.3**	**-1.0**
	baz=213							
KIAG	**Kiagna River**	**1.94**	**306**			**Pn**	**09 25 42.4**	**-0.7**
KIAG	**Kiagna River**	**1.94**	**306**	Pn		**Pn**	**09 25 42.4**	**-0.7**
KIAG				Sg		**Sn**	**09 26 08.3**	**+0.2**
WAX	**Waxell Ridge**	**1.96**	**290**			**Pn**	**09 25 42.6**	**-0.6**
SKAG	**Skagway**	**1.97**	**99**			**Pn**	**09 25 44.4**	**+1.0**
SKAG	**Skagway**	**1.97**	**99**	P		**Pn**	**09 25 43.6**	**+0.3**
	baz=282,SNR=15							
SKAG				S		**Sn**	**09 26 09.0**	**+0.3**
	baz=282							
BALM	**Baldy**	**2.00**	**309**			**Pn**	**09 25 43.3**	**-0.5**
BALM	**Baldy**	**2.00**	**309**	Pn		**Pn**	**09 25 43.3**	**-0.5**
BALM				Sg		**Sn**	**09 26 10.1**	**+0.6**
TGL	**Tana Glacier**	**2.06**	**299**			**Pn**	**09 25 44.4**	**-0.3**
TGL					IAML		09 26 12.8	
	comp=N,222nm,0.8s							
TGL					IAML		09 26 18.2	
	comp=E,164nm,0.7s							
YUK3	**Moose Creek**	**2.06**	**342**			**Pn**	**09 25 44.8**	**0.0**
YUK3	**Moose Creek**	**2.06**	**342**	Pn		**Pn**	**09 25 45.0**	**+0.2**
YUK3				Sg		**Sb**	**09 26 12.9**	**-0.4**
YUK3	**Moose Creek**	**2.06**	**342**	P		**Pn**	**09 25 44.8**	**0.0**
	baz=161,SNR=384							
YUK3				Sb		**Sb**	**09 26 13.4**	**+0.1**
	baz=161							
PTPK	**Patty Peak**	**2.13**	**311**			**Pn**	**09 25 45.7**	**0.0**
PTPK	**Patty Peak**	**2.13**	**311**	Pn		**Pn**	**09 25 45.8**	**0.0**
PTPK				Sg		**Sb**	**09 26 15.0**	**-0.4**
YUK2	**White River**	**2.13**	**338**			**Pn**	**09 25 45.9**	**+0.2**
YUK2	**White River**	**2.13**	**338**	Pn		**Pn**	**09 25 46.0**	**+0.2**
YUK2				Pg		**Pb**	**09 25 48.4**	**0.0**
YUK2				Sg		**Sb**	**09 26 15.6**	**+0.2**
GRIN	**Grindle Hills**	**2.14**	**284**			**Pn**	**09 25 45.6**	**-0.1**
KHIT	**Khitrov Hills**	**2.14**	**289**			**Pn**	**09 25 45.5**	**-0.3**
CRQE	**Cirque**	**2.17**	**297**	P		**Pn**	**09 25 46.0**	**-0.3**
	baz=114							
CRQE				S		**Sn**	**09 26 14.0**	**+0.2**
	baz=114							
CRQM	**Cirque**	**2.20**	**297**			**Pn**	**09 25 46.0**	**-0.7**
CRQM					IAML		09 26 16.0	
	comp=E,209nm,0.7s							
R31K	**City Hall, Gus**	**2.26**	**127**	Sg		**Sb**	**09 26 18.7**	**0.0**
R31K	**City Hall, Gus**	**2.26**	**127**	S		**Sb**	**09 26 17.1**	**-1.6**
	baz=310							
WHY	**Whitehorse**	**2.29**	**67**			**Pn**	**09 25 48.6**	**+0.8**
WHY	**Whitehorse**	**2.29**	**67**	Pn		**Pn**	**09 25 48.6**	**+0.8**
WHY				Sg		**Sb**	**09 26 18.2**	**-1.6**
WHY	**Whitehorse**	**2.29**	**67**	P		**Pn**	**09 25 48.4**	**+0.6**
	baz=250,SNR=683							
WHY				S		**Sn**	**09 26 17.4**	**+0.8**
	baz=250							
BERG	**Berg Lake**	**2.35**	**286**			**Pn**	**09 25 49.6**	**+1.0**
N31M	**Braeburn, Yuko**	**2.35**	**43**	Pn		**Pn**	**09 25 49.9**	**+1.3**
N31M					IAML		09 26 26.9	
	comp=N,147nm,0.5s							
N31M					IAML		09 26 31.4	
	comp=E,187nm,1.1s							
N31M	**Braeburn, Yuko**	**2.35**	**43**	Pn		**Pn**	**09 25 49.5**	**+0.9**
N31M	**Braeburn, Yuko**	**2.35**	**43**	P		**Pn**	**09 25 49.3**	**+0.7**
	baz=226,SNR=604							
N31M				S		**Sb**	**09 26 20.0**	**-1.5**
	baz=226							
S31K	**Pelican**	**2.41**	**140**	S		**Sb**	**09 26 21.3**	**-1.7**
	baz=322							
MCARA	**McCarthy VSAT**	**2.47**	**311**			**Pn**	**09 25 51.1**	**+0.9**
MCARA	**McCarthy VSAT**	**2.47**	**311**	Pn		**Pn**	**09 25 50.8**	**+0.6**
MCARA				Sg		**Sb**	**09 26 24.1**	**-0.8**
MCARA	**McCarthy VSAT**	**2.47**	**311**	P		**Pn**	**09 25 50.2**	**0.0**
	baz=128,SNR=144							
MCARA				S		**Sn**	**09 26 22.6**	**+1.7**
	baz=128							
BESE	**Bessie Mountai**	**2.54**	**118**			**Pn**	**09 25 51.5**	**+0.3**
BESE	**Bessie Mountai**	**2.54**	**118**	Pn		**Pn**	**09 25 51.3**	**+0.1**
VRDI	**Verde Repeater**	**2.55**	**305**			**Pn**	**09 25 51.5**	**0.0**
VRDI					IAML		09 26 28.0	
	comp=N,107nm,0.8s							
HMT	**Hamilton**	**2.61**	**283**			**Pn**	**09 25 51.6**	**-0.6**
M29M	**Somme Creek**	**2.65**	**7**			**Pn**	**09 25 53.9**	**+1.2**
M29M					IAML		09 26 33.5	
	comp=E,99nm,0.5s							
M29M					IAML		09 26 35.6	
	comp=N,116nm,0.7s							
M29M	**Somme Creek**	**2.65**	**7**	Pn		**Pn**	**09 25 53.6**	**+0.8**
M29M				Sg		**Sg**	**09 26 32.9**	**-1.0**
M29M	**Somme Creek**	**2.65**	**7**	P		**Pn**	**09 25 53.5**	**+0.7**
	baz=188,SNR=326							
M29M				Sb		**Sb**	**09 26 31.9**	**+1.8**
	baz=188							
KAIM	**Kayak Island**	**2.66**	**274**	Pn		**Pn**	**09 25 52.1**	**-0.7**
BVCY	**Beaver Creek**	**2.73**	**343**	Pn		**Pn**	**09 25 54.0**	**+0.2**
BVCY				Pg		**Pb**	**09 25 58.7**	**+0.2**
BVCY	**Beaver Creek**	**2.73**	**343**	P		**Pn**	**09 25 53.8**	**+0.1**
	baz=162,SNR=12							
BVCY				S		**Sn**	**09 26 27.8**	**+0.5**
	baz=162							
P32M	**Atlin**	**2.76**	**93**			**Pn**	**09 25 54.3**	**0.0**
P32M					IAML		09 26 37.8	
	comp=N,128nm,0.7s							
P32M	**Atlin**	**2.76**	**93**	Pn		**Pn**	**09 25 54.2**	**-0.1**
P32M				Pg		**Pb**	**09 25 59.0**	**-0.1**
P32M				Sg		**Sb**	**09 26 35.5**	**+2.1**
P32M	**Atlin**	**2.76**	**93**	P		**Pn**	**09 25 54.3**	**0.0**
	baz=277,SNR=16							
P32M				S		**Sn**	**09 26 28.8**	**+0.6**
	baz=277							
GLB	**Gilahina Butte**	**2.81**	**307**			**Pn**	**09 25 55.0**	**0.0**
R32K	**Eaglecrest**	**2.85**	**121**	P		**Pn**	**09 25 56.0**	**+0.5**
	baz=305							
M27K	**Edge Creek, AK**	**2.87**	**334**			**Pn**	**09 25 56.2**	**+0.4**
M27K	**Edge Creek, AK**	**2.87**	**334**	P		**Pn**	**09 25 55.9**	**+0.1**
	baz=151							
M27K				Sb		**Sb**	**09 26 37.9**	**+1.5**
	baz=151							
BMRM	**Bremner River**	**2.94**	**295**			**Pn**	**09 25 56.4**	**-0.4**
BMRM					IAML		09 26 38.1	
	comp=E,102nm,0.4s							
BMRM	**Bremner River**	**2.94**	**295**	P		**Pn**	**09 25 57.0**	**+0.3**
	baz=110							
BMRM				S		**Sn**	**09 26 32.3**	**-0.3**
	baz=110							
M30M	**Minto, Yukon**	**2.98**	**21**	Pn		**Pn**	**09 25 58.2**	**+0.9**
M30M				Pg		**Pb**	**09 26 04.5**	**+1.7**
M30M				Sg		**Sg**	**09 26 43.3**	**-1.5**
M30M	**Minto, Yukon**	**2.98**	**21**	P		**Pn**	**09 25 58.2**	**+0.9**
	baz=203,SNR=132							
M30M				Sb		**Sg**	**09 26 42.9**	**-1.9**
	baz=203							
M26K	**Nabesna, AK**	**3.19**	**326**			**Pn**	**09 25 60.0**	**-0.2**
M26K	**Nabesna, AK**	**3.19**	**326**	P		**Pn**	**09 26 00.2**	**0.0**
	baz=142							
M26K				S		**Sn**	**09 26 39.2**	**+0.5**
	baz=142							
P33M	**Teslin, Yukon**	**3.20**	**80**			**Pn**	**09 26 00.0**	**-0.3**
P33M					IAML		09 26 51.1	
	comp=N,55nm,0.5s							
P33M	**Teslin, Yukon**	**3.20**	**80**	Pn		**Pn**	**09 25 59.6**	**-0.7**
P33M				Sg		**Sb**	**09 26 48.5**	**+2.5**
P33M	**Teslin, Yukon**	**3.20**	**80**	P		**Pn**	**09 25 59.7**	**-0.6**
	baz=266,SNR=48							
P33M				S		**Sn**	**09 26 39.8**	**+0.7**
	baz=266							
N25K	**Chitina, Valde**	**3.22**	**306**			**Pn**	**09 26 00.9**	**+0.3**
N25K	**Chitina, Valde**	**3.22**	**306**	Pn		**Pn**	**09 26 00.6**	**0.0**
N25K				Sn		**Sn**	**09 26 40.1**	**+0.6**
N25K	**Chitina, Valde**	**3.22**	**306**	P		**Pn**	**09 26 00.7**	**+0.1**
	baz=121							
N25K				S		**Sn**	**09 26 39.9**	**+0.4**
	baz=121							
N32M	**Quiet Lake**	**3.28**	**64**			**Pn**	**09 26 02.4**	**+0.9**
N32M	**Quiet Lake**	**3.28**	**64**	Pn		**Pn**	**09 26 02.2**	**+0.8**
N32M				Sg		**Sg**	**09 26 52.2**	**-2.1**
N32M	**Quiet Lake**	**3.28**	**64**	P		**Pn**	**09 26 02.3**	**+0.9**
	baz=249							
N32M				S		**Sn**	**09 26 42.0**	**+0.9**
	baz=249							
M31M	**Drury Creek, Y**	**3.32**	**42**			**Pn**	**09 26 03.5**	**+1.6**
M31M					IAML		09 27 01.1	
	comp=E,71nm,0.4s							
M31M					IAML		09 27 04.5	
	comp=N,69nm,1.1s							
M31M	**Drury Creek, Y**	**3.32**	**42**	Pn		**Pn**	**09 26 03.4**	**+1.4**
M31M	**Drury Creek, Y**	**3.32**	**42**	P		**Pn**	**09 26 03.4**	**+1.4**
	baz=226,SNR=36							
M31M				S		**Sn**	**09 26 43.2**	**+1.2**
	baz=226							
L29M	**L29M**	**3.33**	**8**			**Pn**	**09 26 03.1**	**+0.9**
L29M	**L29M**	**3.33**	**8**	Pn		**Pn**	**09 26 03.0**	**+0.9**
L29M				Sg		**Sg**	**09 26 54.0**	**-1.8**
L29M	**L29M**	**3.33**	**8**	P		**Pn**	**09 26 03.0**	**+0.9**
	baz=189,SNR=40							
L29M				Sb		**Sg**	**09 26 53.3**	**-2.5**
	baz=189							
S32K	**Killisnoo**	**3.36**	**133**	Sb		**Sb**	**09 26 53.3**	**+2.8**
	baz=317							
L27K	**Beaver Creek,**	**3.49**	**340**	Pn		**Pn**	**09 26 04.4**	**+0.1**
L27K				Pg		**Pb**	**09 26 12.7**	**+1.2**
L27K	**Beaver Creek,**	**3.49**	**340**	Pb		**Pb**	**09 26 11.8**	**+0.3**
	baz=157							
Q32M	**Nakina River**	**3.62**	**101**	Pn		**Pn**	**09 26 06.5**	**+0.2**
Q32M	**Nakina River**	**3.62**	**101**	Pn		**Pn**	**09 26 06.1**	**-0.1**
Q32M	**Nakina River**	**3.62**	**101**	P		**Pn**	**09 26 06.1**	**-0.1**
	baz=287							
Q32M				S		**Sn**	**09 26 49.8**	**+0.2**
	baz=287							
HIN	**Hinchinbrook I**	**3.73**	**282**	Pn		**Pn**	**09 26 07.3**	**-0.2**
KLU	**Klutina**	**3.73**	**300**			**Pn**	**09 26 07.7**	**+0.1**
KLU					IAML		09 27 06.3	
	comp=E,61nm,0.5s							
KLU	**Klutina**	**3.73**	**300**	P		**Pn**	**09 26 07.3**	**-0.3**
	baz=114							
KLU				S		**Sn**	**09 26 51.8**	**-0.4**
	baz=114							
L26K	**Log Cabin Wild**	**3.79**	**330**			**Pn**	**09 26 08.6**	**+0.2**
L26K					IAML		09 27 16.6	
	comp=E,31nm,0.4s							
L26K	**Log Cabin Wild**	**3.79**	**330**	P		**Pn**	**09 26 08.3**	**-0.1**
	baz=146							
L26K				S		**Sn**	**09 26 54.2**	**+0.7**
	baz=146							
MAYO	**Mayo, Yukon**	**4.09**	**21**			**Pn**	**09 26 14.1**	**+1.6**
MAYO	**Mayo, Yukon**	**4.09**	**21**	Pg		**Pg**	**09 26 25.1**	**-2.1**
MAYO				Sg		**Sg**	**09 27 17.6**	**-2.5**
K29M	**Barlow Dome**	**4.11**	**10**			**Pn**	**09 26 14.0**	**+1.2**
K29M					IAML		09 27 23.6	
	comp=N,23nm,0.8s							
K29M					IAML		09 27 26.2	
	comp=E,44nm,0.9s							
K29M	**Barlow Dome**	**4.11**	**10**	Pn		**Pn**	**09 26 14.1**	**+1.3**
K29M				Sn		**Sn**	**09 27 02.7**	**+1.3**
K29M				Sg		**Sg**	**09 27 19.3**	**-1.4**
K29M	**Barlow Dome**	**4.11**	**10**	P		**Pn**	**09 26 14.0**	**+1.2**
	baz=192,SNR=88							
K29M				S		**Sn**	**09 27 02.0**	**+0.6**
	baz=192							
M24K	**Tolsona, Glenn**	**4.12**	**307**	Pn		**Pn**	**09 26 14.0**	**+1.1**
M24K	**Tolsona, Glenn**	**4.12**	**307**	P		**Pn**	**09 26 13.6**	**+0.7**
	baz=121							
P23K	**Montague Islan**	**4.16**	**276**	P		**Pn**	**09 26 13.2**	**-0.2**
	baz=89							
R33M	**Jennings River**	**4.18**	**92**	Pn		**Pn**	**09 26 14.4**	**+0.6**
R33M	**Jennings River**	**4.18**	**92**	Pn		**Pn**	**09 26 13.8**	**0.0**
R33M				Pg		**Pb**	**09 26 23.8**	**+0.6**
R33M				Sg		**Sg**	**09 27 19.5**	**-3.6**
R33M	**Jennings River**	**4.18**	**92**	P		**Pn**	**09 26 13.8**	**0.0**
	baz=280,SNR=11							
R33M				Sb		**Sb**	**09 27 17.6**	**+3.4**
	baz=280							
DAWY	**Dawson**	**4.26**	**359**	Pn		**Pn**	**09 26 15.7**	**+0.9**
DAWY	**Dawson**	**4.26**	**359**	Pn		**Pn**	**09 26 15.5**	**+0.7**
K27K	**Chicken**	**4.44**	**343**	Pn		**Pn**	**09 26 17.5**	**+0.3**
K27K	**Chicken**	**4.44**	**343**	Pn		**Pn**	**09 26 16.7**	**-0.6**
K27K	**Chicken**	**4.44**	**343**	P		**Pn**	**09 26 16.7**	**-0.6**
	baz=160,SNR=10							
SCM	**Sheep Creek Mo**	**4.48**	**300**	S		**Sn**	**09 27 10.8**	**+0.2**
	baz=113							
S34M	**Telegraph Cree**	**4.58**	**111**	Pn		**Pn**	**09 26 19.4**	**+0.2**
S34M	**Telegraph Cree**	**4.58**	**111**	Pn		**Pn**	**09 26 19.4**	**+0.2**
S34M	**Telegraph Cree**	**4.58**	**111**	P		**Pn**	**09 26 19.4**	**+0.2**
	baz=298							
M23K	**Glacier View**	**4.64**	**299**	P		**Pn**	**09 26 20.3**	**+0.2**
	baz=111							
M23K				S		**Sn**	**09 27 14.6**	**+0.1**
	baz=111							
PWL	**Port Wells**	**4.68**	**287**	Pn		**Pn**	**09 26 20.0**	**-0.6**
KNK	**Knik Glacier**	**4.86**	**293**	Pn		**Pn**	**09 26 25.4**	**+2.4**
KNK	**Knik Glacier**	**4.86**	**293**	S		**Sn**	**09 27 18.7**	**-1.1**
	baz=105							
SML	**Sawmill**	**4.92**	**298**	Pn		**Pn**	**09 26 24.9**	**+1.0**
SML	**Sawmill**	**4.92**	**298**	S		**Sn**	**09 27 21.1**	**-0.2**
	baz=110							
J30M	**Hart River**	**4.95**	**14**	Pn		**Pn**	**09 26 26.1**	**+1.7**
J30M	**Hart River**	**4.95**	**14**	Pn		**Pn**	**09 26 25.8**	**+1.4**
J30M				Sn		**Sn**	**09 27 23.1**	**+1.0**
J30M	**Hart River**	**4.95**	**14**	P		**Pn**	**09 26 25.3**	**+1.0**
	baz=197							
J30M				S		**Sn**	**09 27 23.3**	**+1.2**
	baz=197							
WRAK	**Wrangell Islan**	**4.97**	**131**	Pn		**Pn**	**09 26 24.1**	**-0.4**
WAT6	**Susitna Watana**	**4.99**	**307**	P		**Pn**	**09 26 24.9**	**-0.1**
	baz=120							
SEW	**Seward**	**5.19**	**278**	Pn		**Pn**	**09 26 26.9**	**-0.6**
T35M	**Bob Quinn**	**5.48**	**118**	Pn		**Pn**	**09 26 32.3**	**+0.8**
I30M	**Mount Dempster**	**5.57**	**12**			**Pn**	**09 26 34.9**	**+2.1**
I30M	**Mount Dempster**	**5.57**	**12**	Pn		**Pn**	**09 26 34.5**	**+1.7**
I30M	**Mount Dempster**	**5.57**	**12**	P		**Pn**	**09 26 34.3**	**+1.4**
	baz=195							
SLKM	**Skilak Lake**	**5.57**	**282**	Pn		**Pn**	**09 26 32.4**	**-0.4**
J25K	**Salcha River,**	**5.61**	**331**	P		**Pn**	**09 26 35.1**	**+1.7**
	baz=146							
I28M	**Miner Creek**	**5.66**	**357**	Pn		**Pn**	**09 26 35.2**	**+1.1**
I28M	**Miner Creek**	**5.66**	**357**	Pn		**Pn**	**09 26 35.1**	**+1.1**
I28M	**Miner Creek**	**5.66**	**357**	P		**Pn**	**09 26 35.9**	**+1.8**
	baz=176							
I26K	**Coal Creek Min**	**5.80**	**343**	Pn		**Pn**	**09 26 36.2**	**+0.3**
I26K	**Coal Creek Min**	**5.80**	**343**	P		**Pn**	**09 26 36.3**	**+0.4**
	baz=160							
RND	**Reindeer**	**5.86**	**312**	Pn		**Pn**	**09 26 36.7**	**-0.1**
HDA	**Harding Lake**	**5.87**	**325**	Pn		**Pn**	**09 26 36.5**	**-0.5**
BRLK	**Bradley Lake**	**5.93**	**274**	Pn		**Pn**	**09 26 37.3**	**-0.4**
CNPM	**China Poot**	**6.13**	**272**	Pn		**Pn**	**09 26 40.1**	**-0.4**
H31M	**Peel River**	**6.39**	**18**			**Pn**	**09 26 45.6**	**+1.5**
H31M	**Peel River**	**6.39**	**18**	Pn		**Pn**	**09 26 45.6**	**+1.5**
H31M	**Peel River**	**6.39**	**18**	P		**Pn**	**09 26 44.8**	**+0.7**
	baz=202,SNR=13							
H29M	**Whitestone**	**6.43**	**3**	Pn		**Pn**	**09 26 44.2**	**-0.3**
H29M	**Whitestone**	**6.43**	**3**	Pn		**Pn**	**09 26 45.0**	**+0.5**
TRF	**Thorofare Moun**	**6.43**	**309**			**Pn**	**09 26 44.9**	**+0.1**
TRF	**Thorofare Moun**	**6.43**	**309**	P		**Pn**	**09 26 45.8**	**+1.1**
	baz=119							
H27K	**Steamboat Moun**	**6.52**	**351**	Pn		**Pn**	**09 26 47.1**	**+1.3**
H27K	**Steamboat Moun**	**6.52**	**351**	Pn		**Pn**	**09 26 46.3**	**+0.5**
H27K				Sg		**Sg**	**09 28 34.4**	**-3.6**
SYI	**Shuyak Island**	**6.91**	**266**	Pn		**Pn**	**09 26 50.6**	**-0.5**
ILSW	**Iliamna Southw**	**7.04**	**277**	Pn		**Pn**	**09 26 53.1**	**0.0**
G27K	**Doyon Strip**	**7.10**	**352**	Pn		**Pn**	**09 26 53.8**	**0.0**
KDAK	**Kodiak Island**	**7.27**	**259**	Pn		**Pn**	**09 26 55.2**	**-1.0**
KDAK	**Kodiak Island**	**7.27**	**259**	P		**Pn**	**09 26 55.5**	**-0.6**
	baz=68							
G30M	**tAoh Zraii Nji**	**7.30**	**9**	Pn		**Pn**	**09 26 57.1**	**+0.5**
G30M	**tAoh Zraii Nji**	**7.30**	**9**	Pn		**Pn**	**09 26 56.6**	**0.0**
CHUM	**Lake Minchumin**	**7.43**	**309**	P		**Pn**	**09 26 58.4**	**+0.1**
	baz=117							
G31M	**Satah River**	**7.45**	**15**	Pn		**Pn**	**09 26 59.7**	**+1.2**
G31M	**Satah River**	**7.45**	**15**	Pn		**Pn**	**09 26 59.5**	**+1.0**
G31M				Sn		**Sn**	**09 28 22.6**	**-0.8**
G31M	**Satah River**	**7.45**	**15**	P		**Pn**	**09 26 59.2**	**+0.7**
	baz=199,SNR=20							
Q19K	**Cape Douglas,**	**7.46**	**269**	Pn		**Pn**	**09 26 58.5**	**-0.3**
Q19K	**Cape Douglas,**	**7.46**	**269**	P		**Pn**	**09 26 59.1**

	SNR=14								
AAK	**Ala-Archa**	**6.80**	**24**	⇑P		**Pn**	**09 38 03.4**	**+0.9**	
	13nm,0.8s								
AAK				⇑S		**Sn**	**09 39 19.7**	**-0.3**	
	8.4nm,0.6s								
KBK	**Karagaybulak**	**6.97**	**26**	P		**Pn**	**09 38 06.2**	**+1.5**	
	SNR=12								
CHMS	**Chumysh**	**7.20**	**24**	P		**Pn**	**09 38 09.0**	**+1.3**	
	SNR=7.6								
USP	**Ospenovka**	**7.37**	**22**	P		**Pn**	**09 38 09.9**	**+0.1**	
	SNR=5.1								
TKM2	**Tokmak 2**	**7.44**	**29**	P		**Pn**	**09 38 12.2**	**+1.3**	
	SNR=12								
MKAR	**Makanchi Array**	**13.42**	**36**	P		**P**	**09 39 28.8**	**-1.3**	
	0.8nm,0.5s,baz=216,slow=12,SNR=5.2								
KURBB	**Kurchatov Arra**	**15.21**	**19**	P		**P**	**09 39 49.6**	**-0.2**	
	0.7nm,0.3s,baz=208,slow=10,SNR=1.9								
BVAR	**Borovoye Array**	**16.55**	**359**	P		**Pn**	**09 40 05.8**	**+0.3**	
	0.5nm,0.3s,baz=152,slow=9.2,SNR=5.6								
ZALV	**Zalesovo Beam**	**20.02**	**25**	P		**P**	**09 40 43.4**	**+1.2**	
	4.4nm,0.3s,baz=214,slow=11,SNR=25								
	4.4nm,0.3s								
FINES	**FINESS Array B**	**37.40**	**326**	P		**P**	**09 43 19.6**	**+1.5**	
	0.3nm,0.3s,baz=128,slow=11,SNR=6.1								
	0.3nm,0.3s								
ARCES	**ARCESS Array B**	**41.10**	**338**	P		**P**	**09 43 49.6**	**+0.9**	
	1.3nm,0.7s,baz=111,slow=6.9,SNR=5.9								
	1.3nm,0.7s								
HFS	**Hagfors**	**42.98**	**322**	P		**P**	**09 44 05.1**	**+1.2**	
	1.6nm,0.8s,baz=99,slow=9.3,SNR=4.2								
	1.6nm,0.8s								
NOA	**NORSAR Array B**	**44.29**	**323**	P		**P**	**09 44 14.8**	**+0.3**	
	0.2nm,0.4s,baz=99,slow=7.9,SNR=4.0								
	0.2nm,0.4s								
WRA	**Warramunga Arr**	**82.13**	**122**	P		**P**	**09 48 22.2**	**-1.1**	
	0.4nm,0.7s,baz=325,slow=4.9,SNR=8.0								
	0.4nm,0.7s								
ASAR	**Alice Springs**	**84.39**	**125**	P		**P**	**09 48 33.1**	**-1.7**	
	0.2nm,0.6s,baz=322,slow=4.7,SNR=5.5								
	0.2nm,0.6s								

IDC 23 09:53:09.2±5.3, 21°.00S×177°.27E, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=306.3km s-min=66.8km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ASAR	**Alice Springs**	**40.09**	**258**	P		P	P	10 00 46.4	-0.4
	0.8nm,0.3s,baz=89,slow=7.8,SNR=20								
	0.8nm,0.3s								
WRA	**Warramunga Arr**	**40.15**	**264**	P		P	P	10 00 47.5	+0.2
	0.1nm,0.3s,baz=99,slow=8.3,SNR=5.0								
	0.1nm,0.3s								
FINES	**FINESS Array B**	**134.90**	**341**	PKP		PKPdf		10 12 29.4	-0.3
	0.7nm,0.4s,baz=28,slow=3.9,SNR=10								

*GUC **23** 09:56:23.1±0.7, 23°.93S×66°.90W, h202km±12km, ML4.2*
*SJA **23** 09:56:23.9±0.6, 23°.97S×66°.92W, h157km±5km, ML3.8, MW3.6*

ISC 23 09:56:20.3±1.2, 23°.96S±0°.04×66°.82W±0°.04, h200km, n34, σ2§23/44, 4C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SALTA		**0.51**	**121**	⇑*e*P		**Pn**	**Pn**	**09 56 51.1**	**+3.0**
SALTA		**0.51**	**121**	*e*P		**Pn**	**Pn**	**09 56 51.1**	**+3.0**
SLA	**San Lorenzo**	**1.41**	**123**	⇓*e*P		**Pn**	**Pn**	**09 56 56.9**	**+3.4**
SLA	**San Lorenzo**	**1.41**	**123**	*e*P		**Pn**	**Pn**	**09 56 51.6**	**-1.9**
SLA				*e*S		**Sn**	**Sn**	**09 57 16.3**	**-2.9**
HJA	**Humahuaca**	**1.49**	**60**	*e*P		**Pn**	**Pn**	**09 56 52.4**	**-2.0**
HJA				*e*S		**Sn**	**Sn**	**09 57 20.4**	**-0.4**
AF01	**San Pedro de A**	**1.61**	**308**	*e*P		**Pn**	**Pn**	**09 56 55.1**	**-0.3**
AF01				*e*S		**Sn**	**Sn**	**09 57 18.6**	**-3.9**
FSA	**Cafayete**	**2.27**	**161**	*e*P		**Pn**	**Pn**	**09 57 04.4**	**+2.5**
GO02	**Mina Guanaco**	**2.80**	**244**	*e*S		**Sn**	**Sn**	**09 57 40.3**	**-4.7**
GO02				IAML				09 57 47.6	
	comp=Z,677nm,0.5s								
PB06	**IPOC Station P**	**2.83**	**296**	⇑*i*P		**Pn**	**Pn**	**09 57 10.3**	**+2.1**
PB06				*i* S		**Sn**	**Sn**	**09 57 44.9**	**-0.4**
PB06				IAML				09 57 46.4	
	comp=N,541nm,0.4s								
PB06	**IPOC Station P**	**2.83**	**296**	*e*P		**Pn**	**Pn**	**09 57 09.6**	**+1.5**
PB06				IAML				09 57 48.1	
	comp=Z,293nm,0.1s								
PB09	**IPOC Station P**	**3.11**	**313**	*e*P		**Pn**	**Pn**	**09 57 13.9**	**+2.5**
PB09				*i* S		**Sn**	**Sn**	**09 57 52.2**	**+0.8**
PB09	**IPOC Station P**	**3.11**	**313**	*e*P		**Pn**	**Pn**	**09 57 13.9**	**+2.5**
PB09				IAML				09 57 56.1	
	comp=Z,86nm,0.6s								
AHML	**Horco Molle**	**3.11**	**155**	*e*P		Pn		09 57 03.2	-8.2
AHML				*e*S		**Sn**	**Sn**	**09 57 47.9**	**-3.5**
PB05	**IPOC Station P**	**3.30**	**289**	*e*P		**Pn**	**Pn**	**09 57 15.3**	**+1.5**
PB05				IAML				09 57 57.1	
	comp=N,171nm,0.4s								
PB05	**IPOC Station P**	**3.30**	**289**	*e*P		**Pn**	**Pn**	**09 57 15.2**	**+1.5**
PB05				IAML				09 57 57.6	
	comp=Z,119nm,0.3s								
PB03	**IPOC Station P**	**3.31**	**305**	⇑*i*P		**Pn**	**Pn**	**09 57 15.6**	**+1.7**
PB03	**IPOC Station P**	**3.31**	**305**	*e*P		**Pn**	**Pn**	**09 57 15.6**	**+1.7**
PB03				IAML				09 57 59.0	
	comp=Z,311nm,0.4s								
PB14	**IPOC Station P**	**3.34**	**258**	*e*P		**Pn**	**Pn**	**09 57 15.8**	**+1.5**
PB14				IAML				09 57 58.9	
	comp=E,165nm,0.4s								
PB14	**IPOC Station P**	**3.34**	**258**	*e*P		**Pn**	**Pn**	**09 57 15.8**	**+1.5**
PB14				*e*S		**Sn**	**Sn**	**09 57 54.2**	**-2.4**
PB14				IAML				09 57 59.8	
	comp=Z,202nm,0.3s								
AC02	**Maricunga**	**3.54**	**216**	*e*P		**Pn**	**Pn**	**09 57 18.8**	**+1.8**
AC02				*e*S		**Sn**	**Sn**	**09 57 59.6**	**-1.7**
PB07	**IPOC Station P**	**3.60**	**308**	⇑*i*P		**Pn**	**Pn**	**09 57 18.9**	**+1.5**
PB07				IAML				09 58 05.0	
	comp=E,179nm,0.2s								
PB07	**IPOC Station P**	**3.60**	**308**	*e*P		**Pn**	**Pn**	**09 57 18.3**	**+0.9**
PB07				IAML				09 58 02.3	
	comp=Z,139nm,0.6s								
PB01	**IPOC Station P**	**3.81**	**319**	*e*P		**Pn**	**Pn**	**09 57 21.6**	**+1.7**
PB01				IAML				09 58 14.9	
	comp=Z,72nm,0.3s								
PB02	**IPOC Station P**	**3.88**	**312**	*e*P		**Pn**	**Pn**	**09 57 22.1**	**+1.4**
PB02				IAML				09 58 08.3	
	comp=Z,291nm,0.4s								
AC01	**Pan de Azucar**	**4.06**	**237**	*e*P		**Pn**	**Pn**	**09 57 23.0**	**+0.1**
AC01				*e*S		**Sn**	**Sn**	**09 58 09.8**	**-2.3**
AC01				IAML				09 58 10.6	
	comp=Z,107nm,0.8s								
PB08	**IPOC Station P**	**4.38**	**330**	*e*P		**Pn**	**Pn**	**09 57 29.9**	**+2.6**
PB08				IAML				09 58 25.8	
	comp=Z,47nm,0.5s								
PATCX	**Punta Patache**	**4.39**	**315**	*e*P		**Pn**	**Pn**	**09 57 28.4**	**+1.2**
PATCX				IAML				09 58 23.6	
	comp=Z,80nm,0.4s								
CYA	**Choya**	**4.55**	**169**	*e*P		**Pn**	**Pn**	**09 57 31.9**	**+2.8**
CYA				*e*S		**Sn**	**Sn**	**09 58 24.8**	**+1.5**
TA01	**Diego Aracena**	**4.60**	**317**	*e*P		**Pn**	**Pn**	**09 57 30.4**	**+0.8**
TA01				IAML				09 58 25.9	
	comp=Z,35nm,0.4s								
HMBC	**Humberstone**	**4.64**	**322**	*e*P		**Pn**	**Pn**	**09 57 30.7**	**+0.3**
HMBC				IAML				09 58 24.8	
	comp=Z,173nm,0.5s								
GO03	**Copiapo**	**4.75**	**220**	*e*P		**Pn**	**Pn**	**09 57 32.2**	**+0.6**
GO03				*e*S		**Sn**	**Sn**	**09 58 26.8**	**-1.0**
GO03				IAML				09 58 31.0	
	comp=Z,52nm,0.3s								
GO01	**Chusmiza**	**4.81**	**332**	*e*P		**Pn**	**Pn**	**09 57 36.0**	**+3.2**
GO01				IAML				09 58 32.6	
	comp=Z,42nm,0.3s								
VCA	**Vinchina**	**4.92**	**194**	*e*P		**Pn**	**Pn**	**09 57 37.1**	**+3.3**
PB11	**IPOC Station P**	**4.94**	**327**	*e*P		**Pn**	**Pn**	**09 57 34.8**	**+0.6**
PB11				IAML				09 58 32.0	
	comp=Z,86nm,0.2s								

*IDC **23** 10:05:12.8±3.1, 27°.80N×140°.09E, h508km±39km, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=74.0km s-min=14.1km az=75.0*

ISC 23 10:05:06.4±1.5, 27°.3N±0°.3×140°.9E±0°.3, h500km, n8, σ0§90/7, mb3.5/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
JCJ	**Chichijima**	**1.20**	**98**	P		**P**	**P**	**10 06 07.7**	**-0.5**
	51nm,0.3s,baz=8.7,slow=8.6,SNR=20								
JCJ				S		**S**	**S**	**10 06 58.6**	**+0.2**
	58nm,0.3s,baz=310,slow=22,SNR=9.0								
MJAR	**Matsushiro Arr**	**9.51**	**347**	P		**P**	**P**	**10 07 17.9**	**-0.4**
	0.7nm,0.4s,baz=176,slow=14,SNR=2.4								
WRA	**Warramunga Arr**	**47.37**	**188**	P		P	P	10 13 03.6	+8.9
	0.5nm,0.3s,baz=5.8,slow=7.6,SNR=21								
	0.5nm,0.3s								
MKAR	**Makanchi Array**	**49.45**	**310**	P		**P**	**P**	**10 13 09.4**	**-0.6**
	0.4nm,0.8s,baz=88,slow=12,SNR=1.7								
	0.4nm,0.8s								
ASAR	**Alice Springs**	**51.09**	**188**	P		P	P	10 13 31.1	+8.8
	0.2nm,0.4s,baz=7.7,slow=6.6,SNR=5.9								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**52.07**	**314**	P		**P**	**P**	**10 13 28.6**	**-0.4**
	1.4nm,0.3s,baz=90,slow=8.1,SNR=9.5								
	1.4nm,0.3s								
BVAR	**Borovoye Array**	**57.11**	**317**	P		**P**	**P**	**10 14 04.5**	**+0.1**
	2.2nm,0.4s,baz=91,slow=7.2,SNR=13								
	2.2nm,0.4s								
FINES	**FINESS Array B**	**77.26**	**333**	P		**P**	**P**	**10 16 09.7**	**+1.5**
	1.1nm,0.5s,baz=74,slow=3.6,SNR=11								
	1.1nm,0.5s								

IDC 23 10:06:54.5±4.6, 19°.19S×177°.11W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=198.5km s-min=35.0km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
STKA	**Stephens Creek**	**39.12**	**243**	P		P	P	10 14 24.6	+0.8
	1.0nm,0.7s,baz=107,slow=14,SNR=1.8								
	1.0nm,0.7s								
WRA	**Warramunga Arr**	**45.62**	**261**	P		P	P	10 15 16.6	-0.4
	0.4nm,0.4s,baz=98,slow=7.7,SNR=8.7								
	0.4nm,0.4s								
ASAR	**Alice Springs**	**45.64**	**255**	P		P	P	10 15 16.9	-0.4
	2.7nm,0.6s,baz=95,slow=7.8,SNR=56								
	2.7nm,0.6s								
ILAR	**Eielson Array**	**86.86**	**12**	P		P	P	10 19 40.5	0.0
	0.2nm,0.5s,baz=213,slow=4.7,SNR=6.2								
	0.2nm,0.5s								

*JMA **23** 10:32:28.9±0.1, 24°.N±2°.×123°.0E±0°.5, h58km±1km, MV2.1/10, NW OFF ISHIGAKIJIMA IS*
*TAP **23** 10:32:29.1, 24°.34N×122°.96E, h52km, ML2.6, D*

ISC 23 10:32:29.4±1.3, 24°.31N±0°.05×122°.96E±0°.03, h52km±8km, n51, σ0§92/83, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
JYNG	**Yonagunijimaku**	**0.14**	**354**	P		**Pn**	**Pn**	**10 32 37.6**	**0.0**
JYNG				*e*S		**Sn**	**Sn**	**10 32 43.9**	**+0.4**
YOJ	**Yonaguni jima**	**0.16**	**17**	*e*P		**Pn**	**Pn**	**10 32 37.6**	**-0.1**
YOJ				*e*S		**Sn**	**Sn**	**10 32 43.9**	**+0.3**
YOJ	**Yonaguni jima**	**0.16**	**17**	*i* P		**Pn**	**Pn**	**10 32 37.6**	**-0.1**
YOJ				S		**Sn**	**Sn**	**10 32 43.6**	**0.0**
IRIF	**Iriomote-Funau**	**0.70**	**88**	*e*P		**Pn**	**Pn**	**10 32 43.0**	**-0.2**
IRIF				*e*S		**Sn**	**Sn**	**10 32 53.4**	**+0.2**
JKRS	**Kuro-shima**	**0.96**	**94**	P		**Pn**	**Pn**	**10 32 46.9**	**+0.4**
JKRS				*e*S		**Sn**	**Sn**	**10 32 60.0**	**+0.8**
ESAO	**Su ao**	**1.05**	**285**	*e*S		**Sn**	**Sn**	**10 32 59.7**	**-1.8**
TWC	**Suao**	**1.06**	**287**	*e*P		**Pn**	**Pn**	**10 32 47.8**	**-0.1**
TWC				S		**Sn**	**Sn**	**10 33 00.3**	**-1.3**
JIJ	**Ishigaki jima**	**1.08**	**87**	*e*P		**Pn**	**Pn**	**10 32 47.8**	**-0.4**
JIJ				*e*S		**Sn**	**Sn**	**10 33 01.4**	**-0.7**
EAHA	**Aohua**	**1.12**	**271**	*e*P		**Pn**	**Pn**	**10 32 49.6**	**+0.9**
EAHA				*e*S		**Sn**	**Sn**	**10 33 04.1**	**+1.1**
NTC	**Toucheng**	**1.16**	**298**	*e*P		**Pn**	**Pn**	**10 32 48.4**	**-0.9**
TIPB	**Shuangxi**	**1.23**	**303**	*i* P		**Pn**	**Pn**	**10 32 49.8**	**-0.4**
TIPB				*i* S		**Sn**	**Sn**	**10 33 04.4**	**-1.4**
TWE	**Neicheng**	**1.25**	**289**	P		**Pn**	**Pn**	**10 32 50.4**	**-0.1**
TWE				S		**Sn**	**Sn**	**10 33 05.6**	**-0.6**
NACB	**Ninganchiao**	**1.26**	**264**	P		**Pn**	**Pn**	**10 32 50.4**	**-0.2**
NACB				*e*S		**Sn**	**Sn**	**10 33 06.2**	**-0.2**
JISG	**Ishigakijimahi**	**1.26**	**77**	*e*P		**Pn**	**Pn**	**10 32 50.1**	**-0.5**
SXI1	**Grass Mountain**	**1.26**	**308**	P		**Pn**	**Pn**	**10 32 50.1**	**-0.6**
SXI1				S		**Sn**	**Sn**	**10 33 05.9**	**-0.7**
TWD	**Chiawan**	**1.27**	**260**	*e*P		**Pn**	**Pn**	**10 32 49.5**	**-1.3**
TWD				*e*S		**Sn**	**Sn**	**10 33 06.2**	**-0.5**
LATG	**Datong**	**1.33**	**280**	P		**Pn**	**Pn**	**10 32 53.1**	**+1.4**
FUSB	**Fushanzhiwuyua**	**1.33**	**290**	*i* P		**Pn**	**Pn**	**10 32 51.6**	**-0.1**
SHUL	**Shoufeng**	**1.38**	**248**	P		**Pn**	**Pn**	**10 32 51.6**	**-0.6**
SHUL				*e*S		**Sn**	**Sn**	**10 33 08.4**	**-1.1**
ETM	**Tongmen**	**1.39**	**256**	*e*P		**Pn**	**Pn**	**10 32 51.9**	**-0.5**
ETM				*i* S		**Sn**	**Sn**	**10 33 08.7**	**-0.8**
NWLT	**Wulai**	**1.41**	**290**	P		**Pn**	**Pn**	**10 32 52.8**	**+0.1**
NWLT				S		**Sn**	**Sn**	**10 33 09.4**	**-0.8**
ESL	**Shilin**	**1.48**	**251**	P		**Pn**	**Pn**	**10 32 53.0**	**-0.6**
ESL				S		**Sn**	**Sn**	**10 33 11.4**	**-0.5**
YHNB	**Yeheng**	**1.49**	**284**	P		**Pn**	**Pn**	**10 32 54.6**	**+0.8**
YHNB				*e*S		**Sn**	**Sn**	**10 33 12.4**	**+0.2**
NSK	**Sanguang**	**1.51**	**284**	*e*P		**Pn**	**Pn**	**10 32 55.1**	**+1.1**
NSK				*e*S		**Sn**	**Sn**	**10 33 13.2**	**+0.6**
YM01	**YM01**	**1.51**	**304**	*i* P		**Pn**	**Pn**	**10 32 53.7**	**-0.4**
EGFH	**Guangfu**	**1.54**	**246**	S		**Sn**	**Sn**	**10 33 13.3**	**-0.1**
WARBT	**Fenglin Townsh**	**1.56**	**248**	P		**Pn**	**Pn**	**10 32 54.0**	**-0.7**
WARBT				*e*S		**Sn**	**Sn**	**10 33 12.9**	**-0.9**
WHF	**Hehuan Shan**	**1.56**	**264**	S		**Sn**	**Sn**	**10 33 13.4**	**-1.0**
JTJ	**Tarama**	**1.62**	**78**	*e*P		**Pn**	**Pn**	**10 32 55.7**	**+0.2**
HGSD	**Ruisui**	**1.63**	**240**	P		**Pn**	**Pn**	**10 32 55.2**	**-0.4**
OWD	**Renai**	**1.67**	**258**	P		**Pn**	**Pn**	**10 32 56.5**	**+0.1**
OWD				*e*S		**Sn**	**Sn**	**10 33 15.9**	**-0.8**
EHYH	**Wanrong**	**1.69**	**242**	P		**Pn**	**Pn**	**10 32 56.2**	**-0.3**
EHYH				S		**Sn**	**Sn**	**10 33 17.2**	**+0.2**
EHY	**Hungye**	**1.70**	**242**	*e*P		**Pn**	**Pn**	**10 32 56.5**	**-0.2**
NFF	**Wufeng Townshi**	**1.71**	**281**	*e*P		**Pn**	**Pn**	**10 32 57.7**	**+0.9**
WUSB	**Renai**	**1.71**	**260**	*e*P		**Pn**	**Pn**	**10 32 57.4**	**+0.5**
WUSB				*e*S		**Sn**	**Sn**	**10 33 17.9**	**+0.1**
VWDT	**VWDT**	**1.75**	**252**	*i* P		**Pn**	**Pn**	**10 32 58.0**	**+0.6**
YULB	**Yu-li**	**1.78**	**239**	P		**Pn**	**Pn**	**10 32 57.5**	**-0.2**
YULB				*e*S		**Sn**	**Sn**	**10 33 18.2**	**-1.0**
TWF1	**Yuli**	**1.80**	**238**	*i* P		**Pn**	**Pn**	**10 32 58.1**	**+0.1**
LIOB	**Emei**	**1.81**	**281**	*i* P		**Pn**	**Pn**	**10 32 59.3**	**+1.3**
CHKH	**Chenggong**	**1.82**	**232**	P		**Pn**	**Pn**	**10 32 56.8**	**-1.5**
CHKH				S		**Sn**	**Sn**	**10 33 18.2**	**-1.9**
WHP	**Taichung City**	**1.84**	**269**	*i* P		**Pn**	**Pn**	**10 33 00.4**	**+1.8**
WHP				*i* S		**Sn**	**Sn**	**10 33 21.6**	**+0.8**
SSLB	**Suanglung**	**1.91**	**255**	P		**Pn**	**Pn**	**10 32 59.8**	**+0.3**
SSLB				S		**Sn**	**Sn**	**10 33 22.0**	**-0.4**
SMLT	**Sun Moon Lake**	**1.93**	**258**	P		**Pn**	**Pn**	**10 33 00.6**	**+0.7**
TYC	**Yuchr**	**1.97**	**259**	P		**Pn**	**Pn**	**10 33 00.8**	**+0.6**
EHD	**Haiduan**	**1.98**	**235**	P		**Pn**	**Pn**	**10 32 59.9**	**-0.6**
EHD				*e*S		**Sn**	**Sn**	**10 33 22.1**	**-2.1**
WHYT	**Xinyi Township**	**2.02**	**253**	*e*P		**Pn**	**Pn**	**10 33 02.1**	**+1.0**
WHYT				*e*S		**Sn**	**Sn**	**10 33 26.8**	**+1.5**
ELDTW	**Lidau**	**2.10**	**238**	*e*P		**Pn**	**Pn**	**10 33 01.7**	**-0.6**
ALS	**Alishan**	**2.13**	**248**	P		**Pn**	**Pn**	**10 33 03.9**	**+1.1**
STYH	**Taoyuan**	**2.30**	**241**	P		**Pn**	**Pn**	**10 33 05.7**	**+0.8**
STYH				S		**Sn**	**Sn**	**10 33 32.0**	**0.0**
TPUB	**Ta-pu**	**2.36**	**245**	*e*P		**Pn**	**Pn**	**10 33 07.7**	**+2.0**
TPUB				*e*S		**Sn**	**Sn**	**10 33 35.7**	**+2.2**
WTP	**Ta-pu**	**2.40**	**244**	*e*P		**Pn**	**Pn**	**10 33 08.1**	**+1.9**
WTP				*e*S		**Sn**	**Sn**	**10 33 36.2**	**+1.8**

KRSC 23 10:42:58.6±1.6, 50°.07N×159°.59E, h42km±25km, Ml4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
KDTR	**Khodutka, Kamc**	**1.99**	**332**	*e*P		Pn		10 43 32.8	+3.1
KDTR				*e*S		Sn		10 43 56.3	+3.0
PAU	**Pauzhetka**	**2.25**	**309**	*e*P		Pn		10 43 36.2	+2.9
PAU				*e*S		Sn		10 44 02.2	+2.4
SKR	**Severo-Kuril's**	**2.31**	**287**	*e*P		Pn		10 43 35.6	+1.5
SKR				*e*S		Sn		10 44 01.1	-0.1
RUS	**Russkaya**	**2.46**	**344**	*e*P		Pn		10 43 39.2	+3.1
RUS				*e*S		Sn		10 44 07.7	+2.7
ASAK	**Asacha**	**2.55**	**336**	*e*P		Pn		10 43 41.3	+3.8
ASAK				*e*S		Sn		10 44 11.4	+4.1
MTVR	**Mutnovka**	**2.58**	**340**	*e*P		Pn		10 43 41.3	+3.4
MTVR				*e*S		Sn		10 44 11.6	+3.6
GRL	**Gorelyy**	**2.66**	**340**	*e*P		Pn		10 43 43.0	+3.9
GRL				*e*S		Sn		10 44 14.5	+4.3
MIPR	**Malaya Ipel'ka**	**2.84**	**322**	*e*P		Pn		10 43 45.1	+3.7
KRMR	**Karymshinskiy**	**2.91**	**342**	*e*P		Pn		10 43 46.2	+3.9
KRMR				*e*S		Sn		10 44 20.3	+4.3
DALK	**Dalny**	**3.01**	**350**	*e*P		Pn		10 43 47.1	+3.4
DALK				*e*S		Sn		10 44 21.1	+2.6
PET	**Petropavlovsk**	**3.02**	**349**	*e*P		Pn		10 43 47.3	+3.5
PET				*e*S		Sn		10 44 22.1	+3.4
SPN	**Mys Shipunski**	**3.04**	**5**	*e*P		Pn		10 43 47.9	+3.7
SPN				*e*S		Sn		10 44 23.0	+3.7
INSR	**Institute**	**3.06**	**349**	*e*S		Sn		10 44 23.3	+3.5
UGLR	**Uglovaya**	**3.18**	**352**	*e*P		Pn		10 43 49.6	+3.5
SMAR	**Somma**	**3.24**	**352**	*e*P		Pn		10 43 50.6	+3.6
APC	**Apacha**	**3.24**	**333**	*e*P		Pn		10 43 51.0	+4.1
SDLR	**Sedlovina**	**3.24**	**352**	*e*P		Pn		10 43 50.2	+3.2
AVH	**Avacha**	**3.25**	**351**	*e*P		Pn		10 43 50.8	+3.8
KOK	**Koryaka**	**3.28**	**350**	*e*P		Pn		10 43 51.5	+3.9
KRER	**Koryakskii**	**3.28**	**351**	*e*P		Pn		10 43 51.4	+3.8
KRX	**Arik**	**3.35**	**350**	*e*P		Pn		10 43 52.1	+3.6
GNL	**Ganaly**	**3.77**	**345**	*e*P		Pn		10 43 58.5	+4.2
GNL				*e*S		Sn		10 44 42.6	+5.1
KZV	**Kizimen**	**5.07**	**5**	*e*P		Pn		10 44 16.6	+4.5
KBTR	**Krutoberegovo**	**6.45**	**16**	*e*P		Pn		10 44 34.8	+4.0

*IDC **23** 10:53:21.8±2.3, 1°.80N×126°.46E, h0km, mb3.6/3, mbtmp3.6/3, MS3.0/1, Error ellipse: s-maj=268.4km s-min=27.1km az=66.0*
*DJA **23** 10:53:26.0±0.4, 2°.N±5°.×12°.6E±°, h10km, M3.3/6, MLv3.3/6*

ISC 23 10:53:27.5±1.4, 1°.6N±0°.3×126°.3E±0°.4, h35km, n5, σ1§12/5, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
TNTI	**Ternate**	**1.34**	**127**	P		**Pn**	**Pn**	**10 53 49.7**	**0.0**
JAY	**Jayapura**	**14.96**	**106**	LR		LR	LR	11 01 53.3	
	comp=Z,55nm,18.0s,baz=207,slow=34								
WRA	**Warramunga Arr**	**22.80**	**160**	P		**P**	**P**	**10 58 26.2**	**-1.1**
	0.4nm,0.3s,baz=337,slow=9.4,SNR=21								
	0.4nm,0.3s								
ASAR	**Alice Springs**	**26.17**	**164**	P		**P**	**P**	**10 58 59.7**	**+0.9**
	0.4nm,0.4s,baz=346,slow=9.6,SNR=12								
ASAR				PcP		**PcP**	**PcP**	**11 02 26.2**	**+0.6**
	0.1nm,0.5s,baz=352,slow=2.0,SNR=4.6								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**59.07**	**326**	P		**P**	**P**	**11 03 24.0**	**-0.3**
	0.7nm,0.9s,baz=116,slow=8.6,SNR=2.2								
	0.7nm,0.9s								

*IDC **23** 10:57:36.2±0.7, 31°.04N×49°.85E, h0km, mb4.2/21, mbtmp4.2/25, ML3.9/4, MS3.1/6, Error ellipse: s-maj=17.0km s-min=12.8km az=173.0*
*THR **23** 10:57:37.9±0.0, 30°.95N×49°.89E, h10km±8km, ML4.2*
*TEH **23** 10:57:38.5, 31°.02N×49°.98E, h9km±26km*
*NEIC **23** 10:57:38.3±1.4, 30°.99N±0°.08×49°.85E±0°.08, h10km±1km, mb4.5/48, Error ellipse: s-maj=14.5km s-min=10.7km az=194.0*
*OMAN **23** 10:57:44.6±1.1, 30°.65N×50°.40E, h10km, mb4.7/28, Error ellipse: s-maj=8.9km s-min=7.7km az=45.0*
*DSN **23** 10:57:44.8±1.5, 30°.81

TAPT	**Tabas- Tapeh t**	**7.29**	**55**	Pn	**Pn**	**10 59 25.4 +0.6**
SHME	**Shamm**	**7.32**	**130**	P	**Pn**	**10 59 25.3 +0.2**
SHME				S	**Sn**	**11 00 44.5 -2.6**
BANOM	**Banah**	**7.51**	**130**	P	**Pn**	**10 59 27.3 -0.5**
BANOM				S	**Sn**	**11 00 49.2 -2.7**
BANOM	**Banah**	**7.51**	**130**	*i* P	**Pn**	**10 59 28.0 +0.2**
	SNR=33					
NAZ	**Nazwa, Dubai**	**7.79**	**138**	P	**Pn**	**10 59 33.9 +2.3**
NAZ				S	**Sn**	**11 00 58.2 -0.6**
MASF	**Masafi**	**7.80**	**133**	P	**Pn**	**10 59 31.7 -0.1**
MASF				S	**Sn**	**11 00 57.0 -2.1**
MSFE	**Esma-Masafi**	**7.81**	**133**	P	**Pn**	**10 59 31.2 -0.7**
ASUD	**Al Ashush, Dub**	**7.89**	**141**	P	**Pn**	**10 59 34.3 +1.4**
	SNR=26					
ASUD				S	**Sn**	**11 01 00.9 -0.3**
ASUD	**Al Ashush, Dub**	**7.89**	**141**	*i* P	**Pn**	**10 59 33.5 +0.6**
	SNR=26					
IKOO	**Kooshah**	**7.92**	**77**	Pn	**Pn**	**10 59 35.0 +1.4**
FAQ	**Al Faqa, Dubai**	**7.94**	**139**	P	**Pn**	**10 59 34.2 +0.6**
FAQ				S	**Sn**	**11 01 00.4 -2.0**
FAQ	**Al Faqa, Dubai**	**7.94**	**139**	P	**Pn**	**10 59 32.8 -0.8**
MZWR	**Madinat Zayed**	**7.94**	**153**	P	**Pn**	**10 59 35.2 +1.6**
MZWR				S	**Sn**	**11 01 01.8 -0.7**
MDH	**Madha**	**7.94**	**133**	P	**Pn**	**10 59 33.0 -0.6**
MDH				S	**Sn**	**11 00 59.4 -3.2**
MDH	**Madha**	**7.94**	**133**	P	**Pn**	**10 59 32.0 -1.6**
BSRN	**Basiran**	**7.96**	**80**	Pn	**Pn**	**10 59 35.6 +1.5**
GRMI	**Germi**	**8.06**	**349**	Pn	**Pn**	**10 59 36.6 +1.2**
UOSS	**Minazif**	**8.14**	**135**	Pn	**Pn**	**10 59 37.9 +1.4**
HATD	**Hatta, Dubai**	**8.19**	**136**	P	**Pn**	**10 59 37.4 +0.4**
ASHO	**Ashiyiah**	**8.25**	**137**	P	**Pn**	**10 59 38.3 +0.4**
	SNR=7.6					
ASHO				S	**Sn**	**11 01 07.9 -2.3**
ASHO	**Ashiyiah**	**8.25**	**137**	*i* P	**Pn**	**10 59 38.2 +0.2**
	SNR=9.8					
ASHO				S	**Sn**	**11 01 06.7 -3.5**
MRVT	**Maraveh tapeh**	**8.47**	**36**	*e*Pn	**Pn**	**10 59 42.4 +1.4**
MRVT				IAML		10 59 59.6
	comp=Z,9.5nm,0.6s					
MZR	**Muzera**	**8.49**	**157**	P	**Pn**	**10 59 42.2 +1.1**
	SNR=31					
MZR				S	**Sn**	**11 01 14.7 -1.3**
MZR	**Muzera**	**8.49**	**157**	*i* P	**Pn**	**10 59 42.2 +1.1**
	SNR=31					
ALNE	**Al Ain**	**8.57**	**141**	P	**Pn**	**10 59 44.1 +1.8**
ALNE				S	**Sn**	**11 01 15.7 -2.3**
ALNE	**Al Ain**	**8.57**	**141**	P	**Pn**	**10 59 42.5 +0.2**
SOHO	**SOHO**	**8.95**	**137**	P	**Pn**	**10 59 46.5 -0.9**
SOHO				S	**Sn**	**11 01 24.1 -3.1**
SOHO	**SOHO**	**8.95**	**137**	P	**Pn**	**10 59 46.1 -1.4**
ISFR	**Sfrayin**	**9.11**	**45**	Pn	**Pn**	**10 59 51.8 +1.9**
BJRD	**Bojnurd**	**9.20**	**40**	*e*Pn	**Pn**	**10 59 53.2 +2.1**
BJRD				IAML		10 59 55.5
	comp=Z,32nm,0.6s					
SHRT	**Shahrakht**	**9.22**	**70**	*e*Pn	**Pn**	**10 59 52.7 +1.4**
SHRT				IAML		11 00 18.0
	comp=Z,6.9nm,0.9s					
UMZA	**Um Al Zommool**	**9.41**	**149**	P	**Pn**	**10 59 54.6 +0.9**
UMZA				S	**Sn**	**11 01 34.9 -3.7**
ARQ	**Araqi**	**9.57**	**140**	P	**Pn**	**10 59 55.7 -0.3**
	SNR=8.8					
ARQ				S	**Sn**	**11 01 38.9 -3.6**
HOQ	**Hoqain**	**9.83**	**136**	P	**Pn**	**11 00 00.1 +0.6**
HOQ				S	**Sn**	**11 01 45.2 -3.7**
MARD	**Mardin**	**9.90**	**313**		**Pn**	**10 59 59.9 -1.5**
BSY	**Bisya**	**10.41**	**139**	P	**Pn**	**11 00 07.4 -0.2**
	SNR=9.0					
BSY				S	**Sn**	**11 01 58.3 -5.0**
SMDO	**Samad**	**10.67**	**135**	P	**Pn**	**11 00 10.7 -0.4**
	SNR=7.3					
SMDO				S	**Sn**	**11 02 05.4 -4.2**
HRA	**Herat**	**10.98**	**68**	Pn	**Pn**	**11 00 15.7 +0.2**
ASF	**Jabal al Asfar**	**11.16**	**280**	Pn	**Pn**	**11 00 16.3 -1.6**
	comp=Z,3.6nm,0.3s,baz=72,slow=2.3,SNR=15					
ASF				Sn	**Sn**	**11 02 15.3 -6.3**
	comp=Z,0.5nm,0.3s,baz=252,slow=19,SNR=1.9					
ASF				Lg	Lg	11 03 35.9
	comp=Z,1.5nm,0.3s,baz=72,slow=7.5,SNR=3.9					
ASF				LR	LR	11 06 06.4
	comp=Z,42nm,18.1s,baz=125,slow=46					
	comp=Z,6.5nm,0.3s					
JMDO	**Jabal Madar**	**11.22**	**137**	P	**Pn**	**11 00 19.0 +0.3**
	SNR=7.0					
WBK	**Wadi Bani Khal**	**11.57**	**133**	P	**Pn**	**11 00 23.8 +0.4**
BALJ	**Balqa**	**12.22**	**279**	Pn	**Pn**	**11 00 31.9 -0.4**
MHTO	**MHTO**	**12.25**	**142**	P	**Pn**	**11 00 32.1 -0.6**
	SNR=17					
GHAJ	**Ghor Haditha**	**12.28**	**276**	Pn	**Pn**	**11 00 33.4 +0.3**
MMAI	**Mount Meron Ar**	**12.48**	**284**	Pn	Pn	11 00 40.8 +4.8
	comp=Z,1.3nm,0.3s,baz=120,slow=14,SNR=3.4					
DOK	**Doka**	**12.81**	**162**	P	**Pn**	**11 00 40.7 +0.3**
	SNR=28					
DQM	**DQM**	**12.92**	**146**	P	**Pn**	**11 00 40.4 -1.4**
	SNR=8.0					
EIL	**Elat**	**12.97**	**268**	Pn	**Pn**	**11 00 40.1 -2.4**
	comp=Z,1.0nm,0.3s,baz=62,slow=7.2,SNR=6.7					
EIL				LR	LR	11 05 31.1
	comp=Z,42nm,21.0s,baz=350,slow=37					
	comp=Z,3.9nm,0.5s					
WHFO	**Wadi Hawf**	**13.39**	**164**	P	**Pn**	**11 00 47.3 -1.0**
	SNR=6.9					
ABTO	**Aybut**	**13.83**	**166**	P	**Pn**	**11 00 53.0 -1.4**
	SNR=6.8					
SHAO	**Shalim**	**13.83**	**157**	P	**Pn**	**11 00 52.5 -1.8**
	SNR=15					
SHAO	**Shalim**	**13.83**	**157**	*i* P	**Pn**	**11 00 52.5 -1.8**
	SNR=15					
RBK	**Rabkut**	**13.90**	**163**	P	**Pn**	**11 00 54.8 -0.5**
DMTO	**DMTO**	**13.90**	**160**	P	**Pn**	**11 00 53.9 -1.4**
	SNR=12					
KBZ	**Khabaz**	**13.96**	**339**	Pn	**Pn**	**11 00 58.8 +2.9**
	comp=Z,0.1nm,0.3s,baz=152,slow=10,SNR=2.1					
	comp=Z,1.1nm,0.7s					
BR131	**Keskin Array S**	**15.91**	**308**		**P**	**11 01 24.0 -1.5**
BRTR	**Keskin Array B**	**15.91**	**308**	Pn	**Pn**	**11 01 22.4 +0.4**
	comp=Z,0.4nm,0.3s,baz=129,slow=12,SNR=11					
BRTR				LR	LR	11 08 31.7
	comp=Z,42nm,18.3s,baz=106,slow=42					
	comp=Z,3.2nm,0.8s					
BRTR	**Keskin Array B**	**15.91**	**308**	Pn	**Pn**	**11 01 20.5 -1.5**
CHGR	**Chuyangaron**	**17.60**	**59**		**Pn**	**11 01 42.9 -0.4**
GAR	**Garm**	**18.57**	**59**		**P**	**11 01 55.3 +0.4**
MANT	**Manisa**	**19.08**	**299**	P	**P**	**11 01 59.2 -1.3**
KARP	**Karpathos**	**19.56**	**290**	P	**P**	**11 02 04.5 -1.1**
KARP				IAmb	IAmb	11 02 34.0
	comp=Z,35nm,1.2s					
AB31	**Akbulak array**	**19.86**	**20**	P	**P**	**11 02 07.7 -0.9**
ABKAR	**Akbulak array**	**19.86**	**20**	P	**P**	**11 02 07.6 -1.1**
NIL	**Nilore**	**19.94**	**76**	P	**Pn**	**11 02 13.6 +2.0**
NIL				IAmb	IAmb	11 02 15.5
	comp=Z,9.1nm,0.5s					
KK31	**Karatay Array**	**20.43**	**48**	P	**P**	**11 02 14.3 -0.7**
KKAR	**Karatay Array**	**20.43**	**48**	P	**P**	**11 02 15.2 +0.2**
ARSB	**Arslanbob**	**21.30**	**54**	P	**P**	**11 02 24.4 -0.2**
ARSB				IAmb	IAmb	11 02 34.5
	comp=Z,9.8nm,0.7s					
IDI	**Anoyia**	**21.38**	**288**	P	**P**	**11 02 26.1 +0.7**
	comp=Z,12nm,0.5s,baz=63,slow=9.9,SNR=17					
	comp=Z,12nm,0.5s					
IDI	**Anoyia**	**21.38**	**288**	P	**P**	**11 02 26.2 +0.9**
IDI				IAmb	IAmb	11 02 35.0
	comp=Z,18nm,0.6s					
TLCR		**21.80**	**317**	⇑P	**P**	**11 02 29.7 0.0**
TPGR	**Topolog**	**21.86**	**316**	⇑P	**P**	**11 02 30.8 +0.4**
RDO	**Rodhopi**	**22.13**	**304**	P	**P**	**11 02 33.4 +0.1**
RDO				IAmb	IAmb	11 02 45.0
	comp=Z,14nm,1.0s					
AAK	**Ala-Archa**	**22.85**	**52**	P	**P**	**11 02 40.9 -0.2**
KSH	**Kashi**	**22.92**	**61**	P	**P**	**11 02 41.3 -0.6**
KSH				sP	pP	11 02 50.5 +0.3
KSH				PP	**PnPn**	**11 03 10.0 +3.1**
KSH				pmax	pmax	
	comp=Z,14nm,0.8s					
NEHR	**Nehoiu**	**23.44**	**315**	⇓P	**P**	**11 02 47.6 +0.7**
PLOR	**Plostina**	**23.44**	**316**	⇓P	**P**	**11 02 47.1 +0.2**
COVR	**Voineasa-Covas**	**23.70**	**316**	⇓P	**P**	**11 02 49.8 +0.4**
BOOM	**Boomskoye usch**	**23.78**	**54**	P	**P**	**11 02 50.6 +0.2**
BOOM				IAmb	IAmb	11 02 56.2
	comp=Z,6.5nm,0.6s					
TESR	**Tescani**	**23.79**	**318**	⇓P	**P**	**11 02 49.9 -0.4**
ONER	**Baraj Valea Uz**	**23.85**	**317**	⇑P	**P**	**11 02 51.4 +0.6**
ITM	**Ithomi**	**23.95**	**293**	P	**P**	**11 02 52.1 +0.2**
ITM				IAmb	IAmb	11 02 55.4
	comp=Z,9.9nm,0.6s					

LIT	**Litokhoron**	**24.05**	**300**	P	**P**	**11 02 52.4 -0.3**
LIT				IAmb	IAmb	11 02 58.4
	comp=Z,12nm,1.0s					
VOIR		**24.21**	**314**	⇑P	**P**	**11 02 55.5 +1.2**
DOPR	**Dopca**	**24.26**	**315**	⇓P	**P**	**11 02 55.7 +1.1**
BIZ	**Bicaz**	**24.34**	**318**	⇑P	**P**	**11 02 55.5 +0.2**
ARR	**Arges**	**24.43**	**313**	⇓P	**P**	**11 02 57.4 +1.2**
KDJ	**Kajisay**	**24.53**	**55**	P	**P**	**11 02 56.8 -0.6**
TARG	**Taragay, Kyrgy**	**24.86**	**56**	P	**P**	**11 02 59.7 -0.8**
TARG				IAmb	IAmb	11 03 06.8
	comp=Z,5.8nm,0.8s					
LOT	**Lotru**	**25.01**	**313**	⇓P	**P**	**11 03 02.2 +0.6**
AKASG	**Malin Array Be**	**25.07**	**328**	P	**P**	**11 03 01.1 -0.8**
	comp=Z,1.0nm,0.4s,baz=130,slow=7.0,SNR=7.8					
	comp=Z,1.0nm,0.4s					
AKASG	**Malin Array Be**	**25.07**	**328**	P	**P**	**11 03 01.0 -0.9**
AKBB	**Malin Array Si**	**25.07**	**328**	P	**P**	**11 03 01.2 -0.7**
AKBB				IAmb	IAmb	11 03 12.6
	comp=Z,14nm,1.3s					
KIEV	**Kiev**	**25.07**	**328**	P	**P**	**11 03 01.3 -0.6**
KIEV				IAmb	IAmb	11 03 12.6
	comp=Z,13nm,1.3s					
BURAR	**Bucovina Array**	**25.21**	**318**	P	**P**	**11 03 03.1 -0.2**
BURAR				IAmb	IAmb	11 03 05.9
	comp=Z,6.0nm,0.6s					
BURAR	**Bucovina Array**	**25.21**	**318**	⇑P	**P**	**11 03 04.0 +0.7**
BUR08	**Bucovina Ar. S**	**25.24**	**319**	P	**P**	**11 03 02.9 -0.6**
BUR08				IAmb	IAmb	11 03 23.4
	comp=Z,6.5nm,0.9s					
GZR	**Gura Zlata**	**25.62**	**312**	⇓P	**P**	**11 03 07.8 +0.8**
HERR	**Herculane**	**25.64**	**311**	⇓P	**P**	**11 03 08.3 +1.2**
BOVS	**Bovan**	**25.65**	**308**	⇑P	**P**	**11 03 08.3 +1.1**
DRGR		**26.28**	**315**	⇑P	**P**	**11 03 13.9 +0.9**
BVAR	**Borovoye Array**	**26.68**	**28**	P	**P**	**11 03 15.7 -0.7**
	comp=Z,3.3nm,0.5s,baz=222,slow=7.6,SNR=14					
BVAR				PcP	**PcP**	**11 06 39.1 -0.4**
	comp=Z,1.1nm,0.5s,baz=307,slow=3.1,SNR=4.4					
	comp=Z,3.3nm,0.5s					
SIRR	**Siria**	**26.70**	**313**	⇑P	**P**	**11 03 17.6 +0.9**
TIP	**Timpagrande**	**28.24**	**296**	P	**P**	**11 03 33.1 +2.4**
TIP				IAmb	IAmb	11 03 41.8
	comp=Z,15nm,1.3s					
KURBB	**Kurchatov Arra**	**29.02**	**39**	P	**P**	**11 03 38.1 +0.7**
	comp=Z,1.4nm,0.6s,baz=240,slow=9.7,SNR=13					
	comp=Z,1.4nm,0.6s					
KURK	**Kurchatov**	**29.12**	**39**	P	**P**	**11 03 39.6 +1.3**
MKAR	**Makanchi Array**	**29.55**	**48**	P	**P**	**11 03 43.0 +0.8**
	comp=Z,0.8nm,0.5s,baz=241,slow=10,SNR=11					
	comp=Z,0.8nm,0.5s					
RONA	**Rosalia, Austr**	**30.64**	**313**	*e*P	**P**	**11 03 52.4 +0.6**
	comp=Z,8.6nm,1.4s					
ARSA	**Arzberg**	**30.97**	**312**	*e*P	**P**	**11 03 56.0 +1.2**
	comp=Z,4.0nm,1.0s					
CONA	**Conrad Observa**	**30.99**	**313**	*i* P	**P**	**11 03 56.0 +1.0**
	comp=Z,7.4nm,1.2s					
NRCA	**Norcia**	**31.50**	**303**	P	**P**	**11 04 00.9 +1.4**
FDMO	**Fiordimonte**	**31.56**	**303**	P	**P**	**11 04 01.2 +1.3**
DPC	**Dobruska-Polom**	**31.66**	**318**	*e*P	**P**	**11 04 00.9 +0.1**
MOA	**Molln**	**31.97**	**312**	*e*P	**P**	**11 04 04.0 +0.4**
	comp=Z,8.3nm,0.9s					
EVN	**Everest**	**32.20**	**86**		**P**	**11 04 09.3 +2.8**
EVN				IAmb	IAmb	11 04 11.4
	comp=Z,2.8nm,0.7s					
CKRC	**Cesky Krumlov**	**32.27**	**314**	*e*P	**P**	**11 04 07.4 +1.2**
BIOA	**Bad Ischl, Aus**	**32.33**	**312**	*e*P	**P**	**11 04 06.9 +0.3**
	comp=Z,6.2nm,0.6s					
KBA	**Koelnbreinsper**	**32.33**	**310**	*e*P	**P**	**11 04 06.8 -0.1**
	comp=Z,14nm,1.6s					
WMQ	**Urumqi**	**32.42**	**56**	*e*P	**P**	**11 04 11.6 +4.0**
GERES	**GERESS Array B**	**32.66**	**314**	P	**P**	**11 04 08.3 -1.3**
	comp=Z,0.8nm,0.6s,baz=100,slow=11,SNR=5.8					
	comp=Z,0.8nm,0.6s					
ARBE	**Arbavere**	**32.78**	**338**	*e*P	**P**	**11 04 09.8 -0.6**
KHC	**Kasperske Hory**	**32.83**	**314**	P	**P**	**11 04 10.1 -0.9**
KHC				IAmb	IAmb	11 04 15.1
	comp=Z,9.2nm,1.4s					
KHC	**Kasperske Hory**	**32.83**	**314**	*e*P	**P**	**11 04 11.2 +0.1**
LESA	**Schwarzleotal**	**32.87**	**311**	*e*P	**P**	**11 04 11.3 -0.1**
	comp=Z,4.0nm,0.5s					
ZCCA	**Zocca**	**33.30**	**305**	P	**P**	**11 04 19.8 +4.6**
WTTA	**Wattenberg**	**33.50**	**310**	*i* P	**P**	**11 04 17.0 -0.1**
	comp=Z,5.4nm,0.5s					
WATA	**Walderalm**	**33.56**	**310**	*i* P	**P**	**11 04 17.2 -0.4**
	comp=Z,4.7nm,0.5s					
SQTA	**Sant Quirin**	**33.77**	**310**	*i* P	**P**	**11 04 19.1 -0.3**
	comp=Z,8.4nm,0.4s					
MOTA	**Moosalm**	**33.87**	**310**	*i* P	**P**	**11 04 19.7 -0.6**
	comp=Z,6.3nm,0.6s					
ZAA0	**Zalesovo Array**	**34.03**	**37**	P	**P**	**11 04 21.6 +0.2**
ZAA0				IAmb	IAmb	11 04 22.3
	comp=Z,8.4nm,1.5s					
ZALV	**Zalesovo Beam**	**34.03**	**37**	P	**P**	**11 04 21.0 -0.4**
	comp=Z,3.6nm,0.6s,baz=226,slow=8.5,SNR=10					
	comp=Z,3.6nm,0.6s					
ZALV	**Zalesovo Beam**	**34.03**	**37**	P	**P**	**11 04 21.4 0.0**
FETA	**Feichten**	**34.04**	**309**	*i* P	**P**	**11 04 21.7 0.0**
	comp=Z,7.3nm,0.9s					
RETA	**Reutte**	**34.13**	**310**	*i* P	**P**	**11 04 21.9 -0.6**
	comp=Z,6.1nm,0.7s					
JOF	**Joensuu**	**34.19**	**345**	*e*P	**P**	**11 04 22.2 -0.4**
FUORN	**Ofenpass-Fuorn**	**34.26**	**309**	P	**P**	**11 04 24.5 +0.8**
FUORN				IAmb	IAmb	11 04 46.0
	comp=Z,10.0nm,1.4s					
FIA1	**FINESS Array C**	**34.31**	**340**	P	**P**	**11 04 23.1 -0.6**
FINES	**FINESS Array B**	**34.31**	**340**	P	**P**	**11 04 22.9 -0.8**
	comp=Z,4.5nm,0.4s,baz=145,slow=9.3,SNR=79					
	comp=Z,4.5nm,0.4s					
FINES	**FINESS Array B**	**34.31**	**340**	P	**P**	**11 04 23.1 -0.6**
BSD	**Bornholm Skovb**	**34.63**	**325**	*e*P	**P**	**11 04 25.4 -1.1**
BSD	**Bornholm Skovb**	**34.63**	**325**	*i* P	**P**	**11 04 24.8 -1.7**
BSD				IAML		11 04 29.7
	comp=Z,0.8nm,0.3s					
DAVA	**Damuels**	**34.67**	**310**	*i* P	**P**	**11 04 26.8 -0.4**
	comp=Z,12nm,0.5s					
TUE	**Stuetta**	**34.84**	**308**	P	**P**	**11 04 28.3 -0.5**
TUE				IAmb	IAmb	11 04 42.6
	comp=Z,14nm,1.5s					
KEF	**Keuruu**	**35.24**	**340**	*e*P	**P**	**11 04 31.2 -0.5**
RAF	**Rauma**	**35.37**	**337**	*e*P	**P**	**11 04 31.9 -1.0**
AAL	**Aland**	**35.41**	**335**	*e*P	**P**	**11 04 32.1 -1.1**
DEL	**Delary**	**35.82**	**326**	*i* P	**P**	**11 04 35.0 -1.7**
BNI	**Bardonecchia**	**36.44**	**305**	P	**P**	**11 04 42.5 +0.1**
VAF	**Ylistaro**	**36.57**	**340**	*e*P	**P**	**11 04 42.2 -0.8**
ECH	**Echery**	**36.66**	**311**	P	**P**	**11 04 43.4 -0.8**
ECH				IAmb	IAmb	11 04 58.8
	comp=Z,12nm,1.4s					
BORU	**Boraas**	**36.93**	**327**	*i* P	**P**	**11 04 44.7 -1.5**
ONAU	**Onsala**	**37.21**	**327**	*i* P	**P**	**11 04 51.4 +2.8**
HFS	**Hagfors**	**37.86**	**331**	P	**P**	**11 04 53.2 -0.9**
	comp=Z,3.7nm,0.4s,baz=136,slow=8.6,SNR=42					
	comp=Z,3.7nm,0.4s					
STRU	**Stroemstad**	**38.36**	**329**	*i* P	**P**	**11 04 56.7 -1.5**
NC405	**NORSAR Array S**	**39.21**	**332**	P	**P**	**11 05 04.5 -0.9**
NC405				IAmb	IAmb	11 05 08.4
	comp=Z,14nm,1.2s					
NB2	**NORSAR Subarra**	**39.38**	**331**	P	**P**	**11 05 05.2 -1.7**
	comp=Z,0.7nm,0.4s,baz=122,slow=8.6					
NOA	**NORSAR Array B**	**39.38**	**331**	P	**P**	**11 05 05.1 -1.7**
	comp=Z,0.7nm,0.4s,baz=122,slow=8.4,SNR=8.3					
	comp=Z,0.7nm,0.4s					
NBO00	**NORSAR Array S**	**39.56**	**331**	P	**P**	**11 05 07.3 -1.0**
VADS	**Vadso**	**40.93**	**349**	*e*P	**P**	**11 05 19.2 -0.3**
KEV	**Kevo**	**41.01**	**348**	P	**P**	**11 05 19.9 -0.3**
ARA0	**ARCESS Array S**	**41.09**	**347**	*e*P	**P**	**11 05 21.2 +0.3**
ARCES	**ARCESS Array B**	**41.09**	**347**	P	**P**	**11 05 19.4 -1.6**
	comp=Z,0.8nm,0.4s,baz=150,slow=9.0,SNR=20					
	comp=Z,0.8nm,0.4s					
ARCES	**ARCESS Array B**	**41.09**	**347**	P	**P**	**11 05 20.5 -0.4**
ARCES				IAmb	IAmb	11 05 46.3
	comp=Z,12nm,1.4s					
KTK1	**Kautokeino**	**41.11**	**346**	*e*P	**P**	**11 05 20.0 -1.1**
GTA	**Gaotai**	**41.25**	**64**	*e*P	**P**	**11 05 23.5 +0.7**
GTA				pP	pP	11 05 26.3 -5.7
GTA				pmax	pmax	
	comp=Z,3.0nm,1.2s					
RAUS	**Rausandaksla**	**41.59**	**339**	*e*P	**P**	**11 05 24.1 -0.9**
LEIR	**Leirfjorden**	**41.67**	**338**	*e*P	**P**	**11 05 23.9 -1.7**
ASK	**Askoy**	**41.71**	**328**	*e*P	**P**	**11 05 23.9 -2.1**
STOK	**Stokkvaagen**	**41.84**	**339**	*e*P	**P**	**11 05 25.8 -1.2**
FAUS	**Fauske**	**41.85**	**341**	*e*P	**P**	**11 05 25.3 -1.8**
VAGH	**Vaagaholmen**	**42.01**	**339**	*e*P	**P**	**11 05 27.7 -0.8**
SUE	**Sulen**	**42.15**	**329**	*e*P	**P**	**11 05 26.7 -2.9**
JETT	**Jettan, Norway**	**42.16**	**345**	*e*P	**P**	**11 05 29.2 -0.5**
STEI	**Steigen**	**42.24**	**341**	*e*P	**P**	**11 05 29.4 -0.9**
FOO	**Floro**	**42.26**	**330**	*e*P	**P**	**11 05 29.4 -1.0**

HAMF	**Hammerfest**	**42.37**	**347**	*e*P	**P**	**11 05 29.4 -1.9**
TRO	**Tromso**	**42.55**	**345**	*e*P	**P**	**11 05 31.6 -1.2**
TLY	**Talaya**	**44.25**	**46**	P	**P**	**11 05 46.2 -0.6**
ESBB	**Sonseca Array**	**44.26**	**297**	P	**P**	**11 05 46.5 -0.5**
ESBB				IAmb	IAmb	11 05 52.2
	comp=Z,10nm,1.1s					
ESDC	**Sonseca Array**	**44.26**	**297**	P	**P**	**11 05 47.4 +0.3**
	comp=Z,1.7nm,0.6s,baz=75,slow=8.3,SNR=20					
	comp=Z,1.7nm,0.6s					
ESDC	**Sonseca Array**	**44.26**	**297**	P	**P**	**11 05 46.4 -0.6**
EKA	**Eskdalemuir Ar**	**44.39**	**319**	P	**P**	**11 05 47.0 -0.8**
	comp=Z,0.6nm,0.3s,baz=105,slow=7.6,SNR=9.0					
	comp=Z,0.6nm,0.3s					
PZH	**PanZhiHua**	**45.37**	**82**	P	P	11 06 01.3 +5.1
SONM	**Songino Array**	**45.80**	**52**	P	**P**	**11 05 59.7 +0.4**
	comp=Z,1.0nm,0.6s,baz=274,slow=6.2,SNR=5.8					
	comp=Z,1.0nm,0.6s					
CMAR	**Chiang Mai Arr**	**45.93**	**94**	P	**P**	**11 06 00.8 +0.3**
	comp=Z,0.8nm,0.7s,baz=296,slow=8.9,SNR=6.8					
CMAR				LR	LR	11 27 55.3
	comp=Z,11nm,20.2s,baz=280,slow=40					
	comp=Z,0.8nm,0.7s					
XAN	**Xi'an**	**49.31**	**70**	P	**P**	**11 06 27.5 +0.8**
XAN				pmax	pmax	
	comp=Z,12nm,0.7s					
HHC	**Hu-ho-hao-te**	**50.04**	**61**	*e*P	**P**	**11 06 34.3 +2.1**
HHC				pmax	pmax	
	comp=Z,20nm,0.7s					
HHC				pmax	pmax	
	comp=Z,87nm,4.4s					
HILR	**Hailar Array B**	**54.52**	**49**	LR	LR	11 33 30.7
	comp=Z,98nm,20.3s,baz=20,slow=40					
DBIC	**Dimbokro**	**56.51**	**257**	P	**P**	**11 07 20.7 +0.8**
	comp=Z,10.0nm,0.7s,baz=55,slow=6.1,SNR=15					
	comp=Z,10.0nm,0.7s					
DBIC	**Dimbokro**	**56.51**	**257**	P	**P**	**11 07 17.0 -2.9**
LBTB	**Lobatse**	**60.26**	**205**	LR	LR	11 34 51.0
	comp=Z,32nm,18.1s,baz=354,slow=37					
LBTB	**Lobatse**	**60.26**	**205**	P	**P**	**11 07 47.8 +1.8**
KOOLE	**Kule**	**60.68**	**212**	P	**P**	**11 07 50.1 +1.1**
KSRS	**Korea Array**	**63.18**	**61**	P	**P**	**11 08 05.2 -0.3**
	comp=Z,3.1nm,0.5s,baz=281,slow=6.5,SNR=22					
	comp=Z,3.1nm,0.5s					
BOSA	**Boshof**	**63.67**	**204**	P	**P**	**11 08 10.2 +1.4**
	comp=Z,3.2nm,0.7s,baz=18,slow=5.4,SNR=14					
	comp=Z,3.2nm,0.7s					
BOSA	**Boshof**	**63.67**	**204**	P	**P**	**11 08 09.9 +1.1**
SCHQ	**Schefferville**	**78.87**	**328**	P	**P**	**11 09 39.4 -0.9**
	comp=Z,2.9nm,0.6s,baz=149,slow=5.9,SNR=1.5					
	comp=Z,2.9nm,0.6s					
ILAR	**Eielson Array**	**83.75**	**7**	P	**P**	**11 10 05.9 -0.2**
	comp=Z,0.5nm,0.6s,baz=318,slow=4.2,SNR=10					
	comp=Z,0.5nm,0.6s					
YKA	**Yellowknife Ar**	**86.11**	**353**	P	**P**	**11 10 17.8 -0.1**
	comp=Z,1.2nm,0.8s,baz=132,slow=1.7,SNR=9.3					
	comp=Z,1.2nm,0.8s					
QSPA	**South Pole Qui**	**120.73**	**180**	PKP	**PKiKP**	**11 16 30.4 +1.8**
	comp=Z,1.6nm,0.8s,baz=250,slow=0.9,SNR=5.2					

AEIC ***23*** *11:11:14.7±1.3,51.9N±0.1×170.4W±0.1, h28km±7km, Error ellipse: s-maj=17.2km s-min=6.9km az=156.0*
NEIC 23 11:11:17.1±1.3, 52.01N±0.1×170.48W±0.08, h35km±2km, mb3.7/10, ML3.3/10, ML2.8(AEIC), **Error ellipse: s-maj=18.6km s-min=3.1km az=155.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLES	**Cleveland East**	**0.89**	**24**			Pn	Pn	11 11 32.1	-1.0
CLES						Sn	Sn	11 11 44.6	-0.2
CLES						IAML		11 11 52.6	
	comp=E,1μm,0.5s								
CLCO	**Concord Point

comp=Z,1.9nm,0.7s
QSPA South Pole Qui 65.95 180 P **P** **11 42 17.3 +0.5**
QSPA IAmb IAmb 11 42 34.5
comp=Z,2.9nm,1.3s
TXAR Lajitas Array 88.72 57 P **P** **11 44 22.4 -1.4**
comp=Z,0.2nm,0.8s,baz=245,slow=4.8,SNR=2.2
comp=Z,0.2nm,0.8s
BCAR Beaver Creek A 91.42 15 P **P** **11 44 36.6 +1.1**
CCB Clear Creek Bu 91.48 12 P **P** **11 44 35.8 +0.2**
ILAR Eielson Array 91.77 13 P **P** **11 44 34.3 -2.7**
comp=Z,0.2nm,0.7s,baz=204,slow=5.1,SNR=5.0
comp=Z,0.2nm,0.7s
J26L Joseph Creek 92.23 14 P **P** **11 44 39.9 +0.6**
BMAR Burnt Mountain 94.56 12 P **P** **11 44 50.3 +0.4**
ARCES ARCESS Array B 132.55 349 PKP **PKPdf** **11 50 41.9 -1.0**
comp=Z,1.7nm,0.9s,baz=48,slow=2.0,SNR=5.9
FINES FINESS Array B 139.34 343 PKP **PKPdf** **11 50 56.4 +0.7**
comp=Z,1.3nm,0.9s,baz=26,slow=3.3,SNR=4.0
HFS Hagfors 143.17 351 PKhKP PKPpre 11 50 59.0
comp=Z,0.8nm,0.3s,baz=42,slow=3.7,SNR=9.6
AKASG Malin Array Be 146.33 329 PKPbc **PKPdf** **11 51 08.8 +0.4**
comp=Z,1.5nm,0.5s,baz=47,slow=4.2,SNR=4.8
EKA Eskdalemuir Ar 148.57 6 PKPbc **PKPdf** **11 51 15.0 +3.1**
comp=Z,1.0nm,0.6s,baz=345,slow=3.2,SNR=4.4

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*IDC **23** 11:33:01.3±1.8, 1°37.37N×126°37.37E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=178.2km s-min=22.5km az=66.0*
*DJA **23** 11:33:04.7±0.3, 1°N±5°×12°6E±°, h10km, M3.4/7, MLv3.4/7*
ISC 23 11:33:07.4±1.2, 1°4N±0°2×126°29E±0°09, h35km, n6, σ2§03/7, mb3.5/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.22**	**118**	P	**Pn**	**11 33 30.5**	**+2.5**
TNTI				S	**Sn**	**11 33 42.4**	**-1.0**
KMSI	**Cibinong**	**2.44**	**251**	P	**Pn**	**11 33 46.6**	**+1.8**
WRA	**Warramunga Arr**	**22.59**	**160**	P	**P**	**11 38 02.9**	**-2.2**
	1.1nm,0.7s,baz=339,slow=10,SNR=12						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**25.95**	**164**	P	**P**	**11 38 36.1**	**-0.7**
	0.3nm,0.6s,baz=342,slow=8.7,SNR=7.5						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**11 43 05.1**	**-0.4**
	0.3nm,0.4s,baz=122,slow=7.9,SNR=1.8						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.50**	**328**	P	**P**	**11 43 33.3**	**-0.8**
	0.2nm,0.4s,baz=127,slow=5.9,SNR=4.3						
	0.2nm,0.4s						

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*MOS **23** 11:39:56.8±1.0, 7°.28S×128°.71E, h128km, mb5.5/65, Error ellipse: s-maj=8.8km s-min=4.7km az=113.3*
*BJI **23** 11:39:56.6, 7°.62S×129°.15E, h160km, mB5.4/39, mb5.6/85*
*NEIC **23** 11:39:58.4, 7°.37S×128°.75E, h130km*
*NEIC **23** 11:39:58.5±1.6, 7°.36S±0°.07×128°.74E±0°.06, h128km±6km, mb5.5/235, Mww5.3/32, Error ellipse: s-maj=10.2km s-min=8.8km az=162.0*
*NEIC **23** 11:39:58.4, 7°.57S×128°.95E, h130km, Moment Tensor Solution. Duration: 2§2 Moment tensor: Scale 10^{16}Nm; Mrr8.36; Mθθ-6.75; Mφφ-1.61; Mrθ3.78; Mθφ2.65; Mφr3.58; Fault plane solution: Mo9.65000×10^{16} NP1: φs311.67000°, δ41.14000°, λ124.86000°. NP2: φs88.90000°, δ57.33000°, λ63.47000°. Principal axes: T 10.6397, Plg66.0000°, Azm308.0000°; N -2.4493, Plg22.0000°, Azm104.0000°; P -8.1904, Plg9.0000°, Azm198.0000°;*
*IDC **23** 11:39:59.8±1.0, 7°.33S×128°.80E, h140km±8km, mb5.2/30, mbtmp5.6/35, MS4.2/9 Error ellipse: s-maj=12.9km s-min=7.8km az=85.0*
*DJA **23** 11:39:59.4±0.2, 8°S±2°×12°9E±°, h129km±6km, M5.3/43, mb5.7/43, mB5.9/40, MLv6.1/24, Mw(mB)5.5/40, MwMwp4.9/29, Mwp5.2/29*
*GCMT **23** 11:40:00.4±0.1, 7°.52S±0°.01×128°.73E±0°.01, h143km, MW5.3/134, Moment Tensor Solution. s111,c163; s134,c243; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; Mrr0.86±.02; Mθθ-1.19±.02; Mφφ0.33±.03; Mrθ0.44±.02; Mθφ0.17±.02; Mφr0.60±.02; Best double couple: Mo1.31000×10^{17} NP1:φs305.00000°, δ43.00000°, λ139.00000°. NP2:φs67.00000°, δ63.00000°, λ54.00000°. Principal axes: T 1.3370, Plg56.0000°, Azm289.0000°; N -0.0490, Plg31.0000°, Azm85.0000°; P -1.2830, Plg11.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 11:39:58.6±0.3, 7°41S±0°03×128°79E±0°03, h138km±3km, h139km; pP-P, n1187, σ1§47/1195, mb5.5/274, 62C-10D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.55**	**103**		**Pn**	**11 40 41.3**	**+1.5**
SAUI	**Saumlaki**	**2.55**	**103**	P	**Pn**	**11 40 41.1**	**+1.3**
SAUI	**Saumlaki**	**2.55**	**103**	S	**Sn**	**11 41 13.7**	**+2.3**
SAUI	**Saumlaki**	**2.55**	**103**	P	**Pn**	**11 40 40.8**	**+1.0**
BNDI	**Bandanaira**	**3.08**	**21**	P	**Pn**	**11 40 48.9**	**+2.4**
BNDI	**Bandanaira**	**3.08**	**21**	P	**Pn**	**11 40 49.2**	**+2.7**
AAI	**Ambon**	**3.75**	**351**	P	**Pn**	**11 40 58.4**	**+3.1**
MSAI	**Masohi**	**4.04**	**2**	P	**Pn**	**11 41 02.5**	**+3.4**
NLAI	**Namlea**	**4.47**	**338**	P	**Pn**	**11 41 08.6**	**+3.7**
SOEI	**Soe**	**5.05**	**242**		**Pn**	**11 41 13.8**	**+1.2**
SOEI				Sn	**Sn**	**11 42 08.9**	**-1.3**
SOEI	**Soe**	**5.05**	**242**	P	**Pn**	**11 41 13.9**	**+1.3**
SOEI	**Soe**	**5.05**	**242**	S	**Sn**	**11 42 10.9**	**+0.7**
SOEI	**Soe**	**5.05**	**242**	P	**Pn**	**11 41 13.5**	**+0.9**
	40nm9µm35µm2µm,1.1s						
AUDHS	**Darwin High Sc**	**5.38**	**158**	P	**Pn**	**11 41 16.5**	**-0.5**
AUDHS	**Darwin High Sc**	**5.38**	**158**	S	**Sn**	**11 42 14.8**	**-3.3**
DRS	**Darwin Rock St**	**5.40**	**158**	P	**Pn**	**11 41 17.2**	**0.0**
DRS	**Darwin Rock St**	**5.40**	**158**	S	**Sn**	**11 42 15.2**	**-3.3**
FAKI	**Fak Fak**	**5.63**	**38**		**Pn**	**11 41 19.9**	**-0.5**
FAKI	**Fak Fak**	**5.63**	**38**	P	**Pn**	**11 41 20.1**	**-0.3**
FAKI	**Fak Fak**	**5.63**	**38**	P	**Pn**	**11 41 19.8**	**-0.5**
	6.7nm9µm24µm1µm,0.5s						
BATI	**Baumata**	**5.78**	**241**	P	**Pn**	**11 41 23.4**	**+1.1**
	2µm,0.4s,baz=89,slow=5.1,SNR=289						
BATI				S	**Sn**	**11 42 26.9**	**-0.8**
	4µm,0.4s,baz=123,slow=21,SNR=24						
BATI				LR	LR	11 43 48.6	
	comp=Z,2µm,20.8s,baz=346,slow=39						
BATI	**Baumata**	**5.78**	**241**	P	**Pn**	**11 41 22.9**	**+0.6**
	30nm36µm3µm,1.0s						
MTN	**Manton Dam**	**5.87**	**157**	P	**Pn**	**11 41 22.7**	**-0.7**
MTN	**Manton Dam**	**5.87**	**157**		**Pn**	**11 41 22.7**	**-0.7**
SANI	**Sanana**	**6.01**	**332**	P	**Pn**	**11 41 28.5**	**+3.0**
SANI	**Sanana**	**6.01**	**332**	P	**Pn**	**11 41 28.8**	**+3.3**
	4µm6µm516nm,1.1s						
KMPI	**Kaimana, Papua**	**6.14**	**53**	P	**Pn**	**11 41 27.8**	**+0.6**
	20nm5µm25µm1µm,0.6s						
KDU	**Kakadu**	**6.37**	**146**	P	**Pn**	**11 41 29.6**	**-0.6**
	comp=Z,1µm,0.7s,comp=Z,0.0nm						
BBSI	**Bau Bau**	**6.47**	**287**	P	**Pn**	**11 41 35.7**	**+4.1**
	comp=Z,3.2nmcomp=Z,13µmcomp=Z,910nm,1.1s						
MMRI	**Maumere**	**6.61**	**259**	Pn	**Pn**	**11 41 32.4**	**-1.0**
MMRI	**Maumere**	**6.61**	**259**	P	**Pn**	**11 41 35.2**	**+1.8**
MMRI	**Maumere**	**6.61**	**259**	S	**Sn**	**11 42 48.3**	**+0.8**
MMRI	**Maumere**	**6.61**	**259**	P	**Pn**	**11 41 34.6**	**+1.2**
	comp=Z,7.6nmcomp=Z,6µmcomp=Z,12µmcomp=Z,989nm,0.8s						
SWI	**Sorong**	**6.95**	**21**	P	**Pn**	**11 41 38.4**	**+0.3**
	comp=Z,2.8nmcomp=Z,9µmcomp=Z,305nm,0.9s						
EDFI	**Ende, Flores**	**7.16**	**259**	P	**Pn**	**11 41 42.1**	**+1.2**
	comp=Z,3.5nmcomp=Z,6µmcomp=Z,337nm,0.8s						
RKPI	**Ransiki, Papua**	**7.95**	**43**	P	**Pn**	**11 41 51.1**	**-0.3**
	comp=Z,4µmcomp=Z,2µm,0.8s						
KNRA	**Kununurra**	**8.21**	**180**	P	**Pn**	**11 41 53.2**	**-1.7**
	comp=Z,4µm,0.8s,comp=Z,0.0nm						
KNRA	**Kununurra**	**8.21**	**180**		**Pn**	**11 41 53.2**	**-1.7**
TNTI	**Ternate**	**8.25**	**350**		**Pn**	**11 41 58.2**	**+2.7**
TNTI	**Ternate**	**8.25**	**350**	P	**Pn**	**11 41 57.8**	**+2.3**
TNTI	**Ternate**	**8.25**	**350**	P	**Pn**	**11 41 58.5**	**+3.0**
	comp=Z,1.4nmcomp=Z,406nm,1.0s						
BSSI	**Bau Bau, Buton**	**8.34**	**278**	P	**Pn**	**11 41 59.2**	**+2.5**
	comp=Z,1.3nmcomp=Z,3µmcomp=Z,6µmcomp=Z,441nm,1.2s						
BASI	**Baing, Sumba**	**8.59**	**250**	P	**Pn**	**11 41 59.8**	**-0.1**
	comp=Z,3µmcomp=Z,1µm,0.8s						
WSI	**Waingapu**	**8.70**	**254**	P	**Pn**	**11 42 00.7**	**-0.7**
LUWI	**Luwuk**	**8.72**	**316**		**Pn**	**11 42 01.4**	**-0.3**
LUWI	**Luwuk**	**8.72**	**316**	P	**Pn**	**11 42 04.3**	**+2.5**
LUWI	**Luwuk**	**8.72**	**316**	P	Pn	11 42 08.2	+6.4
	comp=Z,1.3nmcomp=Z,4µmcomp=Z,330nm,1.0s						
BKSI	**Bulukumba**	**8.86**	**283**	P	**Pn**	**11 42 05.9**	**+2.2**
	comp=Z,2.0nmcomp=Z,8µmcomp=Z,723nm,0.9s						
BNSI	**Bone**	**9.14**	**289**	P	**Pn**	**11 42 10.0**	**+2.6**
	comp=Z,2µmcomp=Z,7µmcomp=Z,643nm,1.0s						
SRPI	**Serui, Papua**	**9.24**	**54**	P	**Pn**	**11 42 09.0**	**+0.3**
	comp=Z,170nm,0.6s						
KMSI	**Cibinong**	**9.27**	**329**	P	**Pn**	**11 42 13.8**	**+4.6**
	comp=Z,4µmcomp=Z,11µmcomp=Z,1µm,1.1s						
KAPI	**Kappang**	**9.30**	**284**	P	**Pn**	**11 42 12.1**	**+2.6**
	comp=Z,154nm,0.9s,baz=119,slow=8.8,SNR=42						
BAKI	**Biak**	**9.56**	**50**	P	**Pn**	**11 42 14.8**	**+1.8**
WBSI	**Waikabubak, Su**	**9.56**	**256**	P	**Pn**	**11 42 12.0**	**-1.1**
SPSI	**Sidrap Palu**	**9.61**	**290**	P	**Pn**	**11 42 16.1**	**+2.4**
	comp=Z,2µmcomp=Z,6µmcomp=Z,576nm,1.1s						
APSI	**Ampana**	**9.61**	**312**	P	**Pn**	**11 42 18.5**	**+4.8**
	comp=Z,4µmcomp=Z,311nm,1.4s						
TTSI	**Tana Toraja**	**9.93**	**295**	P	**Pn**	**11 42 21.3**	**+3.3**
	comp=Z,4µmcomp=Z,432nm,1.3s						
MRSI	**Marisa**	**10.40**	**319**	P	**Pn**	**11 42 28.9**	**+4.7**
	comp=Z,5µmcomp=Z,497nm,1.2s						
WAMI	**Wamena**	**10.47**	**71**	P	Pn	11 42 30.1	+4.9
	comp=Z,3µmcomp=Z,10µmcomp=Z,536nm,0.7s						
PLAI	**Plampang**	**11.00**	**262**	P	**Pn**	**11 42 31.7**	**-0.5**
PLAI	**Plampang**	**11.00**	**262**	P	**Pn**	**11 42 30.8**	**-1.4**
	comp=Z,2µmcomp=Z,5µmcomp=Z,394nm,0.7s						
PCI	**Palu**	**11.02**	**305**	P	**Pn**	**11 42 36.8**	**+4.3**
	comp=Z,5µmcomp=Z,477nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.06**	**196**	P	**Pn**	**11 42 29.8**	**-3.2**
FITZ	**Fitzroy Crossi**	**11.06**	**196**	P	**Pn**	**11 42 29.6**	**-3.4**
	comp=Z,638nm,0.5s,baz=27,slow=11,SNR=814						
FITZ				S	Sn	11 44 23.8	-11
	comp=Z,568nm,0.4s,baz=86,slow=16,SNR=12						
FITZ				LR	LR	11 47 57.9	
	comp=Z,2µm,18.8s,baz=359,slow=43						
FITZ	**Fitzroy Crossi**	**11.06**	**196**	P	**Pn**	**11 42 29.5**	**-3.4**
SGSI	**Sangihe**	**11.49**	**343**	P	**Pn**	**11 42 41.9**	**+3.2**
TOLI2	**Tolitoli**	**11.64**	**316**		**Pn**	**11 42 44.3**	**+3.6**
TOLI2	**Tolitoli**	**11.64**	**316**	P	**Pn**	**11 42 44.6**	**+3.9**
MPSI	**Mapaga**	**11.75**	**311**	P	**Pn**	**11 42 45.8**	**+3.8**
TWSI	**Taliwang, Sumb**	**11.87**	**263**	P	**Pn**	**11 42 43.1**	**-0.5**
	comp=Z,3µmcomp=Z,138nm,0.6s						
GENI	**Genyem**	**12.30**	**68**	P	**Pn**	**11 42 50.6**	**+1.4**
GENI	**Genyem**	**12.30**	**68**	S	**Sn**	**11 45 06.9**	**+1.9**
GENI	**Genyem**	**12.30**	**68**	P	**P**	**11 42 53.7**	**-2.0**
	comp=Z,167nm,0.9s						
JAY	**Jayapura**	**12.82**	**68**	P	**Pn**	**11 42 56.2**	**+0.1**
	comp=Z,16nm,0.4s,baz=231,slow=8.4,SNR=16						
JAY				S	**Sn**	**11 45 12.0**	**-5.8**
	comp=Z,89nm,0.8s,baz=302,slow=22,SNR=5.8						
JAY	**Jayapura**	**12.82**	**68**	P	**Pn**	**11 42 58.0**	**+1.9**
BKB	**Balikpapan**	**13.34**	**297**	P	**P**	**11 43 08.5**	**+1.2**
BKB	**Balikpapan**	**13.34**	**297**	P	**Pn**	**11 43 05.1**	**+2.4**
BKB	**Balikpapan**	**13.34**	**297**	P	**P**	**11 43 09.2**	**+1.9**
	comp=Z,13µmcomp=Z,1µm,1.4s						
WB0	**Warramunga Arr**	**13.43**	**157**	Pn	**Pn**	**11 42 59.8**	**-4.0**
SRBI	**Singaraja**	**13.47**	**266**	P	**P**	**11 43 08.1**	**-0.7**
WRAB	**Tennant Creek**	**13.56**	**157**		**Pn**	**11 43 01.4**	**-4.2**
WRAB	**Tennant Creek**	**13.56**	**157**	*de*P	**Pn**	**11 43 01.4**	**-4.2**
WRAB				pmax	pmax		
	comp=Z,417nm,1.0s						
WRA	**Warramunga Arr**	**13.57**	**157**	P	**Pn**	**11 43 02.1**	**-3.5**
	comp=Z,601nm,0.9s,baz=336,slow=14,SNR=345						
WRA				S	Sn	11 45 22.4	-13
	comp=Z,297nm,0.8s,baz=331,slow=24,SNR=13						
WRA	**Warramunga Arr**	**13.57**	**157**	Pn	**Pn**	**11 43 01.4**	**-4.2**
WRA	**Warramunga Arr**	**13.57**	**157**	P	**Pn**	**11 43 01.4**	**-4.2**
WB1	**Warramunga Ar.**	**13.59**	**157**	P	**Pn**	**11 43 02.7**	**-3.1**
WR8	**Warramunga Arr**	**13.64**	**157**		**Pn**	**11 43 02.5**	**-4.1**
BBKI	**Banjar Baru**	**14.43**	**285**	P	**P**	**11 43 20.2**	**+0.7**
JAGI	**Jajag, Banyuwa**	**14.54**	**265**		**Pn**	**11 43 16.5**	**-1.5**
JAGI	**Jajag, Banyuwa**	**14.54**	**265**	P	**Pn**	**11 43 16.5**	**-1.5**
JAGI	**Jajag, Banyuwa**	**14.54**	**265**	P	**Pn**	**11 43 19.3**	**+1.3**
DAV	**Davao City (W)**	**14.74**	**347**	P	**P**	**11 43 24.9**	**+2.0**
	comp=Z,202nm,0.4s,baz=116,slow=4.7,SNR=7.1						
DAV				S	**S**	**11 46 11.7**	**-1.0**
	comp=Z,138nm,0.4s,baz=90,slow=8.1,SNR=1.4						
DAV	**Davao City (W)**	**14.74**	**347**	P	**Pn**	**11 43 17.4**	**-3.1**
MTKI	**Muara Teweh, K**	**15.27**	**294**	P	**P**	**11 43 30.8**	**+2.0**
COEN	**Coen**	**15.55**	**116**	P	**Pn**	**11 43 30.4**	**-0.2**
	comp=Z,311nm,1.1s						
COEN	**Coen**	**15.55**	**116**		**Pn**	**11 43 30.8**	**+0.2**
COEN	**Coen**	**15.55**	**116**	P	**Pn**	**11 43 31.2**	**+0.6**
MYLDM	**Lahad Datu**	**16.18**	**320**	Pn	**P**	**11 43 42.4**	**+3.5**
MYLDM	**Lahad Datu**	**16.18**	**320**	P	**P**	**11 43 42.0**	**+3.1**
MBWA	**Marble Bar**	**16.23**	**212**	P	**Pn**	**11 43 37.4**	**-1.5**
	comp=Z,212nm,1.1s						
MBWA	**Marble Bar**	**16.23**	**212**		**Pn**	**11 43 37.4**	**-1.5**
MBWA	**Marble Bar**	**16.23**	**212**	P	**Pn**	**11 43 36.7**	**-2.3**
MBWA				S	Sn	11 46 26.0	-14
MBWA	**Marble Bar**	**16.23**	**212**	P	**Pn**	**11 43 37.4**	**-1.5**
PSAC2	**Pilbara Seismi**	**16.48**	**210**	P	**Pn**	**11 43 40.7**	**-1.2**
	comp=Z,371nm,0.6s						
PSAC1	**Pilbara Seismi**	**16.50**	**211**	P	**Pn**	**11 43 41.1**	**-1.2**
	comp=Z,643nm,0.9s						
PSA00	**Pilbara Seismi**	**16.52**	**211**	P	**Pn**	**11 43 40.9**	**-1.5**
	comp=Z,698nm,0.8s						
PSA00	**Pilbara Seismi**	**16.52**	**211**		**Pn**	**11 43 40.7**	**-1.7**
PSA00	**Pilbara Seismi**	**16.52**	**211**		**Pn**	**11 43 40.6**	**-1.8**
PSA00	**Pilbara Seismi**	**16.52**	**211**	P	**Pn**	**11 43 40.7**	**-1.7**
PSAB3	**Pilbara Seismi**	**16.53**	**211**	P	**Pn**	**11 43 41.0**	**-1.6**
	comp=Z,655nm,0.9s						
QIS	**Mount Isa**	**16.74**	**142**	P	**P**	**11 43 44.1**	**-1.0**
	comp=Z,355nm,1.2s						
QIS	**Mount Isa**	**16.74**	**142**	P	**P**	**11 43 43.8**	**-1.3**
AS31	**Alice Springs**	**16.89**	**164**	P	**P**	**11 43 45.6**	**-1.1**
ASAR	**Alice Springs**	**16.89**	**164**	P	**P**	**11 43 46.8**	**+0.1**
	comp=Z,576nm,0.8s,baz=335,slow=8.4,SNR=468						
ASAR				S	**S**	**11 46 44.9**	**-11**
	comp=Z,193nm,0.9s,baz=352,slow=28,SNR=7.2						
ASAR				LR	LR	11 50 23.1	
	comp=Z,832nm,18.1s,baz=340,slow=37						
ASAR	**Alice Springs**	**16.89**	**164**	P	**P**	**11 43 44.5**	**-2.1**
WRKA	**Warakurna**	**17.53**	**181**	P	**P**	**11 43 53.2**	**-0.5**
	comp=Z,351nm,1.0s						
UGM	**Wanagama**	**18.11**	**267**	P	**P**	**11 43 59.0**	**-1.2**
UGM	**Wanagama**	**18.11**	**267**	P	**P**	**11 43 59.4**	**-0.8**
SMRI	**Semarang**	**18.21**	**270**	P	**P**	**11 44 01.6**	**+0.4**
SMRI	**Semarang**	**18.21**	**270**	P	**Pn**	**11 44 03.1**	**+0.3**
PMG	**Port Moresby**	**18.28**	**98**	P	**P**	**11 44 02.5**	**+0.6**
	comp=Z,95nm,1.0s,baz=286,slow=9.1,SNR=21						
PMG				S	**S**	**11 47 17.7**	**-6.2**
	comp=Z,35nm,0.6s,baz=204,slow=19,SNR=7.9						
PMG				LR	LR	11 53 17.4	
	comp=Z,656nm,18.1s,baz=268,slow=44						
PMG	**Port Moresby**	**18.28**	**98**	P	**P**	**11 44 03.0**	**+1.1**
PMG	**Port Moresby**	**18.28**	**98**	P	**Pn**	**11 44 03.4**	**-0.1**
PMG	**Port Moresby**	**18.28**	**98**	*ce*P	**Pn**	**11 44 04.2**	**+0.7**
PMG				pmax	pmax		
	comp=Z,96nm,1.0s						
MTSU	**Mount Surprise**	**18.50**	**127**	P	**Pn**	**11 44 06.6**	**+0.5**
	comp=Z,142nm,0.7s						
MTSU	**Mount Surprise**	**18.50**	**127**	P	**Pn**	**11 44 05.6**	**-0.5**
SBUM	**Sibu**	**19.22**	**300**	P	**Pn**	**11 44 14.2**	**-0.4**
MANU	**Manus Island**	**19.26**	**75**	P	**P**	**11 44 11.9**	**-0.7**
KSM	**Kuching**	**20.45**	**295**	P	**P**	**11 44 26.8**	**+1.4**
GIRL	**Giralia**	**20.64**	**221**	P	**P**	**11 44 28.3**	**+1.0**
	comp=Z,129nm,0.9s						
GIRL	**Giralia**	**20.64**	**221**	P	**P**	**11 44 27.1**	**-0.2**
BBJI	**Bungbulang**	**20.97**	**268**	P	**P**	**11 44 28.9**	**-2.2**
TV1H	**Townsville Har**	**21.08**	**126**	P	**P**	**11 44 33.8**	**+1.6**
CTA	**Charters Tower**	**21.10**	**128**	P	**P**	**11 44 34.0**	**+1.6**
CTAO	**Charters Tower**	**21.10**	**128**	P	**P**	**11 44 33.9**	**+1.5**
CTAO	**Charters Tower**	**21.10**	**128**	P	**P**	**11 44 34.0**	**+1.6**
CTAO	**Charters Tower**	**21.10**	**128**	P	**P**	**11 44 33.9**	**+1.5**
MEEK	**Meekatharra**	**21.43**	**206**	P	**P**	**11 44 37.6**	**+1.7**
	comp=Z,207nm,0.8s						
MEEK	**Meekatharra**	**21.43**	**206**	P	**P**	**11 44 36.9**	**+1.0**
TGY	**Tagaytay City**	**22.75**	**340**	P	**P**	**11 44 50.2**	**+0.9**
	comp=Z,323nm,0.3s,baz=205,slow=5.2,SNR=15						
	comp=Z,323nm,0.3s						
INKA	**Innaminka**	**23.17**	**152**	P	**P**	**11 44 54.5**	**+1.4**
FORT	**Forrest**	**23.26**	**182**	P	**P**	**11 44 56.7**	**+2.9**
	comp=Z,440nm,1.0s						
FORT	**Forrest**	**23.26**	**182**	P	**P**	**11 44 55.2**	**+1.4**
RABL	**Rabaul**	**23.47**	**83**	P	**P**	**11 44 56.6**	**+0.6**
QLP	**Quilpie**	**24.07**	**144**	P	**P**	**11 45 03.6**	**+2.3**
	comp=Z,1µm,0.8s						
QLP	**Quilpie**	**24.07**	**144**	P	**P**	**11 45 02.8**	**+1.5**
PMBI	**Palembang**	**24.33**	**279**	P	**P**	**11 45 02.9**	**-0.9**
PMBI	**Palembang**	**24.33**	**279**	P	**P**	**11 45 06.4**	**+2.6**
MORW	**Morawa**	**24.67**	**208**	P	**P**	**11 45 08.1**	**+1.3**
	comp=Z,107nm,1.1s						
MORW	**Morawa**	**24.67**	**208**	P	**P**	**11 45 07.4**	**+0.7**
MORW				IAmb	IAmb	11 45 37.3	
	comp=Z,143nm,1.1s						
MORW	**Morawa**	**24.67**	**208**	P	**P**	**11 45 08.0**	**+1.3**
KMBL	**Kambalda**	**24.69**	**194**	P	**P**	**11 45 08.4**	**+1.5**
	comp=Z,135nm,0.9s						
BLDU	**Ballidu**	**25.71**	**205**	P	**P**	**11 45 17.3**	**+1.1**
	comp=Z,132nm,0.5s						
BLDU	**Ballidu**	**25.71**	**205**	P	**P**	**11 45 17.2**	**+1.1**
BBOO	**Buckleboo**	**26.16**	**166**	P	**P**	**11 45 20.6**	**+0.4**
	comp=Z,310nm,0.9s						
BBOO	**Buckleboo**	**26.16**	**166**	P	**P**	**11 45 20.9**	**+0.8**
BBOO	**Buckleboo**	**26.16**	**166**	P	**P**	**11 45 20.2**	**0.0**
KLBR	**Kellerberrin**	**26.17**	**202**	P	**P**	**11 45 21.5**	**+1.3**
	comp=Z,200nm,0.9s						
KLBR	**Kellerberrin**	**26.17**	**202**	P	**P**	**11 45 21.2**	**+0.9**
AUNRC	**North Rockhamp**	**26.21**	**130**	P	**P**	**11 45 21.7**	**+1.0**
BTDF	**Bukit Timah Da**	**26.44**	**288**	P	**P**	**11 45 24.5**	**+1.6**
MYKOM	**Kota Tinggi**	**26.51**	**289**	P	**P**	**11 45 23.7**	**+0.2**
MYKOM	**Kota Tinggi**	**26.51**	**289**	P	**P**	**11 45 24.6**	**+1.1**
WHYH	**Whyalla**	**26.77**	**163**	P	**P**	**11 45 25.9**	**+0.3**
GD1S	**Gladstone Soft**	**26.97**	**130**	P	**P**	**11 45 28.5**	**+1.0**
STKA	**Stephens Creek**	**27.11**	**156**	P	**P**	**11 45 29.5**	**+0.8**
	comp=Z,712nm,0.9s						
STKA	**Stephens Creek**	**27.11**	**156**	P	**P**	**11 45 29.7**	**+1.0**
	comp=Z,84nm,0.6s,baz=325,slow=9.2,SNR=154						
STKA				LR	LR	11 57 35.7	
	comp=Z,875nm,18.9s,baz=320,slow=39						
	comp=Z,84nm,0.6s						
STKA	**Stephens Creek**	**27.11**	**156**	P	**P**	**11 45 29.5**	**+0.8**
STKA	**Stephens Creek**	**27.11**	**156**	*d*P	**P**	**11 45 29.6**	**+0.8**
MUN	**Mundaring**	**27.11**	**204**	P	**P**	**11 45 24.6**	**-4.1**
AUJCS	**Jamestown Cent**	**27.23**	**162**	P	**P**	**11 45 30.7**	**+0.9**
AUCAS	**Cummins Area S**	**27.47**	**167**	P	**P**	**11 45 33.4**	**+1.5**
HTT	**Hallett**	**27.54**	**161**	P	**P**	**11 45 33.7**	**+1.1**
	comp=Z,40nm,0.9s						
HTT	**Hallett**	**27.54**	**161**	P	**P**	**11 45 33.7**	**+1.1**
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 33.8**	**+1.1**
	comp=Z,69nm,1.1s						
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 33.9**	**+1.1**
	comp=Z,111nm,1.1s						
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 33.8**	**+1.1**
	comp=Z,40nm,0.6s,baz=41,slow=7.2,SNR=64						
NWAO				LR	LR	11 57 26.6	
	comp=Z,689nm,18.1s,baz=76,slow=38						
	comp=Z,40nm,0.6s						
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 33.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 33.9**	**+1.2**
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 34.9**	**+2.2**
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 34.8**	**+2.1**
NWAO	**Narrogin (SRO)**	**27.56**	**201**	P	**P**	**11 45 33.4**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,299nm,1.3s						
EIDS	**Eidsvold**	**27.77**	**133**	P	**P**	**11 45 34.9**	**+0.2**
	comp=Z,27nm,1.3s						
EIDS	**Eidsvold**	**27.77**	**133**	P	**P**	**11 45 34.8**	**+0

comp=Z,32nm,0.9s
QZH Quanzhou 33.66 343 ⇑*i*P **P** **11 46 25.8 -0.6**
QZH pmax pmax
comp=Z,100nm,1.0s
GEXS Deakin Univers 33.71 158 P **P** **11 46 28.5 +1.8**
JOW Kunigami 34.04 359 LR LR 12 01 24.4
comp=Z,139nm,18.6s,baz=153,slow=38
JOW Kunigami 34.04 359 P **P** **11 46 30.9 +1.2**
JOW Kunigami 34.04 359 P **P** **11 46 30.4 +0.7**
AUSMG Snowy Mountain 34.07 151 P **P** **11 46 32.1 +2.1**
LHMI Lhok Sumawe 34.17 291 P **P** **11 46 30.8 -0.1**
LHMI Lhok Sumawe 34.17 291 P **P** **11 46 32.7 +1.7**
MILA Mila 34.84 151 P **P** **11 46 38.0 +1.4**
comp=Z,17nm,1.7s
LHI Lord Howe Isla 37.04 134 P **P** **11 46 56.5 +1.1**
LHI IAmb IAmb 11 47 16.3
comp=Z,80nm,1.2s
SANVU Saraoutou 38.43 105 P **P** **11 47 07.2 0.0**
SANVU IAmb IAmb 11 47 45.1
comp=Z,129nm,1.1s
MOO Moorlands 38.49 158 P **P** **11 47 09.1 +1.8**
comp=Z,107nm,1.3s
MOO Moorlands 38.49 158 P **P** **11 47 10.1 +2.8**
CNSH ChangSha 38.56 337 P **P** **11 47 08.3 +0.3**
CNSH S **S** **11 52 56.3 +2.4**
CNSH pmax pmax
comp=Z,45nm,1.0s
CNSH LR LR
comp=Z,410nm,14.3s
CNSH LR LR
comp=Z,350nm,14.9s
CNSH LR LR
comp=Z,410nm,15.3s
CM31 Chiang Mai Arr 39.09 311 P **P** **11 47 13.4 +0.8**
CMAR Chiang Mai Arr 39.09 311 P **P** **11 47 13.7 +1.0**
comp=Z,90nm,0.9s,baz=143,slow=7.2,SNR=416
CMAR PcP **PcP** **11 49 21.2 +1.4**
comp=Z,23nm,1.0s,baz=171,slow=2.6,SNR=10
CMAR ScP **ScP** **11 52 55.8 +0.1**
comp=Z,6.0nm,0.8s,baz=126,slow=4.0,SNR=11
CMAR LR LR 12 05 54.8
comp=Z,175nm,18.3s,baz=130,slow=40
comp=Z,90nm,0.9s
CMAR Chiang Mai Arr 39.09 311 P **P** **11 47 13.4 +0.8**
CHTO Chiang Mai 39.31 312 P **P** **11 47 15.4 +0.9**
CHTO Chiang Mai 39.31 312 P **P** **11 47 15.4 +0.9**
CHTO Chiang Mai 39.31 312 P **P** **11 47 15.5 +0.9**
CHTO Chiang Mai 39.31 312 P **P** **11 47 15.4 +0.9**
CHTO pmax pmax
comp=Z,252nm,1.1s
CHTO Chiang Mai 39.31 312 P **P** **11 47 15.3 +0.8**
CHTO PcP **PcP** **11 49 21.9 +1.3**
GYA Guiyang 39.94 328 ⇓P **P** **11 47 20.8 +1.1**
GYA pmax pmax
comp=Z,200nm,0.9s
WHN Wuhan 40.20 341 ⇑P **P** **11 47 22.4 +0.8**
WHN PcP **PcP** **11 49 23.5 +0.4**
WHN pmax pmax
comp=Z,530nm,1.0s
JNU Nakatsue 40.36 3 P **P** **11 47 22.5 -0.5**
JNU IAmb IAmb 11 47 23.9
comp=Z,65nm,0.9s
JNU Nakatsue 40.36 3 P **P** **11 47 23.1 +0.2**
NJ2 Nanjing 40.37 347 ⇑P **P** **11 47 23.5 +0.5**
NJ2 PcP **PcP** **11 49 25.5 +1.9**
NJ2 pmax pmax
comp=Z,69nm,0.7s
KMI Kunming 41.10 323 ⇑P **P** **11 47 31.0 +1.6**
KMI S **S** **11 53 34.9 +2.6**
KMI pmax pmax
comp=Z,240nm,1.2s
KMI LR LR
comp=Z,230nm,17.0s
KMI LR LR
comp=Z,250nm,18.3s
KMI LR LR
comp=Z,400nm,19.5s
KMI Kunming 41.10 323 P **P** **11 47 30.9 +1.6**
JMN Monobe 41.20 6 IAmb IAmb 11 47 31.4
comp=Z,93nm,1.3s
JMN Monobe 41.20 6 P **P** **11 47 30.8 +1.0**
ENH Enshi 41.80 335 IAmb IAmb 11 47 35.9
comp=Z,102nm,0.8s
ENH Enshi 41.80 335 P **P** **11 47 34.8 0.0**
PZH PanZhiHua 42.73 323 P **P** **11 47 42.9 +0.4**
PZH pmax pmax
comp=Z,240nm,1.0s
PZH pmax pmax
comp=Z,350nm,3.7s
INU Inuyama 43.23 10 P **P** **11 47 47.0 +0.8**
JGF Kuroka 43.54 10 P **P** **11 47 47.3 -1.5**
JGF Kuroka 43.54 10 P **P** **11 47 49.0 +0.3**
TJN Taejon 43.58 358 P **P** **11 47 49.0 +0.1**
TJN Taejon 43.58 358 P **P** **11 47 49.6 +0.7**
TJN Taejon 43.58 358 P **P** **11 47 49.0 +0.1**
TJN pmax pmax
comp=Z,397nm,0.9s
TNCH TengChong 43.69 319 ⇑P **P** **11 47 51.3 +1.0**
TNCH pP pP 11 48 20.9 +0.7
TNCH S **S** **11 54 08.9 -1.4**
TNCH SS **SS** **11 57 24.6 -6.8**
TNCH pmax pmax
comp=Z,180nm,1.4s
LYN LuoYang 44.50 341 ⇑*i*P **P** **11 47 56.3 -0.1**
LYN PP **PP** **11 49 44.5 +1.4**
LYN S **S** **11 54 23.4 +2.1**
LYN pmax pmax
comp=Z,140nm,1.0s
LYN pmax pmax
comp=Z,340nm,7.9s
MAJO Matsushiro 44.60 11 P **P** **11 47 55.5 -1.7**
MAJO IAmb IAmb 11 47 58.1
comp=Z,97nm,0.9s
MAJO Matsushiro 44.60 11 P **P** **11 47 56.5 -0.7**
MAJO Matsushiro 44.60 11 *i*P **P** **11 47 55.4 -1.8**
MAJO pmax pmax
comp=Z,92nm,0.9s
MAJO Matsushiro 44.60 11 P **P** **11 47 56.0 -1.2**
MAJO PcP **PcP** **11 49 38.4 +0.6**
MJAR Matsushiro Arr 44.60 11 P **P** **11 47 55.8 -1.4**
comp=Z,72nm,0.9s,baz=188,slow=9.4,SNR=110
MJAR PcP **PcP** **11 49 37.9 +0.2**
comp=Z,17nm,0.9s,baz=178,slow=3.7,SNR=7.8
MJAR ScP **ScP** **11 53 16.8 -0.4**
comp=Z,6.2nm,0.9s,baz=193,slow=4.9,SNR=7.7
comp=Z,72nm,0.9s
MJAR Matsushiro Arr 44.60 11 P **P** **11 47 56.3 -0.9**
MJAR IAmb IAmb 11 47 57.6
comp=Z,66nm,0.9s
MJB9 Matsu-Tunnel 44.61 11 IAmb IAmb 11 47 59.1
comp=Z,91nm,0.9s
KSAR Wonju Array Be 44.63 359 P **P** **11 47 58.1 +0.8**
KSAR Wonju Array Be 44.63 359 P **P** **11 47 58.1 +0.8**
KSRS Korea Array 44.64 359 P **P** **11 47 57.9 +0.5**
comp=Z,27nm,0.8s,baz=177,slow=10,SNR=109
KSRS PcP **PcP** **11 49 38.8 +1.0**
comp=Z,18nm,0.9s,baz=180,slow=3.8,SNR=17
KSRS ScP **ScP** **11 53 17.1 -0.1**
comp=Z,4.9nm,0.9s,baz=178,slow=4.0,SNR=8.6
comp=Z,27nm,0.8s
KS19 Wonju Array Si 44.69 359 P **P** **11 47 57.5 -0.3**
INCN Inchon 44.70 358 P **P** **11 47 57.4 -0.6**
INCN Inchon 44.70 358 P **P** **11 47 58.8 +0.8**
INCN Inchon 44.70 358 P **P** **11 47 57.4 -0.6**
INCN pmax pmax
comp=Z,56nm,1.2s
TIA Tai'an 44.76 347 P **P** **11 47 57.5 -0.9**
TIA pmax pmax
comp=Z,58nm,0.9s
CD2 Chengdu 45.02 329 P **P** **11 48 00.4 -0.3**
CD2 PP **PP** **11 49 47.1 -1.7**
CD2 S **S** **11 54 32.0 +2.9**
CD2 sS sS 11 55 28.5 +6.9
CD2 pmax pmax
comp=Z,180nm,2.3s
CD2 LR LR
comp=Z,710nm,18.2s
CD2 LR LR
comp=Z,890nm,16.9s
CD2 LR LR
comp=Z,600nm,13.1s
XAN Xi'an 45.32 337 ⇑P **P** **11 48 02.4 -0.6**
XAN S **S** **11 54 27.5 -5.8**
XAN pmax pmax
comp=Z,290nm,1.1s
XAN LR LR
comp=Z,320nm,15.1s
XAN LR LR
comp=Z,300nm,14.1s
XAN LR LR
comp=Z,370nm,18.5s
XAN Xi'an 45.32 337 P **P** **11 48 01.9 -1.1**
XAN PcP **PcP** **11 49 41.3 +1.0**
SAIH SAIHA 45.96 311 *e*P **P** **11 48 08.5 +0.2**
SAIH IAmb IAmb 11 48 11.5
comp=Z,96nm,0.9s
JSD Sado 46.07 10 P **P** **11 48 09.6 +0.9**
JMM Marumori 46.41 13 IAmb IAmb 11 48 15.7
comp=Z,113nm,0.9s
JMM Marumori 46.41 13 P **P** **11 48 11.9 +0.5**
HNS HongShan 46.48 344 ⇑P **P** **11 48 11.8 -0.1**
HNS PcP **PcP** **11 49 45.4 +1.2**
HNS S **S** **11 54 44.0 -5.7**
HNS pmax pmax
comp=Z,190nm,0.9s
HNS LR LR
comp=Z,280nm,15.1s
HNS LR LR
comp=Z,270nm,13.5s
HNS LR LR
comp=Z,310nm,19.6s
DL2 Dalian 46.56 352 P **P** **11 48 12.0 -0.5**
DL2 PcP **PcP** **11 49 45.4 +1.0**
DL2 *e*S **S** **11 54 51.9 +1.2**
DL2 pmax pmax
comp=Z,86nm,0.9s
IMP Imphal 46.68 314 *e*P **P** **11 48 13.2 -0.6**
IMP IAmb IAmb 11 48 14.2
comp=Z,66nm,1.2s
KOHI KOHIMA 47.13 316 *e*P **P** **11 48 16.9 -0.5**
KOHI IAmb IAmb 11 48 17.9
comp=Z,91nm,0.9s
MOKO MOKOCHONG 47.23 316 *e*P **P** **11 48 18.2 +0.1**
MOKO IAmb IAmb 11 48 21.6
comp=Z,97nm,0.8s
TIY Taiyuan 47.42 342 *e*P **P** **11 48 19.1 -0.2**
ITAN ITANAGAR 48.31 317 *e*P **P** **11 48 26.8 +0.6**
ITAN IAmb IAmb 11 48 28.7
comp=Z,98nm,0.9s
ZIRO ZIRO 48.47 317 *e*P **P** **11 48 28.4 +0.7**
ZIRO IAmb IAmb 11 48 29.7
comp=Z,87nm,0.7s
SHL Shillong 48.61 314 P **P** **11 48 28.2 -0.6**
SHL Shillong 48.61 314 P **P** **11 48 28.8 0.0**
SNR=48
SHL Shillong 48.61 314 *e*P **P** **11 48 28.0 -0.7**
SHL IAmb IAmb 11 48 31.1
comp=Z,90nm,0.6s
SHL Shillong 48.61 314 P **P** **11 48 28.2 -0.6**
SHL pmax pmax
comp=Z,116nm,0.8s
TEZP TEZPUR 48.61 315 *e*P **P** **11 48 28.2 -0.3**
TEZP IAmb IAmb 11 48 29.2
comp=Z,88nm,0.9s
BJT Baijiatuao 48.61 347 IAmb IAmb 11 48 29.4
comp=Z,102nm,0.9s
BJT Baijiatuao 48.61 347 P **P** **11 48 28.3 0.0**
BJT Baijiatuao 48.61 347 P **P** **11 48 28.0 -0.3**
BJT PcP **PcP** **11 49 52.5 +0.8**
BJI Beijing 48.63 347 P **P** **11 48 28.3 -0.1**
BJI PcP **PcP** **11 49 53.0 +1.2**
BJI pmax pmax
comp=Z,58nm,1.0s
LZDM Lanzhou Array 49.17 333 P **P** **11 48 33.8 +0.7**
comp=Z,122nm,0.6s,baz=170,slow=11,SNR=86
comp=Z,122nm,0.6s
LZH Lanzhou 49.22 333 ⇑*i*P **P** **11 48 34.1 +0.9**
LZH PP **PP** **11 50 33.4 +4.9**
LZH S **S** **11 55 25.0 -3.7**
LZH pmax pmax
comp=Z,500nm,1.1s
LZH pmax pmax
comp=Z,980nm,4.3s
LZH LR LR
comp=Z,670nm,18.6s
LZH LR LR
comp=Z,720nm,17.4s
LZH LR LR
comp=Z,530nm,18.6s
SNY Shenyang 49.23 355 ⇑P **P** **11 48 32.8 -0.2**
SNY pmax pmax
comp=Z,36nm,1.0s
JTM Tenmabayashi 49.27 12 P **P** **11 48 33.4 +0.1**
JTM Tenmabayashi 49.27 12 P **P** **11 48 34.1 +0.8**
TAWA Tawang 49.86 316 *e*P **P** **11 48 39.9 +1.4**
TAWA IAmb IAmb 11 48 41.9
comp=Z,99nm,0.9s
PALK Pallekele 50.13 286 P **P** **11 48 39.2 -1.2**
PALK Pallekele 50.13 286 P **P** **11 48 40.3 -0.1**
PALK Pallekele 50.13 286 P **P** **11 48 39.2 -1.2**
PALK pmax pmax
comp=Z,25nm,0.8s
DHUB DHUBRI 50.24 313 *e*P **P** **11 48 40.8 -0.1**
DHUB IAmb IAmb 11 48 41.9
comp=Z,88nm,0.9s
JCZ Jackson Bay 50.47 143 P **P** **11 48 44.9 +2.4**
HHC Hu-ho-hao-te 50.57 343 *e*P **P** **11 48 44.0 +0.7**
HHC S **S** **11 55 44.8 -2.5**
HHC ScS **ScS** **11 58 18.4 -2.0**
HHC pmax pmax
comp=Z,46nm,0.6s
HHC pmax pmax
comp=Z,110nm,4.8s
FOZ Fox Glacier 50.79 142 P **P** **11 48 46.8 +2.0**
BTO Baotou 50.81 342 *e*P **P** **11 48 45.3 +0.2**
BTO S **S** **11 55 49.0 -1.6**
BTO pmax pmax
comp=Z,44nm,1.1s
BTO pmax pmax
comp=Z,500nm,4.7s
BTO LR LR
comp=Z,350nm,8.7s
BTO LR LR
comp=Z,360nm,8.9s
BTO LR LR
comp=Z,430nm,9.4s
WHZ Wether Hill Ro 51.04 145 P **P** **11 48 48.5 +1.8**
CN2 Changchun 51.06 357 *e*P **P** **11 48 47.3 +0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
WVZ Waitaha Valley 51.12 141 P **P** **11 48 49.6 +2.4**
DSZ Denniston Nort 51.12 139 P **P** **11 48 50.9 +3.5**
QRZ Quartz Range 51.15 138 P **P** **11 48 50.6 +3.0**
VIS Vishakhapatnam 51.38 300 *e*P **P** **11 48 50.1 +0.6**
VIS IAmb IAmb 11 48 52.1
comp=Z,56nm,0.8s
INZ Inchbonnie 51.38 140 P **P** **11 48 51.4 +2.1**
USRK Ussuriysk Ar. 51.45 3 P **P** **11 48 49.8 +0.2**
comp=Z,34nm,0.7s,baz=182,slow=7.1,SNR=4.7
USRK ScP **ScP** **11 53 45.9 -0.1**
comp=Z,6.0nm,1.0s,baz=192,slow=4.1,SNR=7.6
comp=Z,34nm,0.7s
LBZ Lake Benmore 51.48 143 IAmb IAmb 11 48 56.5
comp=Z,68nm,1.3s
SHBG Sahibganj 51.51 310 *e*P **P** **11 48 51.3 +0.8**
APZ The Paps 51.62 146 P **P** **11 48 53.2 +2.2**
RPZ Rata Peaks 51.65 142 P **P** **11 48 53.8 +2.5**
RPZ Rata Peaks 51.65 142 P **P** **11 48 53.6 +2.3**
LSA Lhasa 51.68 317 P **P** **11 48 49.3 -2.9**
LSA pmax pmax
comp=Z,190nm,0.9s
LSA Lhasa 51.68 317 P **P** **11 48 53.3 +1.1**
MDJ Mudanjiang 51.79 1 P **P** **11 48 52.6 +0.4**
MDJ PcP **PcP** **11 50 01.8 -1.6**
MDJ S **S** **11 56 05.0 +1.4**
MDJ pmax pmax
comp=Z,64nm,1.8s
MDJ pmax pmax
comp=Z,390nm,3.8s
MDJ Mudanjiang 51.79 1 P **P** **11 48 53.1 +0.9**
MDJ Mudanjiang 51.79 1 P **P** **11 48 52.5 +0.4**
THZ Tophouse 51.85 139 P **P** **11 48 55.0 +2.2**
VRZ Vera Road 51.92 135 P **P** **11 48 56.7 +3.3**
RAGD RAYAGADA 51.93 301 *e*P **P** **11 48 53.9 +0.2**
RAGD IAmb IAmb 11 48 57.4
comp=Z,83nm,0.9s
LTZ Lake Taylor 51.94 140 P **P** **11 48 56.7 +3.2**
GTK Tadong 52.01 313 *e*P **P** **11 48 54.7 +0.4**
GTK IAmb IAmb 11 48 55.6
comp=Z,66nm,0.8s
TUZ Tuapeka 52.03 145 P **P** **11 48 55.6 +1.6**
OXZ Oxford 52.06 141 P **P** **11 48 56.3 +2.0**
DUWZ D'Urville Isla 52.08 137 P **P** **11 48 57.1 +2.6**
BOK Bokaro 52.12 308 *e*P **P** **11 48 55.7 +0.6**
BOK IAmb IAmb 11 49 00.5
comp=Z,24nm,0.8s
TLZ Tolley Road 52.15 133 P **P** **11 48 58.2 +3.1**
WAZ Wanganui 52.35 135 P **P** **11 48 59.5 +3.0**
XLT XiLinHaoTe 52.35 348 *e*P **P** **11 48 56.8 +0.3**
XLT pmax pmax
comp=Z,120nm,1.0s
XLT pmax pmax
comp=Z,260nm,6.5s
XLT LR LR
comp=Z,230nm,16.8s
XLT LR LR
comp=Z,240nm,16.3s
TUWZ Tuamarina 52.38 138 P **P** **11 48 58.4 +1.7**
PKVZ Pokaka 52.40 135 P **P** **11 48 59.5 +2.5**
TCW Tory Channel 52.50 137 P **P** **11 48 58.9 +1.3**
WTVZ West Tongariro 52.50 134 P **P** **11 49 01.4 +3.6**
COVZ Chateau Observ 52.51 134 P **P** **11 49 01.1 +3.3**
GVZ Greta Valley S 52.52 140 P **P** **11 49 00.2 +2.6**
KATZ Kakaramea 52.52 134 P **P** **11 49 00.9 +2.9**
NNVZ North Ngauruho 52.53 134 P **P** **11 49 01.3 +3.3**
NGZ Ngauruhoe 52.54 134 P **P** **11 49 01.0 +2.9**
NTVZ North Tongarir 52.56 134 P **P** **11 49 01.8 +3.5**
SNVZ South Ngauruho 52.57 134 P **P** **11 49 01.4 +3.1**
KHZ Kahutara 52.58 139 P **P** **11 48 59.8 +1.8**
KHZ IAmb IAmb 11 49 00.8
comp=Z,35nm,0.6s
KHZ Kahutara 52.58 139 P **P** **11 48 59.9 +1.8**
OTVZ Oturere 52.58 134 P **P** **11 49 01.4 +3.0**
TMVZ Te Maari 52.59 134 P **P** **11 49 01.8 +3.4**
WNVZ Wahianoa 52.60 135 P **P** **11 49 01.3 +2.7**
ETVZ East Tongariro 52.60 134 P **P** **11 49 01.8 +3.3**
MQZ McQueen's Vall 52.64 141 P **P** **11 49 01.3 +2.8**
TEY Ternei 52.68 7 ‖*e*P **P** **11 48 58.2 -0.5**
TEY pmax pmax
comp=N,20nm,1.0s
TEY pmax pmax
comp=Z,40nm,1.1s
MOVZ Moawhango 52.74 135 P **P** **11 49 01.4 +2.0**
KIW Kapiti Island 52.77 137 P **P** **11 49 01.5 +1.9**
ASAJ Asahikawa 52.79 12 P **P** **11 49 00.1 +0.6**
comp=Z,49nm,0.9s,baz=244,slow=9.1,SNR=6.1
comp=Z,49nm,0.9s
JKA Kamikawa-asahi 52.79 12 P **P** **11 48 58.8 -0.8**
JKA IAmb IAmb 11 49 01.1
comp=Z,61nm,1.0s
BNX BinXian 52.92 359 ⇑P **P** **11 48 59.5 -1.0**
BNX pmax pmax
comp=Z,23nm,1.4s
OGWZ Otaki Gorge 52.93 136 P **P** **11 49 02.2 +1.4**
CAW Cannon Point 52.99 137 P **P** **11 49 02.0 +0.8**
BHW Baring Head 52.99 137 P **P** **11 49 01.8 +0.6**
MRZ Mangatainoka R 53.15 136 P **P** **11 49 03.4 +1.1**
GAYA Gaya 53.15 308 *e*P **P** **11 49 02.4 -0.2**
GAYA IAmb IAmb 11 49 05.8
comp=Z,114nm,1.2s
TSZ Takapari Road 53.16 135 P **P** **11 49 03.8 +1.3**
BKZ Black Stump Fm 53.17 134 P **P** **11 49 04.4 +1.8**
BKZ Black Stump Fm 53.17 134 P **P** **11 49 04.0 +1.4**
HOWZ Holdsworth Sta 53.20 136 P **P** **11 49 03.8 +1.0**
MSWZ Moikau Station 53.25 137 P **P** **11 49 03.7 +0.6**
URZ Urewera 53.26 133 P **P** **11 49 04.7 +1.5**
URZ Urewera 53.26 133 P **P** **11 49 04.5 +1.3**
KRHZ Kereru 53.27 135 P **P** **11 49 05.0 +1.6**
MTHZ Maungataniwha 53.29 134 P **P** **11 49 05.2 +1.7**
RTZ Ruatahuna 53.30 133 P **P** **11 49 05.0 +1.4**
MTW Mount Morrison 53.31 137 P **P** **11 49 04.1 +0.6**
PAWZ Paruwai Farm 53.35 137 P **P** **11 49 04.8 +0.9**
RAHZ Arahi 53.49 134 P **P** **11 49 07.1 +2.1**
TMWZ Te Maipa 53.55 137 P **P** **11 49 07.2 +1.9**
HAZ Te Kaha 53.56 132 P **P** **11 49 06.7 +1.3**
MWZ Matawai 53.59 133 P **P** **11 49 07.3 +1.6**
EVN Everest 53.67 313 P **P** **11 49 07.3 +0.2**
GTA Gaotai 53.77 332 P **P** **11 49 08.5 +1.5**
GTA S **S** **11 56 28.1 -2.9**
GTA pmax pmax
comp=Z,340nm,1.2s
GTA pmax pmax
comp=Z,630nm,4.8s
GTA LR LR
comp=Z,490nm,19.6s
GTA LR LR
comp=Z,440nm,18.2s
GTA LR LR
comp=Z,430nm,14.9s
PXZ Pawanui 53.77 135 P **P** **11 49 08.3 +1.4**
GOMU GeErMu 53.85 326 P **P** **11 49 09.0 +1.0**
GOMU PcP **PcP** **11 50 13.8 +1.9**
GOMU S **S** **11 56 36.3 +3.6**
GOMU pmax pmax
comp=Z,51nm,1.5s
PUZ Puketiti 54.03 132 P **P** **11 49 10.6 +1.8**
KOD Kodaikanal 54.03 288 *e*P **P** **11 49 08.9 -0.7**
KOD IAmb IAmb 11 49 12.0
comp=Z,40nm,1.0s
BLSP Bilaspur 54.33 304 *e*P **P** **11 49 10.5 -0.7**
BLSP IAmb IAmb 11 49 14.5
comp=Z,75nm,0.8s
HYBB Hyderabad (bro 55.43 297 IVmB_BB 11 49 18.9
comp=Z,1µm,1.9s
HYBB *e*P **P** **11 49 19.2 0.0**
HYBB *e*pP pP 11 49 49.0 -1.1
HYBB *e*PP **PP** **11 51 24.0 -0.7**
YSS Yuzhno-Sakhali 55.53 12 P **P** **11 49 19.1 -0.2**
YSS IAmb IAmb 11 49 20.6
comp=Z,50nm,0.8s
YSS Yuzhno-Sakhali 55.53 12 *c**e*P **P** **11 49 19.9 +0.6**
YSS pmax pmax
comp=Z,111nm,1.7s
YSS Yuzhno-Sakhali 55.53 12 P **P** **11 49 19.5 +0.1**
DGAR Diego Garcia 55.84 266 P **P** **11 49 20.8 -1.4**
DGAR Diego Garcia 55.84 266 P **P** **11 49 23.0 +0.8**
DGAR Diego Garcia 55.84 266 P **P** **11 49 20.8 -1.4**
DGAR pmax pmax
comp=Z,83nm,0.8s
ALBI Allahabad 56.09 307 *e*P **P** **11 49 23.1 -0.6**
KAAM Kaadhehdhoo 56.20 276 P **P** **11 49 25.7 +0.9**
HIA Hailar 56.99 353 P **P** **11 49 30.2 +0.5**
HIA Hailar 56.99 353 *i*P **P** **11 49 30.3 +0.5**
HIA pmax pmax
comp=Z,22nm,1.5s
HILR Hailar Array B 57.28 353 P **P** **11 49 32.5 +0.7**
comp=Z,8.8nm,0.5s,baz=164,slow=9.8,SNR=14
HILR PcP **PcP** **11 50 25.6 +1.1**
comp=Z,14nm,0.8s,baz=147,slow=8.4,SNR=6.7
HILR ScP **ScP** **11 54 11.8 +0.4**
comp=Z,0.8nm,0.4s,baz=142,slow=7.5,SNR=4.1
comp=Z,8.8nm,0.5s
HEH HeiHe 57.44 359 *e*P **P** **11 49 32.0 -0.8**
HEH PcP **PcP** **11 50 23.4 -1.6**
HEH S **S** **11 57 15.6 -3.4**
HEH pmax pmax
comp=Z,81nm,1.2s
HEH pmax pmax
comp=Z,130nm,5.5s
AKL Akola 58.03 300 *e*P **P** **11 49 36.9 -0.7**
ULN Ulaanbaatar 58.29 343 P **P** **11 49 39.5 +0.5**
ULN Ulaanbaatar 58.29 343 P **P** **11 49 40.0 +0.9**
ULN Ulaanbaatar 58.29 343 *c**e*P **P** **11 49 39.4 +0.4**
ULN pmax pmax
comp=Z,85nm,1.3s
ULN Ulaanbaatar 58.29 343 P **P** **11 49 40.1 +1.1**
GRNR Gornyy 58.32 6 ⇓*i*P **P** **11 49 39.3 +0.3**
GRNR pmax pmax
comp=Z,30nm,0.1s
SONM Songino Array 58.46 342 P **P** **11 49 40.9 +0.7**
comp=Z,26nm,0.9s,baz=162,slow=6.0,SNR=96
SONM PcP **PcP** **11 50 30.2 +0.9**
comp=Z,6.0nm,0.7s,baz=141,slow=3.8,SNR=3.5
SONM ScP **ScP** **11 54 17.1 +0.2**
comp=Z,2.4nm,0.8s,baz=178,slow=6.3,SNR=3.5
SONM PKPPKP **P'P'df** **12 19 14.8 -1.4**
comp=Z,1.8nm,1.0s,baz=266,slow=2.2,SNR=4.4
SONM PKP2bc **P'P'bc** **12 19 28.1 +0.7**
comp=Z,3.4nm,0.9s,baz=274,slow=1.7,SNR=9.3
comp=Z,26nm,0.9s
NRDN NARMADA NAGAR 58.72 302 *e*P **P** **11 49 43.3 +1.0**
NRDN IAmb IAmb 11 49 46.1
comp=Z,105nm,0.6s
BHPL Bhopal 58.72 303 *e*P **P** **11 49 41.1 -1.2**

BHPL IAmb IAmb 11 49 44.4
comp=Z,50nm,1.0s
JHNI Jhansi 58.77 306 *e*P **P 11 49 40.9 -1.7**
TYV Tymovskoe 59.27 10 *e*P **P 11 49 44.8 -0.7**
TYV *e*S **S 11 57 40.5 -2.2**
TYV pmax pmax
comp=Z,200nm,2.1s
TYV pmax pmax
comp=Z,54nm,1.1s
TYV smax smax
comp=N,400nm,5.0s
TYV smax smax
comp=E,300nm,5.0s
KAD Karad 59.28 295 *e*P **P 11 49 45.1 -1.2**
GUNA GUNA 59.40 304 *e*P **P 11 49 45.9 -1.1**
GUNA IAmb IAmb 11 49 49.0
comp=Z,114nm,0.9s
PTH Pithoragarh 59.41 311 *e*P **P 11 49 46.0 -1.2**
DRV Dumont d'Urvil 59.66 175 P **P 11 49 49.5 +1.5**
POO Poona 60.00 296 *e*P **P 11 49 50.6 -0.6**
POO IAmb IAmb 11 49 51.5
comp=Z,64nm,0.8s
CASY Casey 60.12 188 P **P 11 49 52.4 +1.3**
CASY IAmb IAmb 11 49 54.9
comp=Z,61nm,1.4s
JOSI Joshimath 60.41 311 *e*P **P 11 49 54.1 +0.1**
JOSI IAmb IAmb 11 49 59.1
comp=Z,132nm,0.5s
ZEA Zeya 60.93 359 *e*P **P 11 49 57.1 +0.3**
ZEA *e* 11 50 40.4
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,60nm,0.8s
NDI New Delhi 61.29 308 *e*P **P 11 49 58.3 -1.5**
KUDL Kundal 61.62 307 *e*P **P 11 50 00.3 -1.6**
KUDL IAmb IAmb 11 50 03.7
comp=Z,90nm,0.8s
ZAK Zakamensk 61.67 342 *e*P **P 11 49 58.7 -3.3**
ZAK pmax pmax
comp=Z,46nm,1.9s
UDPR Udaipur 62.36 303 *e*P **P 11 50 05.9 -1.1**
UDPR IAmb IAmb 11 50 09.1
comp=Z,104nm,0.6s
SMLA Simla 62.48 311 *e*P **P 11 50 07.7 +0.1**
SMLA IAmb IAmb 11 50 10.3
comp=Z,152nm,0.7s
TLY Talaya 62.70 343 P **P 11 50 09.3 +0.6**
TLY Talaya 62.70 343 P **P 11 50 09.9 +1.2**
TLY Talaya 62.70 343*ce*P **P 11 50 09.6 +0.9**
TLY pmax pmax
comp=Z,61nm,1.7s
TLY Talaya 62.70 343 P **P 11 50 09.8 +1.1**
TLY pP **pP 11 50 39.8 -0.8**
IRK Irkutsk 63.02 343 *e*P **P 11 50 10.7 -0.1**
IRK pmax pmax
comp=Z,205nm,1.8s
WMQ Urumqi 63.09 328 ⇑P **P 11 50 12.4 +0.9**
WMQ S **S 11 58 30.9 -0.7**
WMQ pmax pmax
comp=Z,89nm,1.1s
WMQ pmax pmax
comp=Z,560nm,3.6s
WMQ LR LR
comp=Z,790nm,19.1s
WMQ LR LR
comp=Z,280nm,20.7s
WMQ LR LR
comp=Z,200nm,24.1s
WMQ Urumqi 63.09 328 P **P 11 50 12.4 +0.9**
BHK Bhakra 63.18 311 *e*P **P 11 50 12.6 +0.2**
MOY Mondy 63.51 341 *e*P **P 11 50 15.3 +1.2**
MOY pmax pmax
comp=Z,107nm,1.7s
DHRM DHARAMSHALA 63.67 311 *e*P **P 11 50 15.5 -0.3**
DHRM IAmb IAmb 11 50 17.4
comp=Z,142nm,0.5s
KNGR Kungurtug, Tuv 63.81 338 *i*P **P 11 50 16.7 +0.5**
ALCI Alchi Leh 63.98 314 *e*P **P 11 50 17.9 -0.1**
ALCI IAmb IAmb 11 50 22.3
comp=Z,61nm,0.8s
TSSA Tissa 64.06 312 *e*P **P 11 50 17.6 -0.7**
TSSA IAmb IAmb 11 50 22.0
comp=Z,95nm,1.1s
PAF Port-aux-Franc 64.21 218 P **P 11 50 21.3 +2.6**
PAF Port-aux-Franc 64.21 218 P **P 11 50 21.3 +2.6**
PAF pmax pmax
comp=Z,1μm,1.8s
JMU Jammu 64.93 311 *e*P **P 11 50 24.5 +0.8**
PEA0B Petropavlovsk- 65.09 19 P **P 11 50 25.1 +0.8**
PEA0B Petropavlovsk- 65.09 19*ce*P **P 11 50 25.1 +0.8**
PETK Petropavlovsk- 65.09 19 P **P 11 50 25.0 +0.7**
comp=Z,91nm,0.8s,baz=197,slow=5.7,SNR=34
PETK PcP **PcP 11 50 56.6 +0.7**
comp=Z,12nm,0.6s,baz=225,slow=6.9,SNR=6.3
comp=Z,91nm,0.8s
PETK Petropavlovsk- 65.09 19 P **P 11 50 24.6 +0.3**
PET Petropavlovsk 65.33 19 P **P 11 50 26.0 +0.3**
PET IAmb IAmb 11 50 27.8
comp=Z,131nm,1.2s
PET Petropavlovsk 65.33 19 P **P 11 50 26.2 +0.5**
PET Petropavlovsk 65.33 19*ce*P **P 11 50 25.6 -0.2**
PET pmax pmax
comp=Z,29nm,1.2s
PET Petropavlovsk 65.33 19 P **P 11 50 26.3 +0.5**
comp=Z,98nm,1.2s
PET Petropavlovsk 65.33 19 P **P 11 50 26.1 +0.3**
NIL Nilore 66.58 311 P **P 11 50 34.2 -0.1**
NIL IAmb IAmb 11 50 35.5
comp=Z,165nm,1.4s
NIL Nilore 66.58 311 P **P 11 50 34.2 -0.1**
NIL pmax pmax
comp=Z,165nm,1.5s
ZSN Zaisan 67.00 329⇑*i*P **P 11 50 37.2 +0.5**
comp=Z,47nm,1.5s
ZSN Zaisan 67.00 329*c i*P **P 11 50 37.2 +0.5**
ZSN pmax pmax
comp=Z,47nm,1.5s
DGZ Jazzator, Alta 67.30 332 *i*P **P 11 50 39.0 +0.3**
DGZ pmax pmax
comp=Z,63nm,1.1s
SHLS Shalkode 67.32 323 *e*P **P 11 50 37.9 -1.1**
comp=Z,61nm,1.5s
SHLS Shalkode 67.32 323 *e*P **P 11 50 37.8 -1.1**
SHLS pmax pmax
comp=Z,61nm,1.5s
PDGK Podgornoye 67.40 323 P **P 11 50 39.7 +0.3**
KSH Kashi 67.52 318 P **P 11 50 41.5 +1.3**
KSH ScS **SKiKP 12 00 24.5 -0.1**
KSH pmax pmax
comp=Z,140nm,0.9s
TARG Taragay, Kyrgy 67.52 321 P **P 11 50 41.5 +0.9**
TARG IAmb IAmb 11 50 54.1
comp=Z,125nm,1.4s
TARG Taragay, Kyrgy 67.52 321 P **P 11 50 41.5 +0.9**
TARG pmax pmax
comp=Z,125nm,1.4s
PRZ Przheval'sk 67.58 322 P **P 11 50 42.2 +1.6**
PRZ Przheval'sk 67.58 322 P **P 11 50 42.2 +1.6**
PRZ pmax pmax
comp=Z,288nm,1.3s
UZB Uzynbulak 67.58 323⇑*i*P **P 11 50 41.0 +0.5**
comp=Z,98nm,1.4s
UZB Uzynbulak 67.58 323*c i*P **P 11 50 41.0 +0.5**
UZB pmax pmax
comp=Z,98nm,1.4s
SATY Saty 67.90 322 *e*P **P 11 50 43.1 +0.6**
comp=Z,43nm,0.9s
SATY Saty 67.90 322 *e*P **P 11 50 43.1 +0.6**
SATY pmax pmax
comp=Z,43nm,0.9s
MK31 Makanchi Array 67.92 327*ce*P **P 11 50 43.0 +0.5**
MKAR Makanchi Array 67.92 327 P **P 11 50 43.1 +0.7**
comp=Z,37nm,0.4s,baz=116,slow=8.6,SNR=656
comp=Z,37nm,0.4s
MKAR Makanchi Array 67.92 327 P **P 11 50 43.4 +0.9**
MAKZ Makanchi 68.10 327 P **P 11 50 43.9 +0.4**
MAKZ Makanchi 68.10 327 P **P 11 50 43.9 +0.4**
MAKZ pmax pmax
comp=Z,219nm,1.4s
MAKZ Makanchi 68.10 327 P **P 11 50 44.1 +0.5**
KDJ Kajisay 68.13 321 P **P 11 50 45.1 +1.1**
KDJ IAmb IAmb 11 50 46.5
comp=Z,130nm,1.1s
KDJ Kajisay 68.13 321 P **P 11 50 45.2 +1.1**
KDJ pmax pmax
comp=Z,130nm,1.1s
TNSS Tian-Shan 68.77 322 *e*P **P 11 50 48.5 +0.2**
TNSS Tian-Shan 68.77 322 *e*P **P 11 50 48.5 +0.2**
MDOK Medeo 68.78 322 *e*P **P 11 50 48.6 +0.6**
MDOK Medeo 68.78 322 *e*P **P 11 50 48.6 +0.6**
ULHL Ulahol 68.78 321 P **P 11 50 49.2 +1.0**
SNR=7.8
AAA Alma-Ata 68.89 322 *e*P **P 11 50 49.2 +0.5**
comp=Z,43nm,0.7s
AAA Alma-Ata 68.89 322 *e*P **P 11 50 49.1 +0.5**
AAA pmax pmax
comp=Z,43nm,0.7s
TDK Taldyqorghan 69.00 324⇑*i*P **P 11 50 50.0 +0.7**
comp=Z,96nm,1.3s
TDK Taldyqorghan 69.00 324*c i*P **P 11 50 49.9 +0.7**
TDK pmax pmax
comp=Z,96nm,1.3s
MA2 Magadan 69.04 12 P **P 11 50 49.8 +0.8**
comp=Z,65nm,0.9s,baz=172,slow=5.7,SNR=16
comp=Z,65nm,0.9s
MA2 Magadan 69.04 12 P **P 11 50 49.9 +0.8**
MA2 IAmb IAmb 11 50 51.3
comp=Z,85nm,0.9s
MA2 Magadan 69.04 12 P **P 11 50 50.4 +1.3**
MA2 Magadan 69.04 12*ce*P **P 11 50 50.2 +1.1**
MA2 pmax pmax
comp=Z,85nm,1.0s
MA2 Magadan 69.04 12 P **P 11 50 49.8 +0.8**
comp=Z,117nm,1.0s
BOOM Boomskoye usch 69.10 321 P **P 11 50 51.0 +0.9**
BOOM Boomskoye usch 69.10 321 P **P 11 50 51.0 +0.9**
BOOM pmax pmax
comp=Z,230nm,1.1s
YAK Yakutsk 69.24 0 P **P 11 50 50.4 +0.1**
comp=Z,382nm,0.7s,baz=179,slow=1.1,SNR=56
comp=Z,382nm,0.7s
YAK Yakutsk 69.24 0 P **P 11 50 50.2 0.0**
YAK Yakutsk 69.24 0 *e*P **P 11 50 50.9 +0.7**
YAK *e* 11 51 14.0
YAK *e**PP **pwP 11 51 26.2 -1.3**
YAK *e* 11 53 24.9
YAK *e*PPP PPP 11 55 06.4
YAK *e*S **S 11 59 43.9 -1.1**
YAK *e* 12 00 37.2
YAK *e*SS **SS 12 04 13.3 -1.3**
YAK pmax pmax
comp=Z,151nm,0.6s
YAK pmax pmax
comp=N,32nm,0.7s
YAK pmax pmax
comp=E,8.0nm,0.6s
YAK pmax pmax
comp=Z,405nm,2.8s
YAK pmax pmax
comp=N,233nm,3.2s
YAK pmax pmax
comp=E,287nm,3.3s
YAK smax smax
comp=N,493nm,3.2s
YAK smax smax
comp=E,452nm,3.3s
YAK Yakutsk 69.24 0 P **P 11 50 50.3 +0.1**
YAK PcP **PcP 11 51 14.7 +1.7**
TKM2 Tokmak 2 69.55 321 P **P 11 50 53.9 +1.0**
SNR=164
KUU Kurty 69.61 322 *e*P **P 11 50 53.7 +0.7**
comp=E,57nm,1.1s
KUU Kurty 69.61 322 *e*P **P 11 50 53.7 +0.7**
KUU pmax pmax
comp=Z,57nm,1.1s
KBK Karagaybulak 69.81 321 P **P 11 50 55.8 +1.3**
SNR=53
UCH Uchtor 69.86 320 P **P 11 50 56.0 +0.9**
SNR=147
AAK Ala-Archa 70.09 320 P **P 11 50 57.1 +1.0**
AAK Ala-Archa 70.09 320 P **P 11 50 57.4 +1.3**
AAK Ala-Archa 70.09 320 P **P 11 50 57.6 +1.5**
SNR=71
AAK Ala-Archa 70.09 320 *i*P **P 11 50 57.4 +1.3**
SNR=74
AAK Ala-Archa 70.09 320*ce*P **P 11 50 57.4 +1.3**
AAK pmax pmax
comp=Z,163nm,1.0s
CHMS Chumysh 70.11 321 P **P 11 50 57.0 +0.8**
SNR=11
KBL Kabul 70.12 311 P **P 11 50 56.6 +0.1**
KBL IAmb IAmb 11 50 58.0
comp=Z,109nm,1.6s
KBL Kabul 70.12 311 P **P 11 50 56.9 +0.4**
SNR=24
KBL Kabul 70.12 311 P **P 11 50 56.6 +0.1**
KBL pmax pmax
comp=Z,109nm,1.6s
DRK Karamyk 70.31 316 P **P 11 50 58.7 +1.0**
DRK Karamyk 70.31 316 P **P 11 50 58.7 +1.0**
DRK pmax pmax
comp=Z,128nm,0.9s
USP Ospenovka 70.41 321 P **P 11 50 59.0 +1.0**
SNR=190
SGDS Sogindy 70.42 321⇑*i*P **P 11 50 58.7 +0.7**
comp=Z,46nm,1.0s
EKS2 Erkin-Say 70.56 320 P **P 11 51 00.4 +1.5**
SNR=159
GAR Garm 71.11 315 P **P 11 51 02.8 +0.4**
ZAA0 Zalesovo Array 71.43 334 P **P 11 51 03.4 -0.4**
ZAA0 IAmb IAmb 11 51 05.4
comp=Z,88nm,0.7s
ZALV Zalesovo Beam 71.43 334 P **P 11 51 03.3 -0.4**
comp=Z,115nm,0.8s,baz=124,slow=4.9,SNR=231
ZALV PKPPKP **P'P'df 12 18 52.5 -2.3**
comp=Z,1.0nm,0.8s,baz=243,slow=1.6,SNR=3.8
comp=Z,115nm,0.8s
ZALV Zalesovo Beam 71.43 334 P **P 11 51 03.0 -0.7**
BTLS Baital 71.61 322⇑*i*P **P 11 51 05.6 +0.6**
comp=Z,81nm,1.2s
BTLS Baital 71.61 322*c i*P **P 11 51 05.6 +0.6**
BTLS pmax pmax
comp=Z,81nm,1.2s
CHGR Chuyangaron 71.77 315 P **P 11 51 06.4 +0.1**
CHGR Chuyangaron 71.77 315 P **P 11 51 06.4 +0.1**
CHGR pmax pmax
comp=Z,495nm,1.1s
VNDA Vanda 72.19 173 P **P 11 51 08.9 +1.0**
comp=Z,5.8nm,0.4s,baz=318,slow=6.1,SNR=50
comp=Z,5.8nm,0.4s
VNDA Vanda 72.19 173 P **P 11 51 08.8 +0.8**
VNDA Vanda 72.19 173 P **P 11 51 08.8 +0.8**
VNDA pmax pmax
comp=Z,42nm,1.7s
DZA Taraz 72.23 319 *e*P **P 11 51 09.5 +0.5**
comp=Z,54nm,0.9s
DZA Taraz 72.23 319 *e*P **P 11 51 09.4 +0.5**
DZA pmax pmax
comp=Z,54nm,0.9s
KURBB Kurchatov Arra 72.24 329 P **P 11 51 09.3 +0.7**
comp=Z,152nm,0.7s,baz=130,slow=4.9,SNR=864
KURBB PP **PP 11 53 50.8 -0.4**
comp=Z,7.9nm,1.0s,baz=130,slow=9.6,SNR=4.2
comp=Z,152nm,0.7s
KURK Kurchatov 72.25 329 P **P 11 51 09.1 +0.4**
KURK Kurchatov 72.25 329 P **P 11 51 09.2 +0.4**
KURK Kurchatov 72.25 329*ce*P **P 11 51 08.9 +0.2**
KURK pmax pmax
comp=Z,120nm,0.4s
KURK Kurchatov 72.25 329 P **P 11 51 09.2 +0.4**
SEY Seymchan 72.43 11 P **P 11 51 10.6 +1.0**
comp=Z,96nm,0.8s,baz=216,slow=4.5,SNR=101
comp=Z,96nm,0.8s
SEY Seymchan 72.43 11*ce*P **P 11 51 10.7 +1.2**
SEY pmax pmax
comp=Z,196nm,1.3s
IUG luzhnay 72.73 318⇑*i*P **P 11 51 12.6 +0.6**
comp=Z,52nm,0.9s
IUG luzhnay 72.73 318*c i*P **P 11 51 12.5 +0.6**
IUG pmax pmax
comp=Z,52nm,0.9s
KK31 Karatay Array 72.86 319 P **P 11 51 13.0 +0.4**
KK31 Karatay Array 72.86 319 *i*P **P 11 51 13.0 +0.4**
KKAR Karatay Array 72.86 319 P **P 11 51 13.0 +0.4**
KKAR Karatay Array 72.86 319 P **P 11 51 13.0 +0.4**
SBA Scott Base 73.09 172 P **P 11 51 15.0 +1.7**
SBA Scott Base 73.09 172 P **P 11 51 15.0 +1.7**
SBA pmax pmax
comp=Z,72nm,1.7s
CHM Chimkent 73.10 318 *e*P **P 11 51 14.6 +0.7**
CHM Chimkent 73.10 318 *e*P **P 11 51 14.6 +0.7**
BRLS Borolday 73.27 319⇑*i*P **P 11 51 15.5 +0.5**
comp=Z,84nm,0.9s
BRLS Borolday 73.27 319*c i*P **P 11 51 15.5 +0.5**
BRLS pmax pmax
comp=Z,85nm,0.9s
NGCH Negor - Chabah 73.35 299 P **P 11 51 16.9 +1.2**
JLN Jalan Bani Buh 74.00 295 P **P 11 51 19.4 -0.2**
MAW Mawson 74.13 201 P **P 11 51 21.3 +1.8**
comp=Z,17nm,1.1s
MAW Mawson 74.13 201 P **P 11 51 21.4 +1.9**
comp=Z,63nm,0.8s,baz=64,slow=5.6,SNR=63
comp=Z,63nm,0.8s
WBK Wadi Bani Khal 74.51 296 P **P 11 51 22.7 +0.1**
KIWB Kanaga Island 74.90 31 IAmb IAmb 11 51 26.5
comp=Z,106nm,0.9s
MHTO MHTO 75.00 294 P **P 11 51 25.1 -0.3**
DQM DQM 75.14 293 P **P 11 51 26.8 +0.6**
ADK Adak 75.15 31 P **P 11 51 26.1 +0.5**
ADK IAmb IAmb 11 51 34.4
comp=Z,64nm,0.9s
ADK Adak 75.15 31 P **P 11 51 26.9 +1.3**
ADK Adak 75.15 31 P **P 11 51 26.1 +0.5**
ADK pmax pmax
comp=Z,64nm,1.0s
JMDO Jabal Madar 75.22 295 P **P 11 51 26.7 0.0**
HRA Herat 75.27 308 P **P 11 51 27.3 +0.4**
HRA IAmb IAmb 11 51 28.6
comp=Z,87nm,1.1s
SMDO Samad 75.44 296 P **P 11 51 28.0 -0.1**
BSY Bisya 76.12 296 P **P 11 51 32.0 +0.1**
HOQ Hoqain 76.23 296 P **P 11 51 32.9 +0.4**
SNR=9.9
SHAO Shalim 76.48 290 P **P 11 51 34.1 +0.2**
SHAO Shalim 76.48 290 P **P 11 51 33.5 -0.4**
ATKA Atka Island 76.62 32 IAmb IAmb 11 51 35.5
comp=Z,113nm,1.0s
ATKA Atka Island 76.62 32 P **P 11 51 34.9 +1.0**
ARQ Araqi 76.87 296 P **P 11 51 36.2 +0.1**
DMTO DMTO 77.04 290 P **P 11 51 37.1 0.0**
SOHO SOHO 77.06 297 P **P 11 51 37.2 +0.2**
SOHO SOHO 77.06 297 *i*P **P 11 51 37.1 +0.1**
SNR=5.9
UOSS Minazif 77.55 297 P **P 11 51 39.3 -0.5**
UOSS Minazif 77.55 297 P **P 11 51 40.5 +0.7**
MDH Madha 77.55 298 P **P 11 51 40.7 +0.9**
HATD Hatta, Dubai 77.58 297 P **P 11 51 40.5 +0.5**
SNR=6.6
HATD Hatta, Dubai 77.58 297 *i*P **P 11 51 40.4 +0.5**
SNR=12
ASHO Ashiyiah 77.61 297 P **P 11 51 40.6 +0.4**
ASHO P **PcP 11 51 43.0 -6.9**
SNR=6.6
ASHO Ashiyiah 77.61 297 *i*P **P 11 51 40.3 +0.2**
SNR=17
MSFE Esma-Masafi 77.69 298 *i*P **P 11 51 40.9 +0.3**
SNR=19
MASF Masafi 77.69 298 P **P 11 51 41.2 +0.6**
SNR=6.7
RBK Rabkut 77.69 290 P **P 11 51 40.7 0.0**
BANOM Banah 77.71 298 P **P 11 51 41.3 +0.6**
BANOM Banah 77.71 298 *i*P **P 11 51 41.2 +0.6**
SNR=14
ALNE Al Ain 77.73 297 P **P 11 51 40.8 0.0**
SNR=7.6
ALNE Al Ain 77.73 297 *i*P **P 11 51 40.6 -0.2**
SNR=10
BVA0 Borovoye Array 77.78 328 P **P 11 51 40.0 -0.4**
BVAR Borovoye Array 77.78 328 P **P 11 51 40.5 +0.1**
comp=Z,109nm,0.8s,baz=130,slow=6.6,SNR=276
comp=Z,109nm,0.8s
SHME Shamm 77.88 299 P **P 11 51 42.1 +0.6**
SNR=5.2
SHME Shamm 77.88 299 *i*P **P 11 51 41.6 +0.1**
SNR=14
DOK Doka 77.99 291 P **P 11 51 41.4 -0.9**
NAZ Nazwa, Dubai 78.03 297 *i*P **P 11 51 42.7 +0.2**
SNR=7.9
FAQ Al Faqa, Dubai 78.04 297 P **P 11 51 42.1 -0.3**
SNR=7.3
FAQ Al Faqa, Dubai 78.04 297 *i*P **P 11 51 42.2 -0.3**
SNR=21
WHFO Wadi Hawf 78.18 290 P **P 11 51 42.8 -0.6**
ASUD Al Ashush, Dub 78.24 297 P **P 11 51 43.5 -0.1**
ASUD Al Ashush, Dub 78.24 297 *i*P **P 11 51 43.3 -0.2**
SNR=8.1
ABTO Aybut 78.51 289 P **P 11 51 45.2 0.0**
TIXI Tiksi 78.90 0 P **P 11 51 45.3 -0.8**
TIXI IAmb IAmb 11 51 47.4
comp=Z,95nm,0.9s
TIXI Tiksi 78.90 0*ce*P **P 11 51 45.5 -0.6**
TIXI pmax pmax
comp=Z,111nm,1.0s
TIXI Tiksi 78.90 0 P **P 11 51 45.4 -0.8**
MZWR Madinat Zayed 79.33 296 P **P 11 51 51.1 +1.5**
FOMA Nahampoana Res 79.52 246 IAmb IAmb 11 51 53.4
comp=Z,86nm,1.2s
MZR Muzera 79.52 295 P **P 11 51 51.1 +0.4**
SNR=6.3
MZR Muzera 79.52 295 *i*P **P 11 51 50.3 -0.3**
SNR=22
ABPO Ambohimpanom 79.68 252 P **P 11 51 52.0 +0.2**
ABPO Ambohimpanom 79.68 252 P **P 11 51 52.0 +0.2**
ABPO pmax pmax
comp=Z,70nm,1.4s
BILL Bilibino 79.79 13 P **P 11 50 50.9 -0.2**
BILL Bilibino 79.79 13*ce*P **P 11 51 51.9 +0.8**
BILL pmax pmax
comp=Z,27nm,1.3s
NIKH Nikolski High 79.85 33 P **P 11 51 52.1 +0.4**
baz=243
PPT Papeete 79.85 107 P **P 11 51 54.9 +2.3**
comp=Z,38nm,0.9s,baz=6.3,slow=9.2,SNR=3.9
comp=Z,38nm,0.9s
VOI Vohitsoka 79.88 249 P **P 11 51 52.8 0.0**
VOI IAmb IAmb 11 51 55.0
comp=Z,122nm,0.8s
VOI Vohitsoka 79.88 249 P **P 11 51 53.7 +0.9**
SNR=6.6
JRN Qarnain Island 80.51 297 P **P 11 51 56.1 +0.2**
SPIA Saint Paul Isl 81.10 29 P **P 11 51 59.0 +0.7**
baz=241
P08K Saint George I 81.16 30 P **P 11 51 58.6 0.0**
baz=242
UNV Unalaska Valle 81.49 33 P **P 11 52 00.7 +0.3**
baz=245
TRNA Turayna 81.92 296 P **P 11 52 03.7 +0.4**
AB31 Akbulak array 82.09 322 P **P 11 52 03.3 -0.4**
AB31 Akbulak array 82.09 322 *i*P **P 11 52 03.3 -0.4**
ABKAR Akbulak array 82.09 322 P **P 11 52 03.5 -0.2**
SMRA Abu-Samra 82.26 296 P **P 11 52 04.8 -0.3**
SMRA P **PcP 11 52 08.0 -2.1**
SNR=5.8
SHMA Al-Shehemyia 82.37 297 P **P 11 52 06.1 +0.4**
QSPA South Pole Qui 82.57 180 P **P 11 52 08.8 +2.8**
comp=Z,20nm,0.5s,baz=343,slow=1.0,SNR=191
QSPA PKKPbc **PKKPbc 12 10 33.8 -0.4**
comp=Z,2.7nm,0.6s,baz=351,slow=0.7,SNR=13
comp=Z,20nm,0.5s
QSPA South Pole Qui 82.57 180 P P 11 52 10.9 +4.9
QSPA x x 11 52 29.4
SYO Syowa Base 82.85 201⇑*i*P **P 11 52 08.8 +1.5**
SYO Syowa Base 82.85 201‖*ep*P pP 11 52 40.8 0.0
FALS False Pass 83.56 33 P **P 11 52 11.7 +0.6**
baz=248
AKTO Aktyubinsk 83.67 323 P **P 11 52 11.7 -0.1**
GAMB Gambell 83.75 23 P **P 11 52 12.8 +0.9**
baz=239
M11K Mekoryuk 84.44 27 P **P 11 52 15.9 +0.5**
baz=245
SVE Sverdlovsk 84.50 329*de*P **P 11 52 15.6 -0.3**
SVE pmax pmax
comp=Z,121nm,1.1s
S12K Black Hills 84.59 32 P **P 11 52 16.6 +0.3**
baz=249
SDPT Sand Point 85.31 33 P **P 11 52 20.2 +0.3**
baz=250
ARTI Arti 85.50 328 PKKPbc PKKPbc 12 10 25.4 -1.3
comp=Z,1.8nm,0.4s,baz=317,slow=6.2,SNR=4.4
ARTI Arti 85.50 328 P **P 11 52 20.4 -0.4**
ARTI IAmb IAmb 11 52 22.2
comp=Z,123nm,1.1s
ARTI Arti 85.50 328*c i*P **P 11 52 20.1 -0.8**
ARTI *PP **pP 11 52 53.3 -2.3**
ARTI 11 55 38.8

ARTI				S	SKSac	12 02 32.0	-1.1		
ARTI				pmax	pmax				
	comp=Z,105nm,1.0s								
CHNA	Chernabura Isl	85.62	33	P	P	11 52 21.8	+0.4		
	baz=251								
M13K	Dall Lake	85.74	27	IAmb	IAmb	11 52 24.1			
	comp=Z,80nm,1.0s								
M13K	Dall Lake	85.74	27	P	P	11 52 22.8	+0.9		
	baz=247								
K13K	Kusilvak Mount	85.77	26	P	P	11 52 22.9	+0.9		
	baz=246								
TNA	Tin City	86.05	22	P	P	11 52 23.9	+0.6		
	baz=243								
O14K	Tigyukauivet M	86.28	29	IAmb	IAmb	11 52 26.6			
	comp=Z,73nm,1.1s								
O14K	Tigyukauivet M	86.28	29	P	P	11 52 25.3	+0.7		
	baz=249								
N14K	Kuskokwak Cree	86.33	28	IAmb	IAmb	11 52 26.8			
	comp=Z,86nm,1.2s								
N14K	Kuskokwak Cree	86.33	28	P	P	11 52 24.6	-0.2		
	baz=249								
L14K	Kuka Creek	86.40	27	P	P	11 52 25.7	+0.5		
	baz=248								
M14K	Bethel	86.50	27	P	P	11 52 26.3	+0.6		
	baz=248								
J14K	Nanvaranak Lak	86.57	25	IAmb	IAmb	11 52 28.3			
	comp=Z,87nm,1.4s								
J14K	Nanvaranak Lak	86.57	25	P	P	11 52 26.7	+0.8		
	baz=247								
ANM	Nome	86.57	23	P	P	11 52 26.7	+0.7		
	baz=245								
F14K	Arctic Creek	86.60	22	P	P	11 52 26.9	+0.8		
	baz=244								
RAYN	Ar Rayn	86.82	294	P	P	11 52 27.9	-0.2		
O15K	Ungalikthiuk R	86.95	29	P	P	11 52 28.4	+0.5		
	baz=250								
L15K	Ungalak Mounta	87.06	27	P	P	11 52 28.5	+0.1		
	baz=249								
M15K	Kasigluk River	87.07	28	P	P	11 52 29.2	+0.8		
	baz=249								
N15K	Kwethluk River	87.16	28	P	P	11 52 29.4	+0.5		
	baz=250								
K15K	Wolf Creek Mou	87.27	26	IAmb	IAmb	11 52 31.7			
	comp=Z,176nm,1.9s								
K15K	Wolf Creek Mou	87.27	26	P	P	11 52 29.9	+0.6		
	baz=249								
G15K	Niukluk	87.27	23	P	P	11 52 30.0	+0.6		
	baz=246								
F15K	North Star Dit	87.33	22	P	P	11 52 29.9	+0.3		
	baz=246								
P16K	Nushagak River	87.80	30	P	P	11 52 32.1	+0.2		
	baz=252								
H16K	Elim	87.84	24	P	P	11 52 32.5	+0.5		
	baz=248								
N16K	Nishlik Lake	87.89	28	P	P	11 52 32.8	+0.4		
	baz=251								
O16K	Kokwok River B	87.92	29	IAmb	IAmb	11 52 34.5			
	comp=Z,42nm,1.1s								
O16K	Kokwok River B	87.92	29	P	P	11 52 32.9	+0.4		
	baz=252,SNR=6.7								
L16K	Owhat River	87.97	27	P	P	11 52 33.0	+0.3		
	baz=250								
M16K	Timber Creek	87.97	28	IAmb	IAmb	11 52 34.9			
	comp=Z,52nm,1.1s								
M16K	Timber Creek	87.97	28	P	P	11 52 33.4	+0.6		
	baz=251,SNR=9.9								
J16K	Anvik River	88.02	25	IAmb	IAmb	11 52 35.3			
	comp=Z,53nm,0.8s								
J16K	Anvik River	88.02	25	P	P	11 52 33.7	+0.8		
	baz=249								
CHIR	Chirikof Islan	88.08	33	P	P	11 52 33.2	-0.2		
	baz=254								
G16K	Koyuk River	88.08	23	P	P	11 52 33.3	+0.2		
	baz=248								
C16K	Lisburne Hills	88.16	20	IAmb	IAmb	11 52 34.6			
	comp=Z,47nm,0.9s								
C16K	Lisburne Hills	88.16	20	P	P	11 52 33.8	+0.3		
	baz=245								
I17K	Unalakleet	88.19	25	P	P	11 52 33.9	+0.2		
	baz=249								
R17L	Mt. Peulik Vol	88.20	31	P	P	11 52 33.7	-0.2		
	baz=253								
AKT	Akhty	88.21	312	eP	P	11 52 32.9	-1.6		
AKT				e*PP	pP	11 53 06.1	-3.2		
AKT				e		11 56 01.3			
AKT				pmax	pmax				
	comp=Z,104nm,1.0s								
Q16K	King Salmon	88.35	30	P	P	11 52 34.3	-0.2		
	baz=253								
O17K	Koliganek Bris	88.46	29	P	P	11 52 35.0	-0.1		
	baz=253								
P17K	Kvichak River	88.61	30	P	P	11 52 35.8	0.0		
	baz=253								
Q17K	Contact Creek	88.62	31	P	P	11 52 35.6	-0.4		
	baz=254								
L17K	Donlin	88.63	27	P	P	11 52 36.1	+0.3		
	baz=252								
N17K	Nushagak Hills	88.64	28	IAmb	IAmb	11 52 38.4			
	comp=Z,51nm,1.4s								
N17K	Nushagak Hills	88.64	28	P	P	11 52 36.6	+0.7		
	baz=252								
MAK	Makhachkala	88.67	313	c iP	P	11 52 32.6	-3.8		
MAK				e*PP	pP	11 53 10.3	-0.9		
MAK				e		12 02 47.1			
MAK				eSS	SS	12 09 02.4	-4.0		
MAK				pmax	pmax				
	comp=Z,341nm,1.5s								
MAK				MLR	MLR				
	comp=Z,2µm,17.0s								
D17K	Noatak River	88.70	21	P	P	11 52 36.2	+0.2		
	baz=247								
J17K	VABM Dome	88.70	25	IAmb	IAmb	11 52 37.9			
	comp=Z,36nm,0.9s								
J17K	VABM Dome	88.70	25	P	P	11 52 36.4	+0.3		
	baz=251								
G17K	Kiwalik Mounta	88.78	23	P	P	11 52 37.0	+0.6		
	baz=249								
M17K	Holitna River	88.79	28	IAmb	IAmb	11 52 40.0			
	comp=Z,28nm,0.8s								
M17K	Holitna River	88.79	28	P	P	11 52 37.0	+0.4		
	baz=252								
K17K	Iditarod	88.82	26	IAmb	IAmb	11 52 39.1			
	comp=Z,54nm,0.9s								
K17K	Iditarod	88.82	26	P	P	11 52 37.1	+0.4		
	baz=252								
H17K	Granite Mounta	88.88	24	IAmb	IAmb	11 52 38.4			
	comp=Z,30nm,0.8s								
H17K	Granite Mounta	88.88	24	P	P	11 52 37.3	+0.3		
	baz=250								
F17K	Baldwin Pennin	88.89	22	P	P	11 52 37.1	+0.2		
	baz=249								
RDOG	Red Dog Mine	88.91	20	IAmb	IAmb	11 52 38.2			
	comp=Z,50nm,1.1s								
RDOG	Red Dog Mine	88.91	20	P	P	11 52 37.1	+0.1		
	baz=247								
E17K	Hotham Inlet	88.92	22	P	P	11 52 37.4	+0.4		
	baz=248								
C17K	DeLong Mountai	88.98	20	P	P	11 52 37.5	+0.1		
	baz=247								
R18K	Karluk	89.17	32	P	P	11 52 38.6	+0.2		
	baz=255								
Q18K	Katmai Hardscr	89.17	31	P	P	11 52 39.0	+0.4		
	baz=254								
P18K	Big Mountain,	89.26	30	P	P	11 52 39.4	+0.5		
	baz=254								
N18K	Kilae Creek	89.30	28	P	P	11 52 39.7	+0.6		
	baz=254								
L18K	Granite Mounta	89.38	27	IAmb	IAmb	11 52 41.2			
	comp=Z,30nm,1.0s								
L18K	Granite Mounta	89.38	27	P	P	11 52 39.9	+0.6		
	baz=253,SNR=9.4								
O18K	Koktuh Hills	89.40	29	P	P	11 52 40.0	+0.5		
	baz=254								
E18K	Tukpahlearik C	89.48	21	IAmb	IAmb	11 52 41.1			
	comp=Z,35nm,0.9s								
E18K	Tukpahlearik C	89.48	21	P	P	11 52 40.1	+0.3		
	baz=249								
F18K	Selawik	89.55	22	P	P	11 52 40.5	+0.5		
	baz=250								
M18K	Stony River	89.56	28	P	P	11 52 40.7	+0.5		
	baz=254								
H18K	Honhosa River	89.57	24	P	P	11 52 40.1	-0.1		
	baz=251								
OHAK	Old Harbor	89.69	32	IAmb	IAmb	11 52 43.1			
	comp=Z,58nm,1.3s								
OHAK	Old Harbor	89.69	32	P	P	11 52 42.4	+1.5		
OHAK	Old Harbor	89.69	32	P	P	11 52 40.9	+0.1		
	baz=256								
G18K	Tagagawik	89.70	23	P	P	11 52 40.5	-0.3		
	baz=251								
C18K	Utukok River	89.72	20	P	P	11 52 40.4	-0.5		
	baz=249								
J18K	Innoko River	89.73	26	P	P	11 52 40.9	-0.1		
	baz=253								
B18K	Kokolik River	89.78	19	P	P	11 52 41.0	-0.1		
	baz=248								
O19K	Port Alsworth	89.92	29	P	P	11 52 42.0	+0.1		
	baz=255								
Q19K	Cape Douglas,	89.93	30	P	P	11 52 42.5	+0.5		
	baz=256								
N19K	Bonanza Creek	90.00	28	P	P	11 52 42.7	+0.3		
	baz=255								
GCSA	Galena City Sc	90.05	24	P	P	11 52 42.6	+0.2		
	baz=253								
L19K	White Mountain	90.19	27	IAmb	IAmb	11 52 44.9			
	comp=Z,31nm,1.0s								
L19K	White Mountain	90.19	27	P	P	11 52 43.6	+0.4		
	baz=255,SNR=20								
KDAK	Kodiak Island	90.19	32	P	P	11 52 42.8	-0.4		
	baz=256								
GNI	Garni	90.20	310	P	P	11 52 43.7	-0.2		
GNI	Garni	90.20	310	ceP	P	11 52 44.5	+0.6		
GNI				pmax	pmax				
	comp=Z,25nm,1.3s								
P19K	Oil Pt	90.31	30	P	P	11 52 43.9	+0.1		
	baz=256								
A19K	Wainwright	90.33	19	P	P	11 52 43.5	0.0		
	baz=249								
M19K	Big River Lodg	90.33	27	P	P	11 52 44.6	+0.7		
	baz=255								
F19K	Shaleruckik Mo	90.33	22	P	P	11 52 44.1	+0.4		
	baz=252								
J19K	Poorman	90.35	25	P	P	11 52 44.2	+0.3		
J19K	Poorman	90.35	25	P	P	11 52 44.3	+0.5		
	baz=254								
G19K	Purcell Mounta	90.38	23	IAmb	IAmb	11 52 45.3			
	comp=Z,40nm,1.1s								
G19K	Purcell Mounta	90.38	23	P	P	11 52 44.5	+0.5		
	baz=253								
C19K	Lookout Ridge	90.42	20	P	P	11 52 44.4	+0.3		
	baz=250								
KIBK	Kibwezi	90.44	268	P	P	11 52 46.5	+0.9		
	SNR=6.1								
H19K	Roundabout Mou	90.45	24	IAmb	IAmb	11 52 45.7			
	comp=Z,39nm,1.1s								
H19K	Roundabout Mou	90.45	24	P	P	11 52 44.5	+0.3		
	baz=253								
BELG	Belogornoye	90.46	323	i P	P	11 52 43.9	-0.6		
BELG				pmax	pmax				
	comp=Z,8.0nm,1.0s								
Q20K	Shuyak Island	90.48	31	P	P	11 52 45.2	+0.6		
	baz=257								
L20K	Farewell, AK	90.71	27	IAmb	IAmb	11 52 47.3			
	comp=Z,31nm,0.8s								
L20K	Farewell, AK	90.71	27	P	P	11 52 46.0	+0.4		
	baz=255								
E19K	Redstone River	90.73	22	IAmb	IAmb	11 52 46.8			
	comp=Z,38nm,0.8s								
E19K	Redstone River	90.73	22	P	P	11 52 45.6	+0.1		
	baz=252								
D19K	Kuna River	90.73	21	IAmb	IAmb	11 52 46.7			
	comp=Z,43nm,0.8s								
D19K	Kuna River	90.73	21	P	P	11 52 45.7	+0.1		
	baz=252								
KIRV	Kirov	90.77	329	ceP	P	11 52 45.1	-0.7		
K20K	Telida	90.85	26	P	P	11 52 46.7	+0.5		
	baz=255								
M20K	Styx River	90.90	28	IAmb	IAmb	11 52 48.1			
	comp=Z,25nm,0.9s								
M20K	Styx River	90.90	28	P	P	11 52 47.0	+0.4		
	baz=256,SNR=11								
J20K	Nowinta River	91.03	25	P	P	11 52 47.4	+0.5		
	baz=255								
I20K	Naaghedeneel	91.05	25	P	P	11 52 47.6	+0.6		
	baz=255								
H20K	Anotleneega Mo	91.07	24	P	P	11 52 47.1	-0.1		
	baz=255								
HOM	Homer	91.10	30	P	P	11 52 47.4	0.0		
	baz=257								
F20K	Avaraart Lake	91.17	22	P	P	11 52 47.7	+0.2		
	baz=254								
N20K	Mount Spurr	91.17	28	P	P	11 52 47.9	+0.1		
	baz=257								
SPCR	Spurr Chakacha	91.17	28	P	P	11 52 47.9	+0.1		
	baz=257								
D20K	Etivluk River	91.32	21	IAmb	IAmb	11 52 49.4			
	comp=Z,44nm,1.0s								
D20K	Etivluk River	91.32	21	P	P	11 52 48.7	+0.4		
	baz=253								
E20K	Nigu River	91.34	21	P	P	11 52 48.7	+0.3		
	baz=253								
KMBO	Kilima Mbogo	91.39	269	P	P	11 52 50.7	+0.6		
	comp=Z,17nm,0.9s,baz=58,slow=4.1,SNR=16								
	comp=Z,17nm,0.9s								
KMBO	Kilima Mbogo	91.39	269	ceP	P	11 52 50.5	+0.4		
KMBO				pmax	pmax				
	comp=Z,17nm,0.9s								
B20K	Meade River	91.52	19	IAmb	IAmb	11 52 50.0			
	comp=Z,61nm,1.1s								
B20K	Meade River	91.52	19	P	P	11 52 48.9	-0.2		
	baz=253								
BRSE	Bradley Lake S	91.56	30	P	P	11 52 49.1	-0.5		
	baz=258								
PPLA	Purkeypile	91.57	27	IAmb	IAmb	11 52 50.5			
	comp=Z,47nm,1.3s								
PPLA	Purkeypile	91.57	27	P	P	11 52 49.5	-0.2		
	baz=257								
CAPN	Captain Cook N	91.58	29	P	P	11 52 48.8	-0.7		
	baz=258								
NVL	N'lazarevskaya	91.61	197	eP	P	11 52 44.8	-4.8		
NVL				eS	SKSac	12 03 05.2	-3.9		
NVL				eSS	SS	12 09 44.5	-2.4		
NVL				eSSS	SSS	12 13 23.6			
NVL				pmax	pmax				
	comp=Z,17nm,0.6s								
NVL				smax	smax				
	comp=E,178nm,12.5s								
IMAR	Indian Mountai	91.65	24	P	P	11 52 49.7	-0.1		
SKT	Skwentna	91.66	28	IAmb	IAmb	11 52 50.4			
	comp=Z,32nm,1.0s								
SKT	Skwentna	91.66	28	P	P	11 52 48.4	-1.6		
	baz=258,SNR=8.5								
CHUM	Lake Minchumin	91.74	26	P	P	11 52 49.7	-0.6		
	baz=257,SNR=18								
G21K	Allakaket	91.88	23	P	P	11 52 50.6	-0.2		
	baz=256								
SUA	Susitna One	91.92	28	IAmb	IAmb	11 52 52.1			
	comp=Z,41nm,1.0s								
SUA	Susitna One	91.92	28	P	P	11 52 50.6	-0.7		
	baz=258								
H21K	Melozitna Rive	91.95	24	P	P	11 52 50.9	-0.4		
	baz=256,SNR=5.7								
SLKM	Skilak Lake	91.97	29	IAmb	IAmb	11 52 52.6			
	comp=Z,57nm,1.1s								
F21K	Alatna River	92.06	22	P	P	11 52 51.7	0.0		
	baz=256								
C21K	Knifeblade Rid	92.08	20	P	P	11 52 51.7	-0.1		
	baz=255								
A21K	Barrow	92.09	18	P	P	11 52 50.8	-0.9		
	baz=253								
KBZ	Khabaz	92.11	314	P	P	11 52 52.1	-0.3		
	comp=Z,8.2nm,0.9s,baz=138,slow=4.6,SNR=16								
	comp=Z,8.2nm,0.9s								
KBZ	Khabaz	92.11	314	ceP	P	11 52 52.3	-0.1		
KBZ				pmax	pmax				
	comp=Z,12nm,1.0s								
L22K	Petersville	92.13	27	IAmb	IAmb	11 52 53.0			
	comp=Z,31nm,1.0s								
I21K	Tana	92.17	25	P	P	11 52 51.3	-0.9		
	baz=257,SNR=5.6								
E21K	Killik River	92.18	21	P	P	11 52 51.2	-1.1		
	baz=256								
O22K	Cooper Landing	92.21	29	P	P	11 52 51.0	-1.4		
	baz=259								
B21K	Ikpikpuk River	92.26	20	IAmb	IAmb	11 52 53.7			
	comp=Z,29nm,0.7s								
B21K	Ikpikpuk River	92.26	20	P	P	11 52 51.2	-1.4		
	baz=255,SNR=8.3								
M22K	Willow	92.27	28	P	P	11 52 51.4	-1.3		
	baz=259,SNR=8.2								
KTH	Kantishna Hill	92.27	26	IAmb	IAmb	11 52 53.8			
	comp=Z,38nm,1.0s								
SEW	Seward	92.27	30	P	P	11 52 51.9	-0.9		
	baz=259								
KIV	Kislovodsk	92.29	314	eP	P	11 52 53.3	-0.1		
KIV				pmax	pmax				
	comp=Z,9.0nm,1.1s								
RC01	Rabbit Creek A	92.32	29	P	P	11 52 52.3	-0.7		
	baz=259								
CUT	Chulitna	92.33	27	P	P	11 52 52.6	-0.4		
	baz=259								
BPAW	Bear Paw Mtn.	92.36	26	P	P	11 52 53.0	-0.2		
	baz=258								
A22K	Sinclair Lake	92.51	19	P	P	11 52 53.4	-0.2		
	baz=255								
TRF	Thorofare Moun	92.53	26	P	P	11 52 53.3	-0.9		
	baz=259								
H22K	Ishtalitna Cre	92.57	24	P	P	11 52 53.9	-0.2		
	baz=258,SNR=5.8								
F22K	John River	92.62	22	P	P	11 52 54.3	0.0		
	baz=257								
MLY	Manley	92.65	25	IAmb	IAmb	11 52 56.7			
	comp=Z,23nm,0.9s								
MLY	Manley	92.65	25	P	P	11 52 54.4	-0.1		
	baz=258,SNR=24								
PMR	Palmer	92.70	28	P	P	11 52 54.1	-0.6		
	baz=260								
G22K	Bettles	92.74	23	P	P	11 52 54.5	-0.3		
	baz=258								
D22K	Ayikyak River	92.75	21	P	P	11 52 54.4	-0.5		
	baz=257								
B22K	Teshekpuk Lake	92.84	19	P	P	11 52 55.2	0.0		
	baz=256								
POGA	Pongola	92.88	242	P	P	11 52 55.9	-0.6		
E22K	Anaktuvuk Pass	92.89	22	IAmb	IAmb	11 52 57.0			
	comp=Z,48nm,1.4s								
E22K	Anaktuvuk Pass	92.89	22	P	P	11 52 55.4	-0.2		
	baz=258,SNR=10								
PWL	Port Wells	92.95	29	IAmb	IAmb	11 52 57.5			
	comp=Z,43nm,1.2s								
PWL	Port Wells	92.95	29	P	P	11 52 55.6	-0.4		
	baz=260,SNR=5.4								
KNK	Knik Glacier	92.99	29	P	P	11 52 55.7	-0.4		
	baz=260,SNR=6.1								
SML	Sawmill	93.11	28	P	P	11 52 57.1	+0.3		
SML	Sawmill	93.11	28	P	P	11 52 56.1	-0.7		
	baz=260,SNR=10								
MCK	McKinley	93.18	26	IAmb	IAmb	11 52 57.2			
	comp=Z,48nm,1.0s								
MCK	McKinley	93.18	26	P	P	11 52 56.3	-0.7		
	baz=260,SNR=17								
WAT1	Susitna Watana	93.19	27	P	P	11 52 56.3	-0.7		
	baz=260								
I23K	Minto, Yukon-K	93.25	25	P	P	11 52 56.8	-0.4		
	baz=260,SNR=27								
P23K	Montague Islan	93.27	30	P	P	11 52 56.6	-0.8		
	baz=261								
NEA2	Nenana	93.27	25	P	P	11 52 57.0	-0.3		
	baz=260,SNR=12								
G23K	Bananza Creek	93.28	23	IAmb	IAmb	11 52 58.8			
	comp=Z,33nm,0.9s								
G23K	Bananza Creek	93.28	23	P	P	11 52 57.3	-0.1		
	baz=259,SNR=28								
H23K	Yukon River	93.30	24	P	P	11 52 57.4	-0.1		
	baz=259								
COLD	Coldfoot	93.31	23	IAmb	IAmb	11 52 58.9			
	comp=Z,20nm,0.8s								
COLD	Coldfoot	93.31	23	P	P	11 52 57.3	-0.2		
	baz=259,SNR=17								
M23K	Glacier View	93.40	28	P	P	11 52 57.7	-0.3		
	baz=261,SNR=6.3								
KOPT	Kop Dagi	93.41	310	IAmb	IAmb	11 53 06.7			
	comp=Z,25nm,0.9s								
TROLL	Troll, Antarti	93.47	195	⇑P	P	11 53 00.1	+1.7		
	comp=Z,2µm,0.7s								
TROLL				⇓SKSac	SKSac	12 03 19.1	-0.6		
TROLL				⇑PKKPbc	PKKPdf	12 10 04.0	-0.4		
	comp=Z,88nm,0.7s								
D23K	Nanushuk River	93.47	21	IAmb	IAmb	11 53 00.0			
	comp=Z,41nm,1.1s								
D23K	Nanushuk River	93.47	21	P	P	11 52 58.2	0.0		
	baz=259,SNR=16								
WAT6	Susitna Watana	93.52	27	P	P	11 52 58.3	-0.5		
	baz=261,SNR=9.1								
GLI	Glacier Island	93.55	29	P	P	11 52 58.8	0.0		
	baz=261								
SCM	Sheep Creek Mo	93.59	28	P	P	11 52 58.5	-0.5		
	baz=261,SNR=5.5								
WRH	Wood River Hil	93.67	26	IAmb	IAmb	11 52 59.2			
	comp=Z,38nm,0.9s								
C23K	Itkillik River	93.67	20	IAmb	IAmb	11 53 00.1			
	comp=Z,29nm,0.8s								
C23K	Itkillik River	93.67	20	P	P	11 52 59.5	+0.5		
	baz=259								
E23K	Chandalar	93.68	22	P	P	11 52 59.5	+0.2		
	baz=260								
Q23K	Middleton Isla	93.71	31	P	P	11 52 59.6	+0.2		
	baz=262								
DHY	Denali Highway	93.76	27	P	P	11 52 59.5	-0.3		
	baz=261,SNR=19								
TOLK	Toolik Lake Re	93.81	21	P	P	11 52 59.9	+0.1		
	baz=260,SNR=5.7								
CCB	Clear Creek Bu	93.82	25	IAmb	IAmb	11 53 00.2			
	comp=Z,37nm,0.8s								
COLA	College	93.83	25	P	P	11 52 59.8	0.0		
COLA	College	93.83	25	P	P	11 52 58.8	-1.1		
COLA	College	93.83	25	P	P	11 52 59.8	0.0		
COLA				pmax	pmax				
	comp=Z,14nm,0.8s								
COLA	College	93.83	25	P	P	11 52 59.9	0.0		
	baz=261								
VRH	Novokhopyorsk	93.88	321	eP	P	11 52 57.6	-2.8		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.9s								
H24K	Noodor Dome	93.98	24	P	P	11 53 00.8	+0.2		
H24K				IAmb	IAmb	11 53 01.9			
	comp=Z,37nm,1.0s								
H24K	Noodor Dome	93.98	24	P	P	11 53 00.6	-0.1		
	baz=261								
POKR	Poker Plat Res	94.05	25	P	P	11 53 00.7	-0.3		
	baz=261								
E24K	Your Creek	94.10	22	P	P	11 53 00.6	-0.6		
	baz=261								
HDA	Harding Lake	94.15	26	IAmb	IAmb	11 53 01.5			
	comp=Z,30nm,0.9s								
HDA	Harding Lake	94.15	26	P	P	11 53 00.2	-1.2		
	baz=262,SNR=21								
EYAK	Cordova Ski Ar	94.16	30	P	P	11 53 01.1	-0.4		
	baz=262								
D24K	Happy Valley	94.16	21	P	P	11 53 00.4	-1.0		
	baz=260								
M24K	Tolsona, Glenn	94.17	28	P	P	11 53 01.6	0.0		
	baz=262,SNR=7.5								
KLU	Klutina	94.20	29	P	P	11 53 01.3	-0.5		
	baz=262								
ILAR	Eielson Array	94.23	25	P	P	11 53 00.2	-1.5		
	comp=Z,9.9nm,0.9s,baz=271,slow=4.1,SNR=53								
ILAR				PP	PP	11 56 43.9	-6.5		
	comp=Z,1.4nm,1.1s,baz=270,slow=8.4,SNR=4.7								
ILAR				PKKP	PKKPdf	12 10 01.9	-1.9		
	comp=Z,1.5nm,0.8s,baz=37,slow=2.2,SNR=5.8								
	comp=Z,9.9nm,0.9s								
F24K	Squaw Lake	94.24	23	IAmb	IAmb	11 53 03.5			
	comp=Z,34nm,1.1s								
F24K	Squaw Lake	94.24	23	P	P	11 53 02.1	+0.3		
	baz=261,SNR=21								
G24K	Hadweenzic Riv	94.27	23	IAmb	IAmb	11 53 03.

baz=263
N25K Chitina, Valde 94.85 29 IAmb IAmb 11 53 06.2
comp=Z,18nm,1.0s
N25K Chitina, Valde 94.85 29 P **P** **11 53 04.6 -0.1**
baz=264
J25K Salcha River, 94.85 26 P **P** **11 53 03.7 -0.9**
baz=263
H25L Birch Creek 94.87 24 P **P** **11 53 04.4 -0.2**
baz=263,SNR=18
PRP Porcupine Dome 94.90 25 P **P** **11 53 04.3 -0.7**
baz=263
RIDG Independent Ri 94.98 26 P **P** **11 53 05.0 -0.2**
baz=264,SNR=13
SNAA Sanae 94.98 194 ⇑P **P** **11 53 06.5 +1.2**
comp=Z,274nm,0.6s
SNAA Sanae 94.98 194 P **P** **11 53 06.4 +1.2**
comp=Z,24nm,1.0s,baz=197,slow=5.6,SNR=64
SNAA PKKP **PKKPdf** **12 09 59.2 -2.4**
comp=Z,1.7nm,0.2s,baz=279,slow=3.9,SNR=6.3
SNAA Sanae 94.98 194 P **P** **11 53 06.5 +1.2**
comp=Z,24nm,1.0s
SNAA IAmb IAmb 11 53 07.9
comp=Z,34nm,1.1s
SNAA Sanae 94.98 194 *ce*P **P** **11 53 05.6 +0.4**
SNAA pmax pmax
comp=Z,25nm,1.0s
D25K Kavik River 95.05 21 P **P** **11 53 05.1 -0.4**
baz=263,SNR=5.8
F25K Christian Rive 95.10 23 P **P** **11 53 05.7 -0.1**
baz=263,SNR=11
FYU Fort Yukon 95.14 24 IAmb IAmb 11 53 07.6
comp=Z,36nm,1.0s
E25K Arctic Village 95.19 22 IAmb IAmb 11 53 07.7
comp=Z,23nm,1.1s
E25K Arctic Village 95.19 22 P **P** **11 53 06.2 0.0**
baz=263,SNR=10
GLB Gilahina Butte 95.20 29 IAmb IAmb 11 53 07.5
comp=Z,28nm,1.0s
DOT Dot Lake 95.31 27 IAmb IAmb 11 53 07.6
comp=Z,27nm,0.9s
SCRK Sand Creek 95.38 26 P **P** **11 53 06.9 -0.3**
baz=264,SNR=7.4
VORD Divnogorie 95.38 321 *e*P **P** **11 53 04.6 -2.7**
VORD pmax pmax
comp=Z,20nm,0.9s
MENT Mentasta 95.40 27 IAmb IAmb 11 53 08.4
comp=Z,17nm,0.9s
MENT Mentasta 95.40 27 P **P** **11 53 07.2 0.0**
VSR Storozhevoye 95.48 321 *e*P **P** **11 53 03.4 -4.4**
VSR pmax pmax
comp=Z,20nm,0.9s
CRQE Cirque 95.49 30 P **P** **11 53 07.5 -0.2**
baz=265
BMAR Burnt Mountain 95.49 23 P **P** **11 53 08.1 +0.6**
VORR Voronezh 95.50 321 *e*P **P** **11 53 04.9 -2.9**
VORR pmax pmax
comp=Z,20nm,0.9s
L26K Log Cabin Wild 95.58 27 P **P** **11 53 07.9 -0.1**
baz=265,SNR=6.6
MCARA McCarthy VSAT 95.58 29 P **P** **11 53 07.4 -0.6**
baz=265
J26L Joseph Creek 95.62 26 IAmb IAmb 11 53 09.1
comp=Z,27nm,0.8s
J26L Joseph Creek 95.62 26 P **P** **11 53 08.0 -0.2**
baz=265,SNR=24
C26K Camden Bay 95.63 20 P **P** **11 53 07.8 -0.2**
baz=264
M26K Nabesna, AK 95.68 28 P **P** **11 53 08.0 -0.5**
baz=265
F26K Sheenjek River 95.68 23 P **P** **11 53 08.5 +0.1**
baz=264,SNR=7.7
LPSR Galich'ya Gora 95.75 322 *e*P **P** **11 53 04.7 -4.2**
LPSR pmax pmax
comp=Z,24nm,1.0s
G26K Porcupine Rive 95.75 23 IAmb IAmb 11 53 10.5
comp=Z,33nm,1.0s
G26K Porcupine Rive 95.75 23 P **P** **11 53 08.7 +0.1**
baz=265,SNR=18
I26K Coal Creek Min 95.86 25 P **P** **11 53 09.5 +0.4**
baz=265
MESA MESA 96.00 30 P **P** **11 53 09.8 -0.3**
baz=266
C27K Jago River 96.02 21 P **P** **11 53 10.1 +0.3**
baz=265
KLMR Klimovskoe 96.06 331 *e*P **P** **11 53 07.3 -2.8**
KLMR *e* 11 57 01.3
KLMR pmax pmax
comp=Z,20nm,1.0s
M27K Edge Creek, AK 96.20 28 P **P** **11 53 11.2 +0.2**
baz=266
K27K Chicken 96.22 26 P **P** **11 53 11.3 +0.4**
baz=266
L27K Beaver Creek, 96.27 27 P **P** **11 53 11.5 +0.4**
L27K IAmb IAmb 11 53 12.7
comp=Z,25nm,0.8s
L27K Beaver Creek, 96.27 27 P **P** **11 53 11.5 +0.4**
baz=266
BCAR Beaver Creek A 96.29 27 P **P** **11 53 11.5 +0.3**
CTG Chitna Glacier 96.36 29 P **P** **11 53 11.8 +0.1**
baz=266
I27K Kandik River 96.52 25 IAmb IAmb 11 53 13.8
comp=Z,21nm,0.8s
I27K Kandik River 96.52 25 P **P** **11 53 12.7 +0.5**
baz=267
VNA2 Neumayer--Watz 96.56 193 ⇑P **P** **11 53 12.8 +0.5**
comp=Z,9.2nm,0.6s,baz=128,slow=5.1
VNA2 ⇑SKSac **SKSac** **12 03 34.0 -2.0**
baz=179,slow=30
VNA2 ⇑PKKPbc **PKKPbc** **12 09 55.5 -3.2**
comp=Z,3.5nm,0.5s,baz=206,slow=33
G27K Doyon Strip 96.58 23 P **P** **11 53 12.9 +0.4**
baz=267,SNR=7.4
H27K Steamboat Moun 96.60 24 IAmb IAmb 11 53 14.5
comp=Z,39nm,1.4s
H27K Steamboat Moun 96.60 24 P **P** **11 53 13.1 +0.5**
baz=267
BVCY Beaver Creek 96.67 28 P **P** **11 53 13.6 +0.7**
baz=267
E27K Coleen River 96.68 22 IAmb IAmb 11 53 14.2
comp=Z,17nm,0.9s
E27K Coleen River 96.68 22 P **P** **11 53 13.5 +0.6**
baz=267,SNR=14
MOS Moscow 96.73 325 *e*P **P** **11 53 10.6 -2.7**
MOS *e* 11 57 10.0
MOS pmax pmax
comp=Z,39nm,0.7s
MMAI Mount Meron Ar 96.82 302 P **P** **11 53 14.7 +0.3**
comp=Z,10nm,0.9s,baz=96,slow=4.6,SNR=13
comp=Z,10nm,0.9s
YUK3 Moose Creek 96.83 29 P **P** **11 53 14.0 +0.1**
baz=267
VNA3 Neumayer Olymp 96.83 192 ⇑P **P** **11 53 14.4 +0.9**
comp=Z,9.5nm,0.9s
VNA3 ⇑SKSac **SKSac** **12 03 36.0 -1.4**
VNA3 ⇑PKKPbc **PKKPbc** **12 09 54.2 -3.8**
comp=Z,3.1nm,0.7s
PINM Pinnacle 96.84 30 P **P** **11 53 14.6 +0.8**
baz=267
O28M Mount Upton 96.91 30 P **P** **11 53 14.6 +0.2**
baz=267
VNA1 Neumayer--Stat 96.96 193 ⇑P **P** **11 53 15.3 +1.2**
comp=Z,13nm,1.0s
VNA1 ⇓SKSac **SKSac** **12 03 33.4 -4.5**
VNA1 ⇑PKKPbc **PKKPbc** **12 09 54.1 -3.4**
comp=Z,5.0nm,0.7s
D27M Malcolm River 96.96 21 P **P** **11 53 14.2 0.0**
baz=268
YUK8 Steele Glacier 97.14 29 P **P** **11 53 15.0 -0.4**
baz=268
I28M Miner Creek 97.22 25 IAmb IAmb 11 53 16.9
comp=Z,16nm,0.8s
I28M Miner Creek 97.22 25 P **P** **11 53 15.2 -0.2**
baz=268
PNL Peninsula 97.26 31 P **P** **11 53 15.3 -0.3**
baz=268
KHAM Kharkiv 97.26 319 P Pdif 11 53 17.0 +1.0
OBN Obninsk 97.30 325 *de*P **P** **11 53 14.8 -1.0**
OBN *e**PP **pP** **11 53 51.0 +0.4**
OBN *e* 11 57 14.4
OBN *e*PPP PPP 11 59 20.7
OBN pmax pmax
comp=Z,22nm,0.9s
OBN Obninsk 97.30 325 P **P** **11 53 14.9 -0.9**
comp=Z,52nm,0.5s
F28M Old Crow 97.31 23 IAmb IAmb 11 53 16.8
comp=Z,11nm,0.8s
F28M Old Crow 97.31 23 P Pdif 11 53 16.1 +0.3
baz=268
E28M Babbage River 97.46 22 P Pdif 11 53 16.6 +0.2
baz=269
YUK4 Talbot Arm 97.68 29 P Pdif 11 53 17.9 +0.1
baz=269
D28M Stokes Point 97.76 21 P Pdif 11 53 18.1 +0.4
baz=270
M29M Somme Creek 97.79 28 IAmb IAmb 11 53 19.8
comp=Z,12nm,1.0s
M29M Somme Creek 97.79 28 P Pdif 11 53 18.9 +0.8
baz=269
YUK6 Outpost Mounta 97.81 29 P Pdif 11 53 18.6 +0.2
baz=269
H29M Whitestone 97.88 24 P Pdif 11 53 18.6 +0.3
baz=270
L29M L29M 97.95 27 IAmb IAmb 11 53 20.7
comp=Z,14nm,0.9s
L29M L29M 97.95 27 P Pdif 11 53 18.9 +0.1
baz=269
G29M Pine Creek 98.02 23 P Pdif 11 53 19.1 +0.2
baz=270
E29M Blow River 98.06 22 P Pdif 11 53 19.7 +0.6
baz=270
P29M Windy Craggy 98.10 31 P Pdif 11 53 20.0 +0.5
baz=269
BOSA Boshof 98.22 240 P Pdif 11 53 21.1 +0.2
comp=Z,9.7nm,1.0s,baz=104,slow=4.4,SNR=9.5
comp=Z,9.7nm,1.0s
BOSA Boshof 98.22 240 P Pdif 11 53 21.6 +0.7
BOSA IAmb IAmb 11 53 22.5
comp=Z,18nm,1.1s
BOSA Boshof 98.22 240 P Pdif 11 53 21.7 +0.8
BOSA pmax pmax
comp=Z,18nm,1.1s
HYT Haines Junctio 98.23 30 P Pdif 11 53 20.5 +0.4
baz=270
K29M Barlow Dome 98.23 27 IAmb IAmb 11 53 21.8
comp=Z,19nm,1.2s
K29M Barlow Dome 98.23 27 P Pdif 11 53 20.4 +0.3
baz=270
PLTM Poltava 98.34 319 P **P** **11 53 19.8 -0.9**
N30M Aishikik Lake 98.43 29 P Pdif 11 53 21.2 +0.3
baz=270
EPYK Eagle Plains 98.54 24 IAmb IAmb 11 53 22.8
comp=Z,18nm,1.2s
EPYK Eagle Plains 98.54 24 P Pdif 11 53 21.7 +0.4
baz=271
M30M Minto, Yukon 98.56 28 P Pdif 11 53 21.7 +0.2
baz=270
BR104 Keskin Array S 98.64 309 P Pdif 11 53 22.5 0.0
comp=Z,3.0nm,1.1s
BR131 Keskin Array S 98.64 309 *i* P Pdif 11 53 22.6 +0.1
BRTR Keskin Array B 98.64 309 P **P** **11 53 21.6 -0.9**
comp=Z,1.4nm,0.4s,baz=138,slow=4.4,SNR=9.9
BRTR PKKPbc **PKKPbc** **12 09 50.9 -1.3**
comp=Z,0.7nm,0.6s,baz=239,slow=4.7,SNR=3.7
comp=Z,1.4nm,0.4s
BRTR Keskin Array B 98.64 309 P **P** **11 53 21.4 -1.1**
BRTR Keskin Array B 98.64 309 *ce*P **P** **11 53 21.6 -0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.4s
BR105 Keskin Array S 98.66 309 P **P** **11 53 22.5 -0.1**
comp=Z,5.0nm,1.2s
CSS Mathiatis 98.67 304 IAmb IAmb 11 53 23.2
comp=Z,14nm,0.7s
CSS Mathiatis 98.67 304 P **P** **11 53 21.5 -1.0**
comp=Z,19nm,1.0s
I30M Mount Dempster 98.71 25 P **P** **11 53 22.1 -0.1**
baz=271
G30M tAoh Zraii Nji 98.73 23 IAmb IAmb 11 53 22.5
comp=Z,16nm,1.1s
G30M tAoh Zraii Nji 98.73 23 P **P** **11 53 22.0 -0.1**
baz=272
J30M Hart River 98.74 26 P **P** **11 53 22.3 0.0**
baz=271
PLBC Pleasant Camp 98.80 31 P **P** **11 53 22.6 +0.1**
baz=270
LPHEP Lephephe 98.83 245 P Pdif 11 53 23.7 0.0
APA Apatity 98.86 337 ⇓*e*P **P** **11 53 20.3 -2.3**
APA MLR MLR
comp=Z,596nm,21.8s
F30M Barrier River 98.87 23 IAmb IAmb 11 53 23.0
comp=Z,14nm,1.1s
F30M Barrier River 98.87 23 P Pdif 11 53 23.0 +0.3
baz=272
S31K Pelican 98.87 33 P Pdif 11 53 22.9 +0.1
baz=270
O30N Mendenhall 98.92 30 P Pdif 11 53 23.9 +0.8
baz=271
MAYO Mayo, Yukon 98.96 27 P Pdif 11 53 23.6 +0.5
baz=272
SKAG Skagway 99.33 31 P **Pdif** **11 53 25.3 +0.4**
baz=271
SIT Sitka 99.37 33 P **Pdif** **11 53 25.5 +0.4**
baz=271
G31M Satah River 99.50 23 P **Pdif** **11 53 25.7 +0.2**
baz=274
WHY Whitehorse 99.52 30 P **Pdif** **11 53 26.0 +0.1**
baz=272
H31M Peel River 99.53 25 P **Pdif** **11 53 26.0 +0.3**
baz=273
F31M Tsiigehtchic 99.67 23 P **Pdif** **11 53 26.6 +0.4**
baz=274
INK Inuvik 99.69 22 P **Pdif** **11 53 26.5 +0.2**
baz=274
M31M Drury Creek, Y 99.69 28 P **Pdif** **11 53 26.5 0.0**
baz=273
R32K Eaglecrest 99.78 32 P **Pdif** **11 53 27.3 +0.4**
baz=272
P32M Atlin 100.14 31 P **Pdif** **11 53 29.3 +0.8**
baz=273
N32M Quiet Lake 100.37 29 P **Pdif** **11 53 29.8 +0.2**
baz=274
P33M Teslin, Yukon 100.56 30 P **Pdif** **11 53 30.8 +0.4**
baz=274
Q32M Nakina River 100.92 31 P **Pdif** **11 53 32.2 0.0**
baz=274
ARCES ARCESS Array B 101.54 340 P **Pdif** **11 53 33.3 -1.3**
comp=Z,8.6nm,0.8s,baz=80,slow=5.1,SNR=19
ARCES PP **PP** **11 57 46.5 +0.4**
comp=Z,2.7nm,0.9s,baz=70,slow=4.0,SNR=4.7
ARCES PKiKP **PKiKP** **11 57 58.1 +0.5**
comp=Z,0.9nm,0.3s,baz=79,slow=2.4,SNR=11
ARCES PKKPbc **PKKPbc** **12 09 42.0 -2.9**
comp=Z,2.0nm,0.5s,baz=268,slow=2.3,SNR=22
R33M Jennings River 101.55 31 P **Pdif** **11 53 35.0 0.0**
baz=275
S34M Telegraph Cree 101.59 32 P **Pdif** **11 53 34.5 -0.5**
baz=275
AK09 Malin Array Si 101.72 320 P **Pdif** **11 53 35.0 -0.7**
SPITS Spitsbergen Ar 101.74 349 P **Pdif** **11 53 34.7 -0.6**
comp=Z,26nm,1.2s,baz=64,slow=6.6,SNR=3.1
AK08 Malin Array Si 101.74 320 P **Pdif** **11 53 34.5 -1.3**
AK10 Malin Array Si 101.74 320 P **Pdif** **11 53 34.9 -0.9**
AKASG Malin Array Be 101.76 320 P **Pdif** **11 53 34.9 -1.0**
comp=Z,3.6nm,0.7s,baz=72,slow=4.5,SNR=7.5
AKASG PP **PP** **11 57 47.0 -1.2**
comp=Z,3.5nm,0.8s,baz=75,slow=7.3,SNR=5.3
AKBB Malin Array Si 101.76 320 P **Pdif** **11 53 34.7 -1.2**
AK01 Malin Array Si 101.76 320 P **Pdif** **11 53 34.6 -1.3**
KIEV Kiev 101.77 320 P **Pdif** **11 53 34.5 -1.4**
comp=Z,14nm,1.1s
AK07 Malin Array Si 101.78 320 P **Pdif** **11 53 35.0 -1.0**
AK06 Malin Array Si 101.78 320 P **Pdif** **11 53 35.2 -0.8**
AK04 Malin Array Si 101.79 320 P **Pdif** **11 53 35.2 -0.8**
AK12 Malin Array Si 101.80 320 P **Pdif** **11 53 35.1 -1.0**
A36M Sachs Harbour 101.92 18 P **Pdif** **11 53 35.8 -0.4**
baz=283
DLBC Dease Lake 102.13 32 P **Pdif** **11 53 37.4 0.0**
baz=276
MNK Minsk 102.33 324 *i* P **Pdif** **11 53 37.1 -1.2**
MNK *i* 11 57 51.1
MNK *i* PPP PPP 12 00 01.6
MNK *i* S **SKSac** **12 04 04.2 -0.7**
MNK *i* *SS **Sdif** **12 05 05.4 -4.7**
MNK *i* SS **SS** **12 12 19.8 +0.7**
MNK *i* SSS SSS 12 16 14.4
MNK pmax pmax
comp=E,13nm,0.6s
MNK pmax pmax
comp=N,13nm,0.8s
MNK pmax pmax
comp=Z,30nm,0.9s
MNK MLR MLR
comp=N,2μm,18.0s
MNK MLR MLR
comp=E,1μm,19.0s
MNK MLR MLR
comp=Z,488nm,17.0s
FINES FINESS Array B 102.55 331 P **Pdif** **11 53 38.0 -1.1**
comp=Z,2.6nm,0.7s,baz=88,slow=6.5,SNR=6.9
FINES PP **PP** **11 57 54.3 +0.5**
comp=Z,7.4nm,0.9s,baz=123,slow=7.0,SNR=6.3
LUBAR Lubar, Ukraine 102.74 319 P **Pdif** **11 53 40.0 -0.3**
C36M Paulatuk 102.91 20 P **Pdif** **11 53 40.4 -0.2**
baz=284
KMPD K-Podol'skiy 103.68 318 P **Pdif** **11 53 43.5 -1.0**
KARP Karpathos 103.72 305 P **Pdif** **11 53 44.5 -0.6**
RNPP9 Sopachiv 103.80 321 P **Pdif** **11 53 44.4 -0.6**
RNPP5 Staryi Chortor 103.82 321 P **Pdif** **11 53 44.6 -0.5**
WRGLY Wrigley 104.55 26 P **Pdif** **11 53 47.7 -0.2**
baz=283
TOAD Toad River Com 104.56 31 P **Pdif** **11 53 47.5 -0.7**
baz=280
STHS Stebnicka Huta 107.00 319 *e*PKP PKiKP 11 57 57.6 -11
STHS *e*PP **PP** **11 58 27.5 +0.4**
YKA Yellowknife Ar 108.64 26 PKiKP **PKiKP** **11 58 11.0 +0.2**
comp=Z,0.4nm,0.4s,baz=282,slow=2.0,SNR=11
YKA PKKPbc **PKKPbc** **12 09 20.8 -2.2**
comp=Z,0.5nm,0.3s,baz=72,slow=2.0,SNR=21
HFS Hagfors 108.75 331 Pdiff **Pdif** **11 54 06.8 +0.1**
comp=Z,4.3nm,1.0s,baz=60,slow=5.7,SNR=5.6
HFS PKiKP **PKiKP** **11 58 11.1 -0.1**
comp=Z,2.3nm,0.6s,baz=57,slow=6.0,SNR=5.2
HFS PP **PP** **11 58 37.8 -1.6**
comp=Z,4.3nm,0.8s,baz=116,slow=6.6,SNR=4.3
STEB Steborice 109.13 320 *e*PKP **PKiKP** **11 58 13.1 +0.9**
MORC Moravsky Berou 109.31 320 *e*PKIKP **PKiKP** **11 58 13.4 +0.8**
MORC *e* 11 58 48.2
JAVC Velka Javorina 109.41 319 *e*PKIKP **PKiKP** **11 58 14.7 +1.9**
JAVC *e* 11 58 49.3
NB2 NORSAR Subarra 109.60 333 P **Pdif** **11 54 10.3 -0.3**
comp=Z,0.5nm,0.5s,baz=66,slow=4.8
NB2 NORSAR Subarra 109.60 333 PKPdf **PKiKP** **11 58 12.0 -0.8**
comp=Z,1.4nm,0.6s,baz=68,slow=1.9
NOA NORSAR Array B 109.60 333 Pdiff **Pdif** **11 54 10.3 -0.3**
comp=Z,0.7nm,0.8s,baz=63,slow=4.8,SNR=3.9
NOA PKiKP **PKiKP** **11 58 12.3 -0.4**
comp=Z,2.4nm,0.8s,baz=84,slow=2.2,SNR=11
MODS Modra-Piesok 109.76 319 *e*PKP **PKiKP** **11 58 14.6 +1.2**
DPC Dobruska-Polom 109.95 321 *e*PKP **PKiKP** **11 58 15.1 +1.3**
OSTC Ostas 109.97 321 *e*PKP **PKiKP** **11 58 15.1 +1.3**
VRAC Vranov 110.01 320 *e*PKIKP **PKiKP** **11 58 14.7 +0.8**
VRAC *e* 11 58 53.2
CHVC Chvalec 110.06 321 *e*PKP **PKiKP** **11 58 15.4 +1.5**
KRUC Moravsky 110.19 320 *e*PKIKP **PKiKP** **11 58 14.5 +0.3**
KRUC *e* 11 58 54.1
RONA Rosalia, Austr 110.54 318 *e*PKiKP **PKiKP** **11 58 15.8 +0.9**
comp=Z,5.9nm,1.1s
RONA *i* pPKiKP **pPKiKP** **11 58 51.7 +0.8**
comp=Z,16nm,1.4s
CONA Conrad Observa 110.78 319 *i* PKiKP **PKiKP** **11 58 15.5 +0.1**
comp=Z,4.3nm,0.9s
CONA *ep*PKiKP **pPKiKP** **11 58 49.9 -1.6**
comp=Z,14nm,1.3s
PVCC Panska Ves 111.00 321 *e*PKIKP **PKiKP** **11 58 16.7 +1.0**
PVCC Panska Ves 111.00 321 *e*PKP **PKiKP** **11 58 16.7 +1.0**
ARSA Arzberg 111.14 318 *i* PKiKP **PKiKP** **11 58 16.7 +0.6**
comp=Z,2.2nm,0.6s
PRU Pruhonice 111.15 321 *e*PKIKP **PKiKP** **11 58 16.9 +0.9**
PRU Pruhonice 111.15 321 *e*PKP **PKiKP** **11 58 16.9 +0.9**
CKRC Cesky Krumlov 111.58 320 *e*PKIKP **PKiKP** **11 58 17.4 +0.5**
CKRC Cesky Krumlov 111.58 320 *e*PKP **PKiKP** **11 58 17.4 +0.5**
SOKA Soboth 111.60 317 *i* PKiKP **PKiKP** **11 58 16.7 -0.4**
comp=Z,7.1nm,1.0s
CLL Collm 111.75 323 *e*PKIKP **PKiKP** **11 58 18.0 +0.9**
CLL pmax pmax
comp=Z,11nm,0.8s
CLL Collm 111.75 323 *e*PKiKP **PKiKP** **11 58 18.0 +0.9**
comp=Z,11nm,0.8s
CLL *i* PP **PP** **11 59 02.9 +1.6**
MOA Molln 111.84 319 *i* PKiKP **PKiKP** **11 58 17.9 +0.5**
comp=Z,1.9nm,0.5s
MOA *i* PP **PP** **11 59 00.9 -1.2**
comp=Z,6.2nm,1.4s
OBKA Obir 111.96 317 *i* PKiKP **PKiKP** **11 58 18.4 +0.6**
comp=Z,4.2nm,1.0s
GERES GERESS Array B 111.97 320 PKiKP **PKiKP** **11 58 17.8 +0.1**
comp=Z,5.3nm,0.5s,baz=73,slow=2.0,SNR=39
GERES PP **PP** **11 59 02.9 -0.2**
comp=Z,4.6nm,1.1s,baz=55,slow=5.2,SNR=4.9
KHC Kasperske Hory 111.97 320 *c* PKIKP **PKiKP** **11 58 17.3 -0.3**
KHC pmax pmax
comp=Z,9.0nm,2.5s
KHC Kasperske Hory 111.97 320 *e*PKP **PKiKP** **11 58 18.5 +0.9**
BIOA Bad Ischl, Aus 112.29 319 *i* PKiKP **PKiKP** **11 58 18.5 +0.2**
comp=Z,8.1nm,1.0s
NVAR Mina Array Bea 112.49 52 PKiKP **PKiKP** **11 58 20.2 +1.0**
comp=Z,2.4nm,0.9s,baz=314,slow=2.5,SNR=11
NVAR PKKPbc **PKKPbc** **12 09 09.2 -0.8**
comp=Z,1.0nm,0.7s,baz=78,slow=3.7,SNR=9.6
MYKA Terra Mystica 112.54 318 *i* PKiKP **PKiKP** **11 58 19.0 +0.2**
comp=Z,6.4nm,1.1s
KBA Koelnbreinser 112.63 318 *e*PKiKP **PKiKP** **11 58 17.9 -1.2**
comp=Z,5.8nm,0.8s
LESA Schwarzleotal 112.99 319 *e*PKiKP **PKiKP** **11 58 18.9 -0.7**
comp=Z,5.2nm,0.5s,SNR=6.4
LESA *i* PP **PP** **11 59 11.9 +1.5**
comp=Z,18nm,1.1s
ABTA Abfaltersbach 113.27 318 *e*PKiKP **PKiKP** **11 58 19.7 -0.5**
comp=Z,16nm,0.8s
WTTA Wattenberg 113.71 319 *i* PKiKP **PKiKP** **11 58 21.4 +0.2**
comp=Z,34nm,0.5s,SNR=18
WTTA *i* PP **PP** **11 59 17.1 +1.4**
comp=Z,15nm,1.5s
WATA Walderalm 113.73 319 *i* PKiKP **PKiKP** **11 58 21.5 +0.3**
comp=Z,9.9nm,0.4s,SNR=5.8
WATA *e*PP **PP** **11 59 17.1 +1.4**
comp=Z,16nm,1.2s
SQTA Sankt Quirin 114.00 319 *e*PKP **PKiKP** **11 58 21.8 +0.1**
comp=Z,22nm,1.5s,SNR=5.8
SQTA *e*PP **PP** **11 59 19.0 +1.4**
comp=Z,15nm,1.2s
MOTA Moosalm 114.04 319 *e*PKP PKPdf 11 58 21.5 -0.2
comp=Z,11nm,0.4s,SNR=11
MOTA *e*PP **PP** **11 59 18.1 +0.2**
comp=Z,15nm,1.2s
RETA Reutte 114.22 319 *i* PKP **PKiKP** **11 58 22.3 +0.3**
comp=Z,4.5nm,0.5s
RETA *e*PP **PP** **11 59 16.6 -2.5**
comp=Z,13nm,1.2s
FETA Feichten 114.37 318 *i* PKP PKPdf 11 58 22.1 -0.4
comp=Z,6.4nm,0.5s
FETA *e*PP **PP** **11 59 19.5 -0.8**
comp=Z,9.8nm,1.4s
DAVA Damuels 114.85 319 *i* PKP PKPdf 11 58 23.5 +0.2
comp=Z,20nm,0.4s
MCMT McKenzie Canyo 115.17 44 **PKPdf** **11 58 25.6 +1.4**
PDAR Pinedale Array 118.03 45 PKP **PKiKP** **11 58 30.2 +0.5**
comp=Z,5.4nm,0.8s,baz=260,slow=0.7,SNR=36
PDAR SKP **SKPdf** **12 01 52.8 +0.2**
comp=Z,1.4nm,0.9s,baz=260,slow=4.0,SNR=5.0
PDAR PKKPbc **PKKPbc** **12 08 50.0 -1.0**
comp=Z,3.1nm,1.0s,baz=73,slow=2.3,SNR=12
KEST Kesra 118.11 307 PKP **PKiKP** **11 58 30.8 +0.9**
comp=Z,12nm,0.6s,baz=132,slow=2.9,SNR=9.6
EKA Eskdalemuir Ar 118.95 331 PKP **PKiKP** **11 58 31.0 +0.2**
comp=Z,3.7nm,0.4s,baz=34,slow=3.9,SNR=38
ANMO Albuquerque 122.51 53 *c* PKIKP **PKiKP** **11 58 37.7 -0.8**
ANMO pmax pmax
comp=Z,17nm,1.0s
ULM Lac du Bonnet 123.44 33 PKP **PKPdf** **11 58 39.4 -0.2**
comp=Z,11nm,0.7s,baz=306,slow=3.5,SNR=10
TXAR Lajitas Array 126.16 59 PKP **PKiKP** **11 58 46.8 +0.8**
comp=Z,2.4nm,0.4s,baz=200,slow=2.9,SNR=32
TXAR PKKPab **PKKPbc** **12 08 20.5 +0.8**
comp=Z,0.4nm,0.5s,baz=105,slow=5.8,SNR=12
ESDC Sonseca Array 126.95 315 PKP **PKiKP** **11 58 47.4 +0.2**
comp=Z,8.8nm,1.0s,baz=34,slow=2.0,SNR=15
ESDC PP **PP** **12 00 45.9 -0.1**
comp=Z,3.0nm,1.1s,baz=61,slow=7.5,SNR=4.7
TORD Torodi Ar. Bea 127.71 281 PKP **PKiKP** **11 58 49.2 -0.1**
comp=Z,8.9nm,0.4s,baz=63,slow=4.1,SNR=3.2
MVO Moncorvo 128.39 318 *e*PKPdf **PKiKP** **11 58 51.4 +1.3**
POLO Lamas de Olo 128.80 318 *e*PKPdf **PKiKP** **11 58 52.5 +1.6**
PLCA Paso Flores 128.89 161 PKP **PKiKP** **11 58 51.7 +0.6**
comp=Z,22nm,0.9s,baz=198,slow=2.8,SNR=30
PLCA Paso Flores 128.89 161 *e*P **PKiKP** **11 58 52.4 +1.3**
MTE Manteigas 129.10 317 *e*PKPdf **PKiKP** **11 58 53.1 +1.6**
PCBR Castelo Branco 129.31 317 *e*PKPdf **PKiKP** **11 58 53.5 +1.6**
PMRV Marv??o 129.44 316 *e*PKPdf **PKiKP** **11 58 53.4 +1.2**
PBAR Barrancos 129.76 314 *e*PKPdf **PKiKP** **11 58 54.3 +1.5**
PESTR Estremoz 129.84 315 *e*PKPdf **PKPdf** **11 58 52.0 -0.2**

PARRA	Arraiolos	130.17	316	*e*PKPdf	PKiKP	11 58 55.2	+0.2
MOE	Montemor	130.52	315	*e*PKPdf	PKiKP	11 58 56.0	+1.7
PCVE	Castro Verde	130.71	314	*e*PKPdf	PKiKP	11 58 56.2	+1.5
SCHQ	Schefferville	131.08	12	PKP	PKiKP	11 58 54.9	0.0
	comp=Z,11nm,0.7s,baz=301,slow=2.3,SNR=9.9						
SCHQ				SKPbc	SKPbc	12 02 05.7	-0.3
	comp=Z,12nm,0.8s,baz=0.4,slow=2.9,SNR=14						
MORF	Marmelete	131.29	314	*e*PKPdf	PKiKP	11 58 57.3	+1.3
PFVI	Vila Bisbo	131.49	314	*e*PKPdf	PKPdf	11 58 46.8	-8.5
DBIC	Dimbokro	134.01	272	PKP	PKiKP	11 59 01.4	-0.6
	comp=Z,9.2nm,0.3s,baz=96,slow=2.9,SNR=22						
DBIC				SKPbc	SKPbc	12 02 16.2	-1.2
	comp=Z,20nm,0.9s,baz=134,slow=4.3,SNR=14						
PB05	IPOC Station P	144.64	149	*i* P	PKPdf	11 59 20.8	+0.8
PB05				IAML		12 00 36.0	
	comp=Z,7.6nm,1.0s						
PB06	IPOC Station P	145.08	149	*i* P	PKPdf	11 59 22.1	+1.3
PB06				IAML		12 00 42.4	
	comp=Z,13nm,1.0s						
SLA	San Lorenzo	145.15	157	*i* P	PKPdf	11 59 22.7	+1.8
SLA				IAML		12 00 59.5	
	comp=Z,4.5nm,2.4s						
SALTA		145.26	155	*i* P	PKiKP	11 59 23.7	-1.7
SALTA				IAML		12 00 41.5	
	comp=Z,23nm,1.4s						
PB03	IPOC Station P	145.54	149	*i* P	PKPab	11 59 23.4	+1.1
PB03				IAML		12 00 45.7	
	comp=Z,10nm,2.9s						
ITAB	Concordia	145.55	179	*e*P	PKPab	11 59 23.5	+1.5
AF01	San Pedro de A	145.55	152	*i* P	PKPab	11 59 23.5	+1.0
PB07	IPOC Station P	145.73	148	*i* P	PKPab	11 59 23.9	+0.9
PB07				IAML		12 01 11.5	
	comp=Z,13nm,3.7s						
CPUP	Villa Florida	145.94	170	PKPbc	PKPab	11 59 23.6	+0.2
	comp=Z,20nm,0.7s,baz=50,slow=2.2,SNR=92						
CPUP				SKPbc	SKPbc	12 02 49.1	-0.2
	comp=Z,8.2nm,1.0s,baz=232,slow=3.7,SNR=8.1						
CPUP	Villa Florida	145.94	170	*e*P	PKPab	11 59 24.1	+0.6
PB09	IPOC Station P	146.01	149	*i* P	PKiKP	11 59 25.7	-0.9
PB02	IPOC Station P	146.06	148	*i* P	PKPab	11 59 25.3	+1.1
PATCX	Punta Patache	146.33	147	*i* P	PKPdf	11 59 22.8	-0.1
PB01	IPOC Station P	146.50	148	*i* P	PKPab	11 59 26.1	+0.2
TA01	Diego Aracena	146.52	146	*i* P	PKPab	11 59 26.0	+0.2
TA01				IAML		12 00 41.0	
	comp=Z,11nm,0.9s						
HJA	Humahuaca	146.55	156	*i* P	PKPbc	11 59 25.0	-0.2
TA02	Huaiquique	146.78	146	*i* P	PKPbc	11 59 26.1	+0.6
HDC	Heredia	147.38	83	*e*P	PKPbc	11 59 27.0	-0.4
PB08	IPOC Station P	147.42	147	*i* P	PKPbc	11 59 26.4	-1.3
PB11	IPOC Station P	147.46	146	*i* P	PKPbc	11 59 28.4	+0.8
PB11				IAML		12 01 00.3	
	comp=Z,16nm,1.0s						
GO01	Chusmiza	147.78	147	*i* P	PKiKP	11 59 30.5	-0.2
NNA	Nana	148.04	127	*c i* PKIKP	PKPdf	11 59 25.9	+0.1
NNA				pmax	pmax		
	comp=Z,341nm,1.3s						
PTGB	Pitanga	148.06	179	*e*P	PKPbc	11 59 27.4	-1.5
PB16	IPOC Station P	148.68	145	*i* P	PKiKP	11 59 32.7	0.0
PB16				IAML		12 00 59.7	
	comp=Z,11nm,1.7s						
FRTB	Fartura	149.39	183	*e*P	PKPdf	11 59 29.5	+1.7
DUB01	Friburgo-RJ	149.44	196	*e*P	PKPdf	11 59 29.7	+1.8
VAS01	Vassouras-RJ	149.53	194	*e*P	PKPdf	11 59 29.2	+1.2
AMBA	Amambai (Brazi	149.62	173	*e*P	PKPdf	11 59 30.4	+2.3
RCLB	Rio Claro- Sao	150.14	187	*e*P	PKPdf	11 59 31.1	+2.1
MURT	Porto Murtinho	150.44	168	*e*P	PKPdf	11 59 30.7	+1.3
BSCB	Bom Sucesso	151.07	192	*e*P	PKPdf	11 59 32.4	+1.8
LPAZ	La Paz	151.10	145	PKP	PKPdf	11 59 32.3	+0.9
	comp=Z,16nm,1.0s,baz=144,slow=0.8,SNR=34						
LPAZ				PKPbc	PKiKP	11 59 38.4	+0.6
	comp=Z,33nm,0.4s,baz=231,slow=1.2,SNR=55						
LPAZ	La Paz	151.10	145	*e*P	PKPdf	11 59 32.1	+0.8
BDQN	Bodoquena, MS	151.78	169	*e*P	PKPdf	11 59 32.8	+1.3
OTAV	Otavalo	151.91	103	*e*P	PKPdf	11 59 33.2	+0.7
AQDB	Aquidauana	151.94	171	PKPdf	PKPdf	11 59 33.0	+1.2
AQDB				PKPbc	PKiKP	11 59 39.2	+0.5
AQDB				PKPab	PKPab	11 59 48.6	+0.8
AQDB	Aquidauana	151.94	171	*e*P	PKPdf	11 59 33.4	+1.6
BSFB	Barra de Sao F	151.99	201	*e*P	PKPdf	11 59 33.2	+1.3
DIAM	Diamantina, MG	153.40	196	*e*P	PKPdf	11 59 35.8	+1.7
GUA01	Guaratinga, BA	153.62	205	*e*P	PKPdf	11 59 35.4	+1.1
PMNB	Patos De Minas	153.79	190	*e*P	PKPdf	11 59 36.1	+1.5
C2SB	Chapadao do Su	153.94	176	*e*P	PKPdf	11 59 35.7	+1.0
PP1B	Ponte de Pedra	154.88	172	*e*P	PKPdf	11 59 37.3	+1.3
PTLB	Pontes e Lacer	155.97	161	*e*P	PKPdf	11 59 38.8	+1.3
SALV	Santo Antonio	156.41	169	*e*P	PKPdf	11 59 39.8	+1.7
BDFB	Brasilia	156.88	188	PKP	PKPdf	11 59 39.7	+0.9
	baz=128,slow=0.1						
VILB	Vilhena	157.88	156	*e*P	PKPdf	11 59 40.5	+0.5
SDBA	SAO DESIDERIO	159.34	198	*e*P	PKPdf	11 59 44.1	+2.3
PDRB	Porto dos Gac	160.32	164	*e*P	PKPdf	11 59 44.1	+1.2
SDV	Santo Domingo	160.71	84	*e*P	PKPdf	11 59 44.1	+0.5
SNDB	Serra Nova Dou	160.74	180	*e*P	PKPdf	11 59 44.7	+1.4
CLDB	Colider	161.27	166	*e*P	PKPdf	11 59 45.3	+1.4
TEFE	Tefe	162.76	129	*e*P	PKPdf	11 59 46.3	+0.9
SMTB	Santa Maria do	163.44	193	*e*P	PKPdf	11 59 47.5	+1.4

MOS ***23*** *11:44:47.3±1.2, 48°.35N×155°.26E, h46km, mb4.8/6, Error ellipse: s-maj=10.1km s-min=3.8km az=73.5*
SKHL ***23*** *11:44:47.4±0.5, 48°.30N×155°.40E, h35km±4km, mb5.2/7*
KRSC ***23*** *11:44:47.7±1.8, 48°.41N×155°.74E, h48km±32km, Ml4.8*
NEIC ***23*** *11:44:50.5±2.3, 48°.4N±0°.1×155°.2E±0°.2, h50km±7km, mb4.5/15, Error ellipse: s-maj=22.4km s-min=10.4km az=145.0*
IDC ***23*** *11:44:51.9±2.5, 48°.57N×155°.00E, h64km±20km, mb3.8/15, mbtmp4.1/19, MS3.7/9, Error ellipse: s-maj=25.4km s-min=12.7km az=139.0*

ISC 23 11:44:48.4±0.6,**48°.32N**±0°.07×**155°.35E**±0°.06,**h36**km,**n161,**
σ1°.**66**/167,**mb4.3**/29,**MS3.5**/3,**1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	2.41	12	PN	Pn	11 45 24.6	-0.6
SKR				S	Sn	11 45 52.1	-1.4
SKR	**Severo-Kuril's**	2.41	12	*e*P	Pn	11 45 24.7	-0.6
SKR				*e*S	Sn	11 45 52.1	-1.4
SKR	**Severo-Kuril's**	2.41	12	*e*P	Pn	11 45 24.2	-1.1
SKR				AMB	AMB	11 45 29.2	
	160nm,0.5s						
SKR				*e*S	Sn	11 45 52.2	-1.3
SKR				A	A	11 45 59.2	
	700nm,0.2s						
SKR				A	A	11 45 59.2	
	1μm,0.2s						
PAU	**Pauzhetka**	3.29	16	PN	Pn	11 45 37.8	+0.6
PAU				S	Sn	11 46 14.0	-1.0
PAU	**Pauzhetka**	3.29	16	*e*P	Pn	11 45 37.9	+0.6
PAU				*e*S	Sn	11 46 14.1	-1.0
PAU	**Pauzhetka**	3.29	16	*e*P	Pn	11 45 37.2	-0.1
PAU				AMB	AMB	11 45 49.7	
	190nm,0.7s						
PAU				*e*S	Sn	11 46 14.2	-0.8
PAU				A	A	11 46 18.1	
	600nm,0.3s						
PAU				A	A	11 46 18.1	
	1μm,0.3s						
KDTR	**Khodutka, Kamc**	3.91	26	PN	Pn	11 45 45.8	0.0
KDTR	**Khodutka, Kamc**	3.91	26	*e*P	Pn	11 45 45.8	0.0
KDTR				*e*S	Sn	11 46 27.7	-2.6
KDTR	**Khodutka, Kamc**	3.91	26	*e*P	Pn	11 45 45.8	0.0
MIPR	**Malaya Ipel'ka**	4.06	12	PN	Pn	11 45 48.5	+0.6
MIPR	**Malaya Ipel'ka**	4.06	12	*e*P	Pn	11 45 48.6	+0.6
ASAK	**Asacha**	4.38	21	PN	Pn	11 45 53.7	+1.4
ASAK	**Asacha**	4.38	21	*e*P	Pn	11 45 53.8	+1.4
MTVR	**Mutnovka**	4.54	22	PN	Pn	11 45 55.4	+0.8
MTVR				S	Sn	11 46 45.5	-0.6
MTVR	**Mutnovka**	4.54	22	*e*P	Pn	11 45 55.4	+0.8
MTVR				*e*S	Sn	11 46 45.6	-0.6
GRL	**Gorelyy**	4.58	21	PN	Pn	11 45 56.3	+1.2
GRL				S	Sn	11 46 47.0	0.0
GRL	**Gorelyy**	4.58	21	*e*P	Pn	11 45 56.4	+1.2
GRL				*e*S	Sn	11 46 47.0	0.0
RUS	**Russkaya**	4.58	25	PN	Pn	11 45 54.8	-0.3
RUS	**Russkaya**	4.58	25	*e*P	Pn	11 45 54.8	-0.3
RUS				*e*S	Sn	11 46 44.8	-2.2
APC	**Apacha**	4.75	13	PN	Pn	11 45 59.4	+2.1
APC	**Apacha**	4.75	13	*e*P	Pn	11 45 59.5	+2.1
KRMR	**Karymshinskiy**	4.85	20	PN	Pn	11 46 00.6	+1.9
KRMR	**Karymshinskiy**	4.85	20	*e*P	Pn	11 46 00.7	+1.9
KRMR	**Karymshinskiy**	4.85	20	*e*P	Pn	11 46 00.6	+1.9
PEA0B	**Petropavlovsk-**	5.02	16		Pn	11 46 03.1	+2.0
PEA0B	**Petropavlovsk-**	5.02	16	PN	Pn	11 46 03.0	+2.0
PETK	**Petropavlovsk-**	5.02	16	P	Pn	11 46 02.1	+1.0
	8.2nm,0.3s,baz=174,slow=14,SNR=157						
PETK				S	Sn	11 46 58.8	+1.0
	7.7nm,0.7s,baz=284,slow=40,SNR=1.5						
PETK				LR	LR	11 48 17.8	
	comp=Z,889nm,18.2s,baz=189,slow=42						
PETK	**Petropavlovsk-**	5.02	16		Pn	11 46 02.0	+0.9
PET	**Petropavlovsk**	5.15	23		Pn	11 46 03.6	+0.7
PET	**Petropavlovsk**	5.15	23	*e*PN	Pn	11 46 03.6	+0.7
PET				MLR	MLR		
	comp=Z,1μm,12.0s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
PET	**Petropavlovsk**	5.15	23	*e*P	Pn	11 46 03.4	+0.6
PET	**Petropavlovsk**	5.15	23	*e*P	Pn	11 46 03.5	+0.6
PET				*e*S	Sn	11 47 00.5	-0.5
PET				A	A	11 47 23.4	
	comp=Z,270nm,0.8s						
PET				A	A	11 47 23.4	
	comp=Z,160nm,0.8s						
DALK	**Dalny**	5.18	23	PN	Pn	11 46 03.9	+0.6
DALK	**Dalny**	5.18	23	*e*P	Pn	11 46 03.9	+0.6
DALK				*e*S	Sn	11 47 01.0	-0.8
UGLR	**Uglovaya**	5.36	23	PN	Pn	11 46 07.3	+1.4
UGLR	**Uglovaya**	5.36	23	*e*P	Pn	11 46 07.4	+1.4
KOK	**Koryaka**	5.39	21	PN	Pn	11 46 08.6	+2.3
KOK	**Koryaka**	5.39	21	*e*P	Pn	11 46 08.7	+2.3
KOK	**Koryaka**	5.39	21	*e*P	Pn	11 46 08.6	+2.3
AVH	**Avacha**	5.39	22	PN	Pn	11 46 08.6	+2.3
AVH	**Avacha**	5.39	22	*e*P	Pn	11 46 08.6	+2.3
SMAR	**Somma**	5.41	23	PN	Pn	11 46 08.1	+1.5
SMAR	**Somma**	5.41	23	*e*P	Pn	11 46 08.2	+1.5
KRER	**Koryakskii**	5.43	22	PN	Pn	11 46 08.6	+1.7
KRER	**Koryakskii**	5.43	22	*e*P	Pn	11 46 08.7	+1.7
SDLR	**Sedlovina**	5.44	23	PN	Pn	11 46 07.7	+0.7
SDLR	**Sedlovina**	5.44	23	*e*P	Pn	11 46 07.7	+0.7
KRX	**Arik**	5.46	21	PN	Pn	11 46 08.6	+1.4
KRX	**Arik**	5.46	21	*e*P	Pn	11 46 08.6	+1.4
GNL	**Ganaly**	5.62	16	PN	Pn	11 46 10.8	+1.4
GNL	**Ganaly**	5.62	16	*e*P	Pn	11 46 10.9	+1.4
SPN	**Mys Shipunski**	5.62	30	PN	Pn	11 46 09.6	+0.2
SPN	**Mys Shipunski**	5.62	30	*e*P	Pn	11 46 09.6	+0.2
SPN				*e*S	Sn	11 47 10.2	-2.4
KUR	**Kuril'sk**	6.00	242	*e*PN	Pn	11 46 17.1	+2.6
KUR				*e*S	Sn	11 47 25.3	+3.4
KUR				pmax	pmax		
	comp=E,77nm,0.8s						
KUR				pmax	pmax		
	comp=Z,359nm,0.8s						
KUR				pmax	pmax		
	comp=N,62nm,0.5s						
KUR				smax	smax		
	comp=N,259nm,0.6s						
KUR				smax	smax		
	comp=E,129nm,0.9s						
KUR	**Kuril'sk**	6.00	242	*e*P	Pn	11 46 17.1	+2.6
KUR				AMB	AMB	11 46 18.2	
	comp=E,360nm,0.8s						
KUR				*e*S	Sn	11 47 23.3	+1.4
KUR				A	A	11 47 53.8	
	comp=E,260nm,0.7s						
KUR				A	A	11 47 53.8	
	comp=E,130nm,0.7s						
SHO	**Shikotan**	7.41	236	PN	Pn	11 46 40.1	+6.2
SHO	**Shikotan**	7.41	236	*e*P	Pn	11 46 40.1	+6.2
KZV	**Kizimen**	7.46	22	PN	Pn	11 46 35.5	+0.9
KZV	**Kizimen**	7.46	22	*e*P	Pn	11 46 35.6	+0.9
YUK	**Yuzh-Kuril'sk**	7.86	240	*e*PN	Pn	11 46 41.1	+1.0
YUK				pmax	pmax		
	comp=Z,242nm,0.7s						
YUK				pmax	pmax		
	comp=N,100nm,0.5s						
YUK				pmax	pmax		
	comp=E,108nm,0.6s						
YUK				pmax	pmax		
	comp=Z,393nm,1.1s						
YUK	**Yuzh-Kuril'sk**	7.86	240	*e*P	Pn	11 46 41.1	+1.0
YUK				AMB	AMB	11 46 41.7	
	comp=Z,240nm,0.7s						
YUK				*e*S	Sn	11 48 07.7	0.0
YUK				A	A	11 48 15.5	
	comp=Z,220nm,0.6s						
YUK				A	A	11 48 15.5	
	comp=Z,270nm,0.6s						
RUSJ	**Misakicho**	8.18	243	*e*PN	Pn	11 46 46.0	+1.6
GLVR	**Golovnino**	8.23	240	*e*PN	Pn	11 46 45.5	+0.3
GLVR				pmax	pmax		
	comp=Z,209nm,0.5s						
GLVR				pmax	pmax		
	comp=N,74nm,0.6s						
GLVR	**Golovnino**	8.23	240	*e*P	Pn	11 46 45.7	+0.5
GLVR				AMB	AMB	11 46 52.5	
	comp=N,210nm,0.5s						
GLVR				*e*S	Sn	11 48 16.0	-0.9
NMR	**Nemuro--Hokkai**	8.35	237	*i* PN	Pn	11 46 45.1	-1.6
NMR	**Nemuro--Hokkai**	8.35	237	*e*P	Pn	11 46 45.1	-1.6
YSS	**Yuzhno-Sakhali**	8.62	266	Pn	Pn	11 46 48.5	-2.0
YSS	**Yuzhno-Sakhali**	8.62	266	*e*PN	Pn	11 46 51.7	+1.2
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				pmax	pmax		
	comp=Z,700nm,3.6s						
YSS				MLR	MLR		
	comp=Z,800nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,12.0s						
YSS				MLR	MLR		
	comp=E,900nm,13.0s						
YSS	**Yuzhno-Sakhali**	8.62	266	*e*P	Pn	11 46 51.7	+1.2
YSS				AMB	AMB	11 46 55.0	
	comp=E,90nm,0.9s						
YSS				*e*S	Sn	11 48 24.1	-2.2
TYV	**Tymovskoe**	8.63	292	*e*PN	Pn	11 46 53.3	+2.7
TYV				pmax	pmax		
	comp=Z,19nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,3.5s						
TYV	**Tymovskoe**	8.63	292	*e*P	Pn	11 46 52.0	+1.4
UGL	**Uglegorsk**	8.82	280	*e*P	Pn	11 46 56.3	+3.1
KBTR	**Krutoberegovo**	9.12	27	PN	Pn	11 46 56.9	-0.4
KBTR	**Krutoberegovo**	9.12	27	*e*P	Pn	11 46 56.9	-0.4
OKH	**Okha**	9.42	308	*e*P	Pn	11 47 03.8	+2.4
JKA	**Kamikawa-asahi**	9.79	249		Pn	11 47 09.1	+2.6
JKA	**Kamikawa-asahi**	9.79	249	*e*P	Pn	11 47 09.1	+2.6
ASAJ	**Asahikawa**	9.79	249	P	Pn	11 47 09.9	+3.4
	comp=Z,116nm,0.7s,baz=76,slow=14,SNR=86						
ASAJ				LR	LR	11 50 27.3	
	comp=Z,544nm,20.5s,baz=28,slow=35						
ASAJ	**Asahikawa**	9.79	249	PN	Pn	11 47 09.1	+2.6
ERM	**Erimo**	10.67	238	Pn	Pn	11 47 17.9	-0.6
ERM	**Erimo**	10.67	238	PN	Pn	11 47 17.9	-0.6
MA2	**Magadan**	11.59	348	P	Pn	11 47 29.8	-1.2
	comp=Z,8.8nm,0.9s,baz=157,slow=17,SNR=1.6						
MA2				LR	LR	11 51 45.7	
	comp=Z,304nm,20.3s,baz=181,slow=37						
JTM	**Tenmabayashi**	12.66	239		Pn	11 47 42.0	-3.8
SHEM	**Shemya Is, Ala**	12.71	63	LR	LR	11 53 25.3	
	comp=Z,161nm,19.3s,baz=293,slow=40						
SHEM	**Shemya Is, Ala**	12.71	63	Pn	Pn	11 47 47.5	+1.2
SMY	**Shemya**	12.71	63	Pn	Pn	11 47 47.5	+1.2
SEY	**Seymchan**	14.74	355	P	Pn	11 48 13.0	-0.9
	comp=Z,3.1nm,0.8s,baz=161,slow=15,SNR=4.0						
SEY				LR	LR	11 54 10.2	
	comp=Z,314nm,19.4s,baz=152,slow=39						
USRK	**Ussuriysk Ar.**	16.66	264	P	Pn	11 48 38.6	-0.3
	comp=Z,7.9nm,0.7s,baz=66,slow=13,SNR=8.3						
MJAR	**Matsushiro Arr**	17.24	233	P	Pn	11 48 44.1	-2.2
	comp=Z,5.9nm,0.8s,baz=28,slow=13,SNR=4.9						
ZEA	**Zeya**	18.42	298	*e*P	P	11 48 56.8	-3.5
ZEA	**Zeya**	18.42	298	*e*P	Pn	11 49 00.8	+0.2
YAK	**Yakutsk**	19.89	323	LR	LR	11 56 23.8	
	comp=Z,179nm,21.2s,baz=95,slow=35						
YAK	**Yakutsk**	19.89	323	*i* P	Pn	11 49 17.3	-0.9
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK	**Yakutsk**	19.89	323	*e*P	Pn	11 49 17.3	-0.9
BILL	**Bilibino**	20.53	12	*i* P	P	11 49 21.7	-1.5
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	**Korea Array**	22.73	252	P	P	11 49 45.4	-1.6
	comp=Z,8.4nm,1.0s,baz=48,slow=10,SNR=10						
	comp=Z,8.4nm,1.0s						
HILR	**Hailar Array B**	23.29	286	P	P	11 49 49.7	-3.0
	comp=Z,1.4nm,0.3s,baz=71,slow=9.5,SNR=3.9						
HILR				LR	LR	11 59 37.5	
	comp=Z,334nm,19.0s,baz=35,slow=38						
	comp=Z,1.4nm,0.3s						
TIXI	**Tiksi**	26.42	341	LR	LR	12 01 29.4	
	comp=Z,144nm,19.0s,baz=21,slow=38						
TIXI	**Tiksi**	26.42	341	P	P	11 50 20.0	-1.1
TIXI	**Tiksi**	26.42	341	*i* P	P	11 50 21.6	+0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
C18K	**Utukok River**	29.50	31	P	P	11 50 49.6	+0.9
H11N2	**WAKE ISLAND Hy**	30.01	158	T	T	12 22 46.5	
	baz=345,slow=76,SNR=201						
H11N1	**WAKE ISLAND Hy**	30.03	158	T	T	12 22 46.0	
	baz=345,slow=76,SNR=330						
H11N3	**WAKE ISLAND Hy**	30.03	158	T	T	12 22 40.9	
	baz=345,slow=76,SNR=122						
F19K	**Shaleruckik Mo**	30.18	35	P	P	11 50 56.3	+1.5
H11S1	**WAKE ISLAND Hy**	31.14	159	T	T	12 24 05.2	
	baz=344,slow=76,SNR=4049						
H11S3	**WAKE ISLAND Hy**	31.15	159	T	T	12 24 06.1	
	baz=344,slow=76,SNR=4004						
H11S2	**WAKE ISLAND Hy**	31.16	159	T	T	12 24 06.4	
	baz=344,slow=76,SNR=2981						
KDAK	**Kodiak Island**	31.94	53	LR	LR	12 07 09.5	
	comp=Z,86nm,18.3s,baz=259,slow=42						
E22K	**Anaktuvuk Pass**	32.70	34	P	P	11 51 18.4	+1.4
E22K				IAmb	IAmb	11 51 41.1	
	comp=Z,3.6nm,0.8s						
TLY	**Talaya**	32.84	296	*i* P	P	11 51 22.1	+3.8
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
E24K	**Your Creek**	33.93	34	P	P	11 51 29.1	+1.4
E24K				IAmb	IAmb	11 51 41.0	
	comp=Z,8.5nm,1.2s						
F24K	**Squaw Lake**	34.09	35	P	P	11 51 30.6	+1.5
F24K				IAmb	IAmb	11 52 14.2	
	comp=Z,5.5nm,1.2s						
ILAR	**Eielson Array**	34.37	40	P	P	11 51 32.5	+1.0
	comp=Z,1.2nm,1.0s,baz=272,slow=8.5,SNR=8.2						
	comp=Z,1.2nm,1.0s						
D25K	**Kavik River**	34.84	32	P	P	11 51 36.2	+0.7
D25K				IAmb	IAmb	11 51 48.0	
	comp=Z,7.0nm,0.8s						
A36M	**Sachs Harbour**	41.76	27	P	P	11 52 34.8	+1.2
A36M				IAmb	IAmb	11 52 46.6	
	comp=Z,8.9nm,0.8s						
DGZ	**Jazzator, Alta**	43.18	298	*i* P	P	11 52 48.5	+3.0
DGZ				pmax	pmax		
	comp=Z,11nm,1.1s						
MK31	**Makanchi Array**	47.57	297	*i* P	P	11 53 22.7	+2.5
SHL	**Shillong**	53.92	269	P	P	11 54 06.9	-1.6
SHL	**Shillong**	53.92	269	P	P	11 54 06.9	-1.6
SHL				pmax	pmax		
	comp=Z,13nm,0.7s						
CM31	**Chiang Mai Arr**	54.21	257	P	P	11 54 10.1	-0.4
CM31				IAmb	IAmb	11 54 11.2	
	comp=Z,7.5nm,0.9s						
CMAR	**Chiang Mai Arr**	54.21	257	P	P	11 54 10.8	+0.3
	comp=Z,4.2nm,0.8s,baz=32,slow=7.5,SNR=15						
	comp=Z,4.2nm,0.8s						
CMAR	**Chiang Mai Arr**	54.21	257	P	P	11 54 10.3	-0.1
CMAR	**Chiang Mai Arr**	54.21	257	P	P	11 54 10.4	-0.1
AAK	**Ala-Archa**	54.49	296	*i* P	P	11 54 15.0	+2.6
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	**Ala-Archa**	54.49	296	*e*P	P	11 54 15.0	+2.6
AB31	**Akbulak array**	58.58	310	P	P	11 54 39.5	-1.7
ABKAR	**Akbulak array**	58.58	310	P	P	11 54 39.5	-1.7
SUMG	**Summit**	59.01	5	P	P	11 54 44.2	-0.1
SUMG	**Summit**	59.01	5	P	P	11 54 44.3	-0.1
SUMG				pmax	pmax		
	comp=Z,12nm,1.1s						
SUMG	**Summit**	59.01	5	*i* P	P	11 54 43.0	-1.3
BELG	**Belogornoye**	62.36	319	*i* P	P	11 55 09.1	+2.2
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PDAR	**Pinedale Array**	62.60	56	P	P	11 55 08.5	-0.4
	comp=Z,0.5nm,0.9s,baz=307,slow=7.5,SNR=3.7						
	comp=Z,0.5nm,0.9s						
GWY	**Greenwater Val**	62.82	65	P	P	11 55 11.1	+0.7
FIA1	**FINESS Array S**	63.25	335	P	P	11 55 11.1	-1.6
FINES	**FINESS Array B**	63.25	335	P	P	11 55 10.2	-2.5
	comp=Z,1.9nm,0.7s,baz=35,slow=5.0,SNR=4.5						
	comp=Z,1.9nm,0.7s						
FINES	**FINESS Array B**	63.25	335	P	P	11 55 11.4	-1.3
FINES	**F

ABJI	**Asem Bagus**	**3.70**	**73**	P	**Pn**	**12 05 51.5**	**+2.0**
KMMI	**Kalianget**	**3.75**	**61**	P	**Pn**	**12 05 49.9**	**-0.3**
CNJI	**Cibinong**	**3.84**	**294**	P	**Pn**	**12 05 52.5**	**+1.1**
SKJI	**Sukabumi**	**4.48**	**294**	P	**Pn**	**12 06 02.3**	**+2.0**
DNP	**Denpasar**	**4.50**	**88**	P	**Pn**	**12 06 01.5**	**+1.0**
DBJI	**Dramaga**	**4.53**	**301**	P	**Pn**	**12 06 04.2**	**+3.3**
SRBI	**Singaraja**	**4.57**	**80**	P	**Pn**	**12 06 02.0**	**+0.5**
XMI	**Christmas Isla**	**5.14**	**252**	P	**Pn**	**12 06 09.7**	**+0.3**
TWSI	**Taliwang, Sumb**	**6.15**	**89**	P	**Pn**	**12 06 23.7**	**+0.6**
	0.4nm2µ48nm,0.6s						
PLAI	**Plampang**	**7.03**	**90**	P	**Pn**	**12 06 36.3**	**+1.1**
PLAI	**Plampang**	**7.03**	**90**	P	**Pn**	**12 06 36.3**	**+1.1**
MDSI	**Maura Dua**	**7.79**	**304**	P	**Pn**	**12 06 45.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**17.18**	**124**	P	**Pn**	**12 08 48.5**	**-3.0**
	0.6nm,0.3s,baz=315,slow=12,SNR=6.9						
FITZ				S	Sn	12 11 43.7	-18
	2.0nm,0.4s,baz=180,slow=19,SNR=5.6						
	3.1nm,0.6s						
WRA	**Warramunga Arr**	**25.38**	**118**	P	**P**	**12 10 17.1**	**-0.6**
	2.0nm,0.7s,baz=294,slow=11,SNR=33						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**26.64**	**126**	P	**P**	**12 10 28.4**	**-0.7**
	1.3nm,0.7s,baz=303,slow=9.0,SNR=26						
	1.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**29.54**	**337**	P	**P**	**12 10 53.0**	**-1.9**
	0.4nm,0.4s,baz=155,slow=8.7,SNR=4.6						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**36.69**	**133**	P	**P**	**12 11 57.3**	**+0.2**
	2.5nm,0.8s,baz=315,slow=14,SNR=3.5						
	2.5nm,0.8s						
H08S2	**Diego Garcia H**	**37.78**	**269**	T	T	12 52 07.7	
	baz=94,slow=75						
H08S3	**Diego Garcia H**	**37.80**	**269**	T	T	12 52 07.1	
	baz=94,slow=75						
H08S1	**Diego Carcia H**	**37.80**	**269**	T	T	12 52 03.2	
	baz=94,slow=75						
SONM	**Songino Array**	**56.61**	**357**	P	**P**	**12 14 30.8**	**-1.8**
	0.6nm,0.5s,baz=170,slow=8.9,SNR=4.1						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**60.94**	**338**	P	**P**	**12 15 01.8**	**-0.9**
	0.8nm,0.3s,baz=150,slow=7.6,SNR=14						
	0.8nm,0.3s						
H04N2	**CROZET ISLANDS**	**62.25**	**222**	T	T	13 22 55.9	
	baz=71,slow=75,SNR=22						
H04N1	**CROZET ISLANDS**	**62.27**	**222**	T	T	13 22 53.0	
	baz=71,slow=75,SNR=19						
H04N3	**CROZET ISLANDS**	**62.27**	**222**	T	T	13 22 53.8	
	baz=71,slow=75,SNR=19						
KURBB	**Kurchatov Arra**	**65.51**	**338**	P	**P**	**12 15 31.5**	**-1.2**
	0.2nm,0.3s,baz=154,slow=5.2,SNR=4.9						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**66.31**	**344**	P	**P**	**12 15 36.3**	**-1.6**
	0.6nm,0.4s,baz=156,slow=4.6,SNR=3.8						
	0.6nm,0.4s						
BVAR	**Borovoye Array**	**70.55**	**336**	P	**P**	**12 16 03.3**	**-1.1**
	0.6nm,0.6s,baz=156,slow=7.6,SNR=4.5						
	0.6nm,0.6s						
AKTO	**Aktyubinsk**	**74.62**	**328**	P	**P**	**12 16 28.0**	**-0.6**
	1.5nm,0.5s,baz=112,slow=5.8,SNR=5.2						
	1.5nm,0.5s						
ARTI	**Arti**	**77.96**	**333**	P	**P**	**12 16 45.4**	**-2.1**
	2.3nm,0.7s,baz=178,slow=6.5,SNR=3.5						
	2.3nm,0.7s						
QSPA	**South Pole Qui**	**81.10**	**180**	P	**P**	**12 17 08.3**	**+3.7**
	0.9nm,0.9s,baz=252,slow=1.9,SNR=2.1						
	0.9nm,0.9s						
BRTR	**Keskin Array B**	**85.80**	**311**	P	**P**	**12 17 29.7**	**+0.5**
	0.8nm,0.8s,baz=115,slow=5.9,SNR=3.6						
	0.8nm,0.8s						

IDC 23 12:09:44.9±2.6, 5.72S×130.60E, h0km, mb3.7/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=146.2km s-min=33.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.60**	**166**	Pn	Pn	12 13 11.1	-1.9
	0.2nm,0.3s,baz=349,slow=13,SNR=5.3						
WRA				Sn	Sn	12 15 47.4	-8.2
	0.3nm,0.3s,baz=348,slow=24,SNR=7.4						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**18.13**	**170**	P	P	12 13 59.1	+0.4
	0.2nm,0.3s,baz=353,slow=11,SNR=10.0						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**67.49**	**326**	P	P	12 20 42.8	0.0
	0.3nm,0.4s,baz=121,slow=8.4,SNR=2.5						
	0.3nm,0.4s						

IDC ***23*** *12:11:13.6±0.3, 1.63N×132.83E, h0km, mb5.5/45, mbtmp5.5/49, ML3.9/2, MS5.4/65, Error ellipse: s-maj=14.8km s-min=8.5km az=74.0*

BJI ***23*** *12:11:14.2, 1.55N×132.85E, h10km, mB6.3/82, mb5.6/96, Ms6.0/98, MS7 5.7/95*

MOS ***23*** *12:11:14.5±1.0, 1.69N×132.80E, h15km, mb6.0/69, MS5.5/36, Error ellipse: s-maj=8.2km s-min=4.3km az=114.4*

ISC-PP ***23*** *12:11:15, 1.64N×132.82E, h18km±2km, Mwppsm6.4, Moment Tensor Solution. s51 Moment tensor: Scale 1018Nm; Mrr-0.73±.15; Mθθ0.46±.17; Mϕϕ0.26±.17; Mrθ0.12±.15; Mθϕ0.15±.31; Mϕr-0.24±.15; Fault plane solution: Mw4.62000×1018 NP1:φs291.50000°, δ47.30000°, λ253.20000°. NP2:φs135.50000°, δ45.30000°, λ-72.60000°.*

NEIC ***23*** *12:11:15.6±1.9, 1.64N±0.05×132.82E±0.06, h5km±1km, mb6.0/362, Ms_20 5.8/317, Mwb6.0/144, Mww6.2/54 Error ellipse: s-maj=10.9km s-min=8.9km az=116.0, Moment Tensor Solution. Moment tensor: Scale 1018Nm; Mrr-1.03; Mθθ-0.01; Mϕϕ1.04; Mrθ-0.18; Mθϕ0.87; Mϕr-0.22; Fault plane solution: Mw1.38000×1018 NP1: φs204.21000°, δ38.95000°, λ-97.41000°. NP2:φs33.70000°, δ51.43000°, λ-84.05000°. Principal axes: T 1.5617, Plg6.0000°, Azm119.0000°; N -0.4975, Plg5.0000°, Azm210.0000°; P -1.0642, Plg82.0000°, Azm336.0000°;*

NEIC ***23*** *12:11:16.3, 1.63N×132.81E, h10km*

DJA ***23*** *12:11:16.1±0.2, 2.2N±2.2×13.3E±1.1, h10km, M6.1/115, mB6.4/110, mb5.8/115, MLv6.0/19, Mw6.1/32, Mw(mB)6.1/110, MwMwp6.0/103, Mwp6.0/103*

NEIC ***23*** *12:11:16.3, 1.63N×132.81E, h20km, Moment Tensor Solution. Duration: 6s3 Moment tensor: Scale 1018Nm; Mrr-2.45; Mθθ0.33; Mϕϕ2.12; Mrθ-0.95; Mθϕ0.86; Mϕr-0.41; Fault plane solution: Mw2.66000×1018 NP1: φs187.92000°, δ38.40000°, λ-113.33000°. NP2: φs36.75000°, δ55.23000°, λ-72.57000°. Principal axes: T 2.5792, Plg9.0000°, Azm114.0000°; N 0.1629, Plg14.0000°, Azm207.0000°; P -2.7421, Plg73.0000°, Azm354.0000°;*

IPGP ***23*** *12:11:16.0, 1.63N×132.79E, h8km, Mw6.1, Fault plane solution: NP1:φs211.00000°, δ36.00000°, λ-77.00000°. NP2:φs15.00000°, δ55.00000°, λ-99.00000°.*

NEIC ***23*** *12:11:16.3, 1.63N×132.81E, h20km*

GCMT ***23*** *12:11:17.6±0.0, 1.74N×132.75E, h12km, MW6.1/161, Moment Tensor Solution. s159,c372; s161,c637; Duration: 2s8 Moment tensor: Scale 1018Nm; Mrr-1.68±.01; Mθθ0.01±.01; Mϕϕ1.68±.01; Mrθ0.20±.02; Mθϕ0.92±.01; Mϕr-0.04±.02; Best double couple: Mw1.90100×1018 NP1:φs15.00000°, δ45.00000°, λ-103.00000°. NP2:φs213.00000°, δ46.00000°, λ-78.00000°. Principal axes: T 2.0890, Plg1.0000°, Azm294.0000°; N -0.3730, Plg9.0000°, Azm24.0000°; P -1.7120, Plg81.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 23 12:11:16.4±0.4, 1.62N±0.02×132.85E±0.03, h18km±1km, h18km:pP-P, n1649, σ1s69/1611, mb5.9/399, MS5.7/304, 56C-75D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**2.94**	**213**	P	**Pn**	**12 12 01.0**	**-1.2**
RKPI	**Ransiki, Papua**	**3.38**	**157**	P	**Pn**	**12 12 07.8**	**-0.5**
BAKI	**Biak**	**4.29**	**131**	P	**Pn**	**12 12 19.4**	**-1.4**
FAKI	**Fak Fak**	**4.55**	**188**		**Pn**	**12 12 24.4**	**0.0**
FAKI	**Fak Fak**	**4.55**	**188**	P	**Pn**	**12 12 24.7**	**+0.3**
FAKI	**Fak Fak**	**4.55**	**188**	P	**Pn**	**12 12 24.4**	**0.0**
FAKI	**Fak Fak**	**4.55**	**188**	⇑P	**Pn**	**12 12 24.5**	**0.0**
SRPI	**Serui, Papua**	**4.85**	**136**	P	**Pn**	**12 12 28.4**	**-0.1**
KMPI	**Kaimana, Papua**	**5.32**	**171**	P	**Pn**	**12 12 35.3**	**+0.3**
TNTI	**Ternate**		**5.55**	**261**		**Pn**	**12 12 37.9**	**-0.3**
TNTI	**Ternate**		**5.55**	**261**	P	**Pn**	**12 12 39.0**	**+0.9**
TNTI	**Ternate**		**5.55**	**261**	S	**Sn**	**12 13 41.6**	**+0.1**
TNTI	**Ternate**		**5.55**	**261**	P	**Pn**	**12 12 38.0**	**-0.1**
	6.7nm166µ21µm1µm,0.8s							
TNTI	**Ternate**		**5.55**	**261**	⇑P	**Pn**	**12 12 38.2**	**+0.1**
MSAI	**Masohi**		**6.30**	**218**	P	**Pn**	**12 12 49.8**	**+1.3**
BNDI	**Bandanaira**		**6.78**	**206**	P	**Pn**	**12 12 56.4**	**+1.4**
BNDI	**Bandanaira**		**6.78**	**206**	S	**Sn**	**12 14 13.9**	**+2.1**
BNDI	**Bandanaira**		**6.78**	**206**	P	**Pn**	**12 12 55.3**	**+0.3**
BNDI	**Bandanaira**		**6.78**	**206**	⇓P	**Pn**	**12 12 55.3**	**+0.3**
AAI	**Ambon**		**7.03**	**221**	P	**Pn**	**12 12 59.4**	**+0.8**
	5.4nm59µm19µm1µm,1.1s							
NLAI	**Namlea**		**7.51**	**230**	P	**Pn**	**12 13 06.4**	**+1.3**
SGSI	**Sangihe**		**7.60**	**286**	P	**Pn**	**12 13 06.4**	**+0.1**
SANI	**Sanana**		**7.77**	**242**	P	**Pn**	**12 13 07.2**	**-1.5**
SANI	**Sanana**		**7.77**	**242**	P	**Pn**	**12 13 08.3**	**-0.4**
SANI	**Sanana**		**7.77**	**242**	S	**Sn**	**12 14 37.3**	**+1.0**
SANI	**Sanana**		**7.77**	**242**	P	**Pn**	**12 13 07.9**	**-0.8**
	1.6nm106µm382nm,0.9s							
SANI	**Sanana**		**7.77**	**242**	⇓P	**Pn**	**12 13 06.9**	**-1.8**
GENI	**Genyem**		**8.43**	**120**	P	**Pn**	**12 13 18.5**	**+0.8**
GENI	**Genyem**		**8.43**	**120**	P	**Pn**	**12 13 16.7**	**-1.0**
	15µm809nm,1.5s							
GENI	**Genyem**		**8.43**	**120**	⇑P	Pn	12 13 13.1	-4.6
JAY	**Jayapura**		**8.86**	**118**	Pn	**Pn**	**12 13 22.3**	**-1.4**
	5.4nm,0.3s,baz=172,slow=3.1,SNR=14							
JAY					Sn	Sn	12 14 53.1	-10
	3.1nm,0.3s,baz=36,slow=19,SNR=0.9							
JAY					LR	LR	12 16 33.3	
	comp=Z,49µm,19.1s,baz=284,slow=36							
	221nm,0.8s							
JAY	**Jayapura**		**8.86**	**118**	P	**Pn**	**12 13 22.9**	**-0.8**
	10µm406nm,0.9s							
KMSI	**Cibinong**		**8.93**	**263**	P	**Pn**	**12 13 25.5**	**+0.9**
DAV	**Davao City (W)**		**9.05**	**307**	Pn	**Pn**	**12 13 23.4**	**-2.8**
	187nm,0.3s,baz=54,slow=5.3,SNR=8.1							
DAV					Sn	**Sn**	**12 15 01.6**	**-6.1**
	52nm,0.3s,baz=38,slow=18,SNR=1.5							
DAV					LR	LR	12 16 50.2	
	comp=Z,28µm,21.8s,baz=99,slow=37							
DAV	**Davao City (W)**		**9.05**	**307**		**Pn**	**12 13 25.4**	**-0.8**
DAV	**Davao City (W)**		**9.05**	**307**	P	**Pn**	**12 13 26.2**	**+0.1**
DAV					P	**Pn**	**12 13 26.2**	**+0.1**
DAV					S	**Sn**	**12 15 07.9**	**+0.3**
DAV					S	**Sn**	**12 15 07.9**	**+0.3**
SAUI	**Saumlaki**		**9.67**	**189**		**Pn**	**12 13 34.3**	**-0.4**
SAUI	**Saumlaki**		**9.67**	**189**	P	**Pn**	**12 13 36.9**	**+2.2**
	28µm20µm491nm,0.7s							
SAUI	**Saumlaki**		**9.67**	**189**	⇑P	**Pn**	**12 13 36.2**	**+1.5**
LUWI	**Luwuk**		**10.42**	**255**	P	**Pn**	**12 13 44.2**	**-0.8**
LUWI	**Luwuk**		**10.42**	**255**		**Pn**	**12 13 44.5**	**-0.5**
LUWI	**Luwuk**		**10.42**	**255**	P	**Pn**	**12 13 45.6**	**+0.6**
	77µm21µm791nm,1.7s							
LUWI	**Luwuk**		**10.42**	**255**	⇑P	**Pn**	**12 13 44.5**	**-0.5**
MRSI	**Marisa**		**10.97**	**264**	P	**Pn**	**12 13 52.7**	**+0.2**
	80µm13µm385nm,2.2s							
APSI	**Ampana**		**11.48**	**257**	P	**Pn**	**12 14 00.2**	**+0.6**
	14µm940nm,1.0s							
TOLI2	**Tolitoli**		**12.08**	**268**		**Pn**	**12 14 07.1**	**-0.7**
BBSI	**Bau Bau**		**12.46**	**235**	P	**Pn**	**12 14 13.4**	**+0.4**
	36µm17µm755nm,1.2s							
MMPI	**Merauke**		**12.52**	**143**	P	**Pn**	**12 14 13.4**	**-0.4**
	81µm15µm936nm,0.9s							
MPSI	**Mapaga**		**13.01**	**265**	P	**Pn**	**12 14 20.7**	**+0.2**
PCI	**Palu**		**13.25**	**259**	P	**Pn**	**12 14 25.8**	**+2.0**
	74µm14µm579nm,1.0s							
TTSI	**Tana Toraja**		**13.83**	**250**	P	**Pn**	**12 14 31.7**	**0.0**
	42µm8µm450nm,1.5s							
BNSI	**Bone**		**14.07**	**245**	P	**Pn**	**12 14 35.9**	**+0.9**
	44µm12µm287nm,1.5s							
DRS	**Darwin Rock St**		**14.10**	**188**	P	**Pn**	**12 14 34.1**	**-1.2**
SOEI	**Soe**		**14.17**	**217**	P	**Pn**	**12 14 36.6**	**+0.1**
SOEI	**Soe**		**14.17**	**217**	Pn	**Pn**	**12 14 36.8**	**+0.3**
SOEI	**Soe**		**14.17**	**217**	P	**Pn**	**12 14 36.0**	**-0.5**
SOEI	**Soe**		**14.17**	**217**	P	**Pn**	**12 14 39.3**	**+2.8**
	22µm7µm609nm,1.1s							
SOEI	**Soe**		**14.17**	**217**	⇑P	**Pn**	**12 14 37.4**	**+0.9**
SPSI	**Sidrap Palu**		**14.20**	**247**	P	**Pn**	**12 14 38.0**	**+1.2**
	37µm19µm1µm,0.9s							
KDU	**Kakadu**		**14.22**	**182**	P	**Pn**	**12 14 35.4**	**-1.7**
	comp=Z,109nm,1.0s,comp=Z,0.0nm							
BKSI	**Bulukumba**		**14.46**	**241**	P	**Pn**	**12 14 42.8**	**+2.4**
	comp=Z,32µmcomp=Z,12µmcomp=Z,275nm,1.4s							
MTN	**Manton Dam**		**14.47**	**187**	P	**Pn**	**12 14 36.5**	**-4.0**
MTN	**Manton Dam**		**14.47**	**187**		**Pn**	**12 14 37.2**	**-3.3**
BSSI	**Bau Bau, Buton**		**14.55**	**238**	P	**P**	**12 14 45.1**	**-2.9**
	comp=Z,30µmcomp=Z,14µmcomp=Z,400nm,2.2s							
KAPI	**Kappang**		**14.65**	**243**	Pn	**Pn**	**12 14 45.3**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=52,slow=14,SNR=51							
KAPI					LR	LR	12 20 28.8	
	comp=Z,22µm,19.6s,baz=66,slow=38							
KAPI	**Kappang**		**14.65**	**243**	Pn	**Pn**	**12 14 44.1**	**+1.1**
KAPI	**Kappang**		**14.65**	**243**	P	**Pn**	**12 14 42.8**	**-0.2**
KAPI					P	**Pn**	**12 14 42.8**	**-0.2**
KAPI					P	**Pn**	**12 14 42.8**	**-0.2**
KAPI					S	**Sn**	**12 17 25.9**	**+0.9**
KAPI					S	**Sn**	**12 17 25.9**	**+0.9**
KAPI					S	**Sn**	**12 17 25.9**	**+0.9**
KAPI	**Kappang**		**14.65**	**243**	P	**Pn**	**12 14 44.1**	**+1.1**
MMRI	**Maumere**		**14.69**	**226**	P	**Pn**	**12 14 46.1**	**+2.6**
	comp=Z,22µmcomp=Z,12µmcomp=Z,573nm,1.6s							
MMRI	**Maumere**		**14.69**	**226**	⇓P	**Pn**	**12 14 42.5**	**-0.9**
MYLDM	**Lahad Datu**		**14.75**	**284**		**Pn**	**12 14 44.6**	**+0.3**
MYLDM	**Lahad Datu**		**14.75**	**284**	P	**Pn**	**12 14 45.1**	**+0.7**
MYLDM	**Lahad Datu**		**14.75**	**284**	⇑P	**Pn**	**12 14 45.0**	**+0.7**
BATI	**Baumata**		**14.89**	**218**	Pn	**Pn**	**12 14 48.3**	**+2.1**
	comp=Z,4.5nm,0.3s,baz=70,slow=5.5,SNR=15							
BATI					LR	LR	12 21 04.3	
	comp=Z,13µm,19.8s,baz=36,slow=40							
BATI	**Baumata**		**14.89**	**218**	P	**Pn**	**12 14 48.3**	**+2.1**
	comp=Z,400nm,0.8s							
MANU	**Manus Island**		**14.96**	**104**		**Pn**	**12 14 46.2**	**-0.9**
MANU	**Manus Island**		**14.96**	**104**	⇑P	**Pn**	**12 14 46.3**	**-0.9**
EDFI	**Ende, Flores**		**15.16**	**227**	P	**P**	**12 14 53.0**	**-1.9**
	comp=Z,23µmcomp=Z,7µmcomp=Z,248nm,1.2s							
SGKI	**Sangatta, Kali**		**15.39**	**262**	P	**Pn**	**12 14 51.4**	**-1.5**
	comp=Z,65µmcomp=Z,23µmcomp=Z,872nm,1.0s							
BKB	**Balikpapan**		**16.21**	**260**		**Pn**	**12 15 02.7**	**-0.7**
BKB					IAmb	IAmb	12 15 08.2	
	comp=Z,2µm,2.0s							
BKB	**Balikpapan**		**16.21**	**260**	P	**P**	**12 15 05.2**	**-1.2**
WSI	**Waingapu**		**16.80**	**228**	P	**Pn**	**12 15 11.5**	**+0.6**
	comp=Z,28µmcomp=Z,22µmcomp=Z,1µm,1.2s							
GUMO	**Guam**		**16.82**	**44**	Pn	**P**	**12 15 13.5**	**+0.4**
	comp=Z,8.2nm,0.3s,baz=188,slow=15,SNR=4.7							
BASI	**Baing, Sumba**		**16.96**	**226**	P	**P**	**12 15 14.6**	**-0.2**
	comp=Z,18µmcomp=Z,14µmcomp=Z,814nm,1.3s							
TGY	**Tagaytay City**		**17.10**	**317**	P	**P**	**12 15 15.9**	**-0.5**
	comp=Z,126nm,0.3s,baz=194,slow=1.6,SNR=17							
TGY					LR	LR	12 21 00.5	
	comp=Z,12µm,21.1s,baz=134,slow=34							
WBSI	**Waikabubak, Su**		**17.46**	**230**	P	**Pn**	**12 15 19.0**	**-0.2**
	comp=Z,25µmcomp=Z,11µmcomp=Z,336nm,1.5s							
KNRA	**Kununurra**		**17.66**	**193**	P	**Pn**	**12 15 18.6**	**-3.0**
KNRA	**Kununurra**		**17.66**	**193**	P	**Pn**	**12 15 18.6**	**-3.0**
KNRA					IAmb	IAmb	12 15 28.2	
	comp=Z,2µm,2.0s							
PMG	**Port Moresby**		**17.98**	**128**	P	**P**	**12 15 26.3**	**+0.3**
	comp=Z,4.1nm,0.3s,baz=325,slow=8.2,SNR=196							
PMG					LR	LR	12 23 03.9	
	comp=Z,18µm,20.9s,baz=288,slow=40							
	comp=Z,737nm,1.0s							
PMG	**Port Moresby**		**17.98**	**128**	P	**P**	**12 15 26.7**	**+0.6**
PMG	**Port Moresby**		**17.98**	**128**	P	**P**	**12 15 26.3**	**+0.3**
PMG	**Port Moresby**		**17.98**	**128**	ce P	**P**	**12 15 26.6**	**+0.6**
PMG					pmax	pmax		
	comp=Z,3µm,1.7s							
PMG	**Port Moresby**		**17.98**	**128**	⇑P	**P**	**12 15 26.3**	**+0.3**
MTKI	**Muara Teweh, K**		**18.13**	**262**	P	**P**	**12 15 29.0**	**+1.2**
PLAI	**Plampang**		**18.26**	**235**	P	**P**	**12 15 29.9**	**+0.7**
PLAI	**Plampang**		**18.26**	**235**	P	**P**	**12 15 29.2**	**0.0**
	comp=Z,46µmcomp=Z,18µmcomp=Z,591nm,1.6s							
COEN	**Coen**		**18.56**	**147**	P	**P**	**12 15 32.2**	**-0.2**
	comp=Z,1µm,1.9s,comp=Z,0.0nm							
COEN	**Coen**		**18.56**	**147**	P		**12 15 31.7**	**-0.7**
COEN	**Coen**		**18.56**	**147**	P	**Pn**	**12 15 33.1**	**+0.4**
COEN	**Coen**		**18.56**	**147**	⇑P	**P**	**12 15 31.6**	**-0.7**
BBKI	**Banjar Baru**		**18.70**	**254**	P	**Pn**	**12 15 36.4**	**+2.0**
	comp=Z,2µm,2.7s							
TWSI	**Taliwang, Sumb**		**18.95**	**237**	P	**P**	**12 15 36.9**	**+0.1**
	comp=Z,40µmcomp=Z,21µmcomp=Z,503nm,1.2s							
SRBI	**Singaraja**		**20.06**	**241**	P	Pn	12 15 50.6	-0.1
	comp=Z,55µmcomp=Z,21µmcomp=Z,559nm,1.4s							
RABL	**Rabaul**		**20.14**	**107**		Pn	12 15 51.6	-0.2
RABL					IAmb	IAmb	12 16 04.0	
	comp=Z,1µm,1.1s							
RABL	**Rabaul**		**20.14**	**107**	⇑P	Pn	12 15 51.5	-0.2
DNP	**Denpasar**		**20.34**	**240**	P	Pn	12 15 53.4	-0.7
	comp=Z,39µmcomp=Z,658nm,1.6s							
SBUM	**Sibu**		**20.63**	**273**	P	Pn	12 15 56.7	-0.8
SBUM	**Sibu**		**20.63**	**273**	⇓P	Pn	12 15 57.6	+0.1
KMMI	**Kalianget**		**20.72**	**245**	P	Pn	12 15 58.3	-0.2
	comp=Z,62µmcomp=Z,24µmcomp=Z,465nm,1.2s							
ABJI	**Asem Bagus**		**20.79**	**243**	P	Pn	12 15 58.6	-0.7
	comp=Z,836nm,2.5s							
FITZ	**Fitzroy Crossi**		**20.84**	**200**	P	**P**	**12 15 57.9**	**+0.5**
	comp=Z,324nm,1.0s,baz=28,slow=11,SNR=85							
FITZ					S	**S**	**12 19 40.2**	**-9.0**
	comp=Z,19nm,0.9s,baz=43,slow=15,SNR=1.6							
FITZ					LR	LR	12 26 10.4	
	comp=Z,10µm,18.2s,baz=24,slow=43							
	comp=Z,324nm,1.0s							
FITZ	**Fitzroy Crossi**		**20.84**	**200**	P	**P**	**12 15 57.5**	**+0.1**
JAGI	**Jajag, Banyuwa**		**21.17**	**241**	P	**P**	**12 16 00.2**	**-0.7**
JAGI					IAmb	IAmb	12 16 10.6	
	comp=Z,2µm,1.9s							
JAGI	**Jajag, Banyuwa**		**21.17**	**241**	P	**P**	**12 16 01.7**	**+0.8**
	comp=Z,33µmcomp=Z,18µmcomp=Z,512nm,2.5s							
JAGI	**Jajag, Banyuwa**		**21.17**	**241**	⇓P	**P**	**12 16 00.0**	**-0.9**
BLJI	**Banyuglugur**		**21.34**	**244**	P	**P**	**12 16 03.9**	**+1.1**
	comp=Z,47µmcomp=Z,16µmcomp=Z,351nm,1.6s							
WRAB	**Tennant Creek**		**21.47**	**176**	P	**P**	**12 16 04.0**	**0.0**
WRAB					IAmb	IAmb	12 16 08.1	
	comp=Z,872nm,1.4s							
WRAB	**Tennant Creek**		**21.47**	**176**	P	**P**	**12 16 03.7**	**-0.4**
WRAB	**Tennant Creek**		**21.47**	**176**	P	**P**	**12 16 04.1**	**0.0**
WRAB					pmax	pmax		
	comp=Z,872nm,1.4s							
WRAB					MLR	MLR		
	comp=Z,22µm,20.0s							
WRA	**Warramunga Arr**		**21.48**	**176**	P	**P**	**12 16 04.2**	**0.0**
	comp=Z,204nm,0.9s,baz=356,slow=12,SNR=5.0							
WRA					S	**S**	**12 19 55.0**	**-6.9**
	comp=Z,62nm,1.2s,baz=354,slow=20,SNR=8.7							
WRA					LR	LR	12 25 18.3	
	comp=Z,22µm,20.1s,baz=353,slow=39							
	comp=Z,204nm,0.9s							
WRA	**Warramunga Arr**		**21.48**	**176**	P	**P**	**12 16 03.6**	**-0.5**
WRA	**Warramunga Arr**		**21.48**	**176**	P	**P**	**12 16 03.7**	**-0.5**
WRA					pmax	pmax		
	comp=Z,119nm,1.3s							
WB1	**Warramunga Ar.**		**21.50**	**176**	P	**P**	**12 16 05.1**	**+0.7**
	comp=Z,674nm,1.0s							
WR8	**Warramunga Arr**		**21.51**	**176**	P	**P**	**12 16 04.3**	**-0.2**
WR8					IAmb	IAmb	12 16 24.2	
	comp=Z,2µm,1.6s							
GRJI	**Gresik**		**22.03**	**247**	P	**P**	**12 16 11.0**	**+0.8**
	comp=Z,47µmcomp=Z,25µmcomp=Z,419nm,1.5s							
TBJI	**Tambak Boyo**		**22.58**	**248**	P	**P**	**12 16 17.3**	**+1.3**
	comp=Z,43µmcomp=Z,1µm,2.4s							
MTSU	**Mount Surprise**		**22.65**	**151**	P	**P**	**12 16 17.1**	**+0.3**
	comp=Z,96nm,0.9s							
MTSU	**Mount Surprise**		**22.65**	**151**	P	**P**	**12 16 18.3**	**+1.5**
QIS	**Mount Isa**		**23.02**	**164**	P	**P**	**12 16 19.8**	**-0.7**
	comp=Z,339nm,1.1s,comp=Z,0.0nm							
QIS	**Mount Isa**		**23.02**	**164**	P	**P**	**12 16 19.6**	**-1.0**
NGJI	**Ngawi**		**23.14**	**247**	P	**P**	**12 16 24.8**	**+2.9**
	comp=Z,295nm,1.1s							
PCJI	**Pacitan**		**23.71**	**245**	P	**P**	**12 16 28.2**	**+0.6**
	comp=Z,24µmcomp=Z,12µmcomp=Z,466nm,1.1s							
SMRI	**Semarang**		**23.97**	**249**	P	**P**	**12 16 30.9**	**+0.9

QZH pmax pmax
comp=Z,230nm,1.4s
QZH pmax pmax
comp=Z,11µm,8.8s
QZH LR LR
comp=Z,18µm,13.4s
QZH LR LR
comp=Z,10µm,15.1s
QZH LR LR
comp=Z,16µm,17.2s
PPBI Pangkal Pinang 26.97 262 P **P** **12 16 58.5 +1.1**
CNJI Cibinong 27.15 251 P **P** **12 16 59.5 +0.5**
comp=Z,154nm,1.1s
DBJI Dramaga 27.29 252 P **P** **12 17 00.7 +0.5**
comp=Z,23µmcomp=Z,727nm,1.4s
HKC Hong Kong Obse 27.43 320 ⇑P **P** **12 17 02.0 +0.7**
HKPS Hong Kong Po S 27.43 320 P **P** **12 17 00.6 -0.8**
SKJI Sukabumi 27.61 252 P P 12 17 17.6 +15
SBJI Serang 27.77 254 P **P** **12 17 04.4 -0.1**
comp=Z,21µmcomp=Z,12µmcomp=Z,557nm,1.8s
TPRI Tanjung Pinang 28.33 269 P **P** **12 17 10.6 +1.1**
comp=Z,20µmcomp=Z,5µmcomp=Z,77nm,0.5s
DSRI Dabo 28.35 266 P **P** **12 17 11.4 +1.7**
QIZ Qiongzhong 28.41 309 IAmb IAmb 12 17 12.5
comp=Z,228nm,1.4s
QIZ Qiongzhong 28.41 309 P **P** **12 17 10.5 +0.3**
QIZ PP **PnPn** **12 18 01.8 +2.3**
QIZ S **S** **12 21 59.0 +2.3**
QIZ SS **SnSn** **12 23 18.8 +3.5**
QIZ pmax pmax
comp=Z,110nm,1.4s
QIZ pmax pmax
comp=Z,5µm,6.3s
QIZ LR LR
comp=Z,14µm,15.1s
QIZ LR LR
comp=Z,10µm,10.3s
QIZ LR LR
comp=Z,21µm,24.7s
GZH Guangzhou 28.52 320 P **P** **12 17 13.6 +2.5**
GZH pP **pwP** **12 17 22.0 +0.6**
GZH S **S** **12 22 02.8 +4.5**
GZH pmax pmax
comp=Z,140nm,1.5s
GZH pmax pmax
comp=Z,6µm,12.4s
GZH LR LR
comp=Z,8µm,18.4s
GZH LR LR
comp=Z,6µm,15.3s
GZH LR LR
comp=Z,12µm,16.0s
KLI Kotabumi 28.70 257 P **P** **12 17 13.5 +0.7**
MYKOM Kota Tinggi 28.99 271 ⇑P **P** **12 17 16.3 +0.9**
HNR Honiara 29.14 113 LR LR 12 28 36.8
comp=Z,12µm,20.6s,baz=276,slow=36
HNR Honiara 29.14 113 P **P** **12 17 16.8 +0.1**
HNR IAmb IAmb 12 17 40.0
comp=Z,267nm,1.1s
HNR Honiara 29.14 113 IAMs_20 IAMs_20 12 27 58.9
comp=Z,17µm,18.0s
HNR Honiara 29.14 113 P **P** **12 17 16.8 +0.1**
HNR pmax pmax
comp=Z,267nm,1.2s
HNR MLR MLR
comp=Z,17µm,18.0s
KASI Kota Agung 29.20 256 P **P** **12 17 18.0 +0.8**
comp=Z,12µmcomp=Z,4µmcomp=Z,195nm,1.2s
MDSI Maura Dua 29.29 258 P **P** **12 17 18.1 +0.1**
comp=Z,16µmcomp=Z,6µmcomp=Z,260nm,1.2s
LWLI Liwa 29.51 257 P **P** **12 17 20.7 +0.6**
comp=Z,14µmcomp=Z,9µmcomp=Z,233nm,1.5s
QLP Quilpie 30.12 159 P **P** **12 17 25.7 +0.5**
comp=Z,295nm,1.6s,comp=Z,0.0nm
QLP Quilpie 30.12 159 P **P** **12 17 26.7 +1.5**
QLP Quilpie 30.12 159 ⇑P **P** **12 17 26.1 +1.0**
GIRL Giralia 30.19 216 P **P** **12 17 26.7 +0.8**
comp=Z,143nm,1.6s,comp=Z,0.0nm
KSI Kapahiang 30.69 260 P **P** **12 17 32.3 +1.7**
comp=Z,16µmcomp=Z,145nm,1.2s
MASI Maura Aman, Be 30.96 261 P **P** **12 17 34.0 +1.1**
comp=Z,9µmcomp=Z,494nm,1.4s
MEEK Meekatharra 31.28 205 P **P** **12 17 34.3 -1.2**
comp=Z,89nm,0.9s,comp=Z,0.0nm
MEEK Meekatharra 31.28 205 P **P** **12 17 34.6 -0.9**
SSE Sheshan 31.32 341 P **P** **12 17 36.8 +1.0**
SSE S **S** **12 22 45.3 +3.2**
SSE pmax pmax
comp=Z,50nm,1.4s
SSE pmax pmax
comp=Z,2µm,6.6s
SSE LR LR
comp=Z,6µm,16.7s
SSE LR LR
comp=Z,3µm,16.2s
JNU Nakatsue 31.39 357 P **P** **12 17 36.6 +0.3**
comp=Z,253nm,1.0s,baz=167,slow=7.0,SNR=33
JNU LR LR 12 30 07.6
comp=Z,5µm,19.6s,baz=172,slow=36
comp=Z,253nm,1.0s
JNU Nakatsue 31.39 357 IAmb IAmb 12 17 40.4
comp=Z,322nm,1.0s
JNU Nakatsue 31.39 357 P **P** **12 17 36.4 +0.1**
JNU Nakatsue 31.39 357 ⇓P **P** **12 17 36.5 +0.1**
KRJI Kerinci 31.60 263 P **P** **12 17 43.0 +4.4**
comp=Z,13µmcomp=Z,276nm,2.0s
BKNI Bangkinang 31.83 268 P **P** **12 17 39.1 -1.4**
IPM Ipoh 31.90 276 IAmb IAmb 12 17 53.3
comp=Z,161nm,1.1s
IPM Ipoh 31.90 276 P **P** **12 17 41.6 +0.4**
IPM Ipoh 31.90 276 ⇓P **P** **12 17 41.3 +0.1**
JMN Monobe 31.95 2 P **P** **12 17 42.2 +0.8**
JMN IAmb IAmb 12 17 48.8
comp=Z,388nm,1.3s
JMN Monobe 31.95 2 P **P** **12 17 41.8 +0.4**
JMN Monobe 31.95 2 ⇓P **P** **12 17 42.0 +0.7**
JHJ Hachijo jima 2 32.00 11 LR LR 12 29 05.0
comp=Z,10µm,18.7s,baz=206,slow=34
EIDS Eidsvold 32.12 148 P **P** **12 17 43.3 +0.4**
comp=Z,108nm,1.1s
EIDS Eidsvold 32.12 148 P **P** **12 17 43.9 +1.0**
EIDS Eidsvold 32.12 148 P **P** **12 17 43.4 +0.5**
EIDS Eidsvold 32.12 148 ⇑P **P** **12 17 43.4 +0.5**
KULM Kulim 32.34 277 IAmb IAmb 12 17 49.8
comp=Z,190nm,1.3s
KULM Kulim 32.34 277 P **P** **12 17 45.5 +0.5**
KULM Kulim 32.34 277 ⇓P **P** **12 17 45.1 +0.1**
PDSI Padang 32.48 266 P **P** **12 17 46.1 -0.2**
PPI Padang Panjang 32.52 267 P **P** **12 17 47.0 +0.5**
FORT Forrest 32.54 188 P **P** **12 17 46.3 -0.2**
comp=Z,116nm,0.8s,comp=Z,0.0nm
FORT Forrest 32.54 188 IAmb IAmb 12 17 57.5
comp=Z,90nm,0.8s
CNSH ChangSha 32.56 326 P **P** **12 17 48.4 +1.7**
CNSH pmax pmax
comp=Z,50nm,1.3s
CNSH LR LR
comp=Z,8µm,16.0s
CNSH LR LR
comp=Z,6µm,12.8s
CNSH LR LR
comp=Z,5µm,25.5s
NJ2 Nanjing 33.02 338 ⇓P **P** **12 17 51.8 +1.1**
NJ2 pP **pwP** **12 17 59.9 -1.3**
NJ2 PP **PP** **12 19 05.0 -0.5**
NJ2 S **S** **12 23 11.3 +2.8**
NJ2 pmax pmax
comp=Z,53nm,1.2s
NJ2 pmax pmax
comp=Z,4µm,8.9s
NJ2 LR LR
comp=Z,12µm,17.4s
NJ2 LR LR
comp=Z,6µm,13.2s
NJ2 LR LR
comp=Z,14µm,17.9s
PPSI Pulau Pagai 33.12 262 P **P** **12 17 49.8 -2.0**
comp=Z,4µmcomp=Z,277nm,1.6s
MNSI Mandailing Nat 33.27 269 P **P** **12 17 55.2 +2.0**
WHN Wuhan 33.69 330 ⇓P **P** **12 17 58.1 +1.6**
WHN PcP **PcP** **12 20 38.6 +2.3**
WHN S **S** **12 23 21.5 +2.5**
WHN pmax pmax
comp=Z,510nm,1.5s
WHN LR LR
comp=Z,12µm,11.0s

WHN LR LR
comp=Z,16µm,11.7s
WHN LR LR
comp=Z,35µm,16.5s
INU Inuyama 33.78 6 P **P** **12 17 57.4 +0.2**
INU IAmb IAmb 12 18 02.7
comp=Z,149nm,1.1s
INU Inuyama 33.78 6 P **P** **12 17 57.3 +0.1**
RPSI Rantau Prapat 33.92 272 IAmb IAmb 12 18 10.6
comp=Z,243nm,1.3s
PSI Prapat 33.92 273 P **P** **12 17 57.4 -1.5**
comp=Z,102nm,1.1s,baz=93,slow=6.5,SNR=73
PSI LR LR 12 30 57.3
comp=Z,5µm,21.9s,baz=9.0,slow=35
comp=Z,102nm,1.1s
JGF Kuroka 34.06 7 IAmb IAmb 12 18 05.4
comp=Z,200nm,1.1s
JGF Kuroka 34.06 7 P **P** **12 17 59.3 -0.5**
TSI Tuntungan 34.30 274 P **P** **12 18 03.4 +1.3**
STKA Stephens Creek 34.33 167 P **P** **12 18 02.8 +0.7**
comp=Z,177nm,1.2s,comp=Z,0.0nm
STKA Stephens Creek 34.33 167 P **P** **12 18 01.4 -0.7**
comp=Z,32nm,0.9s,baz=338,slow=8.1,SNR=23
STKA LR LR 12 33 26.0
comp=Z,9µm,18.7s,baz=339,slow=39
comp=Z,32nm,0.9s
STKA Stephens Creek 34.33 167 P **P** **12 18 02.7 +0.6**
STKA Stephens Creek 34.33 167 *i* P **P** **12 18 02.8 +0.7**
BBOO Buckleboo 34.38 175 P **P** **12 18 02.8 +0.2**
comp=Z,83nm,1.3s
BBOO Buckleboo 34.38 175 P **P** **12 18 02.9 +0.4**
KMBL Kambalda 34.42 197 P **P** **12 18 02.3 -0.7**
comp=Z,80nm,1.6s
MORW Morawa 34.50 207 P **P** **12 18 02.4 -1.2**
comp=Z,144nm,1.5s
MORW Morawa 34.50 207 P **P** **12 18 02.9 -0.8**
MORW Morawa 34.50 207 ⇓P **P** **12 18 02.9 -0.8**
TJN Taejon 34.95 352 *i* P **P** **12 18 07.8 +0.4**
KCSI Kotacane, Aceh 35.09 274 P **P** **12 18 08.1 -0.9**
comp=Z,9µmcomp=Z,2µmcomp=Z,106nm,1.7s
MAJO Matsushiro 35.10 8 P **P** **12 18 07.7 -1.0**
MAJO Matsushiro 35.10 8 P **P** **12 18 07.0 -1.7**
MAJO Matsushiro 35.10 8 *i* P **P** **12 18 07.0 -1.7**
MAJO pmax pmax
comp=Z,41nm,1.2s
MJAR Matsushiro Arr 35.10 8 P **P** **12 18 06.9 -1.8**
comp=Z,53nm,1.2s,baz=189,slow=7.8,SNR=26
MJAR PcP **PcP** **12 20 41.1 +0.8**
comp=Z,13nm,0.9s,baz=177,slow=3.0,SNR=6.7
comp=Z,53nm,1.2s
MJAR Matsushiro Arr 35.10 8 P **P** **12 18 07.8 -0.9**
CMSA Cobar Meteorol 35.16 161 P **P** **12 18 09.5 +0.2**
comp=Z,112nm,1.1s,comp=Z,0.0nm
CMSA Cobar Meteorol 35.16 161 P **P** **12 18 10.4 +1.1**
GYA Guiyang 35.26 317 ⇑P **P** **12 18 11.9 +1.6**
GYA S **S** **12 23 44.4 +0.9**
GYA pmax pmax
comp=Z,51nm,1.4s
GYA pmax pmax
comp=Z,5µm,6.6s
GYA LR LR
comp=Z,22µm,27.6s
GSI Gunungsitoli 35.27 270 IAmb IAmb 12 18 13.6
comp=Z,347nm,1.1s
GSI Gunungsitoli 35.27 270 P **P** **12 18 09.3 -1.2**
comp=Z,19µmcomp=Z,6µmcomp=Z,318nm,1.0s
HTT Hallett 35.33 171 P **P** **12 18 12.5 +1.7**
comp=Z,14nm,1.1s
HTT Hallett 35.33 171 P **P** **12 18 13.7 +2.9**
BLDU Ballidu 35.56 204 P **P** **12 18 12.0 -0.7**
comp=Z,280nm,1.5s
BLDU Ballidu 35.56 204 P **P** **12 18 11.6 -1.1**
KSAR Wonju Array Be 35.94 353 P **P** **12 18 16.4 +0.5**
KSAR Wonju Array Be 35.94 353 P **P** **12 18 16.4 +0.5**
KSRS Korea Array 35.94 353 P **P** **12 18 16.1 +0.2**
comp=Z,15nm,1.0s,baz=169,slow=8.9,SNR=30
KSRS PcP **PcP** **12 20 43.4 +0.7**
comp=Z,4.6nm,0.8s,baz=189,slow=2.2,SNR=7.0
KSRS LR LR 12 34 31.0
comp=Z,3900µm,18.3s,baz=180,slow=39
comp=Z,15nm,1.0s
KLBR Kellerberrin 36.01 202 P **P** **12 18 15.9 -0.7**
comp=Z,332nm,0.8s
KLBR Kellerberrin 36.01 202 P **P** **12 18 16.3 -0.3**
LHMI Lhok Sumawe 36.01 277 P **P** **12 18 20.7 +3.8**
ENH Enshi 36.10 324 IAmb IAmb 12 18 29.5
comp=Z,361nm,1.8s
INCN Inchon 36.14 352 P **P** **12 18 18.5 +0.8**
INCN Inchon 36.14 352 P **P** **12 18 18.3 +0.7**
INCN P **P** **12 18 18.3 +0.7**
INCN P **P** **12 18 18.3 +0.7**
INCN S **S** **12 24 00.4 +3.7**
INCN S **S** **12 24 00.4 +3.7**
INCN S **S** **12 24 00.4 +3.7**
INCN Inchon 36.14 352 P **P** **12 18 18.5 +0.8**
INCN pmax pmax
comp=Z,72nm,1.0s
MLSI Meulaboh, Aceh 36.49 275 P **P** **12 18 20.2 -0.8**
SNSI Sinabang, Aceh 36.51 272 P **P** **12 18 21.5 +0.4**
comp=Z,20µmcomp=Z,7µmcomp=Z,215nm,1.0s
ARMA Armidale 36.55 152 P **P** **12 18 22.6 +1.2**
comp=Z,184nm,1.6s,comp=Z,0.0nm
ARMA Armidale 36.55 152 P **P** **12 18 22.5 +1.2**
ARMA IAmb IAmb 12 18 26.2
comp=Z,590nm,1.8s
ARMA Armidale 36.55 152 P **P** **12 18 22.5 +1.2**
ARMA Armidale 36.55 152 ⇑P **P** **12 18 22.2 +0.9**
JSD Sado 36.58 7 ⇑P **P** **12 18 20.8 -0.6**
HJU Haeju 36.83 351 P **P** **12 18 23.8 +0.3**
HJU AmB
comp=Z,3µm,4.7s
HJU AMS AMS
comp=Z,10µm,15.5s
MUN Mundaring 36.96 204 P **P** **12 18 23.8 -0.9**
comp=Z,119nm,1.7s
MUN Mundaring 36.96 204 P **P** **12 18 24.3 -0.4**
CMAR Chiang Mai Arr 37.22 299 P **P** **12 18 28.0 +0.8**
comp=Z,28nm,0.9s,baz=116,slow=7.0,SNR=155
CMAR PcP **PcP** **12 20 47.6 +0.7**
comp=Z,25nm,1.0s,baz=99,slow=4.1,SNR=9.9
CMAR LR LR 12 33 17.2
comp=Z,4µm,21.4s,baz=115,slow=36
comp=Z,28nm,0.9s
CMAR Chiang Mai Arr 37.22 299 P **P** **12 18 27.9 +0.8**
CMAR Chiang Mai Arr 37.22 299 *ce* P **P** **12 18 28.0 +0.8**
CMAR pmax pmax
comp=Z,30nm,0.9s
KMI Kunming 37.28 311 ⇓P **P** **12 18 28.9 +1.1**
KMI PP **PnPn** **12 19 56.5 +3.0**
KMI PcP **PcP** **12 20 51.0 +3.7**
KMI S **S** **12 24 08.8 -5.9**
KMI pmax pmax
comp=Z,72nm,1.5s
KMI pmax pmax
comp=Z,4µm,7.3s
KMI LR LR
comp=Z,6µm,14.8s
KMI LR LR
comp=Z,6µm,17.2s
KMI LR LR
comp=Z,9µm,19.2s
CHTO Chiang Mai 37.36 299 P **P** **12 18 28.7 +0.4**
CHTO Chiang Mai 37.36 299 P **P** **12 18 28.8 +0.5**
CHTO P **P** **12 18 28.8 +0.5**
CHTO S **S** **12 24 16.9 +1.2**
CHTO S **S** **12 24 16.9 +1.2**
CHTO Chiang Mai 37.36 299 P **P** **12 18 28.8 +0.5**
CHTO Chiang Mai 37.36 299 P **P** **12 18 28.7 +0.4**
CHTO pmax pmax
comp=Z,113nm,1.3s
CHTO MLR MLR
comp=Z,8µm,22.0s
CHTO Chiang Mai 37.36 299 ⇓P **P** **12 18 28.6 +0.4**
TIA Tai'an 37.37 339 P **P** **12 18 28.4 +0.2**
TIA PP **PP** **12 19 52.5 -1.1**
TIA PcP **PcP** **12 20 48.3 +1.3**
TIA S **S** **12 24 17.6 +2.2**
TIA pmax pmax
comp=Z,71nm,1.3s
TIA pmax pmax
comp=Z,5µm,6.2s
TIA LR LR
comp=Z,11µm,14.4s
TIA LR LR
comp=Z,2µm,14.4s

TIA LR LR
comp=Z,14µm,16.5s
NWAO Narrogin (SRO) 37.40 202 P **P** **12 18 27.9 -0.5**
comp=Z,166nm,1.3s,comp=Z,0.0nm
NWAO Narrogin (SRO) 37.40 202 LR LR 12 36 03.4
comp=Z,6µm,18.6s,baz=20,slow=40
NWAO Narrogin (SRO) 37.40 202 P **P** **12 18 28.2 -0.2**
NWAO Narrogin (SRO) 37.40 202 P **P** **12 18 28.1 -0.3**
NWAO P **P** **12 18 28.1 -0.3**
NWAO S **S** **12 24 15.5 -0.4**
NWAO S **S** **12 24 15.5 -0.4**
NWAO Narrogin (SRO) 37.40 202 P **P** **12 18 28.1 -0.3**
NWAO Narrogin (SRO) 37.40 202 P **P** **12 18 28.2 -0.3**
NWAO pmax pmax
comp=Z,95nm,0.8s
NWAO MLR MLR
comp=Z,6µm,19.0s
PYAG Pyongyang 37.81 351 P **P** **12 18 32.9 +1.1**
PYAG S **S** **12 24 28.1 +6.2**
PYAG AmB
comp=Z,4µm,4.7s
PYAG AMS AMS
comp=Z,3µm,10.5s
H11N1 WAKE ISLAND Hy 37.83 59 T T 12 58 30.5
baz=245,slow=75,SNR=2041
H11N2 WAKE ISLAND Hy 37.84 59 T T 12 58 31.4
baz=245,slow=75,SNR=465
H11N3 WAKE ISLAND Hy 37.85 59 T T 12 58 31.8
baz=245,slow=75,SNR=2030
LYN LuoYang 37.88 332 ⇓*i* P **P** **12 18 33.3 +0.8**
LYN pP sP 12 18 38.3 -0.3
LYN sP pwP 12 18 44.5 +1.5
LYN PP **PP** **12 19 59.5 +0.3**
LYN PcP **PcP** **12 20 50.4 +1.8**
LYN S **S** **12 24 18.6 -4.6**
LYN pmax pmax
comp=Z,130nm,1.6s
LYN pmax pmax
comp=Z,7µm,6.6s
LYN LR LR
comp=Z,9µm,14.7s
LYN LR LR
comp=Z,5µm,13.3s
LYN LR LR
comp=Z,11µm,14.2s
SANVU Saraoutou 37.97 118 P **P** **12 18 34.4 +1.0**
SANVU IAmb IAmb 12 18 38.9
comp=Z,410nm,1.3s
SANVU IAMs_20 IAMs_20 12 33 07.0
comp=Z,16µm,22.0s
HHU Hamhung 38.43 353 P **P** **12 18 37.7 +0.7**
HHU S **S** **12 24 36.9 +5.6**
HHU AmB
comp=Z,1µm,2.8s
HHU AMS AMS
comp=Z,5µm,14.0s
DL2 Dalian 38.50 346 P **P** **12 18 35.1 -2.5**
DL2 S **S** **12 24 27.3 -5.1**
DL2 pmax pmax
comp=Z,95nm,1.4s
DL2 pmax pmax
comp=Z,5µm,6.7s
DL2 LR LR
comp=Z,12µm,19.2s
DL2 LR LR
comp=Z,30µm,19.2s
DL2 LR LR
comp=Z,14µm,20.2s
YNG Young 38.60 159 P **P** **12 18 40.0 +1.4**
comp=Z,93nm,1.0s
MGCD Mangrove Creek 38.69 155 P **P** **12 18 40.8 +1.5**
comp=Z,70nm,1.0s
PZH PanZhiHua 38.79 312 P **P** **12 18 40.6 +0.2**
PZH PP **PP** **12 20 10.5 +1.0**
PZH PcP **PcP** **12 20 52.4 +0.6**
PZH S **S** **12 24 36.3 -1.2**
PZH pmax pmax
comp=Z,60nm,1.3s
PZH pmax pmax
comp=Z,4µm,10.4s
PZH LR LR
comp=Z,4µm,21.4s
PZH LR LR
comp=Z,6µm,19.8s
PZH LR LR
comp=Z,7µm,18.6s
RKGY Rocky Gully 39.00 201 P **P** **12 18 42.0 +0.2**
comp=Z,254nm,1.4s,comp=Z,0.0nm
ARPS Mount Arapiles 39.10 169 P **P** **12 18 44.5 +1.8**
comp=Z,62nm,1.0s
RIV Riverview 39.25 156 P **P** **12 18 46.4 +2.4**
comp=Z,217nm,1.2s
XAN Xi'an 39.25 328 ⇓P **P** **12 18 44.1 0.0**
XAN PP **PnPn** **12 20 24.3 +7.3**
XAN S **S** **12 24 44.6 +0.6**
XAN SS **SS** **12 27 28.0 -10**
XAN pmax pmax
comp=Z,170nm,1.3s
XAN pmax pmax
comp=Z,5µm,6.8s
XAN LR LR
comp=Z,8µm,20.6s
XAN LR LR
comp=Z,9µm,22.0s
XAN LR LR
comp=Z,14µm,22.0s
HNS HongShan 39.33 337 ⇓P **P** **12 18 45.0 +0.4**
HNS PP **PnPn** **12 20 18.0 +0.2**
HNS PcP **PcP** **12 20 54.3 +1.2**
HNS S **S** **12 24 48.8 +3.9**
HNS SS **SS** **12 27 33.8 -5.2**
HNS pmax pmax
comp=Z,240nm,1.3s
HNS pmax pmax
comp=Z,5µm,8.1s
HNS LR LR
comp=Z,13µm,17.9s
HNS LR LR
comp=Z,10µm,16.3s
HNS LR LR
comp=Z,13µm,18.5s
JTM Tenmabayashi 39.69 10 IAmb IAmb 12 18 52.8
comp=Z,389nm,1.3s
JTM Tenmabayashi 39.69 10 P **P** **12 18 48.0 +0.5**
JTM Tenmabayashi 39.69 10 ⇓P **P** **12 18 48.2 +0.7**
CAN Canberra 39.74 159 P **P** **12 18 49.5 +1.4**
comp=Z,103nm,1.3s
CAN Canberra 39.74 159 P **P** **12 18 50.1 +2.0**
CAN Canberra 39.74 159 ⇑P **P** **12 18 50.4 +2.3**
CNB Canberra Magne 39.86 159 P **P** **12 18 51.0 +1.9**
comp=Z,120nm,1.4s,comp=Z,0.0nm
CNB Canberra Magne 39.86 159 P **P** **12 18 51.2 +2.0**
TARA Tarawa 40.06 90 IAMs_20 IAMs_20 12 31 19.3
comp=Z,10µm,19.0s
CD2 Chengdu 40.08 320 P **P** **12 18 51.3 +0.3**
CD2 pP pP 12 18 55.3 +0.1
CD2 sP sP 12 18 56.3 -0.9
CD2 PP **PP** **12 20 23.4 0.0**
CD2 S **S** **12 24 53.8 -2.8**
CD2 pmax pmax
comp=Z,200nm,1.2s
CD2 pmax pmax
comp=Z,6µm,8.2s
CD2 LR LR
comp=Z,16µm,20.0s
CD2 LR LR
comp=Z,11µm,14.7s
CD2 LR LR
comp=Z,17µm,16.9s
H01W3 Cape Leeuwin H 40.33 204 P **P** **12 18 53.1 +0.4**
baz=43,slow=7.8,SNR=6.5
H01W1 Cape Leeuwin H 40.33 204 P **P** **12 18 52.9 +0.2**
baz=43,slow=7.8,SNR=7.5
H01W2 Cape Leeuwin H 40.34 204 P **P** **12 18 52.7 0.0**
baz=43,slow=7.8,SNR=3.7
DZM Mont Dzumac 40.37 128 LR LR 12 35 40.5
comp=Z,7µm,21.9s,baz=304,slow=36
DZM Mont Dzumac 40.37 128 *eP* P **12 18 53.9 +0.3**
comp=Z,175nm,1.1s
DZM Mont Dzumac 40.37 128 *e*PP **PP** **12 20 21.5 -5.2**
comp=Z,3µm,24.0s
DZM *e*S **S** **12 25 03.3 +2.1**
comp=Z,14µm,29.3s
DZM *e*SS **SS** **12 28 02.3 +1.9**
comp=Z,10µm,27.1s
DZM *e*LR LR 12 29 57.9

comp=Z,45µm,34.5s
TNCH TengChong 40.48 308 ⇓P **P** **12 18 54.6 0.0**
TNCH pP sP 12 19 00.8 +0.1
TNCH sP pwP 12 19 04.1 -0.8
TNCH PP **PnPn** **12 20 32.1 +0.3**
TNCH PcS **PcS** **12 24 47.5 -0.7**
TNCH S **S** **12 25 03.9 +1.0**
TNCH pmax pmax
comp=Z,140nm,1.3s
TNCH pmax pmax
comp=Z,4µm,6.7s
TNCH LR LR
comp=Z,3µm,13.3s
TNCH LR LR
comp=Z,3µm,11.3s
TNCH LR LR
comp=Z,5µm,20.3s
TIY Taiyuan 40.53 335 *e*P **P** **12 18 55.4 +0.7**
TIY PP **PnPn** **12 20 30.9 -1.2**
TIY S **S** **12 25 05.4 +2.3**
TIY SS **SS** **12 28 03.8 +0.7**
TIY pmax pmax
comp=Z,56nm,1.2s
TIY pmax pmax
comp=Z,4µm,6.7s
TIY LR LR
comp=Z,6µm,17.9s
TIY LR LR
comp=Z,4µm,19.2s
TIY LR LR
comp=Z,6µm,22.0s
TOO Toolangi 40.72 165 P **P** **12 18 57.7 +1.5**
comp=Z,28nm,1.7s
TOO Toolangi 40.72 165 P **P** **12 18 56.9 +0.7**
TOO Toolangi 40.72 165 P **P** **12 18 56.9 +0.7**
TOO pmax pmax
comp=Z,41nm,1.3s
TOO Toolangi 40.72 165 ⇑P **P** **12 18 59.5 +3.3**
YATNC Mamie plateau, 40.72 127 P **P** **12 18 59.4 +3.0**
SNY Shenyang 40.89 349 ⇓P **P** **12 18 58.1 +0.7**
SNY S **S** **12 25 14.4 +6.3**
SNY pmax pmax
comp=Z,61nm,1.3s
SNY pmax pmax
comp=Z,4µm,6.3s
SNY LR LR
comp=Z,6µm,22.2s
SNY LR LR
comp=Z,7µm,16.1s
SNY LR LR
comp=Z,6µm,21.0s
BJT Baijiatuau 41.12 340 IAmb IAmb 12 19 01.8
comp=Z,349nm,1.4s
BJT Baijiatuau 41.12 340 IAMs_20 IAMs_20 12 34 49.1
comp=Z,11µm,18.0s
BJI Beijing 41.13 340 P **P** **12 19 00.0 +0.5**
BJI PP **PnPn** **12 20 38.0 -1.1**
BJI PcP **PcP** **12 20 59.5 +0.7**
BJI S **S** **12 25 15.6 +3.8**
BJI SS **SS** **12 28 13.5 -1.4**
BJI pmax pmax
comp=Z,88nm,1.3s
BJI pmax pmax
comp=Z,2µm,6.4s
BJI LR LR
comp=Z,4µm,18.0s
BJI LR LR
comp=Z,4µm,16.8s
BJI LR LR
comp=Z,7µm,16.6s
VLA Vladivostok 41.33 359 *i* P **P** **12 19 01.6 +0.6**
VLA pmax pmax
comp=Z,96nm,1.3s
VLA MLR MLR
comp=Z,4µm,17.0s
MARNC Mare, Loyalty 41.35 126 P **P** **12 19 02.8 +1.3**
MARNC IAmb IAmb 12 19 07.2
comp=Z,496nm,1.0s
MARNC Mare, Loyalty 41.35 126 P **P** **12 19 04.1 +2.6**
MARNC Mare, Loyalty 41.35 126 ⇓P **P** **12 19 03.6 +2.1**
MILA Mila 41.35 160 P **P** **12 19 02.8 +1.4**
comp=Z,29nm,1.2s
MILA Mila 41.35 160 P **P** **12 19 03.7 +2.3**
MILA Mila 41.35 160 ⇑P **P** **12 19 03.7 +2.3**
USRK Usuriysk Ar. 42.40 359 P **P** **12 19 10.5 +0.7**
comp=Z,28nm,0.8s,baz=179,slow=8.0,SNR=22
comp=Z,28nm,0.8s
CN2 Changchun 42.51 352 ⇓P **P** **12 19 10.8 +0.1**
CN2 *es*P sP 12 19 17.0 0.0
CN2 *e*S **S** **12 25 32.9 +0.8**
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,3µm,6.0s
CN2 LR LR
comp=Z,2µm,12.0s
CN2 LR LR
comp=Z,2µm,12.0s
CN2 LR LR
comp=Z,3µm,12.0s
MDJ Mudanjiang 42.91 357 P **P** **12 19 14.6 +0.7**
MDJ PcS **PcS** **12 24 57.0 +0.3**
MDJ S **S** **12 25 43.8 +5.8**
MDJ ScS **ScS** **12 29 14.3 +0.2**
MDJ pmax pmax
comp=Z,75nm,1.3s
MDJ pmax pmax
comp=Z,3µm,5.3s
MDJ LR LR
comp=Z,4µm,19.6s
MDJ LR LR
comp=Z,7µm,17.2s
MDJ LR LR
comp=Z,8µm,20.6s
ASAJ Asahikawa 43.19 10 P **P** **12 19 16.4 +0.2**
comp=Z,61nm,1.1s,baz=214,slow=17,SNR=8.9
ASAJ LR LR 12 36 08.0
comp=Z,1µm,18.3s,baz=215,slow=35
comp=Z,61nm,1.1s
ASAJ Asahikawa 43.19 10 P **P** **12 19 17.2 +1.0**
ASAJ pmax pmax
comp=Z,175nm,1.3s
JKA Kamikawa-asahi 43.19 10 P **P** **12 19 17.2 +1.0**
TEY Ternei 43.36 4 ‖ *e*P **P** **12 19 16.6 -0.9**
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=N,20nm,1.2s
TEY pmax pmax
comp=Z,300nm,5.9s
TEY pmax pmax
comp=N,200nm,5.4s
HHC Hu-ho-hao-te 43.54 336 *e*P **P** **12 19 20.4 +1.1**
HHC sP pwP 12 19 27.3 -2.6
HHC PP **PP** **12 21 03.3 +2.6**
HHC S **S** **12 25 48.8 +1.2**
HHC sS sS 12 25 56.1 +1.1
HHC pmax pmax
comp=N,79nm,0.8s
HHC pmax pmax
comp=N,3µm,4.3s
HHC LR LR
comp=N,5µm,13.4s
HHC LR LR
comp=N,3µm,13.0s
HHC LR LR
comp=N,8µm,14.1s
LZDM Lanzhou Array 43.56 325 P **P** **12 19 21.0 +1.3**
comp=N,134nm,1.2s,baz=120,slow=8.8,SNR=33
LZDM PcP **PcP** **12 21 08.6 +1.1**
comp=N,14nm,0.7s,baz=123,slow=4.4,SNR=3.8
LZDM LR LR 12 37 06.2
comp=N,6µm,22.0s,baz=110,slow=36
comp=N,134nm,1.2s
LZH Lanzhou 43.56 325 ⇓P **P** **12 19 20.9 +1.3**
LZH pP sP 12 19 26.1 +0.3
LZH PP **PP** **12 21 04.4 +3.3**
LZH ScP **ScP** **12 24 59.4 +1.3**
LZH PcS **PcS** **12 25 00.4 +0.3**
LZH pmax pmax
comp=N,220nm,1.3s
LZH pmax pmax
comp=N,5µm,5.0s
LZH LR LR
comp=N,8µm,17.5s
LZH LR LR
comp=N,6µm,18.6s
LZH LR LR
comp=N,15µm,20.3s
YUK Yuzh-Kuril'sk 43.78 14 *e*P **P** **12 19 20.1 -0.9**
YUK *i* 12 21 07.6
YUK *i* S **S** **12 25 50.3 -0.5**
YUK pmax pmax
comp=Z,625nm,3.7s
YUK pmax pmax
comp=Z,510nm,1.4s
YUK pmax pmax
comp=N,410nm,1.0s
YUK pmax pmax
comp=E,316nm,1.2s
SAIH SAIHA 43.92 301 *e*P **P** **12 19 23.2 +0.6**
SAIH IAMs_20 IAMs_20 12 34 45.8
comp=Z,9µm,20.3s
SAIH IAMs_20 IAMs_20 12 36 07.1
comp=Z,10µm,20.8s
BTO Baotou 43.97 335 *e*P **P** **12 19 24.3 +1.6**
BTO PP **PcP** **12 21 08.8 +0.4**
BTO S **S** **12 25 57.8 +3.9**
BTO pmax pmax
comp=Z,110nm,1.3s
BTO LR LR
comp=Z,15µm,19.2s
BTO LR LR
comp=Z,8µm,12.9s
BTO LR LR
comp=Z,18µm,17.1s
IMP Imphal 44.06 305 *e*P **P** **12 19 22.8 -0.9**
IMP IAMs_20 IAMs_20 12 36 56.0
comp=Z,12µm,20.8s
BNX BinXian 44.20 355 ⇓P **P** **12 19 24.0 -0.3**
BNX pP **pP** **12 19 27.8 -1.1**
BNX PP **PP** **12 21 09.0 +1.5**
BNX S **S** **12 26 00.3 +3.5**
BNX sS **sS** **12 26 04.6 +0.6**
BNX pmax pmax
comp=Z,52nm,1.5s
BNX pmax pmax
comp=Z,3µm,6.3s
BNX LR LR
comp=Z,5µm,22.8s
BNX LR LR
comp=Z,12µm,17.3s
BNX LR LR
comp=Z,8µm,17.3s
MOKO MOKOCHONG 44.27 307 *e*P **P** **12 19 24.7 -0.7**
MOKO IAMs_20 IAMs_20 12 35 52.5
comp=Z,10µm,20.6s
KOHI KOHIMA 44.32 306 *e*P **P** **12 19 24.8 -1.1**
KOHI IAmb IAmb 12 19 32.1
comp=Z,216nm,0.6s
KOHI IAMs_20 IAMs_20 12 35 00.8
comp=Z,10µm,21.7s
XLT XiLinHaoTe 44.66 343 *e*P **P** **12 19 28.5 +0.3**
XLT pP sP 12 19 32.9 -1.5
XLT PP **PcP** **12 21 10.6 -0.1**
XLT S **S** **12 26 07.3 +3.5**
XLT ScS **ScS** **12 29 25.3 -0.1**
XLT pmax pmax
comp=Z,76nm,1.5s
XLT pmax pmax
comp=Z,4µm,6.9s
XLT LR LR
comp=Z,19µm,17.2s
XLT LR LR
comp=Z,10µm,16.9s
SILR SILCHAR 44.99 304 *e*P **P** **12 19 31.4 +0.5**
BRDH Bariadhala 45.14 301 LR LR 12 38 32.5
comp=Z,2µm,20.9s,baz=117,slow=36
ITAN ITANAGAR 45.27 308 *e*P **P** **12 19 33.8 +0.6**
ITAN IAmb IAmb 12 19 44.8
comp=Z,736nm,1.4s
ZIRO ZIRO 45.35 308 *e*P **P** **12 19 34.1 +0.1**
ZIRO IAmb IAmb 12 19 39.1
comp=Z,242nm,1.0s
KUR Kuril'sk 45.40 15 *e*P **P** **12 19 31.1 -2.8**
KUR *e* 12 21 08.7
KUR *e*S **S** **12 26 13.2 -1.0**
KUR *e*SS **ScS** **12 29 32.6 +2.8**
KUR pmax pmax
comp=Z,5µm,5.0s
KUR pmax pmax
comp=Z,621nm,1.3s
KUR MLR MLR
comp=Z,3µm,16.0s
KUR MLR MLR
comp=N,3µm,15.0s
KUR MLR MLR
comp=E,2µm,15.0s
BELO BELONIA 45.52 302 *e*P **P** **12 19 36.2 +1.0**
MOO Moorlands 45.74 165 P **P** **12 19 38.6 +2.0**
comp=Z,139nm,1.6s
MOO Moorlands 45.74 165 P **P** **12 19 39.0 +2.4**
TEZP TEZPUR 45.77 306 *e*P **P** **12 19 34.7 -2.4**
TEZP IAmb IAmb 12 19 42.3
comp=Z,180nm,1.2s
AGT Agartala 45.93 302 *e*P **P** **12 19 39.2 +0.7**
AGT IAMs_20 IAMs_20 12 38 02.3
comp=Z,10µm,21.8s
YSS Yuzhno-Sakhali 45.97 9 P **P** **12 19 38.2 -0.2**
YSS IAmb IAmb 12 19 44.6
comp=Z,104nm,0.5s
YSS Yuzhno-Sakhali 45.97 9 P **P** **12 19 38.8 +0.4**
YSS Yuzhno-Sakhali 45.97 9 *ce*P **P** **12 19 38.1 -0.2**
YSS *e* 12 21 24.4
YSS *eS* **S** **12 26 18.9 -3.5**
YSS pmax pmax
comp=Z,3µm,6.8s
YSS pmax pmax
comp=Z,100nm,0.9s
YSS MLR MLR
comp=Z,2µm,20.0s
YSS MLR MLR
comp=N,2µm,17.0s
YSS MLR MLR
comp=E,2µm,20.0s
SHL Shillong 46.07 305 *e*P **P** **12 19 39.4 -0.4**
SHL IAmb IAmb 12 19 45.0
comp=Z,236nm,1.0s
TAU Tasmania Unive 46.21 165 P **P** **12 19 42.5 +2.2**
TAU IAmb IAmb 12 19 53.1
comp=Z,88nm,1.0s
TAU Tasmania Unive 46.21 165 IAMs_20 IAMs_20 12 38 57.4
comp=Z,10µm,20.0s
TAU Tasmania Unive 46.21 165 P **P** **12 19 42.9 +2.6**
TAU Tasmania Unive 46.21 165 P **P** **12 19 42.5 +2.2**
TAU pmax pmax
comp=Z,88nm,1.0s
TAU MLR MLR
comp=Z,10µm,20.0s
TAWA Tawang 46.95 307 *e*P **P** **12 19 47.5 +0.7**
TAWA IAmb IAmb 12 19 51.0
comp=Z,663nm,1.2s
FUNA Funafuti 47.28 103 P **P** **12 19 49.9 +0.7**
DHUB DHUBRI 47.81 304 *e*P **P** **12 19 53.1 0.0**
DHUB IAmb IAmb 12 19 59.8
comp=Z,149nm,1.2s
DHUB IAMs_20 IAMs_20 12 38 09.8
comp=Z,5µm,20.1s
GTA Gaotai 48.16 325 P **P** **12 19 56.8 +0.9**
GTA PcP **PcP** **12 21 23.8 +0.6**
GTA PP **PP** **12 21 48.9 +0.6**
GTA S **S** **12 26 54.5 +0.2**
GTA pmax pmax
comp=Z,150nm,1.5s
GTA pmax pmax
comp=Z,4µm,7.4s
GTA LR LR
comp=Z,4µm,18.2s
GTA LR LR
comp=Z,7µm,18.9s
GTA LR LR
comp=Z,8µm,20.7s
LSA Lhasa 48.45 309 IAmb IAmb 12 20 06.5
comp=Z,240nm,1.4s
LSA Lhasa 48.45 309 P **P** **12 19 55.3 -3.4**
LSA S **S** **12 26 56.0 -3.3**
LSA pmax pmax
comp=Z,100nm,1.4s
LSA LR LR
comp=Z,3µm,16.7s
LSA LR LR
comp=Z,4µm,15.1s
LSA Lhasa 48.45 309 P **P** **12 19 59.5 +0.8**
MSVF Nonsavu 48.49 115 P **P** **12 19 59.2 +0.6**
MSVF IAmb IAmb 12 20 04.6
comp=Z,228nm,1.6s
MSVF Nonsavu 48.49 115 IAMs_20 IAMs_20 12 38 59.0
comp=Z,10µm,18.0s
MSVF Nonsavu 48.49 115 P **P** **12 20 00.7 +2.1**
MSVF Nonsavu 48.49 115 P **P** **12 19 59.2 +0.6**
MSVF pmax pmax
comp=Z,228nm,1.6s
MSVF Nonsavu 48.49 115 ⇓P **P** **12 20 00.9 +2.3**
HEH HeiHe 48.67 355 *e*P **P** **12 19 58.4 -1.0**
HEH pP **pP** **12 20 03.8 -0.2**
HEH S **S** **12 27 00.5 -0.3**
HEH SS **SS** **12 30 29.3 -2.0**
HEH pmax pmax
comp=Z,93nm,1.5s
HEH pmax pmax
comp=Z,3µm,6.6s
HEH LR LR
comp=Z,5µm,17.5s
HEH LR LR
comp=Z,10µm,16.9s
HEH LR LR
comp=Z,7µm,20.6s
HIA Hailar 48.78 349 IAMs_20 IAMs_20 12 39 58.9
comp=Z,7µm,18.0s
HIA Hailar 48.78 349 *i* P **P** **12 20 00.8 +0.5**
HILR Hailar Array B 49.05 349 P **P** **12 20 03.0 +0.6**
comp=Z,18nm,0.9s,baz=162,slow=10,SNR=16
HILR PcP **PcP** **12 21 27.3 +1.3**
comp=Z,13nm,0.8s,baz=151,slow=6.8,SNR=3.7
HILR LR LR 12 40 07.7
comp=Z,5µm,21.2s,baz=95,slow=35
comp=Z,18nm,0.9s
GRNR Gornyy 49.06 3 ⇓ *i* P **P** **12 20 02.7 +0.3**
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=E,750nm,13.0s
GRNR MLR MLR
comp=N,2µm,16.0s
GRNR MLR MLR
comp=Z,3µm,16.0s
GOMU GeErMu 49.20 319 P **P** **12 20 04.6 +0.4**
GOMU pP pP 12 20 08.4 0.0
GOMU sP sP 12 20 10.9 +0.5
GOMU PcP **PcP** **12 21 28.8 +1.5**
GOMU S **S** **12 27 12.3 +2.8**
GOMU ScS **ScS** **12 29 57.5 +1.4**
GOMU pmax pmax
comp=Z,28nm,1.2s
GOMU LR LR
comp=Z,3µm,16.5s
GOMU LR LR
comp=Z,4µm,18.4s
SHBG Sahibganj 49.45 302 *e*P **P** **12 20 06.5 +0.8**
SHBG IAmb IAmb 12 20 11.3
comp=Z,300nm,1.3s
GTK Tadong 49.47 305 *e*P **P** **12 20 06.3 +0.2**
GTK IAmb IAmb 12 20 14.8
comp=Z,706nm,1.7s
GTK IAMs_20 IAMs_20 12 37 33.0
comp=Z,6µm,18.1s
BWNR Bhubaneshwar 49.53 295 *e*P **P** **12 20 05.9 -0.5**
BWNR IAmb IAmb 12 20 12.0
comp=Z,58nm,1.0s
TYV Tymovskoe 49.76 8 *e*P **P** **12 20 08.7 +1.0**
TYV *e*S **S** **12 27 18.3 +2.3**
TYV pmax pmax
comp=Z,141nm,1.1s
TYV pmax pmax
comp=Z,2µm,3.9s
TYV smax smax
comp=N,1µm,5.2s
TYV smax smax
comp=E,2µm,5.2s
TYV smax smax
comp=N,29nm,1.6s
TYV smax smax
comp=E,25nm,1.6s
BOK Bokaro 50.49 300 *e*P **P** **12 20 13.9 +0.1**
BOK IAmb IAmb 12 20 17.7
comp=Z,50nm,0.8s
VIS Vishakhapatnam 51.17 291 *e*P **P** **12 20 18.8 -0.1**
VIS IAmb IAmb 12 20 26.0
comp=Z,94nm,1.4s
EVN Everest 51.17 305 P **P** **12 20 19.5 0.0**
EVN IAmb IAmb 12 20 30.9
comp=Z,318nm,1.2s
EVN Everest 51.17 305 ⇓P **P** **12 20 19.6 0.0**
ULN Ulaanbaatar 51.19 338 P **P** **12 20 20.0 +1.2**
ULN IAmb IAmb 12 20 21.6
comp=Z,310nm,1.4s
ULN Ulaanbaatar 51.19 338 IAMs_20 IAMs_20 12 41 10.4
comp=Z,8µm,21.0s
ULN Ulaanbaatar 51.19 338 P **P** **12 20 19.6 +0.9**
ULN P **P** **12 20 19.6 +0.9**
ULN P **P** **12 20 19.6 +0.9**
ULN S **S** **12 27 37.0 +0.6**
ULN S **S** **12 27 37.0 +0.6**
ULN S **S** **12 27 37.0 +0.6**
ULN Ulaanbaatar 51.19 338 *ce*P **P** **12 20 19.8 +1.0**
ULN pmax pmax
comp=Z,249nm,1.3s
ULN Ulaanbaatar 51.19 338 ⇓P **P** **12 20 19.7 +0.9**
GAYA Gaya 51.38 301 *e*P **P** **12 20 19.2 -1.3**
GAYA IAmb IAmb 12 20 25.0
comp=Z,95nm,1.0s
RAGD RAYAGADA 51.40 293 *e*P **P** **12 20 20.2 -0.5**
RAGD IAmb IAmb 12 20 26.4
comp=Z,118nm,1.3s
RAGD IAMs_20 IAMs_20 12 32 21.4
comp=Z,5µm,20.7s
SONM Songino Array 51.41 337 P **P** **12 20 21.4 +1.0**
comp=Z,82nm,1.1s,baz=158,slow=5.9,SNR=95
SONM PcP **PcP** **12 21 35.5 +0.7**
comp=Z,15nm,0.7s,baz=148,slow=3.0,SNR=5.4
SONM LR LR 12 41 27.5
comp=Z,7µm,21.8s,baz=146,slow=35
SONM PKP2bc **P'P'bc** **12 51 18.7 +1.8**
comp=Z,1.8nm,1.1s,baz=242,slow=3.1,SNR=4.6
comp=Z,82nm,1.1s
JHSG JHARSUGUGA 51.75 297 *e*P **P** **12 20 23.0 -0.3**
JHSG IAmb IAmb 12 20 28.0
comp=Z,200nm,0.9s
ZEA Zeya 52.15 356 *e*P **P** **12 20 25.4 -0.2**
ZEA *e* 12 21 40.4
ZEA *e* 12 22 24.4
ZEA *e*S **S** **12 27 51.6 +2.6**
ZEA pmax pmax
comp=N,600nm,6.1s
ZEA pmax pmax
comp=Z,1µm,6.0s
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.2s
ZEA pmax pmax
comp=N,600nm,5.3s
ZEA pmax pmax
comp=Z,1µm,6.0s
ZEA smax smax
comp=N,2µm,16.0s
ZEA MLR MLR
comp=E,900nm,13.0s
ZEA MLR MLR
comp=Z,2µm,15.0s
PALK Pallekele 52.26 278 LR LR 12 40 25.0
comp=Z,2µm,21.6s,baz=86,slow=34
PALK Pallekele 52.26 278 P **P** **12 20 26.8 -0.4**
PALK Pallekele 52.26 278 P **P** **12 20 25.9 -1.3**
PALK P **P** **12 20 25.9 -1.3**
PALK P **P** **12 20 26.1 -1.1**
PALK P **P** **12 20 26.1 -1.1**
PALK S **S** **12 27 50.7 -1.3**
PALK S **S** **12 27 50.7 -1.3**
PALK Pallekele 52.26 278 P **P** **12 20 26.8 -0.4**
PALK pmax pmax
comp=Z,93nm,1.4s
MALK Mahakanadarawa 52.50 279 P **P** **12 20 27.0 -1.9**
MALK Mahakanadarawa 52.50 279 ⇓P **P** **12 20 28.1 -0.9**
SKR Severo-Kuril's 52.71 18 *e*P P 12 20 24.2 -5.6
SKR *e*S **S** **12 27 54.9 -1.8**
SKR pmax pmax

comp=Z,4µm,5.3s
SKR MLR MLR
comp=Z,2µm,18.0s
CIT Chita 52.76 345 *e*P **P 12 20 31.2 +0.9**
CIT *e* 12 20 36.2
CIT *e* 12 20 41.6
CIT *e* 12 21 44.0
CIT *e* 12 22 37.6
CIT *e* 12 23 34.6
CIT *e* 12 28 12.6
CIT pmax pmax
comp=Z,677nm,2.0s
OUZ Omahuta 52.85 138 P P 12 20 36.3 +5.1
OUZ Omahuta 52.85 138 ⇑P **P 12 20 35.5 +4.4**
BLSP Bilaspur 53.32 297 *e*P **P 12 20 33.1 -1.8**
BLSP IAmb IAmb 12 20 39.1
comp=Z,428nm,1.8s
GKPR Gorakhpur 53.55 302 *e*P **P 12 20 37.1 +0.6**
WCZ Waipu Caves 53.76 138 P P 12 20 43.0 +5.2
MBAZ Motutapu North 54.60 139 P P 12 20 49.3 +5.4
ZAK Zakamensk 54.67 337 *e*P **P 12 20 44.3 -0.1**
ZAK pmax pmax
comp=Z,137nm,1.8s
WIAZ Waiheke Island 54.77 139 P P 12 20 50.2 +5.1
MKAZ Moumakai 54.96 139 P P 12 20 51.4 +4.8
SALM Salem 55.10 283 *e*P **P 12 20 47.2 -0.7**
SALM IAmb IAmb 12 20 52.1
comp=Z,108nm,1.5s
KUZ Kuaotunu 55.13 138 P **P 12 20 51.8 +4.0**
PEA0B Petropavlovsk- 55.30 18 IAmb IAmb 12 20 53.8
comp=Z,200nm,1.4s
PEA0B Petropavlovsk- 55.30 18 *ce*P **P 12 20 48.1 -0.6**
PETK Petropavlovsk- 55.30 18 P **P 12 20 49.0 +0.3**
comp=Z,39nm,1.0s,baz=168,slow=1.2,SNR=14
PETK LR LR 12 41 44.5
comp=Z,2µm,21.8s,baz=215,slow=33
comp=Z,39nm,1.0s
PETK Petropavlovsk- 55.30 18 P **P 12 20 49.2 +0.5**
PETK Petropavlovsk- 55.30 18 P **P 12 20 49.2 +0.5**
BRCI Bahraich 55.38 303 *e*P **P 12 20 50.3 +0.5**
PET Petropavlovsk 55.52 19 P **P 12 20 51.3 +1.0**
PET Petropavlovsk 55.52 19 *e*P **P 12 20 50.7 +0.4**
PET *e* 12 22 52.8
PET *e*S **S 12 28 33.0 -1.8**
PET *e* 12 30 37.6
PET *e*SS **SS 12 32 16.9 -3.0**
PET pmax pmax
comp=Z,3µm,5.4s
PET pmax pmax
comp=Z,2µm,6.5s
PET pmax pmax
comp=Z,222nm,1.3s
PET MLR MLR
comp=Z,2µm,15.0s
PET MLR MLR
comp=Z,2µm,16.0s
PET Petropavlovsk 55.52 19 ⇓P **P 12 20 50.5 +0.2**
PET Petropavlovsk 55.52 19 P **P 12 20 50.8 +0.4**
comp=Z,4µmcomp=Z,191nm,1.4s
TOZ Tahuroa Road 55.54 139 IAmb IAmb 12 20 57.2
comp=Z,115nm,1.0s
TOZ IAMs_20 IAMs_20 12 41 15.4
comp=Z,9µm,22.0s
TOZ Tahuroa Road 55.54 139 P **P 12 20 55.3 +4.5**
QRZ Quartz Range 55.56 144 P **P 12 20 53.6 +2.8**
QRZ Quartz Range 55.56 144 P **P 12 20 55.0 +4.1**
HIZ Hauiti 55.58 140 IAMs_20 IAMs_20 12 44 04.3
comp=Z,7µm,20.0s
HIZ Hauiti 55.58 140 P **P 12 20 52.3 +1.3**
HIZ Hauiti 55.58 140 P **P 12 20 55.6 +4.6**
HYBB Hyderabad (bro 55.58 290 *e*P **P 12 20 50.7 -0.7**
HYBB IVmB_BB 12 20 53.5
comp=Z,3µm,6.3s
HYBB *e*PcP **PcP 12 21 51.6 +0.4**
HYBB *e*PP **PP 12 22 57.8 +2.1**
HYBB *e*S **S 12 28 38.4 +1.7**
HYBB *e*ScS **ScS 12 30 41.9 +1.3**
HYBB IVMs_BB IVMs_BB 12 39 34.2
comp=Z,2µm,29.9s
TLY Talaya 55.58 338 P **P 12 20 51.8 +1.0**
TLY Talaya 55.58 338 P **P 12 20 51.9 +1.0**
TLY P **P 12 20 51.9 +1.0**
TLY P **P 12 20 51.9 +1.0**
TLY S **S 12 28 40.1 +4.4**
TLY S **S 12 28 40.1 +4.4**
TLY S **S 12 28 40.1 +4.4**
TLY Talaya 55.58 338 *ce*P **P 12 20 51.4 +0.6**
TLY pmax pmax
comp=Z,93nm,1.7s
TLY Talaya 55.58 338 ⇓P **P 12 20 51.8 +1.0**
MSZ Milford Sound 55.67 150 P **P 12 20 55.2 +3.7**
KOD Kodaikanal 55.67 281 *e*P **P 12 20 50.5 -2.0**
KOD IAmb IAmb 12 21 03.1
comp=Z,181nm,2.0s
JCZ Jackson Bay 55.68 149 P **P 12 20 56.0 +4.2**
DSZ Denniston Nort 55.73 145 P **P 12 20 55.5 +3.3**
FOZ Fox Glacier 55.84 148 IAmb IAmb 12 21 56.8
comp=Z,128nm,1.3s
FOZ Fox Glacier 55.84 148 P **P 12 20 57.1 +4.4**
DCZ Deep Cove 55.87 151 IAmb IAmb 12 20 59.1
comp=Z,185nm,0.9s
DCZ IAMs_20 IAMs_20 12 45 37.3
comp=Z,7µm,20.0s
DCZ Deep Cove 55.87 151 P P 12 20 58.1 +5.2
VRZ Vera Road 55.88 141 P **P 12 20 57.5 +4.4**
KMRZ Kaimai 55.90 139 P P 12 20 58.1 +4.8
TLZ Tolley Road 55.91 140 P **P 12 20 57.7 +4.2**
WVZ Waitaha Valley 56.02 147 P **P 12 20 57.0 +3.0**
TGRZ Tauranga 56.04 139 P **P 12 20 58.8 +4.5**
PYZ Puysegur Point 56.16 152 IAMs_20 IAMs_20 12 47 00.1
comp=Z,7µm,18.0s
RAO Raoul Island 56.17 127 LR LR 12 42 30.7
comp=Z,5µm,21.7s,baz=304,slow=33
INZ Inchbonnie 56.17 146 IAMs_20 IAMs_20 12 44 02.7
comp=Z,9µm,20.0s
MLZ Mavora Lakes 56.26 151 IAMs_20 IAMs_20 12 42 33.8
comp=Z,6µm,21.0s
MLZ Mavora Lakes 56.26 151 P P 12 21 00.6 +4.7
NNZ Nelson 56.31 144 P **P 12 20 58.9 +2.7**
OMRZ Omania 56.32 139 P **P 12 21 00.9 +4.5**
THZ Tophouse 56.38 145 IAmb IAmb 12 21 02.9
comp=Z,73nm,0.7s
THZ Tophouse 56.38 145 P **P 12 20 59.6 +2.9**
KATZ Kakaramea 56.38 140 P P 12 21 02.4 +5.5
NGZ Ngauruhoe 56.44 141 P P 12 21 02.2 +4.9
SNVZ South Ngauruho 56.47 141 P P 12 21 02.8 +5.2
TMVZ Te Maari 56.47 141 P **P 12 21 01.7 +4.2**
OTVZ Oturere 56.47 141 P **P 12 21 01.0 +3.5**
ETVZ East Tongariro 56.48 141 P **P 12 21 01.6 +4.0**
WNVZ Wahianoa 56.52 141 P **P 12 21 02.1 +4.1**
WHZ Wether Hill Ro 56.56 151 IAmb IAmb 12 21 02.7
comp=Z,138nm,1.1s
WHZ IAMs_20 IAMs_20 12 46 07.7
comp=Z,6µm,20.0s
WHZ Wether Hill Ro 56.56 151 P **P 12 20 59.8 +1.9**
MOY Mondy 56.58 337 *e*P **P 12 20 59.4 +1.3**
MOY pmax pmax
comp=Z,466nm,1.6s
LBZ Lake Benmore 56.62 149 P **P 12 20 59.9 +1.6**
LBZ IAmb IAmb 12 21 03.3
comp=Z,153nm,1.1s
LBZ Lake Benmore 56.62 149 P **P 12 21 01.3 +2.9**
RPZ Rata Peaks 56.62 148 LR LR 12 46 41.7
comp=Z,4µm,18.1s,baz=308,slow=38
RPZ Rata Peaks 56.62 148 IAMs_20 IAMs_20 12 46 30.5
comp=Z,6µm,20.0s
RPZ Rata Peaks 56.62 148 P **P 12 21 00.3 +1.9**
MOVZ Moawhango 56.67 141 P **P 12 21 02.7 +3.8**
LTZ Lake Taylor 56.67 146 IAmb IAmb 12 21 12.2
comp=Z,415nm,1.8s
LTZ Lake Taylor 56.67 146 P **P 12 21 01.3 +2.5**
EAZ Earnscleugh 56.76 150 P **P 12 21 02.6 +3.3**
URZ Urewera 56.89 139 LR LR 12 46 50.2
comp=Z,3µm,18.3s,baz=308,slow=38
URZ Urewera 56.89 139 P **P 12 21 02.7 +2.3**
URZ Urewera 56.89 139 P **P 12 21 03.8 +3.4**
URZ Urewera 56.89 139 ⇑P **P 12 21 02.9 +2.5**
OXZ Oxford 56.90 147 P **P 12 21 04.0 +3.7**
AFI Afiamalu 56.98 108 P **P 12 21 02.6 +1.1**
AFI IAmb IAmb 12 21 07.2
comp=Z,213nm,1.4s
AFI Afiamalu 56.98 108 P **P 12 21 05.9 +4.4**
AFI Afiamalu 56.98 108 P **P 12 21 02.6 +1.1**
AFI pmax pmax
comp=Z,213nm,1.4s
BKZ Black Stump Fm 57.00 140 IAmb IAmb 12 21 05.7
comp=Z,112nm,1.0s
BKZ IAMs_20 IAMs_20 12 43 24.9
comp=Z,7µm,22.0s
BKZ Black Stump Fm 57.00 140 P **P 12 21 02.3 +1.1**
RTZ Ruatahuna 57.00 139 IAMs_20 IAMs_20 12 44 42.1
comp=Z,7µm,20.0s
RTZ Ruatahuna 57.00 139 P **P 12 21 02.2 +0.9**
HAZ Te Kaha 57.06 138 P **P 12 21 05.2 +3.7**
LGTI Lohaghat 57.09 304 *e*P **P 12 21 01.3 -0.7**
PTH Pithoragarh 57.15 304 *e*P **P 12 21 01.6 -1.0**
PTH IAmb IAmb 12 21 15.0
comp=Z,67nm,1.1s
SNZO South Karori 57.15 143 P **P 12 21 03.6 +1.4**
SNZO South Karori 57.15 143 P **P 12 21 04.5 +2.4**
SNZO South Karori 57.15 143 ⇑P **P 12 21 04.7 +2.6**
KHZ Kahutara 57.15 145 P **P 12 21 04.8 +2.7**
KHZ Kahutara 57.15 145 ⇑P **P 12 21 04.2 +2.0**
TSZ Takapari Road 57.18 141 P **P 12 21 05.0 +2.5**
MWZ Matawai 57.21 139 P **P 12 21 05.2 +2.5**
GVZ Greta Valley S 57.22 146 IAmb IAmb 12 21 07.3
comp=Z,179nm,1.0s
GVZ IAMs_20 IAMs_20 12 44 22.4
comp=Z,5µm,19.0s
GVZ Greta Valley S 57.22 146 P **P 12 21 04.6 +1.9**
APZ The Paps 57.26 152 P **P 12 21 06.2 +3.3**
MRZ Mangatainoka R 57.29 142 IAmb IAmb 12 21 06.8
comp=Z,83nm,0.9s
MRZ Mangatainoka R 57.29 142 P **P 12 21 05.6 +2.4**
ODZ Otahua Downs 57.31 149 P **P 12 21 05.7 +2.5**
ODZ Otahua Downs 57.31 149 P **P 12 21 07.3 +4.1**
BHW Baring Head 57.31 143 IAMs_20 IAMs_20 12 43 27.0
comp=Z,6µm,22.0s
JHNI Jhansi 57.37 299 *e*P **P 12 21 02.2 -1.9**
JHNI IAmb IAmb 12 21 04.2
comp=Z,132nm,1.0s
TWGZ Tauwhareparae 57.42 138 P P 12 21 09.1 +4.9
TUZ Tuapeka 57.43 150 P **P 12 21 06.7 +2.7**
MQZ McQueen's Vall 57.48 147 IAmb IAmb 12 21 09.2
comp=Z,292nm,1.6s
MQZ IAMs_20 IAMs_20 12 45 02.4
comp=Z,7µm,19.0s
PUZ Puketiti 57.55 138 P **P 12 21 08.9 +3.9**
AKL Akola 57.63 293 *e*P **P 12 21 05.4 -0.6**
AKL IAmb IAmb 12 21 12.2
comp=Z,144nm,1.1s
PXZ Pawanui 57.73 141 P **P 12 21 09.5 +3.3**
BHPL Bhopal 57.81 296 *e*P **P 12 21 06.5 -0.7**
BHPL IAmb IAmb 12 21 12.2
comp=Z,189nm,1.4s
BHPL IAMs_20 IAMs_20 12 37 50.5
comp=Z,6µm,18.3s
NRDN NARMADA NAGAR 57.92 296 *e*P **P 12 21 10.4 +2.5**
NRDN IAmb IAmb 12 21 15.9
comp=Z,226nm,1.6s
NRDN IAMs_20 IAMs_20 12 36 38.4
comp=Z,5µm,21.7s
JOSI Joshimath 58.02 305 *e*P **P 12 21 08.7 -0.1**
JOSI IAmb IAmb 12 21 19.0
comp=Z,234nm,1.0s
WMQ Urumqi 58.02 323 ⇓P **P 12 21 09.6 +1.2**
WMQ pP sP 12 21 15.3 +0.6
WMQ PcP **PcP 12 22 02.3 +2.1**
WMQ PP **PP 12 23 18.6 +1.6**
WMQ S **S 12 29 11.6 +3.3**
WMQ pmax pmax
comp=Z,130nm,1.1s
WMQ pmax pmax
comp=Z,3µm,5.9s
WMQ LR LR
comp=Z,7µm,20.9s
WMQ LR LR
comp=Z,3µm,19.5s
WMQ LR LR
comp=Z,4µm,22.3s
GUNA GUNA 58.22 298 *e*P **P 12 21 09.1 -1.0**
GUNA IAmb IAmb 12 21 14.9
comp=Z,252nm,1.3s
BISR Bishrakh 59.17 303 *e*P **P 12 21 16.0 -0.6**
DDI Dehra Dun 59.17 305 *e*P **P 12 21 16.9 +0.3**
DDI IAmb IAmb 12 21 28.3
comp=Z,534nm,1.2s
JMIU JAMIA UNIVERSI 59.29 302 *e*P **P 12 21 13.3 -4.2**
NDI New Delhi 59.39 303 *e*P **P 12 21 16.4 -1.7**
NDI IAmb IAmb 12 21 22.4
comp=Z,106nm,1.1s
NDI IAMs_20 IAMs_20 12 34 49.2
comp=Z,4µm,20.4s
MA2 Magadan 59.45 10 P **P 12 21 17.4 -0.5**
comp=Z,70nm,1.1s,baz=157,slow=8.3,SNR=8.7
MA2 LR LR 12 44 45.1
comp=Z,1µm,21.3s,baz=202,slow=34
comp=Z,70nm,1.1s
MA2 Magadan 59.45 10 P **P 12 21 18.8 +0.9**
MA2 IAmb IAmb 12 21 24.3
comp=Z,144nm,1.1s
MA2 Magadan 59.45 10 *ce*P **P 12 21 19.4 +1.5**
MA2 pmax pmax
comp=Z,191nm,1.3s
MA2 Magadan 59.45 10 ⇓P **P 12 21 18.5 +0.6**
MA2 Magadan 59.45 10 P **P 12 21 17.9 0.0**
comp=Z,4µmcomp=Z,140nm,1.3s
KAD Karad 59.68 289 *e*P **P 12 21 18.5 -1.8**
KAD IAmb IAmb 12 21 20.5
comp=Z,90nm,1.2s
HMDM Hanimaadhoo 59.69 277 P **P 12 21 19.6 -0.8**
NIUE Niue 59.82 113 P **P 12 21 23.1 +1.9**
comp=Z,297nm,1.1s
NIUE Niue 59.82 113 P **P 12 21 22.6 +1.4**
NIUE Niue 59.82 113 P P 12 21 26.5 +5.3
KUDL Kundal 59.85 302 *e*P **P 12 21 19.9 -1.4**
KUDL IAmb IAmb 12 21 24.8
comp=Z,122nm,0.9s
SMLA Simla 60.15 305 *e*P **P 12 21 23.0 -0.3**
SMLA IAmb IAmb 12 21 30.5
comp=Z,580nm,1.6s
RTK Rohtak 60.16 303 *e*P **P 12 21 23.1 -0.3**
POO Poona 60.18 290 *e*P **P 12 21 22.2 -1.5**
YAK Yakutsk 60.31 358 P **P 12 21 23.5 -0.2**
comp=Z,184nm,1.1s,baz=184,slow=9.3,SNR=14
YAK LR LR 12 47 36.9
comp=Z,3µm,19.9s,baz=174,slow=36
comp=Z,184nm,1.1s
YAK Yakutsk 60.31 358 *e*P **P 12 21 24.1 +0.4**
YAK *e**PP **pP 12 21 28.5 +0.1**
YAK *e* 12 22 09.0
YAK *e* 12 23 37.0
YAK *e*PPP PPP 12 24 59.5
YAK *e*S **S 12 29 39.3 +2.2**
YAK *e**SS **sS 12 29 44.6 -0.1**
YAK *e* 12 31 14.8
YAK *e*SS **SS 12 33 38.2 +3.4**
YAK pmax pmax
comp=Z,149nm,1.0s
YAK pmax pmax
comp=N,75nm,0.9s
YAK pmax pmax
comp=E,23nm,2.0s
YAK pmax pmax
comp=Z,369nm,4.1s
YAK pmax pmax
comp=N,297nm,2.3s
YAK pmax pmax
comp=E,284nm,4.0s
YAK smax smax
comp=N,205nm,2.0s
YAK smax smax
comp=E,191nm,2.7s
YAK MLR MLR
comp=Z,2µm,15.0s
YAK MLR MLR
comp=N,3µm,16.0s
YAK MLR MLR
comp=E,576nm,14.0s
YAK Yakutsk 60.31 358 ⇓P **P 12 21 23.7 0.0**
CGRH CHANDIGARH 60.35 305 *e*P **P 12 21 26.1 +1.4**
BHK Bhakra 60.85 305 IAmb IAmb 12 21 34.1
comp=Z,247nm,1.3s
BHK IAMs_20 IAMs_20 12 36 50.9
comp=Z,5µm,20.3s
H08S2 Diego Garcia H 60.90 260 P **P 12 21 28.8 +0.4**
baz=40,slow=7.2,SNR=5.3
H08S3 Diego Garcia H 60.91 260 P **P 12 21 29.0 +0.6**
baz=40,slow=7.2,SNR=5.0
DGAR Diego Garcia 60.92 261 P **P 12 21 29.2 +0.4**
DGAR Diego Garcia 60.92 261 P **P 12 21 28.6 -0.2**
DGAR P **P 12 21 28.6 -0.2**
DGAR P **P 12 21 28.6 -0.2**
DGAR Diego Garcia 60.92 261 *ce*P **P 12 21 27.9 -0.9**
DGAR pmax pmax
comp=Z,386nm,1.7s
H08S1 Diego Carcia H 60.92 260 P **P 12 21 28.9 +0.4**
baz=40,slow=7.2,SNR=5.0
ALCI Alchi Leh 61.12 309 *e*P **P 12 21 29.7 -0.6**
ALCI IAmb IAmb 12 21 35.6
comp=Z,72nm,1.1s
DHRM DHARAMSHALA 61.20 306 *e*P **P 12 21 30.2 -0.5**
DHRM IAmb IAmb 12 21 37.1
comp=Z,335nm,0.8s
SHEM Shemya Is, Ala 61.35 27 LR LR 12 42 49.3
comp=Z,2µm,20.5s,baz=228,slow=31
TLWR Talawar 61.39 306 *e*P **P 12 21 31.6 -0.2**
UDPR Udaipur 61.41 297 *e*P **P 12 21 31.8 -0.3**
UDPR IAmb IAmb 12 21 38.9
comp=Z,225nm,1.1s
TSSA Tissa 61.50 307 *e*P **P 12 21 31.7 -1.0**
TSSA IAmb IAmb 12 21 39.2
comp=Z,204nm,1.3s
DGZ Jazzator, Alta 61.51 328 *i* P **P 12 21 32.7 +0.3**
DGZ pmax pmax
comp=Z,194nm,1.1s
ZSN Zaisan 61.66 325 ⇓*i*P **P 12 21 33.8 +0.5**
comp=Z,63nm,1.1s
ZSN *e*S **S 12 29 56.8 +1.8**
ZSN Zaisan 61.66 325 *di*P **P 12 21 33.7 +0.5**
ZSN *e*S **S 12 29 56.7 +1.8**
ZSN pmax pmax
comp=Z,63nm,1.1s
JMU Jammu 62.47 306 *e*P **P 12 21 39.1 +0.2**
JMU IAmb IAmb 12 21 42.3
comp=Z,183nm,0.8s
BKNR BIKANER 62.57 301 *e*P **P 12 21 39.5 -0.3**
BKNR IAmb IAmb 12 21 44.0
comp=Z,139nm,0.5s
MK31 Makanchi Array 62.82 323 *ce*P **P 12 21 42.2 +1.1**
MKAR Makanchi Array 62.82 323 P **P 12 21 41.7 +0.6**
comp=Z,160nm,0.7s,baz=110,slow=8.3,SNR=272
MKAR LR LR 12 50 19.4
comp=Z,5µm,20.2s,baz=106,slow=37
MKAR PKPPKP **P'P'df 12 50 36.9 -7.0**
comp=Z,4.5nm,1.1s,baz=262,slow=2.5,SNR=6.1
comp=Z,160nm,0.7s
MKAR Makanchi Array 62.82 323 P **P 12 21 41.6 +0.5**
SEY Seymchan 62.87 10 P **P 12 21 41.4 +0.4**
comp=Z,130nm,1.2s,baz=202,slow=5.8,SNR=58
SEY LR LR 12 48 55.7
comp=Z,1µm,20.1s,baz=204,slow=36
comp=Z,130nm,1.2s
SEY Seymchan 62.87 10 *ce*P **P 12 21 42.2 +1.2**
SEY pmax pmax
comp=Z,435nm,1.7s
SHLS Shalkode 62.91 319 *e*P **P 12 21 40.1 -1.7**
comp=Z,56nm,0.7s
SHLS Shalkode 62.91 319 *e*P **P 12 21 40.1 -1.7**
SHLS pmax pmax
comp=Z,56nm,0.7s
PDGK Podgornoye 62.97 319 P **P 12 21 42.0 -0.2**
MAKZ Makanchi 63.02 323 P **P 12 21 42.8 +0.4**
MAKZ IAMs_20 IAMs_20 12 50 15.5
comp=Z,5µm,20.0s
MAKZ Makanchi 63.02 323 P **P 12 21 42.8 +0.4**
MAKZ pmax pmax
comp=Z,225nm,0.8s
MAKZ MLR MLR
comp=Z,6µm,20.0s
UZB Uzynbulak 63.20 319 ⇓*i*P **P 12 21 44.0 +0.2**
comp=Z,91nm,1.1s
UZB Uzynbulak 63.20 319 *di*P **P 12 21 44.0 +0.2**
UZB pmax pmax
comp=Z,91nm,1.1s
TARG Taragay, Kyrgy 63.43 317 IAmb IAmb 12 21 57.8
comp=Z,136nm,1.1s
SATY Saty 63.57 318 *e*P **P 12 21 46.4 +0.2**
comp=Z,86nm,0.8s
SATY *e*S **S 12 30 20.3 +0.9**
SATY Saty 63.57 318 *e*P **P 12 21 46.4 +0.2**
SATY *e*S **S 12 30 20.2 +0.9**
SATY pmax pmax
comp=Z,86nm,0.8s
KSH Kashi 63.88 314 P **P 12 21 50.3 +2.0**
KSH pP sP 12 21 56.1 +1.4
KSH PP **PP 12 24 15.8 +6.8**
KSH S **S 12 30 25.0 +1.7**
KSH pmax pmax
comp=Z,120nm,1.4s
KSH pmax pmax
comp=Z,3µm,6.3s
KSH LR LR
comp=Z,3µm,16.5s
KSH LR LR
comp=Z,5µm,22.2s
KSH LR LR
comp=Z,5µm,19.4s
NIL Nilore 64.06 307 P **P 12 21 50.0 +0.5**
NIL Nilore 64.06 307 P **P 12 21 50.1 +0.5**
NIL pmax pmax
comp=Z,247nm,1.4s
JASL Jaisalmer 64.38 299 *e*P **P 12 21 51.7 -0.1**
TDK Taldyqorghan 64.39 320 ⇓*i*P **P 12 21 52.0 +0.4**
comp=Z,101nm,1.0s
TDK LR LR 12 50 36.0
comp=Z,2µm,16.1s
TDK Taldyqorghan 64.39 320 *di*P **P 12 21 51.9 +0.4**
TDK pmax pmax
comp=Z,101nm,1.0s
TDK MLR MLR
comp=Z,2µm,16.0s
MDOK Medeo 64.52 318 *e*P **P 12 21 52.7 +0.2**
MDOK *e*S **S 12 30 31.6 +0.5**
MDOK LR LR 12 50 37.1
MDOK Medeo 64.52 318 *e*P **P 12 21 52.7 +0.2**
MDOK *e*S **S 12 30 31.6 +0.5**
TNSS Tian-Shan 64.53 318 *e*P **P 12 21 52.8 -0.1**
TNSS Tian-Shan 64.53 318 *e*P **P 12 21 52.8 -0.1**
AAA Alma-Ata 64.62 318 *e*P **P 12 21 53.4 +0.3**
comp=Z,83nm,1.2s
AAA LR LR 12 50 28.2
AAA Alma-Ata 64.62 318 *e*P **P 12 21 53.4 +0.3**
AAA pmax pmax
comp=Z,83nm,1.2s
ULHL Ulahol 64.70 317 P **P 12 21 54.6 +0.8**
SNR=8.6
BHUJ Bhuj 64.81 295 *e*P **P 12 21 54.7 +0.1**
BHUJ IAmb IAmb 12 22 00.4
comp=Z,258nm,1.4s
BOOM Boomskoye usch 65.00 317 IAmb IAmb 12 21 59.1
comp=Z,63nm,0.7s
KIWB Kanaga Island 65.13 32 IAmb IAmb 12 22 00.7
comp=Z,183nm,1.2s
KUU Kurty 65.28 318 *e*P **P 12 21 57.7 +0.3**
comp=Z,102nm,1.3s
KUU LR LR 12 51 07.5
comp=Z,2µm,18.3s
KUU Kurty 65.28 318 *e*P **P 12 21 57.6 +0.3**
KUU pmax pmax
comp=Z,102nm,1.3s
KUU MLR MLR
comp=Z,2µm,18.0s
ZAA0 Zalesovo Array 65.30 331 IAmb IAmb 12 21 59.2
comp=Z,157nm,1.1s
ZALV Zalesovo Beam 65.30 331 P **P 12 21 57.0 -0.2**
comp=Z,156nm,1.0s,baz=108,slow=4.8,SNR=193
ZALV PKPPKP **P'P'df 12 50 37.2 -2.1**
comp=Z,11nm,1.2s,baz=243,slow=1.6,SNR=4.3
ZALV LR LR 12 50 38.2
comp=Z,3µm,20.9s,baz=123,slow=36
comp=Z,156nm,1.0s
ZALV Zalesovo Beam 65.30 331 P **P 12 21 56.6 -0.6**
ZALV Zalesovo Beam 65.30 331 P **P 12 21 56.6 -0.6**
ADK Adak 65.39 32 P **P 12 22 00.9 +3.1**
TKM2 Tokmak 2 65.40 317 P **P 12 21 58.8 +0.5**
SNR=127
KBK Karagaybulak 65.74 317 P **P 12 22 01.6 +1.1**
SNR=33
UCH Uchtor 65.89 316 P **P 12 22 02.6 +0.8**
SNR=209
CHMS Chumysh 66.00 317 P **P 12 22 03.2 +1.1**
SNR=16
AAK Ala-Archa 66.05 317 P **P 12 22 03.2 +0.7**
comp=Z,23nm,0.7s,baz=111,slow=6.2,SNR=55

AAK PKPPKP **P'P'df** **12 50 35.0 -4.1**
comp=Z,2.5nm,0.8s,baz=190,slow=1.8,SNR=3.6
AAK LR LR 12 52 30.7
comp=Z,7μm,21.7s,baz=102,slow=38
comp=Z,23nm,0.7s
AAK Ala-Archa 66.05 317 P **P** **12 22 03.5 +1.0**
AAK IAmb IAmb 12 22 10.1
comp=Z,75nm,1.0s
AAK Ala-Archa 66.05 317 IAMs_20 IAMs_20 12 52 30.8
comp=Z,6μm,21.0s
AAK Ala-Archa 66.05 317 P **P** **12 22 03.2 +0.7**
AAK P **P** **12 22 03.2 +0.7**
AAK S **S** **12 30 53.3 +3.3**
AAK S **S** **12 30 53.3 +3.3**
AAK Ala-Archa 66.05 317 P **P** **12 22 04.0 +1.5**
SNR=18
AAK Ala-Archa 66.05 317 *i* P **P** **12 22 03.3 +0.7**
SNR=19
AAK Ala-Archa 66.05 317 *ce* P **P** **12 22 02.4 -0.1**
AAK pmax pmax
comp=Z,120nm,1.7s
AAK Ala-Archa 66.05 317 ⇓ P **P** **12 22 03.2 +0.7**
SGDS Sogindy 66.26 317 ⇓ *i* P **P** **12 22 03.9 +0.2**
SGDS *e* S **S** **12 30 53.5 +1.2**
USP Ospenovka 66.28 317 P **P** **12 22 03.9 +0.2**
SNR=197
EKS2 Erkin-Say 66.55 316 P **P** **12 22 07.5 +1.8**
SNR=9.9
KURK Kurchatov 66.85 326 P **P** **12 22 08.1 +0.9**
KURK Kurchatov 66.85 326 P **P** **12 22 07.7 +0.5**
KURK P **P** **12 22 07.7 +0.5**
KURK S **S** **12 31 00.7 +1.7**
KURK S **S** **12 31 00.7 +1.7**
KURK Kurchatov 66.85 326 *ce* P **P** **12 22 07.5 +0.3**
KURK pmax pmax
comp=Z,633nm,1.3s
KURBB Kurchatov Arra 66.86 326 P **P** **12 22 07.5 +0.3**
comp=Z,200nm,0.8s,baz=122,slow=5.5,SNR=438
KURBB PKPPKP **P'P'df** **12 50 31.4 -5.7**
comp=Z,4.6nm,1.2s,baz=282,slow=3.2,SNR=6.9
KURBB LR LR 12 52 31.9
comp=Z,2μm,21.8s,baz=137,slow=37
comp=Z,200nm,0.8s
ATKA Atka Island 66.87 32 P **P** **12 22 08.5 +1.2**
ATKA Atka Island 66.87 32 ⇓ P **P** **12 22 08.1 +0.9**
BTLS Baital 67.24 319 ⇓ *i* P **P** **12 22 10.2 +0.4**
comp=Z,42nm,0.8s
BTLS Baital 67.24 319 *d i* P **P** **12 22 10.1 +0.3**
BTLS pmax pmax
comp=Z,42nm,0.8s
KBU Kabul Universi 67.58 307 P **P** **12 22 11.1 -1.4**
KBL Kabul 67.66 307 P **P** **12 22 13.0 0.0**
KBL IAmb IAmb 12 22 14.5
comp=Z,162nm,1.4s
KBL Kabul 67.66 307 P **P** **12 22 12.8 -0.2**
SNR=57
KBL P **P** **12 22 12.8 -0.2**
SNR=57
KBL S **S** **12 31 08.9 -1.0**
KBL S **S** **12 31 08.9 -1.0**
KBL Kabul 67.66 307 P **P** **12 22 13.0 0.0**
KBL pmax pmax
comp=Z,162nm,1.4s
DZA Taraz 68.32 316 *e* P **P** **12 22 17.0 +0.2**
comp=Z,60nm,0.9s
DZA Taraz 68.32 316 *e* P **P** **12 22 16.9 +0.2**
DZA pmax pmax
comp=Z,60nm,0.9s
KK31 Karatay Array 68.96 316 IAmb IAmb 12 22 23.4
comp=Z,129nm,0.9s
KK31 Karatay Array 68.96 316 *i* P **P** **12 22 21.0 +0.3**
KKAR Karatay Array 68.96 316 P **P** **12 22 21.1 +0.4**
KKAR Karatay Array 68.96 316 P **P** **12 22 21.1 +0.4**
IUG luzhnay 69.00 315 ⇓ *i* P **P** **12 22 21.3 +0.2**
comp=Z,52nm,0.8s
IUG *e* S **S** **12 31 26.4 +1.1**
IUG luzhnay 69.00 315 *d i* P **P** **12 22 21.2 +0.2**
IUG *e* S **S** **12 31 26.4 +1.1**
IUG pmax pmax
comp=Z,52nm,0.8s
CHM Chimkent 69.36 315 *e* P **P** **12 22 23.5 +0.3**
comp=Z,114nm,1.4s
CHM LR LR 12 53 39.7
comp=Z,2μm,16.9s
CHM Chimkent 69.36 315 *e* P **P** **12 22 23.4 +0.3**
CHM pmax pmax
comp=Z,114nm,1.4s
CHM MLR MLR
comp=Z,2μm,17.0s
BRLS Boroldaу 69.41 316 ⇓ *i* P **P** **12 22 24.0 +0.5**
comp=Z,90nm,1.2s
BRLS Boroldaу 69.41 316 *d i* P **P** **12 22 24.0 +0.5**
BRLS pmax pmax
comp=Z,90nm,1.2s
RAR Rarotonga 69.59 113 LR LR 12 51 32.0
comp=Z,939nm,18.6s,baz=277,slow=35
CASY Casey 69.61 189 P **P** **12 22 23.9 -0.3**
CASY IAmb IAmb 12 22 36.5
comp=Z,194nm,1.9s
TIXI Tiksi 69.97 359 P **P** **12 22 25.1 -1.2**
comp=Z,18nm,1.0s,baz=184,slow=4.6,SNR=24
TIXI LR LR 12 53 45.9
comp=Z,5μm,19.8s,baz=188,slow=36
comp=Z,18nm,1.0s
TIXI Tiksi 69.97 359 P **P** **12 22 25.2 -1.0**
TIXI IAmb IAmb 12 22 32.7
comp=Z,113nm,1.4s
TIXI Tiksi 69.97 359 IAMs_20 IAMs_20 12 53 39.9
comp=Z,4μm,18.0s
TIXI Tiksi 69.97 359 *ce* P **P** **12 22 25.3 -1.0**
TIXI pmax pmax
comp=Z,92nm,1.7s
TIXI Tiksi 69.97 359 ⇑ P **P** **12 22 25.4 -0.9**
NIKH Nikolski High 70.11 33 P **P** **12 22 29.4 +1.8**
baz=245
BILL Bilibino 70.13 13 P **P** **12 22 26.9 -0.5**
BILL Bilibino 70.13 13 *ce* P **P** **12 22 28.1 +0.7**
BILL pmax pmax
comp=Z,28nm,1.1s
BILL MLR MLR
comp=Z,2μm,21.0s
SPIA Saint Paul Isl 71.28 29 P **P** **12 22 35.9 +1.3**
baz=242
P08K Saint George I 71.36 30 P **P** **12 22 36.2 +1.2**
baz=243
UNV Unalaska Valle 71.76 33 IAmb IAmb 12 22 45.1
comp=Z,120nm,1.0s
UNV Unalaska Valle 71.76 33 P **P** **12 22 38.3 +0.8**
baz=247
MLOA Mauna Loa Obse 72.10 70 P **P** **12 22 40.2 -0.6**
BVA0 Borovoye Array 72.45 326 P **P** **12 22 41.5 -0.2**
BVAR Borovoye Array 72.45 326 P **P** **12 22 42.0 +0.3**
comp=Z,303nm,0.9s,baz=108,slow=4.8,SNR=290
BVAR PKPPKP **P'P'df** **12 50 24.4 -3.0**
comp=Z,0.8nm,1.0s,baz=222,slow=1.9,SNR=4.7
BVAR LR LR 12 55 32.7
comp=Z,2μm,21.1s,baz=120,slow=37
comp=Z,303nm,0.9s
NGCH Negor - Chabah 72.80 296 P **P** **12 22 45.3 +1.0**
SNR=9.3
FALS False Pass 73.81 33 IAMs_20 IAMs_20 12 53 45.6
comp=Z,4μm,20.0s
FALS False Pass 73.81 33 P **P** **12 22 49.8 +0.1**
baz=249
GAMB Gambell 73.91 22 P **P** **12 22 50.5 +0.4**
baz=239
JLN Jalan Bani Buh 74.06 292 P **P** **12 22 51.3 -0.5**
SNR=8.6
JLN S **S** **12 32 24.3 0.0**
WBK Wadi Bani Khal 74.50 293 P **P** **12 22 54.1 -0.4**
SNR=6.3
WBK S **S** **12 32 29.6 +0.3**
M11K Mekoryuk 74.60 27 P **P** **12 22 55.0 +0.8**
baz=245
S12K Black Hills 74.84 32 P **P** **12 22 55.4 -0.3**
baz=250
JMDO Jabal Madar 75.28 293 P **P** **12 22 58.3 -0.7**
SNR=12
JMDO S **S** **12 32 37.5 -0.5**
MHTO MHTO 75.31 291 P **P** **12 22 58.2 -0.9**
SNR=18
MHTO S **S** **12 32 38.1 -0.1**
SMDO Samad 75.39 293 P **P** **12 22 59.2 -0.5**
SNR=11
SMDO S **S** **12 32 39.2 -0.1**
SDPT Sand Point 75.57 33 P **P** **12 23 00.3 +0.4**
SDPT Sand Point 75.57 33 P **P** **12 22 59.9 0.0**
baz=251
DQM DQM 75.64 290 P **P** **12 23 00.8 -0.2**
DQM S **S** **12 32 42.2 +0.3**
CHNA Chernabura Isl 75.89 33 P **P** **12 23 02.7 +0.9**
baz=252
M13K Dall Lake 75.91 27 IAmb IAmb 12 23 07.6
comp=Z,243nm,1.4s
M13K Dall Lake 75.91 27 P **P** **12 23 03.0 +1.3**
baz=248
K13K Kusilvak Mount 75.93 26 IAmb IAmb 12 23 08.3
comp=Z,337nm,1.8s
K13K Kusilvak Mount 75.93 26 P **P** **12 23 03.0 +1.1**
baz=246
HOQ Hoqain 76.10 294 P **P** **12 23 03.1 -0.5**
SNR=25
HOQ S **S** **12 32 44.6 -2.4**
BSY Bisya 76.14 293 P **P** **12 23 03.4 -0.5**
SNR=16
BSY S **S** **12 32 46.0 -1.5**
TNA Tin City 76.21 22 P **P** **12 23 03.5 +0.2**
baz=242
O14K Tigyukauivet M 76.47 29 IAmb IAmb 12 23 13.3
comp=Z,121nm,1.1s
O14K Tigyukauivet M 76.47 29 P **P** **12 23 05.5 +0.5**
baz=250
N14K Kuskokwak Cree 76.50 28 P **P** **12 23 05.8 +0.8**
baz=249
L14K Kuka Creek 76.56 27 P **P** **12 23 06.8 +1.4**
baz=248
M14K Bethel 76.67 27 P **P** **12 23 07.1 +1.0**
baz=249
J14K Nanvaranak Lak 76.73 25 IAmb IAmb 12 23 14.1
comp=Z,107nm,1.2s
J14K Nanvaranak Lak 76.73 25 P **P** **12 23 07.4 +1.1**
baz=247
ANM Nome 76.73 23 P **P** **12 23 07.1 +0.8**
baz=245
F14K Arctic Creek 76.76 22 P **P** **12 23 07.7 +1.2**
baz=244
ARQ Araqi 76.81 293 P **P** **12 23 07.0 -0.7**
SNR=36
ARQ S **S** **12 32 53.3 -1.4**
SOHO SOHO 76.85 294 P **P** **12 23 07.4 -0.4**
SOHO S **S** **12 32 54.4 -0.7**
SOHO SOHO 76.85 294 *i* P **P** **12 23 07.4 -0.4**
SNR=24
O15K Ungalikthiuk R 77.14 29 IAmb IAmb 12 23 14.1
comp=Z,293nm,1.6s
O15K Ungalikthiuk R 77.14 29 P **P** **12 23 09.4 +0.7**
baz=251
MDH Madha 77.15 295 P **P** **12 23 09.1 -0.4**
MDH S **S** **12 32 57.5 -0.9**
BANOM Banah 77.20 296 P **P** **12 23 10.1 +0.2**
BANOM S **S** **12 32 58.6 -0.4**
BANOM Banah 77.20 296 *i* P **P** **12 23 10.1 +0.2**
SNR=10
UOSS Minazif 77.21 295 P **P** **12 23 09.5 -0.4**
UOSS IAmb IAmb 12 23 11.1
comp=Z,206nm,1.6s
UOSS Minazif 77.21 295 P **P** **12 23 09.3 -0.6**
UOSS S **S** **12 32 58.1 -1.0**
L15K Ungalak Mounta 77.22 26 P **P** **12 23 09.8 +0.6**
baz=249
M15K Kasigluk River 77.24 28 P **P** **12 23 10.1 +0.8**
baz=250
HATD Hatta, Dubai 77.27 295 P **P** **12 23 09.4 -0.8**
SNR=17
HATD S **S** **12 32 56.5 -3.3**
HATD Hatta, Dubai 77.27 295 *i* P **P** **12 23 10.2 0.0**
SNR=25
MSFE Esma-Masafi 77.28 295 *i* P **P** **12 23 10.0 -0.3**
SNR=18
MASF Masafi 77.28 296 P **P** **12 23 10.7 +0.4**
SNR=12
MASF S **S** **12 32 56.8 -3.1**
ASHO Ashiyiah 77.32 295 P **P** **12 23 10.2 -0.3**
SNR=17
ASHO S **S** **12 33 00.4 0.0**
ASHO Ashiyiah 77.32 295 *i* P **P** **12 23 10.6 +0.1**
SNR=20
N15K Kwethluk River 77.34 28 IAmb IAmb 12 23 17.5
comp=Z,126nm,1.1s
N15K Kwethluk River 77.34 28 P **P** **12 23 11.1 +1.3**
baz=251
SHME Shamm 77.35 296 P **P** **12 23 11.1 +0.5**
SNR=7.2
SHME S **S** **12 33 00.5 0.0**
SHME Shamm 77.35 296 *i* P **P** **12 23 11.2 +0.6**
SNR=10
SHAO Shalim 77.35 288 P **P** **12 23 10.6 -0.2**
SNR=5.5
SHAO S **S** **12 32 58.8 -2.0**
SHAO Shalim 77.35 288 *i* P **P** **12 23 12.0 +1.2**
SNR=5.7
K15K Wolf Creek Mou 77.42 26 IAmb IAmb 12 23 16.0
comp=Z,196nm,1.4s
K15K Wolf Creek Mou 77.42 26 P **P** **12 23 11.7 +1.4**
baz=249
G15K Niukluk 77.43 23 P **P** **12 23 10.8 +0.6**
baz=246
F15K North Star Dit 77.49 22 IAmb IAmb 12 23 16.1
comp=Z,181nm,1.5s
F15K North Star Dit 77.49 22 P **P** **12 23 11.6 +1.0**
baz=245
ALNE Al Ain 77.56 294 P **P** **12 23 11.9 0.0**
SNR=42
ALNE SNR=42 P **P** **12 23 11.9 0.0**
ALNE S **S** **12 33 01.9 -1.0**
ALNE S **S** **12 33 01.9 -1.0**
ALNE Al Ain 77.56 294 *i* P **P** **12 23 12.4 +0.5**
SNR=31
AB31 Akbulak array 77.66 320 IAmb IAmb 12 23 13.6
comp=Z,226nm,1.4s
AB31 Akbulak array 77.66 320 *i* P **P** **12 23 11.7 -0.2**
ABKAR Akbulak array 77.66 320 P **P** **12 23 12.1 +0.3**
NAZ Nazwa, Dubai 77.70 295 P **P** **12 23 12.5 -0.1**
SNR=9.1
NAZ S **S** **12 33 04.2 -0.3**
NAZ Nazwa, Dubai 77.70 295 *i* P **P** **12 23 12.4 -0.2**
SNR=10
UMQ Umm Al-Quwin 77.74 296 P **P** **12 23 13.6 +0.8**
UMQ S **S** **12 33 06.6 +1.8**
FAQ Al Faqa, Dubai 77.75 295 P **P** **12 23 12.8 -0.1**
SNR=8.2
FAQ S **S** **12 33 05.2 +0.3**
FAQ Al Faqa, Dubai 77.75 295 *i* P **P** **12 23 12.9 -0.1**
SNR=14
R16K Pilot Point 77.78 31 P **P** **12 23 12.5 +0.2**
baz=254
ASUD Al Ashush, Dub 77.98 295 P **P** **12 23 14.6 +0.4**
SNR=8.1
ASUD S **S** **12 33 07.6 +0.2**
ASUD Al Ashush, Dub 77.98 295 *i* P **P** **12 23 14.3 +0.2**
SNR=9.4
DMTO DMTO 77.98 288 P **P** **12 23 13.8 -0.5**
SNR=5.2
DMTO S **S** **12 33 07.6 0.0**
P16K Nushagak River 78.00 30 P **P** **12 23 14.3 +0.8**
baz=253
H16K Elim 78.00 24 P **P** **12 23 13.9 +0.5**
baz=248,SNR=11
UMZA Um Al Zommool 78.02 293 P **P** **12 23 13.6 -0.8**
UMZA S **S** **12 33 06.4 -1.4**
N16K Nishlik Lake 78.06 28 P **P** **12 23 15.2 +1.3**
baz=252
O16K Kokwok River B 78.11 29 IAmb IAmb 12 23 21.7
comp=Z,87nm,1.1s
O16K Kokwok River B 78.11 29 P **P** **12 23 15.1 +0.9**
baz=253
L16K Owhat River 78.13 27 P **P** **12 23 15.1 +0.9**
baz=251
M16K Timber Creek 78.15 28 IAmb IAmb 12 23 20.7
comp=Z,249nm,1.6s
M16K Timber Creek 78.15 28 P **P** **12 23 15.5 +1.2**
baz=252
J16K Anvik River 78.18 25 IAmb IAmb 12 23 21.9
comp=Z,115nm,1.1s
J16K Anvik River 78.18 25 P **P** **12 23 15.9 +1.4**
baz=250,SNR=23
G16K Koyuk River 78.24 23 IAmb IAmb 12 23 21.5
comp=Z,139nm,1.4s
G16K Koyuk River 78.24 23 P **P** **12 23 15.8 +1.0**
baz=248,SNR=9.9
CHIR Chirikof Islan 78.35 33 P **P** **12 23 16.5 +0.9**
baz=256
C16K Lisburne Hills 78.35 20 IAmb IAmb 12 23 21.3
comp=Z,102nm,1.1s
C16K Lisburne Hills 78.35 20 P **P** **12 23 16.2 +0.9**
baz=244
I17K Unalakleet 78.35 24 IAmb IAmb 12 23 22.9
comp=Z,205nm,1.2s
I17K Unalakleet 78.35 24 P **P** **12 23 16.9 +1.6**
baz=249,SNR=36
R17L Mt. Peulik Vol 78.42 31 P **P** **12 23 16.2 +0.2**
baz=254
Q16K King Salmon 78.56 30 P **P** **12 23 16.4 -0.2**
baz=254
O17K Koliganek Bris 78.65 29 P **P** **12 23 18.2 +1.1**
baz=253
PPT Papeete 78.65 108 P **P** **12 23 19.3 +1.3**
comp=Z,65nm,1.0s,baz=244,slow=15,SNR=4.7
PPT LR LR 12 54 36.6
comp=Z,2μm,18.6s,baz=266,slow=33
comp=Z,65nm,1.0s
PPT2 Papeete2 78.65 108 *e* P **P** **12 23 20.8 +2.7**
comp=Z,79nm,1.3s
PPT2 Papeete2 78.65 108 *e* PP **PP** **12 26 13.6 -2.7**
comp=Z,273nm,27.8s
PPT2 *e* S **S** **12 33 15.1 +0.1**
comp=Z,7μm,33.0s
PPT2 *e* SS **SS** **12 38 14.2 -5.1**
PPT2 *e* LQ LQ 12 44 19.6
comp=Z,4μm,31.2s
PPT2 *e* LR LR 12 47 34.2
comp=Z,6μm,31.5s
PPT2 *e* LR LR 12 47 36.2
comp=Z,17μm,32.5s
PAE Paea 78.66 108 *e* P **P** **12 23 20.5 +2.5**
comp=Z,9μm,34.0s
PAE Paea 78.66 108 *e* PP **PP** **12 26 09.6 -6.6**
comp=Z,36nm,1.2s
PAE *e* S **S** **12 33 06.5 -8.3**
comp=Z,387nm,30.8s
PAE *e* SS **SS** **12 38 16.1 -3.1**
comp=Z,450nm,24.1s
PAE *e* LR LR 12 47 40.1
comp=Z,658nm,26.7s
RBK Rabkut 78.69 287 P **P** **12 23 16.8 -1.4**
comp=Z,1μm,25.0s
SNR=5.9
RBK S **S** **12 33 14.0 -1.3**
DOK Doka 78.80 289 P **P** **12 23 17.6 -1.1**
SNR=11
DOK P **P** **12 23 17.6 -1.1**
SNR=11
DOK S **S** **12 33 14.3 -2.0**
DOK S **S** **12 33 14.3 -2.0**
L17K Donlin 78.80 27 P **P** **12 23 19.4 +1.5**
baz=252,SNR=27
P17K Kvichak River 78.81 30 P **P** **12 23 18.1 +0.1**
baz=254
N17K Nushagak Hills 78.82 28 IAmb IAmb 12 23 24.1
comp=Z,336nm,1.8s
N17K Nushagak Hills 78.82 28 P **P** **12 23 19.3 +1.2**
baz=253
Q17K Contact Creek 78.84 31 P **P** **12 23 17.9 -0.5**
baz=255
J17K VABM Dome 78.86 25 IAmb IAmb 12 23 24.1
comp=Z,236nm,1.6s
J17K VABM Dome 78.86 25 P **P** **12 23 19.5 +1.3**
baz=251
TIAR Tiarei 78.87 108 *e* P **P** **12 23 20.8 +1.6**
comp=Z,248nm,1.3s
TIAR Tiarei 78.87 108 *e* PP **PP** **12 26 23.4 +5.4**
comp=Z,5μm,30.0s
TIAR *e* S **S** **12 33 08.6 -8.6**
comp=Z,4μm,25.6s
TIAR Tiarei 78.87 108 *e* LR LR 12 47 42.0
comp=Z,10μm,28.8s
D17K Noatak River 78.88 20 P **P** **12 23 19.7 +1.5**
baz=246,SNR=14
G17K Kiwalik Mounta 78.94 23 P **P** **12 23 19.7 +1.1**
baz=249,SNR=22
M17K Holitna River 78.96 27 IAmb IAmb 12 23 24.8
comp=Z,278nm,1.6s
M17K Holitna River 78.96 27 P **P** **12 23 20.5 +1.6**
baz=253,SNR=15
SVE Sverdlovsk 78.97 328 *c i* P **P** **12 23 19.3 +0.4**
SVE *e* PPP PPP 12 28 02.6
SVE *e* S **S** **12 33 16.9 +0.2**
SVE *e* SS **SS** **12 38 25.9 +3.7**
SVE pmax pmax
comp=Z,232nm,1.5s
SVE MLR MLR
comp=Z,3μm,17.0s
K17K Iditarod 78.98 26 P **P** **12 23 20.0 +1.1**
baz=252
TVO Taravao 78.98 108 *e* P **P** **12 23 21.5 +1.6**
comp=Z,58nm,1.4s
TVO *e* S S 12 33 08.7 -10
comp=Z,702nm,25.4s
TVO *e* SS **SS** **12 38 21.9 -2.3**
comp=Z,645nm,26.3s
TVO *e* LR LR 12 47 47.1
comp=Z,3μm,32.1s
H17K Granite Mounta 79.03 24 IAmb IAmb 12 23 26.4
comp=Z,102nm,1.1s
H17K Granite Mounta 79.03 24 P **P** **12 23 20.2 +1.1**
baz=250
F17K Baldwin Pennin 79.06 22 IAmb IAmb 12 23 34.2
comp=Z,133nm,1.4s
F17K Baldwin Pennin 79.06 22 P **P** **12 23 20.4 +1.2**
baz=248
RDOG Red Dog Mine 79.08 20 P **P** **12 23 20.2 +0.8**
baz=246
E17K Hotham Inlet 79.09 21 P **P** **12 23 20.7 +1.3**
baz=248,SNR=21
WHFO Wadi Hawf 79.11 288 P **P** **12 23 19.4 -1.2**
SNR=8.1
AKTO Aktyubinsk 79.11 321 P **P** **12 23 20.0 +0.1**
comp=Z,71nm,1.0s,baz=95,slow=4.9,SNR=110
AKTO LR LR 13 00 04.8
comp=Z,3μm,21.1s,baz=110,slow=37
comp=Z,71nm,1.0s
AKTO Aktyubinsk 79.11 321 P **P** **12 23 19.4 -0.5**
C17K DeLong Mountai 79.16 20 P **P** **12 23 21.2 +1.4**
baz=246
MZWR Madinat Zayed 79.25 294 P **P** **12 23 20.6 -0.6**
MZWR S **S** **12 33 20.4 -0.6**
SII Sitkinak Islan 79.31 33 P **P** **12 23 23.4 +2.6**
SII Sitkinak Islan 79.31 33 P **P** **12 23 21.1 +0.2**
baz=257
TBI Tubuai 79.35 114 *e* P **P** **12 23 19.1 -2.6**
comp=Z,2μm,26.8s
TBI Tubuai 79.35 114 *e* PP **PP** **12 26 24.8 +2.9**
comp=Z,1μm,26.0s
TBI *e* S **S** **12 33 25.8 +3.8**
comp=Z,18μm,41.5s
TBI *e* SS **SS** **12 38 26.9 -2.5**
comp=Z,16μm,27.0s
TBI *e* LQ LQ 12 44 41.1
comp=Z,11μm,39.2s
TBI *e* LR LR 12 47 54.5
comp=Z,81μm,39.0s
TBI *e* LR LR 12 47 57.6
comp=Z,13μm,37.0s
Q18K Katmai Hardscr 79.38 30 P **P** **12 23 20.8 -0.6**
baz=256
R18K Karluk 79.40 32 P **P** **12 23 21.4 +0.1**
baz=256
P18K Big Mountain, 79.46 30 P **P** **12 23 21.6 0.0**
baz=255
N18K Kilae Creek 79.48 28 IAmb IAmb 12 23 28.4
comp=Z,138nm,1.4s
N18K Kilae Creek 79.48 28 P **P** **12 23 23.0 +1.3**
baz=254
L18K Granite Mounta 79.54 27 P **P** **12 23 23.3 +1.4**
baz=253,SNR=24
ABTO Aybut 79.55 287 P **P** **12 23 21.9 -1.1**
SNR=7.3
ABTO P **P** **12 23 21.9 -1.1**
SNR=7.3
MZR Muzera 79.58 293 P **P** **12 23 22.9 -0.2**
SNR=16
MZR P **P** **12 23 22.9 -0.2**
SNR=16
MZR S **S** **12 33 24.7 +0.1**
MZR S **S** **12 33 24.7 +0.1**
MZR Muzera 79.58 293 *i* P **P** **12 23 22.9 -0.2**
SNR=25
O18K Koktuh Hills 79.59 29 IAmb IAmb 12 23 27.6
comp=Z,365nm,1.8s
O18K Koktuh Hills 79.59 29 P **P** **12 23 22.8 +0.5**

baz=255
E18K Tukpahlearik C 79.66 21 P P 12 23 23.5 +1.0
baz=249,SNR=19
F18K Selawik 79.71 22 P P 12 23 23.7 +0.9
baz=250
H18K Honhosa River 79.73 24 IAmb IAmb 12 23 29.7
comp=Z,172nm,1.4s
H18K Honhosa River 79.73 24 P P 12 23 23.9 +0.9
baz=251
M18K Stony River 79.73 28 P P 12 23 24.4 +1.4
baz=254
G18K Tagagawik 79.86 23 P P 12 23 24.1 +0.5
baz=251
J18K Innoko River 79.89 25 P P 12 23 24.3 +0.4
baz=253
C18K Utukok River 79.90 20 P P 12 23 24.7 +0.8
baz=248,SNR=9.5
OHAK Old Harbor 79.94 32 P P 12 23 26.5 +2.3
OHAK Old Harbor 79.94 32 P P 12 23 25.0 +0.8
baz=257
B18K Kokolik River 79.97 19 P P 12 23 25.5 +1.4
baz=247
PMOR Pomariorio Ree 80.05 105 *e*P P 12 23 25.9 +0.3
comp=Z,366nm,1.3s
PMOR *e*S S 12 33 23.8 -5.8
comp=Z,3µm,24.3s
PMOR Pomariorio Ree 80.05 105 *e*LR LR 12 48 21.7
comp=Z,10µm,24.2s
ARTI Arti 80.08 327 P P 12 23 24.7 -0.3
comp=Z,82nm,1.1s,baz=99,slow=5.2,SNR=85
ARTI LR LR 13 00 31.2
comp=Z,1µm,21.0s,baz=108,slow=37
comp=Z,82nm,1.1s
ARTI Arti 80.08 327 P P 12 23 24.4 -0.6
ARTI IAmb IAmb 12 23 26.4
comp=Z,235nm,1.4s
ARTI Arti 80.08 327 *d i*P P 12 23 25.0 0.0
ARTI 12 26 24.0
ARTI PPP PPP 12 28 13.6
ARTI S S 12 33 29.8 +1.2
ARTI SSS SSS 12 42 01.6
ARTI pmax pmax
comp=Z,198nm,1.4s
ARTI MLR MLR
comp=Z,3µm,23.0s
O19K Port Alsworth 80.11 29 P P 12 23 25.5 +0.4
baz=256
Q19K Cape Douglas, 80.14 30 IAmb IAmb 12 23 33.9
comp=Z,219nm,1.5s
Q19K Cape Douglas, 80.14 30 P P 12 23 24.9 -0.4
baz=257
GHWR Ruwais 80.18 294 P P 12 23 25.8 -0.5
GHWR S S 12 33 29.3 -1.5
N19K Bonanza Creek 80.18 28 IAmb IAmb 12 23 31.2
comp=Z,421nm,1.6s
N19K Bonanza Creek 80.18 28 P P 12 23 26.9 +1.3
baz=256,SNR=39
GCSA Galena City Sc 80.20 24 P P 12 23 26.5 +1.1
baz=253
JRN Qarnain Island 80.25 295 P P 12 23 26.3 -0.3
JRN S S 12 33 30.8 -0.7
VAH Vaihoa 80.32 106 *e*P P 12 23 29.1 +2.0
comp=Z,2.4nm,1.2s
VAH Vaihoa 80.32 106 *e*LR LR 12 48 19.5
comp=Z,9µm,30.5s
L19K White Mountain 80.36 27 IAmb IAmb 12 23 32.0
comp=Z,229nm,1.5s
L19K White Mountain 80.36 27 P P 12 23 27.6 +1.2
baz=255,SNR=29
KDAK Kodiak Island 80.43 32 P P 12 23 28.0 +1.2
KDAK IAmb IAmb 12 23 32.0
comp=Z,341nm,1.8s
KDAK Kodiak Island 80.43 32 P P 12 23 28.0 +1.2
KDAK pmax pmax
comp=Z,341nm,1.8s
KDAK Kodiak Island 80.43 32 P P 12 23 27.4 +0.5
baz=258
F19K Shaleruckik Mo 80.50 22 P P 12 23 27.5 +0.5
baz=252
M19K Big River Lodg 80.50 27 P P 12 23 28.5 +1.3
baz=256
J19K Poorman 80.51 25 IAmb IAmb 12 23 33.6
comp=Z,344nm,1.8s
J19K Poorman 80.51 25 P P 12 23 27.9 +0.7
baz=254
P19K Oil Pt 80.51 30 IAmb IAmb 12 23 31.6
comp=Z,324nm,1.8s
P19K Oil Pt 80.51 30 P P 12 23 26.8 -0.5
baz=257
A19K Wainwright 80.53 18 P P 12 23 28.7 +1.6
baz=248
G19K Purcell Mounta 80.54 23 IAmb IAmb 12 23 34.2
comp=Z,211nm,1.4s
G19K Purcell Mounta 80.54 23 P P 12 23 28.2 +0.9
baz=252
H19K Roundabout Mou 80.61 23 IAmb IAmb 12 23 34.8
comp=Z,154nm,1.1s
H19K Roundabout Mou 80.61 23 P P 12 23 28.8 +1.2
baz=253
C19K Lookout Ridge 80.61 20 P P 12 23 29.1 +1.4
baz=250
ILSW Iliamna Southw 80.63 29 IAmb IAmb 12 23 31.9
comp=Z,257nm,2.0s
VNDA Vanda 80.64 174 P P 12 23 27.6 +0.1
comp=Z,39nm,1.0s,baz=324,slow=5.7,SNR=41
VNDA LR LR 12 59 40.8
comp=Z,7µm,18.2s,baz=349,slow=36
comp=Z,39nm,1.0s
VNDA Vanda 80.64 174 P P 12 23 27.7 +0.1
Q20K Shuyak Island 80.70 31 P P 12 23 28.9 +0.6
baz=258
SYI Shuyak Island 80.70 31 IAmb IAmb 12 23 33.2
comp=Z,283nm,1.6s
L20K Farewell, AK 80.88 27 IAmb IAmb 12 23 34.9
comp=Z,300nm,1.8s
L20K Farewell, AK 80.88 27 P P 12 23 30.6 +1.4
baz=256
E19K Redstone River 80.89 22 IAmb IAmb 12 23 35.6
comp=Z,168nm,1.2s
E19K Redstone River 80.89 22 P P 12 23 30.0 +0.8
baz=252
D19K Kuna River 80.91 20 IAmb IAmb 12 23 34.7
comp=Z,202nm,1.3s
D19K Kuna River 80.91 20 P P 12 23 30.1 +0.8
baz=251
O20K Slope Mountain 80.91 29 P P 12 23 29.6 +0.2
baz=257
K20K Telida 81.01 26 IAmb IAmb 12 23 37.2
comp=Z,150nm,1.3s
K20K Telida 81.01 26 P P 12 23 31.2 +1.3
baz=256
M20K Styx River 81.07 27 P P 12 23 31.3 +1.0
baz=257,SNR=46
J20K Nowinta River 81.18 25 IAmb IAmb 12 23 38.6
comp=Z,276nm,1.6s
J20K Nowinta River 81.18 25 P P 12 23 32.0 +1.2
baz=255
I20K Naaghedeneel 81.20 24 IAmb IAmb 12 23 38.7
comp=Z,217nm,1.3s
I20K Naaghedeneel 81.20 24 P P 12 23 31.9 +1.1
baz=255
H20K Anotleneega Mo 81.22 24 P P 12 23 32.0 +1.1
baz=254
SLWR Sila 81.27 294 P P 12 23 31.2 -0.8
SLWR S S 12 33 40.3 -1.9
HOM Homer 81.30 30 P P 12 23 31.3 -0.1
baz=258
F20K Avaraart Lake 81.33 22 IAmb IAmb 12 23 37.2
comp=Z,110nm,1.3s
F20K Avaraart Lake 81.33 22 P P 12 23 32.8 +1.3
baz=254
N20K Mount Spurr 81.35 28 P P 12 23 31.5 -0.3
baz=258
SPCR Spurr Chakacha 81.35 28 P P 12 23 31.8 0.0
baz=258
SBA Scott Base 81.47 173 P P 12 23 33.6 +1.6
SBA Scott Base 81.47 173 IAMs_20 IAMs_20 12 57 46.2
comp=Z,3µm,20.0s
SBA Scott Base 81.47 173 P P 12 23 33.6 +1.6
SBA pmax pmax
comp=Z,84nm,1.3s
D20K Etivluk River 81.50 20 IAmb IAmb 12 23 39.5
comp=Z,139nm,1.1s
D20K Etivluk River 81.50 20 P P 12 23 33.4 +1.0
baz=252
E20K Nigu River 81.51 21 P P 12 23 33.6 +1.1
baz=253
BRLK Bradley Lake 81.70 30 IAmb IAmb 12 23 38.8
comp=Z,349nm,1.7s
B20K Meade River 81.72 19 P P 12 23 34.4 +1.0
baz=252
TRNA Turayna 81.73 295 P P 12 23 34.0 -0.5
TRNA S S 12 33 46.9 0.0
PPLA Purkeypile 81.73 27 IAmb IAmb 12 23 38.8
comp=Z,309nm,1.8s
PPLA Purkeypile 81.73 27 P P 12 23 34.2 +0.3
baz=257
CAPN Captain Cook N 81.76 29 P P 12 23 34.1 +0.2
baz=259
BRSE Bradley Lake S 81.77 30 P P 12 23 34.3 +0.3
baz=259
IMAR Indian Mountai 81.80 23 P P 12 23 34.9 +0.8
SKT Skwentna 81.83 28 IAmb IAmb 12 23 40.3
comp=Z,109nm,1.2s
SKT Skwentna 81.83 28 P P 12 23 33.7 -0.6
baz=258,SNR=23
CHUM Lake Minchumin 81.90 26 P P 12 23 35.6 +1.0
baz=257,SNR=26
SHMA Al-Shehemyia 81.99 296 P P 12 23 35.3 -0.6
SHMA S S 12 33 48.6 -1.0
G21K Allakaket 82.03 23 IAmb IAmb 12 23 40.8
comp=Z,294nm,1.9s
G21K Allakaket 82.03 23 P P 12 23 36.0 +0.8
baz=256,SNR=28
SMRA Abu-Samra 82.08 295 P P 12 23 34.9 -1.5
SNR=7.3
SMRA S S 12 33 49.3 -1.3
SUA Susitna One 82.09 28 IAmb IAmb 12 23 39.8
comp=Z,228nm,1.3s
SUA Susitna One 82.09 28 P P 12 23 35.7 -0.1
baz=259
H21K Melozitna Rive 82.10 24 IAmb IAmb 12 23 41.1
comp=Z,254nm,1.8s
H21K Melozitna Rive 82.10 24 P P 12 23 36.2 +0.6
baz=256
F21K Alatna River 82.22 22 P P 12 23 37.0 +0.7
baz=256
C21K Knifeblade Rid 82.26 20 P P 12 23 37.5 +1.1
baz=254
L22K Petersville 82.29 27 IAmb IAmb 12 23 40.7
comp=Z,145nm,1.3s
A21K Barrow 82.30 18 P P 12 23 37.5 +1.0
baz=252
I21K Tanana 82.33 24 IAmb IAmb 12 23 47.7
comp=Z,144nm,1.6s
I21K Tanana 82.33 24 P P 12 23 38.0 +1.2
baz=257,SNR=22
E21K Killik River 82.35 21 IAmb IAmb 12 23 42.4
comp=Z,148nm,1.2s
E21K Killik River 82.35 21 P P 12 23 37.8 +0.9
baz=255,SNR=32
O22K Cooper Landing 82.40 29 IAmb IAmb 12 23 41.5
comp=Z,211nm,1.2s
O22K Cooper Landing 82.40 29 P P 12 23 37.0 -0.2
baz=260
KTH Kantishna Hill 82.43 26 IAmb IAmb 12 23 42.0
comp=Z,86nm,1.2s
M22K Willow 82.44 28 P P 12 23 37.2 -0.3
baz=259,SNR=23
B21K Ikpikpuk River 82.45 20 P P 12 23 38.5 +1.2
baz=254,SNR=34
SEW Seward 82.47 30 IAmb IAmb 12 23 43.6
comp=Z,195nm,1.2s
SEW Seward 82.47 30 P P 12 23 37.6 0.0
baz=260,SNR=6.4
CUT Chulitna 82.50 27 IAmb IAmb 12 23 44.0
comp=Z,204nm,1.4s
CUT Chulitna 82.50 27 P P 12 23 37.4 -0.3
baz=259
RC01 Rabbit Creek A 82.50 29 IAmb IAmb 12 23 44.1
comp=Z,134nm,1.1s
RC01 Rabbit Creek A 82.50 29 P P 12 23 37.9 +0.1
baz=260
BPAW Bear Paw Mtn. 82.51 25 P P 12 23 38.2 +0.4
baz=258,SNR=15
TRF Thorofare Moun 82.69 26 IAmb IAmb 12 23 43.2
comp=Z,96nm,1.3s
TRF Thorofare Moun 82.69 26 P P 12 23 38.6 -0.3
baz=259,SNR=14
A22K Sinclair Lake 82.72 18 P P 12 23 40.1 +1.4
baz=254,SNR=27
H22K Ishlitna Cre 82.73 24 IAmb IAmb 12 23 44.7
comp=Z,315nm,1.8s
H22K Ishtalitna Cre 82.73 24 P P 12 23 40.2 +1.3
baz=258,SNR=41
F22K John River 82.78 22 P P 12 23 40.3 +1.2
baz=257,SNR=57
MLY Manley 82.81 25 IAmb IAmb 12 23 46.6
comp=Z,98nm,1.5s
MLY Manley 82.81 25 P P 12 23 39.8 +0.5
baz=258,SNR=26
PMR Palmer 82.88 28 IAmb IAmb 12 23 46.0
comp=Z,111nm,1.2s
PMR Palmer 82.88 28 P P 12 23 39.4 -0.3
PMR Palmer 82.88 28 P P 12 23 39.3 -0.3
baz=260,SNR=16
G22K Bettles 82.90 23 P P 12 23 40.2 +0.5
baz=257
D22K Ayikyak River 82.92 21 P P 12 23 41.1 +1.3
baz=256,SNR=50
GHO Glory Hole Cre 83.01 28 IAmb IAmb 12 24 06.5
comp=Z,76nm,1.1s
B22K Teshekpuk Lake 83.03 19 P P 12 23 41.2 +0.8
baz=255
E22K Anaktuvuk Pass 83.06 21 P P 12 23 41.8 +1.2
baz=257,SNR=70
PWL Port Wells 83.14 29 P P 12 23 41.2 +0.1
baz=261,SNR=17
KNK Knik Glacier 83.17 28 IAmb IAmb 12 23 48.7
comp=Z,129nm,1.2s
KNK Knik Glacier 83.17 28 P P 12 23 41.7 +0.4
baz=261,SNR=16
SML Sawmill 83.29 28 IAmb IAmb 12 23 46.6
comp=Z,130nm,1.0s
SML Sawmill 83.29 28 P P 12 23 42.0 0.0
baz=261,SNR=20
MCK McKinley 83.34 26 P P 12 23 41.7 -0.4
baz=260,SNR=45
WAT1 Susitna Watana 83.36 27 P P 12 23 41.9 -0.3
baz=261
I23K Minto, Yukon-K 83.41 25 P P 12 23 43.2 +0.9
baz=260,SNR=157
NEA2 Nenana 83.43 25 IAmb IAmb 12 23 49.6
comp=Z,78nm,1.3s
NEA2 Nenana 83.43 25 P P 12 23 42.5 0.0
baz=260,SNR=17
G23K Bananza Creek 83.43 23 P P 12 23 43.5 +1.0
baz=259
H23K Yukon River 83.45 24 P P 12 23 43.7 +1.0
baz=259
COLD Coldfoot 83.47 22 IAmb IAmb 12 23 48.4
comp=Z,162nm,1.2s
COLD Coldfoot 83.47 22 P P 12 23 43.9 +1.2
baz=259,SNR=46
P23K Montague Islan 83.47 30 P P 12 23 42.8 0.0
baz=262
SBV Sambava 83.50 256 P P 12 23 43.7 -0.2
SNR=5.5
M23K Glacier View 83.57 28 P P 12 23 43.5 +0.1
baz=262,SNR=14
D23K Nanushuk River 83.65 21 P P 12 23 44.9 +1.4
baz=258
WAT6 Susitna Watana 83.69 27 P P 12 23 44.3 +0.2
baz=261,SNR=26
GLI Glacier Island 83.74 29 IAmb IAmb 12 23 48.9
comp=Z,114nm,1.2s
GLI Glacier Island 83.74 29 P P 12 23 44.0 -0.2
baz=262
SCM Sheep Creek Mo 83.77 28 P P 12 23 44.3 -0.1
baz=262,SNR=13
E23K Chandalar 83.85 22 P P 12 23 45.7 +1.0
baz=259,SNR=117
C23K Itkillik River 83.85 20 P P 12 23 45.3 +0.8
baz=258
Q23K Middleton Isla 83.92 30 P P 12 23 46.0 +0.9
baz=263
DHY Denali Highway 83.92 27 IAmb IAmb 12 23 51.1
comp=Z,149nm,1.2s
DHY Denali Highway 83.92 27 P P 12 23 45.6 +0.3
baz=262,SNR=39
MAW Mawson 83.96 201 P P 12 23 45.5 +0.4
comp=Z,10nm,2.1s
MAW Mawson 83.96 201 P P 12 23 45.3 +0.2
comp=Z,32nm,1.1s,baz=68,slow=8.2,SNR=12
MAW LR LR 12 59 53.4
comp=Z,2µm,19.1s,baz=66,slow=35
comp=Z,32nm,1.1s
TOLK Toolik Lake Re 83.97 21 P P 12 23 46.3 +1.0
baz=259,SNR=67
COLA College 83.99 25 P P 12 23 44.9 -0.5
COLA IAmb IAmb 12 23 50.2
comp=Z,236nm,1.6s
COLA College 83.99 25 P P 12 23 44.7 -0.6
COLA College 83.99 25 P P 12 23 44.9 -0.5
COLA College 83.99 25 P P 12 23 44.9 -0.5
baz=261
FID Port Fidalgo 84.03 29 IAmb IAmb 12 23 52.0
comp=Z,125nm,1.1s
FID IAMs_20 IAMs_20 13 00 46.7
comp=Z,3µm,18.0s
H24K Noodor Dome 84.13 24 P P 12 23 47.0 +0.8
baz=261
POKR Poker Plat Res 84.20 25 IAmb IAmb 12 23 52.8
comp=Z,178nm,1.7s
POKR Poker Plat Res 84.20 25 P P 12 23 45.8 -0.7
baz=261,SNR=14
E24K Your Creek 84.27 22 IAmb IAmb 12 23 53.1
comp=Z,223nm,1.9s
E24K Your Creek 84.27 22 P P 12 23 47.5 +0.6
baz=260
HDA Harding Lake 84.31 25 IAmb IAmb 12 23 50.7
comp=Z,139nm,1.3s
HDA Harding Lake 84.31 25 P P 12 23 46.3 -0.8
baz=262,SNR=30
D24K Happy Valley 84.34 21 P P 12 23 48.3 +1.2
baz=260
M24K Tolsona, Glenn 84.34 28 P P 12 23 47.0 -0.3
baz=263,SNR=12
EYAK Cordova Ski Ar 84.36 29 IAmb IAmb 12 25 21.5
comp=Z,123nm,1.5s
EYAK Cordova Ski Ar 84.36 29 P P 12 23 50.1 +2.8
EYAK Cordova Ski Ar 84.36 29 P P 12 23 47.6 +0.3
baz=263
IL31 84.38 25 IAmb IAmb 12 23 50.8
comp=Z,160nm,1.5s
ILAR Eielson Array 84.38 25 P P 12 23 46.0 -1.4
comp=Z,20nm,0.9s,baz=250,slow=3.1,SNR=79
ILAR PKKP **PKKPdf** 12 41 51.5 -2.2
comp=Z,1.1nm,1.1s,baz=340,slow=1.8,SNR=4.3
ILAR PKKPbc **PKKPbc** 12 42 00.1 -2.0
comp=Z,2.1nm,1.1s,baz=131,slow=1.9,SNR=6.1
ILAR PKPPKP **P'P'df** 12 50 01.4 -4.2
comp=Z,0.8nm,1.0s,baz=303,slow=0.7,SNR=4.1
ILAR LR LR 12 58 16.8
comp=Z,718nm,21.6s,baz=250,slow=34
comp=Z,20nm,0.9s
ILAR Eielson Array 84.38 25 P P 12 23 46.0 -1.4
KLU Klutina 84.39 28 IAMs_20 IAMs_20 13 01 12.8
comp=Z,3µm,20.0s
KLU Klutina 84.39 28 P P 12 23 47.3 -0.3
baz=263,SNR=14
F24K Squaw Lake 84.40 22 P P 12 23 48.7 +1.2
baz=261
G24K Hadweenzic Riv 84.43 23 IAmb IAmb 12 23 53.1
comp=Z,220nm,1.4s
G24K Hadweenzic Riv 84.43 23 P P 12 23 48.5 +0.9
baz=261
C24K Franklin Bluff 84.48 20 P P 12 23 48.4 +0.6
baz=260
K24K Donnelly Dome 84.73 26 P P 12 23 49.3 0.0
baz=263,SNR=11
PAX Paxson 84.77 27 P P 12 23 50.0 +0.5
baz=263,SNR=52
HARP HAARP 84.85 28 P P 12 23 49.7 -0.1
baz=264
KAIM Kayak Island 84.95 30 P P 12 23 51.2 +0.9
baz=265
BMRM Bremner River 84.96 29 P P 12 23 51.1 +0.6
baz=264,SNR=13
G25K Bearman Lake 84.98 23 P P 12 23 51.5 +1.2
baz=262,SNR=36
J25K Salcha River, 85.01 25 P P 12 23 49.9 -0.7
baz=263
H25L Birch Creek 85.03 24 P P 12 23 51.7 +1.2
baz=263,SNR=34
N25K Chitina, Valde 85.03 28 P P 12 23 51.5 +0.7
baz=264,SNR=19
PRP Porcupine Dome 85.05 24 P P 12 23 50.7 -0.3
baz=263,SNR=14
RIDG Independent Ri 85.14 26 P P 12 23 51.6 +0.3
baz=264,SNR=43
KIRV Kirov 85.19 329 P P 12 23 51.2 -0.4
comp=Z,139nm,1.1s,baz=110,slow=2.1,SNR=61
KIRV LR LR 13 06 48.7
comp=Z,2µm,18.3s,baz=94,slow=39
comp=Z,139nm,1.1s
KIRV Kirov 85.19 329 *ce*P P 12 23 51.5 0.0
D25K Kavik River 85.23 21 P P 12 23 51.7 0.0
baz=262
F25K Christian Rive 85.26 22 IAmb IAmb 12 23 57.8
comp=Z,113nm,1.6s
F25K Christian Rive 85.26 22 P P 12 23 53.2 +1.4
baz=263
AKT Akhty 85.27 311 *e*P P 12 23 51.2 -1.3
AKT *e* 12 27 06.8
AKT *e*S **SKSac** 12 34 15.8 -1.2
AKT pmax pmax
comp=Z,144nm,1.6s
AKT MLR MLR
comp=Z,4µm,21.0s
E25K Arctic Village 85.36 22 IAmb IAmb 12 24 00.5
comp=Z,195nm,1.6s
E25K Arctic Village 85.36 22 P P 12 23 53.3 +1.0
baz=263,SNR=34
MAK Makhachkala 85.49 313 *c i*P P 12 23 48.6 -4.8
MAK *e* 12 27 11.0
MAK *e* 12 34 09.6
MAK *e*SS SS 12 39 56.4 -3.3
MAK pmax pmax
comp=Z,410nm,1.5s
MAK MLR MLR
comp=Z,2µm,16.0s
SCRK Sand Creek 85.54 26 IAmb IAmb 12 23 58.3
comp=Z,249nm,1.6s
SCRK Sand Creek 85.54 26 P P 12 23 53.7 +0.3
baz=265,SNR=44
VRDI Verde Repeater 85.54 29 IAmb IAmb 12 23 58.6
comp=Z,250nm,1.6s
MENT Mentasta 85.56 27 IAmb IAmb 12 23 58.7
comp=Z,255nm,1.7s
BMAR Burnt Mountain 85.65 23 P P 12 23 54.2 +0.5
CRQE Cirque 85.68 29 P P 12 23 54.6 +0.5
baz=266
L26K Log Cabin Wild 85.74 27 IAmb IAmb 12 23 59.5
comp=Z,199nm,1.6s
L26K Log Cabin Wild 85.74 27 P P 12 23 55.2 +0.9
baz=265,SNR=28
MCARA McCarthy VSAT 85.76 29 IAmb IAmb 12 23 59.7
comp=Z,172nm,1.4s
MCARA McCarthy VSAT 85.76 29 P P 12 23 55.1 +0.8
baz=266,SNR=5.8
J26L Joseph Creek 85.77 26 P P 12 23 54.9 +0.4
baz=265,SNR=60
BELG Belogornoye 85.80 322 P P 12 23 54.1 -0.6
comp=Z,523nm,1.0s,baz=64,slow=0.6,SNR=80
BELG LR LR 13 03 58.3
comp=Z,1µm,21.8s,baz=95,slow=37
BELG Belogornoye 85.80 322 *i*P P 12 23 55.3 +0.6
BELG pmax pmax
comp=Z,116nm,1.1s
C26K Camden Bay 85.81 20 P P 12 23 55.3 +0.9
baz=263
F26K Sheenjek River 85.84 22 IAmb IAmb 12 24 01.8
comp=Z,100nm,1.6s
F26K Sheenjek River 85.84 22 P P 12 23 54.9 +0.1
baz=264
M26K Nabesna, AK 85.85 28 IAmb IAmb 12 24 01.2
comp=Z,280nm,1.7s
M26K Nabesna, AK 85.85 28 P P 12 23 55.0 +0.1
baz=266
G26K Porcupine Rive 85.91 23 IAmb IAmb 12 24 02.0
comp=Z,291nm,2.0s
G26K Porcupine Rive 85.91 23 P P 12 23 56.2 +1.2
baz=265
I26K Coal Creek Min 86.02 25 P P 12 23 55.5 0.0
baz=265
C27K Jago River 86.19 20 P P 12 23 56.9 +0.5
baz=264,SNR=15
MESA MESA 86.20 30 P P 12 23 57.2 +0.4
baz=267
M27K Edge Creek, AK 86.37 28 P P 12 23 58.5 +1.0
baz=267,SNR=16
ABPO Ambohimpanom 86.39 251 P P 12 23 58.2 -0.3
ABPO IAmb IAmb 12 23 59.3

ABPO Ambohimpanom 86.39 251 P P 12 23 58.3 -0.3
ABPO pmax pmax
comp=Z,183nm,1.9s
K27K Chicken 86.39 26 P P 12 23 58.6 +1.2
baz=266
L27K Beaver Creek, 86.44 27 IAmb IAmb 12 24 03.3
comp=Z,245nm,1.6s
L27K Beaver Creek, 86.44 27 P P 12 23 59.0 +1.3
baz=267
BCAR Beaver Creek A 86.45 27 P P 12 23 58.5 +0.6
CTG Chitna Glacier 86.55 29 P P 12 23 59.7 +1.2
baz=267,SNR=24
I27K Kandik River 86.68 25 IAmb IAmb 12 24 05.3
comp=Z,262nm,1.7s
I27K Kandik River 86.68 25 P P 12 23 59.9 +1.0
baz=267,SNR=38
G27K Doyon Strip 86.74 23 P P 12 24 00.4 +1.3
baz=267
H27K Steamboat Moun 86.75 24 IAmb IAmb 12 24 07.0
comp=Z,78nm,1.2s
H27K Steamboat Moun 86.75 24 P P 12 23 60.0 +0.7
baz=267
E27K Coleen River 86.84 22 P P 12 24 00.3 +0.7
baz=266
BVCY Beaver Creek 86.85 28 P P 12 24 00.5 +0.8
baz=268,SNR=14
FOMA Nahampoana Res 86.93 245 P P 12 24 01.1 +0.2
FOMA IAmb IAmb 12 24 02.0
comp=Z,297nm,2.0s
VOI Vohitsoka 86.94 248 IAmb IAmb 12 24 02.5
comp=Z,109nm,1.3s
VOI Vohitsoka 86.94 248 P P 12 24 00.9 -0.2
SNR=7.2
YUK3 Moose Creek 87.01 28 P P 12 24 01.8 +1.0
baz=268,SNR=23
PINM Pinnacle 87.05 30 P P 12 24 01.8 +0.9
baz=268
O28M Mount Upton 87.10 29 IAmb IAmb 12 24 06.9
comp=Z,207nm,1.4s
O28M Mount Upton 87.10 29 P P 12 24 02.4 +1.0
baz=268
D27M Malcolm River 87.13 21 P P 12 24 01.7 +0.7
baz=267,SNR=9.7
TAOE Nuku Hiva Isla 87.28 99 *e*P P 12 23 56.7 -6.2
comp=Z,324nm,25.5s
TAOE Nuku Hiva Isla 87.28 99 *e*PP PP 12 27 25.5 -1.8
comp=Z,203nm,24.1s
TAOE *e*S S 12 34 43.0 0.0
comp=Z,2µm,25.6s
TAOE *e*SS SS 12 40 25.9 -1.8
comp=Z,3µm,31.0s
TAOE *e*LQ LQ 12 47 56.8
comp=Z,4µm,33.6s
TAOE *e*LR LR 12 51 35.8
comp=Z,8µm,23.9s
YUK8 Steele Glacier 87.33 29 P P 12 24 03.0 +0.6
baz=269,SNR=7.0
I28M Miner Creek 87.37 25 IAmb IAmb 12 24 09.1
comp=Z,246nm,1.8s
I28M Miner Creek 87.37 25 P P 12 24 02.7 +0.4
baz=268
F28M Old Crow 87.47 23 P P 12 24 02.6 0.0
baz=268,SNR=16
PNL Peninsula 87.47 31 P P 12 24 03.3 +0.5
baz=269
GNI Garni 87.52 310 P P 12 24 02.5 -1.2
comp=Z,5.3nm,0.4s,baz=166,slow=3.6,SNR=19
GNI LR LR 13 07 04.1
comp=Z,2µm,21.9s,baz=89,slow=38
comp=Z,5.3nm,0.4s
GNI Garni 87.52 310 P P 12 24 03.8 +0.1
GNI IAmb IAmb 12 24 14.8
comp=Z,168nm,1.5s
GNI Garni 87.52 310 P P 12 24 03.8 +0.1
GNI Garni 87.52 310 *i* P P 12 24 03.7 0.0
GNI pmax pmax
comp=Z,45nm,1.3s
E28M Babbage River 87.62 22 P P 12 24 03.1 -0.2
baz=268,SNR=17
YUK4 Talbot Arm 87.87 29 P P 12 24 05.8 +0.9
baz=270,SNR=5.8
O29M Mount Kennedy 87.89 30 IAmb IAmb 12 24 10.7
comp=Z,199nm,1.6s
O29M Mount Kennedy 87.89 30 P P 12 24 05.0 0.0
baz=270
D28M Stokes Point 87.93 21 P P 12 24 05.0 +0.3
baz=269
M29M Somme Creek 87.96 28 IAmb IAmb 12 24 11.1
comp=Z,222nm,1.8s
M29M Somme Creek 87.96 28 P P 12 24 05.6 +0.4
baz=270
YUK6 Outpost Mounta 88.00 29 P P 12 24 06.5 +0.9
baz=270
H29M Whitestone 88.03 24 IAmb IAmb 12 24 34.7
comp=Z,89nm,1.6s
H29M Whitestone 88.03 24 P P 12 24 05.7 +0.3
baz=270
L29M L29M 88.12 27 IAmb IAmb 12 24 12.8
comp=Z,236nm,1.9s
L29M L29M 88.12 27 P P 12 24 06.4 +0.5
baz=270
G29M Pine Creek 88.17 23 IAmb IAmb 12 24 10.5
comp=Z,60nm,1.1s
G29M Pine Creek 88.17 23 P P 12 24 06.0 0.0
baz=270
E29M Blow River 88.23 22 P P 12 24 06.7 +0.5
baz=270
P29M Windy Craggy 88.31 31 P P 12 24 06.1 -0.7
baz=270
K29M Barlow Dome 88.39 26 IAmb IAmb 12 24 13.3
comp=Z,83nm,1.6s
K29M Barlow Dome 88.39 26 P P 12 24 07.3 +0.1
baz=270
HYT Haines Junctio 88.42 29 IAmb IAmb 12 24 13.1
comp=Z,216nm,1.9s
HYT Haines Junctio 88.42 29 P P 12 24 07.4 -0.1
baz=270
N30M Aishikik Lake 88.61 29 P P 12 24 08.0 -0.2
baz=271
EPYK Eagle Plains 88.70 24 P P 12 24 08.1 -0.5
baz=271,SNR=12
P30M Million Dollar 88.70 30 P P 12 24 08.3 -0.4
baz=271
M30M Minto, Yukon 88.74 28 P P 12 24 08.5 -0.3
baz=271
KBZ Khabaz 88.86 314 P P 12 24 08.5 -1.2
comp=Z,12nm,1.1s,baz=83,slow=4.7,SNR=8.8
KBZ LR LR 13 09 45.6
comp=Z,2µm,18.6s,baz=80,slow=40
comp=Z,12nm,1.1s
KBZ Khabaz 88.86 314 *ce*P P 12 24 08.5 -1.2
KBZ pmax pmax
comp=Z,11nm,1.0s
I30M Mount Dempster 88.86 25 P P 12 24 08.2 -1.2
baz=271
G30M tAoh Zraii Nji 88.88 23 P P 12 24 08.2 -1.2
baz=272
J30M Hart River 88.90 26 P P 12 24 09.4 -0.2
baz=272
KIV Kislovodsk 89.00 314 P P 12 24 09.6 -0.9
KIV P P 12 24 09.6 -0.9
KIV Kislovodsk 89.00 314 *e*P P 12 24 09.8 -0.7
KIV *e* 12 27 38.4
KIV *e*PPP PPP 12 29 35.6
KIV *e* 12 34 39.0
KIV *e*SS SS 12 40 50.2 -1.1
KIV *e*SSS SSS 12 44 26.4
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,2µm,20.0s
PLBC Pleasant Camp 89.01 31 P P 12 24 10.3 +0.2
baz=272
F30M Barrier River 89.03 23 P P 12 24 09.6 -0.4
baz=272
O30N Mendenhall 89.11 29 IAmb IAmb 12 24 52.2
comp=Z,127nm,1.9s
O30N Mendenhall 89.11 29 P P 12 24 10.7 +0.1
baz=272
MAYO Mayo, Yukon 89.12 27 P P 12 24 10.8 +0.3
baz=272
S31K Pelican 89.12 32 P P 12 24 11.2 +0.6
baz=272
N31M Braeburn, Yuko 89.24 29 P P 12 24 11.3 +0.1
baz=272
R31K City Hall, Gus 89.37 32 P P 12 24 10.8 -0.9
baz=272

VRH Novokhopyorsk 89.46 321 *e*P P 12 24 08.5 -3.8
VRH pmax pmax
comp=Z,40nm,1.1s
SKAG Skagway 89.54 31 P P 12 24 11.8 -0.7
baz=272
GURO Guroymak-BITLI 89.64 308 IAmb IAmb 12 24 18.7
comp=Z,52nm,1.0s
SIT Sitka 89.65 33 P P 12 24 11.7 -1.3
baz=272
G31M Satah River 89.65 23 P P 12 24 12.2 -0.7
baz=273,SNR=8.2
ATD Arta Tunnel 89.68 281 LR LR 13 01 05.6
comp=Z,20nm,21.9s,baz=68,slow=33
H31M Peel River 89.69 24 P P 12 24 12.1 -1.1
baz=273
WHY Whitehorse 89.71 29 P P 12 24 12.1 -1.4
baz=273
F31M Tsiigehtchic 89.83 23 P P 12 24 12.2 -1.5
baz=274,SNR=8.5
INK Inuvik 89.85 22 P P 12 24 12.8 -1.0
baz=274,SNR=15
M31M Drury Creek, Y 89.87 28 P P 12 24 12.5 -1.6
baz=273
R32K Eaglecrest 90.02 32 P P 12 24 13.1 -1.7
baz=273
S32K Killisnoo 90.03 33 P P 12 24 14.1 -0.8
baz=273
KLMR Klimovskoe 90.22 331 *e*P P 12 24 14.4 -1.3
KLMR pmax pmax
comp=Z,146nm,1.4s
KLMR MLR MLR
comp=Z,4µm,19.0s
P32M Atlin 90.36 31 P P 12 24 15.1 -1.3
baz=274
LABN Labinsk 90.39 314 *e*P P 12 24 15.9 -1.0
LABN *e* 12 27 50.4
LABN *e* 12 35 01.1
LABN *e*PS PnS 12 36 18.2 -1.6
LABN *e*SS SS 12 41 08.0 -3.1
LABN *e*SSS SSS 12 44 48.6
LABN pmax pmax
comp=Z,31nm,0.7s
ERBR Yeremizino-Bor 90.51 316 *e*P P 12 24 14.9 -2.5
ERBR *e* 12 27 55.4
ERBR *e*PPP PPP 12 29 50.1
ERBR *e* 12 34 59.4
ERBR *e*PS PS 12 36 13.8 -7.3
ERBR *e*SS SS 12 41 06.1 -6.7
ERBR pmax pmax
comp=Z,48nm,0.5s
ERBR MLR MLR
comp=Z,2µm,18.0s
N32M Quiet Lake 90.56 29 IAmb IAmb 12 24 23.8
comp=Z,120nm,1.6s
N32M Quiet Lake 90.56 29 P P 12 24 16.6 -0.8
baz=274
P33M Teslin, Yukon 90.76 30 P P 12 24 17.6 -0.8
baz=275
KOPT Kop Dagi 90.77 310 IAmb IAmb 12 24 24.0
comp=Z,94nm,1.3s
U33K Whale Pass 90.92 34 P P 12 24 18.1 -0.9
baz=274
T33K Petersburg 90.96 33 P P 12 24 18.2 -1.0
baz=274
CRAG Craig 90.97 35 P P 12 24 17.8 -1.5
baz=274
VORD Divnogorie 91.00 321 *e*P P 12 24 15.9 -3.6
VORD pmax pmax
comp=Z,40nm,1.0s
VORR Voronezh 91.00 322 *e*P P 12 24 15.3 -4.2
VORR pmax pmax
comp=Z,60nm,1.1s
VSR Storozhevoye 91.06 321 *e*P P 12 24 15.2 -4.6
VSR pmax pmax
comp=Z,30nm,1.0s
LPSR Galich'ya Gora 91.11 323 *e*P P 12 24 16.6 -3.4
LPSR pmax pmax
comp=Z,50nm,1.0s
Q32M Nakina River 91.15 31 P P 12 24 19.1 -1.2
baz=275
SOC Sochi 91.17 313 *e*P P 12 24 17.8 -2.7
SOC *e* 12 27 55.4
SOC *e*PPP PPP 12 29 55.8
SOC *e*S SKSac 12 34 49.5 -2.6
SOC *e*SS SS 12 41 19.2 -3.2
SOC MLR MLR
comp=Z,2µm,20.0s
WRAK Wrangell Islan 91.32 34 P P 12 24 19.6 -1.3
baz=275
QSPA South Pole Qui 91.54 180 P P 12 24 24.0 +2.1
comp=Z,106nm,1.1s,baz=329,slow=2.1,SNR=59
QSPA LR LR 13 05 17.0
comp=Z,6µm,20.6s,baz=2.0,slow=35
comp=Z,106nm,1.1s
QSPA South Pole Qui 91.54 180 P P 12 24 25.2 +3.3
LVZ Lovozero 91.60 338 IAMs_20 IAMs_20 13 06 25.8
comp=Z,4µm,20.0s
MOS Moscow 91.62 326 *e*P P 12 24 18.9 -3.4
MOS *e* 12 27 59.2
MOS *e*PPP PPP 12 29 59.3
MOS *e* 12 34 56.8
MOS *e*S S 12 35 20.9 -0.8
MOS *e*PS PS 12 36 29.6 -3.4
MOS *e*SS SS 12 41 23.1 -5.1
MOS pmax pmax
comp=Z,82nm,1.3s
MOS smax smax
comp=N,1µm,5.3s
MOS smax smax
comp=E,1µm,5.3s
MOS MLR MLR
comp=E,3µm,20.0s
MOS MLR MLR
comp=Z,3µm,20.0s
R33M Jennings River 91.77 31 P P 12 24 21.8 -1.3
baz=276
V35K Ketchikan 91.83 35 P P 12 24 22.0 -1.2
baz=276
S34M Telegraph Cree 91.84 32 P P 12 24 22.4 -0.9
baz=276
APA Apatity 92.12 338 || *i*P P 12 24 22.0 -2.4
APA *i* 12 28 06.0
APA *i*S S 12 35 24.5 -1.2
APA *i*PS PS 12 36 33.9 -4.2
APA *i*SS SS 12 41 30.2 -4.6
APA MLR MLR
comp=Z,4µm,22.8s
A36M Sachs Harbour 92.14 18 P P 12 24 23.6 -0.8
baz=282
OBN Obninsk 92.28 325 P P 12 24 23.8 -1.6
comp=Z,26nm,0.4s,baz=0.0,slow=2.0,SNR=14
OBN LR LR 13 08 10.2
comp=Z,2µm,20.5s,baz=26,slow=37
comp=Z,26nm,0.4s
OBN Obninsk 92.28 325 P P 12 24 24.4 -1.0
OBN IAmb IAmb 12 24 25.7
comp=Z,102nm,1.1s
OBN IAMs_20 IAMs_20 13 08 09.4
comp=Z,3µm,20.0s
OBN Obninsk 92.28 325 *d i*P P 12 24 23.6 -1.8
OBN *e* 12 28 06.2
OBN *i*S S 12 35 19.9 -7.7
OBN pmax pmax
comp=Z,54nm,1.1s
OBN MLR MLR
comp=Z,3µm,24.0s
OBN Obninsk 92.28 325 P P 12 24 24.0 -1.4
comp=Z,1µmcomp=Z,50nm,0.9s
DLBC Dease Lake 92.36 31 LR LR 13 02 00.2
comp=Z,1µm,20.5s,baz=270,slow=33
DLBC Dease Lake 92.36 31 P P 12 24 24.9 -0.9
baz=277
T35M Bob Quinn 92.42 33 P P 12 24 24.6 -1.4
baz=277
HOPEN Hopen 92.55 347 *e*P P 12 24 25.3 -0.9
HOPEN IVmB_BB 12 24 28.5
comp=Z,979nm,6.0s
HOPEN IVMs_BB IVMs_BB 13 12 42.4
comp=Z,1µm,17.7s
RKT Rikitea 92.63 113 *e*P P 12 24 27.6 -0.1
comp=Z,4µm,42.8s
RKT Rikitea 92.63 113 *e*S S 12 35 34.2 +2.1
comp=Z,7µm,29.2s
RKT Rikitea 92.63 113 *e*LQ LQ 12 50 16.7
comp=Z,10µm,42.0s
RKT *e*LR LR 12 54 12.7

comp=Z,30µm,37.2s
U35K Hyder 92.67 34 P P 12 24 25.3 -1.8
baz=277
SYO Syowa Base 92.68 201 || *e*P P 12 24 29.4 +2.5
SYO Syowa Base 92.68 201 || *i*PcP PcP 12 24 30.1 +2.5
SYO Syowa Base 92.68 201 || *i*pP pP 12 24 32.0 +0.2
ANN Anapa 92.72 315 *e*P P 12 24 24.6 -3.0
ANN *e* 12 28 08.6
ANN *e*PPP PPP 12 30 07.8
ANN *e*S SKSac 12 34 57.2 -3.5
ANN *e*PS PS 12 36 43.4 -2.2
ANN SS SS 12 41 39.8 -4.8
ANN pmax pmax
comp=Z,39nm,1.0s
WTLY Watson Lake, Y 92.77 30 IAmb IAmb 12 24 32.6
comp=Z,139nm,1.7s
WTLY Watson Lake, Y 92.77 30 P P 12 24 25.7 -1.9
baz=278
KHAM Kharkiv 93.02 320 P P 12 24 28.0 -1.0
VADS Vadso 93.06 341 *e*P P 12 24 27.0 -1.7
VADS *e*PP PP 12 28 14.3 +2.9
VADS IVmB_BB 12 28 17.9
comp=Z,1µm,5.8s
VADS IVMs_BB IVMs_BB 13 03 37.3
comp=Z,1µm,24.7s
C36M Paulatuk 93.09 20 IAmb IAmb 12 24 32.4
comp=Z,105nm,1.5s
C36M Paulatuk 93.09 20 P P 12 24 27.6 -1.2
baz=283
SPITS Spitsbergen Ar 93.69 349 P P 12 24 30.4 -1.2
comp=Z,33nm,1.0s,baz=85,slow=10,SNR=10
SPITS LR LR 13 12 54.5
comp=Z,1µm,18.1s,baz=46,slow=40
comp=Z,33nm,1.0s
KEV Kevo 93.94 340 P P 12 24 32.4 -0.3
KEV IAmb IAmb 12 24 33.1
comp=Z,92nm,1.5s
KEV IAMs_20 IAMs_20 13 09 19.5
comp=Z,4µm,20.0s
KEV Kevo 93.94 340 P P 12 24 32.4 -0.3
KEV pmax pmax
comp=Z,92nm,1.5s
KEV MLR MLR
comp=Z,4µm,20.0s
KBS Kingsbay 94.11 350 IAMs_20 IAMs_20 13 08 11.1
comp=Z,3µm,20.0s
KBS Kingsbay 94.11 350 *e*P P 12 24 34.7 +1.3
KBS IVmB_BB 12 24 36.1
comp=Z,528nm,6.5s
KBS *e* 12 27 25.1
KBS IVMs_BB IVMs_BB 13 08 09.8
comp=Z,1µm,18.4s
PLTM Poltava 94.16 320 P P 12 24 32.3 -1.9
ASF Jabal al Asfar 94.19 302 P P 12 24 34.1 -0.8
comp=Z,4.2nm,0.9s,baz=102,slow=0.8,SNR=9.0
ASF LR LR 13 13 30.9
comp=Z,854nm,19.6s,baz=72,slow=40
comp=Z,4.2nm,0.9s
LIRD Liard River Hi 94.23 30 P P 12 24 33.4 -0.9
baz=280
BBB Bella Bella 94.27 38 LR LR 13 01 15.5
comp=Z,745nm,19.3s,baz=274,slow=32
HSPB Hornsund (broa 94.38 348 *e*P P 12 24 34.2 -0.4
ARA0 ARCESS Array S 94.50 340 *e*P P 12 24 36.0 +0.7
ARA0 *e*PP PP 12 28 23.5 +0.7
ARA0 IVmB_BB 12 28 29.5
comp=Z,1µm,5.9s
ARA0 *e* 12 35 11.2
ARA0 *e*SS SS 12 42 10.6 +1.8
ARA0 IVMs_BB IVMs_BB 13 09 33.6
comp=Z,2µm,19.0s
ARCES ARCESS Array B 94.50 340 P P 12 24 34.8 -0.6
comp=Z,30nm,1.0s,baz=80,slow=5.7,SNR=32
ARCES PKiKP PKiKP 12 29 19.0 +0.7
comp=Z,3.6nm,0.8s,baz=60,slow=2.2,SNR=5.5
ARCES LR LR 13 09 36.3
comp=Z,3µm,21.5s,baz=76,slow=37
comp=Z,30nm,1.0s
ARCES ARCESS Array B 94.50 340 P P 12 24 34.6 -0.8
ARCES IAmb IAmb 12 24 35.9
comp=Z,114nm,1.4s
BJO1 Bjornoya 94.68 346 *e*P P 12 24 33.8 -2.3
BJO1 IVmB_BB 12 24 37.5
comp=Z,683nm,4.8s
BJO1 *e*PP PP 12 28 25.6 +1.6
BJO1 *e* 12 35 15.0
BJO1 IVMs_BB IVMs_BB 13 10 54.9
comp=Z,1µm,17.5s
WRGLY Wrigley 94.71 26 P P 12 24 35.1 -1.3
baz=283
HAMF Hammerfest 94.76 342 IVmB_BB 12 24 37.9
comp=Z,1µm,5.5s
HAMF *e*PP PP 12 28 24.3 -0.4
HAMF *e* 12 35 11.2
HAMF *e*SS SS 12 42 13.9 +1.6
HAMF IVMs_BB IVMs_BB 13 08 33.1
comp=Z,2µm,22.5s
TOAD Toad River Com 94.78 31 P P 12 24 35.8 -1.1
baz=281
KIBK Kibwezi 94.86 268 P P 12 24 37.5 -0.8
KIBK Kibwezi 94.86 268 P P 12 24 38.6 +0.2
SNR=10.0
SIM Simferopol' 95.05 315 *e*P P 12 24 37.7 -0.7
SIM *e* 12 28 32.0
SIM *e*PPP PPP 12 30 27.0
SIM pmax pmax
comp=Z,38nm,0.9s
SIM MLR MLR
comp=Z,2µm,20.0s
KOTAN Kotaneelee Air 95.11 29 P P 12 24 37.5 -0.8
baz=282
MMAI Mount Meron Ar 95.37 303 P P 12 24 39.5 -0.8
comp=Z,0.3nm,0.3s,baz=73,slow=5.0,SNR=4.6
MMAI LR LR 13 14 53.1
comp=Z,820nm,19.5s,baz=67,slow=40
KTK1 Kautokeino 95.43 340 *e*P P 12 24 36.1 -3.5
KTK1 *e* 12 28 23.4
KTK1 IVmB_BB 12 28 33.0
comp=Z,1µm,7.6s
KTK1 *e*SS SS 12 42 27.3 +5.3
KTK1 IVMs_BB IVMs_BB 13 10 54.5
comp=Z,1µm,18.7s
KMBO Kilima Mbogo 95.63 269 P P 12 24 41.6 -0.4
comp=Z,15nm,0.9s,baz=73,slow=6.2,SNR=27
KMBO LR LR 13 06 18.1
comp=Z,985nm,20.1s,baz=100,slow=35
comp=Z,15nm,0.9s
KMBO Kilima Mbogo 95.63 269 *i* P P 12 24 42.5 +0.5
KMBO pmax pmax
comp=Z,15nm,0.9s
NOR Nord 95.67 356 *i* P P 12 24 38.5 -2.0
NOR IAmb IAmb 12 24 41.1
comp=Z,11nm,1.0s
BR131 Keskin Array S 96.06 310 *i* P P 12 24 43.0 -0.3
BRTR Keskin Array B 96.06 310 P P 12 24 42.6 -0.7
comp=Z,4.1nm,0.9s,baz=106,slow=3.1,SNR=14
BRTR LR LR 13 15 12.4
comp=Z,386nm,18.0s,baz=82,slow=40
comp=Z,4.1nm,0.9s
BRTR Keskin Array B 96.06 310 P P 12 24 42.1 -1.2
BRTR Keskin Array B 96.06 310 *ce*P P 12 24 43.5 +0.2
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BR104 Keskin Array S 96.06 310 P P 12 24 42.7 -0.6
comp=Z,6.6nm,1.0s
EIL Elat 96.07 300 P P 12 24 42.9 -0.5
comp=Z,7.7nm,0.8s,baz=88,slow=5.5,SNR=4.9
EIL LR LR 13 12 59.7
comp=Z,1µm,20.7s,baz=88,slow=39
comp=Z,7.7nm,0.8s
BR106 Keskin Array S 96.07 310 P P 12 24 43.0 -0.4
comp=Z,5.1nm,0.9s
BR105 Keskin Array S 96.07 310 P P 12 24 42.8 -0.6
comp=Z,7.0nm,1.0s
JETT Jettan, Norway 96.19 341 *e*P P 12 24 40.1 -2.9
JETT *e*PP PP 12 28 36.0 +0.2
JETT IVmB_BB 12 28 41.2
comp=Z,1µm,8.1s
JETT *e*SS SS 12 42 33.6 +0.9
JETT IVMs_BB IVMs_BB 13 12 34.5
comp=Z,2µm,20.5s
FINES FINESS Array B 96.54 332 P P 12 24 43.8 -1.0
comp=Z,14nm,1.0s,baz=73,slow=6.4,SNR=16
FINES PKiKP PKiKP 12 29 22.7 +0.7
comp=Z,4.6nm,1.0s,baz=67,slow=6.1,SNR=3.4
FINES LR LR 13 10 48.2

comp=Z,4µm,20.0s,baz=70,slow=37
comp=Z,14nm,1.0s
TRO Tromso 96.64 341 *e*P **P 12 24 41.4 -3.6**
TRO *e*PP **PP 12 28 39.5 +0.3**
TRO IVmB_BB 12 28 45.2
comp=Z,1µm,7.8s
TRO *e* 12 35 20.4
TRO *e*SS SS 12 42 40.8 +1.9
TRO IVMs_BB IVMs_BB 13 08 51.8
comp=Z,1µm,20.2s
ANTO Ankara 96.68 310 P **P 12 24 43.9 -2.1**
ANTO Ankara 96.68 310 P **P 12 24 45.1 -1.0**
comp=Z,5.2nm,1.2s
VSU Vasula 97.00 329 *ce*P **P 12 24 44.6 -2.3**
VSU pmax pmax
comp=Z,60nm,1.3s
AK09 Malin Array Si 97.34 321 P **P 12 24 47.3 -1.3**
MNK Minsk 97.34 325 *i* P **P 12 24 46.4 -2.1**
MNK *i* 12 28 43.1
MNK *i* PPP PPP 12 30 47.3
MNK *i* S **SKSac 12 35 23.6 -1.4**
MNK *i* PS **PS 12 37 34.6 -1.3**
MNK *i* SS **SS 12 42 50.5 +0.8**
MNK *i* SSS SSS 12 46 36.3
MNK pmax pmax
comp=E,14nm,0.7s
MNK pmax pmax
comp=Z,18nm,0.8s
MNK pmax pmax
comp=N,30nm,0.8s
MNK MLR MLR
comp=E,1µm,20.0s
MNK MLR MLR
comp=N,2µm,20.0s
MNK MLR MLR
comp=Z,2µm,18.0s
AK08 Malin Array Si 97.35 321 P **P 12 24 47.3 -1.4**
AK03 Malin Array Si 97.35 321 P **P 12 24 47.1 -1.6**
AKASG Malin Array Be 97.36 321 P **P 12 24 46.7 -2.0**
comp=Z,12nm,1.0s,baz=65,slow=4.2,SNR=24
AKASG LR LR 13 12 31.8
comp=Z,2µm,20.2s,baz=75,slow=38
comp=Z,12nm,1.0s
AKASG Malin Array Be 97.36 321 *ce*P **P 12 24 46.7 -2.0**
AKASG pmax pmax
comp=Z,11nm,1.0s
AKBB Malin Array Si 97.36 321 *ce*P **P 12 24 47.8 -0.9**
AKBB pmax pmax
comp=Z,19nm,1.0s
AKBB Malin Array Si 97.36 321 P **P 12 24 47.3 -1.4**
AK10 Malin Array Si 97.36 321 P **P 12 24 47.2 -1.5**
AK01 Malin Array Si 97.37 321 P **P 12 24 47.1 -1.6**
KIEV Kiev 97.37 321 P **P 12 24 47.4 -1.4**
KIEV Kiev 97.37 321 ⇓P **P 12 24 48.0 -0.7**
KIEV Kiev 97.37 321 *i* P **P 12 24 46.7 -2.1**
SNR=10
KIEV Kiev 97.37 321 P **P 12 24 47.4 -1.4**
KIEV pmax pmax
comp=Z,17nm,1.1s
KIEV MLR MLR
comp=Z,4µm,22.0s
KIEV Kiev 97.37 321 P **P 12 24 47.3 -1.4**
comp=Z,3µmcomp=Z,62nm,1.1s
AK02 Malin Array Si 97.38 321 P **P 12 24 47.4 -1.4**
LODK Lodwar 97.38 274 P Pdif 12 24 49.8 -0.1
AK05 Malin Array Si 97.39 321 P **P 12 24 47.4 -1.4**
AK04 Malin Array Si 97.39 321 P **P 12 24 47.3 -1.6**
AK06 Malin Array Si 97.40 321 P **P 12 24 47.5 -1.4**
AK20 Malin Array Si 97.48 322 P **P 12 24 48.1 -1.2**
KIS Kishinev 98.36 318 *e*P **P 12 24 50.0 -3.3**
comp=Z,190nm,5.9s
KIS Kishinev 98.36 318 *e*PP **PP 12 28 57.0 +3.8**
MILM Milestii Mici 98.38 318 ⇓*e*P **P 12 24 50.0 -3.4**
comp=Z,440nm,8.4s
MILM Milestii Mici 98.38 318 *e*PP **PP 12 28 58.0 +4.7**
GNW Green Mountain 98.44 42 IAmb IAmb 12 24 59.0
comp=Z,65nm,1.8s
LUBAR Lubar, Ukraine 98.44 321 P **P 12 24 51.9 -1.7**
STEI Steigen 98.57 340 *e*Pdif **P 12 24 52.0 -1.7**
STEI *e*PP **PP 12 28 55.1 +1.0**
STEI IVmB_BB 12 28 59.6
comp=Z,979nm,5.8s
STEI *e*SS SS 12 43 08.6 +2.5
STEI IVMs_BB IVMs_BB 13 13 39.9
comp=Z,2µm,20.1s
RES Resolute Bay 98.71 11 LR LR 13 12 31.7
comp=Z,351nm,19.0s,baz=337,slow=37
RES Resolute Bay 98.71 11 IAmb IAmb 12 25 01.6
comp=Z,28nm,1.1s
FAUS Fauske 98.80 340 IVmB_BB 12 24 53.2
comp=Z,789nm,5.6s
FAUS *e*Pdif Pdif 12 24 54.8 0.0
FAUS *e*SS SS 12 43 13.5 +4.1
FAUS IVMs_BB IVMs_BB 13 14 54.7
comp=Z,2µm,17.9s
YKA Yellowknife Ar 98.80 26 P **P 12 24 53.4 -1.6**
comp=Z,4.5nm,0.8s,baz=297,slow=5.3,SNR=8.8
YKA PKKPbc **PKKPbc 12 41 21.5 -3.5**
comp=Z,4.0nm,1.1s,baz=96,slow=2.5,SNR=5.2
YKA LR LR 13 07 00.0
comp=Z,929nm,21.2s,baz=282,slow=34
comp=Z,4.5nm,0.8s
YKA Yellowknife Ar 98.80 26 P **P 12 24 54.9 -0.1**
YKA Yellowknife Ar 98.80 26 *ce*P **P 12 24 54.4 -0.5**
YKA pmax pmax
comp=Z,5.0nm,0.8s
LOF Lofoten 99.05 341 *e*Pdif **Pdif 12 24 55.2 -0.7**
LOF *e*PP **PP 12 28 59.6 +1.9**
LOF IVmB_BB 12 29 04.2
comp=Z,786nm,5.7s
LOF *e*SS SS 12 43 19.0 +6.1
LOF IVMs_BB IVMs_BB 13 14 31.3
comp=Z,1µm,17.2s
TIRR Tirgusor 99.14 315 IAMs_20 IAMs_20 13 11 49.4
comp=Z,3µm,21.0s
RNPP9 Sopachiv 99.25 323 P **Pdif 12 24 56.1 -1.1**
RNPP8 Varash 99.29 323 P **Pdif 12 24 56.5 -0.9**
RNPP5 Staryi Chortor 99.30 322 P **Pdif 12 24 56.5 -0.9**
RNPP1 Kostyukhnivka 99.34 323 P **Pdif 12 24 56.4 -1.2**
KHBM Hayfork Bally 99.49 48 IAMs_20 IAMs_20 13 02 33.9
comp=Z,3µm,20.0s
MOR8 Moi Rana 99.64 339 *e*Pdif **Pdif 12 24 58.2 -0.4**
MOR8 *e*PP **PP 12 29 01.2 -1.1**
MOR8 IVmB_BB 12 29 07.2
comp=Z,798nm,6.5s
MOR8 *e*SS SS 12 43 20.2 -1.1
MOR8 IVMs_BB IVMs_BB 13 13 36.5
comp=Z,1µm,20.4s
RAUS Rausandaksla 99.67 339 *e*Pdif **Pdif 12 24 58.4 -0.4**
RAUS *e*PP **PP 12 29 03.0 +0.5**
RAUS IVmB_BB 12 29 09.4
comp=Z,720nm,4.0s
RAUS *e*SS SS 12 43 23.3 +1.7
YBH Yreka Blue Hor 99.67 47 LR LR 12 59 46.1
comp=Z,93nm,21.2s,baz=276,slow=29
VAGH Vaagaholmen 99.80 339 *e*Pdif **Pdif 12 24 59.6 +0.4**
VAGH *e*PP **PP 12 29 03.8 +0.3**
VAGH IVmB_BB 12 29 09.3
comp=Z,864nm,5.7s
VAGH IVMs_BB IVMs_BB 13 15 35.4
comp=Z,2µm,20.2s
N02D Trinity Center 99.81 48 IAMs_20 IAMs_20 13 02 57.5
comp=Z,3µm,20.0s
TESR Tescani 99.92 318 P **Pdif 12 24 59.0 -1.3**
comp=Z,815nmcomp=Z,11nm,1.0s
VRI Vrincioaia 100.01 317 ⇓P **Pdif 12 25 01.3 +0.5**
VRI Vrincioaia 100.01 317 P **Pdif 12 25 01.2 +0.5**
DAG Danmarks Havn 100.08 354 *i* P **Pdif 12 24 59.0 -1.4**
DAG IAmb IAmb 12 25 00.4
comp=Z,20nm,1.3s
STOK Stokkvaagen 100.08 339 *e*Pdif **Pdif 12 24 59.1 -1.4**
STOK *e*PP **PP 12 29 04.3 -1.3**
STOK *e*SS SS 12 43 31.7 +4.4
STOK IVMs_BB IVMs_BB 13 15 55.2
comp=Z,1µm,19.8s
SUW Suwalki 100.13 326 *e*P **Pdif 12 24 59.5 -1.5**
LEIR Leirfjorden 100.15 339 *e*Pdif **Pdif 12 25 00.7 -0.2**
LEIR *e*PP **PP 12 29 05.8 -0.3**
LEIR *e*SS SS 12 43 30.6 +2.3
NEHR Nehoiu 100.41 317 ⇑P **Pdif 12 25 02.4 -0.2**
CVS Carmenet Viney 100.48 51 IAMs_20 IAMs_20 13 08 02.6
comp=Z,3µm,20.0s
BURAR Bucovina Array 100.61 319 ⇑P **Pdif 12 25 03.8 +0.2**
BURAR Bucovina Array 100.61 319 P **Pdif 12 25 03.7 +0.2**
MLR Muntele Rosu 100.63 317 IAMs_20 IAMs_20 13 18 40.8
comp=Z,3µm,21.0s
MLR Muntele Rosu 100.63 317 ⇓P **Pdif 12 25 03.8 +0.1**
MLR Muntele Rosu 100.63 317 P **Pdif 12 25 03.7 +0.1**
JRSC Jasper Ridge 100.83 52 IAMs_20 IAMs_20 13 10 21.7
comp=Z,3µm,20.0s
TULEG Thule 100.97 5 *i* P **Pdif 12 25 04.4 0.0**
TULEG IAmb IAmb 12 25 07.2
comp=Z,14nm,1.0s
NEEM North Greenlan 101.00 1 *i* P **Pdif 12 25 04.4 -0.5**
NEEM IAmb IAmb 12 25 08.6
comp=Z,9.7nm,0.8s
NSS Namsos 101.33 338 *e*Pdif **Pdif 12 25 07.1 +1.0**
NSS *e*PP **PP 12 29 13.0 -2.2**
NVL N'lazarevskaya 101.38 197 *e*P **Pdif 12 25 09.2 +3.0**
NVL *e* 12 29 20.0
NVL *e*PPP PPP 12 31 29.4
NVL *e*S **SKSac 12 35 48.8 +4.4**
NVL *e*SS **SS 12 43 51.8 +6.5**
NVL *e*SSS SSS 12 47 43.7
NVL pmax pmax
comp=Z,8.0nm,0.7s
NVL smax smax
comp=N,437nm,11.1s
NVL MLR MLR
comp=Z,169nm,17.5s
ARR Arges 101.56 317 ⇓P **Pdif 12 25 07.5 -0.2**
KWP Kalwaria Pacla 101.68 321 *e*P **Pdif 12 25 08.5 +0.4**
KWP Kalwaria Pacla 101.68 321 P **Pdif 12 25 07.3 -0.8**
MBAR Mbarara 102.12 270 P **Pdif 12 25 10.5 -0.6**
UZHM Uzhgorod 102.23 321 P **Pdif 12 25 09.8 -0.7**
MARR Marisel-Cluj 102.24 318 ⇑P **Pdif 12 25 11.5 +0.7**
DBG Daneborg 102.44 353 *i* P **Pdif 12 25 11.4 +0.4**
DBG IAmb IAmb 12 25 15.2
comp=Z,15nm,1.5s
WVOR Wild Horse Val 102.48 46 IAMs_20 IAMs_20 13 09 56.9
comp=Z,2µm,18.0s
STHS Stebnicka Huta 102.66 322 *e*P **Pdif 12 25 12.3 -0.2**
STHS Stebnicka Huta 102.66 322 *e*PDIFF **Pdif 12 25 12.3 -0.2**
HFS Hagfors 102.67 333 P **Pdif 12 25 11.3 -1.0**
comp=Z,13nm,1.0s,baz=64,slow=3.4,SNR=9.3
TROLL Troll, Antarti 103.16 194 ⇓P **Pdif 12 25 15.6 +1.2**
comp=Z,255nm,1.1s
NIE Niedzica 103.24 322 *e*P **Pdif 12 25 15.4 +0.3**
OJC Ojcow 103.29 323 *e*P **Pdif 12 25 14.7 -0.5**
NB2 NORSAR Subarra 103.33 335 P **Pdif 12 25 13.1 -2.1**
comp=Z,40nm,2.0s,baz=63,slow=4.4
NOA NORSAR Array B 103.33 335 Pdiff **Pdif 12 25 13.4 -1.8**
comp=Z,4.1nm,0.9s,baz=61,slow=4.6,SNR=9.6
VES Vestal, Richgr 103.62 53 IAMs_20 IAMs_20 13 06 35.5
comp=Z,2µm,20.0s
PLID Pearl Lake 103.63 43 IAMs_20 IAMs_20 13 09 26.7
comp=Z,3µm,21.0s
IDI Anoyia 103.65 307 PKP **PP 12 29 31.2 -2.5**
NVAR Mina Array Bea 103.66 50 Pdiff **Pdif 12 25 18.9 +1.4**
comp=Z,2.0nm,0.9s,baz=263,slow=7.0,SNR=8.6
NVAR PKKPbc **PKKPbc 12 41 09.8 -0.8**
comp=Z,0.3nm,0.7s,baz=101,slow=4.6,SNR=3.7
MDVR Moldovita 103.71 317 ⇓P **Pdif 12 25 16.7 -0.6**
PSZ Piszkesteto 103.97 320 IAMs_20 IAMs_20 13 15 41.0
comp=Z,2µm,21.0s
TIN Tinemaha, Big 104.03 51 IAMs_20 IAMs_20 13 10 11.2
comp=Z,3µm,20.0s
ISA Isabella, Lake 104.14 53 IAMs_20 IAMs_20 13 09 00.4
comp=Z,3µm,20.0s
OKC Ostrava-Krasne 104.42 323 *e*P **Pdif 12 25 18.8 -1.5**
OKC MLR MLR
comp=Z,2µm,19.2s
OKC Ostrava-Krasne 104.42 323 *e*PDIFF **Pdif 12 25 18.8 -1.5**
OKC AMS AMS 13 17 00.0
comp=Z,2µm,19.2s
SNAA Sanae 104.66 193 Pdiff **Pdif 12 25 22.1 +1.2**
comp=Z,1.7nm,0.2s,baz=8.4,slow=23,SNR=4.1
SNAA Sanae 104.66 193 IAMs_20 IAMs_20 13 18 17.3
comp=Z,3µm,21.0s
PASC Pasadena Art C 104.69 54 IAMs_20 IAMs_20 13 10 18.1
comp=Z,3µm,20.0s
MORC Moravsky Berou 104.81 323 *e*PDIFF **Pdif 12 25 21.8 -0.3**
JAVC Velka Javorina 105.06 322 *e*PDIFF **Pdif 12 25 24.4 +1.2**
BFSC Mount Baldy Ra 105.10 54 IAMs_20 IAMs_20 13 11 35.0
comp=Z,3µm,18.0s
KRLC Kraliky 105.16 323 *e*PP **PP 12 29 45.9 +1.6**
KRLC AMS AMS 13 13 10.0
comp=Z,3µm,26.1s
KSP Ksiaz 105.17 324 *e*P **Pdif 12 25 22.4 -1.2**
OSTC Ostas 105.32 324 *e*P **Pdif 12 25 24.7 +0.4**
OSTC *e* 12 29 47.6
OSTC MLR MLR
comp=Z,4µm,20.0s
OSTC Ostas 105.32 324 *e*PDIFF **Pdif 12 25 24.7 +0.4**
OSTC *e*PP **PP 12 29 47.6 +2.2**
OSTC AMS AMS 13 15 20.0
comp=Z,4µm,20.0s
DPC Dobruska-Polom 105.33 324 *e*P **Pdif 12 25 23.0 -1.4**
DPC *e* 12 29 48.0
DPC *e*SP SP 12 38 56.9 -1.5
DPC MLR MLR
comp=Z,3µm,21.2s
DPC Dobruska-Polom 105.33 324 *e*PDIFF **Pdif 12 25 23.0 -1.4**
DPC *e*PP **PP 12 29 48.0 +2.5**
DPC *e*SP SP 12 38 56.9 -1.5
DPC AMS AMS 13 16 20.0
comp=Z,3µm,21.2s
CHVC Chvalec 105.40 324 AMS AMS 13 15 30.0
comp=Z,4µm,19.5s
UPC Upice 105.46 324 *e*P **Pdif 12 25 23.8 -1.1**
UPC *e* 12 29 48.2
UPC MLR MLR
comp=Z,4µm,19.5s
UPC Upice 105.46 324 *e*PDIFF **Pdif 12 25 23.8 -1.1**
UPC *e*PP **PP 12 29 48.2 +1.8**
UPC AMS AMS 13 15 30.0
comp=Z,4µm,19.5s
MODS Modra-Piesok 105.47 321 *e*P **Pdif 12 25 25.3 +0.3**
MODS Modra-Piesok 105.47 321 *e*PDIFF **Pdif 12 25 25.3 +0.3**
VRAC Vranov 105.56 322 Pdiff **Pdif 12 25 25.2 -0.2**
comp=Z,1.2nm,0.3s,baz=204,slow=19,SNR=4.6
VRAC Vranov 105.56 322 *e*PDIFF **Pdif 12 25 25.7 +0.4**
TPNV Topopah Spring 105.59 51 IAMs_20 IAMs_20 13 11 03.7
comp=Z,3µm,20.0s
SUMG Summit 105.72 357 P **Pdif 12 25 25.7 -0.3**
KRUC Moravsky 105.77 322 *e*PDIFF **Pdif 12 25 26.1 -0.2**
CPE Camp Elliot 105.85 55 IAMs_20 IAMs_20 13 07 13.8
comp=Z,3µm,20.0s
PFO Pinyon Flats O 106.21 54 IAMs_20 IAMs_20 13 05 13.5
comp=Z,3µm,21.0s
BAR Barrett 106.25 55 IAMs_20 IAMs_20 13 06 59.4
comp=Z,3µm,20.0s
PVCC Panska Ves 106.30 324 AMS AMS 13 15 50.0
comp=Z,2µm,22.1s
RONA Rosalia, Austr 106.33 321 *i* PKiKP **PKiKP 12 29 41.2 +1.0**
comp=Z,5.5nm,1.0s
RONA *e*PP **PP 12 29 52.6 -0.3**
comp=Z,20nm,1.5s
CONA Conrad Observa 106.52 321 *i* PKiKP **PKiKP 12 29 40.0 -0.6**
comp=Z,9.2nm,1.5s
CONA *i* PP **PP 12 29 54.0 -0.4**
comp=Z,21nm,1.5s
PRU Pruhonice 106.53 324 *e*P **Pdif 12 25 30.4 +0.8**
PRU *e* 12 29 55.8
PRU *e* 12 36 08.4
PRU *e*SP SP 12 39 09.4 -1.3
PRU MLR MLR
comp=Z,4µm,20.1s
PRU Pruhonice 106.53 324 *e*PDIFF **Pdif 12 25 30.4 +0.8**
PRU *e*PP **PP 12 29 55.8 +1.5**
PRU *e*SKS **SKSac 12 36 08.4 -0.7**
PRU *e*SP **SP 12 39 09.4 -1.3**
PRU AMS AMS 13 17 00.0
comp=Z,4µm,20.1s
PRA Prague 106.56 324 *e*PP **PP 12 29 58.3 +3.8**
PRA AMS AMS 13 16 50.0
comp=Z,4µm,19.7s
DANC Danby, Needles 106.84 53 IAMs_20 IAMs_20 13 12 26.9
comp=Z,3µm,19.0s
CLL Collm 106.88 325 *e*P **Pdif 12 25 31.0 -0.2**
CLL pmax pmax
comp=Z,15nm,1.3s
CLL pmax pmax
comp=Z,17nm,1.3s
CLL MLR MLR
comp=Z,4µm,19.4s
HSKC Hora Svate Kat 106.93 325 *e*PP **PP 12 29 58.9 +1.6**
HSKC *e*SP SP 12 39 16.1 +1.3
HSKC AMS AMS 13 16 00.0
comp=Z,3µm,17.7s
ARSA Arzberg 106.98 321 *i* PKiKP **PKiKP 12 29 42.3 +0.9**
comp=Z,6.3nm,1.1s
ARSA *e*PP **PP 12 29 58.1 +0.4**
comp=Z,4.4nm,0.9s
BC3 Big Chuckawall 107.02 54 IAMs_20 IAMs_20 13 17 02.7
comp=Z,3µm,18.0s
CKRC Cesky Krumlov 107.13 323 AMS AMS 13 14 10.0
comp=Z,4µm,24.2s
NEE2 Needles Airpor 107.42 53 IAMs_20 IAMs_20 13 12 36.2
comp=Z,2µm,20.0s
KHC Kasperske Hory 107.45 323 *e*P **Pdif 12 25 32.8 -1.0**
KHC *e* 12 30 01.0
KHC *e* 12 36 13.9
KHC *e*SP SP 12 39 20.0 -0.2
KHC MLR MLR
comp=Z,4µm,17.8s
KHC Kasperske Hory 107.45 323 *e*PDIFF **Pdif 12 25 32.8 -1.0**
KHC *e*PP **PP 12 30 01.0 -0.1**
KHC *e*SKS **SKSac 12 36 13.9 +0.7**
KHC *e*SP **SP 12 39 20.0 -0.2**
KHC AMS AMS 13 16 50.0
comp=Z,4µm,17.8s
GERES GERESS Array B 107.49 323 Pdiff **Pdif 12 25 34.8 +0.7**
comp=Z,2.1nm,1.0s,baz=61,slow=6.3,SNR=9.7
GERES PKiKP **PKiKP 12 29 42.0 -0.4**
comp=Z,0.9nm,0.6s,baz=78,slow=1.4,SNR=5.0
SOKA Soboth 107.50 320 *e*PKiKP **PKiKP 12 29 43.5 +1.1**
comp=Z,8.7nm,1.1s
SOKA *e*PP **PP 12 30 01.1 -0.6**
comp=Z,18nm,1.5s
MOA Molln 107.54 322 *e*PKiKP **PKiKP 12 29 43.1 +0.7**
comp=Z,6.7nm,1.2s
MOA *e*PP **PP 12 30 01.6 -0.2**
comp=Z,19nm,1.7s
GLA Glamis 107.67 55 IAMs_20 IAMs_20 13 08 51.1
comp=Z,3µm,19.0s
OBKA Obir 107.88 320 *e*PKiKP **PKiKP 12 29 42.9 -0.3**
comp=Z,8.2nm,1.4s
OBKA *e*PP **PP 12 30 04.1 -0.3**
comp=Z,18nm,1.7s
BIOA Bad Ischl, Aus 107.99 322 *i* PKiKP **PKiKP 12 29 44.1 +0.8**
comp=Z,12nm,1.4s
BIOA *e*PP **PP 12 30 05.0 -0.1**
comp=Z,20nm,1.5s
KBA Koelnbreinsper 108.42 321 *e*PKiKP **PKiKP 12 29 44.9 +0.6**
comp=Z,8.1nm,0.9s
LESA Schwarzleotal 108.69 322 *e*PP **PP 12 30 11.3 +1.0**
comp=Z,35nm,1.3s
PDAR Pinedale Array 108.78 44 PKiKP **PKiKP 12 29 45.3 +0.1**
comp=Z,2.0nm,1.1s,baz=300,slow=4.8,SNR=6.3
PDAR PKKPbc **PKKPbc 12 40 53.8 -1.2**
comp=Z,1.4nm,1.0s,baz=103,slow=4.7,SNR=5.6
PDAR PKKPab **PKKPab 12 41 05.8 -1.3**
comp=Z,8.4nm,1.2s,baz=107,slow=5.0,SNR=9.1
ABTA Abfaltersbach 109.07 321 *e*PKiKP **PKiKP 12 29 45.9 +0.5**
comp=Z,15nm,1.0s
WTTA Wattenberg 109.40 322 *e*PKiKP **PKiKP 12 29 46.4 +0.3**
comp=Z,20nm,1.2s
WTTA *e*PP **PP 12 30 14.9 -0.7**
comp=Z,39nm,1.3s
WATA Walderalm 109.41 322 *e*PKiKP **PKiKP 12 29 46.1 0.0**
comp=Z,13nm,1.1s
WATA *e*PP **PP 12 30 14.9 -0.7**
comp=Z,29nm,1.4s
SQTA Sankt Quirin 109.69 322 *e*PKiKP **PKiKP 12 29 47.8 +1.2**
comp=Z,8.6nm,1.0s
SQTA *i* PP **PP 12 30 17.8 +0.3**
comp=Z,26nm,1.3s
MOTA Moosalm 109.70 322 *i* PKiKP **PKiKP 12 29 47.8 +1.1**
comp=Z,12nm,1.3s
MOTA *i* PP **PP 12 30 18.0 +0.3**
comp=Z,23nm,1.2s
RETA Reutte 109.84 322 *e*PP **PP 12 30 19.0 +0.4**
comp=Z,25nm,1.3s
FETA Feichten 110.07 322 *i* PKiKP **PKiKP 12 29 47.6 +0.2**
comp=Z,11nm,1.0s
FETA *i* PP **PP 12 30 19.1 -1.3**
comp=Z,23nm,1.4s
STU Stuttgart 110.21 324 IAMs_20 IAMs_20 13 19 35.6
comp=Z,2µm,18.0s
DAVA Damuels 110.47 322 *e*PKiKP **PKiKP 12 29 48.1 0.0**
comp=Z,17nm,1.1s
FUORN Ofenpass-Fuorn 110.53 322 IAMs_20 IAMs_20 13 21 01.4
comp=Z,2µm,20.0s
O20A White River Ci 110.63 46 IAMs_20 IAMs_20 13 22 51.5
comp=Z,2µm,18.0s
BTNL Ternell 111.06 327 *d*PKP **PKiKP 12 29 51.5 +2.6**
MEM Membach 111.11 327 *d*PKP **PKiKP 12 29 50.6 +1.6**
TUC Tucson 111.16 54 IAMs_20 IAMs_20 13 07 20.3
comp=Z,2µm,22.0s
WLF Walferdange 111.52 326 IAMs_20 IAMs_20 13 19 22.1
comp=Z,2µm,20.0s
BCLA Clavier 111.60 327 *d*PKPdf **PKiKP 12 29 51.1 +1.2**
ECH Echery 111.66 324 IAMs_20 IAMs_20 13 20 00.1
comp=Z,3µm,20.0s
BMRD Maredsous 111.95 327 *d*PKP **PKiKP 12 29 52.1 +1.5**
DOU Dourbes 112.15 327 *d*PKP **PKiKP 12 29 52.8 +1.8**
SDCO Great Sand Dun 113.49 47 IAMs_20 IAMs_20 13 16 25.3
comp=Z,2µm,19.0s
SSB Saint Sauveur 114.68 322 IAMs_20 IAMs_20 13 22 52.2
comp=Z,2µm,18.0s
EPT El Paso 114.78 54 IAMs_20 IAMs_20 13 09 36.3
comp=Z,2µm,21.0s
DSB Dublin 115.62 334 IAMs_20 IAMs_20 13 22 46.1
comp=Z,2µm,20.0s
KEST Kesra 115.63 311 PKP **PKPdf 12 29 59.0 +0.8**
comp=Z,17nm,1.0s,baz=343,slow=2.2,SNR=7.8
MNTX Cornudas Mount 115.71 54 IAMs_20 IAMs_20 13 12 55.9
comp=Z,2µm,20.0s
PMSA Palmer Station 115.80 172 IAMs_20 IAMs_20 13 21 21.1
comp=Z,2µm,18.0s
ECSD EROS Data Cent 116.84 38 **PKiKP 12 30 00.4 +0.2**
ECSD EROS Data Cent 116.84 38 IAMs_20 IAMs_20 13 21 56.8
comp=Z,2µm,20.0s
MSTX Muleshoe 116.96 50 IAMs_20 IAMs_20 13 20 29.6
comp=Z,2µm,19.0s
CBKS Cedar Bluff 117.19 44 IAMs_20 IAMs_20 13 18 56.7
comp=Z,2µm,19.0s
IVI Ivigtut 117.34 1 IAMs_20 IAMs_20 13 22 31.8
comp=Z,2µm,21.0s
EYMN Ely 117.37 32 IAMs_20 IAMs_20 13 24 07.1
comp=Z,2µm,19.0s
TXAR Lajitas Array 117.89 55 PKP **PKiKP 12 30 03.9 +1.1**
comp=Z,2.6nm,0.8s,baz=233,slow=1.3,SNR=21
TXAR PKKPab **PKKPab 12 40 25.5 -1.1**
comp=Z,2.3nm,0.8s,baz=116,slow=6.4,SNR=14
TXAR Lajitas Array 117.89 55 **PKPdf 12 30 02.7 -0.1**
TXAR Lajitas Array 117.89 55 PKIKP **PKPdf 12 30 02.7 -0.1**
KUQ Kuujjuuaa 118.08 13 **PKiKP 12 30 02.5 +0.4**
R32A Long Quarter, 118.08 44 IAMs_20 IAMs_20 13 24 55.3
comp=Z,2µm,18.0s
I37A Lemond, Waseca 118.64 36 IAMs_20 IAMs_20 13 21 48.1
comp=Z,2µm,20.0s
WMOK Wichita Mounta 119.67 48 IAMs_20 IAMs_20 13 20 29.0
comp=Z,2µm,20.0s
G40A Rib Lake 119.73 34 IAMs_20 IAMs_20 13 18 10.7
comp=Z,2µm,21.0s
ABTX Abilene, Hawle 119.90 51 IAMs_20 IAMs_20 13 15 39.3
comp=Z,2µm,19.0s
WTFS Witchita Falls 120.33 49 **PKiKP 12 30 07.8 +0.5**
T35A Sooner Cattle 120.33 45 IAMs_20 IAMs_20 13 20 08.9
comp=Z,2µm,20.0s
I40A Norwalk 120.33 35 IAMs_20 IAMs_20 13 23 21.9
comp=Z,2µm,20.0s
F42A Maple Grove Fa 120.54 32 IAMs_20 IAMs_20 13 19 54.0
comp=Z,2µm,18.0s
JCT Junction City 120.62 53 IAMs_20 IAMs_20 13 17 49.6
comp=Z,2µm,20.0s
P38A Dawn 120.98 41 IAMs_20 IAMs_20 13 22 23.6
comp=Z,2µm,19.0s
I42A Draeger Farm, 121.31 34 **PKiKP 12 30 09.1 +0.2**
TUL3 Leonard 121.32 46 **PKiKP 12 30 09.9 +0.7**
Z35A Perchaven, San 121.42 49 IAMs_20 IAMs_20 13 18 06.5
comp=Z,2µm,20.0s
SCHQ Schefferville 121.44 13 PKP **PKiKP 12 30 09.2 +0.4**
comp=Z,13nm,1.0s,baz=292,slow=4.4,SNR=3.8
SCHQ PKKPab **PKKPab 12 40 08.2 -2.7**
comp=Z,9.7nm,0.9s,baz=177,slow=5.1,SNR=3.9
WHTX Lake Whitney, 121.85 50 IAMs_20 IAMs_20 13 17 28.9
comp=Z,2µm,20.0s
P40A Paris 121.99 40 IAMs_20 IAMs_20 13 21 11.3
comp=Z,2µm,20.0s
U38A Gravette 122.05 44 IAMs_20 IAMs_20 13 21 58.5
comp=Z,2µm,20.0s
R40A Maddies Statio 122.53 41 IAMs_20 IAMs_20 13 18 37.7
comp=Z,2µm,19.0s

L44A	**Lake County Fo**	**122.95**	**35**	IAMs_20	IAMs_20	13 23 55.2		
	comp=Z,2µm,22.0s							
ESDC	**Sonseca Array**	**123.00**	**321**	PKP	**PKiKP**	**12 30 13.0**	**+0.6**	
	comp=Z,3.6nm,1.0s,baz=359,slow=2.7,SNR=9.2							
ESDC				PP	**PP**	**12 31 48.4**	**-2.3**	
	comp=Z,7.4nm,1.2s,baz=52,slow=7.2,SNR=5.5							
ESDC	**Sonseca Array**	**123.00**	**321**		**PKiKP**	**12 30 13.4**	**+1.0**	
PAB	**San Pablo**	**123.32**	**321**		**PKiKP**	**12 30 13.2**	**+0.1**	
PAB	**San Pablo**	**123.32**	**321**	PKIKP	**PKiKP**	**12 30 13.2**	**+0.1**	
CCM	**Cathedral Cave**	**123.33**	**41**		**PKPdf**	**12 30 12.4**	**-0.4**	
CCM	**Cathedral Cave**	**123.33**	**41**	IAMs_20	IAMs_20	13 22 43.9		
	comp=Z,2µm,19.0s							
CCM	**Cathedral Cave**	**123.33**	**41**	PKIKP	**PKPdf**	**12 30 12.4**	**-0.4**	
CCM				MLR	MLR			
	comp=Z,2µm,19.0s							
M44A	**Midewin, Midew**	**123.37**	**36**	IAMs_20	IAMs_20	13 21 39.3		
	comp=Z,2µm,21.0s							
MVO	**Moncorvo**	**123.96**	**324**	*e*PKPdf	**PKiKP**	**12 30 16.5**	**+2.1**	
MVO				*e*LR	LR	13 11 08.4		
MVO				*i* IAMs_20	IAMs_20	13 26 09.5		
	comp=Z,2µm,22.0s							
HKT	**Hockley**	**123.97**	**52**	IAMs_20	IAMs_20	13 15 43.1		
	comp=Z,2µm,20.0s							
NATX	**Nacogdoches**	**124.08**	**49**	IAMs_20	IAMs_20	13 18 34.0		
	comp=Z,2µm,21.0s							
PCAB	**Cabril**	**124.19**	**325**	*e*PKPdf	**PKiKP**	**12 30 16.6**	**+1.9**	
POLO	**Lamas de Olo**	**124.28**	**325**	*e*PKPdf	**PKiKP**	**12 30 16.4**	**+1.4**	
PVRL	**Vila Real**	**124.29**	**325**	*e*PKPdf	**PKiKP**	**12 30 16.2**	**+1.3**	
I49A	**Point Hope**	**124.55**	**31**	IAMs_20	IAMs_20	13 33 28.9		
	comp=Z,2µm,20.0s							
MTE	**Manteigas**	**124.75**	**324**	*e*PKPdf	**PKiKP**	**12 30 16.7**	**+0.8**	
MTE				*e*LR	LR	13 12 18.6		
MTE				*i* IAMs_20	IAMs_20	13 28 07.2		
	comp=Z,2µm,20.0s							
S44A	**Carbondale**	**124.83**	**40**	IAMs_20	IAMs_20	13 18 58.6		
	comp=Z,2µm,22.0s							
PTO	**Porto**	**124.89**	**325**	*e*PKPdf	**PKiKP**	**12 30 17.4**	**+1.4**	
PCBR	**Castelo Branco**	**125.06**	**323**	*e*PKPdf	**PKiKP**	**12 30 17.2**	**+0.8**	
PMRV	**Marv??o**	**125.27**	**323**	*e*PKPdf	**PKiKP**	**12 30 18.1**	**+1.2**	
PMRV				*e*LR	LR	13 12 24.5		
PMRV				*i* IAMs_20	IAMs_20	13 30 26.1		
	comp=Z,2µm,20.0s							
K50A	**Casco**	**125.47**	**32**	IAMs_20	IAMs_20	13 22 46.5		
	comp=Z,2µm,20.0s							
T45A	**Paducah**	**125.62**	**41**	IAMs_20	IAMs_20	13 24 56.5		
	comp=Z,2µm,19.0s							
PSARD	**Sardoal**	**125.62**	**323**	*e*PKPdf	**PKiKP**	**12 30 18.6**	**+1.0**	
PESTR	**Estremoz**	**125.73**	**322**	*e*PKPdf	**PKiKP**	**12 30 20.1**	**+2.2**	
O48B	**Farmland**	**125.78**	**36**	IAMs_20	IAMs_20	13 19 53.0		
	comp=Z,2µm,20.0s							
PBAR	**Barrancos**	**125.82**	**321**	*e*PKPdf	**PKiKP**	**12 30 19.5**	**+1.5**	
PMTG	**Montargil**	**126.00**	**323**	*e*PKPdf	**PKiKP**	**12 30 19.4**	**+1.0**	
PARRA	**Arraiolos**	**126.04**	**322**	*e*PKPdf	**PKiKP**	**12 30 19.6**	**+1.2**	
143A	**Socs Landing,**	**126.05**	**47**	IAMs_20	IAMs_20	13 26 42.7		
	comp=Z,2µm,20.0s							
P48A	**Milroy**	**126.13**	**36**	IAMs_20	IAMs_20	13 26 30.5		
	comp=Z,2µm,22.0s							
EVO	**Evora**	**126.20**	**322**	*e*PKPdf	**PKiKP**	**12 30 20.4**	**+1.6**	
O49A	**Covington**	**126.30**	**35**	IAMs_20	IAMs_20	13 34 08.7		
	comp=Z,2µm,20.0s							
WCI	**Wyandotte Cave**	**126.39**	**38**		**PKiKP**	**12 30 19.1**	**-0.1**	
WCI	**Wyandotte Cave**	**126.39**	**38**	PKIKP	**PKiKP**	**12 30 19.1**	**-0.1**	
MOE	**Montemor**	**126.42**	**322**	*e*PKPdf	**PKiKP**	**12 30 20.7**	**+1.5**	
PBEJ	**Beja**	**126.42**	**322**	*e*PKPdf	**PKiKP**	**12 30 21.3**	**+2.0**	
OXF	**Oxford**	**126.52**	**44**	IAMs_20	IAMs_20	13 24 09.6		
	comp=Z,2µm,22.0s							
T47A	**Sharon Grove**	**126.63**	**40**	IAMs_20	IAMs_20	13 20 06.1		
	comp=Z,2µm,19.0s							
WVT	**Waverly**	**126.67**	**41**		**PKPdf**	**12 30 18.8**	**-0.5**	
WVT	**Waverly**	**126.67**	**41**	IAMs_20	IAMs_20	13 27 21.3		
	comp=Z,2µm,19.0s							
WVT	**Waverly**	**126.67**	**41**	PKIKP	**PKPdf**	**12 30 18.8**	**-0.5**	
WVT				MLR	MLR			
	comp=Z,2µm,19.0s							
PVAQ	**Vaqueiros**	**126.71**	**321**	*e*LR	LR	13 13 26.4		
PVAQ				*i* IAMs_20	IAMs_20	13 28 30.8		
	comp=Z,1µm,20.0s							
MESJ	**Messejana**	**126.76**	**322**	*e*PP	**PP**	**12 32 16.8**	**+1.0**	
MESJ				*e*SS	SS	12 49 24.3	+3.2	
MESJ				IAMs_20	IAMs_20	13 26 47.5		
	comp=Z,1µm,18.8s							
LIS	**Lisbon**	**126.78**	**323**	*e*PP	**PP**	**12 32 16.9**	**+1.1**	
LIS				IAMs_20	IAMs_20	13 29 10.6		
	comp=Z,2µm,10.8s							
PCVE	**Castro Verde**	**126.78**	**321**	*e*PKPdf	**PKiKP**	**12 30 21.4**	**+1.5**	
PLAL	**Pickwick Lake**	**127.16**	**42**	IAMs_20	IAMs_20	13 26 57.6		
	comp=Z,2µm,20.0s							
PTEO	**Sao Teotonio**	**127.26**	**322**	*e*PKPdf	**PKiKP**	**12 30 22.2**	**+1.4**	
MD01	**Midelt array s**	**127.31**	**314**		**PKPdf**	**12 30 20.9**	**+0.1**	
MORF	**Marmelete**	**127.36**	**321**	*e*PP	**PP**	**12 32 20.7**	**+0.9**	
MORF				IAMs_20	IAMs_20	13 27 14.3		
	comp=Z,3µm,22.6s							
MORF	**Marmelete**	**127.36**	**321**	*e*PKPdf	**PKiKP**	**12 30 24.3**	**+3.1**	
R50A	**Paris**	**127.55**	**37**	IAMs_20	IAMs_20	13 22 30.0		
	comp=Z,2µm,19.0s							
V48A	**Smith Brothers**	**127.56**	**41**	IAMs_20	IAMs_20	13 25 52.8		
	comp=Z,2µm,19.0s							
PFVI	**Vila Bisbo**	**127.58**	**321**	*e*PKPdf	**PKPdf**	**12 30 20.5**	**-0.5**	
Q51A	**Peebles**	**127.64**	**36**	IAMs_20	IAMs_20	13 32 54.2		
	comp=Z,2µm,19.0s							
346A	**Big Creek Wild**	**128.14**	**47**	IAMs_20	IAMs_20	13 23 02.0		
	comp=Z,2µm,19.0s							
X48A	**Hartselle**	**128.16**	**42**	IAMs_20	IAMs_20	13 28 55.0		
	comp=Z,2µm,20.0s							
K57A	**Scipio Center**	**128.53**	**28**	IAMs_20	IAMs_20	13 29 48.6		
	comp=Z,2µm,18.0s							
LRAL	**Lakeview Retre**	**129.00**	**44**	IAMs_20	IAMs_20	13 27 44.4		
	comp=Z,2µm,20.0s							
EFI	**East Falkland**	**129.29**	**171**		**PKiKP**	**12 30 24.5**	**0.0**	
EFI	**East Falkland**	**129.29**	**171**	PKIKP	**PKiKP**	**12 30 24.5**	**0.0**	
SSPA	**Standing Stone**	**129.46**	**30**	IAMs_20	IAMs_20	13 26 43.8		
	comp=Z,2µm,21.0s							
X51A	**Calhoun**	**129.55**	**41**	IAMs_20	IAMs_20	13 25 40.5		
	comp=Z,2µm,20.0s							
S54A	**Dingess, Beckl**	**129.65**	**35**	IAMs_20	IAMs_20	13 31 27.3		
	comp=Z,2µm,21.0s							
BRAL	**Brewton**	**130.00**	**46**	IAMs_20	IAMs_20	13 29 28.3		
	comp=Z,2µm,21.0s							
U54A	**Nelsons Funny**	**130.21**	**37**	IAMs_20	IAMs_20	13 25 51.4		
	comp=Z,2µm,20.0s							
EMMW	**East Machias**	**130.45**	**19**	IAMs_20	IAMs_20	13 38 53.6		
	comp=Z,2µm,19.0s							
Y52A	**Lilburn**	**130.50**	**41**	IAMs_20	IAMs_20	13 36 22.7		
	comp=Z,2µm,20.0s							
BLA	**Blacksburg**	**130.56**	**35**	IAMs_20	IAMs_20	13 27 01.6		
	comp=Z,2µm,20.0s							
COYC	**Coyhaique**	**131.05**	**157**		**PKiKP**	**12 30 28.7**	**+0.4**	
BCX	**Boston College**	**131.16**	**24**	IAMs_20	IAMs_20	13 35 45.8		
	comp=Z,2µm,19.0s							
451A	**Vernon**	**131.24**	**46**	IAMs_20	IAMs_20	13 31 45.0		
	comp=Z,1µm,20.0s							
T57A	**Hurt**	**131.38**	**35**	IAMs_20	IAMs_20	13 30 32.1		
	comp=Z,2µm,20.0s							
CBN	**Corbin Frederi**	**131.54**	**32**	IAMs_20	IAMs_20	13 34 20.0		
	comp=Z,2µm,21.0s							
154A	**Montrose**	**131.90**	**42**	IAMs_20	IAMs_20	13 39 57.8		
	comp=Z,1µm,19.0s							
M65A	**Busby, Falmout**	**132.02**	**24**	P	**PKPdf**	**12 30 27.8**	**-1.5**	
	baz=328							
TIGA	**Tifton**	**132.28**	**43**	IAMs_20	IAMs_20	13 26 03.2		
	comp=Z,2µm,22.0s							
V58A	**Windy Hill, Pi**	**132.30**	**36**	IAMs_20	IAMs_20	13 22 26.7		
	comp=Z,2µm,22.0s							
W59A	**Clinton**	**133.13**	**36**	IAMs_20	IAMs_20	13 24 00.7		
	comp=Z,2µm,22.0s							
LL01	**San Ignacio de**	**133.53**	**154**	IAMs_20	IAMs_20	13 19 56.4		
	comp=Z,2µm,20.0s							
456A	**Hilliard**	**133.78**	**43**	IAMs_20	IAMs_20	13 22 20.9		
	comp=Z,2µm,21.0s							
656A	**Willston**	**134.24**	**45**	IAMs_20	IAMs_20	13 27 38.2		
	comp=Z,2µm,22.0s							
PLCA	**Paso Flores**	**135.68**	**154**	PKP	**PKiKP**	**12 30 37.4**	**-0.6**	
	comp=Z,22nm,1.0s,baz=206,slow=3.1,SNR=19							
PLCA	**Paso Flores**	**135.68**	**154**	*e*P	**PKPdf**	**12 30 34.0**	**-2.3**	
DWPF	**Disney Wildern**	**135.76**	**45**	IAMs_20	IAMs_20	13 32 59.6		
	comp=Z,2µm,21.0s							
PAYG	**Puerto Ayora**	**136.86**	**89**	IAMs_20	IAMs_20	13 18 06.0		
	comp=Z,2µm,20.0s							
DBIC	**Dimbokro**	**136.99**	**282**	PKP	**PKPdf**	**12 30 39.4**	**0.0**	
	comp=Z,28nm,1.1s,baz=99,slow=2.1,SNR=10							
060A	**Indiantown**	**137.16**	**46**	IAMs_20	IAMs_20	13 27 54.7		
	comp=Z,2µm,22.0s							
TGUH	**Tegucigalpa,Un**	**137.30**	**67**	IAMs_20	IAMs_20	13 20 38.4		
	comp=Z,1µm,20.0s							
061Z	**Ochoppi**	**137.44**	**48**	IAMs_20	IAMs_20	13 29 05.4		
	comp=Z,2µm,19.0s							

CAMR	**Camarioca**	**138.62**	**52**	*e*P	**PKPdf**	**12 30 40.9**	**-1.2**	
MGV	**Manicaragua**	**140.21**	**52**	*e*P	**PKPdf**	**12 30 41.1**	**-3.9**	
JTS	**Las Juntas de**	**140.56**	**72**	IAMs_20	IAMs_20	13 26 40.1		
	comp=Z,2µm,19.0s							
VA01	**Torpederas**	**141.21**	**146**	IAMs_20	IAMs_20	13 23 22.9		
	comp=Z,2µm,22.0s							
HDC	**Heredia**	**141.43**	**72**	*e*P	**PKPdf**	**12 30 44.1**	**-3.5**	
MT08	**Bocatoma Ro**	**141.77**	**148**	IAMs_20	IAMs_20	13 28 59.5		
	comp=Z,1µm,20.0s							
CCCC	**Cccc**	**142.43**	**51**	*e*P	**PKPdf**	**12 30 47.3**	**-1.7**	
CO03	**El Pedregal**	**143.38**	**145**	IAMs_20	IAMs_20	13 24 18.3		
	comp=Z,2µm,21.0s							
CO05	**La Serena**	**143.73**	**143**	IAMs_20	IAMs_20	13 25 09.8		
	comp=Z,1µm,20.0s							
HLGC	**Holguin**	**143.92**	**50**	*e*P	PKPbc	12 30 50.5	+1.0	
CFA	**Coronel Fontan**	**144.14**	**148**	PKP	PKPbc	12 30 50.8	+0.9	
	comp=Z,43nm,1.0s,baz=230,slow=3.3,SNR=70							
CHIV	**Chivirico**	**144.16**	**52**	*e*P	**PKPab**	**12 30 44.2**	**-5.6**	
MTDJ	**Mount Denham**	**144.18**	**55**	*i* P	**PKPab**	**12 30 50.1**	**+0.1**	
MTDJ	**Mount Denham**	**144.18**	**55**	*e*P	**PKPab**	**12 30 49.3**	**-0.7**	
PINC	**Pinares de May**	**144.36**	**50**	*e*P	**PKPab**	**12 30 49.7**	**-0.8**	
MARVS	**Santiago de Cu**	**144.55**	**51**	*e*P	**PKPab**	**12 30 50.6**	**-0.6**	
LCO	**Las Campanas**	**144.71**	**143**		**PKPdf**	**12 30 52.9**	**-0.3**	
LCO	**Las Campanas**	**144.71**	**143**	PKIKP	**PKPdf**	**12 30 52.9**	**-0.3**	
RCC	**Rio Carpintero**	**144.71**	**51**	*e*P	**PKPab**	**12 30 50.6**	**-1.2**	
STH	**Stony Hill**	**144.85**	**55**	*i* P	PKPbc	12 30 52.6	+0.2	
MOAC	**Moa**	**144.90**	**49**	*e*P	**PKPab**	**12 30 51.3**	**-1.1**	
HOJ	**Hope**	**144.93**	**55**	*i* P	**PKPdf**	**12 30 53.9**	**+0.4**	
NMDO	**Nuevo Mundo**	**144.94**	**50**	*e*P	**PKPab**	**12 30 51.1**	**-1.5**	
GTBY	**Guantanamo Bay**	**145.20**	**51**	*e*P	**PKPdf**	**12 30 54.4**	**+0.4**	
GTBY	**Guantanamo Bay**	**145.20**	**51**	P	**PKPdf**	**12 30 53.8**	**-0.1**	
	comp=Z,8µmcomp=Z,9µmcomp=Z,393nm,1.5s							
QMBU	**Quimbuelo**	**145.28**	**50**	*e*P	**PKPbc**	**12 30 51.7**	**-2.1**	
BCIP	**Isla Barro Col**	**145.71**	**71**	IAMs_20	IAMs_20	13 27 14.6		
	comp=Z,1µm,19.0s							
MASC	**Masc**	**145.73**	**49**	*e*P	**PKPdf**	**12 30 54.1**	**-0.8**	
GO03	**Copiapo**	**146.01**	**142**	IAMs_20	IAMs_20	13 25 05.4		
	comp=Z,2µm,21.0s							
AC06	**Mina Casimiro**	**146.10**	**141**	IAMs_20	IAMs_20	13 24 13.9		
	comp=Z,2µm,22.0s							
MCRA	**Macar, Loja**	**147.13**	**96**	P	**PKPdf**	**12 30 57.6**	**+0.1**	
	comp=Z,5µmcomp=Z,221nm,1.5s							
PTAC	**Punta Ardita,**	**148.19**	**74**	P	**PKPbc**	**12 31 03.0**	**+0.6**	
PAC1	**Pacto, Paraso**	**148.31**	**87**	P	**PKPdf**	**12 31 00.3**	**+0.7**	
	comp=Z,5µmcomp=Z,262nm,1.2s							
OTAV	**Otavalo**	**148.65**	**87**		**PKPdf**	**12 31 01.4**	**+0.9**	
OTAV	**Otavalo**	**148.65**	**87**	IAMs_20	IAMs_20	13 28 46.3		
	comp=Z,1µm,20.0s							
OTAV	**Otavalo**	**148.65**	**87**	PKIKP	**PKPdf**	**12 31 01.4**	**+0.9**	
OTAV	**Otavalo**	**148.65**	**87**	*e*P	**PKPdf**	**12 30 56.7**	**-3.8**	
OTAV	**Otavalo**	**148.65**	**87**	P	**PKPdf**	**12 31 01.5**	**+1.0**	
	comp=Z,5µmcomp=Z,3µmcomp=Z,77nm,2.0s							
SDDR	**Presa de Saban**	**148.66**	**48**	IAMs_20	IAMs_20	13 36 48.8		
	comp=Z,2µm,21.0s							
NNA	**Nana**	**148.81**	**111**	PKPbc	**PKPdf**	**12 31 02.2**	**+2.0**	
	comp=Z,129nm,1.0s,baz=262,slow=7.1,SNR=22							
NNA	**Nana**	**148.81**	**111**	*c i* PKIKP	**PKPdf**	**12 31 00.8**	**+0.6**	
NNA				pmax	pmax			
	comp=Z,338nm,1.3s							
PSAL	**Palomas, Salto**	**149.07**	**162**	*e*P	**PKPdf**	**12 30 57.4**	**-2.8**	
CMBC	**Cumbal**	**149.22**	**85**	P	**PKPbc**	**12 31 05.0**	**-0.7**	
PB05	**IPOC Station P**	**149.24**	**135**	IAMs_20	IAMs_20	13 29 46.9		
	comp=Z,2µm,21.0s							
TULM	**Tulcn-Chalpat**	**149.28**	**86**	P	**PKPdf**	**12 31 02.6**	**+1.0**	
	comp=Z,3µmcomp=Z,125nm,1.4s							
PLTB	**Pedras Altas**	**149.41**	**169**	*e*P	**PKPdf**	**12 30 57.5**	**-3.1**	
BONI	**La Bonita**	**149.55**	**86**	P	**PKPdf**	**12 31 03.2**	**+1.5**	
	comp=Z,5µmcomp=Z,224nm,1.1s							
BBAC	**Balboa, Cauca**	**149.69**	**83**	P	**PKPdf**	**12 31 03.4**	**+1.5**	
	comp=Z,4µmcomp=Z,3µmcomp=Z,83nm,1.3s							
DBBC	**Dabeiba**	**149.76**	**73**	P	**PKPdf**	**12 31 04.0**	**+2.2**	
SJCC	**San Jacinto, C**	**149.84**	**67**	P	**PKPdf**	**12 31 03.9**	**+2.0**	
	comp=Z,7µmcomp=Z,5µmcomp=Z,208nm,1.5s							
POPC	**Popayan, Colom**	**150.19**	**82**	P	**PKPdf**	**12 31 03.6**	**+0.9**	
	comp=Z,3µmcomp=Z,197nm,1.4s							
UREC	**San Jos de Ur**	**150.20**	**71**	P	**PKPdf**	**12 31 03.6**	**+1.2**	
	comp=Z,4µmcomp=Z,3µmcomp=Z,82nm,1.9s							
CBOC	**Ciudad Bolivar**	**150.23**	**75**	P	**PKPdf**	**12 31 04.2**	**+1.5**	
	comp=Z,4µmcomp=Z,62nm,1.6s							
YOTC	**Yotoco, Valle**	**150.29**	**79**	P	**PKPdf**	**12 31 03.9**	**+1.2**	
	comp=Z,4µmcomp=Z,184nm,1.6s							
AF01	**San Pedro de A**	**150.57**	**138**	IAMs_20	IAMs_20	13 26 23.8		
	comp=Z,1µm,21.0s							
HELC	**Santa Helena**	**150.62**	**74**	P	**PKPdf**	**12 31 05.4**	**+1.9**	
	comp=Z,4µmcomp=Z,3µmcomp=Z,83nm,1.7s							
CPSB	**Cacapava Do Su**	**150.76**	**169**	*e*P	**PKPdf**	**12 31 01.6**	**-1.3**	
GUY2C	**Guyana, Caldas**	**151.01**	**76**	P	**PKPdf**	**12 31 05.8**	**+1.6**	
	comp=Z,3µmcomp=Z,4µmcomp=Z,222nm,0.9s							
PSGCX	**Pisagua**	**151.29**	**130**	IAMs_20	IAMs_20	13 28 29.9		
	comp=Z,1µm,21.0s							
FLOC	**Florencia**	**151.32**	**84**	P	**PKPdf**	**12 31 06.0**	**+1.8**	
	comp=Z,4µmcomp=Z,165nm,1.7s							
ORTC	**Ortega, Tolima**	**151.39**	**79**	P	**PKPdf**	**12 31 05.6**	**+1.3**	
	comp=Z,3µmcomp=Z,4µmcomp=Z,234nm,1.5s							
GARC	**Garzon, Huila**	**151.41**	**82**	P	**PKPdf**	**12 31 05.6**	**+1.0**	
	comp=Z,3µmcomp=Z,176nm,1.1s							
PB11	**IPOC Station P**	**151.55**	**131**	IAMs_20	IAMs_20	13 25 02.7		
	comp=Z,1µm,20.0s							
PRAC	**Prado**	**151.78**	**79**	P	**PKPdf**	**12 31 06.4**	**+1.5**	
GO01	**Chusmiza**	**151.95**	**131**	IAMs_20	IAMs_20	13 28 32.3		
	comp=Z,1µm,21.0s							
ROSC	**El Rosal**	**152.10**	**77**	PKP	**PKPdf**	**12 31 05.5**	**-0.3**	
	comp=Z,17nm,0.7s,baz=73,slow=2.0,SNR=13							
ROSC				PKPbc	**PKiKP**	**12 31 12.9**	**+0.1**	
	comp=Z,67nm,1.1s,baz=276,slow=6.7,SNR=5.8							
SPBC	**San Pablo de B**	**152.16**	**75**	P	**PKPdf**	**12 31 07.2**	**+1.7**	
CNLB	**Canela**	**152.24**	**173**	*e*P	**PKPdf**	**12 31 04.4**	**-0.8**	
PB16	**IPOC Station P**	**152.49**	**129**	IAMs_20	IAMs_20	13 27 22.9		
	comp=Z,1µm,22.0s							
CPUP	**Villa Florida**	**153.56**	**159**	PKP	**PKPdf**	**12 31 07.7**	**+0.6**	
	comp=Z,9.6nm,1.2s,baz=251,slow=0.4,SNR=15							
CPUP				PKPbc	**PKiKP**	**12 31 15.9**	**+1.0**	
	comp=Z,27nm,1.1s,baz=77,slow=1.6,SNR=25							
CPUP				PKPab	**PKPab**	**12 31 26.0**	**-1.0**	
	comp=Z,27nm,1.1s,baz=154,slow=0.9,SNR=8.7							
CPUP	**Villa Florida**	**153.56**	**159**	*e*P	**PKPdf**	**12 31 06.7**	**-0.4**	
ITAB	**Concordia**	**154.09**	**170**	*e*P	**PKPdf**	**12 31 07.1**	**-0.7**	
SDV	**Santo Domingo**	**154.37**	**66**		**PKPdf**	**12 31 08.5**	**-0.4**	
SDV				IAMs_20	IAMs_20	13 55 27.5		
	comp=Z,1µm,22.0s							
SDV	**Santo Domingo**	**154.37**	**66**	*e*P	**PKPdf**	**12 31 06.9**	**-1.9**	
LPAZ	**La Paz**	**154.71**	**126**	PKP	**PKPdf**	**12 31 10.6**	**+0.8**	
	comp=Z,18nm,1.0s,baz=311,slow=1.5,SNR=39							
LPAZ				PKPab	**PKPab**	**12 31 32.3**	**-0.8**	
	comp=Z,39nm,1.0s,baz=300,slow=1.6,SNR=10							
LPAZ	**La Paz**	**154.71**	**126**	*e*P	**PKPdf**	**12 31 08.0**	**-1.7**	
PTGB	**Pitanga**	**156.56**	**169**	*e*P	**PKPdf**	**12 31 08.1**	**-3.3**	
ABD	**La Joyeuse, An**	**157.11**	**38**	IAMs_20	IAMs_20	13 41 16.1		
	comp=Z,1µm,22.0s							
PET01	**Itanhaem-SP**	**157.47**	**180**	*e*P	**PKPdf**	**12 31 10.4**	**-2.0**	
AMBA	**Amambai (Brazi**	**157.50**	**161**	*e*P	**PKPdf**	**12 31 09.9**	**-2.7**	
MURT	**Porto Murtinho**	**157.63**	**154**	*e*P	**PKPdf**	**12 31 10.4**	**-2.3**	
FRTB	**Fartura**	**158.28**	**174**	*e*P	**PKPdf**	**12 31 12.1**	**-1.4**	
PARB	**Paraibuna**	**158.36**	**184**	*e*P	**PKPdf**	**12 31 11.8**	**-1.9**	
SVN	**Savane Anatole**	**158.55**	**40**	IAMs_20	IAMs_20	13 46 43.5		
	comp=Z,1µm,20.0s							
VAO	**Valinhos**	**158.75**	**180**	*e*P	**PKPdf**	**12 31 13.2**	**-0.9**	
BIM	**Bigot**	**158.85**	**40**	IAMs_20	IAMs_20	13 42 29.6		
	comp=Z,1µm,22.0s							
MPOM	**Morne Pois Mar**	**159.04**	**40**	IAMs_20	IAMs_20	13 39 31.5		
	comp=Z,1µm,21.0s							
BDQN	**Bodoquena, MS**	**159.07**	**154**	*e*P	**PKPdf**	**12 31 12.6**	**-1.9**	
VAS01	**Vassouras-RJ**	**159.15**	**190**	*e*P	**PKPdf**	**12 31 13.0**	**-1.5**	
CAM01	**Campos-RJ**	**159.22**	**195**	*e*P	**PKPdf**	**12 31 12.8**	**-1.8**	
RCLB	**Rio Claro- Sao**	**159.32**	**179**	*e*P	**PKPdf**	**12 31 13.0**	**-1.8**	
AQDB	**Aquidauana**	**159.49**	**157**	*e*P	**PKPdf**	**12 31 14.2**	**-0.7**	
SIV	**San Ignacio**	**160.20**	**137**	PKP	**PKPdf**	**12 31 16.2**	**+0.3**	
	comp=Z,13nm,1.0s,baz=195,slow=1.4,SNR=38							
BSCB	**Bom Sucesso**	**160.60**	**187**	*e*P	**PKPdf**	**12 31 15.6**	**-0.7**	
BB19B	**Bebedouro**	**160.63**	**176**	*e*P	**PKPdf**	**12 31 14.8**	**-1.4**	
ITRB	**Iturama**	**161.76**	**170**	*e*P	**PKPdf**	**12 31 16.9**	**-0.5**	
ABR01	**Abrolhos, BA**	**161.76**	**207**	*e*P	**PKPdf**	**12 31 16.9**	**-0.5**	
BSFB	**Barra de Sao F**	**161.82**	**199**	*e*P	**PKPdf**	**12 31 16.5**	**-2.0**	
PTLB	**Pontas e Lacer**	**161.87**	**140**	*e*P	**PKPdf**	**12 31 16.5**	**-1.1**	
SJMB	**Sao Joao De Ma**	**162.05**	**199**	*e*P	**PKPdf**	**12 31 17.7**	**0.0**	
C2SB	**Chapadao do Su**	**162.07**	**162**	*e*P	**PKPdf**	**12 31 17.5**	**-0.2**	
PP1B	**Ponte de Pedra**	**162.40**	**155**	*e*P	**PKPdf**	**12 31 16.9**	**-1.2**	
VILB	**Vilhena**	**162.86**	**132**	*e*P	**PKPdf**	**12 31 16.3**	**-2.4**	
DIAM	**Diamantina, MG**	**163.08**	**191**	*e*P	**PKPdf**	**12 31 17.8**	**-1.2**	
PMNB	**Patos De Minas**	**163.18**	**182**	*e*P	**PKPdf**	**12 31 17.9**	**-1.0**	
GUA01	**Guaratinga, BA**	**163.47**	**206**	*e*P	**PKPdf**	**12 31 16.5**	**-2.6**	
SALV	**Santo Antonio**	**163.50**	**150**	*e*P	**PKPdf**	**12 31 18.6**	**-0.7**	
IPMB	**Ipameri, GO**	**163.71**	**176**	*e*P	**PKPdf**	**12 31 17.6**	**-1.9**	
CMC01	**Camacan, BA**	**164.41**	**208**	*e*P	**PKPdf**	**12 31 17.6**	**-2.5**	
BDFB	**Brasilia**	**166.04**	**177**	PKP	**PKPdf**	**12 31 21.6**	**0.0**	

*IDC **23** 12:16:52.5±0.8, 1°.67N×132°.89E, h0km, mb4.3/11, mbtmp4.3/13, ML3.2/2, Error ellipse: s-maj=28.2km s-min=17.8km az=63.0*
*NEIC **23** 12:16:54.4±1.2, 1°.53N±0°.08×132°.82E±0°.08, h10km±1km, mb4.9/14, Error ellipse: s-maj=14.1km s-min=13.5km az=211.0*

ISC 23 12:16:57.4±0.5, 1°.51N±0°.07×132°.79E±0°.08, h35km, n40, σ0°.93/40, mb4.7/17, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.43**	**187**	Pn	**Pn**	**12 18 01.5**	**-0.7**
TNTI	**Ternate**	**5.47**	**262**	Pn

WB9 Warramunga Arr 21.30 176 P **P** **12 23 00.3 +0.5**
WB8 Warramunga Arr 21.32 176 P **P** **12 23 00.0 0.0**
WRA Warramunga Arr 21.44 176 P **P** **12 23 00.1 -1.2**
comp=Z,22nm,1.1s,baz=354,slow=11,SNR=6.7
WRA PcP **PcP** **12 27 03.7 -1.0**
comp=Z,1.0nm,0.6s,baz=350,slow=2.4,SNR=3.1
comp=Z,22nm,1.1s
WR8 Warramunga Arr 21.47 176 P **P** **12 23 02.5 +0.9**
WR8 IAmb IAmb 12 23 06.5
comp=Z,58nm,1.0s
QIS Mount Isa 22.97 164 P **P** **12 23 16.9 -0.9**
comp=Z,34nm,1.4s
AS31 Alice Springs 25.12 178 P **P** **12 23 37.3 -0.8**
ASAR Alice Springs 25.12 178 P **P** **12 23 37.1 -1.0**
comp=Z,23nm,0.7s,baz=1.4,slow=10.0,SNR=14
ASAR PcP **PcP** **12 27 11.2 -1.2**
comp=Z,0.8nm,0.7s,baz=8.7,slow=1.2,SNR=2.7
comp=Z,23nm,0.7s
ASAR Alice Springs 25.12 178 P **P** **12 23 37.5 -0.5**
CTA Charters Tower 25.22 149 P **P** **12 23 39.9 +0.9**
comp=Z,0.5nm,1.2s
MBWA Marble Bar 26.00 209 P **P** **12 23 44.7 -1.4**
comp=Z,48nm,1.9s
MBWA Marble Bar 26.00 209 **P** **12 23 45.1 -1.0**
MBWA IAmb IAmb 12 24 01.0
comp=Z,25nm,0.8s
PSAD1 Pilbara Seismi 26.21 208 P **P** **12 23 46.6 -1.3**
comp=Z,46nm,1.3s
PSAC2 Pilbara Seismi 26.27 208 P **P** **12 23 47.7 -0.8**
comp=Z,32nm,0.9s
PSAC1 Pilbara Seismi 26.29 208 P **P** **12 23 47.4 -1.2**
comp=Z,45nm,0.9s
PSA00 Pilbara Seismi 26.30 208 P **P** **12 23 48.0 -0.7**
comp=Z,33nm,0.7s
PSA00 Pilbara Seismi 26.30 208 **P** **12 23 48.1 -0.7**
PSA00 IAmb IAmb 12 23 49.3
comp=Z,26nm,0.9s
PSA00 Pilbara Seismi 26.30 208 **P** **12 23 47.5 -1.3**
PSA00 IAmb IAmb 12 23 49.3
comp=Z,15nm,0.9s
PSAB3 Pilbara Seismi 26.32 208 P **P** **12 23 48.0 -0.9**
comp=Z,31nm,0.7s
WRKA Warakurna 26.83 189 P **P** **12 23 53.5 0.0**
comp=Z,14nm,1.0s
MEEK Meekatharra 31.25 205 P **P** **12 24 31.4 -1.4**
comp=Z,29nm,0.9s
JNU Nakatsue 31.43 357 P **P** **12 24 33.1 -1.2**
comp=Z,17nm,0.8s,baz=132,slow=3.7,SNR=7.6
comp=Z,17nm,0.8s
JNU Nakatsue 31.43 357 P **P** **12 24 33.8 -0.6**
JNU IAmb IAmb 12 24 37.4
comp=Z,22nm,0.9s
JMN Monobe 31.99 2 P **P** **12 24 39.0 -0.3**
FORT Forrest 32.51 188 P **P** **12 24 43.1 -0.7**
comp=Z,22nm,0.8s
NJ2 Nanjing 33.06 338 *e*P **P** **12 24 49.4 +0.8**
NJ2 pmax pmax
comp=Z,11nm,0.7s
STKA Stephens Creek 34.29 167 P **P** **12 24 57.6 -1.7**
comp=Z,3.7nm,0.7s,baz=346,slow=5.3,SNR=3.8
comp=Z,3.7nm,0.7s
KMBL Kambalda 34.39 197 P **P** **12 24 59.0 -1.3**
comp=Z,19nm,0.8s
MORW Morawa 34.48 207 P **P** **12 24 59.7 -1.4**
comp=Z,25nm,0.8s
MJAR Matsushiro Arr 35.13 7 P **P** **12 25 05.7 -0.9**
comp=Z,2.1nm,0.8s,baz=178,slow=9.5,SNR=4.6
comp=Z,2.1nm,0.8s
GSI Gunungsitoli 35.28 270 **P** **12 25 06.8 -1.4**
BLDU Ballidu 35.53 204 P **P** **12 25 08.8 -1.3**
comp=Z,37nm,1.0s
KLBR Kellerberrin 35.98 202 P **P** **12 25 12.8 -1.1**
comp=Z,84nm,0.8s
ARMA Armidale 36.51 152 P **P** **12 25 19.4 +0.8**
comp=Z,24nm,1.8s
ARMA Armidale 36.51 152 P **P** **12 25 20.4 +1.8**
ARMA IAmb IAmb 12 25 23.4
comp=Z,46nm,1.6s
JMM Marumori 36.83 10 P **P** **12 25 21.9 +0.8**
CM31 Chiang Mai Arr 37.26 299 P **P** **12 25 23.9 -1.1**
CMAR Chiang Mai Arr 37.26 299 P **P** **12 25 24.4 -0.6**
comp=Z,2.7nm,0.8s,baz=119,slow=6.9,SNR=8.0
CMAR PcP **PcP** **12 27 44.1 -0.5**
comp=Z,1.1nm,0.7s,baz=127,slow=1.9,SNR=4.9
comp=Z,2.7nm,0.8s
CMAR Chiang Mai Arr 37.26 299 P **P** **12 25 24.1 -0.9**
NWAO Narrogin (SRO) 37.37 202 P **P** **12 25 24.9 -0.9**
comp=Z,64nm,0.8s
NWAO Narrogin (SRO) 37.37 202 P **P** **12 25 24.8 -0.9**
comp=Z,26nm,0.8s,baz=32,slow=7.5,SNR=7.3
comp=Z,26nm,0.8s
NWAO Narrogin (SRO) 37.37 202 P **P** **12 25 25.1 -0.6**
NWAO IAmb IAmb 12 25 26.4
comp=Z,29nm,0.8s
H11N1 WAKE ISLAND Hy 37.84 59 T T 13 05 25.2
baz=246
H11N2 WAKE ISLAND Hy 37.85 59 T T 13 05 26.1
baz=246
H11N3 WAKE ISLAND Hy 37.85 59 T T 13 05 27.3
baz=246
PZH PanZhiHua 38.83 312 P **P** **12 25 40.3 +1.9**
PZH pmax pmax
comp=Z,10.0nm,1.0s
RKGY Rocky Gully 38.97 201 P **P** **12 25 39.5 +0.3**
comp=Z,74nm,1.2s
XAN Xi'an 39.29 328 P **P** **12 25 41.8 -0.2**
XAN pmax pmax
comp=Z,15nm,1.0s
TNCH TengChong 40.51 308 *e*P **P** **12 25 56.3 +3.8**
TNCH pmax pmax
comp=Z,26nm,2.2s
TNCH LR LR
comp=Z,2μm,9.9s
TNCH LR LR
comp=Z,2μm,14.1s
TNCH LR LR
comp=Z,5μm,15.1s
USRK Ussuriysk Ar. 42.44 359 P **P** **12 26 07.2 -0.6**
comp=Z,4.3nm,0.8s,baz=192,slow=5.5,SNR=5.9
comp=Z,4.3nm,0.8s
CN2 Changchun 42.55 352 *e*P **P** **12 26 10.3 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
MDJ Mudanjiang 42.95 357 P **P** **12 26 12.8 +0.9**
MDJ pmax pmax
comp=Z,16nm,2.2s
HHC Hu-ho-hao-te 43.58 336 *e*P **P** **12 26 18.4 +1.2**
HHC pmax pmax
comp=Z,14nm,0.7s
LZH Lanzhou 43.60 325 *e*P P 12 26 08.5 -9.0
LZH sP pP 12 26 17.5 -3.9
LZH PcP **PcP** **12 28 07.0 +2.0**
LZH pmax pmax
comp=Z,17nm,1.0s
BTO Baotou 44.02 335 *e*P **P** **12 26 23.4 +2.7**
BTO sP **pwP** **12 26 30.3 +0.9**
BTO PP **PP** **12 28 03.9 +0.5**
BTO S **S** **12 32 57.8 +5.4**
BTO pmax pmax
comp=Z,14nm,0.7s
BTO LR LR
comp=Z,6μm,16.9s
SHL Shillong 46.11 305 P **P** **12 26 36.1 -1.6**
GTA Gaotai 48.21 325 *e*P **P** **12 26 55.3 +1.5**
GTA PcP **PcP** **12 28 22.3 +1.3**
GTA pmax pmax
comp=Z,9.0nm,1.3s
ULN Ulaanbaatar 51.23 338 **P** **12 27 16.6 -0.1**
SONM Songino Array 51.45 337 P **P** **12 27 17.2 -1.1**
comp=Z,2.2nm,0.7s,baz=156,slow=7.1,SNR=4.7
SONM PcP **PcP** **12 28 31.3 -1.3**
comp=Z,1.4nm,0.7s,baz=152,slow=3.8,SNR=4.1
comp=Z,2.2nm,0.7s
PETK Petropavlovsk- 55.33 18 P **P** **12 27 46.6 0.0**
comp=Z,7.2nm,0.9s,baz=209,slow=11,SNR=4.8
comp=Z,7.2nm,0.9s
HYBB Hyderabad (bro 55.61 290 *e*P **P** **12 27 52.0 +2.7**
HYBB *e*PcP **PcP** **12 28 48.6 -0.4**
WMQ Urumqi 58.06 323 *e*P **P** **12 28 07.6 +1.3**
WMQ sP pwP 12 28 15.3 +0.3
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ LR LR
comp=Z,4μm,17.1s
WMQ LR LR
comp=Z,3μm,21.7s
WMQ LR LR
comp=Z,4μm,24.9s
YAK Yakutsk 60.35 358 P **P** **12 28 19.7 -1.9**
comp=Z,16nm,0.7s,baz=215,slow=2.6,SNR=3.0
comp=Z,16nm,0.7s
MKAR Makanchi Array 62.87 323 P **P** **12 28 38.6 -0.4**
comp=Z,14nm,0.7s,baz=118,slow=7.8,SNR=22
comp=Z,14nm,0.7s
MKAR Makanchi Array 62.87 323 **P** **12 28 38.4 -0.6**
SEY Seymchan 62.91 10 P **P** **12 28 38.5 -0.3**
comp=Z,8.8nm,0.9s,baz=198,slow=6.4,SNR=11
comp=Z,8.8nm,0.9s
MAKZ Makanchi 63.06 323 **P** **12 28 39.3 -0.9**
KSH Kashi 63.91 314 P **P** **12 28 48.3 +2.1**
KSH sP pwP 12 28 55.3 +0.4
KSH pmax pmax
comp=Z,12nm,0.9s
KDJ Kajisay 64.06 317 P **P** **12 28 46.6 -0.6**
KDJ IAmb IAmb 12 28 48.4
comp=Z,12nm,0.8s
ZAA0 Zalesovo Array 65.35 331 IAmb IAmb 12 28 55.1
comp=Z,10nm,0.9s
ZALV Zalesovo Beam 65.35 331 P **P** **12 28 53.7 -1.4**
comp=Z,5.9nm,0.7s,baz=107,slow=5.6,SNR=12
comp=Z,5.9nm,0.7s
ZALV Zalesovo Beam 65.35 331 P **P** **12 28 54.4 -0.7**
KURK Kurchatov 66.89 326 **P** **12 29 04.4 -0.7**
KURBB Kurchatov Arra 66.90 326 P **P** **12 29 04.4 -0.7**
comp=Z,22nm,0.8s,baz=119,slow=5.8,SNR=25
comp=Z,22nm,0.8s
KK31 Karatay Array 69.00 316 P **P** **12 29 17.9 -0.7**
KK31 IAmb IAmb 12 29 19.3
comp=Z,10.0nm,0.9s
KKAR Karatay Array 69.00 316 **P** **12 29 17.8 -0.8**
TIXI Tiksi 70.01 359 P **P** **12 29 22.7 -1.5**
comp=Z,1.9nm,0.3s,baz=274,slow=0.7,SNR=4.2
comp=Z,1.9nm,0.3s
TIXI Tiksi 70.01 359 P **P** **12 29 23.7 -0.5**
TIXI IAmb IAmb 12 29 37.1
comp=Z,26nm,1.8s
BVAR Borovoye Array 72.49 326 P **P** **12 29 38.9 -0.7**
comp=Z,19nm,0.7s,baz=114,slow=8.0,SNR=21
comp=Z,19nm,0.7s
AB31 Akbulak array 77.70 320 IAmb IAmb 12 30 10.2
comp=Z,9.3nm,0.9s
ABKAR Akbulak array 77.70 320 P **P** **12 30 08.4 -1.3**
AKTO Aktyubinsk 79.16 321 P **P** **12 30 16.6 -1.2**
comp=Z,5.2nm,0.9s,baz=108,slow=4.0,SNR=4.7
comp=Z,5.2nm,0.9s
ARTI Arti 80.12 327 P **P** **12 30 20.4 -2.5**
comp=Z,3.3nm,0.8s,baz=143,slow=2.4,SNR=3.5
comp=Z,3.3nm,0.8s
G19K Purcell Mounta 80.57 23 IAmb IAmb 12 31 29.3
comp=Z,17nm,1.4s
VNDA Vanda 80.59 174 P **P** **12 30 24.1 -0.9**
comp=Z,4.1nm,0.7s,baz=322,slow=5.8,SNR=13
comp=Z,4.1nm,0.7s
VNDA Vanda 80.59 174 **P** **12 30 24.5 -0.5**
IMAR Indian Mountai 81.83 23 P **P** **12 30 31.7 -0.1**
I23K Minto, Yukon-K 83.43 25 P **P** **12 30 40.2 +0.1**
I23K IAmb IAmb 12 30 41.8
comp=Z,23nm,1.5s
WRH Wood River Hil 83.85 25 P **P** **12 30 41.9 -0.4**
WRH IAmb IAmb 12 30 42.8
comp=Z,14nm,1.2s
E23K Chandalar 83.88 22 IAmb IAmb 12 30 44.6
comp=Z,21nm,1.3s
H24K Noodor Dome 84.16 24 IAmb IAmb 12 30 47.4
comp=Z,22nm,1.5s
D24K Happy Valley 84.37 21 IAmb IAmb 12 30 46.2
comp=Z,9.7nm,1.0s
ILAR Eielson Array 84.41 25 P **P** **12 30 43.1 -2.0**
comp=Z,2.0nm,0.8s,baz=251,slow=4.9,SNR=11
comp=Z,2.0nm,0.8s
F24K Squaw Lake 84.43 22 IAmb IAmb 12 30 49.9
comp=Z,30nm,1.9s
BMAR Burnt Mountain 85.68 23 P **P** **12 30 51.2 -0.3**
BELG Belogornoye 85.84 322 P **P** **12 30 51.9 -0.7**
comp=Z,34nm,0.9s,baz=125,slow=4.2,SNR=5.2
comp=Z,34nm,0.9s
QSPA South Pole Qui 91.50 180 P **P** **12 31 21.8 +2.4**
comp=Z,4.9nm,0.8s,baz=320,slow=0.7,SNR=10.0
QSPA South Pole Qui 91.50 180 P **P** **12 31 20.1 +0.8**
QSPA IAmb IAmb 12 31 23.4
comp=Z,13nm,1.1s
SYO Syowa Base 92.65 201⇑ *e*P **P** **12 31 26.2 +1.8**
ARCES ARCESS Array B 94.54 340 P **P** **12 31 30.9 -2.3**
comp=Z,0.8nm,0.6s,baz=77,slow=4.9,SNR=5.3
comp=Z,0.8nm,0.6s
CFA Coronel Fontan 144.10 148 PKP **PKPab** **12 37 47.2 +0.3**
comp=Z,3.3nm,0.7s,baz=230,slow=3.4,SNR=8.3
LCO Las Campanas 144.66 143 **PKPab** **12 37 49.5 +0.1**
AC04 Llanos de Chal 145.01 141 **PKPbc** **12 37 50.0 -0.4**
PB14 IPOC Station P 147.90 137 **PKPbc** **12 37 59.2 -0.2**
CPUP Villa Florida 153.51 159 PKPbc **PKPbc** **12 38 11.5 -0.9**
comp=Z,1.1nm,0.8s,baz=216,slow=14,SNR=4.0

JMA 23 12:18:50.3±0.3, 47°N±2°×14°E±°, h400km, MV3.5/18, SOUTHERN SEA OF OKHOTSK, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**2.59**	**230**	*e*P	Pn	12 19 50.6	+0.3
JWK2	**Keihoku**	**2.78**	**243**	*e*P	Pn	12 19 51.8	+0.1
JWK2				*e*S	S	12 20 40.2	-1.1
JTKR	**Abashiri--Toko**	**2.88**	**202**	*e*P	Pn	12 19 52.4	-0.2
NEM2	**Nemuro 2**	**3.29**	**176**	P	Pn	12 19 56.3	+0.3
NEM2				*e*S	S	12 20 48.8	-0.4
JAK	**Akkeshi**	**3.69**	**188**	*e*P	Pn	12 19 59.8	+0.3
JAK				*e*S	S	12 20 54.0	-1.5
JCH	**Churui**	**4.29**	**200**	*e*P	Pn	12 20 04.9	-0.2
JCH				*e*S	S	12 21 02.9	-3.0
JBT2	**Biratori 2**	**4.43**	**210**	*e*P	Pn	12 20 07.5	+0.9
JBT2				*e*S	S	12 21 07.7	-0.8
JNBK	**Urakawa-nobuka**	**4.76**	**204**	*e*P	Pn	12 20 10.2	+0.3
JOT	**Ohata**	**6.13**	**212**	P	Pn	12 20 24.5	+0.2
JSI2	**Shiura 2**	**6.65**	**215**	*e*P	P	12 20 30.8	+0.2
JSI2				*e*S	S	12 21 46.7	-4.8

NEIC 23 12:24:33.2±1.6, 41°41N±0°03×105°50W±0°02, h5km±2km, mb_Lg2.0/8, ML2.8/40, Error ellipse: s-maj=5.1km s-min=3.0km az=13.0, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K22A	**Casper**	**1.45**	**329**		Pn	12 25 00.2	-0.1
K22A				IAML		12 25 21.4	
186nm,0.2s							
HAYD	**Hayden**	**1.60**	**237**		Pb	12 25 03.4	0.0
HAYD				IAML		12 25 25.4	
comp=E,71nm,0.3s							
HAYD				IAML		12 25 26.1	
comp=N,70nm,0.3s							
O20A	**White River Ci**	**2.44**	**239**	Pn	Pn	12 25 13.2	-0.7
Q24A	**Divide**	**2.46**	**174**		Pn	12 25 12.6	-1.7
Q24A				IAmb_Lg		12 25 55.9	
comp=Z,4.3nm,0.7s							
OGNE	**Ogallala**	**2.66**	**99**	Pn	Pn	12 25 16.3	-0.6
RSSD	**Black Hills**	**2.92**	**21**	Pn	Pn	12 25 20.4	-0.1
RSSD				IAmb_Lg		12 26 08.4	
comp=Z,4.6nm,0.8s							
KSCO	**Kaye Shedlock'**	**3.25**	**136**	IAmb_Lg		12 26 21.0	
comp=Z,6.7nm,0.8s							
PD31	**Pinedale Array**	**3.31**	**296**		Pn	12 25 25.6	-0.2
PDAR	**Pinedale Array**	**3.31**	**296**	Pn	Pn	12 25 25.2	-0.7
BW06	**Boulder Array**	**3.31**	**296**		Pn	12 25 25.6	-0.2
PV04	**Paradox Valley**	**3.99**	**222**	Pn	Pn	12 25 35.2	0.0
PV04				IAML		12 26 40.6	
comp=E,17nm,3.6s							
PV11	**David Mesa, Pa**	**4.05**	**221**		Pn	12 25 37.2	+1.2
PV02	**Paradox Valley**	**4.05**	**219**	Pn	Pn	12 25 35.9	-0.2
PV02				IAML		12 26 43.5	
comp=E,16nm,0.6s							
LOHW	**Long Hollow**	**4.37**	**302**	Pn	Pn	12 25 40.6	+0.2
LOHW				IAML		12 26 46.7	
comp=E,15nm,4.9s							
LOHW				IAML		12 28 13.1	
comp=E,11nm,4.6s							

*IDC **23** 12:26:55.7±1.0, 1.73N×133.21E, h0km, mb4.2/11, mbtmp4.3/11, Error ellipse: s-maj=42.0km s-min=16.2km az=82.0*
*DJA **23** 12:26:55.3±0.7, 2.N±6.×13.3E±°, h10km, M4.9/13, mb4.8/8, MLv5.0/13*
*NEIC **23** 12:26:58.7±1.1, 1.65N±0.08×132.9E±0.1, h10km±1km, mb4.5/22, Error ellipse: s-maj=23.0km s-min=10.1km az=66.0*

ISC 23 12:27:01.6±0.5, 1.59N±0.06×132.85E±0.10, h35km, n65, σ1°42/64, mb4.4/26, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**2.91**	**213**	P	Pn	**12 27 42.7**	**-2.7**
BAKI	**Biak**	**4.28**	**130**	P	Pn	**12 28 00.9**	**-3.4**
FAKI	**Fak Fak**	**4.52**	**188**		Pn	**12 28 07.3**	**-0.3**
FAKI	**Fak Fak**	**4.52**	**188**	P	Pn	**12 28 06.1**	**-1.5**
TNTI	**Ternate**	**5.54**	**262**		Pn	**12 28 21.1**	**-0.5**
TNTI	**Ternate**	**5.54**	**262**	P	Pn	**12 28 20.5**	**-1.1**
0.4nm43nm,0.8s							
MSAI	**Masohi**	**6.28**	**219**	P	Pn	**12 28 31.4**	**-0.4**
0.5nm62nm,0.6s							
BNDI	**Bandanaira**	**6.75**	**206**	P	Pn	**12 28 37.4**	**-0.8**
0.6nm97nm,0.7s							
NLAI	**Namlea**	**7.49**	**230**	P	Pn	**12 28 48.5**	**+0.1**
0.4nm38nm,1.1s							
SGSI	**Sangihe**	**7.60**	**286**	P	Pn	**12 28 46.8**	**-3.1**
SANI	**Sanana**	**7.75**	**242**	P	Pn	**12 28 50.4**	**-1.6**
TOLI2	**Tolitoli**	**12.07**	**268**		Pn	**12 29 50.3**	**-0.9**
SOEI	**Soe**	**14.14**	**217**		Pn	**12 30 18.1**	**-1.6**
MTN	**Manton Dam**	**14.44**	**187**	Pn	Pn	**12 30 22.6**	**-1.1**
PMG	**Port Moresby**	**17.96**	**128**	P	P	**12 31 08.9**	**-0.2**
COEN	**Coen**	**18.53**	**147**	P	Pn	**12 31 16.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**20.81**	**200**	P	P	**12 31 40.8**	**+0.6**
3.1nm,0.7s,baz=26,slow=10,SNR=5.5							
3.1nm,0.7s							
WB0	**Warramunga Arr**	**21.28**	**176**		P	**12 31 45.7**	**+0.5**
WB0				IAmb	IAmb	12 31 48.7	
comp=Z,26nm,1.4s							
WRA	**Warramunga Arr**	**21.45**	**176**	P	P	**12 31 47.3**	**+0.3**
comp=Z,9.4nm,0.8s,baz=358,slow=11,SNR=39							
WRA				S	S	**12 35 43.4**	**+0.1**
comp=Z,0.5nm,0.9s,baz=356,slow=19,SNR=2.5							
comp=Z,9.4nm,0.8s							
WRA	**Warramunga Arr**	**21.45**	**176**		P	**12 31 45.3**	**-1.8**
WB2	**Warramunga Arr**	**21.45**	**176**	P	P	**12 31 47.9**	**+0.8**
WB2				IAmb	IAmb	12 31 53.0	
comp=Z,15nm,0.8s							
AS31	**Alice Springs**	**25.13**	**178**		P	**12 32 25.1**	**+1.6**
ASAR	**Alice Springs**	**25.13**	**178**	P	P	**12 32 23.9**	**+0.4**
comp=Z,2.5nm,0.6s,baz=357,slow=9.9,SNR=46							
ASAR				S	S	**12 36 44.0**	**-2.2**
comp=Z,0.2nm,0.6s,baz=351,slow=10.0,SNR=2.1							
comp=Z,2.5nm,0.6s							
ASAR	**Alice Springs**	**25.13**	**178**	P	P	**12 32 23.8**	**+0.2**
JNU	**Nakatsue**	**31.42**	**357**	P	P	**12 33 18.4**	**-1.2**
comp=Z,8.0nm,0.8s,baz=153,slow=6.4,SNR=4.1							
comp=Z,8.0nm,0.8s							
NJ2	**Nanjing**	**33.05**	**338**	*e*P	P	**12 33 34.9**	**+1.1**
NJ2				pmax	pmax		
comp=Z,9.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**37.23**	**299**	P	P	**12 34 12.3**	**+2.2**
comp=Z,1.7nm,0.4s,baz=118,slow=7.2,SNR=4.8							
comp=Z,1.7nm,0.4s							
H11N1	**WAKE ISLAND Hy**	**37.85**	**59**	T	T	13 14 15.5	
baz=245,slow=75							
H11N2	**WAKE ISLAND Hy**	**37.87**	**59**	T	T	13 14 12.7	
baz=245,slow=75							
H11N3	**WAKE ISLAND Hy**	**37.87**	**59**	T	T	13 14 15.7	
baz=245,slow=75							
PZH	**PanZhiHua**	**38.81**	**312**	P	P	**12 34 24.3**	**+0.8**
HHC	**Hu-ho-hao-te**	**43.56**	**336**	*e*P	P	**12 35 03.1**	**+0.7**
LZH	**Lanzhou**	**43.59**	**325**	*e*P	P	**12 34 58.6**	**-4.1**
LZH				sP	pP	12 35 04.8	-6.8
LZH				pmax	pmax		
comp=Z,15nm,1.0s							
EVN	**Everest**	**51.19**	**305**	P	P	**12 36 02.2**	**-0.3**
EVN				IAmb	IAmb	12 36 06.6	
comp=Z,3.6nm,0.8s							
ULN	**Ulaanbaatar**	**51.21**	**338**	P	P	**12 36 01.9**	**+0.1**
ULN				IAmb	IAmb	12 36 03.6	
comp=Z,5.5nm,1.1s							
SONM	**Songino Array**	**51.44**	**337**	P	P	**12 36 03.2**	**-0.2**
comp=Z,0.7nm,0.8s,baz=160,slow=9.5,SNR=5.3							
comp=Z,0.7nm,0.8s							
WMQ	**Urumqi**	**58.04**	**323**	*e*P	P	**12 36 54.0**	**+2.7**
WMQ				pmax	pmax		
comp=Z,15nm,1.1s							
MKAR	**Makanchi Array**	**62.84**	**323**	P	P	**12 37 24.1**	**0.0**
comp=Z,3.0nm,0.7s,baz=121,slow=8.0,SNR=14							
comp=Z,3.0nm,0.7s							
MKAR	**Makanchi Array**	**62.84**	**323**	P	P	**12 37 23.9**	**-0.1**
MAKZ	**Makanchi**	**63.04**	**323**	P	P	**12 37 25.6**	**+0.3**
KSH	**Kashi**	**63.89**	**314**	P	P	**12 37 35.1**	**+3.9**
KSH				pmax	pmax		
comp=Z,3.0nm,1.0s							
ZAA0	**Zalesovo Array**	**65.33**	**331**	P	P	**12 37 39.4**	**-0.8**
ZAA0				IAmb	IAmb	12 37 40.2	
comp=Z,2.6nm,0.8s							
ZALV	**Zalesovo Beam**	**65.33**	**331**	P	P	**12 37 38.9**	**-1.2**
comp=Z,2.3nm,0.7s,baz=95,slow=7.1,SNR=11							
comp=Z,2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**65.33**	**331**	P	P	**12 37 39.2**	**-0.9**
ARSB	**Arslanbob**	**66.66**	**315**	P	P	**12 37 49.8**	**+0.7**
ARSB				IAmb	IAmb	12 37 53.6	
comp=Z,5.4nm,1.2s							
KURK	**Kurchatov**	**66.87**	**326**	P	P	**12 37 50.4**	**+0.3**
KURBB	**Kurchatov Arra**	**66.88**	**326**	P	P	**12 37 50.1**	**0.0**
comp=Z,5.9nm,0.8s,baz=119,slow=5.8,SNR=51							
comp=Z,5.9nm,0.8s							
GAR	**Garm**	**67.88**	**312**	P	P	**12 37 57.0**	**+0.1**
KK31	**Karatay Array**	**68.98**	**316**	P	P	**12 38 03.5**	**0.0**
KK31				IAmb	IAmb	12 38 13.0	
comp=Z,3.3nm,1.1s							
KKAR	**Karatay Array**	**68.98**	**316**	P	P	**12 38 03.7**	**+0.1**
BVAR	**Borovoye Array**	**72.47**	**326**	P	P	**12 38 24.7**	**+0.1**
comp=Z,5.6nm,0.8s,baz=114,slow=7.3,SNR=30							
comp=Z,5.6nm,0.8s							
AB31	**Akbulak array**	**77.68**	**320**	P	P	**12 38 54.2**	**-0.5**
ABKAR	**Akbulak array**	**77.68**	**320**	P	P	**12 38 53.1**	**-1.5**
VNDA	**Vanda**	**80.61**	**174**	P	P	**12 39 10.6**	**+0.4**
VNDA				IAmb	IAmb	12 39 29.4	
comp=Z,5.3nm,1.4s							
D20K	**Etivluk River**	**81.53**	**20**	P	P	**12 39 15.6**	**+0.3**
D20K				IAmb	IAmb	12 39 16.1	
comp=Z,10.0nm,1.2s							
IMAR	**Indian Mountai**	**81.83**	**23**	P	P	**12 39 17.2**	**+0.3**
SKT	**Skwentna**	**81.86**	**28**	P	P	**12 39 16.3**	**-0.9**
SKT				IAmb	IAmb	12 39 26.6	
comp=Z,14nm,1.4s							
B21K	**Ikpikpuk River**	**82.48**	**20**	P	P	**12 39 20.8**	**+0.6**
E22K	**Anaktuvuk Pass**	**83.09**	**21**	P	P	**12 39 23.8**	**+0.3**
E22K				IAmb	IAmb	12 39 25.4	
comp=Z,7.1nm,1.2s							
ILAR	**Eielson Array**	**84.41**	**25**	P	P	**12 39 28.4**	**-1.8**
comp=Z,1.1nm,0.8s,baz=246,slow=5.0,SNR=13							
comp=Z,1.1nm,0.8s							
BMAR	**Burnt Mountain**	**85.68**	**23**	P	P	**12 39 37.0**	**+0.4**
BCAR	**Beaver Creek A**	**86.48**	**27**	P	P	**12 39 41.6**	**+0.9**
QSPA	**South Pole Qui**	**91.51**	**180**	P	P	**12 40 07.3**	**+2.9**
comp=Z,0.8nm,0.6s,baz=256,slow=1.7,SNR=6.1							
QSPA	**South Pole Qui**	**91.51**	**180**	P	P	**12 40 05.6**	**+1.2**
QSPA				IAmb	IAmb	12 40 06.0	
comp=Z,3.2nm,1.2s							
LCO	**Las Campanas**	**144.69**	**143**	PKPdf	**PKPdf**	**12 46 36.0**	**+0.2**

*IDC **23** 12:34:15.5±1.3, 8.73S×131.28E, h0km, mb4.0/4, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=53.1km s-min=23.2km az=81.0*

ISC 23 12:34:18.9±1.1, 9.10S±0.1×131.7E±0.2, h35km, n7, σ1°05/7, mb3.9/4, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.76**	**212**	Pn	**Pn**	**12 36 50.6**	**+0.1**
1.3nm,0.3s,baz=31,slow=13,SNR=24							
FITZ				Sn	**Sn**	**12 38 49.8**	**0.0**
1.9nm,0.3s,baz=293,slow=20,SNR=10							
3.9nm,0.3s							
WRA	**Warramunga Arr**	**11.17**	**167**	Pn	Pn	12 37 01.7	+5.5
0.2nm,0.3s,baz=344,slow=14,SNR=6.0							
WRA				Sn	Sn	12 39 14.5	+15
0.6nm,0.3s,baz=348,slow=24,SNR=8.5							
0.2nm,0.3s							
ASAR	**Alice Springs**	**14.73**	**172**	Pn	**P**	**12 37 50.4**	**-0.1**
0.1nm,0.3s,baz=354,slow=13,SNR=7.1							
0.1nm,0.4s							
MKAR	**Makanchi Array**	**70.80**	**326**	P	P	**12 45 30.6**	**-1.3**
0.8nm,0.8s,baz=114,slow=6.7,SNR=3.1							

0.8nm,0.8s
KURBB **Kurchatov Arra** 75.07 328 P P 12 45 56.5 -0.7
1.3nm,0.8s,baz=117,slow=6.0,SNR=9.6
1.3nm,0.8s
BVAR **Borovoye Array** 80.63 328 P P 12 46 29.5 +1.5
1.0nm,0.6s,baz=114,slow=7.3,SNR=6.9
1.0nm,0.6s
ILAR **Eielson Array** 94.46 25 P P 12 47 35.1 0.0
0.5nm,1.0s,baz=232,slow=4.4,SNR=2.2
0.5nm,1.0s

IDC 23 12:40:26.1±3.8, 1.02N×133.98E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=292.5km s-min=23.0km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	21.09	171	P	P	12 45 12.8	+0.4
	0.4nm,0.6s,baz=354,slow=11,SNR=4.7						
	0.4nm,0.6s						
ASAR	**Alice Springs**	24.70	174	P	P	12 45 48.9	-0.3
	0.3nm,0.5s,baz=355,slow=9.1,SNR=6.0						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	62.20	324	P	P	12 50 50.7	+1.1
	2.1nm,0.9s,baz=111,slow=8.0,SNR=3.9						
	2.1nm,0.9s						
KURBB	**Kurchatov Arra**	66.31	327	P	P	12 51 15.9	-0.4
	0.6nm,0.7s,baz=117,slow=6.3,SNR=4.1						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	71.90	326	P	P	12 51 50.4	-0.7
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.1						
	0.3nm,0.5s						

IDC 23 12:42:51.1±4.0, 6.44N×133.34E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=236.0km s-min=25.6km az=73.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	26.23	178	P	P	12 48 27.9	-0.2
	0.1nm,0.3s,baz=356,slow=12,SNR=3.6						
	0.1nm,0.3s						
ASAR	**Alice Springs**	29.93	179	P	P	12 49 01.3	+0.2
	0.3nm,0.8s,baz=356,slow=11,SNR=5.0						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	59.32	322	P	P	12 52 56.4	+1.4
	0.2nm,0.3s,baz=118,slow=8.7,SNR=1.5						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	63.21	324	P	P	12 53 19.8	-1.4
	0.2nm,0.6s,baz=115,slow=6.3,SNR=2.7						
	0.2nm,0.6s						

*IDC **23** 12:50:37.9±0.7, 44.37S×82.09W, h0km, mb4.3/11, mbtmp4.3/13, ML3.9/2, MS4.7/9, Error ellipse: s-maj=24.2km s-min=17.3km az=105.0*

*GCMT **23** 12:50:39.8±0.3, 44.26S±0.03×82.20W×0.03, h19km±1km, MW5.4/63, Moment Tensor Solution. s20,c21; s63,c88; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.02±.11; $M_{\theta\theta}$-0.07±.08; $M_{\phi\phi}$1.08±.07; $M_{r\theta}$-0.19±.18; $M_{\theta\phi}$-0.91±.05; $M_{\phi r}$-0.20±.12; Best double couple: $M_0$1.36400×10^{17} NP1:ϕ_s128.00000°, δ48.00000°, λ-124.00000°. NP2:ϕ_s353.00000°, δ52.00000°, λ-58.00000°. Principal axes: T 1.5860, Plg2.0000°, Azm61.0000°; N -0.4490, Plg24.0000°, Azm152.0000°; P -1.1420, Plg65.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 12:50:40.8, 44.67S×81.62W, h12km, Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.59; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$0.59; $M_{r\theta}$-0.91; $M_{\theta\phi}$-0.20; $M_{\phi r}$-0.16; Fault plane solution: $M_0$1.12000×10^{17} NP1: ϕ_s353.12000°, δ32.12000°, λ-31.81000°. NP2: ϕ_s110.83000°, δ73.73000°, λ-118.08000°. Principal axes: T 0.7112, Plg24.0000°, Azm222.0000°; N 0.5758, Plg27.0000°, Azm119.0000°; P -1.2870, Plg53.0000°, Azm347.0000°;*

*NEIC **23** 12:50:40.8±2.2, 44.27S±0.08×81.9W±0.1, h10km±1km, mb5.0/178, Mww5.3/16, Mwr5.4(GUC) Error ellipse: s-maj=16.4km s-min=13.3km az=266.0*

*NEIC **23** 12:50:40.8, 44.27S×81.90W, h12km*

*GUC **23** 12:50:42.0, 44.18S×81.71W, h15km, MW5.4*

ISC 23 12:50:40.1±0.4, 44.29S±0.06×82.06W±0.09, h10km, n194, σ1s33/105, mb5.0/89, MS4.8/6, 2C-6D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO07	**Milladeo Hill,**	6.19	82	Pn	Pn	12 52 09.1	-2.5
MGDN	**Magdalena**	6.54	96	*e*P	Pn	12 52 16.2	-0.1
AY01	**Puyuhuapi**	6.75	94	Pn	Pn	12 52 16.9	-2.1
AY03	**Cochrane**	7.25	117		Pn	12 52 26.4	+0.4
LL01	**San Ignacio de**	7.29	78		Pn	12 52 24.4	-2.0
LL02	**Futaleuf**	7.47	85		Pn	12 52 27.5	-1.6
LR05	**Currie**	8.48	65		Pn	12 52 41.1	-1.9
LR03	**Panguipulli**	8.60	61	Pn	Pn	12 52 43.3	-1.2
PLCA	**Paso Flores**	9.21	71	Pn	Pn	12 52 50.9	-2.1
	0.4nm,0.3s,baz=246,slow=11,SNR=12						
PLCA				LR	LR	12 55 59.0	
	comp=Z,7μm,19.7s,baz=271,slow=35						
	14nm,1.2s						
PLCA	**Paso Flores**	9.21	71	Pn	Pn	12 52 51.2	-1.7
PLCA	**Paso Flores**	9.21	71	*e*P	Pn	12 52 51.5	-1.4
GO09	**Cerro Castillo**	9.56	140	Pn	Pn	12 52 58.4	+0.7
H03S1	**Juan Fernandez**	10.71	14	T	T	13 04 26.6	
	baz=191,slow=73,SNR=76						
H03S2	**Juan Fernandez**	10.71	14	T	T	13 04 23.4	
	baz=191,slow=73,SNR=88						
H03S3	**Juan Fernandez**	10.73	14	T	T	13 04 26.4	
	baz=191,slow=73,SNR=7787						
BI02	**San Fabin de**	11.19	51	Pn	Pn	12 53 17.8	-2.3
BO02	**Sierra Bellavi**	12.86	46		Pn	12 53 40.9	-2.0
MT01	**Popeta**	13.36	42		Pn	12 53 48.7	-0.9
MT09	**Talagante**	13.55	43		Pn	12 53 50.1	-2.4
USHA	**Ushuaia**	13.74	145	LR	LR	12 58 52.7	
	comp=Z,2μm,19.7s,baz=304,slow=36						
MT08	**Bocatoma Ro**	14.30	45		Pn	12 54 01.7	-1.1
VA06	**Catapilco**	14.41	39		P	12 54 10.7	-0.3
CO03	**El Pedregal**	16.14	38		Pn	12 54 27.6	+0.5
TRQA	**Tornquist**	16.33	75		Pn	12 54 30.4	+1.0
CFA	**Coronel Fontan**	16.67	45	Pn	P	12 54 35.2	-1.0
	0.2nm,0.3s,baz=210,slow=13,SNR=22						
CFA				LR	LR	13 00 02.3	
	comp=Z,2μm,20.7s,baz=180,slow=34						
	17nm,1.1s						
CO05	**La Serena**	16.71	35	P	P	12 54 36.0	-0.5
LCO	**Las Campanas**	17.73	34		P	12 54 48.5	+0.3
AC02	**Maricunga**	20.30	35	IAmb	IAmb	12 55 29.6	
	comp=Z,78nm,1.1s						
AC01	**Pan de Azucar**	20.34	31		P	12 55 16.1	-0.3
PB05	**IPOC Station P**	23.50	28	IAmb	IAmb	12 55 54.5	
	comp=Z,49nm,1.3s						
PB03	**IPOC Station P**	24.40	29	IAmb	IAmb	12 56 07.7	
	comp=Z,67nm,1.1s						
PB07	**IPOC Station P**	24.65	28	IAmb	IAmb	12 56 09.4	
	comp=Z,49nm,1.3s						
PB09	**IPOC Station P**	24.81	29	IAmb	IAmb	12 56 07.9	
	comp=Z,55nm,1.1s						
PB02	**IPOC Station P**	25.02	28	IAmb	IAmb	12 56 12.3	
	comp=Z,29nm,0.9s						
SMAI	**San Martin Ant**	25.16	167	P	P	12 56 06.4	+1.3
SMAI				IAmb	IAmb	12 56 22.5	
	comp=Z,76nm,1.8s						
PATCX	**Punta Patache**	25.40	27	P	P	12 56 07.8	+0.1
PATCX				IAmb	IAmb	12 56 13.2	
	comp=Z,33nm,1.0s						
PB01	**IPOC Station P**	25.42	28	IAmb	IAmb	12 56 16.2	
	comp=Z,36nm,1.2s						
PLTB	**Pedras Altas**	25.52	70	*e*P	P	12 56 11.4	+2.6
CPUP	**Villa Florida**	26.82	56	P	P	12 56 21.7	+1.2
	comp=Z,3.7nm,1.0s,baz=94,slow=8.7,SNR=7.1						
CPUP				LR	LR	13 06 57.9	
	comp=Z,1μm,19.5s,baz=96,slow=36						
	comp=Z,3.7nm,1.0s						
CPUP	**Villa Florida**	26.82	56		P	12 56 21.3	+0.8
VA02	**Isla de Pascua**	27.85	299	P	P	12 56 29.1	-0.6
PB18	**Visviri**	28.64	26	IAmb	IAmb	12 56 47.6	
	comp=Z,41nm,1.1s						
MURT	**Porto Murtinho**	30.28	50	*e*P	P	12 56 51.4	0.0
LPAZ	**La Paz**	30.30	27	P	P	12 56 53.8	+1.5
	comp=Z,7.7nm,1.0s,baz=194,slow=9.1,SNR=17						
	comp=Z,7.7nm,1.0s						
LPAZ	**La Paz**	30.30	27		P	12 56 52.3	+0.1
LPAZ				IAmb	IAmb	12 57 00.9	
	comp=Z,24nm,1.1s						
LPAZ	**La Paz**	30.30	27	*e*P	P	12 56 52.0	-0.2
AMBA	**Amambai (Brazi**	30.78	55	*e*P	P	12 56 57.3	+1.6
PTLB	**Pontes e Lacer**	34.70	41		P	12 57 31.2	+1.1
PTLB	**Pontes e Lacer**	34.70	41	*e*P	P	12 57 30.7	+0.6
PP1B	**Ponte de Pedra**	35.06	49	*e*P	P	12 57 34.7	+1.4
ITRB	**Iturama**	36.01	57	*e*P	P	12 57 42.6	+1.3
SALV	**Santo Antonio**	36.03	47	*e*P	P	12 57 42.2	+0.6
VILB	**Vilhena**	36.41	38	*e*P	P	12 57 45.9	+1.1
BELA	**Belgrano 2**	38.48	166	P	P	12 58 01.5	-0.3
BSCB	**Bom Sucesso**	39.57	65	*e*P	P	12 58 03.6	+0.4
PDRB	**Porto dos Gac**	39.17	42	*e*P	P	12 58 08.2	0.0
CLDB	**Colider**	40.26	42	*e*P	P	12 58 18.8	+1.6
BDFB	**Brasilia**	40.55	56	P	P	12 58 19.0	-0.7
	comp=Z,11nm,0.9s,baz=128,slow=2.1						
BDFB				LR	LR	13 15 34.2	
	comp=Z,2μm,18.6s,baz=308,slow=37						
	comp=Z,11nm,0.9s						
BDFB	**Brasilia**	40.55	56	P	P	12 58 20.4	+0.6
DIAM	**Diamantina, MG**	41.24	64	*e*P	P	12 58 27.1	+1.7
SNDB	**Serra Nova Dou**	41.64	49	*e*P	P	12 58 29.9	+1.3
VNA3	**Neumayer Olymp**	43.22	153	⇓P	P	12 58 40.0	-0.9
	comp=Z,9.6nm,0.9s						
JANB	**Januaria**	43.26	60	*e*P	P	12 58 43.8	+2.0
TEFE	**Tefe**	43.42	26	*e*P	P	12 58 43.5	+0.5
VNA1	**Neumayer--Stat**	43.71	152	⇑P	P	12 58 44.6	-0.1
	comp=Z,7.1nm,1.0s						
NPGB	**Novo Progresso**	43.81	40	*e*P	P	12 58 45.8	-0.4
VNA2	**Neumayer--Watz**	43.98	153	⇓P	P	12 58 46.1	-0.9
	comp=Z,5.3nm,0.7s,baz=281,slow=7.6						
OTAV	**Otavalo**	44.45	5	P	P	12 58 51.5	-0.3
OTAV	**Otavalo**	44.45	5	*e*P	P	12 58 52.7	+0.9
SDBA	**SAO DESIDERIO**	44.94	57	*e*P	P	12 58 55.9	+0.6
GUA01	**Guaratinga, BA**	44.99	66	*e*P	P	12 58 57.1	+1.4
SNAA	**Sanae**	45.36	154	⇓P	P	12 58 57.7	-0.4
	comp=Z,24nm,0.2s						
SNAA	**Sanae**	45.36	154	P	P	12 58 56.9	-1.2
	comp=Z,3.7nm,0.8s,baz=253,slow=5.5,SNR=11						
	comp=Z,3.7nm,0.8s						
SNAA	**Sanae**	45.36	154		P	12 58 57.6	-0.4
QSPA	**South Pole Qui**	45.95	180	P	P	12 59 02.8	-0.1
	comp=Z,2.2nm,0.9s,baz=174,slow=2.8,SNR=8.0						
	comp=Z,2.2nm,0.9s						
QSPA	**South Pole Qui**	45.95	180	P	P	12 59 04.0	+1.0
ITTB	**Itaituba**	46.01	38	*e*P	P	12 59 04.1	+0.4
CMC01	**Camacan, BA**	46.08	65	*e*P	P	12 59 05.9	+1.7
SMTB	**Santa Maria do**	46.24	51	*e*P	P	12 59 07.4	+1.8
TROLL	**Troll, Antarti**	46.97	155	⇓P	P	12 59 09.6	-1.1
	comp=Z,114nm,0.6s						
PRPB	**Parauapebas**	47.29	46	*e*P	P	12 59 15.0	+1.2
RKT	**Rikitea**	47.91	278	*e*LR	LR	13 12 49.0	
	comp=Z,4μm,26.8s						
BOAV	**Boa Vista**	50.31	28		P	12 59 36.6	-0.3
BOAV				IAmb	IAmb	12 59 44.3	
	comp=Z,17nm,1.1s						
BOAV	**Boa Vista**	50.31	28	*e*P	P	12 59 36.5	-0.5
VNDA	**Vanda**	52.38	194	P	P	12 59 50.9	-0.8
	comp=Z,3.6nm,1.2s,baz=129,slow=5.9,SNR=4.4						
VNDA				LR	LR	13 20 20.2	
	comp=Z,654nm,18.3s,baz=56,slow=34						
	comp=Z,3.6nm,1.2s						
VNDA	**Vanda**	52.38	194	P	P	12 59 52.8	+1.1
SDV	**Santo Domingo**	53.92	14	*e*P	P	13 00 04.3	+0.3
SOCE	**Pocosol**	54.46	357	P	P	13 00 08.4	+0.7
TBI	**Tubuai**	58.14	267	*e*LR	LR	13 17 28.1	
	comp=Z,2μm,28.5s						
TBI				*e*LR	LR	13 17 32.8	
	comp=Z,2μm,22.5s						
SYO	**Syowa Base**	59.12	159	⇑*i*P	P	13 00 36.6	-3.5
SYO	**Syowa Base**	59.12	159	⇓*e*pP	P	13 00 40.4	+0.3
TAOE	**Nuku Hiva Isla**	61.21	287	*e*LR	LR	13 18 55.1	
	comp=Z,661nm,30.4s						
PPT2	**Papeete2**	61.91	272	*e*LR	LR	13 19 11.1	
	comp=Z,419nm,22.0s						
PPT2				*e*LR	LR	13 19 19.1	
	comp=Z,563nm,34.0s						
RAR	**Rarotonga**	66.87	262	LR	LR	13 22 26.8	
	comp=Z,579nm,20.0s,baz=164,slow=29						
ZAIG	**Zacatecas**	69.32	340	P	P	13 01 49.4	+1.5
ZAIG				IAmb	IAmb	13 01 57.2	
	comp=Z,24nm,1.6s						
HPIG		74.10	338	IAmb	IAmb	13 02 24.8	
	comp=Z,19nm,1.2s						
TX31	**Lajitas Ar. Si**	75.89	341	IAmb	IAmb	13 02 29.7	
	comp=Z,39nm,2.0s						
TXAR	**Lajitas Array**	75.89	341	P	P	13 02 25.6	-1.0
	comp=Z,1.5nm,1.1s,baz=168,slow=8.7,SNR=9.4						
	comp=Z,1.5nm,1.1s						
JCT	**Junction City**	76.15	344	IAmb	IAmb	13 02 30.5	
	comp=Z,37nm,1.8s						
152A	**Waverly Hall**	76.63	358	IAmb	IAmb	13 02 37.7	
	comp=Z,18nm,1.2s						
ALPN	**Alpine**	76.88	341	IAmb	IAmb	13 02 45.2	
	comp=Z,27nm,1.5s						
GOGA	**Godfrey**	77.34	359	IAmb	IAmb	13 02 41.7	
	comp=Z,18nm,1.2s						
VHRN	**Van Horn**	77.59	340	P	P	13 02 36.6	+0.3
Y52A	**Lilburn**	77.80	358	IAmb	IAmb	13 02 44.4	
	comp=Z,19nm,1.1s						
MNTX	**Cornudas Mount**	78.56	340		P	13 02 40.9	-0.6
EPT	**El Paso**	78.92	339	P	P	13 02 44.3	+0.7
EPT				IAmb	IAmb	13 02 57.3	
	comp=Z,26nm,1.5s						
APMT	**Aspermont**	78.98	345		P	13 02 45.0	+1.2
WMOK	**Wichita Mounta**	80.11	346	IAmb	IAmb	13 02 57.1	
	comp=Z,31nm,1.6s						
FCAR	**Ozark Folk Cen**	80.32	352	IAmb	IAmb	13 02 50.5	
	comp=Z,32nm,1.9s						
U49A	**Red Boiling Sp**	80.49	357	IAmb	IAmb	13 02 57.9	
	comp=Z,30nm,1.5s						
T47A	**Sharon Grove**	81.03	356	IAmb	IAmb	13 03 00.5	
	comp=Z,17nm,1.2s						
S51A	**Beattyville**	81.56	359	IAmb	IAmb	13 03 04.0	
	comp=Z,16nm,1.1s						
MGMO	**Mountain Grove**	81.59	352	IAmb	IAmb	13 03 04.6	
	comp=Z,26nm,1.4s						
BOSA	**Boshof**	81.74	122	P	P	13 02 57.5	-1.7
	comp=Z,4.2nm,0.8s,baz=240,slow=1.6,SNR=5.4						
	comp=Z,4.2nm,0.8s						
S44A	**Carbondale**	81.86	354	IAmb	IAmb	13 03 05.8	
	comp=Z,18nm,1.1s						
SIUC	**Southern Illin**	81.88	354	IAmb	IAmb	13 03 00.6	
	comp=Z,23nm,1.2s						
ABQ	**Albuquerque**	81.92	340	IAmb	IAmb	13 03 07.4	
	comp=Z,16nm,1.4s						
ANMO	**Albuquerque**	81.92	340	P	P	13 03 00.4	+0.6
TASM	**ASL Pad, Albuq**	81.92	340	IAmb	IAmb	13 03 07.4	
	comp=Z,17nm,1.4s						
TASM	**ASL Pad, Albuq**	81.92	340	IAmb	IAmb	13 03 07.4	
	comp=Z,15nm,1.3s						
CCM	**Cathedral Cave**	82.38	353		P	13 03 01.1	-0.7
CCM				IAmb	IAmb	13 03 08.9	
	comp=Z,26nm,1.3s						
X16A	**Lo Mia Camp, P**	82.77	336	IAmb	IAmb	13 03 12.1	
	comp=Z,14nm,1.5s						
BLYC	**Blythe**	83.11	333	IAmb	IAmb	13 03 14.6	
	comp=Z,17nm,1.1s						
BC3	**Big Chuckawall**	83.32	332	IAmb	IAmb	13 03 15.6	
	comp=Z,18nm,1.3s						
TSUM	**Tsumeb**	83.46	110	LR	LR	13 35 16.3	
	comp=Z,533nm,20.3s,baz=136,slow=32						
T25A	**Trinidad**	83.54	342	IAmb	IAmb	13 03 15.8	
	comp=Z,21nm,1.5s						
PFO	**Pinyon Flats O**	83.62	332	P	P	13 03 10.1	+1.5
PFO				IAmb	IAmb	13 03 16.8	
	comp=Z,10nm,1.2s						
IRM	**Iron Mountain**	83.68	333	IAmb	IAmb	13 03 17.4	
	comp=Z,19nm,1.4s						
WUAZ	**Wupatki**	83.78	336	IAmb	IAmb	13 03 18.1	
	comp=Z,15nm,1.5s						
BELC	**Belle Mtn. Jos**	83.82	332	IAmb	IAmb	13 03 17.8	
	comp=Z,16nm,1.3s						
BFSC	**Mount Baldy Ra**	84.60	331	IAmb	IAmb	13 03 21.7	
	comp=Z,9.3nm,1.2s						
V12A	**Nelson**	85.03	334	IAmb	IAmb	13 03 23.9	
	comp=Z,13nm,1.2s						
DBIC	**Dimbokro**	85.54	76	P	P	13 03 17.7	-0.9
	comp=Z,6.9nm,1.1s,baz=187,slow=3.1,SNR=5.7						
	comp=Z,6.9nm,1.1s						
DBIC	**Dimbokro**	85.54	76		P	13 03 18.6	0.0
PV02	**Paradox Valley**	85.59	339	IAmb	IAmb	13 03 26.7	
	comp=Z,22nm,1.3s						
SHOC	**Shoshone, Teco**	85.64	333	IAmb	IAmb	13 03 27.0	
	comp=Z,17nm,1.3s						
LCMT	**Little Creek M**	85.72	335	IAmb	IAmb	13 03 31.6	
	comp=Z,17nm,1.9s						
PV16	**Nyswonger Mesa**	85.73	339	IAmb	IAmb	13 03 21.1	
	comp=Z,28nm,1.9s						
PV19	**Morning Glory**	85.75	339	IAmb	IAmb	13 03 26.7	
	comp=Z,22nm,1.4s						
PV20	**West Nyswonger**	85.77	339	IAmb	IAmb	13 03 26.8	
	comp=Z,18nm,1.3s						
WSHM	**Spangler Hills**	85.78	332	IAmb	IAmb	13 03 21.4	
	comp=Z,21nm,1.9s						
PV04	**Paradox Valley**	85.81	339	IAmb	IAmb	13 03 21.4	
	comp=Z,23nm,1.7s						
PV10	**Paradox Valley**	85.82	339	IAmb	IAmb	13 03 26.6	
	comp=Z,21nm,1.4s						
SHPR	**Sheep Range**	85.84	334	IAmb	IAmb	13 03 28.7	
	comp=Z,19nm,1.7s						
PV23	**Carpenter Ridg**	85.89	339	IAmb	IAmb	13 04 53.8	
	comp=Z,24nm,1.8s						
QSM	**Queen of Sheba**	85.90	332	IAmb	IAmb	13 03 21.8	
	comp=Z,32nm,1.9s						
CLC	**China Lake**	86.01	332	IAmb	IAmb	13 03 28.9	
	comp=Z,15nm,1.5s						
GWY	**Greenwater Val**	86.03	333	IAmb	IAmb	13 04 00.9	
	comp=Z,19nm,1.8s						
SZCU	**Shurtz Canyon**	86.21	336	IAmb	IAmb	13 03 25.4	
	comp=Z,25nm,1.5s						
CCUT	**Cedar City**	86.25	336	IAmb	IAmb	13 03 30.2	
	comp=Z,22nm,1.7s						
MTPU	**Mount Pierson**	86.36	337	IAmb	IAmb	13 03 24.6	
	comp=Z,23nm,2.0s						
WCT	**Wildcat Mounta**	86.57	333	IAmb	IAmb	13 03 32.2	
	comp=Z,14nm,1.2s						
TPNV	**Topopah Spring**	86.59	333	IAmb	IAmb	13 03 31.6	
	comp=Z,18nm,1.4s						
P17A	**Butcher Ranch,**	87.30	338	IAmb	IAmb	13 03 29.4	
	comp=Z,22nm,1.6s						
PSUT	**Pine Spring**	87.31	336	IAmb	IAmb	13 03 35.5	
	comp=Z,9.6nm,1.3s						
DSP	**Deep Springs**	87.54	332	IAmb	IAmb	13 03 31.4	
	comp=Z,14nm,1.6s						
R11B	**Troy Canyon, C**	87.66	334	IAmb	IAmb	13 03 36.7	
	comp=Z,8.2nm,1.2s						
SPR3	**Spring Creek 3**	87.88	335	IAmb	IAmb	13 03 37.9	
	comp=Z,15nm,1.2s						
RDMU	**Red Mountain**	88.03	339	IAmb	IAmb	13 03 38.1	
	comp=Z,13nm,1.4s						
ECSD	**EROS Data Cent**	88.59	349	IAmb	IAmb	13 03 40.0	
	comp=Z,14nm,1.2s						
NVAR	**Mina Array Bea**	88.61	332	P	P	13 03 33.3	+0.1
	comp=Z,1.2nm,0.8s,baz=168,slow=5.5,SNR=11						
	comp=Z,1.2nm,0.8s						
NVAR	**Mina Array Bea**	88.61	332		P	13 03 33.9	+0.8
WAKR	**Walker**	89.06	332	IAmb	IAmb	13 03 43.6	
	comp=Z,20nm,1.5s						
DZM	**Mont Dzumac**	89.10	240	*e*LR	LR	13 31 41.9	
	comp=Z,1μm,23.9s						
HWUT	**Hardware Ranch**	89.52	338	IAmb	IAmb	13 03 45.1	
	comp=Z,15nm,1.2s						
PNTR	**Pine Nut**	89.64	332	IAmb	IAmb	13 03 46.6	
	comp=Z,13nm,1.1s						
HVU	**Hansel Valley**	90.01	338	IAmb	IAmb	13 03 47.1	
	comp=Z,12nm,1.1s						
BW06	**Boulder Array**	90.10	340	IAmb	IAmb	13 03 47.5	
	comp=Z,10.0nm,1.2s						
PDAR	**Pinedale Array**	90.10	340	P	P	13 03 40.0	0.0
	comp=Z,0.7nm,0.6s,baz=160,slow=4.7,SNR=11						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	90.10	340		P	13 03 39.0	-1.0
BEKR	**Beckworth**	90.60	332	IAmb	IAmb	13 03 50.8	
	comp=Z,11nm,1.1s						
FXWY	**Fox Creek**	91.28	339	IAmb	IAmb	13 03 46.7	
	comp=Z,9.1nm,1.4s						
MOOW	**Moose Ponds**	91.31	340	IAmb	IAmb	13 03 48.1	
	comp=Z,16nm,1.9s						
FLWY	**Flagg Ranch**	91.61	340	IAmb	IAmb	13 03 50.4	
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	94.38	216	LR	LR	13 38 07.4	
	comp=Z,452nm,20.8s,baz=166,slow=30						
H11S2	**WAKE ISLAND Hyl**	17.79	269	T	T	15 18 00.2	
	baz=132,slow=76						
H11S1	**WAKE ISLAND Hyl**	17.81	269	T	T	15 17 58.2	
	baz=132,slow=76						
H11S3	**WAKE ISLAND Hyl**	17.81	269	T	T	15 17 58.0	
	baz=132,slow=76						
H11N3	**WAKE ISLAND Hyl**	18.44	270	T	T	15 18 46.6	
	baz=130,slow=74						
H11N1	**WAKE ISLAND Hyl**	18.45	270	T	T	15 18 48.7	
	baz=130,slow=74						
H11N2	**WAKE ISLAND Hyl**	18.46	270	T	T	15 18 47.4	
	baz=130						
ILGA	**Ilgaz**	133.74	71		PKPdf	13 09 56.3	-0.6
PETK	**Petropavlovsk-**	140.65	305	PKP	PKPdf	13 10 08.2	-0.8
	comp=Z,5.0nm,0.9s,baz=102,slow=2.6,SNR=4.2						
SEY	**Seymchan**	144.08	321	PKP	PKPbc	13 10 13.5	+0.7
	comp=Z,2.8nm,0.9s,baz=45,slow=1.4,SNR=3.9						
HYBB	**Hyderabad (bro**	148.63	142	*e*PKiKP	PKiKP	13 10 29.6	+0.5
MJAR	**Matsushiro Arr**	148.63	270	PKPbc	PKPdf	13 10 25.1	+1.7
	comp=Z,2.4nm,0.7s,baz=124,slow=1.5,SNR=4.4						
TIXI	**Tiksi**	148.78	342		PKPdf	13 10 23.9	+1.5
INU	**Inuyama**	148.94	267		P

MW5.4/63,Moment Tensor Solution. s20,c20; s63,c93; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.07±.03; $M_{\theta\theta}$0.19±.03; $M_{\theta\phi}$-0.26±.02; M_{rt}0.78±.07; $M_{\theta\theta}$-0.12±.02; $M_{\phi r}$-1.44±.06; Best double couple: $M_0$1.65800×10^{17} NP1:ϕ_s54.00000°,δ9.00000°, λ172.00000°. NP2:ϕ_s152.00000°,δ89.00000°,λ81.00000°. Principal axes: T 1.6630, Plg46.0000°, Azm53.0000°; N -0.0110, Plg9.0000°, Azm152.0000°; P -1.6530, Plg43.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*BGR **23** 12:58:17.4, 44°.97N×146°.25E, h33km, mb5.5, Ms5.8*

ISC 23 12:58:09.1±0.4, 43°.78N±0°.03×147°.30E±0°.03, h44km±2km, h44km:pP-P,n1403,σ1s63/1044,mb5.6/585,MS4.5/37, 57C-82D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SHO	**Shikotan**	**0.35**	**285**	*e*P		Pn	12 58 26.8	+8.6
SHO					AMB	AMB	12 58 27.8	
	139μm,0.6s							
SHO				*e*S		**Sn**	**12 58 32.9**	**+8.2**
SHO					A	A	12 58 34.5	
	619μm,0.4s							
SHO					A	A	12 58 34.5	
	390μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.07**	**284**	*d* iPN		**Pn**	**12 58 28.0**	**+0.4**
YUK				*i* S		**Sn**	**12 58 41.2**	**-0.1**
YUK					pmax	pmax		
	comp=Z,29μm,0.3s							
YUK					pmax	pmax		
	comp=N,4μm,0.2s							
YUK					pmax	pmax		
	comp=E,9μm,0.2s							
YUK					smax	smax		
	comp=E,284μm,0.4s							
YUK					smax	smax		
	comp=N,98μm,0.5s							
YUK					smax	smax		
	comp=E,366μm,1.0s							
YUK					smax	smax		
	comp=N,279μm,0.9s							
YUK	**Yuzh-Kuril'sk**	**1.07**	**284**	*i* P		**Pn**	**12 58 28.0**	**+0.4**
YUK					AMB	AMB	12 58 29.1	
	comp=N,29μm,0.3s							
YUK				*i* S		**Sn**	**12 58 41.2**	**-0.1**
YUK					A	A	12 58 41.9	
	comp=N,98μm,0.4s							
YUK					A	A	12 58 41.9	
	comp=N,284μm,0.4s							
NEM2	**Nemuro 2**	**1.20**	**250**	P		**Pn**	**12 58 29.1**	**-0.3**
NEM2				S		**Sn**	**12 58 43.2**	**-1.4**
NEM2	**Nemuro 2**	**1.20**	**250**	A		A	12 58 29.1	
	comp=N,98nm,1.0s,comp=E,95nm,1.2s							
NMR	**Nemuro--Hokkai**	**1.21**	**251**	⇓*i* PN		**Pn**	**12 58 29.1**	**-0.5**
NMR				*i* S		**Sn**	**12 58 43.2**	**-1.6**
NMR	**Nemuro--Hokkai**	**1.21**	**251**	*i* P		**Pn**	**12 58 29.1**	**-0.5**
NMR				*i* S		**Sn**	**12 58 43.2**	**-1.6**
GLVR	**Golovnino**	**1.29**	**269**	*e*PN		**Pn**	**12 58 31.3**	**+0.7**
GLVR				*i* S		**Sn**	**12 58 47.3**	**+0.6**
GLVR					pmax	pmax		
	comp=Z,29μm,0.4s							
GLVR					pmax	pmax		
	comp=N,5μm,0.3s							
GLVR					pmax	pmax		
	comp=E,4μm,0.1s							
GLVR					smax	smax		
	comp=N,289μm,0.5s							
GLVR					smax	smax		
	comp=E,73μm,0.4s							
GLVR	**Golovnino**	**1.29**	**269**	*e*P		**Pn**	**12 58 31.3**	**+0.7**
GLVR					AMB	AMB	12 58 32.3	
	comp=E,29μm,0.4s							
GLVR				*i* S		**Sn**	**12 58 47.3**	**+0.6**
GLVR					A	A	12 58 48.0	
	comp=E,29μm,0.5s							
GLVR					A	A	12 58 48.0	
	comp=E,73μm,0.5s							
KUR	**Kuril'sk**	**1.51**	**15**	*c* iPN		**Pn**	**12 58 34.3**	**+0.7**
KUR				*i* S		**Sn**	**12 58 52.3**	**+0.2**
KUR					pmax	pmax		
	comp=E,1μm,0.3s							
KUR					pmax	pmax		
	comp=E,3μm,0.3s							
KUR					smax	smax		
	comp=E,42μm,2.4s							
KUR					smax	smax		
	comp=N,31μm,4.1s							
KUR					smax	smax		
	comp=E,16μm,0.4s							
KUR					smax	smax		
	comp=N,12μm,0.5s							
KUR	**Kuril'sk**	**1.51**	**15**	*i* P		**Pn**	**12 58 34.3**	**+0.7**
KUR					AMB	AMB	12 58 36.4	
	comp=N,3μm,0.3s							
KUR				*i* S		**Sn**	**12 58 52.3**	**+0.2**
KUR					A	A	12 59 10.0	
	comp=N,12μm,0.5s							
KUR					A	A	12 59 10.0	
	comp=N,16μm,0.5s							
RUSJ	**Misakicho**	**1.52**	**283**	⇓*i* PN		**Pn**	**12 58 35.1**	**+1.4**
RUSJ				*i* S		**Sn**	**12 58 54.2**	**+1.9**
JRA	**Rausu**	**1.58**	**276**	P		**Pn**	**12 58 35.6**	**+1.0**
JRA	**Rausu**	**1.58**	**276**	A		A	12 58 35.6	
	comp=N,153nm,1.6s,comp=E,113nm,1.4s							
JNSB	**Nemuroshibetsu**	**1.66**	**271**	⇓P		**Pn**	**12 58 36.7**	**+1.0**
JNSB				⇓S		**Sn**	**12 58 56.9**	**+1.1**
JNSB	**Nemuroshibetsu**	**1.66**	**271**	A		A	12 58 36.7	
	comp=N,141nm,2.5s,comp=E,138nm,0.7s							
JKHN	**Kushirohamanak**	**1.71**	**247**	⇓P		**Pn**	**12 58 36.5**	**+0.1**
JKHN				⇓*e*S		**Sn**	**12 58 55.7**	**-1.2**
JKHN	**Kushirohamanak**	**1.71**	**247**	A		A	12 58 36.5	
	comp=N,107nm,0.8s,comp=E,108nm,4.1s							
JNK	**Nakash**	**1.88**	**265**	*i* P		**Pn**	**12 58 39.1**	**+0.3**
JNK	**Nakash**	**1.88**	**265**	A		A	12 58 39.1	
	comp=N,44nm,0.7s,comp=E,51nm,2.6s							
AKK	**Akkeshi**	**1.95**	**248**	*e*P		**Pn**	**12 58 39.4**	**-0.2**
JAK	**Akkeshi**	**2.05**	**248**	⇓*i*P		**Pn**	**12 58 41.1**	**0.0**
JAK				⇓S		**Sn**	**12 59 04.2**	**-1.2**
JAK	**Akkeshi**	**2.05**	**248**	A		A	12 58 41.1	
	comp=N,103nm,0.8s,comp=E,155nm,0.7s							
JTKR	**Abashiri--Toko**	**2.46**	**276**	⇓*i*P		**Pn**	**12 58 48.4**	**+1.7**
JTKR	**Abashiri--Toko**	**2.46**	**276**	A		A	12 58 48.4	
	comp=N,31nm,0.7s,comp=E,23nm,3.0s							
JAR	**Ashorobuto**	**2.61**	**261**	⇓*i*P		**Pn**	**12 58 49.9**	**+1.1**
JAR				⇓*e*S		**Sn**	**12 59 20.0**	**+0.7**
JAR	**Ashorobuto**	**2.61**	**261**	A		A	12 58 49.9	
	comp=N,61nm,0.8s,comp=E,70nm,0.7s							
JOB	**Onbets**	**2.67**	**252**	⇓*i*P		**Pn**	**12 58 50.3**	**+0.6**
JOB				⇓*e*S		**Sn**	**12 59 19.6**	**-1.1**
JOB	**Onbets**	**2.67**	**252**	A		A	12 58 50.3	
	comp=N,57nm,1.7s,comp=E,54nm,1.0s							
JMP	**Maruseppu**	**2.85**	**276**	⇓P		**Pn**	**12 58 54.2**	**+2.0**
JMP	**Maruseppu**	**2.85**	**276**	A		A	12 58 54.2	
	comp=N,44nm,0.7s,comp=E,16nm,0.9s							
JCH	**Churui**	**3.10**	**249**	⇓P		**Pn**	**12 58 55.4**	**-0.1**
JCH				⇓*e*S		**Sn**	**12 59 29.5**	**-1.9**
JCH	**Churui**	**3.10**	**249**	A		A	12 58 55.4	
	comp=N,49nm,1.8s,comp=E,31nm,0.8s							
JTHR	**Tokachihiroo**	**3.29**	**244**	A		A	12 58 59.0	
	comp=N,51nm,1.3s,comp=E,52nm,1.2s							
JKK2	**Kamakawa 2**	**3.29**	**273**	⇓*i*P		**Pn**	**12 59 00.4**	**+2.2**
JKK2	**Kamakawa 2**	**3.29**	**273**	A		A	12 59 00.4	
	comp=N,18nm,2.3s,comp=E,13nm,2.5s							
JKA	**Kamikawa-asahi**	**3.41**	**277**			**Pn**	**12 58 56.1**	**-3.6**
ASAJ	**Asahikawa**	**3.41**	**277**	Pn		**Pn**	**12 59 02.1**	**+2.4**
	comp=E,122nm,0.3s,baz=93,slow=11,SNR=453							
ASAJ					Sn	**Sn**	**12 59 47.6**	**+8.6**
	comp=E,266nm,0.3s,baz=16,slow=31,SNR=9.1							
ASAJ					LR	LR	13 00 26.7	
	comp=E,8μm,21.4s,baz=90,slow=43							
ASAJ	**Asahikawa**	**3.41**	**277**	PN		**Pn**	**12 58 56.2**	**-3.6**
ASAJ	**Asahikawa**	**3.41**	**277**	⇓*i*P		**Pn**	**12 59 02.2**	**+2.4**
JFR	**Furan**	**3.48**	**261**	⇓P		**Pn**	**12 59 02.6**	**+1.9**
JFR	**Furan**	**3.48**	**261**	A		A	12 59 02.6	
	comp=N,41nm,1.4s,comp=E,36nm,0.9s							
JEM	**Erimo**	**3.52**	**241**	A		A	12 59 02.1	
	comp=N,37nm,1.0s,comp=E,34nm,3.3s							
ERM	**Erimo**	**3.52**	**241**			**Pn**	**12 59 00.7**	**-0.5**
ERM	**Erimo**	**3.52**	**241**	PN		**Pn**	**12 59 00.7**	**-0.5**
JNBK	**Urakawa-nobuka**	**3.65**	**247**	P		**Pn**	**12 59 03.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**3.65**	**247**	A		A	12 59 03.2	
	comp=N,67nm,0.9s,comp=E,77nm,1.0s							
JAB	**Ashibetsu**	**3.69**	**267**	A		A	12 59 05.5	
	comp=N,26nm,2.1s,comp=E,21nm,2.8s							
JBT2	**Biratori 2**	**3.74**	**256**	A		A	12 59 05.7	
	comp=N,27nm,1.2s,comp=E,27nm,1.4s							
JSHD	**Hidakashinhida**	**3.79**	**250**	A		A	12 59 06.3	
	comp=N,86nm,1.7s,comp=E,97nm,1.4s							
JSS	**Shosan**	**3.97**	**281**	A		A	12 59 10.0	
	comp=N,13nm,2.4s,comp=E,16nm,5.1s							
JHR	**Hokuryu**	**4.04**	**271**	A		A	12 59 10.5	
	comp=N,17nm,2.6s,comp=E,22nm,5.2s							
JIAM	**Iburiatsuma**	**4.10**	**255**	A		A	12 59 10.7	
	comp=N,107nm,1.4s,comp=E,85nm,1.1s							
JISS	**Ishikarishitsu**	**4.31**	**265**	A		A	12 59 14.0	
	comp=N,26nm,1.5s,comp=E,38nm,4.6s							
JEW	**Eniwo**	**4.37**	**260**	A		A	12 59 14.7	
	comp=N,33nm,3.1s,comp=E,38nm,1.1s							
YSS	**Yuzhno-Sakhali**	**4.51**	**316**			**Pn**	**12 59 14.9**	**+0.1**
YSS	**Yuzhno-Sakhali**	**4.51**	**316**	*k* iPN		**Pn**	**12 59 17.2**	**+2.4**
YSS					*e*S	**Sn**	**13 00 10.5**	**+4.6**
YSS					pmax	pmax		
	comp=Z,470nm,0.6s							
YSS					pmax	pmax		
	comp=Z,700nm,3.2s							
YSS					pmax	pmax		
	comp=N,500nm,2.7s							
YSS					pmax	pmax		
	comp=E,500nm,3.4s							
YSS					smax	smax		
	comp=N,860nm,0.5s							
YSS					smax	smax		
	comp=E,620nm,0.6s							
YSS					MLR	MLR		
	comp=Z,3μm,11.0s							
YSS					MLR	MLR		
	comp=N,3μm,13.0s							
YSS					MLR	MLR		
	comp=E,2μm,13.0s							
YSS	**Yuzhno-Sakhali**	**4.51**	**316**	*e*S		**Sn**	**13 00 07.7**	**+1.8**
YSS				*i* P		**Pn**	**12 59 17.2**	**+2.4**
YSS					AMS	AMS	13 01 01.0	
	comp=E,3μm,12.0s							
YSS					AMS	AMS	13 01 01.0	
	comp=E,2μm,12.0s							
JNB	**Noboribetsu**	**4.76**	**256**	A		A	12 59 20.2	
	comp=N,12nm,2.3s,comp=E,13nm,0.9s							
JSK	**Shakotan**	**4.98**	**267**	A		A	12 59 23.5	
	comp=N,8.0nm,5.5s,comp=E,8.0nm,5.6s							
JKB	**Kayabe**	**4.98**	**250**	A		A	12 59 23.0	
	comp=N,28nm,2.5s,comp=E,77nm,1.5s							
JAHD	**Aomorihigashid**	**5.07**	**242**	A		A	12 59 24.0	
	comp=N,59nm,0.9s,comp=E,35nm,1.2s							
JARK	**Aomorirokkasho**	**5.19**	**240**	A		A	12 59 25.7	
	comp=N,10.0nm,0.8s,comp=E,13nm,0.7s							
JOT	**Ohata**	**5.20**	**245**	A		A	12 59 25.9	
	comp=N,9.0nm,1.8s,comp=E,9.0nm,1.7s							
JYM2	**Yakumo 2**	**5.35**	**254**	A		A	12 59 28.3	
	comp=N,23nm,1.4s,comp=E,10.0nm,1.6s							
JKEN	**Kujiedanarisaw**	**5.49**	**231**	A		A	12 59 29.6	
	comp=N,9.0nm,0.7s,comp=E,10.0nm,1.1s							
JTM	**Tenmabayashi**	**5.50**	**239**			**Pn**	**12 59 28.1**	**-0.4**
JTM	**Tenmabayashi**	**5.50**	**239**	A		A	12 59 30.0	
	comp=N,13nm,1.7s,comp=E,8.0nm,1.6s							
JSR	**Shiriuchi**	**5.55**	**248**	A		A	12 59 30.9	
	comp=N,10.0nm,1.4s,comp=E,8.0nm,3.6s							
JHST	**Hiyamasetana**	**5.60**	**259**	A		A	12 59 31.9	
	comp=N,15nm,1.7s,comp=E,19nm,1.6s							
JSI2	**Shiura 2**	**5.78**	**244**	A		A	12 59 34.0	
	comp=N,13nm,1.8s,comp=E,15nm,1.0s							
JHHS	**Hirosakihyakuz**	**6.03**	**241**	A		A	12 59 37.3	
	comp=N,27nm,3.2s,comp=E,22nm,2.5s							
JAH	**Hinai**	**6.12**	**236**	A		A	12 59 38.6	
	comp=N,8.0nm,4.0s,comp=E,6.0nm,4.1s							
JOM	**Ohasama**	**6.23**	**228**	A		A	12 59 39.9	
	comp=N,8.0nm,0.7s,comp=E,7.0nm,1.3s							
JSZI	**Iwateshizukuis**	**6.23**	**232**	A		A	12 59 40.0	
	comp=N,14nm,2.8s,comp=E,14nm,1.7s							
JIW	**Iwasaki**	**6.28**	**242**	A		A	12 59 41.0	
	comp=N,6.0nm,2.7s,comp=E,7.0nm,2.8s							
OFUJ	**Ofunato**	**6.32**	**224**	A		A	12 59 41.1	
	comp=N,5.0nm,2.8s,comp=E,5.0nm,3.3s							
JNTW	**Noshirotokiwa**	**6.37**	**239**	A		A	12 59 42.0	
	comp=N,19nm,5.3s,comp=E,21nm,4.2s							
UGL	**Uglegorsk**	**6.41**	**328**	PN		**Pn**	**12 59 45.0**	**+4.1**
UGL				*e*S		**Sn**	**13 00 57.3**	**+4.6**
UGL					pmax	pmax		
	comp=Z,192nm,1.1s							
UGL					smax	smax		
	comp=E,3μm,6.8s							
UGL					smax	smax		
	comp=N,3μm,6.4s							
UGL	**Uglegorsk**	**6.41**	**328**	*e*S		**Sn**	**13 00 55.8**	**+3.1**
UGL				*e*P		**Pn**	**12 59 45.0**	**+4.1**
JRG	**Rokugo**	**6.64**	**231**	A		A	12 59 45.7	
	comp=N,7.0nm,0.9s,comp=E,7.0nm,3.5s							
JMK	**Ichinoseki**	**6.64**	**226**	A		A	12 59 45.7	
	comp=N,4.0nm,1.9s,comp=E,6.0nm,2.2s							
JYW	**Yuwa**	**6.79**	**234**	A		A	12 59 47.9	
	comp=N,13nm,1.5s,comp=E,10.0nm,2.5s							
JYK	**Kaneyama**	**7.13**	**229**	A		A	12 59 52.5	
	comp=N,4.0nm,3.5s,comp=E,3.0nm,1.6s							
JOU	**Okura**	**7.37**	**225**	A		A	12 59 55.8	
	comp=N,5.0nm,6.4s,comp=E,5.0nm,4.2s							
JYA	**Atsumi**	**7.72**	**230**	A		A	13 00 00.7	
	comp=N,6.0nm,1.4s,comp=E,6.0nm,1.0s							
TYV	**Tymovskoe**	**7.75**	**338**	*e*PN		**Pn**	**13 00 03.8**	**+4.5**
TYV				*e*S		**Sn**	**13 01 31.1**	**+5.4**
TYV					pmax	pmax		
	comp=Z,300nm,3.0s							
TYV					pmax	pmax		
	comp=Z,66nm,1.0s							
TYV					smax	smax		
	comp=N,70nm,1.3s							
TYV					smax	smax		
	comp=E,91nm,1.3s							
TYV					smax	smax		
	comp=N,1μm,4.5s							
TYV					smax	smax		
	comp=E,2μm,4.5s							
TYV	**Tymovskoe**	**7.75**	**338**	*e*P		**Pn**	**13 00 03.1**	**+3.8**
TYV				*e*S		**Sn**	**13 01 27.7**	**+2.0**
TYV					AMS	AMS	13 02 15.8	
	comp=E,3μm,12.0s							
TYV					AMS	AMS	13 02 15.8	
	comp=E,2μm,12.0s							
TEY	**Ternei**	**7.76**	**283**	⇑*e*PN		**Pn**	**13 00 01.9**	**+2.5**
TEY					pmax	pmax		
	comp=Z,20nm,1.6s							
TEY					pmax	pmax		
	comp=E,10.0nm,1.4s							
TEY	**Ternei**	**7.76**	**283**	*e*P		**Pn**	**13 00 01.9**	**+2.5**
JYAR	**Yonezawaarcadi**	**7.98**	**225**	A		A	13 00 04.3	
	comp=N,11nm,1.3s,comp=E,13nm,1.1s							
JSD	**Sado**	**8.93**	**233**			**Pn**	**13 00 14.7**	**-0.8**
SKR	**Severo-Kuril's**	**9.14**	**38**	*c*ePN		**Pn**	**13 00 19.7**	**+1.4**
SKR	**Severo-Kuril's**	**9.14**	**38**	*e*P		**Pn**	**13 00 20.0**	**+1.7**
SKR					AMB	AMB	13 00 23.0	
	comp=E,820nm,0.7s							
SKR				*e*S		**Sn**	**13 01 59.3**	**-0.4**
SKR					A	A	13 02 15.9	
	comp=E,250nm,0.9s							
SKR					A	A	13 02 15.9	
	comp=E,370nm,0.9s							
SKR					AMS	AMS	13 03 14.8	
	comp=E,4μm,14.0s							
SKR					AMS	AMS	13 03 14.8	
	comp=E,4μm,14.0s							
PAU	**Pauzhetka**	**10.01**	**36**	*e*P		**Pn**	**13 00 30.6**	**+0.4**
PAU					AMB	AMB	13 00 36.0	
	comp=E,620nm,0.5s							
MJB9	**Matsu-Tunnel**	**10.03**	**227**			**Pn**	**13 00 30.6**	**+0.1**
MAJO	**Matsushiro**	**10.03**	**227**			**Pn**	**13 00 29.6**	**-0.9**
MAJO	**Matsushiro**	**10.03**	**227**	*i* PN		**Pn**	**13 00 29.6**	**-0.9**
MJAR	**Matsushiro Arr**	**10.03**	**227**	Pn		**Pn**	**13 00 29.4**	**-1.2**
	comp=E,3.8nm,0.3s,baz=27,slow=14,SNR=319							
MJAR					Sn	**Sn**	**13 02 24.6**	**+2.9**
	comp=E,0.6nm,0.3s,baz=99,slow=15,SNR=2.2							
	comp=E,77nm,0.8s							
MJAR	**Matsushiro Arr**	**10.03**	**227**	Pn		**Pn**	**13 00 29.6**	**-1.0**
GRNR	**Gornyy**	**10.16**	**317**	⇑*i*PN		**Pn**	**13 00 35.9**	**+3.6**
GRNR					pmax	pmax		
	comp=E,50nm,1.3s							
GRNR					pmax	pmax		
	comp=Z,60nm,1.2s							
GRNR	**Gornyy**	**10.16**	**317**	*e*P		**Pn**	**13 00 35.9**	**+3.6**
USRK	**Ussuriysk Ar.**	**11.04**	**277**	Pn		**Pn**	**13 00 45.7**	**+1.4**
	comp=Z,4.6nm,0.3s,baz=81,slow=11,SNR=49							
JGF	**Kuroka**	**11.19**	**226**			**Pn**	**13 00 45.9**	**-0.6**
VLA	**Vladivostok**	**11.23**	**272**	*d* iPN		**Pn**	**13 00 49.1**	**+2.2**
INU	**Inuyama**	**11.56**	**227**			**Pn**	**13 00 50.7**	**-0.8**
PEA0B	**Petropavlovsk-**	**11.60**	**33**			**Pn**	**13 00 50.9**	**-1.0**
PEA0B	**Petropavlovsk-**	**11.60**	**33**	*c*ePN		**Pn**	**13 00 52.7**	**+0.8**
PETK	**Petropavlovsk-**	**11.60**	**33**	Pn		**Pn**	**13 00 52.1**	**+0.2**
	comp=Z,12nm,0.3s,baz=193,slow=5.7,SNR=159							
PETK					LR	LR	13 06 01.9	
	comp=Z,1μm,18.0s,baz=216,slow=42							
MSHR	**Mys Shultsa**	**11.85**	**270**	*i* PN		**Pn**	**13 00 56.3**	**+0.9**
MSHR					pmax	pmax		
	comp=Z,87nm,0.8s							
PET	**Petropavlovsk**	**11.92**	**35**			**Pn**	**13 00 55.3**	**-1.0**
PET	**Petropavlovsk**	**11.92**	**35**	*e*PN		**Pn**	**13 00 54.9**	**-1.4**
PET					pmax	pmax		
	comp=E,81nm,0.8s							
PET					MLR	MLR		
	comp=E,2μm,20.0s							
PET					MLR	MLR		
	comp=E,2μm,15.0s							
PSTR	**Posyet**	**12.09**	**270**	*i* PN		**Pn**	**13 00 59.6**	**+0.9**
PSTR	**Posyet**	**12.09**	**270**	*e*P		**Pn**	**13 00 59.6**	**+0.9**
JHJ	**Hachijo jima 2**	**12.16**	**211**	Sn		Sn	13 03 02.4	-11
	comp=Z,46nm,0.3s,baz=120,slow=22,SNR=7.4							
JHJ					LR	LR	13 06 22.3	
	comp=Z,576nm,18.8s,baz=50,slow=41							
MDJ	**Mudanjiang**	**12.74**	**280**	P		**Pn**	**13 01 08.1**	**+0.6**
MDJ					pmax	pmax		
	comp=Z,130nm,1.0s							
BNX	**BinXian**	**14.27**	**285**	⇑P		**Pn**	**13 01 28.4**	**+0.1**
BNX					pmax	pmax		
	comp=Z,140nm,0.9s							
JMN	**Monobe**	**14.48**	**231**	Pn		**Pn**	**13 01 28.9**	**-2.4**
HEH	**HeiHe**	**15.01**	**303**	*e*P		**Pn**	**13 01 39.4**	**+1.3**
HEH					sP	**pP**	**13 01 53.3**	**+0.1**
HEH					S	**Sn**	**13 04 25.3**	**+2.4**
HEH					pmax	pmax		
	comp=Z,92nm,1.3s							
HEH					pmax	pmax		
	comp=Z,650nm,6.3s							
HEH					LR	LR		
	comp=Z,1μm,15.0s							
HEH					LR	LR		
	comp=Z,2μm,13.3s							
HEH					LR	LR		
	comp=Z,3μm,12.6s							
CN2	**Changchun**	**15.78**	**278**	*e*P		**Pn**	**13 01 46.3**	**-1.8**
CN2				*es*P		P	13 01 53.0	+1.6
CN2				*e*S		**Sn**	**13 04 40.4**	**-1.4**
CN2					pmax	pmax		
	comp=Z,40nm,1.2s							
CN2					pmax	pmax		
	comp=Z,800nm,5.0s							
CN2					LR	LR		
	comp=Z,700nm,11.0s							
CN2					LR	LR		
	comp=Z,500nm,11.0s							
CN2					LR	LR		
	comp=Z,600nm,11.0s							
MA2	**Magadan**	**15.96**	**6**	Pn		**Pn**	**13 01 49.7**	**-0.7**
	comp=Z,110nm,0.8s,baz=173,slow=9.1,SNR=30							
MA2					LR	LR	13 08 28.8	
	comp=Z,1μm,18.1s,baz=200,slow=39							
MA2	**Magadan**	**15.96**	**6**			**Pn**	**13 01 50.1**	**-0.2**
MA2	**Magadan**	**15.96**	**6**	*e*P		**Pn**	**13 01 51.0**	**+0.7**
KSRS	**Korea Array**	**16.00**	**253**	Pn		**Pn**	**13 01 49.1**	**-1.8**
	comp=Z,1.4nm,0.3s,baz=63,slow=12,SNR=55							
KSRS					Sn	**Sn**	**13 04 50.6**	**+3.5**
	baz=64,slow=24							
KSRS					LR	LR	13 08 19.8	
	comp=Z,790μm,18.9s,baz=50,slow=38							
	comp=Z,33nm,0.8s							
KS19	**Wonju Array Si**	**16.01**	**254**	Pn		**Pn**	**13 01 49.2**	**-2.0**
KSAR	**Wonju Array Be**	**16.03**	**253**	Pn		**Pn**	**13 01 49.1**	**-2.2**
KSAR	**Wonju Array Be**	**16.03**	**253**	P		**Pn**	**13 01 49.1**	**-2.2**
ZEA	**Zeya**	**16.50**	**314**	*e*P		**P**	**13 01 58.4**	**-0.9**
ZEA					pmax	pmax		
	comp=E,20nm,1.1s							
ZEA					pmax	pmax		
	comp=N,30nm,1.2s							
ZEA					pmax	pmax		
	comp=Z,70nm,1.0s							
ZEA					MLR	MLR		
	comp=N,600nm,13.0s							
ZEA					MLR	MLR		
	comp=Z,800nm,14.0s							
ZEA	**Zeya**	**16.50**	**314**	*e*P		**Pn**	**13 01 57.1**	**0.0**
JNU	**Nakatsue**	**16.66**	**236**	Pn		**Pn**	**13 01 57.6**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=56,slow=8.9,SNR=16							
JNU					LR	LR	13 08 39.2	
	comp=Z,2μm,20.4s,baz=53,slow=38							
	comp=Z,48nm,0.8s							
JNU	**Nakatsue**	**16.66**	**236**	Pn		**Pn**	**13 01 56.6**	**-2.8**
TJN	**Taejon**	**16.93**	**251**	Pn		**Pn**	**13 02 01.7**	**-1.0**
TJN				IAmb		IAmb	13 02 07.0	
	comp=Z,433nm,0.9s							
TJN	**Taejon**	**16.93**	**251**	P		**Pn**	**13 02 01.7**	**-1.0**
TJN					pmax	pmax		
	comp=Z,433nm,0.9s							
JCJ	**Chichijima**	**17.16**	**196**	P		Pn	13 01 53.3	-12
	comp=Z,92nm,0.7s,baz=61,slow=19,SNR=5.5							
JCJ					S	Sn	13 04 48.4	-27
	comp=Z,53nm,0.5s,baz=274,slow=15,SNR=2.0							
JCJ					LR	LR	13 06 52.3	
	comp=Z,1μm,20.9s,baz=28,slow=31							
SNY	**Shenyang**	**17.50**	**272**	⇓P		**Pn**	**13 02 10.0**	**+0.2**
SNY					pmax	pmax		
	comp=Z,31nm,0.9s							
SEY	**Seymchan**	**19.41**	**7**	P		**P**	**13 02 30.4**	**-0.8**
	comp=Z,5.9nm,0.3s,baz=191,slow=8.3,SNR=121							
SEY					LR	LR

XLT pmax pmax
comp=E,570nm,9.5s
XLT LR LR
comp=E,1µm,17.2s
XLT LR LR
comp=E,1µm,17.4s
AMKA Amchitka 22.75 59 P 13 03 06.8 -0.4
JOW Kunigami 22.87 229 LR LR 13 12 25.6
comp=E,1µm,18.9s,baz=48,slow=38
BJI Beijing 23.39 272 P **P 13 03 11.8 -2.0**
BJI pmax pmax
comp=E,77nm,1.2s
BJT Baijiatuau 23.40 272 P **P 13 03 12.4 -1.5**
BJT Baijiatuau 23.40 272 P **P 13 03 12.4 -1.5**
BJT pmax pmax
comp=Z,144nm,1.0s
TIA Tai'an 24.23 262 P **P 13 03 20.8 -0.9**
TIA pmax pmax
comp=Z,270nm,0.9s
KIWB Kanaga Island 25.00 59 P **P 13 03 28.1 -0.4**
KIWB IAmb IAmb 13 03 49.7
comp=Z,139nm,1.0s
NJ2 Nanjing 25.18 252 ||P **P 13 03 30.8 +0.4**
NJ2 sP **pP 13 03 36.9 -5.1**
NJ2 pmax pmax
comp=Z,56nm,0.7s
NJ2 pmax pmax
comp=Z,990nm,8.5s
NJ2 LR LR
comp=Z,1µm,10.2s
NJ2 LR LR
comp=Z,1µm,14.5s
NJ2 LR LR
comp=Z,2µm,11.1s
ADK Adak 25.29 59 P **P 13 03 31.3 +0.2**
ADK IAmb IAmb 13 03 53.6
comp=Z,214nm,1.0s
ADK Adak 25.29 59 P **P 13 03 31.3 +0.2**
ADK pmax pmax
comp=Z,214nm,1.0s
HNS HongShan 25.45 267 ||P **P 13 03 32.6 -0.1**
HNS pmax pmax
comp=Z,100nm,0.7s
BILL Bilibino 26.30 16 P **P 13 03 37.8 -2.3**
BILL Bilibino 26.30 16 *ce*P **P 13 03 38.0 -2.1**
BILL pmax pmax
comp=Z,52nm,1.0s
BILL MLR MLR
comp=Z,1µm,19.0s
HHC Hu-ho-hao-te 26.46 276 *e*P **P 13 03 42.6 +0.6**
HHC sP pP 13 03 50.3 -3.4
HHC S **S 13 08 13.3 +0.5**
HHC sS sS 13 08 22.3 -10
HHC SS **SnSn 13 09 24.5 +7.8**
HHC pmax pmax
comp=Z,34nm,0.5s
HHC pmax pmax
comp=Z,390nm,6.0s
HHC LR LR
comp=Z,430nm,12.0s
HHC LR LR
comp=Z,750nm,11.6s
HHC LR LR
comp=Z,870nm,12.4s
TIY Taiyuan 26.96 269 *e*P **P 13 03 47.4 +0.9**
TIY pmax pmax
comp=Z,100nm,0.8s
BTO Baotou 27.65 276 *e*P **P 13 03 53.9 +1.2**
BTO S **S 13 08 36.9 +5.4**
BTO pmax pmax
comp=Z,200nm,0.9s
BTO LR LR
comp=Z,2µm,12.1s
BTO LR LR
comp=Z,2µm,17.7s
BTO LR LR
comp=Z,3µm,16.9s
ULN Ulaanbaatar 28.11 293 *ce*P **P 13 03 57.0 +0.2**
ULN pmax pmax
comp=Z,32nm,0.8s
ULN Ulaanbaatar 28.11 293 *e*P **P 13 03 57.0 +0.2**
LYN LuoYang 28.36 263 P **P 13 03 59.0 +0.1**
LYN pmax pmax
comp=Z,120nm,1.1s
SONM Songino Array 28.56 293 P **P 13 04 01.2 +0.5**
comp=Z,15nm,0.6s,baz=88,slow=8.3,SNR=79
SONM LR LR 13 16 05.5
comp=Z,1µm,18.6s,baz=95,slow=38
comp=Z,15nm,0.6s
H11N2 WAKE ISLAND Hy 29.05 139 T T 13 34 46.5
baz=330,slow=76
H11N1 WAKE ISLAND Hy 29.07 139 T T 13 34 45.9
baz=330,slow=76
H11N3 WAKE ISLAND Hy 29.07 139 T T 13 34 42.8
baz=330,slow=76
WHN Wuhan 29.19 254 P **P 13 04 06.3 0.0**
WHN PcP **PcP 13 07 09.3 -3.5**
TIXI Tiksi 29.35 348 P **P 13 04 03.6 -3.8**
TIXI Tiksi 29.35 348 *i*P **P 13 04 03.7 -3.6**
TIXI pmax pmax
comp=Z,14nm,0.9s
TPUB Ta-pu 29.97 236 P **P 13 04 13.8 +0.5**
QZH Quanzhou 30.02 241 *e*P **P 13 04 14.9 +1.2**
H11S1 WAKE ISLAND Hy 30.02 141 T T 13 35 54.7
baz=331,slow=76
H11S3 WAKE ISLAND Hy 30.03 141 T T 13 35 59.9
baz=331,slow=76
H11S2 WAKE ISLAND Hy 30.04 141 T T 13 35 56.5
baz=331,slow=76
NIKH Nikolski High 30.12 57 P **P 13 04 16.8 +2.5**
baz=270
GUMO Guam 30.16 185 LR LR 13 14 15.1
comp=Z,267nm,21.7s,baz=360,slow=32
ZAK Zakamensk 30.33 298 *e*P **P 13 04 15.3 -1.1**
ZAK pmax pmax
comp=Z,13nm,1.9s
XAN Xi'an 31.16 265 P **P 13 04 23.4 -0.4**
XAN pmax pmax
comp=Z,68nm,0.7s
CNSH ChangSha 31.60 252 P **P 13 04 27.8 +0.2**
CNSH pmax pmax
comp=Z,61nm,0.8s
M11K Mekoryuk 32.22 43 P **P 13 04 34.5 +1.9**
baz=260,SNR=7.8
TNA Tin City 32.77 33 P **P 13 04 38.3 +0.9**
baz=251
ENH Enshi 32.77 258 P **P 13 04 37.2 -0.7**
ENH IAmb IAmb 13 04 38.1
comp=Z,70nm,0.9s
K13K Kusilvak Mount 33.23 40 P **P 13 04 43.3 +1.7**
baz=260,SNR=30
FALS False Pass 33.31 53 P **P 13 04 44.0 +1.7**
baz=272
F14K Arctic Creek 33.37 33 P **P 13 04 44.2 +1.4**
baz=253,SNR=6.5
ANM Nome 33.50 35 P **P 13 04 46.0 +2.1**
ANM IAmb IAmb 13 04 47.7
comp=Z,85nm,0.9s
ANM Nome 33.50 35 P **P 13 04 46.0 +2.1**
ANM pmax pmax
comp=Z,85nm,0.9s
ANM Nome 33.50 35 P **P 13 04 45.5 +1.6**
baz=255
M13K Dall Lake 33.62 43 P **P 13 04 47.1 +2.2**
baz=263,SNR=33
LZH Lanzhou 33.88 272 ||P **P 13 04 48.3 +0.6**
LZH pP pP 13 04 59.4 -0.2
LZH ScP **ScP 13 11 06.9 +0.3**
LZH pmax pmax
comp=Z,340nm,1.0s
LZH pmax pmax
comp=Z,640nm,4.6s
J14K Nanvaranak Lak 33.88 39 IAmb IAmb 13 04 49.9
comp=Z,119nm,0.8s
J14K Nanvaranak Lak 33.88 39 P **P 13 04 49.0 +1.8**
baz=260,SNR=30
LZDM Lanzhou Array 34.04 272 P **P 13 04 49.8 +0.5**
comp=Z,124nm,0.8s,baz=95,slow=3.1,SNR=115
LZDM LR LR 13 18 27.4
comp=Z,770nm,19.7s,baz=175,slow=36
comp=Z,124nm,0.8s
L14K Kuka Creek 34.06 41 P **P 13 04 50.9 +2.1**
baz=262,SNR=54
S12K Black Hills 34.07 51 P **P 13 04 50.2 +1.3**
baz=271
F15K North Star Dit 34.11 33 P **P 13 04 50.3 +1.1**
baz=254
G15K Niukluk 34.16 35 P **P 13 04 50.9 +1.2**
baz=256
M14K Bethel 34.34 42 P **P 13 04 53.3 +2.1**
M14K Bethel 34.34 42 P **P 13 04 53.1 +1.9**
baz=264,SNR=50
N14K Kuskokwak Cree 34.40 44 P **P 13 04 53.6 +1.9**
baz=266,SNR=32
O14K Tigyukauivet M 34.56 45 P **P 13 04 55.0 +1.8**
baz=267,SNR=22
C16K Lisburne Hills 34.66 29 IAmb IAmb 13 04 55.0
comp=Z,104nm,0.9s
C16K Lisburne Hills 34.66 29 P **P 13 04 53.7 -0.2**
baz=250,SNR=9.2
L15K Ungalak Mounta 34.67 41 P **P 13 04 55.7 +1.7**
baz=263,SNR=18
K15K Wolf Creek Mou 34.74 40 P **P 13 04 56.7 +2.1**
baz=262,SNR=30
H16K Elim 34.83 36 P **P 13 04 56.5 +1.1**
baz=258,SNR=28
G16K Koyuk River 34.95 34 P **P 13 04 57.3 +0.9**
baz=257,SNR=9.1
M15K Kasigluk River 34.96 43 P **P 13 04 58.1 +1.6**
baz=265,SNR=110
SDPT Sand Point 34.98 52 P **P 13 04 57.8 +1.0**
baz=273
GULI GuiLin 35.21 251 P P 13 04 49.3 -10
GULI pmax pmax
comp=Z,61nm,0.7s
N15K Kwethluk River 35.21 44 P **P 13 05 00.3 +1.6**
baz=267,SNR=70
D17K Noatak River 35.28 30 P **P 13 04 59.6 +0.4**
baz=253,SNR=34
O15K Ungalikthiuk R 35.30 45 P **P 13 05 01.1 +1.6**
baz=268,SNR=44
J16K Anvik River 35.30 38 IAmb IAmb 13 05 02.5
comp=Z,113nm,1.1s
J16K Anvik River 35.30 38 P **P 13 05 01.1 +1.7**
baz=262,SNR=22
I17K Unalakleet 35.35 37 **P 13 05 01.8 +2.0**
I17K IAmb IAmb 13 05 04.1
comp=Z,114nm,1.0s
I17K Unalakleet 35.35 37 P **P 13 05 01.6 +1.8**
baz=261,SNR=26
GTA Gaotai 35.39 280 P **P 13 05 01.0 +0.3**
GTA ScP **ScP 13 11 11.8 -0.1**
GTA ScS **ScS 13 15 14.9 -1.6**
GTA pmax pmax
comp=Z,79nm,1.2s
RDOG Red Dog Mine 35.45 30 P **P 13 05 00.7 0.0**
baz=253,SNR=14
C17K DeLong Mountai 35.48 29 P **P 13 05 01.0 0.0**
baz=252,SNR=20
CHNA Chernabura Isl 35.52 53 P **P 13 05 02.3 +0.9**
baz=275
E17K Hotham Inlet 35.57 31 P **P 13 05 02.8 +1.0**
baz=255,SNR=58
L16K Owhat River 35.63 41 P **P 13 05 04.0 +1.7**
baz=265,SNR=79
F17K Baldwin Pennin 35.63 33 P **P 13 05 03.4 +1.1**
baz=257,SNR=46
G17K Kiwalik Mounta 35.67 34 P **P 13 05 04.2 +1.6**
baz=259,SNR=54
M16K Timber Creek 35.83 42 P **P 13 05 05.9 +1.9**
baz=266,SNR=63
H17K Granite Mounta 35.87 35 IAmb IAmb 13 05 07.4
comp=Z,116nm,0.8s
H17K Granite Mounta 35.87 35 P **P 13 05 05.9 +1.6**
baz=260,SNR=42
N16K Nishlik Lake 35.89 43 P **P 13 05 06.7 +2.1**
baz=267,SNR=122
J17K VABM Dome 36.00 38 P **P 13 05 07.5 +2.0**
baz=263,SNR=107
E18K Tukpahlearik C 36.12 31 IAmb IAmb 13 05 09.5
comp=Z,22nm,0.8s
E18K Tukpahlearik C 36.12 31 P **P 13 05 07.2 +0.8**
baz=256,SNR=25
O16K Kokwok River B 36.20 45 IAmb IAmb 13 05 09.9
comp=Z,138nm,0.8s
O16K Kokwok River B 36.20 45 P **P 13 05 08.8 +1.6**
baz=269,SNR=38
L17K Donlin 36.22 40 P **P 13 05 09.7 +2.3**
baz=266,SNR=135
C18K Utukok River 36.23 29 P **P 13 05 07.3 -0.2**
baz=254,SNR=29
B18K Kokolik River 36.23 28 P **P 13 05 07.6 +0.3**
baz=252,SNR=10
P16K Nushagak River 36.24 46 P **P 13 05 09.8 +2.2**
baz=270,SNR=30
K17K Iditarod 36.27 39 P **P 13 05 10.0 +2.2**
baz=265,SNR=115
F18K Selawik 36.29 33 P **P 13 05 09.2 +1.3**
baz=258,SNR=41
R16K Pilot Point 36.49 48 P **P 13 05 10.3 +0.6**
baz=272
CD2 Chengdu 36.52 264 P **P 13 05 09.9 -0.4**
CD2 S **S 13 10 52.6 +3.1**
CD2 pmax pmax
comp=Z,260nm,0.6s
H18K Honhosa River 36.55 35 P **P 13 05 11.6 +1.4**
baz=261,SNR=67
G18K Tagagawik 36.55 34 IAmb IAmb 13 05 13.1
comp=Z,156nm,0.8s
G18K Tagagawik 36.55 34 P **P 13 05 11.4 +1.3**
baz=260,SNR=102
M17K Holitna River 36.58 42 P **P 13 05 12.8 +2.3**
baz=267,SNR=130
N17K Nushagak Hills 36.67 43 IAmb IAmb 13 05 14.4
comp=Z,218nm,0.9s
N17K Nushagak Hills 36.67 43 P **P 13 05 13.3 +2.1**
baz=269
O17K Koliganek Bris 36.71 44 P **P 13 05 13.6 +2.1**
baz=270,SNR=86
A19K Wainwright 36.74 27 P **P 13 05 12.9 +1.2**
baz=252
C19K Lookout Ridge 36.91 29 IAmb IAmb 13 05 15.0
comp=Z,187nm,1.0s
C19K Lookout Ridge 36.91 29 P **P 13 05 13.6 +0.3**
baz=255,SNR=37
Q16K King Salmon 36.94 46 P **P 13 05 15.1 +1.6**
baz=272,SNR=24
L18K Granite Mounta 36.98 40 P **P 13 05 16.1 +2.2**
baz=267,SNR=99
GYA Guiyang 37.03 256 ||P **P 13 05 14.3 -0.5**
GYA pmax pmax
comp=Z,90nm,0.6s
P17K Kvichak River 37.04 45 P **P 13 05 16.1 +1.7**
baz=271,SNR=22
J18K Innoko River 37.06 38 IAmb IAmb 13 05 17.1
comp=Z,221nm,0.9s
J18K Innoko River 37.06 38 P **P 13 05 16.1 +1.6**
baz=265,SNR=100
F19K Shaleruckik Mo 37.07 32 IAmb IAmb 13 05 16.3
comp=Z,175nm,1.0s
F19K Shaleruckik Mo 37.07 32 P **P 13 05 15.2 +0.7**
baz=260
GCSA Galena City Sc 37.12 36 P **P 13 05 15.7 +0.8**
baz=263,SNR=45
R17L Mt. Peulik Vol 37.14 48 P **P 13 05 15.9 +0.6**
baz=273
TGY Tagaytay City 37.19 225 P **P 13 05 17.4 +1.2**
comp=Z,362nm,0.7s,baz=82,slow=1.3,SNR=11
G19K Purcell Mounta 37.23 34 IAmb IAmb 13 05 18.3
comp=Z,82nm,0.8s
G19K Purcell Mounta 37.23 34 P **P 13 05 16.6 +0.7**
baz=261,SNR=42
D19K Kuna River 37.28 30 P **P 13 05 16.8 +0.4**
baz=257,SNR=72
N18K Kilae Creek 37.31 43 P **P 13 05 19.2 +2.5**
baz=270,SNR=92
Q17K Contact Creek 37.36 47 P **P 13 05 17.9 +0.7**
baz=273
M18K Stony River 37.36 41 P **P 13 05 19.3 +2.3**
baz=269
E19K Redstone River 37.40 32 P **P 13 05 18.3 +1.0**
baz=259,SNR=143
H19K Roundabout Mou 37.40 35 P **P 13 05 18.7 +1.4**
baz=263,SNR=212
J19K Poorman 37.59 37 P **P 13 05 20.0 +1.0**
J19K Poorman 37.59 37 P **P 13 05 20.2 +1.2**
baz=266,SNR=221
O18K Koktuh Hills 37.66 44 IAmb IAmb 13 05 22.7
comp=Z,232nm,1.0s
O18K Koktuh Hills 37.66 44 P **P 13 05 21.5 +1.8**
baz=271,SNR=47
P18K Big Mountain, 37.66 45 P **P 13 05 21.2 +1.5**
baz=272,SNR=65
CHIR Chirikof Islan 37.69 51 P **P 13 05 20.3 +0.4**
baz=276
Q18K Katmai Hardscr 37.80 46 P **P 13 05 21.8 +0.8**
baz=273,SNR=39
L19K White Mountain 37.84 40 P **P 13 05 22.8 +1.7**
baz=269,SNR=50
D20K Etivluk River 37.87 30 P **P 13 05 21.7 +0.4**
baz=258,SNR=92
F20K Avaraart Lake 37.90 32 P **P 13 05 22.4 +0.9**
baz=262,SNR=44
E20K Nigu River 37.93 30 P **P 13 05 22.6 +0.6**
baz=260,SNR=174
B20K Meade River 37.97 27 P **P 13 05 22.6 +0.5**
baz=256
N19K Bonanza Creek 38.01 43 IAmb IAmb 13 05 25.8
comp=Z,187nm,0.9s
N19K Bonanza Creek 38.01 43 P **P 13 05 24.5 +1.9**
baz=271,SNR=77
H20K Anotlenegа Mo 38.05 35 P **P 13 05 24.2 +1.4**
baz=264,SNR=168
M19K Big River Lodg 38.05 41 IAmb IAmb 13 05 26.1
comp=Z,143nm,1.1s
M19K Big River Lodg 38.05 41 P **P 13 05 25.1 +2.2**
baz=269
O19K Port Alsworth 38.10 44 P **P 13 05 25.2 +2.0**
baz=272,SNR=26
I20K Naaghedeneel 38.15 36 P **P 13 05 25.5 +1.9**
baz=266,SNR=30
R18K Karluk 38.17 48 IAmb IAmb 13 05 24.7
comp=Z,242nm,1.4s
R18K Karluk 38.17 48 P **P 13 05 23.4 -0.5**
baz=275
K20K Telida 38.24 38 IAmb IAmb 13 05 27.5
comp=Z,253nm,1.0s
K20K Telida 38.24 38 P **P 13 05 26.4 +1.9**
baz=268,SNR=97
J20K Nowinta River 38.25 37 P **P 13 05 26.4 +1.8**
baz=267,SNR=231
L20K Farewell, AK 38.30 40 IAmb IAmb 13 05 28.0
comp=Z,161nm,0.8s
L20K Farewell, AK 38.30 40 P **P 13 05 27.0 +1.9**
baz=269,SNR=67
SII Sitkinak Islan 38.41 49 P **P 13 05 26.5 +0.5**
baz=276
A21K Barrow 38.47 25 P **P 13 05 26.1 -0.2**
baz=255,SNR=7.8
Q19K Cape Douglas, 38.50 46 P **P 13 05 27.4 +0.7**
baz=274,SNR=13
C21K Knifeblade Rid 38.60 29 P **P 13 05 28.3 +0.8**
baz=260,SNR=51
M20K Styx River 38.65 41 IAmb IAmb 13 05 31.4
comp=Z,161nm,0.8s
M20K Styx River 38.65 41 P **P 13 05 30.2 +2.2**
baz=270
P19K Oil Pt 38.67 44 P **P 13 05 29.4 +1.3**
baz=273,SNR=8.9
G21K Allakaket 38.71 33 P **P 13 05 29.8 +1.4**
baz=264,SNR=130
B21K Ikpikpuk River 38.75 28 P **P 13 05 29.1 +0.5**
baz=259,SNR=99
E21K Killik River 38.77 30 IAmb IAmb 13 05 30.7
comp=Z,122nm,0.7s
E21K Killik River 38.77 30 P **P 13 05 29.3 +0.3**
baz=262
F21K Alatna River 38.80 32 IAmb IAmb 13 05 31.5
comp=Z,122nm,0.8s
F21K Alatna River 38.80 32 P **P 13 05 30.0 +0.9**
baz=264,SNR=83
OHAK Old Harbor 38.83 48 P **P 13 05 29.8 +0.4**
baz=276,SNR=14
RED Redoubt Volcan 38.86 43 IAmb IAmb 13 05 32.8
comp=Z,266nm,1.0s
A22K Sinclair Lake 38.91 26 P **P 13 05 29.8 -0.1**
baz=257
H21K Melozitna Rive 38.92 35 IAmb IAmb 13 05 32.8
comp=Z,187nm,0.9s
H21K Melozitna Rive 38.92 35 P **P 13 05 31.6 +1.4**
baz=266,SNR=190
O20K Slope Mountain 38.95 44 P **P 13 05 31.9 +1.4**
baz=273,SNR=15
CHUM Lake Minchumin 39.04 38 P **P 13 05 33.5 +2.3**
baz=269,SNR=183
PPLA Purkeypile 39.09 39 P **P 13 05 34.1 +2.4**
baz=270,SNR=71
N20K Mount Spurr 39.10 42 P **P 13 05 33.8 +2.0**
baz=272
SPCR Spurr Chakacha 39.10 42 P **P 13 05 34.0 +2.2**
baz=272,SNR=66
KDAK Kodiak Island 39.15 47 *i*P **P 13 05 32.4 +0.3**
KDAK pmax pmax
comp=Z,343nm,0.9s
KDAK Kodiak Island 39.15 47 P **P 13 05 32.5 +0.3**
baz=276
Q20K Shuyak Island 39.17 46 P **P 13 05 32.8 +0.5**
baz=275,SNR=21
I21K Tanana 39.23 36 P **P 13 05 34.6 +1.9**
baz=267,SNR=72
B22K Teshekpuk Lake 39.28 27 P **P 13 05 33.1 0.0**
baz=260,SNR=30
D22K Ayikyak River 39.31 30 IAmb IAmb 13 05 35.0
comp=Z,159nm,0.7s
D22K Ayikyak River 39.31 30 P **P 13 05 34.1 +0.8**
baz=262,SNR=73
F22K John River 39.33 32 P **P 13 05 34.8 +1.3**
baz=264,SNR=152
SKT Skwentna 39.40 41 P **P 13 05 35.4 +1.2**
baz=272,SNR=24
HOM Homer 39.47 44 P **P 13 05 35.4 +0.6**
baz=274,SNR=5.4
H22K Ishtalitna Cre 39.52 34 IAmb IAmb 13 05 38.2
comp=Z,166nm,0.8s
H22K Ishtalitna Cre 39.52 34 P **P 13 05 36.9 +1.8**
baz=267,SNR=131
E22K Anaktuvuk Pass 39.53 31 P **P 13 05 36.1 +0.9**
baz=264,SNR=166
G22K Bettles 39.54 33 P **P 13 05 36.2 +1.0**
baz=266
BPAW Bear Paw Mtn. 39.63 37 P **P 13 05 38.0 +1.9**
baz=270,SNR=68
MLY Manley 39.75 36 P **P 13 05 38.9 +1.8**
baz=269,SNR=154
SUA Susitna One 39.80 41 P **P 13 05 38.5 +0.9**
baz=273,SNR=11
QIZ Qiongzhong 39.88 244 P **P 13 05 40.4 +1.8**
QIZ S **S 13 11 46.4 +6.0**
QIZ pmax pmax
comp=Z,20nm,1.2s
QIZ LR LR
comp=Z,410nm,12.8s
QIZ LR LR
comp=Z,300nm,14.7s
QIZ LR LR
comp=Z,600nm,16.7s
BRSE Bradley Lake S 39.92 44 P **P 13 05 39.3 +0.8**
baz=275,SNR=18
TRF Thorofare Moun 39.94 38 P **P 13 05 40.4 +1.5**
baz=271,SNR=63
CUT Chulitna 39.98 40 P **P 13 05 39.9 +0.9**
baz=272,SNR=36
D23K Nanushuk River 40.03 30 IAmb IAmb 13 05 41.3
comp=Z,117nm,0.8s
D23K Nanushuk River 40.03 30 P **P 13 05 40.2 +0.8**
baz=264
COLD Coldfoot 40.07 32 P **P 13 05 40.8 +1.1**
baz=267,SNR=70
M22K Willow 40.08 41 P **P 13 05 40.0 +0.2**
baz=273,SNR=7.1
G23K Bananza Creek 40.11 33 IAmb IAmb 13 05 42.8
comp=Z,172nm,0.9s
G23K Bananza Creek 40.11 33 P **P 13 05 41.1 +1.0**
baz=267,SNR=144
C23K Itkillik River 40.16 28 IAmb IAmb 13 05 41.9
comp=Z,200nm,0.8s
C23K Itkillik River 40.16 28 P **P 13 05 40.8 +0.4**
baz=263,SNR=86
H23K Yukon River 40.27 35 P **P 13 05 43.4 +2.0**
baz=269,SNR=224
RC01 Rabbit Creek A 40.31 42 P **P 13 05 42.5 +0.8**
baz=274,SNR=22
I23K Minto, Yukon-K 40.34 36 P **P 13 05 43.7 +1.8**
baz=270,SNR=174
GOMU GeErMu 40.34 278 P **P 13 05 42.8 0.0**
GOMU S **S 13 11 41.6 -6.2**
GOMU pmax pmax
comp=Z,110nm,0.7s
GOMU LR LR
comp=Z,660nm,18.2s
GOMU LR LR
comp=Z,690nm,19.0s

E23K Chandalar 40.35 31 P P 13 05 43.1 +1.0
baz=266,SNR=165
O22K Cooper Landing 40.36 43 P P 13 05 42.8 +0.6
baz=275,SNR=12
TOLK Toolik Lake Re 40.41 30 P P 13 05 43.1 +0.6
baz=266,SNR=82
NEA2 Nenana 40.47 37 P P 13 05 44.6 +1.6
baz=271,SNR=350
PZH PanZhiHua 40.49 260 P P 13 05 43.4 -0.4
PZH S S 13 11 48.4 -1.3
PZH pmax pmax
comp=Z,70nm,1.2s
DGZ Jazzator, Alta 40.49 300 *i* P P 13 05 43.6 0.0
DGZ pmax pmax
comp=Z,7.0nm,0.9s
SEW Seward 40.53 43 P P 13 05 43.9 +0.4
baz=276,SNR=13
MCK McKinley 40.54 38 P P 13 05 44.8 +1.2
baz=272,SNR=176
PMR Palmer 40.56 41 P P 13 05 44.5 +0.7
PMR IAmb IAmb 13 05 46.2
comp=Z,131nm,1.0s
PMR Palmer 40.56 41 P P 13 05 44.5 +0.7
PMR pmax pmax
comp=Z,131nm,1.0s
PMR Palmer 40.56 41 P P 13 05 44.5 +0.7
baz=274,SNR=27
KMI Kunming 40.63 258 ⇓P P 13 05 45.1 0.0
KMI pmax pmax
comp=Z,90nm,1.1s
KMI LR LR
comp=Z,610nm,16.0s
KMI LR LR
comp=Z,540nm,18.7s
KMI LR LR
comp=Z,750nm,20.0s
GHO Glory Hole Cre 40.65 41 IAmb IAmb 13 05 46.8
comp=Z,239nm,0.9s
D24K Happy Valley 40.72 30 P P 13 05 45.7 +0.7
baz=266
WAT1 Susitna Watana 40.76 39 P P 13 05 46.3 +0.8
baz=273
E24K Your Creek 40.77 31 P P 13 05 46.7 +1.2
baz=267,SNR=216
C24K Franklin Bluff 40.81 29 P P 13 05 46.1 +0.4
baz=265
WRH Wood River Hil 40.89 37 IAmb IAmb 13 05 53.0
comp=Z,142nm,0.8s
KNK Knik Glacier 40.90 41 P P 13 05 47.8 +1.2
baz=275,SNR=49
SML Sawmill 40.93 41 P P 13 05 48.2 +1.3
baz=275,SNR=75
H24K Noodor Dome 40.96 35 P P 13 05 48.9 +1.8
baz=270,SNR=168
F24K Squaw Lake 40.98 32 P P 13 05 48.2 +1.0
baz=268,SNR=86
COLA College 40.98 36 P P 13 05 48.9 +1.7
COLA College 40.98 36 P P 13 05 49.0 +1.8
COLA College 40.98 36 P P 13 05 49.0 +1.8
baz=272
PWL Port Wells 41.01 42 P P 13 05 48.1 +0.5
PWL IAmb IAmb 13 05 49.3
comp=Z,178nm,0.9s
PWL Port Wells 41.01 42 P P 13 05 48.1 +0.5
baz=276,SNR=26
ZALV Zalesovo Beam 41.06 307 P P 13 05 47.6 -0.5
comp=Z,4.0nm,0.4s,baz=79,slow=7.2,SNR=18
ZALV PcP PcP 13 07 47.5 +0.5
comp=Z,14nm,0.7s,baz=83,slow=3.3,SNR=7.9
comp=Z,4.0nm,0.4s
ZALV Zalesovo Beam 41.06 307 P P 13 05 47.9 -0.2
G24K Hadweenzic Riv 41.12 33 P P 13 05 50.2 +1.8
baz=270,SNR=221
WAT6 Susitna Watana 41.14 40 P P 13 05 49.7 +0.9
baz=274,SNR=57
POKR Poker Plat Res 41.16 36 P P 13 05 50.5 +1.9
baz=272,SNR=222
M23K Glacier View 41.21 41 P P 13 05 50.2 +1.0
baz=275,SNR=38
DHY Denali Highway 41.28 39 P P 13 05 50.9 +1.0
baz=274,SNR=109
HDA Harding Lake 41.39 37 P P 13 05 51.2 +0.6
baz=273,SNR=203
IL31 41.40 36 IAmb IAmb 13 05 52.6
comp=Z,258nm,1.0s
ILAR Eielson Array 41.40 36 P P 13 05 51.3 +0.6
comp=Z,127nm,0.8s,baz=249,slow=4.0,SNR=1079
comp=Z,127nm,0.8s
ILAR Eielson Array 41.40 36 P P 13 05 51.7 +1.0
ILAR Eielson Array 41.40 36 P P 13 05 51.7 +1.0
SCM Sheep Creek Mo 41.40 41 IAmb IAmb 13 05 53.2
comp=Z,190nm,0.8s
SCM Sheep Creek Mo 41.40 41 P P 13 05 52.1 +1.3
baz=276,SNR=22
P23K Montague Islan 41.57 43 IAmb IAmb 13 05 54.4
comp=Z,198nm,0.9s
P23K Montague Islan 41.57 43 P P 13 05 52.9 +0.8
baz=278,SNR=9.4
D25K Kavik River 41.60 29 P P 13 05 52.5 +0.2
baz=268,SNR=283
GLI Glacier Island 41.61 42 IAmb IAmb 13 05 54.3
comp=Z,156nm,1.0s
GLI Glacier Island 41.61 42 P P 13 05 53.2 +0.7
baz=277,SNR=6.3
G25K Bearman Lake 41.67 33 P P 13 05 54.6 +1.8
baz=271,SNR=62
H25L Birch Creek 41.79 34 P P 13 05 56.0 +2.2
baz=272,SNR=153
F25K Christian Rive 41.84 32 P P 13 05 56.0 +1.7
baz=270,SNR=101
E25K Arctic Village 41.87 31 IAmb IAmb 13 05 57.0
comp=Z,126nm,0.8s
E25K Arctic Village 41.87 31 P P 13 05 56.0 +1.5
baz=270,SNR=116
M24K Tolsona, Glenn 41.91 40 P P 13 05 56.8 +1.8
baz=276,SNR=28
FID Port Fidalgo 41.92 42 IAmb IAmb 13 05 57.0
comp=Z,163nm,1.1s
K24K Donnelly Dome 41.94 38 P P 13 05 56.1 +0.9
baz=275,SNR=86
PRP Porcupine Dome 41.94 35 P 13 05 55.9 +0.7
PRP Porcupine Dome 41.94 35 P P 13 05 57.0 +1.8
baz=273,SNR=289
HIN Hinchinbrook I 41.96 43 IAmb IAmb 13 05 57.8
comp=Z,184nm,1.0s
J25K Salcha River, 42.06 36 IAmb IAmb 13 05 58.2
comp=Z,91nm,0.8s
J25K Salcha River, 42.06 36 P P 13 05 55.9 -0.3
baz=274,SNR=86
KLU Klutina 42.10 41 P P 13 05 58.0 +1.5
baz=277,SNR=61
C26K Camden Bay 42.13 28 P P 13 05 57.7 +1.1
baz=268,SNR=170
PAX Paxson 42.15 39 IAmb IAmb 13 06 00.8
comp=Z,108nm,0.8s
PAX Paxson 42.15 39 P P 13 05 57.7 +0.7
baz=276,SNR=45
WMQ Urumqi 42.18 292 *e*P P 13 05 58.3 +0.9
WMQ pP pP 13 06 03.8 -5.7
WMQ LR LR
comp=Z,1μm,18.5s
WMQ LR LR
comp=Z,920nm,20.1s
WMQ LR LR
comp=Z,660nm,19.3s
BMAR Burnt Mountain 42.25 32 P P 13 05 59.3 +1.7
EYAK Cordova Ski Ar 42.31 42 IAmb IAmb 13 06 00.9
comp=Z,191nm,1.2s
EYAK Cordova Ski Ar 42.31 42 P P 13 05 59.5 +1.4
baz=278,SNR=11
HARP HAARP 42.36 40 P P 13 06 00.5 +1.9
baz=277,SNR=49
RIDG Independent Ri 42.36 38 P P 13 05 59.1 +0.6
baz=276,SNR=103
F26K Sheenjek River 42.41 32 IAmb IAmb 13 06 01.9
comp=Z,165nm,0.9s
F26K Sheenjek River 42.41 32 P P 13 06 00.9 +2.0
baz=272,SNR=165
C27K Jago River 42.54 29 P P 13 06 00.7 +0.8
baz=270,SNR=303
G26K Porcupine Rive 42.58 33 P P 13 06 02.3 +2.1
baz=273,SNR=289
SCRK Sand Creek 42.71 37 P P 13 06 02.2 +0.7
baz=276,SNR=248
N25K Chitina, Valde 42.72 41 IAmb IAmb 13 06 04.5
comp=Z,212nm,1.6s
N25K Chitina, Valde 42.72 41 P P 13 06 03.4 +1.8
baz=278,SNR=11

ZSN Zaisan 42.79 298 *e*P P 13 06 02.4 +0.2
ZSN *e*S S 13 12 23.8 +0.8
ZSN Zaisan 42.79 298 *e*P P 13 06 02.4 +0.2
ZSN *e*S S 13 12 23.8 +0.8
BMRM Bremner River 42.80 42 P P 13 06 03.8 +1.6
BMRM IAmb IAmb 13 06 05.0
comp=Z,191nm,0.9s
BMRM Bremner River 42.80 42 P P 13 06 04.0 +1.7
baz=279,SNR=26
J26L Joseph Creek 42.85 36 IAmb IAmb 13 06 04.7
comp=Z,115nm,0.7s
J26L Joseph Creek 42.85 36 P P 13 06 02.7 +0.2
baz=276,SNR=103
I26K Coal Creek Min 42.95 35 P P 13 06 03.2 -0.1
baz=275,SNR=46
MENT Mentasta 42.95 39 IAmb IAmb 13 06 06.3
comp=Z,154nm,0.6s
KAIM Kayak Island 43.06 43 P P 13 06 05.8 +1.6
baz=280
HMT Hamilton 43.07 43 IAmb IAmb 13 06 07.3
comp=Z,236nm,1.3s
L26K Log Cabin Wild 43.11 39 P P 13 06 06.6 +1.9
baz=278,SNR=129
VRDI Verde Repeater 43.32 41 IAmb IAmb 13 06 09.4
comp=Z,121nm,0.8s
E27K Coleen River 43.35 31 P P 13 06 07.9 +1.4
baz=274,SNR=66
M26K Nabesna, AK 43.35 40 P P 13 06 08.8 +2.1
baz=278,SNR=160
G27K Doyon Strip 43.43 33 P P 13 06 09.1 +1.9
baz=275,SNR=81
MCARA McCarthy VSAT 43.50 41 P P 13 06 09.4 +1.7
baz=280,SNR=28
D27M Malcolm River 43.52 29 IAmb IAmb 13 06 09.9
comp=Z,89nm,0.8s
D27M Malcolm River 43.52 29 P P 13 06 08.8 +0.8
baz=273,SNR=115
H27K Steamboat Moun 43.53 34 P P 13 06 10.4 +2.4
baz=268,SNR=289
K27K Chicken 43.55 37 P P 13 06 10.0 +1.9
baz=278
I27K Kandik River 43.56 35 P P 13 06 09.3 +1.0
baz=276,SNR=38
CRQE Cirque 43.57 42 P P 13 06 10.4 +1.9
baz=280,SNR=45
TNCH TengChong 43.69 261 ⇓*i*P P 13 06 10.3 +0.3
TNCH PP PP 13 07 53.9 +1.8
TNCH S S 13 12 37.5 +0.5
TNCH SS SS 13 15 49.3 -4.0
TNCH pmax pmax
comp=Z,110nm,1.2s
TNCH LR LR
comp=Z,390nm,11.3s
TNCH LR LR
comp=Z,650nm,10.2s
TNCH LR LR
comp=Z,550nm,11.7s
TGL Tana Glacier 43.70 42 IAmb IAmb 13 06 12.5
comp=Z,256nm,1.2s
L27K Beaver Creek, 43.79 38 P P 13 06 12.4 +2.3
baz=279,SNR=183
BCAR Beaver Creek A 43.81 38 P P 13 06 12.3 +2.0
M27K Edge Creek, AK 43.88 39 P P 13 06 13.2 +2.2
baz=279,SNR=75
ISLE Juniper Island 43.96 42 IAmb IAmb 13 06 16.7
comp=Z,167nm,1.0s
F28M Old Crow 44.05 32 P P 13 06 13.9 +1.8
baz=276,SNR=269
E28M Babbage River 44.08 30 IAmb IAmb 13 06 14.6
comp=Z,104nm,0.8s
E28M Babbage River 44.08 30 P P 13 06 13.6 +1.2
baz=275,SNR=164
BARN Barnard Glacie 44.20 41 IAmb IAmb 13 06 17.3
comp=Z,234nm,1.2s
MESA MESA 44.23 43 P P 13 06 15.7 +1.9
baz=282,SNR=5.5
LKP Lekhapani 44.24 266 *e*P P 13 06 07.7 -6.4
I28M Miner Creek 44.27 35 P P 13 06 15.8 +1.8
baz=278,SNR=464
D28M Stokes Point 44.31 29 P P 13 06 14.9 +0.8
baz=275,SNR=75
BVCY Beaver Creek 44.33 39 P P 13 06 16.1 +1.7
baz=280,SNR=29
CTG Chitna Glacier 44.37 41 P P 13 06 16.3 +1.4
baz=281,SNR=24
LOGN Logan Glacier 44.56 42 IAmb IAmb 13 06 25.2
comp=Z,90nm,1.0s
YUK3 Moose Creek 44.63 40 P P 13 06 18.7 +1.6
baz=281,SNR=32
MK31 Makanchi Array 44.66 298 *ce*P P 13 06 17.9 +0.6
MKAR Makanchi Array 44.66 298 P P 13 06 17.6 +0.3
comp=Z,14nm,0.7s,baz=80,slow=9.6,SNR=82
MKAR LR LR 13 25 41.0
comp=Z,580nm,18.6s,baz=49,slow=37
comp=Z,14nm,0.7s
E29M Blow River 44.70 31 P P 13 06 18.9 +1.5
baz=277,SNR=260
DAWY Dawson 44.71 37 IAmb IAmb 13 06 19.6
comp=Z,72nm,0.6s
H29M Whitestone 44.80 34 P P 13 06 20.2 +2.0
baz=278,SNR=106
G29M Pine Creek 44.84 33 P P 13 06 20.8 +2.3
baz=278,SNR=310
MAKZ Makanchi 44.86 298 P P 13 06 19.2 +0.3
MAKZ Makanchi 44.86 298 P P 13 06 19.2 +0.3
MAKZ pmax pmax
comp=Z,19nm,0.7s
O28M Mount Upton 44.96 41 IAmb IAmb 13 06 22.4
comp=Z,107nm,1.1s
O28M Mount Upton 44.96 41 P P 13 06 21.3 +1.4
baz=282,SNR=15
YUK8 Steele Glacier 45.06 41 P P 13 06 21.7 +1.2
baz=282
PINM Pinnacle 45.08 42 P P 13 06 21.9 +1.4
baz=283,SNR=6.5
BCPM Bancas Point 45.41 43 IAmb IAmb 13 06 26.6
comp=Z,66nm,0.8s
M29M Somme Creek 45.42 39 P P 13 06 25.1 +1.9
baz=282,SNR=18
EPYK Eagle Plains 45.44 33 P P 13 06 25.1 +1.9
baz=280,SNR=182
L29M L29M 45.44 38 P P 13 06 25.7 +2.4
baz=282,SNR=115
G30M tAoh Zrail Nji 45.53 32 P P 13 06 25.6 +1.6
baz=280,SNR=248
K29M Barlow Dome 45.56 37 P P 13 06 26.2 +1.9
baz=281,SNR=122
ZIRO ZIRO 45.57 267 *e*P P 13 06 25.2 +0.3
ZIRO IAmb IAmb 13 06 26.4
comp=Z,92nm,0.6s
YUK4 Talbot Arm 45.57 40 P P 13 06 26.5 +1.9
baz=283,SNR=13
F30M Barrier River 45.60 31 P P 13 06 26.6 +2.2
baz=279,SNR=630
PNL Peninsula 45.60 43 P P 13 06 26.7 +2.2
baz=284
KURK Kurchatov 45.60 304 P P 13 06 23.6 -1.0
KURK Kurchatov 45.60 304 *ce*P P 13 06 24.3 -0.3
KURK pmax pmax
comp=Z,17nm,0.6s
KURK Kurchatov 45.60 304 *e*P P 13 06 24.3 -0.3
KURBB Kurchatov Arra 45.69 304 P P 13 06 24.2 -1.1
comp=Z,17nm,0.8s,baz=75,slow=8.7,SNR=106
KURBB PcP PcP 13 08 02.7 0.0
comp=Z,6.7nm,0.7s,baz=75,slow=3.3,SNR=4.3
KURBB LR LR 13 25 29.6
comp=Z,271nm,21.1s,baz=158,slow=36
comp=Z,17nm,0.8s
I30M Mount Dempster 45.78 35 P P 13 06 27.9 +1.9
baz=281,SNR=252
MOKO MOKOCHONG 45.79 266 *e*P P 13 06 25.8 -0.8
YUK6 Outpost Mounta 45.80 41 P P 13 06 28.1 +1.8
baz=284,SNR=5.8
O29M Mount Kennedy 45.85 42 P P 13 06 28.7 +2.0
baz=284
J30M Hart River 45.92 36 P P 13 06 29.1 +1.9
baz=282,SNR=82
DLV Lat 46.04 238 P P 13 06 30.2 +1.5
M30M Minto, Yukon 46.15 39 IAmb IAmb 13 06 32.4
comp=Z,108nm,1.0s
M30M Minto, Yukon 46.15 39 P P 13 06 31.2 +2.3
baz=283,SNR=43
HYT Haines Junctio 46.23 41 P P 13 06 32.2 +2.6
baz=284,SNR=86
N30M Aishikik Lake 46.28 40 P P 13 06 31.7 +1.7
baz=284,SNR=7.4
LSA Lhasa 46.30 272 P P 13 06 31.9 +0.9

LSA IAmb IAmb 13 06 33.0
comp=Z,78nm,0.9s
LSA Lhasa 46.30 272 *i* P P 13 06 31.7 +0.7
SNR=16
LSA Lhasa 46.30 272 P P 13 06 31.9 +0.9
LSA pmax pmax
comp=Z,78nm,0.9s
G31M Satah River 46.30 32 P P 13 06 31.2 +1.4
baz=281,SNR=218
INK Inuvik 46.32 30 LR LR 13 27 21.1
comp=Z,457nm,19.3s,baz=284,slow=38
INK Inuvik 46.32 30 P P 13 06 31.1 +1.1
baz=280,SNR=171
MAYO Mayo, Yukon 46.32 37 P P 13 06 32.2 +2.1
baz=283,SNR=58
F31M Tsiigehtchic 46.40 32 P P 13 06 32.0 +1.3
baz=281,SNR=239
P29M Windy Craggy 46.42 43 P P 13 06 33.4 +2.4
baz=285,SNR=72
KOHI KOHIMA 46.44 265 *e*P P 13 06 32.3 +0.5
JAY Jayapura 46.47 189 P P 13 06 32.8 +1.0
comp=Z,17nm,0.8s,baz=346,slow=19,SNR=5.6
JAY LR LR 13 24 11.0
comp=Z,250nm,19.8s,baz=358,slow=34
comp=Z,17nm,0.8s
H31M Peel River 46.49 34 P P 13 06 33.2 +1.7
baz=282,SNR=139
CMAI Chiengmai2 46.58 255 P S 13 13 27.2 +8.4
P30M Million Dollar 46.67 42 P P 13 06 35.6 +2.6
baz=285
TEZP TEZPUR 46.86 267 *e*P P 13 06 34.3 -0.5
TEZP IAmb IAmb 13 06 36.7
comp=Z,28nm,0.6s
N31M Braeburn, Yuko 46.88 40 P P 13 06 37.2 +2.6
baz=285,SNR=19
O30N Mendenhall 46.92 41 P P 13 06 37.0 +2.1
baz=285,SNR=11
TAWA Tawang 46.97 269 *e*P P 13 06 36.9 +0.8
UTTA Uttaradit 47.01 252 P S 13 13 23.5 -1.1
IMP Imphal 47.09 264 *e*P P 13 06 36.6 -0.2
IMP IAmb IAmb 13 06 47.3
comp=Z,17nm,0.9s
LAMP Lampang 47.11 253 P S 13 13 22.8 -3.3
PLBC Pleasant Camp 47.14 43 P P 13 06 39.1 +2.5
baz=286,SNR=15
M31M Drury Creek, Y 47.33 39 P P 13 06 40.2 +2.2
baz=285,SNR=50
CHTO Chiang Mai 47.40 254 P S 13 13 29.4 -0.8
WHY Whitehorse 47.52 41 P P 13 06 41.8 +2.1
baz=286,SNR=17
CM09 Chiang Mai Arr 47.61 254 P S 13 13 30.6 -2.7
CM31 Chiang Mai Arr 47.64 254 IAmb IAmb 13 06 42.6
comp=Z,46nm,0.8s
CM31 Chiang Mai Arr 47.64 254 P P 13 06 42.0 +1.0
CMAR Chiang Mai Arr 47.64 254 P P 13 06 41.6 +0.7
comp=Z,32nm,0.8s,baz=44,slow=7.4,SNR=186
CMAR ScP ScP 13 12 05.7 +5.1
comp=Z,2.0nm,1.0s,baz=39,slow=5.6,SNR=8.5
CMAR LR LR 13 27 18.8
comp=Z,369nm,21.1s,baz=65,slow=37
comp=Z,32nm,0.8s
CMAR Chiang Mai Arr 47.64 254 P P 13 06 41.5 +0.6
S31K Pelican 47.65 45 P P 13 06 42.3 +1.8
baz=288
SKAG Skagway 47.65 42 IAmb IAmb 13 07 07.9
comp=Z,67nm,1.1s
SKAG Skagway 47.65 42 P P 13 06 42.9 +2.3
baz=287
CM15 Chiang Mai Arr 47.65 254 P S 13 13 31.2 -2.6
R31K City Hall, Gus 47.76 44 P P 13 06 43.5 +2.1
baz=288
PDGK Podgornoye 47.85 294 P P 13 06 41.9 -0.6
TDK Taldyqorghan 47.86 297 *e*P P 13 06 42.5 0.0
comp=Z,25nm,0.6s
TDK Taldyqorghan 47.86 297 *e*P P 13 06 42.4 0.0
TDK pmax pmax
comp=Z,25nm,0.6s
SHLS Shalkode 47.94 294 ⇓*i*P P 13 06 41.0 -2.3
comp=Z,10nm,0.4s
SHLS Shalkode 47.94 294 *di*P P 13 06 40.9 -2.3
SHLS pmax pmax
comp=Z,11nm,0.4s
SHL Shillong 48.14 267 IAmb IAmb 13 06 45.5
comp=Z,66nm,1.0s
SHL Shillong 48.14 267 *e*P P 13 06 44.2 -0.9
BESE Bessie Mountai 48.15 43 IAmb IAmb 13 06 47.9
comp=Z,138nm,1.2s
N32M Quiet Lake 48.22 40 IAmb IAmb 13 06 47.7
comp=Z,66nm,0.9s
N32M Quiet Lake 48.22 40 P P 13 06 46.7 +1.7
baz=287
UZB Uzynbulak 48.24 294 ⇓*i*P P 13 06 45.4 -0.1
comp=Z,20nm,0.9s
UZB *e*S S 13 13 42.3 +0.3
UZB Uzynbulak 48.24 294 *di*P P 13 06 45.4 -0.1
UZB *e*S S 13 13 42.2 +0.3
UZB pmax pmax
comp=Z,21nm,0.9s
A36M Sachs Harbour 48.30 25 P P 13 06 45.8 +0.4
A36M Sachs Harbour 48.30 25 P P 13 06 46.1 +0.8
baz=284,SNR=115
P32M Atlin 48.40 42 P P 13 06 48.6 +2.2
baz=288,SNR=9.1
SIT Sitka 48.40 45 P P 13 06 48.4 +2.1
baz=289
R32K Eaglecrest 48.41 44 P P 13 06 48.6 +2.1
baz=289,SNR=16
P33M Teslin, Yukon 48.63 41 P P 13 06 50.5 +2.2
baz=288,SNR=37
S32K Killisnoo 48.65 45 IAmb IAmb 13 06 51.6
comp=Z,65nm,1.0s
S32K Killisnoo 48.65 45 P P 13 06 50.5 +2.3
baz=289,SNR=6.6
SATY Saty 48.68 294 ⇓*i*P P 13 06 49.0 0.0
comp=Z,24nm,0.9s
SATY *e*S S 13 13 48.8 +0.6
SATY Saty 48.68 294 *di*P P 13 06 48.9 0.0
SATY *e*S S 13 13 48.7 +0.6
SATY pmax pmax
comp=Z,24nm,0.9s
MRSI Marisa 48.68 215 P P 13 06 49.4 +0.4
comp=Z,1μmcomp=Z,99nm,1.0s
PRZ Przheval'sk 48.94 294 IAmb IAmb 13 06 52.9
comp=Z,55nm,0.7s
SAIH SAIHA 49.23 263 *e*P P 13 06 53.0 -0.4
SAIH IAmb IAmb 13 06 54.4
comp=Z,146nm,0.7s
Q32M Nakina River 49.30 42 P P 13 06 55.9 +2.4
baz=290,SNR=7.8
C36M Paulatuk 49.40 28 P P 13 06 54.3 +0.5
baz=288,SNR=88
SANI Sanana 49.47 209 P P 13 06 53.9 -1.1
MDOK Medeo 49.53 295 *e*P P 13 06 55.5 0.0
MDOK Medeo 49.53 295 *e*P P 13 06 55.4 0.0
BVA0 Borovoye Array 49.57 309 P P 13 06 54.7 -0.7
BVAR Borovoye Array 49.57 309 P P 13 06 55.2 -0.1
comp=Z,10.0nm,0.7s,baz=77,slow=8.7,SNR=28
comp=Z,10.0nm,0.7s
AAA Alma-Ata 49.60 295 *e*P P 13 06 56.0 +0.1
comp=Z,15nm,0.4s
AAA Alma-Ata 49.60 295 *e*P P 13 06 55.9 +0.1
AAA pmax pmax
comp=Z,15nm,0.4s
TNSS Tian-Shan 49.65 295 *e*P P 13 06 56.3 -0.4
TNSS Tian-Shan 49.65 295 *e*P P 13 06 56.2 -0.4
T33K Petersburg 49.70 45 P P 13 06 57.8 +1.4
baz=291
LUWI Luwuk 49.73 213 P P 13 06 58.3 +1.4
R33M Jennings River 49.78 42 IAmb IAmb 13 07 00.7
comp=Z,96nm,0.9s
R33M Jennings River 49.78 42 P P 13 06 59.5 +2.4
baz=290,SNR=30
U33K Whale Pass 49.87 46 IAmb IAmb 13 07 20.3
comp=Z,133nm,1.0s
U33K Whale Pass 49.87 46 P P 13 07 00.1 +2.5
baz=292
KDJ Kajisay 49.91 294 IAmb IAmb 13 06 59.7
comp=Z,64nm,1.0s
CRAG Craig 50.11 47 IAmb IAmb 13 07 22.5
comp=Z,114nm,1.1s
CRAG Craig 50.11 47 P P 13 07 00.6 +1.2
baz=292
WRAK Wrangell Islan 50.16 46 IAmb IAmb 13 07 24.0
comp=Z,63nm,0.9s
WRAK Wrangell Islan 50.16 46 P P 13 07 01.7 +1.9
baz=292
S34M Telegraph Cree 50.23 43 IAmb IAmb 13 07 23.4

	comp=Z,81nm,0.9s								
S34M	**Telegraph Cree**	**50.23**	**43**	P		**P**		**13 07 02.5**	**+2.2**
	baz=291,SNR=16								
EVN	**Everest**	**50.41**	**273**	IAmb		IAmb		13 07 04.5	
	comp=Z,115nm,1.0s								
ULHL	**Ulahol**	**50.47**	**294**	P		**P**		**13 07 03.3**	**+0.6**
	SNR=7.6								
WTLY	**Watson Lake, Y**	**50.56**	**40**	IAmb		IAmb		13 07 05.8	
	comp=Z,69nm,1.0s								
WTLY	**Watson Lake, Y**	**50.56**	**40**	P		**P**		**13 07 04.7**	**+1.8**
	baz=291,SNR=20								
BOOM	**Boomskoye usch**	**50.56**	**295**	IAmb		IAmb		13 07 04.9	
	comp=Z,82nm,0.8s								
DLBC	**Dease Lake**	**50.58**	**42**	P		**P**		**13 07 05.5**	**+2.4**
	baz=292,SNR=20								
TKM2	**Tokmak 2**	**50.59**	**295**	P		**P**		**13 07 04.0**	**+0.4**
	SNR=50								
BTLS	**Baital**	**50.64**	**299**	*e*P		**P**		**13 07 03.0**	**-0.7**
BTLS	**Baital**	**50.64**	**299**	*e*P		**P**		**13 07 02.9**	**-0.7**
V35K	**Ketchikan**	**50.95**	**47**	P		**P**		**13 07 07.9**	**+2.0**
	baz=293								
SGDS	**Sogindy**	**50.98**	**297**	⇓ *i* P		**P**		**13 07 06.3**	**0.0**
	comp=Z,14nm,0.9s								
T35M	**Bob Quinn**	**51.02**	**44**	IAmb		IAmb		13 07 29.6	
	comp=Z,139nm,0.9s								
T35M	**Bob Quinn**	**51.02**	**44**	P		**P**		**13 07 09.2**	**+2.8**
	baz=293,SNR=25								
KBK	**Karagaybulak**	**51.13**	**295**	P		**P**		**13 07 08.1**	**+0.5**
	SNR=30								
USP	**Ospenovka**	**51.15**	**296**	P		**P**		**13 07 08.0**	**+0.5**
	SNR=6.1								
SHBG	**Sahibganj**	**51.40**	**269**	*e*P		**P**		**13 07 10.0**	**+0.4**
AAK	**Ala-Archa**	**51.44**	**296**	P		**P**		**13 07 09.9**	**0.0**
AAK	**Ala-Archa**	**51.44**	**296**	P		**P**		**13 07 10.0**	**0.0**
	SNR=12								
AAK	**Ala-Archa**	**51.44**	**296**	*i* P		**P**		**13 07 10.1**	**+0.2**
	SNR=7.2								
AAK	**Ala-Archa**	**51.44**	**296**	*ce*P		**P**		**13 07 09.9**	**0.0**
AAK				pmax		pmax			
	comp=Z,64nm,1.7s								
AAK	**Ala-Archa**	**51.44**	**296**	*e*P		**P**		**13 07 09.9**	**0.0**
U35K	**Hyder**	**51.55**	**45**	P		**P**		**13 07 12.7**	**+2.4**
	baz=294,SNR=6.7								
UCH	**Uchtor**	**51.62**	**295**	P		**P**		**13 07 11.8**	**+0.2**
	SNR=15								
WRGLY	**Wrigley**	**51.75**	**35**	IAmb		IAmb		13 07 14.8	
	comp=Z,142nm,1.1s								
WRGLY	**Wrigley**	**51.75**	**35**	P		**P**		**13 07 13.9**	**+2.2**
	baz=293,SNR=34								
EKS2	**Erkin-Say**	**51.90**	**296**	P		**P**		**13 07 13.6**	**+0.4**
	SNR=56								
KSH	**Kashi**	**51.95**	**291**	P		**P**		**13 07 17.6**	**+3.9**
KSH				pmax		pmax			
	comp=Z,40nm,0.8s								
LIRD	**Liard River Hi**	**52.09**	**40**	P		**P**		**13 07 16.5**	**+2.2**
	baz=294,SNR=11								
TOAD	**Toad River Com**	**52.73**	**41**	P		**P**		**13 07 21.1**	**+2.0**
	baz=295,SNR=55								
KOTAN	**Kotaneelee Air**	**52.74**	**39**	P		**P**		**13 07 20.9**	**+1.8**
	baz=295								
ARSB	**Arslanbob**	**53.06**	**295**	IAmb		IAmb		13 07 23.6	
	comp=Z,124nm,0.7s								
MTKI	**Muara Teweh, K**	**53.12**	**222**	P		**P**		**13 07 22.9**	**+0.5**
	comp=Z,167nm,0.9s								
SVE	**Sverdlovsk**	**53.19**	**317**	*e*P		**P**		**13 07 24.0**	**+1.6**
SVE				pmax		pmax			
	comp=Z,20nm,0.8s								
AIN	**Ainahou**	**53.32**	**98**	P		**P**		**13 07 26.2**	**+2.1**
DZA	**Taraz**	**53.37**	**297**	*e*P		**P**		**13 07 24.2**	**+0.1**
	comp=Z,15nm,0.6s								
DZA	**Taraz**	**53.37**	**297**	*e*P		**P**		**13 07 24.1**	**+0.1**
DZA				pmax		pmax			
	comp=Z,15nm,0.6s								
GAYA	**Gaya**	**53.41**	**271**	*e*P		**P**		**13 07 24.3**	**-0.2**
GAYA				IAmb		IAmb		13 07 27.5	
	comp=Z,19nm,0.8s								
BOK	**Bokaro**	**53.55**	**269**	*e*P		**P**		**13 07 25.6**	**0.0**
KK31	**Karatay Array**	**53.79**	**298**	*i* P		**P**		**13 07 26.8**	**-0.3**
KKAR	**Karatay Array**	**53.79**	**298**	P		**P**		**13 07 26.7**	**-0.4**
KKAR	**Karatay Array**	**53.79**	**298**	P		**P**		**13 07 26.7**	**-0.4**
ALCI	**Alchi Leh**	**53.84**	**285**	*e*P		**P**		**13 07 28.8**	**+0.8**
ALCI				IAmb		IAmb		13 07 29.9	
	comp=Z,142nm,0.8s								
JOSI	**Joshimath**	**54.16**	**280**	*e*P		**P**		**13 07 29.4**	**-0.8**
JOSI				IAmb		IAmb		13 07 45.4	
	comp=Z,73nm,0.8s								
BBB	**Bella Bella**	**54.17**	**49**	LR		LR		13 28 34.3	
	comp=Z,178nm,20.7s,baz=286,slow=34								
HNR	**Honiara**	**54.19**	**165**	LR		LR		13 27 25.8	
	comp=Z,205nm,21.8s,baz=352,slow=32								
BRLS	**Borolday**	**54.26**	**298**	*e*P		**P**		**13 07 31.9**	**+1.3**
BRLS	**Borolday**	**54.26**	**298**	*e*P		**P**		**13 07 31.8**	**+1.3**
PTH	**Pithoragarh**	**54.26**	**279**	*e*P		**P**		**13 07 30.5**	**-0.4**
LGTI	**Lohaghat**	**54.30**	**278**	*e*P		**P**		**13 07 31.7**	**+0.8**
LGTI				IAmb		IAmb		13 07 33.2	
	comp=Z,76nm,0.9s								
ARTI	**Arti**	**54.50**	**317**	P		**P**		**13 07 30.6**	**-1.4**
ARTI				IAmb		IAmb		13 07 57.9	
	comp=Z,35nm,0.4s								
ARTI	**Arti**	**54.50**	**317**	*c i* P		**P**		**13 07 31.6**	**-0.4**
ARTI				*PP		**pP**		**13 07 44.6**	**+0.1**
ARTI								13 08 33.7	
ARTI								13 09 30.4	
ARTI				S		**S**		**13 15 07.3**	**-0.3**
ARTI								13 17 11.6	
ARTI				SS		**SS**		**13 18 45.7**	**-4.1**
ARTI				pmax		pmax			
	comp=Z,14nm,0.7s								
ARTI				MLR		MLR			
	comp=Z,449nm,17.0s								
KAPI	**Kappang**	**54.56**	**214**	P		**P**		**13 07 32.9**	**+0.1**
	comp=Z,14nm,0.7s,baz=8.1,slow=4.5,SNR=4.7								
	comp=Z,14nm,0.7s								
IUG	**luzhnay**	**54.57**	**297**	⇓ *i* P		**P**		**13 07 32.9**	**0.0**
	comp=Z,21nm,0.6s								
IUG	**luzhnay**	**54.57**	**297**	*d i* P		**P**		**13 07 32.9**	**0.0**
IUG				pmax		pmax			
	comp=Z,21nm,0.6s								
NOR	**Nord**	**54.58**	**357**	*i* P		**P**		**13 07 28.8**	**-3.4**
NOR				IAmb		IAmb		13 07 32.6	
	comp=Z,12nm,0.8s								
DRK	**Karamyk**	**54.76**	**293**	IAmb		IAmb		13 07 39.7	
	comp=Z,158nm,1.6s								
CHM	**Chimkent**	**54.76**	**297**	*e*P		**P**		**13 07 34.2**	**+0.1**
	comp=Z,15nm,0.5s								
CHM	**Chimkent**	**54.76**	**297**	*e*P		**P**		**13 07 34.2**	**+0.1**
CHM				pmax		pmax			
	comp=Z,15nm,0.5s								
KBS	**Kingsbay**	**54.77**	**350**	*ce*P		**P**		**13 07 32.5**	**-1.2**
KBS				pmax		pmax			
	comp=Z,44nm,1.3s								
SPITS	**Spitsbergen Ar**	**54.77**	**349**	P		**P**		**13 07 31.4**	**-2.3**
	comp=Z,1.6nm,0.3s,baz=61,slow=12,SNR=4.5								
RES	**Resolute Bay**	**54.91**	**17**	LR		LR		13 31 53.0	
	comp=Z,472nm,21.0s,baz=348,slow=37								
TSSA	**Tissa**	**55.31**	**284**	*e*P		**P**		**13 07 38.6**	**+0.2**
TSSA				IAmb		IAmb		13 07 39.7	
	comp=Z,228nm,0.6s								
DDI	**Dehra Dun**	**55.37**	**281**	*e*P		**P**		**13 07 38.5**	**-0.2**
DGPR	**DIGLIPUR**	**55.45**	**254**	*e*P		**P**		**13 07 40.0**	**+0.7**
DGPR				IAmb		IAmb		13 07 41.9	
	comp=Z,183nm,0.8s								
DHRM	**DHARAMSHALA**	**55.53**	**284**	*e*P		**P**		**13 07 39.6**	**-0.5**
DHRM				IAmb		IAmb		13 07 41.9	
	comp=Z,154nm,0.5s								
SMLA	**Simla**	**55.54**	**282**	*e*P		**P**		**13 07 39.6**	**-0.3**
YKAW3	**Yellowknife Wh**	**55.68**	**34**	IAmb		IAmb		13 07 42.6	
	comp=Z,91nm,0.9s								
YKA	**Yellowknife Ar**	**55.72**	**34**	P		**P**		**13 07 41.5**	**+0.9**
	comp=Z,55nm,0.7s,baz=304,slow=7.6,SNR=181								
	comp=Z,55nm,0.7s								
HSPB	**Hornsund (broa**	**55.78**	**348**	*e*P		**P**		**13 07 39.4**	**-1.5**
NIL	**Nilore**	**56.88**	**287**	P		**P**		**13 07 50.0**	**+0.5**
NIL	**Nilore**	**56.88**	**287**	P		**P**		**13 07 50.0**	**+0.5**
NIL				pmax		pmax			
	comp=Z,126nm,0.9s								
NPLP	**NPLP New Delhi**	**56.97**	**280**	*e*P		**P**		**13 07 49.6**	**-0.5**
NPLP				IAmb		IAmb		13 07 56.2	
	comp=Z,31nm,0.8s								
BJO1	**Bjornoya**	**57.09**	**345**	*e*P		**P**		**13 07 49.7**	**-0.5**
AYAN	**Aya Nagar**	**57.09**	**279**	*e*P		**P**		**13 07 49.9**	**-1.0**
AB31	**Akbulak array**	**57.13**	**309**	P		**P**		**13 07 50.7**	**-0.2**
ABKAR	**Akbulak array**	**57.13**	**309**	P		**P**		**13 07 50.8**	**-0.1**
SOEI	**Soe**	**57.25**	**207**	P		**P**		**13 07 52.0**	**-0.3**
BLSP	**Bilaspur**	**57.30**	**270**	*e*P		**P**		**13 07 50.8**	**-1.7**
AKTO	**Aktyubinsk**	**57.60**	**311**	P		**P**		**13 07 54.0**	**-0.2**
KIRV	**Kirov**	**57.63**	**322**	*ce*P		**P**		**13 07 54.8**	**+0.5**
KUDL	**Kundal**	**57.74**	**280**	*e*P		**P**		**13 07 55.5**	**-0.1**
TULEG	**Thule**	**57.78**	**9**	*i* P		**P**		**13 07 52.3**	**-2.8**
JHNI	**Jhansi**	**57.86**	**276**	*e*P		**P**		**13 07 54.8**	**-1.6**
JHNI				IAmb		IAmb		13 08 07.8	
	comp=Z,42nm,0.5s								
VADS	**Vadso**	**57.87**	**339**	*e*P		**P**		**13 07 55.4**	**-0.5**
RAGD	**RAYAGADA**	**58.16**	**267**	*e*P		**P**		**13 07 58.4**	**-0.1**
RAGD				IAmb		IAmb		13 07 59.4	
	comp=Z,21nm,0.8s								
APA	**Apatity**	**58.39**	**336**	⇓ *i* P		**P**		**13 07 58.9**	**-0.6**
APA				MLR		MLR			
	comp=Z,445nm,15.2s								
NEEM	**North Greenlan**	**58.51**	**5**	*i* P		**P**		**13 07 58.0**	**-2.6**
NEEM				IAmb		IAmb		13 07 59.6	
	comp=Z,23nm,1.0s								
A04D	**Lummi Island**	**58.89**	**51**	IAmb		IAmb		13 08 05.5	
	comp=Z,58nm,0.8s								
HAMF	**Hammerfest**	**58.91**	**341**	*e*P		**P**		**13 08 01.2**	**-1.9**
NLWA	**Neilton Lookou**	**58.94**	**52**	IAmb		IAmb		13 08 06.5	
	comp=Z,60nm,0.8s								
PSI	**Prapat**	**59.07**	**241**	LR		LR		13 35 18.6	
	comp=Z,355nm,21.2s,baz=50,slow=38								
WISH	**Wishkah**	**59.15**	**53**	IAmb		IAmb		13 08 07.7	
	comp=Z,50nm,0.8s								
GUNA	**GUNA**	**59.22**	**276**	*e*P		**P**		**13 08 04.9**	**-1.0**
VIS	**Vishakhapatnam**	**59.23**	**265**	*e*P		**P**		**13 08 05.8**	**-0.2**
VIS				IAmb		IAmb		13 08 07.0	
	comp=Z,23nm,0.9s								
ARA0	**ARCESS Array S**	**59.26**	**340**	*e*P		**P**		**13 08 04.6**	**-0.9**
ARCES	**ARCESS Array B**	**59.26**	**340**	P		**P**		**13 08 03.3**	**-2.2**
	comp=Z,3.6nm,0.5s,baz=49,slow=6.9,SNR=47								
	comp=Z,3.6nm,0.5s								
KBL	**Kabul**	**59.28**	**290**	P		**P**		**13 08 05.5**	**-1.0**
KBL				IAmb		IAmb		13 08 06.4	
	comp=Z,49nm,0.8s								
KBL	**Kabul**	**59.28**	**290**	P		**P**		**13 08 05.5**	**-1.0**
KBL				pmax		pmax			
	comp=Z,49nm,0.8s								
DAG	**Danmarks Havn**	**59.39**	**356**	*i* P		**P**		**13 08 03.0**	**-3.3**
DAG				IAmb		IAmb		13 08 06.7	
	comp=Z,21nm,0.8s								
E03A	**Lebam**	**59.57**	**53**	IAmb		IAmb		13 08 10.8	
	comp=Z,72nm,0.8s								
BHPL	**Bhopal**	**60.02**	**274**	*e*P		**P**		**13 08 10.4**	**-1.0**
BHPL				IAmb		IAmb		13 08 24.0	
	comp=Z,48nm,1.1s								
F04D	**Rainier, OR**	**60.15**	**53**	IAmb		IAmb		13 08 16.7	
	comp=Z,72nm,0.8s								
KTK1	**Kautokeino**	**60.20**	**340**	*e*P		**P**		**13 08 10.9**	**-1.1**
KLMR	**Klimovskoe**	**60.47**	**328**	*e*P		**P**		**13 08 11.2**	**-2.7**
KLMR				*PP		**pP**		**13 08 26.2**	**-0.3**
KLMR				pmax		pmax			
	comp=Z,17nm,0.7s								
JETT	**Jettan, Norway**	**60.48**	**341**	*e*P		**P**		**13 08 12.7**	**-1.2**
G03D	**McMinnville, O**	**60.48**	**54**	IAmb		IAmb		13 08 17.1	
	comp=Z,142nm,1.4s								
NRDN	**NARMADA NAGAR**	**60.52**	**274**	*e*P		**P**		**13 08 18.9**	**+4.0**
NRDN				IAmb		IAmb		13 08 24.3	
	comp=Z,25nm,0.7s								
I02E	**Swisshome, OR**	**60.75**	**56**	IAmb		IAmb		13 08 19.4	
	comp=Z,48nm,0.7s								
TRO	**Tromso**	**60.76**	**342**	*e*P		**P**		**13 08 14.0**	**-1.7**
KULLO	**Kullorsuaq**	**60.79**	**7**	*i* P		**P**		**13 08 13.6**	**-2.2**
COR	**Corvallis**	**60.81**	**55**	P		**P**		**13 08 17.6**	**+1.1**
COR				IAmb		IAmb		13 08 19.8	
	comp=Z,77nm,0.9s								
COR	**Corvallis**	**60.81**	**55**	P		**P**		**13 08 17.6**	**+1.1**
COR				pmax		pmax			
	comp=Z,77nm,1.0s								
LTY	**Liberty**	**60.84**	**51**	IAmb		IAmb		13 08 18.7	
	comp=Z,111nm,1.6s								
G04A	**Mulino**	**60.95**	**54**	IAmb		IAmb		13 08 20.1	
	comp=Z,79nm,0.9s								
B08A	**Colville Reser**	**60.97**	**50**	IAmb		IAmb		13 08 19.1	
	comp=Z,38nm,0.8s								
J01E	**Myrtle Point**	**61.23**	**57**	IAmb		IAmb		13 08 22.4	
	comp=Z,38nm,0.9s								
I03D	**Drain, OR**	**61.28**	**56**	IAmb		IAmb		13 08 22.8	
	comp=Z,56nm,0.9s								
H04A	**Detroit Lake**	**61.41**	**54**	IAmb		IAmb		13 08 23.1	
	comp=Z,58nm,0.9s								
MXC	**Moxie City**	**61.43**	**52**	IAmb		IAmb		13 08 23.3	
	comp=Z,56nm,0.8s								
ILON	**Igloolik, Nuna**	**61.53**	**18**	P		**P**		**13 08 20.5**	**-0.5**
ILON				IAmb		IAmb		13 08 21.3	
	comp=Z,70nm,0.8s								
G05A	**Wamic**	**61.60**	**53**	IAmb		IAmb		13 08 44.8	
	comp=Z,58nm,0.8s								
K02D	**Willamette Mer**	**61.65**	**57**	IAmb		IAmb		13 08 25.1	
	comp=Z,39nm,0.9s								
E07A	**Sunnyside**	**61.69**	**52**	IAmb		IAmb		13 08 25.0	
	comp=Z,69nm,1.0s								
WAH2	**Wallula Slope**	**61.74**	**51**	IAmb		IAmb		13 08 24.9	
	comp=Z,46nm,0.8s								
I04A	**Tendick Farm,**	**61.78**	**55**	IAmb		IAmb		13 08 25.7	
	comp=Z,53nm,0.8s								
C09A	**Chrisman Ranch**	**61.87**	**50**	IAmb		IAmb		13 08 25.6	
	comp=Z,45nm,0.8s								
AKL	**Akola**	**61.89**	**272**	*e*P		**P**		**13 08 23.6**	**-0.6**
DBG	**Daneborg**	**61.90**	**356**	*i* P		**P**		**13 08 21.6**	**-1.8**
DBG				IAmb		IAmb		13 08 23.6	
	comp=Z,19nm,1.0s								
D08A	**Wolliman Farm,**	**61.93**	**51**	IAmb		IAmb		13 08 26.1	
	comp=Z,37nm,0.8s								
BELG	**Belogornoye**	**61.95**	**317**	*i* P		**P**		**13 08 24.3**	**+0.3**
BELG				pmax		pmax			
	comp=Z,7.0nm,0.9s								
HAWA	**Hanford**	**61.97**	**52**	IAmb		IAmb		13 08 26.8	
	comp=Z,52nm,1.1s								
WIFE	**Three Sisters-**	**61.98**	**55**	IAmb		IAmb		13 08 27.4	
	comp=Z,45nm,0.9s								
KSXB	**Camp Six Broad**	**62.02**	**58**	IAmb		IAmb		13 08 27.8	
	comp=Z,46nm,1.0s								
I05D	**Terrebonne, OR**	**62.10**	**54**	IAmb		IAmb		13 08 27.8	
	comp=Z,42nm,0.8s								
NEW	**Newport**	**62.23**	**49**	IAmb		IAmb		13 08 28.2	
	comp=Z,71nm,0.9s								
UPNV	**Upernavik**	**62.59**	**8**	*i* P		**P**		**13 08 26.4**	**-1.7**
UPNV				IAmb		IAmb		13 08 27.4	
	comp=Z,34nm,0.8s								
KHMM	**Horse Mountain**	**62.66**	**59**	IAmb		IAmb		13 08 32.4	
	comp=Z,90nm,1.1s								
KMPM	**Mount Pierce**	**62.68**	**59**	IAmb		IAmb		13 08 32.5	
	comp=Z,69nm,0.9s								
J05D	**Fort Rock, OR**	**62.77**	**55**	IAmb		IAmb		13 08 32.9	
	comp=Z,68nm,1.0s								
YBH	**Yreka Blue Hor**	**62.79**	**57**	LR		LR		13 30 33.4	
	comp=Z,26nm,21.6s,baz=336,slow=31								
YBH	**Yreka Blue Hor**	**62.79**	**57**	IAmb		IAmb		13 08 33.0	
	comp=Z,45nm,1.0s								
K04D	**Chiloquin, OR**	**62.85**	**56**	IAmb		IAmb		13 08 32.6	
	comp=Z,47nm,0.7s								
HYBB	**Hyderabad (bro**	**62.88**	**269**	*e*P		**P**		**13 08 29.9**	**-1.0**
HYBB				*eS		**S**		**13 17 00.7**	**+3.2**
M02C	**Callahan**	**62.90**	**58**	IAmb		IAmb		13 08 33.9	
	comp=Z,42nm,1.0s								
STEI	**Steigen**	**62.94**	**342**	*e*P		**P**		**13 08 28.8**	**-1.5**
LNOR	**Lincton Mounta**	**62.98**	**51**	IAmb		IAmb		13 08 34.0	
	comp=Z,106nm,1.7s								
KMRM	**Mail Ridge**	**63.05**	**59**	IAmb		IAmb		13 08 34.8	
	comp=Z,37nm,0.8s								
KHBM	**Hayfork Bally**	**63.10**	**59**	IAmb		IAmb		13 08 35.0	
	comp=Z,48nm,1.2s								
LOF	**Lofoten**	**63.15**	**342**	*e*P		**P**		**13 08 30.9**	**-1.0**
N02D	**Trinity Center**	**63.23**	**58**	IAmb		IAmb		13 08 35.9	
	comp=Z,52nm,0.8s								
FAUS	**Fauske**	**63.36**	**341**	*e*P		**P**		**13 08 31.6**	**-1.6**
M03C	**McCloud**	**63.41**	**57**	IAmb		IAmb		13 08 36.8	
	comp=Z,80nm,1.0s								
KCPM	**Cahto Peak**	**63.44**	**60**	IAmb		IAmb		13 08 37.1	
	comp=Z,71nm,0.8s								
F10A	**Beach Ranch, E**	**63.52**	**51**	IAmb		IAmb		13 08 37.1	
	comp=Z,134nm,1.9s								
SUMG	**Summit**	**63.88**	**2**	P		**P**		**13 08 35.8**	**-1.2**
SUMG	**Summit**	**63.88**	**2**	IAmb		IAmb		13 08 38.5	
	comp=Z,117nm,1.2s								
SUMG	**Summit**	**63.88**	**2**	*i* P		**P**		**13 08 35.0**	**-2.1**
SUMG				IAmb		IAmb		13 08 38.1	
	comp=Z,138nm,1.3s								
HRA	**Herat**	**63.94**	**293**	IAmb		IAmb		13 08 39.2	
	comp=Z,132nm,1.6s								
RAUS	**Rausandaksla**	**64.42**	**341**	*e*P		**P**		**13 08 38.8**	**-1.4**
MOS	**Moscow**	**64.49**	**324**	*e*P		**P**		**13 08 39.3**	**-1.5**
MOS				*e*				13 09 19.1	
MOS				*eS		**S**		**13 17 14.8**	**-1.5**
MOS				pmax		pmax			
	comp=Z,43nm,0.9s								
WRA	**Warramunga Arr**	**64.52**	**194**	P		**P**		**13 08 40.7**	**-0.6**
	comp=Z,16nm,0.9s,baz=12,slow=6.6,SNR=5.2								
WRA				PKPPKP		**P'P'df**		**13 37 29.5**	**+6.1**
	comp=Z,1.8nm,0.9s,baz=196,slow=2.5,SNR=9.9								
	comp=Z,16nm,0.9s								
WRA	**Warramunga Arr**	**64.52**	**194**	*i* P		**P**		**13 08 40.7**	**-0.6**
WRA				pmax		pmax			
	comp=Z,15nm,0.9s								
MNRC	**McLaughlin Min**	**64.63**	**60**	IAmb		IAmb		13 08 45.0	
	comp=Z,66nm,0.8s								
PLID	**Pearl Lake**	**64.74**	**51**	IAmb		IAmb		13 08 44.9	
	comp=Z,110nm,1.2s								
STOK	**Stokkvaagen**	**64.74**	**341**	*e*P		**P**		**13 08 40.8**	**-1.5**
ORV	**Oroville**	**64.81**	**59**	IAmb		IAmb		13 08 44.9	
	comp=Z,37nm,0.8s								
MSO	**Missoula**	**64.82**	**49**	IAmb		IAmb		13 08 45.4	
	comp=Z,89nm,0.9s								
WVOR	**Wild Horse Val**	**64.82**	**55**	IAmb		IAmb		13 08 45.8	
	comp=Z,46nm,1.1s								
SUTB	**Sutter Butte**	**64.83**	**59**	IAmb		IAmb		13 08 44.5	
	comp=Z,34nm,0.8s								
FIA1	**FINESS Array S**	**64.89**	**333**	P		**P**		**13 08 43.2**	**-0.1**
FIA1				IAmb		IAmb		13 08 47.0	
	comp=Z,47nm,0.7s								
FINES	**FINESS Array B**	**64.89**	**333**	P		**P**		**13 08 41.7**	**-1.7**
	comp=Z,12nm,0.5s,baz=36,slow=6.4,SNR=140								
	comp=Z,12nm,0.5s								
FINES	**FINESS Array B**	**64.89**	**333**	P		**P**		**13 08 43.2**	**-0.2**
FINES	**FINESS Array B**	**64.89**	**333**	*ce*P		**P**		**13 08 41.7**	**-1.7**
FINES				pmax		pmax			
	comp=Z,13nm,0.5s								
LEIR	**Leirfjorden**	**64.90**	**341**	*e*P		**P**		**13 08 42.5**	**-0.9**
SAATT	**Saattut**	**64.90**	**7**	*i* P		**P**		**13 08 41.3**	**-2.0**
SAATT				IAmb		IAmb		13 08 43.6	
	comp=Z,106nm,0.8s								
BEKR	**Beckworth**	**65.33**	**58**	IAmb		IAmb		13 08 48.9	
	comp=Z,82nm,0.9s								
OBN	**Obninsk**	**65.35**	**324**	*de*P		**P**		**13 08 46.3**	**-0.1**
OBN				*i* *PP		**sP**		**13 09 02.1**	**-2.1**
OBN				*i*				13 09 17.0	
OBN				*e*				13 11 14.7	
OBN				*e*PPP		PPP		13 12 44.6	
OBN				*e*SS		SS		13 21 43.8	+4.2
OBN				pmax		pmax			
	comp=Z,38nm,0.9s								
OBN				MLR		MLR			
	comp=Z,184nm,15.0s								
OBN	**Obninsk**	**65.35**	**324**	*e*P		**P**		**13 08 46.6**	**+0.2**
VRH	**Novokhopyorsk**	**65.57**	**318**	*e*P		**P**		**13 08 44.8**	**-3.1**
VRH				pmax		pmax			
	comp=Z,30nm,1.0s								
POO	**Poona**	**65.57**	**273**	*e*P		**P**		**13 08 47.7**	**-0.8**
POO				IAmb		IAmb		13 08 49.5	
	comp=Z,29nm,0.7s								
FFC	**Flin Flon**	**65.61**	**37**	P		**P**		**13 08 49.1**	**+1.0**
FFC	**Flin Flon**	**65.61**	**37**	P		**P**		**13 08 49.1**	**+1.0**
FFC				pmax		pmax			
	comp=Z,91nm,0.9s								
JRSC	**Jasper Ridge**	**65.65**	**61**	IAmb		IAmb		13 08 50.5	
	comp=Z,46nm,0.9s								
SCO	**Scoresbysund**	**65.78**	**356**	IAmb		IAmb		13 08 50.3	
	comp=Z,34nm,1.1s								
SCO	**Scoresbysund**	**65.78**	**356**	*i* P		**P**		**13 08 47.5**	**-1.4**
SCO				IAmb		IAmb		13 08 50.0	
	comp=Z,34nm,1.1s								
LPSR	**Galich'ya Gora**	**65.97**	**321**	*e*P		**P**		**13 08 50.5**	**0.0**
LPSR				pmax		pmax			
	comp=Z,51nm,1.1s								
PAHR	**Pah Rah Range**	**66.02**	**57**	IAmb		IAmb		13 08 53.5	
	comp=Z,77nm,1.0s								
MHC	**Mount Hamilton**	**66.06**	**61**	IAmb		IAmb		13 08 53.8	
	comp=Z,82nm,1.7s								
KAD	**Karad**	**66.12**	**271**	*e*P		**P**		**13 08 51.0**	**-1.0**
KAD				IAmb		IAmb		13 08 52.8	
	comp=Z,31nm,0.9s								
CMB	**Columbia Colle**	**66.43**	**59**	IAmb		IAmb		13 08 56.0	
	comp=Z,49nm,0.8s								
VORR	**Voronezh**	**66.46**	**320**	*e*P		**P**		**13 08 52.4**	**-1.2**
VORR				pmax		pmax			
	comp=Z,30nm,0.8s								
DLMT	**Dillon**	**66.46**	**49**	IAmb		IAmb		13

comp=Z,46nm,0.9s
SFJD Kangerlussuaq 68.71 7 P **P** **13 09 07.1 -0.5**
SFJD pmax pmax
comp=Z,46nm,1.0s
SFJD Kangerlussuaq 68.71 7 *i* P **P** **13 09 06.2 -1.3**
SFJD IAmb IAmb 13 09 08.0
comp=Z,43nm,0.9s
GOF Gofitskoye 68.90 313 *ce*P **P** **13 09 09.6 +0.5**
R11B Troy Canyon, C 69.18 57 IAmb IAmb 13 09 13.4
comp=Z,44nm,1.0s
MOL Molde 69.20 341 *e*P **P** **13 09 11.1 +0.4**
DOMB Dombas 69.30 340 *e*P **P** **13 09 10.6 -0.7**
MNK Minsk 69.36 327 *i* LRM MLR 13 41 57.4
comp=Z,308nm,15.3s
MNK Minsk 69.36 327 *i* P **P** **13 09 11.3 -0.4**
MNK *i* *PP **pP** **13 09 25.5 +1.0**
MNK *i* 13 09 34.0
MNK *i* 13 11 45.2
MNK *i* PPP PPP 13 13 26.6
MNK *i* S **S** **13 18 15.7 +0.7**
MNK *i* *SS **sS** **13 18 40.1 +3.8**
MNK *i* 13 19 08.2
MNK *i* SS **SS** **13 22 46.7 +5.2**
MNK pmax pmax
comp=N,31nm,1.0s
MNK pmax pmax
comp=Z,107nm,0.8s
MNK pmax pmax
comp=E,46nm,0.9s
MNK MLR MLR
comp=Z,308nm,15.0s
MNK Minsk 69.36 327 *i* P **P** **13 09 11.4 -0.4**
comp=E,46nm,0.9s
MNK Minsk 69.36 327 *i* P **P** **13 09 11.4 -0.4**
comp=N,31nm,1.0s
MNK Minsk 69.36 327 *i* P **P** **13 09 11.4 -0.4**
comp=Z,107nm,0.8s,baz=42
MNK Minsk 69.36 327 *i* pP pP 13 09 25.6 +1.0
MNK Minsk 69.36 327 *i* PP PP 13 11 45.2 +0.5
MNK Minsk 69.36 327 *i* PPP PPP 13 13 26.6
MNK Minsk 69.36 327 *i* S **S** **13 18 15.8 +0.7**
MNK Minsk 69.36 327 *i* sS sS 13 18 40.1 +3.8
MNK Minsk 69.36 327 *i* SS SS 13 22 46.8 +5.3
MNK Minsk 69.36 327 *i* SSS SSS 13 26 02.7
MNK Minsk 69.36 327 *i* LQ LQ 13 34 44.9
MNK Minsk 69.36 327 *i* LR LR 13 39 44.4
MBWA Marble Bar 69.40 207 P **P** **13 09 10.0 -2.3**
comp=Z,63nm,1.2s
NC405 NORSAR Array S 69.42 339 IAmb IAmb 13 09 12.9
comp=Z,41nm,0.5s
HWUT Hardware Ranch 69.44 52 IAmb IAmb 13 09 15.2
comp=Z,89nm,1.3s
NACGM Naroch 69.48 328 *e*P **P** **13 09 13.1 +0.6**
comp=N,49nm,0.8s
WCT Wildcat Mounta 69.54 58 IAmb IAmb 13 09 15.5
comp=Z,69nm,1.3s
CLC China Lake 69.56 60 IAmb IAmb 13 09 15.5
comp=Z,58nm,0.9s
NB201 NORSAR Array S 69.58 339 IAmb IAmb 13 09 14.3
comp=Z,44nm,0.8s
NB2 NORSAR Subarra 69.61 339 P **P** **13 09 12.5 -0.8**
comp=Z,17nm,0.5s,baz=31,slow=6.5
NOA NORSAR Array B 69.61 339 P **P** **13 09 12.3 -1.0**
comp=Z,12nm,0.4s,baz=31,slow=6.6,SNR=183
comp=Z,12nm,0.4s
DUG Dugway, Tooele 69.64 54 IAmb IAmb 13 09 16.4
comp=Z,54nm,0.8s
TPNV Topopah Spring 69.67 58 IAmb IAmb 13 09 16.5
comp=Z,68nm,0.9s
AKN Aaknes 69.67 341 *e*P **P** **13 09 12.8 -0.8**
HFS Hagfors 69.70 337 P **P** **13 09 12.8 -1.0**
comp=Z,39nm,0.4s,baz=46,slow=6.4,SNR=332
comp=Z,39nm,0.4s
PSAC2 Pilbara Seismi 69.72 207 P **P** **13 09 14.5 +0.2**
comp=Z,71nm,1.2s
PSAC1 Pilbara Seismi 69.72 207 P **P** **13 09 14.3 0.0**
comp=Z,64nm,1.4s
PSA00 Pilbara Seismi 69.74 207 P **P** **13 09 14.2 -0.2**
comp=Z,52nm,1.2s
PSA00 Pilbara Seismi 69.74 207 P **P** **13 09 14.7 +0.3**
TPO Tropico Hills 69.75 61 IAmb IAmb 13 09 17.1
comp=Z,64nm,1.0s
PSAB3 Pilbara Seismi 69.76 207 P **P** **13 09 14.5 -0.1**
comp=Z,60nm,1.3s
BW06 Boulder Array 69.81 50 IAmb IAmb 13 09 16.9
comp=Z,48nm,0.9s
ERBR Yeremizino-Bor 69.81 314 *e*P **P** **13 09 13.4 -1.3**
ERBR *e**PP **pP** **13 09 26.8 -0.8**
ERBR *e*S **S** **13 18 18.0 -2.7**
ERBR pmax pmax
comp=Z,109nm,1.3s
PD31 Pinedale Array 69.81 50 IAmb IAmb 13 09 16.9
comp=Z,51nm,0.9s
PDAR Pinedale Array 69.81 50 P **P** **13 09 15.8 +0.7**
comp=Z,33nm,0.8s,baz=272,slow=2.0,SNR=316
PDAR PKPPKP **P'P'df** **13 37 19.1 -5.8**
comp=Z,0.7nm,0.9s,baz=35,slow=0.8,SNR=3.5
comp=Z,33nm,0.8s
PDAR Pinedale Array 69.81 50 P **P** **13 09 15.6 +0.5**
KIV Kislovodsk 69.82 312 *i* P **P** **13 09 15.5 +0.5**
SNR=5.8
KIV Kislovodsk 69.82 312 *e*P **P** **13 09 15.0 0.0**
KIV *e*S **S** **13 18 21.5 +0.4**
KIV pmax pmax
comp=Z,14nm,3.3s
KIV pmax pmax
comp=Z,100nm,1.0s
KIV MLR MLR
comp=Z,429nm,17.0s
KIV Kislovodsk 69.82 312 *e*P **P** **13 09 16.3 +1.3**
TCUT Toone Canyon 69.85 52 IAmb IAmb 13 09 17.7
comp=Z,51nm,0.8s
KBZ Khabaz 69.86 312 P **P** **13 09 15.8 +0.7**
comp=Z,46nm,0.8s,baz=71,slow=3.7,SNR=68
comp=Z,46nm,0.8s
KBZ Khabaz 69.86 312 *ce*P **P** **13 09 15.4 +0.4**
KBZ pmax pmax
comp=Z,43nm,0.9s
KBZ Khabaz 69.86 312 *e*P **P** **13 09 15.4 +0.4**
CCCA Chr Cany lake 69.89 60 IAmb IAmb 13 09 17.7
comp=Z,73nm,1.1s
QSM Queen of Sheba 69.92 59 IAmb IAmb 13 09 17.8
comp=Z,85nm,1.0s
MWC Mount Wilson 70.28 61 IAmb IAmb 13 09 20.0
comp=Z,77nm,1.4s
LABN Labinsk 70.41 313 *e*P **P** **13 09 19.1 +0.7**
LABN *e**PP **pP** **13 09 30.1 -1.2**
LABN *e* 13 11 54.1
LABN *e*S **S** **13 18 28.1 +0.4**
LABN pmax pmax
comp=Z,95nm,1.0s
MPU Maple Canyon 70.44 53 IAmb IAmb 13 09 21.2
comp=Z,44nm,0.8s
BFSC Mount Baldy Ra 70.53 61 IAmb IAmb 13 09 21.3
comp=Z,41nm,0.8s
BSUT Blindstream Ca 70.60 52 IAmb IAmb 13 09 43.7
comp=Z,57nm,1.1s
SKAR Skarslia 70.66 340 *e*P **P** **13 09 20.4 +0.6**
HYA Hoyanger 70.75 341 *e*P **P** **13 09 20.3 +0.1**
ANGG Ammassalik, Gr 70.87 2 IAmb IAmb 13 09 21.2
comp=Z,44nm,0.7s
ANGG Ammassalik, Gr 70.87 2 *i* P **P** **13 09 20.0 -0.8**
ANGG IAmb IAmb 13 09 21.0
comp=Z,44nm,0.8s
MTPC Mountain Pass 71.04 59 IAmb IAmb 13 09 24.9
comp=Z,71nm,1.4s
SUE Sulen 71.17 342 *e*P **P** **13 09 21.8 -0.9**
GNI Garni 71.21 308 *ce*P **P** **13 09 24.9 +1.3**
GNI pmax pmax
comp=Z,49nm,1.7s
KONO Kongsberg 71.22 339 *e*P **P** **13 09 21.8 -1.3**
KONO Kongsberg 71.22 339 P **P** **13 09 23.3 +0.2**
P17A Butcher Ranch, 71.32 53 IAmb IAmb 13 09 26.5
comp=Z,63nm,0.9s
V12A Nelson 71.32 58 IAmb IAmb 13 09 26.8
comp=Z,65nm,1.4s
STRU Stroemstad 71.32 338 *i* P **P** **13 09 22.4 -1.2**
NUUK Nuuk 71.34 9 *i* P **P** **13 09 23.1 -0.5**
NUUK IAmb IAmb 13 09 24.9
comp=Z,142nm,0.9s
ULM Lac du Bonnet 71.41 37 P **P** **13 09 24.4 0.0**
comp=Z,27nm,0.8s,baz=307,slow=7.3,SNR=18
comp=Z,27nm,0.8s
ULM Lac du Bonnet 71.41 37 IAmb IAmb 13 09 25.6
comp=Z,73nm,1.3s
BORG Borgarnes 71.44 355 *i* P **P** **13 09 27.5 +3.2**

LCMT Little Creek M 71.46 56 IAmb IAmb 13 09 27.7
comp=Z,50nm,0.9s
SUW Suwalki 71.53 329 *e*P **P** **13 09 24.9 -0.1**
ASK Askoy 71.58 341 *e*P **P** **13 09 25.2 0.0**
DNR Dunn Ranch,Anz 71.61 61 IAmb IAmb 13 09 28.1
comp=Z,73nm,0.9s
AKASG Malin Array Be 71.62 324 P **P** **13 09 25.8 +0.2**
comp=Z,24nm,0.5s,baz=40,slow=6.2,SNR=131
comp=Z,24nm,0.5s
AKASG Malin Array Be 71.62 324 P **P** **13 09 25.6 0.0**
AKASG IAmb IAmb 13 09 27.1
comp=Z,102nm,1.1s
AKBB Malin Array Si 71.62 324 IAmb IAmb 13 09 27.1
comp=Z,96nm,1.1s
AKBB Malin Array Si 71.62 324 *ce*P **P** **13 09 25.3 -0.3**
AKBB pmax pmax
comp=Z,82nm,1.0s
KIEV Kiev 71.63 324 P **P** **13 09 25.9 +0.2**
KIEV IAmb IAmb 13 09 27.1
comp=Z,86nm,1.1s
KIEV Kiev 71.63 324 *i* P **P** **13 09 25.5 -0.2**
SNR=36
KIEV Kiev 71.63 324 P **P** **13 09 25.9 +0.2**
KIEV pmax pmax
comp=Z,86nm,1.1s
SOC Sochi 71.66 313 *e*P **P** **13 09 24.1 -1.9**
SOC *e* 13 12 06.0
SOC *e*PPP PPP 13 13 49.9
SOC *e*S **S** **13 18 40.0 -2.2**
SOC *e*SS **SS** **13 23 11.6 -5.8**
SOC *e*SSS SSS 13 26 27.6
SOC MLR MLR
comp=Z,460nm,18.0s
SRU San Rafael Swe 71.68 53 IAmb IAmb 13 09 28.5
comp=Z,90nm,0.9s
PFO Pinyon Flats O 71.69 61 LR LR 13 35 28.2
comp=Z,173nm,21.9s,baz=330,slow=31
PFO Pinyon Flats O 71.69 61 P **P** **13 09 27.2 +0.6**
PFO Pinyon Flats O 71.69 61 P **P** **13 09 27.2 +0.6**
PFO pmax pmax
comp=Z,31nm,1.0s
DANC Danby, Needles 71.70 59 IAmb IAmb 13 09 48.5
comp=Z,79nm,1.1s
KNB Kanab 71.71 56 IAmb IAmb 13 09 29.4
comp=Z,58nm,1.0s
CPE Camp Elliot 71.75 62 IAmb IAmb 13 09 28.6
comp=Z,48nm,0.8s
RSSD Black Hills 71.86 46 P **P** **13 09 28.0 +0.5**
RSSD Black Hills 71.86 46 P **P** **13 09 28.0 +0.5**
RSSD pmax pmax
comp=Z,33nm,0.7s
BATM Batumi 71.94 311 P **P** **13 09 28.4 +0.6**
BATM Batumi 71.94 311 P **P** **13 09 28.4 +0.6**
ANN Anapa 72.00 315 *e*P **P** **13 09 27.6 -0.4**
ANN *e**PP **pP** **13 09 40.5 -0.4**
ANN *e*S **S** **13 18 45.1 -1.0**
ANN *e*SS **SS** **13 23 27.0 +4.4**
ANN pmax pmax
comp=Z,23nm,0.7s
ANN Anapa 72.00 315 *e*P **P** **13 09 27.8 -0.2**
TJOU Tjoern 72.05 337 *i* P **P** **13 09 27.2 -0.9**
BORU Boraas 72.06 336 *i* P **P** **13 09 27.2 -0.9**
IRM Iron Mountain 72.16 60 IAmb IAmb 13 09 31.4
comp=Z,79nm,1.3s
BLS5 Blasjo 72.22 340 *e*P **P** **13 09 29.0 -0.1**
O20A White River Ci 72.30 51 IAmb IAmb 13 09 51.5
comp=Z,51nm,0.9s
CBX Cerro Bola 72.41 62 IAmb IAmb 13 09 32.8
comp=Z,40nm,0.8s
U15A North Rim 72.42 56 IAmb IAmb 13 09 33.7
comp=Z,56nm,0.8s
ONAU Onsala 72.51 337 *i* P **P** **13 09 30.2 -0.6**
FABU Falkenberg 72.61 336 *i* P **P** **13 09 30.2 -1.2**
KMY Karmoy 72.69 341 *e*P **P** **13 09 32.0 +0.1**
HOMB Homborsund 72.70 339 *e*P **P** **13 09 28.8 -3.1**
HOMB Homborsund 72.70 339 *i* P **P** **13 09 31.0 -0.9**
DEL Delary 72.71 335 *i* P **P** **13 09 30.0 -2.0**
EPLO Experimental L 72.77 37 IAmb IAmb 13 09 33.5
comp=Z,100nm,1.0s
BLYC Blythe 72.82 60 IAmb IAmb 13 09 35.3
comp=Z,100nm,1.4s
AGMN Agassiz Nation 72.85 39 IAmb IAmb 13 09 34.1
comp=Z,75nm,1.1s
PV21 Cone Mtn., Par 72.95 53 IAmb IAmb 13 09 36.2
comp=Z,62nm,0.8s
SNART Snartemo 72.98 339 *e*P **P** **13 09 34.1 +0.5**
SNART Snartemo 72.98 339 *i* P **P** **13 09 33.0 -0.6**
PV23 Carpenter Ridg 73.00 53 IAmb IAmb 13 09 36.5
comp=Z,121nm,1.0s
PV14 Lion Creek, Pa 73.05 53 IAmb IAmb 13 09 36.7
comp=Z,52nm,0.8s
ESJX Sierra Juarez 73.07 62 IAmb IAmb 13 09 36.9
comp=Z,50nm,0.9s
PV22 Blue Mesa, Par 73.07 53 IAmb IAmb 13 09 36.8
comp=Z,60nm,0.9s
PV04 Paradox Valley 73.10 53 IAmb IAmb 13 09 37.1
comp=Z,57nm,0.8s
PV16 Nyonger Mesa 73.15 53 IAmb IAmb 13 09 37.4
comp=Z,68nm,0.9s
PV05 Paradox Valley 73.20 53 IAmb IAmb 13 09 37.9
comp=Z,97nm,0.9s
PV12 Saucer Basin, 73.21 53 IAmb IAmb 13 09 38.6
comp=Z,83nm,0.9s
PV03 Paradox Valley 73.23 53 IAmb IAmb 13 09 37.8
comp=Z,54nm,0.8s
BANOM Banah 73.24 290 *i* P **P** **13 09 36.1 +0.3**
SNR=11
SHME Shamm 73.26 290 *i* P **P** **13 09 35.6 -0.3**
SNR=6.7
BJUU Bjuv 73.30 335 *i* P **P** **13 09 34.4 -1.1**
PV13 Radium Mtn., P 73.31 53 IAmb IAmb 13 09 38.4
comp=Z,77nm,0.8s
PV02 Paradox Valley 73.32 53 IAmb IAmb 13 09 38.5
comp=Z,74nm,1.0s
BSD Bornholm Skovb 73.51 334 *i* P **P** **13 09 37.1 +0.3**
BSD IAmb IAmb 13 09 37.8
comp=Z,81nm,0.8s
LUNU Lund 73.54 335 *i* P **P** **13 09 36.0 -1.0**
SIM Simferopol' 73.56 317 *e*P **P** **13 09 37.5 +0.2**
SIM S **SKiKP** **13 19 01.0 -2.5**
GOET G??ttrup 73.58 338 *i* P **P** **13 09 38.0 +0.8**
GOET *i* P **P** **13 09 38.5 +1.3**
GOET IAmb IAmb 13 09 39.0
comp=Z,135nm,0.7s
MSFE Esma-Masafi 73.70 290 P **P** **13 09 38.7 +0.2**
COP Copenhagen 73.81 335 *i* P **P** **13 09 38.9 +0.4**
COP IAmb IAmb 13 09 40.0
comp=Z,121nm,0.7s
SORM Soroca 73.91 322 ⇓P **P** **13 09 39.6 +0.3**
SORM Soroca 73.91 322 P **P** **13 09 39.5 +0.3**
UOSS Minazif 73.94 289 P **P** **13 09 39.8 -0.1**
HATD Hatta, Dubai 74.07 289 *i* P **P** **13 09 40.7 +0.1**
SNR=10
MUD Monsted U'grnd 74.09 337 *i* P **P** **13 09 40.4 +0.2**
MUD IAmb IAmb 13 09 41.8
comp=Z,49nm,0.8s
BEL Belsk 74.14 329 *e*P **P** **13 09 41.6 +1.1**
MVCO Mesa Verde 74.14 54 IAmb IAmb 13 09 43.2
comp=Z,47nm,0.8s
SUSD Miller 74.20 43 IAmb IAmb 13 09 42.4
comp=Z,125nm,1.0s
ASHO Ashiyiah 74.21 289 *i* P **P** **13 09 43.0 +1.5**
SNR=7.2
KUQ Kuujjuuaa 74.21 19 P **P** **13 09 40.9 +0.1**
KUQ IAmb IAmb 13 09 41.5
comp=Z,76nm,1.4s
SOHO SOHO 74.25 288 *i* P **P** **13 09 42.0 +0.3**
SNR=6.0
GKP Gorka Klasztor 74.26 331 *e*P **P** **13 09 42.2 +1.0**
X16A Lo Mia Camp, P 74.28 57 IAmb IAmb 13 09 44.5
comp=Z,48nm,0.8s
F33A 5 Mile Ranch, 74.47 41 IAmb IAmb 13 09 44.0
comp=Z,106nm,1.1s
IVI Ivigtut 74.61 8 IAmb IAmb 13 09 44.2
comp=Z,107nm,0.9s
IVI Ivigtut 74.61 8 *i* P **P** **13 09 42.3 -0.8**
IVI IAmb IAmb 13 09 44.0
comp=Z,126nm,1.0s
MILM Milestii Mici 74.62 321 *e*P **P** **13 09 42.5 -0.9**
comp=Z,80nm,1.2s
MILM LRM MLR 13 46 06.0
comp=Z,400nm,17.0s
ASUD Al Ashush, Dub 74.75 289 P **P** **13 09 44.8 +0.3**
ALNE Al Ain 74.83 289 *i* P **P** **13 09 45.3 +0.2**
SNR=11

EYMN Ely 75.04 37 IAmb IAmb 13 09 47.1
comp=Z,122nm,1.2s
KWP Kalwaria Pacla 75.14 326 *e*P **P** **13 09 47.5 +1.1**
GIRR Girov 75.62 323 ⇑P **P** **13 09 50.7 +1.4**
BURAR Bucovina Array 75.67 324 P **P** **13 09 50.1 +0.4**
BURAR IAmb IAmb 13 09 51.6
comp=Z,41nm,0.8s
BURAR Bucovina Array 75.67 324 ⇑P **P** **13 09 49.8 +0.2**
BURAR Bucovina Array 75.67 324 P **P** **13 09 49.8 +0.2**
VLDR Vladesti 75.76 321 ⇑P **P** **13 09 51.2 +1.2**
OJC Oicow 75.81 328 *e*P **P** **13 09 50.7 +0.5**
ECSD EROS Data Cent 75.87 42 IAmb IAmb 13 09 52.1
comp=Z,102nm,1.0s
STHS Stebnicka Huta 75.89 327 *e*P **P** **13 09 50.7 -0.1**
STHS pmax pmax
comp=Z,75nm,1.6s
STHS Stebnicka Huta 75.89 327 *e*P **P** **13 09 50.7 -0.1**
TESR Tescani 75.90 322 ⇓P **P** **13 09 51.7 +0.9**
TLCR 75.92 320 ⇓P **P** **13 09 52.0 +1.0**
TLCR 75.92 320 P **P** **13 09 51.9 +1.0**
SCTR Scanteiesti 75.93 321 ⇓P **P** **13 09 52.6 +1.6**
BSEG Bad Segeberg 75.94 335 *e*P **P** **13 09 51.7 +0.9**
comp=Z,41nm,0.9s,baz=31,slow=5.6
RUE Ruedersdorf 76.09 333 *e*P **P** **13 09 52.4 +0.7**
comp=Z,79nm,1.0s,baz=31,slow=5.6
NEGRR Negrea 76.09 321 ⇑P **P** **13 09 53.2 +1.3**
COSR Cosmesti PH 76.10 321 ⇑P **P** **13 09 53.7 +1.8**
TUC Tucson 76.11 59 P **P** **13 09 53.4 +1.0**
TUC Tucson 76.11 59 P **P** **13 09 53.4 +1.0**
TUC pmax pmax
comp=Z,20nm,1.0s
ONER Baraj Valea Uz 76.15 322 ⇓P **P** **13 09 53.4 +1.2**
PANC Panciu 76.17 322 ⇑P **P** **13 09 54.3 +2.0**
LEWI Lewis, Hebride 76.19 346 *e*P **P** **13 09 52.4 +0.2**
LEWI IAmb IAmb 13 09 53.8
comp=Z,18nm,0.6s
KSCO Kaye Shedlock' 76.20 49 IAmb IAmb 13 09 54.5
comp=Z,96nm,1.2s
CFR Carcaliu 76.24 321 ⇑P **P** **13 09 53.7 +0.9**
CFR Carcaliu 76.24 321 P **P** **13 09 53.6 +0.9**
NIE Niedzica 76.26 328 *e*P **P** **13 09 54.4 +1.6**
FORT Forrest 76.26 197 P **P** **13 09 53.3 +0.5**
comp=Z,31nm,0.8s
ODBI Odobesti 76.29 322 ⇓P **P** **13 09 55.0 +2.0**
TPGR Topolog 76.36 320 ⇓P **P** **13 09 54.7 +1.2**
VRI Vrincioaia 76.36 322 ⇓P **P** **13 09 54.3 +0.8**
VRI Vrincioaia 76.36 322 P **P** **13 09 54.3 +0.8**
PLOR Plostina 76.41 322 ⇓P **P** **13 09 54.9 +1.1**
PLOR Plostina 76.41 322 P **P** **13 09 54.9 +1.1**
GORT1 Trebel 76.45 334 *e*P **P** **13 09 54.8 +1.1**
comp=Z,162nm,1.4s,baz=31,slow=5.6
TURR Turia 76.53 322 ⇓P **P** **13 09 56.1 +1.6**
T25A Trinidad 76.54 51 IAmb IAmb 13 09 56.8
comp=Z,56nm,1.0s
SPMN Marine on St. 76.55 39 IAmb IAmb 13 09 55.6
comp=Z,53nm,1.0s
KSP Ksiaz 76.59 331 *e*P **P** **13 09 54.6 -0.1**
OZUR 76.60 322 ⇓P **P** **13 09 56.9 +2.0**
COVR Voineasa-Covas 76.61 322 ⇑P **P** **13 09 56.0 +1.1**
BISRR Bisoca 76.61 322 ⇑P **P** **13 09 56.9 +1.9**
KPL Plockton 76.73 345 *e*P **P** **13 09 55.4 +0.2**
KPL IAmb IAmb 13 09 56.8
comp=Z,46nm,0.7s
LANS Liptovska Anna 76.80 328 *e*P **P** **13 09 57.8 +1.9**
LANS pmax pmax
comp=Z,58nm,1.6s
LANS Liptovska Anna 76.80 328 *e*P **P** **13 09 57.8 +1.9**
STEB Steborice 76.80 329 *e*P **P** **13 09 56.7 +0.8**
OSTC Ostas 76.86 330 *e*P **P** **13 09 57.0 +0.8**
OSTC Ostas 76.86 330 *e*P **P** **13 09 57.0 +0.8**
DOPR Dopca 76.88 323 ⇑P **P** **13 09 58.0 +1.6**
CHVC Chvalec 76.89 331 *e*P **P** **13 09 57.2 +0.8**
CHVC Chvalec 76.89 331 *e*P **P** **13 09 57.2 +0.8**
NEHR Nehoiu 76.89 322 ⇑P **P** **13 09 57.9 +1.4**
TASM ASL Pad, Albuq 76.90 54 IAmb IAmb 13 09 59.3
comp=Z,24nm,0.9s
TASM ASL Pad, Albuq 76.90 54 IAmb IAmb 13 09 59.3
comp=Z,24nm,0.9s
ANMO Albuquerque 76.90 54 P **P** **13 09 58.1 +1.2**
ANMO Albuquerque 76.90 54 *ce*P **P** **13 09 56.1 -0.8**
ANMO pmax pmax
comp=Z,37nm,1.3s
KECS Kecovo 76.94 327 *e*P **P** **13 09 57.5 +0.8**
UPC Upice 76.97 330 *e*P **P** **13 09 57.6 +0.8**
UPC Upice 76.97 330 *e*P **P** **13 09 57.6 +0.8**
DUN6 Lazy B Ranch 76.98 57 IAmb IAmb 13 09 59.8
comp=Z,116nm,1.0s
DPC Dobruska-Polom 76.99 330 *e*P **P** **13 09 57.9 +0.9**
DPC Dobruska-Polom 76.99 330 *e*P **P** **13 09 57.9 +0.9**
MLR Muntele Rosu 77.00 322 ⇓P **P** **13 09 58.5 +1.2**
MLR Muntele Rosu 77.00 322 P **P** **13 09 58.4 +1.2**
ISR Istrita 77.02 321 ⇓P **P** **13 09 58.4 +1.2**
ISR Istrita 77.02 321 P **P** **13 09 58.4 +1.2**
MORC Moravsky Berou 77.02 329 ⇓P **P** **13 09 58.4 +1.2**
MORC Moravsky Berou 77.02 329 *e*P **P** **13 09 57.5 +0.4**
MORC Moravsky Berou 77.02 329 P **P** **13 09 58.3 +1.2**
FLTG Flechtingen 77.04 334 *e*P **P** **13 09 57.5 +0.4**
comp=Z,66nm,0.8s,baz=31,slow=5.6
KRLC Kraliky 77.05 330 *e*P **P** **13 09 58.3 +1.0**
KRLC Kraliky 77.05 330 *e*P **P** **13 09 58.3 +1.0**
CJR Cluj-Napoca 77.07 324 ⇓P **P** **13 09 59.0 +1.5**
CJR Cluj-Napoca 77.07 324 P **P** **13 09 59.0 +1.5**
MZR Muzera 77.09 289 *i* P **P** **13 09 57.7 -0.2**
SNR=19
MDB Medias 77.18 323 ⇓P **P** **13 09 58.9 +0.8**
MDB Medias 77.18 323 P **P** **13 09 58.9 +0.8**
ICOR Ion Corvin 77.21 320 ⇑P **P** **13 09 59.9 +1.7**
MAUC Maruska 77.25 329 *e*P **P** **13 09 59.4 +1.0**
RETH Rethem/Aller, 77.27 335 *e*P **P** **13 09 59.2 +0.9**
comp=Z,73nm,1.1s,baz=31,slow=5.6
INVG Invergeldie, C 77.28 344 *e*P **P** **13 09 58.0 -0.5**
INVG IAmb IAmb 13 10 00.0
comp=Z,20nm,0.8s
MARR Marisel-Cluj 77.30 324 ⇑P **P** **13 10 00.5 +1.7**
CLL Collm 77.34 333 IAmb IAmb 13 10 00.4
comp=Z,80nm,1.0s
CLL Collm 77.34 333 *i* P **P** **13 09 58.8 0.0**
CLL pmax pmax
comp=Z,78nm,0.8s
CLL Collm 77.34 333 *e*P **P** **13 09 59.1 +0.3**
comp=Z,58nm,0.7s,baz=31,slow=5.6
CLL Collm 77.34 333 *i* P **P** **13 09 58.8 0.0**
comp=Z,78nm,0.8s
DRGR 77.38 325 ⇑P **P** **13 10 00.1 +0.8**
DRGR 77.38 325 P **P** **13 10 00.0 +0.8**
BRG Berggiesshubel 77.39 332 *e*P **P** **13 09 59.5 +0.4**
comp=Z,20nm,0.8s,baz=31,slow=5.6
ASSE Asse, Remlinge 77.39 334 *e*P **P** **13 09 59.9 +0.9**
comp=Z,48nm,1.1s,baz=31,slow=5.6
VOIR 77.44 322 ⇑P **P** **13 10 01.6 +2.0**
VOIR 77.44 322 P **P** **13 10 01.6 +2.0**
PVCC Panska Ves 77.46 331 *e*P **P** **13 10 00.9 +1.4**
PVCC Panska Ves 77.46 331 *e*P **P** **13 10 00.9 +1.4**
SCHQ Schefferville 77.56 19 P **P** **13 10 00.3 +0.3**
comp=Z,48nm,0.7s,baz=347,slow=5.0,SNR=58
comp=Z,48nm,0.7s
BR131 Keskin Array S 77.60 314 *i* P **P** **13 10 00.7 0.0**
BRTR Keskin Array B 77.60 314 P **P** **13 10 01.7 +1.0**
comp=Z,4.4nm,0.6s,baz=66,slow=3.8,SNR=16
comp=Z,4.4nm,0.6s
BRTR Keskin Array B 77.60 314 P **P** **13 10 00.8 +0.1**
BRTR Keskin Array B 77.60 314 *ce*P **P** **13 10 01.7 +1.0**
BRTR pmax pmax
comp=Z,5.0nm,0.6s
RICC Richard 77.61 332 *e*P **P** **13 10 02.1 +1.7**
PSZ Piszkesteto 77.63 327 ⇑P **P** **13 10 01.5 +0.9**
PSZ Piszkesteto 77.63 327 P **P** **13 10 01.5 +0.9**
ARR Arges 77.67 323 ⇑P **P** **13 10 02.9 +2.0**
319A Douglas 77.68 58 IAmb IAmb 13 10 03.5
comp=Z,57nm,0.9s
G40A Rib Lake 77.68 38 IAmb IAmb 13 10 01.9
comp=Z,55nm,1.0s
LAWE Loch Awe, Argy 77.70 345 *e*P **P** **13 10 00.5 -0.2**
LAWE IAmb IAmb 13 10 02.2
comp=Z,26nm,0.6s
JAVC Velka Javorina 77.72 329 *e*P **P** **13 10 02.5 +1.4**
CLZ Clausthal 77.73 334 *e*P **P** **13 10 02.2 +1.1**
comp=Z,66nm,0.8s,baz=31,slow=5.6
VRAC Vranov 77.75 329 ⇑P **P** **13 10 02.8 +1.6**
VRAC Vranov 77.75 329 *e*P **P** **13 10 01.8 +0.6**
VRAC Vranov 77.75 329 P **P** **13 10 02.8 +1.6**
HSKC Hora Svate Kat 77.78 332 *e*P **P** **13 10 01.8 +0.4**
121A Cookes Peak, D 77.79 57 IAmb IAmb 13 10 04.6

NEUB **Neuenburg** 77.83 333 *e*P P 13 10 02.1 +0.6
comp=Z,63nm,0.9s,baz=31,slow=5.6
KIRS **Kirsehir-Merke** 77.89 313 ⇑P P 13 10 03.1 +0.9
PRA **Prague** 77.89 331 *e*P P 13 10 03.0 +1.1
PRA **Prague** 77.89 331 *e*P P 13 10 03.0 +1.1
CBKS **Cedar Bluff** 77.90 47 lAmb lAmb 13 10 03.0
comp=Z,70nm,0.8s
PRU **Pruhonice** 77.92 331 *e*P P 13 10 02.8 +0.7
PRU **Pruhonice** 77.92 331 *e*P P 13 10 02.8 +0.7
ANTO **Ankara** 77.94 314 ⇓P P 13 10 04.3 +1.8
ANTO **Ankara** 77.94 314 ⇓P P 13 10 04.2 +1.8
RTBA **Rita Blanca** 77.98 51 lAmb lAmb 13 10 04.4
comp=Z,56nm,1.0s
LOT **Lotru** 77.99 323 ⇓P P 13 10 03.6 +0.9
KRUC **Moravsky** 78.03 329 *e*P P 13 10 03.3 +0.6
SMOL **Smolenice** 78.10 329 *e*P P 13 10 04.5 +1.4
SMOL pmax pmax
comp=Z,17nm,0.9s
GTTG **Gottingen** 78.11 334 *e*P P 13 10 04.0 +0.8
comp=Z,48nm,0.9s,baz=31,slow=5.6
IBBN **Ibbenburen** 78.12 336 *e*P P 13 10 03.9 +0.8
comp=Z,76nm,0.9s,baz=31,slow=5.6
EKA **Eskdalemuir Ar** 78.12 343 P P 13 10 03.5 +0.3
comp=Z,28nm,0.6s,baz=19,slow=5.4,SNR=99
comp=Z,28nm,0.6s
ESK **Eskdalemuir** 78.15 343 P P 13 10 03.8 +0.5
ESK lAmb lAmb 13 10 05.0
comp=Z,47nm,0.8s
ESK **Eskdalemuir** 78.15 343 *e*P P 13 10 03.4 +0.1
ESK lAmb lAmb 13 10 04.9
comp=Z,37nm,0.7s
ESK **Eskdalemuir** 78.15 343 P P 13 10 03.8 +0.5
ESK pmax pmax
comp=Z,47nm,0.8s
F42A **Maple Grove Fa** 78.19 36 lAmb lAmb 13 10 04.8
comp=Z,46nm,0.8s
MODS **Modra-Piesok** 78.27 329 *e*P P 13 10 04.9 +0.8
MODS pmax pmax
comp=Z,49nm,1.0s
MODS **Modra-Piesok** 78.27 329 *e*P P 13 10 04.9 +0.8
PLN **Plauen** 78.32 333 *e*P P 13 10 04.9 +0.5
comp=Z,9.2nm,1.1s,baz=31,slow=5.6
SRO **Srobarova** 78.33 328 *e*P P 13 10 06.1 +1.7
SRO pmax pmax
comp=Z,32nm,1.0s
SRO **Srobarova** 78.33 328 *e*P P 13 10 06.1 +1.7
EDMD **Edmundbyers** 78.34 342 *e*P P 13 10 04.6 +0.3
EDMD lAmb lAmb 13 10 07.5
comp=Z,16nm,0.6s
LOZB **Loznitsa** 78.34 320 ⇓P P 13 10 05.5 +0.9
MOX **Moxa** 78.36 333 *e*P P 13 10 05.1 +0.5
comp=Z,21nm,0.9s,baz=31,slow=5.6
MOX *e*L L 13 17 22.5
comp=Z,4µm,19.6s
COPA **Copaceanca** 78.38 321 ⇓P P 13 10 05.4 +0.6
SURR **Surduc** 78.45 324 ⇑P P 13 10 06.2 +1.0
GZR **Gura Zlata** 78.46 324 ⇑P P 13 10 05.8 +0.5
GZR **Gura Zlata** 78.46 324 P P 13 10 05.7 +0.5
NEWG **New Galloway** 78.55 344 *e*P P 13 10 05.3 -0.1
NEWG lAmb lAmb 13 10 06.9
comp=Z,15nm,0.9s
I40A **Norwalk** 78.57 39 lAmb lAmb 13 10 06.7
comp=Z,92nm,1.3s
R32A **Long Quarter,** 78.73 47 lAmb lAmb 13 10 07.3
comp=Z,129nm,1.6s
UBBA **Unterbreizbach** 78.73 334 *e*P P 13 10 07.7 +1.2
comp=Z,16nm,0.8s,baz=31,slow=5.6
MANZ **Manzenberg** 78.76 332 *e*P P 13 10 07.5 +0.7
comp=Z,4.4nm,0.7s,baz=31,slow=5.6
BZS **Buzias** 78.78 324 ⇓P P 13 10 07.5 +0.6
BZS **Buzias** 78.78 324 P P 13 10 07.5 +0.6
GAL1 **Galloway** 78.88 344 *e*P P 13 10 07.1 -0.2
GAL1 lAmb lAmb 13 10 08.8
comp=Z,46nm,0.7s
KASTN **Kahler Asten** 78.89 335 *e*P P 13 10 08.3 +0.8
comp=Z,66nm,1.4s,baz=31,slow=5.6
ROTZ **Rotzenmuhle** 78.92 332 *e*P P 13 10 08.7 +1.1
comp=Z,12nm,1.3s,baz=31,slow=5.6
SHAO **Shalim** 78.94 284 *i* P P 13 10 08.3 0.0
SNR=7.3
CLGH **Cloghs, Cushen** 78.95 345 *e*P P 13 10 08.4 +0.7
CLGH lAmb lAmb 13 10 09.4
comp=Z,48nm,0.7s
KHC **Kasperske Hory** 78.98 331 lAmb lAmb 13 10 09.9
comp=Z,44nm,0.6s
KHC **Kasperske Hory** 78.98 331 *ce*P P 13 10 07.5 -0.6
KHC pmax pmax
comp=Z,35nm,0.6s
KHC **Kasperske Hory** 78.98 331 *e*P P 13 10 08.6 +0.5
KHC *ex* x 13 10 21.8
CKRC **Cesky Krumlov** 78.99 330 *e*P P 13 10 08.4 +0.3
CKRC *e* 13 10 21.6
CKRC **Cesky Krumlov** 78.99 330 *e*P P 13 10 08.4 +0.3
CKRC *ex* x 13 10 21.6
HERR **Herculane** 79.02 324 ⇓P P 13 10 08.9 +0.6
BUG **Bochum--Univer** 79.03 336 *e*P P 13 10 08.8 +0.6
comp=Z,51nm,1.0s,baz=31,slow=5.6
HPK **Haverah Park** 79.07 342 *e*P P 13 10 08.7 +0.4
HPK lAmb lAmb 13 10 10.7
comp=Z,105nm,0.7s
CONA **Conrad Observa** 79.17 329 *ep*P P 13 10 09.7 +0.6
comp=Z,14nm,0.6s,SNR=7.0
GERES **GERESS Array B** 79.18 331 P P 13 10 09.2 0.0
comp=Z,7.5nm,0.5s,baz=41,slow=6.1,SNR=44
comp=Z,7.5nm,0.5s
RONA **Rosalia, Austr** 79.20 329 *ep*P P 13 10 10.4 +1.1
comp=Z,18nm,0.7s,SNR=8.7
IDGL **Inch Island, C** 79.22 346 P P 13 10 09.2 +0.1
IDGL **Inch Island, C** 79.22 346 *e*P P 13 10 08.9 -0.2
IDGL lAmb lAmb 13 10 11.2
comp=Z,35nm,0.8s
WET **Wettzell** 79.22 331 *e*P P 13 10 10.3 +1.0
comp=Z,34nm,1.0s,baz=31,slow=5.6
PLVB **Pleven** 79.23 321 ⇑P P 13 10 10.5 +1.0
PHSR **Pinarhisar** 79.24 319 ⇓P P 13 10 11.3 +1.7
E46A **Sault Ste Mari** 79.29 34 lAmb lAmb 13 10 10.5
comp=Z,87nm,1.3s
KSU1 **Kansas State U** 79.33 45 lAmb lAmb 13 10 10.6
comp=Z,75nm,0.7s
I42A **Draeger Farm,** 79.33 38 lAmb lAmb 13 10 11.0
comp=Z,60nm,0.9s
RAO **Raoul Island** 79.36 150 LR LR 13 36 41.1
comp=Z,198nm,21.6s,baz=192,slow=29
H43A **Windswept, Lux** 79.37 37 lAmb lAmb 13 10 11.5
comp=Z,143nm,1.3s
JFWS **Jewell Farm** 79.50 39 lAmb lAmb 13 10 11.6
comp=Z,130nm,1.8s
MORH **Mrgy, Hungar** 79.51 327 ⇑P P 13 10 11.3 +0.3
LBWR **Ladybower, Pea** 79.61 342 *e*P P 13 10 11.2 -0.2
LBWR lAmb lAmb 13 10 13.7
comp=Z,141nm,0.9s
AMTX **Amarillo** 79.69 51 lAmb lAmb 13 10 14.3
comp=Z,75nm,1.1s
L40A **Anamosa** 79.72 40 lAmb lAmb 13 10 12.9
comp=Z,83nm,1.0s
MOA **Molln** 79.82 330 *i* P P 13 10 13.0 +0.3
comp=Z,9.2nm,0.7s
ARSA **Arzberg** 79.86 329 *i* pP P 13 10 13.6 +0.7
comp=Z,4.2nm,0.5s
NOKA **Waynoka** 79.93 48 lAmb lAmb 13 10 15.0
comp=Z,98nm,1.0s
BAND **Balkesir-Ban** 79.94 317 ⇑P P 13 10 14.8 +1.4
KAN08 **Anthony NE Sta** 80.01 47 lAmb lAmb 13 10 14.8
comp=Z,98nm,0.8s
BEBN **Eben Emael** 80.07 336 *d*P P 13 10 14.1 +0.3
comp=Z,55nm,0.9s
ELIS **Ellis County** 80.09 49 lAmb lAmb 13 10 17.0
comp=Z,192nm,1.4s
BTNL **Ternell** 80.12 336 *d*P P 13 10 14.9 +0.8
comp=Z,18nm,1.2s
CWF **Charnwood Fore** 80.13 341 *e*P P 13 10 14.7 +0.6
CWF lAmb lAmb 13 10 16.8
comp=Z,18nm,0.7s
MEM **Membach** 80.14 336 *d*P P 13 10 14.4 +0.2
comp=Z,22nm,1.2s
KAN01 **Argonia South** 80.18 47 lAmb lAmb 13 10 15.9
comp=Z,99nm,0.9s
BIOA **Bad Ischl, Aus** 80.18 330 *i* pP P 13 10 15.0 +0.4
comp=Z,18nm,0.9s,SNR=7.6
BSTI **Sart Tilman** 80.29 336 *d*P P 13 10 15.0 -0.1
comp=Z,6.8nm,1.2s
SMWD **Samnorwood** 80.34 50 lAmb lAmb 13 10 18.2
comp=Z,69nm,0.9s
BHOU **Houvegnez** 80.36 336 *d*P P 13 10 15.8 +0.3
comp=Z,16nm,1.1s

VLDQ **Val d'Or** 80.39 29 lAmb lAmb 13 10 15.7
comp=Z,121nm,1.0s
FOEL **Foel Wylfa** 80.41 342 *e*P P 13 10 15.9 +0.2
FOEL lAmb lAmb 13 10 18.2
comp=Z,52nm,0.7s
UCC **Uccle** 80.44 337 *d*P P 13 10 15.8 -0.1
RJOB **Jochberg** 80.44 331 *e*P P 13 10 17.2 +1.1
comp=Z,14nm,0.6s,baz=31,slow=5.6
L42A **Oliver, Polo** 80.48 39 lAmb lAmb 13 10 16.7
comp=Z,52nm,0.8s
P38A **Dawn** 80.48 43 lAmb lAmb 13 10 17.6
comp=Z,75nm,0.8s
BCLA **Clavier** 80.51 336 *d*P P 13 10 16.4 +0.2
comp=Z,19nm,1.2s
SOKA **Soboth** 80.53 329 *e*P P 13 10 16.7 +0.2
comp=Z,20nm,0.6s,SNR=8.7
PERS **Pernice** 80.53 329 *e*P P 13 10 16.7 +0.2
K43A **Burlington** 80.53 38 lAmb lAmb 13 10 17.2
comp=Z,116nm,1.2s
CROK **Carrier** 80.54 48 lAmb lAmb 13 10 18.2
comp=Z,148nm,1.1s
BGES **Gesves** 80.61 337 *d*P P 13 10 16.9 +0.1
comp=Z,19nm,1.2s
FUR **Furstenfeldbru** 80.61 332 *e*P P 13 10 18.0 +1.1
comp=Z,42nm,0.8s,baz=31,slow=5.6
HLM1 **Long Mynd** 80.69 342 *e*P P 13 10 17.5 +0.3
HLM1 lAmb lAmb 13 10 20.4
comp=Z,26nm,0.8s
DSB **Dublin** 80.74 344 P P 13 10 16.9 -0.5
DSB **Dublin** 80.74 344 P P 13 10 17.6 +0.2
LESA **Schwarzleotal** 80.75 331 *ep*P P 13 10 18.1 +0.4
comp=Z,18nm,0.6s,SNR=13
RCHB **Rochefort** 80.77 336 *d*P P 13 10 16.6 -1.0
comp=Z,15nm,1.2s
BMRD **Maredsous** 80.77 337 *d*P P 13 10 17.5 -0.1
comp=Z,25nm,1.2s
STU **Stuttgart** 80.77 333 *e*P P 13 10 18.4 +0.8
comp=Z,63nm,0.8s,baz=31,slow=5.6
KBA **Konbreinsper** 80.81 330 *ep*P P 13 10 18.6 +0.5
comp=Z,29nm,0.8s,SNR=13
RAR **Rarotonga** 80.83 131 LR LR 13 43 14.8
comp=Z,114nm,19.7s,baz=324,slow=34
OBKA **Obir** 80.85 329 *i* P P 13 10 18.5 +0.3
comp=Z,9.1nm,0.6s
WLF **Walferdange** 80.93 336 P P 13 10 19.4 +0.9
WLF **Walferdange** 80.93 336 *d*P P 13 10 19.3 +0.8
comp=Z,11nm,1.0s
N41A **Harden Midland** 80.94 41 lAmb lAmb 13 10 19.9
comp=Z,139nm,1.0s
PECS **Pecos** 80.96 55 lAmb lAmb 13 10 21.1
comp=Z,60nm,1.0s
DOU **Dourbes** 81.00 337 *d*P P 13 10 19.3 +0.4
comp=Z,12nm,1.3s
T35A **Sooner Cattle** 81.02 47 lAmb lAmb 13 10 20.7
comp=Z,123nm,1.0s
MYKA **Terra Mystica** 81.08 330 *i* P P 13 10 19.5 0.0
comp=Z,8.6nm,0.6s
IGLA **Glengowla, Co** 81.13 346 P P 13 10 19.2 -0.2
L44A **Lake County Fo** 81.14 38 lAmb lAmb 13 10 20.7
comp=Z,76nm,1.1s
OK051 **E0350 and S346** 81.15 47 lAmb lAmb 13 10 22.0
comp=Z,56nm,0.9s
OK048 **Pawnee Station** 81.16 47 lAmb lAmb 13 10 22.1
comp=Z,73nm,0.9s
ODSA **Odessa** 81.19 54 lAmb lAmb 13 10 22.2
comp=Z,78nm,1.1s
MCH1 **Michaelchurch** 81.20 342 *e*P P 13 10 20.2 +0.3
MCH1 lAmb lAmb 13 10 21.7
comp=Z,28nm,0.7s
EZN **Ezine** 81.21 318 ⇑P P 13 10 21.1 +0.9
EZN **Ezine** 81.21 318 P P 13 10 21.0 +0.9
WATA **Walderalm** 81.22 331 *i* pP P 13 10 20.6 +0.3
comp=Z,26nm,0.5s,SNR=8.8
WTTA **Wattenberg** 81.26 331 *i* pP P 13 10 20.9 +0.4
comp=Z,34nm,0.5s,SNR=11
CSS **Mathiatis** 81.28 311 P P 13 10 21.1 +0.5
BLY **Banja Luka** 81.30 327 ⇑P P 13 10 21.2 +0.7
RETA **Reutte** 81.36 332 *i* P P 13 10 21.2 +0.2
comp=Z,26nm,1.1s,SNR=5.2
MOTA **Moosalm** 81.37 332 *i* pP P 13 10 21.3 +0.3
comp=Z,23nm,0.6s,SNR=7.4
ABTA **Abfaltersbach** 81.39 330 *e*P P 13 10 21.0 -0.2
comp=Z,4.9nm,0.6s
BOJS **Bojanci** 81.43 328 *i* P P 13 10 20.9 -0.3
BFO **Black Forest** 81.44 334 P P 13 10 21.5 +0.2
BFO **Black Forest** 81.44 334 P P 13 10 21.5 +0.2
BFO pmax pmax
comp=Z,17nm,0.7s
BFO **Black Forest** 81.44 334 *e*P P 13 10 21.9 +0.6
comp=Z,15nm,0.8s,baz=31,slow=5.6
SQTA **Sankt Quirin** 81.44 331 *i* pP P 13 10 21.7 +0.3
comp=Z,19nm,0.5s,SNR=8.8
HQIL **Hanson Quary C** 81.47 38 lAmb lAmb 13 10 22.6
comp=Z,107nm,1.0s
QUOK **Quay** 81.47 47 lAmb lAmb 13 10 23.2
comp=Z,72nm,1.3s
MMAI **Mount Meron Ar** 81.55 308 P P 13 10 23.5 +1.3
comp=Z,28nm,0.9s,baz=34,slow=6.1,SNR=33
comp=Z,28nm,0.9s
OK052 **Battle Ridge R** 81.56 48 lAmb lAmb 13 10 23.6
comp=Z,71nm,1.1s
IWEX **Carrickbyrne,** 81.64 344 P P 13 10 22.7 +0.5
APMT **Aspermont** 81.71 51 lAmb lAmb 13 10 24.5
comp=Z,100nm,1.6s
FETA **Feichten** 81.78 332 *ep*P P 13 10 24.0 +0.7
comp=Z,12nm,1.0s
VAY **Valandovo** 81.79 321 *i* P P 13 10 24.3 +1.1
DEOK **Depew** 81.83 47 lAmb lAmb 13 10 25.1
comp=Z,97nm,1.3s
DAVA **Damuels** 81.84 332 *e*P P 13 10 23.7 +0.1
comp=Z,20nm,0.6s
X34A **Smith Ranch, M** 82.04 49 lAmb lAmb 13 10 26.8
comp=Z,67nm,1.0s
R40A **Maddies Statio** 82.14 43 lAmb lAmb 13 10 26.1
comp=Z,57nm,0.8s
TUL3 **Leonard** 82.16 47 lAmb lAmb 13 10 26.2
comp=Z,55nm,0.7s
SGCY **Sterling City** 82.17 53 lAmb lAmb 13 10 27.2
comp=Z,52nm,0.9s
PDG **Podgorica** 82.36 324 ⇓P P 13 10 26.6 +0.5
RLO **Rose Lookout** 82.37 46 lAmb lAmb 13 10 27.1
comp=Z,37nm,0.6s
P43A **Skaggs, Pawnee** 82.41 41 lAmb lAmb 13 10 27.7
comp=Z,58nm,0.9s
LDAQ **Lac Daran** 82.54 25 lAmb lAmb 13 10 28.1
comp=Z,46nm,0.8s
TX31 **Lajitas Ar. Si** 82.54 56 lAmb lAmb 13 10 29.5
comp=Z,54nm,0.9s
TXAR **Lajitas Array** 82.54 56 P P 13 10 28.3 +0.8
comp=Z,34nm,0.8s,baz=298,slow=4.0,SNR=319
comp=Z,34nm,0.8s
SLBS **Sierra La Lagu** 82.60 64 P P 13 10 29.6 +1.8
VAL **Valentia** 82.70 346 P P 13 10 28.2 +0.5
VAL **Valentia** 82.70 346 P P 13 10 28.9 +1.2
OHR **Ohrid** 82.76 322 *i* P P 13 10 29.3 +1.0
CCM **Cathedral Cave** 82.83 43 P P 13 10 28.9 +0.2
CCM lAmb lAmb 13 10 29.9
comp=Z,79nm,0.9s
CCM **Cathedral Cave** 82.83 43 P P 13 10 28.9 +0.2
CCM pmax pmax
comp=Z,79nm,1.0s
LOOK **Love County** 82.85 49 lAmb lAmb 13 11 04.7
comp=Z,33nm,0.8s
SLM **Saint Louis** 82.86 42 lAmb lAmb 13 10 30.1
comp=Z,80nm,0.9s
AAM **Ann Arbor** 82.89 35 lAmb lAmb 13 10 30.4
comp=Z,114nm,1.2s
OZNA **Ozona** 82.90 54 lAmb lAmb 13 10 30.8
comp=Z,44nm,1.0s
SFIN **Lafayette** 82.95 39 lAmb lAmb 13 10 30.5
comp=Z,100nm,1.2s
TRQ **Mont Tremblant** 83.01 28 lAmb lAmb 13 10 30.4
comp=Z,87nm,1.0s
SAND **Sanderson** 83.02 55 lAmb lAmb 13 10 31.7
comp=Z,54nm,1.0s
HPIG 83.04 59 lAmb lAmb 13 10 32.2
comp=Z,125nm,1.8s
LMQ **La Malbaie** 83.19 25 lAmb lAmb 13 10 31.4
comp=Z,89nm,0.9s
FVM **French Village** 83.28 42 lAmb lAmb 13 10 32.4
comp=Z,114nm,1.6s
DELO **Deloro Mine** 83.41 31 lAmb lAmb 13 10 32.4
comp=Z,66nm,1.1s
TAOE **Nuku Hiva Isla** 83.73 108 *e*LR LR 13 37 00.3
comp=Z,324nm,23.7s
N49A **Columbus Grove** 83.80 37 lAmb lAmb 13 10 34.9
comp=Z,103nm,1.2s

WBO **Williamsburg** 83.83 29 lAmb lAmb 13 10 34.2
comp=Z,63nm,1.0s
M50A **Fremont** 83.89 36 lAmb lAmb 13 10 35.2
comp=Z,40nm,0.8s
O48B **Farmland** 83.92 38 lAmb lAmb 13 10 35.2
comp=Z,111nm,1.3s
PPT **Papeete** 83.94 121 LR LR 13 48 13.2
comp=Z,151nm,18.9s,baz=324,slow=36
MNTQ **Montreal, Queb** 83.96 28 lAmb lAmb 13 10 35.3
comp=Z,72nm,0.9s
PPT2 **Papeete2** 83.96 121 *e*LR LR 13 36 58.2
comp=Z,636nm,26.8s
PPT2 *e*LR LR 13 37 04.7
comp=Z,836nm,25.0s
D62A **Allapoint, All** 83.99 24 lAmb lAmb 13 10 35.5
comp=Z,48nm,0.7s
JCT **Junction City** 83.99 53 lAmb lAmb 13 10 36.5
comp=Z,63nm,0.9s
FCAR **Ozark Folk Cen** 84.08 45 lAmb lAmb 13 10 36.1
comp=Z,44nm,1.0s
KARP **Karpathos** 84.12 315 lAmb lAmb 13 10 38.9
comp=Z,42nm,0.8s
CGM3 **Cape Girardeau** 84.20 42 lAmb lAmb 13 10 37.0
comp=Z,59nm,1.4s
WHTX **Lake Whitney,** 84.20 51 lAmb lAmb 13 10 37.7
comp=Z,82nm,1.3s
PBMO **Poplar Bluff** 84.23 43 lAmb lAmb 13 10 37.5
comp=Z,62nm,0.9s
E62A **Clayton Lake** 84.27 25 lAmb lAmb 13 10 36.8
comp=Z,59nm,0.8s
O49A **Covington** 84.33 37 lAmb lAmb 13 10 37.6
comp=Z,44nm,1.1s
FDMO **Fiordimonte** 84.34 328 lAmb lAmb 13 10 38.6
comp=Z,63nm,1.4s
MIAR **Mount Ida** 84.36 46 lAmb lAmb 13 10 38.3
comp=Z,72nm,1.0s
MURB **Monte Urbino** 84.36 329 lAmb lAmb 13 10 51.7
comp=Z,45nm,1.0s
J55A **Hilton** 84.41 31 lAmb lAmb 13 10 37.5
comp=Z,77nm,1.0s
LCAR **Lake Charles** 84.43 44 lAmb lAmb 13 10 38.2
comp=Z,76nm,1.7s
P48A **Milroy** 84.44 38 lAmb lAmb 13 10 38.1
comp=Z,89nm,1.3s
WHAR **Wooly Hollow** 84.46 45 lAmb lAmb 13 10 38.3
comp=Z,83nm,1.0s
Z38A **Mt. Pleasant** 84.60 48 lAmb lAmb 13 10 39.4
comp=Z,52nm,0.8s
USIN **University of** 84.62 41 lAmb lAmb 13 10 39.5
comp=Z,67nm,1.1s
CAMP **Campotosto** 84.65 328 lAmb lAmb 13 10 51.8
comp=Z,39nm,1.0s
BATG **Bathurst New B** 84.66 22 lAmb lAmb 13 10 39.4
comp=Z,55nm,0.8s
X40A **Basin Creek Fa** 84.80 46 lAmb lAmb 13 10 40.5
comp=Z,41nm,1.1s
AQU **L'Aquila** 84.81 328 P P 13 10 39.0 +0.2
MMNY **Mt. Morris Dam** 84.83 32 lAmb lAmb 13 10 39.6
comp=Z,74nm,0.9s
ACSO **Alum Creek Sta** 84.88 36 lAmb lAmb 13 10 40.5
comp=Z,57nm,0.8s
MATE **Matera** 84.90 325 ⇓P P 13 10 39.8 +0.6
T45A **Paducah** 84.91 42 lAmb lAmb 13 10 40.8
comp=Z,58nm,0.8s
J57A **Williamstown** 84.95 30 lAmb lAmb 13 10 41.6
comp=Z,38nm,0.9s
WCI **Wyandotte Cave** 85.05 40 P P 13 10 40.5 +0.5
WCI lAmb lAmb 13 11 01.2
comp=Z,52nm,0.9s
WCI **Wyandotte Cave** 85.05 40 P P 13 10 40.5 +0.5
WCI pmax pmax
comp=Z,52nm,1.0s
NCB **Newcomb** 85.10 29 lAmb lAmb 13 10 41.1
comp=Z,37nm,0.9s
ACER **Acerenza** 85.11 325 lAmb lAmb 13 10 43.1
comp=Z,30nm,0.7s
PAOC **Oil Creek Stat** 85.17 33 lAmb lAmb 13 10 41.8
comp=Z,99nm,1.2s
G62A **West of Eustis** 85.22 26 lAmb lAmb 13 10 42.5
comp=Z,81nm,1.0s
WLAR **White Oak Lake** 85.27 47 lAmb lAmb 13 10 43.0
comp=Z,73nm,1.0s
F64A **Sherman** 85.30 24 lAmb lAmb 13 10 42.7
comp=Z,48nm,1.2s
K57A **Scipio Center** 85.35 31 lAmb lAmb 13 10 42.8
comp=Z,87nm,1.4s
ITM **Ithomi** 85.41 319 lAmb lAmb 13 11 10.0
comp=Z,34nm,0.8s
J59A **Piesco** 85.44 29 lAmb lAmb 13 10 42.6
comp=Z,53nm,0.9s
O52A **Adamsville** 85.46 36 lAmb lAmb 13 10 43.3
comp=Z,91nm,1.2s
P51A **Williamsport** 85.47 37 lAmb lAmb 13 10 43.1
comp=Z,59nm,0.9s
IDI **Anoyia** 85.47 316 P P 13 10 41.9 -0.4
IDI **Anoyia** 85.47 316 lAmb lAmb 13 11 05.9
comp=Z,26nm,0.7s
L56A **Greenwood** 85.47 32 lAmb lAmb 13 10 42.7
comp=Z,48nm,0.8s
PAMR **Moraine State** 85.49 34 lAmb lAmb 13 10 43.7
comp=Z,87nm,1.0s
O53A **New Philadelph** 85.61 35 lAmb lAmb 13 10 44.1
comp=Z,65nm,0.8s
R50A **Paris** 85.90 38 lAmb lAmb 13 10 45.8
comp=Z,129nm,1.8s
NATX **Nacogdoches** 85.92 49 lAmb lAmb 13 10 46.7
comp=Z,91nm,0.9s
BINY **Binghamton** 86.01 31 lAmb lAmb 13 10 45.8
comp=Z,54nm,1.1s
O54A **Avella** 86.02 35 lAmb lAmb 13 10 46.3
comp=Z,62nm,0.8s
WVT **Waverly** 86.02 42 P P 13 10 45.2 +0.4
WVT **Waverly** 86.02 42 P P 13 10 45.2 +0.4
WVT pmax pmax
comp=Z,26nm,0.8s
TIP **Timpagrande** 86.11 324 ⇑P P 13 10 46.1 +0.7
P53A **Whipple** 86.18 36 lAmb lAmb 13 10 47.0
comp=Z,44nm,1.0s
Q52A **Bidwell** 86.24 36 lAmb lAmb 13 10 47.0
comp=Z,62nm,1.3s
I63A **Otisfield** 86.25 26 lAmb lAmb 13 10 48.0
comp=Z,106nm,1.1s
LMN **Caledonia Moun** 86.31 22 lAmb lAmb 13 10 47.5
comp=Z,83nm,0.9s
M57A **Sunshine Farm,** 86.32 32 lAmb lAmb 13 10 47.7
comp=Z,73nm,0.8s
735A **Kenedy** 86.36 53 lAmb lAmb 13 10 49.3
comp=Z,62nm,0.9s
L59A **Walton** 86.36 30 lAmb lAmb 13 10 48.2
comp=Z,67nm,0.9s
SSPA **Standing Stone** 86.63 33 P P 13 10 48.4 +0.6
SSPA lAmb lAmb 13 10 48.8
comp=Z,43nm,0.8s
HKT **Hockley** 86.65 51 P P 13 10 49.4 +1.4
HKT **Hockley** 86.65 51 P P 13 10 49.4 +1.4
HKT pmax pmax
comp=Z,31nm,1.5s
MCWV **Mont Chateau** 86.68 35 lAmb lAmb 13 10 49.9
comp=Z,88nm,1.1s
U49A **Red Boiling Sp** 86.68 40 lAmb lAmb 13 10 49.6
comp=Z,50nm,0.8s
T50A **Nancy** 86.70 39 lAmb lAmb 13 10 49.6
comp=Z,46nm,0.8s
V48A **Smith Brothers** 86.81 41 lAmb lAmb 13 10 50.1
comp=Z,39nm,1.0s
KSCT **Kent School, K** 87.33 29 lAmb lAmb 13 10 52.6
comp=Z,78nm,1.4s
Q56A **Snyder Ridge,** 87.47 34 lAmb lAmb 13 10 53.5
comp=Z,58nm,1.0s
P57A **Homestead Farm** 87.57 33 lAmb lAmb 13 10 53.8
comp=Z,42nm,1.1s
S54A **Dingess, Beckl** 87.62 36 lAmb lAmb 13 10 53.6
comp=Z,31nm,0.9s
SWET **Sewanee** 87.66 41 lAmb lAmb 13 10 54.0
comp=Z,69nm,0.9s
TZTN **Tazewell** 87.68 39 lAmb lAmb 13 10 54.6
comp=Z,35nm,0.8s
UCCT **U. Connecticut** 87.71 28 lAmb lAmb 13 10 54.6
comp=Z,46nm,0.9s
X48A **Hartselle** 87.75 42 lAmb lAmb 13 10 54.1
comp=Z,28nm,0.9s
MVL **Millersville** 87.78 32 lAmb lAmb 13 10 54.7
comp=Z,44nm,0.9s
W50A **Signal Mountai** 87.97 41 lAmb lAmb 13 10 55.7
comp=Z,33nm,0.9s
CPNY **Central Park** 87.98 30 lAmb lAmb 13 10 55.8
comp=Z,43nm,0.9s
L64A **Middleborough** 88.05 27 lAmb lAmb 13 10 56.3

	comp=Z,64nm,1.0s							
CPCT	**Cooper Cave**	88.13	40	IAmb	IAmb	13 10 56.5		
	comp=Z,45nm,1.0s							
Z47A	**Carrollton**	88.25	44	IAmb	IAmb	13 10 57.1		
	comp=Z,58nm,0.9s							
TKL	**Tuckaleechee C**	88.31	39	IAmb	IAmb	13 10 57.4		
	comp=Z,49nm,0.8s							
TBI	**Tubual**	88.40	125	*e*LR	LR	13 39 09.4		
	comp=Z,3µm,30.2s							
U54A	**Nelsons Funny**	88.47	38	IAmb	IAmb	13 10 58.2		
	comp=Z,36nm,0.8s							
BLA	**Blacksburg**	88.50	36	IAmb	IAmb	13 10 58.5		
	comp=Z,52nm,1.1s							
Y49A	**Blount Mountai**	88.53	42	IAmb	IAmb	13 10 58.1		
	comp=Z,38nm,0.9s							
R58B	**Mineral**	88.92	34	IAmb	IAmb	13 11 00.3		
	comp=Z,73nm,1.7s							
BG3	**Lake Jocassee**	89.24	39	IAmb	IAmb	13 11 02.2		
	comp=Z,52nm,0.9s							
Y52A	**Lilburn**	89.65	41	IAmb	IAmb	13 11 03.9		
	comp=Z,33nm,0.9s							
250A	**Grady**	90.13	43	IAmb	IAmb	13 11 06.3		
	comp=Z,100nm,1.3s							
154A	**Montrose**	91.13	41	IAmb	IAmb	13 11 11.0		
	comp=Z,78nm,1.2s							
352A	**Blakely**	91.19	42	IAmb	IAmb	13 11 11.8		
	comp=Z,85nm,1.6s							
TIGA	**Tifton**	91.87	42	IAmb	IAmb	13 12 14.3		
	comp=Z,56nm,1.5s							
KEST	**Kesra**	92.11	327	P	**P**	**13 11 13.4**	**-0.3**	
	comp=Z,6.7nm,0.9s,baz=103,slow=6.0,SNR=3.6							
	comp=Z,6.7nm,0.9s							
ATD	**Arta Tunnel**	92.31	288	LR	LR	13 56 09.5		
	comp=Z,11nm,21.5s,baz=198,slow=38							
ESDC	**Sonseca Array**	92.97	338	P	**P**	**13 11 16.8**	**-0.8**	
	comp=Z,5.1nm,0.9s,baz=21,slow=4.4,SNR=14							
	comp=Z,5.1nm,0.9s							
ESDC	**Sonseca Array**	92.97	338	P	**P**	**13 11 17.4**	**-0.2**	
KMBO	**Kilima Mbogo**	105.17	283	*i* P	**Pdif**	**13 12 23.6**	**+10**	
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
DBIC	**Dimbokro**	123.82	326	PKP	**PKPdf**	**13 17 01.9**	**-0.6**	
	comp=Z,4.4nm,0.6s,baz=93,slow=3.5,SNR=6.9							
DBIC	**Dimbokro**	123.82	326	PKIKP	**PKPdf**	**13 17 02.0**	**-0.6**	
MAW	**Mawson**	127.58	209	PKP	**PKPdf**	**13 17 08.0**	**0.0**	
	comp=Z,1.6nm,0.6s,baz=140,slow=7.9,SNR=1.5							
BOSA	**Boshof**	131.78	268	PKP	**PKPdf**	**13 17 16.7**	**-0.7**	
	comp=Z,2.9nm,1.0s,baz=323,slow=5.1,SNR=2.9							
QSPA	**South Pole Qui**	133.52	180	PKP	**PKiKP**	**13 17 20.1**	**-0.6**	
	comp=Z,2.5nm,0.9s,baz=48,slow=2.4,SNR=6.8							
LPAZ	**La Paz**	139.38	59	PKhKP	PKPpre	13 17 22.8		
	comp=Z,1.0nm,0.6s,baz=279,slow=4.7,SNR=3.6							
LPAZ	**La Paz**	139.38	59		**PKiKP**	**13 17 33.9**	**-0.9**	
LPAZ	**La Paz**	139.38	59	PKIKP	**PKiKP**	**13 17 33.9**	**-0.9**	
H03N2	**Juan Fernandez**	142.86	90	T	T	15 56 49.9		
	baz=304,slow=77							
H03N3	**Juan Fernandez**	142.87	90	T	T	15 56 53.4		
	baz=304,slow=77							
H03N1	**Juan Fernandez**	142.87	90	T	T	15 56 51.1		
	baz=304,slow=77							
SIV	**San Ignacio**	143.30	50	PKhKP	PKPpre	13 17 34.9		
	comp=Z,5.0nm,0.6s,baz=285,slow=3.2,SNR=14							
NVL	**N'lazarevskaya**	145.25	204	*e*PKIKP	**PKPdf**	**13 17 41.7**	**+1.2**	
NVL				*e*		13 21 01.6		
NVL				*e*PPP	PPP	13 24 17.6		
NVL				*e*SS	SS	13 39 53.6	+5.7	
NVL				*e*SSS	SSS	13 45 20.5		
NVL				pmax	pmax			
	comp=Z,67nm,0.6s							
BELA	**Belgrano 2**	145.78	179		**PKPbc**	**13 17 41.9**	**-0.1**	
LCO	**Las Campanas**	146.37	77		**PKPbc**	**13 17 45.6**	**+0.2**	
LCO	**Las Campanas**	146.37	77	PKP2	**PKPbc**	**13 17 45.6**	**+0.2**	
TROLL	**Troll, Antarti**	147.06	199	⇑P	**PKPbc**	**13 17 46.6**	**+0.7**	
	comp=Z,908nm,0.6s							
TROLL				⇓sPKPab	**pPKPab**	**13 18 01.0**	**+0.1**	
SNAA	**Sanae**	148.52	198	⇑P	**PKPbc**	**13 17 49.9**	**+0.2**	
	comp=Z,164nm,0.7s							
SNAA				⇓sPKPab	**sPKPdf**	**13 18 05.0**	**+0.5**	
SNAA	**Sanae**	148.52	198	PKPbc	**PKPbc**	**13 17 49.4**	**-0.3**	
	comp=Z,10nm,1.0s,baz=167,slow=4.1,SNR=21							
SNAA	**Sanae**	148.52	198		**PKPbc**	**13 17 50.3**	**+0.6**	
SNAA	**Sanae**	148.52	198	PKP2	**PKPbc**	**13 17 50.3**	**+0.6**	
BDFB	**Brasilia**	149.07	30	PKPbc	**PKPbc**	**13 17 52.7**	**-0.1**	
	baz=308,slow=1.6							
CFA	**Coronel Fontan**	149.60	78	PKPbc	**PKPbc**	**13 17 53.8**	**+0.1**	
	comp=Z,17nm,0.8s,baz=300,slow=2.3,SNR=55							
AQDB	**Aquidauana**	149.87	47		**PKiKP**	**13 17 55.3**	**-0.2**	
VNA2	**Neumayer--Watz**	150.04	196	⇑P	**PKiKP**	**13 17 54.0**	**-0.4**	
	comp=Z,28nm,0.6s,baz=129,slow=2.3							
VNA2				⇓sPKPab	**pPKPbc**	**13 18 08.3**	**+1.3**	
	baz=90,slow=1.8							
VNA3	**Neumayer Olymp**	150.23	195	⇑P	**PKPbc**	**13 17 54.2**	**+0.2**	
	comp=Z,14nm,0.8s							
VNA3				⇓sPKPab	**pPKPbc**	**13 18 08.4**	**+0.9**	
VNA1	**Neumayer--Stat**	150.44	196	⇑P	**PKiKP**	**13 17 55.1**	**0.0**	
VNA1				⇑sPKPab	**pPKPbc**	**13 18 10.0**	**+2.0**	
LL02	**Futaleuf**	151.77	103		**PKiKP**	**13 17 58.9**	**+0.2**	
PLCA	**Paso Flores**	151.98	97	PKPbc	**PKiKP**	**13 17 60.0**	**+0.6**	
	comp=Z,24nm,0.6s,baz=264,slow=2.3,SNR=73							
PLCA				SKP	**SKPdf**	**13 21 27.4**	**+5.3**	
	comp=Z,6.1nm,0.9s,baz=254,slow=1.8,SNR=6.7							
PLCA	**Paso Flores**	151.98	97		**PKPdf**	**13 17 53.3**	**+0.8**	
PLCA					**PKiKP**	**13 18 00.3**	**+1.0**	
PLCA	**Paso Flores**	151.98	97	PKIKP	**PKPdf**	**13 17 53.3**	**+0.8**	
CPUP	**Villa Florida**	153.52	57	PKPbc	**PKiKP**	**13 18 03.1**	**+0.2**	
	comp=Z,1.5nm,0.9s,baz=237,slow=2.4,SNR=6.2							
CPUP	**Villa Florida**	153.52	57		**PKPab**	**13 18 15.8**	**+0.6**	
CPUP	**Villa Florida**	153.52	57	PKP2	**PKPab**	**13 18 15.9**	**+0.6**	

NEIC ***23*** *13:00:13.8±2.0, 7°.55S±0°.05×124°.94E±0°.07, h354km±5km, mb4.8/54, Error ellipse: s-maj=9.7km s-min=7.0km az=110.0*

IDC ***23*** *13:00:14.0±0.7, 7°.57S×125°.02E, h365km±7km, mb4.1/23, mbtmp4.8/28, Error ellipse: s-maj=12.1km s-min=6.4km az=73.0*

DJA ***23*** *13:00:14.4±0.1, 8°S±2°×12°5E±°, h364km±2km, M4.9/78, mB5.3/42, mb5.2/78, MLv5.4/27, Mw(mB)4.8/42*

ISC 23 13:00:14.3±0.2, 7°.61S±0°.03×124°.97E±0°.04, h371km, n385, σ1°32/396, mb4.7/78, 3C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.24**	**198**			**Pn**	**13 01 09.1**	**-0.3**
SOEI				Sn		**S**	13 01 49.9	-3.9
SOEI	**Soe**	**2.24**	**198**	P		**Pn**	**13 01 09.1**	**-0.3**
SOEI	**Soe**	**2.24**	**198**	S		**S**	**13 01 51.9**	**-1.9**
SOEI	**Soe**	**2.24**	**198**	P		**Pn**	**13 01 09.1**	**-0.3**
BATI	**Baumata**	**2.89**	**206**	P		**Pn**	**13 01 14.5**	**+0.1**
	7µm,0.4s,baz=51,slow=0.8,SNR=1142							
BATI				S		**S**	**13 02 02.0**	**-0.7**
	4µm,0.3s,baz=226,slow=23,SNR=7.9							
BATI	**Baumata**	**2.89**	**206**	P		**Pn**	**13 01 14.4**	**+0.1**
MMRI	**Maumere**	**2.89**	**249**			**Pn**	**13 01 13.2**	**-1.2**
MMRI				Sn		**S**	**13 02 00.1**	**-2.7**
MMRI	**Maumere**	**2.89**	**249**	P		**Pn**	**13 01 13.3**	**-1.1**
MMRI	**Maumere**	**2.89**	**249**	S		**S**	**13 02 00.6**	**-2.2**
MMRI	**Maumere**	**2.89**	**249**	P		**Pn**	**13 01 13.2**	**-1.2**
BBSI	**Bau Bau**	**3.18**	**311**	P		**Pn**	**13 01 17.9**	**+1.0**
EDFI	**Ende, Flores**	**3.44**	**251**	P		**Pn**	**13 01 17.8**	**-1.5**
BSSI	**Bau Bau, Buton**	**4.68**	**288**	P		**Pn**	**13 01 32.0**	**+0.4**
NLAI	**Namlea**	**4.83**	**26**	P		**Pn**	**13 01 34.9**	**+1.7**
AAI	**Ambon**	**5.04**	**40**	P		**Pn**	**13 01 37.3**	**+1.8**
	2.1nm7µm518nm,0.6s							
WSI	**Waingapu**	**5.05**	**246**	P		**Pn**	**13 01 33.5**	**-2.0**
BASI	**Baing, Sumba**	**5.06**	**239**	P		**Pn**	**13 01 34.3**	**-1.2**
BKSI	**Bukukumba**	**5.33**	**295**	P		**Pn**	**13 01 38.3**	**-0.2**
	0.9nm2µm239nm,0.8s							
SANI	**Sanana**	**5.61**	**10**	P		**Pn**	**13 01 42.1**	**+0.5**
SANI	**Sanana**	**5.61**	**10**	S		**S**	**13 02 51.0**	**-1.5**
SANI	**Sanana**	**5.61**	**10**	P		**Pn**	**13 01 41.5**	**-0.1**
	1.4nm3µm407nm,0.8s							
MSAI	**Masohi**	**5.78**	**43**	P		**Pn**	**13 01 44.6**	**+1.1**
	6.1nm7µm500nm,0.5s							
BNDI	**Bandanaira**	**5.78**	**58**	P		**Pn**	**13 01 43.5**	**-0.1**
BNDI	**Bandanaira**	**5.78**	**58**	P		**Pn**	**13 01 43.4**	**-0.1**
	6.4nm10µm880nm,0.9s							
BNSI	**Bone**	**5.79**	**303**	P		**Pn**	**13 01 43.6**	**0.0**
	1.9nm5µm526nm,0.7s							
KAPI	**Kappang**	**5.79**	**296**	P		**Pn**	**13 01 44.0**	**+0.4**
	85nm,0.5s,baz=127,slow=5.1,SNR=49							
KAPI				S		**S**	**13 02 57.2**	**+1.1**
	59nm,1.0s,baz=253,slow=16,SNR=3.6							
KAPI	**Kappang**	**5.79**	**296**			**Pn**	**13 01 39.8**	**-3.8**
WBSI	**Waikabubak, Su**	**5.88**	**249**	P		**Pn**	**13 01 41.7**	**-2.9**
SAUI	**Saumlaki**	**6.28**	**94**			**Pn**	**13 01 47.7**	**-1.4**
SAUI	**Saumlaki**	**6.28**	**94**	P		**Pn**	**13 01 48.3**	**-0.8**
SAUI	**Saumlaki**	**6.28**	**94**	P		**Pn**	**13 01 48.1**	**-1.0**
SPSI	**Sidrap Palu**	**6.32**	**305**	P		**Pn**	**13 01 49.4**	**-0.1**
	0.4nm131nm,0.7s							
TTSI	**Tana Toraja**	**6.84**	**311**	P		**P**	**13 01 56.6**	**0.0**
	0.5nm145nm,0.7s							
LUWI	**Luwuk**	**6.88**	**341**			**Pn**	**13 01 55.2**	**-0.7**
LUWI	**Luwuk**	**6.88**	**341**	P		**P**	**13 01 57.0**	**0.0**
PLAI	**Plampang**	**7.22**	**260**	P		**Pn**	**13 01 57.3**	**-2.5**
PLAI	**Plampang**	**7.22**	**260**	P		**Pn**	**13 01 57.5**	**-2.3**
	6.4nm8µm481nm,0.7s							
APSI	**Ampana**	**7.43**	**333**	P		**P**	**13 02 03.5**	**+0.2**
DRS	**Darwin Rock St**	**7.55**	**130**	P		**Pn**	**13 02 03.5**	**-0.1**
MTN	**Manton Dam**	**7.99**	**131**	P		**Pn**	**13 02 08.3**	**-0.3**
	comp=Z,608nm,0.4s							
MTN	**Manton Dam**	**7.99**	**131**			**Pn**	**13 02 08.2**	**-0.5**
TWSI	**Taliwang, Sumb**	**8.09**	**261**	P		**Pn**	**13 02 07.5**	**-2.4**
	comp=Z,4µmcomp=Z,97nm,0.4s							
KMSI	**Cibinong**	**8.19**	**353**	P		**P**	**13 02 12.8**	**0.0**
PCI	**Palu**	**8.40**	**322**	P		**P**	**13 02 15.5**	**+0.4**
	comp=Z,5µmcomp=Z,501nm,1.0s							
MRSI	**Marisa**	**8.58**	**339**	P		**P**	**13 02 16.6**	**-0.5**
	comp=Z,80nm,0.6s							
FAKI	**Fak Fak**	**8.61**	**58**			**Pn**	**13 02 13.5**	**-2.5**
FAKI	**Fak Fak**	**8.61**	**58**	P		**Pn**	**13 02 13.5**	**-2.5**
FAKI	**Fak Fak**	**8.61**	**58**	P		**Pn**	**13 02 13.8**	**-2.3**
	comp=Z,6µmcomp=Z,520nm,0.6s							
TNTI	**Ternate**	**8.66**	**16**			**Pn**	**13 02 16.9**	**+0.3**
TNTI	**Ternate**	**8.66**	**16**	P		**Pn**	**13 02 16.9**	**+0.3**
TNTI	**Ternate**	**8.66**	**16**	S		**S**	**13 03 58.1**	**+1.4**
KNRA	**Kununurra**	**8.84**	**156**	P		**Pn**	**13 02 18.6**	**0.0**
	comp=Z,199nm,0.8s							
KNRA	**Kununurra**	**8.84**	**156**			**Pn**	**13 02 18.5**	**0.0**
KDU	**Kakadu**	**8.94**	**125**	P		**Pn**	**13 02 19.2**	**-0.7**
	comp=Z,598nm,0.7s							
MPSI	**Mapaga**	**9.38**	**327**	P		**P**	**13 02 26.5**	**+0.5**
	comp=Z,136nm,1.0s							
TOLI2	**Tolitoli**	**9.62**	**334**			**P**	**13 02 29.1**	**+0.5**
TOLI2	**Tolitoli**	**9.62**	**334**	P		**P**	**13 02 29.5**	**+0.8**
BKB	**Balikpapan**	**10.22**	**308**			**P**	**13 02 36.5**	**+1.1**
BKB	**Balikpapan**	**10.22**	**308**	P		**P**	13 02 40.7	+5.3
	comp=Z,114nm,0.7s							
FITZ	**Fitzroy Crossi**	**10.45**	**176**	P		**Pn**	**13 02 37.6**	**0.0**
	comp=Z,62nm,0.7s							
FITZ	**Fitzroy Crossi**	**10.45**	**176**	P		**Pn**	**13 02 37.5**	**0.0**
	comp=Z,186nm,0.6s,baz=10,slow=8.4,SNR=349							
FITZ				S		**S**	**13 04 27.3**	**-7.7**
	comp=Z,77nm,1.0s,baz=214,slow=21,SNR=8.0							
FITZ	**Fitzroy Crossi**	**10.45**	**176**	P		**Pn**	**13 02 37.3**	**-0.3**
ABJI	**Asem Bagus**	**10.64**	**268**	P		**Pn**	**13 02 39.7**	**-0.2**
	comp=Z,319nm,0.9s							
JAGI	**Jajag, Banyuwa**	**10.75**	**265**			**Pn**	**13 02 37.9**	**-3.3**
JAGI	**Jajag, Banyuwa**	**10.75**	**265**	P		**Pn**	**13 02 38.0**	**-3.2**
KMMI	**Kaliangat**	**10.93**	**272**	P		**Pn**	**13 02 44.7**	**+1.4**
	comp=Z,298nm,0.8s							
RKPI	**Ransiki, Papua**	**10.99**	**57**	P		**P**	**13 02 43.6**	**-0.4**
	comp=Z,10µmcomp=Z,565nm,0.7s							
SGSI	**Sangihe**	**11.23**	**3**	P		**Pn**	**13 02 46.9**	**0.0**
BLJI	**Banyuglugur**	**11.28**	**269**	P		**P**	**13 02 46.8**	**-0.3**
MTKI	**Muara Teweh, K**	**12.03**	**303**	P		**Pn**	**13 02 57.4**	**+1.1**
	comp=Z,601nm,0.9s							
GRJI	**Gresik**	**12.41**	**272**	P		**Pn**	**13 03 02.2**	**+1.5**
SRPI	**Serui, Papua**	**12.59**	**64**	P		**Pn**	**13 03 03.0**	**+0.2**
	comp=Z,208nm,1.0s							
BAKI	**Biak**	**12.80**	**61**	P		**Pn**	**13 03 06.8**	**+1.5**
TBJI	**Tambak Boyo**	**13.04**	**273**	P		**Pn**	**13 03 08.9**	**+0.8**
	comp=Z,5µmcomp=Z,530nm,1.1s							
NGJI	**Ngawi**	**13.40**	**270**	P		**Pn**	**13 03 13.0**	**+0.7**
	comp=Z,78nm,0.5s							
PCJI	**Pacitan**	**13.68**	**267**	P		**P**	**13 03 13.6**	**0.0**
	comp=Z,5µmcomp=Z,302nm,0.8s							
MYLDM	**Lahad Datu**	**14.25**	**333**	P		**P**	**13 03 19.0**	**-0.9**
UGM	**Wanagama**	**14.32**	**268**	P		**P**	**13 03 20.1**	**-0.6**
UGM	**Wanagama**	**14.32**	**268**	P		**P**	**13 03 19.6**	**-1.1**
MBWA	**Marble Bar**	**14.39**	**200**	P		**P**	**13 03 21.5**	**+0.2**
	comp=Z,103nm,1.3s							
MBWA	**Marble Bar**	**14.39**	**200**	P		**P**	**13 03 21.7**	**+0.4**
MBWA	**Marble Bar**	**14.39**	**200**	P		**P**	**13 03 21.8**	**+0.4**
DAV	**Davao City (W)**	**14.59**	**2**	S		**S**	**13 05 59.0**	**-1.5**
	comp=Z,89nm,0.3s,baz=69,slow=23,SNR=3.7							
PSAC2	**Pilbara Seismi**	**14.71**	**199**	P		**Pn**	**13 03 28.7**	**+1.4**
PSAC1	**Pilbara Seismi**	**14.71**	**199**	P		**Pn**	**13 03 28.5**	**+1.2**
PSA00	**Pilbara Seismi**	**14.74**	**199**	P		**Pn**	**13 03 28.6**	**+1.1**
PSA00	**Pilbara Seismi**	**14.74**	**199**	P		**P**	**13 03 26.1**	**+0.9**
PSA00	**Pilbara Seismi**	**14.74**	**199**	P		**P**	**13 03 25.9**	**+0.8**
PSAB3	**Pilbara Seismi**	**14.76**	**199**	P		**Pn**	**13 03 28.7**	**+0.9**
WB0	**Warramunga Arr**	**15.15**	**144**	P		**P**	**13 03 29.1**	**-0.6**
WRAB	**Tennant Creek**	**15.26**	**144**	P		**P**	**13 03 30.8**	**-0.1**
WRAB	**Tennant Creek**	**15.26**	**144**	P		**P**	**13 03 31.4**	**+0.6**
WRA	**Warramunga Arr**	**15.26**	**144**	P		**P**	**13 03 30.8**	**0.0**
	comp=Z,38nm,0.4s,baz=318,slow=13,SNR=119							
WRA				S		**S**	**13 06 09.3**	**-4.4**
	comp=Z,130nm,0.9s,baz=316,slow=22,SNR=30							
WRA	**Warramunga Arr**	**15.26**	**144**	P		**P**	**13 03 29.5**	**-1.3**
WR8	**Warramunga Arr**	**15.36**	**144**	P		**P**	**13 03 31.6**	**-0.4**
KPJI	**Karang Pucung**	**15.91**	**270**	P		**P**	**13 03 37.0**	**-0.9**
	comp=Z,175nm,0.6s							
GENI	**Genyem**	**15.93**	**73**	P		**P**	**13 03 39.3**	**+1.1**
	comp=Z,166nm,0.9s							
SBUM	**Sibu**	**16.18**	**308**	P		**P**	**13 03 41.7**	**+0.9**
SBUM	**Sibu**	**16.18**	**308**	P		**P**	**13 03 42.4**	**+1.6**
JAY	**Jayapura**	**16.46**	**73**	P		**P**	**13 03 43.5**	**-0.5**
	comp=Z,35nm,0.9s,baz=210,slow=12,SNR=12							
JAY	**Jayapura**	**16.46**	**73**	P		**P**	**13 03 45.1**	**+1.1**
BBJI	**Bungbulang**	**17.17**	**269**	P		**P**	**13 03 48.3**	**-3.3**
WRKA	**Warakurna**	**17.62**	**170**	P		**P**	**13 03 56.3**	**+0.1**
	comp=Z,11nm,0.6s							
CNJI	**Cibinong**	**17.69**	**270**	P		**Pn**	**13 04 04.6**	**+3.2**
	comp=Z,156nm,0.9s							
TPI	**Tanjungpandan**	**17.90**	**285**	P		**Pn**	**13 04 04.5**	**+0.6**
	comp=Z,2µmcomp=Z,146nm,1.3s							
DBJI	**Dramaga**	**18.11**	**272**	P		**P**	**13 04 00.0**	**-1.6**
	comp=Z,130nm,0.9s							
AS31	**Alice Springs**	**18.12**	**153**	P		**P**	**13 04 01.6**	**0.0**
ASAR	**Alice Springs**	**18.12**	**153**	P		**P**	**13 04 01.8**	**+0.2**
	comp=Z,5.1nm,0.3s,baz=331,slow=12,SNR=131							
ASAR				S		**S**	**13 07 10.8**	**+0.9**
	comp=Z,5.4nm,0.8s,baz=339,slow=20,SNR=1.8							
ASAR				ScP		**ScP**	**13 11 15.1**	**-0.9**
	comp=Z,4.8nm,0.6s,baz=337,slow=2.7,SNR=1.1							
ASAR	**Alice Springs**	**18.12**	**153**	P		**P**	**13 04 02.0**	**+0.4**
GIRL	**Giralia**	**18.17**	**213**	P		**P**	**13 04 02.9**	**+0.8**
SKJI	**Sukabumi**	**18.28**	**271**	P		**P**	**13 04 04.6**	**+1.3**
	comp=Z,307nm,0.8s							
COEN	**Coen**	**18.95**	**111**	P		**P**	**13 04 09.2**	**-1.3**
	comp=Z,60nm,0.9s							
COEN	**Coen**	**18.95**	**111**	P		**P**	**13 04 09.7**	**-0.8**
COEN	**Coen**	**18.95**	**111**	P		**P**	**13 04 09.1**	**-1.3**
QIS	**Mount Isa**	**19.14**	**134**	P		**P**	**13 04 11.9**	**-0.4**
	comp=Z,49nm,0.6s							
QIS	**Mount Isa**	**19.14**	**134**	P		**P**	**13 04 12.1**	**-0.2**
XMI	**Christmas Isla**	**19.25**	**260**	P		**P**	**13 04 12.5**	**-1.1**
PPBI	**Pangkal Pinang**	**19.52**	**285**	P		**P**	**13 04 18.1**	**+1.8**
MEEK	**Meekatharra**	**19.87**	**197**	P		**P**	**13 04 19.3**	**-0.3**
	comp=Z,30nm,0.8s							
MEEK	**Meekatharra**	**19.87**	**197**	P		**P**	**13 04 19.2**	**-0.4**
KASI	**Kota Agung**	**20.45**	**275**	P		**P**	**13 04 23.6**	**-1.5**
	comp=Z,58nm,0.6s							
MDSI	**Maura Dua**	**20.91**	**277**	P		**P**	**13 04 28.4**	**-0.8**
DSRI	**Dabo**	**21.53**	**288**	P		**P**	**13 04 36.8**	**+1.9**
	comp=Z,1µmcomp=Z,141nm,1.1s							
MTSU	**Mount Surprise**	**21.54**	**121**	P		**P**	**13 04 34.9**	**0.0**
	comp=Z,14nm,0.8s							
MTSU	**Mount Surprise**	**21.54**	**121**	P		**P**	**13 04 35.7**	**+0.7**
PMG	**Port Moresby**	**22.02**	**96**	P		**P**	**13 04 38.9**	**-0.4**
	comp=Z,47nm,0.5s,baz=199,slow=2.2,SNR=43							
	comp=Z,47nm,0.5s							
PMG	**Port Moresby**	**22.02**	**96**	P		**P**	**13 04 39.3**	**0.0**
PMG	**Port Moresby**	**22.02**	**96**	P		**P**	**13 04 39.5**	**+0.2**
TPRI	**Tanjung Pinang**	**22.08**	**292**	P		**P**	**13 04 41.0**	**+1.1**
	comp=Z,270nm,0.8s							
MORW	**Morawa**	**22.95**	**200**	P		**P**	**13 04 47.6**	**0.0**
	comp=Z,18nm,1.6s							
MORW	**Morawa**	**22.95**	**200**	P		**P**	**13 04 47.9**	**+0.3**
MORW	**Morawa**	**22.95**	**200**	P		**P**	**13 04 47.9**	**+0.3**
MANU	**Manus Island**	**22.98**	**77**	P		**P**	**13 04 49.0**	**+0.9**
MANU						IAmb	IAmb	13 04 49.7
	comp=Z,64nm,0.8s							
MYKOM	**Kota Tinggi**	**23.05**	**293**	P		**P**	**13 04 50.0**	**+1.3**
MYKOM						IAmb	IAmb	13 04 52.7
	comp=Z,78nm,1.0s							
MYKOM	**Kota Tinggi**	**23.05**	**293**	P		**P**	**13 04 49.6**	**+0.9**
MASI	**Maura Aman, Be**	**23.06**	**280**	P		**P**	**13 04 53.8**	**+5.0**
	comp=Z,120nm,1.1s							
KRJI	**Kerinci**	**24.05**	**282**	P		**P**	**13 05 04.3**	**+6.4**
	comp=Z,167nm,0.9s							
CTAO	**Charters Tower**	**24.06**	**123**	P		**P**	**13 04 58.5**	**+0.7**
CTAO				IAmb		IAmb	13 06 00.2	
	comp=Z,89nm,1.7s							
BLDU	**Ballidu**	**24.16**	**198**	P		**P**	**13 04 57.7**	**-0.8**
	comp=Z,20nm,1.9s							
BLDU	**Ballidu**	**24.16**	**198**	P		**P**	**13 04 58.5**	**0.0**
KLBR	**Kellerberrin**	**24.80**	**195**	P		**P**	**13 05 04.6**	**+0.4**
INKA	**Innaminka**	**24.98**	**145**	P		**P**	**13 05 07.2**	**+1.3**
INKA				IAmb		IAmb	13 06 11.3	
	comp=Z,31nm,0.8s							
PDSI	**Padang**	**25.32**	**284**	P		**P**	**13 05 11.3**	**+2.2**
PPI	**Padang Panjang**	**25.51**	**285**	P		**P**	**13 05 11.7**	**+0.9**
MUN	**Mundaring**	**25.59**	**197**	P		**P**	**13 05 11.1**	**-0.1**
NWAO	**Narrogin (SRO)**	**26.20**	**195**	P		**P**	**13 05 16.7**	**+0.1**
NWAO	**Narrogin (SRO)**	**26.20**	**195**	P		**P**	**13 05 16.9**	**+0.2**
QLP	**Quilpie**	**26.29**	**138**	P		**P**	**13 05 17.6**	**0.0**
	comp=Z,15nm,0.6s							
QLP	**Quilpie**	**26.29**	**138**	P		**P**	**13 05 19.0**	**+1.4**
MNSI	**Mandailing Nat**	**26.66**	**287**	P		**P**	**13 05 20.8**	**-0.3**
	comp=Z,58nm,0.6s							
IPM	**Ipoh**	**26.74**	**296**	P		**P**	**13 05 21.6**	**-0.1**
IPM				IAmb		IAmb	13 05 22.8	
	comp=Z,55nm,0.9s							
IPM	**Ipoh**	**26.74**	**296**	P		**P**	**13 05 22.1**	**+0.4**
BBOO	**Buckleboo**	**27.11**	**159**	P		**P**	**13 05 25.2**	**+0.5**
BBOO				IAmb		IAmb	13 06 34.6	
	comp=Z,145nm,2.0s							
BBOO	**Buckleboo**	**27.11**	**159**	P		**P**	**13 05 25.1**	**+0.4**
KULM	**Kulim**	**27.44**	**297**	P		**P**	**13 05 27.8**	**-0.1**
KULM	**Kulim**	**27.44**	**297**	P		**P**	**13 05 27.8**	**-0.5**
RPSI	**Rantau Prapat**	**27.93**	**291**	P		**P**	**13 05 32.6**	**+0.3**
RPSI				IAmb		IAmb	13 05 33.3	
	comp=Z,56nm,0.8s							
PSI	**Prapat**	**27.97**	**291**	P		**P**	**13 05 32.4**	**-0.3**
TSI	**Tuntungan**	**28.57**	**292**	P		**P**	**13 05 37.8**	**0.

PALK	Pallekele	46.55	287	P		P	13 08 06.3	-0.5	
JSD	Sado	47.07	14	P		P	13 08 10.3	0.0	
JSD				IAmb		IAmb	13 08 11.7		
	comp=Z,25nm,0.7s								
JSD	Sado	47.07	14	P		P	13 08 10.4	+0.1	
LZDM	Lanzhou Array	47.73	337	P		P	13 08 16.0	+0.2	
	comp=Z,2.5nm,0.4s,baz=101,slow=7.8,SNR=2.5								
	comp=Z,2.5nm,0.4s								
LZH	Lanzhou	47.79	337	*e*P		P	13 08 16.4	+0.4	
LZH				PcP		pwP	13 09 33.6	+1.0	
LZH				sP		sP	13 10 06.4	-5.5	
LZH				pmax		pmax			
	comp=Z,27nm,1.1s								
HHC	Hu-ho-hao-te	49.77	347	*e*P		P	13 08 34.8	+4.0	
HHC				pmax		pmax			
	comp=Z,15nm,0.5s								
HHC				pmax		pmax			
	comp=Z,230nm,4.0s								
BTO	Baotou	49.91	345	*e*P		P	13 08 32.8	+1.0	
BTO				S		S	13 15 15.1	+2.0	
BTO				pmax		pmax			
	comp=Z,16nm,0.6s								
BTO				pmax		pmax			
	comp=Z,760nm,7.2s								
BTO				LR		LR			
	comp=N,730nm,9.6s								
BTO				LR		LR			
	comp=E,530nm,9.0s								
BTO				LR		LR			
	comp=Z,850nm,12.5s								
SALM	Salem	50.30	292	*e*P		P	13 08 35.1	+0.1	
JTM	Tenmabayashi	50.38	16	P		P	13 08 35.8	+0.6	
JTM	Tenmabayashi	50.38	16	P		P	13 08 35.6	+0.4	
EVN	Everest	51.08	315	P		P	13 08 41.8	+0.4	
EVN				IAmb		IAmb	13 08 42.6		
	comp=Z,47nm,0.6s								
USRK	Ussuriysk Ar.	51.95	6	P		P	13 08 46.6	0.0	
	comp=Z,21nm,0.6s,baz=185,slow=7.0,SNR=57								
	comp=Z,21nm,0.6s								
DGAR	Diego Garcia	52.04	267	P		P	13 08 48.2	+0.3	
DGAR				IAmb		IAmb	13 10 49.3		
	comp=Z,61nm,0.8s								
ERM	Erimo	52.11	17	P		P	13 08 48.7	+0.9	
ERM				IAmb		IAmb	13 08 49.7		
	comp=Z,44nm,0.8s								
ERM	Erimo	52.11	17	P		P	13 08 48.7	+0.9	
MDJ	Mudanjiang	52.15	4	IAmb		IAmb	13 08 49.4		
	comp=Z,41nm,0.9s								
MDJ	Mudanjiang	52.15	4	P		P	13 08 48.4	+0.3	
MDJ				pmax		pmax			
	comp=Z,58nm,1.0s								
MDJ	Mudanjiang	52.15	4	P		P	13 08 48.3	+0.3	
MDJ	Mudanjiang	52.15	4	PcP		PcP	13 09 53.9	-0.2	
MDJ				sP		sP	13 10 40.3	-4.1	
OUZ	Omahuta	52.27	129	P		P	13 08 49.4	+0.2	
OUZ	Omahuta	52.27	129	P		P	13 08 50.8	+1.7	
GTA	Gaotai	52.27	335	*e*P		P	13 08 50.1	+0.9	
GTA				pmax		pmax			
	comp=Z,11nm,1.4s								
MSVF	Nonsavu	52.60	106	P		P	13 08 53.7	+1.7	
MSVF				IAmb		IAmb	13 08 54.4		
	comp=Z,28nm,0.9s								
MSVF	Nonsavu	52.60	106	P		P	13 08 52.9	+0.9	
WHZ	Wether Hill Ro	53.08	143	P		P	13 08 55.7	+0.8	
WHZ	Wether Hill Ro	53.08	143	P		P	13 08 55.5	+0.6	
WCZ	Waipu Caves	53.08	130	P		P	13 08 57.2	+2.1	
BNX	BinXian	53.15	2	⇑P		P	13 08 54.6	-0.7	
BNX				pmax		pmax			
	comp=Z,11nm,0.6s								
WVZ	Waitaha Valley	53.40	139	P		P	13 08 57.3	+0.1	
DSZ	Denniston Nort	53.51	137	P		P	13 09 00.2	+2.1	
QRZ	Quartz Range	53.61	136	P		P	13 09 00.6	+1.8	
QRZ	Quartz Range	53.61	136	P		P	13 09 00.2	+1.4	
APZ	The Paps	53.61	144	P		P	13 08 59.8	+1.1	
LBZ	Lake Benmore	53.67	141	P		P	13 08 59.5	+0.3	
INZ	Inchbonnie	53.70	138	P		P	13 09 01.2	+1.8	
JKA	Kamikawa-asahi	53.90	16	P		P	13 09 01.5	+0.8	
JKA				IAmb		IAmb	13 09 02.0		
	comp=Z,57nm,1.1s								
RPZ	Rata Peaks	53.90	140	P		P	13 09 01.6	+0.7	
MRNZ	Matariki Terra	54.00	136	P		P	13 09 02.7	+1.1	
TUZ	Tuapeka	54.12	143	P		P	13 09 02.4	+0.2	
THZ	Tophouse	54.26	137	P		P	13 09 04.7	+1.2	
LTZ	Lake Taylor	54.27	138	P		P	13 09 04.6	+1.1	
NNZ	Nelson	54.35	136	P		P	13 09 04.4	+0.4	
OXZ	Oxford	54.36	139	P		P	13 09 05.2	+1.0	
TUWZ	Tuamarina	54.83	136	P		P	13 09 08.4	+0.9	
GVZ	Greta Valley S	54.86	138	P		P	13 09 08.5	+0.8	
WAZ	Wanganui	54.91	134	P		P	13 09 10.3	+2.2	
MQZ	McQueen's Vall	54.93	139	P		P	13 09 09.9	+1.7	
KHZ	Kahutara	54.96	137	P		P	13 09 08.6	+0.3	
KHZ	Kahutara	54.96	137	P		P	13 09 09.1	+0.8	
TCW	Tory Channel	54.97	136	P		P	13 09 08.6	+0.1	
WTVZ	West Tongariro	55.11	133	P		P	13 09 11.2	+1.5	
NGZ	Ngauruhoe	55.14	133	P		P	13 09 11.6	+1.6	
WNVZ	Wahianoa	55.20	133	P		P	13 09 11.2	+0.8	
TMVZ	Te Maari	55.20	133	P		P	13 09 12.4	+2.1	
ETVZ	East Tongariro	55.21	133	P		P	13 09 12.2	+1.8	
SNZO	South Karori	55.31	136	P		P	13 09 10.6	-0.2	
MOVZ	Moawhango	55.34	133	P		P	13 09 11.8	+0.6	
OGWZ	Otaki Gorge	55.44	135	P		P	13 09 12.0	+0.2	
BHW	Baring Head	55.46	136	P		P	13 09 11.6	-0.3	
CAW	Cannon Point	55.48	135	P		P	13 09 12.6	+0.5	
MRHZ	Matea Rd	55.62	132	P		P	13 09 14.3	+1.2	
MRZ	Mangatainoka R	55.67	135	P		P	13 09 13.2	-0.2	
HOWZ	Holdsworth Sta	55.71	135	P		P	13 09 13.8	+0.1	
TSZ	Takapari Road	55.72	134	P		P	13 09 14.2	+0.3	
MSWZ	Moikau Station	55.73	136	P		P	13 09 14.7	+0.8	
BKZ	Black Stump Fm	55.79	133	P		P	13 09 14.9	+0.5	
BKZ	Black Stump Fm	55.79	133	P		P	13 09 14.9	+0.5	
BKZ	Black Stump Fm	55.79	133	P		P	13 09 14.7	+0.4	
KWHZ	Kaweka Forest	55.83	133	P		P	13 09 15.5	+0.9	
PAWZ	Paruwai Farm	55.84	135	P		P	13 09 15.8	+1.2	
PNHZ	Pukenui	55.84	134	P		P	13 09 15.5	+0.8	
KRHZ	Kereru	55.87	133	P		P	13 09 15.2	+0.4	
MTHZ	Maungataniwha	55.94	132	P		P	13 09 16.0	+0.6	
URZ	Urewera	55.94	131	P		P	13 09 15.5	+0.2	
URZ	Urewera	55.94	131	P		P	13 09 15.4	0.0	
DVHZ	Dannevirke	55.95	134	P		P	13 09 15.5	0.0	
RTZ	Ruatahuna	55.96	132	P		P	13 09 16.1	+0.5	
NMHZ	Naumai	55.99	132	P		P	13 09 17.2	+1.4	
TRWZ	Traveller	56.02	135	P		P	13 09 17.2	+1.2	
MCHZ	McNeill Hill	56.03	133	P		P	13 09 17.1	+1.0	
RAHZ	Arahi	56.14	132	P		P	13 09 17.7	+0.9	
BFZ	Birch Farm	56.15	134	P		P	13 09 17.5	+0.7	
RAGZ	Rawiri	56.24	132	P		P	13 09 18.1	+0.5	
RUGZ	Raukumara Rang	56.27	131	P		P	13 09 17.4	-0.4	
MWZ	Matawai	56.27	131	P		P	13 09 18.1	+0.3	
HAZ	Te Kaha	56.28	131	P		P	13 09 17.7	-0.1	
SNGZ	Shannon Statio	56.28	132	P		P	13 09 18.1	+0.4	
PXZ	Pawanui	56.36	133	P		P	13 09 19.0	+0.7	
TKGZ	Te Karaka	56.55	131	P		P	13 09 20.5	+0.9	
RIGZ	Rimuhau	56.57	132	P		P	13 09 20.2	+0.4	
YSS	Yuzhno-Sakhali	56.58	15	P		P	13 09 20.0	+0.5	
YSS	Yuzhno-Sakhali	56.58	15	P		P	13 09 19.5	0.0	
KNZ	Kokohu	56.61	132	P		P	13 09 20.6	+0.6	
MXZ	Matakaoa Point	56.62	130	P		P	13 09 21.1	+1.0	
MXZ	Matakaoa Point	56.62	130	P		P	13 09 20.7	+0.6	
WMGZ	Waiomatatini S	56.78	130	P		P	13 09 22.0	+0.8	
HILR	Hailar Array B	57.11	356	P		P	13 09 23.7	+0.4	
	comp=Z,14nm,0.6s,baz=170,slow=9.0,SNR=15								
HILR				PcP		PcP	13 10 13.6	+0.4	
	comp=Z,3.3nm,0.6s,baz=165,slow=6.0,SNR=2.5								
	comp=Z,14nm,0.6s								
ULN	Ulaanbaatar	57.46	346	P		P	13 09 26.1	+0.2	
SONM	Songino Array	57.59	345	P		P	13 09 26.7	-0.1	
	comp=Z,5.3nm,0.7s,baz=163,slow=8.7,SNR=9.5								
	comp=Z,5.3nm,0.7s								
HEH	HeiHe	57.66	2	*e*P		P	13 09 26.4	-0.6	
HEH				pmax		pmax			
	comp=Z,45nm,0.9s								
RAO	Raoul Island	57.70	120	P		P	13 09 27.3	-0.5	
KDJ	Kajisay	65.95	323	P		P	13 10 22.8	+0.6	
MKAR	Makanchi Array	66.10	329	P		P	13 10 23.1	+0.2	
	comp=Z,8.2nm,0.6s,baz=127,slow=7.1,SNR=14								
	comp=Z,8.2nm,0.6s								
MKAR	Makanchi Array	66.10	329	P		P	13 10 23.0	+0.2	
MAKZ	Makanchi	66.27	329	P		P	13 10 24.1	+0.3	
MAKZ				IAmb		IAmb	13 11 58.6		
	comp=Z,11nm,1.1s								
PEA0B	Petropavlovsk-	66.56	21	P		P	13 10 26.5	+1.0	
PETK	Petropavlovsk-	66.56	21	P		P	13 10 25.9	+0.4	
	comp=Z,21nm,0.9s,baz=196,slow=2.4,SNR=18								
	comp=Z,21nm,0.9s								
PETK	Petropavlovsk-	66.56	21	P		P	13 10 26.2	+0.8	
KBL	Kabul	67.41	312	P		P	13 10 32.1	+0.6	
KBL				IAmb		IAmb	13 10 33.5		
	comp=Z,16nm,0.8s								
AAK	Ala-Archa	67.87	322	P		P	13 10 34.6	+0.6	
ARSB	Arslanbob	68.08	320	P		P	13 10 36.0	+0.6	
ARSB				IAmb		IAmb	13 10 36.4		
	comp=Z,12nm,0.5s								
GAR	Garm	68.63	317	P		P	13 10 38.8	0.0	
GAR				IAmb		IAmb	13 10 44.4		
	comp=Z,12nm,0.7s								
YAK	Yakutsk	69.53	2	P		P	13 10 43.4	-0.1	
	comp=Z,73nm,0.6s,baz=106,slow=0.6,SNR=22								
YAK	Yakutsk	69.53	2	P		P	13 10 43.6	+0.1	
YAK	Yakutsk	69.53	2	P		P	13 10 43.4	-0.1	
YAK	Yakutsk	69.53	2	pP		pP	13 12 01.3	-3.3	
ZALV	Zalesovo Beam	70.01	336	P		P	13 10 45.3	-1.3	
	comp=Z,2.9nm,0.4s,baz=133,slow=4.9,SNR=5.8								
ZALV				S		S	13 19 16.5	-10	
	comp=Z,0.4nm,0.4s,baz=126,slow=9.1,SNR=3.7								
	comp=Z,2.9nm,0.4s								
ZALV	Zalesovo Beam	70.01	336			P	13 10 45.6	-1.0	
MA2	Magadan	70.06	14	P		P	13 10 47.0	+0.2	
	comp=Z,29nm,0.9s,baz=234,slow=6.8,SNR=5.3								
	comp=Z,29nm,0.9s								
KURBB	Kurchatov Arra	70.50	331	P		P	13 10 49.3	-0.4	
	comp=Z,2.5nm,0.7s,baz=138,slow=5.5,SNR=7.7								
KURBB				S		S	13 19 24.1	-8.0	
	comp=Z,0.9nm,0.9s,baz=139,slow=12,SNR=6.4								
	comp=Z,2.5nm,0.7s								
KURK	Kurchatov	70.52	331	P		P	13 10 49.9	+0.1	
VNDA	Vanda	72.49	172	P		P	13 11 01.3	+0.3	
	comp=Z,0.8nm,0.7s,baz=322,slow=9.6,SNR=7.6								
	comp=Z,0.8nm,0.7s								
VNDA	Vanda	72.49	172	P		P	13 11 01.5	+0.5	
MAW	Mawson	72.59	201	P		P	13 11 02.9	+1.2	
	comp=Z,4.7nm,0.5s,baz=74,slow=4.7,SNR=10								
	comp=Z,4.7nm,0.5s								
SEY	Seymchan	73.40	13	P		P	13 11 07.0	+0.5	
	comp=Z,9.2nm,0.6s,baz=209,slow=4.0,SNR=24								
	comp=Z,9.2nm,0.6s								
BVAR	Borovoye Array	75.98	330	P		P	13 11 21.5	+0.1	
	comp=Z,2.0nm,0.5s,baz=108,slow=4.7,SNR=3.1								
	comp=Z,2.0nm,0.5s								
ATKA	Atka Island	78.83	33	P		P	13 11 36.3	-0.7	
TIXI	Tiksi	79.13	1	P		P	13 11 37.1	-1.0	
TIXI				PcP		PcP	13 11 45.0	-0.1	
SYO	Syowa Base	81.29	201⇑	*e*P		P	13 11 51.9	+2.2	
QSPA	South Pole Qui	82.37	180	P		P	13 11 59.0	+3.5	
	comp=Z,1.1nm,0.6s,baz=31,slow=4.2,SNR=11								
QSPA	South Pole Qui	82.37	180	P		P	13 11 57.9	+2.3	
UNV	Unalaska Valle	83.74	34	P		P	13 12 02.5	+0.1	
AKUT	Akutan	84.25	34	P		P	13 12 04.8	-0.1	
SDPT	Sand Point	87.54	33	P		P	13 12 21.0	+0.1	
KMBO	Kilima Mbogo	87.59	269	P		P	13 12 22.6	+0.2	
	comp=Z,0.9nm,0.3s,baz=63,slow=7.1,SNR=5.1								
	comp=Z,0.9nm,0.3s								
SNAA	Sanae	93.87	195	P		P	13 12 51.0	+0.9	
	comp=Z,2.2nm,0.5s,baz=331,slow=20,SNR=8.3								
	comp=Z,2.2nm,0.5s								
BOSA	Boshof	94.84	240	P		P	13 12 55.4	-0.1	
	comp=Z,3.7nm,0.7s,baz=104,slow=2.9,SNR=13								
	comp=Z,3.7nm,0.7s								
ILAR	Eielson Array	96.03	26	P		P	13 12 58.0	-1.9	
	comp=Z,1.2nm,1.0s,baz=258,slow=5.0,SNR=8.1								
	comp=Z,1.2nm,1.0s								
ARCES	ARCESS Array B	100.40	339	P		Pdif	13 13 20.1	+0.8	
	comp=Z,1.7nm,0.8s,baz=101,slow=5.5,SNR=3.7								
NVAR	Mina Array Bea	115.57	51	PKP		PKiKP	13 18 14.2	+0.7	
	comp=Z,0.6nm,0.7s,baz=306,slow=3.2,SNR=3.9								
PDAR	Pinedale Array	120.84	44	PKP		PKPdf	13 18 23.2	-0.3	
	comp=Z,0.8nm,0.7s,baz=298,slow=3.1,SNR=7.1								
PDAR				PKKPbc		PKKPab	13 28 30.8	+0.2	
	comp=Z,0.5nm,0.5s,baz=118,slow=3.5,SNR=8.1								
TORD	Torodi Ar. Bea	124.03	281	PKP		PKPdf	13 18 29.8	-0.3	
	comp=Z,20nm,0.4s,baz=30,slow=5.6,SNR=3.5								
TXAR	Lajitas Array	129.50	58	PKP		PKiKP	13 18 41.2	+0.2	
	comp=Z,0.6nm,0.7s,baz=235,slow=0.9,SNR=5.2								
JSC	Jenkinsville	144.10	39			PKPbc	13 19 06.0	+0.1	
T59A	Double "B" Far	144.30	32			PKPab	13 19 06.3	0.0	
TIGA	Tifton	144.34	45			PKPdf	13 19 07.2	-0.1	
553A	Crawfordville	144.44	47			PKPdf	13 19 07.8	+0.2	
W59A	Clinton	145.16	35			PKPab	13 19 09.4	-0.2	
CPUP	Villa Florida	146.19	176	PKPbc		PKPbc	13 19 11.8	-0.6	
	comp=Z,1.9nm,0.7s,baz=223,slow=1.8,SNR=5.4								
PB06	IPOC Station P	146.68	155	PKPbc		PKPab	13 19 15.2	-0.8	
PB09	IPOC Station P	147.62	155	PKPbc		PKiKP	13 19 17.9	-0.5	
NNA	Nana	150.85	132	PKPbc		PKPbc	13 19 24.3	-0.3	
	comp=Z,6.2nm,0.3s,baz=256,slow=1.1,SNR=5.4								
ATAH	Atahualpa	152.48	122	PKPbc		PKiKP	13 19 30.4	+1.5	
	comp=Z,8.4nm,0.7s,baz=176,slow=4.4,SNR=7.2								
LPAZ	La Paz	152.95	151	PKPbc		PKiKP	13 19 31.2	+1.2	
	comp=Z,2.3nm,0.4s,baz=19,slow=4.2,SNR=10								

NEIC ***23*** *13:09:54.1±2.3,5.°58S±0.°08×148.°5E±0.°1,h183km±9km, mb4.3/14, Error ellipse: s-maj=15.0km s-min=10.5km az=103.0*
IDC ***23*** *13:09:54.5±1.4,5.°65S×148.°39E,h186km±13km,mb3.6/8, mbtmp4.2/11,MS4.0/2,Error ellipse: s-maj=24.8km s-min=9.6km az=116.0*

ISC 23 13:09:52.2±0.6,5.°56S±0.°06×148.°30E±0.°08,h163km,n33,
σ1§50/35,mb4.1/16,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.61	345	Pn	Pn	13 10 49.7	+1.8
PMG	Port Moresby	3.99	196	P	Pn	13 10 55.6	+2.9
	9.3nm,0.4s,baz=21,slow=9.5,SNR=11						
PMG				S	Sn	13 11 41.4	+1.5
	55nm,0.8s,baz=138,slow=19,SNR=8.2						
PMG	Port Moresby	3.99	196		Pn	13 10 55.0	+2.3
RABL	Rabaul	4.08	71	Pn	Pn	13 10 55.3	+1.4
HNR	Honiara	12.17	109	P	Pn	13 12 40.9	+0.5
	23nm,0.5s,baz=225,slow=1.4,SNR=3.5						
MTN	Manton Dam	18.42	246	P	Pn	13 13 56.9	-0.4
MTN				IAmb	IAmb	13 14 02.5	
	comp=Z,9.9nm,0.9s						
WB0	Warramunga Arr	19.56	223	P	Pn	13 14 09.2	-1.6
WR8	Warramunga Arr	19.62	222		Pn	13 14 10.0	-1.5
WRA	Warramunga Arr	19.72	222	P	Pn	13 14 11.2	-1.5
	comp=Z,5.3nm,0.3s,baz=51,slow=11,SNR=36						
WRA				S	S	13 17 41.3	-1.7
	comp=Z,2.2nm,0.8s,baz=43,slow=20,SNR=5.6						
WRA	Warramunga Arr	19.72	222	P	P	13 14 09.4	0.0
KNRA	Kununurra	21.65	241	P	P	13 14 31.0	+0.9
KNRA				IAmb	IAmb	13 14 35.4	
	comp=Z,6.7nm,0.8s						
AS31	Alice Springs	22.72	216	P	P	13 14 41.7	+1.3
AS31				IAmb	IAmb	13 14 42.8	
	comp=Z,3.2nm,0.7s						
ASAR	Alice Springs	22.72	216	P	P	13 14 41.9	+1.4
	comp=Z,5.6nm,0.5s,baz=54,slow=8.5,SNR=65						
ASAR				S	S	13 18 36.3	-0.5
	comp=Z,1.7nm,0.9s,baz=28,slow=18,SNR=7.0						
	comp=Z,5.6nm,0.5s						
ASAR	Alice Springs	22.72	216	P	P	13 14 40.9	+0.4
INKA	Innaminka	23.20	197	P	P	13 14 44.4	-0.3
INKA				IAmb	IAmb	13 14 46.6	
	comp=Z,7.2nm,0.7s						
ARMA	Armidale	24.93	173	P	P	13 14 57.6	-2.9
FITZ	Fitzroy Crossi	25.40	239		P	13 15 04.8	0.0
FITZ				IAmb	IAmb	13 15 09.2	
	comp=Z,4.5nm,0.5s						
STKA	Stephens Creek	26.93	193	P	P	13 15 18.0	-0.3
	comp=Z,2.0nm,0.6s,baz=14,slow=14,SNR=1.5						
	comp=Z,2.0nm,0.6s						
KAPI	Kappang	28.43	270	LR	LR	13 29 09.2	
	comp=Z,219nm,19.0s,baz=60,slow=40						
CAN	Canberra	29.62	179	P	P	13 15 41.8	-0.6
CAN				IAmb	IAmb	13 15 51.7	
	comp=Z,8.9nm,1.0s						
FORT	Forrest	31.49	215	P	P	13 15 56.9	-1.8
FORT				IAmb	IAmb	13 16 15.6	
	comp=Z,7.7nm,1.0s						
MORW	Morawa	38.43	229	P	P	13 16 57.4	-0.9
MORW				IAmb	IAmb	13 17 06.2	
	comp=Z,7.0nm,1.0s						
KSRS	Korea Array	46.82	338	P	P	13 18 07.8	+2.2
	comp=Z,1.2nm,0.6s,baz=152,slow=7.6,SNR=6.5						
	comp=Z,1.2nm,0.6s						
PETK	Petropavlovsk-	58.98	7	P	P	13 19 36.1	+1.6
	comp=Z,7.5nm,1.2s,baz=139,slow=7.2,SNR=6.0						
	comp=Z,7.5nm,1.2s						
VNDA	Vanda	72.28	177	P	P	13 20 59.0	-0.3
	comp=Z,0.7nm,0.5s,baz=353,slow=4.4,SNR=5.7						
VNDA				LR	LR	13 51 39.1	
	comp=Z,142nm,18.2s,baz=219,slow=35						
	comp=Z,0.7nm,0.5s						
VNDA	Vanda	72.28	177	P	P	13 20 58.4	-1.0
MKAR	Makanchi Array	77.99	320	P	P	13 21 32.5	-0.1
	comp=Z,0.5nm,0.6s,baz=102,slow=7.3,SNR=1.8						
	comp=Z,0.5nm,0.6s						
ZALV	Zalesovo Beam	79.33	327	P	P	13 21 38.5	-1.2
	comp=Z,0.7nm,0.4s,baz=111,slow=5.2,SNR=4.5						
	comp=Z,0.7nm,0.4s						
QSPA	South Pole Qui	84.41	180	P	P	13 22 08.2	+2.0
	comp=Z,1.4nm,0.6s,baz=21,slow=8.6,SNR=8.1						
QSPA	South Pole Qui	84.41	180	P	P	13 22 05.6	-0.6
ILAR	Eielson Array	84.57	23	P	P	13 22 05.2	-1.6
	comp=Z,0.9nm,0.6s,baz=249,slow=4.9,SNR=24						
	comp=Z,0.9nm,0.6s						
ILAR	Eielson Array	84.57	23	P	P	13 22 04.5	-2.4
TORD	Torodi Ar. Bea	146.23	285	PKPbc	PKPdf	13 29 12.3	-1.0
	comp=Z,0.9nm,0.3s,baz=45,slow=4.1,SNR=0.2						

NEIC ***23*** *13:45:31.0±1.7,30.°9N±0.°1×49.°84E±0.°05,h10km±2km, mb4.3/17, Error ellipse: s-maj=19.9km s-min=4.8km az=194.0*
IDC ***23*** *13:45:30.3±0.7,30.°97N×49.°88E,h0km,mb3.9/24, mbtmp3.9/29,ML3.8/5,Error ellipse: s-maj=17.4km s-min=12.6km az=172.0*
TEH ***23*** *13:45:32.9,31.°02N×49.°98E,h9km±19km*
OMAN ***23*** *13:45:38.3±0.1,30.°68N×50.°36E,h10km,mb4.4/17, Error ellipse: s-maj=1.5km s-min=1.4km az=10.0*
DSN ***23*** *13:45:39.0±1.1,30.°60N×50.°35E,h15km,ML3.5/7, Error ellipse: s-maj=44.9km s-min=8.5km az=34.0*

ISC 23 13:45:34.1±0.4,30.°89N±0.°04×49.°92E±0.°04,h30km,n151,
σ1§55/173,mb4.2/38,9C-5D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABEH	Behbahan	0.41	135	Pg	Pb	13 45 42.7	-0.4
AHWZ	Ahwaz	1.18	292	Pg	Pb	13 45 56.1	+0.3
KLNJ	Kolanjah	1.44	85	Pg	Pn	13 45 59.1	+0.6
ZNGN	Zangian	1.46	33	Pg	Pn	13 45 58.2	-0.6
ZNGN				Sg	Sn	13 46 18.5	+1.5
JHBN	Jahan bin	1.48	25	Pg	Pn	13 45 58.3	-0.7
IBRJ	Brojen	1.53	48	Pg	Pn	13 45 59.6	0.0
IPIR	Pirpir	1.97	25	Pn	Pn	13 46 07.3	+1.6
SHI	Shiraz	2.57	118	Pn	Pn	13 46 17.2	+3.5
DSBU	Dashti - Bushe	2.78	155	Pn	Pb	13 46 20.8	-2.2
IKLH	Kolahrood	2.80	30	Pn	Pn	13 46 18.8	+1.7
IZEF	Zefreh	2.86	45	Pn	Pn	13 46 19.8	+1.8
BDRS	Dareh Seyedi	3.18	344	Pn	Pn	13 46 23.7	+1.4
IDOB	Doab	3.24	333	Pn	Pn	13 46 25.0	+1.9
ANAR	Anarak	3.96	54	Pn	Pn	13 46 35.0	+2.0
IBZA	Bozab	3.97	335	Pn	Pn	13 46 35.1	+1.9
ISFB	Sefidab	3.97	29	Pn	Pn	13 46 34.6	+1.6
HAGD	Aghdareh	3.98	351	Pn	Pn	13 46 34.4	+1.2
IMEH	Mehriz	4.05	82	Pn	Pn	13 46 36.4	+2.1
IQOM	Qom	4.06	14	Pn	Pn	13 46 35.4	+1.1
ICHK	Chekchek	4.06	69	Pn	Pn	13 46 36.3	+1.9
IVRN	Varamin	4.37	20	Pn	Pn	13 46 40.0	+1.5
SNQR	Sonqor, Kerman	4.40	335	Pn	Pn	13 46 40.4	+1.3
IGHG	Ghaleghazi	4.45	321	Pn	Pn	13 46 41.6	+1.9
GLG1	Gilan-e-Gharb	4.67	315	Pn	Pn	13 46 44.6	+2.0
QABG	Abgarm-Qazvin	4.81	357	Pn	Pn	13 46 46.2	+1.4
IDHR	Dehrash	4.83	323	Pn	Pn	13 46 45.6	+0.7
IBAF	Bafgh	4.89	80	Pn	P

IDI				IAmb	IAmb	13 50 29.3			
	comp=Z,9.3nm,0.6s								
BELG	**Belogornoye**	**21.55**	**356**	P	**P**	**13 50 20.9**	**+0.1**		
	comp=Z,14nm,0.6s,baz=192,slow=16,SNR=4.7								
	comp=Z,14nm,0.6s								
LOZB	**Loznitsa**	**22.30**	**310**	⇑P	**P**	**13 50 33.2**	**+4.2**		
KSH	**Kashi**	**22.90**	**61**	P	**P**	**13 50 35.8**	**+0.3**		
KSH				pmax	pmax				
	comp=Z,5.0nm,0.9s								
MLR	**Muntele Rosu**	**23.70**	**315**	⇓P	**P**	**13 50 44.8**	**+1.4**		
COVR	**Voineasa-Covas**	**23.73**	**316**	⇑P	**P**	**13 50 44.7**	**+1.2**		
BOOM	**Boomskoye usch**	**23.77**	**54**	P	**P**	**13 50 44.7**	**+0.6**		
TESR	**Tescani**	**23.81**	**317**	⇓P	**P**	**13 50 44.9**	**+0.6**		
ITM	**Ithomi**	**23.98**	**293**	P	**P**	**13 50 45.3**	**-0.7**		
VOIR		**24.23**	**314**	⇑P	**P**	**13 50 50.0**	**+1.7**		
ARR	**Arges**	**24.46**	**313**	⇑P	**P**	**13 50 51.6**	**+1.3**		
MDB	**Medias**	**24.98**	**315**	⇑P	**P**	**13 50 57.1**	**+2.1**		
LOT	**Lotru**	**25.04**	**313**	⇓P	**P**	**13 50 57.2**	**+1.6**		
AKASG	**Malin Array Be**	**25.09**	**328**	P	**P**	**13 50 54.8**	**-1.1**		
	comp=Z,0.4nm,0.3s,baz=136,slow=7.0,SNR=2.9								
	comp=Z,0.4nm,0.3s								
AKBB	**Malin Array Si**	**25.09**	**328**	P	**P**	**13 50 54.9**	**-1.0**		
KIEV	**Kiev**	**25.09**	**328**	P	**P**	**13 50 54.2**	**-1.6**		
KIEV				IAmb	IAmb	13 51 14.6			
	comp=Z,16nm,1.5s								
BURAR	**Bucovina Array**	**25.23**	**318**	P	**P**	**13 50 53.1**	**-4.3**		
BURAR	**Bucovina Array**	**25.23**	**318**	⇑P	**P**	**13 50 59.0**	**+1.7**		
BUR08	**Bucovina Ar. S**	**25.26**	**318**	P	**P**	**13 50 55.9**	**-1.7**		
BUR08				IAmb	IAmb	13 51 00.2			
	comp=Z,13nm,1.4s								
GZR	**Gura Zlata**	**25.64**	**312**	⇑P	**P**	**13 51 02.2**	**+1.2**		
HERR	**Herculane**	**25.66**	**311**	⇑P	**P**	**13 51 02.7**	**+1.5**		
MARR	**Marisel-Cluj**	**26.00**	**315**	⇑P	**P**	**13 51 07.1**	**+2.7**		
DRGR		**26.30**	**315**	⇓P	**P**	**13 51 08.5**	**+1.5**		
BVAR	**Borovoye Array**	**26.67**	**28**	P	**P**	**13 51 10.9**	**+0.7**		
	comp=Z,2.9nm,0.5s,baz=220,slow=8.9,SNR=13								
BVAR				PcP	**PcP**	**13 54 33.8**	**+0.5**		
	comp=Z,0.5nm,0.4s,baz=188,slow=4.4,SNR=2.8								
	comp=Z,2.9nm,0.5s								
SIRR	**Siria**	**26.72**	**313**	⇓P	**P**	**13 51 13.0**	**+2.3**		
KURBB	**Kurchatov Arra**	**29.01**	**39**	P	**P**	**13 51 32.3**	**+1.1**		
KURBB				PcP	**PcP**	**13 54 39.6**	**+0.6**		
	comp=Z,0.6nm,0.6s,baz=240,slow=9.8,SNR=6.7								
	comp=Z,0.2nm,0.3s,baz=226,slow=2.4,SNR=1.8								
	comp=Z,0.6nm,0.6s								
KURK	**Kurchatov**	**29.11**	**39**	P	**P**	**13 51 32.0**	**0.0**		
MKAR	**Makanchi Array**	**29.54**	**48**	P	**P**	**13 51 37.0**	**+1.2**		
	comp=Z,0.5nm,0.4s,baz=246,slow=9.1,SNR=6.6								
MKAR				PcP	**PcP**	**13 54 40.4**	**-0.1**		
	comp=Z,0.5nm,0.8s,baz=262,slow=2.4,SNR=2.1								
	comp=Z,0.5nm,0.4s								
MKAR	**Makanchi Array**	**29.54**	**48**	P	**P**	**13 51 34.4**	**-1.5**		
WMQ	**Urumqi**	**32.40**	**56**	*e*P	**P**	**13 52 03.1**	**+1.9**		
GERES	**GERESS Array B**	**32.68**	**314**	P	**P**	**13 52 03.7**	**+0.1**		
	comp=Z,0.5nm,0.6s,baz=113,slow=7.7,SNR=3.6								
	comp=Z,0.5nm,0.6s								
LESA	**Schwarzleotal**	**32.89**	**311**	*i* P	**P**	**13 52 05.7**	**+0.3**		
	comp=Z,1.2nm,0.3s								
WTTA	**Wattenberg**	**33.52**	**310**	*i* P	**P**	**13 52 11.2**	**+0.1**		
	comp=Z,2.4nm,0.4s								
WATA	**Walderalm**	**33.58**	**310**	*i* P	**P**	**13 52 11.9**	**+0.3**		
	comp=Z,1.1nm,0.2s								
SQTA	**Sankt Quirin**	**33.80**	**310**	*i* P	**P**	**13 52 13.8**	**+0.4**		
	comp=Z,4.9nm,0.4s								
MOTA	**Moosalm**	**33.90**	**310**	*i* P	**P**	**13 52 14.5**	**+0.2**		
	comp=Z,2.5nm,0.4s								
ZAA0	**Zalesovo Array**	**34.02**	**37**	P	**P**	**13 52 14.7**	**-0.4**		
ZAA0				IAmb	IAmb	13 52 40.8			
	comp=Z,1.8nm,0.9s								
ZALV	**Zalesovo Beam**	**34.02**	**37**	P	**P**	**13 52 15.4**	**+0.3**		
	comp=Z,0.9nm,0.3s,baz=257,slow=10,SNR=7.0								
ZALV				PcP	**PcP**	**13 54 52.1**	**-0.3**		
	comp=Z,0.5nm,0.5s,baz=245,slow=3.0,SNR=2.4								
	comp=Z,0.9nm,0.3s								
ZALV	**Zalesovo Beam**	**34.02**	**37**	P	**P**	**13 52 15.0**	**-0.1**		
FETA	**Feichten**	**34.06**	**309**	*i* P	**P**	**13 52 16.0**	**+0.2**		
	comp=Z,1.5nm,0.5s								
FINES	**FINESS Array B**	**34.33**	**340**	P	**P**	**13 52 17.3**	**-0.4**		
	comp=Z,2.4nm,0.4s,baz=148,slow=8.7,SNR=54								
FINES				PcP	**PcP**	**13 54 54.0**	**+0.8**		
	comp=Z,2.0nm,0.9s,baz=138,slow=9.1,SNR=1.3								
	comp=Z,2.4nm,0.4s								
FINES	**FINESS Array B**	**34.33**	**340**	P	**P**	**13 52 16.8**	**-0.8**		
DAVA	**Damuels**	**34.69**	**310**	*i* P	**P**	**13 52 21.1**	**-0.1**		
	comp=Z,5.3nm,0.4s								
SENIN	**Lac Senin/Sane**	**36.23**	**308**	P	**P**	**13 52 34.6**	**0.0**		
SENIN				IAmb	IAmb	13 53 09.9			
	comp=Z,7.2nm,1.1s								
HFS	**Hagfors**	**37.88**	**331**	P	**P**	**13 52 47.6**	**-0.4**		
	comp=Z,1.8nm,0.3s,baz=131,slow=8.5,SNR=25								
	comp=Z,1.8nm,0.3s								
NC405	**NORSAR Array S**	**39.23**	**332**	P	**P**	**13 52 57.9**	**-1.5**		
NC405				IAmb	IAmb	13 53 02.4			
	comp=Z,6.8nm,1.0s								
NB2	**NORSAR Subarra**	**39.40**	**331**	P	**P**	**13 52 59.8**	**-1.1**		
	comp=Z,0.4nm,0.4s,baz=117,slow=9.3								
NOA	**NORSAR Array B**	**39.40**	**331**	P	**P**	**13 52 59.8**	**-1.1**		
	comp=Z,0.4nm,0.4s,baz=128,slow=8.8,SNR=9.0								
	comp=Z,0.4nm,0.4s								
NBO00	**NORSAR Array S**	**39.57**	**331**	P	**P**	**13 53 01.2**	**-1.1**		
NBO00				IAmb	IAmb	13 53 29.9			
	comp=Z,13nm,1.1s								
ARCES	**ARCESS Array B**	**41.10**	**347**	P	**P**	**13 53 15.2**	**+0.4**		
	comp=Z,0.5nm,0.3s,baz=147,slow=11,SNR=12								
	comp=Z,0.5nm,0.3s								
ARCES	**ARCESS Array B**	**41.10**	**347**	P	**P**	**13 53 13.2**	**-1.7**		
ARCES				IAmb	IAmb	13 53 54.3			
	comp=Z,12nm,1.4s								
ESDC	**Sonseca Array**	**44.28**	**297**	P	**P**	**13 53 41.8**	**+0.7**		
	comp=Z,0.8nm,0.5s,baz=77,slow=7.9,SNR=6.8								
	comp=Z,0.8nm,0.5s								
EKA	**Eskdalemuir Ar**	**44.41**	**319**	P	**P**	**13 53 41.0**	**-0.8**		
	comp=Z,0.4nm,0.3s,baz=102,slow=7.7,SNR=5.6								
	comp=Z,0.4nm,0.3s								
PZH	**PanZhiHua**	**45.34**	**82**	P	**P**	**13 53 50.8**	**+1.0**		
SONM	**Songino Array**	**45.78**	**52**	P	**P**	**13 53 54.2**	**+1.2**		
	comp=Z,0.6nm,0.6s,baz=272,slow=7.8,SNR=3.3								
	comp=Z,0.6nm,0.6s								
CMAR	**Chiang Mai Arr**	**45.91**	**94**	P	**P**	**13 53 53.2**	**-1.0**		
	comp=Z,0.2nm,0.5s,baz=302,slow=6.5,SNR=1.4								
	comp=Z,0.2nm,0.5s								
TORD	**Torodi Ar. Bea**	**47.67**	**259**	P	**P**	**13 54 08.8**	**+0.7**		
	comp=Z,0.8nm,0.5s,baz=56,slow=11,SNR=0.4								
XAN	**Xi'an**	**49.29**	**70**	*e*P	**P**	**13 54 21.8**	**+1.5**		
SPITS	**Spitsbergen Ar**	**49.64**	**351**	P	**P**	**13 54 23.0**	**+0.6**		
	comp=Z,0.6nm,0.4s,baz=128,slow=9.3,SNR=1.3								
	comp=Z,0.6nm,0.4s								
HHC	**Hu-ho-hao-te**	**50.02**	**61**	*e*P	**P**	**13 54 25.1**	**-0.8**		
HHC				pmax	pmax				
	comp=Z,8.0nm,0.6s								
HHC				pmax	pmax				
	comp=Z,180nm,4.1s								
HHC				LR	LR				
	comp=N,380nm,12.7s								
HHC				LR	LR				
	comp=E,120nm,12.7s								
HHC				LR	LR				
	comp=Z,210nm,12.4s								
HILR	**Hailar Array B**	**54.50**	**49**	P	**P**	**13 55 00.3**	**+1.4**		
	comp=Z,0.9nm,0.4s,baz=278,slow=10.0,SNR=2.4								
	comp=Z,0.9nm,0.4s								
DBIC	**Dimbokro**	**56.53**	**257**	P	**P**	**13 55 14.7**	**+0.8**		
	comp=Z,2.6nm,0.5s,baz=33,slow=4.9,SNR=4.1								
	comp=Z,2.6nm,0.5s								
DBIC	**Dimbokro**	**56.53**	**257**	P	**P**	**13 55 12.1**	**-1.9**		
KSRS	**Korea Array**	**63.16**	**61**	P	**P**	**13 55 59.4**	**+0.2**		
	comp=Z,1.7nm,0.5s,baz=280,slow=6.9,SNR=13								
	comp=Z,1.7nm,0.5s								
BOSA	**Boshof**	**63.67**	**204**	P	**P**	**13 56 03.5**	**+0.9**		
	comp=Z,1.6nm,0.8s,baz=44,slow=7.6,SNR=3.7								
	comp=Z,1.6nm,0.8s								
ILAR	**Eielson Array**	**83.75**	**7**	P	**P**	**13 58 00.1**	**+0.2**		
	comp=Z,0.3nm,0.6s,baz=324,slow=4.5,SNR=7.2								
	comp=Z,0.3nm,0.6s								
YKA	**Yellowknife Ar**	**86.11**	**353**	P	**P**	**13 58 12.1**	**+0.3**		
	comp=Z,1.0nm,1.0s,baz=100,slow=1.1,SNR=4.4								
	comp=Z,1.0nm,1.0s								
QSPA	**South Pole Qui**	**120.73**	**180**	PKP	**PKiKP**	**14 04 25.9**	**+3.5**		
	comp=Z,0.8nm,1.0s,baz=264,slow=0.9,SNR=3.2								

IDC 23 14:01:57.9±2.5, 1°.44N×132°.62E, h0km, mb3.5/5, mbtmp3.5/5, Error ellipse: s-maj=158.1km s-min=22.6km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.32**	**176**	P	P	14 06 46.5	0.0
	0.6nm,0.5s,baz=355,slow=1.8,SNR=8.6						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**24.99**	**177**	P	P	14 07 23.5	0.0
	0.7nm,0.8s,baz=359,slow=10,SNR=7.2						
	0.7nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**38.12**	**59**	T	T	14 49 18.3	
	baz=245						
H11N2	**WAKE ISLAND Hy**	**38.14**	**59**	T	T	14 49 17.3	
H11N3	**WAKE ISLAND Hy**	**38.14**	**59**	T	T	14 49 15.9	
	baz=245						
MKAR	**Makanchi Array**	**62.83**	**324**	P	P	14 12 24.0	-1.6
	0.6nm,0.9s,baz=119,slow=6.6,SNR=1.5						
	0.6nm,0.9s						
KURBB	**Kurchatov Arra**	**66.88**	**326**	P	P	14 12 52.5	+0.7
	0.4nm,0.6s,baz=125,slow=5.8,SNR=4.2						
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**72.47**	**326**	P	P	14 13 27.1	+0.7
	0.2nm,0.4s,baz=129,slow=3.9,SNR=1.9						
	0.2nm,0.4s						

IDC 23 14:05:46.4±82.0, 21°.56S×179°.90W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=1472.0km s-min=177.5km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.73**	**245**	P	P	14 12 47.2	+0.2
	1.2nm,0.5s,baz=74,slow=8.3,SNR=3.7						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**42.55**	**258**	P	P	14 13 44.0	-0.3
	0.9nm,0.7s,baz=100,slow=7.9,SNR=12						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**42.71**	**264**	P	P	14 13 45.2	-0.2
	0.6nm,0.8s,baz=96,slow=8.5,SNR=5.7						
	0.6nm,0.8s						

GCG 23 14:18:53.9±0.8, 14°.49N×92°.21W, h60km±8km, MD3.7, ML3.9, MW2.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCA	**Catarina**	**0.38**	**20**	*i* P	Pn	14 19 04.9	+0.2
SMCA				*e*S	Sn	14 19 12.9	+0.4
QUEO	**Labor Ovalle**	**0.77**	**61**	*e*P	Pn	14 19 10.4	+1.1
QUEO				*i* S	Sn	14 19 23.6	+3.0
QUEO				IAML		14 19 23.8	
	comp=N,3µm,0.2s						
STG2	**El Palmar, Qui**	**0.81**	**94**	*i* P	Pn	14 19 07.5	-2.2
STG2				*e*S	Sn	14 19 18.0	-3.1
STG8	**El Palmar, Qui**	**0.83**	**93**	*e*P	Pn	14 19 08.0	-2.0
STG8				*e*S	Sn	14 19 19.1	-2.7
STG5	**El Palmar, Qui**	**0.84**	**96**	*e*P	Pn	14 19 07.6	-2.3
STG5				*i* S	Sn	14 19 18.8	-2.9
SOKI	**Kika Raxquin**	**0.84**	**67**	*e*P	Pn	14 19 11.4	+1.1
FG16	**Alotenango, Sa**	**1.66**	**97**	*e*P	Pn	14 19 16.9	-4.0
APG	**El Apazote**	**1.76**	**73**	*e*P	Pn	14 19 22.5	+0.2
CCIG	**Comitan**	**1.78**	**2**	*i* P	Pn	14 19 23.2	+0.6
PCG5	**San Vicente Pa**	**1.80**	**99**	*e*P	Pn	14 19 19.9	-2.9
PCG5				*i* S	Sn	14 19 39.2	-5.4

IDC 23 14:23:39.5±999.0, 69°.36N×107°.78W, h0km, Error ellipse: s-maj=3912.0km s-min=268.4km az=34.0, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I18DK	**QAANAAQ INFRAS**	**13.33**	**36**	I	I	15 37 30.0	
	0.1nm,0.8s,baz=260,slow=335,SNR=2.8						
I37NO	**I37NO**	**37.15**	**29**	I	I	18 10 10.0	
	baz=325,slow=326,SNR=1.8						
I43RU	**DUBNA INFRASON**	**51.69**	**24**	I	I	19 46 50.0	
	baz=341,slow=338,SNR=4.0						

*IDC **23** 14:45:41.7±6.4, 17°.79N×145°.50E, h335km±68km, mb3.0/7, mbtmp3.7/8, Error ellipse: s-maj=28.9km s-min=20.1km az=97.0*
*NEIC **23** 14:45:42.3±1.4, 17°.83N±0°.06×145°.6E±0°.2, h344km±9km, mb3.8/7, Error ellipse: s-maj=26.6km s-min=8.3km az=81.0*

ISC 23 14:45:42.6±1.2, 17°.7N±0°.1×145°.5E±0°.2, h350km, n21, σ0s81/21, mb3.6/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**19.81**	**342**	P	**P**	**14 49 47.8**	**-0.8**
	1.7nm,0.9s,baz=172,slow=9.8,SNR=2.1						
YHNB	**Yeheng**	**23.51**	**291**	P	**P**	**14 50 23.0**	**+0.3**
WRA	**Warramunga Arr**	**39.02**	**197**	P	**P**	**14 52 37.4**	**+0.7**
	0.1nm,0.3s,baz=16,slow=7.8,SNR=5.0						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**39.02**	**197**	P	**P**	**14 52 35.7**	**-1.1**
SONM	**Songino Array**	**43.78**	**322**	P	**P**	**14 53 14.4**	**-0.6**
	0.3nm,0.4s,baz=128,slow=9.2,SNR=2.3						
	0.3nm,0.4s						
CHTO	**Chiang Mai**	**44.13**	**279**	P	**P**	**14 53 19.0**	**+1.0**
CHTO				IAmb	IAmb	14 53 19.8	
	comp=Z,2.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.17**	**278**	P	**P**	**14 53 17.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=78,slow=8.5,SNR=4.6						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.00**	**314**	P	**P**	**14 55 07.2**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=89,slow=8.2,SNR=12						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**59.00**	**314**	P	**P**	**14 55 06.4**	**-0.2**
MAKZ	**Makanchi**	**59.21**	**314**	P	**P**	**14 55 08.6**	**+0.5**
MAKZ				IAmb	IAmb	14 55 27.4	
	comp=Z,8.4nm,1.1s						
J20K	**Nowinta River**	**61.40**	**26**	P	**P**	**14 55 22.7**	**+0.4**
KURBB	**Kurchatov Arra**	**61.91**	**318**	P	**P**	**14 55 26.3**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=98,slow=7.0,SNR=20						
	comp=Z,1.5nm,0.4s						
D20K	**Etivluk River**	**62.17**	**20**	P	**P**	**14 55 28.5**	**+1.1**
D20K				IAmb	IAmb	14 55 50.3	
	comp=Z,4.3nm,1.1s						
ILAR	**Eielson Array**	**64.58**	**26**	P	**P**	**14 55 43.2**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=247,slow=6.1,SNR=9.0						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**64.58**	**26**	P	**P**	**14 55 41.3**	**-1.8**
BMAR	**Burnt Mountain**	**66.07**	**23**	P	**P**	**14 55 53.4**	**+0.8**
BVAR	**Borovoye Array**	**67.10**	**321**	P	**P**	**14 55 59.2**	**0.0**
	comp=Z,0.9nm,0.6s,baz=99,slow=7.7,SNR=8.1						
	comp=Z,0.9nm,0.6s						
KKAR	**Karatay Array**	**67.24**	**310**	P	**P**	**14 55 59.8**	**-0.6**
D27M	**Malcolm River**	**67.72**	**22**	P	**P**	**14 56 04.0**	**+1.2**
D27M				IAmb	IAmb	14 56 15.3	
	comp=Z,1.6nm,1.1s						
AB31	**Akbulak array**	**73.92**	**317**	P	**P**	**14 56 40.2**	**+0.1**
AB31				IAmb	IAmb	14 56 40.6	
	comp=Z,1.1nm,0.5s						
ABKAR	**Akbulak array**	**73.92**	**317**	P	**P**	**14 56 40.0**	**-0.1**

KRSC 23 14:58:35.2±1.6, 50°.30N×157°.32E, h28km±25km, MI3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.86**	**297**	*e*P	Pn	14 58 50.4	-1.0
SKR				*e*S	Sb	14 59 01.4	-1.3
PAU	**Pauzhetka**	**1.22**	**345**	*e*P	Pb	14 58 58.0	+0.5
PAU				*e*S	Sb	14 59 14.3	+1.5
KDTR	**Khodutka, Kamc**	**1.59**	**17**	*e*P	Pb	14 59 02.8	-1.1
KDTR				*e*S	Sb	14 59 23.2	-0.3
ASAK	**Asacha**	**2.12**	**10**	*e*P	Pb	14 59 11.0	-2.0
MTVR	**Mutnovka**	**2.26**	**14**	*e*P	Pn	14 59 12.8	+2.0
MTVR				*e*S	Sb	14 59 40.6	-2.2
RUS	**Russkaya**	**2.27**	**19**	*e*P	Pn	14 59 12.0	+1.3
RUS				*e*S	Sn	14 59 39.2	+1.5
GRL	**Gorelyy**	**2.31**	**11**	*e*P	Pb	14 59 14.0	-2.2
GRL				*e*S	Sb	14 59 42.9	-1.4
APC	**Apacha**	**2.63**	**358**	*e*P	Pb	14 59 18.8	-2.8
PET	**Petropavlovsk**	**2.86**	**16**	*e*P	Pn	14 59 22.1	+3.3
PET				*e*S	Sb	14 59 56.1	-3.8
DALK	**Dalny**	**2.88**	**17**	*e*P	Pn	14 59 21.4	+2.3
DALK				*e*S	Sn	14 59 56.0	+3.1
UGLR	**Uglovaya**	**3.06**	**17**	*e*P	Pn	14 59 25.1	+3.4
AVH	**Avacha**	**3.10**	**16**	*e*P	Pb	14 59 26.1	-3.5
KOK	**Koryaka**	**3.11**	**15**	*e*P	Pb	14 59 26.6	-3.3
SMAR	**Somma**	**3.11**	**17**	*e*P	Pn	14 59 26.1	+3.5
KRER	**Koryakskii**	**3.14**	**16**	*e*P	Pn	14 59 26.5	+3.6
SDLR	**Sedlovina**	**3.14**	**17**	*e*P	Pn	14 59 25.3	+2.4
KRX	**Arik**	**3.18**	**15**	*e*P	Pn	14 59 27.1	+3.8
KZV	**Kizimen**	**5.15**	**19**	*e*P	Pn	14 59 57.4	+6.8

*IDC **23** 15:06:18.1±19.0, 23°.97S×179°.41E, h0km, mb4.3/3, mbtmp4.2/4, ML3.7/1, Error ellipse: s-maj=356.5km s-min=60.1km az=66.0*
*NEIC **23** 15:06:56.4±1.4, 25°.5S±0°.2×179°.7W±0°.2, h446km±17km, mb4.0/20, Error ellipse: s-maj=33.1km s-min=10.8km az=134.0*

ISC 23 15:06:54.9±1.2, 25°.5S±0°.1×179°.7W±0°.2, h432km, n27, σ0s83/28, mb4.0/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.04**	**191**	Pn	**P**	**15 09 43.6**	**-1.5**
	0.4nm,0.3s,baz=77,slow=23,SNR=1.9						
URZ				Sn	**S**	**15 12 07.0**	**+1.3**
	0.2nm,0.3s,baz=58,slow=6.1,SNR=3.0						
	2.2nm,0.8s						
BKZ	**Black Stump Fm**	**14.03**	**192**	P	**P**	**15 09 55.1**	**-0.8**
MRZ	**Mangatainoka R**	**15.65**	**193**	P	**P**	**15 10 13.0**	**-0.3**
TCW	**Tory Channel**	**16.48**	**196**	P	**P**	**15 10 22.3**	**+0.3**
QRZ	**Quartz Range**	**16.62**	**201**	P	**P**	**15 10 24.0**	**+0.4**
KHZ	**Kahutara**	**17.80**	**196**	P	**P**	**15 10 35.7**	**-0.2**
INZ	**Inchbonnie**	**18.69**	**201**	P	**P**	**15 10 43.9**	**-1.0**
WHZ	**Wether Hill Ro**	**22.66**	**203**	P	**P**	**15 11 21.1**	**-0.1**
ARMA	**Armidale**	**25.74**	**252**	P	**P**	**15 11 49.4**	**+0.1**
ARMA				IAmb	IAmb	15 11 54.4	
	comp=Z,16nm,1.4s						
EIDS	**Eidsvold**	**26.34**	**264**	P	**P**	**15 11 54.5**	**+0.1**
EIDS				IAmb	IAmb	15 11 56.1	
	comp=Z,5.9nm,0.9s						
CTAO	**Charters Tower**	**31.76**	**273**	P	**P**	**15 12 42.1**	**+0.2**
CTAO				IAmb	IAmb	15 12 43.4	
	comp=Z,7.8nm,0.8s						
TOO	**Toolangi**	**31.84**	**239**	P	**P**	**15 12 43.7**	**+1.4**
TOO				IAmb	IAmb	15 12 58.9	
	comp=Z,7.6nm,1.4s						
STKA	**Stephens Creek**	**34.40**	**250**	P	**P**	**15 13 04.6**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=96,slow=10,SNR=6.8						
	comp=Z,1.9nm,0.6s						
PMG	**Port Moresby**	**35.26**	**291**	P	**P**	**15 13 11.1**	**-0.6**
PMG				IAmb	IAmb	15 13 12.5	
	comp=Z,6.0nm,0.7s						
INKA	**Innaminka**	**35.31**	**257**	P	**P**	**15 13 13.3**	**+1.3**
COEN	**Coen**	**36.63**	**281**	P	**P**	**15 13 23.5**	**+0.3**
COEN				IAmb	IAmb	15 13 34.5	
	comp=Z,11nm,1.4s						
BBOO	**Buckleboo**	**39.08**	**249**	P	**P**	**15 13 43.0**	**-0.1**
AS31	**Alice Springs**	**42.05**	**262**	P	**P**	**15 14 06.8**	**-0.3**
AS31				IAmb	IAmb	15 14 08.2	
	comp=Z,1.6nm,0.4s						
ASAR	**Alice Springs**	**42.05**	**262**	P	**P**	**15 14 07.0**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=91,slow=7.6,SNR=128						
	comp=Z,2.0nm,0.4s						
ASAR	**Alice Springs**	**42.05**	**262**	P	**P**	**15 14 06.2**	**-0.9**
WB0	**Warramunga Arr**	**42.57**	**268**	P	**P**	**15 14 10.1**	**-1.2**
WB0				IAmb	IAmb	15 14 11.3	
	comp=Z,4.8nm,0.7s						
WRA	**Warramunga Arr**	**42.57**	**268**	P	**P**	**15 14 10.6**	**-0.7**
	comp=Z,2.4nm,0.4s,baz=104,slow=8.1,SNR=38						
	comp=Z,2.4nm,0.4s						
WRA	**Warramunga Arr**	**42.57**	**268**	P	**P**	**15 14 09.7**	**-1.6**
KNRA	**Kununurra**	**48.94**	**271**	P	**P**	**15 14 59.6**	**-0.7**
KNRA				IAmb	IAmb	15 15 08.0	
	comp=Z,1.8nm,0.8s						
AIN	**Ainahou**	**50.43**	**30**	P	**P**	**15 15 11.4**	**-0.1**
HMH	**Humu'ula Sheep**	**50.62**	**30**	P	**P**	**15 15 14.0**	**+1.0**
FITZ	**Fitzroy Crossi**	**50.97**	**267**	P	**P**	**15 15 15.5**	**+0.2**

*NDI **23** 15:10:47.5±1.9, 20°.01N×72°.85E, h11km±12km, ML3.6, MW3.4*
*IDC **23** 15:10:49.0±26.0, 19°.13N×73°.18E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=662.6km s-min=83.1km az=139.0*

ISC 23 15:10:50.7±1.1, 20°.01N±0°.05×72°.90E±0°.07, h35km, n9, σ1s21/15, mb3.3/3, Southern India

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

SOEI	**Soe**	**7.47**	**162**	P	Pn	15 35 43.6	+8.3
FITZ	**Fitzroy Crossi**	**15.82**	**167**	Pn	**P**	**15 37 33.2**	**+0.3**
	0.1nm,0.3s,baz=25,slow=9.4,SNR=4.8						
WRA	**Warramunga Arr**	**21.07**	**146**	P	**P**	**15 38 29.3**	**-1.4**
	1.1nm,0.7s,baz=323,slow=11,SNR=7.6						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**23.93**	**152**	P	**P**	**15 39 00.1**	**-0.5**
	0.7nm,0.6s,baz=322,slow=7.9,SNR=18						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.82**	**314**	P	**P**	**15 40 00.9**	**-1.5**
	0.2nm,0.4s,baz=114,slow=8.1,SNR=4.2						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**60.28**	**330**	P	**P**	**15 43 55.2**	**+0.4**
	0.3nm,0.6s,baz=124,slow=8.2,SNR=1.7						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**64.69**	**331**	P	**P**	**15 44 23.6**	**-0.5**
	0.3nm,0.7s,baz=122,slow=6.7,SNR=2.3						
	0.3nm,0.7s						

IDC 23 15:42:17.2±2.7,1°.56N×132°.88E,h0km,mb3.5/4, mbtmp3.6/4,Error ellipse: s-maj=115.1km s-min=28.2km az=76.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.79**	**200**	P	P	15 47 00.2	+0.1
	1.7nm,0.5s,baz=30,slow=11,SNR=2.0						
	1.7nm,0.5s						
WRA	**Warramunga Arr**	**21.41**	**176**	P	P	15 47 06.5	-0.4
	0.7nm,0.6s,baz=355,slow=12,SNR=9.1						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**25.09**	**178**	P	P	15 47 44.0	+0.2
	0.8nm,0.6s,baz=355,slow=10,SNR=17						
	0.8nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**37.84**	**59**	T	T	16 29 39.2	
	baz=245,slow=75,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**37.85**	**59**	T	T	16 29 35.4	
	baz=245,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**37.86**	**59**	T	T	16 29 40.6	
	baz=245,slow=75,SNR=4.6						
MKAR	**Makanchi Array**	**62.90**	**323**	P	P	15 52 45.3	-0.1
	0.4nm,0.7s,baz=101,slow=7.6,SNR=2.4						
	0.4nm,0.7s						

ZUR 23 15:44:39.4,47°.38N×8°.65E,h16km,MLh0.9/15,1C-3D, Error ellipse: s-maj=1048.3km s-min=569.5km az=234.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZUR	**Degenried**	**0.05**	**252**	Sg	Sg	15 44 44.8	+0.5
EWZT2	**Wettswil, ZR**	**0.11**	**246**	Sg	Sb	15 44 45.9	+0.1
NDBU	**Wasserreservoi**	**0.19**	**331**	Pg	Pg	15 44 44.1	+0.2
NDBU				Sg	Sg	15 44 47.3	+0.4
FLACH	**Flaach**	**0.20**	**344**	Sg	Sb	15 44 47.7	-0.4
QEG01	**Stadel, Weggab**	**0.21**	**325**	Sg	Sg	15 44 48.0	+0.5
QEG02	**Wil, Freihalte**	**0.25**	**340**	Sg	Sg	15 44 49.0	+0.2
BOBI	**Bbikon, Wasse**	**0.26**	**308**	Sg	Sg	15 44 49.4	+0.3
WEIN	**Weingarten**	**0.27**	**58**	Sg	Sb	15 44 49.9	-0.5
HAMIK	**Hmikon, Dlik**	**0.29**	**242**	Sg	Sg	15 44 49.9	+0.1
ACHB	**Acheberg**	**0.34**	**308**	Sg	Sg	15 44 51.3	+0.2
SULZ	**Cheisacher**	**0.39**	**292**	⇓Pg	Pg	15 44 47.5	+0.2
SULZ				Sg	Sg	15 44 53.2	+0.4
METMA	**Mettma DE**	**0.42**	**321**	⇓Pg	Pg	15 44 47.8	-0.1
METMA				Sg	Sg	15 44 53.5	-0.2
ROTHE	**Rothenfluh**	**0.50**	**281**	Sg	Sg	15 44 56.4	+0.4
EMING	**Emmingen-Lipti**	**0.53**	**15**	Pg	Pg	15 44 49.8	0.0
EMING				Sg	Sg	15 44 57.2	+0.3
BNALP	**Bannalp**	**0.54**	**196**	Sg	Sb	15 44 57.9	-0.1
BERGE	**Lenzkirch (DE)**	**0.58**	**327**	⇓Pg	Pg	15 44 50.7	-0.1
BERGE				Sg	Sg	15 44 58.4	-0.2
PANIX	**Pigniu (Panix)**	**0.64**	**150**	Sg	Sg	15 45 00.5	-0.1
BALST	**Balsthal**	**0.65**	**266**	Sg	Sg	15 45 00.7	0.0
ENDD	**Endenburg**	**0.70**	**299**	Sg	Sg	15 45 02.1	-0.2
OTER2	**Otterbach 2 (B**	**0.73**	**286**	Sg	Sg	15 45 02.7	-0.7
KIZ	**Kirchzarten**	**0.75**	**320**	⇑Pg	Pg	15 44 53.8	-0.2
KIZ				Sg	Sg	15 45 03.6	-0.4
GUT	**Gutenstein**	**0.76**	**25**	Sg	Sg	15 45 04.1	-0.1
A121B	**Sulzburg**	**0.77**	**306**	Sg	Sg	15 45 04.1	-0.4
A102A	**Sigmaringen, J**	**0.84**	**26**	Sg	Sg	15 45 07.2	+0.3

GRAL 23 15:44:50.8±0.3,32°.79N×35°.60E,h0km±3km,MD3.2
JSO 23 15:44:52.1±0.3,33°.N±2°×3°.6E±°,h0km,M2.5/12,ML2.6/10, MLv2.5/12,MLv2.5/12
GII 23 15:44:51.2±0.0,32°.864N±0°.001×35°.575E±0°.001,h5km, Mws2.2,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHM	**Kefar Nahum**	**0.02**	**11**	P	Pg	15 44 52.1	-0.1
KNHM	**Kefar Nahum**	**0.02**	**11**	S	Sg	15 44 53.4	+0.5
MGDL	**Migdal**	**0.06**	**247**	P	Pg	15 44 52.8	+0.2
MGDL	**Migdal**	**0.06**	**247**	S	Sg	15 44 54.9	+1.2
RMOT	**Ramot**	**0.08**	**100**	P	Pg	15 44 53.1	+0.2
RMOT	**Ramot**	**0.08**	**100**	S	Sg	15 44 55.2	+1.2
HDNS	**Had-Ness**	**0.09**	**41**	P	Pg	15 44 53.3	+0.3
HDNS	**Had-Ness**	**0.09**	**41**	S	Sg	15 44 55.6	+1.3
MMA0B	**Mount Meron ar**	**0.21**	**316**	P	Pg	15 44 55.6	+0.3
MMA0B	**Mount Meron ar**	**0.21**	**316**	S	Sg	15 44 59.5	+1.4
SHMJ	**Saham**	**0.21**	**131**	P	Pg	15 44 55.5	+0.2
MMC7	**Mount Meron ar**	**0.22**	**316**	P	Pg	15 44 55.8	+0.3
KSHT	**Keshet**	**0.23**	**59**	P	Pg	15 44 55.9	+0.2
KSHT	**Keshet**	**0.23**	**59**	S	Sg	15 45 00.2	+1.5
BLGI	**Bet Lehem HaGe**	**0.35**	**248**	P	Pb	15 44 59.3	-0.6
BLGI	**Bet Lehem HaGe**	**0.35**	**248**	P	Pg	15 44 58.3	+0.4
BLGI	**Bet Lehem HaGe**	**0.35**	**248**	S	Sb	15 45 04.5	-1.1
GEM	**Giv'at Ha'Em**	**0.35**	**12**	P	Pg	15 44 58.6	+0.6
GEM	**Giv'at Ha'Em**	**0.35**	**12**	P	Pg	15 44 58.7	+0.6
GEM	**Giv'at Ha'Em**	**0.35**	**12**	S	Sb	15 45 04.7	-1.2
HNTI	**Hanita**	**0.40**	**303**	P	Pb	15 45 00.4	-0.4
HNTI	**Hanita**	**0.40**	**303**	P	Pg	15 44 59.7	+0.7
HNTI	**Hanita**	**0.40**	**303**	S	Sb	15 45 06.1	-1.1
NATI	**Neve Ativ**	**0.42**	**19**	P	Pg	15 44 59.6	+0.3
NATI	**Neve Ativ**	**0.42**	**19**	S	Sb	15 45 06.3	-1.5
MMLI	**Mount Malkishu**	**0.44**	**197**	P	Pg	15 45 00.0	+0.3
MMLI	**Mount Malkishu**	**0.44**	**197**	S	Sb	15 45 07.5	-1.0
SHBL	**Chebaa**	**0.50**	**16**	*eP*	Pg	15 45 00.9	0.0
SHBL				*eS*	Sg	15 45 08.7	+1.2
OFRI	**`Ofer**	**0.55**	**244**	P	Pg	15 45 02.3	+0.5
OFRI	**`Ofer**	**0.55**	**244**	S	Sb	15 45 10.6	-1.1
HMDT	**Nahal Hemdat**	**0.61**	**184**	P	Pg	15 45 03.1	+0.2
HMDT	**Nahal Hemdat**	**0.61**	**184**	P	Pg	15 45 03.2	+0.2
HMDT	**Nahal Hemdat**	**0.61**	**184**	S	Sb	15 45 12.8	-0.5
RCY	**Rachaya**	**0.67**	**19**	*eP*	Pg	15 45 03.8	-0.2
RCY				*eS*	Sg	15 45 13.6	+0.9
QRWL	**Qaraoun**	**0.69**	**8**	*eP*	Pg	15 45 04.5	+0.1
SLTI	**Sal'it**	**0.77**	**216**	P	Pb	15 45 06.7	-0.3
SLTI				S	Sb	15 45 18.2	+0.4
SLTI	**Sal'it**	**0.77**	**216**	P	Pg	15 45 06.1	+0.2
DQRL	**Deir Qamar**	**0.84**	**360**	*eP*	Pg	15 45 07.1	-0.2
DQRL				*eS*	Sb	15 45 19.4	-0.6
SALP	**Salfit**	**0.86**	**202**	P	Pg	15 45 07.8	+0.2
HSUJ	**Al Zarqa**	**0.92**	**145**	P	Pb	15 45 09.7	+0.1
ZAHL	**Zahle**	**1.02**	**15**	*eP*	Pg	15 45 10.2	-0.6
DSI	**Dead Sea**	**1.30**	**187**	P	Pn	15 45 14.9	-1.1
DSI				S	Sn	15 45 33.7	-0.1
DSI	**Dead Sea**	**1.30**	**187**	P	Pn	15 45 14.8	-1.2
HWQ	**Hawqa**	**1.44**	**12**	*eP*	Pn	15 45 17.4	-0.7
FKH	**Fakeheh**	**1.54**	**27**	*eP*	Pn	15 45 19.0	-0.5
GHAJ	**Ghor Haditha**	**1.56**	**180**	P	Pn	15 45 19.7	+0.2
BEIL	**Beino**	**1.75**	**17**	*eP*	Pn	15 45 22.1	-0.1
PRNI	**Paran**	**2.55**	**191**	P	Pn	15 45 34.6	+1.4

ZUR 23 15:45:05.6,45°.88N×7°.02E,h-0km±1km,MLh0.0/1,1C-1D, Error ellipse: s-maj=4052.8km s-min=816.9km az=94.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLANC	**P.ta Helbronne**	**0.07**	**237**	⇑Pg	Pg	15 45 07.5	+0.6
BLANC				Sg	Sg	15 45 08.6	+0.8
MFERR	**Prayon, Val Fe**	**0.10**	**44**	⇓Pg	Pg	15 45 08.0	+0.6
MFERR				Sg	Sg	15 45 09.5	+0.8
OGSI	**Sixt**	**0.26**	**315**	Sg	Sg	15 45 14.5	+0.5
SALAN	**Lac Salanfe**	**0.26**	**353**	Sg	Sg	15 45 14.8	+0.7
DIX	**Grande Dixence**	**0.34**	**54**	Sg	Sg	15 45 17.3	+0.8

IDC 23 15:47:19.3±0.7,1°.25N×97°.97E,h0km,mb4.1/17,
mbtmp4.0/18,ML4.0/1,Error ellipse: s-maj=20.5km s-min=14.5km az=63.0
NEIC 23 15:47:22.8±2.1,1°.15N±0°.07×98°.07E±0°.04,h30km±5km, mb4.4/26,Error ellipse: s-maj=11.0km s-min=4.7km az=165.0
DJA 23 15:47:24.1±0.4,1°.N±2°×9°.8E±°,h11km±5km,M4.0/13, mb3.9/1,MLv4.1/13
ISC 23 15:47:23.3±0.4,1°.25N±0°.04×98°.12E±0°.04,h32km,n74, σ1§04/72,mb4.3/31,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.55**	**276**		**Pb**	**15 47 34.1**	**-0.5**
GSI					**Sb**	**15 47 41.2**	**-1.2**
GSI	**Gunungsitoli**	**0.55**	**276**	P	**Pb**	**15 47 34.4**	**-0.3**
GSI				S	**Sb**	**15 47 41.6**	**-0.9**
PBSI	**Pulau Batu**	**1.30**	**173**	P	**Pb**	**15 47 49.7**	**+2.5**
RPSI	**Rantau Prapat**	**1.65**	**29**		**Pn**	**15 47 51.0**	**+0.9**
PSI	**Prapat**	**1.74**	**27**	Pn	**Pn**	**15 47 51.3**	**-0.2**
	7.8nm,0.3s,baz=184,slow=9.7,SNR=23						
PSI				Sn	**Sb**	**15 48 15.5**	**-0.8**
	27nm,0.3s,baz=226,slow=8.1,SNR=5.7						
SNSI	**Sinabang, Aceh**	**2.14**	**303**	P	**Pn**	**15 47 57.1**	**+0.3**
TSI	**Tuntungan**	**2.28**	**11**	P	**Pb**	**15 48 03.4**	**-0.5**
KCSI	**Kotacane, Aceh**	**2.29**	**351**	P	**Pn**	**15 47 59.3**	**+0.4**
SISI	**Saibi**	**2.73**	**159**	P	**Pb**	**15 48 09.3**	**-2.2**
PPI	**Padang Panjang**	**2.83**	**127**	P	**Pb**	**15 48 12.7**	**-0.5**
PDSI	**Padang**	**3.17**	**132**	P	**Pb**	**15 48 17.5**	**-1.5**
LHMI	**Lhok Sumawe**	**4.13**	**344**	Pn	**Pn**	**15 48 24.3**	**+0.1**
IPM	**Ipoh**	**4.33**	**42**		**Pn**	**15 48 27.8**	**+0.8**
KULM	**Kulim**	**4.75**	**32**		**Pn**	**15 48 33.5**	**+0.9**
MYKOM	**Kota Tinggi**	**5.75**	**85**	Pn	**Pn**	**15 48 46.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**17.12**	**3**	P	**Pn**	**15 51 20.1**	**-0.3**
	0.2nm,0.3s,baz=194,slow=10,SNR=13						
	1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**17.12**	**3**		**Pn**	**15 51 19.9**	**-0.5**
CHTO	**Chiang Mai**	**17.48**	**3**	Pn	**Pn**	**15 51 23.9**	**-0.8**
TOLI2	**Tolitoli**	**22.65**	**90**	P	**P**	**15 52 20.1**	**-2.0**
TOLI2				IAmb	IAmb	15 52 33.9	
	comp=Z,6.7nm,0.9s						
SHL	**Shillong**	**24.92**	**347**	P	**P**	**15 52 43.2**	**-0.6**
SHL				IAmb	IAmb	15 52 45.0	
	comp=Z,11nm,0.9s						
H08S2	**Diego Garcia H**	**27.05**	**251**	T	T	16 20 35.3	
	baz=72,slow=76,SNR=156						
H08S3	**Diego Garcia H**	**27.05**	**251**	T	T	16 20 34.7	
	baz=72,slow=76,SNR=133						
H08S1	**Diego Garcia H**	**27.06**	**251**	T	T	16 20 37.7	
	baz=72,slow=76,SNR=135						
LSA	**Lhasa**	**29.07**	**347**	P	**P**	**15 53 21.5**	**0.0**
LSA				IAmb	IAmb	15 53 24.0	
	comp=Z,8.5nm,0.6s						
GTA	**Gaotai**	**38.02**	**2**	*eP*	**P**	**15 54 39.6**	**+0.9**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WB0	**Warramunga Arr**	**41.25**	**122**	P	**P**	**15 55 05.2**	**-0.6**
WB0				IAmb	IAmb	15 55 10.6	
	comp=Z,7.0nm,1.4s						
WRA	**Warramunga Arr**	**41.28**	**123**	P	**P**	**15 55 07.2**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=303,slow=8.9,SNR=11						
WRA				PcP	**PcP**	**15 57 05.6**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=309,slow=3.1,SNR=1.9						
	comp=Z,0.4nm,0.5s						
WR8	**Warramunga Arr**	**41.42**	**123**	P	**P**	**15 55 06.9**	**-0.4**
WR8				IAmb	IAmb	15 55 25.6	
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**42.69**	**128**	P	**P**	**15 55 16.9**	**-0.7**
ASAR	**Alice Springs**	**42.69**	**128**	P	**P**	**15 55 19.1**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=299,slow=7.4,SNR=18						
ASAR				PcP	**PcP**	**15 57 11.4**	**+2.2**
	comp=Z,0.4nm,0.8s,baz=295,slow=3.6,SNR=2.9						
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**42.69**	**128**	P	**P**	**15 55 17.9**	**+0.3**
WUS	**Wushi**	**43.29**	**339**	P	**P**	**15 55 23.2**	**+1.0**
WUS				IAmb	IAmb	15 55 37.6	
	comp=Z,8.5nm,1.2s						
KSRS	**Korea Array**	**45.29**	**34**	P	**P**	**15 55 39.6**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=218,slow=9.1,SNR=8.8						
	comp=Z,1.4nm,0.6s						
KS19	**Wonju Array Si**	**45.30**	**34**	P	**P**	**15 55 39.6**	**+1.3**
KS19				IAmb	IAmb	15 55 45.5	
	comp=Z,8.0nm,1.2s						
CHGR	**Chuyangaron**	**45.71**	**328**	P	**P**	**15 55 40.5**	**-1.1**
CHGR				IAmb	IAmb	15 55 55.1	
	comp=Z,5.1nm,0.8s						
ARSB	**Arslanbob**	**45.90**	**334**	P	**P**	**15 55 43.5**	**+0.3**
ARSB				IAmb	IAmb	15 55 45.3	
	comp=Z,4.9nm,1.1s						
SONM	**Songino Array**	**46.96**	**8**	P	**P**	**15 55 52.4**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=192,slow=9.5,SNR=6.4						
SONM				PcP	**PcP**	**15 57 24.7**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=130,slow=2.3,SNR=1.6						
	comp=Z,1.8nm,0.7s						
ULN	**Ulaanbaatar**	**47.08**	**8**	P	**P**	**15 55 52.1**	**-0.1**
MK31	**Makanchi Array**	**47.43**	**345**	P	**P**	**15 55 54.4**	**-0.4**
MK31				IAmb	IAmb	15 56 14.8	
	comp=Z,6.1nm,1.0s						
MKAR	**Makanchi Array**	**47.43**	**345**	P	**P**	**15 55 55.6**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=158,slow=8.0,SNR=20						
	comp=Z,2.8nm,0.6s						
MKAR	**Makanchi Array**	**47.43**	**345**		**P**	**15 55 54.4**	**-0.5**
MAKZ	**Makanchi**	**47.52**	**345**	P	**P**	**15 55 55.6**	**0.0**
KK31	**Karatay Array**	**48.43**	**333**	P	**P**	**15 56 03.0**	**+0.3**
KKAR	**Karatay Array**	**48.43**	**333**	P	**P**	**15 56 03.3**	**+0.7**
BBOO	**Buckleboo**	**49.28**	**137**	P	**P**	**15 56 09.4**	**+0.1**
INKA	**Innaminka**	**50.05**	**128**	P	**P**	**15 56 16.4**	**+1.1**
MJAR	**Matsushiro Arr**	**51.04**	**42**	P	**P**	**15 56 22.4**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=238,slow=6.0,SNR=4.5						
	comp=Z,1.3nm,0.7s						
MJAR	**Matsushiro Arr**	**51.04**	**42**	P	**P**	**15 56 23.6**	**+0.9**
HILR	**Hailar Array B**	**51.57**	**18**	P	**P**	**15 56 27.3**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=197,slow=9.0,SNR=4.5						
	comp=Z,2.5nm,0.7s						
CTAO	**Charters Tower**	**51.70**	**117**	P	**P**	**15 56 26.5**	**-1.3**
KURBB	**Kurchatov Arra**	**51.93**	**344**	P	**P**	**15 56 29.6**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=164,slow=7.2,SNR=12						
KURBB				PcP	**PcP**	**15 57 42.7**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=148,slow=3.9,SNR=2.4						
	comp=Z,1.2nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.26**	**30**	P	**P**	**15 56 32.9**	**+1.3**
	comp=Z,4.5nm,0.7s,baz=215,slow=5.1,SNR=9.8						
	comp=Z,4.5nm,0.7s						
STKA	**Stephens Creek**	**52.70**	**133**	P	**P**	**15 56 37.5**	**+2.4**
	comp=Z,1.5nm,0.7s,baz=337,slow=6.0,SNR=3.0						
	comp=Z,1.5nm,0.7s						
ZAA0	**Zalesovo Array**	**53.66**	**350**		**P**	**15 56 40.7**	**-1.0**
ZAA0				IAmb	IAmb	15 56 53.9	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**53.66**	**350**	P	**P**	**15 56 42.2**	**+0.4**
	comp=Z,4.3nm,0.5s,baz=171,slow=7.0,SNR=24						
	comp=Z,4.3nm,0.5s						
ZALV	**Zalesovo Beam**	**53.66**	**350**		**P**	**15 56 40.8**	**-1.0**
BVAR	**Borovoye Array**	**56.52**	**340**	P	**P**	**15 57 02.6**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=140,slow=9.4,SNR=13						
	comp=Z,3.5nm,0.7s						
AB31	**Akbulak array**	**57.91**	**331**		**P**	**15 57 11.3**	**-1.0**
AB31				IAmb	IAmb	15 57 13.3	
	comp=Z,2.6nm,0.8s						
ABKAR	**Akbulak array**	**57.91**	**331**	P	**P**	**15 57 11.9**	**-0.4**
H04N2	**CROZET ISLANDS**	**62.33**	**215**	T	T	17 04 47.4	
	baz=54,slow=75,SNR=64						
H04N1	**CROZET ISLANDS**	**62.34**	**215**	T	T	17 04 46.5	
	baz=54,slow=75,SNR=51						
H04N3	**CROZET ISLANDS**	**62.35**	**215**	T	T	17 04 45.0	
	baz=54,slow=75,SNR=48						
H04S1	**CROZET ISLANDS**	**62.66**	**214**	T	T	17 05 10.4	
	baz=55						
H04S3	**CROZET ISLANDS**	**62.67**	**214**	T	T	17 05 06.9	
	baz=55						
H04S2	**CROZET ISLANDS**	**62.68**	**214**	T	T	17 05 02.8	
	baz=55						
KBZ	**Khabaz**	**64.64**	**319**	P	**P**	**15 57 58.4**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=135,slow=10.0,SNR=2.7						
	comp=Z,1.7nm,0.8s						
MMAI	**Mount Meron Ar**	**66.63**	**306**	P	**P**	**15 58 10.0**	**-1.1**
	comp=Z,0.1nm,0.2s,baz=104,slow=10,SNR=2.4						
	comp=Z,0.1nm,0.2s						
CASY	**Casey**	**67.96**	**175**	P	**P**	**15 58 16.8**	**-1.9**
BRTR	**Keskin Array B**	**69.77**	**312**	P	**P**	**15 58 31.5**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=91,slow=6.4,SNR=3.8						
	comp=Z,0.6nm,0.7s						
KIEV	**Kiev**	**75.79**	**322**	P	**P**	**15 59 04.8**	**-1.4**
KIEV				IAmb	IAmb	15 59 30.8	
	comp=Z,5.0nm,1.2s						
FINES	**FINESS Array B**	**80.39**	**332**	P	**P**	**15 59 31.7**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=107,slow=8.5,SNR=4.0						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**82.81**	**340**	P	**P**	**15 59 45.0**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=98,slow=3.7,SNR=0.9						
	comp=Z,1.7nm,1.0s						
TXAR	**Lajitas Array**	**143.14**	**33**	PKP	**PKPdf**	**16 06 55.6**	**+0.6**
	comp=Z,0.8nm,1.1s,baz=302,slow=2.3,SNR=2.2						
CPUP	**Villa Florida**	**145.65**	**221**	PKPbc	**PKPab**	**16 07 00.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=299,slow=3.1,SNR=6.3						

GII 23 15:55:56.7±0.0,32°.869N±0°.010×35°.58E±0°.01,h5km, Mws1.5,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNHM	**Kefar Nahum**	**0.01**	**354**	P	Pg	15 55 57.4	-0.2
KNHM	**Kefar Nahum**	**0.01**	**354**	S	Sg	15 55 58.6	+0.3
MGDL	**Migdal**	**0.07**	**246**	P	Pg	15 55 58.3	+0.1
MGDL	**Migdal**	**0.07**	**246**	S	Sg	15 56 00.2	+0.9
RMOT	**Ramot**	**0.07**	**104**	P	Pg	15 55 58.4	+0.1
RMOT	**Ramot**	**0.07**	**104**	S	Sg	15 56 00.5	+1.1
HDNS	**Had-Ness**	**0.08**	**41**	P	Pg	15 55 58.5	+0.2
HDNS	**Had-Ness**	**0.08**	**41**	S	Sg	15 56 00.9	+1.4
MMA0B	**Mount Meron ar**	**0.21**	**314**	P	Pg	15 56 00.9	+0.1
MMA0B	**Mount Meron ar**	**0.21**	**314**	S	Sg	15 56 05.1	+1.5
MMC7	**Mount Meron ar**	**0.22**	**314**	P	Pg	15 56 01.5	+0.5
KSHT	**Keshet**	**0.22**	**60**	P	Pg	15 56 01.3	+0.2
KSHT	**Keshet**	**0.22**	**60**	S	Sg	15 56 05.5	+1.5
GEM	**Giv'at Ha'Em**	**0.35**	**11**	P	Pg	15 56 04.0	+0.6
GEM	**Giv'at Ha'Em**	**0.35**	**11**	S	Sb	15 56 09.8	-1.4
BLGI	**Bet Lehem HaGe**	**0.35**	**248**	P	Pg	15 56 04.3	+0.8
BLGI	**Bet Lehem HaGe**	**0.35**	**248**	S	Sg	15 56 09.8	+1.6
HNTI	**Hanita**	**0.40**	**302**	P	Pg	15 56 05.4	+0.9
HNTI	**Hanita**	**0.40**	**302**	S	Sb	15 56 11.8	-1.0
NATI	**Neve Ativ**	**0.41**	**18**	P	Pb	15 56 05.6	-0.8
NATI	**Neve Ativ**	**0.41**	**18**	S	Sb	15 56 11.6	-1.5
MMLI	**Mount Malkishu**	**0.45**	**197**	P	Pb	15 56 06.4	-0.7
MMLI	**Mount Malkishu**	**0.45**	**197**	S	Sb	15 56 13.1	-1.0

CATAC 23 15:55:58.3±0.5,12°.N±3°×8°.8W±°,h11km±3km,M4.3/24, MLv4.3/24,Error ellipse: s-maj=5.9km s-min=2.3km az=25.7,confirmed
SNET 23 15:55:59.2±0.9,12°.08N×88°.45W,h34km,ML4.3
NEIC 23 15:56:01.7±1.8,12°.35N±0°.08×88°.25W±0°.07,h44km±7km, mb4.6/113,Error ellipse: s-maj=12.6km s-min=7.7km az=218.0
IDC 23 15:56:03.5±2.1,12°.59N×87°.90W,h54km±19km,mb3.8/11, mbtmp4.1/13,ML3.6/2,MS3.9/18,Error ellipse: s-maj=36.8km s-min=10.6km az=52.0
GCG 23 15:56:17.1±0.8,13°.17N×89°.12W,h34km±5km,MD4.8
ISC 23 15:56:00.9±1.0,12°.20N±0°.05×88°.39W±0°.03,h45km±10km, n222,σ1§65/210,mb4.6/45,MS3.9/18,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.12**	**46**	P	**Pn**	**15 56 20.6**	**+0.3**
CSGN				S	**Sn**	**15 56 37.1**	**+2.5**
POTN	**Potosi Cosigui**	**1.18**	**47**	P	**Pn**	**15 56 21.3**	**+0.3**
POTN				S	**Sn**	**15 56 37.5**	**+1.7**
CNCH	**Conchagua**	**1.20**	**27**	*eP*	**Pn**	**15 56 21.7**	**+0.3**
CNCH	**Conchagua**	**1.20**	**27**	S	**Sn**	**15 56 38.5**	**+1.9**
LCND	**La Caada**	**1.21**	**24**	*eP*	**Pn**	**15 56 20.6**	**-0.7**
LCY	**Lacayo**	**1.22**	**4**	*eP*	**Pn**	**15 56 22.1**	**+0.4**
VSM	**San Miguel**	**1.23**	**5**	*eP*	**Pn**	**15 56 22.7**	**+0.8**
RANC	**El Ranchito**	**1.23**	**5**	*eP*	**Pn**	**15

JTS	Las Juntas de	3.87	119			Pn	15 56 57.7	-0.2
ESPN	Las Esperanzas	4.00	90			Pn	15 56 57.7	-2.0
SOCE	Pocosol	4.12	116		Pn	Pn	15 57 00.3	-1.1
HDC	Heredia	4.73	117		Pn	Pn	15 57 09.3	-0.6
ACOS	Acosta	4.79	119		eP	Pn	15 57 13.0	+2.3
PICV	PH. Pirrs	4.85	121		eP	Pn	15 57 13.9	+2.5
RAFA	San Farael, Vo	5.02	116		Pn	Pn	15 57 12.3	-1.7
CVTV	Tajo	5.05	115		eP	Pn	15 57 19.3	+4.8
PIEC	Cerro El Cedra	5.05	120		eP	Pn	15 57 16.5	+2.1
ABRB	Las Abras (San	5.08	115		eP	Pn	15 57 19.4	+4.7
BUS1	Rivas	5.26	119		eP	Pn	15 57 19.2	+1.7
CCIG	Comitan	5.45	319		Pn	Pn	15 57 18.5	-1.2
EDPE	Pejibaye, P	5.62	122		eP	Pn	15 57 23.9	+1.9
LAES	El Progreso Va	5.78	114		eP	Pn	15 57 27.4	+3.3
DRK0	Durika	5.84	119		eP	Pn	15 57 27.0	+1.9
FIMO	Fila Mora	5.89	122		eP	Pn	15 57 27.8	+2.0
CEUA	Cerro Uatsi, L	5.93	115		eP	Pn	15 57 30.3	+4.0
PIRO	Carate, Puerto	6.24	127		Pn	Pn	15 57 30.6	+0.1
ALCO	Alturas Coton,	6.35	120		eP	Pn	15 57 33.8	+1.7
BRU2	Volcan	6.55	121			Pn	15 57 33.5	-1.4
PRVC	Isla de Provid	6.95	80		Pn	Pn	15 57 37.7	-2.6
CMIG	Matias Romero	7.95	309		P	Pn	15 57 53.8	0.0
	3.0nm,0.3s,baz=154,slow=10,SNR=10							
CMIG					S	Sn	15 59 26.4	+3.9
	3.9nm,0.7s,baz=263,slow=13,SNR=1.3							
TEIG	Tepich	7.98	1		P	Pn	15 57 55.1	+0.7
	baz=131,slow=24,SNR=0.9							
TEIG	Tepich	7.98	1		Pn	Pn	15 57 51.5	-2.9
TLIG	Tlapa	11.19	300		Pn	Pn	15 58 38.0	-0.4
OTAV	Otavalo	15.44	140		Pn	Pn	15 59 33.7	-2.6
ROSC	El Rosal	15.71	117		P	Pn	15 59 40.4	+0.7
	3.6nm,0.3s,baz=323,slow=20,SNR=3.6							
ROSC					S	Sn	16 02 20.1	-13
	7.1nm,0.4s,baz=135,slow=23,SNR=1.5							
ROSC					LR	LR	16 06 38.5	
	comp=Z,226nm,20.8s,baz=61,slow=41							
	8.7nm,0.5s							
ROSC	El Rosal	15.71	117		Pn	Pn	15 59 36.1	-3.6
RUSC	La Rusia	16.36	111			Pn	15 59 44.3	-3.7
FLOC	Florencia	16.45	129			Pn	15 59 45.7	-3.0
FLOC					IAmb	IAmb	15 59 59.7	
	comp=Z,70nm,1.2s							
ZAIG	Zacatecas	17.11	310		P	Pn	15 59 55.8	-1.4
COHC	Cochancay	17.17	147		P	Pn	15 59 56.3	-1.3
SDV	Santo Domingo	17.76	99			Pn	16 00 02.2	-3.1
HKT	Hockley	18.97	340		P	P	16 00 14.9	-3.6
833A	Chaparral WMA,	19.05	329			P	16 00 19.4	-0.2
MLDN	Muldoon	19.27	337		P	P	16 00 21.4	-0.4
MLDN					IAmb	IAmb	16 00 25.9	
	comp=Z,33nm,0.9s							
456A	Hilliard	19.36	17		P	P	16 00 20.5	-2.2
456A					IAmb	IAmb	16 00 26.9	
	comp=Z,26nm,0.9s							
352A	Blakely	19.45	9		P	P	16 00 22.5	-1.3
352A					IAmb	IAmb	16 00 27.7	
	comp=Z,34nm,0.9s							
HNDO	Hondo	20.00	331		P	P	16 00 29.8	0.0
HNDO					IAmb	IAmb	16 00 41.5	
	comp=Z,32nm,0.9s							
VBMS	Vicksburg	20.02	355		P	P	16 00 28.0	-2.0
BAUV	El Baul	20.26	97		P	P	16 00 31.7	-1.1
NATX	Nacogdoches	20.31	344		P	P	16 00 33.2	+0.1
NATX					IAmb	IAmb	16 00 36.6	
	comp=Z,32nm,0.9s							
146A	Union	20.35	358		P	P	16 00 32.6	-1.0
146A					IAmb	IAmb	16 00 36.8	
	comp=Z,20nm,0.8s							
DRIO	Del Rio	20.57	328		P	P	16 00 35.9	-0.1
DRIO					IAmb	IAmb	16 00 43.6	
	comp=Z,22nm,1.0s							
JCT	Junction City	21.04	332		P	P	16 00 40.5	-0.6
JCT					IAmb	IAmb	16 00 51.4	
	comp=Z,23nm,1.0s							
Z41A	Richland Creek	21.35	350		P	P	16 00 42.6	-1.7
Z41A					IAmb	IAmb	16 00 49.7	
	comp=Z,44nm,1.2s							
BRDY	Brady	21.37	334			P	16 00 43.2	-1.4
BRDY					IAmb	IAmb	16 00 46.5	
	comp=Z,18nm,0.8s							
WHTX	Lake Whitney,	21.39	338		P	P	16 00 42.9	-2.0
WHTX					IAmb	IAmb	16 01 17.6	
	comp=Z,31nm,1.2s							
GOGA	Godfrey	21.59	11		P	P	16 00 46.0	-1.0
ATAH	Atahualpa	21.63	152		LR	LR	16 08 16.9	
	comp=Z,196nm,18.4s,baz=337,slow=34							
SAND	Sanderson	21.79	326		P	P	16 00 48.8	-0.4
WLAR	White Oak Lake	21.82	349		P	P	16 00 47.9	-1.4
OZNA	Ozona	22.04	330			P	16 00 51.4	-0.5
TXAR	Lajitas Array	22.20	322		P	P	16 00 55.4	+1.8
	comp=Z,5.4nm,0.8s,baz=148,slow=10.0,SNR=55							
TXAR					PcP	PcP	16 04 47.5	-1.7
	comp=Z,0.2nm,0.7s,baz=127,slow=5.1,SNR=1.8							
	comp=Z,5.4nm,0.8s							
TXAR	Lajitas Array	22.20	322		P	P	16 00 53.7	0.0
TX31	Lajitas Ar. Si	22.20	322			P	16 00 54.0	+0.4
PLPT	Palo Pinto	22.45	338		IAmb	IAmb	16 00 59.4	
	comp=Z,19nm,1.0s							
HODGE	Hodges	22.63	13		P	P	16 00 57.0	-1.1
HODGE					IAmb	IAmb	16 01 01.3	
	comp=Z,21nm,1.0s							
PLAL	Pickwick Lake	22.68	1		P	P	16 00 57.8	-0.9
MIAR	Mount Ida	22.74	349		P	P	16 00 59.1	-0.1
MIAR					IAmb	IAmb	16 01 11.4	
	comp=Z,34nm,1.3s							
ABTX	Abilene, Hawle	22.80	335		P	P	16 00 59.1	-0.8
ABTX					IAmb	IAmb	16 01 02.6	
	comp=Z,21nm,1.0s							
SGCY	Sterling City	22.86	331			P	16 00 59.9	-0.7
SGCY					IAmb	IAmb	16 01 31.7	
	comp=Z,22nm,1.1s							
JSC	Jenkinsville	22.92	15		IAmb	IAmb	16 01 04.3	
	comp=Z,26nm,1.1s							
MNHN	Monahans	23.21	327		IAmb	IAmb	16 01 07.7	
	comp=Z,16nm,0.8s							
BG3	Lake Jocassee	23.23	11		P	P	16 01 03.3	-0.9
WHAR	Wooly Hollow	23.26	352			P	16 01 03.0	-1.5
WHAR					IAmb	IAmb	16 01 06.9	
	comp=Z,30nm,1.0s							
PAULI	Pauline	23.30	14		P	P	16 01 04.4	-0.5
PAULI					IAmb	IAmb	16 01 07.7	
	comp=Z,29nm,1.2s							
APMT	Aspermont	23.61	335			P	16 01 07.3	-0.6
APMT					IAmb	IAmb	16 01 09.7	
	comp=Z,19nm,0.9s							
TKL	Tuckaleechee C	23.73	9		LR	LR	16 10 52.1	
	comp=Z,69nm,18.8s,baz=194,slow=38							
TKL	Tuckaleechee C	23.73	9		P	P	16 01 08.8	-0.2
TKL					IAmb	IAmb	16 01 46.2	
	comp=Z,21nm,1.1s							
SN07	Snyder 07	23.74	333		P	P	16 01 08.4	-0.7
V53A	Saluda	23.91	11		IAmb	IAmb	16 01 48.4	
	comp=Z,31nm,1.4s							
LPIG	La Paz	23.91	303		LR	LR	16 11 46.1	
	comp=Z,418nm,18.3s,baz=62,slow=39							
POST	Post	23.99	332		IAmb	IAmb	16 01 12.6	
	comp=Z,19nm,0.9s							
DKNS	Dickens	24.24	334		IAmb	IAmb	16 01 22.2	
	comp=Z,20nm,0.8s							
U49A	Red Boiling Sp	24.32	5		P	P	16 01 13.4	-1.0
FNO	Franklin	24.37	342		IAmb	IAmb	16 01 16.8	
	comp=Z,16nm,0.6s							
V55A	Taylorsville	24.43	14		IAmb	IAmb	16 01 18.5	
	comp=Z,28nm,1.5s							
TUL3	Leonard	24.54	345		P	P	16 01 15.2	-1.2
TUL3					IAmb	IAmb	16 01 23.1	
	comp=Z,12nm,0.8s							
RLO	Rose Lookout	24.60	347		IAmb	IAmb	16 01 20.0	
	comp=Z,16nm,0.8s							
T47A	Sharon Grove	24.71	2		P	P	16 01 17.5	-0.4
T47A					IAmb	IAmb	16 01 19.1	
	comp=Z,17nm,1.0s							
U38A	Gravette	24.73	348		IAmb	IAmb	16 01 21.9	
	comp=Z,32nm,1.3s							
U54A	Nelsons Funny	24.93	13		IAmb	IAmb	16 01 24.2	
	comp=Z,23nm,1.0s							
V58A	Windy Hill, Pi	24.94	18		IAmb	IAmb	16 01 22.1	
	comp=Z,24nm,1.2s							
MGMO	Mountain Grove	25.09	353		IAmb	IAmb	16 01 23.4	
	comp=Z,18nm,0.9s							
U56A	King	25.11	15		IAmb	IAmb	16 01 25.6	
	comp=Z,22nm,1.1s							
S44A	Carbondale	25.40	358		P	P	16 01 23.2	-1.0
S44A					IAmb	IAmb	16 01 53.9	
	comp=Z,11nm,0.8s							
T35A	Sooner Cattle	25.67	345		P	P	16 01 26.1	-0.6
CCM	Cathedral Cave	25.88	355		P	P	16 01 28.0	-0.5
CCM					IAmb	IAmb	16 01 30.7	
	comp=Z,18nm,1.0s							
RTBA	Rita Blanca	27.38	334			P	16 01 41.9	-0.4
RTBA					IAmb	IAmb	16 01 47.0	
	comp=Z,16nm,0.9s							
P38A	Dawn	27.69	351		IAmb	IAmb	16 01 46.3	
	comp=Z,20nm,1.0s							
ABQ	Albuquerque	27.95	327		P	P	16 01 45.9	-1.5
BOAV	Boa Vista	29.27	107		P	P	16 01 58.5	-0.7
PV03	Paradox Valley	31.72	328		P	P	16 02 20.9	+0.1
ECSD	EROS Data Cent	32.21	349		P	P	16 02 23.9	-0.9
ECSD					IAmb	IAmb	16 02 25.8	
	comp=Z,10nm,1.1s							
SPMN	Marine on St.	33.13	354		P	P	16 02 31.7	-1.1
PFO	Pinyon Flats O	33.32	314		LR	LR	16 18 26.3	
	comp=Z,205nm,19.3s,baz=125,slow=40							
SADO	Sadowa	33.41	12		LR	LR	16 16 42.6	
	comp=Z,148nm,18.6s,baz=153,slow=38							
LPAZ	La Paz	34.68	144		P	P	16 02 50.0	+2.8
	comp=Z,0.6nm,0.6s,baz=297,slow=9.0,SNR=2.2							
	comp=Z,0.6nm,0.6s							
PDAR	Pinedale Array	35.57	333		P	P	16 02 54.9	+0.7
	comp=Z,0.3nm,0.6s,baz=139,slow=8.1,SNR=4.3							
PDAR					PcP	PcP	16 05 24.3	+1.7
	comp=Z,0.2nm,0.3s,baz=119,slow=2.5,SNR=3.3							
PDAR					LR	LR	16 21 27.5	
	comp=Z,97nm,18.2s,baz=120,slow=43							
	comp=Z,0.3nm,0.6s							
AGMN	Agassiz Nation	36.52	352		P	P	16 03 00.3	-1.8
MOOW	Moose Ponds	36.87	333		P	P	16 03 05.7	+0.4
NVAR	Mina Array Bea	37.29	320		P	P	16 03 11.6	+2.6
	comp=Z,0.6nm,0.8s,baz=134,slow=6.4,SNR=4.2							
NVAR					PcP	PcP	16 05 30.4	+2.6
	comp=Z,1.0nm,0.7s,baz=100,slow=1.8,SNR=4.6							
NVAR					LR	LR	16 21 23.6	
	comp=Z,242nm,20.0s,baz=130,slow=41							
	comp=Z,0.6nm,0.8s							
NVAR	Mina Array Bea	37.29	320		P	P	16 03 07.5	-1.5
VILB	Vilhena	37.50	131		P	P	16 03 08.8	-2.0
ULM	Lac du Bonnet	38.44	352		P	P	16 03 17.2	-1.0
	comp=Z,10nm,0.6s,baz=172,slow=7.3,SNR=10							
ULM					LR	LR	16 19 55.5	
	comp=Z,193nm,21.3s,baz=174,slow=38							
	comp=Z,10nm,0.6s							
ULM	Lac du Bonnet	38.44	352		P	P	16 03 16.2	-2.0
YBH	Yreka Blue Hor	41.96	321		LR	LR	16 22 44.0	
	comp=Z,9.5nm,18.5s,baz=136,slow=38							
RPN	Rapa Nui	44.06	207		LR	LR	16 18 48.7	
	comp=Z,116nm,18.1s,baz=66,slow=31							
SCHQ	Schefferville	45.79	17		P	P	16 04 15.9	-2.1
	comp=Z,7.3nm,0.9s,baz=220,slow=12,SNR=3.3							
SCHQ					LR	LR	16 25 08.3	
	comp=Z,369nm,18.1s,baz=180,slow=38							
	comp=Z,7.3nm,0.9s							
H03N2	Juan Fernandez	46.27	169		T	T	16 54 02.7	
	baz=347							
H03N1	Juan Fernandez	46.27	169		T	T	16 53 57.9	
	baz=347							
H03N3	Juan Fernandez	46.29	169		T	T	16 54 02.4	
	baz=347							
BDFB	Brasilia	48.60	124		P	P	16 04 38.8	-1.8
	comp=Z,4.1nm,0.8s,baz=308,slow=7.3							
BDFB					LR	LR	16 28 54.9	
	comp=Z,138nm,18.7s,baz=308,slow=41							
	comp=Z,4.1nm,0.8s							
CPUP	Villa Florida	48.78	142		P	P	16 04 42.3	+0.7
	comp=Z,0.6nm,0.8s,baz=125,slow=1.2,SNR=3.2							
CPUP					LR	LR	16 26 28.7	
	comp=Z,39nm,18.6s,baz=204,slow=37							
	comp=Z,0.6nm,0.8s							
FRB	Frobisher Bay	53.34	11		LR	LR	16 29 04.3	
	comp=Z,206nm,18.6s,baz=208,slow=38							
YKA	Yellowknife Ar	53.62	345		P	P	16 05 17.8	+0.3
	comp=Z,3.3nm,1.0s,baz=149,slow=7.0,SNR=6.4							
YKA					LR	LR	16 29 14.3	
	comp=Z,123nm,19.6s,baz=175,slow=37							
	comp=Z,3.3nm,1.0s							
YKA	Yellowknife Ar	53.62	345		P	P	16 05 16.7	-0.7
PLCA	Paso Flores	55.20	164		P	P	16 05 33.8	+4.5
	comp=Z,3.0nm,0.9s,baz=293,slow=13,SNR=4.7							
	comp=Z,3.0nm,0.9s							
PLCA	Paso Flores	55.20	164		P	P	16 05 30.9	+1.7
PLCA					IAmb	IAmb	16 05 35.2	
	comp=Z,5.2nm,1.1s							
SFJD	Kangerlussuaq	60.21	16		LR	LR	16 33 50.2	
	comp=Z,152nm,18.2s,baz=207,slow=38							
RES	Resolute Bay	62.58	358		LR	LR	16 33 51.6	
	comp=Z,136nm,18.5s,baz=196,slow=36							
INK	Inuvik	63.17	343		LR	LR	16 36 29.2	
	comp=Z,134nm,18.7s,baz=326,slow=38							
INK	Inuvik	63.17	343		P	P	16 06 24.7	+0.7
F28M	Old Crow	64.71	341			P	16 06 35.1	+0.9
ILAR	Eielson Array	65.88	336		P	P	16 06 41.8	0.0
	comp=Z,1.7nm,1.1s,baz=123,slow=3.3,SNR=9.6							
	comp=Z,1.7nm,1.1s							
ILAR	Eielson Array	65.88	336		P	P	16 06 42.5	+0.7
D25K	Kavik River	67.64	341			P	16 06 54.2	+1.2
D25K					IAmb	IAmb	16 07 10.4	
	comp=Z,4.4nm,0.9s							
KURBB	Kurchatov Arra	116.41	9		PKP	PKPdf	16 14 41.4	+1.6
	comp=Z,0.1nm,0.3s,baz=130,slow=8.6,SNR=1.8							
KSRS	Korea Array	119.99	327		PKP	PKiKP	16 14 49.0	+1.8
	comp=Z,0.9nm,0.9s,baz=236,slow=1.3,SNR=3.0							
MKAR	Makanchi Array	120.69	7		PKP	PKiKP	16 14 49.2	+0.8
	comp=Z,0.3nm,0.7s,baz=339,slow=4.2,SNR=1.1							
HHC	Hu-ho-hao-te	124.08	342		eP	PKPdf	16 14 55.1	+0.1
NJ2	Nanjing	128.85	330		eP	PKPdf	16 15 04.4	+0.2
WB0	Warramunga Arr	138.28	254		PKPdf	PKPdf	16 15 22.8	+0.6
WRA	Warramunga Arr	138.32	254		PKP	PKiKP	16 15 24.4	+0.1
	comp=Z,0.4nm,0.9s,baz=100,slow=9.0,SNR=2.0							
ASAR	Alice Springs	138.32	248		PKP	PKiKP	16 15 23.8	-0.5
	comp=Z,0.3nm,0.9s,baz=107,slow=2.7,SNR=5.0							
FITZ	Fitzroy Crossi	146.67	256			PKPdf	16 15 37.2	+0.1
CMAR	Chiang Mai Arr	148.69	347		PKPbc	PKPbc	16 15 43.0	-1.2
	comp=Z,3.0nm,0.8s,baz=32,slow=0.9,SNR=23							
CMAR	Chiang Mai Arr	148.69	347			PKPdf	16 15 41.8	+1.3

IDC 23 16:09:52.3±10.0, 21°.67S×176°.29W, h0km, mb3.8/5, mbtmpg3.8/5, MS2.7/2, Error ellipse: s-maj=296.1km s-min=39.3km az=30.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	15.39	91	LR	LR	16 18 39.6	
	comp=Z,12nm,18.6s,baz=237,slow=34						
DZM	Mont Dzumac	16.03	265	LR	LR	16 17 34.4	
	comp=Z,51nm,19.2s,baz=9.0,slow=29						
ASAR	Alice Springs	45.81	258	P	P	16 18 16.8	+0.5
	0.5nm,0.9s,baz=101,slow=7.9,SNR=4.3						
	0.5nm,0.9s						
WRA	Warramunga Arr	46.03	263	P	P	16 18 17.4	-0.5
	0.3nm,0.8s,baz=102,slow=7.8,SNR=2.0						
	0.3nm,0.8s						
QSPA	South Pole Qui	68.41	180	P	P	16 20 56.5	+0.7
	0.8nm,0.7s,baz=32,slow=2.7,SNR=7.8						
	0.8nm,0.7s						
MAW	Mawson	81.00	199	P	P	16 22 07.1	-1.4
	3.5nm,0.8s,baz=90,slow=4.0,SNR=2.3						
	3.5nm,0.8s						
H03S2	Juan Fernandez	84.02	124	T	T	17 54 31.6	
	baz=244,slow=74,SNR=114						
H03S1	Juan Fernandez	84.03	124	T	T	17 54 36.6	
	baz=244,slow=74,SNR=106						
H03S3	Juan Fernandez	84.04	124	T	T	17 54 33.5	
	baz=244,slow=74,SNR=104						
H03N2	Juan Fernandez	84.16	124	T	T	17 54 41.9	
	baz=250,slow=72,SNR=42						
H03N3	Juan Fernandez	84.16	124	T	T	17 54 42.2	
	baz=250,slow=72,SNR=50						
H03N1	Juan Fernandez	84.18	124	T	T	17 54 43.6	
	baz=250,slow=72,SNR=41						
SNAA	Sanae	86.80	178	P	P	16 22 38.2	-0.1
	0.9nm,0.8s,baz=185,slow=12,SNR=3.6						
	0.9nm,0.8s						

*CATAC **23** 16:10:23.2±0.8, 14°.N±4°.×9°.1W±°, h20km±6km, M3.7/9, MLv3.7/9, Error ellipse: s-maj=9.1km s-min=4.4km az=36.8, confirmed*
*SNET **23** 16:10:24.1±1.9, 13°.82N×91°.24W, h13km, ML3.4*
*GCG **23** 16:10:24.9±2.0, 13°.85N×91°.32W, h49km±32km, MD3.9, ML4.2, MW3.0*
ISC 23 16:10:21.5±2.0, 13°.68N±0°.08×91°.29W±0°.06, h5km±13km, n34, σ1s36/45, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG5	El Palmar, Qui	0.72	356	eP	Pn	16 10 40.7	+2.3
STG8	El Palmar, Qui	0.76	356	eP	Pn	16 10 41.8	+2.5
STG8				eS	Sn	16 10 54.4	+3.1
STG8				IAML		16 10 55.7	
	comp=N,7μm,0.2s						
STG8				AMP		16 10 55.7	
	comp=N,173μm,0.2s						
ESSJ	San Jos, E	0.78	99	iP	Pb	16 10 37.2	-0.4
ESSG	Sabana Grande	0.83	33	iP	Pg	16 10 38.8	+1.3
RTAL	Retalhuleu	0.92	335	eP	Pg	16 10 39.6	+0.4
RTAL				eS	Sg	16 10 50.0	-1.2
FG16	Alotenango, Sa	0.96	52	iP	Pb	16 10 39.9	-1.0
FG16				IAML		16 10 56.8	
	comp=E,10μm,0.2s						
PCG5	San Vicente Pa	1.04	59	eP	Pb	16 10 40.8	-1.3
PCG5				iS	Sb	16 10 53.4	-2.7
SOKI	Kika Raxquin	1.14	355	eP	Pb	16 10 43.1	-0.8
SMCA	Catarina	1.39	327	eP	Pn	16 10 45.9	-1.8
NUBE	Las Nubes	1.49	81	eP	Pn	16 10 49.6	+0.5
NUBE				eS	Sn	16 11 07.4	-1.7
NUBE	Las Nubes	1.49	81	eP	Pn	16 10 49.6	+0.5
NUBE				iS	Sn	16 11 07.7	-1.3
NUBE	Las Nubes	1.49	81	P	Pn	16 10 49.7	+0.5
NUBE	Las Nubes	1.49	81	S	Sn	16 11 08.4	-0.7
LOAL	Lomas de Alarc	1.50	78	P	Pn	16 10 50.2	+1.0
LOAL	Lomas de Alarc	1.50	78	S	Sb	16 11 10.0	+0.5
APG	El Apazote	1.54	31	eP	Pb	16 10 50.0	-0.7
QUIS	Sacapulas	1.61	7	iP	Pb	16 10 51.1	-0.7
QUIS				IAML		16 10 51.5	
	comp=Z,601nm,0.2s						
RTR	El Retiro	1.61	82	eP	Pn	16 10 52.4	+1.5
RBDL	Robledal	1.62	75	eP	Pn	16 10 51.7	+0.7
RBDL				eS	Sn	16 11 10.5	-1.8
CEVE	Cerro Verde	1.63	85	eP	Pn	16 10 52.2	+1.1
CEVE				eS	Sn	16 11 13.1	+0.4
SBLS	San Blas	1.63	84	eP	Pn	16 10 52.2	+1.0
SNJE	San Jose	1.65	83	eP	Pn	16 10 52.3	+0.9
JAYA	Jayaque - finc	1.79	91	eP	Pn	16 10 54.1	+0.8
JAYA	Jayaque - finc	1.79	91	eP	Pn	16 10 54.2	+0.8
JAYA				eS	Sn	16 11 15.9	-0.8
JAYA	Jayaque - finc	1.79	91	P	Pn	16 10 54.9	+1.6
JAYA	Jayaque - finc	1.79	91	S	Sn	16 11 16.4	-0.2
PMON	Piamonte	1.92	89	eP	Pn	16 10 56.8	+1.7
PMON				eS	Sn	16 11 20.3	+0.5
PMON	Piamonte	1.92	89	P	Pn	16 10 56.5	+1.4
BOQS	Boqueron	1.96	88	eP	Pn	16 10 57.8	+2.1
BOQS				eS	Sn	16 11 21.5	+0.8
MTO3	Montecristo	2.01	69	eP	Pn	16 10 56.5	+0.2
MTO3	Montecristo	2.01	69	eP	Pn	16 10 56.7	+0.4
MTO3	Montecristo	2.01	69	P	Pn	16 10 57.0	+0.7
MTO3	Montecristo	2.01	69	S	Sb	16 11 23.9	-0.2
LFRS	El Faro	2.17	91	eP	Pn	16 11 00.6	+2.1
LFRS				eS	Sn	16 11 26.5	+0.6

*KRNET **23** 16:19:31.1±0.1, 41°.91N×72°.79E, h27km, mb3.4*
*SOME **23** 16:19:32.0, 41°.90N×72°.80E, h15km*
*NNC **23** 16:19:32.7±0.5, 41°.97N×72°.85E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=5.4km s-min=2.0km az=175.0*
*KNET **23** 16:19:33.4±0.3, 42°.00N×72°.96E, h4km±1km, ml2.6, Error ellipse: s-maj=1.9km s-min=1.5km az=141.0*
ISC 23 16:19:30.0±1.1, 41°.95N±0°.02×72°.81E±0°.02, h10km±9km, n70, σ1s21/119, 35C-33D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAS	Manas	0.58	337	↑eP	Pb	16 19 43.2	+0.8
MNAS				↑eS	Sb	16 19 51.9	+1.2
ARSB	Arslanbob	0.64	168	↓eP	Pb	16 19 43.0	-0.4
ARSB				↓eS	Sg	16 19 51.4	+0.5
ARK	Arkit	0.65	256	↓eP	Pb	16 19 43.3	-0.2
ARK				↓eS	Sb	16 19 52.1	-0.6
MRKS	Merke	0.85	21	P	Pn	16 19 48.3	+0.1
	60nm,0.2s						
MRKS				S	Sn	16 20 00.5	-0.2
	145nm,0.1s						
MRKS	Merke	0.85	21	eP	Pn	16 19 48.3	+0.1
	60nm,0.2s						
MRKS				eS	Sn	16 19 59.6	-1.2
	145nm,0.1s						
EKS2	Erkin-Say	1.01	45	↓P	Pn	16 19 50.8	+0.5
	18nm,0.1s,SNR=47						
EKS2				↑S	Sn	16 20 04.2	-0.5
	38nm,0.2s						
EKS2	Erkin-Say	1.01	45	↑eP	Pn	16 19 50.6	+0.2
EKS2				↑eS	Sn	16 20 04.8	+0.1
ARLS	Aral	1.14	94	↑eP	Pn	16 19 52.4	+0.3
ARLS				↑eS	Sn	16 20 07.7	-0.1
UCH	Uchtor	1.30	77	↑P	Pg	16 19 56.1	+1.1
	16nm,0.1s,SNR=18

	61nm,0.3s								
DGS	**Degeres**	**2.54**	**59**	Pg		**Pg**	**16 20 18.7**	**0.0**	
	6.4nm,0.2s								
DGS				Lg		Lg	16 20 52.2		
	34nm,0.4s								
DGS	**Degeres**	**2.54**	**59**	*eP*		**Pg**	**16 20 18.7**	**0.0**	
	6.4nm,0.2s								
DGS				*eS*		**Sg**	**16 20 52.2**	**+0.6**	
	34nm,0.4s								
ULHL	**Ulahol**	**2.57**	**82**	⇑P		**Pb**	**16 20 17.4**	**+1.0**	
	7.5nm,0.2s								
ULHL	**Ulahol**	**2.57**	**82**	⇓*eP*		**Pb**	**16 20 14.1**	**-2.3**	
ULHL				⇓*eS*		**Sn**	**16 20 45.2**	**+1.8**	
KST	**Kastek**	**2.58**	**64**	Pg		**Pg**	**16 20 19.6**	**+0.2**	
	3.1nm,0.2s								
KST				Lg		Lg	16 20 53.4		
	40nm,0.5s								
KST	**Kastek**	**2.58**	**64**	*eP*		**Pg**	**16 20 19.6**	**+0.2**	
	3.1nm,0.2s								
KST				*eS*		**Sg**	**16 20 53.4**	**+0.6**	
	40nm,0.5s								
DRK	**Karamyk**	**2.59**	**198**	⇓*eP*		**Pn**	**16 20 13.4**	**+1.2**	
DRK				⇓*eS*		**Sn**	**16 20 44.2**	**+0.4**	
KRBS	**Karabastau**	**2.74**	**49**	Pg		**Pg**	**16 20 21.8**	**-0.6**	
	3.3nm,0.2s								
KRBS				Lg		Lg	16 20 57.2		
	14nm,0.3s								
KRBS	**Karabastau**	**2.74**	**49**	*eP*		**Pg**	**16 20 21.8**	**-0.6**	
KRBS				*eS*		**Sg**	**16 20 57.2**	**-0.7**	
MTBS	**Maitube**	**2.92**	**65**	Pg		**Pg**	**16 20 25.9**	**-0.1**	
	3.0nm,0.2s								
MTBS				Lg		Lg	16 21 04.1		
	23nm,0.3s								
MTBS	**Maitube**	**2.92**	**65**	*eP*		**Pg**	**16 20 25.9**	**-0.1**	
	3.0nm,0.2s								
MTBS				*eS*		**Sg**	**16 21 04.1**	**+0.2**	
	23nm,0.3s								
IZV	**Izvestkoviy**	**3.02**	**68**	Pg		**Pg**	**16 20 27.2**	**-0.6**	
	3.7nm,0.2s								
IZV				Lg		Lg	16 21 06.8		
	15nm,0.5s								
IZV	**Izvestkoviy**	**3.02**	**68**	*eP*		**Pg**	**16 20 27.2**	**-0.6**	
	3.7nm,0.2s								
IZV				*eS*		**Sg**	**16 21 06.8**	**-0.1**	
	15nm,0.5s								
BTLS	**Baital**	**3.22**	**16**	Pg		**Pg**	**16 20 30.2**	**-1.4**	
	6.2nm,0.3s								
BTLS				Lg		Lg	16 21 11.4		
	13nm,0.3s								
BTLS	**Baital**	**3.22**	**16**	*eP*		**Pg**	**16 20 30.2**	**-1.4**	
	6.2nm,0.3s								
BTLS				*eS*		**Sg**	**16 21 11.4**	**-1.8**	
	13nm,0.3s								
KUU	**Kurty**	**3.24**	**52**	Pg		**Pg**	**16 20 31.3**	**-0.8**	
	5.0nm,0.1s								
KUU				Lg		Lg	16 21 13.4		
	40nm,0.3s								
KUU	**Kurty**	**3.24**	**52**	*eP*		**Pg**	**16 20 31.3**	**-0.8**	
	5.0nm,0.1s								
KUU				*eS*		**Sg**	**16 21 13.4**	**-0.7**	
	40nm,0.3s								
TNSS	**Tian-Shan**	**3.25**	**69**	Pg		**Pg**	**16 20 32.2**	**0.0**	
	1.5nm,0.3s								
TNSS				Lg		Lg	16 21 14.9		
	2.6nm,0.5s								
TNSS	**Tian-Shan**	**3.25**	**69**	*eP*		**Pg**	**16 20 32.2**	**0.0**	
	1.5nm,0.3s								
TNSS				*eS*		**Sg**	**16 21 14.9**	**+0.6**	
	2.6nm,0.5s								
KDJ	**Kajisay**	**3.26**	**85**	⇑*eP*		**Pn**	**16 20 23.8**	**+2.4**	
KDJ				⇑*eS*		**Sn**	**16 21 02.0**	**+1.7**	
KTBS	**Karatobe**	**3.35**	**57**	Pg		**Pg**	**16 20 33.1**	**-1.1**	
	1.7nm,0.4s								
KTBS				Lg		Lg	16 21 16.4		
	0.5nm,0.4s								
MDOK	**Medeo**	**3.36**	**67**	Pg		**Pg**	**16 20 32.9**	**-1.5**	
	1.9nm,0.5s								
MDOK				Lg		Lg	16 21 16.1		
	6.7nm,0.4s								
KOTS	**Kotyrbulak**	**3.43**	**67**	Pg		**Pg**	**16 20 34.7**	**-1.0**	
	1.9nm,0.2s								
KOTS				Lg		Lg	16 21 19.5		
	17nm,0.5s								
KOTS	**Kotyrbulak**	**3.43**	**67**	*eP*		**Pg**	**16 20 34.7**	**-1.0**	
	1.9nm,0.2s								
KOTS				*eS*		**Sg**	**16 21 19.5**	**-0.6**	
	17nm,0.5s								
GAR	**Garm**	**3.51**	**214**	⇓*eP*		**Pn**	**16 20 26.1**	**+1.4**	
GAR				⇓*eS*		**Sn**	**16 21 06.2**	**-0.1**	
TARG	**Taragay, Kyrgy**	**3.74**	**92**	⇑*eP*		**Pn**	**16 20 30.3**	**+2.1**	
TARG				⇑*eS*		**Sn**	**16 21 13.4**	**+0.9**	
PRZ	**Przheval'sk**	**4.19**	**81**	⇑*eP*		**Pn**	**16 20 36.5**	**+2.4**	
PRZ				⇑*eS*		**Sn**	**16 21 24.1**	**+0.9**	
SATY	**Saty**	**4.28**	**73**	Pg		**Pg**	**16 20 52.0**	**-0.1**	
	2.0nm,0.4s								
SATY				Lg		Lg	16 21 48.7		
	5.5nm,0.4s								
ARXS	**Arharly**	**4.32**	**57**	Pg		**Pg**	**16 20 50.3**	**-2.3**	
	1.8nm,0.5s								
ARXS				Lg		Lg	16 21 46.8		
	10nm,0.4s								
ARXS	**Arharly**	**4.32**	**57**	*eP*		**Pg**	**16 20 50.3**	**-2.3**	
	1.8nm,0.5s								
ARXS				*eS*		**Sg**	**16 21 46.8**	**-1.7**	
	10nm,0.4s								
CHGR	**Chuyangaron**	**4.32**	**221**	⇓*eP*		**Pn**	**16 20 37.3**	**+1.5**	
CHGR				⇓*eS*		**Sn**	**16 21 25.5**	**-0.7**	
KPKS	**Kokpek**	**4.59**	**69**	Pg		**Pg**	**16 20 55.0**	**-2.9**	
	0.3nm,0.1s								
KPKS				Lg		Lg	16 21 54.1		
	9.1nm,0.4s								
KPKS	**Kokpek**	**4.59**	**69**	*eP*		**Pg**	**16 20 55.0**	**-2.9**	
	0.3nm,0.1s								
KPKS				*eS*		**Sg**	**16 21 54.1**	**-3.1**	
	9.1nm,0.4s								
BLB	**Baldybastay**	**4.68**	**61**	Pg		**Pg**	**16 20 57.6**	**-1.9**	
	4.1nm,0.2s								
BLB				Lg		Lg	16 21 59.1		
	6.8nm,0.5s								
UZB	**Uzynbulak**	**4.74**	**73**	Pg		**Pg**	**16 21 00.1**	**-0.8**	
	3.3nm,0.3s								
UZB				Lg		Lg	16 22 02.6		
	4.6nm,0.4s								
UZB	**Uzynbulak**	**4.74**	**73**	*eP*		**Pg**	**16 21 00.1**	**-0.8**	
	3.3nm,0.3s								
UZB				*eS*		**Sg**	**16 22 02.6**	**+0.3**	
	4.6nm,0.4s								
KAPS	**Kapalarasan**	**5.80**	**53**	Pg		**Pg**	**16 21 17.9**	**-3.3**	
	1.3nm,0.2s								
KAPS				Lg		Lg	16 22 33.6		
	9.1nm,0.4s								

*JMA **23** 16:22:03.4±0.1,39.6N±0.2×141.7E±0.4, h66km, MV3.3/35, SOUTHERN IWATE PREF*
JMA Felt I J1 at SOUTHERN IWATE PREF .
*IDC **23** 16:22:04.5±2.2,39.53N×141.79E, h81km±19km, mb3.4/9, mbtmp3.6/13, Error ellipse: s-maj=24.9km s-min=14.2km az=97.0*

ISC 23 16:22:03.4±0.8, 39.56N±0.04×141.82E±0.07, h64km±6km, n31, σ1s71/34, mb3.8/9, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.02**	**357**	P	**Pn**	**16 22 13.3**	**+0.5**
MIYJ				*eS*	**Sn**	**16 22 20.4**	**+0.7**
JTH	**Tanohata**	**0.38**	**5**	*i* P	**Pn**	**16 22 15.0**	**+0.4**
JTH				S	**Sn**	**16 22 23.3**	**+0.5**
JOM	**Ohasama**	**0.42**	**259**	P	**Pn**	**16 22 14.3**	**-0.5**
JOM				S	**Sn**	**16 22 22.3**	**-1.0**
OFUJ	**Ofunato**	**0.49**	**194**	P	**Pn**	**16 22 15.6**	**0.0**
JKZ	**Kuzumaki**	**0.57**	**319**	P	**Pn**	**16 22 16.2**	**-0.3**
JKZ				S	**Sn**	**16 22 25.4**	**-0.6**
JMK	**Ichinoseki**	**0.76**	**218**	*i* P	**Pn**	**16 22 18.0**	**-0.6**
JANG	**Nango**	**0.85**	**344**	*i* P	**Pn**	**16 22 19.4**	**-0.3**
JANG				S	**Sn**	**16 22 31.2**	**-0.5**
JRG	**Rokugo**	**0.93**	**260**	*i* P	**Pn**	**16 22 19.9**	**-0.7**
JAH	**Hinai**	**1.11**	**305**	⇓*i* P	**Pn**	**16 22 22.8**	**-0.2**
JIO	**Ouri**	**1.16**	**199**	P	**Pn**	**16 22 23.2**	**-0.5**
JIO				S	**Sn**	**16 22 37.7**	**-1.0**
JOU	**Okura**	**1.49**	**218**	*i* P	**Pn**	**16 22 27.8**	**-0.3**
JOU				S	**Sn**	**16 22 45.9**	**-0.8**
MJAR	**Matsushiro Arr**	**4.15**	**225**	P	**Pn**	**16 23 06.0**	**+1.8**
	2.8nm,0.7s,baz=21,slow=15,SNR=15						
MJAR				S	**Sn**	**16 23 57.7**	**+6.3**
	0.8nm,0.5s,baz=312,slow=26,SNR=1.5						
ASAJ	**Asahikawa**	**4.59**	**7**	P	**Pn**	**16 23 11.4**	**+1.2**
	2.0nm,0.5s,baz=211,slow=12,SNR=8.3						
ASAJ				S	**Sn**	**16 24 04.3**	**+2.0**
	3.7nm,0.5s,baz=205,slow=19,SNR=1.0						
USRK	**Ussuriysk Ar.**	**8.68**	**305**	P	**Pn**	**16 24 07.5**	**+1.5**
	1.4nm,0.6s,baz=112,slow=13,SNR=3.1						
KSRS	**Korea Array**	**11.09**	**263**	P	**Pn**	**16 24 43.3**	**+4.2**
	0.8nm,0.3s,baz=73,slow=14,SNR=6.7						
HILR	**Hailar Array B**	**18.57**	**310**	P	**P**	**16 26 12.9**	**-2.1**
	0.9nm,0.5s,baz=108,slow=14,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**29.25**	**125**	T	T	16 58 33.7	
	baz=318,slow=75,SNR=81						
H11N1	**WAKE ISLAND Hy**	**29.26**	**125**	T	T	16 58 41.7	
	baz=318,slow=75,SNR=73						
H11N3	**WAKE ISLAND Hy**	**29.27**	**125**	T	T	16 58 35.1	
	baz=318,slow=75,SNR=79						
H11S1	**WAKE ISLAND Hy**	**30.04**	**127**	T	T	16 59 35.5	
	baz=319,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**30.05**	**127**	T	T	16 59 29.6	
	baz=319,slow=76,SNR=30						
H11S2	**WAKE ISLAND Hy**	**30.06**	**127**	T	T	16 59 37.0	
	baz=319,slow=76,SNR=22						
ZALV	**Zalesovo Beam**	**40.49**	**310**	P	**P**	**16 29 34.6**	**-1.0**
	0.8nm,0.5s,baz=91,slow=8.0,SNR=4.9						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**43.09**	**300**	P	**P**	**16 29 57.1**	**+0.1**
	0.5nm,0.7s,baz=85,slow=10,SNR=1.8						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**44.74**	**306**	P	**P**	**16 30 10.1**	**0.0**
	0.9nm,0.6s,baz=83,slow=8.4,SNR=7.7						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**47.21**	**34**	P	**P**	**16 30 30.1**	**+0.8**
	0.3nm,0.6s,baz=272,slow=7.4,SNR=5.0						
	0.3nm,0.6s						
BVAR	**Borovoye Array**	**49.14**	**311**	P	**P**	**16 30 43.1**	**-1.2**
	0.2nm,0.3s,baz=74,slow=15,SNR=1.4						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**59.60**	**188**	P	**P**	**16 31 59.0**	**-1.5**
	0.6nm,0.5s,baz=6.4,slow=7.0,SNR=8.3						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**63.33**	**188**	P	**P**	**16 32 24.4**	**-1.3**
	0.4nm,0.4s,baz=6.5,slow=7.4,SNR=6.6						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**66.74**	**332**	P	**P**	**16 32 46.3**	**-1.0**
	2.0nm,0.9s,baz=45,slow=7.2,SNR=2.2						
	2.0nm,0.9s						
HFS	**Hagfors**	**71.93**	**336**	P	**P**	**16 33 18.5**	**-0.9**
	3.3nm,1.1s,baz=45,slow=8.4,SNR=1.4						
	3.3nm,1.1s						

*IDC **23** 16:22:54.9±0.8,1.76N×125.40E, h0km, mb3.8/9, mbtmp3.8/9, Error ellipse: s-maj=73.8km s-min=13.1km az=67.0*
*DJA **23** 16:23:02.7±0.8,2.7N±2.2×12.6E±.7, h13km±6km, M4.2/16, mB5.1/4, mb4.3/7, MLv4.2/16, Mw(mB)4.4/4*

ISC 23 16:23:05.1±0.7,1.93N±0.06×126.06E±0.09, h83km, n20, σ2s08/24, mb3.8/9, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.74**	**131**	P	**Pn**	**16 23 32.6**	**-1.0**
SGSI	**Sangihe**	**1.83**	**343**	P	**Pn**	**16 23 34.6**	**-0.2**
SGSI				S	**Sn**	**16 23 57.3**	**-0.1**
KMSI	**Cibinong**	**2.48**	**237**	P	**Pn**	**16 23 41.4**	**-2.0**
SANI	**Sanana**	**3.95**	**181**	P	**Pn**	**16 24 00.2**	**-3.2**
MRSI	**Marisa**	**4.37**	**251**	P	**Pn**	**16 24 08.3**	**-0.7**
LUWI	**Luwuk**	**4.42**	**228**	P	**Pn**	**16 24 09.6**	**-0.2**
NLAI	**Namlea**	**5.24**	**169**	P	**Pn**	**16 24 20.1**	**-0.8**
	0.2nm759nm21nm,0.5s						
APSI	**Ampana**	**5.24**	**237**	P	**Pn**	**16 24 20.4**	**-0.5**
	0.3nm40nm,0.5s						
TTSI	**Tana Toraja**	**7.96**	**232**	P	**Pn**	**16 24 57.8**	**-0.3**
	0.1nm11nm,0.9s						
BKSI	**Bulukumba**	**9.33**	**219**	P	**Pn**	**16 25 15.6**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.90**	**181**	P	P	16 27 20.8	-9.3
	1.8nm,0.9s,baz=11,slow=10,SNR=1.5						
WRA	**Warramunga Arr**	**23.20**	**160**	P	**P**	**16 28 04.0**	**-1.1**
	0.7nm,0.3s,baz=336,slow=10,SNR=30						
WRA				PcP	**PcP**	**16 31 52.5**	**+1.8**
	0.2nm,0.7s,baz=332,slow=2.5,SNR=1.9						
WRA				S	**S**	**16 32 11.6**	**+1.0**
	0.5nm,0.8s,baz=338,slow=16,SNR=3.6						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**26.56**	**164**	P	**P**	**16 28 35.8**	**+0.4**
	0.2nm,0.3s,baz=344,slow=9.2,SNR=22						
ASAR				PcP	**PcP**	**16 31 60.0**	**+1.8**
	0.2nm,0.4s,baz=343,slow=2.2,SNR=5.0						
ASAR				S	**S**	**16 33 11.5**	**+7.4**
	0.5nm,1.1s,baz=329,slow=10,SNR=4.1						
	0.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**31.25**	**303**	P	P	16 29 12.8	-4.4
	0.2nm,0.3s,baz=114,slow=12,SNR=1.6						
	0.2nm,0.3s						
HILR	**Hailar Array B**	**47.76**	**354**	P	**P**	**16 31 34.5**	**+0.8**
	0.6nm,0.4s,baz=179,slow=8.6,SNR=1.7						
	0.6nm,0.4s						
SONM	**Songino Array**	**48.79**	**342**	P	**P**	**16 31 42.4**	**+0.5**
	0.4nm,0.6s,baz=152,slow=6.5,SNR=2.1						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**58.66**	**326**	P	**P**	**16 32 53.0**	**-0.8**
	1.0nm,0.4s,baz=122,slow=7.4,SNR=22						
MKAR				PcP	**PcP**	**16 33 43.4**	**+0.3**
	0.6nm,0.6s,baz=128,slow=2.4,SNR=2.7						
	1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**61.89**	**334**	P	**P**	**16 33 13.9**	**-1.8**
	0.3nm,0.3s,baz=126,slow=7.3,SNR=2.3						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**62.90**	**328**	P	**P**	**16 33 21.4**	**-1.1**
	1.0nm,0.6s,baz=127,slow=6.1,SNR=16						
	1.0nm,0.6s						
FINES	**FINESS Array B**	**93.09**	**332**	P	**P**	**16 36 07.7**	**-1.8**
	1.3nm,0.8s,baz=64,slow=3.2,SNR=4.9						
	1.3nm,0.8s						

*IDC **23** 16:26:27.4±1.1,20.12S×177.23W, h0km, mb3.8/7, mbtmp3.8/8, ML4.2/1, Error ellipse: s-maj=37.0km s-min=25.6km az=130.0*
*NEIC **23** 16:27:00.7±0.9,20.88S±0.09×177.1W±0.1, h323km±9km, mb4.0/11, Error ellipse: s-maj=17.7km s-min=12.3km az=113.0*

ISC 23 16:26:59.2±0.7,21.0S±0.1×177.1W±0.1, h300km, n24, σ1s10/23, mb3.5/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.55**	**304**		**Pn**	**16 28 25.4**	**+2.1**
NIUE	**Niue**	**7.04**	**76**		**Pn**	**16 28 41.8**	**+0.7**
URZ	**Urewera**	**17.95**	**195**	P	**P**	**16 30 48.7**	**+0.5**
	0.8nm,0.3s,baz=16,slow=19,SNR=2.3						
	2.8nm,0.5s						
RTZ	**Ruatahuna**	**18.32**	**195**	P	**P**	**16 30 51.9**	**-0.4**
RTZ				IAmb	IAmb	16 30 54.2	
	comp=Z,12nm,1.2s						
MRZ	**Mangatainoka R**	**20.60**	**196**	P	**P**	**16 31 15.2**	**-0.9**
TCW	**Tory Channel**	**21.47**	**198**	P	**P**	**16 31 24.8**	**+0.5**
QRZ	**Quartz Range**	**21.67**	**202**	P	**P**	**16 31 26.1**	**0.0**
THZ	**Tophouse**	**22.39**	**200**	P	**P**	**16 31 34.4**	**+1.8**
THZ				IAmb	IAmb	16 32 03.4	
	comp=Z,16nm,1.2s						
CTAO	**Charters Tower**	**34.24**	**265**	P	**P**	**16 33 18.1**	**+0.4**
WR8	**Warramunga Arr**	**45.18**	**262**	P	**P**	**16 34 46.0**	**-1.2**
WR8				IAmb	IAmb	16 35 22.8	
	comp=Z,6.6nm,1.3s						
AS31	**Alice Springs**	**45.20**	**257**	P	**P**	**16 34 47.1**	**-0.2**
ASAR	**Alice Springs**	**45.20**	**257**	P	**P**	**16 34 47.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=92,slow=7.8,SNR=23						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**45.20**	**257**	P	**P**	**16 34 46.1**	**-1.2**
WB0	**Warramunga Arr**	**45.31**	**263**	P	**P**	**16 34 47.1**	**-1.2**
WB0				IAmb	IAmb	16 35 27.5	
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	**45.33**	**262**	P	**P**	**16 34 47.8**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=96,slow=8.5,SNR=18						
	comp=Z,0.4nm,0.3s						
MIDW	**Midway**	**48.88**	**360**	P	**P**	**16 35 13.6**	**-1.7**
FITZ	**Fitzroy Crossi**	**53.76**	**262**	P	**P**	**16 35 51.5**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=124,slow=3.6,SNR=0.8						
	comp=Z,0.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.76**	**262**	P	**P**	**16 35 51.1**	**-0.5**
QSPA	**South Pole Qui**	**69.12**	**180**	P	P	16 37 40.1	+6.9
	comp=Z,0.4nm,0.6s,baz=15,slow=1.6,SNR=1.4						
	comp=Z,0.4nm,0.6s						
QSPA	**South Pole Qui**	**69.12**	**180**	P	**P**	**16 37 32.9**	**-0.3**
QSPA				IAmb	IAmb	16 38 08.3	
	comp=Z,4.7nm,1.4s						
PETK	**Petropavlovsk-**	**76.91**	**345**	P	**P**	**16 38 17.8**	**-0.7**
	comp=Z,6.6nm,1.0s,baz=157,slow=6.0,SNR=2.3						
	comp=Z,6.6nm,1.0s						
PETK	**Petropavlovsk-**	**76.91**	**345**	P	**P**	**16 38 17.0**	**-1.4**
ILAR	**Eielson Array**	**88.58**	**12**	P	**P**	**16 39 16.9**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=212,slow=5.1,SNR=7.0						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**88.74**	**43**	P	**P**	**16 39 21.2**	**+1.9**
	comp=Z,0.4nm,0.9s,baz=285,slow=4.3,SNR=2.7						
	comp=Z,0.4nm,0.9s						

*MOS **23** 16:34:41.5±1.0,37.35S×177.24E, h116km, mb6.0/19, Error ellipse: s-maj=10.3km s-min=8.4km az=112.0*
*BJI **23** 16:34:42.3,37.25S×177.85E, h134km, mB5.8/50, mb5.4/64*
*ISC-PP **23** 16:34:43,37.37S×177.26E, h139km, Mwppsm6.2, Moment Tensor Solution. s23 Moment tensor: Scale 10¹⁸Nm; Mrr0.54±.20; Mθθ-0.14±.20; Mϕϕ-0.39±.15; Mrθ0.28±.15; Mθϕ-0.20±.20; Mϕr0.38±.17; Fault plane solution: Mo2.40000×10¹⁸ NP1:ϕs133.40000°, δ60.30000°, λ77.70000°. NP2:ϕs337.20000°, δ32.00000°, λ110.50000°.*
*NEIC **23** 16:34:43.8±1.8,37.37S±0.09×177.26E±0.08, h120km±1km, mb5.7/220, Mwb5.9/85, Mww5.8/43 Error ellipse: s-maj=15.2km s-min=10.8km az=196.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr6.72; Mθθ-3.34; Mϕϕ-3.38; Mrθ4.54; Mθϕ3.49; Mϕr0.65; Fault plane solution: Mo8.19000×10¹⁷ NP1:ϕs111.68000°, δ60.63000°, λ65.69000°. NP2:ϕs334.33000°, δ37.42000°, λ126.18000°. Principal axes: T 8.7615, Plg65.0000°, Azm338.0000°; N -1.3070, Plg21.0000°, Azm124.0000°; P -7.4544, Plg12.0000°, Azm219.0000°;*
*NEIC **23** 16:34:43.7,37.51S×177.23E, h119km*
*IPGP **23** 16:34:44.0,37.54S×177.21E, h129km, Mw5.9, Fault plane solution: NP1:ϕs345.00000°, δ44.00000°, λ130.00000°. NP2:ϕs116.00000°, δ58.00000°, λ58.00000°.*
*IDC **23** 16:34:44.2±0.5,37.37S×177.24E, h131km±4km, mb5.4/20, mbtmp5.8/20, MS4.7/29, Error ellipse: s-maj=9.7km s-min=7.5km az=28.0*
*NEIC **23** 16:34:44.2,37.36S×177.26E, h120km*
*NOU **23** 16:34:44.1,37.69S×177.51E, h131km, ML5.6/164, Off E. Coast of N. Island, N.Z.*
*NEIC **23** 16:34:44.2,37.46S×177.13E, h120km, Moment Tensor Solution. Duration: 4s1 Moment tensor: Scale 10¹⁷Nm; Mrr5.12; Mθθ-2.05; Mϕϕ-3.07; Mrθ3.53; Mθϕ3.54; Mϕr2.17; Fault plane solution: Mo7.04000×10¹⁷ NP1: ϕs345.86000°, δ49.14000°, λ133.41000°. NP2: ϕs110.53000°, δ56.67000°, λ51.54000°. Principal axes: T 7.6686, Plg58.0000°, Azm324.0000°; N -1.4839, Plg31.0000°, Azm134.0000°; P -6.1847, Plg4.0000°, Azm227.0000°;*
*WEL **23** 16:34:46.1±1.1,37.3S±11×17.7E±., h115km±11km, M5.8/108, mB6.2/26, ML5.5/10, MLv5.8/108, Mw(mB)5.8 Error ellipse: s-maj=14.8km s-min=8.6km az=1.8, confirmed*
*WEL **23** 16:34:46.1,37.42S×177.26E, h130km, ML5.3, Mw5.9, Moment Tensor Solution. s16 Moment tensor: Scale 10¹⁷Nm; Mrr7.77; Mθθ-2.40; Mϕϕ-5.37; Mrθ3.90; Mθϕ4.24; Mϕr2.55; Fault plane solution: Mo9.22000×10¹⁷ NP1: ϕs121.00000°, δ51.00000°, λ56.00000°. NP2: ϕs348.00000°, δ50.00000°, λ125.00000°. Principal axes: T 10.0660, Plg64.0000°, Azm326.0000°; N -1.6828, Plg26.0000°, Azm144.0000°; P -8.3832, Plg1.0000°, Azm234.0000°; Stations used: HAZ OPRZ MWZ PUZ RTZ KUZ TOZ TLZ MKAZ BKZ RATZ OTVZ HIZ WHVZ VRZ WCZ REVERSE FAULTING*
*GCMT **23** 16:34:48.2±0.1,37.33S×177.34E, h131km, MW5.9/159, Moment Tensor Solution. s159,c332; s154,c480; Duration: 2s2 Moment tensor: Scale 1018Nm; Mrr0.67±.01; Mθθ-0.15±.01; Mϕϕ-0.52±.01; Mrθ0.43±.01; Mθϕ0.56±.01; Mϕr0.18±.01; Best double couple: Mo0.94900×1018 NP1:ϕs353.00000°, δ50.00000°, λ135.00000°. NP2:ϕs116.00000°, δ57.00000°, λ50.00000°. Principal axes: T 0.9650, Plg57.0000°, Azm329.0000°; N -0.0320, Plg33.0000°, Azm140.0000°; P -0.9340, Plg4.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 23 16:34:44.8±0.3, 37.46S±0.03×177.29E±0.03, h136km±2km, h137km; pP-P, n1316, σ1s79/1381, mb5.6/229, 101C-59D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.10**	**233**	P	**Pn**	**16 35 02.2**	**-0.9**
WSRZ	**White Island S**	**0.10**	**239**	P	**Pn**	**16 35 03.3**	**+0.1**
WHRZ	**Whale Island**	**0.47**	**213**	P	**Pn**	**16 35 04.1**	**-0.2**
HAZ	**Te Kaha**	**0.49**	**127**	P	**Pn**	**16 35 04.1**	**-0.4**
HAZ				S	**Sn**	**16 35 19.2**	**-0.2**
WKHS	**Whakatane High**	**0.55**	**206**	P	**Pn**	**16 35 04.6**	**-0.2**
RUGZ	**Raukumara Rang**	**0.59**	**149**	P	**Pn**	**16 35 04.4**	**-0.8**
RUGZ				S	**Sn**	**16 35 19.5**	**-1.3**
MWFS	**Matata Watchor**	**0.63**	**231**	P	**Pn**	**16 35 05.3**	**0.0**
OPRZ	**Ohinepanea**	**0.70**	**237**	P	**Pn**	**16 35 05.6**	**-0.2**
OPRZ				S	**Sn**	**16 35 21.2**	**-0.6**
MARZ	**Manawahe**	**0.71**	**223**	P	**Pn**	**16 35 05.8**	**-0.2**
PKGZ	**Pakihiroa**	**0.74**	**123**	P	**Pn**	**16 35 06.9**	**+0.8**
KAFS	**Kawerau Fire S**	**0.77**	**217**	P	**Pn**	**16 35 06.2**	**-0.1**
EDRZ	**Edgecumbe**

WHTZ Whakaora 1.60 221 P Pn 16 35 15.5 +1.1
WHHZ Waihua 1.61 182 P Pn 16 35 14.6 +0.1
TLZ Tolley Road 1.63 238 P Pn 16 35 15.4 +0.6
NMHZ Naumai 1.67 193 P Pn 16 35 15.7 +0.3
HATZ Hinemaiaia 1.71 213 P Pn 16 35 15.9 +0.3
MKAZ Moumakai 1.74 281 P Pn 16 35 16.3 +0.3
WATZ Wairara 1.75 224 P Pn 16 35 16.9 +0.8
MHGZ Mahia Peninsul 1.75 164 P Pn 16 35 16.5 +0.4
ARHZ Aropaoanui 1.81 187 P Pn 16 35 16.8 0.0
BKZ Black Stump Fm 1.81 200 Pn 16 35 16.5 -0.4
BKZ Black Stump Fm 1.81 200 P Pn 16 35 16.5 -0.4
BKZ Black Stump Fm 1.81 200 P Pn 16 35 16.4 -0.4
RATZ Rangitukua 1.84 220 P Pn 16 35 17.8 +0.6
WIAZ Waiheke Island 1.85 291 P Pn 16 35 17.5 +0.3
RITZ Rihia Road 1.89 216 P Pn 16 35 18.4 +0.7
GRZ Great Barrier 1.91 309 P Pn 16 35 17.5 -0.4
KBAZ Karaka Road Bo 1.95 280 P Pn 16 35 19.6 +1.1
ETAZ East Tamaki Re 1.96 284 P Pn 16 35 19.2 +0.7
KATZ Kakaramea 1.96 219 P Pn 16 35 19.1 +0.3
MCHZ McNeill Hill 2.03 193 P Pn 16 35 19.3 -0.1
MBAZ Motutapu North 2.04 289 P Pn 16 35 20.0 +0.6
NTVZ North Tongarir 2.07 217 P Pn 16 35 20.3 +0.2
TMVZ Te Maari 2.07 217 P Pn 16 35 20.3 +0.3
KWHZ Kaweka Forest 2.07 199 P Pn 16 35 19.6 -0.4
ETVZ East Tongariro 2.08 216 P Pn 16 35 20.4 +0.3
KRVZ Karewarewa 2.08 218 P Pn 16 35 20.5 +0.4
EPAZ Eden Park BICE 2.12 285 P Pn 16 35 21.3 +0.8
NNVZ North Ngauruho 2.12 218 P Pn 16 35 21.1 +0.4
WTVZ West Tongariro 2.12 219 P Pn 16 35 21.0 +0.3
OTVZ Oturere 2.12 217 P Pn 16 35 21.0 +0.3
HBAZ Herne Bay Bore 2.14 286 P Pn 16 35 21.4 +0.8
ABAZ Army Bay 2.15 280 P Pn 16 35 21.4 +0.6
AWAZ Awhitu Peninsu 2.15 280 P Pn 16 35 21.4 +0.6
SNVZ South Ngauruho 2.15 217 P Pn 16 35 21.4 +0.3
NGZ Ngauruhoe 2.17 217 P Pn 16 35 21.5 +0.3
TWVZ Taurewa 2.17 222 P Pn 16 35 21.6 +0.4
HIZ Hauiti 2.19 241 Pn 16 35 22.6 +1.2
HIZ Hauiti 2.19 241 P Pn 16 35 22.2 +0.8
HIZ Hauiti 2.19 241 P Pn 16 35 22.5 +1.2
CKHZ Cape Kidnapper 2.20 184 P Pn 16 35 20.9 -0.5
COVZ Chateau Observ 2.21 218 P Pn 16 35 21.8 +0.1
TUVZ Tukino 2.21 215 P Pn 16 35 21.8 0.0
WTAZ Waiatarua 2.23 283 P Pn 16 35 22.6 +0.7
FWVZ Far West T-bar 2.25 217 P Pn 16 35 22.3 0.0
WHVZ Whangaehu Hut 2.25 216 P Pn 16 35 22.4 0.0
MAVZ Matarangi 2.26 217 P Pn 16 35 22.5 0.0
RVAZ Riverhead Bore 2.28 287 P Pn 16 35 23.0 +0.6
MOVZ Moawhango 2.29 211 P Pn 16 35 21.9 -0.7
WNVZ Wahianoa 2.29 215 P Pn 16 35 22.5 -0.2
TRVZ Turoa 2.29 216 P Pn 16 35 22.7 -0.1
KRHZ Kereru 2.29 198 P Pn 16 35 21.8 -0.9
KAHZ Kahuranaki 2.35 188 P Pn 16 35 22.7 -0.7
PKVZ Pokaka 2.38 219 P Pn 16 35 23.8 +0.1
MTVZ Mangateitei 2.39 216 P Pn 16 35 24.0 +0.1
PXZ Pawanui 2.58 187 P Pn 16 35 24.9 -1.3
PNHZ Pukenui 2.59 199 P Pn 16 35 25.0 -1.4
VRZ Vera Road 2.59 229 P Pn 16 35 27.0 +0.7
WPHZ Waipukurau 2.68 194 P Pn 16 35 26.1 -1.4
TSZ Takapari Road 2.79 201 P Pn 16 35 27.3 -1.7
WCZ Waipu Caves 2.81 302 P Pn 16 35 29.4 +0.2
MHEZ Mangahewa 2.84 235 P Pn 16 35 32.0 +2.6
PRHZ Porangahau 2.84 190 P Pn 16 35 28.0 -1.6
WAZ Wanganui 2.91 218 P Pn 16 35 30.2 -0.3
DVHZ Dannevirke 2.96 197 P Pn 16 35 29.1 -2.0
DREZ Durham Road 2.98 234 P Pn 16 35 32.6 +1.4
LREZ Lake Rotokare 3.02 228 P Pn 16 35 32.5 +0.7
ANWZ Angora Road 3.05 192 P Pn 16 35 31.1 -1.2
NEZ North Egmont 3.09 233 P Pn 16 35 35.8 +3.0
PREZ Palmer Road 3.09 232 P Pn 16 35 35.0 +2.2
PKE Pukeiti 3.12 235 P Pn 16 35 34.3 +1.2
OHWZ Ohakea 3.14 209 P Pn 16 35 33.0 -0.3
POWZ Post Office Ro 3.15 202 P Pn 16 35 32.0 -1.6
KHEZ Kahui Hut 3.16 234 P Pn 16 35 34.9 +1.2
KHEZ Kahui Hut 3.16 234 P Pn 16 35 34.5 +0.8
NBEZ Newall Road No 3.24 235 P Pn 16 35 36.5 +1.8
PRWZ Pori Road 3.25 198 P Pn 16 35 33.1 -1.7
NMEZ Namu Road 3.31 233 P Pn 16 35 36.6 +1.0
BFZ Birch Farm 3.31 194 Pn 16 35 33.7 -1.9
BFZ Birch Farm 3.31 194 P Pn 16 35 33.7 -1.9
BFZ Birch Farm 3.31 194 P Pn 16 35 33.3 -2.3
MRZ Mangatainoka R 3.46 202 Pn 16 35 35.0 -2.5
MRZ Mangatainoka R 3.46 202 P Pn 16 35 35.2 -2.3
TIWZ Tintock 3.48 198 P Pn 16 35 35.8 -2.0
CPWZ Castlepoint 3.54 193 P Pn 16 35 37.1 -1.5
HOWZ Holdsworth Sta 3.75 203 P Pn 16 35 38.0 -2.6
OUZ Omahuta 3.73 306 P Pn 16 35 42.0 +0.9
OUZ Omahuta 3.73 306 P Pn 16 35 41.6 +0.6
OUZ Omahuta 3.73 306 ⇓P Pn 16 35 41.5 +0.4
OGWZ Otaki Gorge 3.73 206 P Pn 16 35 38.8 -2.3
TMWZ Te Maipa 3.80 196 P Pn 16 35 39.5 -2.4
KIW Kapiti Island 3.86 208 P Pn 16 35 40.1 -2.7
MTW Mount Morrison 3.94 200 P Pn 16 35 40.8 -3.0
CAW Cannon Point 4.03 205 P Pn 16 35 42.0 -2.9
TRWZ Traveller 4.12 197 P Pn 16 35 43.3 -2.9
PAWZ Paruwai Farm 4.17 200 P Pn 16 35 43.6 -3.3
DUWZ D'Urville Isla 4.24 217 P Pn 16 35 44.7 -3.1
MSWZ Moikau Station 4.25 201 Pn 16 35 44.7 -3.2
MSWZ Moikau Station 4.25 201 P Pn 16 35 44.6 -3.4
WEL Wellington 4.29 206 P Pn 16 35 45.3 -3.1
SNZO South Karori 4.33 207 Pn 16 35 45.5 -3.5
SNZO South Karori 4.33 207 P Pn 16 35 46.4 -2.6
SNZO South Karori 4.33 207 S Sn 16 36 35.8 -3.1
SNZO South Karori 4.33 207 ⇑P Pn 16 35 45.7 -3.9
BHW Baring Head 4.36 205 Pn 16 35 45.8 -3.6
BHW Baring Head 4.36 205 P Pn 16 35 45.9 -3.5
PLWZ Palliser 4.39 200 Pn 16 35 46.1 -3.7
PLWZ Palliser 4.39 200 P Pn 16 35 46.2 -3.7
TCW Tory Channel 4.41 211 Pn 16 35 46.2 -3.8
TCW Tory Channel 4.41 211 P Pn 16 35 46.5 -3.5
TUWZ Tuamarina 4.73 212 Pn 16 35 50.6 -3.7
TUWZ Tuamarina 4.73 212 P Pn 16 35 51.2 -3.1
NNZ Nelson 4.82 218 Pn 16 35 52.3 -3.1
NNZ Nelson 4.82 218 P Pn 16 35 51.8 -3.6
CMWZ Cape Campbell 4.89 208 Pn 16 35 53.0 -3.4
TKNZ Takaka Hill 4.90 222 Pn 16 35 52.8 -3.7
TKNZ Takaka Hill 4.90 222 P Pn 16 35 53.5 -3.1
QRZ Quartz Range 5.00 226 Pn 16 35 54.4 -3.4
QRZ Quartz Range 5.00 226 P Pn 16 35 55.1 -2.7
QRZ Quartz Range 5.00 226 S Sn 16 36 52.9 -1.9
QRZ Quartz Range 5.00 226 mB
BSWZ Blackbirch Sta 5.00 211 Pn 16 35 53.7 -4.2
BSWZ Blackbirch Sta 5.00 211 mB
MRNZ Matariki Terra 5.27 220 Pn 16 35 57.8 -3.7
MRNZ Matariki Terra 5.27 220 mB
THZ Tophouse 5.47 217 Pn 16 35 59.9 -4.3
THZ Tophouse 5.47 217 mB
KHZ Kahutara 5.72 209 Pn 16 36 03.0 -4.6
KHZ Kahutara 5.72 209 P Pn 16 36 03.8 -3.7
KHZ Kahutara 5.72 209 S Sn 16 37 07.8 -4.3
KHZ Kahutara 5.72 209 mB
KHZ Kahutara 5.72 209 ⇓P Pn 16 36 02.9 -4.6
DSZ Denniston Nort 6.02 223 mB
GVZ Greta Valley S 6.39 209 mB
LTZ Lake Taylor 6.56 214 Pn 16 36 13.8 -5.0
LTZ Lake Taylor 6.56 214 mB
AMCZ Amberley 6.72 210 mB
INZ Inchbonnie 6.91 219 Pn 16 36 18.2 -5.1
INZ Inchbonnie 6.91 219 mB
OKCZ Okains Bay 7.03 206 mB
OXZ Oxford 7.09 213 mB
MQZ McQueen's Vall 7.16 208 mB
AKCZ Akaroa Harbour 7.21 206 mB
RACZ Rakaia 7.38 210 mB
MHCZ Mount Hutt 7.46 214 mB
WVZ Waitaha Valley 7.51 220 mB
WACZ Wakanui South 7.68 211 mB
CTZ Chatham Island 7.79 145 P Pn 16 36 34.6 -0.6
CTZ Chatham Island 7.79 145 S Sn 16 37 55.5 -6.4
CTZ Chatham Island 7.79 145 P Pn 16 36 35.9 +0.6
RPZ Rata Peaks 7.84 215 P Pn 16 36 31.3 -4.6
1µm,0.4s,baz=48,slow=3.2,SNR=378
RPZ S Sn 16 37 53.4 -10
2µm,0.5s,baz=16,slow=22,SNR=17
RPZ LR LR 16 40 20.2
comp=Z,5µm,21.5s,baz=23,slow=42
RPZ Rata Peaks 7.84 215 P Pn 16 36 31.9 -4.1
RPZ Rata Peaks 7.84 215 mB
ARCZ Arundel 7.97 214 mB
FOZ Fox Glacier 8.31 221 mB

TMZ Timaru 8.39 213 mB
LBZ Lake Benmore 8.76 216 mB
ODZ Otahua Downs 9.07 211 Pn 16 36 47.4 -5.1
ODZ Otahua Downs 9.07 211 P Pn 16 36 47.7 -4.8
ODZ Otahua Downs 9.07 211 mB
ODZ Otahua Downs 9.07 211 ⇓P Pn 16 36 46.6 -5.8
RAO Raoul Island 9.12 27 P Pn 16 36 45.4 -7.7
358nm,0.3s,baz=198,slow=20,SNR=4.1
RAO S Sn 16 38 26.5 -7.6
675nm,0.3s,baz=240,slow=20,SNR=6.8
JCZ Jackson Bay 9.23 222 P Pn 16 36 50.1 -4.5
JCZ Jackson Bay 9.23 222 mB
HHSZ Highcliff Hill 9.79 209 mB
MSZ Milford Sound 10.09 222 mB
TUZ Tuapeka 10.23 212 mB
MLZ Mavora Lakes 10.47 218 Pn 16 37 07.2 -4.0
MLZ Mavora Lakes 10.47 218 mB
SYZ Scrubby Hill 10.90 211 P Pn 16 37 13.2 -3.6
SYZ Scrubby Hill 10.90 211 mB
WHZ Wether Hill Ro 10.94 217 Pn 16 37 12.4 -4.9
DCZ Deep Cove 11.03 220 Pn 16 37 12.2 -6.3
DCZ Deep Cove 11.03 220 mB
NFK Norfolk Island 11.47 314 P Pn 16 37 28.0 +3.4
comp=Z,410nm,0.9s,comp=Z,0.0nm
APZ The Paps 11.62 213 mB
PYZ Puysegur Point 11.75 219 Pn 16 37 23.7 -4.3
PYZ Puysegur Point 11.75 219 P Pn 16 37 23.8 -4.3
PYZ Puysegur Point 11.75 219 mB
LHI Lord Howe Isla 16.15 286 P P 16 38 26.4 +1.8
comp=Z,144nm,1.2s,comp=Z,0.0nm
LHI Lord Howe Isla 16.15 286 ⇓P P 16 38 27.8 +3.3
PINNC Pines Island, 17.06 327 P P 16 38 32.9 -1.8
PINNC Pines Island, 17.06 327 P Pn 16 38 37.4 +2.3
OUENC Ouen Island, N 17.50 326 P Pn 16 38 42.5 +2.2
ONTNC Ouen Toro 17.77 325 P P 16 38 41.5 -0.9
ONTNC Ouen Toro 17.77 325 P Pn 16 38 45.2 +1.6
ONTNC Ouen Toro 17.77 325 ⇑P Pn 16 38 44.4 +0.8
YATNC Mamie plateau, 17.79 327 P Pn 16 38 45.8 +1.9
MARNC Mare, Loyalty 17.84 331 P P 16 38 42.2 -1.0
MARNC Mare, Loyalty 17.84 331 P Pn 16 38 45.9 +1.5
DZM Mont Dzumac 17.98 326 P Pn 16 38 46.8 +0.6
comp=Z,111nm,0.7s,baz=149,slow=12,SNR=59
DZM 17.98 326 eP Pn 16 38 46.2 0.0
comp=Z,580nm,1.0s
DZM eLR LR 16 43 06.3
comp=Z,10µm,35.4s
MSVF Nonsavu 19.67 2 P P 16 39 03.3 +0.1
MSVF Nonsavu 19.67 2 P P 16 39 04.5 +1.3
MSVF Nonsavu 19.67 2 P P 16 39 03.3 +0.1
MSVF Nonsavu 19.67 2 ⇓P P 16 39 04.0 +0.8
KOUNC Koumac, New Ca 20.30 323 P Pn 16 39 12.8 -0.5
KOUNC Koumac, New Ca 20.30 323 ⇓P Pn 16 39 12.4 -0.8
AUKHS Kincumber High 21.46 273 P P 16 39 24.2 +2.0
NIUE Niue 21.46 35 P P 16 39 20.6 -1.8
comp=Z,297nm,1.2s,comp=Z,0.0nm
NIUE Niue 21.46 35 P P 16 39 24.0 +1.6
RIV Riverview 21.52 272 P P 16 39 26.2 +3.3
comp=Z,168nm,1.3s
RIV Riverview 21.52 272 P P 16 39 25.8 +2.9
WOLH Wollongong Har 21.58 270 P P 16 39 26.2 +2.6
AUUHS Ulladulla High 21.66 267 P P 16 39 26.5 +2.1
MGCD Mangrove Creek 21.75 273 P P 16 39 28.0 +2.6
comp=Z,91nm,1.0s
MGCD Mangrove Creek 21.75 273 P P 16 39 27.5 +2.1
SYDH Sydney Hard Ro 21.87 272 P P 16 39 29.3 +2.7
GC1S Gold Coast 1 S 21.99 283 P P 16 39 30.2 +2.4
MILA Mila 22.37 262 P P 16 39 33.7 +2.0
comp=Z,28nm,1.2s,comp=Z,0.0nm
MILA Mila 22.37 262 ⇑P P 16 39 34.4 +2.6
ARMA Armidale 22.38 281 P P 16 39 34.2 +2.3
comp=Z,117nm,1.6s,comp=Z,0.0nm
ARMA Armidale 22.38 281 P P 16 39 32.6 +0.7
ARMA Armidale 22.38 281 P P 16 39 35.5 +3.6
CNB Canberra Magne 22.55 267 P P 16 39 36.0 +2.4
comp=Z,148nm,0.9s,comp=Z,0.0nm
CNB Canberra Magne 22.55 267 P P 16 39 36.6 +3.1
AUPHS Peel High Scho 22.68 278 P P 16 39 37.7 +3.0
AUWSH Wavell State H 22.74 289 P P 16 39 38.5 +3.2
AUDAR Daramalan Coll 22.75 267 P P 16 39 38.2 +2.9
AUMHS Melrose High S 22.76 267 P P 16 39 37.8 +2.3
AUSIS Research Schoo 22.77 267 P P 16 39 38.4 +2.9
AUMTS Mt Stromlo 22.84 267 P P 16 39 38.7 +2.5
CAN Canberra 22.84 267 P P 16 39 38.7 +2.4
CAN Canberra 22.84 267 P P 16 39 37.0 +0.7
CAN Canberra 22.84 267 P P 16 39 38.9 +2.6
CAN Canberra 22.84 267 P P 16 39 37.0 +0.7
CAN Canberra 22.84 267 ⇑P P 16 39 38.6 +2.3
AUSMG Snowy Mountain 22.91 264 P P 16 39 39.0 +2.0
AUBSH Beerwah State 23.10 290 P P 16 39 41.3 +2.7
TAU Tasmania Unive 23.46 247 P P 16 39 42.2 +0.4
TAU Tasmania Unive 23.46 247 P P 16 39 43.2 +1.4
TAU Tasmania Unive 23.46 247 P P 16 39 42.2 +0.4
TAU Tasmania Unive 23.46 247 ⇑P P 16 39 43.8 +2.0
TW1H Toowoomba 1 Ha 23.47 288 P P 16 39 45.5 +3.4
MOO Moorlands 23.54 248 P P 16 39 43.2 +0.7
MOO Moorlands 23.54 248 P P 16 39 44.2 +1.7
CORO Coronation Par 23.55 251 P P 16 39 44.3 +1.7
YNG Young 23.59 269 P P 16 39 45.5 +2.5
comp=Z,57nm,1.5s,comp=Z,0.0nm
SANVU Saraoutou 23.68 335 P P 16 39 44.2 +0.2
SANVU Saraoutou 23.68 335 P P 16 39 45.7 +1.7
SANVU Saraoutou 23.68 335 ⇑P P 16 39 44.7 +0.7
AUDCS Dubbo College 24.05 274 P P 16 39 50.2 +3.0
AUBRN Burnie High Sc 24.52 252 P P 16 39 53.7 +2.3
TOO Toolangi 25.16 260 P P 16 39 59.1 +1.7
comp=Z,15nm,0.8s,comp=Z,0.0nm
TOO Toolangi 25.16 260 P P 16 39 56.9 -0.5
TOO Toolangi 25.16 260 P P 16 39 56.9 -0.5
TOO pmax pmax
comp=Z,44nm,1.6s
EIDS Eidsvold 25.32 291 P P 16 40 00.4 +1.6
comp=Z,167nm,1.1s
EIDS Eidsvold 25.32 291 P P 16 39 58.3 -0.5
EIDS IAmb IAmb 16 40 07.1
comp=Z,157nm,1.0s
EIDS Eidsvold 25.32 291 P P 16 40 01.0 +2.2
EIDS Eidsvold 25.32 291 ⇑P P 16 40 00.6 +1.7
AFI Afiamalu 25.40 25 P P 16 39 57.5 -2.2
AFI Afiamalu 25.40 25 P P 16 40 01.7 +2.0
AFI Afiamalu 25.40 25 P P 16 39 57.5 -2.2
AFI pmax pmax
comp=Z,138nm,1.0s
AFI Afiamalu 25.40 25 ⇓P P 16 40 00.2 +0.6
RAR Rarotonga 25.63 57 P P 16 40 02.6 +1.0
comp=Z,25nm,0.9s,baz=223,slow=10,SNR=2.3
AULRC Lightning Rid 25.66 280 P P 16 40 04.5 +2.6
GEXS Deakin Univers 26.00 258 P P 16 40 07.1 +2.2
AUMAG Moama Anglican 26.03 263 P P 16 40 07.3 +2.1
GD1S Gladstone Soft 26.15 294 P P 16 40 08.9 +2.6
BRAT Ballarat 26.39 260 P P 16 40 11.0 +2.7
AUMTC Mt Clear Colle 26.42 259 P P 16 40 10.7 +2.1
RMQ Roma 26.47 286 P P 16 40 11.9 +2.7
comp=Z,69nm,1.5s
RMQ Roma 26.47 286 P P 16 40 11.8 +2.6
CMSA Cobar Meteorol 26.63 273 P P 16 40 12.2 +1.6
comp=Z,154nm,1.3s,comp=Z,0.0nm
CMSA Cobar Meteorol 26.63 273 P P 16 40 12.5 +1.9
AUNRC North Rockhamp 26.91 294 P P 16 40 15.8 +2.6
ARPS Mount Arapiles 28.18 260 P P 16 40 25.3 +1.0
comp=Z,25nm,1.1s
MGBR Mount Gambier 28.98 258 P P 16 40 30.8 -0.7
STKA Stephens Creek 29.76 270 P P 16 40 40.0 +1.5
comp=Z,725nm,1.0s,comp=Z,0.0nm
STKA Stephens Creek 29.76 270 P P 16 40 39.9 +1.5
comp=Z,115nm,0.9s,baz=106,slow=12,SNR=57
STKA PcP PcP 16 43 37.6 -1.2
comp=Z,39nm,0.9s,baz=125,slow=3.9,SNR=5.9
STKA S S 16 45 22.8 -2.0
comp=Z,3.5nm,0.8s,baz=107,slow=14,SNR=1.4
STKA ScP ScP 16 47 03.1 -4.9
comp=Z,28nm,0.9s,baz=104,slow=2.8,SNR=9.4
STKA LR LR 16 52 04.2
comp=Z,2µm,20.6s,baz=100,slow=35
comp=Z,115nm,0.9s
STKA Stephens Creek 29.76 270 P P 16 40 40.5 +2.1
QLP Quilpie 29.91 282 P P 16 40 40.9 +1.2
comp=Z,314nm,1.0s,comp=Z,0.0nm
QLP Quilpie 29.91 282 P P 16 40 41.9 +2.1
AUMBR Murray Bridge 30.58 263 P P 16 40 47.5 +1.9
AUMAR Marden Senior 31.16 263 P P 16 40 53.5 +2.8
HTT Hallett 31.37 266 P P 16 40 54.0 +1.3
comp=Z,18nm,0.9s
HTT Hallett 31.37 266 P P 16 40 54.1 +1.5

HTT Hallett 31.37 266 ⇑P P 16 40 54.0 +1.3
AUJCS Jamestown Cent 31.69 266 P P 16 40 57.2 +1.8
TBI Tubuai 31.76 73 eP P 16 40 57.7 +1.7
comp=Z,3µm,31.0s
TBI eLR LR 16 49 22.9
comp=Z,26µm,31.2s
TBI eLR LR 16 49 25.7
comp=Z,6µm,33.5s
HNR Honiara 32.01 326 P P 16 40 58.6 +0.4
comp=Z,988nm,0.9s,baz=149,slow=4.3,SNR=19
HNR S S 16 45 59.9 0.0
comp=Z,37nm,0.8s,baz=177,slow=18,SNR=1.5
HNR LR LR 16 53 35.3
comp=Z,728nm,18.5s,baz=160,slow=36
HNR Honiara 32.01 326 P P 16 40 57.8 -0.4
HNR Honiara 32.01 326 P P 16 40 59.8 +1.6
HNR Honiara 32.01 326 ⇑P P 16 40 59.1 +0.9
HNR Honiara 32.01 326 P P 16 40 58.8 +0.6
CTAO Charters Tower 32.05 294 P P 16 40 58.1 -0.5
CTAO Charters Tower 32.05 294 P P 16 41 00.3 +1.7
CTAO Charters Tower 32.05 294 P P 16 40 58.1 -0.5
CTAO pmax pmax
comp=Z,402nm,1.0s
CTAO Charters Tower 32.05 294 ⇑P P 16 41 00.1 +1.4
INKA Innaminka 32.11 277 P P 16 40 58.8 -0.2
TV1H Townsville Har 32.19 296 P P 16 41 01.9 +2.1
SAVO Savo Central 32.32 326 P P 16 41 02.0 +1.0
WHYH Whyalla 32.57 266 P P 16 41 04.5 +1.5
AUCAS Cummins Area S 33.65 263 P P 16 41 14.3 +1.9
BBOO Buckleboo 33.84 265 P P 16 41 14.1 0.0
comp=Z,52nm,0.8s
BBOO Buckleboo 33.84 265 P P 16 41 13.3 -0.8
BBOO Buckleboo 33.84 265 P P 16 41 14.5 +0.4
MTSU Mount Surprise 34.70 295 P P 16 41 23.4 +1.8
comp=Z,133nm,0.9s
MTSU Mount Surprise 34.70 295 P P 16 41 23.6 +2.0
PAE Paea 35.12 65 eP P 16 41 25.2 +0.1
comp=Z,62nm,1.2s
PAE eS S 16 46 50.2 +2.3
comp=Z,421nm,26.3s
PAE eSS SS 16 49 24.1 +0.8
comp=Z,641nm,24.2s
PAE eLR LR 16 50 40.3
comp=Z,1µm,30.0s
PPT2 Papeete2 35.17 65 eP P 16 41 25.5 -0.2
comp=Z,146nm,1.2s
PPT2 eS S 16 46 48.1 -0.7
comp=Z,2µm,26.8s
PPT2 eSS SS 16 49 27.8 +3.3
comp=Z,3µm,24.5s
PPT2 eLR LR 16 51 02.4
comp=Z,5µm,33.5s
PPT2 eLR LR 16 51 03.2
comp=Z,8µm,30.5s
PPTF Pamatai, Papee 35.17 65 P P 16 41 26.8 +1.0
PPTF Pamatai, Papee 35.17 65 P P 16 41 24.9 -0.8
PPTF Pamatai, Papee 35.17 65 ⇑P P 16 41 29.8 +4.0
PPT Papeete 35.18 65 P P 16 41 25.9 +0.1
comp=Z,105nm,0.9s,baz=225,slow=5.7,SNR=9.0
PPT LR LR 16 54 15.1
comp=Z,613nm,19.9s,baz=219,slow=33
comp=Z,105nm,0.9s
TVO Taravao 35.27 65 eP P 16 41 27.5 +0.9
comp=Z,75nm,1.1s
TVO eS S 16 46 53.3 +2.8
comp=Z,430nm,25.0s
TVO eSS SS 16 49 27.2 +0.3
comp=Z,1µm,25.8s
TIAR Tiarei 35.35 65 eP P 16 41 29.1 +1.9
comp=Z,479nm,0.9s
TIAR eS S 16 46 53.0 +1.4
comp=Z,4µm,25.9s
TIAR eSS SS 16 49 32.1 +3.6
comp=Z,1µm,21.0s
TIAR eLR LR 16 50 41.4
comp=Z,8µm,32.1s
DRV Dumont d'Urvil 36.12 204 P P 16 41 35.4 +2.2
DRV PcP PcP 16 43 55.5 -0.4
QIS Mount Isa 36.73 287 P P 16 41 39.6 +0.7
comp=Z,148nm,1.2s,comp=Z,0.0nm
QIS Mount Isa 36.73 287 P P 16 41 40.0 +1.1
PMOR Pomariorio Ree 38.09 63 eSS SS 16 50 28.3 +2.1
comp=Z,4µm,23.4s
COEN Coen 38.30 299 P P 16 41 53.4 +1.2
comp=Z,764nm,1.0s,comp=Z,0.0nm
COEN Coen 38.30 299 P P 16 41 52.7 +0.5
COEN Coen 38.30 299 P P 16 41 53.6 +1.4
TARA Tarawa 38.84 353 P P 16 41 58.7 +2.1
PMG Port Moresby 38.98 308 P P 16 41 58.5 +0.6
comp=Z,509nm,0.9s,baz=138,slow=7.1,SNR=103
PMG ScP ScP 16 47 39.5 -1.5
comp=Z,25nm,0.8s,baz=112,slow=0.6,SNR=8.1
comp=Z,509nm,0.9s
PMG Port Moresby 38.98 308 P P 16 41 58.9 +1.1
PMG Port Moresby 38.98 308 P P 16 41 59.4 +1.6
PMG Port Moresby 38.98 308 ceP P 16 41 58.4 +0.6
PMG pmax pmax
comp=Z,689nm,1.0s
PMG Port Moresby 38.98 308 ⇑P P 16 41 59.2 +1.4
PMG Port Moresby 38.98 308 P P 16 41 59.2 +1.4
PMG pP pP 16 42 25.5 -2.3
ASAR Alice Springs 39.47 278 P P 16 42 01.8 -0.1
comp=Z,126nm,0.9s,baz=120,slow=8.0,SNR=520
ASAR PcP PcP 16 44 05.8 -1.2
comp=Z,32nm,0.7s,baz=121,slow=4.2,SNR=6.7
ASAR ScP ScP 16 47 37.1 -5.8
comp=Z,24nm,0.8s,baz=124,slow=4.3,SNR=13
ASAR S S 16 47 53.1 -0.8
comp=Z,20nm,0.8s,baz=126,slow=14,SNR=15
ASAR PKiKP PKiKP 16 51 17.7 -1.0
comp=Z,2.2nm,1.0s,baz=119,slow=1.2,SNR=4.2
ASAR P3KPbc 17 11 53.5
comp=Z,2.1nm,0.9s,baz=305,slow=4.7,SNR=15
ASAR PKPPKP P'P'df 17 14 26.5 -3.7
comp=Z,1.3nm,1.1s,baz=299,slow=1.0,SNR=4.0
comp=Z,126nm,0.9s
RABL Rabaul 40.32 319 P P 16 42 09.3 +0.4
RABL Rabaul 40.32 319 ⇑P P 16 42 10.2 +1.3
VNDA Vanda 40.71 185 P P 16 42 13.5 +2.1
comp=Z,7.8nm,0.7s,baz=4.2,slow=12,SNR=35
VNDA PcP PcP 16 44 11.9 +1.8
comp=Z,31nm,1.0s,baz=23,slow=7.7,SNR=4.6
VNDA ScP ScP 16 47 44.5 -2.2
comp=Z,23nm,1.0s,baz=357,slow=4.5,SNR=6.9
VNDA LR LR 16 55 41.5
comp=Z,848nm,21.4s,baz=356,slow=31
VNDA Vanda 40.71 185 P P 16 42 11.8 +0.5
VNDA ScP ScP 16 47 44.9 -1.8
SBA Scott Base 40.74 183 P P 16 42 12.8 +1.1
SBA Scott Base 40.74 183 P P 16 42 12.8 +1.1
SBA pmax pmax
comp=Z,60nm,1.2s
FORT Forrest 40.92 264 P P 16 42 13.7 -0.1
comp=Z,123nm,0.6s
FORT Forrest 40.92 264 P P 16 42 13.5 -0.3
FORT IAmb IAmb 16 42 18.2
comp=Z,85nm,0.6s
WR8 Warramunga Arr 40.99 283 P P 16 42 14.4 0.0
WR8 IAmb IAmb 16 42 18.1
comp=Z,110nm,1.0s
WB2 Warramunga Arr 41.12 283 P P 16 42 15.1 -0.3
WB2 IAmb IAmb 16 42 18.6
comp=Z,109nm,0.8s
WRAB Tennant Creek 41.12 283 P P 16 42 15.1 -0.5
WRAB IAmb IAmb 16 42 19.7
comp=Z,104nm,0.8s
WRAB Tennant Creek 41.12 283 P P 16 42 15.6 +0.1
WRAB Tennant Creek 41.12 283 ceP P 16 42 15.3 -0.2
WRAB pmax pmax
comp=Z,76nm,1.0s
WRAB Tennant Creek 41.12 283 P P 16 42 15.3 -0.2
WRA Warramunga Arr 41.13 283 P P 16 42 15.2 -0.4
comp=Z,75nm,0.7s,baz=121,slow=8.3,SNR=282
WRA PcP PcP 16 44 11.8 -0.6
comp=Z,21nm,0.9s,baz=125,slow=3.3,SNR=5.4
WRA ScP ScP 16 47 43.9 -5.6
comp=Z,34nm,0.9s,baz=125,slow=3.7,SNR=13
WRA S S 16 48 18.2 -0.4
comp=Z,11nm,1.0s,baz=125,slow=14,SNR=7.0
WRA PKiKP PKiKP 16 51 17.9 -2.3
comp=Z,2.3nm,0.9s,baz=121,slow=0.6,SNR=6.1
WRA LR LR 17 00 00.6
comp=Z,2µm,19.1s,baz=118,slow=37
comp=Z,75nm,0.7s
WRA Warramunga Arr 41.13 283 P P 16 42 15.0 -0.6
RKT Rikitea 43.18 85 eP P 16 42 31.9 -0.2

RKT *e*S **S** **16 48 44.8 -3.8**
comp=Z,4µm,37.0s
RKT *e*SS **SS** **16 52 07.5 +0.8**
comp=Z,4µm,25.8s
RKT *e*LQ LQ 16 52 59.0
comp=Z,9µm,26.5s
RKT *e*LR LR 16 54 46.8
comp=Z,23µm,32.2s
WRKA Warakurna 43.24 272 P **P** **16 42 31.5 -1.2**
comp=Z,20µm,30.0s
MMPI Merauke 44.11 301 P **P** **16 42 39.3 -0.3**
MANU Manus Island 44.71 315 P **P** **16 42 44.3 -0.1**
MANU IAmb IAmb 16 42 50.0
comp=Z,42nm,1.2s
MANU Manus Island 44.71 315 ⇑P **P** **16 42 45.9 +1.4**
CCD Concordia, Ant 45.08 197 P **P** **16 42 50.1 +3.0**
CCD pP **pP** **16 43 17.3 -0.7**
CCD PcP **PcP** **16 44 26.0 +0.6**
comp=Z,200nm,1.2s
CASY Casey 47.08 211 P **P** **16 43 01.9 -0.4**
CASY Casey 47.08 211 ⇓P **P** **16 43 02.8 +0.5**
CASY Casey 47.08 211 P **P** **16 43 02.2 -0.1**
AUALB St Joseph's Co 47.28 254 P **P** **16 43 04.9 +0.6**
TAOE Nuku Hiva Isla 47.79 64 *e*P **P** **16 43 05.7 -2.9**
comp=Z,453nm,27.3s
TAOE *e*S **S** **16 49 54.6 -0.5**
comp=Z,3µm,25.5s
TAOE *e*SS **SS** **16 53 21.9 -3.5**
comp=Z,1µm,26.1s
TAOE *e*LR LR 16 56 26.5
comp=Z,5µm,35.3s
MTN Manton Dam 47.83 288 P **P** **16 43 08.9 +0.1**
comp=Z,100nm,0.6s,comp=Z,0.0nm
MTN Manton Dam 47.83 288 P **P** **16 43 07.8 -1.0**
MTN IAmb IAmb 16 43 14.7
comp=Z,60nm,0.7s
MTN PcP **PcP** **16 44 34.9 -0.6**
KNRA Kununurra 47.91 283 P **P** **16 43 09.5 +0.1**
comp=Z,93nm,0.9s,comp=Z,0.0nm
KNRA Kununurra 47.91 283 IAmb IAmb 16 43 18.0
comp=Z,64nm,0.7s
DRS Darwin Rock St 48.27 289 P **P** **16 43 14.6 +2.5**
AUDHS Darwin High Sc 48.31 289 P **P** **16 43 13.7 +1.2**
JAY Jayapura 48.34 307 P **P** **16 43 12.0 -0.7**
comp=Z,337nm,1.1s,baz=188,slow=12,SNR=18
JAY LR LR 17 04 30.1
comp=Z,321nm,18.7s,baz=118,slow=37
comp=Z,337nm,1.1s
JAY Jayapura 48.34 307 P **P** **16 43 12.6 -0.1**
comp=Z,3µmcomp=Z,308nm,1.2s
JAY Jayapura 48.34 307 P **P** **16 43 12.0 -0.7**
NWAO Narrogin (SRO) 48.57 256 P **P** **16 43 13.5 -0.9**
NWAO Narrogin (SRO) 48.57 256 P **P** **16 43 13.3 -1.0**
comp=Z,40nm,0.9s,baz=110,slow=6.5,SNR=19
comp=Z,40nm,0.9s
NWAO Narrogin (SRO) 48.57 256 P **P** **16 43 13.2 -1.1**
NWAO Narrogin (SRO) 48.57 256 P **P** **16 43 13.5 -0.9**
NWAO S **S** **16 50 03.9 -1.7**
NWAO Narrogin (SRO) 48.57 256 P **P** **16 43 15.9 +1.6**
NWAO Narrogin (SRO) 48.57 256 P **P** **16 43 13.4 -0.9**
GENI Genyem 48.62 307 P **P** **16 43 16.5 +1.7**
GENI Genyem 48.62 307 P **P** **16 43 15.8 +1.0**
comp=Z,4µmcomp=Z,344nm,1.1s
GENI Genyem 48.62 307 ⇑P **P** **16 43 15.1 +0.2**
KLBR Kellerberrin 48.70 258 P **P** **16 43 14.5 -0.9**
comp=Z,232nm,1.1s
KLBR Kellerberrin 48.70 258 P **P** **16 43 14.7 -0.6**
FITZ Fitzroy Crossi 48.96 279 P **P** **16 43 17.4 0.0**
comp=Z,37nm,1.0s
FITZ Fitzroy Crossi 48.96 279 P **P** **16 43 17.5 0.0**
comp=Z,93nm,0.8s,baz=148,slow=5.3,SNR=78
FITZ ScP **ScP** **16 48 19.8 -2.0**
comp=Z,18nm,0.8s,baz=180,slow=3.0,SNR=5.7
FITZ S **S** **16 50 10.3 -1.0**
comp=Z,14nm,0.9s,baz=50,slow=19,SNR=11
FITZ LR LR 17 05 42.1
comp=Z,1µm,18.9s,baz=120,slow=38
comp=Z,93nm,0.8s
FITZ Fitzroy Crossi 48.96 279 P **P** **16 43 17.1 -0.3**
FITZ PcP **PcP** **16 44 37.6 -1.9**
FITZ Fitzroy Crossi 48.96 279 P **P** **16 43 17.8 +0.4**
FITZ Fitzroy Crossi 48.96 279 ⇑P **P** **16 43 17.6 +0.2**
AUHAR St Anne's Scho 49.54 256 P **P** **16 43 22.0 +0.3**
MUN Mundaring 49.74 257 P **P** **16 43 22.7 -0.5**
comp=Z,132nm,0.9s
MUN Mundaring 49.74 257 P **P** **16 43 23.0 -0.2**
BLDU Ballidu 49.92 259 P **P** **16 43 23.5 -1.1**
comp=Z,92nm,0.9s
BLDU Ballidu 49.92 259 P **P** **16 43 23.7 -0.9**
MTKN Mount Kenneth 50.10 257 P **P** **16 43 27.7 +1.8**
H01W1 Cape Leeuwin H 50.17 253 P **P** **16 43 25.7 -0.5**
baz=85,slow=8.5,SNR=6.4
MEEK Meekatharra 50.18 265 P **P** **16 43 26.0 -0.7**
H01W2 Cape Leeuwin H 50.19 253 P **P** **16 43 25.8 -0.5**
baz=85,slow=8.5,SNR=3.0
H01W3 Cape Leeuwin H 50.19 253 P **P** **16 43 25.8 -0.5**
baz=85,slow=8.5,SNR=4.3
SAUI Saumlaki 50.87 293 P **P** **16 43 31.2 -0.7**
SAUI Saumlaki 50.87 293 P **P** **16 43 33.9 +2.0**
SAUI Saumlaki 50.87 293 P **P** **16 43 32.2 +0.3**
comp=Z,375nm,1.3s
SAUI Saumlaki 50.87 293 ⇑P **P** **16 43 33.0 +1.1**
MORW Morawa 51.11 260 P **P** **16 43 32.8 -0.8**
comp=Z,71nm,0.9s
MORW Morawa 51.11 260 P **P** **16 43 32.7 -0.8**
MORW IAmb IAmb 16 43 37.0
comp=Z,57nm,0.8s
MORW Morawa 51.11 260 P **P** **16 43 33.2 -0.4**
MORW Morawa 51.11 260 ⇑P **P** **16 43 32.9 -0.7**
PSAC2 Pilbara Seismi 51.65 271 P **P** **16 43 36.9 -0.7**
comp=Z,52nm,1.3s
PSA00 Pilbara Seismi 51.69 271 P **P** **16 43 36.4 -1.5**
PSA00 Pilbara Seismi 51.69 271 IAmb IAmb 16 43 41.1
comp=Z,38nm,0.7s
PSA00 Pilbara Seismi 51.69 271 P **P** **16 43 37.0 -0.9**
SRPI Serui, Papua 51.73 303 P **P** **16 43 39.1 +0.8**
comp=Z,2µmcomp=Z,153nm,1.2s
MBWA Marble Bar 51.99 271 P **P** **16 43 38.8 -1.4**
comp=Z,95nm,0.8s,comp=Z,0.0nm
MBWA Marble Bar 51.99 271 P **P** **16 43 39.0 -1.2**
MBWA IAmb IAmb 16 43 43.4
comp=Z,67nm,0.7s
MBWA Marble Bar 51.99 271 P **P** **16 43 39.5 -0.7**
MBWA S **S** **16 50 48.9 -4.3**
MBWA Marble Bar 51.99 271 P **P** **16 43 39.4 -0.8**
MBWA Marble Bar 51.99 271 ⇑P **P** **16 43 39.1 -1.2**
BAKI Biak 52.32 304 P **P** **16 43 44.5 +1.9**
comp=Z,4µmcomp=Z,291nm,1.1s
QSPA South Pole Qui 52.66 180 P **P** 16 43 51.3 +6.6
comp=Z,119nm,0.8s,baz=35,slow=2.6,SNR=211
QSPA ScP **ScP** **16 48 38.6 +1.5**
comp=Z,15nm,1.0s,baz=6.0,slow=1.6,SNR=4.2
QSPA S S 16 51 12.1 +11
comp=Z,9.3nm,0.9s,baz=322,slow=19,SNR=5.7
QSPA LR LR 17 03 25.6
comp=Z,979nm,21.2s,baz=40,slow=33
QSPA South Pole Qui 52.66 180 P P 16 43 50.3 +5.6
QSPA PcP **PcP** **16 44 58.5 +5.8**
QSPA South Pole Qui 52.66 180 P P 16 43 51.9 +7.3
FAKI Fak Fak 53.69 299 P **P** **16 43 51.4 -1.3**
FAKI IAmb IAmb 16 43 55.3
comp=Z,259nm,1.8s
FAKI Fak Fak 53.69 299 P **P** **16 43 52.3 -0.4**
FAKI Fak Fak 53.69 299 P **P** **16 43 51.0 -1.7**
comp=Z,1µmcomp=Z,80nm,1.3s
FAKI Fak Fak 53.69 299 ⇑P **P** **16 43 51.9 -0.8**
BNDI Bandanaira 54.23 295 P **P** **16 43 56.3 -0.3**
BNDI Bandanaira 54.23 295 P **P** **16 43 55.9 -0.7**
comp=Z,3µmcomp=Z,4µmcomp=Z,365nm,1.1s
BNDI Bandanaira 54.23 295 ⇑P **P** **16 43 55.7 -0.9**
SOEI Soe 54.99 286 P **P** **16 44 03.5 +1.3**
SOEI Soe 54.99 286 P **P** **16 44 02.4 +0.2**
SOEI Soe 54.99 286 P **P** **16 44 04.4 +2.2**
SOEI Soe 54.99 286 P **P** **16 44 03.3 +1.1**
comp=Z,4µmcomp=Z,3µmcomp=Z,292nm,1.3s
SOEI Soe 54.99 286 ⇑P **P** **16 44 03.7 +1.4**
BATI Baumata 55.17 285 P **P** **16 44 04.5 +1.1**
comp=Z,107nm,0.8s,baz=119,slow=5.2,SNR=21
BATI S **S** **16 51 36.3 +0.1**
comp=Z,3.8nm,0.5s,baz=120,slow=8.1,SNR=1.4
comp=Z,107nm,0.8s
BATI Baumata 55.17 285 P **P** **16 44 04.5 +1.1**
comp=Z,3µmcomp=Z,2µmcomp=Z,158nm,1.3s
GIRL Giralia 55.60 266 P **P** **16 44 06.9 +0.5**
comp=Z,77nm,0.9s
GIRL Giralia 55.60 266 P **P** **16 44 06.7 +0.2**
GIRL IAmb IAmb 16 44 10.8
comp=Z,67nm,0.9s
MSAI Masohi 55.74 295 P **P** **16 44 06.5 -1.0**
comp=Z,4µmcomp=Z,2µmcomp=Z,233nm,1.0s
SWI Sorong 55.85 300 P **P** **16 44 08.0 -0.2**
comp=Z,4µmcomp=Z,302nm,1.3s
AAI Ambon 56.04 295 P **P** **16 44 11.2 +1.6**
comp=Z,2µmcomp=Z,117nm,1.0s
NLAI Namlea 57.14 294 P **P** **16 44 16.6 -0.7**
comp=Z,3µmcomp=Z,3µmcomp=Z,189nm,1.5s
MMRI Maumere 57.25 285 P **P** **16 44 18.1 0.0**
MMRI Maumere 57.25 285 P **P** **16 44 18.7 +0.6**
MMRI Maumere 57.25 285 P **P** **16 44 18.2 0.0**
MMRI Maumere 57.25 285 ⇑P **P** **16 44 18.1 0.0**
BASI Baing, Sumba 57.55 283 P **P** **16 44 21.0 +0.8**
EDFI Ende, Flores 57.59 285 P **P** **16 44 19.5 -1.2**
comp=Z,3µmcomp=Z,2µmcomp=Z,126nm,0.8s
WSI Waingapu 58.10 283 P **P** **16 44 24.3 +0.2**
SANI Sanana 58.76 294 P **P** **16 44 27.8 -0.9**
SANI Sanana 58.76 294 P **P** **16 44 28.4 -0.2**
SANI Sanana 58.76 294 P **P** **16 44 28.1 -0.6**
comp=Z,4µmcomp=Z,287nm,0.9s
SANI Sanana 58.76 294 ⇑P **P** **16 44 28.0 -0.6**
WBSI Waikabubak, Su 58.82 282 P **P** **16 44 29.1 -0.1**
comp=Z,3µmcomp=Z,2µmcomp=Z,237nm,1.1s
TNTI Ternate 59.73 298 P **P** **16 44 34.2 -1.1**
TNTI IAmb IAmb 16 44 43.5
comp=Z,200nm,2.0s
TNTI Ternate 59.73 298 P **P** **16 44 37.7 +2.4**
TNTI Ternate 59.73 298 P **P** **16 44 34.5 -0.8**
BSSI Bau Bau, Buton 60.16 286 P **P** **16 44 38.1 -0.2**
comp=Z,3µmcomp=Z,1µmcomp=Z,100nm,0.9s
PLAI Plampang 60.58 282 P **P** **16 44 41.5 +0.4**
PLAI Plampang 60.58 282 P **P** **16 44 40.9 -0.2**
comp=Z,3µmcomp=Z,2µmcomp=Z,153nm,1.1s
BKSI Bulukumba 60.96 287 P **P** **16 44 43.6 -0.1**
comp=Z,3µmcomp=Z,2µmcomp=Z,67nm,0.8s
TWSI Taliwang, Sumb 61.33 282 P **P** **16 44 45.7 -0.5**
comp=Z,2µmcomp=Z,2µmcomp=Z,138nm,1.4s
KAPI Kappang 61.44 287 P **P** **16 44 45.9 -1.1**
KAPI IAmb IAmb 16 44 52.4
comp=Z,72nm,1.1s
KAPI Kappang 61.44 287 P **P** **16 44 46.3 -0.7**
KAPI S **S** **16 52 57.5 0.0**
KAPI Kappang 61.44 287 P **P** **16 44 45.9 -1.1**
KAPI pmax pmax
comp=Z,72nm,1.1s
RPN Rapa Nui 61.47 104 LR LR 17 04 58.7
comp=Z,999nm,21.3s,baz=237,slow=30
BNSI Bone 61.57 288 P **P** **16 44 48.1 +0.3**
comp=Z,3µmcomp=Z,2µmcomp=Z,88nm,1.4s
LUWI Luwuk 61.79 292 P **P** **16 44 49.1 -0.1**
LUWI Luwuk 61.79 292 P **P** **16 44 48.5 -0.8**
LUWI Luwuk 61.79 292 P **P** **16 44 50.9 +1.6**
LUWI Luwuk 61.79 292 P **P** **16 44 49.8 +0.5**
comp=Z,4µmcomp=Z,286nm,1.2s
LUWI Luwuk 61.79 292 ⇑P **P** **16 44 49.7 +0.5**
KMSI Cibinong 62.01 295 P **P** **16 44 50.7 0.0**
HLP Hilina Pali 62.08 29 P **P** **16 44 51.4 +0.3**
SPSI Sidrap Palu 62.10 288 P **P** **16 44 50.6 -0.8**
comp=Z,2µmcomp=Z,1µmcomp=Z,91nm,1.1s
PUH Pauahi 62.18 30 P **P** **16 44 52.0 +0.2**
HUH Hualalai 62.23 29 P **P** **16 44 52.5 +0.2**
MLH Mauna Loa 62.23 29 P **P** **16 44 51.7 -0.6**
HMH Humu'ula Sheep 62.29 29 P **P** **16 44 52.8 0.0**
POHA Pohakuloa 62.41 29 P **P** **16 44 55.5 +2.0**
TTSI Tana Toraja 62.66 289 P **P** **16 44 54.8 -0.3**
comp=Z,2µmcomp=Z,1µmcomp=Z,108nm,1.0s
DNP Denpasar 62.67 280 P P 16 45 00.2 +5.1
APSI Ampana 62.71 292 P **P** **16 44 55.7 +0.3**
comp=Z,2µmcomp=Z,253nm,1.2s
DHH Diamond Head 62.95 26 P **P** **16 44 57.9 +1.2**
DHH Diamond Head 62.95 26 P **P** **16 44 57.9 +1.2**
SRBI Singaraja 63.03 281 P **P** **16 44 56.7 -0.8**
comp=Z,3µmcomp=Z,2µmcomp=Z,148nm,0.9s
BELA Belgrano 2 63.31 173 P **P** **16 44 59.0 +0.5**
BELA IAmb IAmb 16 45 03.8
comp=Z,106nm,0.9s
MRSI Marisa 63.42 293 P **P** **16 44 59.0 -1.1**
JAGI Jajag, Banyuwa 63.62 280 P **P** **16 45 00.4 -1.1**
JAGI IAmb IAmb 16 45 07.7
comp=Z,104nm,1.1s
JAGI Jajag, Banyuwa 63.62 280 P **P** **16 45 02.2 +0.7**
JAGI Jajag, Banyuwa 63.62 280 P **P** **16 45 00.2 -1.3**
comp=Z,2µmcomp=Z,1µmcomp=Z,90nm,1.2s
JAGI Jajag, Banyuwa 63.62 280 ⇑P **P** **16 45 00.6 -0.8**
ABJI Asem Bagus 63.97 281 P **P** **16 45 06.1 +2.4**
comp=Z,2µmcomp=Z,137nm,0.9s
PCI Palu 64.06 290 P **P** **16 45 05.6 +1.3**
comp=Z,2µmcomp=Z,131nm,0.8s
MAW Mawson 64.32 203 P **P** **16 45 06.0 +0.8**
comp=Z,40nm,1.0s
MAW Mawson 64.32 203 P **P** **16 45 06.5 +1.4**
comp=Z,219nm,1.0s,baz=131,slow=7.1,SNR=73
MAW LR LR 17 12 21.1
comp=Z,806nm,19.6s,baz=118,slow=35
comp=Z,219nm,1.0s
MAW Mawson 64.32 203 ⇓P **P** **16 45 06.9 +1.7**
SMAI San Martin Ant 64.36 158 P **P** **16 45 06.8 +1.4**
SMAI IAmb IAmb 16 45 17.0
comp=Z,86nm,1.0s
BLJI Banyuglugur 64.50 280 P **P** **16 45 07.4 +0.2**
comp=Z,3µmcomp=Z,155nm,0.8s
KMMI Kalianget 64.63 281 P **P** **16 45 08.6 +0.6**
comp=Z,4µmcomp=Z,3µmcomp=Z,118nm,1.1s
TOLI2 Tolitoli 64.70 293 P **P** **16 45 08.2 -0.3**
TOLI2 IAmb IAmb 16 45 13.8
comp=Z,52nm,0.8s
TOLI2 Tolitoli 64.70 293 P **P** **16 45 09.2 +0.7**
MPSI Mapaga 64.83 291 P **P** **16 45 08.3 -1.0**
comp=Z,3µmcomp=Z,1µmcomp=Z,60nm,1.0s
DAV Davao City (W) 65.46 301 LR LR 17 13 28.8
comp=Z,256nm,22.0s,baz=150,slow=36
DAV Davao City (W) 65.46 301 P **P** **16 45 13.3 -0.1**
GRJI Gresik 65.88 280 P **P** **16 45 18.4 +2.3**
comp=Z,3µmcomp=Z,236nm,1.2s
BKB Balikpapan 66.03 288 P **P** **16 45 19.1 +2.1**
BKB Balikpapan 66.03 288 P **P** **16 45 20.1 +3.1**
BKB Balikpapan 66.03 288 P **P** **16 45 19.5 +2.5**
comp=Z,4µmcomp=Z,4µmcomp=Z,269nm,1.4s
PCJI Pacitan 66.13 278 P **P** **16 45 18.5 +0.8**
BBKI Banjar Baru 66.19 285 P **P** **16 45 18.8 +0.7**
SMRI Semarang 67.40 279 P **P** **16 45 29.3 +3.6**
SMRI Semarang 67.40 279 P **P** **16 45 29.4 +3.7**
comp=Z,152nm,0.9s
PMSA Palmer Station 67.44 156 LR LR 17 11 20.4
comp=Z,896nm,18.8s,baz=250,slow=32
PMSA Palmer Station 67.44 156 *e*P **P** **16 45 29.5 +4.3**
MTKI Muara Teweh, K 67.76 287 P **P** **16 45 28.3 +0.3**
comp=Z,3µmcomp=Z,95nm,0.8s
KPJI Karang Pucung 68.42 277 P **P** **16 45 32.1 0.0**
XMI Christmas Isla 69.14 273 P **P** **16 45 36.6 0.0**
SYO Syowa Base 69.33 195 *i*P **P** **16 45 37.2 +0.3**
SYO Syowa Base 69.33 195 *i*pP pP 16 46 05.8 -4.3
BBJI Bungbulang 69.35 277 P **P** **16 45 37.3 -0.7**
CNJI Cibinong 69.85 276 P **P** **16 45 39.9 -1.1**
comp=Z,1µmcomp=Z,105nm,1.1s
SKJI Sukabumi 70.49 276 P **P** **16 45 47.8 +3.0**
comp=Z,3µmcomp=Z,4µmcomp=Z,260nm,1.0s
DBJI Dramaga 70.61 277 P **P** **16 45 45.9 +0.3**
comp=Z,200nm,1.0s
TROLL Troll, Antarti 70.76 182 ⇑P **P** **16 45 47.2 +1.4**
comp=Z,9µm,1.0s
TROLL ⇑S **S** **16 54 49.9 +0.8**
SNAA Sanae 71.17 180 ⇑P **P** **16 45 49.1 +1.0**
comp=Z,3µm,1.1s
SNAA ⇑S **S** **16 54 55.5 +2.0**
SNAA Sanae 71.17 180 P **P** **16 45 49.4 +1.2**
comp=Z,131nm,1.0s,baz=177,slow=5.9,SNR=128
SNAA S **S** **16 54 55.6 +2.0**
comp=Z,2.8nm,1.0s,baz=186,slow=19,SNR=8.5
SNAA LR LR 17 14 52.3
comp=Z,631nm,19.5s,baz=187,slow=34
comp=Z,131nm,1.0s
SNAA Sanae 71.17 180 P **P** **16 45 49.5 +1.3**
SNAA IAmb IAmb 16 45 53.3
comp=Z,140nm,0.9s
SNAA Sanae 71.17 180 *ce*P **P** **16 45 48.3 +0.2**
SNAA pmax pmax
comp=Z,182nm,1.0s
SNAA Sanae 71.17 180 ⇑P **P** **16 45 49.3 +1.1**
VNA3 Neumayer Olymp 71.48 178 ⇑P **P** **16 45 51.1 +1.1**
comp=Z,203nm,0.8s
VNA3 ⇑S **S** **16 54 59.1 +2.0**
NVL N'lazarevskaya 71.56 185 *e*P **P** **16 45 53.3 +2.9**
NVL *e* 16 48 30.2
NVL *e*PPP PPP 16 50 14.2
NVL *e*S **S** **16 54 59.9 +1.9**
NVL *e*SS **SS** **16 59 38.3 +3.7**
NVL pmax pmax
comp=Z,261nm,0.7s
NVL smax smax
comp=E,658nm,11.7s
VNA2 Neumayer--Watz 71.86 178 ⇑P **P** **16 45 53.7 +1.4**
comp=Z,235nm,0.7s,baz=174,slow=5.1
VNA2 ⇑S **S** **16 55 02.9 +1.5**
baz=22,slow=32
SBUM Sibu 71.98 288 P **P** **16 45 53.3 -0.5**
SBUM Sibu 71.98 288 P **P** **16 45 54.3 +0.5**
SBUM Sibu 71.98 288 ⇑P **P** **16 45 53.7 -0.1**
VNA1 Neumayer--Stat 72.12 178 ⇑P **P** **16 45 55.2 +1.5**
comp=Z,280nm,1.0s
JCJ Chichijima 72.19 327 P **P** **16 45 54.1 -0.5**
JCJ Chichijima 72.19 327 P **P** **16 45 54.5 -0.2**
TPI Tanjungpandan 72.21 280 P **P** **16 45 54.5 -0.7**
comp=Z,2µmcomp=Z,2µmcomp=Z,68nm,1.0s
MG05 Puerto Natales 72.37 142 P **P** **16 45 56.5 +0.9**
MG05 IAmb IAmb 16 46 01.6
comp=Z,91nm,0.8s
GO09 Cerro Castillo 72.71 142 P **P** **16 45 58.9 +1.3**
GO09 IAmb IAmb 16 46 04.0
comp=Z,132nm,1.1s
KASI Kota Agung 73.01 276 P **P** **16 45 58.5 -1.4**
comp=Z,2µmcomp=Z,93nm,0.9s
KLI Kotabumi 73.12 277 P **P** **16 45 59.7 -0.9**
LWLI Liwa 73.66 276 P **P** **16 46 02.8 -1.1**
MDSI Maura Dua 73.89 277 P **P** **16 46 03.2 -1.9**
comp=Z,97nm,0.9s
AY03 Cochrane 75.11 139 P **P** **16 46 12.7 +1.1**
DSRI Dabo 76.03 280 P **P** **16 46 16.2 -1.1**
MASI Maura Aman, Be 76.24 277 P **P** **16 46 17.6 -1.0**
JMZ Minamidaito 2 76.40 318 P **P** **16 46 21.7 +2.7**
COYC Coyhaique 76.45 137 ⇑P **P** **16 46 22.3 +3.0**
COYC Coyhaique 76.45 137 P **P** **16 46 22.1 +2.9**
TPRI Tanjung Pinang 76.93 281 P **P** **16 46 24.1 +1.7**
comp=Z,2µmcomp=Z,2µmcomp=Z,72nm,1.1s
KRJI Kerinci 77.49 277 P **P** **16 46 24.4 -1.3**
BTDF Bukit Timah Da 77.80 281 P **P** **16 46 27.1 -0.1**
MYKOM Kota Tinggi 78.00 282 P **P** **16 46 28.6 +0.2**
MYKOM Kota Tinggi 78.00 282 ⇑P **P** **16 46 28.0 -0.3**
LLD2 Futaleuf 78.12 136 ⇑P **P** **16 46 31.3 +2.7**
PPSI Pulau Pagai 78.23 276 P **P** **16 46 32.3 +2.7**
comp=Z,2µmcomp=Z,243nm,0.9s
LL01 San Ignacio de 78.33 135 P **P** **16 46 31.6 +1.9**
JOW Kunigami 78.79 317 P **P** **16 46 33.8 +1.4**
JOW Kunigami 78.79 317 ⇓P **P** **16 46 34.0 +1.7**
EFI East Falkland 78.91 149 P **P** **16 46 33.5 +0.8**
EFI IAmb IAmb 16 46 38.4
comp=Z,84nm,1.1s
EFI East Falkland 78.91 149 *ce*P **P** **16 46 33.8 +1.0**
EFI pmax pmax
comp=Z,116nm,1.2s
EFI East Falkland 78.91 149 ⇓P **P** **16 46 34.9 +2.1**
EFI ⇑P **P** **16 46 36.9 +4.1**
PDSI Padang 79.00 277 P **P** **16 46 32.0 -1.9**
comp=Z,1µmcomp=Z,65nm,0.9s
PPI Padang Panjang 79.33 278 P **P** **16 46 37.4 +1.8**
LR04 Corral 79.36 132 P **P** **16 46 35.7 +0.3**
LR04 IAmb IAmb 16 46 41.9
comp=Z,121nm,0.9s
H03S2 Juan Fernandez 79.75 125 T T 18 13 27.9
baz=229,slow=74,SNR=82
H03S1 Juan Fernandez 79.76 125 T T 18 13 29.2
baz=229,slow=74,SNR=81
H03S3 Juan Fernandez 79.77 125 T T 18 13 23.5
baz=229,slow=74,SNR=82
SISI Saibi 79.83 276 P **P** **16 46 40.6 +2.2**
comp=Z,2µmcomp=Z,98nm,1.3s
TWGBT Beinan 79.94 309 P **P** **16 46 38.0 -0.6**
TWG Pinlang 79.94 309 P **P** **16 46 37.8 -0.9**
YOJ Yonaguni jima 79.98 311 P **P** **16 46 40.8 +2.0**
YOJ Yonaguni jima 79.98 311 ⇓P **P** **16 46 40.6 +1.8**
H03N3 Juan Fernandez 79.99 124 T T 18 13 35.5
baz=234,slow=72,SNR=125
H03N2 Juan Fernandez 79.99 124 T T 18 13 31.8
baz=234,slow=72,SNR=125
H03N1 Juan Fernandez 80.00 124 T T 18 13 11.5
baz=234,slow=72,SNR=144
YULB Yu-li 80.23 309 P **P** **16 46 39.4 -0.8**
YULB IAmb IAmb 16 46 43.0
comp=Z,101nm,0.8s
YULB Yu-li 80.23 309 P **P** **16 46 39.4 -0.8**
JSG Sagara 80.45 328 P **P** **16 46 42.8 +1.7**
PLCA Paso Flores 80.47 134 P **P** **16 46 43.6 +2.1**
comp=Z,49nm,0.9s,baz=228,slow=6.8,SNR=54
PLCA LR LR 17 14 56.2
comp=Z,317nm,21.9s,baz=226,slow=30
comp=Z,49nm,0.9s
PLCA Paso Flores 80.47 134 P **P** **16 46 41.8 +0.3**
PLCA Paso Flores 80.47 134 *eP* **P** **16 46 44.2 +2.7**
PLCA Paso Flores 80.47 134 P **P** **16 46 44.2 +2.7**
TPUB Ta-pu 80.57 309 P **P** **16 46 41.9 -0.2**
TPUB IAmb IAmb 16 46 45.7
comp=Z,164nm,0.9s
TPUB Ta-pu 80.57 309 P **P** **16 46 41.7 -0.4**
NACB Ninganchiao 80.62 310 P **P** **16 46 43.0 +0.7**
SSLB Suanglung 80.73 309 P **P** **16 46 42.6 -0.3**
SSLB Suanglung 80.73 309 P **P** **16 46 41.8 -1.1**
MNSI Mandailing Nat 80.74 278 P **P** **16 46 41.6 -1.6**
comp=Z,72nm,1.0s
DLV Lat 80.97 292 P **P** **16 46 46.5 +1.9**
YHNB Yeheng 81.12 310 P **P** **16 46 44.9 -0.1**
YHNB IAmb IAmb 16 46 52.8
comp=Z,208nm,1.5s
YHNB Yeheng 81.12 310 P **P** **16 46 46.1 +1.1**
TATO Taipei 81.28 311 P **P** **16 46 46.2 +0.4**
TATO IAmb IAmb 16 46 50.3
comp=Z,185nm,0.9s
TATO Taipei 81.28 311 P **P** **16 46 46.0 +0.2**
TATO Taipei 81.28 311 P **P** **16 46 46.2 +0.4**
INU Inuyama 81.52 328 P **P** **16 46 47.0 +0.2**
INU Inuyama 81.52 328 ⇑P **P** **16 46 46.5 -0.3**
INU Inuyama 81.52 328 P **P** **16 46 46.7 -0.1**
JMN Monobe 81.55 325 P **P** **16 46 48.3 +1.3**
JMN Monobe 81.55 325 ⇓P **P** **16 46 48.1 +1.1**
JGF Kuroka 81.59 328 IAmb IAmb 16 46 49.9
comp=Z,88nm,1.0s
JGF Kuroka 81.59 328 P **P** **16 46 46.6 -0.6**
IPM Ipoh 81.87 282 P **P** **16 46 48.5 -0.7**
MJAR Matsushiro Arr 82.05 329 P **P** **16 46 48.7 -0.9**
comp=Z,69nm,1.0s,baz=160,slow=4.7,SNR=50
MJAR PP **PP** **16 49 55.8 -3.9**
comp=Z,16nm,1.2s,baz=163,slow=9.1,SNR=5.1
comp=Z,69nm,1.0s
MAJO Matsushiro 82.05 329 P **P** **16 46 49.1 -0.5**
MAJO IAmb IAmb 16 46 52.7
comp=Z,117nm,1.0s
MAJO Matsushiro 82.05 329 P **P** **16 46 48.8 -0.7**
MAJO Matsushiro 82.05 329 *i* P **P** **16 46 49.8 +0.3**
MAJO pmax pmax
comp=Z,110nm,1.0s
MAJO Matsushiro 82.05 329 ⇑P **P** **16 46 49.0 -0.5**
MAJO Matsushiro 82.05 329 P **P** **16 46 49.0 -0.5**
JNU Nakatsue 82.47 322 P **P** **16 46 51.8 -0.1**
JNU Nakatsue 82.47 322 P **P** **16 46 52.3 +0.4**
JNU Nakatsue 82.47 322 ⇓P **P** **16 46 52.3 +0.4**
PSI Prapat 82.48 279 LR LR 17 24 15.5
comp=Z,1µm,20.8s,baz=159,slow=36
PSI Prapat 82.48 279 P **P** **16 46 50.5 -2.0**
GSI Gunungsitoli 82.63 277 P **P** **16 46 52.7 -0.4**
GSI Gunungsitoli 82.63 277 P **P** **16 46 53.4 +0.3**
GSI Gunungsitoli 82.63 277 P **P** **16 46 52.3 -0.8**
comp=Z,2µmcomp=Z,3µmcomp=Z,248nm,1.1s
GSI Gunungsitoli 82.63 277 ⇑P **P** **16 46 53.2 0.0**
KULM Kulim 82.67 282 P **P** **16 46 52.2 -1.1**
KULM Kulim 82.67 282 P **P** **16 46 52.7 -0.6**
BI02 San Fabin de 82.75 131 IAmb IAmb 16 46 59.9
comp=Z,104nm,1.0s
H04S2 CROZET ISLANDS 82.86 214 P **P** **16 46 54.4 +0.8**
H04S1 CROZET ISLANDS 82.87 214 P **P** **16 46 54.5 +0.9**
H04S3 CROZET ISLANDS 82.88 214 P **P** **16 46 54.4 +0.7**
SNR=3.4
QZH Quanzhou 83.04 309 P **P** **16 46 55.4 +0.5**
QZH pP **pP** **16 47 31.4 +2.5**
QZH S **SKSac** **16 57 06.3 +2.3**
QZH sS **sS** **16 58 00.4 -1.8**
QZH pmax pmax
comp=Z,230nm,1.0s

QZH pmax pmax
comp=Z,1µm,6.9s
TSI Tuntungan 83.19 280 P **P** **16 46 56.8 +0.8**
comp=Z,2µmcomp=Z,131nm,1.0s
JSD Sado 83.31 330 P **P** **16 46 57.1 +1.1**
JSD Sado 83.31 330 P **P** **16 46 56.3 +0.3**
JSD Sado 83.31 330 ⇓P **P** **16 46 56.4 +0.4**
H04N3 CROZET ISLANDS 83.43 215 P **P** **16 46 57.3 +0.8**
SNR=2.7
H04N2 CROZET ISLANDS 83.43 215 P **P** **16 46 57.4 +0.9**
H04N1 CROZET ISLANDS 83.44 215 P **P** **16 46 57.3 +0.8**
KCSI Kotacane, Aceh 83.83 279 P **P** **16 46 57.1 -2.2**
HKPS Hong Kong Po S 84.00 304 P **P** **16 47 02.4 +2.5**
JTU Tsushima 84.33 322 P **P** **16 47 03.1 +1.8**
JTM Tenmabayashi 84.65 333 P **P** **16 47 03.1 +0.4**
QIZ Qiongzhong 84.70 299 P **P** **16 47 05.0 +1.6**
QIZ pP **pP** **16 47 35.4 -2.3**
QIZ sP **sP** **16 47 49.4 -2.6**
QIZ PP **PP** **16 50 21.4 -0.2**
QIZ S **S** **16 57 20.4 +0.6**
QIZ sS **sS** **16 58 17.3 -2.0**
QIZ SS **SS** **17 02 59.8 +4.7**
QIZ pmax pmax
comp=Z,610nm,4.8s
QIZ LR LR
comp=Z,320nm,17.7s
QIZ LR LR
comp=Z,240nm,13.7s
QIZ LR LR
comp=Z,400nm,26.5s
QIZ Qiongzhong 84.70 299 P **P** **16 47 05.1 +1.6**
MT09 Talagante 84.84 129 IAmb IAmb 16 47 09.9
comp=Z,112nm,1.6s
ERM Erimo 85.01 335 P **P** **16 47 08.7 +4.2**
ERM IAmb IAmb 16 47 09.3
comp=Z,88nm,0.9s
ERM Erimo 85.01 335 P **P** **16 47 06.9 +2.4**
ERM Erimo 85.01 335 P **P** **16 47 08.7 +4.2**
ERM pmax pmax
comp=Z,88nm,1.0s
GZH Guangzhou 85.09 304 P **P** **16 47 07.3 +2.0**
GZH pP **pP** **16 47 41.3 +1.7**
GZH S **S** **16 57 27.4 +3.9**
GZH pmax pmax
comp=Z,210nm,0.9s
GZH pmax pmax
comp=Z,1µm,4.5s
MT13 San Alfonso 85.30 129 P **P** **16 47 08.2 +1.6**
MT13 IAmb IAmb 16 47 12.9
comp=Z,108nm,1.8s
UBPT Khong Chiam 85.36 293 P **P** **16 47 06.7 -0.1**
MLSI Meulaboh, Aceh 85.36 279 P **P** **16 47 05.5 -1.5**
comp=Z,3µmcomp=Z,229nm,1.1s
PEL Peldehue 85.45 129 P **P** **16 47 09.3 +2.0**
CO02 Combarbal 86.56 127 IAmb IAmb 16 47 20.3
comp=Z,91nm,1.0s
TJN Taejon 86.81 322 P **P** **16 47 14.1 +0.6**
TJN Taejon 86.81 322 P **P** **16 47 14.7 +1.2**
TJN Taejon 86.81 322 *c i*P **P** **16 47 13.3 -0.2**
CO03 El Pedregal 87.00 127 P **P** **16 47 17.0 +2.1**
TRQA Tornquist 87.08 137 *e*P **P** **16 47 17.9 +2.8**
CO05 La Serena 87.26 126 IAmb IAmb 16 47 21.7
comp=Z,44nm,0.8s
KSRS Korea Array 87.39 323 P **P** **16 47 16.9 +0.7**
comp=Z,184nm,0.9s,baz=144,slow=4.9,SNR=240
KSRS PP **PP** **16 50 41.3 -1.8**
comp=Z,3.6nm,1.1s,baz=142,slow=6.2,SNR=4.0
KSRS LR LR 17 22 37.0
comp=Z,48µm,21.4s,baz=140,slow=33
comp=Z,184nm,0.9s
KSAR Wonju Array Be 87.40 323 P **P** **16 47 16.9 +0.6**
KSAR Wonju Array Be 87.40 323 P **P** **16 47 16.9 +0.6**
INCN Inchon 88.04 322 P **P** **16 47 20.7 +1.3**
INCN Inchon 88.04 322 ⇑P **P** **16 47 19.2 -0.1**
INCN Inchon 88.04 322 P **P** **16 47 20.4 +1.0**
INCN pP **pP** **16 47 50.5 -3.1**
NJ2 Nanjing 88.06 314 ⇑P **P** **16 47 20.3 +0.7**
NJ2 pP **pP** **16 47 56.0 +2.1**
NJ2 sP **sP** **16 48 09.0 +0.9**
NJ2 PP **PP** **16 50 48.6 0.0**
NJ2 S **S** **16 57 53.8 +2.0**
NJ2 sS **sS** **16 58 50.8 -0.7**
NJ2 pmax pmax
comp=Z,97nm,1.1s
NJ2 pmax pmax
comp=Z,1µm,5.1s
LCO Las Campanas 88.22 126 P **P** **16 47 21.5 +0.5**
LCO IAmb IAmb 16 47 28.2
comp=Z,57nm,1.1s
LCO Las Campanas 88.22 126 P **P** **16 47 21.5 +0.5**
LCO pmax pmax
comp=Z,57nm,1.1s
GULI GuiLin 88.57 304 P P 16 47 13.1 -9.1
GULI pP pP 16 47 48.1 -8.5
GULI PP **PP** **16 50 45.3 -7.5**
GULI GuiLin 88.57 304 S **SKSac** **16 57 43.8 +5.2**
GULI GuiLin 88.57 304 sS sS 16 58 46.1 -11
CNSH ChangSha 88.89 307 P **P** **16 47 24.4 +0.8**
CNSH pmax pmax
comp=Z,31nm,1.1s
ADK Adak 89.13 4 P **P** **16 47 25.1 +1.0**
ADK Adak 89.13 4 ⇑P **P** **16 47 25.1 +1.0**
YSS Yuzhno-Sakhali 89.56 337 P **P** **16 47 27.1 +0.9**
YSS Yuzhno-Sakhali 89.56 337 P **P** **16 47 27.4 +1.2**
YSS Yuzhno-Sakhali 89.56 337 ⇓ *i*P **P** **16 47 27.4 +1.2**
YSS *e* 16 51 01.0
YSS *e*S **S** **16 58 04.7 -0.4**
YSS pmax pmax
comp=Z,260nm,0.9s
YSS pmax pmax
comp=Z,400nm,3.1s
YSS smax smax
comp=N,600nm,4.0s
YSS smax smax
comp=E,900nm,2.8s
YSS MLR MLR
comp=Z,500nm,17.0s
YSS Yuzhno-Sakhali 89.56 337 P **P** **16 47 26.8 +0.6**
WHN Wuhan 89.66 310 P **P** **16 47 27.4 +0.3**
WHN sP **sP** **16 48 18.1 +2.2**
WHN PP **PP** **16 51 05.8 +4.5**
WHN S **S** **16 58 09.0 +2.2**
WHN sS **sS** **16 59 08.0 +1.3**
WHN pmax pmax
comp=Z,170nm,1.2s
WHN pmax pmax
comp=Z,2µm,6.1s
SKR Severo-Kuril's 89.73 347 *e*P **P** **16 47 22.8 -4.1**
SKR *e*S **SKSac** **16 57 51.4 +7.3**
SKR pmax pmax
comp=Z,400nm,3.8s
SKR MLR MLR
comp=Z,400nm,16.0s
SMY Shemya 89.86 358 P **P** **16 47 28.4 +0.9**
SMY Shemya 89.86 358 ⇑P **P** **16 47 28.6 +1.1**
TEY Ternei 89.96 332 ⇓ *e*P **P** **16 47 29.2 +1.1**
TEY pmax pmax
comp=N,20nm,1.1s
MSHR Mys Shultsa 90.06 328 *c e*P **P** **16 47 29.5 +0.8**
MSHR pmax pmax
comp=Z,145nm,1.0s
VLA Vladivostok 90.20 329 *i*P **P** **16 47 29.7 +0.4**
VLA pmax pmax
comp=Z,119nm,1.0s
PSTR Posyet 90.27 328 *i*P **P** **16 47 30.0 +0.4**
AC02 Maricunga 90.71 125 P **P** **16 47 34.6 +1.6**
AC02 IAmb IAmb 16 47 43.8
comp=Z,41nm,1.1s
USRK Ussuriysk Ar. 91.05 329 P **P** **16 47 33.6 +0.4**
comp=Z,78nm,1.0s,baz=150,slow=3.5,SNR=78
USRK PP **PP** **16 51 10.8 -1.3**
comp=Z,15nm,1.0s,baz=141,slow=7.4,SNR=7.5
comp=Z,78nm,1.0s
PB14 IPOC Station P 91.37 123 P **P** **16 47 38.1 +2.3**
LPIG La Paz 91.50 61 LR LR 17 23 28.9
comp=Z,328nm,18.1s,baz=224,slow=32
GO02 Mina Guanaco 91.55 124 P **P** **16 47 37.8 +1.2**
PET Petropavlovsk 91.56 349 P **P** **16 47 35.4 0.0**
PET Petropavlovsk 91.56 349 *e*P **P** **16 47 36.6 +1.3**
PET *e**PP **pwP** **16 48 14.7 +2.9**
PET *e*S **S** **16 58 26.0 +2.9**
PET *e*SS **SS** **17 04 28.9 -5.0**
PET pmax pmax
comp=Z,300nm,11.5s

PET pmax pmax
comp=Z,44nm,0.9s
PET MLR MLR
comp=Z,400nm,15.0s
PET Petropavlovsk 91.56 349 ⇑P **P** **16 47 35.3 0.0**
DL2 Dalian 91.64 320 P **P** **16 47 34.5 -1.6**
DL2 PP **PP** **16 51 17.1 +0.2**
DL2 S **S** **16 58 25.4 +0.9**
DL2 sS **sS** **16 59 23.4 -0.9**
DL2 pmax pmax
comp=Z,63nm,1.4s
DL2 pmax pmax
comp=Z,730nm,6.8s
PEA0B Petropavlovsk- 91.79 348 P **P** **16 47 36.7 +0.2**
PEA0B IAmb IAmb 16 47 38.5
comp=Z,60nm,0.9s
PEA0B Petropavlovsk- 91.79 348 *c e*P **P** **16 47 37.0 +0.5**
PETK Petropavlovsk- 91.79 348 P **P** **16 47 34.9 -1.6**
comp=Z,36nm,0.8s,baz=168,slow=6.1,SNR=50
PETK PKiKP **PKiKP** **16 52 24.2 -2.3**
comp=Z,2.4nm,0.7s,baz=157,slow=6.0,SNR=4.7
PETK LR LR 17 18 45.4
comp=Z,518nm,21.9s,baz=155,slow=29
comp=Z,36nm,0.8s
PETK Petropavlovsk- 91.79 348 P **P** **16 47 35.4 -1.1**
GYA Guiyang 91.82 302 ⇓P **P** **16 47 37.9 +0.5**
GYA PP **PP** **16 51 19.0 +0.3**
GYA S **S** **16 58 27.4 +0.4**
GYA pmax pmax
comp=Z,31nm,1.0s
TIA Tai'an 92.07 315 P **P** **16 47 38.8 +0.6**
TIA PP **PP** **16 51 27.6 +7.2**
TIA S **S** **16 58 31.3 +2.7**
TIA pmax pmax
comp=Z,26nm,1.1s
CMAR Chiang Mai Arr 92.18 292 P **P** **16 47 39.2 +0.1**
comp=Z,56nm,0.7s,baz=126,slow=4.7,SNR=202
CMAR PKKPbc **PKKPdf** **17 04 51.9 +0.8**
comp=Z,3.2nm,1.0s,baz=304,slow=2.1,SNR=11
CMAR PKPPKP **P'P'df** **17 13 02.7 -2.1**
comp=Z,2.0nm,1.0s,baz=323,slow=2.1,SNR=7.8
CMAR LR LR 17 31 23.7
comp=Z,140nm,20.5s,baz=160,slow=37
comp=Z,56nm,0.7s
CMAR Chiang Mai Arr 92.18 292 P **P** **16 47 39.0 -0.2**
CMAR Chiang Mai Arr 92.18 292 *i*P **P** **16 47 39.5 +0.4**
CMAR pmax pmax
comp=Z,60nm,0.7s
MDJ Mudanjiang 92.38 328 P **P** **16 47 40.3 +0.9**
MDJ pmax pmax
comp=Z,110nm,1.0s
MDJ pmax pmax
comp=Z,870nm,3.8s
MDJ Mudanjiang 92.38 328 P **P** **16 47 40.0 +0.6**
CHTO Chiang Mai 92.40 292 P **P** **16 47 40.1 0.0**
CHTO IAmb IAmb 16 47 44.9
comp=Z,62nm,1.1s
CHTO Chiang Mai 92.40 292 P **P** **16 47 41.1 +0.9**
CHTO Chiang Mai 92.40 292 P **P** **16 47 40.2 0.0**
CHTO Chiang Mai 92.40 292 P **P** **16 47 40.1 0.0**
CHTO pmax pmax
comp=Z,62nm,1.1s
ENH Enshi 92.51 307 IAmb IAmb 16 47 44.0
comp=Z,39nm,0.9s
ENH Enshi 92.51 307 P **P** **16 47 40.4 0.0**
SNY Shenyang 92.89 323 ⇑P **P** **16 47 41.0 -0.8**
SNY pmax pmax
comp=Z,25nm,0.9s
CPE Camp Elliot 92.91 50 IAmb IAmb 16 47 47.0
comp=Z,58nm,1.1s
ESJX Sierra Juarez 93.02 51 P **P** **16 47 44.8 +1.9**
ESJX IAmb IAmb 16 47 48.6
comp=Z,60nm,0.9s
BAR Barrett 93.03 51 IAmb IAmb 16 47 47.9
comp=Z,62nm,1.1s
PMPB Monarch Peak 93.05 46 IAmb IAmb 16 47 47.6
comp=Z,61nm,1.0s
TYV Tymovskoe 93.08 339 *e*P **P** **16 47 44.8 +2.4**
TYV *e*S **S** **16 58 37.3 +0.6**
TYV pmax pmax
comp=Z,40nm,1.2s
TYV pmax pmax
comp=Z,600nm,4.2s
TYV smax smax
comp=N,400nm,4.0s
TYV smax smax
comp=E,600nm,4.0s
SAO San Andreas Ge 93.08 45 IAmb IAmb 16 47 47.7
comp=Z,29nm,1.0s
BBGB Big Mountain B 93.18 45 P **P** **16 47 44.8 +1.3**
ELS Elsinore Mount 93.24 49 IAmb IAmb 16 47 48.7
comp=Z,33nm,0.9s
MWC Mount Wilson 93.26 49 IAmb IAmb 16 47 48.5
comp=Z,40nm,1.1s
MHC Mount Hamilton 93.38 44 IAmb IAmb 16 47 49.3
comp=Z,52nm,1.1s
YUH Yuha Desert 93.47 51 IAmb IAmb 16 47 50.0
comp=Z,49nm,0.9s
CN2 Changchun 93.55 325 ⇑P **P** **16 47 44.5 -0.3**
CN2 *e*pP pP 16 48 17.5 -1.7
CN2 *e*S **S** **16 58 40.5 -0.7**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,300nm,4.0s
LYN LuoYang 93.59 312 P **P** **16 47 46.0 +0.8**
LYN pP pP 16 48 17.5 -2.4
LYN PP **PP** **16 51 37.8 +5.5**
LYN SKS **SKSac** **16 58 07.0 +0.3**
LYN S **ScS** **16 58 45.4 +2.0**
LYN pmax pmax
comp=Z,38nm,1.0s
LYN pmax pmax
comp=Z,690nm,5.8s
KMI Kunming 93.65 299 P **P** **16 47 46.8 +0.8**
KMI pP pP 16 48 22.4 +1.7
KMI PP **PP** **16 51 33.5 +0.4**
KMI SKS **SKSac** **16 58 07.3 -0.7**
KMI S **S** **16 58 41.9 -1.6**
KMI sS sS 16 59 44.3 +0.2
KMI SS **SS** **17 05 03.9 -1.3**
KMI pmax pmax
comp=Z,27nm,1.0s
KMI pmax pmax
comp=Z,250nm,5.7s
KMI LR LR
comp=Z,390nm,18.4s
KMI LR LR
comp=Z,330nm,17.1s
KMI LR LR
comp=Z,440nm,25.1s
DNR Dunn Ranch,Anz 93.67 50 P **P** **16 47 47.0 +1.2**
PFO Pinyon Flats O 93.80 50 LR LR 17 27 06.3
comp=Z,109nm,18.4s,baz=236,slow=34
PFO Pinyon Flats O 93.80 50 *i*P **P** **16 47 46.6 +0.2**
PFO pmax pmax
comp=Z,45nm,0.9s
PMD Palm Desert 93.88 50 P **P** **16 47 47.8 +1.2**
PMD IAmb IAmb 16 47 51.6
comp=Z,24nm,0.8s
ISA Isabella, Lake 94.01 47 IAmb IAmb 16 47 52.4
comp=Z,38nm,0.9s
KCPM Cahto Peak 94.02 42 IAmb IAmb 16 47 54.2
comp=Z,92nm,0.9s
MNRC McLaughlin Min 94.05 43 IAmb IAmb 16 47 52.9
comp=Z,38nm,1.0s
BNX BinXian 94.20 328 ⇑P **P** **16 47 47.8 0.0**
BNX pmax pmax
comp=Z,14nm,1.1s
HNS HongShan 94.28 315 ⇑P **P** **16 47 48.9 +0.6**
HNS sP **sP** **16 48 38.5 +1.4**
HNS S **S** **16 58 51.0 +3.2**
HNS sS **sS** **16 59 49.8 +2.0**
HNS pmax pmax
comp=Z,14nm,1.1s
HNS pmax pmax
comp=Z,350nm,10.3s
HNS LR LR
comp=Z,310nm,20.4s
HNS LR LR
comp=Z,350nm,21.1s
KMPM Mount Pierce 94.28 41 IAmb IAmb 16 47 52.3
comp=Z,61nm,1.4s
BELC Belle Mtn. Jos 94.35 50 IAmb IAmb 16 47 54.5
comp=Z,36nm,0.8s
KMRM Mail Ridge 94.35 41 IAmb IAmb 16 47 53.6
comp=Z,72nm,1.4s
LRMC Laurel Mtn Rad 94.35 48 IAmb IAmb 16 47 54.0
comp=Z,32nm,0.9s
GLA Glamis 94.42 51 P **P** **16 47 50.9 +1.7**
GLA Glamis 94.42 51 P **P** **16 47 50.9 +1.7**
GLA pmax pmax
comp=Z,101nm,0.9s
BC3 Big Chuckawall 94.44 50 IAmb IAmb 16 47 54.4
comp=Z,34nm,0.9s
WSHM Spangler Hills 94.54 48 IAmb IAmb 16 47 54.7
comp=Z,26nm,1.0s
CCCA Chr Cany lake 94.57 48 IAmb IAmb 16 47 55.0
comp=Z,51nm,1.0s
CMB Columbia Colle 94.58 45 IAmb IAmb 16 47 54.6
comp=Z,27nm,0.8s
CLC China Lake 94.63 48 IAmb IAmb 16 47 55.1
comp=Z,33nm,0.9s
SUTB Sutter Butte 94.66 43 IAmb IAmb 16 47 54.1
comp=Z,37nm,1.2s
PSAL Palomas, Salto 94.67 135 *e*P **P** **16 47 53.0 +2.5**
O02D Mt. Diablo Mer 94.80 42 IAmb IAmb 16 47 56.0
comp=Z,52nm,1.1s
KHMM Horse Mountain 94.81 41 P **P** **16 47 52.2 +1.4**
KHMM IAmb IAmb 16 47 55.8
comp=Z,40nm,1.3s
113A Mohawk Valley, 94.90 52 P **P** **16 47 52.4 +1.1**
113A IAmb IAmb 16 47 57.0
comp=Z,26nm,1.0s
KHBM Hayfork Bally 94.92 41 IAmb IAmb 16 47 59.8
comp=Z,23nm,1.0s
214A Organ Pipe Nat 94.97 53 IAmb IAmb 16 47 57.7
comp=Z,47nm,1.2s
MDPB Devils Postpil 95.03 46 P **P** **16 47 52.0 -0.1**
NNA Nana 95.04 109 LR LR 17 23 43.7
comp=Z,417nm,18.2s,baz=239,slow=31
ORV Oroville 95.04 43 P **P** **16 47 52.1 +0.3**
ORV Oroville 95.04 43 P **P** **16 47 52.1 +0.3**
ORV pmax pmax
comp=Z,17nm,1.2s
BLYC Blythe 95.08 51 IAmb IAmb 16 47 57.9
comp=Z,39nm,0.9s
PZH PanZhiHua 95.22 299 P **P** **16 47 53.3 +0.2**
PZH SKS **SKSac** **16 58 13.0 -3.2**
PZH S **S** **16 58 53.8 -3.1**
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,170nm,10.6s
PZH LR LR
comp=Z,250nm,22.6s
PZH LR LR
comp=Z,340nm,19.0s
PZH LR LR
comp=Z,350nm,23.5s
BJT Baijiatuau 95.33 318 P **P** **16 47 55.3 +2.2**
BJI Beijing 95.34 318 P **P** **16 47 54.1 +1.0**
BJI PP **PP** **16 51 43.3 -2.5**
BJI pmax pmax
comp=Z,9.0nm,0.9s
BJI pmax pmax
comp=Z,160nm,8.2s
XAN Xi'an 95.39 309 P **P** **16 47 54.4 +0.8**
XAN pP pP 16 48 30.9 +2.6
XAN PP **PP** **16 51 48.8 +2.4**
XAN S **S** **16 59 02.3 +4.4**
XAN sS sS 17 00 02.1 +3.9
XAN pmax pmax
comp=Z,18nm,1.1s
XAN LR LR
comp=Z,410nm,22.0s
XAN LR LR
comp=Z,290nm,23.4s
XAN LR LR
comp=Z,370nm,19.2s
O03E Paynes Creek 95.41 42 IAmb IAmb 16 47 57.7
comp=Z,49nm,1.2s
N02D Trinity Center 95.42 41 IAmb IAmb 16 47 58.6
comp=Z,40nm,1.2s
GWY Greenwater Val 95.43 48 IAmb IAmb 16 48 00.9
comp=Z,21nm,1.0s
WAKR Walker 95.44 45 P **P** **16 47 54.4 +0.5**
WAKR IAmb IAmb 16 47 58.6
comp=Z,26nm,1.1s
DSP Deep Springs 95.48 46 P **P** **16 47 54.5 +0.7**
MTPC Mountain Pass 95.62 49 P **P** **16 47 56.0 +1.2**
MTPC IAmb IAmb 16 47 59.7
comp=Z,30nm,1.0s
M02C Callahan 95.64 41 IAmb IAmb 16 47 59.6
comp=Z,24nm,1.2s
LHV Little Huntoon 95.79 45 P **P** **16 47 56.3 +1.2**
LHV IAmb IAmb 16 47 59.5
comp=Z,24nm,1.0s
TIY Taiyuan 95.79 314 *e*P **P** **16 47 55.5 +0.2**
TIY pmax pmax
comp=Z,270nm,4.5s
L02F Cave Junction 95.80 40 IAmb IAmb 16 48 00.1
comp=Z,42nm,1.4s
M03C McCloud 95.94 41 IAmb IAmb 16 48 00.3
comp=Z,45nm,1.1s
HATC Hat Creek Radi 95.96 42 IAmb IAmb 16 48 00.5
comp=Z,44nm,1.1s
YBH Yreka Blue Hor 95.96 41 LR LR 17 24 36.2
comp=Z,26nm,19.8s,baz=250,slow=31
YBH Yreka Blue Hor 95.96 41 IAmb IAmb 16 47 58.9
comp=Z,22nm,1.3s
NVAR Mina Array Bea 96.02 45 P **P** **16 47 56.1 -0.4**
comp=Z,13nm,1.0s,baz=240,slow=4.2,SNR=4.0
NVAR PKKPbc **PKKPbc** **17 04 44.1 -0.1**
comp=Z,0.8nm,0.6s,baz=27,slow=3.9,SNR=4.2
NVAR LR LR 17 25 51.8
comp=Z,198nm,19.5s,baz=224,slow=32
comp=Z,13nm,1.0s
NVAR Mina Array Bea 96.02 45 P **P** **16 47 56.8 +0.2**
Y14A Wickenburg 96.15 52 P **P** **16 47 58.5 +1.5**
Y14A IAmb IAmb 16 48 02.6
comp=Z,34nm,1.1s
K02D Willamette Mer 96.17 39 IAmb IAmb 16 48 00.6
comp=Z,53nm,1.5s
TPNV Topopah Spring 96.20 48 IAmb IAmb 16 48 02.4
comp=Z,22nm,1.2s
PAHR Pah Rah Range 96.31 44 IAmb IAmb 16 48 02.0
comp=Z,21nm,1.0s
W13A Hualapai Mount 96.37 50 IAmb IAmb 16 48 03.7
comp=Z,14nm,0.9s
TUC Tucson 96.50 54 P **P** **16 47 59.6 +0.9**
TUC Tucson 96.50 54 P **P** **16 47 59.6 +0.9**
TUC pmax pmax
comp=Z,12nm,1.0s
L04D Klamath Falls 96.52 41 P **P** **16 47 60.0 +1.4**
L04D IAmb IAmb 16 48 02.9
comp=Z,36nm,1.3s
TNCH TengChong 96.56 296 ⇑P **P** **16 48 01.6 +2.3**
TNCH sP sP 16 48 44.5 -3.8
TNCH SKS **SKSac** **16 58 16.3 -7.1**
TNCH S **ScS** **16 59 09.8 +0.7**
TNCH pmax pmax
comp=Z,18nm,0.9s
TNCH pmax pmax
comp=Z,240nm,7.1s
TNCH LR LR
comp=Z,230nm,14.0s
TNCH LR LR
comp=Z,240nm,21.3s
TNCH LR LR
comp=Z,580nm,27.7s
CD2 Chengdu 96.65 304 P **P** **16 48 00.9 +1.5**
CD2 pP pP 16 48 32.6 -1.4
CD2 sP sP 16 48 46.0 -2.1
CD2 PP **PP** **16 51 56.4 +0.3**
CD2 SKS **SKSac** **16 58 22.4 -0.9**
CD2 S **ScS** **16 59 13.1 +3.9**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,350nm,9.6s
CD2 LR LR
comp=Z,710nm,14.9s
CD2 LR LR
comp=Z,710nm,13.7s
CD2 LR LR
comp=Z,530nm,12.2s
BBOR Butler Butte 96.81 40 IAmb IAmb 16 50 07.3
comp=Z,29nm,1.6s
ATAH Atahualpa 96.92 104 LR LR 17 22 06.2
comp=Z,1µm,21.9s,baz=241,slow=29
J04A Umpqua Nationa 97.35 40 IAmb IAmb 16 48 08.3

comp=Z,23nm,0.7s
X16A Lo Mia Camp, P 97.44 52 P Pdif 16 48 04.6 +1.5
X16A IAmb IAmb 16 48 08.9
comp=Z,24nm,1.1s
K05A Summer Lake 97.62 41 IAmb IAmb 16 48 07.3
comp=Z,31nm,1.3s
DUN6 Lazy B Ranch 97.75 55 IAmb IAmb 16 48 12.4
comp=Z,33nm,0.9s
HEH HeiHe 97.77 330 P **P** **16 48 02.8 -1.1**
HEH PP **PP** **16 52 05.5 +1.2**
HEH AMB AMB
comp=Z,530nm,3.9s
LCMT Little Creek M 98.03 49 IAmb IAmb 16 48 10.9
comp=Z,16nm,0.9s
WIFE Three Sisters- 98.09 40 P Pdif 16 48 07.8 +2.0
XLT XiLinHaoTe 98.14 320 *e*P Pdif 16 48 13.0 +7.2
XLT PP **PP** **16 52 04.1 -3.3**
XLT XiLinHaoTe 98.14 320 S S 16 59 30.5 +9.5
KDAK Kodiak Island 98.21 16 LR LR 17 27 14.7
comp=Z,280nm,18.5s,baz=201,slow=32
U15A North Rim 98.22 50 IAmb IAmb 16 48 12.3
comp=Z,29nm,1.0s
KNB Kanab 98.28 49 IAmb IAmb 16 48 12.3
comp=Z,30nm,1.0s
H04A Detroit Lake 98.35 39 P Pdif 16 48 07.8 +1.2
CPUP Villa Florida 98.41 132 P Pdif 16 48 08.6 +1.1
comp=Z,0.9nm,0.8s,baz=300,slow=0.5,SNR=6.1
CPUP S **SKSac** **16 58 32.5 -0.3**
comp=Z,0.2nm,0.4s,baz=270,slow=5.1,SNR=1.4
CPUP PKKP **PKKPdf** **17 04 37.1 -1.0**
comp=Z,0.5nm,0.7s,baz=342,slow=0.4,SNR=3.2
CPUP LR LR 17 24 16.0
comp=Z,108nm,21.4s,baz=79,slow=30
HHC Hu-ho-hao-te 98.42 316 *e*P Pdif 16 48 09.0 +1.8
HHC pmax pmax
comp=Z,4.0nm,0.5s
HHC pmax pmax
comp=Z,200nm,3.8s
SZCU Shurtz Canyon 98.50 49 IAmb IAmb 16 48 13.3
comp=Z,15nm,1.1s
CMIG Matias Romero 98.51 75 LR LR 17 26 56.0
comp=Z,192nm,18.2s,baz=217,slow=32
I05D Terrebonne, OR 98.53 40 IAmb IAmb 16 48 22.6
comp=Z,18nm,1.3s
LPAZ La Paz 98.57 118 P Pdif 16 48 10.8 +1.7
comp=Z,4.1nm,0.9s,baz=232,slow=4.1,SNR=14
LPAZ PP **PP** **16 52 14.2 +3.2**
comp=Z,5.9nm,1.1s,baz=223,slow=6.2,SNR=7.3
LPAZ S **SKSac** **16 58 36.1 +0.9**
comp=Z,0.6nm,0.6s,baz=214,slow=3.6,SNR=1.9
LPAZ PKKP **PKKPdf** **17 04 37.7 -1.2**
comp=Z,1.4nm,0.8s,baz=45,slow=2.9,SNR=3.9
LPAZ LR LR 17 22 51.8
comp=Z,162nm,21.2s,baz=230,slow=29
comp=Z,4.1nm,0.9s
LPAZ La Paz 98.57 118 *e*P Pdif 16 48 10.5 +1.4
PKCU Pink Cliffs 98.87 49 IAmb IAmb 16 48 18.2
comp=Z,19nm,1.1s
BTO Baotou 99.13 315 *e*P **Pdif** **16 48 15.8 +5.5**
BTO PP **PP** **16 52 17.8 +2.8**
BTO pmax pmax
comp=Z,14nm,0.6s
BTO pmax pmax
comp=Z,230nm,5.8s
BTO LR LR
comp=Z,350nm,9.0s
BTO LR LR
comp=Z,290nm,8.4s
BTO LR LR
comp=Z,610nm,15.7s
ELK Elko 99.33 45 LR LR 17 27 55.1
comp=Z,236nm,20.0s,baz=241,slow=32
TXAR Lajitas Array 99.39 60 P **Pdif** **16 48 10.8 -1.0**
comp=Z,4.9nm,1.1s,baz=228,slow=4.5,SNR=17
TXAR PP **PP** **16 52 19.4 +2.3**
comp=Z,1.6nm,1.1s,baz=232,slow=5.2,SNR=4.9
TXAR PKKPbc **PKKPbc** **17 04 34.2 0.0**
comp=Z,2.4nm,1.0s,baz=46,slow=4.4,SNR=7.3
TXAR LR LR 17 28 00.4
comp=Z,277nm,18.0s,baz=244,slow=32
comp=Z,4.9nm,1.1s
LZH Lanzhou 99.88 308 *e*P **Pdif** **16 48 20.1 +6.2**
LZH pP pP 16 48 50.4 +1.8
LZH PP **PP** **16 52 22.4 +1.5**
LZH Lanzhou 99.88 308 S **S** **16 59 39.9 +3.6**
LZH Lanzhou 99.88 308 SS SS 17 06 30.0 -2.7
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,280nm,4.8s
LZH LR LR
comp=N,410nm,17.9s
LZH LR LR
comp=E,360nm,17.2s
LZH LR LR
comp=Z,450nm,19.2s
HILR Hailar Array B 100.46 326 P **Pdif** **16 48 15.4 -0.5**
comp=Z,1.2nm,0.4s,baz=138,slow=11,SNR=1.5
ZEA Zeya 100.58 332 *e*P **Pdif** **16 48 26.7 +10**
ZEA *e* 16 52 31.4
ZEA *e* 17 02 20.9
ZEA pmax pmax
comp=Z,20nm,0.6s
ANMO Albuquerque 100.95 54 *i* P **Pdif** **16 48 18.6 -0.1**
ANMO pmax pmax
comp=Z,5.0nm,1.1s
SEY Seymchan 102.03 349 *i* P **Pdif** **16 48 21.9 -0.6**
SEY pmax pmax
comp=Z,8.0nm,1.0s
PTGB Pitanga 102.68 135 *e*P **Pdif** **16 48 29.4 +2.8**
AQDB Aquidauana 103.79 130 *e*P **Pdif** **16 48 34.0 +2.4**
PDAR Pinedale Array 103.88 47 Pdiff **Pdif** **16 48 32.6 +1.0**
comp=Z,2.1nm,0.8s,baz=252,slow=4.8,SNR=16
PDAR PKiKP **PKiKP** **16 52 49.6 +1.0**
comp=Z,3.3nm,1.0s,baz=230,slow=4.8,SNR=8.5
PDAR PKKPbc **PKKPbc** **17 04 18.0 -3.8**
comp=Z,2.0nm,0.8s,baz=46,slow=2.0,SNR=7.9
PTLB Pontes e Lacer 105.31 124 *e*P **Pdif** **16 48 40.3 +2.0**
PET01 Itanhaem-SP 105.64 138 *e*P **Pdif** **16 48 41.7 +2.0**
ILAR Eielson Array 105.71 15 Pdiff **Pdif** **16 48 40.1 +1.2**
comp=Z,1.1nm,1.0s,baz=205,slow=4.9,SNR=5.9
ILAR PKiKP **PKiKP** **16 52 50.2 -0.7**
comp=Z,1.7nm,0.6s,baz=237,slow=1.6,SNR=9.2
ILAR PKKPab **PKKPab** **17 04 30.8 +1.8**
comp=Z,7.7nm,0.9s,baz=16,slow=2.4,SNR=9.9
SONM Songino Array 105.79 319 Pdiff **Pdif** **16 48 40.1 +0.3**
comp=Z,1.2nm,0.7s,baz=136,slow=2.5,SNR=6.9
SONM PKiKP **PKiKP** **16 52 52.8 +1.0**
comp=Z,3.4nm,1.0s,baz=136,slow=4.5,SNR=3.6
SONM PKKPbc **PKKPbc** **17 04 17.3 +1.2**
comp=Z,5.6nm,0.8s,baz=295,slow=3.1,SNR=21
C2SB Chapadao do Su 106.83 131 *e*P **Pdif** **16 48 47.3 +2.2**
VAO Valinhos 106.84 138 *e*P **Pdif** **16 48 47.4 +2.2**
RCLB Rio Claro- Sao 107.01 137 *e*P **Pdif** **16 48 48.6 +2.6**
HYBB Hyderabad (bro 107.20 279 *e*PKiKP **PKiKP** **16 52 55.7 +0.6**
HYBB *e*PP **PP** **16 53 15.0 -0.4**
HYBB *ep*PKiKP **pPKiKP** **16 53 28.4 -3.2**
HYBB *es*PKiKP **sPKiKP** **16 53 40.9 -4.5**
HYBB *e*SKSac **SKSac** **16 59 15.1 +1.1**
ITRB Iturama 107.58 133 *e*P **Pdif** **16 48 50.9 +2.5**
BOSA Boshof 109.23 206 PKiKP **PKiKP** **16 52 58.6 -0.3**
comp=Z,3.6nm,0.5s,baz=160,slow=1.3,SNR=11
BOSA PKKPbc **PKKPbc** **17 04 04.6 +0.1**
comp=Z,6.2nm,0.9s,baz=342,slow=3.8,SNR=6.4
BOSA PKKP **PKKPdf** **17 04 17.2 -1.3**
comp=Z,5.1nm,0.8s,baz=355,slow=3.9,SNR=6.3
DUB01 Friburgo-RJ 109.98 141 *e*P **Pdif** **16 49 01.9 +2.7**
INK Inuvik 111.65 18 PKKPbc PKKPbc 17 03 56.8 -0.9
comp=Z,5.0nm,0.6s,baz=27,slow=4.5,SNR=13
INK PKKPab **PKKPab** **17 04 04.8 +2.0**
comp=Z,18nm,0.9s,baz=32,slow=5.4,SNR=13
MAKGR Makgori 111.95 207 *i* P **PKiKP** **16 53 03.6 -0.6**
BDFB Brasilia 112.14 132 PKiKP **PKiKP** **16 53 03.2 -1.5**
baz=308,slow=0.2
LBTB Lobatse 112.39 208 PKiKP **PKiKP** **16 53 04.5 -0.5**
comp=Z,3.6nm,0.6s,baz=157,slow=4.4,SNR=7.7
LBTB PP **PP** **16 53 52.1 +0.7**
comp=Z,6.4nm,1.0s,baz=167,slow=9.1,SNR=4.2
DIAM Diamantina, MG 112.45 138 *e*P **Pdif** **16 49 12.3 +2.0**
RIB01 Linhares ES 113.30 141 *e*P **Pdif** **16 49 16.7 +2.9**
SKOMA Sekoma 113.45 206 *i* P **PKiKP** **16 53 06.2 -0.8**
YKA Yellowknife Ar 113.50 28 PKiKP **PKiKP** **16 53 04.6 -1.0**
comp=Z,1.2nm,0.5s,baz=249,slow=2.3,SNR=14
YKA PP **PP** **16 53 56.9 -3.0**
comp=Z,4.7nm,1.0s,baz=238,slow=8.1,SNR=7.7
YKA PKKPbc **PKKPbc** **17 03 48.6 -2.8**
comp=Z,0.9nm,0.6s,baz=32,slow=3.6,SNR=5.6
YKA PKKPab **PKKPab** **17 03 56.0 +1.1**
comp=Z,3.2nm,0.9s,baz=52,slow=3.6,SNR=5.8
LPHEP Lephephe 113.79 209 *i* P **PKiKP** **16 53 06.9 -0.9**
MREMI Moremi 113.88 211 *i* P **PKiKP** **16 53 07.5 -0.4**
TIXI Tiksi 114.03 345*c* *i* PKiKP **PKiKP** **16 53 06.6 +0.2**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
KDWAN Kaudwane 114.22 208 *i* P **PKiKP** **16 53 08.1 -0.4**
WMQ Urumqi 114.45 307 *e*PKP **PKiKP** **16 53 09.3 +1.1**
WMQ LR LR
comp=Z,240nm,24.1s
LKGWB Lokgwabe 114.74 204 *i* P **PKiKP** **16 53 08.1 -1.4**
SWET Sewanee 115.12 64 **PKPdf** **16 53 07.5 -2.2**
T47A Sharon Grove 115.15 62 **PKPdf** **16 53 08.9 -0.7**
BROLN Tlhalogang 115.24 211 *i* P **PKiKP** **16 53 08.9 -1.7**
CLTN Cedars of Leba 115.27 63 **PKPdf** **16 53 09.2 -0.7**
KGCAE Kacgae 115.58 206 *i* P **PKiKP** **16 53 10.9 -0.3**
ULM Lac du Bonnet 115.86 45 PKP **PKPdf** **16 53 09.8 -0.8**
comp=Z,10nm,0.8s,baz=211,slow=1.0,SNR=6.9
ULM PP **PP** **16 54 15.8 -1.1**
comp=Z,7.8nm,1.1s,baz=262,slow=11,SNR=3.4
ULM PKKPab **PKKPab** **17 03 45.6 +0.3**
comp=Z,4.1nm,0.7s,baz=86,slow=3.1,SNR=3.3
KOOLE Kule 116.11 204 *i* P **PKPdf** **16 53 12.0 -0.2**
CPCT Cooper Cave 116.25 64 **PKiKP** **16 53 12.5 +0.7**
WCI Wyandotte Cave 116.31 61 **PKPdf** **16 53 10.9 -0.9**
WCI Wyandotte Cave 116.31 61 PKiKP **PKPdf** **16 53 10.9 -0.9**
BLO Bloomington 116.60 60 **PKPdf** **16 53 11.7 -0.6**
BLO Bloomington 116.60 60 PKiKP **PKPdf** **16 53 11.7 -0.6**
GRTLG Ghanzi 117.30 205 *i* P **PKPdf** **16 53 14.2 -0.3**
DGZ Jazzator, Alta 117.35 313 *i* PKiKP **PKPdf** **16 53 12.8 -0.9**
WIN Windhoek 117.44 201 **PKiKP** **16 53 14.9 0.0**
WIN Windhoek 117.44 201 PKiKP **PKiKP** **16 53 14.9 0.0**
ZSN Zaisan 117.88 310 *e*PKP **PKPdf** **16 53 13.5 -1.1**
ZSN Zaisan 117.88 310 *e*PKiKP **PKPdf** **16 53 13.4 -1.1**
Q51A Peebles 118.73 61 **PKPdf** **16 53 15.8 -0.7**
ONGWA Gangwa 119.01 206 *i* P **PKPdf** **16 53 17.3 -0.5**
KSANE Kasane 119.09 211 *i* P **PKPdf** **16 53 17.5 -0.5**
MK31 Makanchi Array 119.19 308*c* PKiKP **PKPdf** **16 53 16.8 -0.3**
MKAR Makanchi Array 119.19 308 PKP **PKPdf** **16 53 14.8 -2.3**
comp=Z,11nm,0.8s,baz=112,slow=1.6,SNR=57
MKAR PP **PP** **16 54 39.5 -0.6**
comp=Z,3.4nm,0.9s,baz=116,slow=6.6,SNR=1.8
MKAR PKKPbc **PKKPab** **17 03 32.0 +0.8**
comp=Z,6.7nm,0.9s,baz=286,slow=3.8,SNR=16
SHLS Shalkode 119.48 304 *e*PKP **PKPdf** **16 53 15.1 -2.8**
SHLS *e*PP **PP** **16 54 38.2 -4.1**
SHLS Shalkode 119.48 304 *e*PKiKP **PKPdf** **16 53 15.9 -2.0**
SHLS *e* 16 54 38.1
PDGK Podgornoye 119.53 304 PKiKP **PKPdf** **16 53 15.7 -2.4**
NIL Nilore 119.67 291 P **PKPdf** **16 53 16.9 -1.6**
UZB Uzynbulak 119.77 303 *e*PKP **PKPdf** **16 53 17.1 -1.5**
UZB Uzynbulak 119.77 303 *e*PKiKP **PKPdf** **16 53 17.0 -1.5**
XAUDM Khaudum 119.87 206 *i* P **PKPdf** **16 53 18.7 -0.8**
SATY Saty 120.14 303 *e*PKP **PKPdf** **16 53 17.9 -1.4**
SATY *e*PP **PP** **16 54 44.6 -2.3**
SATY Saty 120.14 303 *e*PKiKP **PKPdf** **16 53 17.8 -1.4**
SATY *e* 16 54 44.6
O52A Adamsville 120.25 61 **PKPdf** **16 53 18.9 -0.5**
KSH Kashi 120.31 299 PKP **PKPdf** **16 53 18.5 -1.2**
V58A Windy Hill, Pi 120.31 66 **PKPdf** **16 53 19.2 -0.4**
TSUM Tsumeb 120.48 202 PKP **PKPdf** **16 53 20.2 -0.5**
comp=Z,24nm,0.9s,baz=152,slow=6.1,SNR=13
TSUM PP **PP** **16 54 47.9 0.0**
comp=Z,5.1nm,0.8s,baz=166,slow=8.9,SNR=3.7
TSUM Tsumeb 120.48 202 **PKPdf** **16 53 19.6 -1.1**
ZALV Zalesovo Beam 120.59 317 PKP **PKPdf** **16 53 17.3 -2.2**
comp=Z,2.6nm,0.5s,baz=155,slow=2.2,SNR=14
ZALV PKKPbc **PKKPbc** **17 03 26.0 +0.1**
comp=Z,0.5nm,0.4s,baz=305,slow=5.1,SNR=4.9
ZALV PKKP **PKKPdf** **17 03 58.6 -0.6**
comp=Z,1.2nm,0.8s,baz=319,slow=3.5,SNR=4.5
ZALV Zalesovo Beam 120.59 317 **PKPdf** **16 53 16.8 -2.8**
MDOK Medeo 121.09 303 *e*PKP **PKPdf** **16 53 19.7 -1.4**
MDOK *e*PP **PP** **16 54 51.3 -2.1**
MDOK Medeo 121.09 303 *e*PKiKP **PKPdf** **16 53 19.7 -1.4**
MDOK *e* 16 54 51.2
AAA Alma-Ata 121.20 303 *e*PKP **PKPdf** **16 53 19.9 -1.3**
AAA Alma-Ata 121.20 303 *e*PKiKP **PKPdf** **16 53 19.9 -1.3**
ULHL Ulahol 121.26 302 P **PKPdf** **16 53 20.7 -0.8**
SNR=7.7
AOPR Arecibo Observ 121.35 90 **PKPdf** **16 53 20.6 -1.5**
GCPR Guaynabo City 121.86 91 **PKPdf** **16 53 21.9 -1.1**
TKM2 Tokmak 2 121.97 302 P **PKPdf** **16 53 21.0 -1.9**
SNR=24
KBK Karagaybulak 122.30 302 P **PKPdf** **16 53 22.0 -1.5**
SNR=18
UCH Uchtor 122.43 301 P **PKPdf** **16 53 22.7 -1.4**
SNR=42
CHMS Chumysh 122.57 302 P **PKPdf** **16 53 22.6 -1.2**
SNR=9.5
AAK Ala-Archa 122.60 301 PKKPbc PKKPbc 17 03 21.0 +2.9
comp=Z,5.6nm,1.0s,baz=257,slow=3.5,SNR=7.9
AAK Ala-Archa 122.60 301 **PKPdf** **16 53 22.6 -1.4**
AAK Ala-Archa 122.60 301 P **PKPdf** **16 53 23.1 -0.9**
AAK Ala-Archa 122.60 301 P **PKPdf** **16 53 23.0 -0.9**
SNR=20
AAK Ala-Archa 122.60 301 *i* PKPdf **PKPdf** **16 53 22.9 -1.1**
SNR=22
AAK Ala-Archa 122.60 301*c* *i* PKiKP **PKPdf** **16 53 22.4 -1.6**
AAK pmax pmax
comp=Z,26nm,1.3s
SGDS Sogindy 122.83 302 *e*PKP **PKPdf** **16 53 22.9 -1.4**
USP Ospenovka 122.84 302 P **PKPdf** **16 53 22.8 -1.6**
SNR=28
KURK Kurchatov 122.94 312 P **PKPdf** **16 53 22.1 -2.0**
KURK Kurchatov 122.94 312*c* *i* PKiKP **PKPdf** **16 53 22.3 -1.8**
KURK pmax pmax
comp=Z,53nm,1.3s
KURBB Kurchatov Arra 122.97 311 PKP **PKPdf** **16 53 21.9 -2.2**
comp=Z,15nm,0.5s,baz=114,slow=1.9,SNR=87
KURBB PP **PP** **16 55 05.3 -0.3**
comp=Z,19nm,1.1s,baz=103,slow=7.2,SNR=15
KURBB PKKPbc **PKKPbc** **17 03 18.7 +2.0**
comp=Z,5.4nm,0.8s,baz=289,slow=4.4,SNR=21
KURBB PKKP **PKKPdf** **17 03 55.1 +0.6**
comp=Z,2.2nm,1.0s,baz=281,slow=3.2,SNR=2.4
EKS2 Erkin-Say 123.10 301 P **PKPdf** **16 53 24.2 -0.7**
SNR=28
KBL Kabul 123.20 290 **PKPdf** **16 53 24.5 -1.0**
KBL Kabul 123.20 290 P **PKPdf** **16 53 25.0 -0.5**
SNR=51
KBL Kabul 123.20 290 PKiKP **PKPdf** **16 53 24.5 -1.0**
BIM Bigot 123.72 98 **PKPdf** **16 53 26.8 0.0**
BTLS Baital 123.81 304 *e*PKP **PKPdf** **16 53 24.8 -1.3**
BTLS *e*PP **PP** **16 55 09.5 -2.0**
BTLS Baital 123.81 304 *e*PKiKP **PKPdf** **16 53 24.7 -1.3**
BTLS *e* 16 55 09.5
H05S1 Guadeloupe/Mar 123.85 98 PKP **PKPdf** **16 53 26.4 -0.6**
SNR=11
J55A Hilton 124.27 59 **PKPdf** **16 53 25.6 -1.3**
MDP Montagnes des 124.31 113 PKP **PKiKP** **16 53 28.6 +0.4**
comp=Z,79nm,1.0s,baz=226,slow=1.8,SNR=15
ROSB Rosrio 124.44 127 *e*P **PKiKP** **16 53 29.4 +0.8**
DZA Taraz 124.86 301 *e*PKP **PKPdf** **16 53 26.9 -1.3**
DZA Taraz 124.86 301 *e*PKiKP **PKPdf** **16 53 26.9 -1.3**
JLN Jalan Bani Buh 124.89 272 P **PKPdf** **16 53 28.0 -0.8**
SNR=6.5
NGCH Negor - Chabah 125.12 277 P **PKiKP** **16 53 29.7 +0.2**
DQM DQM 125.22 269 P **PKPdf** **16 53 28.5 -1.0**
KIBK Kibwezi 125.29 233 PKP **PKPdf** **16 53 29.2 -0.8**
KIBK Kibwezi 125.29 233 **PKPdf** **16 53 29.9 -0.1**
KIBK Kibwezi 125.29 233 P **PKPdf** **16 53 30.1 +0.1**
SNR=8.0
MHTO MHTO 125.44 270 P **PKPdf** **16 53 29.0 -0.8**
SNR=7.7
IUG Iuzhnay 125.49 299 *e*PKP **PKPdf** **16 53 28.1 -1.4**
IUG Iuzhnay 125.49 299 *e*PKiKP **PKPdf** **16 53 28.1 -1.4**
KK31 Karatay Array 125.50 301 *i* PKiKP **PKPdf** **16 53 27.4 -2.0**
KKAR Karatay Array 125.50 301 **PKPdf** **16 53 27.4 -2.0**
KKAR Karatay Array 125.50 301 PKiKP **PKPdf** **16 53 27.4 -2.0**
SHAO Shalim 125.71 266 PKPdf **PKPdf** **16 53 29.8 -0.7**
CHM Chimkent 125.84 299 *e*PKP **PKPdf** **16 53 28.9 -1.1**
CHM Chimkent 125.84 299 *e*PKiKP **PKPdf** **16 53 28.9 -1.1**
BRLS Borolday 125.93 300 *e*PKP **PKPdf** **16 53 29.0 -1.2**
BRLS *e*PP **PP** **16 55 23.9 -1.9**
BRLS Borolday 125.93 300 *e*PKiKP **PKPdf** **16 53 29.0 -1.2**
BRLS *e* 16 55 23.9
JMDO Jabal Madar 126.04 272 P **PKPdf** **16 53 29.9 -1.1**
SNR=5.5
DMTO DMTO 126.08 265 P **PKPdf** **16 53 30.4 -0.8**
SMDO Samad 126.43 273 P **PKPdf** **16 53 31.4 -0.5**
SNR=6.6
RBK Rabkut 126.56 264 P **PKPdf** **16 53 31.8 -0.3**
SNR=7.4
KMBO Kilima Mbogo 126.72 233 PKP **PKPdf** **16 53 33.1 +0.1**
comp=Z,31nm,1.0s,baz=135,slow=0.8,SNR=20
BSY Bisya 126.95 272 P **PKPdf** **16 53 31.6 -1.1**
RCBR Riachuelo 126.97 137 **PKPdf** **16 53 32.0 -1.1**
RCBR Riachuelo 126.97 137 PKiKP **PKPdf** **16 53 32.0 -1.1**
RCBR Riachuelo 126.97 137 *e*P **PKiKP** **16 53 34.4 +0.7**
WHFO Wadi Hawf 127.13 265 P **PKPdf** **16 53 32.3 -0.9**
ABTO Aybut 127.19 264 P **PKPdf** **16 53 33.1 -0.2**
SNR=6.7
DOK Doka 127.23 266 P **PKPdf** **16 53 32.9 -0.5**
SNR=6.2
HOQ Hoqain 127.28 273 P **PKPdf** **16 53 32.6 -0.7**
SNR=8.0
ARQ Araqi 127.79 272 P **PKPdf** **16 53 33.6 -0.7**
SNR=9.0
SOHO SOHO 128.17 273 P **PKPdf** **16 53 34.2 -0.8**
SOHO SOHO 128.17 273 *i* PKPdf **PKPdf** **16 53 34.0 -1.0**
SNR=27
HRA Herat 128.25 287 **PKPdf** **16 53 33.5 -1.7**
BVAR Borovoye Array 128.50 312 PKhKP PKPpre 16 53 23.9
comp=Z,1.9nm,0.6s,baz=112,slow=1.6,SNR=6.7
BVAR PKP **PKPdf** **16 53 33.9 -0.8**
comp=Z,15nm,0.9s,baz=122,slow=1.9,SNR=18
BVAR PP **PP** **16 55 41.6 -0.8**
comp=Z,11nm,1.1s,baz=108,slow=4.7,SNR=3.4
BVAR PKKP **PKKPdf** **17 03 44.1 +0.1**
comp=Z,2.1nm,0.8s,baz=277,slow=4.9,SNR=6.3
ALNE Al Ain 128.76 272 P **PKPdf** **16 53 35.4 -0.7**
SNR=9.6
ALNE Al Ain 128.76 272 *i* PKPdf **PKPdf** **16 53 35.3 -0.9**
SNR=17
ASHO Ashiyiah 128.82 273 P **PKPdf** **16 53 35.5 -0.7**
SNR=8.3
ASHO Ashiyiah 128.82 273 *i* PKPdf **PKPdf** **16 53 35.3 -1.0**
SNR=15
HATD Hatta, Dubai 128.83 273 P **PKPdf** **16 53 35.6 -0.7**
SNR=7.3
HATD Hatta, Dubai 128.83 273 *i* PKPdf **PKPdf** **16 53 35.4 -0.9**
SNR=18
UOSS Minazif 128.83 274 **PKPdf** **16 53 34.6 -1.7**
UOSS Minazif 128.83 274 P **PKPdf** **16 53 35.1 -1.1**
MDH Madha 128.93 274 P **PKPdf** **16 53 35.4 -1.0**
MDH Madha 128.93 274 PKPdf **PKPdf** **16 53 35.3 -1.1**
MSFE Esma-Masafi 129.06 274 *i* PKPdf **PKPdf** **16 53 35.9 -0.8**
SNR=7.8
MASF Masafi 129.07 274 P **PKPdf** **16 53 36.1 -0.6**
FAQ Al Faqa, Dubai 129.22 273 P **PKPdf** **16 53 36.5 -0.5**
FAQ Al Faqa, Dubai 129.22 273 PKPdf **PKPdf** **16 53 36.2 -0.8**
BANOM Banah 129.22 275 P **PKPdf** **16 53 36.4 -0.7**
BANOM Banah 129.22 275 PKPdf **PKPdf** **16 53 36.2 -0.9**
NAZ Nazwa, Dubai 129.28 273 P **PKPdf** **16 53 36.9 -0.2**
NAZ Nazwa, Dubai 129.28 273 *i* PKPdf **PKPdf** **16 53 36.6 -0.5**
SNR=8.9
ASUD Al Ashush, Dub 129.37 273 P **PKPdf** **16 53 36.4 -0.8**
ASUD Al Ashush, Dub 129.37 273 *i* PKPdf **PKPdf** **16 53 36.6 -0.7**
SNR=11
SHME Shamm 129.41 275 P **PKPdf** **16 53 36.3 -1.0**
SHME Shamm 129.41 275 PKPdf **PKPdf** **16 53 36.6 -0.7**
MZR Muzera 130.04 270 P **PKPdf** **16 53 38.4 -0.2**
SNR=6.2
MZR Muzera 130.04 270 *i* PKPdf **PKPdf** **16 53 37.9 -0.8**
SNR=33
MZWR Madinat Zayed 130.10 271 P **PKPdf** **16 53 36.8 -1.9**
GHWR Ruwais 131.00 271 P **PKPdf** **16 53 39.0 -1.4**
MBAR Mbarara 131.12 227 P **PKPdf** **16 53 40.6 -0.6**
LODK Lodwar 131.39 235 P **PKiKP** **16 53 42.2 -0.3**
JRN Qarnain Island 131.50 272 P **PKPdf** **16 53 40.5 -0.8**
ATD Arta Tunnel 131.79 250 PKP **PKiKP** **16 53 43.2 -0.1**
comp=Z,1.0nm,0.9s,baz=202,slow=4.1,SNR=4.2
SLWR Sila 131.99 270 P **PKPdf** **16 53 41.5 -0.8**
TRNA Turayna 132.70 271 P **PKPdf** **16 53 43.4 -0.2**
SMRA Abu-Samra 133.01 270 P **PKPdf** **16 53 42.9 -1.2**
SHMA Al-Shehemyia 133.43 272 P **PKPdf** **16 53 44.0 -0.9**
SCHQ Scheffer\ville 134.02 46 PKP **PKiKP** **16 53 45.9 -0.6**
comp=Z,24nm,1.0s,baz=279,slow=2.5,SNR=7.0
SCHQ SKPbc **SKPbc** **16 56 59.8 -1.9**
comp=Z,12nm,0.9s,baz=260,slow=6.1,SNR=4.3
AB31 Akbulak array 134.19 306 *i* PKHKP PKPpre 16 53 27.3
SVE Sverdlovsk 134.60 316 *e*PKiKP **PKPdf** **16 53 39.7 -6.4**
SVE pmax pmax
comp=Z,15nm,1.0s
NEEM North Greenlan 134.97 13 *i* P **PKPdf** **16 53 42.3 -4.4**
ARTI Arti 135.83 316 *i* PKiKP **PKPdf** **16 53 47.4 -1.0**
SPITS Spitsbergen Ar 138.40 354 PKhKP PKPpre 16 53 42.6
comp=Z,4.1nm,0.5s,baz=64,slow=6.6,SNR=21
SPITS PKP **PKPdf** **16 53 52.3 -0.4**
comp=Z,14nm,0.6s,baz=64,slow=3.4,SNR=6.7
SPITS SKPbc **SKPbc** **16 57 12.7 -1.6**
comp=Z,5.2nm,0.6s,baz=56,slow=2.6,SNR=2.5
SPITS SKPab **SKiKP** **16 57 20.1 +2.0**
comp=Z,7.6nm,0.6s,baz=46,slow=6.2,SNR=4.3
ILULI Ilulissat 138.97 24 *i* P **PKPdf** **16 53 52.4 -1.5**
DAG Danmarks Havn 139.96 6 *i* P **PKPdf** **16 53 49.6 -5.9**
SFJD Kangerlussuaq 140.05 27 *i* P **PKPdf** **16 53 54.9 -1.0**
KIV Kirov 140.52 319 *i* PKiKP **PKPdf** **16 53 55.4 -1.5**
SUMG Summit 140.54 16 PKP **PKPdf** **16 53 52.7 -4.5**
SUMG Summit 140.54 16 *i* P **PKPdf** **16 53 53.5 -3.7**
AKT Akhty 141.30 292 *e*PKHKP PKPpre 16 53 52.2
AKT *e* 16 53 59.7
AKT *e* 16 54 32.7
AKT *e* 16 54 45.6
AKT *e* 16 57 04.3
AKT *e*PPP PPP 17 00 08.6
AKT pmax pmax
comp=Z,60nm,1.1s
MAK Makhachkala 141.73 294 *e*P **Pdif** **16 51 16.3 -3.2**
MAK *i* 16 54 00.0
MAK *e* 16 54 36.6
MAK *e*PPP PPP 17 00 13.5
MAK *e* 17 01 02.4
MAK *e*SS SS 17 15 30.4 +3.5
MAK *e*SSS SSS 17 20 48.7
MAK pmax pmax
comp=Z,316nm,1.3s
DBG Daneborg 142.12 8 *i* P **PKPdf** **16 53 54.7 -4.8**
BELG Belogornoye 142.18 310 *i* PKHKP PKPpre 16 53 54.7
LVZ Lovozero 143.13 337 *i* PKHKP PKPpre 16 53 56.6
IVI Ivigtut 143.15 35 *i* P PKPbc 16 53 58.4 -0.6
GNI Garni 143.27 289 P PKPbc 16 53 59.8 -0.4
GNI Garni 143.27 289 PKPdf PKPbc 16 54 00.0 -0.2
GNI Garni 143.27 289*c* *i* PKHKP PKPpre 16 53 57.6
APA Apatity 143.71 338 ⇓ *i* PKHKP PKPpre 16 53 57.2
APA MLR MLR
comp=Z,491nm,25.4s
NRS Narsarsuaq 144.41 34 *i* P **PKPab** **16 54 01.4 -1.0**
ARA0 ARCESS Array S 144.45 343 *e*P **PKPab** **16 54 01.1 -1.3**
ARCES ARCESS Array B 144.45 343 PKP **PKPab** **16 54 01.3 -1.1**
comp=Z,196nm,0.8s,baz=35,slow=2.4,SNR=391
ARCES SKPbc **SKPbc** **16 57 29.4 -0.6**
comp=Z,5.6nm,0.6s,baz=38,slow=2.3,SNR=3.2
EDA Edea 144.46 202 **PKPab** **16 54 03.7 -0.3**
KLMR Klimovskoe 144.75 325 *e*PKiKP **PKPab** **16 54 01.8 -1.9**
KLMR *e* 16 57 21.5
KLMR pmax pmax
comp=Z,307nm,1.0s
KBZ Khabaz 145.16 295 PKPbc **PKPbc** **16 54 04.8 -0.8**
comp=Z,235nm,1.1s,baz=163,slow=2.8,SNR=107
KBZ Khabaz 145.16 295 *i* PKP2 **PKPbc** **16 54 03.6 -1.9**
GOF Gofitskoye 145.16 297*c* *i* PKP2 **PKPbc** **16 54 04.5 -1.1**
ANGG Ammassalik, Gr 145.27 25 **PKPdf** **16 54 03.8 -1.3**
ANGG Ammassalik, Gr 145.27 25 *i* P **PKPdf** **16 54 02.4 -2.7**
KIV Kislovodsk 145.33 295 **PKPdf** **16 54 05.1 -1.1**
KIV Kislovodsk 145.33 295 P **PKPdf** **16 54 05.6 -0.5**
KIV Kislovodsk 145.33 295 ⇓ P **PKPdf** **16 54 05.0 -1.1**
KIV Kislovodsk 145.33 295 *i* PKP2 **PKPdf** **16 54 04.1 -2.0**
KIV *e*SSS SSS 17 21 32.4
KIV pmax pmax
comp=Z,125nm,1.1s
KIV MLR MLR
comp=Z,131nm,25.0s
KTK1 Kautokeino 145.37 344 *e*P **PKPdf** **16 54 04.5 -0.8**
SCO Scoresbysund 145.38 11 **PKPdf** **16 54 04.7 -0.5**
SCO Scoresbysund 145.38 11 PKiKP **PKPdf** **16 54 04.7 -0.5**
SCO Scoresbysund 145.38 11 *i* P **PKPdf** **16 54 00.4 -4.8**
JETT Jettan, Norway 145.51 346 *e*P **PKPdf** **16 54 04.3 -1.2**
TRO Tromso 145.72 347 *e*P **PKPdf** **16 54 05.3 -0.5**
BATM Batumi 145.79 291 ⇓ P **PKPdf** **16 54 06.5 -0.3**
BATM Batumi 145.79 291 ⇓ PKP2 **PKPdf** **16 54 06.5 -0.3**
VRH Novokhopyorsk 145.92 308 *e*PKiKP **PKPdf** **16 54 04.5 -2.2**
VRH pmax pmax
comp=Z,180nm,0.8s

LABN Labinsk 146.79 296 *i* PKP2 **PKPbc** **16 54 09.4 -1.0**
LABN pmax pmax
comp=Z,95nm,1.0s
ERBR Yeremizino-Bor 147.00 298 *e*PKIKP **PKPdf** **16 54 07.7 -1.0**
ERBR *i* 16 54 12.5
ERBR *e* 17 01 03.1
ERBR pmax pmax
comp=Z,113nm,0.9s
ERBR pmax pmax
comp=Z,237nm,1.0s
ASF Jabal al Asfar 147.23 273 PKPbc **PKPbc** **16 54 11.5 -0.7**
comp=Z,125nm,1.0s,baz=107,slow=1.7,SNR=54
MOS Moscow 147.41 317 *e*PKIKP **PKPdf** **16 54 09.6 +0.5**
MOS *e* 16 54 43.8
MOS *e* 16 57 36.3
MOS pmax pmax
comp=Z,209nm,1.1s
MOS pmax pmax
comp=Z,400nm,1.5s
VORR Voronezh 147.42 309 *e*PKIKP **PKPdf** **16 54 08.1 -1.1**
VORR pmax pmax
comp=Z,210nm,1.0s
LPSR Galich'ya Gora 147.43 311 *e*PKIKP **PKPdf** **16 54 08.2 -1.0**
LPSR pmax pmax
comp=Z,142nm,1.0s
SOC Sochi 147.45 294 *e*PKHKP PKPpre 16 54 07.6
SOC *e* 16 57 37.9
SOC *e*PPP PPP 17 00 58.5
SOC *e*SS SS 17 16 28.8 -3.5
SOC *e*SSS SSS 17 22 05.9
SOC pmax pmax
comp=Z,127nm,0.8s
VORD Divnogorie 147.47 308 *e*PKIKP **PKPdf** **16 54 09.4 +0.1**
VORD pmax pmax
comp=Z,180nm,1.0s
VSR Storozhevoye 147.51 309 *e*PKIKP **PKPdf** **16 54 09.2 -0.2**
VSR pmax pmax
comp=Z,190nm,1.0s
EIL Elat 147.84 267 PKPbc **PKPbc** **16 54 14.1 +0.3**
comp=Z,264nm,1.1s,baz=116,slow=3.4,SNR=42
LOF Lofoten 147.97 349 *e*PKPdf **PKPdf** **16 54 11.0 +1.4**
OBN Obninsk 148.17 316 ⇑P **PKPbc** **16 54 12.5 -1.3**
OBN Obninsk 148.17 316 *d*PKIKP **PKPdf** **16 54 11.8 +1.5**
OBN *e* 16 54 50.9
OBN *e* 16 57 41.6
OBN pmax pmax
comp=Z,228nm,1.2s
BALJ Balqa 148.20 272 **PKPbc** **16 54 14.9 +0.2**
FAUS Fauske 148.35 347 *e*PKPdf **PKPdf** **16 54 11.7 +1.5**
SHBL Chebaa 148.54 274 *e*P **PKPdf** **16 54 11.3 -0.6**
BEIL Beino 148.55 277 *e*P **PKPdf** **16 54 10.5 -1.2**
ZAHL Zahle 148.59 275 *e*P **PKPdf** **16 54 11.3 -0.6**
QRWL Qaraoun 148.65 275 *e*P **PKPdf** **16 54 11.2 -0.7**
HWQ Hawqa 148.66 276 *e*P **PKPdf** **16 54 10.7 -1.3**
MMAI Mount Meron Ar 148.70 273 PKPbc **PKPbc** **16 54 15.9 -0.1**
comp=Z,97nm,0.7s,baz=87,slow=3.0,SNR=188
BHL Bhannes 148.78 275 *e*P **PKPdf** **16 54 11.1 -1.1**
ANN Anapa 149.14 297 *e*PKIKP **PKPdf** **16 54 09.1 -3.1**
ANN *e* 16 54 51.1
ANN *e* 17 01 05.1
ANN *e*SS SS 17 16 44.8 -6.3
ANN pmax pmax
comp=Z,66nm,1.4s
ANN pmax pmax
comp=Z,249nm,0.9s
DBIC Dimbokro 149.28 176 PKP **PKPdf** **16 54 13.4 0.0**
comp=Z,65nm,0.9s,baz=177,slow=2.4,SNR=20
DBIC PKPbc **PKiKP** **16 54 18.7 -0.3**
comp=Z,132nm,0.7s,baz=186,slow=3.5,SNR=29
DBIC Dimbokro 149.28 176 **PKPdf** **16 54 12.5 -0.9**
VAGH Vaagaholmen 149.29 348 *e*PKPdf **PKPdf** **16 54 13.1 +1.4**
PUL Pulkovo 149.31 327 *c*PKHKP PKPpre 16 54 14.7
PUL pmax pmax
comp=Z,392nm,1.3s
RAUS Rausandaksla 149.42 347 *e*PKPdf **PKPdf** **16 54 13.5 +1.5**
MOR8 Moi Rana 149.58 346 *e*PKPdf **PKPdf** **16 54 13.4 +1.1**
STOK Stokkvaagen 149.69 347 *e*PKPdf **PKPdf** **16 54 13.8 +1.4**
LEIR Leirfjorden 149.88 347 *e*PKPdf **PKPdf** **16 54 14.2 +1.4**
FINES FINESS Array B 150.03 332 PKPbc **PKPbc** **16 54 16.5 -1.7**
comp=Z,86nm,0.8s,baz=52,slow=2.5,SNR=41
FINES PP **PP** **16 57 52.9 -1.2**
comp=Z,8.3nm,0.9s,baz=82,slow=10,SNR=2.4
CSS Mathiatis 150.92 276 **PKPbc** **16 54 20.5 -0.7**
KIRS Kirsehir-Merke 151.33 285 ⇓P **PKPbc** **16 54 21.4 -0.8**
SIM Simferopol' 151.49 297 *e*PKIKP **PKPbc** **16 54 21.4 -0.8**
SIM *e* 16 54 51.0
SIM *e* 16 58 00.0
SIM *e*SS SS 17 18 15.0 +58
SIM pmax pmax
comp=Z,88nm,0.7s
SIM pmax pmax
comp=Z,120nm,6.4s
SIM pmax pmax
comp=Z,150nm,10.0s
NSS Namsos 151.52 347 *e*PKPdf **PKPdf** **16 54 16.7 +1.4**
BZK Bozkurt 151.55 291 ⇑P **PKPdf** **16 54 17.9 +1.8**
BRTR Keskin Array B 151.62 286 PKPbc **PKPbc** **16 54 21.9 -1.0**
comp=Z,12nm,1.0s,baz=139,slow=4.0,SNR=23
BRTR PP **PP** **16 58 04.3 -0.2**
comp=Z,3.3nm,1.1s,baz=104,slow=6.1,SNR=2.1
ANTO Ankara 152.28 286 PKPdf **PKPdf** **16 54 15.2 -2.2**
ANTO **PKPbc** **16 54 23.4 -0.9**
ANTO Ankara 152.28 286 P **PKPdf** **16 54 15.8 -1.6**
ANTO Ankara 152.28 286 ⇑P **PKPbc** **16 54 22.8 -1.5**
ANTO Ankara 152.28 286 ⇑PKIKP **PKPbc** **16 54 22.8 -1.5**
CIDE Kastamonu/Cide 152.33 290 ⇑P **PKPdf** **16 54 18.2 +1.0**
MNK Minsk 153.06 319 *i* PKIKP **PKPbc** **16 54 25.3 -0.1**
MNK *i* 16 55 00.1
MNK *i* 16 58 11.3
MNK *i* 17 01 11.8
MNK *i* PPP PPP 17 01 39.5
MNK *i* SS SS 17 17 35.3 +2.0
MNK *i* SSS SSS 17 23 18.2
MNK pmax pmax
comp=N,11nm,0.7s
MNK pmax pmax
comp=E,22nm,0.9s
MNK pmax pmax
comp=Z,68nm,1.0s
AKASG Malin Array Be 153.75 310 PKP **PKPdf** **16 54 18.9 -0.1**
comp=Z,4.8nm,1.0s,baz=62,slow=2.7,SNR=10.0
AKASG PKPbc **PKPbc** **16 54 25.8 -1.2**
comp=Z,10nm,0.5s,baz=63,slow=2.9,SNR=31
AKASG PKPab **PKPab** **16 54 39.8 -0.7**
comp=Z,40nm,0.9s,baz=71,slow=4.8,SNR=13
AKASG PP **PP** **16 58 13.0 -2.8**
comp=Z,2.3nm,0.9s,baz=57,slow=5.8,SNR=4.6
KIEV Kiev 153.76 310 ⇓P **PKPdf** **16 54 21.6 +2.6**
PURM Purcari 154.30 301 ⇑P **PKPab** **16 54 42.7 -0.3**
NB2 NORSAR Subarra154.82 344 PKP **PKPbc** **16 54 27.0 -2.0**
comp=Z,21nm,1.2s,baz=16,slow=4.4
NOA NORSAR Array B154.82 344 PKP **PKPdf** **16 54 17.8 -2.5**
comp=Z,6.1nm,1.2s,baz=32,slow=1.4,SNR=9.5
NOA PKPbc **PKPbc** **16 54 27.7 -1.3**
comp=Z,9.3nm,0.9s,baz=30,slow=2.0,SNR=21
NOA PKPab **PKPab** **16 54 42.5 -2.3**
comp=Z,37nm,0.9s,baz=27,slow=3.3,SNR=33
NOA PP **PP** **16 58 17.8 -3.2**
comp=Z,1.4nm,1.0s,baz=15,slow=4.0,SNR=1.4
SORM Soroca 155.00 305 ⇑P **PKPdf** **16 54 20.1 -0.7**
SORM Soroca 155.00 305 ⇑PKIKP **PKPdf** **16 54 20.1 -0.7**
HFS Hagfors 155.01 340 PKPbc PKPdf 16 54 29.5 +9.0
comp=Z,12nm,0.8s,baz=48,slow=1.4,SNR=15
HFS PKPab **PKPab** **16 54 44.4 -1.1**
comp=Z,50nm,0.8s,baz=58,slow=3.6,SNR=33
HFS PP **PP** **16 58 18.2 -3.9**
comp=Z,14nm,1.1s,baz=69,slow=4.8,SNR=4.7
ARG Arkhangelos 155.34 277 **PKPdf** **16 54 20.8 -0.9**
ARG Arkhangelos 155.34 277 PKIKP **PKPdf** **16 54 20.8 -0.9**
TORD Torodi Ar. Bea 155.47 190 P **PKPdf** **16 54 20.4 -2.1**
comp=Z,55nm,1.0s,baz=118,slow=0.8,SNR=15
TORD PKPab **PKPab** **16 54 49.3 +0.7**
comp=Z,108nm,1.1s,baz=125,slow=2.1,SNR=13
RNPP5 Staryi Chortor 155.54 313 PKP **PKPdf** **16 54 20.0 -1.5**
TIRR Tirgusor 155.58 296 ⇓P **PKPab** **16 54 45.4 -3.1**
TIRR Tirgusor 155.58 296 ⇓PKP2 **PKPab** **16 54 45.4 -3.1**
VLDR Vladesti 155.64 300 ⇑P PKPdf 16 54 32.6 +11
CFR Carcaliu 155.69 298 ⇓P **PKPab** **16 54 48.0 -1.0**
CFR Carcaliu 155.69 298 ⇓PKP2 **PKPab** **16 54 48.0 -1.0**
SUW Suwalki 155.71 321 *e*PKP **PKPab** **16 54 48.1 -0.6**
SCTR Scanteiesti 155.72 299 ⇑P PKPdf 16 54 30.8 +8.9
CTYL Yalikoy Yolu 155.81 289 ⇑P **PKPab** **16 54 48.2 -1.4**
BAND Balkesir-Ban 155.91 286 ⇑P **PKPdf** **16 54 22.0 -0.4**
VRI Vrincioaia 156.56 300 ⇑P **PKPdf** **16 54 30.2 +7.1**
VRI Vrincioaia 156.56 300 ⇑PKIKP **PKPdf** **16 54 30.2 +7.1**
PLOR Plostina 156.62 300 ⇓P **PKPab** **16 54 45.8 -7.3**
PLOR Plostina 156.62 300 ⇓PKP2 **PKPab** **16 54 45.8 -7.3**
BISRR Bisoca 156.63 300 ⇓P PKPdf 16 54 31.3 +8.0
ONER Baraj Valea Uz 156.70 302 ⇑P **PKPdf** **16 54 21.4 -1.9**
COVR Voineasa-Covas 156.93 300 ⇑P **PKPdf** **16 54 27.8 +4.3**
NEHR Nehoiu 156.94 299 ⇑P **PKPdf** **16 54 27.4 +3.8**
TURR Turia 157.02 301 ⇑P **PKPdf** **16 54 26.6 +2.9**
MLR Muntele Rosu 157.17 300 ⇓P **PKPdf** **16 54 23.2 -0.8**
MLR Muntele Rosu 157.17 300 ⇓PKIKP **PKPdf** **16 54 23.2 -0.8**
BURAR Bucovina Array 157.17 305 PKPdf **PKPdf** **16 54 22.5 -1.4**
BURAR PKPab **PKPab** **16 54 56.3 +0.9**
BURAR Bucovina Array 157.17 305 ⇑P **PKPab** **16 54 55.6 +0.2**
BURAR Bucovina Array 157.17 305 ⇑PKP2 **PKPab** **16 54 55.6 +0.2**
EZN Ezine 157.24 285 ⇓P **PKPdf** **16 54 21.9 -2.2**
EZN Ezine 157.24 285 ⇓PKIKP **PKPdf** **16 54 21.9 -2.2**
DOPR Dopca 157.46 301 ⇑P **PKPdf** **16 54 26.0 +1.7**
APE Apeiranthos 157.55 278 ⇓P **PKPdf** **16 54 25.2 +0.6**
APE Apeiranthos 157.55 278 ⇓PKIKP **PKPdf** **16 54 25.2 +0.6**
IDI Anoyia 157.70 273 PKP **PKPdf** **16 54 22.7 -2.3**
VOIR 157.80 300 ⇑P **PKPdf** **16 54 31.4 +6.7**
VOIR 157.80 300 ⇑PKIKP **PKPdf** **16 54 31.4 +6.7**
KWP Kalwaria Pacla 158.04 312 *e*PKP **PKPab** **16 54 59.1 +0.1**
BEL Belsk 158.09 318 *e*PKP **PKPab** **16 54 59.2 +0.1**
ARR Arges 158.10 300 ⇓P **PKPdf** **16 54 24.5 -0.6**
CJR Cluj-Napoca 158.48 304 ⇑P **PKPab** **16 55 01.4 +0.3**
CJR Cluj-Napoca 158.48 304 ⇑PKP2 **PKPab** **16 55 01.4 +0.3**
LOT Lotru 158.68 300 ⇑P **PKPdf** **16 54 24.2 -1.7**
GKP Gorka Klasztor 158.99 325 *e*PKP **PKPab** **16 55 02.2 -0.7**
STHS Stebnicka Huta 159.00 312 *e*PKP2 **PKPab** **16 55 02.7 -0.5**
STHS Stebnicka Huta 159.00 312 *e*PKP **PKPab** **16 55 02.7 -0.5**
DRGR 159.05 304 ⇑P **PKPdf** **16 54 26.5 +0.3**
DRGR 159.05 304 ⇑PKIKP **PKPdf** **16 54 26.5 +0.3**
DEV Deva 159.17 302 ⇓P **PKPdf** **16 54 26.4 +0.2**
DEV Deva 159.17 302 ⇓PKIKP **PKPdf** **16 54 26.4 +0.2**
GZR Gura Zlata 159.37 301 ⇓P **PKPdf** **16 54 25.1 -1.5**
GZR Gura Zlata 159.37 301 ⇓PKIKP **PKPdf** **16 54 25.1 -1.5**
OJC Ojcow 159.46 316 *e*PKP **PKPab** **16 55 04.8 -0.3**
NIE Niedzica 159.55 313 *e*PKP **PKPab** **16 55 05.9 +0.3**
SURR Surduc 159.73 302 ⇑P **PKPdf** **16 54 26.4 -0.5**
KECS Kecovo 159.85 310 *e*PKP2 **PKPab** **16 55 07.9 +1.0**
KECS Kecovo 159.85 310 *e*PKP **PKPab** **16 55 07.9 +1.0**
SIRR Siria 159.90 304 ⇓P **PKPdf** **16 54 26.6 -0.5**
LANS Liptovska Anna 160.16 313 *e*PKIKP **PKPdf** **16 54 29.3 +2.0**
LANS *e* 16 55 09.5
LANS Liptovska Anna 160.16 313 *e*PKP **PKPdf** **16 54 29.3 +2.0**
LANS *e* 16 55 09.5
BOVS Bovan 160.49 296 ⇑P **PKPdf** **16 54 29.2 +1.4**
OKC Ostrava-Krasne 160.57 316 *e*PKP2 **PKPab** **16 55 10.1 +0.1**
OKC *e* 16 58 51.4
OKC Ostrava-Krasne 160.57 316 *e*PKPAB **PKPab** **16 55 10.1 +0.1**
OKC *e*PP **PP** **16 58 51.4 -1.7**
STEB Steborice 160.72 317 *e*PKPAB **PKPab** **16 55 10.9 +0.3**
MORC Moravsky Berou 160.93 317 ⇓P **PKPdf** **16 54 26.8 -1.3**
MORC Moravsky Berou 160.93 317 *e*PKP **PKPdf** **16 54 26.6 -1.5**
MORC *e* 16 55 11.4
MORC Moravsky Berou 160.93 317 ⇓PKIKP **PKPdf** **16 54 26.8 -1.3**
KSP Ksiaz 160.98 321 *e*PKP **PKPab** **16 55 11.8 0.0**
MAUC Maruska 160.99 315 *e*PKPAB **PKPab** **16 55 12.5 +0.6**
RUE Ruedersdorf 161.06 328 *e*PKPab **PKPab** **16 55 11.6 -0.3**
baz=45,slow=4.5
OSTC Ostas 161.19 320 *e*PKIKP **PKPdf** **16 54 26.8 -1.6**
OSTC *e* 16 55 12.9
OSTC *e* 16 58 53.6
OSTC Ostas 161.19 320 *e*PKPDF **PKPdf** **16 55 12.8 -1.6**
OSTC *e*PKPAB **PKPab** **16 55 12.9 +0.2**
OSTC *e*PP **PP** **16 58 53.6 -2.8**
BSEG Bad Segeberg 161.24 336 *e*PKPab **PKPab** **16 55 12.0 -0.6**
baz=45,slow=4.5
CHVC Chvalec 161.25 320 *e*PKP2 **PKPab** **16 55 13.2 +0.2**
CHVC Chvalec 161.25 320 *e*PKPAB **PKPab** **16 55 13.2 +0.2**
DPC Dobruska-Polom 161.26 319 *e*PKP2 **PKPab** **16 55 13.4 +0.4**
DPC *e* 16 58 58.9
DPC Dobruska-Polom 161.26 319 *e*PKPAB **PKPab** **16 55 13.4 +0.4**
DPC *e*PP **PP** **16 58 58.9 +2.1**
UPC Upice 161.32 320 *e*PKIKP **PKPdf** **16 54 27.9 -0.6**
UPC *e* 16 55 13.4
UPC Upice 161.32 320 *e*PKPDF **PKPdf** **16 54 27.9 -0.6**
UPC *e*PKPAB **PKPab** **16 55 13.4 +0.1**
JAVC Velka Javorina 161.34 314 *e*PKP **PKPdf** **16 54 27.9 -0.7**
JAVC *e* 16 55 14.5
SRO Srobarova 161.45 311 *e*PKP2 **PKPab** **16 55 13.8 -0.1**
SRO Srobarova 161.45 311 *e*PKP **PKPab** **16 55 13.8 -0.1**
GORT1 Trebel 161.66 332 *e*PKPab **PKPab** **16 55 13.8 -0.6**
baz=45,slow=4.5
VRAC Vranov 161.71 316 *e*PKP **PKPdf** **16 54 27.2 -1.7**
VRAC *e* 16 55 15.1
MODS Modra-Piesok 161.80 313 *e*PKIKP **PKPdf** **16 54 27.4 -1.7**
MODS Modra-Piesok 161.80 313 *e*PKP **PKPdf** **16 54 27.4 -1.7**
MODS *e* 16 55 16.5
MORH Mrgy, Hungar 161.89 306 ⇑P **PKPdf** **16 54 28.3 -0.9**
KRUC Moravsky 161.95 316 *e*PKP **PKPdf** **16 54 27.2 -2.0**
KRUC *e* 16 55 15.9
PVCC Panska Ves 162.03 322 *e*PKP2 **PKPab** **16 55 16.5 +0.2**
PVCC Panska Ves 162.03 322 *e*PKPAB **PKPab** **16 55 16.5 +0.2**
BRG Berggiesshubel 162.10 324 *e*PKPab **PKPab** **16 55 16.2 -0.4**
baz=45,slow=4.5
EKA Eskdalemuir Ar 162.12 1 PKP **PKPdf** **16 54 29.2 +0.1**
comp=Z,1.9nm,0.8s,baz=24,slow=4.8,SNR=3.7
EKA PKPab **PKPab** **16 55 15.6 -0.9**
comp=Z,9.9nm,0.7s,baz=0.8,slow=3.1,SNR=12
FLTG Flechtingen 162.20 331 *e*PKPab **PKPab** **16 55 15.4 -1.5**
baz=45,slow=4.5
CLL Collm 162.23 326 *e*PKIKP **PKPdf** **16 54 32.0 +2.6**
CLL *i* 16 55 16.4
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL pmax pmax
comp=Z,105nm,1.0s
CLL MLR MLR
comp=Z,400nm,28.1s
CLL Collm 162.23 326 *e*PKPdf **PKPdf** **16 54 32.0 +2.6**
comp=Z,9.0nm,1.0s
CLL *i* PKPab **PKPab** **16 55 16.4 -0.8**
CLL comp=Z,105nm,1.0s *e*PPIp 16 58 55.0
CLL comp=Z,300nm,13.1s *e*PP **PP** **16 59 01.0 -0.7**
CLL comp=Z,19nm,1.4s *e*SS SS 17 19 42.0 +31
RICC Richard 162.25 323 *e*PKPAB **PKPab** **16 55 17.6 +0.3**
PRU Pruhonice 162.39 321 *e*PKIKP **PKPdf** **16 54 28.4 -1.2**
PRU *e* 16 55 18.1
PRU *e* 16 59 03.7
PRU Pruhonice 162.39 321 *e*PKPDF **PKPdf** **16 54 28.4 -1.2**
PRU *e*PKPAB **PKPab** **16 55 18.1 +0.2**
PRU *e*PP **PP** **16 59 03.7 +1.0**
PRA Prague 162.39 321 *e*PKP2 **PKPab** **16 55 19.9 +2.0**
PRA Prague 162.39 321 *e*PKPAB **PKPab** **16 55 19.9 +2.0**
HSKC Hora Svate Kat 162.52 324 *e*PKPAB **PKPab** **16 55 18.6 +0.1**
HSKC *e*PP **PP** **16 59 03.7 +0.3**
RETH Rethem/Aller, 162.55 335 *e*PKPab **PKPab** **16 55 17.7 -0.7**
baz=45,slow=4.5
ASSE Asse, Remlinge 162.57 332 *e*PKPab **PKPab** **16 55 17.6 -0.9**
baz=45,slow=4.5
RONA Rosalia, Austr 162.71 312 *e*PKP **PKPdf** **16 54 28.7 -1.4**
comp=Z,6.1nm,0.9s
RONA *e*PKP **sPKPdf** **16 55 20.1 -0.2**
comp=Z,41nm,1.4s
NEUB Neuenburg 162.84 328 *e*PKPab **PKPab** **16 55 19.4 -0.4**
baz=45,slow=4.5
CONA Conrad Observa 162.85 313 *e*PKP **PKPdf** **16 54 29.5 -0.7**
comp=Z,5.3nm,1.0s
CONA *e*PKP **PKPab** **16 55 20.2 0.0**
comp=Z,86nm,1.2s,SNR=24
CLZ Clausthal 162.92 331 *e*PKPab **PKPab** **16 55 19.7 -0.5**
baz=45,slow=4.5
TANN Tannenbergstha 163.10 325 *e*PKPab **PKPab** **16 55 20.8 -0.3**
baz=45,slow=4.5
PLN Plauen 163.19 325 *e*PKPab **PKPab** **16 55 20.8 -0.6**
baz=45,slow=4.5
CKRC Cesky Krumlov 163.22 318 *e*PKIKP **PKPdf** **16 54 26.5 -4.0**
CKRC *e* 16 55 21.6
CKRC *e* 16 59 08.8
CKRC Cesky Krumlov 163.22 318 *e*PKPDF **PKPdf** **16 54 26.5 -4.0**
CKRC *e*PKPAB **PKPab** **16 55 21.6 0.0**
CKRC *e*PP **PP** **16 59 08.8 +1.6**
GTTG Gottingen 163.31 332 *e*PKPab **PKPab** **16 55 20.9 -0.9**
baz=45,slow=4.5
KOGS Kog 163.32 309 *i* PKPab **PKPab** **16 55 22.9 +0.8**
MOX Moxa 163.32 327 *e*PKPab **PKPab** **16 55 21.6 -0.4**
baz=45,slow=4.5
MOX *e*L L 18 01 02.1
comp=Z,124nm,19.9s
BLY Banja Luka 163.36 302 ⇓P **PKPdf** **16 54 31.4 +0.7**
ARSA Arzberg 163.39 312 *e*PKP **PKPdf** **16 54 29.0 -1.7**
comp=Z,2.6nm,0.7s
ARSA *i* PKP **PKPab** **16 55 22.1 -0.3**
comp=Z,47nm,1.2s,SNR=11
KHC Kasperske Hory 163.41 320 *e*PKIKP **PKPdf** **16 54 28.6 -2.1**
KHC *e* 16 55 22.1
KHC *e* 16 59 10.1
KHC Kasperske Hory 163.41 320 *e*PKPDF **PKPdf** **16 54 28.6 -2.1**
KHC *e*PKPAB **PKPab** **16 55 22.1 -0.4**
KHC *e*PP **PP** **16 59 10.1 +1.9**
KHC *ex* x 17 09 26.4
IBBN Ibbenburen 163.44 337 *e*PKPab **PKPab** **16 55 21.4 -1.0**
baz=45,slow=4.5
GEC2 GERESS Array S 163.53 319 *e*PKPab **PKPab** **16 55 22.4 -0.7**
baz=45,slow=4.5
GERES GERESS Array B 163.53 319 PKP **PKPdf** **16 54 29.2 -1.6**
comp=Z,2.6nm,1.0s,baz=73,slow=3.3,SNR=11
GERES PKPab **PKPab** **16 55 22.8 -0.3**
comp=Z,7.2nm,0.9s,baz=57,slow=3.6,SNR=13
GERES PP **PP** **16 59 09.8 +1.0**
comp=Z,3.3nm,1.0s,baz=54,slow=9.9,SNR=4.9
MANZ Manzenberg 163.57 324 *e*PKPab **PKPab** **16 55 22.7 -0.4**
baz=45,slow=4.5
ROTZ Rotzenmuhle 163.67 324 *e*PKPab **PKPab** **16 55 23.4 -0.1**
baz=45,slow=4.5
WET Wettzell 163.76 321 *e*PKPab **PKPab** **16 55 23.6 -0.4**
baz=45,slow=4.5
MOA Molln 163.80 315 *e*PKP **PKPdf** **16 54 31.0 0.0**
comp=Z,4.6nm,0.9s
MOA *i* PKP **PKPab** **16 55 24.1 -0.2**
comp=Z,47nm,1.5s,SNR=9.1
UBBA Unterbreizbach 163.86 330 *e*PKPab **PKPab** **16 55 23.8 -0.3**
baz=45,slow=4.5
SOKA Soboth 163.96 311 *e*PKP **PKPdf** **16 54 32.2 +0.9**
comp=Z,14nm,1.1s
SOKA *e*PKP **PKPab** **16 55 24.6 -0.5**
comp=Z,32nm,1.4s
KASTN Kahler Asten 164.15 334 *e*PKPab **PKPab** **16 55 24.6 -1.1**
baz=45,slow=4.5
BIOA Bad Ischl, Aus 164.24 316 *e*PKP **PKPdf** **16 54 30.5 -0.9**
comp=Z,12nm,1.3s
BIOA *e*PKP **PKPab** **16 55 25.8 -0.4**
comp=Z,17nm,1.1s
OBKA Obir 164.33 311 *e*PKP **PKPdf** **16 54 32.2 +0.5**
comp=Z,12nm,1.3s
OBKA *i* PKP **PKPab** **16 55 26.1 -0.6**
comp=Z,27nm,1.3s
LJU Ljubljana 164.57 309 *i* PKPab **PKPab** **16 55 29.8 +2.1**
RJOB Jochberg 164.68 317 *e*PKPab **PKPab** **16 55 27.8 -0.4**
baz=45,slow=4.5
KBA Koelnbreinsper 164.75 314 *i* PKP **PKPdf** **16 54 31.8 -0.3**
comp=Z,14nm,1.2s
KBA *i* PKP **PKPab** **16 55 27.7 -0.9**
comp=Z,54nm,1.1s,SNR=14
MYKA Terra Mystica 164.81 312 *i* PKP **PKPdf** **16 54 32.2 +0.1**
comp=Z,4.3nm,0.7s
MYKA *e*PKP **PKPab** **16 55 28.7 -0.1**
comp=Z,23nm,0.9s
LESA Schwarzleotal 164.93 316 *i* PKP **PKPdf** **16 54 31.3 -0.8**
comp=Z,16nm,1.0s
LESA *e*PKP **PKPab** **16 55 29.4 +0.1**
comp=Z,36nm,1.1s,SNR=5.6
TNS Taunus Mts 164.94 331 *e*PKPab **PKPab** **16 55 28.3 -0.9**
baz=45,slow=4.5
CADS Cadrg 164.96 311 *i* PKPbc **PKPab** **16 55 29.4 0.0**
FUR Furstenfeldbru 165.20 321 *e*PKPab **PKPab** **16 55 30.6 +0.2**
baz=45,slow=4.5
BEBN Eben Emael 165.39 338 *d*PKP **PKPab** **16 55 29.9 -1.1**
ABTA Abfaltersbach 165.40 314 *i* PKP **PKPdf** **16 54 32.8 +0.3**
comp=Z,24nm,1.3s
ABTA *i* PKP **PKPab** **16 55 30.9 -0.5**
comp=Z,58nm,1.1s,SNR=9.4
BTNL Ternell 165.44 337 *d*PKP **PKPab** **16 55 30.3 -1.0**
MEM Membach 165.46 337 *d*PKP **PKPab** **16 55 30.2 -1.1**
WATA Walderalm 165.58 318 *e*PKP **PKPdf** **16 54 31.9 -0.8**
comp=Z,12nm,1.2s
WATA *i* PKP **PKPab** **16 55 32.0 -0.2**
comp=Z,16nm,0.8s
WTTA Wattenberg 165.59 317 *e*PKP **PKPdf** **16 54 32.4 -0.4**
comp=Z,18nm,1.2s
WTTA *e*PKP **PKPab** **16 55 32.1 -0.2**
comp=Z,36nm,1.6s
BSTI Sart Tilman 165.61 338 *d*PcP **PKPab** **16 55 30.9 -1.1**
BHOU Houvegnez 165.68 337 *d*PKP **PKPab** **16 55 31.7 -0.6**
STU Stuttgart 165.76 326 *e*PKPab **PKPab** **16 55 32.5 -0.3**
baz=45,slow=4.5
MOTA Moosalm 165.82 318 *i* PKP **PKPdf** **16 54 31.1 -1.9**
comp=Z,19nm,1.3s
MOTA *e*PKP **PKPab** **16 55 34.0 +0.7**
comp=Z,20nm,1.2s
BCLA Clavier 165.83 339 *d*PKP **PKPab** **16 55 32.1 -0.9**
SQTA Sankt Quirin 165.84 318 *i* PKP **PKPdf** **16 54 31.4 -1.5**
comp=Z,14nm,1.2s
SQTA *e*PKP **PKPab** **16 55 31.8 -1.6**
comp=Z,33nm,1.3s
RETA Reutte 165.91 320 *e*PKP **PKPdf** **16 54 32.3 -0.6**
comp=Z,6.4nm,0.8s
RETA *e*PKP **PKPab** **16 55 33.7 +0.1**
comp=Z,18nm,1.1s
BGES Gesves 165.93 339 *d*PKP **PKPab** **16 55 32.9 -0.5**
BMRD Maredsous 166.09 340 *d*PKP **PKPab** **16 55 33.2 -0.9**
RCHB Rochefort 166.09 338 *d*PKP **PKPab** **16 55 31.1 -3.0**
UBR Ueberruh 166.11 321 *e*PKPab **PKPab** **16 55 33.6 -0.8**
baz=45,slow=4.5
FETA Feichten 166.22 318 *i* PKP **PKPdf** **16 54 33.1 -0.2**
comp=Z,15nm,1.1s
FETA *e*PKP **PKPab** **16 55 35.2 +0.1**
comp=Z,25nm,1.1s
WLF Walferdange 166.23 335 PKP **PKPdf** **16 54 34.1 +1.2**
WLF Walferdange 166.23 335 *d*PKP **PKPab** **16 55 34.5 -0.2**
WLF Walferdange 166.23 335 *e*PKPab **PKPab** **16 55 34.8 0.0**
baz=45,slow=4.5
DOU Dourbes 166.32 340 *d*PKP **PKPab** **16 55 35.3 +0.1**
BFO Black Forest 166.47 327 *e*PKPab **PKPab** **16 55 35.4 -0.6**
baz=45,slow=4.5
DAVA Damuels 166.49 321 *i* PKP **PKPdf** **16 54 33.1 -0.4**
comp=Z,17nm,1.3s
DAVA *e*PKP **PKPab** **16 55 36.4 +0.1**
comp=Z,44nm,1.6s
KEST Kesra 170.15 264 PKPab **PKPab** **16 55 53.5 +0.6**
comp=Z,7.9nm,0.9s,baz=180,slow=1.0,SNR=4.1
TIO Tiouine 172.47 149 PKP **PKPdf** **16 54 38.9 +1.3**
PCAB Cabril 174.10 42 *i* tx tx 16 56 12.8
PTO Porto 174.14 49 *i* tx tx 16 56 09.4
POLO Lamas de Olo 174.46 44 *i* tx tx 16 56 07.0
PVRL Vila Real 174.56 44 *i* tx tx 16 56 12.6
LIS Lisbon 174.77 74 *e*PP **PP** **17 00 06.8 +0.6**
PCAS Casmilo, Conde 174.79 58 *i* tx tx 16 56 15.8
PSBE So Bento 174.81 65 *i* tx tx 16 56 13.4
PVIS Viseu 174.82 50 *i* tx tx 16 56 13.4
MVO Moncorvo 175.01 41 *e*PKPdf **PKPdf** **16 54 40.7 +2.6**
MVO *i* tx tx 16 56 14.7
PSARD Sardoal 175.22 62 *i* tx tx 16 56 15.8
MTE Manteigas 175.22 51 *i* tx tx 16 56 17.1
MORF Marmelete 175.26 90 *e*PKPdf **PKPdf** **16 54 39.4 +1.2**
MORF *e*PP **PP** **17 00 09.3 +0.5**
MORF Marmelete 175.26 90 *e*PKPdf **PKPdf** **16 54 35.2 -3.1**
MORF *i* tx tx 16 56 19.7
PMTG Montargil 175.37 68 *i* tx tx 16 56 16.4
PCBR Castelo Branco 175.58 56 *e*PKPdf **PKPdf** **16 54 38.5 +0.3**
PCBR *i* tx tx 16 56 18.7
PARRA Arraiolos 175.59 71 *e*PKPdf **PKPdf** **16 54 42.9 +4.9**
MESJ Messejana 175.61 83 *e*PKPdf **PKPdf** **16 54 39.4 +1.1**
MESJ *e*PP **PP** **17 00 10.8 +0.4**
EVO Evora 175.68 74 *e*PKPdf **PKPdf** **16 54 39.2 +0.9**
PCVE Castro Verde 175.76 86 *e*PKPdf **PKPdf** **16 54 39.1 +0.8**
PBDV Barranco-do-Ve 175.83 91 *e*PKPdf **PKPdf** **16 54 39.9 +1.5**
PMRV Marv??o 175.83 60 *e*PKPdf **PKPdf** **16 54 39.7 +1.4**
PMRV *i* tx tx 16 56 18.1
PBEJ Beja 175.87 81 *e*PKPdf **PKPdf** **16 54 39.1 +0.8**
PESTR Estremoz 175.91 69 *e*PKPdf **PKPdf** **16 54 39.1 +0.8**
PESTR *i* tx tx 16 56 20.7
PBAR Barrancos 176.50 77 *e*PKPdf **PKPdf** **16 54 40.4 +2.0**
PBAR *i* tx tx 16 56 24.4
ESDC Sonseca Array 177.58 24 PKP **PKPdf** **16 54 38.1 -0.6**
comp=Z,8.1nm,1.1s,baz=331,slow=1.3,SNR=12
ESDC PKPab PKPab 16 56 25.4 0.0
comp=Z,6.3nm,1.0s,baz=334,slow=3.3,SNR=6.3
ESDC PP **PP** **17 00 17.2 -1.1**
comp=Z,1.8nm,1.1s,baz=354,slow=4.0,SNR=3.3

CATAC 23 16:36:14.2±0.5, 12°N±4°×8°8W±°, h46km±3km, M3.0/12, MLv3.0/12, Error ellipse: s-maj=8.6km s-min=3.9km az=31.6, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.55**	**58**	S	Sn	16 36 37.9	+3.8
CRIN	**San Cristobal**	**0.55**	**58**	P	Pn	16 36 27.0	+1.2
CSGN	**Cosiguina Volc**	**0.56**	**357**	P	Pn	16 36 26.8	+0.8
CSGN				S	Sn	16 36 36.7	+2.2
POTN	**Potosi Cosigui**	**0.58**	**2**	P	Pn	16 36 27.0	+0.7
POTN				S	Sn	16 36 37.2	+2.4
PKGN	**Cerro Pekin**	**0.59**	**64**	P	Pn	16 36 27.3	+0.9
PKGN				S	Sn	16 36 38.0	+2.9
ALEN	**Leon**	**0.64**	**86**	S	Sn	16 36 37.8	+1.6
POLN	**Al Sur del Vol**	**0.73**	**71**	P	Pn	16 36 27.6	-0.6
POLN				S	Sn	16 36 39.2	+0.7
CNGA	**Al SSO del Vol**	**0.81**	**84**	P	Pn	16 36 29.7	+0.5
CNGA				S	Sn	16 36 41.8	+1.5
CNGN	**Cerro Negro**	**0.81**	**84**	S	Sn	16 36 42.1	+1.8
CNGN	**Cerro Negro**	**0.81**	**84**	P	Pn	16 36 30.8	+1.4
CNCH	**Conchagua**	**0.91**	**341**	S	Sn	16 36 43.6	+0.8
CNCH	**Conchagua**	**0.91**	**341**	P	Pn	16 36 30.6	-0.1
COPN	**Copaltepe**	**0.94**	**104**	P	Pn	16 36 31.3	+0.3
MOM3	**MOM3**	**0.99**	**84**	P	Pn	16 36 31.8	+0.1
MOM3				S	Sn	16 36 46.6	+2.1
LIMN	**Finca el Limon**	**1.30**	**60**	P	Pn	16 36 35.7	-0.4
LIMN				S	Sn	16 36 51.9	-0.4
PACA	**Pacayal**	**1.31**	**324**	P	Pn	16 36 36.8	+0.7
PACA	**Pacayal**	**1.31**	**324**	S	Sn	16 36 52.9	+0.4
TGUH	**Tegucigalpa,Un**	**1.65**	**9**	P	Pn	16 36 40.5	-0.3
TGUH				S	Sn	16 37 01.7	+0.7
YUSH	**Yuscaran**	**1.67**	**23**	P	Pn	16 36 40.6	-0.5
RCVN	**Varillal2**	**1.74**	**48**	P	Pn	16 36 41.8	-0.3
RCVN	**Varillal2**	**1.74**	**48**	S	Sn	16 37 03.9	+0.6

*IDC **23** 16:44:52.9±0.9, 17°.43N×61°.00W, h0km, mb4.0/10, mbtmp4.2/13, ML3.9/3, MS4.0/6, Error ellipse: s-maj=26.6km s-min=11.8km az=79.0*
*TRN **23** 16:44:54.8, 17°.38N×61°.14W, h3km, MD4.4, South-east of Barbuda.*
*NEIC **23** 16:44:56.3±1.8, 17°.55N±0°.06×60°.97W±0°.08, h30km±7km, mb4.4/35, Error ellipse: s-maj=12.1km s-min=7.1km az=52.0*

ISC 23 16:44:53.0±1.7, 17°.55N±0°.04×60°.98W±0°.05, h7km±10km, n100, σ1°35/111, mb4.3/22, MS4.0/3, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.78**	**279**		**Pn**	**16 45 11.1**	**+0.6**
ANWB				Sn	**Sn**	**16 45 21.8**	**-0.7**
ANWB	**Willy Bob**	**0.78**	**279**	*eP*	**Pn**	**16 45 10.9**	**+0.4**
ANWB				*eS*	**Sn**	**16 45 24.0**	**+1.5**
ABD	**La Joyeuse, An**	**1.17**	**205**		**Pn**	**16 45 16.8**	**+0.9**
H05N1	**Guadeloupe/Mar**	**1.23**	**183**	Pn	**Pn**	**16 45 17.4**	**+0.8**
H05N1				Sn	**Sb**	**16 45 33.5**	**+0.9**
DSDZ	**La Diserade, G**	**1.23**	**184**	*eP*	**Pn**	**16 45 18.2**	**+1.5**
GDSD	**La Dsirade Is**	**1.23**	**184**		**Pn**	**16 45 17.3**	**+0.6**
MBFL	**Flemmings, Mon**	**1.42**	**236**	*eP*	**Pg**	**16 45 21.2**	**+0.9**
MBFL				*eS*	**Sn**	**16 45 39.1**	**+0.8**
DHSZ	**Broadband at M**	**1.47**	**211**	*eP*	**Pg**	**16 45 22.2**	**+0.9**
DHSZ				*eS*	**Sg**	**16 45 40.7**	**+0.3**
GDHS	**Morne Mazeau,**	**1.47**	**211**		**Pb**	**16 45 20.9**	**0.0**
CBE	**Ff, Capester**	**1.59**	**202**		**Pb**	**16 45 22.9**	**+0.1**
ATGZ	**Broadband at L**	**1.61**	**206**	*eP*	**Pb**	**16 45 23.1**	**0.0**
ATGZ				*eS*	**Sn**	**16 45 43.5**	**+0.5**
MAGL	**Barre de l'ile**	**1.61**	**190**		**Pg**	**16 45 23.9**	**-0.2**
MMLZ	**Guadeloupe Bro**	**1.63**	**204**	*eP*	**Pg**	**16 45 24.6**	**+0.3**
MMLZ				*eS*	**Sb**	**16 45 44.7**	**+0.3**
SKI	**Saint Kitts**	**1.69**	**263**	*eP*	**Pg**	**16 45 25.5**	**0.0**
SKI				*eS*	**Sg**	**16 45 48.6**	**+1.1**
SKOC	**St. Kitts, UWI**	**1.69**	**262**	*eP*	**Pg**	**16 45 25.9**	**+0.4**
SKOC				*eS*	**Sg**	**16 45 47.9**	**+0.5**
TBG	**Guadaloupe-3**	**1.80**	**201**	*eP*	**Pb**	**16 45 26.2**	**-0.2**
TBG				*eS*	**Sb**	**16 45 49.3**	**+0.1**
TDBA	**Terre de Bas,**	**1.80**	**201**		**Pb**	**16 45 26.6**	**+0.2**
SEUS	**St. Eustatius**	**1.91**	**269**		**Pb**	**16 45 28.1**	**-0.1**
DWS	**Wesley**	**1.99**	**189**	*eP*	**Pn**	**16 45 28.8**	**+1.6**
DSLB	**Salisbury**	**2.14**	**191**	*eP*	**Pb**	**16 45 31.9**	**-0.2**
DSLB				*eS*	**Sb**	**16 45 58.6**	**-0.3**
SABA	**Saba**	**2.16**	**272**		**Pn**	**16 45 31.0**	**+1.5**
DLPL	**La Plaine**	**2.22**	**187**	*eP*	**Pn**	**16 45 31.9**	**+1.6**
SVN	**Savane Anatole**	**2.69**	**184**		**Pn**	**16 45 37.2**	**+0.3**
SVN	**Savane Anatole**	**2.69**	**184**	*eP*	**Pb**	**16 45 39.9**	**-1.8**
ILAM	**Ilet Lapin Mar**	**2.76**	**178**		**Pn**	**16 45 38.4**	**+0.7**
BIM	**Bigot**	**3.01**	**182**		**Pn**	**16 45 42.8**	**+1.5**
BIM	**Bigot**	**3.01**	**182**	*eP*	**Pn**	**16 45 42.7**	**+1.4**
BIM				*eS*	**Sn**	**16 46 18.8**	**+1.1**
MPOM	**Morne Pois Mar**	**3.09**	**178**		**Pn**	**16 45 43.0**	**+0.8**
H05S1	**Guadeloupe/Mar**	**3.11**	**177**	Pn	**Pn**	**16 45 42.5**	**-0.1**
H05S1				Sn	**Sn**	**16 46 19.5**	**-0.4**
SLBI	**Saint Lucia, B**	**3.50**	**180**	*eP*	**Pn**	**16 45 50.2**	**+2.2**
SLBI				*eS*	**Sn**	**16 46 32.5**	**+2.7**
SLAC	**Saint Lucia, A**	**3.63**	**179**	*eP*	**Pn**	**16 45 51.9**	**+2.2**
SLAC				*eS*	**Sn**	**16 46 33.9**	**+1.0**
MCLT	**Moule a Chique**	**3.81**	**179**	*eP*	**Pn**	**16 45 55.1**	**+2.8**
MCLT				*eS*	**Sn**	**16 46 39.8**	**+2.3**
SVB	**Belmont**	**4.26**	**184**	*eP*	**Pn**	**16 46 00.7**	**+2.3**
HUMP	**Col San Antoni**	**4.68**	**278**		**Pn**	**16 46 04.8**	**+0.6**
GCPR	**Guaynabo City**	**4.92**	**280**		**Pn**	**16 46 08.2**	**+0.8**
SJG	**San Juan** 13nm,0.3s,baz=92,slow=12,SNR=17	**4.96**	**277**	Pn	**Pn**	**16 46 10.2**	**+2.2**
SJG	3.6nm,0.3s,baz=15,slow=20,SNR=1.2			Sn	**Sn**	**16 47 05.2**	**-0.5**
SJG	comp=Z,942nm,20.2s,baz=344,slow=40 72nm,0.6s			LR	LR	16 48 09.1	
SJG	**San Juan**	**4.96**	**277**		**Pn**	**16 46 08.5**	**+0.5**
OBIP	**Obispado Ponce**	**5.38**	**276**		**Pn**	**16 46 14.1**	**+0.2**
GRW	**Mount Saint Ca**	**5.39**	**187**	*eP*	**Pn**	**16 46 16.7**	**+2.6**
AOPR	**Arecibo Observ**	**5.55**	**279**		**Pn**	**16 46 16.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**5.86**	**275**		**Pn**	**16 46 21.5**	**+1.1**
TRN	**Trinidad (W)**	**6.87**	**183**	*eP*	**Pn**	**16 46 38.0**	**+3.8**
SDDR	**Presa de Saban**	**9.90**	**280**		**Pn**	**16 47 15.9**	**0.0**
BAUV	**El Baul**	**10.97**	**220**		**Pn**	**16 47 30.8**	**+0.3**
SDV	**Santo Domingo**	**12.74**	**229**	Pn	**Pn**	**16 47 54.6**	**-0.3**
NMDO	**Nuevo Mundo**	**13.57**	**285**	Pn	**Pn**	**16 48 05.3**	**-0.9**
SMRC	**Santa Marta, M**	**14.31**	**245**	Pn	**Pn**	**16 48 15.5**	**-0.8**
MDP	**Montagnes des** 0.8nm,0.3s,baz=326,slow=16,SNR=7.1	**14.82**	**146**	Pn	**Pn**	**16 48 21.0**	**-2.2**
MDP	0.5nm,0.3s,baz=324,slow=19,SNR=1.0			Sn	Sn	16 50 51.1	-17
MDP	comp=Z,176nm,20.7s,baz=302,slow=38 4.1nm,0.4s			LR	LR	16 54 17.5	
BOAV	**Boa Vista**	**15.06**	**178**		**Pn**	**16 48 24.6**	**-1.9**
BBSR	**BB Station**	**15.14**	**348**	Pn	**Pn**	**16 48 26.6**	**-0.9**
MTDJ	**Mount Denham**	**15.77**	**275**		**Pn**	**16 48 35.9**	**-0.1**
RUSC	**La Rusia**	**16.56**	**227**		**Pn**	**16 48 45.9**	**-0.5**
RUSC	comp=Z,23nm,0.9s			IAmb	IAmb	16 48 54.6	
ROSC	**El Rosal** comp=Z,2.4nm,0.3s,baz=66,slow=20,SNR=6.6	**18.17**	**228**	P	**Pn**	**16 49 06.4**	**0.0**
ROSC	comp=Z,859nm,18.5s,baz=56,slow=42 comp=Z,7.6nm,0.4s			LR	LR	16 57 27.5	
ROSC	**El Rosal**	**18.17**	**228**	P	**Pn**	**16 49 04.7**	**-1.7**
ROSC	comp=Z,31nm,1.0s			IAmb	IAmb	16 49 17.9	
SOR	**Soroa**	**21.32**	**288**	P	**P**	**16 49 40.5**	**-0.2**
SOR	comp=Z,13nm,1.0s			IAmb	IAmb	16 50 05.7	
FLOC	**Florencia**	**21.44**	**224**	P	**P**	**16 49 40.7**	**-1.4**
OTAV	**Otavalo**	**24.32**	**227**	P	**P**	**16 50 09.5**	**-2.7**
BG3	**Lake Jocassee**	**26.16**	**316**	P	**P**	**16 50 27.9**	**-0.2**
BG3	comp=Z,8.7nm,1.0s			IAmb	IAmb	16 50 48.3	
CCM	**Cathedral Cave**	**33.44**	**314**	P	**P**	**16 51 31.0**	**-1.7**
LPAZ	**La Paz** comp=Z,1.7nm,0.7s,baz=18,slow=7.0,SNR=4.0	**34.35**	**192**	P	**P**	**16 51 41.4**	**0.0**
LPAZ	comp=Z,306nm,21.4s,baz=72,slow=37 comp=Z,1.7nm,0.7s			LR	LR	17 05 55.6	
LPAZ	**La Paz**	**34.35**	**192**	P	**P**	**16 51 40.5**	**-0.9**
HNDO	**Hondo**	**36.92**	**296**	P	**P**	**16 52 01.5**	**-1.4**
ADOK	**Arcadia Dam**	**36.93**	**306**	P	**P**	**16 52 01.9**	**-1.0**
BRDY	**Brady**	**37.03**	**299**	P	**P**	**16 52 02.3**	**-1.5**
BRDY	comp=Z,3.8nm,0.8s			IAmb	IAmb	16 52 05.1	
SCHQ	**Schefferville** comp=Z,3.5nm,0.8s,baz=164,slow=12,SNR=5.3	**37.49**	**354**	P	**P**	**16 52 10.3**	**+3.0**
	comp=Z,3.5nm,0.8s						
JCT	**Junction City**	**37.54**	**297**	P	**P**	**16 52 07.5**	**-0.7**
GO01	**Chusmiza**	**37.85**	**193**	P	**P**	**16 52 08.6**	**-2.7**
GO01	comp=Z,6.2nm,0.8s			IAmb	IAmb	16 52 10.9	
PB11	**IPOC Station P**	**38.04**	**193**	P	**P**	**16 52 09.6**	**-2.9**
DRIO	**Del Rio**	**38.05**	**295**	P	**P**	**16 52 11.5**	**-1.0**
DRIO	comp=Z,4.4nm,0.6s			IAmb	IAmb	16 52 13.6	
OZNA	**Ozona**	**38.74**	**298**	P	**P**	**16 52 18.3**	**0.0**
OZNA	comp=Z,6.5nm,0.6s			IAmb	IAmb	16 52 19.9	
SAND	**Sanderson**	**39.43**	**296**	P	**P**	**16 52 23.7**	**-0.4**
PB07	**IPOC Station P**	**39.99**	**193**	P	**P**	**16 52 25.9**	**-2.9**
PB07	comp=Z,6.0nm,0.6s			IAmb	IAmb	16 52 27.8	
TXAR	**Lajitas Array** comp=Z,1.3nm,0.5s,baz=110,slow=5.6,SNR=26	**40.68**	**295**	P	**P**	**16 52 34.9**	**+0.4**
TXAR	comp=Z,0.6nm,0.8s,baz=98,slow=4.1,SNR=2.1 comp=Z,1.3nm,0.5s			PcP	**PcP**	**16 54 37.9**	**+1.6**
ALPN	**Alpine**	**40.79**	**296**	P	**P**	**16 52 35.1**	**-0.4**
ALPN	comp=Z,5.7nm,0.8s			IAmb	IAmb	16 52 36.6	
VHRN	**Van Horn**	**42.00**	**297**	P	**P**	**16 52 46.9**	**+1.5**
MNTX	**Cornudas Mount**	**42.47**	**298**	P	**P**	**16 52 50.5**	**+1.4**
GO02	**Mina Guanaco**	**43.27**	**191**	P	**P**	**16 52 54.2**	**-1.7**
GO02	comp=Z,5.6nm,0.6s			IAmb	IAmb	16 53 10.7	
CPUP	**Villa Florida** comp=Z,7nm,0.5s,baz=277,slow=7.9,SNR=3.7 comp=Z,0.7nm,0.5s	**43.76**	**175**	P	**P**	**16 52 58.7**	**-0.7**
CPUP	**Villa Florida**	**43.76**	**175**	P	**P**	**16 52 58.6**	**-0.8**
ANMO	**Albuquerque**	**43.91**	**302**	P	**P**	**16 53 01.3**	**+0.4**
ANMO	comp=Z,7.4nm,1.5s			IAmb	IAmb	16 53 04.8	
AC02	**Maricunga**	**44.82**	**190**	P	**P**	**16 53 08.2**	**-0.3**
AC05	**El Transito**	**46.98**	**191**	P	**P**	**16 53 23.0**	**-2.1**
AC05	comp=Z,5.2nm,0.9s			IAmb	IAmb	16 53 44.0	
LCO	**Las Campanas**	**47.23**	**192**	P	**P**	**16 53 26.3**	**-0.9**
LCO	comp=Z,5.1nm,1.0s			IAmb	IAmb	16 53 48.6	
PDAR	**Pinedale Array** comp=Z,0.8nm,0.6s,baz=115,slow=7.7,SNR=1.4 comp=Z,0.8nm,0.6s	**48.12**	**312**	P	**P**	**16 53 35.3**	**+1.2**
CO03	**El Pedregal**	**49.00**	**191**	P	**P**	**16 53 40.2**	**-0.5**
CFA	**Coronel Fontan** comp=Z,166nm,20.3s,baz=30,slow=40	**49.36**	**188**	LR	LR	17 17 57.8	
YHL	**Hebgen Lake**	**49.84**	**314**	P	**P**	**16 53 45.7**	**-1.5**
SFJD	**Kangerlussuaq**	**49.88**	**5**	P	**P**	**16 53 46.2**	**-0.6**
H10N3	**ASCENSION HYDR** baz=299,slow=75,SNR=25	**52.39**	**115**	T	T	17 50 59.3	
H10N2	**ASCENSION HYDR** baz=299,slow=75,SNR=20	**52.39**	**115**	T	T	17 50 59.7	
H10N1	**ASCENSION HYDR** baz=299,slow=75,SNR=24	**52.41**	**115**	T	T	17 50 58.8	
H10S3	**ASCENSION HYDR** baz=293,slow=74,SNR=15	**52.79**	**116**	T	T	17 51 22.4	
H10S2	**ASCENSION HYDR** baz=287,slow=74,SNR=12	**52.81**	**116**	T	T	17 51 23.4	
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.5s,baz=84,slow=14,SNR=2.2 comp=Z,0.4nm,0.5s	**53.84**	**305**	P	**P**	**16 54 18.9**	**+1.8**
YKA	**Yellowknife Ar** comp=Z,1.4nm,0.9s,baz=110,slow=5.9,SNR=3.9 comp=Z,1.4nm,0.9s	**58.12**	**334**	P	**P**	**16 54 48.0**	**+0.9**
PLCA	**Paso Flores** comp=Z,2.4nm,0.6s,baz=11,slow=10,SNR=11 comp=Z,2.4nm,0.6s	**58.66**	**189**	P	**P**	**16 54 49.6**	**-1.6**
PLCA	**Paso Flores**	**58.66**	**189**	P	**P**	**16 54 51.8**	**+0.7**
PLCA	comp=Z,3.6nm,0.9s			IAmb	IAmb	16 55 01.1	
ARCES	**ARCESS Array B** comp=Z,13nm,1.1s,baz=289,slow=2.8,SNR=1.2 comp=Z,13nm,1.1s	**72.48**	**22**	P	**P**	**16 56 22.2**	**+2.1**
ILAR	**Eielson Array** comp=Z,0.9nm,0.9s,baz=95,slow=3.9,SNR=6.5 comp=Z,0.9nm,0.9s	**72.55**	**333**	P	**P**	**16 56 21.7**	**+1.1**
BOSA	**Boshof** comp=Z,230nm,19.0s,baz=158,slow=32	**95.03**	**118**	LR	LR	17 35 04.4	

GCG 23 16:45:46.0±0.6, 14°.18N×91°.28W, h65km±9km, MD3.5, ML3.4, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.23**	**342**	*i* P	Pn	16 45 59.7	+3.3
STG5				*eS*	Sn	16 46 10.0	+6.1
STG8	**El Palmar, Qui**	**0.28**	**345**	*i* P	Pn	16 46 00.6	+3.7
STG8				*eS*	Sn	16 46 11.5	+6.8
ESSG	**Sabana Grande**	**0.47**	**65**	*i* P	Pn	16 45 58.3	0.0
ESSG				*i* S	Sn	16 46 07.9	+0.7
SOKI	**Kika Raxquin**	**0.65**	**349**	*eP*	Pn	16 46 01.7	+1.3
SOKI				*eS*	Sn	16 46 13.4	+2.5
SOKI	comp=N,399nm,0.7s			IAML		16 46 18.1	
FG16	**Alotenango, Sa**	**0.75**	**83**	*eP*	Pn	16 45 59.1	-2.3
FG16	comp=N,6μm,0.2s			IAML		16 46 10.4	
PCG5	**San Vicente Pa**	**0.87**	**88**	*i* P	Pn	16 46 00.3	-2.5

*IDC **23** 16:48:56.9±2.6, 10°.53S×162°.49E, h0km, mb3.9/7, mbtmp3.9/8, ML4.4/1, Error ellipse: s-maj=64.2km s-min=29.5km az=122.0*

ISC 23 16:49:02.9±1.4, 10°.5S±0°.2×162°.4E±0°.2, h39km, n14, σ0°81/9, mb4.1/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 66nm,0.3s,baz=140,slow=7.9,SNR=18	**2.65**	**294**	Pn	**Pn**	**16 49 42.2**	**-1.0**
HNR	219nm,0.3s,baz=152,slow=22,SNR=18 142nm,0.3s			Sn	**Sn**	**16 50 15.1**	**+0.9**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=74,slow=9.2,SNR=2.2 0.3nm,0.6s	**28.60**	**248**	P	**P**	**16 54 55.7**	**-0.1**
H11S2	**WAKE ISLAND Hy** baz=188,slow=76,SNR=50	**29.15**	**8**	T	T	17 25 55.4	
H11S3	**WAKE ISLAND Hy** baz=188,slow=76,SNR=25	**29.16**	**8**	T	T	17 26 06.1	
H11S1	**WAKE ISLAND Hy** baz=188,slow=76,SNR=32	**29.17**	**8**	T	T	17 25 57.3	
ASAR	**Alice Springs** 0.4nm,0.8s,baz=70,slow=8.8,SNR=5.4 0.4nm,0.8s	**30.13**	**241**	P	**P**	**16 55 09.5**	**+0.2**
H11N1	**WAKE ISLAND Hy** baz=188,slow=76,SNR=17	**30.38**	**8**	T	T	17 27 29.3	
H11N3	**WAKE ISLAND Hy** baz=188,slow=76,SNR=25	**30.39**	**8**	T	T	17 27 39.5	
H11N2	**WAKE ISLAND Hy** baz=188,slow=76,SNR=19	**30.40**	**8**	T	T	17 27 36.3	
FITZ	**Fitzroy Crossi** 1.4nm,0.5s,baz=76,slow=16,SNR=1.3 1.4nm,0.5s	**36.35**	**254**	P	**P**	**16 56 03.4**	**-0.2**
USRK	**Ussuriysk Ar.** 2.6nm,0.8s,baz=144,slow=5.8,SNR=7.0 2.6nm,0.8s	**61.07**	**335**	P	**P**	**16 59 12.0**	**-0.8**
SONM	**Songino Array** 1.7nm,0.8s,baz=123,slow=5.3,SNR=7.9 1.7nm,0.8s	**76.34**	**325**	P	**P**	**17 00 49.2**	**+1.0**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=82,slow=5.7,SNR=1.5 0.3nm,0.5s	**90.91**	**317**	P	**P**	**17 02 03.4**	**+0.7**
ZALV	**Zalesovo Beam** 0.5nm,0.6s,baz=131,slow=5.9,SNR=1.9 0.5nm,0.6s	**91.23**	**325**	P	**P**	**17 02 03.9**	**-0.1**

AFAD 23 16:53:04.8, 37°.80N×29°.64E, h7km±5km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INCE	**Denizli-Bozkur**	**0.10**	**210**	P	Pg	16 53 07.1	0.0
BRDR	**BURDUR-Merkez**	**0.35**	**107**	P	Pg	16 53 11.1	-0.5
DNIZ	**Denizli-Tavas-**	**0.51**	**250**	P	Pb	16 53 15.7	-0.4
PASA	**Karahalli, USA**	**0.56**	**348**	P	Pg	16 53 15.5	-0.2
GOLH	**Golhisar**	**0.56**	**186**	P	Pg	16 53 15.8	+0.1
GOLH				S	Sb	16 53 25.4	+0.1
GOLH	comp=N,11nm,0.4s			*i* IAML		16 53 27.0	
GOLH	comp=E,16nm,0.4s			*i* IAML		16 53 29.0	
KZIL	**AFYON_Kizioren**	**0.60**	**41**	P	Pb	16 53 17.2	-0.6
DNZT	**Denizli-Tavas-**	**0.71**	**224**	P	Pb	16 53 19.2	-0.4
DNZT				S	Sb	16 53 28.8	-0.9

IDC 23 16:55:20.0±1.9, 35°.90N×77°.90E, h0km, mb3.6/3, mbtmp3.5/5, ML2.8/2, MS4.0/4, Error ellipse: s-maj=50.3km s-min=26.6km az=62.0, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=200,slow=14,SNR=1.5	**11.37**	**15**	Pn	Pn	16 58 05.2	+1.5
MKAR	0.2nm,0.3s,baz=198,slow=27,SNR=5.3 0.5nm,0.7s			Sn	Sn	17 00 10.7	-0.7
BVAR	**Borovoye Array** baz=156,slow=14,SNR=1.3 0.5nm,0.5s	**17.93**	**345**	P	P	16 59 32.3	+1.1
ZALV	**Zalesovo Beam** comp=Z,259nm,21.9s,baz=258,slow=39	**18.68**	**13**	LR	LR	17 07 29.1	
CMAR	**Chiang Mai Arr** 0.2nm,0.4s,baz=324,slow=9.5,SNR=2.0 0.2nm,0.4s	**25.45**	**128**	P	P	17 00 49.7	+0.1
EIL	**Elat** comp=Z,209nm,20.2s,baz=110,slow=38	**36.42**	**273**	LR	LR	17 18 16.2	
FINES	**FINESS Array B** 0.5nm,0.4s,baz=104,slow=7.4,SNR=5.7 0.5nm,0.4s	**41.14**	**325**	P	P	17 03 04.8	-0.7
ARCES	**ARCESS Array B** 1.7nm,1.0s,baz=114,slow=8.3,SNR=1.6 1.7nm,1.0s	**43.89**	**336**	P	P	17 03 27.9	+0.1
OPO	**Ambohidratompo** comp=Z,124nm,20.8s,baz=18,slow=34	**61.49**	**213**	LR	LR	17 29 53.5	
RES	**Resolute Bay** comp=Z,255nm,19.3s,baz=246,slow=40	**69.59**	**358**	LR	LR	17 41 24.5	

*IDC **23** 17:00:04.8±2.6, 59°.53N×147°.93W, h0km, mb3.6/3, mbtmp3.5/5, ML2.8/2, Error ellipse: s-maj=53.6km s-min=25.0km az=119.0*
*AEIC **23** 17:00:13.8±1.0, 60°.11N±0°.03×148°.31W±0°.04, h19km±4km, ML3.0, ML3.3/220(NEIC), Error ellipse: s-maj=4.5km s-min=2.7km az=169.0*
*NEIC **23** 17:00:13.2±1.4, 60°.11N±0°.03×148°.37W±0°.04, h30km±1km, Error ellipse: s-maj=3.8km s-min=2.7km az=178.0*

ISC 23 17:00:12.1±2.9, 60°.10N±0°.03×148°.33W±0°.02, h18km±20km, n182, σ0°91/194, mb3.8/3, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P23K	**Montague Islan**	**0.48**	**103**		**Pb**	**17 00 23.3**	**+1.4**
P23K				Sg	**Sb**	**17 00 29.8**	**+1.2**
P23K	comp=N,2μm,0.4s			IAML		17 00 34.1	
P23K	comp=E,4μm,0.5s			IAML		17 00 36.3	
SEW	**Seward**	**0.56**	**270**		**Pb**	**17 00 23.8**	**+0.4**
SEW					**Sb**	**17 00 31.1**	**+0.1**
PWL	**Port Wells**	**0.76**	**360**		**Pb**	**17 00 26.9**	**+0.1**
PWL				Sg	**Sb**	**17 00 36.9**	**+0.1**
O22K	**Cooper Landing**	**0.79**	**299**		**Pb**	**17 00 27.6**	**+0.3**
O22K				Sg	**Sb**	**17 00 37.3**	**-0.3**
HIN	**Hinchinbrook I**	**0.96**	**71**		**Pb**	**17 00 30.5**	**+0.3**
HIN				Sn	**Sb**	**17 00 43.6**	**+1.1**
GLI	**Glacier Island**	**0.99**	**38**		**Pb**	**17 00 30.1**	**-0.5**
GLI				Sg	**Sb**	**17 00 43.0**	**-0.4**
GLI	comp=E,940nm,0.5s			IAML		17 00 44.3	
GLI	comp=N,1μm,0.7s			IAML		17 00 44.4	
SLKM	**Skilak Lake**	**1.02**	**294**	Pn	**Pb**	**17 00 31.2**	**-0.1**
SLKM				Sn	**Sb**	**17 00 44.4**	**0.0**
SLKM	comp=N,943nm,0.6s			IAML		17 00 49.1	
FID	**Port Fidalgo**	**1.12**	**54**		**Pn**	**17 00 31.9**	**-1.0**
FID				Sg	**Sb**	**17 00 45.5**	**-1.7**
RC01	**Rabbit Creek A**	**1.21**	**326**		**Pn**	**17 00 33.8**	**-0.3**
RC01				Sn	**Sb**	**17 00 49.0**	**-0.7**
RC01	comp=N,564nm,0.4s			IAML		17 00 51.5	
RC01	comp=E,636nm,0.6s			IAML		17 00 52.4	
MID	**Middleton Isla**	**1.22**	**123**	Pn	**Pn**	**17 00 34.1**	**0.0**
MID				IAML		17 00 56.8	
MID	comp=N,917nm,0.9s comp=E,954nm,1.0s			IAML		17 00 57.0	
BRSE	**Bradley Lake S**	**1.27**	**254**		**Pn**	**17 00 34.8**	**-0.1**
BRSE					**Sn**	**17 00 51.3**	**-0.2**
KNK	**Knik Glacier**	**1.31**	**357**		**Pn**	**17 00 35.3**	**-0.3**
KNK				Sn	**Sn**	**17 00 52.0**	**-0.7**
KNK	comp=N,504nm,0.5s			IAML		17 01 00.4	
BRLK	**Bradley Lake**	**1.33**	**256**		**Pn**	**17 00 35.9**	**+0.1**
BRLK				Sn	**Sn**	**17 00 52.8**	**-0.3**
EYAK	**Cordova Ski Ar**	**1.36**	**70**		**Pn**	**17 00 35.8**	**-0.4**
EYAK				Sn	**Sn**	**17 00 52.7**	**-1.0**
EYAK	**Cordova Ski Ar**	**1.36**	**70**	P	**Pn**	**17 00 36.2**	**+0.1**
EYAK	**Cordova Ski Ar**	**1.36**	**70**	S	**Sn**	**17 00 54.0**	**+0.4**
FIS	**Fire Island**	**1.40**	**319**	Pn	**Pn**	**17 00 37.3**	**+0.6**
PMR	**Palmer**	**1.54**	**346**		**Pn**	**17 00 38.8**	**+0.1**
PMR	**Palmer**	**1.54**	**346**	P	**Pn**	**17 00 39.3**	**+0.6**
CAPN	**Captain Cook N**	**1.55**	**297**		**Pn**	**17 00 38.7**	**0.0**
CAPN					**Pb**	**17 00 39.8**	**-0.4**
CNPM	**China Poot**	**1.58**	**250**		**Pn**	**17 00 39.5**	**+0.3**
CNPM	comp=N,469nm,0.4s			IAML		17 00 59.7	
CNPM	comp=E,300nm,0.4s			IAML		17 01 01.6	
CNPM	**China Poot**	**1.58**	**250**		**Sn**	**17 00 59.1**	**-0.1**
DIV	**Divide**	**1.63**	**50**		**Pn**	**17 00 40.1**	**+0.2**
DIV	comp=N,303nm,0.9s			IAML		17 01 05.0	
GHO	**Glory Hole Cre**	**1.

RED	**Redoubt Volcan**	**2.24**	**280**			**Pn**	**17 00 48.7**	**+0.4**
RED				IAML			17 01 22.7	
	comp=E,233nm,0.8s							
RED				IAML			17 01 23.4	
	comp=N,228nm,0.6s							
CKL	**Chakachamna La**	**2.26**	**301**			**Pn**	**17 00 48.7**	**+0.1**
M24K	**Tolsona, Glenn**	**2.27**	**27**			**Pn**	**17 00 48.1**	**-0.6**
M24K				IAML			17 01 32.8	
	comp=N,289nm,0.6s							
RDJH	**Redoubt Jeurge**	**2.28**	**284**			**Pn**	**17 00 49.1**	**+0.2**
RDWB	**Redoubt West**	**2.28**	**282**			**Pn**	**17 00 48.8**	**-0.2**
SUCK	**Suckling Hills**	**2.28**	**89**	Pn		**Pn**	**17 00 48.2**	**-0.6**
SUCK				IAML			17 01 20.2	
	comp=E,242nm,2.2s							
SUCK				IAML			17 01 40.3	
	comp=N,251nm,2.6s							
BERG	**Berg Lake**	**2.33**	**81**			**Pn**	**17 00 49.0**	**-0.4**
NCT	**North Crescent**	**2.33**	**283**			**Pn**	**17 00 49.3**	**-0.3**
IVE	**Iliamna Volcan**	**2.35**	**270**			**Pn**	**17 00 49.7**	**-0.2**
N25K	**Chitina, Valde**	**2.37**	**49**			**Pn**	**17 00 49.9**	**-0.2**
N25K				IAML			17 01 25.3	
	comp=N,123nm,0.5s							
ILS	**Iliamna Low So**	**2.38**	**269**			**Pn**	**17 00 50.3**	**0.0**
SPWE	**Spurr West**	**2.39**	**301**			**Pn**	**17 00 50.8**	**+0.4**
ILSW	**Iliamna Southw**	**2.42**	**269**			**Pn**	**17 00 51.1**	**+0.3**
SKT	**Skwentna**	**2.44**	**322**			**Pn**	**17 00 51.2**	**+0.2**
CUT	**Chulitna**	**2.49**	**339**			**Pn**	**17 00 52.0**	**+0.3**
WAT6	**Susitna Watana**	**2.50**	**6**			**Pn**	**17 00 52.5**	**+0.5**
P19K	**Oil Pt**	**2.51**	**262**			**Pn**	**17 00 52.6**	**+0.6**
KHIT	**Khitrov Hills**	**2.55**	**80**			**Pn**	**17 00 52.0**	**-0.6**
SYI	**Shuyak Island**	**2.56**	**236**			**Pn**	**17 00 53.4**	**+0.7**
GLB	**Gilahina Butte**	**2.59**	**57**			**Pn**	**17 00 51.9**	**-1.3**
VRDI	**Verde Repeater**	**2.65**	**63**			**Pn**	**17 00 53.2**	**-0.9**
VRDI				IAML			17 01 34.3	
	comp=N,116nm,0.7s							
CRQM	**Cirque**	**2.66**	**73**			**Pn**	**17 00 53.7**	**-0.4**
CRQM				IAML			17 01 25.4	
	comp=E,177nm,0.5s							
CRQM				IAML			17 01 27.1	
	comp=N,159nm,0.4s							
L22K	**Petersville**	**2.70**	**335**			**Pn**	**17 00 54.6**	**0.0**
L22K				IAML			17 01 38.7	
	comp=E,89nm,0.5s							
WACK	**Wrangell Chich**	**2.71**	**44**			**Pn**	**17 00 55.8**	**+0.9**
SNH	**Sunshine Point**	**2.75**	**86**	Pn		**Pn**	**17 00 54.7**	**-0.5**
WAX	**Waxell Ridge**	**2.75**	**80**			**Pn**	**17 00 54.8**	**-0.5**
WAX				IAML			17 01 27.6	
	comp=E,186nm,1.0s							
WAX				IAML			17 01 27.8	
	comp=N,171nm,0.4s							
TGL	**Tana Glacier**	**2.80**	**74**			**Pn**	**17 00 56.1**	**0.0**
TGL				IAML			17 01 28.2	
	comp=E,101nm,0.4s							
TGL				IAML			17 01 28.4	
	comp=N,104nm,0.4s							
WAZA	**Wrangell Mount**	**2.83**	**44**			**Pn**	**17 00 57.8**	**+1.1**
MCARA	**McCarthy VSAT**	**2.90**	**61**			**Pn**	**17 00 57.2**	**-0.2**
MCARA				IAML			17 01 45.4	
	comp=N,121nm,1.0s							
MCARA				IAML			17 01 50.8	
	comp=E,134nm,0.8s							
BARK	**Barkley Ridge**	**2.93**	**82**			**Pn**	**17 00 57.7**	**-0.1**
M20K	**Styx River**	**2.94**	**309**			**Pn**	**17 00 58.5**	**+0.5**
Q19K	**Cape Douglas,**	**2.95**	**249**			**Pn**	**17 00 59.4**	**+1.3**
O19K	**Port Alsworth**	**3.00**	**274**			**Pn**	**17 00 59.7**	**+1.1**
DHY	**Denali Highway**	**3.02**	**8**			**Pn**	**17 00 59.2**	**+0.2**
DHY				IAML			17 01 51.0	
	comp=N,75nm,1.2s							
DHY				IAML			17 01 51.0	
	comp=E,94nm,0.5s							
ISLE	**Juniper Island**	**3.02**	**78**	Pn		**Pn**	**17 00 59.0**	**-0.1**
ISLE				IAML			17 01 33.6	
	comp=E,80nm,0.4s							
ISLE				IAML			17 01 34.8	
	comp=N,106nm,0.7s							
KIAG	**Kiagna River**	**3.06**	**72**			**Pn**	**17 00 59.5**	**-0.3**
PTPK	**Patty Peak**	**3.09**	**67**			**Pn**	**17 01 00.3**	**+0.3**
BALM	**Baldy**	**3.10**	**70**			**Pn**	**17 01 00.0**	**-0.1**
BAGL	**Bagley Icefiel**	**3.13**	**80**			**Pn**	**17 01 00.7**	**+0.3**
N19K	**Bonanza Creek**	**3.13**	**286**			**Pn**	**17 01 00.2**	**-0.3**
PAX	**Paxson**	**3.19**	**24**			**Pn**	**17 01 00.7**	**-0.6**
PAX				IAML			17 01 54.0	
	comp=E,64nm,0.5s							
PAX				IAML			17 01 54.8	
	comp=N,62nm,1.1s							
MESA	**MESA**	**3.19**	**86**			**Pn**	**17 01 00.9**	**-0.6**
KDAK	**Kodiak Island**	**3.21**	**225**			**Pn**	**17 01 01.4**	**-0.1**
KDAK				IAML			17 01 37.1	
	comp=N,112nm,0.5s							
KDAK				IAML			17 01 37.8	
	comp=N,102nm,0.2s							
YAH	**Yahtse**	**3.29**	**83**	Pn		**Pn**	**17 01 02.1**	**-0.8**
YAH				IAML			17 01 36.9	
	comp=N,81nm,3.2s							
YAH				IAML			17 02 06.7	
	comp=E,94nm,3.2s							
GRNC	**Granite Creek**	**3.32**	**76**			**Pn**	**17 01 03.0**	**-0.4**
GRNC				IAML			17 01 43.9	
	comp=N,59nm,0.7s							
RND	**Reindeer**	**3.32**	**356**			**Pn**	**17 01 03.5**	**+0.3**
RND				IAML			17 01 52.9	
	comp=N,82nm,0.6s							
RND				IAML			17 01 58.2	
	comp=E,57nm,1.2s							
PPLA	**Purkeypile**	**3.36**	**328**			**Pn**	**17 01 03.7**	**0.0**
PPLA				IAML			17 02 02.7	
	comp=N,65nm,1.9s							
PPLA				IAML			17 02 15.0	
	comp=E,60nm,1.0s							
BARN	**Barnard Glacie**	**3.43**	**71**			**Pn**	**17 01 04.7**	**-0.1**
BARN				IAML			17 01 57.7	
	comp=E,53nm,2.1s							
M26K	**Nabesna, AK**	**3.46**	**46**			**Pn**	**17 01 05.4**	**+0.4**
M19K	**Big River Lodg**	**3.46**	**304**			**Pn**	**17 01 05.3**	**+0.3**
O18K	**Koktuh Hills**	**3.47**	**269**			**Pn**	**17 01 05.3**	**+0.2**
O18K				IAML			17 02 00.9	
	comp=N,61nm,1.4s							
TRF	**Thorofare Moun**	**3.48**	**345**			**Pn**	**17 01 06.3**	**+0.9**
TRF				IAML			17 02 03.2	
	comp=N,55nm,0.6s							
TRF				IAML			17 02 10.1	
	comp=E,58nm,2.4s							
RKAV	**Rock Avalanche**	**3.49**	**84**			**Pn**	**17 01 06.0**	**+0.4**
CTGM	**Chitina Glacie**	**3.56**	**73**	Pn		**Pn**	**17 01 06.3**	**-0.3**
CTGM				IAML			17 01 51.1	
	comp=N,50nm,2.6s							
P18K	**Big Mountain,**	**3.56**	**261**	Pn		**Pn**	**17 01 07.7**	**+1.3**
KAHG	**Katmai Hook Gl**	**3.57**	**246**			**Pn**	**17 01 07.6**	**+1.0**
L20K	**Farewell, AK**	**3.58**	**314**			**Pn**	**17 01 06.6**	**-0.1**
TABL	**Table Mountain**	**3.60**	**82**			**Pn**	**17 01 06.5**	**-0.5**
TABL				IAML			17 01 50.1	
	comp=N,73nm,0.9s							
MENT	**Mentasta**	**3.60**	**36**			**Pn**	**17 01 07.6**	**+0.6**
MENT				IAML			17 02 05.0	
	comp=E,73nm,0.7s							
MENT				IAML			17 02 15.3	
	comp=N,86nm,0.8s							
MCK	**McKinley**	**3.65**	**356**			**Pn**	**17 01 07.1**	**-0.6**
MCK				IAML			17 02 01.8	
	comp=N,57nm,0.8s							
MCK				IAML			17 02 15.7	
	comp=E,54nm,1.7s							
KTH	**Kantishna Hill**	**3.67**	**342**			**Pn**	**17 01 09.1**	**+1.1**
KTH				IAML			17 02 16.7	
	comp=E,48nm,0.9s							
KTH				IAML			17 02 18.6	
	comp=N,53nm,1.0s							
LOGN	**Logan Glacier**	**3.70**	**76**			**Pn**	**17 01 08.2**	**-0.3**
LOGN				IAML			17 02 35.2	
	comp=E,44nm,4.2s							
L26K	**Log Cabin Wild**	**3.78**	**37**			**Pn**	**17 01 09.3**	**-0.1**
L26K				IAML			17 02 07.2	
	comp=N,46nm,0.5s							
L26K				IAML			17 02 10.9	
	comp=E,51nm,0.5s							
L19K	**White Mountain**	**3.79**	**306**			**Pn**	**17 01 10.0**	**+0.5**
N18K	**Kilae Creek**	**3.80**	**282**			**Pn**	**17 01 09.0**	**-0.6**
M27K	**Edge Creek, AK**	**3.85**	**51**			**Pn**	**17 01 08.8**	**-1.7**
M27K				IAML			17 02 24.7	
	comp=E,38nm,2.5s							
OHAK	**Old Harbor**	**3.88**	**224**			**Pn**	**17 01 09.9**	**-0.8**
OHAK				IAML			17 01 52.5	
	comp=E,66nm,0.2s							
OHAK	**Old Harbor**	**3.88**	**224**	P		**Pn**	**17 01 10.0**	**-0.8**
M18K	**Stony River**	**3.93**	**294**			**Pn**	**17 01 11.1**	**-0.3**
RIDG	**Independent Ri**	**4.00**	**23**			**Pn**	**17 01 11.1**	**-1.4**
RIDG				IAML			17 02 23.1	
	comp=N,66nm,0.8s							
RIDG				IAML			17 02 30.0	
	comp=E,60nm,0.8s							
YUK2	**White River**	**4.02**	**62**			**Pn**	**17 01 13.8**	**+1.0**
PCA	**Pinnacle**	**4.04**	**87**	Pn		**Pn**	**17 01 13.0**	**-0.1**
ACHA	**Angle Creek He**	**4.07**	**245**	Pn		**Pn**	**17 01 14.7**	**+1.2**
O28M	**Mount Upton**	**4.09**	**77**			**Pn**	**17 01 14.4**	**+0.5**
O28M	**Mount Upton**	**4.09**	**77**	IAML			17 02 03.1	
	comp=N,41nm,0.6s							
O28M				IAML			17 02 17.6	
	comp=E,34nm,2.4s							
DOT	**Dot Lake**	**4.09**	**28**			**Pn**	**17 01 14.4**	**+0.7**
DOT				IAML			17 02 21.7	
	comp=N,32nm,1.7s							
DOT				IAML			17 02 23.4	
	comp=E,42nm,1.5s							
BWN	**Browne**	**4.12**	**353**			**Pn**	**17 01 15.3**	**+1.3**
YUK3	**Moose Creek**	**4.19**	**63**			**Pn**	**17 01 16.2**	**+1.0**
BPAW	**Bear Paw Mtn.**	**4.20**	**344**			**Pn**	**17 01 15.8**	**+0.7**
BPAW				IAML			17 02 30.3	
	comp=E,32nm,2.2s							
BPAW				IAML			17 02 30.4	
	comp=N,29nm,2.5s							
K20K	**Telida**	**4.25**	**323**			**Pn**	**17 01 15.9**	**0.0**
L27K	**Beaver Creek,**	**4.30**	**44**			**Pn**	**17 01 16.7**	**+0.1**
CNTC	**Contact Creek**	**4.30**	**248**			**Pn**	**17 01 17.5**	**+0.9**
BCAR	**Beaver Creek A**	**4.31**	**44**			**Pn**	**17 01 17.0**	**+0.3**
HDA	**Harding Lake**	**4.37**	**8**			**Pn**	**17 01 16.5**	**-1.0**
HDA				IAML			17 02 34.7	
	comp=E,46nm,1.6s							
HDA				IAML			17 02 38.2	
	comp=N,40nm,0.5s							
WRH	**Wood River Hil**	**4.38**	**1**			**Pn**	**17 01 17.1**	**-0.6**
WRH				IAML			17 02 32.3	
	comp=E,26nm,2.1s							
WRH				IAML			17 02 37.6	
	comp=N,23nm,2.0s							
SCRK	**Sand Creek**	**4.39**	**26**			**Pn**	**17 01 17.6**	**-0.3**
SCRK				IAML			17 02 35.8	
	comp=E,34nm,1.2s							
YKU2	**Yakutat**	**4.41**	**94**	Pn		**Pn**	**17 01 18.6**	**+0.5**
O17K	**Koliganek Bris**	**4.42**	**269**			**Pn**	**17 01 18.1**	**-0.1**
N17K	**Nushagak Hills**	**4.43**	**279**			**Pn**	**17 01 17.8**	**-0.4**
N17K	**Nushagak Hills**	**4.43**	**279**	IAML			17 02 51.8	
	comp=N,24nm,3.6s							
NEA2	**Nenana**	**4.52**	**356**			**Pn**	**17 01 19.4**	**-0.2**
NEA2				IAML			17 02 39.1	
	comp=E,24nm,1.6s							
NEA2				IAML			17 02 39.5	
	comp=N,20nm,1.5s							
PNL	**Peninsula**	**4.52**	**92**	P		**Pn**	**17 01 18.9**	**-0.7**
CCB	**Clear Creek Bu**	**4.57**	**3**			**Pn**	**17 01 21.1**	**+1.0**
CCB				IAML			17 02 42.6	
	comp=E,25nm,1.3s							
L18K	**Granite Mountain**	**4.57**	**301**	Pn		**Pn**	**17 01 19.0**	**-1.2**
L18K				IAML			17 02 03.5	
	comp=E,22nm,4.1s							
L18K				IAML			17 02 57.9	
	comp=N,27nm,3.6s							
M17K	**Holitna River**	**4.65**	**290**			**Pn**	**17 01 21.1**	**-0.3**
M17K	**Holitna River**	**4.65**	**290**	IAML			17 02 45.6	
	comp=E,39nm,0.7s							
SII	**Sitkinak Islan**	**4.71**	**223**	Pn		**Pn**	**17 01 20.6**	**-1.6**
SII	**Sitkinak Islan**	**4.71**	**223**	P		**Pn**	**17 01 21.1**	**-1.0**
IL31		**4.73**	**8**			**Pn**	**17 01 21.5**	**-0.9**
ILAR	**Eielson Array**	**4.73**	**8**	Pn		**Pn**	**17 01 22.3**	**-0.2**
	comp=E,0.4nm,0.3s,baz=190,slow=13,SNR=21							
ILAR					Pg	Pb	17 01 29.7	-4.7
	comp=E,2.4nm,0.3s,baz=191,slow=13,SNR=28							
ILAR					Sn	**Sn**	**17 02 24.1**	**+7.3**
	comp=E,1.6nm,0.3s,baz=189,slow=22,SNR=14							
	comp=E,0.7nm,0.3s							
ILAR	**Eielson Array**	**4.73**	**8**			**Pn**	**17 01 21.5**	**-1.0**
COLA	**College**	**4.79**	**2**	Pn		**Pn**	**17 01 21.4**	**-1.9**
COLA	**College**	**4.79**	**2**	P		**Pn**	**17 01 25.4**	**+2.1**
PLK4	**Peulik 4**	**4.85**	**243**	Pn		**Pn**	**17 01 24.1**	**0.0**
J20K	**Nowinta River**	**4.91**	**329**			**Pn**	**17 01 25.8**	**+0.9**
J20K				IAML			17 02 29.8	
	comp=N,27nm,4.6s							
J20K				IAML			17 02 45.9	
	comp=E,18nm,3.7s							
K27K	**Chicken**	**4.91**	**34**	Pn		**Pn**	**17 01 23.4**	**-1.6**
K27K				IAML			17 02 54.4	
	comp=E,15nm,1.5s							
K27K				IAML			17 03 03.5	
	comp=N,17nm,4.6s							
J26L	**Joseph Creek**	**4.94**	**25**			**Pn**	**17 01 23.8**	**-1.6**
J26L				IAML			17 02 49.6	
	comp=N,16nm,0.7s							
J26L				IAML			17 03 19.4	
	comp=E,17nm,4.0s							
P16K	**Nushagak River**	**5.03**	**262**	Pn		**Pn**	**17 01 27.3**	**+0.8**
POKR	**Poker Flat Res**	**5.05**	**4**	Pn		**Pn**	**17 01 26.7**	**-0.1**
POKR				IAML			17 02 53.0	
	comp=E,23nm,2.6s							
POKR				IAML			17 03 03.7	
	comp=N,21nm,2.8s							
MLY	**Manley**	**5.07**	**348**			**Pn**	**17 01 25.9**	**-1.2**
I23K	**Minto, Yukon-K**	**5.08**	**355**			**Pn**	**17 01 27.2**	**-0.1**
I23K				IAML			17 03 04.1	
	comp=E,18nm,4.0s							
I23K				IAML			17 03 09.8	
	comp=N,29nm,4.9s							
J18K	**Innoko River**	**5.21**	**314**			**Pn**	**17 01 29.9**	**+0.8**
J18K				IAML			17 02 35.5	
	comp=N,16nm,4.8s							
J18K				IAML			17 03 04.8	
	comp=E,16nm,5.0s							
I21K	**Tanana**	**5.37**	**343**			**Pn**	**17 01 30.8**	**-0.3**
I21K				IAML			17 03 10.8	
	comp=N,21nm,2.3s							
HYT	**Haines Junctio**	**5.41**	**78**	Pn		**Pn**	**17 01 30.1**	**-1.7**
HYT				IAML			17 02 52.7	
	comp=E,23nm,5.0s							
HYT				IAML			17 04 24.8	
	comp=N,23nm,4.7s							
K17K	**Iditarod**	**5.46**	**303**	Pn		**Pn**	**17 01 31.8**	**-0.6**
PRP	**Porcupine Dome**	**5.58**	**12**			**Pn**	**17 01 33.1**	**-1.1**
L16K	**Owhat River**	**5.67**	**291**	Pn		**Pn**	**17 01 35.1**	**-0.3**
CHIR	**Chirikof Islan**	**5.79**	**225**	Pn		**Pn**	**17 01 37.6**	**+0.6**
CHIR	**Chirikof Islan**	**5.79**	**225**	P		**Pn**	**17 01 38.2**	**+1.3**
O30N	**Mendenhall**	**6.10**	**78**	Pn		**Pn**	**17 01 40.3**	**-0.9**
I27K	**Kandik River**	**6.31**	**26**			**Pn**	**17 01 42.7**	**-1.5**
I28M	**Miner Creek**	**6.60**	**32**			**Pn**	**17 01 46.2**	**-2.0**
FYU	**Fort Yukon**	**6.63**	**11**	Pn		**Pn**	**17 01 49.1**	**+0.6**
G23K	**Bananza Creek**	**6.68**	**354**			**Pn**	**17 01 48.8**	**-0.4**
WHY	**Whitehorse**	**6.69**	**79**	Pn		**Pn**	**17 01 49.6**	**+0.1**
H18K	**Honhosa River**	**6.85**	**322**	Pn		**Pn**	**17 01 51.7**	**+0.1**
H27K	**Steamboat Moun**	**6.87**	**24**			**Pn**	**17 01 51.2**	**-0.7**
L14K	**Kuka Creek**	**7.15**	**286**	Pn		**Pn**	**17 01 55.9**	**+0.3**
COLD	**Coldfoot**	**7.20**	**354**	Pn		**Pn**	**17 01 55.9**	**-0.4**
BMAR	**Burnt Mountain**	**7.54**	**11**	Pn		**Pn**	**17 02 00.4**	**-0.5**
SDPT	**Sand Point**	**8.06**	**239**	P		**Pn**	**17 02 09.6**	**+1.6**
INK	**Inuvik**	**10.42**	**32**	Pn		**Pn**	**17 02 42.0**	**+1.6**
	baz=216,slow=8.7,SNR=1.7							
	comp=N,0.7nm,0.9s							
SONM	**Songino Array**	**56.59**	**309**	P		**P**	**17 09 54.4**	**+1.0**
	comp=N,0.2nm,0.5s,baz=44,slow=8.7,SNR=4.3							
	comp=N,0.2nm,0.5s							
FINES	**FINESS Array B**	**58.70**	**3**	P		**P**	**17 10 06.7**	**-1.2**
	comp=N,1.6nm,1.0s,baz=353,slow=10,SNR=4.5							
	comp=N,1.6nm,1.0s							
MKAR	**Makanchi Array**	**65.77**	**324**	P		**P**	**17 10 54.0**	**-1.5**
	comp=N,0.7nm,0.9s,baz=26,slow=7.8,SNR=1.7							
	comp=N,0.7nm,0.9s							
MKAR	**Makanchi Array**	**65.77**	**324**	P		**P**	**17 10 54.0**	**-1.5**

*DNK **23** 17:03:06.4±1.2,80°.30N×1°.08W,h28km±10km,ML1.8*
*BER **23** 17:03:08.1±3.0,80°.30N×1°.48W,h21km±23km,mb(Pn)3.2, ML1.8(DNK),Confirmed Earthquake*
*FCIAR **23** 17:03:10.0,80°.03N×0°.68W,h10km,station ZFI2 has station magnitude of 3.40 station OMEGA has station magnitude of 3.50*
*KOLA **23** 17:03:12.9,81°.03N×7°.76E,h0km,ML1.5,Error ellipse: s-maj=72.2km s-min=28.6km az=70.0,Arctic Ocean*

ISC 23 17:02:55.5±0.8,79°.58N±0°.06×3°.16W±0°.03,h10km,n23, σ2s16/40,1C,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.90**	**96**	P	**Pb**	**17 03 49.2**	**+2.0**
KBS				S	**Sn**	**17 04 17.0**	**+0.5**
KBS	**Kingsbay**	**2.90**	**96**	*e*P	**Pb**	**17 03 49.2**	**+2.0**
KBS				*e*S	**Sn**	**17 04 18.6**	**+2.2**
KBS				IAML		17 04 21.0	
	comp=Z,8.4nm,0.4s						
KBS	**Kingsbay**	**2.90**	**96**	*i* P	**Pb**	**17 03 47.6**	**+0.4**
KBS				*i* S	**Sn**	**17 04 18.8**	**+2.3**
NOR	**Nord**	**3.00**	**319**	*i* P	**Pb**	**17 03 48.1**	**-0.8**
NOR				*i* S	**Sn**	**17 04 20.3**	**+1.4**
NOR				IAML		17 04 28.1	
	comp=Z,4.8nm,0.3s						
NOR	**Nord**	**3.00**	**319**	*i* P	**Pb**	**17 03 48.1**	**-0.8**
NOR				*i* S	**Sn**	**17 04 20.3**	**+1.4**
NOR				IAML		17 04 28.1	
	comp=Z,5.8nm,0.3s						
BRBB	**Barentsburg B**	**3.68**	**105**	P	**Pb**	**17 04 03.3**	**+2.8**
BRBB				S	**Sb**	**17 04 43.5**	**-1.6**
BRBB	**Barentsburg B**	**3.68**	**105**	*e*P	**Pb**	**17 04 03.4**	**+2.9**
BRBB				*e*S	**Sb**	**17 04 42.2**	**-2.9**
BRBA	**Barentsburg A**	**3.70**	**106**	*e*P	**Pg**	**17 04 04.2**	**-2.1**
BRBA				*e*S	**Sb**	**17 04 45.0**	**-0.7**
BRBA				IAML		17 04 52.0	
	comp=Z,5.1nm,0.7s						
SPA0	**Spitsbergen Ar**	**4.02**	**101** ⇑	*i* P	**Pb**	**17 04 05.9**	**-0.4**
SPA0				*i* S	**Sn**	**17 04 47.3**	**+3.2**
SPA0	**Spitsbergen Ar**	**4.02**	**101**	*e*P	**Pb**	**17 04 06.0**	**-0.4**
SPA0				*e*S	**Sn**	**17 04 47.9**	**+3.8**
SPA0				IAML		17 04 57.3	
	comp=Z,4.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**4.02**	**101**	P	**Pb**	**17 04 06.0**	**-0.4**
SPITS				S	**Sn**	**17 04 42.1**	**-2.0**
DAG	**Danmarks Havn**	**4.24**	**236**	*i* P	**Pg**	**17 04 17.4**	**+0.8**
DAG				*i* S	**Sg**	**17 05 11.3**	**-0.2**
DAG				IAML		17 05 53.6	
	comp=Z,3.8nm,1.0s						
DAG	**Danmarks Havn**	**4.24**	**236**	*i* P	**Pg**	**17 04 17.4**	**+0.8**
DAG				*i* S	**Sg**	**17 05 11.3**	**-0.2**
DAG				IAML		17 05 12.8	
	comp=Z,5.4nm,0.2s						
HSPB	**Hornsund (broa**	**4.58**	**115**	P	**Pb**	**17 04 16.9**	**+1.1**
HSPB				S	**Sb**	**17 05 06.7**	**-4.3**
HSPB	**Hornsund (broa**	**4.58**	**115**	*e*P	**Pb**	**17 04 16.5**	**+0.6**
HSPB				*e*S	**Sb**	**17 05 05.9**	**-5.2**
HSPB	**Hornsund (broa**	**4.58**	**115**	*e*P	**Pb**	**17 04 16.7**	**+0.9**
HSPB				*e*S	**Sb**	**17 05 06.3**	**-4.7**
HSPB				IAML		17 05 13.1	
	comp=Z,5.2nm,0.5s						
DBG	**Daneborg**	**6.52**	**225**	*i* P	**Pb**	**17 04 49.7**	**+0.9**
DBG				*i* S	**Sb**	**17 06 04.9**	**-1.7**
DBG				IAML		17 07 05.4	
	comp=Z,3.8nm,1.3s						
DBG	**Daneborg**	**6.52**	**225**	*i* P	**Pb**	**17 04 49.7**	**+0.9**
DBG				*i* S	**Sb**	**17 06 04.9**	**-1.7**
DBG				IAML		17 06 09.3	
	comp=Z,3.1nm,0.9s						
HOPEN	**Hopen**	**6.54**	**103**	*e*P	Pn	17 04 40.0	+8.4
HOPEN				*e*S	**Sn**	**17 05 45.6**	**-0.5**
BJO1	**Bjornoya**	**7.06**	**124**	*e*P	Pb	17 04 53.2	-4.8
BJO1				*e*S	Sn	17 06 08.9	+10
ZFI2	**Zemlya Franca-**	**8.51**	**57**	*e*P	**Pn**	**17 05 00.2**	**+1.8**
ZFI2				*e*S	Sn	17 06 22.5	-12
	comp=Z,9.7nm,2.2s						
OMEGA	**Omega**	**8.53**	**58**	*e*P	**Pn**	**17 05 00.4**	**+1.7**
OMEGA				S	Sn	17 06 22.3	-12
	comp=Z,12nm,2.1s						
NEEM	**North Greenlan**	**9.54**	**282**	*i* P	Pn	17 05 22.6	+10
NEEM				*i* S	**Sn**	**17 07 01.6**	**+1.5**

IDC 23 17:04:00.7±3.0,2°.96S×132°.98E,h0km,mb3.1/2, mbtmp3.2/3,ML3.2/1,MS3.9/1,Error ellipse: s-maj=150.0km s-min=30.7km az=75.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.93**	**176**	Pn	P	17 08 00.7	-0.6
	0.1nm,0.3s,baz=355,slow=11,SNR=6.2						
WRA				LR	LR	17 14 34.5	
	comp=Z,382nm,19.1s,baz=302,slow=37						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**20.60**	**178**	P	P	17 08 41.0	-0.7
	0.2nm,0.7s,baz=356,slow=11,SNR=5.9						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**66.58**	**325**	P	P	17 14 53.0	0.0
	0.3nm,0.6s,baz=128,slow=6.3,SNR=4.3						
	0.3nm,0.6s						

ISK 23 17:04:20.9,36°.08N×27°.57E,h17km±1km,ML1.8/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.47**	**73**	Pg	Pb	17 04 30.8	0.0
ARG				Sg	Sb	17 04 38.1	+0.6
KARP	**Karpathos**	**0.62**	**212**	Pg	Pb	17 04 33.5	+0.1
DAT	**Datca**	**0.65**	**1**	Pg	Pb	17 04 34.2	+0.3
DAT				Sg	Sb	17 04 43.8	+1.0
TURN	**Turunc**	**0.89**	**38**	P	Pg	17 04 38.0	-0.1
TURN	**Turunc**	**0.89**	**38**	Pg	Pn	17 04

BVAR	**Borovoye Array**	**115.08**	**321**	PKP		**PKiKP**	**17 51 19.3**	**-0.3**
	0.4nm,0.3s,baz=98,slow=1.7,SNR=3.2							
SPITS	**Spitsbergen Ar**	**118.62**	**356**	**PKP**		**PKPdf**	**17 51 25.2**	**-0.5**
	6.9nm,1.0s,baz=45,slow=4.3,SNR=7.4							
ARCES	**ARCESS Array B**	**125.42**	**349**	PKP		**PKiKP**	**17 51 39.0**	**-0.4**
	2.7nm,1.0s,baz=40,slow=2.2,SNR=7.9							
EKA	**Eskdalemuir Ar**	**142.08**	**2**	PKP		**PKPdf**	**17 52 07.6**	**-2.8**
	0.6nm,0.5s,baz=321,slow=2.2,SNR=4.2							
BRTR	**Keskin Array B**	**142.88**	**314**	PKP		**PKPdf**	**17 52 11.5**	**-1.0**
	0.6nm,0.8s,baz=7.1,slow=3.5,SNR=2.1							
MMAI	**Mount Meron Ar**	**144.05**	**303**	PKP		**PKPab**	**17 52 14.8**	**+0.2**
	1.3nm,0.4s,baz=78,slow=4.6,SNR=7.7							
GERES	**GERESS Array B**	**146.52**	**343**	PKPbc		**PKiKP**	**17 52 22.0**	**-1.1**
	0.8nm,0.4s,baz=9.7,slow=3.5,SNR=6.3							

TRN 23 17:34:19.6, 17.57N×61.02W, h25km, MD3.8, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.74**	**278**	*eP*	Pn	17 34 35.5	+1.1
ANWB				*eS*	Sn	17 34 47.5	+2.7
DSDZ	**La Diserade, G**	**1.25**	**182**	*eP*	Pb	17 34 42.8	+0.4
DHSZ	**Broadband at M**	**1.47**	**209**	*eP*	Pb	17 34 46.7	+0.4
DHSZ				*eS*	Sb	17 35 05.2	+0.7
ATGZ	**Broadband at L**	**1.61**	**205**	*eP*	Pn	17 34 47.4	+1.0
ATGZ				*eS*	Sb	17 35 09.0	+0.5
MMLZ	**Guadeloupe Bro**	**1.64**	**202**	*eP*	Pb	17 34 48.5	-0.6
MMLZ				*eS*	Sb	17 35 09.4	+0.1
SKI	**Saint Kitts**	**1.66**	**262**	*eP*	Pb	17 34 49.1	-0.4
SKI				*eS*	Sb	17 35 10.7	+0.8
TBG	**Guadaloupe-3**	**1.81**	**199**	*eP*	Pn	17 34 50.4	+1.2
TBG				*eS*	Sb	17 35 13.3	-1.0
DSLB	**Salisbury**	**2.15**	**190**	*eP*	Pn	17 34 55.7	+1.8
DSLB				*eS*	Sb	17 35 22.5	-1.6
SVN	**Savane Anatole**	**2.71**	**183**	*eP*	Pn	17 35 04.2	+2.5

IDC 23 17:49:07.3±4.7, 16.90S×178.13W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=205.0km s-min=35.7km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.36**	**240**	P	P	17 56 39.3	+0.7
	0.6nm,0.4s,baz=85,slow=11,SNR=1.9						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**45.09**	**259**	P	P	17 57 25.1	-0.5
	0.3nm,0.4s,baz=96,slow=7.1,SNR=5.7						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**45.33**	**253**	P	P	17 57 27.2	-0.3
	4.7nm,0.5s,baz=89,slow=7.9,SNR=184						
	4.7nm,0.5s						
ILAR	**Eielson Array**	**84.84**	**13**	P	P	18 01 43.5	0.0
	0.3nm,0.9s,baz=203,slow=5.2,SNR=4.4						
	0.3nm,0.9s						

*SOME **23** 17:55:39.9, 41.18N×78.48E, h15km*
*KRNET **23** 17:55:39.9±0.1, 41.23N×78.58E, h11km, mb2.5*
*NNC **23** 17:55:41.1±1.8, 41.22N×78.54E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=12.1km s-min=8.9km az=164.0*
ISC 23 17:55:40.9±2.1, 41.19N±0.08×78.47E±0.05, h16km±14km, n22, σ1§08/34, 12C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.73**	**318**	⇑*iP*	**Pb**	**17 55 54.8**	**-0.8**
TARG				⇑*iS*	**Sg**	**17 56 05.5**	**+0.3**
PRZ	**Przheval'sk**	**1.29**	**358**	⇑*iP*	**Pn**	**17 56 04.1**	**-0.5**
PRZ				⇑*iS*	**Sb**	**17 56 21.7**	**+0.2**
KDJ	**Kajisay**	**1.35**	**315**	⇓*iP*	**Pb**	**17 56 05.8**	**-0.1**
KDJ				⇓*iS*	**Sg**	**17 56 24.7**	**+0.2**
SATY	**Saty**	**1.87**	**359**	P	**Pb**	**17 56 15.5**	**+0.7**
	1.7nm,0.2s						
SATY				S	**Sg**	**17 56 40.9**	**-0.2**
	3.9nm,0.1s						
ULHL	**Ulahol**	**1.97**	**303**	⇑*iP*	**Pb**	**17 56 17.2**	**+0.6**
ULHL				⇑*iS*	**Sg**	**17 56 44.5**	**0.0**
UZB	**Uzynbulak**	**2.00**	**12**	Pg	**Pb**	**17 56 16.3**	**-0.8**
	3.1nm,0.3s						
UZB				Lg	Lg	17 56 42.3	
	3.1nm,0.3s						
UZB	**Uzynbulak**	**2.00**	**12**	*eP*	**Pb**	**17 56 16.3**	**-0.8**
	3.1nm,0.3s						
UZB				*eS*	**Sb**	**17 56 42.3**	**+0.5**
	3.1nm,0.3s						
SHLS	**Shalkode**	**2.10**	**20**	Pg	**Pg**	**17 56 21.2**	**-0.1**
	2.8nm,0.2s						
SHLS				Lg	Lg	17 56 50.7	
	14nm,0.5s						
SHLS	**Shalkode**	**2.10**	**20**	*eP*	**Pg**	**17 56 21.2**	**-0.1**
	2.8nm,0.2s						
SHLS				*eS*	**Sg**	**17 56 50.7**	**+2.2**
	14nm,0.5s						
JNKS	**Jany-Kuch**	**2.13**	**267**	⇑*eP*	**Pb**	**17 56 19.9**	**+0.6**
JNKS				⇑*eS*	**Sg**	**17 56 49.1**	**-0.4**
MDOK	**Medeo**	**2.24**	**332**	Pg	**Pb**	**17 56 22.2**	**+1.1**
	1.3nm,0.2s						
MDOK				Lg	Lg	17 56 52.5	
	6.0nm,0.5s						
KOTS	**Kotyrbulak**	**2.28**	**334**	Pg	**Pb**	**17 56 23.0**	**+1.2**
	4.5nm,0.2s						
KOTS				Lg	Lg	17 56 54.5	
	21nm,0.3s						
KOTS	**Kotyrbulak**	**2.28**	**334**	*eP*	**Pb**	**17 56 23.0**	**+1.2**
	4.5nm,0.2s						
KOTS				*eS*	**Sg**	**17 56 54.5**	**+0.2**
	21nm,0.3s						
KPKS	**Kokpek**	**2.28**	**4**	Pg	**Pb**	**17 56 21.9**	**+0.1**
	0.5nm,0.3s						
KPKS				Lg	Lg	17 56 52.1	
	11nm,0.3s						
BOOM	**Boomskoye usch**	**2.29**	**305**	⇑*eP*	**Pb**	**17 56 21.5**	**-0.5**
BOOM				⇑*eS*	**Sb**	**17 56 51.9**	**+1.7**
TKM2	**Tokmak 2**	**2.75**	**310**	⇑*iP*	**Pb**	**17 56 28.0**	**-1.9**
TKM2				⇑*iS*	**Sb**	**17 57 03.0**	**-0.4**
KTBS	**Karatobe**	**2.85**	**333**	Pg	**Pb**	**17 56 32.8**	**+1.4**
	1.3nm,0.2s						
KTBS				Lg	Lg	17 57 11.4	
	0.5nm,0.5s						
DGS	**Degeres**	**2.87**	**317**	Pg	**Pb**	**17 56 32.5**	**+0.7**
	1.3nm,0.3s						
DGS				Lg	Lg	17 57 10.3	
	2.6nm,0.4s						
BLB	**Baldybastay**	**2.91**	**0**	Pg	**Pb**	**17 56 32.8**	**+0.3**
	1.2nm,0.3s						
BLB				Lg	Lg	17 57 11.0	
	3.9nm,0.5s						
ARXS	**Arharly**	**3.06**	**351**	Pg	**Pb**	**17 56 35.6**	**+0.5**
	1.6nm,0.4s						
ARXS				Lg	Lg	17 57 15.8	
	7.0nm,0.4s						
ARXS	**Arharly**	**3.06**	**351**	*eP*	**Pb**	**17 56 35.6**	**+0.5**
ARXS				*eS*	**Sg**	**17 57 15.8**	**-3.5**
KNOS	**Konyrlen**	**3.21**	**9**	Pg	**Pb**	**17 56 37.7**	**0.0**
	0.6nm,0.1s						
KNOS				Lg	Lg	17 57 19.1	
	1.2nm,0.4s						

*BJI **23** 17:59:47.0, 15.30S×173.40W, h5km, mB5.5/6, mb5.0/11, Ms5.1/3, Ms7.4.8/2*
*IDC **23** 17:59:48.7±0.5, 15.23S×173.49W, h0km, mb4.8/20, mbtmp4.8/20, MS4.3/48, Error ellipse: s-maj=20.1km s-min=13.5km az=124.0*
*NEIC **23** 17:59:49.3±2.2, 15.22S±0.07×173.38W±0.08, h10km±1km, mb5.2/121, Mww5.2/5, Error ellipse: s-maj=12.8km s-min=11.7km az=120.0*
*NOU **23** 17:59:52.9, 15.07S×173.10W, h53km, mb5.0/44, Tonga Islands*
*MOS **23** 17:59:53.8±1.5, 15.33S×173.68W, h39km, mb5.2/21, Error ellipse: s-maj=12.1km s-min=9.5km az=76.6*
*GCMT **23** 17:59:58.1±0.3, 15.08S±0.02×173.40W±0.02, h12km, MW5.3/79, Moment Tensor Solution. s24,c28; s79,c98; Duration: 1§1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.01±.02; $M_{\theta\theta}$0.10±.02; $M_{\phi\phi}$-0.11±.02; $M_{r\theta}$-0.98±.04; $M_{\theta\phi}$0.04±.01; $M_{r\phi}$0.64±.04; Best double couple: $M_0$1.17900×10^{17} NP1:ϕ_s212.00000°,δ6.00000°, λ179.00000°. NP2:ϕ_s303.00000°,δ90.00000°,λ84.00000°.*

Principal axes: T 1.1860, Plg45.0000°, Azm208.0000°; N -0.0140, Plg6.0000°, Azm303.0000°; P -1.1720, Plg45.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 23 17:59:51.8±0.2, 15.23S±0.04×173.27W±0.05, h30km, n733, σ1§70/663, mb5.1/122, MS4.5/52, 47C-33D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.96**	**48**		**Pn**	**18 00 20.9**	**-2.1**
AFI				Sn	**Sn**	**18 00 40.6**	**-6.1**
AFI	**Afiamalu**	**1.96**	**48**	P	**Pn**	**18 00 21.7**	**-1.4**
AFI	**Afiamalu**	**1.96**	**48**	S	**Sn**	**18 00 41.3**	**-5.4**
AFI	**Afiamalu**	**1.96**	**48**	P	**Pn**	**18 00 21.0**	**-2.1**
NIUE	**Niue**	**4.98**	**141**	P	**Pn**	**18 01 04.5**	**-0.1**
NIUE				S	**Sn**	**18 01 56.2**	**-5.0**
NIUE	**Niue**	**4.98**	**141**		**Pn**	**18 01 03.5**	**-1.1**
NIUE				Sn	**Sn**	**18 01 56.0**	**-5.3**
NIUE	**Niue**	**4.98**	**141**	P	**Pn**	**18 01 04.9**	**+0.3**
NIUE	**Niue**	**4.98**	**141**	P	**Pn**	**18 01 04.7**	**+0.1**
NIUE				S	**Sn**	**18 01 55.7**	**-5.6**
MSVF	**Nonsavu**	**8.69**	**252**	Pn	Pn	18 02 03.7	+8.1
FUNA	**Funafuti**	**9.94**	**311**	Pn	**Pn**	**18 02 10.2**	**-2.5**
RAR	**Rarotonga**	**14.13**	**117**	Pn	**Pn**	**18 03 09.2**	**-0.8**
	6.3nm,0.3s,baz=280,slow=4.7,SNR=12						
RAR				Sn	Sn	18 05 36.1	-10
	3.3nm,0.3s,baz=319,slow=20,SNR=1.7						
RAR				LR	LR	18 08 02.6	
	comp=Z,173nm,19.2s,baz=256,slow=34						
RAR	**Rarotonga**	**14.13**	**117**		**Pn**	**18 03 08.6**	**-1.4**
RAR	**Rarotonga**	**14.13**	**117**	P	**Pn**	**18 03 09.2**	**-0.8**
RAR	**Rarotonga**	**14.13**	**117**	P	**Pn**	**18 03 08.6**	**-1.4**
RAO	**Raoul Island**	**14.60**	**196**	LR	LR	18 08 08.1	
	comp=Z,1μm,21.6s,baz=170,slow=34						
RAO	**Raoul Island**	**14.60**	**196**	Pn	**Pn**	**18 03 16.1**	**-0.2**
RAO	**Raoul Island**	**14.60**	**196**	P	**Pn**	**18 03 16.1**	**-0.2**
MARNC	**Mare, Loyalty**	**18.79**	**248**		**P**	**18 04 06.9**	**-2.0**
MARNC	**Mare, Loyalty**	**18.79**	**248**	P	**Pn**	**18 04 10.6**	**+1.0**
SANVU	**Saraoutou**	**18.83**	**267**	P	**P**	**18 04 07.2**	**-2.1**
PINNC	**Pines Island,**	**19.65**	**245**	P	**P**	**18 04 15.2**	**-3.1**
PINNC				IAmb	IAmb	18 04 26.1	
	comp=Z,164nm,1.0s						
PINNC	**Pines Island,**	**19.65**	**245**	P	**Pn**	**18 04 20.9**	**+1.1**
YATNC	**Mamie plateau,**	**19.97**	**247**	P	**Pn**	**18 04 23.8**	**+0.1**
OUENC	**Ouen Island, N**	**20.12**	**246**	P	Pn	18 04 25.5	+0.1
DZM	**Mont Dzumac**	**20.37**	**247**	P	**P**	**18 04 26.9**	**+0.6**
	comp=Z,14nm,0.6s,baz=78,slow=17,SNR=14						
DZM				LR	LR	18 11 10.5	
	comp=Z,2μm,20.1s,baz=64,slow=34						
	comp=Z,14nm,0.6s						
DZM	**Mont Dzumac**	**20.37**	**247**	*eP*	Pn	18 04 28.4	-0.1
	comp=Z,346nm,1.4s						
DZM				*eS*	**S**	**18 08 09.3**	**-4.0**
	comp=Z,1μm,28.4s						
DZM				*eLR*	LR	18 09 12.8	
	comp=Z,4μm,25.6s						
ONTNC	**Ouen Toro**	**20.43**	**247**		**P**	**18 04 23.8**	**-3.0**
ONTNC				IAmb	IAmb	18 04 34.2	
	comp=Z,191nm,1.2s						
ONTNC	**Ouen Toro**	**20.43**	**247**	P	Pn	18 04 28.7	-0.4
NFK	**Norfolk Island**	**22.13**	**228**	P	**P**	**18 04 45.3**	**+0.3**
	comp=Z,227nm,1.0s						
PPT	**Papeete**	**22.85**	**99**	LR	LR	18 11 19.6	
	comp=Z,237nm,20.3s,baz=264,slow=30						
PPT2	**Papeete2**	**22.85**	**99**	*eP*	**P**	**18 04 54.3**	**+1.4**
	comp=Z,74nm,24.5s						
PPT2				*eS*	**S**	**18 08 55.7**	**-5.0**
	comp=Z,555nm,29.2s						
PPT2				*eLR*	LR	18 10 15.9	
	comp=Z,1μm,26.5s						
PPT2				*eLR*	LR	18 10 22.7	
	comp=Z,774nm,26.8s						
OUZ	**Omahuta**	**23.13**	**208**	P	**P**	**18 04 57.3**	**+1.8**
OUZ	**Omahuta**	**23.13**	**208**	P	**P**	**18 04 57.2**	**+1.6**
WCZ	**Waipu Caves**	**23.41**	**206**	P	**P**	**18 05 00.3**	**+2.1**
MXZ	**Matakaoa Point**	**23.46**	**197**	P	**P**	**18 04 57.5**	**-1.3**
MXZ	**Matakaoa Point**	**23.46**	**197**	P	**P**	**18 05 00.2**	**+1.4**
MXZ	**Matakaoa Point**	**23.46**	**197**	P	**P**	**18 05 00.9**	**+2.2**
KUZ	**Kuaotunu**	**23.56**	**203**	P	**P**	**18 05 01.5**	**+1.8**
KUZ	**Kuaotunu**	**23.56**	**203**	P	**P**	**18 05 01.7**	**+2.0**
WMGZ	**Waiomatatini S**	**23.67**	**197**	P	**P**	**18 05 04.0**	**+3.2**
HAZ	**Te Kaha**	**23.79**	**198**	P	**P**	**18 05 03.6**	**+1.7**
PKGZ	**Paikihiroa**	**23.81**	**197**	P	**P**	**18 05 07.0**	**+4.9**
WIAZ	**Waiheke Island**	**23.82**	**204**	P	**P**	**18 05 04.2**	**+1.9**
TBI	**Tubuai**	**23.86**	**113**	*eS*	**S**	**18 09 15.0**	**-2.0**
	comp=Z,2μm,26.0s						
TBI				*eLR*	LR	18 10 49.4	
	comp=Z,3μm,25.5s						
TBI				*eLR*	LR	18 10 55.9	
	comp=Z,1μm,31.8s						
MBAZ	**Motutapu North**	**23.89**	**204**	P	**P**	**18 05 05.3**	**+2.4**
RUGZ	**Raukumara Rang**	**24.02**	**198**	P	**P**	**18 05 06.7**	**+2.5**
ETAZ	**East Tamaki Re**	**24.04**	**204**	P	**P**	**18 05 06.2**	**+1.9**
MKAZ	**Moumakai**	**24.09**	**203**	P	**P**	**18 05 06.0**	**+1.3**
TWGZ	**Tauwhareparae**	**24.12**	**197**	P	**P**	**18 05 09.0**	**+3.8**
WTAZ	**Waiatarua**	**24.18**	**204**	P	**P**	**18 05 07.0**	**+1.6**
AWAZ	**Awhitu Peninsu**	**24.25**	**204**	P	**P**	**18 05 07.6**	**+1.4**
CNGZ	**Carnagh Statio**	**24.35**	**196**	P	**P**	**18 05 11.9**	**+4.8**
MWZ	**Matawai**	**24.40**	**198**	P	**P**	**18 05 10.4**	**+2.8**
URZ	**Urewera**	**24.46**	**199**	P	**P**	**18 05 08.3**	**+0.2**
	comp=Z,17nm,0.4s,baz=21,slow=3.0,SNR=19						
URZ				LR	LR	18 13 26.9	
	comp=Z,1μm,19.0s,baz=17,slow=34						
	comp=Z,17nm,0.4s						
URZ	**Urewera**	**24.46**	**199**	P	**P**	**18 05 08.9**	**+0.8**
URZ	**Urewera**	**24.46**	**199**	P	**P**	**18 05 08.8**	**+0.7**
TOZ	**Tahuroa Road**	**24.52**	**202**		**P**	**18 05 06.9**	**-1.8**
TOZ	**Tahuroa Road**	**24.52**	**202**	P	**P**	**18 05 11.3**	**+2.6**
RAGZ	**Rawiri**	**24.58**	**198**	P	**P**	**18 05 13.6**	**+4.3**
RIGZ	**Rimuhau**	**24.68**	**197**	P	**P**	**18 05 13.3**	**+3.1**
RTZ	**Ruatahuna**	**24.82**	**198**		**P**	**18 05 10.0**	**-1.5**
RTZ	**Ruatahuna**	**24.82**	**198**	P	**P**	**18 05 13.4**	**+1.9**
SNGZ	**Shannon Statio**	**24.87**	**198**	P	**P**	**18 05 16.3**	**+4.4**
KNZ	**Kokohu**	**25.00**	**197**	P	**P**	**18 05 15.2**	**+2.3**
TLZ	**Tolley Road**	**25.04**	**201**	P	**P**	**18 05 16.9**	**+3.4**
HIZ	**Hauiti**	**25.44**	**202**	P	**P**	**18 05 15.4**	**-1.6**
HIZ				IAmb	IAmb	18 05 27.8	
	comp=Z,78nm,1.1s						
HIZ	**Hauiti**	**25.44**	**202**	P	**P**	**18 05 18.1**	**+1.1**
HIZ	**Hauiti**	**25.44**	**202**	P	**P**	**18 05 20.3**	**+3.3**
BKZ	**Black Stump Fm**	**25.48**	**199**		**P**	**18 05 16.7**	**-0.8**
BKZ	**Black Stump Fm**	**25.48**	**199**	P	**P**	**18 05 18.2**	**+0.8**
BKZ	**Black Stump Fm**	**25.48**	**199**	P	**P**	**18 05 17.8**	**+0.4**
NGZ	**Ngauruhoe**	**25.78**	**200**	P	**P**	**18 05 23.2**	**+3.9**
VRZ	**Vera Road**	**26.02**	**202**	P	P	18 05 29.8	+7.5
HNR	**Honiara**	**26.77**	**279**	LR	LR	18 14 34.1	
	comp=Z,381nm,19.5s,baz=77,slow=33						
BFZ	**Birch Farm**	**26.95**	**198**	P	**P**	**18 05 31.4**	**+0.8**
MRZ	**Mangatainoka R**	**27.13**	**199**	P	**P**	**18 05 31.8**	**-0.5**
MRZ				IAmb	IAmb	18 05 38.4	
	comp=Z,145nm,1.9s						
SNZO	**South Karori**	**28.00**	**200**	P	**P**	**18 05 40.9**	**+0.9**
TCW	**Tory Channel**	**28.05**	**200**	P	**P**	**18 05 39.0**	**-1.5**
QRZ	**Quartz Range**	**28.33**	**203**	P	**P**	**18 05 42.0**	**-1.0**
QRZ				IAmb	IAmb	18 05 47.1	
	comp=Z,28nm,0.8s						
QRZ	**Quartz Range**	**28.33**	**203**	P	**P**	**18 05 43.7**	**+0.7**
TKNZ	**Takaka Hill**	**28.35**	**202**	P	**P**	**18 05 42.4**	**-0.8**
NNZ	**Nelson**	**28.36**	**202**	P	**P**	**18 05 41.9**	**-1.4**
NNZ				IAmb	IAmb	18 05 47.6	
	comp=Z,102nm,1.8s						
THZ	**Tophouse**	**29.01**	**202**	P	**P**	**18 05 48.0**	**-1.1**
KHZ	**Kahutara**	**29.37**	**200**	P	**P**	**18 05 53.3**	**+1.1**
DSZ	**Denniston Nort**	**29.40**	**203**	P	**P**	**18 05 51.4**	**-1.2**
DSZ				IAmb	IAmb	18 06 04.1	
	comp=Z,102nm,1.7s						
LTZ	**Lake Taylor**	**30.13**	**201**	P	**P**	**18 05 56.8**	**-2.2**
LTZ				IAmb	IAmb	18 06 02.5	
	comp=Z,47nm,1.2s						
OXZ	**Oxford**	**30.69**	**201**	P	**P**	**18 06 01.9**	**-2.0**
OXZ				IAmb	IAmb	18 06 06.8	
	comp=Z,30nm,0.6s						
RPZ	**Rata Peaks**	**31.38**	**202**	LR	LR	18 18 30.4	
	comp=Z,1μm,19.3s,baz=357,slow=36						
TAOE	**Nuku Hiva Isla**	**32.98**	**83**	*eLR*	LR	18 14 52.0	
	comp=Z,1μm,25.7s						
WHZ	**Wether Hill Ro**	**34.39**	**203**	P	**P**	**18 06 35.3**	**-1.0**
WHZ				IAmb	IAmb	18 06 39.2	
	comp=Z,46nm,0.9s						
EIDS	**Eidsvold**	**34.82**	**247**	P	**P**	**18 06 38.7**	**-1.6**
ARMA	**Armidale**	**35.53**	**239**	P	**P**	**18 06 45.5**	**-0.9**
	comp=Z,20nm,0.9s						
ARMA	**Armidale**	**35.53**	**239**	P	**P**	**18 06 44.4**	**-2.1**
ARMA	**Armidale**	**35.53**	**239**	P	**P**	**18 06 45.6**	**-0.9**
MGCD	**Mangrove Creek**	**36.85**	**234**	P	**P**	**18 06 57.0**	**-0.6**
	comp=Z,26nm,0.9s						
CTA	**Charters Tower**	**38.80**	**257**	LR	LR	18 20 41.4	
	comp=Z,13nm,21.4s,baz=82,slow=32						
CTAO	**Charters Tower**	**38.80**	**257**	P	**P**	**18 07 14.3**	**+0.1**
H11S2	**WAKE ISLAND Hy**	**38.88**	**329**	T	T	18 48 37.0	
	baz=153,slow=74,SNR=12						
H11S3	**WAKE ISLAND Hy**	**38.90**	**329**	T	T	18 48 38.9	
	baz=153,SNR=13						
H11S1	**WAKE ISLAND Hy**	**38.90**	**329**	T	T	18 48 36.4	
	baz=153,slow=74,SNR=14						
CNB	**Canberra Magne**	**38.95**	**232**	P	**P**	**18 07 14.4**	**-1.0**
	comp=Z,38nm,1.2s						
CNB	**Canberra Magne**	**38.95**	**232**	P	**P**	**18 07 14.5**	**-0.9**
PMG	**Port Moresby**	**39.05**	**274**	LR	LR	18 19 34.9	
	comp=Z,206nm,20.9s,baz=68,slow=30						
PMG	**Port Moresby**	**39.05**	**274**	P	**P**	**18 07 16.4**	**+0.1**
PMG	**Port Moresby**	**39.05**	**274**	P	**P**	**18 07 16.4**	**+0.1**
PMG				pmax	pmax		
	comp=Z,14nm,1.1s						
CAN	**Canberra**	**39.23**	**232**	P	**P**	**18 07 16.4**	**-1.3**
	comp=Z,32nm,1.2s						
CAN	**Canberra**	**39.23**	**232**	P	**P**	**18 07 16.2**	**-1.5**
CAN				IAmb	IAmb	18 07 17.6	
	comp=Z,76nm,1.6s						
CAN	**Canberra**	**39.23**	**232**	P	**P**	**18 07 16.7**	**-1.0**
CAN	**Canberra**	**39.23**	**232**	P	**P**	**18 07 16.2**	**-1.5**
CAN				pmax	pmax		
	comp=Z,76nm,1.6s						
H11N3	**WAKE ISLAND Hy**	**39.83**	**330**	T	T	18 49 54.6	
	baz=150,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**39.83**	**330**	T	T	18 49 41.1	
	baz=150,slow=76,SNR=87						
H11N2	**WAKE ISLAND Hy**	**39.85**	**330**	T	T	18 49 48.0	
	baz=150,slow=76,SNR=43						
MTSU	**Mount Surprise**	**40.66**	**260**	P	**P**	**18 07 28.7**	**-1.1**
	comp=Z,17nm,1.0s						
MTSU	**Mount Surprise**	**40.66**	**260**	P	**P**	**18 07 29.2**	**-0.6**
CMSA	**Cobar Meteorol**	**40.74**	**239**	P	**P**	**18 07 28.9**	**-1.4**
	comp=Z,27nm,0.7s						
CMSA	**Cobar Meteorol**	**40.74**	**239**	P	**P**	**18 07 28.9**	**-1.4**
QLP	**Quilpie**	**41.09**	**247**	P	**P**	**18 07 31.6**	**-1.6**
	comp=Z,29nm,0.7s						
QLP	**Quilpie**	**41.09**	**247**	P	**P**	**18 07 31.9**	**-1.3**
COEN	**Coen**	**42.12**	**266**	P	**P**	**18 07 41.4**	**-0.3**
	comp=Z,21nm,0.8s						
COEN	**Coen**	**42.12**	**266**	P	**P**	**18 07 40.7**	**-1.0**
COEN				PcP	**PcP**	**18 09 36.0**	**-0.1**
COEN	**Coen**	**42.12**	**266**	P	**P**	**18 07 42.0**	**+0.3**
TOO	**Toolangi**	**42.66**	**231**	P	**P**	**18 07 44.6**	**-1.4**
	comp=Z,19nm,1.1s						
TOO	**Toolangi**	**42.66**	**231**	P	**P**	**18 07 44.6**	**-1.4**
TOO	**Toolangi**	**42.66**	**231**	P	**P**	**18 07 44.6**	**-1.4**
TOO				pmax	pmax		
	comp=Z,18nm,1.0s						
TAU	**Tasmania Unive**	**43.52**	**223**	P	**P**	**18 07 51.7**	**-1.0**
TAU	**Tasmania Unive**	**43.52**	**223**	P	**P**	**18 07 51.7**	**-1.0**
TAU				pmax	pmax		
	comp=Z,107nm,1.5s						
BRAT	**Ballarat**	**43.83**	**231**	P	**P**	**18 07 54.8**	**-0.5**
STKA	**Stephens Creek**	**44.23**	**240**	P	**P**	**18 07 57.7**	**-0.9**
	comp=Z,113nm,1.8s						
STKA	**Stephens Creek**	**44.23**	**240**	P	**P**	**18 07 57.9**	**-0.7**
	comp=Z,14nm,0.7s,baz=89,slow=9.3,SNR=23						
STKA				LR	LR	18 23 36.1	
	comp=Z,421nm,21.8s,baz=48,slow=32						
	comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	**44.23**	**240**	P	**P**	**18 07 58.2**	**-0.4**
INKA	**Innaminka**	**44.32**	**246**	P	**P**	**18 07 57.8**	**-1.6**
QIS	**Mount Isa**	**45.03**	**256**	P	**P**	**18 08 04.2**	**-1.1**
	comp=Z,7.4nm,1.4s						
QIS	**Mount Isa**	**45.03**	**256**	P	**P**	**18 08 04.6**	**-0.6**
MGBR	**Mount Gambier**	**46.42**	**232**	P	**P**	**18 08 14.4**	**-1.5**
HTT	**Hallett**	**46.73**	**238**	P	**P**	**18 08 17.5**	**-1.1**
	comp=Z,10nm,1.1s						
HTT	**Hallett**	**46.73**	**238**	P	**P**	**18 08 17.4**	**-1.1**
JAY	**Jayapura**	**47.08**	**281**	LR	LR	18 26 57.8	
	comp=Z,148nm,21.8s,baz=267,slow=35						
BBOO	**Buckleboo**	**49.00**	**240**	P	**P**	**18 08 33.2**	**-2.8**
	comp=Z,23nm,3.0s						
BBOO	**Buckleboo**	**49.00**	**240**	P	**P**	**18 08 33.9**	**-2.1**
BBOO				IAmb	IAmb	18 08 49.1	
	comp=Z,26nm,1.1s						
BBOO	**Buckleboo**	**49.00**	**240**

comp=Z,23nm,1.0s
SBA Scott Base 63.42 185 P P 18 10 19.9 +1.7
SBA pmax pmax
comp=Z,23nm,1.0s
MBWA Marble Bar 63.52 254 P P 18 10 18.1 -1.7
comp=Z,20nm,1.1s
MBWA Marble Bar 63.52 254 P P 18 10 18.6 -1.2
MBWA Marble Bar 63.52 254 P P 18 10 21.1 +1.2
VNDA Vanda 63.55 186 P P 18 10 21.4 +2.3
comp=Z,10nm,0.9s,baz=5.2,slow=6.4,SNR=66
VNDA LR LR 18 32 52.5
comp=Z,68nm,21.9s,baz=18,slow=31
comp=Z,10nm,0.9s
VNDA Vanda 63.55 186 P P 18 10 20.8 +1.8
VNDA IAmb IAmb 18 10 23.0
comp=Z,16nm,1.0s
EDFI Ende, Flores 63.76 268 P P 18 10 19.8 -1.8
comp=Z,24nm,1.2s
MEEK Meekatharra 63.99 248 P P 18 10 24.2 +1.3
KLBR Kellerberrin 64.42 242 P P 18 10 24.4 -1.2
comp=Z,67nm,0.8s
KLBR Kellerberrin 64.42 242 P P 18 10 25.2 -0.4
NWAO Narrogin (SRO) 64.81 241 LR LR 18 36 27.7
comp=Z,376nm,21.4s,baz=94,slow=34
NWAO Narrogin (SRO) 64.81 241 P P 18 10 27.0 -1.1
NWAO Narrogin (SRO) 64.81 241 P P 18 10 28.3 +0.2
NWAO Narrogin (SRO) 64.81 241 P P 18 10 27.0 -1.1
NWAO pmax pmax
comp=Z,65nm,1.7s
RKGY Rocky Gully 64.96 239 P P 18 10 27.7 -1.4
comp=Z,65nm,1.7s
BLDU Ballidu 65.37 243 P P 18 10 30.2 -1.6
comp=Z,16nm,1.2s
BLDU Ballidu 65.37 243 P P 18 10 32.1 +0.3
MUN Mundaring 65.72 242 P P 18 10 33.8 -0.2
comp=Z,24nm,1.1s
MUN Mundaring 65.72 242 P P 18 10 34.4 +0.4
MORW Morawa 66.06 245 P P 18 10 36.4 +0.1
BNSI Bone 66.31 272 P P 18 10 37.6 -0.5
comp=Z,9.8nm,1.1s
KAPI Kappang 66.50 271 LR LR 18 37 46.8
comp=Z,53nm,19.7s,baz=88,slow=34
MPSI Mapaga 67.77 277 P P 18 10 47.2 -0.2
comp=Z,7.9nm,0.8s
NIKH Nikolski High 68.03 3 P P 18 10 47.6 -0.5
baz=185
SHEM Shemya Is, Ala 68.56 352 LR LR 18 34 05.6
comp=Z,357nm,21.7s,baz=178,slow=30
MJA0 Matsu Arr-Jizo 68.87 320 *e*P **P 18 10 55.2 +1.4**
MJA0 pmax pmax
comp=Z,4.0nm,1.0s
MJAR Matsushiro Arr 68.89 320 P P 18 10 54.5 +0.5
comp=Z,4.1nm,1.0s,baz=154,slow=5.9,SNR=6.3
MJAR LR LR 18 33 57.1
comp=Z,201nm,21.4s,baz=103,slow=30
comp=Z,4.1nm,1.0s
MJAR Matsushiro Arr 68.89 320 P P 18 10 53.1 -0.8
MJAR IAmb IAmb 18 11 17.0
comp=Z,28nm,1.9s
MAJO Matsushiro 68.89 320 P P 18 10 53.6 -0.3
MAJO Matsushiro 68.89 320 P P 18 10 53.6 -0.3
MAJO pmax pmax
comp=Z,63nm,1.8s
MJB9 Matsu-Tunnel 68.90 320 P P 18 10 54.4 +0.4
UNV Unalaska Valle 69.04 4 P P 18 10 54.7 +0.3
UNV Unalaska Valle 69.04 4 P P 18 10 54.2 -0.2
baz=187
FALS False Pass 70.31 6 P P 18 11 01.5 -0.7
baz=190
CHNA Chernabura Isl 70.75 8 P P 18 11 04.9 0.0
baz=194
HULI Fort Hunter Li 70.82 43 P P 18 11 06.5 +0.7
SDPT Sand Point 71.14 8 P P 18 11 06.3 -0.9
baz=193
S12K Black Hills 71.29 7 P P 18 11 06.7 -1.5
baz=191
ASAJ Asahikawa 71.46 328 LR LR 18 39 43.8
comp=Z,56nm,18.6s,baz=46,slow=34
CHIR Chirikof Islan 72.33 10 P P 18 11 14.0 -0.4
baz=198
PETK Petropavlovsk- 72.51 342 P P 18 11 17.3 +1.7
comp=Z,12nm,0.7s,baz=104,slow=8.8,SNR=18
PETK LR LR 18 39 12.4
comp=Z,61nm,20.3s,baz=121,slow=33
comp=Z,12nm,0.7s
PETK Petropavlovsk- 72.51 342 P P 18 11 16.6 +1.0
PFO Pinyon Flats O 72.72 47 *i* P LR LR 18 36 59.0
comp=Z,512nm,19.4s,baz=254,slow=31
PFO Pinyon Flats O 72.72 47 *i* P **P 18 11 18.3 +0.9**
PFO pmax pmax
comp=Z,22nm,1.3s
LPIG La Paz 72.85 58 LR LR 18 34 24.2
comp=Z,316nm,21.6s,baz=235,slow=28
SII Sitkinak Islan 73.28 11 P P 18 11 19.2 -0.9
baz=199
YBH Yreka Blue Hor 73.39 37 LR LR 18 35 21.4
comp=Z,34nm,21.8s,baz=265,slow=29
YSS Yuzhno-Sakhali 73.40 330 *e*P **P 18 11 22.5 +1.5**
R17L Mt. Peulik Vol 73.94 9 P P 18 11 23.5 -0.4
baz=197
OHAK Old Harbor 74.08 11 P P 18 11 24.7 +0.1
baz=200
NVAR Mina Array Bea 74.12 42 P P 18 11 28.1 +2.4
comp=Z,17nm,0.7s,baz=228,slow=10,SNR=128
NVAR LR LR 18 36 32.3
comp=Z,440nm,20.7s,baz=258,slow=30
comp=Z,17nm,0.7s
R18K Karluk 74.19 10 P P 18 11 24.7 -0.6
baz=199
Q17K Contact Creek 74.62 9 P P 18 11 26.3 -1.7
baz=197
KDAK Kodiak Island 74.74 11 LR LR 18 37 14.0
comp=Z,360nm,20.8s,baz=165,slow=30
KDAK Kodiak Island 74.74 11 P P 18 11 26.7 -1.8
baz=201
QSPA South Pole Qui 74.81 180 P P 18 11 34.5 +5.4
comp=Z,33nm,0.8s,baz=36,slow=1.3,SNR=153
QSPA LR LR 18 39 51.6
comp=Z,112nm,21.4s,baz=34,slow=32
QSPA South Pole Qui 74.81 180 P P 18 11 34.8 +5.6
Q16K King Salmon 74.90 9 P P 18 11 28.4 -1.0
baz=197
O15K Ungalikthiuk R 74.95 7 P P 18 11 28.9 -0.8
baz=193
P16K Nushagak River 75.05 8 P P 18 11 29.2 -1.0
baz=195
Q18K Katmai Hardscr 75.13 10 P P 18 11 29.2 -1.7
baz=198
P17K Kvichak River 75.43 9 P P 18 11 32.1 -0.4
baz=197
N14K Kuskokwak Cree 75.48 6 P P 18 11 32.0 -0.8
baz=192
Q20K Shuyak Island 75.55 11 P P 18 11 32.4 -0.8
baz=201
M11K Mekoryuk 75.57 4 P P 18 11 32.5 -0.8
baz=187
O16K Kokwok River B 75.58 8 P P 18 11 33.3 0.0
baz=195
Q19K Cape Douglas, 75.62 10 P P 18 11 32.7 -0.9
baz=200
P18K Big Mountain, 75.80 9 P P 18 11 33.2 -1.5
baz=198
M13K Dall Lake 75.81 5 P P 18 11 34.7 +0.1
baz=190
O17K Koliganek Bris 75.89 8 P P 18 11 35.5 +0.4
baz=196
N15K Kwethluk River 75.89 7 P P 18 11 35.7 +0.6
baz=193
KSRS Korea Array 76.13 315 P P 18 11 39.5 +2.5
comp=Z,1.5nm,0.9s,baz=119,slow=7.4,SNR=5.3
KSRS LR LR 18 39 23.6
comp=Z,27µm,22.0s,baz=85,slow=31
comp=Z,1.5nm,0.9s
O18K Koktuh Hills 76.25 9 P P 18 11 37.5 +0.3
baz=198
M14K Bethel 76.27 6 P P 18 11 36.9 -0.3
baz=191
M15K Kasigluk River 76.34 6 P P 18 11 38.3 +0.7
baz=192
N16K Nishlik Lake 76.35 7 P P 18 11 37.2 -0.6
baz=194
P19K Oil Pt 76.38 10 P P 18 11 38.3 +0.3
baz=200
N17K Nushagak Hills 76.60 8 P P 18 11 39.4 +0.3
baz=196
O19K Port Alsworth 76.71 10 P P 18 11 39.9 +0.2
baz=199
L14K Kuka Creek 76.78 5 P P 18 11 39.2 -0.9
baz=190
M16K Timber Creek 76.86 7 P P 18 11 39.3 -1.3
baz=194
O20K Slope Mountain 76.89 10 P P 18 11 39.3 -1.6
baz=200
BRSE Bradley Lake S 76.92 11 P P 18 11 38.7 -2.2
baz=202
N18K Kilae Creek 76.93 9 P P 18 11 38.6 -2.5
baz=197
K13K Kusilvak Mount 77.21 4 P P 18 11 42.1 -0.5
baz=188
L15K Ungalak Mounta 77.22 6 P P 18 11 41.3 -1.3
baz=192
N19K Bonanza Creek 77.27 9 P P 18 11 40.5 -2.6
baz=198
USRK Ussuriysk Ar. 77.33 323 P P 18 11 44.3 +0.7
comp=Z,1.7nm,0.8s,baz=123,slow=7.4,SNR=2.2
comp=Z,1.7nm,0.8s
M17K Holitna River 77.41 8 P P 18 11 42.6 -1.1
baz=196
L16K Owhat River 77.47 7 P P 18 11 43.5 -0.5
baz=194
SEW Seward 77.50 12 P P 18 11 42.8 -1.4
baz=204
Q23K Middleton Isla 77.56 14 P P 18 11 43.1 -1.4
baz=207
BBB Bella Bella 77.68 27 LR LR 18 39 51.2
comp=Z,327nm,19.2s,baz=169,slow=31
M18K Stony River 77.72 8 P P 18 11 45.9 +0.5
baz=197
O22K Cooper Landing 77.80 12 P P 18 11 43.9 -1.9
baz=203
K15K Wolf Creek Mou 77.83 6 P P 18 11 45.2 -0.8
baz=192
P23K Montague Islan 77.83 13 P P 18 11 46.2 +0.2
baz=206
N20K Mount Spurr 78.01 10 P P 18 11 48.0 +0.9
baz=201
SPCR Spurr Chakacha 78.01 10 P P 18 11 48.0 +0.9
baz=201
L17K Donlin 78.02 7 P P 18 11 47.3 +0.2
baz=195
J14K Nanvaranak Lak 78.10 5 P P 18 11 46.7 -0.7
baz=190
CRAG Craig 78.14 22 P P 18 11 46.5 -1.3
baz=219
L18K Granite Mounta 78.30 8 P P 18 11 49.2 +0.6
baz=196
M19K Big River Lodg 78.32 9 P P 18 11 46.0 -2.7
baz=199
STLK Strandline Lak 78.36 10 IAmb IAmb 18 11 51.6
comp=Z,31nm,1.6s
RC01 Rabbit Creek A 78.36 11 P P 18 11 46.5 -2.5
baz=203
PWL Port Wells 78.42 12 P P 18 11 47.6 -1.7
baz=204
KAIM Kayak Island 78.45 14 P P 18 11 48.6 -0.9
baz=208
M20K Styx River 78.50 10 P P 18 11 49.7 -0.2
baz=200
SUA Susitna One 78.51 11 P P 18 11 50.3 +0.3
baz=202
L19K White Mountain 78.52 9 P P 18 11 49.2 -0.6
baz=198
K17K Iditarod 78.58 7 P P 18 11 49.6 -0.6
baz=195
V35K Ketchikan 78.59 23 P P 18 11 50.2 -0.1
baz=221
SIT Sitka 78.63 20 P P 18 11 49.3 -1.2
baz=217
U33K Whale Pass 78.64 22 P P 18 11 49.8 -0.8
baz=219
EYAK Cordova Ski Ar 78.69 13 P P 18 11 47.8 -3.0
baz=207
GLI Glacier Island 78.70 13 P P 18 11 49.1 -1.7
baz=206
SKT Skwentna 78.86 10 P P 18 11 51.3 -0.4
baz=201
J16K Anvik River 78.89 6 P P 18 11 51.0 -0.8
baz=192
M22K Willow 78.90 11 P P 18 11 50.2 -1.6
baz=203
KNK Knik Glacier 78.90 12 P P 18 11 51.0 -0.9
baz=204
PMR Palmer 78.94 11 P P 18 11 49.1 -3.0
baz=204
L20K Farewell, AK 78.95 9 IAmb IAmb 18 11 57.3
comp=Z,24nm,1.4s
L20K Farewell, AK 78.95 9 P P 18 11 50.2 -2.0
baz=199
S31K Pelican 79.06 19 P P 18 11 50.0 -2.9
baz=216
WRAK Wrangell Islan 79.15 22 P P 18 11 51.5 -1.9
baz=220
J17K VABM Dome 79.15 6 P P 18 11 52.2 -1.1
baz=194
S32K Killisnoo 79.20 20 P P 18 11 51.5 -2.1
baz=218
T33K Petersburg 79.24 21 P P 18 11 51.7 -2.1
baz=219
MESA MESA 79.28 15 P P 18 11 51.5 -2.8
baz=211
SML Sawmill 79.29 12 P P 18 11 52.6 -1.5
baz=204
BMRM Bremner River 79.33 14 P P 18 11 52.3 -2.1
baz=208
B08A Colville Reser 79.37 33 P 18 11 56.1 +1.2
M23K Glacier View 79.39 12 P P 18 11 51.3 -3.4
baz=205
I17K Unalakleet 79.47 6 P P 18 11 52.6 -2.4
baz=192
CUT Chulitna 79.47 11 P P 18 11 53.6 -1.4
baz=202
CRQE Cirque 79.50 15 P P 18 11 53.2 -2.2
baz=210
J18K Innoko River 79.50 7 P P 18 11 53.8 -1.4
baz=196
L22K Petersville 79.50 10 IAmb IAmb 18 11 58.0
comp=Z,17nm,0.8s
KLU Klutina 79.50 13 P P 18 11 53.2 -2.1
baz=207
SCM Sheep Creek Mo 79.51 12 P P 18 11 54.1 -1.3
baz=205
PNL Peninsula 79.53 17 P P 18 11 53.6 -1.9
baz=213
R31K City Hall, Gus 79.58 19 P P 18 11 53.6 -2.1
baz=217
PPLA Purkeypile 79.61 10 P P 18 11 52.2 -3.7
baz=201
PINM Pinnacle 79.66 16 P P 18 11 53.8 -2.4
baz=212
K20K Telida 79.75 9 P P 18 11 54.1 -2.5
baz=199
ANM Nome 79.78 3 P P 18 11 54.5 -2.2
baz=188
N25K Chitina, Valde 79.89 13 IAmb IAmb 18 12 00.4
comp=Z,14nm,0.8s
N25K Chitina, Valde 79.89 13 P P 18 11 56.1 -1.3
baz=208,SNR=6.6
P29M Windy Craggy 79.97 17 P P 18 11 56.0 -1.9
baz=215
M24K Tolsona, Glenn 80.00 13 P P 18 11 56.2 -1.8
baz=206
MA2 Magadan 80.04 342 LR LR 18 41 39.9
comp=Z,73nm,22.0s,baz=119,slow=31
MCARA McCarthy VSAT 80.06 14 P P 18 11 53.6 -4.7
baz=210
H16K Elim 80.07 5 P P 18 11 55.0 -3.2
baz=191
WAT6 Susitna Watana 80.11 12 P P 18 11 55.2 -3.5
baz=205,SNR=6.4
CTG Chitna Glacier 80.11 15 P P 18 11 55.2 -3.6
baz=211
J19K Poorman 80.15 8 P P 18 11 54.9 -3.8
baz=197
NJ2 Nanjing 80.16 307 *e*P **P 18 12 00.9 +1.4**
WAT1 Susitna Watana 80.18 11 P P 18 11 57.2 -1.8
baz=204
PLBC Pleasant Camp 80.23 18 P P 18 11 56.0 -3.2
baz=216
O28M Mount Upton 80.24 16 P P 18 11 56.1 -3.5
baz=212
O29M Mount Kennedy 80.29 17 P P 18 11 57.1 -2.5
baz=214
G15K Niukluk 80.29 4 P P 18 11 57.0 -2.4
baz=189
T35M Bob Quinn 80.34 22 P P 18 11 57.1 -2.8
baz=222
TXAR Lajitas Array 80.42 56 P P 18 12 03.9 +2.8
comp=Z,15nm,0.9s,baz=224,slow=5.2,SNR=88
comp=Z,15nm,0.9s
TXAR Lajitas Array 80.42 56 P 18 12 03.6 +2.5
KTH Kantishna Hill 80.43 10 P P 18 11 59.5 -0.8
TRF Thorofare Moun 80.44 10 P P 18 12 01.4 +0.9
TRF IAmb IAmb 18 12 02.9
comp=Z,16nm,0.8s
TRF Thorofare Moun 80.44 10 P P 18 11 56.4 -4.1
baz=202,SNR=7.2
HARP HAARP 80.47 13 P P 18 11 57.1 -3.4
baz=207
NEW Newport 80.50 34 LR LR 18 40 02.6
comp=Z,214nm,20.5s,baz=228,slow=30
NEW Newport 80.50 34 P 18 12 02.0 +1.0
NEW Newport 80.50 34 P P 18 12 02.0 +1.0
NEW pmax pmax
comp=Z,6.0nm,0.8s
CHUM Lake Minchumin 80.51 9 P P 18 11 57.9 -2.7
baz=200,SNR=6.3
J20K Nowinta River 80.52 8 P P 18 11 58.7 -2.0
baz=199,SNR=9.5
H17K Granite Mounta 80.57 6 P P 18 11 58.7 -2.2
baz=193
P30M Million Dollar 80.59 17 P P 18 11 58.8 -2.5
baz=215
ANMO Albuquerque 80.60 50 LR LR 18 40 30.1
comp=Z,360nm,20.7s,baz=354,slow=30
ANMO Albuquerque 80.60 50 *i* P **P 18 12 02.8 +0.7**
ANMO pmax pmax
comp=Z,16nm,1.0s
DHY Denali Highway 80.63 12 P P 18 12 01.8 +0.3
DHY Denali Highway 80.63 12 P P 18 12 00.3 -1.2
baz=205
F14K Arctic Creek 80.64 3 P P 18 12 00.4 -0.8
baz=187
RND Reindeer 80.65 11 IAmb IAmb 18 12 05.4
comp=Z,22nm,1.0s
TNA Tin City 80.65 2 P P 18 11 59.7 -1.6
baz=185
GCSA Galena City Sc 80.71 7 P P 18 12 01.1 -0.6
baz=196
S34M Telegraph Cree 80.72 21 P P 18 12 00.2 -1.7
baz=221
YUK8 Steele Glacier 80.79 16 P P 18 12 01.2 -1.4
baz=213
G16K Koyuk River 80.81 5 P P 18 12 00.8 -1.4
baz=191
YUK6 Outpost Mounta 80.88 16 P P 18 12 01.4 -1.6
baz=214
BNX BinXian 80.88 322 ⇑P **P 18 12 04.3 +1.3**
BNX pmax pmax
comp=Z,9.0nm,0.7s
PAX Paxson 80.92 12 P P 18 12 01.3 -1.6
baz=207
BPAW Bear Paw Mtn. 80.93 10 P P 18 12 01.4 -1.5
baz=202
MCK McKinley 80.94 11 P P 18 12 01.2 -1.8
baz=204,SNR=20
H18K Honhosa River 80.94 6 P P 18 12 01.5 -1.4
baz=194
M26K Nabesna, AK 80.96 14 IAmb IAmb 18 12 06.8
comp=Z,31nm,1.2s
M26K Nabesna, AK 80.96 14 P P 18 12 03.1 0.0
baz=210,SNR=8.6
F15K North Star Dit 80.96 4 P P 18 12 03.0 -0.1
baz=188
HYT Haines Junctio 81.02 17 P P 18 12 02.6 -1.0
baz=215
YUK3 Moose Creek 81.03 15 P P 18 12 01.6 -2.1
baz=212
CN2 Changchun 81.04 320 *e*P **P 18 12 07.5 +3.6**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
G17K Kiwalik Mounta 81.06 5 P P 18 12 02.4 -1.1
baz=192
I20K Naaghedeneel 81.06 8 P P 18 12 01.6 -1.9
baz=198
Q32M Nakina River 81.13 20 P P 18 12 03.5 -0.9
baz=220
YUK4 Talbot Arm 81.14 16 P P 18 12 03.3 -1.0
baz=214
P32M Atlin 81.15 19 P P 18 12 03.9 -0.4
baz=218
M27K Edge Creek, AK 81.18 14 P P 18 12 03.8 -0.7
baz=210
O30N Mendenhall 81.38 17 P P 18 12 06.1 +0.7
O30N Mendenhall 81.38 17 P P 18 12 02.9 -2.5
baz=216
L26K Log Cabin Wild 81.42 13 P P 18 12 05.1 -0.5
baz=209
BVCY Beaver Creek 81.47 15 P P 18 12 04.3 -1.6
baz=212
MSO Missoula 81.48 37 P 18 12 07.5 +1.2
MSO IAmb IAmb 18 12 09.0
comp=Z,33nm,1.2s
DLBC Dease Lake 81.50 21 LR LR 18 39 00.3
comp=Z,282nm,21.8s,baz=216,slow=29
DLBC Dease Lake 81.50 21 P P 18 12 04.3 -1.8
baz=222
H19K Roundabout Mou 81.52 7 P P 18 12 04.0 -1.9
baz=196
K24K Donnelly Dome 81.60 12 P P 18 12 04.7 -1.8
baz=207
G18K Tagagawik 81.63 6 P P 18 12 04.3 -2.3
baz=194
WHY Whitehorse 81.64 18 P P 18 12 04.8 -2.0
baz=217
N30M Aishikik Lake 81.66 17 P P 18 12 04.4 -2.5
baz=215
H20K Anotleneega Mo 81.68 8 P P 18 12 04.0 -2.8
baz=198
NEA2 Nenana 81.71 10 IAmb IAmb 18 12 10.3
comp=Z,14nm,0.8s
NEA2 Nenana 81.71 10 P P 18 12 04.4 -2.6
baz=204,SNR=10
RIDG Independent Ri 81.73 12 IAmb IAmb 18 12 11.4
comp=Z,35nm,1.5s
RIDG Independent Ri 81.73 12 P P 18 12 05.1 -2.1
baz=208
I21K Tanana 81.78 9 P P 18 12 05.1 -2.2
baz=201
JTMT Jette 81.78 36 P 18 12 08.6 +0.6
L27K Beaver Creek, 81.80 14 P P 18 12 04.6 -2.9
baz=210
MLY Manley 81.83 9 P P 18 12 08.5 +0.7
MLY IAmb IAmb 18 12 10.6
comp=Z,16nm,0.9s
MLY Manley 81.83 9 P P 18 12 05.9 -1.8
baz=202,SNR=12
R33M Jennings River 81.90 20 P P 18 12 06.4 -1.9
baz=221
HDA Harding Lake 81.92 11 IAmb IAmb 18 12 11.8
comp=Z,21nm,0.8s
HDA Harding Lake 81.92 11 P P 18 12 07.1 -1.0
baz=206,SNR=16
P33M Teslin, Yukon 81.92 19 P P 18 12 04.2 -4.2
baz=219
F17K Baldwin Pennin 81.93 5 P P 18 12 07.5 -0.6
baz=192
G19K Purcell Mounta 82.04 7 P P 18 12 07.3 -1.5
baz=196,SNR=10
N31M Braeburn, Yuko 82.04 17 P P 18 12 08.0 -0.9
baz=216
PDAR Pinedale Array 82.06 42 P P 18 12 11.4 +1.7
comp=Z,12nm,0.8s,baz=214,slow=3.2,SNR=122
PDAR LR LR 18 42 25.4
comp=Z,221nm,19.6s,baz=245,slow=31
comp=Z,12nm,0.8s
M29M Somme Creek 82.10 16 P P 18 12 07.5 -1.7
baz=214,SNR=5.5
H21K Melozitna River 82.11 8 P P 18 12 07.6 -1.5
baz=200
SCRK Sand Creek 82.12 13 IAmb IAmb 18 12 12.9
comp=Z,17nm,0.9s
SCRK Sand Creek 82.12 13 P P 18 12 06.9 -2.5
baz=208,SNR=15
I23K Minto, Yukon-K 82.17 10 IAmb IAmb 18 12 12.6
comp=Z,14nm,0.9s
I23K Minto, Yukon-K 82.17 10 P P 18 12 08.7 -0.7
baz=203,SNR=7.8
COLA College 82.18 11 P P 18 12 10.7 +1.2
COLA College 82.18 11 *i* P **P 18 12 11.1 +1.7**
COLA pmax pmax
comp=Z,54nm,0.9s
COLA College 82.18 11 P P 18 12 08.7 -0.7
baz=205

F18K	Selawik	82.22	5	P	P	18 12 09.0	-0.6	
	baz=193							
ILAR	Eielson Array	82.26	11	P	P	18 12 10.8	+0.9	
	comp=Z,6.7nm,0.7s,baz=222,slow=6.0,SNR=94							
ILAR				LR	LR	18 40 23.1		
	comp=Z,241nm,21.3s,baz=192,slow=30							
	comp=Z,6.7nm,0.7s							
ILAR	Eielson Array	82.26	11	P	P	18 12 10.5	+0.6	
IMAR	Indian Mountai	82.29	8	P	P	18 12 11.2	+1.2	
SEY	Seymchan	82.39	345	LR	LR	18 43 00.5		
	comp=Z,122nm,21.3s,baz=90,slow=32							
SEY	Seymchan	82.39	345	*i* P	P	18 12 11.5	+0.9	
SEY				pmax	pmax			
	comp=Z,10.0nm,1.0s							
J25K	Salcha River,	82.41	12	IAmb	IAmb	18 12 14.2		
	comp=Z,18nm,0.9s							
J25K	Salcha River,	82.41	12	P	P	18 12 09.1	-1.6	
	baz=207							
POKR	Poker Plat Res	82.47	11	P	P	18 12 10.3	-0.7	
	baz=205,SNR=14							
E17K	Hotham Inlet	82.52	4	P	P	18 12 09.7	-1.4	
	baz=191							
H22K	Ishtalitna Cre	82.54	9	IAmb	IAmb	18 12 14.6		
	comp=Z,14nm,0.8s							
H22K	Ishtalitna Cre	82.54	9	P	P	18 12 08.8	-2.6	
	baz=201							
N32M	Quiet Lake	82.57	18	P	P	18 12 10.5	-1.2	
	baz=219							
K27K	Chicken	82.58	13	P	P	18 12 10.8	-0.8	
	baz=210							
F19K	Shaleruckik Mo	82.63	6	IAmb	IAmb	18 12 15.2		
	comp=Z,16nm,0.8s							
F19K	Shaleruckik Mo	82.63	6	P	P	18 12 10.6	-1.2	
	baz=195							
M30M	Minto, Yukon	82.65	16	P	P	18 12 09.6	-2.5	
	baz=215,SNR=6.1							
J26L	Joseph Creek	82.67	12	IAmb	IAmb	18 12 16.4		
	comp=Z,20nm,0.8s							
J26L	Joseph Creek	82.67	12	P	P	18 12 10.2	-1.9	
	baz=209							
L29M	L29M	82.74	15	P	P	18 12 09.5	-3.0	
	baz=214,SNR=12							
H23K	Yukon River	82.76	10	P	P	18 12 09.9	-2.6	
	baz=203							
G21K	Allakaket	82.83	8	P	P	18 12 09.2	-3.6	
	baz=199							
E18K	Tukpahlearik C	82.95	5	P	P	18 12 12.8	-0.6	
	baz=192							
M31M	Drury Creek, Y	83.01	17	P	P	18 12 12.5	-1.4	
	baz=218							
D17K	Noatak River	83.04	4	P	P	18 12 13.0	-0.9	
	baz=190							
H24K	Noodor Dome	83.05	10	P	P	18 12 13.3	-0.8	
	baz=205							
F20K	Avaraart Lake	83.06	7	P	P	18 12 13.4	-0.6	
	baz=197							
WTLY	Watson Lake, Y	83.17	21	P	P	18 12 15.3	+0.6	
	baz=223							
PRP	Porcupine Dome	83.19	11	P	P	18 12 13.7	-1.2	
	baz=207,SNR=22							
DAWY	Dawson	83.23	14	IAmb	IAmb	18 12 18.9		
	comp=Z,20nm,1.1s							
E19K	Redstone River	83.29	6	P	P	18 12 13.2	-2.0	
	baz=196,SNR=6.9							
RDOG	Red Dog Mine	83.40	4	P	P	18 12 13.5	-2.3	
	baz=190							
I26K	Coal Creek Min	83.47	12	P	P	18 12 14.8	-1.3	
	baz=209							
C16K	Lisburne Hills	83.48	3	P	P	18 12 14.1	-1.9	
	baz=188							
G22K	Bettles	83.49	8	P	P	18 12 13.1	-3.1	
	baz=201							
F21K	Alatna River	83.50	8	P	P	18 12 16.9	+0.6	
	baz=199,SNR=5.1							
K29M	Barlow Dome	83.50	15		P	18 12 18.1	+1.5	
K29M				IAmb	IAmb	18 12 20.6		
	comp=Z,13nm,0.9s							
K29M	Barlow Dome	83.50	15	P	P	18 12 15.0	-1.5	
	baz=214,SNR=7.9							
G23K	Bananza Creek	83.51	9	P	P	18 12 17.7	+1.3	
G23K				IAmb	IAmb	18 12 19.1		
	comp=Z,6.7nm,0.7s							
G23K	Bananza Creek	83.51	9	P	P	18 12 14.3	-2.1	
	baz=202							
TOAD	Toad River Com	83.54	23	P	P	18 12 18.1	+1.4	
	baz=226							
CMIG	Matias Romero	83.71	70	LR	LR	18 41 08.1		
	comp=Z,230nm,21.5s,baz=247,slow=30							
C17K	DeLong Mountai	83.80	4	P	P	18 12 16.3	-1.5	
	baz=190							
H25L	Birch Creek	83.81	11	P	P	18 12 15.0	-2.8	
	baz=207							
G24K	Hadweenzic Riv	83.91	10	P	P	18 12 17.4	-1.0	
	baz=205							
F22K	John River	83.94	8	P	P	18 12 16.2	-2.3	
	baz=200							
COLD	Coldfoot	83.96	9	P	P	18 12 16.8	-1.8	
	baz=202,SNR=7.0							
I27K	Kandik River	84.05	13	IAmb	IAmb	18 12 39.5		
	comp=Z,23nm,1.5s							
I27K	Kandik River	84.05	13	P	P	18 12 17.2	-1.9	
	baz=211							
C18K	Utukok River	84.11	4	P	P	18 12 18.8	-0.6	
	baz=192							
BELA	Belgrano 2	84.14	172	P	P	18 12 20.4	+0.8	
E20K	Nigu River	84.18	6	P	P	18 12 19.3	-0.5	
	baz=196							
G25K	Bearman Lake	84.20	10	P	P	18 12 17.8	-2.1	
	baz=206							
D19K	Kuna River	84.21	6	IAmb	IAmb	18 12 25.4		
	comp=Z,15nm,0.9s							
D19K	Kuna River	84.21	6	P	P	18 12 18.1	-1.8	
	baz=195							
I28M	Miner Creek	84.28	13	IAmb	IAmb	18 12 23.8		
	comp=Z,13nm,1.1s							
I28M	Miner Creek	84.28	13	P	P	18 12 20.3	-0.1	
	baz=212							
PMSA	Palmer Station	84.28	156	LR	LR	18 41 12.6		
	comp=Z,85nm,21.1s,baz=98,slow=29							
BILL	Bilibino	84.36	352	*i* P	P	18 12 21.7	+1.1	
BILL				pmax	pmax			
	comp=Z,7.0nm,0.9s							
J30M	Hart River	84.41	15	IAmb	IAmb	18 12 24.9		
	comp=Z,12nm,0.9s							
J30M	Hart River	84.41	15	P	P	18 12 20.9	-0.2	
	baz=216							
D20K	Etivluk River	84.57	6		P	18 12 23.6	+1.8	
D20K				IAmb	IAmb	18 12 24.7		
	comp=Z,20nm,0.9s							
D20K	Etivluk River	84.57	6	P	P	18 12 22.1	+0.3	
	baz=196,SNR=6.7							
E22K	Anaktuvuk Pass	84.58	8	P	P	18 12 23.1	+1.3	
E22K				IAmb	IAmb	18 12 27.9		
	comp=Z,19nm,1.1s							
E22K	Anaktuvuk Pass	84.58	8	P	P	18 12 22.4	+0.5	
	baz=201,SNR=9.3							
F24K	Squaw Lake	84.59	10	P	P	18 12 22.4	+0.5	
	baz=204							
E21K	Killik River	84.60	7	IAmb	IAmb	18 12 34.3		
	comp=Z,14nm,0.9s							
E21K	Killik River	84.60	7	P	P	18 12 20.6	-1.3	
	baz=199							
H27K	Steamboat Moun	84.61	12	P	P	18 12 22.5	+0.5	
	baz=211							
C19K	Lookout Ridge	84.68	5	P	P	18 12 21.8	-0.5	
	baz=193							
B18K	Kokolik River	84.77	4	P	P	18 12 22.2	-0.4	
	baz=191							
G26K	Porcupine Rive	84.79	11	P	P	18 12 23.1	+0.3	
	baz=208							
E23K	Chandalar	84.82	9	P	P	18 12 22.7	-0.3	
	baz=203							
KOTAN	Kotaneelee Air	84.86	22	P	P	18 12 22.3	-1.0	
	baz=227							
I30M	Mount Dempster	84.92	15	IAmb	IAmb	18 12 26.8		
	comp=Z,15nm,0.8s							
I30M	Mount Dempster	84.92	15	P	P	18 12 22.7	-1.0	
	baz=216							
E24K	Your Creek	85.00	9	P	P	18 12 23.4	-0.6	
	baz=204							
F25K	Christian Rive	85.03	10	P	P	18 12 23.5	-0.6	
	baz=207							
BMAR	Burnt Mountain	85.07	11		P	18 12 26.6	+2.3	
G27K	Doyon Strip	85.08	12	P	P	18 12 24.3	-0.1	
	baz=210							
D22K	Ayikyak River	85.17	7	P	P	18 12 24.5	-0.2	
	baz=200							
C21K	Knifeblade Rid	85.19	7	P	P	18 12 24.9	+0.1	
	baz=198							
H03S2	Juan Fernandez	85.19	124	T	T	19 47 02.0		
	baz=251,slow=75,SNR=22							
H03S1	Juan Fernandez	85.21	124	T	T	19 47 06.9		
	baz=251,slow=75,SNR=24							
H03S3	Juan Fernandez	85.21	124	T	T	19 47 05.5		
	baz=251,slow=75,SNR=15							
H29M	Whitestone	85.28	13	IAmb	IAmb	18 12 29.1		
	comp=Z,20nm,0.9s							
H29M	Whitestone	85.28	13	P	P	18 12 24.7	-0.6	
	baz=214							
ZEA	Zeya	85.34	329	*e*P	P	18 12 28.3	+2.4	
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.9s							
TOLK	Toolik Lake Re	85.36	8	IAmb	IAmb	18 12 31.4		
	comp=Z,17nm,1.1s							
TOLK	Toolik Lake Re	85.36	8	P	P	18 12 24.1	-1.6	
	baz=203							
F26K	Sheenjek River	85.38	11	P	P	18 12 25.3	-0.6	
	baz=208							
D23K	Nanushuk River	85.51	8	P	P	18 12 25.1	-1.3	
	baz=202,SNR=6.1							
E25K	Arctic Village	85.51	10	P	P	18 12 26.7	+0.2	
	baz=207							
A19K	Wainwright	85.64	4	P	P	18 12 26.6	-0.4	
	baz=192							
B21K	Ikpikpuk River	85.65	6	P	P	18 12 26.7	-0.4	
	baz=198							
B20K	Meade River	85.77	5	P	P	18 12 26.9	-0.7	
	baz=196							
EPYK	Eagle Plains	85.78	14	IAmb	IAmb	18 12 31.0		
	comp=Z,17nm,0.9s							
EPYK	Eagle Plains	85.78	14	P	P	18 12 27.2	-0.6	
	baz=215							
H31M	Peel River	85.90	15	P	P	18 12 28.6	+0.1	
	baz=217							
G29M	Pine Creek	85.93	13	IAmb	IAmb	18 12 31.8		
	comp=Z,11nm,0.8s							
G29M	Pine Creek	85.93	13	P	P	18 12 28.5	-0.1	
	baz=214							
D24K	Happy Valley	85.94	9	P	P	18 12 28.3	-0.2	
	baz=204							
F28M	Old Crow	86.13	12	IAmb	IAmb	18 12 34.3		
	comp=Z,38nm,1.8s							
F28M	Old Crow	86.13	12	P	P	18 12 28.9	-0.6	
	baz=212							
RSSD	Black Hills	86.26	42		P	18 12 31.7	+0.7	
RSSD				IAmb	IAmb	18 12 34.3		
	comp=Z,28nm,1.3s							
RSSD	Black Hills	86.26	42	P	P	18 12 31.7	+0.7	
RSSD				pmax	pmax			
	comp=Z,28nm,1.3s							
E27K	Coleen River	86.28	11	P	P	18 12 29.7	-0.6	
	baz=210							
C23K	Itkillik River	86.33	8	P	P	18 12 29.4	-1.0	
	baz=202							
G30M	tAoh Zraii Nji	86.39	14	P	P	18 12 30.2	-0.7	
	baz=216							
D25K	Kavik River	86.46	9	P	P	18 12 30.6	-0.6	
	baz=206							
B22K	Teshekpuk Lake	86.47	7	P	P	18 12 30.3	-0.8	
	baz=199							
C24K	Franklin Bluff	86.48	8	P	P	18 12 30.9	-0.2	
	baz=204							
G31M	Satah River	86.81	14	P	P	18 12 30.9	-1.9	
	baz=217							
A22K	Sinclair Lake	86.94	6	P	P	18 12 32.6	-0.7	
	baz=198							
HKT	Hockley	86.99	58	*i* P	P	18 12 36.1	+1.6	
HKT				pmax	pmax			
	comp=Z,11nm,1.2s							
F30M	Barrier River	87.01	14	P	P	18 12 32.7	-1.2	
	baz=216							
E28M	Babbage River	87.04	12	P	P	18 12 32.3	-1.7	
	baz=212							
C27K	Jago River	87.17	10	P	P	18 12 31.8	-2.7	
	baz=208							
WRGLY	Wrigley	87.18	20	P	P	18 12 32.6	-2.0	
	baz=228							
E29M	Blow River	87.19	12	P	P	18 12 31.9	-2.7	
	baz=214							
C26K	Camden Bay	87.23	9	P	P	18 12 33.2	-1.6	
	baz=207							
HILR	Hailar Array B	87.27	323	P	P	18 12 36.8	+1.3	
	comp=Z,1.7nm,0.6s,baz=152,slow=6.7,SNR=3.5							
	comp=Z,1.7nm,0.6s							
D27M	Malcolm River	87.31	11	P	P	18 12 32.0	-3.3	
	baz=211							
F31M	Tsiigehtchic	87.34	14	P	P	18 12 32.4	-3.0	
	baz=218							
D28M	Stokes Point	87.81	12	P	P	18 12 34.3	-3.2	
	baz=213							
MAW	Mawson	87.99	199	P	P	18 12 40.1	+1.4	
	comp=Z,16nm,0.8s,baz=154,slow=6.9,SNR=14							
MAW				LR	LR	18 49 29.0		
	comp=Z,298nm,19.9s,baz=95,slow=34							
	comp=Z,16nm,0.8s							
INK	Inuvik	88.08	14	LR	LR	18 44 32.8		
	comp=Z,231nm,21.7s,baz=236,slow=30							
INK	Inuvik	88.08	14	IAmb	IAmb	18 12 50.7		
	comp=Z,10nm,1.2s							
INK	Inuvik	88.08	14	P	P	18 12 36.4	-2.5	
	baz=218							
PSI	Prapat	88.61	273	LR	LR	18 53 46.5		
	comp=Z,76nm,19.4s,baz=104,slow=37							
HHC	Hu-ho-hao-te	89.00	313	*e*P	P	18 12 44.1	0.0	
HHC				pmax	pmax			
	comp=Z,8.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,120nm,4.1s							
HHC				LR	LR			
	comp=Z,190nm,12.4s							
HHC				LR	LR			
	comp=Z,140nm,12.9s							
YAK	Yakutsk	89.01	337	LR	LR	18 47 54.8		
	comp=Z,64nm,20.6s,baz=78,slow=32							
YAK	Yakutsk	89.01	337	*e*P	P	18 12 43.3	-0.1	
YAK				pmax	pmax			
	comp=Z,11nm,1.3s							
YAK				pmax	pmax			
	comp=N,6.0nm,2.3s							
YAK				pmax	pmax			
	comp=E,9.0nm,1.6s							
PLCA	Paso Flores	89.53	132	P	P	18 12 50.4	+3.7	
	comp=E,1.1nm,0.7s,baz=257,slow=6.7,SNR=3.5							
	comp=E,1.1nm,0.7s							
PLCA	Paso Flores	89.53	132	P	P	18 12 49.5	+2.8	
PLCA				IAmb	IAmb	18 12 58.2		
	comp=Z,22nm,1.9s							
YKA	Yellowknife Ar	89.90	23	P	P	18 12 49.3	+1.7	
	comp=Z,3.3nm,0.8s,baz=249,slow=5.1,SNR=9.3							
YKA				LR	LR	18 48 02.0		
	comp=Z,252nm,18.0s,baz=270,slow=32							
	comp=Z,3.3nm,0.8s							
YKA	Yellowknife Ar	89.90	23	*e*P	P	18 12 49.2	+1.7	
YKA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
BTO	Baotou	90.02	312	*e*P	P	18 12 48.6	-0.2	
BTO				S	S	18 23 42.3	+2.2	
BTO				pmax	pmax			
	comp=Z,13nm,0.7s							
BTO				pmax	pmax			
	comp=Z,230nm,4.9s							
JTS	Las Juntas de	91.06	80	LR	LR	18 43 58.7		
	comp=Z,196nm,20.2s,baz=296,slow=29							
C36M	Paulatuk	91.17	16	P	P	18 12 50.2	-3.1	
	baz=227							
PZH	PanZhiHua	92.31	297	P	P	18 12 58.8	-1.0	
CMAR	Chiang Mai Arr	92.68	288	P	P	18 13 01.7	+0.1	
	comp=Z,1.5nm,0.9s,baz=115,slow=3.0,SNR=8.8							
CMAR				LR	LR	18 51 36.3		
	comp=Z,11nm,20.6s,baz=295,slow=34							
	comp=Z,1.5nm,0.9s							
CMAR	Chiang Mai Arr	92.68	288		P	18 13 00.6	-0.9	
CMAR	Chiang Mai Arr	92.68	288	*e*P	P	18 13 04.8	+3.2	
CMAR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
A36M	Sachs Harbour	92.71	13	P	P	18 12 58.1	-2.3	
	baz=226							
SYO	Syowa Base	92.78	191	⇓*e*PcP	PcP	18 13 02.0	+0.3	
ATAH	Atahualpa	92.82	98	LR	LR	18 45 08.3		
	comp=Z,171nm,21.1s,baz=310,slow=29							
TROLL	Troll, Antarti	92.92	179	⇑P	P	18 13 03.4	+1.6	
	comp=Z,654nm,1.6s							
NNA	Nana	92.97	103	LR	LR	18 45 01.9		
	comp=Z,51nm,19.6s,baz=314,slow=29							
VNA3	Neumayer Olymp	93.01	175	⇑P	P	18 13 03.6	+1.5	
	comp=Z,20nm,0.8s							
SNAA	Sanae	93.06	177	⇑P	P	18 13 03.8	+1.3	
	comp=Z,182nm,1.0s							
SNAA	Sanae	93.06	177	P	P	18 13 03.6	+1.2	
	comp=Z,9.8nm,1.0s,baz=206,slow=5.6,SNR=24							
	comp=Z,9.8nm,1.0s							
SNAA	Sanae	93.06	177		P	18 13 03.3	+0.9	
SNAA				IAmb	IAmb	18 13 05.2		
	comp=Z,16nm,1.1s							
SNAA	Sanae	93.06	177	*i* P	P	18 13 03.6	+1.2	
SNAA				pmax	pmax			
	comp=Z,17nm,1.1s							
VNA2	Neumayer--Watz	93.51	175	⇑P	P	18 13 06.3	+1.9	
	comp=Z,19nm,0.8s,baz=173,slow=2.5							
VNA1	Neumayer--Stat	93.70	175	⇑P	P	18 13 07.3	+2.0	
	comp=Z,32nm,0.9s							
ULM	Lac du Bonnet	93.73	39	LR	LR	18 49 22.3		
	comp=Z,416nm,20.0s,baz=218,slow=32							
CGM3	Cape Girardeau	94.13	53	P	P	18 13 07.9	+0.1	
CGM3				IAmb	IAmb	18 16 37.0		
	comp=Z,8.4nm,0.9s							
NVL	N'lazarevskaya	94.14	182	*e*P	P	18 13 06.1	-1.2	
NVL				*e*S	SKSac	18 23 41.5	+1.6	
NVL				*e*SS	SS	18 30 39.3	+3.9	
NVL				*e*SSS	SSS	18 34 20.4		
NVL				pmax	pmax			
	comp=Z,15nm,0.8s							
NVL				smax	smax			
	comp=N,96nm,9.0s							
NVL				MLR	MLR			
	comp=Z,157nm,20.0s							
SONM	Songino Array	94.80	318	P	P	18 13 13.5	+2.7	
	comp=Z,0.2nm,0.4s,baz=134,slow=4.2,SNR=2.3							
TIXI	Tiksi	94.88	344	LR	LR	18 51 41.0		
	comp=Z,140nm,21.0s,baz=266,slow=33							
TIXI	Tiksi	94.88	344	*i* P	P	18 13 11.6	+1.2	
TIXI				pmax	pmax			
	comp=Z,2.0nm,0.9s							
TLY	Talaya	97.58	321	*i* P	Pdif	18 13 24.4	+1.1	
TLY				pmax	pmax			
	comp=Z,5.0nm,0.9s							
TKL	Tuckaleechee C	98.32	55	LR	LR	18 53 46.4		
	comp=Z,255nm,18.6s,baz=298,slow=33							
WMQ	Urumqi	106.85	312	Pdif	Pdif	18 14 04.3	-0.5	
SPITS	Spitsbergen Ar	116.86	358	PKP	PKiKP	18 18 34.5	+1.7	
	comp=Z,5.6nm,0.9s,baz=339,slow=7.7,SNR=2.3							
BVAR	Borovoye Array	117.83	322	PKP	PKiKP	18 18 35.3	+0.1	
	comp=Z,1.4nm,0.6s,baz=86,slow=4.4,SNR=2.9							
ARTI	Arti	123.37	329	*i* PKIKP	PKiKP	18 18 46.4	+0.4	
ARTI						18 20 29.3		
ARTI						18 25 55.2		
ARTI				SS	SS	18 37 09.2	-1.6	
ARCES	ARCESS Array B	124.46	352	PKP	PKiKP	18 18 49.2	+1.4	
	comp=Z,3.7nm,0.8s,baz=7.0,slow=1.3,SNR=11							
ARCES	ARCESS Array B	124.46	352	*e*PKIKP	PKiKP	18 18 49.3	+1.5	
ARCES				pmax	pmax			
	comp=Z,4.0nm,0.8s							
BELG	Belogornoye	130.81	328	*i* PKIKP	PKiKP	18 19 02.0	+1.1	
FINES	FINESS Array B	131.81	348	PKP	PKPdf	18 19 01.7	+0.1	
	comp=Z,2.1nm,0.8s,baz=36,slow=7.1,SNR=5.4							
FINES	FINESS Array B	131.81	348	*e*PKIKP	PKiKP	18 19 04.9	+2.2	
FINES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
OBN	Obninsk	134.01	337	*ce*PKIKP	PKiKP	18 19 07.0	-0.3	
OBN				*e*		18 21 37.0		
OBN				pmax	pmax			
	comp=Z,3.0nm,0.7s							
OBN	Obninsk	134.01	337	PKP	PKPdf	18 19 05.5	-0.5	
NOA	NORSAR Array B	134.15	357	PKP	PKiKP	18 19 07.2	-0.3	
	comp=Z,0.9nm,0.8s,baz=13,slow=4.2,SNR=3.4							
NOA	NORSAR Array B	134.15	357	*e*PKIKP	PKiKP	18 19 07.6	+0.1	
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
MNK	Minsk	137.49	342	*i* PKIKP	PKiKP	18 19 14.9	+0.5	
MNK				*i*		18 21 59.1		
MNK				*i* PPP	PPP	18 24 58.9		
MNK				*i*		18 26 20.5		
MNK				*i* SS	SS	18 40 06.2	+3.0	
MNK				*i* SSS	SSS	18 45 13.2		
MNK				pmax	pmax			
	comp=N,5.0nm,0.8s							
MNK				pmax	pmax			
	comp=Z,6.0nm,0.9s							
MNK				pmax	pmax			
	comp=E,11nm,0.7s							
MNK				MLR	MLR			
	comp=E,832nm,19.0s							
MNK				MLR	MLR			
	comp=N,576nm,18.0s							
MNK				MLR	MLR			
	comp=Z,74nm,21.0s							
KBZ	Khabaz	138.14	320	*i* PKIKP	PKPdf	18 19 14.9	+0.9	
EKA	Eskdalemuir Ar	139.26	9	PKP	PKiKP	18 19 18.3	+0.3	
	comp=Z,1.4nm,0.8s,baz=1.1,slow=3.1,SNR=1.7							
AKASG	Malin Array Be	140.23	338	PKP	PKPdf	18 19 18.8	+1.1	
	comp=Z,0.2nm,0.3s,baz=43,slow=3.7,SNR=2.2							
KIEV	Kiev	140.25	338	PKP	PKPdf	18 19 18.2	+0.5	
AK02	Malin Array Si	140.28	338	PKP	PKPdf	18 19 17.8	+0.1	
CLL	Collm	143.66	353	*e*PKPdf	PKPdf	18 19 23.0	-0.8	
	comp=Z,7.0nm,1.0s							
STHS	Stebnicka Huta	143.90	344	*e*PKIKP	PKPbc	18 19 22.9	+0.8	
STHS	Stebnicka Huta	143.90	344	*e*PKP	PKPbc	18 19 22.9	+0.8	
OSTC	Ostas	143.94	350	*e*PKIKP	PKPdf	18 19 26.0	+1.7	
OSTC	Ostas	143.94	350	*e*PKP	PKPdf	18 19 26.0	+1.7	
DPC	Dobruska-Polom	144.12	350	*e*PKIKP	PKPdf	18 19 25.1	+0.4	
DPC	Dobruska-Polom	144.12	350	*e*PKP	PKPdf	18 19 25.1	+0.4	
PVCC	Panska Ves	144.23	351	*e*PKIKP	PKPdf	18 19 24.8	0.0	
PVCC	Panska Ves	144.23	351	*e*PKP	PKPdf	18 19 24.8	0.0	
STEB	Steborice	144.24	348	*e*PKP	PKPdf	18 19 24.6	-0.2	
BURAR	Bucovina Array	144.26	338	⇑P	PKPdf	18 19 25.8	+0.7	
BURAR	Bucovina Array	144.26	338	⇑PKIKP	PKPdf	18 19 25.8	+0.7	
MORC	Moravsky Berou	144.44	348	⇑P	PKPab	18 19 20.9	-2.6	
MORC	Moravsky Berou	144.44	348	*e*PKP	PKPdf	18 19 25.5	+0.2	
MORC	Moravsky Berou	144.44	348	⇑PKHKP	PKPpre	18 19 20.9		
LANS	Liptovska Anna	144.60	346	*e*PKIKP	PKPdf	18 19 27.0	+1.4	
LANS	Liptovska Anna	144.60	346	*e*PKP	PKPdf	18 19 27.0	+1.4	
GHRR		144.71	335	⇓P	PKPdf	18 19 26.8	+1.0	
MEM	Membach	144.71	1	*d*PKP	PKPdf	18 19 25.4	-0.2	
BSTI	Sart Tilman	144.73	1	*d*PKP	PKPdf	18 19 26.2	+0.6	
BTNL	Ternell	144.74	1	*d*PKP	PKPdf	18 19 25.9	+0.2	
MAUC	Maruska	144.77	347	*e*PKP	PKPdf	18 19 27.1	+1.3	
BCLA	Clavier	144.89	2	*d*PKP	PKPdf	18 19 26.7	+0.8	
ONER	Baraj Valea Uz	144.90	336	⇑P	PKPdf	18 19 27.0	+0.9	
BGES	Gesves	144.92	2	*d*PKP	PKPdf	18 19 26.4	+0.5	
KECS	Kecovo	144.96	344	*e*PKP	PKPdf	18 19 27.5	+1.4	
BHOU	Houvegnez	144.97	1	*d*PKP	PKPdf	18

MARR	**Marisel-Cluj**	**145.79**	**340**	⇓P	**PKiKP**	**18 19 32.7**	**+0.9**
DRGR		**145.83**	**340**	⇑P	**PKPab**	**18 19 29.7**	**+1.0**
DRGR		**145.83**	**340**	⇑PKP2	**PKPab**	**18 19 29.7**	**+1.0**
MODS	**Modra-Piesok**	**145.83**	**347**	*e*PKP2	**PKiKP**	**18 19 30.6**	**-1.2**
MODS	**Modra-Piesok**	**145.83**	**347**	*e*PKP	**PKiKP**	**18 19 30.6**	**-1.2**
ISR	**Istrita**	**145.83**	**335**	⇑P	**PKPab**	**18 19 30.2**	**+1.4**
ISR	**Istrita**	**145.83**	**335**	⇑PKP2	**PKPab**	**18 19 30.2**	**+1.4**
CKRC	**Cesky Krumlov**	**145.93**	**351**	*e*PKP2	**PKPab**	**18 19 30.2**	**+1.2**
CKRC	**Cesky Krumlov**	**145.93**	**351**	*e*PKP	**PKPab**	**18 19 30.2**	**+1.2**
GERES	**GERESS Array B**	**146.00**	**352**	PKPbc	**PKPab**	**18 19 30.1**	**+0.8**
	comp=Z,7.1nm,0.7s,baz=27,slow=3.9,SNR=53						
GERES	**GERESS Array B**	**146.00**	**352**	*e*PKP2	**PKPab**	**18 19 30.4**	**+1.1**
GERES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRTR	**Keskin Array B**	**146.10**	**321**	PKPbc	**PKPab**	**18 19 31.0**	**+0.9**
	comp=Z,9.7nm,0.8s,baz=105,slow=2.5,SNR=46						
BRTR	**Keskin Array B**	**146.10**	**321**		**PKPab**	**18 19 30.5**	**+0.4**
VOIR		**146.16**	**337**	⇑P	**PKiKP**	**18 19 31.5**	**-1.1**
VOIR		**146.16**	**337**	⇑PKP2	**PKiKP**	**18 19 31.5**	**-1.1**
LEHL	**Lehliu**	**146.24**	**334**	⇓P	**PKPab**	**18 19 30.9**	**+0.7**
KIRS	**Kirsehir-Merke**	**146.30**	**320**	⇓P	**PKPab**	**18 19 30.9**	**+0.1**
SULR		**146.31**	**335**	⇑P	**PKiKP**	**18 19 32.5**	**-0.3**
ARR	**Arges**	**146.38**	**337**	⇑P	**PKiKP**	**18 19 32.7**	**-0.3**
ANTO	**Ankara**	**146.52**	**322**	⇑P	**PKiKP**	**18 19 32.9**	**-0.6**
ANTO	**Ankara**	**146.52**	**322**	⇑PKP2	**PKiKP**	**18 19 32.9**	**-0.6**
CONA	**Conrad Observa**	**146.53**	**349**	*i* PKiKP	**PKiKP**	**18 19 32.6**	**-0.7**
	comp=Z,13nm,0.8s						
DEV	**Deva**	**146.56**	**339**	⇑P	**PKiKP**	**18 19 32.4**	**-0.9**
DEV	**Deva**	**146.56**	**339**	⇑PKP2	**PKiKP**	**18 19 32.4**	**-0.9**
SIRR	**Siria**	**146.63**	**341**	⇑P	**PKPab**	**18 19 32.0**	**+0.3**
LOT	**Lotru**	**146.63**	**338**	⇑P	**PKPab**	**18 19 31.5**	**-0.4**
RONA	**Rosalia, Austr**	**146.67**	**348**	*e*PKiKP	**PKiKP**	**18 19 32.9**	**-0.7**
	comp=Z,9.9nm,0.8s						
MOA	**Molln**	**146.88**	**351**	*i* PKiKP	**PKPab**	**18 19 33.1**	**+0.4**
	comp=Z,14nm,1.1s,SNR=7.5						
SURR	**Surduc**	**146.93**	**340**	⇓P	**PKPab**	**18 19 33.0**	**+0.1**
GZR	**Gura Zlata**	**147.03**	**339**	⇑P	**PKPab**	**18 19 33.1**	**-0.3**
GZR	**Gura Zlata**	**147.03**	**339**	⇑PKP2	**PKPab**	**18 19 33.1**	**-0.3**
RAZG	**Razgrad**	**147.10**	**333**	⇑P	**PKiKP**	**18 19 32.9**	**-0.7**
BIOA	**Bad Ischl, Aus**	**147.13**	**351**	*i* PKiKP	**PKPab**	**18 19 33.6**	**0.0**
	comp=Z,10nm,1.1s						
LOZB	**Loznitsa**	**147.22**	**333**	⇓P	**PKPab**	**18 19 34.0**	**-0.1**
BZS	**Buzias**	**147.22**	**341**	⇓P	**PKPbc**	**18 19 32.8**	**+0.5**
BZS	**Buzias**	**147.22**	**341**	⇓PKP2	**PKPbc**	**18 19 32.8**	**+0.5**
ARSA	**Arzberg**	**147.25**	**349**	*i* PKiKP	**PKPab**	**18 19 33.9**	**-0.2**
	comp=Z,6.2nm,0.9s						
LESA	**Schwarzleotal**	**147.53**	**352**	*e*PKiKP	**PKPab**	**18 19 34.6**	**-0.6**
	comp=Z,9.7nm,1.3s						
MORH	**Mrgy, Hungar**	**147.54**	**345**	⇑P	**PKPbc**	**18 19 32.9**	**-0.3**
HERR	**Herculane**	**147.60**	**339**	⇑P	**PKiKP**	**18 19 35.4**	**0.0**
RETA	**Reutte**	**147.67**	**355**	*i* PKiKP	**PKiKP**	**18 19 35.3**	**-0.3**
	comp=Z,21nm,1.3s						
WATA	**Walderalm**	**147.74**	**354**	*i* PKiKP	**PKiKP**	**18 19 35.3**	**-0.6**
	comp=Z,8.6nm,0.7s						
KBA	**Koelnbreinsper**	**147.78**	**352**	*e*PKiKP	**PKiKP**	**18 19 35.1**	**-0.9**
	comp=Z,6.2nm,0.5s						
MOTA	**Moosalm**	**147.78**	**354**	*e*PKiKP	**PKiKP**	**18 19 35.6**	**-0.4**
	comp=Z,19nm,1.2s,SNR=7.7						
WTTA	**Wattenberg**	**147.80**	**354**	*i* pPKP	**PKiKP**	**18 19 35.9**	**-0.2**
	comp=Z,12nm,0.5s						
SOKA	**Soboth**	**147.89**	**349**	*i* PKiKP	**PKiKP**	**18 19 35.5**	**-0.7**
	comp=Z,18nm,1.1s,SNR=9.5						
SQTA	**Sankt Quirin**	**147.89**	**354**	*e*PKiKP	**PKiKP**	**18 19 36.0**	**-0.2**
	comp=Z,21nm,1.8s						
DAVA	**Damuels**	**147.93**	**356**	*e*pPKP	**PKiKP**	**18 19 36.3**	**0.0**
	comp=Z,21nm,1.0s						
PLVB	**Pleven**	**148.04**	**335**	⇑P	**PKiKP**	**18 19 36.1**	**-0.4**
FETA	**Feichten**	**148.13**	**355**	*e*pPKP	**PKiKP**	**18 19 36.9**	**+0.1**
	comp=Z,14nm,1.1s,SNR=6.4						
OBKA	**Obir**	**148.14**	**350**	*e*PKP	**PKiKP**	**18 19 35.9**	**-0.7**
	comp=Z,10nm,1.2s						
MYKA	**Terra Mystica**	**148.17**	**351**	*e*PKP	**PKiKP**	**18 19 35.9**	**-0.8**
	comp=Z,18nm,1.4s						
ABTA	**Abfaltersbach**	**148.21**	**352**	*e*PKP	**PKiKP**	**18 19 36.2**	**-0.6**
	comp=Z,16nm,1.0s						
MMAI	**Mount Meron Ar**	**148.56**	**309**	PKPbc	**PKiKP**	**18 19 37.5**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=78,slow=4.6,SNR=9.5						
FUORN	**Ofenpass-Fuorn**	**148.57**	**355**		**PKPdf**	**18 19 28.0**	**-4.6**
STAL	**STALIGIAL**	**148.66**	**352**		**PKPdf**	**18 19 29.6**	**-2.9**
BAND	**Balkesir-Ban**	**148.80**	**327**	⇑P	**PKiKP**	**18 19 37.9**	**-0.3**
BOVS	**Bovan**	**148.94**	**339**	⇓P	**PKPbc**	**18 19 36.5**	**-0.5**
CTI	**Castel Tesino**	**149.00**	**353**		**PKPdf**	**18 19 30.4**	**-2.8**
CTI	**Castel Tesino**	**149.00**	**353**	PKHKP	**PKPdf**	**18 19 30.4**	**-2.8**
LODK	**Lodwar**	**149.46**	**250**		**PKPdf**	**18 19 31.1**	**-3.7**
EZN	**Ezine**	**150.10**	**329**	⇑P	**PKiKP**	**18 19 40.9**	**+0.1**
EZN	**Ezine**	**150.10**	**329**	⇑PKiKP	**PKiKP**	**18 19 40.9**	**+0.1**
PDG	**Podgorica**	**150.83**	**341**	⇓P	**PKiKP**	**18 19 42.4**	**+0.2**
ESDC	**Sonseca Array**	**153.91**	**19**	PKPbc	**PKiKP**	**18 19 50.4**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=320,slow=2.8,SNR=4.8						
ESDC				PKPab	**PKPab**	**18 20 02.5**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=331,slow=4.1,SNR=11						
ESDC	**Sonseca Array**	**153.91**	**19**		**PKPab**	**18 20 04.2**	**+2.4**
KEST	**Kesra**	**159.45**	**354**	PKPab	**PKPab**	**18 20 27.0**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=33,slow=1.6,SNR=4.3						

*CNRM **23** 18:08:56.2,34.95N×4.58W,h67km,ML2.3*
*SFS **23** 18:08:57.7,34.98N×4.44W,h48km,ML3.3/11,ML2.6/15, MLv2.3/15*
*MDD **23** 18:08:58.0±1.0,35.01N×4.48W,h30km±10km,mb_Lg2.7/8, Error ellipse: s-maj=4.7km s-min=3.6km az=103.0*
*IGIL **23** 18:08:59.2,34.98N×4.60W,h30km,ML1.4*
*INMG **23** 18:08:59.1±1.6,35.02N×4.60W,h73km±6km,ML2.2, Error ellipse: s-maj=4.9km s-min=4.5km az=79.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SW Al Hoceima (MARR)*

ISC 23 18:08:56.3±1.2,34.99N±0.03×4.48W±0.03,h68km±11km, n64,σ1.9s1.95,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PALE	**Palemas**	**0.50**	**63**	P		**Pn**	**18 09 09.8**	**+0.9**
PALE	**Palemas**	**0.50**	**63**	S		**Sn**	**18 09 19.8**	**+1.6**
AKLM	**AKL**	**0.70**	**133**	P		**Pn**	**18 09 09.7**	**-1.4**
AKLM	**AKL**	**0.70**	**133**	S		**Sn**	**18 09 21.3**	**-0.7**
SMIR	**Smir Dam**	**1.01**	**313**	P		**Pn**	**18 09 14.7**	**-0.1**
SMIR	**Smir Dam**	**1.01**	**313**	S		**Sn**	**18 09 28.4**	**-0.1**
RSA	**Sarsar**	**1.11**	**265**	P		**Pn**	**18 09 15.1**	**-1.0**
RSA	**Sarsar**	**1.11**	**265**	S		**Sn**	**18 09 28.8**	**-2.1**
CEU	**Ceuta**	**1.16**	**321**	Pn		**Pn**	**18 09 17.2**	**+0.5**
CEU				Sn		**Sn**	**18 09 31.4**	**-0.6**
ECEU	**Ceuta**	**1.16**	**321**	Pn		**Pn**	**18 09 18.2**	**+1.4**
ECEU				Sn		**Sn**	**18 09 32.8**	**+0.7**
ECEU	**Ceuta**	**1.16**	**321**	P		**Pn**	**18 09 18.1**	**+1.4**
ECEU				*i*	lVmb_Lg		18 09 19.5	
ECEU				S		**Sn**	**18 09 33.1**	**+1.0**
WMELI	**Melilla**	**1.29**	**75**	Sn		**Sn**	**18 09 33.3**	**-1.7**
LCRM	**LCR**	**1.34**	**194**	P		**Pn**	**18 09 19.9**	**+0.7**
LCRM	**LCR**	**1.34**	**194**	S		**Sn**	**18 09 38.3**	**+1.9**
IFR	**Ifrane**	**1.57**	**200**	Sn		**Sn**	**18 09 40.5**	**-1.3**
IFR				Pn		**Pn**	**18 09 23.0**	**+0.8**
EMIJ	**Mijas**	**1.59**	**351**	Pn		**Pn**	**18 09 22.0**	**-0.4**
EMIJ	**Mijas**	**1.59**	**351**	P		**Pn**	**18 09 21.6**	**-0.8**
EMIJ				S		**Sn**	**18 09 39.4**	**-2.7**
EJIF	**Jimena Fronter**	**1.66**	**331**	P		**Pn**	**18 09 21.7**	**-1.7**
JBK	**JBK**	**1.71**	**112**	P		**Pn**	**18 09 23.4**	**-0.8**
JBK	**JBK**	**1.71**	**112**	S		**Sn**	**18 09 44.5**	**-0.7**
ELGU	**Los Guajares,**	**2.00**	**20**	Pn		**Pn**	**18 09 28.3**	**+0.3**
ELGU				Sn		**Sn**	**18 09 49.4**	**-2.6**
ELGU	**Los Guajares,**	**2.00**	**20**	P		**Pn**	**18 09 28.0**	**+0.1**
ELGU				S		**Sn**	**18 09 49.6**	**-2.3**
ELGU				*i*	lVmb_Lg		18 09 54.7	
MD31	**MD31**	**2.13**	**186**	P		**Pn**	**18 09 30.0**	**+0.2**
MD31	**MD31**	**2.13**	**186**	S		**Sn**	**18 09 54.9**	**-0.4**
MDT	**Midelt**	**2.17**	**183**	P		**Pn**	**18 09 29.7**	**-0.6**
MDT	**Midelt**	**2.17**	**183**	S		**Sn**	**18 09 55.8**	**-0.5**
ZHG	**ZHG**	**2.36**	**230**	P		**Pn**	**18 09 33.3**	**+0.4**
ZHG	**ZHG**	**2.36**	**230**	S		**Sn**	**18 10 02.6**	**+1.7**
EQTA	**Presa de Quent**	**2.37**	**20**	Sn		**Sn**	**18 10 00.2**	**-0.7**
EQES	**Quesada**	**3.03**	**22**	P		**Pn**	**18 09 44.2**	**+2.3**
EQES				S		**Sn**	**18 10 19.4**	**+2.3**
EQES				*i*	lVmb_Lg		18 11 30.4	
ECAB	**El Cabril**	**3.17**	**346**	Pn		**Pn**	**18 09 45.2**	**+1.4**
ECAB	**El Cabril**	**3.17**	**346**	P		**Pn**	**18 09 45.9**	**+1.4**
ECAB				S		**Sn**	**18 10 19.3**	**-1.2**
ECAB				*i*	lVmb_Lg		18 10 56.5	
EADA	**Adamuz**	**3.17**	**359**	Pn		**Pn**	**18 09 45.9**	**+2.0**
EADA				Sn		**Sn**	**18 10 20.9**	**+0.4**
EADA	**Adamuz**	**3.17**	**359**	P		**Pn**	**18 09 45.7**	**+1.8**
EADA				S		**Sn**	**18 10 20.7**	**+0.2**
EADA				*i*	lVmb_Lg		18 10 22.9	

EMIN	**Mina Concepcio**	**3.29**	**328**	Pn		**Pn**	**18 09 46.0**	**+0.6**
EMIN	**Mina Concepcio**	**3.29**	**328**	P		**Pn**	**18 09 46.3**	**+0.9**
EMIN				S		**Sn**	**18 10 21.3**	**-2.0**
EMIN				*i*	lVmb_Lg		18 10 46.2	
EGRO	**El Granado**	**3.51**	**317**	Pn		**Pn**	**18 09 49.6**	**+1.2**
EGRO				Sn		**Sn**	**18 10 27.2**	**-1.6**
EGRO	**El Granado**	**3.51**	**317**	P		**Pn**	**18 09 49.6**	**+1.2**
EGRO				*i*	lVmb_Lg		18 10 26.4	
EGRO				S		**Sn**	**18 10 27.4**	**-1.3**
PVAQ	**Vaqueiros**	**3.56**	**314**	*e*P		**Pn**	**18 09 50.3**	**+1.2**
PVAQ				*e*S		**Sn**	**18 10 28.8**	**-1.1**
PVAQ				*i*	IAML		18 10 29.3	
PVAQ				*i*	IAML		18 10 31.4	
PVAQ				*i*	IAML		18 10 31.5	
PVAQ	**Vaqueiros**	**3.56**	**314**	P		**Pn**	**18 09 48.9**	**-0.2**
PVAQ	**Vaqueiros**	**3.56**	**314**	S		**Sn**	**18 10 29.8**	**0.0**
PBDV	**Barranco-do-Ve**	**3.59**	**310**	Pn		**Pn**	**18 09 50.1**	**+0.6**
PBDV	**Barranco-do-Ve**	**3.59**	**310**	*e*P		**Pn**	**18 09 50.1**	**+0.6**
PBDV				*e*S		**Sn**	**18 10 30.1**	**-0.5**
PBDV				*i*	IAML		18 10 30.7	
PBDV				*i*	IAML		18 10 32.5	
PBDV				*i*	IAML		18 10 33.1	
PBAR	**Barrancos**	**3.79**	**328**	Pn		**Pn**	**18 09 53.2**	**+1.0**
PBAR				Sn		**Sn**	**18 10 33.3**	**-2.2**
PBAR	**Barrancos**	**3.79**	**328**	*e*P		**Pn**	**18 09 54.3**	**+2.1**
PBAR				*e*S		**Sn**	**18 10 34.3**	**-1.2**
PBAR				*i*	IAML		18 10 36.2	
PBAR				*i*	IAML		18 10 37.2	
PBAR				*i*	IAML		18 10 38.2	
PSIM	**Granatula de C**	**3.87**	**8**	S		**Sn**	**18 10 37.5**	**0.0**
PCVE	**Castro Verde**	**3.90**	**314**	Pn		**Pn**	**18 09 54.8**	**+1.0**
PCVE				Sn		**Sn**	**18 10 36.9**	**-1.4**
PCVE	**Castro Verde**	**3.90**	**314**	*e*P		**Pn**	**18 09 55.4**	**+1.7**
PCVE				*e*S		**Sn**	**18 10 37.0**	**-1.3**
PCVE				*i*	IAML		18 10 40.0	
PCVE				*i*	IAML		18 10 40.1	
PCVE				*i*	IAML		18 10 41.9	
PBEJ	**Beja**	**4.08**	**319**	*e*P		**Pn**	**18 09 57.9**	**+1.8**
PBEJ				*e*S		**Sn**	**18 10 41.7**	**-0.9**
MORF	**Marmelete**	**4.09**	**306**	*e*P		**Pn**	**18 09 57.6**	**+1.2**
MORF				*e*S		**Sn**	**18 10 41.2**	**-1.8**
MORF				*i*	IAML		18 10 43.9	
MORF				*i*	IAML		18 10 44.9	
MORF				*i*	IAML		18 10 45.7	
PFVI	**Vila Bisbo**	**4.12**	**303**	Pn		**Pn**	**18 09 57.6**	**+0.9**
PFVI				Sn		**Sn**	**18 10 42.0**	**-1.7**
PFVI	**Vila Bisbo**	**4.12**	**303**	*e*P		**Pn**	**18 09 58.0**	**+1.2**
PFVI				*e*S		**Sn**	**18 10 42.3**	**-1.4**
PFVI				*i*	IAML		18 10 43.5	
PFVI				*i*	IAML		18 10 50.1	
PFVI				*i*	IAML		18 10 55.0	
MESJ	**Messejana**	**4.14**	**314**	*e*P		**Pn**	**18 09 58.3**	**+1.3**
MESJ				*e*S		**Sn**	**18 10 41.2**	**-3.1**
MESJ					IAML		18 10 45.2	
	comp=E,0.9nm,0.1s							
MESJ	**Messejana**	**4.14**	**314**	*e*P		**Pn**	**18 09 58.4**	**+1.3**
MESJ				*e*S		**Sn**	**18 10 42.9**	**-1.4**
MESJ				*i*	IAML		18 10 45.8	
MESJ				*i*	IAML		18 10 46.2	
MESJ				*i*	IAML		18 10 47.2	
EBAD	**Badajoz**	**4.27**	**332**	P		**Pn**	**18 09 59.8**	**+1.0**
EBAD				S		**Sn**	**18 10 45.2**	**-2.1**
PTEO	**Sao Teotonio**	**4.27**	**308**	*e*P		**Pn**	**18 10 00.5**	**+1.7**
PTEO				*e*S		**Sn**	**18 10 46.4**	**-1.0**
PTEO				*i*	IAML		18 10 47.4	
PTEO				*i*	IAML		18 10 49.8	
PTEO				*i*	IAML		18 10 50.1	
EVO	**Evora**	**4.53**	**322**	*e*P		**Pn**	**18 10 04.3**	**+2.0**
EVO				*e*S		**Sn**	**18 10 52.0**	**-1.7**
EVO				*i*	IAML		18 10 53.5	
EVO				*i*	IAML		18 10 54.2	
EVO				*i*	IAML		18 10 54.8	
PESTR	**Estremoz**	**4.60**	**328**	*e*S		**Sn**	**18 10 54.2**	**-1.3**
MOE	**Montemor**	**4.70**	**320**	*e*P		**Pn**	**18 10 06.4**	**+1.7**
MOE				*e*S		**Sn**	**18 10 56.6**	**-1.3**
MOE				*i*	IAML		18 10 58.9	
MOE				*i*	IAML		18 11 03.2	
MOE				*i*	IAML		18 11 04.1	
PARRA	**Arraiolos**	**4.76**	**324**	*e*P		Pn	18 10 07.1	-5.6
PARRA				*e*S		Sn	18 10 57.2	-15
PARRA				*i*	IAML		18 10 59.2	
PARRA				*i*	IAML		18 11 05.7	
PARRA				*i*	IAML		18 11 19.4	
PMRV	**Marv??o**	**5.00**	**333**	*e*P		**Pn**	**18 10 10.0**	**+1.1**
PMRV				*e*S		**Sn**	**18 11 02.6**	**-2.7**
PMRV				*i*	IAML		18 11 09.2	
PMRV				*i*	IAML		18 11 15.6	
PMRV				*i*	IAML		18 11 29.6	
PCBR	**Castelo Branco**	**5.40**	**335**	*e*S		**Sn**	**18 11 11.8**	**-3.1**
PSARD	**Sardoal**	**5.46**	**329**	*e*P		**Pn**	**18 10 16.9**	**+1.8**
PSARD				*e*S		**Sn**	**18 11 14.1**	**-2.3**
PSARD				*i*	IAML		18 11 16.3	
PSARD				*i*	IAML		18 11 21.8	
PSARD				*i*	IAML		18 11 33.5	
PMAFR	**Mafra**	**5.52**	**317**	*e*P		**Pn**	**18 10 20.0**	**+4.2**

ATH 23 18:18:00.3,39.93N×24.01E,h16km±3km,ML1.9/1, Manual Solution by M.Charalampakis First location: 2019/11/23 18:18:23, This location: 2019/11/24 03:51:18 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OUR	**Ouranopolis**	**0.41**	**357**	P		Pg	18 18 08.7	0.0
OUR				S		Sg	18 18 14.4	+0.1
PLG	**Polygyros**	**0.62**	**316**	P		Pg	18 18 11.6	-1.0
AOS2	**Alonissos-2**	**0.79**	**189**	P		Pb	18 18 15.2	-0.4
AOS2				S		Sg	18 18 26.0	0.0
NEO	**Neokhori**	**0.86**	**225**	P		Pg	18 18 17.1	-0.1
THAS	**Thassos island**	**0.87**	**38**	P		Pb	18 18 16.6	-0.4
THAS				S		Sb	18 18 28.1	-0.3
LIA	**Limnos Island**	**0.90**	**91**	P		Pb	18 18 17.7	+0.1
LIA				S		Sb	18 18 29.3	-0.1
HORT	**Hortiatis**	**0.97**	**314**	P		Pb	18 18 18.6	-0.1
SOH	**Sokhos**	**1.02**	**331**	P		Pb	18 18 19.7	0.0
KAVA	**Kavala**	**1.14**	**20**	P		Pb	18 18 21.7	+0.1
SRS	**Serrai**	**1.23**	**345**	P		Pb	18 18 23.1	-0.1
AGG	**Agios Georgios**	**1.58**	**236**	P		Pn	18 18 27.9	+0.2

RSNC 23 18:18:45.6±0.6,4.7N±3.3×8.2W±.,h10km±3km,M3.8,mB5.1, mb4.2,ML3.1,Mw(mB)4.4,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MAPC	**Malpelo**	**0.62**	**108**	P		Pg	18 18 54.4	-3.3
MAPC				S		Sb	18 19 06.9	-0.5
TUMC	**Tumaco**	**4.20**	**124**	P		Pn	18 19 49.2	-0.5
PIZC	**Pizarro, Choco**	**4.88**	**81**	P		Pn	18 19 58.2	-1.0
PIZC				S		Sn	18 20 56.2	+0.4
PAC1	**Pacto, Paraso**	**5.18**	**139**	P		Pn	18 19 58.5	-4.9
PAC1				S		Sn	18 21 00.9	-2.5
BBAC	**Balboa, Cauca**	**5.40**	**113**	P		Pn	18 20 05.4	-1.0
BBAC				S		Sn	18 21 05.3	-3.5
OTAV	**Otavalo**	**5.43**	**136**	P		Pn	18 20 02.1	-5.0
OTAV				S		Sn	18 21 04.2	-5.8
BCIP	**Isla Barro Col**	**5.46**	**25**	P		Pn	18 20 01.7	-5.4
BCIP				S		Sn	18 21 02.8	-7.3
JAMC	**Jamundi, Valle**	**5.60**	**100**	P		Pn	18 20 07.8	-1.4
	7.1nm,0.7s							
JAMC				S		Sn	18 21 11.2	-2.6
	7.1nm,0.7s							
GCUF	**Volcan Galeras**	**5.68**	**121**	P		Pn	18 20 09.6	-0.9
	14nm,0.6s							
GCUF				S		Sn	18 21 16.4	+0.3
	14nm,0.6s							
POPC	**Popayan, Colom**	**5.76**	**106**	P		Pn	18 20 11.0	-0.4
	4.9nm,1.0s							
POPC				S		Sn	18 21 17.9	+0.2
	4.9nm,1.0s							
YOTC	**Yotoco, Valle**	**5.84**	**92**	P		Pn	18 20 11.7	-0.8
	353nm13nm,0.4s							
YOTC				S		Sn	18 21 20.0	+0.3
	353nm13nm,0.4s							
CBOC	**Ciudad Bolivar**	**6.38**	**75**	P		Pn	18 20 19.8	-0.1
CBOC				S		Sn	18 21 35.2	+2.2
CAPC	**Capurgana**	**6.53**	**47**	P		Pn	18 20 20.0	-1.8
CAPC				S		Sn	18 21 35.6	-0.8
	1μm39nm,1.0s							
GUY2C	**Guyana, Caldas**	**6.89**	**81**	P		Pn	18 20 27.2	0.0
	35nm,0.8s							
GUY2C				S		Sn	18 21 47.4	+1.5
	35nm,0.8s							
HELC	**Santa Helena**	**6.93**	**73**	P		Pn	18 20 27.2	-0.5
	11nm,0.8s							
ORTC	**Ortega, Tolima**	**6.94**	**92**	P		Pn	18 20 27.9	+0.4
	16nm,0.7s							
ORTC				S		Sn	18 21 48.9	+2.2
	16nm,0.7s							
COHC	**Cochancay**	**7.25**	**156**	P		Pn	18 20 26.0	-5.7
PRAC	**Prado**	**7.31**	**94**	P		Pn	18 20 33.2	+0.6
	10nm,0.7s							
PRAC				S		Sn	18 22 00.2	+4.4
	10nm,0.7s							
NORC	**Norcasia**	**7.43**	**79**	P		Pn	18 20 35.2	+1.0
	757nm77nm,0.5s							
NORC				S		Sn	18 21 53.7	-5.0
	757nm77nm,0.5s							
URMC	**La Uribe, Meta**	**7.86**	**97**	P		Pn	18 20 39.5	-0.7
	6.6nm,0.8s							
URMC				S		Sn	18 22 10.1	+0.7
	6.6nm,0.8s							
ROSC	**El Rosal**	**7.88**	**85**	P		Pn	18 20 45.4	+4.7
PTBC	**PUERTO BERRIO,**	**8.05**	**73**	P		Pn	18 20 44.0	+1.3
	644nm64nm,0.7s							
PTBC				S		Sn	18 22 11.0	-3.0
	644nm64nm,0.7s							
CHIC	**Chingaza**	**8.45**	**87**	P		Pn	18 20 51.7	+3.1
CHIC				S		Sn	18 22 29.6	+5.2
MACC	**Macarena, Meta**	**8.59**	**103**	P		Pn	18 20 50.6	+0.5
	6.3nm,0.8s							
SJCC	**San Jacinto, C**	**8.97**	**51**	P		Pn	18 20 55.6	+0.1
	3μm12nm,1.0s							
SJCC				S		Sn	18 22 35.0	-1.7
	3μm12nm,1.0s							
RUSC	**La Rusia**	**9.24**	**79**	P		Pn	18 20 58.5	-0.9

*IDC **23** 19:01:40.0±3.3,22.75N×144.54E,h0km,mb3.8/7, mbtmp3.8/7,Error ellipse: s-maj=140.3km s-min=23.5km az=79.0*

ISC 23 19:01:49.0±3.0,22.7N±0.2×143.9E±0.9,h53km,n9, σ0.6s76/9,mb3.7/7,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	**Chichijima**	**4.69**	**341**	Pn		**Pn**	**19 02 57.9**	**+0.6**
	5.7nm,0.3s,baz=108,slow=20,SNR=1.4							
JCJ				Sn		**Sn**	**19 03 49.2**	**-1.1**
	10nm,0.3s,baz=73,slow=19,SNR=9.3							
KSRS	**Korea Array**	**20.18**	**321**	P		Pn	19 06 25.8	+4.4
	0.7nm,0.5s,baz=146,slow=8.3,SNR=6.4							
WRA	**Warramunga Arr**	**43.36**	**193**	P		**P**	**19 09 46.2**	**-0.1**
	0.2nm,0.3s,baz=17,slow=9.1,SNR=2.2							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**47.06**	**193**	P		**P**	**19 10 15.1**	**-0.5**
	0.1nm,0.3s,baz=12,slow=6.4,SNR=6.8							
	0.1nm,0.3s							
ZALV	**Zalesovo Beam**	**53.88**	**321**	P		**P**	**19 11 07.6**	**+0.9**
	0.3nm,0.4s,baz=87,slow=6.3,SNR=2.0							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**54.55**	**312**	P		**

ISC 23 19:21:44.4±0.9, 37°29'N±0'.06×44°.86E±0°.03, h10km, n15, σ0°77/19, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YOVA	**Hakkari_Yksek**	**0.54**	**303**	P	**Pg**		**19 21 54.7**	**-0.2**
YOVA				S	**Sg**		**19 22 01.8**	**-0.3**
YOVA				*i* IAML			19 22 05.0	
	comp=N,690nm,0.5s							
MAHB	**Mahabad**	**0.86**	**127**	Pg	**Pn**		**19 22 02.7**	**+0.1**
MAHB				Sg	**Sn**		**19 22 16.2**	**+0.9**
HAKT	**HAKKARI**	**0.95**	**287**	P	**Pg**		**19 22 02.2**	**-0.5**
HAKT				S	**Sb**		**19 22 15.8**	**-0.1**
HAKT				*i* IAML			19 22 20.0	
	comp=N,173nm,0.8s							
IAZR	**Azarshahr**	**0.97**	**66**	Pg	**Pn**		**19 22 04.4**	**0.0**
ISHB	**Shabestar**	**1.16**	**31**	Pg	**Pb**		**19 22 05.4**	**-1.2**
ITBZ	**Tabriz**	**1.39**	**47**	Pg	**Pn**		**19 22 09.6**	**-0.4**
OZAP	**Van, Ozalp-Mer**	**1.53**	**334**	P	**Pg**		**19 22 15.8**	**+2.0**
IMRD	**Marand**	**1.57**	**25**	Pg	**Pb**		**19 22 13.7**	**+0.1**
TVAN	**Van**	**1.69**	**318**	P	**Pg**		**19 22 17.0**	**+0.2**
IHSH	**Hashtrud**	**1.92**	**89**	Pn	**Pg**		**19 22 21.0**	**-0.2**
PERV	**Siirt/Pervari-**	**1.95**	**290**	P	**Pb**		**19 22 20.8**	**+0.7**
IHRS	**Heris**	**2.01**	**59**	Pn	**Pb**		**19 22 21.9**	**+0.7**
ISRB	**Sarab**	**2.29**	**76**	Pn	**Pb**		**19 22 25.8**	**-0.2**
SRTM	**Siirt_Merkez**	**2.43**	**288**	P	**Pb**		**19 22 28.5**	**+0.2**
SRTM				S	**Sg**		**19 23 01.4**	**-1.1**
SRTM				*i* IAML			19 23 09.0	
	comp=N,52nm,0.7s							
SRTM				*i* IAML			19 23 13.0	
	comp=E,36nm,0.7s							
KOTA	**Agri, Merkez-K**	**2.82**	**333**	P	**Pg**		**19 22 38.2**	**-0.3**

*NNC **23** 19:24:19.7±4.2, 41°.87N×83°.32E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=31.4km s-min=18.4km az=153.0*
*SOME **23** 19:24:19.5, 41°.80N×83°.27E, h10km*
ISC 23 19:24:21.9±3.3, 41°.9N±0°.2×83°.6E±0°.1, h15km, n14, σ2°02/19, 3C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.29**	**294**	Pg	**Pn**		**19 25 14.0**	**+0.9**
	8.1nm,0.5s							
SHLS				Lg	Lg		19 25 51.2	
	19nm,0.6s							
SHLS	**Shalkode**	**3.29**	**294**	*e*P	**Pn**		**19 25 14.0**	**+0.9**
	8.1nm,0.5s							
SHLS				*e*S	**Sn**		**19 25 51.2**	**-0.8**
	19nm,0.6s							
PDGK	**Podgornoye**	**3.34**	**297**	⇑Pg	**Pn**		**19 25 15.7**	**+1.9**
	3.0nm,0.7s							
PDGK				⇑Lg	Lg		19 26 01.2	
	26nm,1.2s							
UZB	**Uzynbulak**	**3.59**	**292**	Pg	**Pb**		**19 25 22.2**	**-3.0**
	3.2nm,0.3s							
UZB				Lg	Lg		19 26 05.6	
	11nm,0.6s							
UZB	**Uzynbulak**	**3.59**	**292**	*e*P	**Pb**		**19 25 22.2**	**-3.0**
	3.2nm,0.3s							
UZB				*e*S	**Sb**		**19 26 05.6**	**-3.0**
	11nm,0.6s							
SATY	**Saty**	**4.00**	**289**	Pg	**Pb**		**19 25 31.3**	**-0.8**
	4.5nm,0.8s							
SATY				Lg	Lg		19 26 20.7	
	12nm,0.9s							
MK31	**Makanchi Array**	**5.00**	**350**	⇑Pg	**Pb**		**19 25 50.5**	**+1.4**
	3.2nm,0.9s,baz=168,slow=16,SNR=3.3							
MK31				⇓Lg	Lg		19 27 02.1	
	4.3nm,0.6s,baz=164,slow=27,SNR=4.8							
TNSS	**Tian-Shan**	**5.03**	**286**	Pg	**Pb**		**19 25 49.8**	**-0.1**
	0.3nm,0.2s							
TNSS				Lg	Lg		19 26 52.9	
	1.7nm,0.7s							
TNSS	**Tian-Shan**	**5.03**	**286**	*e*P	**Pb**		**19 25 49.8**	**-0.1**
	0.3nm,0.2s							
TNSS				*e*S	**Sb**		**19 26 52.9**	**+2.6**
	1.7nm,0.7s							
MAKZ	**Makanchi**	**5.06**	**348**	⇓Pg	**Pb**		**19 25 48.0**	**-2.1**
	1.8nm,0.8s							
MAKZ				⇓Lg	Lg		19 27 03.3	
	6.5nm,1.1s							
ZSN	**Zaisan**	**5.65**	**9**	Pg	**Pg**		**19 26 08.6**	**-1.5**
	1.0nm,0.2s							
ZSN				Lg	Lg		19 27 25.1	
	9.6nm,1.1s							
ZSN	**Zaisan**	**5.65**	**9**	*e*P	**Pg**		**19 26 08.6**	**-1.5**
	1.0nm,0.2s							
ZSN				*e*S	**Sg**		**19 27 25.1**	**+2.0**
	9.6nm,1.1s							
KST	**Kastek**	**5.74**	**284**	Pg	**Pb**		**19 26 01.6**	**-0.3**
	1.4nm,0.3s							
KST				Lg	Lg		19 27 13.7	
	6.2nm,0.8s							
KST	**Kastek**	**5.74**	**284**	*e*P	**Pb**		**19 26 01.6**	**-0.3**
	1.4nm,0.3s							
KST				*e*S	**Sb**		**19 27 13.7**	**+3.1**
	6.2nm,0.8s							

*NEIC **23** 19:41:13.4±0.7, 19°.84N±0°.02×155°.37W±0°.02, h36km±2km, Error ellipse: s-maj=3.3km s-min=2.3km az=206.0*
HVO 23 19:41:14.9±1.9, 19°.84N±0°.06×155°.35W±0°.03, h30km±8km, ML2.7/29, ML2.8/41(NEIC), Error ellipse: s-maj=9.3km s-min=4.4km az=184.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.19**	**245**			Pb	19 41 20.5	-0.9
POHA						Sb	19 41 24.5	-1.2
POHA				IAML			19 41 25.0	
	2µm,0.2s							
HMH	**Humu'ula Sheep**	**0.27**	**208**			Pb	19 41 21.6	-0.7
HMH						Sb	19 41 26.6	-0.7
HMH				IAML			19 41 26.8	
	comp=E,1µm,0.4s							
HMH				IAML			19 41 27.1	
	comp=N,1µm,0.3s							
MLH	**Mauna Loa**	**0.34**	**185**			Pb	19 41 22.4	-0.9
MLH						Sb	19 41 27.7	-1.2
MLH				IAML			19 41 27.9	
	comp=E,1µm,1.4s							
MLH				IAML			19 41 28.1	
	comp=N,946nm,0.2s							
MLOA	**Mauna Loa Obse**	**0.37**	**215**			Pb	19 41 23.1	-0.6
MLOA						Sb	19 41 29.0	-0.7
MLOA				IAML			19 41 35.0	
	comp=N,1µm,0.3s							
HPAH	**Hawaii Prepara**	**0.38**	**300**			Pb	19 41 22.3	-1.3
HPAH						Sb	19 41 27.4	-2.0
RSD	**Rainshed**	**0.38**	**169**			Pb	19 41 22.8	-0.9
RSD						Sb	19 41 28.6	-1.0
RSD				IAML			19 41 29.0	
	comp=E,888nm,0.4s							
RSD				IAML			19 41 29.3	
	comp=N,896nm,0.3s							
ALEP	**Alea Permanent**	**0.40**	**223**			Pb	19 41 23.2	-1.0
ALEP						Sb	19 41 29.1	-1.4
SBLHI	**Steaming Bluff**	**0.42**	**169**			Pb	19 41 22.9	-1.3
SBLHI						Sb	19 41 29.0	-1.5
UWB	**Uwekahuna Bluf**	**0.42**	**170**			Pb	19 41 22.9	-1.3
UWB						Sb	19 41 28.7	-1.8
UWE	**Uwekahuna**	**0.42**	**172**			Pb	19 41 23.1	-1.2
UWE						Sb	19 41 28.9	-1.7
UWE				IAML			19 41 29.6	
	comp=N,965nm,0.3s							
MWH	**Mokuaweoweo**	**0.42**	**213**			Pb	19 41 23.4	-1.2
MWH				IAML			19 41 41.1	
	comp=E,647nm,0.9s							
MWH	**Mokuaweoweo**	**0.42**	**213**			Sb	19 41 29.4	-1.8
HATHI	**Halema'uma'u T**	**0.42**	**168**			Pb	19 41 23.0	-1.3
HATHI				IAML			19 41 29.5	
	comp=N,444nm,0.1s							
HATHI				IAML			19 41 35.6	
	comp=E,464nm,0.5s							
HATHI	**Halema'uma'u T**	**0.42**	**168**			Sb	19 41 28.9	-1.8
OBL	**Observatory Le**	**0.42**	**171**			Pb	19 41 23.1	-1.3
OBL						Sb	19 41 29.1	-1.6
BYL	**Byron's Ledge**	**0.43**	**168**			Pb	19 41 23.1	-1.3
WRMHI	**West Rim**	**0.43**	**174**			Pb	19 41 23.1	-1.4
WRMHI						Sb	19 41 29.0	-1.9
KKO	**Keanakako'i**	**0.45**	**170**			Pb	19 41 23.4	-1.3
KKO						Sb	19 41 29.8	-1.5
SDHHI	**Sand Hill**	**0.45**	**173**			Pb	19 41 23.3	-1.4
SDHHI						Sb	19 41 29.4	-2.0
AIN	**Ainahou**	**0.47**	**192**			Pb	19 41 24.0	-1.2
AIN						Sb	19 41 30.6	-1.5
AIN				IAML			19 41 30.9	
	comp=E,778nm,0.4s							
PUH	**Pauahi**	**0.48**	**165**			Pb	19 41 23.8	-1.4
PUH	**Pauahi**	**0.48**	**165**			Sb	19 41 30.2	-1.9
HUH	**Hualalai**	**0.48**	**251**			Pb	19 41 24.2	-1.1
HUH						Sb	19 41 31.4	-1.0
HUH				IAML			19 41 31.8	
	comp=E,842nm,0.2s							
HUH				IAML			19 41 38.3	
	comp=N,844nm,0.3s							
KNHH	**Kane Nui o Ham**	**0.49**	**159**			Pb	19 41 24.0	-1.3
NPOC	**North of Pu'u**	**0.50**	**153**			Pb	19 41 24.1	-1.4
NPOC						Sb	19 41 30.6	-2.0
HLP	**Hilina Pali**	**0.54**	**176**			Pb	19 41 24.4	-1.7
HLP				IAML			19 41 30.2	
	comp=E,521nm,3.5s							
HLP				IAML			19 41 43.1	
	comp=N,420nm,1.7s							
HLP	**Hilina Pali**	**0.54**	**176**			Sb	19 41 31.4	-2.4
KHLU	**Kahalu`u**	**0.57**	**244**			Pb	19 41 24.9	-1.7
KHLU	**Kahalu`u**	**0.57**	**244**			Sb	19 41 32.3	-2.2
HTC	**Hot Caves**	**0.60**	**184**			Pb	19 41 25.4	-1.6
MHA	**Mahukona**	**0.62**	**304**			Pb	19 41 25.4	-2.0
KHU	**Kahuku**	**0.64**	**203**			Pb	19 41 25.8	-2.0
HPO	**Honuapo**	**0.77**	**194**			Pn	19 41 27.6	-2.2
HPO						Sb	19 41 36.7	-3.3

*GCG **23** 19:47:17.0±1.4, 13°.74N×93°.13W, h36km±999km, MD3.7, ML3.3*
*MEX **23** 19:47:19.5±0.4, 13°.98N×93°.58W, h10km, MD4.2*
ISC 23 19:47:11.4±2.0, 13°.5N±0°.1×93°.37W±0°.04, h35km, n16, σ2°05/20, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SMCA	**Catarina**	**1.82**	**44**	*i* P		**Pn**	**19 47 41.6**	**+1.4**
STG2	**El Palmar, Qui**	**2.14**	**65**	*e*P		**Pn**	**19 47 45.5**	**+0.8**
STG2				*i* S		**Sn**	**19 48 08.3**	**-1.8**
STG8	**El Palmar, Qui**	**2.17**	**65**	*i* P		**Pn**	**19 47 46.1**	**+0.9**
STG8				*e*S		**Sn**	**19 48 09.0**	**-1.9**
CCIG	**Comitan**	**2.98**	**23**	*e*P		Pn	19 47 59.8	+3.4
CCIG				*e*S		**Sn**	**19 48 31.1**	**0.0**
CCIG	**Comitan**	**2.98**	**23**	*e*P		Pn	19 47 59.9	+3.4
CCIG				IAML			19 48 37.0	
	comp=N,136nm,0.5s							
APG	**El Apazote**	**3.18**	**62**	*e*P		Pn	19 48 02.9	+3.8
TGIG		**3.24**	**4**	*e*P		**Pn**	**19 48 02.2**	**+2.4**
TGIG				*e*S		**Sn**	**19 48 35.2**	**-1.9**
TGIG		**3.24**	**4**	*i* P		**Pn**	**19 48 01.9**	**+2.1**
TGIG				IAML			19 48 37.3	
	comp=E,89nm,0.3s							
HUIG	**Huatulco**	**3.46**	**310**	*e*P		**Pn**	**19 48 05.3**	**+2.5**
HUIG				*e*S		**Sn**	**19 48 38.8**	**-3.7**
UXUV	**UXUV**	**3.84**	**349**	*e*P		Pn	19 48 11.1	+3.1
UXUV				*e*S		**Sn**	**19 48 49.6**	**-2.3**
PEIG	**Puerto Escondi**	**4.40**	**304**	*e*P		Pn	19 48 19.1	+3.3
PEIG				*e*S		**Sn**	**19 49 04.0**	**-1.8**
NEUV	**Arroyo Zacate**	**4.77**	**331**	*e*P		Pn	19 48 23.9	+3.1
NEUV				*e*S		**Sn**	**19 49 13.7**	**-1.2**
YOIG	**Yosondua**	**5.21**	**310**	*e*P		Pn	19 48 30.5	+3.4
YOIG				*e*S		**Sn**	**19 49 23.9**	**-2.3**
PNIG	**Pinotepa**	**5.40**	**302**	*e*P		**Pn**	**19 48 31.0**	**+1.4**
PNIG				*e*S		**Sn**	**19 49 29.2**	**-1.4**
TXIG	**Tlaxiaco**	**5.63**	**312**	*e*P		Pn	19 48 38.8	+5.9
TXIG				*e*S		**Sn**	**19 49 35.2**	**-1.2**
TOIG	**Toxpalan**	**5.76**	**322**	*e*P		**Pn**	**19 48 36.1**	**+1.5**
TOIG				*e*S		**Sn**	**19 49 37.5**	**-2.0**

*IDC **23** 19:47:25.0±2.8, 8°.47S×123°.83E, h102km±25km, mb3.5/5, mbtmp3.9/8, Error ellipse: s-maj=55.5km s-min=14.6km az=65.0*
*DJA **23** 19:47:26.7±0.4, 9°.S±3°×12°.3E±°, h103km±6km, M4.1/13, mB4.7/1, mb4.3/6, MLv4.0/13, Mw(mB)3.9/1*
*NEIC **23** 19:47:27.1±1.1, 8°.8S±0°.1×123°.32E±0°.07, h114km±7km, mb4.0/12, Error ellipse: s-maj=17.2km s-min=6.5km az=211.0*
ISC 23 19:47:26.3±0.8, 8°.71S±0°.06×123°.42E±0°.05, h109km±7km, n51, σ1°81/58, mb3.9/9, Flores region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.17**	**273**	Pn		**Pn**	**19 47 49.4**	**+0.2**
MMRI				Sn		**Sn**	**19 48 07.0**	**+0.4**
MMRI	**Maumere**	**1.17**	**273**	P		**Pn**	**19 47 49.5**	**+0.2**
MMRI				S		**Sn**	**19 48 07.5**	**+0.9**
SOEI	**Soe**	**1.34**	**141**	P		**Pn**	**19 47 52.1**	**+0.8**
SOEI				Sn		**Sn**	**19 48 12.2**	**+2.0**
SOEI	**Soe**	**1.34**	**141**	P		**Pn**	**19 47 52.1**	**+0.8**
BATI	**Baumata**	**1.51**	**171**	P		**Pn**	**19 47 54.4**	**+1.1**
	426nm,0.4s,baz=289,slow=1.3,SNR=156							
BATI				S		**Sn**	**19 48 16.8**	**+3.1**
	204nm,0.3s,baz=353,slow=15,SNR=7.4							
BATI	**Baumata**	**1.51**	**171**	P		**Pn**	**19 47 54.2**	**+1.0**
BATI				S		**Sn**	**19 48 16.5**	**+2.8**
EDFI	**Ende, Flores**	**1.71**	**268**	P		**Pn**	**19 47 55.9**	**+0.2**
BASI	**Baing, Sumba**	**3.18**	**242**	P		**Pn**	**19 48 16.3**	**+1.6**
BASI				S		**Sn**	**19 48 54.1**	**+2.1**
WSI	**Waingapu**	**3.22**	**253**	P		**Pn**	**19 48 16.7**	**+1.4**
BSSI	**Bau Bau, Buton**	**3.86**	**311**	P		**Pn**	**19 48 23.7**	**-0.2**
WBSI	**Waikabubak, Su**	**4.08**	**257**	P		**Pn**	**19 48 29.2**	**+2.4**
WBSI				S		**Sn**	**19 49 14.2**	**+0.5**
BKSI	**Bulukumba**	**4.69**	**316**	P		**Pn**	**19 48 34.7**	**-0.3**
KAPI	**Kappang**	**5.17**	**315**	P		**Pn**	**19 48 42.1**	**+0.7**
	4.4nm,0.4s,baz=149,slow=14,SNR=3.5							
BNSI	**Bone**	**5.40**	**322**	P		**Pn**	**19 48 48.3**	**+3.7**
PLAI	**Plampang**	**5.58**	**268**	P		**Pn**	**19 48 48.7**	**+1.7**
	0.3nm50nm,0.6s							
PLAI				S		**Sn**	**19 49 51.1**	**+1.2**
	0.3nm50nm,0.6s							
TWSI	**Taliwang, Sumb**	**6.46**	**269**	P		**Pn**	**19 49 01.0**	**+2.0**
MTN	**Manton Dam**	**8.62**	**119**			**Pn**	**19 49 26.5**	**-1.9**
KNRA	**Kununurra**	**8.68**	**143**			**Pn**	**19 49 25.7**	**-3.4**
JAGI	**Jajag, Banyuwa**	**9.16**	**271**			**Pn**	**19 49 33.7**	**-2.0**
JAGI	**Jajag, Banyuwa**	**9.16**	**271**	P		**Pn**	**19 49 35.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**9.58**	**167**	P		**Pn**	**19 49 38.3**	**-3.0**
	8.3nm,0.4s,baz=352,slow=7.4,SNR=59							
FITZ				S		Sn	19 51 18.1	-9.0
	72nm,0.6s,baz=144,slow=9.7,SNR=26							
FITZ	**Fitzroy Crossi**	**9.58**	**167**			**Pn**	**19 49 38.0**	**-3.3**
FAKI	**Fak Fak**	**10.50**	**57**	Pn		Pn	19 49 57.8	+4.0
WB0	**Warramunga Arr**	**15.29**	**137**			**Pn**	**19 50 52.7**	**-3.7**
WB0					IAmb	IAmb	19 50 58.2	
	comp=Z,5.4nm,0.9s							
WRA	**Warramunga Arr**	**15.37**	**138**	P		**Pn**	**19 50 54.0**	**-3.5**
	comp=Z,2.8nm,0.5s,baz=323,slow=13,SNR=25							
WRA				S		Sn	19 53 33.7	-14
	comp=Z,14nm,0.9s,baz=313,slow=24,SNR=16							
WRA	**Warramunga Arr**	**15.37**	**138**	Pn		**Pn**	**19 50 54.6**	**-2.9**
AS31	**Alice Springs**	**17.95**	**147**			**P**	**19 51 27.8**	**-0.4**
ASAR	**Alice Springs**	**17.95**	**147**	P		**P**	**19 51 28.4**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=328,slow=14,SNR=32							
ASAR				S		S	19 54 37.3	-11
	comp=Z,3.3nm,0.6s,baz=318,slow=22,SNR=12							
ASAR	**Alice Springs**	**17.95**	**147**	P		**P**	**19 51 28.0**	**-0.1**
COEN	**Coen**	**20.06**	**107**	P		**P**	**19 51 50.7**	**-0.4**
COEN					IAmb	IAmb	19 52 14.4	
	comp=Z,16nm,1.3s							
MORW	**Morawa**	**21.41**	**198**	P		**P**	**19 52 03.9**	**-1.6**
MORW					IAmb	IAmb	19 52 29.4	
	comp=Z,10nm,1.0s							
NWAO	**Narrogin (SRO)**	**24.77**	**192**	P		**P**	**19 52 36.3**	**-1.7**
BBOO	**Buckleboo**	**26.69**	**156**	P		**P**	**19 52 54.2**	**-1.1**
STKA	**Stephens Creek**	**28.58**	**146**	P		**P**	**19 53 11.4**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=317,slow=8.1,SNR=5.3							
	comp=Z,1.9nm,0.6s							
PZH	**PanZhiHua**	**40.84**	**330**	P		**P**	**19 54 58.4**	**+0.7**
HHC	**Hu-ho-hao-te**	**50.51**	**348**	*e*P		**P**	**19 56 15.9**	**+2.4**
HHC				pmax		pmax		
	comp=Z,12nm,0.6s							
HHC				pmax		pmax		
	comp=Z,76nm,4.7s							
MKAR	**Makanchi Array**	**66.27**	**330**	P		**P**	**19 58 02.9**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=140,slow=7.2,SNR=14							
	comp=Z,0.7nm,0.5s							
MKAR	**Makanchi Array**	**66.27**	**330**	P		**P**	**19 58 02.4**	**-0.5**
BOOM	**Boomskoye usch**	**66.86**	**324**	P		**P**	**19 58 06.3**	**-0.7**
ZALV	**Zalesovo Beam**	**70.40**	**337**	P		**P**	**19 58 26.8**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=155,slow=7.8,SNR=2.5							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**70.40**	**337**	P		**P**	**19 58 28.7**	**+0.2**
KKAR	**Karatay Array**	**70.47**	**322**	P		**P**	**19 58 28.3**	**-0.9**
KURBB	**Kurchatov Arra**	**70.72**	**332**	P		**P**	**19 58 29.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=143,slow=5.0,SNR=2.9							
	comp=Z,0.3nm,0.5s							
KURK	**Kurchatov**	**70.74**	**332**	P		**P**	**19 58 29.8**	**-0.8**
VNDA	**Vanda**	**71.62**	**172**	P		**P**	**19 58 35.9**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=325,slow=6.0,SNR=11							
	comp=Z,0.7nm,0.5s							
VNDA	**Vanda**	**71.62**	**172**	P		**P**	**19 58 35.6**	**0.0**
VNDA					IAmb	IAmb	19 58 42.3	
	comp=Z,1.9nm,1.1s							
SBA	**Scott Base**	**72.58**	**171**	P		**P**	**19 58 41.9**	**+0.6**
SBA					IAmb	IAmb	19 58 47.1	
	comp=Z,4.0nm,1.3s							
ABKAR	**Akbulak array**	**79.88**	**323**	P		**P**	**19 59 23.2**	**+0.2**
QSPA	**South Pole Qui**	**81.28**	**180**	P		**P**	**19 59 34.1**	**+3.7**
	comp=Z,1.7nm,0.6s,baz=295,slow=1.2,SNR=18							
QSPA	**South Pole Qui**	**81.28**	**180**	P		**P**	**19 59 32.3**	**+1.9**
QSPA					IAmb	IAmb	19 59 34.4	
	comp=Z,2.3nm,0.8s							
CPUP	**Villa Florida**	**145.16**	**179**	PKPbc		**PKPbc**	**20 06 51.5**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=198,slow=3.2,SNR=2.0							

*IDC **23** 19:50:24.6±1.7, 12°.81N×143°.57E, h145km±21km, mb3.4/8, mbtmp3.8/8, Error ellipse: s-maj=39.8km s-min=14.8km az=93.0*
ISC 23 19:50:24.9±0.8, 12°.8N±0°.1×143°.7E±0°.1, h150km, n9, σ0°45/10, mb3.6/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.42**	**56**	P		**Pn**	**19 50 53.4**	**-0.3**
	251nm,0.3s,baz=210,slow=8.1,SNR=36							
GUMO				S		**Sn**	**19 51 15.8**	**+0.1**
	297nm,0.4s,baz=180,slow=20,SNR=10.0							
GUMO				LR		LR	19 51 31.9	
	comp=Z,93nm,20.5s,baz=2.5,slow=45							
MJAR	**Matsushiro Arr**	**24.15**	**349**	P		**P**	**19 55 26.7**	**-0.4**
	2.2nm,1.1s,baz=172,slow=11,SNR=4.0							
	2.2nm,1.1s							
WRA	**Warramunga Arr**	**33.80**	**196**	P		**P**	**19 56 52.5**	**-0.3**
	3.5nm,0.6s,baz=19,slow=9.5,SNR=7.1							
	3.5nm,0.6s							
ASAR	**Alice Springs**	**37.47**	**195**	P		**P**	**19 57 24.6**	**+0.5**
	0.9nm,0.5s,baz=20,slow=12,SNR=6.3							
	0.9nm,0.5s							
STKA	**Stephens Creek**	**44.46**	**182**	P		**P**	**19 58 21.0**	**-0.1**
	1.8nm,0.7s,baz=15,slow=12,SNR=4.3							
	1.8nm,0.7s							
SONM	**Songino Array**	**46.71**	**326**	P		**P**	**19 58 39.3**	**+0.5**
	0.2nm,0.3s,baz=157,slow=8.9,SNR=2.4							
	0.2nm,0.3s							
KURBB	**Kurchatov Arra**	**64.47**	**320**	P		**P**	**20 00 45.0**	**-0.3**
	0.6nm,0.8s,baz=102,slow=6.2,SNR=5.4							
	0.6nm,0.8s							
ILAR	**Eielson Array**	**69.79**	**25**	P		**P**	**20 01 19.2**	**+0.5**
	0.3nm,0.4s,baz=250,slow=5.8,SNR=7.6							
	0.3nm,0.4s							
BVAR	**Borovoye Array**	**69.81**	**322**	P		**P**	**20 01 18.7**	**-0.4**
	0.6nm,0.5s,baz=109,slow=6.3,SNR=4.3							
	0.6nm,0.5s							

*IDC **23** 19:56:30.6±3.2, 43°.23N×105°.21W, h0km, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=81.9km s-min=11.3km az=158.0*
*NEIC **23** 19:56:31.7±2.4, 43°.59N±0°.04×105°.29W±0°.04, h0km±1km, ML3.0/36, Error ellipse: s-maj=8.4km s-min=3.2km az=213.0*
ISC 23 19:56:31.6±1.2, 43°.66N±0°.06×105°.14W±0°.07, h0km, n24, σ1°27/24, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**60**			**Pn**	**19 56 51.9**	**-0.2**
K22A	**Casper**	**1.43**	**226**	Pn		**Pg**	**19 56 57.8**	**-1.1**
K22A				IAML			19 57 02.3	
	193nm,0.2s							
K22A				IAML			19 57 22.1	
	234nm,0.3s							
RLMT	**Red Lodge**	**3.30**	**298**	Pn		**Pn**	**19 57 25.1**	**+0.4**
RLMT				IAML			19 58 26.6	
	36nm,0.4s							
BW06	**Boulder Array**	**3.35**	**256**	Pn		**Pn**	**19 57 26.3**	**+0.9**
BW06				IAML			19 58 23.1	
	27nm,0.9s							
PD31	**Pinedale Array**	**3.35**	**256**	Pn		**Pn**	**19 57 26.3**	**+0.9**
PDAR	**Pinedale Array**	**3.35**	**256**	Pn		**Pn**	**19 57 26.6**	**+1.1**
	1.2nm,0.3s,baz=63,slow=13,SNR=31							
PDAR				Pg		**Pb**	**19 57 31.9**	**-0.1**
	3.3nm,0.3s,baz=67,slow=15,SNR=24							
PDAR				Lg		Lg	19 58 10.8	
	5.5nm,0.3s,baz=77,slow=21,SNR=11							
	1.3nm,0.3s							
PDAR	**Pinedale Array**	**3.35**	**256**			**Pn**	**19 57 26.9**	**+1.5**
HAYD	**Hayden**	**3.51**	**207**	Pn		**Pn**	**19 57 28.5**	**+0.9**
HAYD				IAML			19 58 32.6	
	comp=E,39nm,1.0s							
HAYD				IAML			19 58 38.0	

LWLI				S		Sn	20 01 38.8	-5.5
MDSI	**Maura Dua**	**4.47**	**100**	P		Pn	20 00 52.0	-0.5
KASI	**Kota Agung**	**5.04**	**111**	P		Pn	20 00 59.1	-1.2
CMAR	**Chiang Mai Arr**	**22.08**	**358**	P		P	20 04 40.8	+0.9
	1.7nm,0.9s,baz=187,slow=8.9,SNR=15							
	1.7nm,0.9s							
H08S2	**Diego Garcia H**	**27.40**	**261**	T		T	20 35 10.5	
	baz=82,slow=75,SNR=40							
H08S3	**Diego Garcia H**	**27.41**	**261**	T		T	20 35 11.1	
	baz=82,slow=75,SNR=63							
H08S1	**Diego Carcia H**	**27.42**	**261**	T		T	20 35 01.4	
	baz=82,slow=75,SNR=47							
H01W3	**Cape Leeuwin H**	**33.73**	**158**	T		T	20 42 33.1	
	baz=336,slow=76,SNR=5.7							
H01W2	**Cape Leeuwin H**	**33.74**	**158**	T		T	20 42 37.3	
	baz=336,slow=76,SNR=6.1							
H01W1	**Cape Leeuwin H**	**33.74**	**158**	T		T	20 42 27.2	
	baz=336,slow=76,SNR=6.6							
WRA	**Warramunga Arr**	**37.35**	**118**	P		P	20 06 57.7	+0.3
	0.8nm,0.7s,baz=302,slow=9.0,SNR=5.4							
	0.8nm,0.7s							
ASAR	**Alice Springs**	**38.45**	**124**	P		P	20 07 07.0	+0.2
	0.5nm,0.5s,baz=292,slow=7.5,SNR=8.7							
ASAR				PcP		PcP	20 09 20.6	+0.6
	0.3nm,0.7s,baz=263,slow=3.4,SNR=2.6							
	0.5nm,0.5s							
XAN	**Xi'an**	**38.57**	**12**	P		P	20 07 08.0	+0.4
XAN				pmax		pmax		
	comp=Z,7.0nm,0.8s							
STKA	**Stephens Creek**	**48.19**	**130**	P		P	20 08 25.9	+0.6
	comp=Z,0.9nm,0.6s,baz=331,slow=10,SNR=3.4							
	comp=Z,0.9nm,0.6s							
KSRS	**Korea Array**	**48.64**	**30**	P		P	20 08 29.4	+0.9
	comp=Z,1.8nm,0.9s,baz=234,slow=8.6,SNR=6.3							
	comp=Z,1.8nm,0.9s							
SONM	**Songino Array**	**51.70**	**6**	P		P	20 08 53.3	+1.5
	comp=Z,2.7nm,0.8s,baz=189,slow=9.6,SNR=22							
SONM				PcP		PcP	20 10 05.7	+0.6
	comp=Z,0.5nm,0.6s,baz=234,slow=1.2,SNR=2.2							
	comp=Z,2.7nm,0.8s							
MKAR	**Makanchi Array**	**52.64**	**345**	P		P	20 08 59.6	+1.0
	comp=Z,2.3nm,0.7s,baz=146,slow=8.4,SNR=13							
	comp=Z,2.3nm,0.7s							
USRK	**Ussurisyk Ar.**	**55.81**	**28**	P		P	20 09 22.6	+0.8
	comp=Z,3.0nm,0.7s,baz=216,slow=7.1,SNR=7.9							
	comp=Z,3.0nm,0.7s							
KURBB	**Kurchatov Arra**	**57.15**	**344**	P		P	20 09 31.7	+0.5
	comp=Z,1.0nm,0.7s,baz=164,slow=6.7,SNR=6.9							
	comp=Z,1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**58.84**	**350**	P		P	20 09 43.7	+0.7
	comp=Z,3.6nm,0.8s,baz=182,slow=4.5,SNR=18							
	comp=Z,3.6nm,0.8s							
H04N2	**CROZET ISLANDS**	**59.26**	**217**	T		T	21 14 14.7	
	baz=60,slow=75,SNR=30							
H04N1	**CROZET ISLANDS**	**59.27**	**217**	T		T	21 14 17.2	
	baz=60,slow=75,SNR=42							
H04N3	**CROZET ISLANDS**	**59.28**	**217**	T		T	21 14 15.9	
	baz=60,slow=75,SNR=38							
BVAR	**Borovoye Array**	**61.74**	**340**	P		P	20 10 02.7	-0.2
	comp=Z,2.1nm,0.6s,baz=144,slow=9.1,SNR=17							
	comp=Z,2.1nm,0.6s							
BRTR	**Keskin Array B**	**74.33**	**313**	P		P	20 11 20.4	-2.1
	comp=Z,0.7nm,0.8s,baz=111,slow=6.8,SNR=4.3							
	comp=Z,0.7nm,0.8s							
FINES	**FINESS Array B**	**85.54**	**332**	P		P	20 12 23.1	+0.6
	comp=Z,2.7nm,1.0s,baz=127,slow=8.2,SNR=4.7							
	comp=Z,2.7nm,1.0s							
GERES	**GERESS Array B**	**90.20**	**319**	P		P	20 12 45.5	+0.2
	comp=Z,0.6nm,0.8s,baz=104,slow=5.6,SNR=4.0							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**146.22**	**39**	PKPbc		**PKPbc**	20 19 26.4	+0.5
	comp=Z,1.6nm,0.7s,baz=304,slow=0.9,SNR=18							

*OMAN **23** 20:06:13.4±1.6,27.59N×58.01E,h10km,ml3.1/13,Error ellipse: s-maj=13.8km s-min=12.5km az=69.0*
*TEH **23** 20:06:14.8,27.94N×57.55E,h8km±36km*
*DSN **23** 20:06:15.2±2.4,27.53N×57.97E,h10km,ML2.8/11,Error ellipse: s-maj=36.5km s-min=14.9km az=160.0*

ISC 23 20:06:12.2±2.0,27.67N±0.06×57.85E±0.05,h1km±18km, n50,σ1s57/57,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.30**	**335**	Pg	**Pg**	**20 06 18.7**	**+0.7**
IBND	**Bandar-abas**	**1.18**	**259**	Pg	**Pn**	**20 06 34.7**	**-1.1**
IBND				Sg	**Sb**	**20 06 49.6**	**-1.6**
GENO	**Geno**	**1.51**	**260**	Pg	**Pn**	**20 06 39.9**	**-0.6**
BNDS	**Bandar-Abbas**	**1.52**	**260**	Pg	**Pn**	**20 06 39.7**	**-0.8**
KBAM	**BAM**	**1.55**	**20**	Pg	**Pn**	**20 06 41.1**	**+0.1**
NGRK	**Negar Kerman**	**2.20**	**334**	Pn	**Pn**	**20 06 49.2**	**-0.9**
CHMN	**Cheshme madani**	**2.20**	**353**	Pn	**Pn**	**20 06 50.3**	**+0.2**
SHME	**Shamm**	**2.22**	**224**	P	**Pn**	**20 06 51.5**	**+1.4**
	SNR=9.5						
SHME				S	**Sn**	**20 07 20.0**	**+1.8**
SHME	**Shamm**	**2.22**	**224**	P	**Pn**	**20 06 51.1**	**+1.0**
SHME				S	**Sn**	**20 07 19.9**	**+1.7**
BANOM	**Banah**	**2.23**	**219**	P	**Pn**	**20 06 51.6**	**+1.4**
BANOM				S	**Sn**	**20 07 20.6**	**+2.3**
BANOM	**Banah**	**2.23**	**219**	P	**Pn**	**20 06 51.3**	**+1.1**
KRBR	**Kerman**	**2.49**	**338**	Pn	**Pn**	**20 06 53.3**	**-0.8**
MDH	**Madha**	**2.74**	**211**	P	**Pn**	**20 06 57.1**	**-0.1**
MDH				S	**Sn**	**20 07 32.0**	**+0.9**
MDH	**Madha**	**2.74**	**211**	P	**Pn**	**20 06 57.2**	**-0.1**
MASF	**Masafi**	**2.75**	**214**	P	**Pn**	**20 07 00.5**	**+3.1**
MASF				S	**Sn**	**20 07 32.5**	**+1.3**
MSFE	**Esma-Masafi**	**2.76**	**214**	P	**Pn**	**20 06 59.6**	**+2.1**
KRM1	**Kerman Provinc**	**2.87**	**350**	Pn	**Pn**	**20 06 59.1**	**-0.1**
UOSS	**Minazif**	**3.09**	**209**	P	**Pn**	**20 07 01.8**	**-0.3**
HATD	**Hatta, Dubai**	**3.23**	**209**	P	**Pn**	**20 07 06.0**	**+2.1**
HATD	**Hatta, Dubai**	**3.23**	**209**	P	**Pn**	**20 07 06.4**	**+2.5**
ASHO	**Ashiyiah**	**3.38**	**209**	P	**Pn**	**20 07 09.2**	**+3.0**
	SNR=16						
ASHO	**Ashiyiah**	**3.38**	**209**	P	**Pn**	**20 07 08.2**	**+2.0**
ZRDN	**Zarand Kerman**	**3.48**	**341**	Pn	**Pn**	**20 07 07.3**	**-0.4**
FAQ	**Al Faqa, Dubai**	**3.55**	**215**	P	**Pn**	**20 07 10.6**	**+2.2**
FAQ	**Al Faqa, Dubai**	**3.55**	**215**	P	**Pn**	**20 07 10.2**	**+1.8**
SOHO	**SOHO**	**3.72**	**199**	P	**Pn**	**20 07 11.1**	**+0.4**
SOHO				S	**Sn**	**20 07 54.3**	**-0.8**
SOHO	**SOHO**	**3.72**	**199**	P	**Pn**	**20 07 10.5**	**-0.2**
ASUD	**Al Ashush, Dub**	**3.79**	**217**	P	**Pn**	**20 07 13.4**	**+1.8**
	SNR=5.4						
ASUD	**Al Ashush, Dub**	**3.79**	**217**	P	**Pn**	**20 07 13.4**	**+1.8**
SRVN	**Saravan**	**4.05**	**93**	Pn	**Pb**	**20 07 22.8**	**-1.5**
ALNE	**Al Ain**	**4.07**	**208**	P	**Pn**	**20 07 17.0**	**+1.5**
ALNE	**Al Ain**	**4.07**	**208**	P	**Pn**	**20 07 16.9**	**+1.4**
HOQ	**Hoqain**	**4.10**	**187**	P	**Pn**	**20 07 17.1**	**+1.1**
	SNR=8.2						
HOQ				S	**Sn**	**20 08 03.3**	**-1.3**
NHDN	**Nehbandan**	**4.17**	**27**	Pn	**Pn**	**20 07 19.9**	**+2.8**
BSRN	**Basiran**	**4.42**	**14**	Pn	**Pn**	**20 07 22.8**	**+2.3**
ARQ	**Araqi**	**4.48**	**196**	P	**Pn**	**20 07 24.3**	**+3.1**
	SNR=19						
SMDO	**Samad**	**4.60**	**178**	P	**Pn**	**20 07 23.5**	**+0.6**
SMDO				S	**Sn**	**20 08 15.3**	**-1.7**
IKOO	**Kooshah**	**4.84**	**12**	Pn	**Pn**	**20 07 27.8**	**+1.4**
BSY	**Bisya**	**4.94**	**187**	P	**Pn**	**20 07 29.3**	**+1.7**
UMZA	**Um Al Zommool**	**5.50**	**207**	P	**Pn**	**20 07 36.1**	**+0.9**
GHWR	**Ruwais**	**5.81**	**232**	P	**Pn**	**20 07 38.4**	**-1.0**
MZR	**Muzera**	**6.10**	**221**	P	**Pn**	**20 07 44.3**	**+0.8**
KLNJ	**Kolanjah**	**6.39**	**303**	Pn	**Pn**	**20 07 46.0**	**-1.8**
SHMA	**Al-Shehemyia**	**6.42**	**255**	P	**Pn**	**20 07 46.7**	**-1.1**
	SNR=10						
SMRA	**Abu-Samra**	**6.95**	**247**	P	**Pn**	**20 07 54.5**	**-0.6**
ZNGN	**Zangian**	**7.52**	**308**	Pn	**Pn**	**20 08 02.1**	**-1.1**
DOK	**Doka**	**9.64**	**202**	P	**Pn**	**20 08 31.1**	**-0.9**
DMTO	**DMTO**	**10.26**	**196**	P	Pn	20 08 36.3	-4.3
WHFO	**Wadi Hawf**	**10.41**	**202**	P	**Pn**	**20 08 41.3**	**-1.3**
	SNR=8.6						
ABTO	**Aybut**	**11.10**	**203**	P	**Pn**	**20 08 50.6**	**-1.5**
	SNR=8.4						

OMAN 23 20:58:25.2±1.3,17.44N×59.71E,h10km,ml3.5/2,Error ellipse: s-maj=13.5km s-min=10.8km az=82.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQM	**DQM**	**3.21**	**321**	P	Pn	20 59 17.7	+1.9
	SNR=86						
DQM				S	Sn	20 59 55.5	+1.3
MHTO	**MHTO**	**3.89**	**335**	P	Pn	20 59 25.2	+0.1
	SNR=75						
MHTO				S	Sn	21 00 11.1	+0.3
JLN	**Jalan Bani Buh**	**4.69**	**357**	P	Pn	20 59 35.2	-0.9
JMDO	**Jabal Madar**	**5.13**	**343**	P	Pn	20 59 43.0	+0.8
	SNR=27						
JMDO				S	Sn	21 00 39.1	-2.3
DOK	**Doka**	**5.43**	**283**	P	Pn	20 59 45.0	-1.3
BSY	**Bisya**	**5.78**	**336**	P	Pn	20 59 51.2	+0.2
BSY				S	Sn	21 00 56.5	-1.0
SMDO	**Samad**	**5.80**	**345**	P	Pn	20 59 51.8	+0.4
	SNR=9.6						
SMDO				S	Sn	21 00 56.3	-1.8
ARQ	**Araqi**	**6.58**	**334**	P	Pn	21 00 03.8	+1.6
ARQ				S	Sn	21 01 18.6	-0.6
UMZA	**Um Al Zommool**	**6.76**	**322**	P	Pn	21 00 06.4	+1.9
UMZA				S	Sn	21 01 20.6	-1.1

DJA 23 21:11:31.0±0.3,9.3S±4.3×11.8E±.,h114km±4km,M3.5/12, mb3.6/2,MLv3.5/12,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.62**	**249**	P	Pn	21 11 49.6	+0.5
PLAI				S	Sn	21 12 04.1	+1.3
WBSI	**Waikabubak, Su**	**1.45**	**136**	P	Pn	21 11 57.0	-0.5
WBSI				S	Sn	21 12 18.2	+0.5
TWSI	**Taliwang, Sumb**	**1.47**	**265**	P	Pn	21 11 57.8	+0.1
TWSI				S	Sn	21 12 19.1	+1.2
WSI	**Waingapu**	**2.19**	**119**	P	Pn	21 12 07.8	+1.2
BASI	**Baing, Sumba**	**2.72**	**126**	P	Pn	21 12 13.7	+0.3
SRBI	**Singaraja**	**3.16**	**279**	P	Pn	21 12 19.4	+0.2
BSSI	**Bau Bau, Buton**	**3.23**	**41**	P	Pn	21 12 19.7	-0.5
EDFI	**Ende, Flores**	**3.30**	**93**	P	Pn	21 12 21.1	0.0
EDFI				S	Sn	21 13 00.5	+0.6
BKSI	**Bulukumba**	**3.70**	**28**	P	Pn	21 12 26.0	-0.4
MMRI	**Maumere**	**3.83**	**91**	P	Pn	21 12 27.9	-0.3
JAGI	**Jajag, Banyuwa**	**4.16**	**271**	P	Pn	21 12 30.7	-2.0
BATI	**Baumata**	**5.47**	**107**	P	Pn	21 12 49.3	-1.0
	0.1nm9.1nm,1.5s						

*IDC **23** 21:12:45.5±4.0,3.89S×101.60E,h0km,mb3.5/6, mbtmp3.5/6,Error ellipse: s-maj=182.0km s-min=22.3km az=53.0*
*DJA **23** 21:12:54.5±0.6,4.4S±4.4×10.2E±.,h27km±6km,M4.0/12, mb4.5/3,MLv3.8/12*

ISC 23 21:12:52.0±0.9,3.85S±0.08×101.74E±0.05,h34km,n17, σ1s91/19,mb3.5/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.86**	**36**	P	**Pb**	**21 13 08.9**	**+0.3**
MASI				S	**Sb**	**21 13 20.7**	**+0.8**
KSI	**Kapahiang**	**0.88**	**77**	P	**Pb**	**21 13 08.7**	**-0.2**
KSI				S	**Sn**	**21 13 19.6**	**0.0**
KRJI	**Kerinci**	**1.76**	**351**	P	**Pb**	**21 13 23.2**	**-0.7**
PPSI	**Pulau Pagai**	**2.03**	**302**	P	**Pb**	**21 13 28.3**	**-0.1**
MDSI	**Maura Dua**	**2.52**	**105**	P	**Pn**	**21 13 33.0**	**+2.4**
LWLI	**Liwa**	**2.59**	**117**	P	**Pn**	**21 13 34.8**	**+3.1**
KASI	**Kota Agung**	**3.22**	**121**	P	**Pn**	**21 13 42.9**	**+2.7**
DSRI	**Dabo**	**4.38**	**40**	P	**Pn**	**21 13 58.2**	**+1.9**
PBSI	**Pulau Batu**	**5.11**	**317**	P	**Pn**	**21 14 09.7**	**+3.5**
	153nm,1.3s						
GSI	**Gunungsitoli**	**6.59**	**321**	P	**Pn**	**21 14 29.2**	**+2.6**
WRA	**Warramunga Arr**	**35.58**	**119**	P	**P**	**21 19 45.5**	**-1.0**
	0.1nm,0.3s,baz=299,slow=8.0,SNR=1.6						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**36.77**	**125**	P	**P**	**21 19 56.1**	**-0.7**
	0.2nm,0.5s,baz=297,slow=7.8,SNR=4.8						
	0.2nm,0.5s						
SONM	**Songino Array**	**51.62**	**4**	P	**P**	**21 21 54.4**	**-1.0**
	0.3nm,0.6s,baz=183,slow=7.9,SNR=2.4						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**53.27**	**343**	P	**P**	**21 22 06.8**	**-0.7**
	1.0nm,0.8s,baz=153,slow=8.9,SNR=8.8						
	1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**57.81**	**343**	P	**P**	**21 22 37.8**	**-2.1**
	0.3nm,0.7s,baz=152,slow=8.1,SNR=3.4						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**59.30**	**348**	P	**P**	**21 22 48.9**	**-1.4**
	1.1nm,0.4s,baz=165,slow=7.0,SNR=7.4						
	1.1nm,0.4s						
TXAR	**Lajitas Array**	**145.03**	**41**	PKPbc	**PKPbc**	**21 32 24.6**	**-1.5**
	0.2nm,0.4s,baz=330,slow=1.8,SNR=4.2						

*NSSP **23** 21:22:44.9,38.65N×43.63E,h10km,Ms3.5*
*ISK **23** 21:22:46.8,38.85N×43.59E,h5km,ML3.3/17*
*TEH **23** 21:22:48.3,38.90N×43.57E,h10km±111km*
*AFAD **23** 21:22:48.7,38.91N×43.56E,h11km,ML3.4*

ISC 23 21:22:48.6±0.9,38.89N±0.02×43.60E±0.02,h8km±7km, n58,σ1s27/80,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.10**	**349**	SPECP		21 22 50.0	
VMUR				P	**Pg**	**21 22 50.8**	**-0.4**
VMUR				S	**Sg**	**21 22 53.3**	**+0.2**
VMUR				*i* IAML		21 22 54.0	
	comp=E,4μm,0.3s						
ERCV	**ERCIS-VAN**	**0.24**	**303**	Pg	**Pg**	**21 22 53.2**	**-0.3**
ERCV	**ERCIS-VAN**	**0.24**	**303**	Pg	**Pg**	**21 22 53.3**	**-0.3**
ERCV				Sg	**Sg**	**21 22 58.3**	**+1.5**
OZAP	**Van, Ozalp-Mer**	**0.38**	**126**	SPECP		21 22 57.0	
OZAP				P	**Pb**	**21 22 57.1**	**-0.7**
OZAP				S	**Sb**	**21 23 05.0**	**+1.1**
OZAP				*i* IAML		21 23 06.0	
	comp=E,3μm,0.8s						
TVAN	**Van**	**0.39**	**203**	SPECP		21 22 56.0	
TVAN				P	**Pg**	**21 22 56.7**	**+0.4**
TVAN				S	**Sb**	**21 23 06.9**	**-0.2**
TVAN				*i* IAML		21 23 10.0	
	comp=N,2μm,0.4s						
DYDN	**Diyadin**	**0.66**	**6**	SPECP		21 23 00.0	
DYDN				P	**Pg**	**21 23 00.9**	**-0.5**
DYDN				S	**Sb**	**21 23 10.6**	**-1.3**
DYDN				*i* IAML		21 23 11.0	
	comp=E,3μm,0.2s						
DYDN				*i* IAML		21 23 12.0	
	comp=N,1μm,0.2s						
ADCV	**BITLIS_Adilcev**	**0.69**	**264**	SPECP		21 23 01.0	
ADCV				P	**Pg**	**21 23 01.8**	**-0.1**
ADCV				S	**Sb**	**21 23 12.5**	**-0.1**
ADCV				*i* IAML		21 23 13.0	
	comp=N,3μm,0.3s						
ADCV				*i* IAML		21 23 13.0	
	comp=E,4μm,0.5s						
AKDM	**Akdamar-Van**	**0.74**	**221**	Pg	**Pg**	**21 23 02.3**	**-0.6**
AKDM	**Akdamar-Van**	**0.74**	**221**	Pg	**Pg**	**21 23 02.4**	**-0.5**
DORK	**Agr/Tutak/Do**	**0.81**	**308**	SPECP		21 23 02.0	
DORK				P	**Pg**	**21 23 02.8**	**-1.4**
AGRB	**Hanur-Agry**	**0.83**	**326**	Pg	**Pg**	**21 23 03.6**	**-1.0**
AGRB	**Hanur-Agry**	**0.83**	**326**	Pg	**Pg**	**21 23 03.8**	**-0.8**
AGRB				Sg	**Sn**	**21 23 17.5**	**-1.9**
MLAZ	**Malazgirt-MUS**	**0.85**	**288**	Pg	**Pg**	**21 23 04.3**	**-0.8**
MLAZ	**Malazgirt-MUS**	**0.85**	**288**	Pg	**Pg**	**21 23 04.3**	**-0.8**
MLAZ				Sg	**Sb**	**21 23 17.6**	**+0.1**
KOTA	**Agri, Merkez-K**	**0.96**	**342**	SPECP		21 23 06.0	
KOTA				P	**Pg**	**21 23 06.3**	**-0.8**
IGDI	**IGDIR**	**1.05**	**21**	SPECP		21 23 08.0	
IGDI				P	**Pb**	**21 23 08.5**	**-0.5**
TASB	**TASBURUN-IGDIR**	**1.20**	**24**	Pn	**Pg**	**21 23 11.5**	**-0.2**
VNNZ	**Vanand**	**1.23**	**8**	*e*P	**Pg**	**21 23 11.7**	**-0.4**
VNNZ				*e*S	**Sn**	**21 23 32.2**	**+3.3**
BLIS	**Bitlis-Merkez**	**1.25**	**248**	P	**Pn**	**21 23 11.0**	**-1.6**
BLIS				S	**Sb**	**21 23 28.5**	**-0.5**
BLIS				*i* IAML		21 23 33.0	
	comp=E,689nm,0.5s						
PERV	**Siirt/Pervari-**	**1.25**	**222**	SPECP		21 23 13.0	
PERV				P	**Pg**	**21 23 13.4**	**+0.7**
GURO	**Guroymak-BITLI**	**1.27**	**255**	Pn	**Pn**	**21 23 11.5**	**-1.3**
GURO				Sn	**Sn**	**21 23 30.1**	**0.0**
EATA	**Eleskirt**	**1.30**	**319**	SPECP		21 23 12.0	
EATA				P	**Pn**	**21 23 12.4**	**-0.9**
METS	**Metsamor**	**1.31**	**16**	*e*P	**Pb**	**21 23 12.9**	**-0.7**
METS				*e*S	**Sg**	**21 23 34.4**	**+3.5**
HAKT	**HAKKARI**	**1.33**	**176**	P	**Pn**	**21 23 13.2**	**-0.5**
NRKZ	**NAREK**	**1.38**	**36**	*e*P	**Pn**	**21 23 13.4**	**-0.9**
NRKZ				*e*S	**Sg**	**21 23 34.9**	**+1.8**
ARUZ	**Aruch**	**1.45**	**15**	*e*P	**Pb**	**21 23 15.0**	**-0.8**
ARUZ				*e*S	**Sg**	**21 23 37.8**	**+2.7**
DIGO	**Kars**	**1.53**	**354**	P	**Pg**	**21 23 17.8**	**-0.3**
GNI	**Garni**	**1.54**	**35**	Pn	**Pb**	**21 23 17.0**	**-0.5**
GNI				Sn	**Sg**	**21 23 38.9**	**+0.7**
GNI	**Garni**	**1.54**	**35**	*e*P	**Pg**	**21 23 17.5**	**-0.7**
GNI				*e*S	**Sg**	**21 23 41.2**	**+3.0**
SRTM	**Siirt_Merkez**	**1.59**	**236**	SPECP		21 23 17.0	
SRTM				P	**Pb**	**21 23 17.8**	**-0.6**
VAYK	**Vayk**	**1.63**	**60**	*i* P	**Pb**	**21 23 18.7**	**-0.3**
VAYK				*i* S	**Sg**	**21 23 42.0**	**+0.9**
MUSM	**Mu-Merkez**	**1.64**	**265**	SPECP		21 23 18.0	
MUSM				P	**Pb**	**21 23 18.5**	**-0.6**
KAPZ	**Kaputan**	**1.67**	**30**	*e*P	**Pb**	**21 23 19.5**	**-0.2**
KAPZ				*e*S	**Sg**	**21 23 44.6**	**+2.4**
VRTB	**Varto-Mus**	**1.69**	**280**	SPECP		21 23 19.0	
VRTB				P	**Pb**	**21 23 19.6**	**-0.4**
VRTB	**Varto-Mus**	**1.69**	**280**	Pn	**Pb**	**21 23 18.8**	**-1.2**
ISHB	**Shabestar**	**1.69**	**110**	Pg	**Pn**	**21 23 18.1**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**1.74**	**310**	Pn	**Pb**	**21 23 19.8**	**-1.2**
HOMI	**Horasan**	**1.75**	**312**	SPECP		21 23 20.0	
HOMI				P	**Pb**	**21 23 20.0**	**-1.0**
BOZK	**Kars-Merkez-Bo**	**1.77**	**344**	SPECP		21 23 20.0	
BOZK				P	**Pb**	**21 23 20.5**	**-0.9**
EAK	**Akyaka**	**1.80**	**0**	P	**Pg**	**21 23 22.6**	**-0.4**
SENK	**Senkaya-Erzuru**	**1.93**	**331**	Pn	**Pb**	**21 23 22.5**	**-1.6**
ERZM	**Erzurum**	**2.00**	**301**	P	**Pb**	**21 23 25.4**	**-0.1**
SLHN	**Bingol, Solhan**	**2.01**	**273**	SPECP		21 23 25.0	
SLHN				P	**Pb**	**21 23 25.1**	**-0.4**
KARO	**Karliova-Bingo**	**2.03**	**283**	Pn	**Pn**	**21 23 23.7**	**+0.5**
AYRK	**Ayrk**	**2.09**	**53**	*e*P	**Pb**	**21 23 26.2**	**-0.8**
AYRK				*e*S	**Sg**	**21 23 56.2**	**+0.3**
ITBZ	**Tabriz**	**2.10**	**107**	Pn	**Pb**	**21 23 25.3**	**-1.8**
IAZR	**Azarshahr**	**2.23**	**122**	Pn	**Pb**	**21 23 28.5**	**-0.8**
SRTK	**Saratovka**	**2.25**	**14**	*e*P	**Pb**	**21 23 27.8**	**-1.8**
SRTK				*e*S	**Sg**	**21 24 01.0**	**+0.2**
BNGB	**Bingl**	**2.28**	**274**	Pn	**Pb**	**21 23 27.1**	**+0.5**
EGVZ	**Egvard**	**2.32**	**81**	*e*P	**Pb**	**21 23 29.2**	**-1.5**
EGVZ				*e*S	**Sg**	**21 24 02.6**	**-0.5**
LSVT	**Lusahovit**	**2.37**	**31**	*e*P	**Pb**	**21 23 29.6**	**-2.0**
LSVT				*e*S	**Sg**	**21 24 03.2**	**-1.5**
YEDI	**Yedisu-Bingol**	**2.44**	**284**	Pn	**Pn**	**21 23 29.5**	**+0.7**
IHRS	**Heris**	**2.76**	**101**	Pn	**Pb**	**21 23 35.5**	**-2.9**
BAYT	**Aydıntepe-Bayb**	**3.06**	**300**	Pn	**Pn**	**21 23 38.5**	**+1.0**
BATM	**Batumi**	**3.08**	**332**	Pn	**Pn**	**21 23 39.1**	**+1.6**
CHOM	**Cayeli-Rize**	**3.10**	**316**	Pn	**Pn**	**21 23 39.3**	**+1.5**
ISRB	**Sarab**	**3.37**	**107**	Pn	**Pn**	**21 23 44.2**	**+2.4**
SVRC	**Sivrice-ELAZID**	**3.40**	**263**	Pn	**Pn**	**21 23 43.0**	**+0.9**

*IDC **23** 21:28:51.3±4.9,20.66S×177.87W,h408km±49km,mb3.3/9, mbtmp4.1/11,Error ellipse: s-maj=26.8km s-min=23.3km az=51.0*
*NEIC **23** 21:28:54.9±2.0,20.75S±0.1×177.79W±0.1,h447km±7km, mb4.2/25,Error ellipse: s-maj=19.4km s-min=17.0km az=137.0*

ISC 23 21:28:56.0±0.7,20.8S±0.1×178.0W±0.1,h450km,n56, σ1s52/51,mb4.0/21,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.76**	**308**	P	**P**	**21 30 19.1**	**+0.9**
NIUE	**Niue**	**7.81**	**79**	P	P	21 30 43.9	-5.6
MARNC	**Mare, Loyalty**	**13.02**	**264**	P	**P**	**21 31 47.0**	**+1.0**
PINNC	**Pines Island,**	**13.62**	**260**	P	**P**	**21 31 53.8**	**+1.4**
DZM	**Mont Dzumac**	**14.51**	**262**	P	**P**	**21 31 59.4**	**-2.7**
	6.3nm,0.8s,baz=92,slow=7.8						
URZ	**Urewera**	**17.95**	**192**	P	**P**	**21 32 35.4**	**-2.6**
	6.4nm,0.7s,baz=297,slow=6.0,SNR=4.4						
TCW	**Tory Channel**	**21.42**	**196**	P	**P**	**21 33 10.3**	**+0.2**
ARMA	**Armidale**	**28.93**	**244**	P	**P**	**21 34 17.1**	**-0.2**
ARMA				IAmb	IAmb	21 34 35.1	
	comp=Z,17nm,1.4s						
CAN	**Canberra**	**32.34**	**236**	P	**P**	**21 34 46.0**	**-0.7**
CAN				IAmb	IAmb	21 35 02.5	
	comp=Z,21nm,1.3s						
CTAO	**Charters Tower**	**33.43**	**265**	P	**P**	**21 34 55.6**	**-0.5**
CTAO				IAmb	IAmb	21 34

MMAI	**Mount Meron Ar**	**147.90**	**299**	PKPbc	**PKPdf**	**21**	**47**	**49.7 +3.3**
	comp=Z,0.6nm,0.4s,baz=91,slow=3.3,SNR=6.3							
BORA	**Eskisehir**	**149.08**	**314**	PKPbc	**PKPdf**	**21**	**47**	**50.8 +2.6**
GERES	**GERESS Array B**	**150.43**	**344**	PKPbc	**PKPdf**	**21**	**47**	**54.2 +4.2**
	comp=Z,0.1nm,0.3s,baz=48,slow=2.0,SNR=3.8							

TAP 23 21:39:32.0, 23.15N×120.92E, h3km, ML0.9, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ELDTW	**Lidau**	**0.10**	**66**	*i*	P	Pg	21 39 35.0	+1.0
ELDTW				*i*	S	Sg	21 39 36.2	+0.9
STYH	**Taoyuan**	**0.14**	**279**	*i*	P	Pg	21 39 35.4	+0.7
STYH					S	Sg	21 39 37.5	+0.9
EHD	**Haiduan**	**0.26**	**90**	*i*	P	Pg	21 39 37.9	+0.8
EHD				*i*	S	Sg	21 39 41.5	+1.0
ECS	**Chishang**	**0.28**	**101**	*eS*		Sb	21 39 43.6	-1.2
WTP	**Ta-pu**	**0.30**	**289**		P	Pb	21 39 39.3	-0.8
WTP					S	Sb	21 39 44.1	-1.4
TPUB	**Ta-pu**	**0.31**	**299**	*eP*		Pb	21 39 39.6	-0.6
TPUB					S	Sb	21 39 44.4	-1.3
SGST	**Jiashian**	**0.32**	**258**	*i*	P	Pg	21 39 39.1	+0.9
SGST				*i*	S	Sb	21 39 44.2	-1.8
FULB	**Fuli**	**0.35**	**82**	*eP*		Pb	21 39 40.6	-0.3
TWG	**Pinlang**	**0.36**	**157**	*eP*		Pb	21 39 40.0	-1.0
TWG				*eS*		Sb	21 39 45.8	-1.2
TWGBT	**Beinan**	**0.36**	**156**	*eP*		Pb	21 39 40.2	-0.9
TWGBT				*eS*		Sg	21 39 45.1	+1.4
CHN1	**Nanshi**	**0.36**	**276**	*eS*		Sb	21 39 46.7	-0.6
ALS	**Alishan**	**0.38**	**343**		P	Pg	21 39 40.3	+0.9
ALS					S	Sg	21 39 45.8	+1.5
EDH	**Donghe**	**0.39**	**117**	*eP*		Pb	21 39 41.0	-0.7
SNST	**Tainan City**	**0.40**	**280**	*eS*		Sb	21 39 48.7	+0.5
TWF1	**Yuli**	**0.40**	**60**	*i*	P	Pb	21 39 40.8	-1.0
TWF1					S	Sg	21 39 45.7	+0.8
YULB	**Yu-li**	**0.42**	**55**	*i*	P	Pg	21 39 40.9	+0.8
EHYH	**Wanrong**	**0.52**	**49**	*eP*		Pg	21 39 42.7	+0.7
EHYH				*eS*		Sg	21 39 49.7	+1.0
WHYT	**Xinyi Township**	**0.55**	**353**	*eP*		Pb	21 39 43.7	-0.6
WHYT				*eS*		Sg	21 39 51.1	+1.4
HGSD	**Ruisui**	**0.57**	**53**	*eP*		Pb	21 39 44.9	+0.2
HGSD				*eS*		Sb	21 39 53.1	-0.2
MASBT	**Mashibuluo**	**0.60**	**207**	*eP*		Pg	21 39 43.6	+0.1
VWDT	**VWDT**	**0.63**	**18**	*eP*		Pg	21 39 44.9	+0.6
SSLB	**Suanglung**	**0.64**	**3**	*eP*		Pg	21 39 44.4	+0.1
SSLB	**Suanglung**	**0.64**	**3**		P	Pg	21 39 44.3	0.0

IDC 23 21:43:13.7±0.8, 21.98N×143.05E, h0km, mb3.9/14, mbtmp3.9/14, MS2.6/1, Error ellipse: s-maj=27.1km s-min=18.2km az=73.0
ISC 23 21:43:19.0±0.9, 22.0N±0.1×143.0E±0.2, h35km, n20, σ0.963/15, mb3.9/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCJ	**Chichijima**	**5.17**	**352**		Pn	Pn	21 44 23.0	-11
	7.8nm,0.3s,baz=167,slow=14,SNR=2.2							
JCJ					Sn	Sn	21 45 18.6	-14
	2.3nm,0.3s,baz=75,slow=20,SNR=1.4							
KSRS	**Korea Array**	**20.22**	**323**		P	**P**	**21 47 51.7**	**+0.7**
	1.4nm,0.7s,baz=136,slow=8.6,SNR=9.4							
	1.4nm,0.7s							
ASAJ	**Asahikawa**	**22.10**	**359**	LR		LR	21 59 00.2	
	comp=Z,15nm,19.7s,baz=280,slow=43							
H11S3	**WAKE ISLAND Hy 22.45**	**95**		T		T	22 11 41.4	
	baz=283,slow=75,SNR=61							
H11S1	**WAKE ISLAND Hy 22.46**	**95**		T		T	22 11 47.8	
	baz=283,slow=75,SNR=60							
H11S2	**WAKE ISLAND Hy 22.47**	**95**		T		T	22 11 34.9	
	baz=283,slow=75,SNR=61							
SONM	**Songino Array**	**39.05**	**320**		P	**P**	**21 50 42.4**	**-0.1**
	0.6nm,0.8s,baz=121,slow=6.1,SNR=4.0							
	0.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**41.42**	**273**		P	**P**	**21 51 03.1**	**+0.7**
	0.6nm,0.6s,baz=54,slow=8.8,SNR=6.7							
	0.6nm,0.6s							
WRA	**Warramunga Arr**	**42.50**	**192**		P	**P**	**21 51 11.0**	**-0.1**
	1.3nm,0.7s,baz=12,slow=8.7,SNR=12							
	1.3nm,0.7s							
ASAR	**Alice Springs**	**46.21**	**192**		P	**P**	**21 51 40.5**	**-0.3**
	0.4nm,0.6s,baz=16,slow=12,SNR=9.5							
	0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**53.92**	**322**		P	**P**	**21 52 38.1**	**-0.7**
	4.0nm,0.7s,baz=96,slow=6.9,SNR=17							
	4.0nm,0.7s							
MKAR	**Makanchi Array**	**54.42**	**313**		P	**P**	**21 52 42.7**	**0.0**
	0.5nm,0.6s,baz=75,slow=9.3,SNR=7.1							
	0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**57.24**	**317**		P	**P**	**21 53 02.3**	**-0.5**
	2.3nm,0.8s,baz=95,slow=7.7,SNR=24							
	2.3nm,0.8s							
ILAR	**Eielson Array**	**61.87**	**27**		P	**P**	**21 53 34.0**	**-0.5**
	0.6nm,1.0s,baz=236,slow=6.4,SNR=3.1							
	0.6nm,1.0s							
BVAR	**Borovoye Array**	**62.38**	**319**		P	**P**	**21 53 38.1**	**0.0**
	5.4nm,0.6s,baz=84,slow=8.2,SNR=14							
	5.4nm,0.6s							
KBZ	**Khabaz**	**82.09**	**314**		P	**P**	**21 55 36.2**	**+0.3**
	2.5nm,1.0s,baz=139,slow=5.6,SNR=4.4							
	2.5nm,1.0s							
FINES	**FINESS Array B**	**82.89**	**334**		P	**P**	**21 55 39.5**	**-0.3**
	1.5nm,0.8s,baz=54,slow=9.7,SNR=4.9							
	1.5nm,0.8s							
NVAR	**Mina Array Bea**	**83.09**	**51**		P	**P**	**21 55 42.8**	**+1.1**
	0.8nm,0.7s,baz=274,slow=6.5,SNR=6.0							
	0.8nm,0.7s							
BRTR	**Keskin Array B**	**90.06**	**313**		P	**P**	**21 56 14.6**	**-1.1**
	1.1nm,0.9s,baz=37,slow=3.1,SNR=4.5							
	1.1nm,0.9s							
LPAZ	**La Paz**	**150.06**	**85**	PKPbc		**PKPbc**	**22 03 07.5**	**0.0**
	2.2nm,0.6s,baz=253,slow=3.1,SNR=7.3							

JMA 23 22:02:57.5±0.3, 44°N±1°×14°7E±°, h30km, MV3.7/29, E OFF HOKKAIDO
SKHL 23 22:02:58.1±0.2, 43°.70N×147°.30E, h40km±4km, mb4.8/4
ISC 23 22:02:57.6±2.0, 43.8N±0.1×147.2E±0.1, h71km±16km, n18, σ1.953/25, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHO	**Shikotan**	**0.30**	**294**	*i*	P	Pn	22 03 14.4	+5.4
SHO					AMB	AMB	22 03 14.9	
	230nm,0.2s							
SHO				*eS*		**Sn**	**22 03 20.8**	**+3.5**
SHO					A	A	22 03 21.8	
	6μm,0.2s							
SHO					A	A	22 03 21.8	
	7μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.02**	**287**	*i*	P	**Pn**	**22 03 15.7**	**-0.7**
YUK					AMB	AMB	22 03 16.0	
	700nm,0.3s							
YUK				*i*	S	**Sn**	**22 03 28.8**	**-1.6**
YUK					A	A	22 03 30.0	
	2μm,0.2s							
YUK					A	A	22 03 30.0	
	680nm,0.2s							
NEM2	**Nemuro 2**	**1.14**	**251**	*i*	P	**Pn**	**22 03 16.8**	**-1.0**
NEM2					S	**Sn**	**22 03 30.8**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.15**	**251**	*i*	P	**Pn**	**22 03 16.8**	**-1.2**
NMR				*i*	S	**Sn**	**22 03 30.8**	**-2.4**
GLVR	**Golovnino**	**1.23**	**270**	*eP*		**Pn**	**22 03 19.0**	**-0.1**
GLVR					AMB	AMB	22 03 20.0	
	730nm,0.2s							
GLVR				*i*	S	**Sn**	**22 03 34.7**	**-0.4**
GLVR					A	A	22 03 37.1	
	2μm,0.2s							
GLVR					A	A	22 03 37.1	
	1μm,0.2s							
JRA	**Rausu**	**1.53**	**278**		P	**Pn**	**22 03 23.4**	**+0.4**
KUR	**Kuril'sk**	**1.56**	**17**	*eP*		**Pn**	**22 03 23.1**	**-0.2**
KUR					AMB	AMB	22 03 24.9	
	50nm,0.2s							
KUR				*eS*		**Sn**	**22 03 41.5**	**-1.3**
KUR					A	A	22 03 45.3	
	120nm,0.2s							
KUR					A	A	22 03 45.3	
	70nm,0.2s							
JNSB	**Nemuroshibetsu**	**1.60**	**272**		P	**Pn**	**22 03 24.5**	**+0.5**
JKHN	**Kushirohamanak**	**1.64**	**247**		P	**Pn**	**22 03 24.1**	**-0.3**
JNK	**Nakash**	**1.82**	**266**	*i*	P	**Pn**	**22 03 26.9**	**0.0**
AKK	**Akkeshi**	**1.88**	**248**	*eP*		**Pn**	**22 03 27.1**	**-0.5**
JAK	**Akkeshi**	**1.98**	**249**		P	**Pn**	**22 03 28.7**	**-0.3**
JAK				*eS*		**Sn**	**22 03 52.1**	**-0.8**
JTKR	**Abashiri--Toko**	**2.40**	**276**		P	**Pn**	**22 03 36.1**	**+1.4**
JAR	**Ashorobuto**	**2.55**	**261**		P	**Pn**	**22 03 37.9**	**+1.2**
JOB	**Onbets**	**2.61**	**252**		P	**Pn**	**22 03 38.2**	**+0.7**
JOB				*eS*		**Sn**	**22 04 08.2**	**+0.1**
JFR	**Furan**	**3.42**	**262**	*eP*		**Pn**	**22 03 50.8**	**+2.3**
JEM	**Erimo**	**3.45**	**241**	*eP*		**Pn**	**22 03 51.6**	**+2.7**
JNBK	**Urakawa-nobuka**	**3.59**	**247**	*eP*		**Pn**	**22 03 51.5**	**+0.7**

NOU 23 22:05:35.7, 40.48S×174.35E, h87km, ML4.0/19, Cook Strait, New Zealand
WEL 23 22:05:37.3±0.8, 41°S±3°×17°4E±°, h63km±12km, M3.6/19, ML3.6/19, MLv3.6/19, Error ellipse: s-maj=4.3km s-min=3.5km az=84.6, confirmed
ISC 23 22:05:33.7±1.3, 40.53S±0.03×174.21E±0.03, h110km±8km, n132, σ1.910/144, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DUWZ	**D'Urville Isla**	**0.35**	**218**		P	**Pn**	**22 05 49.4**	**-0.3**
DUWZ					S	**Sn**	**22 05 59.3**	**-2.4**
KIW	**Kapiti Island**	**0.63**	**122**		P	**Pn**	**22 05 52.0**	**+0.5**
TCW	**Tory Channel**	**0.69**	**176**		P	**Pn**	**22 05 52.7**	**+0.8**
OGWZ	**Otaki Gorge**	**0.79**	**112**		P	**Pn**	**22 05 53.7**	**+0.9**
WEL	**Wellington**	**0.87**	**151**		P	**Pn**	**22 05 54.6**	**+1.1**
SNZO	**South Karori**	**0.87**	**154**		P	**Pn**	**22 05 54.5**	**+1.0**
SNZO	**South Karori**	**0.87**	**154**		P	**Sn**	**22 06 07.9**	**-0.6**
CAW	**Cannon Point**	**0.87**	**132**		P	**Pn**	**22 05 54.7**	**+1.1**
OHWZ	**Ohakea**	**0.91**	**70**		P	**Pn**	**22 05 55.0**	**+1.1**
NNZ	**Nelson**	**0.93**	**222**		P	**Pn**	**22 05 54.5**	**+0.4**
WAZ	**Wanganui**	**0.97**	**98**		P	**Pn**	**22 05 55.9**	**+1.2**
BHW	**Baring Head**	**1.01**	**150**		P	**Pn**	**22 05 56.0**	**+1.0**
MRZ	**Mangatainoka R**	**1.05**	**98**		P	**Pn**	**22 05 56.3**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.06**	**111**		P	**Pn**	**22 05 56.5**	**+0.9**
TKNZ	**Takaka Hill**	**1.07**	**241**		P	**Pn**	**22 05 55.6**	**0.0**
LREZ	**Lake Rotokare**	**1.07**	**8**		P	**Pn**	**22 05 56.7**	**+1.0**
NMEZ	**Namu Road**	**1.14**	**347**		P	**Pn**	**22 05 56.8**	**+0.5**
MTW	**Mount Morrison**	**1.17**	**123**		P	**Pn**	**22 05 57.7**	**+1.1**
PREZ	**Palmer Road**	**1.18**	**358**		P	**Pn**	**22 05 57.7**	**+0.8**
MSWZ	**Moikau Station**	**1.19**	**139**		P	**Pn**	**22 05 58.1**	**+1.2**
POWZ	**Post Office Ro**	**1.20**	**84**		P	**Pn**	**22 05 57.9**	**+0.9**
BSWZ	**Blackbirch Sta**	**1.21**	**192**		P	**Pn**	**22 05 58.5**	**+1.4**
CMWZ	**Cape Campbell**	**1.22**	**180**		P	**Pn**	**22 05 59.2**	**+2.0**
KHEZ	**Kahui Hut**	**1.24**	**353**		P	**Pn**	**22 05 58.1**	**+0.6**
KHEZ	**Kahui Hut**	**1.24**	**353**		S	**Sn**	**22 06 15.1**	**-0.5**
KHEZ	**Kahui Hut**	**1.24**	**353**		P	**Pn**	**22 05 58.2**	**+0.6**
NEZ	**North Egmont**	**1.26**	**356**		P	**Pn**	**22 05 58.6**	**+0.8**
PAWZ	**Paruwai Farm**	**1.26**	**133**		P	**Pn**	**22 05 58.9**	**+1.2**
NBEZ	**Newall Road No**	**1.28**	**348**		P	**Pn**	**22 05 58.7**	**+0.7**
TIWZ	**Tintock**	**1.30**	**102**		P	**Pn**	**22 05 59.2**	**+1.0**
TIWZ					S	**Sn**	**22 06 16.0**	**-0.8**
PLWZ	**Palliser**	**1.31**	**143**		P	**Pn**	**22 05 59.4**	**+1.1**
PLWZ					S	**Sn**	**22 06 16.5**	**-0.4**
QRZ	**Quartz Range**	**1.31**	**256**		P	**Pn**	**22 05 57.8**	**-0.5**
QRZ					S	**Sn**	**22 06 14.8**	**-2.1**
DREZ	**Durham Road**	**1.34**	**360**		P	**Pn**	**22 05 59.5**	**+0.9**
DREZ					S	**Sn**	**22 06 17.2**	**-0.2**
PKE	**Pukeiti**	**1.34**	**353**		P	**Pn**	**22 05 59.3**	**+0.7**
PKE					S	**Sn**	**22 06 17.4**	**-0.1**
PRWZ	**Pori Road**	**1.34**	**92**		P	**Pn**	**22 05 59.9**	**+1.2**
PRWZ					S	**Sn**	**22 06 17.3**	**-0.3**
MRNZ	**Matariki Terra**	**1.40**	**231**		P	**Pn**	**22 06 00.0**	**+0.7**
MRNZ					S	**Sn**	**22 06 18.5**	**-0.2**
TMWZ	**Te Maipa**	**1.40**	**115**		P	**Pn**	**22 06 00.5**	**+1.1**
TRWZ	**Traveller**	**1.42**	**128**		P	**Pn**	**22 06 00.8**	**+1.2**
TRWZ					S	**Sn**	**22 06 18.7**	**-0.4**
TSZ	**Takapari Road**	**1.42**	**71**		P	**Pn**	**22 06 00.3**	**+0.7**
TSZ					S	**Sn**	**22 06 19.6**	**+0.4**
MHEZ	**Mangahewa**	**1.45**	**4**		P	**Pn**	**22 06 01.2**	**+1.3**
MHEZ					S	**Sn**	**22 06 19.6**	**-0.2**
VRZ	**Vera Road**	**1.46**	**17**		P	**Pn**	**22 06 01.1**	**+1.1**
VRZ					S	**Sn**	**22 06 19.9**	**-0.1**
MTVZ	**Mangateitei**	**1.50**	**41**		P	**Pn**	**22 06 01.5**	**+0.9**
DVHZ	**Dannevirke**	**1.51**	**82**		P	**Pn**	**22 06 01.2**	**+0.5**
PKVZ	**Pokaka**	**1.52**	**36**		P	**Pn**	**22 06 01.6**	**+0.8**
BFZ	**Birch Farm**	**1.56**	**96**		P	**Pn**	**22 06 01.8**	**+0.6**
BFZ	**Birch Farm**	**1.56**	**96**		P	**Sn**	**22 06 20.6**	**-1.5**
BFZ	**Birch Farm**	**1.56**	**96**		P	**Pn**	**22 06 02.0**	**+0.8**
CPWZ	**Castlepoint**	**1.56**	**105**		P	**Pn**	**22 06 02.9**	**+1.7**
THZ	**Tophouse**	**1.58**	**218**		P	**Pn**	**22 06 02.4**	**+0.9**
TRVZ	**Turoa**	**1.60**	**41**		P	**Pn**	**22 06 02.9**	**+1.0**
WNVZ	**Wahianoa**	**1.61**	**42**		P	**Pn**	**22 06 02.9**	**+0.9**
MOVZ	**Moawhango**	**1.63**	**47**		P	**Pn**	**22 06 02.8**	**+0.6**
MAZ	**Mataroa**	**1.63**	**47**		P	**Pn**	**22 06 02.8**	**+1.0**
WHVZ	**Whangaehu Hut**	**1.64**	**41**		P	**Pn**	**22 06 03.5**	**+1.1**
FWVZ	**Far West T-bar**	**1.64**	**40**		P	**Pn**	**22 06 03.4**	**+1.0**
PNHZ	**Pukenui**	**1.64**	**69**		P	**Pn**	**22 06 02.7**	**+0.4**
COVZ	**Chateau Observ**	**1.68**	**38**		P	**Pn**	**22 06 04.5**	**+1.8**
TUVZ	**Tukino**	**1.68**	**42**		P	**Pn**	**22 06 03.9**	**+1.1**
NGZ	**Ngauruhoe**	**1.72**	**39**		P	**Pn**	**22 06 04.3**	**+0.9**
ANWZ	**Angora Road**	**1.73**	**89**		P	**Pn**	**22 06 04.2**	**+0.9**
SNVZ	**South Ngauruho**	**1.73**	**40**		P	**Pn**	**22 06 04.5**	**+1.0**
TWVZ	**Taurewa**	**1.74**	**34**		P	**Pn**	**22 06 04.2**	**+0.8**
NNVZ	**North Ngauruho**	**1.77**	**38**		P	**Pn**	**22 06 04.8**	**+0.9**
OTVZ	**Oturere**	**1.77**	**40**		P	**Pn**	**22 06 05.0**	**+1.1**
WTVZ	**West Tongariro**	**1.77**	**38**		P	**Pn**	**22 06 04.8**	**+0.9**
WPHZ	**Waipukurau**	**1.77**	**76**		P	**Pn**	**22 06 04.6**	**+0.8**
KRVZ	**Karewarewa**	**1.81**	**38**		P	**Pn**	**22 06 05.2**	**+0.8**
NTVZ	**North Tongariro**	**1.82**	**39**		P	**Pn**	**22 06 05.6**	**+1.1**
TMVZ	**Te Maari**	**1.82**	**40**		P	**Pn**	**22 06 05.6**	**+1.0**
PRHZ	**Porangahau**	**1.87**	**83**		P	**Pn**	**22 06 05.9**	**+0.8**
KRHZ	**Kereru**	**1.88**	**63**		P	**Pn**	**22 06 05.8**	**+0.3**
KATZ	**Kakaramea**	**1.93**	**37**		P	**Pn**	**22 06 07.1**	**+1.2**
KHZ	**Kahutara**	**1.95**	**195**		P	**Pn**	**22 06 07.1**	**+1.1**
KHZ	**Kahutara**	**1.95**	**195**		P	**Pn**	**22 06 07.5**	**+1.4**
RITZ	**Rihia Road**	**2.00**	**40**		P	**Pn**	**22 06 09.6**	**+2.8**
KWHZ	**Kaweka Forest**	**2.03**	**58**		P	**Pn**	**22 06 07.7**	**+0.6**
RATZ	**Rangitukua**	**2.05**	**37**		P	**Pn**	**22 06 09.4**	**+2.1**
HIZ	**Hauiti**	**2.07**	**14**		P	**Pn**	**22 06 08.2**	**+0.6**
HIZ	**Hauiti**	**2.07**	**14**		S	**Sn**	**22 06 33.2**	**-0.3**
HIZ	**Hauiti**	**2.07**	**14**		P	**Pn**	**22 06 08.5**	**+0.9**
PXZ	**Pawanui**	**2.09**	**77**		P	**Pn**	**22 06 08.2**	**+0.4**
WATZ	**Wairara**	**2.17**	**33**		P	**Pn**	**22 06 10.6**	**+1.8**
KAHZ	**Kahuranaki**	**2.17**	**71**		P	**Pn**	**22 06 09.4**	**+0.5**
DSZ	**Denniston Nort**	**2.19**	**235**		P	**Pn**	**22 06 09.5**	**+0.5**
MCHZ	**McNeill Hill**	**2.20**	**61**		P	**Pn**	**22 06 09.6**	**+0.4**
BKZ	**Black Stump Fm**	**2.22**	**53**		P	**Pn**	**22 06 09.6**	**0.0**
BKZ	**Black Stump Fm**	**2.22**	**53**		P	**Pn**	**22 06 09.8**	**+0.3**
CKHZ	**Cape Kidnapper**	**2.37**	**69**		P	**Pn**	**22 06 11.6**	**+0.3**
MRHZ	**Matea Rd**	**2.40**	**46**		P	**Pn**	**22 06 11.6**	**-0.3**
TLZ	**Tolley Road**	**2.42**	**26**		P	**Pn**	**22 06 13.5**	**+1.4**
NMHZ	**Naumai**	**2.46**	**55**		P	**Pn**	**22 06 13.1**	**+0.4**
ARHZ	**Aropaoanui**	**2.49**	**60**		P	**Pn**	**22 06 12.9**	**0.0**
GVZ	**Greta Valley S**	**2.59**	**199**		P	**Pn**	**22 06 15.1**	**+0.8**
MTHZ	**Maungataniwha**	**2.63**	**51**		P	**Pn**	**22 06 14.5**	**-0.3**
LTZ	**Lake Taylor**	**2.68**	**212**		P	**Pn**	**22 06 15.8**	**+0.4**
RAHZ	**Arahi**	**2.74**	**55**		P	**Pn**	**22 06 16.0**	**-0.3**
WHHZ	**Waihua**	**2.75**	**59**		P	**Pn**	**22 06 16.1**	**-0.2**
RTZ	**Ruatahuna**	**2.87**	**49**		P	**Pn**	**22 06 17.2**	**-0.8**
AMCZ	**Amberley**	**2.89**	**203**		P	**Pn**	**22 06 18.8**	**+0.6**
TOZ	**Tahuroa Road**	**2.97**	**20**		P	**Pn**	**22 06 20.1**	**+0.8**
SNGZ	**Shannon Statio**	**2.98**	**55**		P	**Pn**	**22 06 18.9**	**-0.6**
INZ	**Inchbonnie**	**3.02**	**222**		P	**Pn**	**22 06 20.5**	**+0.6**
KNZ	**Kokohu**	**3.06**	**62**		P	**Pn**	**22 06 19.6**	**-0.9**
MHGZ	**Mahia Peninsul**	**3.16**	**65**		P	**Pn**	**22 06 21.3**	**-0.5**
URZ	**Urewera**	**3.19**	**46**		P	**Pn**	**22 06 21.7**	**-0.5**
URZ	**Urewera**	**3.19**	**46**		S	**Sn**	**22 06 58.4**	**-1.2**
URZ	**Urewera**	**3.19**	**46**		P	**Pn**	**22 06 21.0**	**-1.2**
OXZ	**Oxford**	**3.23**	**209**		P	**Pn**	**22 06 22.0**	**-0.8**
PRGZ	**Paritu Road**	**3.26**	**62**		P	**Pn**	**22 06 22.2**	**-0.9**
RIGZ	**Rimuhau**	**3.29**	**58**		P	**Pn**	**22 06 22.9**	**-0.7**
OKCZ	**Okains Bay**	**3.31**	**195**		P	**Pn**	**22 06 23.8**	**0.0**
MQZ	**McQueen's Vall**	**3.38**	**199**		P	**Pn**	**22 06 23.9**	**-0.7**
AWAZ	**Awhitu Peninsu**	**3.47**	**6**		P	**Pn**	**22 06 27.3**	**+1.3**
AKCZ	**Akaroa Harbour**	**3.48**	**196**		P	**Pn**	**22 06 25.7**	**-0.3**
MKAZ	**Moumakai**	**3.50**	**13**		P	**Pn**	**22 06 27.2**	**+0.9**
MHCZ	**Mount Hutt**	**3.59**	**212**		P	**Pn**	**22 06 29.2**	**+1.7**
WTAZ	**Waiatarua**	**3.60**	**5**		P	**Pn**	**22 06 29.6**	**+1.9**
ETAZ	**East Tamaki Re**	**3.61**	**9**		P	**Pn**	**22 06 29.2**	**+1.4**
CNGZ	**Carnagh Statio**	**3.71**	**58**		P	**Pn**	**22 06 28.2**	**-0.9**
RUGZ	**Raukumara Rang**	**3.71**	**48**		P	**Pn**	**22 06 27.6**	**-1.7**
TWGZ	**Tauwhareparae**	**3.75**	**52**		P	**Pn**	**22 06 29.2**	**-0.5**
MBAZ	**Motutapu North**	**3.79**	**8**		P	**Pn**	**22 06 31.8**	**+1.6**
WIAZ	**Waiheke Island**	**3.80**	**11**		P	**Pn**	**22 06 31.5**	**+1.2**
WACZ	**Wakanui South**	**3.84**	**206**		P	**Pn**	**22 06 30.2**	**-0.6**
RPZ	**Rata Peaks**	**3.96**	**215**		P	**Pn**	**22 06 36.0**	**+3.6**
KUZ	**Kuaotunu**	**3.96**	**18**		P	**Pn**	**22 06 33.3**	**+0.9**
KUZ	**Kuaotunu**	**3.96**	**18**		S	**Sn**	**22 07 17.3**	**-0.7**
KUZ	**Kuaotunu**	**3.96**	**18**		P	**Pn**	**22 06 33.3**	**+0.9**
ODZ	**Otahua Downs**	**5.22**	**209**		P	**Pn**	**22 06 51.9**	**+2.5**
OUZ	**Omahuta**	**5.32**	**355**		P	**Pn**	**22 06 52.2**	**+1.4**
JCZ	**Jackson Bay**	**5.36**	**227**		P	**Pn**	**22 06 55.1**	**+3.7**
CTZ	**Chatham Island**	**7.54**	**118**		P	**Pn**	**22 07 22.0**	**+1.2**

DNK 23 22:14:15.2±2.1, 51.31N×16.14E, h24km±74km, ML2.3
IPEC 23 22:14:16.1±0.2, 51.45N×16.39E, h1km, ML2.5/6, Error ellipse: s-maj=1.8km s-min=1.4km az=50.0
IDC 23 22:14:16.1±0.8, 51.36N×15.68E, h0km, mbtmp3.4/7, ML2.9/7, Error ellipse: s-maj=18.0km s-min=7.0km az=95.0
VIE 23 22:14:17.7±0.6, 51.34N×16.38E, h0km, mb2.8/7, ml2.7/11, Error ellipse: s-maj=7.1km s-min=4.1km az=72.0 52 km NW of Wroclaw Suspected Mining induced.
PRU 23 22:14:18.5, 51.38N×16.24E, h0km
ISC 23 22:14:14.6±0.7, 51.51N±0.03×16.24E±0.02, h0km, n50, σ1.967/91, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSP	**Ksiaz**	**0.67**	**177**	*eP*	g	**Pg**	**22 14 28.2**	**+0.8**
KSP				*eS*	g	**Sg**	**22 14 35.9**	**-0.2**
CHVC	**Chvalec**	**0.93**	**187**	*eP*	G	**Pg**	**22 14 33.3**	**+0.9**
CHVC				*eS*	G	**Sg**	**22 14 44.6**	**+0.1**
	comp=Z,76nm,0.5s							
OSTC	**Ostas**	**0.96**	**181**	*eP*	G	**Pg**	**22 14 34.0**	**+1.1**
OSTC				*eS*	G	**Sg**	**22 14 45.7**	**+0.4**
	comp=Z,57nm,0.6s							
UPC	**Upice**	**1.02**	**188**	*eP*	G	**Pg**	**22 14 34.6**	**+0.6**
UPC				*eS*	G	**Sg**	**22 14 47.6**	**+0.4**
	comp=Z,149nm,0.5s							
DPC	**Dobruska-Polom**	**1.17**	**177**	*eP*	G	**Pg**	**22 14 37.2**	**+0.3**
DPC				*eS*	G	**Sg**	**22 14 52.0**	**0.0**
	comp=Z,53nm,0.5s							
PIVO	**Bartosovice**	**1.34**	**171**	*eP*	g	**Pg**	**22 14 40.3**	**0.0**
	baz=356							
PIVO					*eS*	g	**Sg**	**22 14 55.9**	**-1.8**
	58nm,0.5s,baz=356							
PVCC	**Panska Ves**	**1.44**	**228**	*eP*	G	**Pb**	**22 14 43.4**	**+1.1**
PVCC				*eS*	G	**Sg**	**22 15 02.2**	**+1.3**
	comp=Z,218nm,0.4s							
KRLC	**Kraliky**	**1.48**	**166**	*eP*	G	**Pn**	**22 14 42.8**

comp=Z,1.3nm,0.6s
NOA NORSAR Array B 9.95 346 Pn **Pn 22 16 39.7 +1.1**
baz=162,slow=12,SNR=1.5
NOA Sn **Sn 22 18 24.5 -6.4**
baz=318,slow=26,SNR=0.8
comp=Z,0.4nm,0.8s
FINES FINESS Array B 11.33 25 Pn **Pn 22 16 57.0 -0.5**
comp=Z,0.2nm,0.3s,baz=213,slow=13,SNR=7.8
FINES Sn **Sn 22 19 01.2 -3.4**
comp=Z,0.2nm,0.3s,baz=211,slow=21,SNR=3.9
comp=Z,2.0nm,0.8s
EKA Eskdalemuir Ar 12.18 296 Pn **Pn 22 17 07.1 -2.0**
baz=104,slow=18
comp=Z,2.9nm,1.0s
ARCES ARCESS Array B 18.61 10 Pn **P 22 18 32.5 -0.6**
comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=9.5
comp=Z,1.4nm,0.8s

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*LDG **23** 22:14:55.0±0.1, 44.°55N×4.°66E, h2km, Md2.6/2, Ml2.5/26, Error ellipse: s-maj=1.4km s-min=1.1km az=156.0*
*STR **23** 22:14:55.8±0.0, 44.°55N±0.°05×4.°65E±0.°04, h5km, MLv2.2/28, LOCSAT earthModelID auvergne_taup-2.11 preliminary*
*MDD **23** 22:14:56.8±0.2, 44.°58N×4.°66E, h0km, Mb4.0/10, M_mb3.3/10, Error ellipse: s-maj=2.2km s-min=1.4km az=139.0*

ISC 23 22:14:54.6±1.1, 44.°55N±0.°02×4.°66E±0.°01, h5km±9km, n75, σ1°22/141, 1C, France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VIVF	**Saint-Julien-l**	**0.31**	**1**	*e*Pg		**Pg**	**22 15 01.0**	**+0.4**
VIVF				*e*Sg		**Sg**	**22 15 05.0**	**+0.4**
	73nm,0.2s							
SAUF	**chteau de Sau**	**0.69**	**152**	Pg		**Pb**	**22 15 09.0**	**0.0**
SAUF				Sg		**Sb**	**22 15 20.4**	**+1.5**
SSB	**Saint Sauveur**	**0.73**	**353**	Pg		**Pg**	**22 15 09.1**	**+0.4**
SSB				Sg		**Sb**	**22 15 19.4**	**-0.9**
LASF	**Ste Croix**	**0.75**	**231**	*e*Pg		**Pg**	**22 15 08.5**	**-0.4**
LASF	**Ste Croix**	**0.75**	**231**	*e*Pn		**Pb**	**22 15 10.4**	**+0.3**
LASF				*e*Sg		**Sg**	**22 15 19.3**	**+0.7**
	53nm,0.2s							
SMRF	**Simiane la Rot**	**0.87**	**131**	*e*Pg		**Pb**	**22 15 11.9**	**-0.3**
SMRF				*e*Sg		**Sg**	**22 15 23.3**	**+0.7**
	13nm,0.2s							
ORIF	**Oris-en-Rattie**	**0.94**	**67**	*e*Pg		**Pg**	**22 15 13.1**	**+0.4**
ORIF				*e*Sg		**Sg**	**22 15 24.7**	**-0.2**
	5.5nm,0.2s							
ORIF	**Oris-en-Rattie**	**0.94**	**67**	Pg		**Pb**	**22 15 13.7**	**+0.3**
MLYF	**Mely**	**0.97**	**125**	Pg		**Pb**	**22 15 13.8**	**-0.2**
MLYF				Sg		**Sn**	**22 15 28.5**	**-0.6**
BSTF	**la Bastide-des**	**0.97**	**133**	Pg		**Pn**	**22 15 15.6**	**+0.7**
GRN	**Grenoble**	**1.03**	**48**	Pg		**Pg**	**22 15 14.6**	**+0.2**
GRN				Sg		**Sn**	**22 15 30.1**	**-0.6**
LAJAS	**L'Hospitalet-d**	**1.19**	**241**	Pn		**Pg**	**22 15 16.9**	**-0.5**
LAJAS				Pg		**Pb**	**22 15 17.8**	**+0.2**
LAJAS				Sg		**Sn**	**22 15 33.9**	**-0.5**
LBL	**Lubilhac**	**1.22**	**305**	Pn		**Pg**	**22 15 17.7**	**-0.2**
LBL				Pg		**Pn**	**22 15 18.6**	**+0.3**
LBL				Sg		**Sn**	**22 15 35.1**	**-0.2**
OGDI	**Digne**	**1.25**	**110**	Pg		**Pg**	**22 15 17.5**	**-1.1**
OGDI				Sg		**Sg**	**22 15 33.3**	**-1.1**
ARTF	**Artigues**	**1.27**	**139**	Pg		**Pb**	**22 15 17.5**	**-1.4**
ARTF				Pg		**Pb**	**22 15 19.9**	**+1.0**
ARTF				Sg		**Sg**	**22 15 34.1**	**-1.1**
OGSM	**Saint Maurice**	**1.29**	**34**	Pn		**Pn**	**22 15 18.7**	**-0.6**
OGSM				Pg		**Pg**	**22 15 20.0**	**+0.7**
CREF	**Crivoux**	**1.40**	**89**	Pn		**Pn**	**22 15 20.8**	**-0.1**
CREF				Sn		**Sb**	**22 15 39.6**	**0.0**
TRIGF	**Trigance**	**1.49**	**122**	Pg		**Pg**	**22 15 24.5**	**+1.3**
JAUF	**Jausiers**	**1.50**	**94**	Pn		**Pn**	**22 15 21.9**	**-0.3**
JAUF				Pg		**Pg**	**22 15 25.2**	**+1.9**
JAUF				Sn		**Sn**	**22 15 41.7**	**-0.6**
MBDF	**Montbardon**	**1.52**	**83**	*e*Pg		**Pb**	**22 15 23.1**	**-0.1**
MBDF				*e*Sg		**Sb**	**22 15 42.9**	**+0.1**
	7.5nm,0.5s							
BNI	**Bardonecchia**	**1.52**	**70**	Pn		**Pg**	**22 15 23.7**	**0.0**
BNI				Sn		**Sg**	**22 15 44.0**	**+0.6**
LEUC	**Leucamp**	**1.52**	**279**	Pg		**Pn**	**22 15 22.8**	**+0.3**
LEUC				Pg		**Pg**	**22 15 24.1**	**+0.4**
LEUC				Sn		**Sg**	**22 15 44.1**	**+0.7**
SURF	**Saint Ours**	**1.54**	**92**	Pn		**Pn**	**22 15 22.6**	**-0.2**
SURF				Sn		**Sn**	**22 15 42.8**	**-0.5**
RRL	**Rocca Remolon**	**1.56**	**75**	Pn		**Pn**	**22 15 22.9**	**-0.3**
RRL				Sn		**Sb**	**22 15 44.4**	**+0.2**
OGMY	**Moye**	**1.59**	**33**	Pn		**Pn**	**22 15 23.0**	**-0.4**
OGMY				Sn		**Sn**	**22 15 43.5**	**-0.8**
PLDF	**La Plantade**	**1.60**	**333**	Pn		**Pn**	**22 15 23.1**	**-0.5**
PLDF				Pg		**Pg**	**22 15 25.2**	**-0.1**
PLDF				Sn		**Sg**	**22 15 46.3**	**+0.3**
OG35	**Corcelles**	**1.63**	**23**	Pn		**Pn**	**22 15 23.2**	**-0.8**
OG35				Pg		**Pg**	**22 15 26.2**	**+0.5**
FLAF	**Flassans-sur-l**	**1.64**	**135**	Pn		**Pn**	**22 15 24.1**	**+0.1**
FRNF	**Fournols**	**1.71**	**300**	Pn		**Pb**	**22 15 26.3**	**-0.2**
FRNF				Pg		**Pg**	**22 15 28.2**	**+0.8**
FRNF				Sn		**Sg**	**22 15 49.1**	**-0.4**
LPL	**La Plagne**	**1.76**	**56**	*e*Pg		**Pn**	**22 15 26.4**	**+0.5**
LPL				*e*Sg		**Sb**	**22 15 49.6**	**-0.2**
	1.7nm,0.3s							
LPG	**La Plagne**	**1.76**	**57**	*e*Pg		**Pn**	**22 15 26.1**	**+0.1**
LPG				*e*Sg		**Sb**	**22 15 50.1**	**+0.2**
	3.3nm,0.3s							
RSL	**Roselend**	**1.80**	**50**	Pn		**Pn**	**22 15 26.8**	**+0.4**
RSL				Sn		**Sn**	**22 15 48.8**	**-0.8**
LMR	**La Mourre**	**1.80**	**132**	*e*Pg		**Pb**	**22 15 27.7**	**-0.4**
LMR				*e*Sn		**Sn**	**22 15 47.2**	**-2.3**
	2.2nm,0.2s							
CLAF	**Gruissan**	**1.82**	**219**	Pn		**Pb**	**22 15 28.4**	**+0.1**
SLVF	**La Salvetat-Pe**	**1.83**	**260**	Pn		**Pn**	**22 15 26.5**	**-0.1**
SLVF				Pg		**Pg**	**22 15 29.4**	**-0.3**
AGO	**Saint Agoulin**	**1.85**	**325**	Pn		**Pn**	**22 15 26.9**	**-0.1**
AGO				Pg		**Pg**	**22 15 29.7**	**-0.3**
AGO				Sg		**Sg**	**22 15 55.0**	**+0.9**
CAF	**Calviac**	**1.89**	**282**	*e*Pn		**Pn**	**22 15 26.4**	**-1.1**
CAF	**Calviac**	**1.89**	**282**	*e*Pg		**Pg**	**22 15 30.9**	**+0.1**
CAF				*e*Sg		**Sb**	**22 15 54.4**	**+0.9**
	25nm,0.4s							
VERF	**Verneugheol**	**1.95**	**309**	Pn		**Pn**	**22 15 29.1**	**+0.7**
MTLF	**Montolieu**	**2.14**	**236**	*e*Pn		**Pn**	**22 15 29.1**	**-1.8**
MTLF	**Montolieu**	**2.14**	**236**	*e*Pg		**Pb**	**22 15 34.6**	**+0.8**
MTLF				*e*Sg		**Sg**	**22 16 02.8**	**-0.5**
	6.3nm,0.2s							
SMF	**Signal de Mont**	**2.17**	**345**	*e*P		**Pn**	**22 15 31.8**	**+0.4**
SMF	**Signal de Mont**	**2.17**	**345**	*e*Pg		**Pb**	**22 15 35.3**	**+0.9**
SMF				*e*Sg		**Sg**	**22 16 03.8**	**-0.6**
	4.8nm,0.2s							
GIMEL	**St. Georges /**	**2.28**	**29**	Pn		**Pn**	**22 15 32.5**	**-0.5**
GIMEL				Pg		**Pg**	**22 15 39.5**	**+1.2**
CABF	**La Chapelle**	**2.29**	**25**	*e*Pn		**Pn**	**22 15 31.8**	**-1.3**
CABF	**La Chapelle**	**2.29**	**25**	*e*Pg		**Pb**	**22 15 37.4**	**+0.9**
CABF				*e*Sg		**Sb**	**22 16 06.5**	**+1.4**
	1.5nm,0.2s							
RJF	**Les Rejaudoux**	**2.36**	**290**	*e*Pn		**Pn**	**22 15 33.1**	**-0.9**
RJF	**Les Rejaudoux**	**2.36**	**290**	*e*Pg		**Pg**	**22 15 39.1**	**-0.7**
RJF				*e*Sg		**Sg**	**22 16 08.9**	**-1.5**
	6.5nm,0.2s							
RIVEL	**MONT RIVEL**	**2.38**	**21**	Pn		**Pn**	**22 15 33.4**	**-0.9**
RIVEL				Pg		**Pg**	**22 15 39.2**	**-0.9**
BGF	**Bois d'Agland**	**2.38**	**328**	*e*P		**Pn**	**22 15 35.2**	**+1.0**
BGF	**Bois d'Agland**	**2.38**	**328**	*e*Pg		**Pg**	**22 15 39.4**	**-0.8**
BGF				*e*Sg		**Sg**	**22 16 09.6**	**-1.4**
	16nm,0.3s							
AVF	**Avril sur Loir**	**2.42**	**338**	*e*Pn		**Pn**	**22 15 35.0**	**+0.2**
AVF	**Avril sur Loir**	**2.42**	**338**	*e*Pg		**Pg**	**22 15 41.6**	**+0.6**
AVF				*e*Sg		**Sg**	**22 16 10.8**	**-1.6**
	17nm,0.4s							
TCF	**Toulx Ste Croi**	**2.45**	**316**	*e*P		**Pn**	**22 15 35.7**	**+0.4**
TCF	**Toulx Ste Croi**	**2.45**	**316**	*e*Pg		**Pg**	**22 15 41.5**	**0.0**
TCF				*e*Sg		**Sg**	**22 16 12.0**	**-1.3**
	2.5nm,0.2s							
EJON	**La Jonquera**	**2.46**	**212**	Pn		**Pn**	**22 15 37.1**	**+1.6**
EJON				⇑*i*IVmb_VC			22 15 40.2	
	538nm,SNR=1.2							
EJON				Sn		**Sn**	**22 16 07.2**	**+1.2**
EJON				Sg		**Sg**	**22 16 16.2**	**+2.5**
SENIN	**Lac Senin/Sane**	**2.59**	**45**	Pn		**Pn**	**22 15 38.4**	**+1.0**
SENIN				Pg		**Pg**	**22 15 43.9**	**-0.4**
SENIN				Sn		**Sn**	**22 16 08.4**	**-1.0**
SENIN				Sg		**Sg**	**22 16 17.4**	**-0.5**
SSF	**Saint Saulge**	**2.64**	**343**	*e*P		**Pn**	**22 15 38.0**	**+0.2**
SSF	**Saint Saulge**	**2.64**	**343**	*e*Pg		**Pg**	**22 15 44.1**	**-1.1**
SSF				*e*Sg		**Sg**	**22 16 17.6**	**-1.8**
	1.8nm,0.2s							
BRANT	**Les Verrieres**	**2.70**	**27**	Pn		**Pn**	**22 15 38.2**	**-0.6**
BRANT				Pg		**Pg**	**22 15 46.1**	**-0.3**
BRANT				Sn		**Sn**	**22 16 12.3**	**+0.4**
BRANT				Sg		**Sg**	**22 16 22.4**	**+1.0**
LOR	**Lormes**	**2.78**	**349**	*e*Pn		**Pn**	**22 15 40.1**	**+0.4**
LOR	**Lormes**	**2.78**	**349**	*e*Pg		**Pg**	**22 15 47.2**	**-0.6**
	baz=172							
LOR				*e*Sg		**Sb**	**22 16 21.0**	**+2.0**
LFF	**La Frestale**	**2.82**	**279**	*e*Pg		**Pg**	**22 15 47.3**	**-1.4**
LFF				*e*Sg		**Sg**	**22 16 24.0**	**-1.2**
	20nm,0.3s							
HYF	**Humbligny**	**3.06**	**333**	*e*Sg		**Sg**	**22 16 30.9**	**-2.1**
FIESA	**Fiescheralp**	**3.07**	**51**	Pn		**Pn**	**22 15 44.9**	**+1.0**
FIESA				Sn		**Sn**	**22 16 21.4**	**+0.2**
HASLI	**Hasliberg/Brie**	**3.29**	**47**	Pn		**Pn**	**22 15 48.2**	**+1.3**
HASLI				Sn		**Sn**	**22 16 25.7**	**-0.8**
EPF	**Esparros**	**3.48**	**246**	*e*Pg		**Pg**	**22 15 59.6**	**-1.6**
EPF				*e*Sg		**Sg**	**22 16 45.1**	**-1.2**
	3.6nm,0.3s							
HINF	**Hinteralfeld**	**3.60**	**24**	*e*Pn		**Pn**	**22 15 48.6**	**-2.5**
HINF	**Hinteralfeld**	**3.60**	**24**	*e*Pg		**Pb**	**22 16 01.1**	**+2.3**
HINF				*e*Sg		**Sg**	**22 16 47.3**	**-3.0**
	2.3nm,0.3s							
HAU	**Haudompre**	**3.65**	**18**	*e*Sg		**Sg**	**22 16 48.9**	**-2.8**
	4.7nm,0.3s							
CLF	**Chambon-Foret**	**3.86**	**335**	Sg		**Sg**	**22 16 59.0**	**+0.7**
MFF	**Saint Martin d**	**3.95**	**303**	*e*Pn		**Pn**	**22 15 54.6**	**-1.2**
MFF	**Saint Martin d**	**3.95**	**303**	*e*Pg		**Pg**	**22 16 07.9**	**-2.4**
MFF	**Saint Martin d**	**3.95**	**303**	*e*Pg		**Pg**	**22 16 08.1**	**-2.2**
MFF				*e*Sg		**Sg**	**22 16 58.6**	**-2.9**
	2.6nm,0.3s							
MFF				*e*Sg		**Sb**	**22 16 59.0**	**+6.2**
	1.3nm,0.2s							
MEZF	**Maizieres J'vi**	**3.96**	**4**	*e*Pg		**Pb**	**22 16 07.4**	**+2.5**
MEZF				*e*Sg		**Sg**	**22 16 58.6**	**-3.2**
	0.2nm,0.2s							

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*IDC **23** 22:33:30.9±1.2, 1.°60N×132.°63E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=70.1km s-min=22.3km az=76.0*

ISC 23 22:33:36.0±1.2, 1.°5N±0.°2×132.°6E±0.°5, h35km, n6, σ1°07/6, mb3.8/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.41**	**176**	P		**P**	**22 38 20.1**	**-0.9**
	0.6nm,0.6s,baz=354,slow=11,SNR=5.9							
	0.6nm,0.6s							
ASAR	**Alice Springs**	**25.08**	**177**	P		**P**	**22 38 58.6**	**+1.1**
	0.3nm,0.6s,baz=355,slow=10,SNR=4.8							
	0.3nm,0.6s							
MKAR	**Makanchi Array**	**62.75**	**324**	P		**P**	**22 43 58.3**	**+0.4**
	0.8nm,0.6s,baz=112,slow=8.4,SNR=9.8							
	0.8nm,0.6s							
KURBB	**Kurchatov Arra**	**66.79**	**326**	P		**P**	**22 44 23.0**	**-1.0**
	2.0nm,0.2s,baz=116,slow=5.8,SNR=4.1							
	2.0nm,0.2s							
BVAR	**Borovoye Array**	**72.39**	**326**	P		**P**	**22 44 58.8**	**+0.2**
	0.6nm,0.5s,baz=116,slow=6.6,SNR=4.0							
	0.6nm,0.5s							
ILAR	**Eielson Array**	**84.56**	**25**	P		**P**	**22 46 05.5**	**+0.1**
	0.9nm,1.1s,baz=252,slow=4.9,SNR=3.0							
	0.9nm,1.1s							

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*IDC **23** 22:40:47.8±1.0, 37.°20N×141.°68E, h0km, mb3.7/12, mbtmp3.7/15, ML3.1/2, MS3.2/1, Error ellipse: s-maj=23.1km s-min=19.6km az=97.0*
*JMA **23** 22:40:51.6±0.2, 37.°3N±0.°3×141.°4E±0.°8, h23km±1km, MV3.5/40, E OFF FUKUSHIMA PREF*
*NIED **23** 22:40:51.6, 37.°28N×141.°36E, h23km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr-3.52; Mθθ3.34; Mφφ0.19; Mrθ1.45; Mθφ0.54; Mφr-0.09; Fault plane solution: M0 3.77000×10^14^ NP1:φs76.00000°, δ34.00000°, λ-98.00000°. NP2:φs265.00000°, δ56.00000°, λ-85.00000°.*

ISC 23 22:40:49.9±2.0, 37.°26N±0.°05×141.°45E±0.°07, h11km±11km, n30, σ0°98/33, mb3.7/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JFK	**Kawauchi**	**0.47**	**283**	*i* P		**Pb**	**22 40 59.8**	**-0.5**
JFK				S		**Sb**	**22 41 05.7**	**-1.6**
ONAJ	**Iwakimizuishiy**	**0.55**	**254**	*i* P		**Pb**	**22 41 01.1**	**-0.3**
ONAJ				S		**Sb**	**22 41 08.1**	**-1.3**
JMST	**Minamisoumatoc**	**0.65**	**316**	*i* P		**Pg**	**22 41 02.9**	**+0.4**
JMST				S		**Sg**	**22 41 11.1**	**+0.1**
JFFD	**Fukushimafurud**	**0.73**	**257**	*i* P		**Pb**	**22 41 04.3**	**-0.3**
JFFD				S		**Sb**	**22 41 13.2**	**-1.4**
JMM	**Marumori**	**0.80**	**319**	*i* P		**Pg**	**22 41 05.5**	**+0.2**
JMM				S		**Sg**	**22 41 15.6**	**-0.3**
JOTO	**OTAMA OYAMA**	**0.94**	**289**	*i* P		**Pg**	**22 41 08.2**	**+0.2**
JOTO				S		**Sg**	**22 41 20.1**	**-0.2**
JHO	**Hitachi**	**0.96**	**228**	P		**Pb**	**22 41 07.7**	**-0.8**
JIO	**Ouri**	**1.20**	**356**	*i* P		**Pn**	**22 41 11.9**	**-0.6**
JIO				S		**Sb**	**22 41 27.0**	**-1.1**
JOU	**Okura**	**1.27**	**331**	*i* P		**Pn**	**22 41 13.9**	**+0.3**
JOU				S		**Sn**	**22 41 30.4**	**-0.3**
MJAR	**Matsushiro Arr**	**2.70**	**256**	Pn		**Pn**	**22 41 34.2**	**+1.0**
	0.6nm,0.3s,baz=86,slow=16,SNR=41							
MJAR				Sn		**Sb**	**22 42 10.8**	**-0.4**
	0.8nm,0.3s,baz=339,slow=29,SNR=6.1							
	3.9nm,0.4s							
ASAJ	**Asahikawa**	**6.91**	**7**	Pn		**Pn**	**22 42 32.3**	**+1.3**
	0.7nm,0.3s,baz=253,slow=6.1,SNR=6.0							
	7.6nm,0.9s							
USRK	**Ussuriysk Ar.**	**9.98**	**317**	Pn		**Pn**	**22 43 14.0**	**+0.9**
	0.5nm,0.6s,baz=132,slow=16,SNR=1.4							
SONM	**Songino Array**	**27.69**	**304**	P		**P**	**22 46 39.0**	**+1.0**
	0.6nm,0.8s,baz=60,slow=5.7,SNR=3.9							
	0.6nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**28.23**	**121**	T		T	23 16 14.3	
	baz=314,slow=75							
H11N1	**WAKE ISLAND Hy**	**28.24**	**121**	T		T	23 16 17.2	
	baz=314,slow=75							
H11N3	**WAKE ISLAND Hy**	**28.25**	**121**	T		T	23 16 13.5	
	baz=314,slow=75,SNR=48							
H11S1	**WAKE ISLAND Hy**	**28.95**	**123**	T		T	23 17 11.7	
	baz=316,slow=74							
H11S3	**WAKE ISLAND Hy**	**28.95**	**123**	T		T	23 17 14.2	
	baz=316							
H11S2	**WAKE ISLAND Hy**	**28.97**	**123**	T		T	23 17 14.2	
	baz=316,slow=74							
ZALV	**Zalesovo Beam**	**41.79**	**312**	P		**P**	**22 48 40.0**	**+0.9**
	0.4nm,0.5s,baz=92,slow=10,SNR=5.3							
ZALV				LR		LR	23 05 57.3	
	comp=Z,31nm,19.2s,baz=137,slow=36							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**44.03**	**302**	P		**P**	**22 48 57.5**	**+0.1**
	1.0nm,0.9s,baz=84,slow=9.9,SNR=3.0							
	1.0nm,0.9s							
KURBB	**Kurchatov Arra**	**45.89**	**308**	P		**P**	**22 49 12.7**	**+0.6**
	2.7nm,0.2s,baz=80,slow=7.9,SNR=4.4							
	2.7nm,0.2s							
ILAR	**Eielson Array**	**49.29**	**32**	P		**P**	**22 49 38.2**	**-0.2**
	0.2nm,0.8s,baz=279,slow=6.2,SNR=2.5							
	0.2nm,0.8s							
BVAR	**Borovoye Array**	**50.45**	**312**	P		**P**	**22 49 49.9**	**+2.6**
	0.4nm,0.5s,baz=75,slow=7.8,SNR=4.2							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**57.29**	**188**	P		**P**	**22 50 37.0**	**-0.6**
	0.5nm,0.6s,baz=7.8,slow=7.1,SNR=7.6							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**61.01**	**188**	P		**P**	**22 51 03.2**	**-0.2**
	0.1nm,0.3s,baz=21,slow=6.3,SNR=1.5							
	0.1nm,0.3s							
YKA	**Yellowknife Ar**	**63.60**	**30**	P		**P**	**22 51 18.3**	**-1.9**
	0.7nm,0.7s,baz=4.8,slow=23,SNR=3.0							
	0.7nm,0.7s							
FINES	**FINESS Array B**	**68.63**	**332**	P		**P**	**22 51 53.5**	**+0.9**
	1.9nm,0.9s,baz=45,slow=11,SNR=4.7							
	1.9nm,0.9s							
NOA	**NORSAR Array B**	**73.99**	**337**	P		**P**	**22 52 25.9**	**+0.8**
	0.8nm,0.9s,baz=40,slow=6.4,SNR=2.2							
	0.8nm,0.9s							
AKASG	**Malin Array Be**	**74.14**	**322**	P		**P**	**22 52 25.8**	**-0.3**
	1.0nm,0.6s,baz=342,slow=37,SNR=2.8							
	1.0nm,0.6s							

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*NDI **23** 22:43:45.1±3.6, 24.°94N×96.°73E, h14km±63km, ML4.0, MW3.9*
*NEIC **23** 22:43:46.4±1.3, 24.°93N±0.°07×96.°35E±0.°09, h10km±1km, mb4.1/9, Error ellipse: s-maj=14.9km s-min=10.3km az=230.0*
*IDC **23** 22:43:46.6±1.1, 24.°88N×95.°91E, h0km, mb3.7/6, mbtmp3.7/7, ML4.3/1, MS3.1/5, Error ellipse: s-maj=60.1km s-min=16.3km az=65.0*

ISC 23 22:43:48.5±0.6, 24.°95N±0.°05×96.°31E±0.°03, h21km, n44, σ2°14/51, mb4.1/11, MS3.1/4, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNCH	**TengChong**	**2.01**	**87**	Pn		**Pn**	**22 44 19.8**	**-1.5**
TNCH				Pg		**Pb**	**22 44 24.0**	**-0.4**
TNCH				Sn		**Sn**	**22 44 44.5**	**-1.4**
TNCH				Sg		**Sb**	**22 44 49.5**	**+0.5**
TNCH				smax	smax			
	comp=N,490nm,0.8s							
TNCH				smax	smax			
	comp=E,670nm,1.0s							
TNCH				LR	LR			
	comp=N,2μm,2.3s							
TNCH				LR	LR			
	comp=E,2μm,2.9s							
TNCH				LR	LR			
	comp=Z,320nm,4.2s							
MOKO	**MOKOCHONG**	**2.12**	**311**	*e*P		**Pb**	**22 44 25.9**	**-0.4**
MOKO				*e*S		**Sb**	**22 44 56.0**	**+3.8**
MOKO				IAML			22 44 59.2	
	comp=E,917nm,0.6s							
MOKO				IAML			22 45 02.4	
	comp=N,890nm,0.7s							
KOHI	**KOHIMA**	**2.13**	**292**	*e*P		**Pb**	**22 44 26.2**	**-0.3**
KOHI				*e*S		**Sb**	**22 44 56.7**	**+4.1**
KOHI				IAML			22 45 05.0	
	comp=N,834nm,0.8s							
KOHI				IAML			22 45 14.5	
	comp=E,784nm,1.0s							
IMP	**Imphal**	**2.15**	**267**	*e*P		**Pb**	**22 44 25.5**	**-1.2**
IMP				*e*S		**Sb**	**22 44 57.2**	**+4.2**
IMP				IAML			22 45 03.8	
	comp=E,702nm,0.6s							
IMP				IAML			22 45 05.2	
	comp=N,645nm,1.0s							
LKP	**Lekhapani**	**2.41**	**350**	*e*S		**Sn**	**22 44 55.3**	**-0.3**
LKP				IAML			22 45 03.2	
	comp=N,833nm,1.1s							
LKP				IAML			22 45 04.5	
	comp=E,797nm,0.9s							
ITAN	**ITANAGAR**	**3.19**	**314**	*e*P		**Pb**	**22 44 40.8**	**-3.7**
ITAN				*e*S		**Sb**	**22 45 19.2**	**-3.8**
ZIRO	**ZIRO**	**3.39**	**320**	*e*P		**Pn**	**22 44 40.9**	**+0.6**
ZIRO				*e*S		**Sn**	**22 45 22.1**	**+2.2**
ZIRO				IAML			22 45 29.1	
	comp=Z,798nm,0.5s							
TEZP	**TEZPUR**	**3.57**	**298**	*e*P		**Pn**	**22 44 43.3**	**+0.6**
TEZP				*e*S		**Sn**	**22 45 25.9**	**+1.6**
SHL	**Shillong**	**4.05**	**280**			**Pn**	**22 44 49.6**	**+0.2**
SHL	**Shillong**	**4.05**	**280**	*e*P		**Pn**	**22 44 50.4**	**+0.9**
SHL				*e*S		**Sn**	**22 45 39.5**	**+3.0**
SHL				IAML			22 45 45.6	
	comp=E,531nm,0.5s							
SHL				IAML			22 45 47.2	
	comp=N,685nm,0.4s							
TAWA	**Tawang**	**4.78**	**304**	*e*P		**Pn**	**22 45 00.6**	**+1.0**
TAWA				*e*S		**Sn**	**22 45 55.9**	**+1.3**
TAWA				IAML			22 46 19.2	
	comp=N,571nm,0.5s							
TAWA				IAML			22 46 19.4	
	comp=E,606nm,0.8s							
PZH	**PanZhiHua**	**5.14**	**71**	Pg		**Pb**	**22 45 18.3**	**+0.5**
PZH				Sg		**Sb**	**22 46 25.4**	**+6.3**
PZH				smax	smax			
	comp=N,10.0nm,1.1s							
PZH				smax	smax			
	comp=E,10.0nm,0.9s							
PZH				LR	LR			
	comp=N,470nm,7.0s							
PZH				LR	LR			
	comp=E,320nm,8.4s							
PZH				LR	LR			
	comp=Z,400nm,11.0s							
DHUB	**DHUBRI**	**5.80**	**282**	*e*S		**Sn**	**22 46 19.3**	**0.0**
KMI	**Kunming**	**5.84**	**87**	Pg		Pb	22 45 35.3	+5.6
KMI				Sg		Sb	22 46 47.6	+8.3
KMI				smax	smax			
	comp=N,24nm,1.0s							
KMI				smax	smax			
	comp=E,20nm,1.0s							
KMI				LR	LR			
	comp=N,1μm,6.9s							
KMI				LR	LR			
	comp=E,360nm,7.7s							
KMI				LR	LR			
	comp=Z,510nm,7.8s							
CHTO	**Chiang Mai**	**6.58**	**158**	Pn		**Pn**	**22 45 22.3**	**-1.7**
LSA	**

AB31	**Akbulak array**	**37.27**	**320**	P	**P**	**22 50 58.1**	**-0.6**
ABKAR	**Akbulak array**	**37.27**	**320**	P	**P**	**22 50 58.0**	**-0.7**
MJAR	**Matsushiro Arr**	**37.55**	**62**	LR	LR	23 10 01.3	
	comp=Z,40nm,18.8s,baz=176,slow=42						
ARTI	**Arti**	**41.68**	**329**	P	**P**	**22 51 34.8**	**-0.6**
ARTI				IAmb	IAmb	22 51 55.2	
	comp=Z,6.1nm,1.4s						
WB0	**Warramunga Arr**	**57.87**	**137**	P	**P**	**22 53 38.8**	**-0.2**
BURAR	**Bucovina Array**	**59.48**	**312**	P	**P**	**22 53 49.0**	**-1.1**
ASAR	**Alice Springs**	**60.52**	**140**	P	**P**	**22 53 59.2**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=321,slow=6.8,SNR=2.5						
	comp=Z,0.3nm,0.6s						
NOA	**NORSAR Array B**	**66.16**	**328**	LR	LR	23 26 34.6	
	comp=Z,11nm,18.1s,baz=330,slow=39						
GERES	**GERESS Array B**	**66.92**	**315**	P	**P**	**22 54 41.1**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=101,slow=4.2,SNR=5.3						
	comp=Z,0.8nm,0.8s						
BMAR	**Burnt Mountain**	**77.50**	**20**	P	**P**	**22 55 41.8**	**-0.5**

NEIC ***23*** *22:58:53.5±1.2, 59.91N±0.03×148.90W±0.05, h21km±10km, Error ellipse: s-maj=4.5km s-min=3.7km az=157.0*

AEIC ***23*** *22:58:53.7±1.1, 59.88N±0.03×148.87W±0.04, h12km±4km, ML3.3, ML3.5/222(NEIC), Error ellipse: s-maj=4.8km s-min=2.6km az=147.0*

ISC 23 22:58:53.1±1.5, 59.88N±0.03×148.87W±0.02, h20km±5km, n190, σ0.71/196, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEW	**Seward**	**0.37**	**308**		**Pb**	**22 59 01.1**	**+0.2**
SEW				IAML		22 59 06.6	
	comp=N,3μm,0.4s						
SEW				IAML		22 59 06.6	
	comp=E,5μm,0.4s						
SEW				Sg	**Sg**	**22 59 06.0**	**-0.1**
O22K	**Cooper Landing**	**0.74**	**325**		**Pb**	**22 59 06.7**	**-0.6**
O22K					**Sb**	**22 59 16.7**	**-0.1**
P23K	**Montague Islan**	**0.75**	**80**		**Pn**	**22 59 08.4**	**-0.1**
SLKM	**Skilak Lake**	**0.92**	**314**		**Pb**	**22 59 10.0**	**-0.4**
SLKM	**Skilak Lake**	**0.92**	**314**		**Sb**	**22 59 22.1**	**-0.2**
BRSE	**Bradley Lake S**	**0.96**	**262**		**Pb**	**22 59 11.2**	**+0.2**
BRSE					**Sg**	**22 59 24.3**	**0.0**
PWL	**Port Wells**	**1.02**	**15**		**Pb**	**22 59 11.5**	**-0.5**
PWL				Sg	**Sb**	**22 59 23.9**	**-1.1**
BRLK	**Bradley Lake**	**1.02**	**264**		**Pb**	**22 59 12.4**	**+0.3**
BRLK				IAML		22 59 27.8	
	comp=N,2μm,0.2s						
BRLK	**Bradley Lake**	**1.02**	**264**		**Sg**	**22 59 26.2**	**-0.3**
CNPM	**China Poot**	**1.25**	**254**		**Pn**	**22 59 15.6**	**+0.1**
CNPM				IAML		22 59 37.1	
	comp=E,1μm,0.6s						
CNPM	**China Poot**	**1.25**	**254**		**Sb**	**22 59 31.4**	**-0.3**
RC01	**Rabbit Creek A**	**1.28**	**341**		**Pn**	**22 59 15.8**	**-0.1**
RC01					**Sn**	**22 59 31.9**	**-0.7**
RC01				IAML		22 59 33.4	
	comp=N,1μm,0.4s						
RC01				IAML		22 59 33.8	
	comp=E,970nm,0.4s						
HIN	**Hinchinbrook I**	**1.29**	**65**		**Pn**	**22 59 16.2**	**+0.1**
GLI	**Glacier Island**	**1.33**	**41**		**Pn**	**22 59 15.8**	**-0.7**
GLI					**Sn**	**22 59 33.4**	**-0.4**
MID	**Middleton Isla**	**1.36**	**108**	Pn	**Pb**	**22 59 18.1**	**+0.2**
HOM	**Homer**	**1.42**	**262**		**Pb**	**22 59 18.9**	**0.0**
FIS	**Fire Island**	**1.43**	**333**		**Pn**	**22 59 17.7**	**-0.2**
FIS					**Pb**	**22 59 18.6**	**-0.5**
CAPN	**Captain Cook N**	**1.44**	**309**		**Pn**	**22 59 18.4**	**+0.4**
CAPN					**Pb**	**22 59 19.3**	**+0.1**
FID	**Port Fidalgo**	**1.48**	**53**		**Pn**	**22 59 17.7**	**-0.8**
FID				IAML		22 59 42.2	
	comp=E,968nm,0.6s						
KNK	**Knik Glacier**	**1.55**	**7**		**Pn**	**22 59 19.0**	**-0.5**
KNK				IAML		22 59 43.1	
	comp=N,650nm,0.4s						
KNK	**Knik Glacier**	**1.55**	**7**		**Sn**	**22 59 39.3**	**+0.2**
EYAK	**Cordova Ski Ar**	**1.69**	**65**		**Pn**	**22 59 21.4**	**-0.1**
EYAK				IAML		22 59 44.8	
	comp=N,357nm,0.5s						
EYAK	**Cordova Ski Ar**	**1.69**	**65**	P	**Pn**	**22 59 21.1**	**-0.4**
EYAK	**Cordova Ski Ar**	**1.69**	**65**	S	**Sn**	**22 59 43.1**	**+0.5**
PMR	**Palmer**	**1.72**	**356**		**Pn**	**22 59 21.6**	**-0.3**
PMR				IAML		22 59 47.7	
	comp=N,428nm,0.4s						
PMR				IAML		22 59 48.1	
	comp=E,410nm,0.5s						
PMR	**Palmer**	**1.72**	**356**	P	**Pn**	**22 59 21.4**	**-0.5**
PMR	**Palmer**	**1.72**	**356**	S	**Sn**	**22 59 44.3**	**+1.1**
SUA	**Susitna One**	**1.84**	**331**		**Pn**	**22 59 23.5**	**-0.1**
RDT	**Redoubt**	**1.90**	**293**		**Pn**	**22 59 24.4**	**0.0**
GHO	**Glory Hole Cre**	**1.90**	**359**		**Pn**	**22 59 24.3**	**-0.1**
GHO				IAML		22 59 55.4	
	comp=N,640nm,0.4s						
GHO				IAML		23 00 00.4	
	comp=E,586nm,0.6s						
O20K	**Slope Mountain**	**1.90**	**278**		**Pn**	**22 59 24.5**	**+0.1**
O20K					**Pb**	**22 59 24.9**	**-2.1**
SML	**Sawmill**	**1.95**	**8**		**Pn**	**22 59 24.9**	**-0.2**
SML				IAML		22 59 55.0	
	comp=E,471nm,0.4s						
SML				IAML		23 00 05.0	
	comp=N,460nm,1.0s						
M22K	**Willow**	**1.98**	**342**		**Pn**	**22 59 25.1**	**-0.3**
DIV	**Divide**	**1.98**	**49**		**Pn**	**22 59 25.6**	**+0.1**
DIV				IAML		22 59 58.9	
	comp=E,238nm,0.6s						
DIV				IAML		22 59 59.0	
	comp=N,365nm,0.7s						
RED	**Redoubt Volcan**	**2.02**	**287**		**Pn**	**22 59 25.9**	**-0.2**
RED				IAML		22 59 56.6	
	comp=N,457nm,0.6s						
RED				IAML		22 59 56.7	
	comp=E,443nm,0.9s						
SPU	**Mount Spurr**	**2.04**	**311**		**Pn**	**22 59 26.6**	**+0.2**
SCM	**Sheep Creek Mo**	**2.10**	**20**		**Pn**	**22 59 27.5**	**+0.4**
SCM				IAML		23 00 06.2	
	comp=E,500nm,1.0s						
SCM				IAML		23 00 11.4	
	comp=N,400nm,1.0s						
SPCG	**Spurr Capps Gl**	**2.10**	**314**		**Pn**	**22 59 27.7**	**+0.4**
SPCR	**Spurr Chakacha**	**2.12**	**310**		**Pn**	**22 59 27.4**	**+0.1**
SPCR	**Spurr Chakacha**	**2.12**	**310**		**Pn**	**22 59 27.3**	**-0.1**
ILS	**Iliamna Low So**	**2.12**	**274**		**Pn**	**22 59 27.6**	**+0.1**
ILS					**Pb**	**22 59 27.8**	**-3.0**
SPCN	**Chakachatna No**	**2.12**	**311**		**Pn**	**22 59 27.1**	**-0.3**
ILSW	**Iliamna Southw**	**2.15**	**275**		**Pn**	**22 59 28.0**	**0.0**
ILSW				IAML		23 00 08.5	
	comp=E,239nm,0.5s						
RAGM	**Ragged Mountai**	**2.16**	**75**		**Pn**	**22 59 27.9**	**0.0**
RAGM	**Ragged Mountai**	**2.16**	**75**	IAML		23 00 03.9	
	comp=E,391nm,0.4s						
KLU	**Klutina**	**2.17**	**41**		**Pn**	**22 59 28.6**	**+0.4**
KLU				IAML		22 59 59.6	
	comp=E,385nm,0.4s						
STLK	**Strandline Lak**	**2.18**	**319**		**Pn**	**22 59 28.8**	**+0.5**
STLK				IAML		23 00 01.9	
	comp=N,200nm,0.5s						
SYI	**Shuyak Island**	**2.21**	**236**		**Pn**	**22 59 29.4**	**+0.8**
SYI				IAML		23 00 12.1	
	comp=N,184nm,0.6s						
P19K	**Oil Pt**	**2.22**	**266**		**Pn**	**22 59 29.7**	**+0.9**
KAIM	**Kayak Island**	**2.24**	**87**		**Pn**	**22 59 29.4**	**+0.3**
KAIM	**Kayak Island**	**2.24**	**87**	IAML		23 00 07.7	
	comp=N,227nm,1.3s						
KAIM				IAML		23 00 09.9	
	comp=E,229nm,1.3s						
SPWE	**Spurr West**	**2.29**	**309**		**Pn**	**22 59 30.1**	**+0.2**
HMT	**Hamilton**	**2.35**	**77**		**Pn**	**22 59 30.6**	**0.0**
HMT				IAML		23 00 18.8	
	comp=N,344nm,0.8s						
AUJK	**Augustine Jueg**	**2.37**	**259**		**Pn**	**22 59 31.6**	**+0.9**
BMRM	**Bremner River**	**2.38**	**61**		**Pn**	**22 59 31.0**	**0.0**
BMRM				IAML		23 00 10.2	
	comp=E,282nm,0.4s						
BMRM				IAML		23 00 13.6	
	comp=N,308nm,0.7s						
SPNN	**North Nagishla**	**2.40**	**310**		**Pn**	**22 59 31.5**	**0.0**
SKT	**Skwentna**	**2.47**	**329**		**Pn**	**22 59 33.1**	**+0.8**
SKT				IAML		23 00 12.4	
	comp=E,187nm,0.4s						
SKT				IAML		23 00 12.7	
	comp=N,196nm,0.7s						
NICHA	**Nichawak Mount**	**2.48**	**80**		**Pn**	**22 59 32.3**	**-0.1**
M24K	**Tolsona, Glenn**	**2.59**	**29**		**Pn**	**22 59 34.6**	**+0.8**
CUT	**Chulitna**	**2.62**	**346**		**Pn**	**22 59 34.5**	**+0.3**
Q19K	**Cape Douglas,**	**2.62**	**251**		**Pn**	**22 59 35.0**	**+0.7**
BERG	**Berg Lake**	**2.64**	**77**		**Pn**	**22 59 34.1**	**-0.4**
BERG				IAML		23 00 23.1	
	comp=N,269nm,0.4s						
N25K	**Chitina, Valde**	**2.72**	**49**		**Pn**	**22 59 35.7**	**0.0**
N25K				IAML		23 00 17.7	
	comp=E,284nm,0.8s						
N25K				IAML		23 00 21.8	
	comp=N,225nm,0.5s						
O19K	**Port Alsworth**	**2.75**	**279**		**Pn**	**22 59 37.0**	**+1.0**
WAT6	**Susitna Watana**	**2.76**	**11**		**Pn**	**22 59 37.1**	**+0.8**
L22K	**Petersville**	**2.81**	**342**		**Pn**	**22 59 37.0**	**+0.1**
L22K				IAML		23 00 22.8	
	comp=E,115nm,0.7s						
L22K				IAML		23 00 26.0	
	comp=N,155nm,0.6s						
GRIN	**Grindle Hills**	**2.81**	**79**		**Pn**	**22 59 36.9**	**0.0**
KDAK	**Kodiak Island**	**2.86**	**224**		**Pn**	**22 59 37.5**	**0.0**
KDAK				IAML		23 00 37.2	
	comp=N,156nm,0.9s						
KDAK				IAML		23 00 38.0	
	comp=N,112nm,0.7s						
KHIT	**Khitrov Hills**	**2.87**	**76**		**Pn**	**22 59 37.3**	**-0.4**
M20K	**Styx River**	**2.89**	**316**		**Pn**	**22 59 39.4**	**+1.3**
GLB	**Gilahina Butte**	**2.94**	**56**		**Pn**	**22 59 38.9**	**+0.2**
GLB				IAML		23 00 26.3	
	comp=E,106nm,0.8s						
GLB				IAML		23 00 28.0	
	comp=N,179nm,1.0s						
N19K	**Bonanza Creek**	**2.94**	**291**		**Pn**	**22 59 39.1**	**+0.3**
N19K				IAML		23 00 20.3	
	comp=E,105nm,0.5s						
WAT1	**Susitna Watana**	**2.96**	**3**		**Pn**	**22 59 39.0**	**+0.1**
WAT7	**Susitna Watana**	**2.96**	**0**		**Pn**	**22 59 39.2**	**+0.2**
CRQM	**Cirque**	**2.98**	**70**		**Pn**	**22 59 39.4**	**0.0**
CRQM				IAML		23 00 15.3	
	comp=E,140nm,0.3s						
CRQM				IAML		23 00 44.9	
	comp=N,140nm,0.8s						
VRDI	**Verde Repeater**	**3.00**	**61**		**Pn**	**22 59 39.8**	**+0.2**
VRDI				IAML		23 00 30.4	
	comp=N,167nm,0.7s						
SNH	**Sunshine Point**	**3.04**	**82**	Pn	**Pn**	**22 59 39.9**	**-0.1**
SNH				IAML		23 00 34.7	
	comp=E,108nm,1.5s						
SNH				IAML		23 00 39.6	
	comp=N,106nm,1.4s						
WACK	**Wrangell Chich**	**3.06**	**44**		**Pn**	**22 59 41.2**	**+0.7**
WAX	**Waxell Ridge**	**3.06**	**77**		**Pn**	**22 59 40.1**	**-0.2**
WAX				IAML		23 00 17.8	
	comp=E,215nm,0.4s						
HARP	**HAARP**	**3.10**	**34**		**Pn**	**22 59 41.3**	**+0.4**
TGL	**Tana Glacier**	**3.13**	**71**		**Pn**	**22 59 41.2**	**-0.2**
TGL				IAML		23 00 19.1	
	comp=N,87nm,1.2s						
TGL				IAML		23 00 37.9	
	comp=E,92nm,0.9s						
WAZA	**Wrangell Mount**	**3.18**	**44**		**Pn**	**22 59 43.1**	**+0.8**
O18K	**Koktuh Hills**	**3.20**	**272**		**Pn**	**22 59 42.1**	**0.0**
O18K				IAML		23 00 43.0	
	comp=N,113nm,1.0s						
BARK	**Barkley Ridge**	**3.23**	**78**		**Pn**	**22 59 42.9**	**+0.1**
MCARA	**McCarthy VSAT**	**3.25**	**60**		**Pn**	**22 59 43.2**	**+0.3**
MCARA				IAML		23 00 46.6	
	comp=E,171nm,0.7s						
P18K	**Big Mountain,**	**3.27**	**264**		**Pn**	**22 59 44.4**	**+1.3**
DHY	**Denali Highway**	**3.28**	**12**		**Pn**	**22 59 45.0**	**+1.5**
ISLE	**Juniper Island**	**3.34**	**75**		**Pn**	**22 59 44.2**	**0.0**
ISLE				IAML		23 00 25.9	
	comp=N,84nm,0.7s						
M19K	**Big River Lodg**	**3.38**	**309**		**Pn**	**22 59 45.5**	**+0.9**
KIAG	**Kiagna River**	**3.40**	**69**		**Pn**	**22 59 44.9**	**-0.2**
KAWH	**Katmai**	**3.41**	**246**		**Pn**	**22 59 46.7**	**+1.6**
PPLA	**Purkeypile**	**3.42**	**334**		**Pn**	**22 59 45.5**	**+0.1**
PPLA				IAML		23 00 48.3	
	comp=E,69nm,0.8s						
PPLA				IAML		23 00 51.9	
	comp=N,88nm,0.8s						
PTPK	**Patty Peak**	**3.42**	**65**		**Pn**	**22 59 45.7**	**+0.2**
BALM	**Baldy**	**3.43**	**67**		**Pn**	**22 59 45.4**	**-0.1**
BAGL	**Bagley Icefiel**	**3.44**	**77**		**Pn**	**22 59 45.7**	**+0.2**
MESA	**MESA**	**3.48**	**82**	Pn	**Pn**	**22 59 46.0**	**-0.3**
MESA				IAML		23 00 41.6	
	comp=N,76nm,1.4s						
PAX	**Paxson**	**3.50**	**26**		**Pn**	**22 59 47.6**	**+1.1**
PAX				IAML		23 00 43.6	
	comp=E,74nm,0.6s						
PAX				IAML		23 00 51.4	
	comp=N,78nm,1.1s						
OHAK	**Old Harbor**	**3.53**	**223**		**Pn**	**22 59 46.4**	**-0.3**
OHAK				IAML		23 01 02.2	
	comp=E,69nm,1.3s						
OHAK	**Old Harbor**	**3.53**	**223**	P	**Pn**	**22 59 46.3**	**-0.4**
RND	**Reindeer**	**3.54**	**0**		**Pn**	**22 59 48.4**	**+1.5**
RND				IAML		23 00 37.1	
	comp=N,82nm,0.7s						
RND				IAML		23 00 40.3	
	comp=E,99nm,0.6s						
L20K	**Farewell, AK**	**3.56**	**319**		**Pn**	**22 59 48.3**	**+1.1**
N18K	**Kilae Creek**	**3.59**	**286**		**Pn**	**22 59 47.0**	**-0.6**
YAH	**Yahtse**	**3.60**	**79**		**Pn**	**22 59 47.9**	**0.0**
GRNC	**Granite Creek**	**3.64**	**73**		**Pn**	**22 59 48.7**	**+0.3**
GRNC				IAML		23 01 05.3	
	comp=N,54nm,0.9s						
TRF	**Thorofare Moun**	**3.64**	**350**		**Pn**	**22 59 49.9**	**+1.4**
TRF				IAML		23 00 49.1	
	comp=E,94nm,1.0s						
TRF				IAML		23 00 53.2	
	comp=N,105nm,0.7s						
L19K	**White Mountain**	**3.71**	**311**		**Pn**	**22 59 50.2**	**+1.0**
ACHA	**Angle Creek He**	**3.73**	**246**		**Pn**	**22 59 50.9**	**+1.3**
BARN	**Barnard Glacie**	**3.76**	**69**		**Pn**	**22 59 50.2**	**+0.1**
BARN				IAML		23 00 36.5	
	comp=N,50nm,0.6s						
BARN				IAML		23 00 36.8	
	comp=E,68nm,0.6s						
M18K	**Stony River**	**3.78**	**298**		**Pn**	**22 59 50.1**	**-0.1**
RKAV	**Rock Avalanche**	**3.79**	**80**		**Pn**	**22 59 50.8**	**+0.3**
M26K	**Nabesna, AK**	**3.81**	**46**		**Pn**	**22 59 51.2**	**+0.6**
M26K				IAML		23 00 55.2	
	comp=N,62nm,0.8s						
KTH	**Kantishna Hill**	**3.81**	**346**		**Pn**	**22 59 51.3**	**+0.6**
KTH				IAML		23 00 46.5	
	comp=E,68nm,0.8s						
KTH				IAML		23 00 53.8	
	comp=N,85nm,0.8s						
MCK	**McKinley**	**3.87**	**360**		**Pn**	**22 59 52.9**	**+1.6**
MCK				IAML		23 00 46.5	
	comp=E,87nm,0.6s						
MCK				IAML		23 00 57.1	
	comp=N,97nm,0.9s						
CTGM	**Chitina Glacie**	**3.89**	**71**		**Pn**	**22 59 52.1**	**+0.2**
TABL	**Table Mountain**	**3.90**	**78**	Pn	**Pn**	**22 59 52.4**	**+0.3**
TABL				IAML		23 00 39.0	
	comp=N,58nm,1.4s						
TABL				IAML		23 00 41.4	
	comp=E,60nm,1.1s						
MENT	**Mentasta**	**3.94**	**37**		**Pn**	**22 59 52.9**	**+0.5**
LOGN	**Logan Glacier**	**4.02**	**73**		**Pn**	**22 59 53.8**	**+0.2**
L26K	**Log Cabin Wild**	**4.12**	**38**		**Pn**	**22 59 56.0**	**+1.2**
L26K				IAML		23 00 57.1	
	comp=N,78nm,0.5s						
L26K				IAML		23 01 06.1	
	comp=E,68nm,0.5s						
O17K	**Koliganek Bris**	**4.15**	**272**		**Pn**	**22 59 55.5**	**+0.2**
K24K	**Donnelly Dome**	**4.20**	**19**		**Pn**	**22 59 57.8**	**+1.8**
N17K	**Nushagak Hills**	**4.20**	**282**		**Pn**	**22 59 54.9**	**-1.0**
M27K	**Edge Creek, AK**	**4.20**	**51**		**Pn**	**22 59 56.8**	**+0.7**
K20K	**Telida**	**4.28**	**327**		**Pn**	**22 59 57.4**	**+0.4**
K20K				IAML		23 01 17.0	
	comp=E,33nm,0.7s						
BWN	**Browne**	**4.32**	**357**		**Pn**	**22 59 58.8**	**+1.3**
RIDG	**Independent Ri**	**4.32**	**25**		**Pn**	**22 59 58.2**	**+0.6**
RIDG				IAML		23 01 07.8	
	comp=N,78nm,0.9s						
RIDG				IAML		23 01 16.1	
	comp=E,73nm,1.0s						
PCA	**Pinnacle**	**4.33**	**83**	Pn	**Pn**	**22 59 58.2**	**+0.3**
PCA				IAML		23 01 18.5	
	comp=E,76nm,0.9s						
CHUM	**Lake Minchumin**	**4.33**	**339**		**Pn**	**22 59 57.8**	**+0.1**
BPAW	**Bear Paw Mtn.**	**4.35**	**348**		**Pn**	**22 59 58.8**	**+0.8**
BPAW				IAML		23 01 15.2	
	comp=E,42nm,0.9s						
SII	**Sitkinak Islan**	**4.36**	**222**	P	**Pn**	**22 59 58.0**	**-0.1**
O28M	**Mount Upton**	**4.41**	**75**		**Pn**	**22 59 59.8**	**+0.7**
DOT	**Dot Lake**	**4.42**	**29**		**Pn**	**23 00 00.1**	**+1.2**
DOT				IAML		23 01 14.6	
	comp=E,56nm,0.7s						
DOT				IAML		23 01 15.8	
	comp=N,42nm,0.8s						
L18K	**Granite Mounta**	**4.46**	**305**		**Pn**	**23 00 00.1**	**+0.6**
M17K	**Holitna River**	**4.48**	**294**		**Pn**	**23 00 00.0**	**+0.2**
M17K				IAML		23 01 20.9	
	comp=E,68nm,1.1s						
PLK4	**Peulik 4**	**4.50**	**243**	Pn	**Pn**	**23 00 01.9**	**+1.7**
PLK4				IAML		23 01 07.7	
	comp=E,46nm,0.8s						
PLK4				IAML		23 01 29.4	
	comp=N,56nm,1.2s						
YUK3	**Moose Creek**	**4.53**	**62**		**Pn**	**23 00 01.5**	**+0.8**
WRH	**Wood River Hil**	**4.62**	**4**		**Pn**	**23 00 02.6**	**+0.9**
WRH				IAML		23 01 21.2	
	comp=E,51nm,0.8s						
WRH				IAML		23 01 29.6	
	comp=N,46nm,1.1s						
HDA	**Harding Lake**	**4.63**	**10**		**Pn**	**23 00 03.0**	**+1.1**
HDA				IAML		23 01 10.1	
	comp=N,55nm,0.5s						
L27K	**Beaver Creek,**	**4.64**	**44**		**Pn**	**23 00 02.6**	**+0.6**
BCAR	**Beaver Creek A**	**4.66**	**44**		**Pn**	**23 00 02.6**	**+0.3**
O16K	**Kokwok River B**	**4.68**	**270**	Pn	**Pn**	**23 00 03.7**	**+1.2**
O16K				IAML		23 01 30.5	
	comp=N,32nm,0.6s						
SCRK	**Sand Creek**	**4.71**	**27**		**Pn**	**23 00 03.6**	**+0.5**
SCRK				IAML		23 01 20.9	
	comp=E,50nm,0.7s						
SCRK				IAML		23 01 20.9	
	comp=N,28nm,1.2s						
NEA2	**Nenana**	**4.73**	**359**		**Pn**	**23 00 03.9**	**+0.7**
NEA2	**Nenana**	**4.73**	**359**	IAML		23 01 19.1	
	comp=N,30nm,1.2s						
NEA2				IAML		23 01 22.6	
	comp=E,39nm,1.5s						
P16K	**Nushagak River**	**4.73**	**264**	Pn	**Pn**	**23 00 05.5**	**+2.3**
PNL	**Peninsula**	**4.79**	**88**		**Pn**	**23 00 04.0**	**-0.1**
PNL	**Peninsula**	**4.79**	**88**	P	**Pn**	**23 00 04.4**	**+0.3**
CCB	**Clear Creek Bu**	**4.81**	**5**		**Pn**	**23 00 05.2**	**+0.9**
CCB				IAML		23 01 23.1	
	comp=N,26nm,1.0s						
CCB				IAML		23 01 24.4	
	comp=E,37nm,1.5s						
J20K	**Nowinta River**	**4.97**	**332**		**Pn**	**23 00 06.8**	**+0.2**
J20K				IAML		23 01 38.2	
	comp=E,21nm,0.8s						
J20K				IAML		23 01 41.2	
	comp=N,23nm,0.7s						
IL31		**4.99**	**10**		**Pn**	**23 00 07.3**	**+0.5**
ILAR	**Eielson Array**	**4.99**	**10**		**Pn**	**23 00 07.5**	**+0.7**
J25K	**Salcha River,**	**5.02**	**18**		**Pn**	**23 00 07.6**	**+0.3**
J25K				IAML		23 01 25.7	
	comp=N,28nm,0.8s						
J25K				IAML		23 01 28.6	
	comp=E,38nm,0.7s						
COLA	**College**	**5.03**	**5**		**Pn**	**23 00 08.2**	**+0.9**
COLA	**College**	**5.03**	**5**	P	**Pn**	**23 00 08.2**	**+0.9**
COLA	**College**	**5.03**	**5**	S	**Sn**	**23 01 06.3**	**+1.5**
L17K	**Donlin**	**5.11**	**300**		**Pn**	**23 00 08.4**	**-0.1**
M16K	**Timber Creek**	**5.12**	**287**		**Pn**	**23 00 08.7**	**0.0**
M16K	**Timber Creek**	**5.12**	**287**	IAML		23 01 42.0	
	comp=N,28nm,1.4s						
M16K				IAML		23 01 42.2	
	comp=E,23nm,1.1s						
O29M	**Mount Kennedy**	**5.17**	**81**		**Pn**	**23 00 09.8**	**+0.4**
J18K	**Innoko River**	**5.18**	**317**		**Pn**	**23 00 10.0**	**+0.6**
MLY	**Manley**	**5.24**	**351**		**Pn**	**23 00 10.9**	**+0.7**
K27K	**Chicken**	**5.25**	**35**		**Pn**	**23 00 10.8**	**+0.5**
K27K				IAML		23 01 41.7	
	comp=E,19nm,1.0s						
K27K				IAML		23 01 43.0	
	comp=N,22nm,1.4s						
J26L	**Joseph Creek**	**5.26**	**26**		**Pn**	**23 00 11.1**	**+0.6**
J26L				IAML		23 01 39.9	
	comp=N,32nm,0.7s						
J26L				IAML		23 01 42.6	
	comp=E,27nm,1.0s						
I23K	**Minto, Yukon-K**	**5.29**	**358**		**Pn**	**23 00 11.7**	**+0.9**
I23K				IAML		23 01 37.7	
	comp=N,34nm,0.9s						
I23K				IAML		23 01 42.9	
	comp=E,28nm,1.3s						
POKR	**Poker Plat Res**	**5.30**	**7**		**Pn**	**23 00 11.8**	**+0.8**
POKR				IAML		23 01 38.4	
	comp=N,29nm,0.9s						
POKR				IAML		23 01 43.9	
	comp=E,26nm,1.1s						
YUK6	**Outpost Mounta**	**5.32**	**74**		**Pn**	**23 00 11.9**	**+0.4**
K17K	**Iditarod**	**5.36**	**306**		**Pn**	**23 00 12.3**	**+0.4**
K17K				IAML		23 01 46.1	
	comp=N,19nm,0.9s						
K17K				IAML		23 01 51.8	
	comp=E,26nm,1.2s						
YUK7	**Dusty Glacier**	**5.39**	**78**		**Pn**	**23 00 12.8**	**+0.3**
CHIR	**Chirikof Islan**	**5.44**	**224**	Pn	**Pn**	**23 00 14.4**	**+1.5**
L16K	**Owhat River**	**5.51**	**294**		**Pn**	**23 00 13.7**	**-0.1**
I21K	**Tanana**	**5.51**	**346**		**Pn**	**23 00 14.7**	**+0.8**
YUK5	**Granite Creek**	**5.58**	**72**		**Pn**	**23 00 15.8**	**+0.8**
O15K	**Ungalikthiuk R**	**5.62**	**268**	Pn	**Pn**	**23 00 16.2**	**+0.8**
P29M	**Windy Craggy**	**5.63**	**88**		**Pn**	**23 00 16.2**	**+0.5**
N15K	**Kwethluk River**	**5.63**	**278**	Pn	**Pn**	**23 00 16.2**	**+0.6**
M29M	**Somme Creek**	**5.65**	**59**		**Pn**	**23 00 16.7**	**+0.7**
HYT	**Haines Junctio**	**5.72**	**76**	Pn	**Pn**	**23 00 17.5**	**+0.6**
PRP	**Porcupine Dome**	**5.86**	**14**		**Pn**	**23 00 19.1**	**+0.3**
H23K	**Yukon River**	**5.97**	**357**		**Pn**	**23 00 21.2**

WRA	**Warramunga Arr**	**17.84**	**192**	P		**Pn**	**23 47 36.3**	**-0.9**
	0.1nm,0.3s,baz=15,slow=12,SNR=2.4							
WRA				S		**S**	**23 51 01.4**	**+0.4**
	0.3nm,0.7s,baz=28,slow=44,SNR=1.6							
	0.2nm,0.4s							
ASAR	**Alice Springs**	**21.55**	**191**	P		**P**	**23 48 16.4**	**-1.6**
	0.3nm,0.5s,baz=25,slow=9.3,SNR=4.5							
ASAR				S		**S**	**23 52 18.4**	**+3.2**
	0.1nm,0.3s,baz=104,slow=26,SNR=2.2							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**69.22**	**323**	P		**P**	**23 54 35.5**	**+0.6**
	0.8nm,0.7s,baz=110,slow=7.5,SNR=6.0							
	0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**71.40**	**330**	P		**P**	**23 54 49.3**	**+1.3**
	0.2nm,0.4s,baz=115,slow=6.5,SNR=1.6							
	0.2nm,0.4s							
BVAR	**Borovoye Array**	**78.75**	**325**	P		**P**	**23 55 30.7**	**+0.2**
	0.4nm,0.6s,baz=112,slow=7.7,SNR=1.9							
	0.4nm,0.6s							

*DJA **23** 23:52:26.9±0.2,9°S±3°×11°8E±°, h125km±4km, M4.7/25, mB5.0/7, mb4.8/16, MLv4.9/25, Mw(mB)4.4/7*
*NEIC **23** 23:52:27.4±1.9,8.49S±0.08×118.39E±0.02, h137km±7km, mb4.3/31, Error ellipse: s-maj=11.4km s-min=2.3km az=179.0*
*IDC **23** 23:52:28.4±1.3,8.46S×118.65E, h148km±11km, mb3.8/20, mbtmp4.3/23, MS3.1/3, Error ellipse: s-maj=14.9km s-min=6.6km az=64.0*

ISC 23 23:52:28.3±0.4,8.54S±0.05×118.48E±0.05, h152km, n103, σ1§60/106, mb4.2/30, 3D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.41**	**141**	P	Pn	23 52 53.5	-3.7
TWSI	**Taliwang, Sumb**	**1.59**	**263**	P	**Pn**	**23 52 54.8**	**-4.2**
WSI	**Waingapu**	**2.11**	**122**	P	**Pn**	**23 53 02.7**	**-2.2**
BASI	**Baing, Sumba**	**2.66**	**129**	P	**Pn**	**23 53 09.5**	**-1.9**
BSSI	**Bau Bau, Buton**	**3.11**	**40**	P	**Pn**	**23 53 16.8**	**-0.3**
EDFI	**Ende, Flores**	**3.18**	**94**	P	**Pn**	**23 53 17.5**	**-0.6**
DNP	**Denpasar**	**3.24**	**267**	P	**Pn**	**23 53 17.0**	**-1.7**
SRBI	**Singaraja**	**3.27**	**278**	P	**Pn**	**23 53 15.9**	**-3.2**
BKSI	**Bulukumba**	**3.59**	**27**	P	**Pn**	**23 53 23.5**	**+0.2**
MMRI	**Maumere**	**3.72**	**92**		**Pn**	**23 53 24.5**	**-0.4**
KAPI	**Kappang**	**3.73**	**20**	P	**Pn**	**23 53 24.6**	**-0.4**
	115nm,0.5s,baz=189,slow=7.6,SNR=97						
KAPI				S	**Sn**	**23 54 05.1**	**-4.1**
	84nm,0.7s,baz=196,slow=18,SNR=3.7						
KAPI				LR	LR	23 54 58.2	
	comp=Z,94nm,19.8s,baz=164,slow=42						
KAPI	**Kappang**	**3.73**	**20**		**Pn**	**23 53 25.2**	**+0.1**
ABJI	**Asem Bagus**	**4.27**	**280**	P	**Pn**	**23 53 30.4**	**-1.7**
BNSI	**Bone**	**4.42**	**22**	P	**Pn**	**23 53 35.9**	**+1.7**
KMMI	**Kalianget**	**4.71**	**288**	P	**Pn**	**23 53 36.8**	**-1.2**
BLJI	**Banyuglugur**	**4.90**	**279**	P	**Pn**	**23 53 38.1**	**-2.4**
BATI	**Baumata**	**5.37**	**108**	P	**Pn**	**23 53 46.1**	**-0.7**
	664nm,0.4s,baz=300,slow=1.7,SNR=150						
BATI				S	**Sn**	**23 54 45.8**	**-2.3**
	307nm,0.4s,baz=27,slow=23,SNR=7.7						
BATI	**Baumata**	**5.37**	**108**	P	**Pn**	**23 53 46.1**	**-0.7**
TTSI	**Tana Toraja**	**5.62**	**14**	P	**Pn**	**23 53 52.7**	**+2.7**
	55nm,0.9s						
GRJI	**Gresik**	**6.16**	**285**	P	**Pn**	**23 53 55.8**	**-1.4**
	0.7nm196nm,0.8s						
BBKI	**Banjar Baru**	**6.21**	**324**	P	**Pn**	**23 53 58.7**	**+0.8**
	1.1nm9µm195nm,0.9s						
NGJI	**Ngawi**	**7.05**	**279**	P	**Pn**	**23 54 07.4**	**-1.7**
	0.3nm751nm48nm,0.5s						
PCJI	**Pacitan**	**7.24**	**272**	P	**Pn**	**23 54 08.7**	**-2.8**
	88nm,0.7s						
UGM	**Wanagama**	**7.90**	**274**	Pn	**Pn**	**23 54 18.0**	**-2.5**
MPSI	**Mapaga**	**8.93**	**9**	P	**Pn**	**23 54 35.7**	**+1.5**
KPJI	**Karang Pucung**	**9.54**	**277**	P	**Pn**	**23 54 39.8**	**-2.4**
	36nm,0.6s						
SANI	**Sanana**	**9.87**	**50**	P	**Pn**	**23 54 48.8**	**+2.1**
	618nm32nm,1.0s						
CNJI	**Cibinong**	**11.31**	**275**	P	**Pn**	**23 55 02.9**	**-2.7**
	21nm,1.2s						
FITZ	**Fitzroy Crossi**	**11.78**	**144**	P	**Pn**	**23 55 09.8**	**-1.8**
	54nm,0.6s,baz=338,slow=8.1,SNR=132						
FITZ				S	Sn	23 57 15.1	-6.8
	18nm,0.4s,baz=169,slow=21,SNR=8.3						
FITZ	**Fitzroy Crossi**	**11.78**	**144**		**Pn**	**23 55 08.9**	**-2.7**
KNRA	**Kununurra**	**12.30**	**126**		**Pn**	**23 55 16.5**	**-2.0**
MBWA	**Marble Bar**	**12.60**	**175**		**Pn**	**23 55 19.0**	**-3.3**
SAUI	**Saumlaki**	**12.70**	**88**		Pn	23 55 20.2	-3.4
PSA00	**Pilbara Seismi**	**13.02**	**174**		Pn	23 55 24.3	-3.4
PSA00	**Pilbara Seismi**	**13.02**	**174**		Pn	23 55 22.7	-5.0
MTN	**Manton Dam**	**13.14**	**110**		**Pn**	**23 55 27.0**	**-2.4**
FAKI	**Fak Fak**	**14.79**	**69**		**Pn**	**23 55 49.1**	**-1.0**
WB0	**Warramunga Arr**	**19.02**	**128**		**P**	**23 56 38.1**	**-0.5**
WRA	**Warramunga Arr**	**19.07**	**128**	P	**P**	**23 56 39.2**	**0.0**
	9.7nm,0.7s,baz=300,slow=13,SNR=79						
WRA				S	**S**	**00 00 04.0**	**-3.7**
	4.5nm,0.7s,baz=305,slow=22,SNR=4.6						
WRA				ScP	**ScP**	**00 04 20.4**	**+1.1**
	1.2nm,0.8s,baz=298,slow=2.6,SNR=3.6						
WRA	**Warramunga Arr**	**19.07**	**128**		**P**	**23 56 38.5**	**-0.7**
MORW	**Morawa**	**20.55**	**186**	P	**P**	**23 56 54.3**	**-0.7**
MORW				IAmb	IAmb	23 57 18.6	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**21.08**	**137**	P	**P**	**23 57 01.0**	**+0.2**
AS31				IAmb	IAmb	23 57 04.6	
	comp=Z,7.1nm,0.3s						
ASAR	**Alice Springs**	**21.08**	**137**	P	**P**	**23 57 01.4**	**+0.6**
	comp=Z,8.6nm,0.4s,baz=310,slow=9.5,SNR=251						
ASAR				S	**S**	**00 00 46.1**	**-0.8**
	comp=Z,5.5nm,0.9s,baz=317,slow=20,SNR=10.0						
ASAR				ScP	**ScP**	**00 04 24.5**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=313,slow=2.6,SNR=7.0						
ASAR				LR	LR	00 05 31.7	
	comp=Z,75nm,21.5s,baz=292,slow=37						
	comp=Z,8.6nm,0.4s						
ASAR	**Alice Springs**	**21.08**	**137**	P	**P**	**23 57 01.2**	**+0.4**
FORT	**Forrest**	**23.86**	**159**	P	**P**	**23 57 28.3**	**+0.6**
FORT				IAmb	IAmb	23 57 50.6	
	comp=Z,10nm,0.9s						
NWAO	**Narrogin (SRO)**	**24.29**	**183**	P	**P**	**23 57 31.9**	**+0.2**
	comp=Z,5.8nm,0.5s,baz=359,slow=7.9,SNR=9.9						
	comp=Z,5.8nm,0.5s						
COEN	**Coen**	**24.80**	**105**	P	**P**	**23 57 37.0**	**+0.5**
COEN				IAmb	IAmb	23 57 38.7	
	comp=Z,8.1nm,0.7s						
PMG	**Port Moresby**	**28.34**	**94**	LR	LR	00 11 47.6	
	comp=Z,61nm,18.0s,baz=295,slow=41						
BBOO	**Buckleboo**	**29.12**	**148**	P	**P**	**23 58 15.6**	**+0.7**
STKA	**Stephens Creek**	**31.63**	**140**	P	**P**	**23 58 38.4**	**+1.4**
	comp=Z,1.6nm,0.6s,baz=324,slow=10,SNR=4.4						
	comp=Z,1.6nm,0.6s						
CM31	**Chiang Mai Arr**	**33.04**	**324**	P	**P**	**23 58 49.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**33.04**	**324**	P	**P**	**23 58 50.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=153,slow=7.0,SNR=10						
CMAR				ScP	**ScP**	**00 05 00.9**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=122,slow=3.3,SNR=1.7						
	comp=Z,1.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**33.04**	**324**	P	**P**	**23 58 49.2**	**-0.3**
YHNB	**Yeheng**	**33.13**	**5**	P	**P**	**23 58 50.4**	**+0.1**
TOO	**Toolangi**	**37.84**	**144**	P	**P**	**23 59 32.4**	**+2.0**
SHL	**Shillong**	**42.66**	**323**	P	**P**	**00 00 09.5**	**-0.7**
SHL				IAmb	IAmb	00 00 11.4	
	comp=Z,3.3nm,0.7s						
JNU	**Nakatsue**	**43.08**	**15**	P	**P**	**00 00 13.5**	**+0.1**
JNU				IAmb	IAmb	00 00 13.9	
	comp=Z,13nm,1.1s						
LZDM	**Lanzhou Array**	**46.40**	**343**	P	**P**	**00 00 40.8**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=76,slow=31,SNR=1.9						
	comp=Z,0.9nm,0.3s						
KSRS	**Korea Array**	**46.60**	**10**	P	**P**	**00 00 41.1**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=190,slow=9.3,SNR=6.1						
	comp=Z,1.3nm,0.7s						
EVN	**Everest**	**47.48**	**321**	P	**P**	**00 00 48.1**	**-0.7**
MJAR	**Matsushiro Arr**	**48.53**	**21**	P	**P**	**00 00 55.9**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=185,slow=8.4,SNR=1.9						
	comp=Z,0.5nm,0.4s						
JSD	**Sado**	**49.88**	**20**	P	**P**	**00 01 05.7**	**-0.6**
JSD				IAmb	IAmb	00 01 07.4	
	comp=Z,4.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**53.90**	**12**	P	**P**	**00 01 36.9**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=184,slow=6.4,SNR=13						
	comp=Z,3.7nm,0.6s						
SONM	**Songino Array**	**57.14**	**350**	P	**P**	**00 01 59.1**	**0.0**
	comp=Z,1.9nm,0.6s,baz=167,slow=8.6,SNR=17						
	comp=Z,1.9nm,0.6s						
HILR	**Hailar Array B**	**57.86**	**1**	P	**P**	**00 02 04.4**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=190,slow=7.5,SNR=5.4						
	comp=Z,1.2nm,0.3s						

KBL	**Kabul**	**63.41**	**315**			**P**	**00 02 39.6**	**-2.5**
MKAR	**Makanchi Array**	**63.82**	**333**	P		**P**	**00 02 43.4**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=143,slow=6.0,SNR=20							
	comp=Z,0.6nm,0.3s							
MKAR	**Makanchi Array**	**63.82**	**333**	P		**P**	**00 02 43.2**	**-1.1**
MAKZ	**Makanchi**	**63.97**	**333**	P		**P**	**00 02 43.5**	**-1.9**
MAKZ				IAmb	IAmb		00 03 11.6	
	comp=Z,6.1nm,1.1s							
AAK	**Ala-Archa**	**64.82**	**326**	P		**P**	**00 02 50.8**	**-0.3**
ARSB	**Arslanbob**	**64.84**	**324**	P		**P**	**00 02 50.0**	**-1.2**
ARSB				IAmb	IAmb		00 02 51.5	
	comp=Z,2.4nm,0.6s							
GAR	**Garm**	**65.07**	**320**	P		**P**	**00 02 51.3**	**-1.4**
KURBB	**Kurchatov Arra**	**68.33**	**334**	P		**P**	**00 03 13.0**	**0.0**
	comp=Z,0.9nm,0.2s,baz=140,slow=5.5,SNR=7.3							
	comp=Z,0.9nm,0.2s							
KURK	**Kurchatov**	**68.36**	**334**	P		**P**	**00 03 12.3**	**-0.9**
ZAA0	**Zalesovo Array**	**68.44**	**339**	P		**P**	**00 03 12.0**	**-1.6**
ZAA0				IAmb	IAmb		00 03 13.2	
	comp=Z,2.5nm,0.8s							
ZALV	**Zalesovo Beam**	**68.44**	**339**	P		**P**	**00 03 12.4**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=138,slow=5.2,SNR=16							
	comp=Z,2.6nm,0.6s							
ZALV	**Zalesovo Beam**	**68.44**	**339**	P		**P**	**00 03 11.7**	**-1.9**
MAW	**Mawson**	**69.49**	**200**	P		**P**	**00 03 21.4**	**+1.5**
	comp=Z,6.3nm,1.0s,baz=94,slow=7.1,SNR=6.5							
	comp=Z,6.3nm,1.0s							
PEA0B	**Petropavlovsk-**	**69.87**	**24**	P		**P**	**00 03 23.0**	**+0.6**
PETK	**Petropavlovsk-**	**69.87**	**24**	P		**P**	**00 03 23.3**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=293,slow=3.5,SNR=8.5							
	comp=Z,2.6nm,0.6s							
PETK	**Petropavlovsk-**	**69.87**	**24**	P		**P**	**00 03 21.9**	**-0.5**
VOI	**Vohitsoka**	**69.92**	**250**	P		**P**	**00 03 23.2**	**-0.5**
VNDA	**Vanda**	**72.52**	**171**	P		**P**	**00 03 39.7**	**+1.7**
	comp=Z,1.2nm,0.5s,baz=315,slow=8.4,SNR=13							
	comp=Z,1.2nm,0.5s							
VNDA	**Vanda**	**72.52**	**171**	P		**P**	**00 03 39.4**	**+1.4**
VNDA				IAmb	IAmb		00 04 00.4	
	comp=Z,7.6nm,1.5s							
BVAR	**Borovoye Array**	**73.66**	**332**	P		**P**	**00 03 44.7**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=227,slow=34,SNR=3.3							
	comp=Z,0.9nm,0.6s							
AB31	**Akbulak array**	**76.89**	**325**	P		**P**	**00 04 02.1**	**-1.6**
ABKAR	**Akbulak array**	**76.89**	**325**	P		**P**	**00 04 02.0**	**-1.6**
QSPA	**South Pole Qui**	**81.45**	**180**	P		**P**	**00 04 30.9**	**+2.6**
	comp=Z,3.5nm,1.1s,baz=79,slow=2.1,SNR=5.5							
	comp=Z,3.5nm,1.1s							
QSPA	**South Pole Qui**	**81.45**	**180**	P		**P**	**00 04 29.9**	**+1.6**
QSPA				IAmb	IAmb		00 04 33.7	
	comp=Z,8.6nm,1.3s							
POGA	**Pongola**	**83.28**	**243**	P		**P**	**00 04 38.7**	**+0.2**
BOSA	**Boshof**	**88.77**	**241**	P		**P**	**00 05 05.4**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=123,slow=5.1,SNR=4.5							
	comp=Z,1.5nm,0.7s							
BOSA	**Boshof**	**88.77**	**241**	P		**P**	**00 05 05.1**	**-0.4**
BOSA				IAmb	IAmb		00 05 22.4	
	comp=Z,5.2nm,1.1s							
TROLL	**Troll, Antarti**	**89.67**	**196**	⇓P		**P**	**00 05 10.7**	**+1.9**
	comp=Z,74nm,0.6s							
SNAA	**Sanae**	**91.30**	**196**	⇓P		**P**	**00 05 17.9**	**+1.5**
	comp=Z,30nm,0.6s							
SNAA	**Sanae**	**91.30**	**196**	P		**P**	**00 05 18.0**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=199,slow=4.3,SNR=17							
	comp=Z,1.1nm,0.6s							
SNAA	**Sanae**	**91.30**	**196**	P		**P**	**00 05 17.8**	**+1.5**
SNAA				IAmb	IAmb		00 05 18.4	
	comp=Z,1.4nm,0.6s							
VNA2	**Neumayer--Watz**	**92.93**	**195**	⇓P		**P**	**00 05 25.3**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=129,slow=4.5							
D20K	**Etivluk River**	**96.05**	**21**	P		**P**	**00 05 38.4**	**+0.4**
DBIC	**Dimbokro**	**123.84**	**272**	PKP		**PKPdf**	**00 11 09.4**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=112,slow=5.0,SNR=3.8							
TXAR	**Lajitas Array**	**135.42**	**57**	SKP		**SKPbc**	**00 14 51.0**	**+2.9**
	comp=Z,0.4nm,0.8s,baz=280,slow=2.3,SNR=3.7							
CPUP	**Villa Florida**	**145.10**	**187**	PKPbc		**PKPdf**	**00 11 49.3**	**+0.9**
	comp=Z,7.7nm,0.7s,baz=19,slow=2.9,SNR=16							
BDFB	**Brasilia**	**152.50**	**209**	PKPbc		**PKiKP**	**00 12 09.0**	**+1.0**
LPAZ	**La Paz**	**154.47**	**165**	PKPbc		**PKiKP**	**00 12 14.3**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=218,slow=6.0,SNR=2.4							
LPAZ				PKPab		**PKPab**	**00 12 29.5**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=118,slow=3.7,SNR=6.2							

*MDD **23** 23:54:55.2±1.2, 37.09N×13.32W, h0km, Mb4.4/10, M_mb3.8/10, Error ellipse: s-maj=9.2km s-min=8.2km az=43.0*
*INMG **23** 23:54:57.6±1.3, 36.92N×13.66W, h10km, ML2.2, Error ellipse: s-maj=7.7km s-min=6.0km az=85.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Josephine*

ISC 23 23:54:57.0±3.2, 37.15N±0.09×13.1W±0.1, h10km, n44, σ1§46/70, 9C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.40**	**89**	Pn	**Pn**	**23 55 51.2**	**+1.1**
PFVI				Sn	**Sn**	**23 56 30.3**	**-0.2**
PFVI	**Vila Bisbo**	**3.40**	**89**	*eP*	**Pn**	**23 55 51.4**	**+1.2**
PFVI				*eS*	**Sn**	**23 56 30.8**	**+0.3**
PFVI				*i* IAML		23 56 32.6	
PFVI				*i* IAML		23 56 32.6	
PFVI				*i* IAML		23 56 33.5	
PTEO	**Sao Teotonio**	**3.50**	**82**	*eS*	**Sn**	**23 56 33.7**	**+0.9**
PTEO				*i* IAML		23 56 42.2	
PTEO				*i* IAML		23 56 46.9	
PTEO				*i* IAML		23 56 50.0	
PMAFR	**Mafra**	**3.50**	**58**	*eP*	**Pn**	**23 55 53.5**	**+2.0**
PMAFR				*eS*	**Sn**	**23 56 35.0**	**+2.0**
PMAFR				*i* IAML		23 56 39.0	
PMAFR				*i* IAML		23 56 46.7	
PMAFR				*i* IAML		23 56 51.3	
MORF	**Marmelete**	**3.54**	**86**	*eP*	**Pn**	**23 55 53.3**	**+1.3**
MORF				*eS*	**Sn**	**23 56 35.2**	**+1.2**
MORF				*i* IAML		23 56 37.5	
MORF				*i* IAML		23 56 38.9	
MORF				*i* IAML		23 56 40.1	
MESJ	**Messejana**	**3.93**	**78**	*eP*	**Pn**	**23 55 58.8**	**+1.5**
MESJ				*eS*	**Sn**	**23 56 44.8**	**+1.3**
MESJ				*i* IAML		23 56 47.4	
MESJ				*i* IAML		23 56 48.4	
MESJ				*i* IAML		23 56 49.0	
MOE	**Montemor**	**3.99**	**68**	*eP*	**Pn**	**23 55 59.9**	**+1.7**
MOE				*eS*	**Sn**	**23 56 46.0**	**+0.9**
MOE				*i* IAML		23 56 46.2	
MOE				*i* IAML		23 56 47.0	
MOE				*i* IAML		23 56 47.3	
PCVE	**Castro Verde**	**4.05**	**82**	Sn	**Sn**	**23 56 47.3**	**+0.8**
PCVE	**Castro Verde**	**4.05**	**82**	*eS*	**Sn**	**23 56 47.7**	**+1.3**
PCVE				*i* IAML		23 56 49.6	
PCVE				*i* IAML		23 56 51.9	
PCVE				*i* IAML		23 56 52.7	
PBDV	**Barranco-do-Ve**	**4.12**	**87**	Pn	**Pn**	**23 55 58.9**	**-1.1**
PBDV				Sn	**Sn**	**23 56 49.3**	**+1.1**
PBDV	**Barranco-do-Ve**	**4.12**	**87**	*eP*	**Pn**	**23 55 58.9**	**-1.1**
PBDV				*eS*	**Sn**	**23 56 48.9**	**+0.7**
PBDV				*i* IAML		23 56 51.9	
PBDV				*i* IAML		23 56 53.0	
PBDV				*i* IAML		23 57 08.9	
PSBE	**So Bento**	**4.12**	**54**	*eP*	**Pn**	**23 56 02.6**	**+2.7**
PSBE				*eS*	**Sn**	**23 56 51.6**	**+3.4**
PSBE				*i* IAML		23 56 54.3	
PSBE				*i* IAML		23 57 01.0	
PSBE				*i* IAML		23 57 06.7	
PBEJ	**Beja**	**4.24**	**77**	*eS*	**Sn**	**23 56 52.2**	**+1.1**
EVO	**Evora**	**4.25**	**70**	Sn	**Sn**	**23 56 50.5**	**-0.8**
EVO	**Evora**	**4.25**	**70**	*eS*	**Sn**	**23 56 51.3**	**0.0**
EVO				*i* IAML		23 56 54.8	
EVO				*i* IAML		23 56 55.4	
EVO				*i* IAML		23 56 55.4	
PMTG	**Montargil**	**4.29**	**62**	*eP*	**Pn**	**23 56 03.7**	**+1.5**
PMTG				*eS*	**Sn**	**23 56 53.7**	**+1.4**
PMTG				*i* IAML		23 56 55.7	
PMTG				*i* IAML		23 56 59.8	
PMTG				*i* IAML		23 57 14.8	
PVAQ	**Vaqueiros**	**4.29**	**85**	*eP*	**Pn**	**23 56 04.0**	**+1.7**
PVAQ				*eS*	**Sn**	**23 56 52.6**	**+0.2**
PVAQ				*i* IAML		23 56 54.6	
PVAQ				*i* IAML		23 56 55.1	
PVAQ				*i* IAML		23 56 56.5	
PARRA	**Arraiolos**	**4.32**	**66**	*eP*	**Pg**	**23 56 03.7**	**-2.3**
PARRA				*eS*	**Sg**	**23 56 52.8**	**+0.1**
PARRA				*i* IAML		23 56 54.0	
PARRA				*i* IAML		23 56 56.3	
PARRA				*i* IAML		23 56 59.5	

EGRO	**El Granado**	**4.48**	**83**	Sn	**Sn**	**23 56 56.6**	**-0.5**
EGRO	**El Granado**	**4.48**	**83**	Pn	**Pn**	**23 56 05.4**	**+0.5**
EGRO				⇑*i*IVmb_VC		23 56 12.5	
	241nm,SNR=1.8						
EGRO				Sn	**Sn**	**23 56 57.6**	**+0.5**
EGRO				Sn	**Sn**	**23 56 57.7**	**+0.6**
PSARD	**Sardoal**	**4.58**	**56**	*eP*	**Pn**	**23 56 08.6**	**+2.3**
PSARD				*eS*	**Sn**	**23 57 00.9**	**+1.4**
PSARD				*i* IAML		23 57 02.7	
PSARD				*i* IAML		23 57 05.3	
PSARD				*i* IAML		23 57 14.7	
PCAS	**Casmilo, Conde**	**4.62**	**50**	*eP*	**Pn**	**23 56 08.2**	**+1.4**
PCAS				*eS*	**Sn**	**23 57 01.6**	**+1.2**
PCAS				*i* IAML		23 57 05.2	
PCAS				*i* IAML		23 57 07.1	
PCAS				*i* IAML		23 57 25.2	
PESTR	**Estremoz**	**4.67**	**67**	Sn	**Sn**	**23 57 01.6**	**-0.1**
PESTR	**Estremoz**	**4.67**	**67**	*eS*	**Sn**	**23 57 02.6**	**+0.9**
PESTR				*i* IAML		23 57 04.8	
PESTR				*i* IAML		23 57 05.8	
PESTR				*i* IAML		23 57 06.0	
PBAR	**Barrancos**	**4.91**	**76**	Pn	**Pn**	**23 56 12.3**	**+1.6**
PBAR				Sn	**Sn**	**23 57 07.2**	**-0.4**
PBAR	**Barrancos**	**4.91**	**76**	*eP*	**Pn**	**23 56 13.8**	**+3.0**
PBAR				*eS*	**Sn**	**23 57 07.9**	**+0.3**
PBAR				*i* IAML		23 57 16.4	
PBAR				*i* IAML		23 57 19.2	
PBAR				*i* IAML		23 57 28.3	
PMRV	**Marv??o**	**5.02**	**61**	*eP*	**Pn**	**23 56 15.6**	**+3.2**
PMRV				*eS*	**Sn**	**23 57 11.6**	**+1.1**
PMRV				*i* IAML		23 57 11.9	
PMRV				*i* IAML		23 57 12.4	
PMRV				*i* IAML		23 57 29.2	
EBAD	**Badajoz**	**5.06**	**70**	Pn	**Pn**	**23 56 13.8**	**+0.9**
EBAD				Sn	**Sn**	**23 57 08.4**	**-3.0**
EBAD	**Badajoz**	**5.06**	**70**	Pn	**Pn**	**23 56 13.6**	**+0.7**
EBAD				⇑*i*IVmb_VC		23 56 21.3	
	262nm,SNR=1.6						
EBAD				Sn	**Sn**	**23 57 10.8**	**-0.6**
EMIN	**Mina Concepcio**	**5.14**	**81**	Sn	**Sn**	**23 57 11.8**	**-1.6**
EMIN	**Mina Concepcio**	**5.14**	**81**	⇑*i*IVmb_VC		23 56 23.2	
	135nm,SNR=1.2						
EMIN				Sn	**Sn**	**23 57 14.0**	**+0.6**
PCBR	**Castelo Branco**	**5.15**	**57**	*eS*	**Sn**	**23 57 14.3**	**+0.6**
PVIS	**Viseu**	**5.39**	**47**	*eS*	**Sn**	**23 57 20.5**	**+0.9**
ESPR	**Espera**	**5.79**	**91**	Sn	**Sn**	**23 57 30.3**	**+0.9**
POLO	**Lamas de Olo**	**5.88**	**43**	*eP*	**Pn**	**23 56 25.6**	**+1.2**
POLO				*eS*	**Sn**	**23 57 30.6**	**-1.3**
PCAB	**Cabril**	**6.00**	**39**	*eS*	**Sn**	**23 57 33.9**	**-0.8**
ELOB	**Lobios**	**6.11**	**38**	⇑*i*IVmb_VC		23 56 34.2	
	336nm,SNR=1.0						
ELOB				Sn	**Sn**	**23 57 35.3**	**-2.0**
ECAB	**El Cabril**	**6.16**	**79**	Pn	**Pn**	**23 56 29.3**	**+1.3**
ECAB				⇑*i*IVmb_VC		23 56 37.9	
	117nm,SNR=1.1						
ECAB				Sn	**Sn**	**23 57 37.7**	**-0.8**
MVO	**Moncorvo**	**6.18**	**48**	*eP*	**Pn**	**23 56 30.0**	**+1.6**
MVO				*eS*	**Sn**	**23 57 38.3**	**-0.6**
MVO				*i* IAML		23 57 39.4	
MVO				*i* IAML		23 57 40.0	
MVO				*i* IAML		23 57 43.7	
EPLA	**Plasencia**	**6.21**	**60**	Pn	**Pn**	**23 56 29.6**	**+0.9**
EPLA				⇑*i*IVmb_VC		23 56 34.2	
	170nm,SNR=1.0						
EPLA				Sn	**Sn**	**23 57 39.0**	**-0.8**
EAGO	**Agolada(Pontev**	**6.82**	**33**	⇑*i*IVmb_VC		23 56 43.8	
	345nm,SNR=0.9						
EAGO				Sn	**Sn**	**23 57 51.9**	**-3.0**
EADA	**Adamuz**	**6.

OGWZ	**Otaki Gorge**	**0.52**	**255**	P	**Pn**	**00 00 22.3**	**0.0**	
OGWZ				S	**Sn**	**00 00 31.0**	**+0.9**	
MTW	**Mount Morrison**	**0.54**	**208**	P	**Pn**	**00 00 22.6**	**+0.1**	
ANWZ	**Angora Road**	**0.54**	**65**	P	**Pb**	**00 00 21.5**	**-0.4**	
OHWZ	**Ohakea**	**0.62**	**320**	P	**Pn**	**00 00 23.8**	**+0.1**	
TSZ	**Takapari Road**	**0.63**	**9**	P	**Pb**	**00 00 22.4**	**-1.0**	
CAW	**Cannon Point**	**0.72**	**234**	P	**Pn**	**00 00 25.5**	**+0.4**	
TRWZ	**Traveller**	**0.72**	**189**	P	**Pn**	**00 00 25.1**	**0.0**	
KIW	**Kapiti Island**	**0.72**	**256**	P	**Pn**	**00 00 25.7**	**+0.6**	
PRHZ	**Porangahau**	**0.74**	**56**	P	**Pb**	**00 00 24.3**	**-1.0**	
PAWZ	**Paruwai Farm**	**0.76**	**204**	P	**Pn**	**00 00 25.6**	**-0.1**	
WPHZ	**Waipukurau**	**0.78**	**37**	P	**Pb**	**00 00 25.2**	**-0.6**	
PNHZ	**Pukenui**	**0.82**	**20**	P	**Pb**	**00 00 25.6**	**-1.0**	
MSHZ	**Moikau Station**	**0.85**	**211**	P	**Pn**	**00 00 26.7**	**-0.2**	
PLWZ	**Palliser**	**0.98**	**206**	P	**Pn**	**00 00 28.3**	**-1.0**	
PXZ	**Pawanui**	**1.02**	**51**	P	**Pn**	**00 00 28.0**	**-1.2**	
BHW	**Baring Head**	**1.02**	**225**	P	**Pn**	**00 00 29.2**	**-0.8**	
KRHZ	**Kereru**	**1.12**	**22**	P	**Pn**	**00 00 29.8**	**-0.8**	
KAHZ	**Kahuranaki**	**1.20**	**42**	P	**Pn**	**00 00 30.6**	**-1.0**	
MOVZ	**Moawhango**	**1.28**	**357**	P	**Pn**	**00 00 32.7**	**-0.1**	
TCW	**Tory Channel**	**1.29**	**246**	P	**Pb**	**00 00 33.0**	**-1.5**	
MTVZ	**Mangateitei**	**1.33**	**348**	P	**Pn**	**00 00 34.2**	**+0.7**	
KWHZ	**Kaweka Forest**	**1.34**	**20**	P	**Pn**	**00 00 32.9**	**-0.7**	
WNVZ	**Wahianoa**	**1.37**	**352**	P	**Pn**	**00 00 34.5**	**+0.3**	
TRVZ	**Turoa**	**1.40**	**351**	P	**Pn**	**00 00 35.2**	**+0.5**	
MCHZ	**McNeill Hill**	**1.41**	**28**	P	**Pn**	**00 00 33.7**	**-0.8**	
WHVZ	**Whangaehu Hut**	**1.41**	**352**	P	**Pn**	**00 00 35.5**	**+0.7**	
TUVZ	**Tukino**	**1.42**	**354**	P	**Pn**	**00 00 35.5**	**+0.7**	
MAVZ	**Matarangi**	**1.43**	**352**	P	**Pn**	**00 00 35.9**	**+0.7**	
PKVZ	**Pokaka**	**1.44**	**345**	P	**Pn**	**00 00 35.7**	**+0.6**	
FWVZ	**Far West T-bar**	**1.45**	**351**	P	**Pn**	**00 00 36.0**	**+0.7**	
DUWZ	**D'Urville Isla**	**1.46**	**265**	P	**Pn**	**00 00 35.9**	**-1.5**	
COVZ	**Chateau Observ**	**1.50**	**351**	P	**Pn**	**00 00 36.6**	**+0.7**	
SNVZ	**South Ngauruho**	**1.50**	**354**	P	**Pn**	**00 00 36.5**	**+0.5**	
NGZ	**Ngauruhoe**	**1.52**	**353**	P	**Pn**	**00 00 36.8**	**+0.6**	
OTVZ	**Oturere**	**1.53**	**355**	P	**Pn**	**00 00 36.4**	**+0.1**	
NNVZ	**North Ngauruho**	**1.56**	**354**	P	**Pn**	**00 00 37.2**	**+0.4**	
TMVZ	**Te Maari**	**1.57**	**356**	P	**Pn**	**00 00 37.2**	**+0.3**	
WTVZ	**West Tongariro**	**1.58**	**353**	P	**Pn**	**00 00 37.5**	**+0.5**	
NTVZ	**North Tongarir**	**1.59**	**356**	P	**Pn**	**00 00 37.4**	**+0.3**	
KRVZ	**Karewarewa**	**1.60**	**355**	P	**Pn**	**00 00 36.1**	**-1.1**	
BKZ	**Black Stump Fm**	**1.60**	**19**	P	**Pn**	**00 00 36.1**	**-1.1**	
TUWZ	**Tuamarina**	**1.61**	**242**	P	**Pn**	**00 00 37.4**	**+0.1**	
TWVZ	**Taurewa**	**1.64**	**349**	P	**Pn**	**00 00 38.4**	**+0.6**	
RITZ	**Rihia Road**	**1.71**	**1**	P	**Pn**	**00 00 38.9**	**+0.2**	
NMHZ	**Naumai**	**1.75**	**26**	P	**Pn**	**00 00 38.6**	**-0.7**	
VRZ	**Vera Road**	**1.76**	**332**	P	**Pn**	**00 00 40.7**	**+1.3**	
BSWZ	**Blackbirch Sta**	**1.80**	**234**	P	**Pn**	**00 00 39.5**	**-0.4**	
PREZ	**Palmer Road**	**1.86**	**316**	P	**Pb**	**00 00 43.8**	**-0.4**	
MRHZ	**Matea Rd**	**1.90**	**14**	P	**Pn**	**00 00 40.4**	**-1.0**	
NNZ	**Nelson**	**1.93**	**253**	P	**Pn**	**00 00 42.0**	**+0.3**	
KHEZ	**Kahui Hut**	**1.97**	**314**	P	**Pb**	**00 00 45.2**	**-0.9**	
WATZ	**Wairara**	**1.98**	**358**	P	**Pn**	**00 00 42.1**	**-0.2**	
MTHZ	**Maungataniwha**	**1.99**	**23**	P	**Pn**	**00 00 41.5**	**-1.0**	
NBEZ	**Newall Road No**	**2.07**	**313**	P	**Pb**	**00 00 47.5**	**-0.3**	
TKNZ	**Takaka Hill**	**2.21**	**260**	P	**Pn**	**00 00 46.4**	**+0.9**	
HIZ	**Hauiti**	**2.30**	**341**	P	**Pn**	**00 00 48.1**	**+1.3**	
TLZ	**Tolley Road**	**2.36**	**354**	P	**Pn**	**00 00 48.4**	**+0.7**	
MRNZ	**Matariki Terra**	**2.43**	**252**	P	**Pn**	**00 00 49.4**	**+0.8**	
THZ	**Tophouse**	**2.46**	**243**	P	**Pn**	**00 00 49.3**	**+0.3**	
QRZ	**Quartz Range**	**2.51**	**266**	P	**Pb**	**00 00 55.0**	**-0.3**	
URZ	**Urewera**	**2.62**	**23**	Pn	**Pb**	**00 00 57.6**	**+0.5**	
	1.6nm,0.3s,baz=207,slow=7.1,SNR=7.5							
URZ				Sn	**Sb**	**00 01 35.2**	**+6.5**	
	1.2nm,0.3s,baz=307,slow=20,SNR=3.8 2.0nm,0.3s							
ASAR	**Alice Springs**	**38.93**	**283**	P	**P**	**00 07 32.6**	**-1.6**	
	0.2nm,0.4s,baz=120,slow=7.0,SNR=4.5 0.2nm,0.4s							
WRA	**Warramunga Arr**	**40.88**	**288**	P	**P**	**00 07 48.6**	**-1.9**	
	0.3nm,0.5s,baz=125,slow=8.2,SNR=2.4 0.3nm,0.5s							
LPAZ	**La Paz**	**98.02**	**119**	P	Pdif	00 13 47.1	+1.6	
	1.1nm,0.3s,baz=225,slow=4.3,SNR=13							

*SOME **24** 00:37:07.4,41.37N×83.60E,h20km,MS4.3*
*IDC **24** 00:37:08.1±2.9,41.74N×83.39E,h0km,mbtmp3.3/6, ML2.6/6,Error ellipse: s-maj=27.5km s-min=19.0km az=149.0*
*NNC **24** 00:37:09.0±1.0,41.41N×83.49E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=8.8km s-min=5.8km az=176.0*

ISC 24 00:37:10.2±1.1,41.72N±0.07×83.62E±0.04,h10km,n43, α2^{5}68/50,12C-6D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHLS	**Shalkode**	**3.40**	**296**	Pg	**Pb**	**00 38 08.0**		**-2.5**
	52nm,0.2s							
SHLS				Lg	Lg	00 38 51.6		
SHLS	**Shalkode**	**3.40**	**296**	*eP*	**Pb**	**00 38 08.0**		**-2.5**
	52nm,0.2s							
SHLS				*eS*	**Sb**	**00 38 51.5**		**-0.4**
PDGK	**Podgornoye**	**3.45**	**299**	⇓Pn	**Pn**	**00 38 04.3**		**+0.2**
	6.7nm,0.8s							
PDGK				⇑Pg	**Pg**	**00 38 14.7**		**-1.6**
	27nm,0.7s							
PDGK				⇑Sn	**Sn**	**00 38 48.9**		**+3.8**
	44nm,0.5s							
PDGK				⇑Lg	Lg	00 39 01.3		
	206nm,0.8s							
WMQ	**Urumqi**	**3.66**	**54**	*ePn*	**Pb**	**00 38 15.3**		**+0.3**
WMQ				Sn	**Sn**	**00 38 52.8**		**+2.6**
WMQ				smax	smax			
	comp=N,97nm,1.1s							
WMQ				smax	smax			
	comp=E,75nm,1.1s							
UZB	**Uzunbulak**	**3.69**	**294**	Pg	**Pb**	**00 38 17.2**		**+1.6**
	comp=E,16nm,0.6s							
UZB				Lg	Lg	00 39 07.0		
	comp=E,112nm,0.4s							
UZB	**Uzunbulak**	**3.69**	**294**	*eP*	**Pb**	**00 38 17.2**		**+1.6**
	comp=E,16nm,0.6s							
UZB				*eS*	**Sg**	**00 39 07.0**		**-1.7**
	comp=E,112nm,0.4s							
KPKS	**Kokpek**	**4.04**	**297**	Pg	**Pb**	**00 38 24.4**		**+2.9**
	comp=E,0.5nm,0.3s							
KPKS				Lg	Lg	00 39 19.2		
	comp=E,87nm,0.4s							
SATY	**Saty**	**4.09**	**291**	Pg	**Pb**	**00 38 24.0**		**+1.7**
	comp=E,10nm,0.4s							
SATY				Lg	Lg	00 39 18.7		
	comp=E,144nm,0.6s							
KNOS	**Konyrlen**	**4.19**	**311**	Pg	**Pg**	**00 38 28.6**		**-1.9**
	comp=E,19nm,0.5s							
KNOS				Lg	Lg	00 39 27.0		
	comp=E,44nm,0.6s							
BLB	**Baldybastay**	**4.46**	**304**	Pg	**Pg**	**00 38 34.3**		**-1.4**
	comp=E,28nm,0.3s							
BLB				Lg	Lg	00 39 36.0		
	comp=E,64nm,0.6s							
ARXS	**Arharly**	**4.93**	**302**	Pg	Pb	00 38 40.8		+4.2
	comp=E,6.3nm,0.4s							
ARXS				Lg	Lg	00 39 47.1		
	comp=E,32nm,0.5s							
ARXS	**Arharly**	**4.93**	**302**	*eP*	Pb	00 38 40.8		+4.2
ARXS				*eS*	**Sg**	**00 39 47.1**		**-1.2**
TDK	**Taldyqorghan**	**5.02**	**313**	*eP*	Pb	00 38 42.2		+4.1
	comp=E,30nm,0.6s							
TDK				*eS*	**Sg**	**00 39 49.7**		**-1.7**
	comp=E,39nm,0.3s							
KOTS	**Kotyrbulak**	**5.05**	**290**	*eP*	**Pb**	**00 38 37.5**		**-1.2**
	comp=E,12nm,0.4s							
KOTS				*eS*	**Sb**	**00 39 42.4**		**+2.9**
	comp=E,47nm,0.6s							
MDOK	**Medeo**	**5.07**	**289**	Pg	**Pb**	**00 38 41.6**		**+2.5**
	comp=E,5.8nm,0.5s							
MDOK				Lg	Lg	00 39 49.0		
	comp=E,44nm,0.8s							
TNSS	**Tian-Shan**	**5.12**	**287**	Pg	**Pb**	**00 38 41.8**		**+1.8**
	comp=E,2.6nm,1.0s							
TNSS				Lg	Lg	00 39 49.6		
	comp=E,10nm,0.8s							
TNSS	**Tian-Shan**	**5.12**	**287**	*eP*	**Pb**	**00 38 41.8**		**+1.8**
	comp=E,2.6nm,1.0s							
TNSS				*eS*	**Sg**	**00 39 49.6**		**-4.8**
	comp=E,10nm,0.8s							
KNDC	**Almaty**	**5.14**	**289**	⇑Pg	**Pb**	**00 38 43.7**		**+3.4**
	comp=E,40nm,0.7s							
KNDC				⇑Lg	Lg	00 39 54.9		
	comp=E,207nm,0.8s							
MK31	**Makanchi Array**	**5.16**	**350**	⇓Pn	**Pn**	**00 38 31.0**		**+3.5**
	comp=E,1.4nm,0.5s,baz=33,slow=19,SNR=8.6							
MK31				⇑Pg	**Pg**	**00 38 49.1**		**0.0**
	comp=E,4.7nm,0.6s,baz=167,slow=14,SNR=11							
MK31				⇑Lg	Lg	00 40 02.7		
	comp=E,21nm,0.7s,baz=181,slow=21,SNR=3.6							
MKAR	**Makanchi Array**	**5.16**	**350**	Pn	**Pn**	**00 38 29.0**		**+1.5**
	comp=E,0.3nm,0.3s,baz=165,slow=12,SNR=6.7							
MKAR				Pg	**Pb**	**00 38 41.2**		**+0.6**
	comp=E,0.6nm,0.3s,baz=171,slow=14,SNR=9.0							
MKAR				Sn	**Sn**	**00 39 25.8**		**-1.3**
	comp=E,1.0nm,0.3s,baz=166,slow=18,SNR=4.5 comp=E,0.4nm,0.3s							
MAKZ	**Makanchi**	**5.22**	**347**	⇑Pg	Pb	00 38 48.5		+6.9
	comp=E,14nm,1.2s							
MAKZ				⇑Lg	Lg	00 40 04.2		
	comp=E,37nm,1.1s							
KTBS	**Karatobe**	**5.49**	**294**	Pg	**Pg**	**00 38 51.4**		**-3.9**
	comp=E,3.8nm,0.2s							
KTBS				Lg	Lg	00 40 04.8		
	comp=E,0.3nm,0.2s							
MTBS	**Maitube**	**5.51**	**287**	Pg	**Pb**	**00 38 49.9**		**+3.5**
	comp=E,6.5nm,0.4s							
MTBS				Lg	Lg	00 40 03.5		
	comp=E,36nm,0.6s							
MTBS	**Maitube**	**5.51**	**287**	*eP*	**Pb**	**00 38 49.9**		**+3.5**
	comp=E,6.5nm,0.4s							
MTBS				*eS*	**Sg**	**00 40 03.5**		**-3.5**
	comp=E,36nm,0.6s							
KUU	**Kurty**	**5.78**	**295**	Pg	**Pg**	**00 38 56.3**		**-4.5**
	comp=E,3.5nm,0.1s							
KUU				Lg	Lg	00 40 13.4		
	comp=E,15nm,0.2s							
KUU	**Kurty**	**5.78**	**295**	*eP*	**Pg**	**00 38 56.3**		**-4.5**
	comp=E,3.5nm,0.1s							
KUU				*eS*	**Sg**	**00 40 13.4**		**-2.2**
	comp=E,15nm,0.2s							
KST	**Kastek**	**5.82**	**286**	Pg	**Pb**	**00 38 54.1**		**+2.2**
	comp=E,8.6nm,0.6s							
KST				Lg	Lg	00 40 10.1		
	comp=E,33nm,0.7s							
KST	**Kastek**	**5.82**	**286**	*eP*	**Pb**	**00 38 54.1**		**+2.2**
	comp=E,8.6nm,0.6s							
KST				*eS*	**Sg**	**00 40 10.1**		**-7.0**
	comp=E,33nm,0.7s							
DGS	**Degeres**	**6.00**	**287**	Pg	Pb	00 38 58.7		+3.8
	comp=E,3.6nm,0.4s							
DGS				Lg	Lg	00 40 18.8		
	comp=E,16nm,0.7s							
KSH	**Kashi**	**6.22**	**252**	Pn	Pn	00 38 42.6		+0.4
KSH				Sn	Sn	00 39 04.8		-49
KSH				smax	smax			
	comp=N,7.0nm,0.8s							
KSH				smax	smax			
	comp=E,15nm,0.6s							
AAK	**Ala-Archa**	**6.84**	**281**	Pn	**Pn**	**00 38 49.4**		**-1.3**
	comp=E,0.3nm,0.3s,baz=113,slow=7.7,SNR=4.5							
AAK				Pg	**Pb**	**00 39 08.2**		**-1.0**
	comp=E,0.7nm,0.3s,baz=80,slow=12,SNR=6.4							
AAK				Sn	**Sn**	**00 40 07.0**		**-1.7**
	comp=E,1.0nm,0.3s,baz=90,slow=7.1,SNR=3.6							
AAK				Lg	Lg	00 40 42.9		
	comp=E,1.2nm,0.3s,baz=0.0,slow=20,SNR=4.2 comp=E,0.9nm,0.4s							
AAK	**Ala-Archa**	**6.84**	**281**	⇓Pg	Pb	00 39 12.5		+3.3
	comp=E,5.7nm,0.9s							
AAK				⇓Lg	Lg	00 40 45.1		
	comp=E,16nm,0.7s							
SGDS	**Sogindy**	**6.86**	**288**	Pg	Pg	00 39 14.8		-6.6
	comp=E,1.7nm,0.4s							
SGDS				Lg	Lg	00 40 45.6		
	comp=E,10nm,0.8s							
BTLS	**Baital**	**7.72**	**299**	Pg	Pg	00 39 31.3		-6.7
	comp=E,1.8nm,0.3s							
BTLS				Lg	Lg	00 41 14.0		
	comp=E,5.3nm,0.6s							
MRKS	**Merke**	**7.78**	**281**	Pg	Pb	00 39 30.1		+4.9
	comp=E,4.2nm,1.1s							
MRKS				Lg	Lg	00 41 12.3		
	comp=E,8.3nm,0.9s							
KURBB	**Kurchatov Arra**	**9.58**	**340**	Pn	**Pn**	**00 39 28.2**		**+0.2**
	baz=156,slow=13,SNR=6.7							
KURBB				Sn	**Sn**	**00 41 12.2**		**-3.4**
	baz=174,slow=27,SNR=1.6							
KURBB				Lg	Lg	00 42 06.6		
	comp=E,0.1nm,0.3s,baz=160,slow=33,SNR=4.7 comp=E,0.5nm,0.5s							
KURBB	**Kurchatov Arra**	**9.58**	**340**	⇑Pn	**Pn**	**00 39 29.9**		**+1.9**
	comp=E,4.4nm,1.4s							
KURBB				⇑Lg	Lg	00 42 22.4		
	comp=E,14nm,0.8s							
KURK	**Kurchatov**	**9.64**	**341**	⇑Lg	Lg	00 42 22.4		
	comp=E,8.7nm,1.1s							
KK31	**Karatay Array**	**9.80**	**282**	⇓Pg	Pn	00 40 10.3		+39
	comp=E,0.5nm,0.5s							
KK31				⇓Lg	Lg	00 42 21.0		
	comp=E,3.0nm,0.6s,baz=97,slow=28,SNR=4.5							
ZALV	**Zalesovo Beam**	**12.26**	**3**	Pn	**Pn**	**00 40 03.4**		**-1.4**
	comp=E,0.2nm,0.3s,baz=180,slow=11,SNR=13							
ZALV				Sn	**Sn**	**00 42 23.0**		**+1.6**
	comp=E,0.1nm,0.3s,baz=180,slow=31,SNR=5.2							
ZALV				Lg	Lg	00 43 36.9		
	baz=189,slow=26 comp=E,1.9nm,0.6s							
BVAR	**Borovoye Array**	**14.40**	**326**	Pn	**Pn**	**00 40 31.3**		**-2.7**
	baz=144,slow=10.0,SNR=3.8							
BVAR				Lg	Lg	00 44 40.8		
	baz=143,slow=28,SNR=5.2 comp=E,0.3nm,0.6s							
SONM	**Songino Array**	**17.26**	**62**	P	**P**	**00 41 11.7**		**-1.1**
	baz=248,slow=14,SNR=4.2 comp=E,0.6nm,0.7s							
BTO	**Baotou**	**19.89**	**84**	*eP*	**Pn**	**00 41 40.5**		**-2.8**
BTO				pmax	pmax			
	comp=Z,12nm,0.5s							
BTO				pmax	pmax			
	comp=Z,310nm,3.7s							

*IDC **24** 00:53:57.4±0.3,51.59N×175.59W,h0km,mb5.4/43, mbtmp5.4/47,ML4.8/4,MS6.1/93,Error ellipse: s-maj=10.0km s-min=7.1km az=173.0*
*MOS **24** 00:53:58.5±0.8,51.60N×175.61W,h17km,mb6.0/111, MS6.2/74,Error ellipse: s-maj=6.2km s-min=4.3km az=107.0*
*BJI **24** 00:54:00.0,51.50N×175.55W,h30km,mB6.4/75, mb6.1/91,Ms6.5/96,Ms7 6.3/93*
*ISC-PP **24** 00:54:01,51.38N×175.51W,h28km±1km,Mwppsm6.8, Moment Tensor Solution. s60 Moment tensor: Scale 10^{19}Nm; M_{rr}0.53±.12; $M_{\theta\theta}$-0.74±.15; $M_{\phi\phi}$0.15±.11; $M_{r\theta}$-0.02±.17; $M_{\theta\phi}$-0.26±.18; $M_{\phi r}$-0.08±.24; Fault plane solution: M_o1.91000×10^{19} NP1:ϕ_s109.40000°,δ49.00000°, λ126.90000°. NP2:ϕ_s240.70000°,δ52.90000°,λ55.40000°.*
*NEIC **24** 00:54:01.1,51.38N×175.51W,h24km*
*AEIC **24** 00:54:01.9±1.8,51.38N±0.04×175.54W±0.04,h26km±3km, Error ellipse: s-maj=5.8km s-min=4.0km az=183.0*
*NEIC **24** 00:54:01.1±1.9,51.38N±0.04×175.51W±0.05,h20km±1km, mb6.1/345,ML6.0/12,Ms_20 6.2/669,Mwb6.2/288, Mww6.3/99,ML5.6(AEIC),Error ellipse: s-maj=7.1km s-min=4.9km az=180.0,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.20; $M_{\theta\theta}$-2.06; $M_{\phi\phi}$-0.14; $M_{r\theta}$1.57; $M_{\theta\phi}$-0.85; $M_{\phi r}$0.79; Fault plane solution: M_o2.90000×10^{18} NP1:ϕ_s65.42000°,δ63.79000°, λ86.35000°. NP2:ϕ_s253.64000°,δ26.45000°,λ97.37000°. Principal axes: T 2.8037, Plg71.0000°, Azm327.0000°; N 0.1760, Plg3.0000°, Azm67.0000°; P -2.9798, Plg19.0000°, Azm158.0000°;*
*NEIC **24** 00:54:01.1,51.08N×175.51W,h24km,Moment Tensor Solution. Duration: 8s2 Moment tensor: Scale 10^{18}Nm; M_{rr}3.14; $M_{\theta\theta}$-2.67; $M_{\phi\phi}$-0.47; $M_{r\theta}$2.25; $M_{\theta\phi}$-1.30; $M_{\phi r}$1.38; Fault plane solution: M_o4.16000×10^{18} NP1: ϕ_s249.68000°,δ25.47000°,λ98.04000°. NP2:ϕ_s60.78000°, δ64.80000°,λ86.19000°. Principal axes: T 4.1020, Plg70.0000°, Azm323.0000°; N 0.1091, Plg3.0000°, Azm62.0000°; P -4.2111, Plg20.0000°, Azm154.0000°;*
*NEIC **24** 00:54:01.6,51.41N×175.51W,h23km*
*IPGP **24** 00:54:02.0,51.53N×175.56W,h19km,Mw6.4, Fault plane solution: NP1:ϕ_s259.00000°,δ24.00000°,λ99.00000°. NP2:ϕ_s69.00000°,δ66.00000°,λ86.00000°.*
*RSNC **24** 00:54:04.6±3.1,52.5N×177.4W±7.3,h10km,M6.2, mB6.6,mb6.1,Mw(mB)6.4,MwMwp6.0,Mwp6.0*
*BGR **24** 00:54:05.6,51.51N×177.78W,h33km,mb5.7,Ms5.9*
*GCMT **24** 00:54:06.0±0.0,51.42N×175.57W,h24km,MW6.4/165, Moment Tensor Solution. s163,c406; s165,c690; Duration: 3s7 Moment tensor: Scale 10^{18}Nm; M_{rr}3.58±.02; $M_{\theta\theta}$-3.27±.02; $M_{\phi\phi}$-0.31±.01; $M_{r\theta}$2.08±.03; $M_{\theta\phi}$-1.39±.01; $M_{\phi r}$1.26±.03; Best double couple: M_o4.42900×10^{18} NP1:ϕ_s254.00000°,δ29.00000°, λ100.00000°. NP2:ϕ_s63.00000°,δ62.00000°,λ85.00000°. Principal axes: T 4.3260, Plg73.0000°, Azm320.0000°; N 0.2000, Plg5.0000°, Azm65.0000°; P -4.5330, Plg17.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 24 00:54:02.6±0.3,51.45N±0.02×175.63W±0.02,h33km±2km, h32km:pP-P,n2511,σ1972/2713,mb6.0/501,MS6.2/497, 306C-70D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GSIG	**Igitkin Island**	**0.57**	**342**		**Pn**	**00 54 14.8**		**+0.4**
GSIG					**Pb**	**00 54 15.0**		**+0.7**
GSIG					**Sn**	**00 54 24.2**		**+1.4**
ETKA	**Kagalaska Isla**	**0.64**	**311**		**Pn**	**00 54 15.4**		**+0.1**
ETKA					**Pb**	**00 54 15.5**		**+0.2**
ETKA					**Sn**	**00 54 25.2**		**+0.9**
ETKA					**Sb**	**00 54 25.5**		**+1.5**
GSMY	**Great Sitkin M**	**0.65**	**336**		**Pn**	**00 54 16.3**		**+0.7**
GSMY					**Sn**	**00 54 27.0**		**+2.2**
GSMY					**Sb**	**00 54 27.1**		**+2.6**
GSCK	**Great Sitkin C**	**0.66**	**330**		**Pn**	**00 54 16.3**		**+0.7**
GSTD	**Great Sitkin T**	**0.69**	**333**		**Pn**	**00 54 16.7**		**+0.5**
GSTD					**Sn**	**00 54 27.4**		**+1.6**
GSTD					**Sb**	**00 54 27.9**		**+2.3**
GSTR	**Great Sitkin T**	**0.70**	**338**		**Pn**	**00 54 17.1**		**+0.8**
GSTR				IAML		00 54 33.3		
	comp=N,828μm,0.6s							
GSTR				IAML		00 54 35.2		
	comp=E,525μm,0.5s							
GSSP	**Great Sitkin S**	**0.73**	**333**		**Pn**	**00 54 17.4**		**+0.8**
GSSP					**Sn**	**00 54 29.0**		**+2.3**
GSSP					**Sb**	**00 54 29.4**		**+2.7**
ADK	**Adak**	**0.79**	**304**		**Pb**	**00 54 17.2**		**-0.6**
ADK				Sn	**Sn**	**00 54 29.5**		**+1.5**
ADK	**Adak**	**0.79**	**304**	P	**Pb**	**00 54 17.3**		**-0.6**
ADK	**Adak**	**0.79**	**304**	S	**Sn**	**00 54 29.7**		**+1.7**
ADK	**Adak**	**0.79**	**304**	⇑P	**Pb**	**00 54 17.1**		**-0.7**
ADAG	**Mount Adagdak**	**0.81**	**312**		**Pn**	**00 54 18.5**		**+0.8**
ADAG					**Sn**	**00 54 30.8**		**+2.3**
KIRH	**Kanaga Island**	**1.02**	**297**		**Pb**	**00 54 21.2**		**-0.5**
KIWB	**Kanaga Island**	**1.03**	**294**		**Pn**	**00 54 20.9**		**+0.2**
KIWB				Sn	**Sn**	**00 54 35.1**		**+1.0**
KIWB				IAML		00 54 41.0		
	comp=E,408μm,0.5s							
KIWB				IAML		00 54 41.8		
	comp=N,253μm,0.6s							
KIMD	**Kanaga Island**	**1.05**	**288**		**Pn**	**00 54 20.9**		**-0.1**
KIMD					**Sn**	**00 54 36.9**		**+2.4**
KINC	**Kanaga Island**	**1.05**	**298**		**Pb**	**00 54 21.6**		**-0.6**
KINC					**Sn**	**00 54 37.0**		**+2.5**
KICM	**Kanaga Island**	**1.08**	**297**		**Pb**	**00 54 22.1**		**-0.7**
ATKA	**Atka Island**	**1.17**	**49**		**Pn**	**00 54 21.6**		**-1.0**
ATKA				Sn	**Sn**	**00 54 36.1**		**-1.4**
ATKA				IAML		00 54 37.6		
	comp=E,241μm,0.5s							
ATKA	**Atka Island**	**1.17**	**49**	P	**Pn**	**00 54 21.8**		**-0.9**
ATKA	**Atka Island**	**1.17**	**49**	⇓P	**Pn**	**00 54 21.6**		**-1.0**
KOKL	**Mount Kliuchef**	**1.25**	**45**		**Sn**	**00 54 39.8**		**+0.2**
KOWE	**Korovin West**	**1.26**	**42**		**Pn**	**00 54 24.0**		**0.0**
KOWE					**Sn**	**00 54 40.4**		**+0.7**
KOFP	**Korovin Flat P**	**1.26**	**48**		**Pn**	**00 54 23.5**		**-0.5**
KOFP					**Sn**	**00 54 40.1**		**+0.2**
TAPA	**Tanaga Point A**	**1.41**	**286**		**Pn**	**00 54 26.6**		**+0.6**
TAPA					**Sb**	**00 54 46.2**		**+0.3**
TAFL	**Tanaga Flats**	**1.45**	**283**		**Pn**	**00 54 26.7**		**+0.3**
TAFP	**Tanaga Falls P**	**1.53**	**288**		**Pn**	**00 54 28.5**		**+0.8**
TAFP					**Sb**	**00 54 49.0**		**-0.4**
GAEA	**Gareloi East**	**1.97**	**281**		**Pn**	**00 54 34.9**		**+1.2**
GALAA	**Gareloi Lava P**	**1.98**	**280**		**Pn**	**00 54 35.3**		**+1.4**
GAKI	**Gareloi-Kavalg**	**1.99**	**274**		**Pn**	**00 54 34.4**		**+0.5**
GAKI					**Sb**	**00 55 00.3**		**-2.2**
GASW	**Gareloi Southw**	**2.04**	**281**		**Pn**	**00 54 35.9**		**+1.3**
CEPE	**Semis' Perret**	**2.98**	**282**		**Pn**	**00 54 48.6**		**+1.0**
CERB	**Semis' Cerberu**	**2.99**	**281**		**Pn**	**00 54 50.1**		**+2.5**

baz=215,SNR=47
R16K Pilot Point 12.13 53 P Pn 00 56 57.4 +4.5
baz=248
L14K Kuka Creek 12.21 31 **Pn** **00 56 56.0 +2.0**
L14K Kuka Creek 12.21 31 P Pn 00 56 58.3 +4.3
baz=222,SNR=50
N15K Kwethluk River 12.33 39 **Pn** **00 56 57.2 +1.6**
N15K Kwethluk River 12.33 39 P Pn 00 56 59.6 +3.9
baz=232,SNR=194
M15K Kasigluk River 12.44 36 P Pn 00 57 01.7 +4.5
baz=228
GAMB Gambell 12.54 8 **Pn** **00 56 59.8 +1.4**
GAMB Gambell 12.54 8 P **Pn** **00 57 02.5 +4.1**
baz=191,SNR=9.0
P16K Nushagak River 12.58 46 **Pn** **00 57 01.0 +2.0**
P16K Nushagak River 12.58 46 P **Pn** **00 57 02.6 +3.5**
baz=241,SNR=65
CHIR Chirikof Islan 12.64 62 **Pn** **00 56 58.7 -1.3**
CHIR Chirikof Islan 12.64 62 P **Pn** **00 56 57.4 -2.6**
baz=258
R17L Mt. Peulik Vol 12.77 53 P **Pn** **00 57 01.8 +0.2**
baz=249,SNR=29
R17L S **Sn** **00 59 27.3 +4.9**
baz=249
PLK4 Peulik 4 12.77 53 **Pn** **00 57 02.0 +0.3**
O16K Kokwok River B 12.82 44 P **Pn** **00 57 05.2 +2.8**
baz=238
L15K Ungalak Mounta 12.85 32 P **Pn** **00 57 06.6 +3.9**
baz=223,SNR=95
Q16K King Salmon 13.03 49 P **Pn** **00 57 06.7 +1.5**
baz=245,SNR=71
Q16K S **Sn** **00 59 31.8 +2.9**
baz=245
N16K Nishlik Lake 13.04 40 P **Pn** **00 57 08.6 +3.2**
baz=234,SNR=48
N16K S **Sn** **00 59 31.0 +1.9**
baz=234
J14K Nanvaranak Lak 13.06 25 P **Pn** **00 57 09.2 +3.6**
baz=215,SNR=80
J14K S **Sn** **00 59 38.6 +9.0**
baz=215
Q17K Contact Creek 13.23 51 P **Pn** **00 57 08.8 +0.7**
baz=248
Q17K S **Sn** **00 59 36.9 +2.9**
baz=248
K15K Wolf Creek Mou 13.29 30 P **Pn** **00 57 12.6 +3.8**
baz=222,SNR=76
K15K S **Sn** **00 59 36.8 +1.6**
baz=222
M16K Timber Creek 13.30 37 P **Pn** **00 57 11.6 +2.7**
baz=231,SNR=59
M16K S **Sn** **00 59 39.3 +3.9**
baz=231
O17K Koliganek Bris 13.35 44 P **Pn** **00 57 12.2 +2.6**
baz=240,SNR=77
O17K S **Sn** **00 59 36.9 +0.2**
baz=240
P17K Kvichak River 13.37 47 P **Pn** **00 57 12.4 +2.6**
baz=243,SNR=81
P17K S **Sn** **00 59 41.0 +4.1**
baz=243
L16K Owhat River 13.56 34 P **Pn** **00 57 14.4 +2.0**
baz=228,SNR=94
L16K S **Sn** **00 59 48.4 +6.7**
baz=228
SII Sitkinak Islan 13.59 60 **Pn** **00 57 10.1 -2.7**
SII Sitkinak Islan 13.59 60 P **Pn** **00 57 13.6 +0.7**
baz=257
SII S **Sn** **00 59 46.5 +4.0**
baz=257
N17K Nushagak Hills 13.71 41 P **Pn** **00 57 17.9 +3.4**
baz=237,SNR=51
N17K S **Sn** **00 59 50.2 +4.8**
baz=237
R18K Karluk 13.71 55 **Pn** **00 57 12.7 -1.8**
R18K Karluk 13.71 55 P **Pn** **00 57 14.5 0.0**
baz=253
R18K S **Sn** **00 59 45.5 0.0**
baz=253
Q18K Katmai Hardscr 13.81 51 P **Pn** **00 57 16.0 +0.1**
baz=248,SNR=85
Q18K S **Sn** **00 59 52.7 +4.7**
baz=248
P18K Big Mountain, 14.01 47 **Pn** **00 57 17.9 -0.7**
P18K Big Mountain, 14.01 47 P **Pn** **00 57 20.1 +1.5**
baz=244,SNR=78
P18K S **Sn** **00 59 51.8 -0.9**
baz=244
M17K Holitna River 14.12 38 P **Pn** **00 57 22.0 +2.1**
baz=233,SNR=95
M17K S **Sn** **01 00 00.4 +5.2**
baz=233
ANM Nome 14.20 18 **Pn** **00 57 22.2 +1.0**
ANM Nome 14.20 18 P **Pn** **00 57 22.2 +1.0**
ANM Nome 14.20 18 P **Pn** **00 57 24.6 +3.4**
baz=207,SNR=32
ANM S **Sn** **01 00 04.5 +7.1**
baz=207
O18K Koktuh Hills 14.22 46 **Pn** **00 57 21.3 -0.2**
O18K Koktuh Hills 14.22 46 P **Pn** **00 57 23.3 +1.8**
baz=243,SNR=54
O18K S **Sn** **00 59 59.7 +1.7**
baz=243
OHAK Old Harbor 14.23 57 P **Pn** **00 57 20.5 -1.0**
OHAK Old Harbor 14.23 57 P **Pn** **00 57 21.2 -0.3**
baz=256
L17K Donlin 14.26 35 P **Pn** **00 57 24.8 +2.9**
baz=229,SNR=92
L17K S **Sn** **01 00 04.6 +5.9**
baz=229
J16K Anvik River 14.32 28 P **Pn** **00 57 26.2 +3.5**
baz=221,SNR=63
J16K S **Sn** **01 00 05.5 +5.3**
baz=221
N18K Kilae Creek 14.33 42 P **Pn** **00 57 26.2 +3.2**
baz=239,SNR=57
N18K S **Sn** **01 00 01.7 +1.1**
baz=239
Q19K Cape Douglas, 14.57 51 **Pn** **00 57 25.0 -1.2**
Q19K Cape Douglas, 14.57 51 P **Pn** **00 57 25.6 -0.6**
baz=249,SNR=18
Q19K S **Sn** **01 00 11.7 +5.2**
baz=249
K17K Iditarod 14.64 33 P **Pn** **00 57 25.9 -1.3**
baz=228,SNR=72
K17K S **Sn** **01 00 11.0 +2.9**
baz=228
TNA Tin City 14.70 13 ⇑P **P** **00 57 31.9 -1.7**
TNA Tin City 14.70 13 P **Pn** **00 57 26.1 -1.7**
baz=199,SNR=11
TNA S Sn 01 00 19.6 +10
baz=199
KDAK Kodiak Island 14.74 56 Pn **Pn** **00 57 26.4 -2.0**
comp=E,4.8nm,0.3s,baz=241,slow=6.0,SNR=53
KDAK Sn **Sn** **01 00 10.1 -0.3**
comp=E,4.3nm,0.3s,baz=316,slow=23,SNR=2.3
comp=E,40nm,0.4s
KDAK Kodiak Island 14.74 56 **Pn** **00 57 24.9 -3.6**
KDAK Kodiak Island 14.74 56 P **Pn** **00 57 24.9 -3.6**
KDAK Kodiak Island 14.74 56 ⇑P **Pn** **00 57 25.4 -3.0**
KDAK Kodiak Island 14.74 56 P **Pn** **00 57 26.9 -1.5**
baz=254
KDAK S Sn 01 00 19.5 +9.1
baz=254
I17K Unalakleet 14.75 27 P **Pn** **00 57 27.1 -1.5**
baz=219,SNR=30
I17K S **Sn** **01 00 10.8 +0.1**
baz=219
O19K Port Alsworth 14.78 45 P **Pn** **00 57 28.3 -0.6**
baz=243,SNR=118
O19K S **Sn** **01 00 14.4 +3.1**
baz=243
M18K Stony River 14.80 40 P **Pn** **00 57 28.8 -0.4**
baz=236,SNR=48
M18K S **Sn** **01 00 18.1 +6.2**
baz=236
G15K Niukluk 14.85 19 P **Pn** **00 57 29.6 -0.4**
baz=209,SNR=88
G15K S **S** **01 00 24.0 -6.7**
baz=209
F14K Arctic Creek 14.86 15 P **Pn** **00 57 29.3 -0.7**
baz=203,SNR=49
F14K S Sn 01 00 22.4 +9.1
baz=203
J17K VABM Dome 14.87 30 **Pn** **00 57 31.6 +1.4**
J17K VABM Dome 14.87 30 P **Pn** **00 57 29.2 -1.0**
baz=224,SNR=74
J17K S **Sn** **01 00 20.7 +7.2**
baz=224
L18K Granite Mounta 14.90 36 P **Pn** **00 57 30.4 -0.2**
baz=232,SNR=115
L18K S Sn 01 00 23.9 +10
baz=232
H16K Elim 14.96 23 P **Pn** **00 57 31.4 0.0**
baz=214,SNR=141
H16K S **S** **01 00 27.5 -5.2**
baz=214
N19K Bonanza Creek 15.00 43 **Pn** **00 57 33.2 +1.2**
N19K Bonanza Creek 15.00 43 P **Pn** **00 57 31.6 -0.4**
baz=241,SNR=278
N19K S **Sn** **01 00 24.1 +7.2**
baz=241
P19K Oil Pt 15.04 48 **Pn** **00 57 33.4 +0.9**
P19K Oil Pt 15.04 48 P **Pn** **00 57 33.1 +0.5**
baz=247,SNR=73
P19K S **S** **01 00 30.3 -4.3**
baz=247
Q20K Shuyak Island 15.08 53 P **Pn** **00 57 32.1 -0.9**
baz=252
Q20K S **S** **01 00 29.1 -6.1**
baz=252
SYI Shuyak Island 15.08 53 **Pn** **00 57 31.0 -2.0**
ILSW Iliamna Southw 15.22 47 **Pn** **00 57 34.5 -0.4**
F15K North Star Dit 15.37 17 P **Pn** **00 57 36.4 -0.3**
baz=207,SNR=108
F15K S **S** **01 00 35.8 -5.3**
baz=207
O20K Slope Mountain 15.50 47 P **Pn** **00 57 35.8 -2.7**
baz=246,SNR=25
O20K S **Sn** **01 00 36.8 +7.9**
baz=246
G16K Koyuk River 15.56 21 P **P** **00 57 42.2 -1.0**
G16K Koyuk River 15.56 21 P **Pn** **00 57 36.5 -2.8**
baz=212,SNR=96
G16K S **S** **01 00 42.2 -2.9**
baz=212
L19K White Mountain 15.57 38 P **Pn** **00 57 37.7 -1.8**
baz=236,SNR=276
L19K S **Sn** **01 00 38.3 +7.7**
baz=236
J18K Innoko River 15.68 33 P **Pn** **00 57 41.4 +0.5**
baz=229,SNR=176
J18K S **Sn** **01 00 39.3 +5.9**
baz=229
H17K Granite Mounta 15.79 25 P **Pn** **00 57 44.4 +2.2**
H17K Granite Mounta 15.79 25 P **Pn** **00 57 41.6 -0.6**
baz=218,SNR=470
H17K S **S** **01 00 47.4 -2.4**
baz=218
HOM Homer 15.79 49 P **Pn** **00 57 40.1 -2.2**
baz=249
HOM S **Sn** **01 00 44.0 +7.9**
baz=249
PET Petropavlovsk 15.81 286 **P** **00 57 44.7 -1.3**
PET Petropavlovsk 15.81 286 P **P** **00 57 45.1 -0.9**
PET Petropavlovsk 15.81 286 *ce*P **P** **00 57 45.1 -0.9**
PET *e*S **Sn** **01 00 39.6 +3.2**
PET pmax pmax
comp=Z,11µm,14.0s
PET pmax pmax
comp=Z,12µm,11.1s
PET pmax pmax
comp=Z,339nm,1.2s
PET smax smax
comp=N,7µm,17.3s
PET smax smax
comp=N,6µm,18.3s
PET MLR MLR
comp=Z,38µm,18.0s
PET MLR MLR
comp=Z,36µm,17.0s
PET Petropavlovsk 15.81 286 ⇑P **Pn** **00 57 42.0 -0.5**
G17K Kiwalik Mounta 16.05 23 P **P** **00 57 48.9 +0.2**
baz=216
G17K S **S** **01 00 53.0 -2.1**
baz=216
M20K Styx River 16.10 41 P **P** **00 57 49.0 -0.2**
baz=240,SNR=270
M20K S **Sn** **01 00 46.2 +2.7**
baz=240
L20K Farewell, AK 16.11 38 P **Pn** **00 57 48.0 +1.6**
baz=237,SNR=253
L20K S **Sn** **01 00 47.0 +3.2**
baz=237
N20K Mount Spurr 16.16 44 P **Pn** **00 57 48.9 +1.9**
baz=243
N20K S **Sn** **01 00 51.0 +5.9**
baz=243
SPCR Spurr Chakacha 16.16 44 P **Pn** **00 57 48.6 +1.6**
baz=243,SNR=269
SPCR S **Sn** **01 00 52.6 +7.6**
baz=243
BRSE Bradley Lake S 16.25 50 P **Pn** **00 57 48.2 +0.1**
baz=250,SNR=43
BRSE S **Sn** **01 00 51.0 +3.8**
baz=250
PEA0B Petropavlovsk- 16.37 286 **Pn** **00 57 50.8 +1.1**
PEA0B Petropavlovsk- 16.37 286 *ce*P **Pn** **00 57 48.9 -0.8**
PETK Petropavlovsk- 16.37 286 Pn **Pn** **00 57 49.1 -0.6**
comp=Z,4.8nm,0.3s,baz=92,slow=5.3,SNR=40
PETK Sn **Sn** **01 00 53.1 +2.9**
baz=108,slow=17
PETK PcP **PcP** **01 02 42.1 +1.1**
comp=Z,17nm,0.9s,baz=49,slow=3.2,SNR=5.3
PETK LR LR 01 03 47.0
comp=Z,91µm,21.5s,baz=98,slow=36
PETK ScP **ScP** **01 06 16.8 +3.9**
comp=Z,10nm,0.9s,baz=29,slow=3.3,SNR=3.8
comp=Z,12nm,0.7s
PETK Petropavlovsk- 16.37 286 **Pn** **00 57 50.6 +0.9**
H18K Honhosa River 16.38 26 **Pn** **00 57 51.0 +1.2**
H18K Honhosa River 16.38 26 P **P** **00 57 53.1 +0.8**
baz=221,SNR=184
H18K S **S** **01 00 58.8 -3.0**
baz=221
J19K Poorman 16.40 32 P **P** **00 57 52.2 -0.3**
baz=229,SNR=418
J19K S **S** **01 01 00.7 -1.5**
baz=229
CAPN Captain Cook N 16.44 46 P **Pn** **00 57 51.3 +0.7**
baz=246
CAPN S **S** **01 01 02.9 -0.1**
baz=246
STLK Strandline Lak 16.46 43 P **Pn** **00 57 51.4 +0.6**
GCSA Galena City Sc 16.51 29 P **P** **00 57 54.3 +0.6**
baz=225,SNR=84
GCSA S **S** **01 01 03.8 -0.6**
baz=225
K20K Telida 16.54 36 P **Pn** **00 57 53.2 +1.3**
baz=234
K20K S **S** **01 01 01.4 -3.8**
baz=234
F17K Baldwin Pennin 16.70 20 P **Pn** **00 57 55.2 +1.5**
F17K Baldwin Pennin 16.70 20 P **P** **00 57 57.6 +1.9**
baz=213,SNR=130
F17K S **S** **01 01 05.6 -2.5**
baz=213
SKT Skwentna 16.81 42 P **P** **00 57 57.5 +0.4**
baz=242,SNR=271
SKT S **Sn** **01 01 05.3 +4.7**
baz=242
G18K Tagagawik 16.87 24 P **P** **00 57 58.9 +1.2**
baz=219,SNR=310
G18K S **S** **01 01 08.9 -2.9**
baz=219
SUA Susitna One 16.91 44 P **Pn** **00 57 57.5 +1.0**
baz=245,SNR=24
SUA S **Sn** **01 01 08.3 +5.0**
baz=245
SEW Seward 16.98 49 P **Pn** **00 57 57.2 -0.2**
baz=251,SNR=39
SEW S **Sn** **01 01 10.9 +6.0**
baz=251
O22K Cooper Landing 16.99 48 P **Pn** **00 57 57.5 +0.1**
baz=250,SNR=59
O22K S **Sn** **01 01 07.0 +2.1**
baz=250
PPLA Purkeypile 17.00 39 P **P** **00 57 59.8 +0.5**
baz=238,SNR=156
PPLA S **Sn** **01 01 08.2 +2.8**
baz=238
J20K Nowinta River 17.02 33 P **P** **00 57 59.4 +0.1**
baz=232,SNR=268
J20K S **Sn** **01 01 10.2 +4.5**
baz=232
E17K Hotham Inlet 17.12 19 P **P** **00 58 02.1 +1.6**
baz=210,SNR=100
E17K S **S** **01 01 17.7 +0.8**
baz=210
F18K Selawik 17.19 22 P **P** **00 58 03.2 +2.0**
baz=216,SNR=176
F18K S **S** **01 01 21.8 +3.7**
baz=216
H19K Roundabout Mou 17.20 28 P **Pn** **00 58 00.8 +0.8**
H19K IAmb IAmb 00 58 07.9
comp=Z,3µm,1.4s
H19K Roundabout Mou 17.20 28 P **P** **00 58 02.4 +1.0**
baz=224,SNR=505
H19K S **S** **01 01 19.2 +0.7**
baz=224
RC01 Rabbit Creek A 17.20 46 P **Pn** **00 58 00.3 +0.2**
baz=248,SNR=22
RC01 S **S** **01 01 16.9 -1.7**
baz=248
I20K Naaghedeneel 17.30 31 P **P** **00 58 03.6 +1.2**
baz=229,SNR=167
I20K S **S** **01 01 22.1 +1.6**
baz=229
M22K Willow 17.30 44 P **P** **00 58 03.5 +1.0**
baz=245,SNR=35
M22K S **S** **01 01 20.4 -0.2**
baz=245
D17K Noatak River 17.43 16 P **P** **00 58 06.6 +2.7**
baz=207,SNR=202
D17K S **Sn** **01 01 19.9 +4.3**
baz=207
G19K Purcell Mounta 17.47 26 P **P** **00 58 06.0 +1.6**
baz=222,SNR=254
G19K S **Sn** **01 01 20.4 +3.7**
baz=222
CHUM Lake Minchumin 17.49 36 P **P** **00 58 05.7 +1.2**
baz=236,SNR=159
CHUM S **S** **01 01 22.7 -1.6**
baz=236
CUT Chulitna 17.53 41 P **P** **00 58 05.8 +0.8**
baz=243,SNR=72
CUT S **Sn** **01 01 22.1 +4.1**
baz=243
C16K Lisburne Hills 17.61 13 P **P** **00 58 06.5 +0.7**
C16K Lisburne Hills 17.61 13 P **P** **00 58 08.8 +3.0**
baz=202
C16K S **S** **01 01 27.7 +1.0**
baz=202
H20K Anotleneega Mo 17.64 29 P **P** **00 58 08.1 +1.9**
baz=227,SNR=231
H20K S **Sn** **01 01 24.6 +3.9**
baz=227
E18K Tukpahlearik C 17.66 19 P **Pn** **00 58 06.8 +1.1**
E18K IAmb IAmb 00 58 14.1
comp=Z,1µm,1.4s
E18K Tukpahlearik C 17.66 19 P **P** **00 58 09.3 +2.9**
baz=212,SNR=166
E18K S **S** **01 01 30.0 +2.1**
baz=212
PMR Palmer 17.67 45 P **Pn** **00 58 06.2 +0.4**
PMR Palmer 17.67 45 P **Pn** **00 58 06.8 +0.9**
baz=247,SNR=19
PMR S **Sn** **01 01 26.1 +4.6**
baz=247
SKR Severo-Kuril's 17.73 279 *e*P **Pn** **00 58 06.3 -0.4**
SKR *e*S Sn 01 01 12.2 -11
SKR pmax pmax
comp=Z,21µm,11.0s
SKR pmax pmax
comp=Z,2µm,0.9s
SKR MLR MLR
comp=Z,103µm,18.0s
PWL Port Wells 17.76 47 **Pn** **00 58 04.7 -2.3**
PWL Port Wells 17.76 47 P **Pn** **00 58 05.5 -1.5**
baz=250,SNR=40
PWL S **Sn** **01 01 27.7 +4.0**
baz=250
RDOG Red Dog Mine 17.78 16 P **P** **00 58 11.5 +3.7**
baz=207,SNR=44
RDOG S **S** **01 01 32.6 +2.3**
baz=207
F19K Shaleruckik Mo 17.82 23 **Pn** **00 58 08.5 +0.7**
F19K Shaleruckik Mo 17.82 23 P **P** **00 58 09.9 +1.7**
baz=219,SNR=608
F19K S **S** **01 01 30.8 -0.3**
baz=219
KNK Knik Glacier 17.90 46 P **Pn** **00 58 07.4 -1.3**
KNK Knik Glacier 17.90 46 P **Pn** **00 58 07.6 -1.1**
baz=248,SNR=73
KNK S **S** **01 01 31.7 -1.1**
baz=248
P23K Montague Islan 17.93 51 P **P** **00 58 10.2 +0.7**
baz=254,SNR=18
P23K S **Sn** **01 01 29.3 +1.5**
baz=254
TRF Thorofare Moun 18.02 38 P **P** **00 58 11.6 +1.0**
baz=240,SNR=523
TRF S **Sn** **01 01 31.0 +0.7**
baz=240
BPAW Bear Paw Mtn. 18.10 36 P **Pn** **00 58 11.4 +0.3**
BPAW IAmb IAmb 00 58 20.3
comp=Z,2µm,1.2s
BPAW Bear Paw Mtn. 18.10 36 P **P** **00 58 12.4 +1.1**
baz=237,SNR=361
BPAW S **Sn** **01 01 33.0 +1.2**
baz=237
SML Sawmill 18.10 45 P **Pn** **00 58 10.7 -0.6**
baz=248,SNR=55
SML S **Sn** **01 01 35.9 +3.8**
baz=248
C17K DeLong Mountai 18.12 15 P **P** **00 58 14.4 +2.9**
baz=206,SNR=46
C17K S **S** **01 01 38.9 +1.9**
baz=206
Q23K Middleton Isla 18.31 53 P **P** **00 58 12.6 -0.9**
baz=257
Q23K S **Sn** **01 01 37.3 +0.4**
baz=257
IMAR Indian Mountai 18.32 29 P **P** **00 58 13.7 0.0**
GLI Glacier Island 18.34 48 P **P** **00 58 13.7 -0.3**
baz=252,SNR=19
GLI S **Sn** **01 01 38.8 +1.1**
baz=252
M23K Glacier View 18.36 45 P **P** **00 58 13.6 -0.6**
baz=248,SNR=135
M23K S **Sn** **01 01 37.4 -0.9**
baz=248
I21K Tanana 18.37 33 P **Pn** **00 58 16.1 +1.7**
baz=233,SNR=667
I21K S **Sn** **01 01 36.9 -1.4**
baz=233
H21K Melozitna Rive 18.40 31 P **Pn** **00 58 16.3 +1.6**
baz=230,SNR=311
H21K S **Sn** **01 01 41.7 +2.7**
baz=230
WAT1 Susitna Watana 18.43 41 P **P** **00 58 14.3 -0.6**
baz=244
WAT1 S **Sn** **01 01 39.3 -0.6**
baz=244
E19K Redstone River 18.45 23 P **Pn** **00 58 17.2 +1.8**
baz=219,SNR=329
E19K S **Sn** **01 01 40.7 +0.5**
baz=219
F20K Avaraart Lake 18.51 25 P **P** **00 58 16.7 +0.9**
F20K IAmb IAmb 00 58 24.8
comp=Z,2µm,1.4s
F20K Avaraart Lake 18.51 25 P **Pn** **00 58 17.8 +1.7**
baz=222
F20K S **S** **01 01 45.9 +0.9**
baz=222
SCM Sheep Creek Mo 18.55 45 P **P** **00 58 14.4 -2.0**
SCM Sheep Creek Mo 18.55 45 P **P** **00 58 14.4 -2.0**
SCM pmax pmax
comp=Z,375nm,0.8s
SCM Sheep Creek Mo 18.55 45 P **P** **00 58 16.5 +0.1**
baz=249,SNR=48
SCM S **Sn** **01 01 39.6 -3.5**
baz=249
RND Reindeer 18.57 40 P **P** **00 58 15.1 -1.4**
RND IAmb IAmb 00 58 24.2
comp=Z,1µm,1.3s
RND Reindeer 18.57 40 P **P** **00 58 15.1 -1.4**
RND pmax pmax
comp=Z,1µm,1.3s
C18K Utukok River 18.61 17 P **P** **00 58 17.5 +0.6**
C18K IAmb IAmb 00 58 24.6
comp=Z,945nm,1.2s

C18K Utukok River 18.61 17 P Pn 00 58 19.2 +1.9
baz=209,SNR=102
C18K S Sn 01 01 45.8 +1.7
baz=209
WAT6 Susitna Watana 18.66 43 P P 00 58 16.3 -1.4
baz=246,SNR=132
WAT6 S Sn 01 01 44.1 -1.6
baz=246
MCK McKinley 18.69 39 P P 00 58 17.8 0.0
baz=241,SNR=286
MCK S Sn 01 01 45.5 -0.6
baz=241
BWN Browne 18.70 37 P P 00 58 18.7 +0.8
BWN IAmb IAmb 00 58 24.3
comp=Z,1μm,1.0s
MLY Manley 18.71 34 P Pn 00 58 19.4 +0.9
baz=235,SNR=377
MLY S Sn 01 01 47.9 +1.3
baz=235
G21K Allakaket 18.75 28 P P 00 58 19.4 +1.0
G21K IAmb IAmb 00 58 26.7
comp=Z,2μm,1.2s
G21K Allakaket 18.75 28 P Pn 00 58 20.2 +1.2
baz=227,SNR=443
G21K S S 01 01 51.2 +1.5
baz=227
BILL Bilibino 18.84 339 P Pn 00 58 20.6 +0.6
BILL Bilibino 18.84 339 *ceP* P 00 58 17.4 -1.9
BILL pmax pmax
comp=Z,1μm,1.3s
BILL MLR MLR
comp=Z,50μm,21.0s
EYAK Cordova Ski Ar 18.88 50 P P 00 58 19.6 -0.2
EYAK Cordova Ski Ar 18.88 50 S Sn 01 01 52.5 +1.9
EYAK Cordova Ski Ar 18.88 50 P Pn 00 58 21.1 +0.6
baz=255
EYAK S Sn 01 01 49.2 -1.4
baz=255
H22K Ishtalitna Cre 19.00 31 P Pn 00 58 23.2 +1.1
baz=232,SNR=633
H22K S Sn 01 01 55.7 +1.9
baz=232
DHY Denali Highway 19.02 41 P P 00 58 21.1 -0.5
baz=245,SNR=132
DHY S Sn 01 01 53.0 -1.3
baz=245
NEA2 Nenana 19.07 36 P P 00 58 21.5 -0.4
baz=239,SNR=134
NEA2 S Sn 01 01 54.1 -1.1
baz=239
KLU Klutina 19.07 47 P P 00 58 22.5 +0.4
baz=252,SNR=90
KLU S Sn 01 01 50.8 -4.7
baz=252
D19K Kuna River 19.08 20 P P 00 58 23.0 +0.9
D19K Kuna River 19.08 20 P Pn 00 58 23.4 +0.4
baz=215
D19K S Sn 01 01 53.8 -1.8
baz=215
B18K Kokolik River 19.14 15 P Pn 00 58 24.7 +1.1
baz=207,SNR=87
B18K S S 01 01 60.0 +2.6
baz=207
M24K Tolsona, Glenn 19.16 45 P P 00 58 22.4 -0.6
baz=250,SNR=84
F21K Alatna River 19.25 26 P Pn 00 58 25.6 +0.6
baz=226,SNR=291
F21K S Sn 01 02 00.0 +0.5
baz=226
I23K Minto, Yukon-K 19.26 35 P P 00 58 25.2 +1.3
baz=237,SNR=313
I23K S Sn 01 01 59.5 -0.2
baz=237
C19K Lookout Ridge 19.30 17 P P 00 58 25.3 +0.8
C19K Lookout Ridge 19.30 17 P Pn 00 58 26.8 +1.1
baz=212,SNR=66
C19K S Sn 01 02 02.3 +1.5
baz=212
E20K Nigu River 19.32 22 P Pn 00 58 26.5 +0.6
baz=219,SNR=425
E20K S S 01 02 02.5 +1.2
baz=219
KAIM Kayak Island 19.37 52 P Pn 00 58 29.1 +2.5
baz=258,SNR=5.6
BMRM Bremner River 19.53 49 P P 00 58 27.6 +0.6
baz=255,SNR=65
BMRM S S 01 02 00.3 -5.3
baz=255
HMT Hamilton 19.54 51 P P 00 58 26.7 -0.4
CCB Clear Creek Bu 19.57 37 P P 00 58 25.8 -1.5
H23K Yukon River 19.57 33 P P 00 58 28.1 +0.7
baz=235
H23K S S 01 02 05.8 -0.6
baz=235
D20K Etivluk River 19.58 21 P Pn 00 58 29.2 +0.1
baz=217,SNR=354
D20K S S 01 02 07.6 +1.1
baz=217
G22K Bettles 19.62 29 P Pn 00 58 29.5 +0.1
baz=230
G22K S S 01 02 06.8 -0.3
baz=230
COLA College 19.66 36 P P 00 58 26.7 -1.6
COLA IAmb IAmb 00 58 39.2
comp=Z,1μm,1.2s
COLA College 19.66 36 P P 00 58 27.4 -0.9
COLA College 19.66 36 S S 01 02 09.1 +1.0
COLA College 19.66 36 P P 00 58 26.7 -1.6
COLA pmax pmax
comp=Z,1μm,1.3s
COLA College 19.66 36 P P 00 58 27.5 -0.9
baz=240
COLA S S 01 02 06.1 -1.9
baz=240
HARP HAARP 19.71 44 P P 00 58 28.4 -0.6
baz=250,SNR=64
N25K Chitina, Valde 19.71 47 P P 00 58 28.4 -0.7
baz=253,SNR=48
N25K S S 01 02 05.0 -4.3
baz=253
HDA Harding Lake 19.78 38 P P 00 58 28.6 -1.1
HDA IAmb IAmb 00 58 37.6
comp=Z,754nm,0.6s
HDA Harding Lake 19.78 38 P P 00 58 29.2 -0.5
baz=243,SNR=245
HDA S S 01 02 08.5 -2.0
baz=243
PAX Paxson 19.78 43 P P 00 58 29.1 -0.7
baz=248,SNR=116
PAX S S 01 02 08.0 -2.7
baz=248
F22K John River 19.81 27 P P 00 58 31.3 +1.3
baz=227
F22K S S 01 02 10.6 -0.5
baz=227
POKR Poker Plat Res 19.94 36 P P 00 58 30.5 -0.9
baz=240,SNR=94
POKR S S 01 02 13.6 -0.1
baz=240
G23K Bananza Creek 19.94 30 P Pn 00 58 33.4 +0.1
baz=232
G23K S S 01 02 14.8 +1.0
baz=232
BGLC Bering Glacier 19.97 52 P P 00 58 30.9 -0.9
baz=259
ILAR Eielson Array 19.97 37 P P 00 58 29.4 -2.4
comp=Z,3.9nm,0.3s,baz=239,slow=9.8,SNR=150
ILAR S S 01 02 14.3 0.0
comp=Z,5.9nm,0.7s,baz=243,slow=25,SNR=1.2
ILAR ScP ScP 01 06 24.2 +3.8
comp=Z,18nm,0.7s,baz=299,slow=2.4,SNR=21
ILAR LR LR 01 07 00.8
comp=Z,93μm,18.7s,baz=232,slow=40
ILAR P3KPbc 01 32 47.5
comp=Z,2.6nm,0.9s,baz=42,slow=3.8,SNR=19
comp=Z,29nm,0.6s
K24K Donnelly Dome 19.98 40 P P 00 58 31.3 -0.6
baz=246,SNR=185
K24K S S 01 02 15.2 +0.6
baz=246
E21K Killik River 20.00 24 P P 00 58 33.4 +1.3
baz=222
E21K S S 01 02 15.4 +0.5
baz=222
A19K Wainwright 20.00 15 P Pn 00 58 33.8 -0.1
baz=207
A19K S S 01 02 13.9 -1.0
baz=207

H24K Noodor Dome 20.15 34 IAMs_20 IAMs_20 01 06 53.6
comp=Z,120μm,18.0s
H24K Noodor Dome 20.15 34 P P 00 58 34.3 +0.5
baz=238,SNR=756
H24K S S 01 02 19.8 +1.8
baz=238
CRQM Cirque 20.17 50 IAMs_20 IAMs_20 01 07 35.9
comp=Z,92μm,20.0s
CRQE Cirque 20.20 50 P P 00 58 35.5 +1.1
baz=257,SNR=15
CRQE S S 01 02 17.5 -1.6
baz=257
COLD Coldfoot 20.21 29 IAMs_20 IAMs_20 01 06 56.1
comp=Z,129μm,18.0s
COLD Coldfoot 20.21 29 P P 00 58 35.9 +1.6
baz=231,SNR=422
COLD S S 01 02 17.7 -1.4
baz=231
WAX Waxell Ridge 20.25 51 IAMs_20 IAMs_20 01 07 20.2
comp=Z,145μm,20.0s
TGL Tana Glacier 20.32 50 P P 00 58 34.0 -1.8
TGL IAMs_20 IAMs_20 01 07 39.2
comp=Z,89μm,20.0s
RIDG Independent Ri 20.33 41 IAMs_20 IAMs_20 01 06 53.5
comp=Z,130μm,18.0s
RIDG Independent Ri 20.33 41 P P 00 58 34.6 -1.1
baz=247,SNR=163
RIDG S S 01 02 21.2 -0.4
baz=247
E22K Anaktuvuk Pass 20.34 26 IAMs_20 IAMs_20 01 06 44.8
comp=Z,100μm,19.0s
E22K Anaktuvuk Pass 20.34 26 P P 00 58 37.1 +1.3
baz=227,SNR=479
E22K S S 01 02 23.6 +1.8
baz=227
C21K Knifeblade Rid 20.34 21 P P 00 58 36.2 +0.4
baz=220,SNR=248
C21K S S 01 02 20.3 -1.4
baz=220
MCARA McCarthy VSAT 20.38 48 P P 00 58 35.1 -1.1
MCARA IAmb IAmb 00 58 46.0
comp=Z,503nm,0.9s
MCARA McCarthy VSAT 20.38 48 P P 00 58 34.7 -1.6
baz=256,SNR=41
MCARA S S 01 02 25.6 +3.1
baz=256
J25K Salcha River, 20.48 38 IAMs_20 IAMs_20 01 07 16.3
comp=Z,107μm,18.0s
J25K Salcha River, 20.48 38 P P 00 58 35.2 -2.2
baz=244,SNR=313
J25K S S 01 02 20.6 -4.0
baz=244
MA2 Magadan 20.50 306 P P 00 58 36.1 -1.4
comp=Z,58nm,0.9s,baz=84,slow=11,SNR=21
MA2 LR LR 01 06 13.1
comp=Z,60μm,19.9s,baz=101,slow=36
comp=Z,58nm,0.9s
MA2 Magadan 20.50 306 P P 00 58 38.8 +1.2
MA2 IAmb IAmb 00 58 53.9
comp=Z,1μm,1.3s
MA2 Magadan 20.50 306 P Pn 00 58 39.2 -0.6
MA2 Magadan 20.50 306 *ceP* P 00 58 38.1 +0.6
MA2 pmax pmax
comp=Z,266nm,0.8s
MA2 MLR MLR
comp=Z,49μm,17.0s
MA2 Magadan 20.50 306 ⇑P P 00 58 38.4 +0.9
MENT Mentasta 20.52 44 P P 00 58 38.9 +1.2
B20K Meade River 20.52 18 P 00 58 37.9 +0.2
B20K IAmb IAmb 00 58 45.6
comp=Z,850nm,1.1s
B20K IAMs_20 IAMs_20 01 06 53.8
comp=Z,133μm,20.0s
B20K Meade River 20.52 18 P P 00 58 38.9 +1.2
baz=214,SNR=69
B20K S S 01 02 26.7 +1.5
baz=214
ISLE Juniper Island 20.53 51 P P 00 58 37.2 -0.8
ISLE IAMs_20 IAMs_20 01 07 29.2
comp=Z,112μm,22.0s
SEY Seymchan 20.54 316 P P 00 58 36.4 -1.5
comp=Z,36nm,1.1s,baz=115,slow=10,SNR=30
SEY S S 01 02 27.6 +1.8
comp=Z,52nm,1.2s,baz=174,slow=22,SNR=1.2
SEY ScP ScP 01 06 24.8 +3.1
comp=Z,31nm,0.9s,baz=131,slow=3.9,SNR=7.6
SEY LR LR 01 07 05.9
comp=Z,136μm,18.3s,baz=108,slow=38
comp=Z,36nm,1.1s
MESA MESA 20.64 52 P Pn 00 58 42.5 +0.8
baz=260,SNR=8.8
MESA S S 01 02 30.7 +2.7
baz=260
D22K Ayikyak River 20.64 24 P 00 58 39.8 +0.8
D22K IAmb IAmb 00 58 43.1
comp=Z,2μm,1.2s
D22K IAMs_20 IAMs_20 01 06 23.7
comp=Z,81μm,20.0s
D22K Ayikyak River 20.64 24 P P 00 58 40.4 +1.3
baz=224
D22K S S 01 02 29.1 +1.4
baz=224
M26K Nabesna, AK 20.67 45 IAMs_20 IAMs_20 01 07 08.3
comp=Z,142μm,19.0s
M26K Nabesna, AK 20.67 45 P P 00 58 38.1 -1.3
baz=253
M26K S S 01 02 27.6 -0.7
baz=253
L26K Log Cabin Wild 20.70 44 P P 00 58 38.8 -1.0
baz=251,SNR=136
L26K S S 01 02 32.0 +3.0
baz=251
B21K Ikpikpuk River 20.74 21 IAMs_20 IAMs_20 01 06 38.8
comp=Z,105μm,21.0s
B21K Ikpikpuk River 20.74 21 P P 00 58 41.1 +1.1
baz=219,SNR=310
B21K S S 01 02 30.8 +1.2
baz=219
G24K Hadweenzic Riv 20.76 32 IAMs_20 IAMs_20 01 07 12.7
comp=Z,93μm,18.0s
G24K Hadweenzic Riv 20.76 32 P P 00 58 41.4 +1.1
baz=236,SNR=237
G24K S S 01 02 30.3 +0.3
baz=236
YAH Yahtse 20.77 51 P P 00 58 40.0 -0.7
SCRK Sand Creek 20.77 41 IAMs_20 IAMs_20 01 07 16.2
comp=Z,139μm,18.0s
SCRK Sand Creek 20.77 41 P P 00 58 39.2 -1.4
baz=248,SNR=780
SCRK S S 01 02 31.0 +0.5
baz=248
PRP Porcupine Dome 20.83 36 IAMs_20 IAMs_20 01 07 14.8
comp=Z,83μm,18.0s
PRP Porcupine Dome 20.83 36 P P 00 58 39.6 -1.6
baz=242,SNR=121
PRP S S 01 02 31.7 0.0
baz=242
E23K Chandalar 20.91 28 IAMs_20 IAMs_20 01 07 10.8
comp=Z,112μm,19.0s
E23K Chandalar 20.91 28 P P 00 58 43.2 +1.3
baz=230,SNR=95
E23K S S 01 02 34.2 +1.1
baz=230
BARN Barnard Glacie 20.95 49 IAMs_20 IAMs_20 01 07 57.7
comp=Z,92μm,22.0s
TABL Table Mountain 21.08 51 P P 00 58 43.3 -0.7
CTG Chitna Glacier 21.08 50 P P 00 58 44.7 +0.8
baz=259,SNR=13
CTG S S 01 02 37.7 +1.0
baz=259
CTGM Chitina Glacie 21.08 50 IAMs_20 IAMs_20 01 08 11.2
comp=Z,107μm,22.0s
H25L Birch Creek 21.09 34 P P 00 58 43.6 -0.2
baz=240,SNR=364
F24K Squaw Lake 21.09 30 IAMs_20 IAMs_20 01 07 15.7
comp=Z,108μm,19.0s
F24K Squaw Lake 21.09 30 P P 00 58 45.5 +1.5
baz=234,SNR=1000
F24K S S 01 02 37.3 +0.6
baz=234
J26L Joseph Creek 21.15 40 P P 00 58 43.4 -1.2
baz=247,SNR=570
J26L S S 01 02 38.4 +0.6
baz=247
M27K Edge Creek, AK 21.15 46 IAMs_20 IAMs_20 01 07 33.2
comp=Z,139μm,18.0s
M27K Edge Creek, AK 21.15 46 P P 00 58 45.3 +0.5
baz=254,SNR=58
M27K S S 01 02 39.6 +1.5
baz=254
LOGN Logan Glacier 21.21 50 IAMs_20 IAMs_20 01 08 12.7
comp=Z,96μm,21.0s
D23K Nanushuk River 21.22 25 IAMs_20 IAMs_20 01 06 43.2
comp=Z,98μm,21.0s
D23K Nanushuk River 21.22 25 P P 00 58 46.0 +0.8
baz=227,SNR=282
D23K S S 01 02 40.9 +1.9
baz=227
E24K Your Creek 21.25 28 IAMs_20 IAMs_20 01 07 39.8
comp=Z,116μm,18.0s
E24K Your Creek 21.25 28 P P 00 58 46.8 +1.2
baz=232,SNR=365
E24K S S 01 02 41.2 +1.4
baz=232
G25K Bearman Lake 21.25 33 P P 00 58 46.3 +0.7
baz=238
TOLK Toolik Lake Re 21.30 26 IAMs_20 IAMs_20 01 07 26.1
comp=Z,145μm,19.0s
TOLK Toolik Lake Re 21.30 26 P P 00 58 47.0 +0.8
baz=229,SNR=389
TOLK S S 01 02 41.7 +1.0
baz=229
L27K Beaver Creek, 21.38 44 P P 00 58 46.7 -0.3
baz=253,SNR=87
L27K S S 01 02 42.5 +0.2
baz=253
BCAR Beaver Creek A 21.39 44 P P 00 58 46.6 -0.6
FYU Fort Yukon 21.45 34 IAMs_20 IAMs_20 01 07 44.1
comp=Z,95μm,18.0s
PCA Pinnacle 21.46 52 P P 00 58 47.2 -0.8
PCA IAMs_20 IAMs_20 01 08 31.4
comp=Z,106μm,18.0s
PINM Pinnacle 21.46 52 P P 00 58 48.2 +0.2
baz=262,SNR=11
PINM S S 01 02 42.9 -1.2
baz=262
B22K Teshekpuk Lake 21.56 20 P P 00 58 49.0 +0.2
B22K IAMs_20 IAMs_20 01 07 27.2
comp=Z,88μm,21.0s
B22K Teshekpuk Lake 21.56 20 P P 00 58 49.2 +0.3
baz=220,SNR=221
B22K S S 01 02 46.3 +0.6
baz=220
K27K Chicken 21.58 41 IAMs_20 IAMs_20 01 07 23.5
comp=Z,94μm,19.0s
K27K Chicken 21.58 41 P P 00 58 48.5 -0.6
baz=250,SNR=285
K27K S S 01 02 45.8 -0.4
baz=250
O28M Mount Upton 21.60 51 IAMs_20 IAMs_20 01 08 02.0
comp=Z,120μm,20.0s
O28M Mount Upton 21.60 51 P P 00 58 49.6 0.0
baz=260,SNR=34
O28M S S 01 02 45.5 -1.6
baz=260
BVCY Beaver Creek 21.63 46 P P 00 58 50.0 +0.3
baz=256,SNR=112
BVCY S S 01 02 46.9 -0.3
baz=256
I26K Coal Creek Min 21.63 38 IAMs_20 IAMs_20 01 08 00.1
comp=Z,105μm,18.0s
I26K Coal Creek Min 21.63 38 P P 00 58 47.8 -1.8
baz=246
I26K S S 01 02 43.6 -3.6
baz=246
YUK3 Moose Creek 21.66 48 P P 00 58 48.5 -1.8
baz=258,SNR=49
YUK3 S S 01 02 43.4 -4.9
baz=258
A21K Barrow 21.72 16 P P 00 58 51.3 +0.8
baz=213,SNR=21
A21K S S 01 02 47.4 -1.4
baz=213
BCPM Bancas Point 21.75 53 P P 00 58 51.2 +0.2
BCPM IAmb IAmb 00 59 10.2
comp=Z,404nm,0.9s
BCPM IAMs_20 IAMs_20 01 07 00.1
comp=Z,84μm,22.0s
A22K Sinclair Lake 21.76 18 P P 00 58 51.6 +0.6
baz=216,SNR=184
A22K S S 01 02 50.7 +1.0
baz=216
PNL Peninsula 21.84 54 P P 00 58 50.7 -1.3
baz=264,SNR=8.7
PNL S S 01 02 47.5 -3.9
baz=264
D24K Happy Valley 21.84 26 IAMs_20 IAMs_20 01 07 34.6
comp=Z,129μm,20.0s
D24K Happy Valley 21.84 26 P P 00 58 52.0 +0.1
baz=229
D24K S S 01 02 52.6 +1.4
baz=229
C23K Itkillik River 21.84 23 IAMs_20 IAMs_20 01 07 13.5
comp=Z,79μm,21.0s
C23K Itkillik River 21.84 23 P P 00 58 52.6 +0.8
baz=225,SNR=833
C23K S S 01 02 50.9 -0.3
baz=225
F25K Christian Rive 21.85 31 IAMs_20 IAMs_20 01 07 56.5
comp=Z,88μm,18.0s
F25K Christian Rive 21.85 31 P P 00 58 52.6 +0.6
baz=237
F25K S S 01 02 53.7 +2.2
baz=237
YUK8 Steele Glacier 21.89 49 P P 00 58 51.8 -0.9
baz=260,SNR=23
YUK8 S S 01 02 49.7 -3.0
baz=260
BMAR Burnt Mountain 22.11 32 P P 00 58 55.0 +0.2
G26K Porcupine Rive 22.14 33 IAMs_20 IAMs_20 01 08 06.1
comp=Z,86μm,18.0s
G26K Porcupine Rive 22.14 33 P P 00 58 55.0 0.0
baz=241,SNR=511
G26K S S 01 02 55.1 -1.7
baz=241
E25K Arctic Village 22.16 30 IAMs_20 IAMs_20 01 08 08.9
comp=Z,114μm,18.0s
E25K Arctic Village 22.16 30 P P 00 58 56.2 +0.8
baz=236,SNR=580
E25K S S 01 02 57.6 +0.3
baz=236
C24K Franklin Bluff 22.25 25 P P 00 58 55.7 -0.5
C24K IAmb IAmb 00 59 07.8
comp=Z,1μm,1.2s
C24K IAMs_20 IAMs_20 01 07 28.2
comp=Z,87μm,20.0s
C24K Franklin Bluff 22.25 25 P P 00 58 56.4 +0.1
baz=228,SNR=309
C24K S S 01 02 58.0 -0.8
baz=228
O29M Mount Kennedy 22.32 52 P P 00 58 56.0 -1.2
O29M Mount Kennedy 22.32 52 P P 00 58 57.4 +0.1
baz=263
O29M S S 01 02 58.8 -1.8
baz=263
I27K Kandik River 22.34 38 IAMs_20 IAMs_20 01 07 55.4
comp=Z,78μm,20.0s
I27K Kandik River 22.34 38 P P 00 58 56.2 -1.1
baz=247,SNR=99
I27K S S 01 02 58.4 -2.3
baz=247
F26K Sheenjek River 22.39 32 IAMs_20 IAMs_20 01 08 14.8
comp=Z,84μm,18.0s
F26K Sheenjek River 22.39 32 P P 00 58 57.8 -0.1
baz=239
F26K S S 01 03 00.0 -1.5
baz=239
YUK4 Talbot Arm 22.43 49 P P 00 58 57.6 -0.9
baz=261,SNR=22
YUK4 S S 01 02 58.9 -3.8
baz=261
YUK6 Outpost Mounta 22.51 51 P P 00 58 57.5 -1.9
baz=262,SNR=8.5
YUK6 S S 01 03 02.4 -1.7
baz=262
H27K Steamboat Moun 22.62 36 IAMs_20 IAMs_20 01 08 32.2
comp=Z,71μm,18.0s
H27K Steamboat Moun 22.62 36 P P 00 58 58.9 -1.5
baz=246,SNR=108
H27K S S 01 03 01.4 -4.4
baz=246
D25K Kavik River 22.62 27 P P 00 58 59.8 -0.6
D25K IAMs_20 IAMs_20 01 08 18.2
comp=Z,85μm,19.0s
D25K Kavik River 22.62 27 P P 00 59 00.1 -0.3
baz=233,SNR=224

D25K S **S** **01 03 03.7 -2.1**
baz=233
P29M **Windy Craggy** **22.67 54** P **P** **00 59 00.2 -0.7**
P29M **Windy Craggy** **22.67 54** P **P** **00 58 58.9 -2.0**
baz=266,SNR=43
P29M S **S** **01 03 03.6 -3.1**
baz=266
DAWY **Dawson** **22.71 42** P **P** **00 59 00.5 -0.8**
DAWY IAmb IAmb 00 59 08.6
comp=Z,871nm,1.2s
M29M **Somme Creek** **22.72 47** IAMs_20 IAMs_20 01 08 06.3
comp=Z,87µm,20.0s
M29M **Somme Creek** **22.72 47** P **P** **00 59 00.6 -0.8**
baz=258,SNR=44
M29M S **S** **01 03 03.5 -4.1**
baz=258
G27K **Doyon Strip** **22.82 35** IAMs_20 IAMs_20 01 08 28.2
comp=Z,75µm,20.0s
G27K **Doyon Strip** **22.82 35** P **P** **00 59 01.5 -0.9**
baz=244,SNR=113
G27K S **S** **01 03 07.4 -1.8**
baz=244
HYT **Haines Junctio** **22.91 51** P **P** **00 59 01.6 -1.9**
HYT **Haines Junctio** **22.91 51** P **P** **00 59 02.9 -0.5**
baz=263,SNR=20
HYT S **S** **01 03 07.8 -3.2**
baz=263
I28M **Miner Creek** **22.93 39** P **P** **00 59 03.2 -0.5**
baz=250,SNR=475
I28M S **S** **01 03 08.0 -3.3**
baz=250
L29M **L29M** **23.01 45** IAMs_20 IAMs_20 01 08 40.3
comp=Z,90µm,19.0s
L29M **L29M** **23.01 45** P **P** **00 59 04.0 -0.4**
baz=257,SNR=97
L29M S **S** **01 03 10.0 -2.6**
baz=257
P30M **Million Dollar** **23.10 53** P **P** **00 59 06.0 +0.6**
baz=265
P30M S **S** **01 03 08.7 -5.4**
baz=265
N30M **Aishikik Lake** **23.19 49** IAMs_20 IAMs_20 01 09 26.7
comp=Z,94µm,19.0s
N30M **Aishikik Lake** **23.19 49** P **P** **00 59 05.3 -1.0**
baz=262
N30M S **S** **01 03 11.8 -3.7**
baz=262
MIDW **Midway** **23.24 184** P **P** **00 59 06.8 -0.1**
MIDW IAmb IAmb 00 59 24.8
comp=Z,655nm,1.4s
MIDW **Midway** **23.24 184** P **P** **00 59 08.7 +1.8**
PLBC **Pleasant Camp** **23.36 55** P **P** **00 59 07.7 -0.1**
baz=268,SNR=22
PLBC S **S** **01 03 17.0 -1.3**
baz=268
C26K **Camden Bay** **23.39 26** P **P** **00 59 08.4 +0.3**
baz=234
C26K S **S** **01 03 17.9 -0.7**
baz=234
S31K **Pelican** **23.41 58** P **P** **00 59 08.0 -0.3**
S31K IAmb IAmb 00 59 26.0
comp=Z,292nm,0.9s
S31K **Pelican** **23.41 58** P **P** **00 59 08.3 -0.1**
baz=271,SNR=9.7
S31K S **S** **01 03 20.3 +1.3**
baz=271
K29M **Barlow Dome** **23.45 43** IAMs_20 IAMs_20 01 08 44.6
comp=Z,83µm,21.0s
K29M **Barlow Dome** **23.45 43** P **P** **00 59 08.3 -0.6**
baz=256,SNR=225
K29M S **S** **01 03 18.5 -1.4**
baz=256
E27K **Coleen River** **23.47 32** IAMs_20 IAMs_20 01 09 07.4
comp=Z,85µm,18.0s
E27K **Coleen River** **23.47 32** P **P** **00 59 08.8 -0.1**
baz=242
E27K S **S** **01 03 20.3 +0.4**
baz=242
M30M **Minto, Yukon** **23.51 47** IAMs_20 IAMs_20 01 08 29.6
comp=Z,97µm,21.0s
M30M **Minto, Yukon** **23.51 47** P **P** **00 59 08.0 -1.4**
baz=260,SNR=9.9
M30M S **S** **01 03 22.4 +1.7**
baz=260
C27K **Jago River** **23.57 28** IAMs_20 IAMs_20 01 08 59.0
comp=Z,114µm,19.0s
C27K **Jago River** **23.57 28** P **P** **00 59 08.8 -1.0**
baz=236,SNR=212
C27K S **S** **01 03 22.5 +1.0**
baz=236
O30N **Mendenhall** **23.59 51** IAMs_20 IAMs_20 01 09 40.7
comp=Z,102µm,18.0s
O30N **Mendenhall** **23.59 51** P **P** **00 59 08.9 -1.3**
baz=265,SNR=15
O30N S **S** **01 03 22.2 +0.1**
baz=265
R31K **City Hall, Gus** **23.66 57** P **P** **00 59 10.3 -0.5**
baz=270
R31K S **S** **01 03 22.4 -0.7**
baz=270
F28M **Old Crow** **23.79 34** IAMs_20 IAMs_20 01 09 16.9
comp=Z,93µm,18.0s
F28M **Old Crow** **23.79 34** P **P** **00 59 12.2 +0.3**
baz=245,SNR=327
F28M S **S** **01 03 25.8 +0.6**
baz=245
H29M **Whitestone** **23.80 37** IAMs_20 IAMs_20 01 09 12.1
comp=Z,72µm,20.0s
H29M **Whitestone** **23.80 37** P **P** **00 59 10.7 -1.4**
baz=250,SNR=147
H29M S **S** **01 03 21.9 -3.4**
baz=250
N31M **Braeburn, Yuko** **23.82 50** IAMs_20 IAMs_20 01 09 24.6
comp=Z,103µm,20.0s
N31M **Braeburn, Yuko** **23.82 50** P **P** **00 59 11.6 -0.7**
baz=263
N31M S **S** **01 03 24.9 -0.8**
baz=263
SKAG **Skagway** **23.89 55** P **P** **00 59 14.3 +1.4**
SKAG **Skagway** **23.89 55** ⇓P **P** **00 59 13.9 +1.0**
SKAG **Skagway** **23.89 55** P **P** **00 59 11.7 -1.2**
baz=268
SIT **Sitka** **23.94 61** P **P** **00 59 13.3 0.0**
SIT IAmb IAmb 00 59 37.1
comp=Z,344nm,1.0s
SIT **Sitka** **23.94 61** P **P** **00 59 14.6 +1.3**
SIT **Sitka** **23.94 61** P **P** **00 59 13.3 0.0**
SIT pmax pmax
comp=Z,344nm,1.0s
SIT **Sitka** **23.94 61** P **P** **00 59 12.4 -0.9**
baz=274,SNR=9.2
SIT S **S** **01 03 30.5 +3.0**
baz=274
MAYO **Mayo, Yukon** **24.10 44** P **P** **00 59 13.2 -1.6**
baz=258,SNR=13
BESE **Bessie Mountai** **24.13 57** P **P** **00 59 15.2 0.0**
J30M **Hart River** **24.13 42** IAMs_20 IAMs_20 01 08 54.7
comp=Z,100µm,20.0s
J30M **Hart River** **24.13 42** P **P** **00 59 15.1 -0.2**
baz=256,SNR=189
J30M S **S** **01 03 32.7 +1.9**
baz=256
WHY **Whitehorse** **24.18 52** P **P** **00 59 15.4 -0.3**
WHY **Whitehorse** **24.18 52** P **P** **00 59 12.4 -3.3**
baz=266
WHY S **S** **01 03 30.9 -0.6**
baz=266
G29M **Pine Creek** **24.18 36** IAMs_20 IAMs_20 01 09 39.1
comp=Z,64µm,18.0s
G29M **Pine Creek** **24.18 36** P **P** **00 59 14.9 -0.7**
baz=249
G29M S **S** **01 03 28.7 -2.6**
baz=249
D27M **Malcolm River** **24.19 30** IAMs_20 IAMs_20 01 09 28.4
comp=Z,94µm,19.0s
D27M **Malcolm River** **24.19 30** P **P** **00 59 15.6 -0.1**
baz=240,SNR=363
D27M S **S** **01 03 29.3 -2.2**
baz=240
I30M **Mount Dempster** **24.28 40** IAMs_20 IAMs_20 01 09 24.9
comp=Z,113µm,19.0s
I30M **Mount Dempster** **24.28 40** P **P** **00 59 15.2 -1.5**
baz=254,SNR=326
I30M S **S** **01 03 30.7 -2.4**
baz=254
R32K **Eaglecrest** **24.31 58** P **P** **00 59 16.8 -0.1**
baz=272,SNR=15
R32K S **S** **01 03 35.0 +1.4**
baz=272
S32K **Killisnoo** **24.32 60** P **P** **00 59 17.5 +0.7**
S32K IAmb IAmb 00 59 34.1
comp=Z,451nm,1.1s
S32K **Killisnoo** **24.32 60** P **P** **00 59 15.9 -0.9**
baz=274,SNR=22
S32K S **S** **01 03 30.0 -3.5**
baz=274
E28M **Babbage River** **24.34 32** IAMs_20 IAMs_20 01 09 44.4
comp=Z,85µm,18.0s
E28M **Babbage River** **24.34 32** P **P** **00 59 17.1 0.0**
baz=243,SNR=711
E28M S **S** **01 03 36.9 +3.0**
baz=243
JIS **Juneau Island** **24.38 58** P **P** **00 59 18.5 +1.1**
EPYK **Eagle Plains** **24.48 38** IAMs_20 IAMs_20 01 09 51.1
comp=Z,92µm,18.0s
EPYK **Eagle Plains** **24.48 38** P **P** **00 59 16.9 -1.5**
baz=252,SNR=260
EPYK S **S** **01 03 33.7 -2.6**
baz=252
M31M **Drury Creek, Y** **24.56 48** IAMs_20 IAMs_20 01 10 14.2
comp=Z,116µm,19.0s
M31M **Drury Creek, Y** **24.56 48** P **P** **00 59 17.4 -1.7**
baz=263,SNR=13
M31M S **S** **01 03 36.6 -0.9**
baz=263
P32M **Atlin** **24.72 54** IAMs_20 IAMs_20 01 09 57.3
comp=Z,63µm,18.0s
P32M **Atlin** **24.72 54** P **P** **00 59 20.1 -0.5**
baz=270,SNR=6.6
P32M S **S** **01 03 40.9 +0.7**
baz=270
E29M **Blow River** **24.79 33** P **P** **00 59 21.1 -0.1**
baz=246,SNR=440
E29M S **S** **01 03 42.1 +1.0**
baz=246
KUR **Kuril'sk** **24.85 270** *c* iP **P** **00 59 20.6 -1.2**
KUR *e*PPP PPP 01 00 01.5
KUR *e*S **S** **01 03 40.8 -1.6**
KUR *e*SSS SSS 01 04 43.3
KUR pmax pmax
comp=Z,3µm,1.3s
KUR pmax pmax
comp=E,894nm,2.1s
KUR pmax pmax
comp=N,498nm,1.3s
KUR pmax pmax
comp=Z,23µm,4.9s
KUR MLR MLR
comp=Z,15µm,16.0s
KUR MLR MLR
comp=N,18µm,17.0s
KUR MLR MLR
comp=E,12µm,22.0s
G30M **tAoh Zraii Nji** **24.87 36** IAMs_20 IAMs_20 01 09 23.3
comp=Z,62µm,20.0s
G30M **tAoh Zraii Nji** **24.87 36** P **P** **00 59 20.0 -1.9**
baz=251,SNR=144
G30M S **S** **01 03 40.5 -1.9**
baz=251
D28M **Stokes Point** **24.93 30** P **P** **00 59 21.9 -0.3**
baz=243,SNR=220
D28M S **S** **01 03 48.9 +5.7**
baz=243
N32M **Quiet Lake** **25.08 51** IAMs_20 IAMs_20 01 10 57.1
comp=Z,77µm,18.0s
N32M **Quiet Lake** **25.08 51** P **P** **00 59 23.4 -0.4**
baz=267
N32M S **S** **01 03 43.6 -2.4**
baz=267
P33M **Teslin, Yukon** **25.18 53** P **P** **00 59 25.6 +0.8**
baz=269,SNR=30
P33M S **S** **01 03 47.8 +0.3**
baz=269
F30M **Barrier River** **25.24 35** IAMs_20 IAMs_20 01 10 14.3
comp=Z,77µm,18.0s
F30M **Barrier River** **25.24 35** P **P** **00 59 24.6 -0.6**
baz=250,SNR=62
F30M S **S** **01 03 46.7 -1.6**
baz=250
U33K **Whale Pass** **25.24 63** P **P** **00 59 25.2 0.0**
baz=278,SNR=21
U33K S **S** **01 03 53.5 +5.1**
baz=278
H31M **Peel River** **25.25 40** P **P** **00 59 24.8 -0.6**
baz=256,SNR=200
H31M S **S** **01 03 45.7 -2.9**
baz=256
T33K **Petersburg** **25.25 61** P **P** **00 59 25.6 +0.3**
baz=276,SNR=28
T33K S **S** **01 03 51.9 +3.4**
baz=276
CRAG **Craig** **25.33 64** P **P** **00 59 26.6 +0.6**
CRAG **Craig** **25.33 64** P **P** **00 59 27.9 +1.9**
CRAG **Craig** **25.33 64** ⇑P **P** **00 59 28.4 +2.3**
CRAG **Craig** **25.33 64** P **P** **00 59 28.7 +2.6**
baz=279,SNR=22
CRAG S **S** **01 03 54.3 +4.5**
baz=279
Q32M **Nakina River** **25.47 56** P **P** **00 59 28.2 +0.7**
Q32M IAmb IAmb 00 59 46.4
comp=Z,316nm,1.1s
Q32M **Nakina River** **25.47 56** P **P** **00 59 28.9 +1.4**
baz=272,SNR=25
Q32M S **S** **01 03 47.7 -4.7**
baz=272
G31M **Satah River** **25.58 37** IAMs_20 IAMs_20 01 10 26.1
comp=Z,67µm,18.0s
G31M **Satah River** **25.58 37** P **P** **00 59 27.4 -0.8**
baz=253,SNR=59
G31M S **S** **01 03 50.9 -2.7**
baz=253
WRAK **Wrangell Islan** **25.63 62** P **P** **00 59 29.9 +1.2**
WRAK **Wrangell Islan** **25.63 62** ⇑P **P** **00 59 31.1 +2.4**
WRAK **Wrangell Islan** **25.63 62** P **P** **00 59 31.2 +2.4**
baz=277,SNR=71
WRAK S **S** **01 03 58.1 +3.6**
baz=277
TYV **Tymovskoe** **25.92 285** *e*P **P** **00 59 32.6 +1.2**
TYV pmax pmax
comp=Z,9µm,8.0s
TYV pmax pmax
comp=Z,163nm,1.4s
TYV MLR MLR
comp=Z,77µm,21.0s
TYV MLR MLR
comp=E,62µm,20.0s
F31M **Tsiigehtchic** **25.93 36** IAMs_20 IAMs_20 01 11 32.3
comp=Z,64µm,18.0s
F31M **Tsiigehtchic** **25.93 36** P **P** **00 59 30.4 -1.0**
baz=253,SNR=98
F31M S **S** **01 03 59.6 +0.5**
baz=253
R33M **Jennings River** **26.12 55** IAMs_20 IAMs_20 01 10 40.4
comp=Z,54µm,19.0s
R33M **Jennings River** **26.12 55** P **P** **00 59 32.5 -0.9**
baz=272,SNR=14
R33M S **S** **01 04 03.6 +1.0**
baz=272
S34M **Telegraph Cree** **26.13 58** P **P** **00 59 33.5 +0.2**
baz=275,SNR=36
S34M S **S** **01 04 01.5 -1.0**
baz=275
DIB **Dawson Inlet,** **26.14 69** P **P** **00 59 34.0 +0.6**
DIB IAmb IAmb 00 59 52.5
comp=Z,914nm,1.2s
V35K **Ketchikan** **26.20 64** P **P** **00 59 34.9 +0.9**
baz=280,SNR=77
V35K S **S** **01 04 05.6 +1.9**
baz=280
INK **Inuvik** **26.28 34** LR LR 01 10 57.1
comp=Z,53µm,19.4s,baz=232,slow=39
INK **Inuvik** **26.28 34** P **P** **00 59 33.6 -0.9**
INK **Inuvik** **26.28 34** P **P** **00 59 33.6 -0.9**
INK pmax pmax
comp=Z,242nm,1.0s
INK **Inuvik** **26.28 34** ⇑P **P** **00 59 32.4 -2.1**
INK **Inuvik** **26.28 34** P **P** **00 59 33.9 -0.6**
baz=251,SNR=135
INK S **S** **01 04 05.5 +1.0**
baz=251
MOBC **Moresby Island** **26.45 69** P **P** **00 59 36.6 +0.2**
NKL **Nikolayevsk** **26.47 291** *e*P **P** **00 59 35.4 -0.9**
NKL pmax pmax
comp=E,198nm,1.3s
NKL pmax pmax
comp=N,210nm,1.1s
NKL pmax pmax
comp=Z,431nm,1.0s
NKL MLR MLR
comp=E,43µm,20.0s
NKL MLR MLR
comp=N,45µm,17.0s
NKL MLR MLR
comp=Z,128µm,19.0s
DLBC **Dease Lake** **26.67 57** LR LR 01 10 22.4
comp=Z,50µm,19.8s,baz=264,slow=37
DLBC **Dease Lake** **26.67 57** P **P** **00 59 40.5 +2.3**
baz=275,SNR=42
DLBC S **S** **01 04 11.9 +0.8**
baz=275
YUK **Yuzh-Kuril'sk** **26.68 269** *e*P **P** **00 59 38.8 +0.4**
YUK *i* S **S** **01 04 12.7 +1.3**
YUK pmax pmax
comp=Z,2µm,1.8s
YUK pmax pmax
comp=Z,3µm,1.2s
YUK pmax pmax
comp=N,493nm,1.0s
YUK pmax pmax
comp=E,882nm,1.3s
T35M **Bob Quinn** **26.70 60** P **P** **00 59 39.4 +0.8**
baz=278,SNR=37
T35M S **S** **01 04 13.4 +1.7**
baz=278
UGL **Uglegorsk** **26.87 282** ⇑*i*P **P** **00 59 41.7 +1.6**
UGL *e* 01 00 36.8
UGL pmax pmax
comp=Z,1µm,1.1s
UGL pmax pmax
comp=Z,11µm,10.0s
UGL MLR MLR
comp=E,32µm,17.0s
UGL MLR MLR
comp=N,29µm,15.0s
UGL MLR MLR
comp=Z,25µm,17.0s
U35K **Hyder** **26.99 62** P **P** **00 59 42.2 +1.2**
baz=280,SNR=28
U35K S **S** **01 04 19.9 +3.9**
baz=280
HG4B **Hotspring** **27.13 71** P **P** **00 59 42.3 -0.1**
HG4B IAmb IAmb 00 59 59.6
comp=Z,1µm,1.8s
WTLY **Watson Lake, Y** **27.19 53** P **P** **00 59 43.6 +0.8**
baz=273,SNR=11
WTLY S **S** **01 04 23.2 +4.0**
baz=273
YSS **Yuzhno-Sakhali** **27.28 277** P **P** **00 59 44.5 +0.7**
YSS IAMs_20 IAMs_20 01 09 46.7
comp=Z,64µm,21.0s
YSS **Yuzhno-Sakhali** **27.28 277** P **P** **00 59 45.2 +1.5**
YSS **Yuzhno-Sakhali** **27.28 277** *c* iP **P** **00 59 45.3 +1.5**
YSS *e* 01 03 09.3
YSS *e*S **S** **01 04 21.0 +0.2**
YSS *e* 01 10 34.1
YSS pmax pmax
comp=Z,380nm,1.3s
YSS pmax pmax
comp=Z,7µm,10.0s
YSS pmax pmax
comp=E,4µm,8.9s
YSS smax smax
comp=N,6µm,10.1s
YSS smax smax
comp=E,10µm,8.2s
YSS MLR MLR
comp=N,14µm,20.0s
YSS MLR MLR
comp=E,34µm,20.0s
YSS MLR MLR
comp=Z,43µm,20.0s
YSS **Yuzhno-Sakhali** **27.28 277** ⇑P **P** **00 59 45.0 +1.2**
LIRD **Liard River Hi** **28.60 54** P **P** **00 59 55.9 +0.5**
baz=276,SNR=6.2
LIRD S **S** **01 04 44.2 +2.8**
baz=276
JKA **Kamikawa-asahi** **28.68 272** P **P** **00 59 57.0 +0.7**
JKA IAmb IAmb 01 00 16.7
comp=Z,554nm,1.4s
ASAJ **Asahikawa** **28.69 272** P **P** **00 59 56.7 +0.4**
comp=Z,164nm,0.9s,baz=41,slow=6.7,SNR=41
ASAJ LR LR 01 12 41.6
comp=Z,21µm,19.4s,baz=80,slow=39
comp=Z,164nm,0.9s
ASAJ **Asahikawa** **28.69 272** P **P** **00 59 57.0 +0.7**
ASAJ pmax pmax
comp=Z,554nm,1.4s
BBB **Bella Bella** **28.98 70** LR LR 01 09 32.5
comp=Z,32µm,21.3s,baz=291,slow=32
BBB **Bella Bella** **28.98 70** ⇑P **P** **01 00 00.9 +2.2**
TOAD **Toad River Com** **29.11 55** P **P** **00 59 59.8 -0.2**
baz=278,SNR=15
TOAD S **S** **01 04 51.5 +2.0**
baz=278
JEM **Erimo** **29.43 268** P **P** **01 00 04.3 +1.4**
ERM **Erimo** **29.43 268** P **P** **01 00 03.7 +0.8**
ERM IAmb IAmb 01 00 13.1
comp=Z,518nm,1.5s
ERM **Erimo** **29.43 268** P **P** **01 00 04.3 +1.4**
ERM **Erimo** **29.43 268** P **P** **01 00 03.7 +0.8**
ERM pmax pmax
comp=Z,518nm,1.5s
ERM **Erimo** **29.43 268** ⇓P **P** **01 00 04.4 +1.4**
KOTAN **Kotaneelee Air** **29.55 53** P **P** **01 00 03.7 -0.2**
baz=276,SNR=8.2
KOTAN S **S** **01 04 57.1 +0.8**
baz=276
WRGLY **Wrigley** **29.63 46** P **P** **01 00 04.4 -0.2**
baz=271,SNR=13
WRGLY S **S** **01 04 56.6 -0.8**
baz=271
GRNR **Gornyy** **29.69 288** ⇑*i*P **P** **01 00 05.5 +0.3**
GRNR pmax pmax
comp=Z,60nm,1.2s
GRNR MLR MLR
comp=E,22µm,21.0s
GRNR MLR MLR
comp=N,21µm,20.0s
GRNR MLR MLR
comp=Z,21µm,20.0s
C36M **Paulatuk** **29.86 34** P **P** **01 00 05.8 -0.6**
baz=260,SNR=80
C36M S **S** **01 04 59.7 -1.1**
baz=260
A36M **Sachs Harbour** **30.07 29** P **P** **01 00 08.3 0.0**
A36M IAmb IAmb 01 00 14.6
comp=Z,260nm,0.8s
A36M IAMs_20 IAMs_20 01 14 00.9
comp=Z,51µm,20.0s
A36M **Sachs Harbour** **30.07 29** P **P** **01 00 08.6 +0.3**
baz=254,SNR=182
A36M S **S** **01 05 05.2 +1.0**
baz=254
YAK **Yakutsk** **30.86 311** P **P** **01 00 14.6 -0.8**
comp=Z,107nm,0.9s,baz=53,slow=12,SNR=11
YAK PcP **PcP** **01 03 11.5 +0.2**
comp=Z,113nm,0.7s,baz=105,slow=0.1,SNR=9.9
YAK ScP **ScP** **01 06 50.2 -1.2**
comp=Z,52nm,0.9s,baz=49,slow=1.1,SNR=8.6
YAK LR LR 01 12 52.3
comp=Z,57µm,20.3s,baz=86,slow=37
comp=Z,107nm,0.9s
YAK **Yakutsk** **30.86 311** P **P** **01 00 14.6 -0.8**
YAK IAmb IAmb 01 00 43.6
comp=Z,338nm,1.5s
YAK **Yakutsk** **30.86 311** IAMs_20 IAMs_20 01 12 34.2
comp=Z,57µm,20.0s
YAK **Yakutsk** **30.86 311** *e*P **P** **01 00 13.5 -1.9**
YAK *e**PP **pP** **01 00 22.3 -1.7**
YAK *e* 01 01 19.8
YAK *e* 01 03 10.9
YAK *e*S **S** **01 05 14.6 -2.1**
YAK *e*SS **SnSn** **01 07 01.0 +3.8**
YAK *e* 01 10 47.2
YAK pmax pmax
comp=Z,39nm,1.1s
YAK pmax pmax
comp=N,17nm,1.3s
YAK pmax pmax
comp=E,36nm,1.4s
YAK pmax pmax
comp=Z,761nm,3.1s

YAK pmax pmax
comp=E,579nm,2.5s
YAK pmax pmax
comp=N,743nm,3.2s
YAK smax smax
comp=N,2µm,20.6s
YAK smax smax
comp=E,11µm,18.2s
YAK MLR MLR
comp=Z,56µm,18.0s
YAK MLR MLR
comp=E,19µm,13.0s
YAK MLR MLR
comp=N,4µm,17.0s
JTM Tenmabayashi 31.42 267 P **P** **01 00 20.5 0.0**
JTM IAmb IAmb 01 00 23.7
comp=Z,491nm,1.5s
JTM Tenmabayashi 31.42 267 P **P** **01 00 20.5 0.0**
JTM Tenmabayashi 31.42 267 ⇑P **P** **01 00 20.7 +0.2**
TIXI Tiksi 31.56 330 P **P** **01 00 20.7 -0.7**
comp=Z,22nm,0.7s,baz=119,slow=9.3,SNR=28
TIXI PcP **PcP** **01 03 13.2 +0.1**
comp=Z,246nm,0.9s,baz=77,slow=2.8,SNR=19
TIXI ScP **ScP** **01 06 52.7 -0.8**
comp=Z,92nm,1.1s,baz=104,slow=4.4,SNR=11
TIXI LR LR 01 13 59.0
comp=Z,34µm,19.3s,baz=120,slow=38
comp=Z,22nm,0.7s
TIXI Tiksi 31.56 330 P **P** **01 00 20.8 -0.7**
TIXI Tiksi 31.56 330 *ceP* **P** **01 00 20.9 -0.5**
TIXI pmax pmax
comp=Z,33nm,1.1s
TIXI MLR MLR
comp=Z,38µm,19.0s
OZB Mount Ozzard 31.69 74 P **P** **01 00 22.3 -0.5**
OZB IAmb IAmb 01 00 46.9
comp=Z,402nm,1.2s
OZB Mount Ozzard 31.69 74 ⇑P **P** **01 00 25.9 +3.1**
TEY Ternei 31.97 278 ⇑*eP* **P** **01 00 24.8 -0.5**
TEY *e* 01 01 33.5
TEY 01 05 33.2
TEY pmax pmax
comp=N,30nm,1.0s
TEY pmax pmax
comp=E,30nm,1.0s
TEY pmax pmax
comp=Z,110nm,1.0s
TEY pmax pmax
comp=E,200nm,4.2s
TEY pmax pmax
comp=N,300nm,4.1s
TEY pmax pmax
comp=Z,900nm,4.8s
TEY MLR MLR
comp=E,300nm,20.0s
TEY MLR MLR
comp=N,200nm,21.0s
TEY MLR MLR
comp=Z,700nm,19.0s
LLLB Lillooet 33.18 70 P **P** **01 00 36.7 +0.7**
LLLB IAmb IAmb 01 00 54.1
comp=Z,336nm,1.0s
NLWA Neilton Lookou 33.34 76 P **P** **01 00 38.0 +0.6**
NLWA IAmb IAmb 01 01 01.3
comp=Z,222nm,1.0s
NLWA IAMs_20 IAMs_20 01 11 23.3
comp=Z,38µm,20.0s
NLWA Neilton Lookou 33.34 76 ⇑P **P** **01 00 39.0 +1.7**
KPA Kalaupapa 33.53 147 P **P** **01 00 39.1 +0.1**
KPA Kalaupapa 33.53 147 P **P** **01 00 39.2 +0.1**
YKA Yellowknife Ar 33.74 47 P **P** **01 00 39.0 -1.6**
comp=Z,12nm,0.7s,baz=237,slow=9.9,SNR=70
YKA PcP **PcP** **01 03 19.2 -0.1**
comp=Z,43nm,1.1s,baz=291,slow=2.9,SNR=7.9
YKA ScP **ScP** **01 07 06.5 +5.3**
comp=Z,6.9nm,0.9s,baz=290,slow=4.4,SNR=3.9
YKA LR LR 01 16 09.7
comp=Z,48µm,18.1s,baz=278,slow=40
comp=Z,12nm,0.7s
YKA Yellowknife Ar 33.74 47 P **P** **01 00 39.7 -0.9**
GNW Green Mountain 33.89 75 P **P** **01 00 42.9 +0.8**
GNW IAmb IAmb 01 01 04.9
comp=Z,240nm,1.1s
ZEA Zeya 33.98 297 *eP* **P** **01 00 42.7 0.0**
ZEA *e* 01 03 21.5
ZEA *eS* **S** **01 06 00.9 -4.5**
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,100nm,1.1s
ZEA pmax pmax
comp=E,1µm,6.3s
ZEA pmax pmax
comp=N,500nm,4.7s
ZEA pmax pmax
comp=Z,2µm,5.9s
ZEA smax smax
comp=E,4µm,17.2s
ZEA MLR MLR
comp=N,11µm,18.0s
ZEA MLR MLR
comp=E,4µm,18.0s
ZEA MLR MLR
comp=Z,12µm,18.0s
H11N2 WAKE ISLAND Hy 34.50 210 T T 01 37 32.7
baz=18,slow=76,SNR=8131
H11N3 WAKE ISLAND Hy 34.51 210 T T 01 37 33.3
baz=18,slow=76,SNR=9791
H11N1 WAKE ISLAND Hy 34.52 210 T T 01 37 34.1
baz=18,slow=76,SNR=9459
JSD Sado 34.79 266 P **P** **01 00 50.3 +0.3**
JSD IAmb IAmb 01 00 53.5
comp=Z,201nm,1.1s
JSD Sado 34.79 266 P **P** **01 00 50.4 +0.4**
JSD Sado 34.79 266 ⇑P **P** **01 00 50.3 +0.3**
MHA Mahukona 34.83 146 P **P** **01 00 50.6 +0.3**
MHA Mahukona 34.83 146 P **P** **01 00 50.6 +0.3**
JOHN Johnston Islan 34.97 170 IAMs_20 IAMs_20 01 12 39.3
comp=Z,46µm,19.0s
COR Corvallis 35.02 80 P **P** **01 00 52.6 +0.7**
COR IAmb IAmb 01 01 14.0
comp=Z,334nm,1.1s
COR Corvallis 35.02 80 P **P** **01 00 52.6 +0.7**
COR pmax pmax
comp=Z,334nm,1.1s
COR Corvallis 35.02 80 ⇓P **P** **01 00 54.0 +2.1**
HPAH Hawaii Prepara 35.04 146 P **P** **01 00 51.9 -0.5**
HEH HeiHe 35.20 291 *eP* **P** **01 00 52.1 -1.3**
HEH pP **pP** **01 01 00.8 -1.6**
HEH PP **PP** **01 02 15.1 +1.8**
HEH S S 01 06 16.1 -8.2
HEH pmax pmax
comp=Z,240nm,1.1s
HEH pmax pmax
comp=Z,3µm,8.1s
HEH LR LR
comp=Z,18µm,21.5s
HEH LR LR
comp=Z,29µm,23.9s
HEH LR LR
comp=Z,48µm,21.4s
USRK Ussuriysk Ar. 35.25 279 P **P** **01 00 53.7 -0.1**
comp=Z,198nm,0.7s,baz=59,slow=8.6,SNR=214
USRK PcP **PcP** **01 03 24.6 +0.6**
comp=Z,23nm,0.8s,baz=66,slow=3.6,SNR=4.9
comp=Z,198nm,0.7s
POHA Pohakuloa 35.35 146 P **P** **01 00 55.1 -0.1**
POHA Pohakuloa 35.35 146 IAMs_20 IAMs_20 01 12 24.5
comp=Z,43µm,20.0s
POHA Pohakuloa 35.35 146 P **P** **01 00 56.1 +0.9**
POHA Pohakuloa 35.35 146 ⇓P **P** **01 00 56.6 +1.5**
HMH Humu'ula Sheep 35.51 146 P **P** **01 00 56.6 -0.1**
HMH IAmb IAmb 01 01 14.9
comp=Z,454nm,1.1s
H11S1 WAKE ISLAND Hy 35.71 210 T T 01 40 25.2
baz=20,slow=76
H11S2 WAKE ISLAND Hy 35.73 210 T T 01 40 13.9
baz=20,slow=76,SNR=8244
H11S3 WAKE ISLAND Hy 35.73 210 T T 01 40 26.4
baz=20,slow=76,SNR=5780
AIN Ainahou 35.73 146 P **P** **01 00 58.1 -0.3**
MAJO Matsushiro 35.76 264 P **P** **01 00 58.9 +0.6**
MAJO Matsushiro 35.76 264 P **P** **01 00 59.2 +0.9**
MAJO Matsushiro 35.76 264 *c iP* **P** **01 00 58.5 +0.2**

MAJO pmax pmax
comp=Z,417nm,1.0s
MAJO Matsushiro 35.76 264 ⇑P **P** **01 00 59.3 +0.9**
MJAR Matsushiro Arr 35.76 264 P **P** **01 00 58.4 +0.1**
comp=Z,142nm,0.9s,baz=52,slow=7.1,SNR=182
MJAR PcP **PcP** **01 03 26.0 +0.3**
comp=Z,28nm,0.9s,baz=71,slow=1.9,SNR=6.9
MJAR S **S** **01 06 36.9 +3.7**
comp=Z,0.8nm,0.4s,baz=233,slow=14,SNR=4.3
MJAR ScP **ScP** **01 07 14.0 +5.0**
comp=Z,0.8nm,0.4s,baz=3.5,slow=7.1,SNR=4.1
MJAR LR LR 01 13 44.9
comp=Z,35µm,21.5s,baz=58,slow=33
comp=Z,142nm,0.9s
BYL Byron's Ledge 35.77 146 P **P** **01 00 58.7 +0.1**
KNHH Kane Nui o Ham 35.83 146 P **P** **01 00 59.2 +0.1**
VLA Vladivostok 35.88 278 *diP* **P** **01 00 59.4 +0.2**
VLA pmax pmax
comp=Z,467nm,1.3s
VLA MLR MLR
comp=Z,13µm,17.0s
KSXB Camp Six Broad 36.12 85 P **P** **01 01 02.0 +0.5**
KSXB IAmb IAmb 01 01 19.0
comp=Z,192nm,1.1s
WIFE Three Sisters- 36.21 80 P **P** **01 01 02.2 -0.1**
WIFE IAmb IAmb 01 01 22.7
comp=Z,270nm,0.9s
WAH2 Wahluke Slope 36.24 75 P **P** **01 01 02.5 +0.2**
WAH2 IAmb IAmb 01 01 22.1
comp=Z,247nm,0.7s
HAWA Hanford 36.44 75 P **P** **01 01 04.4 +0.4**
HAWA IAmb IAmb 01 01 27.1
comp=Z,292nm,0.8s
HAWA Hanford 36.44 75 ⇑P **P** **01 01 03.7 -0.3**
MDJ Mudanjiang 36.51 281 **P** **01 01 03.8 -0.8**
MDJ IAmb IAmb 01 01 06.9
comp=Z,209nm,1.1s
MDJ IAMs_20 IAMs_20 01 15 43.5
comp=Z,54µm,20.0s
MDJ Mudanjiang 36.51 281 P **P** **01 01 04.3 -0.3**
MDJ PP **PP** **01 02 31.8 +3.9**
MDJ S **S** **01 06 48.0 +3.5**
MDJ sS sS 01 06 58.6 +0.1
MDJ pmax pmax
comp=Z,100nm,0.9s
MDJ pmax pmax
comp=Z,6µm,10.0s
MDJ LR LR
comp=Z,18µm,18.0s
MDJ LR LR
comp=Z,43µm,21.6s
MDJ LR LR
comp=Z,73µm,17.7s
MDJ Mudanjiang 36.51 281 P **P** **01 01 04.0 -0.6**
MSHR Mys Shultsa 36.62 277 *ceP* **P** **01 01 06.6 +1.1**
MSHR pmax pmax
comp=Z,898nm,2.5s
MSHR MLR MLR
comp=Z,10µm,19.0s
PSTR Posyet 36.80 278 *c iP* **P** **01 01 07.8 +0.7**
JGF Kuroka 36.89 263 P **P** **01 01 08.6 +0.6**
JGF IAmb IAmb 01 01 12.8
comp=Z,437nm,1.1s
JGF Kuroka 36.89 263 P **P** **01 01 09.0 +1.0**
JGF Kuroka 36.89 263 ⇑P **P** **01 01 08.8 +0.8**
YBH Yreka Blue Hor 36.91 84 LR LR 01 13 00.3
comp=Z,1µm,21.3s,baz=288,slow=31
YBH Yreka Blue Hor 36.91 84 P **P** **01 01 09.0 +0.8**
YBH Yreka Blue Hor 36.91 84 P **P** **01 01 09.0 +0.8**
YBH pmax pmax
comp=Z,132nm,1.1s
NEW Newport 36.99 71 LR LR 01 15 43.1
comp=Z,22µm,19.1s,baz=307,slow=35
NEW Newport 36.99 71 P **P** **01 01 09.4 +0.6**
NEW Newport 36.99 71 P **P** **01 01 09.4 +0.6**
NEW pmax pmax
comp=Z,493nm,0.9s
NEW Newport 36.99 71 ⇑P **P** **01 01 09.5 +0.6**
JHJ2 Mitsune 37.02 258 P **P** **01 01 08.3 -0.8**
JHJ2 Mitsune 37.02 258 P **P** **01 01 08.6 -0.5**
JHJ Hachijo jima 2 37.04 258 P **P** **01 01 08.6 -0.7**
comp=Z,394nm,0.5s,baz=273,slow=6.5,SNR=6.8
JHJ LR LR 01 14 10.2
comp=Z,14µm,21.8s,baz=46,slow=33
KMRM Mail Ridge 37.14 87 P **P** **01 01 10.5 +0.4**
INU Inuyama 37.26 263 P **P** **01 01 11.2 +0.1**
INU Inuyama 37.26 263 P **P** **01 01 11.0 -0.1**
INU Inuyama 37.26 263 ⇑P **P** **01 01 11.4 +0.2**
BNX BinXian 37.28 284 ⇑P **P** **01 01 10.4 -0.7**
BNX sP pwP 01 01 26.8 +2.5
BNX PP **PP** **01 02 34.0 -2.3**
BNX S **S** **01 06 53.5 -2.6**
BNX sS **ScP** **01 07 14.6 +0.2**
BNX pmax pmax
comp=Z,930nm,1.1s
BNX pmax pmax
comp=Z,5µm,10.9s
BNX LR LR
comp=Z,27µm,20.6s
BNX LR LR
comp=Z,42µm,20.6s
BNX LR LR
comp=Z,70µm,21.7s
HOPS Hopland Field 38.26 88 IAMs_20 IAMs_20 01 13 03.2
comp=Z,37µm,21.0s
BMO Blue Mountains 38.56 76 P **P** **01 01 22.2 +0.1**
BMO Blue Mountains 38.56 76 P **P** **01 01 22.2 +0.1**
BMO pmax pmax
comp=Z,187nm,1.2s
BMO Blue Mountains 38.56 76 ⇑P **P** **01 01 22.9 +0.7**
MNRC McLaughlin Min 38.72 88 IAMs_20 IAMs_20 01 13 39.4
comp=Z,37µm,20.0s
RES Resolute Bay 38.86 25 LR LR 01 19 41.4
comp=Z,23µm,19.5s,baz=272,slow=40
RES Resolute Bay 38.86 25 P **P** **01 01 23.4 -0.7**
RES Resolute Bay 38.86 25 P **P** **01 01 23.4 -0.7**
RES pmax pmax
comp=Z,47nm,1.1s
MCCM Marconi Confer 38.89 89 IAMs_20 IAMs_20 01 13 36.9
comp=Z,33µm,21.0s
JTMT Jette 38.92 71 P **P** **01 01 25.6 +0.4**
CVS Carmenet Viney 39.03 88 IAMs_20 IAMs_20 01 13 33.7
comp=Z,33µm,21.0s
WVOR Wild Horse Val 39.04 80 P **P** **01 01 26.9 +0.7**
WVOR IAmb IAmb 01 01 46.2
comp=Z,320nm,1.1s
WVOR Wild Horse Val 39.04 80 P **P** **01 01 26.9 +0.7**
WVOR pmax pmax
comp=Z,320nm,1.1s
WVOR Wild Horse Val 39.04 80 ⇑P **P** **01 01 27.1 +0.9**
FARB Farallon Islan 39.08 89 IAMs_20 IAMs_20 01 13 51.5
comp=Z,27µm,19.0s
PLID Pearl Lake 39.23 75 P **P** **01 01 27.6 -0.3**
PLID IAMs_20 IAMs_20 01 16 21.1
comp=Z,36µm,20.0s
BEKR Beckworth 39.43 85 P **P** **01 01 29.6 0.0**
CN2 Changchun 39.47 283 P **P** **01 01 29.3 -0.3**
CN2 PP **PnPn** **01 03 03.8 +0.4**
CN2 S **S** **01 07 25.9 -3.5**
CN2 SS **SS** **01 10 14.6 -9.5**
CN2 pmax pmax
comp=Z,230nm,1.5s
CN2 pmax pmax
comp=Z,6µm,5.0s
CN2 LR LR
comp=Z,40µm,20.0s
CN2 LR LR
comp=Z,39µm,20.0s
CN2 LR LR
comp=Z,54µm,21.0s
MSO Missoula 39.57 72 P **P** **01 01 30.9 +0.3**
MSO IAmb IAmb 01 01 47.5
comp=Z,395nm,0.9s
MSO Missoula 39.57 72 ⇑P **P** **01 01 30.9 +0.3**
JCJ Chichijima 39.93 249 P P 01 01 24.1 -9.5
comp=Z,411nm,0.8s,baz=334,slow=5.1,SNR=10
JCJ LR LR 01 16 05.4
comp=Z,8µm,21.6s,baz=22,slow=33
JCJ Chichijima 39.93 249 P **P** **01 01 34.1 +0.5**
JCJ Chichijima 39.93 249 P **P** **01 01 34.4 +0.8**
JCJ Chichijima 39.93 249 ⇑P **P** **01 01 34.4 +0.8**
HILR Hailar Array B 39.95 294 P **P** **01 01 33.3 -0.3**
comp=Z,9.5nm,0.3s,baz=66,slow=9.3,SNR=31
HILR PcP **PcP** **01 03 39.0 +0.7**
comp=Z,63nm,0.9s,baz=98,slow=7.6,SNR=6.9

HILR ScP **ScP** **01 07 27.6 +2.9**
comp=Z,6.4nm,0.7s,baz=90,slow=4.4,SNR=4.1
HILR LR LR 01 18 25.1
comp=Z,35µm,20.2s,baz=70,slow=37
comp=Z,9.5nm,0.3s
WELL Weller Preserv 40.06 87 IAMs_20 IAMs_20 01 14 54.9
comp=Z,27µm,20.0s
HIA Hailar 40.09 293 P **P** **01 01 34.6 -0.2**
HIA Hailar 40.09 293 IAMs_20 IAMs_20 01 17 56.9
comp=Z,45µm,20.0s
HIA Hailar 40.09 293 P **P** **01 01 34.1 -0.7**
HIA Hailar 40.09 293 P **P** **01 01 34.6 -0.2**
HIA pmax pmax
comp=Z,315nm,1.5s
HIA MLR MLR
comp=Z,45µm,20.0s
JMN Monobe 40.28 264 P **P** **01 01 37.3 +0.9**
JMN IAmb IAmb 01 01 41.5
comp=Z,377nm,1.2s
JMN Monobe 40.28 264 P **P** **01 01 37.8 +1.3**
JMN Monobe 40.28 264 ⇑P **P** **01 01 37.8 +1.3**
HHU Hamhung 40.37 276 P **P** **01 01 37.5 +0.4**
HHU S **S** **01 07 43.7 +0.9**
HHU AmB
comp=Z,6µm,2.9s
HHU AMS AMS
comp=Z,3µm,7.0s
CMB Columbia Colle 40.51 87 IAMs_20 IAMs_20 01 15 07.0
comp=Z,32µm,21.0s
SAO San Andreas Ge 40.63 89 ⇑P **P** **01 01 40.9 +1.6**
HLID Hailey 41.01 76 P **P** **01 01 42.9 +0.3**
HLID IAmb IAmb 01 02 02.4
comp=Z,218nm,1.1s
HLID Hailey 41.01 76 ⇓P **P** **01 01 42.1 -0.5**
BCYI Bear Canyon 41.21 75 P **P** **01 01 44.7 +0.4**
BCYI IAmb IAmb 01 02 03.8
comp=Z,377nm,0.9s
BLKN Baker Lake 41.31 40 P **P** **01 01 43.2 -1.4**
EGMT Eagleton 41.43 68 P **P** **01 01 45.6 -0.3**
EGMT IAmb IAmb 01 02 03.0
comp=Z,368nm,0.9s
EGMT IAMs_20 IAMs_20 01 16 44.9
comp=Z,27µm,21.0s
EGMT Eagleton 41.43 68 ⇑P **P** **01 01 46.0 +0.1**
NVAR Mina Array Bea 41.57 85 P **P** **01 01 47.5 +0.2**
comp=Z,23nm,0.9s,baz=293,slow=8.2,SNR=77
NVAR PcP **PcP** **01 03 44.7 +0.6**
comp=Z,21nm,0.7s,baz=282,slow=2.8,SNR=5.1
NVAR ScP **ScP** **01 07 31.7 +0.2**
comp=Z,8.6nm,1.0s,baz=281,slow=4.0,SNR=6.6
NVAR PKiKP **PKiKP** **01 10 50.6 -0.2**
comp=Z,0.3nm,0.3s,baz=309,slow=2.4,SNR=7.5
NVAR LR LR 01 16 09.6
comp=Z,13µm,21.3s,baz=298,slow=32
comp=Z,23nm,0.9s
BOZ Bozeman (W) 41.58 72 P **P** **01 01 47.3 +0.1**
BOZ IAmb IAmb 01 02 04.2
comp=Z,353nm,1.0s
BOZ Bozeman (W) 41.58 72 P **P** **01 01 47.3 +0.1**
BOZ pmax pmax
comp=Z,353nm,1.0s
BOZ MLR MLR
comp=Z,18µm,18.0s
BOZ Bozeman (W) 41.58 72 ⇑P **P** **01 01 47.6 +0.4**
KSRS Korea Array 41.62 273 P **P** **01 01 47.9 +0.5**
comp=Z,122nm,0.9s,baz=58,slow=7.6,SNR=71
KSRS LR LR 01 18 29.0
comp=Z,6369µm,21.3s,baz=55,slow=35
comp=Z,122nm,0.9s
KS19 Wonju Array Si 41.62 273 P **P** **01 01 48.5 +1.0**
KS19 IAmb IAmb 01 01 56.1
comp=Z,234nm,0.9s
KSAR Wonju Array Be 41.65 273 P **P** **01 01 48.4 +0.8**
KSAR Wonju Array Be 41.65 273 P **P** **01 01 48.4 +0.8**
NV11 Mina Array Sit 41.66 85 P **P** **01 01 48.3 +0.3**
SNY Shenyang 41.71 281 ⇑P **P** **01 01 49.0 +0.9**
SNY PP **PP** **01 03 26.8 +2.1**
SNY S **S** **01 08 02.8 +0.1**
SNY pmax pmax
comp=Z,440nm,1.0s
SNY pmax pmax
comp=Z,7µm,3.2s
SNY LR LR
comp=Z,16µm,19.4s
SNY LR LR
comp=Z,9µm,21.8s
SNY LR LR
comp=Z,27µm,27.1s
PYAG Pyongyang 41.99 277 P **P** **01 01 51.3 +0.9**
PYAG AmB
comp=Z,7µm,2.6s
PYAG AMS AMS
comp=Z,13µm,19.6s
ELK Elko 42.10 80 LR LR 01 18 15.3
comp=Z,23µm,19.0s,baz=312,slow=35
ELK Elko 42.10 80 P **P** **01 01 52.0 +0.4**
ELK IAMs_20 IAMs_20 01 20 14.3
comp=Z,32µm,18.0s
ELK Elko 42.10 80 P **P** **01 01 52.0 +0.4**
ELK pmax pmax
comp=Z,78nm,0.8s
ELK MLR MLR
comp=Z,32µm,18.0s
ELK Elko 42.10 80 ⇑P **P** **01 01 52.4 +0.8**
CIT Chita 42.24 300 *eP* **P** **01 01 52.8 +0.4**
CIT *e* 01 02 03.2
CIT *e* 01 03 48.0
CIT *e* 01 08 03.6
CIT *e* 01 12 04.2
CIT pmax pmax
comp=Z,386nm,3.0s
YHL Hebgen Lake 42.25 73 P **P** **01 01 53.2 +0.3**
YHL IAmb IAmb 01 02 22.7
comp=Z,569nm,1.1s
INCN Inchon 42.40 274 P **P** **01 01 54.3 +0.4**
INCN IAmb IAmb 01 02 15.0
comp=Z,992nm,1.6s
INCN Inchon 42.40 274 P **P** **01 01 55.4 +1.6**
INCN S **S** **01 08 07.8 -5.3**
INCN Inchon 42.40 274 P **P** **01 01 54.3 +0.4**
INCN Inchon 42.40 274 P **P** **01 01 54.3 +0.4**
INCN pmax pmax
comp=Z,992nm,1.7s
INCN Inchon 42.40 274 ⇑P **P** **01 01 54.8 +0.9**
TIN Tinemaha, Big 42.47 87 P **P** **01 01 54.9 +0.4**
TIN IAmb IAmb 01 02 10.2
comp=Z,322nm,0.9s
TIN IAMs_20 IAMs_20 01 15 46.7
comp=Z,30µm,21.0s
TIN Tinemaha, Big 42.47 87 P **P** **01 01 54.9 +0.4**
TIN pmax pmax
comp=Z,322nm,0.9s
FFC Flin Flon 42.48 56 P **P** **01 01 53.6 -0.7**
FFC Flin Flon 42.48 56 P **P** **01 01 53.6 -0.7**
FFC pmax pmax
comp=Z,81nm,0.9s
FFC MLR MLR
comp=Z,20µm,21.0s
FFC Flin Flon 42.48 56 ⇑P **P** **01 01 53.5 -0.7**
JNU Nakatsue 42.55 266 LR LR 01 18 23.2
comp=Z,31µm,21.8s,baz=64,slow=34
JNU Nakatsue 42.55 266 P **P** **01 01 55.7 +0.6**
JNU IAmb IAmb 01 01 59.1
comp=Z,235nm,0.9s
JNU Nakatsue 42.55 266 P **P** **01 01 55.7 +0.6**
JNU Nakatsue 42.55 266 ⇑P **P** **01 01 56.2 +1.1**
JTU Tsushima 42.55 269 P **P** **01 01 55.9 +0.9**
JTU Tsushima 42.55 269 ⇑P **P** **01 01 55.0 0.0**
HJU Haeju 42.62 275 P **P** **01 01 56.1 +0.5**
HJU S **S** **01 08 16.9 +0.6**
HJU AmB
comp=Z,11µm,3.3s
HJU AMS AMS
comp=Z,6µm,9.8s
TJN Taejon 42.64 272 P **P** **01 01 56.2 +0.5**
TJN Taejon 42.64 272 P **P** **01 01 56.2 +0.5**
TJN Taejon 42.64 272 *c iP* **P** **01 01 55.5 -0.2**
CWC Cottonwood Cre 42.94 87 IAMs_20 IAMs_20 01 15 46.3
comp=Z,29µm,21.0s
HVU Hansel Valley 43.01 77 P **P** **01 01 59.1 +0.2**
HVU Hansel Valley 43.01 77 P **P** **01 01 59.1 +0.2**
HVU pmax pmax
comp=Z,170nm,0.8s
RLMT Red Lodge 43.24 71 P **P** **01 02 01.1 +0.3**
RLMT Red Lodge 43.24 71 ⇑P **P** **01 02 01.6 +0.8**

SNOW Snow King Moun 43.27 74 IAMs_20 IAMs_20 01 16 50.1
comp=Z,29µm,22.0s
AHID Auburn Hatcher 43.46 75 IAMs_20 IAMs_20 01 17 06.2
comp=Z,35µm,22.0s
OSI Osito Audit: C 43.71 90 IAMs_20 IAMs_20 01 15 38.0
comp=Z,29µm,21.0s
TPNV Topopah Spring 43.77 85 IAMs_20 IAMs_20 01 16 58.8
comp=Z,34µm,21.0s
TPNV Topopah Spring 43.77 85 ⇑P **P** **01 02 05.7 +0.7**
HWUT Hardware Ranch 43.85 77 P **P** **01 02 05.3 -0.4**
HWUT Hardware Ranch 43.85 77 ⇑P **P** **01 02 06.2 +0.5**
DUG Dugway, Tooele 43.91 79 ⇑P **P** **01 02 07.0 +0.8**
POIN Pond Inlet 44.01 25 P **P** **01 02 05.8 -0.5**
PRN Pahroc Range 44.23 84 ⇑P **P** **01 02 09.4 +0.7**
TULEG Thule 44.29 19 P **P** **01 02 08.6 +0.1**
TULEG IAmb IAmb 01 02 10.8
comp=Z,262nm,1.5s
TULEG Thule 44.29 19 *i* P **P** **01 02 07.7 -0.8**
TULEG IAmb IAmb 01 02 10.4
comp=Z,202nm,1.4s
PASC Pasadena Art C 44.34 90 IAMs_20 IAMs_20 01 16 28.6
comp=Z,29µm,21.0s
DGMT Dagmar 44.38 64 IAMs_20 IAMs_20 01 19 07.7
comp=Z,36µm,21.0s
DGMT Dagmar 44.38 64 ⇓P **P** **01 02 08.7 -1.0**
MWC Mount Wilson 44.38 90 IAMs_20 IAMs_20 01 16 30.8
comp=Z,30µm,20.0s
ILON Igloolik, Nuna 44.39 30 P **P** **01 02 08.3 -1.1**
BW06 Boulder Array 44.39 74 IAMs_20 IAMs_20 01 17 48.6
comp=Z,27µm,21.0s
BW06 Boulder Array 44.39 74 ⇑P **P** **01 02 10.4 +0.3**
PD31 Pinedale Array 44.39 74 P **P** **01 02 10.0 -0.1**
PDAR Pinedale Array 44.39 74 P **P** **01 02 09.6 -0.6**
comp=Z,70nm,0.6s,baz=305,slow=4.1,SNR=740
PDAR PcP **PcP** **01 03 53.6 +0.1**
comp=Z,24nm,0.8s,baz=133,slow=1.4,SNR=1.2
PDAR ScP **ScP** **01 07 43.0 +0.2**
comp=Z,2.7nm,0.9s,baz=291,slow=5.0,SNR=1.9
PDAR LR LR 01 18 10.9
comp=Z,16µm,21.8s,baz=298,slow=33
comp=Z,70nm,0.6s
PDAR Pinedale Array 44.39 74 P **P** **01 02 10.4 +0.3**
BFSC Mount Baldy Ra 44.62 89 IAMs_20 IAMs_20 01 16 29.1
comp=Z,31µm,22.0s
DL2 Dalian 44.64 279 P **P** **01 02 11.8 0.0**
DL2 PP **PcP** **01 03 54.0 0.0**
DL2 S **S** **01 08 45.9 +0.2**
DL2 pmax pmax
comp=Z,710nm,1.2s
DL2 pmax pmax
comp=Z,8µm,5.9s
DL2 LR LR
comp=Z,18µm,21.4s
DL2 LR LR
comp=Z,14µm,17.6s
DL2 LR LR
comp=Z,21µm,20.2s
XLT XiLinHaoTe 45.06 288 *e*P **P** **01 02 15.5 +0.2**
XLT sP pwP 01 02 33.4 +4.9
XLT PcP **PcP** **01 03 55.3 -0.3**
XLT PcS **PcS** **01 07 47.3 -2.0**
XLT S **S** **01 08 50.0 -1.9**
XLT ScS **ScS** **01 12 09.8 +0.3**
XLT pmax pmax
comp=Z,190nm,1.4s
XLT pmax pmax
comp=Z,6µm,11.0s
XLT LR LR
comp=Z,3µm,18.4s
XLT LR LR
comp=Z,25µm,18.6s
XLT LR LR
comp=Z,33µm,20.0s
PFO Pinyon Flats O 45.78 89 LR LR 01 17 26.7
comp=Z,35µm,21.9s,baz=294,slow=31
PFO Pinyon Flats O 45.78 89 P **P** **01 02 20.7 -0.4**
PFO Pinyon Flats O 45.78 89 IAMs_20 IAMs_20 01 17 36.0
comp=Z,30µm,20.0s
PFO Pinyon Flats O 45.78 89*c i* P **P** **01 02 21.1 0.0**
PFO pmax pmax
comp=Z,68nm,1.4s
CPE Camp Elliot 45.86 90 P **P** **01 02 21.5 -0.1**
CPE IAmb IAmb 01 02 38.1
comp=Z,338nm,1.6s
BAR Barrett 46.27 90 IAMs_20 IAMs_20 01 16 58.8
comp=Z,22µm,20.0s
BC3 Big Chuckawall 46.38 88 IAMs_20 IAMs_20 01 17 59.4
comp=Z,24µm,20.0s
CBX Cerro Bola 46.52 91 P **P** **01 02 26.6 -0.3**
CBX IAmb IAmb 01 02 42.2
comp=Z,237nm,1.2s
NOR Nord 46.72 4 ⇑P **P** **01 02 27.2 -0.5**
NOR Nord 46.72 4 *i* P **P** **01 02 26.3 -1.4**
NOR IAmb IAmb 01 02 29.8
comp=Z,180nm,1.2s
NEEM North Greenlan 46.89 14 *i* P **P** **01 02 28.3 -1.2**
NEEM IAmb IAmb 01 02 31.7
comp=Z,227nm,0.8s
RSSD Black Hills 46.89 69 P **P** **01 02 29.4 -0.4**
RSSD IAmb IAmb 01 02 48.3
comp=Z,174nm,1.2s
RSSD Black Hills 46.89 69 P **P** **01 02 29.4 -0.4**
RSSD pmax pmax
comp=Z,174nm,1.3s
IRK Irkutsk 47.05 304 *e*P **P** **01 02 29.9 -0.8**
IRK *e* 01 04 03.5
IRK *e* 01 12 23.1
IRK pmax pmax
comp=Z,332nm,2.2s
GLA Glamis 47.18 88 IAMs_20 IAMs_20 01 18 20.4
comp=Z,27µm,20.0s
BJI Beijing 47.29 284 P **P** **01 02 33.6 +0.9**
BJI PP **PP** **01 04 22.4 -1.4**
BJI S **S** **01 09 19.3 -4.4**
BJI pmax pmax
comp=Z,250nm,1.0s
BJI pmax pmax
comp=Z,4µm,9.6s
BJI LR LR
comp=Z,16µm,19.9s
BJI LR LR
comp=Z,9µm,21.0s
BJI LR LR
comp=Z,25µm,21.9s
MDND Maddock 47.29 63 IAMs_20 IAMs_20 01 21 22.7
comp=Z,38µm,21.0s
BJT Baijiatuau 47.31 284 **P** **01 02 33.5 +0.7**
BJT Baijiatuau 47.31 284 P **P** **01 02 33.3 +0.5**
BJT Baijiatuau 47.31 284 P **P** **01 02 33.5 +0.7**
BJT pmax pmax
comp=Z,410nm,0.9s
BJT MLR MLR
comp=Z,44µm,21.0s
E28A Huff 47.40 65 IAMs_20 IAMs_20 01 20 41.8
comp=Z,33µm,22.0s
JMZ Minamidaito 2 47.45 258 P **P** **01 02 34.6 +0.5**
JMZ Minamidaito 2 47.45 258 P **P** **01 02 34.6 +0.5**
TLY Talaya 47.69 304 P **P** **01 02 35.8 +0.2**
TLY IAmb IAmb 01 04 08.3
comp=Z,176nm,1.1s
TLY Talaya 47.69 304 P **P** **01 02 33.2 -2.4**
TLY P **P** **01 02 33.2 -2.4**
TLY Talaya 47.69 304*ce*P **P** **01 02 34.1 -1.6**
TLY pmax pmax
comp=Z,213nm,1.7s
TLY MLR MLR
comp=Z,20µm,18.0s
TLY Talaya 47.69 304 ⇑P **P** **01 02 34.7 -1.0**
WUAZ Wupatki 47.72 83 P **P** **01 02 36.3 0.0**
WUAZ IAmb IAmb 01 02 48.0
comp=Z,126nm,0.8s
WUAZ IAMs_20 IAMs_20 01 19 55.2
comp=Z,22µm,20.0s
WUAZ Wupatki 47.72 83 ⇑P **P** **01 02 35.9 -0.4**
KULLO Kullorsuaq 47.79 19 *i* P **P** **01 02 34.2 -1.8**
ULM Lac du Bonnet 47.98 58 P **P** **01 02 37.2 -0.7**
comp=Z,103nm,0.7s,baz=302,slow=7.4,SNR=47
ULM S **S** **01 09 35.0 +1.7**
comp=Z,7.8nm,1.0s,baz=251,slow=14,SNR=5.1
ULM LR LR 01 24 29.1
comp=Z,22µm,18.3s,baz=314,slow=38
comp=Z,103nm,0.7s
ULM Lac du Bonnet 47.98 58 P **P** **01 02 37.0 -0.9**
ULM IAmb IAmb 01 02 54.2
comp=Z,302nm,1.0s
ULN Ulaanbaatar 47.99 298 P **P** **01 02 38.2 0.0**
ULN IAmb IAmb 01 04 09.0
comp=Z,261nm,1.4s
ULN Ulaanbaatar 47.99 298 IAMs_20 IAMs_20 01 24 22.8
comp=Z,29µm,19.0s
ULN Ulaanbaatar 47.99 298 P **P** **01 02 35.2 -3.1**
ULN P **P** **01 02 35.2 -3.1**
ULN S **S** **01 09 26.9 -7.0**
ULN S **S** **01 09 26.9 -7.0**
ULN Ulaanbaatar 47.99 298*ce*P **P** **01 02 37.5 -0.8**
ULN pmax pmax
comp=Z,163nm,1.7s
ULN Ulaanbaatar 47.99 298 ⇑P **P** **01 02 37.7 -0.5**
SONM Songino Array 48.38 298 P **P** **01 02 40.7 -0.4**
comp=Z,125nm,1.2s,baz=56,slow=7.5,SNR=97
SONM PcP **PcP** **01 04 07.6 +0.3**
comp=Z,74nm,0.9s,baz=63,slow=2.8,SNR=13
SONM ScP **ScP** **01 07 59.2 0.0**
comp=Z,11nm,0.9s,baz=48,slow=3.9,SNR=5.5
SONM LR LR 01 24 48.8
comp=Z,34µm,19.3s,baz=59,slow=38
SONM P4KPbc 01 40 21.7
comp=Z,1.0nm,0.7s,baz=61,slow=3.5,SNR=5.8
comp=Z,125nm,1.2s
MVCO Mesa Verde 48.41 80 IAMs_20 IAMs_20 01 20 08.6
comp=Z,23µm,22.0s
MVCO Mesa Verde 48.41 80 ⇑P **P** **01 02 41.7 0.0**
JOW Kunigami 48.54 262 LR LR 01 21 58.4
comp=Z,5µm,21.3s,baz=43,slow=35
JOW Kunigami 48.54 262 P **P** **01 02 42.7 +0.2**
JOW IAmb IAmb 01 02 46.0
comp=Z,224nm,0.9s
JOW Kunigami 48.54 262 P **P** **01 02 43.0 +0.5**
JOW Kunigami 48.54 262 ⇑P **P** **01 02 43.0 +0.5**
ISCO Idaho Springs 48.55 75 P **P** **01 02 42.7 -0.1**
ISCO IAmb IAmb 01 03 03.4
comp=Z,174nm,1.1s
ISCO IAMs_20 IAMs_20 01 22 27.1
comp=Z,30µm,20.0s
ISCO Idaho Springs 48.55 75 P **P** **01 02 42.7 -0.1**
ISCO pmax pmax
comp=Z,174nm,1.1s
ISCO MLR MLR
comp=Z,30µm,20.0s
ZAK Zakamensk 48.60 303 *e*P **P** **01 02 42.3 -0.5**
ZAK pmax pmax
comp=Z,339nm,1.5s
MOY Mondy 49.06 305 *e*P **P** **01 02 45.4 -1.0**
MOY *e* 01 04 10.8
MOY pmax pmax
comp=Z,312nm,1.8s
AGMN Agassiz Nation 49.09 60 IAMs_20 IAMs_20 01 25 49.3
comp=Z,28µm,18.0s
AGMN Agassiz Nation 49.09 60 ⇑P **P** **01 02 46.0 -0.5**
TIA Tai'an 49.11 279 P **P** **01 02 47.3 +0.5**
TIA PP **PP** **01 04 42.5 +2.1**
TIA S **S** **01 09 48.8 -0.8**
TIA pmax pmax
comp=Z,87nm,0.8s
TIA pmax pmax
comp=Z,8µm,4.3s
TIA LR LR
comp=Z,14µm,19.8s
TIA LR LR
comp=Z,18µm,20.8s
TIA LR LR
comp=Z,34µm,20.0s
UPNV Upernavik 49.25 20 *i* P **P** **01 02 46.7 -0.6**
UPNV IAmb IAmb 01 02 49.0
comp=Z,169nm,0.9s
GUMO Guam 49.33 235 LR LR 01 21 17.7
comp=Z,7µm,21.1s,baz=50,slow=33
Q24A Divide 49.35 76 P **P** **01 02 48.8 -0.2**
HHC Hu-ho-hao-te 49.57 288 *e*P **P** **01 02 51.1 +0.8**
HHC sP sP 01 02 59.3 -3.0
HHC PP **PP** **01 04 45.5 +1.0**
HHC S **S** **01 09 57.0 +0.9**
HHC sS sS 01 10 08.3 -1.9
HHC pmax pmax
comp=Z,310nm,1.6s
HHC LR LR
comp=Z,21µm,18.3s
HHC LR LR
comp=Z,18µm,18.3s
HHC LR LR
comp=Z,34µm,18.3s
SUSD Miller 49.64 66 IAMs_20 IAMs_20 01 21 13.1
comp=Z,32µm,22.0s
KBS Kingsbay 49.81 358 P **P** **01 02 51.7 +0.1**
KBS IAmb IAmb 01 02 57.9
comp=Z,118nm,0.8s
KBS Kingsbay 49.81 358 *e*P **P** **01 02 51.6 +0.1**
KBS IVmB_BB 01 04 53.8
comp=Z,2µm,4.0s
KBS *e*S **S** **01 10 01.4 +3.1**
KBS IVMs_BB IVMs_BB 01 23 59.9
comp=Z,13µm,19.2s
KBS Kingsbay 49.81 358*ce*P **P** **01 02 51.7 +0.1**
KBS pmax pmax
comp=Z,147nm,1.0s
KBS Kingsbay 49.81 358 ⇑P **P** **01 02 51.7 +0.1**
KBS Kingsbay 49.81 358 *i* P **P** **01 02 50.2 -1.4**
HNS HongShan 49.84 282 ⇑P **P** **01 02 53.5 +1.2**
HNS PP **PP** **01 04 50.0 +3.1**
HNS S **S** **01 09 58.1 -1.5**
HNS ScS **ScS** **01 12 42.9 +1.9**
HNS pmax pmax
comp=Z,660nm,0.9s
HNS pmax pmax
comp=Z,10µm,6.9s
HNS LR LR
comp=Z,20µm,18.4s
HNS LR LR
comp=Z,9µm,17.1s
HNS LR LR
comp=Z,26µm,23.5s
SDCO Great Sand Dun 49.91 77 ⇑P **P** **01 02 53.7 +0.5**
SSE Sheshan 49.98 271 P **P** **01 02 54.3 +0.9**
SSE PP **PP** **01 04 50.0 +1.7**
SSE S **S** **01 09 58.3 -3.5**
SSE pmax pmax
comp=Z,31nm,0.7s
SSE pmax pmax
comp=Z,4µm,4.2s
OGNE Ogallala 49.98 72 P **P** **01 02 53.7 +0.2**
OGNE Ogallala 49.98 72 ⇑P **P** **01 02 54.1 +0.6**
TUC Tucson 50.20 86 P **P** **01 02 55.4 +0.1**
TUC IAmb IAmb 01 03 06.0
comp=Z,135nm,1.1s
TUC Tucson 50.20 86 P **P** **01 02 55.4 +0.1**
TUC pmax pmax
comp=Z,135nm,1.2s
TUC Tucson 50.20 86 ⇑P **P** **01 02 55.5 +0.3**
F33A 5 Mile Ranch, 50.31 63 IAMs_20 IAMs_20 01 23 03.6
comp=Z,34µm,21.0s
K30B Basset 50.34 68 IAMs_20 IAMs_20 01 23 40.7
comp=Z,19µm,20.0s
SPA0 Spitsbergen Ar 50.43 357 *e*P **P** **01 02 55.1 -1.2**
SPA0 IVmB_BB 01 03 05.6
comp=Z,3µm,7.9s
SPA0 *e*S **S** **01 10 05.7 -1.4**
SPA0 IVMs_BB IVMs_BB 01 24 52.4
comp=Z,14µm,19.2s
SPITS Spitsbergen Ar 50.43 357 P **P** **01 02 55.1 -1.2**
comp=Z,27nm,0.6s,baz=47,slow=6.2,SNR=54
SPITS ScP **ScP** **01 08 08.4 +1.0**
comp=Z,30nm,1.2s,baz=69,slow=4.8,SNR=3.9
SPITS LR LR 01 24 55.4
comp=Z,41µm,19.7s,baz=2.0,slow=37
comp=Z,27nm,0.6s
BTO Baotou 50.63 289 *e*P **P** **01 02 59.3 +0.9**
BTO S **S** **01 10 14.1 +3.1**
BTO pmax pmax
comp=Z,84nm,1.0s
BTO pmax pmax
comp=Z,19µm,4.3s
BTO LR LR
comp=Z,55µm,17.4s
BTO LR LR
comp=Z,58µm,20.7s
BTO LR LR
comp=Z,63µm,19.4s
NJ2 Nanjing 50.79 274 ⇑P **P** **01 02 59.5 0.0**
NJ2 pP **sP** **01 03 09.8 -1.8**
NJ2 sP **pwP** **01 03 18.3 +5.7**
NJ2 PP **PP** **01 04 53.9 -1.8**
NJ2 PcS **PcS** **01 08 16.4 +2.8**
NJ2 S **S** **01 10 11.0 -2.0**
NJ2 pmax pmax
comp=Z,67nm,0.9s
NJ2 pmax pmax
comp=Z,7µm,5.4s
NJ2 LR LR
comp=Z,10µm,15.9s
NJ2 LR LR
comp=Z,12µm,20.6s
NJ2 LR LR
comp=Z,18µm,23.4s
TARA Tarawa 50.84 195 IAMs_20 IAMs_20 01 19 46.5
comp=Z,24µm,20.0s
TARA Tarawa 50.84 195 P **P** **01 03 00.6 +0.6**
KSCO Kaye Shedlock' 50.84 74 IAMs_20 IAMs_20 01 22 42.3
comp=Z,21µm,20.0s
TIY Taiyuan 51.02 284 *e*P **P** **01 03 02.8 +1.5**
TIY S **S** **01 10 16.6 +0.3**
TIY pmax pmax
comp=Z,1µm,1.1s
TIY pmax pmax
comp=Z,8µm,5.7s
TIY LR LR
comp=Z,14µm,22.7s
TIY LR LR
comp=Z,22µm,20.6s
TIY LR LR
comp=Z,28µm,25.4s
ANMO Albuquerque 51.13 80 LR LR 01 22 24.6
comp=Z,17µm,21.9s,baz=43,slow=33
ANMO Albuquerque 51.13 80 P **P** **01 03 02.3 -0.1**
ANMO Albuquerque 51.13 80 IAMs_20 IAMs_20 01 26 05.5
comp=Z,23µm,18.0s
ANMO Albuquerque 51.13 80*ce*P **P** **01 03 01.2 -1.2**
ANMO pmax pmax
comp=Z,67nm,1.7s
ANMO Albuquerque 51.13 80 ⇑P **P** **01 03 02.6 +0.2**
DAG Danmarks Havn 51.22 7 ⇑P **P** **01 03 00.9 -1.2**
DAG Danmarks Havn 51.22 7 *i* P **P** **01 03 00.1 -2.1**
DAG IAmb IAmb 01 03 03.5
comp=Z,199nm,1.1s
ECSD EROS Data Cent 51.41 66 P **P** **01 03 03.2 -0.9**
ECSD IAmb IAmb 01 03 22.3
comp=Z,217nm,1.1s
ECSD EROS Data Cent 51.41 66 IAMs_20 IAMs_20 01 22 29.9
comp=Z,35µm,22.0s
ECSD EROS Data Cent 51.41 66 ⇑P **P** **01 03 03.1 -0.9**
XMAS Kiritimati 51.55 157 IAMs_20 IAMs_20 01 21 54.2
comp=Z,30µm,20.0s
XMAS Kiritimati 51.55 157 P **P** **01 03 06.2 +0.8**
HSPB Hornsund (broa 51.63 357 *e*P **P** **01 03 06.3 +1.1**
HSPB *e*S S 01 10 54.1 +31
HOPEN Hopen 51.63 354 *e*P **P** **01 03 04.2 -1.1**
HOPEN IVmB_BB 01 03 15.5
comp=Z,3µm,6.5s
HOPEN *e*S **S** **01 10 22.6 -1.0**
HOPEN IVMs_BB IVMs_BB 01 26 08.3
comp=Z,8µm,19.1s
EYMN Ely 51.66 59 IAMs_20 IAMs_20 01 26 20.0
comp=Z,22µm,19.0s
EYMN Ely 51.66 59 ⇑P **P** **01 03 05.3 -0.6**
JMJ Miyako jima 2 51.84 262 P **P** **01 03 08.9 +1.4**
FRB Frobisher Bay 51.92 33 ⇑P **P** **01 03 06.5 -1.0**
BGNE Belgrade 51.98 69 IAMs_20 IAMs_20 01 27 20.1
comp=Z,19µm,20.0s
HSIG 52.35 89 P **P** **01 03 10.8 -0.5**
HSIG IAmb IAmb 01 03 25.9
comp=Z,267nm,1.6s
HSIG 52.35 89 ⇑P **P** **01 03 11.2 -0.1**
E38A The Farm, Brul 52.45 60 IAMs_20 IAMs_20 01 26 19.0
comp=Z,22µm,19.0s
SPMN Marine on St. 52.62 62 IAMs_20 IAMs_20 01 24 46.8
comp=Z,30µm,21.0s
L34A Svendsen Farm, 52.66 67 IAMs_20 IAMs_20 01 25 22.9
comp=Z,24µm,21.0s
CBKS Cedar Bluff 52.70 72 ⇑P **P** **01 03 14.1 +0.3**
SRIG Santa Rosalia 52.74 92 P **P** **01 03 14.0 -0.1**
SRIG IAmb IAmb 01 03 41.9
comp=Z,167nm,1.2s
SUMG Summit 52.74 15 P **P** **01 03 12.9 -1.2**
SUMG S **S** **01 10 38.2 -1.4**
SUMG Summit 52.74 15 P **P** **01 03 13.6 -0.5**
SUMG IAmb IAmb 01 03 16.4
comp=Z,278nm,1.2s
SUMG Summit 52.74 15 P **P** **01 03 13.6 -0.5**
SUMG pmax pmax
comp=Z,278nm,1.2s
SUMG MLR MLR
comp=Z,16µm,21.0s
SUMG Summit 52.74 15 ⇑P **P** **01 03 13.4 -0.6**
SUMG Summit 52.74 15 *i* P **P** **01 03 12.7 -1.3**
SUMG IAmb IAmb 01 03 16.1
comp=Z,266nm,1.2s
ILULI Ilulissat 52.99 22 P **P** **01 03 14.9 -0.5**
ILULI IAMs_20 IAMs_20 01 25 47.6
comp=Z,19µm,22.0s
ILULI Ilulissat 52.99 22 P **P** **01 03 14.9 -0.5**
ILULI pmax pmax
comp=Z,92nm,0.9s
ILULI MLR MLR
comp=Z,19µm,22.0s
LYN LuoYang 53.07 281 ⇑P **P** **01 03 17.3 +0.8**
LYN sP pwP 01 03 32.9 +3.2
LYN PP **PP** **01 05 22.0 +5.7**
LYN S **S** **01 10 41.8 -2.5**
LYN sS sS 01 11 03.5 +4.8
LYN pmax pmax
comp=Z,1µm,1.0s
LYN pmax pmax
comp=Z,8µm,4.7s
LYN LR LR
comp=Z,22µm,19.2s
LYN LR LR
comp=Z,33µm,19.5s
LYN LR LR
comp=Z,27µm,20.2s
DBG Daneborg 53.44 8 ⇑P **P** **01 03 17.1 -1.7**
DBG Daneborg 53.44 8 *i* P **P** **01 03 17.0 -1.7**
DBG IAmb IAmb 01 03 19.6
comp=Z,125nm,1.0s
YOJ Yonaguni jima 53.52 264 P **P** **01 03 19.3 -0.6**
YOJ IAmb IAmb 01 03 21.6
comp=Z,191nm,0.9s
YOJ Yonaguni jima 53.52 264 P **P** **01 03 19.4 -0.6**
YOJ Yonaguni jima 53.52 264 P **P** **01 03 19.3 -0.6**
YOJ pmax pmax
comp=Z,191nm,0.9s
YOJ Yonaguni jima 53.52 264 ⇑P **P** **01 03 19.1 -0.8**
N35A Tabor 53.79 68 IAMs_20 IAMs_20 01 28 47.8
comp=Z,25µm,18.0s
BJO1 Bjornoya 53.95 355 *e*P **P** **01 03 21.5 -0.9**
MNTX Cornudas Mount 53.98 83 P **P** **01 03 23.3 +0.1**
MNTX IAmb IAmb 01 03 43.2
comp=Z,96nm,0.8s
MNTX Cornudas Mount 53.98 83 ⇑P **P** **01 03 23.7 +0.4**
G40A Rib Lake 54.02 60 IAMs_20 IAMs_20 01 28 57.7
comp=Z,19µm,18.0s
MSTX Muleshoe 54.05 79 P **P** **01 03 23.4 -0.4**
TATO Taipei 54.09 266 IAMs_20 IAMs_20 01 24 20.1
comp=Z,26µm,22.0s
TATO Taipei 54.09 266 P **P** **01 03 22.8 -1.3**
AMTX Amarillo 54.11 77 ⇑P **P** **01 03 24.4 +0.2**
KSU1 Kansas State U 54.36 70 IAMs_20 IAMs_20 01 29 00.2
comp=Z,17µm,20.0s
KSU1 Kansas State U 54.36 70 ⇑P **P** **01 03 25.3 -0.6**
YHNB Yeheng 54.39 266 P **P** **01 03 26.3 0.0**
YHNB IAMs_20 IAMs_20 01 24 18.0
comp=Z,19µm,22.0s
YHNB Yeheng 54.39 266 P **P** **01 03 25.9 -0.5**
SCIA State Center 54.50 65 ⇑P **P** **01 03 26.7 -0.2**
NACB Ninganchiao 54.61 265 P **P** **01 03 26.6 -1.2**
NACB IAmb IAmb 01 03 32.8
comp=Z,266nm,1.3s
NACB Ninganchiao 54.61 265 P **P** **01 03 26.0 -1.9**
WHN Wuhan 54.62 276 ⇑P **P** **01 03 27.8 -0.1**
WHN sP pwP 01 03 43.8 +2.8
WHN S **S** **01 11 06.3 +0.9**
WHN sS **sS** **01 11 25.5 +5.6**
WHN pmax pmax
comp=Z,2µm,1.4s
WHN LR LR
comp=Z,28µm,15.3s
WHN LR LR
comp=Z,7µm,12.4s

WHN					LR	LR				
	comp=Z,41µm,17.9s									
I40A	**Norwalk**	**54.68**	**62**		IAMs_20	IAMs_20	01 26 02.0			
	comp=Z,29µm,20.0s									
ELIS	**Ellis County**	**54.69**	**75**		P	**P**	**01 03 28.3**	**-0.1**		
SFJD	**Kangerlussuaq**	**54.82**	**23**		LR	LR	01 29 40.0			
	comp=Z,24µm,20.2s,baz=320,slow=39									
SFJD	**Kangerlussuaq**	**54.82**	**23**		P	**P**	**01 03 28.1**	**-0.7**		
SFJD					IAmb	IAmb	01 04 33.2			
	comp=Z,146nm,1.1s									
SFJD	**Kangerlussuaq**	**54.82**	**23**		IAMs_20	IAMs_20	01 29 08.1			
	comp=Z,23µm,20.0s									
SFJD	**Kangerlussuaq**	**54.82**	**23**		P	**P**	**01 03 28.1**	**-0.7**		
SFJD					pmax	pmax				
	comp=Z,146nm,1.2s									
SFJD					MLR	MLR				
	comp=Z,23µm,20.0s									
SFJD	**Kangerlussuaq**	**54.82**	**23**	⇓	P	**P**	**01 03 28.3**	**-0.5**		
SFJD	**Kangerlussuaq**	**54.82**	**23**	*i*	P	**P**	**01 03 28.4**	**-0.5**		
SFJD					IAmb	IAmb	01 03 30.2			
	comp=Z,90nm,1.1s									
F42A	**Maple Grove Fa**	**54.83**	**59**		IAMs_20	IAMs_20	01 28 18.8			
	comp=Z,20µm,19.0s									
N38A	**Joes South For**	**55.22**	**66**		IAMs_20	IAMs_20	01 27 14.6			
	comp=Z,24µm,20.0s									
SSLB	**Suanglung**	**55.29**	**265**		P	**P**	**01 03 32.8**	**-0.1**		
SSLB					IAMs_20	IAMs_20	01 25 44.9			
	comp=Z,18µm,21.0s									
SSLB	**Suanglung**	**55.29**	**265**		P	**P**	**01 03 32.5**	**-0.4**		
YULB	**Yu-li**	**55.37**	**265**		P	**P**	**01 03 32.8**	**-0.6**		
ZAA0	**Zalesovo Array**	**55.41**	**315**		P	**P**	**01 03 32.4**	**-0.8**		
ZAA0					IAmb	IAmb	01 04 36.3			
	comp=Z,173nm,1.0s									
ZALV	**Zalesovo Beam**	**55.41**	**315**		P	**P**	**01 03 32.5**	**-0.7**		
	comp=Z,8.3nm,0.5s,baz=45,slow=7.7,SNR=30									
ZALV					PcP	**PcP**	**01 04 34.0**	**+0.7**		
	comp=Z,102nm,0.9s,baz=27,slow=4.2,SNR=21									
ZALV					ScP	**ScP**	**01 08 31.2**	**+1.9**		
	comp=Z,6.0nm,0.9s,baz=29,slow=3.3,SNR=3.2									
ZALV					LR	LR	01 29 07.1			
	comp=Z,45µm,19.7s,baz=52,slow=38									
ZALV					PKPPKP	**P'P'df**	**01 33 36.9**	**-6.8**		
	comp=Z,1.7nm,0.9s,baz=189,slow=3.9,SNR=3.8									
ZALV					PKP2bc	**P'P'bc**	**01 33 52.2**	**-5.0**		
	comp=Z,8.3nm,0.5s									
JFWS	**Jewell Farm**	**55.52**	**63**	⇑	P	**P**	**01 03 33.0**	**-1.2**		
L40A	**Anamosa**	**55.53**	**64**		IAMs_20	IAMs_20	01 26 15.7			
	comp=Z,32µm,21.0s									
XAN	**Xi'an**	**55.58**	**283**	⇑	P	**P**	**01 03 35.1**	**+0.2**		
XAN					pP	pP	01 03 43.3	-0.3		
XAN					PP	**PP**	**01 05 40.5**	**+1.6**		
XAN					S	**S**	**01 11 17.1**	**-1.2**		
XAN					SS	**SS**	**01 15 01.9**	**-1.2**		
XAN					pmax	pmax				
	comp=Z,1µm,1.2s									
XAN					pmax	pmax				
	comp=Z,8µm,3.7s									
XAN					LR	LR				
	comp=Z,17µm,18.6s									
XAN					LR	LR				
	comp=Z,25µm,18.6s									
XAN					LR	LR				
	comp=Z,24µm,21.2s									
I42A	**Draeger Farm,**	**55.62**	**61**		IAMs_20	IAMs_20	01 27 20.8			
	comp=Z,29µm,20.0s									
P38A	**Dawn**	**55.81**	**68**		IAMs_20	IAMs_20	01 27 23.5			
	comp=Z,23µm,20.0s									
TPUB	**Ta-pu**	**55.85**	**265**		IAMs_20	IAMs_20	01 25 42.7			
	comp=Z,22µm,22.0s									
TPUB	**Ta-pu**	**55.85**	**265**		P	**P**	**01 03 37.1**	**+0.2**		
H43A	**Windswept, Lux**	**55.86**	**60**		IAMs_20	IAMs_20	01 30 12.2			
	comp=Z,14µm,18.0s									
TWGBT	**Beinan**	**55.92**	**264**		P	**P**	**01 03 38.3**	**+0.9**		
QZH	**Quanzhou**	**55.93**	**268**	⇑	*i* P	**P**	**01 03 37.8**	**+0.4**		
QZH					sP	**pwP**	**01 03 48.4**	**-1.9**		
QZH					PP	**PP**	**01 05 45.3**	**+3.2**		
QZH					S	**S**	**01 11 25.6**	**+2.7**		
QZH					pmax	pmax				
	comp=Z,290nm,1.4s									
QZH					pmax	pmax				
	comp=Z,7µm,6.9s									
QZH					LR	LR				
	comp=Z,6µm,17.5s									
QZH					LR	LR				
	comp=Z,7µm,16.8s									
QZH					LR	LR				
	comp=Z,10µm,22.0s									
OK048	**Pawnee Station**	**55.94**	**73**		IAMs_20	IAMs_20	01 30 46.2			
	comp=Z,15µm,19.0s									
WMOK	**Wichita Mounta**	**55.97**	**75**		P	**P**	**01 03 37.5**	**-0.1**		
WMOK					IAmb	IAmb	01 03 54.5			
	comp=Z,282nm,0.9s									
WMOK	**Wichita Mounta**	**55.97**	**75**		IAMs_20	IAMs_20	01 27 24.0			
	comp=Z,22µm,20.0s									
WMOK	**Wichita Mounta**	**55.97**	**75**		P	**P**	**01 03 37.5**	**-0.1**		
WMOK					pmax	pmax				
	comp=Z,282nm,0.9s									
WMOK					MLR	MLR				
	comp=Z,22µm,20.0s									
WMOK	**Wichita Mounta**	**55.97**	**75**	⇑	P	**P**	**01 03 37.6**	**0.0**		
LPIG	**La Paz**	**56.26**	**93**		LR	LR	01 25 15.8			
	comp=Z,8µm,18.1s,baz=309,slow=33									
TXAR	**Lajitas Array**	**56.68**	**84**		P	**P**	**01 03 42.8**	**-0.1**		
	comp=Z,24nm,0.6s,baz=300,slow=5.3,SNR=378									
TXAR					ScP	**ScP**	**01 08 44.5**	**+9.0**		
	comp=Z,7.3nm,0.8s,baz=324,slow=6.0,SNR=5.0									
TXAR					LR	LR	01 24 55.0			
	comp=Z,14µm,21.8s,baz=307,slow=33									
TXAR					PKPPKP	**P'P'df**	**01 33 35.4**	**-3.4**		
	comp=Z,2.9nm,1.0s,baz=119,slow=4.4,SNR=5.4									
TXAR					PKP2bc	**P'P'bc**	**01 33 47.8**	**-3.5**		
	comp=Z,8.7nm,1.2s,baz=130,slow=2.0,SNR=5.7									
	comp=Z,24nm,0.6s									
TXAR	**Lajitas Array**	**56.68**	**84**		P	**P**	**01 03 42.6**	**-0.2**		
K43A	**Burlington**	**56.72**	**62**		IAMs_20	IAMs_20	01 27 25.0			
	comp=Z,30µm,20.0s									
P40A	**Paris**	**56.73**	**67**		IAMs_20	IAMs_20	01 28 02.7			
	comp=Z,27µm,21.0s									
SLBS	**Sierra La Lagu**	**56.79**	**93**		P	**P**	**01 03 43.3**	**-0.4**		
SLBS					IAmb	IAmb	01 04 09.2			
	comp=Z,351nm,1.6s									
SLBS	**Sierra La Lagu**	**56.79**	**93**	⇑	P	**P**	**01 03 44.0**	**+0.3**		
ABTX	**Abilene, Hawle**	**56.88**	**78**		IAMs_20	IAMs_20	01 27 43.4			
	comp=Z,26µm,19.0s									
SCO	**Scoresbysund**	**56.90**	**10**		P	**P**	**01 03 42.8**	**-0.8**		
SCO					IAmb	IAmb	01 03 45.7			
	comp=Z,115nm,1.0s									
SCO					IAMs_20	IAMs_20	01 28 04.2			
	comp=Z,24µm,21.0s									
SCO	**Scoresbysund**	**56.90**	**10**		P	**P**	**01 03 42.8**	**-0.8**		
SCO					pmax	pmax				
	comp=Z,115nm,1.0s									
SCO					MLR	MLR				
	comp=Z,24µm,21.0s									
SCO	**Scoresbysund**	**56.90**	**10**	⇑	P	**P**	**01 03 43.0**	**-0.6**		
SCO	**Scoresbysund**	**56.90**	**10**	*i*	P	**P**	**01 03 42.0**	**-1.6**		
SCO					IAmb	IAmb	01 03 45.5			
	comp=Z,108nm,1.0s									
I45A	**Fountain**	**56.97**	**59**		IAMs_20	IAMs_20	01 30 33.7			
	comp=Z,19µm,19.0s									
DGZ	**Jazzator, Alta**	**57.03**	**310**	*c*	*i* P	**P**	**01 03 43.8**	**-1.3**		
DGZ					pmax	pmax				
	comp=Z,128nm,1.5s									
HPIG		**57.13**	**87**		P	**P**	**01 03 45.5**	**-0.7**		
HPIG		**57.13**	**87**	⇑	P	**P**	**01 03 45.9**	**-0.2**		
CNSH	**ChangSha**	**57.16**	**275**		P	**P**	**01 03 46.1**	**0.0**		
CNSH					S	**S**	**01 11 38.0**	**-1.2**		
CNSH					LR	LR				
	comp=Z,10µm,17.3s									
CNSH					LR	LR				
	comp=Z,5µm,16.5s									
CNSH					LR	LR				
	comp=Z,10µm,18.4s									
LZH	**Lanzhou**	**57.26**	**288**	⇑	P	**P**	**01 03 47.8**	**+0.9**		
LZH					sP	pwP	01 04 03.0	+2.3		
LZH					PcP	**PcP**	**01 04 43.5**	**+2.5**		
LZH					PP	**PP**	**01 05 57.5**	**+3.6**		
LZH					S	**S**	**01 11 36.5**	**-4.2**		
LZH					ScS	**ScS**	**01 13 34.0**	**+0.2**		
LZH					pmax	pmax				
	comp=Z,520nm,1.3s									
LZH					pmax	pmax				
	comp=Z,8µm,5.0s									
LZH					LR	LR				
	comp=Z,31µm,20.1s									
LZH					LR	LR				
	comp=Z,38µm,19.1s									
LZH					LR	LR				
	comp=Z,65µm,20.3s									
GLMI	**Grayling**	**57.31**	**58**		IAMs_20	IAMs_20	01 29 49.5			
	comp=Z,27µm,20.0s									
GLMI	**Grayling**	**57.31**	**58**	⇑	P	**P**	**01 03 47.0**	**0.0**		
GTA	**Gaotai**	**57.37**	**294**		P	**P**	**01 03 47.0**	**-0.6**		
GTA					pP	pP	01 03 55.6	-0.7		
GTA					PcP	**PcP**	**01 04 43.3**	**+2.0**		
GTA					PcS	**PcS**	**01 08 44.3**	**+1.8**		
GTA					S	**S**	**01 11 39.0**	**-3.0**		
GTA					sS	sS	01 11 55.8	-0.4		
GTA					ScS	**ScS**	**01 13 32.0**	**-2.5**		
GTA					pmax	pmax				
	comp=Z,150nm,1.5s									
GTA					pmax	pmax				
	comp=Z,5µm,10.4s									
GTA					LR	LR				
	comp=Z,28µm,18.9s									
GTA					LR	LR				
	comp=Z,31µm,19.6s									
GTA					LR	LR				
	comp=Z,53µm,20.4s									
VADS	**Vadso**	**57.39**	**350**	*e*	P	**P**	**01 03 45.5**	**-1.7**		
VADS					IVmB_BB		01 03 49.8			
	comp=Z,2µm,10.3s									
VADS				*e*	PP	**PP**	**01 05 56.3**	**+2.2**		
VADS				*e*	S	**S**	**01 11 42.0**	**+0.9**		
VADS					IVMs_BB	IVMs_BB	01 30 20.5			
	comp=Z,14µm,19.1s									
HAMF	**Hammerfest**	**57.42**	**352**	*e*	P	**P**	**01 03 44.5**	**-2.9**		
HAMF					IVmB_BB		01 03 47.2			
	comp=Z,2µm,4.9s									
HAMF				*e*	PP	**PP**	**01 05 54.6**	**+0.2**		
HAMF				*e*	S	**S**	**01 11 38.1**	**-3.5**		
HAMF					IVMs_BB	IVMs_BB	01 26 44.0			
	comp=Z,6µm,22.1s									
LZDM	**Lanzhou Array**	**57.43**	**288**		P	**P**	**01 03 48.4**	**0.0**		
	comp=Z,59nm,0.8s,baz=17,slow=2.0,SNR=48									
LZDM					PcP	**PcP**	**01 04 42.7**	**+0.8**		
	comp=Z,18nm,0.5s,baz=230,slow=2.5,SNR=5.3									
LZDM					LR	LR	01 29 41.2			
	comp=Z,45µm,20.5s,baz=50,slow=37									
	comp=Z,59nm,0.8s									
R40A	**Maddies Statio**	**57.44**	**68**		IAMs_20	IAMs_20	01 28 13.5			
	comp=Z,20µm,21.0s									
U38A	**Gravette**	**57.45**	**71**		IAMs_20	IAMs_20	01 31 32.9			
	comp=Z,23µm,19.0s									
JNW	**Jan Mayen West**	**57.49**	**5**	*e*	P	**P**	**01 03 48.0**	**+0.2**		
JMIC	**Jan Mayen**	**57.52**	**5**		LR	LR	01 30 18.7			
	comp=Z,8µm,18.7s,baz=350,slow=38									
JMIC	**Jan Mayen**	**57.52**	**5**	*e*	P	**P**	**01 03 47.3**	**-0.7**		
JNE	**Jan Mayen East**	**57.53**	**5**	*e*	P	**P**	**01 03 48.9**	**+0.8**		
HHAR	**Hobbs**	**57.82**	**71**		P	**P**	**01 03 49.2**	**-1.5**		
HHAR					IAmb	IAmb	01 04 05.6			
	comp=Z,196nm,1.1s									
ENH	**Enshi**	**57.83**	**279**		P	**P**	**01 03 50.5**	**-0.3**		
ENH	**Enshi**	**57.83**	**279**		P	**P**	**01 03 50.9**	**0.0**		
Z35A	**Perchaven, San**	**57.85**	**76**		IAMs_20	IAMs_20	01 26 03.9			
	comp=Z,25µm,22.0s									
KEV	**Kevo**	**57.98**	**351**		P	**P**	**01 03 51.1**	**-0.2**		
KEV					IAMs_20	IAMs_20	01 30 04.3			
	comp=Z,24µm,20.0s									
KEV	**Kevo**	**57.98**	**351**		P	**P**	**01 03 51.1**	**-0.2**		
KEV					pmax	pmax				
	comp=Z,85nm,1.2s									
KEV					MLR	MLR				
	comp=Z,24µm,20.0s									
KEV	**Kevo**	**57.98**	**351**	⇑	P	**P**	**01 03 49.1**	**-2.2**		
P43A	**Skaggs, Pawnee**	**58.10**	**65**		IAMs_20	IAMs_20	01 27 22.9			
	comp=Z,27µm,21.0s									
CCM	**Cathedral Cave**	**58.19**	**68**		P	**P**	**01 03 51.2**	**-2.1**		
CCM	**Cathedral Cave**	**58.19**	**68**		IAMs_20	IAMs_20	01 28 46.3			
	comp=Z,20µm,20.0s									
CCM	**Cathedral Cave**	**58.19**	**68**		P	**P**	**01 03 51.2**	**-2.1**		
CCM					pmax	pmax				
	comp=Z,491nm,1.3s									
CCM					MLR	MLR				
	comp=Z,20µm,20.0s									
CCM	**Cathedral Cave**	**58.19**	**68**	⇑	P	**P**	**01 03 51.6**	**-1.7**		
J47A	**Sunmer**	**58.27**	**59**		IAMs_20	IAMs_20	01 30 32.9			
	comp=Z,20µm,18.0s									
JCT	**Junction City**	**58.27**	**80**		P	**P**	**01 03 52.3**	**-1.7**		
JCT					IAmb	IAmb	01 04 09.3			
	comp=Z,138nm,0.8s									
JCT					IAMs_20	IAMs_20	01 27 58.3			
	comp=Z,22µm,20.0s									
JCT	**Junction City**	**58.27**	**80**		P	**P**	**01 03 52.3**	**-1.7**		
JCT					pmax	pmax				
	comp=Z,138nm,0.8s									
JCT	**Junction City**	**58.27**	**80**	⇑	P	**P**	**01 03 53.2**	**-0.8**		
L46A	**Eue Claire**	**58.30**	**61**		IAMs_20	IAMs_20	01 28 42.8			
	comp=Z,26µm,20.0s									
ARA0	**ARCESS Array S**	**58.34**	**351**	*e*	P	**P**	**01 03 50.9**	**-3.0**		
ARCES	**ARCESS Array B**	**58.34**	**351**		P	**P**	**01 03 52.8**	**-1.1**		
	comp=Z,14nm,0.6s,baz=14,slow=6.1,SNR=43									
ARCES					PcP	**PcP**	**01 04 44.5**	**0.0**		
	comp=Z,55nm,0.9s,baz=14,slow=5.4,SNR=12									
ARCES					ScP	**ScP**	**01 08 44.5**	**+2.5**		
	comp=Z,40nm,1.1s,baz=12,slow=6.2,SNR=12									
ARCES					LR	LR	01 29 44.1			
	comp=Z,10µm,20.4s,baz=8.0,slow=37									
ARCES					PKP2bc	P'P'bc	01 33 42.1	-9.4		
	comp=Z,6.3nm,1.0s,baz=90,slow=1.2,SNR=4.2									
	comp=Z,14nm,0.6s									
ARCES	**ARCESS Array B**	**58.34**	**351**		P	**P**	**01 03 52.8**	**-1.1**		
ARCES					IAmb	IAmb	01 04 47.5			
	comp=Z,114nm,1.1s									
WHTX	**Lake Whitney,**	**58.66**	**77**		IAMs_20	IAMs_20	01 29 35.3			
	comp=Z,14µm,19.0s									
SCHQ	**Schefferville**	**58.70**	**40**		P	**P**	**01 03 55.3**	**-1.3**		
	comp=Z,58nm,0.9s,baz=325,slow=5.8,SNR=19									
SCHQ					LR	LR	01 30 31.1			
	comp=Z,37µm,18.1s,baz=316,slow=38									
	comp=Z,58nm,0.9s									
JETT	**Jettan, Norway**	**58.74**	**353**	*e*	P	**P**	**01 03 55.0**	**-1.7**		
JETT					IVmB_BB		01 03 57.0			
	comp=Z,3µm,4.9s									
JETT				*e*	PP	**PP**	**01 06 07.9**	**+1.7**		
JETT				*e*	S	**S**	**01 11 58.7**	**-0.2**		
JETT					IVMs_BB	IVMs_BB	01 28 25.9			
	comp=Z,5µm,22.9s									
TRO	**Tromso**	**58.77**	**354**	*e*	P	**P**	**01 03 55.3**	**-1.4**		
TRO					IVmB_BB		01 03 59.6			
	comp=Z,3µm,12.3s									
TRO				*e*	PP	**PP**	**01 06 06.0**	**-0.2**		
TRO				*e*	S	**S**	**01 11 56.1**	**-2.9**		
TRO				*e*	SS	**SS**	**01 15 59.4**	**+8.0**		
TRO					IVMs_BB	IVMs_BB	01 29 58.4			
	comp=Z,8µm,20.6s									
LVZ	**Lovozero**	**58.84**	**347**		P	**P**	**01 03 57.2**	**-0.1**		
LVZ					IAmb	IAmb	01 04 01.6			
	comp=Z,87nm,0.8s									
LVZ					IAMs_20	IAMs_20	01 33 37.1			
	comp=Z,17µm,20.0s									
LVZ	**Lovozero**	**58.84**	**347**	*ce*	P	**P**	**01 03 55.2**	**-2.2**		
LVZ					pmax	pmax				
	comp=Z,123nm,1.0s									
LVZ					MLR	MLR				
	comp=Z,15µm,21.0s									
LVZ	**Lovozero**	**58.84**	**347**	⇑	P	**P**	**01 03 56.1**	**-1.3**		
I49A	**Point Hope**	**58.86**	**57**		IAMs_20	IAMs_20	01 30 45.3			
	comp=Z,27µm,20.0s									
Q44A	**Meyer Farm, Va**	**58.89**	**65**		IAMs_20	IAMs_20	01 27 36.7			
	comp=Z,28µm,22.0s									
ANGG	**Ammassalik, Gr**	**58.90**	**19**		P	**P**	**01 03 56.1**	**-1.7**		
ANGG					IAmb	IAmb	01 03 58.3			
	comp=Z,240nm,1.2s									
ANGG					IAMs_20	IAMs_20	01 32 40.9			
	comp=Z,21µm,20.0s									
ANGG	**Ammassalik, Gr**	**58.90**	**19**	⇑	P	**P**	**01 03 55.9**	**-1.8**		
ANGG	**Ammassalik, Gr**	**58.90**	**19**	*i*	P	**P**	**01 03 55.7**	**-2.0**		
ANGG					IAmb	IAmb	01 03 58.0			
	comp=Z,200nm,1.1s									
KTK1	**Kautokeino**	**59.05**	**352**	*e*	P	**P**	**01 03 56.6**	**-2.2**		
KTK1					IVmB_BB		01 03 58.8			
	comp=Z,2µm,5.1s									
KTK1				*e*	PP	**PP**	**01 06 09.7**	**+0.8**		
KTK1				*e*	S	**S**	**01 12 03.2**	**+0.3**		
KTK1				*e*	SS	**SS**	**01 16 02.9**	**+6.8**		
KTK1					IVMs_BB	IVMs_BB	01 31 13.3			
	comp=Z,8µm,18.6s									
MIAR	**Mount Ida**	**59.23**	**72**		P	**P**	**01 04 00.1**	**-0.4**		
MIAR					IAMs_20	IAMs_20	01 32 44.0			
	comp=Z,18µm,20.0s									
MIAR	**Mount Ida**	**59.23**	**72**		P	pmax	**01 04 00.1**	**-0.4**		
MIAR					pmax	pmax				
	comp=Z,649nm,1.1s									
MIAR					MLR	MLR				
	comp=Z,18µm,20.0s									
MIAR	**Mount Ida**	**59.23**	**72**	⇑	P	**P**	**01 04 00.2**	**-0.2**		
Z38A	**Mt. Pleasant**	**59.27**	**74**		IAMs_20	IAMs_20	01 29 29.4			
	comp=Z,15µm,20.0s									
APA	**Apatity**	**59.32**	**347**	⇓	*i* P	**P**	**01 03 59.9**	**-0.7**		
APA					*i*		01 04 46.7			
APA					*i*		01 06 15.1			
APA					*i* S	**S**	**01 12 04.2**	**-2.1**		
APA					*i*		01 13 48.8			
APA					*i* SS	**SS**	**01 15 58.0**	**-2.2**		
APA					MLR	MLR				
	comp=Z,22µm,20.1s									
AAM	**Ann Arbor**	**59.54**	**59**		IAMs_20	IAMs_20	01 31 05.4			
	comp=Z,16µm,20.0s									
AAM	**Ann Arbor**	**59.54**	**59**	⇑	P	**P**	**01 04 02.5**	**0.0**		
PBMO	**Poplar Bluff**	**59.54**	**68**		P	**P**	**01 04 01.3**	**-1.3**		
S44A	**Carbondale**	**59.59**	**67**		IAMs_20	IAMs_20	01 29 50.1			
	comp=Z,27µm,20.0s									
ZSN	**Zaisan**	**59.82**	**309**	*e*	P	**P**	**01 04 03.8**	**-0.6**		
	comp=Z,62nm,1.0s									
ZSN					*e*S	**S**	**01 12 13.2**	**-0.2**		
ZSN	**Zaisan**	**59.82**	**309**	*e*	P	**P**	**01 04 03.8**	**-0.6**		
ZSN					*e*S	**S**	**01 12 13.2**	**-0.2**		
ZSN					pmax	pmax				
	comp=Z,62nm,1.0s									
FUNA	**Funafuti**	**59.90**	**186**		IAMs_20	IAMs_20	01 24 19.2			
	comp=Z,27µm,20.0s									
IVI	**Ivigtut**	**60.12**	**26**		P	**P**	**01 04 05.2**	**-0.9**		
IVI					IAmb	IAmb	01 04 07.7			
	comp=Z,137nm,1.0s									
IVI					IAMs_20	IAMs_20	01 35 00.1			
	comp=Z,24µm,19.0s									
IVI	**Ivigtut**	**60.12**	**26**	⇑	P	**P**	**01 04 05.3**	**-0.9**		
IVI	**Ivigtut**	**60.12**	**26**	*i*	P	**P**	**01 04 05.8**	**-0.4**		
SADO	**Sadowa**	**60.20**	**55**		LR	LR	01 31 30.6			
	comp=Z,29µm,18.5s,baz=350,slow=38									
N49A	**Columbus Grove**	**60.20**	**61**		IAMs_20	IAMs_20	01 32 21.1			
	comp=Z,24µm,18.0s									
SZP	**Santa**	**60.24**	**261**		P	**P**	**01 04 08.8**	**+1.2**		
KURK	**Kurchatov**	**60.39**	**315**		P	**P**	**01 04 07.7**	**-0.5**		
KURK	**Kurchatov**	**60.39**	**315**		P	**P**	**01 04 05.8**	**-2.4**		
KURK					P	**P**	**01 04 05.8**	**-2.4**		
KURK					S	S	01 12 13.0	-7.5		
KURK					S	S	01 12 13.0	-7.5		
KURK	**Kurchatov**	**60.39**	**315**	*ce*	P	**P**	**01 04 06.9**	**-1.3**		
KURK					pmax	pmax				
	comp=Z,309nm,1.3s									
KURK					MLR	MLR				
	comp=Z,46µm,19.0s									
T45A	**Paducah**	**60.40**	**67**		IAMs_20	IAMs_20	01 30 14.8			
	comp=Z,25µm,20.0s									
M50A	**Fremont**	**60.49**	**60**		IAMs_20	IAMs_20	01 31 34.6			
	comp=Z,17µm,19.0s									
KURBB	**Kurchatov Arra**	**60.49**	**315**		P	**P**	**01 04 08.0**	**-1.0**		
	comp=Z,74nm,0.5s,baz=43,slow=6.6,SNR=731									
KURBB					S	**S**	**01 12 17.4**	**-4.5**		
	comp=Z,3.3nm,1.1s,baz=52,slow=14,SNR=5.9									
KURBB					LR	LR	01 32 09.4			
	comp=Z,46µm,19.0s,baz=49,slow=38									
KURBB					PKP2bc	P'P'bc	01 33 33.6	-12		
	comp=Z,3.1nm,0.8s,baz=254,slow=3.7,SNR=8.6									
KURBB					P4KPbc		01 41 10.6			
	comp=Z,1.5nm,1.0s,baz=46,slow=4.3,SNR=9.5									
	comp=Z,74nm,0.5s									
KURBB	**Kurchatov Arra**	**60.49**	**315**		P	**P**	**01 04 07.8**	**-1.1**		
NATX	**Nacogdoches**	**60.52**	**75**		IAMs_20	IAMs_20	01 27 59.3			
	comp=Z,26µm,22.0s									
NATX	**Nacogdoches**	**60.52**	**75**	⇑	P	**P**	**01 04 09.6**	**+0.2**		
LOF	**Lofoten**	**60.55**	**356**	*e*	P	**P**	**01 04 05.8**	**-3.2**		
LOF					IVmB_BB		01 04 09.1			
	comp=Z,2µm,5.8s									
LOF				*e*	PP	**PP**	**01 06 23.4**	**+1.4**		
LOF				*e*	S	**S**	**01 12 21.7**	**-0.3**		
LOF					IVMs_BB	IVMs_BB	01 28 05.5			
	comp=Z,6µm,21.3s									
GZH	**Guangzhou**	**60.56**	**271**		P	**P**	**01 04 06.4**	**-3.3**		
GZH					S	**S**	**01 12 16.8**	**-6.6**		
GZH					SS	**SS**	**01 16

comp=Z,19µm,20.0s
FAUS Fauske 61.21 355 *e*P **P** **01 04 11.0 -2.6**
FAUS IVmB_BB 01 04 14.1
comp=Z,2µm,4.8s
FAUS *e*PP **PP** **01 06 28.2 +0.4**
FAUS *e*S **S** **01 12 33.4 +2.9**
FAUS IVMs_BB IVMs_BB 01 29 04.6
comp=Z,9µm,21.9s
ACSO Alum Creek Sta 61.34 61 P **P** **01 04 14.3 -0.6**
ACSO IAMs_20 IAMs_20 01 33 31.2
comp=Z,23µm,18.0s
ACSO Alum Creek Sta 61.34 61 ⇑P **P** **01 04 14.6 -0.2**
GAC Glen Almond 61.37 52 ⇑P **P** **01 04 14.2 -0.7**
WVT Waverly 61.49 67 P **P** **01 04 15.3 -0.6**
WVT IAmb IAmb 01 04 45.4
comp=Z,159nm,0.9s
WVT Waverly 61.49 67 IAMs_20 IAMs_20 01 30 47.6
comp=Z,22µm,20.0s
WVT Waverly 61.49 67 P **P** **01 04 15.3 -0.6**
WVT pmax pmax
comp=Z,159nm,1.0s
WVT MLR MLR
comp=Z,22µm,20.0s
WVT Waverly 61.49 67 ⇑P **P** **01 04 15.4 -0.5**
MK31 Makanchi Array 61.52 310 P **P** **01 04 14.9 -1.2**
MK31 Makanchi Array 61.52 310*ce*P **P** **01 04 14.6 -1.5**
MKAR Makanchi Array 61.52 310 P **P** **01 04 15.0 -1.1**
comp=Z,70nm,0.9s,baz=50,slow=5.8,SNR=98
MKAR S **S** **01 12 35.9 +0.7**
comp=Z,3.5nm,1.0s,baz=31,slow=5.0,SNR=3.5
MKAR PKPPKP P'P'df 01 33 21.4 -12
comp=Z,3.3nm,1.0s,baz=152,slow=3.4,SNR=6.6
MKAR LR LR 01 33 21.9
comp=Z,30µm,18.7s,baz=28,slow=38
MKAR P4KPbc 01 41 12.4
comp=Z,2.5nm,1.0s,baz=2.9,slow=9.7,SNR=5.3
comp=Z,70nm,0.9s
MKAR Makanchi Array 61.52 310 P **P** **01 04 15.0 -1.1**
ERPA Erie 61.62 57 IAMs_20 IAMs_20 01 32 26.4
comp=Z,25µm,19.0s
ERPA Erie 61.62 57 ⇑P **P** **01 04 17.0 +0.3**
MAKZ Makanchi 61.66 310 IAMs_20 IAMs_20 01 33 13.8
comp=Z,25µm,19.0s
MAKZ Makanchi 61.66 310 P **P** **01 04 14.4 -2.6**
MAKZ Makanchi 61.66 310 ⇑P **P** **01 04 15.4 -1.6**
OXF Oxford 61.71 69 ⇑P **P** **01 04 16.9 -0.5**
143A Socs Landing, 61.81 72 IAMs_20 IAMs_20 01 33 48.3
comp=Z,17µm,20.0s
MANU Manus Island 61.84 223 P **P** **01 04 18.8 +0.3**
RABL Rabaul 61.87 217 P **P** **01 04 17.9 -0.7**
RABL IAmb IAmb 01 04 35.4
comp=Z,148nm,0.7s
VAGH Vaagaholmen 61.96 356 *e*P **P** **01 04 16.7 -1.9**
VAGH IVmB_BB 01 04 19.0
comp=Z,2µm,4.8s
VAGH *e*PP **PP** **01 06 35.7 +1.2**
VAGH *e*S **S** **01 12 40.7 +0.7**
VAGH IVMs_BB IVMs_BB 01 27 49.0
comp=Z,6µm,21.6s
O52A Adamsville 62.04 60 IAMs_20 IAMs_20 01 31 30.1
comp=Z,18µm,21.0s
ZAIG Zacatecas 62.07 88 P **P** **01 04 19.7 -0.6**
ZAIG IAmb IAmb 01 04 38.1
comp=Z,105nm,1.1s
ZAIG Zacatecas 62.07 88 ⇑P **P** **01 04 20.0 -0.4**
BVA0 Borovoye Array 62.10 321 *i*P **P** **01 04 19.1 -0.7**
BVAR Borovoye Array 62.10 321 P **P** **01 04 19.1 -0.7**
comp=Z,103nm,0.5s,baz=48,slow=6.8,SNR=258
BVAR S **S** **01 12 43.5 +1.2**
comp=Z,7.5nm,1.1s,baz=38,slow=18,SNR=4.0
BVAR PKPPKP P'P'df 01 33 26.2 -7.2
comp=Z,2.0nm,0.9s,baz=193,slow=5.9,SNR=4.3
BVAR LR LR 01 33 47.7
comp=Z,71µm,19.5s,baz=44,slow=39
BVAR P4KPbc 01 41 15.6
comp=Z,2.2nm,0.9s,baz=67,slow=5.0,SNR=9.1
comp=Z,103nm,0.5s
441A DeRidder 62.12 75 IAMs_20 IAMs_20 01 29 20.8
comp=Z,23µm,20.0s
PLAL Pickwick Lake 62.16 68 IAMs_20 IAMs_20 01 34 02.3
comp=Z,17µm,20.0s
PAOC Oil Creek Stat 62.21 58 P **P** **01 04 20.5 -0.2**
RAUS Rausandaksla 62.22 356 *e*P **P** **01 04 18.3 -2.0**
RAUS IVmB_BB 01 04 20.8
comp=Z,2µm,4.8s
RAUS *e*PP **PP** **01 06 38.0 +1.2**
RAUS *e*S **S** **01 12 44.2 +0.9**
RAUS IVMs_BB IVMs_BB 01 28 11.7
comp=Z,7µm,21.7s
MMNY Mt. Morris Dam 62.27 56 P **P** **01 04 21.1 +0.1**
GYA Guiyang 62.28 278 ⇑P **P** **01 04 21.6 +0.1**
GYA S **S** **01 12 42.8 -2.7**
GYA pmax pmax
comp=Z,83nm,0.8s
GYA pmax pmax
comp=Z,7µm,4.8s
GYA LR LR
comp=Z,7µm,20.9s
GYA LR LR
comp=Z,9µm,22.6s
GYA LR LR
comp=Z,20µm,20.7s
V48A Smith Brothers 62.35 67 IAMs_20 IAMs_20 01 31 15.2
comp=Z,22µm,20.0s
STOK Stokkvaagen 62.37 356 *e*P **P** **01 04 18.9 -2.4**
STOK IVmB_BB 01 04 24.0
comp=Z,2µm,14.7s
STOK *e*PP **PP** **01 06 37.9 -0.2**
STOK *e*S **S** **01 12 50.0 +4.9**
STOK IVMs_BB IVMs_BB 01 27 59.8
comp=Z,5µm,23.5s
BORG Borgarnes 62.44 12 LR LR 01 35 06.2
comp=Z,11µm,18.1s,baz=333,slow=40
BORG Borgarnes 62.44 12 P **P** **01 04 22.3 +0.5**
BORG IAmb IAmb 01 04 24.7
comp=Z,130nm,1.1s
BORG Borgarnes 62.44 12 P **P** **01 04 22.3 +0.5**
BORG pmax pmax
comp=Z,130nm,1.1s
BORG MLR MLR
comp=Z,12µm,19.0s
BORG Borgarnes 62.44 12 ⇓P **P** **01 04 22.6 +0.8**
MOR8 Moi Rana 62.46 355 *e*P **P** **01 04 19.3 -2.7**
MOR8 IVmB_BB 01 04 21.3
comp=Z,2µm,4.4s
MOR8 *e*PP **PP** **01 06 39.3 +0.4**
MOR8 *e*S **S** **01 12 41.1 -5.4**
MOR8 IVMs_BB IVMs_BB 01 28 27.9
comp=Z,7µm,23.9s
SVE Sverdlovsk 62.58 329*de*P **P** **01 04 22.7 -0.2**
SVE *e* 01 06 39.2
SVE *e*PPP PPP 01 08 12.2
SVE *e*S **S** **01 12 45.1 -3.0**
SVE *e* 01 14 06.6
SVE pmax pmax
comp=Z,115nm,1.1s
SVE MLR MLR
comp=E,17µm,19.0s
SVE MLR MLR
comp=Z,41µm,18.0s
SVE MLR MLR
comp=N,23µm,18.0s
LEIR Leirfjorden 62.58 356 *e*P **P** **01 04 20.5 -2.2**
LEIR IVmB_BB 01 04 25.5
comp=Z,3µm,14.6s
LEIR *e*PP **PP** **01 06 40.9 +1.0**
LEIR *e*S **S** **01 12 42.0 -5.9**
LEIR IVMs_BB IVMs_BB 01 28 53.5
comp=Z,6µm,21.8s
TGY Tagaytay City 62.58 258 LR LR 01 30 29.9
comp=Z,4µm,19.1s,baz=31,slow=35
LONY Lake Ozonia 62.59 52 ⇑P **P** **01 04 22.1 -1.2**
Q52A Bidwell 62.63 61 IAMs_20 IAMs_20 01 30 56.3
comp=Z,21µm,20.0s
VBMS Vicksburg 62.68 72 IAMs_20 IAMs_20 01 34 55.4
comp=Z,22µm,19.0s
VBMS Vicksburg 62.68 72 ⇑P **P** **01 04 23.4 -0.5**
P53A Whipple 62.73 60 IAMs_20 IAMs_20 01 32 36.0
comp=Z,23µm,18.0s
K57A Scipio Center 62.98 55 IAMs_20 IAMs_20 01 33 38.3
comp=Z,19µm,20.0s
X48A Hartselle 63.13 68 IAMs_20 IAMs_20 01 31 27.2
comp=Z,19µm,20.0s
146A Union 63.24 71 IAMs_20 IAMs_20 01 34 59.4
comp=Z,20µm,18.0s
Z47A Carrollton 63.42 69 IAMs_20 IAMs_20 01 35 00.1
comp=Z,17µm,18.0s
MCWV Mont Chateau 63.44 59 P **P** **01 04 28.9 -0.1**
MCWV Mont Chateau 63.44 59 ⇓P **P** **01 04 28.1 -0.8**
TZTN Tazewell 63.64 64 ⇑P **P** **01 04 30.2 -0.1**
BINY Binghamton 63.64 55 ⇑P **P** **01 04 30.6 +0.4**
ARTI Arti 63.66 330 PKP2bc 01 33 29.7
comp=Z,7.3nm,1.0s,baz=182,slow=5.6,SNR=6.8
ARTI LR LR 01 35 29.1
comp=Z,17µm,18.6s,baz=34,slow=39
ARTI Arti 63.66 330 P **P** **01 04 29.1 -0.9**
ARTI IAmb IAmb 01 04 34.9
comp=Z,100nm,0.5s
ARTI IAMs_20 IAMs_20 01 34 05.3
comp=Z,19µm,21.0s
ARTI Arti 63.66 330*c i*P **P** **01 04 29.2 -0.9**
ARTI 01 05 05.5
ARTI 01 06 45.6
ARTI PPP PPP 01 08 18.2
ARTI S **S** **01 13 01.9 +0.3**
ARTI 01 14 15.4
ARTI SS **SS** **01 17 03.5 -5.0**
ARTI pmax pmax
comp=Z,155nm,1.4s
ARTI MLR MLR
comp=Z,19µm,22.0s
ARTI Arti 63.66 330 ⇑P **P** **01 04 29.1 -0.9**
SSPA Standing Stone 63.78 57 P **P** **01 04 31.1 -0.1**
SSPA Standing Stone 63.78 57 ⇑P **P** **01 04 31.2 +0.1**
FPAL Fort Paine 63.90 67 P **P** **01 04 31.1 -1.0**
FPAL IAmb IAmb 01 04 50.3
comp=Z,184nm,0.8s
346A Big Creek Wild 63.90 72 IAMs_20 IAMs_20 01 35 10.7
comp=Z,22µm,19.0s
Y49A Blount Mountai 63.92 68 IAMs_20 IAMs_20 01 35 04.1
comp=Z,21µm,20.0s
SAVO Savo Central 63.97 207 P **P** **01 04 33.0 +0.4**
L59A Walton 64.12 54 IAMs_20 IAMs_20 01 32 52.6
comp=Z,19µm,21.0s
TKL Tuckaleechee C 64.14 65 LR LR 01 31 24.9
comp=Z,27µm,22.0s,baz=334,slow=35
TKL Tuckaleechee C 64.14 65 ⇑P **P** **01 04 33.0 -0.6**
LRAL Lakeview Retre 64.17 69 IAMs_20 IAMs_20 01 35 26.8
comp=Z,16µm,18.0s
LRAL Lakeview Retre 64.17 69 ⇑P **P** **01 04 32.7 -1.1**
LBNH Lisbon 64.17 51 ⇑P **P** **01 04 33.0 -0.7**
HNR Honiara 64.20 207 LR LR 01 28 48.8
comp=Z,16µm,19.8s,baz=8.5,slow=32
HNR Honiara 64.20 207 P **P** **01 04 34.8 +0.8**
HNR Honiara 64.20 207 IAMs_20 IAMs_20 01 27 06.0
comp=Z,18µm,21.0s
HNR Honiara 64.20 207 P **P** **01 04 34.8 +0.8**
HNR pmax pmax
comp=Z,532nm,1.3s
NSS Namsos 64.21 356 *e*P **P** **01 04 31.4 -2.2**
R55A Marlinton 64.28 60 IAMs_20 IAMs_20 01 32 49.7
comp=Z,21µm,20.0s
X51A Calhoun 64.31 66 IAMs_20 IAMs_20 01 30 32.5
comp=Z,26µm,22.0s
KIRV Kirov 64.35 336 PKP2bc 01 33 27.9
comp=Z,3.2nm,0.6s,baz=286,slow=0.5,SNR=7.5
KIRV LR LR 01 35 02.4
comp=Z,16µm,19.7s,baz=17,slow=38
KIRV Kirov 64.35 336*ce*P **P** **01 04 34.1 -0.4**
P57A Homestead Farm 64.55 58 IAMs_20 IAMs_20 01 34 11.6
comp=Z,23µm,19.0s
KLMR Klimovskoe 64.56 342 *e*P **P** **01 04 33.2 -2.7**
KLMR *e**PP **pP** **01 04 43.0 -2.0**
KLMR pmax pmax
comp=Z,144nm,1.2s
KLMR MLR MLR
comp=Z,23µm,17.0s
PKME Peaks-Kenny Pk 64.67 49 P **P** **01 04 36.1 -0.8**
PKME IAmb IAmb 01 04 38.6
comp=Z,157nm,1.2s
PKME Peaks-Kenny Pk 64.67 49 ⇓P **P** **01 04 36.3 -0.5**
TDK Taldyqorghan 64.68 311 ⇑*i*P **P** **01 04 36.6 -0.5**
comp=Z,93nm,1.1s
TDK *e*S **S** **01 13 14.8 0.0**
TDK LR LR 01 33 15.7
comp=Z,15µm,18.6s
TDK Taldyqorghan 64.68 311*c i*P **P** **01 04 36.5 -0.5**
TDK *e*S **S** **01 13 14.7 0.0**
TDK pmax pmax
comp=Z,93nm,1.1s
TDK MLR MLR
comp=Z,15µm,19.0s
BLA Blacksburg 64.89 61 IAMs_20 IAMs_20 01 32 16.8
comp=Z,22µm,20.0s
BLA Blacksburg 64.89 61 ⇑P **P** **01 04 38.9 +0.4**
JRQG Juriquilla Cam 64.92 88 P **P** **01 04 38.3 -0.8**
Y52A Lilburn 65.27 66 IAMs_20 IAMs_20 01 31 14.0
comp=Z,26µm,22.0s
JAY Jayapura 65.27 229 P **P** **01 04 41.8 +0.7**
comp=Z,18nm,0.8s,baz=7.6,slow=3.8,SNR=4.8
JAY LR LR 01 29 26.3
comp=Z,17µm,20.3s,baz=30,slow=33
comp=Z,18nm,0.8s
JAY Jayapura 65.27 229 P **P** **01 04 42.4 +1.2**
PZH PanZhiHua 65.28 282 P **P** **01 04 41.9 +0.6**
PZH PP **PP** **01 07 04.9 +0.1**
PZH S **S** **01 13 22.3 -0.4**
PZH sS **sS** **01 13 35.9 -1.4**
PZH pmax pmax
comp=Z,970nm,1.1s
PZH pmax pmax
comp=Z,7µm,8.9s
PZH LR LR
comp=Z,7µm,22.5s
PZH LR LR
comp=Z,10µm,20.6s
PZH LR LR
comp=Z,11µm,22.1s
DAV Davao City (W) 65.34 249 LR LR 01 28 26.7
comp=Z,8µm,21.4s,baz=46,slow=32
DAV Davao City (W) 65.34 249 P **P** **01 04 41.7 +0.1**
DAV Davao City (W) 65.34 249 P **P** **01 04 42.7 +1.1**
DAV P **P** **01 04 42.7 +1.1**
DAV S **S** **01 13 23.6 +0.2**
DAV S **S** **01 13 23.6 +0.2**
250A Grady 65.36 69 IAMs_20 IAMs_20 01 36 07.3
comp=Z,13µm,19.0s
PDGK Podgornoye 65.41 309 P **P** **01 04 41.1 -0.8**
BRAL Brewton 65.48 70 IAMs_20 IAMs_20 01 35 18.7
comp=Z,12µm,19.0s
BRAL Brewton 65.48 70 ⇑P **P** **01 04 42.8 +0.4**
ARXS Arharly 65.55 311 *i*P **P** **01 04 41.9 -0.8**
SHLS Shalkode 65.56 309 ⇑*i*P **P** **01 04 41.1 -1.8**
comp=Z,96nm,1.0s
SHLS Shalkode 65.56 309*c i*P **P** **01 04 41.1 -1.8**
SHLS pmax pmax
comp=Z,97nm,1.0s
PAL Palisades 65.57 54 IAMs_20 IAMs_20 01 36 05.6
comp=Z,18µm,18.0s
GENI Genyem 65.60 230 P **P** **01 04 44.3 +1.1**
GENI Genyem 65.60 230 P **P** **01 04 44.1 +0.9**
comp=Z,15µmcomp=Z,7µmcomp=Z,198nm,0.9s
HRV Adam Dziewonsk 65.64 52 P **P** **01 04 42.5 -0.7**
HRV IAmb IAmb 01 04 45.3
comp=Z,209nm,1.1s
HRV Adam Dziewonsk 65.64 52 P **P** **01 04 42.5 -0.7**
HRV pmax pmax
comp=Z,209nm,1.1s
HRV MLR MLR
comp=Z,30µm,20.0s
HRV Adam Dziewonsk 65.64 52 ⇑P **P** **01 04 42.7 -0.5**
KMI Kunming 65.67 280 ⇑P **P** **01 04 44.5 +0.5**
KMI pP sP 01 04 52.9 -3.3
KMI PP **PP** **01 07 10.1 +1.7**
KMI S **S** **01 13 25.4 -2.4**
KMI SS **SS** **01 17 38.6 -3.2**
KMI pmax pmax
comp=Z,320nm,1.7s
KMI pmax pmax
comp=Z,7µm,10.2s
KMI LR LR
comp=Z,8µm,19.0s
KMI LR LR
comp=Z,12µm,18.3s
KMI LR LR
comp=Z,12µm,26.1s
QIZ Qiongzhong 65.75 270 P **P** **01 04 44.5 +0.3**
QIZ IAmb IAmb 01 04 48.4
comp=Z,285nm,1.3s
QIZ Qiongzhong 65.75 270 P **P** **01 04 44.6 +0.3**
QIZ S **S** **01 13 29.9 +1.6**
QIZ sS sS 01 13 45.0 +2.0
QIZ pmax pmax
comp=Z,170nm,1.3s
QIZ pmax pmax
comp=Z,6µm,5.0s
QIZ LR LR
comp=Z,7µm,19.2s
QIZ LR LR
comp=Z,6µm,19.2s
QIZ LR LR
comp=Z,9µm,21.3s
QIZ Qiongzhong 65.75 270 P **P** **01 04 45.5 +1.3**
152A Waverly Hall 65.76 68 IAMs_20 IAMs_20 01 36 07.9
comp=Z,18µm,18.0s
UZB Uzynbulak 65.78 309 ⇑*i*P **P** **01 04 43.7 -0.7**
comp=Z,119nm,1.2s
UZB *e*S **S** **01 13 28.1 -0.3**
UZB Uzynbulak 65.78 309*c i*P **P** **01 04 43.6 -0.7**
UZB *e*S **S** **01 13 28.1 -0.3**
UZB pmax pmax
comp=Z,119nm,1.2s
CBN Corbin Frederi 65.82 59 P **P** **01 04 44.1 -0.3**
CBN Corbin Frederi 65.82 59 ⇑P **P** **01 04 44.7 +0.2**
N62A Caumsett State 65.85 54 IAMs_20 IAMs_20 01 33 55.0
comp=Z,21µm,20.0s
GGN Saint George 65.92 47 P **P** **01 04 43.9 -1.0**
GGN IAmb IAmb 01 04 46.4
comp=Z,210nm,1.2s
FIA1 FINESS Array S 66.13 349 P **P** **01 04 45.6 -0.4**
FIA1 IAmb IAmb 01 04 48.7
comp=Z,157nm,1.0s
FINES FINESS Array B 66.13 349 P **P** **01 04 44.5 -1.5**
comp=Z,32nm,0.9s,baz=1.1,slow=5.3,SNR=38
FINES PKPPKP P'P'df 01 33 20.4 -7.0
comp=Z,1.2nm,0.7s,baz=97,slow=7.9,SNR=3.6
FINES LR LR 01 35 04.3
comp=Z,19µm,20.6s,baz=18,slow=37
comp=Z,32nm,0.9s
FINES FINESS Array B 66.13 349 P **P** **01 04 45.3 -0.7**
FINES FINESS Array B 66.13 349*ce*P **P** **01 04 45.4 -0.7**
FINES pmax pmax
comp=Z,32nm,0.9s
SATY Saty 66.14 310 ⇑*i*P **P** **01 04 46.1 -0.6**
comp=Z,70nm,1.3s
SATY *e*S **S** **01 13 32.7 -0.1**
SATY Saty 66.14 310*c i*P **P** **01 04 46.0 -0.6**
SATY *e*S **S** **01 13 32.6 -0.2**
SATY pmax pmax
comp=Z,70nm,1.3s
MOL Molde 66.30 358 *e*P **P** **01 04 44.5 -2.6**
BAKI Biak 66.39 235 P **P** **01 04 49.8 +1.4**
comp=Z,6µmcomp=Z,116nm,1.3s
KUU Kurty 66.49 311 *e*P **P** **01 04 48.0 -0.7**
KUU LR LR 01 34 22.5
comp=Z,9µm,17.6s
KUU Kurty 66.49 311 *e*P **P** **01 04 48.0 -0.7**
KUU MLR MLR
comp=Z,9µm,18.0s
352A Blakely 66.50 69 IAMs_20 IAMs_20 01 36 16.2
comp=Z,15µm,19.0s
PRZ Przheval'sk 66.58 309 P **P** **01 04 49.9 +0.4**
PRZ Przheval'sk 66.58 309 P **P** **01 04 49.9 +0.4**
PRZ pmax pmax
comp=Z,590nm,1.2s
V58A Windy Hill, Pi 66.65 62 IAMs_20 IAMs_20 01 33 11.2
comp=Z,21µm,20.0s
BTLS Baital 66.67 314 ⇑*i*P **P** **01 04 49.3 -0.6**
comp=Z,70nm,1.1s
BTLS *e*S **S** **01 13 38.8 -0.2**
BTLS Baital 66.67 314*c i*P **P** **01 04 49.2 -0.6**
BTLS *e*S **S** **01 13 38.7 -0.2**
BTLS pmax pmax
comp=Z,70nm,1.1s
DRLN Deer Lake 66.68 39 ⇓P **P** **01 04 49.2 -0.5**
AKN Aaknes 66.70 359 *e*P **P** **01 04 48.3 -1.5**
MDOK Medeo 66.71 310 *e*P **P** **01 04 49.6 -0.7**
MDOK *e*S **S** **01 13 39.4 -0.5**
MDOK LR LR 01 34 29.3
MDOK Medeo 66.71 310 *e*P **P** **01 04 49.6 -0.7**
MDOK *e*S **S** **01 13 39.3 -0.5**
UNM Universidad Na 66.73 88 IAMs_20 IAMs_20 01 29 35.4
comp=Z,16µm,20.0s
AAA Alma-Ata 66.74 311 *e*P **P** **01 04 49.8 -0.6**
comp=Z,130nm,1.5s
AAA LR LR 01 34 42.2
comp=Z,12µm,16.0s
AAA Alma-Ata 66.74 311 *e*P **P** **01 04 49.8 -0.6**
AAA pmax pmax
comp=Z,130nm,1.5s
AAA MLR MLR
comp=Z,12µm,16.0s
M65A Busby, Falmout 66.79 52 P **P** **01 04 50.2 -0.4**
baz=319
M65A S **S** **01 13 33.7 -6.8**
baz=319
DOMB Dombas 66.80 358 *e*P **P** **01 04 47.7 -2.7**
TNSS Tian-Shan 66.86 310 *e*P **P** **01 04 50.6 -0.9**
TNSS Tian-Shan 66.86 310 *e*P **P** **01 04 50.6 -0.9**
WUS Wushi 67.14 308 P **P** **01 04 52.8 -0.3**
WUS Wushi 67.14 308 IAMs_20 IAMs_20 01 37 06.8
comp=Z,21µm,19.0s
PUL Pulkovo 67.17 346*ce*P **P** **01 04 51.0 -1.7**
PUL pmax pmax
comp=Z,97nm,1.0s
PUL MLR MLR
comp=Z,28µm,20.0s
FOO Floro 67.30 360 *e*P **P** **01 04 53.3 -0.2**
TIGA Tifton 67.31 68 IAMs_20 IAMs_20 01 34 08.0
comp=Z,15µm,20.0s
TAOE Nuku Hiva Isla 67.40 142 P **P** **01 04 54.5 -0.3**
TAOE Nuku Hiva Isla 67.40 142 *e*P **P** **01 04 54.8 0.0**
comp=Z,427nm,1.3s
TAOE *e*S **S** **01 13 53.8 +5.4**
comp=Z,7µm,26.8s
TAOE *e*SS **SS** **01 18 11.0 +1.9**
comp=Z,7µm,25.7s
TAOE *e*LQ LQ 01 21 37.9
comp=Z,11µm,37.8s
TAOE *e*LR LR 01 25 12.5
comp=Z,29µm,24.3s
KDJ Kajisay 67.44 310 P **P** **01 04 55.1 +0.2**
KDJ Kajisay 67.44 310 P **P** **01 04 55.1 +0.2**
KDJ pmax pmax
comp=Z,392nm,1.1s
TARG Taragay, Kyrgy 67.44 309 P **P** **01 04 55.6 +0.4**
TARG IAmb IAmb 01 05 00.4
comp=Z,116nm,1.0s
TARG Taragay, Kyrgy 67.44 309 P **P** **01 04 55.7 +0.4**
TARG pmax pmax
comp=Z,116nm,1.0s
TKM2 Tokmak 2 67.58 311 P **P** **01 04 55.8 -0.2**
SNR=124
SGDS Sogindy 67.63 312 ⇑*i*P **P** **01 04 55.6 -0.5**
comp=Z,67nm,1.3s
RKPI Ransiki, Papua 67.66 236 P **P** **01 04 57.6 +1.2**
comp=Z,12µmcomp=Z,235nm,1.8s
HYA Hoyanger 67.73 359 *e*P **P** **01 04 54.4 -1.8**
NB2 NORSAR Subarra 67.73 356 P **P** **01 04 55.2 -1.1**
comp=Z,212nm,2.0s,baz=7.1,slow=6.5
NB2 P'P' 01 33 13.1
comp=Z,306nm,3.3s,baz=177,slow=3.5
NOA NORSAR Array B 67.73 356 P **P** **01 04 55.0 -1.3**
comp=Z,21nm,0.9s,baz=3.4,slow=6.3,SNR=53
NOA LR LR 01 32 21.5
comp=Z,10µm,21.8s,baz=0.0,slow=34
NOA PKP2bc P'P'bc 01 33 14.6 -12
comp=Z,3.2nm,1.0s,baz=176,slow=3.4,SNR=6.3
NOA P4KPbc 01 41 24.6
comp=Z,0.6nm,0.8s,baz=126,slow=8.9,SNR=3.5
comp=Z,21nm,0.9s
NOA NORSAR Array B 67.73 356 P **P** **01 04 55.0 -1.3**
553A Crawfordville 67.74 69 IAMs_20 IAMs_20 01 37 40.3
comp=Z,17µm,18.0s
BOOM Boomskoye usch 67.75 311 P **P** **01 04 57.1 +0.2**
BOOM Boomskoye usch 67.75 311 P **P** **01 04 57.1 +0.2**
HAL Halifax 67.76 46 P **P** **01 04 56.0 -0.7**
HAL IAmb IAmb 01 05 13.8
comp=Z,130nm,1.0s
HAL Halifax 67.76 46 P **P** **01 04 56.0 -0.7**
HAL pmax pmax
comp=Z,130nm,1.0s
ULHL Ulahol 67.80 310 P **P** **01 04 58.0 +0.7**
SNR=28
USP Ospenovka 67.83 312 P **P** **01 04 57.4 +0.1**
SNR=194
SUE Sulen 67.85 360 *e*P **P** **01 04 55.6 -1.4**

CHMS Chumysh 67.92 312 P P 01 04 57.9 +0.1
SNR=71
NC602 NORSAR Array S 68.02 356 *e*P P 01 04 55.6 -2.5
NHSC New Hope 68.03 64 ⇑P P 01 04 59.1 +0.5
KBK Karagaybulak 68.09 311 P P 01 04 59.0 -0.1
SNR=135
FRU1 Bishkek 68.12 312 P P 01 04 59.4 +0.3
FRU1 Bishkek 68.12 312 P P 01 04 59.4 +0.3
FRU1 pmax pmax
comp=Z,900nm,1.7s
SKAR Skarslia 68.18 358 *e*P P 01 04 57.9 -1.3
SANVU Saraoutou 68.27 198 IAMs_20 IAMs_20 01 31 39.5
comp=Z,14μm,20.0s
AAK Ala-Archa 68.32 312 PKP2bc 01 33 16.8
comp=Z,1.3nm,0.7s,baz=212,slow=7.2,SNR=4.1
AAK LR LR 01 36 52.6
comp=Z,21μm,20.1s,baz=32,slow=38
AAK Ala-Archa 68.32 312 P P 01 05 00.4 -0.1
AAK Ala-Archa 68.32 312 IAMs_20 IAMs_20 01 36 30.8
comp=Z,23μm,21.0s
AAK Ala-Archa 68.32 312 P P 01 05 00.2 -0.3
AAK P P 01 05 00.2 -0.3
AAK S S 01 13 54.1 -5.1
AAK S S 01 13 54.1 -5.1
AAK Ala-Archa 68.32 312 P P 01 05 00.4 -0.1
SNR=133
AAK Ala-Archa 68.32 312 *i* P P 01 05 00.3 -0.1
SNR=57
AAK Ala-Archa 68.32 312 *ce*P P 01 05 00.8 +0.3
AAK pmax pmax
comp=Z,249nm,1.3s
AAK Ala-Archa 68.32 312 ⇑P P 01 05 00.4 -0.1
TNCH TengChong 68.33 283 ⇑*i*P P 01 05 01.9 +1.1
TNCH pP pwP 01 05 11.9 -2.7
TNCH sP sP 01 05 14.4 +1.4
TNCH S S 01 14 00.8 +1.1
TNCH sS sS 01 14 14.8 +0.4
TNCH pmax pmax
comp=Z,860nm,1.4s
TNCH pmax pmax
comp=Z,9μm,4.2s
TNCH LR LR
comp=Z,9μm,18.3s
TNCH LR LR
comp=Z,8μm,17.1s
TNCH LR LR
comp=Z,21μm,21.6s
ASK Askoy 68.42 360 *e*P P 01 04 59.0 -1.5
TLIG Tlapa 68.44 89 P P 01 05 01.1 -0.4
HFS Hagfors 68.52 355 P P 01 04 59.6 -1.7
comp=Z,28nm,0.7s,baz=45,slow=4.8,SNR=38
HFS LR LR 01 34 36.3
comp=Z,11μm,20.9s,baz=359,slow=36
comp=Z,28nm,0.7s
BER Bergen 68.52 359 *e*P P 01 05 00.5 -0.7
PMG Port Moresby 68.58 220 LR LR 01 30 04.3
comp=Z,12μm,21.9s,baz=38,slow=32
PMG Port Moresby 68.58 220 P P 01 05 02.0 -0.1
PMG IAmb IAmb 01 05 19.7
comp=Z,222nm,1.2s
PMG Port Moresby 68.58 220 IAMs_20 IAMs_20 01 31 52.1
comp=Z,13μm,21.0s
PMG Port Moresby 68.58 220 P P 01 05 02.3 +0.2
PMG Port Moresby 68.58 220 *ce*P P 01 05 02.4 +0.3
PMG pmax pmax
comp=Z,157nm,2.5s
PMG Port Moresby 68.58 220 ⇑P P 01 05 02.3 +0.2
UCH Uchtor 68.63 311 P P 01 05 02.9 +0.1
SNR=76
EKS2 Erkin-Say 68.64 312 P P 01 05 02.6 +0.2
SNR=127
SWI Sorong 68.66 239 P P 01 05 02.9 +0.3
AKTO Aktyubinsk 68.75 326 PKP2bc 01 33 13.3
comp=Z,2.1nm,0.8s,baz=300,slow=2.6,SNR=5.3
AKTO LR LR 01 39 20.1
comp=Z,27μm,18.6s,baz=31,slow=40
AKTO Aktyubinsk 68.75 326 P P 01 05 02.3 -0.5
OSL Oslo 68.85 357 *e*P P 01 05 02.2 -1.1
VSU Vasula 68.94 348 *ce*P P 01 05 02.1 -1.7
VSU pmax pmax
comp=Z,167nm,1.2s
VSU Vasula 68.94 348 ⇑P P 01 05 01.5 -2.3
ODD1 Odda 68.98 359 *e*P P 01 05 02.5 -1.7
AB31 Akbulak array 69.06 325 P P 01 05 04.2 -0.6
AB31 IAmb IAmb 01 05 08.3
comp=Z,100nm,0.8s
AB31 Akbulak array 69.06 325 *i* P P 01 05 03.9 -0.8
ABKAR Akbulak array 69.06 325 P P 01 05 04.2 -0.5
MSVF Nonsavu 69.10 186 P P 01 05 05.3 0.0
MSVF IAmb IAmb 01 05 30.2
comp=Z,129nm,1.4s
MSVF Nonsavu 69.10 186 IAMs_20 IAMs_20 01 30 38.6
comp=Z,18μm,20.0s
MSVF Nonsavu 69.10 186 P P 01 05 06.3 +1.0
MSVF Nonsavu 69.10 186 P P 01 05 05.3 0.0
MSVF pmax pmax
comp=Z,129nm,1.4s
MSVF Nonsavu 69.10 186 ⇓P P 01 05 06.6 +1.2
KONO Kongsberg 69.18 357 P P 01 05 05.1 -0.2
KONO Kongsberg 69.18 357 *e*P P 01 05 04.8 -0.5
KONO Kongsberg 69.18 357 *ce*P P 01 05 05.2 -0.1
KONO pmax pmax
comp=Z,45nm,1.0s
KONO Kongsberg 69.18 357 ⇑P P 01 05 05.5 +0.2
LSA Lhasa 69.27 292 P P 01 05 07.8 +0.9
LSA IAMs_20 IAMs_20 01 39 35.3
comp=Z,12μm,19.0s
LSA Lhasa 69.27 292 P P 01 05 04.0 -3.0
LSA S S 01 14 05.5 -5.9
LSA pmax pmax
comp=Z,260nm,1.4s
LSA LR LR
comp=Z,8μm,17.1s
LSA LR LR
comp=Z,11μm,18.8s
LSA LR LR
comp=Z,9μm,20.6s
LSA Lhasa 69.27 292 *i* P P 01 05 07.7 +0.8
SNR=52
LSA Lhasa 69.27 292 P P 01 05 07.9 +0.9
LSA pmax pmax
comp=Z,302nm,1.1s
LSA MLR MLR
comp=Z,12μm,19.0s
ZIRO ZIRO 69.29 288 *e*P P 01 05 07.8 +1.0
ZIRO IAmb IAmb 01 05 11.4
comp=Z,769nm,1.2s
TNTI Ternate 69.44 244 P P 01 05 07.1 -0.4
TNTI IAmb IAmb 01 05 10.5
comp=Z,377nm,1.6s
TNTI Ternate 69.44 244 P P 01 05 09.9 +2.4
TNTI Ternate 69.44 244 P P 01 05 09.0 +1.5
656A Willston 69.45 69 IAMs_20 IAMs_20 01 38 16.7
comp=Z,13μm,19.0s
BLS5 Blasjo 69.47 359 *e*P P 01 05 05.9 -1.2
DZA Taraz 69.57 314 *e*P P 01 05 07.5 -0.7
DZA Taraz 69.57 314 *e*P P 01 05 07.4 -0.7
ITAN ITANAGAR 69.65 288 *e*P P 01 05 10.3 +1.5
ITAN IAmb IAmb 01 05 13.8
comp=Z,665nm,1.0s
MOS Moscow 69.68 341 *e*P P 01 05 06.3 -2.1
MOS *e* 01 05 30.6
MOS *e* 01 07 37.9
MOS *e*PPP PPP 01 09 17.0
MOS *e*S S 01 14 09.6 -4.8
MOS *e* 01 15 01.1
MOS pmax pmax
comp=Z,96nm,1.1s
MOS pmax pmax
comp=N,95nm,1.0s
MOS pmax pmax
comp=N,2μm,5.2s
MOS pmax pmax
comp=E,700nm,5.2s
MOS pmax pmax
comp=Z,2μm,5.2s
KMY Karmoy 69.70 360 *e*P P 01 05 08.5 0.0
KMPI Kaimana, Papua 69.73 235 P P 01 05 11.1 +1.8
comp=Z,13μmcomp=Z,5μmcomp=Z,286nm,0.9s
STRU Stroemstad 69.74 356 *i* P P 01 05 09.2 +0.4
KK31 Karatay Array 69.78 314 P P 01 05 08.7 -0.7
KK31 IAmb IAmb 01 05 11.9
comp=Z,357nm,1.6s
KK31 Karatay Array 69.78 314 P P 01 05 08.7 -0.7
KK31 pmax pmax
comp=Z,357nm,1.6s
KKAR Karatay Array 69.78 314 P P 01 05 08.7 -0.6
KKAR Karatay Array 69.78 314 P P 01 05 08.7 -0.6
MOKO MOKOCHONG 69.79 287 *e*P P 01 05 11.3 +1.4
MOKO IAmb IAmb 01 05 14.8
comp=Z,550nm,1.0s
FAKI Fak Fak 69.86 237 P P 01 05 09.7 -0.4
FAKI IAmb IAmb 01 05 27.8
comp=Z,241nm,1.1s
FAKI Fak Fak 69.86 237 P P 01 05 10.5 +0.4
FAKI Fak Fak 69.86 237 P P 01 05 09.7 -0.4
comp=Z,12μmcomp=Z,7μmcomp=Z,216nm,1.3s
FAKI Fak Fak 69.86 237 ⇑P P 01 05 10.2 +0.1
KSH Kashi 70.03 309 P P 01 05 14.4 +3.3
KSH PcP PcP 01 05 38.4 +5.3
KSH S S 01 14 24.9 +5.6
KSH pmax pmax
comp=Z,460nm,1.2s
KSH pmax pmax
comp=Z,5μm,10.4s
KSH LR LR
comp=Z,22μm,21.3s
KSH LR LR
comp=Z,22μm,19.5s
KSH LR LR
comp=Z,30μm,23.2s
BRLS Borolday 70.14 315 ⇑*i*P P 01 05 12.6 +1.1
comp=Z,148nm,2.1s
BRLS Borolday 70.14 315 *c i*P P 01 05 12.6 +1.1
BRLS pmax pmax
comp=Z,148nm,2.1s
SLIT Slitere, Latvi 70.30 350 ⇑P P 01 05 10.8 -1.4
BELG Belogornoye 70.30 334 PKPPKP 01 33 13.7
comp=Z,31nm,1.1s,baz=26,slow=5.0,SNR=4.9
BELG LR LR 01 38 52.9
comp=Z,22μm,20.5s,baz=31,slow=38
BELG Belogornoye 70.30 334 *c i*P P 01 05 10.8 -1.5
BELG pmax pmax
comp=Z,20nm,0.9s
LEWI Lewis, Hebride 70.38 6 *e*P P 01 05 13.3 +0.6
LEWI IAmb IAmb 01 05 14.9
comp=Z,48nm,1.1s
PMOR Pomariorio Ree 70.45 151 *e*P P 01 05 14.8 +1.2
comp=Z,295nm,1.3s
PMOR *e*S S 01 14 27.1 +2.9
comp=Z,8μm,24.1s
PMOR *e*SS SS 01 18 56.2 +0.2
comp=Z,2μm,24.3s
PMOR *e*LR LR 01 26 40.8
comp=Z,33μm,21.3s
OBN Obninsk 70.48 341 LR LR 01 39 26.5
comp=Z,13μm,21.8s,baz=338,slow=39
OBN Obninsk 70.48 341 P P 01 05 12.2 -1.1
OBN IAmb IAmb 01 05 37.3
comp=Z,97nm,1.1s
OBN IAMs_20 IAMs_20 01 38 06.1
comp=Z,18μm,22.0s
OBN Obninsk 70.48 341 ⇑P P 01 05 12.5 -0.8
OBN Obninsk 70.48 341 *c i*P P 01 05 11.8 -1.5
OBN *e* 01 05 35.7
OBN *e* 01 07 55.3
OBN *i*S S 01 14 23.1 -0.6
OBN *e*SS SS 01 18 51.1 -2.8
OBN *e*SSS SSS 01 22 06.7
OBN pmax pmax
comp=Z,93nm,1.1s
OBN MLR MLR
comp=Z,16μm,20.0s
OBN Obninsk 70.48 341 ⇑P P 01 05 11.9 -1.4
OBN Obninsk 70.48 341 P P 01 05 13.2 -0.1
comp=Z,3μmcomp=Z,94nm,1.1s
KOHI KOHIMA 70.48 287 *e*P P 01 05 14.9 +0.9
KOHI IAmb IAmb 01 05 17.4
comp=Z,362nm,1.1s
HOMB Homborsund 70.59 358 *e*P P 01 05 12.8 -1.1
HOMB Homborsund 70.59 358 *i* P P 01 05 13.8 -0.1
TEZP TEZPUR 70.59 288 *e*P P 01 05 14.7 +0.2
TEZP IAmb IAmb 01 05 17.2
comp=Z,732nm,1.2s
TJOU Tjoern 70.72 356 *i* P P 01 05 14.0 -0.8
IUG Iuzhnay 70.75 314 *e*P P 01 05 15.0 -0.5
comp=Z,131nm,1.1s
IUG *e*S S 01 14 27.6 0.0
IUG Iuzhnay 70.75 314 *e*P P 01 05 14.9 -0.5
IUG *e*S S 01 14 27.6 0.0
IUG pmax pmax
comp=Z,131nm,1.1s
VAH Vaihoa 70.75 151 *e*P P 01 05 15.2 -0.2
comp=Z,3.7nm,0.9s
CHM Chimkent 70.81 315 *e*P P 01 05 15.1 -0.6
comp=Z,178nm,1.6s
CHM LR LR 01 37 25.7
comp=Z,12μm,16.8s
CHM Chimkent 70.81 315 *e*P P 01 05 15.0 -0.6
CHM pmax pmax
comp=Z,178nm,1.6s
CHM MLR MLR
comp=Z,12μm,17.0s
DWPF Disney Wildern 71.03 69 P P 01 05 17.1 0.0
DWPF Disney Wildern 71.03 69 IAMs_20 IAMs_20 01 39 15.5
comp=Z,14μm,19.0s
DWPF Disney Wildern 71.03 69 ⇑P P 01 05 17.4 +0.3
MYLDM Lahad Datu 71.05 254 P P 01 05 18.9 +1.5
MYLDM Lahad Datu 71.05 254 P P 01 05 19.3 +1.9
BORU Boraas 71.06 355 *i* P P 01 05 15.3 -1.5
CMIG Matias Romero 71.09 86 LR LR 01 31 53.9
comp=Z,18μm,22.0s,baz=303,slow=32
IMP Imphal 71.24 286 *e*P P 01 05 18.8 +0.2
IMP IAmb IAmb 01 05 21.5
comp=Z,847nm,1.4s
ONAU Onsala 71.34 356 *i* P P 01 05 15.6 -3.0
KMSI Cibinong 71.52 246 P P 01 05 20.5 +0.3
comp=Z,13μmcomp=Z,11μmcomp=Z,559nm,0.9s
FABU Falkenberg 71.70 355 *i* P P 01 05 19.8 -0.9
SHL Shillong 71.92 288 P P 01 05 22.6 -0.2
SHL Shillong 71.92 288 P P 01 05 23.1 +0.2
SNR=608
SHL Shillong 71.92 288 *e*P P 01 05 22.8 0.0
SHL IAmb IAmb 01 05 26.4
comp=Z,460nm,1.2s
SHL Shillong 71.92 288 P P 01 05 22.6 -0.2
SHL pmax pmax
comp=Z,1μm,1.0s
DLV Lat 71.95 267 P P 01 05 23.7 +0.6
DLV IAmb IAmb 01 05 26.6
comp=Z,231nm,1.2s
DLV Lat 71.95 267 P P 01 05 24.5 +1.4
SILR SILCHAR 71.96 287 *e*P P 01 05 24.6 +1.7
SILR IAmb IAmb 01 05 28.0
comp=Z,86nm,1.2s
MSAI Masohi 71.99 240 P P 01 05 23.6 +0.6
comp=Z,6μmcomp=Z,269nm,1.0s
DRK Karamyk 72.06 311 P P 01 05 23.5 -0.1
DRK IAmb IAmb 01 05 28.4
comp=Z,232nm,1.1s
DRK Karamyk 72.06 311 P P 01 05 23.5 -0.1
DRK pmax pmax
comp=Z,232nm,1.1s
DEL Delary 72.16 354 *i* P P 01 05 23.0 -0.5
PABE Paberze 72.18 348 P P 01 05 22.8 -0.8
PABE IAmb IAmb 01 05 26.5
comp=Z,214nm,1.1s
LPSR Galich'ya Gora 72.32 339 *e*P P 01 05 21.9 -2.6
LPSR *e*PPP PPP 01 09 51.4
LPSR *e*S S 01 14 38.1 -7.0
LPSR pmax pmax
comp=Z,150nm,0.9s
LPSR smax smax
comp=N,5μm,20.2s
MUD Monsted U'grnd 72.39 357 *i* P P 01 05 25.0 +0.2
MUD IAmb IAmb 01 05 26.9
comp=Z,41nm,0.8s
PPT Papeete 72.40 154 LR LR 01 33 25.1
comp=Z,21μm,18.7s,baz=300,slow=33
PPT2 Papeete2 72.42 154 *e*S S 01 14 41.1 -6.0
comp=Z,15μm,28.2s
PPT2 *e*SS SS 01 19 24.0 -2.5
comp=Z,7μm,26.5s
PPT2 *e*LQ LQ 01 24 24.5
comp=Z,4μm,33.0s
PPT2 *e*LR LR 01 27 32.5
comp=Z,29μm,22.8s
PPT2 *e*LR LR 01 27 37.9
comp=Z,33μm,21.5s
BNDI Bandanaira 72.45 238 P P 01 05 26.6 +0.8
BNDI Bandanaira 72.45 238 P P 01 05 25.5 -0.3
comp=Z,13μmcomp=Z,9μmcomp=Z,472nm,1.1s
TIAR Tiarei 72.46 154 *e*P P 01 05 26.7 +1.0
comp=Z,345nm,1.0s
060A Indiantown 72.46 69 IAMs_20 IAMs_20 01 40 17.7
comp=Z,15μm,18.0s
PAE Paea 72.49 154 *e*P P 01 05 33.2 +7.4
comp=Z,40nm,1.2s
PAE *e*S S 01 14 48.8 +1.2
comp=Z,2μm,25.4s
PAE *e*SS SS 01 19 27.8 +0.5
comp=Z,637nm,22.7s
PAE *e*LR LR 01 27 35.1
comp=Z,6μm,21.1s
SANI Sanana 72.53 243 P P 01 05 25.6 -0.6
SANI Sanana 72.53 243 P P 01 05 25.4 -0.9
SANI Sanana 72.53 243 P P 01 05 25.2 -1.1
comp=Z,13μmcomp=Z,6μmcomp=Z,172nm,1.7s
SANI Sanana 72.53 243 ⇑P P 01 05 25.7 -0.6
GTK Tadong 72.53 292 *e*P P 01 05 27.4 +0.9
GTK IAmb IAmb 01 05 30.8
comp=Z,252nm,0.7s
BJUU Bjuv 72.61 355 *i* P P 01 05 25.3 -0.9
MNK Minsk 72.61 346 *i* P P 01 05 25.9 -0.3
MNK *i* 01 05 40.7
MNK *i* 01 08 08.8
MNK *i* PPP PPP 01 09 52.0
MNK *i* S S 01 14 49.1 +0.7
MNK *i* PS PnS 01 15 29.8 +8.3
MNK pmax pmax
comp=Z,98nm,0.8s
MNK pmax pmax
comp=N,12nm,0.8s
MNK pmax pmax
comp=E,50nm,0.7s
MNK MLR MLR
comp=Z,18μm,17.0s
MNK MLR MLR
comp=N,13μm,18.0s
MNK MLR MLR
comp=E,14μm,17.0s
MNK MLR MLR
comp=N,744nm,13.0s
AAI Ambon 72.67 240 P P 01 05 27.3 +0.2
comp=N,16μmcomp=N,6μmcomp=N,324nm,1.2s
DHUB DHUBRI 72.70 290 *e*P P 01 05 26.5 -0.7
DHUB IAmb IAmb 01 05 30.5
comp=Z,158nm,1.0s
TVO Taravao 72.70 154 *e*P P 01 05 31.7 +4.6
comp=Z,65nm,1.2s
TVO *e*S S 01 14 51.9 +1.8
comp=Z,2μm,25.1s
TVO *e*SS SS 01 19 29.9 -0.7
comp=Z,968nm,23.5s
TVO *e*LR LR 01 27 42.3
comp=Z,8μm,21.3s
CHTO Chiang Mai 72.70 279 P P 01 05 27.1 -0.2
CHTO IAmb IAmb 01 05 31.8
comp=Z,224nm,1.2s
CHTO Chiang Mai 72.70 279 P P 01 05 27.5 +0.1
CHTO S S 01 14 46.0 -4.4
CHTO Chiang Mai 72.70 279 P P 01 05 27.2 -0.1
CHTO Chiang Mai 72.70 279 P P 01 05 27.1 -0.2
CHTO pmax pmax
comp=Z,224nm,1.3s
CHTO MLR MLR
comp=Z,8μm,20.0s
CHTO Chiang Mai 72.70 279 ⇑P P 01 05 27.4 +0.1
MRSI Marisa 72.77 248 P P 01 05 27.3 -0.4
comp=Z,15μmcomp=Z,9μmcomp=Z,662nm,1.2s
TEIG Tepich 72.83 79 P P 01 05 26.9 -1.1
TEIG IAmb IAmb 01 05 47.4
comp=Z,375nm,1.8s
TEIG Tepich 72.83 79 ⇑P P 01 05 27.9 -0.1
NLAI Namlea 72.90 241 P P 01 05 28.5 +0.1
comp=Z,14μmcomp=Z,6μmcomp=Z,159nm,1.4s
TOLI2 Tolitoli 72.94 249 P P 01 05 28.3 -0.4
TOLI2 IAmb IAmb 01 05 31.4
comp=Z,328nm,1.2s
TOLI2 Tolitoli 72.94 249 P P 01 05 28.3 -0.4
VRH Novokhopyorsk 72.94 336 *e*P P 01 05 26.7 -1.5
VRH pmax pmax
comp=Z,113nm,0.9s
VRH MLR MLR
comp=Z,24μm,22.0s
CM31 Chiang Mai Arr 72.97 278 P P 01 05 29.5 +0.6
CMAR Chiang Mai Arr 72.97 278 P P 01 05 29.3 +0.3
comp=Z,110nm,0.9s,baz=26,slow=7.3,SNR=137
CMAR PKPPKP P'P'df 01 33 04.8 -7.0
comp=Z,1.2nm,0.3s,baz=257,slow=2.7,SNR=4.6
CMAR LR LR 01 40 03.7
comp=Z,7μm,19.6s,baz=40,slow=38
comp=Z,110nm,0.9s
CMAR Chiang Mai Arr 72.97 278 P P 01 05 29.0 +0.1
CMAR Chiang Mai Arr 72.97 278 *ce*P P 01 05 29.2 +0.3
CMAR pmax pmax
comp=Z,118nm,0.9s
LUNU Lund 73.02 355 *i* P P 01 05 28.0 -0.6
061Z Ochoppi 73.03 70 IAMs_20 IAMs_20 01 42 09.7
comp=Z,13μm,18.0s
EVN Everest 73.08 294 P P 01 05 30.5 +0.3
VORR Voronezh 73.12 338 *e*P P 01 05 26.9 -2.4
VORR *e*PPP PPP 01 09 54.3
VORR *e*S S 01 14 52.4 -1.8
VORR pmax pmax
comp=Z,130nm,0.7s
VORR smax smax
comp=E,250nm,7.4s
VORR MLR MLR
comp=Z,19μm,19.0s
GAR Garm 73.13 312 P P 01 05 29.6 -0.2
IDGL Inch Island, C 73.39 7 P P 01 05 30.5 -0.3
IDGL Inch Island, C 73.39 7 *e*P P 01 05 30.9 +0.1
IDGL IAmb IAmb 01 05 33.2
comp=Z,42nm,1.0s
EKA Eskdalemuir Ar 73.41 4 P P 01 05 30.4 -0.5
comp=Z,70nm,1.0s,baz=353,slow=4.7,SNR=54
comp=Z,70nm,1.0s
CCIG Comitan 73.42 85 P P 01 05 31.6 -0.2
CCIG IAmb IAmb 01 05 48.9
comp=Z,163nm,1.2s
ESK Eskdalemuir 73.42 5 P P 01 05 30.7 -0.3
ESK IAmb IAmb 01 05 33.2
comp=Z,156nm,1.2s
ESK Eskdalemuir 73.42 5 *e*P P 01 05 30.4 -0.6
ESK IAmb IAmb 01 05 34.0
comp=Z,51nm,1.2s
ESK Eskdalemuir 73.42 5 P P 01 05 30.7 -0.3
ESK pmax pmax
comp=Z,156nm,1.3s
ESK MLR MLR
comp=Z,8μm,19.0s
ESK Eskdalemuir 73.42 5 ⇑P P 01 05 31.1 +0.1
BSD Bornholm Skovb 73.45 354 *i* P P 01 05 31.1 0.0
CLGH Cloghs, Cushen 73.48 6 *e*P P 01 05 32.1 +0.7
CLGH IAmb IAmb 01 05 34.2
comp=Z,81nm,1.4s
LUWI Luwuk 73.53 247 P P 01 05 31.6 -0.6
LUWI Luwuk 73.53 247 P P 01 05 31.6 -0.6
LUWI Luwuk 73.53 247 P P 01 05 31.4 -0.8
LUWI Luwuk 73.53 247 P P 01 05 31.6 -0.6
LUWI Luwuk 73.53 247 ⇑P P 01 05 30.6 -1.6
ALCI Alchi Leh 73.54 304 *e*P P 01 05 33.6 +1.1
ALCI IAmb IAmb 01 05 36.8
comp=Z,376nm,1.2s
VSR Storozhevoye 73.55 338 *e*P P 01 05 30.8 -1.0
VSR *e*PPP PPP 01 09 56.2
VSR *e*S SKiKP 01 14 54.3 -4.8
VSR pmax pmax
comp=Z,150nm,0.9s
VSR smax smax
comp=N,7μm,19.9s
VSR MLR MLR
comp=Z,31μm,22.0s
NEWG New Galloway 73.56 5 *e*P P 01 05 31.0 -0.8
NEWG IAmb IAmb 01 05 33.6
comp=Z,24nm,0.8s
SAIH SAIHA 73.58 285 *e*P P 01 05 33.1 +0.5
SAIH IAmb IAmb 01 05 35.6
comp=Z,680nm,1.1s
RAR Rarotonga 73.67 165 LR LR 01 31 32.0
comp=Z,31μm,20.6s,baz=350,slow=30
SUW Suwalki 73.74 349 *e*P P 01 05 32.4 -0.4
SUW *e*S S 01 15 44.4 +43
SUW Suwalki 73.74 349 P P 01 05 32.0 -0.9

SUW Suwalki 73.74 349 P P 01 05 32.0 -0.9
SUW MLR MLR
comp=Z,24µm,22.0s
VORD Divnogorie 73.75 338 eP P 01 05 31.9 -1.1
VORD ePPP PPP 01 09 58.1
VORD eS SKiKP 01 14 58.1 -1.3
VORD pmax pmax
comp=Z,170nm,0.8s
VORD smax smax
comp=N,910nm,8.2s
VORD MLR MLR
comp=Z,12µm,22.0s
EDMD Edmundbyers 73.96 4 eP P 01 05 33.5 -0.7
EDMD IAmb IAmb 01 05 35.9
comp=Z,58nm,0.9s
APSI Ampana 74.07 248 P P 01 05 35.1 -0.2
comp=Z,5µmcomp=Z,329nm,1.3s
MPSI Mapaga 74.08 250 P P 01 05 35.2 -0.2
comp=Z,15µmcomp=Z,7µmcomp=Z,466nm,1.2s
SOR Soroa 74.10 73 P P 01 05 35.1 -0.4
SOR IAmb IAmb 01 05 44.7
comp=Z,131nm,1.1s
SOR Soroa 74.10 73 P P 01 05 35.1 -0.4
SOR pmax pmax
comp=Z,131nm,1.1s
SOR Soroa 74.10 73 eP P 01 05 31.1 -4.4
SOR eS SKiKP 01 15 03.9 +3.3
RGN Rugen 74.11 355 IAMs_20 IAMs_20 01 37 44.7
comp=Z,18µm,22.0s
BRDH Bariadhala 74.25 287 LR LR 01 42 43.1
comp=Z,8µm,18.0s,baz=32,slow=39
COEN Coen 74.32 222 P P 01 05 36.8 +0.1
COEN Coen 74.32 222 P P 01 05 36.5 -0.2
COEN IAmb IAmb 01 05 54.1
comp=Z,185nm,1.3s
COEN Coen 74.32 222 P P 01 05 36.8 +0.1
PETF Flores 74.35 82 P P 01 05 36.6 -0.4
PETF IAmb IAmb 01 05 54.2
comp=Z,112nm,0.8s
ILTH Belurgan, Co L 74.52 7 P P 01 05 36.9 -0.5
ILTH Belurgan, Co L 74.52 7 eP P 01 05 37.9 +0.5
ILTH IAmb IAmb 01 05 40.2
comp=Z,53nm,1.3s
SAUI Saumlaki 74.64 235 P P 01 05 39.7 +1.1
SAUI Saumlaki 74.64 235 P P 01 05 40.8 +2.2
SAUI Saumlaki 74.64 235 P P 01 05 39.8 +1.1
BSEG Bad Segeberg 74.87 356 eP P 01 05 41.0 +1.5
comp=Z,48nm,0.9s,baz=5.7,slow=5.5
IGLA Glengowla, Co 74.87 8 P P 01 05 38.9 -0.6
IGLA Glengowla, Co 74.87 8 eP P 01 05 38.1 -1.3
DZM Mont Dzumac 74.87 197 LR LR 01 35 42.3
comp=Z,13µm,18.6s,baz=19,slow=33
DZM Mont Dzumac 74.87 197 eP P 01 05 40.3 +0.4
comp=Z,325nm,1.5s
DZM Mont Dzumac 74.87 197 ePP PP 01 08 19.2 -8.8
comp=Z,890nm,32.5s
DZM eS S 01 15 19.8 +5.2
comp=Z,7µm,24.9s
DZM eSS SS 01 20 10.3 +6.5
comp=Z,7µm,26.9s
DZM eLQ LQ 01 25 05.0
comp=Z,23µm,29.4s
DZM eLR LR 01 28 48.8
comp=Z,29µm,26.9s
CAMR Camarioca 74.88 72 eP P 01 05 37.8 -2.2
CAMR eS S 01 15 11.9 -3.0
RTAL Retalhuleu 75.03 85 P P 01 05 40.9 0.0
RTAL IAmb IAmb 01 05 57.3
comp=Z,299nm,1.0s
GKP Gorka Klasztor 75.10 352 eP P 01 05 40.7 0.0
GKP eS S 01 15 13.6 -2.8
ONTNC Ouen Toro 75.10 197 P P 01 05 41.4 +0.4
ONTNC IAmb IAmb 01 05 58.8
comp=Z,215nm,1.5s
ONTNC IAMs_20 IAMs_20 01 33 43.8
comp=Z,16µm,20.0s
PCI Palu 75.12 249 P P 01 05 40.9 -0.6
comp=Z,15µmcomp=Z,11µmcomp=Z,573nm,1.1s
JOSI Joshimath 75.13 300 eP P 01 05 41.0 -0.6
JOSI IAmb IAmb 01 05 46.1
comp=Z,270nm,1.1s
TSSA Tissa 75.15 304 eP P 01 05 41.8 0.0
TSSA IAmb IAmb 01 05 44.2
comp=Z,226nm,1.3s
DSB Dublin 75.29 7 P P 01 05 40.9 -1.0
DSB Dublin 75.29 7 P P 01 05 41.9 -0.1
DSB IAmb IAmb 01 05 44.2
comp=Z,163nm,1.3s
DSB Dublin 75.29 7 P P 01 05 41.6 -0.3
DSB Dublin 75.29 7 eP P 01 05 41.5 -0.4
DSB Dublin 75.29 7 ⇓P P 01 05 41.8 -0.1
KHAM Kharkiv 75.35 339 P P 01 05 42.0 -0.4
APG El Apazote 75.43 84 LR LR 01 36 11.1
comp=Z,1µm,20.9s,baz=252,slow=34
LGTI Lohaghat 75.62 299 eP P 01 05 44.5 +0.3
LGTI IAmb IAmb 01 05 48.1
comp=Z,237nm,1.1s
R9F13 Warsaw-Wawer 75.74 349 eP P 01 05 44.6 +0.1
comp=Z,1.9nm,0.7s
R9F13 ePP PP 01 08 33.7 0.0
R9F13 eS S 01 15 22.7 -0.9
R9F13 eSS SS 01 20 16.4 +2.3
GORT1 Trebel 75.77 356 eP P 01 05 46.0 +1.4
comp=Z,161nm,1.2s,baz=5.7,slow=5.5
JMU Jammu 75.89 305 eP P 01 05 46.3 +0.6
JMU IAmb IAmb 01 05 49.7
comp=Z,391nm,0.9s
RNPP9 Sopachiv 75.91 346 P P 01 05 45.4 -0.1
TLWR Talawar 75.95 304 eP P 01 05 46.0 -0.1
TLWR IAmb IAmb 01 05 48.4
comp=Z,409nm,1.4s
SMLA Simla 75.96 302 eP P 01 05 45.8 -0.3
SMLA IAmb IAmb 01 05 50.5
comp=Z,354nm,0.6s
NIL Nilore 75.99 307 P P 01 05 46.5 +0.2
NIL Nilore 75.99 307 P P 01 05 46.5 +0.2
NIL pmax pmax
comp=Z,832nm,1.3s
NIL MLR MLR
comp=Z,23µm,20.0s
RNPP8 Varash 75.99 346 P P 01 05 45.9 0.0
AK23 Malin Array Si 76.02 344 P P 01 05 45.6 -0.5
AK21 Malin Array Si 76.02 344 P P 01 05 45.5 -0.6
AK22 Malin Array Si 76.03 344 P P 01 05 45.6 -0.6
AK03 Malin Array Si 76.04 344 P P 01 05 45.5 -0.7
AK04 Malin Array Si 76.05 344 P P 01 05 45.7 -0.6
AK20 Malin Array Si 76.06 344 P P 01 05 45.8 -0.5
AKASG Malin Array Be 76.06 344 P P 01 05 44.6 -1.7
comp=Z,12nm,0.4s,baz=18,slow=5.9,SNR=50
AKASG PKPPKP P'P'df 01 33 02.8 -7.0
comp=Z,0.1nm,0.3s,baz=234,slow=0.7,SNR=5.4
AKASG LR LR 01 42 45.7
comp=Z,23µm,19.6s,baz=16,slow=39
comp=Z,12nm,0.4s
AKASG Malin Array Be 76.06 344 P P 01 05 45.0 -1.4
AKASG Malin Array Be 76.06 344 ceP P 01 05 45.9 -0.5
AKASG pmax pmax
comp=Z,25nm,0.6s
AKBB Malin Array Si 76.06 344 P P 01 05 45.2 -1.1
AKBB Malin Array Si 76.06 344 ceP P 01 05 45.0 -1.4
AKBB pmax pmax
comp=Z,62nm,1.0s
AKBB Malin Array Si 76.06 344 P P 01 05 45.5 -0.9
AK18 Malin Array Si 76.07 344 P P 01 05 45.8 -0.6
KIEV Kiev 76.07 344 ⇓P P 01 05 45.7 -0.8
KIEV Kiev 76.07 344 iP P 01 05 45.1 -1.3
SNR=11
KIEV Kiev 76.07 344 P P 01 05 45.6 -0.8
KIEV Kiev 76.07 344 ⇑P P 01 05 44.5 -1.9
KIEV Kiev 76.07 344 P P 01 05 45.5 -0.9
comp=Z,11µmcomp=Z,236nm,1.0s
AK01 Malin Array Si 76.07 344 P P 01 05 45.8 -0.6
CWF Charnwood Fore 76.08 4 eP P 01 05 46.8 +0.4
CWF IAmb IAmb 01 05 50.0
comp=Z,30nm,1.0s
RNPP5 Staryi Chortor 76.09 346 P P 01 05 46.2 -0.3
PLTM Poltava 76.09 340 P P 01 05 45.7 -0.8
RETH Rethem/Aller, 76.10 357 eP P 01 05 47.8 +1.3
comp=Z,136nm,1.4s,baz=5.7,slow=5.5
AK17 Malin Array Si 76.11 344 P P 01 05 46.2 -0.4
DDI Dehra Dun 76.12 301 eP P 01 05 47.0 -0.2
DDI IAmb IAmb 01 05 50.4
comp=Z,897nm,1.2s
IWEX Carrickbyrne, 76.13 7 P P 01 05 47.6 +0.9
IWEX Carrickbyrne, 76.13 7 eP P 01 05 47.0 +0.3

BHK Bhakra 76.13 303 eP P 01 05 47.2 +0.1
BHK IAmb IAmb 01 05 50.9
comp=Z,862nm,1.1s
RUE Ruedersdorf 76.14 354 eP P 01 05 47.7 +0.9
comp=Z,139nm,1.1s,baz=5.7,slow=5.5
BEL Belsk 76.16 350 eP P 01 05 48.0 +1.1
BEL eS S 01 15 44.9 +17
VAL Valentia 76.25 9 P P 01 05 47.4 0.0
VAL Valentia 76.25 9 P P 01 05 47.2 -0.2
VAL Valentia 76.25 9 ⇑P P 01 05 47.9 +0.5
GAYA Gaya 76.40 293 eP P 01 05 49.0 +0.3
GAYA IAmb IAmb 01 05 51.5
comp=Z,818nm,1.1s
MGV Manicaragua 76.43 72 eP P 01 05 47.1 -1.8
MGV eS S 01 15 26.5 -5.5
FLTG Flechtingen 76.44 356 ⇑P P 01 05 47.2 -1.2
FLTG Flechtingen 76.44 356 eP P 01 05 49.0 +0.6
comp=Z,73nm,0.9s,baz=5.7,slow=5.5
FLTG eS S 01 15 31.2 0.0
baz=7.1,slow=11
MTO3 Montecristo 76.58 84 P P 01 05 48.8 -1.3
MTO3 IAmb IAmb 01 06 06.6
comp=Z,98nm,1.0s
IBBN Ibbenburen 76.58 358 ⇑P P 01 05 48.0 -1.2
IBBN Ibbenburen 76.58 358 eP P 01 05 50.6 +1.4
comp=Z,158nm,0.9s,baz=5.7,slow=5.5
IBBN eS S 01 15 33.6 +0.8
baz=7.1,slow=11
TKRD Thakurdwara 76.61 300 eP P 01 05 49.8 0.0
ASSE Asse, Remlinge 76.66 356 eP P 01 05 50.7 +1.0
comp=Z,81nm,1.1s,baz=5.7,slow=5.5
ASSE eS S 01 15 34.6 +1.1
baz=7.1,slow=11
BOK Bokaro 76.80 291 eP P 01 05 51.6 +0.6
BOK IAmb IAmb 01 05 54.3
comp=Z,742nm,1.2s
TTSI Tana Toraja 76.85 248 P P 01 05 51.3 0.0
comp=Z,11µmcomp=Z,8µmcomp=Z,491nm,1.7s
BBSR BB Station 76.92 54 P P 01 05 50.6 -0.9
BBSR IAmb IAmb 01 06 08.9
comp=Z,175nm,0.9s
BBSR BB Station 76.92 54 IAMs_20 IAMs_20 01 39 20.2
comp=Z,13µm,21.0s
BBSR BB Station 76.92 54 ⇑P P 01 05 51.7 +0.2
CLZ Clausthal 76.96 356 eP P 01 05 52.9 +1.3
comp=Z,108nm,0.9s,baz=5.7,slow=5.5
CLZ eS S 01 15 37.9 +0.8
baz=7.1,slow=11
SBUM Sibu 77.01 257 P P 01 05 52.5 +0.3
SBUM IAmb IAmb 01 05 57.3
comp=Z,140nm,1.1s
SBUM Sibu 77.01 257 P P 01 05 53.1 +0.9
LUBAR Lubar, Ukraine 77.06 345 P P 01 05 50.2 -1.9
BKB Balikpapan 77.13 251 P P 01 05 53.0 +0.1
BKB Balikpapan 77.13 251 P P 01 05 54.6 +1.7
BKB Balikpapan 77.13 251 P P 01 05 53.5 +0.6
comp=Z,691nm,2.0s
BBSI Bau Bau 77.27 244 P P 01 05 54.9 +1.3
comp=Z,17µmcomp=Z,11µmcomp=Z,406nm,1.2s
GTTG Gottingen 77.28 356 eP P 01 05 54.6 +1.4
comp=Z,162nm,1.2s,baz=5.7,slow=5.5
GTTG eS S 01 15 41.3 +0.9
baz=7.1,slow=11
KBU Kabul Universi 77.31 310 P P 01 05 51.8 -2.2
KBL Kabul 77.33 310 P P 01 05 52.9 -1.2
KBL IAmb IAmb 01 05 56.4
comp=Z,328nm,1.1s
KBL Kabul 77.33 310 P P 01 05 53.1 -1.1
SNR=178
KBL S S 01 15 34.7 -7.3
KBL Kabul 77.33 310 P P 01 05 52.9 -1.2
KBL pmax pmax
comp=Z,328nm,1.1s
CLL Collm 77.36 354 P P 01 05 52.6 -1.1
CLL IAMs_20 IAMs_20 01 39 42.6
comp=Z,12µm,21.0s
CLL Collm 77.36 354 iP P 01 05 53.8 +0.1
CLL pmax pmax
comp=Z,68nm,1.0s
CLL Collm 77.36 354 eP P 01 05 54.0 +0.4
comp=Z,55nm,0.8s,baz=5.7,slow=5.5
CLL eS S 01 15 40.3 -1.1
baz=7.1,slow=11
CLL Collm 77.36 354 iP P 01 05 53.8 +0.1
comp=Z,68nm,1.0s
CLL ePmax 01 05 54.0
CLL ePlp 01 05 55.0
comp=Z,4µm,14.1s
CLL ipP pP 01 06 00.0 -3.0
CLL ix x 01 06 13.9
comp=Z,66nm,1.1s
CLL ePPP PP 01 08 42.0 -5.3
comp=Z,1µm,10.0s
CLL ePPPP PPP 01 10 30.0
comp=Z,2µm,13.3s
CLL eS S 01 15 40.0 -1.3
CLL eS S 01 15 40.0 -1.3
CLL ePS PnS 01 16 25.0 +2.0
CLL eSS SS 01 20 50.0 +11
CLL L L 01 39 00.0
comp=Z,12µm,21.4s
BUG Bochum--Univer 77.46 358 eP P 01 05 55.0 +0.8
comp=Z,264nm,1.6s,baz=5.7,slow=5.5
BUG eS S 01 15 43.4 +1.1
baz=7.1,slow=11
NEUB Neuenburg 77.53 355 eP P 01 05 55.6 +1.0
comp=Z,188nm,1.0s,baz=5.7,slow=5.5
NEUB eS S 01 15 43.4 +0.3
baz=7.1,slow=11
KSP Ksiaz 77.58 352 eP P 01 05 54.8 -0.1
KSP eS S 01 16 35.5 +52
MTSU Mount Surprise 77.63 219 P P 01 05 56.0 +0.5
MTSU Mount Surprise 77.63 219 P P 01 05 55.8 +0.3
SPSI Sidrap Palu 77.63 247 P P 01 05 55.6 0.0
comp=Z,15µmcomp=Z,6µmcomp=Z,212nm,1.2s
KASTN Kahler Asten 77.67 357 eP P 01 05 56.5 +1.0
comp=Z,60nm,1.1s,baz=5.7,slow=5.5
KASTN eS S 01 15 46.4 +1.6
baz=7.1,slow=11
TV1H Townsville Har 77.71 216 P P 01 05 56.8 +0.9
BRG Berggiesshubel 77.73 354 eP P 01 05 56.3 +0.6
comp=Z,77nm,1.0s,baz=5.7,slow=5.5
BNSI Bone 77.79 247 P P 01 05 56.7 +0.2
comp=Z,6µmcomp=Z,223nm,1.1s
FSCY Frank Sound, G 77.84 74 eS SKiKP 01 15 17.2 +11
CHVC Chvalec 77.86 352 ⇑iP P 01 05 55.3 -1.2
CHVC MLR MLR
comp=Z,18µm,22.6s
CHVC Chvalec 77.86 352 ⇑iP P 01 05 55.3 -1.2
CHVC AMS AMS 01 37 40.0
comp=Z,18µm,22.6s
NDI New Delhi 77.86 301 eP P 01 05 56.1 -0.8
NDI IAmb IAmb 01 06 00.7
comp=Z,140nm,0.8s
OJC Ojcow 77.86 350 eP P 01 05 57.1 +0.5
OJC eS S 01 16 34.6 +48
OJC Ojcow 77.86 350 P P 01 05 56.1 -0.5
OJC Ojcow 77.86 350 P P 01 05 56.1 -0.5
OSTC Ostas 77.88 352 eP P 01 05 56.1 -0.5
OSTC MLR MLR
comp=Z,18µm,22.6s
OSTC Ostas 77.88 352 ⇑eP P 01 05 56.1 -0.5
OSTC AMS AMS 01 37 40.0
comp=Z,18µm,22.6s
NPLP NPLP New Delhi 77.92 301 eP P 01 05 57.4 +0.1
UPC Upice 77.94 352 ⇑iP P 01 05 56.6 -0.4
UPC MLR MLR
comp=Z,19µm,22.4s
UPC Upice 77.94 352 ⇑iP P 01 05 56.6 -0.4
UPC AMS AMS 01 37 40.0
comp=Z,19µm,22.4s
TBI Tubuai 77.95 156 eP P 01 06 01.5 +4.4
comp=Z,380nm,1.4s
TBI Tubuai 77.95 156 ePP PP 01 08 49.4 -4.3
comp=Z,5µm,33.5s
TBI eS S 01 15 48.4 +0.4
comp=Z,38µm,34.0s
TBI eSS SS 01 20 51.1 +1.0
comp=Z,23µm,27.2s
TBI eLQ LQ 01 26 50.9
comp=Z,9µm,34.2s
TBI eLR LR 01 30 02.3
comp=Z,118µm,23.5s
TBI eLR LR 01 30 06.5
comp=Z,31µm,23.2s

ALBI Allahabad 77.97 295 eP P 01 05 56.6 -0.9
ALBI IAmb IAmb 01 05 59.2
comp=Z,831nm,0.9s
UBBA Unterbreizbach 78.00 356 eP P 01 05 59.0 +1.9
comp=Z,136nm,1.6s,baz=5.7,slow=5.5
UBBA eS S 01 15 48.7 +0.6
baz=7.1,slow=11
HSKC Hora Svate Kat 78.03 354 ⇑iP P 01 05 56.7 -0.8
HSKC AMS AMS 01 35 10.0
comp=Z,14µm,25.1s
PVCC Panska Ves 78.03 353 ⇑iP P 01 05 56.7 -0.8
PVCC MLR MLR
comp=Z,15µm,22.8s
PVCC Panska Ves 78.03 353 ⇑iP P 01 05 56.7 -0.8
PVCC AMS AMS 01 37 20.0
comp=Z,15µm,22.8s
RICC Richard 78.05 354 ⇑eP P 01 05 57.7 +0.2
RICC AMS AMS 01 35 30.0
comp=Z,15µm,26.3s
AYAN Aya Nagar 78.07 301 eP P 01 05 56.9 -1.1
AYAN IAmb IAmb 01 06 01.2
comp=Z,129nm,0.8s
MTKI Muara Teweh, K 78.07 253 P P 01 05 58.4 +0.2
comp=Z,14µmcomp=Z,14µmcomp=Z,412nm,2.3s
KDU Kakadu 78.07 232 P P 01 05 58.1 +0.1
DPC Dobruska-Polom 78.07 352 eP P 01 05 57.4 -0.3
DPC MLR MLR
comp=Z,17µm,24.7s
DPC Dobruska-Polom 78.07 352 ⇑eP P 01 05 57.4 -0.3
DPC AMS AMS 01 37 20.0
comp=Z,17µm,24.7s
DPC Dobruska-Polom 78.07 352 P P 01 05 57.7 -0.1
comp=Z,3µmcomp=Z,76nm,1.5s
KWP Kalwaria Pacla 78.09 348 eP P 01 05 58.3 +0.5
KWP eS SKSac 01 16 05.1 -4.2
KWP Kalwaria Pacla 78.09 348 P P 01 05 57.5 -0.3
comp=Z,4µmcomp=Z,132nm,1.1s
MOX Moxa 78.10 355 eP P 01 05 58.7 +0.9
comp=Z,74nm,1.1s,baz=5.7,slow=5.5
MOX eS S 01 15 47.7 -1.7
baz=7.1,slow=11
MOX eL L 01 39 43.2
comp=Z,7µm,20.9s
BEBN Eben Emael 78.13 359 dP P 01 05 58.1 +0.2
comp=Z,62nm,0.9s
UCC Uccle 78.13 0 P P 01 05 57.5 -0.4
UCC Uccle 78.13 0 dP P 01 05 58.0 0.0
comp=Z,31nm,0.9s
UCC Uccle 78.13 0 P P 01 05 57.5 -0.4
UCC pmax pmax
comp=Z,45nm,0.9s
TGUH Tegucigalpa,Un 78.13 82 IAMs_20 IAMs_20 01 36 19.4
comp=Z,11µm,22.0s
RAC Raciborz 78.17 351 eP P 01 05 58.0 -0.2
RAC AMS AMS 01 39 33.0
comp=Z,31nm,22.3s
RAC Raciborz 78.17 351 eP P 01 05 58.0 -0.2
RAC MLR MLR
comp=Z,31µm,22.3s
PLN Plauen 78.23 355 eP P 01 05 59.3 +0.7
comp=Z,19nm,1.0s,baz=5.7,slow=5.5
GOF Gofitskoye 78.23 333 c iP P 01 05 58.3 -0.4
GOF eS S 01 15 51.3 +0.3
TANN Tannenbergstha 78.28 355 eP P 01 05 59.7 +0.8
comp=Z,100nm,1.4s,baz=5.7,slow=5.5
TANN eS S 01 15 51.8 +0.3
baz=7.1,slow=11
KRLC Kraliky 78.31 352 ⇑iP P 01 05 58.2 -0.8
KRLC MLR MLR
comp=Z,19µm,24.5s
KRLC Kraliky 78.31 352 ⇑iP P 01 05 58.2 -0.8
KRLC AMS AMS 01 37 50.0
comp=Z,19µm,24.5s
MEM Membach 78.31 359 dP P 01 05 58.8 -0.2
comp=Z,59nm,1.1s
ERBR Yeremizino-Bor 78.33 335 eP P 01 05 58.9 -0.3
ERBR e 01 08 57.4
ERBR eS S 01 15 51.4 -0.6
ERBR e 01 16 11.3
ERBR pmax pmax
comp=Z,132nm,1.1s
BTNL Ternell 78.33 359 dP P 01 05 58.5 -0.6
comp=Z,44nm,1.0s
BSTI Sart Tilman 78.34 359 dP P 01 05 58.8 -0.4
comp=Z,12nm,0.9s
STEB Steborice 78.35 351 ⇑eP P 01 05 58.5 -0.8
SHIU Shidnytsya 78.41 347 P P 01 05 59.3 -0.3
OKC Ostrava-Krasne 78.41 351 ⇑iP P 01 05 58.7 -0.9
OKC MLR MLR
comp=Z,22µm,22.4s
OKC Ostrava-Krasne 78.41 351 ⇑iP P 01 05 58.7 -0.9
OKC AMS AMS 01 39 10.0
comp=Z,22µm,22.4s
CCA1 Carnmenellis 78.42 6 eP P 01 05 58.7 -0.9
CCA1 IAmb IAmb 01 06 01.8
comp=Z,22nm,0.6s
CCCC Cccc 78.44 71 eP P 01 05 59.0 -1.1
CCCC eS S 01 15 55.7 +2.0
STHS Stebnicka Huta 78.49 349 eP P 01 05 59.7 -0.3
STHS pmax pmax
comp=Z,38nm,1.2s
STHS Stebnicka Huta 78.49 349 eP P 01 05 59.7 -0.3
KAPI Kappang 78.49 247 LR LR 01 40 15.5
comp=Z,804nm,19.1s,baz=30,slow=35
KAPI Kappang 78.49 247 P P 01 06 00.9 +0.5
KAPI Kappang 78.49 247 P P 01 06 00.9 +0.5
KAPI pmax pmax
comp=Z,468nm,1.5s
PRA Prague 78.50 353 ⇑iP P 01 05 59.4 -0.6
PRA MLR MLR
comp=Z,16µm,23.6s
PRA Prague 78.50 353 ⇑iP P 01 05 59.4 -0.6
PRA AMS AMS 01 36 40.0
comp=Z,16µm,23.6s
BCLA Clavier 78.51 359 dP P 01 06 00.1 0.0
comp=Z,42nm,1.1s
MORC Moravsky Berou 78.53 351 P P 01 05 59.6 -0.7
MORC Moravsky Berou 78.53 351 ⇑P P 01 06 00.1 -0.3
MORC Moravsky Berou 78.53 351 eP P 01 05 59.1 -1.2
MORC eS S 01 15 38.6 -16
MORC Moravsky Berou 78.53 351 P P 01 06 00.0 -0.3
MORC Moravsky Berou 78.53 351 ⇑P P 01 05 59.3 -1.0
BGES Gesves 78.54 360 dP P 01 05 60.0 -0.3
comp=Z,51nm,1.0s
BHOU Houvegnez 78.57 359 dP P 01 06 00.9 +0.4
comp=Z,17nm,0.9s
PRU Pruhonice 78.57 353 ⇑iP P 01 05 59.3 -1.1
PRU MLR MLR
comp=Z,17µm,24.5s
PRU Pruhonice 78.57 353 ⇑iP P 01 05 59.3 -1.1
PRU AMS AMS 01 36 20.0
comp=Z,17µm,24.5s
NIE Niedzica 78.60 349 eP P 01 06 01.6 +1.0
NIE eS S 01 16 04.7 +10
NIE Niedzica 78.60 349 P P 01 06 00.8 +0.1
BMRD Maredsous 78.63 360 dP P 01 06 00.3 -0.5
comp=Z,86nm,0.8s
DRS Darwin Rock St 78.63 233 P P 01 06 01.5 +0.4
TNS Taunus Mts 78.65 357 eP P 01 06 02.0 +1.0
comp=Z,69nm,0.9s,baz=5.7,slow=5.5
TNS eS S 01 15 55.5 +0.1
baz=7.1,slow=11
BAL3X Bal3x, Balta 78.66 343 P P 01 06 00.8 -0.2
CTA Charters Tower 78.67 216 LR LR 01 39 01.5
comp=Z,123nm,18.9s,baz=22,slow=34
AUDHS Darwin High Sc 78.67 233 P P 01 06 01.1 -0.2
KUDL Kundal 78.68 301 eP P 01 06 01.0 -0.3
KUDL IAmb IAmb 01 06 04.5
comp=Z,457nm,1.0s
SORM Soroca 78.69 344 ⇓P P 01 06 00.2 -1.0
SORM Soroca 78.69 344 P P 01 06 00.1 -1.0
MANZ Manzenberg 78.73 355 eP P 01 06 02.1 +0.8
comp=Z,12nm1.1,0s,baz=5.7,slow=5.5
MANZ eS S 01 15 56.7 +0.4
baz=7.1,slow=11
RCHB Rochefort 78.77 359 dP P 01 06 00.2 -1.3
comp=Z,48nm,1.0s
MAK Makhachkala 78.79 329 eP P 01 05 59.1 -2.6
MAK e 01 09 00.8
MAK eS S 01 15 53.6 -3.3
MAK eSS SS 01 21 02.1 +1.6
MAK pmax pmax
comp=Z,260nm,1.2s
MAK pmax pmax
comp=Z,8µm,9.6s

MAK smax smax
comp=N,2µm,3.9s
MAK smax smax
comp=E,3µm,6.2s
DOU Dourbes 78.83 360 *d*P **P 01 06 01.7 -0.2**
comp=Z,50nm,1.2s
MTN Manton Dam 78.87 233 P **P 01 06 02.1 -0.3**
comp=Z,0.0nmcomp=Z,245nm,1.1s
MTN Manton Dam 78.87 233 P **P 01 06 02.4 0.0**
MTN IAmb IAmb 01 06 20.4
comp=Z,188nm,0.8s
MAUC Maruska 78.91 351⇑ *e*P **P 01 06 02.4 0.0**
ROTZ Rotzenmuhle 78.94 355 *e*P **P 01 06 03.5 +1.0**
comp=Z,18nm,1.1s,baz=5.7,slow=5.5
LANS Liptovska Anna 78.95 350 *e*P **P 01 06 03.0 +0.4**
LANS pmax pmax
comp=Z,32nm,1.1s
LANS Liptovska Anna 78.95 350 *e*P **P 01 06 03.0 +0.4**
BSSI Bau Bau, Buton 78.98 245 P **P 01 06 02.8 -0.3**
comp=Z,13µmcomp=Z,7µmcomp=Z,260nm,2.0s
VRAC Vranov 79.08 352 LR LR 01 42 43.2
comp=Z,12µm,20.2s,baz=3.5,slow=37
VRAC Vranov 79.08 352⇑P **P 01 06 03.1 -0.3**
VRAC Vranov 79.08 352 *e*P **P 01 06 02.5 -0.8**
VRAC *e*S S 01 15 43.4 -17
VRAC Vranov 79.08 352 P **P 01 06 03.0 -0.3**
UZHM Uzhgorod 79.13 348 P **P 01 06 03.0 -0.5**
TREC Trest 79.19 353⇑AMS AMS 01 37 30.0
comp=Z,19µm,24.1s
MUKU Mukachevo 79.25 348 P **P 01 06 04.4 +0.2**
LABN Labinsk 79.26 334 *e*P **P 01 06 04.2 -0.1**
LABN *e* 01 09 00.3
LABN *e*S **S 01 16 02.0 +0.1**
LABN pmax pmax
comp=Z,51nm,1.0s
WLF Walferdange 79.26 359 P **P 01 06 03.6 -0.6**
WLF Walferdange 79.26 359 P **P 01 06 04.7 +0.5**
WLF IAMs_20 IAMs_20 01 48 05.6
comp=Z,10µm,21.0s
WLF Walferdange 79.26 359 *d*P **P 01 06 04.9 +0.7**
comp=Z,61nm,0.8s
WLF Walferdange 79.26 359 P **P 01 06 04.7 +0.5**
WLF pmax pmax
comp=Z,69nm,0.8s
WLF Walferdange 79.26 359⇑P **P 01 06 04.9 +0.7**
WLF Walferdange 79.26 359 *e*P **P 01 06 05.7 +1.5**
comp=Z,76nm,0.9s,baz=5.7,slow=5.5
WLF *e*S **S 01 16 03.0 +1.2**
baz=7.1,slow=11
STKI Sintang 79.34 257 P **P 01 06 05.0 -0.1**
comp=Z,13µmcomp=Z,11µmcomp=Z,287nm,1.6s
KVAR Kislovodsk Arr 79.34 333 LR LR 01 46 02.1
comp=Z,10µm,21.7s,baz=269,slow=39
KRUC Moravsky 79.34 352 *e*P **P 01 06 03.8 -0.9**
KRUC *e*S **S 01 16 00.5 -2.2**
KIV Kislovodsk 79.34 333 P **P 01 06 04.9 0.0**
KIV IAMs_20 IAMs_20 01 44 59.0
comp=Z,15µm,21.0s
KIV Kislovodsk 79.34 333 P **P 01 06 04.0 -1.0**
KIV *e*S **S 01 15 58.2 -4.9**
KIV Kislovodsk 79.34 333⇑P **P 01 06 04.5 -0.5**
KIV Kislovodsk 79.34 333 *i*P **P 01 06 04.5 -0.5**
SNR=21
KIV Kislovodsk 79.34 333 *e*P **P 01 06 04.2 -0.7**
KIV *e* 01 09 02.2
KIV *e*PPP PPP 01 10 54.1
KIV *e*S **S 01 16 02.4 -0.7**
KIV *e*SS **SS 01 21 10.5 +1.5**
KIV *e*SSS SSS 01 24 36.2
KIV pmax pmax
comp=Z,59nm,1.1s
KIV pmax pmax
comp=Z,401nm,3.2s
KIV MLR MLR
comp=Z,10µm,19.0s
JAVC Velka Javorina 79.43 351 *e*P **P 01 06 05.0 -0.2**
JAVC *e*S **S 01 16 03.9 +0.2**
BERU Beregovo 79.47 348 P **P 01 06 05.2 -0.2**
KBZ Khabaz 79.49 333 P **P 01 06 05.2 -0.4**
comp=Z,25nm,0.9s,baz=78,slow=1.3,SNR=33
KBZ LR LR 01 45 17.4
comp=Z,15µm,22.0s,baz=19,slow=39
comp=Z,25nm,0.9s
KBZ Khabaz 79.49 333*c**e*P **P 01 06 05.4 -0.2**
KBZ pmax pmax
comp=Z,29nm,0.9s
KHC Kasperske Hory 79.49 354 P **P 01 06 05.5 -0.1**
KHC IAMs_20 IAMs_20 01 46 51.0
comp=Z,10µm,19.0s
KHC Kasperske Hory 79.49 354⇑ *i*P **P 01 06 05.0 -0.6**
KHC *e* 01 06 20.5
KHC *e*S **S 01 16 02.8 -1.6**
KHC MLR MLR
comp=Z,16µm,25.5s
KHC Kasperske Hory 79.49 354⇑ *i*P **P 01 06 05.0 -0.6**
KHC *ex* x 01 06 20.5
KHC *e*S **S 01 16 02.8 -1.6**
KHC AMS AMS 01 36 10.0
comp=Z,16µm,25.5s
KECS Kecovo 79.50 349 *e*P **P 01 06 06.5 +1.0**
NCK Nalchik 79.50 332*c* *i*P **P 01 06 06.0 +0.3**
NCK pmax pmax
comp=Z,157nm,1.4s
WET Wettzell 79.53 354 *e*P **P 01 06 06.7 +0.9**
comp=Z,66nm,1.3s,baz=5.7,slow=5.5
BWNR Bhubaneshwar 79.54 289 *e*P **P 01 06 06.8 +0.6**
BWNR IAmb IAmb 01 06 10.3
comp=Z,639nm,1.0s
JHNI Jhansi 79.67 298 *e*P **P 01 06 05.6 -1.2**
JHNI IAmb IAmb 01 06 08.0
comp=Z,620nm,1.2s
BUR08 Bucovina Ar. S 79.68 346 P **P 01 06 06.1 -0.6**
KIS Kishinev 79.71 343⇑P **P 01 06 06.3 -0.4**
KIS Kishinev 79.71 343 P **P 01 06 06.2 -0.4**
KIS Kishinev 79.71 343⇑ *i*P **P 01 06 05.0 -1.7**
comp=Z,2µm,5.4s
KIS Kishinev 79.71 343 *e*PP PP 01 09 04.0 -3.0
BURAR Bucovina Array 79.71 346 P **P 01 06 06.0 -0.9**
BURAR Bucovina Array 79.71 346 ⇓P **P 01 06 05.9 -0.9**
BURAR Bucovina Array 79.71 346 P **P 01 06 05.8 -1.0**
IASR Iasi 79.75 344 ⇓P **P 01 06 06.1 -0.8**
CKRC Cesky Krumlov 79.75 353⇑ *i*P **P 01 06 06.0 -1.0**
CKRC MLR MLR
comp=Z,14µm,25.9s
CKRC Cesky Krumlov 79.75 353⇑ *i*P **P 01 06 06.0 -1.0**
CKRC AMS AMS 01 36 30.0
comp=Z,14µm,25.9s
LMGC Las Mercedes 79.76 71 *e*P P 01 07 16.1 +69
LMGC *e*S **S 01 16 06.4 -1.5**
GEC2 GERESS Array S 79.77 354 P **P 01 06 06.9 -0.2**
GEC2 GERESS Array S 79.77 354 *e*P **P 01 06 07.6 +0.5**
comp=Z,53nm,1.0s,baz=5.7,slow=5.5
GEC2 *e*S **S 01 16 06.1 -1.3**
baz=7.1,slow=11
GERES GERESS Array B 79.77 354 P **P 01 06 06.6 -0.5**
comp=Z,23nm,0.8s,baz=19,slow=4.9,SNR=96
GERES PKKPbc **PKKPbc 01 24 50.4 -1.0**
comp=Z,0.6nm,0.7s,baz=161,slow=2.4,SNR=4.6
GERES PKPPKP P'P'df 01 32 52.5 -11
comp=Z,0.5nm,0.8s,baz=160,slow=4.3,SNR=3.5
GERES LR LR 01 41 20.9
comp=Z,8µm,21.1s,baz=13,slow=36
comp=Z,23nm,0.8s
MILM Milestii Mici 79.78 343⇑P **P 01 06 06.0 -1.1**
MILM Milestii Mici 79.78 343 P **P 01 06 06.0 -1.1**
MILM Milestii Mici 79.78 343⇑ *i*P P 01 06 03.0 -4.1
comp=Z,5µm,7.6s
MILM Milestii Mici 79.78 343 *e*PP PP 01 09 03.0 -4.6
SMOL Smolenice 79.79 351 *e*P **P 01 06 08.4 +1.2**
SMOL pmax pmax
comp=Z,25nm,1.1s
SIUN Universidad Ur 79.94 81 P **P 01 06 08.5 0.0**
SIUN IAmb IAmb 01 06 28.0
comp=Z,82nm,1.0s
MODS Modra-Piesok 79.95 351 *e*P **P 01 06 08.0 0.0**
MODS pmax pmax
comp=Z,185nm,1.4s
MODS Modra-Piesok 79.95 351 *e*P **P 01 06 08.0 0.0**
ANN Anapa 79.96 337 *e*P **P 01 06 07.0 -1.1**
ANN *e* 01 09 11.2
ANN *e*S **S 01 16 08.3 -1.0**
ANN pmax pmax
comp=Z,32nm,0.8s
ANN MLR MLR
comp=Z,13µm,22.0s
ANN MLR MLR
comp=N,33µm,18.0s
ANN MLR MLR
comp=E,4µm,14.0s
PURM Purcari 79.96 342⇑P **P 01 06 08.2 +0.1**
MMRI Maumere 80.04 243 P **P 01 06 07.9 -0.9**
MMRI Maumere 80.04 243 P **P 01 06 08.5 -0.4**
AKT Akhty 80.05 328 *e*P **P 01 06 08.3 -0.5**
AKT *e* 01 06 13.5
AKT *e* 01 09 11.4
AKT *e*PPP PPP 01 11 03.6
AKT *e*S **S 01 16 08.5 -2.2**
AKT *e* 01 16 27.9
AKT *e*SS **SS 01 21 16.6 -3.1**
AKT pmax pmax
comp=Z,838nm,1.6s
AKT pmax pmax
comp=Z,200nm,0.9s
AKT pmax pmax
comp=N,47nm,0.7s
AKT pmax pmax
comp=E,87nm,0.8s
AKT smax smax
comp=N,1µm,3.0s
AKT smax smax
comp=E,900nm,3.4s
STU Stuttgart 80.08 357 P **P 01 06 08.7 0.0**
STU IAMs_20 IAMs_20 01 42 19.3
comp=Z,9µm,20.0s
STU Stuttgart 80.08 357 P **P 01 06 08.7 0.0**
STU pmax pmax
comp=Z,59nm,1.0s
STU MLR MLR
comp=Z,9µm,20.0s
STU Stuttgart 80.08 357 *e*P **P 01 06 09.4 +0.8**
comp=Z,133nm,1.0s,baz=5.7,slow=5.5
BBKI Banjar Baru 80.11 252 P **P 01 06 09.5 +0.2**
comp=Z,12µmcomp=Z,255nm,1.6s
PSZ Piszkesteto 80.12 349 P **P 01 06 09.1 +0.1**
PSZ IAMs_20 IAMs_20 01 42 18.9
comp=Z,14µm,20.0s
PSZ Piszkesteto 80.12 349⇑P **P 01 06 09.2 +0.1**
PSZ Piszkesteto 80.12 349 P **P 01 06 09.1 +0.1**
PSZ Piszkesteto 80.12 349⇑P **P 01 06 08.2 -0.8**
GIRR Girov 80.15 345⇓P **P 01 06 09.3 +0.2**
PINC Pinares de May 80.15 70 *e*P **P 01 06 08.3 -1.1**
PINC *e*S **S 01 16 09.0 -3.0**
CHIV Chivirico 80.18 70 *e*P P 01 06 03.0 -6.6
CHIV *e*S **S 01 16 10.3 -2.0**
BLSP Bilaspur 80.26 293 *e*P **P 01 06 09.7 -0.4**
BLSP IAmb IAmb 01 06 13.3
comp=Z,728nm,1.1s
BOAB BOACO BROADBAND 80.36 82 P **P 01 06 09.8 -0.9**
BOAB IAmb IAmb 01 06 27.5
comp=Z,342nm,1.2s
RAO Raoul Island 80.37 182 LR LR 01 34 51.1
comp=Z,25µm,21.6s,baz=12,slow=30
SRO Srobarova 80.40 351 *e*P **P 01 06 12.0 +1.6**
EDFI Ende, Flores 80.44 243 P **P 01 06 09.4 -1.7**
comp=Z,11µmcomp=Z,7µmcomp=Z,335nm,1.3s
MARVS Santiago de Cu 80.46 70 *e*P **P 01 06 08.3 -2.8**
MARVS *e*S S 01 16 01.0 -14
MOAC Moa 80.50 69 *e*P **P 01 06 09.7 -1.7**
MOAC *e*S **S 01 16 10.3 -5.3**
SOC Sochi 80.51 335 *e*P **P 01 06 08.9 -2.2**
SOC *e* 01 09 12.1
SOC *e*S **S 01 16 13.7 -1.4**
SOC *e*SS **SS 01 21 22.3 -3.9**
SOC pmax pmax
comp=Z,43nm,0.9s
CONA Conrad Observa 80.52 352 *e*P **P 01 06 11.1 -0.1**
comp=Z,25nm,0.8s,SNR=17
BFO Black Forest 80.55 357 P **P 01 06 11.2 0.0**
BFO IAMs_20 IAMs_20 01 42 42.7
comp=Z,9µm,20.0s
BFO Black Forest 80.55 357 P **P 01 06 11.2 0.0**
BFO pmax pmax
comp=Z,43nm,0.9s
BFO MLR MLR
comp=Z,9µm,20.0s
BFO Black Forest 80.55 357 *e*P **P 01 06 12.0 +0.8**
comp=Z,54nm,1.0s,baz=5.7,slow=5.5
TESR Tescani 80.55 345⇑P **P 01 06 11.0 -0.3**
BATI Baumata 80.55 240 LR LR 01 38 37.1
comp=Z,1µm,21.2s,baz=38,slow=33
BATI Baumata 80.55 240 P **P 01 06 11.4 -0.2**
comp=Z,13µmcomp=Z,6µmcomp=Z,379nm,1.1s
NMDO Nuevo Mundo 80.57 69 *e*P **P 01 06 08.3 -3.4**
NMDO *e*S **S 01 16 11.7 -4.7**
RCC Rio Carpintero 80.59 70 *e*P **P 01 06 08.3 -3.5**
RCC *e*S S 01 16 05.0 -12
FUR Furstenfeldbru 80.59 355 *e*P **P 01 06 12.4 +0.9**
comp=Z,65nm,0.9s,baz=5.7,slow=5.5
SIM Simferopol' 80.60 339*c**e*P **P 01 06 11.3 -0.2**
SIM *e* 01 09 16.0
SIM *e*S **S 01 16 15.0 -1.0**
SIM *e*PS PnS 01 16 30.0 -34
SIM *e*PPS PPS 01 16 54.0
SIM pmax pmax
comp=Z,21nm,0.4s
SIM pmax pmax
comp=Z,2µm,10.4s
SIM pmax pmax
comp=Z,820nm,9.7s
SIM MLR MLR
comp=Z,16µm,18.7s
HRA Herat 80.60 315 P **P 01 06 11.8 -0.2**
HRA IAmb IAmb 01 06 15.0
comp=Z,275nm,1.4s
BIR Birlad 80.62 344⇑P **P 01 06 12.5 +0.8**
BIR Birlad 80.62 344 P **P 01 06 12.4 +0.8**
ECH Echery 80.69 358 P **P 01 06 11.8 -0.2**
ECH IAMs_20 IAMs_20 01 47 22.5
comp=Z,8µm,18.0s
ECH Echery 80.69 358 P **P 01 06 11.8 -0.2**
ECH pmax pmax
comp=Z,56nm,1.0s
RONA Rosalia, Austr 80.70 352 *e*P **P 01 06 12.0 -0.2**
comp=Z,15nm,0.8s,SNR=11
BORR Bors 80.71 348⇓P **P 01 06 12.9 +0.9**
DGPR DIGLIPUR 80.71 279 *e*P **P 01 06 12.8 +0.2**
DGPR IAmb IAmb 01 06 17.2
comp=Z,671nm,1.2s
MOA Molln 80.72 353 *e*P **P 01 06 11.8 -0.3**
comp=Z,38nm,2.1s,SNR=9.4
ONER Baraj Valea Uz 80.77 345⇑P **P 01 06 13.2 +0.8**
CBBR Cluj-Babes-Bol 80.78 347⇓P **P 01 06 13.0 +0.5**
CJR Cluj-Napoca 80.83 347⇑P **P 01 06 12.2 -0.6**
CJR Cluj-Napoca 80.83 347 P **P 01 06 12.2 -0.6**
GHRR 80.86 344⇓P **P 01 06 13.4 +0.4**
MTDJ Mount Denham 80.87 72 P **P 01 06 13.4 -0.1**
MTDJ IAMs_20 IAMs_20 01 47 18.4
comp=Z,10µm,19.0s
MTDJ Mount Denham 80.87 72⇓ *i*P **P 01 06 14.4 +0.9**
MTDJ Mount Denham 80.87 72⇑P **P 01 06 14.0 +0.5**
MTDJ Mount Denham 80.87 72 *e*P **P 01 06 13.7 +0.2**
MTDJ *e*S **S 01 16 17.0 -2.8**
TGMR Targu Mures 80.87 346⇑P **P 01 06 13.3 +0.3**
DRGR 80.88 347⇓P **P 01 06 12.4 -0.8**
DRGR 80.88 347 P **P 01 06 12.3 -0.8**
CLF Chambon-Foret 80.89 1 P **P 01 06 13.2 +0.2**
CLF IAmb IAmb 01 06 17.1
comp=Z,175nm,0.8s
CLF Chambon-Foret 80.89 1⇓P **P 01 06 13.3 +0.3**
BIOA Bad Ischl, Aus 80.92 354 *i*P **P 01 06 13.2 -0.1**
comp=Z,85nm,1.1s,SNR=24
RJOB Jochberg 80.93 354 *e*P **P 01 06 14.1 +0.8**
comp=Z,42nm,0.9s,baz=5.7,slow=5.5
RJOB *e*S **S 01 16 19.9 +0.3**
baz=7.1,slow=11
VARL Varlezi 80.94 344⇑P **P 01 06 13.9 +0.5**
QMBU Quimbuelo 80.95 69 *e*P P 01 06 08.3 -5.5
QMBU *e*S S 01 16 13.0 -7.4
VLDR Vladesti 80.95 343⇑P **P 01 06 13.1 -0.3**
GTBY Guantanamo Bay 80.98 69⇑P **P 01 06 14.3 +0.3**
GTBY Guantanamo Bay 80.98 69 *e*P P 01 06 07.0 -6.9
GTBY *e*S **S 01 16 18.3 -2.4**
GUNA GUNA 80.99 298 *e*P **P 01 06 13.0 -1.0**
GUNA IAmb IAmb 01 06 15.5
comp=Z,785nm,1.3s
COSR Cosmesti PH 81.08 344⇑P **P 01 06 14.1 0.0**
PANC Panciu 81.09 344⇑P **P 01 06 14.7 +0.6**
OZUR 81.10 345⇑P **P 01 06 13.5 -0.7**
TURR Turia 81.10 345⇑P **P 01 06 14.9 +0.6**
UBR Ueberruh 81.13 356 *e*P **P 01 06 15.1 +0.7**
comp=Z,121nm,1.5s,baz=5.7,slow=5.5
SCTR Scanteiesti 81.13 343⇑P **P 01 06 14.3 0.0**
BOSR Bodos 81.14 345⇓P **P 01 06 14.8 +0.4**
VRI Vrincioaia 81.17 344⇓P **P 01 06 15.3 +0.7**
VRI Vrincioaia 81.17 344 P **P 01 06 15.3 +0.7**
PLOR Plostina 81.19 344⇑P **P 01 06 14.6 -0.2**
PLOR Plostina 81.19 344 P **P 01 06 14.6 -0.2**
TATR Tatarca 81.20 343⇑P **P 01 06 15.5 +0.8**
ODBI Odobesti 81.21 344⇓P **P 01 06 15.0 +0.2**
ARSA Arzberg 81.22 352 *e*P **P 01 06 14.5 -0.3**
comp=Z,57nm,1.4s,SNR=13
LESA Schwarzleotal 81.25 354 *i*P **P 01 06 14.9 -0.2**
comp=Z,38nm,1.0s,SNR=13
TUDR 81.27 344⇑P **P 01 06 15.1 +0.1**
MDB Medias 81.27 346⇑P **P 01 06 15.8 +0.7**
MDB Medias 81.27 346 P **P 01 06 15.8 +0.7**
COVR Voineasa-Covas 81.27 345⇓P **P 01 06 16.0 +0.9**
GIUM Giurgiulesti 81.28 343⇓P **P 01 06 16.1 +0.9**
DOPR Dopca 81.29 345⇑P **P 01 06 15.7 +0.4**
NEGRR Negrea 81.29 344⇑P **P 01 06 15.1 0.0**
RETA Reutte 81.29 356 *e*P **P 01 06 15.2 -0.1**
comp=Z,15nm,0.9s
IZVR Izvoarele 81.30 344⇓P **P 01 06 15.6 +0.4**
MASC Masc 81.31 69 *e*P **P 01 06 13.7 -2.0**
MASC *e*S **S 01 16 23.6 -0.4**
WATA Walderalm 81.40 355 *i*P **P 01 06 15.7 -0.3**
comp=Z,93nm,1.7s,SNR=14
WATA *e*P'P' **P'P'df 01 32 55.3 -4.9**
comp=Z,6.6nm,1.1s
ESPN Las Esperanzas 81.40 81 P **P 01 06 16.1 -0.2**
ESPN IAmb IAmb 01 06 33.6
comp=Z,279nm,0.9s
ESPN Las Esperanzas 81.40 81 P **P 01 06 16.7 +0.5**
MOTA Moosalm 81.42 355 *i*P **P 01 06 16.6 +0.5**
comp=Z,54nm,1.2s,SNR=18
MOTA *e*P'P' **P'P'df 01 32 55.5 -4.7**
comp=Z,10nm,1.5s
STH Stony Hill 81.42 72 *i*P **P 01 06 16.6 +0.3**
TLCR 81.45 343⇑P **P 01 06 16.2 +0.1**
TLCR 81.45 343 P **P 01 06 16.1 +0.1**
GWJ Greenwich 81.47 72 *i*P **P 01 06 15.3 -1.5**
WTTA Wattenberg 81.47 355 *i*P **P 01 06 16.2 -0.2**
comp=Z,62nm,1.0s,baz=20,SNR=20
WTTA *e*P'P' **P'P'df 01 32 54.8 -5.4**
comp=Z,16nm,2.1s
BISRR Bisoca 81.48 344⇓P **P 01 06 17.0 +0.7**
HOJ Hope 81.51 72 *i*P **P 01 06 16.6 -0.2**
SIRR Siria 81.53 348⇑P **P 01 06 15.7 -0.9**
DAVA Damuels 81.53 356 *e*P **P 01 06 16.7 0.0**
comp=Z,26nm,1.2s
DAVA *e*P'P' **P'P'df 01 32 53.7 -6.4**
comp=Z,12nm,1.3s
SQTA Sankt Quirin 81.54 355 *i*P **P 01 06 16.7 0.0**
comp=Z,40nm,1.0s,SNR=19
KBA Koelnbreinsper 81.55 354 *i*P **P 01 06 16.7 -0.1**
comp=Z,112nm,0.8s,SNR=43
CFR Carcaliu 81.59 343⇓P **P 01 06 16.5 -0.2**
CFR Carcaliu 81.59 343 P **P 01 06 16.5 -0.2**
GRER 81.59 344⇑P **P 01 06 17.5 +0.6**
MLR Muntele Rosu 81.66 345 LR LR 01 45 08.3
comp=Z,19µm,21.2s,baz=22,slow=38
MLR Muntele Rosu 81.66 345⇑P **P 01 06 17.3 -0.1**
MLR Muntele Rosu 81.66 345 P **P 01 06 17.2 -0.1**
NEHR Nehoiu 81.66 345⇑P **P 01 06 17.7 +0.4**
QIS Mount Isa 81.71 222 P **P 01 06 16.3 -1.3**
comp=Z,0.0nmcomp=Z,61nm,1.2s
QIS Mount Isa 81.71 222 P **P 01 06 16.8 -0.8**
RAGD RAYAGADA 81.74 290 *e*P **P 01 06 18.7 +0.7**
RAGD IAmb IAmb 01 06 21.2
comp=Z,400nm,1.3s
FETA Feichten 81.76 356 *i*P **P 01 06 17.6 -0.3**
comp=Z,43nm,1.0s,SNR=12
FETA *e*P'P' **P'P'df 01 32 55.0 -4.7**
comp=Z,8.4nm,1.2s
SOKA Soboth 81.83 353 *i*P **P 01 06 17.8 -0.3**
comp=Z,119nm,1.2s,SNR=39
TPGR Topolog 81.85 343⇓P **P 01 06 18.5 +0.3**
JURR Jurilovca 81.85 343⇓P **P 01 06 18.2 0.0**
VOIR 81.86 345⇓P **P 01 06 18.6 +0.2**
VOIR 81.86 345 P **P 01 06 18.5 +0.2**
PERS Pernice 81.86 353 *e*P **P 01 06 17.8 -0.5**
PERS *i*S **S 01 16 31.8 +2.5**
PERS *e* 01 22 15.1
BEHE Becsehely 81.88 351⇑ *i*P **P 01 06 18.3 0.0**
ISR Istrita 81.92 344⇑P **P 01 06 19.3 +0.7**
ISR Istrita 81.92 344 P **P 01 06 19.3 +0.7**
ABTA Abfaltersbach 81.94 354 *i*P **P 01 06 18.3 -0.4**
comp=Z,62nm,1.0s,SNR=14
MORH Mrgy, Hungar 81.94 350⇑ *i*P **P 01 06 16.3 -2.3**
MORH Mrgy, Hungar 81.94 350⇑P **P 01 06 19.0 +0.3**
WSI Waingapu 81.97 244 P **P 01 06 17.8 -1.3**
KULM Kulim 81.97 268 P **P 01 06 19.0 -0.2**
KULM IAmb IAmb 01 06 22.5
comp=Z,193nm,1.1s
KULM Kulim 81.97 268 P **P 01 06 19.4 +0.1**
SURR Surduc 81.97 348⇓P **P 01 06 18.4 -0.4**
MYKA Terra Mystica 81.98 354 *i*P **P 01 06 18.8 -0.2**
comp=Z,20nm,1.0s,SNR=7.7
ARR Arges 81.99 346⇓P **P 01 06 19.1 +0.1**
PBA Port Blair 82.00 279 P **P 01 06 20.1 +0.7**
PBA Port Blair 82.00 279 P **P 01 06 18.9 -0.5**
SNR=5.8
PBA Port Blair 82.00 279 *e*P **P 01 06 21.0 +1.6**
PBA IAmb IAmb 01 06 23.9
comp=Z,347nm,1.1s
GROS Grobnik 82.00 352 *e*P **P 01 06 18.3 -0.8**
OBKA Obir 82.03 353 *e*P **P 01 06 19.3 0.0**
comp=Z,42nm,0.8s,SNR=13
DAVOX Davos/Dischmat 82.04 356 LR LR 01 42 06.0
comp=Z,10µm,21.9s,baz=358,slow=35
LOT Lotru 82.04 346⇓P **P 01 06 18.7 -0.7**
GRTK Grand Turk 82.04 66 IAMs_20 IAMs_20 01 40 28.1
comp=Z,17µm,22.0s
GRTK Grand Turk 82.04 66 *e*P **P 01 06 16.3 -3.2**
GRTK *e*S **S 01 16 28.9 -2.7**
BHPL Bhopal 82.05 297 *e*P **P 01 06 18.8 -0.8**
BHPL IAmb IAmb 01 06 22.5
comp=Z,916nm,1.2s
MTUR Matau 82.06 345⇑P **P 01 06 19.9 +0.5**
MTUR Matau 82.06 345 P **P 01 06 19.9 +0.5**
TIM Timisoara 82.11 348⇓P **P 01 06 19.4 -0.2**
TIM Timisoara 82.11 348 P **P 01 06 19.3 -0.2**
BZS Buzias 82.18 348⇓P **P 01 06 19.4 -0.5**
BZS Buzias 82.18 348 P **P 01 06 19.4 -0.5**
FUORN Ofenpass-Fuorn 82.18 356 P **P 01 06 20.1 -0.2**
JUD3 Juan Diaz 3 82.20 84 P **P 01 06 20.2 -0.4**
JUD3 IAmb IAmb 01 06 37.9
comp=Z,205nm,0.9s
PLAR PLOIESTI 82.21 345⇑P **P 01 06 19.7 -0.3**
GNI Garni 82.21 330 LR LR 01 49 19.0
comp=Z,20µm,18.3s,baz=32,slow=40
GNI Garni 82.21 330 P **P 01 06 21.2 +0.8**
GNI IAmb IAmb 01 06 54.7
comp=Z,115nm,1.1s
GNI Garni 82.21 330 P **P 01 06 20.5 +0.2**
GNI S **S 01 16 29.8 -3.4**
GNI Garni 82.21 330 P **P 01 06 21.0 +0.6**
GNI Garni 82.21 330*c* *i*P **P 01 06 20.6 +0.2**
GNI pmax pmax
comp=Z,24nm,1.2s
GNI Garni 82.21 330⇑P **P 01 06 21.3 +0.9**
TLBR Topalu 82.22 343⇓P **P 01 06 19.3 -0.8**
PTCC Patocco-Chiusa 82.22 354⇓P **P 01 06 19.8 -0.4**
TIRR Tirgusor 82.23 343 P **P 01 06 20.2 0.0**
TIRR IAmb IAmb 01 06 24.5
comp=Z,148nm,1.0s
TIRR Tirgusor 82.23 343⇑P **P 01 06 20.5 +0.3**
TIRR Tirgusor 82.23 343 P **P 01 06 20.2 0.0**
TIRR pmax pmax
comp=Z,148nm,1.0s
TIRR MLR MLR
comp=Z,28µm,20.0s
TIRR Tirgusor 82.23 343⇑P **P 01 06 20.3 +0.1**
GZR Gura Zlata 82.24 347⇓P **P 01 06 19.8 -0.5**
GZR Gura Zlata 82.24 347 P **P 01 06 19.8 -0.5**
BASI Baing, Sumba 82.26 243 P **P 01 06 19.6 -1.1**
AMRR Amara 82.28 344⇓P **P 01 06 21.4 +0.9**
AMRR Amara 82.28 344 P **P 01 06 21.3 +0.9**
PRVC Isla de Provid 82.30 78 P **P 01 06 20.8 -0.2**
PRVC IAmb IAmb 01 06 39.0
comp=Z,274nm,1.1s
IPM Ipoh 82.36 268 P **P 01 06 20.6 -0.8**

IPM IAmb IAmb 01 06 24.1
comp=Z,267nm,1.3s
IPM Ipoh 82.36 268 P P 01 06 21.1 -0.2
TUE Stuetta 82.37 357 P P 01 06 21.5 +0.3
TUE IAMs_20 IAMs_20 01 41 42.0
comp=Z,11µm,22.0s
TUE Stuetta 82.37 357 ⇑P P 01 06 21.4 +0.3
RKT Rikitea 82.38 143 *e*P **P 01 06 23.9 +2.9**
comp=Z,46nm,0.9s
RKT Rikitea 82.38 143 *e*PP **PP 01 09 28.7 -1.9**
comp=Z,3µm,33.8s
RKT *e*S **S 01 16 30.6 -4.1**
comp=Z,12µm,24.2s
RKT *e*SS **SS 01 21 53.8 -2.7**
comp=Z,18µm,27.0s
RKT Rikitea 82.38 143 *e*LR LR 01 32 10.9
comp=Z,83µm,24.0s
SULR 82.40 344 ⇑P P 01 06 21.3 +0.3
STFAR Stefanesti-Arg 82.43 345 ⇑P P 01 06 22.1 +0.8
WBSI Waikabubak, Su 82.46 244 P P 01 06 19.6 -2.1
comp=Z,9µmcomp=Z,8µmcomp=Z,430nm,1.3s
JTS Las Juntas de 82.47 83 P P 01 06 19.9 -2.0
comp=Z,8.1nm,0.6s,baz=276,slow=6.8,SNR=7.5
JTS LR LR 01 40 25.5
comp=Z,4µm,21.5s,baz=304,slow=34
comp=Z,8.1nm,0.6s
JTS Las Juntas de 82.47 83 P P 01 06 20.0 -1.9
KNRA Kununurra 82.47 233 P P 01 06 21.6 -0.1
comp=Z,0.0nmcomp=Z,113nm,0.9s
KNRA Kununurra 82.47 233 P P 01 06 21.1 -0.5
KNRA IAmb IAmb 01 06 39.2
comp=Z,90nm,0.9s
CRNS Crni Vrh 82.48 353 *e*P **P 01 06 19.9 -1.6**
CRNS *e*S **S 01 16 33.6 -2.0**
CRNS *e* 01 22 25.3
LEHL Lehliu 82.50 344 ⇓P P 01 06 21.4 -0.2
MFTR Murfatlar 82.50 343 ⇑P P 01 06 21.7 +0.1
SENIN Lac Senin/Sase 82.54 358 P P 01 06 22.0 -0.1
SENIN IAMs_20 IAMs_20 01 50 27.4
comp=Z,9µm,20.0s
JASL Jaisalmer 82.60 304 *e*P **P 01 06 21.9 -0.6**
INCR INCERC-Sediu C 82.64 344 ⇓P P 01 06 22.3 0.0
ICOR Ion Corvin 82.67 343 ⇑P P 01 06 22.8 +0.3
CIOR Ciorogarla 82.69 345 ⇑P P 01 06 23.0 +0.4
MYKOM Kota Tinggi 82.69 264 P P 01 06 23.1 +0.1
MYKOM IAmb IAmb 01 06 26.7
comp=Z,162nm,1.1s
MYKOM Kota Tinggi 82.69 264 P P 01 06 23.9 +0.9
PLAI Plampang 82.71 246 P P 01 06 21.7 -1.3
AUBSH Beerwah State 82.73 208 P P 01 06 23.2 +0.5
CICN Ciocanesti 82.73 344 ⇑P P 01 06 22.9 +0.1
HUMR Humele 82.75 345 ⇑P P 01 06 22.3 -0.6
BUC1 Bucharest 82.76 345 ⇑P P 01 06 22.9 0.0
BUC1 Bucharest 82.76 345 P P 01 06 22.9 0.0
HERR Herculane 82.79 347 ⇑P P 01 06 22.6 -0.5
MANR Mangalia 82.82 343 ⇑P P 01 06 22.8 -0.4
SGRR Singureni 82.89 345 ⇑P P 01 06 23.6 0.0
SRE Strehaia 82.89 347 ⇑P P 01 06 23.2 -0.5
SRE Strehaia 82.89 347 P P 01 06 23.1 -0.5
TPRI Tanjung Pinang 82.95 263 P P 01 06 25.3 +1.0
comp=Z,16µmcomp=Z,6µmcomp=Z,194nm,1.3s
MDVR Moldovita 82.98 348 ⇑P P 01 06 24.2 0.0
VIS Vishakhapatnam 83.00 290 *e*P **P 01 06 24.6 0.0**
VIS IAmb IAmb 01 06 27.4
comp=Z,704nm,1.0s
UDPR Udaipur 83.01 301 *e*P **P 01 06 24.1 -0.6**
UDPR IAmb IAmb 01 06 27.7
comp=Z,448nm,1.1s
BTDF Bukit Timah Da 83.07 263 P P 01 06 26.3 +1.3
PSN Preselentsi 83.08 343 *e*P **P 01 06 26.4 +1.8**
COPA Copaceanca 83.10 345 ⇑P P 01 06 24.7 0.0
TWSI Taliwang, Sumb 83.16 247 P P 01 06 23.4 -1.9
comp=Z,10µmcomp=Z,5µmcomp=Z,149nm,1.8s
WB0 Warramunga Arr 83.29 227 P P 01 06 24.9 -1.0
WB0 IAmb IAmb 01 06 47.5
comp=Z,292nm,1.6s
PUNG Punghina 83.31 347 ⇑P P 01 06 25.6 -0.2
BWJI Bawean 83.31 252 P P 01 06 25.9 -0.3
VLAD Vladila 83.36 346 ⇓P P 01 06 26.6 +0.6
WR8 Warramunga Arr 83.41 226 P P 01 06 25.5 -0.9
WR8 IAmb IAmb 01 06 47.3
comp=Z,198nm,1.6s
RAZG Razgrad 83.44 344 ⇓P P 01 06 25.8 -0.7
SLATY Slatina 83.45 351 *e*P **P 01 06 26.6 +0.1**
WRAB Tennant Creek 83.45 227 IAMs_20 IAMs_20 01 37 37.6
comp=Z,10µm,22.0s
WRAB Tennant Creek 83.45 227 P P 01 06 26.1 -0.7
WRAB Tennant Creek 83.45 227*ce*P **P 01 06 26.0 -0.7**
WRAB pmax pmax
comp=Z,128nm,1.7s
WB2 Warramunga Arr 83.46 227 P P 01 06 26.3 -0.4
WRA Warramunga Arr 83.47 227 P P 01 06 26.1 -0.6
comp=Z,22nm,0.9s,baz=36,slow=6.0,SNR=71
WRA PKiKP **PKiKP 01 11 43.6 -0.4**
comp=Z,0.9nm,0.5s,baz=358,slow=1.7,SNR=7.6
WRA PKKPbc **PKKPbc 01 24 43.7 -0.4**
comp=Z,1.2nm,0.7s,baz=226,slow=2.4,SNR=8.3
WRA PKPPKP **P'P'df 01 32 46.6 -0.7**
comp=Z,3.0nm,1.1s,baz=243,slow=1.7,SNR=6.2
WRA LR LR 01 40 39.4
comp=Z,7µm,20.6s,baz=16,slow=34
comp=Z,22nm,0.9s
WRA Warramunga Arr 83.47 227 P P 01 06 26.0 -0.8
WRA Warramunga Arr 83.47 227 P P 01 06 26.0 -0.8
WRA pmax pmax
comp=Z,15nm,1.5s
KMMI Kalianget 83.50 250 P P 01 06 27.6 +0.5
comp=Z,14µmcomp=Z,409nm,1.3s
BAIL Bailesti 83.50 346 ⇓P P 01 06 26.9 +0.1
BLY Banja Luka 83.55 351 ⇑*i*P P 01 06 26.3 -0.7
BLY Banja Luka 83.55 351 ⇑P P 01 06 26.7 -0.3
SRBI Singaraja 83.59 249 P P 01 06 28.0 +0.4
comp=Z,12µmcomp=Z,6µmcomp=Z,193nm,1.7s
KOPT Kop Dagi 83.60 333 P P 01 06 28.6 +0.9
KOPT IAmb IAmb 01 06 31.7
comp=Z,204nm,1.6s
LOZB Loznitsa 83.61 344 ⇑P P 01 06 27.5 +0.1
SSB Saint Sauveur 83.66 360 P P 01 06 27.9 +0.3
SSB IAmb IAmb 01 06 32.1
comp=Z,131nm,1.3s
SSB Saint Sauveur 83.66 360 IAMs_20 IAMs_20 01 50 39.9
comp=Z,9µm,20.0s
SSB Saint Sauveur 83.66 360 P P 01 06 27.9 +0.3
SSB pmax pmax
comp=Z,131nm,1.3s
TW1H Toowoomba 1 Ha 83.66 209 P P 01 06 29.0 +1.3
PRD Provadia 83.67 343 *e*P **P 01 06 29.3 +1.6**
CIDE Kastamonu/Cide 83.78 339 ⇑P P 01 06 28.1 -0.1
VALD Valchedram 83.81 346 *e*P **P 01 06 28.9 +0.5**
SZH Strazhitsa 83.82 344 P P 01 06 26.7 -1.7
SZH Strazhitsa 83.82 344 *e*P **P 01 06 29.5 +1.0**
BNI Bardonecchia 83.86 358 P P 01 06 29.6 +0.8
BNI IAmb IAmb 01 06 34.1
comp=Z,181nm,1.3s
BNI Bardonecchia 83.86 358 P P 01 06 29.6 +0.8
BNI pmax pmax
comp=Z,181nm,1.3s
TPI Tanjungpandan 83.89 258 P P 01 06 29.2 0.0
comp=Z,13µmcomp=Z,6µmcomp=Z,417nm,1.2s
SC01 Santiago de lo 83.92 67 P P 01 06 29.5 +0.2
SC01 IAmb IAmb 01 06 58.5
comp=Z,161nm,0.9s
PLVB Pleven 83.92 345 ⇑P P 01 06 28.8 -0.1
ABJI Asem Bagus 83.94 250 P P 01 06 27.9 -1.4
comp=Z,13µmcomp=Z,5µmcomp=Z,165nm,1.1s
SDDR Presa de Saban 83.95 67 P P 01 06 29.1 -0.4
SDDR IAmb IAmb 01 06 47.5
comp=Z,195nm,1.4s
SDDR IAMs_20 IAMs_20 01 46 26.7
comp=Z,11µm,19.0s
SDDR Presa de Saban 83.95 67 ⇑P P 01 06 30.0 +0.5
SDDR Presa de Saban 83.95 67 *e*P **P 01 06 28.3 -1.2**
SDDR *e*S **SKSac 01 16 42.2 -8.1**
DSRI Dabo 84.00 262 P P 01 06 30.4 +0.7
comp=Z,15µmcomp=Z,6µmcomp=Z,353nm,1.5s
MPEP Malo Peshtene 84.09 346 *e*P **P 01 06 30.1 +0.3**
PVL Pavlikeni 84.09 345 *e*P **P 01 06 31.3 +1.5**
BOVS Bovan 84.11 347 ⇑P P 01 06 29.7 -0.2
ELND Elena 84.16 344 ⇑P P 01 06 30.0 -0.2
BLJI Banyuglugur 84.27 250 P P 01 06 31.1 +0.1
comp=Z,13µmcomp=Z,4µmcomp=Z,110nm,1.4s
AKL Akola 84.30 296 *e*P **P 01 06 31.1 -0.2**
AKL IAmb IAmb 01 06 33.6
comp=Z,714nm,1.2s

LHMI Lhok Sumawe 84.34 271 P P 01 06 31.9 +0.5
LHMI Lhok Sumawe 84.34 271 P P 01 06 32.8 +1.3
PPBI Pangkal Pinang 84.36 259 P P 01 06 31.1 -0.4
ILGA Ilgaz 84.39 338 P P 01 06 32.2 +0.5
ILGA IAmb IAmb 01 06 35.5
comp=Z,171nm,1.2s
TOKA Tokat 84.41 336 P P 01 06 31.9 +0.4
TOKA IAmb IAmb 01 06 35.0
comp=Z,82nm,1.1s
ZCCA Zocca 84.41 355 P P 01 06 32.3 +0.8
ZCCA IAmb IAmb 01 06 37.1
comp=Z,212nm,1.2s
JMB Yambol 84.48 344 P P 01 06 30.1 -1.7
JMB Yambol 84.48 344 *e*P **P 01 06 33.8 +2.0**
GURO Guroymak-BITLI 84.51 331 P P 01 06 33.0 +0.8
GURO IAmb IAmb 01 06 35.8
comp=Z,335nm,1.8s
TBJI Tambak Boyo 84.57 252 P P 01 06 34.0 +1.5
comp=Z,15µmcomp=Z,8µmcomp=Z,332nm,1.6s
VLC Villacollemand 84.63 356 P P 01 06 32.2 -0.4
BLSH Balsha 84.65 346 *e*P **P 01 06 33.9 +1.2**
TRAN Tran 84.76 347 *e*P **P 01 06 34.4 +1.1**
PGB Panagyurishte 84.85 345 *e*P **P 01 06 35.2 +1.5**
VTS Vitosha 84.89 346 P P 01 06 32.9 -1.2
VTS Vitosha 84.89 346 *e*P **P 01 06 34.2 +0.1**
BANI BANI 84.95 67 P P 01 06 34.9 +0.2
KLINJ Klinje 84.96 350 *e*P **P 01 06 35.0 +0.7**
PSI Prapat 84.98 268 LR LR 01 47 39.4
comp=Z,3µm,19.4s,baz=2.0,slow=38
PSI Prapat 84.98 268 P P 01 06 34.9 +0.1
PSI Prapat 84.98 268 P P 01 06 35.0 +0.1
PSI pmax pmax
comp=Z,218nm,0.9s
PSI MLR MLR
comp=Z,4µm,21.0s
PLNA Plana 85.00 346 *e*P **P 01 06 36.4 +1.8**
BRU2 Volcan 85.03 82 P P 01 06 35.2 +0.1
BRU2 IAmb IAmb 01 07 04.9
comp=Z,125nm,0.9s
RPSI Rantau Prapat 85.06 268 P P 01 06 35.0 -0.1
DIM Dimitrovgrad 85.07 344 P P 01 06 34.3 -0.5
PLD Plovdiv 85.11 345 P P 01 06 34.0 -1.0
PLD Plovdiv 85.11 345 *e*P **P 01 06 37.0 +2.0**
KCSI Kotacane, Aceh 85.14 270 P P 01 06 34.9 -0.6
SDD Santo Domingo 85.15 66 P P 01 06 35.6 +0.1
SDD IAmb IAmb 01 06 50.7
comp=Z,184nm,1.2s
DR12 Loma Pena Alta 85.20 66 P P 01 06 36.1 +0.2
NGJI Ngawi 85.23 252 P P 01 06 36.3 +0.4
comp=Z,136nm,0.9s
QLP Quilpie 85.34 215 P P 01 06 36.9 +0.9
QLP Quilpie 85.34 215 P P 01 06 36.5 +0.4
TREB Trebinje 85.43 350 *e*P **P 01 06 35.1 -1.5**
KDZ Kurdzhali 85.52 344 P P 01 06 36.0 -1.0
KDZ Kurdzhali 85.52 344 *e*P **P 01 06 39.2 +2.1**
VJD Vijayawada 85.52 291 *e*P **P 01 06 43.7 +6.3**
VJD IAmb IAmb 01 06 46.2
comp=Z,970nm,1.4s
RZN Rozhen 85.56 345 P P 01 06 36.2 -1.3
RZN Rozhen 85.56 345 *e*P **P 01 06 39.3 +1.8**
BKNI Bangkinang 85.58 265 P P 01 06 37.9 +0.2
BKNI Bangkinang 85.58 265 P P 01 06 37.5 -0.2
PDG Podgorica 85.61 349 P P 01 06 37.1 -0.4
PDG IAMs_20 IAMs_20 01 45 42.1
comp=Z,15µm,22.0s
PDG Podgorica 85.61 349 ⇓P P 01 06 37.4 -0.1
KKB Krupnik 85.66 346 P P 01 06 37.4 -0.3
KKB Krupnik 85.66 346 *e*P **P 01 06 39.4 +1.6**
BR131 Keskin Array S 85.67 338 P P 01 06 37.5 -0.6
BR131 Keskin Array S 85.67 338*c i*P **P 01 06 37.0 -1.0**
BRTR Keskin Array B 85.67 338 P P 01 06 37.6 -0.4
comp=Z,19nm,0.8s,baz=51,slow=2.8,SNR=65
BRTR PKKPbc **PKKPbc 01 24 38.0 +0.1**
comp=Z,1.1nm,0.9s,baz=181,slow=9.4,SNR=3.9
BRTR PKPPKP **P'P'df** 01 32 43.0 -9.1
comp=Z,1.7nm,1.0s,baz=194,slow=5.2,SNR=5.1
BRTR LR LR 01 51 56.2
comp=Z,5µm,18.9s,baz=32,slow=41
comp=Z,19nm,0.8s
ANTO Ankara 85.73 338 P P 01 06 39.5 +1.3
ANTO IAmb IAmb 01 06 41.4
comp=Z,222nm,1.6s
ANTO Ankara 85.73 338 IAMs_20 IAMs_20 01 51 12.8
comp=Z,13µm,19.0s
ANTO Ankara 85.73 338 P P 01 06 37.9 -0.3
ANTO Ankara 85.73 338 ⇑P P 01 06 37.9 -0.3
ANTO Ankara 85.73 338 P P 01 06 37.9 -0.3
MMB Musomishta 85.86 346 P P 01 06 38.1 -0.7
MMB Musomishta 85.86 346 *e*P **P 01 06 40.8 +2.0**
RDO Rodhopi 85.95 344 P P 01 06 39.3 +0.1
RDO Rodhopi 85.95 344 P P 01 06 39.0 -0.2
HYBB Hyderabad (bro 86.03 293 *e*P **P 01 06 40.0 0.0**
HYBB IVmB_BB 01 06 41.5
comp=Z,8µm,1.4s
HYBB *e*sP **sP 01 06 49.9 -2.5**
HYBB *e*PP **PP 01 10 01.0 +1.2**
HYBB *e*SKSac **SKSac 01 17 05.3 +1.7**
HYBB ⇑*e*SKKS **SKKSac 01 17 12.4 +1.3**
HYBB *e*SS **SS 01 22 54.1 +4.6**
HYBB IVMs_BB IVMs_BB 01 49 51.2
comp=Z,3µm,16.8s
FITZ Fitzroy Crossi 86.09 235 LR LR 01 43 00.3
comp=Z,7µm,20.2s,baz=42,slow=34
FITZ Fitzroy Crossi 86.09 235 P P 01 06 40.2 +0.2
KIRS Kirsehir-Merke 86.17 337 ⇑P P 01 06 40.1 -0.3
PHP Peshkopia 86.20 348 P P 01 06 39.8 -0.7
UGM Wanagama 86.22 252 P P 01 06 39.6 -1.2
BHUJ Bhuj 86.24 303 *e*P **P 01 06 41.3 +0.4**
BHUJ IAmb IAmb 01 06 43.3
comp=Z,350nm,1.2s
ENEZ Enez 86.25 344 P P 01 06 40.2 -0.4
AQU L'Aquila 86.25 353 P P 01 06 41.5 +0.8
AQU L'Aquila 86.25 353 ⇑*i*P P 01 06 40.8 +0.1
BAND Balkesir-Ban 86.26 342 ⇑P P 01 06 40.1 -0.6
VAY Valandovo 86.26 346 *i* **P 01 06 41.9 +1.2**
KAVA Kavala 86.27 345 P P 01 06 40.4 -0.4
CEST Esterri de Car 86.30 2 P P 01 06 41.2 +0.2
SRS Serrai 86.30 346 P P 01 06 40.5 -0.4
KNT Kendrikon 86.36 346 P P 01 06 40.8 -0.4
ARMA Armidale 86.46 208 P P 01 06 43.1 +1.4
ARMA Armidale 86.46 208 P P 01 06 42.2 +0.5
ARMA Armidale 86.46 208 P P 01 06 42.8 +1.1
EJON La Jonquera 86.48 1 P P 01 06 41.1 -0.7
ECAL Calabor 86.49 8 P P 01 06 43.3 +1.3
BCIP Isla Barro Col 86.50 80 P P 01 06 44.3 +2.0
comp=Z,10µmcomp=Z,5µmcomp=Z,115nm,1.5s
PPI Padang Panjang 86.58 265 P P 01 06 41.6 -1.0
PCAB Cabril 86.60 9 *e*P **P 01 06 43.1 +0.7**
SMTH Samothraki Isl 86.61 344 P P 01 06 42.0 -0.5
THAS Thassos island 86.62 345 P P 01 06 42.1 -0.4
PBRG Braganca 86.62 8 *e*P **P 01 06 41.5 -1.1**
PBRG *i* IAmb IAmb 01 07 15.2
comp=Z,81nm,1.6s
SOH Sokhos 86.63 346 P P 01 06 42.1 -0.5
GRG Griva 86.64 346 P P 01 06 42.2 -0.5
AULRC Lightning Ridg 86.66 211 P P 01 06 43.5 +0.9
OHR Ohrid 86.71 348 *i* **P 01 06 44.6 +1.6**
GADA Gvkgeada 86.82 344 P P 01 06 42.2 -1.2
THE Thessaloniki 86.87 346 P P 01 06 42.5 -1.2
HORT Hortiatis 86.89 346 P P 01 06 42.2 -1.7
PDSI Padang 86.90 265 P P 01 06 42.4 -1.8
comp=Z,9µmcomp=Z,127nm,2.2s
AS31 Alice Springs 86.91 225 P P 01 06 43.4 -0.6
ASAR Alice Springs 86.91 225 P P 01 06 44.0 0.0
comp=Z,18nm,0.7s,baz=29,slow=4.5,SNR=132
ASAR PKKPbc **PKKPbc 01 24 36.7 +0.6**
comp=Z,1.1nm,0.7s,baz=191,slow=2.3,SNR=6.1
ASAR PKPPKP **P'P'df 01 32 44.1 +3.2**
comp=Z,1.5nm,1.0s,baz=173,slow=1.9,SNR=5.4
ASAR LR LR 01 42 11.0
comp=Z,13µm,20.9s,baz=28,slow=33
comp=Z,18nm,0.7s
ASAR Alice Springs 86.91 225 P P 01 06 44.0 0.0
POLO Lamas de Olo 86.95 9 *e*P **P 01 06 43.7 -0.5**
POLO *i* IAmb IAmb 01 06 47.5
comp=Z,47nm,1.4s
OUR Ouranopolis 87.00 345 P P 01 06 43.1 -1.2
PLG Polygyros 87.05 346 P P 01 06 43.9 -0.8
PVRL Vila Real 87.06 9 *e*P **P 01 06 45.4 +0.7**
PVRL *i* IAmb IAmb 01 06 47.9
comp=Z,113nm,1.5s
EZN Ezine 87.10 343 P P 01 06 44.1 -0.7
EZN Ezine 87.10 343 ⇑P P 01 06 45.0 +0.1

EZN Ezine 87.10 343 P P 01 06 44.9 +0.1
KRJI Kerinci 87.19 263 P P 01 06 46.3 +0.6
comp=Z,13µmcomp=Z,770nm,1.8s
KBN Korca 87.19 348 P P 01 06 44.5 -0.8
LIA Limnos Island 87.23 344 P P 01 06 44.7 -0.7
MVO Moncorvo 87.23 9 *e*P **P 01 06 45.3 -0.3**
MVO *i* IAmb IAmb 01 06 48.7
comp=Z,100nm,1.5s
MVO *e*S **S 01 17 21.5 -1.5**
MVO *e*SS **SS 01 23 14.8 +9.2**
MVO *e*LR LR 01 36 14.7
MVO *i* IAMs_20 IAMs_20 01 50 14.8
comp=Z,7µm,20.0s
AUPHS Peel High Scho 87.31 208 P P 01 06 47.0 +1.3
NEST Nestorio 87.36 347 P P 01 06 45.4 -0.9
KZN Kozani 87.37 347 P P 01 06 45.4 -0.9
CMLA Cha da Macela 87.38 23 IAMs_20 IAMs_20 01 43 54.1
comp=Z,12µm,21.0s
DBJI Dramaga 87.43 256 P P 01 06 44.8 -1.9
comp=Z,11µmcomp=Z,225nm,2.0s
LIT Litokhoron 87.47 346 P P 01 06 45.8 -0.8
SJG San Juan 87.56 64 P P 01 06 46.1 -1.3
comp=Z,20nm,0.5s,baz=320,slow=1.6,SNR=14
SJG LR LR 01 46 53.2
comp=Z,8µm,20.4s,baz=320,slow=36
comp=Z,20nm,0.5s
SJG San Juan 87.56 64 P P 01 06 46.9 -0.5
SJG IAmb IAmb 01 07 07.5
comp=Z,229nm,1.4s
SJG San Juan 87.56 64 IAMs_20 IAMs_20 01 48 20.4
comp=Z,15µm,20.0s
PENT Pentalofos 87.57 347 P P 01 06 46.3 -0.9
PVIS Viseu 87.59 9 *e*P **P 01 06 46.3 -1.0**
BBJI Bungbulang 87.59 255 P P 01 06 48.4 +0.8
PAYG Puerto Ayora 87.61 94 P P 01 06 46.9 -0.8
PAYG IAmb IAmb 01 07 03.9
comp=Z,250nm,1.6s
PAYG Puerto Ayora 87.61 94 P P 01 06 49.7 +2.0
comp=Z,5µmcomp=Z,2µmcomp=Z,71nm,1.7s
MATE Matera 87.65 351 ⇑P P 01 06 48.0 +0.5
PRK Paraskevi 87.67 343 P P 01 06 46.9 -0.7
INKA Innaminka 87.69 218 P P 01 06 47.6 +0.1
INKA IAmb IAmb 01 07 05.8
comp=Z,106nm,1.2s
KSI Kapahiang 87.71 261 P P 01 06 47.9 -0.2
SIGR SIGRI 87.78 343 P P 01 06 47.4 -0.7
POO Poona 87.81 297 *e*P **P 01 06 48.4 -0.2**
POO IAmb IAmb 01 06 51.9
comp=Z,709nm,0.9s
MTE Manteigas 87.94 9 P P 01 06 48.3 -0.7
MTE IAmb IAmb 01 07 54.3
comp=Z,94nm,1.5s
MTE IAMs_20 IAMs_20 01 51 26.0
comp=Z,9µm,20.0s
MTE Manteigas 87.94 9 *e*P **P 01 06 48.7 -0.3**
MTE *e*PP **PP 01 10 19.9 +5.6**
MTE *e*S **S 01 17 31.1 +1.3**
MTE *e*SS SS 01 23 30.6 +15
MTE *e*LR LR 01 36 28.8
MTE *i* IAMs_20 IAMs_20 01 51 50.5
comp=Z,7µm,18.0s
THL Klokotos Trika 88.06 346 P P 01 06 47.7 -1.8
NEO Neokhori 88.13 345 P P 01 06 48.0 -1.8
JAN Janina 88.14 347 P P 01 06 49.6 -0.3
AOS Alonnisos 88.16 345 P P 01 06 48.5 -1.4
PCAS Casmilo, Conde 88.19 10 *e*P **P 01 06 49.6 -0.5**
PCAS *i* IAmb IAmb 01 06 51.9
comp=Z,88nm,1.7s
PRMD Pramanda 88.23 347 P P 01 06 49.7 -0.7
IGT Igoumenitsa 88.33 348 P P 01 06 48.6 -2.1
SKY Skiros Island 88.33 344 P P 01 06 49.4 -1.4
BLCB Balcova 88.36 342 P P 01 06 49.5 -1.4
TETR Tetrakomo, Epi 88.38 347 P P 01 06 49.6 -1.5
CUC Castrocucco 88.39 351 IAMs_20 IAMs_20 01 54 22.5
comp=Z,9µm,19.0s
PCBR Castelo Branco 88.50 9 *e*P **P 01 06 50.8 -0.7**
AGG Agios Georgios 88.55 346 P P 01 06 49.9 -1.9
CHOS Chios island 88.55 343 P P 01 06 49.9 -2.0
MAKR Makrakomi, Fth 88.58 346 P P 01 06 50.0 -2.0
KAD Karad 88.60 296 *e*P **P 01 06 51.8 -0.7**
KAD IAmb IAmb 01 06 54.3
comp=Z,571nm,1.0s
KYMI Kymi, Euboea I 88.65 345 P P 01 06 50.2 -2.0
PSARD Sardoal 88.67 10 *e*P **P 01 06 52.1 -0.3**
PSARD *i* IAmb IAmb 01 06 54.8
comp=Z,90nm,1.8s
PSBE So Bento 88.69 10 *e*P **P 01 06 51.1 -1.4**
EVR Evrytania 88.73 346 P P 01 06 50.6 -2.1
NGCH Negor - Chabah 88.74 311 P P 01 06 53.7 +0.8
SNR=6.8
AXAR Agios Charalam 88.75 346 P P 01 06 50.7 -2.0
ATAL Atalanti 88.76 346 P P 01 06 50.8 -2.0
SJCC San Jacinto, C 88.78 76 P P 01 06 54.6 +1.3
comp=Z,9µmcomp=Z,4µmcomp=Z,115nm,1.5s
AMPL Ampelaki 88.81 347 P P 01 06 51.4 -1.6
LKR Lokris 88.81 346 P P 01 06 50.5 -2.5
PMRV Marv??o 88.92 9 *e*P **P 01 06 52.8 -0.8**
PMRV *i* IAmb IAmb 01 06 56.1
comp=Z,53nm,1.8s
PMRV *e*PP **PP 01 10 28.2 +6.0**
PMRV *e*S S 01 17 30.7 -8.3
PMRV *e*SS SS 01 23 52.6 +23
PMRV *e*LR LR 01 36 54.6
PMRV *i* IAMs_20 IAMs_20 01 47 17.3
comp=Z,6µm,20.0s
ESDC Sonseca Array 88.96 6 P P 01 06 52.0 -1.8
comp=Z,12nm,0.9s,baz=347,slow=2.9,SNR=28
ESDC LR LR 01 48 07.1
comp=Z,4µm,18.7s,baz=6.0,slow=37
comp=Z,12nm,0.9s
ESDC Sonseca Array 88.96 6 P P 01 06 52.7 -1.1
LKD2 Lefkada island 89.02 347 P P 01 06 52.5 -1.5
ANX Ano Chora 89.03 346 P P 01 06 52.5 -1.6
MAHO Mahon 89.03 0 IAMs_20 IAMs_20 01 54 19.3
comp=Z,7µm,19.0s
AUDCS Dubbo College 89.05 210 P P 01 06 55.0 +1.1
SMG Samos 89.06 342 P P 01 06 52.4 -1.8
PVO Paravola 89.06 347 P P 01 06 53.6 -0.6
PAB San Pablo 89.06 7 IAMs_20 IAMs_20 01 48 36.8
comp=Z,8µm,21.0s
TIP Timpagrande 89.10 350 ⇓P P 01 06 53.9 -0.6
TOZ Tahuroa Road 89.14 187 P P 01 06 54.4 +0.2
KARY Karystos 89.18 344 P P 01 06 52.1 -2.6
EVGI Lefkada island 89.18 347 P P 01 06 53.0 -1.8
SERG Sergoula 89.18 346 P P 01 06 52.8 -2.1
PMAFR Mafra 89.19 11 P P 01 06 55.0 +0.2
PMAFR Mafra 89.19 11 *e*P **P 01 06 55.4 +0.6**
PMTG Montargil 89.19 10 *e*P **P 01 06 55.2 +0.4**
EFP Efpalio 89.19 346 P P 01 06 53.5 -1.3
KALE Kalithea 89.19 346 P P 01 06 52.8 -2.1
DION Dionisos Attik 89.22 345 P P 01 06 52.9 -2.1
MGCD Mangrove Creek 89.22 207 P P 01 06 56.1 +1.4
MGCD Mangrove Creek 89.22 207 P P 01 06 56.1 +1.4
VILL Villia 89.23 345 P P 01 06 53.0 -2.1
PTL Penteli 89.26 345 P P 01 06 53.1 -2.1
URIC Uribia, Colomb 89.28 72 P P 01 06 57.0 +1.5
comp=Z,8µmcomp=Z,4µmcomp=Z,173nm,1.2s
CRJC Cerrejon, Guaj 89.28 73 P P 01 06 56.8 +1.1
comp=Z,8µmcomp=Z,4µmcomp=Z,190nm,1.5s
MAGU Magoula 89.28 345 P P 01 06 53.2 -2.0
PTAC Punta Ardita, 89.32 79 P P 01 06 56.9 +1.2
comp=Z,4µmcomp=Z,299nm,1.0s
VSL Villasalto 89.33 356 IAMs_20 IAMs_20 01 53 43.2
comp=Z,8µm,20.0s
YER Yerkesik 89.33 341 P P 01 06 53.5 -2.1
ATH Athens Observa 89.36 345 P P 01 06 53.6 -2.0
CMSA Cobar Meteorol 89.36 212 P P 01 06 56.4 +1.1
CMSA Cobar Meteorol 89.36 212 P P 01 06 56.0 +0.6
LTK Loutraki 89.43 345 P P 01 06 53.9 -2.0
LIS Lisbon 89.43 11 *e*P **P 01 06 56.5 +0.6**
LIS *e*SKSac **SKSac 01 17 24.8 +1.3**
LIS IAMs_20 IAMs_20 01 41 14.8
comp=Z,15µm,28.5s
LIS Lisbon 89.43 11 *e*P **P 01 06 57.2 +1.3**
LIS Lisbon 89.43 11 *e*P **P 01 06 56.5 +0.6**
LIS *e* 01 17 24.8
PESTR Estremoz 89.45 9 *e*P **P 01 06 55.4 -0.7**
PESTR *i* IAmb IAmb 01 06 59.4
comp=Z,61nm,1.6s
VLY Voula,Athens 89.46 345 P P 01 06 54.1 -2.0
PARRA Arraiolos 89.46 10 *e*P **P 01 06 56.0 -0.1**
PARRA *i* IAmb IAmb 01 06 59.4
comp=Z,72nm,1.7s

AXS Araxos 89.50 347 P **P** **01 06 55.5 -0.8**
KLV Kalavryta, Ach 89.53 346 P **P** **01 06 54.8 -1.7**
URZ Urewera 89.56 186 LR LR 01 39 34.8
comp=Z,18µm,21.6s,baz=22,slow=30
SABA Saba 89.58 62 IAMs_20 IAMs_20 01 45 15.6
comp=Z,13µm,22.0s
BODT Bodrum 89.59 342 P **P** **01 06 55.8 -0.9**
GUR Goura 89.61 346 P **P** **01 06 54.6 -2.3**
RLS Riolos of Patr 89.62 347 P **P** **01 06 56.6 -0.3**
EBAD Badajoz 89.62 9 P **P** **01 06 56.4 -0.4**
VLS Valsamata 89.63 347 P **P** **01 06 55.1 -1.7**
DRO Drossia 89.69 346 P **P** **01 06 56.3 -0.8**
PSDA Pessada-Kefalo 89.69 347 P **P** **01 06 56.4 -0.8**
RTZL Ratzakli, Kefa 89.70 347 P **P** **01 06 56.5 -0.7**
MOE Montemor 89.72 10 *e*P **P** **01 06 57.5 +0.3**
MOE *i* IAmb IAmb 01 07 00.7
comp=Z,107nm,1.9s
EVO Evora 89.74 10 P **P** **01 06 59.2 +1.8**
EVO Evora 89.74 10 *e*P **P** **01 06 57.9 +0.5**
APE Apeiranthos 89.92 343 P **P** **01 06 55.6 -2.7**
APE Apeiranthos 89.92 343 *c i*P **P** **01 06 54.5 -3.8**
APE pmax pmax
comp=Z,31nm,1.6s
ORTH Orthonies,Zaky 89.93 347 P **P** **01 06 58.0 -0.3**
HIZ Hauiti 89.97 187 P **P** **01 06 57.7 -0.3**
LTHK Lithakia 90.05 347 P **P** **01 06 57.2 -1.6**
NISR Nisiros 90.07 342 P **P** **01 06 56.5 -2.4**
CEL Celeste 90.10 351 IAMs_20 IAMs_20 01 54 04.8
comp=Z,7µm,20.0s
VLX Vlachokerasia 90.16 346 P **P** **01 06 58.0 -1.5**
PBAR Barrancos 90.20 9 P **P** **01 06 59.5 0.0**
PBAR Barrancos 90.20 9 *e*P **P** **01 06 59.9 +0.4**
PBAR *i* IAmb IAmb 01 07 03.1
comp=Z,98nm,1.6s
HWQ Hawqa 90.24 334 *e*P P 01 06 55.6 -4.3
UREC San Jos de Ur 90.24 77 P **P** **01 07 00.5 +0.4**
comp=Z,3µmcomp=Z,55nm,1.4s
ARG Arkhangelos 90.25 341 P **P** **01 06 58.5 -1.3**
PBEJ Beja 90.26 10 *e*P **P** **01 07 00.7 +0.9**
PBEJ *i* IAmb IAmb 01 07 03.4
comp=Z,58nm,1.6s
CSS Mathiatis 90.27 337 P **P** **01 06 59.3 -0.6**
CSS IAmb IAmb 01 07 01.9
comp=Z,267nm,1.7s
CSS IAMs_20 IAMs_20 01 54 27.1
comp=Z,8µm,21.0s
ANWB Willy Bob 90.34 61 IAMs_20 IAMs_20 01 50 35.7
comp=Z,9µm,20.0s
ANWB Willy Bob 90.34 61 *e*P **P** **01 06 58.6 -1.9**
DBBC Dabeiba 90.40 78 P **P** **01 07 02.3 +1.4**
MESJ Messejana 90.41 10 *e*SKSac **SKSac** **01 17 30.6 +1.3**
MESJ IAMs_20 IAMs_20 01 55 38.7
comp=Z,5µm,20.3s
MESJ Messejana 90.41 10 *e* 01 17 30.6
ITM Ithomi 90.41 346 P **P** **01 06 59.2 -1.3**
EADA Adamuz 90.42 7 P **P** **01 07 01.0 +0.4**
SHME Shamm 90.44 315 P **P** **01 06 59.4 -1.4**
SHME Shamm 90.44 315 *i* P **P** **01 06 59.5 -1.4**
SNR=8.9
ECAB El Cabril 90.44 8 P **P** **01 07 00.5 -0.2**
BANOM Banah 90.48 315 P **P** **01 07 00.8 -0.3**
BANOM Banah 90.48 315 *i* P **P** **01 06 59.9 -1.2**
SNR=23
BKZ Black Stump Fm 90.50 186 P **P** **01 06 58.7 -1.9**
THERA Ancient Thera, 90.61 343 P **P** **01 06 58.3 -3.2**
EMIN Mina Concepcio 90.64 9 P **P** **01 07 01.1 -0.4**
PTEO Sao Teotonio 90.64 10 *e*P **P** **01 07 02.4 +0.8**
BHL Bhannes 90.67 334 *e*P **P** **01 06 58.9 -3.0**
VLI Veliai 90.71 345 P **P** **01 06 58.7 -3.2**
PYL PYLOS 90.72 346 P **P** **01 06 58.8 -3.2**
EGRO El Granado 90.79 9 P **P** **01 07 01.3 -1.0**
SALM Salem 90.81 290 *e*P **P** **01 07 02.8 +0.1**
SALM IAmb IAmb 01 07 05.1
comp=Z,452nm,1.5s
MORF Marmelete 90.89 10 *e*P **P** **01 07 03.2 +0.4**
MORF IAMs_20 IAMs_20 01 50 15.5
comp=Z,12µm,21.1s
MORF Marmelete 90.89 10 *e*P **P** **01 07 04.2 +1.3**
MORF Marmelete 90.89 10 *e*P **P** **01 07 03.2 +0.4**
PVAQ Vaqueiros 90.89 10 *e*P **P** **01 07 03.7 +1.0**
PVAQ *e*S **S** **01 17 55.6 -1.6**
PVAQ *e*SS **SS** **01 24 06.2 +7.6**
PVAQ *e*LR LR 01 37 51.6
PVAQ *i* IAMs_20 IAMs_20 01 51 41.7
comp=Z,9µm,20.0s
EMUR La Murta 90.95 4 P **P** **01 07 03.9 +0.8**
VAE Valguarnera 91.01 352 LR LR 01 52 30.6
comp=Z,10µm,18.7s,baz=58,slow=39
MASF Masafi 91.02 315 P **P** **01 07 02.5 -1.1**
SNR=10
MDH Madha 91.02 315 P **P** **01 07 01.9 -1.6**
SNR=9.0
MDH Madha 91.02 315 *i* P **P** **01 07 02.0 -1.6**
SNR=16
PBDV Barranco-do-Ve 91.03 10 *e*P **P** **01 07 05.5 +2.0**
MSFE Esma-Masafi 91.03 315 *i* P **P** **01 07 02.4 -1.3**
SNR=13
PFVI Vila Bisbo 91.04 11 *e*P **P** **01 07 05.3 +1.8**
KARP Karpathos 91.09 342 IAMs_20 IAMs_20 01 53 05.5
comp=Z,10µm,20.0s
KARP Karpathos 91.09 342 P **P** **01 07 00.6 -3.1**
STKA Stephens Creek 91.09 215 P **P** **01 07 04.1 +0.6**
comp=Z,30nm,0.9s,baz=352,slow=5.8,SNR=51
STKA LR LR 01 43 41.0
comp=Z,15µm,21.3s,baz=18,slow=33
comp=Z,30nm,0.9s
STKA Stephens Creek 91.09 215 P **P** **01 07 03.7 +0.2**
UMQ Umm Al-Quwin 91.11 315 P **P** **01 07 03.7 -0.2**
XMI Christmas Isla 91.13 255 P **P** **01 07 05.8 +1.7**
KTHA Kythira Island 91.14 345 P **P** **01 07 00.9 -3.1**
OCAC Ocana 91.21 75 P **P** **01 07 05.7 +1.0**
comp=Z,7µmcomp=Z,4µmcomp=Z,359nm,1.1s
CART Cartagena 91.22 4 P **P** **01 07 03.4 -0.8**
UOSS Minazif 91.37 314 P **P** **01 07 03.1 -2.1**
UOSS IAmb IAmb 01 07 07.8
comp=Z,87nm,1.1s
UOSS Minazif 91.37 314 IAMs_20 IAMs_20 01 55 51.8
comp=Z,11µm,21.0s
UOSS Minazif 91.37 314 P **P** **01 07 03.5 -1.7**
CBOC Ciudad Bolivar 91.43 79 P **P** **01 07 06.7 +0.9**
comp=Z,6µmcomp=Z,3µmcomp=Z,93nm,1.1s
EQTA Presa de Quent 91.45 6 P **P** **01 07 05.2 -0.3**
HELC Santa Helena 91.47 78 P **P** **01 07 06.9 +0.7**
comp=Z,3µmcomp=Z,59nm,1.2s
ABD La Joyeuse, An 91.48 61 IAMs_20 IAMs_20 01 51 10.9
comp=Z,13µm,20.0s
ANKY Antikythira Is 91.48 345 P **P** **01 07 03.6 -1.9**
DHSZ Broadband at M 91.49 61 *e*P **P** **01 07 06.6 +0.8**
GDHS Morne Mazeau, 91.49 61 P **P** **01 07 04.8 -1.1**
GDHS IAMs_20 IAMs_20 01 51 16.9
comp=Z,12µm,20.0s
EGOR Sierra Gorda, 91.50 7 P **P** **01 07 05.8 0.0**
HATD Hatta, Dubai 91.50 314 P **P** **01 07 05.2 -0.6**
SNR=16
HATD Hatta, Dubai 91.50 314 *i* P **P** **01 07 04.6 -1.2**
SNR=19
NAZ Nazwa, Dubai 91.57 315 P **P** **01 07 05.6 -0.5**
SNR=10
NAZ Nazwa, Dubai 91.57 315 *i* P **P** **01 07 05.1 -1.0**
SNR=17
MMAI Mount Meron Ar 91.58 334 P **P** **01 07 05.5 -0.7**
comp=Z,49nm,1.1s,baz=29,slow=1.9,SNR=41
MMAI LR LR 01 51 14.0
comp=Z,4µm,21.7s,baz=21,slow=38
comp=Z,49nm,1.1s
ESPR Espera 91.60 8 P **P** **01 07 06.2 +0.1**
ATGZ Broadband at L 91.66 62 *e*P **P** **01 07 06.4 -0.2**
ASHO Ashiyiah 91.66 314 P **P** **01 07 05.9 -0.7**
SNR=18
ASHO Ashiyiah 91.66 314 *i* P **P** **01 07 05.2 -1.4**
SNR=18
CHAN Chania 91.69 344 P **P** **01 07 02.7 -3.8**
MBWA Marble Bar 91.70 238 P **P** **01 07 05.8 -0.7**
MBWA Marble Bar 91.70 238 P **P** **01 07 06.5 0.0**
MMLZ Guadeloupe Bro 91.73 62 *e*P **P** **01 07 05.5 -1.4**
WSAR Wadi Sarin 91.73 312 LR LR 01 54 35.0
comp=Z,42nm,18.2s,baz=62,slow=40
CBE Ff, Capester 91.74 61 P **P** **01 07 06.2 -0.8**
CBE IAMs_20 IAMs_20 01 48 12.9
comp=Z,13µm,20.0s
ENIJ Nijar 91.77 5 P **P** **01 07 06.0 -0.9**
IDI Anoyia 91.77 343 P **P** **01 07 04.7 -2.3**
IDI Anoyia 91.77 343 LR LR 01 51 25.0
comp=Z,9µm,21.2s,baz=11,slow=38
IDI Anoyia 91.77 343 P **P** **01 07 03.1 -3.9**
ELGU Los Guajares, 91.78 6 P **P** **01 07 07.0 0.0**
CAN Canberra 91.81 208 IAMs_20 IAMs_20 01 41 24.7
comp=Z,8µm,22.0s
FAQ Al Faqa, Dubai 91.81 315 P **P** **01 07 06.6 -0.6**
SNR=6.3
FAQ Al Faqa, Dubai 91.81 315 *i* P **P** **01 07 05.9 -1.4**
SNR=10
DSDZ La Diserade, G 91.84 61 *e*P **P** **01 07 07.1 -0.3**
GDSD La Desirade Is 91.84 61 IAMs_20 IAMs_20 01 55 52.5
comp=Z,8µm,19.0s
PTBC PUERTO BERRIO, 91.85 77 P **P** **01 07 09.1 +1.5**
comp=Z,6µmcomp=Z,3µmcomp=Z,227nm,1.2s
SOHO SOHO 91.92 314 P **P** **01 07 07.0 -0.7**
SOHO SOHO 91.92 314 *i* P **P** **01 07 06.4 -1.4**
SNR=22
ASF Jabal al Asfar 91.96 333 LR LR 01 56 45.1
comp=Z,6µm,18.1s,baz=24,slow=41
SFS San Fernando 91.97 9 P **P** **01 07 10.1 +2.3**
SFS San Fernando 91.97 9 IAMs_20 IAMs_20 01 50 19.6
comp=Z,9µm,19.0s
PSA00 Pilbara Seismi 91.98 237 P **P** **01 07 07.3 -0.5**
PSA00 IAmb IAmb 01 07 10.3
comp=Z,122nm,1.2s
PSA00 Pilbara Seismi 91.98 237 P **P** **01 07 06.9 -0.9**
PSA00 IAmb IAmb 01 07 24.2
comp=Z,111nm,1.0s
PSA00 Pilbara Seismi 91.98 237 P **P** **01 07 07.8 0.0**
EMIJ Mijas 92.00 7 P **P** **01 07 07.6 -0.3**
MAGL Barre de l'ile 92.02 61 IAMs_20 IAMs_20 01 51 58.2
comp=Z,8µm,19.0s
ASUD Al Ashush, Dub 92.03 315 P **P** **01 07 08.1 -0.1**
SNR=8.8
ASUD Al Ashush, Dub 92.03 315 *i* P **P** **01 07 07.1 -1.2**
SNR=8.6
KNDR Palaiochora Ch 92.04 344 P **P** **01 07 06.3 -1.9**
HOQ Hoqain 92.05 313 P **P** **01 07 07.6 -0.8**
SNR=15
WBK Wadi Bani Khal 92.11 311 P **P** **01 07 09.4 +0.7**
SNR=10
SMDO Smad 92.16 312 P **P** **01 07 08.7 -0.3**
SNR=18
PAMC Pamplona, Colo 92.29 75 P **P** **01 07 10.6 +0.4**
comp=Z,135nmcomp=Z,366nmcomp=Z,51nm,0.9s
JLN Jalan Bani Buh 92.29 310 P **P** **01 07 09.4 -0.1**
SNR=17
SDV Santo Domingo 92.31 73 P **P** **01 07 10.4 +0.5**
comp=Z,23nm,0.8s,baz=358,slow=1.8,SNR=32
SDV LR LR 01 53 25.6
comp=Z,5µm,18.1s,baz=359,slow=39
comp=Z,23nm,0.8s
SDV Santo Domingo 92.31 73 P **P** **01 07 09.0 -0.9**
SDV IAmb IAmb 01 07 26.9
comp=Z,70nm,0.9s
SDV IAMs_20 IAMs_20 01 54 23.7
comp=Z,8µm,19.0s
SDV Santo Domingo 92.31 73 *e*P **P** **01 07 10.3 +0.4**
SDV Santo Domingo 92.31 73 P **P** **01 07 10.4 +0.5**
comp=Z,7µmcomp=Z,3µmcomp=Z,110nm,1.5s
DWS Wesley 92.31 62 *e*P **P** **01 07 10.9 +1.3**
GUY2C Guyana, Caldas 92.33 79 P **P** **01 07 11.4 +1.1**
comp=Z,6µmcomp=Z,3µmcomp=Z,209nm,0.9s
ALNE Al Ain 92.34 314 P **P** **01 07 09.0 -0.7**
SNR=24
ALNE Al Ain 92.34 314 *i* P **P** **01 07 08.7 -1.1**
SNR=25
GVD Gavdhos 92.35 344 P **P** **01 07 07.7 -1.9**
KOD Kodaikanal 92.37 290 *e*P **P** **01 07 10.2 -0.1**
KOD IAmb IAmb 01 07 12.8
comp=Z,199nm,1.2s
BALJ Balqa 92.39 334 P **P** **01 07 09.2 -0.6**
BALJ IAmb IAmb 01 07 12.8
comp=Z,98nm,1.1s
BARC Barichara 92.58 76 P **P** **01 07 13.0 +1.8**
comp=Z,2µmcomp=Z,198nm,1.0s
CEU Ceuta 92.61 8 P **P** **01 07 10.2 -0.5**
ECEU Ceuta 92.61 8 P **P** **01 07 10.9 +0.1**
ARQ Araqi 92.62 313 P **P** **01 07 11.0 0.0**
SNR=46
YOTC Yotoco, Valle 92.69 80 P **P** **01 07 12.5 +0.9**
comp=Z,6µmcomp=Z,3µmcomp=Z,132nm,1.2s
JMDO Jabal Madar 92.72 312 P **P** **01 07 11.4 -0.1**
SNR=22
SPBC San Pablo de B 92.78 77 P **P** **01 07 14.7 +2.8**
comp=Z,6µmcomp=Z,2µmcomp=Z,76nm,0.7s
SHMA Al-Shehemyia 92.82 319 P **P** **01 07 11.3 -0.6**
SNR=9.2
BSY Bisya 92.82 313 P **P** **01 07 11.8 -0.2**
SNR=20
JRN Jarnain Island 92.83 317 P **P** **01 07 11.0 -0.9**
SNR=5.2
BHW Baring Head 92.85 187 IAMs_20 IAMs_20 01 45 42.2
comp=Z,9µm,20.0s
SVN Savane Anatole 92.99 62 IAMs_20 IAMs_20 01 48 30.0
comp=Z,11µm,20.0s
SVN Savane Anatole 92.99 62 *e*P **P** **01 07 13.4 +0.6**
KEST Kesra 93.08 356 P **P** **01 07 12.9 -0.2**
comp=Z,9.1nm,0.9s,baz=147,slow=1.6,SNR=6.7
comp=Z,9.1nm,0.9s
KEST Kesra 93.08 356 P **P** **01 07 13.3 +0.2**
KEST IAmb IAmb 01 07 29.0
comp=Z,79nm,1.7s
JAMC Jamundi, Valle 93.09 81 P **P** **01 07 15.0 +1.5**
comp=Z,7µmcomp=Z,3µmcomp=Z,227nm,2.2s
GHAJ Ghor Haditha 93.15 334 P **P** **01 07 12.7 -0.6**
GHAJ IAmb IAmb 01 07 15.4
comp=Z,80nm,1.4s
GHAJ IAMs_20 IAMs_20 01 57 45.4
comp=Z,10µm,19.0s
RUSC La Rusia 93.20 77 P **P** **01 07 13.6 -0.7**
RUSC La Rusia 93.20 77 P **P** **01 07 16.1 +1.8**
comp=Z,7µmcomp=Z,3µmcomp=Z,134nm,1.4s
ILAM Ilet Lapin Mar 93.20 62 IAMs_20 IAMs_20 01 48 56.6
comp=Z,10µm,20.0s
ILAM Ilet Lapin Mar 93.20 62 *e*P **P** **01 07 12.4 -1.4**
ROSC El Rosal 93.27 78 P **P** **01 07 14.4 -0.2**
comp=Z,19nm,0.7s,baz=281,slow=3.3,SNR=9.4
ROSC LR LR 01 51 03.0
comp=Z,3µm,20.5s,baz=343,slow=37
comp=Z,19nm,0.7s
ROSC El Rosal 93.27 78 P **P** **01 07 14.3 -0.2**
ROSC IAmb IAmb 01 07 56.8
comp=Z,68nm,1.1s
ROSC El Rosal 93.27 78 P **P** **01 07 14.3 -0.2**
ROSC pmax pmax
comp=Z,68nm,1.2s
ROSC El Rosal 93.27 78 P **P** **01 07 18.7 +4.2**
BIM Bigot 93.31 62 IAMs_20 IAMs_20 01 49 21.4
comp=Z,10µm,20.0s
BIM Bigot 93.31 62 *e*P **P** **01 07 13.4 -0.8**
MZWR Madinat Zayed 93.43 316 P **P** **01 07 15.5 +0.8**
ORTC Ortega, Tolima 93.43 79 P **P** **01 07 15.4 +0.5**
comp=Z,5µmcomp=Z,2µmcomp=Z,192nm,0.9s
HTT Hallett 93.47 217 P **P** **01 07 14.8 +0.3**
MPOM Morne Pois Mar 93.48 62 IAMs_20 IAMs_20 01 53 17.0
comp=Z,11µm,20.0s
POPC Popayan, Colom 93.61 81 P **P** **01 07 16.5 +0.5**
comp=Z,6µmcomp=Z,2µmcomp=Z,66nm,1.8s
BBAC Balboa, Cauca 93.66 82 P **P** **01 07 17.8 +1.6**
comp=Z,2µmcomp=Z,47nm,1.0s
GHWR Ruwais 93.68 317 P **P** **01 07 15.4 -0.4**
TRNA Turayna 93.71 318 P **P** **01 07 16.0 0.0**
SNR=5.9
SLBI Saint Lucia, B 93.76 62 *e*P **P** **01 07 15.4 -0.9**
UMZA Um Al Zommool 93.77 314 P **P** **01 07 16.1 -0.2**
PRAC Prado 93.80 79 P **P** **01 07 17.4 +0.8**
comp=Z,5µmcomp=Z,2µmcomp=Z,83nm,1.6s
BAUV El Baul 93.81 71 P **P** **01 07 16.0 -0.5**
BAUV El Baul 93.81 71 *e*P **P** **01 07 15.8 -0.7**
SMRA Abu-Samra 93.86 319 P **P** **01 07 16.2 -0.5**
SNR=13
PMPST Porto Santo, M 93.89 17 *e*P **P** **01 07 20.2 +3.5**
SLAC Saint Lucia, A 93.91 62 *e*P **P** **01 07 15.2 -1.8**
PMOZ Porto Moniz, M 93.97 18 P **P** **01 07 18.2 +1.0**
PMOZ Porto Moniz, M 93.97 18 *e*P **P** **01 07 19.8 +2.6**
PMOZ *e*PP **PP** **01 11 05.4 +3.1**
PMOZ *e*S **SKSac** **01 17 56.7 +7.0**
PMOZ *e*LR LR 01 39 22.8
PMOZ *i* IAMs_20 IAMs_20 01 51 07.2
comp=Z,6µm,20.0s
MHTO MHTO 93.97 311 P **P** **01 07 17.0 -0.3**
SNR=39
BBOO Buckleboo 94.02 219 P **P** **01 07 17.7 +0.8**
MCLT Moule a Chique 94.04 62 *e*P **P** **01 07 18.9 +1.3**
SLWR Sila 94.09 318 P **P** **01 07 17.4 -0.4**
PMAR Madeira 94.12 18 *e*P **P** **01 07 19.2 +1.2**
MZR Muzera 94.27 316 P **P** **01 07 18.2 -0.4**
SNR=23
MZR Muzera 94.27 316 *i* P **P** **01 07 17.5 -1.1**
SNR=46
CUSE Cuicocha Este 94.28 84 P **P** **01 07 20.6 +1.3**
comp=Z,2µmcomp=Z,145nm,0.9s
OTAV Otavalo 94.30 84 P **P** **01 07 18.8 -0.6**
OTAV IAmb IAmb 01 07 36.7
comp=Z,56nm,0.9s
OTAV Otavalo 94.30 84 P **P** **01 07 18.8 -0.6**
OTAV pmax pmax
comp=Z,56nm,1.0s
OTAV MLR MLR
comp=Z,4µm,19.0s
OTAV Otavalo 94.30 84 *e*P **P** **01 07 19.1 -0.3**
OTAV Otavalo 94.30 84 P **P** **01 07 19.8 +0.4**
comp=Z,5µmcomp=Z,2µmcomp=Z,59nm,0.9s
TULM Tulcn-Chalpat 94.34 83 P **P** **01 07 20.8 +1.2**
comp=Z,5µmcomp=Z,2µmcomp=Z,172nm,1.2s
GARC Garzon, Huila 94.62 81 P **P** **01 07 21.6 +1.0**
comp=Z,5µmcomp=Z,2µmcomp=Z,78nm,1.2s
BONI La Bonita 94.71 83 P **P** **01 07 22.1 +1.1**
comp=Z,4µmcomp=Z,1µmcomp=Z,66nm,1.2s
GCMP Grenada, Carri 94.77 63 *e*P **P** **01 07 20.0 -0.9**
CTZ Chatham Island 94.81 181 IAMs_20 IAMs_20 01 43 19.8
comp=Z,13µm,21.0s
PCRV Puerto La Cruz 94.81 67 *e*P **P** **01 07 22.9 +1.6**
GRHS Sauteurs 94.86 64 *e*P **P** **01 07 19.4 -1.9**
EIL Elat 94.86 334 LR LR 01 54 57.6
comp=Z,6µm,20.1s,baz=34,slow=39
GRGR Grenville 94.92 64 IAMs_20 IAMs_20 01 48 20.8
comp=Z,10µm,21.0s
GRGR Grenville 94.92 64 *e*P **P** **01 07 21.3 -0.4**
AVE Averroes 94.98 10 IAMs_20 IAMs_20 01 56 15.8
comp=Z,8µm,20.0s
IFR Ifrane 94.99 8 P **P** **01 07 22.7 +0.8**
FLOC Florencia 94.99 81 P **P** **01 07 20.9 -1.1**
FLOC IAmb IAmb 01 07 40.1
comp=Z,50nm,0.8s
FLOC Florencia 94.99 81 P **P** **01 07 23.4 +1.4**
comp=Z,4µmcomp=Z,2µmcomp=Z,82nm,1.1s
DQM DQM 95.08 311 P **P** **01 07 21.9 -0.5**
PTGC Puerto Gaitan, 95.11 77 P **P** **01 07 25.2 +2.7**
comp=Z,5µmcomp=Z,2µmcomp=Z,166nm,1.6s
BBGH Gun Hill 95.26 61 *e*P **P** **01 07 23.0 -0.2**
PIAT Ana Tenorio 95.38 85 P **P** **01 07 24.9 +0.7**
comp=Z,976nmcomp=Z,31nm,1.0s
RPZ Rata Peaks 95.48 190 LR LR 01 45 44.9
comp=Z,21µm,19.5s,baz=26,slow=32
FORT Forrest 95.64 226 P **P** **01 07 25.6 +1.1**
MD31 MD31 95.67 8 P **P** **01 07 24.3 -0.6**
MD31 IAmb IAmb 01 07 27.2
comp=Z,142nm,1.9s
MDT Midelt 95.73 8 LR LR 01 50 07.2
comp=Z,3µm,21.3s,baz=14,slow=35
GIRL Giralia 95.86 241 P **P** **01 07 25.4 -0.2**
GIRL IAmb IAmb 01 07 29.0
comp=Z,84nm,1.0s
COHC Cochancay 95.90 87 P **P** **01 07 25.8 -0.3**
TRN Trinidad (W) 96.28 64 *e*P **P** **01 07 31.3 +3.5**
MEEK Meekatharra 96.76 235 P **P** **01 07 29.7 0.0**
TIO Tiouine 97.35 10 P **P** **01 07 32.2 -0.5**
VA02 Isla de Pascua 97.42 125 IAMs_20 IAMs_20 01 43 40.9
comp=Z,8µm,20.0s
RPN Rapa Nui 97.44 125 LR LR 01 44 02.6
comp=Z,6µm,19.3s,baz=321,slow=31
RPN Rapa Nui 97.44 125 IAMs_20 IAMs_20 01 40 48.6
comp=Z,8µm,22.0s
MLZ Mavora Lakes 97.45 191 IAMs_20 IAMs_20 01 49 55.1
comp=Z,11µm,20.0s
DCZ Deep Cove 97.67 192 IAMs_20 IAMs_20 01 49 26.9
comp=Z,10µm,20.0s
DOK Doka 97.81 313 P **P** **01 07 34.1 -0.6**
SNR=8.6
WHZ Wether Hill Ro 97.99 191 IAMs_20 IAMs_20 01 50 23.3
comp=Z,10µm,20.0s
WHFO Wadi Hawf 98.58 313 P **P** **01 07 37.4 -0.9**
SNR=7.1
RBK Rabkut 98.74 312 P **P** **01 07 39.1 +0.1**
EOSO Osorio 98.91 18 P Pdif 01 07 40.6 +1.0
ABTO Aybut 99.29 313 P **Pdif** **01 07 41.0 -0.4**
SNR=5.6
ATAH Atahualpa 100.05 89 P **Pdif** **01 07 44.6 -0.7**
comp=Z,1.2nm,0.6s,baz=124,slow=3.6,SNR=1.6
NWAO Narrogin (SRO) 102.56 233 IAMs_20 IAMs_20 01 49 46.1
comp=Z,7µm,22.0s
TAM Tamanrasset 106.08 359 IAMs_20 IAMs_20 02 00 04.7
comp=Z,6µm,21.0s
ATD Arta Tunnel 108.98 320 IAMs_20 IAMs_20 02 04 16.2
comp=Z,9µm,20.0s
DGAR Diego Garcia 109.36 283 IAMs_20 IAMs_20 02 05 59.0
comp=Z,7µm,20.0s
SACV Santiago Islan 109.51 29 IAMs_20 IAMs_20 01 58 50.6
comp=Z,7µm,20.0s
LPAZ La Paz 113.46 87 PKiKP **PKiKP** **01 12 37.6 -0.3**
comp=Z,2.3nm,0.9s,baz=3.6,slow=5.2,SNR=4.9
LPAZ La Paz 113.46 87 *e*P **Pdif** **01 08 45.2 +0.2**
PB18 Visviri 113.60 89 IAMs_20 IAMs_20 02 11 16.9
comp=Z,5µm,18.0s
TORD Torodi Ar. Bea 115.64 3 PKP **PKiKP** **01 12 41.1 -0.4**
comp=Z,6.5nm,0.5s,baz=24,slow=3.9,SNR=2.8
PB08 IPOC Station P 115.71 90 IAMs_20 IAMs_20 02 12 21.8
comp=Z,5µm,20.0s
PB14 IPOC Station P 118.22 95 IAMs_20 IAMs_20 01 52 31.4
comp=Z,5µm,22.0s
PTLB Pontes e Lacer 118.41 79 **PKPdf** **01 12 45.7 -1.0**
AC01 Pan de Azucar 119.20 96 IAMs_20 IAMs_20 01 52 52.7
comp=Z,6µm,20.0s
H03N2 Juan Fernandez 119.27 108 T T 03 23 07.9
baz=317,slow=77,SNR=1427
H03N1 Juan Fernandez 119.28 108 T T 03 23 29.7
baz=317,slow=77,SNR=1214
H03N3 Juan Fernandez 119.28 108 T T 03 23 29.0
baz=317,slow=77,SNR=750
LODK Lodwar 119.29 324 IAMs_20 IAMs_20 02 08 53.9
comp=Z,6µm,22.0s
LODK Lodwar 119.29 324 P **PKPdf** **01 12 49.1 +0.4**
VA04 Juan Fernndez 119.47 108 IAMs_20 IAMs_20 02 00 08.8
comp=Z,6µm,19.0s
AC06 Mina Casimiro 120.21 97 IAMs_20 IAMs_20 01 52 37.6
comp=Z,7µm,21.0s
AC04 Llanos de Chal 120.37 98 IAMs_20 IAMs_20 02 02 49.8
comp=Z,5µm,18.0s
SNDB Serra Nova Dou 120.41 70 *e*P **PKPdf** **01 12 50.7 0.0**
GO03 Copiapo 120.46 97 IAMs_20 IAMs_20 01 54 27.1
comp=Z,6µm,20.0s
AC02 Maricunga 120.60 96 IAMs_20 IAMs_20 01 54 21.0
comp=Z,6µm,20.0s
SALV Santo Antonio 120.86 76 *e*P **PKiKP** **01 12 52.2 +0.7**
LCO Las Campanas 121.17 98 **PKPdf** **01 12 51.4 -0.7**
LCO Las Campanas 121.17 98 IAMs_20 IAMs_20 01 52 50.0
comp=Z,5µm,22.0s
LCO Las Campanas 121.17 98 PKIKP **PKPdf** **01 12 51.4 -0.7**
AC05 El Transito 121.31 98 **PKPdf** **01 12 51.9 -0.2**
AC05 IAMs_20 IAMs_20 02 01 50.7
comp=Z,6µm,18.0s
CO05 La Serena 121.48 100 IAMs_20 IAMs_20 01 53 46.1
comp=Z,9µm,21.0s
DBIC Dimbokro 121.57 11 PKP **PKPdf** **01 12 52.6 -0.4**
comp=Z,16nm,0.5s,baz=37,slow=3.3,SNR=32
DBIC SKKP **SKKPdf** **01 27 02.1 +5.4**
comp=Z,6.7nm,0.9s,baz=176,slow=5.4,SNR=3.8
DBIC Dimbokro 121.57 11 **PKPdf** **01 12 51.9 -1.1**
DBIC Dimbokro 121.57 11 *e*P **PKPdf** **01 12 53.3 +0.3**
DBIC Dimbokro 121.57 11 PKIKP **PKPdf** **01 12 51.9 -1.1**
CO06 Fray Jorge 121.76 101 IAMs_20 IAMs_20 02 03 07.6
comp=Z,8µm,18.0s
CO01 Juntas del Tor 122.22 99 IAMs_20 IAMs_20 02 02 17.9
comp=Z,7µm,18.0s
CO03 El Pedregal 122.46 100 IAMs_20 IAMs_20 02 03 31.5
comp=Z,8µm,18.0s
CO02 Combarbal 122.52 101 IAMs_20 IAMs_20 01 53 11.2
comp=Z,9µm,22.0s
PP1B Ponte de Pedra 122.66 77 *e*P **PKPdf** **01 12 55.0 +0.1**
KMBO Kilima Mbogo 122.73 320 PKP **PKPdf** **01 12 55.4 -0.1**
comp=Z,30nm,0.9s,baz=24,slow=2.2,SNR=29
ACRG Accra 123.00 5 **PKPdf** **01 12 55.0 -0.7**
ARAG Araguaiana, MT 123.05 73 *e*P **PKPdf** **01 12 55.8 +0.2**
VA06 Catapilco 123.27 102 IAMs_20 IAMs_20 01 54 11.2
comp=Z,7µm,21.0s
VA01 Torpederas 123.38 103 **PKPdf** **01 12 54.8 -1.0**
VA01 IAMs_20 IAMs_20 02 03 11.1
comp=Z,7µm,18.0s
KIBK Kibwezi 123.50 318 **PKPdf** **01 12 56.1 -0.7**
KIBK Kibwezi 123.50 318 P **PKPdf** **01 12 57.3 +0.5**
RCBR Riachuelo 123.62 51 *e*P **PKPdf** **01 12 57.4 +0.4**

BDQN	Bodoquena, MS	123.67	81	eP		PKiKP	01 12 57.9	+0.9	
VA05	Santo Domingo	123.83	103	IAMs_20	IAMs_20		02 02 55.9		
	comp=Z,6µm,18.0s								
MT02	Curacav	123.85	102	IAMs_20	IAMs_20		02 03 17.4		
	comp=Z,6µm,18.0s								
VA03	San Esteban	123.87	102	IAMs_20	IAMs_20		02 03 14.0		
	comp=Z,6µm,18.0s								
PEL	Peldehue	124.05	102			PKPdf	01 12 56.7	-0.5	
PEL				IAMs_20	IAMs_20		01 54 33.8		
	comp=Z,6µm,21.0s								
PEL	Peldehue	124.05	102	PKIKP		PKPdf	01 12 56.7	-0.5	
MT05	Renca	124.18	102	IAMs_20	IAMs_20		02 03 45.3		
	comp=Z,6µm,18.0s								
MT09	Talagante	124.29	103	IAMs_20	IAMs_20		02 04 19.1		
	comp=Z,4µm,18.0s								
AQDB	Aquidauana	124.33	80			PKPdf	01 12 57.0	-1.0	
AQDB	Aquidauana	124.33	80	eP		PKiKP	01 13 00.3	+2.0	
MT16	CCHEN	124.34	102			PKPdf	01 12 56.9	-0.9	
MT16				IAMs_20	IAMs_20		01 54 42.4		
	comp=Z,5µm,21.0s								
MT03	Universidad Ad	124.39	102	IAMs_20	IAMs_20		01 54 42.8		
	comp=Z,5µm,21.0s								
SDBA	SAO DESIDERIO	124.44	64	eP		PKiKP	01 12 59.4	+0.6	
CFA	Coronel Fontan	124.50	99	PKP		PKPdf	01 12 57.7	-0.4	
	comp=Z,5.7nm,0.6s,baz=290,slow=1.8,SNR=26								
BO01	Tunca	124.65	103	IAMs_20	IAMs_20		01 56 22.6		
	comp=Z,5µm,20.0s								
MT08	Bocatoma Ro	124.66	102	IAMs_20	IAMs_20		01 55 06.3		
	comp=Z,7µm,21.0s								
MBAR	Mbarara	124.67	327			PKPdf	01 12 58.5	-0.6	
MBAR	Mbarara	124.67	327	P		PKPdf	01 12 59.3	+0.1	
MBAR	Mbarara	124.67	327	PKIKP		PKPdf	01 12 58.5	-0.6	
BO04	La Punta	124.67	103	IAMs_20	IAMs_20		02 03 50.1		
	comp=Z,5µm,18.0s								
MT13	San Alfonso	124.70	102	IAMs_20	IAMs_20		01 54 09.9		
	comp=Z,5µm,22.0s								
EDA	Edea	124.77	353			PKPdf	01 12 58.2	-1.0	
EDA				IAMs_20	IAMs_20		02 10 09.2		
	comp=Z,5µm,22.0s								
LMEL	Las Melosas	124.82	102	IAMs_20	IAMs_20		01 54 45.1		
	comp=Z,5µm,21.0s								
BO02	Sierra Bellavi	125.11	103	IAMs_20	IAMs_20		02 04 24.7		
	comp=Z,6µm,18.0s								
BDFB	Brasilia	125.24	69			PKPdf	01 12 59.0	-1.0	
BDFB	Brasilia	125.24	69	PKIKP		PKPdf	01 12 59.0	-1.0	
ML02	Panimavida	125.37	105	IAMs_20	IAMs_20		02 02 14.6		
	comp=Z,5µm,19.0s								
BI02	San Fabin de	126.05	106			PKPdf	01 12 60.0	-0.9	
BI02				IAMs_20	IAMs_20		01 55 03.2		
	comp=Z,5µm,21.0s								
AMBA	Amambai (Brazi	126.60	81	eP		PKiKP	01 13 03.3	+0.5	
LR04	Corral	126.87	110	IAMs_20	IAMs_20		01 55 50.7		
	comp=Z,7µm,21.0s								
JANB	Januaria	126.91	65	eP		PKPdf	01 13 03.7	+0.6	
IPMB	Ipameri, GO	126.96	71	eP		PKiKP	01 13 04.5	+0.8	
ITRB	Iturama	127.01	74	eP		PKPdf	01 13 03.8	+0.6	
SBV	Sambava	127.35	299	P		PKPdf	01 13 04.4	+0.5	
CPUP	Villa Florida	127.62	86	PKhKP	PKPpre		01 12 56.6		
	comp=Z,2.9nm,0.7s,baz=338,slow=4.2,SNR=2.8								
CPUP				PKP		PKPdf	01 13 03.8	-0.3	
	comp=Z,2.9nm,0.7s,baz=160,slow=1.8,SNR=23								
CPUP	Villa Florida	127.62	86	eP		PKiKP	01 13 05.1	+0.4	
LL05	Los Muermos	127.81	111	IAMs_20	IAMs_20		01 55 15.6		
	comp=Z,6µm,21.0s								
LR05	Currie	127.93	109	IAMs_20	IAMs_20		01 56 36.8		
	comp=Z,8µm,21.0s								
PMNB	Patos De Minas	128.44	70	eP		PKPdf	01 13 04.6	-1.4	
PLCA	Paso Flores	129.10	109	PKP		PKPdf	01 13 07.2	+0.5	
	comp=Z,29nm,1.0s,baz=257,slow=2.5,SNR=30								
PLCA	Paso Flores	129.10	109			PKPdf	01 13 06.5	-0.1	
PLCA	Paso Flores	129.10	109	PKIKP		PKPdf	01 13 06.5	-0.1	
PLCA	Paso Flores	129.10	109	eP		PKiKP	01 13 07.9	+0.6	
BB19B	Bebedouro	129.15	74	eP		PKPdf	01 13 07.4	+0.2	
VNDA	Vanda	129.46	186	PKP		PKPdf	01 13 06.3	+0.2	
	comp=Z,14nm,1.2s,baz=341,slow=3.0,SNR=11								
VNDA	Vanda	129.46	186			PKPdf	01 13 06.5	+0.4	
SBA	Scott Base	129.49	185			PKPdf	01 13 07.0	+0.9	
SBA	Scott Base	129.49	185	IAMs_20	IAMs_20		02 01 39.3		
	comp=Z,4µm,20.0s								
SBA	Scott Base	129.49	185	PKIKP		PKPdf	01 13 07.0	+0.9	
CMC01	Camacan, BA	129.83	61	eP		PKPdf	01 13 09.1	+0.5	
DIAM	Diamantina, MG	129.86	67	eP		PKPdf	01 13 08.5	-0.3	
LL02	Futaleuf	129.87	112			PKPdf	01 13 08.2	+0.4	
CASY	Casey	130.00	210	IAMs_20	IAMs_20		02 03 28.4		
	comp=Z,6µm,20.0s								
AY01	Puyuhuapi	130.15	114	IAMs_20	IAMs_20		01 57 58.5		
	comp=Z,7µm,20.0s								
PSAL	Palomas, Salto	130.77	91	eP		PKPdf	01 13 10.7	+0.7	
RCLB	Rio Claro- Sao	130.78	74	eP		PKiKP	01 13 11.8	+0.5	
BSCB	Bom Sucesso	131.33	70	eP		PKPdf	01 13 12.1	+0.6	
ITAB	Concordia	131.50	82			PKPdf	01 13 11.1	-0.4	
ITAB	Concordia	131.50	82	eP		PKPdf	01 13 12.5	+1.0	
VAO	Valinhos	131.56	74			PKPdf	01 13 11.6	-0.2	
VAO	Valinhos	131.56	74	eP		PKiKP	01 13 13.1	+0.3	
SJMB	Sao Joao De Ma	131.60	65	eP		PKPdf	01 13 12.9	+1.0	
AY03	Cochrane	131.85	117	IAMs_20	IAMs_20		02 16 35.4		
	comp=Z,5µm,18.0s								
BSFB	Barra de Sao F	131.90	65	eP		PKPdf	01 13 12.5	0.0	
RIB01	Linhares ES	132.54	64	eP		PKPdf	01 13 12.9	-0.8	
TRQA	Tornquist	132.61	101			PKPdf	01 13 12.7	-0.6	
TRQA				IAMs_20	IAMs_20		02 24 12.3		
	comp=Z,5µm,20.0s								
TRQA	Tornquist	132.61	101	PKIKP		PKPdf	01 13 12.7	-0.6	
PARB	Paraibuna	132.62	73	eP		PKPdf	01 13 14.9	+1.1	
CPSB	Cacapava Do Su	132.91	87	eP		PKPdf	01 13 15.1	+1.0	
OPO	Ambohidratompo	133.02	298	PKP		PKPdf	01 13 13.0	-1.8	
	comp=Z,9.4nm,1.0s,baz=52,slow=5.2,SNR=4.0								
OPO				SKPbc		SKPbc	01 16 41.5	+1.6	
	comp=Z,12nm,0.9s,baz=32,slow=8.0,SNR=4.5								
VAS01	Vassouras-RJ	133.10	70	eP		PKPdf	01 13 15.5	+0.8	
ABPO	Ambohimpanom	133.36	298	IAMs_20	IAMs_20		02 14 31.3		
	comp=Z,6µm,22.0s								
PLTB	Pedras Altas	133.74	88			PKPdf	01 13 15.7	+0.1	
PLTB	Pedras Altas	133.74	88	eP		PKPdf	01 13 15.9	+0.3	
CNLB	Canela	133.76	83	eP		PKPdf	01 13 16.9	+1.1	
VOI	Vohitsoka	135.91	296			PKPdf	01 13 19.5	-0.6	
VOI	Vohitsoka	135.91	296	P		PKPdf	01 13 20.5	+0.4	
FOMA	Nahampoana Res	138.20	293	IAMs_20	IAMs_20		02 23 05.9		
	comp=Z,4µm,21.0s								
QSPA	South Pole Qui	141.20	180	PKhKP	PKPpre		01 13 25.7		
	comp=Z,16nm,0.7s,baz=12,slow=0.7,SNR=75								
QSPA				PKP		PKPdf	01 13 28.9	+0.6	
	comp=Z,44nm,1.0s,baz=11,slow=1.2,SNR=22								
QSPA				SKPbc		SKiKP	01 17 05.4	+1.0	
	comp=Z,15nm,0.9s,baz=341,slow=1.1,SNR=4.5								
KSANE	Kasane	142.60	326	*i* P		PKPdf	01 13 30.9	-1.4	
PMSA	Palmer Station	143.46	138	eP		PKPdf	01 13 33.2	+1.0	
SHEL	Horse Pasture	143.69	17	IAMs_20	IAMs_20		02 20 52.0		
	comp=Z,4µm,19.0s								
SLIND	Selinda	143.92	328	*i* P		PKPbc	01 13 33.8	+1.3	
XAUDM	Khaudum	144.53	331	*i* P		PKPab	01 13 34.6	+0.5	
BROLN	Tlhalogang	144.80	321	*i* P		PKPab	01 13 35.7	+0.6	
MUSN	Musina, Limpop	144.81	316	eP		PKPdf	01 13 37.2	+1.1	
QNGWA	Qangwa	145.51	331	*i* P		PKPdf	01 13 37.5	+0.1	
MREMI	Moremi	146.08	320	*i* P		PKPdf	01 13 38.9	+0.6	
TSUM	Tsumeb	146.18	337			PKPdf	01 13 39.0	+0.4	
TSUM	Tsumeb	146.18	337	IAMs_20	IAMs_20		02 25 03.5		
	comp=Z,6µm,20.0s								
TSUM	Tsumeb	146.18	337	eP		PKPab	01 13 40.9	+0.6	
ESPZ	Base Esperanza	146.25	135			PKPdf	01 13 38.1	+1.0	
LEPH	Lephalale, Lim	147.08	318	eP		PKPbc	01 13 42.2	+0.2	
GRTLG	Ghanzi	147.22	330	*i* P		PKPdf	01 13 40.5	+0.2	
LPHEP	Lephephe	147.42	321	*i* P		PKPdf	01 13 41.9	+1.3	
TEMBE	Tembe Elephant	147.70	308	eP		PKPbc	01 13 44.3	+0.7	
MAW	Mawson	147.75	218	PKPbc		PKPdf	01 13 40.4	+0.9	
	comp=Z,203nm,0.9s,baz=91,slow=1.7,SNR=37								
KDWAN	Kaudwane	147.90	323	*i* P		PKPdf	01 13 42.4	+1.1	
CRLN	Carolina, Mapu	147.96	313	eP		PKPdf	01 13 43.2	+1.8	
KGCAE	Kacgae	148.29	327	*i* P		PKPdf	01 13 43.0	+1.0	
POGA	Pongola	148.31	309	eP		PKPbc	01 13 46.0	+0.8	
CRZF	Crozet Islands	148.84	260	IAMs_20	IAMs_20		02 35 34.4		
	comp=Z,5µm,20.0s								
HRAO	HartRAO	148.91	316	eP		PKPbc	01 13 47.4	+0.4	
LBTB	Lobatse	149.01	320			PKPdf	01 13 42.0	-1.1	
LBTB	Lobatse	149.01	320	eP		PKPbc	01 13 47.9	+0.7	
LBTB	Lobatse	149.01	320	PKIKP		PKPdf	01 13 42.0	-1.1	
SKOMA	Sekoma	149.20	323	*i* P		PKPdf	01 13 44.9	+1.4	
NWCL	Newcastle	149.50	311	eP		PKPbc	01 13 48.9	+0.5	
WIN	Windhoek	149.52	336			PKPdf	01 13 42.8	-1.3	
WIN	Windhoek	149.52	336	eP		PKPbc	01 13 49.8	+1.2	
WIN	Windhoek	149.52	336	PKIKP		PKPdf	01 13 42.8	-1.3	
BELA	Belgrano 2	149.90	165	PKPdf		PKPdf	01 13 42.9	+0.1	
PRYS	Parys	149.96	316	eP		PKPbc	01 13 48.9	-0.6	
MAKGR	Makgori	150.04	321	*i* P		PKPdf	01 13 46.9	+2.1	
PHPEN	Phepeng	150.47	324	*i* P		PKPdf	01 13 47.4	+2.0	
PMBG	Pietermaritzbu	150.69	308	eP		PKiKP	01 13 52.3	+0.5	
SNKL	Senekal, Frees	150.94	314	eP		PKPbc	01 13 52.6	+0.7	
SWZ	Schweizer	151.04	319	eP		PKPbc	01 13 52.3	+0.2	
KSTD	Kokstad	152.18	309	eP		PKiKP	01 13 56.1	+1.2	
BOSA	Boshof	152.33	318	PKP		PKPdf	01 13 46.8	-1.4	
	comp=Z,20nm,0.9s,baz=57,slow=1.0,SNR=15								
BOSA				PKPbc		PKPbc	01 13 55.0	+0.1	
	comp=Z,102nm,0.7s,baz=35,slow=1.8,SNR=156								
BOSA	Boshof	152.33	318	PKPdf		PKPdf	01 13 46.9	-1.2	
BOSA	Boshof	152.33	318	eP		PKPbc	01 13 54.8	-0.1	
AUSN	Aus	153.66	335	eP		PKPbc	01 13 58.7	+0.7	
UPI	Upington	153.68	325	eP		PKPbc	01 13 57.5	-0.4	
ARMS	Ukamas	153.91	328	eP		PKiKP	01 13 59.4	+0.9	
HVD	Gariep Dam	153.95	315	eP		PKPdf	01 13 53.5	+3.0	
SYO	Syowa Base	155.75	210	*i* PKPdf		PKPdf	01 13 50.2	-1.3	
SYO	Syowa Base	155.75	210	*i* pPKPdf		pPKPdf	01 14 00.4	-0.6	
SYO	Syowa Base	155.75	210	*i* PKPab		PKPab	01 14 18.0	-0.3	
BFON	Badsfontein, M	155.76	317	eP		PKPdf	01 14 04.0	+11	
GRHM	Grahamstown, E	155.78	310			PKPdf	01 13 51.1	-1.7	
GRAF	Camdeboo Natio	155.82	315	eP		PKPdf	01 14 03.4	+10	
BRAK	Brakfontein	156.08	318	eP		PKPdf	01 14 03.0	+10	
KOMG	Komaggas	156.26	331	eP		PKPdf	01 14 04.5	+11	
ROOI	Rooidraai Farm	156.42	316	eP		PKPdf	01 14 03.7	+10	
GRAN	Grantham	156.84	319	eP		PKPdf	01 14 07.2	+13	
CVNA	Calvinia	157.05	324	eP		PKPdf	01 14 06.9	+12	
MERW	Merweville	157.43	320	eP		PKPdf	01 14 07.6	+13	
SUR	Sutherland	157.45	321	P		PKPdf	01 13 55.8	+0.7	
SUR	Sutherland	157.45	321	eP		PKPdf	01 14 07.9	+13	
VNA3	Neumayer Olymp	159.14	167	↑P		PKPdf	01 13 53.9	-1.8	
	comp=Z,14nm,0.8s								
VNA3				↑PP		PP	01 18 17.5	+3.1	
TROLL	Troll, Antarti	159.35	178	↑P		PKPdf	01 13 55.2	-1.0	
	comp=Z,470nm,0.9s								
TROLL				↓PP		PP	01 18 19.3	+3.6	
SNAA	Sanae	159.45	174	↑P		PKPdf	01 13 54.1	-2.0	
SNAA				↑PP		PP	01 18 19.0	+2.9	
SNAA	Sanae	159.45	174	↓		PKPab	01 14 34.2	-0.1	
SNAA	Sanae	159.45	174	PKP		PKPdf	01 13 54.2	-2.0	
	comp=Z,10nm,1.0s,baz=240,slow=2.1,SNR=20								
SNAA				PKPab		PKPab	01 14 34.2	-0.1	
	comp=Z,22nm,1.0s,baz=204,slow=4.6,SNR=5.9								
SNAA	Sanae	159.45	174			PKPdf	01 13 54.6	-1.5	
VNA2	Neumayer--Watz	159.73	169	↑P		PKPdf	01 13 54.3	-2.1	
	comp=Z,16nm,0.8s,baz=310,slow=1.6								
VNA2				↑PP		PP	01 18 18.4	+0.8	
	baz=181,slow=30								
VNA1	Neumayer--Stat	159.87	168	↑P		PKPdf	01 13 55.1	-1.5	
	comp=Z,18nm,1.1s								
NVL	N'lazarevskaya	160.31	187	ePKIKP		PKPdf	01 13 58.4	+1.4	
NVL				*e*			01 18 22.4		
NVL				ePPP		PPP	01 22 03.7		
NVL				eSS		SS	01 38 31.5	+3.1	
NVL				eSSS		SSS	01 44 43.3		
NVL				pmax		pmax			
	comp=Z,11nm,0.7s								
NVL				pmax		pmax			
	comp=N,1µm,15.0s								

KNET ***24*** *00:58:02.9±0.5, 42°.43N×76°.01E, h0km, ml1.4, Error ellipse: s-maj=6.2km s-min=2.3km az=40.0*
NNC ***24*** *00:58:03.4±0.5, 42°.43N×76°.04E, h0km, mb2.9, mpv2.9, Error ellipse: s-maj=4.7km s-min=1.8km az=165.0*
KRNET ***24*** *00:58:03.5±0.1, 42°.41N×76°.09E, h18km, mb2.5*
SOME ***24*** *00:58:03.8, 42°.38N×76°.10E, h15km*

ISC 24 00:58:03.3±0.8, 42°.41N±0°.02×76°.08E±0°.02, h14km±6km, n48, σ0°80/89, 34C-22D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOOM	Boomskoye usch	0.13	308	↓*e*P		Pg		00 58 07.0	-0.1
BOOM				↓*e*S		Sg		00 58 09.3	-0.2
ULHL	Ulahol	0.21	143	↓P		Pg		00 58 08.0	-0.2
	19nm,0.1s,SNR=179								
ULHL				↑S		Sg		00 58 10.8	-0.6
	120nm,0.1s								
ULHL	Ulahol	0.21	143	↓*e*P		Pg		00 58 07.9	-0.2
ULHL				↓*e*S		Sg		00 58 11.0	-0.4
TKM2	Tokmak 2	0.62	325	↓P		Pg		00 58 15.6	0.0
	10nm,0.1s,SNR=72								
TKM2				↑S		Sb		00 58 24.4	-0.3
	43nm,0.1s								
TKM2	Tokmak 2	0.62	325	↑*e*P		Pg		00 58 15.7	+0.2
TKM2				↑*e*S		Sb		00 58 24.5	-0.2
KST	Kastek	0.64	352	P		Pb		00 58 16.2	-0.1
	1.2nm,0.1s								
KST				S		Sb		00 58 24.7	-0.4
	57nm,0.2s								
KST	Kastek	0.64	352	*e*P		Pb		00 58 16.1	-0.1
	1.2nm,0.1s								
KST				*e*S		Sb		00 58 24.7	-0.4
	57nm,0.2s								
MTBS	Maitube	0.76	20	P		Pg		00 58 18.2	0.0
	5.0nm,0.1s								
MTBS				S		Sb		00 58 28.6	-0.2
	40nm,0.2s								
MTBS	Maitube	0.76	20	*e*P		Pg		00 58 18.2	0.0
	5.0nm,0.1s								
MTBS				*e*S		Sb		00 58 28.6	-0.2
	40nm,0.2s								
KDJ	Kajisay	0.87	109	↑*e*P		Pg		00 58 19.9	-0.2
KDJ				↑*e*S		Sg		00 58 31.7	+0.2
KBK	Karagaybulak	0.87	287	↑P		Pb		00 58 19.8	-0.4
	5.0nm,0.1s,SNR=18								
KBK				↓S		Sb		00 58 32.3	+0.4
	37nm,0.2s								
KBK	Karagaybulak	0.87	287	↑*e*P		Pb		00 58 20.2	-0.1
KBK				↑*e*S		Sb		00 58 32.2	+0.4
TNSS	Tian-Shan	0.90	45	P		Pg		00 58 20.7	-0.1
	8.3nm,0.1s								
TNSS				S		Sb		00 58 32.6	-0.3
	3.8nm,0.3s								
TNSS	Tian-Shan	0.90	45	*e*P		Pg		00 58 20.6	-0.1
	8.3nm,0.1s								
TNSS				*e*S		Sb		00 58 32.6	-0.3
	3.8nm,0.3s								
MDOK	Medeo	1.04	43	Pg		Pb		00 58 23.1	0.0
	8.1nm,0.2s								
MDOK				Lg		Lg		00 58 36.5	
	4.4nm,0.5s								
KOTS	Kotyrbulak	1.12	42	P		Pg		00 58 25.2	+0.2
	20nm,0.2s								
KOTS				S		Sn		00 58 40.4	+0.3
	22nm,0.5s								
KOTS	Kotyrbulak	1.12	42	*e*P		Pg		00 58 25.2	+0.2
	20nm,0.2s								
KOTS				*e*S		Sn		00 58 40.4	+0.3
	22nm,0.5s								
CHMS	Chumysh	1.14	301	↑P		Pb		00 58 24.7	-0.1
	3.1nm,0.2s								
CHMS				↑S		Sn		00 58 40.1	-0.2
	11nm,0.2s								
CHMS	Chumysh	1.14	301	↑*e*P		Pb		00 58 24.8	0.0
CHMS				↑*e*S		Sn		00 58 40.2	-0.1
FRU1	Bishkek	1.14	291	↑*e*P		Pn		00 58 25.2	+0.3
FRU1				↑*e*S		Sg		00 58 40.9	+0.7
UCH	Uchtor	1.17	262	↑P		Pb		00 58 25.4	-0.2
	1.2nm,0.2s,SNR=7.9								
UCH				↓S		Sb		00 58 41.3	+0.4
	9.1nm,0.2s								
UCH	Uchtor	1.17	262	↓*e*P		Pb		00 58 25.7	+0.1
UCH				↓*e*S		Sg		00 58 41.6	+0.2
AAK	Ala-Archa	1.19	281	↓P		Pn		00 58 25.8	+0.1
	1.8nm,0.1s,SNR=6.8								
AAK				↑S		Sn		00 58 41.8	+0.1
	5.4nm,0.2s								
AAK	Ala-Archa	1.19	281	↑P		Pn		00 58 25.8	+0.1
	0.2nm,0.3s								
AAK				↑S		Sb		00 58 41.3	+0.2
	1.5nm,0.5s								
AAK	Ala-Archa	1.19	281	↑*e*P		Pn		00 58 25.8	+0.1
AAK				↑*e*S		Sg		00 58 42.1	+0.3
KTBS	Karatobe	1.37	19	P		Pg		00 58 29.3	-0.4
	4.1nm,0.2s								
KTBS				S		Sg		00 58 47.5	-0.2
	0.3nm,0.3s								
JNKS	Jany-Kuch	1.39	193	↑*e*P		Pn		00 58 29.1	+0.6
JNKS				↑*e*S		Sb		00 58 47.7	+0.9
ARLS	Aral	1.42	248	↑*e*P		Pb		00 58 29.7	+0.1
ARLS				↑*e*S		Sb		00 58 48.7	+1.2
USP	Ospenovka	1.44	307	↓P		Pb		00 58 30.1	+0.2
	5.1nm,0.2s,SNR=14								
USP				↓S		Sg		00 58 49.5	-0.2
	6.2nm,0.2s								
USP	Ospenovka	1.44	307	↓*e*P		Pb		00 58 30.2	+0.2
USP				↓*e*S		Sg		00 58 49.6	-0.2
TARG	Taragay, Kyrgy	1.46	117	↑*e*P		Pb		00 58 30.2	-0.2
TARG				↑*e*S		Sb		00 58 49.6	+0.7
SGDS	Sogindy	1.49	315	P		Pb		00 58 30.8	+0.1
	1.9nm,0.2s								
SGDS				S		Sb		00 58 50.2	+0.7
	7.4nm,0.2s								
EKS2	Erkin-Say	1.72	279	↑P		Pb		00 58 35.4	+0.7
	1.7nm,0.1s,SNR=12								
EKS2				↓S		Sg		00 58 59.0	+0.4
	5.3nm,0.2s								
EKS2	Erkin-Say	1.72	279	↓*e*P		Pb		00 58 35.1	+0.4
EKS2				↓*e*S		Sg		00 58 58.1	-0.5
PRZ	Przheval'sk	1.72	87	↓*e*P		Pb		00 58 35.0	+0.2
PRZ				↑*e*S		Sg		00 58 57.8	-0.9
SATY	Saty	1.83	69	P		Pg		00 58 37.8	-0.7
	4.7nm,0.1s								
SATY				S		Sg		00 59 02.0	-0.4
	19nm,0.2s								
KPKS	Kokpek	2.19	60	Pg		Pg		00 58 44.5	-0.7
	0.4nm,0.1s								
KPKS				Lg		Lg		00 59 13.6	
	22nm,0.4s								
KPKS	Kokpek	2.19	60	*e*P		Pg		00 58 44.5	-0.7
	0.4nm,0.1s								
KPKS				*e*S		Sg		00 59 13.6	0.0
	22nm,0.4s								
ARXS	Arharly	2.21	35	Pg		Pb		00 58 43.6	+0.6
	6.6nm,0.3s								
ARXS				Lg		Lg		00 59 12.1	
	8.4nm,0.2s								
ARXS	Arharly	2.21	35	*e*P		Pb		00 58 43.6	+0.6
	6.6nm,0.3s								
ARXS				*e*S		Sg		00 59 12.1	-2.3
	8.4nm,0.2s								
SALK	Salom-Alik	2.28	229	↓*e*P		Pb		00 58 43.2	-1.1
SALK				↓*e*S		Sb		00 59 11.9	-0.4
UZB	Uzunbulak	2.29	70	Pg		Pb		00 58 45.4	+1.0
	5.2nm,0.4s								
UZB				Lg		Lg		00 59 15.0	
	16nm,0.3s								
UZB	Uzunbulak	2.29	70	*e*P		Pb		00 58 45.4	+1.0
	5.2nm,0.4s								
UZB				*e*S		Sg		00 59 15.0	-1.9
	16nm,0.3s								
MNAS	Manas	2.65	273	↓*e*P		Pn		00 58 48.2	+2.6
MNAS				↓*e*S		Sb		00 59 20.9	-2.0
PDGK	Podgornoye	2.67	69	↑Pg		Pb		00 58 51.0	+0.1
	2.7nm,0.9s								
PDGK				↑Lg		Lg		00 59 25.9	
	4.4nm,0.6s								
BTLS	Baital	3.01	331	Pg		Pb		00 58 58.6	+1.9
	1.4nm,0.2s								
BTLS				Lg		Lg		00 59 37.5	
	5.3nm,0.6s								
BTLS	Baital	3.01	331	*e*P		Pb		00 58 58.5	+1.9
	1.4nm,0.2s								
BTLS				*e*S	

J26L IAmb IAmb 01 08 33.6
comp=Z,13nm,1.4s

*SFS **24** 01:06:47.6, 37.63N × 8.58W, h6km, ML2.3/6, ML2.0/10, MLv1.8/10*
*MDD **24** 01:06:47.6±0.5, 37.64N × 8.58W, h10km, mb_Lg2.5/8, Error ellipse: s-maj=4.3km s-min=2.9km az=111.0*
*IGIL **24** 01:06:48.5, 37.62N × 8.59W, h12km, ML1.5*
INMG 24 01:06:48.3±1.4, 37.62N × 8.59W, h12km ± 3km, ML1.7, 2C, Error ellipse: s-maj=2.6km s-min=1.6km az=106.0, #DIST_RANGE: LOCAL #IPMA_REGION: NE Odemira, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**0.13**	**236**	*i* Pg	Pg	01 06 51.5	0.0
PTEO				*e*Sg	Sg	01 06 54.0	+0.1
PTEO				*i* IAML		01 06 54.3	
PTEO				*i* IAML		01 06 54.4	
PTEO				*i* IAML		01 06 55.0	
MORF	**Marmelete**	**0.32**	**190**	*e*P	Pg	01 06 54.4	-0.4
MORF				*e*S	Sg	01 06 59.0	-0.1
MORF				IAML		01 06 60.0	
	comp=N,150nm,0.2s						
MORF	**Marmelete**	**0.32**	**190**	*e*Pg	Pg	01 06 54.4	-0.4
MORF				*e*Sg	Sg	01 06 59.1	0.0
MORF				*i* IAML		01 06 59.3	
MORF				*i* IAML		01 06 59.6	
MORF				*i* IAML		01 06 59.8	
MESJ	**Messejana**	**0.36**	**53**	*e*P	Pg	01 06 55.4	-0.2
MESJ				*e*S	Sg	01 07 00.4	0.0
MESJ				IAML		01 07 00.9	
	comp=E,16nm,0.2s						
MESJ	**Messejana**	**0.36**	**53**	*e*P	Pn	01 07 01.9	+2.4
MESJ	**Messejana**	**0.36**	**53**	*e*Pg	Pg	01 06 55.4	-0.2
MESJ				*e*Sg	Sg	01 07 00.7	+0.3
MESJ				*i* IAML		01 07 00.9	
MESJ				*i* IAML		01 07 01.2	
MESJ				*i* IAML		01 07 01.2	
MESJ	**Messejana**	**0.36**	**53**	*e*P	Pn	01 07 01.1	+1.6
MESJ	**Messejana**	**0.36**	**53**	*e*P	Pn	01 07 01.1	+1.6
PCVE	**Castro Verde**	**0.43**	**88**	Pg	Pg	01 06 56.5	-0.4
PCVE				Sg	Sg	01 07 02.5	-0.1
PCVE	**Castro Verde**	**0.43**	**88**	*e*P	Pn	01 07 02.9	+2.4
PCVE	**Castro Verde**	**0.43**	**88**	*e*Pg	Pg	01 06 56.5	-0.4
PCVE				*e*Sg	Sg	01 07 02.6	0.0
PCVE				*i* IAML		01 07 02.8	
PCVE				*i* IAML		01 07 03.1	
PCVE				*i* IAML		01 07 03.6	
PFVI	**Vila Bisbo**	**0.52**	**202**	Pg	Pg	01 06 57.7	-0.8
PFVI				Sg	Sg	01 07 04.7	-0.7
PFVI	**Vila Bisbo**	**0.52**	**202**	*e*Pg	Pg	01 06 57.8	-0.7
PFVI				*e*Sg	Sg	01 07 04.6	-0.9
PFVI				*i* IAML		01 07 06.2	
PFVI				*i* IAML		01 07 06.2	
PFVI				*i* IAML		01 07 06.3	
PBDV	**Barranco-do-Ve**	**0.64**	**126**	P	Pn	01 07 02.9	-0.4
PBDV	**Barranco-do-Ve**	**0.64**	**126**	Pg	Pg	01 06 59.8	-1.0
PBDV				Sg	Sg	01 07 08.3	-0.9
PBDV	**Barranco-do-Ve**	**0.64**	**126**	*e*Pg	Pg	01 07 00.0	-0.8
PBDV				*e*Sg	Sg	01 07 09.4	+0.2
PBDV				*i* IAML		01 07 11.0	
PBDV				*i* IAML		01 07 11.7	
PBDV				*i* IAML		01 07 12.8	
PBEJ	**Beja**	**0.70**	**54**	*e*Pg	Pg	01 07 01.4	-0.4
PBEJ				*e*Sg	Sg	01 07 10.3	-0.7
PBEJ				*i* IAML		01 07 11.4	
PBEJ				*i* IAML		01 07 11.6	
PBEJ				*i* IAML		01 07 11.7	
PVAQ	**Vaqueiros**	**0.72**	**107**	*e*Pg	Pg	01 07 01.3	-1.0
PVAQ				*e*Sg	Sg	01 07 11.6	-0.2
PVAQ				*i* IAML		01 07 12.3	
PVAQ				*i* IAML		01 07 12.6	
PVAQ				*i* IAML		01 07 12.7	
EGRO	**El Granado**	**0.88**	**95**	Pg	Pg	01 07 04.0	-1.3
EGRO				Sg	Sg	01 07 15.6	-1.2
EGRO	**El Granado**	**0.88**	**95**	Pg	Pg	01 07 03.6	-1.7
EGRO				Pg	Pb	01 07 03.8	-1.7
EGRO				Sg	Sg	01 07 15.5	-1.3
EGRO				Sg	Sb	01 07 15.6	-1.7
EGRO				*i* IVmb_Lg		01 07 18.3	
MOE	**Montemor**	**0.92**	**12**	*e*P	Pg	01 07 05.4	-0.6
MOE				*e*S	Sg	01 07 17.4	-0.6
MOE				*i* IAML		01 07 18.5	
MOE				*i* IAML		01 07 18.5	
MOE				*i* IAML		01 07 18.8	
EVO	**Evora**	**1.02**	**26**	Sg	Sg	01 07 18.8	-2.3
EVO				Pg	Pg	01 07 05.0	-2.9
EVO	**Evora**	**1.02**	**26**	*e*P	Pg	01 07 06.9	-0.9
EVO				*e*S	Sg	01 07 19.7	-1.4
EVO				*i* IAML		01 07 21.1	
EVO				*i* IAML		01 07 21.5	
EVO				*i* IAML		01 07 21.5	
EXAYA	**Ayamonte**	**1.02**	**113**	Sg	Sg	01 07 20.3	-0.9
PARRA	**Arraiolos**	**1.27**	**20**	*e*P	Pn	01 07 10.8	-0.8
PARRA				*e*S	Sb	01 07 27.4	-0.4
PARRA				*i* IAML		01 07 27.9	
PARRA				*i* IAML		01 07 29.5	
PARRA				*i* IAML		01 07 30.0	
PBAR	**Barrancos**	**1.34**	**65**	Pn	Pn	01 07 10.5	-2.5
PBAR				Sn	Sb	01 07 29.3	-1.4
PBAR	**Barrancos**	**1.34**	**65**	*e*Pg	Pn	01 07 12.6	-0.3
PBAR				*e*Sg	Sb	01 07 30.1	-0.5
PBAR				*i* IAML		01 07 32.0	
PBAR				*i* IAML		01 07 32.6	
PBAR				*i* IAML		01 07 32.9	
PMAFR	**Mafra**	**1.44**	**338**	Sn	Sn	01 07 32.3	-0.9
PESTR	**Estremoz**	**1.47**	**32**	Sn	Sn	01 07 33.1	-0.9
PESTR	**Estremoz**	**1.47**	**32**	*e*Sg	Sn	01 07 33.2	-0.7
PESTR				*i* IAML		01 07 35.0	
PESTR				*i* IAML		01 07 35.4	
PESTR				*i* IAML		01 07 35.6	
EMIN	**Mina Concepcio**	**1.52**	**84**	Pn	Pn	01 07 13.5	-1.9
EMIN				Pg	Pb	01 07 15.2	-1.4
EMIN				Sn	Sn	01 07 33.0	-2.2
EMIN				Sg	Sb	01 07 36.0	+0.1
EMIN				*i* IVmb_Lg		01 07 38.2	
EBAD	**Badajoz**	**1.68**	**47**	Pn	Pn	01 07 14.6	-3.0
EBAD				Sn	Sn	01 07 38.6	-0.5
EBAD	**Badajoz**	**1.68**	**47**	Pn	Pn	01 07 14.6	-3.0
EBAD				Pg	Pb	01 07 18.0	-1.2
EBAD				Sn	Sn	01 07 36.7	-2.3
EBAD				Sg	Sb	01 07 40.4	+0.1
EBAD				*i* IVmb_Lg		01 07 42.0	
PSBE	**So Bento**	**1.90**	**355**	*e*Sg	Sb	01 07 47.3	+0.7
PSARD	**Sardoal**	**2.00**	**9**	*e*Pg	Pb	01 07 25.5	+0.8
PSARD				*e*Sg	Sb	01 07 50.0	+0.3
PSARD				*i* IAML		01 07 51.1	
PSARD				*i* IAML		01 07 52.9	
PSARD				*i* IAML		01 07 53.8	
PMRV	**Marv??o**	**2.03**	**27**	*e*Pn	Pn	01 07 19.9	-2.5
PMRV				*e*Sg	Sb	01 07 49.8	-0.7
PMRV				*i* IAML		01 07 52.7	
PMRV				*i* IAML		01 07 53.0	
PMRV				*i* IAML		01 07 54.0	
PCBR	**Castelo Branco**	**2.38**	**21**	*e*Pn	Pn	01 07 35.0	-2.2
PCBR				*e*Sg	Sb	01 08 01.2	+0.8
ECAB	**El Cabril**	**2.55**	**79**	Pn	Pn	01 07 27.5	-2.1
ECAB				Sn	Sn	01 07 56.6	-3.9
ECAB	**El Cabril**	**2.55**	**79**	Pn	Pn	01 07 27.8	-1.8
ECAB				Sn	Sn	01 07 57.2	-3.3
ECAB				Sg	Sg	01 08 08.7	-1.5
ECAB				*i* IVmb_Lg		01 08 13.3	
EPLA	**Plasencia**	**3.13**	**38**	Sn	Sn	01 08 11.3	-3.5
EPLA				*i* IVmb_Lg		01 08 23.8	
EPLA				Sg	Sg	01 08 26.3	-2.5
EADA	**Adamuz**	**3.22**	**79**	Pn	Pn	01 07 36.4	-2.4
EADA				Sn	Sn	01 08 13.4	-3.6
EADA				Sg	Sg	01 08 29.6	-2.1
EADA				*i* IVmb_Lg		01 08 31.0	
PAB	**San Pablo**	**3.84**	**59**	Pn	Pn	01 07 44.8	-2.5
PAB				Sg	Sg	01 08 49.6	-1.9
PAB				*i* IVmb_Lg		01 08 58.0	

*IDC **24** 01:08:24.4±1.6, 0.89S × 97.95E, h0km, mb4.3/11, mbtmp4.3/12, ML4.7/1, Error ellipse: s-maj=54.4km s-min=17.6km az=58.0*

*DJA **24** 01:08:25.2±1.3, 1.5S × 9.8E, h14km±10km, M4.8/19, mB5.6/2, mb4.8/9, MLv4.7/19, Mw(mB)5.1/2*
*NEIC **24** 01:08:26.5±1.3, 0.9S±0.1 × 97.9E±0.1, h10km±1km, mb5.0/16, Error ellipse: s-maj=20.4km s-min=15.9km az=241.0*
ISC 24 01:08:28.1±0.6, 0.90S±0.06 × 97.95E±0.08, h26km, n75, σ1§03/60, mb4.6/18, 1C-1D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**0.90**	**22**	P	Pb	**01 08 44.7**	**-0.4**
SISI	**Saibi**	**1.22**	**110**	P	Pb	**01 08 49.2**	**-1.3**
MNSI	**Mandailing Nat**	**2.34**	**44**	P	Pn	**01 09 05.4**	**+0.4**
PPI	**Padang Panjang**	**2.49**	**80**	P	Pn	**01 09 07.0**	**+0.1**
PDSI	**Padang**	**2.51**	**90**	P	Pn	**01 09 07.1**	**-0.2**
PPSI	**Pulau Pagai**	**2.77**	**132**	P	Pn	**01 09 10.1**	**-0.7**
SNSI	**Sinabang, Aceh**	**3.66**	**334**	P	Pn	**01 09 21.3**	**-1.9**
RPSI	**Rantau Prapat**	**3.70**	**15**		Pn	**01 09 23.8**	**+0.1**
KRJI	**Kerinci**	**3.71**	**109**	P	Pn	**01 09 25.3**	**+1.5**
KCSI	**Kotacane, Aceh**	**4.39**	**358**	P	Pn	**01 09 31.2**	**-2.0**
MASI	**Maura Aman, Be**	**4.83**	**118**	P	Pn	**01 09 40.9**	**+1.6**
MLSI	**Meulaboh, Aceh**	**5.36**	**343**	P	Pn	**01 09 45.0**	**-1.5**
	0.5nm66nm,1.1s						
KSI	**Kapahiang**	**5.38**	**121**	P	Pn	**01 09 47.6**	**+0.7**
	393nm,0.6s						
IPM	**Ipoh**	**6.16**	**30**		Pn	**01 09 59.1**	**+1.6**
MYKOM	**Kota Tinggi**	**6.48**	**66**	Pn	Pn	**01 10 02.5**	**+0.7**
DSRI	**Dabo**	**6.64**	**86**	P	Pn	**01 10 04.9**	**+0.8**
	0.3nm54nm,0.6s						
KULM	**Kulim**	**6.71**	**24**		Pn	**01 10 05.9**	**+0.8**
MDSI	**Maura Dua**	**7.17**	**120**	P	Pn	**01 10 11.1**	**-0.3**
	0.3nm2μm44nm,1.1s						
KASI	**Kota Agung**	**7.99**	**125**	P	Pn	**01 10 21.7**	**-0.9**
SBUM	**Sibu**	**14.65**	**77**		Pn	**01 11 53.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**19.26**	**3**	P	Pn	**01 12 51.7**	**-0.3**
	0.9nm,0.3s,baz=194,slow=10,SNR=16						
	3.7nm,0.5s						
TOLI2	**Tolitoli**	**22.92**	**85**	P	**P**	**01 13 29.0**	**-1.4**
H08S2	**Diego Garcia H**	**26.24**	**254**	T	T	01 41 24.6	
	baz=76,slow=75,SNR=595						
H08S3	**Diego Garcia H**	**26.25**	**255**	T	T	01 41 22.7	
	baz=76,slow=75,SNR=781						
H08S1	**Diego Garcia H**	**26.26**	**255**	T	T	01 41 12.9	
	baz=76,slow=75,SNR=596						
HYBB	**Hyderabad (bro**	**26.39**	**314**	*e*P	**P**	**01 14 02.9**	**+0.2**
SHL	**Shillong**	**26.96**	**348**	P	**P**	**01 14 07.5**	**-0.4**
SHL				IAmb	IAmb	01 14 46.8	
	comp=Z,60nm,1.1s						
SSLB	**Suanglung**	**33.19**	**41**	P	**P**	**01 15 02.1**	**-0.8**
FAKI	**Fak Fak**	**34.34**	**94**	P	**P**	**01 15 12.1**	**-1.0**
FAKI				IAmb	IAmb	01 16 25.6	
	comp=Z,34nm,1.4s						
H01W3	**Cape Leeuwin H**	**37.03**	**158**	T	T	01 54 38.0	
	baz=334,slow=76,SNR=46						
H01W2	**Cape Leeuwin H**	**37.05**	**158**	T	T	01 54 39.0	
	baz=334,slow=76,SNR=61						
H01W1	**Cape Leeuwin H**	**37.05**	**158**	T	T	01 54 39.2	
	baz=334,slow=76,SNR=49						
LZDM	**Lanzhou Array**	**37.05**	**8**	P	**P**	**01 15 36.6**	**+0.2**
	comp=Z,3.2nm,0.5s,baz=200,slow=11,SNR=4.5						
	comp=Z,3.2nm,0.5s						
WRA	**Warramunga Arr**	**40.31**	**120**	P	**P**	**01 16 03.6**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=301,slow=9.0,SNR=33						
	comp=Z,4.1nm,0.7s						
WRA	**Warramunga Arr**	**40.31**	**120**	P	**P**	**01 16 03.1**	**-0.6**
WR8	**Warramunga Arr**	**40.46**	**120**	P	**P**	**01 16 05.0**	**+0.1**
WR8				IAmb	IAmb	01 16 05.6	
	comp=Z,9.2nm,0.7s						
ASAR	**Alice Springs**	**41.55**	**126**	P	**P**	**01 16 14.3**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=294,slow=8.1,SNR=14						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**41.55**	**126**	P	**P**	**01 16 14.1**	**+0.1**
JNU	**Nakatsue**	**45.91**	**39**	P	**P**	**01 16 49.2**	**+0.4**
KSRS	**Korea Array**	**47.17**	**33**	P	**P**	**01 16 58.1**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=220,slow=9.3,SNR=8.0						
	comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**49.09**	**8**	P	**P**	**01 17 13.6**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=190,slow=8.8,SNR=12						
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**49.45**	**346**	P	**P**	**01 17 16.7**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=157,slow=8.8,SNR=28						
	comp=Z,2.7nm,0.6s						
MKAR	**Makanchi Array**	**49.45**	**346**	P	**P**	**01 17 16.2**	**+0.2**
MAKZ	**Makanchi**	**49.54**	**346**	P	**P**	**01 17 16.8**	**+0.1**
MAKZ				IAmb	IAmb	01 17 36.1	
	comp=Z,32nm,1.6s						
KURBB	**Kurchatov Arra**	**53.94**	**345**	P	**P**	**01 17 49.5**	**0.0**
	comp=Z,1.2nm,0.8s,baz=165,slow=6.9,SNR=9.1						
	comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**54.00**	**345**	P	**P**	**01 17 50.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**54.19**	**30**	P	**P**	**01 17 51.2**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=230,slow=7.5,SNR=11						
	comp=Z,5.0nm,0.8s						
ZAA0	**Zalesovo Array**	**55.74**	**351**	IAmb	IAmb	01 18 22.8	
	comp=Z,8.1nm,0.8s						
ZALV	**Zalesovo Beam**	**55.74**	**351**	P	**P**	**01 18 02.6**	**+0.2**
	comp=Z,4.9nm,0.7s,baz=175,slow=6.9,SNR=17						
	comp=Z,4.9nm,0.7s						
ZALV	**Zalesovo Beam**	**55.74**	**351**	P	**P**	**01 18 02.4**	**0.0**
BVAR	**Borovoye Array**	**58.47**	**341**	P	**P**	**01 18 21.6**	**-0.2**
	comp=Z,3.8nm,0.9s,baz=152,slow=12,SNR=4.5						
	comp=Z,3.8nm,0.9s						
AB31	**Akbulak array**	**59.71**	**332**	P	**P**	**01 18 29.4**	**-1.0**
AB31				IAmb	IAmb	01 18 34.4	
	comp=Z,13nm,1.6s						
ABKAR	**Akbulak array**	**59.71**	**332**	P	**P**	**01 18 29.6**	**-0.8**
H04N2	**CROZET ISLANDS**	**60.48**	**215**	T	T	02 24 16.8	
	baz=56,slow=75,SNR=357						
H04N1	**CROZET ISLANDS**	**60.50**	**215**	T	T	02 24 17.3	
	baz=56,slow=75,SNR=301						
H04N3	**CROZET ISLANDS**	**60.50**	**215**	T	T	02 24 15.9	
	baz=56,slow=75,SNR=321						
H04S1	**CROZET ISLANDS**	**60.80**	**214**	T	T	02 24 37.0	
	baz=55,slow=76,SNR=31						
H04S3	**CROZET ISLANDS**	**60.81**	**214**	T	T	02 24 37.5	
	baz=55,slow=76,SNR=42						
H04S2	**CROZET ISLANDS**	**60.82**	**214**	T	T	02 24 38.0	
	baz=55,slow=76,SNR=19						
TIXI	**Tiksi**	**75.11**	**10**	P	**P**	**01 20 07.1**	**-0.3**
	comp=Z,4.8nm,0.6s,baz=248,slow=1.8,SNR=11						
	comp=Z,4.8nm,0.6s						
TIXI	**Tiksi**	**75.11**	**10**	P	**P**	**01 20 07.5**	**0.0**
TIXI				IAmb	IAmb	01 20 08.0	
	comp=Z,14nm,1.2s						
SYO	**Syowa Base**	**78.26**	**198**	*e*P	**P**	**01 20 28.2**	**+2.9**
SYO	**Syowa Base**	**78.26**	**198**	*e*pP	pP	01 20 31.6	-1.4
BURAR	**Bucovina Array**	**79.09**	**319**	P	**P**	**01 20 32.7**	**+2.2**
BKZ	**Black Stump Fm**	**80.55**	**129**	P	**P**	**01 20 38.8**	**+0.3**
BKZ				IAmb	IAmb	01 21 43.8	
	comp=Z,55nm,1.8s						
CLL	**Collm**	**87.53**	**321**	*e*P	**P**	**01 21 14.0**	**+0.3**
SPB2	**Spitsbergen Ar**	**89.14**	**348**	P	**P**	**01 21 23.6**	**+2.8**
CPUP	**Villa Florida**	**143.92**	**220**	PKhKP	PKPpre	01 27 57.1	
	comp=Z,1.1nm,1.0s,baz=66,slow=2.6,SNR=3.2						
WHAR	**Wooly Hollow**	**144.48**	**14**	PKPdf	**PKPdf**	**01 28 00.8**	**-1.9**
TZTN	**Tazewell**	**144.50**	**2**	PKPdf	**PKPdf**	**01 28 01.1**	**-1.7**
MIAR	**Mount Ida**	**144.84**	**17**	PKPdf	**PKPdf**	**01 28 02.7**	**-0.7**
TX31	**Lajitas Ar. Si**	**145.01**	**34**		**PKPdf**	**01 28 04.2**	**+0.2**
TXAR	**Lajitas Array**	**145.01**	**34**	PKPbc	**PKPdf**	**01 28 03.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=263,slow=1.5,SNR=16						
TXAR	**Lajitas Array**	**145.01**	**34**		**PKPdf**	**01 28 04.4**	**+0.4**
CO03	**El Pedregal**	**146.64**	**198**	PKPbc	**PKPab**	**01 28 08.2**	**-1.1**

*BER **24** 01:08:45.7±1.6, 75.04N × 8.32E, h10km, mb(Pn)3.5, Confirmed Earthquake*
*KOLA **24** 01:08:50.0, 75.56N × 9.11E, h0km, ML2.0, Error ellipse: s-maj=32.1km s-min=23.0km az=110.0, Greenland sea,Knipovich ridge, south*
ISC 24 01:08:44.8±3.5, 75.2N±0.1 × 8.6E±0.2, h10km, n11, σ1§76/16, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**2.48**	**39**	P	**Pn**	**01 09 26.1**	**+1.1**
HSPB				*S*	**Sn**	**01 09 53.4**	**-1.9**
HSPB	**Hornsund (broa**	**2.48**	**39**	*e*P	**Pn**	**01 09 26.2**	**+1.1**
BJO1	**Bjornoya**	**2.82**	**99**	*e*P	**Pn**	**01 09 30.4**	**+0.6**
BJO1				*e*S	**Sn**	**01 10 01.2**	**-2.4**
BJO1				IAML		01 10 03.0	
	comp=Z,4.6nm,0.3s						
BRBA	**Barentsburg A**	**3.17**	**22**	*e*P	**Pn**	**01 09 35.7**	**+1.1**
BRBA				IAML		01 10 21.9	
	comp=Z,5.7nm,0.9s						
BRBB	**Barentsburg B**	**3.20**	**21**	P	**Pn**	**01 09 35.9**	**+0.9**
BRBB				S	**Sn**	**01 10 10.5**	**-2.6**
BRBB	**Barentsburg B**	**3.20**	**21**	*e*P	**Pn**	**01 09 36.1**	**+1.1**
SPA0	**Spitsbergen Ar**	**3.50**	**27**	*e*P	**Pn**	**01 09 41.2**	**+2.0**
SPA0				*e*S	**Sn**	**01 10 21.7**	**+1.1**
SPA0				IAML		01 10 27.1	
	comp=Z,3.3nm,0.3s						
SPITS	**Spitsbergen Ar**	**3.50**	**27**	P	**Pn**	**01 09 41.0**	**+1.8**
KBS	**Kingsbay**	**3.84**	**10**	P	**Pn**	**01 09 44.0**	**+0.3**
KBS				S	**Sn**	**01 10 26.9**	**-1.9**
KBS	**Kingsbay**	**3.84**	**10**	*e*P	**Pn**	**01 09 44.0**	**+0.3**
KBS				IAML		01 10 26.0	
	comp=Z,3.6nm,0.8s						
HOPEN	**Hopen**	**4.24**	**64**	*e*P	**Pn**	**01 09 51.5**	**+2.3**
HOPEN				IAML		01 10 21.9	
	comp=Z,3.6nm,0.9s						

*MOS **24** 01:16:16.9, 42.83N × 45.67E, h36km, MPVA4.0*
*TIF **24** 01:16:16.7, 42.90N × 45.66E, h25km ± 1km*
*NORS **24** 01:16:18.4, 42.77N × 45.66E, h23km, MPVA4.1*
*DRS **24** 01:16:19.4, 42.83N × 45.71E, h15km*
ISC 24 01:16:17.9±1.0, 42.83N±0.02 × 45.59E±0.02, h13km±8km, n42, σ1§13/83, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.41**	**21**	*i* Pg	**Pb**	**01 16 27.2**	**+0.3**
GROC				*e*Sg	**Sb**	**01 16 34.7**	**+1.7**
DVE	**Vedeno**	**0.41**	**71**	*e*Pg	**Pg**	**01 16 26.2**	**+0.1**
DVE				*e*Sg	**Sg**	**01 16 32.4**	**+0.7**
BTLR	**Botlikh**	**0.49**	**109**	*e*Pg	**Pg**	**01 16 27.8**	**+0.2**
BTLR				*e*Sg	**Sg**	**01 16 34.9**	**+0.8**
KMGR	**Komgaron**	**0.58**	**294**	*i* Pg	**Pn**	**01 16 31.4**	**-0.5**
KMGR				*e*Sg	**Sn**	**01 16 42.2**	**+0.8**
VLKR	**Vladikavkaz**	**0.71**	**288**	*e*Pg	**Pn**	**01 16 33.4**	**-0.2**
VLKR				*e*Sg	**Sn**	**01 16 45.2**	**+0.8**
DLMR	**Dylym**	**0.80**	**72**	*e*Pg	**Pg**	**01 16 32.7**	**-0.6**
DLMR				*e*Sg	**Sg**	**01 16 43.8**	**0.0**
XNZR	**Khunzakh**	**0.87**	**109**	*e*Pg	**Pg**	**01 16 34.3**	**-0.4**
XNZR				*e*Sg	**Sg**	**01 16 45.8**	**-0.3**
UNCR	**Uncukul**	**0.89**	**97**	*e*Pg	**Pg**	**01 16 34.3**	**-0.8**
UNCR				*e*Sg	**Sg**	**01 16 46.4**	**-0.4**
TLTR	**Tlyarata**	**0.91**	**142**	*e*Pg	**Pg**	**01 16 34.5**	**-1.0**
TLTR				*e*Sg	**Sg**	**01 16 46.8**	**-0.7**
BTKR	**Batakoyurt**	**0.94**	**306**	*e*Pg	**Pn**	**01 16 37.5**	**+0.6**
BTKR				*e*Sg	**Sn**	**01 16 51.8**	**+1.6**
LACR	**Lac**	**0.95**	**271**	*e*Pg	**Pb**	**01 16 36.2**	**-0.2**
LACR				*e*Sg	**Sn**	**01 16 50.3**	**-0.3**
KRNR	**Karanay**	**0.97**	**89**	*e*Pg	**Pg**	**01 16 35.6**	**-0.9**
KRNR				*e*Sg	**Sg**	**01 16 48.7**	**-0.4**
ARNR	**Ardon**	**1.02**	**291**	*e*Pg	**Pb**	**01 16 37.8**	**+0.3**
ARNR				*e*Sg	**Sn**	**01 16 53.1**	**+0.9**
ARKR	**Arakani**	**1.06**	**102**	*e*Pg	**Pg**	**01 16 37.3**	**-0.9**
ARKR				*e*Sg	**Sg**	**01 16 51.5**	**-0.5**
TRKR	**Terskaya**	**1.10**	**325**	*e*Pg	**Pb**	**01 16 39.0**	**+0.4**
TRKR				*e*Sg	**Sn**	**01 16 55.4**	**+1.5**
BUJR	**Buynaksk**	**1.11**	**90**	*e*Pg	**Pg**	**01 16 38.6**	**-0.8**
BUJR				*e*Sg	**Sg**	**01 16 54.0**	**+0.1**
SEAG	**Tbilisi Sea**	**1.21**	**209**	P	**Pn**	**01 16 41.5**	**+1.0**
SEAG				S	**Sn**	**01 16 59.8**	**+3.0**
STDR	**Stavd-Durt**	**1.25**	**296**	*e*Pg	**Pg**	**01 16 41.8**	**0.0**
STDR				*e*Sg	**Sn**	**01 17 00.1**	**+2.5**
KMKR	**Kumukh**	**1.31**	**121**	*e*Pg	**Pn**	**01 16 41.1**	**-1.0**
KMKR				*e*Sg	**Sb**	**01 16 58.6**	**-0.7**
PRTR	**Priterechnaya**	**1.33**	**314**	*i* Pg	**Pg**	**01 16 43.2**	**-0.3**
PRTR				*e*Sg	**Sb**	**01 17 00.0**	**+0.4**
LSNR	**Lesken**	**1.37**	**290**	*e*Pg	**Pg**	**01 16 44.0**	**-0.2**
LSNR				*e*Sg	**Sg**	**01 17 03.4**	**+1.3**
DGRG	**David-gareji**	**1.38**	**187**	P	**Pg**	**01 16 45.0**	**+0.5**
DGRG				S	**Sg**	**01 17 06.7**	**+4.3**
MAK	**Makhachkala**	**1.41**	**84**	*e*Pg	**Pg**	**01 16 45.6**	**+0.7**
MAK				*e*Sg	**Sn**	**01 17 02.0**	**+0.4**
KANR	**Karaman**	**1.44**	**74**	*e*Pg	**Pn**	**01 16 42.9**	**-0.7**
KANR				*e*Sg	**Sn**	**01 17 01.7**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.48**	**274**	*e*Pg	**Pn**	**01 16 44.9**	**+0.5**
DIGR				*e*Sg	**Sg**	**01 17 04.9**	**-0.8**
SGKR	**Sergokala**	**1.57**	**103**	*e*Pg	**Pn**	**01 16 44.6**	**-0.8**
SGKR				*e*Sg	**Sn**	**01 17 05.1**	**-0.4**
NCK	**Nalchik**	**1.61**	**295**	*e*Pg	**Pn**	**01 16 46.4**	**+0.4**
NCK				*e*Sg	**Sn**	**01 17 06.1**	**-0.5**
URKR	**Urkarakh**	**1.65**	**113**	*e*Pg	**Pn**	**01 16 47.6**	**+1.0**
URKR				*e*Sg	**Sn**	**01 17

URMC	**La Uribe, Meta**	**3.77**	**199**	P	Pn	01 22 27.7	-0.9
URMC				S	Sn	01 23 12.9	-0.2
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	P	Pn	01 22 31.6	-2.2
CRJC				S	Sn	01 23 18.3	-4.2
YOTC	**Yotoco, Valle**	**4.27**	**229**	P	Pn	01 22 33.5	-1.7
MACC	**Macarena, Meta**	**4.71**	**189**	P	Pn	01 22 38.3	-2.6
MACC				S	Sn	01 23 29.0	-6.1
URIC	**Uribia, Colomb**	**4.97**	**13**	P	Pn	01 22 41.7	-2.6
JAMC	**Jamundi, Valle** 4.3nm,0.5s	**5.04**	**225**	P	Pn	01 22 46.2	+0.8
JAMC	4.3nm,0.5s			S	Sn	01 23 42.5	-0.6
GARC	**Garzon, Huila**	**5.18**	**207**	P	Pn	01 22 44.9	-2.4
POPC	**Popayan, Colom** 4.6nm,0.5s	**5.54**	**220**	P	Pn	01 22 50.5	-1.6
FLOC	**Florencia** 6.5nm,1.1s	**5.79**	**206**	P	Pn	01 22 54.2	-1.0
BBAC	**Balboa, Cauca**	**6.30**	**221**	P	Pn	01 23 02.8	+0.6

*IDC **24** 01:34:12.1±2.0, 1°.53N×132°.64E, h0km, mb3.7/6, mbtmp3.8/6, Error ellipse: s-maj=107.0km s-min=19.4km az=77.0*

ISC 24 01:34:16.8±2.5, 1°.5N±0°.2×132°.8E±0°.8, h35km, n6, σ0s35/6, mb3.8/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 2.0nm,0.8s,baz=29,slow=13,SNR=1.8	**20.74**	**200**	P	**P**	**01 38 54.5**	**-0.1**
	2.0nm,0.8s						
WRA	**Warramunga Arr** 1.7nm,0.8s,baz=356,slow=11,SNR=9.1	**21.39**	**176**	P	**P**	**01 39 01.4**	**-0.1**
	1.7nm,0.8s						
ASAR	**Alice Springs** 0.9nm,0.6s,baz=355,slow=10.0,SNR=15	**25.06**	**178**	P	**P**	**01 39 38.3**	**+0.2**
	0.9nm,0.6s						
MKAR	**Makanchi Array** 0.8nm,0.5s,baz=123,slow=7.1,SNR=8.5	**62.89**	**323**	P	**P**	**01 44 39.9**	**+0.4**
	0.8nm,0.5s						
KURBB	**Kurchatov Area** 1.0nm,0.8s,baz=120,slow=5.7,SNR=9.3	**66.92**	**326**	P	**P**	**01 45 05.5**	**-0.1**
	1.0nm,0.8s						
BVAR	**Borovoye Array** 0.8nm,0.7s,baz=104,slow=6.1,SNR=2.8	**72.52**	**326**	P	**P**	**01 45 39.6**	**-0.4**
	0.8nm,0.7s						

*IDC **24** 02:10:21.8±0.5, 37°.07N×71°.71E, h0km, mb4.2/27, mbtmp4.3/33, ML3.8/6, Error ellipse: s-maj=9.7km s-min=8.3km az=20.0*

*BJI **24** 02:10:22.9, 37°.28N×71°.55E, h14km, mB5.2/5, mb4.4/28, ML4.6/2, Ms4.5/4, Ms7 4.3/3*

*MOS **24** 02:10:24.6±1.3, 37°.15N×71°.59E, h16km, mb4.7/25, Error ellipse: s-maj=5.4km s-min=3.7km az=97.4*

*NNC **24** 02:10:24.2±2.7, 37°.27N×71°.10E, h0km, mb4.8, mpv4.8, Error ellipse: s-maj=22.6km s-min=19.9km az=25.0*

*NEIC **24** 02:10:25.8±1.9, 37°.26N±0°.04×71°.67E±0°.08, h10km±1km, mb4.7/68, Error ellipse: s-maj=10.9km s-min=6.2km az=265.0*

*SOME **24** 02:10:26.9, 37°.08N×71°.50E, h15km*

ISC 24 02:10:24.7±0.3, 37°.18N±0°.03×71°.65E±0°.03, h10km, n361, σ2s14/371, mb4.6/103, 30C-23D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.10**	**330**		**Pn**	**02 11 01.4**	**+1.4**
DRK	**Karamyk**	**2.30**	**3**		**Pn**	**02 11 04.3**	**+1.3**
DRK	**Karamyk**	**2.30**	**3**	PN	**Pn**	**02 11 04.3**	**+1.3**
CHGR	**Chuyangaron**	**2.46**	**308**		**Pn**	**02 11 06.7**	**+1.7**
CHGR	**Chuyangaron**	**2.46**	**308**	PN	**Pn**	**02 11 06.7**	**+1.7**
KBL	**Kabul**	**3.38**	**220**		**Pn**	**02 11 19.9**	**+2.2**
KBL	**Kabul** SNR=103	**3.38**	**220**	P	**Pn**	**02 11 21.8**	**+4.0**
KBL				S	**Sb**	**02 12 07.1**	**+1.1**
KBL	**Kabul**	**3.38**	**220**	PN	**Pn**	**02 11 20.0**	**+2.2**
OHH	**Osh**	**3.46**	**15**	PN	**Pn**	**02 11 21.4**	**+2.7**
NIL	**Nilore**	**3.76**	**159**		**Pn**	**02 11 26.0**	**+3.2**
NIL	**Nilore**	**3.76**	**159**	P	**Pn**	**02 11 26.5**	**+3.7**
NIL	**Nilore**	**3.76**	**159**	PN	**Pn**	**02 11 26.0**	**+3.2**
SRNI	**Srinagar**	**4.03**	**139**	*e*P	**Pn**	**02 11 28.8**	**+2.3**
KSH	**Kashi**	**4.12**	**54**	Pn	**Pn**	**02 11 26.3**	**-1.6**
KSH				Sn	**Sn**	**02 12 14.1**	**-2.1**
KSH	comp=N,2μm,0.8s			smax	smax		
KSH	comp=E,2μm,1.1s			smax	smax		
TRKS	**Terek-Say**	**4.36**	**355**	PN	**Pn**	**02 11 33.2**	**+2.0**
ARLS	**Aral**	**5.11**	**23**	PN	**Pn**	**02 11 44.7**	**+3.2**
IUG	**luzhnay**	**5.11**	**346**	*e*Pn	**Pn**	**02 11 44.4**	**+2.9**
IUG				*e*Pg	**Pb**	**02 11 57.4**	**+3.0**
IUG				*e*Lg	Lg	02 13 05.4	
IUG	**luzhnay**	**5.11**	**346**	*e*PN	**Pn**	**02 11 44.3**	**+2.8**
IUG				*e*		02 11 57.3	
JMU	**Jammu**	**5.19**	**148**	*e*P	**Pn**	**02 11 44.0**	**+1.5**
JMU				*e*S	**Sn**	**02 12 42.5**	**+0.1**
JMU	comp=E,2μm,1.2s			IAML		02 13 14.8	
JMU	comp=N,2μm,1.2s			IAML		02 13 23.9	
CHM	**Chimkent** comp=N,75nm,0.1s	**5.37**	**344**	*e*P	**Pn**	**02 11 45.5**	**+0.6**
CHM				*e*S	**Sn**	**02 12 46.0**	**-0.8**
CHM	comp=N,364nm,0.5s						
CHM	**Chimkent**	**5.37**	**344**	*e*Pn	**Pn**	**02 11 47.3**	**+2.3**
CHM				*e*Pg	**Pb**	**02 12 01.8**	**+3.2**
CHM				*e*Lg	Lg	02 13 13.5	
CHM	**Chimkent**	**5.37**	**344**	*e*PN	**Pn**	**02 11 47.2**	**+2.3**
CHM				*e*		02 12 01.8	
ALCI	**Alchi Leh**	**5.39**	**122**	*e*P	**Pn**	**02 11 46.2**	**+0.7**
ALCI				*e*S	**Sn**	**02 12 52.1**	**+4.3**
UCH	**Uchtor** SNR=15	**5.50**	**23**	P	**Pn**	**02 11 51.1**	**+3.9**
MRKS	**Merke** comp=N,39nm,0.7s	**5.69**	**12**	*e*P	**Pn**	**02 11 52.6**	**+3.3**
MRKS	comp=N,115nm,1.1s			*e*S	**Sn**	**02 12 57.4**	**+2.6**
TSSA	**Tissa**	**5.70**	**138**	*e*P	**Pn**	**02 11 49.6**	**+0.1**
TSSA				*e*S	**Sn**	**02 12 57.9**	**+2.8**
TSSA	comp=N,662nm,1.0s			IAML		02 13 26.4	
TSSA	comp=E,624nm,0.8s			IAML		02 13 26.8	
DZA	**Taraz** comp=E,224nm,0.6s	**5.71**	**358**	*e*P	Pn	02 11 54.4	+4.8
DZA	comp=E,394nm,0.5s			*e*S	**Sn**	**02 13 01.1**	**+5.9**
DZA	**Taraz**	**5.71**	**358**	*e*Pn	**Pn**	**02 11 52.9**	**+3.2**
DZA				*e*Pg	**Pb**	**02 12 08.1**	**+3.7**
DZA	**Taraz**	**5.71**	**358**	*e*PN	**Pn**	**02 11 52.8**	**+3.2**
DZA				*e*		02 12 08.0	
EKS2	**Erkin-Say** SNR=41	**5.71**	**16**	P	**Pn**	**02 11 53.4**	**+3.6**
AAK	**Ala-Archa** comp=E,6.4nm,0.3s,baz=190,slow=6.8,SNR=33	**5.87**	**21**	Pn	**Pn**	**02 11 55.6**	**+3.7**
AAK	comp=E,7.3nm,0.3s,baz=320,slow=12,SNR=4.4 comp=E,21nm,0.3s			Sn	**Sn**	**02 13 03.1**	**+3.7**
AAK	**Ala-Archa**	**5.87**	**21**		**Pn**	**02 11 56.4**	**+4.4**
AAK	**Ala-Archa** SNR=10	**5.87**	**21**	P	Pn	02 11 57.1	+5.1
AAK	**Ala-Archa** comp=E,194nm,1.4s	**5.87**	**21**	⇑Pn	**Pn**	**02 11 55.2**	**+3.2**
AAK	comp=E,158nm,1.0s			⇑Sn	**Sn**	**02 13 05.4**	**+6.0**
AAK	comp=E,244nm,1.2s			⇑Lg	Lg	02 13 31.2	
AAK	**Ala-Archa**	**5.87**	**21**	P	**Pn**	**02 11 55.8**	**+3.8**
AAK	**Ala-Archa**	**5.87**	**21**	PN	**Pn**	**02 11 55.1**	**+3.2**
AAK						02 13 05.4	
KK31	**Karatay Array**	**5.98**	**352**		**Pn**	**02 11 55.9**	**+2.6**
KK31	**Karatay Array** comp=E,26nm,0.5s,baz=177,slow=13,SNR=526	**5.98**	**352**	⇑Pn	**Pn**	**02 11 55.1**	**+1.8**
KK31	comp=E,48nm,0.5s,baz=177,slow=23,SNR=3.9			⇑Sn	**Sn**	**02 12 59.9**	**-1.9**
KK31	comp=E,243nm,0.9s,baz=170,slow=15,SNR=6.0			⇑Lg	Lg	02 13 29.9	
KK31	**Karatay Array**	**5.98**	**352**	*e*PN	**Pn**	**02 11 55.3**	**+2.0**
KK31				*i*		02 13 02.2	
KK31				*e*		02 13 29.8	
KKAR	**Karatay Array**	**5.98**	**352**		**Pn**	**02 11 55.5**	**+2.2**
KKAR	**Karatay Array**	**5.98**	**352**	PN	**Pn**	**02 11 55.5**	**+2.2**
BRLS	**Borolday** comp=E,22nm,0.6s	**6.00**	**347**	*e*P	**Pn**	**02 11 52.4**	**-1.3**
BRLS	comp=E,91nm,0.7s			*e*S	**Sn**	**02 12 57.9**	**-4.5**
BRLS	**Borolday**	**6.00**	**347**	*e*Pn	**Pn**	**02 11 52.4**	**-1.3**
BRLS				*e*Pg	**Pb**	**02 12 09.9**	**+0.4**
BRLS	**Borolday**	**6.00**	**347**	*e*PN	**Pn**	**02 11 52.3**	**-1.3**
KBK	**Karagaybulak** SNR=17	**6.03**	**24**	P	Pn	02 11 59.2	+5.1
FRU1	**Bishkek**	**6.07**	**21**		Pn	02 12 00.3	+5.7
FRU1	**Bishkek**	**6.07**	**21**	PN	Pn	02 12 00.3	+5.7
BOOM	**Boomskoye usch**	**6.25**	**31**		**Pn**	**02 12 01.4**	**+4.3**
BOOM	**Boomskoye usch**	**6.25**	**31**	PN	**Pn**	**02 12 01.4**	**+4.3**
CHMS	**Chumysh** SNR=20	**6.28**	**21**	P	Pn	02 12 02.6	+5.2
TLWR	**Talawar**	**6.31**	**144**	*e*P	**Pn**	**02 11 58.7**	**+0.9**
TLWR				*e*S	**Sn**	**02 13 10.2**	**+0.2**
USP	**Ospenovka** SNR=45	**6.46**	**19**	P	**Pn**	**02 12 03.2**	**+3.3**
TKM2	**Tokmak 2** SNR=8.7	**6.48**	**27**	P	Pn	02 12 06.2	+5.8
KDJ	**Kajisay**	**6.53**	**39**		Pn	02 12 07.5	+6.5
KDJ	**Kajisay**	**6.53**	**39**	PN	Pn	02 12 07.5	+6.5
TARG	**Taragay, Kyrgy**	**6.58**	**44**		**Pn**	**02 12 05.0**	**+3.1**
TARG	**Taragay, Kyrgy**	**6.58**	**44**	PN	**Pn**	**02 12 05.0**	**+3.1**
SGDS	**Sogindy**	**6.67**	**19**	*e*Pn	**Pn**	**02 12 06.1**	**+3.3**
SGDS				*e*Pg	Pg	02 12 26.3	-6.0
BHK	**Bhakra**	**6.97**	**144**	*e*P	**Pn**	**02 12 09.4**	**+2.5**
BHK				*e*S	**Sn**	**02 13 29.7**	**+3.3**
BHK	comp=N,328nm,0.6s			IAML		02 14 04.5	
BHK	comp=E,315nm,0.8s			IAML		02 14 08.0	
TNSS	**Tian-Shan**	**7.12**	**33**	*e*P	**Pn**	**02 12 12.8**	**+3.5**
TNSS	**Tian-Shan**	**7.12**	**33**	*e*Pn	**Pn**	**02 12 12.9**	**+3.5**
TNSS				*e*Pg	Pg	02 12 35.0	-6.0
TNSS	**Tian-Shan**	**7.12**	**33**	*e*PN	**Pn**	**02 12 12.8**	**+3.5**
TNSS				*e*		02 12 35.0	
MDOK	**Medeo**	**7.26**	**33**	*e*Pn	**Pn**	**02 12 15.7**	**+4.6**
MDOK				*e*Pg	Pg	02 12 37.6	-6.2
MDOK				*e*Lg	Lg	02 14 15.6	
MDOK	**Medeo**	**7.26**	**33**	*e*P	**Pn**	**02 12 15.7**	**+4.6**
HNLY	**HANLEY**	**7.44**	**124**	*e*P	**Pn**	**02 12 13.7**	**-0.2**
HNLY				*e*S	**Sn**	**02 13 36.1**	**-2.5**
HNLY	comp=E,242nm,0.6s			IAML		02 13 42.0	
HNLY	comp=N,228nm,0.6s			IAML		02 13 49.4	
SMLA	**Simla**	**7.57**	**141**	*e*P	**Pn**	**02 12 15.3**	**+0.2**
SMLA				*e*S	**Sn**	**02 13 37.2**	**-3.9**
SMLA	comp=N,157nm,0.6s			IAML		02 13 48.2	
SMLA	comp=E,216nm,0.9s			IAML		02 13 48.7	
SATY	**Saty**	**7.83**	**39**	*e*Pn	**Pn**	**02 12 23.4**	**+4.6**
SATY				*e*Pg	Pg	02 12 48.0	-6.5
SATY				*e*Lg	Lg	02 14 34.0	
SATY	**Saty**	**7.83**	**39**	*e*P	**Pn**	**02 12 23.3**	**+4.6**
BTLS	**Baital**	**8.06**	**12**	*e*Pn	**Pn**	**02 12 23.7**	**+1.8**
BTLS				*e*Pg	Pb	02 12 51.3	+6.9
BTLS	**Baital**	**8.06**	**12**	*e*P	**Pn**	**02 12 23.6**	**+1.8**
HRA	**Herat**	**8.13**	**253**		**Pn**	**02 12 24.7**	**+1.6**
UZB	**Uzunbulak**	**8.21**	**41**	*e*Pn	**Pn**	**02 12 25.6**	**+1.6**
UZB				*e*Pg	Pg	02 12 55.0	-6.8
UZB				*e*Lg	Lg	02 14 46.4	
UZB	**Uzunbulak**	**8.21**	**41**	*e*P	**Pn**	**02 12 25.6**	**+1.6**
SHLS	**Shalkode**	**8.45**	**43**	*e*Pn	Pn	02 12 32.8	+5.5
SHLS				*e*Pg	**Pg**	**02 13 04.0**	**-2.4**
SHLS	**Shalkode**	**8.45**	**43**	*e*P	Pn	02 12 32.8	+5.5
PDGK	**Podgornoye** comp=E,46nm,1.0s	**8.58**	**42**	⇓Pn	**Pn**	**02 12 31.4**	**+2.3**
PDGK				⇑Lg	Lg	02 15 01.6	
DDI	**Dehra Dun**	**8.67**	**140**	*e*P	**Pn**	**02 12 32.1**	**+1.8**
JOSI	**Joshimath**	**9.32**	**133**	*e*P	**Pn**	**02 12 39.9**	**+0.5**
JOSI				*e*S	**Sn**	**02 14 19.5**	**-4.8**
JOSI	comp=E,139nm,0.8s			IAML		02 14 31.1	
AYAN	**Aya Nagar**	**9.82**	**150**	*e*P	**Pn**	**02 12 44.9**	**-1.1**
AYAN				*e*S	Sn	02 14 29.3	-7.0
KUDL	**Kundal**	**9.89**	**154**	*e*P	**Pn**	**02 12 44.1**	**-2.8**
KUDL				*e*S	Sn	02 14 31.6	-6.4
KUDL	comp=E,148nm,0.9s			IAML		02 14 46.6	
KUDL	comp=N,129nm,0.9s			IAML		02 14 54.1	
JASL	**Jaisalmer**	**10.25**	**184**	*e*P	**Pn**	**02 12 51.1**	**-0.7**
LGTI	**Lohaghat**	**10.54**	**135**	*e*P	**Pn**	**02 12 54.7**	**-1.1**
LGTI				*e*S	**Sn**	**02 13 49.4**	**-4.5**
LGTI	comp=E,135nm,0.5s			IAML		02 14 59.2	
MAKZ	**Makanchi**	**12.30**	**35**		**Pn**	**02 13 21.6**	**+1.7**
MAKZ	**Makanchi**	**12.30**	**35**	P	**Pn**	**02 13 21.6**	**+1.7**
MK31	**Makanchi Array** comp=E,11nm,0.8s,baz=223,slow=12,SNR=32	**12.44**	**36**	⇑P	**Pn**	**02 13 25.2**	**+3.5**
MK31	**Makanchi Array**	**12.44**	**36**	*c*e*e*P	**Pn**	**02 13 23.7**	**+2.0**
MKAR	**Makanchi Array** comp=E,0.4nm,0.3s,baz=222,slow=14,SNR=21	**12.44**	**36**	Pn	**Pn**	**02 13 22.5**	**+0.8**
MKAR	baz=264,slow=35 comp=E,5.2nm,0.7s			Sn	**Sn**	**02 15 40.6**	**+0.2**
MKAR	**Makanchi Array**	**12.44**	**36**		**Pn**	**02 13 24.3**	**+2.6**
UDPR	**Udaipur**	**12.69**	**171**	*e*P	**Pn**	**02 13 23.6**	**-1.7**
JHNI	**Jhansi**	**13.07**	**151**	*e*P	Pn	02 13 27.3	-3.2
JHNI				*e*S	Sn	02 15 45.2	-11
WMQ	**Urumqi**	**13.89**	**56**	*e*P	**Pn**	**02 13 44.1**	**+2.5**
BHUJ	**Bhuj**	**13.99**	**188**	*e*P	**Pn**	**02 13 40.5**	**-2.5**
KURBB	**Kurchatov Arra** comp=E,0.1nm,0.3s,baz=209,slow=12,SNR=30	**14.31**	**18**	Pn	**Pn**	**02 13 45.5**	**-1.8**
KURBB	baz=198,slow=30 comp=E,7.8nm,0.9s			Sn	**Sn**	**02 16 21.9**	**-4.2**
KURBB	**Kurchatov Arra** comp=E,30nm,1.1s	**14.31**	**18**	⇑P	**Pn**	**02 13 46.8**	**-0.5**
KURK	**Kurchatov**	**14.42**	**18**		**Pn**	**02 13 48.4**	**-0.4**
KURK	**Kurchatov**	**14.42**	**18**	P	**Pn**	**02 13 45.5**	**-3.3**
KURK						02 16 21.9	
AB31	**Akbulak array**	**14.76**	**329**		**Pn**	**02 13 50.9**	**-2.5**
AB31	**Akbulak array** comp=E,7.1nm,0.5s,baz=141,slow=13,SNR=189	**14.76**	**329**	⇓Pn	**Pn**	**02 13 50.2**	**-3.2**
AB31	comp=E,18nm,0.6s,baz=148,slow=22,SNR=16			Sn	**Sn**	**02 16 31.4**	**-5.4**
AB31	**Akbulak array**	**14.76**	**329**	*e*P	**Pn**	**02 13 50.1**	**-3.2**
ABKAR	**Akbulak array**	**14.76**	**329**		**Pn**	**02 13 50.6**	**-2.8**
BHPL	**Bhopal**	**14.76**	**159**	*e*P	**Pn**	**02 13 51.0**	**-2.6**
BVA0	**Borovoye Array** comp=E,37nm,1.4s,baz=162,slow=10.0,SNR=45	**15.87**	**357**	P	**Pn**	**02 14 05.9**	**-2.1**
BVA0	**Borovoye Array** comp=E,37nm,1.4s	**15.87**	**357**	P	**Pn**	**02 14 05.9**	**-2.1**
BVA0				pmax	pmax		
BVAR	**Borovoye Array** comp=E,0.1nm,0.3s,baz=162,slow=11,SNR=21 comp=E,3.4nm,0.7s	**15.87**	**357**	Pn	**Pn**	**02 14 04.2**	**-3.9**
AKTO	**Aktyubinsk** comp=E,1.6nm,0.3s,baz=140,slow=11,SNR=23	**16.46**	**328**	Pn	**Pn**	**02 14 14.2**	**-1.5**
AKTO	comp=E,1.5nm,0.3s,baz=138,slow=15,SNR=8.6 comp=E,5.9nm,0.5s			Sn	**Sn**	**02 17 10.3**	**-8.1**
AKTO	**Aktyubinsk** comp=E,32nm,0.8s	**16.46**	**328**	⇓Pn	**Pn**	**02 14 13.7**	**-2.0**
AKTO	comp=E,52nm,1.3s			⇑Sn	**Sn**	**02 17 11.1**	**-7.3**
DGZ	**Jazzator, Alta**	**16.93**	**37**	*i* P	**Pn**	**02 14 22.5**	**+0.8**
DGZ	comp=E,17nm,0.9s			pmax	pmax		
BANOM	**Banah**	**17.21**	**234**	P	**Pn**	**02 14 26.4**	**+1.1**
BANOM	**Banah** SNR=6.5	**17.21**	**234**	*i* P	**Pn**	**02 14 26.4**	**+1.1**
SHME	**Shamm**	**17.22**	**234**	P	**Pn**	**02 14 26.1**	**+0.7**
SHME	**Shamm**	**17.22**	**234**	P	**Pn**	**02 14 26.9**	**+1.4**
MDH	**Madha**	**17.65**	**232**	P	**Pn**	**02 14 31.1**	**+0.4**
MDH	**Madha**	**17.65**	**232**	P	**Pn**	**02 14 30.8**	**+0.1**
MSFE	**Esma-Masafi**	**17.70**	**233**	P	**Pn**	**02 14 32.9**	**+1.5**
UOSS	**Minazif**	**17.96**	**232**	P	**Pn**	**02 14 36.1**	**+1.5**
UOSS	**Minazif**	**17.96**	**232**	P	**Pn**	**02 14 34.2**	**-0.4**
LKRN	**Lenkeran, Azer**	**18.10**	**282**	P	**P**	**02 14 38.6**	**+2.1**
ASHO	**Ashiyiah**	**18.24**	**231**	P	**Pn**	**02 14 39.4**	**+1.3**
ASHO	**Ashiyiah** SNR=8.9	**18.24**	**231**	*i* P	**Pn**	**02 14 39.2**	**+1.1**
NAZ	**Nazwa, Dubai**	**18.28**	**233**	P	**Pn**	**02 14 39.2**	**+0.7**
GOMU	**GeErMu**	**18.60**	**86**	P	**P**	**02 14 41.0**	**-1.5**
GOMU	comp=E,8.0nm,1.1s			pmax	pmax		
ALNE	**Al Ain**	**18.89**	**231**	P	**P**	**02 14 43.7**	**-1.7**
ALNE	**Al Ain** SNR=10.0	**18.89**	**231**	*i* P	**P**	**02 14 45.8**	**+0.4**
ARQ	**Araqi**	**18.97**	**228**	P	**P**	**02 14 46.8**	**+0.6**
AKT	**Akhty**	**18.98**	**290**	*e*P	**P**	**02 14 45.0**	**-1.3**
AKT				*e*S	**Sn**	**02 18 17.5**	**-2.0**
AKT	comp=Z,33nm,1.0s			pmax	pmax		
ZAA0	**Zalesovo Array**	**19.08**	**24**	P	**P**	**02 14 47.4**	**+0.2**
ZAA0	**Zalesovo Array** comp=Z,2.4nm,0.7s	**19.08**	**24**	⇓P	**P**	**02 14 47.2**	**0.0**
ZALV	**Zalesovo Beam** comp=Z,3.6nm,0.3s,baz=220,slow=11,SNR=52	**19.08**	**24**	P	**P**	**02 14 47.2**	**0.0**
ZALV				S	**S**	**02 18 23.5**	**-0.1**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.4s,baz=201,slow=20,SNR=2.1 comp=Z,19nm,0.6s	**19.08**	**24**	P	**P**	**02 14 47.0**	**-0.2**
SEKA	**Sheki**	**19.35**	**290**	P	**Pn**	**02 14 52.3**	**+0.8**
MNGR	**Mingechevir, A**	**19.41**	**288**	P	**Pn**	**02 14 53.0**	**+0.9**
GANJ	**Ganja**	**19.99**	**288**	P	**P**	**02 14 59.0**	**+1.7**
MHTO	**MHTO**	**20.04**	**220**	P	**P**	**02 15 00.1**	**+2.2**
JRN	**Qarnain Island**	**20.16**	**238**	P	**P**	**02 14 58.2**	**-1.0**
UMZA	**Um Al Zommool**	**20.25**	**229**	P	**P**	**02 15 00.5**	**+0.3**
NAX	**Nakhchivan**	**20.64**	**284**	P	Pn	02 15 06.9	+0.2
GHWR	**Ruwais**	**20.80**	**236**	P	**P**	**02 15 05.2**	**-1.0**
SHMA	**Al-Shehemyia** SNR=7.0	**20.89**	**243**	P	**P**	**02 15 06.4**	**-0.8**
SVE	**Sverdlovsk**	**20.99**	**343**	*e*P	Pn	02 15 10.5	-0.1
SVE				*e*S	Sn	02 19 05.0	-2.5
SVE	comp=Z,15nm,0.8s			pmax	pmax		
MZR	**Muzera**	**21.08**	**233**	P	**P**	**02 15 08.3**	**-1.0**
MZR	**Muzera** SNR=7.1	**21.08**	**233**	*i* P	**P**	**02 15 08.1**	**-1.2**
ARTI	**Arti** comp=Z,6.5nm,0.8s,baz=155,slow=6.4,SNR=13	**21.18**	**339**	P	**P**	**02 15 10.9**	**+0.9**
ARTI				S	**S**	**02 19 05.1**	**-0.3**
ARTI	**Arti** comp=Z,3.6nm,0.7s,baz=147,slow=22,SNR=2.6 comp=Z,6.5nm,0.8s	**21.18**	**339**	P	**P**	**02 15 11.0**	**+0.9**
ARTI				IAmb	IAmb	02 15 17.3	
ARTI	**Arti** comp=Z,49nm,1.4s	**21.18**	**339**	*c* *i* P	**P**	**02 15 11.1**	**+1.1**
ARTI						02 15 29.9	
ARTI				S	Sn	02 19 08.7	-3.5
ARTI				SS	**SnSn**	**02 19 30.0**	**+2.9**
ARTI	comp=Z,25nm,1.4s			pmax	pmax		
GNI	**Garni** comp=Z,40nm,0.7s,baz=31,slow=2.9,SNR=27	**21.19**	**286**	P	**P**	**02 15 10.5**	**+0.1**
GNI				S	Sn	02 19 11.0	-1.9
GNI	**Garni** comp=Z,8.2nm,1.0s,baz=300,slow=13,SNR=1.7 comp=Z,40nm,0.7s	**21.19**	**286**	P	**P**	**02 15 12.9**	**+2.5**
GNI	**Garni**	**21.19**	**286**	P	**P**	**02 15 12.5**	**+2.0**
GNI	**Garni**	**21.19**	**286**	*c* *i* P	**P**	**02 15 12.7**	**+2.2**
GNI	comp=Z,55nm,0.8s			pmax	pmax		
TRNA	**Turayna**	**21.42**	**240**	P	**P**	**02 15 11.1**	**-1.7**
SLWR	**Sila**	**21.52**	**238**	P	**P**	**02 15 12.0**	**-2.0**
SMRA	**Abu-Samra** SNR=6.9	**21.68**	**241**	P	**P**	**02 15 14.7**	**-0.9**
GTA	**Gaotai**	**22.18**	**76**	P	**P**	**02 15 20.3**	**-0.9**
GTA				pP	pP	02 15 25.3	+0.1
GTA				S	**S**	**02 19 25.0**	**-0.5**
GTA	comp=Z,11nm,1.4s			pmax	pmax		
NCK	**Nalchik**	**22.23**	**295**	*i* P	**P**	**02 15 22.2**	**+0.7**
NCK	comp=Z,168nm,0.8s			pmax	pmax		
BRDH	**Bariadhala** comp=Z,79nm,0.3s,baz=262,slow=14,SNR=3.8	**22.50**	**124**	P	**P**	**02 15 22.4**	**-2.0**
BELG	**Belogornoye**	**22.70**	**320**	*i* P	**P**	**02 15 26.3**	**0.0**
BELG	comp=Z,9.0nm,1.0s			pmax	pmax		
KBZ	**Khabaz** comp=Z,25nm,0.9s,baz=132,slow=7.8,SNR=36	**22.76**	**296**	P	**P**	**02 15 26.7**	**-0.4**
KBZ	comp=Z,2.8nm,1.0s,baz=301,slow=9.5,SNR=2.6 comp=Z,25nm,0.9s			S	**S**	**02 19 37.7**	**+1.9**
GOF	**Gofitskoye**	**22.86**	**299**	*c*e*e*P	**P**	**02 15 29.1**	**+1.0**
KIV	**Kislovodsk**	**22.94**	**296**	P	**P**	**02 15 26.1**	**-3.0**
KIV	**Kislovodsk**	**22.94**	**296**	⇓P	**P**	**02 15 29.7**	**+0.6**
KIV	**Kislovodsk**	**22.94**	**296**	P	**P**	**02 15 29.5**	**+0.4**
KIV	**Kislovodsk**	**22.94**	**296**	*e*P	**P**	**02 15 27.7**	**-1.4**
KIV				*e*S	**S**	**02 19 38.0**	**-1.2**
KIV	comp=Z,23nm,1.0s			pmax	pmax		
DOK	**Doka**	**24.04**	**224**	P	**P**	**02 15 39.9**	**-0.2**
DMTO	**DMTO**	**24.33**	**222**	P	**P**	**02 15 43.0**	**+0.2**
KOPT	**Kop Dagi**	**24.45**	**286**	P	**P**	**02 15 44.9**	**+0.9**
KOPT	comp=Z,20nm,1.1s			IAmb	IAmb	02 15 55.5	
MARD	**Mardin**	**24.52**	**280**	P	**P**	**02 15 45.0**	**+0.5**
MARD	comp=Z,22nm,1.3s			IAmb	IAmb	02 15 48.7	
WHFO	**Wadi Hawf** SNR=16	**24.81**	**224**	P	**P**	**02 15 46.1**	**-1.0**
VRH	**Novokhopyorsk**	**25.41**	**313**	*e*P	**P**	**02 15 50.5**	**-1.7**
VRH	comp=Z,10.0nm,0.9s			pmax	pmax		
ABTO	**Aybut**	**25.53**	**224**	P	**P**	**02 15 54.6**	**+1.0**
LZDM	**Lanzhou Array** comp=Z,0.7nm,0.3s,baz=269,slow=12,SNR=4.1 comp=Z,0.7nm,0.3s	**25.71**	**83**	P	**P**	**02 15 53.4**	**-2.1**
LZH	**Lanzhou**	**25.80**	**83**	*e*P	**P**	**02 15 57.4**	**+1.3**
LZH				pP	sP	02 16 02.8	+0.6
LZH	comp=Z,16nm,0.9s			pmax	pmax		
KIRV	**Kirov**	**25.86**	**333**	*c*e*e*P	**P**	**

comp=Z,7.0nm,1.1s
ANTO Ankara 30.36 287 P P 02 16 38.8 +2.1
ANTO IAmb IAmb 02 16 42.2
comp=Z,27nm,1.5s
ANTO Ankara 30.36 287 P P 02 16 38.8 +2.1
ANTO pmax pmax
comp=Z,27nm,1.5s
ANTO Ankara 30.36 287 P P 02 16 38.1 +1.4
comp=Z,6.2nm,1.6s
HHC Hu-ho-hao-te 31.04 71 *e*P **P 02 16 43.3 +0.5**
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,120nm,6.0s
KLMR Klimovskoe 31.15 330 *e*P **P 02 16 41.2 -2.2**
KLMR *e* 02 17 42.0
KLMR pmax pmax
comp=Z,13nm,1.5s
PURM Purcari 32.16 300 ⇓P **P 02 16 53.6 +1.2**
BAL3X Bal3x, Balta 32.41 303 P **P 02 16 55.3 +0.7**
AK09 Malin Array Si 32.88 308 P **P 02 16 58.8 +0.1**
AK10 Malin Array Si 32.90 308 P **P 02 16 59.2 +0.3**
AK07 Malin Array Si 32.92 308 P **P 02 16 59.0 -0.1**
AKASG Malin Array Be 32.93 308 P **P 02 16 58.6 -0.5**
comp=Z,1.5nm,0.5s,baz=83,slow=7.1,SNR=16
AKASG PP **PnPn 02 18 08.4 +0.5**
comp=Z,1.6nm,0.8s,baz=94,slow=9.6,SNR=4.6
comp=Z,1.5nm,0.5s
AKASG Malin Array Be 32.93 308 P **P 02 16 59.1 0.0**
AKASG Malin Array Be 32.93 308 *ce*P **P 02 16 59.0 -0.1**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 32.93 308 *ce*P **P 02 16 59.1 0.0**
AKBB pmax pmax
comp=Z,7.0nm,0.9s
AKBB Malin Array Si 32.93 308 P **P 02 16 59.1 0.0**
AK06 Malin Array Si 32.93 308 P **P 02 16 59.3 +0.2**
AK05 Malin Array Si 32.93 308 P **P 02 16 59.4 +0.3**
KIEV Kiev 32.94 308 ⇑P **P 02 16 59.6 +0.4**
KIEV Kiev 32.94 308 P **P 02 16 59.6 +0.4**
KIEV Kiev 32.94 308 P **P 02 16 59.2 0.0**
comp=Z,40nm,1.2s
AK12 Malin Array Si 32.97 308 P **P 02 16 59.6 +0.2**
AK14 Malin Array Si 32.99 308 P **P 02 16 59.6 -0.1**
AK13 Malin Array Si 33.02 308 P **P 02 17 00.1 +0.2**
AK18 Malin Array Si 33.03 308 P **P 02 17 00.1 +0.1**
AK17 Malin Array Si 33.03 308 P **P 02 16 59.8 -0.2**
AK21 Malin Array Si 33.06 308 P **P 02 17 00.1 -0.1**
AK21 pP **sP 02 17 10.4 +4.1**
AK20 Malin Array Si 33.07 308 P **P 02 17 00.2 -0.2**
AK20 pP **sP 02 17 10.8 +4.3**
SORM Soroca 33.26 303 ⇑P **P 02 17 02.5 +0.4**
SORM Soroca 33.26 303 P **P 02 17 02.4 +0.4**
CFR Carcaliu 33.38 298 ⇑P **P 02 17 03.7 +0.7**
CFR Carcaliu 33.38 298 P **P 02 17 03.7 +0.7**
LUBAR Lubar, Ukraine 33.78 306 P **P 02 17 06.3 -0.2**
LUBAR pP **sP 02 17 16.9 +4.3**
MANT Manisa 33.83 286 IAmb IAmb 02 17 09.1
comp=Z,9.9nm,0.9s
VRI Vrincioaia 34.35 299 ⇓P **P 02 17 11.9 +0.3**
VRI Vrincioaia 34.35 299 P **P 02 17 11.8 +0.3**
TESR Tescani 34.39 300 ⇑P **P 02 17 13.2 +1.3**
MNK Minsk 34.39 314 *i* P **P 02 17 12.0 +0.2**
comp=E,11nm,0.8s
MNK *i* P **P 02 17 12.0 +0.2**
comp=N,10.0nm,0.7s,baz=101
MNK *i* P **P 02 17 12.0 +0.2**
comp=Z,12nm,0.7s
MNK *i* PP **PnPn 02 18 26.4 +0.2**
MNK *i* S **S 02 22 40.1 +0.8**
MNK *i* SS **SnSn 02 24 37.7 -11**
MNK *i* LQ LQ 02 30 18.2
MNK *i* LR LR 02 30 59.8
MNK *i* LRM MLR 02 33 30.1
comp=Z,726nm,13.3s
MNK *i* LRM MLR 02 34 04.5
comp=E,827nm,14.1s
PLOR Plostina 34.40 299 ⇓P **P 02 17 13.8 +1.8**
PLOR Plostina 34.40 299 P **P 02 17 13.8 +1.8**
KMPD K-Podol'skiy 34.54 304 P **P 02 17 13.2 +0.1**
KMPD P **P 02 17 12.3 -0.8**
HORU Horodok 34.59 305 P **P 02 17 14.0 +0.4**
HORU Horodok 34.59 305 P **P 02 17 14.1 +0.4**
COVR Voineasa-Covas 34.71 299 ⇑P **P 02 17 16.2 +1.4**
TURR Turia 34.84 299 ⇓P **P 02 17 17.6 +1.8**
MLR Muntele Rosu 34.91 298 ⇓P **P 02 17 18.6 +2.0**
MLR Muntele Rosu 34.91 298 P **P 02 17 18.5 +2.0**
RNPP5 Staryi Chortor 35.09 308 P **P 02 17 18.2 +0.3**
NACGM Naroch 35.10 315 *e*P **P 02 17 18.9 +1.0**
comp=Z,28nm,0.9s,baz=101
RNPP9 Sopachiv 35.10 309 P **P 02 17 18.3 +0.3**
RNPP8 Varash 35.12 309 P **P 02 17 18.4 +0.3**
ELND Elena 35.16 294 ⇑P **P 02 17 19.3 +0.7**
DOPR Dopca 35.28 299 ⇓P **P 02 17 21.2 +1.6**
EZN Ezine 35.28 289 ⇓P **P 02 17 21.0 +1.3**
EZN Ezine 35.28 289 P **P 02 17 20.9 +1.3**
BURAR Bucovina Array 35.36 302 P **P 02 17 21.1 +0.7**
BURAR Bucovina Array 35.36 302 ⇓P **P 02 17 21.1 +0.7**
BURAR Bucovina Array 35.36 302 P **P 02 17 21.1 +0.7**
KSV Kosov 35.46 303 P **P 02 17 25.3 +4.2**
VOIR 35.54 298 ⇑P **P 02 17 23.3 +1.4**
VOIR 35.54 298 P **P 02 17 23.3 +1.4**
KARP Karpathos 35.62 281 P **P 02 17 23.1 +0.5**
comp=Z,49nm,0.9s
ARR Arges 35.84 298 ⇑P **P 02 17 26.1 +1.6**
STNU Starunia 35.84 304 P **P 02 17 24.8 +0.4**
LVV L'vov 36.18 306 P **P 02 17 27.9 +0.6**
MORS Morshin 36.25 305 P **P 02 17 29.5 +1.6**
LOT Lotru 36.44 298 ⇓P **P 02 17 31.2 +1.5**
CJR Cluj-Napoca 36.48 301 ⇓P **P 02 17 32.1 +2.1**
CJR Cluj-Napoca 36.48 301 P **P 02 17 32.0 +2.1**
APE Apeiranthos 36.49 284 ⇓P **P 02 17 31.0 +0.9**
APE Apeiranthos 36.49 284 P **P 02 17 31.0 +0.9**
TRSU Trosnyk 36.87 303 P **P 02 17 35.0 +1.8**
DEV Deva 37.01 299 ⇓P **P 02 17 36.1 +1.7**
DEV Deva 37.01 299 P **P 02 17 36.1 +1.7**
DRGR 37.09 301 ⇓P **P 02 17 36.6 +1.4**
DRGR 37.09 301 P **P 02 17 36.5 +1.4**
FINES FINESS Array B 37.21 325 P **P 02 17 36.1 +0.2**
comp=Z,2.2nm,0.6s,baz=127,slow=7.7,SNR=18
comp=Z,2.2nm,0.6s
SURR Surduc 37.57 299 ⇓P **P 02 17 40.8 +1.7**
SIRR Siria 37.85 300 ⇑P **P 02 17 42.4 +0.9**
BZS Buzias 37.93 299 ⇓P **P 02 17 43.4 +1.2**
BZS Buzias 37.93 299 P **P 02 17 43.4 +1.2**
KECS Kecovo 38.51 304 *e*P **P 02 17 47.8 +0.7**
NIE Niedzica 38.60 305 P **P 02 17 48.7 +0.8**
comp=Z,4.3nm,1.0s
NJ2 Nanjing 38.87 83 *e*P **P 02 17 49.5 -0.8**
NJ2 pmax pmax
comp=Z,13nm,0.5s
OJC Ojcow 38.91 306 P **P 02 17 50.6 +0.2**
MORH Mrgy, Hungar 39.94 300 ⇑P **P 02 18 00.4 +1.4**
MORC Moravsky Berou 40.38 306 ⇓P **P 02 18 03.9 +1.2**
MORC Moravsky Berou 40.38 306 P **P 02 18 03.9 +1.2**
SMOL Smolenice 40.54 304 *e*P **P 02 18 05.9 +1.9**
ARCES ARCESS Array B 40.72 337 P **P 02 18 05.9 +0.8**
comp=Z,3.7nm,0.7s,baz=112,slow=8.3,SNR=20
ARCES PP **PP 02 19 37.1 -1.7**
comp=Z,0.4nm,0.3s,baz=87,slow=10,SNR=12
comp=Z,3.7nm,0.7s
ARCES ARCESS Array B 40.72 337 P **P 02 18 06.2 +1.0**
ARCES IAmb IAmb 02 18 46.4
comp=Z,21nm,1.4s
ARCES ARCESS Array B 40.72 337 P **P 02 18 06.2 +1.0**
ARCES pmax pmax
comp=Z,21nm,1.5s
VRAC Vranov 41.03 305 ⇓P **P 02 18 09.6 +1.5**
VRAC Vranov 41.03 305 P **P 02 18 09.5 +1.5**
CONA Conrad Observa 41.64 303 *e*P **P 02 18 12.7 -0.5**
comp=Z,5.5nm,0.9s
SOKA Soboth 42.35 301 P **P 02 18 19.5 +0.5**
comp=Z,6.9nm,1.1s
HFS Hagfors 42.86 321 P **P 02 18 21.0 -1.8**
comp=Z,4.6nm,0.7s,baz=92,slow=11,SNR=22
HFS PP **PP 02 20 02.8 +0.8**
comp=Z,3.3nm,0.8s,baz=104,slow=12,SNR=2.0
comp=Z,4.6nm,0.7s
GERES GERESS Array B 42.97 305 P **P 02 18 22.1 -1.9**
comp=Z,0.5nm,0.7s,baz=60,slow=6.3,SNR=5.7
GERES PP **PP 02 20 01.7 -1.8**
comp=Z,0.7nm,0.8s,baz=61,slow=11,SNR=4.2
comp=Z,0.5nm,0.7s

YAK Yakutsk 43.11 36 *i* P **P 02 18 26.2 +1.4**
YAK pmax pmax
comp=Z,11nm,0.9s
CLL Collm 43.17 308 *e*P **P 02 18 29.0 +3.6**
CLL pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 43.17 308 *e*Px Px 02 18 29.0
comp=Z,9.0nm,1.2s
KBA Koelnbreinsper 43.44 302 *e*P **P 02 18 28.0 +0.1**
comp=Z,7.4nm,1.3s
LESA Schwarzleotal 43.84 303 *e*P **P 02 18 31.2 +0.2**
comp=Z,6.0nm,1.1s
NC405 NORSAR Array S 43.92 323 P **P 02 18 32.0 +0.7**
NC405 IAmb IAmb 02 18 57.9
comp=Z,23nm,1.5s
ABTA Abfaltersbach 44.06 302 P **P 02 18 32.9 +0.2**
comp=Z,4.2nm,1.2s
NC303 NORSAR Array S 44.09 323 P **P 02 18 32.3 -0.5**
NC303 IAmb IAmb 02 18 46.2
comp=Z,8.8nm,0.8s
NB2 NORSAR Subarra 44.15 323 P **P 02 18 32.7 -0.6**
comp=Z,7.3nm,1.1s,baz=94,slow=7.9
NOA NORSAR Array B 44.15 323 P **P 02 18 31.0 -2.3**
comp=Z,3.0nm,0.8s,baz=106,slow=7.2,SNR=16
comp=Z,3.0nm,0.8s
NOA NORSAR Array B 44.15 323 P **P 02 18 31.0 -2.3**
KSRS Korea Array 44.17 72 P **P 02 18 32.9 -0.7**
comp=Z,2.1nm,1.1s,baz=274,slow=6.1,SNR=4.4
comp=Z,2.1nm,1.1s
WTTA Wattenberg 44.56 303 *e*P **P 02 18 36.8 -0.1**
comp=Z,6.3nm,1.1s
WATA Walderalm 44.59 303 *e*P **P 02 18 36.9 -0.2**
comp=Z,8.5nm,1.4s
SQTA Sankt Quirin 44.86 303 *e*P **P 02 18 39.0 -0.2**
comp=Z,12nm,1.4s
TIXI Tiksi 44.95 22 P **P 02 18 40.4 +1.0**
TIXI IAmb IAmb 02 19 19.8
comp=Z,8.8nm,1.1s
TIXI Tiksi 44.95 22 *i* P **P 02 18 40.4 +1.0**
TIXI pmax pmax
comp=Z,5.0nm,0.9s
FETA Feichten 45.21 303 *e*P **P 02 18 41.7 -0.4**
comp=Z,7.0nm,1.5s
USRK Ussuriysk Ar. 45.39 61 P **P 02 18 43.4 +0.1**
comp=Z,1.0nm,0.7s,baz=174,slow=16,SNR=2.4
comp=Z,1.0nm,0.7s
DAVA Damuels 45.73 303 *e*P **P 02 18 46.1 -0.1**
comp=Z,5.0nm,0.9s
PPI Padang Panjang 45.94 138 P **P 02 18 47.3 -0.6**
PDSI Padang 46.35 138 P **P 02 18 49.7 -1.5**
SPITS Spitsbergen Ar 46.95 347 P **P 02 18 56.1 +0.9**
comp=Z,2.8nm,0.6s,baz=110,slow=10.0,SNR=6.1
comp=Z,2.8nm,0.6s
KEST Kesra 49.31 288 P **P 02 19 14.5 +0.4**
comp=Z,7.8nm,1.1s,baz=326,slow=4.8,SNR=5.0
comp=Z,7.8nm,1.1s
KMBO Kilima Mbogo 49.67 228 P **P 02 19 15.6 -1.5**
comp=Z,1.3nm,0.5s,baz=51,slow=12,SNR=3.8
comp=Z,1.3nm,0.5s
KMBO Kilima Mbogo 49.67 228 *i* P **P 02 19 17.7 +0.5**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
EKA Eskdalemuir Ar 52.16 316 P **P 02 19 34.5 -0.7**
comp=Z,2.1nm,0.6s,baz=87,slow=7.4,SNR=11
comp=Z,2.1nm,0.6s
MJAR Matsushiro Arr 52.22 69 P **P 02 19 36.1 +0.1**
comp=Z,1.6nm,0.9s,baz=287,slow=9.2,SNR=2.8
comp=Z,1.6nm,0.9s
DAG Danmarks Havn 54.23 344 *i* P **P 02 19 49.1 -0.9**
DAG IAmb IAmb 02 19 56.8
comp=Z,20nm,1.5s
DBG Daneborg 55.11 341 *i* P **P 02 19 56.1 -0.4**
SCO Scoresbysund 56.64 336 *i* P **P 02 20 10.4 +2.9**
SCO IAmb IAmb 02 20 11.8
comp=Z,6.5nm,1.3s
ESDC Sonseca Array 57.60 298 P **P 02 20 12.8 -2.1**
comp=Z,2.0nm,0.7s,baz=56,slow=7.5,SNR=16
comp=Z,2.0nm,0.7s
ESDC Sonseca Array 57.60 298 IAmb IAmb 02 20 19.8
comp=Z,3.4nm,1.1s
BILL Bilibino 57.77 26 *i* P **P 02 20 19.0 +3.5**
BILL pmax pmax
comp=Z,4.0nm,1.0s
TAM Tamanrasset 57.99 276 P **P 02 20 18.6 +0.6**
TAM IAmb IAmb 02 20 20.6
comp=Z,5.3nm,0.8s
TAM Tamanrasset 57.99 276 P **P 02 20 18.6 +0.6**
TAM pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 60.59 341 *i* P **P 02 20 36.0 +0.6**
SUMG IAmb IAmb 02 20 38.0
comp=Z,5.6nm,0.7s
BATI Baumata 67.80 123 P **P 02 21 21.5 -1.5**
comp=Z,12nm,0.5s,baz=279,slow=3.5,SNR=3.9
comp=Z,12nm,0.5s
E21K Killik River 69.35 16 IAmb IAmb 02 21 36.0
comp=Z,7.5nm,0.8s
E22K Anaktuvuk Pass 70.08 16 IAmb IAmb 02 21 42.8
comp=Z,6.9nm,1.2s
D25K Kavik River 70.18 13 IAmb IAmb 02 21 44.3
comp=Z,6.0nm,0.8s
C27K Jago River 70.39 12 IAmb IAmb 02 21 43.1
comp=Z,6.1nm,0.9s
F21K Alatna River 70.44 17 IAmb IAmb 02 21 43.6
comp=Z,5.8nm,0.9s
E24K Your Creek 70.83 15 IAmb IAmb 02 21 44.8
comp=Z,12nm,1.4s
COLD Coldfoot 71.17 16 P **P 02 21 43.7 +0.5**
COLD IAmb IAmb 02 21 47.6
comp=Z,4.9nm,0.7s
F25K Christian Rive 71.81 14 IAmb IAmb 02 21 52.0
comp=Z,5.7nm,0.9s
E27K Coleen River 72.03 12 IAmb IAmb 02 21 51.5
comp=Z,14nm,1.4s
E29M Blow River 72.45 11 IAmb IAmb 02 21 55.3
comp=Z,6.6nm,0.9s
J20K Nowinta River 72.72 19 IAmb IAmb 02 21 56.7
comp=Z,4.9nm,0.9s
H24K Noodor Dome 72.85 16 IAmb IAmb 02 21 58.4
comp=Z,3.6nm,0.7s
INK Inuvik 73.15 10 P **P 02 21 55.1 +0.1**
INK IAmb IAmb 02 21 59.0
comp=Z,7.6nm,0.8s
INK Inuvik 73.15 10 P **P 02 21 55.1 +0.1**
INK pmax pmax
comp=Z,8.0nm,0.8s
C36M Paulatuk 73.15 6 IAmb IAmb 02 21 57.1
comp=Z,7.4nm,0.8s
G27K Doyon Strip 73.25 13 IAmb IAmb 02 21 59.7
comp=Z,14nm,1.5s
NEA2 Nenana 73.64 17 IAmb IAmb 02 22 04.2
comp=Z,8.6nm,1.0s
COLA College 73.68 16 P **P 02 21 59.0 +0.9**
COLA College 73.68 16 P **P 02 21 59.0 +0.9**
COLA pmax pmax
comp=Z,14nm,0.9s
ILAR Eielson Array 73.98 16 P **P 02 21 58.4 -1.6**
comp=Z,1.9nm,0.8s,baz=326,slow=3.3,SNR=16
comp=Z,1.9nm,0.8s
ILAR Eielson Array 73.98 16 P **P 02 21 59.6 -0.4**
G30M tAoh Zrail Nji 74.00 11 IAmb IAmb 02 22 04.0
comp=Z,12nm,1.2s
I28M Miner Creek 74.79 13 IAmb IAmb 02 22 08.8
comp=Z,8.5nm,0.8s
L22K Petersville 74.95 19 IAmb IAmb 02 22 11.0
comp=Z,7.5nm,1.1s
DHY Denali Highway 75.33 17 IAmb IAmb 02 22 12.6
comp=Z,6.7nm,0.7s
I30M Mount Dempster 75.61 12 IAmb IAmb 02 22 14.3
comp=Z,6.9nm,0.9s
DAWY Dawson 76.14 14 IAmb IAmb 02 22 15.7
comp=Z,8.0nm,1.1s
K29M Barlow Dome 76.68 13 IAmb IAmb 02 22 20.9
comp=Z,7.7nm,1.0s
BOSA Boshof 78.60 220 P **P 02 22 25.4 -1.3**
comp=Z,3.1nm,0.8s,baz=26,slow=3.2,SNR=5.4
comp=Z,3.1nm,0.8s
BOSA Boshof 78.60 220 IAmb IAmb 02 22 32.5
comp=Z,15nm,1.4s
YKA Yellowknife Ar 80.54 3 P **P 02 22 36.1 -0.7**
comp=Z,3.4nm,0.9s,baz=346,slow=5.9,SNR=8.8
comp=Z,3.4nm,0.9s
WRA Warramunga Arr 81.91 122 P **P 02 22 41.6 -3.1**
comp=Z,1.3nm,0.6s,baz=323,slow=5.0,SNR=24
comp=Z,1.3nm,0.6s
ASAR Alice Springs 84.22 125 P **P 02 22 54.4 -2.2**
comp=Z,1.6nm,0.7s,baz=310,slow=5.0,SNR=29
comp=Z,1.6nm,0.7s

*IDC **24** 02:13:08.1±4.1,52°.41N×178°.61W,h0km,mb3.3/4, mbtmp3.5/5,ML4.1/1, Error ellipse: s-maj=94.5km s-min=47.1km az=125.0*
*NEIC **24** 02:13:22.4±1.8,51°.25N±0°.04×175°.60W±0°.05,h10km±2km, ML3.5(AEIC), Error ellipse: s-maj=7.4km s-min=4.8km az=352.0*
*AEIC **24** 02:13:24.0±1.3,51°.35N±0°.05×175°.53W±0°.05,h30km±6km, Error ellipse: s-maj=7.2km s-min=4.7km az=186.0*
ISC 24 02:13:22.3±1.9,51°.31N±0°.07×175°.58W±0°.04,h6km±12km, n46,σ1s89/45,mb3.7/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.72**	**342**			**Pb**	**02 13 37.4**	**+0.2**
GSIG						**Sb**	**02 13 47.1**	**-0.1**
ETKA	**Kagalaska Isla**	**0.76**	**317**			**Pg**	**02 13 38.0**	**+1.1**
GSCK	**Great Sitkin C**	**0.80**	**333**			**Pb**	**02 13 38.7**	**+0.2**
GSMY	**Great Sitkin M**	**0.80**	**338**			**Pb**	**02 13 38.7**	**+0.1**
GSMY						**Sb**	**02 13 49.4**	**-0.2**
GSTD	**Great Sitkin T**	**0.83**	**335**			**Pg**	**02 13 39.2**	**+1.0**
GSTR	**Great Sitkin T**	**0.85**	**339**			**Sn**	**02 13 52.0**	**-1.5**
GSTR	**Great Sitkin T**	**0.85**	**339**			**Pg**	**02 13 39.7**	**+1.2**
GSSP	**Great Sitkin S**	**0.87**	**335**			**Pg**	**02 13 40.0**	**+1.0**
ADK	**Adak**	**0.90**	**310**			**Pb**	**02 13 39.8**	**-0.5**
ADAG	**Mount Adagdak**	**0.93**	**317**			**Pb**	**02 13 41.0**	**+0.2**
ADAG						**Sn**	**02 13 54.2**	**-1.3**
KIRH	**Kanaga Island**	**1.12**	**303**			**Pb**	**02 13 43.5**	**-0.5**
KIWB	**Kanaga Island**	**1.13**	**300**			**Pb**	**02 13 43.4**	**-0.7**
KIMD	**Kanaga Island**	**1.13**	**294**			**Pb**	**02 13 43.4**	**-0.9**
KIKV	**Kanaga Island**	**1.15**	**301**			**Pb**	**02 13 43.8**	**-0.7**
ATKA	**Atka Island**	**1.24**	**43**			**Sb**	**02 14 00.8**	**-1.5**
ATKA	**Atka Island**	**1.24**	**43**			**Pn**	**02 13 43.9**	**-2.2**
KOKL	**Mount Kliuchef**	**1.33**	**39**			**Pn**	**02 13 45.7**	**-1.7**
KOFP	**Korovin Flat P**	**1.34**	**43**			**Pn**	**02 13 45.8**	**-1.7**
KOFP						**Sb**	**02 14 03.1**	**-2.0**
KOWE	**Korovin West**	**1.34**	**37**			**Pn**	**02 13 46.2**	**-1.4**
KOWE						**Sn**	**02 14 03.1**	**-2.6**
KOKV	**Korovin Volcan**	**1.37**	**39**			**Pn**	**02 13 46.6**	**-1.4**
KOSE	**Korovin Southe**	**1.41**	**42**			**Pn**	**02 13 47.2**	**-1.2**
TAFL	**Tanaga Flats**	**1.52**	**288**			**Pn**	**02 13 49.2**	**-0.8**
TAFP	**Tanaga Falls P**	**1.62**	**293**			**Pn**	**02 13 50.8**	**-0.5**
TASE	**Tanaga Southea**	**1.63**	**290**			**Pn**	**02 13 51.1**	**-0.4**
GAKI	**Gareloi-Kavalg**	**2.04**	**278**			**Pn**	**02 13 56.8**	**-0.3**
GANE	**Gareloi Northe**	**2.06**	**286**			**Pn**	**02 13 57.4**	**0.0**
GANO	**Gareloi North**	**2.08**	**286**			**Pn**	**02 13 58.4**	**+0.7**
AMKA	**Amchitka**	**3.21**	**273**			**Pn**	**02 14 13.3**	**+0.1**
NIKH	**Nikolski High**	**4.46**	**65**	Pn		**Pn**	**02 14 31.4**	**+1.0**
UNV	**Unalaska Valle**	**6.09**	**62**	Pn		**Pn**	**02 14 53.5**	**+0.9**
KDAK	**Kodiak Island**	**14.79**	**55**	Pn		**Pn**	**02 16 50.3**	**-1.4**
	0.8nm,0.3s,baz=252,slow=20,SNR=8.7							
KDAK						Sn	**02 19 42.4**	**+6.8**
	0.2nm,0.3s,baz=299,slow=19,SNR=1.5							
	6.6nm,0.9s							
KDAK	**Kodiak Island**	**14.79**	**55**			**Pn**	**02 16 50.3**	**-1.4**
KDAK						**Sn**	**02 19 42.4**	**+6.8**
ILAR	**Eielson Array**	**20.06**	**37**	P		P	02 17 45.5	-10
	0.3nm,0.9s,baz=237,slow=12,SNR=16							
	0.3nm,0.9s							
ILAR	**Eielson Array**	**20.06**	**37**	P		P	02 17 45.5	-10
H11N2	**WAKE ISLAND Hy**	**34.40**	**210**	T		T	02 56 47.5	
	baz=18,slow=76,SNR=9.7							
H11N3	**WAKE ISLAND Hy**	**34.41**	**210**	T		T	02 56 49.3	
	baz=18,slow=76,SNR=9.0							
H11N1	**WAKE ISLAND Hy**	**34.42**	**210**	T		T	02 56 48.9	
	baz=18,slow=76,SNR=9.6							
H11S1	**WAKE ISLAND Hy**	**35.61**	**210**	T		T	02 58 46.5	
	baz=18,slow=74							
H11S2	**WAKE ISLAND Hy**	**35.62**	**210**	T		T	02 58 45.9	
	baz=18,slow=74							
H11S3	**WAKE ISLAND Hy**	**35.63**	**210**	T		T	02 58 35.3	
	baz=18							
NVAR	**Mina Array Bea**	**41.55**	**85**	P		**P**	**02 21 11.6**	**+0.9**
	0.2nm,0.6s,baz=311,slow=8.7,SNR=3.9							
	0.2nm,0.6s							
NVAR	**Mina Array Bea**	**41.55**	**85**	P		**P**	**02 21 11.6**	**+0.9**
PDAR	**Pinedale Array**	**44.39**	**74**	P		**P**	**02 21 32.8**	**-0.8**
	0.8nm,0.6s,baz=304,slow=4.0,SNR=10							
	0.8nm,0.6s							
PDAR	**Pinedale Array**	**44.39**	**74**	P		**P**	**02 21 32.8**	**-0.8**
TXAR	**Lajitas Array**	**56.66**	**83**	P		**P**	**02 23 05.0**	**-1.3**
	0.3nm,0.4s,baz=290,slow=6.2,SNR=7.7							
	0.3nm,0.4s							
TXAR	**Lajitas Array**	**56.66**	**83**	P		**P**	**02 23 05.0**	**-1.3**

*NDI **24** 02:16:10.6±2.8,25°.05N×96°.83E,h10km,ML3.7,MW3.8*
*IDC **24** 02:16:20.8±1.2,26°.05N×96°.26E,h0km,mb3.7/7, mbtmp3.8/8,ML4.2/1, Error ellipse: s-maj=66.9km s-min=18.9km az=67.0*
ISC 24 02:16:15.9±0.8,25°.15N±0°.05×96°.42E±0°.04,h10km,n16, σ2s19/24,mb4.0/7,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNCH	**TengChong**	**1.91**	**93**	Pg		**Pn**	**02 16 47.8**	**-0.9**
TNCH				Sg		**Sn**	**02 17 13.1**	**+0.3**
TNCH				smax	smax			
	comp=N,420nm,0.9s							
TNCH				smax	smax			
	comp=E,500nm,1.7s							
TNCH				LR	LR			
	comp=N,2μm,2.7s							
TNCH				LR	LR			
	comp=E,2μm,3.3s							
TNCH				LR	LR			
	comp=Z,1μm,14.3s							
MOKO	**MOKOCHONG**	**2.08**	**304**	*e*P		**Pn**	**02 16 52.5**	**+1.5**
MOKO				*e*S		**Sb**	**02 17 21.5**	**+1.8**
MOKO				IAML			02 17 27.9	
	comp=E,368nm,0.6s							
MOKO				IAML			02 17 29.0	
	comp=N,614nm,0.6s							
KOHI	**KOHIMA**	**2.17**	**286**	*e*P		**Pn**	**02 16 52.7**	**+0.5**
KOHI				*e*S		**Sb**	**02 17 24.4**	**+2.0**
KOHI				IAML			02 17 31.5	
	comp=N,323nm,0.8s							
KOHI				IAML			02 17 38.8	
	comp=E,465nm,0.8s							
IMP	**Imphal**	**2.27**	**262**	*e*P		**Pn**	**02 16 51.8**	**-1.8**
IMP				*e*S		**Sn**	**02 17 23.3**	**+1.6**
IMP				IAML			02 17 28.9	
	comp=N,1μm,0.7s							
IMP				IAML			02 17 30.3	
	comp=E,818nm,0.5s							
ITAN	**ITANAGAR**	**3.13**	**310**	*e*P		**Pn**	**02 17 05.7**	**+0.4**
ITAN				*e*S		**Sn**	**02 17 45.5**	**+2.6**
ITAN				IAML			02 17 58.4	
	comp=E,212nm,0.5s							
ITAN				IAML			02 17 58.9	
	comp=N,297nm,0.3s							
ZIRO	**ZIRO**	**3.30**	**316**	*e*P		**Pn**	**02 17 07.3**	**-0.6**
ZIRO				*e*S		**Sn**	**02 17 46.5**	**-0.8**
TEZP	**TEZPUR**	**3.57**	**295**	*e*P		**Pn**	**02 17 11.4**	**0.0**
TEZP				*e*S		**Sn**	**02 17 54.4**	**+0.7**
TEZP				IAML			02 17 55.5	
	comp=E,234nm,0.2s							
TEZP				IAML			02 17 57.6	
	comp=N,240nm,0.2s							
SAIH	**SAIHA**	**4.11**	**231**	*e*P		**Pn**	**02 17 15.6**	**-3.4**
SAIH				*e*S		**Sn**	**02 18 06.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**7.06**	**160**	Pn		**Pb**	**02 18 18.3**	**-0.5**
	comp=N,0.9nm,0.3s,baz=336,slow=14,SNR=7.8							
CMAR				Sn		**Sb**	**02 19 50.2**	**+7.0**
	comp=N,0.5nm,0.3s,baz=101,slow=15,SNR=4.7							
	comp=N,1.3nm,0.3s							
SONM	**Songimi Array**	**23.97**	**17**	P		**P**	**02 21 29.2**	**-1.4**
	comp=N,0.4nm,0.7s,baz=210,slow=10,SNR=2.3							
	comp=N,0.4nm,0.7s							
MKAR	**Makanchi Array**	**24.36**	**336**	P		**P**	**02 21 33.6**	**-0.5**
	comp=N,3.4nm,0.8s,baz=142,slow=8.6,SNR=13							
	comp=N,3.4nm,0.8s							
KURBB	**Kurchatov Arra**	**28.93**	**336**	P		**P**	**02 22 12.8**	**-2.3**
	comp=N,0.9nm,0.7s,baz=150,slow=8.5,SNR=3.9							
	comp=N,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	**30.04**	**346**	P		**P**	**02 22 23.1**	**-1.8**
	comp=N,1.1nm,0.5s,baz=148,slow=8.4,SNR=4.5							
	comp=N,1.1nm,0.5s							
BVAR	**Borovoye Array**	**34.03**	**332**	P		**P**	**02 22 58.3**	**-1.7**
	comp=N,0.8nm,0.5s,baz=134,slow=9.8,SNR=4.7							
	comp=N,0.8nm,0.5s							
ARCES	**ARCESS Array B**	**60.01**	**337**	P		**P**	**02 26 23.0**	**+0.7**
	comp=N,1.0nm,0.6s,baz=52,slow=7.9,SNR=4.3							
	comp=N,1.0nm,0.6s							

ASAR Alice Springs 60.62 140 P P 02 26 38.6 +11
comp=N,0.4nm,0.8s,baz=339,slow=7.8,SNR=3.1
comp=N,0.4nm,0.8s

CATAC ***24*** *02:28:56.3±0.6, 16˚N±5˚×9˚8W±˚, h329km±5km, M5.2/12, mb5.0/10, mB5.2/6, MLv5.6/12, Mw(mB)4.6/6, Error ellipse: s-maj=10.7km s-min=6.8km az=20.4, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.85; $M_{\theta\theta}$-1.74; $M_{\phi\phi}$-1.11; $M_{r\theta}$1.15; $M_{r\phi}$1.73; $M_{\theta\phi}$-1.69; Fault plane solution: M_o3.65533×10^{16} NP1:ϕ_s139.32149°, δ62.19258°, λ,99.68736°. NP2:ϕ_s299.22248°, δ29.31890°, λ,72.30442°. Principal axes: T 3.5249, Plg71.1554°, Azm70.9370°; N 0.2483, Plg8.5597°, Azm314.7684°; P -3.7731, Plg16.6584°, Azm222.1870°; confirmed*
IDC ***24*** *02:29:06.8±0.7, 15.˚72N×96.˚50W, h0km, mb4.4/19, mbtmp4.3/22, ML3.8/4, MS4.4/5 Error ellipse: s-maj=19.6km s-min=12.8km az=55.0*
RSNC ***24*** *02:29:06.9±1.2, 16˚N±9˚×9˚7W±1˚2, h0km, M4.6, mB5.2, mb4.5, Mw(mB)4.6*
NEIC ***24*** *02:29:08.4±2.1, 15˚.65N±0˚.04×96˚.77W±0˚.04, h10km±1km, mb4.9/417, Md5.1/182(MEX), Error ellipse: s-maj=7.3km s-min=6.2km az=225.0*
MEX ***24*** *02:29:08.3±1.6, 15˚.52N×96˚.80W, h11km±27km, MD5.1*
ISC 24 02:29:06.8±1.2, 15˚.69N±0˚.03×96˚.81W±0˚.02, h5km±7km, n712, σ1§87/693, mb4.9/172, MS4.4/4, 7C, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.45**	**313**		**Pb**	**02 29 17.4**	**+0.1**
PEIG					**Sb**	**02 29 25.4**	**+1.2**
PEIG	**Puerto Escondi** baz=139,slow=5.9	**0.45**	**313**	*eP*	**Pb**	**02 29 17.4**	**+0.1**
PEIG				*eS*	**Sb**	**02 29 25.4**	**+1.2**
HUIG	**Huatulco**	**0.68**	**83**		**Pg**	**02 29 20.2**	**+0.3**
HUIG					**Sb**	**02 29 32.4**	**+1.5**
HUIG	**Huatulco**	**0.68**	**83**	*eP*	**Pg**	**02 29 20.2**	**+0.3**
HUIG				*eS*	**Sb**	**02 29 32.4**	**+1.5**
YOIG	**Yosondua**	**1.36**	**329**		**Pn**	**02 29 32.4**	**-0.4**
YOIG					**Sn**	**02 29 53.2**	**+1.9**
YOIG	**Yosondua**	**1.36**	**329**	*eP*	**Pn**	**02 29 32.4**	**-0.4**
YOIG				*eS*	**Sn**	**02 29 53.2**	**+1.9**
OXLC	**Oaxaca**	**1.37**	**4**		**Pg**	**02 29 33.3**	**+0.2**
OXLC					**Sn**	**02 29 54.1**	**+2.6**
OXLC	**Oaxaca**	**1.37**	**4**	*eP*	**Pg**	**02 29 33.3**	**+0.2**
OXLC				*eS*	**Sn**	**02 29 54.1**	**+2.6**
OXBJ	**Oaxaca**	**1.37**	**3**		**Pg**	**02 29 36.2**	**+3.1**
OXBJ					**Sn**	**02 29 56.3**	**+4.8**
OXBJ	**Oaxaca**	**1.37**	**3**	*eP*	**Pg**	**02 29 36.2**	**+3.1**
OXBJ				*eS*	**Sn**	**02 29 56.3**	**+4.8**
VHO	**Vista Hermosa**	**1.37**	**3**	*eP*	**Pg**	**02 29 33.2**	**0.0**
VHO				*eS*	**Sn**	**02 29 54.3**	**+2.7**
OXIG	**Oaxaca**	**1.38**	**3**		**Pg**	**02 29 33.2**	**0.0**
OXIG					**Sn**	**02 29 54.3**	**+2.7**
PNIG	**Pinotepa**	**1.45**	**299**		**Pn**	**02 29 32.1**	**-1.6**
PNIG					**Sg**	**02 29 55.3**	**+1.9**
PNIG	**Pinotepa**	**1.45**	**299**	*eP*	**Pn**	**02 29 32.1**	**-1.6**
PNIG				*eS*	**Sg**	**02 29 55.3**	**+1.9**
TXIG	**Tlaxiaco**	**1.81**	**329**		**Pn**	**02 29 39.5**	**+0.6**
TXIG					**Sg**	**02 30 04.8**	**-0.2**
TXIG	**Tlaxiaco**	**1.81**	**329**	*eP*	**Pn**	**02 29 39.5**	**+0.6**
TXIG				*eS*	**Sg**	**02 30 04.8**	**-0.2**
NEUV	**Arroyo Zacate**	**2.23**	**25**		**Pn**	**02 29 45.1**	**+0.6**
NEUV					**Sb**	**02 30 16.4**	**+0.8**
NEUV	**Arroyo Zacate**	**2.23**	**25**	*eP*	**Pn**	**02 29 45.1**	**+0.6**
NEUV				*eS*	**Sb**	**02 30 16.4**	**+0.8**
CMIG	**Matias Romero** 123nm,0.3s,baz=234,slow=10,SNR=1604	**2.31**	**53**	Pn Sn	**Pn**	**02 29 43.8**	**-1.8**
CMIG	357nm,0.3s,baz=264,slow=8.7,SNR=9.4			LR	**Sn**	**02 30 08.4**	**-6.1**
CMIG	comp=Z,4µm,18.6s,baz=208,slow=33 256nm,0.3s			LR	LR	02 30 15.0	
CMIG	**Matias Romero**	**2.31**	**53**		**Pn**	**02 29 44.0**	**-1.6**
CMIG					**Sg**	**02 30 21.6**	**+0.5**
MGIG	**Malinaltepec**	**2.33**	**311**		**Pn**	**02 29 46.1**	**+0.1**
MGIG					**Sn**	**02 30 14.0**	**-1.1**
MGIG	**Malinaltepec**	**2.33**	**311**	*eP*	**Pn**	**02 29 46.1**	**+0.1**
MGIG				*eS*	**Sn**	**02 30 14.0**	**-1.1**
TOIG	**Toxpalan**	**2.40**	**354**		**Pb**	**02 29 48.8**	**-1.8**
TOIG					**Sg**	**02 30 23.1**	**-1.0**
TOIG	**Toxpalan**	**2.40**	**354**	*eP*	**Pb**	**02 29 48.8**	**-1.8**
TOIG				*eS*	**Sg**	**02 30 23.1**	**-1.0**
CRIG	**Cruz Grande**	**2.46**	**295**		**Pn**	**02 29 46.1**	**-1.6**
CRIG					**Sn**	**02 30 14.1**	**-4.1**
CRIG	**Cruz Grande**	**2.46**	**295**	*eP*	**Pn**	**02 29 46.1**	**-1.6**
CRIG				*eS*	**Sn**	**02 30 14.1**	**-4.1**
TLIG	**Tlapa**	**2.51**	**318**		**Pn**	**02 29 49.3**	**+0.8**
TLIG	**Tlapa**	**2.51**	**318**	*eP*	**Pn**	**02 29 49.0**	**+0.5**
TLIG				*eS*	**Sn**	**02 30 18.9**	**-0.7**
TLIG	**Tlapa**	**2.51**	**318**	P	**Pn**	**02 29 49.1**	**+0.7**
TLIG	**Tlapa**	**2.51**	**318**	S	**Sg**	**02 30 29.1**	**+1.5**
FTIG	**Fresnillo de T**	**2.54**	**330**		**Pn**	**02 29 50.0**	**+1.1**
FTIG					**Sb**	**02 30 25.1**	**+0.3**
FTIG	**Fresnillo de T**	**2.54**	**330**	*eP*	**Pn**	**02 29 50.0**	**+1.1**
FTIG				*eS*	**Sb**	**02 30 25.1**	**+0.3**
HMTT	**Tlapaneco**	**2.68**	**322**		**Pb**	**02 29 55.1**	**-0.3**
HMTT	**Tlapaneco**	**2.68**	**322**	*eP*	**Pb**	**02 29 55.1**	**-0.3**
HMTT				*eS*	**Sg**	**02 30 32.9**	**-0.2**
TPIG	**Tehuac#an**	**2.76**	**349**		**Pn**	**02 29 53.0**	**+1.0**
TPIG					**Sn**	**02 30 26.8**	**+0.9**
TPIG	**Tehuac#an**	**2.76**	**349**	*eP*	**Pn**	**02 29 53.0**	**+1.0**
TPIG				*eS*	**Sn**	**02 30 26.8**	**+0.9**
UXUV	**UXUV**	**3.02**	**57**		**Pn**	**02 29 54.7**	**-0.7**
UXUV					**Sn**	**02 30 31.6**	**-0.4**
UXUV	**UXUV**	**3.02**	**57**	*eP*	**Pn**	**02 29 54.7**	**-0.7**
UXUV				*eS*	**Sn**	**02 30 31.6**	**-0.4**
DAIG	**Los Arroyos**	**3.03**	**296**		**Pn**	**02 29 54.7**	**-0.9**
DAIG					**Sn**	**02 30 28.5**	**-3.8**
DAIG	**Los Arroyos**	**3.03**	**296**	*eP*	**Pn**	**02 29 54.7**	**-0.9**
DAIG				*eS*	**Sn**	**02 30 28.5**	**-3.8**
VNTA	**La Mica**	**3.14**	**293**		**Pn**	**02 29 57.8**	**+0.8**
VNTA					**Sn**	**02 30 31.8**	**-3.0**
VNTA	**La Mica**	**3.14**	**293**	*eP*	**Pn**	**02 29 57.8**	**+0.8**
VNTA				*eS*	**Sn**	**02 30 31.8**	**-3.0**
MIHL	**Minatitlan**	**3.15**	**43**		**Pn**	**02 29 55.1**	**-2.0**
MIHL					**Sn**	**02 30 36.4**	**+1.2**
MIHL	**Minatitlan**	**3.15**	**43**	*eP*	**Pn**	**02 29 55.1**	**-2.0**
MIHL				*eS*	**Sn**	**02 30 36.4**	**+1.2**
TUIG	**Tuzandepetl**	**3.26**	**44**		**Pn**	**02 29 57.9**	**-0.8**
TUIG					**Sn**	**02 30 39.7**	**+1.8**
TUIG	**Tuzandepetl**	**3.26**	**44**	*eP*	**Pn**	**02 29 57.9**	**-0.8**
TUIG				*eS*	**Sn**	**02 30 39.7**	**+1.8**
MEIG	**Mezcala**	**3.49**	**310**		**Pn**	**02 30 02.8**	**+0.8**
MEIG					**Sn**	**02 30 42.2**	**-1.5**
MEIG	**Mezcala**	**3.49**	**310**	*eP*	**Pn**	**02 30 02.8**	**+0.8**
MEIG				*eS*	**Sn**	**02 30 42.2**	**-1.5**
PPAX	**Atlixo**	**3.56**	**335**	*eP*	**Pn**	**02 30 04.0**	**+0.9**
PPAX				*eS*	**Sn**	**02 30 47.1**	**+1.4**
PHPU	**Puebla**	**3.58**	**339**		**Pn**	**02 30 04.4**	**+1.1**
PHPU					**Sn**	**02 30 44.3**	**-1.8**
PHPU	**Puebla**	**3.58**	**339**	*eP*	**Pn**	**02 30 04.4**	**+1.1**
PHPU				*eS*	**Sn**	**02 30 44.3**	**-1.8**
CAIG	**El Cayaco**	**3.58**	**293**		**Pn**	**02 30 02.1**	**-1.0**
CAIG					**Sn**	**02 30 43.8**	**-2.0**
CAIG	**El Cayaco**	**3.58**	**293**	*eP*	**Pn**	**02 30 02.1**	**-1.0**
CAIG				*eS*	**Sn**	**02 30 43.8**	**-2.0**
PPCL	**Tochimilco**	**3.64**	**332**	*eP*	**Pn**	**02 30 05.4**	**+1.2**
PPCL				*eS*	**Sn**	**02 30 49.2**	**+1.5**
PBCV	**Popocatepetl**	**3.68**	**333**	*eP*	**Pn**	**02 30 05.6**	**+0.8**
PBCV				*eS*	**Sn**	**02 30 46.5**	**-2.1**
PPPT	**Popocatepetl**	**3.69**	**332**	*eP*	**Pn**	**02 30 05.9**	**+0.8**
PPPT				*eS*	**Sn**	**02 30 47.8**	**-1.6**
TGIG		**3.70**	**73**		**Pn**	**02 30 02.6**	**-2.2**
TGIG					**Sn**	**02 30 49.3**	**+0.4**
TGIG		**3.70**	**73**	*eP*	**Pn**	**02 30 02.6**	**-2.2**
TGIG				*eS*	**Sn**	**02 30 49.3**	**+0.4**
PPCU	**Popocatapetl**	**3.72**	**332**	*eP*	**Pn**	**02 30 06.3**	**+0.9**
PPCU				*eS*	**Sn**	**02 30 50.5**	**+0.6**
TGBT	**Tuxtla Gutierr**	**3.73**	**73**		**Pn**	**02 30 07.7**	**+2.6**
TGBT					**Sn**	**02 30 49.3**	**-0.2**
TGBT	**Tuxtla Gutierr**	**3.73**	**73**	*eP*	**Pn**	**02 30 07.7**	**+2.6**
TGBT				*eS*	**Sn**	**02 30 49.3**	**-0.2**
PBXN	**Popocatepetl**	**3.74**	**332**	*eP*	**Pn**	**02 30 06.4**	**+0.6**
PBXN				*eS*	**Sn**	**02 30 49.9**	**-0.6**
PPSX	**Xalitzintla**	**3.75**	**335**	*eP*	**Pn**	**02 30 07.8**	**+2.2**
PPM	**Popocatepetl**	**3.78**	**333**	*eP*	**Pn**	**02 30 08.0**	**+1.7**
PPM				*eS*	**Sn**	**02 30 53.9**	**+2.5**
PPIG	**Popocatepetl**	**3.78**	**333**		**Pn**	**02 30 08.0**	**+1.7**
PPIG					**Sn**	**02 30 53.9**	**+2.5**
ATYC	**Atoyac**	**3.79**	**294**		**Pn**	**02 30 07.4**	**+1.4**
ATYC					**Sn**	**02 30 51.5**	**+0.5**
ATYC	**Atoyac**	**3.79**	**294**	*eP*	**Pn**	**02 30 07.4**	**+1.4**
ATYC				*eS*	**Sn**	**02 30 51.5**	**+0.5**
YAIG	**Yautepec**	**3.82**	**326**		**Pn**	**02 30 08.0**	**+1.4**
YAIG					**Sn**	**02 30 51.5**	**-0.5**
YAIG	**Yautepec**	**3.82**	**326**	*eP*	**Pn**	**02 30 08.0**	**+1.4**
YAIG				*eS*	**Sn**	**02 30 51.5**	**-0.5**
LVIG	**Laguna Verde**	**4.03**	**5**		**Pn**	**02 30 08.8**	**-0.4**
LVIG					**Sn**	**02 30 58.6**	**+1.9**
LVIG	**Laguna Verde**	**4.03**	**5**	*eP*	**Pn**	**02 30 08.8**	**-0.4**
LVIG				*eS*	**Sn**	**02 30 58.6**	**+1.9**
MPVM	**San Francisco**	**4.08**	**329**		**Pn**	**02 30 12.5**	**+2.4**
MPVM					**Sn**	**02 31 00.0**	**+1.7**
MPVM	**San Francisco**	**4.08**	**329**	*eP*	**Pn**	**02 30 12.5**	**+2.4**
MPVM				*eS*	**Sn**	**02 31 00.0**	**+1.7**
MAVM	**Malinalco, Edo**	**4.14**	**322**		**Pn**	**02 30 15.4**	**+4.4**
MAVM					**Sn**	**02 31 00.8**	**+0.9**
MAVM	**Malinalco, Edo**	**4.14**	**322**	*eP*	**Pn**	**02 30 15.4**	**+4.4**
MAVM				*eS*	**Sn**	**02 31 00.8**	**+0.9**
THVM	**De Xico**	**4.15**	**330**		**Pn**	**02 30 11.8**	**+0.7**
THVM					**Sn**	**02 31 04.7**	**+4.5**
THVM	**De Xico**	**4.15**	**330**	*eP*	**Pn**	**02 30 11.8**	**+0.7**
THVM				*eS*	**Sn**	**02 31 04.7**	**+4.5**
TLVM	**San Miguel Top**	**4.15**	**328**		**Pn**	**02 30 09.7**	**-1.6**
TLVM					**Sn**	**02 31 01.1**	**+0.7**
TLVM	**San Miguel Top**	**4.15**	**328**	*eP*	**Pn**	**02 30 09.7**	**-1.6**
TLVM				*eS*	**Sn**	**02 31 01.1**	**+0.7**
XCVM	**Xochimilco**	**4.17**	**328**		**Pn**	**02 30 15.6**	**+4.1**
XCVM					**Sn**	**02 31 02.6**	**+1.8**
XCVM	**Xochimilco**	**4.17**	**328**	*eP*	**Pn**	**02 30 15.6**	**+4.1**
XCVM				*eS*	**Sn**	**02 31 02.6**	**+1.8**
MZVM		**4.18**	**327**		**Pn**	**02 30 13.6**	**+2.4**
MZVM					**Sn**	**02 31 02.4**	**+1.9**
MZVM		**4.18**	**327**	*eP*	**Pn**	**02 30 13.6**	**+2.4**
MZVM				*eS*	**Sn**	**02 31 02.4**	**+1.9**
TXVM	**Universitario**	**4.23**	**332**		**Pb**	**02 30 17.9**	**-4.0**
TXVM					**Sb**	**02 31 08.7**	**-4.8**
TXVM	**Universitario**	**4.23**	**332**	*eP*	**Pb**	**02 30 17.9**	**-4.0**
TXVM				*eS*	**Sb**	**02 31 08.7**	**-4.8**
CNCY	**Coyoacan**	**4.25**	**328**	*eP*	Pb	02 30 17.4	-4.9
CNCY				*eS*	**Sn**	**02 30 59.3**	**-3.5**
ARIG	**Puente Sto Nin**	**4.25**	**308**		**Pn**	**02 30 11.8**	**-0.6**
ARIG					**Sn**	**02 31 01.2**	**-1.3**
ARIG	**Puente Sto Nin**	**4.25**	**308**	*eP*	**Pn**	**02 30 11.8**	**-0.6**
ARIG				*eS*	**Sn**	**02 31 01.2**	**-1.3**
UNM	**Universidad Na**	**4.27**	**328**		**Pn**	**02 30 14.2**	**+1.5**
UNM	**Universidad Na**	**4.27**	**328**	*eP*	**Pn**	**02 30 14.1**	**+0.3**
UNM				*eS*	**Sn**	**02 31 05.1**	**+2.0**
CUP5	**Mexico City**	**4.27**	**328**		**Pn**	**02 30 15.1**	**+2.3**
CUP5					**Sb**	**02 31 08.9**	**-5.7**
CUP5	**Mexico City**	**4.27**	**328**	*eP*	**Pn**	**02 30 15.1**	**+2.3**
CUP5				*eS*	**Sb**	**02 31 08.9**	**-5.7**
COVM	**Coyoacan**	**4.27**	**329**		**Pb**	**02 30 17.9**	**-4.7**
COVM					**Sn**	**02 31 04.5**	**+1.3**
COVM	**Coyoacan**	**4.27**	**329**	*eP*	**Pn**	**02 30 16.3**	**+3.4**
COVM				*eP*	**Pb**	**02 30 17.9**	**-4.7**
COVM				*eS*	**Sn**	**02 31 04.5**	**+1.3**
COVM				*eS*	Sb	02 31 04.9	-10
COVM				*eS*	Sg	02 31 05.4	-19
AOVM	**Tlapan**	**4.29**	**326**		**Pn**	**02 30 15.1**	**+1.8**
AOVM					**Sn**	**02 31 03.6**	**-0.4**
AOVM	**Tlapan**	**4.29**	**326**	*eP*	**Pn**	**02 30 15.1**	**+1.8**
AOVM				*eS*	**Sn**	**02 31 03.6**	**-0.4**
BJVM	**Benito Juarez**	**4.30**	**329**		**Pn**	**02 30 15.8**	**+2.5**
BJVM					**Sn**	**02 31 05.0**	**+1.0**
BJVM	**Benito Juarez**	**4.30**	**329**	*eP*	**Pn**	**02 30 15.8**	**+2.5**
BJVM				*eS*	**Sn**	**02 31 05.0**	**+1.0**
SCT2	**Benito Juarez**	**4.31**	**329**		**Pn**	**02 30 14.2**	**+0.8**
SCT2					**Sn**	**02 31 04.9**	**+0.8**
SCT2	**Benito Juarez**	**4.31**	**329**	*eP*	**Pn**	**02 30 14.2**	**+0.8**
SCT2				*eS*	**Sn**	**02 31 04.9**	**+0.8**
VRVM	**Mexico City**	**4.31**	**330**		**Pb**	**02 30 19.1**	**-4.2**
VRVM					**Sn**	**02 31 06.5**	**+2.3**
VRVM	**Mexico City**	**4.31**	**330**	*eP*	**Pb**	**02 30 19.1**	**-4.2**
VRVM				*eS*	**Sn**	**02 31 06.5**	**+2.3**
PBVM	**Pinon**	**4.32**	**330**		**Pn**	**02 30 15.6**	**+2.5**
PBVM					**Sn**	**02 31 04.9**	**+1.0**
PBVM	**Pinon**	**4.32**	**330**	*eP*	**Pn**	**02 30 15.6**	**+2.5**
PBVM				*eS*	**Sn**	**02 31 04.9**	**+1.0**
INVM	**La Marquesa**	**4.34**	**326**		**Pn**	**02 30 14.7**	**+0.8**
INVM					**Sn**	**02 30 55.7**	**+0.8**
INVM	**La Marquesa**	**4.34**	**326**	*eP*	**Pn**	**02 30 14.7**	**+0.8**
INVM				*eS*	**Sn**	**02 31 05.7**	**+0.6**
MHVM	**Bosque de Chap**	**4.35**	**329**		**Pn**	**02 30 15.9**	**+2.1**
MHVM					**Sn**	**02 31 07.2**	**+2.1**
MHVM	**Bosque de Chap**	**4.35**	**329**	*eP*	**Pn**	**02 30 15.9**	**+2.1**
MHVM				*eS*	**Sn**	**02 31 07.2**	**+2.1**
VHSA	**Villahermosa**	**4.35**	**58**		**Sn**	**02 31 05.2**	**+0.4**
VHSA	**Villahermosa**	**4.35**	**58**	*eS*	**Sn**	**02 31 05.2**	**+0.4**
CTVM	**Cuauhtemoc**	**4.36**	**329**		**Pn**	**02 30 16.0**	**+2.0**
CTVM					**Sn**	**02 31 05.0**	**-0.4**
CTVM	**Cuauhtemoc**	**4.36**	**329**	*eP*	**Pn**	**02 30 16.0**	**+2.0**
CTVM				*eS*	**Sn**	**02 31 05.0**	**-0.4**
APVM	**Azcapotzalco**	**4.42**	**329**		**Pn**	**02 30 17.6**	**+2.8**
APVM					**Sn**	**02 31 05.8**	**-1.0**
APVM	**Azcapotzalco**	**4.42**	**329**	*eP*	**Pn**	**02 30 17.6**	**+2.8**
APVM				*eS*	**Sn**	**02 31 05.8**	**-1.0**
PTVM	**Pico Tres Padr**	**4.46**	**331**		Pb	02 30 20.7	-5.1
PTVM					**Sn**	**02 31 08.9**	**+1.0**
PTVM	**Pico Tres Padr**	**4.46**	**331**	*eP*	Pb	02 30 20.7	-5.1
PTVM				*eS*	**Sn**	**02 31 08.9**	**+1.0**
VTVM	**Tizayuca**	**4.47**	**335**		**Pn**	**02 30 19.7**	**+4.1**
VTVM					**Sn**	**02 31 05.6**	**-2.6**
VTVM	**Tizayuca**	**4.47**	**335**	*eP*	**Pn**	**02 30 19.7**	**+4.1**
VTVM				*eS*	**Sn**	**02 31 05.6**	**-2.6**
TOVM	**TOLUCA**	**4.50**	**323**		**Pn**	**02 30 20.6**	**+4.5**
TOVM					**Sn**	**02 31 09.6**	**+0.6**
TOVM	**TOLUCA**	**4.50**	**323**	*eP*	**Pn**	**02 30 20.6**	**+4.5**
TOVM				*eS*	**Sn**	**02 31 09.6**	**+0.6**
CCIG	**Comitan**	**4.53**	**82**		**Pn**	**02 30 15.6**	**-0.7**
CCIG	**Comitan**	**4.53**	**82**		**Sn**	**02 31 05.7**	**-3.8**
CCIG	**Comitan**	**4.53**	**82**	*eP*	**Pn**	**02 30 14.9**	**-1.4**
CCIG				*eS*	**Sn**	**02 31 05.7**	**-3.8**
CCIG	**Comitan**	**4.53**	**82**	P	**Pn**	**02 30 15.1**	**-1.2**
CCIG	**Comitan**	**4.53**	**82**	S	**Sg**	**02 31 32.1**	**-0.4**
ZUVM	**ZUMPANGO**	**4.65**	**333**		**Pn**	**02 31 05.8**	**+3.3**
ZUVM					**Sn**	**02 31 12.8**	**+0.3**
ZUVM	**ZUMPANGO**	**4.65**	**333**	*eP*	**Pn**	**02 30 21.3**	**+3.3**
ZUVM				*eS*	**Sn**	**02 31 12.8**	**+0.3**
ZIIG	**Zihuatanejo**	**4.85**	**294**		**Pn**	**02 30 20.3**	**-0.3**
ZIIG					**Sn**	**02 31 17.3**	**+0.1**
ZIIG	**Zihuatanejo**	**4.85**	**294**	*eP*	**Pn**	**02 30 20.3**	**-0.3**
ZIIG				*eS*	**Sn**	**02 31 17.3**	**+0.1**
ATVM	**ATLACOMULCO**	**4.97**	**325**		**Pn**	**02 30 22.6**	**+0.1**
ATVM					**Sn**	**02 31 20.5**	**-0.2**
ATVM	**ATLACOMULCO**	**4.97**	**325**	*eP*	**Pn**	**02 30 22.6**	**+0.1**
ATVM				*eS*	**Sn**	**02 31 20.5**	**-0.2**
DHIG	**Demacu**	**5.05**	**336**		**Pn**	**02 30 26.3**	**+2.8**
DHIG					**Sn**	**02 31 26.3**	**+3.9**
DEIG	**Demacu**	**5.05**	**336**	*eP*	**Pn**	**02 30 26.3**	**+2.8**
DEIG				*eS*	**Sn**	**02 31 26.3**	**+3.9**
RTAL	**Retalhuleu**	**5.07**	**103**	P	**Pn**	**02 30 22.7**	**-0.9**
HUEH	**Huehuetenango**	**5.13**	**93**		**Pn**	**02 30 24.2**	**-0.4**
HUEH	**Huehuetenango**	**5.13**	**93**	P	**Pn**	**02 30 21.6**	**-3.0**
HUEH	**Huehuetenango**	**5.13**	**93**	S	**Sn**	**02 31 30.6**	**+6.3**
ACIG	**Acambay**	**5.17**	**326**		**Pn**	**02 30 28.7**	**+3.5**
ACIG					**Sn**	**02 31 25.9**	**+0.6**
ACIG	**Acambay**	**5.17**	**326**	*eP*	**Pn**	**02 30 28.7**	**+3.5**
ACIG				*eS*	**Sn**	**02 31 25.9**	**+0.6**
MOIG	**Morelia**	**5.76**	**314**		**Pn**	**02 30 36.1**	**+2.9**
MOIG	**Morelia**	**5.76**	**314**		**Sn**	**02 31 43.7**	**+3.8**
MOIG	**Morelia**	**5.76**	**314**	*eP*	**Pn**	**02 30 33.7**	**+0.5**
MOIG				*eS*	**Sn**	**02 31 43.7**	**+3.8**
JRQG	**Juriquilla Cam**	**6.07**	**326**		**Pn**	**02 30 40.3**	**+2.8**
JRQG	**Juriquilla Cam**	**6.07**	**326**		**Sn**	**02 31 51.3**	**+3.8**
JRQG	**Juriquilla Cam**	**6.07**	**326**	*eS*	**Sn**	**02 31 51.3**	**+3.8**
APG	**El Apazote** 0.3nm,0.3s,baz=217,slow=16,SNR=8.3	**6.16**	**96**	Pn Sn	Pn	02 30 33.8	-5.0
APG	0.9nm,0.3s,baz=233,slow=22,SNR=4.9				**Sn**	**02 31 44.7**	**-5.0**
URUA	**Uruapan**	**6.24**	**307**		**Sn**	**02 31 54.5**	**+2.6**
URUA	**Uruapan**	**6.24**	**307**	*eS*	**Sn**	**02 31 54.5**	**+2.6**
SCIG	**Sabancuy**	**6.28**	**58**		**Pn**	**02 30 36.7**	**-3.5**
SCIG					**Sn**	**02 31 49.7**	**-2.7**
SCIG	**Sabancuy**	**6.28**	**58**	*eP*	**Pn**	**02 30 36.7**	**-3.5**
SCIG				*eS*	**Sn**	**02 31 49.7**	**-2.7**
SCIG	**Sabancuy**	**6.28**	**58**	P	**Pn**	**02 30 36.6**	**-3.5**
IGIG	**Irapuato, Guan**	**6.62**	**320**		Pn	02 30 51.0	+6.0
IGIG					**Sn**	**02 32 02.5**	**+1.5**
IGIG	**Irapuato, Guan**	**6.62**	**320**	*eP*	Pn	02 30 51.0	+6.0
IGIG				*eS*	**Sn**	**02 32 02.5**	**+1.5**
MMIG	**Aquila**	**6.77**	**293**		**Pn**	**02 30 46.4**	**-0.5**
MMIG					**Sn**	**02 32 03.5**	**-0.9**
MMIG	**Aquila**	**6.77**	**293**	*eP*	**Pn**	**02 30 46.4**	**-0.5**
MMIG				*eS*	**Sn**	**02 32 03.5**	**-0.9**
PETF	**Flores**	**6.78**	**79**		**Pn**	**02 30 46.1**	**-0.9**
PETF	**Flores**	**6.78**	**79**	P	**Pn**	**02 30 45.7**	**-1.3**
PETF	**Flores**	**6.78**	**79**	S	**Sb**	**02 32 19.7**	**-6.7**
SLOZ	**Alcaldia de Sa**	**6.99**	**103**	P	Pn	02 30 57.4	+7.4
NUBE	**Las Nubes**	**7.03**	**104**	P	Pn	02 30 43.9	-6.7
NUBE	**Las Nubes**	**7.03**	**104**	S	**Sn**	**02 32 16.6**	**+5.6**
CEVE	**Cerro Verde**	**7.19**	**104**	P	**Pn**	**02 30 51.0**	**-2.0**
MTO3	**Montecristo**	**7.31**	**99**		**Pn**	**02 30 54.5**	**0.0**
MNGA	**Volcan de Coli**	**7.50**	**301**	*eP*	**Pn**	**02 31 00.2**	**+3.0**
MNGA				*eS*	**Sn**	**02 32 28.7**	**+5.8**
INCO	**Volcan de Coli**	**7.52**	**301**	*eP*	**Pn**	**02 30 59.4**	**+1.8**
INCO				*eS*	**Sn**	**02 32 27.1**	**+3.6**
SOMAC	**Volcano de Col**	**7.54**	**301**	*eP*	**Pn**	**02 31 01.0**	**+3.2**
SOMAC				*eS*	**Sn**	**02 32 26.0**	**+2.0**
COMA	**Comala**	**7.55**	**300**		**Sn**	**02 32 25.3**	**+1.4**
COMA	**Comala**	**7.55**	**300**	*eS*	**Sn**	**02 32 25.3**	**+1.4**
CDAR	**Ciudad de Arme**	**7.60**	**296**	*eP*	**Pn**	**02 30 59.2**	**+0.8**
CDAR				*eS*	**Sn**	**02 32 27.8**	**+2.8**
CEGR	**Campo Tres**	**7.66**	**300**	*eP*	**Pn**	**02 31 01.6**	**+2.2**
CEGR				*eS*	**Sn**	**02 32 25.8**	**-0.9**
GTIG	**Gomez Farias**	**7.67**	**343**		**Sn**	**02 32 30.1**	**+3.4**
GTIG	**Gomez Farias**	**7.67**	**343**	*eS*	**Sn**	**02 32 30.1**	**+3.4**
AAIG	**Aguscalientes**	**8.17**	**321**		**Pn**	**02 31 08.6**	**+2.2**
AAIG					**Sn**	**02 32 42.3**	**+3.0**
AAIG	**Aguscalientes**	**8.17**	**321**	*eP*	**Pn**	**02 31 08.6**	**+2.2**
AAIG				*eS*	**Sn**	**02 32 42.3**	**+3.0**
MYIG	**Merida**	**8.51**	**51**		**Pn**	**02 31 09.4**	**-1.5**
MYIG					**Sn**	**02 32 46.5**	**-0.9**
MYIG	**Merida**	**8.51**	**51**	*eP*	**Pn**	**02 31 09.4**	**-1.5**
MYIG				*eS*	**Sn**	**02 32 46.5**	**-0.9**
MYIG	**Merida**	**8.51**	**51**	S	**Sn**	**02 32 53.8**	**+6.4**
MYIG	**Merida**	**8.51**	**51**	P	**Pn**	**02 31 10.9**	**0.

comp=Z,63nm,1.4s
RLO **Rose Lookout** 20.45 4 IAmb IAmb 02 33 48.6
comp=Z,103nm,1.5s
FCAR **Ozark Folk Cen** 20.55 11 IAmb IAmb 02 33 48.1
comp=Z,28nm,0.6s
OK048 **Pawnee Station** 20.64 360 IAmb IAmb 02 33 51.1
comp=Z,108nm,1.1s
HHAR **Hobbs** 20.66 7 IAmb IAmb 02 33 51.4
comp=Z,97nm,1.4s
OK038 **West end E0370** 20.77 356 IAmb IAmb 02 33 53.0
comp=Z,52nm,1.1s
U38A **Gravette** 20.78 6 IAmb IAmb 02 33 54.2
comp=Z,63nm,1.1s
TUC **Tucson** 20.86 325 P Pn 02 33 53.0 +0.8
TUC **Tucson** 20.86 325 eP **P** **02 33 50.2 +0.3**
LCAR **Lake Charles** 20.91 13 IAmb IAmb 02 33 51.7
comp=Z,47nm,1.3s
NOKA **Waynoka** 20.94 355 IAmb IAmb 02 33 56.4
comp=Z,103nm,1.3s
BLOK **Blackwell** 20.99 359 IAmb IAmb 02 33 55.8
comp=Z,110nm,1.1s
ABQ **Albuquerque** 21.04 337 IAmb IAmb 02 33 59.4
comp=Z,59nm,1.3s
ANMO **Albuquerque** 21.04 337 P **P** **02 33 53.9 +2.0**
comp=Z,24nm,0.9s,baz=236,slow=11,SNR=31
comp=Z,24nm,0.9s
ANMO **Albuquerque** 21.04 337 P **P** **02 33 54.2 +2.3**
ANMO IAmb IAmb 02 33 59.4
comp=Z,58nm,1.3s
TASM **ASL Pad, Albuq** 21.04 337 IAmb IAmb 02 33 59.5
comp=Z,54nm,1.3s
TASM **ASL Pad, Albuq** 21.04 337 IAmb IAmb 02 33 59.5
comp=Z,55nm,1.3s
TASM **ASL Pad, Albuq** 21.04 337 IAmb IAmb 02 33 59.5
comp=Z,55nm,1.3s
T35A **Sooner Cattle** 21.14 1 IAmb IAmb 02 33 56.9
comp=Z,80nm,0.9s
KAN14 **Manchester OK** 21.20 357 IAmb IAmb 02 33 58.8
comp=Z,67nm,1.2s
KAN01 **Argonia South** 21.39 358 IAmb IAmb 02 34 01.0
comp=Z,75nm,1.2s
KAN08 **Anthony NE Sta** 21.47 357 IAmb IAmb 02 34 01.0
comp=Z,48nm,1.1s
SWET **Sewanee** 21.75 25 IAmb IAmb 02 34 18.2
comp=Z,24nm,0.7s
MGMO **Mountain Grove** 21.75 10 IAmb IAmb 02 34 04.8
comp=Z,66nm,0.9s
PBMO **Poplar Bluff** 21.75 14 IAmb IAmb 02 34 02.5
comp=Z,47nm,0.8s
214A **Organ Pipe Nat** 21.78 321 IAmb IAmb 02 34 05.3
comp=Z,83nm,1.7s
SJCC **San Jacinto, C** 21.86 103 P **P** **02 33 56.7 -4.0**
comp=Z,34nm,2.4s
V48A **Smith Brothers** 21.87 22 IAmb IAmb 02 34 03.9
comp=Z,96nm,1.3s
WVT **Waverly** 21.87 20 P **P** **02 33 59.7 -0.9**
X18A **Snowflake** 22.17 330 IAmb IAmb 02 34 09.8
comp=Z,75nm,1.4s
UREC **San Jos de Ur** 22.26 108 P **P** **02 34 06.0 +1.0**
comp=Z,786nmcomp=Z,38nm,1.5s
CGM3 **Cape Girardeau** 22.43 15 IAmb IAmb 02 34 08.5
comp=Z,27nm,0.9s
W52A **Murphy** 22.51 29 IAmb IAmb 02 34 10.3
comp=Z,55nm,1.5s
CPCT **Cooper Cave** 22.54 27 IAmb IAmb 02 34 10.2
comp=Z,37nm,0.9s
CBOC **Ciudad Bolivar** 22.62 113 P **P** **02 34 08.4 -0.6**
comp=Z,1µmcomp=Z,45nm,1.6s
R32A **Long Quarter,** 22.70 356 IAmb IAmb 02 34 12.8
comp=Z,70nm,1.1s
CCM **Cathedral Cave** 22.81 11 P **P** **02 34 10.9 +0.2**
CCM IAmb IAmb 02 34 12.8
comp=Z,55nm,1.1s
T47A **Sharon Grove** 22.89 20 IAmb IAmb 02 34 13.5
comp=Z,53nm,1.0s
BG3 **Lake Jocassee** 22.90 30 IAmb IAmb 02 34 14.4
comp=Z,34nm,1.1s
HELC **Santa Helena** 22.90 112 P **P** **02 34 12.3 +0.1**
comp=Z,848nmcomp=Z,20nm,1.5s
S44A **Carbondale** 22.91 16 IAmb IAmb 02 34 13.8
comp=Z,46nm,1.0s
SIUC **Southern Illin** 22.94 16 IAmb IAmb 02 34 14.0
comp=Z,44nm,1.0s
U49A **Red Boiling Sp** 22.94 23 IAmb IAmb 02 34 13.8
comp=Z,33nm,0.8s
TKL **Tuckaleechee C** 23.05 28 P **P** **02 34 12.6 -0.5**
comp=Z,14nm,0.9s,baz=193,slow=10,SNR=16
TKL LR LR 02 45 51.5
comp=Z,1µm,18.3s,baz=33,slow=44
comp=Z,14nm,0.9s
YOTC **Yotoco, Valle** 23.25 118 P **P** **02 34 17.5 +2.0**
comp=Z,18nm,1.6s
SDCO **Great Sand Dun** 23.27 342 IAmb IAmb 02 34 19.8
comp=Z,33nm,1.1s
JAMC **Jamundi, Valle** 23.38 120 P **P** **02 34 17.3 +0.4**
comp=Z,20nm,1.1s
GUY2C **Guyana, Caldas** 23.48 114 P **P** **02 34 19.0 +0.7**
comp=Z,49nm,1.1s
BBAC **Balboa, Cauca** 23.59 123 P **P** **02 34 18.8 -0.2**
comp=Z,741nmcomp=Z,16nm,0.9s
PTBC **PUERTO BERRIO,** 23.72 110 P **P** **02 34 18.8 -1.3**
comp=Z,977nmcomp=Z,23nm,2.2s
CRJC **Cerrejon, Guaj** 23.73 98 P **P** **02 34 17.7 -2.6**
comp=Z,15nm,1.4s
POPC **Popayan, Colom** 23.75 121 P **P** **02 34 19.5 -1.1**
comp=Z,718nmcomp=Z,12nm,1.9s
T50A **Nancy** 23.75 24 IAmb IAmb 02 34 21.3
comp=Z,28nm,1.0s
OTAV **Otavalo** 23.75 129 P **P** **02 34 23.0 +2.1**
OTAV **Otavalo** 23.75 129 P **P** **02 34 21.2 +0.3**
comp=Z,7.4nm,1.2s
NORC **Norcasia** 23.77 113 P **P** **02 34 20.8 +0.2**
comp=Z,775nmcomp=Z,8.7nm,1.2s
GLA **Glamis** 23.77 320 P **P** **02 34 23.4 +2.9**
GLA IAmb IAmb 02 34 24.8
comp=Z,79nm,1.4s
KSCO **Kaye Shedlock'** 23.79 349 IAmb IAmb 02 34 23.9
comp=Z,65nm,1.3s
ESJX **Sierra Juarez** 23.81 316 P **P** **02 34 24.3 +3.3**
ESJX IAmb IAmb 02 34 25.6
comp=Z,65nm,2.0s
TZTN **Tazewell** 23.89 27 IAmb IAmb 02 34 47.0
comp=Z,45nm,1.4s
TULM **Tulcn-Chalpat** 23.95 127 P **P** **02 34 27.3 +4.5**
comp=Z,19nm,1.1s
P38A **Dawn** 24.02 6 IAmb IAmb 02 34 24.3
comp=Z,26nm,0.8s
BLYC **Blythe** 24.06 322 IAmb IAmb 02 34 27.7
comp=Z,42nm,1.5s
ORTC **Ortega, Tolima** 24.23 117 P **P** **02 34 24.5 -0.4**
comp=Z,1µmcomp=Z,51nm,0.9s
WCI **Wyandotte Cave** 24.29 20 P **P** **02 34 24.4 -0.8**
URIC **Uribia, Colomb** 24.43 96 P **P** **02 34 24.7 -2.0**
comp=Z,684nmcomp=Z,26nm,1.4s
SPBC **San Pablo de B** 24.44 112 P **P** **02 34 26.8 -0.1**
comp=Z,792nmcomp=Z,19nm,1.5s
W57A **Gilead** 24.55 35 P **P** **02 34 25.7 -2.0**
W57A IAmb IAmb 02 34 26.8
comp=Z,26nm,1.1s
ROSC **El Rosal** 24.58 114 P **P** **02 34 27.0 -1.6**
comp=Z,3.9nm,0.3s,baz=317,slow=15,SNR=8.9
comp=Z,3.9nm,0.3s
ROSC **El Rosal** 24.58 114 sP 02 34 32.0 +1.4
PRAC **Prado** 24.63 117 P **P** **02 34 30.3 +1.7**
W13A **Hualapai Mount** 24.66 325 IAmb IAmb 02 34 34.4
comp=Z,28nm,1.2s
U54A **Nelsons Funny** 24.66 30 IAmb IAmb 02 34 50.3
comp=Z,24nm,0.6s
IRM **Iron Mountain** 24.72 321 IAmb IAmb 02 34 34.5
comp=Z,44nm,1.3s
PV13 **Radium Mtn., P** 24.76 337 IAmb IAmb 02 34 33.8
comp=Z,29nm,0.9s
S51A **Beattyville** 24.79 26 IAmb IAmb 02 34 30.9
comp=Z,32nm,0.9s
PV05 **Paradox Valley** 24.80 336 IAmb IAmb 02 34 34.0
comp=Z,25nm,1.0s
U15A **North Rim** 24.83 329 IAmb IAmb 02 34 36.4
comp=Z,57nm,1.3s
NEE2 **Needles Airpor** 24.83 323 IAmb IAmb 02 34 35.6
comp=Z,35nm,1.2s
BARC **Barichara** 24.86 109 P **P** **02 34 31.4 +0.5**
comp=Z,1µm,1.2s
CVER **Cruz Verde, Cu** 24.95 114 P **P** **02 34 30.3 -1.7**
comp=Z,2µmcomp=Z,44nm,1.3s
PAMC **Pamplona, Colo** 25.02 107 P **P** **02 34 33.1 +0.5**
comp=Z,224nmcomp=Z,19nm,0.9s
PV14 **Lion Creek, Pa** 25.03 337 IAmb IAmb 02 34 36.9
comp=Z,60nm,1.4s

R50A **Paris** 25.05 24 IAmb IAmb 02 34 32.4
comp=Z,60nm,1.5s
FLOC **Florencia** 25.13 122 P **P** **02 34 35.4 +2.3**
FLOC IAmb IAmb 02 34 44.9
comp=Z,21nm,1.2s
FLOC **Florencia** 25.13 122 P **P** **02 34 34.7 +1.6**
comp=Z,14nm,1.0s
PFO **Pinyon Flats O** 25.16 319 P **P** **02 34 35.8 +2.4**
PV21 **Cone Mtn., Par** 25.17 337 IAmb IAmb 02 34 38.5
comp=Z,49nm,1.3s
CHIC **Chingaza** 25.20 113 P **P** **02 34 35.5 +1.3**
comp=Z,34nm,1.5s
ISCO **Idaho Springs** 25.22 344 IAmb IAmb 02 34 40.0
comp=Z,64nm,1.6s
RUSC **La Rusia** 25.23 110 P **P** **02 34 33.9 -0.6**
RUSC IAmb IAmb 02 34 54.8
comp=Z,46nm,1.1s
RUSC **La Rusia** 25.23 110 P **P** **02 34 32.3 -2.2**
comp=Z,39nm,1.2s
URMC **La Uribe, Meta** 25.30 117 P **P** **02 34 39.9 +5.2**
comp=Z,9.7nm,0.8s
KNB **Kanab** 25.56 329 IAmb IAmb 02 34 43.2
comp=Z,58nm,1.5s
PKCU **Pink Cliffs** 25.65 331 IAmb IAmb 02 34 51.8
comp=Z,20nm,1.1s
V12A **Nelson** 25.65 324 IAmb IAmb 02 34 43.7
comp=Z,23nm,1.2s
MTPC **Mountain Pass** 25.88 323 IAmb IAmb 02 34 47.1
comp=Z,40nm,1.6s
BLA **Blacksburg** 25.89 31 IAmb IAmb 02 34 41.2
comp=Z,68nm,1.6s
SFIN **Lafayette** 26.01 17 IAmb IAmb 02 34 43.0
comp=Z,19nm,0.8s
MTPU **Mount Pierson** 26.07 332 IAmb IAmb 02 35 02.5
comp=Z,14nm,0.8s
SZCU **Shurtz Canyon** 26.14 330 IAmb IAmb 02 34 47.0
comp=Z,61nm,1.9s
O20A **White River** 26.32 340 IAmb IAmb 02 34 47.8
comp=Z,45nm,1.2s
MACC **Macarena, Meta** 26.33 118 P **P** **02 34 40.1 -3.9**
SDV **Santo Domingo** 26.44 102 LR LR 02 46 03.2
comp=Z,897nm,19.0s,baz=6.5,slow=39
SDV **Santo Domingo** 26.44 102 P **P** **02 34 45.4 +0.3**
SDV IAmb IAmb 02 34 57.5
comp=Z,15nm,0.9s
SDV **Santo Domingo** 26.44 102 P **P** **02 34 44.9 -0.2**
comp=Z,18nm,1.0s
L40A **Amona** 26.72 9 IAmb IAmb 02 35 22.3
comp=Z,24nm,1.0s
N47A **Urbana** 26.89 19 IAmb IAmb 02 34 51.1
comp=Z,39nm,1.1s
L42A **Oliver, Polo** 26.93 12 IAmb IAmb 02 35 00.6
comp=Z,19nm,0.7s
CCCA **Chr Cany lake** 26.98 321 IAmb IAmb 02 35 01.4
comp=Z,31nm,1.4s
TPO **Tropico Hills** 27.10 319 P **P** **02 34 53.6 +2.8**
TPO IAmb IAmb 02 34 54.6
comp=Z,24nm,1.4s
RDMU **Red Mountain** 27.16 338 IAmb IAmb 02 34 55.3
comp=Z,85nm,2.0s
ACSO **Alum Creek Sta** 27.26 24 IAmb IAmb 02 34 53.1
comp=Z,61nm,1.3s
TPNV **Topopah Spring** 27.31 324 IAmb IAmb 02 35 06.1
comp=Z,30nm,1.5s
FURC **Furnace Creek,** 27.32 323 IAmb IAmb 02 35 01.6
comp=Z,26nm,1.5s
N49A **Columbus Grove** 27.42 21 IAmb IAmb 02 34 57.7
comp=Z,21nm,1.1s
S11A **Rachel** 27.54 326 IAmb IAmb 02 35 03.3
comp=Z,38nm,1.3s
JFWS **Jewell Farm** 27.71 10 IAmb IAmb 02 35 15.8
comp=Z,21nm,0.6s
SPR3 **Spring Creek 3** 27.85 330 IAmb IAmb 02 35 01.4
comp=Z,35nm,1.7s
ECSD **EROS Data Cent** 27.95 0 IAmb IAmb 02 35 06.5
comp=Z,25nm,1.2s
R11B **Troy Canyon, C** 27.98 327 IAmb IAmb 02 35 03.2
comp=Z,25nm,1.8s
K22A **Casper** 28.13 345 IAmb IAmb 02 35 03.3
comp=Z,50nm,1.3s
VES **Vestal, Richgr** 28.25 319 P **P** **02 35 03.8 +2.8**
VES IAmb IAmb 02 35 07.1
comp=Z,62nm,1.7s
O54A **Avella** 28.29 27 P **P** **02 35 01.2 -0.2**
O54A IAmb IAmb 02 35 02.6
comp=Z,45nm,1.2s
I40A **Norwalk** 28.60 9 IAmb IAmb 02 35 06.5
comp=Z,41nm,1.5s
RSSD **Black Hills** 29.00 349 P **P** **02 35 09.8 +2.0**
BW06 **Boulder Array** 29.11 340 IAmb IAmb 02 35 12.2
comp=Z,30nm,1.8s
PD31 **Pinedale Array** 29.11 340 IAmb IAmb 02 35 12.2
comp=Z,29nm,1.8s
PDAR **Pinedale Array** 29.11 340 P **P** **02 35 10.6 +1.7**
comp=Z,2.3nm,0.7s,baz=133,slow=12,SNR=23
comp=Z,2.3nm,0.7s
PDAR **Pinedale Array** 29.11 340 P **P** **02 35 10.0 +1.1**
HVU **Hansel Valley** 29.42 335 IAmb IAmb 02 35 14.8
comp=Z,16nm,1.2s
NV11 **Mina Array Sit** 29.43 324 IAmb IAmb 02 35 16.5
comp=Z,58nm,1.6s
NVAR **Mina Array Bea** 29.51 324 P **P** **02 35 15.8 +3.4**
comp=Z,6.3nm,1.1s,baz=141,slow=8.6,SNR=36
NVAR LR LR 02 46 17.4
comp=Z,2µm,18.4s,baz=7.5,slow=35
comp=Z,6.3nm,1.1s
NVAR **Mina Array Bea** 29.51 324 P **P** **02 35 15.6 +3.1**
SPMN **Marine on St.** 29.63 6 IAmb IAmb 02 35 25.6
comp=Z,16nm,0.7s
RYN **Ryan** 29.77 324 IAmb IAmb 02 36 02.9
comp=Z,18nm,0.6s
LOHW **Long Hollow** 30.21 340 IAmb IAmb 02 35 22.1
comp=Z,36nm,1.2s
PNTR **Pine Nut** 30.70 324 IAmb IAmb 02 36 12.9
comp=Z,15nm,0.7s
PAHR **Pah Rah Range** 31.00 325 IAmb IAmb 02 35 30.4
comp=Z,37nm,2.0s
YNR **Norris Junctio** 31.22 341 IAmb IAmb 02 35 34.9
comp=Z,15nm,1.3s
YMR **Madison River** 31.27 340 IAmb IAmb 02 35 32.0
comp=Z,32nm,1.2s
YNE **Yellowstone No** 31.28 342 IAmb IAmb 02 35 38.8
comp=Z,11nm,0.7s
YHL **Hebgen Lake** 31.50 340 IAmb IAmb 02 35 35.1
comp=Z,31nm,1.3s
BCYI **Bear Canyon** 31.81 337 IAmb IAmb 02 35 37.0
comp=Z,24nm,1.4s
BOZ **Bozeman (W)** 32.31 340 IAmb IAmb 02 35 41.1
comp=Z,21nm,1.2s
EYMN **Ely** 32.46 7 IAmb IAmb 02 35 40.1
comp=Z,24nm,1.2s
AGMN **Agassiz Nation** 32.52 1 IAmb IAmb 02 35 39.6
comp=Z,14nm,1.1s
WVOR **Wild Horse Val** 32.58 329 IAmb IAmb 02 35 43.2
comp=Z,36nm,1.4s
SADO **Sadowa** 32.61 24 P **P** **02 35 38.3 -1.1**
comp=Z,11nm,1.0s,baz=237,slow=9.6,SNR=6.0
comp=Z,11nm,1.0s
SADO **Sadowa** 32.61 24 IAmb IAmb 02 35 45.8
comp=Z,26nm,1.3s
BUKO **Buck Lake** 33.08 23 IAmb IAmb 02 35 45.9
comp=Z,28nm,1.1s
PLID **Pearl Lake** 33.48 335 IAmb IAmb 02 35 50.6
comp=Z,33nm,1.1s
BMO **Blue Mountains** 33.83 333 IAmb IAmb 02 35 53.1
comp=Z,34nm,1.9s
MSO **Missoula** 34.17 339 IAmb IAmb 02 35 56.4
comp=Z,28nm,1.4s
ULM **Lac du Bonnet** 34.48 1 P **P** **02 35 55.3 -0.3**
comp=Z,4.0nm,0.7s,baz=191,slow=6.4,SNR=3.8
comp=Z,4.0nm,0.7s
ULM **Lac du Bonnet** 34.48 1 IAmb IAmb 02 36 44.2
comp=Z,58nm,1.9s
F10A **Beach Ranch, E** 34.70 335 IAmb IAmb 02 36 00.8
comp=Z,24nm,1.0s
G08A **Pilot Rock** 34.90 332 IAmb IAmb 02 36 02.4
comp=Z,23nm,1.5s
H04A **Detroit Lake** 35.99 329 IAmb IAmb 02 36 12.0
comp=Z,40nm,1.4s
C09A **Chrisman Ranch** 36.60 336 IAmb IAmb 02 36 18.1
comp=Z,33nm,1.4s
LTY **Liberty** 37.17 333 IAmb IAmb 02 36 22.3
comp=Z,22nm,1.3s
B08A **Colville Reser** 37.47 335 IAmb IAmb 02 36 42.4
comp=Z,22nm,1.6s
LPAZ **La Paz** 42.55 137 P **P** **02 37 04.9 +0.3**
comp=Z,1.4nm,0.7s,baz=331,slow=12,SNR=6.8
comp=Z,1.4nm,0.7s

PB16 **IPOC Station P** 43.20 140 P **P** **02 37 11.2 +1.5**
SCHQ **Schefferville** 45.41 24 P **P** **02 37 25.9 -0.6**
comp=Z,9.0nm,1.0s,baz=201,slow=5.2,SNR=4.1
comp=Z,9.0nm,1.0s
SCHQ **Schefferville** 45.41 24 IAmb IAmb 02 37 26.7
comp=Z,922nm,1.9s
TOAD **Toad River Com** 47.94 341 P **P** **02 37 48.0 +1.8**
baz=141
PTLB **Pontes e Lacer** 48.39 128 P **P** **02 37 49.2 -1.0**
YKA **Yellowknife Ar** 48.40 349 P **P** **02 37 50.2 +0.6**
comp=Z,1.6nm,0.8s,baz=165,slow=6.7,SNR=8.5
comp=Z,1.6nm,0.8s
CRAG **Craig** 48.48 333 P **P** **02 37 52.2 +1.9**
baz=130
KOTAN **Kotaneelee Air** 48.60 342 P **P** **02 37 52.6 +1.4**
baz=144
LIRD **Liard River Hi** 48.65 341 P **P** **02 37 53.1 +1.4**
baz=141
WRAK **Wrangell Islan** 48.78 335 P **P** **02 37 54.6 +2.0**
baz=132
U33K **Whale Pass** 48.90 334 P **P** **02 37 55.9 +2.3**
baz=130
DLBC **Dease Lake** 49.27 338 P **P** **02 37 58.4 +1.9**
baz=136
S34M **Telegraph Cree** 49.31 337 P **P** **02 37 58.8 +2.0**
baz=134
WTLY **Watson Lake, Y** 50.08 340 IAmb IAmb 02 38 06.1
comp=Z,29nm,1.3s
WTLY **Watson Lake, Y** 50.08 340 P **P** **02 38 04.6 +2.1**
baz=138
R33M **Jennings River** 50.30 338 P **P** **02 38 06.7 +2.3**
baz=135
Q32M **Nakina River** 50.48 337 P **P** **02 38 07.8 +1.9**
baz=133
WRGLY **Wrigley** 50.99 345 P **P** **02 38 11.4 +2.1**
baz=146
S31K **Pelican** 51.39 334 P **P** **02 38 14.2 +1.8**
baz=128
P32M **Atlin** 51.45 337 P **P** **02 38 14.7 +1.8**
baz=132
P33M **Teslin, Yukon** 51.54 338 P **P** **02 38 15.5 +1.8**
baz=133
SKAG **Skagway** 51.98 336 P **P** **02 38 18.6 +1.8**
baz=130
PLBC **Pleasant Camp** 52.38 336 P **P** **02 38 21.2 +1.4**
baz=129
WHY **Whitehorse** 52.60 338 P **P** **02 38 22.7 +1.1**
baz=131
P30M **Million Dollar** 53.04 336 P **P** **02 38 26.1 +1.3**
baz=129
P29M **Windy Craggy** 53.04 335 P **P** **02 38 26.1 +1.3**
baz=128
O30N **Mendenhall** 53.12 337 P **P** **02 38 26.8 +1.4**
baz=130
M31M **Drury Creek, Y** 53.47 339 P **P** **02 38 29.2 +1.3**
baz=133
N31M **Braeburn, Yuko** 53.48 338 P **P** **02 38 29.4 +1.5**
baz=131
HYT **Haines Junctio** 53.69 337 P **P** **02 38 30.7 +1.1**
baz=128
PNL **Peninsula** 53.74 335 P **P** **02 38 31.3 +1.5**
baz=126
O29M **Mount Kennedy** 53.78 336 P **P** **02 38 31.8 +1.4**
baz=127
N30M **Aishikik Lake** 53.94 337 P **P** **02 38 32.8 +1.4**
baz=129
YUK6 **Outpost Mounta** 54.09 336 P **P** **02 38 33.8 +1.0**
baz=128
PINM **Pinnacle** 54.34 335 P **P** **02 38 36.0 +1.7**
baz=125
YUK4 **Talbot Arm** 54.45 337 P **P** **02 38 36.6 +1.3**
baz=128
M30M **Minto, Yukon** 54.55 339 P **P** **02 38 37.1 +1.3**
baz=130
O28M **Mount Upton** 54.71 336 P **P** **02 38 37.8 +0.6**
baz=126
YUK8 **Steele Glacier** 54.84 336 P **P** **02 38 39.0 +0.8**
baz=126
M29M **Somme Creek** 55.06 338 IAmb IAmb 02 39 00.1
comp=Z,23nm,1.4s
M29M **Somme Creek** 55.06 338 P **P** **02 38 41.1 +1.5**
baz=128
MESA **MESA** 55.08 334 P **P** **02 38 41.0 +1.1**
baz=123
CTG **Chitna Glacier** 55.28 335 P **P** **02 38 42.8 +1.6**
baz=124
L29M **L29M** 55.37 339 IAmb IAmb 02 38 46.3
comp=Z,13nm,1.0s
L29M **L29M** 55.37 339 P **P** **02 38 43.2 +1.5**
baz=129
YUK3 **Moose Creek** 55.40 337 P **P** **02 38 43.2 +1.0**
baz=126
K29M **Barlow Dome** 55.63 339 P **P** **02 38 44.9 +1.2**
baz=130
J30M **Hart River** 55.72 341 P **P** **02 38 44.9 +0.6**
baz=132
CRQE **Cirque** 55.87 335 P **P** **02 38 46.6 +1.2**
baz=122
BVCY **Beaver Creek** 55.93 337 P **P** **02 38 46.7 +0.9**
baz=126
H31M **Peel River** 55.97 342 P **P** **02 38 47.0 +1.1**
baz=134
KAIM **Kayak Island** 56.00 333 P **P** **02 38 47.5 +1.3**
baz=120
I30M **Mount Dempster** 56.17 341 P **P** **02 38 49.0 +1.5**
baz=132
MCARA **McCarthy VSAT** 56.19 335 P **P** **02 38 49.3 +1.8**
baz=123
C36M **Paulatuk** 56.28 349 P **P** **02 38 49.0 +0.9**
baz=148
M27K **Edge Creek, AK** 56.29 337 P **P** **02 38 49.1 +0.6**
baz=125
BMRM **Bremner River** 56.62 334 P **P** **02 38 51.8 +1.1**
baz=121
L27K **Beaver Creek,** 56.67 337 IAmb IAmb 02 39 16.4
comp=Z,43nm,1.9s
L27K **Beaver Creek,** 56.67 337 P **P** **02 38 52.1 +1.1**
baz=125
G31M **Satah River** 56.74 343 P **P** **02 38 52.2 +0.8**
baz=135
M26K **Nabesna, AK** 56.74 336 P **P** **02 38 53.0 +1.4**
baz=123
EYAK **Cordova Ski Ar** 56.88 334 P **P** **02 38 53.8 +1.3**
baz=120
N25K **Chitina, Valde** 56.95 335 P **P** **02 38 53.4 +0.3**
baz=121
F31M **Tsiigehtchic** 56.97 344 IAmb IAmb 02 38 54.5
comp=Z,26nm,1.4s
F31M **Tsiigehtchic** 56.97 344 P **P** **02 38 53.2 +0.2**
baz=136
EPYK **Eagle Plains** 57.06 342 P **P** **02 38 53.9 +0.2**
baz=132
L26K **Log Cabin Wild** 57.23 337 P **P** **02 38 55.9 +1.0**
baz=123
K27K **Chicken** 57.33 338 IAmb IAmb 02 38 59.2
comp=Z,22nm,1.2s
K27K **Chicken** 57.33 338 P **P** **02 38 56.5 +0.9**
baz=125
G30M **tAoh Zraii Nji** 57.33 343 P **P** **02 38 56.1 +0.5**
baz=133
P23K **Montague Islan** 57.34 333 P **P** **02 38 56.4 +0.7**
baz=118
BDFB **Brasilia** 57.36 121 P **P** **02 38 55.8 -0.9**
comp=Z,2.1nm,0.6s,baz=308,slow=9.5
comp=Z,2.1nm,0.6s
KLU **Klutina** 57.43 335 P **P** **02 38 56.8 +0.3**
baz=120
H29M **Whitestone** 57.46 341 IAmb IAmb 02 38 58.3
comp=Z,16nm,1.2s
H29M **Whitestone** 57.46 341 P **P** **02 38 57.5 +1.0**
baz=130
I28M **Miner Creek** 57.46 340 P **P** **02 38 57.5 +0.8**
baz=128
INK **Inuvik** 57.55 345 P **P** **02 38 58.0 +0.9**
INK IAmb IAmb 02 38 58.6
comp=Z,12nm,1.1s
INK **Inuvik** 57.55 345 P **P** **02 38 57.6 +0.5**
baz=137,SNR=9.1
HARP **HAARP** 57.59 336 P **P** **02 38 57.5 0.0**
baz=121
GLI **Glacier Island** 57.62 334 P **P** **02 38 57.5 -0.2**
baz=118
F30M **Barrier River** 57.65 343 P **P** **02 38 56.9 -1.0**
baz=134
G29M **Pine Creek** 57.81 342 P **P** **02 38 58.5 -0.5**
baz=131
DOT **Dot Lake** 57.84 337 IAmb IAmb 02 40 10.4
comp=Z,26nm,1.4s

M24K	Tolsona, Glenn baz=120	57.85	335	P		P	02 38 59.1	-0.3
SCRK	Sand Creek baz=123,SNR=5.1	57.99	338	P		P	02 39 00.1	-0.4
PAX	Paxson baz=121	58.01	336	P		P	02 39 00.7	+0.1
I27K	Kandik River baz=126	58.11	340	P		P	02 39 01.3	+0.1
J26L	Joseph Creek comp=Z,25nm,1.2s	58.13	338	P		P	02 39 03.8	+2.4
J26L				IAmb		IAmb	02 39 04.8	
J26L	Joseph Creek baz=124,SNR=7.7	58.13	338	P		P	02 39 01.6	+0.2
PWL	Port Wells baz=117	58.15	333	P		P	02 39 01.8	+0.3
RIDG	Independent Ri comp=Z,25nm,1.2s	58.18	337	IAmb		IAmb	02 39 04.2	
RIDG	Independent Ri baz=122,SNR=5.8	58.18	337	P		P	02 39 01.6	-0.1
SCM	Sheep Creek Mo baz=119	58.18	334	P		P	02 39 01.3	-0.5
SEW	Seward baz=116	58.30	332	P		P	02 39 02.3	-0.2
M23K	Glacier View baz=118	58.33	334	P		P	02 39 02.1	-0.7
I26K	Coal Creek Min baz=125	58.45	339	P		P	02 39 02.0	-1.4
H27K	Steamboat Moun comp=Z,12nm,1.4s	58.46	340	IAmb		IAmb	02 39 06.5	
H27K	Steamboat Moun baz=127	58.46	340	P		P	02 39 03.1	-0.5
KNK	Knik Glacier baz=117	58.46	334	P		P	02 39 02.6	-1.0
K24K	Donnelly Dome baz=121	58.57	337	P		P	02 39 02.6	-1.8
SML	Sawmill baz=118	58.59	334	P		P	02 39 03.5	-1.1
O22K	Cooper Landing baz=115	58.59	332	P		P	02 39 03.6	-0.9
WAT6	Susitna Watana baz=119,SNR=5.2	58.72	335	P		P	02 39 05.6	0.0
A36M	Sachs Harbour baz=147	58.74	350	P		P	02 39 04.5	-0.9
BRSE	Bradley Lake S baz=114	58.74	331	P		P	02 39 05.6	0.0
E29M	Blow River comp=Z,25nm,1.4s	58.76	343	IAmb		IAmb	02 39 08.3	
E29M	Blow River baz=132	58.76	343	P		P	02 39 05.2	-0.4
DHY	Denali Highway baz=119	58.81	336	P		P	02 39 06.0	-0.2
F28M	Old Crow	58.81	342	P		P	02 39 07.6	+1.6
F28M	Old Crow baz=129,SNR=11	58.81	342	P		P	02 39 05.7	-0.3
PMR	Palmer baz=117	58.83	334	P		P	02 39 05.1	-1.1
J25K	Salcha River, comp=Z,5.8nm,0.5s	58.85	338	IAmb		IAmb	02 41 10.1	
J25K	Salcha River, baz=122	58.85	338	P		P	02 39 05.6	-0.7
G27K	Doyon Strip comp=Z,31nm,2.0s	58.85	341	IAmb		IAmb	02 39 10.3	
G27K	Doyon Strip baz=127	58.85	341	P		P	02 39 05.8	-0.5
KDAK	Kodiak Island baz=111	58.86	329	P		P	02 39 04.8	-1.6
RC01	Rabbit Creek A baz=116	58.86	333	P		P	02 39 05.0	-1.4
OHAK	Old Harbor baz=110	59.01	328	P		P	02 39 07.1	-0.3
Q20K	Shuyak Island baz=112	59.07	330	P		P	02 39 06.9	-1.0
WAT1	Susitna Watana baz=118	59.16	335	P		P	02 39 06.7	-1.8
SII	Sitkinak Islan baz=109	59.25	327	P		P	02 39 07.8	-1.4
HDA	Harding Lake baz=120	59.32	337	P		P	02 39 08.3	-1.2
E28M	Babbage River comp=Z,14nm,1.4s	59.36	343	IAmb		IAmb	02 39 12.1	
E28M	Babbage River baz=130	59.36	343	P		P	02 39 08.6	-1.1
PRP	Porcupine Dome comp=Z,13nm,1.2s	59.39	339	IAmb		IAmb	02 39 12.2	
PRP	Porcupine Dome baz=122,SNR=6.5	59.39	339	P		P	02 39 09.3	-0.9
SUA	Susitna One baz=115	59.47	333	P		P	02 39 10.7	-0.1
ILAR	Eielson Array comp=Z,5.1nm,1.0s,baz=137,slow=4.4,SNR=29 comp=Z,5.1nm,1.0s	59.48	338	P		P	02 39 11.7	+1.0
ILAR	Eielson Array	59.48	338	P		P	02 39 11.9	+1.3
G26K	Porcupine Rive baz=125	59.61	341	P		P	02 39 11.2	-0.3
D28M	Stokes Point baz=131	59.62	344	P		P	02 39 11.3	-0.2
CUT	Chulitna baz=116	59.67	334	P		P	02 39 11.2	-0.8
E27K	Coleen River comp=Z,18nm,1.2s	59.68	342	IAmb		IAmb	02 39 14.1	
E27K	Coleen River baz=128	59.68	342	P		P	02 39 10.9	-1.1
O20K	Slope Mountain baz=112	59.74	331	P		P	02 39 12.3	-0.3
CHIR	Chirikof Islan baz=107	59.78	326	P		P	02 39 12.1	-0.7
Q19K	Cape Douglas, baz=111	59.80	330	P		P	02 39 12.6	-0.4
POKR	Poker Plat Res baz=120	59.86	338	P		P	02 39 12.8	-0.5
P19K	Oil Pt baz=112	59.87	331	P		P	02 39 12.7	-0.7
COLA	College baz=120	59.89	337	P		P	02 39 12.5	-0.9
H25L	Birch Creek baz=122	59.90	339	P		P	02 39 13.1	-0.4
SPU	Mount Spurr comp=Z,9.0nm,1.0s	59.92	333	IAmb		IAmb	02 39 15.8	
N20K	Mount Spurr baz=113	60.00	333	P		P	02 39 12.7	-1.6
SPCR	Spurr Chakacha baz=113	60.00	333	P		P	02 39 13.1	-1.3
SKT	Skwentna baz=114	60.02	334	P		P	02 39 14.7	+0.2
BMAR	Burnt Mountain	60.14	341	P		P	02 39 15.8	+0.6
TRF	Thorofare Moun	60.15	335	P		P	02 39 16.9	+1.4
TRF	Thorofare Moun baz=116	60.15	335	P		P	02 39 15.3	-0.2
F26K	Sheenjek River baz=125	60.16	341	P		P	02 39 16.0	+0.6
D27M	Malcolm River baz=129	60.17	343	P		P	02 39 15.2	-0.2
NEA2	Nenana baz=118	60.21	337	P		P	02 39 15.3	-0.4
G25K	Bearman Lake baz=122	60.27	340	P		P	02 39 15.8	-0.2
Q18K	Katmai Hardscr baz=109	60.36	329	P		P	02 39 16.9	0.0
H24K	Noodor Dome comp=Z,13nm,1.2s	60.39	338	IAmb		IAmb	02 39 19.5	
H24K	Noodor Dome baz=120,SNR=5.3	60.39	338	P		P	02 39 16.8	-0.2
KTH	Kantishna Hill	60.45	335	P		P	02 39 18.2	+0.8
F25K	Christian Rive comp=Z,16nm,1.4s	60.57	341	IAmb		IAmb	02 39 21.2	
F25K	Christian Rive baz=123	60.57	341	P		P	02 39 18.5	+0.3
I23K	Minto, Yukon-K baz=118,SNR=7.6	60.59	337	P		P	02 39 18.8	+0.7
Q17K	Contact Creek baz=108	60.67	329	P		P	02 39 19.0	-0.1
M20K	Styx River baz=113	60.68	333	P		P	02 39 19.4	+0.4
PPLA	Purkeypile baz=114	60.69	334	P		P	02 39 19.4	+0.3
G24K	Hadweenzic Riv baz=121	60.70	339	P		P	02 39 18.8	-0.1
R17L	Mt. Peulik Vol baz=107	60.72	328	P		P	02 39 19.3	0.0
BPAW	Bear Paw Mtn. baz=116	60.72	336	P		P	02 39 19.1	-0.1
P18K	Big Mountain, baz=109	60.72	330	P		P	02 39 20.0	+0.7
E25K	Arctic Village baz=124,SNR=5.1	60.84	341	P		P	02 39 19.9	-0.1
O18K	Koktuh Hills baz=110	60.87	331	P		P	02 39 20.6	+0.3
N19K	Bonanza Creek baz=111	60.87	332	P		P	02 39 20.6	+0.2
H23K	Yukon River baz=118	60.98	338	P		P	02 39 21.1	+0.1
MLY	Manley	61.05	337	P		P	02 39 22.4	+0.9
MLY				IAmb		IAmb	02 39 23.9	
MLY	Manley baz=117,SNR=6.2 comp=Z,24nm,1.4s	61.05	337	P		P	02 39 21.7	+0.2
CHUM	Lake Minchumin baz=115	61.16	335	P		P	02 39 21.8	-0.3
C27K	Jago River comp=Z,17nm,1.4s	61.17	343	IAmb		IAmb	02 39 28.9	
C27K	Jago River baz=126	61.17	343	P		P	02 39 21.6	-0.5
Q16K	King Salmon baz=108	61.19	329	P		P	02 39 22.0	-0.4
PLCA	Paso Flores comp=Z,3.8nm,1.1s,baz=354,slow=6.4,SNR=4.1 comp=Z,3.8nm,1.1s	61.20	157	P		P	02 39 23.4	+0.6
L20K	Farewell, AK baz=112	61.23	334	P		P	02 39 22.2	-0.5
P17K	Kvichak River baz=108	61.24	330	P		P	02 39 21.7	-1.0
F24K	Squaw Lake baz=121	61.26	340	P		P	02 39 21.7	-1.1
N18K	Kilae Creek baz=110	61.47	331	P		P	02 39 23.8	-0.6
L19K	White Mountain baz=111	61.54	333	P		P	02 39 23.4	-1.4
G23K	Bananza Creek comp=Z,10nm,1.2s	61.58	339	IAmb		IAmb	02 39 32.3	
G23K	Bananza Creek baz=118	61.58	339	P		P	02 39 23.9	-1.1
I21K	Tanana baz=116	61.59	337	P		P	02 39 24.9	-0.1
K20K	Telida baz=113	61.66	334	P		P	02 39 25.2	-0.4
C26K	Camden Bay baz=125	61.68	343	P		P	02 39 24.9	-0.6
H22K	Ishtalitna Cre baz=117	61.68	338	P		P	02 39 25.4	-0.2
CHNA	Chernabura Isl baz=103	61.70	324	P		P	02 39 26.7	+0.8
M18K	Stony River baz=110	61.72	332	P		P	02 39 26.3	+0.3
E24K	Your Creek baz=120	61.74	340	P		P	02 39 25.9	-0.2
O17K	Koliganek Bris baz=108	61.74	330	P		P	02 39 25.9	-0.2
D25K	Kavik River comp=Z,12nm,1.1s	61.76	342	IAmb		IAmb	02 39 28.2	
D25K	Kavik River baz=123,SNR=6.1	61.76	342	P		P	02 39 26.3	+0.1
COLD	Coldfoot comp=Z,11nm,1.2s	61.89	339	IAmb		IAmb	02 39 34.7	
COLD	Coldfoot baz=118	61.89	339	P		P	02 39 26.6	-0.4
P16K	Nushagak River baz=107	61.96	329	P		P	02 39 26.6	-1.0
J20K	Nowinta River baz=113	62.01	335	P		P	02 39 27.3	-0.6
N17K	Nushagak Hills baz=108	62.03	331	P		P	02 39 27.8	-0.3
E23K	Chandalar comp=Z,19nm,1.2s	62.10	340	IAmb		IAmb	02 39 35.9	
E23K	Chandalar baz=119,SNR=7.8	62.10	340	P		P	02 39 28.3	-0.3
H21K	Melozitna Rive baz=115	62.10	337	P		P	02 39 28.7	+0.2
O16K	Kokwok River B baz=107	62.17	330	P		P	02 39 28.8	-0.2
G22K	Bettles baz=117	62.20	339	P		P	02 39 29.0	-0.1
SDPT	Sand Point baz=102	62.31	325	P		P	02 39 29.8	-0.2
L18K	Granite Mounta baz=110	62.36	333	P		P	02 39 30.3	0.0
TOLK	Toolik Lake Re baz=120	62.38	341	P		P	02 39 29.7	-0.7
I20K	Naaghedeneel baz=113	62.39	336	P		P	02 39 30.0	-0.4
D24K	Happy Valley baz=121	62.41	341	P		P	02 39 30.6	+0.1
M17K	Holitna River baz=108	62.42	332	P		P	02 39 30.5	-0.2
J19K	Poorman comp=Z,16nm,1.3s	62.54	335	IAmb		IAmb	02 39 41.7	
J19K	Poorman baz=111	62.54	335	P		P	02 39 31.2	-0.3
C24K	Franklin Bluff baz=120	62.67	342	P		P	02 39 31.4	-0.8
F22K	John River baz=116	62.70	339	P		P	02 39 32.3	-0.2
G21K	Allakaket baz=115	62.73	338	P		P	02 39 33.1	+0.4
N16K	Nishlik Lake baz=107	62.76	331	P		P	02 39 33.5	+0.5
J18K	Innoko River baz=105	62.80	334	P		P	02 39 34.0	+0.7
H20K	Anatleneega Mo baz=113	62.82	337	P		P	02 39 33.9	+0.6
E22K	Anaktuvuk Pass baz=117	62.86	340	P		P	02 39 34.5	+0.9
D23K	Nanushuk River comp=Z,15nm,1.2s	62.89	341	IAmb		IAmb	02 39 36.2	
D23K	Nanushuk River baz=119	62.89	341	P		P	02 39 34.1	+0.4
O15K	Ungalikthiuk R baz=105	62.91	329	P		P	02 39 34.6	+0.6
M16K	Timber Creek baz=107	63.01	331	P		P	02 39 35.4	+0.8
F21K	Alatna River baz=115	63.02	339	P		P	02 39 34.4	-0.3
L17K	Donlin baz=108	63.05	332	P		P	02 39 35.3	+0.5
K17K	Iditarod baz=108	63.23	333	P		P	02 39 36.7	+0.7
S12K	Black Hills baz=101	63.27	325	P		P	02 39 37.1	+0.7
C23K	Itkillik River baz=119	63.30	342	P		P	02 39 37.3	+1.0
N15K	Kwethluk River baz=105	63.30	330	P		P	02 39 36.9	+0.3
GCSA	Galena City Sc baz=110	63.32	335	P		P	02 39 37.4	+0.8
H19K	Roundabout Mou baz=111	63.44	336	P		P	02 39 38.0	+0.6
L16K	Owhat River comp=Z,16nm,1.1s	63.45	332	IAmb		IAmb	02 39 41.1	
L16K	Owhat River baz=107	63.45	332	P		P	02 39 38.3	+0.8
D22K	Ayikyak River baz=117	63.49	340	P		P	02 39 37.7	0.0
O14K	Tigyukauivet M baz=104	63.64	329	P		P	02 39 39.7	+0.9
E21K	Killik River baz=115	63.72	340	P		P	02 39 39.8	+0.6
M15K	Kasigluk River baz=105	63.73	330	P		P	02 39 39.2	-0.2
F20K	Avaraart Lake comp=Z,14nm,1.4s	63.75	338	IAmb		IAmb	02 39 42.1	
F20K	Avaraart Lake baz=113	63.75	338	P		P	02 39 40.2	+0.8
J17K	VABM Dome baz=108	63.78	334	P		P	02 39 40.0	+0.3
G19K	Purcell Mounta baz=111	63.91	337	P		P	02 39 40.8	+0.3
N14K	Kuskokwak Cree baz=104	64.01	330	P		P	02 39 41.7	+0.4
C21K	Knifeblade Rid baz=115	64.29	340	P		P	02 39 43.1	+0.1
M14K	Bethel baz=104	64.35	330	P		P	02 39 43.5	+0.1
L15K	Ungalak Mounta baz=105	64.36	331	P		P	02 39 44.1	+0.6
B22K	Teshekpuk Lake baz=116	64.39	342	P		P	02 39 43.7	+0.2
E20K	Nigu River baz=113	64.39	339	P		P	02 39 43.8	+0.1
J16K	Anvik River baz=106	64.41	333	P		P	02 39 44.0	+0.2
F19K	Shaleruckim Mo baz=111	64.42	337	P		P	02 39 44.0	+0.2
G18K	Tagagawik baz=109	64.42	336	P		P	02 39 44.1	+0.2
B21K	Ikpikpuk River baz=115	64.44	341	P		P	02 39 43.3	-0.5
E19K	Redstone River baz=111	64.45	338	P		P	02 39 44.4	+0.4
K15K	Wolf Creek Mou baz=105	64.54	332	P		P	02 39 44.5	-0.2
H17K	Granite Mounta baz=108	64.61	335	P		P	02 39 45.5	+0.4
I17K	Unalakleet baz=106	64.62	334	P		P	02 39 45.2	+0.1
D20K	Etivluk River baz=113	64.72	340	P		P	02 39 46.2	+0.5
L14K	Kuka Creek baz=103	64.83	331	P		P	02 39 46.5	-0.1
M13K	Dall Lake baz=102	64.94	330	P		P	02 39 47.4	+0.2
F18K	Selawik baz=109	65.04	337	P		P	02 39 47.6	-0.2
G17K	Kiwalik Mounta baz=107	65.08	336	P		P	02 39 47.7	-0.4
D19K	Kuna River baz=111	65.14	339	P		P	02 39 48.0	-0.5
B20K	Meade River baz=113	65.40	341	P		P	02 39 50.2	+0.1
H16K	Elim baz=105	65.48	334	P		P	02 39 50.9	+0.2
UNV	Unalaska Valle baz=96	65.51	322	P		P	02 39 52.1	+1.0
J14K	Nanvaranak Lak baz=103	65.56	332	P		P	02 39 51.9	+0.6
F17K	Baldwin Pennin baz=107	65.60	337	P		P	02 39 51.1	-0.3
E18K	Tukpahlearik C baz=108	65.66	338	P		P	02 39 51.9	+0.1
G16K	Koyuk River baz=106	65.73	335	P		P	02 39 52.1	-0.2
C19K	Lookout Ridge baz=110	65.86	340	P		P	02 39 53.2	0.0
K13K	Kusilvak Mount baz=102	65.88	331	P		P	02 39 53.0	-0.3
E17K	Hotham Inlet baz=107	66.01	337	P		P	02 39 53.6	-0.5
C18K	Utukok River baz=108	66.26	339	P		P	02 39 55.0	-0.8
G15K	Niukluk baz=104	66.31	335	P		P	02 39 55.5	-0.7
M11K	Mekoryuk baz=100	66.32	329	P		P	02 39 55.8	-0.4
D17K	Noatak River baz=106	66.65	338	P		P	02 39 57.8	-0.5
RDOG	Red Dog Mine baz=106	66.69	338	P		P	02 39 58.2	-0.3
B18K	Kokolik River baz=108	66.69	340	P		P	02 39 58.1	-0.3
F15K	North Star Dit baz=104	66.73	335	P		P	02 39 58.0	-0.8
ANM	Nome baz=102	66.77	334	P		P	02 39 59.1	0.0
NIKH	Nikolski High baz=94	66.82	321	P		P	02 39 59.9	+0.3
C17K	DeLong Mountai baz=106	66.90	338	P		P	02 39 59.8	-0.1
F14K	Arctic Creek baz=102	67.36	335	P		P	02 40 03.1	+0.3
P08K	Saint George I baz=95	67.54	325	P		P	02 40 04.2	+0.1
C16K	Lisburne Hills baz=104	67.62	338	P		P	02 40 04.2	-0.2
SPIA	Saint Paul Isl baz=95	67.98	326	P		P	02 40 06.9	+0.1
TNA	Tin City baz=100	68.03	335	P		P	02 40 06.4	-0.6
DAG	Danmarks Havn	72.11	14	*i* P		P	02 40 31.0	-0.9
EKA	Eskdalemuir Ar comp=Z,1.1nm,0.6s,baz=300,slow=3.4,SNR=4.8 comp=Z,1.1nm,0.6s	79.31	35	P		P	02 41 13.1	-0.3
ESDC	Sonseca Array comp=Z,2.2nm,0.9s,baz=288,slow=4.8,SNR=9.0 comp=Z,2.2nm,0.9s	82.30	51	P		P	02 41 30.1	+0.2
ESDC	Sonseca Array	82.30	51	P		P	02 41 29.6	-0.3
NOA	NORSAR Array B comp=Z,1.8nm,1.1s,baz=301,slow=5.0,SNR=3.3	84.85	28	P		P	02 41 43.2	+0.6
NOA				LR		LR	03 21 58.8	
ARCES	comp=Z,135nm,19.1s,baz=180,slow=38 comp=Z,1.8nm,1.1s ARCESS Array B comp=Z,4.7nm,1.1s,baz=303,slow=6.1,SNR=3.7 comp=Z,4.7nm,1.1s	85.96	17	P		P	02 41 47.8	0.0
GERES	GERESS Array B comp=Z,0.1nm,0.3s,baz=88,slow=2.3,SNR=3.5 comp=Z,0.1nm,0.3s	91.21	38	P		P	02 42 13.5	+0.1
TORD	Torodi Ar. Bea comp=Z,1.5nm,0.3s,baz=270,slow=5.8,SNR=1.2 comp=Z,2.5nm,0.3s	94.47	75	P		P	02 42 27.1	-1.8
HHC	Hu-ho-hao-te	117.89	336	*e*P		PKiKP	02 47 55.5	+0.4
STKA	Stephens Creek comp=Z,1.3nm,0.9s,baz=90,slow=4.0,SNR=3.6	124.79	242	PKP		PKPdf	02 48 08.3	-0.1
LZH	Lanzhou	124.92	340	*e*PKP		PKPdf	02 48 00.3	-8.5
LZH				sPKP		sPKPdf	02 48 14.3	+3.4
BOSA	Boshof comp=Z,1.9nm,0.8s,baz=221,slow=3.4,SNR=3.6	125.28	114	PKP		PKPdf	02 48 09.1	-0.5
WRA	Warramunga Arr comp=Z,0.9nm,0.7s,baz=84,slow=2.2,SNR=6.9	131.27	257	PKP		PKPdf	02 48 21.4	+0.3
ASAR	Alice Springs comp=Z,0.4nm,0.6s,baz=95,slow=2.3,SNR=6.5	131.80	252	PKP		PKiKP	02 48 22.5	-0.5
PZH	PanZhiHua	134.34	337	PKP		PKPdf	02 48 27.3	+0.4

AEIC **24** *02:32:59.7*±*0.9, 51°.31N*±*0°.05*×*175°.51W*±*0°.04, h26*^{km}*±7km, Error ellipse: s-maj=7.7km s-min=3.2km az=163.0*

NEIC 24 02:32:58.6±1.1,**51°.27N**±0°.04×**175°.55W**±0°.03,**h10**^{km}±1km, **ML3.7**(AEIC),**Error ellipse: s-maj=6.7km s-min=3.6km az=349.0,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.75	342			Pb	02 33 13.5	-0.3
GSIG						Sg	02 33 22.8	-0.2
ETKA	Kagalaska Isla	0.80	318			Pg	02 33 14.1	+0.1
ETKA						Sg	02 33 24.5	+0.1
GSCK	Great Sitkin C	0.83	333			Pb	02 33 15.2	0.0
GSMY	Great Sitkin M	0.83	338			Pg	02 33 14.8	+0.1
GSMY						Sg	02 33 25.1	-0.5
GSTD	Great Sitkin T	0.87	335			Pg	02 33 15.4	0.0
GSTD						Sg	02 33 26.2	-0.5
GSTR	Great Sitkin T	0.88	339			Pg	02 33 15.7	+0.1
GSTR						Sg	02 33 27.0	-0.1
GSSP	Great Sitkin S	0.91	335			Pg	02 33 16.1	0.0
ADK	Adak	0.94	311			Pg	02 33 15.8	-0.8
ADK						Sg	02 33 27.7	-1.1
ADAG	Mount Adagdak	0.97	318			Pg	02 33 17.1	0.0
KIRH	Kanaga Island	1.15	304			Pb	02 33 19.7	-0.9
KIRH						Sb	02 33 34.0	-1.5
KIWB	Kanaga Island	1.16	301			Pb	02 33 19.6	-1.0
KIWB	Kanaga Island	1.16	301			Sb	02 33 34.3	-1.4
KIMD	Kanaga Island	1.16	296			Pb	02 33 19.5	-1.3
KIMD						Sb	02 33 32.4	-3.4
KIKV	Kanaga Island	1.18	302			Sb	02 33 34.5	-1.9
KINC	Kanaga Island	1.19	305			Pb	02 33 20.1	-1.1
ATKA	Atka Island	1.26	42			Pn	02 33 20.2	-2.0
ATKA	Atka Island	1.26	42			Sb	02 33 34.6	-4.0
KOKL	Mount Kliuchef	1.35	38			Pn	02 33 21.9	-1.7
KOFP	Korovin Flat P	1.35	41			Pn	02 33 22.0	-1.6
KOFP						Sb	02 33 41.5	+0.1
KOWE	Korovin West	1.36	36			Pn	02 33 22.2	-1.5
TAPA	Tanaga Point A	1.51	292			Pn	02 33 25.1	-0.7
TASE	Tanaga Southea	1.65	291			Pn	02 33 27.0	-0.7
GAKI	Gareloi-Kavalg	2.06	279			Pn	02 33 33.5	+0.2
GALAA	Gareloi Lava P	2.07	285			Pn	02 33 33.3	-0.1
GANE	Gareloi Northe	2.09	286			Pn	02 33 33.7	+0.1
GANO	Gareloi North	2.10	286			Pn	02 33 34.0	+0.2
CESW	Semis' Southwe	3.11	284			Pn	02 33 47.8	+0.1
AMKA	Amchitka	3.23	274			Pn	02 33 49.5	+0.2
LSSE	Little Sitkin	3.73	283			Pn	02 33 56.4	+0.3
LSNW	Little Sitkin	3.76	283			Pn	02 33 57.0	+0.3
NIKH	Nikolski High	4.46	65	Pn		Pn	02 34 06.5	+0.2
UNV	Unalaska Valle	6.09	61	Pn		Pn	02 34 30.1	+1.5

NEIC **24** *02:33:03.1*±*2.2, 15°.26N*±*0°.05*×*96°.91W*±*0°.03, h10*^{km}±*2km, mb4.8/137, Md4.9/155(MEX), Error ellipse: s-maj=9.2km s-min=4.2km az=199.0*

IDC **24** *02:33:11.0*±*1.1, 15°.76N*×*96°.63W, h0*^{km}*, mb4.4/9, mbtmp4.4/11, ML4.0/2, Error ellipse: s-maj=21.3km s-min=14.2km az=8.0*

MEX **24** *02:33:11.6*±*1.0, 15°.49N*×*96°.85W, h16*^{km}±*12*^{km}*, MD4.9*

ISC 24 02:33:08.2±1.3,**15°.43N**±0°.04×**96°.84W**±0°.02,**h6**^{km}±8^{km}, **n255,**σ**2**^{s}**89**/265,**mb4.8**/56,**Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.64**	**333**		**Pg**	**02 33 20.4**	**-0.1**
PEIG					**Sg**	**02 33 28.2**	**-0.7**
PEIG	**Puerto Escondi**	**0.64**	**333**	*eP*	**Pg**	**02 33 20.4**	**-0.1**
PEIG				*eS*	**Sg**	**02 33 28.2**	**-0.7**
HUIG	**Huatulco**	**0.78**	**64**		**Pg**	**02 33 24.0**	**+0.7**
HUIG					**Sg**	**02 33 33.1**	**-0.3**
HUIG	**Huatulco**	**0.78**	**64**	*eP*	**Pg**	**02 33 24.0**	**+0.7**
HUIG				*eS*	**Sg**	**02 33 33.1**	**-0.3**
PNIG	**Pinotepa**	**1.57**	**308**		**Pn**	**02 33 36.1**	**-0.5**
PNIG					**Sn**	**02 33 53.3**	**-3.9**
PNIG	**Pinotepa**	**1.57**	**308**	*eP*	**Pn**	**02 33 36.1**	**-0.5**
PNIG				*eS*	**Sn**	**02 33 53.3**	**-3.9**
YOIG	**Yosondua**	**1.58**	**335**		**Pn**	**02 33 35.7**	**-1.2**
YOIG					**Sn**	**02 33 52.5**	**-5.3**
YOIG	**Yosondua**	**1.58**	**335**	*eP*	**Pn**	**02 33 35.7**	**-1.2**
YOIG				*eS*	**Sn**	**02 33 52.5**	**-5.3**
OXLC	**Oaxaca**	**1.64**	**5**		**Pn**	**02 33 36.9**	**-0.8**
OXLC					**Sn**	**02 33 56.8**	**-2.4**
OXLC	**Oaxaca**	**1.64**	**5**	*eP*	**Pn**	**02 33 36.9**	**-0.8**
OXLC				*eS*	**Sn**	**02 33 56.8**	**-2.4**
OXBJ	**Oaxaca**	**1.64**	**4**		**Pn**	**02 33 38.5**	**+0.8**
OXBJ					**Sn**	**02 33 58.1**	**-1.1**
OXBJ	**Oaxaca**	**1.64**	**4**	*eP*	**Pn**	**02 33 38.5**	**+0.8**
OXBJ				*eS*	**Sn**	**02 33 58.1**	**-1.1**
VHO	**Vista Hermosa**	**1.64**	**4**	*eP*	**Pn**	**02 33 36.3**	**-1.4**
VHO				*eS*	**Sn**	**02 33 53.7**	**-5.5**
OXIG	**Oaxaca**	**1.64**	**4**		**Pn**	**02 33 36.3**	**-1.4**
OXIG					**Sn**	**02 33 53.7**	**-5.6**
TXIG	**Tlaxiaco**	**2.02**	**334**		**Pn**	**02 33 42.0**	**-1.1**
TXIG					**Sn**	**02 34 03.4**	**-5.5**
TXIG	**Tlaxiaco**	**2.02**	**334**	*eP*	**Pn**	**02 33 42.0**	**-1.1**
TXIG				*eS*	**Sn**	**02 34 03.4**	**-5.5**
NEUV	**Arroyo Zacate**	**2.48**	**23**		**Pn**	**02 33 47.2**	**-1.9**
NEUV					**Sn**	**02 34 15.5**	**-4.3**
NEUV	**Arroyo Zacate**	**2.48**	**23**	*eP*	**Pn**	**02 33 47.2**	**-1.9**
NEUV				*eS*	**Sn**	**02 34 15.5**	**-4.3**
MGIG	**Malinaltepec**	**2.49**	**316**		**Pn**	**02 33 47.7**	**-1.7**
MGIG					**Sn**	**02 34 16.9**	**-3.3**
MGIG	**Malinaltepec**	**2.49**	**316**	*eP*	**Pn**	**02 33 47.7**	**-1.7**
MGIG				*eS*	**Sn**	**02 34 16.9**	**-3.3**
CMIG	**Matias Romero**	**2.50**	**48**	Pn	**Pn**	**02 33 47.3**	**-2.1**
	58nm,0.3s,baz=222,slow=13,SNR=12						
CMIG				Lg	Lg	02 34 18.3	
	251nm,0.3s,baz=347,slow=16,SNR=5.7 168nm,0.4s						
CMIG	**Matias Romero**	**2.50**	**48**		**Pn**	**02 33 47.6**	**-1.9**
CMIG					**Sn**	**02 34 15.1**	**-5.3**
CRIG	**Cruz Grande**	**2.56**	**301**		**Pn**	**02 33 49.8**	**-0.4**
CRIG					**Sn**	**02 34 16.1**	**-5.6**
CRIG	**Cruz Grande**	**2.56**	**301**	*eP*	**Pn**	**02 33 49.8**	**-0.4**
CRIG				*eS*	**Sn**	**02 34 16.1**	**-5.6**
TOIG	**Toxpalan**	**2.67**	**355**		Pn	02 33 47.4	-4.3
TOIG					**Sn**	**02 34 21.1**	**-3.4**
TOIG	**Toxpalan**	**2.67**	**355**	*eP*	Pn	02 33 47.4	-4.3
TOIG				*eS*	**Sn**	**02 34 21.1**	**-3.4**
TLIG	**Tlapa**	**2.69**	**322**		**Sn**	**02 34 21.9**	**-3.3**
TLIG	**Tlapa**	**2.69**	**322**		**Sn**	**02 34 27.8**	**+2.6**
TLIG	**Tlapa**	**2.69**	**322**	Pn	Pn	02 33 47.1	-5.0
TLIG	**Tlapa**	**2.69**	**322**	*eP*	**Pn**	**02 33 49.7**	**-2.5**
TLIG				*eS*	**Sn**	**02 34 21.9**	**-3.3**
FTIG	**Fresnillo de T**	**2.76**	**334**		Pn	02 33 49.4	-3.8
FTIG					**Sn**	**02 34 21.1**	**-5.8**
FTIG	**Fresnillo de T**	**2.76**	**334**	*eP*	Pn	02 33 49.4	-3.8
FTIG				*eS*	**Sn**	**02 34 21.1**	**-5.8**
HMTT	**Tlapaneco**	**2.88**	**325**		**Pn**	**02 33 52.9**	**-1.8**
HMTT					**Sn**	**02 34 30.2**	**+0.5**
HMTT	**Tlapaneco**	**2.88**	**325**	*eP*	**Pn**	**02 33 52.9**	**-1.8**
HMTT				*eS*	**Sn**	**02 34 30.2**	**+0.5**
TPIG	**Tehuac#an**	**3.02**	**351**		Pn	02 33 52.7	-4.0
TPIG					**Sn**	**02 34 30.5**	**-2.8**
TPIG	**Tehuac#an**	**3.02**	**351**	*eP*	Pn	02 33 52.7	-4.0
TPIG				*eS*	**Sn**	**02 34 30.5**	**-2.8**
DAIG	**Los Arroyos**	**3.13**	**301**		**Pn**	**02 33 57.4**	**-0.7**
DAIG					**Sn**	**02 34 34.1**	**-1.7**
DAIG	**Los Arroyos**	**3.13**	**301**	*eP*	**Pn**	**02 33 57.4**	**-0.7**
DAIG				*eS*	**Sn**	**02 34 34.1**	**-1.7**
UXUV	**UXUV**	**3.20**	**54**		**Pn**	**02 33 58.4**	**-0.6**
UXUV					**Sn**	**02 34 34.1**	**-3.4**
UXUV	**UXUV**	**3.20**	**54**	*eP*	**Pn**	**02 33 58.4**	**-0.6**
UXUV				*eS*	**Sn**	**02 34 34.1**	**-3.4**
VNTA	**La Mica**	**3.22**	**298**		**Sn**	**02 34 39.4**	**+1.4**
VNTA	**La Mica**	**3.22**	**298**	*eP*	**Pn**	**02 34 03.1**	**+3.8**
VNTA				*eS*	**Sn**	**02 34 39.4**	**+1.4**
MIHL	**Minatitlan**	**3.37**	**40**		**Pn**	**02 33 59.0**	**-2.3**
MIHL					**Sn**	**02 34 37.9**	**-3.7**
MIHL	**Minatitlan**	**3.37**	**40**	*eP*	**Pn**	**02 33 59.0**	**-2.3**
MIHL				*eS*	**Sn**	**02 34 37.9**	**-3.7**
TUIG	**Tuzandepetl**	**3.48**	**41**		**Pn**	**02 33 59.9**	**-3.0**
TUIG					**Sn**	**02 34 43.8**	**-0.5**
TUIG	**Tuzandepetl**	**3.48**	**41**	*eP*	**Pn**	**02 33 59.9**	**-3.0**
TUIG				*eS*	**Sn**	**02 34 43.8**	**-0.5**
MEIG	**Mezcala**	**3.64**	**313**		**Pn**	**02 34 07.7**	**+2.5**
MEIG					**Sn**	**02 34 42.8**	**-5.8**
MEIG	**Mezcala**	**3.64**	**313**	*eP*	**Pn**	**02 34 07.7**	**+2.5**
MEIG				*eS*	**Sn**	**02 34 42.8**	**-5.8**
CAIG	**El Cayaco**	**3.67**	**297**		**Pn**	**02 34 05.2**	**-0.2**
CAIG					**Sn**	**02 34 44.1**	**-4.9**
CAIG	**El Cayaco**	**3.67**	**297**	*eP*	**Pn**	**02 34 05.2**	**-0.2**
CAIG				*eS*	**Sn**	**02 34 44.1**	**-4.9**
PPAX	**Atlixo**	**3.79**	**337**	*eP*	**Pn**	**02 34 06.1**	**-1.2**
PPAX				*eS*	**Sn**	**02 34 49.6**	**-2.8**
PHPU	**Puebla**	**3.82**	**341**		**Pn**	**02 34 05.4**	**-2.3**
PHPU					**Sn**	**02 34 48.0**	**-5.0**
PHPU	**Puebla**	**3.82**	**341**	*eP*	**Pn**	**02 34 05.4**	**-2.3**
PHPU				*eS*	**Sn**	**02 34 48.0**	**-5.0**
TGIG		**3.82**	**69**		Pn	02 34 02.0	-5.6
TGIG					**Sn**	**02 34 53.4**	**+0.6**
TGIG		**3.82**	**69**	*eP*	Pn	02 34 02.0	-5.6
TGIG				*eS*	**Sn**	**02 34 53.4**	**+0.6**
TGBT	**Tuxtla Gutierr**	**3.85**	**69**		**Sn**	**02 34 54.7**	**+1.3**
TGBT	**Tuxtla Gutierr**	**3.85**	**69**	*eS*	**Sn**	**02 34 54.7**	**+1.3**
PPCL	**Tochimilco**	**3.86**	**334**	*eP*	**Pn**	**02 34 09.2**	**+1.4**
PPCL				*eS*	**Sn**	**02 34 52.2**	**-2.0**
ATYC	**Atoyac**	**3.88**	**298**		**Sn**	**02 34 49.9**	**-4.3**
ATYC	**Atoyac**	**3.88**	**298**	*eS*	**Sn**	**02 34 49.9**	**-4.3**
PBCV	**Popocatepetl**	**3.90**	**335**	*eP*	**Pn**	**02 34 08.1**	**-0.9**
PPPT	**Popocatepetl**	**3.92**	**334**	*eP*	**Pn**	**02 34 09.5**	**+0.1**
PPPT				*eS*	**Sn**	**02 34 53.4**	**-2.6**
PPCU	**Popocatepetl**	**3.94**	**335**	*eP*	**Pn**	**02 34 09.5**	**-0.2**
PPCU				*eS*	**Sn**	**02 34 56.0**	**-0.5**
PBXN	**Popocatepetl**	**3.96**	**334**	*eP*	**Pn**	**02 34 11.4**	**+1.4**
PBXN				*eS*	**Sn**	**02 34 55.0**	**-2.1**
PPSX	**Xalitzintla**	**3.97**	**337**	*eP*	**Pn**	**02 34 10.8**	**+0.8**
PPSX				*eS*	**Sn**	**02 34 57.9**	**+0.8**
PPM	**Popocatepetl**	**4.00**	**335**	*eP*	**Pn**	**02 34 13.7**	**+3.2**
PPM				*eS*	**Sn**	**02 34 57.9**	**-0.2**
PPIG	**Popocatepetl**	**4.00**	**335**		**Pn**	**02 34 13.7**	**+3.1**
PPIG					**Sn**	**02 34 57.9**	**-0.2**
YAIG	**Yautepec**	**4.03**	**328**		**Pn**	**02 34 08.6**	**-2.0**
YAIG					**Sn**	**02 34 55.5**	**-2.3**
YAIG	**Yautepec**	**4.03**	**328**	*eP*	**Pn**	**02 34 08.6**	**-2.0**
YAIG				*eS*	**Sn**	**02 34 55.9**	**-2.3**
MPVM	**San Francisco**	**4.29**	**331**		**Pn**	**02 34 16.1**	**+1.9**
MPVM					**Sn**	**02 35 04.2**	**-0.5**
MPVM	**San Francisco**	**4.29**	**331**	*eP*	**Pn**	**02 34 16.1**	**+1.9**
MPVM				*eS*	**Sn**	**02 35 04.2**	**-0.5**
LVIG	**Laguna Verde**	**4.29**	**5**		**Pn**	**02 34 12.3**	**-1.7**
LVIG					**Sn**	**02 34 59.0**	**-5.4**
LVIG	**Laguna Verde**	**4.29**	**5**	*eP*	**Pn**	**02 34 12.3**	**-1.7**
LVIG				*eS*	**Sn**	**02 34 59.0**	**-5.4**
MAVM	**Malinalco, Edo**	**4.33**	**325**		**Pn**	**02 34 16.0**	**+1.2**
MAVM					**Sn**	**02 35 02.7**	**-3.1**
MAVM	**Malinalco, Edo**	**4.33**	**325**	*eP*	**Pn**	**02 34 16.0**	**+1.2**
MAVM				*eS*	**Sn**	**02 35 02.7**	**-3.1**
TLVM	**San Miguel Top**	**4.37**	**330**		**Pn**	**02 34 14.8**	**-0.5**
TLVM					**Sn**	**02 35 01.0**	**-5.7**
TLVM	**San Miguel Top**	**4.37**	**330**	*eP*	**Pn**	**02 34 14.8**	**-0.5**
TLVM				*eS*	**Sn**	**02 35 01.0**	**-5.7**
THVM	**De Xico**	**4.37**	**333**		**Pn**	**02 34 16.1**	**+0.8**
THVM					**Sn**	**02 35 04.2**	**-2.5**
THVM	**De Xico**	**4.37**	**333**	*eP*	**Pn**	**02 34 16.1**	**+0.8**
THVM				*eS*	**Sn**	**02 35 04.2**	**-2.5**
MZVM		**4.38**	**329**		**Sn**	**02 35 05.8**	**-0.9**
MZVM		**4.38**	**329**	*eP*	Pn	02 34 20.8	+5.6
MZVM				*eS*	**Sn**	**02 35 05.8**	**-0.9**
XCVM	**Xochimilco**	**4.38**	**331**		**Pn**	**02 34 17.1**	**+1.6**
XCVM					**Sn**	**02 35 05.2**	**-1.9**
XCVM	**Xochimilco**	**4.38**	**331**	*eP*	**Pn**	**02 34 17.1**	**+1.6**
XCVM				*eS*	**Sn**	**02 35 05.2**	**-1.9**
ARIG	**Puente Sto Nin**	**4.40**	**311**		Pn	02 34 11.6	-3.9
ARIG					**Sn**	**02 35 03.3**	**-3.8**
ARIG	**Puente Sto Nin**	**4.40**	**311**	*eP*	Pn	02 34 11.6	-3.9
ARIG				*eS*	**Sn**	**02 35 03.3**	**-3.8**
TXVM	**Universitario**	**4.45**	**334**		**Pn**	**02 34 16.8**	**+0.3**
TXVM	**Universitario**	**4.45**	**334**	*eP*	**Pn**	**02 34 16.8**	**+0.3**
CNCY	**Coyoacan**	**4.46**	**330**	*eP*	**Pn**	**02 34 16.4**	**-0.3**
CNCY				*eS*	**Sn**	**02 35 13.6**	**+4.4**
UNM	**Universidad Na**	**4.48**	**330**	*eP*	**Pn**	**02 34 17.6**	**+0.8**
UNM				*eS*	**Sn**	**02 35 08.9**	**-0.6**
CUP5	**Mexico City**	**4.48**	**330**		**Sn**	**02 35 08.8**	**-0.7**
CUP5	**Mexico City**	**4.48**	**330**	*eS*	**Sn**	**02 35 08.8**	**-0.7**
COVM	**Coyoacan**	**4.49**	**331**	*eP*	**Pn**	**02 34 18.5**	**+1.5**
COVM				*eP*	Pb	02 34 23.1	-4.5
AOVM	**Tlapan**	**4.50**	**329**		**Pn**	**02 34 19.2**	**+1.9**
AOVM					**Sn**	**02 35 06.2**	**-3.9**
AOVM	**Tlapan**	**4.50**	**329**	*eP*	**Pn**	**02 34 19.2**	**+1.9**
AOVM				*eS*	**Sn**	**02 35 06.2**	**-3.9**
BJVM	**Benito Juarez**	**4.51**	**331**		**Pn**	**02 34 19.7**	**+2.4**
BJVM					**Sn**	**02 35 12.2**	**+1.9**
BJVM	**Benito Juarez**	**4.51**	**331**	*eP*	**Pn**	**02 34 19.7**	**+2.4**
BJVM				*eS*	**Sn**	**02 35 12.2**	**+1.9**
VRVM	**Mexico City**	**4.53**	**332**		**Sn**	**02 35 06.9**	**-3.7**
VRVM	**Mexico City**	**4.53**	**332**	*eS*	**Sn**	**02 35 06.9**	**-3.7**
PBVM	**Pinon**	**4.53**	**332**		Pn	02 34 12.1	-5.2
PBVM					**Sn**	**02 35 08.4**	**-1.9**
PBVM	**Pinon**	**4.53**	**332**	*eP*	Pn	02 34 12.1	-5.2
PBVM				*eS*	**Sn**	**02 35 08.4**	**-1.9**
INVM	**La Marquesa**	**4.55**	**328**		**Pn**	**02 34 20.0**	**+2.1**
INVM					**Sn**	**02 35 04.8**	**-6.5**
INVM	**La Marquesa**	**4.55**	**328**	*eP*	**Pn**	**02 34 20.0**	**+2.1**
INVM				*eS*	**Sn**	**02 35 04.8**	**-6.5**
MHVM	**Bosque de Chap**	**4.56**	**331**		**Pn**	**02 34 17.0**	**-1.0**
MHVM					**Sn**	**02 35 11.2**	**-0.2**
MHVM	**Bosque de Chap**	**4.56**	**331**	*eP*	**Pn**	**02 34 17.0**	**-1.0**
MHVM				*eS*	**Sn**	**02 35 11.2**	**-0.2**
CTVM	**Cuauhtemoc**	**4.57**	**331**		**Pn**	**02 34 20.4**	**+2.3**
CTVM					**Sn**	**02 35 15.6**	**+3.8**
CTVM	**Cuauhtemoc**	**4.57**	**331**	*eP*	**Pn**	**02 34 20.4**	**+2.3**
CTVM				*eS*	**Sn**	**02 35 15.6**	**+3.8**
CCIG	**Comitan**	**4.61**	**79**		**Sn**	**02 35 13.2**	**+0.8**
CCIG	**Comitan**	**4.61**	**79**	Pn	Pn	02 34 15.5	-3.0
CCIG	**Comitan**	**4.61**	**79**	*eP*	**Pn**	**02 34 18.9**	**+0.3**
CCIG				*eS*	**Sn**	**02 35 13.2**	**+0.8**
APVM	**Azcapotzalco**	**4.63**	**331**		**Pn**	**02 34 22.2**	**+3.3**
APVM					**Sn**	**02 35 06.2**	**-6.9**
APVM	**Azcapotzalco**	**4.63**	**331**	*eP*	**Pn**	**02 34 22.2**	**+3.3**
APVM				*eS*	**Sn**	**02 35 06.2**	**-6.9**
PTVM	**Pico Tres Padr**	**4.68**	**333**		Pn	02 34 15.7	-3.9
PTVM					**Sn**	**02 35 07.9**	**-6.4**
PTVM	**Pico Tres Padr**	**4.68**	**333**	*eP*	Pn	02 34 15.7	-3.9
PTVM				*eS*	**Sn**	**02 35 07.9**	**-6.4**
TOVM	**TOLUCA**	**4.70**	**325**		Pn	02 34 15.7	-4.3
TOVM					**Sn**	**02 35 10.9**	**-4.0**
TOVM	**TOLUCA**	**4.70**	**325**	*eP*	Pn	02 34 15.7	-4.3
TOVM				*eS*	**Sn**	**02 35 10.9**	**-4.0**
VTVM	**Tizayuca**	**4.70**	**337**		**Pn**	**02 34 19.9**	**0.0**
VTVM					**Sn**	**02 35 14.6**	**-0.3**
VTVM	**Tizayuca**	**4.70**	**337**	*eP*	**Pn**	**02 34 19.9**	**0.0**
VTVM				*eS*	**Sn**	**02 35 14.6**	**-0.3**
ZUVM	**ZUMPANGO**	**4.87**	**334**		**Pn**	**02 34 21.2**	**-1.1**
ZUVM	**ZUMPANGO**	**4.87**	**334**	*eP*	**Pn**	**02 34 21.2**	**-1.1**
ZIIG	**Zihuatanejo**	**4.94**	**297**		**Pn**	**02 34 21.8**	**-1.1**
ZIIG					**Sn**	**02 35 16.4**	**-4.0**
ZIIG	**Zihuatanejo**	**4.94**	**297**	*eP*	**Pn**	**02 34 21.8**	**-1.1**
ZIIG				*eS*	**Sn**	**02 35 16.4**	**-4.0**
ATVM	**ATLACOMULCO**	**5.18**	**327**		**Sn**	**02 35 27.1**	**+0.4**
ATVM	**ATLACOMULCO**	**5.18**	**327**	*eP*	Pn	02 34 34.5	+8.0
ATVM				*eS*	**Sn**	**02 35 27.1**	**+0.4**
DHIG	**Demacu**	**5.28**	**337**		**Pn**	**02 34 31.5**	**+3.6**
DEIG	**Demacu**	**5.28**	**337**	*eP*	**Pn**	**02 34 31.5**	**+3.6**
ACIG	**Acambay**	**5.38**	**328**	*eP*	Pn	02 34 34.7	+5.6
ACIG				*eS*	**Sn**	**02 35 32.1**	**+0.6**
MOIG	**Morelia**	**5.92**	**316**		**Sn**	**02 35 43.8**	**-1.2**
MOIG	**Morelia**	**5.92**	**316**	*eP*	Pn	02 34 43.2	+6.5
MOIG				*eS*	**Sn**	**02 35 43.8**	**-1.2**
APG	**El Apazote**	**6.17**	**93**	Pn	**Pn**	**02 34 41.1**	**+1.1**
	0.1nm,0.3s,baz=236,slow=22,SNR=0.6						
APG				Sn	**Sn**	**02 35 51.5**	**+0.4**
	0.3nm,0.3s,baz=69,slow=21,SNR=2.1						
APG				Lg	Lg	02 36 21.4	
	0.4nm,0.3s,baz=228,slow=20,SNR=2.0						
JRQG	**Juriquilla Cam**	**6.27**	**327**		**Pn**	**02 34 44.2**	**+2.8**
JRQG					**Sn**	**02 35 53.8**	**+0.2**
JRQG	**Juriquilla Cam**	**6.27**	**327**	*eP*	**Pn**	**02 34 44.2**	**+2.8**
JRQG				*eS*	**Sn**	**02 35 53.8**	**+0.2**
SCIG	**Sabancuy**	**6.45**	**56**		Pn	02 34 38.5	-5.2
SCIG					**Sn**	**02 35 55.0**	**-2.7**
SCIG	**Sabancuy**	**6.45**	**56**	*eP*	Pn	02 34 38.5	-5.2
SCIG				*eS*	**Sn**	**02 35 55.0**	**-2.7**
IGIG	**Irapuato, Guan**	**6.80**	**322**		Pn	02 34 44.6	-4.1
IGIG					**Sn**	**02 36 05.1**	**-1.6**
IGIG	**Irapuato, Guan**	**6.80**	**322**	*eP*	Pn	02 34 44.6	-4.1
IGIG				*eS*	**Sn**	**02 36 05.1**	**-1.6**
MMIG	**Aquila**	**6.85**	**295**		Pn	02 34 43.4	-5.8
MMIG					**Sn**	**02 36 02.0**	**-5.4**
MMIG	**Aquila**	**6.85**	**295**	*eP*	Pn	02 34 43.4	-5.8
MMIG				*eS*	**Sn**	**02 36 02.0**	**-5.4**
PETF	**Flores**	**6.86**	**77**		**Pn**	**02 34 49.8**	**+0.4**
MNGA	**Volcan de Coli**	**7.62**	**303**	*eP*	Pn	02 34 56.5	-3.5
MNGA				*eS*	**Sn**	**02 36 24.6**	**-2.1**
INCO	**Volcan de Coli**	**7.63**	**303**	*eP*	**Pn**	**02 34 58.4**	**-1.9**
INCO				*eS*	**Sn**	**02 36 22.4**	**-5.0**
SOMAC	**Volcano de Col**	**7.65**	**303**	*eP*	Pn	02 34 56.8	-3.8
SOMAC				*eS*	**Sn**	**02 36 26.0**	**-1.9**
CDAR	**Ciudad de Arme**	**7.69**	**298**	*eP*	Pn	02 34 57.4	-3.4
CDAR				*eS*	**Sn**	**02 36 23.8**	**-4.5**
CEGR	**Campo Tres**	**7.77**	**301**	*eP*	Pn	02 34 58.4	-3.6
CEGR				*eS*	**Sn**	**02 36 30.3**	**-0.2**
TEIG	**Tepich**	**9.45**	**58**	Pn	Pn	02 35 15.9	-9.0
JUD3	**Juan Diaz 3**	**12.20**	**114**	Pn	**Pn**	**02 36 01.0**	**-1.6**
JTS	**Las Juntas de**	**12.66**	**112**	Pn	**Pn**	**02 36 12.4**	**+3.5**
	0.7nm,0.3s,baz=276,slow=4.5,SNR=3.7 13nm,1.0s						
JTS	**Las Juntas de**	**12.66**	**112**		**Pn**	**02 36 12.8**	**+3.8**
BILN	**Bilwi Airport**	**13.10**	**94**	Pn	Pn	02 36 11.4	-3.5
MCIG	**Muzquiz**	**13.12**	**342**		**Pn**	**02 36 11.8**	**-3.4**
MCIG	**Muzquiz**	**13.12**	**342**	*eP*	**Pn**	**02 36 11.8**	**-3.4**
SSIG	**Sanalona**	**13.44**	**316**		Pn	02 36 11.8	-7.8
SSIG	**Sanalona**	**13.44**	**316**	*eP*	Pn	02 36 11.8	-7.8
TXAR	**Lajitas Array**	**15.21**	**337**	Pn	**Pn**	**02 36 44.0**	**+0.3**
	0.1nm,0.3s,baz=161,slow=12,SNR=5.3						
TXAR				Lg	Lg	02 41 05.9	
	baz=161,slow=21,SNR=1.7						
TXAR	**Lajitas Array**	**15.21**	**337**		**Pn**	**02 36 42.9**	**-0.7**
OZNA	**Ozona**	**15.92**	**346**	Pn	**Pn**	**02 36 48.1**	**-4.8**
VHRN	**Van Horn**	**17.02**	**335**		**Pn**	**02 37 03.9**	**-3.1**
ABTX	**Abilene, Hawle**	**17.31**	**352**		Pn	02 37 02.0	-8.6
ODSA	**Odessa**	**17.41**	**344**		**Pn**	**02 37 06.2**	**-5.7**
MNTX	**Cornudas Mount**	**17.98**	**336**		Pn	02 37 12.0	-6.8
CGIG		**18.05**	**327**	P	**Pn**	**02 37 18.6**	**-1.2**
CGIG		**18.05**	**327**	*eP*	**Pn**	**02 37 18.6**	**-1.2**
GDL2	**Guadalupe Moun**	**18.05**	**339**		**Pn**	**02 37 14.5**	**-5.3**
MSTX	**Muleshoe**	**19.23**	**345**		P	02 37 27.2	-6.0
MSTX				IAmb	IAmb	02 37 36.0	
	comp=Z,79nm,1.0s						
OK052	**Battle Ridge R**	**20.48**	**0**	IAmb	IAmb	02 37 49.1	
	comp=Z,45nm,1.0s						
Y22A	**Socorro**	**20.57**	**335**	IAmb	IAmb	02 37 52.0	
	comp=Z,29nm,0.9s						
RLO	**Rose Lookout**	**20.72**	**4**	P	**P**	**02 37 49.8**	**+0.5**
RLO				IAmb	IAmb	02 37 51.7	
	comp=Z,32nm,0.9s						
HHAR	**Hobbs**	**20.93**	**7**	IAmb	IAmb	02 37 54.4	
	comp=Z,30nm,1.0s						
U38A	**Gravette**	**21.04**	**6**	IAmb	IAmb	02 37 57.9	
	comp=Z,45nm,1.0s						
LCAR	**Lake Charles**	**21.18**	**13**	IAmb	IAmb	02 37 57.8	
	comp=Z,27nm,0.9s						
ANMO	**Albuquerque**	**21.27**	**338**	P	**P**	**02 37 58.0**	**+2.5**
	comp=Z,12nm,0.9s,baz=240,slow=13,SNR=11 comp=Z,12nm,0.9s						
TASM	**ASL Pad, Albuq**	**21.27**	**338**	IAmb	IAmb	02 38 00.1	
	comp=Z,13nm,1.0s						
TASM	**ASL Pad, Albuq**	**21.27**	**338**	IAmb	IAmb	02 38 03.1	
	comp=Z,14nm,1.0s						
KAN14	**Manchester OK**	**21.47**	**358**	IAmb	IAmb	02 38 01.3	
	comp=Z,37nm,1.0s						
RTBA	**Rita Blanca**	**21.58**	**347**	IAmb	IAmb	02 38 01.5	
	comp=Z,63nm,1.0s						
KAN01	**Argonia South**	**21.66**	**358**	IAmb	IAmb	02 38 03.3	
	comp=Z,33nm,1.0s						
KAN08	**Anthony NE Sta**	**21.74**	**358**	IAmb	IAmb	02 38 04.6	
	comp=Z,35nm,0.8s						
MGMO	**Mountain Grove**	**22.02**	**10**	IAmb	IAmb	02 38 06.7	
	comp=Z,48nm,0.9s						
PBMO	**Poplar Bluff**	**22.02**	**14**	IAmb	IAmb	02 38 06.2	
	comp=Z,44nm,0.9s						
V48A	**Smith Brothers**	**22.13**	**22**	IAmb	IAmb	02 38 06.9	
	comp=Z,34nm,1.0s						
WVT	**Waverly**	**22.14**	**20**	IAmb	IAmb	02 38 06.8	
	comp=Z,30nm,1.2s						
X18A	**Snowflake**	**22.39**	**331**	IAmb	IAmb	02 38 12.8	
	comp=Z,38nm,1.3s						
CGM3	**Cape Girardeau**	**22.70**	**15**	IAmb	IAmb	02 38 12.1	
	comp=Z,22nm,1.0s						
CPCT	**Cooper Cave**	**22.79**	**27**	IAmb	IAmb	02 38 13.3	
	comp=Z,34nm,0.9s						
R32A	**Long Quarter,**	**22.97**	**356**	IAmb	IAmb	02 38 18.6	
	comp=Z,50nm,1.0s						
CCM	**Cathedral Cave**	**23.08**	**11**	IAmb	IAmb	02 38 15.9	
	comp=Z,40nm,0.9s						
BG3	**Lake Jocassee**	**23.15**	**30**	IAmb	IAmb	02 38 17.6	
	comp=Z,20nm,0.9s						
S44A	**Carbondale**	**23.18**	**15**	IAmb	IAmb	02 38 16.8	
	comp=Z,37nm,1.0s						
U49A	**Red Boiling Sp**	**23.20**	**23**	IAmb	IAmb	02 38 16.9	
	comp=Z,25nm,0.8s						
SIUC	**Southern Illin**	**23.21**	**15**	IAmb	IAmb	02 38 17.1	
	comp=Z,38nm,1.0s						
TKL	**Tuckaleechee C**	**23.30**	**28**	P	**P**	**02 38 16.8**	**0.0**
	comp=Z,19nm,1.1s,baz=226,slow=7.3,SNR=4.9 comp=Z,19nm,1.1s						
TKL	**Tuckaleechee C**	**23.30**	**28**	IAmb	IAmb	02 38 18.2	
	comp=Z,30nm,1.2s						
GLA	**Glamis**	**23.95**	**320**	IAmb	IAmb	02 38 28.6	
	comp=Z,17nm,0.9s						
KSCO	**Kaye Shedlock'**	**24.04**	**349**	IAmb	IAmb	02 38 27.5	
	comp=Z,30nm,1.0s						
MVCO	**Mesa Verde**	**24.04**	**337**	IAmb	IAmb	02 38 38.1	
	comp=Z,23nm,1.1s						
P38A	**Dawn**	**24.28**	**6**	IAmb	IAmb	02 38 27.3	
	comp=Z,54nm,1.6s						
P40A	**Paris**	**24.38**	**9**	IAmb	IAmb

mb4.9/82,Md4.8/104(MEX),Error ellipse: s-maj=10.0km s-min=7.8km az=194.0

ISC 24 02:34:38.6±1.0,15°.63N±0°.04×96°.81W±0°.02,h12km±6km, n218,σ2°.35/229,mb4.8/39,1C,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.48**	**318**		**Pg**	**02 34 48.3**	**+0.1**
PEIG					**Sg**	**02 34 55.6**	**+0.9**
PEIG	**Puerto Escondi**	**0.48**	**318**	*eP*	**Pg**	**02 34 48.3**	**+0.1**
PEIG				*eS*	**Sg**	**02 34 55.6**	**+0.9**
HUIG	**Huatulco**	**0.69**	**79**		**Pb**	**02 34 51.0**	**-1.5**
HUIG					**Sb**	**02 35 00.5**	**-1.6**
HUIG	**Huatulco**	**0.69**	**79**	*eP*	**Pb**	**02 34 51.0**	**-1.5**
HUIG				*eS*	**Sb**	**02 35 00.5**	**-1.6**
YOIG	**Yosondua**	**1.41**	**330**		**Pn**	**02 35 03.6**	**-0.7**
YOIG					**Sn**	**02 35 23.1**	**+0.2**
YOIG	**Yosondua**	**1.41**	**330**	*eP*	**Pn**	**02 35 03.6**	**-0.7**
YOIG				*eS*	**Sn**	**02 35 23.1**	**+0.2**
OXLC	**Oaxaca**	**1.43**	**4**		**Pn**	**02 35 03.9**	**-0.6**
OXLC					**Sg**	**02 35 24.1**	**-0.5**
OXLC	**Oaxaca**	**1.43**	**4**	*eP*	**Pn**	**02 35 03.9**	**-0.6**
OXLC				*eS*	**Sg**	**02 35 24.1**	**-0.5**
OXBJ	**Oaxaca**	**1.43**	**3**		**Pg**	**02 35 06.3**	**+0.3**
OXBJ					**Sg**	**02 35 26.7**	**+2.0**
OXBJ	**Oaxaca**	**1.43**	**3**	*eP*	**Pg**	**02 35 06.3**	**+0.3**
OXBJ				*eS*	**Sg**	**02 35 26.7**	**+2.0**
OXIG	**Oaxaca**	**1.43**	**3**		**Pn**	**02 35 03.6**	**-1.0**
OXIG					**Sg**	**02 35 23.1**	**-1.8**
VHO	**Vista Hermosa**	**1.43**	**3**	*eP*	**Pn**	**02 35 03.6**	**-0.9**
VHO				*eS*	**Sg**	**02 35 23.1**	**-1.8**
PNIG	**Pinotepa**	**1.47**	**301**		**Pn**	**02 35 03.6**	**-1.4**
PNIG					**Sn**	**02 35 24.0**	**-0.2**
PNIG	**Pinotepa**	**1.47**	**301**	*eP*	**Pn**	**02 35 03.6**	**-1.4**
PNIG				*eS*	**Sn**	**02 35 24.0**	**-0.2**
TXIG	**Tlaxiaco**	**1.85**	**330**		**Pn**	**02 35 09.2**	**-1.3**
TXIG					**Sb**	**02 35 35.1**	**-0.7**
TXIG	**Tlaxiaco**	**1.85**	**330**	*eP*	**Pn**	**02 35 09.2**	**-1.3**
TXIG				*eS*	**Sb**	**02 35 35.1**	**-0.7**
NEUV	**Arroyo Zacate**	**2.28**	**25**		**Pn**	**02 35 16.4**	**+0.3**
NEUV					**Sb**	**02 35 45.8**	**-2.2**
NEUV	**Arroyo Zacate**	**2.28**	**25**	*eP*	**Pn**	**02 35 16.4**	**+0.3**
NEUV				*eS*	**Sb**	**02 35 45.8**	**-2.2**
CMIG	**Matias Romero**	**2.35**	**52**	Pn	**Pn**	**02 35 14.0**	**-3.0**
	636nm,0.9s,baz=222,slow=20,SNR=0.6						
CMIG				Lg	Lg	02 35 43.7	
	baz=223,slow=7.3						
CMIG	**Matias Romero**	**2.35**	**52**		**Pn**	**02 35 14.3**	**-2.7**
CMIG					**Sn**	**02 35 44.3**	**-1.5**
MGIG	**Malinaltepec**	**2.36**	**313**		**Pn**	**02 35 16.7**	**-0.7**
MGIG					**Sn**	**02 35 45.9**	**-0.5**
MGIG	**Malinaltepec**	**2.36**	**313**	*eP*	**Pn**	**02 35 16.7**	**-0.7**
MGIG				*eS*	**Sn**	**02 35 45.9**	**-0.5**
TOIG	**Toxpalan**	**2.46**	**354**		**Pn**	**02 35 19.5**	**+0.9**
TOIG					**Sn**	**02 35 47.9**	**-0.8**
TOIG	**Toxpalan**	**2.46**	**354**	*eP*	**Pn**	**02 35 19.5**	**+0.9**
TOIG				*eS*	**Sn**	**02 35 47.9**	**-0.8**
CRIG	**Cruz Grande**	**2.48**	**296**		**Pn**	**02 35 18.1**	**-0.8**
CRIG					**Sn**	**02 35 43.8**	**-5.4**
CRIG	**Cruz Grande**	**2.48**	**296**	*eP*	**Pn**	**02 35 18.1**	**-0.8**
CRIG				*eS*	**Sn**	**02 35 43.8**	**-5.4**
TLIG	**Tlapa**	**2.55**	**319**	Pn	**Pb**	**02 35 23.3**	**-1.1**
TLIG	**Tlapa**	**2.55**	**319**		**Sn**	**02 35 47.7**	**-3.3**
TLIG	**Tlapa**	**2.55**	**319**	*eS*	**Sn**	**02 35 47.7**	**-3.3**
FTIG	**Fresnillo de T**	**2.59**	**331**		**Pn**	**02 35 18.3**	**-2.2**
FTIG					**Sn**	**02 35 52.4**	**+0.4**
FTIG	**Fresnillo de T**	**2.59**	**331**	*eP*	**Pn**	**02 35 18.3**	**-2.2**
FTIG				*eS*	**Sn**	**02 35 52.4**	**+0.4**
HMTT	**Tlapaneco**	**2.73**	**322**		**Sn**	**02 35 55.2**	**-0.1**
HMTT	**Tlapaneco**	**2.73**	**322**	*eS*	**Sn**	**02 35 55.2**	**-0.1**
TPIG	**Tehuac#an**	**2.82**	**349**		**Pb**	**02 35 27.5**	**-1.5**
TPIG					**Sb**	**02 36 00.2**	**-3.4**
TPIG	**Tehuac#an**	**2.82**	**349**	*eP*	**Pb**	**02 35 27.5**	**-1.5**
TPIG				*eS*	**Sb**	**02 36 00.2**	**-3.4**
DAIG	**Los Arroyos**	**3.06**	**297**		**Sn**	**02 35 58.1**	**-5.2**
DAIG	**Los Arroyos**	**3.06**	**297**	*eS*	**Sn**	**02 35 58.1**	**-5.2**
UXUV	**UXUV**	**3.06**	**56**		**Pn**	**02 35 24.1**	**-2.6**
UXUV					**Sn**	**02 36 02.8**	**-0.4**
UXUV	**UXUV**	**3.06**	**56**	*eP*	**Pn**	**02 35 24.1**	**-2.6**
UXUV				*eS*	**Sn**	**02 36 02.8**	**-0.4**
VNTA	**La Mica**	**3.16**	**294**		**Sn**	**02 36 03.9**	**-1.9**
VNTA	**La Mica**	**3.16**	**294**	*eS*	**Sn**	**02 36 03.9**	**-1.9**
MIHL	**Minatitlan**	**3.19**	**43**		**Sb**	**02 36 10.9**	**-3.2**
MIHL	**Minatitlan**	**3.19**	**43**	*eS*	**Sb**	**02 36 10.9**	**-3.2**
MEIG	**Mezcala**	**3.53**	**311**		**Sn**	**02 36 13.8**	**-1.1**
MEIG	**Mezcala**	**3.53**	**311**	*eS*	**Sn**	**02 36 13.8**	**-1.1**
CAIG	**El Cayaco**	**3.60**	**293**		**Sn**	**02 36 11.9**	**-4.9**
CAIG	**El Cayaco**	**3.60**	**293**	*eS*	**Sn**	**02 36 11.9**	**-4.9**
PHPU	**Puebla**	**3.63**	**339**		**Pn**	**02 35 33.0**	**-1.9**
PHPU					**Sn**	**02 36 17.4**	**-0.4**
PHPU	**Puebla**	**3.63**	**339**	*eP*	**Pn**	**02 35 33.0**	**-1.9**
PHPU				*eS*	**Sn**	**02 36 17.4**	**-0.4**
PPCL	**Tochimilco**	**3.69**	**332**	*eS*	**Sn**	**02 36 23.8**	**+4.5**
TGIG		**3.72**	**72**		**Sn**	**02 36 19.8**	**0.0**
TGIG		**3.72**	**72**	*eS*	**Sn**	**02 36 19.8**	**0.0**
PPPT	**Popocatepetl**	**3.74**	**333**	*eS*	**Sn**	**02 36 24.6**	**+3.6**
TGBT	**Tuxtla Gutierr**	**3.75**	**72**		**Sn**	**02 36 19.9**	**-0.5**
TGBT	**Tuxtla Gutierr**	**3.75**	**72**	*eS*	**Sn**	**02 36 19.9**	**-0.5**
PBXN	**Popocatepetl**	**3.79**	**333**	*eS*	**Sn**	**02 36 25.9**	**+3.8**
PPSX	**Xalitzintla**	**3.80**	**335**	*eS*	**Sn**	**02 36 22.7**	**+0.7**
ATYC	**Atoyac**	**3.81**	**295**		**Sn**	**02 36 20.4**	**-1.5**
ATYC	**Atoyac**	**3.81**	**295**	*eS*	**Sn**	**02 36 20.4**	**-1.5**
PPM	**Popocatepetl**	**3.83**	**333**	*eS*	**Sn**	**02 36 22.5**	**-0.5**
PPIG	**Popocatepetl**	**3.83**	**333**		**Sn**	**02 36 22.5**	**-0.5**
YAIG	**Yautepec**	**3.87**	**326**		**Sn**	**02 36 22.9**	**-0.6**
YAIG	**Yautepec**	**3.87**	**326**	*eS*	**Sn**	**02 36 22.9**	**-0.6**
LVIG	**Laguna Verde**	**4.08**	**5**		**Sn**	**02 36 26.8**	**-1.8**
LVIG	**Laguna Verde**	**4.08**	**5**	*eS*	**Sn**	**02 36 26.8**	**-1.8**
MPVM	**San Francisco**	**4.12**	**330**		**Sn**	**02 36 30.2**	**+0.3**
MPVM	**San Francisco**	**4.12**	**330**	*eS*	**Sn**	**02 36 30.2**	**+0.3**
MAVM	**Malinalco, Edo**	**4.18**	**323**		**Sn**	**02 36 33.0**	**+1.6**
MAVM	**Malinalco, Edo**	**4.18**	**323**	*eS*	**Sn**	**02 36 33.0**	**+1.6**
THVM	**De Xico**	**4.20**	**331**		**Sn**	**02 36 32.2**	**+0.3**
THVM	**De Xico**	**4.20**	**331**	*eS*	**Sn**	**02 36 32.2**	**+0.3**
TLVM	**San Miguel Top**	**4.20**	**328**		**Sn**	**02 36 32.2**	**+0.2**
TLVM	**San Miguel Top**	**4.20**	**328**	*eS*	**Sn**	**02 36 32.2**	**+0.2**
XCVM	**Xochimilco**	**4.22**	**329**		**Sn**	**02 36 32.8**	**+0.5**
XCVM	**Xochimilco**	**4.22**	**329**	*eS*	**Sn**	**02 36 32.8**	**+0.5**
MZVM		**4.22**	**327**		**Sn**	**02 36 29.5**	**-2.5**
MZVM		**4.22**	**327**	*lS*	**Sn**	**02 36 29.5**	**-2.5**
TXVM	**Universitario**	**4.28**	**332**		**Sn**	**02 36 37.4**	**+3.5**
TXVM	**Universitario**	**4.28**	**332**	*eS*	**Sn**	**02 36 37.4**	**+3.5**
ARIG	**Puente Sto Nin**	**4.29**	**308**		**Sn**	**02 36 31.0**	**-2.7**
ARIG	**Puente Sto Nin**	**4.29**	**308**	*eS*	**Sn**	**02 36 31.0**	**-2.7**
UNM	**Universidad Na**	**4.31**	**329**	*eS*	**Sn**	**02 36 34.3**	**-0.4**
CUP5	**Mexico City**	**4.32**	**329**		**Sn**	**02 36 35.1**	**+0.4**
CUP5	**Mexico City**	**4.32**	**329**	*eS*	**Sn**	**02 36 35.1**	**+0.4**
COVM	**Coyoacan**	**4.32**	**329**		**Sn**	**02 36 36.0**	**+1.1**
COVM	**Coyoacan**	**4.32**	**329**	*eS*	**Sn**	**02 36 36.0**	**+1.1**
COVM				*eS*	**Sb**	**02 36 38.1**	**-8.8**
AOVM	**Tlapan**	**4.34**	**327**		**Sn**	**02 36 35.3**	**-0.2**
AOVM	**Tlapan**	**4.34**	**327**	*eS*	**Sn**	**02 36 35.3**	**-0.2**
BJVM	**Benito Juarez**	**4.35**	**329**		**Sn**	**02 36 39.6**	**+4.1**
BJVM	**Benito Juarez**	**4.35**	**329**	*eS*	**Sn**	**02 36 39.6**	**+4.1**
VRVM	**Mexico City**	**4.36**	**330**		**Sn**	**02 36 30.8**	**-4.9**
VRVM	**Mexico City**	**4.36**	**330**	*eS*	**Sn**	**02 36 30.8**	**-4.9**
PBVM	**Pinon**	**4.36**	**331**		**Sn**	**02 36 37.5**	**+2.0**
PBVM	**Pinon**	**4.36**	**331**	*eS*	**Sn**	**02 36 37.5**	**+2.0**
VHSA	**Villahermosa**	**4.38**	**57**		**Sn**	**02 36 39.2**	**+3.3**
VHSA	**Villahermosa**	**4.38**	**57**	*eS*	**Sn**	**02 36 39.2**	**+3.3**
INVM	**La Marquesa**	**4.39**	**326**		**Sn**	**02 36 37.0**	**+0.3**
INVM	**La Marquesa**	**4.39**	**326**	*eS*	**Sn**	**02 36 37.0**	**+0.3**
MHVM	**Bosque de Chap**	**4.39**	**329**		**Sn**	**02 36 35.5**	**-1.2**
MHVM	**Bosque de Chap**	**4.39**	**329**	*eS*	**Sn**	**02 36 35.5**	**-1.2**
APVM	**Azcapotzalco**	**4.46**	**330**		**Sn**	**02 36 36.0**	**-2.4**
APVM	**Azcapotzalco**	**4.46**	**330**	*eS*	**Sn**	**02 36 36.0**	**-2.4**
PTVM	**Pico Tres Padr**	**4.51**	**331**		**Sn**	**02 36 41.9**	**+2.4**
PTVM	**Pico Tres Padr**	**4.51**	**331**	*eS*	**Sn**	**02 36 41.9**	**+2.4**
VTVM	**Tizayuca**	**4.52**	**336**		**Sn**	**02 36 41.6**	**+1.9**
VTVM	**Tizayuca**	**4.52**	**336**	*eS*	**Sn**	**02 36 41.6**	**+1.9**
CCIG	**Comitan**	**4.54**	**81**		**Sn**	**02 36 37.5**	**-2.7**
CCIG	**Comitan**	**4.54**	**81**	*eS*	**Sn**	**02 36 37.5**	**-2.7**
TOVM	**TOLUCA**	**4.54**	**323**		**Sn**	**02 36 40.4**	**-0.1**
TOVM	**TOLUCA**	**4.54**	**323**	*eS*	**Sn**	**02 36 40.4**	**-0.1**
ZUVM	**ZUMPANGO**	**4.70**	**333**		**Sn**	**02 36 41.6**	**-2.5**
ZUVM	**ZUMPANGO**	**4.70**	**333**	*eS*	**Sn**	**02 36 41.6**	**-2.5**
ZIIG	**Zihuatanejo**	**4.87**	**294**		**Sn**	**02 36 40.5**	**-7.6**
ZIIG	**Zihuatanejo**	**4.87**	**294**	*eS*	**Sn**	**02 36 40.5**	**-7.6**
ATVM	**ATLACOMULCO**	**5.02**	**325**		**Sn**	**02 36 51.9**	**-0.2**
ATVM	**ATLACOMULCO**	**5.02**	**325**	*eS*	**Sn**	**02 36 51.9**	**-0.2**
DEIG	**Demacu**	**5.10**	**336**	*eS*	**Sn**	**02 36 57.1**	**+3.0**
DHIG	**Demacu**	**5.10**	**336**		**Sn**	**02 36 57.1**	**+3.1**
MOIG	**Morelia**	**5.80**	**315**		**Sn**	**02 37 13.6**	**+2.4**
MOIG	**Morelia**	**5.80**	**315**	*eS*	**Sn**	**02 37 13.6**	**+2.4**
JRQG	**Juriquilla Cam**	**6.11**	**326**		**Sn**	**02 37 19.1**	**+0.1**
JRQG	**Juriquilla Cam**	**6.11**	**326**	*eS*	**Sn**	**02 37 19.1**	**+0.1**
URUA	**Uruapan**	**6.28**	**308**		**Sn**	**02 37 26.8**	**+3.8**
URUA	**Uruapan**	**6.28**	**308**	*eS*	**Sn**	**02 37 26.8**	**+3.8**
SCIG	**Sabancuy**	**6.31**	**58**		**Sn**	**02 37 18.7**	**-4.9**
SCIG	**Sabancuy**	**6.31**	**58**	*eS*	**Sn**	**02 37 18.7**	**-4.9**
IGIG	**Irapuato, Guan**	**6.66**	**321**		**Sn**	**02 37 36.8**	**+4.3**
IGIG	**Irapuato, Guan**	**6.66**	**321**	*eS*	**Sn**	**02 37 36.8**	**+4.3**
MMIG	**Aquila**	**6.79**	**294**		**Pn**	**02 36 18.9**	**+0.8**
MMIG					**Sn**	**02 37 31.0**	**-4.3**
MMIG	**Aquila**	**6.79**	**294**	*eP*	**Pn**	**02 36 18.9**	**+0.8**
MMIG				*eS*	**Sn**	**02 37 31.0**	**-4.3**
MNGA	**Volcan de Coli**	**7.53**	**301**	*eP*	**Pn**	**02 36 29.3**	**+0.8**
MNGA				*eS*	**Sn**	**02 37 56.8**	**+2.8**
INCO	**Volcan de Coli**	**7.55**	**302**	*eP*	**Pn**	**02 36 30.4**	**+1.5**
INCO				*eS*	**Sn**	**02 37 56.8**	**+2.2**
SOMAC	**Volcano de Col**	**7.57**	**302**	*eP*	**Pn**	**02 36 28.1**	**-1.0**
SOMAC				*eS*	**Sn**	**02 37 55.0**	**0.0**
CDAR	**Ciudad de Arme**	**7.62**	**297**	*eP*	**Pn**	**02 36 30.9**	**+1.4**
CDAR				*eS*	**Sn**	**02 37 57.3**	**+1.4**
CEGR	**Campo Tres**	**7.69**	**300**	*eP*	**Pn**	**02 36 32.2**	**+1.6**
CEGR				*eS*	**Sn**	**02 38 01.0**	**+3.2**
AAIG	**Aguscalientes**	**8.21**	**321**		**Sn**	**02 38 10.0**	**-0.8**
AAIG	**Aguscalientes**	**8.21**	**321**	*eS*	**Sn**	**02 38 10.0**	**-0.8**
CJM	**Chamela**	**8.74**	**297**	*eP*	**Pn**	**02 36 45.4**	**+0.5**
ZAIG	**Zacatecas**	**8.94**	**323**		**Sn**	**02 38 29.6**	**+0.9**
ZAIG	**Zacatecas**	**8.94**	**323**	*eS*	**Sn**	**02 38 29.6**	**+0.9**
TEIG	**Tepich**	**9.32**	**59**	Pn	**Pn**	**02 36 51.8**	**-1.0**
LNIG	**Linares**	**9.55**	**345**		**Pn**	**02 36 52.9**	**-3.1**
LNIG	**Linares**	**9.55**	**345**	*eP*	**Pn**	**02 36 52.9**	**-3.1**
JUD3	**Juan Diaz 3**	**12.26**	**115**		**Pn**	**02 37 34.5**	**+1.3**
PDIG	**Papasquiaro**	**12.34**	**321**		**Sn**	**02 39 45.1**	**-6.8**
PDIG	**Papasquiaro**	**12.34**	**321**	*eS*	**Sn**	**02 39 45.1**	**-6.8**
JTS	**Las Juntas de**	**12.72**	**113**	Pn	**Pn**	**02 37 38.6**	**-0.8**
	0.7nm,0.3s,baz=298,slow=17,SNR=2.1						
	4.1nm,0.5s						
TXAR	**Lajitas Array**	**15.03**	**336**	Pn	**Pn**	**02 38 13.0**	**+2.0**
	0.3nm,0.3s,baz=135,slow=12,SNR=6.7						
	6.1nm,1.1s						
VHRN	**Van Horn**	**16.84**	**335**		**P**	**02 38 38.5**	**+2.0**
ODSA	**Odessa**	**17.22**	**343**	P	**P**	**02 38 42.8**	**+2.1**
ODSA				IAmb	IAmb	02 38 44.1	
	comp=Z,49nm,0.8s						
POST	**Post**	**17.87**	**347**	P	**P**	**02 38 48.2**	**+0.4**
CGIG		**17.89**	**327**	P	**P**	**02 38 48.5**	**+0.4**
CGIG		**17.89**	**327**	*eP*	**P**	**02 38 48.5**	**+0.4**
HSIG		**18.64**	**318**	P	**P**	**02 38 53.6**	**-2.7**
HSIG		**18.64**	**318**		**pP**	**02 38 59.8**	**+0.1**
HSIG				IAmb	IAmb	02 39 00.8	
	comp=Z,15nm,1.2s						
HSIG		**18.64**	**318**	*eP*	**P**	**02 38 53.6**	**-2.7**
MSTX	**Muleshoe**	**19.03**	**345**		**Pn**	**02 39 02.7**	**+1.3**
MSTX				IAmb	IAmb	02 39 03.4	
	comp=Z,54nm,0.9s						
MIAR	**Mount Ida**	**19.05**	**8**	P	**Pn**	**02 39 01.4**	**-0.2**
MIAR				IAmb	IAmb	02 39 03.1	
	comp=Z,56nm,1.0s						
SMWD	**Samnorwood**	**19.63**	**352**	P	**Pn**	**02 39 08.6**	**+0.1**
CRNM	**Carthage**	**20.32**	**336**	P	Pn	02 39 17.2	+0.4
Y22A	**Socorro**	**20.40**	**335**	P	Pn	02 39 18.1	+0.4
BNM	**Barren Site**	**20.45**	**336**		Pn	02 39 19.2	+0.8
OK051	**E0350 and S346**	**20.79**	**360**	IAmb	IAmb	02 39 23.1	
	comp=Z,70nm,1.1s						
TUC	**Tucson**	**20.91**	**325**	P	Pn	02 39 24.0	+0.4
ANMO	**Albuquerque**	**21.09**	**338**	P	**P**	**02 39 24.3**	**+1.2**
	comp=Z,7.2nm,0.8s,baz=245,slow=14,SNR=5.3						
	comp=Z,7.2nm,0.8s						
ANMO	**Albuquerque**	**21.09**	**338**	IAmb	IAmb	02 39 29.9	
	comp=Z,10nm,0.9s						
T35A	**Sooner Cattle**	**21.20**	**1**	IAmb	IAmb	02 39 27.4	
	comp=Z,46nm,0.8s						
RTBA	**Rita Blanca**	**21.38**	**347**		**P**	**02 39 27.7**	**+1.5**
RTBA				IAmb	IAmb	02 39 28.9	
	comp=Z,52nm,1.0s						
KAN08	**Anthony NE Sta**	**21.53**	**357**	IAmb	IAmb	02 39 31.9	
	comp=Z,24nm,0.8s						
PBMO	**Poplar Bluff**	**21.81**	**14**	IAmb	IAmb	02 39 33.5	
	comp=Z,36nm,0.8s						
U49A	**Red Boiling Sp**	**23.00**	**23**	P	**P**	**02 39 44.0**	**+0.7**
U49A				IAmb	IAmb	02 39 44.2	
	comp=Z,24nm,0.8s						
CBKS	**Cedar Bluff**	**23.23**	**354**	P	**P**	**02 39 46.8**	**+1.1**
USIN	**University of**	**23.67**	**18**	IAmb	IAmb	02 39 50.6	
	comp=Z,50nm,1.1s						
ROSC	**El Rosal**	**24.56**	**114**	P	**P**	**02 39 58.3**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=354,slow=21,SNR=3.8						
	comp=Z,2.4nm,0.3s						
ROSC	**El Rosal**	**24.56**	**114**	IAmb	IAmb	02 40 28.4	
	comp=Z,23nm,1.1s						
PV01	**Paradox Valley**	**24.70**	**337**	IAmb	IAmb	02 40 04.1	
	comp=Z,36nm,1.1s						
IRM	**Iron Mountain**	**24.76**	**321**	IAmb	IAmb	02 40 05.0	
	comp=Z,21nm,1.2s						
R49A	**Shelbyville**	**24.79**	**22**	IAmb	IAmb	02 40 01.8	
	comp=Z,39nm,1.2s						
PV05	**Paradox Valley**	**24.85**	**336**	IAmb	IAmb	02 40 05.0	
	comp=Z,16nm,1.0s						
PV15	**Paradox Valley**	**24.85**	**338**	IAmb	IAmb	02 40 05.8	
	comp=Z,22nm,1.1s						
PV16	**Nyswonger Mesa**	**24.98**	**337**	IAmb	IAmb	02 40 06.6	
	comp=Z,67nm,1.7s						
PV04	**Paradox Valley**	**25.05**	**337**	IAmb	IAmb	02 40 07.4	
	comp=Z,37nm,1.1s						
RUSC	**La Rusia**	**25.21**	**110**		**P**	**02 40 05.9**	**+0.9**
OGNE	**Ogallala**	**25.62**	**351**		**P**	**02 40 09.7**	**+1.7**
SFIN	**Lafayette**	**26.07**	**17**		**P**	**02 40 11.5**	**-0.5**
SFIN				IAmb	IAmb	02 40 13.6	
	comp=Z,19nm,0.9s						
Q51A	**Peebles**	**26.13**	**24**	P	**P**	**02 40 13.2**	**+0.7**
SDV	**Santo Domingo**	**26.43**	**102**		**P**	**02 40 13.8**	**-1.9**
SDV				IAmb	IAmb	02 40 17.5	
	comp=Z,16nm,0.9s						
Q52A	**Bidwell**	**26.52**	**26**		**P**	**02 40 15.6**	**-0.4**
P53A	**Whipple**	**27.33**	**27**	P	**P**	**02 40 23.0**	**-0.4**
P53A				IAmb	IAmb	02 40 24.6	
	comp=Z,39nm,1.1s						
O52A	**Adamsville**	**27.67**	**25**	IAmb	IAmb	02 40 26.6	
	comp=Z,39nm,1.1s						
O54A	**Avella**	**28.34**	**27**	IAmb	IAmb	02 40 33.6	
	comp=Z,24nm,1.0s						
BAUV	**El Baul**	**28.86**	**100**		**P**	**02 40 35.7**	**-1.6**
BAUV				IAmb	IAmb	02 40 37.9	
	comp=Z,27nm,0.9s						
PDAR	**Pinedale Array**	**29.17**	**341**	P	**P**	**02 40 41.4**	**+1.4**
	comp=Z,2.2nm,0.8s,baz=144,slow=10,SNR=6.3						
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**29.56**	**324**	P	**P**	**02 40 46.7**	**+3.2**
	comp=Z,1.9nm,0.7s,baz=141,slow=7.8,SNR=4.0						
	comp=Z,1.9nm,0.7s						
SNOW	**Snow King Moun**	**30.18**	**340**	IAmb	IAmb	02 40 52.0	
	comp=Z,22nm,0.8s						
LOHW	**Long Hollow**	**30.27**	**340**	IAmb	IAmb	02 40 52.6	
	comp=Z,17nm,0.9s						
RLMT	**Red Lodge**	**31.22**	**343**	IAmb	IAmb	02 41 00.7	
	comp=Z,19nm,1.0s						
YMR	**Madison River**	**31.32**	**340**	IAmb	IAmb	02 41 02.4	
	comp=Z,16nm,1.0s						
YHL	**Hebgen Lake**	**31.56**	**340**	IAmb	IAmb	02 41 06.1	
	comp=Z,11nm,1.0s						
SUTB	**Sutter Butte**	**32.11**	**322**	IAmb	IAmb	02 41 13.2	
	comp=Z,10nm,0.6s						
SADO	**Sadowa**	**32.66**	**24**	P	**P**	**02 41 08.9**	**-1.6**
	comp=Z,8.9nm,0.9s,baz=245,slow=5.9,SNR=3.4						
	comp=Z,8.9nm,0.9s						
PLID	**Pearl Lake**	**33.53**	**335**	IAmb	IAmb	02 41 21.0	
	comp=Z,15nm,0.9s						
LPAZ	**La Paz**	**42.51**	**137**	P	**P**	**02 42 34.6**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=311,slow=7.7,SNR=4.7						
	comp=Z,1.8nm,0.8s						
G31M	**Satah River**	**56.80**	**343**	P	**P**	**02 44 22.7**	**+0.4**
G31M				IAmb	IAmb	02 44 24.1	
	comp=Z,9.7nm,0.9s						
J26L	**Joseph Creek**	**58.19**	**338**	IAmb	IAmb	02 44 35.2	
	comp=Z,6.7nm,0.9s						
F28M	**Old Crow**	**58.87**	**342**		**P**	**02 44 38.3**	**+1.4**
F28M				IAmb	IAmb	02 44 39.2	
	comp=Z,9.8nm,0.9s						
ILAR	**Eielson Array**	**59.54**	**338**	P	**P**	**02 44 42.5**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=134,slow=5.0,SNR=9.2						
	comp=Z,3.1nm,0.9s						
ILAR	**Eielson Array**	**59.54**	**338**		**P**	**02 44 43.1**	**+1.5**
PLCA	**Paso Flores**	**61.15**	**157**	P	**P**	**02 44 54.7**	**+1.7**
	comp=Z,2.1nm,1.0s,baz=345,slow=8.6,SNR=3.2						
	comp=Z,2.1nm,1.0s						
PLCA	**Paso Flores**	**61.15**	**157**	IAmb	IAmb	02 45 43.2	
	comp=Z,14nm,1.6s						
EKA	**Eskdalemuir Ar**	**79.35**	**35**	P	**P**	**02 46 43.4**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=283,slow=4.2,SNR=2.9						
	comp=Z,2.3nm,0.8s						
ESDC	**Sonseca Array**	**82.34**	**51**	P	**P**	**02 47 00.7**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=274,slow=4.9,SNR=7.3						
	comp=Z,2.0nm,0.8s						
ESDC	**Sonseca Array**	**82.34**	**51**	IAmb	IAmb	02 47 09.2	
	comp=Z,9.7nm,1.6s						
HHC	**Hu-ho-hao-te**	**117.94**	**336**	*eP*	**PKiKP**	**02 53 26.1**	**+0.4**
NJ2	**Nanjing**	**121.55**	**324**	*eP*	**PKiKP**	**02 53 34.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WRA	**Warramunga Arr**	**131.25**	**257**	PKP	**PKPdf**	**02 53 51.4**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=80,slow=1.8,SNR=6.0						
ASAR	**Alice Springs**	**131.78**	**252**	PKP	**PKPdf**	**02 53 53.0**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=108,slow=1.1,SNR=4.8						
PZH	**PanZhiHua**	**134.40**	**336**	PKP	**PKiKP**	**02 53 59.1**	**+0.2**

IDC 24 02:38:54.2±2.0,20°.88S×177°.79W,h0km,mb3.8/4, mbtmp3.9/5,ML4.0/1,Error ellipse: s-maj=52.1km s-min=34.1km az=88.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.88**	**193**	P	Pn	02 43 04.2	-0.1
	0.5nm,0.3s,baz=0.0,slow=3.0,SNR=3.2						
	3.0nm,0.4s						
ASAR	**Alice Springs**	**44.63**	**257**	P	P	02 47 08.1	-0.7
	0.3nm,0.8s,baz=96,slow=7.0,SNR=4.4						
	0.3nm,0.8s						
WRA	**Warramunga Ar

YER	**Yerkesik**	**0.77 334**	Pg	Pg	02 54 32.5 -0.3
YER			Sg	Sb	02 54 43.9 -0.6
DAT	**Datca**	**0.94 288**	Pg	Pg	02 54 36.3 +0.1
ELL	**Elmali**	**1.02 72**	Pg	Pg	02 54 37.1 -0.6
ELL			Sg	Sg	02 54 51.3 +0.3
YAZI	**Mula-Dat§a-**	**1.03 284**	P	Pg	02 54 37.5 -0.3
YAZI			*i* IAML		02 54 44.0
	comp=N,7.8nm,2.0s				
YAZI			S	Sg	02 54 48.8 -2.4
YAZI			*i* IAML		02 54 57.0
	comp=E,5.4nm,0.8s				
MLSB	**Milas**	**1.13 319**	Pn	Pg	02 54 39.6 -0.1
APMY	**Acipayam-Deniz**	**1.14 25**	Pn	Pg	02 54 39.3 -0.6
DNIZ	**Denizli-Tavas-**	**1.21 13**	P	Pn	02 54 42.4 +0.8
DNIZ			S	Sg	02 54 53.5 -3.6
DNIZ			*i* IAML		02 55 00.0
	comp=E,10nm,0.3s				
BODT	**Bodrum**	**1.27 299**	Pn	Pn	02 54 41.5 -0.8
KARP	**Karpathos**	**1.53 235**	Pn	Pn	02 54 45.3 -0.6

*IDC **24** 03:07:54.7±3.8,9˙17S×124˙54E,h64km±40km,mb3.9/7, mbtmp4.3/11,ML4.6/4,Error ellipse: s-maj=63.3km s-min=16.6km az=53.0*
*NEIC **24** 03:07:56.8±2.7,9˙32S±0˙07×124˙18E±0˙08,h72km±9km, mb4.3/11,Error ellipse: s-maj=13.4km s-min=7.2km az=57.0*
*DJA **24** 03:07:56.7±0.4,9˚S±2˚×12˚4E±˚,h73km±5km,M4.6/12, mB5.0/4,mb4.8/6,MLv4.5/12,Mw(mB)4.4/4*

ISC 24 03:07:57.7±0.5,**9˚50S**±0˙05×**124˙19E**±0˙06,**h100**km,**n51**, σ2§**08**/52,**mb4.1/13**,**Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.27 162**			**Pn**	**03 08 09.9**	**-2.4**
SOEI	**Soe**	**0.27 162**		P	**Pn**	**03 08 10.1**	**-2.2**
SOEI				S	**Sn**	**03 08 20.2**	**-3.0**
BATI	**Baumata**	**0.87 216**		P	**Pn**	**03 08 17.2**	**+0.4**
	146nm,0.3s,baz=81,slow=4.3,SNR=21						
BATI				S	**Sn**	**03 08 28.0**	**-3.2**
	528nm,0.3s,baz=233,slow=20,SNR=13						
BATI	**Baumata**	**0.87 216**		P	**Pn**	**03 08 17.0**	**+0.2**
BATI				S	**Sn**	**03 08 32.2**	**+1.0**
MMRI	**Maumere**	**2.11 294**			**Pn**	**03 08 30.2**	**-1.5**
MMRI	**Maumere**	**2.11 294**		P	**Pn**	**03 08 30.2**	**-1.5**
MMRI				S	**Sn**	**03 08 54.8**	**-2.9**
EDFI	**Ende, Flores**	**2.58 287**		P	**Pn**	**03 08 36.7**	**-1.2**
BASI	**Baing, Sumba**	**3.63 258**		P	**Pn**	**03 08 51.6**	**-0.3**
WSI	**Waingapu**	**3.84 267**		P	**Pn**	**03 08 51.0**	**-3.7**
WBSI	**Waikabubak, Su**	**4.73 268**		P	**Pn**	**03 09 06.2**	**-0.6**
BSSI	**Bau Bau, Buton**	**4.95 312**		P	**Pn**	**03 09 09.4**	**-0.4**
KAPI	**Kappang**	**6.26 315**		P	**Pn**	**03 09 26.9**	**-0.6**
	1.6nm,0.3s,baz=123,slow=6.3,SNR=8.2 6.9nm,0.5s						
KAPI	**Kappang**	**6.26 315**			**Pn**	**03 09 27.8**	**+0.2**
PLAI	**Plampang**	**6.36 276**		P	**Pn**	**03 09 28.3**	**-0.7**
BNSI	**Bone**	**6.49 321**		P	**Pn**	**03 09 29.2**	**-1.4**
	0.2nm58nm,0.8s						
SPSI	**Sidrap Palu**	**7.03 321**		P	Pn	03 09 41.8	+3.7
TWSI	**Taliwang, Sumb**	**7.25 275**		P	**Pn**	**03 09 40.5**	**-0.6**
	1um38nm,0.5s						
MTN	**Manton Dam**	**7.58 117**			**Pn**	**03 09 44.7**	**-0.8**
KNRA	**Kununurra**	**7.59 144**			**Pn**	**03 09 45.0**	**-0.7**
SANI	**Sanana**	**7.62 14**		P	Pn	03 09 48.9	+2.9
FITZ	**Fitzroy Crossi**	**8.66 171**		P	**Pn**	**03 09 59.6**	**-0.7**
	9.8nm,0.3s,baz=3.4,slow=9.9,SNR=218						
FITZ				S	Sn	03 11 30.2	-6.0
	158nm,0.6s,baz=105,slow=20,SNR=18 19nm,0.3s						
FITZ	**Fitzroy Crossi**	**8.66 171**			**Pn**	**03 09 59.8**	**-0.5**
FAKI	**Fak Fak**	**10.34 51**		Pn	**Pn**	**03 10 24.6**	**+1.5**
UGM	**Wanagama**	**13.60 276**			**Pn**	**03 11 03.6**	**-3.0**
WRA	**Warramunga Arr**	**14.28 138**		P	**Pn**	**03 11 12.0**	**-3.3**
	4.2nm,0.3s,baz=314,slow=14,SNR=91						
WRA				S	Sn	03 13 42.2	-11
	11nm,0.5s,baz=318,slow=25,SNR=7.4 6.9nm,0.4s						
WR8	**Warramunga Arr**	**14.40 137**			**Pn**	**03 11 14.3**	**-2.6**
AS31	**Alice Springs**	**16.87 148**			**Pn**	**03 11 47.5**	**-0.4**
ASAR	**Alice Springs**	**16.87 148**		P	**Pn**	**03 11 47.1**	**-0.7**
	1.7nm,0.3s,baz=324,slow=12,SNR=91						
ASAR				S	**Sn**	**03 14 47.3**	**-8.1**
	2.2nm,0.7s,baz=318,slow=23,SNR=5.2 8.2nm,0.6s						
ASAR	**Alice Springs**	**16.87 148**			**Pn**	**03 11 48.3**	**+0.4**
COEN	**Coen**	**19.11 105**		P	**Pn**	**03 12 15.6**	**+0.8**
COEN				IAmb	IAmb	03 12 16.4	
	comp=Z,12nm,0.6s						
MORW	**Morawa**	**20.91 200**		P	**P**	**03 12 35.8**	**+3.5**
MORW				IAmb	IAmb	03 12 45.8	
	comp=Z,16nm,1.2s						
FORT	**Forrest**	**21.48 171**		P	**P**	**03 12 41.9**	**+3.6**
FORT				IAmb	IAmb	03 12 47.4	
	comp=Z,8.4nm,0.8s						
BBOO	**Buckleboo**	**25.66 156**		P	**P**	**03 13 22.2**	**+4.0**
BBOO				IAmb	IAmb	03 13 24.8	
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**27.50 147**		P	**P**	**03 13 37.5**	**+2.7**
	comp=Z,2.2nm,0.6s,baz=333,slow=14,SNR=8.4 comp=Z,2.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.31 318**		P	**P**	**03 15 00.6**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=134,slow=8.7,SNR=8.6 comp=Z,1.8nm,0.3s						
PZH	**PanZhiHua**	**41.91 329**		P	P	03 15 41.9	+3.3
HHC	**Hu-ho-hao-te**	**51.44 348**		*eP*	P	03 16 56.9	+4.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,250nm,5.7s						
EVN	**Everest**	**51.90 317**		P	**P**	**03 16 57.7**	**+0.6**
EVN				IAmb	IAmb	03 16 58.3	
	comp=Z,5.7nm,0.8s						
SONM	**Songino Array**	**59.23 346**		P	**P**	**03 17 48.1**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=160,slow=8.8,SNR=8.5 comp=Z,1.1nm,0.5s						
NIL	**Nilore**	**64.65 314**		P	**P**	**03 18 25.1**	**0.0**
MKAR	**Makanchi Array**	**67.33 330**		P	**P**	**03 18 42.7**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=136,slow=6.4,SNR=15 comp=Z,2.2nm,0.7s						
MKAR	**Makanchi Array**	**67.33 330**		P	**P**	**03 18 42.0**	**0.0**
BOOM	**Boomskoye usch**	**67.94 323**		P	**P**	**03 18 45.9**	**-0.2**
AAK	**Ala-Archa**	**68.89 323**		P	**P**	**03 18 52.8**	**+0.8**
AAK				IAmb	IAmb	03 19 28.9	
	comp=Z,3.4nm,1.1s						
ZALV	**Zalesovo Beam**	**71.43 337**		P	**P**	**03 19 06.5**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=133,slow=5.9,SNR=5.5 comp=Z,1.0nm,0.3s						
KKAR	**Karatay Array**	**71.56 322**		P	**P**	**03 19 09.0**	**+0.9**
KURBB	**Kurchatov Arra**	**71.77 331**		P	**P**	**03 19 09.2**	**0.0**
	comp=Z,0.7nm,0.5s,baz=142,slow=5.9,SNR=5.8 comp=Z,0.7nm,0.5s						
KURK	**Kurchatov**	**71.79 331**		P	**P**	**03 19 09.9**	**+0.6**
KURK				IAmb	IAmb	03 19 11.1	
	comp=Z,2.4nm,0.9s						
BVAR	**Borovoye Array**	**77.22 330**		P	**P**	**03 19 40.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=134,slow=8.5,SNR=4.0 comp=Z,0.6nm,0.7s						
AB31	**Akbulak array**	**80.97 323**		P	**P**	**03 20 01.6**	**+0.5**
ABKAR	**Akbulak array**	**80.97 323**		P	**P**	**03 20 01.6**	**+0.4**

*IDC **24** 03:11:30.9±1.1,51˙78N×175˙57W,h0km,mb3.7/11, mbtmp3.7/13,ML4.0/2,Error ellipse: s-maj=39.5km s-min=14.3km az=173.0*
*NEIC **24** 03:11:31.7±2.0,51˙31N±0˙04×175˙53W±0˙04,h10km±1km, ML3.6(AEIC),Error ellipse: s-maj=6.5km s-min=4.4km az=9.0*
*AEIC **24** 03:11:33.6±1.2,51˙36N±0˙05×175˙47W±0˙05,h25km±5km, Error ellipse: s-maj=6.9km s-min=4.6km az=184.0*

ISC 24 03:11:32.4±1.8,**51˙42N**±0˙07×**175˙51W**±0˙04, **h16**km±11km,**n62**,σ1§**24**/63,**mb3.7**/11,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSIG	**Igitkin Island**	**0.63 336**			**Pn**	**03 11 47.0**	**+0.3**
GSIG					**Sb**	**03 11 56.2**	**+2.7**
GSMY	**Great Sitkin M**	**0.71 332**			**Pn**	**03 11 48.4**	**+0.5**
ETKA	**Kagalaska Isla**	**0.72 309**			**Pn**	**03 11 48.0**	**+0.1**
ETKA					**Sb**	**03 11 57.7**	**+1.6**
GSTD	**Great Sitkin T**	**0.75 328**			**Pn**	**03 11 49.0**	**+0.6**
GSTD					**Sb**	**03 11 59.4**	**+2.2**
GSTR	**Great Sitkin T**	**0.76 333**			**Pn**	**03 11 49.3**	**+0.8**
GSTR	**Great Sitkin T**	**0.76 333**			**Sn**	**03 12 00.2**	**+0.4**
GSSP	**Great Sitkin S**	**0.79 329**			**Pn**	**03 11 49.7**	**+0.7**
GSSP					**Sb**	**03 12 00.2**	**+1.8**
ADK	**Adak**	**0.87 303**			**Pn**	**03 11 50.0**	**0.0**
ADK					**Sb**	**03 12 00.8**	**+0.3**
ADAG	**Mount Adagdak**	**0.89 310**			**Pn**	**03 11 51.1**	**+0.8**
ADAG					**Sn**	**03 12 03.3**	**+0.5**
KIRH	**Kanaga Island**	**1.10 297**			**Pn**	**03 11 53.7**	**+0.5**
KIRH					**Sb**	**03 12 07.9**	**+0.7**
KIWB	**Kanaga Island**	**1.11 294**			**Pn**	**03 11 53.7**	**+0.3**
ATKA	**Atka Island**	**1.13 45**			**Pb**	**03 11 53.4**	**-0.2**
ATKA					**Sb**	**03 12 07.5**	**-0.5**
KIMD	**Kanaga Island**	**1.13 288**			**Pn**	**03 11 53.8**	**+0.2**
KIMD					**Sb**	**03 12 07.5**	**-0.6**
KIKV	**Kanaga Island**	**1.14 295**			**Pn**	**03 11 54.0**	**+0.4**
KICM	**Kanaga Island**	**1.17 296**			**Pg**	**03 11 54.5**	**-0.3**
KOKL	**Mount Kliuchef**	**1.22 41**			**Pn**	**03 11 55.1**	**+0.3**
KOFP	**Korovin Flat P**	**1.23 45**			**Pn**	**03 11 55.1**	**+0.2**
KOWE	**Korovin West**	**1.23 39**			**Pn**	**03 11 55.5**	**+0.6**
KONW	**Korovin Northw**	**1.27 39**			**Pn**	**03 11 55.6**	**+0.1**
TAFL	**Tanaga Flats**	**1.53 284**			**Pn**	**03 11 59.2**	**+0.1**
TASE	**Tanaga Southea**	**1.63 286**			**Pn**	**03 12 00.8**	**+0.3**
GALAA	**Gareloi Lava P**	**2.07 281**			**Pn**	**03 12 07.1**	**+0.7**
GAKI	**Gareloi-Kavalg**	**2.07 275**			**Pn**	**03 12 06.8**	**+0.3**
GANE	**Gareloi Northe**	**2.08 282**			**Pn**	**03 12 07.1**	**+0.5**
GANO	**Gareloi North**	**2.10 282**			**Pn**	**03 12 07.3**	**+0.4**
CEPE	**Semis' Perret**	**3.06 282**			**Pn**	**03 12 21.0**	**+0.8**
CESW	**Semis' Southwe**	**3.11 281**			**Pn**	**03 12 21.5**	**+0.7**
AMKA	**Amchitka**	**3.25 271**			**Pn**	**03 12 24.1**	**+1.4**
LSNW	**Little Sitkin**	**3.76 281**			**Pn**	**03 12 30.8**	**+1.0**
CLCO	**Concord Point,**	**3.82 67**			**Pn**	**03 12 31.9**	**+1.4**
NIKH	**Nikolski High**	**4.38 67**		Pn	**Pn**	**03 12 41.1**	**+3.0**
UNV	**Unalaska Valle**	**6.00 63**		Pn	**Pn**	**03 13 03.2**	**+2.9**
DT1	**Dutton Round H**	**8.74 60**			**Pn**	**03 13 40.1**	**+2.1**
SDPT	**Sand Point**	**9.80 60**		Pn	**Pn**	**03 13 53.7**	**+1.2**
KDAK	**Kodiak Island**	**14.69 55**		Pn	**Pn**	**03 14 56.6**	**-2.7**
	1.3nm,0.3s,baz=266,slow=16,SNR=8.8						
KDAK					Sn	**Sn**	**03 17 38.6**	**-2.9**
	baz=0.0,slow=19,SNR=1.2 4.8nm,0.8s						
ILAR	**Eielson Array**	**19.95 37**		P	**P**	**03 16 02.8**	**-0.6**
	0.2nm,0.3s,baz=224,slow=9.2,SNR=16 0.3nm,0.4s						
ILAR	**Eielson Array**	**19.95 37**		P	**P**	**03 16 02.6**	**-0.8**
H11N2	**WAKE ISLAND Hy**	**34.52 210**		T	T	03 55 03.0	
	baz=18,slow=76,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**34.53 210**		T	T	03 55 01.3	
	baz=18,slow=76,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**34.54 210**		T	T	03 55 08.5	
	baz=18,slow=76,SNR=8.9						
USRK	**Ussuriysk Ar.**	**35.33 279**		P	**P**	**03 18 26.2**	**-0.5**
	1.9nm,0.6s,baz=52,slow=10.0,SNR=6.1 1.9nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**35.73 210**		T	T	03 56 53.0	
	baz=18						
H11S2	**WAKE ISLAND Hy**	**35.74 210**		T	T	03 56 57.8	
	baz=18,slow=74						
H11S3	**WAKE ISLAND Hy**	**35.75 210**		T	T	03 57 08.9	
	baz=18,slow=74						
MJAR	**Matsushiro Arr**	**35.84 264**		P	**P**	**03 18 31.7**	**+0.6**
	0.6nm,0.5s,baz=49,slow=9.6,SNR=2.0 0.6nm,0.5s						
NVAR	**Mina Array Bea**	**41.49 85**		P	**P**	**03 19 20.8**	**+2.0**
	0.1nm,0.4s,baz=313,slow=7.7,SNR=1.8 0.1nm,0.4s						
KSRS	**Korea Array**	**41.70 273**		P	**P**	**03 19 22.8**	**+2.6**
	0.8nm,0.7s,baz=50,slow=6.8,SNR=2.9 0.8nm,0.7s						
PDAR	**Pinedale Array**	**44.32 74**		P	**P**	**03 19 42.5**	**+0.8**
	0.7nm,0.6s,baz=309,slow=3.8,SNR=7.8 0.7nm,0.6s						
PDAR	**Pinedale Array**	**44.32 74**		P	P	**03 19 42.3**	**+0.6**
SONM	**Songino Array**	**48.46 298**		P	**P**	**03 20 14.5**	**+0.5**
	0.2nm,0.4s,baz=76,slow=7.6,SNR=1.6 0.2nm,0.4s						
TXAR	**Lajitas Array**	**56.60 84**		P	**P**	**03 21 14.7**	**+0.1**
	0.2nm,0.5s,baz=299,slow=6.4,SNR=4.9 0.2nm,0.5s						
TXAR	**Lajitas Array**	**56.60 84**		P	**P**	**03 21 14.9**	**+0.4**
KURK	**Kurchatov**	**60.47 315**		P	**P**	**03 21 40.4**	**-0.6**
KURBB	**Kurchatov Arra**	**60.57 315**		P	**P**	**03 21 40.6**	**-1.1**
	0.8nm,0.4s,baz=43,slow=6.7,SNR=7.1 0.8nm,0.4s						
MKAR	**Makanchi Array**	**61.60 310**		P	**P**	**03 21 47.1**	**-1.8**
	0.6nm,1.0s,baz=64,slow=4.6,SNR=1.6 0.6nm,1.0s						
MKAR	**Makanchi Array**	**61.60 310**		P	**P**	**03 21 47.4**	**-1.5**
BVAR	**Borovoye Array**	**62.17 321**		P	**P**	**03 21 51.3**	**-1.2**
	1.0nm,0.4s,baz=39,slow=5.9,SNR=6.9 1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**73.06 278**		P	**P**	**03 23 02.1**	**+0.4**
	1.3nm,0.3s,baz=44,slow=7.9,SNR=1.4 1.3nm,0.3s						
H03N2	**Juan Fernandez**	**119.18 108**		T	T	05 41 42.1	
	baz=316						
H03N1	**Juan Fernandez**	**119.19 108**		T	T	05 41 43.5	
	baz=316						
H03N3	**Juan Fernandez**	**119.20 108**		T	T	05 41 43.5	
	baz=316						
BOSA	**Boshof**	**152.41 318**		PKPbc	**PKPbc**	**03 31 27.2**	**-0.3**
	0.8nm,0.6s,baz=336,slow=3.8,SNR=1.3						

*RSNC **24** 03:15:15.6±0.0,9˚N±1˚×7˚7W±˚,h33km±6km,M2.9,mb3.8, ML2.6*

ISC 24 03:15:15.4±1.5,**9˚13N**±0˙04×**77˚35W**±0˙05,**h34**km±3km, **n30**,σ1§**52**/50,**Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPC	**Capurgana**	**0.49 180**		P	**Pb**	**03 15 25.3**	**-0.5**
CAPC				S	**Sb**	**03 15 32.3**	**-0.7**
LCBC	**Los crdobas,**	**1.01 105**		P	**Pb**	**03 15 34.6**	**+0.2**
LCBC				S	**Sn**	**03 15 47.0**	**+0.8**
PTAC	**Punta Ardita,**	**2.02 193**		P	**Pn**	**03 15 46.1**	**-1.0**
PTAC				S	**Sn**	**03 16 11.2**	**+0.1**
UREC	**San Jos de Ur**	**2.26 127**		P	**Pn**	**03 15 52.4**	**+2.0**
UREC				S	**Sn**	**03 16 16.6**	**-0.5**
SJCC	**San Jacinto, C**	**2.27 70**		P	**Pn**	**03 15 51.2**	**+0.5**
SJCC				S	**Sn**	**03 16 17.3**	**-0.3**
DBBC	**Dabeiba**	**2.38 152**		P	**Pn**	**03 15 51.8**	**-0.3**
DBBC				S	**Sn**	**03 16 17.6**	**-2.6**
BCIP	**Isla Barro Col**	**2.46 271**		P	**Pn**	**03 15 52.6**	**-0.5**
BCIP				S	**Sn**	**03 16 20.5**	**-1.5**
ARGC	**Ariguani, Magd**	**3.15 76**		P	**Pn**	**03 16 03.4**	**+0.8**
ARGC				S	**Sn**	**03 16 38.2**	**-0.9**
HELC	**Santa Helena**	**3.43 148**		P	**Pn**	**03 16 07.9**	**+1.1**
HELC				S	**Sn**	**03 16 45.1**	**-1.4**
CBOC	**Ciudad Bolivar**	**3.50 158**		P	**Pn**	**03 16 09.4**	**+1.7**
CBOC				S	**Sn**	**03 16 49.6**	**+1.6**
SMRC	**Santa Marta, M**	**3.68 56**		P	**Pn**	**03 16 09.7**	**-0.3**
SMRC				S	**Sn**	**03 16 52.5**	**+0.2**
PTBC	**PUERTO BERRIO,**	**3.85 132**		P	**Pn**	**03 16 13.0**	**+0.7**
PTBC				S	**Sn**	**03 16 54.1**	**-2.3**
OCAC	**Ocana**	**4.08 102**		P	**Pn**	**03 16 15.3**	**-0.3**
OCAC				S	**Sn**	**03 17 01.1**	**-1.2**
BRJC	**Barrancabermej**	**4.16 121**		P	**Pn**	**03 16 19.5**	**+2.9**
BRJC				S	**Sn**	**03 17 03.0**	**-1.1**
GUY2C	**Guyana, Caldas**	**4.35 153**		P	**Pn**	**03 16 20.5**	**+0.9**
CRJC	**Cerrejon, Guaj**	**4.79 66**		P	**Pn**	**03 16 25.0**	**-0.3**
CRJC				S	**Sn**	**03 17 16.2**	**-3.4**
BARC	**Barichara**	**4.83 121**		P	**Pn**	**03 16 29.6**	**+3.5**
BARC				S	**Sn**	**03 17 20.1**	**-1.0**
PAMC	**Pamplona, Colo**	**4.93 111**		P	**Pn**	**03 16 29.0**	**+1.4**
PAMC				S	**Sn**	**03 17 22.0**	**-1.8**
RUSC	**La Rusia**	**5.31 127**		P	**Pn**	**03 16 33.2**	**+0.4**
	1.7nm,0.7s						
RUSC				S	**Sn**	**03 17 30.9**	**-2.3**
	1.7nm,0.7s						
URIC	**Uribia, Colomb**	**5.86 64**		P	**Pn**	**03 16 40.0**	**+0.1**
	18nm,0.5s						
URIC				S	**Sn**	**03 17 43.8**	**-2.2**
	18nm,0.5s						
SDV	**Santo Domingo**	**6.64 92**		P	**Pn**	**03 16 49.3**	**-1.5**
SDV				S	**Sn**	**03 18 03.4**	**-2.1**
CHIV	**Chivirico**	**10.83 5**		*i* P	**Pn**	**03 17 48.4**	**+0.3**
LMGC	**Las Mercedes**	**10.88 2**		*i* P	**Pn**	**03 17 49.2**	**+0.4**
MARVS	**Santiago de Cu**	**10.90 7**		*i* P	**Pn**	**03 17 49.8**	**+0.7**
RCC	**Rio Carpintero**	**10.92 8**		*i* P	**Pn**	**03 17 50.3**	**+0.9**
GTBY	**Guantanamo Bay**	**10.96 11**		*i* P	**Pn**	**03 17 51.8**	**+2.0**
QMBU	**Quimbuelo**	**11.28 12**		*i* P	**Pn**	**03 17 56.0**	**+1.7**
MASC	**Masc**	**11.39 15**		*i* P	**Pn**	**03 17 56.3**	**+0.5**
PINC	**Pinares de May**	**11.40 7**		*i* P	**Pn**	**03 17 55.5**	**-0.4**
HLGC	**Holguin**	**11.76 6**		*i* P	**Pn**	**03 18 03.2**	**+2.3**

IDC 24 03:21:01.9±4.1,**10˙64S×166˙66E,h0km,mb4.0/5, mbtmp3.9/5,MS4.3/2,Error ellipse: s-maj=176.6km s-min=30.7km az=137.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.72 280**		LR	LR	03 25 30.5	
	comp=Z,467nm,18.9s,baz=197,slow=40						
WRA	**Warramunga Arr**	**32.47 250**		P	P	03 27 33.1	-1.2
	1.3nm,0.8s,baz=78,slow=9.1,SNR=5.1 1.3nm,0.8s						
ASAR	**Alice Springs**	**33.78 243**		P	P	03 27 46.2	+0.4
	1.6nm,0.8s,baz=74,slow=9.4,SNR=17 1.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.36 255**		P	P	03 28 42.5	+0.7
	3.5nm,0.7s,baz=103,slow=8.2,SNR=3.0 3.5nm,0.7s						
KDAK	**Kodiak Island**	**75.87 21**		LR	LR	03 59 53.6	
	comp=Z,833nm,21.1s,baz=89,slow=31						
ILAR	**Eielson Array**	**82.84 18**		P	P	03 33 28.0	+0.1
	0.5nm,0.8s,baz=235,slow=5.5,SNR=4.9 0.5nm,0.8s						
MKAR	**Makanchi Array**	**93.84 317**		P	P	03 34 20.9	-0.4
	0.4nm,0.7s,baz=82,slow=5.2,SNR=1.8 0.4nm,0.7s						

*REY **24** 04:22:53.6,64˙62N×17˙42W,h0km*
*IDC **24** 04:22:54.9±0.7,64˙61N×17˙60W,h0km,mb3.7/14, mbtmp3.7/18,ML2.4/3,Error ellipse: s-maj=23.1km s-min=11.6km az=12.0*

ISC 24 04:22:55.7±0.5,**64˙62N**±0˙02×**17˙45W**±0˙02,**h10**km,**n51**, σ2§**05**/79,**mb3.6**/13,**Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKIS	**Kista**	**0.07 317**		P	**Pg**	**04 22 55.7**	**-2.5**
IKIS				S	**Sg**	**04 22 58.1**	**-1.8**
IVON	**Vonarskard**	**0.14 292**		P	**Pg**	**04 22 57.3**	**-1.8**
IVON				S	**Sg**	**04 23 00.7**	**-0.7**
IDYN	**Dyngjuhals**	**0.17 11**		P	**Pg**	**04 22 57.7**	**-1.8**
IDYN				S	**Sg**	**04 23 01.1**	**-1.1**
IURH	**Urdarhals**	**0.24 33**		P	**Pg**	**04 22 59.1**	**-1.6**
IBJK	**Bruarjokull**	**0.34 117**		S	**Sg**	**04 23 05.6**	**-1.4**
IBJK				P	**Pg**	**04 23 00.4**	**-2.1**
IHUS	**Husbondi**	**0.34 196**		P	**Pg**	**04 23 00.6**	**-1.9**
IHUS				S	**Sg**	**04 23 06.3**	**-0.7**
ISKR	**Skrokkalda**	**0.41 262**		P	**Pg**	**04 23 02.5**	**-1.3**
ISKR				S	**Sg**	**04 23 08.4**	**-0.8**
IJOK	**Jokulheimar**	**0.46 228**		P	**Pg**	**04 23 02.6**	**-2.0**
IJOK				S	**Sg**	**04 23 09.6**	**-1.0**
THOR	**Thorvaldshraun**	**0.46 46**		P	**Pg**	**04 23 02.1**	**-2.5**
THOR				S	**Sg**	**04 23 09.5**	**-1.2**
IKRE	**Kreppuhraun**	**0.49 70**		P	**Pg**	**04 23 02.7**	**-2.5**
IKRE				S	**Sg**	**04 23 10.8**	**-0.8**
IMKO	**Mokollar**	**0.59 52**		P	**Pg**	**04 23 04.8**	**-2.5**
IMKO				S	**Sg**	**04 23 13.9**	**-1.2**
IIEY	**Innrieyrar**	**0.60 209**		P	**Pg**	**04 23 04.8**	**-2.7**
IIEY				S	**Sg**	**04 23 13.7**	**-1.7**
IKSK	**Karasker**	**0.63 137**		P	**Pg**	**04 23 04.9**	**-2.9**
IKSK				S	**Sg**	**04 23 13.9**	**-2.1**
IHAE	**Haedir**	**0.63 161**		P	**Pg**	**04 23 04.8**	**-3.1**
IHAE				S	**Sg**	**04 23 14.7**	**-1.4**
IKAL	**Kalfafell**	**0.68 189**		P	**Pg**	**04 23 06.2**	**-2.7**
IKAL				S	**Sg**	**04 23 16.2**	**-1.6**
IFAL	**Falljokull**	**0.72 157**		P	**Pg**	**04 23 06.7**	**-2.9**
IFAL				S	**Sg**	**04 23 17.3**	**-1.6**
ISVA	**Svartarkot**	**0.72 6**		P	**Pg**	**04 23 07.2**	**-2.5**
ISVA				S	**Sg**	**04 23 17.6**	**-1.6**
IVSH	**V-Sauoahnukur**	**0.76 75**		P	**Pg**	**04 23 07.4**	**-3.0**
IVSH				S	**Sg**	**04 23 19.1**	**-1.2**
IVAT	**Vatnsfell**	**0.77 236**		P	**Pg**	**04 23 08.3**	**-2.3**
IVAT				S	**Sg**	**04 23 19.8**	**-0.9**
SLET	**Slettubjorg**	**0.77 152**		P	**Pg**	**04 23 08.0**	**-2.6**
SLET				S	**Sg**	**04 23 19.5**	**-1.2**
IKVI	**Kvisker**	**0.78 145**		P	**Pg**	**04 23 07.6**	**-3.1**
IKVI				S	**Sg**	**04 23 19.1**	**-1.8**
IFAG	**Fagurholsmyri**	**0.82 155**		P	**Pg**	**04 23 08.8**	**-2.8**
IFAG				S	**Sg**	**04 23 20.7**	**-1.6**
IADA	**Aoalbol**	**0.90 63**		P	**Pg**	**04 23 09.5**	**-3.4**
IADA				S	**Sg**	**04 23 22.9**	**-1.7**
ISTE	**Stelbrattur**	**0.96 285**		P	**Pg**	**04 23 10.8**	**-3.5**
ISTE				S	**Sg**

IKIS	**Kista**	**0.08**	**314**	P	**Pg**	**04 28 40.8**	**-1.8**
IKIS				S	**Sg**	**04 28 42.5**	**-1.9**
IVON	**Vonarskard**	**0.15**	**292**	P	**Pg**	**04 28 42.1**	**-1.5**
IVON				S	**Sg**	**04 28 45.4**	**-0.6**
IDYN	**Dyngjuhals**	**0.18**	**8**	P	**Pg**	**04 28 42.5**	**-1.4**
IDYN				S	**Sg**	**04 28 47.4**	**+0.8**
IGRF	**Grimsfjall**	**0.22**	**162**	P	**Pg**	**04 28 43.4**	**-1.4**
IGRF				S	**Sg**	**04 28 46.8**	**-1.1**
IURH	**Urdarhals**	**0.24**	**30**	P	**Pg**	**04 28 43.5**	**-1.5**
IURH				S	**Sg**	**04 28 48.2**	**-0.1**
IBJK	**Bruarjokull**	**0.33**	**117**	P	**Pg**	**04 28 45.1**	**-1.5**
IBJK				S	**Sg**	**04 28 49.8**	**-1.2**
IHUS	**Husbondi**	**0.34**	**197**	P	**Pg**	**04 28 45.5**	**-1.3**
IHUS				S	**Sg**	**04 28 51.6**	**+0.2**
ISKR	**Skrokkalda**	**0.42**	**263**	P	**Pg**	**04 28 46.9**	**-1.4**
ISKR				S	**Sg**	**04 28 53.1**	**-0.7**
THOR	**Thorvaldshraun**	**0.45**	**45**	P	**Pg**	**04 28 47.4**	**-1.5**
THOR				S	**Sg**	**04 28 54.1**	**-0.8**
IJOK	**Jokulheimar**	**0.46**	**229**	P	**Pg**	**04 28 47.1**	**-1.9**
IJOK				S	**Sg**	**04 28 54.5**	**-0.6**
IKRE	**Kreppuhraun**	**0.48**	**69**	P	**Pg**	**04 28 47.6**	**-1.8**
IKRE				S	**Sg**	**04 28 54.9**	**-0.8**
IMKO	**Mokollar**	**0.59**	**52**	P	**Pg**	**04 28 49.6**	**-1.9**
IMKO				S	**Sg**	**04 28 58.6**	**-0.6**
IIEY	**Innrieyrar**	**0.61**	**210**	P	**Pg**	**04 28 49.6**	**-2.2**
IIEY				S	**Sg**	**04 28 58.9**	**-0.9**
IKSK	**Karasker**	**0.62**	**138**	P	**Pg**	**04 28 49.5**	**-2.5**
IKSK				S	**Sg**	**04 28 58.6**	**-1.5**
IKAL	**Kalfafell**	**0.68**	**190**	P	**Pg**	**04 28 51.0**	**-2.2**
IKAL				S	**Sg**	**04 29 01.2**	**-0.9**
IFAL	**Falljokull**	**0.71**	**158**	P	**Pg**	**04 28 51.5**	**-2.4**
IFAL				S	**Sg**	**04 29 01.9**	**-1.2**
ISVA	**Svartarkot**	**0.73**	**6**	P	**Pg**	**04 28 51.6**	**-2.5**
ISVA				S	**Sg**	**04 29 02.6**	**-0.9**
IVSH	**V-Sauoahnukur**	**0.75**	**75**	P	**Pg**	**04 28 52.3**	**-2.3**
IVSH				S	**Sg**	**04 29 03.4**	**-1.0**
SLET	**Slettubjorg**	**0.77**	**153**	P	**Pg**	**04 28 52.7**	**-2.1**
SLET				S	**Sb**	**04 29 04.5**	**-1.5**
IKVI	**Kvisker**	**0.77**	**145**	P	**Pg**	**04 28 52.2**	**-2.7**
IKVI				S	**Sg**	**04 29 03.4**	**-1.5**
IVAT	**Vatnsfell**	**0.78**	**237**	P	**Pg**	**04 28 52.8**	**-2.2**
IVAT				S	**Sg**	**04 29 04.8**	**-0.4**
IFAG	**Fagurholsmyri**	**0.82**	**155**	P	**Pg**	**04 28 53.4**	**-2.4**
IFAG				S	**Sg**	**04 29 05.7**	**-0.7**
IADA	**Aoalbol**	**0.89**	**62**	P	**Pg**	**04 28 54.2**	**-2.9**
IADA				S	**Sg**	**04 29 06.8**	**-1.8**
ISTE	**Stelbrattur**	**0.97**	**285**	P	**Pg**	**04 28 55.8**	**-3.0**
IMEL	**Melhnausar**	**1.01**	**18**	P	**Pg**	**04 28 56.7**	**-2.8**
IMEL				S	**Sg**	**04 29 11.3**	**-1.3**
IREN	**Reynihlio**	**1.06**	**12**	P	**Pg**	**04 28 57.2**	**-3.1**
IREN				S	**Sg**	**04 29 12.6**	**-1.5**
ISLY	**Slysaalda**	**1.09**	**224**	P	**Pg**	**04 28 58.2**	**-2.8**
ISLY				S	**Sg**	**04 29 13.2**	**-1.8**
IHES	**Hestalda**	**1.09**	**239**	P	**Pg**	**04 28 58.2**	**-2.8**
IKVO	**Krokottuvotn**	**1.12**	**12**	P	**Pb**	**04 28 58.5**	**-3.1**
IRJU	**Rjupnafell**	**1.14**	**209**	P	**Pb**	**04 28 59.2**	**-2.7**
IGRS	**Grimsstaoir**	**1.16**	**28**	P	**Pb**	**04 28 59.1**	**-3.1**
IGRS				S	**Sb**	**04 29 15.9**	**-1.4**
IAUS	**Austmannsbunga**	**1.20**	**218**	P	**Pb**	**04 29 00.0**	**-2.8**
JMIC	**Jan Mayen** comp=Z,182nm,20.4s,baz=304,slow=30	**7.22**	**24**	LR	LR	04 32 19.9	
EKA	**Eskdalemuir Ar** baz=319,slow=13 1.3nm,0.6s	**11.70**	**136**	Pn	**Pn**	**04 31 27.5**	**+0.7**
GERES	**GERESS Array B** 0.4nm,0.8s,baz=349,slow=9.5,SNR=4.9 0.4nm,0.8s	**22.90**	**119**	P	**P**	**04 33 44.2**	**+0.5**
ESDC	**Sonseca Array** 0.6nm,0.8s,baz=344,slow=11,SNR=1.8 0.6nm,0.8s	**26.20**	**156**	P	**P**	**04 34 16.7**	**+2.1**
BRTR	**Keskin Array B** 0.7nm,0.9s,baz=331,slow=8.6,SNR=2.9 0.7nm,0.9s	**38.44**	**105**	P	**P**	**04 36 04.3**	**+2.6**
BVAR	**Borovoye Array** 0.3nm,0.4s,baz=350,slow=7.5,SNR=2.8 0.3nm,0.4s	**43.19**	**62**	P	**P**	**04 36 42.7**	**+2.1**
ILAR	**Eielson Array** 0.4nm,0.9s,baz=40,slow=8.0,SNR=4.4 0.4nm,0.9s	**45.74**	**332**	P	**P**	**04 37 02.8**	**+2.0**
KURBB	**Kurchatov Arra** 0.7nm,0.5s,baz=328,slow=6.5,SNR=2.3 0.7nm,0.5s	**48.15**	**58**	P	**P**	**04 37 21.6**	**+1.8**
TORD	**Torodi Ar. Bea** 2.1nm,0.4s,baz=349,slow=9.2,SNR=2.9 2.1nm,0.4s	**53.08**	**156**	P	**P**	**04 37 58.1**	**+0.7**
PDAR	**Pinedale Array** 0.5nm,0.9s,baz=21,slow=7.8,SNR=3.5 0.5nm,0.9s	**53.23**	**293**	P	**P**	**04 37 59.5**	**+1.0**

DJA 24 04:28:54.5±0.6,1°S:4°×9°8E±°,h10km,M4.0/10,mb4.4/2,MLv3.7/10,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.31**	**108**	P	Pn	04 29 19.0	+0.1
SISI				S	Sb	04 29 36.0	-0.1
GSI	**Gunungsitoli**	**2.23**	**353**	P	Pn	04 29 31.4	-0.2
MNSI	**Mandailing Nat**	**2.44**	**45**	P	Pn	04 29 34.5	0.0
PPI	**Padang Panjang**	**2.60**	**80**	P	Pn	04 29 36.3	-0.3
PDSI	**Padang**	**2.62**	**90**	P	Pn	04 29 37.0	0.0
SBSI	**Sibolga**	**2.68**	**23**	P	Pn	04 29 39.2	+1.5
PPSI	**Pulau Pagai**	**2.83**	**130**	P	Pn	04 29 39.5	-0.3
SNSI	**Sinabang, Aceh**	**3.65**	**335**	P	Pn	04 29 51.3	+0.3

*BEO **24** 04:32:10.5±0.8, 40°.23N×19°.37E, h0km, ML2.8/3*
*TIR **24** 04:32:10.6, 40°.31N×19°.60E, h37km, Ml2.5/4*
*THE **24** 04:32:12.5, 40°N±2°×2°.0E±°, h3km±5km, M2.7/10, MLh2.7/10*

ISC 24 04:32:11.7±1.0, 40°.28N±0°.03×19°.58E±0°.04, h16km±8km, n35, σ1°11/48, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.20**	**340**	P	**Pg**	**04 32 16.6**	**+0.1**
VLO				Sg	**Sb**	**04 32 21.6**	**+1.0**
VLO				AML	AML	04 32 23.6	
	28nm,0.3s						
VLO	**Vlora**	**0.20**	**340**	P	**Pg**	**04 32 16.4**	**0.0**
LFKM	**Lefkimmi**	**0.91**	**156**	P	**Pn**	**04 32 30.0**	**+0.1**
LFKM				S	**Sn**	**04 32 42.5**	**-0.1**
IGT	**Igoumenitsa**	**0.94**	**142**	Pg	**Pb**	**04 32 29.2**	**-0.6**
IGT				S	**Sg**	**04 32 42.8**	**+0.4**
IGT				AML	AML	04 32 47.6	
	0.7nm,0.3s						
IGT	**Igoumenitsa**	**0.94**	**142**	P	**Pb**	**04 32 30.0**	**+0.2**
IGT				S	**Sn**	**04 32 43.2**	**-0.3**
KBN	**Korca**	**0.98**	**69**	P	**Pb**	**04 32 29.9**	**-0.6**
KBN				Sg	**Sb**	**04 32 42.1**	**-1.1**
KBN	**Korca**	**0.98**	**69**	P	**Pb**	**04 32 30.0**	**-0.4**
TIR	**Tirane**	**1.09**	**11**	Pg	**Pb**	**04 32 32.2**	**0.0**
TIR				Sg	**Sg**	**04 32 47.0**	**0.0**
TIR				AML	AML	04 32 54.5	
	0.3nm,0.5s						
NEST	**Nestorio**	**1.13**	**83**	Pg	**Pb**	**04 32 31.4**	**-1.5**
NEST				Sg	**Sn**	**04 32 48.8**	**+0.6**
NEST				AML	AML	04 32 52.5	
	0.3nm,0.4s						
NEST	**Nestorio**	**1.13**	**83**	P	**Pn**	**04 32 33.0**	**0.0**
JAN	**Janina**	**1.16**	**122**	P	**Pb**	**04 32 33.7**	**+0.4**
JAN				S	**Sg**	**04 32 50.0**	**+0.8**
PENT	**Pentalofos**	**1.19**	**94**	P	**Pg**	**04 32 34.4**	**-0.3**
OHR	**Ohrid**	**1.24**	**48**	*i* Pn	**Pg**	**04 32 35.7**	**0.0**
OHR				*i* Sn	**Sg**	**04 32 52.7**	**+0.8**
PRMD	**Pramanda**	**1.39**	**122**	P	**Pb**	**04 32 37.7**	**+0.4**
PHP	**Peshkopia**	**1.55**	**25**	P	**Pn**	**04 32 38.8**	**+0.1**
PHP				Sn	**Sn**	**04 32 58.1**	**-0.4**
PHP	**Peshkopia**	**1.55**	**25**	P	**Pb**	**04 32 39.6**	**-0.4**
TETR	**Tetrakomo, Epi**	**1.60**	**125**	P	**Pb**	**04 32 41.1**	**+0.1**
TETR				S	**Sg**	**04 33 02.2**	**-1.2**
SDA	**Shkodra**	**1.77**	**358**	Pn	**Pn**	**04 32 41.8**	**+0.1**
SDA				Sn	**Sn**	**04 33 04.1**	**+0.2**
DRME	**Dracevica, Mon**	**1.93**	**351**	*e*Pg	**Pn**	**04 32 43.3**	**-0.6**
NOCI	**Noci**	**1.99**	**286**	Pn	**Pn**	**04 32 44.5**	**-0.2**
PDG	**Podgorica**	**2.16**	**354**	*e*Pn	**Pn**	**04 32 47.8**	**+0.7**
PDG				*e*Sg	**Sg**	**04 33 21.1**	**-0.2**
PVY	**Plav**	**2.33**	**7**	*e*Pn	**Pn**	**04 32 49.9**	**+0.4**
KOME	**Kolasin**	**2.57**	**359**	*e*Pn	**Pn**	**04 32 53.6**	**+0.8**
BEY	**Berane**	**2.60**	**5**	*e*Pn	**Pn**	**04 32 54.1**	**+0.9**
TREB	**Trebinje**	**2.60**	**340**	*e*Pn	**Pn**	**04 32 54.5**	**+1.3**
SJES	**Sjenica**	**2.99**	**5**	*e*Pn	**Pn**	**04 32 59.5**	**+0.9**
PLE	**Pljevlja**	**3.05**	**357**	*e*Pn	**Pn**	**04 33 00.3**	**+0.9**
BOSS	**Bosilegrad**	**3.11**	**44**	*e*Pn	**Pb**	**04 33 03.4**	**-3.2**
SELS	**Selova**	**3.15**	**21**	*e*Pn	**Pn**	**04 33 01.9**	**+1.1**
IVAS	**Ivanjica**	**3.32**	**7**	*e*Pn	**Pn**	**04 33 03.0**	**-0.1**
BBLS	**Lazi&#263i**	**3.58**	**358**	*e*Pn	**Pn**	**04 33 09.4**	**+2.7**
ZAPS	**Zavoj**	**3.76**	**36**	*e*Pn	**Pn**	**04 33 12.1**	**+3.0**
TRUS	**Trudelj**	**3.99**	**9**	*e*Pn	**Pn**	**04 33 15.5**	**+3.3**
BOJS	**Bojanci**	**6.11**	**330**	*e*Pn	**Pn**	**04 33 41.2**	**-0.2**
CEY	**Cerknica**	**6.63**	**327**	*e*Pn	**Pn**	**04 33 47.9**	**-0.7**

*HLW **24** 04:42:01.2, 28°.67N×34°.91E, h6km, Ml3.2*
*GII **24** 04:42:01.2±0.0, 28°.771N±0°.002×34°.453E±0°.001, h4km, Mws2.9, confirmed*
*SGS **24** 04:42:03.8, 28°.80N×34°.69E, h24km, Ml2.5*

ISC 24 04:42:02.2±1.0, 28°.76N±0°.02×34°.72E±0°.03, h13km±8km, n51, σ0°.94/52, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDHB	**Dhahab**	**0.10**	**246**	P	**Pg**	**04 42 06.4**	**+1.3**
NUB	**Nuweibaa**	**0.27**	**346**	P	**Pb**	**04 42 09.1**	**+0.1**
HAQS	**Haql**	**0.34**	**31**	P	Pn	04 42 22.4	+10
HBST	**Basata**	**0.45**	**1**	P	**Pb**	**04 42 12.8**	**+0.7**
HBST				S	**Sb**	**04 42 20.1**	**+1.3**
RSHS		**0.47**	**172**	P	**Pn**	**04 42 13.7**	**-0.9**
RSHS				S	**Sb**	**04 42 20.9**	**+1.8**
BDAS	**Al Bad`**	**0.47**	**135**	S	**Sb**	**04 42 21.0**	**+1.8**
BDAS	**Al Bad`**	**0.47**	**135**	P	**Pn**	**04 42 13.8**	**-0.9**
JMOS	**Jabal al Moall**	**0.53**	**40**	P	**Pb**	**04 42 13.8**	**+0.4**
JMOS	**Jabal al Moall**	**0.53**	**40**	S	**Sb**	**04 42 21.1**	**+0.2**
HQLS		**0.61**	**29**	P	**Pb**	**04 42 15.0**	**+0.1**
JLOS		**0.68**	**92**	P	**Pn**	**04 42 17.0**	**-0.7**
JLOS		**0.68**	**92**	S	**Sb**	**04 42 26.4**	**+1.1**
HKAT	**Jabal Katrina**	**0.68**	**250**	P	**Pn**	**04 42 17.1**	**-0.7**
AYUS	**`Aynunah**	**0.75**	**140**	P	**Pn**	**04 42 18.2**	**-0.3**
AYUS	**`Aynunah**	**0.75**	**140**	S	**Sb**	**04 42 28.7**	**+1.6**
KRABS	**KRABS**	**0.81**	**144**	P	**Pn**	**04 42 18.8**	**-0.5**
ELOT	**Eilot**	**0.84**	**15**	P	**Pn**	**04 42 19.5**	**-0.4**
EIL	**Elat**	**0.93**	**12**	P	**Pb**	**04 42 19.5**	**-0.6**
EIL	**Elat**	**0.93**	**12**	S	**Sn**	**04 42 34.8**	**+0.7**
BEOR	**Beer Ora**	**0.97**	**14**	P	**Pn**	**04 42 21.9**	**+0.3**
AQBJ	**Aqaba**	**1.00**	**17**	P	**Pn**	**04 42 21.9**	**-0.1**
TR1	**Tor 1**	**1.01**	**222**	P	**Pn**	**04 42 21.5**	**-0.7**
MBRI	**Mt Berech**	**1.04**	**9**	P	**Pn**	**04 42 22.3**	**-0.3**
MBRI	**Mt Berech**	**1.04**	**9**	P	**Pn**	**04 42 22.2**	**-0.5**
MBRI	**Mt Berech**	**1.04**	**9**	S	**Sn**	**04 42 37.7**	**+0.6**
ELFZ	**Elifaz**	**1.06**	**14**	P	**Pn**	**04 42 23.5**	**+0.7**
SAMR	**Samar**	**1.10**	**14**	P	**Pn**	**04 42 23.5**	**+0.2**
YTVT	**Yotvata**	**1.16**	**15**	P	**Pn**	**04 42 24.2**	**0.0**
MWLHS	**Almuwaylih**	**1.23**	**145**	P	**Pn**	**04 42 24.8**	**-0.3**
WTBKS	**WTBKS**	**1.25**	**123**	P	**Pg**	**04 42 25.7**	**-0.5**
HRDS	**Abu Rudays**	**1.25**	**268**	P	**Pn**	**04 42 26.7**	**+1.3**
LOTA	**Lotan**	**1.26**	**15**	P	**Pg**	**04 42 26.2**	**-0.3**
HRFI	**Mount Harif**	**1.30**	**12**	P	**Pb**	**04 42 26.0**	**-0.5**
HRFI	**Mount Harif**	**1.30**	**12**	P	**Pg**	**04 42 26.7**	**-0.5**
HRFI	**Mount Harif**	**1.30**	**12**	S	**Sn**	**04 42 45.2**	**+1.7**
KRMI	**Paran Flat**	**1.35**	**0**	P	**Pb**	**04 42 26.7**	**-0.7**
KRMI	**Paran Flat**	**1.35**	**0**	P	**Pn**	**04 42 26.4**	**-0.4**
KRMI	**Paran Flat**	**1.35**	**0**	S	**Sn**	**04 42 45.4**	**+0.7**
YAHL	**Yahel**	**1.36**	**15**	P	**Pg**	**04 42 28.1**	**-0.3**
PRNI	**Paran**	**1.60**	**9**	P	**Pn**	**04 42 30.3**	**0.0**
PRNI	**Paran**	**1.60**	**9**	P	**Pn**	**04 42 29.9**	**-0.4**
PRNI	**Paran**	**1.60**	**9**	S	**Sg**	**04 42 53.0**	**-0.8**
HSNJ	**Maan**	**1.71**	**29**	P	**Pn**	**04 42 31.2**	**-0.7**
RMNI	**Mount Ramon**	**1.83**	**1**	P	**Pn**	**04 42 34.0**	**+0.6**
ZFRI	**Zfri**	**1.83**	**12**	P	**Pb**	**04 42 34.1**	**-1.4**
ZFRI	**Zfri**	**1.83**	**12**	S	**Sg**	**04 42 59.4**	**-1.7**
HHRG	**Al Ghardaqah**	**1.84**	**214**	P	**Pb**	**04 42 34.3**	**-1.5**
ZAF	**Zafarana**	**1.97**	**286**	S	**Sg**	**04 43 03.2**	**-2.4**
KZIT	**Kziot**	**2.15**	**353**	P	**Pn**	**04 42 37.7**	**-0.2**
BIDS	**Bi'r al Bayda'**	**2.74**	**133**	P	**Pn**	**04 42 47.0**	**+1.1**
EWJHS	**Al Wajh**	**3.11**	**146**	P	**Pn**	**04 42 51.2**	**+0.2**

*IDC **24** 04:48:24.5±0.5, 22°.35S×176°.65W, h0km, mb4.3/11, mbtmp4.3/12, ML3.6/1, Error ellipse: s-maj=25.0km s-min=18.7km az=144.0*
*NEIC **24** 04:48:26.9±2.0, 22°.6S±0°.1×176°.6W±0°.1, h10km±1km, mb4.8/18, Error ellipse: s-maj=20.3km s-min=14.6km az=137.0*

ISC 24 04:48:29.1±1.5, 22°.67S±0°.07×176°.52W±0°.08, h28km±10km, n74, σ1°62/69, mb4.8/22, 7C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.68**	**191**	Sn	**Sn**	**04 51 20.0**	**-0.6**
	88nm,0.3s,baz=71,slow=22,SNR=4.6						
RAO	**Raoul Island**	**6.68**	**191**	Sn	**Sn**	**04 51 20.6**	**+0.1**
NIUE	**Niue**	**7.12**	**61**		**Pn**	**04 50 12.8**	**+1.3**
AFI	**Afiamalu**	**9.80**	**28**	Pn	**Pn**	**04 50 47.2**	**-1.2**
MARNC	**Mare, Loyalty**	**14.37**	**272**	Pn	**Pn**	**04 51 48.1**	**-2.7**
RAR	**Rarotonga** 2.2nm,0.3s,baz=268,slow=9.0,SNR=8.9	**15.61**	**88**	Pn	**Pn**	**04 52 07.5**	**+0.2**
RAR	5.5nm,0.3s,baz=305,slow=22,SNR=6.1 6.6nm,0.2s			Sn	Sn	04 54 44.2	-15
RAR	**Rarotonga** comp=Z,179nm,2.0s	**15.61**	**88**	IAmb	IAmb	04 52 11.2	
DZM	**Mont Dzumac** comp=Z,0.8nm,0.3s,baz=79,slow=17,SNR=14	**15.77**	**269**	Pn	**P**	**04 52 18.6**	**+5.5**
URZ	**Urewera** comp=Z,1.5nm,0.3s,baz=342,slow=20,SNR=9.0	**16.48**	**198**	Pn	**Pn**	**04 52 16.2**	**-2.0**
URZ				Sn	Sn	04 55 03.7	-17
	comp=Z,0.9nm,0.3s,baz=188,slow=21,SNR=6.8						
CTAO	**Charters Tower**	**34.70**	**267**		**P**	**04 55 18.4**	**+1.5**
PMG	**Port Moresby**	**37.20**	**285**		**P**	**04 55 39.6**	**+1.4**
PMG	comp=Z,22nm,1.0s			IAmb	IAmb	04 55 43.4	
STKA	**Stephens Creek** comp=Z,1.3nm,0.5s,baz=72,slow=9.4,SNR=3.6 comp=Z,1.3nm,0.5s	**38.15**	**247**	P	**P**	**04 55 45.7**	**-0.5**
COEN	**Coen**	**39.13**	**276**		**P**	**04 55 56.6**	**+2.1**
BBOO	**Buckleboo**	**42.87**	**246**	P	**P**	**04 56 23.7**	**-1.5**
BBOO	comp=Z,47nm,1.7s			IAmb	IAmb	04 57 04.7	
AS31	**Alice Springs**	**45.40**	**259**		**P**	**04 56 44.4**	**-1.2**
ASAR	**Alice Springs** comp=Z,20nm,0.8s,baz=92,slow=7.9,SNR=110	**45.41**	**259**	P	**P**	**04 56 44.9**	**-0.7**
ASAR	comp=Z,1.0nm,0.7s,baz=97,slow=3.5,SNR=3.1 comp=Z,20nm,0.8s			PcP	**PcP**	**04 58 23.5**	**-1.2**
ASAR	**Alice Springs**	**45.41**	**259**	P	**P**	**04 56 45.1**	**-0.6**
WR8	**Warramunga Arr**	**45.55**	**264**		**P**	**04 56 45.8**	**-1.0**
WRA	**Warramunga Arr** comp=Z,12nm,0.7s,baz=90,slow=5.8,SNR=132	**45.70**	**264**	P	**P**	**04 56 46.9**	**-1.1**
WRA	comp=Z,0.9nm,0.7s,baz=98,slow=3.5,SNR=4.9 comp=Z,12nm,0.7s			PcP	**PcP**	**04 58 24.3**	**-1.5**
WRA	**Warramunga Arr**	**45.70**	**264**		**P**	**04 56 47.1**	**-0.9**
FORT	**Forrest**	**49.74**	**248**	P	**P**	**04 57 17.1**	**-2.0**
KNRA	**Kununurra**	**51.92**	**267**	P	**P**	**04 57 35.0**	**-0.7**
KNRA	comp=Z,15nm,0.8s			IAmb	IAmb	04 57 37.0	
FITZ	**Fitzroy Crossi**	**54.13**	**264**	P	**P**	**04 57 51.5**	**-0.5**
SOEI	**Soe** comp=Z,45nm,1.1s	**57.96**	**273**	P	**P**	**04 58 21.1**	**+1.4**
SANI	**Sanana** comp=Z,14nm,1.0s	**59.36**	**282**	P	**P**	**04 58 28.9**	**-0.3**
MORW	**Morawa**	**60.30**	**249**	P	**P**	**04 58 32.7**	**-2.9**
EDFI	**Ende, Flores**	**60.69**	**273**	P	**P**	**04 58 39.0**	**+0.5**
TOLI2	**Tolitoli**	**65.41**	**282**	P	**P**	**04 59 10.8**	**+1.1**
TOLI2	comp=Z,5.1nm,0.9s			IAmb	IAmb	04 59 36.5	
QSPA	**South Pole Qui** comp=Z,2.1nm,0.8s,baz=347,slow=0.9,SNR=13 comp=Z,2.1nm,0.8s	**67.41**	**180**	P	**P**	**04 59 24.8**	**+2.9**
QSPA	**South Pole Qui**	**67.41**	**180**	P	P	04 59 25.1	+3.2
QSPA	comp=Z,16nm,1.8s			IAmb	IAmb	05 00 22.8	
BELA	**Belgrano 2** comp=Z,4.6nm,0.6s	**77.24**	**172**	IAmb	IAmb	05 01 46.3	
MAW	**Mawson** comp=Z,1.4nm,0.5s,baz=168,slow=9.3,SNR=1.1 comp=Z,1.4nm,0.5s	**80.00**	**200**	P	**P**	**05 00 36.7**	**+1.2**
NVAR	**Mina Array Bea** comp=Z,0.7nm,0.9s,baz=232,slow=8.6,SNR=4.6 comp=Z,0.7nm,0.9s	**81.67**	**42**	P	**P**	**05 00 45.6**	**+0.5**
NJ2	**Nanjing**	**82.31**	**309**	*e*P	**P**	**05 00 51.8**	**+3.5**
NJ2	comp=Z,13nm,0.5s			pmax	pmax		
H03S2	**Juan Fernandez** baz=246,slow=75,SNR=355	**83.64**	**124**	T	T	06 32 57.4	
H03S1	**Juan Fernandez** baz=246,slow=75,SNR=424	**83.66**	**124**	T	T	06 32 58.5	
H03S3	**Juan Fernandez** baz=246,slow=75,SNR=322	**83.66**	**124**	T	T	06 32 57.3	
H03N2	**Juan Fernandez** baz=251,slow=72,SNR=88	**83.79**	**124**	T	T	06 33 06.6	
H03N3	**Juan Fernandez** baz=251,slow=72,SNR=91	**83.79**	**124**	T	T	06 32 58.4	
H03N1	**Juan Fernandez** baz=251,slow=72,SNR=107	**83.81**	**124**	T	T	06 33 00.6	
SNAA	**Sanae** comp=Z,0.6nm,0.7s,baz=221,slow=8.7,SNR=5.8 comp=Z,0.6nm,0.7s	**85.81**	**178**	P	**P**	**05 01 05.7**	**0.0**
SNAA	**Sanae** comp=Z,11nm,1.8s	**85.81**	**178**	IAmb	IAmb	05 01 51.1	
TXAR	**Lajitas Array** comp=Z,1.2nm,0.9s,baz=222,slow=6.7,SNR=11 comp=Z,1.2nm,0.9s	**87.07**	**57**	P	**P**	**05 01 11.2**	**-1.4**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.9s,baz=205,slow=3.3,SNR=3.0 comp=Z,0.5nm,0.9s	**89.60**	**43**	P	**P**	**05 01 23.6**	**-0.8**
CCB	**Clear Creek Bu**	**89.83**	**12**	P	**P**	**05 01 24.1**	**-0.5**
CCB	comp=Z,8.0nm,1.4s			IAmb	IAmb	05 01 26.2	
ILAR	**Eielson Array** comp=Z,1.2nm,1.0s,baz=220,slow=4.7,SNR=9.0 comp=Z,1.2nm,1.0s	**90.12**	**12**	P	**P**	**05 01 25.3**	**-0.7**
XAN	**Xi'an**	**90.53**	**307**	*e*P	**P**	**05 01 32.8**	**+4.0**
J26L	**Joseph Creek**	**90.57**	**14**		**P**	**05 01 27.9**	**-0.4**
J26L	comp=Z,4.5nm,0.9s			IAmb	IAmb	05 01 29.9	
HHC	**Hu-ho-hao-te**	**91.84**	**314**	*e*P	**P**	**05 01 37.6**	**+2.8**
HHC	comp=Z,11nm,0.8s			pmax	pmax		
HHC	comp=Z,130nm,4.7s			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.3s,baz=143,slow=3.3,SNR=6.7 comp=Z,2.0nm,0.3s	**92.13**	**289**	P	**P**	**05 01 36.9**	**+0.4**
PZH	**PanZhiHua**	**92.93**	**297**	P	**P**	**05 01 41.5**	**+1.3**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.7s,baz=74,slow=3.1,SNR=2.2	**113.68**	**313**	PKiKP	**PKiKP**	**05 07 03.2**	**-1.7**
KURK	**Kurchatov**	**116.51**	**317**		**PKPdf**	**05 07 07.7**	**-2.4**
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.6s,baz=95,slow=2.3,SNR=2.7	**116.56**	**317**	PKP	**PKPdf**	**05 07 07.7**	**-2.5**
BVAR	**Borovoye Array** comp=Z,0.7nm,0.5s,baz=140,slow=1.0,SNR=5.8	**121.61**	**319**	PKP	**PKPdf**	**05 07 17.9**	**-2.0**
ARCES	**ARCESS Array B** comp=Z,1.0nm,0.7s,baz=55,slow=0.9,SNR=11	**131.29**	**350**	PKP	**PKPdf**	**05 07 36.4**	**-1.5**
FINES	**FINESS Array B** comp=Z,0.8nm,0.7s,baz=336,slow=4.2,SNR=3.7	**138.23**	**344**	PKhKP	PKPpre	05 07 38.9	
FINES	comp=Z,2.2nm,0.9s,baz=127,slow=2.9,SNR=6.1			PKP	**PKPdf**	**05 07 50.8**	**-0.3**
NOA	**NORSAR Array B** comp=Z,0.4nm,0.8s,baz=343,slow=2.3,SNR=3.3	**141.28**	**354**	PKhKP	PKPpre	05 07 48.2	
HFS	**Hagfors** comp=Z,2.0nm,0.8s,baz=83,slow=6.1,SNR=10	**141.88**	**352**	PKhKP	PKPpre	05 07 49.6	
AKASG	**Malin Array Be** comp=Z,4.7nm,0.6s,baz=43,slow=3.3,SNR=21	**145.57**	**331**	PKPbc	**PKPdf**	**05 08 03.0**	**-1.5**
KIEV	**Kiev**	**145.58**	**331**		**PKPdf**	**05 08 03.3**	**-1.2**
EKA	**Eskdalemuir Ar** comp=Z,1.1nm,0.6s,baz=322,slow=2.4,SNR=7.7	**147.00**	**7**	PKPbc	**PKPdf**	**05 08 07.4**	**+0.6**
ASF	**Jabal al Asfar** comp=Z,7.1nm,0.9s,baz=108,slow=0.9,SNR=7.6	**148.97**	**295**	PKPbc	**PKPbc**	**05 08 13.3**	**-1.6**
BRTR	**Keskin Array B** comp=Z,1.5nm,0.8s,baz=141,slow=5.4,SNR=7.2	**149.30**	**311**	PKPbc	**PKPbc**	**05 08 14.4**	**-1.2**
MMAI	**Mount Meron Ar** comp=Z,5.6nm,0.7s,baz=151,slow=3.3,SNR=7.6	**150.05**	**297**	PKPbc	**PKPbc**	**05 08 16.9**	**-0.7**
OSTC	**Ostas**	**150.43**	**343**	*e*PKP	**PKPbc**	**05 08 17.8**	**-0.1**
OSTC				*e*PKPAB	**PKPab**	**05 08 24.5**	**+0.2**
STEB	**Steborice**	**150.55**	**341**	*e*PKP	**PKPbc**	**05 08 17.7**	**-0.4**
STEB				*e*PKPAB	**PKPab**	**05 08 24.6**	**-0.2**
**

comp=Z,1.1nm,0.5s,baz=146,slow=7.2,SNR=8.1
comp=Z,1.1nm,0.5s
AKBB Malin Array Si 40.31 337 P **P** **04 58 55.5 +0.3**
AKBB IAmb IAmb 04 58 55.9
comp=Z,4.7nm,0.7s
KIEV Kiev 40.31 337 P **P** **04 58 55.4 +0.2**
KIEV IAmb IAmb 04 58 55.9
comp=Z,4.2nm,0.7s
MKAR Makanchi Array 40.53 32 P **P** **04 58 58.2 +1.0**
comp=Z,1.8nm,0.8s,baz=217,slow=8.1,SNR=9.7
comp=Z,1.8nm,0.8s
MKAR Makanchi Array 40.53 32 P **P** **04 58 57.1 0.0**
BVAR Borovoye Array 40.72 17 P **P** **04 58 59.4 +0.8**
comp=Z,1.2nm,0.7s,baz=165,slow=6.2,SNR=7.0
comp=Z,1.2nm,0.7s
KURBB Kurchatov Arra 41.54 25 P **P** **04 59 06.1 +0.8**
comp=Z,1.8nm,0.8s,baz=227,slow=8.0,SNR=12
comp=Z,1.8nm,0.8s
ARTI Arti 41.73 5 P **P** **04 59 07.2 +0.4**
ARTI IAmb IAmb 04 59 08.1
comp=Z,5.8nm,0.8s
CMAR Chiang Mai Arr 44.81 79 P **P** **04 59 32.4 +0.1**
comp=Z,1.8nm,0.3s,baz=280,slow=9.0,SNR=13
comp=Z,1.8nm,0.3s
ZALV Zalesovo Beam 46.61 26 P **P** **04 59 45.5 -0.5**
comp=Z,1.6nm,0.6s,baz=227,slow=10.0,SNR=10
comp=Z,1.6nm,0.6s
ZALV Zalesovo Beam 46.61 26 P **P** **04 59 45.1 -0.9**
CLL Collm 48.05 328 *e*P **P** **04 59 59.0 +1.7**
FINES FINESS Array B 50.18 344 P **P** **05 00 13.4 0.0**
comp=Z,1.7nm,0.6s,baz=153,slow=9.6,SNR=16
comp=Z,1.7nm,0.6s
FIA1 FINESS Array S 50.18 344 P **P** **05 00 13.4 0.0**
HFS Hagfors 53.20 337 P **P** **05 00 35.7 -0.3**
comp=Z,2.2nm,0.6s,baz=128,slow=9.6,SNR=11
comp=Z,2.2nm,0.6s
NOA NORSAR Array B 54.72 337 P **P** **05 00 46.5 -0.7**
comp=Z,0.4nm,0.7s,baz=139,slow=8.5,SNR=3.5
NOA LR LR 05 26 55.0
comp=Z,32nm,18.5s,baz=300,slow=39
comp=Z,0.4nm,0.7s
ESDC Sonseca Array 54.75 308 P **P** **05 00 47.2 -0.6**
comp=Z,0.7nm,0.9s,baz=102,slow=6.8,SNR=2.7
comp=Z,0.7nm,0.9s
ESDC Sonseca Array 54.75 308 P **P** **05 00 45.4 -2.3**
SONM Songino Array 55.28 42 P **P** **05 00 52.1 +0.6**
comp=Z,1.7nm,0.9s,baz=248,slow=8.6,SNR=7.0
comp=Z,1.7nm,0.9s
ARCES ARCESS Array B 57.17 349 P **P** **05 01 04.3 -0.2**
comp=Z,1.7nm,0.8s,baz=139,slow=7.7,SNR=3.7
comp=Z,1.7nm,0.8s
KSRS Korea Array 69.86 55 P **P** **05 02 27.6 -1.3**
comp=Z,0.8nm,0.7s,baz=278,slow=7.3,SNR=2.6
comp=Z,0.8nm,0.7s
ASAR Alice Springs 88.47 115 P **P** **05 04 09.2 -1.8**
comp=Z,0.3nm,0.5s,baz=289,slow=4.9,SNR=6.8
comp=Z,0.3nm,0.5s
NVAR Mina Array Bea 126.27 351 PKP **PKiKP** **05 10 21.2 -0.7**
comp=Z,0.1nm,0.3s,baz=0.8,slow=4.4,SNR=3.8

CATAC 24 05:23:00.1±0.3, 10°N±2°×8°4W±°, h31km±3km, M3.1/11, MLv3.1/11, Error ellipse: s-maj=6.7km s-min=3.3km az=56.5, confirmed, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TCS1	**Tacares**	**0.29**	**345**	P	Pn	05 23 09.3	+0.9
QUEP	**Quepos**	**0.33**	**170**	S	Sn	05 23 16.2	+1.7
SOCE	**Pocosol**	**0.73**	**328**	P	Pn	05 23 14.5	+0.1
SOCE	**Pocosol**	**0.73**	**328**	S	Sn	05 23 26.6	+2.0
OCHAL	**Ojochal**	**0.87**	**139**	S	Sb	05 23 29.2	+1.2
OCHAL	**Ojochal**	**0.87**	**139**	P	Pn	05 23 15.5	-0.8
TRT2	**Tortugero**	**0.93**	**31**	P	Pn	05 23 16.6	-0.5
TRT2	**Tortugero**	**0.93**	**31**	S	Sb	05 23 30.8	+1.0
COVE	**Coope Vega, Sa**	**0.97**	**350**	S	Sb	05 23 31.8	+0.8
COVE	**Coope Vega, Sa**	**0.97**	**350**	P	Pn	05 23 17.1	-0.6
DRK0	**Durika**	**1.08**	**117**	S	Sn	05 23 33.6	+0.1
DRK0	**Durika**	**1.08**	**117**	P	Pn	05 23 18.3	-1.0
CMARA	**Lajas Hojancha**	**1.21**	**283**	P	Pn	05 23 21.3	+0.3
PIRO	**Carate, Puerto**	**1.60**	**147**	P	Pn	05 23 27.4	+1.0
CDITO	**Canoas**	**1.78**	**131**	S	Sn	05 23 51.3	+1.0
CDITO	**Canoas**	**1.78**	**131**	P	Pn	05 23 29.4	+0.6
BOAB	**BOACO BROADBAN**	**3.03**	**332**	P	Pn	05 23 45.5	-0.5

*MOS **24** 05:39:43.4±0.9, 40°.68N×77°.72E, h14km, mb4.4/2, Error ellipse: s-maj=10.3km s-min=5.8km az=105.5*
*NNC **24** 05:39:44.9±1.3, 40°.86N×77°.69E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=9.1km s-min=5.8km az=172.0*
*SOME **24** 05:39:44.4, 40°.83N×77°.67E, h15km*
*KNET **24** 05:39:45.0±0.9, 40°.78N×77°.46E, h0km, ml3.8, Error ellipse: s-maj=11.0km s-min=5.8km az=66.0*
*KRNET **24** 05:39:45.1±0.1, 40°.79N×77°.57E, h21km, mb4.3*
*IDC **24** 05:39:46.9±1.8, 40°.91N×77°.97E, h0km, mb3.8/4, mbtmp3.7/9, ML2.7/4, MS2.9/4, Error ellipse: s-maj=23.4km s-min=16.9km az=143.0*
ISC 24 05:39:48.2±1.2, 40°.97N±0°.03×77°.57E±0°.03, h10km±8km, n103, σ1§78/158, mb3.8/5, 43C-29D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.78**	**13**	⇑*iP*	**Pg**	**05 40 03.0**	**-0.3**
TARG				⇑*iS*	**Sb**	**05 40 16.0**	**+1.0**
TARG	**Taragay, Kyrgy**	**0.78**	**13**	*i* PG	**Pg**	**05 40 03.0**	**-0.3**
TARG				S	**Sb**	**05 40 16.0**	**+1.0**
KDJ	**Kajisay**	**1.20**	**346**	⇑*iP*	**Pn**	**05 40 10.2**	**-1.0**
KDJ				⇑*iS*	**Sn**	**05 40 28.5**	**+0.8**
KDJ	**Kajisay**	**1.20**	**346**	*i* PG	**Pn**	**05 40 10.2**	**-1.0**
JNKS	**Jany-Kuch**	**1.45**	**274**	⇑*iP*	**Pn**	**05 40 12.3**	**-2.5**
JNKS				⇑*iS*	**Sn**	**05 40 31.9**	**-2.2**
ULHL	**Ulahol**	**1.62**	**322**	⇓P	**Pb**	**05 40 18.0**	**-0.4**
ULHL	52nm,0.2s,SNR=22			⇓S	**Sg**	**05 40 42.2**	**+1.9**
ULHL	**Ulahol**	**1.62**	**322**	⇓*iP*	**Pn**	**05 40 17.1**	**+0.1**
ULHL	63nm,0.2s			⇓*iS*	**Sg**	**05 40 40.6**	**+0.3**
ULHL	**Ulahol**	**1.62**	**322**	*i* PN	**Pn**	**05 40 17.1**	**+0.1**
ULHL				S	**Sg**	**05 40 40.6**	**+0.3**
PRZ	**Przheval'sk**	**1.64**	**22**	⇑*iP*	**Pb**	**05 40 17.7**	**-0.9**
PRZ				⇑*iS*	**Sg**	**05 40 41.8**	**+1.0**
PRZ	**Przheval'sk**	**1.64**	**22**	*i* PN	**Pb**	**05 40 17.7**	**-0.9**
PRZ				S	**Sg**	**05 40 41.8**	**+1.0**
KSH	**Kashi**	**1.90**	**221**	Pn	**Pg**	**05 40 24.8**	**+0.3**
KSH				Sn	**Sg**	**05 40 55.4**	**+6.3**
KSH	comp=N,1μm,0.8s			smax	smax		
KSH	comp=E,190nm,1.0s			smax	smax		
BOOM	**Boomskoye usch**	**1.95**	**322**	⇑*iP*	**Pn**	**05 40 21.7**	**+0.2**
BOOM				⇑*iS*	**Sb**	**05 40 48.5**	**+0.1**
BOOM	**Boomskoye usch**	**1.95**	**322**	*i* PN	**Pn**	**05 40 21.9**	**+0.4**
BOOM				S	**Sb**	**05 40 48.5**	**+0.1**
TNSS	**Tian-Shan**	**2.12**	**348**	Pg	**Pb**	**05 40 26.2**	**-0.7**
TNSS	comp=E,48nm,0.7s			Lg	Lg	05 40 57.7	
TNSS	**Tian-Shan**	**2.12**	**348**	*e*P	**Pb**	**05 40 27.0**	**+0.1**
TNSS	comp=E,48nm,0.7s			*e*S	**Sg**	**05 40 58.2**	**+1.9**
MDOK	**Medeo**	**2.23**	**350**	Pg	**Pb**	**05 40 27.6**	**-1.1**
MDOK	comp=E,124nm,0.5s			Lg	Lg	05 40 59.0	
KOTS	**Kotyrbulak**	**2.29**	**352**	Pg	**Pb**	**05 40 28.7**	**-1.0**
KOTS	comp=E,94nm,0.2s			Lg	Lg	05 41 02.6	
KOTS	**Kotyrbulak**	**2.29**	**352**	*e*P	**Pb**	**05 40 30.5**	**+0.8**
KOTS	comp=E,94nm,0.2s			*e*S	**Sg**	**05 41 04.0**	**+2.2**
AAA	**Alma-Ata**	**2.29**	**348**	*e*P	**Pg**	**05 40 31.3**	**-0.8**
AAA	comp=E,340nm,0.3s			*e*S	**Sg**	**05 41 04.8**	**+2.9**
KNDC	**Almaty**	**2.29**	**349**	⇑Pg	**Pg**	**05 40 30.9**	**-1.3**
KNDC	comp=E,467nm,0.8s			⇑Lg	Lg	05 41 04.1	
MTBS	**Maitube**	**2.32**	**339**	Pg	**Pb**	**05 40 28.9**	**-1.3**
MTBS	comp=E,116nm,0.6s			Lg	Lg	05 41 01.4	
MTBS	**Maitube**	**2.32**	**339**	*e*P	**Pb**	**05 40 30.7**	**+0.5**
MTBS	comp=E,116nm,0.6s			*e*S	**Sg**	**05 41 04.4**	**+1.6**
KST	**Kastek**	**2.40**	**331**	Pg	**Pb**	**05 40 30.1**	**-1.4**
KST	comp=E,166nm,0.5s			Lg	Lg	05 41 03.5	
KST	**Kastek**	**2.40**	**331**	*e*P	**Pb**	**05 40 32.2**	**+0.7**
KST	comp=E,166nm,0.5s			*e*S	**Sg**	**05 41 06.5**	**+1.3**
UZB	**Uzynbulak**	**2.43**	**26**	Pg	**Pn**	**05 40 29.5**	**+1.3**
UZB	comp=E,285nm,0.5s			Lg	Lg	05 41 02.1	
UZB	**Uzynbulak**	**2.43**	**26**	*e*P	**Pb**	**05 40 32.2**	**+0.1**
UZB	comp=E,285nm,0.5s			*e*S	**Sg**	**05 41 06.7**	**+0.4**
TKM2	**Tokmak 2**	**2.44**	**324**	⇑P	**Pb**	**05 40 30.3**	**-2.0**
TKM2	comp=E,24nm,0.2s,SNR=21			⇑S	**Sg**	**05 41 06.5**	**-0.3**
TKM2	**Tokmak 2**	**2.44**	**324**	⇑*i*P	**Pn**	**05 40 28.8**	**+0.4**
TKM2	comp=E,103nm,0.3s			⇑*i*S	**Sn**	**05 41 00.4**	**+1.9**
TKM2	**Tokmak 2**	**2.44**	**324**	*i* PN	**Pn**	**05 40 28.8**	**+0.4**
TKM2				S	**Sn**	**05 41 00.4**	**+1.9**
KBK	**Karagaybulak**	**2.59**	**312**	⇓P	**Pb**	**05 40 32.6**	**-2.1**
KBK	comp=E,139nm,0.5s,SNR=60			⇓S	**Sg**	**05 41 09.7**	**-1.6**
KBK	**Karagaybulak**	**2.59**	**312**	⇓*i*P	**Pn**	**05 40 30.3**	**0.0**
KBK	comp=E,242nm,0.3s			⇓*i*S	**Sn**	**05 41 03.2**	**+1.3**
KBK	**Karagaybulak**	**2.59**	**312**	*i* PN	**Pn**	**05 40 30.3**	**0.0**
KBK				S	**Sn**	**05 41 03.2**	**+1.3**
ARLS	**Aral**	**2.60**	**291**	⇑*iP*	**Pn**	**05 40 29.7**	**-0.8**
ARLS				⇑*iS*	**Sn**	**05 41 02.0**	**-0.2**
ARLS	**Aral**	**2.60**	**291**	*i* PN	**Pn**	**05 40 29.7**	**-0.8**
ARLS				S	**Sn**	**05 41 02.0**	**-0.2**
SHLS	**Shalkode**	**2.60**	**32**	Pg	**Pb**	**05 40 33.8**	**-1.2**
SHLS	comp=E,170nm,0.3s			Lg	Lg	05 41 10.1	
SHLS	**Shalkode**	**2.60**	**32**	*e*P	**Pg**	**05 40 37.9**	**-0.1**
SHLS	comp=E,464nm,0.5s			*e*S	**Sg**	**05 41 16.7**	**+4.9**
UCH	**Uchtor**	**2.62**	**300**	⇓P	**Pn**	**05 40 31.7**	**+0.7**
UCH	comp=E,138nm,0.5s,SNR=50			⇑S	**Sb**	**05 41 08.8**	**+1.0**
UCH	**Uchtor**	**2.62**	**300**	⇓*i*P	**Pn**	**05 40 30.5**	**-0.4**
UCH				⇓*i*S	**Sn**	**05 41 03.7**	**+0.7**
UCH	**Uchtor**	**2.62**	**300**	*i* PN	**Pn**	**05 40 30.5**	**-0.4**
UCH				S	**Sn**	**05 41 03.7**	**+0.7**
DGS	**Degeres**	**2.64**	**330**	Pg	**Pb**	**05 40 36.8**	**+1.2**
DGS	comp=E,147nm,0.4s			Lg	Lg	05 41 14.4	
PDGK	**Podgornoye**	**2.76**	**31**	⇑Pg	**Pb**	**05 40 37.5**	**-0.1**
PDGK	comp=E,241nm,0.5s			⇓Lg	Lg	05 41 15.9	
AAK	**Ala-Archa**	**2.84**	**307**	Pn	**Pb**	**05 40 39.6**	**+0.4**
AAK	comp=E,48nm,0.5s,baz=127,slow=13,SNR=125			Sn	**Sg**	**05 41 17.6**	**-1.8**
AAK	comp=E,16nm,0.3s,baz=314,slow=20,SNR=16			LR	LR	05 42 00.6	
AAK	**Ala-Archa**	**2.84**	**307**	⇓P	**Pn**	**05 40 35.8**	**+2.0**
AAK	comp=E,120nm,21.8s,baz=175,slow=43			⇓Pg	**Pb**	**05 40 39.5**	**+0.4**
AAK	**Ala-Archa**	**2.84**	**307**	⇓P	**Pn**	**05 40 35.8**	**+2.0**
AAK	comp=E,96nm,0.5s,SNR=73			⇓Pg	**Pb**	**05 40 39.5**	**+0.4**
AAK	**Ala-Archa**	**2.84**	**307**	⇓Pg	**Pb**	**05 40 39.5**	**+0.4**
AAK	comp=E,82nm,0.7s			⇓Lg	Lg	05 41 18.0	
AAK	**Ala-Archa**	**2.84**	**307**	⇑*iP*	**Pn**	**05 40 33.8**	**0.0**
AAK	comp=E,256nm,0.9s			⇑*iS*	**Sn**	**05 41 09.2**	**+1.0**
AAK	**Ala-Archa**	**2.84**	**307**	*i* PN	**Pn**	**05 40 33.8**	**0.0**
AAK				S	**Sn**	**05 41 09.2**	**+1.0**
SALK	**Salom-Alik**	**2.84**	**270**	⇓*iP*	**Pn**	**05 40 32.1**	**-1.7**
SALK				⇓*iS*	**Sn**	**05 41 06.6**	**-1.6**
SALK	**Salom-Alik**	**2.84**	**270**	*i* PN	**Pn**	**05 40 32.1**	**-1.7**
SALK				S	**Sn**	**05 41 06.6**	**-1.6**
FRU1	**Bishkek**	**2.87**	**311**	⇑*iP*	**Pn**	**05 40 34.3**	**+0.3**
FRU1				⇑*iS*	**Sn**	**05 41 10.2**	**+1.6**
FRU1	**Bishkek**	**2.87**	**311**	*i* PN	**Pn**	**05 40 34.3**	**+0.3**
FRU1				S	**Sn**	**05 41 10.2**	**+1.6**
CHMS	**Chumysh**	**2.92**	**315**	⇑P	**Pn**	**05 40 36.8**	**+2.0**
CHMS	comp=E,116nm,0.6s,SNR=41						
CHMS	**Chumysh**	**2.92**	**315**	⇑*iP*	**Pn**	**05 40 34.8**	**0.0**
CHMS				⇑*iS*	**Sn**	**05 41 11.3**	**+1.3**
CHMS	**Chumysh**	**2.92**	**315**	*i* PN	**Pn**	**05 40 34.8**	**0.0**
CHMS				S	**Sn**	**05 41 11.3**	**+1.3**
KUU	**Kurty**	**3.06**	**343**	Pg	**Pb**	**05 40 43.9**	**+1.1**
KUU	comp=E,26nm,0.4s			Lg	Lg	05 41 26.6	
KUU	**Kurty**	**3.06**	**343**	*e*P	**Pb**	**05 40 43.7**	**+0.9**
KUU	comp=E,26nm,0.4s			*e*S	**Sg**	**05 41 26.4**	**-0.1**
USP	**Ospenovka**	**3.24**	**316**	⇑*iP*	**Pn**	**05 40 39.5**	**+0.3**
USP				⇑*iS*	**Sn**	**05 41 18.9**	**+1.1**
USP	**Ospenovka**	**3.24**	**316**	*i* PN	**Pn**	**05 40 39.5**	**+0.3**
USP				S	**Sn**	**05 41 18.9**	**+1.1**
SFK	**Sufi-Kurgan**	**3.25**	**254**	⇓*iP*	**Pn**	**05 40 37.3**	**-2.1**
SFK				⇓*iS*	**Sn**	**05 41 15.3**	**-2.9**
SFK	**Sufi-Kurgan**	**3.25**	**254**	*i* PN	**Pn**	**05 40 37.3**	**-2.1**
SFK				S	**Sn**	**05 41 15.3**	**-2.9**
ARXS	**Arharly**	**3.25**	**3**	*e*P	**Pb**	**05 40 47.1**	**+1.2**
ARXS				*e*S	**Sg**	**05 41 32.2**	**-0.3**
ARXS	**Arharly**	**3.25**	**3**	*i* PN	**Pn**	**05 40 40.9**	**+1.6**
EKS2	**Erkin-Say**	**3.30**	**302**	⇑del		05 40 42.5	
EKS2	comp=E,56nm,0.6s,SNR=26						
EKS2	**Erkin-Say**	**3.30**	**302**	⇑*iP*	**Pn**	**05 40 39.8**	**-0.3**
EKS2				⇑*iS*	**Sn**	**05 41 19.9**	**+0.4**
SGDS	**Sogindy**	**3.31**	**320**	Pg	**Pb**	**05 40 47.7**	**+0.8**
SGDS	comp=E,38nm,0.4s			Lg	Lg	05 41 33.3	
ARSB	**Arslanbob**	**3.48**	**277**	⇓*e*P	**Pn**	**05 40 41.6**	**-1.0**
ARSB				⇓*e*S	**Sn**	**05 41 22.8**	**-1.2**
OHH	**Osh**	**3.66**	**265**	⇓*e*P	**Pn**	**05 40 43.6**	**-1.4**
OHH				⇓*e*S	**Sn**	**05 41 26.0**	**-2.3**
MRKS	**Merke**	**3.70**	**300**	Pg	**Pb**	**05 40 54.5**	**+0.8**
MRKS	comp=E,30nm,0.4s			Lg	Lg	05 41 44.8	
MRKS	**Merke**	**3.70**	**300**	*e*P	**Pb**	**05 40 53.8**	**+0.1**
MRKS	comp=E,77nm,0.7s			*e*S	**Sg**	**05 41 43.3**	**-3.6**
TDK	**Taldyqorghan**	**4.08**	**8**	Pg	**Pb**	**05 41 01.2**	**+1.1**
TDK	comp=E,114nm,0.4s			Lg	Lg	05 41 56.9	
TDK	**Taldyqorghan**	**4.08**	**8**	*e*P	**Pb**	**05 41 01.8**	**+1.7**
TDK	comp=E,114nm,0.4s			*e*S	**Sg**	**05 41 57.6**	**-1.5**
ARK	**Arkit**	**4.30**	**283**	⇑*iP*	**Pn**	**05 40 53.0**	**-0.8**
ARK				⇑*iS*	**Sn**	**05 41 42.4**	**-1.7**
KAPS	**Kapalarasan**	**4.51**	**16**	Pg	**Pb**	**05 41 08.0**	**+0.6**
KAPS	comp=E,32nm,0.6s			Lg	Lg	05 42 09.3	
DRK	**Karamyk**	**4.66**	**253**	⇓*e*P	**Pn**	**05 40 56.4**	**-2.5**
DRK				⇓*e*S	**Sn**	**05 41 49.1**	**-4.1**
BTLS	**Baital**	**4.82**	**329**	Pg	**Pb**	**05 41 15.1**	**+2.4**
BTLS	comp=E,40nm,1.0s			Lg	Lg	05 42 20.7	
BTLS	**Baital**	**4.82**	**329**	*e*P	**Pb**	**05 41 14.9**	**+2.2**
BTLS	comp=E,81nm,0.4s			*e*S	**Sg**	**05 42 20.5**	**-2.5**
TRKS	**Terek-Say**	**4.88**	**279**	⇓*iP*	**Pn**	**05 41 00.4**	**-1.4**
TRKS				⇓*iS*	**Sn**	**05 41 55.2**	**-3.2**
KK31	**Karatay Array**	**5.67**	**294**	⇑Pg	**Pb**	**05 41 31.0**	**+3.7**
KK31	comp=E,11nm,0.6s,baz=118,slow=16,SNR=44			⇑Lg	Lg	05 42 47.1	
IUG	**luzhnay**	**5.78**	**284**	Pg	**Pb**	**05 41 33.0**	**+3.9**
IUG	comp=E,72nm,1.2s,baz=107,slow=28,SNR=9.3			Lg	Lg	05 42 51.4	
MAKZ	**Makanchi**	**6.65**	**27**	⇑Pn	**Pn**	**05 41 25.2**	**-0.7**
MAKZ	comp=E,4.3nm,0.7s			⇓Pg	Pg	05 41 49.2	-6.3
MAKZ	comp=E,9.1nm,1.1s			⇑Lg	Lg	05 43 23.4	
MK31	**Makanchi Array**	**6.75**	**29**	Pn	**Pn**	**05 41 26.6**	**-0.7**
MK31	comp=E,1.7nm,0.5s,baz=205,slow=11,SNR=14			⇑Lg	Lg	05 43 24.3	
MK31	**Makanchi Array**	**6.75**	**29**	*i* PN	**Pn**	**05 41 27.4**	**+0.1**
MKAR	**Makanchi Array**	**6.75**	**29**	Pn	**Pn**	**05 41 26.8**	**-0.5**
MKAR	comp=E,0.4nm,0.3s,baz=207,slow=19,SNR=12			Lg	Lg	05 43 19.3	
WMQ	**Urumqi**	**8.02**	**66**	*e*P	**Pn**	**05 41 45.8**	**+1.0**
WMQ	comp=N,100nm,0.9s			smax	smax		
WMQ	comp=E,130nm,0.9s			smax	smax		
KURBB	**Kurchatov Arra**	**9.68**	**4**	Pn	**Pn**	**05 42 06.9**	**-0.6**
KURBB	comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=12			Sn	**Sn**	**05 43 55.2**	**-1.0**
KURBB	comp=E,0.1nm,0.3s,baz=171,slow=19,SNR=4.7			Lg	Lg	05 44 55.6	
KURBB	comp=E,0.1nm,0.3s,baz=188,slow=25,SNR=4.7			LR	LR	05 46 12.0	
KURBB	**Kurchatov Arra**	**9.68**	**4**	⇑Pn	**Pn**	**05 42 06.8**	**-0.6**
KURBB	comp=E,91nm,18.5s,baz=158,slow=40			⇓Lg	Lg	05 44 58.0	
KURK	**Kurchatov**	**9.78**	**4**	⇑Pn	**Pn**	**05 42 06.7**	**-2.0**
KURK	comp=E,0.7nm,0.5s			⇑Lg	Lg	05 45 00.9	
KURK	**Kurchatov**	**9.78**	**4**	P	**Pn**	**05 42 06.9**	**-1.9**
KURK	comp=E,84nm,0.9s					05 43 55.2	
DGZ	**Jazzator, Alta**	**11.14**	**35**	*i* P	**Pn**	**05 42 26.6**	**-1.1**
BVA0	**Borovoye Array**	**13.01**	**340**	Pn	**Pn**	**05 42 50.9**	**-2.2**
BVA0	comp=E,3.2nm,0.7s,baz=147,slow=12,SNR=7.2			⇑Lg	Lg	05 46 45.0	
BVA0	comp=E,38nm,1.6s,baz=151,slow=23,SNR=14			pmax	pmax		
BVA0	**Borovoye Array**	**13.01**	**340**	P	**Pn**	**05 42 50.8**	**-2.2**
BVA0	comp=Z,3.0nm,0.7s			pmax	pmax		
BVAR	**Borovoye Array**	**13.01**	**340**	Pn	**Pn**	**05 42 50.6**	**-2.3**
BVAR	baz=152,slow=13,SNR=8.0			Lg	Lg	05 46 34.9	
BVAR	baz=167,slow=26,SNR=7.9			LR	LR	05 48 07.1	
ZALV	**Zalesovo Beam**	**13.87**	**18**	Pn	**Pn**	**05 43 03.1**	**-1.5**
ZALV	comp=E,57nm,18.6s,baz=80,slow=38			LR	LR	05 48 56.3	
GOMU	**GeErMu**	**14.30**	**104**	P	Pn	05 43 04.4	-6.6
GOMU	comp=Z,1.6nm,0.7s			pmax	pmax		
AKTO	**Aktyubinsk**	**16.57**	**311**	Pn	**P**	**05 43 44.6**	**+1.5**
GTA	**Gaotai**	**17.06**	**88**	*e*P	**Pn**	**05 43 45.8**	**-1.2**
GTA	comp=Z,7.6nm,1.0s			sP	sP	05 43 53.6	-0.8
ARTI	**Arti**	**19.86**	**327**	P	**P**	**05 44 18.2**	**-0.9**
ARTI				S	**Sn**	**05 48 07.2**	**+3.5**
SONM	**Songino Array**	**21.62**	**62**	P	**P**	**05 44 35.8**	**-2.7**
ULN	**Ulaanbaatar**	**22.07**	**62**	*i* P	**P**	**05 44 41.3**	**-2.0**
ULN	comp=Z,12nm,2.6s			pmax	pmax		
OBN	**Obninsk**	**30.36**	**312**	*e*P	**P**	**05 45 57.3**	**-2.6**
OBN	comp=Z,5.0nm,0.7s			pmax	pmax		
FINES	**FINESS Array B**	**36.94**	**321**	P	**P**	**05 47 00.7**	**+3.7**
ARCES	**ARCESS Array B**	**39.18**	**334**	P	**P**	**05 47 19.5**	**+3.6**
BORG	**Borgarnes**	**57.33**	**330**	*i* P	**P**	**05 49 33.1**	**-2.8**
TORD	**Torodi Ar. Bea**	**70.88**	**271**	P	**P**	**05 51 07.1**	**+1.5**

IDC 24 05:43:27.9±1.6, 7°.61S×146°.53E, h221km±30km, mb3.1/3, mbtmp3.7/4, Error ellipse: s-maj=63.9km s-min=24.8km az=111.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.89**	**161**	P	Pn	05 44 06.8	-0.1
PMG	11nm,0.4s,baz=354,slow=10,SNR=9.0			S	S	05 44 37.9	+0.6
WRA	**Warramunga Arr**	**17.03**	**223**	P	P	05 47 11.1	-0.8
ASAR	**Alice Springs**	**20.04**	**216**	P	P	05 47 44.7	+0.3
CMAR	**Chiang Mai Arr**	**53.61**	**299**	P	P	05 52 26.1	-0.8
MKAR	**Makanchi Array**	**78.44**	**321**	P	P	05 55 04.1	-0.2
TORD	**Torodi Ar. Bea**	**145.00**	**282**	PKPbc	PKPab	06 02 40.1	+0.3

1.1nm,0.6s,baz=208,slow=27,SNR=4.5
0.7nm,0.4s,baz=47,slow=8.8,SNR=24
0.7nm,0.4s
1.0nm,0.5s,baz=116,slow=8.1,SNR=4.7
1.0nm,0.5s
0.3nm,0.6s,baz=121,slow=5.4,SNR=2.0
0.3nm,0.6s
1.2nm,0.3s,baz=83,slow=3.6,SNR=2.2

*KOLA **24** 05:52:05.0, 78°.83N×10°.53E, h0km, ML2.7, Error ellipse: s-maj=12.9km s-min=7.1km az=100.0, Spitsbergen,Greenland sea*
*BER **24** 05:52:07.4±1.2, 78°.80N×10°.52E, h3km±5km, ML2.4, Confirmed Earthquake*
*FCIAR **24** 05:52:08.0, 78°.78N×11°.85E, h10km, station ZFI2 has station magnitude of 3.30*
ISC 24 05:52:07.0±2.1, 78°.83N±0°.05×10°.8E±0°.1, h18km±3km, n16, σ1§11/30, 1C-1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**0.24**	**66**	P	**Pg**	**05 52 12.4**	**-0.2**
KBS				S	**Sg**	**05 52 16.4**	**0.0**
KBS	**Kingsbay**	**0.24**	**66**	⇓*iP*	**Pb**	**05 52 12.9**	**+0.3**
KBS				*e*S	**Sg**	**05 52 16.5**	**+0.1**
KBS	comp=Z,1μm,0.2s			IAML		05 52 17.0	
BRBB	**Barentsburg B**	**1.01**	**136**	P	**Pb**	**05 52 26.1**	**+0.2**
BRBB				S	**Sb**	**05 52 39.9**	**+1.1**
BRBB	**Barentsburg B**	**1.01**	**136**	*e*P	**Pn**	**05 52 26.3**	**+0.1**
BRBB				*e*S	**Sb**	**05 52 39.3**	**+0.5**
BRBA	**Barentsburg A**	**1.04**	**137**	*e*P	**Pb**	**05 52 26.8**	**+0.4**
BRBA				*e*S	**Sb**	**05 52 40.0**	**+0.4**
BRBA	comp=Z,143nm,0.3s			IAML		05 52 45.9	
SPA0	**Spitsbergen Ar**	**1.30**	**118**	⇑*iP*	**Pb**	**05 52 31.4**	**+0.6**
SPA0				*i* S	**Sb**	**05 52 48.0**	**+1.0**
SPA0	**Spitsbergen Ar**	**1.30**	**118**	*e*P	**Pb**	**05 52 31.3**	**+0.6**
SPA0				*e*S	**Sg**	**05 52 49.1**	**+0.2**
SPA0	comp=Z,76nm,0.5s			IAML		05 52 53.3	
SPITS	**Spitsbergen Ar**	**1.30**	**118**	P	**Pb**	**05 52 31.1**	**+0.4**
SPITS				S	**Sg**	**05 52 49.1**	**+0.2**
HSPB	**Hornsund (broa**	**2.09**	**149**	P	**Pn**	**05 52 40.6**	**-0.4**
HSPB				S	**Sn**	**05 53 05.8**	**-0.7**
HSPB	**Hornsund (broa**	**2.09**	**149**	*e*P	**Pn**	**05 52 40.5**	**-0.6**
HSPB				*e*S	**Sn**	**05

HOPEN					IAML			05 53 50.7	
	comp=Z,9.9nm,0.6s								
BJO1	**Bjornoya**	**4.74**	**152**	*eP*		**Pn**		**05 53 18.7**	**+1.3**
BJO1				*eS*		**Sn**		**05 54 10.2**	**-1.6**
ZFI2	**Zemlya Franca-**	**6.72**	**56**	*eP*		**Pn**		**05 53 45.9**	**+1.4**
ZFI2				*eS*		**Sn**		**05 54 56.8**	**-3.5**
	comp=Z,11nm,1.9s								
OMEGA	**Omega**	**6.73**	**56**	*eP*		**Pn**		**05 53 45.9**	**+1.2**

*IDC **24** 06:17:11.0±2.1,51°.29N×175°.67W,h0km,mb3.5/6, mbtmp3.7/7,ML3.7/1,MS2.8/3,Error ellipse: s-maj=71.4km s-min=21.3km az=9.0*
*AEIC **24** 06:17:15.6±1.1,51°.35N±0°.05×175°.53W±0°.05,h30km±6km, Error ellipse: s-maj=8.0km s-min=4.4km az=171.0*
*NEIC **24** 06:17:16.1±1.3,51°.38N±0°.06×175°.55W±0°.03,h30km±7km, mb3.7/14,ML3.6(AEIC),Error ellipse: s-maj=9.1km s-min=2.8km az=172.0*

ISC 24 06:17:15.6±1.7,51°.37N±0°.08×175°.53W±0°.04, h30km±11km,n61,σ0ᵗ77/65,mb3.9/5,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.67**	**339**		**Pb**	**06 17 29.0**	**+0.2**
GSIG					**Sn**	**06 17 38.8**	**+0.4**
ETKA	**Kagalaska Isla**	**0.73**	**313**		**Pb**	**06 17 29.7**	**-0.2**
GSMY	**Great Sitkin M**	**0.75**	**334**		**Pb**	**06 17 30.4**	**+0.2**
GSMY					**Sn**	**06 17 41.0**	**+0.5**
GSCK	**Great Sitkin C**	**0.75**	**329**		**Pn**	**06 17 30.3**	**+0.1**
GSCK					**Sn**	**06 17 41.2**	**+0.6**
GSTD	**Great Sitkin T**	**0.79**	**331**		**Pn**	**06 17 30.8**	**+0.1**
GSTR	**Great Sitkin T**	**0.80**	**336**		**Pb**	**06 17 31.6**	**+0.6**
GSTR				Sn	**Sn**	**06 17 42.9**	**+1.2**
GSSP	**Great Sitkin S**	**0.83**	**331**		**Pb**	**06 17 31.6**	**+0.2**
ADK	**Adak**	**0.88**	**306**		**Pn**	**06 17 31.7**	**-0.2**
ADK				Sn	**Sn**	**06 17 42.4**	**-1.4**
ADAG	**Mount Adagdak**	**0.91**	**313**		**Pb**	**06 17 32.6**	**-0.1**
ADAG					**Sb**	**06 17 45.1**	**+0.6**
KIRH	**Kanaga Island**	**1.11**	**299**		**Pn**	**06 17 35.1**	**+0.1**
KIRH					**Sb**	**06 17 49.8**	**-0.4**
KIWB	**Kanaga Island**	**1.12**	**296**		**Pn**	**06 17 35.3**	**+0.1**
KIWB				Sn	**Sn**	**06 17 47.2**	**-2.4**
KIMD	**Kanaga Island**	**1.13**	**291**		**Pn**	**06 17 35.0**	**-0.4**
KIKV	**Kanaga Island**	**1.14**	**297**		**Pn**	**06 17 35.5**	**0.0**
KICM	**Kanaga Island**	**1.17**	**299**		**Pn**	**06 17 36.1**	**+0.2**
ATKA	**Atka Island**	**1.18**	**44**		**Pn**	**06 17 35.6**	**-0.4**
KOKL	**Mount Kliuchef**	**1.26**	**40**		**Pn**	**06 17 37.4**	**+0.1**
KOFP	**Korovin Flat P**	**1.27**	**44**		**Pn**	**06 17 37.4**	**+0.1**
KOFP					**Sn**	**06 17 54.2**	**+0.8**
KOWE	**Korovin West**	**1.28**	**38**		**Pn**	**06 17 37.8**	**+0.4**
KOSE	**Korovin Southe**	**1.34**	**43**		**Pn**	**06 17 39.0**	**+0.7**
TAPA	**Tanaga Point A**	**1.49**	**288**		**Pn**	**06 17 40.4**	**+0.1**
TAPA					**Sn**	**06 17 59.4**	**+0.6**
TAFL	**Tanaga Flats**	**1.53**	**286**		**Pn**	**06 17 40.8**	**0.0**
TASE	**Tanaga Southea**	**1.63**	**288**		**Pn**	**06 17 42.7**	**+0.5**
TASE					**Sn**	**06 18 02.9**	**+0.7**
GAKI	**Gareloi-Kavalg**	**2.06**	**276**		**Pn**	**06 17 48.7**	**+0.6**
GAKI					**Sn**	**06 18 14.0**	**+1.2**
GALAA	**Gareloi Lava P**	**2.06**	**282**		**Pn**	**06 17 48.9**	**+0.8**
GANE	**Gareloi Northe**	**2.07**	**284**		**Pn**	**06 17 49.7**	**+1.4**
GANO	**Gareloi North**	**2.09**	**284**		**Pn**	**06 17 49.9**	**+1.3**
CEPE	**Semis' Perret**	**3.06**	**283**		**Pn**	**06 18 02.1**	**+0.3**
CESW	**Semis' Southwe**	**3.10**	**282**		**Pn**	**06 18 03.5**	**+1.0**
AMKA	**Amchitka**	**3.24**	**272**		**Pn**	**06 18 05.0**	**+0.7**
NIKH	**Nikolski High**	**4.41**	**66**	Pn	**Pn**	**06 18 20.5**	**0.0**
SHEM	**Shemya Is, Ala**	**6.54**	**286**	Pn	**Pn**	**06 18 49.1**	**-0.5**
	1.5nm,0.3s,baz=87,slow=18,SNR=4.0						
SHEM				LR	LR	06 21 12.3	
	comp=Z,51nm,19.8s,baz=112,slow=37						
	98nm,0.9s						
KDAK	**Kodiak Island**	**14.73**	**55**	Pn	**Pn**	**06 20 39.7**	**-1.9**
	0.7nm,0.3s,baz=283,slow=14,SNR=10						
KDAK				Sn	**Sn**	**06 23 24.0**	**+0.4**
	0.1nm,0.3s,baz=357,slow=22,SNR=1.3						
WRH	**Wood River Hil**	**19.40**	**37**	P	**P**	**06 21 38.6**	**-0.2**
CCB	**Clear Creek Bu**	**19.59**	**37**	P	**Pn**	**06 21 41.9**	**-0.4**
H23K	**Yukon River**	**19.60**	**33**	P	**P**	**06 21 41.4**	**+0.3**
H23K				IAmb	IAmb	06 21 51.4	
	comp=Z,4.8nm,1.1s						
D20K	**Etivluk River**	**19.63**	**21**	P	**Pn**	**06 21 42.9**	**0.0**
D20K				IAmb	IAmb	06 21 43.6	
	comp=Z,5.0nm,1.1s						
N25K	**Chitina, Valde**	**19.72**	**47**	P	**P**	**06 21 42.4**	**0.0**
N25K				IAmb	IAmb	06 22 03.3	
	comp=Z,3.2nm,0.9s						
PAX	**Paxson**	**19.79**	**43**	P	**P**	**06 21 43.4**	**+0.1**
PAX				IAmb	IAmb	06 22 01.8	
	comp=Z,3.0nm,1.0s						
HDA	**Harding Lake**	**19.80**	**38**	P	**P**	**06 21 44.1**	**+0.9**
HDA				IAmb	IAmb	06 22 06.9	
	comp=Z,4.0nm,0.9s						
G23K	**Bananza Creek**	**19.98**	**30**	P	**P**	**06 21 45.3**	**+0.2**
K24K	**Donnelly Dome**	**19.99**	**40**	P	**P**	**06 21 45.4**	**+0.1**
ILAR	**Eielson Array**	**20.00**	**37**	P	**P**	**06 21 46.1**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=230,slow=9.3,SNR=10						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**20.00**	**37**	P	**P**	**06 21 44.5**	**-0.8**
GLB	**Gilahina Butte**	**20.03**	**48**		**P**	**06 21 43.4**	**-2.4**
GLB				IAmb	IAmb	06 21 49.4	
	comp=Z,11nm,1.2s						
E21K	**Killik River**	**20.04**	**23**	P	Pn	06 21 47.4	-0.4
E21K				IAmb	IAmb	06 21 54.4	
	comp=Z,5.2nm,1.1s						
VRDI	**Verde Repeater**	**20.14**	**48**	P	**P**	**06 21 47.5**	**+0.3**
VRDI				IAmb	IAmb	06 21 54.1	
	comp=Z,4.4nm,1.0s						
MA2	**Magadan**	**20.59**	**307**	LR	LR	06 28 34.4	
	comp=Z,37nm,21.3s,baz=123,slow=33						
YAK	**Yakutsk**	**30.96**	**312**	LR	LR	06 35 27.3	
	comp=Z,23nm,18.1s,baz=73,slow=35						
H11N2	**WAKE ISLAND Hy**	**34.47**	**210**	T	T	07 00 38.0	
	baz=18,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**34.48**	**210**	T	T	07 00 39.3	
	baz=18,slow=76,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**34.49**	**210**	T	T	07 00 41.5	
	baz=18,slow=76,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**35.68**	**210**	T	T	07 02 38.0	
	baz=20,slow=74						
H11S2	**WAKE ISLAND Hy**	**35.69**	**210**	T	T	07 02 40.3	
	baz=20,slow=74						
H11S3	**WAKE ISLAND Hy**	**35.69**	**210**	T	T	07 02 47.5	
	baz=20						
PD31	**Pinedale Array**	**44.35**	**74**	P	**P**	**06 25 23.9**	**+0.8**
PDAR	**Pinedale Array**	**44.35**	**74**	P	**P**	**06 25 24.1**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=314,slow=3.8,SNR=11						
	comp=Z,1.2nm,0.7s						
PV01	**Paradox Valley**	**47.73**	**79**	P	**P**	**06 25 49.2**	**-0.6**
TXAR	**Lajitas Array**	**56.62**	**84**	P	**P**	**06 26 56.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=292,slow=4.5,SNR=7.3						
	comp=Z,0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**60.59**	**315**	P	**P**	**06 27 22.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=42,slow=6.5,SNR=5.7						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**61.62**	**310**	P	**P**	**06 27 29.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=46,slow=5.2,SNR=1.7						
	comp=Z,0.2nm,0.5s						
BVAR	**Borovoye Array**	**62.20**	**321**	P	**P**	**06 27 34.3**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=41,slow=7.3,SNR=3.4						
	comp=Z,0.5nm,0.5s						

IDC 24 06:24:16.1±7.0,18°.93S×176°.26W,h0km,mb4.0/2, mbtmp4.0/2,Error ellipse: s-maj=287.4km s-min=113.3km az=152.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.46**	**260**	P	P	06 32 45.2	-0.1
	0.7nm,0.3s,baz=97,slow=7.5,SNR=18						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**46.49**	**255**	P	P	06 32 45.4	-0.2
	1.1nm,0.5s,baz=94,slow=7.6,SNR=28						
	1.1nm,0.5s						
AKASG	**Malin Array Be**	**142.40**	**333**	PKP	PKPdf	06 43 50.0	-0.7
	0.1nm,0.3s,baz=43,slow=3.6,SNR=4.9						

*IGIL **24** 06:26:53.9,34°.85N×3°.75W,h4km,ML2.3*
*SFS **24** 06:26:54.9,35°.04N×3°.79W,h0km,ML3.5/19,ML3.3/25, MLv2.9/25*
*MDD **24** 06:26:54.0±0.4,34°.88N×3°.79W,h0km,mb_Lg3.0/32, Error ellipse: s-maj=3.5km s-min=2.4km az=159.0*
*INMG **24** 06:26:55.1±1.3,34°.92N×3°.76W,h11km,ML2.6,Error ellipse: s-maj=4.7km s-min=3.0km az=173.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Al Hoceima (MARR)*
*CNRM **24** 06:26:55.3,34°.94N×4°.03W,h20km,ML3.2*

ISC 24 06:26:54.0±1.0,34°.94N±0°.03×3°.80W±0°.03,h17km±8km, n101,σ1ᵗ48/165,1C,Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.30**	**337**	P	**Pg**	**06 27 01.4**	**+0.9**
PALE	**Palemas**	**0.30**	**337**	S	**Sb**	**06 27 06.8**	**+1.1**
AKLM	**AKL**	**0.43**	**187**	P	**Pg**	**06 27 02.5**	**-0.3**
AKLM	**AKL**	**0.43**	**187**	S	**Sg**	**06 27 08.3**	**-0.3**
EMEL	**Melilla**	**0.78**	**62**	⇑Pg	**Pg**	**06 27 07.8**	**-1.3**
EMEL				Sg	**Sg**	**06 27 19.5**	**+0.1**
EMLI	**Melilla**	**0.78**	**62**	Pg	**Pg**	**06 27 07.9**	**-1.3**
EMLI				Sg	**Sg**	**06 27 19.5**	**-0.1**
WMELI	**Melilla**	**0.79**	**61**	Pg	**Pg**	**06 27 08.1**	**-1.3**
WMELI				Sg	**Sg**	**06 27 19.1**	**-0.7**
EALB	**Alboran**	**1.18**	**32**	Pg	**Pn**	**06 27 15.3**	**-0.3**
EALB				Sg	**Sb**	**06 27 27.9**	**-2.9**
EALB	**Alboran**	**1.18**	**32**	Pg	**Pn**	**06 27 16.9**	**+1.2**
EALB				Sg	**Sb**	**06 27 32.2**	**+1.4**
EALB				*i* lVmb_Lg		06 27 33.9	
SMIR	**Smir Dam**	**1.50**	**300**	P	**Pn**	**06 27 18.9**	**-1.1**
SMIR	**Smir Dam**	**1.50**	**300**	S	**Sn**	**06 27 38.2**	**-0.9**
LCRM	**LCR**	**1.53**	**215**	P	**Pn**	**06 27 21.8**	**+1.2**
LCRM	**LCR**	**1.53**	**215**	S	**Sg**	**06 27 43.8**	**+0.6**
CEU	**Ceuta**	**1.61**	**307**	Pn	**Pn**	**06 27 20.0**	**-1.5**
ECEU	**Ceuta**	**1.61**	**307**	Pn	**Pn**	**06 27 20.8**	**-0.8**
ECEU				Sn	**Sn**	**06 27 40.9**	**-1.0**
ECEU	**Ceuta**	**1.61**	**307**	Pn	**Pn**	**06 27 21.0**	**-0.6**
ECEU				Sn	**Sn**	**06 27 41.8**	**-0.1**
ECEU				*i* lVmb_Lg		06 27 45.1	
IFR	**Ifrane**	**1.80**	**218**	Pn	**Pn**	**06 27 25.0**	**+0.7**
IFR				Sn	**Sg**	**06 27 51.8**	**-0.1**
EMIJ	**Mijas**	**1.81**	**334**	Pn	**Pn**	**06 27 23.7**	**-0.6**
EMIJ	**Mijas**	**1.81**	**334**	Pn	**Pn**	**06 27 23.7**	**-0.6**
EMIJ				Sn	**Sn**	**06 27 48.4**	**+1.5**
ELGU	**Los Guajares,**	**1.93**	**4**	Pn	**Pn**	**06 27 25.2**	**-0.9**
ELGU				Sn	**Sn**	**06 27 47.3**	**-2.7**
ELGU	**Los Guajares,**	**1.93**	**4**	Pn	**Pn**	**06 27 25.2**	**-0.9**
ELGU				Sn	**Sn**	**06 27 50.8**	**+0.8**
ELGU				*i* lVmb_Lg		06 27 54.5	
EJIF	**Jimena Fronter**	**2.03**	**318**	Pn	**Pn**	**06 27 28.8**	**+1.4**
EJIF				Sn	**Sn**	**06 27 54.2**	**+1.7**
EGOR	**Sierra Gorda,**	**2.18**	**353**	Pn	**Pn**	**06 27 30.2**	**+0.6**
EGOR	**Sierra Gorda,**	**2.18**	**353**	Pn	**Pn**	**06 27 29.8**	**+0.2**
EGOR				Sn	**Sb**	**06 27 59.8**	**-0.1**
EGOR				*i* lVmb_Lg		06 28 01.4	
MD31	**MD31**	**2.21**	**201**	P	**Pn**	**06 27 30.4**	**+0.4**
MD31	**MD31**	**2.21**	**201**	S	**Sn**	**06 27 57.4**	**+0.3**
MDT	**Midelt**	**2.22**	**198**	P	**Pn**	**06 27 30.7**	**+0.6**
MDT	**Midelt**	**2.22**	**198**	S	**Sn**	**06 27 57.1**	**-0.2**
EQUE	**Quentar**	**2.28**	**7**	Pn	**Pn**	**06 27 32.2**	**+1.3**
EQUE				Sn	**Sn**	**06 28 00.6**	**+1.9**
EQUE				*i* lVmb_Lg		06 28 06.1	
EQTA	**Presa de Quent**	**2.28**	**7**	Sn	**Sn**	**06 27 56.8**	**-2.0**
EQTA				Pn	**Pn**	**06 27 31.1**	**+0.1**
UMV12	**Villanueva de**	**2.39**	**332**	Pn	**Pn**	**06 27 33.4**	**+1.1**
UMV12				Sn	**Sb**	**06 28 06.4**	**+0.7**
ENIJ	**Nijar**	**2.41**	**32**	Pn	**Pn**	**06 27 32.9**	**+0.4**
ENIJ				Sn	**Sn**	**06 28 04.0**	**+2.3**
ENIJ				*i* lVmb_Lg		06 28 05.4	
SFS	**San Fernando**	**2.48**	**309**	Pn	**Pn**	**06 27 33.9**	**+0.3**
ESPR	**Espera**	**2.55**	**320**	Pn	**Pn**	**06 27 36.6**	**+2.0**
ESPR	**Espera**	**2.55**	**320**	Pn	**Pn**	**06 27 36.8**	**+2.3**
ESPR				Sn	**Sb**	**06 28 09.1**	**-1.3**
ESPR				*i* lVmb_Lg		06 28 14.4	
ZHG	**ZHG**	**2.79**	**239**	P	**Pn**	**06 27 40.0**	**+2.1**
ZHG	**ZHG**	**2.79**	**239**	S	**Sn**	**06 28 11.2**	**0.0**
EQES	**Quesada**	**2.92**	**11**	Pn	**Pn**	**06 27 41.5**	**+1.8**
EQES				Sn	**Sn**	**06 28 17.6**	**+3.1**
EQES				*i* lVmb_Lg		06 28 21.3	
E0802	**Ubeda,Jaen**	**3.10**	**6**	Sn	**Sn**	**06 28 23.2**	**+4.3**
EADA	**Adamuz**	**3.29**	**349**	Pn	**Pn**	**06 27 46.1**	**+1.4**
EADA	**Adamuz**	**3.29**	**349**	Pn	**Pn**	**06 27 46.0**	**+1.4**
EADA				Sn	**Sn**	**06 28 25.9**	**+2.5**
EADA				Sn	**Sb**	**06 28 26.3**	**-5.2**
EADA				*i* lVmb_Lg		06 28 33.8	
ECAB	**El Cabril**	**3.39**	**338**	Pn	**Pn**	**06 27 47.4**	**+1.2**
ECAB				Sn	**Sn**	**06 28 25.2**	**-0.9**
ECAB	**El Cabril**	**3.39**	**338**	Pn	**Pn**	**06 27 47.4**	**+1.2**
ECAB				Sn	**Sn**	**06 28 25.6**	**-0.4**
ECAB				*i* lVmb_Lg		06 28 31.1	
EMUR	**La Murta**	**3.56**	**35**	Pn	**Pn**	**06 27 48.1**	**-0.3**
EMUR	**La Murta**	**3.56**	**35**	Pn	**Pn**	**06 27 48.6**	**+0.1**
EMUR				Sn	**Sn**	**06 28 27.2**	**-2.9**
EMUR				*i* lVmb_Lg		06 28 30.4	
EMIN	**Mina Concepcio**	**3.66**	**321**	Pn	**Pn**	**06 27 50.3**	**+0.5**
EMIN				Sn	**Sn**	**06 28 32.4**	**-0.1**
EMIN	**Mina Concepcio**	**3.66**	**321**	Pn	**Pn**	**06 27 50.3**	**+0.5**
EMIN				Sn	**Sn**	**06 28 33.1**	**+0.6**
EMIN				*i* lVmb_Lg		06 28 37.7	
PSIM	**Granatula de C**	**3.88**	**0**	Pn	**Pn**	**06 27 54.9**	**+2.0**
PSIM				Sn	**Sn**	**06 28 41.1**	**+3.2**
EGRO	**El Granado**	**3.95**	**312**	Pn	**Pn**	**06 27 54.7**	**+0.9**
EGRO				Sn	**Sn**	**06 28 39.1**	**-0.6**
EGRO	**El Granado**	**3.95**	**312**	Pn	**Pn**	**06 27 54.5**	**+0.7**
EGRO				Sn	**Sn**	**06 28 39.3**	**-0.4**
EGRO				*i* lVmb_Lg		06 28 40.7	
PVAQ	**Vaqueiros**	**4.01**	**309**	*eP*	**Pn**	**06 27 55.5**	**+0.7**
PVAQ				*eS*	**Sn**	**06 28 41.1**	**-0.2**
PVAQ				*i* IAML		06 28 42.1	
PVAQ				*i* IAML		06 28 44.2	
PVAQ				*i* IAML		06 28 44.6	
PVAQ	**Vaqueiros**	**4.01**	**309**	P	**Pn**	**06 27 55.4**	**+0.7**
PVAQ	**Vaqueiros**	**4.01**	**309**	S	**Sn**	**06 28 38.4**	**-3.0**
PBDV	**Barranco-do-Ve**	**4.06**	**306**	*eP*	**Pn**	**06 27 56.6**	**+1.2**
PBDV				*eS*	**Sn**	**06 28 42.5**	**-0.1**
PBDV				*i* IAML		06 28 47.7	
PBDV				*i* IAML		06 28 48.4	
PBDV				*i* IAML		06 28 48.7	
ETOB	**Tobarra**	**4.12**	**25**	Pn	**Pn**	**06 27 58.2**	**+2.1**
ETOB	**Tobarra**	**4.12**	**25**	Pn	**Pn**	**06 27 58.2**	**+2.1**
ETOB				Sn	**Sn**	**06 28 47.0**	**+3.0**
ETOB				*i* lVmb_Lg		06 28 47.5	
PBAR	**Barrancos**	**4.15**	**322**	Pn	**Pn**	**06 27 57.4**	**+0.8**
PBAR				Sn	**Sn**	**06 28 44.2**	**-0.6**
PBAR	**Barrancos**	**4.15**	**322**	*eP*	**Pn**	**06 27 57.5**	**+0.8**
PBAR				*eS*	**Sn**	**06 28 45.4**	**+0.6**
PBAR				*i* IAML		06 28 49.2	
PBAR				*i* IAML		06 28 55.3	
PBAR				*i* IAML		06 29 02.2	
PCVE	**Castro Verde**	**4.36**	**309**	Pn	**Pn**	**06 28 00.7**	**+1.4**
PCVE				Sn	**Sn**	**06 28 48.1**	**-1.7**
PCVE	**Castro Verde**	**4.36**	**309**	*eP*	**Pn**	**06 28 00.9**	**+1.5**
PCVE				*eS*	**Sn**	**06 28 50.2**	**+0.5**
PCVE				*i* IAML		06 28 52.9	
PCVE				*i* IAML		06 28 53.5	
PCVE				*i* IAML		06 28 55.8	
PBEJ	**Beja**	**4.50**	**314**	*eP*	**Pn**	**06 28 03.3**	**+1.9**
PBEJ				*eS*	**Sn**	**06 28 53.0**	**-0.4**
PBEJ				*i* IAML		06 28 58.0	
PBEJ				*i* IAML		06 29 02.6	
PBEJ				*i* IAML		06 29 04.7	
MORF	**Marmelete**	**4.59**	**302**	*eP*	**Pn**	**06 28 03.3**	**+0.7**
MORF	**Marmelete**	**4.59**	**302**	*eP*	**Pn**	**06 28 04.2**	**+1.6**
MORF				*eS*	**Sn**	**06 28 56.7**	**+1.2**
MORF				*i* IAML		06 28 58.8	
MORF				*i* IAML		06 29 02.1	
MORF				*i* IAML		06 29 02.6	
MESJ	**Messejana**	**4.60**	**310**	*eP*	**Pn**	**06 28 03.2**	**+0.5**
MESJ				*eS*	**Sn**	**06 28 53.9**	**-1.8**
MESJ				IAML		06 28 58.0	
	comp=N,4.6nm,0.3s						
MESJ	**Messejana**	**4.60**	**310**	*eP*	**Pn**	**06 28 04.1**	**+1.5**
MESJ				*eS*	**Sn**	**06 28 56.0**	**+0.3**
MESJ				*i* IAML		06 28 59.4	
MESJ				*i* IAML		06 28 59.4	
MESJ				*i* IAML		06 29 01.0	
EBAD	**Badajoz**	**4.60**	**327**	Pn	**Pn**	**06 28 04.1**	**+1.3**
EBAD				Sn	**Sn**	**06 28 54.4**	**-1.4**
EBAD	**Badajoz**	**4.60**	**327**	Pn	**Pn**	**06 28 03.8**	**+1.1**
EBAD				Sn	**Sn**	**06 28 55.1**	**-0.7**
EBAD				*i* lVmb_Lg		06 29 00.7	
PAB	**San Pablo**	**4.62**	**355**	Pn	**Pn**	**06 28 04.4**	**+1.3**
PAB				Sn	**Sn**	**06 28 55.4**	**-1.0**
PAB				*i* lVmb_Lg		06 29 14.9	
PFVI	**Vila Bisbo**	**4.63**	**300**	Pn	**Pn**	**06 28 04.6**	**+1.5**
PFVI				Sn	**Sn**	**06 28 54.9**	**-1.5**
PFVI	**Vila Bisbo**	**4.63**	**300**	*eP*	**Pn**	**06 28 04.8**	**+1.7**
PFVI				*eS*	**Sn**	**06 28 56.0**	**-0.5**
PFVI				*i* IAML		06 29 03.7	
PFVI				*i* IAML		06 29 05.6	
PFVI				*i* IAML		06 29 07.6	
PFVI	**Vila Bisbo**	**4.63**	**300**	P	**Pn**	**06 28 02.3**	**-0.8**
ESDC	**Sonseca Array**	**4.73**	**358**	Pn	**Pn**	**06 28 06.0**	**+1.4**
ESDC				Sn	**Sn**	**06 28 59.3**	**+0.2**
ESDC				*i* lVmb_Lg		06 29 18.4	
ESBB	**Sonseca Array**	**4.73**	**358**	Pn	**Pn**	**06 28 06.1**	**+1.5**
ESBB				Sn	**Sn**	**06 29 00.7**	**+1.6**
PTEO	**Sao Teotonio**	**4.76**	**305**	*eP*	**Pn**	**06 28 06.5**	**+1.7**
PTEO				*eS*	**Sn**	**06 28 59.8**	**+0.1**
PTEO				*i* IAML		06 29 02.5	
PTEO				*i* IAML		06 29 03.6	
PTEO				*i* IAML		06 29 04.5	
EVO	**Evora**	**4.93**	**318**	Pn	**Pn**	**06 28 08.7**	**+1.4**
EVO				Sn	**Sn**	**06 29 02.5**	**-1.4**
EVO	**Evora**	**4.93**	**318**	*eP*	**Pn**	**06 28 08.8**	**+1.4**
EVO				*eS*	**Sn**	**06 29 03.5**	**-0.5**
EVO				*i* IAML		06 29 05.8	
EVO				*i* IAML		06 29 05.8	
EVO				*i* IAML		06 29 06.7	
TIO	**Tiouine**	**4.95**	**217**	Pn	**Pn**	**06 28 09.2**	**+1.5**
TIO				Sn	**Sn**	**06 29 07.1**	**+2.5**
TIO	**Tiouine**	**4.95**	**217**	P	**Pn**	**06 28 08.1**	**+0.4**
TIO	**Tiouine**	**4.95**	**217**	S	**Sn**	**06 29 03.6**	**-1.0**
PESTR	**Estremoz**	**4.96**	**323**	Pn	**Pn**	**06 28 08.9**	**+1.1**
PESTR				Sn	**Sn**	**06 29 03.6**	**-1.1**
PESTR	**Estremoz**	**4.96**	**323**	*eP*	**Pn**	**06 28 09.3**	**+1.6**
PESTR				*eS*	**Sn**	**06 29 04.5**	**-0.2**
PESTR				*i* IAML		06 29 07.3	
PESTR				*i* IAML		06 29 09.4	
PESTR				*i* IAML		06 29 25.4	
MOE	**Montemor**	**5.12**	**316**	*eP*	**Pn**	**06 28 11.8**	**+1.9**
MOE				*eS*	**Sn**	**06 29 08.6**	**+0.1**
MOE				*i* IAML		06 29 10.7	
MOE				*i* IAML		06 29 17.2	
MOE				*i* IAML		06 29 26.0	
PARRA	**Arraiolos**	**5.15**	**320**	*eP*	Pn	06 28 12.0	-6.0
PARRA				*eS*	Sn	06 29 08.9	-14
PARRA				*i* IAML		06 29 10.5	
PARRA				*i* IAML		06 29 10.7	
PARRA				*i* IAML		06 29 12.3	
PMRV	**Marv??o**	**5.32**	**328**	*eP*	**Pn**	**06 28 14.1**	**+1.4**
EPLA	**Plasencia**	**5.43**	**341**	Pn	**Pn**	**06 28 15.6**	**+1.4**
EPLA				Sn	**Sn**	**06 29 17.2**	**+1.0**
EPLA				*i* lVmb_Lg		06 29 21.7	
PMTG	**Montargil**	**5.44**	**321**	*eP*	**Pn**	**06 28 15.3**	**+1.1**
PMTG				*eS*	**Sn**	**06 29 16.9**	**+0.5**
PMTG				*i* IAML		06 29 18.8	
PMTG				*i* IAML		06 29 21.7	
PMTG				*i* IAML		06 29 49.3	
PCBR	**Castelo Branco**	**5.70**	**330**	*eP*	**Pn**	**06 28 19.6**	**+1.7**
PCBR				*eS*	**Sn**	**06 29 23.4**	**+0.4**
PCBR				*i* IAML		06 29 27.3	
PCBR				*i* IAML		06 29 27.5	
PCBR				*i* IAML		06 29 27.9	
PSARD	**Sardoal**	**5.81**	**324**	*eP*	**Pn**	**06 28 21.0**	**+1.6**
PSARD				*eS*	**Sn**	**06 29 24.8**	**-0.8**
PSARD				*i* IAML		06 29 27.8	
PSARD				*i* IAML		06 29 28.6	
PSARD				*i* IAML		06 29 28.8	
PMAFR	**Mafra**	**5.95**	**314**	*eP*	**Pn**	**06 28 23.0**	**+1.7**
PMAFR				*eS*	**Sn**	**06 29 27.0**	**-2.0**
ETOR	**Torete**	**6.03**	**13**	Pn	**Pn**	**06 28 24.1**	**+1.6**
PSBE	**So Bento**	**6.06**	**320**	*eP*	**Pn**	**06 28 24.7**	**+1.8**
MTE	**Manteigas**	**6.21**	**333**	*eP*	**Pn**	**06 28 26.2**	**+1.3**
PCAS	**Casmilo, Conde**	**6.33**	**325**	*eP*	**Pn**	**06 28 28.6**	**+2.1**
PCAS				*eS*	**Sn**	**06 29

CO02 IAmb IAmb 07 01 03.5
comp=Z,23nm,1.4s
BO01 Tunca 39.78 116 P P 07 00 56.2 0.0
MT05 Renca 40.01 115 P P 07 00 58.0 -0.3
LCO Las Campanas 40.04 108 P P 07 00 57.9 -0.9
PEL Peldehue 40.04 114 P P 07 00 59.0 +0.5
BO02 Sierra Bellavi 40.06 117 P P 07 00 58.4 -0.2
VA03 San Esteban 40.14 114 P P 07 00 59.6 +0.2
VA03 IAmb IAmb 07 01 01.6
comp=Z,35nm,1.5s
BO04 La Punta 40.15 115 P P 07 00 58.8 -0.5
MT03 Universidad Ad 40.20 115 P P 07 00 60.0 +0.1
MT13 San Alfonso 40.40 115 P P 07 01 02.6 +1.0
AC05 El Transito 40.42 108 P P 07 01 02.1 +0.3
AC05 IAmb IAmb 07 01 04.7
comp=Z,34nm,1.6s
AC06 Mina Casimiro 40.45 105 P P 07 01 01.9 0.0
AC06 IAmb IAmb 07 01 04.8
comp=Z,29nm,1.3s
COHC Cochancay 40.45 64 P P 07 01 00.9 -1.1
LMEL Las Melosas 40.48 115 P P 07 01 02.8 +0.5
LMEL IAmb IAmb 07 01 05.7
comp=Z,31nm,1.6s
GO03 Copiapo 40.54 106 P P 07 01 02.1 -0.6
MT08 Bocatoma Ro 40.61 115 P P 07 01 03.5 +0.1
PLCA Paso Flores 41.03 126 P P 07 01 06.8 +0.2
comp=Z,5.4nm,1.0s,baz=292,slow=9.6,SNR=5.8
PLCA LR LR 07 13 51.1
comp=Z,391nm,18.7s,baz=249,slow=30
comp=Z,5.4nm,1.0s
PLCA Paso Flores 41.03 126 P P 07 01 06.8 +0.2
RAR Rarotonga 41.27 264 LR LR 07 13 13.9
comp=Z,183nm,21.6s,baz=95,slow=29
GO02 Mina Guanaco 41.36 102 P P 07 01 09.4 -0.4
GO02 IAmb IAmb 07 01 11.6
comp=Z,19nm,1.2s
AC02 Maricunga 41.59 105 P P 07 01 11.4 -0.4
PB03 IPOC Station P 41.71 97 P P 07 01 11.9 -0.6
PB03 IAmb IAmb 07 01 14.8
comp=Z,34nm,1.3s
ZON Zonda 41.72 112 P P 07 01 11.6 -0.8
ZON IAmb IAmb 07 01 15.6
comp=Z,33nm,1.3s
PB12 IPOC Station P 41.93 92 P P 07 01 13.4 -0.8
PB12 IAmb IAmb 07 01 15.6
comp=Z,22nm,1.2s
PB09 IPOC Station P 42.22 97 P P 07 01 16.6 -0.1
PB09 IAmb IAmb 07 01 21.2
comp=Z,31nm,1.3s
PB11 IPOC Station P 42.28 94 P P 07 01 17.1 -0.1
PB11 IAmb IAmb 07 01 19.2
comp=Z,32nm,1.3s
OTAV Otavalo 42.65 62 P P 07 01 20.1 -0.5
PB08 IPOC Station P 42.65 95 P P 07 01 20.5 +0.1
PB08 IAmb IAmb 07 01 23.0
comp=Z,20nm,1.2s
GO01 Chusmiza 42.72 94 P P 07 01 19.9 -1.2
PB16 IPOC Station P 42.76 92 P P 07 01 20.7 -0.8
PB16 IAmb IAmb 07 01 24.2
comp=Z,38nm,1.6s
PB18 Visviri 42.98 91 P P 07 01 22.5 -0.8
TLIG Tlapa 43.80 23 P P 07 01 29.8 +0.5
TLIG IAmb IAmb 07 01 31.0
comp=Z,13nm,1.0s
LPAZ La Paz 44.58 90 P P 07 01 36.1 -0.2
comp=Z,18nm,1.0s,baz=271,slow=4.3,SNR=30
LPAZ LR LR 07 15 33.6
comp=Z,247nm,21.8s,baz=254,slow=30
comp=Z,18nm,1.0s
LPAZ La Paz 44.58 90 P P 07 01 35.6 -0.7
JTS Las Juntas de 44.62 45 LR LR 07 15 17.3
comp=Z,282nm,21.1s,baz=224,slow=30
CMIG Matias Romero 44.83 28 LR LR 07 16 17.4
comp=Z,215nm,20.1s,baz=199,slow=31
HUEH Huehuetenango 44.87 33 P P 07 01 38.3 +0.2
MOIG Morelia 44.92 19 P P 07 01 38.2 -0.2
MTO3 Montecristo 45.23 36 P P 07 01 40.6 -0.2
MTO3 IAmb IAmb 07 01 42.1
comp=Z,27nm,1.8s
FLOC Florencia 45.70 63 P P 07 01 43.8 -0.8
PETF Flores 47.05 34 P P 07 01 54.3 -0.7
PETF IAmb IAmb 07 01 55.4
comp=Z,13nm,1.1s
LPIG La Paz 47.45 6 LR LR 07 17 30.1
comp=Z,79nm,18.0s,baz=187,slow=30
ROSC El Rosal 48.69 60 LR LR 07 18 30.3
comp=Z,221nm,18.6s,baz=211,slow=31
ROSC El Rosal 48.69 60 P P 07 02 07.8 -0.4
ROSC IAmb IAmb 07 02 17.9
comp=Z,9.7nm,1.1s
SIV San Ignacio 51.15 92 LR LR 07 21 00.8
comp=Z,146nm,19.4s,baz=285,slow=32
CPUP Villa Florida 52.12 106 LR LR 07 20 32.9
comp=Z,51nm,20.3s,baz=116,slow=31
HBVL Hebbronville 52.62 18 P P 07 02 37.6 +0.4
PMSA Palmer Station 52.81 155 LR LR 07 19 40.0
comp=Z,208nm,19.3s,baz=292,slow=30
VILB Vilhena 52.91 89 P P 07 02 38.7 -1.1
PTLB Pontes e Lacer 53.09 92 P P 07 02 39.7 -1.2
PTLB IAmb IAmb 07 02 42.8
comp=Z,22nm,1.2s
TXAR Lajitas Array 53.58 12 P P 07 02 44.4 +0.1
comp=Z,1.0nm,1.1s,baz=203,slow=8.1,SNR=5.2
TXAR LR LR 07 21 16.3
comp=Z,90nm,18.9s,baz=203,slow=31
comp=Z,1.0nm,1.1s
TXAR Lajitas Array 53.58 12 P P 07 02 44.1 -0.2
TX31 Lajitas Ar. Si 53.58 12 P P 07 02 46.0 +1.7
TX31 IAmb IAmb 07 03 08.2
comp=Z,14nm,1.8s
833A Chaparral WMA, 53.61 17 P P 07 02 44.6 +0.1
833A IAmb IAmb 07 02 49.0
comp=Z,18nm,1.5s
SDV Santo Domingo 54.03 59 LR LR 07 22 25.9
comp=Z,130nm,19.1s,baz=251,slow=32
SAND Sanderson 54.50 14 P P 07 02 51.5 +0.5
VHRN Van Horn 54.75 11 P P 07 02 53.4 +0.5
HNDO Hondo 54.78 17 P P 07 02 52.8 -0.2
HNDO IAmb IAmb 07 04 18.6
comp=Z,10nm,1.2s
214A Organ Pipe Nat 55.09 2 P P 07 02 56.4 +1.1
JCT Junction City 55.55 16 P P 07 02 58.5 -0.1
MNTX Cornudas Mount 55.58 10 P P 07 02 58.7 0.0
OZNA Ozona 55.65 15 P P 07 02 60.0 +0.6
OZNA IAmb IAmb 07 03 04.4
comp=Z,11nm,1.4s
BAR Barrett 55.79 358 P P 07 03 01.4 +1.1
BAR IAmb IAmb 07 03 09.6
comp=Z,11nm,1.1s
121A Cookes Peak, D 56.06 7 P P 07 03 03.2 +0.8
121A IAmb IAmb 07 03 12.0
comp=Z,6.3nm,0.9s
HKT Hockley 56.19 20 P P 07 03 03.7 +0.7
MACA Manacapuru-AM 56.25 78 P P 07 03 01.5 -2.4
MACA IAmb IAmb 07 03 04.8
comp=Z,12nm,1.0s
BORC Borrego Spring 56.37 359 P P 07 03 05.7 +1.3
BORC IAmb IAmb 07 03 14.2
comp=Z,15nm,1.5s
435B Jarrell 56.44 18 P P 07 03 04.5 -0.3
BRDY Brady 56.52 17 P P 07 03 04.9 -0.6
BELC Belle Mtn. Jos 57.09 359 P P 07 03 11.7 +2.0
BELC IAmb IAmb 07 03 19.3
comp=Z,7.3nm,1.0s
BFSC Mount Baldy Ra 57.38 357 IAmb IAmb 07 03 33.1
comp=Z,7.9nm,1.1s
Y22A Socorro 57.55 8 IAmb IAmb 07 03 22.4
comp=Z,8.3nm,1.1s
DANC Danby, Needles 57.72 360 P P 07 03 16.1 +2.1
DANC IAmb IAmb 07 03 23.6
comp=Z,12nm,1.1s
TPO Tropico Hills 58.04 357 IAmb IAmb 07 03 25.2
comp=Z,9.1nm,1.0s
PLPT Palo Pinto 58.15 17 IAmb IAmb 07 03 21.4
comp=Z,19nm,1.4s
APMT Aspermont 58.19 15 IAmb IAmb 07 03 21.1
comp=Z,18nm,1.4s
ANMO Albuquerque 58.61 8 LR LR 07 24 51.7
comp=Z,69nm,18.7s,baz=282,slow=32
LRMC Laurel Mtn Rad 58.62 358 IAmb IAmb 07 03 23.8
comp=Z,5.6nm,0.8s
CCCA Chr Cany lake 58.65 358 IAmb IAmb 07 03 39.1
comp=Z,6.8nm,1.0s
WSHM Spangler Hills 58.73 358 IAmb IAmb 07 03 33.2
comp=Z,24nm,2.0s

URZ Urewera 58.88 238 LR LR 07 24 11.0
comp=Z,132nm,18.9s,baz=148,slow=31
CLC China Lake 58.95 358 IAmb IAmb 07 03 23.6
comp=Z,4.3nm,0.6s
WTFS Witchita Falls 59.02 16 P P 07 03 27.1 +4.1
WTFS IAmb IAmb 07 03 27.3
comp=Z,9.2nm,1.0s
GWY Greenwater Val 59.29 359 P P 07 03 27.1 +2.1
GWY IAmb IAmb 07 03 43.4
comp=Z,11nm,1.4s
U15A North Rim 59.57 3 IAmb IAmb 07 03 29.2
comp=Z,9.6nm,1.5s
SHPR Sheep Range 59.59 360 P 07 03 28.7 +1.6
CWC Cottonwood Cre 59.59 357 P 07 03 27.8 +0.7
CWC IAmb IAmb 07 03 36.5
comp=Z,6.1nm,1.1s
WCT Wildcat Mounta 59.89 359 IAmb IAmb 07 03 38.9
comp=Z,6.4nm,1.1s
PRN Pahroc Range 60.49 0 IAmb IAmb 07 03 43.6
comp=Z,6.4nm,1.1s
SZCU Shurtz Canyon 60.70 2 IAmb IAmb 07 03 39.4
comp=Z,9.6nm,1.5s
TUWZ Tuamarina 60.94 234 P P 07 03 42.2 +5.9
CMB Columbia Colle 61.32 355 IAmb IAmb 07 03 47.4
comp=Z,7.1nm,1.2s
LHV Little Huntoon 61.41 357 IAmb IAmb 07 03 58.6
comp=Z,16nm,1.5s
R11B Troy Canyon, C 61.43 360 IAmb IAmb 07 03 58.7
comp=Z,11nm,1.7s
SDCO Great Sand Dun 61.49 9 P P 07 03 40.6 +0.4
SDCO IAmb IAmb 07 03 45.1
comp=Z,12nm,1.5s
NV11 Mina Array Sit 61.58 357 IAmb IAmb 07 03 59.4
comp=Z,10.0nm,1.2s
NVAR Mina Array Bea 61.58 357 P P 07 03 42.0 +1.2
comp=Z,2.1nm,0.8s,baz=183,slow=8.3,SNR=14
comp=Z,2.1nm,0.8s
SPR3 Spring Creek 3 62.08 1 IAmb IAmb 07 03 57.6
comp=Z,6.7nm,1.3s
PNTR Pine Nut 62.31 356 P 07 03 46.4 +0.8
MAL2 Monte Alegre, 62.60 80 P 07 03 47.1 -0.8
PAHR Pah Rah Range 62.91 356 IAmb IAmb 07 03 59.0
comp=Z,4.8nm,1.0s
SJG San Juan 63.14 54 LR LR 07 26 16.2
comp=Z,104nm,20.0s,baz=208,slow=31
BDFB Brasilia 63.22 96 P P 07 03 51.0 -1.1
comp=Z,11nm,1.0s,baz=308,slow=3.9
BDFB LR LR 07 28 14.0
comp=Z,175nm,19.7s,baz=308,slow=33
comp=Z,11nm,1.0s
DUG Dugway, Tooele 63.31 2 P 07 03 53.3 +1.2
DUG IAmb IAmb 07 03 54.0
comp=Z,7.2nm,1.4s
GCPR Guaynabo City 63.31 53 P P 07 03 51.9 -0.5
ISCO Idaho Springs 63.50 8 IAmb IAmb 07 04 01.3
comp=Z,15nm,1.8s
ELK Elko 63.82 360 P 07 03 56.3 +0.7
RDMU Red Mountain 63.85 5 P P 07 03 56.3 +0.4
HAYD Hayden 64.01 7 IAmb IAmb 07 04 05.8
comp=Z,9.2nm,1.3s
BELA Belgrano 2 65.28 167 P P 07 04 05.6 +1.1
BELA IAmb IAmb 07 04 13.2
comp=Z,5.7nm,1.1s
WVOR Wild Horse Val 65.59 357 IAmb IAmb 07 04 16.9
comp=Z,5.6nm,0.9s
TKL Tuckaleechee C 65.80 28 LR LR 07 29 45.1
comp=Z,90nm,19.2s,baz=186,slow=33
VNDA Vanda 65.81 194 LR LR 07 26 32.5
comp=Z,99nm,19.9s,baz=86,slow=30
K05A Summer Lake 66.02 355 P P 07 04 11.4 +1.6
PDAR Pinedale Array 66.04 4 P P 07 04 09.4 -0.6
comp=Z,0.6nm,0.7s,baz=158,slow=6.1,SNR=5.7
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 66.04 4 P P 07 04 10.3 +0.2
HLID Hailey 66.64 1 P 07 04 15.1 +1.3
HLID IAmb IAmb 07 04 30.0
comp=Z,10nm,1.4s
QSPA South Pole Qui 66.75 180 P P 07 04 19.0 +4.7
comp=Z,4.5nm,1.1s,baz=94,slow=3.1,SNR=6.8
QSPA LR LR 07 29 03.2
comp=Z,63nm,18.3s,baz=92,slow=32
QSPA South Pole Qui 66.75 180 P P 07 04 16.7 +2.4
MOOW Moose Ponds 66.94 3 P P 07 04 16.2 +0.4
MOOW IAmb IAmb 07 04 54.0
comp=Z,8.2nm,1.7s
MDP Montagnes des 67.15 73 LR LR 07 30 14.6
comp=Z,130nm,20.2s,baz=253,slow=33
BMO Blue Mountains 67.96 358 IAmb IAmb 07 04 25.5
comp=Z,3.3nm,1.6s
G08A Pilot Rock 68.45 357 P 07 04 26.3 +1.2
G08A IAmb IAmb 07 04 34.6
comp=Z,5.0nm,0.9s
DZM Mont Dzumac 71.46 253 *e*LR LR 07 26 27.1
comp=Z,104nm,26.4s
VNA3 Neumayer Olymp 72.86 161 ⇑P **P 07 04 50.1 -1.6**
comp=Z,4.5nm,0.9s
VNA1 Neumayer--Stat 73.52 161 ⇑P **P 07 04 53.2 -2.4**
comp=Z,5.0nm,1.1s
VNA2 Neumayer--Matz 73.67 161 ⇑P **P 07 04 53.6 -2.8**
comp=Z,3.8nm,1.0s,baz=251,slow=4.8
SNAA Sanae 74.66 162 ⇑P **P 07 04 59.2 -3.1**
comp=Z,70nm,1.3s
SNAA Sanae 74.66 162 P P 07 05 01.0 -1.3
comp=Z,2.8nm,1.1s,baz=269,slow=5.9,SNR=8.1
SNAA LR LR 07 33 11.0
comp=Z,59nm,19.0s,baz=192,slow=32
comp=Z,2.8nm,1.1s
SNAA Sanae 74.66 162 P P 07 05 01.4 -0.9
SNAA IAmb IAmb 07 05 09.9
comp=Z,14nm,1.4s
ULM Lac du Bonnet 75.28 13 LR LR 07 33 54.0
comp=Z,62nm,18.8s,baz=176,slow=32
SADO Sadowa 75.37 26 LR LR 07 36 41.8
comp=Z,59nm,18.5s,baz=225,slow=34
TROLL Troll, Antarti 75.93 164 ⇑P **P 07 05 09.5 -0.2**
comp=Z,214nm,1.1s
YKA Yellowknife Ar 85.60 0 P P 07 06 00.8 -0.3
comp=Z,0.9nm,0.9s,baz=193,slow=2.9,SNR=4.6
comp=Z,0.9nm,0.9s
YKA Yellowknife Ar 85.60 0 P P 07 06 01.4 +0.4
H11S2 WAKE ISLAND Hy 86.92 292 T T 08 42 21.7
baz=116,slow=75,SNR=305
H11S1 WAKE ISLAND Hy 86.93 292 T T 08 42 26.3
baz=116,slow=75,SNR=264
H11S3 WAKE ISLAND Hy 86.94 292 T T 08 42 32.2
baz=116,slow=75,SNR=174
H11N3 WAKE ISLAND Hy 87.28 293 T T 08 42 53.0
baz=117,slow=75,SNR=48
H11N1 WAKE ISLAND Hy 87.29 293 T T 08 42 45.7
baz=117,slow=75,SNR=26
H11N2 WAKE ISLAND Hy 87.30 293 T T 08 42 51.4
baz=117,slow=75,SNR=104
SCHQ Schefferville 88.18 26 LR LR 07 43 00.2
comp=Z,81nm,21.0s,baz=262,slow=34
STKA Stephens Creek 88.42 236 LR LR 07 41 09.1
comp=Z,23nm,18.4s,baz=195,slow=32
MAW Mawson 89.25 179 LR LR 07 42 44.7
comp=Z,67nm,18.8s,baz=125,slow=33
ILAR Eielson Array 91.27 347 P P 07 06 28.2 +0.1
comp=Z,0.3nm,0.8s,baz=181,slow=3.6,SNR=2.0
comp=Z,0.3nm,0.8s
PMG Port Moresby 93.33 258 LR LR 07 40 36.0
comp=Z,79nm,21.4s,baz=106,slow=30
FRB Frobisher Bay 94.17 19 LR LR 07 45 35.9
comp=Z,80nm,20.4s,baz=244,slow=33
SHEM Shemya Is, Ala 97.46 325 LR LR 07 43 12.0
comp=Z,83nm,19.1s,baz=126,slow=31
ASAR Alice Springs 98.30 240 LR LR 07 50 39.0
comp=Z,81nm,19.4s,baz=120,slow=35
RES Resolute Bay 98.72 5 LR LR 07 47 26.3
comp=Z,63nm,19.3s,baz=313,slow=33
WLF Walferdange 127.58 45 *d*PKiKP **PKiKP 07 12 30.1 +1.4**
FINES FINESS Array B 133.65 25 PKP **PKPdf 07 12 40.0 +0.7**
comp=Z,2.1nm,1.0s,baz=93,slow=3.8,SNR=4.1
AKASG Malin Array Be 141.20 36 PKP **PKPdf 07 12 54.3 +0.7**
comp=Z,1.0nm,0.6s,baz=276,slow=3.0,SNR=5.4
KMBO Kilima Mbogo 143.69 128 PKP **PKPdf 07 12 59.1 -0.4**
comp=Z,1.4nm,0.3s,baz=219,slow=7.9,SNR=3.7
ZALV Zalesovo Beam 146.01 339 PKPbc **PKPdf 07 13 02.3 +0.4**
comp=Z,1.2nm,0.6s,baz=22,slow=5.0,SNR=6.1
CMAR Chiang Mai Arr 147.88 268 PKPbc **PKPbc 07 13 10.1 +1.0**
comp=Z,5.6nm,1.1s,baz=94,slow=0.6,SNR=11
BRTR Keskin Array B 148.98 51 PKPbc **PKPbc 07 13 10.8 -0.8**
comp=Z,2.5nm,0.9s,baz=323,slow=1.3,SNR=8.0
BRTR Keskin Array B 148.98 51 PKPdf **PKPdf 07 13 08.6 +1.1**
BVAR Borovoye Array 150.13 353 PKP **PKPdf 07 13 08.8 +0.1**
comp=Z,2.0nm,0.7s,baz=354,slow=2.5,SNR=2.0

BVAR PKPbc **sPKPdf 07 13 13.6 +1.7**
comp=Z,2.4nm,0.7s,baz=339,slow=2.0,SNR=12
KURK Kurchatov 150.72 342 PKPdf 07 13 11.6 +1.9
KURBB Kurchatov Arra 150.83 342 PKPbc **PKPbc 07 13 14.6 -0.9**
comp=Z,7.1nm,1.0s,baz=24,slow=1.9,SNR=8.2
MKAR Makanchi Array 152.79 333 PKPbc **PKPbc 07 13 19.8 -0.4**
comp=Z,2.7nm,0.7s,baz=50,slow=3.8,SNR=7.5
KBZ Khabaz 152.81 36 PKPbc **PKPbc 07 13 20.1 -0.2**
comp=Z,4.8nm,1.0s,baz=136,slow=2.0,SNR=5.8

*NOU **24** 07:10:27.8,37°.33S×177°.59E,h200km,ML3.7/8,Off E. Coast of N. Island, N.Z.*
*WEL **24** 07:10:36.7±0.7,37°.5S±.5°×177°.7E±°,h110km±5km,M3.1/40, ML3.3/7,MLv3.1/40,Error ellipse: s-maj=7.0km s-min=4.8km az=35.0,confirmed*
ISC 24 07:10:31.2±1.9,37°.52S±0'.07×177°.34E±0'.06,h162km±9km, n140,σ2ŝ12/149,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
HAZ	**Te Kaha**	**0.42**	**124**	P	**Pn**	**07 10 54.0**	**+0.5**
HAZ				S	**Sn**	**07 11 07.8**	**-2.7**
WHRZ	**Whale Island**	**0.44**	**221**	P	**Pn**	**07 10 54.1**	**+0.6**
WHRZ				S	**Sn**	**07 11 08.0**	**-2.8**
OPCS	**Opotiki Colleg**	**0.49**	**185**	P	**Pn**	**07 10 54.4**	**+0.7**
OPCS				S	**Sn**	**07 11 09.9**	**-1.3**
RUGZ	**Raukumara Rang**	**0.52**	**149**	P	**Pn**	**07 10 54.3**	**+0.3**
RUGZ				S	**Sn**	**07 11 08.3**	**-3.4**
WKHS	**Whakatane High**	**0.52**	**212**	S	**Sn**	**07 11 09.7**	**-1.6**
PKGZ	**Pakihiroa**	**0.68**	**121**	P	**Pn**	**07 10 56.6**	**+1.8**
PKGZ				S	**Sn**	**07 11 12.8**	**-0.1**
MARZ	**Manawahe**	**0.70**	**228**	P	**Pn**	**07 10 55.9**	**+1.0**
MARZ				S	**Sn**	**07 11 11.4**	**-1.8**
OPRZ	**Ohinepanea**	**0.70**	**242**	P	**Pn**	**07 10 55.5**	**+0.6**
EDRZ	**Edgecumbe**	**0.75**	**219**	P	**Pn**	**07 10 56.7**	**+1.4**
URZ	**Urewera**	**0.76**	**194**	P	**Pn**	**07 10 56.3**	**+1.1**
URZ	**Urewera**	**0.76**	**194**	P	**Pn**	**07 10 56.5**	**+1.3**
URZ				S	**Sn**	**07 11 12.5**	**-1.3**
MXZ	**Matakaoa Point**	**0.77**	**93**	P	**Pn**	**07 10 56.6**	**+1.3**
MXZ	**Matakaoa Point**	**0.77**	**93**	P	**Pn**	**07 10 56.8**	**+1.5**
MWZ	**Matawai**	**0.83**	**170**	P	**Pn**	**07 10 57.4**	**+1.6**
MWZ				S	**Sn**	**07 11 14.4**	**-0.3**
TWGZ	**Tauwhareparae**	**0.83**	**142**	P	**Pn**	**07 10 57.9**	**+2.1**
TWGZ				S	**Sn**	**07 11 15.3**	**+0.6**
TGRZ	**Tauranga**	**0.88**	**256**	P	**Pn**	**07 10 56.8**	**+0.7**
WMGZ	**Waiomatatini S**	**0.90**	**110**	P	**Pn**	**07 10 58.3**	**+2.0**
WMGZ				S	**Sn**	**07 11 15.6**	**+0.1**
PUZ	**Puketiti**	**0.91**	**127**	P	**Pn**	**07 10 58.1**	**+1.8**
OMRZ	**Omania**	**0.96**	**232**	P	**Pn**	**07 10 58.1**	**+1.4**
TARZ	**Mount Tarawera**	**0.97**	**222**	P	**Pn**	**07 10 58.6**	**+1.7**
RAGZ	**Rawiri**	**0.98**	**176**	P	**Pn**	**07 10 59.3**	**+2.4**
KARZ	**Kaharoa**	**1.00**	**240**	P	**Pn**	**07 10 58.2**	**+1.1**
TKGZ	**Te Karaka**	**1.00**	**156**	P	**Pn**	**07 10 58.9**	**+1.9**
RRRZ	**Republican Roa**	**1.05**	**218**	P	**Pn**	**07 10 59.2**	**+1.8**
MUGZ	**Murupara**	**1.06**	**205**	P	**Pn**	**07 10 59.3**	**+1.8**
RTZ	**Ruatahuna**	**1.13**	**194**	P	**Pn**	**07 10 59.8**	**+1.6**
HSRZ	**Hossack Road**	**1.17**	**227**	P	**Pn**	**07 11 01.0**	**+2.5**
CNGZ	**Carnagh Statio**	**1.18**	**145**	P	**Pn**	**07 11 01.1**	**+2.5**
HRNZ	**Handcock Road**	**1.21**	**224**	P	**Pn**	**07 11 01.1**	**+2.3**
PRRZ	**Plateau Road**	**1.23**	**217**	P	**Pn**	**07 11 01.1**	**+2.1**
RIGZ	**Rimuhau**	**1.23**	**164**	P	**Pn**	**07 11 01.3**	**+2.3**
SNGZ	**Shannon Statio**	**1.26**	**180**	P	**Pn**	**07 11 01.7**	**+2.4**
GRRZ	**Galatos Road**	**1.28**	**229**	P	**Pn**	**07 11 00.6**	**+1.1**
WPRZ	**Whakapapataran**	**1.36**	**223**	P	**Pn**	**07 11 02.8**	**+2.6**
MTHZ	**Maungataniwha**	**1.39**	**196**	P	**Pn**	**07 11 02.9**	**+2.4**
RAHZ	**Arahi**	**1.41**	**188**	P	**Pn**	**07 11 03.4**	**+2.7**
PRGZ	**Paritu Road**	**1.46**	**163**	P	**Pn**	**07 11 04.5**	**+3.2**
TOZ	**Tahuroa Road**	**1.47**	**261**	P	**Pn**	**07 11 03.1**	**+1.8**
MRHZ	**Matea Rd**	**1.50**	**209**	P	**Pn**	**07 11 03.8**	**+2.2**
KUZ	**Kuaotunu**	**1.51**	**300**	P	**Pn**	**07 11 02.0**	**+0.3**
KUZ	**Kuaotunu**	**1.51**	**300**	P	**Pn**	**07 11 02.0**	**+0.3**
KNZ	**Kokohu**	**1.52**	**170**	P	**Pn**	**07 11 04.2**	**+2.4**
KUTZ	**Kaahu Road**	**1.54**	**231**	P	**Pn**	**07 11 04.7**	**+2.7**
WHHZ	**Waihua**	**1.56**	**183**	P	**Pn**	**07 11 05.5**	**+3.4**
WHTZ	**Whakaora**	**1.58**	**223**	P	**Pn**	**07 11 05.4**	**+2.9**
NMHZ	**Naumai**	**1.63**	**195**	P	**Pn**	**07 11 05.3**	**+3.0**
TLZ	**Tolley Road**	**1.64**	**240**	P	**Pn**	**07 11 05.5**	**+2.5**
HATZ	**Hinemaiaia**	**1.69**	**215**	P	**Pn**	**07 11 06.0**	**+2.5**
WATZ	**Wairara**	**1.73**	**226**	P	**Pn**	**07 11 07.1**	**+3.0**
ARHZ	**Aropaoanui**	**1.76**	**189**	P	**Pn**	**07 11 07.0**	**+2.8**
BKZ	**Black Stump Fm**	**1.77**	**202**	P	**Pn**	**07 11 06.6**	**+2.1**
BKZ	**Black Stump Fm**	**1.77**	**202**	P	**Pn**	**07 11 06.6**	**+2.1**
MKAZ	**Moumakai**	**1.79**	**283**	P	**Pn**	**07 11 06.3**	**+1.7**
RATZ	**Rangitukua**	**1.82**	**222**	P	**Pn**	**07 11 08.2**	**+3.2**
RITZ	**Rihia Road**	**1.86**	**218**	P	**Pn**	**07 11 08.7**	**+3.2**
WIAZ	**Waiheke Island**	**1.91**	**292**	P	**Pn**	**07 11 07.5**	**+1.6**
MCHZ	**McNeill Hill**	**1.99**	**195**	P	**Pn**	**07 11 09.7**	**+2.9**
KBAZ	**Karaka Road Bo**	**2.00**	**282**	P	**Pn**	**07 11 09.5**	**+2.6**
ETAZ	**East Tamaki Re**	**2.01**	**286**	P	**Pn**	**07 11 09.2**	**+2.2**
KWHZ	**Kaweka Forest**	**2.03**	**200**	P	**Pn**	**07 11 09.7**	**+2.4**
TMVZ	**Te Maari**	**2.05**	**218**	P	**Pn**	**07 11 10.6**	**+3.0**
NTVZ	**North Tongarir**	**2.05**	**219**	P	**Pn**	**07 11 10.8**	**+3.1**
ETVZ	**East Tongariro**	**2.06**	**218**	P	**Pn**	**07 11 10.7**	**+3.0**
KRVZ	**Karewarewa**	**2.06**	**220**	P	**Pn**	**07 11 10.8**	**+3.0**
MBAZ	**Motutaupu North**	**2.09**	**290**	P	**Pn**	**07 11 10.0**	**+2.1**
OTVZ	**Oturere**	**2.10**	**218**	P	**Pn**	**07 11 11.2**	**+2.9**
NNVZ	**North Ngauruho**	**2.10**	**220**	P	**Pn**	**07 11 11.3**	**+3.0**
WTVZ	**West Tongariro**	**2.10**	**220**	P	**Pn**	**07 11 11.2**	**+2.9**
SNVZ	**South Ngauruho**	**2.13**	**218**	P	**Pn**	**07 11 11.7**	**+3.0**
CKHZ	**Cape Kidnapper**	**2.15**	**185**	P	**Pn**	**07 11 11.4**	**+2.8**
NGZ	**Ngauruhoe**	**2.15**	**219**	P	**Pn**	**07 11 12.0**	**+3.2**
TWVZ	**Taurewa**	**2.15**	**223**	P	**Pn**	**07 11 11.8**	**+3.0**
EPAZ	**Eden Park BICE**	**2.17**	**286**	P	**Pn**	**07 11 11.3**	**+2.4**
HBAZ	**Herne Bay Bore**	**2.19**	**287**	P	**Pn**	**07 11 11.5**	**+2.4**
TUVZ	**Tukino**	**2.19**	**217**	P	**Pn**	**07 11 12.2**	**+2.9**
COVZ	**Chateau Observ**	**2.19**	**220**	P	**Pn**	**07 11 12.9**	**+3.6**
AWAZ	**Awhitu Peninsu**	**2.20**	**281**	P	**Pn**	**07 11 11.5**	**+2.3**
HIZ	**Hauiti**	**2.20**	**242**	P	**Pn**	**07 11 12.5**	**+3.3**
HIZ	**Hauiti**	**2.20**	**242**	P	**Pn**	**07 11 12.6**	**+3.3**
ABAZ	**Army Bay**	**2.21**	**294**	P	**Pn**	**07 11 11.4**	**+2.0**
FWVZ	**Far West T-bar**	**2.23**	**218**	P	**Pn**	**07 11 12.8**	**+3.0**
WHVZ	**Whangaehu Hut**	**2.23**	**217**	P	**Pn**	**07 11 12.8**	**+2.9**
MAVZ	**Mataranga**	**2.23**	**218**	P	**Pn**	**07 11 13.0**	**+3.0**
KRHZ	**Kereru**	**2.25**	**199**	P	**Pn**	**07 11 11.8**	**+1.9**
MOVZ	**Moawhango**	**2.26**	**213**	P	**Pn**	**07 11 12.1**	**+2.1**
WNVZ	**Wahianoa**	**2.26**	**217**	P	**Pn**	**07 11 12.8**	**+2.7**
TRVZ	**Turoa**	**2.27**	**218**	P	**Pn**	**07 11 13.2**	**+2.9**
WTAZ	**Waiatarua**	**2.28**	**284**	P	**Pn**	**07 11 12.8**	**+2.5**
KAHZ	**Kahuranaki**	**2.30**	**189**	P	**Pn**	**07 11 12.9**	**+2.5**
RVAZ	**Riverhead Bore**	**2.33**	**288**	P	**Pn**	**07 11 13.0**	**+2.3**
PKVZ	**Pokaka**	**2.36**	**221**	P	**Pn**	**07 11 14.1**	**+2.9**
MTVZ	**Mangateitei**	**2.37**	**218**	P	**Pn**	**07 11 14.6**	**+3.2**
PXZ	**Pawanui**	**2.53**	**188**	P	**Pn**	**07 11 15.6**	**+2.4**
PNHZ	**Pukenui**	**2.55**	**200**	P	**Pn**	**07 11 15.1**	**+1.7**
VRZ	**Vera Road**	**2.59**	**231**	P	**Pn**	**07 11 17.5**	**+3.7**
WPHZ	**Waipukurau**	**2.64**	**195**	P	**Pn**	**07 11 16.6**	**+2.1**
TSZ	**Takapari Road**	**2.75**	**203**	P	**Pn**	**07 11 17.4**	**+1.5**
PRHZ	**Porangahau**	**2.80**	**191**	P	**Pn**	**07 11 17.7**	**+1.3**
WCZ	**Waipu Caves**	**2.88**	**302**	P	**Pn**	**07 11 19.5**	**+2.1**
WAZ	**Wanganui**	**2.89**	**219**	P	**Pn**	**07 11 20.7**	**+3.1**
DVHZ	**Dannevirke**	**2.92**	**198**	P	**Pn**	**07 11 19.5**	**+1.6**
KHEZ	**Kahui Hut**	**3.16**	**235**	P	**Pn**	**07 11 25.4**	**+4.5**
PRWZ	**Pori Road**	**3.21**	**199**	P	**Pn**	**07 11 23.4**	**+1.8**
BFZ	**Birch Farm**	**3.27**	**195**	P	**Pn**	**07 11 23.9**	**+1.6**
BFZ	**Birch Farm**	**3.27**	**195**	P	**Pn**	**07 11 23.8**	**+1.6**
MRZ	**Mangatainoka R**	**3.42**	**203**	P	**Pn**	**07 11 25.5**	**+1.2**
TIWZ	**Tintock**	**3.44**	**199**	P	**Pn**	**07 11 26.0**	**+1.5**
CPWZ	**Castlepoint**	**3.50**	**194**	P	**Pn**

INZ	**Inchbonnie**	**6.88**	**219**	P	**Pn**	**07 12 09.3 -0.3**
OKCZ	**Okains Bay**	**7.00**	**206**	P	**Pn**	**07 12 10.6 -0.5**
OXZ	**Oxford**	**7.07**	**213**	P	**Pn**	**07 12 10.5 -1.6**
MQZ	**McQueen's Vall**	**7.13**	**208**	P	**Pn**	**07 12 11.3 -1.5**
AKCZ	**Akaroa Harbour**	**7.18**	**207**	P	**Pn**	**07 12 12.8 -0.7**
MHCZ	**Mount Hutt**	**7.44**	**214**	P	**Pn**	**07 12 16.0 -1.1**
WACZ	**Wakanui South**	**7.65**	**211**	P	**Pn**	**07 12 19.0 -0.8**
CTZ	**Chatham Island**	**7.72**	**145**	P	Pn	07 12 28.7 +8.0
ARCZ	**Arundel**	**7.94**	**214**	P	**Pn**	**07 12 23.6 -0.1**
TMZ	**Timaru**	**8.36**	**213**	P	**Pn**	**07 12 28.8 -0.4**
ODZ	**Otahua Downs**	**9.05**	**212**	P	**Pn**	**07 12 37.7 -0.5**

ROM 24 07:23:14.6±0.1, 42°.994N±0°.004×12°.867E±0°.004, h9km, ML1.9/44, 3D, Error ellipse: s-maj=0.4km s-min=0.2km az=9.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESI	**CESI - Serrava**	**0.03**	**68**	P	Pg	07 23 16.2	-0.2
CESI				S	Sg	07 23 16.9	-0.8
CESI				AML	AML		
	comp=E,4980μm,0.3s						
CESI				AML	AML		
	comp=E,5875μm,0.3s						
CESI				AML	AML		
	comp=N,10130μm,0.3s						
CESI				AML	AML		
	comp=N,10195μm,0.3s						
MTCL	**Monte Cavallo**	**0.10**	**90**	P	Pg	07 23 17.6	+0.5
MTCL				S	Sg	07 23 19.6	+0.7
FOPC	**Foligno Prot C**	**0.12**	**259**	P	Pg	07 23 18.2	+0.8
FOPC				S	Sg	07 23 20.7	+1.3
FEMA	**Monte Fema**	**0.14**	**103**	P	Pg	07 23 18.5	+0.7
FEMA				S	Sg	07 23 21.1	+1.1
MML1	**Montelago di S**	**0.14**	**33**	P	Pg	07 23 18.4	+0.5
MML1				S	Sg	07 23 21.0	+0.9
ASSB	**Assisi San Ben**	**0.16**	**288**	⇓P	Pg	07 23 18.7	+0.6
ASSB				S	Sg	07 23 21.5	+1.1
ASSB				AML	AML		
	comp=E,846μm,1.5s						
ASSB				AML	AML		
	comp=E,846μm,0.5s						
ASSB				AML	AML		
	comp=N,728μm,0.7s						
SEF1	**Sefro**	**0.16**	**21**	P	Pg	07 23 19.0	+0.8
FDMO	**Fiordimonte**	**0.17**	**75**	⇓P	Pg	07 23 18.9	+0.7
FDMO				S	Sg	07 23 22.0	+1.3
FDMO				AML	AML		
	comp=E,730μm,0.4s						
FDMO				AML	AML		
	comp=N,805μm,0.2s						
NRCA	**Norcia**	**0.24**	**131**	P	Pg	07 23 20.3	+0.7
NRCA				AML	AML		
	comp=N,575μm,0.9s						
NRCA				AML	AML		
	comp=N,450μm,0.9s						
NRCA				AML	AML		
	comp=N,450μm,1.1s						
NRCA				AML	AML		
	comp=N,575μm,1.1s						
NRCA				AML	AML		
	comp=E,387μm,0.6s						
NRCA				AML	AML		
	comp=E,386μm,0.2s						
MC2	**Monte Cornacci**	**0.25**	**109**	P	Pg	07 23 20.4	+0.6
ATCC	**AVT- Casa Cast**	**0.25**	**319**	⇓P	Pg	07 23 20.5	+0.7
ATCC				S	Sb	07 23 25.0	-1.0
ATCC				AML	AML		
	comp=E,454μm,1.6s						
ATCC				AML	AML		
	comp=E,454μm,0.4s						
ATCC				AML	AML		
	comp=N,372μm,0.2s						
CSP1	**Cessapalombo**	**0.27**	**68**	P	Pg	07 23 20.7	+0.7
CSP1				AML	AML		
	comp=E,336μm,0.7s						
CSP1				AML	AML		
	comp=N,310μm,0.7s						
CSP1				AML	AML		
	comp=E,336μm,0.7s						
CSP1				AML	AML		
	comp=N,310μm,0.7s						
CSP1				AML	AML		
	comp=E,336μm,1.3s						
CSP1				AML	AML		
	comp=N,310μm,1.3s						
SNTG	**Esanatoglia**	**0.27**	**12**	P	Pg	07 23 20.6	+0.6
SNTG				AML	AML		
	comp=E,162μm,0.6s						
SNTG				AML	AML		
	comp=N,178μm,1.1s						
SNTG				AML	AML		
	comp=N,178μm,0.9s						
PF6	**Pievefavera**	**0.28**	**57**	P	Pg	07 23 20.9	+0.6
GNU	**Giano nell'Umb**	**0.29**	**229**	P	Pb	07 23 21.3	-0.8
MOMA	**Monte Martano**	**0.29**	**229**	P	Pg	07 23 21.0	+0.6
MOMA				S	Sb	07 23 26.1	-0.9
MOMA				AML	AML		
	comp=E,373μm,0.2s						
MOMA				AML	AML		
	comp=N,284μm,1.5s						
MOMA				AML	AML		
	comp=N,284μm,0.5s						
FOSV	**Fossato di Vic**	**0.31**	**346**	P	Pg	07 23 21.4	+0.5
FOSV				AML	AML		
	comp=N,183μm,0.6s						
FOSV				AML	AML		
	comp=E,152μm,1.4s						
GUMA	**Gualdo di Mace**	**0.35**	**79**	P	Pb	07 23 22.5	-0.6
GUMA				AML	AML		
	comp=N,481μm,0.9s						
GUMA				AML	AML		
	comp=E,542μm,0.9s						
GUMA				AML	AML		
	comp=N,481μm,1.1s						
MMO1	**Montemonaco**	**0.35**	**105**	P	Pg	07 23 22.2	+0.6
MURB	**Monte Urbino**	**0.37**	**317**	P	Pg	07 23 22.6	+0.6
MURB				S	Sb	07 23 28.8	-0.5
MURB				AML	AML		
	comp=E,742μm,0.2s						
MURB				AML	AML		
	comp=N,646μm,1.5s						
MURB				AML	AML		
	comp=E,742μm,0.2s						
MURB				AML	AML		
	comp=E,754μm,0.2s						
MURB				AML	AML		
	comp=N,492μm,1.1s						
MURB				AML	AML		
	comp=N,646μm,0.5s						
EL6	**Elcito**	**0.38**	**27**	P	Pg	07 23 22.5	+0.4
LNSS	**Leonessa**	**0.41**	**162**	P	Pg	07 23 23.2	+0.5
LNSS				AML	AML		
	comp=N,212μm,1.2s						
LNSS				AML	AML		
	comp=N,212μm,0.8s						
LNSS				AML	AML		
	comp=E,186μm,1.0s						
ARRO	**Arrone**	**0.42**	**190**	P	Pg	07 23 23.4	+0.5
ATFO	**Monte Foce - G**	**0.43**	**330**	P	Pg	07 23 23.8	+0.7
ATFO				AML	AML		
	comp=E,170μm,0.4s						
ATFO				AML	AML		
	comp=N,120μm,1.0s						
ATFO				AML	AML		
	comp=E,170μm,1.6s						
MF5	**Montefalcone A**	**0.44**	**90**	P	Pb	07 23 24.2	-0.4
CESX	**Cesi**	**0.44**	**209**	P	Pg	07 23 23.6	+0.5
SSFR	**Montelago di S**	**0.45**	**352**	P	Pg	07 23 23.6	+0.2
SSFR				AML	AML		
	comp=E,358μm,0.3s						
SSFR				AML	AML		
	comp=N,324μm,1.0s						
SSFR				AML	AML		
	comp=E,294μm,0.3s						
SSFR				AML	AML		
	comp=N,272μm,1.4s						
SSFR				AML	AML		
	comp=N,324μm,1.0s						
CING	**Cingoli**	**0.45**	**32**	P	Pg	07 23 24.0	+0.6
CING				S	Sb	07 23 31.3	-0.4
ARVD	**Arcevia**	**0.51**	**6**	P	Pg	07 23 24.8	+0.3
ATVO	**AVT- Monte Val**	**0.51**	**319**	P	Pg	07 23 24.7	+0.1
ATVO				AML	AML		
	comp=E,108μm,1.3s						
ATVO				AML	AML		
	comp=N,68μm,1.5s						
FRON	**Frontone**	**0.53**	**349**	P	Pg	07 23 25.1	+0.1
ATMI	**Monte Miggiano**	**0.56**	**308**	P	Pb	07 23 26.3	-0.3
ATMI				AML	AML		
	comp=N,160μm,1.5s						
ATMI				AML	AML		
	comp=N,160μm,0.5s						
ATMI				AML	AML		
	comp=E,110μm,1.1s						
ATPI	**Pietralunga -**	**0.57**	**324**	P	Pg	07 23 25.9	+0.2
ATPI				AML	AML		
	comp=E,92μm,1.6s						
ATPI				AML	AML		
	comp=N,89μm,1.6s						
ATPI				AML	AML		
	comp=E,92μm,0.4s						
ATPI				AML	AML		
	comp=N,89μm,0.4s						
BADI	**Badiali**	**0.69**	**319**	P	Pg	07 23 28.3	+0.4

ROM 24 07:23:39.7±0.1, 42°.811N±0°.003×13°.101E±0°.005, h10km, ML2.3/50, 8C-1D, Error ellipse: s-maj=0.4km s-min=0.2km az=57.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.02**	**24**	P	Pg	07 23 42.1	+0.4
NRCA				S	Sg	07 23 43.4	+0.2
NRCA				AML	AML		
	comp=N,14850μm,0.1s						
NRCA				AML	AML		
	comp=N,16450μm,0.1s						
NRCA				AML	AML		
	comp=E,17350μm,0.1s						
NRCA				AML	AML		
	comp=E,16750μm,0.1s						
MC2	**Monte Cornacci**	**0.12**	**33**	⇓P	Pg	07 23 43.3	+0.5
MC2				S	Sg	07 23 45.8	+0.7
FEMA	**Monte Fema**	**0.15**	**346**	P	Pg	07 23 43.8	+0.5
FEMA				S	Sg	07 23 46.6	+0.7
FEMA				AML	AML		
	comp=E,5305μm,0.9s						
FEMA				AML	AML		
	comp=N,3135μm,1.0s						
FEMA				AML	AML		
	comp=E,5305μm,0.9s						
FEMA				AML	AML		
	comp=N,3135μm,1.0s						
MMO1	**Montemonaco**	**0.19**	**62**	⇑P	Pg	07 23 44.2	+0.5
MMO1				S	Sg	07 23 47.4	+0.8
LNSS	**Leonessa**	**0.21**	**192**	⇑P	Pg	07 23 44.9	+0.7
LNSS				S	Sg	07 23 48.7	+1.5
LNSS				AML	AML		
	comp=E,1180μm,0.5s						
LNSS				AML	AML		
	comp=E,1310μm,1.0s						
LNSS				AML	AML		
	comp=N,1535μm,0.2s						
LNSS				AML	AML		
	comp=N,1625μm,0.3s						
MTRA	**Matera**	**0.22**	**104**	⇑P	Pg	07 23 44.8	+0.4
MTRA				S	Sg	07 23 48.6	+1.0
MTRA				AML	AML		
	comp=N,1024μm,0.2s						
MTRA				AML	AML		
	comp=E,1195μm,0.5s						
MTRA				AML	AML		
	comp=E,1195μm,0.6s						
MTRA				AML	AML		
	comp=N,1035μm,0.2s						
MTRA				AML	AML		
	comp=E,1195μm,0.5s						
MTRA				AML	AML		
	comp=N,1024μm,0.2s						
FDMO	**Fiordimonte**	**0.23**	**357**	⇑P	Pg	07 23 44.9	+0.5
FDMO				S	Sg	07 23 48.5	+0.9
FDMO				AML	AML		
	comp=E,904μm,1.0s						
FDMO				AML	AML		
	comp=N,1031μm,0.7s						
CESI	**CESI - Serrava**	**0.24**	**323**	⇑P	Pg	07 23 45.3	+0.6
CESI				S	Sg	07 23 49.4	+1.3
CESI				AML	AML		
	comp=N,2420μm,0.3s						
CESI				AML	AML		
	comp=N,2415μm,0.3s						
CESI				AML	AML		
	comp=N,2480μm,0.3s						
CESI				AML	AML		
	comp=E,1985μm,0.5s						
CESI				AML	AML		
	comp=E,1730μm,0.5s						
CESI				AML	AML		
	comp=N,2420μm,0.3s						
SMA1	**SAN MARTINO**	**0.25**	**136**	⇑P	Pg	07 23 45.4	+0.5
SMA1				S	Sg	07 23 49.5	+1.2
SMA1				AML	AML		
	comp=N,1305μm,0.2s						
SMA1				AML	AML		
	comp=E,904μm,0.5s						
SMA1				AML	AML		
	comp=N,1310μm,0.2s						
SMA1				AML	AML		
	comp=E,904μm,1.5s						
CSP1	**Cessapalombo**	**0.29**	**15**	P	Pg	07 23 46.1	+0.5
CSP1				S	Sb	07 23 50.8	-1.2
CSP1				AML	AML		
	comp=E,713μm,0.1s						
CSP1				AML	AML		
	comp=E,714μm,0.1s						
CSP1				AML	AML		
	comp=N,967μm,0.6s						
GUMA	**Gualdo di Mace**	**0.30**	**34**	P	Pb	07 23 46.6	-0.7
GUMA				S	Sb	07 23 51.8	-0.6
GUMA				AML	AML		
	comp=E,1210μm,1.5s						
GUMA				AML	AML		
	comp=N,1268μm,0.4s						
GUMA				AML	AML		
	comp=E,1210μm,0.5s						
RM33	**Pellescritta (**	**0.31**	**164**	P	Pg	07 23 46.4	+0.4
RM33				S	Sb	07 23 51.6	-1.0
RM33				AML	AML		
	comp=E,480μm,0.1s						
RM33				AML	AML		
	comp=N,398μm,0.3s						
RM33				AML	AML		
	comp=E,453μm,0.2s						
RM33				AML	AML		
	comp=N,369μm,0.3s						
RM33				AML	AML		
	comp=E,446μm,0.1s						
RM33				AML	AML		
	comp=N,368μm,0.3s						
RM33				AML	AML		
	comp=E,477μm,0.1s						
RM33				AML	AML		
	comp=N,398μm,1.7s						
RM33				AML	AML		
	comp=N,368μm,1.7s						
MML1	**Montelago di S**	**0.32**	**343**	⇑P	Pg	07 23 46.5	+0.4
MF5	**Montefalcone A**	**0.32**	**56**	P	Pg	07 23 46.8	+0.7
MF5				AML	AML		
	comp=E,630μm,0.3s						
MF5				AML	AML		
	comp=N,623μm,0.4s						
MF5				AML	AML		
	comp=E,630μm,1.7s						
ARRO	**Arrone**	**0.34**	**227**	P	Pg	07 23 47.0	+0.5
ARRO				AML	AML		
	comp=E,288μm,0.8s						
ARRO				AML	AML		
	comp=N,306μm,1.1s						
ARRO				AML	AML		
	comp=N,306μm,0.9s						
PF6	**Pievefavera**	**0.34**	**11**	P	Pg	07 23 46.7	+0.1
SEF1	**Sefro**	**0.35**	**341**	P	Pg	07 23 47.0	+0.3
CAMP	**Campotosto**	**0.36**	**140**	⇑P	Pg	07 23 47.1	+0.3
CAMP				AML	AML		
	comp=E,250μm,1.1s						
CAMP				AML	AML		
	comp=N,189μm,0.3s						
CAMP				AML	AML		
	comp=E,250μm,0.9s						
SAP2	**Sant'Angelo in**	**0.36**	**37**	P	Pb	07 23 47.5	-0.6
SAP2				AML	AML		
	comp=N,4125μm,0.6s						
SAP2				AML	AML		
	comp=E,798μm,0.9s						
MOMA	**Monte Martano**	**0.39**	**269**	P	Pg	07 23 48.0	+0.5
MOMA				AML	AML		
	comp=E,645μm,0.2s						
MOMA				AML	AML		
	comp=N,597μm,1.6s						
MOMA				AML	AML		
	comp=E,645μm,0.2s						
MOMA				AML	AML		
	comp=N,597μm,0.4s						
ASSB	**Assisi San Ben**	**0.40**	**306**	P	Pg	07 23 47.8	+0.2
TERO	**Teramo**	**0.42**	**117**	P	Pg	07 23 48.0	+0.1
TERO				AML	AML		
	comp=E,390μm,0.1s						
TERO				AML	AML		
	comp=N,311μm,0.5s						
CESX	**Cesi**	**0.43**	**243**	P	Pg	07 23 48.5	+0.3
CESX				AML	AML		
	comp=E,208μm,0.3s						
CESX				AML	AML		
	comp=N,312μm,1.6s						
CESX				AML	AML		
	comp=N,312μm,0.4s						
CESX				AML	AML		
	comp=E,208μm,1.7s						
MNTT	**Montottone**	**0.44**	**55**	P	Pb	07 23 49.5	-0.1
MNTT				AML	AML		
	comp=E,884μm,0.3s						
MNTT				AML	AML		
	comp=N,927μm,1.2s						
MNTT				AML	AML		
	comp=N,927μm,0.8s						
SNTG	**Esanatoglia**	**0.46**	**345**	P	Pg	07 23 48.8	+0.1
GIGS	**Gran Sasso**	**0.50**	**136**	P	Pg	07 23 49.2	-0.2
ATCC	**AVT- Casa Cast**	**0.50**	**318**	P	Pg	07 23 49.8	+0.3
ATCC				AML	AML		
	comp=E,422μm,1.1s						
ATCC				AML	AML		
	comp=E,422μm,0.9s						
ATCC				AML	AML		
	comp=N,437μm,0.2s						
EL6	**Elcito**	**0.52**	**0**	P	Pg	07 23 50.0	+0.1
FIAM	**Fiamignano**	**0.54**	**179**	P	Pg	07 23 50.3	0.0
FOSV	**Fossato di Vic**	**0.54**	**333**	P	Pg	07 23 50.4	+0.1
TRTR	**Tortoreto Alta**	**0.60**	**90**	P	Pb	07 23 52.6	+0.4
MURB	**Monte Urbino**	**0.62**	**317**	P	Pg	07 23 51.8	+0.1
ATFO	**Monte Foce - G**	**0.68**	**325**	P	Pg	07 23 52.8	0.0
VCEL	**Villa Celiera**	**0.69**	**127**	P	Pg	07 23 53.0	0.0
FRON	**Frontone**	**0.76**	**339**	P	Pg	07 23 54.1	-0.3
ATVO	**AVT- Monte Val**	**0.76**	**319**	P	Pg	07 23 54.3	-0.2
T0110	**Collepietro**	**0.77**	**139**	P	Pg	07 23 54.2	-0.4
ATPI	**Pietralunga -**	**0.82**	**322**	P	Pg	07 23 55.2	-0.3
SACS	**San Casciano d**	**0.88**	**273**	P	Pg	07 23 56.8	+0.2
NARO	**Abbazia di Nar**	**0.89**	**335**	P	Pg	07 23 56.3	-0.4

*IDC **24** 07:24:44.2±3.6, 7°.38S×128°.48E, h143km×36km, mb3.5/7, mbtmp4.0/9, MS3.8/2, Error ellipse: s-maj=31.9km s-min=16.0km az=43.0*
*NEIC **24** 07:24:46.1±1.6, 7°.46S±0°.09×128°.54E±0°.07, h159km±6km, mb4.2/17, Error ellipse: s-maj=13.4km s-min=10.2km az=196.0*

ISC 24 07:24:45.3±0.5, 7°.52S±0°.06×128°.50E±0°.05, h151km, n52, σ1s69/53, mb4.0/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.81**	**100**	Pn	**Pn**	**07 25 30.2**	**-0.1**
SAUI				Sn	**Sn**	**07 26 06.3**	**+1.2**
SOEI	**Soe**	**4.74**	**242**		**Pn**	**07 25 56.7**	**+1.2**
DRS	**Darwin Rock St**	**5.42**	**154**	P	**Pn**	**07 26 05.8**	**+1.4**
BATI	**Baumata**	**5.47**	**240**	P	**Pn**	**07 26 05.8**	**+0.7**
	269nm,0.4s,baz=144,slow=1.4,SNR=21						
BATI				S	**Sn**	**07 27 06.8**	**-0.7**
	159nm,0.4s,baz=325,slow=20,SNR=14						
MTN	**Manton Dam**	**5.89**	**154**		**Pn**	**07 26 12.3**	**+1.7**
FAKI	**Fak Fak**	**5.90**	**39**		**Pn**	**07 26 10.3**	**-0.5**
KNRA	**Kununurra**	**8.11**	**178**		**Pn**	**07 26 40.4**	**+0.2**
LUWI	**Luwuk**	**8.61**	**318**	Pn	**Pn**	**07 26 46.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**10.88**	**195**	P	**Pn**	**07 27 15.0**	**-2.0**
	4.7nm,0.3s,baz=26,slow=11,SNR=34						
FITZ				S	Sn	07 29 10.3	-7.0
	12nm,0.3s,baz=144,slow=23,SNR=8.0						
FITZ	**Fitzroy Crossi**	**10.88**	**195**	P	**Pn**	**07 27 15.1**	**-1.8**
WB0	**Warramunga Arr**	**13.45**	**155**		**Pn**	**07 27 49.1**	**-1.1**
WRAB	**Tennant Creek**	**13.58**	**156**	P	**Pn**	**07 27 50.4**	**-1.6**
WRA	**Warramunga Arr**	**13.58**	**156**	P	**Pn**	**07 27 49.8**	**-2.3**
	0.9nm,0.4s,baz=321,slow=14,SNR=22						
WRA				S	Sn	07 30 14.8	-7.8
	6.5nm,0.5s,baz=334,slow=22,SNR=13						
WRA	**Warramunga Arr**	**13.58**	**156**	Pn	**Pn**	**07 27 50.5**	**-1.5**
WR8	**Warramunga Arr**	**13.66**	**155**		**Pn**	**07 27 51.2**	**-1.8**
COEN	**Coen**	**15.77**	**115**		**Pn**	**07 28 19.5**	**+0.2**
COEN				IAmb	IAmb	07 28 32.0	
	comp=Z,10nm,1.1s						
MBWA	**Marble Bar**	**15.99**	**211**	Pn	**Pn**	**07 28 21.1**	**-0.9**
PSA00	**Pilbara Seismi**	**16.28**	**210**		**Pn**	**07 28 26.2**	**+0.7**
PSA00	**Pilbara Seismi**	**16.28**	**210**		**Pn**	**07 28 26.3**	**+0.8**
PSA00				IAmb	IAmb	07 28 28.4	
	comp=Z,4.4nm,1.1s						
PSA00	**Pilbara Seismi**	**16.28**	**210**	P	**P**	**07 28 27.3**	**+1.6**
QIS	**Mount Isa**	**16.84**	**141**	P	**Pn**	**07 28 33.8**	**+1.5**
AS31	**Alice Springs**	**16.87**	**163**		**Pn**	**07 28 33.9**	**+1.2**
AS31				IAmb	IAmb	07 28 35.4	
	comp=Z,5.1nm,0.6s						
ASAR	**Alice Springs**	**16.87**	**163**	P	**Pn**	**07 28 33.8**	**+1.1**
	comp=Z,9.8nm,0.5s,baz=338,slow=11,SNR=280						
ASAR				S	**S**	**07 31 32.6**	**-7.7**
	comp=Z,1.3nm,0.5s,baz=345,slow=26,SNR=5.8						
ASAR	**Alice Springs**	**16.87**	**163**		**Pn**	**07 28 33.3**	**+0.6**
PMG	**Port Moresby**	**18.55**	**97**	P	**P**	**07 28 49.6**	**-1.0**
	comp=Z,2.2nm,0.3s,baz=282,slow=9.3,SNR=6.5						
PMG	**Port Moresby**	**18.55**	**97**		**P**		
PMG				IAmb	IAmb	07 28 50.4	**-0.3**
						07 28 57.0	
	comp=Z,17nm,0.8s						
SBUM	**Sibu**	**19.03**	**301**	P	**P**	**07 28 56.4**	**+0.6**
SBUM				IAmb	IAmb	07 28 59.1	
	comp=Z,3.8nm,0.5s						
MEEK	**Meekatharra**	**21.21**	**205**	P	**P**	**07 29 21.3**	**+2.0**
TGY	**Tagaytay City**	**22.76**	**341**	LR	LR	07 40 13.6	
	comp=Z,180nm,21.4s,baz=130,slow=41						
FORT	**Forrest**	**23.14**	**181**	P	**P**	**07 29 39.5**	**+1.2**
FORT				IAmb	IAmb	07 29 52.6	
	comp=Z,9.0nm,1.1s						
INKA	**Innaminka**	**23.21**	**152**		**P**	**07 29 38.1**	**-0.9**
MORW	**Morawa**	**24.44**	**207**	P	**P**	**07 29 49.7**	**-0.5**
BBOO	**Buckleboo**	**26.12**	**165**	P	**P**	**07 30 06.4**	**+1.0**
BBOO				IAmb	IAmb	07 30 32.5	
	comp=Z,6.7nm,1.1s						
STKA	**Stephens Creek**	**27.13**	**155**	P	**P**	**07 30 15.4**	**+1.0**
	comp=Z,2.7nm,0.6s,baz=329,slow=9.7,SNR=8.7						
	comp=Z,2.7nm,0.6s						
NWAO	**Narrogin (SRO)**	**27.36**	**201**	P	**P**	**07 30 16.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**38.95**	**312**	P	**P**	**07 31 55.9**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=124,slow=9.0,SNR=1.5						
	comp=Z,0.7nm,0.3s						
MJAR	**Matsushiro Arr**	**44.77**	**11**	LR	LR	07 49 53.4	
	comp=Z,170nm,21.7s,baz=122,slow=34						
XAN	**Xi'an**	**45.31**	**337**	*e*P	**P**	**07 32 46.8**	**-1.4**
HHC	**Hu-ho-hao-te**	**50.59**	**343**	*e*P	**P**	**07 33 31.3**	**+2.5**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,90nm,5.1s						
SONM	**Songino Array**	**58.48**	**343**	P	**P**	**07 34 25.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=149,slow=6.7,SNR=2.3						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**67.86**	**328**	P	**P**	**07 35 27.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=127,slow=6.6,SNR=5.5						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**67.86**	**328**	P	**P**	**07 35 26.8**	**-0.5**
MAKZ	**Makanchi**	**68.03**	**327**	P	**P**	**07 35 27.9**	**-0.6**
MAKZ				IAmb	IAmb	07 35 55.7	
	comp=Z,7.8nm,1.2s						
ZALV	**Zalesovo Beam**	**71.40**	**334**	P	**P**	**07 35 47.0**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=152,slow=6.5,SNR=2.2						
	comp=Z,0.4nm,0.3s						
VNDA	**Vanda**	**72.12**	**173**	P	**P**	**07 35 53.3**	**+0.5**
VNDA				IAmb	IAmb	07 35 56.5	
	comp=Z,7.8nm,1.4s						
KURBB	**Kurchatov Arra**	**72.18**	**329**	P	**P**	**07 35 52.2**	**-1.4**

comp=Z,1.3nm,0.7s,baz=128,slow=5.1,SNR=21
comp=Z,1.3nm,0.7s

KURK	Kurchatov	72.19	329	P		P	07 35 52.8	-0.8
BVAR	Borovoye Array	77.72	328	P		P	07 36 23.5	-1.8
	comp=Z,0.8nm,0.8s,baz=107,slow=5.0,SNR=4.2							
	comp=Z,0.8nm,0.8s							
QSPA	South Pole Qui	82.46	180	P		P	07 36 54.1	+3.4
	comp=Z,1.9nm,0.9s,baz=320,slow=7.1,SNR=6.8							
QSPA	South Pole Qui	82.46	180	P		P	07 36 50.4	-0.4
BELA	Belgrano 2	94.22	184	P		P	07 37 46.8	+0.1
BELA				IAmb		IAmb	07 38 02.8	
	comp=Z,3.2nm,1.4s							
LPAZ	La Paz	151.18	145	PKPbc		PKPbc	07 44 22.8	+0.2
	comp=Z,0.3nm,0.4s,baz=233,slow=5.1,SNR=4.6							

NEIC ***24*** *07:29:15.7±2.2,55.˚60N±0.˚05×158.˚07W±0.˚07, h23km±9km, Error ellipse: s-maj=7.5km s-min=5.5km az=152.0*
AEIC ***24*** *07:29:15.5±1.4,55.˚64N±0.˚03×158.˚07W±0.˚03, h3km±6km, ML3.9, mb4.4/10(NEIC), ML4.0/58(NEIC), Error ellipse: s-maj=4.9km s-min=2.0km az=157.0*
IDC ***24*** *07:29:19.4±2.7,55.˚99N×158.˚10W, h42km±23km, mb3.8/21, mbtmp4.1/25, ML4.3/5, MS3.4/5, Error ellipse: s-maj=19.1km s-min=13.2km az=11.0*

ISC 24 07:29:16.5±0.5, 55.˚67N±0.˚06×158.˚05W±0.˚03, h32km, n272, σ1s23/281, mb4.2/24, MS3.4/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNSG	Veniaminof 6	0.74	308			Pn	07 29 30.0	-0.7
VNKR	Veniaminof 5	0.82	296			Pn	07 29 31.4	-0.5
VNSW	Veniaminof 7	0.94	296			Pn	07 29 33.3	-0.2
VNFG	Fog Glacier, M	1.04	307			Pb	07 29 35.6	-0.4
ANPB	Aniakchak Plen	1.14	354			Pn	07 29 36.4	+0.2
ANPK	Aniakchak Peak	1.17	358			Pn	07 29 36.8	+0.2
CHNA	Chernabura Isl	1.22	227	P		Pn	07 29 37.5	+0.3
CNBA	Chernabura Isl	1.23	226			Pn	07 29 36.0	-1.4
CNBA					IAML		07 30 06.8	
	comp=E,2μm,0.7s							
CNBA					IAML		07 30 07.8	
	comp=N,3μm,0.6s							
ANNE	Aniakchak Nort	1.24	360			Pn	07 29 37.9	+0.3
ANNW	Aniakchak Nort	1.30	356			Pb	07 29 39.7	-0.6
CHIR	Chirikof Islan	1.38	83			Pn	07 29 39.7	+0.3
CHIR				Sg		Sb	07 29 58.5	-0.4
CHIR					IAML		07 30 02.9	
	comp=N,2μm,0.5s							
CHIR					IAML		07 30 06.4	
	comp=E,3μm,0.5s							
CHIR	Chirikof Islan	1.38	83	P		Pn	07 29 39.9	+0.4
SDPT	Sand Point	1.42	258			Pn	07 29 39.5	-0.4
SDPT					IAML		07 30 10.8	
	comp=E,3μm,1.2s							
SDPT					IAML		07 30 11.4	
	comp=N,3μm,1.0s							
SDPT	Sand Point	1.42	258	P		Pn	07 29 39.9	0.0
SDPT	Sand Point	1.42	258	S		Sb	07 30 00.4	+0.5
R16K	Pilot Point	1.92	8	Pn		Pn	07 29 47.1	+0.3
R16K					IAML		07 30 21.6	
	comp=N,2μm,0.8s							
R16K					IAML		07 30 31.3	
	comp=E,2μm,1.1s							
PS1A	Pavlof South-1	2.11	265			Pn	07 29 50.0	+0.4
PS1A						Sn	07 30 16.4	+1.7
PLBL	Peulik Blue Cr	2.14	18			Pn	07 29 51.6	+1.7
PLBL						Pb	07 29 52.4	-2.2
PLK4	Peulik 4	2.17	25			Pn	07 29 51.9	+1.4
PS4A	Pavlof South-4	2.19	263			Pn	07 29 51.0	+0.4
PS4A						Sn	07 30 18.4	+1.9
HAG	Hague Volcano	2.22	262			Pn	07 29 51.6	+0.6
DOL	Dolgoi Island	2.24	258			Pn	07 29 51.6	+0.4
DOL						Pb	07 29 52.2	-3.9
DOL						Sb	07 30 20.8	-2.7
PN7A	Pavlof North-7	2.25	265			Pn	07 29 52.3	+0.8
S12K	Black Hills	2.27	272			Pn	07 29 52.6	+0.9
S12K					IAML		07 30 35.2	
	comp=E,2μm,0.6s							
PLK1	Peulik 1	2.28	20			Pn	07 29 53.7	+1.9
PLK1						Pb	07 29 54.0	-2.8
PLK2	Peulik 2	2.30	24			Pn	07 29 54.3	+2.1
SII	Sitkinak Islan	2.34	66			Pn	07 29 53.1	+0.5
SII					IAML		07 30 38.3	
	comp=N,1μm,0.6s							
SII	Sitkinak Islan	2.34	66	P		Pn	07 29 53.5	+0.8
PLK5	Peulik 5	2.42	15			Pn	07 29 54.8	+1.1
DT1	Dutton Round H	2.48	258			Pn	07 29 54.9	+0.3
KJL	Kejulik	2.75	29			Pn	07 29 59.1	+0.8
CNTC	Contact Creek	2.85	24			Pn	07 30 00.4	+0.5
CNTC						Pb	07 30 00.5	-6.2
ANCK	Angle Creek	2.89	28			Pn	07 30 01.3	+1.0
ANCK						Pb	07 30 01.6	-5.7
ACHA	Angle Creek He	2.95	29			Pn	07 30 02.3	+1.2
KABU	Katmai Buttres	3.01	29			Pn	07 30 03.7	+1.7
OHAK	Old Harbor	3.07	58			Pn	07 30 03.0	+0.4
OHAK	Old Harbor	3.07	58	P		Pn	07 30 02.8	+0.2
KAKN	Katmai Knife C	3.10	31			Pn	07 30 04.4	+1.3
Q16K	King Salmon	3.11	14			Pn	07 30 03.8	+0.6
FALS	False Pass	3.18	257			Pn	07 30 05.3	+1.2
FALS	False Pass	3.18	257	P		Pn	07 30 05.1	+1.0
P16K	Nushagak River	3.37	1			Pn	07 30 07.7	+0.9
KARR	Katmai Rainbow	3.37	31			Pn	07 30 08.1	+1.3
ISNN	Isanotski Nort	3.38	258			Pn	07 30 07.9	+0.8
KAHC	Katmai Hardscr	3.41	28			Pn	07 30 08.7	+1.2
KAHC						Pb	07 30 08.9	-7.3
KAHG	Katmai Hook Gl	3.41	33			Pn	07 30 08.7	+1.3
KAHG						Pb	07 30 08.9	-7.3
SSBA	Shishaldin	3.59	258			Pn	07 30 10.6	+0.7
O15K	Ungalikthiuk R	3.64	345			Pn	07 30 11.4	+0.9
KDAK	Kodiak Island	3.68	53	P		Pn	07 30 11.2	+0.2
	comp=N,22nm,0.3s,baz=245,slow=7.8,SNR=407							
KDAK					S	Sn	07 30 53.1	-0.1
	comp=N,76nm,0.7s,baz=47,slow=19,SNR=1.0							
	comp=N,61nm,0.4s							
KDAK	Kodiak Island	3.68	53			Pn	07 30 11.3	+0.3
KDAK					IAML		07 31 22.9	
	comp=N,196nm,1.1s							
O16K	Kokwok River B	3.93	360			Pn	07 30 15.4	+0.9
O14K	Tigyukauivet M	3.99	336			Pn	07 30 16.6	+1.4
O14K					IAML		07 31 06.8	
	comp=E,169nm,0.8s							
O14K					IAML		07 31 38.3	
	comp=N,172nm,1.4s							
P18K	Big Mountain,	4.03	21			Pn	07 30 16.7	+0.9
Q19K	Cape Douglas,	4.04	34			Pn	07 30 17.4	+1.3
O17K	Koliganek Bris	4.14	7			Pn	07 30 17.9	+0.5
SYI	Shuyak Island	4.26	44			Pn	07 30 19.9	+0.9
SYI					IAML		07 31 23.3	
	comp=N,126nm,1.0s							
AUJK	Augustine Jueg	4.46	32			Pn	07 30 22.9	+1.2
O18K	Koktuh Hills	4.46	19			Pn	07 30 23.0	+1.2
O18K					IAML		07 31 43.2	
	comp=E,105nm,1.0s							
O18K					IAML		07 32 00.5	
	comp=N,108nm,1.2s							
N14K	Kuskokwak Cree	4.68	337			Pn	07 30 26.2	+1.4
N14K					IAML		07 32 13.3	
	comp=N,182nm,1.5s							
AKUT	Akutan	4.71	254			Pn	07 30 26.1	+0.9
AKUT					IAML		07 31 47.9	
	comp=E,154nm,1.5s							
AKUT					IAML		07 31 56.1	
	comp=N,175nm,1.2s							
AKUT	Akutan	4.71	254	P		Pn	07 30 26.8	+1.6
P19K	Oil Pt	4.75	31			Pn	07 30 27.6	+1.7
P19K					IAML		07 31 02.5	
	comp=N,110nm,0.6s							
P19K					IAML		07 32 00.8	
	comp=E,138nm,1.2s							
N16K	Nishlik Lake	4.83	356			Pn	07 30 27.7	+0.8
N17K	Nushagak Hills	4.89	5			Pn	07 30 28.1	+0.4
N17K					IAML		07 32 00.5	
	comp=E,95nm,0.8s							
N17K					IAML		07 32 00.5	
	comp=N,76nm,0.7s							
O19K	Port Alsworth	4.95	22			Pn	07 30 29.6	+1.2
O19K					IAML		07 31 58.3	
	comp=N,151nm,0.4s							
ILS	Iliamna Low So	5.05	30			Pn	07 30 31.4	+1.4
ILSW	Iliamna Southw	5.05	29			Pn	07 30 31.9	+1.8
IVE	Iliamna Volcan	5.12	30			Pn	07 30 32.5	+1.6
N18K	Kilae Creek	5.15	12			Pn	07 30 31.8	+0.6
N18K					IAML		07 32 03.2	
	comp=E,73nm,1.8s							
N18K					IAML		07 32 08.0	
	comp=N,68nm,1.2s							
M15K	Kasigluk River	5.22	346			Pn	07 30 33.2	+1.0
M15K						Pn	07 30 33.5	+1.3
UNV	Unalaska Valle	5.23	253			Pn	07 30 32.9	+0.6
UNV					IAML		07 32 07.3	
	comp=N,92nm,4.7s							
UNV					IAML		07 32 10.7	
	comp=E,92nm,1.8s							
HOM	Homer	5.27	38	Pn		Pn	07 30 33.6	+0.7
O20K	Slope Mountain	5.28	31			Pn	07 30 34.9	+1.8
O20K						Pn	07 30 35.1	+2.0
MNAT	Makushin Natee	5.31	254			Pn	07 30 34.2	+0.8
CNPM	China Poot	5.32	41			Pn	07 30 34.5	+0.9
CNPM					IAML		07 31 51.2	
	comp=N,83nm,0.8s							
CNPM					IAML		07 31 52.9	
	comp=E,94nm,0.8s							
MSW	Makushin Switc	5.35	254			Pn	07 30 34.7	+0.7
MSW						Pn	07 30 34.9	+0.9
M16K	Timber Creek	5.38	355			Pn	07 30 35.6	+1.2
N19K	Bonanza Creek	5.49	19			Pn	07 30 37.6	+1.7
M14K	Bethel	5.49	340	Pn		Pn	07 30 37.2	+1.3
RED	Redoubt Volcan	5.52	28			Pn	07 30 38.5	+2.0
M13K	Dall Lake	5.52	332			Pn	07 30 38.1	+1.8
RDSO	Redoubt South	5.56	28			Pn	07 30 38.9	+1.9
RDWB	Redoubt West	5.56	28			Pn	07 30 38.8	+1.8
RDWB						Pn	07 30 38.9	+1.9
BRLK	Bradley Lake	5.62	40			Pn	07 30 37.9	+0.3
BRSE	Bradley Lake S	5.65	41			Pn	07 30 38.4	+0.3
BRSE						Pn	07 30 38.5	+0.4
DFR	Drift River	5.69	28			Pn	07 30 40.4	+1.7
RDT	Redoubt	5.75	29			Pn	07 30 41.2	+1.7
M17K	Holitna River	5.75	3	Pn		Pn	07 30 40.0	+0.5
M18K	Stony River	5.95	10			Pn	07 30 42.7	+0.5
L16K	Owhat River	6.10	354	Pn		Pn	07 30 44.7	+0.4
L14K	Kuka Creek	6.18	339			Pn	07 30 46.2	+0.9
L15K	Ungalak Mounta	6.28	345			Pn	07 30 47.2	+0.4
CKL	Chakachamna La	6.30	26			Pn	07 30 48.4	+1.3
CKL						Pb	07 30 48.6	-1.7
SPCR	Spurr Chakacha	6.33	27			Pn	07 30 48.8	+1.3
SPBG	Spurr Blockage	6.34	26			Pn	07 30 49.6	+1.9
SPU	Mount Spurr	6.36	27			Pn	07 30 49.9	+2.1
SPNN	North Nagishla	6.36	24			Pn	07 30 49.1	+1.1
SPNN						Pn	07 30 49.4	+1.4
SLKM	Skilak Lake	6.38	37	Pn		Pn	07 30 48.9	+0.8
SEW	Seward	6.38	42	Pn		Pn	07 30 47.8	-0.3
M11K	Mekoryuk	6.40	321	Pn		Pn	07 30 49.3	+1.0
L17K	Donlin	6.48	359			Pn	07 30 49.9	+0.4
M19K	Big River Lodg	6.53	15			Pn	07 30 51.6	+1.4
L18K	Granite Mounta	6.60	6			Pn	07 30 51.3	+0.2
STLK	Strandline Lak	6.68	27			Pn	07 30 54.3	+2.0
M20K	Styx River	6.73	20	Pn		Pn	07 30 55.0	+2.0
L19K	White Mountain	6.73	13			Pn	07 30 53.8	+0.8
NIKH	Nikolski High	6.87	251	P		Pn	07 30 56.7	+1.8
K15K	Wolf Creek Mou	6.88	346			Pn	07 30 56.6	+1.7
SUA	Susitna One	6.95	30	Pn		Pn	07 30 57.4	+1.4
RC01	Rabbit Creek A	6.97	35	Pn		Pn	07 30 57.0	+0.8
K17K	Iditarod	7.07	359			Pn	07 30 58.1	+0.6
P23K	Montague Islan	7.14	48	Pn		Pn	07 30 59.6	+1.0
K13K	Kusilvak Mount	7.15	334			Pn	07 30 59.9	+1.2
L20K	Farewell, AK	7.15	16			Pn	07 31 00.2	+1.5
SKT	Skwentna	7.17	25	Pn		Pn	07 31 01.0	+2.1
PWL	Port Wells	7.29	41			Pn	07 31 00.1	-0.6
M22K	Willow	7.36	31	Pn		Pn	07 31 02.4	+0.9
PMR	Palmer	7.54	34	Pn		Pn	07 31 04.2	+0.2
PMR	Palmer	7.54	34	P		Pn	07 31 04.3	+0.4
KNK	Knik Glacier	7.63	37	Pn		Pn	07 31 06.0	+0.8
J14K	Nanvaranak Lak	7.63	341			Pn	07 31 06.0	+0.8
GHO	Glory Hole Cre	7.74	34	Pn		Pn	07 31 06.5	-0.3
HIN	Hinchinbrook I	7.74	48	Pn		Pn	07 31 06.4	-0.4
J16K	Anvik River	7.74	351			Pn	07 31 07.3	+0.5
J17K	VABM Dome	7.76	357	Pn		Pn	07 31 07.9	+0.8
GLI	Glacier Island	7.78	43	Pn		Pn	07 31 06.3	-0.9
L22K	Petersville	7.82	26			Pn	07 31 09.8	+1.9
PPLA	Purkeypile	7.84	20	Pn		Pn	07 31 10.4	+2.2
CUT	Chulitna	7.85	28	Pn		Pn	07 31 09.6	+1.4
FID	Port Fidalgo	7.95	45	Pn		Pn	07 31 08.4	-1.2
SML	Sawmill	7.95	35	Pn		Pn	07 31 10.4	+0.7
EYAK	Cordova Ski Ar	8.14	48	Pn		Pn	07 31 12.2	0.0
EYAK	Cordova Ski Ar	8.14	48	P		Pn	07 31 12.4	+0.2
SCM	Sheep Creek Mo	8.31	38	Pn		Pn	07 31 15.6	+1.0
I17K	Unalakleet	8.35	352	Pn		Pn	07 31 16.4	+1.4
KAIM	Kayak Island	8.43	54	Pn		Pn	07 31 17.6	+1.3
J19K	Poorman	8.44	7			Pn	07 31 16.9	+0.7
DIV	Divide	8.45	45	Pn		Pn	07 31 16.3	-0.2
WAT7	Susitna Watana	8.58	29			Pn	07 31 17.7	-0.6
GOAT	Goat Mountain	8.59	50			Pn	07 31 18.3	-0.2
KLU	Klutina	8.60	42			Pn	07 31 19.4	+0.8
KTH	Kantishna Hill	8.68	22	Pn		Pn	07 31 21.3	+1.6
TRF	Thorofare Moun	8.73	24	Pn		Pn	07 31 21.9	+1.5
BMRM	Bremner River	8.84	48	Pn		Pn	07 31 21.6	-0.2
RNDI	Reindeer	9.04	27	Pn		Pn	07 31 22.0	+0.6
BPAW	Bear Paw Mtn.	9.16	20			Pn	07 31 27.5	+1.3
KHIT	Khitrov Hills	9.18	53			Pn	07 31 26.4	-0.2
N25K	Chitina, Valde	9.18	44	Pn		Pn	07 31 27.2	+0.6
DHY	Denali Highway	9.19	32			Pn	07 31 26.6	-0.2
MCK	McKinley	9.29	26	Pn		Pn	07 31 28.5	+0.4
WAX	Waxell Ridge	9.36	53	Pn		Pn	07 31 29.2	+0.2
GLB	Gilahina Butte	9.41	46	Pn		Pn	07 31 29.6	-0.1
VRDI	Verde Repeater	9.45	48	Pn		Pn	07 31 30.7	+0.3
TGL	Tana Glacier	9.50	51	Pn		Pn	07 31 30.7	-0.3
ISLE	Juniper Island	9.65	53	Pn		Pn	07 31 33.7	+0.6
MCARA	McCarthy VSAT	9.71	48	Pn		Pn	07 31 35.2	+1.5
PAX	Paxson	9.72	36	Pn		Pn	07 31 35.4	+1.4
KIAG	Kiagna River	9.78	51			Pn	07 31 34.8	-0.1
YAH	Yahtse	9.83	55	Pn		Pn	07 31 36.8	+1.2
BALM	Baldy	9.84	50			Pn	07 31 35.6	0.0
GRNC	Granite Creek	9.97	53	Pn		Pn	07 31 37.3	-0.2
I21K	Tanana	9.99	15	Pn		Pn	07 31 39.0	+1.4
RKAV	Rock Avalanche	10.00	56			Pn	07 31 37.4	+1.5
ATKA	Atka Island	10.13	257	Pn		Pn	07 31 39.8	+0.4
ATKA	Atka Island	10.13	257	P		Pn	07 31 39.9	+0.4
TABL	Table Mountain	10.14	55	Pn		Pn	07 31 40.5	+0.7
BARN	Barnard Glacie	10.15	51	Pn		Pn	07 31 40.1	+0.2
K24K	Donnelly Dome	10.22	32	Pn		Pn	07 31 42.3	+1.6
CTGM	Chitina Glacie	10.25	52	Pn		Pn	07 31 42.3	+1.0
LOGN	Logan Glacier	10.35	53	Pn		Pn	07 31 43.1	+0.6
HDA	Harding Lake	10.35	28	Pn		Pn	07 31 41.8	-0.8
RIDG	Independent Ri	10.46	34	Pn		Pn	07 31 44.8	+0.7
L26K	Log Cabin Wild	10.50	39			Pn	07 31 45.9	+1.4
COLA	College	10.51	24			Pn	07 31 44.2	-0.3
COLA	College	10.51	24	P		Pn	07 31 43.9	-0.7
IMAR	Indian Mountai	10.55	10	Pn		Pn	07 31 45.8	+0.6
IL31		10.66	27			Pn	07 31 45.2	-1.4
ILAR	Eielson Array	10.66	27	P		Pn	07 31 45.1	-1.6
	comp=E,0.9nm,0.3s,baz=218,slow=13,SNR=63							
ILAR					S	Sn	07 33 38.5	-6.3
	comp=E,1.0nm,0.7s,baz=220,slow=21,SNR=2.4							
ILAR					LR	LR	07 36 07.8	
	comp=E,185nm,19.0s,baz=200,slow=39							
	comp=E,2.5nm,0.5s							
ILAR	Eielson Array	10.66	27			Pn	07 31 46.0	-0.7
M27K	Edge Creek, AK	10.67	45	Pn		Pn	07 31 46.0	-1.1
O28M	Mount Upton	10.70	54			Pn	07 31 47.8	+0.3
PNL	Peninsula	10.75	61	P		Pn	07 31 48.8	+0.8
H22K	Ishtalitna Cre	10.75	15			Pn	07 31 49.2	+1.3
POKR	Poker Plat Res	10.81	25			Pn	07 31 48.4	-0.4
SCRK	Sand Creek	10.90	35			Pn	07 31 49.7	-0.5
J25K	Salcha River,	10.94	30			Pn	07 31 49.8	-0.9
BCAR	Beaver Creek A	11.10	42	Pn		Pn	07 31 52.9	+0.1
O29M	Mount Kennedy	11.31	58	Pn		Pn	07 31 56.7	+1.0
J26L	Joseph Creek	11.40	33			Pn	07 31 56.9	0.0
PRP	Porcupine Dome	11.61	27			Pn	07 31 58.4	-1.3
ADK	Adak	11.65	259	P		Pn	07 32 00.4	+0.1
KIWB	Kanaga Island	11.92	259	Pn		Pn	07 32 04.5	+0.5
M29M	Somme Creek	12.11	48	Pn		Pn	07 32 07.0	+0.3
G24K	Hadweenzic Riv	12.15	20	Pn		Pn	07 32 05.3	-1.8
S31K	Pelican	12.16	70	Pn		Pn	07 32 07.4	+0.2
COLD	Coldfoot	12.17	15	Pn		Pn	07 32 05.9	-1.4
N30M	Aishikik Lake	12.35	53	Pn		Pn	07 32 07.2	-2.7
FYU	Fort Yukon	12.52	24	Pn		Pn	07 32 10.0	-2.1
DAWY	Dawson	12.54	40	Pn		Pn	07 32 14.2	+1.7
O30N	Mendenhall	12.62	57	Pn		Pn	07 32 14.3	+0.8
I27K	Kandik River	12.76	32	Pn		Pn	07 32 15.0	-0.4
F24K	Squaw Lake	12.80	18	Pn		Pn	07 32 15.4	-0.6
E22K	Anaktuvuk Pass	12.83	11	Pn		Pn	07 32 17.2	+0.7
E21K	Killik River	12.95	7			Pn	07 32 19.6	+1.6
S32K	Killisnoo	13.05	72	Pn		Pn	07 32 21.3	+2.0
JIS	Juneau Island	13.15	69	P		Pn	07 32 21.8	+1.1
WHY	Whitehorse	13.17	58	Pn		Pn	07 32 22.7	+1.5
I28M	Miner Creek	13.18	35			Pn	07 32 21.8	+0.6
F25K	Christian Rive	13.29	21	Pn		Pn	07 32 19.6	-3.1
BMAR	Burnt Mountain	13.38	23	Pn		Pn	07 32 23.1	-0.8
G27K	Doyon Strip	13.61	28	Pn		Pn	07 32 22.2	-4.8
F26K	Sheenjek River	13.69	23	Pn		Pn	07 32 26.9	-1.3
E25K	Arctic Village	13.76	20			Pn	07 32 27.4	-1.7
J30M	Hart River	13.95	42	Pn		Pn	07 32 32.9	+1.2
CRAG	Craig	14.08	81	P		Pn	07 32 34.0	+0.5
P33M	Teslin, Yukon	14.10	61	Pn		Pn	07 32 34.3	+0.5
AMKA	Amchitka	14.12	262	Pn		Pn	07 32 33.3	-0.6
H29M	Whitestone	14.17	34			Pn	07 32 35.2	+0.6
Q32M	Nakina River	14.28	66	Pn		Pn	07 32 35.9	-0.4
F28M	Old Crow	14.68	28			Pn	07 32 41.3	-0.2
EPYK	Eagle Plains	14.79	35			Pn	07 32 43.0	-0.1
R33M	Jennings River	14.96	64	Pn		Pn	07 32 46.0	+0.5
DLBC	Dease Lake	15.44	68	P		P	07 32 54.0	-1.9
	comp=E,0.4nm,0.3s,baz=285,slow=12,SNR=10							
	comp=E,1.4nm,0.5s							
D27M	Malcolm River	15.64	23	Pn		Pn	07 32 54.2	-0.1
G31M	Satah River	15.91	35			Pn	07 32 56.6	-1.0
G31M					IAmb	IAmb	07 33 10.6	
	comp=Z,21nm,0.6s							
F31M	Tsiigehtchic	16.37	34			Pn	07 33 04.0	+0.5
SHEM	Shemya Is, Ala	16.51	271	P		P	07 33 08.9	+1.2
	comp=Z,6.5nm,0.3s,baz=68,slow=11,SNR=2.4							
INK	Inuvik	16.94	32	P		Pn	07 33 07.8	-2.8
	comp=Z,0.9nm,0.3s,baz=235,slow=12,SNR=33							
	comp=Z,2.9nm,0.4s							
INK	Inuvik	16.94	32			Pn	07 33 08.8	-1.9
INK					IAmb	IAmb	07 33 24.9	
	comp=Z,10.0nm,0.7s							
C36M	Paulatuk	20.43	35	P		P	07 33 51.1	+0.6
C36M					IAmb	IAmb	07 33 59.6	
	comp=Z,16nm,0.7s							
A36M	Sachs Harbour	21.36	28	P		P	07 34 00.1	-0.4
A36M					IAmb	IAmb	07 34 12.9	
	comp=Z,11nm,0.7s							
YKA	Yellowknife Ar	22.95	55	P		P	07 34 18.7	+1.1
	comp=Z,1.4nm,0.7s,baz=280,slow=12,SNR=8.8							
	comp=Z,1.4nm,0.7s							
PEA0B	Petropavlovsk-	25.56	283	P		P	07 34 39.1	-3.0
PETK	Petropavlovsk-	25.56	283	P		P	07 34 42.3	+0.2
	comp=Z,3.9nm,0.4s,baz=74,slow=13,SNR=18							
	comp=Z,3.9nm,0.4s							
PETK	Petropavlovsk-	25.56	283	P		P	07 34 39.2	-2.9
NVAR	Mina Array Bea	31.55	106	P		P	07 35 38.3	+2.4
	comp=Z,0.9nm,0.7s,baz=305,slow=8.2,SNR=8.4							
NVAR					LR	LR	07 45 43.0	
	comp=Z,68nm,18.6s,baz=307,slow=31							
	comp=Z,0.9nm,0.7s							
PDAR	Pinedale Array	33.49	92	P		P	07 35 54.6	+1.8
	comp=Z,1.1nm,0.7s,baz=309,slow=5.2,SNR=13							
	comp=Z,1.1nm,0.7s							
ULM	Lac du Bonnet	36.72	72	LR		LR	07 50 48.9	
	comp=Z,48nm,18.4s,baz=306,slow=35							
SPITS	Spitsbergen Ar	46.36	2	P		P	07 37 38.1	-0.8
	comp=Z,14nm,1.1s,baz=22,slow=1.6,SNR=5.1							
	comp=Z,14nm,1.1s							
TXAR	Lajitas Array	46.39	101	P		P	07 37 40.5	+0.7
	comp=Z,0.7nm,0.8s,baz=316,slow=7.5,SNR=6.9							
	comp=Z,0.7nm,0.8s							
HILR	Hailar Array B	47.51	299	P		P	07 37 48.8	+0.6
	comp=Z,0.5nm,0.3s,baz=94,slow=6.2,SNR=1.6							
	comp=Z,0.5nm,0.3s							
ARCES	ARCESS Array B	55.07	358	P		P	07 38 42.6	-1.9
	comp=Z,

GUY2C	**Guyana, Caldas**	**2.14**	**237**	P	Pn	07 32 44.9	-0.1
GUY2C				S	Sn	07 33 12.8	+0.8
VILC	**Villavicencio,**	**2.27**	**183**	P	Pn	07 32 45.4	-0.9
VILC				S	Sn	07 33 15.1	+0.6
UREC	**San Jos de Ur**	**2.38**	**305**	P	Pn	07 32 46.3	-1.3
UREC				S	Sn	07 33 13.7	-3.2
CBOC	**Ciudad Bolivar**	**2.49**	**258**	P	Pn	07 32 50.2	+1.0
CBOC				S	Sn	07 33 19.7	0.0
PRAC	**Prado**	**2.97**	**206**	P	Pn	07 32 53.6	-1.7
PRAC				S	Sn	07 33 32.0	+1.3
ORTC	**Ortega, Tolima**	**2.98**	**214**	P	Pn	07 32 54.8	-0.7
ORTC				S	Sn	07 33 31.8	+0.8
URMC	**La Uribe, Meta**	**3.23**	**195**	P	Pn	07 32 58.9	+0.1
URMC				S	Sn	07 33 36.2	-0.6
SJCC	**San Jacinto, C**	**3.83**	**335**	P	Pn	07 33 05.2	-1.7
SJCC				S	Sn	07 33 48.4	-2.9
CRJC	**Cerrejon, Guaj**	**4.65**	**8**	P	Pn	07 33 15.3	-2.5
CRJC				S	Sn	07 34 09.9	-1.0
URIC	**Uribia, Colomb**	**5.50**	**16**	P	Pn	07 33 28.3	-0.9

*IDC **24** 07:36:35.4±3.1, 13°.64S×166°.27E, h0km, mb4.0/4, mbtmp4.0/5, ML3.8/1, Error ellipse: s-maj=65.5km s-min=32.2km az=92.0*
*NEIC **24** 07:36:41.6±0.6, 13°.65S±0°.07×166°.8E±0°.2, h77km±15km, mb4.0/12, Error ellipse: s-maj=34.9km s-min=6.5km az=77.0*
*NOU **24** 07:36:45.4, 14°.06S×167°.17E, h0km, MLv4.8/6, Vanuatu Islands*

ISC 24 07:36:40.0±1.3, 13°.8S±0°.1×166°.4E±0°.1, h35km, n23, σ2s02/26, mb4.0/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.81**	**155**		**Pn**	**07 37 11.1**	**+2.4**
SANVU				Sn	**Sn**	**07 37 31.9**	**+1.5**
SANVU	**Saraoutou**	**1.81**	**155**	P	**Pn**	**07 37 10.9**	**+2.2**
DVP	**Devils Point**	**4.26**	**157**	P	**Pn**	**07 37 44.9**	**+2.5**
MARNC	**Mare, Loyalty**	**7.79**	**169**	Pn	**Pn**	**07 38 32.4**	**+1.4**
MARNC				Sn	**Sn**	**07 39 52.9**	**-5.1**
DZM	**Mont Dzumac**	**8.22**	**180**	Pn	**Pn**	**07 38 38.8**	**+1.8**
	1.2nm,0.3s,baz=0.0,slow=20,SNR=36						
DZM				Sn	**Sn**	**07 40 05.7**	**-3.1**
	0.5nm,0.3s,baz=74,slow=15,SNR=1.6 6.5nm,0.7s						
ONTNC	**Ouen Toro**	**8.46**	**180**	Pn	**Pn**	**07 38 43.8**	**+3.6**
PINNC	**Pines Island,**	**8.82**	**174**	Pn	**Pn**	**07 38 47.6**	**+2.5**
EIDS	**Eidsvold**	**18.44**	**229**	P	**Pn**	**07 40 55.4**	**+2.4**
EIDS				IAmb	IAmb	07 40 58.1	
	comp=Z,6.6nm,0.8s						
LHI	**Lord Howe Isla**	**18.88**	**200**	P	**Pn**	**07 40 58.5**	**+0.3**
LHI				IAmb	IAmb	07 41 05.3	
	comp=Z,18nm,1.1s						
CTAO	**Charters Tower**	**20.26**	**249**	P	**P**	**07 41 12.7**	**+0.1**
COEN	**Coen**	**22.56**	**267**	P	**P**	**07 41 38.2**	**+0.8**
STKA	**Stephens Creek**	**28.98**	**227**	P	**P**	**07 42 36.5**	**0.0**
	comp=Z,3.3nm,0.4s,baz=54,slow=9.0,SNR=21 comp=Z,3.3nm,0.4s						
TOO	**Toolangi**	**30.12**	**214**	P	**P**	**07 42 46.0**	**-0.6**
TOO				IAmb	IAmb	07 43 10.6	
	comp=Z,2.6nm,1.1s						
WR8	**Warramunga Arr**	**31.11**	**254**	P	**P**	**07 42 55.6**	**+0.2**
WR8				IAmb	IAmb	07 43 09.0	
	comp=Z,4.5nm,1.1s						
WB0	**Warramunga Arr**	**31.19**	**255**	P	**P**	**07 42 56.8**	**+0.6**
WB0				IAmb	IAmb	07 42 56.9	
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**31.26**	**254**	P	**P**	**07 42 57.0**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=86,slow=9.3,SNR=8.2 comp=Z,0.4nm,0.4s						
AS31	**Alice Springs**	**32.24**	**247**	P	**P**	**07 43 05.7**	**+0.3**
ASAR	**Alice Springs**	**32.24**	**247**	P	**P**	**07 43 05.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=75,slow=9.4,SNR=17 comp=Z,0.5nm,0.5s						
BBOO	**Buckleboo**	**33.51**	**230**	P	**P**	**07 43 16.5**	**+0.2**
KNRA	**Kununurra**	**36.43**	**262**	P	**P**	**07 43 41.4**	**-0.3**
FORT	**Forrest**	**39.07**	**238**	P	**P**	**07 44 03.6**	**-0.3**
MJAR	**Matsushiro Arr**	**56.70**	**333**	P	**P**	**07 46 19.1**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=158,slow=9.0,SNR=2.9 comp=Z,1.5nm,0.9s						
QSPA	**South Pole Qui**	**76.22**	**180**	P	**P**	**07 48 22.4**	**-2.4**
QSPA				IAmb	IAmb	07 48 35.7	
	comp=Z,1.5nm,1.1s						

IDC 24 07:57:38.4±72.0, 12°.57S×172°.12E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=1251.0km s-min=124.9km az=65.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.99**	**231**	P	P	08 04 23.6	-0.3
	1.4nm,0.4s,baz=70,slow=9.4,SNR=12 1.4nm,0.4s						
WRA	**Warramunga Arr**	**36.94**	**254**	P	P	08 04 50.2	+0.6
	0.4nm,0.3s,baz=81,slow=8.9,SNR=8.6 0.4nm,0.3s						
ASAR	**Alice Springs**	**37.85**	**248**	P	P	08 04 56.7	-0.5
	0.7nm,0.4s,baz=80,slow=9.4,SNR=17 0.7nm,0.4s						

*UPP **24** 08:18:03.6±0.0, 67°.84N×20°.22E, h0km, ML2.2, Confirmed Induced event*
*IDC **24** 08:18:03.6±1.1, 67°.87N×20°.46E, h0km, mbtmp2.9/4, ML2.0/4, Error ellipse: s-maj=18.0km s-min=6.6km az=121.0*
*HEL **24** 08:18:04.1±0.2, 67°.84N×20°.22E, h0km, ML1.8, Suspected explosion*

ISC 24 08:18:03.5±0.8, 67°.84N±0°.02×20°.21E±0°.02, h0km, n36, σ1s13/63, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**22**	P	**Pg**	**08 18 06.2**	**+0.3**
KUA				S	**Sg**	**08 18 07.7**	**+0.2**
RATU	**Laukkuluspa**	**0.24**	**267**	P	**Pg**	**08 18 08.3**	**+0.4**
RATU				S	**Sg**	**08 18 11.6**	**+0.6**
NIKU	**Nikkaluokta**	**0.45**	**274**	P	**Pg**	**08 18 12.2**	**+0.2**
NIKU				S	**Sg**	**08 18 18.4**	**+0.6**
LANU	**Lannavaara**	**0.71**	**72**	P	**Pg**	**08 18 16.9**	**-0.1**
LANU				S	**Sg**	**08 18 26.2**	**+0.1**
LANU	**Lannavaara**	**0.71**	**72**	PG	**Pg**	**08 18 16.9**	**-0.1**
LANU				SG	**Sg**	**08 18 25.3**	**-0.8**
DUNU	**Dundret**	**0.73**	**169**	P	**Pg**	**08 18 17.4**	**-0.1**
DUNU				S	**Sg**	**08 18 27.5**	**+0.6**
MASU	**Masugnsbyn**	**0.78**	**118**	P	**Pg**	**08 18 18.5**	**+0.1**
MASU				S	**Sg**	**08 18 28.6**	**+0.1**
SALU	**Saltoluokta**	**0.80**	**236**	P	**Pg**	**08 18 18.7**	**0.0**
SALU				S	**Sg**	**08 18 29.5**	**+0.5**
KIF	**Kilpisjarvi**	**1.19**	**10**	*eP*	**Pb**	**08 18 26.8**	**-0.1**
KIF	**Kilpisjarvi**	**1.19**	**10**	PG	**Pg**	**08 18 26.0**	**-0.3**
	baz=195						
KIF				smax	smax	08 18 41.4	
	comp=Z,12nm,0.2s						
KIF				SG	**Sg**	**08 18 42.0**	**+0.2**
HEF	**Hetta**	**1.41**	**64**	*eP*	**Pn**	**08 18 29.1**	**-1.3**
HEF	**Hetta**	**1.41**	**64**	PG	**Pn**	**08 18 29.4**	**-1.1**
	baz=246						
HEF				smax	smax	08 18 46.6	
	comp=Z,5.8nm,0.2s						
HEF				SB	**Sg**	**08 18 47.8**	**-1.0**
ERTU	**Ertsjaerv**	**1.50**	**148**	P	**Pn**	**08 18 31.1**	**-0.5**
ERTU				S	**Sg**	**08 18 51.6**	**0.0**
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	**Pn**	**08 18 31.0**	**-0.6**
ERTU				SN	**Sn**	**08 18 52.1**	**+0.3**
KLF	**Kolari**	**1.56**	**111**	PG	**Pn**	**08 18 32.0**	**-0.5**
KLF				smax	smax	08 18 50.8	
	comp=Z,6.1nm,0.2s						
KLF				SN	**Sg**	**08 18 53.8**	**+0.2**
KTK1	**Kautokeino**	**1.63**	**42**	PG	**Pn**	**08 18 33.2**	**-0.1**
KTK1				SN	**Sg**	**08 18 56.9**	**+1.3**
HARU	**Harads**	**1.71**	**170**	P	**Pn**	**08 18 34.6**	**+0.2**
HARU				S	**Sg**	**08 18 58.1**	**-0.1**
TRO	**Tromso**	**1.86**	**346**	PG	**Pn**	**08 18 37.5**	**+0.9**
TRO				SG	**Sn**	**08 19 01.4**	**+0.7**
KALU	**Kalix**	**2.34**	**147**	PG	**Pn**	**08 18 44.3**	**+1.2**
KALU				SG	**Sb**	**08 19 15.3**	**-0.6**
TOF	**Tornio**	**2.39**	**136**	PB	**Pn**	**08 18 45.2**	**+1.4**
TOF				smax	smax	08 19 14.8	
	comp=Z,3.8nm,0.2s						
TOF				SG	**Sb**	**08 19 18.1**	**+0.8**

RNF	**Rovaniemi**	**2.57**	**116**	PB	**Pn**	**08 18 48.1**	**+1.8**
RNF				SG	**Sb**	**08 19 22.4**	**-0.1**
ARA0	**ARCESS Array S**	**2.58**	**46**	PN	**Pn**	**08 18 47.0**	**+0.6**
	baz=230						
ARA0				SB	**Sb**	**08 19 20.9**	**-1.9**
ARCES	**ARCESS Array B**	**2.58**	**46**	Pn	**Pn**	**08 18 46.7**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=226,slow=15,SNR=52						
ARCES				Lg	Lg	08 19 20.9	
	comp=Z,1.8nm,0.3s,baz=228,slow=25,SNR=18 comp=Z,1.2nm,0.3s						
RAJF	**Raja-Jooseppi**	**3.10**	**74**	PN	**Pn**	**08 18 53.7**	**+0.3**
RAJF				SG	**Sb**	**08 19 36.7**	**-0.8**
KEV	**Kevo**	**3.13**	**49**	PN	**Pn**	**08 18 55.1**	**+1.1**
KEV				SN	**Sn**	**08 19 33.0**	**+1.0**
RANF	**Ranua**	**3.17**	**122**	PN	**Pn**	**08 18 55.6**	**+1.1**
	baz=313						
RANF				SG	**Sb**	**08 19 41.3**	**+1.6**
BURU	**Burvik**	**3.30**	**171**	PB	**Pn**	**08 18 58.4**	**+2.1**
	baz=349						
BURU				SB	**Sb**	**08 19 40.6**	**-2.9**
VRF	**Varrio**	**3.57**	**87**	PB	**Pn**	**08 19 03.3**	**+3.3**
VRF				SG	**Sb**	**08 19 51.9**	**+0.7**
OUL	**Oulu**	**3.58**	**138**	SG	**Sb**	**08 19 53.0**	**+1.4**
KU2	**Taivalkoski**	**3.83**	**120**	PN	**Pn**	**08 19 05.0**	**+1.4**
OLKF	**Oulanka, Finla**	**3.90**	**109**	PN	**Pn**	**08 19 05.7**	**+1.1**
MSF	**Maaselka**	**3.98**	**115**	PN	**Pn**	**08 19 07.0**	**+1.3**
KU1	**Kurvinen**	**4.36**	**117**	PN	**Pn**	**08 19 12.4**	**+1.6**
FINES	**FINESS Array B**	**6.89**	**156**	Pn	**Pn**	**08 19 46.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=345,slow=14,SNR=3.4						
FINES				Sn	**Sn**	**08 21 03.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=343,slow=22,SNR=4.2						
FINES				Lg	Lg	08 21 40.0	
	comp=Z,0.3nm,0.3s,baz=336,slow=27,SNR=7.3 comp=Z,1.2nm,0.9s						
NOA	**NORSAR Array B**	**7.85**	**214**	Pn	**Pn**	**08 19 57.8**	**-0.9**
	baz=23,slow=11,SNR=1.4						
NOA				Lg	Lg	08 22 12.6	
	baz=26,slow=18,SNR=5.7 comp=Z,0.4nm,0.8s						
HFS	**Hagfors**	**8.24**	**203**	Pn	**Pn**	**08 20 03.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=21,slow=17,SNR=1.8						
HFS				Sn	**Sn**	**08 21 34.3**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=15,slow=22,SNR=1.0						
HFS				Lg	Lg	08 22 22.8	
	comp=Z,0.2nm,0.3s,baz=20,slow=30,SNR=5.2 comp=Z,1.8nm,0.9s						

*IDC **24** 08:23:00.5±1.1, 1°.78N×126°.80E, h0km, mb4.0/8, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=83.3km s-min=15.6km az=66.0*
*DJA **24** 08:23:04.6±0.3, 2°.1N±3°.1×12°.6E±°, h10km, M3.8/10, mb3.9/2, MLv3.7/10*

ISC 24 08:23:06.5±0.9, 1°.60N±0°.08×126°.58E±0°.09, h35km, n15, σ1s03/15, mb3.9/8, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**136**	P	**Pn**	**08 23 27.2**	**+1.2**
SGSI	**Sangihe**	**2.32**	**333**	P	**Pn**	**08 23 42.1**	**-0.1**
SANI	**Sanana**	**3.68**	**189**	P	**Pn**	**08 23 59.4**	**-1.5**
MRSI	**Marisa**	**4.77**	**256**	P	**Pn**	**08 24 17.1**	**+1.2**
APSI	**Ampana**	**5.53**	**243**	P	Pn	08 24 16.5	-10
MPSI	**Mapaga**	**6.79**	**259**	P	**Pn**	**08 24 44.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.60**	**183**	P	**P**	**08 27 31.9**	**+0.1**
	0.3nm,0.3s,baz=356,slow=9.8,SNR=7.4 2.8nm,0.9s						
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**08 28 04.9**	**-0.6**
	1.9nm,0.5s,baz=340,slow=9.8,SNR=28 1.9nm,0.5s						
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**08 28 37.0**	**-0.3**
	0.7nm,0.4s,baz=346,slow=9.1,SNR=21						
ASAR				PcP	**PcP**	**08 32 05.2**	**+0.8**
	0.2nm,0.4s,baz=341,slow=2.4,SNR=4.7 0.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**31.86**	**303**	P	**P**	**08 29 29.3**	**+0.8**
	1.0nm,0.3s,baz=106,slow=8.4,SNR=1.4 1.0nm,0.3s						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**08 30 06.5**	**+0.4**
	1.0nm,0.6s,baz=339,slow=7.7,SNR=4.9 1.0nm,0.6s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**08 33 02.7**	**-1.6**
	0.5nm,0.3s,baz=122,slow=7.1,SNR=7.0 0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	**08 33 24.4**	**-1.3**
	0.3nm,0.3s,baz=117,slow=10.0,SNR=1.4 0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.44**	**328**	P	**P**	**08 33 31.7**	**-1.0**
	1.6nm,0.2s,baz=128,slow=6.3,SNR=4.4 1.6nm,0.2s						
BVAR	**Borovoye Array**	**69.01**	**327**	P	**P**	**08 34 08.2**	**-0.2**
	0.5nm,0.5s,baz=98,slow=5.1,SNR=3.3 0.5nm,0.5s						

TRN 24 08:23:22.9, 17°.58N×61°.01W, h18km, MD3.6, East of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.74**	**277**	*eP*	Pn	08 23 39.6	+1.0
ANWB				*eS*	Sn	08 23 52.4	+3.0
MBFL	**Flemmings, Mon**	**1.41**	**235**	*eP*	Pg	08 23 49.6	-0.6
DHSZ	**Broadband at M**	**1.48**	**209**	*eP*	Pb	08 23 50.3	+0.4
DHSZ				*eS*	Sg	08 24 11.6	+0.8
ATGZ	**Broadband at L**	**1.62**	**205**	*eP*	Pn	08 23 51.3	+0.6
ATGZ				*eS*	Sb	08 24 13.0	+0.6
MMLZ	**Guadeloupe Bro**	**1.65**	**203**	*eP*	Pb	08 23 53.5	+0.7
MMLZ				*eS*	Sg	08 24 15.6	-0.5
SKI	**Saint Kitts**	**1.67**	**262**	*eP*	Pb	08 23 53.4	+0.3
SKI				*eS*	Sb	08 24 14.9	+1.1
TBG	**Guadaloupe-3**	**1.82**	**200**	*eP*	Pn	08 23 53.9	+0.6
TBG				*eS*	Sb	08 24 17.7	-0.4
DSLB	**Salisbury**	**2.16**	**191**	*eP*	Pb	08 24 00.2	-1.3
DSLB				*eS*	Sb	08 24 27.3	-0.7
BIM	**Bigot**	**3.04**	**181**	*eP*	Pn	08 24 13.3	+3.1

*GCG **24** 08:25:07.7±1.7, 15°.66N×88°.40W, h7km±14km, MD4.2, ML4.0*
*CATAC **24** 08:25:09.2±0.4, 16°.1N±3°.3×8°.9W±°, h13km±2km, M3.5/19, MLv3.5/19, Error ellipse: s-maj=6.6km s-min=3.8km az=177.5, confirmed*

ISC 24 08:25:10.3±1.0, 15°.66N±0°.05×88°.55W±0°.04, h10km, n44, σ1s45/46, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZABA	**Izabal, Puerto**	**0.08**	**333**	P	**Pg**	**08 25 12.6**	**-0.1**
IZABA				S	**Sg**	**08 25 17.1**	**+2.7**
ZAFR2	**Estanzuela, Za**	**1.32**	**216**	*eP*	**Pn**	**08 25 31.3**	**-3.6**
ZAFR2				*eS*	**Sn**	**08 25 51.3**	**-1.3**
ESQI	**Esquipulas**	**1.33**	**215**	S	**Sn**	**08 25 52.7**	**-0.3**
ESQI	**Esquipulas**	**1.33**	**215**	P	**Pn**	**08 25 32.7**	**-2.5**
MTO3	**Montecristo**	**1.48**	**212**	*eP*	**Pn**	**08 25 35.3**	**-1.9**
MTO3	**Montecristo**	**1.48**	**212**	P	**Pn**	**08 25 35.5**	**-1.7**
MTO3	**Montecristo**	**1.48**	**212**	S	**Sn**	**08 25 56.6**	**-0.2**
LLGN	**La Laguna**	**1.54**	**195**	S	**Sn**	**08 25 57.9**	**-0.1**
JUAM	**Asuncion Mita**	**1.73**	**221**	*eP*	**Pn**	**08 25 39.1**	**-1.4**
PETF	**Flores**	**1.78**	**315**	*eP*	**Pn**	**08 25 39.7**	**-1.5**
PETF	**Flores**	**1.78**	**315**	P	**Pn**	**08 25 39.9**	**-1.3**
AVCB	**Coban**	**1.80**	**264**	IAML		08 26 16.4	
	comp=E,1μm,0.4s						
UNIC	**Universidad Ca**	**1.93**	**210**	P	**Pn**	**08 25 42.7**	**-0.5**
UNIC	**Universidad Ca**	**1.93**	**210**	S	**Sn**	**08 26 09.2**	**+1.6**
APG	**El Apazote**	**1.96**	**251**	*eP*	**Pn**	**08 25 42.4**	**-1.5**
PAVA	**Las Pavas**	**1.97**	**191**	P	**Pn**	**08 25 42.2**	**-1.7**
PAVA	**Las Pavas**	**1.97**	**191**	S	**Sn**	**08 26 09.8**	**+1.0**
SLOZ	**Alcaldia de Sa**	**2.02**	**217**	S	**Sn**	**08 26 10.9**	**+1.1**
SLOZ	**Alcaldia de Sa**	**2.02**	**217**	P	**Pn**	**08 25 41.9**	**-2.6**
UESV	**Universidad de**	**2.02**	**187**	P	**Pn**	**08 25 44.3**	**-0.3**
UESV	**Universidad de**	**2.02**	**187**	S	**Sn**	**08 26 10.8**	**+0.9**
IGN	**Direccin Gen**	**2.02**	**197**	P	**Pn**	**08 25 44.9**	**+0.3**
PMON	**Piamonte**	**2.07**	**201**	P	**Pn**	**08 25 45.3**	**0.0**
LOMA	**Loma Larga**	**2.09**	**197**	P	**Pn**	**08 25 44.8**	**-0.8**
NUBE	**Las Nubes**	**2.12**	**215**	*eP*	**Pn**	**08 25 45.2**	**-0.7**
NUBE	**Las Nubes**	**2.12**	**215**	P	**Pn**	**08 25 45.9**	**0.0**
NUBE	**Las Nubes**	**2.12**	**215**	S	**Sn**	**08 26 14.2**	**+1.8**
TECO	**Alcaldia de Te**	**2.12**	**186**	S	**Sn**	**08 26 13.7**	**+1.3**
TECO	**Alcaldia de Te**	**2.12**	**186**	P	**Pn**	**08 25 44.2**	**-1.7**
JAYA	**Jayaque - finc**	**2.17**	**204**	*eP*	**Pn**	**08 25 46.0**	**-0.8**
JAYA	**Jayaque - finc**	**2.17**	**204**	P	**Pn**	**08 25 46.3**	**-0.4**
FAME	**Alcaldia de Sa**	**2.30**	**218**	P	**Pn**	**08 25 48.6**	**+0.3**
LCND	**La Caada**	**2.42**	**165**	S	**Sn**	**08 26 20.8**	**+1.1**
LCND	**La Caada**	**2.42**	**165**	P	**Pn**	**08 25 47.8**	**-2.2**
CNCH	**Conchagua**	**2.47**	**164**	P	**Pn**	**08 25 48.9**	**-1.8**
CNCH	**Conchagua**	**2.47**	**164**	S	**Sn**	**08 26 21.8**	**+0.8**
POTN	**Potosi Cosigui**	**2.83**	**159**	P	**Pn**	**08 25 54.6**	**-1.0**
POTN				S	**Sn**	**08 26 31.6**	**+1.8**
RCVN	**Varillal2**	**3.07**	**132**	P	**Pn**	**08 25 57.1**	**-2.0**
RCVN	**Varillal2**	**3.07**	**132**	S	**Sn**	**08 26 35.5**	**-0.5**
RCON	**San Juan de Ri**	**3.17**	**133**	S	**Sn**	**08 26 38.8**	**+0.5**
RCON	**San Juan de Ri**	**3.17**	**133**	P	**Pn**	**08 25 58.8**	**-1.6**
RCPN	**Sur Rio San Ju**	**3.18**	**131**	S	**Sn**	**08 26 38.8**	**+0.1**
RCPN	**Sur Rio San Ju**	**3.18**	**131**	P	**Pn**	**08 25 59.5**	**-1.1**
LIMN	**Finca el Limon**	**3.33**	**140**	P	**Pn**	**08 26 02.8**	**+0.1**

*SKHL **24** 08:32:00.8±0.1, 44°.70N×145°.10E, h229km±4km, mb4.6/4, msha5.6/3*
*JMA **24** 08:32:01.5±0.5, 45°.1N±2°.4×14°.5E±°, h238km±4km, MV3.5/29, NE OFF HOKKAIDO*
*IDC **24** 08:32:02.3±1.0, 44°.90N×144°.83E, h240km±12km, mb3.1/6, mbtmp3.7/11, Error ellipse: s-maj=33.3km s-min=15.4km az=166.0*

ISC 24 08:32:01.4±0.7, 44°.71N±0°.09×145°.04E±0°.06, h238km±7km, n32, σ1s23/40, mb3.3/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**0.78**	**175**	*eP*	**Pn**	**08 32 34.6**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**0.90**	**139**	*eP*	**Pn**	**08 32 34.8**	**+0.2**
YUK				AMB	AMB	08 32 35.6	
	140nm,0.5s						
YUK				*eS*	**S**	**08 33 01.3**	**+0.8**
YUK				A	A	08 33 08.5	
	460nm,0.5s						
YUK				A	A	08 33 08.5	
	590nm,0.5s						
GLVR	**Golovnino**	**1.03**	**160**	*eP*	**Pn**	**08 32 36.1**	**+0.8**
GLVR				AMB	AMB	08 32 38.9	
	230nm,0.4s						
GLVR				*eS*	**S**	**08 33 03.7**	**+1.8**
GLVR				A	A	08 33 06.6	
	700nm,0.3s						
GLVR				A	A	08 33 06.6	
	330nm,0.3s						
JTKR	**Abashiri--Toko**	**1.10**	**228**	*eP*	**Pn**	**08 32 36.0**	**+0.3**
JTKR				*eS*	**S**	**08 33 03.1**	**+0.5**
JNK	**Nakash**	**1.15**	**192**	*eP*	**Pn**	**08 32 36.7**	**+0.6**
JMP	**Maruseppu**	**1.39**	**240**	P	**Pn**	**08 32 37.9**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.43**	**159**	*i P*	**Pn**	**08 32 38.0**	**0.0**
NEM2	**Nemuro 2**	**1.44**	**159**	*eP*	**Pn**	**08 32 38.0**	**-0.1**
NEM2				*eS*	**S**	**08 33 05.8**	**-1.1**
SHO	**Shikotan**	**1.54**	**123**	*eP*	Pn	08 32 45.6	+6.8
SHO				AMB	AMB	08 32 45.7	
	40nm,0.2s						
SHO				*eS*	**S**	**08 33 03.7**	**-4.5**
SHO				A	A	08 33 14.8	
	160nm,0.2s						
SHO				A	A	08 33 14.8	
	200nm,0.2s						
JKHN	**Kushirohamanak**	**1.63**	**177**	*eP*	**Pn**	**08 32 39.9**	**+0.3**
JKHN				*eS*	**S**	**08 33 08.5**	**-1.1**
JAR	**Ashorobuto**	**1.68**	**213**	P	**Pn**	**08 32 40.9**	**+0.8**
AKK	**Akkeshi**	**1.70**	**185**	*eP*	**Pn**	**08 32 40.9**	**+0.7**
JAK	**Akkeshi**	**1.73**	**188**	P	**Pn**	**08 32 40.6**	**+0.1**
JAK				*eS*	**S**	**08 33 10.0**	**-1.1**
JSE	**Soyaes**	**1.76**	**279**	*eP*	**Pn**	**08 32 39.8**	**-0.8**
JKK2	**Kamakawa 2**	**1.84**	**244**	P	**Pn**	**08 32 41.7**	**+0.2**
ASAJ	**Asahikawa**	**1.85**	**252**	P	**Pn**	**08 32 41.8**	**+0.3**
	75nm,0.4s,baz=40,slow=3.6,SNR=162						
ASAJ				S	**S**	**08 33 13.4**	**+0.6**
	8.6nm,0.7s,baz=175,slow=32,SNR=1.1						
ASAJ	**Asahikawa**	**1.85**	**252**	P	**Pn**	**08 32 41.7**	**+0.3**
KUR	**Kuril'sk**	**2.08**	**74**	*eP*	**Pn**	**08 32 43.8**	**+0.3**
KUR				AMB	AMB	08 32 44.2	
	100nm,0.5s						
JSS	**Shosan**	**2.30**	**263**	*eP*	**Pn**	**08 32 46.5**	**+0.8**
JWK2	**Keihoku**	**2.31**	**286**	*eP*	**Pn**	**08 32 45.5**	**-0.2**
JCH	**Churui**	**2.42**	**211**	P	**Pn**	**08 32 46.8**	**-0.2**
JCH				*eS*	**S**	**08 33 20.9**	**-1.9**
USRK	**Ussuriysk Ar.**	**9.35**	**271**	P	**Pn**	**08 34 10.6**	**-1.1**
	5.0nm,0.7s,baz=82,slow=14,SNR=9.4						
MJAR	**Matsushiro Arr**	**9.67**	**215**	P	**Pn**	**08 34 17.3**	**+1.4**
	1.0nm,0.6s,baz=27,slow=11,SNR=5.5						
PETK	**Petropavlovsk-**	**11.82**	**40**	P	**Pn**	**08 34 43.9**	**+1.1**
	3.2nm,0.8s,baz=220,slow=11,SNR=2.0						
KSRS	**Korea Array**	**14.79**	**247**	P	**P**	**08 35 21.4**	**+2.0**
	2.8nm,0.8s,baz=54,slow=11,SNR=7.0						
HILR	**Hailar Array B**	**17.84**	**295**	P	**P**	**08 35 50.5**	**-2.3**
	0.7nm,0.3s,baz=97,slow=12,SNR=2.3						
SONM	**Songino Array**	**26.70**	**291**	P	**P**	**08 37 18.3**	**-0.5**
	0.7nm,0.5s,baz=88,slow=11,SNR=2.6 0.7nm,0.

MORR	**Playas El Morr**	**1.83**	**247**	P		**Pn**	**08 40 18.5**	**+1.0**
ISPG	**Isla Puna-Puer**	**1.84**	**236**	P		**Pn**	**08 40 19.3**	**+1.6**
PPLP	**Puerto Lpez**	**2.16**	**280**	P		**Pn**	**08 40 21.5**	**+0.1**
PPLP	**Puerto Lpez**	**2.16**	**280**	P		**Pn**	**08 40 21.6**	**+0.1**
OTAV	**Otavalo**	**2.16**	**5**	P		**Pn**	**08 40 23.7**	**+1.7**
PAC1	**Pacto, Paraso**	**2.19**	**356**	P		**Pn**	**08 40 23.5**	**+1.6**
CUSE	**Cuicocha Este**	**2.23**	**6**	P		**Pn**	**08 40 24.7**	**+1.9**
BONI	**La Bonita**	**2.62**	**25**	P		**Pn**	**08 40 28.8**	**+1.4**
MCRA	**Macar, Loja**	**2.75**	**208**	P		**Pn**	**08 40 28.8**	**-0.1**
MCRA				S		**Sn**	**08 41 01.4**	**-1.4**
GCUF	**Volcan Galeras**	**3.39**	**23**	P		**Pn**	**08 40 39.9**	**+2.4**
CRUC	**La Cruz**	**3.87**	**26**	P		**Pn**	**08 40 45.1**	**+1.5**
BBAC	**Balboa, Cauca**	**4.17**	**20**	P		**Pn**	**08 40 48.8**	**+1.4**
PTLC	**Puerto Leguiza**	**4.38**	**62**	P		**Pn**	**08 40 48.6**	**-1.4**
FLOC	**Florencia**	**4.60**	**41**	P		**Pn**	**08 40 52.7**	**-0.2**
POPC	**Popayan, Colom**	**4.86**	**24**	P		**Pn**	**08 40 53.2**	**-3.4**
GARC	**Garzon, Huila** 28nm,0.5s	**5.16**	**38**	P		**Pn**	**08 41 01.4**	**+0.7**
JAMC	**Jamundi, Valle** 3.6nm,1.5s	**5.48**	**21**	P		**Pn**	**08 41 03.9**	**-0.9**
MACC	**Macarena, Meta** 525nm17nm,0.7s	**6.28**	**50**	P		**Pn**	**08 41 16.5**	**+1.2**
YOTC	**Yotoco, Valle** 2.7nm,0.7s	**6.31**	**21**	P		**Pn**	**08 41 14.4**	**-1.4**
URMC	**La Uribe, Meta** 12nm,0.7s	**6.68**	**40**	P		**Pn**	**08 41 22.0**	**+1.2**
ORTC	**Ortega, Tolima**	**6.72**	**30**	P		**Pn**	**08 41 20.4**	**-0.9**

*NOU **24** 08:40:35.1,21˚.42S×178˚.11W,h432km,mb4.2/16,Fiji Islands Region*
*NEIC **24** 08:40:36.4±1.4,21˚.1S±0˚.1×178˚.1W±0˚.2,h468km±11km, mb4.0/22,Error ellipse: s-maj=20.5km s-min=18.0km az=84.0*
*IDC **24** 08:40:38.1±2.8,20˚.95S×178˚.33W,h488km±30km,mb3.4/8, mbtmp4.3/9,Error ellipse: s-maj=19.0km s-min=16.7km az=132.0*

ISC 24 08:40:34.5±0.5,**21˚.28S**±0˚.07×**178˚.02W**±0˚.07,**h450**km, **n79**,σ1°**77**/84,**mb4.0**/18,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**3.13**	**346**	P		**P**	**08 41 43.0**	**+0.4**
TAVE	**Taveuni**	**4.89**	**338**	P		**P**	**08 41 58.4**	**+0.5**
MSVF	**Nonsavu**	**5.12**	**313**	P		**P**	**08 42 01.2**	**+0.9**
MSVF	**Nonsavu**	**5.12**	**313**	P		**P**	**08 42 01.0**	**+0.8**
DGTI	**Dogotuki**	**5.39**	**336**	P		**P**	**08 42 02.9**	**+0.1**
NIUE	**Niue**	**7.91**	**75**	P		**P**	**08 42 31.2**	**+2.3**
NIUE	**Niue**	**7.91**	**75**	P		**P**	**08 42 30.8**	**+1.8**
NIUE	**Niue**	**7.91**	**75**	P		**P**	**08 42 30.7**	**+1.8**
NIUE				S		**S**	**08 43 59.9**	**-3.0**
GLKZ	**Green Lake**	**7.95**	**179**	P		P	08 42 28.4	-0.8
GLKZ				S		S	08 43 59.9	-3.4
INH	**Isangel**	**12.04**	**276**	P		**P**	**08 43 13.3**	**-0.6**
MARNC	**Mare, Loyalty**	**13.00**	**267**	P		**P**	**08 43 25.7**	**+1.5**
MARNC	**Mare, Loyalty**	**13.00**	**267**	P		**P**	**08 43 24.3**	**+0.1**
PINNC	**Pines Island,**	**13.56**	**262**	P		**P**	**08 43 33.1**	**+2.9**
DZM	**Mont Dzumac** 6.8nm,0.8s,baz=115,slow=21,SNR=6.9	**14.47**	**264**	P		**P**	**08 43 41.2**	**+1.1**
OUZ	**Omahuta**	**15.72**	**206**	P		**P**	**08 43 58.8**	**+5.7**
WCZ	**Waipu Caves**	**16.06**	**203**	P		P	08 44 04.7	+7.9
WMGZ	**Waiomatatini S**	**16.77**	**190**	P		**P**	**08 44 04.8**	**+0.7**
WMGZ				S		**S**	**08 46 53.6**	**-3.9**
HAZ	**Te Kaha**	**16.82**	**192**	P		**P**	**08 44 05.3**	**+0.6**
HAZ				S		**S**	**08 46 55.3**	**-3.1**
RUGZ	**Raukumara Rang**	**17.04**	**192**	P		**P**	**08 44 06.7**	**-0.5**
RUGZ				S		**S**	**08 46 58.6**	**-4.1**
PUZ	**Puketiti**	**17.04**	**190**	P		**P**	**08 44 06.5**	**-0.5**
PUZ				S		**S**	**08 46 59.8**	**-2.9**
TWGZ	**Tauwhareparae**	**17.19**	**191**	P		**P**	**08 44 09.7**	**+1.0**
TWGZ				S		**S**	**08 47 03.3**	**-2.2**
MWZ	**Matawai**	**17.42**	**192**	P		**P**	**08 44 10.5**	**-0.7**
URZ	**Urewera** 4.3nm,0.3s,baz=262,slow=4.0,SNR=16	**17.43**	**193**	P		**P**	**08 44 10.8**	**-0.5**
URZ	6.7nm,1.1s,baz=33,slow=15,SNR=3.1			S		S	08 47 04.1	-5.7
URZ	**Urewera**	**17.43**	**193**	P		**P**	**08 44 10.7**	**-0.5**
URZ	**Urewera**	**17.43**	**193**	P		**P**	**08 44 09.5**	**-1.7**
URZ				S		**S**	**08 47 06.2**	**-3.6**
MUGZ	**Murupara**	**17.72**	**194**	P		**P**	**08 44 14.0**	**-0.2**
RIGZ	**Rimuhau**	**17.74**	**191**	P		**P**	**08 44 13.8**	**-0.7**
MTHZ	**Maungataniwha**	**18.06**	**193**	P		**P**	**08 44 18.4**	**+0.6**
MRHZ	**Matea Rd**	**18.14**	**194**	P		**P**	**08 44 15.5**	**-3.0**
BKZ	**Black Stump Fm**	**18.44**	**194**	P		**P**	**08 44 20.8**	**-0.6**
BKZ	**Black Stump Fm**	**18.44**	**194**	P		**P**	**08 44 19.5**	**-1.9**
OTVZ	**Oturere**	**18.63**	**196**	P		**P**	**08 44 22.5**	**-0.9**
MTVZ	**Mangateitei**	**18.89**	**196**	P		**P**	**08 44 27.3**	**+1.7**
PNHZ	**Pukenui**	**19.22**	**194**	P		**P**	**08 44 28.4**	**-0.2**
TSZ	**Takapari Road**	**19.41**	**194**	P		**P**	**08 44 30.7**	**+0.3**
QRZ	**Quartz Range**	**21.07**	**200**	P		**P**	**08 44 46.2**	**+0.7**
TATA	**Tatamba Isabel**	**24.94**	**298**	P		**P**	**08 45 22.8**	**+2.3**
PYZ	**Puysegur Point**	**27.79**	**203**	P		**P**	**08 45 46.2**	**+0.8**
EIDS	**Eidsvold**	**28.63**	**256**	P		**P**	**08 45 53.2**	**+0.2**
EIDS	comp=Z,7.2nm,1.1s			IAmb		IAmb	08 45 56.0	
ARMA	**Armidale**	**28.72**	**245**	P		**P**	**08 45 54.6**	**+0.7**
CNB	**Canberra Magne**	**31.78**	**237**	P		**P**	**08 46 21.1**	**+0.7**
CAN	**Canberra**	**32.07**	**237**	P		**P**	**08 46 23.5**	**+0.7**
CAN	comp=Z,7.8nm,1.1s			IAmb		IAmb	08 46 45.1	
CTAO	**Charters Tower**	**33.41**	**266**	P		**P**	**08 46 34.4**	**0.0**
CTAO	comp=Z,6.6nm,0.8s			IAmb		IAmb	08 46 34.8	
CMSA	**Cobar Meteorol**	**33.94**	**245**	P		**P**	**08 46 38.7**	**0.0**
TOO	**Toolangi**	**35.43**	**235**	P		**P**	**08 46 52.0**	**+0.8**
PMG	**Port Moresby**	**35.51**	**284**	P		**P**	**08 46 51.9**	**-0.3**
STKA	**Stephens Creek** comp=Z,1.9nm,0.5s,baz=99,slow=12,SNR=10	**37.44**	**245**	P		**P**	**08 47 08.0**	**0.0**
STKA	**Stephens Creek** comp=Z,1.9nm,0.5s	**37.44**	**245**	P		**P**	**08 47 08.2**	**+0.2**
COEN	**Coen**	**37.62**	**275**	P		**P**	**08 47 09.4**	**-0.3**
COEN	comp=Z,6.5nm,1.1s			IAmb		IAmb	08 47 11.2	
BBOO	**Buckleboo**	**42.19**	**244**	P		**P**	**08 47 46.0**	**-0.4**
BBOO	comp=Z,3.4nm,0.5s			IAmb		IAmb	08 47 46.1	
AS31	**Alice Springs**	**44.33**	**258**	P		**P**	**08 48 02.3**	**-1.1**
ASAR	**Alice Springs** comp=Z,6.7nm,0.8s,baz=100,slow=7.9,SNR=80	**44.33**	**258**	P		**P**	**08 48 02.3**	**-1.1**
ASAR	comp=Z,0.5nm,0.7s,baz=91,slow=4.1,SNR=3.3			PcP		**pwP**	**08 49 36.7**	**+3.4**
ASAR	comp=Z,0.5nm,0.8s,baz=96,slow=15,SNR=5.2 comp=Z,6.7nm,0.8s			S		**S**	**08 54 00.7**	**-3.3**
WR8	**Warramunga Arr**	**44.33**	**263**	P		**P**	**08 48 02.1**	**-1.3**
WR8	comp=Z,3.0nm,0.8s			IAmb		IAmb	08 48 02.3	
WB0	**Warramunga Arr**	**44.47**	**263**	P		**P**	**08 48 03.2**	**-1.3**
WRA	**Warramunga Arr** comp=Z,3.3nm,0.6s,baz=96,slow=5.3,SNR=40 comp=Z,3.3nm,0.6s	**44.48**	**263**	P		**P**	**08 48 02.8**	**-1.8**
WRA	**Warramunga Arr**	**44.48**	**263**	P		**P**	**08 48 03.2**	**-1.4**
FORT	**Forrest**	**48.98**	**247**	P		**P**	**08 48 38.2**	**-0.5**
MTN	**Manton Dam**	**49.16**	**271**	P		**P**	**08 48 38.9**	**-1.3**
KNRA	**Kununurra**	**50.60**	**267**	P		**P**	**08 48 49.7**	**-1.1**
KNRA	comp=Z,6.3nm,0.6s			IAmb		IAmb	08 48 51.4	
FAKI	**Fak Fak**	**51.67**	**284**	P		**P**	**08 48 58.5**	**-0.2**
FAKI	comp=Z,8.2nm,1.1s			IAmb		IAmb	08 49 11.1	
FITZ	**Fitzroy Crossi**	**52.91**	**263**	P		**P**	**08 49 07.2**	**-0.5**
SBA	**Scott Base**	**57.09**	**184**	P		**P**	**08 49 38.2**	**+2.1**
SBA	comp=Z,5.1nm,1.0s			IAmb		IAmb	08 50 05.6	
VNDA	**Vanda** comp=Z,1.2nm,0.7s,baz=22,slow=6.8,SNR=2.9 comp=Z,1.2nm,0.7s	**57.13**	**185**	P		**P**	**08 49 37.8**	**+1.5**
VNDA	**Vanda**	**57.13**	**185**	P		**P**	**08 49 38.0**	**+1.7**
VNDA	comp=Z,4.0nm,1.1s			IAmb		IAmb	08 49 38.5	
PSA00	**Pilbara Seismi**	**57.48**	**257**	P		**P**	**08 49 38.9**	**-0.8**
MBWA	**Marble Bar**	**57.67**	**258**	P		**P**	**08 49 40.0**	**-1.0**
TOLI2	**Tolitoli**	**63.76**	**282**	P		**P**	**08 50 20.2**	**-1.2**
TOLI2	comp=Z,6.0nm,1.0s			IAmb		IAmb	08 50 20.8	
QSPA	**South Pole Qui** comp=Z,3.3nm,0.7s,baz=41,slow=3.0,SNR=32 comp=Z,3.3nm,0.7s	**68.79**	**180**	P		**P**	**08 50 55.4**	**+3.3**
QSPA	**South Pole Qui**	**68.79**	**180**	P		**P**	**08 50 56.1**	**+3.9**
QSPA	comp=Z,3.6nm,0.8s			IAmb		IAmb	08 50 57.2	
MJAR	**Matsushiro Arr**	**70.83**	**324**	P		**P**	**08 51 03.0**	**-1.6**

	comp=Z,1.2nm,0.6s,baz=154,slow=6.2,SNR=5.9 comp=Z,1.2nm,0.6s							
MJAR	**Matsushiro Arr**	**70.83**	**324**	P		**P**	**08 51 03.3**	**-1.4**
PETK	**Petropavlovsk-** comp=Z,2.8nm,0.7s,baz=126,slow=6.0,SNR=6.6 comp=Z,2.8nm,0.7s	**77.02**	**345**	P		**P**	**08 51 38.1**	**-1.5**
ILAR	**Eielson Array** comp=Z,0.5nm,0.5s,baz=190,slow=7.0,SNR=2.2 comp=Z,0.5nm,0.5s	**89.08**	**13**	P		**P**	**08 52 39.0**	**-1.0**
HFS	**Hagfors** comp=Z,1.9nm,0.6s,baz=66,slow=8.3,SNR=6.0	**140.31**	**351**	PKhKP		PKPpre	08 59 02.2	
AKASG	**Malin Array Be** comp=Z,2.2nm,0.4s,baz=43,slow=4.1,SNR=13	**143.69**	**331**	PKP		PKPab	08 59 13.9	-1.6
EKA	**Eskdalemuir Ar** comp=Z,1.9nm,0.9s,baz=20,slow=3.5,SNR=2.5	**145.78**	**5**	PKPbc		**PKPdf**	**08 59 20.1**	**-0.4**
BRTR	**Keskin Array B** comp=Z,0.7nm,0.5s,baz=69,slow=3.4,SNR=4.1	**147.35**	**311**	PKPbc		**PKPdf**	**08 59 24.9**	**+1.0**
MMAI	**Mount Meron Ar** comp=Z,0.5nm,0.2s,baz=20,slow=4.6,SNR=1.0	**148.18**	**299**	PKPbc		**PKPdf**	**08 59 26.2**	**+0.8**
GERES	**GERESS Array B** comp=Z,0.1nm,0.3s,baz=41,slow=3.1,SNR=4.1	**150.95**	**344**	PKPbc		**PKPbc**	**08 59 33.9**	**-1.6**

*IDC **24** 08:43:10.9±0.9,12˚.40S×45˚.74E,h0km,mb3.7/6, mbtmp3.9/9,ML4.5/3,MS3.5/20,Error ellipse: s-maj=28.8km s-min=23.6km az=114.0*
*NEIC **24** 08:43:11.1±1.3,12˚.45S±0˚.09×45˚.5E±0˚.1,h10km±2km, mb4.2/9,Error ellipse: s-maj=20.7km s-min=15.3km az=252.0*

ISC 24 08:43:10.7±0.6,**12˚.49S**±0˚.06×**45˚.69E**±0˚.07,**h10**km,**n49**, σ1°**95**/42,**mb3.9**/8,**MS3.4**/17,**Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SBV	**Sambava**	**4.23**	**104**	P		**Pn**	**08 44 14.8**	**-0.5**
SBV				S		**Sn**	**08 45 02.0**	**-2.7**
OPO	**Ambohidratompo** 1.1nm,0.3s,baz=348,slow=12,SNR=4.2	**6.21**	**167**	Pn		**Pn**	**08 44 44.1**	**+1.4**
OPO	2.9nm,0.3s,baz=52,slow=12,SNR=13 22nm,0.3s			Sn		**Sn**	**08 45 50.4**	**-3.5**
OPO	**Ambohidratompo**	**6.21**	**167**	P		**Pn**	**08 44 44.5**	**+1.8**
OPO				S		**Sn**	**08 45 51.9**	**-2.0**
FIRM	**Firavahana**	**6.28**	**170**	P		**Pn**	**08 44 45.7**	**+2.1**
FIRM				S		**Sn**	**08 45 54.0**	**-1.5**
ATG	**Ambohiby**	**6.37**	**176**	P		**Pn**	**08 44 46.9**	**+2.1**
ABPO	**Ambohimpanom**	**6.66**	**167**			**Pn**	**08 44 50.8**	**+2.0**
ABPO	**Ambohimpanom**	**6.66**	**167**	P		**Pn**	**08 44 50.9**	**+2.2**
ABPO				S		**Sn**	**08 46 04.7**	**-0.1**
AVY	**Angavokely**	**6.70**	**163**	P		**Pn**	**08 44 50.4**	**+1.0**
AVY				S		**Sn**	**08 46 03.3**	**-2.6**
DGRM	**Ambatolahisoa**	**6.76**	**174**	P		**Pn**	**08 44 52.4**	**+2.2**
DGRM				S		**Sn**	**08 46 04.8**	**-2.7**
ABM	**Ambohimiarambe**	**7.42**	**168**	P		**Pn**	**08 45 01.1**	**+1.8**
ABM				S		**Sn**	**08 46 23.1**	**-0.7**
VOI	**Vohitsoka**	**9.42**	**174**	Pn		**Pn**	**08 45 27.7**	**+1.0**
KIBK	**Kibwezi**	**12.61**	**322**	Pn		**Pn**	**08 46 07.3**	**-3.1**
KMBO	**Kilima Mbogo** 1.1nm,0.3s,baz=163,slow=14,SNR=3.3	**14.05**	**323**	Pn		**Pn**	**08 46 32.6**	**+2.4**
KMBO	comp=Z,107nm,18.0s,baz=104,slow=35 3.1nm,0.2s			LR		LR	08 51 21.3	
LSZ	**Lusaka** 0.9nm,0.3s,baz=91,slow=11,SNR=4.4	**17.22**	**259**	P		**P**	**08 47 14.3**	**+1.1**
LSZ	comp=Z,172nm,19.8s,baz=95,slow=36 1.7nm,0.3s			LR		LR	08 53 23.7	
LSZ	**Lusaka**	**17.22**	**259**	P		**Pn**	**08 47 10.8**	**-0.8**
LODK	**Lodwar**	**18.85**	**326**	P		**P**	**08 47 29.6**	**-1.5**
MBAR	**Mbarara** comp=Z,112nm,18.6s,baz=116,slow=36	**18.96**	**307**	LR		LR	08 54 30.8	
MBAR	**Mbarara** comp=Z,7.8nm,1.3s	**18.96**	**307**	P		**P**	**08 47 29.4**	**-3.0**
MBAR				IAmb		IAmb	08 47 33.4	
POGA	**Pongola** comp=Z,30nm,1.4s	**19.75**	**220**	P		**P**	**08 47 39.5**	**-1.3**
POGA				IAmb		IAmb	08 47 39.7	
LBTB	**Lobatse** comp=Z,222nm,19.1s,baz=58,slow=37	**22.70**	**234**	LR		LR	08 57 10.4	
LBTB	**Lobatse**	**22.70**	**234**	P		**P**	**08 48 11.7**	**-1.1**
LBTB	comp=Z,8.3nm,0.9s			IAmb		IAmb	08 48 26.0	
BOSA	**Boshof** comp=Z,1.6nm,0.5s,baz=61,slow=10,SNR=7.1	**24.91**	**227**	P		**P**	**08 48 36.6**	**+2.5**
BOSA	comp=Z,81nm,18.9s,baz=20,slow=37 comp=Z,1.6nm,0.5s			LR		LR	08 58 39.6	
BOSA	**Boshof**	**24.91**	**227**	P		**P**	**08 48 32.4**	**-1.7**
BOSA	comp=Z,4.7nm,0.8s			IAmb		IAmb	08 48 47.2	
DGAR	**Diego Garcia**	**26.82**	**82**	P		**P**	**08 48 52.1**	**+0.7**
TSUM	**Tsumeb** comp=Z,84nm,19.5s,baz=136,slow=35	**27.83**	**253**	LR		LR	08 59 14.9	
SUR	**Sutherland**	**30.21**	**225**	P		**P**	**08 49 19.1**	**-2.6**
BRTR	**Keskin Array B** comp=Z,24nm,18.6s,baz=164,slow=36	**53.14**	**348**	LR		LR	09 15 24.0	
DBIC	**Dimbokro** comp=Z,44nm,18.0s,baz=184,slow=35	**53.73**	**288**	LR		LR	09 14 22.7	
MAW	**Mawson** comp=Z,51nm,19.0s,baz=94,slow=32	**56.22**	**172**	LR		LR	09 13 25.1	
EVN	**Everest**	**56.59**	**44**	P		**P**	**08 52 55.2**	**+0.5**
EVN	comp=Z,3.8nm,1.1s			IAmb		IAmb	08 53 05.0	
BRDH	**Bariadhala** comp=Z,62nm,19.8s,baz=179,slow=34	**56.99**	**52**	LR		LR	09 15 08.8	
CMAR	**Chiang Mai Arr** comp=Z,17nm,18.2s,baz=240,slow=34	**60.85**	**61**	LR		LR	09 17 48.2	
AAK	**Ala-Archa** comp=Z,22nm,21.4s,baz=220,slow=34	**60.89**	**24**	LR		LR	09 17 52.7	
MDT	**Midelt** comp=Z,66nm,18.8s,baz=298,slow=37	**65.83**	**315**	LR		LR	09 23 55.5	
VRAC	**Vranov** comp=Z,16nm,18.1s,baz=269,slow=40	**66.67**	**340**	LR		LR	09 27 39.3	
MKAR	**Makanchi Array** comp=Z,0.4nm,0.8s,baz=212,slow=6.6,SNR=1.7	**67.51**	**26**	P		**P**	**08 54 06.9**	**0.0**
MKAR	comp=Z,20nm,18.3s,baz=268,slow=35 comp=Z,0.4nm,0.8s			LR		LR	09 22 35.3	
MKAR	**Makanchi Array**	**67.51**	**26**	P		**P**	**08 54 07.5**	**+0.5**
KURBB	**Kurchatov Arra** comp=Z,0.1nm,0.5s,baz=219,slow=6.8,SNR=1.4 comp=Z,0.1nm,0.5s	**69.08**	**22**	P		**P**	**08 54 19.2**	**+2.5**
ARTI	**Arti** comp=Z,34nm,18.2s,baz=258,slow=40	**69.43**	**7**	LR		LR	09 28 53.1	
ZALV	**Zalesovo Beam** comp=Z,3nm,0.4s,baz=242,slow=6.1,SNR=1.7 comp=Z,0.3nm,0.4s	**74.07**	**23**	P		**P**	**08 54 46.4**	**-0.3**
ZALV	**Zalesovo Beam**	**74.07**	**23**	P		**P**	**08 54 46.5**	**-0.1**
HFS	**Hagfors** comp=Z,18nm,18.1s,baz=282,slow=38	**76.79**	**344**	LR		LR	09 31 26.5	
QSPA	**South Pole Qui** comp=Z,48nm,19.2s,baz=222,slow=34	**77.60**	**180**	LR		LR	09 26 52.2	
ASAR	**Alice Springs** comp=Z,0.4nm,0.6s,baz=262,slow=4.9,SNR=6.6	**83.47**	**113**	P		**P**	**08 55 40.8**	**+1.5**
ASAR	comp=Z,37nm,18.2s,baz=284,slow=33 comp=Z,0.4nm,0.6s			LR		LR	09 28 32.4	
ASAR	**Alice Springs**	**83.47**	**113**	P		**P**	**08 55 39.7**	**+0.4**
WRA	**Warramunga Arr** comp=Z,1.5nm,1.1s,baz=263,slow=4.7,SNR=5.7 comp=Z,1.5nm,1.1s	**84.57**	**109**	P		**P**	**08 55 48.3**	**+3.4**
CPUP	**Villa Florida** comp=Z,13nm,20.7s,baz=351,slow=34	**95.89**	**242**	LR		LR	09 37 51.5	
TXAR	**Lajitas Array** comp=Z,0.2nm,0.6s,baz=55,slow=5.3,SNR=1.8	**146.98**	**305**	PKPbc		**PKPbc**	**09 02 54.1**	**-0.3**
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.4s,baz=27,slow=5.9,SNR=2.1	**150.50**	**334**	PKPbc		**PKiKP**	**09 03 06.5**	**+2.4**

*IDC **24** 09:11:45.0±1.0,22˚.05N×142˚.96E,h0km,mb3.9/7, mbtmp3.9/7,Error ellipse: s-maj=40.2km s-min=22.3km az=73.0*

ISC 24 09:11:50.3±1.1,**22˚.0N**±0˚.2×**142˚.9E**±0˚.3,**h35**km,**n14**, σ1°**00**/8,**mb3.8**/7,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H11N1	**WAKE ISLAND Hy** baz=280	**22.52**	**91**	T		T	09 40 04.9	
H11N2	**WAKE ISLAND Hy** baz=280	**22.52**	**91**	T		T	09 40 05.5	
H11N3	**WAKE ISLAND Hy** baz=280	**22.53**	**91**	T		T	09 40 10.2	
H11S3	**WAKE ISLAND Hy** baz=283,slow=75,SNR=23	**22.57**	**95**	T		T	09 40 03.6	
H11S1	**WAKE ISLAND Hy** baz=283,slow=75,SNR=31	**22.58**	**95**	T		T	09 40 07.3	
H11S2	**WAKE ISLAND Hy** baz=283,slow=75,SNR=22	**22.59**	**95**	T		T	09 40 09.7	
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=12,slow=8.8,SNR=5.0 0.6nm,0.6s	**42.55**	**192**	P		**P**	**09 19 44.3**	**+1.5**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=14,slow=10,SNR=5.3 0.3nm,0.7s	**46.26**	**191**	P		**P**	**09 20 11.0**	**-1.5**
ZALV	**Zalesovo Beam** 1.5nm,0.6s,baz=111,slow=8.1,SNR=8.1 1.5nm,0.6s	**53.80**	**322**	P		**P**	**09 21 09.0**	**-0.3**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=96,slow=6.5,SNR=2.2 0.3nm,0.7s	**54.29**	**312**	P		**P**	**09 21 13.7**	**+0.5**
KURBB	**Kurchatov Arra** 2.3nm,0.2s,baz=95,slow=7.6,SNR=4.4 2.3nm,0.2s	**57.12**	**317**	P		**P**	**09 21 33.2**	**-0.1**
BVAR	**Borovoye Array** 2.3nm,0.6s,baz=96,slow=7.4,SNR=11 2.3nm,0.6s	**62.26**	**319**	P		**P**	**09 22 08.6**	**-0.1**
NVAR	**Mina Array Bea** 0.6nm,0.7s,baz=262,slow=5.9,SNR=4.2 0.6nm,0.7s	**83.13**	**51**	P		**P**	**09 24 13.5**	**+0.3**
LPAZ	**La Paz** 1.0nm,0.5s,baz=284,slow=4.2,SNR=6.1	**150.16**	**84**	PKPbc		**PKPbc**	**09 31 38.6**	**-0.5**

*SKHL **24** 09:24:36.6±0.3,43˚.00N×145˚.70E,h37km±1km,mb4.8/2*
*JMA **24** 09:24:36.8±0.1,43˚.1N±0˚.5×145˚.6E±0˚.6,h46km,MV2.8/35, OFF NEMURO PENINSULA*

ISC 24 09:24:38.2±1.3,**43˚.15N**±0˚.06×**145˚.53E**±0˚.05,**h32**km±11km, **n13**,σ0°**87**/24,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NMR	**Nemuro--Hokkai**	**0.27**	**33**	*i* P		**Pn**	**09 24 45.3**	**-0.7**
NMR				*e*S		**Sn**	**09 24 51.0**	**+0.1**
NEM2	**Nemuro 2**	**0.27**	**36**	P		**Pn**	**09 24 45.3**	**-0.6**
NEM2				S		**Sn**	**09 24 51.5**	**+0.5**
JKHN	**Kushirohamanak**	**0.28**	**257**	*i* P		**Pn**	**09 24 46.1**	**+0.1**
JKHN				S		**Sn**	**09 24 52.4**	**+1.2**
AKK	**Akkeshi**	**0.52**	**256**	*e*P		**Pb**	**09 24 48.2**	**-0.8**
GLVR	**Golovnino**	**0.59**	**359**	*i* P		**Pb**	**09 24 49.8**	**-0.5**
GLVR	350nm,0.2s			AMB		AMB	09 24 50.1	
GLVR	2µm,0.2s			*e*S		**Sb**	**09 24 59.7**	**+1.2**
GLVR	870nm,0.2s			A		A	09 25 00.3	
JAK	**Akkeshi**	**0.63**	**257**	P		**Pb**	**09 24 49.9**	**-0.9**
JAK				S		**Sb**	**09 24 59.6**	**+0.2**
JNK	**Nakash**	**0.74**	**307**	*i* P		**Pn**	**09 24 51.9**	**-0.5**
JNK				S		**Sb**	**09 25 02.5**	**+0.1**
JNSB	**Nemuroshibetsu**	**0.74**	**329**	P		**Pn**	**09 24 52.1**	**-0.3**
JNSB				S		**Sb**	**09 25 03.6**	**+1.1**
JRA	**Rausu**	**0.84**	**340**	P		**Pn**	**09 24 53.6**	**-0.3**
JRA				S		**Sn**	**09 25 05.7**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**0.92**	**15**	*e*P		**Pn**	**09 24 53.8**	**-1.1**
YUK	200nm,0.2s			AMB		AMB	09 24 54.7	
YUK	760nm,0.2s			*i* S		**Sn**	**09 25 06.5**	**-0.6**
YUK	770nm,0.2s			A		A	09 25 08.6	
YUK	140nm,0.2s			A		A	09 25 08.6	
SHO	**Shikotan**	**1.19**	**52**	*i* P		Pb	09 25 03.4	+3.1
SHO	40nm,0.2s			AMB		AMB	09 25 04.8	
SHO	140nm,0.2s			*e*S		**Sb**	**09 25 17.6**	**+2.2**
SHO	110nm,0.2s			A		A	09 25 17.8	
SHO				A		A	09 25 17.8	
JAR	**Ashorobuto**	**1.29**	**277**	P		**Pn**	**09 24 59.8**	**-0.2**
JAR				S		**Sn**	**09 25 16.9**	**+0.7**
KUR	**Kuril'sk**	**2.68**	**38**	*e*P		**Pn**	**09 25 19.0**	**-0.1**
KUR				*e*S		**Sn**	**09 25 50.5**	**0.0**

*INMG **24** 09:32:27.6±1.5,34˚.91N×3˚.79W,h5km,ML2.8,Error ellipse: s-maj=4.3km s-min=3.1km az=170.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE AI Hoceima (MARR)*
*CNRM **24** 09:32:27.4,34˚.94N×3˚.77W,h18km,ML3.8*
*MDD **24** 09:32:27.5±0.4,34˚.88N×3˚.75W,h0km,mb_Lg3.0/25, Error ellipse: s-maj=3.7km s-min=2.6km az=160.0*
*SFS **24** 09:32:28.4,34˚.99N×3˚.75W,h7km,ML3.7/19,ML3.5/26, MLv3.1/26*
*IGIL **24** 09:32:29.2,35˚.01N×3˚.83W,h2km*

ISC 24 09:32:27.4±1.0,**34˚.96N**±0˚.02×**3˚.77W**±0˚.02,**h15**km±8km, **n111**,σ1°**36**/165,**Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PALE	**Palemas**	**0.29**	**332**	P		**Pg**	**09 32 34.6**	**+1.0**
PALE	**Palemas**	**0.29**	**332**	S		**Sb**	**09 32 39.9**	**+0.7**
AKLM	**AKL**	**0.45**	**190**	P		**

EADA				Sn	Sb	09 34 03.4	-1.5	
EADA				*i* IVmb_Lg		09 34 08.7		
ECAB	**El Cabril**	**3.38**	**337**	Pn	Pn	**09 33 20.5**	**+0.8**	
ECAB				Sn	Sn	**09 33 59.9**	**+0.3**	
ECAB	**El Cabril**	**3.38**	**337**	Pn	Pn	**09 33 20.6**	**+0.8**	
ECAB				Sn	Sn	**09 34 01.4**	**+1.7**	
ECAB				*i* IVmb_Lg		09 34 08.3		
FIGM	**Figuig**	**3.51**	**143**	P	Pn	**09 33 20.5**	**-1.1**	
FIGM	**Figuig**	**3.51**	**143**	S	Sn	**09 34 04.1**	**+1.2**	
EMUR	**La Murta**	**3.53**	**35**	Pn	Pn	**09 33 23.5**	**+1.7**	
EMUR				Sn	Sn	**09 33 59.7**	**-3.5**	
EMUR	**La Murta**	**3.53**	**35**	Pn	Pn	**09 33 22.9**	**+1.2**	
EMUR				Sn	Sn	**09 34 04.2**	**+0.9**	
EMIN	**Mina Concepcio**	**3.66**	**321**	Pn	Pn	**09 33 24.8**	**+1.4**	
EMIN	**Mina Concepcio**	**3.66**	**321**	Pn	Pn	**09 33 24.1**	**+0.6**	
EMIN				Sn	Sn	**09 34 07.8**	**+1.5**	
EMIN				*i* IVmb_Lg		09 34 18.7		
PSIM	**Granatula de C**	**3.86**	**0**	Pn	Pn	**09 33 28.4**	**+2.2**	
TISM	**Timmit**	**3.92**	**215**	P	Pn	**09 33 26.5**	**-0.7**	
TISM	**Timmit**	**3.92**	**215**	S	Sn	**09 34 14.5**	**+1.5**	
EGRO	**El Granado**	**3.95**	**312**	Pn	Pn	**09 33 27.7**	**+0.2**	
EGRO				Sn	Sn	**09 34 11.3**	**-2.3**	
EGRO	**El Granado**	**3.95**	**312**	Pn	Pn	**09 33 27.6**	**+0.2**	
EGRO				Sn	Sn	**09 34 13.4**	**-0.3**	
EGRO				*i* IVmb_Lg		09 34 19.6		
PVAQ	**Vaqueiros**	**4.02**	**309**	*eP*	Pn	**09 33 28.6**	**+0.1**	
PVAQ				*eS*	Sn	**09 34 13.9**	**-1.4**	
PVAQ				*i* IAML		09 34 17.6		
PVAQ				*i* IAML		09 34 17.7		
PVAQ				*i* IAML		09 34 20.9		
PVAQ	**Vaqueiros**	**4.02**	**309**	P	Pn	**09 33 28.6**	**+0.1**	
PVAQ	**Vaqueiros**	**4.02**	**309**	S	Sn	**09 34 14.8**	**-0.5**	
PBDV	**Barranco-do-Ve**	**4.07**	**305**	Pn	Pn	**09 33 29.2**	**0.0**	
PBDV				Sn	Sn	**09 34 14.0**	**-2.5**	
PBDV	**Barranco-do-Ve**	**4.07**	**305**	*eP*	Pn	**09 33 29.6**	**+0.4**	
PBDV				*eS*	Sn	**09 34 15.5**	**-1.1**	
PBDV				*i* IAML		09 34 21.4		
PBDV				*i* IAML		09 34 25.7		
PBDV				*i* IAML		09 34 27.2		
ETOB	**Tobarra**	**4.09**	**25**	Pn	Pn	**09 33 31.8**	**+2.3**	
ETOB	**Tobarra**	**4.09**	**25**	Pn	Pn	**09 33 32.0**	**+2.5**	
ETOB				*i* IVmb_Lg		09 35 49.0		
PBAR	**Barrancos**	**4.15**	**322**	Pn	Pn	**09 33 30.8**	**+0.6**	
PBAR				Sn	Sn	**09 34 16.9**	**-1.6**	
PBAR	**Barrancos**	**4.15**	**322**	*eP*	Pn	**09 33 31.3**	**+1.1**	
PBAR				*eS*	Sn	**09 34 17.6**	**-1.0**	
PBAR				*i* IAML		09 34 23.0		
PBAR				*i* IAML		09 34 24.0		
PBAR				*i* IAML		09 34 26.5		
PCVE	**Castro Verde**	**4.36**	**309**	Pn	Pn	**09 33 33.5**	**+0.3**	
PCVE				Sn	Sn	**09 34 22.3**	**-1.4**	
PCVE	**Castro Verde**	**4.36**	**309**	*eP*	Pn	**09 33 33.6**	**+0.5**	
PCVE				*eS*	Sn	**09 34 23.6**	**-0.2**	
PCVE				*i* IAML		09 34 24.8		
PCVE				*i* IAML		09 34 28.6		
PCVE				*i* IAML		09 34 30.1		
TZRR	**Tazzarine**	**4.43**	**200**	P	Pn	**09 33 35.0**	**+0.8**	
TZRR	**Tazzarine**	**4.43**	**200**	S	Sn	**09 34 25.7**	**+0.2**	
PBEJ	**Beja**	**4.50**	**314**	*eP*	Pn	**09 33 36.1**	**+1.0**	
PBEJ				*eS*	Sn	**09 34 26.5**	**-0.8**	
PBEJ				*i* IAML		09 34 28.4		
PBEJ				*i* IAML		09 34 29.0		
PBEJ				*i* IAML		09 34 31.5		
MORF	**Marmelete**	**4.59**	**302**	*eP*	Pn	**09 33 36.8**	**+0.4**	
MORF	**Marmelete**	**4.59**	**302**	*eP*	Pn	**09 33 37.2**	**+0.8**	
MORF				*eS*	Sn	**09 34 29.1**	**-0.4**	
MORF				*i* IAML		09 34 33.8		
MORF				*i* IAML		09 34 35.8		
MORF				*i* IAML		09 34 37.4		
EBAD	**Badajoz**	**4.60**	**326**	Pn	Pn	**09 33 36.9**	**+0.5**	
EBAD				Sn	Sn	**09 34 27.2**	**-2.3**	
EBAD	**Badajoz**	**4.60**	**326**	Pn	Pn	**09 33 36.9**	**+0.5**	
EBAD				Sn	Sn	**09 34 29.8**	**+0.2**	
EBAD				*i* IVmb_Lg		09 34 32.7		
MESJ	**Messejana**	**4.60**	**310**	*eS*	Sn	**09 34 29.3**	**-0.4**	
MESJ				*i* IAML		09 34 32.5		
MESJ				*i* IAML		09 34 32.7		
MESJ				*i* IAML		09 34 35.9		
PAB	**San Pablo**	**4.60**	**354**	Pn	Pn	**09 33 37.9**	**+1.3**	
PAB				Sn	Sn	**09 34 33.9**	**+4.0**	
PAB				*i* IVmb_Lg		09 34 57.8		
PFVI	**Vila Bisbo**	**4.64**	**299**	Pn	Pn	**09 33 37.7**	**+0.8**	
PFVI				Sn	Sn	**09 34 27.9**	**-2.7**	
PFVI	**Vila Bisbo**	**4.64**	**299**	*eP*	Pn	**09 33 38.0**	**+1.0**	
PFVI				*eS*	Sn	**09 34 29.4**	**-1.2**	
PFVI				*i* IAML		09 34 35.1		
PFVI				*i* IAML		09 34 35.7		
PFVI				*i* IAML		09 34 45.2		
PFVI	**Vila Bisbo**	**4.64**	**299**	P	Pn	**09 33 38.1**	**+1.2**	
ESDC	**Sonseca Array**	**4.71**	**358**	Pn	Pn	**09 33 39.4**	**+1.4**	
ESDC				*i* IVmb_Lg		09 34 58.7		
ESBB	**Sonseca Array**	**4.71**	**358**	Pn	Pn	**09 33 39.6**	**+1.5**	
OUZM	**OUZ**	**4.75**	**213**	P	Pn	**09 33 39.8**	**+1.1**	
OUZM	**OUZ**	**4.75**	**213**	S	Sn	**09 34 37.2**	**+3.5**	
PTEO	**Sao Teotonio**	**4.76**	**304**	*eP*	Pn	**09 33 39.5**	**+0.9**	
PTEO				*eS*	Sn	**09 34 32.8**	**-0.9**	
PTEO				*i* IAML		09 34 36.4		
PTEO				*i* IAML		09 34 43.7		
PTEO				*i* IAML		09 35 01.9		
EVO	**Evora**	**4.93**	**318**	Pn	Pn	**09 33 42.3**	**+1.3**	
EVO				Sn	Sn	**09 34 35.9**	**-1.9**	
EVO	**Evora**	**4.93**	**318**	*eP*	Pn	**09 33 42.3**	**+1.3**	
EVO				*eS*	Sn	**09 34 36.0**	**-1.8**	
EVO				*i* IAML		09 34 40.6		
EVO				*i* IAML		09 34 40.7		
EVO				*i* IAML		09 34 43.8		
PESTR	**Estremoz**	**4.96**	**323**	Pn	Pn	**09 33 42.9**	**+1.5**	
PESTR	**Estremoz**	**4.96**	**323**	*eP*	Pn	**09 33 42.9**	**+1.5**	
PESTR				*eS*	Sn	**09 34 38.9**	**+0.3**	
PESTR				*i* IAML		09 34 48.1		
PESTR				*i* IAML		09 34 49.0		
PESTR				*i* IAML		09 34 51.7		
TIO	**Tiouine**	**4.98**	**217**	Pn	Pn	**09 33 42.1**	**+0.3**	
TIO				Sn	Sn	**09 34 40.2**	**+1.0**	
TIO	**Tiouine**	**4.98**	**217**	P	Pn	**09 33 41.4**	**-0.3**	
TIO	**Tiouine**	**4.98**	**217**	S	Sn	**09 34 38.5**	**-0.6**	
ZGR	**Zagora**	**5.07**	**198**	P	Pn	**09 33 42.3**	**-0.7**	
ZGR	**Zagora**	**5.07**	**198**	S	Sn	**09 34 42.8**	**+1.4**	
OUK	**Oukaimeden**	**5.08**	**224**	P	Pn	**09 33 42.5**	**-0.8**	
OUK	**Oukaimeden**	**5.08**	**224**	S	Sn	**09 34 44.4**	**-1.5**	
MOE	**Montemor**	**5.12**	**315**	*eP*	Pn	**09 33 44.6**	**+1.0**	
MOE				*eS*	Sn	**09 34 40.7**	**-1.7**	
MOE				*i* IAML		09 34 43.2		
MOE				*i* IAML		09 34 55.5		
MOE				*i* IAML		09 34 58.9		
PARRA	**Arraiolos**	**5.15**	**320**	*eP*	Pn	09 33 44.8	-6.9	
PARRA				*eS*	Sn	09 34 43.0	-14	
PARRA				*i* IAML		09 34 43.8		
PARRA				*i* IAML		09 34 44.0		
PARRA				*i* IAML		09 34 57.8		
PMRV	**Marv??o**	**5.32**	**328**	*eP*	Pn	**09 33 47.0**	**+0.7**	
PMRV				*eS*	Sn	**09 34 45.6**	**-1.7**	
PMRV				*i* IAML		09 35 03.6		
PMRV				*i* IAML		09 35 05.4		
PMRV				*i* IAML		09 35 05.4		
EPLA	**Plasencia**	**5.42**	**341**	Pn	Pn	**09 33 48.7**	**+1.0**	
EPLA				Sn	Sn	**09 34 51.4**	**+1.5**	
EPLA				*i* IVmb_Lg		09 35 16.3		
PMTG	**Montargil**	**5.44**	**320**	*eP*	Pn	**09 33 48.9**	**+1.0**	
PMTG				*eS*	Sn	**09 34 49.2**	**-1.1**	
PMTG				*i* IAML		09 34 54.7		
PMTG				*i* IAML		09 35 07.0		
PMTG				*i* IAML		09 35 11.3		
PCBR	**Castelo Branco**	**5.70**	**330**	*eP*	Pn	**09 33 52.5**	**+1.0**	
PCBR				*eS*	Sn	**09 34 54.5**	**-2.2**	
PCBR				*i* IAML		09 34 57.7		
PCBR				*i* IAML		09 35 00.7		
PCBR				*i* IAML		09 35 04.6		
PSARD	**Sardoal**	**5.81**	**324**	*eP*	Pn	**09 33 53.9**	**+0.8**	
PSARD				*eS*	Sn	**09 34 56.5**	**-2.9**	
PSARD				*i* IAML		09 35 06.9		
PSARD				*i* IAML		09 35 07.1		
PSARD				*i* IAML		09 35 13.8		
PMAFR	**Mafra**	**5.95**	**314**	*eS*	Sn	**09 35 00.6**	**-2.3**	
PSBE	**So Bento**	**6.06**	**320**	*eP*	Pn	**09 33 57.5**	**+1.0**	
PSBE				*eS*	Sn	**09 34 04.3**	**-1.4**	
PSBE				*i* IAML		09 35 19.1		
PSBE				*i* IAML		09 35 20.4		
PSBE				*i* IAML		09 35 28.1		
MTE	**Manteigas**	**6.20**	**332**	*eS*	Sn	**09 35 07.8**	**-1.4**	
PCAS	**Casmilo, Conde**	**6.32**	**325**	*eP*	Pn	**09 34 02.0**	**+1.9**	
PCAS				*eS*	Sn	**09 35 13.0**	**+0.9**	
PCAS				*i* IAML		09 35 18.9		
PCAS				*i* IAML		09 35 20.9		
PCAS				*i* IAML		09 35 29.1		
PVIS	**Viseu**	**6.61**	**332**	*eP*	Pn	**09 34 03.7**	**-0.4**	
PVIS				*eS*	Sn	**09 35 18.6**	**-0.6**	
MVO	**Moncorvo**	**6.71**	**338**	*eP*	Pn	**09 34 06.2**	**+0.7**	
MVO				*eS*	Sn	**09 35 21.6**	**-0.1**	
MVO				*i* IAML		09 35 44.7		
MVO				*i* IAML		09 35 45.4		
MVO				*i* IAML		09 36 02.6		
PVRL	**Vila Real**	**7.03**	**335**	*eP*	Pn	**09 34 11.5**	**+1.6**	
PVRL				*eS*	Sn	**09 35 28.7**	**-0.9**	
PVRL				*i* IAML		09 35 36.0		
PVRL				*i* IAML		09 35 36.3		
PVRL				*i* IAML		09 35 37.6		
POLO	**Lamas de Olo**	**7.15**	**335**	*eP*	Pn	**09 34 12.4**	**+0.9**	
POLO				*eS*	Sn	**09 35 30.4**	**-2.1**	
POLO				*i* IAML		09 35 32.6		
POLO				*i* IAML		09 35 35.4		
POLO				*i* IAML		09 35 37.7		
PBRG	**Braganca**	**7.22**	**342**	*eP*	Pn	**09 34 13.1**	**+0.6**	
PBRG				*eS*	Sn	**09 35 32.5**	**-1.8**	
PCAB	**Cabril**	**7.53**	**335**	*eP*	Pn	**09 34 18.9**	**+2.3**	

MDD ***24*** *09:34:42.0±0.4, 34°.98N×3°.80W, h0km, mb_Lg2.9/23, Error ellipse: s-maj=3.3km s-min=2.3km az=158.0*
CNRM ***24*** *09:34:41.2, 34°.98N×3°.77W, h22km, ML3.6*
SFS ***24*** *09:34:42.6, 35°.05N×3°.78W, h4km, ML3.5/19, ML3.5/24, MLv3.1/24*
INMG ***24*** *09:34:43.1±1.6, 34°.99N×3°.80W, h11km±8km, ML2.8, Error ellipse: s-maj=7.8km s-min=3.8km az=149.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Al Hoceima (MARR)*
IGIL ***24*** *09:34:44.0, 35°.02N×3°.92W, h3km, ML2.3*
ISC 24 09:34:41.4±1.1,**34°.95N**±0°.02×**3°.80W**±0°.02,**h20**km±4km, **n102**,σ1**$38**/167,**Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
PALE	**Palemas**	**0.29**	**336**	P	Pg	**09 34 48.1**	**+0.1**	
PALE	**Palemas**	**0.29**	**336**	S	Sg	**09 34 52.4**	**-0.1**	
AKLM	**AKL**	**0.44**	**187**	P	Pg	**09 34 49.6**	**-1.1**	
AKLM	**AKL**	**0.44**	**187**	S	Sg	**09 34 56.1**	**-0.7**	
EMEL	**Melilla**	**0.77**	**63**	Pg	Pb	**09 34 55.0**	**-1.2**	
EMEL				Sg	Sb	**09 35 06.6**	**+0.3**	
EMLI	**Melilla**	**0.78**	**63**	Pg	Pb	**09 34 55.0**	**-1.3**	
WMELI	**Melilla**	**0.78**	**62**	Pg	Pb	**09 34 55.2**	**-1.2**	
WMELI				Sg	Sb	**09 35 05.5**	**-1.1**	
TAF	**Taforalt**	**1.15**	**96**	P	Pn	**09 35 01.6**	**-0.8**	
TAF	**Taforalt**	**1.15**	**96**	S	Sb	**09 35 17.0**	**-0.1**	
EALB	**Alboran**	**1.17**	**32**	Pg	Pn	**09 35 03.2**	**+0.5**	
EALB				Sg	Sb	**09 35 18.2**	**+0.6**	
EALB	**Alboran**	**1.17**	**32**	Pg	Pn	**09 35 03.5**	**+0.9**	
EALB				Sg	Sb	**09 35 18.6**	**+0.9**	
EALB				*i* IVmb_Lg		09 35 20.9		
SMIR	**Smir Dam**	**1.49**	**300**	P	Pn	**09 35 07.0**	**0.0**	
SMIR	**Smir Dam**	**1.49**	**300**	S	Sn	**09 35 26.6**	**+0.7**	
LCRM	**LCR**	**1.54**	**215**	P	Pb	**09 35 09.9**	**+0.5**	
LCRM	**LCR**	**1.54**	**215**	S	Sg	**09 35 32.3**	**+1.0**	
CEU	**Ceuta**	**1.60**	**307**	Pn	Pn	**09 35 07.0**	**-1.6**	
ECEU	**Ceuta**	**1.60**	**307**	Pn	Pn	**09 35 08.0**	**-0.6**	
ECEU				Sn	Sn	**09 35 27.2**	**-1.5**	
ECEU	**Ceuta**	**1.60**	**307**	Pn	Pn	**09 35 08.1**	**-0.6**	
ECEU				Sn	Sn	**09 35 29.1**	**+0.4**	
ECEU				*i* IVmb_Lg		09 35 36.2		
EMIJ	**Mijas**	**1.79**	**334**	Pn	Pn	**09 35 11.8**	**+0.4**	
EMIJ	**Mijas**	**1.79**	**334**	Pn	Pn	**09 35 11.0**	**-0.4**	
EMIJ				Pg	Pb	**09 35 14.1**	**+0.4**	
EMIJ				Sn	Sn	**09 35 34.1**	**+0.5**	
IFR	**Ifrane**	**1.81**	**218**	Pn	Pb	**09 35 14.7**	**+0.7**	
IFR				Sn	Sb	**09 35 37.6**	**+1.4**	
ELGU	**Los Guajares,**	**1.92**	**4**	Pn	Pn	**09 35 12.6**	**-0.5**	
ELGU				Sn	Sn	**09 35 33.5**	**-3.1**	
ELGU	**Los Guajares,**	**1.92**	**4**	Pn	Pn	**09 35 13.1**	**0.0**	
ELGU				Sn	Sn	**09 35 36.3**	**-0.4**	
ELGU				*i* IVmb_Lg		09 35 40.9		
EJIF	**Jimena Fronter**	**2.02**	**318**	Pn	Pn	**09 35 15.7**	**+1.3**	
EJIF				Sn	Sb	**09 35 41.4**	**-0.9**	
EGOR	**Sierra Gorda,**	**2.17**	**353**	Pn	Pn	**09 35 17.0**	**+0.4**	
EGOR	**Sierra Gorda,**	**2.17**	**353**	Pn	Pn	**09 35 17.0**	**+0.4**	
EGOR				Sn	Sb	**09 35 47.1**	**+0.4**	
EGOR				*i* IVmb_Lg		09 35 49.1		
MD31	**MD31**	**2.23**	**201**	P	Pn	**09 35 18.0**	**+0.6**	
MD31	**MD31**	**2.23**	**201**	S	Sn	**09 35 45.3**	**+0.9**	
MDT	**Midelt**	**2.24**	**198**	P	Pn	**09 35 17.9**	**+0.5**	
MDT	**Midelt**	**2.24**	**198**	S	Sn	**09 35 45.1**	**+0.6**	
EQUE	**Quentar**	**2.27**	**7**	Pn	Pn	**09 35 19.1**	**+1.2**	
EQUE				Sn	Sn	**09 35 46.1**	**+0.8**	
EQUE				*i* IVmb_Lg		09 35 52.9		
EQTA	**Presa de Quent**	**2.27**	**7**	Pn	Pn	**09 35 19.1**	**+1.2**	
EQTA				Sn	Sn	**09 35 45.8**	**+0.4**	
CNIL	**Conil**	**2.32**	**308**	Pn	Pb	**09 35 21.4**	**-1.2**	
ENIJ	**Nijar**	**2.39**	**32**	Pn	Pn	**09 35 19.1**	**-0.5**	
ENIJ				Sn	Sn	**09 35 47.6**	**-0.8**	
ENIJ	**Nijar**	**2.39**	**32**	Pn	Pn	**09 35 19.0**	**-0.5**	
ENIJ				Sn	Sn	**09 35 47.9**	**-0.4**	
ENIJ				*i* IVmb_Lg		09 35 58.7		
ESPR	**Espera**	**2.54**	**319**	Pn	Pn	**09 35 23.4**	**+1.8**	
ESPR	**Espera**	**2.54**	**319**	Pn	Pb	**09 35 24.8**	**-1.6**	
ESPR				*i* IVmb_Lg		09 35 57.1		
ZHG	**ZHG**	**2.80**	**238**	P	Pn	**09 35 26.6**	**+1.4**	
ZHG	**ZHG**	**2.80**	**238**	S	Sb	**09 36 02.0**	**-2.7**	
EQES	**Quesada**	**2.91**	**11**	Pn	Pn	**09 35 29.3**	**+2.6**	
EQES				Sn	Sn	**09 36 05.4**	**+4.3**	
EQES				*i* IVmb_Lg		09 36 11.6		
E0802	**Ubeda,Jaen**	**3.09**	**6**	Sn	Sn	**09 36 06.5**	**+1.0**	
EADA	**Adamuz**	**3.27**	**349**	Pn	Pn	**09 35 33.3**	**+1.6**	
EADA				Sn	Sn	**09 36 09.4**	**-0.7**	
EADA	**Adamuz**	**3.27**	**349**	Pn	Pn	**09 35 33.0**	**+1.4**	
EADA				Sn	Sn	**09 36 12.4**	**+2.4**	
EADA				*i* IVmb_Lg		09 36 22.7		
ECAB	**El Cabril**	**3.38**	**338**	Pn	Pn	**09 35 34.5**	**+1.3**	
ECAB				Sn	Sn	**09 36 12.7**	**0.0**	
ECAB	**El Cabril**	**3.38**	**338**	Pn	Pn	**09 35 34.4**	**+1.2**	
ECAB				Sn	Sn	**09 36 11.9**	**-0.8**	
ECAB				*i* IVmb_Lg		09 36 17.6		
FIGM	**Figuig**	**3.52**	**142**	P	Pn	**09 35 34.8**	**-0.3**	
EMUR	**La Murta**	**3.55**	**35**	Pn	Pn	**09 35 36.7**	**+1.3**	
EMUR				Sn	Sn	**09 36 15.2**	**-1.6**	
EMUR				*i* IVmb_Lg		09 36 16.5		
EMIN	**Mina Concepcio**	**3.65**	**321**	Pn	Pn	**09 35 37.7**	**+0.9**	
EMIN				Sn	Sn	**09 36 17.2**	**-2.0**	
EMIN	**Mina Concepcio**	**3.65**	**321**	Pn	Pn	**09 35 37.6**	**+0.9**	
EMIN				Sn	Sn	**09 36 19.5**	**+0.3**	
EMIN				*i* IVmb_Lg		09 36 26.1		
PSIM	**Granatula de C**	**3.86**	**0**	Pn	Pn	**09 35 42.0**	**+2.2**	
PSIM				Sn	Sn	**09 36 26.3**	**+1.7**	
TISM	**Timmit**	**3.91**	**215**	P	Pn	**09 35 40.8**	**+0.4**	
EGRO	**El Granado**	**3.94**	**312**	Pn	Pn	**09 35 41.7**	**+0.9**	
EGRO				Sn	Sn	**09 36 25.7**	**-0.8**	
EGRO	**El Granado**	**3.94**	**312**	Pn	Pn	**09 35 41.5**	**+0.7**	
EGRO				Sn	Sn	**09 36 26.0**	**-0.4**	
EGRO				*i* IVmb_Lg		09 36 32.6		
PVAQ	**Vaqueiros**	**4.01**	**309**	*eP*	Pn	**09 35 42.4**	**+0.7**	
PVAQ				*eS*	Sn	**09 36 26.8**	**-1.3**	
PVAQ				*i* IAML		09 36 28.7		
PVAQ				*i* IAML		09 36 29.3		
PVAQ				*i* IAML		09 36 30.3		
PVAQ	**Vaqueiros**	**4.01**	**309**	P	Pn	**09 35 42.5**	**+0.7**	
PBDV	**Barranco-do-Ve**	**4.05**	**306**	*eP*	Pn	**09 35 43.2**	**+0.8**	
PBDV				*eS*	Sn	**09 36 29.0**	**-0.4**	
PBDV				*i* IAML		09 36 32.5		
PBDV				*i* IAML		09 36 34.2		
PBDV				*i* IAML		09 36 34.5		
ETOB	**Tobarra**	**4.10**	**25**	Pn	Pn	**09 35 45.6**	**+2.5**	
ETOB	**Tobarra**	**4.10**	**25**	Pn	Pn	**09 35 46.0**	**+2.9**	
ETOB				Sn	Sn	**09 36 30.9**	**+0.3**	
PBAR	**Barrancos**	**4.14**	**322**	Pn	Pn	**09 35 44.7**	**+1.1**	
PBAR				Sn	Sn	**09 36 31.3**	**-0.1**	
PBAR	**Barrancos**	**4.14**	**322**	*eP*	Pn	**09 35 44.7**	**+1.1**	
PBAR				*eS*	Sn	**09 36 31.3**	**-0.1**	
PBAR				*i* IAML		09 36 34.8		
PBAR				*i* IAML		09 36 38.8		
PBAR				*i* IAML		09 36 41.9		
PCVE	**Castro Verde**	**4.35**	**309**	Pn	Pn	**09 35 47.1**	**+0.7**	
PCVE				Sn	Sn	**09 36 36.0**	**-0.5**	
PCVE	**Castro Verde**	**4.35**	**309**	*eP*	Pn	**09 35 47.2**	**+0.7**	
PCVE				*eS*	Sn	**09 36 36.0**	**-0.5**	
PCVE				*i* IAML		09 36 39.8		
PCVE				*i* IAML		09 36 39.9		
PCVE				*i* IAML		09 36 40.2		
PBEJ	**Beja**	**4.49**	**314**	*eP*	Pn	**09 35 50.8**	**+2.4**	
PBEJ				*eS*	Sn	**09 36 39.8**	**-0.2**	
PBEJ				*i* IAML		09 36 43.5		
PBEJ				*i* IAML		09 36 44.5		
PBEJ				*i* IAML		09 36 45.9		
MORF	**Marmelete**	**4.58**	**302**	*eP*	Pn	**09 35 50.5**	**+0.9**	
MORF	**Marmelete**	**4.58**	**302**	*eP*	Pn	**09 35 51.0**	**+1.4**	
MORF				*eS*	Sn	**09 36 41.9**	**-0.4**	
MORF				*i* IAML		09 36 45.8		
MORF				*i* IAML		09 36 48.0		
MORF				*i* IAML		09 36 49.0		
MESJ	**Messejana**	**4.59**	**310**	*eP*	Pn	**09 35 50.5**	**+0.8**	
MESJ				*eS*	Sn	**09 36 39.4**	**-3.0**	
MESJ				IAML		09 36 44.7		
	comp=N,5.1nm,0.5s							
MESJ	**Messejana**	**4.59**	**310**	*eP*	Pn	**09 35 51.1**	**+1.4**	
MESJ				*eS*	Sn	**09 36 42.0**	**-0.4**	
MESJ				*i* IAML		09 36 45.2		
MESJ				*i* IAML		09 36 45.7		
MESJ				*i* IAML		09 36 47.4		
EBAD	**Badajoz**	**4.59**	**327**	Pn	Pn	**09 35 50.4**	**+0.7**	
EBAD				Sn	Sn	**09 36 41.3**	**-1.2**	
EBAD	**Badajoz**	**4.59**	**327**	Pn	Pn	**09 35 50.7**	**+1.0**	
EBAD				Sn	Sn	**09 36 41.9**	**-0.6**	
PAB	**San Pablo**	**4.61**	**355**	Pn	Pn	**09 35 51.9**	**+1.8**	
PAB				Sn	Sn	**09 36 41.9**	**-1.1**	
PAB				*i* IVmb_Lg		09 37 12.9		
PFVI	**Vila Bisbo**	**4.62**	**300**	Pn	Pn	**09 35 51.5**	**+1.3**	
PFVI				Sn	Sn	**09 36 41.9**	**-1.3**	
PFVI	**Vila Bisbo**	**4.62**	**300**	*eP*	Pn	**09 35 51.9**	**+1.7**	
PFVI				*eS*	Sn	**09 36 42.5**	**-0.7**	
PFVI				*i* IAML		09 36 49.1		
PFVI				*i* IAML		09 36 54.4		
PFVI				*i* IAML		09 36 59.5		
PFVI	**Vila Bisbo**	**4.62**	**300**	P	Pn	**09 35 51.7**	**+1.6**	
ESDC	**Sonseca Array**	**4.72**	**358**	Pn	Pn	**09 35 53.5**	**+1.9**	
ESDC				Sn	Sn	**09 36 46.7**	**+1.0**	
ESDC				*i* IVmb_Lg		09 37 07.3		
ESBB	**Sonseca Array**	**4.72**	**358**	Pn	Pn	**09 35 53.5**	**+2.0**	
ESBB				Sn	Sn	**09 36 46.7**	**+1.0**	
OUZM	**OUZ**	**4.74**	**213**	P	Pn	**09 35 55.0**	**+3.1**	
PTEO	**Sao Teotonio**	**4.75**	**304**	*eP*	Pn	**09 35 53.5**	**+1.6**	
PTEO				*eS*	Sn	**09 36 46.4**	**0.0**	
PTEO				*i* IAML		09 36 49.3		
PTEO				*i* IAML		09 36 49.8		
PTEO				*i* IAML		09 36 50.7		
EVO	**Evora**	**4.92**	**318**	Pn	Pn	**09 35 55.7**	**+1.4**	
EVO				Sn	Sn	**09 36 49.8**	**-0.8**	
EVO	**Evora**	**4.92**	**318**	*eP*	Pn	**09 35 55.2**	**+0.9**	
EVO				*eS*	Sn	**09 36 49.9**	**-0.8**	
EVO				*i* IAML		09 36 52.6		
EVO				*i* IAML		09 36 52.8		
EVO				*i* IAML		09 36 55.6		
PESTR	**Estremoz**	**4.95**	**323**	*eP*	Pn	**09 35 56.9**	**+2.2**	
PESTR				*eS*	Sn	**09 36 50.5**	**-1.0**	
PESTR				*i* IAML		09 36 56.6		
PESTR				*i* IAML		09 36 57.7		
PESTR				*i* IAML		09 37 12.6		
TIO	**Tiouine**	**4.96**	**217**	Pn	Pn	**09 35 57.7**	**+2.3**	
TIO				Sn	Sn	**09 36 54.8**	**+3.0**	
TIO	**Tiouine**	**4.96**	**217**	P	Pn	**09 35 55.6**	**+0.7**	
OUK	**Oukaimeden**	**5.06**	**224**	P	Pn	**09 35 56.8**	**+0.3**	
MOE	**Montemor**	**5.11**	**316**	*eP*	Pn	**09 35 58.6**	**+1.8**	
MOE				*eS*	Sn	**09 36 54.3**	**-0.9**	
MOE				*i* IAML		09 37 04.9		
MOE				*i* IAML		09 37 09.4		
MOE				*i* IAML		09 37 12.8		
PARRA	**Arraiolos**	**5.14**	**320**	*eP*

T25A					IAML			09 45 07.9	
	comp=E,4.6nm,1.3s								
Q24A	**Divide**	**1.44**	**356**		Pn	Pg		09 45 14.2	+0.7

*IDC **24** 09:53:07.5±1.8,51°.40N×175°.50W,h0km,mb3.8/6, mbtmp3.8/7,ML3.7/1,MS2.7/2,Error ellipse: s-maj=60.6km s-min=20.2km az=6.0*
*AEIC **24** 09:53:12.1±1.3,51°.43N±0°.07×175°.39W±0°.05,h31km±6km, Error ellipse: s-maj=10.1km s-min=4.0km az=173.0*
*NEIC **24** 09:53:13.1±1.3,51°.46N±0°.06×175°.40W±0°.04,h35km±2km, mb4.0/24,ML3.8/10,ML3.5(AEIC),Error ellipse: s-maj=10.8km s-min=3.8km az=173.0*

ISC 24 09:53:12.4±1.7,51°.44N±0°.09×175°.38W±0°.04, h32km±11km,n94,σ0°76/90,mb3.9/10,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.64**	**328**			**Pb**		**09 53 25.1**	**-0.1**
GSIG						**Sn**		**09 53 34.7**	**+0.4**
GSMY	**Great Sitkin M**	**0.73**	**325**			**Pb**		**09 53 26.5**	**-0.2**
GSMY						**Sn**		**09 53 37.2**	**+0.6**
GSCK	**Great Sitkin C**	**0.75**	**320**			**Pb**		**09 53 26.7**	**-0.3**
GSCK						**Sn**		**09 53 37.4**	**+0.4**
ETKA	**Kagalaska Isla**	**0.76**	**304**			**Pn**		**09 53 26.4**	**-0.5**
ETKA						**Sb**		**09 53 36.9**	**-0.5**
GSTD	**Great Sitkin T**	**0.78**	**323**			**Pb**		**09 53 27.2**	**-0.3**
GSTR	**Great Sitkin T**	**0.78**	**327**			**Pb**		**09 53 27.5**	**0.0**
GSTR					IAML			09 53 41.1	
	comp=E,5μm,0.4s								
GSTR					IAML			09 53 43.5	
	comp=N,5μm,0.3s								
GSSP	**Great Sitkin S**	**0.81**	**323**			**Pb**		**09 53 27.9**	**-0.2**
ADK	**Adak**	**0.92**	**299**			**Pn**		**09 53 28.4**	**-0.6**
ADK					IAML			09 53 41.5	
	comp=N,3μm,0.2s								
ADK					IAML			09 53 41.8	
	comp=N,3μm,0.2s								
ADK	**Adak**	**0.92**	**299**			**Sn**		**09 53 40.5**	**-0.7**
ADAG	**Mount Adagdak**	**0.93**	**306**			**Pb**		**09 53 29.6**	**-0.4**
ADAG						**Sb**		**09 53 42.4**	**+0.4**
ATKA	**Atka Island**	**1.06**	**44**			**Pn**		**09 53 30.6**	**-0.4**
ATKA	**Atka Island**	**1.06**	**44**			**Sn**		**09 53 44.1**	**-0.5**
KOKL	**Mount Kliuchef**	**1.15**	**39**			**Pn**		**09 53 32.3**	**+0.1**
KOFP	**Korovin Flat P**	**1.15**	**43**			**Pn**		**09 53 32.4**	**0.0**
KOFP						**Sn**		**09 53 47.9**	**+0.9**
KIRH	**Kanaga Island**	**1.16**	**294**			**Pn**		**09 53 32.2**	**-0.1**
KOWE	**Korovin West**	**1.16**	**37**			**Pn**		**09 53 32.8**	**+0.4**
KIWB	**Kanaga Island**	**1.18**	**291**			**Pn**		**09 53 32.2**	**-0.4**
KIWB					IAML			09 53 53.1	
	comp=N,1μm,0.4s								
KIWB					IAML			09 53 53.4	
	comp=E,2μm,0.4s								
KIKV	**Kanaga Island**	**1.20**	**292**			**Pn**		**09 53 32.6**	**-0.3**
KIMD	**Kanaga Island**	**1.20**	**286**			**Pn**		**09 53 32.2**	**-0.6**
KONW	**Korovin Northw**	**1.20**	**37**			**Pn**		**09 53 33.4**	**+0.4**
KICM	**Kanaga Island**	**1.22**	**294**			**Pn**		**09 53 33.1**	**-0.1**
KOSE	**Korovin Southe**	**1.22**	**42**			**Pn**		**09 53 33.7**	**+0.4**
TAPA	**Tanaga Point A**	**1.56**	**285**			**Pn**		**09 53 37.8**	**-0.1**
TAFL	**Tanaga Flats**	**1.60**	**282**			**Pn**		**09 53 38.2**	**-0.2**
TAFP	**Tanaga Falls P**	**1.68**	**287**			**Pn**		**09 53 39.7**	**+0.1**
TASE	**Tanaga Southea**	**1.70**	**284**			**Pn**		**09 53 40.1**	**+0.3**
GAEA	**Gareloi East**	**2.12**	**281**			**Pn**		**09 53 46.8**	**+1.1**
GALAA	**Gareloi Lava P**	**2.14**	**280**			**Pn**		**09 53 46.3**	**+0.5**
GAKI	**Gareloi-Kavalg**	**2.15**	**274**			**Pn**		**09 53 45.8**	**-0.1**
GAKI						**Sn**		**09 54 12.7**	**+1.3**
GANE	**Gareloi Northe**	**2.15**	**281**			**Pn**		**09 53 46.8**	**+0.9**
GANO	**Gareloi North**	**2.17**	**281**			**Pn**		**09 53 47.0**	**+0.8**
GASW	**Gareloi Southw**	**2.19**	**280**			**Pn**		**09 53 47.2**	**+0.6**
CEPE	**Semis' Perret**	**3.13**	**282**			**Pn**		**09 54 00.2**	**+0.7**
AMKA	**Amchitka**	**3.33**	**271**		Pn	**Pn**		**09 54 02.5**	**+0.3**
LSSE	**Little Sitkin**	**3.79**	**280**			**Pn**		**09 54 10.1**	**+1.5**
LSNW	**Little Sitkin**	**3.83**	**280**			**Pn**		**09 54 09.8**	**+0.7**
NIKH	**Nikolski High**	**4.30**	**67**			**Pn**		**09 54 17.6**	**+2.1**
UNV	**Unalaska Valle**	**5.92**	**63**		Pn	**Pn**		**09 54 38.5**	**+0.8**
SHEM	**Shemya Is, Ala**	**6.61**	**285**		LR	LR		09 57 29.9	
	comp=E,47nm,18.0s,baz=176,slow=40								
SDPT	**Sand Point**	**9.72**	**60**		Pn	**Pn**		**09 55 30.3**	**+0.5**
M11K	**Mekoryuk**	**10.33**	**26**		Pn	**Pn**		**09 55 40.1**	**+2.1**
O14K	**Tigyukauivet M**	**11.20**	**40**		Pn	**Pn**		**09 55 52.4**	**+2.4**
N15K	**Kwethluk River**	**12.23**	**38**		Pn	**Pn**		**09 56 03.7**	**-0.4**
O16K	**Kokwok River B**	**12.72**	**43**		Pn	**Pn**		**09 56 12.5**	**+1.8**
M16K	**Timber Creek**	**13.21**	**37**		Pn	**Pn**		**09 56 19.2**	**+1.8**
N18K	**Kilae Creek**	**14.23**	**42**		Pn	**Pn**		**09 56 32.6**	**+1.1**
K17K	**Iditarod**	**14.56**	**33**		Pn	**Pn**		**09 56 35.8**	**0.0**
KDAK	**Kodiak Island**	**14.61**	**55**		Pn	**Pn**		**09 56 36.2**	**-0.3**
L18K	**Granite Mounta**	**14.80**	**36**		Pn	**Pn**		**09 56 40.5**	**+1.3**
PEA0B	**Petropavlovsk-**	**16.52**	**286**		Pn	**Pn**		**09 57 00.0**	**-1.5**
PETK	**Petropavlovsk-**	**16.52**	**286**		Pn	**P**		**09 57 03.8**	**0.0**
	comp=E,0.2nm,0.3s,baz=143,slow=13,SNR=4.6								
KLU	**Klutina**	**18.96**	**47**		P	**P**		**09 57 29.7**	**-1.0**
KLU					IAmb	IAmb		09 57 45.6	
	comp=Z,9.0nm,0.6s								
D19K	**Kuna River**	**19.03**	**20**		P	**Pn**		**09 57 33.0**	**+0.8**
D19K					IAmb	IAmb		09 57 39.5	
	comp=Z,11nm,1.1s								
I23K	**Minto, Yukon-K**	**19.17**	**34**		P	**P**		**09 57 33.4**	**+0.5**
WRH	**Wood River Hil**	**19.28**	**37**		P	**P**		**09 57 33.0**	**-1.0**
WRH					IAmb	IAmb		09 57 57.3	
	comp=Z,15nm,1.5s								
CCB	**Clear Creek Bu**	**19.47**	**37**		P	**P**		**09 57 36.0**	**-0.2**
HDA	**Harding Lake**	**19.68**	**38**		P	**P**		**09 57 37.9**	**-0.6**
HDA					IAmb	IAmb		09 57 45.3	
	comp=Z,5.9nm,1.2s								
G23K	**Bananza Creek**	**19.86**	**30**		P	**Pn**		**09 57 42.0**	**-0.2**
K24K	**Donnelly Dome**	**19.88**	**40**		P	**P**		**09 57 40.7**	**0.0**
K24K					IAmb	IAmb		09 57 50.7	
	comp=Z,7.5nm,0.8s								
IL31		**19.88**	**37**		P	**P**		**09 57 39.7**	**-0.8**
ILAR	**Eielson Array**	**19.88**	**37**		P	**P**		**09 57 41.0**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=226,slow=9.8,SNR=15								
	comp=Z,0.4nm,0.4s								
E21K	**Killik River**	**19.94**	**23**		P	**Pn**		**09 57 42.3**	**-0.8**
E21K					IAmb	IAmb		09 57 52.2	
	comp=Z,5.2nm,1.1s								
J25K	**Salcha River,**	**20.39**	**38**		P	**P**		**09 57 45.1**	**-1.1**
J25K					IAmb	IAmb		09 57 53.4	
	comp=Z,3.9nm,0.6s								
D22K	**Ayikyak River**	**20.58**	**23**		P	**P**		**09 57 49.0**	**+0.8**
SEY	**Seymchan**	**20.65**	**316**		LR	LR		10 06 08.6	
	comp=Z,28nm,19.4s,baz=27,slow=38								
SCRK	**Sand Creek**	**20.67**	**41**		P	**P**		**09 57 48.7**	**-0.6**
SCRK					IAmb	IAmb		09 57 54.1	
	comp=Z,9.0nm,0.8s								
B21K	**Ikpikpuk River**	**20.69**	**21**		P	**P**		**09 57 49.7**	**+0.4**
F24K	**Squaw Lake**	**21.02**	**30**		P	**P**		**09 57 52.6**	**-0.4**
F24K					IAmb	IAmb		09 58 12.9	
	comp=Z,6.8nm,1.3s								
J26L	**Joseph Creek**	**21.05**	**39**		P	**P**		**09 57 53.2**	**-0.2**
J26L					IAmb	IAmb		09 57 58.4	
	comp=Z,4.5nm,0.6s								
BCAR	**Beaver Creek A**	**21.29**	**44**		P	**P**		**09 57 56.1**	**+0.2**
B22K	**Teshekpuk Lake**	**21.51**	**20**		P	**P**		**09 57 57.9**	**-0.2**
C23K	**Itkillik River**	**21.78**	**23**		P	**P**		**09 58 01.6**	**+0.6**
E25K	**Arctic Village**	**22.09**	**30**		P	**P**		**09 58 04.5**	**+0.1**
I28M	**Miner Creek**	**22.84**	**39**		P	**P**		**09 58 12.2**	**-0.3**
E28M	**Babbage River**	**24.26**	**32**		P	**P**		**09 58 25.9**	**-0.3**
E28M					IAmb	IAmb		09 58 32.4	
	comp=Z,2.7nm,0.9s								
H11N2	**WAKE ISLAND Hy**	**34.58**	**210**		T	T		10 36 32.5	
	baz=18,slow=76,SNR=15								
H11N3	**WAKE ISLAND Hy**	**34.59**	**210**		T	T		10 36 48.7	
	baz=18,slow=76,SNR=16								
H11N1	**WAKE ISLAND Hy**	**34.60**	**210**		T	T		10 36 48.1	
	baz=18,slow=76,SNR=14								
USRK	**Ussuriysk Ar.**	**35.40**	**279**		P	**P**		**10 00 04.7**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=67,slow=8.5,SNR=2.6								
	comp=Z,1.0nm,0.6s								
H11S1	**WAKE ISLAND Hy**	**35.79**	**210**		T	T		10 38 28.7	
	baz=18								
H11S2	**WAKE ISLAND Hy**	**35.80**	**210**		T	T		10 38 44.2	
	baz=18,slow=74								
H11S3	**WAKE ISLAND Hy**	**35.81**	**210**		T	T		10 38 40.5	
	baz=18,slow=74								
BOZ	**Bozeman (W)**	**41.44**	**72**		P	**P**		**10 00 56.1**	**+0.2**
PDAR	**Pinedale Array**	**44.24**	**74**		P	**P**		**10 01 19.4**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=304,slow=4.0,SNR=13								
	comp=Z,1.0nm,0.6s								
TXAR	**Lajitas Array**	**56.52**	**84**		P	**P**		**10 02 51.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=300,slow=6.7,SNR=8.8								
	comp=Z,0.3nm,0.5s								
TXAR	**Lajitas Array**	**56.52**	**84**		P	**P**		**10 02 51.3**	**-0.3**
KURK	**Kurchatov**	**60.50**	**315**		P	**P**		**10 03 18.5**	**-0.3**
KURK					IAmb	IAmb		10 03 22.8	
	comp=Z,1.2nm,0.6s								
KURBB	**Kurchatov Arra**	**60.61**	**315**		P	**P**		**10 03 19.2**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=44,slow=6.5,SNR=12								
	comp=Z,1.0nm,0.6s								
MKAR	**Makanchi Array**	**61.65**	**310**		P	**P**		**10 03 26.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=48,slow=7.1,SNR=5.2								
	comp=Z,0.4nm,0.5s								
MKAR	**Makanchi Array**	**61.65**	**310**		P	**P**		**10 03 26.3**	**-0.4**
BVAR	**Borovoye Array**	**62.20**	**321**		P	**P**		**10 03 30.2**	**-0.1**
	comp=Z,0.9nm,0.4s								
	comp=Z,0.9nm,0.4s								
H03N2	**Juan Fernandez**	**119.12**	**108**		T	T		12 22 28.8	
	baz=318,slow=78,SNR=3.1								
H03N1	**Juan Fernandez**	**119.13**	**108**		T	T		12 22 29.0	
	baz=318,slow=78,SNR=4.6								
H03N3	**Juan Fernandez**	**119.13**	**108**		T	T		12 22 24.8	
	baz=318,slow=78,SNR=3.7								

Gll 24 10:17:57.7±0.0,32°.91N×35°.45E,h0km,confirmed,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AMID	**Amiad**	**0.07**	**77**			P	Pg	10 17 59.6	+0.5
KNHM	**Kefar Nahum**	**0.11**	**104**			P	Pg	10 18 00.4	+0.7
KNHM	**Kefar Nahum**	**0.11**	**104**			S	Sg	10 18 03.8	+2.6
MMA0B	**Mount Meron ar**	**0.11**	**338**			P	Pg	10 18 00.4	+0.5
MMA0B	**Mount Meron ar**	**0.11**	**338**			S	Sg	10 18 02.7	+1.4
MMC7	**Mount Meron ar**	**0.12**	**336**			P	Pg	10 18 00.5	+0.5
HDNS	**Had-Ness**	**0.16**	**84**			P	Pg	10 18 01.6	+0.8

*IDC **24** 10:29:43.0±0.5,1°.60N×126°.39E,h0km,mb4.2/21, mbtmp4.2/23,ML4.1/2,MS3.2/13,Error ellipse: s-maj=27.5km s-min=11.7km az=77.0*
*DJA **24** 10:29:46.9±0.3,2°.N±3°×12°.6E±°,h10km,M4.4/15,mB4.7/4, mb4.6/6,MLv4.4/15,Mw(mB)3.9/4*
*NEIC **24** 10:29:49.5±1.5,1°.50N±0°.09×126°.26E±0°.07,h39km±8km, mb4.8/28,Error ellipse: s-maj=14.3km s-min=8.1km az=211.0*

ISC 24 10:29:48.8±0.4,1°.58N±0°.05×126°.39E±0°.07,h35km,n93, σ1°42/89,mb4.5/41,MS3.3/13,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**129**			**Pn**		**10 30 09.8**	**-0.2**
TNTI	**Ternate**	**1.27**	**129**		P	**Pn**		**10 30 09.5**	**-0.5**
SGSI	**Sangihe**	**2.27**	**338**		P	**Pn**		**10 30 23.9**	**+0.1**
KMSI	**Cibinong**	**2.60**	**248**		P	**Pn**		**10 30 28.4**	**0.0**
SANI	**Sanana**	**3.62**	**186**		P	**Pn**		**10 30 42.8**	**+0.3**
LUWI	**Luwuk**	**4.45**	**234**			**Pn**		**10 30 53.3**	**-0.6**
LUWI	**Luwuk**	**4.45**	**234**		P	**Pn**		**10 30 55.0**	**+1.1**
MRSI	**Marisa**	**4.58**	**256**		P	**Pn**		**10 30 58.9**	**+3.3**
NLAI	**Namlea**	**4.83**	**172**		P	**Pn**		**10 31 00.3**	**+1.1**
APSI	**Ampana**	**5.34**	**242**		P	**Pn**		**10 31 07.8**	**+1.7**
TOLI2	**Tolitoli**	**5.62**	**265**			**Pn**		**10 31 09.1**	**-0.9**
MPSI	**Mapaga**	**6.60**	**259**		P	**Pn**		**10 31 24.9**	**+1.4**
	0.2nm55nm,0.8s								
FAKI	**Fak Fak**	**7.37**	**127**			**Pn**		**10 31 35.4**	**+1.4**
FAKI	**Fak Fak**	**7.37**	**127**		P	**Pn**		**10 31 36.3**	**+2.3**
	0.1nm470nm43nm,0.8s								
SPSI	**Sidrap Palu**	**8.60**	**230**		P	**Pn**		**10 31 52.9**	**+2.0**
MYLDM	**Lahad Datu**	**8.65**	**295**			**Pn**		**10 31 49.6**	**-2.0**
BKSI	**Bulukumba**	**9.28**	**222**		P	**Pn**		**10 32 02.6**	**+2.4**
KAPI	**Kappang**	**9.31**	**225**		Pn	**Pn**		**10 31 59.8**	**-0.9**
	1.5nn,0.3s,baz=31,slow=5.2,SNR=4.6								
	5.0nm,0.5s								
SOEI	**Soe**	**11.45**	**191**		Pn	**Pn**		**10 32 29.8**	**-0.3**
SBUM	**Sibu**	**14.18**	**274**		Pn	**Pn**		**10 33 06.3**	**-1.1**
JAY	**Jayapura**	**14.88**	**106**		LR	LR		10 39 06.6	
	comp=Z,136nn,18.8s,baz=266,slow=38								
MTN	**Manton Dam**	**15.08**	**162**			**Pn**		**10 33 16.9**	**-2.6**
KNRA	**Kununurra**	**17.30**	**172**			**Pn**		**10 33 47.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.56**	**182**		P	**P**		**10 34 12.7**	**-1.2**
	0.4nm,0.3s,baz=359,slow=10,SNR=9.1								
	7.2nm,1.0s								
FITZ	**Fitzroy Crossi**	**19.56**	**182**		P	**P**		**10 34 12.3**	**-1.5**
GUMO	**Guam**	**21.84**	**56**		LR	LR		10 42 47.3	
	comp=Z,32nn,18.6s,baz=84,slow=36								
YULB	**Yu-li**	**22.24**	**348**		P	**P**		**10 34 43.5**	**+0.8**
WB0	**Warramunga Arr**	**22.62**	**160**			**P**		**10 34 45.2**	**-1.6**
WB0						IAmb	IAmb	10 35 08.0	
	comp=Z,18nm,0.9s								
WRA	**Warramunga Arr**	**22.76**	**160**		P	**P**		**10 34 46.4**	**-1.9**
	comp=Z,6.9nm,0.6s,baz=337,slow=9.6,SNR=57								
WRA					PcP	**PcP**		**10 38 39.1**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=342,slow=2.4,SNR=4.3								
WRA					S	**S**		**10 38 54.5**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=341,slow=17,SNR=5.0								
	comp=Z,6.9nm,0.6s								
WRA	**Warramunga Arr**	**22.76**	**160**			**P**		**10 34 46.0**	**-2.3**
PMG	**Port Moresby**	**23.39**	**118**		LR	LR		10 46 50.5	
	comp=Z,88nn,19.5s,baz=332,slow=44								
MBWA	**Marble Bar**	**23.51**	**196**		P	**P**		**10 34 53.9**	**-2.0**
MBWA					IAmb	IAmb		10 35 35.5	
	comp=Z,49nm,1.5s								
QIZ	**Qiongzhong**	**23.74**	**318**		P	**P**		**10 35 00.8**	**+2.7**
QIZ					S	**S**		**10 39 12.3**	**+1.1**
QIZ					pmax	pmax			
	comp=Z,17nm,1.4s								
QIZ					LR	LR			
	comp=N,100nn,15.4s								
QIZ					LR	LR			
	comp=E,89nn,14.4s								
QIZ					LR	LR			
	comp=Z,130nn,19.2s								
PSA00	**Pilbara Seismi**	**23.88**	**195**		P	**P**		**10 34 57.5**	**-1.8**
PSA00					IAmb	IAmb		10 35 13.3	
	comp=Z,41nn,1.4s								
JOW	**Kunigami**	**25.18**	**4**		P	**P**		**10 35 12.0**	**+0.8**
AS31	**Alice Springs**	**26.13**	**164**			**P**		**10 35 19.2**	**-0.7**
ASAR	**Alice Springs**	**26.13**	**164**		P	**P**		**10 35 19.1**	**-0.7**
	comp=Z,2.8nn,0.6s,baz=344,slow=8.0,SNR=35								
ASAR					PcP	**PcP**		**10 38 47.1**	**+0.3**
	comp=Z,0.3nn,0.4s,baz=336,slow=3.1,SNR=4.8								
	comp=Z,2.8nn,0.6s								
ASAR	**Alice Springs**	**26.13**	**164**			**P**		**10 35 20.0**	**+0.1**
PSI	**Prapat**	**27.47**	**273**		LR	LR		10 47 01.7	
	comp=Z,39nn,18.1s,baz=141,slow=38								
NJ2	**Nanjing**	**31.14**	**348**		*eP*	**P**		**10 36 08.0**	**+3.7**
NJ2					pmax	pmax			
	comp=Z,14nn,0.5s								
JNU	**Nakatsue**	**31.66**	**7**		LR	LR		10 50 48.4	
	comp=Z,30nn,19.8s,baz=341,slow=40								
CMAR	**Chiang Mai Arr**	**31.72**	**304**		P	**P**		**10 36 10.1**	**+0.5**
	comp=Z,0.5nn,0.3s,baz=113,slow=6.6,SNR=5.7								
CMAR					LR	LR		10 50 01.6	
	comp=Z,24nn,19.1s,baz=120,slow=38								
	comp=Z,0.5nn,0.3s								
PZH	**PanZhiHua**	**34.28**	**318**		P	**P**		**10 36 34.5**	**+2.4**
HNR	**Honiara**	**35.17**	**109**		LR	LR		10 50 29.0	
	comp=Z,48nn,18.9s,baz=163,slow=35								
KSRS	**Korea Array**	**35.73**	**2**		P	**P**		**10 36 42.4**	**-1.9**
	comp=Z,0.9nn,0.7s,baz=180,slow=9.6,SNR=2.3								
	comp=Z,0.9nn,0.7s								
XAN	**Xi'an**	**36.19**	**335**		P	**P**		**10 36 47.8**	**-0.6**
XAN					pmax	pmax			
	comp=Z,6.0nn,1.6s								
STKA	**Stephens Creek**	**36.26**	**158**		P	**P**		**10 36 48.6**	**-0.3**
	comp=Z,4.4nn,0.8s,baz=324,slow=9.5,SNR=11								
	comp=Z,4.4nn,0.8s								
MJAR	**Matsushiro Arr**	**36.47**	**16**		P	**P**		**10 36 49.1**	**-1.6**
	comp=Z,2.9nn,1.1s,baz=181,slow=8.2,SNR=5.5								
	comp=Z,2.9nn,1.1s								
LZDM	**Lanzhou Array**	**40.16**	**331**		P	**P**		**10 37 21.1**	**-1.0**
	comp=Z,0.8nn,0.3s,baz=113,slow=11,SNR=1.4								
	comp=Z,0.8nn,0.3s								
LZH	**Lanzhou**	**40.20**	**331**		*eP*	P		10 37 27.3	+5.1
LZH					pP	sP		10 37 37.6	+1.7
LZH					pmax	pmax			
	comp=Z,19nn,1.1s								
SHL	**Shillong**	**40.91**	**309**		P	**P**		**10 37 27.0**	**-1.2**
SHL					IAmb	IAmb		10 37 31.9	
	comp=Z,7.0nn,0.6s								
HHC	**Hu-ho-hao-te**	**41.33**	**343**		*eP*	**P**		**10 37 35.3**	**+3.9**
HHC					pmax	pmax			
	comp=Z,13nn,0.7s								
HHC					pmax	pmax			
	comp=Z,220nn,4.4s								
USRK	**Ussuriysk Ar.**	**42.73**	**6**		P	**P**		**10 37 42.3**	**-0.4**
	comp=Z,4.5nn,1.0s,baz=159,slow=9.7,SNR=5.3								
	comp=Z,4.5nn,1.0s								
ASAJ	**Asahikawa**	**44.74**	**17**		P	**P**		**10 37 59.3**	**+0.5**
	comp=Z,7.4nn,1.1s,baz=199,slow=18,SNR=1.6								
ASAJ					LR	LR		10 56 17.8	
	comp=Z,38nn,20.6s,baz=164,slow=36								
	comp=Z,7.4nn,1.1s								
JKA	**Kamikawa-asahi**	**44.74**	**17**		P	**P**		**10 37 59.0**	**+0.2**
GTA	**Gaotai**	**44.77**	**331**		*eP*	**P**		**10 38 00.3**	**+1.0**
GTA					PcP	**PcP**		**10 39 42.4**	**+1.3**
GTA					pmax	pmax			
	comp=Z,3.0nn,1.1s								
EVN	**Everest**	**46.02**	**308**		P	**P**		**10 38 08.6**	**-1.4**
HILR	**Hailar Array B**	**48.14**	**354**		P	**P**		**10 38 25.8**	**+0.4**
	comp=Z,1.5nn,0.5s,baz=144,slow=12,SNR=2.0								
	comp=Z,1.5nn,0.5s								
SONM	**Songino Array**	**49.23**	**342**		P	**P**		**10 38 33.2**	**-0.7**
	comp=Z,1.4nn,0.8s,baz=165,slow=8.7,SNR=6.6								
SONM					PcP	**PcP**		**10 39 56.6**	**0.0**
	comp=Z,2.3nn,0.9s,baz=149,slow=3.7,SNR=6.5								
SONM					LR	LR		11 01 28.1	
	comp=Z,39nn,18.5s,baz=160,slow=39								
	comp=Z,1.4nn,0.8s								
PETK	**Petropavlovsk-**	**57.54**	**22**		LR	LR		11 04 08.3	
	comp=Z,6.2nn,21.3s,baz=173,slow=36								
MKAR	**Makanchi Array**	**59.13**	**326**		P	**P**		**10 39 44.6**	**-1.5**
	comp=Z,1.8nn,0.6s,baz=121,slow=8.5,SNR=11								
MKAR					LR	LR		11 05 58.7	
	comp=Z,41nn,20.9s,baz=82,slow=37								
	comp=Z,1.8nn,0.6s								
MKAR	**Makanchi Array**	**59.13**	**326**		P	**P**		**10 39 45.0**	**-1.1**
MAKZ	**Makanchi**	**59.31**	**326**		P	**P**		**10 39 46.2**	**-1.1**
MAKZ					IAmb	IAmb		10 39 50.7	
	comp=Z,15nn,1.4s								
YAK	**Yakutsk**	**60.36**	**2**		P	**P**		**10 39 51.9**	**-2.2**
	comp=Z,9.2nn,0.5s,baz=214,slow=7.3,SNR=1.6								
	comp=Z,9.2nn,0.5s								
BKZ	**Black Stump Fm**	**61.23**	**137**		P	**P**		**10 40 00.8**	**+0.2**
ZALV	**Zalesovo Beam**	**62.35**	**334**		P	**P**		**10 40 06.3**	**-1.4**
	comp=Z,0.7nn,0.6s,baz=112,slow=6.6,SNR=4.5								
	comp=Z,0.7nn,0.6s								
GAR	**Garm**	**63.13**	**314**		P	**P**		**10 40 13.3**	**-0.1**
GAR					IAmb	IAmb		10 40 21.8	
	comp=Z,5.8nn,0.8s								
KURBB	**Kurchatov Arra**	**63.37**	**328**		P	**P**		**10 40 13.3**	**-1.3**
	comp=Z,2.8nn,0.7s,baz=128,slow=6.1,SNR=15								
	comp=Z,2.8nn,0.7s								
KURK	**Kurchatov**	**63.37**	**328**		P	**P**		**10 40 13.4**	**-1.2**
KURK					IAmb	IAmb		10 40 17.2	
	comp=Z,5.9nn,0.7s								
KURK	**Kurchatov**	**63.37**	**328**		P	**P**		**10 40 13.4**	**-1.2**
BVAR	**Borovoye Array**	**68.93**	**328**		P	**P**		**10 40 49.7**	**-0.6**
	comp=Z,1.3nn,0.7s,baz=134,slow=10,SNR=3.7								
	comp=Z,1.3nn,0.7s								
TIXI	**Tiksi**	**69.99**	**1**		P	**P**		**10 40 56.1**	**-0.2**
TIXI					IAmb	IAmb		10 40 57.2	
	comp=Z,7.5nn,1.1s								
TIXI	**Tiksi**	**69.99**	**1**		P	**P**		**10 40 56.2**	**-0.2**
M14K	**Bethel**	**79.73**	**28**		P	**P**		**10 41 53.1**	**+0.

FLOC	**Florencia**	**4.17**	**28**	P		**Pn**	**10 52 38.6**	**-0.2**
POPC	**Popayan, Colom**	**4.73**	**12**	P		**Pb**	**10 52 57.3**	**-0.9**
	3.7nm,1.7s							
GARC	**Garzon, Huila**	**4.78**	**26**	P		**Pn**	**10 52 47.3**	**-0.1**
MACC	**Macarena, Meta**	**5.67**	**42**	P		Pn	10 52 54.2	-5.3
URMC	**La Uribe, Meta**	**6.24**	**31**	P		**Pn**	**10 53 04.0**	**-3.3**

*IDC **24** 10:57:35.3±4.9, 36°.44N×71°.14E, h184km±40km, mb3.2/7, mbtmp3.7/13, Error ellipse: s-maj=41.8km s-min=18.9km az=43.0*
ISC 24 10:57:35.5±0.8, 36°.49N±0°.07×71°.0E±0°.1, h188km, n26, σ1§75/33, mb3.5/7, 1C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSSA	**Tissa**	**5.58**	**129**	*e*P	**Pn**	**10 58 59.5**	**+2.1**
TSSA				*e*S	**Sn**	**11 00 00.6**	**-1.1**
TSSA				IAML		11 00 02.8	
	comp=E,124nm,0.4s						
TSSA				IAML		11 00 03.0	
	comp=N,91nm,0.3s						
DHRM	**DHARAMSHALA**	**6.08**	**133**	*e*P	**Pn**	**10 59 05.7**	**+1.9**
DHRM				*e*S	**Sn**	**11 00 13.3**	**-0.2**
DHRM				IAML		11 00 16.4	
	comp=N,105nm,0.3s						
DHRM				IAML		11 00 16.5	
	comp=E,98nm,0.3s						
UCH	**Uchtor**	**6.34**	**24**	P	**Pn**	**10 59 07.9**	**+0.5**
	SNR=25						
EKS2	**Erkin-Say**	**6.52**	**18**	P	**Pn**	**10 59 10.3**	**+0.8**
	SNR=14						
KK31	**Karatay Array**	**6.62**	**357**	⇓Pn	**Pn**	**10 59 10.4**	**-0.2**
	comp=E,5.3nm,0.3s,baz=188,slow=14,SNR=83						
KK31				⇑Sn	**Sn**	**11 00 20.2**	**-5.7**
	comp=E,7.4nm,0.3s,baz=182,slow=20,SNR=10						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**10 59 12.5**	**+0.7**
	comp=E,6.3nm,0.3s,baz=173,slow=5.7,SNR=35						
AAK				S	**Sn**	**11 00 26.9**	**-1.2**
	comp=E,5.8nm,0.5s,baz=323,slow=23,SNR=9.9						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**10 59 12.8**	**+1.0**
	SNR=13						
AAK	**Ala-Archa**	**6.70**	**23**	⇓Pn	**Pn**	**10 59 12.3**	**+0.5**
	comp=E,1.5nm,0.4s						
AAK				⇓Sn	**Sn**	**11 00 25.3**	**-2.8**
	comp=E,8.7nm,0.9s						
KBK	**Karagaybulak**	**6.87**	**25**	P	**Pn**	**10 59 15.3**	**+1.2**
	SNR=8.6						
CHMS	**Chumysh**	**7.11**	**23**	P	**Pn**	**10 59 17.4**	**+0.4**
	SNR=5.5						
USP	**Ospenovka**	**7.28**	**20**	P	**Pn**	**10 59 20.1**	**+0.8**
	SNR=8.4						
TKM2	**Tokmak 2**	**7.33**	**27**	P	**Pn**	**10 59 20.7**	**+0.6**
	SNR=22						
SMLA	**Simla**	**7.40**	**134**	*e*P	**Pn**	**10 59 22.2**	**+1.3**
SMLA				*e*S	**Sn**	**11 00 42.9**	**-1.4**
KUDL	**Kundal**	**9.52**	**149**	*e*P	**Pn**	**10 59 48.1**	**-0.5**
KUDL				*e*S	**Sn**	**11 01 30.0**	**-4.9**
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**11 00 37.5**	**+0.6**
	comp=E,0.3nm,0.5s,baz=207,slow=11,SNR=5.7						
KURBB	**Kurchatov Arra**	**15.13**	**19**	P	**Pn**	**11 00 58.1**	**-1.6**
	comp=E,0.2nm,0.5s,baz=210,slow=10,SNR=2.2						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**P**	**11 01 17.0**	**+1.1**
	comp=E,0.8nm,0.5s,baz=165,slow=11,SNR=7.7						
AKTO	**Aktyubinsk**	**16.80**	**330**	P	**P**	**11 01 20.1**	**+1.3**
	comp=E,1.8nm,0.4s,baz=111,slow=5.2,SNR=7.8						
ZALV	**Zalesovo Beam**	**19.92**	**24**	P	**P**	**11 01 53.3**	**+0.7**
	comp=E,0.7nm,0.3s,baz=222,slow=8.8,SNR=4.2						
ARCES	**ARCESS Array B**	**41.16**	**338**	P	**P**	**11 05 00.9**	**-0.1**
	comp=E,1.2nm,0.7s,baz=109,slow=6.8,SNR=5.5						
	comp=E,1.2nm,0.7s						
HFS	**Hagfors**	**43.09**	**322**	P	**P**	**11 05 17.7**	**+1.1**
	comp=E,1.3nm,0.7s,baz=95,slow=12,SNR=1.6						
	comp=E,1.3nm,0.7s						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**11 05 27.8**	**+0.7**
	comp=E,0.3nm,0.6s,baz=99,slow=7.7,SNR=1.4						
	comp=E,0.3nm,0.6s						
ILAR	**Eielson Array**	**74.79**	**16**	P	**P**	**11 08 55.0**	**+0.5**
	comp=E,0.1nm,0.4s,baz=324,slow=6.0,SNR=1.7						
	comp=E,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**81.26**	**3**	P	**P**	**11 09 30.8**	**+0.6**
	comp=E,0.8nm,0.8s,baz=352,slow=2.8,SNR=12						
	comp=E,0.8nm,0.8s						
WRA	**Warramunga Arr**	**81.97**	**122**	P	**P**	**11 09 34.0**	**-0.5**
	comp=E,0.4nm,0.5s,baz=324,slow=4.9,SNR=7.1						
	comp=E,0.4nm,0.5s						
ASAR	**Alice Springs**	**84.23**	**125**	P	**P**	**11 09 45.7**	**-0.4**
	comp=E,0.7nm,0.6s,baz=309,slow=4.9,SNR=16						
	comp=E,0.7nm,0.6s						

*IDC **24** 10:57:44.0±1.1, 10°.28N×126°.26E, h0km, mb3.8/9, mbtmp3.8/9, MS2.7/1, Error ellipse: s-maj=58.6km s-min=21.1km az=77.0*
ISC 24 10:57:50.0±0.9, 10°.3N±0°.1×126°.3E±0°.4, h44km, n9, σ1§07/9, mb3.8/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**28.18**	**181**	P	**P**	**11 03 36.9**	**-1.7**
	1.5nm,0.9s,baz=5.7,slow=10,SNR=1.4						
	1.5nm,0.9s						
MJAR	**Matsushiro Arr**	**28.30**	**20**	P	**P**	**11 03 38.9**	**-0.6**
	0.4nm,0.4s,baz=193,slow=10,SNR=1.5						
MJAR				LR	LR	11 16 11.4	
	comp=Z,15nm,18.3s,baz=115,slow=39						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**34.52**	**168**	P	**P**	**11 04 35.9**	**+1.6**
	0.1nm,0.4s,baz=343,slow=7.4,SNR=4.1						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**52.06**	**323**	P	**P**	**11 06 55.7**	**+0.2**
	0.9nm,0.8s,baz=111,slow=13,SNR=4.3						
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**54.66**	**331**	P	**P**	**11 07 14.2**	**-0.2**
	1.0nm,0.6s,baz=114,slow=7.2,SNR=6.5						
	1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**56.11**	**325**	P	**P**	**11 07 24.9**	**0.0**
	0.6nm,0.2s,baz=132,slow=7.2,SNR=5.6						
	0.6nm,0.2s						
BVAR	**Borovoye Array**	**61.70**	**325**	P	**P**	**11 08 03.3**	**-0.4**
	0.3nm,0.4s,baz=130,slow=6.4,SNR=1.8						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**84.22**	**340**	P	**P**	**11 10 17.2**	**+0.7**
	1.0nm,0.6s,baz=77,slow=4.9,SNR=4.4						
	1.0nm,0.6s						
FINES	**FINESS Array B**	**85.92**	**332**	P	**P**	**11 10 25.8**	**+0.6**
	1.0nm,0.8s,baz=84,slow=7.1,SNR=4.1						
	1.0nm,0.8s						

*ISK **24** 10:57:48.4, 35°.86N×30°.51E, h19km, ML3.5/38*
*NIC **24** 10:57:49.5, 35°.85N×30°.40E, h15km±31km, Ml3.0/6*
*AFAD **24** 10:57:49.2, 35°.93N×30°.61E, h16km±2km, MW3.5*
*IDC **24** 10:57:50.5±1.5, 35°.94N×30°.49E, h56km±17km, mb3.6/8, mbtmp3.7/14, ML3.0/5, MS2.4/2, Error ellipse: s-maj=18.5km s-min=11.4km az=159.0*
*GII **24** 10:57:51.0±0.0, 35°.693N±0°.006×30°.249E±0°.002, h20km, Mws3.0, confirmed*
ISC 24 10:57:50.5±0.9, 35°.95N±0°.03×30°.49E±0°.02, h41km±11km, n115, σ1§80/140, mb3.7/8, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.39**	**343**	SPECP		10 57 58.0	
AKUM				P	**Pn**	**10 57 58.7**	**-1.3**
AKUM				S	**Sn**	**10 58 04.8**	**-1.7**
DEMR	**Demre-Antalya**	**0.55**	**302**	Pg	**Pn**	**10 58 01.1**	**-0.9**
DEMR				Sg	**Sn**	**10 58 10.1**	**0.0**
KEMT	**Kemer-ANTALYA**	**0.66**	**5**	Pg	**Pn**	**10 58 03.4**	**0.0**
AKAS	**Kas**	**0.77**	**292**	SPECP		10 58 05.0	
AKAS				P	**Pn**	**10 58 05.7**	**+0.7**
AKAS				S	**Sn**	**10 58 18.8**	**+3.3**
AKAS	**Kas**	**0.77**	**292**	Pg	**Pn**	**10 58 04.9**	**-0.2**
AKAS				Sg	**Sn**	**10 58 17.0**	**+1.5**
ELL	**Elmali**	**0.93**	**330**	Pg	**Pn**	**10 58 08.0**	**+0.8**
ELL				Sg	**Sn**	**10 58 22.1**	**+2.7**
ELL	**Elmali**	**0.93**	**330**	P	**Pn**	**10 58 07.7**	**+0.5**
ELL				S	**Sn**	**10 58 23.7**	**+4.3**
ANTB	**Antalya**	**0.96**	**8**	Pg	**Pn**	**10 58 08.5**	**+1.0**
ANTB				Sg	**Sn**	**10 58 23.4**	**+3.4**
KORT	**Korkueli**	**1.06**	**354**	SPECP		10 58 09.0	
KORT				P	**Pn**	**10 58 09.5**	**+0.5**
KORT	**Korkueli**	**1.06**	**354**	Pn	**Pn**	**10 58 09.9**	**+0.9**
IZZE	**Mula-Seydike**	**1.13**	**296**	SPECP		10 58 10.0	
IZZE				P	**Pn**	**10 58 10.9**	**+1.0**
IZZE				S	**Sn**	**10 58 25.1**	**+0.8**
KNIK	**Mula-Seydike**	**1.16**	**321**	SPECP		10 58 12.0	
KNIK				P	**Pn**	**10 58 12.1**	**+1.7**
KNIK				S	**Sn**	**10 58 28.6**	**+3.4**
FETY	**Fethiye**	**1.32**	**302**	P	Pn	10 58 04.7	-7.9
CAME	**Cameli-Denizli**	**1.38**	**317**	Pn	**Pn**	**10 58 14.6**	**+1.2**
BUCA	**Burdur, Bucak-**	**1.38**	**2**	SPECP		10 58 14.0	
BUCA				P	**Pn**	**10 58 14.4**	**+1.0**
BUCA				S	**Sn**	**10 58 35.2**	**+4.7**
ALAN	**Alanya-ANTALYA**	**1.39**	**64**	Pn	**Pn**	**10 58 13.5**	**+0.1**
GOLH	**Golhisar**	**1.49**	**330**	SPECP		10 58 17.0	
GOLH				P	**Pn**	**10 58 17.2**	**+2.3**
GOLH				S	**Sn**	**10 58 36.0**	**+2.8**
CAEL	**Denizli, Camel**	**1.50**	**322**	P	Pn	10 58 19.2	+4.1
SABU	**Mula-Dalaman**	**1.50**	**306**	SPECP		10 58 16.0	
SABU				P	**Pn**	**10 58 16.1**	**+1.1**
SABU				S	**Sn**	**10 58 33.4**	**-0.1**
GAZI	**Gazipasa**	**1.51**	**78**	SPECP		10 58 14.0	
GAZI				P	**Pn**	**10 58 14.6**	**-0.5**
GAZI				S	**Sn**	**10 58 31.3**	**-2.3**
GAZI	**Gazipasa**	**1.51**	**78**	Pn	**Pn**	**10 58 15.1**	**0.0**
BCK	**Bucak**	**1.51**	**3**	Pn	**Pn**	**10 58 16.5**	**+1.3**
DALY	**Dalyan (Mula)**	**1.71**	**301**	Pn	**Pn**	**10 58 18.9**	**+1.0**
AKMS	**Akamas**	**1.77**	**121**	P	**Pn**	**10 58 19.9**	**+1.3**
AKMS				S	**Sn**	**10 58 42.7**	**+2.7**
AKMS				AML	AML	10 58 59.3	
	0.4nm,0.4s						
AKMS				AML	AML	10 59 00.2	
	0.4nm,0.4s						
DNZT	**Denizli-Tavas-**	**1.77**	**319**	SPECP		10 58 20.0	
DNZT				P	**Pn**	**10 58 20.6**	**+1.8**
DNZT				S	**Sn**	**10 58 39.5**	**-0.8**
BRDR	**BURDUR-Merkez**	**1.78**	**349**	SPECP		10 58 21.0	
BRDR				P	**Pn**	**10 58 21.5**	**+2.6**
BRDR				S	**Sn**	**10 58 39.7**	**-0.6**
APMY	**Acipayam-Deniz**	**1.79**	**328**	Pn	**Pn**	**10 58 20.3**	**+1.2**
SEDI	**Konya, Seydise**	**1.81**	**34**	SPECP		10 58 20.0	
SEDI				P	**Pn**	**10 58 20.5**	**+1.1**
SEDI				S	**Sn**	**10 58 43.0**	**+1.8**
SEYD	**Seydisehir-KON**	**1.82**	**36**	Pn	**Pn**	**10 58 20.6**	**+1.2**
ISP	**Isparta**	**1.87**	**1**	Pn	**Pn**	**10 58 21.6**	**+1.4**
ALFC	**Alefka**	**1.90**	**114**	P	**Pn**	**10 58 20.0**	**-0.4**
ALFC				S	**Sn**	**10 58 48.5**	**+5.4**
ALFC				AML	AML	10 59 03.6	
	0.5nm,0.5s						
ALFC				AML	AML	10 59 05.5	
	0.5nm,0.7s						
INCE	**Denizli-Bozkur**	**1.91**	**338**	SPECP		10 58 22.0	
INCE				P	**Pn**	**10 58 22.9**	**+2.3**
HDMB	**Hadim**	**1.91**	**57**	Pn	**Pn**	**10 58 21.3**	**+0.6**
ARG	**Arkhangelos**	**1.93**	**279**	Pn	**Pn**	**10 58 21.6**	**+0.7**
ARG	**Arkhangelos**	**1.93**	**279**	P	**Pn**	**10 58 21.5**	**+0.7**
ARG				S	**Sn**	**10 58 45.0**	**+1.1**
TAVA	**DENIZLI_Tavas**	**1.97**	**321**	SPECP		10 58 22.0	
TAVA				P	**Pn**	**10 58 22.6**	**+1.1**
TURN	**Turunc**	**1.99**	**295**	P	**Pn**	**10 58 23.7**	**+2.0**
TURN	**Turunc**	**1.99**	**295**	Pn	**Pn**	**10 58 22.9**	**+1.3**
BASM	**Basmaki-Afyon**	**2.00**	**350**	Pn	**Pn**	**10 58 23.6**	**+1.7**
DNIZ	**Denizli-Tavas-**	**2.04**	**326**	SPECP		10 58 24.0	
DNIZ				P	**Pn**	**10 58 24.0**	**+1.6**
DNIZ				S	**Sn**	**10 58 46.3**	**-0.4**
BAGO	**Egridir - ISPA**	**2.06**	**7**	SPECP		10 58 24.0	
BAGO				P	**Pn**	**10 58 24.2**	**+1.6**
TEKE	**Tekeli-Mersin**	**2.14**	**84**	Pn	**Pn**	**10 58 24.2**	**+0.5**
MULA	**Mugla, Merkez-**	**2.18**	**308**	P	Pn	10 58 27.9	+3.5
TROD	**Troodos**	**2.18**	**116**	P	**Pn**	**10 58 24.1**	**-0.5**
TROD				S	**Sn**	**10 58 53.0**	**+2.6**
TROD				AML	AML	10 59 15.5	
	0.3nm,0.9s						
TROD				AML	AML	10 59 18.4	
	0.4nm,0.6s						
BERE	**Bereket-Mersin**	**2.25**	**79**	Pn	**Pn**	**10 58 25.9**	**+0.5**
XYLS	**Xyliatos**	**2.29**	**113**	P	**Pn**	**10 58 24.8**	**-1.1**
XYLS				S	**Sn**	**10 58 57.5**	**+4.6**
XYLS				AML	AML	10 59 07.8	
	0.3nm,0.5s						
XYLS				AML	AML	10 59 12.9	
	0.3nm,0.8s						
AFYN	**Afyon-Dinar-K**	**2.32**	**0**	P	**Pn**	**10 58 28.4**	**+2.0**
KZIL	**AFYON_Kizioren**	**2.32**	**353**	SPECP		10 58 28.0	
KZIL				P	**Pn**	**10 58 28.2**	**+1.8**
KKBE	**Karaman, Kazim**	**2.35**	**57**	SPECP		10 58 28.0	
KKBE				P	**Pn**	**10 58 28.6**	**+1.9**
KKBE				S	**Sn**	**10 58 56.1**	**+1.7**
DOGA	**KONYA_Doganhis**	**2.35**	**23**	P	**Pn**	**10 58 28.9**	**+2.1**
YORU	**Yoruktepe-Mers**	**2.38**	**84**	Pn	**Pn**	**10 58 27.5**	**+0.5**
YVAC	**Isparta, Yalva**	**2.40**	**14**	SPECP		10 58 29.0	
YVAC				P	**Pn**	**10 58 29.3**	**+1.9**
YVAC				S	**Sn**	**10 58 57.6**	**+2.0**
TEVE	**Tevekalti-Mers**	**2.44**	**78**	Pn	**Pn**	**10 58 28.5**	**+0.5**
DAT	**Datca**	**2.47**	**289**	Pn	**Pn**	**10 58 29.6**	**+1.2**
GULN	**MERSIN_Gulnar**	**2.49**	**84**	P	**Pn**	**10 58 26.0**	**-2.5**
GULN				S	**Sn**	**10 58 57.1**	**-0.6**
KONT	**Konya--Tatoy**	**2.50**	**36**	SPECP		10 58 30.0	
KONT				P	**Pn**	**10 58 30.8**	**+2.1**
KONT	**Konya--Tatoy**	**2.50**	**36**	Pn	**Pn**	**10 58 30.1**	**+1.4**
ESEN	**Aydn-Nazilli**	**2.52**	**318**	SPECP		10 58 30.0	
ESEN				P	**Pn**	**10 58 30.3**	**+1.4**
CSS	**Mathiatis**	**2.52**	**112**	P	Pn	10 58 33.0	+4.0
CSS	**Mathiatis**	**2.52**	**112**	P	**Pn**	**10 58 28.8**	**-0.2**
CSS				S	**Sn**	**10 59 03.8**	**+5.3**
CSS				AML	AML	10 59 25.0	
	0.3nm,0.7s						
CSS				AML	AML	10 59 27.1	
	0.2nm,0.9s						
OSC1	**CSNet OBS 1**	**2.53**	**165**	P	Pn	10 58 32.7	+3.7
OSC1				S	**Sn**	**10 59 01.0**	**+2.4**
PASA	**Karahalli, USA**	**2.53**	**342**	S	**Sn**	**10 58 56.2**	**-2.5**
ASGA	**Asgata**	**2.54**	**116**	P	**Pn**	**10 58 29.6**	**+0.4**
ASGA				S	Sn	10 59 09.3	+10
ASGA				AML	AML	10 59 19.0	
	0.3nm,1.0s						
ASGA				AML	AML	10 59 27.2	
	0.3nm,0.7s						
KRMN	**Karaman**	**2.55**	**60**	Pn	**Pn**	**10 58 30.5**	**+1.0**
YAZI	**Mula-Dat§a-**	**2.56**	**288**	SPECP		10 58 30.0	
YAZI				P	**Pn**	**10 58 30.9**	**+1.5**
MLSB	**Milas**	**2.56**	**302**	Pn	**Pn**	**10 58 30.8**	**+1.2**
SHUT	**Suhut-Afyon**	**2.60**	**1**	Pn	**Pn**	**10 58 32.0**	**+1.8**
NAZL	**Nazilli-Aydin**	**2.67**	**320**	Pn	**Pn**	**10 58 32.7**	**+1.6**
BDRM	**Kayabasi**	**2.69**	**295**	SPECP		10 58 33.0	
BDRM				P	**Pn**	**10 58 33.2**	**+1.8**
LADK	**Ladik-KONYA**	**2.71**	**33**	Pn	**Pn**	**10 58 33.2**	**+1.6**
KARP	**Karpathos**	**2.73**	**263**	Pn	**Pn**	**10 58 32.9**	**+1.0**
KARP	**Karpathos**	**2.73**	**263**	P	**Pn**	**10 58 33.0**	**+1.0**
KARP				S	**Sn**	**10 59 04.7**	**+0.9**
BNAZ	**Uak-Banaz**	**2.77**	**350**	SPECP		10 58 35.0	
BNAZ				P	**Pn**	**10 58 35.4**	**+2.9**
UCKU	**Afyonkarahisar**	**2.79**	**15**	SPECP		10 58 34.0	
UCKU				P	**Pn**	**10 58 34.3**	**+1.6**
BODT	**Bodrum**	**2.79**	**294**	Pn	**Pn**	**10 58 34.1**	**+1.4**
KIRA	**zmir-Kiraz**	**2.80**	**324**	SPECP		10 58 33.0	
KIRA				P	**Pn**	**10 58 33.4**	**+0.5**
KURO	**Afyon-Bolvadin**	**2.81**	**7**	SPECP		10 58 34.0	
KURO				P	**Pn**	**10 58 34.8**	**+1.8**
YKAV	**Yalikavak-Bodr**	**2.84**	**295**	Pn	**Pn**	**10 58 35.0**	**+1.7**
KDHN	**Kadinhani**	**2.88**	**26**	SPECP		10 58 34.0	
KDHN				P	**Pn**	**10 58 34.8**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.88**	**315**	Pn	**Pn**	**10 58 35.9**	**+1.8**
BLVD	**Bolvadin-AFYON**	**2.88**	**10**	Pn	**Pn**	**10 58 36.4**	**+2.3**
KULA	**Kula-Manisa**	**2.95**	**331**	Pn	**Pn**	**10 58 35.9**	**+1.0**
MANT	**Manisa**	**2.97**	**329**	SPECP		10 58 35.0	
MANT				P	**Pn**	**10 58 35.6**	**+0.3**
USAK	**Uak-Merkez**	**3.00**	**337**	SPECP		10 58 36.0	
USAK				P	**Pn**	**10 58 36.3**	**+0.7**
ODEM	**Odemis-Izmir**	**3.02**	**321**	Pn	**Pn**	**10 58 37.8**	**+1.9**
KIZT	**Kizilcal**	**3.13**	**20**	Pn	**Pn**	**10 58 38.6**	**+1.1**
GCAM	**G?zelcami?**	**3.14**	**305**	Pn	**Pn**	**10 58 39.3**	**+1.8**
SIMA	**Simav-Kutahya**	**3.35**	**340**	Pn	**Pn**	**10 58 42.6**	**+2.1**
GORD	**Gordes-Manisa**	**3.48**	**329**	Pn	**Pn**	**10 58 44.4**	**+2.2**
APE	**Apeiranthos**	**4.15**	**287**	P	**Pn**	**10 58 52.2**	**+0.8**
APE	**Apeiranthos**	**4.15**	**287**	S	**Sn**	**10 59 38.7**	**+0.1**
BRTR	**Keskin Array B**	**4.52**	**33**	P	**Pn**	**10 58 57.0**	**+0.4**
	0.7nm,0.3s,baz=202,slow=15,SNR=19						
BRTR				S	**Sn**	**10 59 48.4**	**+0.4**
	4.5nm,0.4s,baz=199,slow=26,SNR=7.6						
	3.5nm,0.8s						
IDI	**Anoyia**	**4.61**	**263**	P	**Pn**	**10 58 57.8**	**+0.1**
	6.1nm,0.3s,baz=73,slow=12,SNR=33						
IDI				S	**Sn**	**10 59 50.1**	**+0.2**
	14nm,0.4s,baz=293,slow=20,SNR=7.1						
	14nm,0.3s						
MMAI	**Mount Meron Ar**	**5.00**	**124**	P	**Pn**	**10 59 02.1**	**-1.0**
	3.3nm,0.3s,baz=300,slow=12,SNR=6.4						
	2.0nm,0.3s						
GEM	**Giv'at Ha'Em**	**5.07**	**121**	P	**Pn**	**10 59 06.0**	**+2.1**
NATI	**Neve Ativ**	**5.09**	**120**	P	**Pn**	**10 59 07.0**	**+2.7**
HMDT	**Nahal Hemdat**	**5.57**	**130**	P	**Pn**	**10 59 12.0**	**+1.1**
DSI	**Dead Sea**	**5.97**	**136**	P	**Pn**	**10 59 18.0**	**+1.7**
KRMI	**Paran Flat**	**6.81**	**147**	P	**Pn**	**10 59 29.3**	**+1.3**
KRMI	**Paran Flat**	**6.81**	**147**	S	**Sn**	**11 00 45.2**	**+0.9**
MBRI	**Mt Berech**	**7.18**	**148**	P	**Pn**	**10 59 34.5**	**+1.5**
MBRI	**Mt Berech**	**7.18**	**148**	S	**Sn**	**11 00 53.5**	**+0.3**
EIL	**Elat**	**7.30**	**148**	P	**Pn**	**10 59 34.7**	**+0.1**
	0.5nm,0.3s,baz=329,slow=12,SNR=2.3						
EIL				S	**Sn**	**11 00 52.9**	**-3.3**
	3.5nm,0.6s,baz=39,slow=14,SNR=1.7						
EIL				LR	LR	11 04 03.2	
	comp=Z,27nm,19.4s,baz=353,slow=51						
	2.4nm,0.4s						
GNI	**Garni**	**11.99**	**65**	LR	LR	11 06 32.0	
	comp=Z,17nm,20.3s,baz=194,slow=44						
VAE	**Valguarnera**	**12.99**	**282**	P	**Pn**	**11 00 54.0**	**+1.5**
	1.2nm,0.3s,baz=84,slow=11,SNR=2.1						
AKASG	**Malin Array Be**	**14.78**	**357**	P	**Pn**	**11 01 17.4**	**+0.9**
	0.1nm,0.3s,baz=174,slow=9.4,SNR=1.1						
GERES	**GERESS Array B**	**17.83**	**321**	P	**Pn**	**11 01 55.6**	**+0.1**
	0.2nm,0.5s,baz=129,slow=9.3,SNR=2.0						
AKTO	**Aktyubinsk**	**24.57**	**45**	P	**P**	**11 03 05.2**	**-1.2**
	3.1nm,0.6s,baz=251,slow=7.4,SNR=6.8						
	3.1nm,0.6s						
FINES	**FINESS Array B**	**25.67**	**355**	P	**P**	**11 03 14.7**	**-1.5**
	1.1nm,0.4s,baz=158,slow=11,SNR=20						
	1.1nm,0.4s						
BVAR	**Borovoye Array**	**32.67**	**46**	P	**P**	**11 04 17.5**	**-1.0**
	0.3nm,0.4s,baz=256,slow=4.0,SNR=2.3						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**33.76**	**357**	P	**P**	**11 04 25.9**	**-1.9**
	0.7nm,0.4s,baz=170,slow=10,SNR=15						
	0.7nm,0.4s						
KURBB	**Kurchatov Arra**	**37.24**	**52**	P	**P**	**11 04 56.9**	**-1.1**
	0.4nm,0.5s,baz=275,slow=8.8,SNR=4.8						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**39.70**	**58**	P	**P**	**11 05 17.1**	**-1.6**
	0.2nm,0.4s,baz=273,slow=5.6,SNR=2.0						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**41.32**	**47**	P	**P**	**11 05 29.8**	**-2.1**
	0.5nm,0.5s,baz=265,slow=9.9,SNR=2.7						
	0.5nm,0.5s						
SPITS	**Spitsbergen Ar**	**42.77**	**356**	P	**P**	**11 05 41.5**	**-1.9**
	6.1nm,1.0s,baz=134,slow=4.2,SNR=5.2						
	6.1nm,1.0s						

GII 24 11:00:59.1±0.0, 33°.03N±0°.01×35°.20E±0°.01, h0km, confirmed, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNTI	**Hanita**	**0.06**	**337**	P	Pg	11 01 00.5	+0.2
HNTI	**Hanita**	**0.06**	**337**	S	Sg	11 01 02.2	+1.0
ZRT	**Zar'it**	**0.11**	**44**	P	Pg	11 01 01.7	+0.6
ZRT	**Zar'it**	**0.11**	**44**	S	Sg	11 01 04.8	+2.3
MMA0B	**Mount Meron ar**	**0.17**	**93**	P	Pg	11 01 03.2	+0.9
MMA0B	**Mount Meron ar**	**0.17**	**93**	S	Sg	11 01 06.8	+2.3
BLGI	**Bet Lehem HaGe**	**0.29**	**182**	P	Pg	11 01 05.5	+0.8
BLGI	**Bet Lehem HaGe**	**0.29**	**182**	S	Sb	11 01 11.6	-1.0
GEM	**Giv'at Ha'Em**	**0.43**	**64**	P	Pb	11 01 08.6	-0.9
GEM	**Giv'at Ha'Em**	**0.43**	**64**	S	Sb	11 01 15.1	-1.5
NATI	**Neve Ativ**	**0.51**	**62**	P	Pb	11 01 10.1	-0.8
NATI	**Neve Ativ**	**0.51**	**62**	S	Sb	11 01 18.6	-0.2

*AEIC **24** 11:14:40.6±0.8, 51°.8N±0°.2×176°.34W±0°.09, h69km±7km, Error ellipse: s-maj=28.5km s-min=4.0km az=166.0*
**NEIC 24 11:14:41.1±0.6,

MAT				S	**Sn**	**11 23 28.1**	**-0.3**
BSO1	**Boso 1**	**1.51**	**133**	P	**Pn**	**11 23 08.2**	**+0.2**
JOTO	**OTAMA OYAMA**	**1.95**	**17**	P	**Pn**	**11 23 14.0**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**28.77**	**116**	T	T	12 00 12.7	
	baz=315,slow=0.8						
H11N1	**WAKE ISLAND Hy**	**28.78**	**116**	T	T	12 00 10.1	
	baz=315,slow=0.8						
H11N3	**WAKE ISLAND Hy**	**28.79**	**116**	T	T	12 00 12.8	
	baz=315,slow=0.8						
H11S3	**WAKE ISLAND Hy**	**29.41**	**118**	T	T	12 01 14.3	
	baz=317,slow=76,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**29.41**	**118**	T	T	12 01 09.4	
	baz=317,slow=76,SNR=5.3						
H11S2	**WAKE ISLAND Hy**	**29.43**	**118**	T	T	12 01 15.7	
	baz=317,slow=76,SNR=4.5						
MKAR	**Makanchi Array**	**43.63**	**303**	P	**P**	**11 30 33.1**	**+0.4**
	0.4nm,0.5s,baz=89,slow=7.9,SNR=4.7						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**45.71**	**309**	P	**P**	**11 30 49.2**	**+0.1**
	0.5nm,0.4s,baz=82,slow=7.5,SNR=9.2						
	0.5nm,0.4s						
AAK	**Ala-Archa**	**49.87**	**299**	LR	LR	11 55 15.7	
	comp=Z,16nm,20.1s,baz=336,slow=39						
BVAR	**Borovoye Array**	**50.42**	**313**	P	**P**	**11 31 26.9**	**+1.6**
	0.5nm,0.3s,baz=100,slow=8.7,SNR=2.7						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**55.55**	**186**	P	**P**	**11 32 02.3**	**-1.0**
	0.2nm,0.4s,baz=2.1,slow=7.4,SNR=2.0						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**59.28**	**186**	P	**P**	**11 32 27.9**	**-1.4**
	0.3nm,0.8s,baz=23,slow=5.0,SNR=2.2						
	0.3nm,0.8s						

*NEIC **24** 11:24:55.5±0.7, 35.824N±0.005×98.098W±0.008, h6km±2km, Error ellipse: s-maj=1.2km s-min=0.3km az=49.0*

NEIC 24 11:24:55.4±0.6, 35.828N±0.007×98.095W±0.009, h5km±1km, mb_Lg3.1/93, ML3.5, ML3.5/70, Error ellipse: s-maj=2.4km s-min=1.5km az=39.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCOK	**Bluff Creek, N**	**0.43**	**113**		Pg	11 25 04.2	+0.5
BCOK					Sg	11 25 10.5	+1.2
CSTR	**Hydro, Custer**	**0.52**	**250**		Pg	11 25 05.9	+0.5
CSTR					Sg	11 25 13.3	+1.3
OK004	**Okla Sci Mus**	**0.59**	**121**		Pg	11 25 07.1	+0.4
OK004					Sg	11 25 15.4	+1.0
ADOK	**Arcadia Dam**	**0.61**	**106**		Pg	11 25 07.5	+0.3
OKCSW	**OKLAHOMA CITY**	**0.68**	**128**		Pg	11 25 08.5	0.0
OKCSW					Sg	11 25 17.9	+0.6
OKCSW				IAML		11 25 18.3	
	comp=N,3μm,0.4s						
OKCSW				IAML		11 25 18.3	
	comp=E,3μm,0.3s						
CROK	**Carrier**	**0.68**	**8**	Pg	Pg	11 25 08.6	+0.1
CROK					Sg	11 25 18.4	+1.0
CROK				IAML		11 25 18.8	
	comp=E,3μm,0.3s						
CROK				IAML		11 25 25.3	
	comp=N,2μm,0.2s						
FNO	**Franklin**	**0.80**	**135**		Pg	11 25 10.3	-0.5
FNO					Sg	11 25 21.8	+0.6
FNO				IAML		11 25 25.1	
	comp=E,2μm,0.4s						
OK038	**West end E0370**	**0.83**	**321**		Pg	11 25 11.2	-0.2
OK038					Sg	11 25 22.9	+0.7
GC02	**Grant County #**	**1.04**	**10**		Pg	11 25 14.8	-0.6
NOKA	**Waynoka**	**1.05**	**320**		Pg	11 25 15.2	-0.4
OK052	**Battle Ridge R**	**1.06**	**81**		Pg	11 25 15.2	-0.6
OK052				IAML		11 25 33.1	
	comp=E,939nm,0.2s						
OK052				IAML		11 25 35.7	
	comp=E,858nm,0.2s						
ELIS	**Ellis County**	**1.10**	**283**		Pg	11 25 16.2	-0.3
ELIS				IAML		11 25 38.2	
	comp=N,1μm,0.3s						
ELIS				IAML		11 25 47.1	
	comp=E,1μm,0.4s						
OK048	**Pawnee Station**	**1.10**	**57**		Pg	11 25 16.1	-0.5
OK048				IAML		11 25 35.9	
	comp=E,1μm,0.3s						
KAN14	**Manchester OK**	**1.13**	**5**		Pg	11 25 16.4	-0.8
KAN14				IAML		11 25 36.6	
	comp=E,1μm,0.2s						
KAN14				IAML		11 25 39.1	
	comp=N,894nm,0.1s						
BLOK	**Blackwell**	**1.17**	**37**		Pg	11 25 17.6	-0.3
OK051	**E0350 and S346**	**1.22**	**56**		Pg	11 25 18.2	-0.7
WMOK	**Wichita Mounta**	**1.22**	**207**		Pg	11 25 17.8	-1.1
KAN13	**South Haven SW**	**1.28**	**23**		Pn	11 25 19.4	-0.7
DEOK	**Depew**	**1.30**	**89**		Pn	11 25 18.9	-1.3
DEOK				IAML		11 25 40.5	
	comp=N,765nm,0.2s						
DEOK				IAML		11 25 42.2	
	comp=E,778nm,0.4s						
KAN01	**Argonia South**	**1.35**	**11**		Pn	11 25 20.1	-0.9
KAN08	**Anthony NE Sta**	**1.40**	**4**		Pn	11 25 20.9	-0.7
T35A	**Sooner Cattle**	**1.68**	**49**		Pn	11 25 25.5	+0.1
TUL3	**Leonard**	**1.87**	**87**		Pn	11 25 28.3	+0.2
DRZT	**Darrouzett**	**1.89**	**290**		Pb	11 25 30.0	-0.4
SMWD	**Samnorwood**	**1.90**	**248**		Pn	11 25 28.3	-0.2
SMWD				IAmb_Lg		11 25 55.2	
	comp=Z,72nm,0.9s						
WTFS	**Witchita Falls**	**2.08**	**189**		Pn	11 25 32.2	+1.2
RLO	**Rose Lookout**	**2.51**	**81**		Pn	11 25 37.1	+0.2
Z35A	**Perchaven, San**	**2.59**	**164**		Pn	11 25 38.7	+0.8
Z35A				IAmb_Lg		11 26 20.8	
	comp=Z,55nm,0.8s						
R32A	**Long Quarter,**	**2.64**	**349**		Pn	11 25 39.2	+0.5
FW06	**Azle**	**2.88**	**171**		Pn	11 25 42.8	+0.7
APMT	**Aspermont**	**3.00**	**214**		Pn	11 25 45.0	+1.3
PLPT	**Palo Pinto**	**3.01**	**184**		Pn	11 25 44.2	+0.4
U38A	**Gravette**	**3.06**	**77**		Pn	11 25 44.8	+0.3
U38A				IAmb_Lg		11 26 38.6	
	comp=Z,43nm,0.8s						
AMTX	**Amarillo**	**3.08**	**253**		Pn	11 25 45.5	+0.7
AMTX				IAmb_Lg		11 26 33.9	
	comp=Z,78nm,0.8s						
DKNS	**Dickens**	**3.17**	**228**	Pn	Pn	11 25 47.7	+1.6
CBKS	**Cedar Bluff**	**3.26**	**337**		Pn	11 25 48.0	+0.8
CBKS				IAmb_Lg		11 26 45.0	
	comp=Z,54nm,0.8s						
ABTX	**Abilene, Hawle**	**3.44**	**202**		Pn	11 25 49.9	+0.1
KSU1	**Kansas State U**	**3.48**	**19**		Pn	11 25 49.7	-0.4
KSU1				IAmb_Lg		11 26 47.7	
	comp=Z,41nm,0.7s						
TREL	**Terrell**	**3.51**	**151**		Pn	11 25 51.1	+0.5
TREL				IAmb_Lg		11 26 49.9	
	comp=Z,43nm,0.8s						
SN07	**Snyder 07**	**3.58**	**221**		Pn	11 25 51.2	-0.4
SN07				IAmb_Lg		11 26 56.8	
	comp=Z,56nm,0.7s						
Z38A	**Mt. Pleasant**	**3.63**	**134**	Pn	Pn	11 25 51.9	-0.3
RTBA	**Rita Blanca**	**3.81**	**281**		Pn	11 25 55.6	+0.7
WHTX	**Lake Whitney,**	**3.86**	**172**		Pn	11 25 55.8	+0.3
MIAR	**Mount Ida**	**3.92**	**108**		Pn	11 25 57.2	+1.0
POST	**Post**	**3.94**	**227**		Pn	11 25 57.0	+0.5
POST				IAmb_Lg		11 27 10.3	
	comp=Z,68nm,0.9s						
237A	**Washetta, Mont**	**4.26**	**153**		Pn	11 26 00.8	-0.1
MSTX	**Muleshoe**	**4.27**	**246**	Pn	Pn	11 26 01.8	+0.7
BRDY	**Brady**	**4.59**	**190**		Pn	11 26 05.1	-0.4
BRDY				IAmb_Lg		11 27 25.8	
	comp=Z,29nm,0.8s						
SGCY	**Sterling City**	**4.65**	**214**		Pn	11 26 05.5	-0.9
SGCY				IAmb_Lg		11 27 35.0	
	comp=Z,62nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.81**	**313**	Pn	Pn	11 26 08.5	-0.1
UALR	**University of**	**4.82**	**101**		Pn	11 26 09.0	+0.4
MGMO	**Mountain Grove**	**4.88**	**73**		Pn	11 26 08.1	-1.3
MGMO				IAmb_Lg		11 27 37.0	
	comp=Z,44nm,1.1s						
NATX	**Nacogdoches**	**4.96**	**144**	IAmb_Lg		11 27 40.3	
	comp=Z,31nm,1.1s						
435B	**Jarrell**	**5.05**	**175**		Pn	11 26 11.2	-0.6
435B				IAmb_Lg		11 27 47.9	
	comp=Z,49nm,0.8s						
P38A	**Dawn**	**5.24**	**42**	IAmb_Lg		11 27 49.3	
	comp=Z,24nm,0.9s						
T25A	**Trinidad**	**5.25**	**286**	IAmb_Lg		11 27 50.0	
	comp=Z,56nm,0.8s						
R40A	**Maddies Statio**	**5.27**	**60**		Pn	11 26 14.4	-0.4
R40A				IAmb_Lg		11 27 50.4	
	comp=Z,36nm,0.9s						
OZNA	**Ozona**	**5.51**	**208**	IAmb_Lg		11 28 04.0	
	comp=Z,36nm,0.8s						
JCT	**Junction City**	**5.52**	**196**	Pn	Pn	11 26 18.1	-0.3
CPRX	**Cap Rock**	**5.53**	**241**		Pn	11 26 18.7	+0.2
BGNE	**Belgrade**	**5.57**	**360**		Pn	11 26 18.4	-0.6
BGNE				IAmb_Lg		11 28 01.0	
	comp=Z,48nm,0.8s						
CLN7	**Carlsbad 7**	**5.83**	**236**		Pn	11 26 22.6	-0.1
CCM	**Cathedral Cave**	**5.92**	**66**		Pn	11 26 22.8	-1.0
MNHN	**Monahans**	**5.93**	**222**		Pn	11 26 22.8	-1.2
MNHN				IAmb_Lg		11 28 10.8	
	comp=Z,22nm,0.7s						
OGNE	**Ogallala**	**5.97**	**330**	IAmb_Lg		11 28 16.8	
	comp=Z,36nm,0.7s						
HNDO	**Hondo**	**6.36**	**189**	IAmb_Lg		11 28 22.4	
	comp=Z,34nm,1.0s						
Q24A	**Divide**	**6.43**	**301**	IAmb_Lg		11 28 22.3	
	comp=Z,19nm,0.8s						
FVM	**French Village**	**6.51**	**68**	IAmb_Lg		11 28 35.6	
	comp=Z,23nm,0.8s						
PECS	**Pecos**	**6.55**	**229**	IAmb_Lg		11 28 30.3	
	comp=Z,39nm,1.1s						
EF04	**Eagle Ford 04**	**6.60**	**178**	IAmb_Lg		11 28 40.2	
	comp=Z,26nm,0.7s						
DRIO	**Del Rio**	**6.73**	**199**	IAmb_Lg		11 28 27.3	
	comp=Z,37nm,0.9s						
SAND	**Sanderson**	**6.76**	**211**	IAmb_Lg		11 28 31.7	
	comp=Z,26nm,0.7s						
SLM	**Saint Louis**	**6.87**	**64**	IAmb_Lg		11 28 33.0	
	comp=Z,33nm,0.8s						
TASM	**ASL Pad, Albuq**	**6.89**	**265**	IAmb_Lg		11 28 44.5	
	comp=Z,4.8nm,0.7s						
TASM	**ASL Pad, Albuq**	**6.89**	**265**	IAmb_Lg		11 28 52.8	
	comp=Z,4.9nm,0.9s						
735A	**Kenedy**	**6.96**	**178**	IAmb_Lg		11 28 48.4	
	comp=Z,23nm,1.0s						
MNTX	**Cornudas Mount**	**7.33**	**238**	IAmb_Lg		11 28 48.0	
	comp=Z,28nm,1.2s						
S44A	**Carbondale**	**7.34**	**73**	IAmb_Lg		11 28 57.8	
	comp=Z,28nm,0.8s						
SIUC	**Southern Illin**	**7.37**	**73**	IAmb_Lg		11 28 58.1	
	comp=Z,36nm,0.7s						
833A	**Chaparral WMA,**	**7.56**	**189**	IAmb_Lg		11 29 07.6	
	comp=Z,20nm,0.9s						
SUSD	**Miller**	**8.63**	**356**	IAmb_Lg		11 29 45.8	
	comp=Z,15nm,0.8s						
121A	**Cookes Peak, D**	**8.68**	**251**	IAmb_Lg		11 29 32.7	
	comp=Z,12nm,1.2s						
I37A	**Lemond, Waseca**	**8.94**	**22**	IAmb_Lg		11 29 45.4	
	comp=Z,21nm,0.9s						
RSSD	**Black Hills**	**9.45**	**333**	IAmb_Lg		11 29 59.1	
	comp=Z,12nm,0.9s						

*BJI **24** 11:36:27.5, 3.905×129.072E, h118km, mB5.1/8, mb4.8/35*

*NEIC **24** 11:36:28.7±1.7, 4.145±0.07×129.536±0.08, h126km±8km, mb4.9/28, Error ellipse: s-maj=12.5km s-min=9.4km az=71.0*

*IDC **24** 11:36:30.0±1.9, 4.135×129.64E, h139km±17km, mb4.1/16, mbtmp4.6/18, MS3.0/4, Error ellipse: s-maj=20.0km s-min=9.7km az=79.0*

*DJA **24** 11:36:32.3±0.2, 4.5±2°×13°0E±°, h100km±4km, M4.8/20, mb4.8/20, mB5.2/9, MLv5.1/20, Mw(mB)4.5/9, MwMwp4.9/2, Mwp5.2/2*

ISC 24 11:36:30.7±0.3, 4.15S±0.04×129.54E±0.05, h150km, n213, σ1.8 89/217, mb4.7/40, 4C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.52**	**135**	P	**Pn**	**11 36 49.5**	**-2.6**
BNDI	**Bandanaira**	**0.52**	**135**	P	**Pn**	**11 36 49.5**	**-2.6**
BNDI				S	**Sn**	**11 37 04.6**	**-3.9**
MSAI	**Masohi**	**1.01**	**323**	P	**Pn**	**11 36 51.7**	**-3.8**
MSAI				S	**Sn**	**11 37 08.4**	**-6.1**
AAI	**Ambon**	**1.42**	**289**	P	**Pn**	**11 36 56.5**	**-2.9**
AAI				S	**Sn**	**11 37 16.0**	**-5.3**
NLAI	**Namlea**	**2.60**	**290**	P	**Pn**	**11 37 13.2**	**+0.2**
NLAI				S	**Sn**	**11 37 43.8**	**-1.8**
FAKI	**Fak Fak**	**2.97**	**66**		**Pn**	**11 37 14.7**	**-3.1**
FAKI	**Fak Fak**	**2.97**	**66**	P	**Pn**	**11 37 15.3**	**-2.5**
FAKI	**Fak Fak**	**2.97**	**66**	P	**Pn**	**11 37 15.2**	**-2.5**
SWI	**Sorong**	**3.69**	**28**	P	**Pn**	**11 37 23.9**	**-3.1**
SWI				S	**Sn**	**11 38 04.3**	**-6.4**
SANI	**Sanana**	**4.11**	**300**	P	**Pn**	**11 37 29.4**	**-3.1**
SANI	**Sanana**	**4.11**	**300**	P	**Pn**	**11 37 29.3**	**-3.2**
SAUI	**Saumlaki**	**4.19**	**155**		**Pn**	**11 37 31.5**	**-1.9**
SAUI	**Saumlaki**	**4.19**	**155**	P	**Pn**	**11 37 36.5**	**+3.0**
RKPI	**Ransiki, Papua**	**5.33**	**61**	P	**Pn**	**11 37 46.5**	**-2.0**
TNTI	**Ternate**	**5.35**	**336**		**Pn**	**11 37 46.7**	**-2.1**
TNTI	**Ternate**	**5.35**	**336**	P	**Pn**	**11 37 47.1**	**-1.7**
TNTI	**Ternate**	**5.35**	**336**	P	**Pn**	**11 37 47.1**	**-1.7**
	0.4nm1μm94nm,0.8s						
SRPI	**Serui, Papua**	**7.07**	**71**	P	**Pn**	**11 38 10.8**	**-0.9**
	2.3nm124nm,0.6s						
BAKI	**Biak**	**7.19**	**66**	P	**Pn**	**11 38 12.3**	**-1.1**
	1.6nm4μm2μm180nm,0.8s						
KMSI	**Cibinong**	**7.27**	**310**	P	**Pn**	**11 38 14.8**	**+0.4**
	206nm,0.9s						
LUWI	**Luwuk**	**7.43**	**294**	Pn	**Pn**	**11 38 14.4**	**-2.2**
LUWI	**Luwuk**	**7.43**	**294**	P	**Pn**	**11 38 15.8**	**-0.8**
	0.4nm8μm71nm,0.6s						
SOEI	**Soe**	**7.64**	**223**		**Pn**	**11 38 15.9**	**-3.5**
SOEI	**Soe**	**7.64**	**223**	P	**Pn**	**11 38 16.5**	**-2.9**
SOEI	**Soe**	**7.64**	**223**	P	Pn	11 38 25.4	+6.0
	0.5nm71nm,0.8s						
DRS	**Darwin Rock St**	**8.34**	**171**	P	**Pn**	**11 38 26.2**	**-2.4**
BATI	**Baumata**	**8.37**	**224**	P	**Pn**	**11 38 30.6**	**+1.4**
	55nm,0.5s,baz=120,slow=2.2,SNR=8.3						
BATI				S	**Sn**	**11 40 08.7**	**+6.3**
	28nm,0.6s,baz=145,slow=22,SNR=1.2						
BATI	**Baumata**	**8.37**	**224**	P	Pn	11 38 34.3	+5.1
	1μm117nm,0.7s						
APSI	**Ampana**	**8.51**	**292**	P	**Pn**	**11 38 33.0**	**+2.0**
	938nm52nm,0.7s						
MTN	**Manton Dam**	**8.78**	**170**		**Pn**	**11 38 31.8**	**-2.8**
MRSI	**Marisa**	**8.88**	**301**	P	**Pn**	**11 38 34.8**	**-1.0**
	755nm51nm,0.6s						
EDFI	**Ende, Flores**	**9.03**	**239**	P	Pn	11 38 43.5	+5.4
	41nm,0.9s						
BSSI	**Bau Bau, Buton**	**9.22**	**257**	P	Pn	11 38 45.0	+4.5
	29nm,0.9s						
BKSI	**Bulukumba**	**9.45**	**263**	P	**Pn**	**11 38 47.6**	**+4.1**
SPSI	**Sidrap Palu**	**9.74**	**271**	P	**Pn**	**11 38 51.1**	**+3.7**
	3μm23nm,1.0s						
KAPI	**Kappang**	**9.79**	**265**	P	Pn	11 38 52.3	+4.3
	13nm,0.6s,baz=124,slow=7.1,SNR=11						
KAPI				LR	LR	11 43 08.3	
	comp=Z,19nm,18.3s,baz=92,slow=40						
TOLI2	**Tolitoli**	**10.19**	**301**		**Pn**	**11 38 52.7**	**-0.7**
TOLI2	**Tolitoli**	**10.19**	**301**	P	**Pn**	**11 38 52.5**	**-0.8**
TOLI2	**Tolitoli**	**10.19**	**301**	S	**Sn**	**11 40 45.4**	**-0.9**
MPSI	**Mapaga**	**10.61**	**295**	P	**Pn**	**11 39 01.4**	**+2.5**
WSI	**Waingapu**	**10.68**	**239**	P	Pn	11 39 07.4	+7.6
WBSI	**Waikabubak, Su**	**11.45**	**241**	P	**P**	**11 39 14.9**	**-2.7**
KNRA	**Kununurra**	**11.48**	**184**		**Pn**	**11 39 07.2**	**-3.0**
PLAI	**Plampang**	**12.57**	**248**	P	**Pn**	**11 39 22.6**	**-1.9**
PLAI	**Plampang**	**12.57**	**248**	P	**Pn**	**11 39 24.4**	**-0.1**
TWSI	**Taliwang, Sumb**	**13.37**	**249**	P	**Pn**	**11 39 35.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**14.37**	**195**	P	**Pn**	**11 39 44.8**	**-2.6**
	38nm,0.7s,baz=34,slow=10,SNR=75						
FITZ				S	**Sn**	**11 42 19.4**	**-7.5**
	14nm,0.6s,baz=95,slow=6.4,SNR=5.4						
FITZ	**Fitzroy Crossi**	**14.37**	**195**		**Pn**	**11 39 44.5**	**-2.9**
FITZ	**Fitzroy Crossi**	**14.37**	**195**	P	**Pn**	**11 39 44.5**	**-2.9**
MYLDM	**Lahad Datu**	**14.40**	**310**	Pn	**Pn**	**11 39 45.0**	**-2.8**
JAGI	**Jajag, Banyuwa**	**15.88**	**254**	P	**Pn**	**11 40 05.4**	**-0.7**
JAGI	**Jajag, Banyuwa**	**15.88**	**254**	P	**Pn**	**11 40 04.6**	**-1.5**
WRAB	**Tennant Creek**	**16.37**	**164**	P	**Pn**	**11 40 09.0**	**-3.1**
WRA	**Warramunga Arr**	**16.38**	**164**	P	**Pn**	**11 40 09.6**	**-2.6**
	85nm,0.6s,baz=340,slow=12,SNR=110						
WRA				S	S	11 43 01.4	-13
	19nm,0.6s,baz=346,slow=23,SNR=7.2						
WRA	**Warramunga Arr**	**16.38**	**164**		**Pn**	**11 40 09.1**	**-3.1**
COEN	**Coen**	**16.61**	**127**	P	**P**	**11 40 13.0**	**-1.8**
COEN	**Coen**	**16.61**	**127**	P	**P**	**11 40 14.2**	**-0.6**
PMG	**Port Moresby**	**18.25**	**108**	P	**P**	**11 40 32.2**	**-0.7**
	2.8nm,0.4s,baz=147,slow=8.7,SNR=6.1						
PMG	**Port Moresby**	**18.25**	**108**	P	**P**	**11 40 32.1**	**-0.8**
SBUM	**Sibu**	**18.51**	**290**	P	**P**	**11 40 35.9**	**+0.2**
QIS	**Mount Isa**	**19.02**	**150**	P	**P**	**11 40 41.6**	**+0.3**
MBWA	**Marble Bar**	**19.41**	**209**	P	**P**	**11 40 44.3**	**-1.0**
MBWA	**Marble Bar**	**19.41**	**209**	P	**P**	**11 40 44.2**	**-1.1**
PSA00	**Pilbara Seismi**	**19.71**	**208**	P	**P**	**11 40 47.2**	**-1.4**
PSA00	**Pilbara Seismi**	**19.71**	**208**	P	**P**	**11 40 47.6**	**-1.0**
AS31	**Alice Springs**	**19.85**	**168**	P	**P**	**11 40 50.0**	**-0.2**
ASAR	**Alice Springs**	**19.85**	**168**	P	**P**	**11 40 50.9**	**+0.7**
	208nm,0.5s,baz=349,slow=11,SNR=1235						
ASAR				S	**S**	**11 44 22.6**	**-3.0**
	46nm,1.0s,baz=351,slow=18,SNR=26						
ASAR				ScP	**ScP**	**11 48 25.2**	**+1.2**
	3.6nm,0.7s,baz=336,slow=2.3,SNR=6.5						
BBJI	**Bungbulang**	**22.02**	**260**	P	**P**	**11 41 09.9**	**-3.5**
TV1H	**Townsville Har**	**22.57**	**133**	P	**P**	**11 41 19.9**	**+1.3**
CTA	**Charters Tower**	**22.72**	**136**	P	**P**	**11 41 20.8**	**+0.8**
CTAO	**Charters Tower**	**22.72**	**136**	P	**P**	**11 41 19.8**	**-0.2**
CTAO	**Charters Tower**	**22.72**	**136**	P	**P**	**11 41 20.8**	**+0.8**
MEEK	**Meekatharra**	**24.68**	**204**	P	**P**	**11 41 36.1**	**-1.8**
PMBI	**Palembang**	**24.75**	**272**	P	**P**	**11 41 40.1**	**+1.5**
INKA	**Innaminka**	**25.78**	**157**	P	**P**	**11 41 48.4**	**+0.6**
QLP	**Quilpie**	**26.37**	**149**	P	**P**	**11 41 53.6**	**+0.5**
FORT	**Forrest**	**26.52**	**183**	P	**P**	**11 41 54.1**	**-0.3**
FORT				IAmb	IAmb	11 41 54.7	
	comp=Z,20nm,0.7s						
TPUB	**Ta-pu**	**28.64**	**343**	P	**P**	**11 42 11.7**	**-1.6**
TPUB				IAmb	IAmb	11 43 04.3	
	comp=Z,34nm,1.1s						
TPUB	**Ta-pu**	**28.64**	**343**	P	**P**	**11 42 12.0**	**-1.3**
BLDU	**Ballidu**	**28.97**	**203**	P	**P**	**11 42 16.4**	**+0.2**
BBOO	**Buckleboo**	**29.16**	**169**	P	**P**	**11 42 17.3**	**-0.5**
BBOO				IAmb	IAmb	11 42 18.5	
	comp=Z,31nm,0.7s						
BBOO	**Buckleboo**	**29.16**	**169**	P	**P**	**11 42 17.6**	**-0.2**
KLBR	**Kellerberrin**	**29.46**	**201**	P	**P**	**11 42 20.1**	**-0.4**
YHNB	**Yeheng**	**29.73**	**345**	P	**P**	**11 42 22.2**	**-0.9**
YHNB				IAmb	IAmb	11 43 00.7	
	comp=Z,58nm,1.6s						
IPM	**Ipoh**	**29.75**	**286**	P	**P**	**11 42 22.2**	**-1.1**
IPM				IAmb	IAmb	11 42 24.4	
	comp=Z,23nm,0.6s						
IPM	**Ipoh**	**29.75**	**286**	P	**P**	**11 42 23.6**	**+0.3**
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**11 42 23.8**	**+0.2**
	comp=Z,15nm,0.7s,baz=329,slow=9.0,SNR=32						
STKA				LR	LR	11 56 39.9	
	comp=Z,46nm,18.8s,baz=28,slow=41						
	comp=Z,15nm,0.7s						
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**11 42 24.0**	**+0.4**
KULM	**Kulim**	**30.34**	**288**	P	**P**	**11 42 28.5**	**0.0**
KULM	**Kulim**	**30.34**	**288**	P	**P**	**11 42 28.8**	**+0.3**
MUN	**Mundaring**	**30.38**	**203**	P	**P**	**11 42 28.4**	**-0.2**
HTT	**Hallett**	**30.42**	**164**	P	**P**	**11 42 29.2**	**+0.2**
JOW	**Kunigami**	**30.83**	**358**	P	**P**	**11 42 33.5**	**+0.9**
JOW				IAmb	IAmb	11 42 34.1	
	comp=Z,30nm,0.9s						
NWAO	**Narrogin (SRO)**	**30.85**	**200**	P	**P**	**11 42 32.3**	**-0.4**
NWAO				IAmb	IAmb	11 42 34.2	
	comp=Z,61nm,1.6s						
NWAO	**Narrogin (SRO)**	**30.85**	**200**	P	**P**	**11 42 32.8**	**0.0**
NWAO	**Narrogin (SRO)**	**30.85**	**200**	P	**P**	**11 42 32.6**	**-0.2**
CMSA	**Cobar Meteorol**	**31.19**	**153**	P	**P**	**11 42 36.4**	**+0.6**
ARMA	**Armidale**	**33.43**	**144**	P	**P**	**11 42 57.4**	**+1.9**
MGBR	**Mount Gambier**	**34.91**	**165**	P	**P**	**11 43 08.8**	**+0.9**
BRAT	**Ballarat**	**35.76**	**160**	P	**P**	**11 43 17.0**	**+1.8**
CAN	**Canberra**	**35.86**	**152**		**P**	**11 43 17.7**	**+1.5**
CAN	**Canberra**	**35.86**	**152**	P	**P**	**11 43 17.6**	**+1.4**
CAN	**Canberra**	**35.86**	**152**	P	**P**	**11 43 17.8**	**+1.6**
CNB	**Canberra Magne**	**36.03**	**152**	P	**P**	**11 43 18.0**	**+0.3**
TOO	**Toolangi**	**36.33**	**158**	P	**P**	**11 43 21.0**	**+0.9**
JNU	**Nakatsue**	**37.09**	**2**	P	**P**	**11 43 26.9**	**+0.3**
NJ2	**Nanjing**	**37.41**	**345**	*eP*	**P**	**11 43 31.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
WHN	**Wuhan**	**37.43**	**338**	P	**P**	**11 43 30.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**37.60**	**308**	P	**P**	**11 43 32.2**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=134,slow=6.7,SNR=5.6						
CMAR				PcP	**PcP**	**11 45 47.8**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=161,slow=2.9,SNR=7.9						
CMAR				ScP	**ScP**	**11 49 21.2**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=112,slow=3.9,SNR=5.3						
	comp=Z,0.7nm,0.5

OXZ	Oxford	54.14	143	P		P	11 45 42.1	+1.7
HILR	Hailar Array B	54.16	352	P		P	11 45 41.0	+0.6
	comp=Z,1.6nm,0.5s,baz=161,slow=11,SNR=3.7							
	comp=Z,1.6nm,0.5s							
HEH	HeiHe	54.22	358	*eP*		P	11 45 41.3	+0.6
HEH				pmax		pmax		
	comp=Z,14nm,1.1s							
TUZ	Tuapeka	54.28	146	P		P	11 45 42.5	+1.2
GVZ	Greta Valley S	54.55	142	P		P	11 45 45.0	+1.7
KHZ	Kahutara	54.58	141	P		P	11 45 44.3	+0.8
KHZ	Kahutara	54.58	141	P		P	11 45 44.3	+0.8
MQZ	McQueen's Vall	54.72	143	P		P	11 45 45.9	+1.4
BKZ	Black Stump Fm	54.94	136	P		P	11 45 46.6	+0.4
BKZ	Black Stump Fm	54.94	136	P		P	11 45 46.9	+0.7
BKZ	Black Stump Fm	54.94	136	P		P	11 45 47.1	+0.9
URZ	Urewera	54.96	135	P		P	11 45 47.1	+0.7
TSZ	Takapari Road	54.98	137	P		P	11 45 46.9	+0.3
MRZ	Mangatainoka R	55.01	138	P		P	11 45 47.1	+0.4
RTZ	Ruatahuna	55.03	135	P		P	11 45 48.9	+1.9
MTHZ	Maungataniwha	55.04	136	P		P	11 45 48.3	+1.3
HAZ	Te Kaha	55.23	134	P		P	11 45 50.1	+1.9
RUGZ	Raukumara Rang	55.24	134	P		P	11 45 49.4	+0.9
MWZ	Matawai	55.29	135	P		P	11 45 49.9	+1.1
ULN	Ulaanbaatar	55.43	342	P		P	11 45 49.9	+0.2
ULN				lAmb		lAmb	11 45 51.7	
	comp=Z,12nm,1.0s							
ULN	Ulaanbaatar	55.43	342	P		P	11 45 50.7	+1.0
BFZ	Birch Farm	55.47	138	P		P	11 45 50.8	+0.8
BFZ	Birch Farm	55.47	138	P		P	11 45 50.9	+0.9
TWGZ	Tauwhareparae	55.55	134	P		P	11 45 52.9	+2.2
TKGZ	Te Karaka	55.56	135	P		P	11 45 52.0	+1.3
SONM	Songino Array	55.61	341	P		P	11 45 51.9	+0.9
	comp=Z,5.1nm,0.9s,baz=160,slow=6.9,SNR=18							
	comp=Z,5.1nm,0.9s							
RIGZ	Rimuhau	55.62	135	P		P	11 45 53.2	+2.1
PUZ	Puketiti	55.70	134	P		P	11 45 52.8	+1.1
WMGZ	Waiomatatini S	55.71	134	P		P	11 45 53.0	+1.3
CNGZ	Carnagh Statio	55.84	135	P		P	11 45 54.6	+1.9
WMQ	Urumqi	60.78	326	*eP*		P	11 46 30.0	+3.1
PETK	Petropavlovsk-	61.79	19	P		P	11 46 33.7	+0.3
	comp=Z,18nm,0.8s,baz=179,slow=5.4,SNR=35							
PETK				LR		LR	12 12 25.0	
	comp=Z,17nm,20.4s,baz=108,slow=35							
	comp=Z,18nm,0.8s							
DRV	Dumont d'Urvil	62.83	175	P		P	11 46 40.4	+0.3
DRV	Dumont d'Urvil	62.83	175	sP		sP	11 47 24.1	-5.7
MKAR	Makanchi Array	65.61	326	P		P	11 46 59.0	+0.4
	comp=Z,4.4nm,0.7s,baz=112,slow=7.7,SNR=51							
	comp=Z,4.4nm,0.7s							
MKAR	Makanchi Array	65.61	326	P		P	11 46 58.4	-0.2
YAK	Yakutsk	66.00	0	P		P	11 47 00.8	+0.2
YAK	Yakutsk	66.00	0	P		P	11 47 01.4	+0.7
YAK	Yakutsk	66.00	0	pP		pP	11 47 32.9	-3.4
YAK				sP		sP	11 47 45.7	-6.6
ZAA0	Zalesovo Array	68.84	334	P		P	11 47 18.6	-0.1
ZALV	Zalesovo Beam	68.84	334	P		P	11 47 18.6	-0.2
	comp=Z,3.8nm,0.8s,baz=123,slow=5.3,SNR=13							
	comp=Z,3.8nm,0.8s							
ZALV	Zalesovo Beam	68.84	334	P		P	11 47 18.4	-0.3
KURBB	Kurchatov Arra	69.86	328	P		P	11 47 25.6	+0.5
	comp=Z,6.3nm,0.9s,baz=124,slow=5.5,SNR=58							
	comp=Z,6.3nm,0.9s							
KURK	Kurchatov	69.87	328	P		P	11 47 25.6	+0.5
KURK				lAmb		lAmb	11 47 30.8	
	comp=Z,16nm,1.1s							
KURK	Kurchatov	69.87	328	P		P	11 47 25.8	+0.7
CCD	Concordia, Ant	70.98	182	P		P	11 47 32.8	+0.8
VNDA	Vanda	75.31	173	P		P	11 47 56.9	0.0
	comp=Z,3.6nm,0.6s,baz=321,slow=7.8,SNR=19							
	comp=Z,3.6nm,0.6s							
BVAR	Borovoye Array	75.43	328	P		P	11 47 58.8	+0.8
	comp=Z,5.9nm,0.9s,baz=113,slow=11,SNR=15							
	comp=Z,5.9nm,0.9s							
TIXI	Tiksi	75.66	360	P		P	11 47 58.9	0.0
TIXI	Tiksi	75.66	360	P		P	11 47 59.2	+0.3
MAW	Mawson	77.42	201	P		P	11 48 09.1	+0.2
	comp=Z,3.6nm,0.6s,baz=80,slow=11,SNR=7.1							
	comp=Z,3.6nm,0.6s							
AB31	Akbulak array	80.01	321			P	11 48 22.8	-0.6
ABKAR	Akbulak array	80.01	321			P	11 48 23.5	+0.1
QSPA	South Pole Qui	85.80	180	P		P	11 48 56.3	+3.2
	comp=Z,4.2nm,0.7s,baz=342,slow=2.6,SNR=27							
QSPA	South Pole Qui	85.80	180	P		P	11 48 56.1	+2.9
QSPA				lAmb		lAmb	11 48 57.3	
	comp=Z,20nm,1.6s							
QSPA	South Pole Qui	85.80	180	P		P	11 48 57.0	+3.9
SYO	Syowa Base	86.13	201⇑	*eP*		P	11 48 54.8	+0.3
RAYN	Ar Rayn	86.18	294	P		P	11 48 56.3	+0.6
ILAR	Eielson Array	90.98	25	P		P	11 49 16.8	-0.6
	comp=Z,0.6nm,0.5s,baz=263,slow=4.6,SNR=14							
	comp=Z,0.6nm,0.5s							
TROLL	Troll, Antarti	96.79	194	⇑P		P	11 49 45.0	+0.8
	comp=Z,104nm,0.6s							
VNA2	Neumayer--Watz	99.88	193	⇑P		Pdif	11 49 58.6	+0.8
	comp=Z,1.4nm,0.6s,baz=132,slow=4.0							
TXAR	Lajitas Array	123.83	57	PKP		PKiKP	11 55 12.7	+0.7
	comp=Z,0.3nm,0.6s,baz=270,slow=1.0,SNR=4.6							
PLCA	Paso Flores	131.69	160	PKP		PKiKP	11 55 27.6	+0.2
	comp=Z,2.1nm,0.8s,baz=198,slow=6.4,SNR=4.2							
CPUP	Villa Florida	148.97	168	PKPbc		PKPbc	11 56 01.9	+0.1
	comp=Z,3.7nm,0.7s,baz=136,slow=2.4,SNR=23							
LPAZ	La Paz	153.21	140	PKPbc		PKiKP	11 56 13.5	+0.7
	comp=Z,2.7nm,0.7s,baz=191,slow=5.2,SNR=9.8							

*SOME **24** 12:00:49.1,44.00N×85.42E,h5km*
*NNC **24** 12:00:56.5±2.5,43.89N×86.11E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=19.0km s-min=11.2km az=111.0
ISC 24 12:00:47.7±4.0,**43.7N**±0.1×**86.0E**±0.2,**h10**km,**n4**,σ2°**64**/9,
6C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	Zaisan	3.82	348	*eP*	Pb	12 01 53.3	-1.9
	1.8nm,0.2s						
ZSN				*eS*	Sb	12 02 40.0	-1.6
	16nm,0.4s						
MK31	Makanchi Array	4.06	321	Pn	Pb	12 01 58.3	-1.0
	0.4nm,0.2s,baz=136,slow=15,SNR=71						
MK31				Pg	Pg	12 02 09.9	+4.4
	3.3nm,0.5s,baz=129,slow=17,SNR=14						
MK31				⇓Sn	Sb	12 02 46.9	-1.5
	5.2nm,0.5s,baz=134,slow=27,SNR=4.6						
MK31				⇑Lg	Lg	12 03 01.2	
	8.3nm,0.3s,baz=136,slow=29,SNR=8.7						
MAKZ	Makanchi	4.22	319	⇑Pn	Pb	12 02 00.1	-1.8
	11nm,1.4s						
MAKZ				⇑Sn	Sb	12 02 50.7	-2.2
	7.7nm,0.4s						
MAKZ				⇑Lg	Lg	12 03 07.7	
	7.1nm,0.3s						
PDGK	Podgornoye	4.78	268	⇑Pn	Pb	12 02 09.8	-1.9
	1.2nm,0.4s						
PDGK				⇑Pg	Pg	12 02 28.6	+9.4
	6.2nm,0.8s						
PDGK				⇓Sn	Sb	12 03 08.4	-0.9
	5.1nm,0.4s						
PDGK				⇓Lg	Lg	12 03 29.9	
	10nm,0.7s						

*IDC **24** 13:06:23.2±0.8,9.78N×126.39E,h0km,mb3.9/13,*
mbtmp3.9/14,ML4.4/1,MS2.9/3,Error ellipse:
s-maj=32.7km s-min=12.4km az=83.0
*NEIC **24** 13:06:25.7±0.8,9.78N±0.07×126.4E±0.1,h11km±4km,*
mb4.6/30,Error ellipse: s-maj=17.9km s-min=10.5km
az=90.0
ISC 24 13:06:24.6±0.5,**9.76N**±0.06×**126.4E**±0.1,**h10**km,**n54**,
σ0°**87**/47,**mb4.3**/27,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.78	196	Pn	Pn	13 07 07.2	-2.0
	54nm,0.3s,baz=200,slow=7.2,SNR=2.2						
DAV				Lg	Lg	13 07 52.4	
	34nm,0.3s,baz=24,slow=20,SNR=4.1						
	110nm,0.3s						
TPUB	Ta-pu	14.54	339	Pn	Pn	13 09 50.1	-0.4
YOJ	Yonaguni jima	14.96	348	Pn	Pn	13 09 56.4	+0.1
TATO	Taipei	15.83	344	Pn	Pn	13 10 08.2	+0.6
TATO				lAmb	lAmb	13 10 47.1	
	comp=Z,77nm,1.2s						
GUMO	Guam	18.53	76	LR	LR	13 15 54.0	
	comp=Z,71nm,21.5s,baz=88,slow=31						
BATI	Baumata	20.01	188	P	P	13 10 57.4	-0.3
	comp=Z,11nm,0.3s,baz=121,slow=6.3,SNR=1.7						
BATI				LR	LR	13 19 19.7	
	comp=Z,28nm,20.0s,baz=296,slow=39						
	comp=Z,11nm,0.3s						
MTN	Manton Dam	22.95	168	P	P	13 11 29.8	+0.5
UGM	Wanagama	23.59	222	P	P	13 11 35.5	-0.3
MANU	Manus Island	23.99	118	P	P	13 11 38.2	-1.5
MANU				lAmb	lAmb	13 11 48.8	
	comp=Z,66nm,1.4s						
JMN	Monobe	24.84	15	P	P	13 11 47.1	-0.2
JMN				lAmb	lAmb	13 11 57.9	
	comp=Z,24nm,1.2s						
KNRA	Kununurra	25.38	175	P	P	13 11 52.9	+0.6
KNRA				lAmb	lAmb	13 12 00.1	
	comp=Z,7.3nm,0.6s						
FITZ	Fitzroy Crossi	27.69	181	P	P	13 12 13.7	+0.6
	comp=Z,4.9nm,0.7s,baz=8.4,slow=9.2,SNR=11						
	comp=Z,4.9nm,0.7s						
FITZ	Fitzroy Crossi	27.69	181	P	P	13 12 13.5	+0.5
CMAR	Chiang Mai Arr	27.92	291	P	P	13 12 15.9	+0.7
	comp=Z,0.5nm,0.3s,baz=62,slow=8.1,SNR=1.4						
CMAR				LR	LR	13 24 03.5	
	comp=Z,20nm,18.3s,baz=110,slow=38						
	comp=Z,0.5nm,0.3s						
WRA	Warramunga Arr	30.54	165	P	P	13 12 39.4	+0.9
	comp=Z,0.3nm,0.7s,baz=344,slow=9.0,SNR=1.9						
	comp=Z,0.3nm,0.7s						
WR8	Warramunga Arr	30.60	165	P	P	13 12 39.5	+0.5
WR8				lAmb	lAmb	13 13 06.2	
	comp=Z,7.1nm,1.4s						
AS31	Alice Springs	34.03	168	P	P	13 13 09.2	+0.2
ASAR	Alice Springs	34.03	168	P	P	13 13 09.2	+0.2
	comp=Z,0.3nm,0.5s,baz=352,slow=6.6,SNR=12						
ASAR				PcP	PcP	13 15 46.6	-0.4
	comp=Z,0.3nm,0.8s,baz=352,slow=3.1,SNR=2.0						
	comp=Z,0.3nm,0.5s						
CTAO	Charters Tower	35.55	147	P	P	13 13 23.2	+1.0
CTAO				lAmb	lAmb	13 13 36.9	
	comp=Z,13nm,1.4s						
MORW	Morawa	39.86	194	P	P	13 13 58.8	+0.2
MORW				lAmb	lAmb	13 14 30.3	
	comp=Z,20nm,1.3s						
H11S3	WAKE ISLAND Hy	39.99	73	T	T	13 56 51.7	
	baz=262,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	40.00	73	T	T	13 56 48.8	
	baz=262,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	40.01	73	T	T	13 56 52.5	
	baz=262,slow=75,SNR=11						
FORT	Forrest	40.34	178	P	P	13 14 02.1	-0.3
FORT				lAmb	lAmb	13 14 40.2	
	comp=Z,13nm,1.1s						
H11N1	WAKE ISLAND Hy	40.34	71	T	T	13 57 19.4	
	baz=262,slow=75,SNR=20						
H11N2	WAKE ISLAND Hy	40.35	71	T	T	13 57 15.1	
	baz=262,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	40.36	71	T	T	13 57 20.3	
	baz=262,slow=75,SNR=24						
SONM	Songino Array	41.52	340	P	P	13 14 12.8	+0.5
	comp=Z,0.4nm,0.5s,baz=148,slow=8.5,SNR=3.1						
	comp=Z,0.4nm,0.5s						
NWAO	Narrogin (SRO)	43.33	191	P	P	13 14 28.5	+1.6
NWAO				lAmb	lAmb	13 14 29.3	
	comp=Z,15nm,0.8s						
BBOO	Buckleboo	43.33	168	P	P	13 14 27.7	+0.7
BBOO				lAmb	lAmb	13 14 47.2	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	43.89	161	P	P	13 14 32.1	+0.6
	comp=Z,1.4nm,0.7s,baz=335,slow=9.7,SNR=3.4						
	comp=Z,1.4nm,0.7s						
PEA0B	Petropavlovsk-	50.07	24	P	P	13 15 18.6	-0.9
MKAR	Makanchi Array	52.48	323	P	P	13 15 36.5	-1.3
	comp=Z,0.7nm,0.6s,baz=121,slow=8.6,SNR=5.8						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	52.48	323	P	P	13 15 36.0	-1.8
MAKZ	Makanchi	52.67	323	P	P	13 15 37.4	-1.9
MAKZ				lAmb	lAmb	13 16 16.3	
	comp=Z,6.9nm,1.2s						
KURK	Kurchatov	56.53	326	P	P	13 16 07.6	+0.4
KURBB	Kurchatov Arra	56.54	326	P	P	13 16 07.7	+0.5
	comp=Z,0.7nm,0.6s,baz=124,slow=6.6,SNR=5.7						
	comp=Z,0.7nm,0.6s						
KKAR	Karatay Array	58.67	315	P	P	13 16 22.9	+0.5
BKZ	Black Stump Fm	67.34	140	P	P	13 17 20.2	+0.1
D23K	Nanushuk River	78.43	21	P	P	13 18 26.1	+0.7
D23K				lAmb	lAmb	13 19 00.6	
	comp=Z,6.0nm,1.4s						
C23K	Itkillik River	78.50	21	P	P	13 18 26.0	+0.3
KBZ	Khabaz	78.61	313	P	P	13 18 27.4	+0.6
	comp=Z,1.5nm,0.9s,baz=51,slow=6.5,SNR=2.1						
	comp=Z,1.5nm,0.9s						
TOLK	Toolik Lake Re	78.82	22	P	P	13 18 28.0	+0.5
TOLK				lAmb	lAmb	13 18 44.1	
	comp=Z,8.4nm,1.4s						
ILAR	Eielson Array	79.86	26	P	P	13 18 31.8	-1.5
	comp=Z,0.1nm,0.6s,baz=267,slow=6.1,SNR=1.1						
	comp=Z,0.1nm,0.6s						
BMAR	Burnt Mountain	80.70	23	P	P	13 18 38.1	+0.3
I27K	Kandik River	82.03	25	P	P	13 18 45.1	+0.2
I27K				lAmb	lAmb	13 19 01.3	
	comp=Z,4.1nm,1.4s						
I28M	Miner Creek	82.74	25	P	P	13 18 48.9	+0.2
I28M				lAmb	lAmb	13 19 07.6	
	comp=Z,9.9nm,1.4s						
TABL	Table Mountain	82.83	30	P	P	13 18 49.7	+0.3
H29M	Whitestone	83.27	24	P	P	13 18 51.5	+0.2
ARCES	ARCESS Array B	84.70	340	P	P	13 18 59.4	+0.9
	comp=Z,1.7nm,0.8s,baz=76,slow=5.3,SNR=3.6						
	comp=Z,1.7nm,0.8s						
ARCES	ARCESS Array B	84.70	340	lAmb	lAmb	13 19 06.6	
	comp=Z,26nm,1.5s						
H31M	Peel River	84.97	24	P	P	13 19 00.5	+0.5
H31M				lAmb	lAmb	13 19 35.8	
	comp=Z,12nm,1.5s						
FINES	FINESS Array B	86.38	332	P	P	13 19 08.1	+1.1
	comp=Z,1.7nm,0.9s,baz=90,slow=5.6,SNR=8.7						
	comp=Z,1.7nm,0.9s						
TULEG	Thule	93.39	4	P	P	13 19 38.1	-1.6

*IDC **24** 13:10:54.3±1.0,1.54N×126.27E,h0km,mb3.8/8,*
mbtmp3.8/9,ML3.6/1,Error ellipse: s-maj=119.1km
s-min=15.3km az=68.0
*DJA **24** 13:10:58.2±0.3,1.1E±3×12.6E±1,h10km,M4.0/13,mB4.7/1,*
mb4.1/3,MLv3.9/13,Mw(mB)4.0/1
*NEIC **24** 13:11:00.0±1.5,1.53N±0.10×126.33E±0.07,h35km±2km,*
mb4.2/17,Error ellipse: s-maj=17.6km s-min=9.8km
az=208.0
ISC 24 13:10:59.7±0.6,**1.51N**±0.06×**126.32E**±0.07,**h35**km,**n41**,
σ0°**80**/43,**mb4.1**/15,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.28	125		Pn	13 11 20.5	-0.6
TNTI	Ternate	1.28	125	P	Pn	13 11 20.7	-0.4
TNTI				S	Sn	13 11 37.2	+0.1
SGSI	Sangihe	2.30	340	P	Pn	13 11 36.4	+1.3
KMSI	Cibinong	2.51	248	P	Pn	13 11 39.2	+1.1
SANI	Sanana	3.55	185	P	Pn	13 11 52.9	+0.5
LUWI	Luwuk	4.36	234	Pn	Pn	13 12 03.4	-0.1
LUWI	Luwuk	4.36	234	P	Pn	13 12 05.2	+1.7
APSI	Ampana	5.25	243	P	Pn	13 12 16.8	+1.1
	0.3nm779nm56nm,1.1s						
TOLI2	Tolitoli	5.55	266	Pn	Pn	13 12 19.4	-0.4
MYLDM	Lahad Datu	8.61	295	Pn	Pn	13 13 00.7	-1.2
SBUM	Sibu	14.12	274	Pn	Pn	13 14 16.6	-0.7
MTN	Manton Dam	15.04	162	P	P	13 14 34.5	-0.3
MTN				lAmb	lAmb	13 14 50.3	
	comp=Z,15nm,1.4s						
KNRA	Kununurra	17.25	172	Pn	Pn	13 14 57.7	-0.3
KNRA				lAmb	lAmb	13 14 59.4	
	comp=Z,21nm,1.3s						
FITZ	Fitzroy Crossi	19.50	182	P	P	13 15 23.6	-0.3
	comp=Z,0.1nm,0.3s,baz=105,slow=9.7,SNR=2.8						
	comp=Z,4.3nm,1.1s						
FITZ	Fitzroy Crossi	19.50	182	P	P	13 15 23.5	-0.4
WB0	Warramunga Arr	22.58	160	P	P	13 15 56.9	-0.4
COEN	Coen	22.70	133	P	P	13 15 58.1	-0.5
COEN				lAmb	lAmb	13 16 20.7	
	comp=Z,13nm,1.3s						
WRAB	Tennant Creek	22.72	160	P	P	13 15 58.3	-0.5
WRAB				lAmb	lAmb	13 16 09.2	
	comp=Z,6.3nm,1.0s						
WRA	Warramunga Arr	22.73	160	P	P	13 15 57.8	-1.0
	comp=Z,2.4nm,0.6s,baz=339,slow=11,SNR=14						
	comp=Z,2.4nm,0.6s						
WRA	Warramunga Arr	22.73	160	P	P	13 15 58.5	-0.3
WR8	Warramunga Arr	22.80	160	P	P	13 15 59.1	-0.4
WR8				lAmb	lAmb	13 16 06.2	
	comp=Z,11nm,1.4s						
MBWA	Marble Bar	23.43	196	P	P	13 16 06.0	+0.1
MBWA				lAmb	lAmb	13 16 20.9	
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	23.80	195	P	P	13 16 09.7	+0.3
PSA00				lAmb	lAmb	13 16 24.3	
	comp=Z,19nm,1.2s						
IPM	Ipoh	25.43	277	P	P	13 16 23.3	-1.1
IPM				lAmb	lAmb	13 16 58.5	
	comp=Z,8.1nm,1.1s						
AS31	Alice Springs	26.09	164	P	P	13 16 30.8	+0.4
ASAR	Alice Springs	26.09	164	P	P	13 16 30.6	+0.2
	comp=Z,0.7nm,0.5s,baz=346,slow=8.0,SNR=17						
ASAR				PcP	PcP	13 19 58.2	+0.6
	comp=Z,0.3nm,0.5s,baz=347,slow=2.2,SNR=8.9						
	comp=Z,0.7nm,0.5s						
STKA	Stephens Creek	36.23	158	P	P	13 17 59.5	0.0
	comp=Z,1.8nm,0.7s,baz=331,slow=13,SNR=4.8						
	comp=Z,1.8nm,0.7s						
CAN	Canberra	42.34	152	P	P	13 18 51.0	+0.5
SONM	Songino Array	49.26	342	P	P	13 19 44.6	-0.5
	comp=Z,0.3nm,0.4s,baz=169,slow=8.1,SNR=2.1						
	comp=Z,0.3nm,0.4s						
MKAR	Makanchi Array	59.14	326	P	P	13 20 56.5	-0.4
	comp=Z,0.6nm,0.5s,baz=123,slow=7.4,SNR=8.5						
	comp=Z,0.6nm,0.5s						
MKAR	Makanchi Array	59.14	326	P	P	13 20 56.1	-0.9
ZALV	Zalesovo Beam	62.37	334	P	P	13 21 18.3	-0.5
	comp=Z,0.3nm,0.4s,baz=129,slow=5.7,SNR=1.8						
	comp=Z,0.3nm,0.4s						
KURBB	Kurchatov Arra	63.38	328	P	P	13 21 24.5	-1.0
	comp=Z,1.2nm,0.7s,baz=128,slow=6.4,SNR=8.8						
	comp=Z,1.2nm,0.7s						
KURK	Kurchatov	63.39	328	P	P	13 21 24.8	-0.7
KURK				lAmb	lAmb	13 21 28.4	
	comp=Z,2.1nm,0.8s						
BVAR	Borovoye Array	68.95	328	P	P	13 22 01.6	+0.3
	comp=Z,0.3nm,0.5s,baz=134,slow=6.2,SNR=3.1						
	comp=Z,0.3nm,0.5s						
ABKAR	Akbulak array	73.60	321	P	P	13 22 29.7	+0.3
J18K	Innoko River	82.84	26	P	P	13 23 21.6	+1.3
E19K	Redstone River	83.43	22	P	P	13 23 24.2	+1.0
I20K	Naaghedeneel	84.04	25	P	P	13 23 27.1	+0.8
BMAR	Burnt Mountain	88.27	23		P	13 23 49.4	+2.2
BCAR	Beaver Creek A	89.53	27	P	P	13 23 53.8	+0.5

*BJI **24** 13:26:17.1,50.95N×179.05W,h12km,mB5.3/35,*
mb5.3/70,Ms4.9/46,Ms7 4.6/48
*IDC **24** 13:26:18.6±0.5,51.07N×179.12W,h0km,mb5.0/34,*
mbtmp5.0/36,ML4.4/2,MS4.4/66,Error ellipse:
s-maj=14.8km s-min=9.8km az=169.0
*NEIC **24** 13:26:20.3,50.88N×179.05W,h14km,Moment Tensor*
Solution. Duration: 1s8 Moment tensor: Scale 10^16Nm;
Mrr2.97; Mθθ-3.23; Mφφ0.26; Mrθ-0.15; Mrφ-1.12; Mθφ0.36;
Fault plane solution: M0 3.33000×10^16 NP1:φs263.60000°,
δ45.32000°,λ77.20000°. NP2:φs262.58000°,δ46.10000°,
λ102.63000°. Principal axes: T 3.0286, Plg81.0000°,
Azm251.0000°; N 0.5318, Plg9.0000°, Azm74.0000°; P
-3.5604, Plg0.0000°, Azm344.0000°;
*NEIC **24** 13:26:20.3,50.88N×179.21W,h14km*
*NEIC **24** 13:26:20.4±2.1,50.88N±0.04×179.20W±0.05,h10km±1km,*
mb5.2/648,ML5.0/12,Mww4.9/25,Error ellipse:
s-maj=6.4km s-min=4.7km az=157.0
*MOS **24** 13:26:21.5±0.9,51.10N×179.12W,h27km,mb5.5/68,*
MS4.6/14,Error ellipse: s-maj=7.9km s-min=4.6km
az=111.6
*AEIC **24** 13:26:23.6±1.7,50.94N±0.05×179.18W±0.05,h26km±3km,*
Error ellipse: s-maj=7.4km s-min=4.1km az=169.0
*GCMT **24** 13:26:24.3±0.2,50.93N±0.01×179.07W±0.02,h20km,*
MW5.1/112,Moment Tensor Solution. s82,c116;
s112,c179; Duration: 0 Moment tensor: Scale 10^16Nm;
Mrr4.40±.15; Mθθ-4.59±.11; Mφφ0.18±.10; Mrθ3.53±.22;
Mrφ-1.76±.07; Mθφ2.15±.21; Best double couple:
M06.33400×10^16 NP1:φs263.00000°,δ26.00000°,
λ109.00000°. NP2:φs62.00000°,δ66.00000°,λ81.00000°.
Principal axes: T 6.0170, Plg68.0000°, Azm315.0000°; N
0.6310, Plg8.0000°, Azm66.0000°; P -6.6500, Plg20.0000°,
Azm159.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
*BGR **24** 13:26:28.7,51.53N×179.05E,h33km,mb5.3,Ms4.4*
ISC 24 13:26:22.8±0.6,**51.02N**±0.04×**179.12W**±0.02,**h27**km±3km,
n1270,σ1°**25**/1003,**mb5.2**/452,**MS4.5**/100,**91C-28D,**
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAKI	Gareloi-Kavalg	0.57	20		Pn	13 26 35.4	+0.2
GAKI					Sn	13 26 44.8	+1.1
GALAA	Gareloi Lava P	0.78	16		Pn	13 26 39.3	+1.3
GALAA					Sn	13 26 52.2	+3.4
GASW	Gareloi Southw	0.78	12		Pn	13 26 39.2	+1.1
GANO	Gareloi North	0.83	14		Pn	13 26 39.6	+0.9
GANE	Gareloi Northe	0.83	15		Pn	13 26 39.9	+1.1
GANE					Sn	13 26 53.9	+3.7

baz=257,SNR=7.2
OKSP **Okmok Steeple** 7.03 67 Pn 13 28 07.3 +3.4
OKCE **Okmok Cone E** 7.15 66 Pn 13 28 09.0 +3.5
OKNC **Okmok New Cone** 7.18 66 Pn 13 28 10.0 +4.0
OKTU **Okmok Mt. Tuli** 7.21 67 Pn 13 28 09.2 +2.8
OKFG **Magazine Ridge** 7.29 66 Pn 13 28 11.1 +3.6
P08K **Saint George I** 7.96 42 P Pn 13 28 15.2 -1.3
baz=230
MGOD **Makushin Gods** 7.99 65 Pn 13 28 20.7 +3.6
MREP **Makushin Rep't** 8.07 65 Pn 13 28 21.2 +3.1
MSW **Makushin Switc** 8.07 64 Pn 13 28 21.4 +3.1
SPIA **Saint Paul Isl** 8.07 37 Pn 13 28 22.1 +4.0
SPIA **Saint Paul Isl** 8.07 37 P Pn 13 28 16.5 -1.6
baz=224
MNAT **Makushin Natee** 8.12 64 Pn 13 28 22.1 +3.2
UNV **Unalaska Valle** 8.21 65 Pn 13 28 22.0 +1.9
UNV **Unalaska Valle** 8.21 65 P Pn 13 28 19.4 -0.7
baz=255,SNR=5.7
AKMO **Akutan Morgan** 8.56 64 Pn 13 28 28.4 +3.5
AKUT **Akutan** 8.71 64 Pn 13 28 28.1 +1.2
FALS **False Pass** 10.23 62 P Pn 13 28 46.8 -0.9
baz=254
S12K **Black Hills** 11.21 59 P Pn 13 29 00.1 -1.1
baz=252
M11K **Mekoryuk** 11.86 33 P Pn 13 29 08.4 -1.5
baz=224
SDPT **Sand Point** 11.99 62 P Pn 13 29 09.8 -1.9
baz=257
CHNA **Chernabura Isl** 12.38 64 P Pn 13 29 14.9 -2.2
baz=260
M13K **Dall Lake** 12.91 37 P Pn 13 29 22.2 -2.1
baz=230
O14K **Tigyukauivet M** 13.09 44 Pn 13 29 27.8 +1.0
O14K **Tigyukauivet M** 13.09 44 P Pn 13 29 24.3 -2.4
baz=239
N14K **Kuskokwak Cree** 13.28 41 Pn 13 29 30.7 +1.4
N14K **Kuskokwak Cree** 13.28 41 P Pn 13 29 27.3 -2.0
baz=236,SNR=7.2
GAMB **Gambell** 13.39 14 P Pn 13 29 28.8 -2.0
baz=201
K13K **Kusilvak Mount** 13.51 30 P Pn 13 29 30.3 -2.1
baz=223
M14K **Bethel** 13.66 38 Pn 13 29 35.5 +1.1
M14K **Bethel** 13.66 38 P Pn 13 29 33.6 -0.9
baz=232,SNR=7.1
O15K **Ungalikthiuk R** 13.70 46 P Pn 13 29 33.1 -2.0
baz=242,SNR=6.0
L14K **Kuka Creek** 13.77 35 P Pn 13 29 33.9 -2.0
baz=229,SNR=7.9
PET **Petropavlovsk** 13.82 287 *e*P Pn 13 29 39.4 +2.6
PET *e*S Sn 13 32 12.7 +3.5
PET pmax pmax
comp=Z,83nm,1.1s
PET MLR MLR
comp=Z,800nm,20.0s
PET MLR MLR
comp=Z,1µm,20.0s
PET **Petropavlovsk** 13.82 287 P Pn 13 29 37.0 +0.2
comp=Z,75nm,1.1s
N15K **Kwethluk River** 14.08 42 P Pn 13 29 38.9 -1.4
baz=238,SNR=16
M15K **Kasigluk River** 14.13 40 P Pn 13 29 38.2 -2.6
baz=235
R16K **Pilot Point** 14.15 54 P Pn 13 29 37.6 -3.6
baz=252
PEA0B **Petropavlovsk-** 14.40 287 Pn 13 29 44.3 -0.4
PEA0B **Petropavlovsk-** 14.40 287 *de*P Pn 13 29 46.8 +2.2
PETK **Petropavlovsk-** 14.40 287 Pn Pn 13 29 44.9 +0.3
comp=Z,1.7nm,0.3s,baz=81,slow=17,SNR=20
PETK LR LR 13 35 04.9
comp=Z,2µm,21.6s,baz=95,slow=37
comp=Z,34nm,1.0s
L15K **Ungalak Mounta** 14.42 35 P Pn 13 29 42.1 -2.8
baz=230
J14K **Nanvaranak Lak** 14.46 30 P Pn 13 29 42.0 -3.4
baz=223
P16K **Nushagak River** 14.48 48 P Pn 13 29 43.4 -2.4
baz=246
O16K **Kokwok River B** 14.68 46 P Pn 13 29 46.2 -2.2
baz=244
CHIR **Chirikof Islan** 14.78 62 P Pn 13 29 47.6 -2.2
baz=261
R17L **Mt. Peulik Vol** 14.79 55 P Pn 13 29 48.7 -1.3
baz=253
N16K **Nishlik Lake** 14.80 42 P Pn 13 29 50.5 +0.4
baz=240,SNR=27
K15K **Wolf Creek Mou** 14.81 34 P Pn 13 29 49.9 -0.2
baz=228,SNR=37
Q16K **King Salmon** 14.98 51 P Pn 13 29 52.1 -0.4
baz=249,SNR=5.3
M16K **Timber Creek** 15.01 40 Pn Pn 13 29 54.0 +1.1
M16K IAmb IAmb 13 30 01.7
comp=Z,44nm,0.7s
M16K **Timber Creek** 15.01 40 P Pn 13 29 52.9 0.0
baz=237,SNR=7.1
L16K **Owhat River** 15.20 38 P Pn 13 29 54.6 -0.7
baz=234,SNR=20
O17K **Koliganek Bris** 15.21 46 P Pn 13 29 55.1 -0.4
baz=245,SNR=5.7
Q17K **Contact Creek** 15.23 53 P Pn 13 29 53.8 -2.0
baz=252
P17K **Kvichak River** 15.28 49 P Pn 13 29 54.6 -1.9
baz=248
ANM **Nome** 15.38 23 P Pn 13 29 56.2 -1.5
baz=215
ACHA **Angle Creek He** 15.49 53 Pn 13 29 59.3 +0.1
N17K **Nushagak Hills** 15.51 44 P Pn 13 29 58.8 -0.7
baz=242,SNR=14
SKR **Severo-Kuril's** 15.62 278 ⇑*e*P Pn 13 30 00.2 -0.8
TNA **Tin City** 15.68 17 P Pn 13 29 59.5 -2.1
baz=207
SII **Sitkinak Islan** 15.70 60 P Pn 13 30 00.2 -1.7
baz=260
Q18K **Katmai Hardscr** 15.79 52 P Pn 13 30 02.4 -0.8
baz=252,SNR=9.3
J16K **Anvik River** 15.79 32 P Pn 13 30 01.9 -1.2
baz=228,SNR=6.7
M17K **Holitna River** 15.84 41 IAmb IAmb 13 30 11.3
comp=Z,154nm,0.9s
M17K **Holitna River** 15.84 41 P Pn 13 30 02.5 -1.1
baz=239,SNR=25
L17K **Donlin** 15.90 38 P Pn 13 30 02.9 -1.5
baz=235
F14K **Arctic Creek** 15.93 20 P Pn 13 30 02.7 -2.1
baz=211
P18K **Big Mountain,** 15.93 49 Pn 13 30 05.4 +0.5
P18K **Big Mountain,** 15.93 49 P Pn 13 30 05.2 +0.2
baz=249,SNR=7.9
G15K **Niukluk** 16.06 24 P Pn 13 30 05.2 -1.2
baz=217,SNR=12
O18K **Koktuh Hills** 16.11 47 Pn 13 30 07.8 +0.6
O18K **Koktuh Hills** 16.11 47 P Pn 13 30 06.6 -0.7
baz=247,SNR=7.4
N18K **Kilae Creek** 16.15 44 Pn Pn 13 30 08.4 +0.7
N18K **Kilae Creek** 16.15 44 P Pn 13 30 07.7 0.0
baz=244,SNR=19
I17K **Unalakleet** 16.18 30 P Pn 13 30 06.8 -1.1
baz=226,SNR=7.3
K17K **Iditarod** 16.24 36 P Pn 13 30 08.8 0.0
baz=234,SNR=27
H16K **Elim** 16.26 27 P Pn 13 30 08.5 -0.5
baz=221
OHAK **Old Harbor** 16.31 58 P Pn 13 30 10.1 +0.5
baz=259,SNR=8.1
J17K **VABM Dome** 16.38 33 P Pn 13 30 09.9 -0.7
baz=230,SNR=24
F15K **North Star Dit** 16.50 21 P Pn 13 30 11.0 -1.0
baz=214,SNR=5.6
Q19K **Cape Douglas,** 16.55 52 Pn 13 30 12.9 +0.2
Q19K **Cape Douglas,** 16.55 52 P Pn 13 30 12.5 -0.3
baz=253
M18K **Stony River** 16.55 42 P Pn 13 30 12.4 -0.4
baz=241,SNR=19
L18K **Granite Mounta** 16.57 39 P Pn 13 30 11.7 -1.3
baz=238,SNR=15
O19K **Port Alsworth** 16.66 47 P Pn 13 30 12.3 -1.7
baz=248,SNR=11
KDAK **Kodiak Island** 16.79 56 Pn Pn 13 30 13.0 -2.8
comp=Z,8.1nm,0.3s,baz=239,slow=5.4,SNR=50
KDAK Sn Sn 13 33 15.6 -5.7
comp=Z,2.9nm,0.3s,baz=125,slow=19,SNR=7.7
comp=Z,17nm,0.3s
KDAK **Kodiak Island** 16.79 56 ⇓*e*P Pn 13 30 15.2 -0.6
KDAK pmax pmax
comp=Z,29nm,0.9s
KDAK **Kodiak Island** 16.79 56 P Pn 13 30 14.6 -1.2
baz=258
G16K **Koyuk River** 16.81 25 P Pn 13 30 14.3 -1.6
baz=219,SNR=12
N19K **Bonanza Creek** 16.83 45 Pn 13 30 16.8 +0.4
N19K **Bonanza Creek** 16.83 45 P Pn 13 30 14.3 -2.0
baz=246,SNR=13
P19K **Oil Pt** 16.98 49 Pn P 13 30 19.1 -0.8
P19K **Oil Pt** 16.98 49 P Pn 13 30 16.7 -1.4
baz=251
Q20K **Shuyak Island** 17.09 53 P Pn 13 30 18.1 -1.4
baz=255
ILSW **Iliamna Southw** 17.13 48 P 13 30 20.9 -0.7
H17K **Granite Mounta** 17.16 28 P P 13 30 23.8 +2.0
baz=225,SNR=39
J18K **Innoko River** 17.26 35 IAmb IAmb 13 30 29.0
comp=Z,120nm,1.1s
J18K **Innoko River** 17.26 35 P Pn 13 30 20.9 -0.8
baz=234,SNR=58
L19K **White Mountain** 17.29 40 IAmb IAmb 13 30 27.1
comp=Z,148nm,1.1s
L19K **White Mountain** 17.29 40 P Pn 13 30 20.3 -1.8
baz=241,SNR=41
M19K **Big River Lodg** 17.35 42 P Pn 13 30 22.3 -0.6
baz=242
G17K **Kiwalik Mounta** 17.36 26 P Pn 13 30 21.6 -1.2
baz=222,SNR=13
O20K **Slope Mountain** 17.41 48 P Pn 13 30 22.2 -1.4
baz=250
RED **Redoubt Volcan** 17.46 47 P 13 30 26.4 +1.1
RED IAmb IAmb 13 30 34.1
comp=Z,147nm,1.0s
HOM **Homer** 17.75 50 P Pn 13 30 25.7 -2.0
baz=253
H18K **Honhosa River** 17.78 29 P Pn 13 30 27.4 -0.7
baz=227,SNR=17
L20K **Farewell, AK** 17.84 40 P P 13 30 30.0 +0.7
L20K **Farewell, AK** 17.84 40 P Pn 13 30 28.2 -0.6
baz=242,SNR=34
M20K **Styx River** 17.88 43 P P 13 30 30.5 +0.6
M20K **Styx River** 17.88 43 P Pn 13 30 29.4 +0.1
baz=244,SNR=19
CNPM **China Poot** 17.91 51 P Pn 13 30 29.8 +0.1
F17K **Baldwin Pennin** 17.91 24 P Pn 13 30 28.6 -1.1
baz=219,SNR=8.0
J19K **Poorman** 17.97 35 P P 13 30 31.2 +0.4
J19K **Poorman** 17.97 35 P Pn 13 30 30.1 -0.2
baz=235,SNR=40
GCSA **Galena City Sc** 17.99 32 P Pn 13 30 30.1 -0.6
baz=231,SNR=47
N20K **Mount Spurr** 18.00 45 P Pn 13 30 30.7 -0.2
baz=248,SNR=43
SPCR **Spurr Chakacha** 18.00 45 P P 13 30 31.2 0.0
baz=248,SNR=37
K20K **Telida** 18.20 38 P P 13 30 33.2 -0.1
baz=239,SNR=21
BRSE **Bradley Lake S** 18.21 50 P Pn 13 30 32.1 -1.2
baz=254
G18K **Tagagawik** 18.21 27 P P 13 30 33.4 0.0
baz=225,SNR=11
E17K **Hotham Inlet** 18.28 22 P P 13 30 34.4 +0.3
baz=217,SNR=16
CAPN **Captain Cook N** 18.33 47 P P 13 30 33.7 -1.0
baz=250
F18K **Selawik** 18.45 25 P P 13 30 35.0 -1.0
baz=222,SNR=23
D17K **Noatak River** 18.51 19 P P 13 30 35.4 -1.2
baz=214,SNR=19
BILL **Bilibino** 18.52 343 Pn 13 30 37.0 0.0
BILL IAmb IAmb 13 30 45.9
comp=Z,228nm,1.6s
BILL **Bilibino** 18.52 343 ⇓*e*P Pn 13 30 38.7 +1.7
BILL pmax pmax
comp=Z,121nm,1.3s
C16K **Lisburne Hills** 18.57 16 P P 13 30 36.3 -1.1
baz=208
SKT **Skwentna** 18.61 43 IAmb IAmb 13 30 45.4
comp=Z,220nm,1.1s
SKT **Skwentna** 18.61 43 P P 13 30 36.6 -1.2
baz=247,SNR=50
J20K **Nowinta River** 18.61 35 P P 13 30 37.7 0.0
baz=237,SNR=28
H19K **Roundabout Mou** 18.63 30 P P 13 30 36.6 -1.4
baz=230,SNR=26
PPLA **Purkeypile** 18.72 40 IAmb IAmb 13 30 51.2
comp=Z,133nm,1.0s
PPLA **Purkeypile** 18.72 40 P P 13 30 37.9 -1.3
baz=243,SNR=18
SUA **Susitna One** 18.75 45 P P 13 30 38.5 -1.1
baz=249
I20K **Naaghedeneel** 18.84 34 IAmb IAmb 13 30 43.8
comp=Z,114nm,1.1s
I20K **Naaghedeneel** 18.84 34 P P 13 30 38.7 -1.6
baz=235,SNR=14
E18K **Tukpahlearik C** 18.84 22 P P 13 30 40.4 +0.1
baz=219,SNR=11
RDOG **Red Dog Mine** 18.84 19 P P 13 30 39.5 -0.9
baz=213,SNR=6.1
G19K **Purcell Mounta** 18.85 28 P P 13 30 38.5 -1.9
baz=227,SNR=26
O22K **Cooper Landing** 18.91 49 IAmb IAmb 13 30 55.3
comp=Z,164nm,1.1s
O22K **Cooper Landing** 18.91 49 P P 13 30 39.3 -1.7
baz=253
SEW **Seward** 18.93 50 P P 13 30 40.9 -0.4
baz=255
MA2 **Magadan** 19.01 308 P Pn 13 30 45.0 +1.9
comp=Z,45nm,1.1s,baz=105,slow=16,SNR=3.1
MA2 LR LR 13 37 34.6
comp=Z,1µm,19.9s,baz=108,slow=36
MA2 **Magadan** 19.01 308 IAmb IAmb 13 30 46.6
comp=Z,226nm,1.5s
MA2 **Magadan** 19.01 308 P Pn 13 30 45.0 +1.9
MA2 pmax pmax
comp=Z,226nm,1.5s
MA2 **Magadan** 19.01 308 P P 13 30 40.9 -1.4
comp=Z,164nm,2.0s
RC01 **Rabbit Creek A** 19.09 47 P P 13 30 41.7 -1.4
baz=252
H20K **Anotleneega Mo** 19.12 32 P P 13 30 41.9 -1.4
baz=232,SNR=44
F19K **Shaleruckik Mo** 19.13 26 P P 13 30 42.0 -1.4
baz=225,SNR=43
M22K **Willow** 19.14 45 IAmb IAmb 13 30 53.9
comp=Z,190nm,1.1s
M22K **Willow** 19.14 45 P P 13 30 43.7 +0.1
baz=249
CHUM **Lake Minchumin** 19.14 38 P P 13 30 43.3 -0.3
baz=240,SNR=16
C17K **DeLong Mountai** 19.15 18 P P 13 30 42.8 -0.9
baz=212,SNR=24
L22K **Petersville** 19.15 42 IAmb IAmb 13 30 49.9
comp=Z,161nm,1.0s
CUT **Chulitna** 19.32 43 IAmb IAmb 13 30 53.8
comp=Z,290nm,1.2s
CUT **Chulitna** 19.32 43 P P 13 30 45.8 +0.3
baz=247,SNR=20
SEY **Seymchan** 19.38 319 P Pn 13 30 48.3 +0.8
comp=Z,20nm,0.9s,baz=118,slow=11,SNR=16
SEY **Seymchan** 19.38 319 ⇑*e*P Pn 13 30 47.0 -0.5
SEY pmax pmax
comp=Z,28nm,1.0s
PMR **Palmer** 19.53 46 P P 13 30 47.7 -0.1
baz=251
KTH **Kantishna Hill** 19.53 39 IAmb IAmb 13 30 50.8
comp=Z,153nm,0.8s
PWL **Port Wells** 19.67 48 P P 13 30 49.2 -0.3
baz=254
C18K **Utukok River** 19.70 20 IAmb IAmb 13 30 53.4
comp=Z,124nm,0.9s
C18K **Utukok River** 19.70 20 P P 13 30 49.0 -0.7
baz=215,SNR=29
E19K **Redstone River** 19.73 25 IAmb IAmb 13 30 53.4
comp=Z,84nm,0.9s
E19K **Redstone River** 19.73 25 P P 13 30 50.4 +0.4
baz=224,SNR=39
TRF **Thorofare Moun** 19.74 40 P P 13 30 50.3 0.0
baz=244,SNR=53
BPAW **Bear Paw Mtn.** 19.76 38 IAmb IAmb 13 30 57.6
comp=Z,92nm,0.8s
BPAW **Bear Paw Mtn.** 19.76 38 P P 13 30 50.6 +0.2
baz=242,SNR=90
KNK **Knik Glacier** 19.78 46 IAmb IAmb 13 30 59.7
comp=Z,60nm,0.7s
KNK **Knik Glacier** 19.78 46 P P 13 30 49.8 -0.8
baz=252,SNR=14
IMAR **Indian Mountai** 19.79 31 P Pn 13 30 51.8 -0.5
F20K **Avaraart Lake** 19.86 27 P P 13 30 50.9 -0.6
baz=228,SNR=29
P23K **Montague Islan** 19.90 51 P P 13 30 51.7 -0.3
baz=257
H21K **Melozitna Rive** 19.91 33 IAmb IAmb 13 30 55.6
comp=Z,139nm,1.0s
H21K **Melozitna Rive** 19.91 33 P P 13 30 51.9 -0.1
baz=235,SNR=99
I21K **Tanana** 19.94 34 IAmb IAmb 13 30 55.8
comp=Z,224nm,0.9s
I21K **Tanana** 19.94 34 P P 13 30 53.1 +0.8
baz=238,SNR=150
SML **Sawmill** 19.96 45 P P 13 30 52.5 -0.1
baz=251,SNR=13
B18K **Kokolik River** 20.17 18 P P 13 30 55.3 +0.5
baz=213,SNR=11
G21K **Allakaket** 20.19 30 P P 13 30 54.9 -0.1
baz=232,SNR=134
M23K **Glacier View** 20.23 46 P P 13 30 54.9 -0.5
baz=252,SNR=12
GLI **Glacier Island** 20.26 49 P P 13 30 55.3 -0.5
baz=255
D19K **Kuna River** 20.27 22 IAmb IAmb 13 30 59.2
comp=Z,145nm,0.9s
D19K **Kuna River** 20.27 22 P P 13 30 55.3 -0.7
baz=221,SNR=42
MCK **McKinley** 20.41 40 P P 13 30 56.8 -0.6
baz=246,SNR=10
C19K **Lookout Ridge** 20.41 20 IAmb IAmb 13 31 01.0
comp=Z,86nm,1.1s
C19K **Lookout Ridge** 20.41 20 P P 13 30 57.0 -0.5
baz=217,SNR=8.9
SCM **Sheep Creek Mo** 20.42 46 IAmb IAmb 13 31 02.5
comp=Z,164nm,1.3s
SCM **Sheep Creek Mo** 20.42 46 P P 13 30 57.5 -0.1
baz=253,SNR=18
WAT6 **Susitna Watana** 20.48 44 P P 13 30 57.7 -0.6
baz=250,SNR=50
H22K **Ishtalitna Cre** 20.54 33 IAmb IAmb 13 31 17.2
comp=Z,66nm,0.9s
H22K **Ishtalitna Cre** 20.54 33 P P 13 30 59.3 +0.5
baz=237,SNR=57
E20K **Nigu River** 20.58 24 P P 13 30 59.5 +0.2
baz=225,SNR=59
F21K **Alatna River** 20.64 29 IAmb IAmb 13 31 06.1
comp=Z,71nm,0.9s
F21K **Alatna River** 20.64 29 P P 13 30 59.7 -0.2
baz=231,SNR=46
NEA2 **Nenana** 20.73 38 P P 13 31 00.7 -0.2
baz=244,SNR=81
D20K **Etivluk River** 20.80 23 P P 13 31 02.3 +0.6
baz=223,SNR=108
DHY **Denali Highway** 20.80 42 IAmb IAmb 13 31 08.1
comp=Z,146nm,0.7s
DHY **Denali Highway** 20.80 42 P P 13 31 02.0 +0.1
baz=250,SNR=73
EYAK **Cordova Ski Ar** 20.83 50 P P 13 31 02.1 +0.2
baz=258
I23K **Minto, Yukon-K** 20.88 36 IAmb IAmb 13 31 10.5
comp=Z,78nm,1.0s
I23K **Minto, Yukon-K** 20.88 36 P P 13 31 03.3 +0.8
baz=242,SNR=56
DIV **Divide** 20.95 48 P 13 31 03.2 -0.1
KLU **Klutina** 20.97 47 P P 13 31 03.6 +0.1
baz=255,SNR=16
A19K **Wainwright** 21.02 17 P P 13 31 03.6 -0.3
baz=213
M24K **Tolsona, Glenn** 21.02 45 IAmb IAmb 13 31 09.6
comp=Z,88nm,0.8s
M24K **Tolsona, Glenn** 21.02 45 P P 13 31 05.1 +1.0
baz=253,SNR=9.6
G22K **Bettles** 21.07 31 P P 13 31 04.4 -0.1
baz=235
H23K **Yukon River** 21.14 34 P P 13 31 05.4 +0.1
baz=240
F22K **John River** 21.21 29 P P 13 31 06.5 +0.4
baz=232,SNR=31
CCB **Clear Creek Bu** 21.24 38 P 13 31 05.0 -1.4
E21K **Killik River** 21.30 26 P P 13 31 06.9 -0.1
baz=228
COLA **College** 21.32 38 P P 13 31 07.9 +0.7
COLA IAmb IAmb 13 31 15.4
comp=Z,67nm,0.8s
COLA **College** 21.32 38 *d*iP P 13 31 06.6 -0.6
COLA pmax pmax
comp=Z,75nm,0.9s
COLA **College** 21.32 38 P P 13 31 07.1 -0.1
baz=244
KAIM **Kayak Island** 21.36 52 P P 13 31 07.8 +0.1
baz=261
G23K **Bananza Creek** 21.44 32 IAmb IAmb 13 31 11.7
comp=Z,112nm,1.1s
G23K **Bananza Creek** 21.44 32 P P 13 31 09.2 +0.6
baz=237,SNR=76
BMRM **Bremner River** 21.46 49 P P 13 31 09.2 +0.3
BMRM IAmb IAmb 13 31 15.6
comp=Z,65nm,0.8s
BMRM **Bremner River** 21.46 49 P P 13 31 09.2 +0.3
baz=258,SNR=15
HDA **Harding Lake** 21.48 39 P P 13 31 09.4 +0.4
baz=247,SNR=28
HARP **HAARP** 21.56 45 P P 13 31 10.3 +0.4
baz=254,SNR=8.1
C21K **Knifeblade Rid** 21.58 24 P P 13 31 10.0 -0.1
baz=225,SNR=22
POKR **Poker Plat Res** 21.59 37 IAmb IAmb 13 31 13.4
comp=Z,89nm,1.0s
POKR **Poker Plat Res** 21.59 37 P P 13 31 10.9 +0.8
baz=244,SNR=20
PAX **Paxson** 21.59 43 IAmb IAmb 13 31 19.0
comp=Z,54nm,0.9s
PAX **Paxson** 21.59 43 P P 13 31 10.8 +0.6
baz=252,SNR=25
N25K **Chitina, Valde** 21.61 47 P P 13 31 10.5 0.0
baz=256,SNR=13
B20K **Meade River** 21.65 20 IAmb IAmb 13 31 12.6
comp=Z,103nm,1.1s
B20K **Meade River** 21.65 20 P P 13 31 10.3 -0.4
baz=220,SNR=7.5
IL31 21.65 38 IAmb IAmb 13 31 29.1
comp=Z,63nm,1.1s
ILAR **Eielson Array** 21.65 38 P P 13 31 08.7 -2.2
comp=Z,4.0nm,0.5s,baz=241,slow=8.3,SNR=45
ILAR PcP **PcP** 13 35 09.3 -1.8
comp=Z,1.0nm,0.7s,baz=287,slow=3.5,SNR=4.4
ILAR ScP **ScP** 13 38 46.1 0.0
comp=Z,1.4nm,1.0s,baz=269,slow=5.3,SNR=5.0
comp=Z,4.0nm,0.5s
ILAR **Eielson Array** 21.65 38 P 13 31 09.1 -1.7
ILAR **Eielson Array** 21.65 38 P P 13 31 09.1 -1.7
ILAR 13 35 09.4
COLD **Coldfoot** 21.67 31 IAmb IAmb 13 31 15.1
comp=Z,74nm,1.0s
COLD **Coldfoot** 21.67 31 P P 13 31 10.8 -0.2
baz=236,SNR=52
E22K **Anaktuvuk Pass** 21.71 28 IAmb IAmb 13 31 14.9
comp=Z,68nm,0.9s
E22K **Anaktuvuk Pass** 21.71 28 P P 13 31 11.7 +0.2
baz=232,SNR=41
K24K **Donnelly Dome** 21.73 41 IAmb IAmb 13 31 22.7
comp=Z,114nm,1.1s
K24K **Donnelly Dome** 21.73 41 P P 13 31 11.9 +0.2
baz=250,SNR=17
H24K **Noodor Dome** 21.75 35 P P 13 31 10.8 -1.1
baz=242,SNR=41
GLB **Gilahina Butte** 21.94 48 IAmb IAmb 13 31 20.5
comp=Z,46nm,0.6s
D22K **Ayikyak River** 21.95 26 IAmb IAmb 13 31 17.5
comp=Z,86nm,1.0s
D22K **Ayikyak River** 21.95 26 P P 13 31 13.3 -0.7
baz=229
BGLC **Bering Glacier** 21.96 52 P P 13 31 13.3 -0.7
baz=262
B21K **Ikpikpuk River** 21.96 23 IAmb IAmb 13 31 15.7
comp=Z,90nm,0.9s
B21K **Ikpikpuk River** 21.96 23 P P 13 31 12.7 -1.3
baz=225,SNR=17
RIDG **Independent Ri** 22.10 42 IAmb IAmb 13 31 32.6
comp=Z,48nm,0.6s
RIDG **Independent Ri** 22.10 42 P P 13 31 14.6 -1.1
baz=251,SNR=13
CRQE **Cirque** 22.15 50 P P 13 31 15.7 -0.6
baz=260
J25K **Salcha River,** 22.19 39 P P 13 31 16.2 -0.5
baz=248,SNR=27
TGL **Tana Glacier** 22.28 50 P P 13 31 17.4 -0.2
MCARA **McCarthy VSAT** 22.30 48 P P 13 31 17.3 -0.5
baz=259
G24K **Hadweenzic Riv** 22.30 33 IAmb IAmb 13 31 20.4
comp=Z,130nm,0.9s
G24K **Hadweenzic Riv** 22.30 33 P P 13 31 17.3 -0.5

baz=241,SNR=105
E23K Chandalar 22.33 29 P P 13 31 18.0 -0.2
baz=235,SNR=13
DOT Dot Lake 22.40 42 IAmb IAmb 13 31 20.7
comp=Z,110nm,0.9s
PRP Porcupine Dome 22.48 37 P P 13 31 18.4 -1.5
PRP Porcupine Dome 22.48 37 P P 13 31 18.5 -1.3
baz=246,SNR=55
M26K Nabesna, AK 22.53 46 P P 13 31 21.2 +0.9
baz=256,SNR=20
L26K Log Cabin Wild 22.53 44 IAmb IAmb 13 31 36.7
comp=Z,227nm,1.7s
L26K Log Cabin Wild 22.53 44 P P 13 31 20.4 +0.1
baz=255,SNR=38
SCRK Sand Creek 22.54 41 IAmb IAmb 13 31 22.7
comp=Z,35nm,0.7s
SCRK Sand Creek 22.54 41 P P 13 31 19.5 -1.0
baz=252,SNR=37
D23K Nanushuk River 22.56 27 IAmb IAmb 13 31 23.6
comp=Z,133nm,1.1s
D23K Nanushuk River 22.56 27 P P 13 31 20.8 +0.3
baz=232,SNR=40
F24K Squaw Lake 22.58 31 P P 13 31 21.5 +0.7
baz=239,SNR=155
MESA MESA 22.62 52 P P 13 31 20.4 -1.1
baz=263
TOLK Toolik Lake Re 22.68 28 IAmb IAmb 13 31 24.2
comp=E,85nm,1.1s
TOLK Toolik Lake Re 22.68 28 P P 13 31 22.3 +0.4
baz=234,SNR=31
E24K Your Creek 22.69 30 IAmb IAmb 13 31 24.8
comp=E,65nm,1.0s
E24K Your Creek 22.69 30 P P 13 31 22.2 +0.3
baz=237,SNR=45
H25L Birch Creek 22.69 35 P P 13 31 21.6 -0.2
baz=244,SNR=43
B22K Teshekpuk Lake 22.76 22 IAmb IAmb 13 31 25.1
comp=Z,72nm,1.1s
B22K Teshekpuk Lake 22.76 22 P P 13 31 22.1 -0.5
baz=225,SNR=16
A21K Barrow 22.79 19 P P 13 31 22.3 -0.6
baz=219
G25K Bearman Lake 22.82 34 P P 13 31 22.9 -0.3
baz=243
J26L Joseph Creek 22.88 40 IAmb IAmb 13 31 25.2
comp=Z,46nm,1.0s
J26L Joseph Creek 22.88 40 P P 13 31 23.2 -0.8
baz=251,SNR=46
A22K Sinclair Lake 22.89 20 P P 13 31 23.4 -0.4
baz=222,SNR=10.0
CTG Chitna Glacier 23.03 50 P P 13 31 24.8 -0.8
baz=262
M27K Edge Creek, AK 23.03 46 IAmb IAmb 13 31 27.9
comp=Z,106nm,1.0s
M27K Edge Creek, AK 23.03 46 P P 13 31 25.8 +0.2
baz=258,SNR=36
FYU Fort Yukon 23.04 35 IAmb IAmb 13 31 26.6
comp=Z,93nm,1.0s
C23K Itkillik River 23.13 25 P P 13 31 26.1 -0.3
baz=230,SNR=107
D24K Happy Valley 23.20 27 P P 13 31 26.5 -0.7
baz=234
L27K Beaver Creek, 23.21 44 P P 13 31 27.2 -0.2
baz=256,SNR=22
BCAR Beaver Creek A 23.23 44 P 13 31 26.7 -0.9
I26K Coal Creek Min 23.32 39 P P 13 31 27.6 -0.8
baz=250
K27K Chicken 23.36 42 P P 13 31 28.5 -0.2
baz=254
F25K Christian Rive 23.36 32 IAmb IAmb 13 31 30.4
comp=Z,81nm,0.9s
F25K Christian Rive 23.36 32 P P 13 31 29.3 +0.4
baz=242,SNR=77
PINM Pinnacle 23.46 52 P P 13 31 29.2 -0.7
baz=265
BVCY Beaver Creek 23.51 46 P P 13 31 30.6 +0.4
baz=259,SNR=34
O28M Mount Upton 23.56 50 P P 13 31 30.3 -0.8
baz=263
C24K Franklin Bluff 23.58 26 P P 13 31 30.2 -0.5
baz=233
YUK3 Moose Creek 23.58 48 P P 13 31 30.2 -1.0
baz=261,SNR=17
E25K Arctic Village 23.64 31 IAmb IAmb 13 31 33.9
comp=Z,129nm,1.1s
E25K Arctic Village 23.64 31 P P 13 31 30.7 -0.8
baz=241,SNR=94
BMAR Burnt Mountain 23.65 33 P 13 31 31.6 0.0
G26K Porcupine Rive 23.72 34 IAmb IAmb 13 31 35.0
comp=Z,98nm,0.9s
G26K Porcupine Rive 23.72 34 P P 13 31 31.6 -0.6
baz=245,SNR=98
YUK8 Steele Glacier 23.83 49 P P 13 31 33.2 -0.5
baz=262,SNR=12
PNL Peninsula 23.86 53 P P 13 31 33.0 -0.6
baz=266
TYV Tymovskoe 23.91 285 *e*P P 13 31 34.5 +0.4
TYV pmax pmax
comp=Z,1µm,3.6s
TYV pmax pmax
comp=Z,75nm,1.3s
F26K Sheenjek River 23.92 33 IAmb IAmb 13 31 36.8
comp=Z,47nm,1.0s
F26K Sheenjek River 23.92 33 P P 13 31 34.2 +0.1
baz=243,SNR=38
D25K Kavik River 24.02 28 IAmb IAmb 13 31 37.3
comp=Z,68nm,0.8s
D25K Kavik River 24.02 28 P P 13 31 35.2 +0.1
baz=237,SNR=61
I27K Kandik River 24.03 38 P P 13 31 34.5 -0.7
baz=251,SNR=14
H27K Steamboat Moun 24.27 37 P P 13 31 35.7 -1.8
baz=250,SNR=7.9
O29M Mount Kennedy 24.31 52 P P 13 31 36.6 -1.4
baz=266
YUK4 Talbot Arm 24.38 49 P P 13 31 38.1 -0.5
baz=263
G27K Doyon Strip 24.44 36 P P 13 31 37.9 -1.0
baz=248,SNR=9.4
YUK6 Outpost Mounta 24.47 50 P P 13 31 38.3 -1.2
baz=265
M29M Somme Creek 24.61 47 IAmb IAmb 13 31 46.5
comp=Z,34nm,0.6s
M29M Somme Creek 24.61 47 P P 13 31 39.7 -0.9
baz=261,SNR=20
I28M Miner Creek 24.64 39 IAmb IAmb 13 31 46.8
comp=Z,85nm,0.9s
I28M Miner Creek 24.64 39 P P 13 31 40.1 -0.8
baz=253,SNR=81
P29M Windy Craggy 24.70 54 P P 13 31 39.3 -2.0
baz=268
C26K Camden Bay 24.77 28 P P 13 31 41.6 -0.3
baz=238,SNR=32
L29M L29M 24.87 45 IAmb IAmb 13 31 45.3
comp=Z,52nm,0.7s
L29M L29M 24.87 45 P P 13 31 42.9 0.0
baz=260,SNR=21
HYT Haines Junctio 24.88 51 P P 13 31 42.8 -0.3
baz=266
C27K Jago River 24.98 29 IAmb IAmb 13 31 46.5
comp=Z,56nm,1.1s
C27K Jago River 24.98 29 P P 13 31 43.9 +0.2
baz=240,SNR=38
E27K Coleen River 25.00 33 IAmb IAmb 13 31 47.4
comp=Z,73nm,1.1s
E27K Coleen River 25.00 33 P P 13 31 44.2 +0.2
baz=246,SNR=77
P30M Million Dollar 25.11 52 P P 13 31 44.4 -0.6
baz=268
N30M Aishikik Lake 25.13 49 P P 13 31 44.5 -0.8
baz=265
YSS Yuzhno-Sakhali 25.15 276 P 13 31 45.7 +0.2
YSS Yuzhno-Sakhali 25.15 276 *a i*P P 13 31 46.8 +1.3
YSS *e* 13 32 00.3
YSS *e*S S 13 36 07.2 -1.4
YSS pmax pmax
comp=Z,140nm,0.9s
YSS pmax pmax
comp=Z,300nm,3.5s
YSS pmax pmax
comp=N,100nm,2.9s
YSS pmax pmax
comp=E,200nm,3.0s
YSS MLR MLR
comp=Z,800nm,19.0s
YSS MLR MLR
comp=N,600nm,17.0s
K29M Barlow Dome 25.27 44 IAmb IAmb 13 31 50.7
comp=Z,48nm,0.8s
K29M Barlow Dome 25.27 44 P P 13 31 46.4 -0.2
baz=259,SNR=41
F28M Old Crow 25.38 34 IAmb IAmb 13 31 50.8
comp=Z,68nm,1.0s
F28M Old Crow 25.38 34 P P 13 31 47.8 +0.3
baz=249,SNR=60
PLBC Pleasant Camp 25.39 54 P P 13 31 47.5 -0.1
baz=270
M30M Minto, Yukon 25.39 47 P P 13 31 47.1 -0.5
baz=263
H29M Whitestone 25.49 38 P P 13 31 47.9 -0.5
baz=254,SNR=11
S31K Pelican 25.50 57 P P 13 31 48.0 -0.5
baz=273
O30N Mendenhall 25.57 51 P P 13 31 48.7 -0.5
baz=267
D27M Malcolm River 25.66 31 IAmb IAmb 13 32 01.0
comp=Z,30nm,0.9s
D27M Malcolm River 25.66 31 P P 13 31 49.9 -0.1
baz=244,SNR=29
R31K City Hall, Gus 25.73 56 P P 13 31 50.6 0.0
baz=272
G29M Pine Creek 25.82 37 P P 13 31 51.3 -0.2
baz=252,SNR=10
E28M Babbage River 25.87 32 IAmb IAmb 13 31 56.1
comp=Z,50nm,1.1s
E28M Babbage River 25.87 32 P P 13 31 51.9 0.0
baz=247
J30M Hart River 25.92 42 P P 13 31 52.3 -0.2
baz=259,SNR=17
SKAG Skagway 25.92 54 P P 13 31 51.0 -1.3
baz=271
MAYO Mayo, Yukon 25.94 44 IAmb IAmb 13 31 59.7
comp=Z,34nm,0.8s
MAYO Mayo, Yukon 25.94 44 P P 13 31 51.0 -1.5
baz=262
I30M Mount Dempster 26.03 41 IAmb IAmb 13 31 54.1
comp=Z,50nm,0.8s
I30M Mount Dempster 26.03 41 P P 13 31 52.6 -0.9
baz=258,SNR=52
SIT Sitka 26.05 59 P P 13 31 52.4 -1.1
baz=276
WHY Whitehorse 26.16 51 P P 13 31 52.7 -1.9
baz=268
EPYK Eagle Plains 26.17 38 IAmb IAmb 13 31 55.0
comp=Z,30nm,0.8s
EPYK Eagle Plains 26.17 38 P P 13 31 54.0 -0.6
baz=255,SNR=15
E29M Blow River 26.35 33 IAmb IAmb 13 32 00.6
comp=Z,35nm,0.9s
E29M Blow River 26.35 33 P P 13 31 56.0 -0.2
baz=250,SNR=49
R32K Eaglecrest 26.39 57 P P 13 31 55.2 -1.4
baz=274
D28M Stokes Point 26.42 31 P P 13 31 56.7 0.0
baz=247,SNR=11
S32K Killisnoo 26.42 58 P P 13 31 55.8 -1.0
baz=275
M31M Drury Creek, Y 26.47 48 P P 13 31 56.4 -1.0
baz=266
JKA Kamikawa-asahi 26.50 270 IAmb IAmb 13 31 59.9
comp=Z,116nm,1.3s
ASAJ Asahikawa 26.50 270 LR LR 13 43 29.3
comp=Z,505nm,19.6s,baz=75,slow=39
G30M tAoh Zraii Nji 26.52 37 P P 13 31 55.3 -2.5
baz=254,SNR=6.8
F30M Barrier River 26.86 36 P P 13 32 00.9 +0.1
baz=254,SNR=13
H31M Peel River 26.98 40 P P 13 32 01.1 -0.8
H31M Peel River 26.98 40 P P 13 32 01.3 -0.6
baz=259,SNR=15
N32M Quiet Lake 27.05 50 P P 13 32 02.2 -0.3
baz=269
P33M Teslin, Yukon 27.18 52 P P 13 32 02.3 -1.5
baz=271,SNR=5.7
G31M Satah River 27.25 37 IAmb IAmb 13 32 04.7
comp=Z,61nm,1.8s
G31M Satah River 27.25 37 P P 13 32 03.7 -0.5
baz=257,SNR=6.4
T33K Petersburg 27.37 60 P P 13 32 04.0 -1.3
baz=278
U33K Whale Pass 27.38 61 P P 13 32 03.1 -2.4
baz=279
CRAG Craig 27.48 63 P P 13 32 04.3 -2.2
baz=280
Q32M Nakina River 27.51 55 P P 13 32 06.3 -0.6
baz=274
F31M Tsiigehtchic 27.57 36 IAmb IAmb 13 32 08.2
comp=Z,24nm,0.8s
F31M Tsiigehtchic 27.57 36 P P 13 32 06.8 -0.4
baz=256,SNR=15
GRNR Gornyy 27.72 287⇑ *i*P P 13 32 09.2 +0.5
GRNR pmax pmax
comp=E,20nm,1.1s
GRNR pmax pmax
comp=Z,50nm,1.1s
GRNR MLR MLR
comp=E,500nm,21.0s
GRNR MLR MLR
comp=N,410nm,15.0s
GRNR MLR MLR
comp=Z,620nm,14.0s
INK Inuvik 27.87 35 IAmb IAmb 13 32 16.1
comp=Z,36nm,1.1s
INK Inuvik 27.87 35 P P 13 32 08.6 -1.2
baz=255,SNR=23
R33M Jennings River 28.15 54 P P 13 32 12.0 -0.6
baz=274
S34M Telegraph Cree 28.21 57 P P 13 32 12.8 -0.2
baz=277
V35K Ketchikan 28.35 63 P P 13 32 12.7 -1.6
baz=281
DLBC Dease Lake 28.73 56 LR LR 13 46 05.4
comp=Z,443nm,18.4s,baz=261,slow=41
DLBC Dease Lake 28.73 56 P P 13 32 15.9 -1.7
baz=277
T35M Bob Quinn 28.81 59 P P 13 32 18.1 -0.2
baz=279
U35K Hyder 29.12 61 P P 13 32 20.7 -0.4
baz=281
WTLY Watson Lake, Y 29.19 52 P P 13 32 21.7 0.0
baz=275
YAK Yakutsk 29.50 312 LR LR 13 45 48.7
comp=Z,680nm,18.6s,baz=94,slow=40
YAK Yakutsk 29.50 312 *e*P P 13 32 23.6 -0.8
YAK *e**PP pwP 13 32 35.2 +0.7
YAK *e* 13 33 19.2
YAK *e* 13 35 28.6
YAK *e*S S 13 37 19.1 +2.2
YAK *e**SS sS 13 37 33.9 +4.7
YAK *e*SSS SSS 13 39 07.3
YAK pmax pmax
comp=Z,55nm,1.0s
YAK pmax pmax
comp=E,35nm,1.2s
YAK pmax pmax
comp=N,13nm,1.2s
YAK pmax pmax
comp=Z,437nm,3.7s
YAK pmax pmax
comp=E,670nm,3.5s
YAK pmax pmax
comp=N,604nm,3.5s
YAK smax smax
comp=N,310nm,3.2s
YAK smax smax
comp=E,338nm,3.5s
LIRD Liard River Hi 30.63 53 P P 13 32 33.7 -0.6
baz=278
TIXI Tiksi 30.85 331 LR LR 13 45 26.4
comp=E,679nm,18.2s,baz=177,slow=37
TIXI Tiksi 30.85 331⇑ *e*P P 13 32 36.1 -0.1
TIXI pmax pmax
comp=Z,14nm,2.5s
TOAD Toad River Com 31.15 54 P P 13 32 38.2 -0.8
baz=280
BBB Bella Bella 31.18 68 LR LR 13 44 10.5
comp=Z,510nm,20.4s,baz=296,slow=34
C36M Paulatuk 31.44 34 IAmb IAmb 13 32 42.3
comp=Z,22nm,1.0s
C36M Paulatuk 31.44 34 P P 13 32 41.1 -0.3
baz=263,SNR=12
A36M Sachs Harbour 31.50 29 IAmb IAmb 13 32 44.1
comp=Z,49nm,0.8s
A36M Sachs Harbour 31.50 29 P P 13 32 42.8 +0.9
baz=258,SNR=41
WRGLY Wrigley 31.51 46 IAmb IAmb 13 32 44.0
comp=Z,36nm,0.9s
WRGLY Wrigley 31.51 46 P P 13 32 43.0 +0.9
baz=274,SNR=15
KOTAN Kotaneelee Air 31.55 52 P P 13 32 43.1 +0.6
baz=278,SNR=5.8
ZEA Zeya 32.20 296 *e*P P 13 32 47.6 -0.7
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,100nm,1.1s
ZEA pmax pmax
comp=Z,200nm,3.3s
ZEA MLR MLR
comp=E,300nm,21.0s
ZEA MLR MLR
comp=N,300nm,23.0s
ZEA MLR MLR
comp=Z,600nm,21.0s
H11N2 WAKE ISLAND Hy 33.12 205 T T 14 08 10.5
baz=17,slow=76,SNR=73
H11N3 WAKE ISLAND Hy 33.13 205 T T 14 08 10.4
baz=17,slow=76,SNR=63
H11N1 WAKE ISLAND Hy 33.14 205 T T 14 08 11.0
baz=17,slow=76,SNR=46
USRK Ussurisk Ar. 33.14 278 P P 13 32 56.5 0.0
comp=Z,13nm,0.6s,baz=62,slow=8.9,SNR=23
USRK PcP PcP 13 35 37.4 -1.6
comp=Z,4.6nm,0.8s,baz=78,slow=2.1,SNR=4.5
comp=Z,13nm,0.6s
HEH HeiHe 33.30 290 *e*P P 13 32 56.6 -1.3
HEH PcP PcP 13 35 39.4 +0.1
HEH pmax pmax
comp=Z,58nm,1.1s
HEH LR LR
comp=Z,690nm,16.0s
HEH LR LR
comp=Z,600nm,15.2s
HEH LR LR
comp=Z,830nm,17.5s
MAJO Matsushiro 33.53 261 P 13 33 00.1 +0.1
MAJO IAmb IAmb 13 33 01.9
comp=Z,32nm,1.1s
MAJO Matsushiro 33.53 261 *ce*P P 13 33 00.5 +0.5
MAJO pmax pmax
comp=Z,32nm,1.2s
MJAR Matsushiro Arr 33.53 261 P P 13 33 00.4 +0.4
comp=Z,10.0nm,1.1s,baz=49,slow=7.8,SNR=21
MJAR PcP PcP 13 35 40.8 +0.5
comp=Z,2.8nm,0.7s,baz=86,slow=3.3,SNR=7.1
MJAR ScP ScP 13 39 23.1 +0.4
comp=Z,4.1nm,1.1s,baz=70,slow=5.1,SNR=7.4
MJAR LR LR 13 45 44.7
comp=Z,567nm,19.6s,baz=60,slow=35
comp=Z,10.0nm,1.1s
MJAR Matsushiro Arr 33.53 261 P 13 32 59.7 -0.4
MJAR IAmb IAmb 13 33 01.9
comp=Z,30nm,1.7s
MJAR PcP 13 35 41.5 +1.2
MJB9 Matsu-Tunnel 33.53 261 P P 13 33 00.7 +0.6
MJB9 IAmb IAmb 13 33 02.9
comp=Z,34nm,1.2s
H11S1 WAKE ISLAND Hy 34.34 204 T T 14 10 36.5
baz=17,slow=76,SNR=70
H11S2 WAKE ISLAND Hy 34.35 204 T T 14 10 29.7
baz=17,slow=76,SNR=36
H11S3 WAKE ISLAND Hy 34.35 204 T T 14 10 35.2
baz=17,slow=76,SNR=36
MDJ Mudanjiang 34.43 280 IAmb IAmb 13 33 08.3
comp=Z,32nm,1.0s
JGF Kuroka 34.66 261 P P 13 33 10.0 +0.1
JGF IAmb IAmb 13 33 11.9
comp=Z,30nm,1.0s
PSTR Posyet 34.67 276 *di*P P 13 33 10.9 +1.1
CLRS Cowichan Lake 34.78 72 P P 13 33 12.1 +1.3
JHJ Hachijo jima 2 34.81 255 LR LR 13 45 31.8
comp=Z,209nm,21.6s,baz=90,slow=33
BNX BinXian 35.24 283 ⇑P P 13 33 13.8 -1.0
BNX pmax pmax
comp=Z,73nm,0.8s
NLWA Neilton Lookou 35.57 74 IAmb IAmb 13 33 22.5
comp=Z,87nm,1.4s
YKAW3 Yellowknife Wh 35.61 46 IAmb IAmb 13 33 19.4
comp=Z,30nm,0.8s
YKA Yellowknife Ar 35.63 46 P P 13 33 18.1 +0.2
comp=Z,18nm,0.8s,baz=285,slow=9.0,SNR=38
YKA PcP PcP 13 35 46.2 +0.3
comp=Z,2.2nm,0.9s,baz=290,slow=3.4,SNR=3.5
comp=Z,18nm,0.8s
YKA Yellowknife Ar 35.63 46 P P 13 33 17.1 -0.8
YKAW1 Yellowknife Wh 35.69 46 IAmb IAmb 13 33 19.5
comp=Z,26nm,0.8s
GNW Green Mountain 36.12 73 IAmb IAmb 13 33 26.3
comp=Z,41nm,1.0s
D05A Enumclaw 36.80 73 IAmb IAmb 13 33 32.4
comp=Z,90nm,1.1s
CN2 Changchun 37.42 281 P P 13 33 32.4 -0.9
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=Z,600nm,17.0s
CN2 LR LR
comp=Z,700nm,17.0s
CN2 LR LR
comp=Z,900nm,18.0s
G04A Mulino 37.45 76 IAmb IAmb 13 33 47.2
comp=Z,66nm,0.9s
H04D Lebanon 37.64 77 IAmb IAmb 13 34 04.4
comp=Z,28nm,0.8s
JCJ Chichijima 37.75 246 LR LR 13 45 53.5
comp=Z,280nm,20.1s,baz=70,slow=31
B08A Colville Reser 37.85 70 IAmb IAmb 13 33 39.8
comp=Z,30nm,0.9s
H04A Detroit Lake 37.90 77 IAmb IAmb 13 33 55.3
comp=Z,30nm,0.8s
HILR Hailar Array B 38.10 292 P P 13 33 38.6 -0.5
comp=Z,18nm,0.8s,baz=82,slow=11,SNR=14
HILR PcP PcP 13 35 54.1 +0.5
comp=Z,2.6nm,0.6s,baz=123,slow=5.5,SNR=4.0
HILR LR LR 13 51 15.4
comp=Z,653nm,18.8s,baz=255,slow=39
comp=Z,18nm,0.8s
G05A Wamic 38.15 75 IAmb IAmb 13 33 52.4
comp=Z,66nm,1.2s
I04A Tendick Farm, 38.21 78 IAmb IAmb 13 33 47.1
comp=Z,144nm,1.7s
HIA Hailar 38.23 292 P P 13 33 39.6 -0.6
HIA IAmb IAmb 13 33 41.0
comp=Z,60nm,1.1s
HIA Hailar 38.23 292 P P 13 33 39.6 -0.6
HIA pmax pmax
comp=Z,60nm,1.1s
WIFE Three Sisters- 38.44 77 IAmb IAmb 13 33 48.3
comp=Z,29nm,0.9s
WAH2 Wahluke Slope 38.47 72 IAmb IAmb 13 33 45.3
comp=Z,40nm,1.0s
G06A Carlson Farm, 38.57 75 IAmb IAmb 13 33 52.7
comp=Z,51nm,1.7s
I05D Terrebonne, OR 38.59 77 IAmb IAmb 13 34 01.2
comp=Z,30nm,1.0s
HAWA Hanford 38.66 73 IAmb IAmb 13 33 47.2
comp=Z,52nm,1.1s
F07A Phinny Hill Vi 38.67 74 IAmb IAmb 13 33 48.6
comp=Z,35nm,0.9s
J04A Umpqua Nationa 38.69 79 IAmb IAmb 13 34 17.3
comp=Z,71nm,1.1s
C09A Chrisman Ranch 38.74 70 IAmb IAmb 13 33 46.9
comp=Z,29nm,0.9s
L04D Klamath Falls 39.12 80 P P 13 33 48.9 +1.0
YBH Yreka Blue Hor 39.13 81 LR LR 13 47 04.4
comp=Z,32nm,21.3s,baz=292,slow=32
YPT Yellepit 39.17 73 IAmb IAmb 13 33 51.3
comp=Z,47nm,1.2s
NEW Newport 39.20 69 LR LR 13 47 10.9
comp=Z,521nm,21.6s,baz=288,slow=32
J05D Fort Rock, OR 39.21 78 IAmb IAmb 13 33 55.2
comp=Z,32nm,1.0s
KSRS Korea Array 39.44 271 P P 13 33 51.5 +1.1
comp=Z,30nm,0.9s,baz=57,slow=8.1,SNR=45
KSRS PcP PcP 13 35 57.5 -0.4
comp=Z,2.8nm,0.8s,baz=52,slow=7.9,SNR=3.2
KSRS LR LR 13 49 04.6
comp=Z,136µm,20.9s,baz=60,slow=35
comp=Z,30nm,0.9s
KS19 Wonju Array Si 39.45 271 P P 13 33 50.5 0.0
KS19 IAmb IAmb 13 33 52.7
comp=Z,40nm,0.9s

KSAR **Wonju Array Be** 39.47 271 P **P** **13 33 50.3 -0.4**
KSAR **Wonju Array Be** 39.47 271 P **P** **13 33 50.3 -0.4**
K05A **Summer Lake** 39.72 79 IAmb IAmb 13 34 11.3
comp=Z,70nm,1.4s
RES **Resolute Bay** 40.16 24 LR LR 13 53 04.2
comp=Z,468nm,20.8s,baz=245,slow=40
RES **Resolute Bay** 40.16 24 P **P** **13 33 55.6 -0.3**
RES **Resolute Bay** 40.16 24 P **P** **13 33 55.6 -0.3**
RES pmax pmax
comp=Z,12nm,1.2s
INCN **Inchon** 40.24 272 P **P** **13 33 57.1 +0.1**
INCN IAmb IAmb 13 33 58.9
comp=Z,88nm,0.9s
INCN **Inchon** 40.24 272 P **P** **13 33 57.6 +0.6**
INCN **Inchon** 40.24 272 P **P** **13 33 57.1 +0.1**
INCN pmax pmax
comp=Z,88nm,1.0s
F10A **Beach Ranch, E** 40.26 72 P **P** **13 33 58.0 +0.8**
JNU **Nakatsue** 40.33 263 LR LR 13 52 27.5
comp=Z,380nm,18.6s,baz=50,slow=39
JNU **Nakatsue** 40.33 263 P **P** **13 33 58.2 +0.4**
JNU IAmb IAmb 13 34 00.7
comp=Z,53nm,1.0s
HATC **Hat Creek Radi** 40.43 81 P **P** **13 34 00.4 +1.7**
HATC IAmb IAmb 13 34 10.6
comp=Z,33nm,0.8s
TJN **Taejon** 40.45 270 *ce*P **P** **13 33 59.1 +0.3**
O03E **Paynes Creek** 40.51 82 P **P** **13 34 00.2 +0.8**
O03E IAmb IAmb 13 34 07.6
comp=Z,62nm,1.4s
CIT **Chita** 40.54 299 *e*P **P** **13 33 59.8 +0.4**
CIT *e* 13 34 05.2
CIT *e* 13 34 10.4
CIT *e* 13 35 37.4
CIT *e* 13 36 09.2
CIT pmax pmax
comp=Z,226nm,1.1s
BMO **Blue Mountains** 40.79 74 P **P** **13 34 02.6 +1.0**
BMO **Blue Mountains** 40.79 74 P **P** **13 34 02.6 +1.0**
BMO pmax pmax
comp=Z,19nm,1.2s
ORV **Oroville** 41.13 83 P **P** **13 34 05.0 +0.6**
ORV **Oroville** 41.13 83 P **P** **13 34 05.0 +0.6**
ORV pmax pmax
comp=Z,7.0nm,1.0s
WVOR **Wild Horse Val** 41.27 78 P **P** **13 34 06.5 +0.8**
WVOR **Wild Horse Val** 41.27 78 P **P** **13 34 06.5 +0.8**
WVOR pmax pmax
comp=Z,21nm,1.0s
MSO **Missoula** 41.78 69 IAmb IAmb 13 34 11.9
comp=Z,28nm,0.9s
PNTR **Pine Nut** 42.59 82 IAmb IAmb 13 34 46.8
comp=Z,24nm,0.7s
XLT **XiLinHaoTe** 43.10 287 *e*P **P** **13 34 21.0 +0.5**
XLT pmax pmax
comp=Z,50nm,1.2s
XLT LR LR
comp=Z,530nm,15.8s
XLT LR LR
comp=Z,600nm,17.6s
BCYI **Bear Canyon** 43.43 72 IAmb IAmb 13 34 26.7
comp=Z,55nm,1.0s
EGMT **Eagleton** 43.61 66 IAmb IAmb 13 34 28.0
comp=Z,53nm,0.8s
BOZ **Bozeman (W)** 43.80 70 IAmb IAmb 13 34 28.1
comp=Z,32nm,0.8s
NVAR **Mina Array Bea** 43.80 82 P **P** **13 34 27.6 +1.3**
comp=Z,4.2nm,0.8s,baz=286,slow=7.9,SNR=32
NVAR PcP **PcP** **13 36 13.3 +0.8**
comp=Z,4.2nm,0.9s,baz=307,slow=4.3,SNR=3.5
NVAR ScP **ScP** **13 40 03.5 +1.3**
comp=Z,0.6nm,0.9s,baz=336,slow=4.0,SNR=3.8
NVAR LR LR 13 49 51.3
comp=Z,266nm,21.7s,baz=290,slow=32
comp=Z,4.2nm,0.8s
NVAR **Mina Array Bea** 43.80 82 P **P** **13 34 26.9 +0.5**
YHL **Hebgen Lake** 44.47 70 IAmb IAmb 13 34 34.4
comp=Z,46nm,1.0s
YHB **Horse Butte** 44.51 70 IAmb IAmb 13 34 35.0
comp=Z,54nm,0.9s
FFC **Flin Flon** 44.52 54 *i* P **P** **13 34 34.7 +3.0**
YMR **Madison River** 44.70 70 IAmb IAmb 13 34 36.6
comp=Z,35nm,0.8s
YNR **Norris Junctio** 44.84 70 IAmb IAmb 13 34 37.9
comp=Z,38nm,0.9s
YFT **Old Faithful** 44.89 71 IAmb IAmb 13 34 39.6
comp=Z,45nm,0.9s
YPP **Pitchstone Pla** 45.01 71 IAmb IAmb 13 35 02.9
comp=Z,18nm,1.0s
YNE **Yellowstone No** 45.08 69 IAmb IAmb 13 34 51.3
comp=Z,21nm,0.9s
H17A **Grant Village** 45.08 70 IAmb IAmb 13 34 47.7
comp=Z,41nm,0.9s
LKWY **Lake** 45.09 70 IAmb IAmb 13 34 48.0
comp=Z,34nm,0.8s
HVU **Hansel Valley** 45.24 75 IAmb IAmb 13 34 42.5
comp=Z,24nm,0.9s
BJI **Beijing** 45.25 282 P **P** **13 34 38.8 +1.2**
BJI pmax pmax
comp=Z,14nm,0.9s
BJI LR LR
comp=Z,250nm,19.9s
BJI LR LR
comp=Z,210nm,20.8s
BJI LR LR
comp=Z,290nm,19.4s
BJT **Baijiatuau** 45.27 282 IAmb IAmb 13 34 39.4
comp=Z,22nm,0.8s
POIN **Pond Inlet** 45.32 24 IAmb IAmb 13 34 39.3
comp=Z,22nm,1.1s
RLMT **Red Lodge** 45.45 69 IAmb IAmb 13 34 48.7
comp=Z,52nm,0.9s
IRK **Irkutsk** 45.46 303 *e*P **P** **13 34 37.0 -2.2**
IRK pmax pmax
comp=Z,130nm,1.1s
ILON **Igloolik, Nuna** 45.85 29 IAmb IAmb 13 34 43.0
comp=Z,28nm,0.9s
SPR3 **Spring Creek 3** 45.93 79 IAmb IAmb 13 35 00.5
comp=Z,30nm,1.6s
TLY **Talaya** 46.09 303 P **P** **13 34 44.7 +0.6**
TLY **Talaya** 46.09 303 P **P** **13 34 44.8 +0.6**
TLY **Talaya** 46.09 303 *c i*P **P** **13 34 44.5 +0.3**
TLY pmax pmax
comp=Z,74nm,1.0s
DUG **Dugway, Tooele** 46.15 77 IAmb IAmb 13 35 05.7
comp=Z,54nm,1.1s
ULN **Ulaanbaatar** 46.24 296 P **P** **13 34 45.9 +0.3**
ULN IAmb IAmb 13 34 47.4
comp=Z,35nm,0.9s
ULN **Ulaanbaatar** 46.24 296 P **P** **13 34 46.2 +0.6**
ULN **Ulaanbaatar** 46.24 296 *c i*P **P** **13 34 46.2 +0.6**
ULN pmax pmax
comp=Z,43nm,1.0s
JOW **Kunigami** 46.30 259 LR LR 13 50 55.9
comp=Z,120nm,20.2s,baz=74,slow=32
FCC **Fort Churchill** 46.36 46 IAmb IAmb 13 34 47.4
comp=Z,74nm,1.8s
TCUT **Toone Canyon** 46.46 75 IAmb IAmb 13 34 52.2
comp=Z,23nm,0.9s
CTU **Camp Tracy** 46.50 75 IAmb IAmb 13 34 58.9
comp=Z,16nm,1.1s
PSUT **Pine Spring** 46.51 79 IAmb IAmb 13 35 07.4
comp=Z,20nm,0.8s
MWC **Mount Wilson** 46.59 87 IAmb IAmb 13 34 57.1
comp=Z,30nm,1.2s
PDAR **Pinedale Array** 46.61 72 P **P** **13 34 49.5 +0.8**
comp=Z,48nm,0.9s,baz=308,slow=4.0,SNR=142
PDAR LR LR 13 51 59.1
comp=Z,294nm,20.1s,baz=302,slow=33
comp=Z,48nm,0.9s
PDAR **Pinedale Array** 46.61 72 P **P** **13 34 49.0 +0.3**
SONM **Songino Array** 46.63 297 P **P** **13 34 49.2 +0.6**
comp=Z,22nm,0.8s,baz=60,slow=9.0,SNR=96
SONM PcP **PcP** **13 36 22.4 +0.3**
comp=Z,12nm,1.0s,baz=95,slow=2.4,SNR=5.3
SONM ScP **ScP** **13 40 13.2 -0.3**
comp=Z,2.6nm,1.0s,baz=78,slow=3.3,SNR=5.3
SONM S **S** **13 41 38.2 +2.3**
comp=Z,0.4nm,0.7s,baz=32,slow=14,SNR=1.2
SONM LR LR 13 55 47.7
comp=Z,1μm,19.2s,baz=62,slow=38
comp=Z,22nm,0.8s
BFSC **Mount Baldy Ra** 46.83 86 IAmb IAmb 13 34 58.9
comp=Z,17nm,0.9s
ZAK **Zakamensk** 46.97 301 *e*P **P** **13 34 51.1 -0.1**
ZAK pmax pmax
comp=Z,129nm,1.3s

TIA **Tai'an** 47.01 277 P **P** **13 34 51.5 0.0**
TIA pmax pmax
comp=Z,46nm,1.0s
BSUT **Blindstream Ca** 47.20 75 IAmb IAmb 13 35 05.8
comp=Z,20nm,0.9s
NOR **Nord** 47.29 3 *i* P **P** **13 34 52.5 -0.7**
NOR IAmb IAmb 13 34 53.9
comp=Z,7.6nm,0.9s
GUMO **Guam** 47.33 231 LR LR 13 53 17.4
comp=Z,178nm,19.7s,baz=72,slow=34
TCRU **Three Creeks R** 47.33 78 IAmb IAmb 13 35 23.4
comp=Z,17nm,0.7s
ELS **Elsinore Mount** 47.36 87 IAmb IAmb 13 35 17.4
comp=Z,12nm,0.9s
CCUT **Cedar City** 47.42 80 IAmb IAmb 13 35 11.9
comp=Z,22nm,1.4s
MOY **Mondy** 47.49 304 *e*P **P** **13 34 55.9 +0.6**
MOY pmax pmax
comp=Z,87nm,1.3s
HHC **Hu-ho-hao-te** 47.59 286 *e*P **P** **13 34 56.5 +0.3**
HHC sP sP 13 35 03.6 -3.0
HHC PP **PP** **13 36 50.3 +2.7**
HHC S **S** **13 41 47.5 -2.3**
HHC sS sS 13 41 59.5 -2.1
HHC pmax pmax
comp=Z,28nm,1.3s
HHC pmax pmax
comp=Z,150nm,3.8s
HHC LR LR
comp=Z,340nm,14.5s
HHC LR LR
comp=Z,250nm,14.5s
HHC LR LR
comp=Z,470nm,15.3s
TMUT **Trail Mountain** 47.68 77 IAmb IAmb 13 35 02.4
comp=Z,36nm,1.0s
HNS **HongShan** 47.77 280 ⇑P **P** **13 34 58.4 +1.0**
HNS pmax pmax
comp=Z,33nm,0.8s
HNS LR LR
comp=Z,290nm,22.5s
HNS LR LR
comp=Z,410nm,23.0s
HNS LR LR
comp=Z,580nm,21.4s
LCMT **Little Creek M** 47.83 80 IAmb IAmb 13 35 15.7
comp=Z,22nm,1.2s
NEEM **North Greenlan** 47.83 13 *i* P **P** **13 34 56.5 -1.2**
MTPU **Mount Pierson** 47.85 78 IAmb IAmb 13 35 05.4
comp=Z,49nm,1.6s
P17A **Butcher Ranch,** 47.86 76 IAmb IAmb 13 35 02.9
comp=Z,20nm,1.1s
DNR **Dunn Ranch,Anz** 47.91 86 IAmb IAmb 13 35 27.0
comp=Z,26nm,0.8s
Q16A **Castle Valley** 47.93 77 IAmb IAmb 13 35 20.4
comp=Z,31nm,1.2s
PFO **Pinyon Flats O** 47.99 86 LR LR 13 51 29.2
comp=Z,233nm,21.2s,baz=310,slow=32
PFO **Pinyon Flats O** 47.99 86 P **P** **13 34 59.9 +0.5**
PFO **Pinyon Flats O** 47.99 86⇑ *e*P **P** **13 34 59.6 +0.2**
PFO pmax pmax
comp=Z,9.0nm,1.0s
P18A **Preston Nutter** 48.06 76 IAmb IAmb 13 35 08.1
comp=Z,17nm,0.9s
KNB **Kanab** 48.09 80 IAmb IAmb 13 35 21.1
comp=Z,68nm,1.8s
DPP **Dos Picos Cty** 48.09 87 IAmb IAmb 13 35 23.1
comp=Z,16nm,1.1s
PKCU **Pink Cliffs** 48.14 79 IAmb IAmb 13 35 31.2
comp=Z,21nm,1.1s
SRU **San Rafael Swe** 48.21 76 IAmb IAmb 13 35 06.8
comp=Z,22nm,0.8s
BORC **Borrego Spring** 48.24 86 IAmb IAmb 13 35 09.3
comp=Z,19nm,1.0s
K22A **Casper** 48.49 70 IAmb IAmb 13 35 05.4
comp=Z,23nm,0.9s
NJ2 **Nanjing** 48.62 272 *e*P **P** **13 35 02.8 -1.2**
NJ2 pmax pmax
comp=Z,12nm,0.6s
BTO **Baotou** 48.67 287 *e*P **P** **13 35 05.6 +1.1**
BTO S **S** **13 42 09.3 +4.2**
BTO pmax pmax
comp=Z,78nm,1.0s
BTO pmax pmax
comp=Z,220nm,4.5s
BTO LR LR
comp=Z,990nm,19.2s
BTO LR LR
comp=Z,950nm,16.0s
BTO LR LR
comp=Z,2μm,17.8s
CBX **Cerro Bola** 48.72 88 IAmb IAmb 13 35 32.7
comp=Z,34nm,1.1s
U15A **North Rim** 48.79 80 IAmb IAmb 13 35 44.0
comp=Z,32nm,1.3s
RSSD **Black Hills** 49.09 67 P **P** **13 35 07.6 -0.2**
RSSD **Black Hills** 49.09 67 P **P** **13 35 07.6 -0.2**
RSSD pmax pmax
comp=Z,6.0nm,0.7s
HAYD **Hayden** 49.34 73 IAmb IAmb 13 35 37.4
comp=Z,19nm,1.0s
GLA **Glamis** 49.39 85 IAmb IAmb 13 35 48.8
comp=Z,18nm,0.8s
PV04 **Paradox Valley** 49.65 76 IAmb IAmb 13 35 18.6
comp=Z,26nm,0.6s
PV16 **Nyswonger Mesa** 49.69 76 IAmb IAmb 13 35 31.3
comp=Z,26nm,0.8s
PV05 **Paradox Valley** 49.73 76 IAmb IAmb 13 35 32.9
comp=Z,46nm,1.2s
PV12 **Saucer Basin,** 49.76 76 IAmb IAmb 13 35 17.7
comp=Z,49nm,1.0s
KNGR **Kungurtug, Tuv** 49.91 304 *ce*P **P** **13 35 14.5 +0.7**
KNGR pmax pmax
comp=Z,96nm,1.0s
PV01 **Paradox Valley** 50.02 76 IAmb IAmb 13 35 19.5
comp=Z,22nm,0.9s
ULM **Lac du Bonnet** 50.05 56 P **P** **13 35 14.4 -0.4**
comp=Z,7.0nm,0.9s,baz=298,slow=8.1,SNR=3.8
ULM LR LR 13 57 46.6
comp=Z,462nm,18.8s,baz=308,slow=38
comp=Z,7.0nm,0.9s
ULM **Lac du Bonnet** 50.05 56 IAmb IAmb 13 35 27.9
comp=Z,31nm,1.5s
ULM **Lac du Bonnet** 50.05 56⇑ *e*P **P** **13 35 14.2 -0.6**
KBS **Kingsbay** 50.15 357 *e*P **P** **13 35 15.9 +0.7**
KBS **Kingsbay** 50.15 357⇓ *e*P **P** **13 35 16.1 +1.0**
KBS pmax pmax
comp=Z,68nm,1.0s
KBS **Kingsbay** 50.15 357 *i* P **P** **13 35 15.8 +0.7**
MVCO **Mesa Verde** 50.64 77 IAmb IAmb 13 35 24.6
comp=Z,25nm,1.1s
SPA0 **Spitsbergen Ar** 50.72 356 *e*P **P** **13 35 19.2 -0.3**
SPITS **Spitsbergen Ar** 50.72 356 P **P** **13 35 19.4 -0.1**
comp=Z,53nm,0.7s,baz=50,slow=6.9,SNR=51
comp=Z,53nm,0.7s
SPITS **Spitsbergen Ar** 50.72 356 P **P** **13 35 18.4 -1.1**
SPITS pmax pmax
comp=Z,66nm,0.8s
SPB2 **Spitsbergen Ar** 50.72 356 P **P** **13 35 19.0 -0.5**
LYN **LuoYang** 50.98 279 ⇑P **P** **13 35 22.3 +0.3**
LYN pmax pmax
comp=Z,54nm,0.9s
LYN LR LR
comp=Z,500nm,19.9s
LYN LR LR
comp=Z,570nm,20.2s
LYN LR LR
comp=Z,570nm,20.0s
AGMN **Agassiz Nation** 51.20 58 IAmb IAmb 13 35 24.2
comp=Z,23nm,1.2s
EPLO **Experimental L** 51.52 56 IAmb IAmb 13 35 27.5
comp=Z,26nm,1.0s
TUC **Tucson** 52.42 83 P **P** **13 35 33.2 +0.3**
TUC IAmb IAmb 13 35 40.4
comp=Z,26nm,1.4s
TUC **Tucson** 52.42 83 P **P** **13 35 33.2 +0.3**
TUC pmax pmax
comp=Z,26nm,1.4s
F33A **5 Mile Ranch,** 52.45 61 IAmb IAmb 13 35 34.0
comp=Z,23nm,1.1s
WHN **Wuhan** 52.48 274 P **P** **13 35 33.3 +0.1**
WHN sP **pP** **13 35 39.8 -0.9**
WHN pmax pmax
comp=Z,60nm,0.8s
SSLB **Suanglung** 53.06 263 P **P** **13 35 37.7 0.0**
SSLB IAmb IAmb 13 35 38.7
comp=Z,50nm,0.9s

YULB **Yu-li** 53.14 262 P **P** **13 35 37.9 -0.3**
T25A **Trinidad** 53.19 74 IAmb IAmb 13 36 04.1
comp=Z,36nm,1.2s
DUN6 **Lazy B Ranch** 53.32 82 IAmb IAmb 13 35 46.3
comp=Z,47nm,1.3s
ANMO **Albuquerque** 53.37 78 LR LR 13 57 46.1
comp=Z,562nm,19.1s,baz=47,slow=35
ANMO **Albuquerque** 53.37 78⇓ *e*P **P** **13 35 40.9 +0.9**
ANMO pmax pmax
comp=Z,15nm,1.7s
FRB **Frobisher Bay** 53.44 31 LR LR 14 00 22.3
comp=Z,719nm,21.1s,baz=302,slow=38
XAN **Xi'an** 53.53 281 P **P** **13 35 40.6 -0.4**
XAN S **S** **13 43 16.3 +4.1**
XAN pmax pmax
comp=Z,27nm,1.0s
XAN LR LR
comp=Z,360nm,21.0s
XAN LR LR
comp=Z,470nm,18.8s
XAN LR LR
comp=Z,630nm,20.6s
ECSD **EROS Data Cent** 53.58 63 IAmb IAmb 13 35 41.9
comp=Z,27nm,0.9s
TPUB **Ta-pu** 53.62 262 P **P** **13 35 41.2 -0.5**
TPUB IAmb IAmb 13 35 43.9
comp=Z,52nm,1.0s
SUMG **Summit** 53.70 14 *i* P **P** **13 35 41.0 -1.1**
SUMG IAmb IAmb 13 35 43.0
comp=Z,45nm,1.0s
QZH **Quanzhou** 53.71 266⇓ *i*P **P** **13 35 43.4 +1.0**
QZH pmax pmax
comp=Z,100nm,1.0s
Y22A **Socorro** 53.72 79 IAmb IAmb 13 35 59.4
comp=Z,17nm,0.9s
319A **Douglas** 54.00 83 IAmb IAmb 13 36 00.8
comp=Z,13nm,0.9s
ZAA0 **Zalesovo Array** 54.13 314 IAmb IAmb 13 36 51.9
comp=Z,16nm,1.0s
ZALV **Zalesovo Beam** 54.13 314 P **P** **13 35 44.5 -0.5**
comp=Z,5.2nm,0.8s,baz=51,slow=7.2,SNR=22
ZALV PcP **PcP** **13 36 50.7 +1.3**
comp=Z,11nm,0.9s,baz=23,slow=4.8,SNR=8.1
ZALV LR LR 14 00 12.7
comp=Z,410nm,20.1s,baz=56,slow=38
comp=Z,5.2nm,0.8s
ZALV **Zalesovo Beam** 54.13 314 P **P** **13 35 44.1 -0.9**
ZALV **Zalesovo Beam** 54.13 314 P **P** **13 35 44.1 -0.9**
ZALV 13 36 50.7
DBG **Daneborg** 54.15 7 *i* P **P** **13 35 43.1 -1.8**
DBG IAmb IAmb 13 35 44.7
comp=Z,14nm,1.0s
TBO **Thunder Bay** 54.38 55 IAmb IAmb 13 35 49.0
comp=Z,32nm,1.1s
E38A **The Farm, Brul** 54.55 58 IAmb IAmb 13 35 48.8
comp=Z,41nm,1.0s
RTBA **Rita Blanca** 54.66 74 IAmb IAmb 13 35 53.6
comp=Z,14nm,0.9s
SPMN **Marine on St.** 54.75 60 IAmb IAmb 13 35 50.9
comp=Z,25nm,1.2s
LZH **Lanzhou** 55.29 286 *e*P **P** **13 35 54.9 +1.0**
LZH PcP **PcP** **13 36 55.5 +1.1**
LZH S **S** **13 43 45.0 +8.9**
LZH pmax pmax
comp=Z,50nm,1.1s
LZH pmax pmax
comp=Z,190nm,4.6s
LZH LR LR
comp=Z,480nm,16.0s
LZH LR LR
comp=Z,510nm,16.7s
LZH LR LR
comp=Z,640nm,20.3s
EPT **El Paso** 55.46 81 IAmb IAmb 13 36 02.0
comp=Z,29nm,0.9s
LZDM **Lanzhou Array** 55.47 286 P **P** **13 35 55.9 +0.6**
comp=Z,11nm,0.7s,baz=90,slow=1.5,SNR=15
LZDM PcP **PcP** **13 36 55.5 +0.2**
comp=Z,1.8nm,0.3s,baz=20,slow=4.6,SNR=3.6
LZDM LR LR 14 03 04.2
comp=Z,296nm,18.6s,baz=105,slow=40
comp=Z,11nm,0.7s
GTA **Gaotai** 55.51 292 P **P** **13 35 55.8 +0.4**
GTA sP sP 13 36 02.9 -3.0
GTA S **S** **13 43 43.9 +5.0**
GTA pmax pmax
comp=Z,90nm,1.2s
GTA pmax pmax
comp=Z,210nm,4.9s
GTA LR LR
comp=Z,490nm,17.1s
GTA LR LR
comp=Z,500nm,16.0s
GTA LR LR
comp=Z,740nm,15.3s
DGZ **Jazzator, Alta** 55.60 308 *ce*P **P** **13 35 56.4 +0.5**
DGZ pmax pmax
comp=Z,64nm,1.2s
ENH **Enshi** 55.72 277 IAmb IAmb 13 35 58.1
comp=Z,49nm,1.2s
R32A **Long Quarter,** 55.77 70 IAmb IAmb 13 35 59.6
comp=Z,56nm,1.2s
MNTX **Cornudas Mount** 56.21 80 IAmb IAmb 13 36 16.8
comp=Z,14nm,1.0s
MSTX **Muleshoe** 56.28 76 IAmb IAmb 13 36 06.5
comp=Z,44nm,1.3s
AMTX **Amarillo** 56.34 75 IAmb IAmb 13 36 05.4
comp=Z,22nm,1.1s
I40A **Norwalk** 56.80 60 IAmb IAmb 13 36 05.5
comp=Z,14nm,0.8s
F42A **Maple Grove Fa** 56.91 57 IAmb IAmb 13 36 06.8
comp=Z,32nm,0.9s
SMWD **Samnorwood** 57.06 73 IAmb IAmb 13 36 10.8
comp=Z,14nm,0.7s
KAN01 **Argonia South** 57.18 70 IAmb IAmb 13 36 10.0
comp=Z,36nm,1.1s
KUQ **Kuujjuaa** 57.42 36 P **P** **13 36 07.8 -0.7**
DKNS **Dickens** 57.62 75 IAmb IAmb 13 36 15.1
comp=Z,28nm,0.9s
JFWS **Jewell Farm** 57.65 60 IAmb IAmb 13 36 11.7
comp=Z,45nm,1.0s
L40A **Anamosa** 57.68 62 IAmb IAmb 13 36 11.5
comp=Z,35nm,1.0s
POST **Post** 57.68 76 IAmb IAmb 13 36 15.6
comp=Z,34nm,0.9s
ODSA **Odessa** 57.68 78 IAmb IAmb 13 36 16.8
comp=Z,27nm,1.3s
SCO **Scoresbysund** 57.69 9 P **P** **13 36 10.0 -0.2**
SCO **Scoresbysund** 57.69 9 P **P** **13 36 10.0 -0.2**
SCO pmax pmax
comp=Z,9.0nm,1.0s
SCO **Scoresbysund** 57.69 9 *i* P **P** **13 36 09.8 -0.4**
SCO IAmb IAmb 13 36 11.4
comp=Z,6.3nm,0.8s
I42A **Draeger Farm,** 57.73 59 IAmb IAmb 13 36 13.1
comp=Z,23nm,1.0s
BLOK **Blackwell** 57.77 70 IAmb IAmb 13 36 13.0
comp=Z,38nm,1.2s
H43A **Windswept, Lux** 57.96 58 IAmb IAmb 13 36 42.6
comp=Z,30nm,0.9s
P38A **Dawn** 58.00 65 IAmb IAmb 13 36 28.8
comp=Z,33nm,0.9s
SN07 **Snyder 07** 58.03 76 IAmb IAmb 13 36 18.7
comp=Z,13nm,0.7s
T35A **Sooner Cattle** 58.08 69 IAmb IAmb 13 36 15.5
comp=Z,26nm,1.2s
MNHN **Monahans** 58.08 78 IAmb IAmb 13 36 29.1
comp=Z,30nm,1.2s
OK048 **Pawnee Station** 58.16 70 IAmb IAmb 13 36 31.0
comp=Z,30nm,1.1s
WMOK **Wichita Mounta** 58.20 73 IAmb IAmb 13 36 23.7
comp=Z,20nm,1.4s
APMT **Aspermont** 58.34 75 IAmb IAmb 13 36 20.0
comp=Z,32nm,1.0s
ZSN **Zaisan** 58.37 308 *e*P **P** **13 36 15.5 0.0**
comp=Z,16nm,1.0s
ZSN **Zaisan** 58.37 308 *e*P **P** **13 36 15.4 0.0**
ZSN pmax pmax
comp=Z,16nm,1.0s
ARA0 **ARCESS Array S** 58.41 350 *e*P **P** **13 36 14.8 -0.6**
ARCES **ARCESS Array B** 58.41 350 P **P** **13 36 14.3 -1.1**
comp=Z,14nm,0.8s,baz=26,slow=8.8,SNR=32
comp=Z,14nm,0.8s
ARCES **ARCESS Array B** 58.41 350 P **P** **13 36 14.3 -1.1**
ARCES IAmb IAmb 13 36 15.8
comp=Z,17nm,0.9s
ARCES **ARCESS Array B** 58.41 350 P **P** **13 36 14.3 -1.1**

ARCES pmax pmax
comp=Z,17nm,0.9s
LPIG La Paz 58.44 90 LR LR 13 55 56.9
comp=Z,209nm,21.1s,baz=267,slow=30
SEM Semipalatinsk 58.58 313 *eP* **P 13 36 16.8 -0.4**
SEM Semipalatinsk 58.58 313 *eP* **P 13 36 16.7 -0.4**
LVZ Lovozero 58.74 346 P **P 13 36 16.8 -0.9**
LVZ Lovozero 58.74 346 *deP* **P 13 36 17.1 -0.6**
LVZ pmax pmax
comp=Z,76nm,1.0s
LVZ Lovozero 58.74 346 P **P 13 36 16.8 -0.9**
comp=Z,87nm,1.1s
DEOK Depew 58.81 70 IAmb IAmb 13 36 20.6
comp=Z,32nm,1.1s
CD2 Chengdu 58.85 282 P **P 13 36 18.9 -0.1**
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 pmax pmax
comp=Z,180nm,4.3s
CD2 LR LR
comp=Z,420nm,17.8s
CD2 LR LR
comp=Z,660nm,21.0s
CD2 LR LR
comp=Z,520nm,17.8s
JETT Jettan, Norway 58.89 352 *eP* **P 13 36 18.5 -0.2**
TX31 Lajitas Ar. Si 58.91 81 IAmb IAmb 13 36 26.2
comp=Z,18nm,1.1s
TXAR Lajitas Array 58.91 81 P **P 13 36 19.6 +0.1**
comp=Z,6.1nm,0.8s,baz=295,slow=4.7,SNR=68
comp=Z,6.1nm,0.8s
TXAR Lajitas Array 58.91 81 P **P 13 36 19.5 -0.1**
TRO Tromso 58.94 353 *eP* **P 13 36 18.2 -0.7**
WTFS Witchita Falls 59.05 73 IAmb IAmb 13 36 24.5
comp=Z,12nm,0.9s
ABTX Abilene, Hawle 59.12 75 IAmb IAmb 13 36 25.7
comp=Z,38nm,1.0s
KURK Kurchatov 59.12 314 P **P 13 36 19.9 -0.7**
KURK Kurchatov 59.12 314 P **P 13 36 20.2 -0.3**
KURK Kurchatov 59.12 314 *ceP* **P 13 36 19.8 -0.7**
KURK pmax pmax
comp=Z,74nm,1.0s
KTK1 Kautokeino 59.15 351 *eP* **P 13 36 19.1 -1.4**
TUL3 Leonard 59.19 70 IAmb IAmb 13 36 38.2
comp=Z,23nm,0.8s
KURBB Kurchatov Arra 59.23 314 P **P 13 36 21.0 -0.3**
comp=Z,50nm,0.7s,baz=43,slow=6.6,SNR=236
KURBB LR LR 14 03 33.7
comp=Z,612nm,19.2s,baz=148,slow=38
comp=Z,50nm,0.7s
APA Apatity 59.23 346⇓ *eP* **P 13 36 16.6 -4.5**
APA MLR MLR
comp=Z,409nm,19.2s
WMQ Urumqi 59.37 303 *eP* **P 13 36 23.4 +0.9**
WMQ pmax pmax
comp=Z,68nm,0.9s
WMQ pmax pmax
comp=Z,260nm,4.5s
WMQ LR LR
comp=Z,780nm,17.7s
WMQ LR LR
comp=Z,720nm,17.7s
WMQ LR LR
comp=Z,870nm,20.5s
OZNA Ozona 59.38 78 IAmb IAmb 13 36 27.5
comp=Z,17nm,0.9s
RLO Rose Lookout 59.47 69 IAmb IAmb 13 36 39.4
comp=Z,13nm,0.7s
R40A Maddies Statio 59.62 66 IAmb IAmb 13 37 22.1
comp=Z,18nm,1.1s
U38A Gravette 59.66 69 IAmb IAmb 13 36 25.7
comp=Z,14nm,0.9s
PLPT Palo Pinto 59.80 74 IAmb IAmb 13 36 30.0
comp=Z,24nm,0.9s
M44A Midewin, Midew 59.89 60 P **P 13 36 26.2 +0.2**
ANGG Ammassalik, Gr 59.99 17 *i* P **P 13 36 24.6 -1.7**
ANGG IAmb IAmb 13 36 25.5
comp=Z,54nm,1.2s
Z35A Perchaven, San 60.08 73 IAmb IAmb 13 36 28.8
comp=Z,24nm,1.2s
MK31 Makanchi Array 60.10 308 *ceP* **P 13 36 27.1 -0.3**
MKAR Makanchi Array 60.10 308 P **P 13 36 27.2 -0.1**
comp=Z,26nm,0.8s,baz=54,slow=6.5,SNR=114
MKAR LR LR 14 03 43.6
comp=Z,468nm,19.6s,baz=36,slow=37
comp=Z,26nm,0.8s
MKAR Makanchi Array 60.10 308 P **P 13 36 26.6 -0.8**
MAKZ Makanchi 60.24 309 P **P 13 36 27.6 -0.8**
MAKZ Makanchi 60.24 309 P **P 13 36 27.6 -0.8**
MAKZ pmax pmax
comp=Z,38nm,0.9s
TGY Tagaytay City 60.35 255 LR LR 13 57 45.1
comp=Z,139nm,20.9s,baz=128,slow=31
J47A Sunmer 60.36 57 P **P 13 36 29.5 +0.3**
J47A IAmb IAmb 13 36 31.6
comp=Z,34nm,0.9s
CCM Cathedral Cave 60.37 65 P **P 13 36 28.8 -0.5**
CCM IAmb IAmb 13 36 39.4
comp=Z,39nm,1.6s
CCM Cathedral Cave 60.37 65 P **P 13 36 28.8 -0.5**
CCM pmax pmax
comp=Z,39nm,1.6s
MGMO Mountain Grove 60.40 67 IAmb IAmb 13 37 30.1
comp=Z,21nm,1.1s
SCHQ Schefferville 60.41 38 P **P 13 36 28.8 -0.6**
comp=Z,38nm,1.0s,baz=325,slow=6.7,SNR=13
SCHQ LR LR 14 06 03.4
comp=Z,527nm,18.1s,baz=324,slow=40
comp=Z,38nm,1.0s
SCHQ Schefferville 60.41 38 P **P 13 36 28.7 -0.7**
BRDY Brady 60.44 76 IAmb IAmb 13 36 34.6
comp=Z,22nm,1.2s
JCT Junction City 60.51 77 IAmb IAmb 13 36 36.1
comp=Z,12nm,0.7s
GOMU GeErMu 60.60 292 P **P 13 36 29.8 -1.6**
GOMU PcP **PcP 13 37 14.5 -1.1**
GOMU S **S 13 44 45.0 -0.9**
GOMU pmax pmax
comp=Z,26nm,1.0s
GOMU LR LR
comp=Z,170nm,16.0s
GOMU LR LR
comp=Z,250nm,15.8s
VLDQ Val d'Or 60.67 49 IAmb IAmb 13 36 30.8
comp=Z,18nm,1.1s
DRIO Del Rio 60.74 79 IAmb IAmb 13 36 46.9
comp=Z,10nm,0.9s
STEI Steigen 60.89 354 *eP* **P 13 36 31.5 -0.9**
WHTX Lake Whitney, 60.89 74 IAmb IAmb 13 36 34.6
comp=Z,14nm,0.8s
FVM French Village 60.89 65 IAmb IAmb 13 36 34.0
comp=Z,54nm,1.6s
BVAR Borovoye Array 61.03 320 P **P 13 36 33.1 -0.5**
comp=Z,25nm,0.8s,baz=49,slow=6.2,SNR=57
BVAR PcP **PcP 13 37 17.1 +0.5**
comp=Z,22nm,0.8s,baz=48,slow=3.9,SNR=9.3
BVAR LR LR 14 04 44.0
comp=Z,551nm,21.6s,baz=47,slow=38
comp=Z,25nm,0.8s
FAUS Fauske 61.42 354 *eP* **P 13 36 35.5 -0.5**
MIAR Mount Ida 61.44 70 IAmb IAmb 13 36 53.6
comp=Z,36nm,1.1s
IVI Ivigtut 61.45 25 *i* P **P 13 36 35.6 -0.6**
IVI IAmb IAmb 13 36 36.6
comp=Z,60nm,1.0s
BUKO Buck Lake 61.61 52 IAmb IAmb 13 36 39.3
comp=Z,31nm,1.0s
PBMO Poplar Bluff 61.72 66 IAmb IAmb 13 36 39.4
comp=Z,32nm,1.1s
S44A Carbondale 61.76 64 IAmb IAmb 13 36 39.8
comp=Z,31nm,1.1s
SIUC Southern Illin 61.77 64 IAmb IAmb 13 36 54.4
comp=Z,26nm,0.9s
SVE Sverdlovsk 61.79 327 *eP* **P 13 36 39.3 +0.7**
SVE pmax pmax
comp=Z,19nm,1.1s
SVE MLR MLR
comp=Z,556nm,19.0s
NRS Narsarsuaq 62.20 23 *i* P **P 13 36 40.6 -0.7**
NRS IAmb IAmb 13 36 41.6
comp=Z,21nm,0.8s
SADO Sadowa 62.22 52 LR LR 14 03 46.8
comp=Z,354nm,21.4s,baz=343,slow=36
SADO Sadowa 62.22 52 IAmb IAmb 13 36 42.6
comp=Z,20nm,1.0s
RAUS Rausandaksla 62.45 354 *eP* **P 13 36 41.8 -1.1**
STOK Stokkvaagen 62.61 355 *eP* **P 13 36 43.0 -1.0**

MOR8 Moi Rana 62.68 354 *eP* **P 13 36 42.7 -1.8**
LEIR Leirfjorden 62.83 354 *eP* **P 13 36 43.8 -1.6**
ARTI Arti 62.90 328 LR LR 14 06 36.6
comp=Z,392nm,21.1s,baz=41,slow=38
ARTI Arti 62.90 328 P **P 13 36 45.3 -0.7**
ARTI IAmb IAmb 13 37 25.8
comp=Z,28nm,1.0s
ARTI Arti 62.90 328 *c iP* **P 13 36 45.6 -0.5**
ARTI 13 37 24.0
ARTI S **S 13 45 13.8 +0.1**
ARTI SS **SS 13 49 17.0 -1.1**
ARTI pmax pmax
comp=Z,31nm,1.4s
ARTI MLR MLR
comp=Z,498nm,18.0s
HNVL Huntsville, TX 62.96 74 IAmb IAmb 13 36 51.9
comp=Z,26nm,0.9s
WCI Wyandotte Cave 63.05 62 P **P 13 36 47.5 +0.1**
WCI Wyandotte Cave 63.05 62 P **P 13 36 47.5 +0.1**
WCI pmax pmax
comp=Z,72nm,1.0s
DAV Davao City (W) 63.15 246 LR LR 13 59 51.5
comp=Z,341nm,21.1s,baz=68,slow=32
DELO Deloro Mine 63.15 52 IAmb IAmb 13 37 27.6
comp=Z,20nm,1.0s
PZH PanZhiHua 63.20 280 P **P 13 36 48.9 +0.2**
PZH S **S 13 45 17.0 -1.6**
PZH pmax pmax
comp=Z,50nm,1.2s
PZH pmax pmax
comp=Z,170nm,3.8s
PZH LR LR
comp=Z,160nm,19.1s
PZH LR LR
comp=Z,170nm,16.2s
PZH LR LR
comp=Z,200nm,18.6s
TDK Taldyqorghan 63.28 309 *eP* **P 13 36 48.8 0.0**
comp=Z,13nm,0.7s
TDK Taldyqorghan 63.28 309 *eP* **P 13 36 48.8 0.0**
TDK pmax pmax
comp=Z,13nm,0.7s
HKT Hockley 63.31 75 *deP* **P 13 36 50.2 +1.1**
HKT pmax pmax
comp=Z,12nm,1.0s
JAY Jayapura 63.36 226 LR LR 14 01 13.1
comp=Z,295nm,19.6s,baz=39,slow=33
ACSO Alum Creek Sta 63.45 58 IAmb IAmb 13 36 52.1
comp=Z,27nm,0.9s
QIZ Qiongzhong 63.55 268 P **P 13 36 47.8 -3.1**
QIZ S **S 13 45 23.8 +1.0**
QIZ LR LR
comp=Z,120nm,13.7s
QIZ LR LR
comp=Z,190nm,20.6s
QIZ LR LR
comp=Z,180nm,19.2s
KMI Kunming 63.57 278 ⇑P **P 13 36 51.3 0.0**
KMI sP pwP 13 37 03.0 +0.7
KMI pmax pmax
comp=Z,17nm,1.3s
KMI pmax pmax
comp=Z,82nm,6.4s
KMI LR LR
comp=Z,240nm,16.6s
KMI LR LR
comp=Z,190nm,21.3s
KMI LR LR
comp=Z,180nm,25.1s
HBVL Hebbronville 63.62 79 IAmb IAmb 13 36 58.8
comp=Z,13nm,1.0s
R49A Shelbyville 63.63 61 IAmb IAmb 13 36 52.9
comp=Z,22nm,1.0s
WVT Waverly 63.67 65 P **P 13 36 51.4 -0.1**
WVT IAmb IAmb 13 36 53.2
comp=Z,26nm,1.0s
WVT Waverly 63.67 65 P **P 13 36 51.4 -0.1**
WVT pmax pmax
comp=Z,26nm,1.0s
KIRV Kirov 63.81 334 LR LR 14 06 54.3
comp=Z,577nm,20.8s,baz=30,slow=38
KIRV Kirov 63.81 334 *ceP* **P 13 36 51.8 -0.2**
SHLS Shalkode 64.09 307 *eP* **P 13 36 53.2 -1.2**
SHLS Shalkode 64.09 307 *eP* **P 13 36 53.1 -1.2**
N53A Lisbon 64.18 57 IAmb IAmb 13 36 57.4
comp=Z,28nm,1.1s
KLMR Klimovskoe 64.25 340 *eP* **P 13 36 53.6 -1.3**
KLMR *e**PP **sP 13 37 03.7 -1.5**
KLMR pmax pmax
comp=Z,112nm,1.1s
ZAIG Zacatecas 64.29 85 P **P 13 36 56.5 +0.4**
UZB Uzynbulak 64.32 307 *eP* **P 13 36 56.0 0.0**
comp=Z,17nm,1.0s
UZB Uzynbulak 64.32 307 *eP* **P 13 36 55.9 0.0**
UZB pmax pmax
comp=Z,17nm,1.0s
PLAL Pickwick Lake 64.34 66 IAmb IAmb 13 36 57.7
comp=Z,29nm,1.0s
LMQ La Malbaie 64.38 45 IAmb IAmb 13 36 56.3
comp=Z,27nm,1.2s
SATY Saty 64.69 308 *eP* **P 13 36 58.8 +0.4**
comp=Z,24nm,1.1s
SATY Saty 64.69 308 *eP* **P 13 36 58.7 +0.4**
SATY pmax pmax
comp=Z,24nm,1.1s
K57A Scipio Center 65.00 53 IAmb IAmb 13 37 34.8
comp=Z,31nm,0.9s
MDOK Medeo 65.29 309 *eP* **P 13 37 02.4 +0.2**
MDOK Medeo 65.29 309 *eP* **P 13 37 02.3 +0.1**
D62A Allapoint, All 65.30 45 IAmb IAmb 13 37 03.7
comp=Z,33nm,1.1s
X48A Hartselle 65.31 65 IAmb IAmb 13 37 23.9
comp=Z,22nm,1.0s
AAA Alma-Ata 65.33 309 *eP* **P 13 37 02.6 +0.2**
AAA Alma-Ata 65.33 309 *eP* **P 13 37 02.5 +0.2**
BTLS Baital 65.35 312 *eP* **P 13 37 02.9 +0.5**
comp=Z,18nm,0.9s
BTLS Baital 65.35 312 *eP* **P 13 37 02.8 +0.4**
BTLS pmax pmax
comp=Z,18nm,0.9s
TNSS Tian-Shan 65.44 309 *eP* **P 13 37 03.2 -0.3**
TNSS Tian-Shan 65.44 309 *eP* **P 13 37 03.1 -0.3**
Q54A Coxs Mills 65.50 58 IAmb IAmb 13 37 04.7
comp=Z,43nm,1.3s
BINY Binghamton 65.66 53 IAmb IAmb 13 37 07.5
comp=Z,24nm,0.9s
M57A Sunshine Farm, 65.72 54 IAmb IAmb 13 37 22.7
comp=Z,28nm,1.0s
TARG Taragay, Kyrgy 65.97 307 IAmb IAmb 13 37 43.9
comp=Z,25nm,1.0s
FINES FINESS Array B 66.09 347 P **P 13 37 06.0 -0.8**
comp=Z,53nm,0.9s,baz=25,slow=6.3,SNR=88
FINES LR LR 14 11 38.3
comp=Z,429nm,18.1s,baz=27,slow=41
comp=Z,53nm,0.9s
FINES FINESS Array B 66.09 347 P **P 13 37 06.0 -0.8**
TKM2 Tokmak 2 66.19 309 P **P 13 37 09.6 +1.5**
SNR=37
SGDS Sogindy 66.26 310 *eP* **P 13 37 08.7 +0.3**
TNCH TengChong 66.27 281 ⇑P **P 13 37 09.5 +0.7**
TNCH pP pP 13 37 12.0 -4.4
TNCH S **S 13 45 54.3 -2.3**
TNCH pmax pmax
comp=Z,34nm,1.5s
TNCH LR LR
comp=Z,150nm,3.7s
TNCH LR LR
comp=Z,190nm,4.3s
TNCH LR LR
comp=Z,86nm,4.5s
TKL Tuckaleechee C 66.30 62 LR LR 14 06 15.8
comp=Z,304nm,20.2s,baz=323,slow=36
LRAL Lakeview Retre 66.36 66 IAmb IAmb 13 37 28.1
comp=Z,18nm,1.0s
ULHL Ulaho 66.37 308 P **P 13 37 10.8 +1.5**
SNR=6.2
USP Ospenovka 66.46 310 P **P 13 37 10.3 +0.7**
SNR=69
CHMS Chumysh 66.54 310 P **P 13 37 11.1 +1.0**
SNR=14
SWI Sorong 66.57 236 P **P 13 37 10.2 -0.3**
comp=Z,952nmcomp=Z,82nm,1.0s
MOL Molde 66.63 357 *eP* **P 13 37 10.3 0.0**
KBK Karagaybulak 66.70 309 P **P 13 37 12.9 +1.6**
SNR=48
PMG Port Moresby 66.89 217 LR LR 14 03 27.9

comp=Z,245nm,19.8s,baz=344,slow=33
AAK Ala-Archa 66.94 310 LR LR 14 07 52.3
comp=Z,386nm,20.6s,baz=35,slow=37
AAK Ala-Archa 66.94 310 P **P 13 37 13.2 +0.4**
AAK Ala-Archa 66.94 310 P **P 13 37 13.2 +0.4**
AAK Ala-Archa 66.94 310 P **P 13 37 13.6 +0.8**
SNR=51
AAK Ala-Archa 66.94 310 *i* P **P 13 37 13.6 +0.8**
SNR=57
AAK Ala-Archa 66.94 310 *ceP* **P 13 37 13.1 +0.4**
AAK pmax pmax
comp=Z,85nm,1.3s
BLA Blacksburg 67.01 59 IAmb IAmb 13 37 15.1
comp=Z,32nm,1.1s
DOMB Dombas 67.10 356 *eP* **P 13 37 11.9 -1.4**
UCH Uchtor 67.23 309 P **P 13 37 16.7 +1.7**
SNR=38
EKS2 Erkin-Say 67.27 310 P **P 13 37 15.7 +0.9**
SNR=50
LSA Lhasa 67.37 290 P **P 13 37 13.3 -2.8**
LSA S **S 13 46 02.1 -8.2**
LSA pmax pmax
comp=Z,31nm,0.8s
LSA LR LR
comp=Z,270nm,21.6s
LSA LR LR
comp=Z,220nm,18.6s
LSA LR LR
comp=Z,370nm,19.2s
LSA Lhasa 67.37 290 *i* P **P 13 37 17.6 +1.5**
SNR=9.8
AKTO Aktyubinsk 67.86 325 LR LR 14 09 56.5
comp=Z,910nm,18.2s,baz=33,slow=39
152A Waverly Hall 67.94 65 IAmb IAmb 13 37 19.9
comp=Z,29nm,1.2s
NB2 NORSAR Subarra 67.99 355 P **P 13 37 18.3 -0.7**
comp=Z,50nm,1.2s,baz=5.9,slow=6.5
NOA NORSAR Array B 67.99 355 P **P 13 37 18.4 -0.5**
comp=Z,22nm,1.0s,baz=12,slow=6.7,SNR=32
NOA LR LR 14 08 02.8
comp=Z,171nm,19.8s,baz=345,slow=37
comp=Z,22nm,1.0s
NBO00 NORSAR Array S 68.02 355 IAmb IAmb 13 37 19.9
comp=Z,30nm,1.3s
AB31 Akbulak array 68.10 323 IAmb IAmb 13 37 47.3
comp=Z,16nm,1.0s
ABKAR Akbulak array 68.10 323 P **P 13 37 19.3 -0.5**
DZA Taraz 68.26 312 *eP* **P 13 37 21.4 +0.4**
comp=Z,17nm,1.0s
DZA Taraz 68.26 312 *eP* **P 13 37 21.4 +0.4**
DZA pmax pmax
comp=Z,17nm,1.0s
NC602 NORSAR Array S 68.27 354 IAmb IAmb 13 37 21.4
comp=Z,27nm,1.1s
NC602 NORSAR Array S 68.27 354 *eP* **P 13 37 20.3 -0.3**
KK31 Karatay Array 68.48 312 P **P 13 37 21.7 -0.6**
KK31 Karatay Array 68.48 312 P **P 13 37 21.7 -0.6**
KK31 pmax pmax
comp=Z,57nm,1.0s
KKAR Karatay Array 68.48 312 P **P 13 37 22.0 -0.3**
KKAR Karatay Array 68.48 312 P **P 13 37 22.0 -0.3**
TAOE Nuku Hiva Isla 68.49 138 *eS* **S 13 46 26.5 +3.5**
comp=Z,109nm,25.1s
TAOE Nuku Hiva Isla 68.49 138 *eLR* LR 13 58 00.3
comp=Z,1µm,22.8s
SKAR Skarslia 68.49 356 *eP* **P 13 37 22.1 0.0**
KSH Kashi 68.55 307 P **P 13 37 27.4 +4.4**
KSH pmax pmax
comp=Z,150nm,1.2s
KSH LR LR
comp=Z,480nm,22.0s
KSH LR LR
comp=Z,460nm,22.7s
HFS Hagfors 68.72 353 P **P 13 37 22.9 -0.6**
comp=Z,32nm,0.9s,baz=11,slow=3.0,SNR=39
comp=Z,32nm,0.9s
T59A Double "B" Far 68.73 57 IAmb IAmb 13 37 26.2
comp=Z,27nm,1.0s
MYLDM Lahad Datu 68.83 251 IAmb IAmb 13 37 27.4
comp=Z,30nm,1.0s
BRLS Boroldav 68.85 313 *eP* **P 13 37 26.3 +1.6**
BRLS Boroldav 68.85 313 *eP* **P 13 37 26.2 +1.6**
VSU Vasula 68.85 346 *c iP* **P 13 37 22.8 -1.5**
VSU pmax pmax
comp=Z,150nm,1.3s
OSL Oslo 69.11 355 *eP* **P 13 37 25.6 -0.3**
MOS Moscow 69.32 339 *eP* **P 13 37 25.9 -1.4**
MOS *e* 13 37 36.9
MOS pmax pmax
comp=Z,149nm,0.9s
MOS pmax pmax
comp=Z,200nm,1.0s
MOS MLR MLR
comp=N,700nm,19.0s
MOS MLR MLR
comp=Z,700nm,19.0s
KONO Kongsberg 69.46 355 P **P 13 37 27.5 -0.6**
KONO IAmb IAmb 13 37 29.4
comp=Z,27nm,0.9s
KONO Kongsberg 69.46 355 *eP* **P 13 37 28.2 +0.1**
KONO Kongsberg 69.46 355 *deP* **P 13 37 28.5 +0.4**
KONO pmax pmax
comp=Z,23nm,1.0s
CHM Chimkent 69.51 312 *eP* **P 13 37 28.9 +0.2**
comp=Z,30nm,1.0s
CHM Chimkent 69.51 312 *eP* **P 13 37 28.9 +0.2**
CHM pmax pmax
comp=Z,30nm,1.0s
BELG Belogornoye 69.67 332 *c iP* **P 13 37 29.0 -0.5**
BELG pmax pmax
comp=Z,12nm,0.9s
SHL Shillong 69.95 286 P **P 13 37 31.6 -0.3**
SNR=25
OBN Obninsk 70.13 339 LR LR 14 12 34.6
comp=Z,524nm,18.0s,baz=344,slow=40
OBN Obninsk 70.13 339 P **P 13 37 31.1 -1.1**
OBN Obninsk 70.13 339 *c iP* **P 13 37 31.7 -0.6**
OBN *e* 13 40 07.4
OBN pmax pmax
comp=Z,184nm,1.3s
OBN MLR MLR
comp=Z,571nm,18.0s
OBN Obninsk 70.13 339 P **P 13 37 31.3 -1.0**
comp=Z,1µmcomp=Z,150nm,1.0s
SANI Sanana 70.40 240 P **P 13 37 32.3 -2.1**
comp=Z,32nm,0.9s
AAI Ambon 70.57 237 P **P 13 37 34.7 -0.8**
comp=Z,4µmcomp=Z,53nm,1.4s
CHTO Chiang Mai 70.58 276 P **P 13 37 34.7 -0.9**
CHTO IAmb IAmb 13 37 36.5
comp=Z,17nm,1.1s
CHTO Chiang Mai 70.58 276 P **P 13 37 35.5 -0.1**
CHTO Chiang Mai 70.58 276 P **P 13 37 34.7 -0.9**
CHTO pmax pmax
comp=Z,17nm,1.1s
MRSI Marisa 70.59 245 P **P 13 37 34.6 -1.0**
comp=Z,556nmcomp=Z,54nm,1.0s
TOLI2 Tolitoli 70.75 247 IAmb IAmb 13 37 36.8
comp=Z,22nm,0.9s
CM31 Chiang Mai Arr 70.85 276 IAmb IAmb 13 37 38.4
comp=Z,15nm,1.1s
CM31 Chiang Mai Arr 70.85 276 P **P 13 37 37.5 +0.2**
SNR=6.9
CMAR Chiang Mai Arr 70.85 276 P **P 13 37 37.1 -0.1**
comp=Z,8.0nm,0.9s,baz=27,slow=7.0,SNR=61
comp=Z,8.0nm,0.9s
CMAR Chiang Mai Arr 70.85 276 P **P 13 37 36.8 -0.4**
LUWI Luwuk 71.36 244 P **P 13 37 38.9 -1.4**
LUWI Luwuk 71.36 244 P **P 13 37 38.0 -2.3**
LPSR Galich'ya Gora 71.88 337 *eP* **P 13 37 40.5 -2.4**
LPSR pmax pmax
comp=Z,40nm,1.0s
MPSI Mapaga 71.88 247 P **P 13 37 42.1 -1.4**
comp=Z,403nmcomp=Z,35nm,0.9s
APSI Ampana 71.89 245 P **P 13 37 43.4 -0.1**
comp=Z,28nm,1.0s
PABE Paberze 72.12 346 P **P 13 37 43.9 -0.4**
VRH Novokhopyorsk 72.42 334 *eP* **P 13 37 44.9 -1.3**
VRH pmax pmax
comp=Z,51nm,1.1s
MNK Minsk 72.45 344 *i* P **P 13 37 46.8 +0.5**
MNK *i* 13 38 04.1
MNK *i* 13 40 28.0
MNK *i* PPP PPP 13 42 12.2
MNK *i* S **S 13 47 12.2 +4.1**
MNK pmax pmax

comp=Z,117nm,0.8s
MNK pmax pmax
comp=E,62nm,0.8s
MNK pmax pmax
comp=N,20nm,0.8s
MNK MLR MLR
comp=N,255nm,16.0s
MNK MLR MLR
comp=E,221nm,15.0s
VORR Voronezh 72.66 336 *eP* **P 13 37 46.5 -1.1**
VORR pmax pmax
comp=Z,65nm,1.3s
PPT Papeete 73.05 151 LR LR 14 01 35.0
comp=Z,253nm,20.9s,baz=350,slow=29
PPT2 Papeete2 73.07 151 *eP* **P 13 37 51.8 +1.4**
comp=Z,33nm,25.5s
PPT2 *eS* **SKiKP 13 47 20.7 -0.1**
comp=Z,208nm,29.0s
PPT2 *e*SS **SS 13 52 03.2 +5.4**
comp=Z,93nm,23.5s
PPT2 *e*LR LR 14 00 07.4
comp=Z,425nm,28.5s
PPT2 *e*LR LR 14 00 14.0
comp=Z,639nm,27.2s
VSR Storozhevoye 73.09 336 *eP* **P 13 37 47.2 -2.9**
VSR pmax pmax
comp=Z,40nm,1.0s
VORD Divnogorie 73.28 336 *eP* **P 13 37 49.4 -1.9**
VORD pmax pmax
comp=Z,60nm,1.0s
CMIG Matias Romero 73.32 83 LR LR 14 08 09.5
comp=Z,197nm,19.3s,baz=298,slow=34
SUW Suwalki 73.68 347 *eP* **P 13 37 53.1 -0.5**
DZM Mont Dzumac 73.87 194 *eS* **S 13 47 29.5 +4.5**
comp=Z,133nm,24.1s
DZM Mont Dzumac 73.87 194 *e*LR LR 14 00 35.5
comp=Z,727nm,23.4s
RAR Rarotonga 73.91 161 LR LR 14 04 35.5
comp=Z,513nm,19.2s,baz=324,slow=31
EKA Eskdalemuir Ar 73.96 2 P **P 13 37 55.4 +0.1**
comp=Z,18nm,0.9s,baz=359,slow=4.8,SNR=20
comp=Z,18nm,0.9s
ESK Eskdalemuir 73.98 2 P **P 13 37 55.4 +0.1**
ESK IAmb IAmb 13 37 56.5
comp=Z,40nm,1.1s
ESK Eskdalemuir 73.98 2 P **P 13 37 55.4 +0.1**
ESK pmax pmax
comp=Z,40nm,1.1s
IDGL Inch Island, C 74.05 5 P **P 13 37 56.6 +0.9**
NIL Nilore 74.45 304 P **P 13 37 59.5 +1.0**
NIL Nilore 74.45 304 P **P 13 37 59.9 +1.4**
NIL Nilore 74.45 304 P **P 13 37 59.5 +1.0**
NIL pmax pmax
comp=Z,237nm,1.1s
TTSI Tana Toraja 74.67 245 P **P 13 37 58.9 -1.0**
comp=Z,2µmcomp=Z,34nm,0.9s
BSEG Bad Segeberg 75.12 354 *eP* **P 13 38 02.7 +0.7**
comp=Z,41nm,1.0s,baz=7.7,slow=5.5
ILTH Belurgan, Co L 75.15 4 P **P 13 38 02.1 0.0**
GKP Gorka Klasztor 75.18 350 *eP* **P 13 38 02.4 +0.1**
IGLA Glengowla, Co 75.58 6 P **P 13 38 04.7 +0.1**
BNSI Bone 75.61 244 P **P 13 38 04.8 -0.5**
comp=Z,26nm,1.1s
AK23 Malin Array Si 75.79 342 P **P 13 38 05.3 -0.6**
AK21 Malin Array Si 75.79 342 P **P 13 38 05.3 -0.6**
AK22 Malin Array Si 75.80 342 P **P 13 38 05.3 -0.6**
AK03 Malin Array Si 75.81 342 P **P 13 38 05.3 -0.6**
AK04 Malin Array Si 75.82 342 P **P 13 38 05.4 -0.6**
AKASG Malin Array Be 75.83 342 P **P 13 38 05.7 -0.3**
comp=Z,104nm,0.7s,baz=22,slow=5.8,SNR=191
AKASG LR LR 14 15 33.6
comp=Z,133nm,18.1s,baz=7.0,slow=39
comp=Z,104nm,0.7s
AKASG Malin Array Be 75.83 342 P **P 13 38 05.6 -0.5**
AKBB Malin Array Si 75.83 342*c i*P **P 13 38 05.7 -0.4**
AKBB Malin Array Si 75.83 342 P **P 13 38 05.5 -0.6**
AK20 Malin Array Si 75.83 342 P **P 13 38 05.5 -0.6**
KIEV Kiev 75.84 342 P **P 13 38 05.7 -0.4**
KIEV Kiev 75.84 342 *i* P **P 13 38 05.7 -0.4**
SNR=68
KIEV Kiev 75.84 342 P **P 13 38 05.7 -0.4**
KIEV pmax pmax
comp=Z,145nm,1.1s
KIEV Kiev 75.84 342 P **P 13 38 05.5 -0.6**
comp=Z,5µmcomp=Z,594nm,1.3s
AK18 Malin Array Si 75.84 342 P **P 13 38 05.5 -0.6**
AK01 Malin Array Si 75.84 342 P **P 13 38 05.5 -0.6**
RNPP8 Varash 75.84 344 P **P 13 38 05.6 -0.5**
KBL Kabul 75.90 308 P **P 13 38 06.0 -1.1**
KBL Kabul 75.90 308 P **P 13 38 07.0 -0.1**
SNR=45
KBL Kabul 75.90 308 P **P 13 38 06.0 -1.1**
KBL pmax pmax
comp=Z,108nm,1.0s
DSB Dublin 75.93 4 IAmb IAmb 13 38 08.0
comp=Z,28nm,0.8s
DSB Dublin 75.93 4 P **P 13 38 07.0 +0.4**
RNPP5 Staryi Chortor 75.94 344 P **P 13 38 06.3 -0.4**
AK13 Malin Array Si 75.94 342 P **P 13 38 06.4 -0.3**
MTSU Mount Surprise 75.96 216 P **P 13 38 07.3 +0.1**
comp=Z,7.0nm,0.9s
GORT1 Trebel 75.99 354 *eP* **P 13 38 07.5 +0.6**
comp=Z,55nm,1.1s,baz=7.7,slow=5.5
KDU Kakadu 76.11 229 P **P 13 38 07.7 -0.3**
comp=Z,9.3nm,0.9s
BEL Belsk 76.14 347 *eP* **P 13 38 08.5 +0.7**
RUE Ruedersdorf 76.30 352 *eP* **P 13 38 09.0 +0.2**
comp=Z,61nm,1.1s,baz=7.7,slow=5.5
BKSI Bulukumba 76.36 243 P **P 13 38 09.7 +0.2**
comp=Z,453nmcomp=Z,40nm,1.3s
RETH Rethem/Aller, 76.37 355 *eP* **P 13 38 09.7 +0.6**
comp=Z,38nm,1.1s,baz=7.7,slow=5.5
FLTG Flechtingen 76.65 353 *eP* **P 13 38 10.6 -0.2**
comp=Z,42nm,1.0s,baz=7.7,slow=5.5
IWEX Carrickbyrne, 76.78 5 P **P 13 38 11.9 +0.5**
IBBN Ibbenburen 76.89 356 *eP* **P 13 38 12.7 +0.7**
comp=Z,92nm,1.0s,baz=7.7,slow=5.5
MTN Manton Dam 76.89 230 P **P 13 38 12.2 -0.2**
comp=Z,20nm,0.9s
MTN Manton Dam 76.89 230 IAmb IAmb 13 38 13.2
comp=Z,20nm,1.0s
ASSE Asse, Remlinge 76.89 354 *eP* **P 13 38 12.3 +0.3**
comp=Z,45nm,1.2s,baz=7.7,slow=5.5
CLZ Clausthal 77.20 354 *eP* **P 13 38 14.5 +0.6**
comp=Z,57nm,1.0s,baz=7.7,slow=5.5
GTTG Gottingen 77.52 354 *eP* **P 13 38 16.2 +0.6**
comp=Z,66nm,1.1s,baz=7.7,slow=5.5
CLL Collm 77.53 352 IAmb IAmb 13 38 16.4
comp=Z,25nm,1.0s
CLL Collm 77.53 352 *i* P **P 13 38 15.4 -0.3**
CLL pmax pmax
comp=Z,27nm,1.0s
CLL Collm 77.53 352 *eP* **P 13 38 15.4 -0.3**
comp=Z,24nm,1.0s,baz=7.7,slow=5.5
GOF Gofitskoye 77.58 331*ceP* **P 13 38 16.2 +0.1**
LVV L'vov 77.61 345 P **P 13 38 16.0 -0.2**
KSP Ksiaz 77.67 350 *eP* **P 13 38 16.5 0.0**
KSP Ksiaz 77.67 350 P **P 13 38 16.1 -0.4**
comp=Z,21nm,1.0s
NEUB Neuenburg 77.73 353 *eP* **P 13 38 17.0 +0.2**
comp=Z,71nm,1.1s,baz=7.7,slow=5.5
ERBR Yeremizino-Bor 77.75 333 *eP* **P 13 38 17.2 +0.2**
ERBR pmax pmax
comp=Z,99nm,1.0s
SOEI Soe 77.75 237 IAmb IAmb 13 38 48.0
comp=Z,27nm,0.9s
SOEI Soe 77.75 237 P **P 13 38 16.4 -1.1**
comp=Z,25nm,0.8s
BUG Bochum--Univer 77.77 356 *eP* **P 13 38 17.2 +0.1**
comp=Z,40nm,1.1s,baz=7.7,slow=5.5
HORU Horodok 77.78 343 P **P 13 38 16.8 -0.3**
OJC Ojcow 77.86 348 *eP* **P 13 38 17.7 +0.2**
OJC Ojcow 77.86 348 P **P 13 38 17.2 -0.4**
comp=Z,47nm,1.0s
BRG Berggiesshubel 77.88 352 *eP* **P 13 38 17.5 -0.2**
comp=Z,24nm,1.1s,baz=7.7,slow=5.5
CHVC Chvalec 77.95 350 *eP* **P 13 38 17.6 -0.5**
CHVC Chvalec 77.95 350 *eP* **P 13 38 17.6 -0.5**
KASTN Kahler Asten 77.95 355 *eP* **P 13 38 18.4 +0.3**
comp=Z,17nm,1.0s,baz=7.7,slow=5.5
OSTC Ostas 77.96 350 *eP* **P 13 38 18.3 +0.1**
OSTC MLR MLR
comp=Z,400nm,16.1s
OSTC Ostas 77.96 350 *eP* **P 13 38 18.3 +0.1**
OSTC AMS AMS 14 19 10.0
comp=Z,400nm,16.1s
MAK Makhachkala 77.99 327*c iP* **P 13 38 14.5 -3.9**
MAK *e* 13 41 14.3
MAK *e*PPP PPP 13 43 05.3
MAK *e*S **S 13 48 05.6 -4.4**
MAK *e*SSS SSS 13 56 35.3
MAK pmax pmax
comp=Z,199nm,1.1s
KWP Kalwaria Pacla 78.01 346 *eP* **P 13 38 19.1 +0.7**
UPC Upice 78.03 350 *eP* **P 13 38 18.6 +0.1**
UPC MLR MLR
comp=Z,400nm,19.1s
UPC Upice 78.03 350 *eP* **P 13 38 18.6 +0.1**
UPC AMS AMS 14 17 10.0
comp=Z,400nm,19.1s
DPC Dobruska-Polom 78.16 350 *eP* **P 13 38 19.6 +0.3**
DPC MLR MLR
comp=Z,400nm,15.1s
DPC Dobruska-Polom 78.16 350 *eP* **P 13 38 19.6 +0.3**
DPC AMS AMS 14 19 20.0
comp=Z,400nm,15.1s
PVCC Panska Ves 78.16 351 *eP* **P 13 38 19.4 +0.2**
PVCC Panska Ves 78.16 351 *eP* **P 13 38 19.4 +0.2**
HSKC Hora Svate Kat 78.19 352 *eP* **P 13 38 19.6 +0.2**
RICC Richard 78.19 351 *eP* **P 13 38 20.0 +0.6**
UBBA Unterbreizbach 78.24 354 *eP* **P 13 38 20.6 +1.1**
comp=Z,35nm,1.6s,baz=7.7,slow=5.5
SHIU Shidnytsya 78.30 345 P **P 13 38 20.1 0.0**
MORS Morshin 78.30 345 P **P 13 38 20.2 +0.2**
MOX Moxa 78.30 353 *eP* **P 13 38 20.2 +0.1**
comp=Z,26nm,1.0s,baz=7.7,slow=5.5
MOX *e*L L 14 18 28.1
comp=Z,197nm,20.6s
EDFI Ende, Flores 78.31 240 P **P 13 38 17.8 -2.8**
comp=Z,29nm,1.2s
KRLC Kraliky 78.38 350 AMS AMS 14 17 50.0
comp=Z,300nm,20.7s
STEB Steborice 78.40 349 *eP* **P 13 38 20.9 +0.4**
KMPD K-Podol'skiy 78.40 343 P **P 13 38 19.9 -0.7**
PLN Plauen 78.42 353 *eP* **P 13 38 20.8 +0.1**
comp=Z,6.3nm,0.9s,baz=7.7,slow=5.5
STHS Stebnicka Huta 78.44 347 *eP* **P 13 38 20.7 -0.1**
STHS pmax pmax
comp=Z,56nm,1.2s
STHS Stebnicka Huta 78.44 347 *eP* **P 13 38 20.7 -0.1**
OKC Ostrava-Krasne 78.45 349 *eP* **P 13 38 21.1 +0.3**
OKC MLR MLR
comp=Z,300nm,18.1s
OKC Ostrava-Krasne 78.45 349 *eP* **P 13 38 21.1 +0.3**
OKC AMS AMS 14 19 30.0
comp=Z,300nm,18.1s
SORM Soroca 78.45 342 ⇑P **P 13 38 20.7 -0.1**
SORM Soroca 78.45 342 P **P 13 38 20.7 -0.1**
BATI Baumata 78.45 238 P **P 13 38 21.1 -0.2**
comp=Z,57nm,1.1s
TANN Tannenbergstha 78.46 352 *eP* **P 13 38 21.0 0.0**
comp=Z,22nm,1.2s,baz=7.7,slow=5.5
UCC Uccle 78.52 358 IAmb IAmb 13 38 21.7
comp=Z,16nm,0.8s
TBI Tubuai 78.53 152 *eS* **S 13 48 14.1 -1.7**
comp=Z,542nm,28.8s
TBI *e*SS **SS 13 53 24.9 +4.6**
comp=Z,3µm,29.5s
TBI *e*LR LR 14 02 34.9
comp=Z,3µm,22.2s
TBI *e*LR LR 14 02 35.9
comp=Z,1µm,26.5s
NIE Niedzica 78.57 347 *eP* **P 13 38 22.3 +0.7**
NIE Niedzica 78.57 347 P **P 13 38 21.3 -0.3**
MORC Moravsky Berou 78.58 349 IAmb IAmb 13 38 22.8
comp=Z,20nm,1.0s
MORC Moravsky Berou 78.58 349 ⇑P **P 13 38 21.7 0.0**
MORC Moravsky Berou 78.58 349 *eP* **P 13 38 21.5 -0.1**
MORC Moravsky Berou 78.58 349 P **P 13 38 21.6 0.0**
LABN Labinsk 78.66 332 *eP* **P 13 38 21.7 -0.4**
LABN pmax pmax
comp=Z,43nm,1.0s
MEM Membach 78.66 357 *dP* **P 13 38 22.1 +0.1**
comp=Z,44nm,1.0s
BTNL Ternell 78.67 357 *dP* **P 13 38 22.4 +0.4**
comp=Z,29nm,1.0s
KVAR Kislovodsk Arr 78.68 331 LR LR 14 16 34.8
comp=Z,317nm,21.8s,baz=260,slow=38
KIV Kislovodsk 78.68 331 P **P 13 38 21.9 -0.4**
KIV IAmb IAmb 13 38 24.2
comp=Z,48nm,1.1s
KIV Kislovodsk 78.68 331 P **P 13 38 22.8 +0.4**
KIV Kislovodsk 78.68 331 ⇑P **P 13 38 22.6 +0.2**
KIV Kislovodsk 78.68 331 *i* P **P 13 38 22.6 +0.2**
SNR=7.5
KIV Kislovodsk 78.68 331 *eP* **P 13 38 22.2 -0.2**
KIV pmax pmax
comp=Z,35nm,1.1s
KIV MLR MLR
comp=Z,182nm,19.0s
BSTI Sart Tilman 78.70 357 *dP* **P 13 38 22.3 +0.1**
comp=Z,6.1nm,0.9s
PRU Pruhonice 78.70 351 *eP* **P 13 38 22.3 +0.1**
PRU Pruhonice 78.70 351 *eP* **P 13 38 22.3 +0.1**
KBZ Khabaz 78.82 330 P **P 13 38 23.2 +0.3**
comp=Z,16nm,0.9s,baz=81,slow=2.5,SNR=27
KBZ LR LR 14 17 08.3
comp=Z,402nm,21.9s,baz=16,slow=39
comp=Z,16nm,0.9s
KBZ Khabaz 78.82 330*c iP* **P 13 38 23.5 +0.6**
KBZ pmax pmax
comp=Z,22nm,1.0s
BCLA Clavier 78.87 357 *dP* **P 13 38 23.2 +0.1**
comp=Z,21nm,1.0s
BGES Gesves 78.91 357 *dP* **P 13 38 23.5 +0.2**
comp=Z,20nm,1.0s
BHOU Houvegnez 78.91 357 *dP* **P 13 38 23.4 +0.1**
MANZ Manzenberg 78.92 353 *eP* **P 13 38 23.5 +0.1**
comp=Z,3.9nm,1.0s,baz=7.7,slow=5.5
TNS Taunus Mts 78.93 355 *eP* **P 13 38 23.7 +0.2**
comp=Z,28nm,0.9s,baz=7.7,slow=5.5
LANS Liptovska Anna 78.95 348 *eP* **P 13 38 24.8 +1.1**
LANS pmax pmax
comp=Z,41nm,1.0s
LANS Liptovska Anna 78.95 348 *eP* **P 13 38 24.8 +1.1**
BMRD Maredsous 79.00 357 *dP* **P 13 38 24.0 +0.1**
comp=Z,34nm,1.1s
ROTZ Rotzenmuhle 79.13 353 *eP* **P 13 38 24.8 +0.3**
comp=Z,6.1nm,1.1s,baz=7.7,slow=5.5
RCHB Rochefort 79.14 357 *dP* **P 13 38 24.6 0.0**
comp=Z,21nm,1.0s
VRAC Vranov 79.15 350 LR LR 14 17 14.9
comp=Z,123nm,19.5s,baz=21,slow=39
VRAC Vranov 79.15 350 ⇑P **P 13 38 25.2 +0.5**
VRAC Vranov 79.15 350 *eP* **P 13 38 25.0 +0.3**
VRAC Vranov 79.15 350 P **P 13 38 25.2 +0.5**
MUKU Mukachevo 79.16 345 P **P 13 38 24.6 -0.1**
DOU Dourbes 79.21 358 *dP* **P 13 38 24.9 -0.1**
comp=Z,22nm,1.0s
BRIU Brid 79.22 345 P **P 13 38 24.9 -0.1**
AKT Akhty 79.22 326 *eP* **P 13 38 24.2 -1.2**
AKT *e* 13 38 32.7
AKT *e*S **S 13 48 21.4 -2.1**
AKT pmax pmax
comp=Z,40nm,0.9s
TREC Trest 79.29 350 AMS AMS 14 17 50.0
comp=Z,400nm,16.1s
HRA Herat 79.31 312 IAmb IAmb 13 38 29.0
comp=Z,39nm,1.6s
RAKU Rahkiv 79.33 344 P **P 13 38 24.6 -1.1**
KORU Korolevo 79.37 345 P **P 13 38 25.7 -0.2**
KRUC Moravsky 79.42 350 *eP* **P 13 38 26.2 0.0**
KIS Kishinev 79.44 341 ⇑*iP* **P 13 38 26.0 -0.3**
comp=Z,84nm,1.3s
KIS *e*L L 14 13 00.0
KIS LRM MLR 14 17 43.0
comp=Z,200nm,18.0s
ANN Anapa 79.44 334 *eP* **P 13 38 22.6 -3.7**
ANN pmax pmax
comp=Z,42nm,1.0s
KECS Kecovo 79.46 347 *eP* **P 13 38 27.3 +0.9**
JAVC Velka Javorina 79.47 349 *eP* **P 13 38 27.8 +1.3**
MILM Milestii Mici 79.52 341 ⇑*iP* **P 13 38 25.0 -1.7**
comp=Z,170nm,1.3s
MILM *e*L L 14 14 46.0
comp=Z,500nm,17.0s
IASR Iasi 79.52 342 ⇑P **P 13 38 27.5 +0.8**
BURAR Bucovina Array 79.54 344 P **P 13 38 27.5 +0.5**
WLF Walferdange 79.59 357 IAmb IAmb 13 38 28.8
comp=Z,34nm,1.0s
WLF Walferdange 79.59 357 *dP* **P 13 38 27.7 +0.6**
comp=Z,23nm,1.0s
WLF Walferdange 79.59 357 *eP* **P 13 38 27.7 +0.6**
comp=Z,34nm,1.0s,baz=7.7,slow=5.5
KHC Kasperske Hory 79.64 352 IAmb IAmb 13 38 28.9
comp=Z,36nm,1.1s
KHC Kasperske Hory 79.64 352*c iP* **P 13 38 27.4 0.0**
KHC pmax pmax
comp=Z,27nm,1.0s
KHC Kasperske Hory 79.64 352 *eP* **P 13 38 28.0 +0.6**
KHC AMS AMS 14 15 40.0
comp=Z,300nm,17.1s
WET Wettzell 79.69 352 *eP* **P 13 38 27.9 +0.3**
comp=Z,18nm,1.1s,baz=7.7,slow=5.5
SMOL Smolenice 79.84 349 *eP* **P 13 38 29.6 +1.1**
SMOL pmax pmax
comp=Z,17nm,0.9s
GEC2 GERESS Array S 79.91 351 IAmb IAmb 13 38 30.0
comp=Z,18nm,1.0s
GEC2 GERESS Array S 79.91 351 *eP* **P 13 38 28.9 0.0**
comp=Z,19nm,1.0s,baz=7.7,slow=5.5
GERES GERESS Array B 79.91 351 P **P 13 38 28.4 -0.5**
comp=Z,8.1nm,0.8s,baz=28,slow=6.0,SNR=43
GERES LR LR 14 17 35.1
comp=Z,93nm,18.8s,baz=14,slow=38
comp=Z,8.1nm,0.8s
SOC Sochi 79.92 332 *eP* **P 13 38 27.9 -1.0**
SOC *e* 13 41 29.5
SOC *e*PPP PPP 13 43 17.5
SOC *e*S **S 13 48 27.3 -3.2**
SOC *e*SS **SS 13 53 39.4 +0.6**
SOC *e*SSS SSS 13 57 04.6
SOC pmax pmax
comp=Z,37nm,1.0s
SOC MLR MLR
comp=Z,440nm,19.0s
RAO Raoul Island 79.92 179 LR LR 14 08 17.0
comp=Z,390nm,20.5s,baz=161,slow=32
MODS Modra-Piesok 79.99 349 *eP* **P 13 38 30.3 +0.9**
MODS pmax pmax
comp=Z,85nm,1.1s
MODS Modra-Piesok 79.99 349 *eP* **P 13 38 30.2 +0.9**
PSZ Piszkesteto 80.10 347 ⇑P **P 13 38 30.5 +0.5**
PSZ Piszkesteto 80.10 347 P **P 13 38 30.4 +0.5**
TESR Tescani 80.34 342 ⇓P **P 13 38 31.7 +0.5**
MESR Meseseni 80.38 345 ⇑P **P 13 38 32.7 +1.3**
SRO Srobarova 80.41 348 *eP* **P 13 38 33.0 +1.5**
KNRA Kununurra 80.48 230 P **P 13 38 31.7 -0.5**
comp=Z,19nm,1.3s
KNRA Kununurra 80.48 230 P **P 13 38 32.1 -0.1**
KNRA IAmb IAmb 13 41 32.4
comp=Z,44nm,1.4s
ONER Baraj Valea Uz 80.56 342 ⇑P **P 13 38 33.2 +0.8**
CONA Conrad Observa 80.60 350 *eP* **P 13 38 33.0 +0.3**
comp=Z,27nm,1.0s,SNR=14
GHRR 80.62 342 ⇑P **P 13 38 34.0 +1.3**
CBBR Cluj-Babes-Bol 80.65 344 ⇑P **P 13 38 34.2 +1.3**
VLDR Vladesti 80.69 341 ⇑P **P 13 38 33.9 +0.8**
CJR Cluj-Napoca 80.70 344 ⇑P **P 13 38 34.3 +1.1**
CJR Cluj-Napoca 80.70 344 P **P 13 38 34.3 +1.1**
TGMR Targu Mures 80.72 344 ⇑P **P 13 38 34.3 +1.1**
DRGR 80.77 345 ⇑P **P 13 38 34.0 +0.3**
DRGR 80.77 345 P **P 13 38 33.9 +0.3**
RONA Rosalia, Austr 80.77 350 *eP* **P 13 38 34.3 +0.7**
comp=Z,20nm,1.0s,SNR=7.4
MARR Marisel-Cluj 80.81 345 ⇑P **P 13 38 35.8 +2.0**
BFO Black Forest 80.83 355 *eP* **P 13 38 33.7 -0.1**
comp=Z,17nm,1.1s,baz=7.7,slow=5.5
COSR Cosmesti PH 80.84 342 ⇑P **P 13 38 35.1 +1.2**
MOA Molln 80.84 351 *i* P **P 13 38 33.2 -0.7**
comp=Z,12nm,1.1s
PANC Panciu 80.85 342 ⇑P **P 13 38 34.6 +0.7**
SCTR Scanteiesti 80.87 341 ⇑P **P 13 38 35.5 +1.5**
TURR Turia 80.90 343 ⇓P **P 13 38 35.4 +1.2**
VRI Vrincioaia 80.94 342 ⇑P **P 13 38 35.1 +0.7**
VRI Vrincioaia 80.94 342 P **P 13 38 35.1 +0.7**
PLOR Plostina 80.97 342 ⇑P **P 13 38 35.3 +0.6**
PLOR Plostina 80.97 342 P **P 13 38 35.2 +0.6**
ODBI Odobesti 80.98 342 ⇑P **P 13 38 35.8 +1.2**
BIOA Bad Ischl, Aus 81.06 351 *i* P **P 13 38 35.3 +0.2**
comp=Z,32nm,1.1s,SNR=9.5
COVR Voineasa-Covas 81.06 342 ⇑P **P 13 38 36.6 +1.4**
DOPR Dopca 81.10 343 ⇑P **P 13 38 36.7 +1.4**
MDB Medias 81.11 344 ⇑P **P 13 38 36.8 +1.4**
MDB Medias 81.11 344 P **P 13 38 36.7 +1.4**
TLCR 81.17 340 ⇑P **P 13 38 35.4 -0.2**
TLCR 81.17 340 P **P 13 38 35.4 -0.2**
ARSA Arzberg 81.30 350 IAmb IAmb 13 38 38.2
comp=Z,23nm,1.0s
ARSA Arzberg 81.30 350 *eP* **P 13 38 37.0 +0.6**
comp=Z,21nm,1.0s,SNR=8.5
CFR Carcaliu 81.32 341 ⇑P **P 13 38 36.2 -0.2**
CFR Carcaliu 81.32 341 P **P 13 38 36.2 -0.2**
GRER 81.36 342 ⇑P **P 13 38 38.0 +1.3**
LESA Schwarzleotal 81.41 352 *eP* **P 13 38 36.7 -0.3**
comp=Z,12nm,0.9s
WB0 Warramunga Arr 81.43 224 IAmb IAmb 13 38 52.4
comp=Z,58nm,2.0s
GNI Garni 81.44 328 LR LR 14 20 02.6
comp=Z,547nm,19.2s,baz=30,slow=40
GNI Garni 81.44 328*c iP* **P 13 38 38.6 +1.2**
GNI pmax pmax
comp=Z,19nm,1.2s
SIRR Siria 81.45 346 ⇑P **P 13 38 37.7 +0.5**
MLR Muntele Rosu 81.45 342 LR LR 14 20 07.9
comp=Z,178nm,18.6s,baz=24,slow=40
MLR Muntele Rosu 81.45 342 ⇑P **P 13 38 38.3 +1.0**
MLR Muntele Rosu 81.45 342 P **P 13 38 38.3 +1.0**
RETA Reutte 81.51 353 *eP* **P 13 38 37.6 +0.1**
comp=Z,13nm,1.0s
TPGR Topolog 81.57 341 ⇑P **P 13 38 38.0 +0.2**
WATA Walderalm 81.59 353 *i* P **P 13 38 38.2 +0.2**
comp=Z,45nm,1.0s,SNR=14
WRA Warramunga Arr 81.61 224 P **P 13 38 37.1 -1.1**
comp=Z,15nm,0.8s,baz=33,slow=5.9,SNR=36
comp=Z,4.5nm,0.8s
WRA Warramunga Arr 81.61 224 P **P 13 38 36.5 -1.7**
WRA Warramunga Arr 81.61 224 *i* P **P 13 38 37.4 -0.8**
WRA pmax pmax
comp=Z,4.0nm,0.7s
DEV Deva 81.62 345 ⇑P **P 13 38 39.0 +1.0**
DEV Deva 81.62 345 P **P 13 38 39.0 +1.0**
MOTA Moosalm 81.62 353 *eP* **P 13 38 38.1 -0.2**
comp=Z,46nm,1.2s,SNR=8.3
WTTA Wattenberg 81.66 353 *eP* **P 13 38 38.9 +0.4**
comp=Z,40nm,0.9s,SNR=12
VOIR 81.67 343 ⇑P **P 13 38 39.4 +0.9**
VOIR 81.67 343 P **P 13 38 39.3 +0.9**
KBA Koelnbreinsper 81.69 351 *eP* **P 13 38 39.3 +0.7**
comp=Z,72nm,0.8s,SNR=27
SQTA Sankt Quirin 81.74 353 *eP* **P 13 38 38.9 +0.1**
comp=Z,24nm,0.9s,SNR=8.5
DAVA Damuels 81.77 354 *i* P **P 13 38 37.9 -1.1**
comp=Z,13nm,1.3s
DSRI Dabo 81.77 259 P **P 13 38 40.5 +1.3**
comp=Z,31nm,1.3s
ARR Arges 81.82 343 ⇑P **P 13 38 40.1 +0.9**
SURR Surduc 81.87 345 ⇑P **P 13 38 40.0 +0.6**
MTUR Matau 81.88 343 ⇑P **P 13 38 40.6 +1.0**
MTUR Matau 81.88 343 P **P 13 38 40.5 +1.0**
SOKA Soboth 81.92 350 *i* P **P 13 38 40.1 +0.3**
comp=Z,39nm,1.0s,SNR=16
MORH Mrgy, Hungar 81.94 348 ⇓P **P 13 38 39.4 -0.3**
TLBR Topalu 81.94 341 ⇑P **P 13 38 40.7 +1.0**
TIRR Tirgusor 81.95 340 IAmb IAmb 13 38 41.2
comp=Z,34nm,0.9s
TIRR Tirgusor 81.95 340 ⇑P **P 13 38 39.7 -0.1**
TIRR Tirgusor 81.95 340 P **P 13 38 39.6 -0.1**
PERS Pernice 81.95 350 *i* P **P 13 38 40.3 +0.5**
FETA Feichten 81.97 353 *eP* **P 13 38 40.3 +0.3**
comp=Z,25nm,1.0s,SNR=10
GROS Grobnik 82.08 350 *i* P **P 13 38 40.9 +0.3**
BZS Buzias 82.09 345 ⇑P **P 13 38 40.8 +0.3**
BZS Buzias 82.09 345 P **P 13 38 40.8 +0.3**
ABTA Abfaltersbach 82.10 352 *i* P **P 13 38 40.7 0.0**
comp=Z,25nm,0.9s,SNR=9.3
GZR Gura Zlata 82.12 345 ⇑P **P 13 38 41.2 +0.4**
GZR Gura Zlata 82.12 345 P **P 13 38 41.1 +0.4**
OBKA Obir 82.14 351 *i* P **P 13 38 41.1 +0.3**
comp=Z,39nm,0.9s,SNR=5.9
ZAVS Zavodnje 82.16 350 *i* P **P 13 38 41.7 +0.8**
SULR 82.18 342 ⇑P **P 13 38 41.7 +0.8**
SIUN Universidad Ur 82.18 78 IAmb IAmb 13 38 59.1
comp=Z,12nm,1.2s
DAVOX Davos/Dischmat 82.27 354 LR LR 14 15 58.9

comp=Z,91nm,20.4s,baz=29,slow=36
FUORN **Ofenpass-Fuorn** 82.41 353 IAmb IAmb 13 38 44.1
comp=Z,21nm,1.0s
TUE **Stuetta** 82.61 354 IAmb IAmb 13 38 45.1
comp=Z,27nm,0.9s
SGRR **Singureni** 82.67 342 ⇑P P 13 38 43.2 -0.3
HERR **Herculane** 82.67 345 ⇑P P 13 38 43.7 +0.2
DJES **Djerdap** 82.86 345 ⇑P P 13 38 44.6 0.0
CTI **Castel Tesino** 82.87 352 IAmb IAmb 13 38 45.3
comp=Z,17nm,1.0s
MDVR **Moldovita** 82.89 345 ⇑P P 13 38 45.0 +0.3
COPA **Copaceanca** 82.90 343 ⇑P P 13 38 44.6 -0.1
KOPT **Kop Dagi** 82.94 330 IAmb IAmb 13 38 49.5
comp=Z,23nm,0.9s
PUNG **Punghina** 83.17 344 ⇑P P 13 38 46.8 +0.7
RAZG **Razgrad** 83.20 342 ⇑P P 13 38 45.8 -0.5
BKNI **Bangkinang** 83.35 262 P P 13 38 41.8 -5.7
LOZB **Loznitsa** 83.37 341 ⇓P P 13 38 47.1 -0.1
RKT **Rikitea** 83.42 140 *e*LR LR 14 04 53.0
comp=Z,2µm,24.8s
PLVB **Pleven** 83.73 343 ⇑P P 13 38 49.4 +0.3
QLP **Quilpie** 83.75 213 P P 13 38 49.6 +0.4
comp=Z,33nm,1.0s
ILGA **Ilgaz** 83.92 336 IAmb IAmb 13 38 53.9
comp=Z,37nm,1.3s
ELND **Elena** 83.93 342 ⇑P P 13 38 49.8 -0.4
BOVS **Bovan** 84.00 345 ⇓P P 13 38 50.4 -0.1
SSB **Saint Sauveur** 84.03 357 IAmb IAmb 13 38 52.1
comp=Z,24nm,1.1s
FITZ **Fitzroy Crossi** 84.08 232 P P 13 38 51.0 0.0
comp=Z,11nm,0.9s
FITZ **Fitzroy Crossi** 84.08 232 IAmb IAmb 13 38 52.4
comp=Z,8.1nm,0.9s
HYBB **Hyderabad (bro** 84.15 290 *e*P P 13 38 51.9 +0.3
BNI **Bardonecchia** 84.18 356 IAmb IAmb 13 38 54.0
comp=Z,26nm,0.9s
JUD3 **Juan Diaz 3** 84.43 81 IAmb IAmb 13 38 55.6
comp=Z,21nm,0.9s
JTS **Las Juntas de** 84.70 80 *de*P P 13 38 55.9 +1.5
JTS pmax pmax
comp=Z,6.0nm,1.0s
GSI **Gunungsitoli** 84.77 266 IAmb IAmb 13 38 55.1
comp=Z,19nm,0.8s
GSI **Gunungsitoli** 84.77 266 P P 13 38 54.1 -0.6
comp=Z,21nm,0.7s
SAHE **Sakarya_HENDEK** 84.83 338 ⇑P P 13 38 54.8 +0.1
ASAR **Alice Springs** 85.08 222 P P 13 38 55.8 -0.2
comp=Z,4.1nm,0.7s,baz=26,slow=5.5,SNR=45
ASAR LR LR 14 15 06.2
comp=Z,220nm,19.7s,baz=10,slow=34
comp=Z,4.1nm,0.7s
ASAR **Alice Springs** 85.08 222 P P 13 38 55.3 -0.7
ASAR **Alice Springs** 85.08 222 P P 13 38 55.3 -0.7
MDSI **Maura Dua** 85.14 257 P P 13 38 52.5 -4.0
comp=Z,20nm,1.1s
BR131 **Keskin Array S** 85.19 335 IAmb IAmb 13 38 58.3
comp=Z,25nm,0.9s
BR131 **Keskin Array S** 85.19 335 P P 13 38 57.3 +0.6
SNR=14
BR131 **Keskin Array S** 85.19 335 *c i*P P 13 38 56.6 -0.1
BRTR **Keskin Array B** 85.19 335 P P 13 38 57.0 +0.3
comp=Z,18nm,0.9s,baz=49,slow=2.5,SNR=24
BRTR LR LR 14 19 43.6
comp=Z,119nm,21.5s,baz=6.0,slow=38
comp=Z,18nm,0.9s
BRTR **Keskin Array B** 85.19 335 P P 13 38 56.4 -0.3
BRTR **Keskin Array B** 85.19 335 *i* P P 13 38 57.0 +0.3
BRTR pmax pmax
comp=Z,19nm,0.9s
ANTO **Ankara** 85.28 336 P P 13 38 57.4 +0.4
ANTO **Ankara** 85.28 336 P P 13 38 57.6 +0.6
ANTO **Ankara** 85.28 336 P P 13 38 57.4 +0.4
ANTO pmax pmax
comp=Z,46nm,1.1s
PDG **Podgorica** 85.56 346 ⇑P P 13 38 58.7 +0.4
BAND **Balkesir-Ban** 85.94 339 ⇑P P 13 39 00.1 -0.1
PBRG **Braganca** 87.32 6 *e*P P 13 39 07.3 +0.3
POLO **Lamas de Olo** 87.68 7 *e*P P 13 39 09.6 +0.8
PVRL **Vila Real** 87.78 6 *e*P P 13 39 09.4 +0.2
PVIS **Viseu** 88.32 7 *e*P P 13 39 12.2 +0.4
MTE **Manteigas** 88.66 6 *e*P P 13 39 14.2 +0.7
WRKA **Warakurna** 88.75 226 P P 13 39 14.3 +0.5
comp=Z,7.8nm,1.0s
SHME **Shamm** 89.15 312 P P 13 39 15.4 -0.5
BANOM **Banah** 89.18 312 P P 13 39 16.3 +0.2
BANOM **Banah** 89.18 312 *i* P P 13 39 15.3 -0.8
SNR=5.6
PSARD **Sardoal** 89.41 7 *e*P P 13 39 17.0 0.0
STKA **Stephens Creek** 89.51 213 P P 13 39 17.4 +0.2
STKA **Stephens Creek** 89.51 213 P P 13 39 17.6 +0.4
comp=Z,8.4nm,0.8s,baz=352,slow=6.0,SNR=17
comp=Z,8.4nm,0.8s
STKA **Stephens Creek** 89.51 213 ⇑*e*P P 13 39 17.7 +0.5
ESBB **Sonseca Array** 89.58 4 IAmb IAmb 13 39 19.6
comp=Z,26nm,1.2s
ESDC **Sonseca Array** 89.58 4 P P 13 39 17.0 -0.8
comp=Z,9.6nm,1.1s,baz=346,slow=4.6,SNR=21
comp=Z,9.6nm,1.1s
ESDC **Sonseca Array** 89.58 4 P P 13 39 16.8 -1.0
ESDC IAmb IAmb 13 39 19.0
comp=Z,13nm,1.2s
MBWA **Marble Bar** 89.64 235 P P 13 39 17.8 -0.2
PMRV **Marv??o** 89.64 6 *e*P P 13 39 18.1 +0.1
SJG **San Juan** 89.71 61 LR LR 14 23 21.1
comp=Z,131nm,18.6s,baz=327,slow=38
UOSS **Minazif** 90.06 312 P P 13 39 19.2 -1.0
PESTR **Estremoz** 90.18 7 *e*P P 13 39 19.9 -0.7
HATD **Hatta, Dubai** 90.19 312 P P 13 39 20.6 -0.3
NAZ **Nazwa, Dubai** 90.28 312 P P 13 39 21.1 -0.1
WSAR **Wadi Sarin** 90.33 309 P P 13 39 22.3 +0.8
ASHO **Ashiyiah** 90.35 312 P P 13 39 21.1 -0.5
ASHO **Ashiyiah** 90.35 312 P P 13 39 21.1 -0.5
EVO **Evora** 90.48 7 *e*P P 13 39 22.0 +0.1
SOHO **SOHO** 90.59 311 P P 13 39 21.7 -1.0
SOHO **SOHO** 90.59 311 P P 13 39 21.9 -0.7
HOQ **Hoqain** 90.69 310 P P 13 39 22.6 -0.5
WBK **Wadi Bani Khal** 90.69 308 P P 13 39 23.2 0.0
ASUD **Al Ashush, Dub** 90.74 312 P P 13 39 23.3 -0.1
ASUD **Al Ashush, Dub** 90.74 312 P P 13 39 22.7 -0.6
SMDO **Samad** 90.77 309 P P 13 39 23.7 +0.1
PBAR **Barrancos** 90.91 6 *e*P P 13 39 24.1 +0.2
MMAI **Mount Meron Ar** 90.96 332 P P 13 39 24.2 -0.1
comp=Z,0.7nm,0.3s,baz=345,slow=5.1,SNR=4.3
MMAI LR LR 14 26 34.3
comp=Z,114nm,18.0s,baz=26,slow=40
comp=Z,0.7nm,0.3s
PBEJ **Beja** 91.00 7 *e*P P 13 39 25.4 +1.1
ARQ **Araqi** 91.28 311 P P 13 39 26.0 +0.1
SNR=6.1
ASF **Jabal al Asfar** 91.28 330 LR LR 14 26 26.9
comp=Z,213nm,18.5s,baz=30,slow=40
JMDO **Jabal Madar** 91.33 309 P P 13 39 26.0 -0.1
BSY **Bisya** 91.45 310 P P 13 39 26.6 -0.1
IDI **Anoyia** 91.50 341 LR LR 14 25 35.0
comp=Z,152nm,19.2s,baz=352,slow=39
SHMA **Al-Shehemyia** 91.66 316 P P 13 39 27.2 -0.3
MHTO **MHTO** 92.56 308 P P 13 39 32.0 +0.2
SMRA **Abu-Samra** 92.69 316 P P 13 39 31.6 -0.7
MZR **Muzera** 93.00 313 P P 13 39 34.1 +0.3
SNR=5.3
MZR **Muzera** 93.00 313 *i* P P 13 39 33.8 0.0
SNR=9.3
KEST **Kesra** 93.30 353 P P 13 39 33.8 -1.3
comp=Z,6.1nm,0.9s,baz=315,slow=10.0,SNR=2.5
comp=Z,6.1nm,0.9s
EIL **Elat** 94.22 331 LR LR 14 28 11.9
comp=Z,206nm,19.4s,baz=50,slow=39
SDV **Santo Domingo** 94.53 70 LR LR 14 23 16.4
comp=Z,175nm,20.8s,baz=306,slow=36
ROSC **El Rosal** 95.50 75 LR LR 14 27 01.4
comp=Z,73nm,18.7s,baz=55,slow=38
RPN **Rapa Nui** 99.04 122 LR LR 14 14 03.3
comp=Z,110nm,21.5s,baz=14,slow=29
H03N2 **Juan Fernandez** 121.24 106 T T 15 58 22.0
baz=317,slow=77,SNR=8.1
H03N1 **Juan Fernandez** 121.26 106 T T 15 58 30.1
baz=317,slow=77,SNR=8.7
H03N3 **Juan Fernandez** 121.26 106 T T 15 58 30.8
baz=317,slow=77,SNR=9.1
KMBO **Kilima Mbogo** 121.57 316 PKP PKPdf 13 45 14.1 -0.4
comp=Z,1.2nm,0.4s,baz=214,slow=15,SNR=2.1
AC05 **El Transito** 123.44 96 PKiKP 13 45 17.5 -0.1
CPUP **Villa Florida** 129.84 83 PKP PKPdf 13 45 29.1 -0.3
comp=Z,1.8nm,1.1s,baz=97,slow=1.6,SNR=4.9
PLCA **Paso Flores** 131.06 107 PKP PKiKP 13 45 31.9 -0.4
comp=Z,6.5nm,1.1s,baz=292,slow=2.6,SNR=5.5
QSPA **South Pole Qui** 140.77 180 PKP PKPdf 13 45 46.1 -2.5
comp=Z,1.6nm,0.7s,baz=97,slow=0.1,SNR=12
QSPA **South Pole Qui** 140.77 180 PKPdf 13 45 47.7 -0.9
BROLN **Tlhalogang** 143.66 315 *i* P PKPbc 13 45 53.5 +0.7
QNGWA **Qangwa** 144.72 325 *i* P PKPdf 13 45 56.9 -0.3
MREMI **Moremi** 144.89 314 *i* P PKPbc 13 45 56.8 +0.3
MAW **Mawson** 146.07 217 PKPbc PKPbc 13 45 58.3 -0.5
comp=Z,7.0nm,0.9s,baz=58,slow=3.4,SNR=7.5
LPHEP **Lephephe** 146.29 316 *i* P PKPdf 13 45 59.8 0.0
GRTLG **Ghanzi** 146.39 324 *i* P PKPbc 13 46 00.7 -0.6
KGCAE **Kacgae** 147.36 322 *i* P PKPdf 13 46 02.0 +0.4
SKOMA **Sekoma** 148.13 317 *i* P PKPdf 13 46 03.5 +0.7
KOOLE **Kule** 148.25 325 *i* P PKPdf 13 46 04.2 +1.1
MAKGR **Makgori** 148.89 315 *i* P PKPdf 13 46 04.7 +0.7
BOSA **Boshof** 151.07 311 PKPbc PKPbc 13 46 13.2 +0.1
comp=Z,15nm,0.8s,baz=56,slow=2.3,SNR=22
BOSA **Boshof** 151.07 311 PKPbc 13 46 13.1 -0.1
BOSA **Boshof** 151.07 311 PKiKP PKPbc 13 46 13.1 -0.1
VNA3 **Neumayer Olymp** 159.14 170 ⇑P PKPdf 13 46 15.9 -0.9
comp=Z,2.8nm,0.8s
VNA2 **Neumayer--Watz** 159.66 172 ⇑P PKPdf 13 46 16.4 -1.1
comp=Z,3.9nm,0.9s,baz=178,slow=1.0

*ISK **24** 13:33:21.6, 37.°64N×35.°66E, h4km, ML3.9/18*
*AFAD **24** 13:33:22.0, 37.°63N×35.°65E, h11km±2km, MW4.0*
*IDC **24** 13:33:22.1±1.2, 37.°62N×35.°64E, h0km, mb3.8/4,*
mbtmp3.6/8, ML3.3/4, MS3.0/3, Error ellipse: s-maj=26.4km
s-min=14.9km az=53.0
*NEIC **24** 13:33:23.5±1.4, 37.°63N±0.°05×35.°82E±0.°05, h12km±5km,*
mb4.5/17, Error ellipse: s-maj=8.3km s-min=3.4km
az=218.0

ISC 24 13:33:22.8±1.0, **37.°62N**±0.°02×**35.°68E**±0.°02, **h7**km±7km, **n111**, σ1§17/130, **mb4.4**/11, **6D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.18**	**140**	Pg	**Pg**	**13 33 26.8**	**+0.3**
KOZT				Sg	**Sg**	**13 33 29.8**	**+0.8**
AKO	**Adana**	**0.24**	**230**	SPECP		13 33 27.0	
AKO				P	**Pg**	**13 33 27.4**	**-0.3**
AKO				S	**Sg**	**13 33 29.9**	**-1.0**
SAIM	**ADANA**	**0.48**	**42**	P	**Pg**	**13 33 31.9**	**-0.2**
SAIM				S	**Sg**	**13 33 38.2**	**-0.2**
ANDN	**Andirin**	**0.53**	**94**	SPECP		13 33 33.0	
ANDN				P	**Pg**	**13 33 33.1**	**0.0**
ANDN				S	**Sg**	**13 33 41.0**	**+1.0**
YAHY	**KAYSERI_Yahyal**	**0.54**	**332**	P	**Pg**	**13 33 32.5**	**-0.7**
YAHY				S	**Sg**	**13 33 39.7**	**-0.6**
CMRD	**Camardi-Nigde**	**0.55**	**275**	Pg	**Pg**	**13 33 32.4**	**-1.0**
CMRD				Sg	**Sg**	**13 33 40.6**	**0.0**
CEYT	**Ceyhan**	**0.61**	**175**	Pg	**Pg**	**13 33 34.7**	**+0.1**
CEYT				Sg	**Sb**	**13 33 44.6**	**-0.1**
KARA	**Karaisali**	**0.61**	**234**	Pg	**Pg**	**13 33 33.8**	**-0.8**
KARA				Sg	**Sg**	**13 33 43.1**	**+0.5**
GULE	**Gulek**	**0.79**	**245**	P	**Pg**	**13 33 37.2**	**-0.9**
GULE				S	**Sg**	**13 33 47.9**	**-0.5**
YURE	**YUREGIR**	**0.79**	**183**	SPECP		13 33 37.0	
YURE				P	**Pg**	**13 33 37.9**	**-0.2**
NIDE	**Nigde/Merkez-G**	**0.81**	**298**	SPECP		13 33 37.0	
NIDE				P	**Pg**	**13 33 37.5**	**-0.9**
KAMA	**Osmaniye**	**0.90**	**119**	P	**Pg**	**13 33 38.7**	**-1.4**
KMRS	**Kahramanmaras**	**0.98**	**96**	Pg	**Pg**	**13 33 40.8**	**-0.8**
NIG	**Nigde**	**0.98**	**300**	Pg	**Pg**	**13 33 40.7**	**-0.9**
HASA	**Hatay-Hassa-Ha**	**1.08**	**143**	P	**Pg**	**13 33 41.7**	**-1.9**
HASA				S	**Sg**	**13 33 56.6**	**-1.0**
MERS	**Mersin**	**1.19**	**231**	Pn	**Pg**	**13 33 44.9**	**-0.8**
BNN	**Bunyan**	**1.24**	**6**	Pn	**Pg**	**13 33 45.5**	**-1.1**
BNN	**Bunyan**	**1.24**	**6**		**Pg**	**13 33 45.0**	**-1.5**
KERG	**Konya-Eregli**	**1.25**	**261**	P	**Pg**	**13 33 43.7**	**-3.1**
KERG				S	**Sg**	**13 34 01.8**	**-1.3**
BSIR	**Belisirma, Guz**	**1.27**	**301**	SPECP		13 33 46.0	
BSIR				P	**Pn**	**13 33 46.3**	**-0.9**
BSIR				S	**Sg**	**13 34 01.9**	**-2.0**
GUNE	**Kayseri**	**1.28**	**358**	SPECP		13 33 46.0	
GUNE				P	**Pn**	**13 33 46.7**	**-0.7**
GAZ	**Gaziantep**	**1.30**	**110**	Pn	**Pn**	**13 33 47.3**	**-0.2**
GAZ	**Gaziantep**	**1.30**	**110**		**Pn**	**13 33 46.1**	**-1.4**
TAHT	**Tahtakopru-Hat**	**1.31**	**162**	Pn	**Pn**	**13 33 47.2**	**-0.4**
ASUZ	**Hatay-Arsuz**	**1.33**	**176**	P	**Pn**	**13 33 47.2**	**-0.6**
GULA	**Gulagac**	**1.35**	**303**	Pn	**Pn**	**13 33 45.7**	**-2.6**
AVNS	**Nevsehir-Avano**	**1.35**	**331**	SPECP		13 33 47.0	
AVNS				P	**Pn**	**13 33 47.2**	**-1.2**
AVNS				S	**Sb**	**13 34 04.2**	**-2.1**
KUZU	**Kuzuini**	**1.40**	**127**	SPECP		13 33 48.0	
KUZU				P	**Pn**	**13 33 48.3**	**-0.5**
KUZU				S	**Sb**	**13 34 05.6**	**-1.9**
GZT	**Gaziantep**	**1.52**	**99**	SPECP		13 33 50.0	
GZT				P	**Pn**	**13 33 50.3**	**-0.4**
GZT				S	**Sn**	**13 34 08.2**	**-2.7**
YESY	**Yesilyurt**	**1.54**	**277**	Pn	**Pn**	**13 33 50.9**	**-0.1**
RHAN	**Hatay/Reyhanl**	**1.55**	**151**	P	**Pn**	**13 33 49.7**	**-1.2**
AKCA	**Adyaman/G¶l**	**1.60**	**83**	SPECP		13 33 51.0	
AKCA				P	**Pn**	**13 33 51.6**	**-0.2**
AKCA				S	**Sn**	**13 34 10.9**	**-1.9**
KIZK	**Mersin**	**1.67**	**228**	SPECP		13 33 52.0	
KIZK				P	**Pn**	**13 33 52.9**	**+0.3**
KIZK				S	**Sb**	**13 34 15.3**	**-0.1**
KIZK	**Mersin**	**1.67**	**228**	Pn	**Pn**	**13 33 52.9**	**+0.3**
NZIP	**Nizip/Gaziante**	**1.69**	**109**	SPECP		13 33 53.0	
NZIP				P	**Pn**	**13 33 53.2**	**+0.3**
NZIP				S	**Sb**	**13 34 15.6**	**-0.3**
KOZK	**Kozakli-Nevseh**	**1.71**	**338**	Pn	**Pn**	**13 33 53.1**	**-0.1**
SIRC	**Yozgat**	**1.76**	**346**	P	**Pn**	**13 33 53.9**	**-0.1**
MCUR	**KIREHR**	**1.79**	**330**	P	**Pn**	**13 33 53.9**	**-0.4**
MCUR				S	**Sn**	**13 34 17.0**	**-0.3**
SULT	**Sultanhani-AKS**	**1.81**	**289**	Pn	**Pn**	**13 33 54.4**	**-0.1**
AKSY	**AKSARAY - Alti**	**1.83**	**305**	SPECP		13 33 54.0	
AKSY				P	**Pn**	**13 33 54.6**	**-0.2**
AKSY				S	**Sn**	**13 34 19.0**	**+0.7**
CUAYA	**Sivas-Altinyay**	**1.84**	**27**	P	**Pn**	**13 33 55.5**	**+0.4**
SILI	**Silifke-Mersin**	**1.88**	**229**	Pn	**Pn**	**13 33 55.7**	**+0.2**
AKCD	**Akcadag**	**1.90**	**68**	P	**Pn**	**13 33 56.0**	**+0.1**
KEBE	**Keben-Mersin**	**1.96**	**234**	Pn	**Pn**	**13 33 57.1**	**+0.5**
KRMN	**Karaman**	**1.98**	**258**	Pn	**Pn**	**13 33 56.8**	**-0.1**
YOZ	**Yozgat**	**2.04**	**352**	Pn	**Pn**	**13 33 57.6**	**-0.2**
HACI	**Hacifakili, Ak**	**2.08**	**1**	SPECP		13 33 58.0	
HACI				P	**Pn**	**13 33 59.0**	**+0.7**
TEVE	**Tevekalti-Mers**	**2.15**	**237**	Pn	**Pn**	**13 33 59.4**	**+0.2**
YESI	**Yesilovacik-Me**	**2.17**	**230**	Pn	**Pn**	**13 33 59.8**	**+0.5**
TISA	**Tisan-Mersin**	**2.17**	**228**	Pn	**Pn**	**13 33 59.7**	**+0.3**
HEKM	**Malatya_Hekimh**	**2.19**	**54**	SPECP		13 34 00.0	
HEKM				P	**Pn**	**13 34 00.6**	**+0.6**
TEPK	**Tepekoy-MERSIN**	**2.21**	**231**	Pn	**Pn**	**13 34 00.5**	**+0.5**
KKBE	**Karaman, Kazim**	**2.22**	**260**	SPECP		13 34 01.0	
KKBE				P	**Pn**	**13 34 01.6**	**+1.4**
GULN	**MERSIN_Gulnar**	**2.23**	**231**	P	**Pn**	**13 33 59.9**	**-0.4**
CDAG	**Cicekdag**	**2.25**	**333**	SPECP		13 34 03.0	
CDAG				P	**Pb**	**13 34 03.2**	**-0.7**
YOZG	**Bozok Univ. Me**	**2.27**	**343**	P	**Pn**	**13 34 01.1**	**+0.2**
MAYA	**Malatya/Merkez**	**2.28**	**71**	P	**Pn**	**13 34 01.0**	**-0.1**
AKPI	**Kirsehir/Akpin**	**2.30**	**325**	SPECP		13 34 01.0	
AKPI				P	**Pn**	**13 34 01.6**	**+0.3**
ALIN	**Konya, Altinte**	**2.31**	**288**	SPECP		13 34 01.0	
ALIN				P	**Pn**	**13 34 01.8**	**+0.3**
ERMK	**Ermenek**	**2.42**	**247**	SPECP		13 34 04.0	
ERMK				P	**Pn**	**13 34 04.8**	**+1.8**
SURC	**SANLIURFA_SURC**	**2.45**	**107**	P	**Pn**	**13 34 03.4**	**0.0**
BR131	**Keskin Array S**	**2.64**	**323**		**Pn**	**13 34 06.2**	**+0.1**
BRTR	**Keskin Array B**	**2.64**	**323**	Pn	**Pn**	**13 34 06.5**	**+0.4**
	6.5nm,0.3s,baz=155,slow=13,SNR=139						
BRTR				Lg	Lg	13 34 43.0	
	15nm,0.3s,baz=240,slow=23,SNR=6.1						
BRTR				LR	LR	13 35 19.7	
	comp=Z,282nm,19.4s,baz=242,slow=45						
	20nm,0.4s						
BRTR	**Keskin Array B**	**2.64**	**323**		**Pn**	**13 34 06.0**	**0.0**
TOKA	**Tokat**	**2.77**	**13**		**Pn**	**13 34 07.4**	**-0.4**
BEIL	**Beino**	**3.10**	**172**	*e*P	**Pn**	**13 34 12.6**	**+0.3**
ANTO	**Ankara**	**3.18**	**316**		**Pn**	**13 34 15.3**	**+1.9**
HWQ	**Hawqa**	**3.34**	**176**	*e*P	**Pn**	**13 34 16.5**	**+0.9**
FKH	**Fakeheh**	**3.42**	**170**	*e*P	**Pn**	**13 34 17.8**	**+1.1**
BHL	**Bhannes**	**3.71**	**180**	*e*P	**Pn**	**13 34 20.4**	**-0.3**
ILGA	**Ilgaz**	**3.75**	**337**		**Pn**	**13 34 22.4**	**+1.0**
MARD	**Mardin**	**4.07**	**93**		**Pn**	**13 34 24.7**	**-1.0**
SHBL	**Chebaa**	**4.26**	**179**	*e*P	**Pn**	**13 34 26.9**	**-1.4**
MMAI	**Mount Meron Ar**	**4.60**	**183**	Pn	**Pn**	**13 34 32.6**	**-0.3**
	8.6nm,0.3s,baz=356,slow=12,SNR=9.5						
MMAI				Sn	**Sn**	**13 35 25.3**	**-1.4**
	6.3nm,0.3s,baz=12,slow=22,SNR=1.8						
	5.6nm,0.3s						
BORA	**Eskisehir**	**4.67**	**301**	Pn	**Pn**	**13 34 35.4**	**+1.6**
KARP	**Karpathos**	**7.16**	**256**	Pn	**Pn**	**13 35 08.3**	**+0.3**
GNI	**Garni**	**7.51**	**68**	LR	LR	13 38 45.0	
	comp=Z,44nm,18.1s,baz=256,slow=43						
IDI	**Anoyia**	**9.00**	**258**	Pn	**Pn**	**13 35 34.0**	**+0.7**
AKASG	**Malin Array Be**	**13.87**	**343**	Pn	**Pn**	**13 36 40.6**	**+0.9**
	0.4nm,0.3s,baz=166,slow=12,SNR=2.6						
	0.2nm,0.3s						
CUC	**Castrocucco**	**15.67**	**285**	P	**P**	**13 37 09.8**	**+1.6**
CUC				IAmb	IAmb	13 37 23.2	
	comp=Z,25nm,1.1s						
NACGM	**Naroch**	**18.32**	**343**	*e*P	**P**	**13 37 44.7**	**+7.2**
GERES	**GERESS Array B**	**19.48**	**312**	P	**Pn**	**13 37 51.8**	**+0.2**
	baz=119,slow=11,SNR=6.5						
	comp=Z,0.8nm,0.7s						
SENIN	**Lac Senin/Sane**	**22.73**	**302**	P	**P**	**13 38 24.9**	**-0.8**
ECH	**Echery**	**23.29**	**306**	P	**P**	**13 38 31.0**	**-0.2**
ECH				IAmb	IAmb	13 38 36.4	
	comp=Z,22nm,1.1s						
ECH	**Echery**	**23.29**	**306**	P	**P**	**13 38 31.0**	**-0.2**
FINES	**FINESS Array B**	**24.59**	**349**	P	**P**	**13 38 45.2**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=144,slow=12,SNR=0.8						
	comp=Z,1.1nm,0.6s						
BSTI	**Sart Tilman**	**25.01**	**311**	*d*P	**P**	**13 38 49.4**	**+2.1**
RCHB	**Rochefort**	**25.08**	**310**	*d*P	**P**	**13 38 46.9**	**-1.0**
	comp=Z,8.2nm,1.0s						
BCLA	**Clavier**	**25.12**	**310**	*d*P	**P**	**13 38 47.4**	**-0.8**
BGES	**Gesves**	**25.24**	**310**	*d*P	**P**	**13 38 48.0**	**-1.4**
BMRD	**Maredsous**	**25.41**	**310**	*d*P	**P**	**13 38 48.9**	**-1.9**
DOU	**Dourbes**	**25.45**	**309**	*d*P	**P**	**13 38 50.6**	**-0.6**
	comp=Z,8.6nm,1.1s						
EBR	**Ebro Roquetas**	**27.34**	**288**	P	**P**	**13 39 09.4**	**+1.0**
EBR	**Ebro Roquetas**	**27.34**	**288**	P	**P**	**13 39 09.4**	**+1.0**
ESDC	**Sonseca Array**	**30.86**	**286**	LR	LR	13 52 05.4	
	comp=Z,52nm,20.4s,baz=99,slow=36						
PVAQ	**Vaqueiros**	**34.20**	**283**	P	**P**	**13 40 09.4**	**+0.5**
MKAR	**Makanchi Array**	**35.27**	**60**	P	**P**	**13 40 19.5**	**+1.3**
	comp=Z,1.4nm,0.9s,baz=262,slow=10.0,SNR=2.8						
	comp=Z,1.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**38.85**	**240**	P	**P**	**13 40 49.4**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=37,slow=9.9,SNR=2.6						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**57.97**	**91**	P	**P**	**13 43 14.8**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=300,slow=8.2,SNR=4.2						
	comp=Z,0.5nm,0.6s						
VOI	**Vohitsoka**	**60.13**	**168**	P	**P**	**13 43 30.3**	**-0.9**
A36M	**Sachs Harbour**	**69.87**	**354**	P	**P**	**13 44 33.6**	**-0.2**
A36M				IAmb	IAmb	13 45 08.3	
	comp=Z,5.3nm,1.2s						
B22K	**Teshekpuk Lake**	**72.14**	**3**	P	**P**	**13 44 48.1**	**+0.5**
B21K	**Ikpikpuk River**	**72.80**	**4**	P	**P**	**13 44 51.1**	**-0.5**
E29M	**Blow River**	**74.20**	**358**	P	**P**	**13 44 59.7**	**-0.2**
E29M				IAmb	IAmb	13 45 06.3	
	comp=Z,5.3nm,1.5s						
F30M	**Barrier River**	**74.89**	**357**	P	**P**	**13 45 03.4**	**-0.5**
G31M	**Satah River**	**75.50**	**356**	P	**P**	**13 45 06.7**	**-0.7**
G31M				IAmb	IAmb	13 45 14.7	
	comp=Z,3.6nm,1.3s						
G29M	**Pine Creek**	**75.68**	**357**	P	**P**	**13 45 08.2**	**-0.3**
G29M				IAmb	IAmb	13 45 09.0	
	comp=Z,7.1nm,1.4s						
G19K	**Purcell Mounta**	**76.09**	**5**	P	**P**	**13 45 10.7**	**-0.1**
G19K				IAmb	IAmb	13 45 20.0	
	comp=Z,9.0nm,1.2s						
I28M	**Miner Creek**	**77.21**	**358**	P	**P**	**13 45 16.6**	**-0.7**
PPLA	**Purkeypile**	**79.63**	**4**	P	**P**	**13 45 30.1**	**-0.6**
M52A	**Chesterland**	**82.50**	**318**	P	**P**	**13 45 45.6**	**-0.6**

*IDC **24** 13:41:09.5±4.1, 6.°98S×130.°00E, h90km±37km, mb3.5/6,*
mbtmp4.0/10, MS4.1/2, Error ellipse: s-maj=47.7km
s-min=21.9km az=71.0
*NEIC **24** 13:41:13.7±1.8, 7.°10S±0.°06×129.°59E±0.°06, h123km±8km,*
mb4.4/14, Error ellipse: s-maj=11.2km s-min=6.1km
az=135.0

ISC 24 13:41:14.2±0.6, **7.°20S**±0.°07×**129.°64E**±0.°07, **h139**km, **n36**, σ2§12/34, **mb3.8**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.83**	**116**		**Pn**	**13 41 46.5**	**-0.2**
FAKI	**Fak Fak**	**4.98**	**32**		**Pn**	**13 42 25.9**	**-1.4**
MTN	**Manton Dam**	**5.80**	**165**		**Pn**	**13 42 39.3**	**+1.0**
SOEI	**Soe**	**5.89**	**244**		**Pn**	**13 42 39.2**	**-0.3**
BATI	**Baumata**	**6.62**	**243**	P	**Pn**	**13 42 51.1**	**+1.9**
	17nm,0.4s,baz=329,slow=3.6,SNR=7.5						
BATI				S	**Sn**	**13 44 02.1**	**-1.4**
	79nm,0.4s,baz=54,slow=8.9,SNR=10						
KNRA	**Kununurra**	**8.47**	**186**		**Pn**	**13 43 14.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**11.52**	**199**	P	**Pn**	**13 43 53.5**	**-1.0**
	4.5nm,0.3s,baz=26,slow=10,SNR=40						
FITZ				S	Sn	13 45 52.3	-9.4
	7.9nm,0.3s,baz=144,slow=24,SNR=9.0						
FITZ	**Fitzroy Crossi**	**11.52**	**199**		**Pn**	**13 43 53.3**	**-1.2**
WB0	**Warramunga Arr**	**13.32**	**160**		**Pn**	**13 44 16.7**	**-1.3**
WRAB	**Tennant Creek**	**13.46**	**161**	Pn	**Pn**	**13 44 18.4**	**-1.4**
WRA	**Warramunga Arr**	**13.47**	**161**	P	**Pn**	**13 44 18.4**	**-1.6**
	4.7nm,0.3s,baz=351,slow=13,SNR=40						
WRA				S	Sn	13 46 39.9	-8.9
	2.1nm,0.3s,baz=334,slow=22,SNR=9.1						
WR8	**Warramunga Arr**	**13.54**	**160**		**Pn**	**13

mbtmp3.5/6,Error ellipse: s-maj=124.9km s-min=22.8km az=131.0

ISC 24 13:51:29.2±1.0,**54°29N**±0°03×**161°21E**±0°06,**h62**km±11km, **n89,σ0ᵗ75**/107,**mb3.5**/5,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KZV	**Kizimen**	**0.98**	**328**	PN		**Pn**	**13 51 47.5**	**+0.2**
KZV				S		**Sn**	**13 52 00.7**	**+0.1**
KZV	**Kizimen**	**0.98**	**328**	*eP*		**Pn**	**13 51 47.5**	**+0.2**
KZV				*eS*		**Sn**	**13 52 00.7**	**+0.1**
TUMD	**Tumrok D**	**1.03**	**333**	PN		**Pn**	**13 51 47.5**	**-0.2**
TUMD				S		**Sn**	**13 52 00.9**	**-0.5**
TUMD	**Tumrok D**	**1.03**	**333**	*eP*		**Pn**	**13 51 47.6**	**-0.2**
TUMD				*eS*		**Sn**	**13 52 01.0**	**-0.5**
KII	**Karymskiy**	**1.06**	**257**	PN		**Pn**	**13 51 48.3**	**+0.1**
KII				S		**Sn**	**13 52 02.4**	**+0.1**
KII	**Karymskiy**	**1.06**	**257**	*eP*		**Pn**	**13 51 48.3**	**+0.1**
KII				*eS*		**Sn**	**13 52 02.5**	**+0.1**
TUMR	**Tumrok**	**1.17**	**329**	PN		**Pn**	**13 51 50.0**	**+0.4**
TUMR	**Tumrok**	**1.17**	**329**	*eP*		**Pn**	**13 51 50.1**	**+0.4**
SPN	**Mys Shipunski**	**1.39**	**211**	PN		**Pn**	**13 51 52.3**	**-0.1**
SPN				S		**Sn**	**13 52 09.4**	**-0.4**
SPN	**Mys Shipunski**	**1.39**	**211**	*eP*		**Pn**	**13 51 52.3**	**-0.1**
SPN				*eS*		**Sn**	**13 52 09.4**	**-0.4**
KMNR	**Kamenistaya**	**1.57**	**340**	PN		**Pn**	**13 51 55.8**	**+0.8**
KMNR				S		**Sn**	**13 52 15.3**	**+0.9**
KMNR	**Kamenistaya**	**1.57**	**340**	*eP*		**Pn**	**13 51 55.9**	**+0.8**
KMNR				*eS*		**Sn**	**13 52 15.4**	**+0.9**
NLC	**Nalytchevo**	**1.57**	**225**	PN		**Pn**	**13 51 55.3**	**+0.4**
NLC				S		**Sn**	**13 52 14.5**	**+0.2**
NLC	**Nalytchevo**	**1.57**	**225**	*eP*		**Pn**	**13 51 55.4**	**+0.4**
NLC				*eS*		**Sn**	**13 52 14.5**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**1.68**	**350**	PN		**Pn**	**13 51 57.3**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**1.68**	**350**	*eP*		**Pn**	**13 51 57.3**	**+0.8**
SDLR	**Sedlovina**	**1.71**	**235**	PN		**Pn**	**13 51 57.6**	**+0.7**
SDLR				S		**Sn**	**13 52 18.4**	**+0.6**
SDLR	**Sedlovina**	**1.71**	**235**	*eP*		**Pn**	**13 51 57.6**	**+0.7**
SDLR				*eS*		**Sn**	**13 52 18.5**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.73**	**347**	PN		**Pn**	**13 51 58.1**	**+0.9**
BZWR	**Bezymyannyi-We**	**1.73**	**347**	*eP*		**Pn**	**13 51 58.1**	**+0.9**
KIRR	**Kirishev**	**1.74**	**344**	PN		**Pn**	**13 51 58.1**	**+0.8**
KIRR	**Kirishev**	**1.74**	**344**	*eP*		**Pn**	**13 51 58.1**	**+0.8**
ZLN	**Zelenaya**	**1.75**	**353**	PN		**Pn**	**13 51 58.3**	**+0.9**
ZLN	**Zelenaya**	**1.75**	**353**	*eP*		**Pn**	**13 51 58.3**	**+0.9**
SMAR	**Somma**	**1.76**	**235**	PN		**Pn**	**13 51 58.3**	**+0.7**
SMAR	**Somma**	**1.76**	**235**	*eP*		**Pn**	**13 51 58.3**	**+0.7**
KRER	**Koryakskii**	**1.76**	**237**	PN		**Pn**	**13 51 58.5**	**+0.9**
KRER	**Koryakskii**	**1.76**	**237**	*eP*		**Pn**	**13 51 58.5**	**+0.9**
KPT	**Kopyto**	**1.77**	**342**	PN		**Pn**	**13 51 58.0**	**+0.3**
KPT	**Kopyto**	**1.77**	**342**	*eP*		**Pn**	**13 51 58.0**	**+0.3**
KRX	**Arik**	**1.78**	**239**	PN		**Pn**	**13 51 58.2**	**+0.4**
KRX	**Arik**	**1.78**	**239**	*eP*		**Pn**	**13 51 58.3**	**+0.4**
UGLR	**Uglovaya**	**1.78**	**234**	PN		**Pn**	**13 51 58.7**	**+0.9**
UGLR	**Uglovaya**	**1.78**	**234**	*eP*		**Pn**	**13 51 58.7**	**+0.9**
AVH	**Avacha**	**1.79**	**236**	PN		**Pn**	**13 51 58.8**	**+0.9**
AVH	**Avacha**	**1.79**	**236**	*eP*		**Pn**	**13 51 58.9**	**+0.9**
KOK	**Koryaka**	**1.82**	**238**	PN		**Pn**	**13 51 59.1**	**+0.7**
KOK	**Koryaka**	**1.82**	**238**	*eP*		**Pn**	**13 51 59.1**	**+0.7**
CIRR	**Tsirk**	**1.85**	**352**	PN		**Pn**	**13 51 59.9**	**+1.2**
CIRR	**Tsirk**	**1.85**	**352**	*eP*		**Pn**	**13 51 60.0**	**+1.2**
DALK	**Dalny**	**1.93**	**230**	PN		**Pn**	**13 52 00.4**	**+0.7**
DALK				S		**Sn**	**13 52 23.2**	**+0.3**
DALK	**Dalny**	**1.93**	**230**	*eP*		**Pn**	**13 52 00.4**	**+0.7**
DALK				*eS*		**Sn**	**13 52 23.2**	**+0.3**
KOZ	**Kozyrevsk**	**1.93**	**337**	PN		**Pn**	**13 52 00.3**	**+0.6**
KOZ	**Kozyrevsk**	**1.93**	**337**	*eP*		**Pn**	**13 52 00.3**	**+0.6**
INSR	**Institute**	**1.97**	**233**	PN		**Pn**	**13 52 01.2**	**+0.9**
INSR	**Institute**	**1.97**	**233**	*eP*		**Pn**	**13 52 01.3**	**+0.9**
PET	**Petropavlovsk**	**1.98**	**231**	*eP*		**Pn**	**13 52 01.2**	**+0.8**
PET				*eS*		**Sn**	**13 52 24.6**	**+0.5**
PET	comp=Z,83nm,0.5s			pmax	pmax			
PET	comp=E,449nm,0.6s			smax	smax			
PET	comp=N,427nm,0.6s			smax	smax			
PET	**Petropavlovsk**	**1.98**	**231**	*eP*		**Pn**	**13 52 01.2**	**+0.8**
PET				*eS*		**Sn**	**13 52 24.4**	**+0.3**
KLY	**Klyuchi**	**2.05**	**351**	PN		**Pn**	**13 52 01.9**	**+0.5**
KLY				S		**Sn**	**13 52 25.4**	**-0.5**
KLY	**Klyuchi**	**2.05**	**351**	*eP*		**Pn**	**13 52 01.9**	**+0.5**
KLY				*eS*		**Sn**	**13 52 25.4**	**-0.5**
KBTR	**Krutoberegovo**	**2.13**	**25**	PN		**Pn**	**13 52 03.6**	**+1.2**
KBTR	**Krutoberegovo**	**2.13**	**25**	*eP*		**Pn**	**13 52 03.7**	**+1.2**
KBG	**Krutoberegovo**	**2.15**	**23**	PN		**Pn**	**13 52 03.4**	**+0.8**
KBG	**Krutoberegovo**	**2.15**	**23**	*eP*		**Pn**	**13 52 03.5**	**+0.8**
ESO	**Esso**	**2.18**	**320**	PN		**Pn**	**13 52 03.3**	**-0.2**
ESO	**Esso**	**2.18**	**320**	*eP*		**Pn**	**13 52 03.3**	**-0.2**
SMKR	**Semkarok**	**2.30**	**4**	PN		**Pn**	**13 52 05.9**	**+1.0**
SMKR	**Semkarok**	**2.30**	**4**	*eP*		**Pn**	**13 52 05.9**	**+1.0**
KRMR	**Karymshinskiy**	**2.35**	**233**	PN		**Pn**	**13 52 05.9**	**+0.5**
KRMR				S		**Sn**	**13 52 32.7**	**-0.3**
KRMR	**Karymshinskiy**	**2.35**	**233**	*eP*		**Pn**	**13 52 05.9**	**+0.5**
KRMR				*eS*		**Sn**	**13 52 32.7**	**-0.3**
SRKR	**Sorokina**	**2.37**	**359**	PN		**Pn**	**13 52 06.7**	**+0.9**
SRKR	**Sorokina**	**2.37**	**359**	*eP*		**Pn**	**13 52 06.7**	**+0.9**
PEA0B	**Petropavlovsk-**	**2.40**	**242**	PN		**Pn**	**13 52 06.0**	**-0.1**
PEA0B				S		**Sn**	**13 52 34.4**	**+0.1**
PETK	**Petropavlovsk-** comp=N,5.1nm,0.3s,baz=69,slow=18,SNR=146	**2.40**	**242**	P		**Pn**	**13 52 05.7**	**-0.4**
PETK	comp=N,18nm,0.4s,baz=48,slow=14,SNR=13			S		**Sn**	**13 52 35.0**	**+0.7**
RUS	**Russkaya**	**2.46**	**222**	PN		**Pn**	**13 52 07.3**	**+0.4**
RUS	**Russkaya**	**2.46**	**222**	*eP*		**Pn**	**13 52 07.3**	**+0.4**
GRL	**Gorelyy**	**2.56**	**228**	PN		**Pn**	**13 52 09.8**	**+1.4**
GRL	**Gorelyy**	**2.56**	**228**	*eP*		**Pn**	**13 52 09.8**	**+1.4**
MTVR	**Mutnovka**	**2.56**	**226**	PN		**Pn**	**13 52 09.4**	**+1.0**
MTVR	**Mutnovka**	**2.56**	**226**	*eP*		**Pn**	**13 52 09.5**	**+1.0**
ASAK	**Asacha**	**2.75**	**227**	PN		**Pn**	**13 52 12.6**	**+1.6**
ASAK	**Asacha**	**2.75**	**227**	*eP*		**Pn**	**13 52 12.6**	**+1.6**
APC	**Apacha**	**2.77**	**242**	PN		**Pn**	**13 52 11.8**	**+0.6**
APC	**Apacha**	**2.77**	**242**	*eP*		**Pn**	**13 52 11.8**	**+0.6**
BKI	**Bering**	**2.91**	**70**	*eS*		**Sn**	**13 52 46.0**	**-0.8**
KDTR	**Khodutka, Kamc**	**3.12**	**219**	PN		**Pn**	**13 52 15.9**	**0.0**
KDTR	**Khodutka, Kamc**	**3.12**	**219**	*eP*		**Pn**	**13 52 15.9**	**0.0**
ILAR	**Eielson Array** comp=N,0.5nm,0.8s,baz=274,slow=8.7,SNR=6.2 comp=N,0.5nm,0.8s	**27.51**	**47**	P		**P**	**13 57 08.1**	**-1.3**
H11N2	**WAKE ISLAND Hy** baz=354,slow=76,SNR=71	**34.77**	**171**	T		T	14 35 20.4	
H11N3	**WAKE ISLAND Hy** baz=354,slow=76,SNR=47	**34.79**	**171**	T		T	14 35 16.9	
H11N1	**WAKE ISLAND Hy** baz=354,slow=76,SNR=62	**34.79**	**171**	T		T	14 35 20.6	
H11S1	**WAKE ISLAND Hy** baz=352	**35.96**	**171**	T		T	14 36 45.6	
H11S3	**WAKE ISLAND Hy** baz=352	**35.98**	**171**	T		T	14 36 45.3	
H11S2	**WAKE ISLAND Hy** baz=352	**35.98**	**171**	T		T	14 36 41.7	
YKA	**Yellowknife Ar** comp=N,1.0nm,0.9s,baz=306,slow=7.3,SNR=2.8 comp=N,1.0nm,0.9s	**41.84**	**44**	P		**P**	**13 59 11.0**	**-1.4**
NVAR	**Mina Array Bea** comp=N,0.3nm,0.5s,baz=303,slow=7.2,SNR=5.5 comp=N,0.3nm,0.5s	**54.72**	**72**	P		**P**	**14 00 53.4**	**+1.1**
TXAR	**Lajitas Array** comp=N,0.5nm,0.5s,baz=291,slow=4.9,SNR=12 comp=N,0.5nm,0.5s	**69.57**	**68**	P		**P**	**14 02 31.8**	**+0.3**
ASAR	**Alice Springs** comp=N,0.1nm,0.5s,baz=22,slow=5.1,SNR=1.8 comp=N,0.1nm,0.5s	**81.12**	**205**	P		**P**	**14 03 36.7**	**-0.8**
PLCA	**Paso Flores** comp=N,3.7nm,1.1s,baz=305,slow=8.4,SNR=3.8	**143.36**	**90**	PKP		**PKPdf**	**14 10 56.5**	**+0.8**

*NEIC **24** 14:01:03.1±1.1,35°.72N±0°.01×98°.84W±0°.01,h6km±5km, Error ellipse: s-maj=1.9km s-min=1.3km az=54.0*

NEIC 24 14:01:02.7±1.1,**35°.69N**±0°.01×**98°.81W**±0°.02,**h5**km±11km, **mb_Lg2.3**/22,**ML2.4**/18,**ML2.6**/52,**Error ellipse: s-maj=3.0km s-min=2.8km az=259.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CSTR	**Hydro, Custer**	**0.11**	**117**			Pg	14 01 06.3	+1.3
ELIS	**Ellis County**	**0.62**	**307**			Pg	14 01 15.1	+0.5
ELIS	comp=E,258nm,0.3s			IAML			14 01 31.0	
ELIS	comp=N,267nm,0.6s			IAML			14 01 33.6	
OK038	**West end E0370**	**0.79**	**4**			Pg	14 01 17.2	-0.6
OK038						Sg	14 01 28.6	+0.6
NOKA	**Waynoka**	**0.94**	**354**			Pg	14 01 20.4	-0.4
NOKA						Sg	14 01 33.3	+0.1
NOKA	comp=E,246nm,0.3s			IAML			14 01 41.6	
NOKA	comp=N,315nm,0.2s			IAML			14 01 45.2	
WMOK	**Wichita Mounta**	**0.95**	**179**			Pg	14 01 20.4	-0.6
WMOK	**Wichita Mounta**	**0.95**	**179**			Sg	14 01 33.6	+0.2
CROK	**Carrier**	**1.05**	**39**			Pg	14 01 22.3	-0.6
CROK						Sg	14 01 36.9	+0.4
FNO	**Franklin**	**1.23**	**110**			Pb	14 01 26.4	0.0
FNO						Sn	14 01 43.4	-0.2
FNO	comp=E,170nm,0.3s			IAML			14 01 48.7	
SMWD	**Samnorwood**	**1.31**	**244**			Pn	14 01 27.4	-0.4
X34A	**Smith Ranch, M**	**1.35**	**144**			Pn	14 01 28.0	-0.3
X34A	comp=Z,22nm,1.1s			IAmb_Lg			14 01 46.9	
GC02	**Grant County #**	**1.39**	**33**			Pn	14 01 27.8	-1.0
GC02						Sn	14 01 47.4	-0.1
KAN14	**Manchester OK**	**1.43**	**28**			Pn	14 01 27.9	-1.6
OK052	**Battle Ridge R**	**1.66**	**79**			Pn	14 01 33.0	+0.6
BLOK	**Blackwell** comp=Z,16nm,0.9s	**1.67**	**50**	IAmb_Lg			14 01 56.0	
WTFS	**Witchita Falls**	**1.94**	**172**			Pb	14 01 37.7	-0.9
LOOK	**Love County**	**2.16**	**141**			Pb	14 01 41.0	-1.4
T35A	**Sooner Cattle**	**2.22**	**56**			Pn	14 01 39.9	-0.3
TUL3	**Leonard**	**2.46**	**84**			Pn	14 01 43.5	0.0
TUL3	comp=Z,7.6nm,0.8s			IAmb_Lg			14 02 26.3	
AMTX	**Amarillo**	**2.49**	**252**			Pn	14 01 45.5	+1.6
AMTX	comp=Z,11nm,0.8s			IAmb_Lg			14 02 28.2	
APMT	**Aspermont**	**2.60**	**205**			Pn	14 01 47.0	+1.6
DKNS	**Dickens**	**2.67**	**221**			Pn	14 01 48.3	+1.8
DKNS	comp=Z,11nm,0.8s			IAmb_Lg			14 02 29.5	
Z35A	**Perchaven, San**	**2.68**	**151**			Pn	14 01 48.2	+1.7
R32A	**Long Quarter,**	**2.73**	**2**	Pn		Pn	14 01 47.3	+0.1
PLPT	**Palo Pinto**	**2.90**	**172**			Pn	14 01 51.0	+1.3
PLPT	comp=Z,6.0nm,0.9s			IAmb_Lg			14 02 40.0	
SN07	**Snyder 07** comp=Z,9.0nm,0.7s	**3.12**	**214**	IAmb_Lg			14 02 39.6	
CBKS	**Cedar Bluff** comp=Z,13nm,1.0s	**3.20**	**347**	IAmb_Lg			14 02 46.0	
RTBA	**Rita Blanca**	**3.27**	**284**			Pn	14 01 55.9	+1.1
WHTX	**Lake Whitney,** comp=Z,11nm,0.7s	**3.86**	**163**	IAmb_Lg			14 03 10.4	
BRDY	**Brady** comp=Z,7.0nm,0.8s	**4.40**	**182**	IAmb_Lg			14 03 27.3	
KSCO	**Kaye Shedlock'** comp=Z,11nm,0.8s	**4.50**	**319**	IAmb_Lg			14 03 29.5	
SDCO	**Great Sand Dun**	**5.75**	**293**			Pn	14 02 29.3	+0.2
CCM	**Cathedral Cave** comp=Z,7.1nm,0.8s	**6.50**	**67**	IAmb_Lg			14 04 29.8	

*CATAC **24** 14:14:05.6±0.5,7°.7N±4°×8°.2W±°, h1km,M4.7/16,mb4.7/1, mB4.7/1,MLv4.7/16,Mw(mB)3.9/1,Error ellipse: s-maj=8.9km s-min=4.8km az=26.3,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.33; Mθθ1.51; Mφφ-1.83; Mrθ0.68; Mθφ1.02; Mφr1.92; Fault plane solution: M₀2.83953×10¹⁵ NP1:φ₁118.67684°, δ43.06641°,λ4.99120°. NP2:φ₂25.02615°,δ86.59409°, λ132.95784°. Principal axes: T 2.6061, Plg33.9587°, Azm330.5437°; N 0.4201, Plg42.8637°, Azm201.8599°; P -3.0262, Plg28.3318°, Azm81.8345°; confirmed*

*UCR **24** 14:14:08.2±1.9,7°.07N×82°.32W,h35km±999km,MW4.3*

*IDC **24** 14:14:12.3±1.5,8°.34N×81°.89W,h0km,mb3.8/8, mbtmp3.9/10,ML3.1/3,MS3.2/6,Error ellipse: s-maj=51.9km s-min=16.7km az=29.0*

*NEIC **24** 14:14:15.6±1.2,8°.3N±0°.1×81°.89W±0°.05,h10km±2km, mb4.3/42,Error ellipse: s-maj=26.3km s-min=2.9km az=196.0*

ISC 24 14:14:06.3±3.2,**7°.11N**±0°.08×**82°.33W**±0°.04,**h7**km±20km, **n197,σ1ᵗ48**/200,**mb4.2**/23,**MS3.2**/4,**31C-16D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LMNES	**Limones**	**1.12**	**332**	*iP*		**Pb**	**14 14 26.3**	**-1.7**
GMAL	**Guarumal, Vera**	**1.27**	**59**	*eP*		**Pn**	**14 14 29.0**	**-1.4**
GMAL				*eS*		**Sb**	**14 14 45.4**	**-1.7**
ARIEL	**Armuelles**	**1.28**	**336**	*iP*		**Pn**	**14 14 30.7**	**+0.1**
CDITO	**Canoas**	**1.55**	**340**	S		**Sn**	**14 14 54.8**	**0.0**
CDITO	**Canoas**	**1.55**	**340**	P		**Pn**	**14 14 32.7**	**-1.7**
JEFFS	**S de V. Baru**	**1.57**	**353**	*iP*		**Pn**	**14 14 33.6**	**-1.0**
JEFFS				*eS*		**Sn**	**14 14 53.7**	**-1.6**
DMCAL	**E. de Neily**	**1.62**	**344**	*eP*		**Pn**	**14 14 34.1**	**-1.2**
DMCAL				*eS*		**Sn**	**14 14 55.8**	**-0.7**
PIRO	**Carate, Puerto**	**1.63**	**322**	S		**Sn**	**14 14 55.7**	**-1.0**
PIRO	**Carate, Puerto**	**1.63**	**322**	P		**Pn**	**14 14 33.2**	**-2.2**
PIRO	**Carate, Puerto**	**1.63**	**322**	*iP*		**Pn**	**14 14 33.1**	**-2.4**
WILLF	**Boquete**	**1.64**	**356**	*eP*		**Pn**	**14 14 34.2**	**-1.5**
WILLF				*eS*		**Sn**	**14 14 54.9**	**-2.2**
BOTLE	**Boquete Panama**	**1.65**	**356**	*eP*		**Pn**	**14 14 34.8**	**-1.1**
NELY	**Ciudad Neily**	**1.65**	**338**	*eP*		**Pn**	**14 14 34.0**	**-1.7**
NELY				*eS*		**Sn**	**14 14 55.0**	**-2.2**
DAP26	**falda E V. Bar**	**1.67**	**357**	*eP*		**Pn**	**14 14 35.0**	**-1.2**
BRU2	**Volcan**	**1.71**	**348**	Pn		**Pn**	**14 14 35.3**	**-1.4**
BRU2	**Volcan**	**1.71**	**348**	S		**Sn**	**14 14 58.4**	**-0.6**
BRU2	**Volcan**	**1.71**	**348**	P		**Pn**	**14 14 35.4**	**-1.4**
BRU2	**Volcan**	**1.71**	**348**	*iP*		**Pn**	**14 14 35.3**	**-1.4**
PTJ1	**Puerto Jimnez**	**1.72**	**326**	P		**Pn**	**14 14 35.3**	**-1.3**
PTJ1	**Puerto Jimnez**	**1.72**	**326**	S		**Sn**	**14 14 59.1**	**+0.3**
JIME	**Puerto Jimenez**	**1.73**	**325**	*eP*		**Pn**	**14 14 35.0**	**-1.8**
EDAD	**Golfito**	**1.74**	**332**	*eP*		**Pn**	**14 14 34.7**	**-2.4**
EDAD				*eS*		**Sn**	**14 14 57.4**	**-2.1**
RBALA	**Bur**	**1.77**	**6**	*eP*		**Pn**	**14 14 36.9**	**-0.5**
SCLRA	**Santa Clara, W**	**1.77**	**345**	*iP*		**Pn**	**14 14 36.6**	**-0.9**
PBNVO	**Pueblo Nuevo,**	**1.78**	**4**	*eP*		**Pn**	**14 14 36.3**	**-1.1**
PBNVO				*eS*		**Sn**	**14 14 59.2**	**-1.2**
RSRNO	**Rio Sereno**	**1.78**	**343**	*eP*		**Pn**	**14 14 37.1**	**-0.5**
KKNTU	**Kakint[a]**	**1.80**	**17**	*eP*		**Pn**	**14 14 37.3**	**-0.4**
KKNTU				*eS*		**Sn**	**14 15 00.5**	**-0.4**
VITO	**San Vito**	**1.81**	**340**	*eP*		**Pn**	**14 14 37.4**	**-0.8**
ALCO	**Alturas Coton,**	**1.90**	**345**	*iP*		**Pn**	**14 14 37.8**	**-1.5**
ALCO				*eS*		**Sn**	**14 15 01.4**	**-2.1**
EDP2	**Potrero Grande**	**2.07**	**336**	*eP*		**Pn**	**14 14 41.2**	**-0.4**
FIMO	**Fila Mora**	**2.13**	**332**	*eP*		**Pn**	**14 14 41.4**	**-1.0**
AZU	**Azuero**	**2.15**	**71**	*iP*		**Pn**	**14 14 42.2**	**-0.4**
PANP	**Palmar Norte**	**2.15**	**329**	*eP*		**Pn**	**14 14 41.0**	**-1.7**
BURE	**Buenos Aires**	**2.28**	**334**	*eP*		**Pn**	**14 14 43.9**	**-0.6**
BURE				*eS*		**Sn**	**14 15 11.9**	**-1.0**
OCHAL	**Ojochal**	**2.37**	**327**	S		**Sn**	**14 15 15.2**	**+0.2**
OCHAL	**Ojochal**	**2.37**	**327**	P		**Pn**	**14 14 44.5**	**-1.1**
EDPE	**Pejibaye, P**	**2.38**	**329**	*eP*		**Pn**	**14 14 44.9**	**-0.9**
RGM0	**Gandoca**	**2.48**	**354**			Pn	14 14 41.3	-5.9
RGM0	**Gandoca**	**2.48**	**354**	S		**Sn**	**14 15 20.1**	**+2.4**
RGM0	**Gandoca**	**2.48**	**354**	P		**Pn**	**14 14 49.0**	**+1.8**
RGM0	**Gandoca**	**2.48**	**354**	*iP*		**Pn**	**14 14 48.6**	**+1.4**
BRIBI	**Bribri**	**2.54**	**349**	*iP*		**Pn**	**14 14 49.4**	**+1.4**
CEUA	**Cerro Uatsi, L**	**2.57**	**346**	*eP*		**Pn**	**14 14 50.1**	**+1.6**
ZEDO	**Perez Zeledon**	**2.60**	**329**	*eP*		**Pn**	**14 14 48.7**	**-0.3**
LAES	**El Progreso Va**	**2.73**	**345**	*iP*		**Pn**	**14 14 51.3**	**+0.7**
BUS1	**Rivas**	**2.81**	**330**	*iP*		**Pn**	**14 14 51.3**	**-0.8**
VERH	**Veragua Rainfo**	**2.93**	**343**	*eP*		**Pn**	**14 14 53.7**	**+0.3**
LLNJ	**Naranjito**	**2.93**	**323**	*eP*		**Pn**	**14 14 52.1**	**-1.3**
PIEC	**Cerro El Cedra**	**2.97**	**327**	*eP*		**Pn**	**14 14 53.7**	**-0.5**
PITB	**Pirrs, San**	**3.04**	**327**	*eP*		**Pn**	**14 14 55.1**	**0.0**
ZANG	**Zanguenga, Cho**	**3.06**	**53**	*eP*		**Pn**	**14 14 55.8**	**+0.8**
REPA	**Paraso**	**3.10**	**331**	*eP*		**Pn**	**14 14 55.9**	**+0.1**
VINA	**Juan Vinas**	**3.10**	**333**	*eP*		**Pn**	**14 14 56.1**	**+0.3**
PICV	**PH. Pirrs**	**3.11**	**324**	*eP*		**Pn**	**14 14 54.9**	**-1.0**
TAAN	**Batan**	**3.12**	**341**	*eP*		**Pn**	**14 14 56.6**	**+0.6**
VERB	**Verbena**	**3.13**	**335**	*iP*		**Pn**	**14 14 56.6**	**+0.5**
PCAYA	**Pacayas**	**3.15**	**332**	*eP*		**Pn**	**14 14 57.0**	**+0.3**
VTCV	**VTCV, Calle Va**	**3.17**	**334**	*iP*		**Pn**	**14 14 56.9**	**0.0**
RESJ	**San Isidro (Tu**	**3.18**	**336**	*iP*		**Pn**	**14 14 57.7**	**+0.8**
IRES	**Siquirres**	**3.19**	**339**	*eP*		**Pn**	**14 14 57.9**	**+1.0**
RAFA	**San Fareal, Vo**	**3.19**	**333**	*eP*		**Pn**	**14 14 57.6**	**+0.4**
ABRB	**Las Abras (San**	**3.19**	**335**	*eP*		**Pn**	**14 14 57.4**	**+0.2**
LCOCO	**El Coco**	**3.20**	**338**	*eP*		**Pn**	**14 14 58.0**	**+1.0**
CVTV	**Tajo**	**3.20**	**334**	*iP*		**Pn**	**14 14 57.5**	**+0.1**
CVTV				*eS*		**Sn**	**14 15 37.5**	**+1.5**
BCIP	**Isla Barro Col**	**3.21**	**50**	*eP*		**Pn**	**14 14 57.5**	**+0.3**
CVTQ	**Turrialba Volc**	**3.21**	**334**	*eP*		**Pn**	**14 14 57.8**	**+0.3**
VTR0	**Volcan Turrial**	**3.22**	**334**	*eP*		**Pn**	**14 14 57.6**	**-0.1**
CVTR	**Volcan Turrial**	**3.22**	**334**	*iP*		**Pn**	**14 14 57.6**	**-0.1**
VTUN	**Crater Central**	**3.23**	**334**	*eP*		**Pn**	**14 14 57.7**	**-0.1**
VICA	**Volcano Irazu**	**3.23**	**332**	*iP*		**Pn**	**14 14 57.6**	**-0.2**
ACOS	**Acosta**	**3.23**	**326**	*eP*		**Pn**	**14 14 56.4**	**-1.2**
TRIO	**Tres Rios**	**3.23**	**330**	*eP*		**Pn**	**14 14 56.7**	**-0.9**
RVLA	**Villa Bonita**	**3.23**	**337**	*iP*		**Pn**	**14 14 58.5**	**+1.0**
AMPA	**Desamparados**	**3.26**	**328**	*eP*		**Pn**	**14 14 57.6**	**-0.4**
ECI	**Escuela Centro**	**3.29**	**329**	*eP*		**Pn**	**14 14 58.5**	**0.0**
LUJA	**Lujan**	**3.29**	**329**	*eP*		**Pn**	**14 14 58.4**	**0.0**
SJS3	**Mercedes San J**	**3.29**	**329**	*eP*		**Pn**	**14 14 58.6**	**+0.2**
SJS	**Escuela Geolog**	**3.29**	**329**	*eP*		**Pn**	**14 14 58.5**	**+0.1**
CORON	**Coronado**	**3.29**	**330**	*eP*		**Pn**	**14 14 59.1**	**+0.6**
LUPE	**Guadalupe**	**3.30**	**329**	*eP*		**Pn**	**14 14 58.9**	**+0.3**
CVIMO	**Finca Echandi**	**3.31**	**331**	*eP*		**Pn**	**14 14 58.5**	**-0.3**
EGUB	**Earth Gu|pi**	**3.33**	**338**	*iP*		**Pn**	**14 14 59.6**	**+0.8**
CVTG	**V. Turrialba,**	**3.34**	**335**	*eP*		**Pn**	**14 14 59.8**	**+0.7**
PURI	**Puriscal**	**3.35**	**324**	*eP*		**Pn**	**14 14 58.6**	**-0.7**
HDC	**Heredia**	**3.37**	**329**			**Pn**	**14 14 59.5**	**-0.1**
HDC	**Heredia**	**3.37**	**329**	*iP*		**Pn**	**14 14 59.7**	**+0.1**
HDC				*eS*		**Sn**	**14 15 39.9**	**-0.1**
HEME	**Heredia, Merce**	**3.38**	**328**	*eP*		**Pn**	**14 15 00.7**	**+1.1**
BELE	**Belen**	**3.39**	**327**	*eP*		**Pn**	**14 14 59.4**	**-0.4**
PILE	**Guapiles**	**3.41**	**335**	*eP*		**Pn**	**14 15 01.0**	**+1.0**
TCS1	**Tacares**	**3.51**	**326**	P		**Pn**	**14 15 01.3**	**0.0**
TCS1	**Tacares**	**3.51**	**326**	*eP*		**Pn**	**14 15 00.3**	**-1.0**
CARI	**Cariari**	**3.52**	**337**	*eP*		**Pn**	**14 15 02.5**	**+1.0**
CAZU	**Cerro Azul, Pa**	**3.59**	**54**	*eP*		**Pn**	**14 15 02.5**	**0.0**
VPS8	**V Poas**	**3.59**	**328**	*eP*		**Pn**	**14 15 01.8**	**-0.9**
VPS5	**V. Poas**	**3.59**	**329**	*eP*		**Pn**	**14 15 03.0**	**+0.2**
TRT2	**Tortugero**	**3.70**	**338**	S		**Sn**	**14 15 49.3**	**+1.5**
TRT2	**Tortugero**	**3.70**	**338**	P		**Pn**	**14 15 04.0**	**0.0**
TRT2	**Tortugero**	**3.70**	**338**	*eP*		**Pn**	**14 15 03.2**	**-0.7**
ARTO	**Ro Cuarto**	**3.72**	**330**	*eP*		**Pn**	**14 15 04.7**	**+0.5**
VPL3	**V. Platanar**	**3.77**	**329**	*eP*		**Pn**	**14 15 05.2**	**+0.2

LRMC	**Laurel Mtn Rad**	**42.98**	**316**	IAmb	IAmb	14 22 11.5	
	comp=Z,3.4nm,0.9s						
R11B	**Troy Canyon, C**	**43.24**	**321**		**P**	**14 22 11.2**	**+2.6**
GMN	**Gold Mountain**	**43.70**	**319**	P	**P**	**14 22 14.9**	**+2.5**
ULM	**Lac du Bonnet**	**44.47**	**348**	P	**P**	**14 22 15.7**	**-2.4**
	comp=Z,4.9nm,0.8s,baz=146,slow=7.9,SNR=3.4						
	comp=Z,4.9nm,0.8s						
ELK	**Elko**	**44.52**	**324**	LR	LR	14 41 42.2	
	comp=Z,18nm,20.9s,baz=47,slow=38						
ELK	**Elko**	**44.52**	**324**		**P**	**14 22 21.1**	**+2.1**
ELK				IAmb	IAmb	14 22 21.7	
	comp=Z,6.9nm,1.4s						
NV11	**Mina Array Sit**	**44.92**	**319**	P	**P**	**14 22 25.3**	**+3.2**
NVAR	**Mina Array Bea**	**45.02**	**319**	P	**P**	**14 22 25.9**	**+2.9**
	comp=Z,1.7nm,0.6s,baz=124,slow=7.1,SNR=19						
NVAR				LR	LR	14 42 08.9	
	comp=Z,40nm,19.2s,baz=290,slow=38						
	comp=Z,1.7nm,0.6s						
HLID	**Hailey**	**45.92**	**327**		**P**	**14 22 31.7**	**+1.7**
ORV	**Oroville**	**47.72**	**319**	P	**P**	**14 22 47.9**	**+4.0**
YKA	**Yellowknife Ar**	**60.10**	**343**	P	**P**	**14 24 13.6**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=143,slow=6.0,SNR=5.5						
	comp=Z,1.0nm,0.7s						
DLBC	**Dease Lake**	**62.88**	**334**	LR	LR	14 53 26.0	
	comp=Z,44nm,18.9s,baz=56,slow=38						
ILAR	**Eielson Array**	**72.92**	**336**	P	**P**	**14 25 36.9**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=102,slow=5.1,SNR=11						
	comp=Z,0.5nm,0.6s						
ESDC	**Sonseca Array**	**76.55**	**51**	P	**P**	**14 25 59.0**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=257,slow=5.8,SNR=2.4						
	comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**76.55**	**51**	IAmb	IAmb	14 26 27.8	
	comp=Z,3.4nm,1.4s						

BJI ***24*** *14:18:40.5, 1.°95N×92.°38E, h25km, mB5.3/23, mb5.2/74, Ms4.5/52, MS7 4.4/53*

IDC ***24*** *14:18:42.0±0.4, 2.°42N×92.°48E, h0km, mb4.7/35, mbtmp4.7/37, ML4.8/2, MS4.2/55, Error ellipse: s-maj=13.6km s-min=11.6km az=82.0*

NEIC ***24*** *14:18:44.3, 2.°31N×92.°18E, h30km, Moment Tensor Solution. Duration: 1s5 Moment tensor: Scale 10^16 Nm; Mrr-1.62; Mθθ-0.56; Mϕϕ2.19; Mrθ4.56; Mθϕ-2.32; Mϕr-0.15; Fault plane solution: M0 5.48000×10^16 NP1: ϕs182.07000°, δ33.26000°, λ-17.93000°. NP2: ϕs287.21000°, δ80.28000°, λ-121.96000°. Principal axes: T 4.8545, Plg28.0000°, Azm42.0000°; N 1.0894, Plg31.0000°, Azm293.0000°; P -5.9438, Plg45.0000°, Azm165.0000°;*

NEIC ***24*** *14:18:44.3, 2.°41N×92.°48E, h30km*

NEIC ***24*** *14:18:44.3±1.1, 2.°40N±0.°07×92.°47E±0.°09, h10km±1km, mb5.2/67, Mww5.1/14, Error ellipse: s-maj=14.9km s-min=11.9km az=253.0*

DJA ***24*** *14:18:45.4±0.9, 2.°N±3.°×9.°2E±.°, h22km±7km, M5.3/62, mb5.3/62, mB5.7/35, MLv6.0/13, Mw(mB)5.3/35, MwMwp4.7/5, Mwp5.0/5*

GCMT ***24*** *14:18:49.3±0.2, 2.°48N±0.°01×92.°58E±0.°02, h43km±1km, MW5.1/111, Moment Tensor Solution. s41,c51; s111,c164; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.85±.17; Mθθ-1.78±.11; Mϕϕ2.63±.12; Mrθ3.08±.14; Mθϕ-2.66±.10; Mϕr-1.15±.12; Best double couple: Mo4.82100×10^16 NP1:ϕs197.00000°, δ46.00000°, λ-9.00000°. NP2:ϕs294.00000°, δ83.00000°, λ-135.00000°. Principal axes: T 4.9540, Plg24.0000°, Azm57.0000°; N -0.2710, Plg45.0000°, Azm301.0000°; P -4.6870, Plg35.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 14:18:47.6±0.7, 2.°45N±0.°04×92.°61E±0.°05, h34km±2km, n358, σ1s56/333, mb5.1/153, MS4.3/79, 19C-5D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
SNSI	**Sinabang, Aceh**	**3.71**	**91**	P			**Pn**	**14**	**19**	**43.8**	**+1.2**
MLSI	**Meulaboh, Aceh**	**4.19**	**64**	P			**Pn**	**14**	**19**	**50.9**	**+1.7**
CMBY	**CAMPBELL BAY**	**4.72**	**16**	*e*P			**Pn**	**14**	**19**	**58.0**	**+1.5**
CMBY				*e*S			**Sn**	**14**	**20**	**46.4**	**-3.6**
CMBY				IAML				14	20	53.8	
	comp=E,3μm,0.5s										
CMBY				IAML				14	20	53.9	
	comp=N,4μm,0.5s										
GSI	**Gunungsitoli**	**5.09**	**103**	Pn			**Pn**	**14**	**20**	**02.9**	**+1.3**
GSI	**Gunungsitoli**	**5.09**	**103**	P			**Pn**	**14**	**20**	**02.7**	**+1.1**
	comp=N,8.3nmcomp=N,1μm,0.7s										
LHMI	**Lhok Sumawe**	**5.13**	**57**				**Pn**	**14**	**20**	**03.8**	**+1.6**
LHMI	**Lhok Sumawe**	**5.13**	**57**	P			**Pn**	**14**	**20**	**05.0**	**+2.9**
LHMI	**Lhok Sumawe**	**5.13**	**57**	P			**Pn**	**14**	**20**	**04.8**	**+2.7**
	comp=N,7.9nmcomp=N,20μmcomp=N,1μm,1.0s										
KCSI	**Kotacane, Aceh**	**5.26**	**78**	P			**Pn**	**14**	**20**	**06.5**	**+2.6**
TSI	**Tuntungan**	**6.04**	**80**	P			**Pn**	**14**	**20**	**16.9**	**+2.3**
RPSI	**Rantau Prapat**	**6.31**	**88**				**Pn**	**14**	**20**	**19.6**	**+1.3**
RPSI							**Sn**	**14**	**21**	**25.4**	**-3.9**
PSI	**Prapat**	**6.32**	**87**	Pn			**Pn**	**14**	**20**	**19.6**	**+1.1**
	comp=N,22nm,0.3s,baz=276,slow=6.8,SNR=46										
PSI					Sn		**Sn**	**14**	**21**	**25.4**	**-4.2**
	comp=N,28nm,0.3s,baz=79,slow=17,SNR=4.6										
	comp=N,254nm,0.7s										
MNSI	**Mandailing Nat**	**7.16**	**103**	P			**Pn**	**14**	**20**	**31.3**	**+1.3**
SISI	**Saibi**	**7.49**	**120**	P			**Pn**	**14**	**20**	**34.3**	**-0.2**
	comp=N,4.3nmcomp=N,3μmcomp=N,259nm,0.7s										
PPI	**Padang Panjang**	**8.30**	**110**	P			**Pn**	**14**	**20**	**46.5**	**+0.8**
	comp=N,2.1nmcomp=N,2μmcomp=N,166nm,0.6s										
KULM	**Kulim**	**8.50**	**70**				**Pn**	**14**	**20**	**49.2**	**+0.8**
KULM	**Kulim**	**8.50**	**70**	P			**Pn**	**14**	**20**	**50.0**	**+1.6**
PDSI	**Padang**	**8.53**	**113**	P			**Pn**	**14**	**20**	**49.2**	**+0.3**
	comp=N,6μmcomp=N,92nm,1.1s										
IPM	**Ipoh**	**8.64**	**76**				**Pn**	**14**	**20**	**51.2**	**+0.9**
IPM	**Ipoh**	**8.64**	**76**	P			**Pn**	**14**	**20**	**51.7**	**+1.4**
PPSI	**Pulau Pagai**	**9.03**	**125**	P			**Pn**	**14**	**20**	**55.6**	**-0.1**
	comp=N,4μmcomp=N,471nm,0.8s										
PBA	**Port Blair**	**9.15**	**1**				**Pn**	**14**	**20**	**57.1**	**-0.1**
PBA	**Port Blair**	**9.15**	**1**	*e*P			**Pn**	**14**	**20**	**57.4**	**+0.1**
PBA				*e*S			**Sn**	**14**	**22**	**32.1**	**-7.0**
PBA				IAML				14	22	40.0	
	comp=E,1μm,0.4s										
PBA				IAML				14	22	41.0	
	comp=N,1μm,0.4s										
KRJI	**Kerinci**	**9.93**	**117**	P			**Pn**	**14**	**21**	**09.4**	**+1.2**
DGPR	**DIGLIPUR**	**10.66**	**2**	*e*P			**Pn**	**14**	**21**	**17.7**	**-0.3**
DGPR				*e*S			Sn	14	23	02.9	-13
DGPR				IAML				14	23	21.8	
	comp=E,1μm,0.3s										
DGPR				IAML				14	23	22.9	
	comp=N,1μm,0.6s										
MASI	**Maura Aman, Be**	**11.11**	**120**	P			**Pn**	**14**	**21**	**24.7**	**+0.4**
	comp=N,3μmcomp=N,225nm,1.3s										
MYKOM	**Kota Tinggi**	**11.25**	**93**				**Pn**	**14**	**21**	**26.8**	**+0.7**
MYKOM	**Kota Tinggi**	**11.25**	**93**	P			**Pn**	**14**	**21**	**27.2**	**+1.1**
KSI	**Kapahiang**	**11.67**	**121**	P			**Pn**	**14**	**21**	**31.8**	**-0.2**
	comp=N,4μmcomp=N,174nm,0.7s										
TPRI	**Tanjung Pinang**	**12.01**	**97**	P			**Pn**	**14**	**21**	**36.6**	**+0.1**
	comp=N,48nm,1.1s										
DSRI	**Dabo**	**12.31**	**104**	P			**Pn**	**14**	**21**	**40.7**	**0.0**
MDSI	**Maura Dua**	**13.46**	**121**	P			**Pn**	**14**	**21**	**56.4**	**+0.1**
	comp=N,977nmcomp=N,42nm,0.6s										
LWLI	**Liwa**	**13.63**	**123**	P			**Pn**	**14**	**21**	**58.4**	**-0.4**
	comp=N,247nm,0.7s										
KASI	**Kota Agung**	**14.27**	**124**	P			**Pn**	**14**	**22**	**07.4**	**0.0**
	comp=N,70nm,1.0s										
COCO	**West Island**	**15.14**	**164**	P			**P**	**14**	**22**	**24.1**	**+0.3**
COCO				IAmb			IAmb	14	22	26.1	
	comp=Z,61nm,0.8s										
MDRS	**Chennai**	**16.15**	**311**	*e*P			**P**	**14**	**22**	**35.7**	**+0.6**
DBJI	**Dramaga**	**16.71**	**122**	P			**Pn**	**14**	**22**	**40.2**	**+0.9**
	comp=Z,5μmcomp=Z,150nm,1.3s										
SKJI	**Sukabumi**	**16.79**	**124**	P			**Pn**	**14**	**22**	**40.1**	**-0.2**
	comp=Z,176nm,0.9s										
KOD	**Kodaikanal**	**16.91**	**298**	*e*P			**P**	**14**	**22**	**45.6**	**+1.7**
SALM	**Salem**	**16.96**	**303**	*e*P			**P**	**14**	**22**	**45.8**	**+1.7**
SALM				IAmb			IAmb	14	22	46.0	
	comp=Z,81nm,1.0s										
CM31	**Chiang Mai Arr**	**17.07**	**21**				**Pn**	**14**	**22**	**42.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**17.07**	**21**	P			**Pn**	**14**	**22**	**43.5**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=217,slow=13,SNR=222										
CMAR				S			**Sn**	**14**	**25**	**52.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=199,slow=24,SNR=2.0										
CMAR				LR			LR	14	30	08.2	
	comp=Z,606nm,19.1s,baz=205,slow=40										
	comp=Z,28nm,0.9s										
CHTO	**Chiang Mai**	**17.41**	**20**				**Pn**	**14**	**22**	**47.2**	**-0.8**
CHTO	**Chiang Mai**	**17.41**	**20**				**P**	**14**	**22**	**50.3**	**+1.3**
CNJI	**Cibinong**	**17.43**	**124**	P			**Pn**	**14**	**22**	**47.7**	**-0.6**
VIS	**Vishakhapatnam**	**17.70**	**330**	*e*P			**Pn**	**14**	**22**	**51.9**	**+0.3**
VIS				IAmb			IAmb	14	22	54.4	
	comp=Z,91nm,0.8s										
BBJI	**Bungbulang**	**17.95**	**123**	P			**Pn**	**14**	**22**	**54.9**	**+0.1**
BWNR	**Bhubaneshwar**	**18.94**	**340**	*e*P			**P**	**14**	**23**	**05.9**	**+0.1**
BWNR				IAmb			IAmb	14	23	09.7	
	comp=Z,103nm,0.8s										
RAGD	**RAYAGADA**	**18.94**	**332**	*e*P			**Pn**	**14**	**23**	**09.1**	**+2.3**
RAGD				IAmb			IAmb	14	23	11.4	
	comp=Z,98nm,0.8s										
KPJI	**Karang Pucung**	**18.96**	**121**	P			**Pn**	**14**	**23**	**06.7**	**-0.4**
SBUM	**Sibu**	**19.59**	**90**	P			**Pn**	**14**	**23**	**14.8**	**+0.2**
SBUM				IAmb			IAmb	14	23	16.4	
	comp=Z,76nm,0.8s										
SBUM	**Sibu**	**19.59**	**90**	P			**Pn**	**14**	**23**	**15.1**	**+0.5**
SAIH	**SAIHA**	**19.92**	**1**	*e*P			**Pn**	**14**	**23**	**18.1**	**-0.5**
SAIH				IAmb			IAmb	14	23	30.0	
	comp=Z,98nm,0.5s										
BRDH	**Bariadhala**	**20.13**	**357**	P			**P**	**14**	**23**	**19.8**	**+1.0**
	comp=Z,178nm,0.3s,baz=127,slow=5.1,SNR=6.6										
BRDH				S			**S**	**14**	**27**	**01.9**	**-1.2**
	comp=Z,262nm,0.4s,baz=1.7,slow=21,SNR=13										
BRDH				LR			LR	14	33	17.6	
	comp=Z,999nm,18.2s,baz=168,slow=44										
SMRI	**Semarang**	**20.14**	**118**	P			Pn	14	23	20.5	-0.6
	comp=Z,106nm,1.5s										
HYBB	**Hyderabad (bro**	**20.30**	**318**	*e*P			**P**	**14**	**23**	**20.0**	**-0.8**
JHSG	**JHARSUGUGA**	**21.03**	**337**	*e*P			**P**	**14**	**23**	**30.4**	**+1.8**
JHSG				IAmb			IAmb	14	23	51.3	
	comp=Z,82nm,1.1s										
AGT	**Agartala**	**21.35**	**357**	*e*P			**P**	**14**	**23**	**33.5**	**+1.6**
AGT				IAmb			IAmb	14	23	46.9	
	comp=Z,91nm,0.7s										
AGT				*e*S			**S**	**14**	**27**	**29.6**	**+2.2**
BLSP	**Bilaspur**	**22.05**	**333**	*e*P			**P**	**14**	**23**	**42.8**	**+3.2**
BLSP				IAmb			IAmb	14	23	57.1	
	comp=Z,101nm,1.1s										
BOK	**Bokaro**	**22.19**	**344**	*e*P			**P**	**14**	**23**	**42.4**	**+1.2**
BOK				IAmb			IAmb	14	23	56.7	
	comp=Z,115nm,1.1s										
SILR	**SILCHAR**	**22.20**	**0**	*e*P			**P**	**14**	**23**	**43.6**	**+2.4**
SILR				IAmb			IAmb	14	23	59.0	
	comp=Z,78nm,0.9s										
IMP	**Imphal**	**22.29**	**3**	*e*P			**P**	**14**	**23**	**42.4**	**+0.2**
IMP				IAmb			IAmb	14	23	56.9	
	comp=Z,108nm,1.0s										
H08S2	**Diego Garcia H**	**22.44**	**243**	T			T	14	46	04.4	
	baz=59,slow=75,SNR=89										
H08S3	**Diego Garcia H**	**22.44**	**243**	T			T	14	46	05.4	
	baz=59,slow=75,SNR=80										
H08S1	**Diego Garcia H**	**22.45**	**243**	T			T	14	46	06.9	
	baz=59,slow=75,SNR=64										
MTKI	**Muara Teweh, K**	**22.53**	**98**	P			**P**	**14**	**23**	**45.3**	**+0.4**
	comp=Z,47nm,0.9s										
BBKI	**Banjar Baru**	**22.98**	**105**	P			**P**	**14**	**23**	**50.5**	**+0.9**
	comp=Z,83nm,1.0s										
SHL	**Shillong**	**22.99**	**358**	*e*P			**P**	**14**	**23**	**47.9**	**-1.8**
TNCH	**TengChong**	**23.16**	**14**	⇑P			**P**	**14**	**23**	**52.5**	**+1.1**
TNCH				pP			pP	14	23	55.8	-3.7
TNCH				sP			sP	14	23	58.9	-4.3
TNCH				S			**S**	**14**	**28**	**04.4**	**+3.5**
TNCH				sS			pS	14	28	10.8	+0.7
TNCH				pmax			pmax				
	comp=Z,140nm,1.2s										
TNCH				LR			LR				
	comp=Z,490nm,13.3s										
TNCH				LR			LR				
	comp=Z,380nm,13.0s										
TNCH				LR			LR				
	comp=Z,1μm,20.4s										
KOHI	**KOHIMA**	**23.18**	**3**	*e*P			**P**	**14**	**23**	**50.7**	**-0.9**
GAYA	**Gaya**	**23.34**	**343**	*e*P			**P**	**14**	**23**	**55.0**	**+2.1**
GAYA				IAmb			IAmb	14	24	11.7	
	comp=Z,108nm,0.8s										
KAD	**Karad**	**23.36**	**310**	*e*P			**P**	**14**	**24**	**00.1**	**+6.7**
KAD				IAmb			IAmb	14	24	08.5	
	comp=Z,108nm,1.1s										
DHUB	**DHUBRI**	**23.57**	**354**	*e*P			**P**	**14**	**23**	**53.7**	**-1.5**
DHUB				IAmb			IAmb	14	24	14.9	
	comp=Z,110nm,0.8s										
DHUB				*e*S			**S**	**14**	**28**	**12.6**	**+5.4**
QIZ	**Qiongzhong**	**23.58**	**44**	P			**P**	**14**	**23**	**56.0**	**+0.6**
QIZ				IAmb			IAmb	14	23	58.0	
	comp=Z,144nm,1.5s										
QIZ	**Qiongzhong**	**23.58**	**44**	P			**P**	**14**	**23**	**56.8**	**+1.4**
QIZ				S			**S**	**14**	**28**	**12.0**	**+4.4**
QIZ				pmax			pmax				
	comp=Z,54nm,1.2s										
QIZ				pmax			pmax				
	comp=Z,420nm,3.5s										
QIZ				LR			LR				
	comp=Z,840nm,17.3s										
QIZ				LR			LR				
	comp=Z,730nm,15.7s										
QIZ				LR			LR				
	comp=Z,1μm,15.8s										
AKL	**Akola**	**23.67**	**321**	*e*P			**P**	**14**	**24**	**01.4**	**+5.0**
AKL				IAmb			IAmb	14	24	11.8	
	comp=Z,102nm,1.0s										
MOKO	**MOKOCHONG**	**23.80**	**4**	*e*P			**P**	**14**	**23**	**57.4**	**-0.3**
MOKO				IAmb			IAmb	14	24	13.7	
	comp=Z,114nm,1.4s										
TEZP	**TEZPUR**	**24.03**	**0**	*e*P			**P**	**14**	**23**	**59.0**	**-0.6**
TEZP				IAmb			IAmb	14	24	22.1	
	comp=Z,106nm,0.7s										
POO	**Poona**	**24.36**	**312**	*e*P			**P**	**14**	**24**	**08.8**	**+6.0**
POO				IAmb			IAmb	14	24	17.8	
	comp=Z,48nm,0.7s										
BKB	**Balikpapan**	**24.56**	**98**	P			**P**	**14**	**24**	**07.3**	**+2.7**
	comp=Z,134nm,0.9s										
KMI	**Kunming**	**24.57**	**23**	⇑P			**P**	**14**	**24**	**07.0**	**+2.2**
KMI				S			**S**	**14**	**28**	**32.5**	**+8.8**
KMI				pmax			pmax				
	comp=Z,120nm,1.3s										
KMI				LR			LR				
	comp=Z,380nm,20.6s										
KMI				LR			LR				
	comp=Z,930nm,17.5s										
KMI				LR			LR				
	comp=Z,500nm,16.9s										
ITAN	**ITANAGAR**	**24.58**	**2**	*e*P			**P**	**14**	**24**	**05.0**	**+0.5**
ITAN				IAmb			IAmb	14	24	29.6	
	comp=Z,107nm,1.2s										
LKP	**Lekhapani**	**24.93**	**7**	*e*P			**P**	**14**	**24**	**07.5**	**-0.3**
ZIRO	**ZIRO**	**24.96**	**3**	*e*P			**P**	**14**	**24**	**08.1**	**-0.2**
ZIRO				IAmb			IAmb	14	24	34.5	
	comp=Z,103nm,0.7s										
TAWA	**Tawang**	**25.01**	**358**	*e*P			**P**	**14**	**24**	**09.9**	**+0.9**
TAWA				IAmb			IAmb	14	24	40.5	
	comp=Z,112nm,0.9s										
GTK	**Tadong**	**25.02**	**352**	*e*P			**P**	**14**	**24**	**07.8**	**-1.0**
NRDN	**NARMADA NAGAR**	**25.11**	**325**	*e*P			**P**	**14**	**24**	**14.3**	**+4.8**
NRDN				IAmb			IAmb	14	24	26.9	
	comp=Z,64nm,0.9s										
BHPL	**Bhopal**	**25.37**	**326**	*e*P			**P**	**14**	**24**	**16.1**	**+4.3**
BHPL				IAmb			IAmb	14	24	27.3	
	comp=Z,70nm,1.0s										
PZH	**PanZhiHua**	**25.47**	**19**	P			**P**	**14**	**24**	**13.8**	**+0.9**
PZH				S			**S**	**14**	**28**	**40.1**	**+2.1**
PZH				pmax			pmax				
	comp=Z,30nm,0.8s										
PZH				LR			LR				
	comp=Z,430nm,20.4s										
PZH				LR			LR				
	comp=Z,450nm,19.4s										
PZH				LR			LR				
	comp=Z,610nm,19.4s										
EVN	**Everest**	**25.96**	**348**	P			**P**	**14**	**24**	**17.6**	**-0.2**
EVN				IAmb			IAmb	14	24	51.7	
	comp=Z,62nm,0.7s										
MYLDM	**Lahad Datu**	**25.97**	**83**	P			**P**	**14**	**24**	**19.2**	**+1.8**
JHNI	**Jhansi**	**26.59**	**331**	*e*P			**P**	**14**	**24**	**26.6**	**+3.8**
JHNI				IAmb			IAmb	14	24	39.3	
	comp=Z,78nm,1.0s										
LSA	**Lhasa**	**27.14**	**357**	IAmb			IAmb	14	24	46.2	
	comp=Z,65nm,0.8s										
LSA	**Lhasa**	**27.14**	**357**	P			**P**	**14**	**24**	**25.8**	**-2.5**
LSA				pmax			pmax				
	comp=Z,54nm,0.5s										
LSA				LR			LR				
	comp=Z,290nm,21.6s										
LSA				LR			LR				
	comp=Z,290nm,23.4s										
MPSI	**Mapaga**	**27.36**	**94**	P			**P**	**14**	**24**	**31.1**	**+1.2**
	comp=Z,860nmcomp=Z,31nm,1.1s										
GYA	**Guiyang**	**27.42**	**28**	⇑P			**P**	**14**	**24**	**31.1**	**+0.6**
GYA				pmax			pmax				
	comp=Z,50nm,1.0s										
PCI	**Palu**	**27.42**	**97**	P			**P**	**14**	**24**	**31.3**	**+0.8**
	comp=Z,3μmcomp=Z,30nm,1.2s										
TTSI	**Tana Toraja**	**27.74**	**101**	P			**P**	**14**	**24**	**34.1**	**+0.8**
	comp=Z,23nm,1.1s										
KAPI	**Kappang**	**28.11**	**105**	LR			LR	14	36	08.6	
	comp=Z,325nm,18.1s,baz=274,slow=37										
TOLI2	**Tolitoli**	**28.19**	**92**	P			**P**	**14**	**24**	**36.1**	**-1.2**
TOLI2				IAmb			IAmb	14	25	06.4	
	comp=Z,28nm,1.0s										
TOLI2	**Tolitoli**	**28.19**	**92**	P			**P**	**14**	**24**	**39.1**	**+1.7**
BNSI	**Bone**	**28.31**	**104**	P			**P**	**14**	**24**	**39.9**	**+1.5**
GULI	**GuiLin**	**28.43**	**35**	P			P	14	24	30.0	-9.4
GULI				pP			pP	14	24	34.1	-14
GULI				S			**S**	**14**	**29**	**20.8**	**-3.7**
GULI				pmax			pmax				
	comp=Z,13nm,1.0s										
GULI				pmax			pmax				
	comp=Z,150nm,3.9s										
GULI				LR			LR				
	comp=N,660nm,19.8s										
GULI				LR			LR				
	comp=E,400nm,17.7s										
GULI				LR			LR				
	comp=Z,980nm,16.1s										
BKSI	**Bulukumba**	**28.55**	**106**	P			**P**	**14**	**24**	**41.2**	**+0.7**
	comp=Z,31nm,0.9s										
GZH	**Guangzhou**	**28.72**	**43**	P			P	14	24	48.5	+6.6
GZH				pP			pwP	14	25	01.4	+5.3
GZH				S			S	14	29	42.6	+14
GZH				pmax			pmax				
	comp=Z,61nm,0.8s										
GZH				LR			LR				
	comp=Z,930nm,13.6s										
GZH				LR			LR				
	comp=Z,930nm,16.7s										
GZH				LR			LR				
	comp=Z,1μm,16.2s										
BSSI	**Bau Bau, Buton**	**29.12**	**107**	P			**P**	**14**	**24**	**44.7**	**-0.9**
	comp=Z,23nm,1.5s										
APSI	**Ampana**	**29.22**	**96**	P			**P**	**14**	**24**	**47.2**	**+0.7**
	comp=Z,689nmcomp=Z,62nm,1.1s										
LGTI	**Lohaghat**	**29.31**	**338**	*e*P			**P**	**14**	**24**	**49.6**	**+2.5**
MRSI	**Marisa**	**29.38**	**93**	P			**P**	**14**	**24**	**48.7**	**+0.7**
	comp=Z,30nm,0.8s										
PTH	**Pithoragarh**	**29.41**	**338**	*e*P			**P**	**14**	**24**	**49.4**	**+1.2**
CD2	**Chengdu**	**30.20**	**19**	⇑P			**P**	**14**	**24**	**55.4**	**+0.3**
CD2				pmax			pmax				
	comp=Z,200nm,0.9s										
CD2				LR			LR				
	comp=Z,680nm,16.5s										
CD2				LR			LR				
	comp=Z,620nm,12.7s										
CD2				LR			LR				
	comp=Z,790nm,19.0s										
TGY	**Tagaytay City**	**30.28**	**66**	LR			LR	14	36	35.7	
	comp=Z,276nm,21.9s,baz=290,slow=35										
LUWI	**Luwuk**	**30.35**	**96**	P			**P**	**14**	**24**	**56.5**	**-0.1**
	comp=Z,761nmcomp=Z,33nm,1.0s										
JOSI	**Joshimath**	**30.56**	**337**	*e*P			**P**	**14**	**24**	**59.1**	**+0.6**
JOSI				IAmb			IAmb	14	25	14.7	
	comp=Z,66nm,1.2s										
KMSI	**Cibinong**	**31.41**	**93**	P			**P**	**14**	**25**	**04.9**	**-1.0**
	comp=Z,94nm,0.9s										
ENH	**Enshi**	**31.96**	**28**	P			**P**	**14**	**25**	**10.6**	**+0.1**
SMLA	**Simla**	**32.04**	**335**	*e*P			**P**	**14**	**25**	**13.9**	**+2.7**
SMLA				IAmb			IAmb	14	25	26.1	
	comp=Z,59nm,0.7s										
CNSH	**ChangSha**	**32.11**	**35**

SSE pmax pmax
comp=Z,240nm,3.4s
SSE LR LR
comp=Z,380nm,21.6s
SSE LR LR
comp=Z,350nm,22.0s
KSH Kashi 39.88 340 P **P** **14 26 15.8 -2.6**
KSH sP pP 14 26 24.4 -2.7
KSH pmax pmax
comp=Z,7.0nm,0.7s
KSH LR LR
comp=Z,190nm,19.2s
KSH LR LR
comp=Z,610nm,21.9s
BLDU Ballidu 40.12 147 P **P** **14 26 20.3 0.0**
comp=Z,29nm,1.2s
BLDU Ballidu 40.12 147 P **P** **14 26 21.0 +0.7**
HNS HongShan 40.28 28 ⇑P **P** **14 26 23.5 +2.0**
HNS S **S** **14 32 29.0 +2.2**
HNS pmax pmax
comp=Z,130nm,1.0s
HNS LR LR
comp=Z,320nm,19.2s
HNS LR LR
comp=Z,610nm,20.6s
HNS LR LR
comp=Z,710nm,21.0s
TIA Tai'an 40.52 31 P **P** **14 26 24.1 +0.5**
TIA pmax pmax
comp=Z,29nm,1.3s
BTO Baotou 41.12 20 *e*P **P** **14 26 29.5 +0.9**
BTO PP **PnPn** **14 28 07.8 -0.6**
BTO S **S** **14 32 40.8 +1.4**
BTO pmax pmax
comp=Z,150nm,0.9s
BTO pmax pmax
comp=Z,380nm,5.6s
BTO LR LR
comp=Z,610nm,13.5s
BTO LR LR
comp=Z,580nm,14.2s
BTO LR LR
comp=Z,640nm,16.7s
WMQ Urumqi 41.42 355 *e*P **P** **14 26 32.8 +1.8**
WMQ sP pP 14 26 40.0 +0.3
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ LR LR
comp=Z,280nm,17.9s
WMQ LR LR
comp=Z,510nm,23.5s
WMQ LR LR
comp=Z,300nm,21.1s
KLBR Kellerberrin 41.44 147 P **P** **14 26 31.4 +0.2**
comp=Z,40nm,0.8s
GAR Garm 41.67 334 IAmb IAmb 14 26 47.0
comp=Z,47nm,1.0s
HHC Hu-ho-hao-te 41.88 22 *e*P **P** **14 26 36.1 +1.2**
HHC sP pP 14 26 42.4 -1.2
HHC S **S** **14 32 51.5 +0.7**
HHC pmax pmax
comp=Z,61nm,0.7s
HHC LR LR
comp=Z,450nm,13.8s
HHC LR LR
comp=Z,340nm,14.5s
HHC LR LR
comp=Z,530nm,16.8s
JOW Kunigami 41.89 51 LR LR 14 44 10.9
comp=Z,301nm,21.4s,baz=270,slow=36
SHLS Shalkode 42.19 346 *e*P **P** **14 26 36.1 -1.2**
comp=Z,9.4nm,0.8s
NWAO Narrogin (SRO) 42.19 149 P **P** **14 26 37.6 +0.3**
comp=Z,46nm,0.9s
NWAO Narrogin (SRO) 42.19 149 P **P** **14 26 37.4 +0.1**
comp=Z,74nm,0.9s
NWAO Narrogin (SRO) 42.19 149 LR LR 14 41 58.8
comp=Z,354nm,18.5s,baz=312,slow=33
NWAO Narrogin (SRO) 42.19 149 P **P** **14 26 37.5 +0.1**
NWAO IAmb IAmb 14 26 38.1
comp=Z,26nm,0.8s
NWAO Narrogin (SRO) 42.19 149 P **P** **14 26 37.5 +0.1**
H01W3 Cape Leeuwin H 42.28 153 T T 15 11 11.7
baz=330
H01W2 Cape Leeuwin H 42.29 153 T T 15 11 12.7
baz=330
H01W1 Cape Leeuwin H 42.29 153 T T 15 11 19.8
baz=330
UZB Uzynbulak 42.29 345 *e*P **P** **14 26 37.6 -0.6**
SATY Saty 42.37 345 *e*P **P** **14 26 38.1 -0.7**
TNSS Tian-Shan 42.76 343 *e*P **P** **14 26 41.2 -1.1**
MDOK Medeo 42.84 343 *e*P **P** **14 26 42.0 -0.7**
AAA Alma-Ata 42.93 343 *e*P **P** **14 26 42.6 -0.6**
comp=Z,14nm,0.9s
BJT Baijiatuau 43.07 27 P **P** **14 26 45.5 +1.1**
BJI Beijing 43.09 27 P **P** **14 26 46.4 +1.9**
BJI pmax pmax
comp=Z,28nm,0.9s
BJI LR LR
comp=Z,210nm,19.6s
BJI LR LR
comp=Z,120nm,21.1s
BJI LR LR
comp=Z,280nm,24.8s
AAK Ala-Archa 43.17 340 LR LR 14 45 03.8
comp=Z,445nm,21.4s,baz=162,slow=37
AAK Ala-Archa 43.17 340 P **P** **14 26 45.5 +0.2**
SGDS Sogindy 43.85 341 *e*P **P** **14 26 50.0 -0.6**
WRKA Warakurna 44.09 130 P **P** **14 26 52.8 -0.1**
comp=Z,4.6nm,0.9s
TDK Taldyqorghan 44.19 346 *e*P **P** **14 26 52.9 -0.4**
DZA Taraz 44.52 338 *e*P **P** **14 26 55.1 -1.0**
comp=Z,5.3nm,0.6s
KK31 Karatay Array 45.02 337 P **P** **14 26 59.4 -0.6**
KK31 IAmb IAmb 14 27 14.5
comp=Z,23nm,0.9s
KKAR Karatay Array 45.02 337 P **P** **14 26 59.4 -0.6**
MKAR Makanchi Array 45.07 350 P **P** **14 27 00.4 +0.1**
comp=Z,14nm,0.7s,baz=167,slow=8.8,SNR=91
MKAR LR LR 14 47 01.0
comp=Z,209nm,21.7s,baz=159,slow=38
comp=Z,14nm,0.7s
MKAR Makanchi Array 45.07 350 P **P** **14 27 00.1 -0.2**
MAKZ Makanchi 45.14 350 P **P** **14 27 00.6 -0.3**
BRLS Borolday 45.22 336 *e*P **P** **14 26 59.5 -2.1**
ZSN Zaisan 45.32 353 *e*P **P** **14 27 02.3 0.0**
comp=Z,14nm,1.0s
BTLS Baital 45.46 342 *e*P **P** **14 27 02.9 -0.5**
XLT XiLinHaoTe 46.23 23 *e*P **P** **14 27 10.8 +1.2**
XLT pmax pmax
comp=Z,26nm,1.0s
XLT LR LR
comp=Z,77nm,21.2s
XLT LR LR
comp=Z,500nm,21.2s
XLT LR LR
comp=Z,1μm,20.6s
WB0 Warramunga Arr 46.58 120 IAmb IAmb 14 27 29.8
comp=Z,17nm,0.7s
WRA Warramunga Arr 46.60 120 P **P** **14 27 12.8 -0.1**
comp=Z,14nm,0.9s,baz=300,slow=8.7,SNR=76
comp=Z,14nm,0.9s
WRA Warramunga Arr 46.60 120 P **P** **14 27 12.3 -0.6**
WRAB Tennant Creek 46.61 120 P **P** **14 27 12.5 -0.4**
WRAB IAmb IAmb 14 27 13.9
comp=Z,38nm,1.4s
WRAB Tennant Creek 46.61 120 P **P** **14 27 12.8 -0.1**
WR8 Warramunga Arr 46.74 120 IAmb IAmb 14 27 31.4
comp=Z,17nm,0.8s
SONM Songino Array 46.75 13 P **P** **14 27 14.4 +0.7**
comp=Z,26nm,0.8s,baz=192,slow=9.0,SNR=145
SONM LR LR 14 49 29.1
comp=Z,416nm,19.7s,baz=185,slow=40
comp=Z,26nm,0.8s
ULN Ulaanbaatar 46.93 13 P **P** **14 27 15.2 +0.1**
ULN IAmb IAmb 14 27 16.8
comp=Z,16nm,1.0s
JNU Nakatsue 47.05 45 LR LR 14 49 50.9
comp=Z,314nm,18.1s,baz=224,slow=40
JNU Nakatsue 47.05 45 P **P** **14 27 17.3 +1.1**
FORT Forrest 47.24 137 P **P** **14 27 17.3 -0.4**
comp=Z,26nm,0.9s
KSRS Korea Array 47.58 39 P **P** **14 27 20.9 +0.7**
comp=Z,9.5nm,0.8s,baz=223,slow=9.0,SNR=22
comp=Z,9.5nm,0.8s
ASAR Alice Springs 47.83 125 P **P** **14 27 22.1 -0.4**
comp=Z,7.4nm,0.9s,baz=297,slow=7.6,SNR=154
comp=Z,7.4nm,0.9s
ASAR Alice Springs 47.83 125 P **P** **14 27 21.8 -0.6**
SEM Semipalatinsk 48.92 350 *e*P **P** **14 27 30.0 -0.5**
KURBB Kurchatov Arra 49.46 348 P **P** **14 27 34.1 -0.3**
comp=Z,6.0nm,0.7s,baz=170,slow=7.1,SNR=24
KURBB LR LR 14 49 35.2
comp=Z,296nm,21.0s,baz=174,slow=38
comp=Z,6.0nm,0.7s
JMN Monobe 49.51 46 P **P** **14 27 35.7 +0.6**
JMN IAmb IAmb 14 27 52.5
comp=Z,37nm,1.0s
JMN Monobe 49.51 46 P **P** **14 27 36.2 +1.0**
KURK Kurchatov 49.53 348 P **P** **14 27 34.3 -0.6**
KURK IAmb IAmb 14 27 49.9
comp=Z,35nm,1.4s
TLY Talaya 49.92 9 P **P** **14 27 37.9 -0.1**
CN2 Changchun 50.42 31 P **P** **14 27 42.3 +0.4**
CN2 pP pwP 14 27 56.3 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,200nm,17.0s
QIS Mount Isa 51.41 119 P **P** **14 27 49.7 0.0**
ZALV Zalesovo Beam 51.73 354 P **P** **14 27 51.4 -0.1**
comp=Z,20nm,0.6s,baz=188,slow=8.4,SNR=92
ZALV LR LR 14 51 07.2
comp=Z,263nm,21.9s,baz=174,slow=38
comp=Z,20nm,0.6s
ZALV Zalesovo Beam 51.73 354 P **P** **14 27 51.2 -0.3**
HIA Hailar 52.08 22 IAmb IAmb 14 27 56.1
comp=Z,31nm,0.8s
HILR Hailar Array B 52.32 22 P **P** **14 27 56.9 +0.9**
comp=Z,14nm,0.7s,baz=193,slow=9.5,SNR=18
HILR LR LR 14 52 54.2
comp=Z,610nm,19.6s,baz=220,slow=39
comp=Z,14nm,0.7s
INU Inuyama 52.56 46 P **P** **14 27 58.1 +0.1**
INU IAmb IAmb 14 27 59.4
comp=Z,31nm,0.8s
BNX BinXian 52.78 30 ⇑P **P** **14 27 59.8 +0.4**
BNX pmax pmax
comp=Z,32nm,0.8s
GUMO Guam 52.80 75 LR LR 14 49 20.2
comp=Z,176nm,21.7s,baz=237,slow=35
JGF Kuroka 52.92 46 IAmb IAmb 14 28 02.1
comp=Z,35nm,0.9s
JGF Kuroka 52.92 46 P **P** **14 28 00.9 +0.1**
MDJ Mudanjiang 53.15 32 P **P** **14 28 04.8 +2.6**
MDJ pmax pmax
comp=Z,29nm,1.3s
JHJ Hachijo jima 2 53.62 50 LR LR 14 53 38.4
comp=Z,113nm,18.9s,baz=286,slow=39
BVAR Borovoye Array 53.66 344 P **P** **14 28 04.3 -1.5**
comp=Z,7.2nm,0.7s,baz=144,slow=8.2,SNR=46
BVAR LR LR 14 51 22.3
comp=Z,342nm,20.9s,baz=157,slow=36
comp=Z,7.2nm,0.7s
MAJO Matsushiro 53.97 45 P **P** **14 28 10.0 +1.6**
MJAR Matsushiro Arr 53.97 45 P **P** **14 28 08.4 0.0**
comp=Z,6.1nm,0.7s,baz=234,slow=4.6,SNR=34
MJAR LR LR 14 53 36.2
comp=Z,285nm,18.5s,baz=242,slow=39
comp=Z,6.1nm,0.7s
MJAR Matsushiro Arr 53.97 45 P **P** **14 28 08.4 0.0**
USRK Ussuriysk Ar. 54.20 34 P **P** **14 28 10.5 +0.6**
comp=Z,6.0nm,0.7s,baz=251,slow=9.7,SNR=10
comp=Z,6.0nm,0.7s
AB31 Akbulak array 54.33 334 IAmb IAmb 14 28 25.1
comp=Z,24nm,1.0s
ABKAR Akbulak array 54.33 334 P **P** **14 28 09.8 -1.0**
INKA Innaminka 55.16 126 IAmb IAmb 14 28 18.8
comp=Z,18nm,1.1s
KMBO Kilima Mbogo 55.46 267 P **P** **14 28 18.7 -1.2**
comp=Z,1.5nm,0.5s,baz=78,slow=14,SNR=1.7
KMBO LR LR 14 48 31.5
comp=Z,312nm,19.4s,baz=97,slow=32
comp=Z,1.5nm,0.5s
HEH HeiHe 56.00 26 *e*P **P** **14 28 23.1 +0.3**
HEH pmax pmax
comp=Z,34nm,0.9s
AKTO Aktyubinsk 56.04 334 LR LR 14 53 01.2
comp=Z,164nm,20.7s,baz=194,slow=37
HTT Hallett 56.37 133 P **P** **14 28 24.8 -1.0**
comp=Z,6.3nm,2.0s
HTT Hallett 56.37 133 P **P** **14 28 26.3 +0.5**
GNI Garni 57.25 317 P **P** **14 28 30.8 -1.3**
comp=Z,19nm,1.5s
STKA Stephens Creek 57.62 131 P **P** **14 28 34.4 -0.2**
comp=Z,58nm,1.1s
STKA Stephens Creek 57.62 131 P **P** **14 28 34.0 -0.6**
comp=Z,5.3nm,0.5s,baz=315,slow=5.2,SNR=15
comp=Z,5.3nm,0.5s
STKA Stephens Creek 57.62 131 P **P** **14 28 34.4 -0.2**
ASF Jabal al Asfar 60.01 306 LR LR 14 56 18.8
comp=Z,60nm,19.1s,baz=100,slow=38
KBZ Khabaz 60.16 320 P **P** **14 28 50.6 -1.4**
comp=Z,5.3nm,0.8s,baz=132,slow=6.5,SNR=11
KBZ LR LR 14 58 39.2
comp=Z,41nm,18.4s,baz=69,slow=40
comp=Z,5.3nm,0.8s
H04N2 CROZET ISLANDS 60.33 212 T T 15 32 59.1
baz=47,slow=74,SNR=12
H04N1 CROZET ISLANDS 60.34 212 T T 15 33 01.0
baz=47,slow=74,SNR=8.8
H04N3 CROZET ISLANDS 60.35 212 T T 15 33 00.0
baz=47,slow=74,SNR=10
ARTI Arti 60.35 339 LR LR 14 57 22.0
comp=Z,268nm,18.1s,baz=146,slow=38
ARTI Arti 60.35 339 P **P** **14 28 51.0 -2.1**
KIV Kislovodsk 60.40 321 P **P** **14 28 52.8 -1.0**
comp=Z,22nm,1.3s
ASAJ Asahikawa 60.52 39 P **P** **14 28 55.4 +0.9**
comp=Z,13nm,0.7s,baz=234,slow=10,SNR=12
ASAJ LR LR 14 57 02.8
comp=Z,227nm,18.7s,baz=238,slow=38
comp=Z,13nm,0.7s
CMSA Cobar Meteorol 60.64 128 P **P** **14 28 54.9 -0.6**
comp=Z,36nm,1.0s
CMSA Cobar Meteorol 60.64 128 P **P** **14 28 55.8 +0.3**
EIL Elat 60.92 303 LR LR 14 54 34.8
comp=Z,150nm,19.6s,baz=42,slow=35
RMQ Roma 61.32 122 P **P** **14 29 00.7 +0.4**
comp=Z,52nm,1.0s
MMAI Mount Meron Ar 61.47 306 P **P** **14 29 01.8 +0.6**
comp=Z,0.4nm,0.3s,baz=130,slow=8.1,SNR=2.0
MMAI LR LR 14 57 32.1
comp=Z,126nm,18.2s,baz=109,slow=38
comp=Z,0.4nm,0.3s
MBAR Mbarara 61.93 268 LR LR 14 53 09.4
comp=Z,120nm,19.2s,baz=74,slow=34
CSS Mathiatis 63.68 308 P **P** **14 29 15.0 -0.9**
comp=Z,19nm,1.3s
KIRS Kirsehir-Merke 64.50 313 ⇑P **P** **14 29 21.8 +0.4**
CAN Canberra 64.67 131 P **P** **14 29 23.1 +0.6**
BR104 Keskin Array S 64.89 313 P **P** **14 29 22.7 -1.2**
comp=Z,53nmcomp=Z,6.9nm,0.8s
BR131 Keskin Array S 64.90 313 P **P** **14 29 23.3 -0.7**
BR131 IAmb IAmb 14 29 38.6
comp=Z,7.4nm,0.8s
BRTR Keskin Array B 64.90 313 P **P** **14 29 23.4 -0.6**
comp=Z,1.4nm,0.7s,baz=130,slow=6.9,SNR=9.4
BRTR LR LR 14 59 37.1
comp=Z,94nm,20.3s,baz=120,slow=38
comp=Z,1.4nm,0.7s
BRTR Keskin Array B 64.90 313 P **P** **14 29 23.0 -1.0**
BR105 Keskin Array S 64.91 313 P **P** **14 29 22.8 -1.3**
comp=Z,75nmcomp=Z,9.2nm,0.9s
BR106 Keskin Array S 64.92 313 P **P** **14 29 22.9 -1.2**
comp=Z,72nmcomp=Z,8.7nm,0.9s
KIRV Kirov 65.31 337 LR LR 14 58 51.8
comp=Z,164nm,19.7s,baz=135,slow=37
YAK Yakutsk 65.59 18 P **P** **14 29 27.1 -0.6**
comp=Z,61nm,0.8s,baz=50,slow=2.0,SNR=28
YAK LR LR 15 01 05.1
comp=Z,474nm,19.0s,baz=210,slow=39
comp=Z,61nm,0.8s
YAK Yakutsk 65.59 18 P **P** **14 29 27.1 -0.6**
LSZ Lusaka 66.10 252 LR LR 14 54 45.2
comp=Z,246nm,19.2s,baz=74,slow=33
HNR Honiara 68.10 101 LR LR 15 00 33.0
comp=Z,40nm,22.0s,baz=190,slow=37
KARP Karpathos 68.71 307 P **P** **14 29 47.6 -0.6**
comp=Z,84nm,0.8s
OBN Obninsk 69.18 329 LR LR 15 03 07.7
comp=Z,155nm,19.1s,baz=25,slow=39
CASY Casey 69.78 172 P **P** **14 29 53.3 -0.8**
LBTB Lobatse 70.36 242 LR LR 14 58 20.4
comp=Z,524nm,18.2s,baz=69,slow=34
LBTB Lobatse 70.36 242 P **P** **14 29 57.0 -1.6**
LBTB IAmb IAmb 14 29 59.5
comp=Z,20nm,1.0s
CFR Carcaliu 70.46 317 ⇑P **P** **14 29 59.5 +0.8**
AK09 Malin Array Si 71.43 323 P **P** **14 30 03.9 -0.6**
AK10 Malin Array Si 71.44 323 P **P** **14 30 03.9 -0.7**
AK08 Malin Array Si 71.45 323 P **P** **14 30 03.8 -0.9**
AK07 Malin Array Si 71.46 323 P **P** **14 30 03.8 -0.9**
BOSA Boshof 71.46 239 P **P** **14 30 04.2 -1.2**
comp=Z,9.6nm,0.8s,baz=87,slow=3.3,SNR=15
BOSA LR LR 14 59 14.5
comp=Z,215nm,19.2s,baz=39,slow=34
comp=Z,9.6nm,0.8s
BOSA Boshof 71.46 239 P **P** **14 30 04.0 -1.4**
BOSA IAmb IAmb 14 30 05.9
comp=Z,33nm,1.4s
AK06 Malin Array Si 71.47 323 P **P** **14 30 03.9 -0.9**
AKASG Malin Array Be 71.50 323 P **P** **14 30 03.5 -1.4**
comp=Z,0.9nm,0.6s,baz=93,slow=4.8,SNR=6.2
AKASG LR LR 15 06 49.6
comp=Z,78nm,18.1s,baz=97,slow=40
comp=Z,0.9nm,0.6s
KIEV Kiev 71.50 323 P **P** **14 30 04.0 -0.9**
comp=Z,21nm,0.9s
VRI Vrincioaia 71.60 318 ⇑P **P** **14 30 06.5 +0.8**
PLOR Plostina 71.65 318 ⇓P **P** **14 30 06.5 +0.5**
TESR Tescani 71.83 318 ⇑P **P** **14 30 07.4 +0.3**
ONER Baraj Valea Uz 71.95 318 ⇓P **P** **14 30 07.9 +0.1**
MLR Muntele Rosu 72.03 317 P **P** **14 30 07.9 -0.5**
MLR IAmb IAmb 14 30 24.0
comp=Z,25nm,1.1s
MLR Muntele Rosu 72.03 317 ⇓P **P** **14 30 08.5 +0.1**
MLR Muntele Rosu 72.03 317 P **P** **14 30 07.8 -0.6**
comp=Z,19nm,1.2s
MA2 Magadan 72.25 27 P **P** **14 30 09.0 -0.3**
comp=Z,41nm,1.0s,baz=207,slow=2.3,SNR=3.2
MA2 LR LR 15 05 52.8
comp=Z,145nm,18.2s,baz=268,slow=39
comp=Z,41nm,1.0s
KMPD K-Podol'skiy 72.54 320 P **P** **14 30 10.9 -0.3**
VOIR 72.62 317 ⇑P **P** **14 30 11.5 -0.4**
VOIR 72.62 317 P **P** **14 30 11.4 -0.5**
TIXI Tiksi 72.81 11 P **P** **14 30 11.5 -0.9**
comp=Z,25nm,0.7s,baz=238,slow=3.2,SNR=109
TIXI LR LR 15 05 38.6
comp=Z,399nm,19.9s,baz=200,slow=39
comp=Z,25nm,0.7s
TIXI Tiksi 72.81 11 P **P** **14 30 11.3 -1.1**
ARR Arges 72.89 317 ⇑P **P** **14 30 13.4 0.0**
MAW Mawson 72.95 191 P **P** **14 30 13.2 0.0**
comp=Z,12nm,1.0s,baz=311,slow=2.7,SNR=5.8
MAW LR LR 14 56 57.4
comp=Z,258nm,18.7s,baz=54,slow=32
comp=Z,12nm,1.0s
BURAR Bucovina Array 73.08 319 P **P** **14 30 14.2 -0.4**
BURAR Bucovina Array 73.08 319 ⇑P **P** **14 30 15.1 +0.5**
PETK Petropavlovsk- 73.28 35 LR LR 15 02 50.0
comp=Z,219nm,21.7s,baz=236,slow=36
KSV Kosov 73.36 320 P **P** **14 30 15.8 -0.3**
MNK Minsk 73.54 327 *i* P **P** **14 30 16.1 -0.9**
comp=E,6.0nm,0.8s
MNK *i* P **P** **14 30 16.1 -0.9**
comp=N,10.0nm,0.9s
MNK *i* P **P** **14 30 16.1 -0.9**
comp=Z,11nm,0.8s,baz=110
MNK *i* PcP **PcP** **14 30 34.5 +1.6**
MNK *i* PP **PP** **14 33 00.0 -1.2**
MNK *i* PPP PPP 14 34 45.0
MNK *i* S **S** **14 39 44.6 +0.1**
MNK *i* SS SS 14 45 02.1 +34
MNK *i* LQ LQ 14 58 20.6
MNK *i* LR LR 15 01 56.8
MNK *i* LRM MLR 15 05 04.0
comp=Z,69nm,15.4s
MNK *i* LRM MLR 15 05 18.2
comp=N,119nm,15.2s
MNK *i* LRM MLR 15 05 20.9
comp=E,67nm,14.2s
RNPP5 Staryi Chortor 73.67 323 P **P** **14 30 17.6 -0.2**
RNPP9 Sopachiv 73.72 323 P **P** **14 30 17.4 -0.7**
MARR Maisel-Cluj 74.23 318 ⇑P **P** **14 30 22.6 +1.3**
SEY Seymchan 74.46 24 P **P** **14 30 21.6 -0.7**
comp=E,12nm,1.1s,baz=242,slow=8.3,SNR=8.0
SEY LR LR 15 08 19.2
comp=E,197nm,18.1s,baz=254,slow=40
comp=E,12nm,1.1s
DRGR 74.53 318 ⇑P **P** **14 30 23.4 +0.3**
DZM Mont Dzumac 75.98 113 *e*LR LR 14 53 54.0
comp=E,189nm,27.6s
TSUM Tsumeb 76.70 250 LR LR 15 01 18.8
comp=E,215nm,20.0s,baz=68,slow=33
FINES FINESS Array B 76.80 333 P **P** **14 30 34.5 -1.1**
comp=E,4.8nm,0.7s,baz=111,slow=4.9,SNR=18
FINES LR LR 15 06 20.8
comp=E,171nm,20.9s,baz=106,slow=37
comp=E,4.8nm,0.7s
LANS Liptovska Anna 77.16 320 *e*P **P** **14 30 38.5 +0.5**
JAVC Velka Javorina 78.27 319 *e*P **P** **14 30 42.6 -1.6**
STEB Steborice 78.39 320 *e*P **P** **14 30 45.0 +0.2**
MODS Modra-Piesok 78.44 319 *e*P **P** **14 30 45.9 +0.7**
MODS *e* **14 31 00.6**
MORC Moravsky Berou 78.51 320 *e*P **P** **14 30 45.4 -0.1**
KRUC Moravsky 79.13 319 *e*P **P** **14 30 48.5 -0.4**
CONA Conrad Observa 79.31 318 *e*P **P** **14 30 49.2 -0.8**
comp=E,4.1nm,1.2s
DPC Dobruska-Polom 79.38 321 *e*P **P** **14 30 51.1 +0.8**
ARSA Arzberg 79.44 318 *e*P **P** **14 30 49.7 -1.0**
comp=E,3.1nm,1.0s
OSTC Ostas 79.48 321 *e*P **P** **14 30 51.5 +0.7**
CHVC Chvalec 79.58 321 *e*P **P** **14 30 51.8 +0.4**
UPC Upice 79.60 321 *e*P **P** **14 30 52.1 +0.7**
SOKA Soboth 79.70 317 *e*P **P** **14 30 52.4 +0.2**
comp=E,7.4nm,1.0s
SYO Syowa Base 79.81 197⇓*e*P **P** **14 30 52.2 +0.1**
SYO Syowa Base 79.81 197⇑*e*pP **P** **14 30 55.8 +3.7**
ARCES ARCESS Array B 79.84 341 P **P** **14 30 51.3 -1.0**
comp=E,4.1nm,0.8s,baz=121,slow=6.2,SNR=9.6
ARCES LR LR 15 08 21.6
comp=E,183nm,18.9s,baz=102,slow=37
comp=E,4.1nm,0.8s
ARCES ARCESS Array B 79.84 341 IAmb IAmb 14 31 14.4
comp=E,78nm,2.0s
OBKA Obir 80.01 317 P **P** **14 30 54.1 +0.3**
comp=E,12nm,1.2s
MOA Molln 80.37 318 *e*P **P** **14 30 55.5 -0.1**
comp=E,6.2nm,1.4s
CKRC Cesky Krumlov 80.46 319 *e*P **P** **14 30 56.8 +0.7**
GEC2 GERESS Array S 80.86 319 IAmb IAmb 14 31 15.1
comp=E,60nm,1.8s
GERES GERESS Array B 80.86 319 P **P** **14 30 58.3 -0.1**
comp=E,4.6nm,0.8s,baz=86,slow=5.5,SNR=36
comp=E,4.6nm,0.8s
KHC Kasperske Hory 80.97 319 *e*P **P** **14 30 59.1 +0.2**
LESA Schwarzleotal 81.39 317 P **P** **14 31 00.5 -0.7**
comp=E,2.0nm,0.5s
CLL Collm 81.59 321 *i* P **P** **14 31 00.5 -1.6**
comp=E,10.0nm,1.5s
CLL L L 15 10 00.0
comp=E,100nm,19.3s
WTTA Wattenberg 82.08 317 *e*P **P** **14 31 04.3 -0.7**
comp=E,2.9nm,0.7s
WATA Walderalm 82.12 317 *e*P **P** **14 31 04.5 -0.6**
comp=E,2.1nm,1.8s
HFS Hagfors 82.36 330 P **P** **14 31 04.9 -1.0**
comp=E,4.1nm,0.9s,baz=119,slow=9.3,SNR=6.4
HFS LR LR 15 10 47.9
comp=E,121nm,19.4s,baz=84,slow=38
comp=E,4.1nm,0.9s
SQTA Sankt Quirin 82.36 317 *e*P **P** **14 31 05.5 -0.9**
comp=E,3.9nm,0.7s
MOTA Moosalm 82.44 317 *e*P **P** **14 31 06.0 -0.9**
comp=E,2.1nm,0.5s
RETA Reutte 82.69 317 *e*P **P** **14 31 07.3 -0.7**
comp=E,2.7nm,0.8s
SHEM Shemya Is, Ala 82.90 37 LR LR 15 08 17.2
comp=E,75nm,21.5s,baz=284,slow=36
DAVOX Davos/Dischmat 83.24 317 LR LR 15 13 13.7
comp=E,55nm,18.1s,baz=83,slow=39
DAVA Damuels 83.27 317 *e*P **P** **14 31 11.2 +0.1**
comp=E,4.0nm,0.7s
NB2 NORSAR Subarra 83.69 331 P **P** **14 31 11.3 -1.6**
comp=E,20nm,1.7s,baz=96,slow=6.2

NOA	**NORSAR Array B**	**83.69**	**331**	P	**P**	**14 31 11.5**	**-1.3**
	comp=Z,2.8nm,0.9s,baz=94,slow=6.0,SNR=8.5						
NOA				LR	LR	15 12 20.2	
	comp=Z,74nm,18.8s,baz=95,slow=38						
	comp=Z,2.8nm,0.9s						
SPITS	**Spitsbergen Ar**	**84.80**	**348**	P	**P**	**14 31 17.3**	**-0.9**
	comp=Z,6.3nm,0.7s,baz=134,slow=8.3,SNR=2.9						
SPITS				LR	LR	15 12 41.9	
	comp=Z,237nm,21.9s,baz=103,slow=38						
	comp=Z,6.3nm,0.7s						
VNDA	**Vanda**	**87.96**	**168**	P	**P**	**14 31 33.6**	**0.0**
	comp=Z,1.7nm,1.0s,baz=316,slow=5.9,SNR=3.3						
	comp=Z,1.7nm,1.0s						
VNDA	**Vanda**	**87.96**	**168**	IAmb	IAmb	14 31 54.6	
	comp=Z,26nm,1.8s						
EKA	**Eskdalemuir Ar**	**91.29**	**325**	P	**P**	**14 31 49.5**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=73,slow=4.9,SNR=4.1						
	comp=Z,1.8nm,0.8s						
JMIC	**Jan Mayen**	**91.32**	**341**	LR	LR	15 15 29.1	
	comp=Z,47nm,19.5s,baz=125,slow=37						
QSPA	**South Pole Qui**	**92.39**	**180**	P	**P**	**14 31 57.9**	**+3.3**
	comp=Z,3.5nm,0.7s,baz=309,slow=0.4,SNR=36						
QSPA	**South Pole Qui**	**92.39**	**180**	P	**P**	**14 31 58.0**	**+3.3**
QSPA				IAmb	IAmb	14 31 59.8	
	comp=Z,19nm,1.4s						
ESDC	**Sonseca Array**	**93.51**	**310**	P	**P**	**14 32 00.4**	**0.0**
	comp=Z,0.5nm,0.7s,baz=48,slow=3.6,SNR=2.7						
ESDC				LR	LR	15 18 19.9	
	comp=Z,31nm,18.7s,baz=353,slow=38						
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**93.51**	**310**	IAmb	IAmb	14 33 56.0	
	comp=Z,17nm,1.9s						
SNAA	**Sanae**	**94.03**	**198**	P	**P**	**14 32 01.8**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=0.0,slow=0.0,SNR=8.8						
	comp=Z,1.2nm,0.9s						
SNAA	**Sanae**	**94.03**	**198**	IAmb	IAmb	14 34 15.5	
	comp=Z,10.0nm,1.6s						
D23K	**Nanushuk River**	**97.04**	**19**	P	Pdif	14 32 16.0	+0.2
DBIC	**Dimbokro**	**97.13**	**277**	LR	LR	15 12 34.0	
	comp=Z,81nm,21.4s,baz=112,slow=33						
BORG	**Borgarnes**	**97.79**	**337**	LR	LR	15 17 11.4	
	comp=Z,97nm,20.9s,baz=55,slow=36						
ILAR	**Eielson Array**	**100.31**	**22**	P	**Pdif**	**14 32 30.3**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=305,slow=5.3,SNR=2.8						
ILAR				PP	**PP**	**14 36 33.9**	**-2.5**
	comp=Z,0.7nm,0.9s,baz=281,slow=7.4,SNR=5.0						
TBI	**Tubuai**	**116.54**	**115**	*e*LR	LR	15 12 48.8	
	comp=Z,566nm,27.2s						
PPT2	**Papeete2**	**117.22**	**108**	*e*LR	LR	15 13 08.9	
	comp=Z,49nm,22.5s						
NVAR	**Mina Array Bea**	**130.31**	**32**	PKP	**PKiKP**	**14 37 56.3**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=336,slow=6.6,SNR=4.1						
PDAR	**Pinedale Array**	**130.74**	**22**	PKP	**PKPdf**	**14 37 53.5**	**-2.4**
	comp=Z,0.6nm,0.7s,baz=295,slow=2.5,SNR=5.6						
TXAR	**Lajitas Array**	**144.76**	**25**	PKP	**PKPab**	**14 38 20.8**	**+0.1**
	comp=Z,9.8nm,0.8s,baz=249,slow=1.5,SNR=111						
CFA	**Coronel Fontan**	**145.84**	**210**	PKPbc	**PKPbc**	**14 38 23.9**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=131,slow=2.3,SNR=32						
LPAZ	**La Paz**	**156.59**	**233**	PKPab	**PKPab**	**14 39 09.2**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=105,slow=4.1,SNR=4.6						

*IDC **24** 14:32:50.9±2.6, 17.°01S×168.°31E, h193km±24km, mb3.7/11, mbtmp4.2/12, Error ellipse: s-maj=19.6km s-min=18.9km az=141.0*
*NOU **24** 14:32:52.6, 17.°33S×168.°45E, h214km, mb4.4/32, Vanuatu Islands*
*NEIC **24** 14:32:52.5±1.0, 17.°24S±0.°07×168.°4E±0.°1, h208km±7km, mb4.4/44, Error ellipse: s-maj=15.2km s-min=10.6km az=81.0*

ISC 24 14:32:51.3±0.5, 17.°28S±0.°05×168.°45E±0.°07, h200km, n102, σ1$30/101, mb4.4/31, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.51**	**210**	P	**Pn**	**14 33 21.4**	**+2.9**
RTV	**Rentapao**	**0.51**	**183**	P	**Pn**	**14 33 21.4**	**+2.9**
SANVU	**Saraoutou**	**2.18**	**326**		**Pn**	**14 33 32.9**	**+1.2**
SANVU	**Saraoutou**	**2.18**	**326**	P	**Pn**	**14 33 34.1**	**+2.3**
INH	**Isangel**	**2.39**	**161**	P	**Pn**	**14 33 35.4**	**+1.4**
MARNC	**Mare, Loyalty**	**4.20**	**185**		**Pn**	**14 33 56.4**	**+0.7**
MARNC					**Sn**	**14 34 40.6**	**-5.6**
MARNC	**Mare, Loyalty**	**4.20**	**185**	P	**Pn**	**14 33 56.3**	**+0.7**
YATNC	**Mamie plateau,**	**4.98**	**197**	P	**Pn**	**14 34 06.0**	**+0.5**
KOUNC	**Koumac, New Ca**	**5.11**	**230**	P	**Pn**	**14 34 09.6**	**+2.4**
DZM	**Mont Dzumac**	**5.13**	**201**	P	**Pn**	**14 34 09.2**	**+1.8**
	57nm,0.5s,baz=228,slow=23,SNR=113						
DZM				S	**Sn**	**14 35 12.0**	**+4.4**
	32nm,0.4s,baz=313,slow=23,SNR=7.3						
OUENC	**Ouen Island, N**	**5.33**	**196**	P	**Pn**	**14 34 11.8**	**+1.8**
ONTNC	**Ouen Toro**	**5.34**	**200**		**Pn**	**14 34 11.8**	**+1.7**
ONTNC	**Ouen Toro**	**5.34**	**200**	P	**Pn**	**14 34 12.2**	**+2.1**
PINNC	**Pines Island,**	**5.39**	**190**		**Pn**	**14 34 11.2**	**+0.5**
PINNC	**Pines Island,**	**5.39**	**190**	P	**Pn**	**14 34 12.2**	**+1.5**
TATA	**Tatamba Isabel**	**12.21**	**315**	P	**Pn**	**14 35 40.2**	**+1.2**
EIDS	**Eidsvold**	**18.06**	**241**	P	**P**	**14 36 48.3**	**+0.4**
ARMA	**Armidale**	**20.16**	**226**	P	**P**	**14 37 11.3**	**+0.8**
ARMA				IAmb	IAmb	14 37 29.5	
	comp=Z,22nm,1.5s						
CTA	**Charters Tower**	**21.21**	**259**	P	**P**	**14 37 21.2**	**-0.5**
CTAO	**Charters Tower**	**21.21**	**259**	P	**P**	**14 37 21.4**	**-0.3**
CTAO				IAmb	IAmb	14 37 50.9	
	comp=Z,19nm,1.4s						
CTAO	**Charters Tower**	**21.21**	**259**	P	**P**	**14 37 21.4**	**-0.3**
TOZ	**Tahuroa Road**	**21.30**	**164**	P	**P**	**14 37 23.3**	**+0.9**
TOZ				IAmb	IAmb	14 37 30.3	
	comp=Z,17nm,1.2s						
PMG	**Port Moresby**	**22.13**	**288**	P	**P**	**14 37 30.6**	**-0.3**
	comp=Z,2.9nm,0.4s,baz=263,slow=18,SNR=3.0						
	comp=Z,2.9nm,0.4s						
PMG	**Port Moresby**	**22.13**	**288**	IAmb	IAmb	14 37 32.1	
	comp=Z,16nm,1.3s						
RTZ	**Ruatahuna**	**22.53**	**162**	P	**P**	**14 37 35.2**	**+0.7**
RTZ				IAmb	IAmb	14 37 36.6	
	comp=Z,18nm,0.8s						
BKZ	**Black Stump Fm**	**22.91**	**164**	P	**P**	**14 37 38.7**	**+0.9**
MTSU	**Mount Surprise**	**23.00**	**264**	P	**P**	**14 37 39.8**	**+0.9**
COEN	**Coen**	**24.56**	**274**	P	**P**	**14 37 52.5**	**-0.5**
COEN				IAmb	IAmb	14 38 21.7	
	comp=Z,14nm,1.4s						
CMSA	**Cobar Meteorol**	**25.05**	**231**	P	**P**	**14 37 56.9**	**-0.4**
KHZ	**Kahutara**	**25.43**	**171**	P	**P**	**14 38 00.8**	**+0.2**
KHZ	**Kahutara**	**25.43**	**171**	P	**P**	**14 38 00.5**	**0.0**
LTZ	**Lake Taylor**	**25.63**	**173**	P	**P**	**14 38 02.7**	**+0.3**
QIS	**Mount Isa**	**27.47**	**259**	P	**P**	**14 38 18.9**	**-0.2**
INKA	**Innaminka**	**27.57**	**243**	P	**P**	**14 38 19.9**	**0.0**
STKA	**Stephens Creek**	**28.32**	**234**	P	**P**	**14 38 26.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=64,slow=9.1,SNR=4.7						
	comp=Z,1.3nm,0.5s						
RAR	**Rarotonga**	**30.23**	**103**	P	**P**	**14 38 44.7**	**+1.2**
HTT	**Hallett**	**31.01**	**233**	P	**P**	**14 38 49.7**	**-0.6**
WR8	**Warramunga Arr**	**32.25**	**260**	P	**P**	**14 38 59.2**	**-2.1**
WB0	**Warramunga Arr**	**32.36**	**260**	P	**P**	**14 39 00.1**	**-2.1**
WRAB	**Tennant Creek**	**32.40**	**260**	P	**P**	**14 39 01.3**	**-1.2**
WRA	**Warramunga Arr**	**32.41**	**260**	P	**P**	**14 39 00.9**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=81,slow=6.6,SNR=18						
	comp=Z,0.4nm,0.3s						
AS31	**Alice Springs**	**32.92**	**253**	P	**P**	**14 39 06.1**	**-1.1**
AS31				IAmb	IAmb	14 39 06.7	
	comp=Z,8.6nm,0.4s						
ASAR	**Alice Springs**	**32.93**	**253**	P	**P**	**14 39 06.2**	**-1.0**
	comp=Z,12nm,0.4s,baz=79,slow=9.1,SNR=656						
	comp=Z,12nm,0.4s						
ASAR	**Alice Springs**	**32.93**	**253**	P	**P**	**14 39 05.5**	**-1.7**
BBOO	**Buckleboo**	**33.01**	**236**	P	**P**	**14 39 07.4**	**-0.4**
BBOO				IAmb	IAmb	14 39 38.3	
	comp=Z,11nm,1.2s						
BBOO	**Buckleboo**	**33.01**	**236**	P	**P**	**14 39 07.3**	**-0.4**
MTN	**Manton Dam**	**36.27**	**272**	P	**P**	**14 39 34.8**	**-1.0**
MTN				IAmb	IAmb	14 39 51.8	
	comp=Z,14nm,1.4s						
SAUI	**Saumlaki**	**37.35**	**280**	P	**P**	**14 39 43.6**	**-1.3**
KNRA	**Kununurra**	**38.05**	**266**	P	**P**	**14 39 49.5**	**-1.2**
KNRA				IAmb	IAmb	14 40 23.3	
	comp=Z,37nm,1.5s						
FAKI	**Fak Fak**	**38.29**	**288**	P	**P**	**14 39 51.8**	**-1.0**
FAKI				IAmb	IAmb	14 39 52.4	
	comp=Z,13nm,0.8s						
FAKI	**Fak Fak**	**38.29**	**288**	P	**P**	**14 39 52.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**40.73**	**262**	P	**P**	**14 40 12.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**40.73**	**262**	P	**P**	**14 40 12.7**	**-0.2**
PSA00	**Pilbara Seismi**	**45.90**	**257**	P	**P**	**14 40 53.8**	**-0.4**
PSA00				IAmb	IAmb	14 41 19.9	
	comp=Z,25nm,1.3s						
MEEK	**Meekatharra**	**46.91**	**250**	P	**P**	**14 41 01.7**	**-0.4**

LUWI	**Luwuk**	**47.72**	**285**	P	**P**	**14 41 08.4**	**0.0**
PLAI	**Plampang**	**49.95**	**273**	P	**P**	**14 41 25.0**	**-0.4**
JHJ2	**Mitsune**	**57.09**	**331**	P	**P**	**14 42 16.6**	**-0.3**
UGM	**Wanagama**	**57.12**	**272**	P	**P**	**14 42 16.9**	**-0.6**
JEM	**Erimo**	**63.46**	**339**	P	**P**	**14 43 00.4**	**+0.6**
COCO	**West Island**	**69.11**	**263**	P	**P**	**14 43 36.1**	**-0.3**
PET	**Petropavlovsk**	**70.52**	**354**	P	**P**	**14 43 43.7**	**-0.4**
PEA0B	**Petropavlovsk-**	**70.71**	**353**	P	**P**	**14 43 45.3**	**0.0**
PETK	**Petropavlovsk-**	**70.71**	**353**	P	**P**	**14 43 44.9**	**-0.3**
	comp=Z,2.4nm,0.5s,baz=156,slow=5.5,SNR=12						
	comp=Z,2.4nm,0.5s						
QSPA	**South Pole Qui**	**72.76**	**180**	P	**P**	**14 44 00.6**	**+3.0**
	comp=Z,2.3nm,0.8s,baz=342,slow=0.8,SNR=16						
	comp=Z,2.3nm,0.8s						
QSPA	**South Pole Qui**	**72.76**	**180**	P	**P**	**14 43 59.9**	**+2.2**
CMAR	**Chiang Mai Arr**	**77.02**	**294**	P	**P**	**14 44 23.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=135,slow=4.1,SNR=4.8						
	comp=Z,0.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**77.02**	**294**	P	**P**	**14 44 22.1**	**-0.6**
N15K	**Kwethluk River**	**81.27**	**15**	P	**P**	**14 44 44.2**	**-0.6**
M16K	**Timber Creek**	**82.29**	**15**	P	**P**	**14 44 50.4**	**+0.3**
K15K	**Wolf Creek Mou**	**82.78**	**14**	P	**P**	**14 44 52.9**	**+0.4**
J17K	**VABM Dome**	**84.30**	**14**	P	**P**	**14 45 00.7**	**+0.5**
J17K				IAmb	IAmb	14 45 42.8	
	comp=Z,12nm,1.3s						
J18K	**Innoko River**	**84.92**	**15**	P	**P**	**14 45 03.2**	**-0.1**
J18K				IAmb	IAmb	14 45 30.3	
	comp=Z,7.5nm,1.4s						
SONM	**Songino Array**	**85.21**	**323**	P	**P**	**14 45 04.8**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=99,slow=4.5,SNR=3.6						
	comp=Z,0.4nm,0.4s						
J20K	**Nowinta River**	**86.16**	**15**	P	**P**	**14 45 09.0**	**-0.4**
J20K				IAmb	IAmb	14 45 12.9	
	comp=Z,5.3nm,1.2s						
CMB	**Columbia Colle**	**86.42**	**48**	P	**P**	**14 45 11.0**	**-0.4**
F17K	**Baldwin Pennin**	**86.49**	**12**	P	**P**	**14 45 11.2**	**+0.2**
F17K				IAmb	IAmb	14 45 35.9	
	comp=Z,18nm,1.4s						
BEKR	**Beckworth**	**87.21**	**47**	P	**P**	**14 45 15.2**	**-0.2**
BORC	**Borrego Spring**	**87.47**	**54**	P	**P**	**14 45 16.4**	**0.0**
DSP	**Deep Springs**	**87.89**	**50**	P	**P**	**14 45 18.4**	**+0.1**
WRH	**Wood River Hil**	**88.02**	**17**	P	**P**	**14 45 18.2**	**-0.1**
WRH				IAmb	IAmb	14 45 56.4	
	comp=Z,8.9nm,1.4s						
NVAR	**Mina Array Bea**	**88.07**	**49**	P	**P**	**14 45 19.5**	**0.0**
	comp=Z,1.5nm,0.8s,baz=233,slow=8.0,SNR=7.4						
	comp=Z,1.5nm,0.8s						
NVAR	**Mina Array Bea**	**88.07**	**49**	P	**P**	**14 45 19.2**	**-0.4**
H22K	**Ishtalitna Cre**	**88.24**	**15**	P	**P**	**14 45 18.8**	**-0.6**
ILAR	**Eielson Array**	**88.59**	**18**	P	**P**	**14 45 18.6**	**-2.4**
	comp=Z,0.6nm,0.7s,baz=239,slow=4.6,SNR=14						
	comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**88.59**	**18**	P	**P**	**14 45 19.1**	**-2.0**
I07A	**Izee**	**89.56**	**43**	P	**P**	**14 45 26.1**	**-0.1**
I07A				IAmb	IAmb	14 45 27.4	
	comp=Z,4.3nm,0.9s						
F24K	**Squaw Lake**	**90.38**	**15**	P	**P**	**14 45 28.8**	**-0.6**
F24K				IAmb	IAmb	14 45 53.1	
	comp=Z,6.4nm,1.5s						
G08A	**Pilot Rock**	**90.42**	**42**	P	**P**	**14 45 29.8**	**-0.4**
G08A				IAmb	IAmb	14 45 31.6	
	comp=Z,3.1nm,0.9s						
BMAR	**Burnt Mountain**	**91.18**	**16**	P	**P**	**14 45 33.0**	**-0.1**
U15A	**North Rim**	**91.77**	**52**	P	**P**	**14 45 36.6**	**-0.3**
U15A				IAmb	IAmb	14 45 38.1	
	comp=Z,3.6nm,1.2s						
E28M	**Babbage River**	**93.37**	**17**	P	**P**	**14 45 42.8**	**-0.3**
E28M				IAmb	IAmb	14 45 43.9	
	comp=Z,3.4nm,1.4s						
TXAR	**Lajitas Array**	**96.49**	**61**	P	**P**	**14 45 58.0**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=235,slow=4.1,SNR=2.3						
	comp=Z,0.2nm,0.7s						
ARCES	**ARCESS Array B**	**122.99**	**345**	PKP	**PKPdf**	**14 51 21.8**	**-1.4**
	comp=Z,3nm,0.9s,baz=67,slow=2.2,SNR=23						
FINES	**FINESS Array B**	**128.50**	**338**	PKP	**PKPdf**	**14 51 32.8**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=45,slow=2.8,SNR=5.2						
EKA	**Eskdalemuir Ar**	**141.48**	**352**	PKhKP	PKPpre	14 51 53.1	
	comp=Z,0.2nm,0.3s,baz=7.2,slow=3.0,SNR=4.4						
LESA	**Schwarzleotal**	**143.93**	**332**	*e*PKP	PKPab	14 52 01.1	+0.4
	comp=Z,5.4nm,0.8s						
MOTA	**Moosalm**	**144.69**	**333**	*e*PKP	**PKPab**	**14 52 03.4**	**-0.3**
	comp=Z,7.4nm,0.9s						
RETA	**Reutte**	**144.73**	**334**	*e*PKP	**PKPab**	**14 52 03.4**	**-0.3**
	comp=Z,14nm,2.0s						
SQTA	**Sankt Quirin**	**144.74**	**333**	*e*PKP	**PKPab**	**14 52 03.6**	**-0.3**
	comp=Z,5.6nm,0.7s						
FETA	**Feichten**	**145.10**	**333**	*e*PKP	**PKPbc**	**14 52 04.8**	**-0.3**
	comp=Z,8.8nm,0.9s						
DAVA	**Damuels**	**145.26**	**334**	*e*PKP	**PKPdf**	**14 52 05.6**	**+0.2**
	comp=Z,6.6nm,1.1s						

*NEIC **24** 14:41:15.3±2.3, 31.°49S±0.°06×68.°76W±0.°09, h113km±5km, mb4.6/8, Error ellipse: s-maj=10.8km s-min=9.1km az=86.0*
*IDC **24** 14:41:15.2±1.3, 31.°58S×68.°73W, h103km±11km, mb3.7/2, mbtmp3.9/4, Error ellipse: s-maj=41.8km s-min=25.4km az=98.0*
*SJA **24** 14:41:15.3±0.8, 31.°50S×68.°71W, h110km±2km, ML3.5, MW3.6*

ISC 24 14:41:15.1±0.7, 31.°48S±0.°03×68.°67W±0.°03, h115km±5km, n92, σ1$49/124, mb4.3/4, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.07**	**184**	Pn	**Pn**	**14 41 30.8**	**-0.2**
ZON				Sn	**Sn**	**14 41 43.1**	**+0.2**
ZON	**Zonda**	**0.07**	**184**	*e*P	**Pn**	**14 41 30.9**	**0.0**
ZON				*e*S	**Sn**	**14 41 43.4**	**+0.6**
ZON				IAML		14 41 44.6	
	comp=Z,744nm,0.4s						
SJA	**San Juan**	**0.11**	**118**	*e*P	**Pn**	**14 41 31.3**	**+0.3**
SJA				*e*S	**Sn**	**14 41 45.1**	**+2.2**
SJA				IAML		14 41 53.4	
	comp=Z,749nm,0.5s						
RTLL	**Cerro Villicun**	**0.22**	**49**	*e*P	**Pn**	**14 41 31.4**	**+0.1**
RTLL				*e*S	**Sn**	**14 41 43.1**	**-0.2**
RTLL				IAML		14 41 43.9	
	comp=Z,2μm,0.3s						
CFA	**Coronel Fontan**	**0.39**	**109**	P	**Pn**	**14 41 31.9**	**0.0**
	comp=Z,575nm,0.3s,baz=256,slow=6.3						
CFA				S	**Sn**	**14 41 44.2**	**-0.4**
	comp=Z,323nm,0.3s,baz=158,slow=22,SNR=80						
CFA	**Coronel Fontan**	**0.39**	**109**	*e*P	Pn	14 41 26.9	-5.0
CFA				*e*P		14 41 32.2	
CFA				*e*S	**Sn**	**14 41 45.2**	**+0.7**
RTLS	**Leoncito**	**0.62**	**239**	*e*P	**Pn**	**14 41 33.8**	**+0.1**
RTLS				*e*S	**Sn**	**14 41 47.7**	**0.0**
RTLS				IAML		14 41 51.2	
	comp=Z,2μm,0.5s						
ACCO	**Cerro Coronel**	**0.95**	**339**	*e*P	**Pn**	**14 41 37.3**	**+0.7**
ACCO				*e*S	**Sn**	**14 41 52.3**	**-0.4**
ASAL	**Salagasta**	**1.12**	**187**	*e*P	Pn	14 41 33.1	-5.0
AVFE	**Valle Fertil**	**1.32**	**52**	*e*P	**Pn**	**14 41 41.7**	**+1.4**
AVFE				IAML		14 42 02.7	
	comp=Z,649nm,0.2s						
ACDV	**Cuesta del Vie**	**1.36**	**343**	*e*P	**Pn**	**14 41 41.8**	**+1.0**
ACDV				IAML		14 42 02.1	
	comp=Z,547nm,0.5s						
ARCO	**CERRO ARCO**	**1.38**	**189**	*e*P	**Pn**	**14 41 41.8**	**+0.8**
ARCO				*e*S	**Sn**	**14 42 01.0**	**+0.4**
ARCO				IAML		14 42 02.5	
	comp=Z,710nm,0.3s						
AROD	**Rodeo**	**1.48**	**332**	*e*P	**Pn**	**14 41 43.4**	**+1.1**
AROD				*e*S	**Sn**	**14 42 03.6**	**+0.7**
ACAN	**Cantantal**	**1.49**	**123**	*e*P	**Pn**	**14 41 41.4**	**-0.8**
AAGR	**Agrelo**	**1.61**	**185**	*e*P	**Pn**	**14 41 44.6**	**+1.0**
AAGR				IAML		14 42 07.9	
	comp=Z,639nm,0.2s						
ACHE	**Chepes**	**1.75**	**80**	*e*P	**Pn**	**14 41 47.1**	**+1.7**
CO03	**El Pedregal**	**1.84**	**290**		**Pn**	**14 41 46.9**	**+0.5**
CO03	**El Pedregal**	**1.84**	**290**	*e*P	**Pn**	**14 41 47.3**	**+0.8**
CO03				*e*S	**Sn**	**14 42 11.8**	**+1.5**
CO03				IAML		14 42 12.5	
	comp=Z,527nm,0.3s						
CO01	**Juntas del Tor**	**1.93**	**320**		**Pn**	**14 41 49.2**	**+1.5**
CO01	**Juntas del Tor**	**1.93**	**320**	*e*P	**Pn**	**14 41 49.5**	**+1.8**
CO01				*e*S	**Sn**	**14 42 14.3**	**+1.8**
CO01				IAML		14 42 15.9	
	comp=Z,186nm,0.6s						
AGUA	**GUANDACOL**	**1.99**	**5**	*e*P	**Pn**	**14 41 49.9**	**+1.6**
AGUA				*e*S	**Sn**	**14 42 17.4**	**+3.7**
AGUA				IAML		14 42 18.3	
	comp=Z,633nm,0.3s						

AVIZ	**Vizcacheras**	**2.00**	**176**	*e*P	**Pn**	**14 41 49.5**	**+1.2**
AVIZ				*e*S	**Sn**	**14 42 08.7**	**-5.1**
CO02	**Combarbal**	**2.01**	**277**		**Pn**	**14 41 48.6**	**0.0**
CO02	**Combarbal**	**2.01**	**277**	*e*P	**Pn**	**14 41 48.9**	**+0.3**
CO02				*e*S	**Sn**	**14 42 14.7**	**+0.6**
CO02				IAML		14 42 15.7	
	comp=Z,452nm,0.2s						
VA03	**San Esteban**	**2.05**	**231**		**Pn**	**14 41 49.5**	**+0.5**
VA03	**San Esteban**	**2.05**	**231**	*e*P	**Pn**	**14 41 50.1**	**+1.1**
VA03				*e*S	**Sn**	**14 42 16.7**	**+1.8**
VA03				IAML		14 42 19.1	
	comp=Z,204nm,0.7s						
APLL	**PUNTA DE LOS L**	**2.13**	**60**	*e*P	**Pn**	**14 41 51.5**	**+1.4**
APLL				*e*S	**Sn**	**14 42 16.8**	**0.0**
APLL				IAML		14 42 20.3	
	comp=Z,216nm,0.3s						
GO04	**Tololo Observa**	**2.24**	**305**		**Pn**	**14 41 51.6**	**-0.1**
GO04	**Tololo Observa**	**2.24**	**305**	*e*P	**Pn**	**14 41 52.3**	**+0.6**
GO04				*e*S	**Sn**	**14 42 20.4**	**+0.8**
GO04				IAML		14 42 21.7	
	comp=Z,828nm,0.6s						
MT08	**Bocatoma Ro**	**2.27**	**210**		**Pn**	**14 41 52.8**	**+0.8**
MT08	**Bocatoma Ro**	**2.27**	**210**	*e*P	**Pn**	**14 41 53.4**	**+1.4**
MT08				*e*S	**Sn**	**14 42 23.4**	**+3.2**
MT08				IAML		14 42 25.1	
	comp=Z,128nm,0.6s						
MT04	**Ro Olivares**	**2.29**	**212**	*e*P	**Pn**	**14 41 53.9**	**+1.7**
MT04				*e*S	**Sn**	**14 42 19.9**	**-0.7**
PEL	**Peldehue**	**2.38**	**225**		**Pn**	**14 41 53.1**	**-0.1**
PEL	**Peldehue**	**2.38**	**225**	*e*P	**Pn**	**14 41 54.0**	**+0.8**
PEL				*e*S	**Sn**	**14 42 23.4**	**+1.0**
PEL				IAML		14 42 27.8	
	comp=Z,104nm,0.4s						
VA06	**Catapilco**	**2.48**	**243**		**Pn**	**14 41 53.1**	**-1.3**
ROC1	**El Roble**	**2.48**	**232**	*e*P	**Pn**	**14 41 54.3**	**-0.4**
ROC1				*e*S	**Sn**	**14 42 24.6**	**-0.5**
MT16	**CCHEN**	**2.50**	**218**		**Pn**	**14 41 55.0**	**+0.2**
ACLC	**CERRO LA CRUZ**	**2.53**	**36**	*e*P	**Pn**	**14 41 56.4**	**+1.2**
ACLC				IAML		14 42 29.4	
	comp=Z,272nm,0.6s						
MT03	**Universidad Ad**	**2.54**	**217**		**Pn**	**14 41 55.4**	**+0.1**
MT03	**Universidad Ad**	**2.54**	**217**	*e*P	**Pn**	**14 41 56.2**	**+0.9**
MT03				*e*S	**Sn**	**14 42 27.7**	**+1.5**
MT03				IAML		14 42 29.7	
	comp=Z,223nm,0.2s						
MT05	**Renca**	**2.59**	**222**		**Pn**	**14 41 56.0**	**+0.1**
MT05	**Renca**	**2.59**	**222**	*e*P	**Pn**	**14 41 56.8**	**+0.9**
MT05				*e*S	**Sn**	**14 42 28.5**	**+1.3**
MT05				IAML		14 42 29.6	
	comp=Z,172nm,0.5s						
MT13	**San Alfonso**	**2.64**	**211**		**Pn**	**14 41 56.9**	**+0.3**
MT13	**San Alfonso**	**2.64**	**211**	*e*P	**Pn**	**14 41 57.6**	**+1.0**
MT13				*e*S	**Sn**	**14 42 28.9**	**-1.6**
MT13				IAML		14 42 38.4	
	comp=Z,71nm,0.6s						
CO06	**Fray Jorge**	**2.67**	**287**		**Pn**	**14 41 55.2**	**-1.7**
MRA	**San Martin**	**2.68**	**111**	*e*P	**Pn**	**14 41 58.9**	**+1.7**
MRA				IAML		14 42 35.1	
	comp=Z,383nm,0.3s						
LMEL	**Las Melosas**	**2.69**	**208**		**Pn**	**14 41 57.7**	**+0.3**
LMEL	**Las Melosas**	**2.69**	**208**	*e*P	**Pn**	**14 41 58.4**	**+1.0**
LMEL				*e*S	**Sn**	**14 42 31.5**	**+1.6**
LMEL				IAML		14 42 44.4	
	comp=Z,59nm,0.6s						
MT02	**Curacav**	**2.74**	**229**		**Pn**	**14 41 57.0**	**-0.9**
MT02	**Curacav**	**2.74**	**229**	*e*P	P

IDC ***24*** *14:44:12.0±1.0, 12°.55N×143°.03E, h0km, mb3.6/9, mbtmp3.6/9, MS3.8/4, Error ellipse: s-maj=36.6km s-min=18.7km az=84.0*

NEIC ***24*** *14:44:13.0±0.8, 12°.59N±0°.09×143°.3E±0°.1, h10km±1km, mb4.4/14, Error ellipse: s-maj=21.5km s-min=9.5km az=130.0*

ISC 24 14:44:12.4±0.7, 12°.56N±0°.10×143°.3E±0°.1, h10km, n38, σ0.86/26, mb3.9/13, MS4.0/4, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**18.28**	**254**		**Pn**	**14 49 26.9**	**+0.6**
RABL	**Rabaul**	**18.84**	**152**	P	**P**	**14 49 32.2**	**-0.4**
RABL				IAmb	IAmb	14 48 57.5	
	comp=Z,15nm,0.7s						
FAKI	**Fak Fak**	**18.89**	**216**	P	**P**	**14 48 33.6**	**+0.4**
YOJ	**Yonaguni jima**	**22.54**	**305**	P	**P**	**14 49 13.5**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**23.29**	**72**	T	T	15 14 11.0	
	baz=258,slow=75,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**23.31**	**72**	T	T	15 14 14.5	
	baz=258,slow=75,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**23.31**	**72**	T	T	15 14 15.1	
	baz=258,slow=75,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**23.75**	**70**	T	T	15 14 43.2	
	baz=257						
H11N2	**WAKE ISLAND Hy**	**23.75**	**69**	T	T	15 14 44.2	
	baz=257						
H11N3	**WAKE ISLAND Hy**	**23.76**	**70**	T	T	15 14 45.0	
	baz=257						
SSLB	**Suanglung**	**23.94**	**301**	P	**P**	**14 49 26.8**	**-0.1**
MJAR	**Matsushiro Arr**	**24.31**	**350**	P	**P**	**14 49 31.4**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=146,slow=10,SNR=4.9						
	comp=Z,0.3nm,0.6s						
MJB9	**Matsu-Tunnel**	**24.32**	**350**	P	**P**	**14 49 28.6**	**-1.7**
MJB9				IAmb	IAmb	14 49 44.5	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**33.30**	**195**	P	**P**	**14 50 50.8**	**+0.3**
WB0				IAmb	IAmb	14 50 59.2	
	comp=Z,6.0nm,1.2s						
WR8	**Warramunga Arr**	**33.45**	**195**	P	**P**	**14 50 52.0**	**+0.2**
WR8				IAmb	IAmb	14 51 02.0	
	comp=Z,7.2nm,1.4s						
WRA	**Warramunga Arr**	**33.48**	**195**	P	**P**	**14 50 52.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=13,slow=8.9,SNR=12						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**33.48**	**195**	IAmb	IAmb	14 50 57.3	
	comp=Z,0.6nm,1.4s						
ASAR	**Alice Springs**	**37.16**	**194**	P	**P**	**14 51 24.1**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=17,slow=9.9,SNR=12						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**37.16**	**194**	P	**P**	**14 51 23.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**43.05**	**284**	P	**P**	**14 52 12.4**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=98,slow=7.6,SNR=6.5						
	comp=Z,0.2nm,0.3s						
BBOO	**Buckleboo**	**45.64**	**189**	P	**P**	**14 52 33.2**	**0.0**
SONM	**Songino Array**	**46.70**	**326**	P	**P**	**14 52 41.7**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=128,slow=9.3,SNR=5.7						
	comp=Z,0.3nm,0.4s						
PBA	**Port Blair**	**49.37**	**275**	P	**P**	**14 53 01.6**	**-0.9**
BRDH	**Bariadhala**	**50.03**	**289**	LR	LR	15 13 29.3	
	comp=Z,46nm,19.7s,baz=125,slow=35						
MKAR	**Makanchi Array**	**61.17**	**317**	P	**P**	**14 54 28.0**	**+0.7**
	comp=Z,1.4nm,1.1s,baz=100,slow=7.9,SNR=5.8						
	comp=Z,1.4nm,1.1s						
K15K	**Wolf Creek Mou**	**63.15**	**25**	P	**P**	**14 54 41.0**	**+0.7**
O16K	**Kokwok River B**	**63.60**	**29**	P	**P**	**14 54 43.6**	**+0.3**
KURK	**Kurchatov**	**64.38**	**320**	P	**P**	**14 54 48.5**	**-0.1**
KURK	**Kurchatov**	**64.38**	**320**	IAmb	IAmb	14 54 55.7	
	comp=Z,3.3nm,0.8s						
KURBB	**Kurchatov Arra**	**64.42**	**320**	P	**P**	**14 54 48.5**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=105,slow=6.8,SNR=7.5						
	comp=Z,1.3nm,0.3s						
BVAR	**Borovoye Array**	**69.78**	**322**	P	**P**	**14 55 22.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=99,slow=6.4,SNR=3.7						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**70.15**	**25**	P	**P**	**14 55 25.9**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=259,slow=5.1,SNR=1.5						
	comp=Z,0.2nm,0.6s						
ILAR	**Eielson Array**	**70.15**	**25**	P	**P**	**14 55 25.1**	**+0.1**
BBB	**Bella Bella**	**79.34**	**39**	LR	LR	15 23 51.0	
	comp=Z,87nm,19.9s,baz=286,slow=30						
VNDA	**Vanda**	**90.55**	**176**	LR	LR	15 38 41.5	
	comp=Z,61nm,18.1s,baz=272,slow=36						
PFO	**Pinyon Flats O**	**91.49**	**55**	LR	LR	15 38 38.4	
	comp=Z,39nm,18.1s,baz=328,slow=36						
LPAZ	**La Paz**	**149.37**	**101**	PKPbc	**PKiKP**	**15 04 06.2**	**+1.7**
	comp=Z,3.0nm,0.8s,baz=265,slow=1.5,SNR=5.4						
LPAZ	**La Paz**	**149.37**	**101**	PKPdf	**PKPdf**	**15 03 56.9**	**-2.2**

NEIC ***24*** *14:48:05.9, 0°.03N×124°.32E, h50km, Moment Tensor Solution. Duration: 1s4 Moment tensor: Scale 10^16Nm; Mrr2.21; Mθθ-0.44; Mφφ-1.77; Mrθ-0.37; Mθφ-1.24; Mφr1.30; Fault plane solution: M0 2.73000×10^16 NP1: φs231.01000°, δ38.01000°, λ124.26000°. NP2: φs10.17000°, δ59.41000°, λ66.25000°. Principal axes: T 2.7607, Plg66.0000°, Azm235.0000°; N -0.0609, Plg20.0000°, Azm23.0000°; P -2.6997, Plg11.0000°, Azm117.0000°;*

NEIC ***24*** *14:48:05.9, 0°.07S×124°.32E, h50km*

IDC ***24*** *14:48:05.6±1.6, 0°.03S×124°.21E, h62km±13km, mb4.2/27, mbtmp4.5/30, MS3.7/29, Error ellipse: s-maj=13.8km s-min=9.8km az=82.0*

GCMT ***24*** *14:48:05.9±0.2, 0°.11S±0°.01×124°.37E±0°.02, h53km±1km, MW5.0/81, Moment Tensor Solution. s47,c63; s81,c106; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.50±.14; Mθθ-0.77±.10; Mφφ-1.74±.12; Mrθ-0.61±.06; Mθφ-2.15±.08; Mφr1.27±.08; Best double couple: M0 3.39000×10^16 NP1:φs245.00000°, δ46.00000°, λ131.00000°. NP2: φs13.00000°, δ57.00000°, λ55.00000°. Principal axes: T 3.2570, Plg61.0000°, Azm228.0000°; N 0.2590, Plg28.0000°, Azm34.0000°; P -3.5230, Plg6.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *14:48:06.2±1.9, 0°.08S±0°.06×124°.31E±0°.05, h65km±6km, mb4.9/62, Mww4.9/10 Error ellipse: s-maj=9.8km s-min=6.2km az=138.0*

DJA ***24*** *14:48:06.9±0.1, 0°S±2°×12°4E±°, h64km±2km, M4.9/60, mb5.0/60, mB5.4/29, MLv5.4/27, Mw(mB)4.9/29, MwMwp4.6/3, Mwp5.0/3*

ISC 24 14:48:06.5±0.5, 0°.08S±0°.04×124°.34E±0°.05, h69km±4km, n239, σ1s29/234, mb4.8/68, 1C-1D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.74**	**331**	P	**Pn**	**14 48 20.7**	**-1.1**
KMSI				S	**Sn**	**14 48 32.8**	**-0.2**
LUWI	**Luwuk**	**1.83**	**239**		**Pn**	**14 48 35.3**	**-0.6**
LUWI	**Luwuk**	**1.83**	**239**	P	**Pn**	**14 48 36.4**	**+0.5**
LUWI	**Luwuk**	**1.83**	**239**	P	**Pn**	**14 48 35.2**	**-0.7**
LUWI				S	**Sn**	**14 49 02.2**	**+4.0**
MRSI	**Marisa**	**2.46**	**283**	P	**Pn**	**14 48 41.8**	**-2.5**
SANI	**Sanana**	**2.56**	**140**	P	**Pn**	**14 48 43.1**	**-2.6**
SANI	**Sanana**	**2.56**	**140**	P	**Pn**	**14 48 42.8**	**-2.9**
APSI	**Ampana**	**2.81**	**253**	P	**Pn**	**14 48 50.9**	**+1.8**
TNTI	**Ternate**	**3.15**	**74**		**Pn**	**14 48 54.1**	**+0.4**
TNTI	**Ternate**	**3.15**	**74**	P	**Pn**	**14 48 54.6**	**+0.9**
TNTI	**Ternate**	**3.15**	**74**	P	**Pn**	**14 48 54.4**	**+0.7**
TOLI2	**Tolitoli**	**3.75**	**288**		**Pn**	**14 49 01.6**	**-0.3**
TOLI2	**Tolitoli**	**3.75**	**288**	P	**Pn**	**14 49 01.5**	**-0.3**
SGSI	**Sangihe**	**3.92**	**18**	P	**Pn**	**14 49 06.3**	**+2.0**
NLAI	**Namlea**	**4.18**	**139**	P	**Pn**	**14 49 06.6**	**-1.2**
MPSI	**Mapaga**	**4.46**	**275**	P	**Pn**	**14 49 11.0**	**-0.6**
PCI	**Palu**	**4.57**	**260**	P	**Pn**	**14 49 14.7**	**+1.5**
AAI	**Ambon**	**5.26**	**133**	P	**Pn**	**14 49 22.4**	**-0.3**
TTSI	**Tana Toraja**	**5.39**	**237**	P	**Pn**	**14 49 25.3**	**+0.9**
MSAI	**Masohi**	**5.62**	**125**	P	**Pn**	**14 49 27.5**	**0.0**
SPSI	**Sidrap Palu**	**5.98**	**230**	P	**Pn**	**14 49 33.0**	**+0.6**
	1.9nm8μm421nm,0.9s						
BNSI	**Bone**	**6.02**	**224**	P	**Pn**	**14 49 33.3**	**+0.3**
	1.3nm3μm420nm,0.9s						
BKSI	**Bulukumba**	**6.70**	**219**	P	**Pn**	**14 49 42.5**	**+0.3**
	0.6nm1μm146nm,0.7s						
KAPI	**Kappang**	**6.71**	**223**	P	**Pn**	**14 49 42.5**	**+0.1**
	82nm,0.5s,baz=34,slow=9.1,SNR=65						
KAPI				S	**Sn**	**14 50 57.3**	**-0.1**
	52nm,0.3s,baz=44,slow=20,SNR=1.8						
KAPI	**Kappang**	**6.71**	**223**		**Pn**	**14 49 41.5**	**-0.9**
KAPI	**Kappang**	**6.71**	**223**	P	**Pn**	**14 49 44.0**	**+1.6**
SWI	**Sorong**	**6.97**	**96**	P	**Pn**	**14 49 45.8**	**-0.1**
	0.5nm2μm119nm,0.5s						
BNDI	**Bandanaira**	**7.10**	**129**	P	**Pn**	**14 49 47.5**	**-0.3**
BNDI	**Bandanaira**	**7.10**	**129**	P	**Pn**	**14 49 47.0**	**-0.8**
BSSI	**Bau Bau, Buton**	**7.14**	**212**	P	**Pn**	**14 49 48.1**	**-0.3**
	1.2nm2μm229nm,1.0s						
DAV	**Davao City (W)**	**7.21**	**10**	P	**Pn**	**14 49 51.7**	**+2.5**
	97nm,0.3s,baz=108,slow=6.4,SNR=5.6						
DAV	**Davao City (W)**	**7.21**	**10**		**Pn**	**14 49 48.4**	**-0.9**
BKB	**Balikpapan**	**7.53**	**261**	P	**Pn**	**14 49 53.3**	**-0.4**
BKB	**Balikpapan**	**7.53**	**261**	P	**Pn**	**14 49 54.5**	**+0.8**
FAKI	**Fak Fak**	**8.40**	**110**		**Pn**	**14 50 04.2**	**-1.3**
FAKI	**Fak Fak**	**8.40**	**110**	P	**Pn**	**14 50 03.9**	**-1.6**
FAKI	**Fak Fak**	**8.40**	**110**	P	**Pn**	**14 50 03.6**	**-1.9**
	2μm185nm,0.5s						
MMRI	**Maumere**	**8.76**	**194**	Pn	**Pn**	**14 50 09.6**	**-0.8**
EDFI	**Ende, Flores**	**9.01**	**197**	P	**Pn**	**14 50 12.9**	**-1.1**
MTKI	**Muara Teweh, K**	**9.48**	**265**	P	**Pn**	**14 50 21.4**	**+1.1**
	2μm136nm,1.1s						
SOEI	**Soe**	**9.61**	**180**		**Pn**	**14 50 21.4**	**-0.9**
SOEI	**Soe**	**9.61**	**180**	P	**Pn**	**14 50 21.3**	**-0.9**
	1μm59nm,1.1s						
RKPI	**Ransiki, Papua**	**9.94**	**98**	P	**Pn**	**14 50 27.0**	**+0.4**
	82nm,0.6s						
BBKI	**Banjar Baru**	**10.07**	**250**	P	**Pn**	**14 50 29.4**	**+1.0**
	137nm,1.4s						
BATI	**Baumata**	**10.08**	**184**	P	**Pn**	**14 50 31.7**	**+3.1**
	16nm,0.6s,baz=18,slow=0.5,SNR=4.4						
BATI				LR	LR	14 54 27.8	
	comp=Z,1μm,21.4s,baz=353,slow=38						
SAUI	**Saumlaki**	**10.48**	**139**		**Pn**	**14 50 34.0**	**0.0**
SAUI	**Saumlaki**	**10.48**	**139**	P	**Pn**	**14 50 34.5**	**+0.5**
	242nm,1.3s						
BASI	**Baing, Sumba**	**10.75**	**200**	P	**Pn**	**14 50 36.5**	**-1.1**
	125nm,1.1s						
TWSI	**Taliwang, Sumb**	**11.36**	**221**	P	**Pn**	**14 50 45.4**	**-0.7**
	56nm,1.1s						
BAKI	**Biak**	**11.82**	**95**	P	**Pn**	**14 50 53.8**	**+1.5**
	81nm,1.1s						
SRBI	**Singaraja**	**12.08**	**229**	P	**Pn**	**14 50 56.5**	**+0.7**
	719nm42nm,1.2s						
SBUM	**Sibu**	**12.37**	**282**		**Pn**	**14 50 58.6**	**-1.2**
KMMI	**Kalianget**	**12.45**	**236**	P	**Pn**	**14 51 03.0**	**+2.1**
	2μm128nm,1.4s						
JAGI	**Jajag, Banyuwa**	**13.13**	**230**	P	**Pn**	**14 51 12.0**	**+1.8**
	45nm,1.1s						
MTN	**Manton Dam**	**14.36**	**152**		**Pn**	**14 51 25.2**	**-1.3**
PCJI	**Pacitan**	**15.39**	**238**	P	**P**	**14 51 43.5**	**+0.6**
	98nm,1.3s						
KNRA	**Kununurra**	**16.10**	**164**	Pn	**Pn**	**14 51 48.0**	**-0.7**
JAY	**Jayapura**	**16.54**	**99**	P	**P**	**14 51 55.6**	**-0.2**
	7.0nm,0.4s,baz=257,slow=4.2,SNR=11						
TPI	**Tanjungpandan**	**16.89**	**261**	P	**P**	**14 51 59.7**	**+0.2**
	674nm72nm,0.9s						
KPJI	**Karang Pucung**	**16.97**	**245**	P	**P**	**14 52 00.8**	**+0.4**
	112nm,0.9s						
FITZ	**Fitzroy Crossi**	**17.95**	**176**	P	**P**	**14 52 10.1**	**-1.1**
	23nm,0.9s,baz=12,slow=7.5,SNR=25						
FITZ	**Fitzroy Crossi**	**17.95**	**176**	P	**P**	**14 52 10.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**17.95**	**176**	P	**P**	**14 52 11.1**	**-0.1**
BBJI	**Bungbulang**	**18.18**	**246**	P	**Pn**	**14 52 15.5**	**+1.0**
CNJI	**Cibinong**	**18.60**	**247**	P	**Pn**	**14 52 20.1**	**+0.7**
	56nm,1.2s						
DSRI	**Dabo**	**19.76**	**269**	P	**P**	**14 52 31.3**	**+0.2**
	926nm101nm,0.7s						
TPRI	**Tanjung Pinang**	**19.83**	**273**	P	**Pn**	**14 52 33.3**	**-0.7**
	68nm,0.8s						
KASI	**Kota Agung**	**20.53**	**254**	P	**P**	**14 52 39.6**	**+0.1**
	58nm,1.0s						
MYKOM	**Kota Tinggi**	**20.57**	**275**	P	Pn	14 52 41.8	-0.9
MDSI	**Maura Dua**	**20.61**	**257**	P	**P**	**14 52 40.9**	**+0.6**
	53nm,1.0s						
LWLI	**Liwa**	**20.84**	**256**	P	Pn	14 52 46.5	+0.5
	2μm79nm,0.9s						
MBWA	**Marble Bar**	**21.43**	**192**	P	**P**	**14 52 48.6**	**-0.4**
MBWA				IAmb	IAmb	14 52 50.1	
	comp=Z,47nm,0.8s						
MBWA	**Marble Bar**	**21.43**	**192**	P	**P**	**14 52 48.9**	**-0.1**
PSA00	**Pilbara Seismi**	**21.81**	**191**	P	**P**	**14 52 52.2**	**-0.8**
PSA00				IAmb	IAmb	14 52 53.9	
	comp=Z,48nm,0.9s						
WB0	**Warramunga Arr**	**21.91**	**154**	P	**P**	**14 52 52.6**	**-1.6**
WB0				IAmb	IAmb	14 52 59.0	
	comp=Z,43nm,1.1s						
WRAB	**Tennant Creek**	**22.04**	**154**	P	**P**	**14 52 54.5**	**-1.0**
WRAB				IAmb	IAmb	14 52 60.0	
	comp=Z,29nm,0.6s						
WRAB	**Tennant Creek**	**22.04**	**154**	P	**P**	**14 52 54.1**	**-1.4**
WRA	**Warramunga Arr**	**22.04**	**154**	P	**P**	**14 52 53.9**	**-1.7**
	comp=Z,20nm,0.8s,baz=335,slow=11,SNR=80						
WRA				S	**S**	**14 56 48.6**	**-6.2**
	comp=Z,5.2nm,1.2s,baz=337,slow=15,SNR=6.8						
WRA				PcP	**PcP**	**14 56 52.0**	**+0.5**
	comp=Z,6.1nm,1.0s,baz=322,slow=2.6,SNR=7.2						
WRA				ScP	**ScP**	**15 00 21.6**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=333,slow=2.3,SNR=5.2						
WRA	**Warramunga Arr**	**22.04**	**154**	P	**P**	**14 52 53.7**	**-1.9**
WR8	**Warramunga Arr**	**22.12**	**154**	P	**P**	**14 52 54.7**	**-1.7**
WR8				IAmb	IAmb	14 53 01.6	
	comp=Z,77nm,1.3s						
MASI	**Maura Aman, Be**	**22.29**	**262**	P	**P**	**14 52 59.4**	**+1.0**
	comp=Z,3μmcomp=Z,122nm,0.7s						
KRJI	**Kerinci**	**22.96**	**265**	P	**P**	**14 53 05.6**	**+0.1**
	comp=Z,3μmcomp=Z,226nm,1.0s						
COEN	**Coen**	**23.20**	**127**	P	**P**	**14 53 06.9**	**-0.7**
COEN	**Coen**	**23.20**	**127**	P	**P**	**14 53 07.2**	**-0.5**
TPUB	**Ta-pu**	**23.52**	**351**	P	**P**	**14 53 10.1**	**-0.5**
YULB	**Yu-li**	**23.52**	**353**	P	**P**	**14 53 12.2**	**+1.7**
IPM	**Ipoh**	**23.72**	**281**	P	**P**	**14 53 12.4**	**-0.1**
IPM	**Ipoh**	**23.72**	**281**	P	**P**	**14 53 13.2**	**+0.6**
QIZ	**Qiongzhong**	**23.73**	**324**	P	**P**	**14 53 11.8**	**-0.7**
QIZ				S	**S**	**14 57 25.6**	**+2.8**
QIZ				sS	**sS**	**14 57 48.9**	**0.0**
QIZ				LR	LR		
	comp=N,190nm,11.7s						
QIZ				LR	LR		
	comp=E,170nm,10.3s						
QIZ				LR	LR		
	comp=Z,190nm,18.1s						
PDSI	**Padang**	**23.89**	**268**	P	**P**	**14 53 14.0**	**-0.1**
	comp=Z,1μmcomp=Z,31nm,0.9s						
SSLB	**Suanglung**	**23.95**	**352**	P	**P**	**14 53 15.2**	**+0.7**
KULM	**Kulim**	**24.25**	**283**	P	**P**	**14 53 17.1**	**-0.1**
KULM				IAmb	IAmb	14 53 21.6	
	comp=Z,49nm,1.4s						
KULM	**Kulim**	**24.25**	**283**	P	**P**	**14 53 17.1**	**-0.1**
PMG	**Port Moresby**	**24.54**	**113**	P	**P**	**14 53 20.1**	**+0.2**
	comp=Z,9.9nm,0.7s,baz=310,slow=13,SNR=8.5						
	comp=Z,9.9nm,0.7s						
PMG	**Port Moresby**	**24.54**	**113**	P	**P**	**14 53 20.5**	**+0.6**
YHNB	**Yeheng**	**24.77**	**354**	P	**P**	**14 53 23.0**	**+1.1**
AS31	**Alice Springs**	**25.22**	**159**	P	**P**	**14 53 25.6**	**-0.5**
ASAR	**Alice Springs**	**25.22**	**159**	P	**P**	**14 53 25.9**	**-0.2**
	comp=Z,21nm,1.0s,baz=334,slow=8.4,SNR=97						
ASAR				PcP	**PcP**	**14 56 58.4**	**+0.2**
	comp=Z,3.4nm,0.6s,baz=344,slow=2.4,SNR=9.4						
ASAR				ScP	**ScP**	**15 00 32.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=341,slow=3.0,SNR=6.3						
ASAR				LR	LR	15 05 21.4	
	comp=Z,152nm,18.6s,baz=330,slow=41						
	comp=Z,21nm,1.0s						
ASAR	**Alice Springs**	**25.22**	**159**		**P**	**14 53 25.5**	**-0.5**
QIS	**Mount Isa**	**25.25**	**145**	P	**P**	**14 53 27.2**	**+0.9**
RPSI	**Rantau Prapat**	**25.55**	**276**	P	**P**	**14 53 28.3**	**-0.8**
PSI	**Prapat**	**25.56**	**277**	P	**P**	**14 53 28.3**	**-1.1**
	comp=Z,8.4nm,0.5s,baz=89,slow=3.4,SNR=12						
PSI				LR	LR	15 05 15.9	
	comp=Z,104nm,19.1s,baz=106,slow=40						
	comp=Z,8.4nm,0.5s						
MTSU	**Mount Surprise**	**26.60**	**133**	P	**P**	**14 53 40.0**	**+1.4**
KCSI	**Kotacane, Aceh**	**26.79**	**278**	P	**P**	**14 53 39.2**	**-1.1**
GSI	**Gunungsitoli**	**26.79**	**273**	P	**P**	**14 53 38.7**	**-1.7**
GSI	**Gunungsitoli**	**26.79**	**273**	P	**P**	**14 53 40.2**	**-0.2**
MEEK	**Meekatharra**	**26.98**	**191**	P	**P**	**14 53 41.4**	**-0.5**
RABL	**Rabaul**	**28.10**	**99**	P	**P**	**14 53 52.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**31.01**	**308**	P	**P**	**14 54 18.2**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=138,slow=7.8,SNR=35						
CMAR				PcP	**PcP**	**14 57 13.4**	**+0.9**
	comp=Z,3.2nm,0.8s,baz=140,slow=2.5,SNR=13						
CMAR				ScP	**ScP**	**15 00 50.2**	**+0.7**
	comp=Z,2.4nm,1.1s,baz=121,slow=3.9,SNR=10						
	comp=Z,4.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**31.01**	**308**	P	**P**	**14 54 17.9**	**+0.1**
CMAR					**ScP**	**15 00 50.1**	**+0.6**
CHTO	**Chiang Mai**	**31.21**	**308**	P	**P**	**14 54 19.7**	**+0.1**
CHTO				IAmb	IAmb	14 54 21.9	
	comp=Z,20nm,1.0s						
CHTO	**Chiang Mai**	**31.21**	**308**	P	**P**	**14 54 20.2**	**+0.7**
CHTO	**Chiang Mai**	**31.21**	**308**	pP	pP	14 54 35.8	+0.5
BLDU	**Ballidu**	**31.22**	**193**	P	**P**	**14 54 18.8**	**-0.7**
INKA	**Innaminka**	**31.69**	**152**	P	**P**	**14 54 24.0**	**+0.3**
INKA				IAmb	IAmb	14 54 26.4	
	comp=Z,14nm,0.8s						
WHN	**Wuhan**	**31.90**	**344**	P	**P**	**14 54 24.1**	**-1.3**
NJ2	**Nanjing**	**32.37**	**351**	*eP*	**P**	**14 54 31.1**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**33.35**	**191**	LR	LR	15 09 03.7	
	comp=Z,114nm,18.8s,baz=207,slow=38						
JNU	**Nakatsue**	**33.59**	**10**	P	**P**	**14 54 39.7**	**-0.6**
	comp=Z,7.1nm,0.8s,baz=135,slow=1.4,SNR=2.8						
JNU				LR	LR	15 08 54.8	
	comp=Z,44nm,20.4s,baz=168,slow=37						
	comp=Z,7.1nm,0.8s						
JNU	**Nakatsue**	**33.59**	**10**	IAmb	IAmb	14 54 40.6	
	comp=Z,79nm,1.6s						
JNU	**Nakatsue**	**33.59**	**10**	P	**P**	**14 54 41.4**	**+1.2**
PZH	**PanZhiHua**	**34.24**	**322**	P	**P**	**14 54 47.4**	**+1.4**
BBOO	**Buckleboo**	**34.38**	**162**	P	**P**	**14 54 48.7**	**+1.6**
JMN	**Monobe**	**34.80**	**14**	P	**P**	**14 54 51.8**	**+1.1**
TNCH	**TengChong**	**35.31**	**317**	⇑P	**P**	**14 54 56.4**	**+1.0**
TNCH				pmax	pmax		
	comp=Z,19nm,0.8s						
STKA	**Stephens Creek**	**35.59**	**154**	P	**P**	**14 54 57.6**	**+0.1**
	comp=Z,7.7nm,0.5s,baz=332,slow=8.7,SNR=31						
	comp=Z,7.7nm,0.5s						
STKA	**Stephens Creek**	**35.59**	**154**	P	**P**	**14 54 57.8**	**+0.3**
HTT	**Hallett**	**35.90**	**159**	P	**P**	**14 55 01.0**	**+0.8**
JHJ	**Hachijo jima 2**	**36.08**	**22**	LR	LR	15 07 35.7	
	comp=Z,37nm,21.9s,baz=194,slow=32						
TATA	**Tatamba Isabel**	**36.29**	**104**	P	**P**	**14 55 04.7**	**+1.0**
CD2	**Chengdu**	**36.49**	**329**	P	**P**	**14 55 06.3**	**+1.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
XAN	**Xi'an**	**36.89**	**338**	P	**P**	**14 55 09.3**	**+0.7**
XAN				pP	pwP	14 55 26.9	-0.8
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=N,160nm,23.2s						
XAN				LR	LR		
	comp=E,220nm,14.8s						
XAN				LR	LR		
	comp=Z,240nm,15.8s						
INU	**Inuyama**	**37.18**	**17**	P	**P**	**14 55 11.4**	**+0.4**
INU				IAmb	IAmb	14 55 12.4	
	comp=Z,19nm,1.0s						
INU	**Inuyama**	**37.18**	**17**	P	**P**	**14 55 11.7**	**+0.8**
INU	**Inuyama**	**37.18**	**17**	P	**P**	**14 55 11.5**	**+0.5**
CMSA	**Cobar Meteorol**	**37.26**	**149**	P	**P**	**14 55 13.0**	**+1.3**
KSRS	**Korea Array**	**37.49**	**5**	P	**P**	**14 55 14.1**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=181,slow=9.4,SNR=5.3						
KSRS				PcP	**PcP**	**14 57 31.8**	**+1.1**
	comp=Z,2.5nm,1.0s,baz=170,slow=2.5,SNR=4.2						
	comp=Z,1.9nm,0.8s						
JGF	**Kuroka**	**37.51**	**18**	P	**P**	**14 55 13.9**	**+0.1**
JGF				IAmb	IAmb	14 55 15.6	
	comp=Z,13nm,0.7s						
JGF	**Kuroka**	**37.51**	**18**	P	**P**	**14 55 14.3**	**+0.5**
MAJO	**Matsushiro**	**38.64**	**18**	P	**P**	**14 55 22.9**	**-0.4**
MAJO				IAmb	IAmb	14 55 23.9	
	comp=Z,13nm,0.7s						
MAJO	**Matsushiro**	**38.64**	**18**	P	**P**	**14 55 23.2**	**-0.1**
MAJO	**Matsushiro**	**38.64**	**18**	P	**P**	**14 55 23.1**	**-0.2**
MAJO	**Matsushiro**	**38.64**	**18**	pP	pP	14 55 39.2	-0.3
MJAR	**Matsushiro Arr**	**38.64**	**18**	P	**P**	**14 55 22.7**	**-0.6**
	comp=Z,11nm,0.7s,baz=191,slow=8.7,SNR=49						
MJAR				PcP	**PcP**	**14 57 35.3**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=182,slow=5.3,SNR=4.8						
MJAR				ScP	**ScP**	**15 01 17.8**	**+1.2**
	comp=Z,0.8n

KBL IAmb IAmb 14 58 21.1
comp=Z,10nm,0.9s
YAK Yakutsk 62.08 3 LR LR 15 24 55.7
comp=Z,50nm,22.0s,baz=194,slow=36
YAK Yakutsk 62.08 3 P **P 14 58 19.0 -0.7**
YAK Yakutsk 62.08 3 P **P 14 58 19.2 -0.5**
YAK sP **sP 14 58 43.9 -0.2**
GAR Garm 62.81 315 P **P 14 58 23.4 -1.8**
GAR IAmb IAmb 14 58 26.9
comp=Z,22nm,1.1s
ZALV Zalesovo Beam 62.94 335 P **P 14 58 23.1 -2.5**
comp=Z,1.2nm,0.3s,baz=142,slow=6.6,SNR=7.7
ZALV LR LR 15 27 36.7
comp=Z,73nm,19.2s,baz=126,slow=38
comp=Z,1.2nm,0.3s
MA2 Magadan 62.96 15 LR LR 15 24 37.9
comp=Z,26nm,21.9s,baz=230,slow=35
KURBB Kurchatov Arra 63.71 329 P **P 14 58 29.0 -1.7**
comp=Z,2.9nm,0.5s,baz=131,slow=5.7,SNR=17
comp=Z,2.9nm,0.5s
KURK Kurchatov 63.72 329 P **P 14 58 29.1 -1.7**
KURK IAmb IAmb 14 58 35.0
comp=Z,20nm,1.1s
KKAR Karatay Array 64.44 319 P **P 14 58 34.6 -1.2**
SEY Seymchan 66.26 14 LR LR 15 29 52.6
comp=Z,16nm,18.7s,baz=0.5,slow=38
BVAR Borovoye Array 69.24 329 P **P 14 59 04.4 -1.6**
comp=Z,1.5nm,0.4s,baz=142,slow=7.5,SNR=12
BVAR LR LR 15 30 27.5
comp=Z,42nm,21.1s,baz=113,slow=37
comp=Z,1.5nm,0.4s
BORK Borovoye 69.29 329 P **P 14 59 04.9 -1.4**
BORK sP **PcP 14 59 29.6 +0.1**
TIXI Tiksi 71.67 2 LR LR 15 33 59.4
comp=Z,53nm,18.7s,baz=197,slow=38
TIXI Tiksi 71.67 2 P **P 14 59 20.0 -0.4**
TIXI IAmb IAmb 14 59 38.8
comp=Z,24nm,1.4s
TIXI Tiksi 71.67 2 P **P 14 59 20.3 -0.1**
AB31 Akbulak array 73.61 322 P **P 14 59 30.4 -2.0**
ABKAR Akbulak array 73.61 322 P **P 14 59 30.3 -2.1**
CCD Concordia, Ant 74.94 180 P **P 14 59 41.6 +1.4**
AKTO Aktyubinsk 75.18 323 LR LR 15 36 45.1
comp=Z,31nm,19.6s,baz=225,slow=39
ABPO Ambohimpanom 77.79 251 P **P 14 59 56.2 -0.9**
ABPO IAmb IAmb 14 59 59.2
comp=Z,25nm,1.2s
ABPO Ambohimpanom 77.79 251 P **P 14 59 57.5 +0.4**
VOI Vohitsoka 78.42 248 P **P 14 59 59.4 -1.1**
VNDA Vanda 79.99 172 P **P 15 00 07.8 0.0**
comp=Z,3.8nm,0.9s,baz=312,slow=8.2,SNR=8.7
comp=Z,3.8nm,0.9s
VNDA Vanda 79.99 172 IAmb IAmb 15 00 33.9
comp=Z,20nm,1.6s
L16K Owhat River 83.54 28 IAmb IAmb 15 00 29.5
comp=Z,19nm,0.9s
KBZ Khabaz 83.86 314 P **P 15 00 26.9 -1.9**
comp=Z,3.6nm,1.0s,baz=142,slow=8.7,SNR=5.3
comp=Z,3.6nm,1.0s
GURO Guroymak-BITLI 84.02 309 IAmb IAmb 15 00 30.5
comp=Z,13nm,1.0s
KMBO Kilima Mbogo 87.08 269 P **P 15 00 45.5 -0.2**
comp=Z,2.4nm,0.6s,baz=97,slow=3.6,SNR=8.2
KMBO LR LR 15 38 34.0
comp=Z,114nm,18.5s,baz=98,slow=35
comp=Z,2.4nm,0.6s
ASF Jabal al Asfar 87.87 302 LR LR 15 46 20.6
comp=Z,17nm,21.2s,baz=169,slow=40
SYO Syowa Base 88.04 201‖ *eP* **P 15 00 49.9 +1.1**
COLD Coldfoot 88.31 23 IAmb IAmb 15 00 51.7
comp=Z,12nm,1.5s
SML Sawmill 88.80 28 P **P 15 00 52.2 -0.4**
MMAI Mount Meron Ar 89.15 303 P **P 15 00 53.4 -1.6**
comp=Z,0.3nm,0.3s,baz=53,slow=5.6,SNR=4.5
MMAI LR LR 15 45 25.0
comp=Z,30nm,21.9s,baz=162,slow=39
comp=Z,0.3nm,0.3s
EIL Elat 89.50 300 LR LR 15 46 54.8
comp=Z,85nm,20.1s,baz=174,slow=40
ILAR Eielson Array 89.55 25 P **P 15 00 54.1 -1.9**
comp=Z,0.3nm,0.6s,baz=247,slow=4.6,SNR=6.7
ILAR PKKPbc **PKKPdf 15 18 30.6 +2.5**
comp=Z,0.4nm,0.8s,baz=102,slow=1.3,SNR=4.4
comp=Z,0.3nm,0.6s
QSPA South Pole Qui 89.86 180 P **P 15 01 00.4 +2.8**
comp=Z,6.9nm,1.1s,baz=310,slow=1.0,SNR=12
QSPA LR LR 15 40 37.4
comp=Z,90nm,20.4s,baz=305,slow=35
QSPA South Pole Qui 89.86 180 P **P 15 00 58.0 +0.4**
QSPA IAmb IAmb 15 01 02.3
comp=Z,9.5nm,1.2s
BRTR Keskin Array B 90.59 310 P **P 15 00 59.6 -2.0**
comp=Z,1.2nm,0.8s,baz=138,slow=5.8,SNR=6.2
comp=Z,1.2nm,0.8s
G26K Porcupine Rive 90.81 23 IAmb IAmb 15 01 04.0
comp=Z,9.5nm,1.2s
F28M Old Crow 92.29 22 IAmb IAmb 15 01 10.2
comp=Z,7.4nm,1.1s
I28M Miner Creek 92.46 25 IAmb IAmb 15 01 11.7
comp=Z,11nm,1.2s
ARCES ARCESS Array B 93.17 340 P **P 15 01 11.1 -1.7**
comp=Z,2.1nm,0.8s,baz=89,slow=3.7,SNR=8.9
ARCES LR LR 15 45 33.9
comp=Z,33nm,20.8s,baz=92,slow=37
comp=Z,2.1nm,0.8s
AKASG Malin Array Be 93.31 321 P **P 15 01 11.2 -2.6**
comp=Z,0.9nm,0.6s,baz=71,slow=4.2,SNR=4.4
comp=Z,0.9nm,0.6s
AKASG Malin Array Be 93.31 321 IAmb IAmb 15 01 12.7
comp=Z,4.0nm,1.1s
SPITS Spitsbergen Ar 93.72 349 P **P 15 01 15.1 -0.1**
comp=Z,0.9nm,0.4s,baz=80,slow=7.9,SNR=7.3
SPITS LR LR 15 46 56.1
comp=Z,43nm,21.8s,baz=66,slow=38
comp=Z,0.9nm,0.4s
FINES FINESS Array B 94.03 332 P **P 15 01 15.3 -1.6**
comp=Z,0.5nm,0.6s,baz=65,slow=4.7,SNR=5.2
comp=Z,0.5nm,0.6s
LSZ Lusaka 95.91 255 LR LR 15 41 01.8
comp=Z,100nm,19.7s,baz=120,slow=33
BURAR Bucovina Array 96.21 318 P **P 15 01 25.9 -1.4**
LBTB Lobatse 97.89 245 LR LR 15 40 24.6
comp=Z,25nm,18.5s,baz=116,slow=32
BOSA Boshof 97.94 241 LR LR 15 43 08.0
comp=Z,30nm,18.3s,baz=100,slow=34
HFS Hagfors 100.23 332 P **Pdif 15 01 42.2 -2.7**
comp=Z,0.7nm,0.6s,baz=97,slow=10,SNR=4.1
EKA Eskdalemuir Ar 110.42 331 PKiKP **PKiKP 15 06 29.1 -1.7**
comp=Z,1.9nm,0.9s,baz=53,slow=3.6,SNR=3.5
PDAR Pinedale Array 115.78 41 PKP **PKiKP 15 06 40.7 -1.1**
comp=Z,0.2nm,0.6s,baz=264,slow=3.2,SNR=1.5
PDAR PKKPab **PKKPab 15 17 17.9 -1.5**
comp=Z,1.4nm,0.8s,baz=107,slow=3.3,SNR=9.5
ESDC Sonseca Array 118.63 316 PKP **PKPdf 15 06 46.8 -0.3**
comp=Z,0.3nm,0.5s,baz=36,slow=3.3,SNR=3.0
TORD Torodi Ar. Bea 121.72 285 PKP **PKPdf 15 06 53.1 -0.5**
comp=Z,1.2nm,0.4s,baz=61,slow=4.0,SNR=1.9
TXAR Lajitas Array 125.80 53 PKP **PKPdf 15 07 01.1 -0.2**
comp=Z,0.4nm,0.8s,baz=202,slow=2.3,SNR=5.5
LPAZ La Paz 159.61 143 PKP **PKPdf 15 08 00.3 +1.2**
comp=Z,1.2nm,0.8s,baz=269,slow=2.6,SNR=4.2
LPAZ PKPab **PKPab 15 08 39.5 +1.9**
comp=Z,3.1nm,0.8s,baz=181,slow=2.6,SNR=11
LPAZ La Paz 159.61 143 PKPab 15 08 40.5 +2.9
BDFB Brasilia 162.65 205 PKPab **PKPab 15 08 51.0 +0.9**
baz=128,slow=6.4

*JMA **24** 15:04:40.3±0.2,26°N±2°×12°5E±°, h92km±4km, MV3.5/16, NW OFF MIYAKOJIMA ISLAND*
*IDC **24** 15:04:40.0±2.9,25°.49N×124°.96E, h103km±28km, mb3.3/13, mbtmp3.7/17, Error ellipse: s-maj=26.1km s-min=13.7km az=71.0*
ISC 24 15:04:40.0±0.7,25°.40N±0°.07×125°.01E±0°.05, h110km±7km, n45, σ1ᵖ48/60, mb3.5/13, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**0.52**	**155**	P	**Pn**	**15 04 56.9**	**-0.1**
JIKM				S	**Sn**	**15 05 09.1**	**-0.6**
JIRB	**Irabujima**	**0.59**	**165**	*i* P	**Pn**	**15 04 57.1**	**-0.4**
JIRB				S	**Sn**	**15 05 09.2**	**-1.4**
JMJ	**Miyako jima 2**	**0.64**	**156**	P	**Pn**	**15 04 58.7**	**+0.9**
JMJ2	**Miyako jima3**	**0.72**	**156**	*i* P	**Pn**	**15 04 58.7**	**+0.2**
JMJ2				*eS*	**Sn**	**15 05 12.2**	**-0.2**
JOGS	**Gusukube**	**0.73**	**150**	P	**Pn**	**15 04 59.0**	**+0.4**
JOGS				*eS*	**Sn**	**15 05 12.3**	**-0.3**
JTJ	**Tarama**	**0.81**	**200**	P	**Pn**	**15 04 59.0**	**-0.3**
JTJ				S	**Sn**	**15 05 12.8**	**-1.0**
JISG	**Ishigakijimahi**	**1.03**	**218**	P	**Pn**	**15 05 01.3**	**-0.1**
JISG				*eS*	**Sn**	**15 05 16.5**	**-1.1**
JIJ	**Ishigaki jima**	**1.30**	**217**	P	**Pn**	**15 05 04.1**	**-0.4**
JIJ				S	**Sn**	**15 05 21.0**	**-1.9**
JKRS	**Kuro-shima**	**1.47**	**218**	P	**Pn**	**15 05 06.3**	**-0.2**
JKRS				S	**Sn**	**15 05 25.7**	**-0.8**
IRIF	**Iriomote-Funau**	**1.57**	**228**	P	**Pn**	**15 05 07.5**	**-0.2**
IRIF				*eS*	**Sn**	**15 05 27.8**	**-0.9**
HATJ	**Hateruma jima**	**1.73**	**219**	P	**Pn**	**15 05 09.5**	**0.0**
HATJ				*eS*	**Sn**	**15 05 31.2**	**-0.9**
JKE	**Kume jima 2**	**1.85**	**60**	P	**Pn**	**15 05 10.8**	**-0.2**
JKE				*eS*	**Sn**	**15 05 34.0**	**-0.7**
YOJ	**Yonaguni jima**	**2.04**	**243**	P	**Pn**	**15 05 13.9**	**+0.5**
YOJ	**Yonaguni jima**	**2.04**	**243**	*eP*	**Pn**	**15 05 14.0**	**+0.5**
YOJ				S	**Sn**	**15 05 38.3**	**-0.7**
JYNG	**Yonagunijimaku**	**2.10**	**244**	P	**Pn**	**15 05 14.1**	**-0.1**
JYNG				*eS*	**Sn**	**15 05 39.6**	**-0.8**
JAGN	**Aguni-jima**	**2.33**	**59**	P	**Pn**	**15 05 17.1**	**-0.1**
JAGN				*eS*	**Sn**	**15 05 43.7**	**-2.1**
TATO	**Taipei**	**3.22**	**263**	P	**Pn**	**15 05 31.6**	**+2.8**
JOW	**Kunigami**	**3.27**	**63**	P	**Pn**	**15 05 28.8**	**-0.7**
	27nm,0.3s,baz=265,slow=12,SNR=45						
JOW				S	**Sn**	**15 06 03.2**	**-4.5**
	33nm,0.3s,baz=235,slow=16,SNR=8.7						
NACB	**Ninganchiao**	**3.33**	**249**	P	**Pn**	**15 05 30.4**	**0.0**
NACB	**Ninganchiao**	**3.33**	**249**	S	**Sn**	**15 06 07.8**	**-1.6**
YHNB	**Yeheng**	**3.37**	**258**	P	**Pn**	**15 05 33.0**	**+2.0**
YULB	**Yu-li**	**3.93**	**240**	P	**Pn**	**15 05 36.9**	**-1.5**
YULB	**Yu-li**	**3.93**	**240**	S	**Sn**	**15 06 19.8**	**-3.9**
SSLB	**Suanglung**	**4.02**	**247**	P	**Pn**	**15 05 39.9**	**+0.2**
SSLB	**Suanglung**	**4.02**	**247**	S	**Sn**	**15 06 23.8**	**-2.2**
TWGBT	**Beinan**	**4.42**	**235**	P	**Pn**	**15 05 43.8**	**-1.1**
TWGBT	**Beinan**	**4.42**	**235**	S	**Sn**	**15 06 30.3**	**-5.1**
TPUB	**Ta-pu**	**4.51**	**243**	P	**Pn**	**15 05 47.0**	**+0.8**
TPUB	**Ta-pu**	**4.51**	**243**	S	**Sn**	**15 06 34.4**	**-3.2**
KSRS	**Korea Array**	**12.27**	**11**	P	**Pn**	**15 07 31.1**	**+0.2**
	2.0nm,1.0s,baz=183,slow=11,SNR=5.5						
MJAR	**Matsushiro Arr**	**15.84**	**42**	P	**Pn**	**15 08 17.5**	**+0.7**
	0.7nm,0.6s,baz=224,slow=8.8,SNR=2.5						
USRK	**Ussuriysk Ar.**	**19.60**	**15**	P	**P**	**15 08 59.7**	**+0.3**
	1.6nm,0.6s,baz=224,slow=15,SNR=1.9						
SONM	**Songino Array**	**26.78**	**331**	P	**P**	**15 10 08.7**	**-1.0**
	0.3nm,0.3s,baz=154,slow=12,SNR=5.1						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**39.96**	**313**	P	**P**	**15 12 03.5**	**-0.2**
	0.5nm,0.4s,baz=99,slow=10,SNR=21						
	0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**41.19**	**325**	P	**P**	**15 12 12.9**	**-0.7**
	1.3nm,0.5s,baz=115,slow=9.2,SNR=7.7						
	1.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**43.24**	**179**	P	**P**	**15 12 31.2**	**+0.7**
	1.6nm,0.7s,baz=27,slow=9.0,SNR=2.0						
	1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**43.48**	**318**	P	**P**	**15 12 31.7**	**-0.5**
	0.3nm,0.6s,baz=109,slow=8.9,SNR=2.7						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**45.98**	**168**	P	**P**	**15 12 53.4**	**+1.1**
	0.5nm,0.5s,baz=349,slow=8.9,SNR=4.8						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**48.98**	**319**	P	**P**	**15 13 16.3**	**+1.1**
	0.2nm,0.4s,baz=80,slow=7.9,SNR=2.1						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**49.53**	**169**	P	**P**	**15 13 21.7**	**+1.9**
	0.5nm,0.6s,baz=355,slow=13,SNR=13						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**66.53**	**28**	P	**P**	**15 15 17.8**	**0.0**
	0.4nm,0.8s,baz=253,slow=5.1,SNR=12						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**72.14**	**330**	P	**P**	**15 15 52.6**	**+0.3**
	0.5nm,0.5s,baz=64,slow=8.7,SNR=6.8						
	0.5nm,0.5s						
HFS	**Hagfors**	**78.18**	**332**	P	**P**	**15 16 27.5**	**+0.5**
	1.4nm,0.8s,baz=108,slow=8.4,SNR=4.3						
	1.4nm,0.8s						
NOA	**NORSAR Array B**	**78.75**	**333**	P	**P**	**15 16 30.2**	**0.0**
	0.4nm,0.7s,baz=54,slow=1.6,SNR=1.3						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**80.48**	**24**	P	**P**	**15 16 40.4**	**+0.9**
	0.4nm,0.6s,baz=305,slow=6.3,SNR=2.0						
	0.4nm,0.6s						

*MDD **24** 15:06:04.8±0.7,34°.85N×3°.74W, h19km±8km, mb_Lg2.4/9, Error ellipse: s-maj=7.9km s-min=4.2km az=128.0*
*CNRM **24** 15:06:05.4,34°.97N×3°.61W, h18km, ML2.5*
ISC 24 15:06:05.7±1.0,34°.93N±0°.03×3°.67W±0°.03, h32km±9km, n40, σ1ᵖ61/53, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.36**	**322**	P	**Pb**	**15 06 13.7**	**-0.4**
PALE	**Palemas**	**0.36**	**322**	S	**Sb**	**15 06 19.4**	**-0.5**
AKLM	**AKL**	**0.45**	**201**	P	**Pb**	**15 06 14.6**	**-0.9**
AKLM	**AKL**	**0.45**	**201**	S	**Sn**	**15 06 22.3**	**-0.7**
EMEL	**Melilla**	**0.69**	**57**	P	**Pb**	**15 06 19.1**	**-0.2**
EMEL				P	**Pn**	**15 06 19.3**	**+0.1**
EMEL				S	**Sn**	**15 06 29.5**	**+0.6**
EMEL				S	**Sb**	**15 06 30.1**	**+1.6**
TAF	**Taforalt**	**1.04**	**96**	P	**Pn**	**15 06 24.0**	**-0.1**
TAF	**Taforalt**	**1.04**	**96**	S	**Sb**	**15 06 38.1**	**-0.3**
JBK	**JBK**	**1.08**	**123**	P	**Pn**	**15 06 24.4**	**-0.5**
JBK	**JBK**	**1.08**	**123**	S	**Sn**	**15 06 39.0**	**+0.1**
CHEFC	**Chefchaouen**	**1.38**	**278**	P	**Pb**	**15 06 30.4**	**-0.5**
CHEFC	**Chefchaouen**	**1.38**	**278**	S	**Sb**	**15 06 49.7**	**+1.4**
LCRM	**LCR**	**1.58**	**219**	P	**Pb**	**15 06 35.1**	**+0.7**
LCRM	**LCR**	**1.58**	**219**	S	**Sb**	**15 06 57.9**	**+3.8**
SMIR	**Smir Dam**	**1.59**	**299**	P	**Pn**	**15 06 32.7**	**+1.1**
SMIR	**Smir Dam**	**1.59**	**299**	S	**Sb**	**15 06 54.8**	**+0.7**
ECEU	**Ceuta**	**1.70**	**305**	P	**Pn**	**15 06 31.4**	**-1.8**
ECEU				S	**Sn**	**15 06 51.9**	**-1.9**
ECEU				*i* lVmb_Lg		15 07 05.3	
RSA	**Sarsar**	**1.77**	**269**	P	**Pb**	**15 06 36.2**	**-1.3**
RSA	**Sarsar**	**1.77**	**269**	S	**Sb**	**15 06 59.1**	**-0.3**
EMIJ	**Mijas**	**1.86**	**331**	P	**Pn**	**15 06 36.3**	**+0.9**
EMIJ				S	**Sn**	**15 06 56.9**	**-1.0**
EMIJ				*i* lVmb_Lg		15 07 11.7	
EXAGE	**Algeciras**	**1.88**	**310**	P	**Pn**	**15 06 34.0**	**-1.7**
EXAGE				S	**Sn**	**15 06 56.7**	**-1.6**
ELGU	**Los Guajares,**	**1.93**	**1**	P	**Pn**	**15 06 34.8**	**-1.6**
ELGU				S	**Sn**	**15 06 59.7**	**-0.1**
ELGU				*i* lVmb_Lg		15 07 18.7	
EGOR	**Sierra Gorda,**	**2.21**	**351**	P	**Pn**	**15 06 41.4**	**+1.2**
EGOR				S	**Sn**	**15 07 07.7**	**+1.2**
EGOR				*i* lVmb_Lg		15 07 31.0	
MD31	**MD31**	**2.25**	**204**	P	**Pn**	**15 06 42.9**	**+2.1**
MD31	**MD31**	**2.25**	**204**	S	**Sb**	**15 07 11.5**	**-1.6**
MDT	**Midelt**	**2.25**	**201**	P	**Pn**	**15 06 42.0**	**+1.2**
MDT	**Midelt**	**2.25**	**201**	S	**Sb**	**15 07 12.2**	**-1.0**
ZHG	**ZHG**	**2.88**	**240**	P	**Pb**	**15 06 52.9**	**-3.4**
ZHG	**ZHG**	**2.88**	**240**	S	**Sb**	**15 07 30.0**	**-1.0**
ECAB	**El Cabril**	**3.44**	**336**	P	**Pn**	**15 06 56.8**	**-0.3**
ECAB				S	**Sn**	**15 07 37.2**	**+0.4**
ECAB				*i* lVmb_Lg		15 07 52.7	
EGRO	**El Granado**	**4.03**	**311**	P	**Pn**	**15 07 05.0**	**-0.2**
EGRO				S	**Sn**	**15 07 49.2**	**-2.2**
EGRO				*i* lVmb_Lg		15 08 10.5	
PVAQ	**Vaqueiros**	**4.10**	**308**	*eP*	**Pn**	**15 07 08.2**	**+2.1**
PVAQ				*eS*	**Sn**	**15 07 53.4**	**+0.3**
PVAQ				IAML		15 07 54.8	
PVAQ				IAML		15 07 56.9	
PVAQ				IAML		15 08 03.1	
PVAQ	**Vaqueiros**	**4.10**	**308**	P	**Pn**	**15 07 06.9**	**+0.7**
PVAQ	**Vaqueiros**	**4.10**	**308**	S	**Sn**	**15 07 55.8**	**+2.8**
PBAR	**Barrancos**	**4.22**	**321**	*eS*	**Sn**	**15 07 57.7**	**+1.6**
PCVE	**Castro Verde**	**4.44**	**309**	*eP*	**Pn**	**15 07 13.4**	**+2.5**
PCVE				*eS*	**Sn**	**15 08 02.4**	**+0.9**
EBAD	**Badajoz**	**4.67**	**326**	P	**Pn**	**15 07 13.1**	**-0.8**
EBAD				S	**Sn**	**15 08 04.0**	**-3.0**
EBAD				*i* lVmb_Lg		15 08 10.4	
PFVI	**Vila Bisbo**	**4.72**	**299**	*eP*	**Pn**	**15 07 18.0**	**+3.3**
EVO	**Evora**	**5.01**	**317**	*eP*	**Pn**	**15 07 22.0**	**+3.4**
EVO				*eS*	**Sn**	**15 08 16.4**	**+0.9**
PARRA	**Arraiolos**	**5.23**	**319**	*eP*	Pn	15 07 24.2	-5.2
PARRA				*eS*	Sn	15 08 20.6	-14
PMAFR	**Mafra**	**6.03**	**313**	*eS*	**Sn**	**15 08 40.3**	**-0.2**

*IDC **24** 15:08:28.9±4.2,5°.22S×153°.73E, h62km±37km, mb3.6/14, mbtmp3.9/15, ML2.2/1, Error ellipse: s-maj=30.0km s-min=19.4km az=89.0*

*NEIC **24** 15:08:29.5±1.1,5°.15S±0°.06×153°.59E±0°.07, h60km±6km, mb4.5/25, Error ellipse: s-maj=12.6km s-min=4.6km az=131.0*
ISC 24 15:08:28.9±0.5,5°.15S±0°.06×153°.54E±0°.07, h56km, n58, σ1ᵖ16/57, mb4.4/24, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.67**	**305**	Pn	**Pn**	**15 08 57.5**	**+1.7**
MANU	**Manus Island**	**6.89**	**296**	Pn	**Pn**	**15 10 09.3**	**+2.0**
TATA	**Tatamba Isabel**	**7.01**	**118**	P	**Pn**	**15 10 08.2**	**-0.7**
SAVO	**Savo Central**	**7.39**	**123**	P	**Pn**	**15 10 16.2**	**+2.0**
PMG	**Port Moresby**	**7.61**	**236**	P	**Pn**	**15 10 18.5**	**+1.3**
	1.9nm,0.3s,baz=53,slow=7.4,SNR=10						
PMG				S	**Sn**	**15 11 40.1**	**-2.0**
	11nm,0.5s,baz=144,slow=21,SNR=6.4						
	5.7nm,0.3s						
PMG	**Port Moresby**	**7.61**	**236**		**Pn**	**15 10 17.8**	**+0.6**
PMG	**Port Moresby**	**7.61**	**236**	P	**Pn**	**15 10 19.5**	**+2.3**
PMG	**Port Moresby**	**7.61**	**236**	P	**Pn**	**15 10 19.2**	**+2.0**
CTAO	**Charters Tower**	**16.45**	**205**		**P**	**15 12 16.9**	**-1.1**
TARA	**Tarawa**	**20.42**	**72**	P	**P**	**15 13 01.4**	**-0.2**
TARA				IAmb	IAmb	15 13 04.5	
	comp=Z,16nm,0.8s						
DZM	**Mont Dzumac**	**20.96**	**145**	P	**P**	**15 13 06.4**	**-1.0**
	comp=Z,6.1nm,0.7s,baz=309,slow=5.0,SNR=2.3						
	comp=Z,6.1nm,0.7s						
SAUI	**Saumlaki**	**22.27**	**262**	P	**P**	**15 13 22.0**	**+0.5**
SAUI				IAmb	IAmb	15 13 54.7	
	comp=Z,51nm,1.0s						
QLP	**Quilpie**	**23.09**	**202**	P	**P**	**15 13 32.9**	**+2.9**
WR8	**Warramunga Arr**	**23.66**	**230**	P	**P**	**15 13 35.5**	**0.0**
WRAB	**Tennant Creek**	**23.76**	**230**	P	**P**	**15 13 36.1**	**-0.3**
WRAB				IAmb	IAmb	15 14 03.3	
	comp=Z,8.9nm,0.5s						
WRA	**Warramunga Arr**	**23.77**	**230**	P	**P**	**15 13 36.1**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=55,slow=9.8,SNR=3.5						
WRA				PcP	**PcP**	**15 17 19.0**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=62,slow=2.2,SNR=5.4						
	comp=Z,0.8nm,0.9s						
WRA	**Warramunga Arr**	**23.77**	**230**	P	**P**	**15 13 36.4**	**-0.2**
ARMA	**Armidale**	**25.20**	**184**	P	**P**	**15 13 49.8**	**+0.3**
ARMA				IAmb	IAmb	15 14 31.7	
	comp=Z,18nm,1.4s						
INKA	**Innaminka**	**25.55**	**207**	P	**P**	**15 13 52.3**	**-0.3**
AS31	**Alice Springs**	**26.39**	**224**	P	**P**	**15 13 59.7**	**-0.7**
ASAR	**Alice Springs**	**26.40**	**224**	P	**P**	**15 14 00.2**	**-0.2**
	comp=Z,1.2nm,1.2s,baz=46,slow=8.3,SNR=5.7						
ASAR				PcP	**PcP**	**15 17 25.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=58,slow=2.8,SNR=5.9						
	comp=Z,1.2nm,1.2s						
ASAR	**Alice Springs**	**26.40**	**224**	P	**P**	**15 13 59.5**	**-0.9**
LHI	**Lord Howe Isla**	**26.74**	**169**	P	**P**	**15 14 03.1**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**26.84**	**29**	T	T	15 42 23.5	
	baz=209,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**26.84**	**29**	T	T	15 42 28.5	
	baz=209,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**26.85**	**29**	T	T	15 42 22.1	
	baz=209,slow=76,SNR=11						
FITZ	**Fitzroy Crossi**	**30.14**	**242**	P	**P**	**15 14 33.1**	**-0.7**
JCJ	**Chichijima**	**33.88**	**342**	P	**P**	**15 15 06.3**	**-0.1**
RTZ	**Ruatahuna**	**39.53**	**151**	P	**P**	**15 15 53.6**	**-0.7**
RTZ				IAmb	IAmb	15 16 09.5	
	comp=Z,29nm,1.4s						
LTZ	**Lake Taylor**	**41.00**	**159**	P	**P**	**15 16 06.1**	**-0.4**
MJAR	**Matsushiro Arr**	**43.88**	**342**	P	**P**	**15 16 31.0**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=133,slow=9.0,SNR=1.3						
	comp=Z,0.8nm,0.9s						
MJAR	**Matsushiro Arr**	**43.88**	**342**	P	**P**	**15 16 30.0**	**0.0**
MJAR				IAmb	IAmb	15 17 14.8	
	comp=Z,3.4nm,1.4s						
KSRS	**Korea Array**	**48.64**	**333**	P	**P**	**15 17 09.6**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=142,slow=7.7,SNR=1.0						
	comp=Z,0.3nm,0.3s						
KS19	**Wonju Array Si**	**48.70**	**333**	P	**P**	**15 17 07.7**	**-0.1**
PETK	**Petropavlovsk-**	**58.14**	**3**	P	**P**	**15 18 16.2**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=188,slow=4.5,SNR=4.1						
	comp=Z,4.7nm,0.9s						
CM31	**Chiang Mai Arr**	**58.69**	**295**	P	**P**	**15 18 20.3**	**-0.9**
CM31				IAmb	IAmb	15 18 52.7	
	comp=Z,2.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**58.69**	**295**	P	**P**	**15 18 23.1**	**+1.9**
	comp=Z,1.4nm,0.8s,baz=118,slow=5.3,SNR=14						
	comp=Z,1.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.69**	**295**	P	**P**	**15 18 20.3**	**-0.9**
SONM	**Songino Array**	**67.01**	**328**	P	**P**	**15 19 15.9**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=133,slow=6.7,SNR=2.1						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**72.46**	**178**	P	**P**	**15 19 49.2**	**+0.2**
VNDA				IAmb	IAmb	15 20 00.1	
	comp=Z,9.3nm,1.5s						
N15K	**Kwethluk River**	**74.55**	**22**	P	**P**	**15 20 02.2**	**+0.7**
M19K	**Big River Lodg**	**77.80**	**22**	P	**P**	**15 20 19.6**	**-0.4**
M19K				IAmb	IAmb	15 20 42.9	
	comp=Z,13nm,1.3s						
SML	**Sawmill**	**80.14**	**24**	P	**P**	**15 20 32.3**	**-0.5**
SML				IAmb	IAmb	15 20 55.0	
	comp=Z,14nm,1.2s						
MKAR	**Makanchi Array**	**81.07**	**319**	P	**P**	**15 20 38.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=92,slow=7.8,SNR=10						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**81.07**	**319**	P	**P**	**15 20 38.1**	**0.0**

CEVE	Cerro Verde	0.92	79	S		Sn	15 12 48.6	+0.9
CEVE	Cerro Verde	0.92	79	⇑P		Pb	15 12 34.6	-0.1
SBLS	San Blas	0.92	78	*e*P		Pb	15 12 34.5	-0.3
SNJE	San Jose	0.95	77	*e*P		Pb	15 12 34.9	-0.2
RBDL	Robledal	0.96	61	*e*P		Pb	15 12 34.8	-0.5
UNIC	Universidad Ca	1.03	71	S		Sn	15 12 51.4	+1.2
UNIC	Universidad Ca	1.03	71	⇑P		Pn	15 12 35.8	-0.6
JUAM	Asuncion Mita	1.07	50	*i* S		Sb	15 12 51.0	+0.3
JUAM				IAML			15 12 54.5	
	comp=E,2μm,0.3s							
JAYA	Jayaque - finc	1.07	90⇑	*e*P		Pn	15 12 36.2	-0.9
JAYA	Jayaque - finc	1.07	90	*i* P		Pn	15 12 36.2	-0.9
JAYA	Jayaque - finc	1.07	90	S		Sb	15 12 51.2	+0.2
JAYA	Jayaque - finc	1.07	90	⇑P		Pb	15 12 36.2	-0.9
STG5	El Palmar, Qui	1.07	314	*i* P		Pb	15 12 39.2	+2.0
STG8	El Palmar, Qui	1.11	316	*e*P		Pb	15 12 40.3	+2.3
STG2	El Palmar, Qui	1.12	315	*e*P		Pb	15 12 40.3	+2.3
STG2				*e*S		Sn	15 12 58.1	+5.7
CEDA	San Andres	1.14	82	*e*P		Pn	15 12 37.4	-0.4
PMON	Piamonte	1.21	87⇑	*e*P		Pn	15 12 38.4	-0.4
PMON	Piamonte	1.21	87	S		Sb	15 12 55.3	+0.6
PMON	Piamonte	1.21	87	⇑P		Pn	15 12 38.4	-0.4
LALI	Alcalda de L	1.21	98	*e*P		Pn	15 12 38.3	-0.4
LALI	Alcalda de L	1.21	98	*e*P		Pn	15 12 38.4	-0.3
LALI	Alcalda de L	1.21	98	P		Pn	15 12 38.4	-0.4
LALI	Alcalda de L	1.21	98	S		Sb	15 12 55.1	+0.4
BOQS	Boqueron	1.24	86	*e*P		Pn	15 12 38.9	-0.5
UEES	Universidad Ev	1.28	87	⇑P		Pn	15 12 39.5	-0.3
PANCS	Alcalda de	1.34	92	S		Sn	15 12 57.7	0.0
PANCS	Alcalda de	1.34	92	P		Pn	15 12 40.4	-0.2
LOMA	Loma Larga	1.34	90	*e*P		Pn	15 12 40.3	-0.5
LOMA	Loma Larga	1.34	90	S		Sn	15 12 58.7	+0.7
LOMA	Loma Larga	1.34	90	P		Pn	15 12 40.3	-0.5
APG	El Apazote	1.35	4	*i* P		Pn	15 12 39.7	-1.2
APG				*i* S		Sn	15 12 57.2	-1.0
MTO3	Montecristo	1.38	57	*e*P		Pn	15 12 40.1	-1.2
MTO3	Montecristo	1.38	57	*e*P		Pn	15 12 40.1	-1.2
MTO3	Montecristo	1.38	57	P		Pn	15 12 40.1	-1.2
RTAL	Retalhuleu	1.41	308	*e*P		Pn	15 12 39.0	-2.5
RTAL				*e*S		Sn	15 12 55.7	-3.7
RTAL	Retalhuleu	1.41	308	⇓P		Pn	15 12 39.1	-2.4
SOKI	Kika Raxquin	1.43	325	*e*P		Pn	15 12 40.2	-1.9
LFRS	El Faro	1.45	91	*e*P		Pn	15 12 42.1	-0.1
ESQI	Esquipulas	1.48	52	*e*P		Pn	15 12 41.6	-1.0
ESQI	Esquipulas	1.48	52	S		Sn	15 13 01.9	+0.4
ESQI	Esquipulas	1.48	52	P		Pn	15 12 41.7	-1.0
QUEO	Labor Ovalle	1.53	323	*i* P		Pn	15 12 42.6	-0.9
PAVA	Las Pavas	1.57	88	*e*P		Pn	15 12 43.4	-0.5
PAVA	Las Pavas	1.57	88	P		Pn	15 12 43.4	-0.5
UESV	Universidad de	1.72	90	P		Pn	15 12 45.3	-0.5
UESV	Universidad de	1.72	90	S		Sb	15 13 09.3	-0.1
SMCA	Catarina	1.90	309	*e*P		Pn	15 12 45.6	-2.7

IDC ***24*** *15:17:18.0±1.0,25°.69N×93°.61E, h0km, mb3.6/9, mbtmp3.6/10, ML3.4/1, Error ellipse: s-maj=41.5km s-min=16.9km az=59.0*

NDI ***24*** *15:17:20.0±2.4,25°.76N×93°.38E, h5km, ML3.7, MW3.6*

ISC 24 15:17:17.9±1.5,25°.68N±0°.04×93°.44E±0°.04,h1km±10km, n23,σ1°23/34,mb3.5/9,Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**0.60**	**86**	*e*P	**Pn**	**15 17 33.0**	**-0.7**
KOHI				*e*S	**Sn**	**15 17 43.2**	**-1.0**
KOHI				IAML		15 17 44.6	
	comp=E,2μm,0.4s						
KOHI				IAML		15 17 44.9	
	comp=N,2μm,0.5s						
IMP	**Imphal**	**0.96**	**151**	*e*P	**Pn**	**15 17 39.8**	**+1.2**
IMP				*e*S	**Sn**	**15 17 54.5**	**+1.6**
IMP				IAML		15 17 58.6	
	comp=E,316nm,0.4s						
IMP				IAML		15 17 59.1	
	comp=N,248nm,0.4s						
SILR	**SILCHAR**	**1.06**	**213**	*e*P	**Pn**	**15 17 39.6**	**-0.3**
SILR				*e*S	**Sn**	**15 17 57.7**	**+2.3**
SILR				IAML		15 18 00.3	
	comp=N,1μm,0.4s						
SILR				IAML		15 18 00.7	
	comp=E,1μm,0.3s						
TEZP	**TEZPUR**	**1.10**	**328**	*e*P	**Pb**	**15 17 39.1**	**-0.6**
TEZP				*e*S	**Sg**	**15 17 53.2**	**-0.1**
TEZP				IAML		15 17 56.5	
	comp=E,2μm,0.2s						
TEZP				IAML		15 17 56.9	
	comp=N,2μm,0.1s						
MOKO	**MOKOCHONG**	**1.16**	**56**	*e*P	**Pn**	**15 17 42.6**	**+1.2**
MOKO				*e*S	**Sn**	**15 17 59.6**	**+1.7**
MOKO				IAML		15 18 02.5	
	comp=E,3μm,0.3s						
MOKO				IAML		15 18 02.6	
	comp=N,2μm,0.2s						
JORH	**JORHAT**	**1.29**	**34**	*e*P	**Pg**	**15 17 42.6**	**+0.1**
JORH				*e*S	**Sn**	**15 18 01.9**	**+1.0**
JORH				IAML		15 18 03.8	
	comp=N,4μm,0.3s						
JORH				IAML		15 18 04.2	
	comp=E,3μm,0.3s						
SHL	**Shillong**	**1.41**	**266**	*e*P	**Pn**	**15 17 44.4**	**-0.5**
SHL				*e*S	**Sn**	**15 18 02.4**	**-1.9**
ITAN	**ITANAGAR**	**1.48**	**10**	*e*P	**Pg**	**15 17 46.6**	**+0.3**
ITAN				*e*S	**Sg**	**15 18 06.6**	**+1.1**
ITAN				IAML		15 18 09.7	
	comp=N,2μm,0.3s						
ITAN				IAML		15 18 10.2	
	comp=E,3μm,0.2s						
ZIRO	**ZIRO**	**1.88**	**11**	*e*P	**Pb**	**15 17 52.0**	**-1.1**
ZIRO				*e*S	**Sb**	**15 18 15.8**	**-1.4**
ZIRO				IAML		15 18 19.9	
	comp=E,3μm,0.4s						
ZIRO				IAML		15 18 25.9	
	comp=N,2μm,0.5s						
TAWA	**Tawang**	**2.37**	**324**	*e*P	**Pb**	**15 18 00.7**	**-1.0**
TAWA				*e*S	**Sn**	**15 18 28.0**	**-0.2**
TAWA				IAML		15 18 34.1	
	comp=E,1000nm,0.4s						
TAWA				IAML		15 18 34.6	
	comp=N,870nm,0.3s						
PASG	**PASIGHAT**	**2.91**	**35**	*e*P	**Pg**	**15 18 05.1**	**+0.9**
SAIH	**SAIHA**	**3.20**	**188**	*e*P	**Pn**	**15 18 11.2**	**+1.7**
SAIH				*e*S	**Sb**	**15 18 52.4**	**-2.8**
SAIH				IAML		15 18 59.1	
	comp=N,57nm,0.4s						
SAIH				IAML		15 19 00.2	
	comp=E,96nm,0.4s						
CMAR	**Chiang Mai Arr**	**8.81**	**144**	Pn	**Pn**	**15 19 24.9**	**-1.5**
	comp=E,0.1nm,0.3s,baz=322,slow=13,SNR=2.0 comp=E,0.2nm,0.3s						
MKAR	**Makanchi Array**	**22.87**	**340**	P	**P**	**15 22 22.7**	**-0.1**
	comp=E,1.0nm,0.7s,baz=159,slow=11,SNR=7.0 comp=E,1.0nm,0.7s						
SONM	**Songino Array**	**24.36**	**21**	P	**P**	**15 22 36.9**	**-0.6**
	comp=E,0.9nm,0.8s,baz=206,slow=10,SNR=5.3 comp=E,0.9nm,0.8s						
KURBB	**Kurchatov Arra**	**27.42**	**339**	P	**P**	**15 23 06.5**	**+1.5**
	comp=E,0.3nm,0.6s,baz=157,slow=9.8,SNR=3.2 comp=E,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**28.96**	**349**	P	**P**	**15 23 20.0**	**+1.3**
	comp=E,0.4nm,0.5s,baz=144,slow=10,SNR=1.9 comp=E,0.4nm,0.5s						
MJAR	**Matsushiro Arr**	**39.52**	**63**	P	**P**	**15 24 49.6**	**-0.7**
	comp=E,0.4nm,0.6s,baz=268,slow=8.7,SNR=1.9 comp=E,0.4nm,0.6s						
WRA	**Warramunga Arr**	**60.29**	**135**	P	**P**	**15 27 28.2**	**-0.2**
	comp=E,0.9nm,0.7s,baz=322,slow=7.5,SNR=7.7 comp=E,0.9nm,0.7s						
ASAR	**Alice Springs**	**62.77**	**138**	P	**P**	**15 27 45.0**	**-0.2**
	comp=E,0.3nm,0.4s,baz=322,slow=6.9,SNR=11 comp=E,0.3nm,0.4s						
HFS	**Hagfors**	**63.03**	**326**	P	**P**	**15 27 46.8**	**+0.4**
	comp=E,2.6nm,1.1s,baz=70,slow=12,SNR=1.7 comp=E,2.6nm,1.1s						
GERES	**GERESS Array B**	**64.55**	**314**	P	**P**	**15 27 57.6**	**+0.8**
	comp=E,0.3nm,0.6s,baz=66,slow=8.0,SNR=2.2 comp=E,0.3nm,0.6s						
TXAR	**Lajitas Array**	**122.89**	**18**	PKP	**PKiKP**	**15 36 16.4**	**-0.3**
	comp=E,0.2nm,0.8s,baz=297,slow=7.6,SNR=2.0						

IDC ***24*** *15:40:19.8±5.5,5°.66N×91°.81E, h0km, mb3.3/2, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=108.7km s-min=54.0km az=84.0*

NEIC ***24*** *15:40:22.2±0.8,5°.68N±0°.09×91°.82E±0°.08, h10km±1km, mb4.5/12, Error ellipse: s-maj=16.4km s-min=11.3km az=325.0*

ISC 24 15:40:25.4±0.9,5°.7N±0°.1×91°.9E±0°.1,h35km,n23,σ0s94/23,mb4.2/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**5.04**	**95**	Pn	**Pn**	**15 41 38.8**	**+0.3**
PBA	**Port Blair**	**6.03**	**8**	Pn	**Pn**	**15 41 55.2**	**+3.1**
PSI	**Prapat**	**7.56**	**112**	Pn	**Pn**	**15 42 13.3**	**+0.1**
	2.5nm,0.3s,baz=348,slow=18,SNR=4.9 7.7nm,0.3s						
RPSI	**Rantau Prapat**	**7.60**	**112**		**Pn**	**15 42 13.3**	**-0.3**
RPSI	**Rantau Prapat**	**7.60**	**112**	Pn	**Pn**	**15 42 13.6**	**0.0**
IPM	**Ipoh**	**9.17**	**97**	Pn	**Pn**	**15 42 35.8**	**+0.6**
BKNI	**Bangkinang**	**10.55**	**120**	Pn	**Pn**	**15 42 55.0**	**+0.8**
CM31	**Chiang Mai Arr**	**14.47**	**28**	Pn	**Pn**	**15 43 46.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**14.47**	**28**	Pn	**Pn**	**15 43 46.3**	**-1.5**
	0.2nm,0.3s,baz=213,slow=17,SNR=1.3						
HYBB	**Hyderabad (bro**	**17.53**	**313**	*e*P	**Pn**	**15 44 26.7**	**-0.5**
SMRI	**Semarang**	**22.39**	**124**	P	**P**	**15 45 20.1**	**-1.0**
BKB	**Balikpapan**	**25.89**	**105**	P	**P**	**15 45 53.7**	**-0.6**
INCN	**Inchon**	**44.78**	**40**	P	**P**	**15 48 35.8**	**0.0**
WB0	**Warramunga Arr**	**48.84**	**122**	P	**P**	**15 49 07.9**	**+0.1**
WB0				IAmb	IAmb	15 50 50.5	
	comp=E,9.4nm,1.4s						
WRA	**Warramunga Arr**	**48.87**	**123**	P	**P**	**15 49 08.3**	**+0.2**
	comp=E,0.2nm,0.3s,baz=298,slow=8.2,SNR=5.6 comp=E,0.2nm,0.3s						
WRA	**Warramunga Arr**	**48.87**	**123**	P	**P**	**15 49 08.0**	**-0.1**
WR8	**Warramunga Arr**	**49.01**	**122**	P	**P**	**15 49 09.6**	**+0.5**
WR8				IAmb	IAmb	15 49 13.9	
	comp=E,25nm,1.9s						
AS31	**Alice Springs**	**50.28**	**127**	P	**P**	**15 49 18.6**	**-0.2**
AS31				IAmb	IAmb	15 49 52.4	
	comp=E,1.3nm,1.2s						
ASAR	**Alice Springs**	**50.28**	**127**	P	**P**	**15 49 18.9**	**+0.1**
	comp=E,0.3nm,1.0s,baz=303,slow=8.0,SNR=1.7 comp=E,0.3nm,1.0s						
MGBR	**Mount Gambier**	**62.52**	**138**	P	**P**	**15 50 46.6**	**+0.9**
ARMA	**Armidale**	**67.41**	**126**	P	**P**	**15 51 17.9**	**0.0**
PSZ	**Piszkesteto**	**73.79**	**318**	P	**P**	**15 51 56.2**	**-0.2**
PSZ				IAmb	IAmb	15 52 19.4	
	comp=E,22nm,2.0s						
NBO00	**NORSAR Array S**	**80.78**	**331**	P	**P**	**15 52 35.1**	**-0.1**

IDC ***24*** *15:42:24.4±1.5,32°.85N×92°.62E, h0km, mb3.5/6, mbtmp3.5/10, ML3.6/4, MS4.4/1, Error ellipse: s-maj=33.5km s-min=27.7km az=37.0*

NEIC ***24*** *15:42:27.5±1.5,33°.0N±0°.1×92°.7E±0°.1, h10km±1km, mb4.3/14, Error ellipse: s-maj=21.4km s-min=11.8km az=142.0*

ISC 24 15:42:30.2±0.6,32°.98N±0°.08×92°.65E±0°.08,h35km,n36,σ1°36/32,mb3.8/9,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.51**	**202**	Pn	**Pn**	**15 43 23.5**	**+0.8**
EVN	**Everest**	**7.10**	**227**		**Pn**	**15 44 11.9**	**-0.3**
LZDM	**Lanzhou Array**	**9.59**	**69**	Pn	**Pn**	**15 44 46.2**	**+0.2**
	baz=194,slow=18 1.4nm,0.4s						
TARG	**Taragay, Kyrgy**	**14.67**	**311**	P	**P**	**15 46 00.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**15.53**	**157**	Pn	**Pn**	**15 46 04.7**	**-1.8**
	0.1nm,0.3s,baz=344,slow=8.0,SNR=8.0						
CMAR				LR	LR	15 52 52.0	
	comp=E,25nm,21.6s,baz=15,slow=41 0.2nm,0.3s						
MKAR	**Makanchi Array**	**15.90**	**333**	Pn	**Pn**	**15 46 08.8**	**-2.4**
	0.1nm,0.3s,baz=137,slow=14,SNR=5.1 0.9nm,1.0s						
MKAR	**Makanchi Array**	**15.90**	**333**		**Pn**	**15 46 08.2**	**-3.0**
AAK	**Ala-Archa**	**17.26**	**309**	LR	LR	15 54 16.3	
	comp=E,34nm,19.9s,baz=153,slow=41						
SONM	**Songino Array**	**18.11**	**31**	P	**P**	**15 46 40.7**	**+1.5**
	0.1nm,0.3s,baz=216,slow=13,SNR=11 1.7nm,0.8s						
KBL	**Kabul**	**19.69**	**281**	P	**P**	**15 46 57.1**	**+0.5**
KK31	**Karatay Array**	**20.10**	**307**	P	**P**	**15 47 01.6**	**+0.7**
KKAR	**Karatay Array**	**20.10**	**307**	P	**P**	**15 47 01.8**	**+1.0**
KURBB	**Kurchatov Arra**	**20.47**	**334**	P	**P**	**15 47 05.0**	**+0.3**
	0.7nm,0.7s,baz=144,slow=10.0,SNR=5.5 0.7nm,0.7s						
KURK	**Kurchatov**	**20.51**	**334**	P	**P**	**15 47 05.0**	**-0.2**
KURK	**Kurchatov**	**20.51**	**334**	IAmb	IAmb	15 47 07.4	
	comp=Z,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**21.69**	**347**	P	**P**	**15 47 18.2**	**+0.4**
	comp=E,1.4nm,0.7s,baz=163,slow=12,SNR=4.9 comp=E,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**21.69**	**347**	P	**P**	**15 47 17.5**	**-0.3**
BVAR	**Borovoye Array**	**25.63**	**328**	P	**P**	**15 47 56.9**	**+0.6**
	comp=E,1.5nm,0.7s,baz=139,slow=11,SNR=9.8 comp=E,1.5nm,0.7s						
AB31	**Akbulak array**	**29.23**	**314**	P	**P**	**15 48 29.1**	**+0.5**
AB31				IAmb	IAmb	15 48 29.3	
	comp=Z,3.5nm,1.3s						
ABKAR	**Akbulak array**	**29.23**	**314**	P	**P**	**15 48 28.7**	**+0.2**
GNI	**Garni**	**38.76**	**295**	P	**P**	**15 49 51.9**	**+0.5**
GNI				IAmb	IAmb	15 49 54.0	
	comp=Z,7.8nm,0.9s						
JCJ	**Chichijima**	**42.96**	**84**	P	**P**	**15 50 24.4**	**-1.6**
FINES	**FINESS Array B**	**50.53**	**325**	P	**P**	**15 51 24.6**	**-0.1**
	comp=E,0.6nm,0.6s,baz=45,slow=3.2,SNR=3.9 comp=E,0.6nm,0.6s						
FINES	**FINESS Array B**	**50.53**	**325**	P	**P**	**15 51 24.9**	**+0.2**
NOA	**NORSAR Array B**	**57.71**	**325**	P	**P**	**15 52 17.0**	**-0.2**
	comp=E,0.6nm,0.9s,baz=80,slow=6.6,SNR=1.7 comp=E,0.6nm,0.9s						
NC204	**NORSAR Array S**	**57.88**	**326**	P	**P**	**15 52 18.9**	**+0.6**
ABPO	**Ambohimpanom**	**67.50**	**227**	P	**P**	**15 53 23.8**	**+0.7**
M19K	**Big River Lodg**	**71.22**	**27**	P	**P**	**15 53 45.6**	**+0.2**
M19K				IAmb	IAmb	15 54 28.0	
	comp=Z,9.5nm,1.3s						
ILAR	**Eielson Array**	**72.13**	**23**	P	**P**	**15 53 49.4**	**-1.4**
	comp=E,0.5nm,0.8s,baz=299,slow=6.7,SNR=5.4 comp=E,0.5nm,0.8s						
L27K	**Beaver Creek,**	**74.94**	**23**	P	**P**	**15 54 10.8**	**+3.4**
L27K				IAmb	IAmb	15 54 53.6	
	comp=Z,7.5nm,1.4s						
BCAR	**Beaver Creek A**	**74.95**	**23**	P	**P**	**15 54 10.8**	**+3.4**
MTE	**Manteigas**	**76.34**	**309**	P	**P**	**15 54 15.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**83.76**	**282**	P	**P**	**15 54 56.0**	**-0.2**
	comp=E,0.8nm,0.7s,baz=38,slow=6.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**83.76**	**282**	IAmb	IAmb	15 55 04.8	
	comp=Z,15nm,0.9s						
ULM	**Lac du Bonnet**	**96.79**	**6**	LR	LR	16 42 57.5	
	comp=Z,162nm,19.9s,baz=276,slow=38						
TXAR	**Lajitas Array**	**116.12**	**16**	PKP	**PKPdf**	**16 01 10.5**	**+0.4**
	comp=E,0.3nm,0.7s,baz=316,slow=1.7,SNR=4.1						

NEIC ***24*** *15:43:53.0±2.1,38°.72N±0°.10×28°.98W±0°.10, h10km±1km, mb4.9/25, Error ellipse: s-maj=19.0km s-min=9.0km az=212.0*

IDC ***24*** *15:43:54.5±1.2,39°.51N×29°.30W, h0km, mb3.7/5, mbtmp3.6/6, ML3.8/1, MS3.6/13, Error ellipse: s-maj=53.7km s-min=25.0km az=153.0*

ISC 24 15:43:55.1±0.6,38.7N±0°.1×28.99W±0°.07,h27km,n54,σ1°06/36,mb4.8/12,MS3.5/12,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMLA	**Cha da Macela**	**2.87**	**107**		**Pn**	**15 44 37.3**	**-1.8**
PMOZ	**Porto Moniz, M**	**11.21**	**118**	Pn	**Pn**	**15 46 31.3**	**-2.3**
MACI	**Morro de la Ar**	**14.69**	**131**	Pn	**Pn**	**15 47 22.6**	**+1.4**
PFVI	**Vila Bisbo**	**15.99**	**89**	Pn	**Pn**	**15 47 37.9**	**-0.2**
PFVI				IAmb	IAmb	15 47 38.0	
	comp=Z,211nm,1.7s						
PAB	**San Pablo**	**19.14**	**80**	P	**P**	**15 48 16.0**	**-0.2**
ESDC	**Sonseca Array**	**19.42**	**79**	P	**Pn**	**15 48 22.9**	**+2.4**
	comp=E,0.1nm,0.3s,baz=278,slow=11,SNR=2.3						
ESDC				LR	LR	15 54 35.3	
	comp=E,97nm,20.2s,baz=298,slow=33 comp=Z,0.7nm,1.0s						
ESDC	**Sonseca Array**	**19.42**	**79**	P	**P**	**15 48 18.7**	**-0.6**
MD01	**Midelt array s**	**20.47**	**99**	P	**P**	**15 48 31.5**	**+0.7**
CART	**Cartagena**	**22.02**	**84**	P	**P**	**15 48 46.6**	**-0.7**
CART				IAmb	IAmb	15 49 06.6	
	comp=Z,79nm,1.3s						
CORI	**Orista**	**23.84**	**72**	P	**P**	**15 49 05.5**	**-0.3**
GBN	**Guysborough**	**24.96**	**296**	P	**P**	**15 49 15.6**	**-0.6**
GBN				IAmb	IAmb	15 49 17.3	
	comp=Z,44nm,1.3s						

IVI	Ivigtut	25.53	338	P		P	15 49 19.2	-1.9
SSB	Saint Sauveur	25.67	64	P		P	15 49 20.8	-1.8
BORG	Borgarnes	26.52	7	LR		LR	15 57 13.3	
	comp=Z,98nm,21.4s,baz=20,slow=31							
F64A	Sherman	29.77	297	P		P	15 49 59.5	+0.3
I63A	Otisfield	31.43	293	P		P	15 50 14.7	+0.8
CLL	Collm	31.84	53	*e*P		P	15 50 17.0	-0.4
PRED	Cave del Predi	31.99	62	P		P	15 50 19.1	+0.2
GERES	GERESS Array B	32.09	57	LR		LR	16 00 51.9	
	comp=Z,28nm,20.1s,baz=274,slow=32							
NOA	NORSAR Array B	33.44	35	LR		LR	16 02 40.4	
	comp=Z,52nm,16.9s,baz=255,slow=34							
VAE	Valguarnera	33.96	78	LR		LR	16 03 49.8	
	comp=Z,179nm,18.7s,baz=319,slow=35							
HFS	Hagfors	34.25	37	LR		LR	16 03 53.0	
	comp=Z,59nm,18.2s,baz=266,slow=36							
M52A	Chesterland	39.66	291	P		P	15 51 25.0	+0.4
M52A				IAmb		IAmb	15 51 49.0	
	comp=Z,33nm,0.9s							
FINES	FINESS Array B	40.45	37	LR		LR	16 07 17.4	
	comp=Z,64nm,18.3s,baz=262,slow=35							
AKASG	Malin Array Be	42.07	54	LR		LR	16 06 48.3	
	comp=Z,34nm,21.8s,baz=22,slow=33							
ARCES	ARCESS Array B	42.08	25	LR		LR	16 06 04.2	
	comp=Z,52nm,21.3s,baz=326,slow=32							
ARCES	ARCESS Array B	42.08	25	P		P	15 51 44.9	+0.7
ARCES				IAmb		IAmb	15 52 27.3	
	comp=Z,33nm,1.8s							
BAUV	El Baul	45.83	240	P		P	15 52 15.5	+0.6
OBN	Obninsk	45.95	47	LR		LR	16 10 57.4	
	comp=Z,75nm,19.6s,baz=178,slow=36							
H10N2	ASCENSION HYDR	48.17	161	T		T	16 43 30.2	
	baz=345,slow=75,SNR=115							
H10N3	ASCENSION HYDR	48.18	161	T		T	16 43 33.5	
	baz=345,slow=75,SNR=104							
H10N1	ASCENSION HYDR	48.19	161	T		T	16 43 32.7	
	baz=345,slow=75,SNR=110							
H10S3	ASCENSION HYDR	49.21	161	T		T	16 44 47.4	
	baz=345,slow=74,SNR=19							
H10S2	ASCENSION HYDR	49.22	161	T		T	16 44 49.2	
	baz=235,slow=74,SNR=23							
BELG	Belogornoye	52.94	48	LR		LR	16 14 36.2	
	comp=Z,493nm,19.9s,baz=102,slow=35							
JTS	Las Juntas de	57.20	256	P		P	15 53 39.9	-0.1
JTS				IAmb		IAmb	15 55 46.1	
	comp=Z,19nm,1.4s							
PDAR	Pinedale Array	58.98	302	P		P	15 53 51.5	-0.9
AKTO	Aktyubinsk	59.71	48	LR		LR	16 20 05.0	
	comp=Z,45nm,18.1s,baz=66,slow=37							
BSUT	Blindstream Ca	60.78	300	P		P	15 54 05.1	+0.1
BSUT				IAmb		IAmb	15 54 41.6	
	comp=Z,20nm,2.0s							
TXAR	Lajitas Array	61.06	286	P		P	15 54 06.9	+0.2
	comp=Z,0.7nm,0.8s,baz=90,slow=8.8,SNR=7.6 comp=Z,0.7nm,0.8s							
TXAR	Lajitas Array	61.06	286	P		P	15 54 06.1	-0.6
K27K	Chicken	64.95	333	P		P	15 54 32.4	+0.5
J25K	Salcha River,	65.71	335	P		P	15 54 36.9	0.0
LPAZ	La Paz	65.81	222	P		P	15 54 45.7	+7.0
	comp=Z,1.2nm,0.7s,baz=37,slow=6.6,SNR=4.6 comp=Z,1.2nm,0.7s							
MCARA	McCarthy VSAT	66.94	331	P		P	15 54 44.0	-0.7
BWN	Browne	67.34	336	P		P	15 54 45.6	-1.6
KURK	Kurchatov	70.76	40	P		P	15 55 09.6	+0.9
KURBB	Kurchatov Arra	70.77	40	P		P	15 55 09.6	+0.9
	comp=E,0.5nm,0.8s,baz=309,slow=6.3,SNR=4.5 comp=Z,0.5nm,0.8s							
K17K	Iditarod	71.12	338	P		P	15 55 11.6	+1.0
ZALV	Zalesovo Beam	71.64	35	P		P	15 55 15.6	+1.7
	comp=Z,0.2nm,0.3s,baz=300,slow=3.2,SNR=2.0 comp=Z,0.2nm,0.3s							
MKAR	Makanchi Array	75.12	41	P		P	15 55 34.5	-0.2
	comp=Z,1.4nm,1.1s,baz=297,slow=6.3,SNR=2.1 comp=Z,1.4nm,1.1s							
MKAR	Makanchi Array	75.12	41	P		P	15 55 33.9	-0.8
MT02	Curacav	81.56	215	P		P	15 56 09.8	-0.3
MT02				IAmb		IAmb	15 56 28.9	
	comp=Z,21nm,1.9s							
RPN	Rapa Nui	99.50	243	LR		LR	16 37 25.7	
	comp=Z,53nm,20.8s,baz=47,slow=32							

BJI ***24*** *15:47:14.0,6°.05S×154°.83E, h44km, mB5.0/10, mb4.9/45*

NEIC ***24*** *15:47:15.8±1.5,6°.22S±0°.07×154°.81E±0°.05, h45km±4km, mb5.0/182, Error ellipse: s-maj=10.4km s-min=6.6km az=172.0*

GCMT ***24*** *15:47:16.8±0.3,6°.53S±0°.02×154°.65E±0°.02, h48km±1km, MW5.0/54, Moment Tensor Solution. s50,c62; s54,c71; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.67±.18; $M_{\theta\theta}$-1.38±.12; $M_{\phi\phi}$-2.29±.12; $M_{r\theta}$-0.05±.12; $M_{r\phi}$2.32±.09; $M_{\theta\phi}$-0.01±.09; Best double couple: M_o3.93500×$

ONTNC Ouen Toro 19.55 146 P **P** 15 51 38.1 -1.4
ONTNC IAmb IAmb 15 51 43.9
comp=Z,57nm,0.9s

MARNC Mare, Loyalty 19.85 141 **P** 15 51 43.4 +0.6
OUENC Ouen Island, N 19.86 145 P **Pn** 15 51 46.9 +2.1
QIS Mount Isa 20.47 225 P **P** 15 51 50.5 +1.0
comp=Z,24nm,0.8s
QIS Mount Isa 20.47 225 P Pn 15 51 51.5 -0.5
GUMO Guam 22.02 334 LR LR 16 00 00.8
comp=Z,122nm,21.1s,baz=149,slow=34
QLP Quilpie 22.59 205 P **P** 15 52 12.5 +0.4
comp=Z,57nm,0.9s
FAKI Fak Fak 22.69 277 **P** 15 52 13.5 +0.1
FAKI IAmb IAmb 15 52 16.1
comp=Z,39nm,0.9s
FAKI Fak Fak 22.69 277 P **P** 15 52 14.4 +1.0
KDU Kakadu 22.90 252 P **P** 15 52 15.8 +0.3
comp=Z,11nm,1.3s
WB0 Warramunga Arr 23.94 234 P **P** 15 52 25.8 +0.4
WR8 Warramunga Arr 23.95 233 P **P** 15 52 26.1 +0.5
WR8 IAmb IAmb 15 52 54.5
comp=Z,39nm,1.1s
WRAB Tennant Creek 24.06 234 P **P** 15 52 27.1 +0.5
SWI Sorong 24.06 282 P **P** 15 52 26.4 -0.2
comp=Z,964nmcomp=Z,34nm,1.2s
WRA Warramunga Arr 24.07 234 P **P** 15 52 27.3 +0.6
comp=Z,18nm,1.0s,baz=57,slow=9.4,SNR=39
WRA PcP **PcP** 15 56 07.3 0.0
comp=Z,5.4nm,0.8s,baz=57,slow=2.1,SNR=10
WRA S **S** 15 56 38.3 -2.6
comp=Z,4.6nm,1.1s,baz=54,slow=16,SNR=5.9
WRA LR LR 16 01 40.4
comp=Z,469nm,20.9s,baz=74,slow=36
comp=Z,18nm,1.0s
WRA Warramunga Arr 24.07 234 P **P** 15 52 25.7 -1.0
WRA **PcP** 15 56 07.4 0.0
MTN Manton Dam 24.20 253 P **P** 15 52 28.2 +0.3
comp=Z,26nm,1.1s
MTN Manton Dam 24.20 253 **P** 15 52 28.1 +0.2
ARMA Armidale 24.23 187 P **P** 15 52 28.0 -0.1
comp=Z,16nm,1.7s
ARMA Armidale 24.23 187 P **P** 15 52 28.1 -0.1
BNDI Bandanaira 24.81 273 P **P** 15 52 33.7 +0.2
comp=Z,58nm,1.1s
INKA Innaminka 25.19 210 P **P** 15 52 36.3 -0.4
MSVF Nonsavu 25.44 119 P **P** 15 52 38.6 -0.7
MSVF Nonsavu 25.44 119 P **P** 15 52 40.9 +1.7
AS31 Alice Springs 26.51 227 P **P** 15 52 48.5 -0.3
ASAR Alice Springs 26.51 227 P **P** 15 52 48.6 -0.2
comp=Z,2.1nm,0.3s,baz=56,slow=9.3,SNR=128
ASAR PcP **PcP** 15 56 12.9 +0.1
comp=Z,5.8nm,0.8s,baz=60,slow=2.7,SNR=15
ASAR LR LR 16 02 53.5
comp=Z,433nm,20.6s,baz=115,slow=35
comp=Z,2.1nm,0.3s
ASAR Alice Springs 26.51 227 **PcP** 15 56 12.6 -0.3
CMSA Cobar Meteorol 26.56 198 P **P** 15 52 48.8 -0.3
comp=Z,11nm,0.9s
CMSA Cobar Meteorol 26.56 198 P **P** 15 52 50.5 +1.4
KNRA Kununurra 27.17 248 P **P** 15 52 54.9 +0.2
H11S3 WAKE ISLAND Hy 27.25 25 T T 16 21 35.2
baz=205
H11S2 WAKE ISLAND Hy 27.25 25 T T 16 21 32.6
baz=205,slow=74
H11S1 WAKE ISLAND Hy 27.26 25 T T 16 21 39.7
baz=205,slow=74
WAKE Wake Island 27.93 25 P **P** 15 53 02.1 +0.6
STKA Stephens Creek 28.32 204 P **P** 15 53 03.9 -1.1
comp=Z,2.0nm,0.6s,baz=342,slow=12,SNR=4.9
STKA PcP **PcP** 15 56 16.1 -0.9
comp=Z,5.0nm,0.8s,baz=30,slow=3.9,SNR=5.2
STKA LR LR 16 04 11.8
comp=Z,425nm,20.8s,baz=18,slow=36
comp=Z,2.0nm,0.6s
STKA Stephens Creek 28.32 204 P **P** 15 53 06.0 +1.1
H11N1 WAKE ISLAND Hy 28.42 25 T T 16 22 51.5
baz=205,slow=76,SNR=3.4
H11N3 WAKE ISLAND Hy 28.43 25 T T 16 22 43.7
baz=205,slow=76,SNR=5.4
H11N2 WAKE ISLAND Hy 28.44 25 T T 16 23 04.6
baz=205,slow=76,SNR=4.9
SANI Sanana 29.00 277 P **P** 15 53 10.9 -0.3
comp=Z,381nmcomp=Z,33nm,1.0s
SOEI Soe 30.40 261 P **P** 15 53 22.3 -1.4
SOEI IAmb IAmb 15 53 56.9
comp=Z,49nm,1.1s
SOEI Soe 30.40 261 P **P** 15 53 22.1 -1.6
FITZ Fitzroy Crossi 30.76 245 P **P** 15 53 25.9 -0.8
FITZ Fitzroy Crossi 30.76 245 LR LR 16 06 13.7
comp=Z,441nm,20.5s,baz=70,slow=37
FITZ Fitzroy Crossi 30.76 245 P **P** 15 53 26.4 -0.3
HTT Hallett 30.80 206 P **P** 15 53 29.0 +2.1
BATI Baumata 31.03 261 LR LR 16 07 28.6
comp=Z,338nm,21.3s,baz=120,slow=39
KMSI Cibinong 31.47 281 P **P** 15 53 33.2 +0.2
WRKA Warakurna 31.49 231 P **P** 15 53 32.5 -0.6
comp=Z,6.6nm,1.2s
BBOO Buckleboo 31.66 211 P **P** 15 53 33.8 -0.6
BBOO IAmb IAmb 15 54 38.8
comp=Z,48nm,1.6s
BBOO Buckleboo 31.66 211 P **P** 15 53 35.3 +0.9
DAV Davao City (W) 31.99 294 LR LR 16 04 33.7
comp=Z,99nm,22.0s,baz=100,slow=32
LUWI Luwuk 32.34 278 P **P** 15 53 40.1 -0.5
MMRI Maumere 32.34 264 P **P** 15 53 40.4 -0.2
MMRI Maumere 32.34 264 P **P** 15 53 40.1 -0.6
EDFI Ende, Flores 32.88 264 P **P** 15 53 44.2 -1.3
comp=Z,548nmcomp=Z,51nm,1.0s
MRSI Marisa 33.44 280 P **P** 15 53 49.8 -0.5
comp=Z,358nmcomp=Z,19nm,1.2s
APSI Ampana 33.47 278 P **P** 15 53 49.3 -1.2
comp=Z,580nmcomp=Z,50nm,1.2s
BSSI Bau Bau, Buton 34.08 268 P **P** 15 53 56.4 +0.6
comp=Z,14nm,0.7s
TOLI2 Tolitoli 34.71 281 P **P** 15 54 00.9 -0.3
TOLI2 IAmb IAmb 15 54 01.8
comp=Z,12nm,0.8s
TOLI2 Tolitoli 34.71 281 P **P** 15 54 00.9 -0.3
KAPI Kappang 34.87 270 P **P** 15 54 03.1 +0.4
comp=Z,6.8nm,1.0s,baz=100,slow=4.0,SNR=3.7
KAPI LR LR 16 11 02.5
comp=Z,29nm,19.8s,baz=84,slow=41
comp=Z,6.8nm,1.0s
PCI Palu 35.25 277 P **P** 15 54 06.7 +0.7
JCJ Chichijima 35.31 340 LR LR 16 06 20.6
comp=Z,53nm,21.1s,baz=152,slow=32
MPSI Mapaga 35.41 279 P **P** 15 54 06.8 -0.6
comp=Z,421nmcomp=Z,36nm,0.9s
CORO Coronation Par 35.72 190 P **P** 15 54 10.3 +0.8
TOZ Tahuroa Road 36.58 152 P **P** 15 54 17.5 +0.5
TOZ IAmb IAmb 15 54 21.9
comp=Z,22nm,0.9s
PLAI Plampang 36.75 264 P **P** 15 54 17.4 -1.4
PLAI Plampang 36.75 264 P **P** 15 54 15.6 -3.2
comp=Z,57nm,0.8s
MBWA Marble Bar 37.01 243 P **P** 15 54 20.6 -0.3
MBWA IAmb IAmb 15 55 36.6
comp=Z,50nm,1.6s
MBWA Marble Bar 37.01 243 P **P** 15 54 22.2 +1.3
PSA00 Pilbara Seismi 37.04 242 P **P** 15 54 20.6 -0.6
TAU Tasmania Unive 37.11 189 P **P** 15 54 22.6 +1.2
URZ Urewera 37.77 151 LR LR 16 09 21.9
comp=Z,125nm,19.2s,baz=320,slow=35
QRZ Quartz Range 37.92 158 P **P** 15 54 29.1 +0.7
THZ Tophouse 38.88 158 P **P** 15 54 36.7 +0.3
SNZO South Karori 39.19 156 P **P** 15 54 41.6 +2.7
BHW Baring Head 39.34 156 P **P** 15 54 40.2 0.0
KHZ Kahutara 39.68 158 P **P** 15 54 44.5 +1.5
MEEK Meekatharra 39.95 235 P **P** 15 54 45.8 +0.2
RPZ Rata Peaks 39.98 162 LR LR 16 08 17.5
comp=Z,271nm,21.9s,baz=317,slow=32
RPZ Rata Peaks 39.98 162 P **P** 15 54 45.8 +0.3
RPZ Rata Peaks 39.98 162 P **P** 15 54 46.2 +0.7
JAGI Jajag, Banyuwa 40.33 264 P **P** 15 54 47.5 -1.3
JAGI IAmb IAmb 15 54 48.0
comp=Z,39nm,1.0s
JAGI Jajag, Banyuwa 40.33 264 P **P** 15 54 46.4 -2.5
comp=Z,40nm,1.1s
JOW Kunigami 41.71 323 LR LR 16 09 13.1
comp=Z,70nm,19.8s,baz=106,slow=32
KLBR Kellerberrin 42.80 229 P **P** 15 55 08.0 -0.9
comp=Z,42nm,0.9s
KLBR Kellerberrin 42.80 229 P **P** 15 55 08.4 -0.5
MORW Morawa 43.02 233 P **P** 15 55 09.8 -0.8
MORW Morawa 43.02 233 P **P** 15 55 12.1 +1.4

BLDU Ballidu 43.15 231 P **P** 15 55 10.8 -0.9
NWAO Narrogin (SRO) 43.83 228 LR LR 16 13 24.4
comp=Z,285nm,21.1s,baz=84,slow=36
UGM Wanagama 43.93 265 P **P** 15 55 18.3 +0.1
YULB Yu-li 44.01 313 P **P** 15 55 19.4 +0.7
YULB IAmb IAmb 15 55 20.9
comp=Z,19nm,0.9s
YULB Yu-li 44.01 313 P **P** 15 55 17.8 -0.8
NACB Ninganchiao 44.27 314 P **P** 15 55 20.9 +0.1
TPUB Ta-pu 44.44 313 P **P** 15 55 22.1 -0.1
TPUB Ta-pu 44.44 313 P **P** 15 55 22.5 +0.4
SSLB Suanglung 44.50 313 P **P** 15 55 22.7 +0.1
CTZ Chatham Island 45.01 151 P **P** 15 55 26.3 0.0
JNU Nakatsue 45.25 331 P **P** 15 55 28.2 -0.2
JNU IAmb IAmb 15 55 32.1
comp=Z,20nm,0.8s
JNU Nakatsue 45.25 331 P **P** 15 55 27.7 -0.7
MJAR Matsushiro Arr 45.30 341 P **P** 15 55 27.5 -1.3
comp=Z,1.1nm,0.6s,baz=167,slow=7.4,SNR=6.9
MJAR PcP **PcP** 15 57 06.9 -1.0
comp=Z,2.3nm,0.8s,baz=149,slow=3.7,SNR=5.5
MJAR LR LR 16 11 32.8
comp=Z,82nm,20.9s,baz=162,slow=32
comp=Z,1.1nm,0.6s
MJAR Matsushiro Arr 45.30 341 P **P** 15 55 27.5 -1.3
MAJO Matsushiro 45.30 341 P **P** 15 55 28.7 -0.1
KPJI Karang Pucung 45.52 266 P **P** 15 55 27.4 -3.4
comp=Z,20nm,0.8s
RAR Rarotonga 46.41 113 LR LR 16 11 52.0
comp=Z,113nm,18.1s,baz=258,slow=32
BBJI Bungbulang 46.78 266 P **P** 15 55 41.9 +1.0
TNG Tangerang 47.83 267 P P 15 56 05.9 +17
HKPS Hong Kong Po S 48.84 307 P **P** 15 55 56.4 -0.2
KSRS Kosrae Array 50.17 332 P **P** 15 56 06.0 -0.4
comp=Z,5.5nm,0.8s,baz=144,slow=6.5,SNR=10
comp=Z,5.5nm,0.8s
MDSI Maura Dua 50.39 269 P **P** 15 56 06.3 -2.2
comp=Z,15nm,1.1s
NJ2 Nanjing 51.20 320 *e*P **P** 15 56 15.9 +1.6
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
JKA Kamikawa-asahi 51.31 349 P **P** 15 56 16.8 +1.9
ASAJ Asahikawa 51.32 349 P **P** 15 56 16.8 +1.8
comp=Z,7.1nm,1.0s,baz=94,slow=16,SNR=1.6
ASAJ LR LR 16 15 51.9
comp=Z,123nm,20.9s,baz=182,slow=33
comp=Z,7.1nm,1.0s
WHN Wuhan 53.25 316 P **P** 15 56 31.0 +1.5
USRK Ussuriysk Ar. 54.25 340 P **P** 15 56 35.9 -0.7
comp=Z,2.7nm,0.7s,baz=146,slow=4.8,SNR=5.7
comp=Z,2.7nm,0.7s
PDSI Padang 54.43 273 P **P** 15 56 36.1 -2.5
comp=Z,29nm,0.8s
PPI Padang Panjang 54.55 274 P **P** 15 56 37.8 -1.6
IPM Ipoh 54.71 280 P **P** 15 56 40.2 -0.3
IPM IAmb IAmb 15 56 41.4
comp=Z,11nm,0.7s
HUH Hualalai 55.00 61 P **P** 15 56 42.6 -0.3
KULM Kulim 55.23 281 P **P** 15 56 43.6 -0.7
PPT Papeete 55.43 107 LR LR 16 17 35.9
comp=Z,50nm,18.2s,baz=266,slow=33
PPT2 Papeete2 55.43 107 *e*S **S** 16 04 21.8 -5.6
comp=Z,56nm,25.5s
PPT2 *e*SS **SS** 16 08 12.0 -0.8
comp=Z,63nm,31.5s
PPT2 *e*LR LR 16 12 48.7
comp=Z,150nm,34.0s
PPT2 *e*LR LR 16 12 55.3
comp=Z,135nm,26.5s
TBI Tubuai 56.18 114 *e*LR LR 16 13 16.6
comp=Z,2µm,29.0s
ENH Enshi 56.57 313 P **P** 15 56 53.5 -0.1
ENH pP **pP** 15 57 06.4 -1.0
BNX BinXian 57.23 337 ⇑P **P** 15 56 58.3 +0.3
BNX pmax pmax
comp=Z,15nm,0.9s
HNS HongShan 57.27 322 ⇓P **P** 15 56 58.8 +0.4
HNS pmax pmax
comp=Z,15nm,1.0s
GSI Gunungsitoli 57.59 276 P **P** 15 56 58.8 -2.3
comp=Z,28nm,0.9s
XAN Xi'an 59.01 316 P **P** 15 57 10.4 -0.3
XAN pP pP 15 57 24.0 -0.5
XAN pmax pmax
comp=Z,13nm,0.9s
XAN Xi'an 59.01 316 P **P** 15 57 10.0 -0.7
XAN sP **sP** 15 57 28.2 -2.0
PET Petropavlovsk 59.13 3 P **P** 15 57 11.7 +0.6
PETK Petropavlovsk- 59.18 2 P **P** 15 57 11.8 +0.3
comp=Z,20nm,0.7s,baz=166,slow=6.3,SNR=16
PETK LR LR 16 18 59.4
comp=Z,114nm,21.8s,baz=162,slow=32
comp=Z,20nm,0.7s
KMI Kunming 59.41 304 ⇑P **P** 15 57 15.3 +1.4
KMI pmax pmax
comp=Z,26nm,1.1s
CMAR Chiang Mai Arr 60.26 295 P **P** 15 57 20.9 +1.3
comp=Z,25nm,0.8s,baz=113,slow=5.0,SNR=162
CMAR LR LR 16 21 50.0
comp=Z,47nm,21.5s,baz=110,slow=34
comp=Z,25nm,0.8s
CMAR Chiang Mai Arr 60.26 295 P **P** 15 57 19.8 +0.2
CHTO Chiang Mai 60.38 296 P **P** 15 57 20.4 0.0
CHTO Chiang Mai 60.38 296 P **P** 15 57 21.1 +0.8
PZH PanZhiHua 60.80 305 P **P** 15 57 26.9 +3.6
XLT XiLinHaoTe 60.90 329 *e*P **P** 15 57 22.9 -0.7
XLT pmax pmax
comp=Z,38nm,0.7s
XLT pmax pmax
comp=Z,220nm,4.0s
HEH HeiHe 61.05 340 *e*P **P** 15 57 23.9 -0.4
HEH pmax pmax
comp=Z,7.0nm,1.0s
HHC Hu-ho-hao-te 61.36 324 *e*P **P** 15 57 29.5 +2.8
HHC pmax pmax
comp=Z,19nm,0.5s
HHC pmax pmax
comp=Z,61nm,4.3s
BTO Baotou 62.13 323 *e*P **P** 15 57 35.8 +3.9
BTO S **S** 16 05 59.8 +6.1
BTO pmax pmax
comp=Z,14nm,0.6s
BTO pmax pmax
comp=Z,240nm,3.8s
KIWB Kanaga Island 62.66 19 P **P** 15 57 36.1 +1.0
ADK Adak 62.84 19 P **P** 15 57 37.1 +0.9
ADK Adak 62.84 19 P **P** 15 57 36.8 +0.6
HIA Hailar 63.15 335 P **P** 15 57 38.2 -0.3
HIA pP **pP** 15 57 51.3 -1.1
HILR Hailar Array B 63.37 335 P **P** 15 57 40.1 +0.2
comp=Z,5.9nm,0.7s,baz=139,slow=9.8,SNR=7.3
comp=Z,5.9nm,0.7s
LZH Lanzhou 63.62 315 *e*P **P** 15 57 43.4 +1.4
LZH pP pP 15 57 58.0 +2.0
LZH pmax pmax
comp=Z,23nm,1.0s
LZDM Lanzhou Array 63.66 315 P **P** 15 57 42.8 +0.3
comp=Z,5.4nm,0.6s,baz=150,slow=6.3,SNR=6.9
comp=Z,5.4nm,0.6s
ATKA Atka Island 63.95 21 P **P** 15 57 44.1 +0.5
TAOE Nuku Hiva Isla 64.50 97 *e*LR LR 16 16 58.9
comp=Z,160nm,26.0s
MA2 Magadan 65.69 358 LR LR 16 23 54.9
comp=Z,42nm,21.8s,baz=135,slow=33
NIKH Nikolski High 66.54 23 P **P** 15 58 00.7 +0.4
baz=220
GTA Gaotai 68.04 317 *e*P **P** 15 58 11.3 +0.9
GTA pP pP 15 58 24.8 +0.4
GTA pmax pmax
comp=Z,11nm,1.3s
BRDH Bariadhala 68.06 297 LR LR 16 27 16.4
comp=Z,23nm,21.0s,baz=234,slow=35
UNV Unalaska Valle 68.12 24 P **P** 15 58 11.2 +0.8
ULN Ulaanbaatar 68.25 328 P **P** 15 58 11.4 -0.1
ULN Ulaanbaatar 68.25 328 P **P** 15 58 10.7 -0.8
SONM Songino Array 68.59 327 P **P** 15 58 13.7 +0.1
comp=Z,2.9nm,0.5s,baz=142,slow=5.2,SNR=21
SONM LR LR 16 29 54.8
comp=Z,34nm,18.6s,baz=132,slow=37
comp=Z,2.9nm,0.5s
P08K Saint George I 69.11 20 P **P** 15 58 16.8 +0.3
baz=218
SPIA Saint Paul Isl 69.33 19 P **P** 15 58 17.9 +0.1
baz=217
FALS False Pass 70.10 24 P **P** 15 58 23.0 +0.4
baz=225

YAK Yakutsk 70.78 348 P **P** 15 58 26.5 0.0
comp=Z,12nm,0.7s,baz=168,slow=1.7,SNR=9.1
comp=Z,12nm,0.7s
YAK Yakutsk 70.78 348 P **P** 15 58 26.3 -0.3
YAK IAmb IAmb 15 58 27.5
comp=Z,29nm,1.2s
CCD Concordia, Ant 71.12 188 P **P** 15 58 29.2 +0.1
S12K Black Hills 71.25 24 P **P** 15 58 29.7 +0.1
baz=226
VNDA Vanda 71.33 178 P **P** 15 58 29.4 -0.4
comp=Z,2.6nm,0.8s,baz=306,slow=6.5,SNR=6.5
VNDA LR LR 16 25 07.3
comp=Z,39nm,18.5s,baz=332,slow=32
comp=Z,2.6nm,0.8s
VNDA Vanda 71.33 178 IAmb IAmb 15 58 31.7
comp=Z,6.8nm,1.2s
SDPT Sand Point 71.66 25 P **P** 15 58 32.4 +0.4
baz=227
CHNA Chernabura Isl 71.70 26 P **P** 15 58 32.3 0.0
baz=228
M11K Mekoryuk 73.15 19 P **P** 15 58 40.9 +0.1
baz=221
O14K Tigyukauivet M 74.04 22 P **P** 15 58 45.9 -0.2
baz=226
CHIR Chirikof Islan 74.07 27 P **P** 15 58 46.9 +0.6
baz=232
M13K Dall Lake 74.12 20 P **P** 15 58 46.7 +0.1
baz=224
GAMB Gambell 74.25 15 P **P** 15 58 47.7 +0.5
baz=215
R16K Pilot Point 74.34 24 P **P** 15 58 47.9 0.0
baz=230
N14K Kuskokwak Cree 74.36 21 P **P** 15 58 48.1 +0.2
baz=225
O15K Ungalikthiuk R 74.52 22 P **P** 15 58 48.9 0.0
baz=227
BILL Bilibino 74.55 4 P **P** 15 58 49.1 +0.2
BILL IAmb IAmb 15 58 53.1
comp=Z,26nm,0.8s
BILL Bilibino 74.55 4 P **P** 15 58 49.3 +0.4
K13K Kusilvak Mount 74.81 19 P **P** 15 58 50.5 0.0
baz=222
M14K Bethel 74.85 20 P **P** 15 58 50.9 +0.2
baz=225
L14K Kuka Creek 75.02 20 P **P** 15 58 51.7 0.0
baz=224
N15K Kwethluk River 75.10 22 P **P** 15 58 52.2 -0.1
baz=227
P16K Nushagak River 75.13 23 P **P** 15 58 52.6 +0.2
baz=229
SII Sitkinak Islan 75.16 26 P **P** 15 58 52.8 +0.1
baz=233
M15K Kasigluk River 75.25 21 P **P** 15 58 53.4 +0.3
baz=226
Q16K King Salmon 75.43 24 P **P** 15 58 53.9 -0.2
baz=230
O16K Kokwok River B 75.46 23 P **P** 15 58 54.1 -0.2
baz=229
Q17K Contact Creek 75.48 24 P **P** 15 58 54.0 -0.6
baz=231
R18K Karluk 75.65 26 P **P** 15 58 55.6 +0.2
baz=232
L15K Ungalak Mounta 75.67 20 P **P** 15 58 55.0 -0.4
baz=225
ACHA Angle Creek He 75.68 25 IAmb IAmb 15 58 59.5
comp=Z,11nm,0.8s
J14K Nanvaranak Lak 75.76 18 IAmb IAmb 15 58 58.5
comp=Z,25nm,0.9s
J14K Nanvaranak Lak 75.76 18 P **P** 15 58 55.8 -0.1
baz=223
N16K Nishlik Lake 75.80 22 P **P** 15 58 55.5 -0.7
baz=228
P17K Kvichak River 75.85 24 P **P** 15 58 56.1 -0.4
baz=230
OHAK Old Harbor 75.95 26 P **P** 15 58 56.5 -0.7
baz=234
O17K Koliganek Bris 75.96 23 P **P** 15 58 57.0 -0.1
baz=230
Q18K Katmai Hardscr 76.08 24 P **P** 15 58 57.6 -0.5
baz=232
K15K Wolf Creek Mou 76.09 19 IAmb IAmb 15 58 60.0
comp=Z,20nm,0.8s
K15K Wolf Creek Mou 76.09 19 P **P** 15 58 58.0 +0.2
baz=225
M16K Timber Creek 76.09 21 P **P** 15 58 58.4 +0.5
baz=228
L16K Owhat River 76.38 21 IAmb IAmb 15 59 00.8
comp=Z,16nm,0.9s
L16K Owhat River 76.38 21 P **P** 15 58 59.1 -0.4
baz=227
N17K Nushagak Hills 76.42 22 P **P** 15 59 00.1 +0.3
baz=228
P18K Big Mountain, 76.46 24 P **P** 15 58 59.9 -0.1
baz=232
ANM Nome 76.58 17 P **P** 15 59 01.6 +1.0
baz=221
KDAK Kodiak Island 76.59 26 P **P** 15 59 01.9 +1.1
baz=234
TNA Tin City 76.66 15 P **P** 15 59 01.8 +0.9
baz=218
O18K Koktuh Hills 76.75 23 P **P** 15 59 02.6 +0.9
baz=231
Q19K Cape Douglas, 76.82 25 P **P** 15 59 02.4 +0.3
baz=233
M17K Holitna River 76.90 21 P **P** 15 59 03.0 +0.5
baz=229
F14K Arctic Creek 77.01 16 P **P** 15 59 03.5 +0.5
baz=220
N18K Kilae Creek 77.01 23 IAmb IAmb 15 59 07.0
comp=Z,20nm,0.9s
N18K Kilae Creek 77.01 23 P **P** 15 59 03.4 +0.2
baz=231
L17K Donlin 77.08 21 P **P** 15 59 04.1 +0.7
baz=228
J16K Anvik River 77.09 19 P **P** 15 59 03.5 0.0
baz=226
Q20K Shuyak Island 77.15 25 P **P** 15 59 04.6 +0.7
baz=234
G15K Niukluk 77.28 17 P **P** 15 59 05.4 +0.9
baz=222
O19K Port Alsworth 77.31 23 P **P** 15 59 05.1 +0.3
baz=232
P19K Oil Pt 77.42 24 P **P** 15 59 05.8 +0.3
baz=233
K17K Iditarod 77.47 20 P **P** 15 59 06.7 +1.1
baz=228
I17K Unalakleet 77.48 19 IAmb IAmb 15 59 08.2
comp=Z,13nm,0.8s
I17K Unalakleet 77.48 19 P **P** 15 59 06.4 +0.8
baz=226
H16K Elim 77.54 18 P **P** 15 59 06.4 +0.4
baz=224
M18K Stony River 77.55 22 P **P** 15 59 07.0 +0.9
baz=230
N19K Bonanza Creek 77.63 23 P **P** 15 59 07.3 +0.6
baz=232
F15K North Star Dit 77.64 16 P **P** 15 59 07.2 +0.7
baz=221
J17K VABM Dome 77.67 19 IAmb IAmb 15 59 09.1
comp=Z,16nm,0.8s
J17K VABM Dome 77.67 19 P **P** 15 59 06.2 -0.6
baz=227
L18K Granite Mounta 77.70 21 IAmb IAmb 15 59 09.4
comp=Z,16nm,1.0s
L18K Granite Mounta 77.70 21 P **P** 15 59 07.1 +0.2
baz=230
O20K Slope Mountain 77.92 24 P **P** 15 59 08.7 +0.3
baz=234
G16K Koyuk River 78.06 17 IAmb IAmb 15 59 20.2
comp=Z,27nm,1.1s
G16K Koyuk River 78.06 17 P **P** 15 59 09.0 +0.2
baz=224
HOM Homer 78.08 25 P **P** 15 59 09.1 +0.1
baz=235
WMQ Urumqi 78.12 317 *e*P **P** 15 59 11.8 +2.0
M19K Big River Lodg 78.34 22 P **P** 15 59 10.7 +0.2
baz=232
L19K White Mountain 78.34 22 IAmb IAmb 15 59 12.6
comp=Z,15nm,0.7s
L19K White Mountain 78.34 22 P **P** 15 59 10.5 0.0
baz=231
H17K Granite Mounta 78.46 18 P **P** 15 59 11.7 +0.6
baz=226
BRSE Bradley Lake S 78.50 25 P **P** 15 59 11.0 -0.4
baz=236
J18K Innoko River 78.50 20 P **P** 15 59 11.6 +0.2
baz=229
G17K Kiwalik Mounta 78.63 17 P **P** 15 59 12.2 +0.2

	baz=225							
N20K	Mount Spurr	78.75	23	P	P	15 59 13.1	+0.2	
	baz=234							
SPCR	Spurr Chakacha	78.75	23	P	P	15 59 13.2	+0.3	
	baz=234							
M20K	Styx River	78.80	22	P	P	15 59 12.7	-0.5	
	baz=233							
HYBB	Hyderabad (bro	78.82	289	eP	P	15 59 13.6	-0.5	
L20K	Farewell, AK	78.89	22	P	P	15 59 13.4	-0.1	
	baz=232							
CAPN	Captain Cook N	78.92	24	P	P	15 59 14.0	+0.4	
	baz=235							
H18K	Honhosa River	79.09	18	P	P	15 59 14.6	+0.1	
	baz=228							
F17K	Baldwin Pennin	79.13	17	IAmb	IAmb	15 59 20.1		
	comp=Z,14nm,0.9s							
F17K	Baldwin Pennin	79.13	17	P	P	15 59 15.0	+0.3	
	baz=225							
SLKM	Skilak Lake	79.15	24	IAmb	IAmb	15 59 16.2		
	comp=Z,30nm,1.1s							
J19K	Poorman	79.22	20	IAmb	IAmb	15 59 17.3		
	comp=Z,44nm,1.8s							
J19K	Poorman	79.22	20	P	P	15 59 15.8	+0.5	
	baz=230							
SEW	Seward	79.25	25	P	P	15 59 15.7	+0.3	
	baz=237							
GCSA	Galena City Sc	79.29	19	P	P	15 59 15.8	+0.3	
	baz=229							
O22K	Cooper Landing	79.34	25	P	P	15 59 16.5	+0.5	
	baz=236							
K20K	Telida	79.36	21	P	P	15 59 16.2	+0.1	
	baz=232							
C16K	Lisburne Hills	79.41	14	P	P	15 59 16.8	+0.6	
	baz=220							
E17K	Hotham Inlet	79.43	16	P	P	15 59 16.8	+0.5	
	baz=224							
SKT	Skwentna	79.47	23	P	P	15 59 16.5	-0.2	
	baz=234							
SUA	Susitna One	79.48	23	IAmb	IAmb	15 59 20.1		
	comp=Z,11nm,0.7s							
SUA	Susitna One	79.48	23	P	P	15 59 16.6	-0.3	
	baz=235							
G18K	Tagagawik	79.50	18	P	P	15 59 17.1	+0.3	
	baz=227							
D17K	Noatak River	79.54	15	P	P	15 59 17.5	+0.5	
	baz=223							
TIXI	Tiksi	79.58	352	P	P	15 59 17.0	-0.1	
	comp=Z,1.7nm,0.4s,baz=124,slow=3.5,SNR=11							
TIXI				LR	LR	16 33 40.1		
	comp=Z,41nm,19.9s,baz=202,slow=35							
	comp=Z,1.7nm,0.4s							
TIXI	Tiksi	79.58	352	P	P	15 59 17.4	+0.3	
RC01	Rabbit Creek A	79.67	24	P	P	15 59 17.9	+0.2	
	baz=236							
F18K	Selawik	79.69	17	P	P	15 59 18.3	+0.5	
	baz=226							
PPLA	Purkeypile	79.76	22	P	P	15 59 18.3	-0.1	
	baz=234							
J20K	Nowinta River	79.84	20	P	P	15 59 18.9	+0.3	
	baz=232							
RDOG	Red Dog Mine	79.85	15	P	P	15 59 18.9	+0.3	
	baz=223							
M22K	Willow	79.89	23	P	P	15 59 18.8	-0.1	
	baz=236							
H19K	Roundabout Mou	79.94	19	P	P	15 59 19.2	+0.1	
	baz=229							
E18K	Tukpahlearik C	80.00	16	P	P	15 59 19.6	+0.1	
	baz=225							
P23K	Montague Islan	80.06	26	P	P	15 59 19.3	-0.6	
	baz=239							
C17K	DeLong Mountai	80.09	15	P	P	15 59 20.0	0.0	
	baz=222							
I20K	Naaghedeneel	80.11	20	P	P	15 59 19.5	-0.6	
	baz=231							
PWL	Port Wells	80.12	25	IAmb	IAmb	15 59 24.8		
	comp=Z,25nm,0.9s							
PWL	Port Wells	80.12	25	P	P	15 59 19.6	-0.7	
	baz=238							
G19K	Purcell Mounta	80.15	18	P	P	15 59 20.2	0.0	
	baz=229							
PMR	Palmer	80.19	24	IAmb	IAmb	15 59 21.6		
	comp=Z,23nm,1.2s							
PMR	Palmer	80.19	24	P	P	15 59 19.8	-0.7	
	baz=237							
CUT	Chulitna	80.20	23	P	P	15 59 20.0	-0.6	
	baz=236							
CHUM	Lake Minchumin	80.30	21	P	P	15 59 20.9	-0.2	
	baz=234,SNR=5.5							
KNK	Knik Glacier	80.37	24	P	P	15 59 21.2	-0.4	
	baz=237							
F19K	Shaleruckik Mo	80.40	17	P	P	15 59 21.9	+0.4	
	baz=228							
H20K	Anotleneega Mo	80.42	19	P	P	15 59 21.9	+0.1	
	baz=231							
SML	Sawmill	80.63	24	IAmb	IAmb	15 59 46.0		
	comp=Z,20nm,0.9s							
SML	Sawmill	80.63	24	P	P	15 59 22.1	-1.0	
	baz=238							
GLI	Glacier Island	80.65	25	P	P	15 59 22.2	-0.8	
	baz=239							
C18K	Utukok River	80.72	15	P	P	15 59 22.6	-0.7	
	baz=224							
TRF	Thorofare Moun	80.78	22	IAmb	IAmb	16 02 04.6		
	comp=Z,24nm,1.5s							
TRF	Thorofare Moun	80.78	22	P	P	15 59 23.1	-0.8	
	baz=235							
M23K	Glacier View	80.87	24	P	P	15 59 23.6	-0.6	
	baz=238							
BPAW	Bear Paw Mtn.	80.90	21	P	P	15 59 23.6	-0.8	
	baz=235							
E19K	Redstone River	80.98	17	IAmb	IAmb	15 59 26.5		
	comp=Z,18nm,0.9s							
E19K	Redstone River	80.98	17	P	P	15 59 24.2	-0.5	
	baz=228							
EYAK	Cordova Ski Ar	81.05	26	P	P	15 59 23.9	-1.3	
	baz=240							
SCM	Sheep Creek Mo	81.05	24	P	P	15 59 25.2	-0.1	
	baz=238							
B18K	Kokolik River	81.08	14	P	P	15 59 25.4	+0.2	
	baz=224							
IMAR	Indian Mountai	81.09	19	P	P	15 59 25.4	+0.1	
WAT1	Susitna Watana	81.10	23	P	P	15 59 25.1	-0.4	
	baz=237							
F20K	Avaraart Lake	81.15	18	P	P	15 59 25.3	-0.2	
	baz=230							
I21K	Tanana	81.19	20	P	P	15 59 25.9	0.0	
	baz=234							
H21K	Melozitna Rive	81.20	19	P	P	15 59 25.9	0.0	
	baz=233							
WAT6	Susitna Watana	81.28	23	P	P	15 59 26.1	-0.5	
	baz=238							
KAIM	Kayak Island	81.32	26	P	P	15 59 25.9	-0.8	
	baz=241							
D19K	Kuna River	81.43	16	P	P	15 59 26.7	-0.4	
	baz=227							
MCK	McKinley	81.44	22	IAmb	IAmb	15 59 29.7		
	comp=Z,18nm,0.9s							
MCK	McKinley	81.44	22	P	P	15 59 26.9	-0.4	
	baz=237,SNR=8.0							
KLU	Klutina	81.45	25	IAmb	IAmb	15 59 31.6		
	comp=Z,17nm,1.0s							
KLU	Klutina	81.45	25	P	P	15 59 27.3	-0.1	
	baz=240							
C19K	Lookout Ridge	81.46	15	P	P	15 59 27.1	-0.2	
	baz=226							
G21K	Allakaket	81.50	19	P	P	15 59 27.0	-0.4	
	baz=232							
M24K	Tolsona, Glenn	81.66	24	P	P	15 59 28.3	-0.2	
	baz=239							
DHY	Denali Highway	81.68	23	P	P	15 59 28.2	-0.5	
	baz=238							
BMRM	Bremner River	81.74	25	P	P	15 59 28.7	-0.3	
	baz=241							
E20K	Nigu River	81.80	17	P	P	15 59 29.2	+0.1	
	baz=229							
H22K	Ishtalitna Cre	81.81	20	P	P	15 59 28.6	-0.6	
	baz=234							
A19K	Wainwright	81.87	14	P	P	15 59 29.7	+0.4	
	baz=224							
NEA2	Nenana	81.87	21	IAmb	IAmb	16 02 34.5		
	comp=Z,22nm,1.2s							
NEA2	Nenana	81.87	21	P	P	15 59 29.1	-0.4	
	baz=236,SNR=5.3							
BGLC	Bering Glacier	81.92	27	P	P	15 59 29.4	-0.4	
	baz=242							
F21K	Alatna River	81.94	18	P	P	15 59 29.5	-0.4	
	baz=232							
D20K	Etivluk River	81.98	16	P	P	15 59 29.6	-0.4	
	baz=229							
N25K	Chitina, Valde	82.06	25	P	P	15 59 29.9	-0.7	
	baz=241							
I23K	Minto, Yukon-K	82.08	21	P	P	15 59 29.9	-0.6	
	baz=236							
WRH	Wood River Hil	82.16	22	IAmb	IAmb	16 01 45.9		
	comp=Z,21nm,1.6s							
HARP	HAARP	82.22	24	P	P	15 59 30.5	-0.9	
	baz=240							
CRQE	Cirque	82.29	26	P	P	15 59 31.1	-0.8	
	baz=242							
PAX	Paxson	82.38	23	P	P	15 59 31.8	-0.5	
	baz=240							
G22K	Bettles	82.38	19	P	P	15 59 31.7	-0.3	
	baz=234							
H23K	Yukon River	82.39	20	P	P	15 59 31.5	-0.8	
	baz=236							
COLA	College	82.46	21	P	P	15 59 31.4	-1.2	
COLA	College	82.46	21	P	P	15 59 31.9	-0.6	
COLA	College	82.46	21	P	P	15 59 32.0	-0.5	
	baz=238							
COLA	College	82.46	21	P	P	15 59 31.2	-1.2	
F22K	John River	82.52	18	P	P	15 59 32.3	-0.5	
	baz=233							
MESA	MESA	82.54	27	P	P	15 59 32.6	-0.7	
	baz=244							
HDA	Harding Lake	82.55	22	IAmb	IAmb	16 02 39.5		
	comp=Z,33nm,1.9s							
HDA	Harding Lake	82.55	22	P	P	15 59 32.9	-0.1	
	baz=238							
E21K	Killik River	82.55	17	P	P	15 59 32.0	-1.0	
	baz=231							
MCARA	McCarthy VSAT	82.62	25	P	P	15 59 32.1	-1.4	
	baz=242							
K24K	Donnelly Dome	82.67	23	P	P	15 59 32.2	-1.6	
	baz=240							
MKAR	Makanchi Array	82.69	319	P	P	15 59 33.7	-0.5	
	comp=Z,5.3nm,0.5s,baz=98,slow=5.9,SNR=45							
MKAR				LR	LR	16 36 56.1		
	comp=Z,40nm,20.2s,baz=75,slow=36							
	comp=Z,5.3nm,0.5s							
MKAR	Makanchi Array	82.69	319	P	P	15 59 33.4	-0.8	
B20K	Meade River	82.70	15	P	P	15 59 32.2	-1.5	
	baz=228							
G23K	Bananza Creek	82.73	19	P	P	15 59 34.1	+0.1	
	baz=235,SNR=7.4							
POKR	Poker Flat Res	82.74	21	P	P	15 59 34.0	0.0	
	baz=238							
ILAR	Eielson Array	82.76	22	P	P	15 59 32.9	-1.3	
	comp=Z,3.9nm,0.8s,baz=238,slow=5.3,SNR=59							
ILAR				LR	LR	16 30 54.6		
	comp=Z,252nm,21.7s,baz=251,slow=32							
	comp=Z,3.9nm,0.8s							
C21K	Knifeblade Rid	82.78	16	P	P	15 59 34.2	0.0	
	baz=230							
MAKZ	Makanchi	82.91	319	P	P	15 59 34.4	-0.9	
MAKZ				IAmb	IAmb	15 59 36.4		
	comp=Z,15nm,0.9s							
MAKZ	Makanchi	82.91	319	P	P	15 59 35.0	-0.3	
COLD	Coldfoot	82.97	19	P	P	15 59 35.0	-0.2	
	baz=235							
H24K	Noodor Dome	82.97	20	P	P	15 59 35.0	-0.3	
	baz=237							
E22K	Anaktuvuk Pass	83.00	18	IAmb	IAmb	15 59 36.9		
	comp=Z,11nm,1.0s							
E22K	Anaktuvuk Pass	83.00	18	P	P	15 59 35.4	0.0	
	baz=234,SNR=5.9							
RIDG	Independent Ri	83.00	23	IAmb	IAmb	15 59 36.6		
	comp=Z,12nm,1.1s							
RIDG	Independent Ri	83.00	23	P	P	15 59 35.5	0.0	
	baz=240							
M26K	Nabesna, AK	83.10	25	P	P	15 59 36.0	-0.1	
	baz=242							
B21K	Ikpupuk River	83.12	16	P	P	15 59 35.8	0.0	
	baz=231							
CTG	Chitna Glacier	83.16	26	P	P	15 59 35.9	-0.5	
	baz=244							
D22K	Ayikyak River	83.20	17	P	P	15 59 36.4	+0.1	
	baz=233							
J25K	Salcha River,	83.24	22	P	P	15 59 36.5	-0.2	
	baz=240							
L26K	Log Cabin Wild	83.25	24	IAmb	IAmb	16 00 05.4		
	comp=Z,24nm,1.8s							
L26K	Log Cabin Wild	83.25	24	P	P	15 59 36.8	+0.1	
	baz=242							
PINM	Pinnacle	83.27	27	P	P	15 59 36.9	0.0	
	baz=245							
ZAA0	Zalesovo Array	83.44	326	IAmb	IAmb	15 59 37.3		
	comp=Z,9.0nm,0.8s							
ZALV	Zalesovo Beam	83.44	326	P	P	15 59 36.5	-1.4	
	comp=Z,9.2nm,0.8s,baz=104,slow=6.3,SNR=35							
	comp=Z,2.2nm,0.8s							
ZALV	Zalesovo Beam	83.44	326	P	P	15 59 35.9	-1.9	
SCRK	Sand Creek	83.45	23	P	P	15 59 37.5	-0.3	
	baz=241							
PNL	Peninsula	83.48	28	P	P	15 59 37.7	-0.2	
	baz=246							
M27K	Edge Creek, AK	83.55	25	P	P	15 59 38.4	0.0	
	baz=243							
G24K	Hadweenzic Riv	83.58	20	P	P	15 59 38.2	-0.1	
	baz=238							
O28M	Mount Upton	83.58	27	P	P	15 59 38.3	-0.5	
	baz=245							
E23K	Chandalar	83.63	18	P	P	15 59 38.6	-0.1	
	baz=236							
PRP	Porcupine Dome	83.64	21	P	P	15 59 38.7	-0.1	
	baz=240							
A21K	Barrow	83.71	14	P	P	15 59 38.7	-0.1	
	baz=229							
QSPA	South Pole Qui	83.73	180	P	P	15 59 42.0	+2.6	
	comp=Z,28nm,1.0s,baz=350,slow=3.6,SNR=87							
QSPA	South Pole Qui	83.73	180	P	P	15 59 41.6	+2.3	
D23K	Nanushuk River	83.83	17	P	P	15 59 39.4	-0.2	
	baz=234							
J26L	Joseph Creek	83.86	23	P	P	15 59 40.2	+0.3	
	baz=242							
F24K	Squaw Lake	83.88	19	P	P	15 59 40.0	+0.1	
	baz=237							
L27K	Beaver Creek,	83.88	24	P	P	15 59 40.0	+0.1	
	baz=243							
YUK3	Moose Creek	83.89	26	P	P	15 59 39.7	-0.5	
	baz=245							
B22K	Teshekpuk Lake	83.89	16	P	P	15 59 40.0	+0.2	
	baz=232							
A22K	Sinclair Lake	83.91	15	P	P	15 59 40.4	+0.5	
	baz=230							
H25L	Birch Creek	83.92	21	P	P	15 59 40.4	+0.4	
	baz=239							
TOLK	Toolik Lake Re	83.97	18	IAmb	IAmb	15 59 41.9		
	comp=Z,13nm,1.0s							
TOLK	Toolik Lake Re	83.97	18	P	P	15 59 40.6	+0.2	
	baz=236,SNR=7.7							
YUK8	Steele Glacier	83.98	26	P	P	15 59 40.7	-0.2	
	baz=245							
E24K	Your Creek	83.99	18	P	P	15 59 39.9	-0.6	
	baz=237							
BVCY	Beaver Creek	84.00	25	P	P	15 59 40.7	+0.2	
	baz=244							
G25K	Bearman Lake	84.07	20	P	P	15 59 40.8	0.0	
	baz=239							
O29M	Mount Kennedy	84.12	27	P	P	15 59 41.1	-0.3	
	baz=246							
K27K	Chicken	84.22	23	P	P	15 59 41.6	0.0	
	baz=243							
P29M	Windy Craggy	84.24	28	P	P	15 59 41.9	+0.1	
	baz=247							
S31K	Pelican	84.34	30	P	P	15 59 42.4	+0.1	
	baz=249							
C23K	Itkillik River	84.36	17	IAmb	IAmb	15 59 44.5		
	comp=Z,21nm,1.0s							
C23K	Itkillik River	84.36	17	P	P	15 59 42.2	0.0	
	baz=234,SNR=9.4							
I26K	Coal Creek Min	84.40	22	P	P	15 59 42.6	+0.1	
	baz=242							
YUK6	Outpost Mounta	84.47	27	P	P	15 59 42.4	-0.8	
	baz=247							
SIT	Sitka	84.48	31	P	P	15 59 42.9	-0.2	
	baz=250							
D24K	Happy Valley	84.49	17	P	P	15 59 42.8	-0.1	
	baz=236							
YUK4	Talbot Arm	84.50	26	P	P	15 59 43.9	+0.5	
	baz=246							
F25K	Christian Rive	84.65	19	P	P	15 59 43.9	0.0	
	baz=239,SNR=5.6							
R31K	City Hall, Gus	84.75	30	P	P	15 59 44.6	+0.2	
	baz=249							
P30M	Million Dollar	84.79	28	P	P	15 59 44.8	+0.1	
	baz=248							
HYT	Haines Junctio	84.81	27	P	P	15 59 44.8	-0.1	
	baz=247							
PLBC	Pleasant Camp	84.82	29	P	P	15 59 44.7	0.0	
	baz=248							
C24K	Franklin Bluff	84.84	17	P	P	15 59 44.8	+0.2	
	baz=236							
BMAR	Burnt Mountain	84.92	20	P	P	15 59 45.8	+0.7	
E25K	Arctic Village	84.95	19	P	P	15 59 45.4	+0.2	
	baz=239							
G26K	Porcupine Rive	84.96	20	P	P	15 59 45.9	+0.7	
	baz=241,SNR=19							
MAW	Mawson	85.00	203	P	P	15 59 45.1	-0.4	
	comp=Z,11nm,0.7s,baz=100,slow=8.0,SNR=15							
MAW				LR	LR	16 33 26.1		
	comp=Z,94nm,21.6s,baz=86,slow=33							
	comp=Z,11nm,0.7s							
S32K	Killisnoo	85.00	31	P	P	15 59 46.1	+0.4	
	baz=250							
M29M	Somme Creek	85.02	25	P	P	15 59 46.0	+0.1	
	baz=246							
I27K	Kandik River	85.11	22	IAmb	IAmb	15 59 47.8		
	comp=Z,8.4nm,0.9s							
I27K	Kandik River	85.11	22	P	P	15 59 46.2	+0.1	
	baz=243							
CRAG	Craig	85.11	33	P	P	15 59 46.1	-0.1	
	baz=252							
F26K	Sheenjek River	85.20	20	P	P	15 59 47.6	+1.1	
	baz=241,SNR=7.0							
N30M	Aishikik Lake	85.24	27	P	P	15 59 46.9	0.0	
	baz=248							
R32K	Eaglecrest	85.31	30	P	P	15 59 47.0	-0.2	
	baz=250							
D25K	Kavik River	85.31	18	P	P	15 59 47.0	-0.1	
	baz=238							
SKAG	Skagway	85.32	29	P	P	15 59 46.5	-0.7	
	baz=249							
U33K	Whale Pass	85.32	32	P	P	15 59 47.4	+0.1	
	baz=252							
KSH	Kashi	85.36	310	P	P	15 59 49.1	+1.0	
KSH				pmax	pmax			
	comp=Z,11nm,0.9s							
H27K	Steamboat Moun	85.42	21	IAmb	IAmb	15 59 49.6		
	comp=Z,7.8nm,1.0s							
H27K	Steamboat Moun	85.42	21	P	P	15 59 47.5	-0.2	
	baz=243,SNR=5.5							
L29M	L29M	85.43	25	P	P	15 59 47.9	+0.1	
	baz=247							
O30N	Mendenhall	85.43	27	P	P	15 59 47.9	0.0	
	baz=249							
T33K	Petersburg	85.63	32	P	P	15 59 48.7	-0.1	
	baz=252							
G27K	Doyon Strip	85.64	21	P	P	15 59 48.8	+0.1	
	baz=243							
I28M	Miner Creek	85.67	22	P	P	15 59 48.8	-0.3	
	baz=245							
M30M	Minto, Yukon	85.79	26	P	P	15 59 49.5	0.0	
	baz=248							
WRAK	Wrangell Islan	85.83	32	P	P	15 59 49.3	-0.5	
	baz=252							
N31M	Braeburn, Yuko	85.83	27	P	P	15 59 49.6	-0.2	
	baz=249							
V35K	Ketchikan	85.89	33	P	P	15 59 50.5	+0.4	
	baz=253							
WHY	Whitehorse	85.95	28	P	P	15 59 50.4	-0.1	
	baz=250							
K29M	Barlow Dome	85.97	24	IAmb	IAmb	15 59 54.5		
	comp=Z,9.6nm,0.9s							
K29M	Barlow Dome	85.97	24	P	P	15 59 50.5	0.0	
	baz=247,SNR=7.3							
C26K	Camden Bay	86.06	18	P	P	15 59 51.6	+0.9	
	baz=240,SNR=5.6							
KURK	Kurchatov	86.11	322	P	P	15 59 49.6	-1.8	
KURK				IAmb	IAmb	15 59 50.8		
	comp=Z,9.0nm,1.1s							
KURK	Kurchatov	86.11	322	P	P	15 59 49.9	-1.4	
KURK				pP	pP	16 00 04.2	-1.7	
P32M	Atlin	86.14	29	P	P	15 59 51.9	+0.5	
	baz=251							
KURBB	Kurchatov Arra	86.14	322	P	P	15 59 50.4	-1.1	
	comp=Z,2.1nm,0.6s,baz=102,slow=3.9,SNR=26							
	comp=Z,2.1nm,0.6s							
C27K	Jago River	86.28	18	IAmb	IAmb	15 59 54.5		
	comp=Z,11nm,0.9s							
C27K	Jago River	86.28	18	P	P	15 59 52.2	+0.4	
	baz=241,SNR=11							
E27K	Coleen River	86.28	20	IAmb	IAmb	15 59 53.8		
	comp=Z,14nm,0.9s							
E27K	Coleen River	86.28	20	P	P	15 59 53.0	+1.1	
	baz=243,SNR=19							
MAYO	Mayo, Yukon	86.55	25	P	P	15 59 54.3	+1.0	
	baz=249							
H29M	Whitestone	86.58	22	P	P	15 59 54.0	+0.6	
	baz=246							
F28M	Old Crow	86.62	20	IAmb	IAmb	15 59 55.2		
	comp=Z,8.6nm,0.9s							
F28M	Old Crow	86.62	20	P	P	15 59 54.6	+1.1	
	baz=245,SNR=9.2							
Q32M	Nakina River	86.64	30	P	P	15 59 53.5	-0.5	
	baz=252							
M31M	Drury Creek, Y	86.70	26	P	P	15 59 54.0	-0.1	
	baz=238							
J30M	Hart River	86.73	24	IAmb	IAmb	15 59 56.5		
	comp=Z,9.4nm,0.9s							
J30M	Hart River	86.73	24	P	P	15 59 54.1	-0.1	
	baz=248,SNR=6.8							
S34M	Telegraph Cree	86.90	31	P	P	15 59 55.2	+0.2	
	baz=253							
U35K	Hyder	86.92	33	P	P	15 59 55.1	-0.1	
	baz=254							
N32M	Quiet Lake	86.94	28	P	P	15 59 55.6	+0.3	
	baz=251							
I30M	Mount Dempster	86.95	23	IAmb	IAmb	15 59 56.8		
	comp=Z,6.6nm,0.9s							
I30M	Mount Dempster	86.95	23	P	P	15 59 55.3	0.0	
	baz=248,SNR=5.4							
D27M	Malcolm River	86.96	19	P	P	15 59 56.0	+0.7	
	baz=244							
G29M	Pine Creek	86.98	21	P	P	15 59 55.5	+0.2	
	baz=246							
BBB	Bella Bella	87.06	37	LR	LR	16 31 09.8		
	comp=Z,125nm,21.1s,baz=216,slow=30							
AAK	Ala-Archa	87.08	313	LR	LR	16 41 39.2		
	comp=Z,13nm,19.2s,baz=64,slow=37							
T35M	Bob Quinn	87.09	32	P	P	15 59 56.4	+0.3	
	baz=254							
E28M	Babbage River	87.15	20	P	P	15 59 56.7	+0.6	
	baz=245							
EPYK	Eagle Plains	87.25	22	P	P	15 59 57.0	+0.3	
EPYK	Eagle Plains	87.25	22	P	P	15 59 57.0	+0.3	
	baz=248,SNR=8.6							
R33M	Jennings River	87.41	30	P	P	15 59 57.4	-0.3	
	baz=253							
DLBC	Dease Lake	87.61	31	P	P	15 59 57.8	-0.8	
	baz=254							
E29M	Blow River	87.61	20	P	P	15 59 57.5	-0.8	
	baz=247							
G30M	tAoh Zraii Nji	87.66	22	P	P	15 59 58.3	-0.4	
	baz=248							
D28M	Stokes Point	87.72	19	P	P	15 59 59.0	+0.3	
	baz=246							
H31M	Peel River	87.95	23	P	P	15 59 59.6	-0.4	
	baz=250							
F30M	Barrier River	88.05	21	IAmb	IAmb	16 00 02.2		
	comp=Z,14nm,1.1s							
F30M	Barrier River	88.05	21	P	P	16 00 00.5	0.0	
	baz=249,SNR=5.3							
G31M	Satah River	88.36	22	IAmb	IAmb	16 00 04.5		
	comp=Z,9.6nm,0.9s							
G31M	Satah River	88.36	22	P	P	16 00 01.7	-0.2	
	baz=250,SNR=6.4							
YBH	Yreka Blue Hor	88.55	48	LR	LR	16 33 00.6		
	comp=Z,17nm,20.7s,baz=280,slow=31							
WTLY	Watson Lake, Y	88.67	29	P	P	16 00 02.9	-0.6	
	baz=255							
F31M	Tsiigehtchic	88.73	21	P	P	16 00 02.8	-0.7	
	baz=250							
INK	Inuvik	89.10	21	LR	LR	16 37 12.2		
	comp=Z,219nm,19.6s,baz=309,slow=34							
INK	Inuvik	89

TOAD	**Toad River Com**	**90.14**	**31**	P		**P**	**16 00 10.6**	**+0.1**
	baz=258							
PNTR	**Pine Nut**	**90.51**	**51**	P		**P**	**16 00 11.6**	**-1.3**
PNTR				IAmb		IAmb	16 00 14.9	
	comp=Z,8.9nm,0.9s							
PAHR	**Pah Rah Range**	**90.75**	**50**	IAmb		IAmb	16 00 15.7	
	comp=Z,6.8nm,1.0s							
KOTAN	**Kotaneelee Air**	**90.98**	**30**	P		**P**	**16 00 14.1**	**-0.2**
	baz=259							
RYN	**Ryan**	**91.28**	**51**	IAmb		IAmb	16 00 18.4	
	comp=Z,9.0nm,0.9s							
NVAR	**Mina Array Bea**	**91.43**	**52**	P		**P**	**16 00 17.7**	**+0.5**
	comp=Z,7.6nm,0.8s,baz=252,slow=6.7,SNR=38							
NVAR				LR		LR	16 36 39.9	
	comp=Z,103nm,18.5s,baz=282,slow=32							
	comp=Z,7.6nm,0.8s							
NVAR	**Mina Array Bea**	**91.43**	**52**	P		**P**	**16 00 16.6**	**-0.6**
BFSC	**Mount Baldy Ra**	**91.47**	**56**	IAmb		IAmb	16 00 19.7	
	comp=Z,9.1nm,1.1s							
BVAR	**Borovoye Array**	**91.56**	**323**	P		**P**	**16 00 15.5**	**-1.7**
	comp=Z,7.3nm,0.8s,baz=104,slow=5.4,SNR=43							
	comp=Z,7.3nm,0.8s							
DSP	**Deep Springs**	**91.57**	**53**	IAmb		IAmb	16 00 20.0	
	comp=Z,4.5nm,0.9s							
WVOR	**Wild Horse Val**	**91.65**	**48**	IAmb		IAmb	16 00 33.2	
	comp=Z,18nm,1.8s							
WSHM	**Spangler Hills**	**91.75**	**55**	IAmb		IAmb	16 00 20.8	
	comp=Z,8.2nm,1.0s							
G08A	**Pilot Rock**	**91.77**	**45**	IAmb		IAmb	16 00 22.5	
	comp=Z,7.1nm,1.2s							
WRGLY	**Wrigley**	**91.83**	**27**	P		**P**	**16 00 17.5**	**-0.6**
	baz=260							
BORC	**Borrego Spring**	**92.39**	**57**	IAmb		IAmb	16 00 23.6	
	comp=Z,6.9nm,1.0s							
PFO	**Pinyon Flats O**	**92.39**	**57**	LR		LR	16 33 53.5	
	comp=Z,64nm,20.3s,baz=292,slow=30							
C09A	**Chrisman Ranch**	**92.53**	**42**	IAmb		IAmb	16 00 22.5	
	comp=Z,8.8nm,1.2s							
WCT	**Wildcat Mounta**	**92.58**	**53**	IAmb		IAmb	16 00 24.4	
	comp=Z,8.4nm,0.9s							
C36M	**Paulatuk**	**92.68**	**21**	P		**P**	**16 00 21.4**	**-0.5**
	baz=260							
YUH	**Yuha Desert**	**92.74**	**58**	IAmb		IAmb	16 00 25.6	
	comp=Z,6.4nm,1.2s							
A36M	**Sachs Harbour**	**92.80**	**18**	IAmb		IAmb	16 00 23.8	
	comp=Z,9.4nm,0.9s							
A36M	**Sachs Harbour**	**92.80**	**18**	P		**P**	**16 00 22.2**	**-0.2**
	baz=258							
TPNV	**Topopah Spring**	**92.89**	**53**	IAmb		IAmb	16 00 26.0	
	comp=Z,9.1nm,1.1s							
SYO	**Syowa Base**	**92.96**	**199**⇑	*e*P		**P**	**16 00 22.6**	**-0.7**
SYO	**Syowa Base**	**92.96**	**199**⇑	*e*pP		pP	16 00 39.2	+1.7
BC3	**Big Chuckawall**	**93.23**	**57**	IAmb		IAmb	16 00 27.9	
	comp=Z,9.7nm,1.1s							
NEW	**Newport**	**93.35**	**42**	LR		LR	16 35 53.7	
	comp=Z,288nm,20.6s,baz=273,slow=31							
NEW	**Newport**	**93.35**	**42**	IAmb		IAmb	16 00 26.9	
	comp=Z,7.3nm,1.1s							
R11B	**Troy Canyon, C**	**93.55**	**52**	IAmb		IAmb	16 00 28.9	
	comp=Z,5.7nm,1.0s							
V12A	**Nelson**	**93.91**	**55**	IAmb		IAmb	16 00 32.8	
	comp=Z,5.5nm,0.8s							
BLYC	**Blythe**	**94.01**	**57**	IAmb		IAmb	16 00 31.4	
	comp=Z,6.4nm,1.1s							
SPR3	**Spring Creek 3**	**94.58**	**51**	IAmb		IAmb	16 00 33.9	
	comp=Z,10nm,1.0s							
W13A	**Hualapai Mount**	**94.64**	**55**	IAmb		IAmb	16 00 34.3	
	comp=Z,5.9nm,0.9s							
CCUT	**Cedar City**	**95.24**	**53**	IAmb		IAmb	16 00 43.6	
	comp=Z,18nm,1.9s							
YKA	**Yellowknife Ar**	**95.78**	**28**	P		**P**	**16 00 36.5**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=291,slow=7.7,SNR=7.5							
YKA				LR		LR	16 38 41.6	
	comp=Z,86nm,21.6s,baz=214,slow=32							
	comp=Z,1.8nm,0.8s							
BELA	**Belgrano 2**	**95.84**	**178**			**P**	**16 00 35.0**	**-1.4**
U15A	**North Rim**	**96.02**	**54**	IAmb		IAmb	16 00 40.9	
	comp=Z,5.4nm,0.9s							
PKCU	**Pink Cliffs**	**96.07**	**53**	P		**P**	**16 00 37.6**	**-1.0**
MTPU	**Mount Pierson**	**96.20**	**52**	P		**P**	**16 00 38.7**	**-0.6**
MTPU				IAmb		IAmb	16 00 42.1	
	comp=Z,5.3nm,0.9s							
LPIG	**La Paz**	**97.00**	**67**	LR		LR	16 36 28.4	
	comp=Z,99nm,20.5s,baz=254,slow=30							
TMUT	**Trail Mountain**	**97.02**	**51**	IAmb		IAmb	16 00 44.8	
	comp=Z,3.7nm,0.9s							
PDAR	**Pinedale Array**	**98.36**	**48**	P		**P**	**16 00 48.0**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=204,slow=2.9,SNR=7.3							
PDAR				LR		LR	16 42 25.3	
	comp=Z,66nm,18.5s,baz=276,slow=34							
	comp=Z,1.0nm,0.8s							
ARTI	**Arti**	**98.70**	**326**	LR		LR	16 47 48.4	
	comp=Z,22nm,20.1s,baz=66,slow=37							
PV23	**Carpenter Ridg**	**98.71**	**52**	IAmb		IAmb	16 00 56.1	
	comp=Z,6.2nm,0.9s							
TROLL	**Troll, Antarti**	**99.83**	**188**	⇑P		**Pdif**	**16 00 53.8**	**-0.9**
	comp=Z,149nm,1.1s							
SNAA	**Sanae**	**100.86**	**187**	⇑P		**Pdif**	**16 00 57.9**	**-1.2**
	comp=Z,25nm,1.0s							
TXAR	**Lajitas Array**	**103.10**	**61**	PKKPbc		PKKPbc	16 17 05.0	-1.7
	comp=Z,0.6nm,0.8s,baz=109,slow=4.4,SNR=7.0							
FINES	**FINESS Array B**	**113.16**	**336**	PKP		**PKiKP**	**16 05 49.8**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=104,slow=6.1,SNR=3.5							
BOSA	**Boshof**	**120.31**	**232**	PKP		**PKPdf**	**16 06 01.0**	**-1.4**
	comp=Z,3.0nm,0.8s,baz=189,slow=2.3,SNR=6.3							
CLL	**Collm**	**125.05**	**332**	*e*PKPdf		**PKiKP**	**16 06 13.0**	**+2.1**
GERES	**GERESS Array B**	**126.30**	**329**	PKP		**PKPdf**	**16 06 12.3**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=70,slow=6.4,SNR=5.6							
ROSC	**El Rosal**	**131.13**	**89**	PKP		**PKPdf**	**16 06 21.8**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=331,slow=19,SNR=5.4							
ROSC	**El Rosal**	**131.13**	**89**			**PKPdf**	**16 06 22.5**	**-1.2**
LPAZ	**La Paz**	**132.01**	**118**	PKP		**PKPdf**	**16 06 23.9**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=233,slow=5.1,SNR=5.7							
RUSC	**La Rusia**	**132.43**	**88**			**PKPdf**	**16 06 24.9**	**-1.4**
SDV	**Santo Domingo**	**134.94**	**84**			**PKPdf**	**16 06 29.0**	**-1.7**
PMRV	**Marv??o**	**143.25**	**337**	*e*PKP		**PKPdf**	**16 06 46.2**	**+1.3**
PSARD	**Sardoal**	**143.40**	**338**	*e*PKP		PKPbc	16 06 41.9	-0.5
PBEJ	**Beja**	**144.65**	**336**	*e*PKP		PKPbc	16 06 46.2	0.0
MESJ	**Messejana**	**144.95**	**336**	*e*PKP		PKPbc	16 06 47.2	+0.1
PCVE	**Castro Verde**	**145.05**	**336**	*e*PKP		**PKPab**	**16 06 47.5**	**-0.1**
PVAQ	**Vaqueiros**	**145.12**	**335**	*e*PKP		**PKPbc**	**16 06 47.5**	**-0.2**
PTEO	**Sao Teotonio**	**145.40**	**337**	*e*PKP		**PKPab**	**16 06 48.7**	**-0.1**
MORF	**Marmelete**	**145.58**	**336**	*e*PKP		**PKPab**	**16 06 49.8**	**+0.2**
BDFB	**Brasilia**	**148.66**	**134**	PKPbc		**PKPbc**	**16 06 57.2**	**-1.4**
	baz=308,slow=1.1							
DBIC	**Dimbokro**	**159.75**	**272**	PKPab		**PKPab**	**16 07 48.0**	**-1.2**
	comp=Z,9.1nm,0.8s,baz=133,slow=4.8,SNR=7.2							
DBIC	**Dimbokro**	**159.75**	**272**			**PKPab**	**16 07 47.5**	**-1.8**

HEL 24 15:50:15.3±0.3, 67.83N×20.18E, h0km, ML1.1, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.72**	**71**	PG	Pg	15 50 27.0	-2.0
LANU				SG	Sg	15 50 36.6	-1.8
KIF	**Kilpisjarvi**	**1.21**	**11**	*e*P	Pg	15 50 37.0	-1.4
KIF	**Kilpisjarvi**	**1.21**	**11**	PG	Pg	15 50 37.8	-0.6
KIF				smax	smax	15 50 52.9	
	comp=Z,2.0nm,0.2s						
KIF				SG	Sg	15 50 53.2	-0.8
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	15 50 41.0	-1.4
HEF	**Hetta**	**1.43**	**64**	PG	Pn	15 50 41.3	-1.2
	baz=251						
HEF				smax	smax	15 50 58.3	
	comp=Z,0.9nm,0.2s						
HEF				SG	Sg	15 50 59.4	-1.8
ERTU	**Ertsjaerv**	**1.50**	**148**	PG	Pn	15 50 42.0	-1.4
ERTU				SN	Sg	15 51 03.3	0.0
KLF	**Kolari**	**1.57**	**110**	PG	Pn	15 50 43.9	-0.4
KLF				smax	smax	15 51 02.2	
	comp=Z,1.2nm,0.2s						
KLF				SG	Sn	15 51 04.2	-1.1
KTK1	**Kautokeino**	**1.64**	**42**	PG	Pn	15 50 44.9	-0.5
KTK1				SG	Sn	15 51 06.9	-0.3
TRO	**Tromso**	**1.87**	**346**	SG	Sb	15 51 13.7	-0.5
KALU	**Kalix**	**2.34**	**146**	SG	Sb	15 51 27.3	-0.3
TOF	**Tornio**	**2.39**	**135**	PG	Pb	15 50 57.5	-1.7
TOF				smax	smax	15 51 26.0	
	comp=Z,0.8nm,0.2s						
TOF				SG	Sb	15 51 28.3	-0.9
RNF	**Rovaniemi**	**2.58**	**116**	SG	Sb	15 51 33.4	-1.1
ARA0	**ARCESS Array S**	**2.59**	**46**	PB	Pn	15 50 59.3	+0.8
ARA0				SB	Sn	15 51 32.7	+2.0
RAJF	**Raja-Jooseppi**	**3.11**	**74**	SG	Sb	15 51 48.8	-0.9
KEV	**Kevo**	**3.15**	**49**	SB	Sb	15 51 49.4	-1.5
KEV	**Kevo**	**3.15**	**49**	P	**P**	**15 51 49.0**	**+0.3**
RANF	**Ranua**	**3.17**	**122**	SG	Sb	15 51 53.2	+1.6
KU2	**Taivalkoski**	**3.83**	**120**	SN	Sn	15 51 59.5	-1.6

*IDC **24** 15:51:24.9±6.9, 35.08S×179.02W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=340.4km s-min=61.5km az=165.0*
*WEL **24** 15:51:28.1±0.8, 36.5S×177.9W±, h12km, M4.2/21, ML4.1/23, MLv4.2/21, Error ellipse: s-maj=11.7km s-min=6.7km az=128.6, confirmed*
*NOU **24** 15:51:31.0, 35.58S×178.96W, h72km, ML4.2/11, East of North Island, N.Z.*

ISC 24 15:51:26.4±1.7, 35.51S±0.09×178.8W±0.1, h10km, n67, σ1s23/78, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.09**	**228**	P	**Pn**	**15 52 15.6**	**+0.3**
MXZ	**Matakaoa Point**	**3.09**	**228**	S	**Sn**	**15 52 50.7**	**-1.6**
MXZ	**Matakaoa Point**	**3.09**	**228**	P	**Pn**	**15 52 15.5**	**+0.3**
MXZ				S	**Sn**	**15 52 52.4**	**+0.1**
WMGZ	**Waiomatatini S**	**3.21**	**223**	P	**Pn**	**15 52 18.1**	**+1.3**
PKGZ	**Pakihiroa**	**3.43**	**226**	P	**Pn**	**15 52 21.3**	**+1.3**
PKGZ				S	**Sn**	**15 53 02.7**	**+2.0**
PUZ	**Puketiti**	**3.47**	**222**	P	**Pn**	**15 52 21.1**	**+0.6**
PUZ				S	**Sn**	**15 53 02.9**	**+1.1**
HAZ	**Te Kaha**	**3.54**	**230**	P	**Pn**	**15 52 21.9**	**+0.5**
HAZ				S	**Sn**	**15 53 05.0**	**+1.8**
TWGZ	**Tauwhareparae**	**3.70**	**223**	P	**Pn**	**15 52 24.4**	**+0.7**
RUGZ	**Raukumara Rang**	**3.73**	**228**	P	**Pn**	**15 52 25.2**	**+1.0**
RUGZ				S	**Sn**	**15 53 10.4**	**+2.1**
CNGZ	**Carnagh Statio**	**3.81**	**218**	P	**Pn**	**15 52 26.2**	**+1.1**
TKGZ	**Te Karaka**	**3.96**	**221**	P	**Pn**	**15 52 28.0**	**+0.8**
TKGZ				S	**Sn**	**15 53 14.6**	**+0.9**
MWZ	**Matawai**	**4.07**	**225**	P	**Pn**	**15 52 28.8**	**0.0**
RIGZ	**Rimuhau**	**4.20**	**220**	P	**Pn**	**15 52 31.3**	**+0.7**
RIGZ				S	**Sn**	**15 53 21.2**	**+1.4**
URZ	**Urewera**	**4.27**	**229**	P	**Pn**	**15 52 31.8**	**+0.4**
URZ	**Urewera**	**4.27**	**229**	P	**Pn**	**15 52 31.7**	**+0.4**
URZ				S	**Sn**	**15 53 21.8**	**+0.5**
PRGZ	**Paritu Road**	**4.31**	**217**	P	**Pn**	**15 52 32.6**	**+0.6**
MARZ	**Manawahe**	**4.38**	**234**	P	**Pn**	**15 52 34.3**	**+1.3**
SNGZ	**Shannon Statio**	**4.48**	**222**	P	**Pn**	**15 52 35.1**	**+0.6**
KNZ	**Kokohu**	**4.49**	**218**	P	**Pn**	**15 52 34.2**	**-0.3**
RTZ	**Ruatahuna**	**4.57**	**226**	P	**Pn**	**15 52 36.5**	**+0.8**
KUZ	**Kuaotunu**	**4.59**	**253**	P	**Pn**	**15 52 36.1**	**+0.2**
KUZ	**Kuaotunu**	**4.59**	**253**	S	**Sn**	**15 53 27.1**	**-2.2**
KUZ	**Kuaotunu**	**4.59**	**253**	P	**Pn**	**15 52 36.1**	**+0.2**
MUGZ	**Murupara**	**4.61**	**229**	P	**Pn**	**15 52 37.1**	**+0.9**
MUGZ				S	**Sn**	**15 53 29.4**	**-0.4**
TARZ	**Mount Tarawera**	**4.63**	**233**	P	**Pn**	**15 52 38.2**	**+1.6**
RAHZ	**Arahi**	**4.72**	**223**	P	**Pn**	**15 52 38.7**	**+1.0**
RAHZ				S	**Sn**	**15 53 33.2**	**+0.7**
WHHZ	**Waihua**	**4.75**	**220**	S	**Sn**	**15 53 34.1**	**+0.7**
MTHZ	**Maungataniwha**	**4.81**	**225**	P	**Pn**	**15 52 39.4**	**+0.4**
NMHZ	**Naumai**	**5.00**	**223**	P	**Pn**	**15 52 42.7**	**+1.1**
NMHZ				S	**Sn**	**15 53 40.4**	**+0.9**
ARHZ	**Aropaoanui**	**5.02**	**220**	P	**Pn**	**15 52 42.1**	**+0.4**
ARHZ				S	**Sn**	**15 53 40.2**	**+0.5**
WIAZ	**Waiheke Island**	**5.06**	**254**	P	**Pn**	**15 52 42.8**	**+0.5**
TOZ	**Tahuroa Road**	**5.08**	**242**	P	**Pn**	**15 52 42.7**	**+0.1**
MKAZ	**Moumakai**	**5.12**	**250**	P	**Pn**	**15 52 44.1**	**+1.0**
BKZ	**Black Stump Fm**	**5.22**	**224**	P	**Pn**	**15 52 44.4**	**-0.3**
BKZ	**Black Stump Fm**	**5.22**	**224**	S	**Sn**	**15 53 43.1**	**-1.9**
BKZ	**Black Stump Fm**	**5.22**	**224**	P	**Pn**	**15 52 44.3**	**-0.4**
MCHZ	**McNeill Hill**	**5.31**	**221**	P	**Pn**	**15 52 45.7**	**0.0**
TMVZ	**Te Maari**	**5.66**	**229**	P	**Pn**	**15 52 50.8**	**+0.1**
PXZ	**Pawanui**	**5.67**	**216**	P	**Pn**	**15 52 49.3**	**-1.4**
NTVZ	**North Tongarir**	**5.67**	**229**	P	**Pn**	**15 52 51.1**	**+0.3**
OTVZ	**Oturere**	**5.71**	**229**	P	**Pn**	**15 52 52.1**	**+0.6**
NNVZ	**North Ngauruho**	**5.72**	**229**	P	**Pn**	**15 52 52.3**	**+0.6**
SNVZ	**South Ngauruho**	**5.74**	**229**	P	**Pn**	**15 52 51.8**	**-0.1**
NGZ	**Ngauruhoe**	**5.76**	**229**	P	**Pn**	**15 52 52.2**	**+0.1**
MOVZ	**Moawhango**	**5.81**	**226**	P	**Pn**	**15 52 52.9**	**+0.1**
WNVZ	**Wahianoa**	**5.86**	**228**	P	**Pn**	**15 52 53.5**	**+0.1**
HIZ	**Hauiti**	**5.88**	**238**	P	**Pn**	**15 52 54.9**	**+1.2**
WPHZ	**Waipukurau**	**5.90**	**218**	P	**Pn**	**15 52 52.2**	**-1.7**
PNHZ	**Pukenui**	**5.91**	**220**	P	**Pn**	**15 52 52.5**	**-1.6**
TSZ	**Takapari Road**	**6.14**	**221**	P	**Pn**	**15 52 55.8**	**-1.5**
OUZ	**Omahuta**	**6.21**	**270**	P	**Pn**	**15 52 58.3**	**+0.2**
OUZ	**Omahuta**	**6.21**	**270**	P	**Pn**	**15 52 58.5**	**+0.4**
DVHZ	**Dannevirke**	**6.21**	**218**	P	**Pn**	**15 52 56.6**	**-1.6**
VRZ	**Vera Road**	**6.26**	**233**	P	**Pn**	**15 52 59.9**	**+1.0**
BFZ	**Birch Farm**	**6.47**	**216**	P	**Pn**	**15 53 00.5**	**-1.2**
BFZ	**Birch Farm**	**6.47**	**216**	P	**Pn**	**15 52 59.7**	**-2.0**
PRWZ	**Pori Road**	**6.50**	**218**	P	**Pn**	**15 53 01.3**	**-0.9**
MRZ	**Mangatainoka R**	**6.78**	**219**	P	**Pn**	**15 53 03.3**	**-2.7**
TMWZ	**Te Maipa**	**6.97**	**215**	P	**Pn**	**15 53 05.6**	**-2.9**
HOWZ	**Holdsworth Sta**	**6.99**	**218**	P	**Pn**	**15 53 07.4**	**-1.5**
OGWZ	**Otaki Gorge**	**7.11**	**220**	P	**Pn**	**15 53 08.2**	**-2.2**
PAWZ	**Paruwai Farm**	**7.40**	**216**	P	Pn	15 53 10.8	-3.7
CTZ	**Chatham Island**	**8.39**	**169**	P	**Pn**	**15 53 29.4**	**+1.4**
CTZ	**Chatham Island**	**8.39**	**169**	P	**Pn**	**15 53 29.5**	**+1.4**
ASAR	**Alice Springs**	**42.41**	**273**	P	**P**	**15 59 19.8**	**-1.6**
	1.1nm,0.6s,baz=116,slow=7.4,SNR=13						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**43.86**	**278**	P	**P**	**15 59 31.1**	**-2.0**
	0.3nm,0.3s,baz=118,slow=8.1,SNR=2.7						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**149.62**	**336**	PKPbc	**PKPdf**	**16 11 13.9**	**+3.2**
	1.6nm,0.8s,baz=30,slow=12,SNR=4.2						

*IDC **24** 15:51:55.9±3.2, 51.53N×179.11W, h0km, mb3.6/5, mbtmp3.6/5, MS3.4/1, Error ellipse: s-maj=92.3km s-min=29.1km az=1.0*
*AEIC **24** 15:51:57.0±1.2, 50.89N±0.05×179.15W±0.08, h13km±7km, Error ellipse: s-maj=7.8km s-min=5.9km az=136.0*
*NEIC **24** 15:51:56.0±0.9, 50.87N±0.04×179.18W±0.07, h10km±2km, ML3.0(AEIC), Error ellipse: s-maj=8.5km s-min=6.1km az=125.0*

ISC 24 15:51:55.5±2.3, 50.86N±0.10×179.19W±0.04, h15km±13km, n34, σ1s02/38, mb3.9/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.74**	**19**		**Pb**	**15 52 10.3**	**+0.2**
GAKI					**Sb**	**15 52 19.8**	**-0.2**
GALAA	**Gareloi Lava P**	**0.94**	**16**		**Pb**	**15 52 14.0**	**+0.5**
GAEA	**Gareloi East**	**0.97**	**16**		**Pb**	**15 52 14.4**	**+0.4**
GANO	**Gareloi North**	**0.99**	**14**		**Pg**	**15 52 14.6**	**-0.2**
GANE	**Gareloi Northe**	**1.00**	**15**		**Pb**	**15 52 14.8**	**+0.3**
AMKA	**Amchitka**	**1.08**	**299**	Pn	**Pb**	**15 52 16.2**	**+0.2**
TAFL	**Tanaga Flats**	**1.21**	**41**		**Pb**	**15 52 17.9**	**-0.2**
TAFL					**Sn**	**15 52 35.0**	**+0.9**
TASE	**Tanaga Southea**	**1.22**	**36**		**Pb**	**15 52 18.1**	**-0.2**
TANO	**Tanaga North**	**1.25**	**32**		**Pn**	**15 52 19.1**	**+0.5**
TAFP	**Tanaga Falls P**	**1.29**	**35**		**Pn**	**15 52 19.5**	**+0.4**
TAPA	**Tanaga Point A**	**1.29**	**41**		**Pn**	**15 52 19.2**	**+0.1**
TAPA					**Sn**	**15 52 37.0**	**+0.9**
CESW	**Semis' Southwe**	**1.30**	**324**		**Pn**	**15 52 20.3**	**+1.0**
CEPE	**Semis' Perret**	**1.33**	**327**		**Pn**	**15 52 20.5**	**+0.9**
KIMD	**Kanaga Island**	**1.52**	**53**		**Pb**	**15 52 23.7**	**+0.3**
KIMD					**Sb**	**15 52 43.2**	**+0.7**
KIWB	**Kanaga Island**	**1.62**	**51**		**Pn**	**15 52 23.4**	**-0.1**
KIWB	**Kanaga Island**	**1.62**	**51**		**Sb**	**15 52 45.1**	**-0.3**
KIKV	**Kanaga Island**	**1.63**	**50**		**Pn**	**15 52 23.9**	**+0.2**
KIRH	**Kanaga Island**	**1.68**	**51**		**Pn**	**15 52 25.3**	**+1.9**
KINC	**Kanaga Island**	**1.68**	**49**		**Pn**	**15 52 25.5**	**+1.2**
LSSE	**Little Sitkin**	**1.77**	**308**		**Pn**	**15 52 27.0**	**+1.3**
LSPA	**Little Sitkin**	**1.78**	**309**		**Pn**	**15 52 26.8**	**+1.0**
ADK	**Adak**	**1.88**	**56**		**Pn**	**15 52 27.7**	**+0.6**
ADK	**Adak**	**1.88**	**56**		**Sn**	**15 52 51.1**	**+0.7**
ADAG	**Mount Adagdak**	**1.97**	**54**		**Pn**	**15 52 29.6**	**+1.2**
GSCK	**Great Sitkin C**	**2.22**	**57**		**Pn**	**15 52 32.8**	**+1.0**
GSCK					**Sn**	**15 53 00.4**	**+1.5**
GSTD	**Great Sitkin T**	**2.25**	**57**		**Pn**	**15 52 33.3**	**+1.0**
GSMY	**Great Sitkin M**	**2.29**	**58**		**Pn**	**15 52 34.5**	**+1.7**
ATKA	**Atka Island**	**3.40**	**65**	Pn	**Pn**	**15 52 49.5**	**+1.6**
ILAR	**Eielson Array**	**21.80**	**38**	P	**P**	**15 56 43.4**	**-3.4**
	0.2nm,0.5s,baz=245,slow=11,SNR=9.4						
	0.2nm,0.5s						
JHJ	**Hachijo jima 2**	**34.73**	**255**	LR	LR	16 12 39.5	
	comp=Z,64nm,19.9s,baz=142,slow=36						
PDAR	**Pinedale Array**	**46.70**	**72**	P	**P**	**16 00 24.4**	**+0.5**
	1.1nm,1.0s,baz=316,slow=4.1,SNR=6.3						
	1.1nm,1.0s						
KURBB	**Kurchatov Arra**	**59.31**	**314**	P	**P**	**16 01 56.4**	**+0.1**
	0.7nm,0.6s,baz=42,slow=6.6,SNR=6.9						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**60.17**	**308**	P	**P**	**16 02 02.1**	**-0.3**
	0.5nm,0.6s,baz=45,slow=8.3,SNR=1.5						
	0.5nm,0.6s						
AKASG	**Malin Array Be**	**75.97**	**342**	P	**P**	**16 03 40.4**	**-1.0**
	0.6nm,0.3s,baz=22,slow=6.6,SNR=4.8						
	0.6nm,0.3s						

IDC 24 16:01:02.3±2.1, 30.97S×179.37W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=60.9km s-min=37.7km az=46.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.91**	**268**	P	P	16 08 54.9	+0.1
	0.1nm,0.3s,baz=106,slow=7.0,SNR=8.8						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**42.95**	**274**	P	P	16 09 02.5	-0.8
	0.4nm,0.3s,baz=114,slow=8.0,SNR=2.5						
	0.4nm,0.3s						
QSPA	**South Pole Qui**	**59.14**	**180**	P	P	16 11 04.6	0.0
	0.7nm,0.7s,baz=63,slow=2.3,SNR=6.5						
	0.7nm,0.7s						
FINES	**FINESS Array B**	**145.26**	**339**	PKPbc	PKPbc	16 20 40.2	-0.7
	1.3nm,0.8s,baz=44,slow=5.4,SNR=5.9						

*JMA **24** 16:02:56.1±0.6, 32.1N±5.3×13.8E±, h432km, MV3.1/23, NEAR TORISHIMA IS*
*IDC **24** 16:02:59.8±0.7, 32.09N×137.97E, h395km±9km, mb2.9/9, mbtmp3.7/14, Error ellipse: s-maj=20.4km s-min=11.5km az=72.0*

ISC 24 16:02:59.4±0.7, 32.01N±0.07×138.05E±0.08, h400km, n30, σ1s36/34, mb3.1/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.83**	**53**	P	**Pn**	**16 03 54.8**	**+0.5**
	111nm,0.8s,baz=252,slow=20,SNR=6.4						
JHJ				S	**S**	**16 04 38.8**	**+0.1**
	48nm,0.4s,baz=253,slow=19,SNR=1.5						
JHJ2	**Mitsune**	**1.85**	**53**	*e*P	**Pn**	**16 03 54.9**	**+0.6**
TTO2	**TONANKAI O.B.S**	**1.92**	**334**	*e*P	**Pn**	**16 03 55.3**	**+0.9**
TTO4	**TONANKAI O.B.S**	**2.04**	**348**	*e*P	**Pn**	**16 03 55.8**	**+0.7**
JIE	**Ise**	**2.63**	**335**	*e*P	**Pn**	**16 03 59.5**	**0.0**
JWY	**Kouya**	**3.02**	**318**	*e*P	**Pn**	**16 04 02.5**	**-0.2**
JOD2	**Odawara 2**	**3.36**	**15**	*e*P	**Pn**	**16 04 05.5**	**0.0**
JYN	**Shimob**	**3.50**	**7**	*e*P	**Pn**	**16 04 07.4**	**+0.6**
BSO1	**Boso 1**	**3.60**	**42**	*e*P	**Pn**	**16 04 06.3**	**-0.6**
BSO1				*e*S	**S**	**16 04 59.7**	**-2.3**
JYTA	**Yamagatataniai**	**3.74**	**343**	*e*P	**Pn**	**16 04 08.8**	**-0.1**
JWT	**Wachi**	**3.94**	**327**	*e*P	**Pn**	**16 04 10.4**	**-0.3**
JWT				*e*S	**S**	**16 05 06.2**	**-2.5**
JRY	**Ryogami san**	**4.06**	**10**	*e*P	**Pn**	**16 04 12.0**

AKUT Akutan 6.55 61 P **Pn** **16 22 45.0 +2.1**
AKUT Akutan 6.55 61 S **Sn** **16 23 59.3 +2.2**
SHEM Shemya Is, Ala 6.56 286 Pn Pn 16 22 48.8 +5.7
3.8nm,0.3s,baz=94,slow=17,SNR=1.9
SPIA Saint Paul Isl 6.61 26 **Pn** **16 22 45.3 +1.5**
SPIA Saint Paul Isl 6.61 26 P **Pn** **16 22 46.5 +2.7**
SDPT Sand Point 9.85 60 Pn **Pn** **16 23 28.8 +0.7**
SDPT Sand Point 9.85 60 P **Pn** **16 23 29.4 +1.3**
SDPT Sand Point 9.85 60 S **Sn** **16 25 20.9 +2.7**
CHNA Chernabura Isl 10.20 64 P **Pn** **16 23 33.2 +0.3**
OHAK Old Harbor 14.22 57 P **Pn** **16 24 29.2 +1.3**
KDAK Kodiak Island 14.74 55 Pn **Pn** **16 24 31.6 -3.3**
0.3nm,0.3s,baz=268,slow=14,SNR=18
KDAK Sn **Sn** **16 27 19.4 +1.7**
0.1nm,0.3s,baz=280,slow=11,SNR=1.6
KDAK Kodiak Island 14.74 55 **Pn** **16 24 34.5 -0.4**
J17K VABM Dome 14.93 30 **P** **16 24 45.2 +2.2**
P19K Oil Pt 15.06 48 P **P** **16 24 44.8 +0.2**
RED Redoubt Volcan 15.59 46 Pn **Pn** **16 24 46.8 +0.4**
L19K White Mountain 15.61 38 P **P** **16 24 50.2 -0.4**
L19K IAmb IAmb 16 24 56.6
comp=Z,24nm,1.2s
H17K Granite Mounta 15.86 25 P **P** **16 24 59.1 +5.7**
H17K IAmb IAmb 16 25 09.8
comp=Z,17nm,1.0s
BRLK Bradley Lake 16.20 49 Pn **Pn** **16 24 55.0 +0.9**
BRLK IAmb IAmb 16 25 24.9
comp=Z,43nm,1.4s
J19K Poorman 16.45 32 P **P** **16 25 02.4 +2.5**
PETK Petropavlovsk- 16.48 287 Pn **Pn** **16 24 56.9 -0.8**
comp=Z,0.1nm,0.3s,baz=85,slow=11,SNR=2.0
PETK LR LR 16 31 06.4
comp=Z,71nm,20.5s,baz=80,slow=36
comp=Z,5.5nm,1.0s
STLK Strandline Lak 16.48 43 **P** **16 24 59.5 -0.9**
SKT Skwentna 16.84 41 **P** **16 25 04.2 0.0**
L22K Petersville 17.41 40 **P** **16 25 10.9 +0.3**
PMR Palmer 17.69 44 **P** **16 25 14.3 +0.7**
KTH Kantishna Hill 17.87 37 **P** **16 25 16.6 +0.9**
KTH IAmb IAmb 16 25 33.2
comp=Z,35nm,1.3s
TRF Thorofare Moun 18.06 38 **P** **16 25 18.9 +1.0**
TRF IAmb IAmb 16 25 28.1
comp=Z,21nm,1.4s
BPAW Bear Paw Mtn. 18.14 36 **Pn** **16 25 18.7 +0.3**
IMAR Indian Mountai 18.38 29 P **Pn** **16 25 21.4 +0.2**
I21K Tanana 18.42 32 P **P** **16 25 21.7 +0.1**
RND Reindeer 18.60 39 P **P** **16 25 22.6 -1.2**
RND IAmb IAmb 16 25 43.0
comp=Z,14nm,1.2s
MCK McKinley 18.73 38 P **P** **16 25 25.3 +0.2**
DHY Denali Highway 19.05 41 P **P** **16 25 28.5 -0.2**
H22K Ishtalitna Cre 19.06 31 IAmb IAmb 16 25 34.9
comp=Z,16nm,1.2s
NEA2 Nenana 19.11 36 P **P** **16 25 28.7 -0.6**
D19K Kuna River 19.16 20 IAmb IAmb 16 25 53.6
comp=Z,15nm,1.1s
I23K Minto, Yukon-K 19.30 34 IAmb IAmb 16 25 53.3
comp=Z,14nm,1.1s
CCB Clear Creek Bu 19.61 37 **P** **16 25 33.8 -0.9**
D20K Etivluk River 19.66 21 IAmb IAmb 16 25 44.2
comp=Z,20nm,1.4s
N25K Chitina, Valde 19.73 47 P **P** **16 25 37.0 +0.9**
N25K IAmb IAmb 16 25 53.8
comp=Z,20nm,1.4s
HDA Harding Lake 19.82 38 IAmb IAmb 16 25 41.7
comp=Z,7.0nm,0.7s
K24K Donnelly Dome 20.01 40 P **P** **16 25 38.9 -0.2**
K24K IAmb IAmb 16 25 54.1
comp=Z,15nm,0.8s
ILAR Eielson Array 20.01 37 P **P** **16 25 37.1 -2.0**
comp=Z,0.6nm,0.6s,baz=224,slow=8.7,SNR=35
ILAR S **S** **16 29 17.7 -5.6**
comp=Z,0.3nm,0.9s,baz=229,slow=16,SNR=2.3
ILAR ScP **ScP** **16 33 30.1 +0.4**
comp=Z,0.5nm,0.7s,baz=259,slow=2.8,SNR=4.9
comp=Z,0.6nm,0.6s
H24K Noodor Dome 20.20 34 IAmb IAmb 16 25 46.2
comp=Z,11nm,1.0s
COLD Coldfoot 20.27 29 **P** **16 25 42.8 +1.0**
COLD IAmb IAmb 16 25 49.6
comp=Z,15nm,1.3s
RIDG Independent Ri 20.36 41 P **P** **16 25 42.2 -0.7**
RIDG IAmb IAmb 16 25 48.9
comp=Z,9.0nm,0.6s
J25K Salcha River, 20.52 38 IAmb IAmb 16 26 11.1
comp=Z,10nm,1.1s
MENT Mentasta 20.54 43 P **P** **16 25 45.1 +0.3**
MA2 Magadan 20.62 307 LR LR 16 33 42.5
comp=Z,52nm,18.9s,baz=108,slow=37
DOT Dot Lake 20.65 41 P **P** **16 25 46.5 +0.5**
DOT IAmb IAmb 16 25 50.0
comp=Z,12nm,0.9s
SEY Seymchan 20.68 316 P **P** **16 25 46.4 +0.1**
comp=Z,3.3nm,0.9s,baz=183,slow=23,SNR=1.4
comp=Z,3.3nm,0.9s
SCRK Sand Creek 20.81 40 P **P** **16 25 46.2 -1.6**
SCRK IAmb IAmb 16 25 51.5
comp=Z,16nm,0.9s
F24K Squaw Lake 21.15 30 IAmb IAmb 16 26 15.4
comp=Z,13nm,1.2s
J26L Joseph Creek 21.18 39 IAmb IAmb 16 25 55.9
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 21.36 26 IAmb IAmb 16 26 04.9
comp=Z,22nm,1.4s
G26K Porcupine Rive 22.19 33 IAmb IAmb 16 26 07.0
comp=Z,9.8nm,1.4s
E25K Arctic Village 22.22 30 IAmb IAmb 16 26 14.5
comp=Z,8.2nm,1.1s
F26K Sheenjek River 22.44 31 IAmb IAmb 16 26 26.2
comp=Z,14nm,1.4s
I28M Miner Creek 22.97 39 IAmb IAmb 16 26 36.6
comp=Z,11nm,1.4s
F28M Old Crow 23.84 34 P **P** **16 26 18.6 -0.9**
I30M Mount Dempster 24.32 40 IAmb IAmb 16 26 43.9
comp=Z,4.4nm,0.8s
E28M Babbage River 24.39 31 IAmb IAmb 16 26 28.6
comp=Z,8.0nm,1.2s
E29M Blow River 24.85 33 IAmb IAmb 16 26 34.0
comp=Z,7.3nm,0.8s
ASAJ Asahikawa 28.77 272 LR LR 16 39 24.7
comp=Z,51nm,19.0s,baz=165,slow=38
A36M Sachs Harbour 30.13 28 P **P** **16 27 15.0 -0.8**
A36M IAmb IAmb 16 27 40.4
comp=Z,3.7nm,0.9s
YAK Yakutsk 30.99 312 LR LR 16 39 20.1
comp=Z,41nm,20.1s,baz=68,slow=35
YKA Yellowknife Ar 33.76 47 P **P** **16 27 48.1 +0.3**
comp=Z,0.7nm,0.8s,baz=220,slow=6.7,SNR=5.2
comp=Z,0.7nm,0.8s
H11N2 WAKE ISLAND Hy 34.45 210 T T 17 04 30.3
baz=18,slow=76,SNR=21
H11N3 WAKE ISLAND Hy 34.45 210 T T 17 04 30.9
baz=18,slow=76,SNR=16
H11N1 WAKE ISLAND Hy 34.46 210 T T 17 04 41.8
baz=18,slow=76,SNR=22
WAKE Wake Island 34.94 210 P **P** **16 27 58.9 +0.4**
COR Corvallis 34.97 80 P **P** **16 27 59.0 +0.5**
USRK Ussuriysk Ar. 35.34 279 P **P** **16 28 01.1 -0.6**
comp=Z,2.0nm,0.6s,baz=59,slow=9.5,SNR=6.8
comp=Z,2.0nm,0.6s
B08A Colville Reser 35.60 72 P **P** **16 28 04.5 +0.5**
B08A IAmb IAmb 16 28 05.5
comp=Z,4.5nm,0.8s
H11S1 WAKE ISLAND Hy 35.66 210 T T 17 06 15.5
baz=18,slow=76,SNR=32
H11S2 WAKE ISLAND Hy 35.67 210 T T 17 06 10.9
baz=18,slow=76,SNR=17
H11S3 WAKE ISLAND Hy 35.67 210 T T 17 06 11.0
baz=18,slow=76,SNR=5.9
MJAR Matsushiro Arr 35.82 264 P **P** **16 28 05.9 -0.1**
comp=Z,1.8nm,0.8s,baz=54,slow=6.8,SNR=7.5
comp=Z,1.8nm,0.8s
J05D Fort Rock, OR 36.92 81 P **P** **16 28 16.6 +1.3**
J05D IAmb IAmb 16 28 25.7
comp=Z,5.9nm,1.3s
JGF Kuroka 36.95 263 P **P** **16 28 16.2 +0.5**
NEW Newport 36.95 71 P **P** **16 28 15.9 +0.4**
NEW IAmb IAmb 16 28 33.4
comp=Z,6.6nm,1.0s
K05A Summer Lake 37.43 81 P **P** **16 28 20.8 +1.0**
K05A IAmb IAmb 16 28 21.8
comp=Z,9.4nm,1.2s
HOPS Hopland Field 38.18 88 P **P** **16 28 27.0 +1.0**
JCJ Chichijima 39.97 249 LR LR 16 40 52.4
comp=Z,62nm,21.9s,baz=130,slow=30

BCYI Bear Canyon 41.16 75 P **P** **16 28 51.0 0.0**
NVAR Mina Array Bea 41.51 85 P **P** **16 28 52.9 -1.0**
comp=Z,0.5nm,0.6s,baz=297,slow=9.7,SNR=3.6
comp=Z,0.5nm,0.6s
KSRS Korea Array 41.70 273 P **P** **16 28 55.2 +0.1**
comp=Z,2.2nm,1.0s,baz=50,slow=7.7,SNR=2.5
comp=Z,2.2nm,1.0s
YHL Hebgen Lake 42.21 73 P **P** **16 28 59.7 +0.1**
YHL IAmb IAmb 16 29 01.1
comp=Z,11nm,1.4s
TPNV Topopah Spring 43.70 85 P **P** **16 29 12.2 +0.6**
TPNV IAmb IAmb 16 29 43.9
comp=Z,2.9nm,0.9s
DUG Dugway, Tooele 43.86 79 P **P** **16 29 13.4 +0.5**
DUG IAmb IAmb 16 29 14.3
comp=Z,3.2nm,1.1s
BW06 Boulder Array 44.35 74 P **P** **16 29 16.6 -0.3**
PD31 Pinedale Array 44.35 74 P **P** **16 29 16.8 -0.1**
PD31 IAmb IAmb 16 29 17.7
comp=Z,5.1nm,0.8s
PDAR Pinedale Array 44.35 74 P **P** **16 29 16.7 -0.1**
comp=Z,4.3nm,0.7s,baz=306,slow=4.1,SNR=39
comp=Z,4.3nm,0.7s
O20A White River Ci 46.70 76 P **P** **16 29 35.5 +0.1**
SONM Songino Array 48.50 298 P **P** **16 29 48.9 -0.3**
comp=Z,0.4nm,0.8s,baz=44,slow=8.5,SNR=1.6
comp=Z,0.4nm,0.8s
YOJ Yonaguni jima 53.58 264 P **P** **16 30 27.8 +0.3**
ZALV Zalesovo Beam 55.54 315 LR LR 16 55 57.5
comp=Z,34nm,19.5s,baz=55,slow=38
TX31 Lajitas Ar. Si 56.62 84 P **P** **16 30 49.2 -0.4**
TX31 IAmb IAmb 16 30 49.7
comp=Z,1.9nm,0.8s
TXAR Lajitas Array 56.62 84 P **P** **16 30 49.0 -0.6**
comp=Z,1.6nm,0.7s,baz=296,slow=5.0,SNR=20
comp=Z,1.6nm,0.7s
TXAP Lajitas Array 56.62 84 P **P** **16 30 49.0 -0.6**
R40A Maddies Statio 57.41 68 P **P** **16 30 55.6 +0.7**
KURK Kurchatov 60.52 315 P **P** **16 31 15.8 -0.5**
KURK Kurchatov 60.52 315 IAmb IAmb 16 31 17.2
comp=Z,1.5nm,0.7s
KURBB Kurchatov Arra 60.63 315 P **P** **16 31 15.8 -1.3**
comp=Z,1.1nm,0.6s,baz=44,slow=6.9,SNR=15
comp=Z,1.1nm,0.6s
DELO Deloro Mine 61.15 54 P **P** **16 31 21.5 +0.8**
MK31 Makanchi Array 61.66 310 P **P** **16 31 22.8 -1.4**
MK31 IAmb IAmb 16 31 30.9
comp=Z,4.3nm,1.3s
MKAR Manchi Array 61.66 310 P **P** **16 31 22.9 -1.3**
comp=Z,0.7nm,0.6s,baz=52,slow=6.6,SNR=5.9
comp=Z,0.7nm,0.6s
MKAR Makanchi Array 61.66 310 P **P** **16 31 22.7 -1.4**
PECO Prince Edward 61.88 54 P **P** **16 31 24.7 -0.9**
BVAR Borovoye Array 62.23 321 P **P** **16 31 27.6 -0.3**
comp=Z,1.6nm,0.5s,baz=52,slow=6.9,SNR=13
BVAR LR LR 17 00 57.5
comp=Z,88nm,19.4s,baz=32,slow=38
comp=Z,1.6nm,0.5s
L56A Greenwood 62.87 56 P **P** **16 31 32.3 -0.1**
M57A Sunshine Farm, 63.67 56 P **P** **16 31 37.6 0.0**
SSPA Standing Stone 63.78 57 P **P** **16 31 38.2 -0.1**
PZH PanZhiHua 65.38 282 P **P** **16 31 49.6 +0.5**
NOA NORSAR Array B 67.85 356 P **P** **16 32 05.1 +0.8**
comp=Z,0.6nm,1.0s,baz=21,slow=8.1,SNR=1.1
comp=Z,0.6nm,1.0s
PMG Port Moresby 68.55 220 LR LR 17 00 56.5
comp=Z,13nm,18.3s,baz=337,slow=35
HFS Hagfors 68.64 355 P **P** **16 32 08.3 -0.9**
comp=Z,1.6nm,0.9s,baz=358,slow=4.3,SNR=4.5
comp=Z,1.6nm,0.9s
KK31 Karatay Array 69.91 315 P **P** **16 32 17.1 -0.3**
KK31 IAmb IAmb 16 32 45.0
comp=Z,3.5nm,1.2s
KKAR Karatay Array 69.91 315 P **P** **16 32 17.1 -0.2**
KSH Kashi 70.16 309 P **P** **16 32 22.0 +2.9**
KSH pmax pmax
comp=Z,3.0nm,0.6s
CMAR Chiang Mai Arr 73.06 278 P **P** **16 32 36.4 -0.4**
comp=Z,0.5nm,0.3s,baz=33,slow=7.0,SNR=7.2
comp=Z,0.5nm,0.3s
RAR Rarotonga 73.55 165 LR LR 16 58 43.1
comp=Z,65nm,18.9s,baz=149,slow=31
DZM Mont Dzumac 74.79 197 LR LR 17 00 32.3
comp=Z,194nm,19.9s,baz=92,slow=32
AKASG Malin Array Be 76.19 344 P **P** **16 32 55.8 +1.4**
comp=Z,0.3nm,0.3s,baz=19,slow=6.4,SNR=2.4
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 76.19 344 IAmb IAmb 16 33 37.4
comp=Z,3.8nm,1.3s
CTAO Charters Tower 78.62 216 P **P** **16 33 08.1 -0.2**
MTN Manton Dam 78.86 233 P **P** **16 33 09.7 +0.1**
JUD3 Juan Diaz 3 82.13 84 P **P** **16 33 27.2 -0.3**
WR8 Warramunga Arr 83.39 226 P **P** **16 33 32.8 -0.9**
WR8 IAmb IAmb 16 34 15.0
comp=Z,2.2nm,1.1s
WRA Warramunga Arr 83.45 227 P **P** **16 33 33.2 -0.8**
comp=Z,1.6nm,1.0s,baz=31,slow=5.7,SNR=5.8
comp=Z,1.6nm,1.0s
BRTR Keskin Array B 85.80 338 P **P** **16 33 46.1 +0.1**
FITZ Fitzroy Crossi 86.09 235 P **P** **16 33 47.5 +0.2**
comp=Z,4.3nm,0.8s,baz=25,slow=5.5,SNR=4.7
comp=Z,4.3nm,0.8s
FITZ Fitzroy Crossi 86.09 235 P **P** **16 33 47.8 +0.5**
FITZ IAmb IAmb 16 33 48.1
comp=Z,1.2nm,0.8s
AS31 Alice Springs 86.88 225 P **P** **16 33 51.3 +0.1**
AS31 IAmb IAmb 16 33 59.2
comp=Z,1.5nm,1.4s
ASAR Alice Springs 86.88 225 P **P** **16 33 50.7 -0.5**
comp=Z,1.1nm,0.8s,baz=21,slow=5.5,SNR=19
comp=Z,1.1nm,0.8s
ASAR Alice Springs 86.88 225 P **P** **16 33 51.0 -0.1**
STKA Stephens Creek 91.05 215 P **P** **16 34 10.8 +0.3**
comp=Z,2.6nm,0.9s,baz=354,slow=9.3,SNR=4.3
comp=Z,2.6nm,0.9s
H03N2 Juan Fernandez 119.16 108 T T 18 51 22.2
baz=317,slow=77,SNR=12
H03N1 Juan Fernandez 119.17 108 T T 18 51 20.6
baz=317,slow=77,SNR=12
H03N3 Juan Fernandez 119.17 108 T T 18 51 23.9
baz=317,slow=77,SNR=10
QSPA South Pole Qui 141.09 180 PKP **PKPdf** **16 40 32.8 -2.7**
comp=Z,1.5nm,1.0s,baz=326,slow=3.0,SNR=5.3
MAW Mawson 147.71 218 PKPbc **PKPdf** **16 40 47.1 +0.3**
comp=Z,2.6nm,0.6s,baz=89,slow=9.2,SNR=4.0
BOSA Boshof 152.47 318 PKPbc **PKPbc** **16 41 00.1 -2.5**
comp=Z,1.4nm,0.6s,baz=78,slow=3.0,SNR=3.4

*IDC **24** 16:28:42.0±0.9,67.˚18N×23.˚69E,h0km,mbtmp3.1/5, ML1.8/4,Error ellipse: s-maj=20.6km s-min=7.5km az=103.0*
*UPP **24** 16:28:41.9±0.3,67.˚14N×23.˚27E,h10km±2km,ML2.1, Confirmed Earthquake*
*HEL **24** 16:28:42.6,67.˚13N×23.˚25E,h8km,ML1.8,ML2.1(UPP), Confirmed Earthquake*
*BER **24** 16:28:43.1±3.8,67.˚01N×23.˚47E,h8km,ML1.7, ML1.8(HEL),Confirmed Earthquake*
ISC 24 16:28:41.1±1.1,67.˚11N±0.˚02×23.˚20E±0.˚02,h3km±10km, n53,σ0°87/89,1C-4D,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KLF	**Kolari**	**0.33**	**67**	*e*P	**Pg**	**16 28 48.0**	**+0.7**
KLF				*e*S	**Sg**	**16 28 52.1**	**+0.5**
MASU	**Masugnsbyn**	**0.58**	**308**	P	**Pg**	**16 28 52.9**	**+0.6**
MASU				S	**Sg**	**16 29 00.8**	**+0.9**
MASU	**Masugnsbyn**	**0.58**	**308**	*i* P	**Pg**	**16 28 52.9**	**+0.6**
MASU				*i* S	**Sg**	**16 29 00.8**	**+0.9**
ERTU	**Ertsjaerv**	**0.68**	**216**	⇑P	**Pb**	**16 28 55.4**	**-0.2**
ERTU				S	**Sb**	**16 29 04.8**	**-0.7**
ERTU	**Ertsjaerv**	**0.68**	**216**	*e*P	**Pb**	**16 28 55.5**	**-0.2**
ERTU				*e*S	**Sb**	**16 29 04.8**	**-0.7**
LANU	**Lannavaara**	**1.05**	**335**	P	**Pg**	**16 29 00.7**	**-0.5**
LANU				S	**Sg**	**16 29 14.7**	**-0.1**
LANU	**Lannavaara**	**1.05**	**335**	*e*P	**Pg**	**16 29 01.1**	**-0.1**
LANU				*e*S	**Sg**	**16 29 14.8**	**0.0**
TOF	**Tornio**	**1.13**	**156**	*e*P	**Pb**	**16 29 03.0**	**-0.2**
TOF				*e*S	**Sb**	**16 29 17.6**	**-0.6**
TOF				smax	smax	16 29 17.8	
comp=Z,4.6nm,0.1s							
RNF	**Rovaniemi**	**1.22**	**113**	*e*P	**Pg**	**16 29 03.9**	**-0.6**
RNF				*e*S	**Sg**	**16 29 19.8**	**-0.4**
RNF				smax	smax	16 29 20.2	
comp=Z,14nm,0.1s							

KALU Kalix 1.25 177 P **Pn** **16 29 05.4 -0.1**
KALU S **Sn** **16 29 21.6 -1.2**
KALU Kalix 1.25 177 *e*PG **Pn** **16 29 05.4 -0.1**
KALU *e*S **Sn** **16 29 21.7 -1.2**
KALU smax smax 16 29 22.9
comp=Z,4.8nm,0.1s
HARU Harads 1.30 224 P **Pn** **16 29 06.0 -0.1**
HARU S **Sn** **16 29 24.1 +0.2**
HARU Harads 1.30 224 *e*P **Pn** **16 29 06.0 -0.1**
HARU *e*S **Sn** **16 29 24.1 +0.2**
HEF Hetta 1.32 7 *e*P **Pn** **16 29 05.4 -1.0**
HEF *e*S **Sg** **16 29 22.6 -0.8**
HEF Hetta 1.32 7 *e*P **Pn** **16 29 05.4 -1.0**
HEF *e*SG **Sg** **16 29 22.6 -0.8**
HEF smax smax 16 29 23.8
comp=Z,15nm,0.1s
SGF Sodankyl 1.34 74 *e*P **Pn** **16 29 05.7 -0.9**
SGF *e*S **Sg** **16 29 22.4 -1.5**
SGF smax smax 16 29 24.9
comp=Z,6.4nm,0.1s
KUA Kurravaara 1.39 309 ⇓P **Pn** **16 29 06.9 -0.4**
KUA Kurravaara 1.39 309 ⇓*e*P **Pn** **16 29 06.9 -0.4**
RATU Laukkuluspa 1.56 299 P **Pb** **16 29 10.0 -0.6**
RATU S **Sg** **16 29 31.6 +0.3**
RATU Laukkuluspa 1.56 299 *e*P **Pb** **16 29 10.0 -0.6**
RATU *e*S **Sg** **16 29 31.6 +0.3**
SJUU Sjulsmark 1.73 203 P **Pb** **16 29 13.1 -0.4**
SJUU S **Sg** **16 29 36.6 0.0**
SJUU Sjulsmark 1.73 203 *e*P **Pb** **16 29 13.1 -0.4**
SJUU *e*S **Sg** **16 29 36.6 0.0**
NIKU Nikkaluokta 1.77 297 ⇓P **Pb** **16 29 13.6 -0.6**
NIKU S **Sg** **16 29 37.3 -0.7**
NIKU Nikkaluokta 1.77 297 ⇓*e*P **Pb** **16 29 13.6 -0.6**
NIKU *e*S **Sg** **16 29 37.3 -0.7**
RANF Ranua 1.81 126 *e*PN **Pb** **16 29 14.0 -0.8**
RANF *e*SN **Sb** **16 29 37.2 -0.5**
SALU Saltoluokta 1.84 281 *e*P **Pb** **16 29 14.7 -0.7**
SALU *e*S **Sg** **16 29 39.4 -0.9**
SALU Saltoluokta 1.84 281 *e*P **Pb** **16 29 14.7 -0.7**
SALU *e*S **Sg** **16 29 39.4 -0.9**
KTK1 Kautokeino 1.91 0 *e*P **Pn** **16 29 14.9 +0.3**
KTK1 *e*S **Sn** **16 29 39.1 0.0**
KTK1 IAML 16 29 40.5
comp=Z,7.7nm,0.6s
KTK1 Kautokeino 1.91 0 *e*P **Pn** **16 29 14.9 +0.3**
KTK1 *e*S **Sn** **16 29 38.8 -0.4**
KIF Kilpisjarvi 2.11 336 *e*P **Pb** **16 29 19.3 -0.5**
KIF *e*S **Sb** **16 29 45.8 -0.6**
KIF Kilpisjarvi 2.11 336 *e*PB **Pb** **16 29 19.4 -0.5**
ARA0 ARCESS Array S 2.58 18 *e*P **Pn** **16 29 23.9 +0.1**
ARA0 *e*S **Sn** **16 29 57.9 +2.2**
ARA0 IAML 16 29 58.8
comp=Z,5.1nm,0.2s
ARA0 ARCESS Array S 2.58 18 *e*P **Pn** **16 29 23.9 +0.1**
ARA0 *e*SB **Sn** **16 29 57.9 +2.2**
ARA0 IAML 16 29 58.8
comp=Z,5.1nm,0.2s
ARCES ARCESS Array B 2.58 18 Pn **Pn** **16 29 23.9 +0.1**
comp=Z,0.3nm,0.3s,baz=199,slow=14,SNR=79
ARCES Sn **Sn** **16 29 53.6 -2.1**
comp=Z,0.9nm,0.3s,baz=200,slow=23,SNR=18
ARCES Lg Lg 16 29 57.5
comp=Z,1.0nm,0.3s,baz=201,slow=30,SNR=2.5
comp=Z,1.0nm,0.2s
JETT Jettan, Norway 2.67 338 *e*P **Pn** **16 29 26.0 +1.0**
JETT *e*S **Sn** **16 29 58.2 +0.4**
JETT IAML 16 30 02.9
comp=Z,22nm,0.6s
JETT Jettan, Norway 2.67 338 *e*P **Pn** **16 29 26.0 +1.0**
JETT *e*S **Sn** **16 29 58.2 +0.4**
JETT IAML 16 30 02.9
comp=Z,22nm,0.6s
TRO Tromso 2.99 330 *e*P **Pb** **16 29 35.6 +0.7**
KEV Kevo 3.01 26 *e*P **Pn** **16 29 30.0 +0.4**
KEV Kevo 3.01 26 *e*P **Pn** **16 29 30.0 +0.4**
FAUS Fauske 3.09 279 *e*P **Pn** **16 29 31.1 +0.5**
FAUS Fauske 3.09 279 *e*P **Pn** **16 29 31.1 +0.5**
STEI Steigen 3.17 289 *e*P **Pn** **16 29 31.5 -0.2**
STEI *e*S **Sn** **16 30 10.2 +0.2**
STEI IAML 16 30 25.4
comp=Z,3.8nm,0.7s
STEI Steigen 3.17 289 *e*P **Pn** **16 29 31.5 -0.2**
STEI *e*S **Sn** **16 30 10.2 +0.2**
STEI IAML 16 30 25.4
comp=Z,3.8nm,0.7s
MOR8 Moi Rana 3.61 259 *e*P **Pn** **16 29 37.5 -0.4**
MOR8 Moi Rana 3.61 259 *e*P **Pn** **16 29 37.5 -0.4**
VAF Ylistaro 4.09 183 *e*P **Pn** **16 29 46.2 +1.8**
KEF Keuruu 5.01 171 *e*P **Pn** **16 29 59.6 +2.5**
JOF Joensuu 5.43 137 *e*P **Pn** **16 30 04.2 +1.4**
FINES FINESS Array B 5.82 166 Pn **Pn** **16 30 10.3 +2.1**
comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=1.3
FINES Sn **Sn** **16 31 15.2 -0.2**
comp=Z,0.1nm,0.3s,baz=352,slow=24,SNR=1.4
FINES Lg Lg 16 31 40.1
comp=Z,0.3nm,0.3s,baz=349,slow=29,SNR=4.3
comp=Z,0.9nm,0.9s
RAF Rauma 6.14 187 *e*P **Pn** **16 30 13.7 +1.1**
NOA NORSAR Array B 8.03 226 Pn **Pn** **16 30 39.9 +1.4**
baz=29,slow=7.6,SNR=1.9
NOA Lg Lg 16 32 57.8
baz=47,slow=24,SNR=2.1
comp=Z,0.4nm,0.8s
HFS Hagfors 8.17 216 Pn **Pn** **16 30 41.9 +1.5**
baz=27,slow=13,SNR=1.4
comp=Z,1.3nm,0.9s
SPITS Spitsbergen Ar 11.30 353 Pn **Pn** **16 31 21.9 -1.3**
comp=Z,4.2nm,0.9s,baz=162,slow=15,SNR=1.3

*IDC **24** 16:45:56.5±2.9, 18.˚24S×178.˚09W,h558km±32km, mb3.5/16,mbtmp4.4/17,Error ellipse: s-maj=17.0km s-min=15.6km az=84.0*
*NEIC **24** 16:45:58.5±1.6, 18.˚2S±0.˚1×178.˚1W±0.˚1,h581km±8km, mb4.4/90,Error ellipse: s-maj=15.8km s-min=13.5km az=146.0*
*NOU **24** 16:45:59.8, 18.˚12S×178.˚31W,h580km,mb4.3/21,Fiji Islands Region*
ISC 24 16:45:59.4±0.4, 18.˚14S±0.˚07×178.˚22W±0.˚07, h590km, n175,σ0°90/175, mb4.4/60, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.58**	**260**	P	**P**	**16 47 07.4**	**-1.5**
TAVE	**Taveuni**	**2.15**	**311**	P	**P**	**16 47 12.5**	**-1.0**
DGTI	**Dogotuki**	**2.68**	**313**	P	**P**	**16 47 14.5**	**-1.5**
MSVF	**Nonsavu**	**3.58**	**276**	P	**P**	**16 47 20.9**	**-0.4**
MSVF	**Nonsavu**	**3.58**	**276**	P	**P**	**16 47 21.3**	**-0.1**
AFI	**Afiamalu**	**7.48**	**57**	P	**P**	16 47 49.2	-4.5
NIUE	**Niue**	**7.92**	**98**	P	**P**	**16 47 55.2**	**-2.4**
NIUE	**Niue**	**7.92**	**98**	P	**P**	**16 47 59.8**	**+2.2**
FUNA	**Funafuti**	**9.88**	**345**	P	**P**	**16 48 15.4**	**-1.5**
MARNC	**Mare, Loyalty**	**13.36**	**253**	P	**P**	**16 48 52.4**	**+0.4**
PINNC	**Pines Island,**	**14.16**	**249**	P	**P**	**16 48 59.7**	**-0.2**
SANVU	**Saraoutou**	**14.21**	**279**	P	**P**	**16 49 01.2**	**+0.6**
DZM	**Mont Dzumac**	**14.93**	**252**	P	**P**	**16 49 06.3**	**-1.0**
7.8nm,1.0s,baz=22,slow=13,SNR=1.4							
RAR	**Rarotonga**	**17.64**	**103**	P	**P**	**16 49 30.5**	**-1.6**
RAR				IAmb	IAmb	16 49 57.3	
comp=Z,22nm,1.4s							
OUZ	**Omahuta**	**18.50**	**202**	P	**P**	**16 49 41.6**	**+1.7**
KUZ	**Kuaotunu**	**19.29**	**195**	P	**P**	**16 49 48.8**	**+1.8**
TOZ	**Tahuroa Roac**	**20.28**	**194**	P	**P**	**16 49 54.8**	**-1.2**
TOZ				IAmb	IAmb	16 50 00.2	
comp=Z,18nm,1.1s							
URZ	**Urewera**	**20.46**	**191**	P	**P**	**16 49 53.8**	**-3.7**
comp=Z,12nm,0.4s,baz=331,slow=7.6,SNR=24							
comp=Z,12nm,0.4s							
BKZ	**Black Stump Fm**	**21.45**	**191**	P	**P**	**16 50 06.7**	**+0.2**
MRZ	**Mangatainoka R**	**23.07**	**192**	P	**P**	**16 50 18.2**	**-2.6**
TATA	**Tatamba Isabel**	**23.46**	**292**	P	**P**	**16 50 24.9**	**+0.2**
TCW	**Tory Channel**	**23.88**	**194**	P	**P**	**16 50 26.0**	**-2.0**
QRZ	**Quartz Range**	**23.97**	**197**	P	**P**	**16 50 28.0**	**-0.8**
THZ	**Tophouse**	**24.74**	**196**	P	**P**	**16 50 33.4**	**-2.3**
FOZ	**Fox Glacier**	**27.26**	**199**	P	**P**	**16 50 55.4**	**-2.2**
JCZ	**Jackson Bay**	**28.07**	**200**	P	**P**	**16 51 04.2**	**-0.7**
EIDS	**Eidsvold**	**29.36**	**250**	P	**P**	**16 51 15.2**	**-1.0**
EIDS				IAmb	IAmb	16 51 33.4	
comp=Z,11nm,1.2s							
MLZ	**Mavora Lakes**	**29.44**	**200**	P	**P**	**16 51 15.0**	**-1.6**
ARMA	**Armidale**	**29.98**	**240**	P	**P**	**16 51 22.4**	**+0.7**
ARMA				IAmb	IAmb	16 51 47.0	

comp=Z,23nm,1.5s
ARMA Armidale 29.98 240 P P 16 51 22.6 +0.9
CNB Canberra Magne 33.43 233 P P 16 51 52.1 +1.3
CTAO Charters Tower 33.59 261 P P 16 51 52.4 +0.1
CTAO IAmb IAmb 16 51 52.7
comp=Z,7.4nm,0.6s
CTAO Charters Tower 33.59 261 P P 16 51 52.2 -0.1
CAN Canberra 33.71 233 P P 16 51 53.7 +0.6
CAN IAmb IAmb 16 52 05.9
comp=Z,18nm,1.4s
PMG Port Moresby 34.68 280 P 16 52 02.2 +0.8
CMSA Cobar Meteorol 35.20 241 P P 16 52 05.9 +0.4
TOO Toolangi 37.17 231 P P 16 52 22.1 +0.4
COEN Coen 37.29 271 P P 16 52 23.6 +0.7
COEN IAmb IAmb 16 52 24.3
comp=Z,11nm,0.9s
MANU Manus Island 37.35 291 P P 16 52 24.4 +1.0
STKA Stephens Creek 38.68 241 P P 16 52 34.5 +0.5
comp=Z,3.3nm,0.5s,baz=90,slow=11,SNR=11
comp=Z,3.3nm,0.5s
INKA Innaminka 38.83 248 P 16 52 36.2 +1.0
QIS Mount Isa 39.79 259 P P 16 52 42.6 -0.4
HTT Hallett 41.19 240 P P 16 52 54.4 +0.4
JAY Jayapura 43.15 286 P P 16 53 10.2 +0.7
comp=Z,15nm,0.7s,baz=102,slow=4.4,SNR=6.8
comp=Z,15nm,0.7s
BBOO Buckleboo 43.45 241 P P 16 53 11.8 +0.1
BBOO Buckleboo 43.45 241 P P 16 53 11.8 +0.1
DHH Diamond Head 43.97 28 P P 16 53 15.8 +0.1
WR8 Warramunga Arr 44.62 260 P 16 53 20.1 -0.7
WB0 Warramunga Arr 44.74 260 P 16 53 21.1 -0.7
WB0 IAmb IAmb 16 53 21.9
comp=Z,7.7nm,0.6s
WRAB Tennant Creek 44.76 260 P P 16 53 21.1 -0.8
WRA Warramunga Arr 44.77 260 P P 16 53 21.2 -0.8
comp=Z,4.5nm,0.5s,baz=96,slow=7.5,SNR=71
WRA PcP **PcP 16 54 51.5 +0.3**
comp=Z,0.8nm,0.3s,baz=90,slow=3.8,SNR=6.6
comp=Z,4.5nm,0.5s
WRA Warramunga Arr 44.77 260 P P 16 53 21.2 -0.8
AS31 Alice Springs 44.90 254 P 16 53 23.0 0.0
AS31 IAmb IAmb 16 53 24.0
comp=Z,9.2nm,0.5s
ASAR Alice Springs 44.90 254 P P 16 53 23.0 0.0
comp=Z,22nm,0.6s,baz=87,slow=9.0,SNR=473
ASAR PcP **PcP 16 54 51.7 +0.1**
comp=Z,1.6nm,0.4s,baz=102,slow=3.9,SNR=11
ASAR S **S 16 59 17.9 -1.2**
comp=Z,0.8nm,0.6s,baz=89,slow=16,SNR=6.4
comp=Z,22nm,0.6s
ASAR Alice Springs 44.90 254 P 16 53 22.9 -0.1
MTN Manton Dam 48.98 269 P P 16 53 53.2 -0.3
MTN IAmb IAmb 16 53 53.6
comp=Z,9.2nm,1.0s
FORT Forrest 50.07 245 P P 16 54 00.9 -0.5
FORT IAmb IAmb 16 54 22.0
comp=Z,19nm,1.1s
KNRA Kununurra 50.65 264 P P 16 54 05.4 -0.3
KNRA IAmb IAmb 16 54 24.8
comp=Z,16nm,1.2s
FAKI Fak Fak 50.80 281 P P 16 54 06.7 -0.3
FAKI IAmb IAmb 16 54 07.8
comp=Z,18nm,1.0s
FAKI Fak Fak 50.80 281 P P 16 54 06.8 -0.1
FITZ Fitzroy Crossi 53.17 261 P P 16 54 23.8 0.0
SOEI Soe 56.25 270 P P 16 54 45.6 0.0
SOEI IAmb IAmb 16 54 47.8
comp=Z,17nm,0.8s
TNTI Ternate 56.69 283 P P 16 54 48.4 0.0
PSA00 Pilbara Seismi 58.03 256 P P 16 54 56.8 -0.6
MBWA Marble Bar 58.20 256 P P 16 54 57.8 -0.6
MMRI Maumere 58.48 271 P P 16 54 60.0 -0.6
MMRI IAmb IAmb 16 55 00.3
comp=Z,48nm,1.4s
SBA Scott Base 60.20 184 P P 16 55 11.8 +1.0
SBA IAmb IAmb 16 55 48.8
comp=Z,35nm,1.4s
VNDA Vanda 60.23 185 P P 16 55 11.3 +0.2
comp=Z,0.8nm,0.7s,baz=8.0,slow=5.4,SNR=1.8
comp=Z,0.8nm,0.7s
VNDA Vanda 60.23 185 P P 16 55 11.9 +0.9
MORW Morawa 60.56 246 P P 16 55 13.9 -0.2
MORW IAmb IAmb 16 55 39.8
comp=Z,30nm,1.4s
KAPI Kappang 61.89 274 P P 16 55 23.1 +0.1
JAGI Jajag, Banyuwa 66.22 269 P P 16 55 49.2 -1.2
JAGI IAmb IAmb 16 56 09.9
comp=Z,23nm,1.3s
JGF Kuroka 68.03 322 P P 16 56 00.7 -0.4
JGF IAmb IAmb 16 56 13.2
comp=Z,21nm,1.4s
MJAR Matsushiro Arr 68.20 323 P P 16 56 01.9 -0.1
comp=Z,3.1nm,0.6s,baz=162,slow=5.8,SNR=19
comp=Z,3.1nm,0.6s
MJAR Matsushiro Arr 68.20 323 P P 16 56 01.4 -0.6
MAJO Matsushiro 68.20 323 P P 16 56 01.9 -0.1
MAJO IAmb IAmb 16 56 02.7
comp=Z,12nm,1.2s
KIWB Kanaga Island 69.70 1 P P 16 56 10.2 -0.4
ADK Adak 69.73 1 P P 16 56 10.4 -0.4
UGM Wanagama 69.82 268 P P 16 56 11.8 -0.5
ATKA Atka Island 70.13 3 P P 16 56 12.0 -1.1
QSPA South Pole Qui 71.92 180 P P 16 56 26.8 +3.1
comp=Z,1.8nm,0.5s,baz=9.9,slow=1.8,SNR=22
QSPA South Pole Qui 71.92 180 P P 16 56 26.6 +2.9
NACB Ninganchiao 72.19 304 P P 16 56 26.3 +0.4
NACB IAmb IAmb 16 57 03.7
comp=Z,17nm,1.1s
SSLB Suanglung 72.51 303 P P 16 56 27.0 -0.8
PEA0B Petropavlovsk- 73.95 345 P P 16 56 35.4 +0.2
PETK Petropavlovsk- 73.95 345 P P 16 56 35.0 -0.2
comp=Z,3.3nm,0.6s,baz=104,slow=7.2,SNR=16
comp=Z,3.3nm,0.6s
PETK Petropavlovsk- 73.95 345 P P 16 56 34.6 -0.6
KSRS Korea Array 74.99 318 P P 16 56 42.7 +1.3
comp=Z,1.2nm,0.7s,baz=134,slow=4.9,SNR=4.2
comp=Z,1.2nm,0.7s
DCMP DeCamp, Califo 76.85 41 P P 16 56 51.4 -0.3
DCMP IAmb IAmb 16 56 59.6
comp=Z,24nm,1.5s
USRK Ussuriysk Ar. 76.91 326 P P 16 56 52.6 +0.8
comp=Z,0.6nm,0.4s,baz=82,slow=6.7,SNR=4.6
comp=Z,0.6nm,0.4s
OHAK Old Harbor 77.91 14 P P 16 56 56.8 -0.1
KSXB Camp Six Broad 77.95 38 P P 16 56 56.4 -1.3
KSXB IAmb IAmb 16 57 04.2
comp=Z,30nm,1.4s
KDAK Kodiak Island 78.58 14 P P 16 57 00.4 -0.1
WAKR Walker 78.76 43 P P 16 57 02.2 0.0
N14K Kuskokwak Cree 78.94 8 P P 16 57 02.7 +0.4
L04D Klamath Falls 79.12 39 P P 16 57 04.2 +0.3
N15K Kwethluk River 79.41 9 P P 16 57 05.0 +0.2
N15K IAmb IAmb 16 57 26.0
comp=Z,23nm,1.1s
NVAR Mina Array Bea 79.46 44 P P 16 57 06.6 +0.7
comp=Z,1.2nm,0.6s,baz=225,slow=8.1,SNR=7.5
comp=Z,1.2nm,0.6s
NVAR Mina Array Bea 79.46 44 P P 16 57 06.3 +0.4
PAHR Pah Rah Range 79.47 42 P P 16 57 06.1 +0.3
TPNV Topopah Spring 80.05 46 P P 16 57 08.8 -0.2
K05A Summer Lake 80.26 39 P P 16 57 10.5 +0.5
M16K Timber Creek 80.39 9 P P 16 57 10.9 +1.0
M16K IAmb IAmb 16 57 45.6
comp=Z,30nm,1.4s
L16K Owhat River 80.97 9 P P 16 57 13.4 +0.6
L16K IAmb IAmb 16 57 16.4
comp=Z,19nm,1.4s
M17K Holitna River 81.00 10 P P 16 57 13.8 +0.7
K15K Wolf Creek Mou 81.25 8 P P 16 57 15.0 +0.7
L18K Granite Mounta 81.89 10 P P 16 57 18.2 +0.6
L18K IAmb IAmb 16 57 51.4
comp=Z,14nm,1.5s
J16K Anvik River 82.32 8 P P 16 57 20.2 +0.5
J16K IAmb IAmb 16 57 59.8
comp=Z,14nm,1.3s
L20K Farewell, AK 82.62 11 P P 16 57 20.6 -0.7
L20K IAmb IAmb 16 57 33.7
comp=Z,12nm,1.4s
PMR Palmer 82.78 14 P P 16 57 21.5 -0.5
PMR IAmb IAmb 16 57 33.6
comp=Z,24nm,1.4s
SML Sawmill 83.15 14 P P 16 57 23.3 -0.7
SML IAmb IAmb 16 57 26.1
comp=Z,22nm,1.4s
BMRM Bremner River 83.33 16 P P 16 57 24.8 -0.1
BMRM IAmb IAmb 16 57 26.7
comp=Z,24nm,1.4s
SCM Sheep Creek Mo 83.41 14 P P 16 57 24.9 -0.4
SCM IAmb IAmb 16 57 42.3
comp=Z,22nm,1.3s
TRF Thorofare Moun 84.19 12 IAmb IAmb 16 57 30.1
comp=Z,11nm,1.0s
O28M Mount Upton 84.37 18 P P 16 57 30.2 -0.1
RND Reindeer 84.45 13 P P 16 57 30.2 -0.2
RND IAmb IAmb 16 57 30.6
comp=Z,5.6nm,0.7s
M27K Edge Creek, AK 85.21 16 P P 16 57 34.3 +0.1
M27K IAmb IAmb 16 57 35.8
comp=Z,9.7nm,1.1s
Q32M Nakina River 85.53 22 P P 16 57 36.3 +0.4
CCB Clear Creek Bu 85.77 13 P P 16 57 35.6 -1.0
CCB IAmb IAmb 16 57 35.9
comp=Z,3.4nm,0.5s
BCAR Beaver Creek A 85.82 16 P P 16 57 37.6 +0.6
IMAR Indian Mountai 85.88 10 P P 16 57 36.6 -0.5
TXAR Lajitas Array 85.96 58 P P 16 57 39.9 +1.4
comp=Z,1.2nm,0.7s,baz=215,slow=5.4,SNR=16
comp=Z,1.2nm,0.7s
IL31 86.07 13 P P 16 57 36.8 -1.2
ILAR Eielson Array 86.07 13 P P 16 57 37.1 -0.9
comp=Z,1.2nm,0.4s,baz=220,slow=5.1,SNR=60
comp=Z,1.2nm,0.4s
ILAR Eielson Array 86.07 13 P P 16 57 37.0 -1.0
F19K Shaleruckik Mo 86.08 8 P P 16 57 37.5 -0.5
F19K IAmb IAmb 16 58 19.9
comp=Z,13nm,1.5s
J25K Salcha River, 86.26 14 P P 16 57 38.7 -0.4
J25K IAmb IAmb 16 57 39.0
comp=Z,7.7nm,1.3s
J26L Joseph Creek 86.58 14 P P 16 57 40.6 0.0
DAWY Dawson 87.26 16 P P 16 57 43.7 -0.1
DAWY IAmb IAmb 16 57 59.8
comp=Z,6.6nm,1.4s
PDAR Pinedale Array 87.39 43 P P 16 57 45.2 +0.1
comp=Z,0.7nm,0.6s,baz=222,slow=3.3,SNR=8.3
comp=Z,0.7nm,0.6s
PDAR Pinedale Array 87.39 43 P P 16 57 44.8 -0.4
K29M Barlow Dome 87.58 17 P P 16 57 45.5 +0.2
K29M IAmb IAmb 16 57 56.0
comp=Z,7.7nm,1.4s
E22K Anaktuvuk Pass 88.16 10 P P 16 57 47.6 -0.3
E22K IAmb IAmb 16 57 48.3
comp=Z,6.9nm,1.1s
D22K Ayikyak River 88.70 9 P P 16 57 50.5 +0.1
D22K IAmb IAmb 16 58 02.5
comp=Z,9.7nm,1.4s
BMAR Burnt Mountain 88.84 12 P P 16 57 51.2 +0.2
CMAR Chiang Mai Arr 89.13 290 P P 16 57 54.8 +1.3
comp=Z,1.8nm,0.9s,baz=111,slow=3.0,SNR=12
comp=Z,1.8nm,0.9s
H29M Whitestone 89.24 15 P P 16 57 53.1 +0.2
H29M IAmb IAmb 16 57 54.0
comp=Z,5.1nm,1.1s
G29M Pine Creek 89.88 15 P P 16 57 56.0 +0.2
C23K Itkillik River 89.89 9 P P 16 57 55.5 -0.3
C23K IAmb IAmb 16 57 56.6
comp=Z,3.1nm,0.9s
SNAA Sanae 90.36 179 P P 16 57 57.6 -0.6
comp=Z,1.2nm,0.9s,baz=219,slow=0.9,SNR=3.8
comp=Z,1.2nm,0.9s
SNAA Sanae 90.36 179 P P 16 57 57.6 -0.6
D27M Malcolm River 91.10 12 P P 16 58 01.6 +0.1
D27M IAmb IAmb 16 58 33.7
comp=Z,6.5nm,1.5s
F31M Tsiigehtchic 91.36 16 P P 16 58 02.4 -0.1
MKAR Makanchi Array 109.42 314 PKiKP **PKiKP 17 03 22.1 -1.4**
comp=Z,0.5nm,0.7s,baz=90,slow=1.4,SNR=6.0
KURK Kurchatov 112.12 318 Pdif 16 59 36.2 +0.4
KURBB Kurchatov Array 112.17 318 Pdiff **Pdif 16 59 36.2 +0.2**
comp=Z,0.1nm,0.3s,baz=60,slow=5.6,SNR=2.6
KURBB PKiKP **PKiKP 17 03 27.2 -1.3**
comp=Z,0.1nm,0.5s,baz=89,slow=2.2,SNR=5.1
BVAR Borovoye Array 117.14 321 PKP **PKPdf 17 03 37.3 -0.7**
comp=Z,0.8nm,0.4s,baz=130,slow=2.6,SNR=6.2
ARCES ARCESS Array B 126.57 350 PKP **PKPdf 17 03 55.4 -0.3**
comp=Z,1.1nm,0.6s,baz=42,slow=0.9,SNR=13
FINES FINESS Array B 133.46 344 PKhKP PKPpre 17 04 02.1
comp=Z,0.8nm,0.7s,baz=11,slow=1.9,SNR=4.7
FINES PKP **PKPdf 17 04 08.0 -1.0**
comp=Z,1.3nm,0.9s,baz=0.0,slow=3.8,SNR=3.6
NOA NORSAR Array B 136.62 353 PKP **PKPdf 17 04 15.0 +0.1**
comp=Z,0.3nm,0.8s,baz=31,slow=2.2,SNR=1.9
HFS Hagfors 137.19 351 PKhKP PKPpre 17 04 04.4
comp=Z,1.6nm,0.8s,baz=101,slow=3.0,SNR=4.9
EKA Eskdalemuir Ar 142.68 5 PKhKP PKPpre 17 04 22.9
comp=Z,0.3nm,0.4s,baz=326,slow=1.5,SNR=4.5
BRTR Keskin Array B 145.07 315 PKPbc **PKPdf 17 04 31.6 +0.7**
comp=Z,2.1nm,0.7s,baz=142,slow=5.0,SNR=15
CHVC Chvalec 145.68 344 *e*PKP **PKPbc 17 04 33.6 +0.6**
UPC Upice 145.76 344 *e*PKP **PKPbc 17 04 34.0 +0.8**
STEB Steborice 145.78 342 *e*PKP **PKPab 17 04 36.0 +0.9**
DPC Dobruska-Polom 145.82 343 *e*PKP **PKPbc 17 04 33.9 +0.5**
KRLC Kraliky 145.94 343 *e*PKP **PKPbc 17 04 34.0 +0.2**
MAUC Maruska 146.26 341 *e*PKP **PKPbc 17 04 35.5 +0.8**
HSKC Hora Svate Kat 146.29 347 *e*PKP **PKPbc 17 04 34.6 -0.1**
MMAI Mount Meron Ar 146.42 303 PKPbc **PKPbc 17 04 36.0 +0.3**
comp=Z,2.6nm,0.5s,baz=76,slow=5.4,SNR=12
PRU Pruhonice 146.61 345 *e*PKP **PKPbc 17 04 35.8 +0.2**
KHC Kasperske Hory 147.64 345 *e*PKP **PKPbc 17 04 38.7 +0.4**
KHC *ex* 17 04 43.4
CKRC Cesky Krumlov 147.75 344 *e*PKP **PKPbc 17 04 38.9 +0.3**
GERES GERESS Array B 147.88 345 PKPbc **PKPbc 17 04 39.1 +0.1**
comp=Z,1.9nm,0.5s,baz=25,slow=4.1,SNR=20
CONA Conrad Observa 148.14 342 *e*PKP **PKPbc 17 04 40.5 +0.8**
comp=Z,1.7nm,0.6s
LESA Schwarzleotal 149.45 345 *e*PKP **PKPbc 17 04 43.2 +0.3**
comp=Z,1.8nm,0.5s
KBA Koelnbreinsper 149.61 344 *e*PKP **PKPbc 17 04 43.4 0.0**
comp=Z,8.6nm,1.1s
WATA Walderalm 149.79 347 *e*PKP **PKPbc 17 04 43.6 -0.2**
comp=Z,2.6nm,0.6s
WTTA Wattenberg 149.84 347 *e*PKP **PKPbc 17 04 43.9 -0.1**
comp=Z,6.6nm,0.8s
MOTA Moosalm 149.88 347 *i* PKP **PKPbc 17 04 43.7 -0.3**
comp=Z,2.8nm,0.8s
SQTA Sankt Quirin 149.98 347 *e*PKP **PKPbc 17 04 44.2 0.0**
comp=Z,2.1nm,0.6s
ABTA Abfaltersbach 150.13 345 *e*PKP **PKPbc 17 04 44.1 -0.5**
comp=Z,9.7nm,1.4s
DAVA Damuels 150.18 349 *e*PKP **PKPbc 17 04 44.3 -0.4**
comp=Z,8.9nm,1.2s
FETA Feichten 150.27 348 *e*PKP **PKPbc 17 04 44.9 0.0**
comp=Z,3.4nm,0.7s

*NEIC **24** 17:02:35.4±2.5,26.27N±0.04×100.11E±0.05,h10km±1km, mb4.4/19, Error ellipse: s-maj=8.7km s-min=6.9km az=300.0*
*IDC **24** 17:02:36.2±0.7,26.02N×99.83E,h0km,mb3.9/16, mbtmp3.9/18,ML4.4/2,MS3.7/42, Error ellipse: s-maj=24.9km s-min=12.4km az=67.0*
*BJI **24** 17:02:36.9,25.97N×99.70E,h12km, mB4.5/6, mb4.4/24, ML4.3/11, Ms4.4/30, Ms7 4.1/23*
ISC 24 17:02:36.4±0.4,25.96N±0.04×99.85E±0.03,h10km,n105, s2850/83,mb4.3/26,MS3.7/42,2C-1D,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
TNCH	**TengChong**	**1.51**	**233**	Pn	**Pn**	**17 03 03.1**	**-0.7**
TNCH				⇑Pg	**Pg**	**17 03 05.8**	**+0.3**
TNCH				Sn	**Sn**	**17 03 20.9**	**-2.7**
TNCH				Sg	**Sg**	**17 03 25.3**	**+0.1**
TNCH				smax	smax		
	comp=N,21μm,1.4s						
TNCH				smax	smax		
	comp=E,29μm,1.1s						
PZH	**PanZhiHua**	**1.79**	**72**	Pg	**Pg**	**17 03 11.3**	**+0.5**
PZH				Sg	**Sg**	**17 03 39.3**	**+5.3**
PZH				smax	smax		
	comp=N,3μm,1.0s						
PZH				smax	smax		
	comp=E,2μm,0.9s						
KMI	**Kunming**	**2.74**	**107**	⇑Pn	**Pb**	**17 03 24.9**	**-0.8**
KMI				Pg	**Pg**	**17 03 28.9**	**-0.1**
KMI				Sg	**Sg**	**17 04 06.0**	**+1.4**
KMI				smax	smax		
	comp=N,2μm,1.1s						
KMI				smax	smax		
	comp=E,1μm,0.9s						
CD2	**Chengdu**	**6.02**	**34**	Pn	**Pn**	**17 04 09.3**	**+3.7**
CD2 Sg **Sg 17 05 51.0 +1.3**
CD2 smax smax
comp=N,250nm,1.6s
CD2 smax smax
comp=E,500nm,1.3s
GYA Guiyang 6.14 84 Pn Pn 17 04 12.3 +4.9
CHTO Chiang Mai 7.16 187 Pn 17 04 23.6 +2.4
SHL Shillong 7.19 269 Pn Pn 17 04 20.1 -1.8
CM31 Chiang Mai Arr 7.51 187 Pn 17 04 28.5 +2.4
CMAR Chiang Mai Arr 7.51 187 Pn Pn 17 04 28.6 +2.5
1.4nm,0.3s,baz=0.6,slow=13,SNR=33
CMAR Pg Pg 17 04 55.7 -4.5
0.5nm,0.3s,baz=15,slow=17,SNR=5.9
CMAR Lg Lg 17 06 34.9
1.4nm,0.3s,baz=0.6,slow=29,SNR=11
3.8nm,0.4s
CMAR Chiang Mai Arr 7.51 187 Pn 17 04 29.9 +3.8
BRDH Bariadhala 8.16 248 LR LR 17 07 48.0
comp=Z,189nm,21.6s,baz=84,slow=38
LSA Lhasa 8.55 298 Pn Pn 17 04 40.9 0.0
LSA Lhasa 8.55 298 P Pn 17 04 39.8 -1.0
LSA S **Sn 17 06 20.3 +2.7**
GULI GuiLin 9.52 92 P Pn 17 04 46.3 -7.3
GULI pmax pmax
comp=Z,21nm,1.5s
ENH Enshi 9.54 61 Pn Pn 17 04 53.2 -0.7
LZDM Lanzhou Array 10.50 17 Pn Pn 17 05 09.3 +2.0
baz=173,slow=16
LZDM LR LR 17 09 52.7
comp=Z,364nm,21.1s,baz=50,slow=42
comp=Z,2.4nm,0.4s
LZH Lanzhou 10.66 18 *e*P **Pn 17 05 11.0 +1.6**
LZH sP 17 05 19.6
LZH pmax pmax
comp=Z,12nm,1.0s
LZH LR LR
comp=Z,2μm,11.7s
LZH LR LR
comp=Z,920nm,14.3s
GOMU GeErMu 11.08 338 P Pn 17 05 14.9 -0.4
GOMU S **Sn 17 07 18.8 -0.7**
GOMU pmax pmax
comp=Z,3.0nm,1.1s
XAN Xi'an 11.25 42 P Pn 17 05 18.8 +1.4
XAN S **Sn 17 07 26.1 +2.8**
XAN LR LR
comp=Z,3μm,13.7s
XAN LR LR
comp=Z,950nm,12.8s
QIZ Qiongzhong 11.53 125 P Pn 17 05 21.8 +0.7
QIZ S **Sn 17 07 29.6 -0.4**
QIZ LR LR
comp=Z,930nm,11.1s
QIZ LR LR
comp=Z,470nm,12.0s
EVN Everest 11.79 283 Pn 17 05 23.9 -1.5
CNSH ChangSha 11.87 76 P Pn 17 05 26.0 +0.2
CNSH S **Sn 17 07 38.1 -0.3**
GTA Gaotai 13.42 360 P P 17 05 59.6 +3.0
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA LR LR
comp=N,440nm,9.1s
GTA LR LR
comp=E,770nm,8.0s
GTA LR LR
comp=Z,470nm,9.5s
WHN Wuhan 13.57 67 *e*P **Pn 17 05 47.5 -1.6**
WHN S **Sn 17 08 16.9 -3.1**
WHN LR LR
comp=N,2μm,9.5s
WHN LR LR
comp=E,2μm,9.3s
LYN LuoYang 13.86 49 P Pn 17 05 53.8 +0.8
LYN sP P 17 06 01.3 0.0
LYN pmax pmax
comp=E,18nm,0.5s
LYN LR LR
comp=E,3μm,13.1s
LYN LR LR
comp=E,1μm,11.3s
BTO Baotou 16.89 28 *e*P **Pn 17 06 31.1 -1.9**
BTO S **Sn 17 09 39.8 -0.9**
BTO pmax pmax
comp=E,13nm,0.5s
BTO pmax pmax
comp=E,350nm,4.6s
BTO LR LR
comp=E,1μm,7.7s
BTO LR LR
comp=E,1μm,10.4s
BTO LR LR
comp=E,950nm,9.3s
HNS HongShan 17.01 44 ⇓P **Pn 17 06 27.4 -7.0**
HNS LR LR
comp=N,2μm,11.9s
HNS LR LR
comp=E,760nm,10.1s
HNS LR LR
comp=Z,590nm,12.8s
NJ2 Nanjing 17.69 66 *e*P **Pn 17 06 38.8 -4.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
HHC Hu-ho-hao-te 17.76 30 *e*P **Pn 17 06 40.4 -3.5**
HHC S **Sn 17 09 52.1 -10**
HHC pmax pmax
comp=Z,11nm,0.6s
HHC LR LR
comp=N,350nm,8.4s
HHC LR LR
comp=E,510nm,7.6s
HHC LR LR
comp=Z,410nm,8.0s
TIA Tai'an 17.96 51 P P 17 06 50.6 +3.8
TIA pmax pmax
comp=Z,21nm,1.1s
TIA LR LR
comp=Z,910nm,13.6s
TIA LR LR
comp=Z,1μm,12.9s
NACB Ninganchiao 19.78 90 P P 17 07 03.0 -3.9
NACB IAmb IAmb 17 07 26.2
comp=Z,28nm,1.2s
WMQ Urumqi 20.38 334 *e*P Pn 17 07 15.8 +0.4
WMQ LR LR
comp=Z,630nm,11.9s
WMQ LR LR
comp=Z,560nm,12.9s
KULM Kulim 20.57 178 P P 17 07 16.2 +0.7
KULM IAmb IAmb 17 07 55.8
comp=Z,22nm,1.3s
IPM Ipoh 21.39 177 P P 17 07 24.7 +0.4
SONM Songino Array 22.44 12 P P 17 07 36.4 +0.8
comp=Z,1.1nm,0.8s,baz=209,slow=8.5,SNR=5.7
SONM LR LR 17 18 05.0
comp=Z,89nm,21.1s,baz=168,slow=42
comp=Z,1.1nm,0.8s
WUS Wushi 22.86 317 P P 17 07 39.8 -0.4
WUS IAmb IAmb 17 07 45.7
comp=Z,16nm,1.0s
PSI Prapat 23.04 182 LR LR 17 16 31.3
comp=Z,130nm,20.6s,baz=348,slow=36
RPSI Rantau Prapat 23.14 182 P P 17 07 43.8 +0.8
RPSI IAmb IAmb 17 07 47.3
comp=Z,12nm,1.2s
KSH Kashi 24.12 310 P P 17 07 54.5 +1.9
KSH pP sP 17 07 57.3 -0.5
KSH pmax pmax
comp=Z,13nm,1.0s
KSH LR LR
comp=Z,390nm,12.4s
NIL Nilore 24.27 295 P P 17 07 53.7 -0.3
NIL IAmb IAmb 17 07 58.5
comp=Z,16nm,1.0s
MK31 Makanchi Array 25.04 331 P P 17 07 57.5 -3.3
MK31 IAmb IAmb 17 08 06.7
comp=Z,6.6nm,0.8s
MKAR Makanchi Array 25.04 331 P P 17 08 01.6 +0.9
comp=Z,8.1nm,0.8s,baz=139,slow=9.9,SNR=16
comp=Z,8.1nm,0.8s
MKAR Makanchi Array 25.04 331 P P 17 07 58.9 -1.9
JOW Kunigami 25.46 82 LR LR 17 19 00.8
comp=Z,219nm,21.8s,baz=300,slow=39
SBUM Sibu 26.23 151 P P 17 08 10.5 -1.2
SBUM IAmb IAmb 17 08 13.2
comp=Z,8.7nm,1.3s

KSRS	**Korea Array**	**26.40**	**57**	P	**P**	**17 08 13.9**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=236,slow=12,SNR=2.3						
	comp=Z,0.8nm,0.8s						
AAK	**Ala-Archa**	**26.60**	**315**	LR	LR	17 19 33.4	
	comp=Z,163nm,20.7s,baz=105,slow=38						
AAK	**Ala-Archa**	**26.60**	**315**	P	**P**	**17 08 14.1**	**-1.0**
AAK				IAmb	IAmb	17 08 25.7	
	comp=Z,8.0nm,1.0s						
JNU	**Nakatsue**	**27.86**	**68**	LR	LR	17 19 37.1	
	comp=Z,149nm,18.8s,baz=263,slow=37						
JNU	**Nakatsue**	**27.86**	**68**	P	**P**	**17 08 21.3**	**-5.0**
KBL	**Kabul**	**27.87**	**295**	P	**P**	**17 08 24.2**	**-2.4**
KBL				IAmb	IAmb	17 08 46.0	
	comp=Z,6.5nm,1.0s						
GAR	**Garm**	**27.97**	**305**	P	**P**	**17 08 25.9**	**-1.5**
GAR				IAmb	IAmb	17 08 38.2	
	comp=Z,14nm,1.2s						
KKAR	**Karatay Array**	**29.40**	**313**	P	**P**	**17 08 41.4**	**+1.4**
KURBB	**Kurchatov Arra**	**29.57**	**332**	P	**P**	**17 08 41.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=140,slow=9.8,SNR=7.3						
	comp=Z,0.6nm,0.7s						
KURK	**Kurchatov**	**29.60**	**332**	P	**P**	**17 08 40.0**	**-1.5**
ZAA0	**Zalesovo Array**	**30.11**	**342**	P	**P**	**17 08 42.5**	**-3.6**
ZALV	**Zalesovo Beam**	**30.11**	**342**	P	**P**	**17 08 46.5**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=161,slow=9.4,SNR=4.4						
ZALV				LR	LR	17 22 10.9	
	comp=Z,61nm,21.1s,baz=182,slow=39						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**30.11**	**342**	P	**P**	**17 08 42.8**	**-3.3**
JMN	**Monobe**	**30.42**	**67**	P	**P**	**17 08 45.2**	**-3.9**
DAV	**Davao City (W)**	**30.89**	**123**	LR	LR	17 21 04.3	
	comp=Z,145nm,18.1s,baz=294,slow=36						
MJAR	**Matsushiro Arr**	**34.25**	**63**	LR	LR	17 23 53.3	
	comp=Z,96nm,19.4s,baz=260,slow=37						
BVAR	**Borovoye Array**	**34.87**	**329**	P	**P**	**17 09 28.6**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=123,slow=9.5,SNR=8.1						
BVAR				LR	LR	17 24 39.4	
	comp=Z,113nm,18.8s,baz=118,slow=38						
	comp=Z,1.7nm,0.7s						
JCJ	**Chichijima**	**37.77**	**79**	LR	LR	17 25 51.9	
	comp=Z,75nm,19.4s,baz=156,slow=37						
AB31	**Akbulak array**	**38.62**	**318**	P	**P**	**17 09 59.5**	**-0.2**
AB31				IAmb	IAmb	17 10 05.6	
	comp=Z,5.5nm,0.8s						
ABKAR	**Akbulak array**	**38.62**	**318**	P	**P**	**17 09 56.7**	**-3.0**
ASAJ	**Asahikawa**	**38.91**	**51**	LR	LR	17 25 17.6	
	comp=Z,66nm,21.0s,baz=91,slow=35						
AKTO	**Aktyubinsk**	**40.21**	**319**	LR	LR	17 27 47.9	
	comp=Z,71nm,18.2s,baz=76,slow=38						
YAK	**Yakutsk**	**41.23**	**21**	LR	LR	17 26 31.7	
	comp=Z,35nm,18.6s,baz=222,slow=35						
ARTI	**Arti**	**42.52**	**327**	LR	LR	17 28 33.8	
	comp=Z,103nm,19.6s,baz=128,slow=37						
BATI	**Baumata**	**42.77**	**144**	LR	LR	17 29 33.0	
	comp=Z,63nm,19.0s,baz=326,slow=38						
GNI	**Garni**	**47.60**	**302**	LR	LR	17 35 56.8	
	comp=Z,47nm,18.3s,baz=78,slow=42						
KIRV	**Kirov**	**47.84**	**327**	LR	LR	17 31 48.4	
	comp=Z,73nm,18.0s,baz=106,slow=37						
MA2	**Magadan**	**48.43**	**32**	LR	LR	17 32 05.0	
	comp=Z,80nm,19.1s,baz=191,slow=37						
KBZ	**Khabaz**	**49.02**	**306**	LR	LR	17 35 07.8	
	comp=Z,74nm,19.2s,baz=94,slow=40						
SEY	**Seymchan**	**50.39**	**28**	LR	LR	17 34 09.3	
	comp=Z,98nm,19.5s,baz=328,slow=38						
PETK	**Petropavlovsk-**	**50.58**	**41**	LR	LR	17 32 49.0	
	comp=Z,122nm,18.6s,baz=261,slow=36						
ASF	**Jabal al Asfar**	**54.70**	**292**	LR	LR	17 37 21.0	
	comp=Z,46nm,18.4s,baz=112,slow=38						
MMAI	**Mount Meron Ar**	**55.78**	**294**	LR	LR	17 38 04.6	
	comp=Z,38nm,21.1s,baz=74,slow=38						
BRTR	**Keskin Array B**	**56.14**	**302**	P	**P**	**17 12 18.8**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=124,slow=9.1,SNR=4.3						
	comp=Z,0.5nm,0.7s						
BRTR	**Keskin Array B**	**56.14**	**302**	P	**P**	**17 12 14.2**	**-2.2**
WB0	**Warramunga Arr**	**56.49**	**140**	P	**P**	**17 12 19.8**	**+0.9**
WRA	**Warramunga Arr**	**56.60**	**140**	P	**P**	**17 12 20.7**	**+1.0**
	comp=Z,4.2nm,0.8s,baz=329,slow=7.8,SNR=16						
	comp=Z,4.2nm,0.8s						
WRA	**Warramunga Arr**	**56.60**	**140**	P	**P**	**17 12 17.9**	**-1.9**
EIL	**Elat**	**56.85**	**290**	LR	LR	17 38 57.3	
	comp=Z,63nm,19.6s,baz=359,slow=38						
AKASG	**Malin Array Be**	**58.27**	**315**	P	**P**	**17 12 32.6**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=77,slow=6.5,SNR=5.8						
AKASG				LR	LR	17 38 57.9	
	comp=Z,62nm,21.8s,baz=86,slow=38						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**59.33**	**143**	P	**P**	**17 12 40.2**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=324,slow=7.0,SNR=13						
ASAR				LR	LR	17 39 45.0	
	comp=Z,27nm,18.1s,baz=321,slow=38						
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**59.82**	**328**	P	**P**	**17 12 43.6**	**+1.8**
	comp=Z,3.0nm,1.1s,baz=122,slow=9.3,SNR=4.9						
	comp=Z,3.0nm,1.1s						
MLR	**Muntele Rosu**	**60.99**	**309**	LR	LR	17 43 04.5	
	comp=Z,67nm,20.4s,baz=68,slow=40						
SPITS	**Spitsbergen Ar**	**63.45**	**347**	LR	LR	17 44 54.7	
	comp=Z,76nm,18.7s,baz=72,slow=40						
HFS	**Hagfors**	**65.98**	**327**	P	**P**	**17 13 22.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=67,slow=12,SNR=1.7						
	comp=Z,1.5nm,0.7s						
VRAC	**Vranov**	**66.53**	**315**	LR	LR	17 46 13.7	
	comp=Z,78nm,19.9s,baz=74,slow=39						
NB2	**NORSAR Subarra**	**67.00**	**328**	P	**P**	**17 13 32.0**	**+2.7**
	comp=Z,4.1nm,1.2s,baz=79,slow=6.5						
NOA	**NORSAR Array B**	**67.00**	**328**	P	**P**	**17 13 29.4**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=81,slow=6.3,SNR=1.7						
	comp=Z,0.5nm,0.8s						
HNR	**Honiara**	**68.17**	**113**	LR	LR	17 41 42.9	
	comp=Z,26nm,20.2s,baz=34,slow=34						
GERES	**GERESS Array B**	**68.48**	**315**	P	**P**	**17 13 39.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=70,slow=5.8,SNR=4.5						
GERES				LR	LR	17 45 21.4	
	comp=Z,77nm,20.6s,baz=79,slow=38						
	comp=Z,0.4nm,0.5s						
STKA	**Stephens Creek**	**69.96**	**143**	P	**P**	**17 13 51.5**	**+3.4**
	comp=Z,1.6nm,0.8s,baz=289,slow=11,SNR=3.5						
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**76.06**	**24**	LR	LR	17 49 14.6	
	comp=Z,100nm,20.6s,baz=190,slow=37						
KDAK	**Kodiak Island**	**77.17**	**32**	LR	LR	17 49 27.3	
	comp=Z,105nm,21.9s,baz=153,slow=36						
LSZ	**Lusaka**	**80.83**	**248**	LR	LR	17 49 49.4	
	comp=Z,54nm,20.1s,baz=337,slow=35						
ESDC	**Sonseca Array**	**83.63**	**311**	P	**P**	**17 15 06.4**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=91,slow=6.9,SNR=1.9						
ESDC				LR	LR	17 54 57.4	
	comp=Z,23nm,21.1s,baz=27,slow=38						
	comp=Z,0.3nm,0.6s						
SFJD	**Kangerlussuaq**	**84.70**	**349**	LR	LR	17 57 26.5	
	comp=Z,84nm,18.1s,baz=24,slow=39						
DLBC	**Dease Lake**	**86.27**	**24**	LR	LR	17 56 05.7	
	comp=Z,131nm,18.2s,baz=144,slow=37						
YKA	**Yellowknife Ar**	**87.66**	**15**	LR	LR	17 58 31.4	
	comp=Z,68nm,18.9s,baz=328,slow=38						
LBTB	**Lobatse**	**87.78**	**241**	LR	LR	17 56 28.1	
	comp=Z,18nm,18.1s,baz=21,slow=37						
FRB	**Frobisher Bay**	**90.13**	**355**	LR	LR	17 57 27.9	
	comp=Z,32nm,20.9s,baz=317,slow=36						

*IDC **24** 17:15:47.0±2.4,5°.73N×126°.64E,h101km±19km,mb3.5/10, mbtmp4.0/12,MS2.9/1,Error ellipse: s-maj=67.0km s-min=11.3km az=70.0*

*DJA **24** 17:15:48.0±1.4,6°.1N±13°×12°7E±°,h117km±10km,M4.2/13, mB4.8/5,mb4.2/9,MLv4.3/13,Mw(mB)4.0/5*

ISC 24 17:15:46.7±0.8,5°.70N±0°.06×126°.6E±0°.1,h100km,n25, σ0s83/23,mb3.8/10,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.70**	**323**	P	**Pn**	**17 16 15.0**	**-0.4**
	124nm,0.3s,baz=145,slow=5.6,SNR=1.9						
DAV				S	**Sn**	**17 16 37.8**	**+0.4**
	349nm,0.3s,baz=86,slow=23,SNR=13						
SGSI	**Sangihe**	**2.26**	**208**	P	**Pn**	**17 16 22.4**	**-0.4**
SGSI				S	**Sn**	**17 16 49.2**	**-1.2**
TNTI	**Ternate**	**4.95**	**171**	P	**Pn**	**17 16 58.1**	**-0.8**
KMSI	**Cibinong**	**5.72**	**207**	P	**Pn**	**17 17 07.8**	**-1.5**
	0.3nm70nm,0.8s						
MRSI	**Marisa**	**6.96**	**222**	P	**Pn**	**17 17 25.8**	**-0.4**
	0.1nm36nm,0.6s						
LUWI	**Luwuk**	**7.71**	**210**	P	**Pn**	**17 17 37.0**	**+0.7**
	574nm41nm,0.8s						
SANI	**Sanana**	**7.72**	**185**	P	Pn	17 17 32.3	-4.2
	1µm21nm,0.6s						
SWI	**Sorong**	**8.01**	**144**	P	**Pn**	**17 17 40.7**	**+0.3**
	0.1nm8.9nm,0.6s						
NLAI	**Namlea**	**8.89**	**177**	P	**Pn**	**17 17 50.3**	**-2.1**
KAPI	**Kappang**	**12.65**	**213**	P	**Pn**	**17 18 43.0**	**-0.1**
	3.7nm,0.5s,baz=296,slow=20,SNR=3.7						
BATI	**Baumata**	**16.07**	**190**	P	**P**	**17 19 29.4**	**+1.0**
	13nm,0.5s,baz=279,slow=2.2,SNR=6.8						
GUMO	**Guam**	**19.63**	**65**	LR	LR	17 27 06.0	
	comp=Z,41nm,21.8s,baz=22,slow=35						
WRA	**Warramunga Arr**	**26.59**	**164**	P	**P**	**17 21 15.1**	**-0.8**
	0.8nm,0.6s,baz=343,slow=10,SNR=19						
	0.8nm,0.6s						
ASAR	**Alice Springs**	**30.04**	**167**	P	**P**	**17 21 47.0**	**+0.4**
	0.8nm,0.6s,baz=346,slow=7.0,SNR=19						
ASAR				PcP	**PcP**	**17 24 47.4**	**+1.0**
	0.7nm,0.5s,baz=348,slow=2.4,SNR=11						
	0.8nm,0.6s						
STKA	**Stephens Creek**	**40.01**	**160**	P	**P**	**17 23 12.8**	**+0.8**
	0.9nm,0.5s,baz=339,slow=11,SNR=5.4						
	0.9nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**41.10**	**68**	T	T	18 07 24.2	
	baz=259						
H11S1	**WAKE ISLAND Hy**	**41.12**	**68**	T	T	18 07 29.0	
	baz=259						
H11S2	**WAKE ISLAND Hy**	**41.12**	**68**	T	T	18 07 29.2	
	baz=259						
SONM	**Songino Array**	**45.41**	**341**	P	**P**	**17 23 55.5**	**0.0**
	0.2nm,0.3s,baz=134,slow=10,SNR=1.6						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**55.88**	**325**	P	**P**	**17 25 14.3**	**+0.1**
	0.6nm,0.6s,baz=118,slow=7.9,SNR=8.0						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**58.79**	**333**	P	**P**	**17 25 34.3**	**-0.1**
	0.3nm,0.3s,baz=137,slow=7.8,SNR=2.6						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**60.02**	**327**	P	**P**	**17 25 43.0**	**0.0**
	0.5nm,0.5s,baz=127,slow=6.3,SNR=6.1						
	0.5nm,0.5s						
BVAR	**Borovoye Array**	**65.61**	**327**	P	**P**	**17 26 19.5**	**-0.5**
	0.3nm,0.4s,baz=96,slow=10,SNR=2.7						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**88.57**	**340**	P	**P**	**17 28 28.1**	**0.0**
	1.4nm,0.7s,baz=60,slow=7.2,SNR=5.7						
	1.4nm,0.7s						
FINES	**FINESS Array B**	**90.05**	**332**	P	**P**	**17 28 34.7**	**-0.4**
	2.1nm,0.9s,baz=77,slow=10,SNR=2.6						
	2.1nm,0.9s						

GCG 24 17:23:45.8±0.3,13°.52N×90°.64W,h32km±9km,MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESSJ	**San Jos, E**	**0.14**	**74**	*e*P	Pn	17 23 55.4	+3.6
NUBE	**Las Nubes**	**0.92**	**66**	*e*P	Pn	17 24 02.9	+0.3
JAYA	**Jayaque - finc**	**1.17**	**83**	*e*P	Pn	17 24 05.8	-0.3
APG	**El Apazote**	**1.48**	**7**	*e*P	Pn	17 24 11.1	+0.5

IDC 24 17:37:45.7±12.0,20°.83S×70°.12E,h0km,mb3.9/5, mbtmp3.9/5,MS3.3/1,Error ellipse: s-maj=418.2km s-min=34.6km az=53.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**13.30**	**10**	T	T	17 53 48.1	
	baz=187,slow=76,SNR=25						
H08S2	**Diego Garcia H**	**13.31**	**10**	T	T	17 53 50.0	
	baz=187,slow=76,SNR=27						
H08S3	**Diego Garcia H**	**13.32**	**10**	T	T	17 53 49.4	
	baz=187,slow=76,SNR=26						
H04N2	**CROZET ISLANDS**	**29.38**	**206**	T	T	18 15 37.3	
	baz=38,slow=75,SNR=18						
H04N1	**CROZET ISLANDS**	**29.39**	**206**	T	T	18 15 39.4	
	baz=38,slow=75,SNR=22						
H04N3	**CROZET ISLANDS**	**29.40**	**206**	T	T	18 15 36.9	
	baz=38,slow=75,SNR=24						
H01W2	**Cape Leeuwin H**	**41.04**	**120**	T	T	18 28 44.7	
	baz=274						
H01W3	**Cape Leeuwin H**	**41.04**	**120**	T	T	18 28 47.4	
	baz=274						
H01W1	**Cape Leeuwin H**	**41.06**	**120**	T	T	18 28 43.2	
	baz=274						
ASAR	**Alice Springs**	**58.67**	**106**	P	P	17 47 45.5	0.0
	0.6nm,0.8s,baz=264,slow=6.6,SNR=8.6						
ASAR				LR	LR	18 11 31.9	
	comp=Z,22nm,18.1s,baz=260,slow=34						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**59.83**	**102**	P	P	17 47 53.4	-0.1
	1.1nm,0.8s,baz=254,slow=10.0,SNR=3.0						
	1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**71.52**	**6**	P	P	17 49 08.3	+0.1
	2.1nm,0.2s,baz=183,slow=6.5,SNR=1.5						
	2.1nm,0.2s						
ZALV	**Zalesovo Beam**	**75.54**	**9**	P	P	17 49 31.8	0.0
	0.4nm,0.3s,baz=207,slow=6.0,SNR=2.7						
	0.4nm,0.3s						
SONM	**Songino Array**	**75.71**	**24**	P	P	17 49 33.1	0.0
	0.1nm,0.3s,baz=197,slow=4.5,SNR=1.7						
	0.1nm,0.3s						

*PRE **24** 17:57:15.7±0.8,26°.49S×27°.47E,h2km,ML3.0*

*BGSI **24** 17:57:15.1±1.3,26°.87S×28°.06E,h65km±17km,ML3.4*

*IDC **24** 17:57:17.3±1.4,26°.34S×27°.14E,h0km,mb3.9/4, mbtmp3.9/5,ML3.5/1,Error ellipse: s-maj=44.5km s-min=15.5km az=112.0*

ISC 24 17:57:16.4±1.4,26°.47S±0°.04×27°.49E±0°.04,h9km±10km, n39,σ2s34/68,mb4.0/3,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRYS	**Parys**	**0.47**	**194**	*e*P	**Pg**	**17 57 25.2**	**-0.5**
PRYS				*e*S	**Sg**	**17 57 30.9**	**-1.0**
PRYS				IAML		17 57 33.4	
	comp=Z,577nm,0.3s						
HRAO	**HartRAO**	**0.60**	**17**	*e*P	**Pb**	**17 57 27.5**	**-1.7**
HRAO				*e*S	**Sb**	**17 57 36.8**	**-1.0**
HRAO				IAML		17 57 36.9	
	comp=Z,644nm,0.5s						
SWZ	**Schweizer**	**2.06**	**249**	*e*P	**Pn**	**17 57 51.8**	**+0.4**
SWZ				*e*S	**Sn**	**17 58 18.4**	**+1.1**
SWZ				IAML		17 58 23.4	
	comp=Z,247nm,0.2s						
LBTB	**Lobatse**	**2.24**	**310**	*e*P	**Pn**	**17 57 54.9**	**+1.1**
LBTB				*e*S	**Sn**	**17 58 23.4**	**+1.8**
LBTB				IAML		17 58 28.2	
	comp=Z,237nm,0.5s						
CRLN	**Carolina, Mapu**	**2.32**	**79**	*e*P	**Pn**	**17 57 55.4**	**+0.4**
CRLN				*e*S	**Sn**	**17 58 24.9**	**+1.1**
CRLN				IAML		17 58 26.9	
	comp=Z,89nm,0.2s						
NWCL	**Newcastle**	**2.49**	**121**	*e*P	**Pn**	**17 57 58.2**	**+0.9**
NWCL				*e*S	**Sn**	**17 58 28.9**	**+1.1**
NWCL				IAML		17 58 34.6	
	comp=Z,197nm,0.3s						
MAKGR	**Makgori**	**2.50**	**284**	*i* P	**Pn**	**17 58 00.1**	**+2.6**
MAKGR				*i* S	**Sb**	**17 58 34.2**	**+1.5**
MAKGR				IAML		17 58 38.9	
	comp=N,304nm,0.5s						
BOSA	**Boshof**	**2.92**	**222**	Pn	**Pn**	**17 58 04.3**	**+1.2**
	comp=N,4.4nm,0.3s,baz=40,slow=15,SNR=134						
BOSA				Pg	**Pb**	**17 58 09.4**	**+0.7**
	comp=N,6.3nm,0.3s,baz=45,slow=17,SNR=17						
BOSA				Sn	**Sn**	**17 58 39.5**	**+1.0**
	comp=N,6.9nm,0.3s,baz=330,slow=14,SNR=7.6						
BOSA				Lg	Lg	17 58 45.5	
	comp=N,23nm,0.3s,baz=330,slow=20,SNR=4.5						
	comp=N,10nm,0.3s						
BOSA	**Boshof**	**2.92**	**222**	*e*P	**Pn**	**17 58 03.7**	**+0.5**
BOSA				*e*S	**Sn**	**17 58 38.7**	**+0.2**
BOSA				IAML		17 58 49.6	
	comp=Z,85nm,0.3s						
LPHEP	**Lephephe**	**3.42**	**334**	*i* P	**Pn**	**17 58 12.5**	**+2.3**
LPHEP				*i* S	**Sn**	**17 58 56.2**	**+5.2**
LPHEP				IAML		17 59 08.1	
	comp=E,152nm,0.5s						
SKOMA	**Sekoma**	**3.76**	**300**	*i* P	**Pn**	**17 58 17.6**	**+2.9**
MREMI	**Moremi**	**3.88**	**359**	*i* P	**Pn**	**17 58 16.7**	**+0.3**
PHPEN	**Phepeng**	**4.29**	**282**	*i* P	**Pn**	**17 58 24.5**	**+2.6**
KSTD	**Kokstad**	**4.43**	**159**	*e*P	**Pn**	**17 58 25.2**	**+1.1**
KSTD				*e*S	**Sn**	**17 59 15.8**	**-0.2**
KSTD				IAML		17 59 35.2	
	comp=Z,35nm,0.4s						
HVD	**Gariep Dam**	**4.48**	**203**	*e*P	**Pn**	**17 58 25.7**	**+1.0**
HVD				*e*S	**Sn**	**17 59 16.2**	**-0.9**
BROLN	**Tlhalogang**	**5.34**	**358**	*i* P	**Pn**	**17 58 36.9**	**+0.4**
BROLN				*i* S	**Sn**	**17 59 35.0**	**-3.2**
BROLN				IAML		18 00 04.2	
	comp=E,50nm,0.5s						
ALKP	**Alkanpan, Nort**	**5.78**	**232**	*e*P	**Pn**	**17 58 43.0**	**+0.5**
ALKP				*e*S	**Sn**	**17 59 47.0**	**-2.0**
ALKP				IAML		18 00 20.0	
	comp=Z,54nm,0.4s						
KGCAE	**Kacgae**	**6.00**	**306**	*i* P	**Pn**	**17 58 48.0**	**+2.4**
KGCAE				IAML		18 00 34.5	
	comp=E,87nm,0.3s						
LKGWB	**Lokgwabe**	**6.14**	**291**	IAML		18 00 23.5	
	comp=N,74nm,0.6s						
BFON	**Badsfontein, M**	**6.27**	**211**	*e*P	**Pn**	**17 58 49.9**	**+0.6**
BFON				*e*S	**Sn**	**17 59 58.0**	**-3.2**
BFON				IAML		18 00 34.7	
	comp=Z,31nm,0.8s						
GRAF	**Camdeboo Natio**	**6.36**	**204**	*e*P	**Pn**	**17 58 51.7**	**+1.3**
GRAF				*e*S	**Sn**	**18 00 00.1**	**-3.1**
GRAF				IAML		18 00 39.8	
	comp=Z,26nm,0.5s						
BRAK	**Brakfontein**	**6.65**	**216**	*e*P	**Pn**	**17 58 55.3**	**+0.9**
BRAK				*e*S	**Sn**	**18 00 07.6**	**-2.9**
BRAK				IAML		18 00 33.0	
	comp=Z,11nm,0.4s						
AUGR	**Augrabies**	**6.70**	**250**	*e*P	**Pn**	**17 58 56.2**	**+1.2**
AUGR				*e*S	**Sn**	**18 00 08.4**	**-3.2**
AUGR				IAML		18 00 53.9	
	comp=Z,22nm,0.6s						
GRHM	**Grahamstown, E**	**6.86**	**188**	*e*P	**Pn**	**17 58 58.7**	**+1.5**
GRHM				*e*S	**Sn**	**18 00 13.4**	**-2.1**
GRHM				IAML		18 00 28.5	
	comp=Z,6.4nm,0.2s						
ARMS	**Ukamas**	**7.08**	**255**	*e*P	**Pn**	**17 59 01.9**	**+1.6**
ARMS				*e*S	**Sn**	**18 00 17.7**	**-3.3**
GRAN	**Grantham**	**7.44**	**217**	*e*P	**Pn**	**17 59 06.8**	**+1.6**
GRAN				*e*S	**Sn**	**18 00 26.3**	**-3.6**
GRAN				IAML		18 01 15.0	
	comp=Z,17nm,0.4s						
KOOLE	**Kule**	**7.48**	**296**	*i* P	**Pn**	**17 59 06.2**	**+0.3**
FRAZ	**Fraserburg**	**7.61**	**223**	*e*P	**Pn**	**17 59 08.4**	**+0.8**
FRAZ				*e*S	**Sn**	**18 00 30.4**	**-3.7**
FRAZ				IAML		18 01 20.0	
	comp=Z,17nm,0.7s						
GRTLG	**Ghanzi**	**7.67**	**310**	*i* P	**Pn**	**17 59 08.9**	**+0.4**
GRTLG				*i* S	**Sn**	**18 00 33.6**	**-1.9**
GRTLG				IAML		18 01 23.7	
	comp=E,32nm,0.3s						
BUFB	**Buffelsbos**	**8.02**	**197**	*e*P	**Pn**	**17 59 14.3**	**+1.2**
BUFB				*e*S	**Sn**	**18 00 40.4**	**-3.6**
BUFB				IAML		18 01 01.1	
	comp=Z,9.6nm,0.4s						
CVNA	**Calvinia**	**8.41**	**232**	*e*P	**Pn**	**17 59 19.6**	**+0.9**
CVNA				*e*S	**Sn**	**18 00 49.4**	**-4.5**
CVNA				IAML		18 01 43.9	
	comp=Z,29nm,0.5s						
KOMG	**Komaggas**	**9.44**	**247**	*e*P	**Pn**	**17 59 34.0**	**+1.4**
KOMG				*e*S	**Sn**	**18 01 14.2**	**-4.7**
KOMG				IAML		18 01 34.8	
	comp=Z,4.4nm,0.5s						
CER	**Ceres**	**9.89**	**224**	*e*P	**Pn**	**17 59 39.4**	**+0.6**
CER				*e*S	**Sn**	**18 01 25.2**	**-4.7**
AUSN	**Aus**	**10.06**	**266**	*e*P	**Pn**	**17 59 42.4**	**+1.1**
AUSN				*e*S	**Sn**	**18 01 29.4**	**-5.1**
ELIM	**Elim**	**10.50**	**218**	*e*P	**Pn**	**17 59 47.5**	**+0.3**
ELIM				*e*S	**Sn**	**18 01 39.1**	**-5.8**
ELIM				IAML		18 01 43.0	
	comp=Z,4.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**46.69**	**324**	P	**P**	**18 05 45.9**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=131,slow=6.4,SNR=1.3						
	comp=Z,1.4nm,0.3s						
QSPA	**South Pole Qui**	**63.72**	**180**	P	**P**	**18 07 51.7**	**+3.4**
	comp=Z,0.9nm,0.9s,baz=250,slow=3.2,SNR=7.0						
	comp=Z,0.9nm,0.9s						
ESDC	**Sonseca Array**	**72.04**	**335**	P	**P**	**18 08 41.8**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=149,slow=5.9,SNR=4.2						
	comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**87.60**	**359**	P	**P**	**18 10 05.4**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=160,slow=18,SNR=4.9						
	comp=Z,0.8nm,0.6s						

*SOME **24** 18:00:35.6,44°.38N×83°.22E,h15km*

*NNC **24** 18:00:37.6±2.0,44°.36N×83°.08E,h0km,mb3.5,mpv3.5, Error ellipse: s-maj=17.3km s-min=6.6km az=126.0*

ISC 24 18:00:38.1±1.6,44°.37N±0°.08×83°.10E±0°.09,h17km,n18, σ2s21/24,4C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.49**	**347**	⇑Pg	**Pb**	**18 01 22.1**	**-0.2**
	2.5nm,0.4s,baz=163,slow=17,SNR=9.6						
MK31				⇑Lg	Lg	18 01 54.2	
	2.7nm,0.2s,baz=154,slow=28,SNR=6.6						
MAKZ	**Makanchi**	**2.

s-min=1.6km az=156.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEOK	**Depew**	**0.14**	**73**		Pg	18 12 01.4	+0.4
DEOK					Sg	18 12 03.7	+0.8
DEOK				IAML		18 12 03.8	
	comp=E,341nm,0.2s						
OK052	**Battle Ridge R**	**0.22**	**330**		Pg	18 12 03.1	+0.7
OK052					Sg	18 12 06.5	+1.1
OK052				IAML		18 12 06.7	
	comp=E,382nm,0.2s						
QUOK	**Quay**	**0.37**	**355**		Pg	18 12 05.8	+0.5
QUOK					Sg	18 12 11.1	+0.9
QUOK				IAML		18 12 14.1	
	comp=N,101nm,0.3s						
OK048	**Pawnee Station**	**0.65**	**340**		Pg	18 12 10.9	+0.3
OK048				IAML		18 12 20.0	
	comp=N,52nm,0.2s						
TUL3	**Leonard**	**0.72**	**81**		Pg	18 12 11.8	-0.1
TUL3					Sg	18 12 21.3	+0.1
OKCSW	**OKLAHOMA CITY**	**0.74**	**238**		Pg	18 12 12.7	+0.4
OKCSW					Sg	18 12 22.9	+0.9
OKCSW				IAML		18 12 23.0	
	comp=N,65nm,1.7s						
FNO	**Franklin**	**0.81**	**228**		Pg	18 12 13.6	0.0
FNO					Sg	18 12 24.9	+0.9
FNO				IAML		18 12 25.1	
	comp=E,37nm,0.5s						
T35A	**Sooner Cattle**	**1.12**	**6**		Pg	18 12 19.1	-0.5
T35A					Sg	18 12 34.3	+0.2
T35A				IAML		18 12 35.1	
	comp=E,31nm,0.1s						
CROK	**Carrier**	**1.28**	**304**		Pg	18 12 21.8	-0.7
GC02	**Grant County #**	**1.42**	**318**		Pn	18 12 24.3	-0.3
X34A	**Smith Ranch, M**	**1.53**	**219**		Pn	18 12 25.7	-0.4
U38A	**Gravette**	**1.95**	**70**	Pn	Pn	18 12 32.7	+0.8
WMOK	**Wichita Mounta**	**2.03**	**239**	Pn	Pn	18 12 33.7	+0.7

*SFS **24** 18:29:17.0, 38°.27N×0°.56E, h16km, ML2.7/4, ML2.0/4, MLv1.7/4*
*MDD **24** 18:29:17.9±1.6, 38°.17N×0°.36E, h29km, mb_Lg2.4/6, Error ellipse: s-maj=13.1km s-min=6.8km az=120.0*
ISC 24 18:29:16.2±1.5, 38°.24N±0°.06×0°.50E±0°.06, h30km±13km, n9, σ1s00/18, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBEN2	**Beniarda presa**	**0.70**	**309**	Pg	**Pb**	**18 29 30.1**	**+0.2**
EBEN2				Sg	**Sb**	**18 29 39.1**	**-0.1**
EBEN2				*i* IVmb_Lg		18 29 40.5	
EIBI	**Ibiza**	**1.02**	**40**	Sn	**Sb**	**18 29 47.5**	**-0.9**
EIBI				Pn	**Pn**	**18 29 35.2**	**+0.7**
CART	**Cartagena**	**1.36**	**242**	Sn	**Sb**	**18 29 58.1**	**+0.2**
CART				Pn	**Pb**	**18 29 40.7**	**-0.2**
EMUR	**La Murta**	**1.43**	**254**	Pn	**Pb**	**18 29 42.1**	**-0.2**
EMUR				Sn	**Sb**	**18 30 00.9**	**+0.7**
EMUR	**La Murta**	**1.43**	**254**	Pg	**Pn**	**18 29 40.5**	**+0.4**
EMUR				Sg	**Sn**	**18 29 56.3**	**-1.6**
EMUR				*i* IVmb_Lg		18 30 01.9	
EVIV	**Cofrentes, Val**	**1.63**	**309**	Pn	**Pn**	**18 29 41.7**	**-1.1**
EVIV				Sn	**Sn**	**18 30 02.4**	**-0.4**
EVIV				*i* IVmb_Lg		18 30 09.7	
ETOB	**Tobarra**	**1.66**	**285**	Pn	**Pn**	**18 29 43.8**	**+0.6**
ETOB				Sn	**Sn**	**18 30 05.8**	**+2.2**
ETOB	**Tobarra**	**1.66**	**285**	Pn	**Pn**	**18 29 43.5**	**+0.2**
ETOB				*i* IVmb_Lg		18 29 53.0	
ETOB				Sn	**Sn**	**18 30 02.1**	**-1.5**
EMOS	**Mosqueruela**	**2.25**	**341**	Pn	**Pn**	**18 29 52.1**	**+0.6**
EMOS				*i* IVmb_Lg		18 29 56.0	
EMOS				Sn	**Sn**	**18 30 18.4**	**+0.1**

*KRNET **24** 18:31:46.7±0.1, 40°.10N×77°.66E, mb2.9*
*NNC **24** 18:31:48.2±3.9, 40°.17N×77°.82E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=26.2km s-min=23.3km az=13.0*
*SOME **24** 18:31:49.6, 40°.22N×77°.60E, h5km*
ISC 24 18:31:44.5±2.2, 40°.04N±0°.08×77°.64E±0°.05, h17km±15km, n28, σ1s07/45, 17C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.69**	**4**	⇓*eP*	**Pg**	**18 32 17.5**	**+0.4**
TARG				⇓*eS*	**Sg**	**18 32 40.0**	**+0.8**
JNKS	**Jany-Kuch**	**1.82**	**304**	⇑*eP*	**Pg**	**18 32 20.5**	**+0.9**
JNKS				⇑*eS*	**Sg**	**18 32 45.1**	**+1.7**
KDJ	**Kajisay**	**2.12**	**351**	⇑*eP*	**Pg**	**18 32 24.6**	**-0.6**
KDJ				⇑*eS*	**Sg**	**18 32 52.3**	**-0.4**
ULHL	**Ulahol**	**2.44**	**335**	⇓*eP*	**Pb**	**18 32 29.4**	**+1.3**
ULHL				⇓*eS*	**Sb**	**18 33 00.5**	**+2.5**
PRZ	**Przheval'sk**	**2.51**	**13**	⇓*eP*	**Pb**	**18 32 30.3**	**+1.1**
PRZ				⇓*eS*	**Sb**	**18 33 02.6**	**+2.8**
BOOM	**Boomskoye usch**	**2.76**	**333**	⇑*eP*	**Pb**	**18 32 34.0**	**+0.4**
BOOM				⇑*eS*	**Sb**	**18 33 08.3**	**+1.1**
SALK	**Salom-Alik**	**3.03**	**287**	⇑*eP*	**Pb**	**18 32 38.2**	**0.0**
SALK				⇑*eS*	**Sb**	**18 33 15.6**	**+0.6**
TNSS	**Tian-Shan**	**3.04**	**350**	*eP*	**Pg**	**18 32 43.0**	**+0.2**
	5.1nm,0.8s						
TNSS				*eS*	**Sg**	**18 33 21.3**	**-1.0**
	2.6nm,0.8s						
SATY	**Saty**	**3.07**	**11**	Pg	**Pg**	**18 32 44.4**	**+1.1**
	3.1nm,0.3s						
SATY				Lg	Lg	18 33 23.8	
	13nm,0.5s						
ARLS	**Aral**	**3.10**	**307**	⇑*eP*	**Pb**	**18 32 38.7**	**-0.6**
ARLS				⇑*eS*	**Sb**	**18 33 16.7**	**-0.2**
MDOK	**Medeo**	**3.15**	**352**	Pg	**Pg**	**18 32 44.8**	**-0.2**
	8.7nm,0.5s						
MDOK				Lg	Lg	18 33 24.7	
	15nm,0.6s						
SFK	**Sufi-Kurgan**	**3.18**	**271**	⇑*eP*	**Pb**	**18 32 40.4**	**-0.3**
SFK				⇑*eS*	**Sb**	**18 33 19.7**	**+0.5**
KNDC	**Almaty**	**3.21**	**351**	⇑Pg	**Pb**	**18 32 41.8**	**+0.7**
	9.2nm,0.4s						
KNDC				⇑Lg	Lg	18 33 26.8	
	9.8nm,0.6s						
MTBS	**Maitube**	**3.22**	**344**	Pg	**Pg**	**18 32 46.8**	**+0.6**
	2.8nm,0.2s						
MTBS				Lg	Lg	18 33 27.7	
	9.4nm,0.6s						
MTBS	**Maitube**	**3.22**	**344**	*eP*	**Pg**	**18 32 46.8**	**+0.6**
	2.8nm,0.2s						
MTBS				*eS*	**Sg**	**18 33 27.7**	**-0.2**
	9.4nm,0.6s						
UCH	**Uchtor**	**3.22**	**314**	⇑*eP*	**Pb**	**18 32 40.5**	**-1.0**
UCH				⇑*eS*	**Sb**	**18 33 19.8**	**-0.7**
KST	**Kastek**	**3.25**	**338**	Pg	**Pg**	**18 32 47.5**	**+0.6**
	2.4nm,0.3s						
KST				Lg	Lg	18 33 29.3	
	16nm,0.6s						
KST	**Kastek**	**3.25**	**338**	*eP*	**Pg**	**18 32 47.5**	**+0.6**
	2.4nm,0.3s						
KST				*eS*	**Sg**	**18 33 29.3**	**+0.3**
	16nm,0.6s						
TKM2	**Tokmak 2**	**3.26**	**333**	⇓*eP*	**Pb**	**18 32 40.7**	**-1.4**
TKM2				⇓*eS*	**Sb**	**18 33 20.2**	**-1.4**
UZB	**Uzynbulak**	**3.27**	**18**	*eP*	**Pg**	**18 32 47.3**	**0.0**
	3.2nm,0.2s						
UZB				*eS*	**Sg**	**18 33 28.8**	**-0.9**
	3.7nm,0.6s						
DGS	**Degeres**	**3.49**	**337**	Pg	**Pg**	**18 32 50.9**	**-0.5**
	2.2nm,0.6s						
DGS				Lg	Lg	18 33 35.1	
	12nm,0.7s						
KPKS	**Kokpek**	**3.51**	**12**	Pg	**Pg**	**18 32 51.1**	**-0.7**
	0.3nm,0.1s						
KPKS				Lg	Lg	18 33 35.4	
	8.3nm,0.4s						
PDGK	**Podgornoye**	**3.56**	**22**	⇓Pg	**Pb**	**18 32 45.8**	**-1.3**
	2.3nm,0.6s						
PDGK				⇑Lg	Lg	18 33 36.3	
	7.8nm,0.8s						
KRBS	**Karabastau**	**3.94**	**339**	Pg	**Pg**	**18 32 59.4**	**-0.6**
	1.6nm,0.3s						
KRBS				Lg	Lg	18 33 49.7	
	5.0nm,0.7s						
ARXS	**Arharly**	**4.17**	**2**	Pg	**Pg**	**18 33 03.3**	**-1.1**
	2.1nm,0.6s						
ARXS				Lg	Lg	18 33 56.7	
	4.2nm,0.5s						
ARXS	**Arharly**	**4.17**	**2**	*eP*	**Pg**	**18 33 03.3**	**-1.1**
ARXS				*eS*	**Sg**	**18 33 56.7**	**-1.7**
BTLS	**Baital**	**5.66**	**333**	Pg	**Pg**	**18 33 31.6**	**-1.2**
	1.3nm,0.6s						
BTLS				Lg	Lg	18 34 45.2	
	2.0nm,0.5s						
BTLS	**Baital**	**5.66**	**333**	*eP*	**Pg**	**18 33 31.6**	**-1.2**
	1.3nm,0.6s						
BTLS				*eS*	**Sg**	**18 34 45.2**	**-0.8**
	2.0nm,0.5s						

*AFAD **24** 18:34:52.6, 39°.51N×23°.78E, h14km±1km, ML3.5*
*BEO **24** 18:34:54.6±0.9, 39°.21N×24°.29E, h10km, ML3.5/9*
*SOF **24** 18:34:56.8, 39°.60N±0°.04×24°.10E±0°.03, h3km±5km, MD3.5/6*
*IDC **24** 18:34:56.6±2.1, 39°.51N×23°.99E, h0km, mb3.4/4, mbtmp3.4/6, ML3.4/2, MS2.8/12, Error ellipse: s-maj=49.2km s-min=25.6km az=14.0*
*ISK **24** 18:34:57.0, 39°.47N×23°.98E, h15km, ML3.8/23*
*ATH **24** 18:34:57.8, 39°.46N×24°.09E, h15km, ML3.8/44, Manual Solution by G.Panopoulou First location: 2019/11/24 18:36:01, This location: 2019/11/24 18:46:59 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **24** 18:34:58.0, 39°.5N±0°.9×2°.4E±°, h10km±1km, M3.7/15, MLh3.7/15*
ISC 24 18:34:57.9±1.0, 39°.46N±0°.01×24°.08E±0°.01, h12km±7km, n215, σ0s76/259, mb3.3/4, MS2.8/3, 13C-11D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.32**	**208**	P	**Pb**	**18 35 04.9**	**-0.6**
AOS				S	**Sb**	**18 35 10.3**	**-0.4**
AOS2	**Alonissos-2**	**0.35**	**210**	P	**Pg**	**18 35 05.0**	**-0.1**
AOS2				S	**Sg**	**18 35 10.3**	**+0.5**
PLN1	**Chaniotis**	**0.67**	**325**	P	**Pb**	**18 35 11.0**	**-0.4**
PLN1				S	**Sb**	**18 35 19.9**	**-0.7**
NEO	**Neokhori**	**0.68**	**258**	P	**Pb**	**18 35 11.5**	**-0.2**
NEO				S	**Sb**	**18 35 20.8**	**-0.2**
NEO	**Neokhori**	**0.68**	**258**	P	**Pb**	**18 35 11.3**	**-0.3**
NEO				S	**Sg**	**18 35 20.3**	**+0.4**
SKY	**Skiros Island**	**0.68**	**147**	P	**Pg**	**18 35 11.0**	**-0.2**
SKY				S	**Sg**	**18 35 20.1**	**-0.1**
SKY	**Skiros Island**	**0.68**	**147**	P	**Pg**	**18 35 11.2**	**+0.1**
SKY				S	**Sg**	**18 35 19.6**	**-0.6**
EFSA	**Agios Efstrati**	**0.71**	**83**	P	**Pb**	**18 35 12.1**	**-0.1**
EFSA				S	**Sg**	**18 35 20.9**	**-0.1**
KYMI	**Kymi, Euboea I**	**0.82**	**179**	P	**Pg**	**18 35 13.7**	**-0.1**
KYMI				S	**Sb**	**18 35 25.2**	**+0.2**
KYMI	**Kymi, Euboea I**	**0.82**	**179**	P	**Pg**	**18 35 13.7**	**-0.1**
KYMI				S	**Sb**	**18 35 25.2**	**+0.2**
LMN1	**MIRINA LIMNOU**	**0.87**	**61**	P	**Pn**	**18 35 15.3**	**-0.6**
VOL2	**Volos**	**0.88**	**265**	P	**Pg**	**18 35 14.4**	**-0.4**
VOL2				S	**Sg**	**18 35 25.7**	**-0.5**
OUR	**Ouranopolis**	**0.88**	**355**	Pg	**Pg**	**18 35 14.3**	**-0.6**
OUR				Sg	**Sb**	**18 35 26.8**	**+0.1**
OUR	**Ouranopolis**	**0.88**	**355**	P	**Pb**	**18 35 14.8**	**-0.3**
OUR				S	**Sb**	**18 35 26.9**	**+0.1**
OUR	**Ouranopolis**	**0.88**	**355**	P	**Pb**	**18 35 14.6**	**-0.5**
OUR				S	**Sb**	**18 35 26.9**	**+0.1**
LIA	**Limnos Island**	**0.96**	**62**	P	**Pb**	**18 35 16.1**	**-0.3**
LIA				S	**Sb**	**18 35 29.6**	**+0.4**
LIA	**Limnos Island**	**0.96**	**62**	P	**Pb**	**18 35 16.2**	**-0.3**
LIA				S	**Sb**	**18 35 28.5**	**-0.6**
AIDA	**Aidipsos**	**1.00**	**233**	P	**Pg**	**18 35 16.8**	**-0.3**
AIDA				S	**Sb**	**18 35 30.2**	**+0.1**
PLG	**Polygyros**	**1.04**	**332**	P	**Pg**	**18 35 17.0**	**-0.9**
PLG	**Polygyros**	**1.04**	**332**	P	**Pg**	**18 35 16.6**	**-1.3**
PLG				S	**Sb**	**18 35 31.5**	**+0.1**
ATAL	**Atalanti**	**1.12**	**227**	P	**Pb**	**18 35 18.6**	**-0.5**
ATAL				S	**Sg**	**18 35 34.1**	**+0.1**
ATAL	**Atalanti**	**1.12**	**227**	P	**Pb**	**18 35 18.7**	**-0.5**
ATAL				S	**Sn**	**18 35 34.5**	**-0.2**
LKR	**Lokris**	**1.16**	**227**	P	**Pb**	**18 35 19.0**	**-0.8**
LKR				S	**Sb**	**18 35 35.1**	**+0.3**
LKR	**Lokris**	**1.16**	**227**	P	**Pb**	**18 35 19.4**	**-0.4**
LKR				S	**Sg**	**18 35 35.5**	**+0.2**
THAS	**Thassos island**	**1.25**	**23**	P	**Pn**	**18 35 20.1**	**-1.0**
THAS				S	**Sn**	**18 35 39.1**	**+1.2**
THAS	**Thassos island**	**1.25**	**23**	P	**Pn**	**18 35 20.0**	**-1.2**
THAS				S	**Sb**	**18 35 36.4**	**-1.0**
AXAR	**Agios Charalam**	**1.30**	**238**	P	**Pn**	**18 35 21.2**	**-0.6**
AXAR	**Agios Charalam**	**1.30**	**238**	P	**Pn**	**18 35 21.6**	**-0.2**
AXAR				S	**Sg**	**18 35 39.8**	**0.0**
LRSO	**Larissa Observ**	**1.32**	**280**	P	**Pn**	**18 35 22.1**	**0.0**
LRSO	**Larissa Observ**	**1.32**	**280**	P	**Pb**	**18 35 22.6**	**0.0**
GINA	**Giannouli**	**1.32**	**280**	P	**Pn**	**18 35 21.3**	**-0.8**
THS1	**Thassos, Thass**	**1.34**	**16**	P	**Pn**	**18 35 21.1**	**-1.2**
STFN	**Stefani**	**1.34**	**198**	P	**Pn**	**18 35 22.4**	**-0.1**
STFN	**Stefani**	**1.34**	**198**	P	**Pn**	**18 35 22.4**	**-0.1**
STFN				S	**Sb**	**18 35 40.3**	**+0.2**
HORT	**Hortiatis**	**1.36**	**327**	P	**Pn**	**18 35 22.5**	**-0.3**
HORT	**Hortiatis**	**1.36**	**327**	P	**Pn**	**18 35 22.2**	**-0.6**
DION	**Dionisos Attik**	**1.38**	**185**	P	**Pn**	**18 35 22.9**	**0.0**
DION	**Dionisos Attik**	**1.38**	**185**	P	**Pn**	**18 35 22.4**	**-0.6**
DION				S	**Sb**	**18 35 40.6**	**-0.6**
LIT	**Litokhoron**	**1.38**	**298**	P	**Pn**	**18 35 22.9**	**-0.1**
LIT	**Litokhoron**	**1.38**	**298**	P	**Pn**	**18 35 22.8**	**-0.2**
LAM2	**Lamia**	**1.39**	**247**	P	**Pn**	**18 35 22.6**	**-0.4**
LAM2				S	**Sn**	**18 35 40.7**	**-0.6**
VIL2	**Platees**	**1.39**	**207**	P	**Pn**	**18 35 23.1**	**0.0**
VIL2				S	**Sn**	**18 35 41.2**	**-0.2**
SIGR	**SIGRI**	**1.40**	**99**	Pn	**Pg**	**18 35 26.1**	**+1.3**
SIGR	**SIGRI**	**1.40**	**99**	P	**Pg**	**18 35 26.0**	**+1.1**
SIGR				S	**Sg**	**18 35 44.8**	**+1.8**
SIGR	**SIGRI**	**1.40**	**99**	P	**Pn**	**18 35 23.0**	**-0.2**
ACHAR	**Athens-Acharne**	**1.40**	**191**	P	**Pn**	**18 35 22.3**	**-0.9**
PTL	**Penteli**	**1.41**	**187**	P	**Pn**	**18 35 23.1**	**-0.3**
PTL	**Penteli**	**1.41**	**187**	P	**Pn**	**18 35 23.0**	**-0.4**
PTL				S	**Sn**	**18 35 41.6**	**-0.3**
VILL	**Villia**	**1.42**	**205**	P	**Pn**	**18 35 22.9**	**-0.6**
AGG	**Agios Georgios**	**1.42**	**253**	P	**Pn**	**18 35 22.9**	**-0.7**
AGG	**Agios Georgios**	**1.42**	**253**	P	**Pn**	**18 35 22.8**	**-0.8**
AGG				S	**Sn**	**18 35 41.7**	**-0.4**
MAGU	**Magoula**	**1.44**	**198**	P	**Pn**	**18 35 23.7**	**-0.1**
MAGU				S	**Sn**	**18 35 42.1**	**-0.5**
MAGU	**Magoula**	**1.44**	**198**	P	**Pn**	**18 35 23.5**	**-0.3**
MAGU				S	**Sn**	**18 35 42.4**	**-0.2**
TYRN	**Tyrnavos**	**1.45**	**281**	P	**Pn**	**18 35 23.4**	**-0.4**
TYRN	**Tyrnavos**	**1.45**	**281**	P	**Pn**	**18 35 23.7**	**-0.1**
KARY	**Karystos**	**1.45**	**169**	P	**Pn**	**18 35 23.6**	**-0.2**
KARY	**Karystos**	**1.45**	**169**	P	**Pn**	**18 35 23.7**	**-0.2**
KARY				S	**Sn**	**18 35 41.5**	**-1.3**
THE	**Thessaloniki**	**1.45**	**324**	P	**Pn**	**18 35 23.9**	**0.0**
THE	**Thessaloniki**	**1.45**	**324**	P	**Pn**	**18 35 23.8**	**-0.1**
ELFA	**Athens-Elefsin**	**1.47**	**197**	P	**Pn**	**18 35 24.1**	**0.0**
ATHP	**Athens-Neo Psi**	**1.47**	**189**	P	**Pn**	**18 35 24.0**	**-0.2**
SOH	**Sokhos**	**1.47**	**338**	P	**Pn**	**18 35 24.0**	**-0.3**
SOH	**Sokhos**	**1.47**	**338**	P	**Pn**	**18 35 23.8**	**-0.5**
SOH				S	**Sn**	**18 35 42.9**	**-0.6**
ATH5	**Athens Parliam**	**1.50**	**190**	P	**Pn**	**18 35 23.9**	**-0.7**
NOAC	**Athens-Thissio**	**1.50**	**191**	P	**Pn**	**18 35 24.3**	**-0.3**
NOAC				S	**Sn**	**18 35 44.2**	**+0.1**
ATH	**Athens Observa**	**1.51**	**191**	P	**Pn**	**18 35 24.8**	**+0.1**
ATH	**Athens Observa**	**1.51**	**191**	P	**Pn**	**18 35 24.6**	**-0.1**
ATH				S	**Sn**	**18 35 43.5**	**-0.6**
SMTH	**Samothraki Isl**	**1.51**	**47**	P	**Pn**	**18 35 23.3**	**-1.3**
SMTH	**Samothraki Isl**	**1.51**	**47**	P	**Pn**	**18 35 23.4**	**-1.3**
DLFA	**Delphi**	**1.57**	**232**	P	**Pn**	**18 35 25.1**	**-0.5**
DLFA				S	**Sn**	**18 35 44.7**	**-1.1**
MAKR	**Makrakomi, Fth**	**1.57**	**254**	P	**Pn**	**18 35 25.6**	**0.0**
MAKR	**Makrakomi, Fth**	**1.57**	**254**	P	**Pn**	**18 35 25.7**	**+0.1**
BOZC	**Bozcaada**	**1.57**	**75**	SPECP		18 35 25.0	
BOZC				P	**Pn**	**18 35 25.9**	**+0.3**
BOZC				S	**Sg**	**18 35 48.4**	**-0.2**
BOZC				*i* IAML		18 35 52.0	
	comp=N,397nm,1.0s						
BOZC				*i* IAML		18 36 00.0	
	comp=E,416nm,0.8s						
BOZC	**Bozcaada**	**1.57**	**75**	Pn	**Pb**	**18 35 26.3**	**-0.6**
BOZC				Sn	**Sg**	**18 35 47.5**	**-1.1**
KAVA	**Kavala**	**1.58**	**12**	P	**Pn**	**18 35 24.7**	**-1.0**
KAVA	**Kavala**	**1.58**	**12**	P	**Pn**	**18 35 24.6**	**-1.0**
GOAD	**anakkale-G¶**	**1.58**	**63**	SPECP		18 35 25.0	
GOAD				P	**Pn**	**18 35 25.4**	**-0.3**
GOAD				S	**Sn**	**18 35 45.3**	**-0.7**
GOAD				*i* IAML		18 35 51.0	
	comp=N,940nm,0.5s						
GOAD				*i* IAML		18 35 52.0	
	comp=E,816nm,0.7s						
GPNR	**Gulpinar-Canak**	**1.59**	**89**	Pn	**Pb**	**18 35 26.6**	**-0.6**
KOCA	**Canakkale, Ayv**	**1.60**	**88**	SPECP		18 35 26.0	
KOCA				P	**Pb**	**18 35 26.5**	**-0.8**
KOCA				S	**Sb**	**18 35 46.9**	**-0.6**
KOCA				*i* IAML		18 35 55.0	
	comp=E,1μm,0.5s						
KOCA				*i* IAML		18 36 03.0	
	comp=N,973nm,0.8s						
THL	**Klokotos Trika**	**1.60**	**275**	P	**Pn**	**18 35 25.7**	**-0.2**
VLY	**Voula,Athens**	**1.61**	**188**	P	**Pn**	**18 35 25.8**	**-0.3**
VLY				S	**Sn**	**18 35 46.5**	**-0.3**
LTK	**Loutraki**	**1.67**	**212**	P	**Pn**	**18 35 26.8**	**-0.2**
SRS	**Serrai**	**1.70**	**348**	P	**Pn**	**18 35 26.8**	**-0.6**
PRK	**Paraskevi**	**1.72**	**96**	P	**Pn**	**18 35 27.7**	**+0.2**
PRK	**Paraskevi**	**1.72**	**96**	P	**Pn**	**18 35 27.8**	**+0.2**
ECEA	**Canakkale, Ece**	**1.72**	**69**	SPECP		18 35 28.0	
ECEA				P	**Pb**	**18 35 28.6**	**-0.8**
ECEA				S	**Sg**	**18 35 53.9**	**+0.6**
ECEA				*i* IAML		18 35 56.0	
	comp=N,691nm,0.7s						
ECEA				*i* IAML		18 36 09.0	
	comp=E,616nm,0.6s						
LVRA	**Laurium**	**1.74**	**181**	P	**Pn**	**18 35 27.7**	**-0.1**
EZN	**Ezine**	**1.78**	**77**	Pn	**Pb**	**18 35 29.2**	**-1.1**
EZN				Sn	**Sb**	**18 35 52.6**	**0.0**
EZN	**Ezine**	**1.78**	**77**	⇑P	**Pb**	**18 35 29.7**	**-0.7**
EZN				⇓S	**Sg**	**18 35 54.9**	**-0.2**
EZNE	**Ezine-Canakkal**	**1.79**	**80**	Pn	**Pb**	**18 35 29.4**	**-1.3**
EVR	**Evrytania**	**1.84**	**254**	P	**Pn**	**18 35 29.3**	**-0.1**
KALE	**Kalithea**	**1.85**	**235**	P	**Pn**	**18 35 29.2**	**-0.2**
CHOS	**Chios island**	**1.88**	**124**	Pn	**Pn**	**18 35 30.3**	**+0.5**
CHOS	**Chios island**	**1.88**	**124**	P	**Pn**	**18 35 30.1**	**+0.3**
CNKL	**anakkale-Mer**	**1.88**	**70**	SPECP		18 35 29.0	
CNKL				P	**Pn**	**18 35 29.2**	**-0.7**
CNKL				S	**Sg**	**18 35 58.6**	**+0.1**
CNKL				*i* IAML		18 36 02.0	
	comp=N,401nm,0.9s						
CNKL				*i* IAML		18 36 11.0	
	comp=E,562nm,1.3s						
ANX	**Ano Chora**	**1.89**	**244**	P	**Pn**	**18 35 30.0**	**0.0**
SERG	**Sergoula**	**1.89**	**237**	P	**Pn**	**18 35 29.9**	**0.0**
TRIZ	**Trizonia**	**1.90**	**236**	P	**Pn**	**18 35 30.0**	**-0.1**
MET4	**Agioi Theodoro**	**1.90**	**196**	P	**Pn**	**18 35 29.8**	**-0.4**
MET5	**Makryloggos,Me**	**1.92**	**197**	P	**Pn**	**18 35 30.1**	**-0.2**
KNT	**Kendrikon**	**1.93**	**333**	P	**Pn**	**18 35 30.4**	**-0.1**
MET2	**Kameni Chora,**	**1.93**	**198**	P	**Pn**	**18 35 30.0**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**1.93**	**81**	SPECP		18 35 30.0	
BAYC				P	**Pn**	**18 35 30.9**	**+0.4**
BAYC				*i* IAML		18 36 06.0	
	comp=N,501nm,0.7s						
BAYC				*i* IAML		18 36 08.0	
	comp=E,235nm,1.3s						
COMU	**Canakkale**	**1.96**	**70**	Pn	**Pn**	**18 35 31.7**	**+0.8**
KZN	**Kozani**	**1.97**	**296**	P	**Pn**	**18 35 31.1**	**0.0**
EFP	**Efpalio**	**1.98**	**239**	P	**Pn**	**18 35 30.9**	**-0.2**
KARB	**zmir-Karabur**	**1.98**	**113**	SPECP		18 35 31.0	
KARB				P	**Pn**	**18 35 31.5**	**+0.3**
KARB				*i* IAML		18 36 06.0	
	comp=E,323nm,0.6s						
KARB				*i* IAML		18 36 14.0	
	comp=N,142nm,0.6s						
CAVK	**Edirne/Enez-Ca**	**2.03**	**52**	⇑P	**Pn**	**18 35 31.2**	**-0.6**
RDO	**Rodhopi**	**2.03**	**33**	P	**Pn**	**18 35 30.7**	**-1.1**
GUR	**Gnura**	**2.03**	**222**	P	**Pn**	**18 35 31.9**	**-0.1**
ENEZ	**Enez**	**2.04**	**51**	Pn	**Pn**	**18 35 32.4**	**+0.4**
KLV	**Kalavryta, Ach**	**2.06**	**227**	P	**Pn**	**18 35 32.0**	**-0.3**
KLV	**Kalavryta, Ach**	**2.06**	**227**	P	**Pn**	**18 35 32.3**	**0.0**
KLV1	**Kalavrita**	**2.09**	**228**	P	**Pn**	**18 35 32.8**	**0.0**
ARS1	**Argos**	**2.10**	**211**	P	**Pn**	**18 35 33.0**	**+0.1**
MMB	**Musomishta**	**2.10**	**353**	P	**Pn**	**18 35 33.1**	**+0.2**
MMB				S	**Sb**	**18 36 02.0**	**-0.1**
PVO	**Paravola**	**2.15**	**248**	P	**Pn**	**18 35 33.9**	**+0.4**
TETR	**Tetrakomo, Epi**	**2.17**	**268**	P	**Pn**	**18 35 34.0**	**+0.1**
VAY	**Valandovo**	**2.19**	**329**	*i* Pn	**Pn**	**18 35 34.8**	**+0.8**
DKL	**Dikili**	**2.23**	**99**	Pn	**Pn**	**18 35 35.7**	**+1.1**
ERIK	**Erikli-Kesan**	**2.23**	**56**	Pn	**Pn**	**18 35 34.2**	**-0.4**
URLA	**Izmir**	**2.25**	**118**	Pn	**Pn**	**18 35 35.8**	**+0.9**
LPK	**Lapseki**	**2.26**	**65**	Pn	**Pn**	**18 35 35.4**	**+0.4**
RZN	**Rozhen**	**2.29**	**13**	P	**Pn**	**18 35 35.2**	**-0.5**
RZN				S	**Sn**	**18 36 03.1**	**-0.8

DOPR	Dopca	6.58	8	⇓P		Pn	18 36 35.8	+1.4	
PLOR	Plostina	6.67	16	⇑P		Pn	18 36 37.6	+2.0	
VRI	Vrincioaia	6.70	16	⇑P		Pn	18 36 38.3	+2.2	
TLCR		6.72	30	⇓P		Pn	18 36 36.4	+0.2	
TESR	Tescani	7.30	14	⇓P		Pn	18 36 46.0	+1.8	
BRTR	Keskin Array B	7.39	85	Pn		Pn	18 36 47.4	+1.7	
	0.2nm,0.3s,baz=268,slow=12,SNR=7.7								
BRTR				Sn		Sn	18 38 06.7	-2.8	
	0.1nm,0.3s,baz=264,slow=13,SNR=1.6								
	0.8nm,0.7s								
MORH	Mrgy, Hungar	7.84	331	⇓P		Pn	18 36 51.9	+0.2	
MORH	Mrgy, Hungar	7.84	331	*e*Pn		Pn	18 36 52.2	+0.5	
BURAR	Bucovina Array	8.20	5	⇑P		Pn	18 36 57.4	+0.7	
MMAI	Mount Meron Ar	11.17	122	Pn		Pn	18 37 38.3	+0.8	
	0.6nm,0.3s,baz=302,slow=12,SNR=4.0								
	0.6nm,0.4s								
VRAC	Vranov	11.21	334	LR		LR	18 42 31.0		
	comp=Z,42nm,21.2s,baz=167,slow=41								
AKASG	Malin Array Be	11.82	16	LR		LR	18 42 16.8		
	comp=Z,37nm,18.6s,baz=303,slow=37								
GERES	GERESS Array B	11.97	325	LR		LR	18 42 07.5		
	comp=Z,30nm,19.8s,baz=141,slow=36								
KEST	Kesra	12.26	257	LR		LR	18 44 17.7		
	comp=Z,62nm,19.0s,baz=29,slow=46								
DAVOX	Davos/Dischmat	12.68	310	LR		LR	18 43 44.8		
	comp=Z,64nm,18.1s,baz=80,slow=42								
ASF	Jabal al Asfar	12.68	121	LR		LR	18 43 29.8		
	comp=Z,35nm,20.0s,baz=313,slow=40								
EIL	Elat	13.24	134	LR		LR	18 45 28.4		
	comp=Z,16nm,18.5s,baz=336,slow=47								
GNI	Garni	15.90	81	LR		LR	18 45 15.8		
	comp=Z,37nm,20.7s,baz=276,slow=39								
ESDC	Sonseca Array	21.59	280	P		P	18 39 47.2	-0.2	
	1.1nm,1.1s,baz=69,slow=13,SNR=2.1								
	1.1nm,1.1s								
HFS	Hagfors	21.71	346	LR		LR	18 49 00.1		
	comp=Z,37nm,20.5s,baz=204,slow=39								
NOA	NORSAR Array B	23.04	344	P		P	18 40 01.8	-0.8	
	0.6nm,0.8s,baz=153,slow=11,SNR=3.2								
NOA				LR		LR	18 49 42.3		
	comp=Z,21nm,19.0s,baz=175,slow=39								
	0.6nm,0.8s								
KIRV	Kirov	25.09	32	LR		LR	18 50 51.2		
	comp=Z,46nm,21.2s,baz=239,slow=38								
MKAR	Makanchi Array	42.26	60	P		P	18 42 51.9	+0.9	
	0.8nm,0.9s,baz=270,slow=8.1,SNR=3.9								
	0.8nm,0.9s								
ZALV	Zalesovo Beam	42.76	49	P		P	18 42 56.0	+1.1	
	1.3nm,0.6s,baz=268,slow=9.4,SNR=7.4								
	1.3nm,0.6s								

NEIC ***24*** *18:50:21.4±2.8,50.80N±0.04×179.16W±0.07,h10km±1km, mb4.5/121,ML4.6/14,ML4.2(AEIC), Error ellipse: s-maj=7.5km s-min=6.8km az=109.0*

AEIC ***24*** *18:50:24.4±1.4,50.95N±0.05×179.15W±0.05,h15km±4km, Error ellipse: s-maj=7.0km s-min=4.2km az=158.0*

IDC ***24*** *18:50:29.4±3.0,51.06N×179.15W,h70km±25km,mb4.0/32, mbtmp4.3/35,MS3.9/59,Error ellipse: s-maj=18.5km s-min=11.6km az=172.0*

ISC 24 18:50:27.2±1.3,51.04N±0.10×179.15W±0.03,h51km±9km, n274,σ1s31/187,mb4.5/97,MS3.9/59,13C-10D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.56	22		Pn	18 50 37.0	-2.2
GAKI					Sn	18 50 46.5	-1.3
GALAA	Gareloi Lava P	0.76	18		Pn	18 50 40.9	-0.9
GALAA					Sn	18 50 53.6	+1.2
GASW	Gareloi Southw	0.76	14		Pn	18 50 40.7	-1.1
GASW					Sn	18 50 53.7	+1.2
GANO	Gareloi North	0.81	15		Pn	18 50 41.3	-1.2
GANE	Gareloi Northe	0.81	16		Pn	18 50 41.4	-1.1
AMKA	Amchitka	1.03	290		Pn	18 50 42.7	-2.7
AMKA	Amchitka	1.03	290		Sn	18 50 58.7	-0.1
TASE	Tanaga Southea	1.06	41		Pn	18 50 45.0	-0.8
TAFL	Tanaga Flats	1.06	47		Pn	18 50 44.8	-1.0
TAFL					Sn	18 51 01.5	+2.0
TANO	Tanaga North	1.09	36		Pn	18 50 45.7	-0.4
TAPA	Tanaga Point A	1.14	47		Pn	18 50 46.0	-0.9
TAPA					Sn	18 51 03.4	+1.9
CERB	Semis' Cerberu	1.18	320		Pn	18 50 47.2	-0.1
CESW	Semis' Southwe	1.18	317		Pn	18 50 46.5	-0.9
CEPE	Semis' Perret	1.20	321		Pn	18 50 46.8	-0.8
CETU	Semis' Tuman	1.26	318		Pn	18 50 48.0	-0.4
KIMD	Kanaga Island	1.40	58		Sn	18 51 09.5	+1.9
KIWB	Kanaga Island	1.49	56		Sn	18 51 11.6	+1.7
KIWB	Kanaga Island	1.49	56	Pn	Pn	18 50 51.0	-0.6
KIWB				IAML		18 51 18.9	
	comp=N,8μm,0.5s						
KIWB				IAML		18 51 19.2	
	comp=E,8μm,0.7s						
KIKV	Kanaga Island	1.49	55		Sn	18 51 11.5	+1.5
KINC	Kanaga Island	1.54	54		Pn	18 50 52.3	0.0
LSSE	Little Sitkin	1.69	303		Pn	18 50 53.7	-0.5
ADK	Adak	1.76	60		Pn	18 50 54.5	-0.7
ADK				IAML		18 51 23.3	
	comp=E,6μm,0.6s						
ADK				IAML		18 51 26.4	
	comp=E,6μm,1.0s						
ADK	Adak	1.76	60		Sn	18 51 17.7	+1.3
ADAG	Mount Adagdak	1.85	58		Pn	18 50 56.8	+0.3
ADAG					Sn	18 51 21.2	+2.5
ETKA	Kagalaska Isla	1.90	63		Sn	18 51 20.5	+0.6
GSCK	Great Sitkin C	2.10	61		Sn	18 51 27.1	+2.2
GSSP	Great Sitkin S	2.13	59		Pn	18 51 00.5	+0.1
GSMY	Great Sitkin M	2.17	61		Sn	18 51 28.6	+1.9
GSTR	Great Sitkin T	2.20	60		Pn	18 51 01.4	+0.2
GSIG	Igitkin Island	2.22	64		Pn	18 51 01.5	-0.1
GSIG					Sn	18 51 28.9	+1.0
ATKA	Atka Island	3.30	67		Pn	18 51 16.2	-0.1
ATKA				IAML		18 52 06.0	
	comp=E,888nm,0.7s						
ATKA				IAML		18 52 09.9	
	comp=N,1μm,0.8s						
KOWE	Korovin West	3.32	65		Pn	18 51 16.9	+0.2
KOKL	Mount Kliuchef	3.33	65		Pn	18 51 17.4	+0.5
KONW	Korovin Northw	3.36	64		Pn	18 51 17.2	+0.1
KOKV	Korovin Volcan	3.37	65		Pn	18 51 17.4	0.0
KOFP	Korovin Flat P	3.38	67		Pn	18 51 17.9	+0.5
KOSE	Korovin Southe	3.43	66		Pn	18 51 18.0	-0.2
SHEM	Shemya Is, Ala	4.51	295	P	Pn	18 51 35.4	+2.5
SHEM	comp=N,116nm,0.6s,baz=336,slow=2.9,SNR=11			S	Sn	18 52 29.3	+5.2
SHEM	comp=N,164nm,0.8s,baz=235,slow=22,SNR=8.3			LR	LR	18 53 30.9	
SHEM	comp=N,2μm,19.4s,baz=144,slow=40 Shemya Is, Ala	4.51	295	IAML		18 52 38.9	
	comp=E,250nm,1.1s						
SMY	Shemya	4.51	295		Pn	18 51 35.0	+2.1
SMY				IAML		18 52 49.3	
	comp=N,554nm,1.1s						
CLCO	Concord Point,	6.09	70		Pn	18 51 55.2	+0.7
NIKH	Nikolski High	6.64	69	Pn	Pn	18 52 03.0	+0.9
OKSP	Okmok Steeple	7.04	67		Pn	18 52 08.3	+0.7
OKCE	Okmok Cone E	7.16	66		Pn	18 52 10.1	+0.9
OKTU	Okmok Mt. Tuli	7.21	67		Pn	18 52 10.5	+0.5
MREP	Makushin Rep't	8.07	65		Pn	18 52 22.7	+1.0
MSW	Makushin Switc	8.08	64		Pn	18 52 22.5	+0.7
MNAT	Makushin Natee	8.13	65		Pn	18 52 23.5	+1.0
UNV	Unalaska Valle	8.22	65		Pn	18 52 23.9	+0.2
SDPT	Sand Point	11.99	62	Pn	Pn	18 53 13.9	-1.3
N14K	Kuskokwak Cree	13.27	41		Pn	18 53 36.4	+3.7
O15K	Ungalikthiuk R	13.69	46	Pn	Pn	18 53 42.1	+3.7
L14K	Kuka Creek	13.76	35		Pn	18 53 43.8	+4.6
PETK	Petropavlovsk-	14.38	287	P	P	18 53 50.6	-2.7
PETK	comp=N,11nm,0.9s,baz=82,slow=11,SNR=3.9			S	Sn	18 56 24.1	-1.3
PETK	comp=N,7.7nm,1.1s,baz=159,slow=22,SNR=2.5			LR	LR	18 59 06.2	
M16K	comp=N,484nm,21.6s,baz=95,slow=36 Timber Creek	15.01	40	P	P	18 54 02.3	+2.0
M16K				IAmb	IAmb	18 54 08.6	
	comp=Z,14nm,0.8s						
L18K	Granite Mounta	16.57	39		Pn	18 54 15.8	+0.1
KDAK	Kodiak Island	16.79	56	P	Pn	18 54 14.8	-3.8
KDAK	comp=Z,6.9nm,0.4s,baz=216,slow=3.9,SNR=19			S	Sn	18 57 18.8	-5.1
	comp=Z,8.7nm,0.9s,baz=143,slow=20,SNR=6.6						
L19K	White Mountain	17.29	41		P	18 54 27.0	+1.5
STLK	Strandline Lak	18.28	45	P	Pn	18 54 38.0	+1.2
SKT	Skwentna	18.60	43		P	18 54 41.3	+1.3
SKT				IAmb	IAmb	18 54 48.9	
	comp=Z,22nm,0.7s						
SUA	Susitna One	18.75	45		P	18 54 41.3	-0.4
SUA				IAmb	IAmb	18 55 04.4	
	comp=Z,40nm,1.4s						
MA2	Magadan	18.99	308	LR	LR	19 01 25.9	
	comp=Z,277nm,20.4s,baz=120,slow=35						
L22K	Petersville	19.14	42		P	18 54 46.4	+0.4
L22K				IAmb	IAmb	18 54 51.8	
	comp=Z,25nm,0.7s						
SEY	Seymchan	19.36	319	P	Pn	18 54 49.4	-0.2
	comp=Z,7.9nm,1.1s,baz=114,slow=15,SNR=2.7						
SEY				LR	LR	19 02 28.3	
	comp=Z,384nm,18.7s,baz=106,slow=37						
KTH	Kantishna Hill	19.52	39	IAmb	IAmb	18 54 56.4	
	comp=Z,34nm,0.8s						
GHO	Glory Hole Cre	19.67	45	P	P	18 54 51.9	+0.2
C18K	Utukok River	19.68	20	IAmb	IAmb	18 54 54.9	
	comp=Z,17nm,0.9s						
TRF	Thorofare Moun	19.73	40	IAmb	IAmb	18 54 58.1	
	comp=Z,50nm,1.2s						
IMAR	Indian Mountai	19.78	31	P	P	18 54 53.3	+0.5
H21K	Melozitna Rive	19.90	33	IAmb	IAmb	18 54 56.6	
	comp=Z,20nm,1.0s						
I21K	Tanana	19.93	34	IAmb	IAmb	18 54 57.4	
	comp=Z,35nm,0.9s						
SML	Sawmill	19.95	45	IAmb	IAmb	18 55 02.6	
	comp=Z,20nm,1.1s						
D19K	Kuna River	20.26	22	IAmb	IAmb	18 55 00.2	
	comp=Z,22nm,0.9s						
RND	Reindeer	20.30	41	IAmb	IAmb	18 55 03.5	
	comp=Z,12nm,0.7s						
MCK	McKinley	20.40	40		P	18 55 00.3	+0.8
SCM	Sheep Creek Mo	20.41	46	P	P	18 54 58.6	-1.2
SCM				IAmb	IAmb	18 55 32.8	
	comp=Z,30nm,1.0s						
NEA2	Nenana	20.72	38	P	P	18 55 02.9	-0.1
DHY	Denali Highway	20.80	42	P	P	18 55 03.6	-0.3
DHY				IAmb	IAmb	18 55 09.6	
	comp=Z,34nm,0.9s						
DIV	Divide	20.94	48	IAmb	IAmb	18 55 09.5	
	comp=Z,29nm,1.4s						
KLU	Klutina	20.96	47	IAmb	IAmb	18 55 13.3	
	comp=Z,17nm,1.0s						
M24K	Tolsona, Glenn	21.01	46	IAmb	IAmb	18 55 25.4	
	comp=Z,34nm,1.0s						
PAX	Paxson	21.58	44		P	18 55 12.3	-0.1
PAX				IAmb	IAmb	18 55 31.8	
	comp=Z,16nm,1.0s						
ILAR	Eielson Array	21.64	38	P	P	18 55 11.9	-1.0
	comp=Z,2.3nm,0.7s,baz=235,slow=8.5,SNR=31						
ILAR				S	S	18 58 56.3	-13
	comp=Z,0.1nm,0.6s,baz=203,slow=8.4,SNR=1.4						
	comp=Z,2.3nm,0.7s						
K24K	Donnelly Dome	21.73	41	IAmb	IAmb	18 55 38.2	
	comp=Z,14nm,0.7s						
D22K	Ayikyak River	21.93	26	IAmb	IAmb	18 55 37.4	
	comp=Z,14nm,0.9s						
GLB	Gilahina Butte	21.94	48	IAmb	IAmb	18 55 24.6	
	comp=Z,14nm,0.7s						
B21K	Ikpikpuk River	21.94	23	IAmb	IAmb	18 55 32.9	
	comp=Z,19nm,1.1s						
RIDG	Independent Ri	22.09	42	IAmb	IAmb	18 56 01.4	
	comp=Z,21nm,1.1s						
G24K	Hadweenzic Riv	22.29	33	IAmb	IAmb	18 55 21.4	
	comp=Z,24nm,0.9s						
SCRK	Sand Creek	22.53	42		P	18 55 20.8	-1.8
D23K	Nanushuk River	22.54	27	IAmb	IAmb	18 55 28.8	
	comp=Z,11nm,0.8s						
F24K	Squaw Lake	22.57	31	IAmb	IAmb	18 55 25.1	
	comp=Z,24nm,0.9s						
E24K	Your Creek	22.68	30	IAmb	IAmb	18 55 25.8	
	comp=Z,8.1nm,0.7s						
J26L	Joseph Creek	22.88	40	IAmb	IAmb	18 55 26.8	
	comp=Z,8.9nm,0.7s						
FYU	Fort Yukon	23.02	35	IAmb	IAmb	18 55 28.2	
	comp=Z,14nm,0.8s						
M27K	Edge Creek, AK	23.02	46	IAmb	IAmb	18 55 29.0	
	comp=Z,20nm,1.0s						
C23K	Itkillik River	23.11	25		P	18 55 28.3	-0.1
K27K	Chicken	23.35	42	IAmb	IAmb	18 55 31.8	
	comp=Z,27nm,1.4s						
F25K	Christian Rive	23.35	32	IAmb	IAmb	18 55 31.9	
	comp=Z,12nm,0.8s						
C24K	Franklin Bluff	23.56	26	IAmb	IAmb	18 55 34.5	
	comp=Z,18nm,0.8s						
E25K	Arctic Village	23.63	31	IAmb	IAmb	18 55 34.9	
	comp=Z,22nm,1.0s						
BMAR	Burnt Mountain	23.64	33		P	18 55 32.7	-0.8
G26K	Porcupine Rive	23.71	35	IAmb	IAmb	18 55 36.6	
	comp=Z,16nm,0.9s						
D25K	Kavik River	24.01	28	IAmb	IAmb	18 55 38.8	
	comp=Z,16nm,0.8s						
DAWY	Dawson	24.50	43	IAmb	IAmb	18 55 43.2	
	comp=Z,7.7nm,0.9s						
M29M	Somme Creek	24.61	47	IAmb	IAmb	18 55 46.1	
	comp=Z,11nm,1.1s						
C27K	Jago River	24.97	29	IAmb	IAmb	18 55 47.5	
	comp=Z,6.9nm,0.7s						
E27K	Coleen River	24.99	33	IAmb	IAmb	18 55 48.4	
	comp=Z,14nm,1.1s						
K29M	Barlow Dome	25.26	44	IAmb	IAmb	18 55 49.9	
	comp=Z,11nm,0.7s						
F28M	Old Crow	25.37	34	IAmb	IAmb	18 55 51.9	
	comp=Z,11nm,0.8s						
D27M	Malcolm River	25.65	31	IAmb	IAmb	18 56 18.2	
	comp=Z,13nm,1.4s						
I30M	Mount Dempster	26.02	41	IAmb	IAmb	18 55 56.1	
	comp=Z,6.9nm,0.7s						
EPYK	Eagle Plains	26.16	38	IAmb	IAmb	18 55 56.1	
	comp=Z,6.8nm,0.8s						
INK	Inuvik	27.86	35		P	18 56 10.1	-1.4
DLBC	Dease Lake	28.73	56	LR	LR	19 08 25.1	
	comp=Z,170nm,20.1s,baz=256,slow=38						
YAK	Yakutsk	29.48	312	LR	LR	19 08 55.8	
	comp=Z,176nm,18.2s,baz=93,slow=38						
A36M	Sachs Harbour	31.49	29	IAmb	IAmb	18 56 45.6	
	comp=Z,8.1nm,0.8s						
USRK	Ussuriysk Ar.	33.12	278	P	P	18 56 57.3	-0.9
	comp=Z,3.3nm,0.7s,baz=57,slow=7.8,SNR=2.7						
	comp=Z,3.3nm,0.7s						
H11N2	WAKE ISLAND Hy	33.13	205	T	T	19 32 14.5	
	baz=16,slow=76						
H11N3	WAKE ISLAND Hy	33.14	205	T	T	19 32 12.0	
	baz=16,slow=76						
H11N1	WAKE ISLAND Hy	33.15	205	T	T	19 32 16.6	
	baz=16,slow=76						
HEH	HeiHe	33.28	290	*e*P	P	18 56 59.3	-0.1
HEH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MJAR	Matsushiro Arr	33.52	261	LR	LR	19 09 56.1	
	comp=Z,156nm,19.0s,baz=55,slow=35						
H11S1	WAKE ISLAND Hy	34.35	204	T	T	19 33 51.5	
	baz=4.6,slow=78						
H11S2	WAKE ISLAND Hy	34.37	204	T	T	19 33 51.9	
	baz=4.6,slow=78						
H11S3	WAKE ISLAND Hy	34.37	204	T	T	19 33 52.7	
	baz=4.6,slow=78						
BNX	BinXian	35.23	283	⇓P	P	18 57 15.6	-0.8
BNX				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YKA	Yellowknife Ar	35.62	46	P	P	18 57 19.9	+0.3
	comp=Z,3.0nm,0.8s,baz=284,slow=8.8,SNR=11						
YKA				LR	LR	19 13 51.5	
	comp=Z,418nm,19.0s,baz=266,slow=39						
	comp=Z,3.0nm,0.8s						
JCJ	Chichijima	37.74	246	LR	LR	19 10 27.7	
	comp=Z,100nm,20.3s,baz=120,slow=32						
B08A	Colville Reser	37.85	70	IAmb	IAmb	18 57 41.5	
	comp=Z,10.0nm,1.2s						
HAWA	Hanford	38.67	73	IAmb	IAmb	18 57 48.9	
	comp=Z,11nm,1.1s						
YBH	Yreka Blue Hor	39.15	81	LR	LR	19 12 10.2	
	comp=Z,12nm,19.5s,baz=290,slow=33						
NEW	Newport	39.21	69	P	P	18 57 49.9	-0.2
KSRS	Korea Array	39.43	271	P	P	18 57 52.5	+0.6
	comp=Z,3.2nm,0.8s,baz=54,slow=8.3,SNR=5.5						
	comp=Z,3.2nm,0.8s						
RES	Resolute Bay	40.14	24	LR	LR	19 17 05.0	
	comp=Z,128nm,20.6s,baz=272,slow=40						
JNU	Natsue	40.32	263	LR	LR	19 12 39.2	
	comp=Z,111nm,21.3s,baz=52,slow=33						
BCYI	Bear Canyon	43.44	72	P	P	18 58 26.3	+1.2
BCYI				IAmb	IAmb	18 58 28.3	
	comp=Z,11nm,1.0s						
BOZ	Bozeman (W)	43.80	70	IAmb	IAmb	18 58 29.3	
	comp=Z,5.6nm,0.8s						
NVAR	Mina Array Bea	43.81	82	P	P	18 58 28.4	+0.3
	comp=Z,1.2nm,0.9s,baz=296,slow=9.1,SNR=6.3						
	comp=Z,1.2nm,0.9s						
ELK	Elko	44.34	77	LR	LR	19 15 53.4	
	comp=Z,143nm,19.8s,baz=312,slow=34						
YHL	Hebgen Lake	44.47	70	IAmb	IAmb	18 58 39.6	
	comp=Z,11nm,1.1s						
YHB	Horse Butte	44.52	70	IAmb	IAmb	18 58 39.9	
	comp=Z,10nm,0.9s						
HVU	Hansel Valley	45.25	75	IAmb	IAmb	18 58 48.1	
	comp=Z,4.0nm,0.7s						
TPNV	Topopah Spring	46.01	82	P	P	18 58 46.2	+0.7
TPNV				IAmb	IAmb	18 58 56.9	
	comp=Z,5.2nm,0.8s						
SONM	Songino Array	46.60	297	P	P	18 58 50.5	+0.5
	comp=Z,3.1nm,0.8s,baz=60,slow=8.3,SNR=18						
SONM				PcP	PcP	19 00 23.6	+0.4
	comp=Z,1.7nm,1.0s,baz=74,slow=2.3,SNR=3.7						
SONM				LR	LR	19 19 58.4	
	comp=Z,354nm,18.7s,baz=50,slow=38						
	comp=Z,3.1nm,0.8s						
PDAR	Pinedale Array	46.62	72	P	P	18 58 51.5	+1.1
	comp=Z,5.4nm,0.7s,baz=309,slow=4.4,SNR=39						
PDAR				LR	LR	19 16 02.4	
	comp=Z,79nm,20.4s,baz=302,slow=33						
	comp=Z,5.4nm,0.7s						
PDAR	Pinedale Array	46.62	72		P	18 58 51.0	+0.6
GUMO	Guam	47.33	231	LR	LR	19 17 20.0	
	comp=Z,44nm,19.9s,baz=88,slow=34						
HHC	Hu-ho-hao-te	47.57	286	*e*P	P	18 58 58.9	+1.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,70nm,4.4s						
PFO	Pinyon Flats O	48.01	86	LR	LR	19 15 51.3	
	comp=Z,39nm,20.8s,baz=311,slow=32						
SRU	San Rafael Swe	48.22	76	IAmb	IAmb	18 59 20.7	
	comp=Z,7.1nm,0.9s						
NJ2	Nanjing	48.60	272	*e*P	P	18 59 07.3	+1.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PV22	Blue Mesa, Par	49.64	76	IAmb	IAmb	18 59 48.3	
	comp=Z,7.2nm,1.0s						
PV03	Paradox Valley	49.78	76	IAmb	IAmb	18 59 19.1	
	comp=Z,9.4nm,1.1s						
PV01	Paradox Valley	50.02	76	IAmb	IAmb	18 59 25.0	
	comp=Z,4.8nm,0.6s						
ULM	Lac du Bonnet	50.05	56	LR	LR	19 21 28.7	
	comp=Z,116nm,18.0s,baz=306,slow=37						
SPITS	Spitsbergen Ar	50.70	356	P	P	18 59 20.9	0.0
	comp=Z,9.3nm,0.6s,baz=40,slow=6.8,SNR=22						
SPITS				LR	LR	19 22 34.8	
	comp=Z,70nm,18.9s,baz=349,slow=38						
	comp=Z,9.3nm,0.6s						
ANMO	Albuquerque	53.38	78	LR	LR	19 21 38.1	
	comp=Z,128nm,19.5s,baz=46,slow=35						
FRB	Frobisher Bay	53.43	31	LR	LR	19 24 23.3	
	comp=Z,204nm,20.9s,baz=292,slow=38						
ZALV	Zalesovo Beam	54.11	313	P	P	18 59 45.9	-0.6
	comp=Z,0.5nm,0.3s,baz=28,slow=7.0,SNR=5.1						
ZALV				PcP	PcP	19 00 50.7	+0.1
	comp=Z,1.7nm,0.8s,baz=46,slow=4.2,SNR=5.3						
ZALV				LR	LR	19 24 23.5	
	comp=Z,92nm,19.1s,baz=56,slow=38						
	comp=Z,0.5nm,0.3s						
LZH	Lanzhou	55.27	286	*e*P	P	19 00 01.9	+6.6
LZH				pP	pwP	19 00 16.8	+4.4
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				LR	LR		
	comp=N,140nm,15.5s						
LZH				LR	LR		
	comp=E,190nm,15.6s						
LZH				LR	LR		
	comp=Z,210nm,16.1s						
GTA	Gaotai	55.49	292	*e*P	P	18 59 57.4	+0.6
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				LR	LR		
	comp=N,110nm,14.9s						
GTA				LR	LR		
	comp=E,150nm,13.1s						
GTA				LR	LR		
	comp=Z,230nm,16.4s						
ARCES	ARCESS Array B	58.39	350	P	P	19 00 15.8	-0.9
	comp=Z,2.2nm,0.7s,baz=19,slow=6.9,SNR=9.0						
ARCES				LR	LR	19 30 25.1	
	comp=Z,45nm,18.2s,baz=48,slow=41						
	comp=Z,2.2nm,0.7s						
ARCES	ARCESS Array B	58.39	350	P	P	19 00 16.2	-0.5
LPIG	La Paz	58.45	90	LR	LR	19 20 19.9	
	comp=Z,59nm,20.5s,baz=308,slow=31						
TXAR	Lajitas Array	58.92	81	P	P	19 00 21.1	0.0
	comp=Z,0.5nm,0.5s,baz=298,slow=5.1,SNR=7.7						
	comp=Z,0.5nm,0.5s						
TXAR	Lajitas Array	58.92	81	P	P	19 00 21.4	+0.3
KURK	Kurchatov	59.10	314		P	19 00 21.5	-0.4
KURBB	Kurchatov Arra	59.20	314	P	P	19 00 22.7	+0.1
	comp=Z,6.9nm,0.6s,baz=43,slow=6.6,SNR=41						
	comp=Z,6.9nm,0.6s						
WMQ	Urumqi	59.34	303	*e*P	P	19 00 24.9	+1.1
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				LR	LR		
	comp=Z,250nm,18.1s						
MKAR	Makanchi Array	60.07	308	P	P	19 00 28.6	-0.1
	comp=Z,3.0nm,0.6s,baz=49,slow=5.8,SNR=31						
MKAR				LR	LR	19 26 49.6	
	comp=Z,120nm,21.3s,baz=54,slow=36						
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	60.07	308		P	19 00 28.2	-0.6
SCHQ	Schefferville	60.41	38	LR	LR	19 30 32.1	

NOA LR LR 19 32 04.0
comp=Z,40nm,20.0s,baz=350,slow=37
comp=Z,1.2nm,0.6s
KKAR Karatay Array 68.45 312 P 19 01 23.9 +0.3
TAOE Nuku Hiva Isla 68.51 138 *e*LR LR 19 22 16.4
comp=Z,237nm,21.8s
KSH Kashi 68.53 307 P **P 19 01 28.9 +4.6**
KSH pmax pmax
comp=Z,18nm,0.9s
HFS Hagfors 68.70 353 P **P 19 01 24.4 -0.4**
comp=Z,3.3nm,0.7s,baz=23,slow=7.8,SNR=14
HFS LR LR 19 31 59.2
comp=Z,43nm,19.9s,baz=32,slow=36
comp=Z,3.3nm,0.7s
OBN Obninsk 70.11 339 P **P 19 01 33.3 -0.3**
comp=Z,10nm,0.4s,baz=191,slow=5.2,SNR=5.0
OBN LR LR 19 36 35.9
comp=Z,130nm,18.1s,baz=352,slow=40
comp=Z,10nm,0.4s
CMAR Chiang Mai Arr 70.83 276 P **P 19 01 38.6 +0.1**
comp=Z,1.1nm,0.8s,baz=30,slow=7.3,SNR=10
CMAR LR LR 19 34 14.0
comp=Z,31nm,20.2s,baz=50,slow=37
comp=Z,1.1nm,0.8s
PABE Paberze 72.09 346 P 19 01 44.2 -1.4
BRDH Bariadhala 72.22 284 LR LR 19 39 09.7
comp=Z,33nm,18.1s,baz=252,slow=40
PPT Papeete 73.07 151 LR LR 19 28 46.9
comp=Z,60nm,20.9s,baz=358,slow=31
PPT2 Papeete2 73.09 151 *e*S **S 19 11 13.6 -1.9**
comp=Z,41nm,24.5s
PPT2 Papeete2 73.09 151 *e*LR LR 19 24 15.6
comp=Z,136nm,25.2s
PPT2 *e*LR LR 19 24 23.5
comp=Z,151nm,26.5s
CMIG Matias Romero 73.33 83 LR LR 19 32 21.6
comp=Z,54nm,19.3s,baz=348,slow=34
DZM Mont Dzumac 73.89 194 *e*S **SKiKP 19 11 21.1 +0.5**
comp=Z,48nm,24.2s
DZM Mont Dzumac 73.89 194 *e*LR LR 19 24 40.3
comp=Z,218nm,24.8s
RAR Rarotonga 73.93 161 LR LR 19 28 38.2
comp=Z,188nm,19.1s,baz=316,slow=31
EKA Eskdalemuir Ar 73.94 2 P **P 19 01 56.0 -0.5**
comp=Z,2.9nm,0.9s,baz=4.9,slow=6.6,SNR=5.0
comp=Z,2.9nm,0.9s
AKASG Malin Array Be 75.80 342 P **P 19 02 07.3 0.0**
comp=Z,7.1nm,0.4s,baz=22,slow=5.9,SNR=35
AKASG LR LR 19 38 10.7
comp=Z,55nm,21.7s,baz=30,slow=38
comp=Z,7.1nm,0.4s
AKASG Malin Array Be 75.80 342 P **P 19 02 05.4 -1.9**
AKASG IAmb IAmb 19 02 08.5
comp=Z,4.5nm,0.9s
KIEV Kiev 75.81 342 P 19 02 05.5 -1.9
KIEV Kiev 75.81 342 ⇑P **P 19 02 07.3 -0.1**
CLL Collm 77.51 352 *i* P **P 19 02 16.6 -0.3**
comp=Z,6.0nm,1.0s
STHS Stebnicka Huta 78.42 347 *e*P **P 19 02 22.4 +0.3**
SORM Soroca 78.42 342 ⇓P **P 19 02 21.8 -0.3**
TBI Tubuai 78.55 152 *e*LR LR 19 26 49.7
comp=Z,708nm,23.2s
MEM Membach 78.63 357 *d*P **P 19 02 24.1 +1.0**
comp=Z,7.1nm,1.0s
KBZ Khabaz 78.80 330 P **P 19 02 24.9 +0.7**
comp=Z,2.1nm,0.8s,baz=108,slow=7.8,SNR=4.0
KBZ LR LR 19 40 58.4
comp=Z,124nm,21.7s,baz=4.5,slow=38
comp=Z,2.1nm,0.8s
LANS Liptovska Anna 78.92 348 *e*P **P 19 02 26.8 +1.9**
BMRD Maredsous 78.98 357 *d*P **P 19 02 25.3 +0.2**
comp=Z,5.6nm,1.0s
VRAC Vranov 79.13 350 P **P 19 02 26.5 +0.5**
comp=Z,5.1nm,1.0s,baz=102,slow=1.2,SNR=6.0
VRAC LR LR 19 41 54.4
comp=Z,38nm,18.4s,baz=18,slow=39
comp=Z,5.1nm,1.0s
VRAC Vranov 79.13 350 ⇑P **P 19 02 26.8 +0.9**
BUR08 Bucovina Ar. S 79.49 344 P 19 02 26.6 -1.5
BURAR Bucovina Array 79.52 344 P 19 02 26.9 -1.3
BURAR Bucovina Array 79.52 344 ⇑P **P 19 02 28.9 +0.7**
WLF Walferdange 79.57 357 *d*P **P 19 02 29.2 +0.9**
comp=Z,8.2nm,1.2s
GERES GERESS Array B 79.89 351 P **P 19 02 30.2 0.0**
comp=Z,1.3nm,0.7s,baz=14,slow=6.2,SNR=11
comp=Z,1.3nm,0.7s
MODS Modra-Piesok 79.97 349 *e*P **P 19 02 32.2 +1.7**
PSZ Piszkesteto 80.07 347 ⇑P **P 19 02 32.3 +1.1**
TESR Tescani 80.31 342 ⇑P **P 19 02 33.1 +0.6**
CONA Conrad Observa 80.57 350 *i* P **P 19 02 34.7 +0.8**
comp=Z,2.0nm,0.7s
DRGR 80.74 345 ⇑P **P 19 02 35.3 +0.5**
MARR Marisel-Cluj 80.79 345 ⇑P **P 19 02 35.9 +0.8**
VRI Vrincioaia 80.92 342 ⇑P **P 19 02 36.3 +0.6**
PLOR Plostina 80.95 342 ⇑P **P 19 02 36.3 +0.4**
BIOA Bad Ischl, Aus 81.04 351 *e*P **P 19 02 37.1 +0.8**
comp=Z,3.2nm,0.9s
COVR Voineasa-Covas 81.04 342 ⇓P **P 19 02 38.2 +1.8**
GNI Garni 81.41 327 LR LR 19 44 03.7
comp=Z,147nm,19.0s,baz=32,slow=40
SIRR Siria 81.42 346 ⇓P **P 19 02 38.6 +0.2**
MLR Muntele Rosu 81.43 342 P **P 19 02 39.7 +1.1**
comp=Z,9.7nm,0.8s,baz=0.0,slow=4.0,SNR=7.8
MLR LR LR 19 44 09.3
comp=Z,59nm,18.1s,baz=34,slow=40
comp=Z,9.7nm,0.8s
MLR Muntele Rosu 81.43 342 P **P 19 02 38.4 -0.2**
MLR Muntele Rosu 81.43 342 ⇑P **P 19 02 40.5 +1.9**
WATA Walderalm 81.57 353 *e*P **P 19 02 39.6 +0.3**
comp=Z,7.4nm,1.0s
WRA Warramunga Arr 81.62 224 P **P 19 02 38.9 -0.7**
comp=Z,0.9nm,0.8s,baz=36,slow=6.1,SNR=5.7
comp=Z,0.9nm,0.8s
WTTA Wattenberg 81.64 353 *i* P **P 19 02 39.3 -0.4**
comp=Z,4.8nm,1.1s
VOIR 81.65 343 ⇓P **P 19 02 41.6 +1.9**
KBA Koelnbreinsper 81.67 351 *e*P **P 19 02 41.1 +1.2**
comp=Z,12nm,0.7s
ARR Arges 81.79 343 ⇑P **P 19 02 42.0 +1.6**
SURR Surduc 81.85 345 ⇑P **P 19 02 41.4 +0.9**
SOKA Soboth 81.90 350 *e*P **P 19 02 41.2 +0.2**
comp=Z,6.4nm,1.2s
FETA Feichten 81.95 353 *e*P **P 19 02 42.2 +0.9**
comp=Z,4.7nm,1.0s
BZS Buzias 82.06 345 ⇓P **P 19 02 42.2 +0.5**
ABTA Abfaltersbach 82.08 352 *e*P **P 19 02 42.5 +0.6**
comp=Z,5.2nm,1.0s
GZR Gura Zlata 82.09 345 ⇓P **P 19 02 43.2 +1.2**
OBKA Obir 82.11 350 *e*P **P 19 02 42.8 +0.7**
comp=Z,8.9nm,1.0s
DAVOX Davos/Dischmat 82.25 354 LR LR 19 40 09.0
comp=Z,27nm,20.4s,baz=75,slow=36
PSI Prapat 82.75 265 LR LR 19 42 36.3
comp=Z,18nm,19.7s,baz=16,slow=38
RKT Rikitea 83.45 140 *e*LR LR 19 28 58.8
comp=Z,12μm,39.8s
BOVS Bovan 83.98 345 ⇑P **P 19 02 52.2 +0.6**
ASAR Alice Springs 85.09 222 P **P 19 02 56.7 -0.7**
comp=Z,0.6nm,0.8s,baz=25,slow=5.4,SNR=8.4
ASAR LR LR 19 38 27.9
comp=Z,57nm,19.4s,baz=17,slow=34
comp=Z,0.6nm,0.8s
BRTR Keskin Array B 85.16 335 P **P 19 02 57.5 -0.3**
comp=Z,3.0nm,0.8s,baz=42,slow=3.3,SNR=17
BRTR LR LR 19 46 57.7
comp=Z,31nm,18.4s,baz=314,slow=40
comp=Z,3.0nm,0.8s
URZ Urewera 88.98 183 LR LR 19 37 29.3
comp=Z,77nm,20.1s,baz=12,slow=32
ESDC Sonseca Array 89.56 4 P **P 19 03 18.5 -0.5**
comp=Z,1.7nm,1.1s,baz=354,slow=5.3,SNR=4.2
comp=Z,1.7nm,1.1s
SJG San Juan 89.71 61 LR LR 19 47 41.3
comp=Z,33nm,18.4s,baz=337,slow=38
MMAI Mount Meron Ar 90.94 332 LR LR 19 48 28.2
comp=Z,30nm,21.5s,baz=8.5,slow=38
ASF Jabal al Asfar 91.26 330 LR LR 19 50 37.0
comp=Z,65nm,18.3s,baz=29,slow=40
EIL Elat 94.19 331 LR LR 19 52 12.8
comp=Z,70nm,18.1s,baz=354,slow=39
RPZ Rata Peaks 94.76 187 LR LR 19 43 06.5
comp=Z,117nm,18.3s,baz=134,slow=33
MDT Midelt 96.37 5 LR LR 19 51 30.3
comp=Z,20nm,18.0s,baz=339,slow=38
H03N2 Juan Fernandez 121.26 106 T T 21 22 26.6
baz=317,slow=77,SNR=4.8
H03N1 Juan Fernandez 121.28 106 T T 21 22 27.9
baz=317,slow=77,SNR=4.9
H03N3 Juan Fernandez 121.28 106 T T 21 22 24.6
baz=317,slow=77,SNR=4.8
BOSA Boshof 151.04 311 PKPbc **PKPbc 19 10 14.0 -0.3**
comp=Z,1.6nm,0.6s,baz=349,slow=4.1,SNR=3.7

*MCSM **24** 19:07:06.1±0.5,46°N±4°×2°7E±°, h124km±4km, mb3.4, MLv3.5*
*BUC **24** 19:07:07.1±0.3,45°.69N×26°.64E, h130km±1km, ml3.7/53, Error ellipse: s-maj=1.6km s-min=1.3km az=11.0*
*IDC **24** 19:07:07.2±1.4,45°.91N×26°.70E, h119km±17km, mb3.2/1, mbtmp3.5/3, Error ellipse: s-maj=33.1km s-min=16.5km az=90.0*
ISC 24 19:07:06.2±1.0,**45°.75N**±0°.03×**26°.66E**±0°.03,**h139**km±5km, **n93**,σ0**s87**/139,**60C-38D, Romania**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.10**	**357**	⇑P		**Pn**	**19 07 24.9**	**-0.2**
PLOR				⇓S		**Sn**	**19 07 38.2**	**-1.2**
VRI	**Vrincioaia**	**0.13**	**22**	⇑P		**Pn**	**19 07 25.0**	**-0.1**
VRI				⇓S		**Sn**	**19 07 38.4**	**-1.0**
VRI	**Vrincioaia**	**0.13**	**22**	P		**Pn**	**19 07 24.7**	**-0.4**
VRI				S		**Sn**	**19 07 38.2**	**-1.2**
BISRR	**Bisoca**	**0.20**	**170**	⇑P		**Pn**	**19 07 25.5**	**+0.2**
BISRR				⇓S		**Sn**	**19 07 39.2**	**-0.5**
BISRR	**Bisoca**	**0.20**	**170**	P		**Pn**	**19 07 23.8**	**-1.5**
COVR	**Voineasa-Covas**	**0.33**	**287**	⇑P		**Pn**	**19 07 25.3**	**-0.3**
COVR				⇓S		**Sn**	**19 07 39.6**	**-0.7**
PANC	**Panciu**	**0.36**	**70**	⇑P		**Pn**	**19 07 25.9**	**+0.2**
PANC				⇓S		**Sn**	**19 07 40.2**	**-0.2**
NEHR	**Nehoiu**	**0.41**	**219**	⇑P		**Pn**	**19 07 26.4**	**+0.2**
NEHR				⇓S		**Sn**	**19 07 40.6**	**-0.2**
COSR	**Cosmesti PH**	**0.47**	**77**	⇓P		**Pn**	**19 07 26.3**	**+0.2**
COSR				⇓S		**Sn**	**19 07 41.4**	**+0.2**
TURR	**Turia**	**0.54**	**305**	⇑P		**Pn**	**19 07 26.5**	**-0.1**
TURR				⇓S		**Sn**	**19 07 41.2**	**-0.9**
MLR	**Muntele Rosu**	**0.56**	**243**	⇑P		**Pn**	**19 07 26.8**	**0.0**
MLR				⇑S		**Sn**	**19 07 41.9**	**-0.5**
MLR	**Muntele Rosu**	**0.56**	**243**	P		**Pn**	**19 07 26.9**	**0.0**
	116nm,0.3s,baz=132,slow=4.0,SNR=712							
MLR				S		**Sn**	**19 07 42.0**	**-0.4**
	77nm,0.4s,baz=53,slow=21,SNR=18							
MLR	**Muntele Rosu**	**0.56**	**243**	P		**Pn**	**19 07 26.2**	**-0.6**
GHRR		**0.61**	**59**	⇑P		**Pn**	**19 07 27.4**	**+0.5**
GHRR				⇓S		**Sn**	**19 07 42.5**	**-0.2**
GHRR		**0.61**	**59**	P		**Pn**	**19 07 27.1**	**+0.2**
GHRR				S		**Sn**	**19 07 41.3**	**-1.4**
ONER	**Baraj Valea Uz**	**0.61**	**343**	⇑P		**Pn**	**19 07 27.0**	**0.0**
ONER				⇑S		**Sn**	**19 07 42.4**	**-0.4**
ISR	**Istrita**	**0.64**	**187**	⇓P		**Pn**	**19 07 27.5**	**+0.3**
ISR				⇓S		**Sn**	**19 07 42.3**	**-0.7**
ISR	**Istrita**	**0.64**	**187**	P		**Pn**	**19 07 27.0**	**-0.2**
ISR				S		**Sn**	**19 07 40.6**	**-2.5**
OZUR		**0.70**	**300**	⇑P		**Pn**	**19 07 27.2**	**-0.4**
TUDR		**0.72**	**102**	⇓P		**Pn**	**19 07 27.5**	**-0.1**
TUDR				⇑S		**Sn**	**19 07 43.5**	**-0.5**
TESR	**Tescani**	**0.76**	**359**	⇓P		**Pn**	**19 07 27.6**	**-0.4**
TESR	**Tescani**	**0.76**	**359**	P		**Pn**	**19 07 27.2**	**-0.8**
BOSR	**Bodos**	**0.77**	**295**	⇑P		**Pn**	**19 07 27.8**	**-0.3**
IZVR	**Izvoarele**	**0.80**	**104**	⇑P		**Pn**	**19 07 28.3**	**+0.1**
IZVR				⇓S		**Sn**	**19 07 43.9**	**-1.1**
VARL	**Varlezi**	**0.85**	**79**	⇑P		**Pn**	**19 07 28.8**	**+0.2**
VARL				⇑S		**Sn**	**19 07 44.9**	**-0.7**
NEGRR	**Negrea**	**0.88**	**103**	⇓P		**Pn**	**19 07 29.3**	**+0.4**
NEGRR				⇓S		**Sn**	**19 07 45.7**	**-0.4**
DOPR	**Dopca**	**0.91**	**284**	⇑P		**Pn**	**19 07 29.2**	**0.0**
DOPR				⇓S		**Sn**	**19 07 46.0**	**-0.7**
SCTR	**Scanteiesti**	**0.94**	**94**	⇑P		**Pn**	**19 07 29.8**	**+0.5**
SCTR				⇑S		**Sn**	**19 07 46.5**	**-0.4**
TATR	**Tatarca**	**0.99**	**98**	⇓P		**Pn**	**19 07 30.2**	**+0.4**
TATR				⇑S		**Sn**	**19 07 47.4**	**-0.3**
VLDR	**Vladesti**	**1.00**	**84**	⇑P		**Pn**	**19 07 30.3**	**+0.4**
VLDR				⇓S		**Sn**	**19 07 47.2**	**-0.8**
GISR	**Galati**	**1.03**	**107**	⇓S		**Sn**	**19 07 48.2**	**-0.2**
SULR		**1.11**	**195**	⇓S		**Sn**	**19 07 49.3**	**-0.4**
GIUM	**Giurgiulesti**	**1.12**	**103**	⇓S		**Sn**	**19 07 49.8**	**0.0**
VOIR		**1.17**	**255**	⇑P		**Pn**	**19 07 31.3**	**-0.3**
VOIR				⇑S		**Sn**	**19 07 49.5**	**-1.5**
VOIR		**1.17**	**255**	P		**Pn**	**19 07 30.5**	**-1.1**
CFR	**Carcaliu**	**1.19**	**118**	⇑P		**Pn**	**19 07 31.8**	**+0.1**
CFR				⇓S		**Sn**	**19 07 50.2**	**-0.8**
AMRR	**Amara**	**1.23**	**157**	⇓P		**Pn**	**19 07 32.4**	**+0.3**
AMRR				⇑S		**Sn**	**19 07 51.6**	**-0.3**
MTUR	**Matau**	**1.24**	**246**	⇑P		**Pn**	**19 07 32.7**	**+0.3**
LEHL	**Lehliu**	**1.28**	**175**	⇓P		**Pn**	**19 07 32.9**	**+0.3**
LEHL				⇑S		**Sn**	**19 07 52.6**	**-0.1**
BUC	**Bucharest**	**1.39**	**197**	⇓S		**Sn**	**19 07 54.3**	**-0.5**
CIOR	**Ciorogarla**	**1.41**	**203**	⇓S		**Sn**	**19 07 54.5**	**-0.6**
ARR	**Arges**	**1.47**	**256**	⇑P		**Pn**	**19 07 34.9**	**+0.2**
ARR				⇑S		**Sn**	**19 07 56.1**	**-0.4**
TPGR	**Topolog**	**1.53**	**125**	⇑P		**Pn**	**19 07 35.2**	**-0.1**
TLBR	**Topalu**	**1.55**	**140**	⇓P		**Pn**	**19 07 35.7**	**+0.2**
TLBR				⇓S		**Sn**	**19 07 56.6**	**-1.2**
CICN	**Ciocanesti**	**1.57**	**170**	⇓P		**Pn**	**19 07 35.8**	**0.0**
CICN				⇓S		**Sn**	**19 07 57.3**	**-1.0**
SGRR	**Singureni**	**1.60**	**198**	⇑P		**Pn**	**19 07 36.1**	**0.0**
SGRR				⇓S		**Sn**	**19 07 57.4**	**-1.4**
TLCR		**1.62**	**110**	⇑P		**Pn**	**19 07 36.4**	**+0.2**
TLCR				⇑S		**Sn**	**19 07 58.3**	**-0.9**
HUMR	**Humele**	**1.70**	**225**	⇑P		**Pn**	**19 07 37.0**	**-0.3**
HUMR				⇑S		**Sn**	**19 07 59.4**	**-1.5**
CVDA	**Cernavoda**	**1.72**	**145**	⇓P		**Pn**	**19 07 37.7**	**+0.3**
CVDA				⇑S		**Sn**	**19 07 59.7**	**-1.4**
TIRR	**Tirgusor**	**1.79**	**135**	⇓P		**Pn**	**19 07 38.3**	**+0.1**
TIRR				⇑S		**Sn**	**19 08 00.8**	**-1.8**
TIRR	**Tirgusor**	**1.79**	**135**	P		**Pn**	**19 07 37.2**	**-1.0**
ICOR	**Ion Corvin**	**1.82**	**153**	⇓P		**Pn**	**19 07 39.1**	**+0.5**
ICOR				⇑S		**Sn**	**19 08 01.9**	**-1.4**
JURR	**Jurilovca**	**1.85**	**121**	⇑P		**Pn**	**19 07 39.3**	**+0.4**
MILM	**Milestii Mici**	**1.90**	**51**	⇓*i*P		**Pn**	**19 07 38.5**	**-0.9**
	30nm,0.1s							
MILM				*e*S		**Sn**	**19 08 02.0**	**-2.9**
	120nm,0.1s							
COPA	**Copaceanca**	**1.91**	**213**	⇑P		**Pn**	**19 07 39.4**	**-0.2**
COPA				⇑S		**Sn**	**19 08 03.8**	**-1.3**
KIS	**Kishinev**	**1.95**	**49**	*e*P		**Pn**	**19 07 39.1**	**-0.9**
	10.0nm,0.1s							
KIS				*e*S		**Sn**	**19 08 03.4**	**-2.6**
	190nm,0.4s							
MFTR	**Murfatlar**	**2.01**	**141**	⇓P		**Pn**	**19 07 40.9**	**+0.1**
MFTR				⇓S		**Sn**	**19 08 05.9**	**-1.3**
LOT	**Lotru**	**2.05**	**263**	⇑P		**Pn**	**19 07 41.2**	**-0.2**
LOT				⇑S		**Sn**	**19 08 08.1**	**-0.3**
BURAR	**Bucovina Array**	**2.11**	**333**	⇓P		**Pn**	**19 07 43.5**	**+1.4**
EFOR	**EFORIE**	**2.18**	**139**	⇑P		**Pn**	**19 07 43.3**	**+0.4**
EFOR				⇑S		**Sn**	**19 08 09.1**	**-1.4**
RAZG	**Razgrad**	**2.19**	**183**	⇑P		**Pn**	**19 07 43.0**	**0.0**
RAZG				⇑S		**Sn**	**19 08 09.2**	**-1.9**
ZIMR		**2.29**	**204**	⇓S		**Sn**	**19 08 11.4**	**-1.8**
MANR	**Mangalia**	**2.37**	**144**	⇑S		**Sn**	**19 08 14.0**	**-1.1**
LOZB	**Loznitsa**	**2.38**	**181**	⇓P		**Pn**	**19 07 45.2**	**-0.2**
LOZB				⇓S		**Sn**	**19 08 13.6**	**-1.8**
GZR	**Gura Zlata**	**2.75**	**264**	⇑P		**Pn**	**19 07 50.6**	**+0.6**
PLVB	**Pleven**	**2.77**	**212**	⇑P		**Pn**	**19 07 49.9**	**-0.4**
KSV	**Kosov**	**2.79**	**338**	P		**Pn**	**19 07 50.4**	**0.0**
KMPD	**K-Podol'skiy**	**2.82**	**357**	P		**Pn**	**19 07 50.2**	**-0.6**
RAKU	**Rahkiv**	**2.85**	**324**	P		**Pn**	**19 07 52.3**	**+1.1**
ELND	**Elena**	**2.88**	**192**	⇓P		**Pn**	**19 07 51.6**	**0.0**
PUNG	**Punghina**	**3.02**	**242**	⇓P		**Pn**	**19 07 52.3**	**-1.1**
HERR	**Herculane**	**3.12**	**255**	⇓P		**Pn**	**19 07 53.9**	**-0.7**
STNU	**Staruna**	**3.31**	**334**	P		**Pn**	**19 07 57.3**	**+0.2**
BRIU	**Brid**	**3.59**	**317**	P		**Pn**	**19 08 00.7**	**0.0**
BERU	**Beregovo**	**3.70**	**314**	P		**Pn**	**19 08 02.3**	**+0.1**
MUKU	**Mukachevo**	**3.83**	**316**	P		**Pn**	**19 08 04.1**	**+0.2**
MORS	**Morshin**	**3.87**	**332**	P		**Pn**	**19 08 04.2**	**-0.2**
LUBAR	**Lubar, Ukraine**	**4.24**	**10**	P		**Pn**	**19 08 09.5**	**+0.3**
KWP	**Kalwaria Pacla**	**4.71**	**327**	P		**Pn**	**19 08 16.6**	**+1.1**
AK06	**Malin Array Si**	**5.13**	**18**	P		**Pn**	**19 08 20.8**	**-0.3**
AK12	**Malin Array Si**	**5.17**	**18**	P		**Pn**	**19 08 21.8**	**+0.2**
AK09	**Malin Array Si**	**5.18**	**19**	P		**Pn**	**19 08 21.4**	**-0.3**
AK17	**Malin Array Si**	**5.19**	**17**	P		**Pn**	**19 08 21.4**	**-0.5**
AK02	**Malin Array Si**	**5.20**	**18**	P		**Pn**	**19 08 21.9**	**-0.1**
AK11	**Malin Array Si**	**5.21**	**18**	P		**Pn**	**19 08 22.0**	**-0.1**
KIEV	**Kiev**	**5.23**	**18**	P		**Pn**	**19 08 22.8**	**+0.4**
AKASG	**Malin Array Be**	**5.24**	**18**	P		**Pn**	**19 08 22.0**	**-0.5**
	0.5nm,0.2s,baz=205,slow=11,SNR=6.8							
AKASG				S		**Sn**	**19 09 18.8**	**-3.3**
	1.0nm,0.5s,baz=206,slow=20,SNR=4.4							
AKBB	**Malin Array Si**	**5.24**	**18**	P		**Pn**	**19 08 22.8**	**+0.2**
RNPP5	**Staryi Chortor**	**5.51**	**355**	P		**Pn**	**19 08 26.3**	**+0.2**
RNPP8	**Varash**	**5.62**	**355**	P		**Pn**	**19 08 27.8**	**+0.2**
RNPP9	**Sopachiv**	**5.69**	**355**	P		**Pn**	**19 08 28.9**	**+0.4**
FINES	**FINESS Array B**	**15.73**	**359**	P		**Pn**	**19 10 39.9**	**+0.1**
	2.4nm,0.9s,baz=169,slow=15,SNR=1.9							
MKAR	**Makanchi Array**	**37.78**	**68**	P		**Pn**	**19 14 10.8**	**+2.1**
	0.9nm,1.0s,baz=276,slow=8.0,SNR=4.7							
	0.9nm,1.0s							

*IDC **24** 19:23:07.5±1.2,51°.07N×179°.28W, h0km, mb3.8/17, mbtmp3.9/18, ML4.1/1, MS3.0/5, Error ellipse: s-maj=33.5km s-min=17.0km az=176.0*
*NEIC **24** 19:23:09.3±1.4,50°.83N±0°.04×179°.14W±0°.07, h10km±1km, mb4.2/19, ML3.9/8, ML3.5(AEIC), Error ellipse: s-maj=7.3km s-min=6.9km az=310.0*
*AEIC **24** 19:23:11.8±1.0,50°.94N±0°.03×179°.11W±0°.05, h14km±5km, Error ellipse: s-maj=5.9km s-min=3.7km az=132.0*
ISC 24 19:23:11.3±1.8,**50°.91N**±0°.09×**179°.20W**±0°.03, **h29**km±11km,**n83**,σ1**s52**/80,**mb4.0**/23,**MS3.0**/3,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.69**	**20**			**Pb**	**19 23 24.2**	**-0.6**
GAKI						**Sb**	**19 23 34.0**	**0.0**
GALAA	**Gareloi Lava P**	**0.90**	**17**			**Pn**	**19 23 28.1**	**+0.2**
GASW	**Gareloi Southw**	**0.90**	**14**			**Pn**	**19 23 28.1**	**+0.1**
GAEA	**Gareloi East**	**0.92**	**18**			**Pb**	**19 23 28.4**	**-0.3**
GANO	**Gareloi North**	**0.95**	**15**			**Pn**	**19 23 28.5**	**-0.1**
GANE	**Gareloi Northe**	**0.95**	**16**			**Pn**	**19 23 28.7**	**+0.1**
GANE						**Sn**	**19 23 42.7**	**+1.5**
AMKA	**Amchitka**	**1.06**	**297**			**Pn**	**19 23 30.2**	**+0.2**
AMKA	**Amchitka**	**1.06**	**297**			**Sn**	**19 23 46.9**	**+3.1**
TAFL	**Tanaga Flats**	**1.18**	**43**			**Pn**	**19 23 32.0**	**+0.2**
TASE	**Tanaga Southea**	**1.18**	**38**			**Pn**	**19 23 32.2**	**+0.4**
TANO	**Tanaga North**	**1.21**	**33**			**Pb**	**19 23 33.1**	**-0.5**
TANO						**Sb**	**19 23 50.5**	**+1.6**
TAFP	**Tanaga Falls P**	**1.25**	**37**			**Pn**	**19 23 33.2**	**+0.4**
TAPA	**Tanaga Point A**	**1.26**	**43**			**Pn**	**19 23 33.3**	**+0.4**
TAPA						**Sb**	**19 23 50.2**	**+0.1**
CERB	**Semis' Cerberu**	**1.26**	**325**			**Pb**	**19 23 34.9**	**+0.6**
CERB						**Sb**	**19 23 53.9**	**+3.7**
CESW	**Semis' Southwe**	**1.26**	**323**			**Pb**	**19 23 34.4**	**0.0**
CEPE	**Semis' Perret**	**1.28**	**326**			**Pb**	**19 23 34.5**	**-0.2**
KIWB	**Kanaga Island**	**1.59**	**53**			**Pn**	**19 23 38.0**	**+0.5**
KIWB				IAML			19 24 02.9	
	comp=E,1μm,0.8s							
KIWB				IAML			19 24 09.5	
	comp=N,1μm,0.6s							
KIWB	**Kanaga Island**	**1.59**	**53**			**Sn**	**19 23 58.2**	**+1.2**
KIKV	**Kanaga Island**	**1.60**	**52**			**Sb**	**19 23 58.7**	**-1.2**
KICM	**Kanaga Island**	**1.61**	**50**			**Pb**	**19 23 39.0**	**-1.3**
LSPA	**Little Sitkin**	**1.75**	**308**			**Pb**	**19 23 41.2**	**-1.4**
ADK	**Adak**	**1.85**	**57**			**Pn**	**19 23 41.8**	**+0.8**
ADK				IAML			19 24 09.8	
	comp=N,1μm,0.5s							
ADK	**Adak**	**1.85**	**57**			**Sn**	**19 24 04.3**	**+0.9**
ADAG	**Mount Adagdak**	**1.95**	**56**			**Pn**	**19 23 43.7**	**+1.4**
ETKA	**Kagalaska Isla**	**1.99**	**60**			**Sn**	**19 24 07.5**	**+0.6**
GSCK	**Great Sitkin C**	**2.20**	**59**			**Pn**	**19 23 47.4**	**+1.6**
GSTD	**Great Sitkin T**	**2.23**	**58**			**Pn**	**19 23 47.8**	**+1.5**
GSMY	**Great Sitkin M**	**2.27**	**59**			**Pn**	**19 23 47.9**	**+1.1**
GSIG	**Igitkin Island**	**2.31**	**61**			**Pn**	**19 23 48.3**	**+1.2**
ATKA	**Atka Island**	**3.38**	**66**			**Pn**	**19 24 03.2**	**+1.2**
ATKA				IAML			19 25 01.8	
	comp=E,220nm,0.7s							
KOWE	**Korovin West**	**3.41**	**63**			**Pn**	**19 24 04.6**	**+2.2**
KOKL	**Mount Kliuchef**	**3.42**	**64**			**Pn**	**19 24 05.2**	**+2.5**
KOKV	**Korovin Volcan**	**3.46**	**63**			**Pn**	**19 24 05.9**	**+2.8**
KOFP	**Korovin Flat P**	**3.46**	**65**			**Pn**	**19 24 05.4**	**+2.2**
SHEM	**Shemya Is, Ala**	**4.54**	**296**	Pn		**Pn**	**19 24 21.5**	**+3.6**
	comp=E,4.1nm,0.3s,baz=90,slow=20,SNR=2.2							
SHEM				Sn		**Sb**	**19 25 20.4**	**-3.9**
	comp=E,0.3nm,0.3s,baz=72,slow=19,SNR=2.0							
UNV	**Unalaska Valle**	**8.30**	**64**			**Pn**	**19 25 12.1**	**+2.5**
PETK	**Petropavlovsk-**	**14.38**	**288**	LR		LR	19 31 42.2	
	comp=E,58nm,21.4s,baz=90,slow=36							
KDAK	**Kodiak Island**	**16.89**	**56**	Pn		**Pn**	**19 27 03.7**	**-1.6**
	comp=E,0.6nm,0.3s,baz=266,slow=13,SNR=7.9							
	comp=E,8.0nm,0.8s							
SKT	**Skwentna**	**18.72**	**43**			**P**	**19 27 26.5**	**-0.7**
SKT				IAmb		IAmb	19 27 34.0	
	comp=Z,17nm,1.3s							
J20K	**Nowinta River**	**18.73**	**35**	P		**P**	**19 27 25.9**	**-1.4**
SLKM	**Skilak Lake**	**18.79**	**48**	P		**P**	**19 27 28.3**	**+0.3**
SLKM				IAmb		IAmb	19 27 42.5	
	comp=Z,30nm,1.5s							
L22K	**Petersville**	**19.27**	**42**			**P**	**19 27 30.7

NOA	**NORSAR Array B**	**68.09**	**355**	P		**P**		**19 34 07.4**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=358,slow=5.8,SNR=4.0								
	comp=Z,0.2nm,0.5s								
HFS	**Hagfors**	**68.82**	**353**	P		**P**		**19 34 10.5**	**-1.7**
	comp=Z,3.6nm,1.1s,baz=25,slow=3.8,SNR=4.9								
	comp=Z,3.6nm,1.1s								
AKASG	**Malin Array Be**	**75.92**	**342**	P		**P**		**19 34 54.8**	**0.0**
	comp=Z,2.3nm,0.4s,baz=22,slow=5.6,SNR=8.2								
	comp=Z,2.3nm,0.4s								
GERES	**GERESS Array B**	**80.01**	**351**	P		**P**		**19 35 17.7**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=31,slow=5.4,SNR=2.3								
	comp=Z,0.2nm,0.3s								
ASAR	**Alice Springs**	**84.97**	**222**	P		**P**		**19 35 44.6**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=18,slow=7.0,SNR=2.1								
	comp=Z,0.3nm,0.8s								
BRTR	**Keskin Array B**	**85.27**	**335**	P		**P**		**19 35 45.6**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=32,slow=5.6,SNR=4.6								
	comp=Z,1.0nm,0.9s								
H03N2	**Juan Fernandez**	**121.26**	**106**	T		T		21 55 05.0	
	baz=310								
H03N1	**Juan Fernandez**	**121.27**	**106**	T		T		21 55 03.6	
	baz=310								
H03N3	**Juan Fernandez**	**121.27**	**106**	T		T		21 55 08.0	
	baz=310								

*NEIC **24** 19:29:50.0±2.4, 50.74N±0.04×179.19W±0.04, h10km±2km, mb4.0/57, ML3.7/10, ML3.3(AEIC), Error ellipse: s-maj=7.3km s-min=3.8km az=181.0*
*AEIC **24** 19:29:54.0±5.4, 50.9N±0.1×179.1W±0.1, h8km±9km, Error ellipse: s-maj=21.8km s-min=10.4km az=201.0*
*IDC **24** 19:29:54.9±2.1, 51.81N×179.34W, h0km, mb3.9/11, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=54.6km s-min=20.5km az=6.0*

ISC 24 19:29:54.1±2.0, 50.94N±0.10×179.20W±0.04, h27km±12km, n110, σ1s62/114, mb4.0/21, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.66**	**21**		**Pb**	**19 30 07.1**	**0.0**
GAKI					**Sn**	19 30 16.8	**-0.4**
GALAA	**Gareloi Lava P**	**0.87**	**18**		**Pn**	**19 30 11.0**	**+0.5**
GAEA	**Gareloi East**	**0.89**	**18**		**Pn**	**19 30 11.3**	**+0.5**
GANO	**Gareloi North**	**0.92**	**15**		**Pb**	**19 30 11.4**	**+0.1**
GANE	**Gareloi Northe**	**0.92**	**16**		**Pb**	**19 30 11.6**	**+0.2**
GANE					**Sn**	**19 30 25.1**	**+1.6**
AMKA	**Amchitka**	**1.04**	**296**		**Pn**	**19 30 13.3**	**+0.4**
TAFL	**Tanaga Flats**	**1.16**	**44**		**Pn**	**19 30 14.6**	**+0.2**
TASE	**Tanaga Southea**	**1.16**	**38**		**Pn**	**19 30 14.9**	**+0.4**
TANO	**Tanaga North**	**1.19**	**34**		**Pb**	**19 30 15.6**	**-0.3**
TAFP	**Tanaga Falls P**	**1.23**	**38**		**Pn**	**19 30 16.0**	**+0.6**
TAFP					**Sb**	**19 30 33.5**	**+1.5**
TAPA	**Tanaga Point A**	**1.23**	**44**		**Pn**	**19 30 15.9**	**+0.3**
TAPA					**Sb**	**19 30 33.4**	**+1.2**
CESW	**Semis' Southwe**	**1.24**	**322**		**Pn**	**19 30 17.3**	**+1.7**
CEPE	**Semis' Perret**	**1.26**	**325**		**Pn**	**19 30 17.3**	**+1.5**
KIWB	**Kanaga Island**	**1.57**	**54**		**Pn**	**19 30 20.9**	**+0.7**
KIWB				IAML		19 30 46.9	
	comp=N,640nm,0.5s						
KIWB				IAML		19 30 49.2	
	comp=E,1μm,0.5s						
KICM	**Kanaga Island**	**1.59**	**51**		**Pb**	**19 30 21.6**	**-1.2**
KICM					**Sb**	**19 30 43.0**	**+0.6**
KIRH	**Kanaga Island**	**1.63**	**53**		**Pn**	**19 30 22.0**	**+1.0**
LSSE	**Little Sitkin**	**1.72**	**306**		**Pn**	**19 30 24.4**	**+2.2**
LSPA	**Little Sitkin**	**1.73**	**307**		**Pn**	**19 30 24.3**	**+1.9**
LSNW	**Little Sitkin**	**1.77**	**307**		**Pn**	**19 30 24.7**	**+1.9**
ADK	**Adak**	**1.84**	**58**		**Sb**	**19 30 48.8**	**-0.7**
ADK	**Adak**	**1.84**	**58**	Pn	**Pn**	**19 30 24.7**	**+0.9**
ADK				IAML		19 30 56.5	
	comp=E,972nm,0.5s						
ADK				IAML		19 30 58.0	
	comp=E,752nm,0.4s						
ADAG	**Mount Adagdak**	**1.93**	**56**		**Pn**	**19 30 26.5**	**+1.5**
ADAG					**Sb**	**19 30 51.3**	**-0.8**
GSCK	**Great Sitkin C**	**2.18**	**59**		**Pn**	**19 30 30.0**	**+1.5**
GSTD	**Great Sitkin T**	**2.21**	**58**		**Pn**	**19 30 30.6**	**+1.5**
GSSP	**Great Sitkin S**	**2.21**	**57**		**Pn**	**19 30 30.3**	**+1.3**
GSSP					**Sb**	**19 30 58.9**	**-1.4**
GSTR	**Great Sitkin T**	**2.28**	**58**	Pn	**Pn**	**19 30 29.3**	**-0.6**
GSIG	**Igitkin Island**	**2.30**	**62**		**Pn**	**19 30 31.1**	**+1.0**
ATKA	**Atka Island**	**3.37**	**66**		**Pn**	**19 30 46.1**	**+1.3**
ATKA	**Atka Island**	**3.37**	**66**	IAML		19 31 35.0	
	comp=N,142nm,0.5s						
ATKA				IAML		19 31 44.4	
	comp=E,114nm,0.7s						
KOWE	**Korovin West**	**3.40**	**63**		**Pn**	**19 30 46.9**	**+1.7**
KOKL	**Mount Kliuchef**	**3.41**	**64**		**Pn**	**19 30 47.0**	**+1.5**
KOKL					**Sn**	**19 31 27.6**	**+2.6**
KOKV	**Korovin Volcan**	**3.44**	**64**		**Pn**	**19 30 47.2**	**+1.3**
KOFP	**Korovin Flat P**	**3.45**	**65**		**Pn**	**19 30 47.6**	**+1.6**
KOFP					**Sn**	**19 31 28.7**	**+2.8**
NIKH	**Nikolski High**	**6.71**	**68**	Pn	**Pn**	**19 31 32.2**	**+1.5**
UNV	**Unalaska Valle**	**8.29**	**65**	Pn	**Pn**	**19 31 54.6**	**+2.2**
SDPT	**Sand Point**	**12.06**	**61**	Pn	**Pn**	**19 32 45.9**	**+1.9**
N15K	**Kwethluk River**	**14.17**	**42**	Pn	**Pn**	**19 33 10.5**	**-2.3**
K15K	**Wolf Creek Mou**	**14.90**	**33**	Pn	**Pn**	**19 33 19.4**	**-3.2**
M16K	**Timber Creek**	**15.10**	**40**	P	**P**	**19 33 31.6**	**+1.3**
L16K	**Owhat River**	**15.29**	**38**	P	**P**	**19 33 33.4**	**+1.0**
L16K				IAmb	IAmb	19 33 39.9	
	comp=Z,14nm,1.3s						
N17K	**Nushagak Hills**	**15.60**	**44**	P	**P**	**19 33 36.9**	**+1.1**
N18K	**Kilae Creek**	**16.24**	**44**	P	**P**	**19 33 44.0**	**+1.1**
OHAK	**Old Harbor**	**16.39**	**57**	Pn	**Pn**	**19 33 38.5**	**-3.4**
J17K	**VABM Dome**	**16.48**	**33**	P	**P**	**19 33 48.3**	**+2.8**
J17K				IAmb	IAmb	19 34 05.3	
	comp=Z,16nm,1.4s						
L18K	**Granite Mounta**	**16.66**	**39**	Pn	**Pn**	**19 33 43.3**	**-2.1**
L18K				IAmb	IAmb	19 33 44.1	
	comp=Z,17nm,1.5s						
KDAK	**Kodiak Island**	**16.88**	**56**	Pn	**Pn**	**19 33 44.8**	**-3.3**
	comp=Z,0.5nm,0.3s,baz=226,slow=18,SNR=9.2						
	comp=Z,15nm,1.0s						
KDAK	**Kodiak Island**	**16.88**	**56**	Pn	**Pn**	**19 33 45.0**	**-3.1**
N19K	**Bonanza Creek**	**16.92**	**45**	P	**P**	**19 33 53.2**	**+2.7**
N19K				IAmb	IAmb	19 34 36.6	
	comp=Z,16nm,1.2s						
H17K	**Granite Mounta**	**17.25**	**28**	Pn	**Pn**	**19 33 51.7**	**-1.0**
H17K				IAmb	IAmb	19 33 54.9	
	comp=Z,18nm,1.5s						
J18K	**Innoko River**	**17.36**	**35**	Pn	**Pn**	**19 33 53.0**	**-1.0**
L19K	**White Mountain**	**17.38**	**40**	Pn	**Pn**	**19 33 52.0**	**-2.4**
L19K				IAmb	IAmb	19 34 04.8	
	comp=Z,15nm,1.4s						
M19K	**Big River Lodg**	**17.44**	**41**	Pn	**Pn**	**19 33 52.4**	**-2.8**
M19K				IAmb	IAmb	19 34 06.8	
	comp=Z,17nm,1.4s						
H18K	**Honhosa River**	**17.88**	**29**	P	**P**	**19 34 02.9**	**+1.9**
H18K				IAmb	IAmb	19 34 32.7	
	comp=Z,20nm,1.5s						
L20K	**Farewell, AK**	**17.93**	**40**		**Pn**	**19 34 01.2**	**+0.1**
K20K	**Telida**	**18.29**	**38**		**Pn**	**19 34 04.2**	**-1.4**
STLK	**Strandline Lak**	**18.37**	**44**		**P**	**19 34 02.8**	**-3.8**
SKT	**Skwentna**	**18.70**	**43**	P	**P**	**19 34 09.7**	**-0.3**
J20K	**Nowinta River**	**18.70**	**35**	P	**Pn**	**19 34 11.0**	**+0.5**
SLKM	**Skilak Lake**	**18.77**	**48**	P	**P**	**19 34 08.4**	**-2.4**
PPLA	**Purkeypile**	**18.81**	**40**	P	**P**	**19 34 09.5**	**-1.9**
PPLA				IAmb	IAmb	19 34 41.2	
	comp=Z,13nm,1.2s						
SEW	**Seward**	**19.02**	**50**	P	**P**	**19 34 12.8**	**-0.6**
F19K	**Shaleruckik Mo**	**19.22**	**26**	P	**P**	**19 34 14.2**	**-1.5**
L22K	**Petersville**	**19.24**	**42**	P	**P**	**19 34 16.0**	**-0.1**
L22K				IAmb	IAmb	19 34 19.8	
	comp=Z,14nm,1.4s						
KTH	**Kantishna Hill**	**19.62**	**39**	P	**P**	**19 34 20.3**	**+0.1**
KTH				IAmb	IAmb	19 34 54.4	
	comp=Z,7.7nm,1.0s						
GHO	**Glory Hole Cre**	**19.77**	**45**	P	**P**	**19 34 20.4**	**-1.4**
GHO				IAmb	IAmb	19 34 51.5	
	comp=Z,10nm,1.1s						
C18K	**Utukok River**	**19.79**	**20**	P	**P**	**19 34 21.0**	**-0.9**
C18K				IAmb	IAmb	19 34 31.0	
	comp=Z,14nm,1.2s						
E19K	**Redstone River**	**19.82**	**25**	P	**P**	**19 34 21.6**	**-0.7**
E19K				IAmb	IAmb	19 34 22.1	
	comp=Z,11nm,1.5s						
TRF	**Thorofare Moun**	**19.83**	**40**	P	**P**	**19 34 21.8**	**-0.8**
TRF				IAmb	IAmb	19 34 39.3	
	comp=Z,9.8nm,1.3s						
BPAW	**Bear Paw Mtn.**	**19.85**	**38**	P	**P**	**19 34 19.6**	**-3.0**
BPAW				IAmb	IAmb	19 34 34.3	
	comp=Z,11nm,1.4s						
IMAR	**Indian Mountai**	**19.88**	**31**	P	**P**	**19 34 21.1**	**-1.8**
G21K	**Allakaket**	**20.28**	**30**	P	**P**	**19 34 25.9**	**-1.4**
G21K				IAmb	IAmb	19 34 29.2	
	comp=Z,4.2nm,0.8s						
D19K	**Kuna River**	**20.36**	**22**	P	**P**	**19 34 26.0**	**-2.1**
RND	**Reindeer**	**20.40**	**41**	P	**P**	**19 34 27.2**	**-1.4**
SCM	**Sheep Creek Mo**	**20.51**	**46**	P	**P**	**19 34 28.3**	**-1.6**
D20K	**Etivluk River**	**20.89**	**23**	P	**P**	**19 34 32.9**	**-1.0**
D20K				IAmb	IAmb	19 34 46.9	
	comp=Z,16nm,1.5s						
DHY	**Denali Highway**	**20.89**	**42**	P	**P**	**19 34 33.7**	**-0.4**
DHY				IAmb	IAmb	19 35 04.4	
	comp=Z,14nm,1.5s						
KLU	**Klutina**	**21.05**	**47**	P	**P**	**19 34 32.6**	**-3.1**
KLU				IAmb	IAmb	19 34 43.9	
	comp=Z,10nm,1.1s						
WRH	**Wood River Hil**	**21.15**	**38**	P	**P**	**19 34 34.0**	**-2.6**
CCB	**Clear Creek Bu**	**21.33**	**38**	P	**P**	**19 34 37.6**	**-1.0**
HDA	**Harding Lake**	**21.57**	**39**	P	**P**	**19 34 39.1**	**-2.1**
HDA				IAmb	IAmb	19 35 02.5	
	comp=Z,9.6nm,1.5s						
ILAR	**Eielson Array**	**21.74**	**38**	P	**P**	**19 34 40.7**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=234,slow=8.4,SNR=15						
	comp=Z,0.4nm,0.4s						
E22K	**Anaktuvuk Pass**	**21.80**	**28**	P	**P**	**19 34 43.1**	**-0.6**
H24K	**Noodor Dome**	**21.84**	**35**	P	**P**	**19 34 42.6**	**-1.5**
G24K	**Hadweenzic Riv**	**22.40**	**33**	P	**P**	**19 34 49.9**	**-0.1**
G24K				IAmb	IAmb	19 34 51.7	
	comp=Z,6.5nm,1.2s						
SCRK	**Sand Creek**	**22.63**	**41**	P	**P**	**19 34 49.9**	**-2.7**
D23K	**Nanushuk River**	**22.65**	**27**	P	**P**	**19 34 52.7**	**0.0**
F24K	**Squaw Lake**	**22.67**	**31**	P	**P**	**19 34 53.7**	**+0.7**
F24K				IAmb	IAmb	19 34 55.2	
	comp=Z,6.2nm,1.1s						
J26L	**Joseph Creek**	**22.97**	**40**	P	**P**	**19 34 54.3**	**-1.9**
J26L				IAmb	IAmb	19 34 54.5	
	comp=Z,5.0nm,1.4s						
C23K	**Itkillik River**	**23.22**	**25**	P	**P**	**19 34 58.4**	**-0.1**
C23K				IAmb	IAmb	19 35 01.0	
	comp=Z,7.3nm,1.1s						
M29M	**Somme Creek**	**24.70**	**47**	P	**P**	**19 35 12.3**	**-0.3**
I28M	**Miner Creek**	**24.74**	**39**	P	**P**	**19 35 11.9**	**-1.0**
I28M				IAmb	IAmb	19 35 14.0	
	comp=Z,2.2nm,0.8s						
L29M	**L29M**	**24.96**	**45**	P	**P**	**19 35 13.9**	**-1.0**
K29M	**Barlow Dome**	**25.36**	**43**	P	**P**	**19 35 18.0**	**-0.6**
K29M				IAmb	IAmb	19 35 35.5	
	comp=Z,5.9nm,1.3s						
I30M	**Mount Dempster**	**26.12**	**41**	P	**P**	**19 35 24.3**	**-1.3**
H31M	**Peel River**	**27.07**	**40**	P	**P**	**19 35 32.2**	**-1.8**
G31M	**Satah River**	**27.34**	**37**	P	**P**	**19 35 34.6**	**-1.7**
G31M				IAmb	IAmb	19 36 01.6	
	comp=Z,7.2nm,1.5s						
INK	**Inuvik**	**27.96**	**35**	P	**P**	**19 35 41.3**	**-0.5**
INK				IAmb	IAmb	19 35 41.7	
	comp=Z,3.6nm,1.3s						
PDAR	**Pinedale Array**	**46.68**	**72**	P	**P**	**19 38 23.0**	**+2.6**
	comp=Z,0.8nm,0.8s,baz=306,slow=8.9,SNR=10.0						
	comp=Z,0.8nm,0.8s						
SPITS	**Spitsbergen Ar**	**50.80**	**356**	P	**P**	**19 38 51.0**	**-0.3**
	comp=Z,11nm,1.0s,baz=38,slow=7.3,SNR=5.4						
	comp=Z,11nm,1.0s						
ARCES	**ARCESS Array B**	**58.48**	**350**	P	**P**	**19 39 46.1**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=24,slow=6.7,SNR=1.6						
	comp=Z,2.3nm,0.9s						
TXAR	**Lajitas Array**	**58.97**	**81**	P	P	19 39 57.0	+5.9
	comp=Z,0.2nm,0.6s,baz=323,slow=6.6,SNR=3.9						
	comp=Z,0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**59.25**	**314**	P	**P**	**19 39 53.0**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=41,slow=6.7,SNR=14						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**60.11**	**308**	P	**P**	**19 39 59.1**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=54,slow=5.0,SNR=5.5						
	comp=Z,0.7nm,0.8s						
BVAR	**Borovoye Array**	**61.06**	**320**	P	**P**	**19 40 04.7**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=56,slow=7.1,SNR=2.2						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**66.16**	**347**	P	**P**	**19 40 37.8**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=36,slow=6.3,SNR=3.7						
	comp=Z,1.9nm,1.0s						
HFS	**Hagfors**	**68.79**	**353**	P	**P**	**19 40 54.5**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=35,slow=5.3,SNR=4.2						
	comp=Z,1.8nm,0.9s						
AKASG	**Malin Array Be**	**75.89**	**342**	P	**P**	**19 41 37.7**	**0.0**
	comp=Z,1.0nm,0.3s,baz=21,slow=6.6,SNR=4.7						
	comp=Z,1.0nm,0.3s						
H03N2	**Juan Fernandez**	**121.27**	**106**	T	T	22 01 50.2	
	baz=315						
H03N1	**Juan Fernandez**	**121.28**	**106**	T	T	22 01 51.1	
	baz=315						
H03N3	**Juan Fernandez**	**121.28**	**106**	T	T	22 01 47.2	
	baz=315						

*NEIC **24** 19:36:34.7±1.6, 50.77N±0.04×179.14W±0.07, h10km±1km, mb4.2/49, ML4.1/10, ML3.7(AEIC), Error ellipse: s-maj=7.6km s-min=7.0km az=119.0*
*AEIC **24** 19:36:37.1±2.8, 50.93N±0.07×179.15W±0.05, h4km±5km, Error ellipse: s-maj=10.2km s-min=4.4km az=171.0*
*IDC **24** 19:36:45.1±2.8, 51.18N×179.06W, h81km±22km, mb3.7/19, mbtmp4.1/21, MS3.2/9, Error ellipse: s-maj=23.4km s-min=14.9km az=177.0*

ISC 24 19:36:38.7±1.5, 50.95N±0.08×179.20W±0.03, h32km±9km, n131, σ1s47/120, mb4.2/38, MS3.3/5, 5C-6D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.65**	**22**		**Pb**	**19 36 50.8**	**-0.9**
GAKI					**Sb**	**19 37 01.1**	**+0.2**
GALAA	**Gareloi Lava P**	**0.85**	**18**		**Pn**	**19 36 54.7**	**+0.2**
GALAA					**Sn**	**19 37 08.1**	**+2.2**
GASW	**Gareloi Southw**	**0.86**	**14**		**Pb**	**19 36 54.4**	**-0.8**
GASW					**Sn**	**19 37 07.7**	**+1.7**
GANO	**Gareloi North**	**0.91**	**16**		**Pn**	**19 36 55.7**	**+0.5**
GANE	**Gareloi Northe**	**0.91**	**17**		**Pn**	**19 36 55.2**	**0.0**
AMKA	**Amchitka**	**1.04**	**295**		**Pn**	**19 36 56.8**	**-0.2**
AMKA	**Amchitka**	**1.04**	**295**		**Sn**	**19 37 13.8**	**+3.4**
TASE	**Tanaga Southea**	**1.15**	**39**		**Pn**	**19 36 58.8**	**+0.3**
TAFL	**Tanaga Flats**	**1.15**	**45**		**Pb**	**19 36 59.0**	**-1.0**
TAFL					**Sb**	**19 37 15.7**	**+1.2**
TANO	**Tanaga North**	**1.18**	**35**		**Pb**	**19 36 59.5**	**-1.0**
CERB	**Semis' Cerberu**	**1.23**	**324**		**Pb**	**19 37 01.5**	**+0.2**
CESW	**Semis' Southwe**	**1.23**	**321**		**Pb**	**19 37 01.0**	**-0.3**
TAPA	**Tanaga Point A**	**1.23**	**45**		**Pn**	**19 36 59.7**	**+0.1**
TAPA					**Sb**	**19 37 17.6**	**+0.8**
CEPE	**Semis' Perret**	**1.25**	**325**		**Pb**	**19 37 01.2**	**-0.5**
CETU	**Semis' Tuman**	**1.30**	**322**		**Pb**	**19 37 02.4**	**-0.2**
KIMD	**Kanaga Island**	**1.48**	**56**		**Pn**	**19 37 03.5**	**+0.5**
KIWB	**Kanaga Island**	**1.57**	**54**		**Pn**	**19 37 04.3**	**+0.1**
KIWB				IAML		19 37 35.1	
	comp=E,2μm,0.6s						
KIWB				IAML		19 37 35.6	
	comp=N,3μm,0.5s						
KIWB	**Kanaga Island**	**1.57**	**54**		**Sb**	**19 37 25.3**	**-1.2**
KIKV	**Kanaga Island**	**1.57**	**53**		**Pn**	**19 37 04.5**	**+0.1**
KIRH	**Kanaga Island**	**1.62**	**53**		**Pb**	**19 37 06.0**	**-2.1**
LSSE	**Little Sitkin**	**1.71**	**306**		**Pb**	**19 37 08.0**	**-1.4**
LSPA	**Little Sitkin**	**1.72**	**307**		**Pb**	**19 37 08.1**	**-1.5**
LSNW	**Little Sitkin**	**1.76**	**306**		**Pn**	**19 37 08.3**	**+1.4**
ADK	**Adak**	**1.83**	**58**		**Pn**	**19 37 08.9**	**+1.0**
ADK				IAML		19 37 36.9	
	comp=N,2μm,0.9s						
ADK				IAML		19 37 41.0	
	comp=N,2μm,0.5s						
ADAG	**Mount Adagdak**	**1.92**	**57**		**Pn**	**19 37 10.1**	**+0.9**
ETKA	**Kagalaska Isla**	**1.97**	**61**		**Sn**	**19 37 34.3**	**+0.9**
GSTD	**Great Sitkin T**	**2.21**	**59**		**Pn**	**19 37 14.1**	**+1.0**
GSSP	**Great Sitkin S**	**2.21**	**58**		**Pn**	**19 37 14.1**	**+1.0**
GSMY	**Great Sitkin M**	**2.25**	**60**		**Pn**	**19 37 14.7**	**+1.0**
GSTR	**Great Sitkin T**	**2.27**	**59**		**Pb**	**19 37 15.8**	**-3.2**
GSIG	**Igitkin Island**	**2.29**	**62**		**Pn**	**19 37 15.4**	**+1.2**
ATKA	**Atka Island**	**3.36**	**66**		**Pn**	**19 37 29.2**	**+0.2**
ATKA				IAML		19 38 22.0	
	comp=N,462nm,0.7s						
ATKA				IAML		19 38 29.5	
	comp=E,294nm,1.1s						
KOWE	**Korovin West**	**3.39**	**63**		**Pn**	**19 37 31.1**	**+1.7**
KOKL	**Mount Kliuchef**	**3.40**	**64**		**Pn**	**19 37 31.3**	**+1.8**
KOFP	**Korovin Flat P**	**3.44**	**65**		**Pn**	**19 37 31.8**	**+1.7**
SHEM	**Shemya Is, Ala**	**4.52**	**296**	P	Pb	19 37 51.1	-6.2
	comp=E,102nm,0.8s,baz=77,slow=18,SNR=5.2						
SHEM				S	**Sb**	**19 38 46.6**	**-4.6**
	comp=E,51nm,0.6s,baz=49,slow=17,SNR=1.0						
SHEM				LR	LR	19 39 34.8	
	comp=E,273nm,18.4s,baz=126,slow=38						
CLCO	**Concord Point,**	**6.15**	**69**		**Pn**	**19 38 09.4**	**+2.2**
NIKH	**Nikolski High**	**6.71**	**68**		**Pn**	**19 38 17.3**	**+2.5**
UNV	**Unalaska Valle**	**8.29**	**65**		**Pn**	**19 38 38.7**	**+2.2**
N15K	**Kwethluk River**	**14.16**	**42**	P	**P**	**19 40 03.7**	**-0.2**
PETK	**Petropavlovsk-**	**14.37**	**288**	P	**P**	**19 40 04.5**	**-1.8**
	comp=E,5.6nm,1.0s,baz=85,slow=11,SNR=2.5						
PETK				LR	LR	19 45 09.0	
	comp=E,94nm,21.5s,baz=94,slow=35						
K15K	**Wolf Creek Mou**	**14.89**	**34**	P	**P**	**19 40 14.3**	**+2.3**
K17K	**Iditarod**	**16.32**	**36**	P	**P**	**19 40 28.9**	**+1.1**
K17K				IAmb	IAmb	19 40 31.8	
	comp=Z,29nm,1.2s						
KDAK	**Kodiak Island**	**16.87**	**56**	P	**Pn**	**19 40 28.6**	**-3.5**
	comp=Z,2.9nm,0.4s,baz=246,slow=6.1,SNR=16						
KDAK				S	**Sn**	**19 43 32.5**	**-5.8**
	comp=Z,7.1nm,0.9s,baz=322,slow=17,SNR=1.6						
L19K	**White Mountain**	**17.38**	**40**		**Pn**	**19 40 38.1**	**-0.4**
STLK	**Strandline Lak**	**18.37**	**44**	P	**Pn**	**19 40 51.1**	**+0.4**
SKT	**Skwentna**	**18.69**	**43**		**P**	**19 40 53.9**	**0.0**
SKT				IAmb	IAmb	19 41 02.0	
	comp=Z,15nm,0.8s						
J20K	**Nowinta River**	**18.69**	**35**	P	**Pn**	**19 40 55.5**	**+1.0**
MA2	**Magadan**	**19.02**	**309**	LR	LR	19 47 28.0	
	comp=Z,53nm,20.5s,baz=111,slow=34						
F19K	**Shaleruckik Mo**	**19.21**	**26**	P	**P**	**19 40 59.4**	**-0.3**
L22K	**Petersville**	**19.23**	**42**		**P**	**19 40 59.4**	**-0.6**
L22K				IAmb	IAmb	19 41 05.5	
	comp=Z,18nm,1.0s						
SEY	**Seymchan**	**19.40**	**319**	LR	LR	19 48 49.8	
	comp=Z,73nm,18.3s,baz=70,slow=38						
KTH	**Kantishna Hill**	**19.61**	**39**		**P**	**19 41 03.7**	**-0.4**
TRF	**Thorofare Moun**	**19.82**	**40**	P	**P**	**19 41 05.5**	**-1.0**
TRF				IAmb	IAmb	19 41 15.7	
	comp=Z,19nm,1.4s						
H21K	**Melozitna Rive**	**20.00**	**33**	P	**P**	**19 41 08.5**	**+0.3**
H21K				IAmb	IAmb	19 41 10.7	
	comp=Z,8.3nm,1.0s						
I21K	**Tanana**	**20.02**	**34**	P	**P**	**19 41 08.4**	**0.0**
RND	**Reindeer**	**20.39**	**41**	P	**P**	**19 41 12.0**	**-0.5**
RND				IAmb	IAmb	19 41 17.9	
	comp=Z,9.1nm,0.7s						
F21K	**Alatna River**	**20.72**	**29**	P	**P**	**19 41 15.7**	**-0.3**
F21K				IAmb	IAmb	19 41 39.0	
	comp=Z,19nm,1.5s						
DHY	**Denali Highway**	**20.89**	**42**	P	**P**	**19 41 17.7**	**-0.3**
DHY				IAmb	IAmb	19 41 23.7	
	comp=Z,11nm,0.7s						
I23K	**Minto, Yukon-K**	**20.96**	**36**	P	**P**	**19 41 18.6**	**+0.1**
I23K				IAmb	IAmb	19 41 23.4	
	comp=Z,14nm,1.3s						
CCB	**Clear Creek Bu**	**21.32**	**38**		**P**	**19 41 20.8**	**-1.7**
G23K	**Bananza Creek**	**21.52**	**32**	P	**P**	**19 41 24.1**	**-0.6**
PAX	**Paxson**	**21.67**	**43**		**P**	**19 41 25.5**	**-0.9**
PAX				IAmb	IAmb	19 41 34.5	
	comp=Z,6.9nm,1.0s						
ILAR	**Eielson Array**	**21.73**	**38**	P	**P**	**19 41 25.0**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=251,slow=10,SNR=21						
ILAR				PcP	**PcP**	**19 45 26.5**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=235,slow=3.0,SNR=1.7						
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**21.73**	**38**	P	**P**	**19 41 27.4**	**+0.5**
H24K	**Noodor Dome**	**21.83**	**35**	P	**P**	**19 41 28.0**	**0.0**
G24K	**Hadweenzic Riv**	**22.39**	**33**	P	**P**	**19 41 33.5**	**-0.4**
L26K	**Log Cabin Wild**	**22.61**	**44**	P	**P**	**19 41 35.4**	**-1.0**
L26K				IAmb	IAmb	19 41 52.8	
	comp=Z,11nm,1.2s						
SCRK	**Sand Creek**	**22.62**	**41**		**P**	**19 41 34.9**	**-1.7**
D23K	**Nanushuk River**	**22.64**	**27**	IAmb	IAmb	19 41 39.8	
	comp=Z,7.3nm,0.8s				

CMAR	**Chiang Mai Arr**	**70.81 276**	P		**P**	**19 47 53.4**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=26,slow=5.8,SNR=4.4						
	comp=Z,0.3nm,0.3s						
RAR	**Rarotonga**	**73.86 161**	LR	LR		20 14 49.4	
	comp=Z,39nm,19.0s,baz=202,slow=31						
AKASG	**Malin Array Be**	**75.88 342**	P		**P**	**19 48 21.4**	**-0.1**
	comp=Z,4.9nm,0.5s,baz=22,slow=5.7,SNR=15						
	comp=Z,4.9nm,0.5s						
KIEV	**Kiev**	**75.89 342**	⇑P		**P**	**19 48 21.7**	**+0.2**
BATI	**Baumata**	**78.38 238**	LR	LR		20 19 56.4	
	comp=Z,20nm,19.1s,baz=58,slow=33						
STHS	**Stebnicka Huta**	**78.49 347**	*e*P		**P**	**19 48 36.7**	**+0.5**
SORM	**Soroca**	**78.50 342**	⇑P		**P**	**19 48 36.5**	**+0.3**
BURAR	**Bucovina Array**	**79.59 343**	⇑P		**P**	**19 48 43.2**	**+0.8**
GERES	**GERESS Array B**	**79.97 351**	P		**P**	**19 48 43.8**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=4.3,slow=5.4,SNR=4.3						
	comp=Z,0.6nm,0.8s						
DRGR		**80.82 345**	⇓P		**P**	**19 48 50.1**	**+1.1**
TURR	**Turia**	**80.95 343**	⇑P		**P**	**19 48 52.3**	**+2.6**
COVR	**Voineasa-Covas**	**81.11 342**	⇓P		**P**	**19 48 52.8**	**+2.3**
WRA	**Warramunga Arr**	**81.53 224**	P		**P**	**19 48 54.3**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=25,slow=5.4,SNR=2.1						
	comp=Z,0.6nm,0.7s						
VOIR		**81.72 343**	⇓P		**P**	**19 48 56.0**	**+2.2**
ARR	**Arges**	**81.87 343**	⇓P		**P**	**19 48 56.5**	**+1.9**
SURR	**Surduc**	**81.92 345**	⇑P		**P**	**19 48 55.9**	**+1.2**
BZS	**Buzias**	**82.14 345**	⇓P		**P**	**19 48 56.8**	**+0.9**
GZR	**Gura Zlata**	**82.17 345**	⇓P		**P**	**19 48 56.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**84.00 232**	P		**P**	**19 49 07.0**	**+1.3**
	comp=Z,3.9nm,0.9s,baz=55,slow=7.1,SNR=3.9						
	comp=Z,3.9nm,0.9s						
BRTR	**Keskin Array B**	**85.23 335**	P		**P**	**19 49 11.0**	**-1.0**
	comp=Z,2.0nm,1.1s,baz=51,slow=2.8,SNR=5.9						
	comp=Z,2.0nm,1.1s						
H03N2	**Juan Fernandez**	**121.27 106**	T	T		22 08 38.3	
	baz=317,slow=77,SNR=7.1						
H03N1	**Juan Fernandez**	**121.28 106**	T	T		22 08 36.7	
	baz=317,slow=77,SNR=6.9						
H03N3	**Juan Fernandez**	**121.29 106**	T	T		22 08 37.3	
	baz=317,slow=77,SNR=11						

*DJA **24** 19:43:49.6±0.3,3°S±4°×13°1E±°, h10km,M3.8/12, mb4.2/2, MLv3.6/12*
*IDC **24** 19:43:59.3±2.0, 4°.61S×130°.02E, h0km, mb4.0/1, mbtmp3.9/4, ML4.0/3, MS3.1/3, Error ellipse: s-maj=93.5km s-min=15.6km az=74.0*
ISC 24 19:43:47.2±1.0, 3°.69S±0°.08×130°.77E±0°.07, h10km, n16, σ1s88/13, MS3.0/3, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.20**	**226**	P	Pn	19 44 17.6	+7.5
FAKI	**Fak Fak**	**1.66**	**63**	P	**Pn**	**19 44 16.3**	**-0.1**
MSAI	**Masohi**	**1.87**	**280**	P	**Pg**	**19 44 22.9**	**-0.2**
AAI	**Ambon**	**2.57**	**270**	P	**Pb**	**19 44 33.1**	**-0.4**
SWI	**Sorong**	**2.85**	**10**	P	Pn	19 44 27.6	-5.2
NLAI	**Namlea**	**3.69**	**277**	P	**Pn**	**19 44 46.6**	**+2.2**
RKPI	**Ransiki, Papua**	**4.03**	**58**	P	**Pn**	**19 44 48.2**	**-0.9**
SANI	**Sanana**	**5.05**	**289**	P	**Pn**	**19 45 02.2**	**-0.8**
BAKI	**Biak**	**5.88**	**65**	P	**Pn**	**19 45 13.9**	**-0.6**
	80nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.18**	**199**	Pn	**Pn**	**19 47 21.6**	**-0.2**
	0.4nm,0.3s,baz=33,slow=5.7,SNR=7.7						
FITZ				Sn	**Sn**	**19 50 06.9**	**-3.2**
	0.1nm,0.3s,baz=94,slow=14,SNR=1.3						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**16.53**	**168**	Pn	**P**	**19 47 43.6**	**+1.6**
	0.4nm,0.3s,baz=341,slow=12,SNR=12						
WRA				Sn	**Sn**	**19 50 42.0**	**-1.1**
	baz=350,slow=22,SNR=2.6						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**20.09**	**172**	P	**Pn**	**19 48 26.2**	**+3.2**
	1.1nm,0.3s,baz=350,slow=11,SNR=74						
ASAR				S	**S**	**19 52 05.1**	**-2.0**
	0.7nm,0.8s,baz=356,slow=26,SNR=5.1						
	4.6nm,0.6s						
TGY	**Tagaytay City**	**20.19**	**331**	LR	LR	19 58 05.5	
	comp=Z,27nm,21.6s,baz=120,slow=41						
ASAJ	**Asahikawa**	**48.76**	**11**	LR	LR	20 13 40.1	
	comp=Z,17nm,19.6s,baz=188,slow=36						
MKAR	**Makanchi Array**	**65.91**	**326**	P	P	19 54 49.2	+16
	1.1nm,0.7s,baz=122,slow=5.4,SNR=6.8						
	1.1nm,0.7s						
OPO	**Ambohidratompo**	**82.76**	**252**	LR	LR	20 29 52.8	
	comp=Z,27nm,18.0s,baz=155,slow=34						

*IDC **24** 19:47:02.5±0.7, 1°.68N×132°.90E, h0km, mb4.2/13, mbtmp4.3/15, ML2.9/2, MS3.3/4, Error ellipse: s-maj=32.1km s-min=13.3km az=69.0*
*NEIC **24** 19:47:04.1±1.9, 1°.6N±0°.1×132°.8E±0°.1, h10km±1km, mb4.4/16, Error ellipse: s-maj=22.5km s-min=15.2km az=38.0*
*DJA **24** 19:47:05.7±1.4, 2°N±6°×13°3E±°, h31km±17km, M4.3/13, mb4.5/13, mB5.0/6, MLv4.3/13, Mw(mB)4.4/6*
ISC 24 19:47:07.1±0.5, 1°.55N±0°.07×132°.86E±0°.08, h35km, n62, σ1s10/56, mb4.5/21, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**2.88**	**214**	P	**Pn**	**19 47 49.9**	**-0.6**
RKPI	**Ransiki, Papua**	**3.32**	**157**	P	**Pn**	**19 47 55.6**	**-0.9**
BAKI	**Biak**	**4.24**	**130**	P	**Pn**	**19 48 08.3**	**-1.0**
FAKI	**Fak Fak**	**4.48**	**188**	P	**Pn**	**19 48 13.3**	**+0.7**
TNTI	**Ternate**	**5.54**	**262**		**Pn**	**19 48 26.9**	**-0.2**
TNTI	**Ternate**	**5.54**	**262**	P	**Pn**	**19 48 26.6**	**-0.6**
	0.1nm35nm,0.6s						
MSAI	**Masohi**	**6.25**	**219**	P	**Pn**	**19 48 38.3**	**+1.4**
	0.2nm1μm40nm,0.5s						
BNDI	**Bandanaira**	**6.71**	**206**	P	**Pn**	**19 48 44.9**	**+1.6**
	86nm,1.2s						
NLAI	**Namlea**	**7.47**	**230**	P	**Pn**	**19 48 54.4**	**+0.8**
	0.1nm24nm,0.5s						
SANI	**Sanana**	**7.74**	**243**	P	**Pn**	**19 48 56.8**	**-0.6**
	0.0nm13nm,0.9s						
JAY	**Jayapura**	**8.82**	**117**	Pn	**Pn**	**19 49 10.5**	**-1.8**
	1.3nm,0.3s,baz=48,slow=3.1,SNR=4.4						
	10nm,0.7s						
MRSI	**Marisa**	**10.97**	**265**	P	**Pn**	**19 49 41.3**	**-0.3**
	10nm,0.5s						
SPSI	**Sidrap Palu**	**14.18**	**247**	P	**Pn**	**19 50 26.4**	**+0.8**
	20nm,0.8s						
MTN	**Manton Dam**	**14.40**	**187**	Pn	**Pn**	**19 50 28.1**	**-0.5**
KAPI	**Kappang**	**14.63**	**243**	LR	LR	19 55 58.3	
	comp=Z,72nm,18.4s,baz=63,slow=36						
KNRA	**Kununurra**	**17.59**	**193**	Pn	**Pn**	**19 51 08.7**	**-0.9**
KNRA				IAmb	IAmb	19 51 44.9	
	comp=Z,23nm,1.4s						
PMG	**Port Moresby**	**17.93**	**128**	P	**P**	**19 51 15.2**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=333,slow=9.1,SNR=9.5						
PMG				LR	LR	19 57 58.3	
	comp=Z,104nm,21.7s,baz=334,slow=36						
	comp=Z,12nm,0.8s						
PMG	**Port Moresby**	**17.93**	**128**		**P**	**19 51 15.2**	**+1.1**
PMG				IAmb	IAmb	19 51 17.0	
	comp=Z,47nm,1.3s						
COEN	**Coen**	**18.49**	**147**		**P**	**19 51 19.2**	**-1.2**
COEN				IAmb	IAmb	19 51 28.1	
	comp=Z,12nm,0.7s						
SBUM	**Sibu**	**20.64**	**273**	P	**P**	**19 51 41.0**	**-2.9**
SBUM				IAmb	IAmb	19 51 58.0	
	comp=Z,11nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.78**	**200**	P	**P**	**19 51 45.7**	**+0.4**
	comp=Z,6.4nm,0.8s,baz=19,slow=9.1,SNR=6.8						
	comp=Z,6.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.78**	**200**		**P**	**19 51 45.5**	**+0.2**
WB0	**Warramunga Arr**	**21.24**	**176**		**P**	**19 51 49.4**	**-0.8**
WB0				IAmb	IAmb	19 51 56.0	
	comp=Z,32nm,1.4s						
WRA	**Warramunga Arr**	**21.41**	**176**	P	**P**	**19 51 53.8**	**+1.6**
	comp=Z,8.8nm,0.7s,baz=357,slow=11,SNR=24						
	comp=Z,8.8nm,0.7s						
WRA	**Warramunga Arr**	**21.41**	**176**		**P**	**19 51 51.9**	**-0.2**
WR8	**Warramunga Arr**	**21.43**	**176**		**P**	**19 51 53.0**	**+0.7**
WR8				IAmb	IAmb	19 52 04.2	
	comp=Z,13nm,0.9s						
AS31	**Alice Springs**	**25.09**	**178**	P	**P**	**19 52 27.5**	**-1.2**
ASAR	**Alice Springs**	**25.09**	**178**	P	**P**	**19 52 30.6**	**+2.0**
	comp=Z,3.7nm,0.8s,baz=358,slow=10,SNR=17						
	comp=Z,3.7nm,0.8s						
MBWA	**Marble Bar**	**25.97**	**209**	P	**P**	**19 52 35.2**	**-1.5**
NJ2	**Nanjing**	**33.09**	**338**	*e*P	**P**	**19 53 41.8**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						

STKA	**Stephens Creek**	**34.26 167**	P		**P**	**19 53 51.3**	**+1.3**
	comp=Z,4.0nm,1.2s,baz=9.5,slow=6.1,SNR=2.7						
	comp=Z,4.0nm,1.2s						
KSRS	**Korea Array**	**36.02 353**	LR	LR		20 08 06.8	
	comp=Z,11μm,20.5s,baz=120,slow=35						
CMAR	**Chiang Mai Arr**	**37.26 299**	P		**P**	**19 54 15.3**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=115,slow=6.9,SNR=8.4						
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.26 299**	P		**P**	**19 54 15.8**	**0.0**
H11N1	**WAKE ISLAND Hy**	**37.87 59**	T		T	20 34 16.6	
	baz=245,slow=75,SNR=23						
H11N2	**WAKE ISLAND Hy**	**37.88 59**	T		T	20 34 17.9	
	baz=245,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**37.88 59**	T		T	20 34 18.1	
	baz=245,slow=75,SNR=16						
PZH	**PanZhiHua**	**38.84 312**	P		**P**	**19 54 30.4**	**+1.1**
XAN	**Xi'an**	**39.31 328**	*e*P		**P**	**19 54 33.3**	**+0.3**
HNS	**HongShan**	**39.40 337**	⇑P		**P**	**19 54 34.3**	**+0.7**
HNS			pmax	pmax			
	comp=Z,10.0nm,1.0s						
DZM	**Mont Dzumac**	**40.32 128**	LR	LR		20 10 17.3	
	comp=Z,44nm,18.6s,baz=355,slow=35						
HHC	**Hu-ho-hao-te**	**43.61 336**	*e*P		**P**	**19 55 09.3**	**+1.1**
HHC			pmax	pmax			
	comp=Z,8.0nm,0.6s						
HHC			pmax	pmax			
	comp=Z,53nm,5.0s						
GTA	**Gaotai**	**48.23 326**	*e*P		**P**	**19 55 45.8**	**+1.1**
GTA			pmax	pmax			
	comp=Z,4.0nm,1.0s						
EVN	**Everest**	**51.22 305**			**P**	**19 56 06.8**	**-1.4**
EVN			IAmb	IAmb		19 56 09.5	
	comp=Z,5.0nm,0.7s						
ULN	**Ulaanbaatar**	**51.25 338**	P		**P**	**19 56 06.8**	**-0.8**
ULN			IAmb	IAmb		19 56 09.5	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**51.48 337**	P		**P**	**19 56 09.5**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=151,slow=8.7,SNR=6.1						
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**62.88 323**	P		**P**	**19 57 30.6**	**+0.8**
	comp=Z,5.2nm,0.7s,baz=116,slow=8.1,SNR=31						
	comp=Z,5.2nm,0.7s						
MKAR	**Makanchi Array**	**62.88 323**			**P**	**19 57 29.5**	**-0.3**
MAKZ	**Makanchi**	**63.08 323**			**P**	**19 57 31.6**	**+0.6**
KSH	**Kashi**	**63.93 314**	P		**P**	**19 57 37.4**	**+0.4**
KSH			pmax	pmax			
	comp=Z,5.0nm,1.2s						
ZALV	**Zalesovo Beam**	**65.37 331**	P		**P**	**19 57 45.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=104,slow=6.3,SNR=11						
	comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**65.37 331**			**P**	**19 57 45.1**	**-0.7**
KURK	**Kurchatov**	**66.91 326**			**P**	**19 57 55.7**	**-0.2**
KURBB	**Kurchatov Arra**	**66.92 326**	P		**P**	**19 57 56.4**	**+0.5**
	comp=Z,7.9nm,0.8s,baz=119,slow=5.9,SNR=60						
	comp=Z,7.9nm,0.8s						
GAR	**Garm**	**67.91 312**	P		**P**	**19 58 01.8**	**-0.8**
KKAR	**Karatay Array**	**69.02 316**	P		**P**	**19 58 08.9**	**-0.4**
BVAR	**Borovoye Array**	**72.51 326**	P		**P**	**19 58 30.9**	**+0.6**
	comp=Z,7.0nm,0.8s,baz=113,slow=7.3,SNR=38						
	comp=Z,7.0nm,0.8s						
ABKAR	**Akbulak array**	**77.72 320**	P		**P**	**19 58 59.5**	**-0.8**
VNDA	**Vanda**	**80.56 174**	P		**P**	**19 59 17.8**	**+2.3**
	comp=Z,1.1nm,0.7s,baz=345,slow=5.4,SNR=2.7						
	comp=Z,1.1nm,0.7s						
VNDA	**Vanda**	**80.56 174**	P		**P**	**19 59 16.9**	**+1.4**
ILAR	**Eielson Array**	**84.45 25**	P		**P**	**19 59 35.1**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=246,slow=5.4,SNR=7.1						
	comp=Z,0.5nm,0.8s						
QSPA	**South Pole Qui**	**91.47 180**	P		**P**	**20 00 10.8**	**+1.1**
	comp=Z,1.2nm,0.3s,baz=304,slow=2.8,SNR=2.6						
	comp=Z,1.2nm,0.3s						

*DJA **24** 20:08:21.0±0.4, 3°S±3°×13°1E±°, h75km±22km, M3.9/13, mb4.3/3, MLv3.7/13*
*IDC **24** 20:08:31.9±5.7, 3°.71S×130°.42E, h140km±47km, mb3.4/6, mbtmp3.9/7, MS3.0/1, Error ellipse: s-maj=55.9km s-min=12.2km az=77.0*
ISC 24 20:08:20.1±0.8, 3°.37S±0°.07×130°.82E±0°.07, h35km, n20, σ2s48/21, mb3.8/5, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.47**	**219**	P	**Pn**	**20 08 46.4**	**+2.3**
FAKI	**Fak Fak**	**1.49**	**73**	P	**Pn**	**20 08 45.5**	**+1.1**
MSAI	**Masohi**	**1.89**	**271**	P	**Pn**	**20 08 51.7**	**+1.8**
SWI	**Sorong**	**2.53**	**10**	P	**Pn**	**20 08 57.8**	**-0.9**
AAI	**Ambon**	**2.64**	**263**	P	**Pn**	**20 09 01.8**	**+1.6**
KMPI	**Kaimana, Papua**	**2.89**	**96**	P	**Pn**	**20 09 05.5**	**+1.9**
NLAI	**Namlea**	**3.72**	**272**	P	**Pn**	**20 09 16.7**	**+1.6**
RKPI	**Ransiki, Papua**	**3.83**	**61**	P	**Pn**	**20 09 17.8**	**+1.3**
SANI	**Sanana**	**5.00**	**285**	P	**Pn**	**20 09 31.0**	**-1.7**
BAKI	**Biak**	**5.71**	**68**	P	**Pn**	**20 09 44.6**	**+2.2**
	116nm,0.8s						
BATI	**Baumata**	**9.83**	**226**	P	**Pn**	**20 10 42.5**	**+3.5**
	8.2nm,0.6s,baz=340,slow=2.6,SNR=4.3						
BATI				S	**Sn**	**20 12 26.1**	**-2.3**
	3.8nm,0.4s,baz=67,slow=13,SNR=1.4						
KAPI	**Kappang**	**11.16**	**261**	LR	LR	20 16 21.9	
	comp=Z,73nm,18.9s,baz=92,slow=44						
FITZ	**Fitzroy Crossi**	**15.49**	**199**	P	**Pn**	**20 11 53.5**	**-2.6**
	1.8nm,0.5s,baz=36,slow=12,SNR=7.5						
WRA	**Warramunga Arr**	**16.83**	**169**	P		**20 12 11.7**	**-1.4**
	1.4nm,0.5s,baz=353,slow=14,SNR=13						
WRA				S	Sn	20 15 09.1	-10
	0.6nm,0.4s,baz=354,slow=18,SNR=5.2						
ASAR	**Alice Springs**	**20.40**	**172**	P	**P**	**20 12 55.6**	**+1.5**
	4.0nm,0.4s,baz=351,slow=11,SNR=104						
ASAR				S	**S**	**20 16 33.8**	**-7.1**
	1.1nm,0.9s,baz=356,slow=27,SNR=6.5						
	4.0nm,0.4s						
SONM	**Songino Array**	**55.30**	**340**	P	**P**	**20 17 51.3**	**+1.0**
	0.3nm,0.5s,baz=157,slow=7.8,SNR=2.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**65.68**	**326**	P	**P**	**20 19 01.9**	**+0.9**
	1.3nm,0.8s,baz=126,slow=7.4,SNR=8.9						
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**68.73**	**333**	P	**P**	**20 19 20.4**	**+0.2**
	0.5nm,0.5s,baz=127,slow=3.8,SNR=1.9						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**69.88**	**328**	P	**P**	**20 19 28.2**	**+0.8**
	0.6nm,0.7s,baz=127,slow=5.7,SNR=7.6						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**75.46**	**327**	P	**P**	**20 20 01.3**	**+0.8**
	1.0nm,0.8s,baz=102,slow=6.3,SNR=5.9						
	1.0nm,0.8s						

IDC 24 20:09:52.0±4.4, 19°.81S×179°.93W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=190.1km s-min=38.9km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.47**	**243**	P	P	20 16 58.5	-0.4
	0.6nm,0.3s,baz=214,slow=0.4,SNR=6.0						
	0.6nm,0.3s						
WRA	**Warramunga Arr**	**42.90**	**262**	P	P	20 17 52.5	-0.3
	0.3nm,0.8s,baz=97,slow=8.0,SNR=1.4						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**42.91**	**256**	P	P	20 17 53.0	+0.2
	0.9nm,0.4s,baz=89,slow=8.3,SNR=12						
	0.9nm,0.4s						
ILAR	**Eielson Array**	**88.06**	**14**	P	P	20 22 43.8	0.0
	0.4nm,0.9s,baz=208,slow=6.2,SNR=2.9						
	0.4nm,0.9s						

*IDC **24** 20:26:44.4±0.9, 14°.02N×147°.74E, h0km, mb4.0/12, mbtmp4.0/13, ML4.3/1, MS3.1/10, Error ellipse: s-maj=24.6km s-min=17.2km az=94.0*
*NEIC **24** 20:26:45.7±1.7, 14°.00N±0°.05×147°.9E±0°.1, h10km±1km, mb4.5/10, Error ellipse: s-maj=22.5km s-min=8.7km az=88.0*
ISC 24 20:26:49.1±0.8, 13°.97N±0°.10×147°.8E±0°.1, h35km, n36, σ1s13/30, mb4.1/16, MS3.2/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.82**	**263**	Pn	**Pn**	**20 27 30.8**	**-0.9**
	52nm,0.3s,baz=146,slow=7.0,SNR=16						
GUMO				Sn	**Sn**	**20 28 04.9**	**+0.4**
	199nm,0.3s,baz=7.0,slow=21,SNR=9.2						
GUMO				LR	LR	20 28 33.7	
	comp=Z,148nm,20.6s,baz=36,slow=39						
	137nm,0.3s						
MANU	**Manus Island**	**15.91**	**181**	Pn	**Pn**	**20 30 29.7**	**-0.8**
MANU				IAmb	IAmb	20 30 42.0	
	comp=Z,47nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**19.19**	**70**	T	T	20 50 47.1	
	baz=256,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**19.20**	**70**	T	T	20 50 43.9	
	baz=256,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**19.21**	**70**	T	T	20 50 44.7	
	baz=256,slow=75,SNR=14						
JOW	**Kunigami**	**22.25 308**	LR	LR		20 38 47.4	
	comp=Z,79nm,21.9s,baz=136,slow=32						
FAKI	**Fak Fak**	**22.75 224**	P		**P**	**20 31 47.1**	**-1.3**
MJAR	**Matsushiro Arr**	**24.05 341**	P		**P**	**20 32 00.7**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=166,slow=9.9,SNR=2.4						
	comp=Z,0.8nm,0.5s						
MJAR	**Matsushiro Arr**	**24.05 341**	P		**P**	**20 31 58.2**	**-2.8**
MJAR			IAmb	IAmb		20 32 44.3	
	comp=Z,4.5nm,1.2s						
MAJO	**Matsushiro**	**24.05 341**	P		**P**	**20 31 58.2**	**-2.8**
MAJO			IAmb	IAmb		20 32 21.8	
	comp=Z,11nm,1.1s						
LUWI	**Luwuk**	**28.89 241**	P		**P**	**20 32 45.2**	**+0.4**
KSRS	**Korea Array**	**29.30 327**	P		**P**	**20 32 47.6**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=148,slow=9.6,SNR=2.2						
	comp=Z,1.1nm,0.7s						
ASAJ	**Asahikawa**	**30.37 353**	LR	LR		20 44 31.8	
	comp=Z,32nm,22.0s,baz=174,slow=35						
WB0	**Warramunga Arr**	**36.01 202**			**P**	**20 33 47.2**	**+0.2**
WB0			IAmb	IAmb		20 33 48.5	
	comp=Z,10nm,0.9s						
WR8	**Warramunga Arr**	**36.14 201**			**P**	**20 33 48.7**	**+0.6**
WR8			IAmb	IAmb		20 33 49.6	
	comp=Z,10.0nm,0.9s						
WRAB	**Tennant Creek**	**36.17 202**	P		**P**	**20 33 48.8**	**+0.4**
WRAB			IAmb	IAmb		20 33 50.0	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**36.19 202**	P		**P**	**20 33 49.2**	**+0.7**
	comp=Z,9.9nm,0.8s,baz=25,slow=9.5,SNR=44						
WRA			PcP		**PcP**	**20 36 14.0**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=14,slow=2.2,SNR=2.0						
	comp=Z,9.9nm,0.8s						
WRA	**Warramunga Arr**	**36.19 202**			**P**	**20 33 47.4**	**-1.1**
AS31	**Alice Springs**	**39.77 200**	P		**P**	**20 34 19.8**	**+1.0**
ASAR	**Alice Springs**	**39.78 200**	P		**P**	**20 34 19.5**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=26,slow=7.2,SNR=19						
ASAR			LR	LR		20 51 08.5	
	comp=Z,29nm,18.1s,baz=12,slow=37						
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**39.78 200**	P		**P**	**20 34 18.7**	**-0.1**
DZM	**Mont Dzumac**	**40.24 153**	LR	LR		20 49 28.0	
	comp=Z,66nm,19.2s,baz=166,slow=34						
CMAR	**Chiang Mai Arr**	**46.97 282**	P		**P**	**20 35 18.4**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=84,slow=6.2,SNR=11						
CMAR			LR	LR		20 53 49.3	
	comp=Z,5.7nm,20.4s,baz=65,slow=35						
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**48.07 323**	P		**P**	**20 35 26.6**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=141,slow=9.2,SNR=6.5						
SONM			LR	LR		20 55 08.5	
	comp=Z,31nm,20.0s,baz=170,slow=36						
	comp=Z,0.6nm,0.8s						
SEY	**Seymchan**	**49.01 3**	LR	LR		20 54 05.6	
	comp=Z,21nm,21.7s,baz=350,slow=34						
ZALV	**Zalesovo Beam**	**62.96 324**	P		**P**	**20 37 12.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=103,slow=6.3,SNR=1.8						
ZALV			LR	LR		21 04 35.0	
	comp=Z,17nm,19.9s,baz=94,slow=36						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**63.17 316**	P		**P**	**20 37 14.9**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=88,slow=8.4,SNR=9.5						
	comp=Z,0.5nm,0.4s						
MKAR	**Makanchi Array**	**63.17 316**	P		**P**	**20 37 14.0**	**+0.4**
KURBB	**Kurchatov Arra**	**66.15 319**	P		**P**	**20 37 32.9**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=98,slow=6.7,SNR=16						
	comp=Z,1.3nm,0.7s						
ILAR	**Eielson Array**	**67.04 25**	P		**P**	**20 37 38.7**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=253,slow=6.3,SNR=7.9						
	comp=Z,0.4nm,0.5s						
ILAR	**Eielson Array**	**67.04 25**	P		**P**	**20 37 38.3**	**-0.1**
BVAR	**Borovoye Array**	**71.37 322**	P		**P**	**20 38 05.0**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=90,slow=8.6,SNR=4.7						
	comp=Z,0.8nm,0.6s						
ARTI	**Arti**	**78.15 325**	LR	LR		21 15 08.2	
	comp=Z,22nm,18.7s,baz=72,slow=37						
FINES	**FINESS Array B**	**91.98 336**	P		**P**	**20 39 53.1**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=78,slow=5.0,SNR=11						
	comp=Z,1.4nm,0.7s						
**F

EATA	**Eleskirt**	**2.16**	**312**	P		**Pb**	**20 28 27.6**	**+0.3**
EATA				S		**Sg**	**20 28 59.3**	**+2.6**
QRD	**Qoradiz**	**2.37**	**63**	P		**Pb**	**20 28 28.7**	**-2.1**
QRD				S		**Sg**	**20 29 02.6**	**-0.8**
GDB	**GEDABAY**	**2.46**	**21**	P		**Pb**	**20 28 30.9**	**-1.5**
GDB				S		**Sb**	**20 29 04.0**	**+0.8**
ISRB	**Sarab**	**2.51**	**103**	Pn		**Pb**	**20 28 32.0**	**-1.2**
AGDM	**Agdam**	**2.58**	**49**	P		**Pb**	**20 28 32.8**	**-1.6**
AGDM				S		**Sb**	**20 29 07.6**	**+1.1**
GANJ	**Ganja**	**2.59**	**31**	P		**Pb**	**20 28 32.9**	**-1.6**
GANJ				S		**Sb**	**20 29 05.4**	**-1.4**
GRMI	**Germi**	**2.62**	**81**	Pn		**Pb**	**20 28 33.9**	**-1.2**
BLQ	**Beylaqan**	**2.65**	**60**	P		**Pb**	**20 28 36.3**	**+0.8**
BLQ				S		**Sb**	**20 29 08.9**	**+0.3**
QZX	**Qazax, Azerbai**	**2.69**	**13**	P		**Pb**	**20 28 35.7**	**-0.5**
QZX				S		**Sb**	**20 29 07.7**	**-2.1**
YRD	**Yardimli**	**2.91**	**79**	P		**Pb**	**20 28 38.8**	**-1.2**
YRD				S		**Sb**	**20 29 14.1**	**-2.1**
LRK	**Lerik**	**2.96**	**85**	P		**Pb**	**20 28 38.5**	**-2.4**
DGRG	**David-gareji**	**3.08**	**11**	P		**Pg**	**20 28 45.3**	**-0.9**
VSHL	**Vashlovani**	**3.12**	**26**	P		**Pb**	**20 28 42.2**	**-1.4**
VSHL				S		**Sg**	**20 29 30.9**	**+3.3**

*MEX **24** 20:51:35.3±0.8, 14°.03N×93°.09W, h10km, MD4.3*
*GCG **24** 20:51:36.7±1.0, 14°.17N×92°.62W, h8km±13km, MD4.0*
ISC 24 20:51:33.6±1.7**, 13°.91N**±0°.09×**92°.96W**±0°.04**, h37**km**, n16,** σ1§**94/27, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SMCA	**Catarina**	**1.27**	**42**	*eP*	**Pn**		**20 51 53.6**	**-1.2**
RTAL	**Retalhuleu**	**1.37**	**64**	*eP*	**Pn**		**20 51 55.8**	**-0.4**
RTAL				*eS*	**Sn**		**20 52 11.6**	**-1.4**
STG2	**El Palmar, Qui**	**1.62**	**71**	*eP*	**Pn**		**20 51 57.2**	**-2.6**
STG8	**El Palmar, Qui**	**1.65**	**71**	*i* P	**Pn**		**20 51 57.7**	**-2.5**
HUEH	**Huehuetenango**	**1.99**	**45**	*eP*	**Pn**		**20 52 05.6**	**+0.8**
HUEH				*eS*	**Sn**		**20 52 29.9**	**+1.3**
CCIG	**Comitan**	**2.48**	**19**	*eP*	**Pn**		**20 52 12.7**	**+1.0**
CCIG				*eS*	**Sn**		**20 52 40.3**	**-0.5**
CCIG	**Comitan**	**2.48**	**19**	*eP*	**Pn**		**20 52 12.8**	**+1.2**
TGIG		**2.85**	**357**	*eP*	**Pn**		**20 52 15.5**	**-1.1**
TGIG				*eS*	**Sn**		**20 52 47.4**	**-2.4**
NUBE	**Las Nubes**	**3.09**	**90**	*eP*	**Pn**		**20 52 21.7**	**+1.8**
HUIG	**Huatulco**	**3.56**	**302**	*eP*	**Pn**		**20 52 25.5**	**-0.7**
HUIG				*eS*	**Sn**		**20 53 02.7**	**-4.4**
UXUV	**UXUV**	**3.57**	**342**	*eP*	**Pn**		**20 52 27.2**	**+0.8**
UXUV				*eS*	**Sn**		**20 53 06.2**	**-1.3**
PETF	**Flores**	**4.22**	**45**	*eP*	**Pn**		**20 52 36.7**	**+1.4**
PETF				*eS*	**Sn**		**20 53 26.0**	**+2.6**
NEUV	**Arroyo Zacate**	**4.66**	**324**	*eP*	**Pn**		**20 52 41.4**	**0.0**
NEUV				*eS*	**Sn**		**20 53 33.8**	**-0.5**
YOIG	**Yosondua**	**5.30**	**304**	*eP*	**Pn**		**20 52 53.4**	**+2.9**
YOIG				*eS*	**Sn**		**20 53 52.2**	**+1.7**
TXIG	**Tlaxiaco**	**5.70**	**306**	*eP*	**Pn**		**20 52 58.9**	**+2.9**
TXIG				*eS*	**Sn**		**20 53 57.7**	**-2.6**
TOIG	**Toxpalan**	**5.73**	**317**	*eP*	**Pn**		**20 52 57.1**	**+0.8**
TOIG				*eS*	**Sn**		**20 54 00.7**	**-0.2**

*AEIC **24** 21:05:57.3±0.8, 51°.40N±0°.04×175°.56W±0°.04, h27km±6km, Error ellipse: s-maj=5.7km s-min=3.0km az=204.0*
NEIC 24 21:05:53.9±1.7**, 51°.28N**±0°.05×**175°.47W**±0°.03**, h10**km±1**km, mb3.6/1, ML3.8/8, ML3.3**(AEIC)**, Error ellipse: s-maj=8.0km s-min=3.0km az=1.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GSIG	**Igitkin Island**	**0.77**	**338**		Pb		21 06 09.9	+0.6
GSIG					Sg		21 06 18.9	+0.2
ETKA	**Kagalaska Isla**	**0.83**	**315**		Pb		21 06 10.6	+0.3
ETKA					Sg		21 06 20.2	-0.5
GSMY	**Great Sitkin M**	**0.85**	**335**		Pb		21 06 11.2	+0.5
GSMY					Sg		21 06 21.4	0.0
GSTD	**Great Sitkin T**	**0.89**	**332**		Pb		21 06 11.8	+0.4
GSTD					Sg		21 06 22.3	-0.2
GSTR	**Great Sitkin T**	**0.90**	**336**		Pb		21 06 12.0	+0.4
GSSP	**Great Sitkin S**	**0.93**	**332**		Pb		21 06 12.5	+0.5
ADK	**Adak**	**0.97**	**309**		Pg		21 06 12.6	0.0
ADK					Sg		21 06 23.9	-1.3
ADK	**Adak** 4µm,0.3s	**0.97**	**309**	IAML			21 06 24.2	
ADK	3µm,0.4s			IAML			21 06 24.2	
ADAG	**Mount Adagdak**	**1.00**	**315**		Pn		21 06 13.7	-0.2
ADAG					Sg		21 06 26.0	-0.1
KIRH	**Kanaga Island**	**1.19**	**302**		Pb		21 06 16.3	-0.2
KIWB	**Kanaga Island**	**1.20**	**300**		Pb		21 06 16.1	-0.5
KIWB	comp=N,2µm,0.4s			IAML			21 06 30.8	
KIWB	comp=E,2µm,0.4s			IAML			21 06 35.7	
KIWB	**Kanaga Island**	**1.20**	**300**		Sb		21 06 30.4	-1.7
KIMD	**Kanaga Island**	**1.21**	**295**		Pn		21 06 16.1	-0.6
ATKA	**Atka Island**	**1.22**	**40**		Pn		21 06 16.6	-0.4
ATKA	**Atka Island**	**1.22**	**40**		Sb		21 06 31.1	-1.7
KIKV	**Kanaga Island**	**1.22**	**300**		Pn		21 06 16.6	-0.4
KIKV					Sb		21 06 31.3	-1.6
KOKL	**Mount Kliuchef**	**1.31**	**36**		Pn		21 06 18.4	+0.2
KOFP	**Korovin Flat P**	**1.31**	**40**		Pb		21 06 18.5	-0.1
KOWE	**Korovin West**	**1.33**	**34**		Pb		21 06 18.8	0.0
KOKV	**Korovin Volcan**	**1.36**	**36**		Pb		21 06 19.5	+0.1
TAPA	**Tanaga Point A**	**1.56**	**291**		Pn		21 06 21.7	+0.1
TAPA					Sn		21 06 40.1	-1.9
TAFL	**Tanaga Flats**	**1.59**	**289**		Pn		21 06 22.1	+0.1
TAFP	**Tanaga Falls P**	**1.69**	**293**		Pn		21 06 23.8	+0.3
TASE	**Tanaga Southea**	**1.70**	**290**		Pn		21 06 24.1	+0.5
GAKI	**Gareloi-Kavalg**	**2.11**	**279**		Pn		21 06 29.8	+0.6
GAKI					Sn		21 06 56.4	+0.9
AMKA	**Amchitka**	**3.28**	**274**	Pn	Pb		21 06 48.7	-3.4
STLK	**Strandline Lak**	**16.51**	**43**	Pn	Pn		21 09 45.0	-0.3
STLK	comp=Z,5.8nm,1.2s			IAmb	IAmb		21 10 11.9	

*NNC **24** 21:08:54.9±4.4, 37°.17N×70°.98E, h0km, mb4.6, mpv4.5, Error ellipse: s-maj=34.4km s-min=26.1km az=166.0*
*IDC **24** 21:08:54.8±4.8, 36°.58N×71°.46E, h98km±40km, mb3.4/11, mbtmp3.9/14, Error ellipse: s-maj=33.7km s-min=16.9km az=26.0*
*NEIC **24** 21:08:56.8±1.4, 36°.80N±0°.06×71°.35E±0°.08, h105km±6km, mb4.4/19, Error ellipse: s-maj=10.0km s-min=8.5km az=50.0*
*BJI **24** 21:09:01.3, 36°.83N×72°.10E, h100km, mB4.6/5, mb4.2/13*
ISC 24 21:08:55.9±0.5**, 36°.73N**±0°.05×**71°.40E**±0°.06**, h11**4km**, n85,** σ2§**17**/94**, mb4.0**/20**, 6C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GAR	**Garm**	**2.42**	**340**		**Pn**		**21 09 33.9**	**-0.8**
CHGR	**Chuyangaron**	**2.62**	**318**		**Pn**		**21 09 35.9**	**-1.2**
DRK	**Karamyk**	**2.77**	**6**		**Pn**		**21 09 39.3**	**+0.1**
KBL	**Kabul**	**2.91**	**222**		**Pn**		**21 09 42.2**	**+1.2**
NIL	**Nilore**	**3.42**	**153**		Pn		21 09 49.8	+2.1
KSH	**Kashi**	**4.55**	**51**	P	**Pn**		**21 09 59.3**	**-3.5**
KSH				S	Sn		21 10 44.0	-11
KSH	comp=N,890nm,0.7s			smax	smax			
KSH	comp=E,210nm,0.9s			smax	smax			
JMU	**Jammu**	**4.93**	**143**	*eP*	**Pn**		**21 10 08.3**	**+0.5**
JMU				*eS*	**Sn**		**21 11 00.8**	**-3.0**
JMU	comp=E,604nm,0.2s			IAML			21 11 05.1	
JMU	comp=N,1µm,0.6s			IAML			21 11 05.4	
ALCI	**Alchi Leh**	**5.34**	**116**	*eP*	**Pn**		**21 10 12.4**	**-1.3**
ALCI				*eS*	**Sn**		**21 11 11.9**	**-2.4**
ALCI	comp=N,217nm,0.3s			IAML			21 11 14.9	
ALCI	comp=E,192nm,0.3s			IAML			21 11 15.5	
TSSA	**Tissa**	**5.51**	**133**	*eP*	**Pn**		**21 10 15.1**	**-0.7**
TSSA				*eS*	**Sn**		**21 11 13.0**	**-5.0**
TSSA	comp=N,1µm,0.5s			IAML			21 11 17.4	
TSSA	comp=E,681nm,0.3s			IAML			21 11 18.7	
UCH	**Uchtor** SNR=20	**6.00**	**23**	P	**Pn**		**21 10 23.0**	**+0.4**

DHRM	**DHARAMSHALA**	**6.03**	**136**	*eP*		**Pn**	**21 10 22.7**	**-0.2**
DHRM				*eS*		**Sn**	**21 11 27.3**	**-3.3**
DHRM	comp=E,1µm,0.5s			IAML			21 11 31.1	
DHRM	comp=N,930nm,0.6s			IAML			21 11 31.3	
TLWR	**Talawar**	**6.07**	**140**	*eS*		**Sn**	**21 11 27.6**	**-3.8**
EKS2	**Erkin-Say** SNR=18	**6.20**	**16**	P		**Pn**	**21 10 25.6**	**+0.5**
AAK	**Ala-Archa** comp=N,30nm,0.3s,baz=171,slow=6.3,SNR=173	**6.36**	**21**	P		**Pn**	**21 10 28.0**	**+0.7**
AAK	comp=N,30nm,0.6s,baz=329,slow=22,SNR=15			S		**Sn**	**21 11 36.9**	**-1.8**
AAK	**Ala-Archa**	**6.36**	**21**			**Pn**	**21 10 27.7**	**+0.4**
AAK	**Ala-Archa** SNR=52	**6.36**	**21**	P		**Pn**	**21 10 28.0**	**+0.7**
AAK	**Ala-Archa** comp=N,13nm,0.6s	**6.36**	**21**	⇑P		**Pn**	**21 10 27.6**	**+0.4**
AAK	comp=N,54nm,1.1s			⇓S		**Sn**	**21 11 36.3**	**-2.4**
KK31	**Karatay Array**	**6.40**	**354**			**Pn**	**21 10 27.2**	**-0.5**
KK31	**Karatay Array** comp=N,37nm,0.3s,baz=180,slow=13,SNR=809	**6.40**	**354**	⇑P		**Pn**	**21 10 24.2**	**-3.5**
KK31	comp=N,21nm,0.6s,baz=173,slow=21,SNR=5.4			⇑S		**Sn**	**21 11 35.5**	**-3.9**
KKAR	**Karatay Array**	**6.40**	**354**			**Pn**	**21 10 27.3**	**-0.4**
KBK	**Karagaybulak** SNR=8.1	**6.52**	**24**	P		**Pn**	**21 10 30.4**	**+1.0**
FRU1	**Bishkek**	**6.56**	**21**	Pn		**Pn**	**21 10 30.4**	**+0.4**
BHK	**Bhakra**	**6.74**	**140**	*eP*		**Pn**	**21 10 33.3**	**+1.1**
BHK	comp=E,155nm,0.4s			IAML			21 11 46.2	
BHK	comp=N,173nm,0.1s			IAML			21 11 47.5	
BHK				*eS*		**Sn**	**21 11 48.6**	**+1.1**
CHMS	**Chumysh** SNR=11	**6.77**	**21**	P		**Pn**	**21 10 33.3**	**+0.7**
USP	**Ospenovka** SNR=16	**6.95**	**19**	P		**Pn**	**21 10 35.7**	**+0.6**
TKM2	**Tokmak 2** SNR=8.5	**6.97**	**26**	P		**Pn**	**21 10 36.1**	**+0.5**
KDJ	**Kajisay**	**7.00**	**38**	Pn		**Pn**	**21 10 34.8**	**-1.2**
TARG	**Taragay, Kyrgy**	**7.04**	**43**	Pn		**Pn**	**21 10 36.8**	**+0.1**
SMLA	**Simla**	**7.36**	**138**	*eP*		**Pn**	**21 10 40.1**	**-0.5**
SMLA				*eS*		**Sn**	**21 11 56.1**	**-6.5**
SMLA	comp=N,329nm,0.3s			IAML			21 12 00.1	
SMLA	comp=E,194nm,0.3s			IAML			21 12 00.6	
WUS	**Wushi**	**7.55**	**51**			**Pn**	**21 10 44.6**	**+1.3**
PRZ	**Przheval'sk**	**7.88**	**41**	Pn		**Pn**	**21 10 48.6**	**+0.7**
KUDL	**Kundal**	**9.57**	**152**	*eP*		**Pn**	**21 11 08.7**	**-2.0**
KUDL				*eS*		Sn	21 12 47.1	-9.4
KUDL	comp=N,126nm,0.4s			IAML			21 12 52.1	
KUDL	comp=E,128nm,0.2s			IAML			21 12 53.4	
LGTI	**Lohaghat**	**10.37**	**132**	*eP*		**Pn**	**21 11 18.0**	**-3.5**
LGTI				*eS*		Sn	21 13 04.7	-11
LGTI	comp=N,150nm,0.2s			IAML			21 13 09.7	
LGTI	comp=E,144nm,0.4s			IAML			21 13 09.8	
MAKZ	**Makanchi**	**12.78**	**35**	Pn		**Pn**	**21 11 52.8**	**-0.6**
MKAR	**Makanchi Array** comp=E,0.8nm,0.8s,baz=220,slow=12,SNR=7.0	**12.92**	**35**	P		**Pn**	**21 11 54.8**	**-0.4**
MKAR	**Makanchi Array**	**12.92**	**35**	Pn		**Pn**	**21 11 55.5**	**+0.4**
WMQ	**Urumqi**	**14.30**	**55**	*eP*		**P**	**21 12 15.8**	**-1.0**
BHPL	**Bhopal**	**14.41**	**157**	*eP*		**Pn**	**21 12 13.0**	**-1.6**
BHPL				*eS*		Sn	21 14 42.9	-11
KURBB	**Kurchatov Arra** comp=E,4.0nm,0.8s,baz=205,slow=10,SNR=16	**14.80**	**18**	P		**Pn**	**21 12 16.9**	**-2.4**
KURK	**Kurchatov**	**14.91**	**18**	Pn		**Pn**	**21 12 20.4**	**-0.2**
AB31	**Akbulak array**	**15.04**	**330**	Pn		**Pn**	**21 12 19.9**	**-2.5**
AB31	**Akbulak array** comp=E,2.6nm,0.4s,baz=138,slow=12,SNR=133	**15.04**	**330**	P		**Pn**	**21 12 19.9**	**-2.5**
AB31	comp=E,3.7nm,0.8s,baz=150,slow=23,SNR=5.7			⇑S		**Sn**	**21 15 01.8**	**-6.7**
ABKAR	**Akbulak array**	**15.04**	**330**	Pn		**Pn**	**21 12 19.8**	**-2.5**
EVN	**Everest**	**15.68**	**120**			**Pn**	**21 12 28.5**	**-2.5**
BVAR	**Borovoye Array** comp=E,2.5nm,0.5s,baz=172,slow=12,SNR=13	**16.31**	**358**	P		**Pn**	**21 12 36.4**	**-1.7**
AKTO	**Aktyubinsk** comp=E,3.7nm,0.3s,baz=145,slow=7.3,SNR=23	**16.75**	**329**	P		**Pn**	**21 12 42.5**	**-1.0**
AKTO	comp=E,1.0nm,0.8s,baz=161,slow=18,SNR=1.1			S		Sn	21 15 34.0	-16
AKTO	**Aktyubinsk** comp=E,7.0nm,1.0s	**16.75**	**329**	⇑P		**Pn**	**21 12 42.5**	**-1.0**
AKTO	comp=E,3.2nm,1.2s			⇑S		**Sn**	**21 15 43.5**	**-6.1**
LSA	**Lhasa**	**17.93**	**107**	P		**Pn**	**21 12 58.8**	**+0.3**
ZAA0	**Zalesovo Array** ZAA0 comp=Z,7.4nm,0.6s	**19.57**	**24**		IAmb	**P** IAmb	**21 13 15.1** 21 13 17.3	**+0.5**
ZALV	**Zalesovo Beam** comp=Z,5.6nm,0.5s,baz=217,slow=11,SNR=34	**19.57**	**24**	P		**P**	**21 13 14.9**	**+0.2**
ZALV	**Zalesovo Beam**	**19.57**	**24**			**P**	**21 13 15.0**	**+0.3**
SHL	**Shillong**	**20.72**	**117**			Pn	21 13 28.8	-2.1
SHL	comp=Z,11nm,1.0s				IAmb	IAmb	21 13 29.3	
ARTI	**Arti** comp=Z,2.9nm,0.4s,baz=160,slow=9.9,SNR=12 comp=Z,2.9nm,0.4s	**21.54**	**340**	P		**P**	**21 13 36.9**	**+1.1**
ARTI	**Arti**	**21.54**	**340**	P		**P**	**21 13 40.4**	**+4.7**
ARTI	comp=Z,9.9nm,0.4s				IAmb	IAmb	21 13 41.5	
GTA	**Gaotai**	**22.49**	**74**	*eP*		**P**	**21 13 48.3**	**+2.3**
GTA					pP	pP	21 14 11.0	+2.0
GTA	comp=Z,11nm,1.2s				pmax	pmax		
LZH	**Lanzhou**	**26.05**	**82**	*eP*		**P**	**21 14 23.6**	**+4.8**
LZH	comp=Z,22nm,1.6s				pmax	pmax		
PZH	**PanZhiHua**	**27.67**	**103**	P		**P**	**21 14 36.0**	**+2.7**
SONM	**Songino Array** comp=Z,0.9nm,0.4s,baz=262,slow=9.1,SNR=12 comp=Z,0.9nm,0.4s	**27.94**	**56**	P		**P**	**21 14 37.7**	**+2.2**
BRTR	**Keskin Array B** comp=Z,0.3nm,0.5s,baz=87,slow=7.7,SNR=2.3 comp=Z,0.3nm,0.5s	**29.67**	**287**	P		**P**	**21 14 52.7**	**+1.7**
BRTR	**Keskin Array B**	**29.67**	**287**	P		**P**	**21 14 52.5**	**+1.5**
HHC	**Hu-ho-hao-te**	**31.38**	**70**	*eP*		**P**	**21 15 09.5**	**+3.5**
HHC	comp=Z,10.0nm,0.7s				pmax	pmax		
HHC	comp=Z,97nm,4.7s				pmax	pmax		
BURAR	**Bucovina Array**	**35.43**	**303**	P		**P**	**21 15 41.5**	**+0.4**
FINES	**FINESS Array B** comp=Z,0.5nm,0.3s,baz=110,slow=8.8,SNR=8.2 comp=Z,0.5nm,0.3s	**37.48**	**326**	P		**P**	**21 15 59.7**	**+1.6**
FINES	**FINESS Array B**	**37.48**	**326**	P		**P**	**21 15 58.9**	**+0.8**
ARCES	**ARCESS Array B** comp=Z,0.7nm,0.4s,baz=119,slow=9.0,SNR=16 comp=Z,0.7nm,0.4s	**41.06**	**337**	P		**P**	**21 16 29.6**	**+1.9**
ARCES	**ARCESS Array B**	**41.06**	**337**	P		**P**	**21 16 29.2**	**+1.5**
HFS	**Hagfors** comp=Z,1.1nm,0.5s,baz=99,slow=8.9,SNR=8.6 comp=Z,1.1nm,0.5s	**43.09**	**322**	P		**P**	**21 16 46.1**	**+1.8**
NC602	**NORSAR Array S** NC602 comp=Z,15nm,1.4s	**44.21**	**322**	P	IAmb	**P** IAmb	**21 16 54.8** 21 17 34.3	**+1.5**
NC303	**NORSAR Array S** NC303 comp=Z,10nm,1.1s	**44.34**	**323**	P	IAmb	**P** IAmb	**21 16 56.4** 21 17 00.6	**+2.1**
NB201	**NORSAR Array S**	**44.36**	**323**	P		**P**	**21 16 55.8**	**+1.3**
NB2	**NORSAR Subarra** comp=Z,0.8nm,0.6s,baz=94,slow=7.9	**44.39**	**323**	P		**P**	**21 16 56.4**	**+1.6**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.4s,baz=95,slow=7.8,SNR=4.8 comp=Z,0.3nm,0.4s	**44.39**	**323**	P		**P**	**21 16 56.1**	**+1.3**
NC204	**NORSAR Array S**	**44.63**	**323**	P		**P**	**21 16 58.4**	**+1.6**
ILAR	**Eielson Array** comp=Z,0.3nm,0.8s,baz=312,slow=7.4,SNR=2.8 comp=Z,0.3nm,0.8s	**74.47**	**16**	P		**P**	**21 20 22.2**	**+0.9**
ILAR	**Eielson Array**	**74.47**	**16**	P		**P**	**21 20 22.4**	**+1.1**
G30M	**tAoh Zraii Nji** G30M comp=Z,8.8nm,1.4s	**74.48**	**11**	P	IAmb	**P** IAmb	**21 20 22.7** 21 20 44.7	**+1.3**
BLKN	**Baker Lake** BLKN comp=Z,14nm,1.4s	**78.80**	**354**	P	IAmb	**P** IAmb	**21 20 45.4** 21 20 45.7	**-0.2**
YKA	**Yellowknife Ar** comp=Z,0.5nm,0.7s,baz=350,slow=5.6,SNR=2.6 comp=Z,0.5nm,0.7s	**81.00**	**3**	P		**P**	**21 20 58.6**	**+1.1**
WB0	**Warramunga Arr** WB0	**81.75**	**122**	P	IAmb	**P** IAmb	**21 21 02.3** 21 21 19.4	**+0.2**
WRA	**Warramunga Arr** comp=Z,4.9nm,1.2s comp=Z,0.5nm,0.6s,baz=326,slow=5.0,SNR=9.2 comp=Z,0.5nm,0.6s	**81.84**	**122**	P		**P**	**21 21 02.2**	**-0.4**
WRA	**Warramunga Arr**	**81.84**	**122**	P		**P**	**21 21 02.6**	**+0.1**
WR8	**Warramunga Arr** WR8 comp=Z,7.6nm,1.5s	**81.95**	**122**	P	IAmb	**P** IAmb	**21 21 03.2** 21 21 06.5	**0.0**
ASAR	**Alice Springs** comp=Z,0.6nm,0.6s,baz=309,slow=4.8,SNR=8.5 comp=Z,0.6nm,0.6s	**84.12**	**125**	P		**P**	**21 21 14.4**	**+0.2**
ASAR	**Alice Springs**	**84.12**	**125**	P		**P**	**21 21 15.0**	**+0.7**
COEN	**Coen**	**84.19**	**112**	P		**P**	**21 21 16.3**	**+1.5**

*SJA **24** 21:18:23.7±0.8, 31°.82S×71°.50W, h62km±6km, ML4.2, MW4.2*
*IDC **24** 21:18:25.9±0.8, 31°.83S×71°.36W, h57km±6km, mb3.9/5, mbtmp4.1/9, MS3.2/2, Error ellipse: s-maj=17.4km s-min=11.5km az=180.0*
*GUC **24** 21:18:25.4±0.9, 31°.80S×71°.39W, h40km±2km, ML4.4*
*NEIC **24** 21:18:25.7±1.9, 31°.80S±0°.02×71°.49W±0°.03, h35km±1km, mb4.7/11, ML4.4(GUC), Error ellipse: s-maj=5.0km s-min=3.0km az=48.0*
ISC 24 21:18:25.2±0.5**, 31°.81S**±0°.02×**71°.46W**±0°.04**, h48**km±4km**, n149,** σ1§**39**/166**, mb4.5**/10**, 8C-9D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CO04	**Los Peladeros**	**0.48**	**119**	*eP*		**Pn**	**21 18 36.2**	**-0.1**
CO04				*eS*		**Sn**	**21 18 43.8**	**-0.4**
CO04	comp=E,117µm,0.2s			IAML			21 18 44.6	
CO04	comp=N,110µm,0.2s			IAML			21 18 44.7	
CO02	**Combarbal**	**0.72**	**33**			**Pn**	**21 18 39.6**	**+0.3**
CO02					Sn	**Sn**	**21 18 49.6**	**+0.2**
CO02	**Combarbal**	**0.72**	**33**	*eP*		**Pn**	**21 18 39.6**	**+0.3**
CO02				*eS*		**Sn**	**21 18 49.6**	**+0.2**
CO02	comp=E,66µm,0.3s			IAML			21 18 51.2	
CO02	**Combarbal**	**0.72**	**33**	*eP*		Pn	21 18 34.1	-5.2
CO02				*eP*			21 18 39.3	
CO02	comp=Z,12µm,0.5s			IAML			21 18 50.8	
VA06	**Catapilco**	**0.76**	**169**	Pn		**Pn**	**21 18 40.3**	**+0.6**
VA06				Sn		**Sn**	**21 18 50.6**	**+0.5**
VA06	**Catapilco**	**0.76**	**169**	⇑*eP*		**Pn**	**21 18 40.2**	**+0.6**
VA06				*eS*		**Sn**	**21 18 51.0**	**+0.8**
VA06	comp=N,30µm,0.4s			IAML			21 18 53.2	
CO06	**Fray Jorge**	**1.14**	**353**			**Pn**	**21 18 46.1**	**+1.4**
CO06	**Fray Jorge**	**1.14**	**353**	⇑*eP*		**Pn**	**21 18 46.2**	**+1.4**
CO06				*eS*		**Sn**	**21 19 01.2**	**+1.9**
CO03	**El Pedregal**	**1.17**	**35**			**Pn**	**21 18 45.6**	**+0.3**
CO03					Sn	**Sn**	**21 19 00.8**	**+0.5**
CO03	**El Pedregal**	**1.17**	**35**	*eP*		**Pn**	**21 18 45.8**	**+0.5**
CO03				*eS*		**Sn**	**21 19 00.7**	**+0.5**
CO03	comp=N,14µm,0.4s			IAML			21 19 01.1	
CO03	**El Pedregal**	**1.17**	**35**	*eP*		**Pn**	**21 18 45.8**	**+0.5**
CO03	comp=Z,7µm,0.4s			IAML			21 19 00.8	
CO03				*eS*		**Sn**	**21 19 01.2**	**+1.0**
VA01	**Torpederas**	**1.22**	**187**			**Pn**	**21 18 46.7**	**+0.9**
VA01	**Torpederas**	**1.22**	**187**	*eP*		**Pn**	**21 18 46.8**	**+1.0**
VA01				*eS*		**Sn**	**21 19 03.1**	**+1.9**
VA01	comp=N,7µm,0.1s			IAML			21 19 06.2	
VA01	**Torpederas**	**1.22**	**187**	*eP*		**Pn**	**21 18 46.2**	**+0.4**
VA01				*eS*		**Sn**	**21 19 02.3**	**+1.1**
VA01	comp=Z,3µm,0.4s			IAML			21 19 06.7	
ROCH	**El Roble**	**1.22**	**162**	*eP*		**Pn**	**21 18 46.5**	**+0.4**
ROCH				*eS*		**Sn**	**21 19 02.6**	**+1.0**
ROCH	comp=N,17µm,0.5s			IAML			21 19 04.8	
VA03	**San Esteban**	**1.23**	**141**			**Pn**	**21 18 46.2**	**+0.2**
VA03	**San Esteban**	**1.23**	**141**	*eP*		**Pn**	**21 18 45.9**	**-0.1**
VA03	comp=N,14µm,0.2s			IAML			21 19 03.6	
VA03	**San Esteban**	**1.23**	**141**	*eP*		**Pn**	**21 18 46.1**	**+0.1**
VA03				*eS*		**Sn**	**21 19 02.6**	**+1.1**
VA03	comp=Z,5µm,0.4s			IAML			21 19 03.6	
MT02	**Curacav**	**1.47**	**169**			**Pn**	**21 18 49.9**	**+0.6**
MT02	**Curacav**	**1.47**	**169**	⇑*eP*		**Pn**	**21 18 49.7**	**+0.4**
MT02				*eS*		**Sn**	**21 19 08.7**	**+1.3**
PEL	**Peldehue**	**1.48**	**154**			**Pn**	**21 18 50.0**	**+0.5**
PEL	**Peldehue**	**1.48**	**154**	*eP*		**Pn**	**21 18 49.8**	**+0.3**
PEL				*eS*		**Sn**	**21 19 08.8**	**+1.1**
PEL	comp=N,4µm,0.3s			IAML			21 19 13.3	
MT10	**Hacienda Santa**	**1.66**	**152**	⇑*eP*		**Pn**	**21 18 52.3**	**+0.3**
MT10	comp=E,10µm,0.4s			IAML			21 19 16.3	
MT05	**Renca**	**1.69**	**159**			**Pn**	**21 18 52.5**	**+0.2**
MT05	**Renca**	**1.69**	**159**	*eP*		**Pn**	**21 18 52.9**	**+0.6**
MT05	comp=E,10µm,0.3s			IAML			21 19 16.0	
MT05	**Renca**	**1.69**	**159**	*eP*		**Pn**	**21 18 52.4**	**0.0**
GO04	**Tololo Observa**	**1.73**	**19**			**Pn**	**21 18 54.3**	**+1.3**
GO04	**Tololo Observa**	**1.73**	**19**	*eP*		**Pn**	**21 18 54.1**	**+1.1**
GO04				*eS*		**

BO04	**La Punta**	**2.29**	**162**		IAML			21 19 31.3
	comp=E,2µm,0.4s							
LMEL	**Las Melosas**	**2.29**	**153**				**Pn**	**21 19 01.5 +0.9**
LMEL	**Las Melosas**	**2.29**	**153**		*eP*		**Pn**	**21 19 01.9 +1.3**
LMEL					*eS*		**Sn**	**21 19 30.6 +2.8**
LMEL					IAML			21 19 33.7
	comp=N,3µm,0.4s							
LMEL	**Las Melosas**	**2.29**	**153**		*eP*		**Pn**	**21 19 01.3 +0.7**
ASAL	**Salagasta**	**2.36**	**110**		*eP*		**Pn**	**21 19 04.3 +2.8**
AROD	**Rodeo**	**2.37**	**47**		*eP*		**Pn**	**21 19 05.5 +3.6**
AROD					*eS*		**Sn**	**21 19 30.1 +0.3**
ARCO	**CERRO ARCO**	**2.38**	**116**		*eP*		**Pn**	**21 19 05.0 +3.2**
ARCO					IAML			21 19 56.2
	comp=Z,771nm,0.5s							
ACCO	**Cerro Coronel**	**2.39**	**60**		*eP*		**Pn**	**21 19 04.9 +2.8**
ACCO					*eP*			21 19 05.0
ACCO					*eS*		**Sn**	**21 19 31.6 +1.2**
ZON	**Zonda**	**2.39**	**84**				**Pn**	**21 19 03.4 +1.6**
ZON	**Zonda**	**2.39**	**84**		*eP*		**Pn**	**21 19 03.5 +1.6**
SJA	**San Juan**	**2.49**	**84**		*eP*		Pn	21 18 50.6 -13
SJA					IAML			21 19 25.5
	comp=Z,1µm,0.5s							
AAGR	**Agrelo**	**2.56**	**120**		*eP*		Pn	21 18 45.7 -19
AAGR					IAML			21 19 27.5
	comp=Z,753nm,0.4s							
ACDV	**Cuesta del Vie**	**2.59**	**52**		*eP*		**Pn**	**21 19 08.4 +3.7**
ACDV					IAML			21 19 45.2
	comp=Z,618nm,0.4s							
BO01	**Tunca**	**2.59**	**173**				**Pn**	**21 19 05.1 +0.4**
BO01	**Tunca**	**2.59**	**173**		*eP*		**Pn**	**21 19 04.7 +0.1**
RTLL	**Cerro Villicun**	**2.59**	**80**		*eP*		**Pn**	**21 19 05.7 +1.0**
RTLL					*eS*		**Sn**	**21 19 37.1 +2.0**
RTLL					IAML			21 19 44.6
	comp=Z,1µm,0.4s							
CFA	**Coronel Fontan**	**2.76**	**87**		P		**Pn**	**21 19 08.2 +1.3**
	comp=Z,304nm,0.5s,baz=256,slow=8.8,SNR=380							
CFA					S		**Sn**	**21 19 38.6 -0.4**
	comp=Z,244nm,0.4s,baz=82,slow=15,SNR=6.3							
CFA	**Coronel Fontan**	**2.76**	**87**		*eP*		**Pn**	**21 19 08.6 +1.7**
LCO	**Las Campanas**	**2.87**	**13**				**Pn**	**21 19 09.7 +1.0**
LCO	**Las Campanas**	**2.87**	**13**	↑	*eP*		**Pn**	**21 19 09.6 +1.0**
LCO					*eS*		**Sn**	**21 19 43.7 +1.7**
LCO	**Las Campanas**	**2.87**	**13**		*eP*		**Pn**	**21 19 09.4 +0.8**
AVIZ	**Vizcaderas**	**2.99**	**125**		*eP*		**Pn**	**21 19 13.0 +2.8**
AVIZ					*eS*		Sn	21 19 31.6 -13
BO02	**Sierra Bellavi**	**3.03**	**169**				**Pn**	**21 19 11.4 +0.7**
AC05	**El Transito**	**3.14**	**19**				**Pn**	**21 19 13.4 +1.2**
AC05	**El Transito**	**3.14**	**19**		*eP*		**Pn**	**21 19 08.6 -3.6**
AC05					*eP*			21 19 13.4
AC05					*eS*		**Sn**	**21 19 51.3 +2.8**
AC05					IAML			21 20 09.1
	comp=Z,482nm,0.3s							
GO05	**Hualane**	**3.22**	**187**		*eP*		**Pn**	**21 19 13.3 +0.1**
GO05					*eS*		**Sn**	**21 19 49.7 -0.5**
GO05					IAML			21 20 10.7
	comp=Z,450nm,0.8s							
AGUA	**GUANDACOL**	**3.45**	**49**		*eP*		**Pn**	**21 19 19.9 +3.4**
AC04	**Llanos de Chal**	**3.61**	**5**				**Pn**	**21 19 19.6 +1.0**
AVFE	**Valle Fertil**	**3.62**	**73**		*eP*		**Pn**	**21 19 20.0 +1.2**
AVFE					*eS*		**Sn**	**21 20 02.6 +2.3**
ACAN	**Cantantal**	**3.66**	**98**		*eP*		**Pn**	**21 19 19.5 +0.2**
RFA	**San Rafael**	**3.88**	**140**		*eP*		**Pn**	**21 19 22.5 +0.2**
ML02	**Panimavida**	**3.94**	**179**				**Pn**	**21 19 23.5 +0.4**
ACHE	**Chepes**	**4.15**	**82**		*eP*		**Pn**	**21 19 27.0 +0.9**
VCA	**Vinchina**	**4.16**	**43**		*eP*		**Pn**	**21 19 28.9 +2.6**
GO03	**Copiapo**	**4.33**	**15**				**Pn**	**21 19 29.5 +0.9**
GO03	**Copiapo**	**4.33**	**15**		*eP*		**Pn**	**21 19 30.0 +1.4**
GO03					*eS*		Sn	21 20 34.1 +16
APLL	**PUNTA DE LOS L**	**4.46**	**73**		*eP*		**Pn**	**21 19 31.0 +0.7**
AC06	**Mina Casimiro**	**4.54**	**13**				**Pn**	**21 19 31.8 +0.4**
ACLC	**CERRO LA CRUZ**	**4.56**	**60**		*eP*		**Pn**	**21 19 33.1 +1.4**
BI02	**San Fabin de**	**4.84**	**178**				**Pn**	**21 19 36.5 +0.9**
BI02	**San Fabin de**	**4.84**	**178**		*eP*		**Pn**	**21 19 36.2 +0.6**
AC02	**Maricunga**	**5.36**	**23**				**Pn**	**21 19 43.4 +0.3**
AC01	**Pan de Azucar**	**5.69**	**8**		Pn		**Pn**	**21 19 47.9 +0.8**
VA04	**Juan Fernndez**	**6.47**	**252**		Pn		**Pn**	**21 19 59.3 +1.5**
H03N1	**Juan Fernandez**	**6.49**	**254**		T		T	21 26 43.8
	baz=80,slow=72							
H03N3	**Juan Fernandez**	**6.50**	**253**		T		T	21 26 43.5
	baz=80,slow=72							
H03N2	**Juan Fernandez**	**6.51**	**254**		T		T	21 26 44.8
	baz=80,slow=72							
H03S3	**Juan Fernandez**	**6.58**	**250**		T		T	21 26 42.3
	baz=81,slow=75							
H03S1	**Juan Fernandez**	**6.58**	**250**		T		T	21 26 42.1
	baz=81,slow=75							
H03S2	**Juan Fernandez**	**6.60**	**250**		T		T	21 26 42.9
	baz=81,slow=75							
GO02	**Mina Guanaco**	**6.82**	**14**				**Pn**	**21 20 03.9 +0.9**
PB14	**IPOC Station P**	**7.22**	**8**		Pn		**Pn**	**21 20 06.6 -1.8**
LR04	**Corral**	**8.21**	**191**		Pn		**Pn**	**21 20 21.2 -0.4**
PLCA	**Paso Flores**	**8.94**	**176**		P		**Pn**	**21 20 32.4 +0.7**
	comp=Z,1.8nm,0.6s,baz=336,slow=10,SNR=9.6							
PLCA					LR		LR	21 23 37.6
	comp=Z,69nm,19.4s,baz=28,slow=35							
TRQA	**Tornquist**	**9.97**	**131**				**Pn**	**21 20 44.8 -0.9**
CPUP	**Villa Florida**	**13.51**	**70**		P		**Pn**	**21 21 31.1 -3.0**
	comp=Z,0.5nm,0.5s,baz=96,slow=9.4,SNR=6.2							
CPUP					S		**Sn**	**21 23 59.0 -3.7**
	comp=Z,2.7nm,1.0s,baz=128,slow=17,SNR=3.4							
LPAZ	**La Paz**	**15.75**	**12**		P		**Pn**	**21 22 04.3 -0.1**
	comp=Z,1.6nm,0.6s,baz=171,slow=6.5,SNR=11							
LPAZ	**La Paz**	**15.75**	**12**				**Pn**	**21 22 04.9 +0.5**
SIV	**San Ignacio**	**18.37**	**33**		P		**P**	**21 22 34.9 -1.1**
	comp=Z,4.6nm,0.7s,baz=274,slow=12							
BDFB	**Brasilia**	**26.74**	**58**		P		**P**	**21 23 58.3 -2.2**
	comp=Z,7.0nm,0.9s,baz=308,slow=4.3							
BDFB					pP		**pP**	**21 24 12.6 -0.5**
	comp=Z,7.0nm,0.9s							
BDFB	**Brasilia**	**26.74**	**58**		IAmb		IAmb	21 24 05.7
	comp=Z,9.7nm,1.2s							
RUSC	**La Rusia**	**37.52**	**357**		P		**P**	**21 25 35.5 +0.4**
RUSC					IAmb		IAmb	21 25 38.8
	comp=Z,11nm,1.1s							
VNA2	**Neumayer--Watz**	**51.85**	**158**	↑	P		**P**	**21 27 27.6 -0.5**
	comp=Z,2.7nm,0.4s,baz=280,slow=8.4							
SNAA	**Sanae**	**53.43**	**158**	↑	P		**P**	**21 27 39.4 -0.4**
	comp=Z,73nm,1.0s							
SNAA	**Sanae**	**53.43**	**158**		P		**P**	**21 27 39.3 -0.5**
	comp=Z,2.9nm,0.8s,baz=279,slow=7.2,SNR=11							
SNAA					pP		**pP**	**21 27 54.4 +1.1**
	comp=Z,2.8nm,0.8s,baz=289,slow=6.7,SNR=6.2							
	comp=Z,2.9nm,0.8s							
SNAA	**Sanae**	**53.43**	**158**		P		**P**	**21 27 39.6 -0.3**
SNAA							**pP**	**21 27 54.4 +1.1**
SNAA					IAmb		IAmb	21 28 02.5
	comp=Z,6.3nm,1.0s							
TEIG	**Tepich**	**54.19**	**340**		P		**P**	**21 27 46.1 +0.2**
TROLL	**Troll, Antarti**	**55.14**	**159**	↑	P		**P**	**21 27 52.3 -0.1**
	comp=Z,24nm,0.2s							
QSPA	**South Pole Qui**	**58.42**	**180**		P		**P**	**21 28 19.4 +3.7**
	comp=Z,1.6nm,0.8s,baz=142,slow=4.1,SNR=5.7							
QSPA					pP		**sP**	**21 28 34.7 0.0**
	comp=Z,2.4nm,0.6s,baz=176,slow=2.9,SNR=3.3							
QSPA	**South Pole Qui**	**58.42**	**180**				**sP**	**21 28 35.7 +1.0**
QSPA					IAmb		IAmb	21 28 36.8
	comp=Z,4.9nm,0.9s							
SAND	**Sanderson**	**67.97**	**331**		P		**P**	**21 29 20.5 +1.3**
SAND					IAmb		IAmb	21 29 21.3
	comp=Z,11nm,1.4s							
TXAR	**Lajitas Array**	**68.08**	**330**		P		**P**	**21 29 20.9 +1.0**
	comp=Z,1.2nm,0.7s,baz=152,slow=8.8,SNR=14							
TXAR					pP		**pP**	**21 29 35.8 +2.2**
	comp=Z,0.4nm,0.8s,baz=147,slow=7.1,SNR=2.7							
	comp=Z,1.2nm,0.7s							
TX31	**Lajitas Ar. Si**	**68.08**	**330**		P		**P**	**21 29 21.1 +1.2**
OXF	**Oxford**	**68.10**	**344**		P		**P**	**21 29 19.9 +0.1**
TKL	**Tuckaleechee C**	**68.10**	**349**		P		**P**	**21 29 19.3 -0.5**
TKL					IAmb		IAmb	21 29 39.1
	comp=Z,25nm,1.4s							
DBIC	**Dimbokro**	**74.02**	**71**		LR		LR	22 02 39.8
	comp=Z,25nm,18.6s,baz=306,slow=36							
NVAR	**Mina Array Bea**	**82.37**	**325**		P		**P**	**21 30 41.7 -0.5**
	comp=Z,0.6nm,0.5s,baz=150,slow=5.8,SNR=5.6							
	comp=Z,0.6nm,0.5s							
LBTB	**Lobatse**	**82.78**	**115**		P		**P**	**21 30 43.0 -1.6**
	comp=Z,1.2nm,0.6s,baz=253,slow=4.3,SNR=1.8							
	comp=Z,1.2nm,0.6s							
LBTB	**Lobatse**	**82.78**	**115**		IAmb		IAmb	21 30 56.8
	comp=Z,12nm,1.5s							
ASAR	**Alice Springs**	**119.73**	**207**		PKP		**PKPdf**	**21 37 09.3 -1.1**
	comp=Z,0.4nm,0.5s,baz=138,slow=1.8,SNR=4.2							
ASAR					pPKP		**pPKPdf**	**21 37 23.6 -1.7**
	comp=Z,0.4nm,0.5s,baz=112,slow=1.5,SNR=2.1							
WRA	**Warramunga Arr**	**122.91**	**209**		PKP		**PKPdf**	**21 37 15.8 -0.9**
	comp=Z,1.2nm,0.5s,baz=156,slow=1.7,SNR=13							
WRA					pPKP		**pPKPdf**	**21 37 32.0 +0.6**
	comp=Z,1.0nm,0.5s,baz=160,slow=1.7,SNR=4.1							
H11S2	**WAKE ISLAND Hyl**	**26.26**	**270**		T		T	23 56 40.2
	baz=118,slow=75							
H11S1	**WAKE ISLAND Hyl**	**26.28**	**270**		T		T	23 56 44.9
	baz=118,slow=75							
H11S3	**WAKE ISLAND Hyl**	**26.28**	**270**		T		T	23 56 44.3
	baz=118,slow=75							
H11N3	**WAKE ISLAND Hyl**	**26.62**	**272**		T		T	23 56 51.5
	baz=116,slow=75,SNR=36							
H11N1	**WAKE ISLAND Hyl**	**26.64**	**272**		T		T	23 56 53.0
	baz=116,slow=75,SNR=11							
H11N2	**WAKE ISLAND Hyl**	**26.64**	**272**		T		T	23 56 53.6
	baz=116,slow=75,SNR=62							
BVAR	**Borovoye Array**	**145.33**	**41**		PKPbc		**PKPbc**	**21 37 57.1 +0.1**
	comp=Z,2.9nm,0.7s,baz=300,slow=3.7,SNR=22							
BVAR					pPKP		pPKPab	21 38 12.9 +1.2
	comp=Z,1.8nm,0.5s,baz=312,slow=2.6,SNR=8.6							
KURBB	**Kurchatov Arra**	**150.92**	**41**		PKPbc		**PKPbc**	**21 38 11.7 -0.4**
	comp=Z,1.3nm,0.6s,baz=302,slow=2.8,SNR=14							
KURK	**Kurchatov**	**150.93**	**41**				**PKPbc**	**21 38 11.7 -0.4**
ZALV	**Zalesovo Beam**	**152.11**	**31**		PKPbc		**PKPbc**	**21 38 14.3 -0.4**
	comp=Z,2.5nm,0.5s,baz=304,slow=3.1,SNR=12							
KSH	**Kashi**	**152.56**	**65**		PKPbc		**P**	**21 38 08.4 +0.6**
MKAR	**Makanchi Array**	**154.93**	**46**		PKPab		**PKPab**	**21 38 36.1 -0.5**
	comp=Z,0.5nm,0.5s,baz=279,slow=3.4,SNR=5.8							

*IDC **24** 21:26:46.8±0.8, 2°.29S×139°.13E, h0km, mb3.9/7, mbtmp4.0/9, ML4.4/1, MS3.2/3, Error ellipse: s-maj=19.7km s-min=12.4km az=13.0*
*DJA **24** 21:26:50.5±0.6, 2°.5S±8°×13°.9E±°, h79km±8km, M4.3/7, mb4.1/7, mB6.5/1, MLv4.4/7, Mw(mB)6.2/1*
ISC 24 21:26:52.0±0.7, 2.51S±0.08×139.16E±0.07, h35km, n22, σ2s44/23, mb3.9/6, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.01**	**95**	P		**Pn**	**21 27 09.1**	**-0.6**
WAMI	**Wamena**	**1.44**	**198**	P		Pn	21 27 24.3	+8.7
JAY	**Jayapura**	**1.54**	**90**	Pg		**Pn**	**21 27 16.4**	**-0.7**
	71nm,0.3s,baz=240,slow=11,SNR=206			Lg				
JAY				Lg		Lg	21 27 36.9	
	84nm,0.3s,baz=115,slow=22,SNR=30							
JAY				LR		LR	21 28 07.9	
	comp=Z,333nm,18.8s,baz=193,slow=51							
JAY	**Jayapura**	**1.54**	**90**	P		**Pn**	**21 27 16.1**	**-1.0**
SRPI	**Serui, Papua**	**2.99**	**282**	P		**Pn**	**21 27 36.7**	**-0.2**
BAKI	**Biak**	**3.32**	**293**	P		**Pn**	**21 27 40.7**	**-0.8**
FAKI	**Fak Fak**	**6.92**	**266**	P		**Pn**	**21 28 30.9**	**0.0**
BNDI	**Bandanaira**	**9.45**	**258**	P		**Pn**	**21 29 06.7**	**+1.0**
PMG	**Port Moresby**	**10.50**	**131**	Pn		**Pn**	**21 29 21.9**	**+1.9**
	2.2nm,0.3s,baz=311,slow=11,SNR=1.8			LR				
PMG				LR		LR	21 34 16.0	
	comp=Z,97nm,18.3s,baz=316,slow=42							
SANI	**Sanana**	**13.17**	**272**	P		**Pn**	**21 29 55.3**	**-1.4**
	6.2nm,0.8s							
SOEI	**Soe**	**16.45**	**243**	P		**Pn**	**21 30 41.3**	**+0.8**
	19nm,0.8s							
BATI	**Baumata**	**17.18**	**243**	P		**P**	**21 30 53.5**	**+2.7**
	23nm,0.6s,baz=29,slow=2.6,SNR=10							
BATI	**Baumata**	**17.18**	**243**	P		**P**	**21 30 54.4**	**+3.5**
WRA	**Warramunga Arr**	**17.95**	**195**	P		**Pn**	**21 30 59.3**	**+0.3**
	1.2nm,0.3s,baz=18,slow=13,SNR=42							
WRA				S		**Sn**	**21 34 10.2**	**-8.2**
	0.7nm,0.8s,baz=13,slow=22,SNR=2.7							
	1.5nm,0.3s							
FITZ	**Fitzroy Crossi**	**20.39**	**220**	P		**P**	**21 31 27.6**	**+1.6**
	2.2nm,0.7s,baz=39,slow=13,SNR=5.8							
FITZ				S		**S**	**21 35 10.0**	**-2.7**
	4.0nm,1.0s,baz=41,slow=20,SNR=3.3							
	2.2nm,0.7s							
ASAR	**Alice Springs**	**21.64**	**193**	P		**P**	**21 31 40.9**	**+1.5**
	2.8nm,0.5s,baz=20,slow=9.7,SNR=21							
ASAR				S		**S**	**21 35 39.3**	**+1.9**
	0.6nm,0.8s,baz=15,slow=26,SNR=2.0							
ASAR				LR		LR	21 41 20.6	
	comp=Z,32nm,21.0s,baz=20,slow=40							
	2.8nm,0.5s							
STKA	**Stephens Creek**	**29.30**	**176**	P		**P**	**21 32 53.1**	**+1.8**
	1.6nm,0.6s,baz=345,slow=10,SNR=5.2							
	1.6nm,0.6s							
NWAO	**Narrogin (SRO)**	**36.58**	**212**	LR		LR	21 50 44.1	
	comp=Z,64nm,18.4s,baz=275,slow=39							
CMAR	**Chiang Mai Arr**	**44.73**	**299**	P		**P**	**21 35 01.8**	**-0.5**
	0.7nm,0.3s,baz=113,slow=7.9,SNR=6.4							
	0.7nm,0.3s							
MKAR	**Makanchi Array**	**69.91**	**322**	P		**P**	**21 37 59.1**	**-0.5**
	0.4nm,0.6s,baz=105,slow=7.2,SNR=5.4							
	0.4nm,0.6s							
BVAR	**Borovoye Array**	**79.41**	**325**	P		**P**	**21 38 53.8**	**-0.7**
	0.8nm,0.5s,baz=111,slow=7.6,SNR=5.6							
	0.8nm,0.5s							
ILAR	**Eielson Array**	**85.47**	**24**	P		**P**	**21 39 24.1**	**-1.8**
	0.7nm,0.8s,baz=251,slow=5.2,SNR=6.7							
	0.7nm,0.8s							

*MDD **24** 21:38:42.3±0.7, 35°.37N×3°.92W, h1km±5km, mb_Lg2.2/10, Error ellipse: s-maj=4.8km s-min=4.0km az=14.0*
*CNRM **24** 21:38:44.3, 35°.58N×3°.85W, h15km, ML2.4*
*SFS **24** 21:38:45.6, 35°.44N×3°.74W, h25km, ML2.5/6, ML2.1/7, MLv1.9/7*
ISC 24 21:38:43.5±1.2, 35°.49N±0°.02×3°.86W±0°.04, h8km±11km, n29, σ1s13/42, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.28**	**194**	P		**Pb**	**21 38 51.4**	**+0.7**
PALE	**Palemas**	**0.28**	**194**	S		**Sb**	**21 38 57.0**	**+1.4**
EMEL	**Melilla**	**0.76**	**104**	Pg		**Pg**	**21 38 57.4**	**-0.7**
EMEL				Sg		**Sg**	**21 39 06.9**	**-1.1**
WMEL	**Melilla**	**0.76**	**103**	Pg		**Pg**	**21 38 57.7**	**-0.3**
WMELI				Sg		**Sg**	**21 39 06.6**	**-1.3**
EMLI	**Melilla**	**0.76**	**104**	Sg		**Sg**	**21 39 07.1**	**-1.0**
EMLI				Pg		**Pg**	**21 38 57.5**	**-0.6**
EALB	**Alboran**	**0.81**	**56**	Pg		**Pg**	**21 38 59.0**	**0.0**
EALB				Sg		**Sg**	**21 39 09.7**	**+0.1**
EALB	**Alboran**	**0.81**	**56**	Sg		**Sg**	**21 39 10.4**	**+0.9**
EALB				*i* lVmb_Lg			21 39 11.4	
AKLM	**AKL**	**0.97**	**180**	P		**Pn**	**21 39 03.6**	**+0.1**
AKLM	**AKL**	**0.97**	**180**	S		**Sn**	**21 39 17.0**	**-0.5**
SMIR	**Smir Dam**	**1.26**	**279**	P		**Pb**	**21 39 07.9**	**+0.5**
SMIR	**Smir Dam**	**1.26**	**279**	S		**Sg**	**21 39 25.0**	**+1.1**
ECEU	**Ceuta**	**1.30**	**289**	Sn		**Sn**	**21 39 25.7**	**+0.1**
ECEU	**Ceuta**	**1.30**	**289**	Sg		**Sb**	**21 39 23.4**	**-1.7**
ECEU				*i* lVmb_Lg			21 39 27.9	
EMIJ	**Mijas**	**1.31**	**326**	Pg		**Pb**	**21 39 09.5**	**+1.2**
EMIJ	**Mijas**	**1.31**	**326**	Pn		**Pn**	**21 39 07.4**	**-0.6**
EMIJ				Sn		**Sn**	**21 39 25.2**	**-0.5**
TAF	**Taforalt**	**1.36**	**119**	P		**Pg**	**21 39 09.8**	**+0.2**
TAF	**Taforalt**	**1.36**	**119**	S		**Sg**	**21 39 28.2**	**+1.1**
ELGU	**Los Guajares,**	**1.39**	**8**	Sn		**Sn**	**21 39 26.6**	**-1.2**
ELGU				Pn		**Pn**	**21 39 09.7**	**+0.5**
ELGU	**Los Guajares,**	**1.39**	**8**	Pg		**Pn**	**21 39 10.0**	**+0.7**
ELGU				Sn		**Sn**	**21 39 28.3**	**+0.5**
ELGU				*i* lVmb_Lg			21 39 30.9	
EGOR	**Sierra Gorda,**	**1.63**	**353**	Pn		**Pn**	**21 39 13.1**	**+0.4**
EGOR				Sn		**Sn**	**21 39 31.6**	**-2.4**
EGOR	**Sierra Gorda,**	**1.63**	**353**	Pn		**Pn**	**21 39 12.6**	**0.0**
EGOR				Sn		**Sn**	**21 39 35.1**	**+1.2**
EGOR				*i* lVmb_Lg			21 39 44.3	
EQUE	**Quentar**	**1.75**	**11**	Pn		**Pn**	**21 39 14.5**	**+0.4**
EQUE				Sn		**Sb**	**21 39 38.3**	**+0.3**
EQUE				*i* lVmb_Lg			21 39 44.3	
EQES	**Quesada**	**2.40**	**15**	Pn		**Pn**	**21 39 23.5**	**+0.4**
EQES				Sn		**Sn**	**21 39 53.9**	**+1.2**
EQES				*i* lVmb_Lg			21 39 58.0	
MD31	**MD31**	**2.72**	**196**	P		**Pn**	**21 39 28.8**	**+1.3**
MD31	**MD31**	**2.72**	**196**	S		**Sb**	**21 40 03.3**	**-2.6**
MDT	**Midelt**	**2.74**	**193**	P		**Pn**	**21 39 29.8**	**+2.0**
MDT	**Midelt**	**2.74**	**193**	S		**Sb**	**21 40 04.2**	**-2.2**
EADA	**Adamuz**	**2.74**	**348**	Pn		**Pn**	**21 39 27.7**	**0.0**
EADA				*i* lVmb_Lg			21 39 59.5	
EADA				Sn		**Sn**	**21 40 01.4**	**+0.4**
ECAB	**El Cabril**	**2.87**	**335**	Pn		**Pn**	**21 39 27.8**	**-1.8**
ECAB				Sn		**Sn**	**21 40 03.6**	**-0.7**
ECAB				*i* lVmb_Lg			21 40 09.8	

*KRNET **24** 21:41:39.7±0.1, 40°.91N×74°.58E, h15km, mb2.9*
*NNC **24** 21:41:40.6±0.9, 40°.91N×74°.55E, h0km, mb3.6, mpv3.3,*

Error ellipse: s-maj=6.0km s-min=3.9km az=171.0
*SOME **24** 21:41:40.8, 41°.02N×74°.55E, h5km*
*KNET **24** 21:41:44.1±0.7, 41°.14N×74°.64E, h8km±4km, ml2.1, Error ellipse: s-maj=4.8km s-min=3.3km az=17.0*
ISC 24 21:41:39.3±1.2, 40°.91N±0°.03×74°.61E±0°.02, h2km±16km, n54, σ1s09/90, 36C-26D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
SALK	**Salom-Alik**	**0.59**	**268**	↑	*eP*	**Pg**	**21 41 51.0**	**+0.3**
SALK				↑	*eS*	**Sg**	**21 41 59.2**	**+0.8**
JNKS	**Jany-Kuch**	**0.81**	**79**	↑	*eP*	**Pg**	**21 41 55.5**	**+0.7**
JNKS				↑	*eS*	**Sb**	**21 42 07.1**	**-0.5**
ARLS	**Aral**	**0.98**	**348**	↑	*eP*	**Pb**	**21 41 58.2**	**-0.8**
ARLS				↑	*eS*	**Sg**	**21 42 11.6**	**+0.9**
SFK	**Sufi-Kurgan**	**1.23**	**224**	↑	*eP*	**Pb**	**21 42 02.8**	**-0.4**
SFK				↑	*eS*	**Sg**	**21 42 19.7**	**+1.1**
ARSB	**Arslanbob**	**1.29**	**289**	↑	*eP*	**Pb**	**21 42 03.8**	**-0.6**
ARSB				↑	*eS*	**Sg**	**21 42 21.9**	**+1.0**
UCH	**Uchtor**	**1.32**	**357**	⇓	P	**Pg**	**21 42 04.9**	**+0.2**
	7.4nm,0.1s,SNR=59							
UCH				↑	S	**Sg**	**21 42 22.0**	**+0.2**
	14nm,0.2s							
UCH	**Uchtor**	**1.32**	**357**	↑	*eP*	**Pg**	**21 42 04.8**	**+0.2**
UCH				↑	*eS*	**Sg**	**21 42 23.2**	**+1.4**
OHH	**Osh**	**1.44**	**255**	↑	*eP*	**Pb**	**21 42 06.4**	**-0.3**
OHH				↑	*eS*	**Sg**	**21 42 25.9**	**+0.6**
AAK	**Ala-Archa**	**1.73**	**357**	⇓	P	**Pg**	**21 42 12.5**	**0.0**
	23nm,0.3s,SNR=13							
AAK				↑	S	**Sg**	**21 42 34.4**	**-0.5**
	25nm,0.5s							
AAK	**Ala-Archa**	**1.73**	**357**	↑	P	**Pg**	**21 42 12.3**	**-0.2**
	1.6nm,0.3s							
AAK				↑	S	**Sg**	**21 42 35.6**	**+0.6**
	2.8nm,0.5s							
AAK	**Ala-Archa**	**1.73**	**357**	⇓	*eP*	**Pb**	**21 42 12.0**	**+0.1**
AAK				⇓	*eS*	**Sg**	**21 42 35.5**	**+0.6**
KBK	**Karagaybulak**	**1.77**	**8**	⇓	P	**Pg**	**21 42 13.3**	**+0.2**
	25nm,0.1s,SNR=33							
KBK				↑	S	**Sg**	**21 42 36.1**	**0.0**
	52nm,0.2s							
KBK	**Karagaybulak**	**1.77**	**8**	⇓	*eP*	**Pb**	**21 42 12.6**	**+0.1**
KBK				⇓	*eS*	**Sg**	**21 42 36.7**	**+0.6**
ULHL	**Ulahol**	**1.82**	**42**	↑	P	**Pg**	**21 42 14.6**	**+0.5**
	4.8nm,0.2s,SNR=18							
ULHL				⇓	S	**Sg**	**21 42 37.6**	**-0.1**
	34nm,0.2s							
ULHL	**Ulahol**	**1.82**	**42**	⇓	*eP*	**Pb**	**21 42 13.7**	**+0.4**
ULHL				⇓	*eS*	**Sg**	**21 42 38.4**	**+0.8**
EKS2	**Erkin-Say**	**1.86**	**341**	⇓	P	**Pg**	**21 42 14.6**	**-0.3**
	3.8nm,0.2s,SNR=24							
EKS2				↑	S	**Sg**	**21 42 38.0**	**-1.0**
	11nm,0.2s							
EKS2	**Erkin-Say**	**1.86**	**341**	↑	*eP*	**Pb**	**21 42 14.1**	**+0.1**
EKS2				↑	*eS

	2.9nm,0.3s							
BRLS	**Borolday**	**4.14**	**302**	*e*P	**Pb**	**21 42 54.1**	**+1.3**
	0.6nm,0.2s							
BRLS				*e*S	**Sb**	**21 43 46.7**	**+3.4**
	2.9nm,0.3s							
BLB	**Baldybastay**	**4.29**	**41**	Pg	**Pb**	**21 42 58.4**	**+3.1**
BLB				Lg	Lg	21 43 54.3	

IDC 24 21:43:47.3±4.8, 58°42S×149°55E, h0km, mb3.8/3, mbtmp3.8/3, MS3.3/1, Error ellipse: s-maj=287.2km s-min=25.8km az=83.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**19.64**	**172**	LR	LR	21 55 02.2	
	comp=Z,83nm,18.3s,baz=344,slow=34						
H01W1	**Cape Leeuwin H**	**33.19**	**300**	T	T	22 25 20.0	
	baz=146,slow=75,SNR=169						
H01W2	**Cape Leeuwin H**	**33.19**	**300**	T	T	22 25 20.2	
	baz=146,slow=75,SNR=182						
H01W3	**Cape Leeuwin H**	**33.21**	**300**	T	T	22 25 23.4	
	baz=146,slow=75,SNR=167						
ASAR	**Alice Springs**	**36.48**	**335**	P	P	21 50 54.1	+0.1
	1.1nm,0.8s,baz=167,slow=9.6,SNR=11						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**40.00**	**337**	P	P	21 51 23.4	-0.2
	1.1nm,0.7s,baz=164,slow=7.7,SNR=6.2						
	1.1nm,0.7s						
SNAA	**Sanae**	**48.77**	**191**	P	P	21 52 33.3	0.0
	1.0nm,0.6s,baz=174,slow=10,SNR=11						
	1.0nm,0.6s						
H04S2	**CROZET ISLANDS**	**55.23**	**236**	T	T	22 53 26.1	
	baz=139,slow=76,SNR=18						
H04S1	**CROZET ISLANDS**	**55.23**	**236**	T	T	22 53 27.0	
	baz=139,slow=76,SNR=24						
H04S3	**CROZET ISLANDS**	**55.24**	**236**	T	T	22 53 33.1	
	baz=139,slow=76,SNR=22						
H08S2	**Diego Garcia H**	**76.75**	**277**	T	T	23 19 41.0	
	baz=148,slow=76,SNR=218						
H08S1	**Diego Garcia H**	**76.76**	**277**	T	T	23 19 44.5	
	baz=148,slow=76,SNR=240						
H08S3	**Diego Garcia H**	**76.77**	**277**	T	T	23 19 38.1	
	baz=148,slow=76,SNR=255						
H03S2	**Juan Fernandez**	**79.58**	**141**	T	T	23 24 12.7	
	baz=201,slow=74,SNR=50						
H03S1	**Juan Fernandez**	**79.58**	**141**	T	T	23 24 14.0	
	baz=201,slow=74,SNR=49						
H03S3	**Juan Fernandez**	**79.59**	**141**	T	T	23 24 13.6	
	baz=201,slow=74,SNR=56						
AKASG	**Malin Array Be**	**145.61**	**284**	PKPbc	PKPdf	22 03 25.6	-0.7
	0.4nm,0.4s,baz=86,slow=2.7,SNR=4.4						
FINES	**FINESS Array B**	**152.28**	**301**	PKPbc	PKiKP	22 03 43.6	-0.1
	1.8nm,0.8s,baz=246,slow=1.9,SNR=4.6						
GERES	**GERESS Array B**	**152.60**	**269**	PKPbc	PKPbc	22 03 44.0	-0.7
	0.4nm,0.6s,baz=108,slow=4.3,SNR=4.3						

*JMA **24** 21:43:48.8±0.1, 24°.1N±0°.4×121°.9E±0°.3, h54km, MV2.8/13, TAIWAN REGION*

*TAP **24** 21:43:49.4, 24°.12N×121°.91E, h51km, ML3.3, C*

ISC 24 21:43:49.8±1.2, 24°09N±0°.02×121°94E±0°.03, h48km±6km, n83, σ0s62/152, 13C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.29**	**284**	*i* P	**Pn**	**21 43 58.3**	**-0.4**
ETL				*i* S	**Sn**	**21 44 05.3**	**+0.3**
EAHA	**Aohua**	**0.30**	**323**	⇑*i*P	**Pn**	**21 43 58.3**	**-0.4**
EAHA				*i* S	**Sn**	**21 44 05.2**	**+0.1**
TWD	**Chiawan**	**0.31**	**269**	⇑*i*P	**Pn**	**21 43 58.4**	**-0.4**
TWD				*i* S	**Sn**	**21 44 05.1**	**-0.1**
HWA	**Hwalien**	**0.32**	**250**	*i* P	**Pn**	**21 43 59.1**	**+0.1**
HWA				*i* S	**Sn**	**21 44 06.9**	**+1.5**
NACB	**Ninganchiao**	**0.32**	**285**	⇑*i*P	**Pn**	**21 43 58.4**	**-0.6**
NACB				*i* S	**Sn**	**21 44 05.4**	**-0.1**
TEYL	**Yanliau Villag**	**0.38**	**235**	*i* P	**Pn**	**21 43 59.6**	**+0.1**
TEYL				*i* S	**Sn**	**21 44 07.5**	**+1.1**
ENA	**Nanau**	**0.38**	**332**	⇑*i*P	**Pn**	**21 43 59.2**	**-0.3**
ENA				*i* S	**Sn**	**21 44 06.5**	**0.0**
EWUT	**Wuta**	**0.38**	**338**	⇑*i*P	**Pn**	**21 43 59.3**	**-0.3**
EWUT				*i* S	**Sn**	**21 44 06.5**	**-0.1**
ETM	**Tongmen**	**0.42**	**253**	*i* P	**Pn**	**21 43 59.7**	**-0.3**
ETM				*i* S	**Sn**	**21 44 07.5**	**+0.1**
SHUL	**Shoufeng**	**0.45**	**229**	*i* P	**Pn**	**21 44 00.4**	**0.0**
SHUL				*i* S	**Sn**	**21 44 09.2**	**+1.3**
ESAO	**Su ao**	**0.49**	**350**	*i* P	**Pn**	**21 44 01.2**	**+0.4**
ESAO				*i* S	**Sn**	**21 44 09.2**	**+0.5**
TEGC	**Jichi Village**	**0.52**	**224**	*i* P	**Pn**	**21 44 01.4**	**+0.2**
TEGC				*i* S	**Sn**	**21 44 10.7**	**+1.3**
TWC	**Suao**	**0.53**	**351**	⇑*i*P	**Pn**	**21 44 01.1**	**-0.1**
TWC				*i* S	**Sn**	**21 44 09.5**	**+0.1**
ESL	**Shilin**	**0.53**	**239**	⇓*i*P	**Pn**	**21 44 00.8**	**-0.6**
ESL				*i* S	**Sn**	**21 44 09.1**	**-0.5**
NDS	**Dongshan**	**0.58**	**340**	*i* P	**Pn**	**21 44 01.6**	**-0.3**
NDS				*e*S	**Sn**	**21 44 10.3**	**-0.3**
LATG	**Datong**	**0.58**	**320**	⇑*i*P	**Pn**	**21 44 01.4**	**-0.6**
LATG				*i* S	**Sn**	**21 44 10.1**	**-0.3**
NNSB	**Datong**	**0.61**	**304**	⇑*i*P	**Sn**	**21 44 01.9**	**-0.5**
NNSB				*i* S	**Sn**	**21 44 10.9**	**-0.6**
WHF	**Hehuan Shan**	**0.61**	**275**	*i* P	**Pn**	**21 44 02.2**	**-0.5**
WHF				*i* S	**Sn**	**21 44 11.6**	**-0.5**
NNS	**Nan Shan**	**0.62**	**304**	⇑*i*P	**Pn**	**21 44 02.1**	**-0.5**
NNS				*i* S	**Sn**	**21 44 11.4**	**-0.3**
WARBT	**Fenglin Townsh**	**0.62**	**234**	⇓*i*P	**Pn**	**21 44 01.8**	**-0.7**
WARBT				S	**Sn**	**21 44 11.3**	**-0.3**
EGFH	**Guangfu**	**0.62**	**228**	*i* P	**Pn**	**21 44 02.2**	**-0.3**
EGFH				S	**Sn**	**21 44 12.1**	**+0.5**
ENTT	**Nioudou**	**0.64**	**329**	*i* P	**Pn**	**21 44 02.3**	**-0.5**
ENTT				S	**Sn**	**21 44 12.1**	**0.0**
FUSS	**Fushou**	**0.65**	**284**	*i* P	**Pn**	**21 44 02.9**	**-0.2**
FUSS				*i* S	**Sn**	**21 44 12.3**	**-0.4**
TWE	**Neicheng**	**0.68**	**339**	⇑*i*P	**Pn**	**21 44 02.9**	**-0.2**
TWE				*i* S	**Sn**	**21 44 12.8**	**0.0**
ILA	**Ilan**	**0.70**	**346**	*i* P	**Pn**	**21 44 03.2**	**-0.2**
ILA				*i* S	**Sn**	**21 44 14.2**	**+1.0**
OWD	**Renai**	**0.71**	**259**	*i* P	**Pn**	**21 44 03.3**	**-0.4**
OWD				*i* S	**Sn**	**21 44 13.0**	**-0.7**
TWT	**Tachien**	**0.71**	**283**	*i* P	**Pn**	**21 44 04.0**	**+0.2**
TWT				*i* S	**Sn**	**21 44 13.9**	**0.0**
TDCB	**Techi**	**0.73**	**283**	*i* P	**Pn**	**21 44 04.0**	**0.0**
TDCB				*e*S	**Sn**	**21 44 11.7**	**-2.5**
FUSB	**Fushanzhiwuyua**	**0.74**	**335**	*i* P	**Pn**	**21 44 03.7**	**-0.4**
FUSB				*e*S	**Sn**	**21 44 14.1**	**-0.3**
WUSB	**Renai**	**0.75**	**263**	*i* P	**Pn**	**21 44 04.1**	**-0.2**
WUSB				*i* S	**Sn**	**21 44 14.5**	**-0.3**
EGS		**0.75**	**360**	*i* P	**Pn**	**21 44 04.7**	**+0.5**
EGS				*i* S	**Sn**	**21 44 16.1**	**+1.5**
HGSD	**Ruisui**	**0.76**	**218**	⇑*i*P	**Pn**	**21 44 04.0**	**-0.2**
HGSD				*i* S	**Sn**	**21 44 15.5**	**+0.8**
YHNB	**Yeheng**	**0.77**	**319**	P	**Pn**	**21 44 04.1**	**-0.4**
YHNB	**Yeheng**	**0.77**	**319**	S	**Sn**	**21 44 14.3**	**-0.9**
YHNB	**Yeheng**	**0.77**	**319**	⇑*i*P	**Sn**	**21 44 04.1**	**-0.4**
YHNB				S	**Sn**	**21 44 14.6**	**-0.6**
NSK	**Sanguang**	**0.79**	**318**	⇑*i*P	**Pn**	**21 44 04.3**	**-0.4**
NSK				*i* S	**Sn**	**21 44 14.7**	**-0.9**
NWLT	**Wulai**	**0.79**	**330**	*i* P	**Pn**	**21 44 04.2**	**-0.5**
NWLT				*i* S	**Sn**	**21 44 14.9**	**-0.6**
VWDT	**VWDT**	**0.80**	**246**	⇓*i*P	**Pn**	**21 44 04.8**	**0.0**
VWDT				*i* S	**Sn**	**21 44 15.8**	**+0.1**
EHYH	**Wanrong**	**0.80**	**223**	*i* P	**Pn**	**21 44 04.0**	**-0.8**
EHYH				*e*S	**Sn**	**21 44 16.1**	**+0.4**
EHY	**Hungye**	**0.81**	**224**	*i* P	**Pn**	**21 44 04.0**	**-0.9**
EHY				S	**Sn**	**21 44 14.9**	**-1.0**
TIPB	**Shuangxi**	**0.89**	**354**	*i* P	**Pn**	**21 44 06.3**	**+0.3**
TIPB				*i* S	**Sn**	**21 44 17.9**	**+0.1**
ECBN	**Changbin**	**0.89**	**210**	*i* P	**Pn**	**21 44 05.7**	**-0.3**
ECBN				*i* S	**Sn**	**21 44 17.9**	**+0.2**
YULB	**Yu-li**	**0.91**	**220**	P	**Pn**	**21 44 05.3**	**-0.9**
YULB	**Yu-li**	**0.91**	**220**	*i* P	**Pn**	**21 44 05.3**	**-0.9**
TWB1	**Santiao Chiao**	**0.92**	**3**	*i* P	**Pn**	**21 44 06.4**	**+0.1**
TWB1				*i* S	**Sn**	**21 44 18.1**	**-0.4**
NFF	**Wufeng Townshi**	**0.92**	**306**	*i* P	**Pn**	**21 44 06.7**	**+0.3**
NFF				*i* S	**Sn**	**21 44 18.4**	**-0.3**
WHP	**Taichung City**	**0.92**	**282**	*i* P	**Pn**	**21 44 07.1**	**+0.6**
WHP				*i* S	**Sn**	**21 44 19.1**	**+0.3**
EYUL	**Yuli**	**0.93**	**218**	*i* P	**Pn**	**21 44 06.1**	**-0.4**
EYUL				*e*S	**Sn**	**21 44 18.8**	**0.0**
TWF1	**Yuli**	**0.94**	**219**	*i* P	**Pn**	**21 44 05.8**	**-0.8**
TWF1				*e*S	**Sn**	**21 44 18.1**	**-0.9**
TWA	**Mucha**	**0.94**	**340**	*i* P	**Pn**	**21 44 07.0**	**+0.2**
TWA				*i* S	**Sn**	**21 44 19.6**	**+0.4**
SSLB	**Suanglung**	**0.95**	**252**	P	**Pn**	**21 44 06.5**	**-0.3**
SSLB	**Suanglung**	**0.95**	**252**	*i* P	**Pn**	**21 44 06.6**	**-0.2**
NHDH	**Xindian Distri**	**0.95**	**337**	P	**Pn**	**21 44 05.7**	**-1.1**
NHDH				*e*S	**Sn**	**21 44 19.4**	**+0.2**
SMLT	**Sun Moon Lake**	**0.97**	**258**	*i* P	**Pn**	**21 44 07.2**	**0.0**
SMLT				*i* S	**Sn**	**21 44 20.2**	**+0.4**
TATO	**Taipei**	**0.97**	**335**	P	**Pn**	**21 44 07.6**	**+0.5**
TATO	**Taipei**	**0.97**	**335**	S	**Sn**	**21 44 21.0**	**+1.2**
KSHI	**Guanxi Townshi**	**0.97**	**315**	*i* P	**Pn**	**21 44 07.4**	**+0.2**
KSHI				S	**Sn**	**21 44 21.1**	**+1.2**
NWF	**Wu-fen Shan**	**0.99**	**352**	*i* P	**Pn**	**21 44 07.6**	**+0.2**
NWF				*i* S	**Sn**	**21 44 20.0**	**-0.3**
WFSB	**Wu-fen Shan**	**0.99**	**352**	*i* P	**Pn**	**21 44 07.6**	**+0.2**
WFSB				*e*S	**Sn**	**21 44 20.7**	**+0.5**
JYNG	**Yonagunijimaku**	**0.99**	**68**	P	**Pn**	**21 44 07.1**	**-0.2**
JYNG				*e*S	**Sn**	**21 44 20.2**	**0.0**
SXI1	**Grass Mountain**	**1.00**	**357**	*i* P	**Pn**	**21 44 07.6**	**0.0**
SXI1				*e*S	**Sn**	**21 44 20.6**	**-0.1**
TYC	**Yuchr**	**1.00**	**260**	*i* P	**Pn**	**21 44 07.5**	**+0.1**
TYC				*i* S	**Sn**	**21 44 21.1**	**+0.6**
LIOB	**Emei**	**1.00**	**304**	*i* P	**Pn**	**21 44 08.3**	**+0.7**
LIOB				S	**Sn**	**21 44 21.6**	**+0.9**
NSTT	**Nanjuang**	**1.01**	**303**	*i* P	**Pn**	**21 44 08.4**	**+0.9**
NSTT				*i* S	**Sn**	**21 44 21.3**	**+0.6**
CHKH	**Chenggong**	**1.02**	**209**	*i* P	**Pn**	**21 44 06.7**	**-1.0**
CHKH				*i* S	**Sn**	**21 44 20.1**	**-0.8**
YOJ	**Yonaguni jima**	**1.05**	**69**	P	**Pn**	**21 44 08.4**	**+0.3**
YOJ	**Yonaguni jima**	**1.05**	**69**	*e*P	**Pn**	**21 44 08.1**	**0.0**
FULB	**Fuli**	**1.06**	**214**	*i* P	**Pn**	**21 44 08.2**	**-0.1**
FULB				S	**Sn**	**21 44 23.1**	**+1.1**
WHYT	**Xinyi Township**	**1.06**	**249**	*i* P	**Pn**	**21 44 09.3**	**+1.0**
WHYT				S	**Sn**	**21 44 23.9**	**+1.8**
TNOU	**National Taiwa**	**1.07**	**352**	*e*P	**Pn**	**21 44 08.4**	**0.0**
TNOU				*e*S	**Sn**	**21 44 22.1**	**0.0**
YUS	**Yu-Shan**	**1.08**	**237**	*i* P	**Pn**	**21 44 08.9**	**-0.1**
YUS				*i* S	**Sn**	**21 44 22.8**	**-0.4**
YM01	**YM01**	**1.10**	**343**	*i* P	**Pn**	**21 44 08.5**	**-0.4**
YM01				S	**Sn**	**21 44 23.3**	**+0.2**
NCU	**National Centr**	**1.11**	**322**	*e*P	**Pn**	**21 44 07.7**	**-1.3**
NCU				*i* S	**Sn**	**21 44 23.2**	**0.0**
NCUH	**Zhongli**	**1.11**	**322**	*e*P	**Pn**	**21 44 10.0**	**+1.0**
NCUH				S	**Sn**	**21 44 23.5**	**+0.3**
TWS1	**Kuangyinshan**	**1.11**	**335**	*i* P	**Pn**	**21 44 08.2**	**-0.8**
TWS1				*i* S	**Sn**	**21 44 23.3**	**+0.1**
ZUZH	**Zhuzihu**	**1.13**	**342**	*i* P	**Pn**	**21 44 08.9**	**-0.3**
ZUZH				*i* S	**Sn**	**21 44 22.9**	**-0.7**
TPUB	**Ta-pu**	**1.43**	**237**	P	**Pn**	**21 44 14.2**	**+0.8**
IRIF	**Iriomote-Funau**	**1.66**	**81**	P	**Pn**	**21 44 16.3**	**-0.1**
IRIF				*e*S	**Sn**	**21 44 36.5**	**0.0**
JKRS	**Kuro-shima**	**1.90**	**85**	*e*P	**Pn**	**21 44 20.4**	**+0.6**
JIJ	**Ishigaki jima**	**2.03**	**82**	P	**Pn**	**21 44 21.5**	**-0.1**
JIJ				S	**Sn**	**21 44 44.8**	**-1.0**
JISG	**Ishigakijimahi**	**2.22**	**77**	P	**Pn**	**21 44 23.8**	**-0.4**
JISG				*e*S	**Sn**	**21 44 49.9**	**-0.5**
JTJ	**Tarama**	**2.58**	**77**	*e*P	**Pn**	**21 44 29.4**	**+0.4**

NEIC 24 21:52:04.3±0.8, 38°39N±0°.02×103°39W±0°.02, h5km±1km, mb_Lg2.3/19, Error ellipse: s-maj=3.6km s-min=3.0km az=177.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSCO	**Kaye Shedlock'**	**0.86**	**44**	Pg	**Pn**	**21 52 20.0**	**-0.8**
KSCO				Sg	**Sg**	**21 52 31.2**	**-0.7**
T25A	**Trinidad**	**1.49**	**213**		**Pn**	**21 52 31.3**	**-0.6**
T25A					**Sb**	**21 52 50.3**	**-1.5**
Q24A	**Divide**	**1.49**	**293**		**Pn**	**21 52 30.8**	**-1.2**
Q24A					**Sb**	**21 52 50.6**	**-1.4**
SDCO	**Great Sand Dun**	**1.79**	**250**		**Pn**	**21 52 35.9**	**-0.1**
RTBA	**Rita Blanca**	**2.02**	**165**		**Pn**	**21 52 38.5**	**-0.6**
ISCO	**Idaho Springs**	**2.23**	**310**	Pn	**Pn**	**21 52 42.0**	**-0.2**
OGNE	**Ogallala**	**2.76**	**22**	Pn	**Pn**	**21 52 46.5**	**-2.8**
CBKS	**Cedar Bluff**	**2.89**	**80**	Pn	**Pn**	**21 52 49.8**	**-1.2**
CBKS				IAmb_Lg		21 53 42.2	
	comp=Z,12nm,0.8s						
HAYD	**Hayden**	**3.67**	**307**	Pn	**Pn**	**21 53 01.5**	**-0.5**
ELIS	**Ellis County**	**3.93**	**125**	Pn	**Pn**	**21 53 04.6**	**-0.7**
SMWD	**Samnorwood**	**4.14**	**141**	Pn	**Pn**	**21 53 07.8**	**-0.4**
ANMO	**Albuquerque**	**4.23**	**217**	IAmb_Lg		21 54 20.1	
	comp=Z,5.2nm,0.8s						
TASM	**ASL Pad, Albuq**	**4.23**	**217**	IAmb_Lg		21 54 22.8	
	comp=Z,4.8nm,0.7s						
ABQ	**Albuquerque**	**4.23**	**217**	Pn	**Pn**	**21 53 08.1**	**-1.5**
PV19	**Morning Glory**	**4.40**	**271**	Pn	**Pn**	**21 53 11.8**	**-0.1**
PV23	**Carpenter Ridg**	**4.42**	**273**	Pn	**Pn**	**21 53 10.2**	**-2.0**
WMOK	**Wichita Mounta**	**5.20**	**133**	IAmb_Lg		21 54 56.9	
	comp=Z,5.1nm,1.0s						
DEOK	**Depew**	**6.07**	**113**	IAmb_Lg		21 55 29.2	
	comp=Z,5.0nm,0.8s						

*BJI **24** 22:05:06.0, 1°.00N×133°.07E, h10km, mB5.2/26, mb4.9/56, Ms4.5/27, Ms7 4.2/30*

*IDC **24** 22:05:10.9±0.5, 1°.67N×132°.94E, h0km, mb4.6/19, mbtmp4.7/22, ML3.8/3, MS3.9/56, Error ellipse: s-maj=23.0km s-min=11.0km az=74.0*

*MOS **24** 22:05:12.4±0.8, 1°.65N×132°.85E, h21km, mb5.1/38, MS4.2/4, Error ellipse: s-maj=12.6km s-min=5.4km az=119.0*

*NEIC **24** 22:05:13.3±1.8, 1°.64N±0°.08×132°.85E±0°.07, h10km±1km, mb5.2/77, Mww5.1/21, Error ellipse: s-maj=14.1km s-min=10.9km az=34.0*

*NEIC **24** 22:05:13.3, 1°.65N×132°.86E, h18km*

*NEIC **24** 22:05:13.3, 1°.65N×132°.66E, h18km, Moment Tensor Solution. Duration: 1s9 Moment tensor: Scale 10¹⁶Nm; Mrr=4.50; Mθθ 0.41; Mϕϕ 4.09; Mrθ -3.25; Mθϕ 1.34; Mϕr 0.93; Fault plane solution: M0 5.64000×10¹⁶ NP1: ϕs173.14000°, δ50.47000°, λ-127.77000°. NP2: ϕs43.74000°, δ52.43000°, λ-53.42000°. Principal axes: T 4.5303, Plg1.0000°, Azm109.0000°; N 1.7851, Plg28.0000°, Azm199.0000°; P -6.3154, Plg62.0000°, Azm17.0000°;*

*DJA **24** 22:05:14.0±0.9, 2°.N±4°×133°.3E±°, h30km±7km, M4.9/49, mB5.4/37, mb5.0/49, MLv5.0/18, Mw5.1/12, Mw(mB)4.9/37, MwMwp4.9/13, Mwp5.2/13*

*GCMT **24** 22:05:14.3±0.1, 1°.86N±0°.01×132°.79E±0°.01, h12km, MW5.1/124, Moment Tensor Solution. s65,c93; s124,c207; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=4.06±.08; Mθθ -0.20±.07; Mϕϕ 4.26±.07; Mrθ 1.92±.26; Mθϕ 1.55±.07; Mϕr -1.69±.22; Best double couple: M0 5.11100×10¹⁶ NP1:ϕs221.00000°, δ44.00000°, λ-51.00000°. NP2:ϕs353.00000°, δ57.00000°, λ-121.00000°. Principal axes: T 4.8810, Plg7.0000°, Azm104.0000°; N 0.4590, Plg26.0000°, Azm211.0000°; P -5.3410, Plg63.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:05:13.3±0.9, 1°.61N±0°.04×132°.90E±0°.04, h15km±5km, n400, σ1s43/403, mb5.1/127, MS4.0/66, 12C-24D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**2.96**	**214**	P	**Pn**	**22 05 58.0**	**-1.7**
RKPI	**Ransiki, Papua**	**3.36**	**158**	P	**Pn**	**22 06 04.8**	**-0.4**
BAKI	**Biak**	**4.25**	**131**	P	**Pn**	**22 06 14.2**	**-3.2**
FAKI	**Fak Fak**	**4.55**	**188**		**Pn**	**22 06 22.1**	**+0.5**
FAKI	**Fak Fak**	**4.55**	**188**	P	**Pn**	**22 06 21.5**	**-0.1**
SRPI	**Serui, Papua**	**4.81**	**136**	P	**Pn**	**22 06 25.4**	**+0.2**
KMPI	**Kaimana, Papua**	**5.30**	**171**	P	**Pn**	**22 06 32.3**	**+0.4**
	1.3nm3μm255nm,0.9s						
TNTI	**Ternate**	**5.60**	**261**		**Pn**	**22 06 35.8**	**-0.3**
TNTI	**Ternate**	**5.60**	**261**	P	**Pn**	**22 06 35.7**	**-0.3**
	0.6nm4μm2μm162nm,0.9s						
MSAI	**Masohi**	**6.33**	**219**	P	**Pn**	**22 06 46.9**	**+0.8**
BNDI	**Bandanaira**	**6.79**	**206**	P	**Pn**	**22 06 53.2**	**+0.8**
AAI	**Ambon**	**7.06**	**222**	P	**Pn**	**22 06 56.3**	**+0.2**
NLAI	**Namlea**	**7.54**	**230**	P	**Pn**	**22 07 02.6**	**-0.1**
	0.3nm1μm84nm,0.7s						
SGSI	**Sangihe**	**7.65**	**286**	P	**Pn**	**22 07 01.2**	**-3.0**
SANI	**Sanana**	**7.81**	**242**	P	**Pn**	**22 07 05.2**	**-1.3**
	0.2nm3μm49nm,0.8s						
GENI	**Genyem**	**8.38**	**120**	P	**Pn**	**22 07 15.3**	**+1.1**
	5μm3μm93nm,0.6s						
JAY	**Jayapura**	**8.81**	**118**	Pn	**Pn**	**22 07 19.6**	**-0.7**
	3.7nm,0.3s,baz=326,slow=11,SNR=17						
JAY				Sn	**Sn**	**22 08 52.3**	**-7.1**
	0.5nm,0.3s,baz=243,slow=16,SNR=1.8						
JAY				LR	LR	22 10 20.3	
	comp=Z,2μm,21.6s,baz=304,slow=35						
	63nm,0.7s						
JAY	**Jayapura**	**8.81**	**118**	P	**Pn**	**22 07 21.6**	**+1.4**
	65nm,0.7s						
KMSI	**Cibinong**	**8.98**	**263**	P	**Pn**	**22 07 21.6**	**-0.9**
DAV	**Davao City (W)**	**9.09**	**307**	LR	LR	22 10 45.0	
	comp=Z,936nm,21.4s,baz=95,slow=37						
DAV	**Davao City (W)**	**9.09**	**307**	P	**Pn**	**22 07 20.4**	**-3.7**
LUWI	**Luwuk**	**10.47**	**255**		**Pn**	**22 07 42.4**	**-0.5**
LUWI	**Luwuk**	**10.47**	**255**	P	**Pn**	**22 07 41.5**	**-1.4**
	2μm105nm,1.2s						
MRSI	**Marisa**	**11.02**	**264**	P	**Pn**	**22 07 49.9**	**-0.5**
	745nm36nm,1.0s						
APSI	**Ampana**	**11.53**	**258**	P	**Pn**	**22 07 56.8**	**-0.6**
TOLI2	**Tolitoli**	**12.13**	**268**		**Pn**	**22 08 03.2**	**-2.4**
SOEI	**Soe**	**14.20**	**217**	Pn	**Pn**	**22 08 30.7**	**-3.3**
KDU	**Kakadu**	**14.21**	**182**	P	**Pn**	**22 08 34.0**	**-0.2**
MTN	**Manton Dam**	**14.47**	**187**	P	**Pn**	**22 08 37.2**	**-0.5**
MTN	**Manton Dam**	**14.47**	**187**		**Pn**	**22 08 36.1**	**-1.6**
BSSI	**Bau Bau, Buton**	**14.59**	**238**	P	**Pn**	**22 08 37.0**	**-2.4**
KAPI	**Kappang**	**14.70**	**243**	LR	LR	22 14 26.0	
	comp=Z,1μm,19.2s,baz=66,slow=38						
KAPI	**Kappang**	**14.70**	**243**	P	**P**	**22 08 50.3**	**+3.4**
KAPI				P	**P**	**22 08 50.3**	**+3.4**
KAPI				S	**S**	**22 11 40.3**	**-1.9**
KAPI				S	**S**	**22 11 40.3**	**-1.9**
MMRI	**Maumere**	**14.72**	**226**	Pn	**Pn**	**22 08 40.1**	**-1.0**
MMRI	**Maumere**	**14.72**	**226**	P	**Pn**	**22 08 40.3**	**-0.8**
BATI	**Baumata**	**14.92**	**218**	Pn	**Pn**	**22 08 45.3**	**+1.5**
	2.0nm,0.3s,baz=100,slow=15,SNR=5.0						
BATI				LR	LR	22 15 01.6	
	comp=Z,1μm,18.8s,baz=23,slow=39						
	9.3nm,0.5s						
BATI	**Baumata**	**14.92**	**218**	P	**Pn**	**22 08 43.7**	**-0.1**
	881nm44nm,1.1s						
EDFI	**Ende, Flores**	**15.20**	**227**	P	**Pn**	**22 08 49.8**	**+2.2**
GUMO	**Guam**	**16.79**	**44**	LR	LR	22 13 53.3	
	comp=Z,547nm,20.1s,baz=222,slow=31						
TGY	**Tagaytay City**	**17.14**	**317**	LR	LR	22 14 55.2	
	comp=Z,354nm,21.3s,baz=113,slow=34						
KNRA	**Kununurra**	**17.66**	**193**	P	**Pn**	**22 09 19.2**	**+0.3**
	comp=Z,94nm,0.9s						
KNRA	**Kununurra**	**17.66**	**193**	Pn	**Pn**	**22 09 18.1**	**-0.8**
PMG	**Port Moresby**	**17.93**	**128**	P	**P**	**22 09 23.4**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=326,slow=10,SNR=48						
PMG				LR	LR	22 17 22.7	
	comp=Z,576nm,18.9s,baz=299,slow=41						
	comp=Z,60nm,0.8s						
PMG	**Port Moresby**	**17.93**	**128**	Pn	**Pn**	**22 09 21.8**	**-0.5**
PMG				IAmb	IAmb	22 09 26.1	
	comp=Z,312nm,1.4s						
PMG	**Port Moresby**	**17.93**	**128**	*c* P	**P**	**22 09 23.7**	**+0.9**
PMG				pmax	pmax		
	comp=Z,337nm,1.7s						
PLAI	**Plampang**	**18.30**	**235**	P	**Pn**	**22 09 22.0**	**-4.8**
	comp=Z,1μmcomp=Z,67nm,1.4s						
COEN	**Coen**	**18.52**	**147**	P	**Pn**	**22 09 31.1**	**+1.6**
	comp=Z,123nm,0.8s						
COEN	**Coen**	**18.52**	**147**	P	**Pn**	**22 09 30.4**	**+0.9**
COEN				IAmb	IAmb	22 09 33.6	
	comp=Z,188nm,1.2s						
BBKI	**Banjar Baru**	**18.74**	**254**	P	**Pn**	**22 09 34.0**	**+1.8**
	comp=Z,168nm,2.5s						
TWSI	**Taliwang, Sumb**	**18.99**	**237**	P	**P**	**22 09 34.5**	**0.0**
	comp=Z,1μmcomp=Z,62nm,1.6s						
RABL	**Rabaul**	**20.09**	**107**	P	Pn	22 09 48.6	+0.1
RABL				IAmb	IAmb	22 09 56.7	
	comp=Z,82nm,0.9s						
**

comp=Z,11nm,1.0s
QIZ Qiongzhong 28.46 309 P **P** **22 11 09.0 +1.1**
QIZ S **S** **22 15 53.0 -2.0**
QIZ pmax pmax
comp=Z,220nm,5.4s
QIZ LR LR
comp=Z,380nm,13.1s
QIZ LR LR
comp=Z,310nm,12.4s
QIZ LR LR
comp=Z,460nm,20.2s
MYKOM **Kota Tinggi 29.04 271** P **P** **22 11 12.8 -0.3**
HNR Honiara 29.09 113 LR LR 22 22 05.9
comp=Z,589nm,21.8s,baz=292,slow=35
QLP Quilpie 30.09 159 P **P** **22 11 23.8 +1.6**
comp=Z,30nm,0.9s,comp=Z,0.0nm
MEEK Meekatharra 31.29 205 P **P** **22 11 31.9 -1.1**
comp=Z,36nm,1.1s
IPM Ipoh 31.95 276 P **P** **22 11 38.2 -0.8**
IPM IAmb IAmb 22 11 40.2
comp=Z,49nm,1.3s
JHJ Hachijo jima 2 32.00 11 LR LR 22 22 47.3
comp=Z,657nm,18.1s,baz=136,slow=33
KULM Kulim 32.39 277 P **P** **22 11 41.8 -0.9**
KULM IAmb IAmb 22 11 52.2
comp=Z,68nm,1.8s
FORT Forrest 32.54 188 P **P** **22 11 44.2 +0.4**
comp=Z,51nm,0.8s
FORT Forrest 32.54 188 P **P** **22 11 43.1 -0.7**
FORT IAmb IAmb 22 11 46.2
comp=Z,33nm,0.7s
NJ2 Nanjing 33.05 338 *e*P **P** **22 11 49.4 +1.2**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
WHN Wuhan 33.72 330 P **P** **22 11 55.8 +1.7**
PSI Prapat 33.97 273 LR LR 22 27 30.5
comp=Z,128nm,20.8s,baz=76,slow=39
STKA Stephens Creek 34.31 167 P **P** **22 12 00.5 +1.2**
comp=Z,63nm,1.0s
STKA Stephens Creek 34.31 167 P **P** **22 11 59.6 +0.3**
comp=Z,5.1nm,1.0s,baz=335,slow=9.1,SNR=8.8
STKA LR LR 22 28 33.4
comp=Z,187nm,20.9s,baz=345,slow=41
comp=Z,5.1nm,1.0s
STKA Stephens Creek 34.31 167⇑ *i*P **P** **22 11 59.8 +0.5**
KMBL Kambalda 34.43 197 P **P** **22 11 59.5 -0.8**
comp=Z,30nm,0.8s
MORW Morawa 34.52 207 P **P** **22 11 59.6 -1.5**
comp=Z,31nm,0.8s
MJAR Matsushiro Arr 35.10 7 P **P** **22 12 04.2 -1.8**
comp=Z,1.3nm,0.6s,baz=183,slow=7.4,SNR=4.5
MJAR LR LR 22 25 10.8
comp=Z,262nm,18.7s,baz=190,slow=34
comp=Z,1.3nm,0.6s
MJAR Matsushiro Arr 35.10 7 P **P** **22 12 06.4 +0.4**
MJAR Matsushiro Arr 35.10 7 P **P** **22 12 06.4 +0.4**
MJAR pmax pmax
comp=Z,8.0nm,1.5s
CMSA Cobar Meteorol 35.14 161 P **P** **22 12 07.6 +1.3**
comp=Z,12nm,1.5s
BLDU Ballidu 35.57 204 P **P** **22 12 09.3 -0.9**
comp=Z,46nm,1.5s
KSRS Korea Array 35.96 353 P **P** **22 12 12.3 -1.0**
comp=Z,1.4nm,0.8s,baz=199,slow=6.2,SNR=2.1
comp=Z,1.4nm,0.8s
KLBR Kellerberrin 36.02 202 P **P** **22 12 13.0 -0.9**
comp=Z,67nm,0.8s
ARMA Armidale 36.52 152 P **P** **22 12 19.5 +1.2**
ARMA Armidale 36.52 152 P **P** **22 12 19.8 +1.4**
CM31 Chiang Mai Arr 37.27 299 P **P** **22 12 25.4 +0.5**
CM31 PcP **PcP** **22 14 45.4 +1.0**
CM31 Chiang Mai Arr 37.27 299 P **P** **22 12 23.7 -1.2**
SNR=8.5
CMAR Chiang Mai Arr 37.27 299 P **P** **22 12 24.8 -0.1**
comp=Z,4.8nm,0.8s,baz=114,slow=6.8,SNR=39
CMAR PcP **PcP** **22 14 46.0 +1.5**
comp=Z,2.0nm,0.8s,baz=129,slow=1.0,SNR=9.4
CMAR LR LR 22 26 49.6
comp=Z,137nm,21.9s,baz=115,slow=35
comp=Z,4.8nm,0.8s
CMAR Chiang Mai Arr 37.27 299 P **P** **22 12 25.2 +0.3**
CMAR PcP **PcP** **22 14 44.9 +0.5**
CMAR Chiang Mai Arr 37.27 299*ce*P **P** **22 12 25.8 +1.0**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
KMI Kunming 37.32 311 ⇓P **P** **22 12 25.9 +0.5**
KMI PP **PnPn** **22 13 52.6 +1.3**
KMI S **S** **22 18 15.6 +2.7**
KMI pmax pmax
comp=Z,14nm,1.4s
KMI pmax pmax
comp=Z,150nm,6.6s
KMI LR LR
comp=Z,250nm,15.2s
KMI LR LR
comp=Z,190nm,19.8s
KMI LR LR
comp=Z,300nm,18.0s
CHTO Chiang Mai 37.41 299 P **P** **22 12 24.8 -1.2**
CHTO Chiang Mai 37.41 299 P **P** **22 12 25.5 -0.5**
CHTO P **P** **22 12 25.5 -0.5**
CHTO S **S** **22 18 11.5 -2.5**
CHTO S **S** **22 18 11.5 -2.5**
CHTO Chiang Mai 37.41 299 P **P** **22 12 24.8 -1.2**
CHTO pmax pmax
comp=Z,12nm,1.0s
NWAO Narrogin (SRO) 37.41 202 P **P** **22 12 25.4 -0.4**
comp=Z,50nm,0.9s
NWAO Narrogin (SRO) 37.41 202 P **P** **22 12 25.2 -0.6**
NWAO Narrogin (SRO) 37.41 202 P **P** **22 12 25.2 -0.6**
NWAO pmax pmax
comp=Z,24nm,0.9s
H11N1 WAKE ISLAND Hy 37.79 59 T T 22 52 25.9
baz=245,slow=75,SNR=38
H11N2 WAKE ISLAND Hy 37.81 59 T T 22 52 27.4
baz=245,slow=75,SNR=34
H11N3 WAKE ISLAND Hy 37.81 59 T T 22 52 28.3
baz=245,slow=75,SNR=37
LYN LuoYang 37.91 332 ⇑P **P** **22 12 31.1 +1.1**
LYN pP sP 22 12 35.3 +0.2
LYN sP pwP 22 12 40.5 +1.9
LYN S **S** **22 18 24.6 +3.4**
LYN pmax pmax
comp=Z,29nm,0.8s
LYN LR LR
comp=Z,410nm,11.3s
LYN LR LR
comp=Z,130nm,7.0s
LYN LR LR
comp=Z,310nm,12.5s
PZH PanZhiHua 38.84 312 P **P** **22 12 38.3 +0.2**
PZH PP **PnPn** **22 14 13.5 +4.0**
PZH S **S** **22 18 39.3 +3.6**
PZH SS **SS** **22 21 27.0 -0.1**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,170nm,7.6s
PZH LR LR
comp=Z,160nm,18.6s
PZH LR LR
comp=Z,240nm,17.1s
PZH LR LR
comp=Z,210nm,18.1s
RKGY Rocky Gully 39.01 201 P **P** **22 12 39.7 +0.5**
comp=Z,92nm,1.3s
XAN Xi'an 39.28 328 P **P** **22 12 41.5 -0.2**
XAN S **S** **22 18 41.3 -0.8**
XAN pmax pmax
comp=Z,26nm,1.1s
XAN LR LR
comp=Z,300nm,19.6s
XAN LR LR
comp=Z,300nm,22.1s
XAN LR LR
comp=Z,330nm,16.5s
HNS HongShan 39.36 337 ⇑P **P** **22 12 42.9 +0.8**
HNS S **S** **22 18 44.1 +1.2**
HNS SS **SnSn** **22 21 38.1 +0.2**
HNS pmax pmax
comp=Z,37nm,1.2s
HNS LR LR
comp=Z,380nm,17.8s
HNS LR LR
comp=Z,390nm,19.4s
CNB Canberra Magne 39.84 159 P **P** **22 12 47.7 +1.4**
comp=Z,21nm,1.4s
CD2 Chengdu 40.12 319 P **P** **22 12 49.0 +0.3**
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 LR LR
comp=Z,630nm,14.0s
CD2 LR LR
comp=Z,570nm,20.3s
CD2 LR LR
comp=Z,460nm,13.3s
DZM Mont Dzumac 40.33 128 *e*P **P** **22 12 48.1 -2.4**
comp=Z,93nm,32.4s
DZM *e*S **S** **22 18 59.7 +1.6**
comp=Z,285nm,28.9s
DZM *e*SS **SS** **22 21 57.9 +0.9**
comp=Z,188nm,26.3s
DZM *e*LR LR 22 23 52.6
comp=Z,971nm,30.6s
PSTR Posyet 40.90 358⇑ *e*P **P** **22 12 58.6 +3.8**
USRK Ussuriysk Ar. 42.41 359 P **P** **22 13 07.5 +0.3**
comp=Z,2.8nm,0.6s,baz=172,slow=8.3,SNR=4.4
comp=Z,2.8nm,0.6s
ASAJ Asahikawa 43.19 10 LR LR 22 30 09.8
comp=Z,149nm,19.1s,baz=179,slow=35
HHC Hu-ho-hao-te 43.57 336 *e*P **P** **22 13 17.8 +1.0**
HHC S **S** **22 19 46.1 +0.5**
HHC SS **SS** **22 23 00.9 +0.3**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,200nm,4.2s
HHC LR LR
comp=Z,190nm,15.3s
HHC LR LR
comp=Z,160nm,16.0s
HHC LR LR
comp=Z,310nm,16.8s
LZDM Lanzhou Array 43.59 325 P **P** **22 13 17.4 +0.1**
comp=Z,0.6nm,0.3s,baz=115,slow=13,SNR=9.5
comp=Z,0.6nm,0.3s
LZH Lanzhou 43.60 325 *e*P **P** **22 13 17.8 +0.6**
LZH sP pwP 22 13 27.1 +1.1
LZH PP **PP** **22 15 00.3 +1.5**
LZH ScP **ScP** **22 18 53.8 -2.1**
LZH S **S** **22 19 45.3 -1.0**
LZH pmax pmax
comp=Z,30nm,1.0s
LZH pmax pmax
comp=Z,190nm,4.0s
LZH LR LR
comp=Z,220nm,14.4s
LZH LR LR
comp=Z,240nm,15.5s
LZH LR LR
comp=Z,460nm,17.7s
BTO Baotou 44.00 335 *e*P **P** **22 13 22.3 +2.0**
BTO S **S** **22 19 55.8 +3.9**
BTO SS **SS** **22 23 09.3 +0.2**
BTO pmax pmax
comp=Z,20nm,0.8s
BTO pmax pmax
comp=Z,420nm,5.4s
BTO LR LR
comp=Z,520nm,10.8s
BTO LR LR
comp=Z,290nm,5.9s
BTO LR LR
comp=Z,320nm,8.8s
XLT XiLinHaoTe 44.68 343 *e*P **P** **22 13 25.9 +0.2**
XLT pmax pmax
comp=Z,14nm,1.0s
XLT LR LR
comp=Z,520nm,14.6s
XLT LR LR
comp=Z,270nm,20.6s
BRDH Bariadhala 45.19 301 LR LR 22 32 37.5
comp=Z,76nm,21.5s,baz=188,slow=36
YSS Yuzhno-Sakhali 45.97 9 *e*P **P** **22 13 36.0 +0.3**
YSS *e*S **S** **22 20 22.4 +2.5**
YSS pmax pmax
comp=Z,30nm,0.7s
YSS MLR MLR
comp=Z,400nm,15.0s
YSS MLR MLR
comp=N,500nm,18.0s
YSS MLR MLR
comp=E,300nm,15.0s
SHL Shillong 46.12 305 P **P** **22 13 36.3 -1.1**
SHL PcP **PcP** **22 15 12.9 -0.6**
SHL Shillong 46.12 305 P **P** **22 13 36.5 -1.0**
SNR=22
SHL Shillong 46.12 305 P **P** **22 13 36.3 -1.1**
SHL 22 15 13.0
SHL pmax pmax
comp=Z,55nm,0.9s
TAU Tasmania Unive 46.19 165 P **P** **22 13 37.8 +0.3**
TAU Tasmania Unive 46.19 165 P **P** **22 13 37.8 +0.3**
TAU pmax pmax
comp=Z,157nm,1.8s
GTA Gaotai 48.20 325 P **P** **22 13 54.3 +0.9**
GTA sP pwP 22 14 03.6 +1.3
GTA PcP **PcP** **22 15 22.4 +1.8**
GTA PP **PP** **22 15 47.3 +1.4**
GTA S **S** **22 20 52.6 +0.2**
GTA pmax pmax
comp=Z,20nm,1.2s
GTA pmax pmax
comp=Z,190nm,7.2s
GTA LR LR
comp=Z,110nm,15.3s
GTA LR LR
comp=Z,220nm,17.8s
GTA LR LR
comp=Z,220nm,18.9s
MSVF Nonsavu 48.44 115⇑ *e*P **P** **22 13 55.0 -0.5**
MSVF pmax pmax
comp=Z,88nm,2.6s
LSA Lhasa 48.50 309 P **P** **22 13 56.5 +0.2**
LSA Lhasa 48.50 309 P **P** **22 13 52.8 -3.5**
LSA pmax pmax
comp=Z,15nm,0.8s
LSA Lhasa 48.50 309 *i* P **P** **22 13 56.7 +0.4**
SNR=9.9
HEH HeiHe 48.69 355 *e*P **P** **22 13 56.0 -0.8**
HEH pmax pmax
comp=Z,12nm,1.7s
HILR Hailar Array B 49.07 349 P **P** **22 14 00.0 +0.2**
comp=Z,2.5nm,0.6s,baz=168,slow=15,SNR=3.6
comp=Z,2.5nm,0.6s
GOMU GeErMu 49.24 319 P **P** **22 14 02.3 +0.5**
GOMU PcP **PcP** **22 15 25.3 +0.5**
GOMU S **S** **22 21 08.8 +1.1**
GOMU pmax pmax
comp=Z,3.0nm,1.3s
ULN Ulaanbaatar 51.21 338 P **P** **22 14 17.3 +1.0**
ULN IAmb IAmb 22 14 18.3
comp=Z,27nm,1.1s
ULN Ulaanbaatar 51.21 338*de*P **P** **22 14 17.1 +0.8**
ULN pmax pmax
comp=Z,25nm,1.0s
EVN Everest 51.22 305 P **P** **22 14 17.5 +0.3**
EVN IAmb IAmb 22 14 18.4
comp=Z,30nm,0.8s
SONM Songino Array 51.44 337 P **P** **22 14 18.1 +0.2**
comp=Z,10nm,1.2s,baz=160,slow=7.3,SNR=28
SONM PcP **PcP** **22 15 32.0 -0.2**
comp=Z,0.8nm,0.6s,baz=159,slow=4.1,SNR=4.2
SONM LR LR 22 35 22.6
comp=Z,176nm,21.9s,baz=146,slow=35
comp=Z,10nm,1.2s
ZEA Zeya 52.16 356 *e*P **P** **22 14 20.9 -2.1**
ZEA MLR MLR
comp=Z,200nm,13.0s
CIT Chita 52.78 345 *e*P **P** **22 14 29.2 +1.4**
CIT *e* 22 14 31.8
CIT *e* 22 14 37.8
CIT *e* 22 16 35.2
ZAK Zakamensk 54.70 337 *e*P **P** **22 14 42.2 +0.3**
ZAK pmax pmax
comp=Z,17nm,1.9s
PETK Petropavlovsk- 55.29 18 P **P** **22 14 46.9 +0.9**
comp=Z,1.8nm,0.6s,baz=175,slow=4.9,SNR=1.8
PETK LR LR 22 35 28.9
comp=Z,97nm,21.9s,baz=200,slow=33
comp=Z,1.8nm,0.6s
PETK Petropavlovsk- 55.29 18 P **P** **22 14 46.8 +0.8**
TLY Talaya 55.61 338 P **P** **22 14 45.0 -3.4**
TLY P **P** **22 14 45.0 -3.4**
HYBB Hyderabad (bro 55.63 290 *e*P **P** **22 14 48.8 -0.3**
IRK Irkutsk 55.84 339 *e*P **P** **22 14 48.7 -1.2**
IRK pmax pmax
comp=Z,56nm,2.2s
URZ Urewera 56.85 139 LR LR 22 38 09.8
comp=Z,88nm,21.7s,baz=306,slow=35
RTZ Ruatahuna 56.96 139 P **P** **22 15 00.3 +2.0**
RTZ IAmb IAmb 22 15 02.5
comp=Z,32nm,1.1s
KNGR Kungurtug, Tuv 57.26 334*ce*P **P** **22 15 01.5 +1.3**
KNGR pmax pmax
comp=Z,13nm,1.0s
WMQ Urumqi 58.06 323 *e*P **P** **22 15 07.3 +1.4**
WMQ pmax pmax
comp=Z,33nm,0.9s
WMQ pmax pmax
comp=Z,160nm,4.1s
WMQ LR LR
comp=Z,140nm,20.3s
MA2 Magadan 59.45 10 LR LR 22 39 56.3
comp=Z,39nm,20.4s,baz=242,slow=35
YAK Yakutsk 60.32 358 LR LR 22 41 00.0
comp=Z,96nm,20.8s,baz=176,slow=36
YAK Yakutsk 60.32 358 *e*P **P** **22 15 20.9 -0.2**
YAK *e**PP **pwP** **22 15 30.5 +0.2**
YAK *e* 22 16 06.6
YAK *e*PPP PPP 22 19 00.9
YAK *e*S **S** **22 23 32.4 -2.4**
YAK *e**SS sS 22 23 53.0 +12
YAK *e*SS **SS** **22 27 32.4 -0.1**
YAK *e*SSS SSS 22 30 03.7
YAK pmax pmax
comp=Z,29nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK pmax pmax
comp=N,15nm,1.5s
YAK pmax pmax
comp=Z,445nm,3.7s
YAK pmax pmax
comp=N,440nm,3.3s
YAK pmax pmax
comp=E,332nm,4.4s
YAK smax smax
comp=N,538nm,4.3s
YAK smax smax
comp=E,349nm,3.5s
YAK MLR MLR
comp=Z,154nm,16.0s
YAK MLR MLR
comp=N,113nm,18.0s
SHEM Shemya Is, Ala 61.34 27 LR LR 22 36 00.6
comp=N,86nm,21.1s,baz=220,slow=30
DGZ Jazzator, Alta 61.55 328*d* *i*P **P** **22 15 30.2 +0.2**
DGZ pmax pmax
comp=Z,20nm,1.2s
ZSN Zaisan 61.69 325 *e*P **P** **22 15 30.8 -0.1**
ZSN Zaisan 61.69 325 *e*P **P** **22 15 30.7 -0.1**
MK31 Makanchi Array 62.86 323 P **P** **22 15 39.0 +0.3**
MK31 Makanchi Array 62.86 323*d* *i*P **P** **22 15 38.7 0.0**
MKAR Makanchi Array 62.86 323 P **P** **22 15 38.9 +0.2**
comp=Z,23nm,0.7s,baz=116,slow=7.9,SNR=161
MKAR LR LR 22 44 14.8
comp=Z,134nm,20.4s,baz=76,slow=37
comp=Z,23nm,0.7s
MKAR Makanchi Array 62.86 323 P **P** **22 15 39.0 +0.3**
SEY Seymchan 62.87 10 LR LR 22 40 38.7
comp=Z,84nm,20.6s,baz=176,slow=34
SEY Seymchan 62.87 10 *e*P **P** **22 15 39.2 +0.9**
SEY pmax pmax
comp=Z,34nm,1.7s
SHLS Shalkode 62.95 319 *e*P **P** **22 15 37.3 -2.2**
comp=Z,8.6nm,0.8s
SHLS Shalkode 62.95 319 *e*P **P** **22 15 37.2 -2.2**
SHLS pmax pmax
comp=Z,9.0nm,0.8s
MAKZ Makanchi 63.05 323 P **P** **22 15 40.2 +0.2**
MAKZ Makanchi 63.05 323 P **P** **22 15 40.2 +0.2**
MAKZ pmax pmax
comp=Z,36nm,0.8s
UZB Uzynbulak 63.23 319⇓ *i*P **P** **22 15 41.2 -0.2**
comp=Z,10nm,1.3s
UZB Uzynbulak 63.23 319*d* *i*P **P** **22 15 41.1 -0.3**
UZB pmax pmax
comp=Z,10.0nm,1.3s
PRZ Przheval'sk 63.37 318 P **P** **22 15 43.6 +1.2**
PRZ Przheval'sk 63.37 318 P **P** **22 15 43.6 +1.2**
PRZ pmax pmax
comp=Z,383nm,2.0s
TARG Taragay, Kyrgy 63.47 317 P **P** **22 15 43.5 +0.2**
TARG Taragay, Kyrgy 63.47 317 P **P** **22 15 43.5 +0.2**
TARG pmax pmax
comp=Z,56nm,1.6s
SATY Saty 63.61 318⇓ *i*P **P** **22 15 43.6 -0.2**
comp=Z,9.0nm,0.8s
SATY Saty 63.61 318*d* *i*P **P** **22 15 43.6 -0.2**
SATY pmax pmax
comp=Z,9.0nm,0.8s
KSH Kashi 63.92 314 P **P** **22 15 47.9 +2.0**
KSH pmax pmax
comp=Z,23nm,1.1s
KDJ Kajisay 64.06 317 P **P** **22 15 47.0 +0.1**
KDJ Kajisay 64.06 317 P **P** **22 15 47.0 +0.1**
KDJ pmax pmax
comp=Z,236nm,1.8s
NIL Nilore 64.10 307 P **P** **22 15 45.8 -1.4**
NIL P **P** **22 15 45.8 -1.4**
TDK Taldyqorghan 64.43 320⇓ *i*P **P** **22 15 49.1 0.0**
TDK Taldyqorghan 64.43 320*d* *i*P **P** **22 15 49.0 0.0**
ARXS Arharly 64.47 319 *i* P **P** **22 15 49.0 -0.4**
MDOK Medeo 64.56 318 *e*P **P** **22 15 49.9 -0.3**
MDOK Medeo 64.56 318 *e*P **P** **22 15 49.8 -0.3**
TNSS Tian-Shan 64.57 318 *e*P **P** **22 15 49.9 -0.7**
TNSS Tian-Shan 64.57 318 *e*P **P** **22 15 49.8 -0.7**
AAA Alma-Ata 64.66 318 *e*P **P** **22 15 50.5 -0.2**
comp=Z,18nm,1.3s
AAA Alma-Ata 64.66 318 *e*P **P** **22 15 50.5 -0.2**
AAA pmax pmax
comp=Z,18nm,1.3s
ZAA0 Zalesovo Array 65.34 331 P **P** **22 15 54.4 -0.4**
ZAA0 IAmb IAmb 22 15 55.4
comp=Z,18nm,0.9s
ZALV Zalesovo Beam 65.34 331 P **P** **22 15 54.2 -0.5**
comp=Z,16nm,0.9s,baz=111,slow=5.8,SNR=51
ZALV LR LR 22 44 22.7
comp=Z,87nm,21.8s,baz=118,slow=36
comp=Z,16nm,0.9s
TKM2 Tokmak 2 65.44 317 P **P** **22 15 56.5 +0.5**
SNR=10
UCH Uchtor 65.93 316 P **P** **22 16 00.2 +0.8**
SNR=19
AAK Ala-Archa 66.09 317 LR LR 22 46 36.5
comp=Z,188nm,21.6s,baz=105,slow=38
AAK Ala-Archa 66.09 317 P **P** **22 16 00.5 +0.4**
AAK IAmb IAmb 22 16 06.6
comp=Z,22nm,1.3s
AAK Ala-Archa 66.09 317 P **P** **22 15 59.5 -0.6**
AAK P **P** **22 15 59.5 -0.6**
AAK S **S** **22 24 43.3 -4.7**
AAK S **S** **22 24 43.3 -4.7**
AAK Ala-Archa 66.09 317 P **P** **22 16 01.1 +1.1**
SNR=5.8
AAK Ala-Archa 66.09 317 *i* P **P** **22 16 00.4 +0.4**
SNR=7.1
AAK Ala-Archa 66.09 317*de*P **P** **22 16 00.1 0.0**
AAK pmax pmax
comp=Z,7.0nm,1.1s
SGDS Sogindy 66.30 317⇓ *i*P **P** **22 16 01.0 -0.3**
comp=Z,4.5nm,0.8s
USP Ospenovka 66.32 317 P **P** **22 16 01.6 +0.3**
SNR=20
EKS2 Erkin-Say 66.59 316 P **P** **22 16 03.7 +0.5**
SNR=11
ATKA Atka Island 66.85 32 P **P** **22 16 05.2 +0.7**
KURK Kurchatov 66.89 326 **P** **22 16 05.2 +0.5**
KURK Kurchatov 66.89 326 P **P** **22 16 05.0 +0.3**
KURK Kurchatov 66.89 326*d* *i*P **P** **22 16 04.6 -0.1**
KURK pmax pmax
comp=Z,48nm,1.0s
KURBB Kurchatov Arra 66.89 326 P **P** **22 16 04.8 0.0**
comp=Z,29nm,0.8s,baz=120,slow=5.9,SNR=177
KURBB PKPPKP **P'P'df** **22 44 33.4 -1.0**
comp=Z,0.2nm,0.5s,baz=319,slow=4.1,SNR=4.8

	comp=Z,29nm,0.8s							
BTLS	**Baital**	**67.28 319**	⇓	*i* P		**P**	**22 16 07.2**	**-0.2**
	comp=Z,8.8nm,0.8s							
BTLS	**Baital**	**67.28 319**	*d*	*i* P		**P**	**22 16 07.1**	**-0.2**
BTLS				pmax	pmax			
	comp=Z,9.0nm,0.8s							
KBL	**Kabul**	**67.71 307**				**P**	**22 16 10.3**	**-0.3**
KBL				IAmb	IAmb		22 16 11.3	
	comp=Z,14nm,0.8s							
KBL	**Kabul**	**67.71 307**		P	P	**P**	**22 16 10.9**	**+0.3**
	SNR=12							
KBL	**Kabul**	**67.71 307**		P	P	**P**	**22 16 10.3**	**-0.3**
KBL				pmax	pmax			
	comp=Z,14nm,0.9s							
GAR	**Garm**	**67.90 312**		P	P	**P**	**22 16 11.4**	**-0.2**
DZA	**Taraz**	**68.36 316**		*e*P	P	**P**	**22 16 14.2**	**-0.1**
	comp=Z,12nm,1.0s							
DZA	**Taraz**	**68.36 316**		*e*P	P	**P**	**22 16 14.2**	**-0.1**
DZA				pmax	pmax			
	comp=Z,12nm,1.0s							
CHGR	**Chuyangaron**	**68.68 311**		P	P	**P**	**22 16 16.3**	**-0.2**
CHGR	**Chuyangaron**	**68.68 311**		P	P	**P**	**22 16 16.3**	**-0.2**
KK31	**Karatay Array**	**69.00 316**		P	P	**P**	**22 16 18.1**	**-0.2**
KK31				IAmb	IAmb		22 16 19.6	
	comp=Z,27nm,1.0s							
KK31	**Karatay Array**	**69.00 316**		P	P	**P**	**22 16 18.1**	**-0.2**
KK31				pmax	pmax			
	comp=Z,27nm,1.0s							
KKAR	**Karatay Array**	**69.00 316**		P	P	**P**	**22 16 18.2**	**-0.1**
KKAR	**Karatay Array**	**69.00 316**		P	P	**P**	**22 16 18.2**	**-0.1**
IUG	**luzhnay**	**69.04 315**	⇓	*i* P	P	**P**	**22 16 18.5**	**-0.2**
	comp=Z,6.5nm,0.8s							
IUG	**luzhnay**	**69.04 315**	*d*	*i* P		**P**	**22 16 18.4**	**-0.2**
IUG				pmax	pmax			
	comp=Z,7.0nm,0.8s							
CHM	**Chimkent**	**69.40 315**		*e*P	P	**P**	**22 16 20.6**	**-0.1**
	comp=Z,11nm,0.9s							
CHM	**Chimkent**	**69.40 315**		*e*P	P	**P**	**22 16 20.6**	**-0.1**
CHM				pmax	pmax			
	comp=Z,11nm,0.9s							
BRLS	**Borolday**	**69.45 316**	⇓	*i* P	P	**P**	**22 16 21.2**	**+0.1**
	comp=Z,9.0nm,0.8s							
BRLS	**Borolday**	**69.45 316**	*d*	*i* P		**P**	**22 16 21.1**	**+0.1**
BRLS				pmax	pmax			
	comp=Z,9.0nm,0.8s							
RAR	**Rarotonga**	**69.54 113**		LR	LR		22 45 27.3	
	comp=Z,47nm,18.1s,baz=230,slow=35							
TIXI	**Tiksi**	**69.98 359**		LR	LR		22 47 40.1	
	comp=Z,101nm,20.4s,baz=189,slow=36							
TIXI	**Tiksi**	**69.98 359**	⇓	*e*P		**P**	**22 16 24.0**	**+0.3**
TIXI				pmax	pmax			
	comp=Z,12nm,1.7s							
BVAR	**Borovoye Array**	**72.48 326**		P	P	**P**	**22 16 39.4**	**+0.1**
	comp=Z,33nm,0.8s,baz=114,slow=7.3,SNR=79							
BVAR				LR	LR		22 49 27.2	
	comp=Z,57nm,21.0s,baz=121,slow=37							
	comp=Z,33nm,0.8s							
HRA	**Herat**	**73.17 305**				**P**	**22 16 43.6**	**-0.4**
HRA				IAmb	IAmb		22 16 45.0	
	comp=Z,21nm,1.1s							
JLN	**Jalan Bani Buh**	**74.11 292**		P	P	**P**	**22 16 49.1**	**-0.3**
WSAR	**Wadi Sarin**	**74.92 294**		P	P	**P**	**22 16 53.9**	**-0.3**
JMDO	**Jabal Madar**	**75.33 293**		P	P	**P**	**22 16 56.4**	**-0.2**
MHTO	**MHTO**	**75.36 291**		P	P	**P**	**22 16 56.5**	**-0.2**
MHTO				P	P	**P**	**22 16 56.5**	**-0.2**
SMDO	**Samad**	**75.44 293**		P	P	**P**	**22 16 56.9**	**-0.4**
HOQ	**Hoqain**	**76.15 294**		P	P	**P**	**22 17 02.0**	**+0.7**
	SNR=6.9							
ARQ	**Araqi**	**76.86 293**		P	P	**P**	**22 17 07.0**	**+1.7**
	SNR=6.5							
SOHO	**SOHO**	**76.90 294**		P	P	**P**	**22 17 05.4**	**-0.1**
SOHO	**SOHO**	**76.90 294**		*i* P	P	**P**	**22 17 04.9**	**-0.6**
	SNR=6.6							
MDH	**Madha**	**77.20 295**		P	P	**P**	**22 17 07.9**	**+0.8**
BANOM	**Banah**	**77.25 296**		P	P	**P**	**22 17 07.5**	**0.0**
BANOM	**Banah**	**77.25 296**		*i* P	P	**P**	**22 17 07.4**	**0.0**
	SNR=7.9							
UOSS	**Minazif**	**77.26 295**				**P**	**22 17 06.4**	**-1.1**
UOSS	**Minazif**	**77.26 295**		P	P	**P**	**22 17 07.1**	**-0.3**
HATD	**Hatta, Dubai**	**77.32 295**		P	P	**P**	**22 17 09.0**	**+1.2**
	SNR=5.1							
HATD	**Hatta, Dubai**	**77.32 295**		*i* P	P	**P**	**22 17 07.5**	**-0.4**
	SNR=5.7							
MSFE	**Esma-Masafi**	**77.33 295**		*i* P	P	**P**	**22 17 08.0**	**0.0**
	SNR=5.3							
MASF	**Masafi**	**77.33 296**		P	P	**P**	**22 17 10.0**	**+2.1**
	SNR=5.4							
ASHO	**Ashiyiah**	**77.37 295**		P	P	**P**	**22 17 08.2**	**+0.1**
	SNR=6.7							
ASHO	**Ashiyiah**	**77.37 295**		P	P	**P**	**22 17 07.8**	**-0.4**
SHME	**Shamm**	**77.40 296**		P	P	**P**	**22 17 08.6**	**+0.4**
SHME	**Shamm**	**77.40 296**		P	P	**P**	**22 17 08.1**	**-0.1**
SHAO	**Shalim**	**77.40 288**		P	P	**P**	**22 17 09.5**	**+1.1**
ALNE	**Al Ain**	**77.61 294**		P	P	**P**	**22 17 09.7**	**+0.2**
	SNR=13							
ALNE	**Al Ain**	**77.61 294**		*i* P	P	**P**	**22 17 09.2**	**-0.3**
	SNR=8.0							
AB31	**Akbulak array**	**77.70 320**				**P**	**22 17 08.9**	**-0.5**
AB31				IAmb	IAmb		22 17 10.4	
	comp=Z,20nm,1.0s							
ABKAR	**Akbulak array**	**77.70 320**				**P**	**22 17 09.0**	**-0.4**
FAQ	**Al Faqa, Dubai**	**77.80 295**		P	P	**P**	**22 17 11.1**	**+0.6**
FAQ	**Al Faqa, Dubai**	**77.80 295**		P	P	**P**	**22 17 10.3**	**-0.2**
ASUD	**Al Ashush, Dub**	**78.03 295**		P	P	**P**	**22 17 11.8**	**+0.1**
UMZA	**Um Al Zommool**	**78.07 293**		P	P	**P**	**22 17 11.1**	**-1.0**
I17K	**Unalakleet**	**78.34 24**				**P**	**22 17 13.0**	**+0.4**
I17K				IAmb	IAmb		22 17 23.6	
	comp=Z,28nm,1.2s							
PPT2	**Papeete2**	**78.60 108**		*e*S		**S**	**22 27 10.6**	**-1.4**
	comp=Z,184nm,36.5s							
PPT2	**Papeete2**	**78.60 108**		*e*LR	LR		22 41 29.5	
	comp=Z,363nm,30.5s							
PPT2				*e*LR	LR		22 41 37.6	
	comp=Z,212nm,29.2s							
SVE	**Sverdlovsk**	**79.00 328**		*e*P	P	**P**	**22 17 16.8**	**+0.3**
SVE				pmax	pmax			
	comp=Z,28nm,1.5s							
AKTO	**Aktyubinsk**	**79.15 321**		LR	LR		22 54 10.6	
	comp=Z,70nm,21.8s,baz=51,slow=37							
TBI	**Tubuai**	**79.30 114**		*e*SS	SS		22 32 38.1	+12
	comp=Z,1μm,37.0s							
TBI				*e*LR	LR		22 41 49.7	
	comp=Z,957nm,32.0s							
TBI				*e*LR	LR		22 41 53.6	
	comp=Z,2μm,40.8s							
MZR	**Muzera**	**79.63 293**		P	P	**P**	**22 17 21.3**	**+0.6**
	SNR=5.8							
MZR	**Muzera**	**79.63 293**		*i* P	P	**P**	**22 17 20.4**	**-0.3**
	SNR=6.9							
ARTI	**Arti**	**80.12 327**		LR	LR		22 52 47.6	
	comp=Z,43nm,21.9s,baz=114,slow=36							
ARTI	**Arti**	**80.12 327**				**P**	**22 17 22.2**	**-0.3**
ARTI				IAmb	IAmb		22 17 23.2	
	comp=Z,25nm,1.2s							
ARTI	**Arti**	**80.12 327**	*d*	*i* P	P	**P**	**22 17 21.7**	**-0.8**
ARTI							22 20 20.6	
ARTI				S	S		**22 27 30.2**	**+3.7**
ARTI				SS	SS		**22 32 37.6**	**+0.6**
ARTI				pmax	pmax			
	comp=Z,22nm,1.2s							
GHWR	**Ruwais**	**80.23 294**		P	P	**P**	**22 17 23.8**	**0.0**
KDAK	**Kodiak Island**	**80.41 32**		LR	LR		22 46 19.6	
	comp=Z,170nm,21.9s,baz=235,slow=31							
VNDA	**Vanda**	**80.62 174**		P	P	**P**	**22 17 24.8**	**-0.1**
	comp=Z,4.5nm,0.8s,baz=326,slow=6.3,SNR=18							
VNDA				LR	LR		22 53 47.5	
	comp=Z,163nm,18.2s,baz=344,slow=36							
	comp=Z,4.5nm,0.8s							
VNDA	**Vanda**	**80.62 174**				**P**	**22 17 25.7**	**+0.9**
VNDA	**Vanda**	**80.62 174**		P	P	**P**	**22 17 25.7**	**+0.9**
VNDA				pmax	pmax			
	comp=Z,23nm,1.7s							
J20K	**Nowinta River**	**81.17 25**				**P**	**22 17 28.3**	**+0.2**
J20K				IAmb	IAmb		22 17 32.7	
	comp=Z,30nm,1.6s							
SBA	**Scott Base**	**81.46 173**		P	P	**P**	**22 17 30.2**	**+0.9**
SBA				IAmb	IAmb		22 18 11.9	
	comp=Z,24nm,1.4s							
SBA	**Scott Base**	**81.46 173**		P	P	**P**	**22 17 30.2**	**+0.9**
SBA				pmax	pmax			
	comp=Z,24nm,1.5s							
STLK	**Strandline Lak**	**81.58 28**		P	P	**P**	**22 17 30.2**	**-0.1**
STLK				IAmb	IAmb		22 19 53.0	
	comp=Z,30nm,2.0s							
SHMA	**Al-Shehemyia**	**82.04 296**		P	P	**P**	**22 17 33.1**	**-0.4**
SMRA	**Abu-Samra**	**82.13 295**		P	P	**P**	**22 17 33.5**	**-0.4**

L22K	**Petersville**	**82.28 27**				**P**	**22 17 33.4**	**-0.6**
MCK	**McKinley**	**83.32 26**				**P**	**22 17 38.6**	**-0.8**
MCK	**McKinley**	**83.32 26**		P	P	**P**	**22 17 38.6**	**-0.8**
MCK				pmax	pmax			
	comp=Z,60nm,1.9s							
COLD	**Coldfoot**	**83.45 22**				**P**	**22 17 40.4**	**+0.5**
COLD				IAmb	IAmb		22 17 45.6	
	comp=Z,20nm,1.3s							
SBV	**Sambava**	**83.55 256**		P	P	**P**	**22 17 45.8**	**+4.3**
CCB	**Clear Creek Bu**	**83.96 25**				**P**	**22 17 42.1**	**-0.5**
CCB				IAmb	IAmb		22 17 46.5	
	comp=Z,36nm,1.5s							
TOLK	**Toolik Lake Re**	**83.97 21**				**P**	**22 17 42.7**	**+0.2**
MAW	**Mawson**	**83.97 201**		LR	LR		22 55 19.5	
	comp=Z,63nm,18.7s,baz=80,slow=36							
H24K	**Noodor Dome**	**84.12 24**				**P**	**22 17 42.9**	**-0.6**
ILAR	**Eielson Array**	**84.37 25**		P	P	**P**	**22 17 43.5**	**-1.1**
	comp=Z,4.5nm,1.1s,baz=248,slow=4.5,SNR=23							
ILAR				LR	LR		22 49 39.8	
	comp=Z,112nm,21.9s,baz=244,slow=32							
	comp=Z,4.5nm,1.1s							
ILAR	**Eielson Array**	**84.37 25**				**P**	**22 17 43.9**	**-0.7**
ILAR	**Eielson Array**	**84.37 25**		P	P	**P**	**22 17 43.9**	**-0.7**
KIRV	**Kirov**	**85.23 329**		LR	LR		23 00 42.6	
	comp=Z,56nm,18.3s,baz=94,slow=39							
KIRV	**Kirov**	**85.23 329**	*ce*	P		**P**	**22 17 49.6**	**+0.6**
FYU	**Fort Yukon**	**85.28 23**				**P**	**22 17 49.4**	**+0.2**
FYU				IAmb	IAmb		22 20 49.6	
	comp=Z,40nm,1.6s							
E25K	**Arctic Village**	**85.35 22**		P	P	**P**	**22 17 51.3**	**+1.8**
E25K				IAmb	IAmb		22 18 02.1	
	comp=Z,13nm,1.2s							
SCRK	**Sand Creek**	**85.53 26**		P	P	**P**	**22 17 51.7**	**+1.1**
SCRK				IAmb	IAmb		22 17 57.9	
	comp=Z,23nm,1.6s							
MAK	**Makhachkala**	**85.53 313**	*d*	*i* P	P		22 17 43.2	-7.7
MAK				*e*			22 21 02.7	
MAK				*e*			22 28 04.2	
MAK				*e*SS	SS		22 33 50.4	-7.5
MAK				pmax	pmax			
	comp=Z,285nm,1.2s							
BMAR	**Burnt Mountain**	**85.64 23**		P	P	**P**	**22 17 51.8**	**+0.7**
BELG	**Belogornoye**	**85.84 322**	*d*	*i* P		**P**	**22 17 51.0**	**-1.2**
BELG				pmax	pmax			
	comp=Z,11nm,0.9s							
BCAR	**Beaver Creek A**	**86.44 27**		P	P	**P**	**22 17 56.3**	**+1.2**
VOI	**Vohitsoka**	**86.98 248**		P	P	**P**	**22 18 03.2**	**+4.5**
TAOE	**Nuku Hiva Isla**	**87.23 99**		*e*LR	LR		22 45 35.4	
	comp=Z,385nm,23.8s							
I28M	**Miner Creek**	**87.36 25**				**P**	**22 17 59.6**	**0.0**
I28M				IAmb	IAmb		22 18 14.4	
	comp=Z,17nm,1.3s							
F28M	**Old Crow**	**87.46 23**		P	P	**P**	**22 17 59.6**	**-0.4**
GNI	**Garni**	**87.56 310**		LR	LR		23 01 10.4	
	comp=Z,45nm,21.9s,baz=88,slow=38							
GNI	**Garni**	**87.56 310**		P	P	**P**	**22 18 02.8**	**+1.6**
GNI				P	P	**P**	**22 18 02.8**	**+1.6**
M30M	**Minto, Yukon**	**88.72 28**		P	P	**P**	**22 18 07.5**	**+1.4**
M30M				IAmb	IAmb		22 19 28.3	
	comp=Z,28nm,1.9s							
KBZ	**Khabaz**	**88.90 314**		LR	LR		23 03 31.9	
	comp=Z,53nm,18.9s,baz=69,slow=39							
KIV	**Kislovodsk**	**89.05 314**		P	P	**P**	**22 18 09.2**	**+1.2**
KIV	**Kislovodsk**	**89.05 314**		*e*P	P	**P**	**22 18 09.1**	**+1.0**
KIV				pmax	pmax			
	comp=Z,4.0nm,1.1s							
KIV				MLR	MLR			
	comp=Z,42nm,19.0s							
G31M	**Satah River**	**89.64 23**		P	P	**P**	**22 18 09.0**	**-1.2**
G31M				IAmb	IAmb		22 19 58.7	
	comp=Z,47nm,1.9s							
GURO	**Guroymak-BITLI**	**89.69 308**				**P**	**22 18 10.6**	**-0.6**
GURO				IAmb	IAmb		22 18 14.1	
	comp=Z,11nm,1.0s							
WHY	**Whitehorse**	**89.70 29**		P	P	**P**	**22 18 11.4**	**+0.6**
KLMR	**Klimovskoe**	**90.26 331**		*e*P	P	**P**	**22 18 10.6**	**-2.6**
KLMR				pmax	pmax			
	comp=Z,26nm,1.4s							
QSPA	**South Pole Qui**	**91.53 180**		P	P	**P**	**22 18 23.0**	**+3.8**
	comp=Z,8.0nm,0.8s,baz=309,slow=1.3,SNR=20							
QSPA				LR	LR		22 59 24.1	
	comp=Z,157nm,20.5s,baz=3.5,slow=36							
QSPA	**South Pole Qui**	**91.53 180**		P	P	**P**	**22 18 21.1**	**+1.9**
QSPA				IAmb	IAmb		22 18 24.2	
	comp=Z,12nm,0.9s							
A36M	**Sachs Harbour**	**92.14 18**		P	P	**P**	**22 18 21.5**	**-0.2**
A36M				IAmb	IAmb		22 21 42.5	
	comp=Z,27nm,2.0s							
OBN	**Obninsk**	**92.32 325**	⇓	*e*P		**P**	**22 18 21.8**	**-1.1**
OBN				*e*			22 22 04.1	
OBN				*e*SS	SS		22 35 37.9	+2.1
OBN				pmax	pmax			
	comp=Z,6.0nm,1.1s							
DLBC	**Dease Lake**	**92.34 31**		LR	LR		22 55 44.9	
	comp=Z,65nm,19.7s,baz=293,slow=33							
SYO	**Syowa Base**	**92.69 201**	⇑	*e*pP		pP	22 18 28.0	0.0
C36M	**Paulatuk**	**93.08 20**		P	P	**P**	**22 18 25.2**	**-0.9**
C36M				IAmb	IAmb		22 19 16.1	
	comp=Z,22nm,1.9s							
SPITS	**Spitsbergen Ar**	**93.71 349**		LR	LR		23 02 29.7	
	comp=Z,40nm,21.2s,baz=50,slow=37							
ASF	**Jabal al Asfar**	**94.24 302**		LR	LR		23 07 27.1	
	comp=Z,20nm,19.1s,baz=93,slow=40							
BBB	**Bella Bella**	**94.25 38**		LR	LR		22 51 35.9	
	comp=Z,103nm,20.4s,baz=264,slow=30							
ARCES	**ARCESS Array B**	**94.53 340**		P	P	**P**	**22 18 31.8**	**-1.0**
	comp=Z,5.9nm,0.9s,baz=90,slow=8.6,SNR=12							
ARCES				LR	LR		23 04 10.7	
	comp=Z,50nm,20.6s,baz=91,slow=38							
	comp=Z,5.9nm,0.9s							
ARCES	**ARCESS Array B**	**94.53 340**		P	P	**P**	**22 18 32.2**	**-0.6**
ARCES	**ARCESS Array B**	**94.53 340**		P	P	**P**	**22 18 32.2**	**-0.6**
ARCES				pmax	pmax			
	comp=Z,58nm,1.8s							
MMAI	**Mount Meron Ar**	**95.42 303**		LR	LR		23 05 19.6	
	comp=Z,23nm,21.9s,baz=67,slow=38							
KMBO	**Kilima Mbogo**	**95.68 269**		LR	LR		23 00 23.0	
	comp=Z,31nm,20.1s,baz=100,slow=35							
BRTR	**Keskin Array B**	**96.10 310**		LR	LR		23 06 51.1	
	comp=Z,17nm,21.7s,baz=86,slow=38							
EIL	**Elat**	**96.12 300**		LR	LR		23 09 30.1	
	comp=Z,52nm,18.5s,baz=168,slow=40							
FINES	**FINESS Array B**	**96.57 332**		LR	LR		23 04 43.5	
	comp=Z,86nm,20.0s,baz=69,slow=37							
FINES	**FINESS Array B**	**96.57 332**	*i*	P		**P**	**22 18 42.0**	**-0.3**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.9s							
AKASG	**Malin Array Be**	**97.39 321**		LR	LR		23 04 45.3	
	comp=Z,45nm,21.9s,baz=59,slow=37							
RES	**Resolute Bay**	**98.71 11**		LR	LR		23 03 10.8	
	comp=Z,27nm,21.2s,baz=339,slow=35							
RES	**Resolute Bay**	**98.71 11**		P	P	**P**	**22 18 50.7**	**-0.9**
RES				IAmb	IAmb		22 20 09.2	
	comp=Z,13nm,1.4s							
RES	**Resolute Bay**	**98.71 11**		P	P	**P**	**22 18 50.7**	**-0.9**
RES				pmax	pmax			
	comp=Z,13nm,1.5s							
YKA	**Yellowknife Ar**	**98.79 26**	*ce*	P		Pdif	22 18 53.5	+1.3
YKA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
YBH	**Yreka Blue Hor**	**99.63 47**		LR	LR		22 53 53.7	
	comp=Z,8.3nm,21.9s,baz=286,slow=29							
CLL	**Collm**	**106.92 325**		*e*SS	SS		22 38 59.0	-0.7
CLL				LV			23 10 00.0	
	comp=Z,100nm,19.5s							
TXAR	**Lajitas Array**	**117.86 56**		PKP		**PKPdf**	**22 24 00.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=282,slow=2.3,SNR=4.1							
TXAR				PKKPbc		**PKKPbc**	**22 34 20.6**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=131,slow=7.0,SNR=4.3							
TXAR	**Lajitas Array**	**117.86 56**				**PKPdf**	**22 24 00.0**	**0.0**
ESDC	**Sonseca Array**	**123.04 321**		PKP		**PKPdf**	**22 24 09.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=43,slow=2.1,SNR=3.2							
TORD	**Torodi Ar. Bea**	**129.43 288**		PKP		**PKPdf**	**22 24 22.1**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=42,slow=4.6,SNR=9.7							
ZON	**Zonda**	**143.92 148**				**PKPdf**	**22 24 48.1**	**-0.8**
ZON	**Zonda**	**143.92 148**		PKIKP		**PKPdf**	**22 24 48.1**	**-0.8**
LCO	**Las Campanas**	**144.67 143**				**PKPdf**	**22 24 50.5**	**0.0**
LCO	**Las Campanas**	**144.67 143**		PKIKP		**PKPdf**	**22 24 50.5**	**0.0**
NMDO	**Nuevo Mundo**	**144.90 50**				**PKPab**	**22 24 48.9**	**-1.0**
AC05	**El Transito**	**145.05 143**				**PKPbc**	**22 24 49.8**	**-0.5**
AC02	**Maricunga**	**147.19 142**				**PKPdf**	**22 24 56.4**	**+1.2**
PB14	**IPOC Station P**	**147.90 137**				**PKPdf**	**22 24 56.9**	**+0.8**
GO02	**Mina Guanaco**	**148.08 139**				**PKPdf**	**22 24 55.6**	**-0.8**
OTAV	**Otavalo**	**148.60 87**				**PKPdf**	**22 24 55.6**	**-2.2**
OTAV	**Otavalo**	**148.60 87**		PKIKP		**PKPdf**	**22 24 55.6**	**-2.2**

PB07	**IPOC Station P**	**150.13 134**				**PKPdf**	**22 24 59.2**	**-0.5**
PB16	**IPOC Station P**	**152.44 128**		PKPbc		**PKPbc**	**22 25 09.3**	**-1.3**
RUSC	**La Rusia**	**153.00 74**				**PKPab**	**22 25 21.5**	**-1.6**
CPUP	**Villa Florida**	**153.53 159**		PKPbc		**PKiKP**	**22 25 12.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=236,slow=1.6,SNR=9.8							
CPUP	**Villa Florida**	**153.53 159**				**PKPbc**	**22 25 11.8**	**-0.3**
CPUP	**Villa Florida**	**153.53 159**		PKIKP		**PKPbc**	**22 25 11.8**	**-0.3**
LPAZ	**La Paz**	**154.67 126**		PKP		**PKPdf**	**22 25 06.0**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=308,slow=2.6,SNR=4.1							
LPAZ				PKPab		**PKPab**	**22 25 31.1**	**+0.9**
	comp=Z,5.9nm,0.9s,baz=214,slow=1.7,SNR=9.7							
LPAZ	**La Paz**	**154.67 126**		PKPdf		**PKPdf**	**22 25 05.6**	**-1.4**

DJA 24 22:07:31.1±0.3, 2°S±2°×12°1E±°, h10km, M3.4/10, MLv3.4/10, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.29**	**230**	P	Pn	22 07 54.1	-1.1
TTSI				S	Sb	22 08 10.8	-1.4
APSI	**Ampana**	**1.54**	**33**	P	Pn	22 07 57.4	-1.2
PCI	**Palu**	**1.62**	**323**	P	Pn	22 07 59.5	-0.3
PCI				S	Sn	22 08 20.9	+0.2
SPSI	**Sidrap Palu**	**2.03**	**211**	P	Pn	22 08 05.5	+0.1
BNSI	**Bone**	**2.29**	**198**	P	Pn	22 08 10.0	+1.1
MPSI	**Mapaga**	**2.69**	**340**	P	Pn	22 08 14.9	+0.4
MPSI	**Mapaga**	**2.69**	**340**	P	Pn	22 08 14.9	+0.4
	3μm860nm27nm,0.8s						
BKSI	**Bulukumba**	**3.17**	**192**	P	Pn	22 08 22.1	+1.1
BSSI	**Bau Bau, Buton**	**3.92**	**185**	P	Pn	22 08 31.6	+0.2

NOU 24 22:09:31.1, 14°08S×170°31E, h608km, ML4.2/11, Vanuatu Islands Region, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.30**	**245**	P	P	22 10 52.3	-0.3
DVP	**Devils Point**	**4.16**	**209**	P	P	22 10 58.1	-0.1
MARNC	**Mare, Loyalty**	**7.57**	**196**	P	P	22 11 27.0	-0.6
YATNC	**Mamie plateau,**	**8.57**	**202**	P	P	22 11 36.0	-0.1
OUENC	**Ouen Island, N**	**8.92**	**201**	P	P	22 11 39.8	+0.3
ONTNC	**Ouen Toro**	**8.96**	**204**	P	P	22 11 40.2	+0.3
SAVO	**Savo Central**	**11.39**	**294**	P	P	22 12 03.8	-0.1
TATA	**Tatamba Isabel**	**11.75**	**298**	P	P	22 12 07.5	0.0

DJA 24 22:13:33.0±0.3, 0°N±3°×12°7E±°, h61km±17km, M4.5/17, mB5.3/4, mb4.6/6, MLv4.3/17, Mw(mB)4.7/4
IDC 24 22:13:35.1±7.7, 0°10N×126°71E, h124km±71km, mb3.8/5, mbtmp4.2/7, Error ellipse: s-maj=60.0km s-min=16.1km az=55.0

ISC 24 22:13:32.2±1.0, 0°24N±0°08×126°88E±0°07, h100km, n21, σ1↟15/23, mb4.1/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.72**	**43**	P	**Pn**	**22 13 48.8**	**-1.0**
SANI	**Sanana**	**2.44**	**201**	P	**Pn**	**22 14 10.2**	**-0.3**
KMSI	**Cibinong**	**2.92**	**277**	P	**Pn**	**22 14 17.4**	**+0.6**
NLAI	**Namlea**	**3.46**	**176**	P	**Pn**	**22 14 24.4**	**+0.2**
MSAI	**Masohi**	**4.11**	**150**	P	**Pn**	**22 14 34.1**	**+1.2**
AAI	**Ambon**	**4.12**	**161**	P	**Pn**	**22 14 33.5**	**+0.5**
LUWI	**Luwuk**	**4.30**	**253**	P	**Pn**	**22 14 35.6**	**+0.2**
MRSI	**Marisa**	**4.94**	**273**	P	**Pn**	**22 14 44.7**	**+0.6**
APSI	**Ampana**	**5.35**	**258**	P	**Pn**	**22 14 50.4**	**+0.7**
FAKI	**Fak Fak**	**6.22**	**120**	P	**Pn**	**22 15 02.4**	**+0.9**
TTSI	**Tana Toraja**	**7.77**	**245**	P	**Pn**	**22 15 24.3**	**+1.7**
BNSI	**Bone**	**8.18**	**236**	P	**Pn**	**22 15 29.7**	**+1.5**
	28nm,0.6s						
SPSI	**Sidrap Palu**	**8.24**	**239**	P	**Pn**	**22 15 30.3**	**+1.3**
	2μm77nm,0.7s						
KAPI	**Kappang**	**8.82**	**234**	P	**Pn**	**22 15 37.9**	**+0.9**
	14nm,0.3s,baz=87,slow=5.3,SNR=25						
KAPI				S	**Sn**	**22 17 12.5**

CROK					IAML			23 04 15.8	
	comp=N,164nm,0.3s								
FNO	**Franklin**	**0.79**	**134**			Pb		23 04 02.2	-0.5
FNO						Sg		23 04 12.7	+0.8
FNO					IAML			23 04 15.5	
	comp=E,114nm,0.5s								
OK038	**West end E0370**	**0.85**	**322**			Pg		23 04 02.9	+0.2
OK038						Sg		23 04 14.0	+0.2
GC02	**Grant County #**	**1.05**	**10**			Pg		23 04 05.9	-0.8
GC02						Sg		23 04 20.1	-0.3
OK052	**Battle Ridge R**	**1.06**	**80**			Pg		23 04 06.3	-0.5
OK052					IAML			23 04 27.3	
	comp=E,61nm,0.3s								
OK052					IAML			23 04 33.0	
	comp=E,56nm,0.3s								
OK048	**Pawnee Station**	**1.11**	**57**			Pg		23 04 07.1	-0.6
OK048					IAML			23 04 26.0	
	comp=E,77nm,0.3s								
QUOK	**Quay**	**1.18**	**72**		IAML			23 04 32.1	
	comp=N,80nm,0.2s								
QUOK					IAML			23 04 34.7	
	comp=E,79nm,0.2s								
BLOK	**Blackwell**	**1.18**	**37**		IAmb_Lg			23 04 24.0	
	comp=Z,6.8nm,0.8s								
WMOK	**Wichita Mounta**	**1.21**	**208**			Pg		23 04 08.7	-1.0
X34A	**Smith Ranch, M**	**1.23**	**170**			Pb		23 04 10.2	+0.1
X34A					IAML			23 04 29.0	
	comp=E,61nm,0.3s								
X34A					IAML			23 04 36.6	
	comp=N,64nm,0.3s								
DEOK	**Depew**	**1.29**	**88**			Pn		23 04 10.0	-1.2
DEOK					IAML			23 04 33.1	
	comp=E,66nm,0.4s								
KAN01	**Argonia South**	**1.36**	**11**			Pn		23 04 11.4	-0.7
T35A	**Sooner Cattle**	**1.68**	**49**			Pn		23 04 17.0	+0.4
TUL3	**Leonard**	**1.87**	**86**			Pn		23 04 19.8	+0.7
SMWD	**Samnorwood**	**1.89**	**249**			Pb		23 04 20.7	-0.8
SMWD					IAmb_Lg			23 04 47.2	
	comp=Z,10nm,0.8s								
WTFS	**Witchita Falls**	**2.06**	**189**			Pb		23 04 23.7	-0.7
RLO	**Rose Lookout**	**2.51**	**81**			Pb		23 04 32.3	+0.3
ABTX	**Abilene, Hawle**	**3.43**	**202**		IAmb_Lg			23 05 35.7	
	comp=Z,5.5nm,0.9s								

*NEIC **24** 23:07:14.7±2.1,51˚.00N±0˚.04×179˚.28W±0˚.04, h10km±1km, mb4.2/63, ML3.5(AEIC), Error ellipse: s-maj=7.6km s-min=4.2km az=355.0*

*AEIC **24** 23:07:16.0±2.9, 50˚.96N±0˚.04×179˚.15W±0˚.04, h7km±3km, Error ellipse: s-maj=6.2km s-min=4.0km az=173.0*

*IDC **24** 23:07:25.4±3.2,51˚.35N×179˚.14W, h97km±23km, mb3.7/12, mbtmp4.1/13, MS3.4/15, Error ellipse: s-maj=46.9km s-min=14.4km az=3.0*

ISC 24 23:07:14.5±1.7, 51˚.01N±0˚.08×179˚.31W±0˚.03, h13km±9km, n143, σ1§12/141, mb4.2/37, MS3.6/11, 1C-1D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.63**	**30**		**Pn**	**23 07 28.8**	**-0.3**
GAKI					**Sn**	**23 07 38.9**	**-0.2**
GASW	**Gareloi Southw**	**0.82**	**20**		**Pn**	**23 07 32.6**	**+0.8**
GALAA	**Gareloi Lava P**	**0.82**	**24**		**Pn**	**23 07 32.7**	**+0.8**
GALAA					**Sn**	**23 07 44.2**	**+0.3**
GANO	**Gareloi North**	**0.87**	**21**		**Pn**	**23 07 33.1**	**+0.6**
GANE	**Gareloi Northe**	**0.88**	**22**		**Pn**	**23 07 33.3**	**+0.7**
GANE					**Sn**	**23 07 46.1**	**+0.9**
AMKA	**Amchitka**	**0.95**	**293**		**Pn**	**23 07 36.0**	**+1.5**
AMKA				Sn	**Sn**	**23 07 48.1**	**+1.1**
CERB	**Semis' Cerberu**	**1.14**	**325**		**Pn**	**23 07 39.4**	**+3.2**
CESW	**Semis' Southwe**	**1.14**	**322**		**Pn**	**23 07 39.0**	**+2.8**
TASE	**Tanaga Southea**	**1.15**	**43**		**Pg**	**23 07 36.6**	**0.0**
TAFL	**Tanaga Flats**	**1.16**	**49**		**Pb**	**23 07 36.4**	**0.0**
CEPE	**Semis' Perret**	**1.16**	**326**		**Pg**	**23 07 38.9**	**+2.2**
TANO	**Tanaga North**	**1.17**	**39**		**Pg**	**23 07 37.5**	**+0.5**
TANO					**Sn**	**23 07 54.4**	**+1.8**
TAFP	**Tanaga Falls P**	**1.22**	**42**		**Pg**	**23 07 37.8**	**-0.1**
TAPA	**Tanaga Point A**	**1.24**	**49**		**Pg**	**23 07 38.1**	**-0.1**
TAPA					**Sn**	**23 07 55.7**	**+1.6**
KIMD	**Kanaga Island**	**1.50**	**59**		**Pn**	**23 07 41.4**	**+0.2**
KIWB	**Kanaga Island**	**1.59**	**57**		**Pn**	**23 07 42.5**	**+0.1**
KIWB				Sn	**Sn**	**23 08 03.1**	**+0.3**
KIKV	**Kanaga Island**	**1.60**	**56**		**Pn**	**23 07 43.0**	**+0.5**
KICM	**Kanaga Island**	**1.60**	**55**		**Pn**	**23 07 43.0**	**+0.4**
LSSE	**Little Sitkin**	**1.62**	**306**		**Pg**	**23 07 46.0**	**+0.5**
LSPA	**Little Sitkin**	**1.63**	**306**		**Pg**	**23 07 46.1**	**+0.4**
KINC	**Kanaga Island**	**1.65**	**55**		**Pb**	**23 07 44.2**	**-0.5**
KINC					**Sb**	**23 08 06.2**	**+0.8**
LSNW	**Little Sitkin**	**1.67**	**306**		**Pg**	**23 07 46.6**	**+0.2**
ADK	**Adak**	**1.86**	**61**	Pn	**Pn**	**23 07 46.6**	**+0.5**
ADAG	**Mount Adagdak**	**1.95**	**59**		**Pn**	**23 07 48.5**	**+1.2**
ADAG					**Sb**	**23 08 13.4**	**-0.8**
ETKA	**Kagalaska Isla**	**2.01**	**64**		**Pn**	**23 07 48.7**	**+0.6**
GSCK	**Great Sitkin C**	**2.21**	**62**		**Pn**	**23 07 51.6**	**+0.8**
GSSP	**Great Sitkin S**	**2.24**	**60**		**Pn**	**23 07 52.2**	**+1.0**
GSTD	**Great Sitkin T**	**2.24**	**61**		**Pn**	**23 07 52.2**	**+0.8**
GSTD					**Sn**	**23 08 20.3**	**+1.5**
GSMY	**Great Sitkin M**	**2.28**	**62**		**Pn**	**23 07 53.0**	**+1.1**
GSTR	**Great Sitkin T**	**2.30**	**61**		**Pn**	**23 07 53.8**	**+1.6**
GSIG	**Igitkin Island**	**2.33**	**64**		**Pn**	**23 07 53.4**	**+0.8**
ATKA	**Atka Island**	**3.40**	**67**		**Pn**	**23 08 07.7**	**+0.4**
KOWE	**Korovin West**	**3.43**	**65**		**Pn**	**23 08 08.7**	**+1.0**
KOKL	**Mount Kliuchef**	**3.44**	**66**		**Pn**	**23 08 08.9**	**+1.0**
KOFP	**Korovin Flat P**	**3.48**	**67**		**Pn**	**23 08 09.5**	**+1.1**
SHEM	**Shemya Is, Ala**	**4.43**	**295**	P	**Pb**	**23 08 28.6**	**-3.6**
	43nm,0.5s,baz=204,slow=4.6,SNR=5.8						
SHEM				S	**Sb**	**23 09 21.1**	**-4.4**
	269nm,1.1s,baz=240,slow=20,SNR=2.3						
SHEM				LR	LR	23 10 22.9	
	comp=Z,418nm,18.8s,baz=131,slow=40						
SMY	**Shemya**	**4.43**	**295**	Pn	**Pn**	**23 08 23.6**	**+2.1**
NIKH	**Nikolski High**	**6.75**	**69**	Pn	**Pn**	**23 08 53.9**	**+0.7**
SPIA	**Saint Paul Isl**	**8.15**	**37**	Pn	**Pn**	**23 09 12.6**	**+0.1**
MREP	**Makushin Rep't**	**8.18**	**65**		**Pn**	**23 09 14.5**	**+1.7**
UNV	**Unalaska Valle**	**8.32**	**65**	Pn	**Pn**	**23 09 16.6**	**+1.8**
SDPT	**Sand Point**	**12.09**	**62**	Pn	**Pn**	**23 10 06.6**	**+0.3**
N15K	**Kwethluk River**	**14.16**	**42**	Pn	**Pn**	**23 10 34.8**	**+0.1**
PETK	**Petropavlovsk-**	**14.29**	**287**	LR	LR	23 15 58.0	
	comp=Z,110nm,20.9s,baz=96,slow=36						
K15K	**Wolf Creek Mou**	**14.88**	**34**	Pn	**Pn**	**23 10 43.8**	**-0.6**
J18K	**Innoko River**	**17.34**	**35**	Pn	**Pn**	**23 11 15.4**	**-0.6**
SKT	**Skwentna**	**18.69**	**43**		**Pn**	**23 11 33.0**	**+0.4**
SKT					IAmb	IAmb	23 11 39.2	
	comp=Z,12nm,0.9s						
MA2	**Magadan**	**18.93**	**308**	LR	LR	23 19 25.7	
	comp=Z,69nm,18.6s,baz=131,slow=38						
F19K	**Shaleruckik Mo**	**19.19**	**26**	P	**P**	**23 11 37.0**	**-0.7**
L22K	**Petersville**	**19.24**	**42**		**P**	**23 11 38.3**	**0.0**
SEY	**Seymchan**	**19.31**	**319**	LR	LR	23 19 11.2	
	comp=Z,90nm,19.5s,baz=88,slow=37						
KTH	**Kantishna Hill**	**19.61**	**39**		**P**	**23 11 42.8**	**+0.4**
KTH					IAmb	IAmb	23 11 43.6	
	comp=Z,17nm,1.0s						
BPAW	**Bear Paw Mtn.**	**19.84**	**38**		**P**	**23 11 44.5**	**-0.3**
BPAW					IAmb	IAmb	23 11 49.3	
	comp=Z,8.5nm,0.9s						
H21K	**Melozitna Rive**	**19.98**	**33**	P	**P**	**23 11 46.3**	**0.0**
H21K					IAmb	IAmb	23 11 48.9	
	comp=Z,11nm,1.1s						
I21K	**Tanana**	**20.01**	**34**	P	**P**	**23 11 47.1**	**+0.5**
I21K					IAmb	IAmb	23 11 48.6	
	comp=Z,17nm,1.0s						
G21K	**Allakaket**	**20.26**	**30**	P	**P**	**23 11 49.1**	**-0.2**
G21K					IAmb	IAmb	23 11 51.1	
	comp=Z,15nm,0.8s						
D19K	**Kuna River**	**20.32**	**23**	P	**P**	**23 11 49.1**	**-0.9**
D19K					IAmb	IAmb	23 11 52.5	
	comp=Z,12nm,1.1s						
H22K	**Ishtalitna Cre**	**20.61**	**33**	P	**P**	**23 11 53.1**	**-0.1**
F21K	**Alatna River**	**20.70**	**29**	P	**P**	**23 11 53.4**	**-0.8**
F21K					IAmb	IAmb	23 11 58.9	
	comp=Z,9.3nm,1.1s						
NEA2	**Nenana**	**20.81**	**38**	P	**P**	**23 11 54.8**	**-0.5**
NEA2					IAmb	IAmb	23 12 00.4	
	comp=Z,7.9nm,1.0s						
D20K	**Etivluk River**	**20.86**	**23**	P	**P**	**23 11 55.7**	**-0.1**
D20K					IAmb	IAmb	23 11 57.9	
	comp=Z,21nm,1.1s						
DHY	**Denali Highway**	**20.89**	**42**	P	**P**	**23 11 55.0**	**-1.4**
DHY					IAmb	IAmb	23 11 59.5	
	comp=Z,12nm,1.0s						
I23K	**Minto, Yukon-K**	**20.95**	**36**	P	**P**	**23 11 56.1**	**-0.7**
CCB	**Clear Creek Bu**	**21.32**	**38**		**P**	**23 12 00.3**	**-0.5**
G23K	**Bananza Creek**	**21.51**	**32**		**P**	**23 12 02.9**	**0.0**
G23K					IAmb	IAmb	23 12 05.0	
	comp=Z,9.1nm,1.1s						
PAX	**Paxson**	**21.68**	**44**	P	**P**	**23 12 05.0**	**+0.2**
ILAR	**Eielson Array**	**21.73**	**38**	P	**P**	**23 12 04.2**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=245,slow=7.5,SNR=11						
	comp=Z,0.8nm,0.7s						
COLD	**Coldfoot**	**21.73**	**31**	P	**P**	**23 12 04.2**	**-1.0**
E22K	**Anaktuvuk Pass**	**21.77**	**28**	P	**P**	**23 12 05.0**	**-0.7**
G24K	**Hadweenzic Riv**	**22.38**	**33**	P	**P**	**23 12 11.4**	**-0.7**
G24K					IAmb	IAmb	23 12 13.7	
	comp=Z,15nm,1.1s						
L26K	**Log Cabin Wild**	**22.62**	**44**	P	**P**	**23 12 14.7**	**-0.1**
L26K					IAmb	IAmb	23 12 15.8	
	comp=Z,6.4nm,1.0s						
SCRK	**Sand Creek**	**22.62**	**42**	P	**P**	**23 12 12.9**	**-2.0**
F24K	**Squaw Lake**	**22.65**	**31**	P	**P**	**23 12 15.1**	**+0.1**
F24K					IAmb	IAmb	23 12 17.4	
	comp=Z,9.5nm,0.9s						
E24K	**Your Creek**	**22.75**	**30**	P	**P**	**23 12 17.4**	**+1.2**
J26L	**Joseph Creek**	**22.96**	**40**	P	**P**	**23 12 15.9**	**-2.6**
M27K	**Edge Creek, AK**	**23.12**	**46**	P	**P**	**23 12 18.7**	**-1.4**
M27K					IAmb	IAmb	23 12 25.6	
	comp=Z,13nm,1.2s						
C23K	**Itkillik River**	**23.18**	**25**		**P**	**23 12 19.8**	**-0.8**
D24K	**Happy Valley**	**23.26**	**27**	P	**P**	**23 12 22.0**	**+0.6**
F25K	**Christian River**	**23.43**	**32**	P	**P**	**23 12 22.6**	**-0.6**
F25K					IAmb	IAmb	23 12 24.2	
	comp=Z,6.8nm,1.1s						
K27K	**Chicken**	**23.44**	**42**	P	**P**	**23 12 22.7**	**-0.5**
C24K	**Franklin Bluff**	**23.64**	**26**	P	**P**	**23 12 24.7**	**-0.3**
C24K					IAmb	IAmb	23 12 41.4	
	comp=Z,3.9nm,0.8s						
E25K	**Arctic Village**	**23.71**	**31**	P	**P**	**23 12 24.9**	**-0.9**
E25K					IAmb	IAmb	23 12 27.3	
	comp=Z,12nm,1.1s						
D25K	**Kavik River**	**24.08**	**28**	P	**P**	**23 12 28.8**	**-0.5**
D25K					IAmb	IAmb	23 12 30.6	
	comp=Z,4.7nm,0.8s						
I28M	**Miner Creek**	**24.73**	**39**		**P**	**23 12 33.4**	**-2.0**
I28M					IAmb	IAmb	23 12 35.5	
	comp=Z,6.3nm,0.9s						
E27K	**Coleen River**	**25.07**	**33**		**P**	**23 12 37.6**	**-0.7**
K29M	**Barlow Dome**	**25.36**	**44**		**P**	**23 12 39.4**	**-1.7**
K29M					IAmb	IAmb	23 12 43.7	
	comp=Z,5.0nm,0.9s						
F28M	**Old Crow**	**25.45**	**34**	P	**P**	**23 12 41.1**	**-0.7**
F28M					IAmb	IAmb	23 12 42.6	
	comp=Z,7.1nm,1.1s						
I30M	**Mount Dempster**	**26.11**	**41**		**P**	**23 12 45.8**	**-2.1**
I30M					IAmb	IAmb	23 12 47.4	
	comp=Z,5.1nm,0.9s						
JKA	**Kamikawa-asahi**	**26.38**	**270**	P	**P**	**23 12 51.5**	**+1.1**
ASAJ	**Asahikawa**	**26.38**	**270**	LR	LR	23 23 32.6	
	comp=Z,38nm,20.2s,baz=24,slow=36						
E29M	**Blow River**	**26.42**	**33**	P	**P**	**23 12 52.1**	**+1.6**
ERM	**Erimo**	**27.10**	**265**	P	**P**	**23 12 57.4**	**+0.5**
TIXI	**Tiksi**	**30.80**	**331**	LR	LR	23 26 46.4	
	comp=Z,52nm,18.0s,baz=264,slow=38						
YKA	**Yellowknife Ar**	**35.72**	**46**	P	**P**	**23 14 11.7**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=295,slow=10.0,SNR=5.4						
	comp=Z,1.5nm,0.8s						
HILR	**Hailar Array B**	**37.99**	**292**	LR	LR	23 31 01.1	
	comp=Z,37nm,21.5s,baz=260,slow=37						
HLID	**Hailey**	**43.35**	**74**	P	**P**	**23 15 16.5**	**+0.1**
HLID					IAmb	IAmb	23 15 17.8	
	comp=Z,3.8nm,1.1s						
BCYI	**Bear Canyon**	**43.55**	**72**	P	**P**	**23 15 18.6**	**+0.5**
BCYI					IAmb	IAmb	23 15 20.5	
	comp=Z,4.0nm,0.9s						
MCMT	**McKenzie Canyo**	**43.60**	**71**	P	**P**	**23 15 18.1**	**-0.5**
EGMT	**Eagleton**	**43.72**	**66**	P	**P**	**23 15 18.5**	**-0.7**
BOZ	**Bozeman (W)**	**43.91**	**69**	P	**P**	**23 15 20.5**	**-0.4**
BOZ					IAmb	IAmb	23 15 21.4	
	comp=Z,4.1nm,1.0s						
YHL	**Hebgen Lake**	**44.58**	**70**	P	**P**	**23 15 25.9**	**-0.5**
YHL					IAmb	IAmb	23 15 27.8	
	comp=Z,4.6nm,1.0s						
YHH	**Holmes Hill**	**44.81**	**70**		**P**	**23 15 28.1**	**-0.1**
YPP	**Pitchstone Pla**	**45.12**	**71**	P	**P**	**23 15 30.7**	**0.0**
TPNV	**Topopah Spring**	**46.11**	**82**	P	**P**	**23 15 38.3**	**-0.2**
TPNV					IAmb	IAmb	23 15 52.4	
	comp=Z,2.1nm,0.9s						
DUG	**Dugway, Tooele**	**46.26**	**76**		**P**	**23 15 39.3**	**-0.3**
DUG					IAmb	IAmb	23 15 43.0	
	comp=Z,2.9nm,1.0s						
SONM	**Songino Array**	**46.53**	**297**	P	**P**	**23 15 42.6**	**+1.0**
	comp=Z,1.8nm,1.0s,baz=68,slow=8.3,SNR=6.4						
SONM				LR	LR	23 36 50.5	
	comp=Z,93nm,18.3s,baz=72,slow=38						
	comp=Z,1.8nm,1.0s						
BW06	**Boulder Array**	**46.73**	**72**	P	**P**	**23 15 43.1**	**-0.2**
PD31	**Pinedale Array**	**46.73**	**72**	P	**P**	**23 15 42.8**	**-0.6**
PDAR	**Pinedale Array**	**46.73**	**72**	P	**P**	**23 15 43.2**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=310,slow=3.7,SNR=24						
	comp=Z,4.5nm,0.9s						
PDAR	**Pinedale Array**	**46.73**	**72**		**P**	**23 15 43.0**	**-0.3**
HHC	**Hu-ho-hao-te**	**47.48**	**286**	*e*P	**P**	**23 15 51.1**	**+2.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,55nm,4.8s						
TMUT	**Trail Mountain**	**47.79**	**76**	P	**P**	**23 15 52.2**	**+0.4**
PV18	**Skein Mesa, Pa**	**49.85**	**76**		**P**	**23 16 07.5**	**0.0**
PV03	**Paradox Valley**	**49.88**	**76**	P	**P**	**23 16 08.4**	**+0.6**
PV13	**Radium Mtn., P**	**49.96**	**76**	P	**P**	**23 16 07.9**	**-0.5**
PV02	**Paradox Valley**	**49.98**	**76**	P	**P**	**23 16 08.8**	**+0.3**
SPITS	**Spitsbergen Ar**	**50.72**	**356**	P	**P**	**23 16 12.7**	**-0.6**
	comp=Z,10nm,0.9s,baz=34,slow=6.1,SNR=8.3						
	comp=Z,10nm,0.9s						
ANMO	**Albuquerque**	**53.48**	**78**	LR	LR	23 38 38.6	
	comp=Z,78nm,18.2s,baz=70,slow=35						
GTA	**Gaotai**	**55.41**	**292**	*e*P	**P**	**23 16 49.4**	**+0.9**
GTA				sP	pwP	23 17 04.3	+8.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TXAR	**Lajitas Array**	**59.03**	**81**	P	**P**	**23 17 14.2**	**0.0**
	comp=Z,0.2nm,0.4s,baz=306,slow=6.2,SNR=3.6						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**59.04**	**314**		**P**	**23 17 14.7**	**+0.9**
KURBB	**Kurchatov Arra**	**59.15**	**314**	P	**P**	**23 17 14.8**	**+0.2**
	comp=Z,2.8nm,0.6s,baz=42,slow=6.7,SNR=38						
	comp=Z,2.8nm,0.6s						
WMQ	**Urumqi**	**59.27**	**303**	*e*P	**P**	**23 17 17.9**	**+2.2**
WMQ				sP	pwP	23 17 32.8	+10
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
MKAR	**Makanchi Array**	**60.01**	**308**	P	**P**	**23 17 20.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=52,slow=7.0,SNR=12						
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**60.01**	**308**	P	**P**	**23 17 20.4**	**-0.3**
HHAR	**Hobbs**	**60.14**	**68**	P	**P**	**23 17 22.4**	**+0.7**
HHAR					IAmb	IAmb	23 17 31.8	
	comp=Z,2.6nm,1.1s						
MAKZ	**Makanchi**	**60.16**	**308**	P	**P**	**23 17 21.6**	**0.0**
MAKZ					IAmb	IAmb	23 17 32.8	
	comp=Z,3.2nm,1.1s						
BVAR	**Borovoye Array**	**60.96**	**320**	P	**P**	**23 17 26.4**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=54,slow=7.5,SNR=6.3						
BVAR				LR	LR	23 45 14.9	
	comp=Z,43nm,20.9s,baz=56,slow=37						
	comp=Z,1.0nm,0.6s						
ARTI	**Arti**	**62.84**	**328**	LR	LR	23 47 29.8	
	comp=Z,37nm,19.5s,baz=36,slow=38						
PZH	**PanZhiHua**	**63.09**	**280**	P	**P**	**23 17 42.8**	**+1.0**
FINES	**FINESS Array B**	**66.07**	**347**	P	**P**	**23 17 58.5**	**-2.1**
	comp=Z,2.4nm,0.8s,baz=90,slow=2.9,SNR=5.9						
	comp=Z,2.4nm,0.8s						
FINES	**FINESS Array B**	**66.07**	**347**	P	**P**	**23 17 59.7**	**-0.9**
AKTO	**Aktyubinsk**	**67.80**	**324**	LR	LR	23 50 39.3	
	comp=Z,61nm,18.1s,baz=206,slow=38						
NOA	**NORSAR Array B**	**67.98**	**354**	LR	LR	23 50 58.0	
	comp=Z,8.3nm,18.4s,baz=330,slow=39						
ABKAR	**Akbulak array**	**68.04**	**323**	P	**P**	**23 18 13.0**	**-0.3**
KSH	**Kashi**	**68.46**	**306**	P	**P**	**23 18 21.5**	**+5.2**
KSH				sP	PcP	23 18 35.4	-6.2
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AKASG	**Malin Array Be**	**75.80**	**342**	P	**P**	**23 18 59.3**	**-0.5**
	comp=Z,2.5nm,0.4s,baz=21,slow=5.8,SNR=11						
AKASG				LR	LR	23 55 21.9	
	comp=Z,15nm,18.9s,baz=330,slow=38						
	comp=Z,2.5nm,0.4s						
AKASG	**Malin Array Be**	**75.80**	**342**	IAmb	IAmb	23 19 01.8	
	comp=Z,2.2nm,0.9s						
KIEV	**Kiev**	**75.81**	**342**	⇑P	**P**	**23 18 59.4**	**-0.4**
LANS	**Liptovska Anna**	**78.93**	**348**	*e*P	**P**	**23 19 18.9**	**+1.4**
BURAR	**Bucovina Array**	**79.52**	**343**	⇓P	**P**	**23 19 21.0**	**+0.2**
WRA	**Warramunga Arr**	**81.53**	**223**	LR	LR	23 51 59.8	
	comp=Z,174nm,21.1s,baz=9.5,slow=33						
BRTR	**Keskin Array B**	**85.15**	**335**	P	**P**	**23 19 47.6**	**-2.8**
	comp=Z,1.1nm,0.8s,baz=26,slow=6.5,SNR=7.1						
	comp=Z,1.1nm,0.8s						

*DJA **24** 23:15:59.3±1.2,2˚N±5˚×96˚E±˚, h19km±5km, M3.9/12, mb4.2/2, MLv3.8/12*

*IDC **24** 23:16:03.6±6.7, 1˚.91N×96˚.54E, h99km±63km, mb3.3/5, mbtmp3.7/7, ML5.0/1, Error ellipse: s-maj=81.6km s-min=61.0km az=169.0*

ISC 24 23:15:57.0±1.4, 2˚.1N±0˚.1×96˚.45E±0˚.08, h28km, n25, σ0§58/14, mb3.7/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.37**	**341**	P	**Pb**	**23 16 04.8**	**-0.5**
KCSI	**Kotacane, Aceh**	**1.97**	**42**	P	**Pb**	**23 16 32.0**	**-0.2**
MLSI	**Meulaboh, Aceh**	**2.20**	**359**	P	**Pn**	**23 16 31.6**	**-0.1**
TSI	**Tuntungan**	**2.56**	**56**	P	**Pb**	**23 16 42.0**	**-0.2**
PSI	**Prapat**	**2.58**	**73**	P	**Pb**	**23 16 42.5**	**-0.1**
	5.2nm,0.3s,baz=273,slow=3.6,SNR=8.0						
PSI				S	**Sb**	**23 17 13.9**	**-0.2**
	12nm,0.5s,baz=238,slow=18,SNR=7.0						
LHMI	**Lhok Sumawe**	**3.19**	**9**	P	**Pn**	**23 16 45.5**	**+0.2**
MNSI	**Mandailing Nat**	**3.37**	**112**	P	**Pb**	**23 16 55.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**16.48**	**8**	P	**P**	**23 19 49.1**	**+0.3**
	2.2nm,0.3s,baz=192,slow=12,SNR=5.2						
	2.7nm,0.3s						
H08S2	**Diego Garcia H**	**25.77**	**248**	T	T	23 48 01.3	
	baz=68,slow=76,SNR=22						
H08S3	**Diego Garcia H**	**25.77**	**248**	T	T	23 48 04.4	
	baz=68,slow=76,SNR=32						
H08S1	**Diego Garcia H**	**25.79**	**248**	T	T	23 48 05.6	
	baz=68,slow=76,SNR=26						
H01W3	**Cape Leeuwin H**	**40.32**	**157**	T	T	00 06 43.8	
	baz=333,slow=76,SNR=6.3						
H01W2	**Cape Leeuwin H**	**40.33**	**157**	T	T	00 06 47.0	
	baz=333,slow=76,SNR=6.5						
H01W1	**Cape Leeuwin H**	**40.33**	**157**	T	T	00 06 54.1	
	baz=333,slow=76,SNR=6.9						
MKAR	**Makanchi Array**	**46.24**	**347**	P	**P**	**23 24 19.6**	**-0.1**
	0.9nm,0.7s,baz=162,slow=8.2,SNR=13						
	0.9nm,0.7s						
SONM	**Songino Array**	**46.41**	**9**	P	**P**	**23 24 20.7**	**-0.5**
	0.7nm,0.7s,baz=193,slow=9.2,SNR=4.4						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**50.72**	**345**	P	**P**	**23 24 55.3**	**+1.2**
	0.5nm,0.8s,baz=163,slow=7.0,SNR=3.7						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**52.60**	**351**	P	**P**	**23 25 07.7**	**-0.5**
	0.9nm,0.5s,baz=175,slow=3.8,SNR=4.6						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**55.20**	**341**	P	**P**	**23 25 28.3**	**+1.1**
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.5						
	0.3nm,0.5s						
H04N2	**CROZET ISLANDS**	**62.06**	**214**	T	T	00 33 52.4	
	baz=52,slow=75,SNR=220						
H04N1	**CROZET ISLANDS**	**62.07**	**214**	T	T	00 33 55.0	
	baz=52,slow=75,SNR=194						
H04N3	**CROZET ISLANDS**	**62.08**	**214**	T	T	00 33 51.9	
	baz=52,slow=75,SNR=223						
H04S1	**CROZET ISLANDS**	**62.41**	**213**	T	T	00 34 16.5	
	baz=51,slow=74,SNR=6.7						
H04S3	**CROZET ISLANDS**	**62.42**	**213**	T	T	00 34 11.8	
	baz=51,slow=74,SNR=11						
H04S2	**CROZET ISLANDS**	**62.43**	**213**	T	T	00 34 17.7	
	baz=51,slow=74,SNR=4.6						

*MDD **24** 23:16:06.3±0.9, 36˚.10N×7˚.61W, h0km, mb_Lg2.7/7, Error ellipse: s-ma

PBAR				*i* IAML			23 17 13.3		
ZHG	**ZHG**	**2.48**	**162**	P		**Pn**	**23 16 43.5**	**+1.1**	
ZHG	**ZHG**	**2.48**	**162**	S		**Sn**	**23 17 10.4**	**-1.1**	
EVO	**Evora**	**2.74**	**352**	Pn		**Pn**	**23 16 46.8**	**+0.9**	
EVO				Sn		**Sn**	**23 17 16.4**	**-1.4**	
EVO	**Evora**	**2.74**	**352**	*e*P		**Pn**	**23 16 47.1**	**+1.1**	
EVO				*e*S		**Sn**	**23 17 17.3**	**-0.5**	
EVO				*i* IAML			23 17 17.6		
EVO				*i* IAML			23 17 18.0		
EVO				*i* IAML			23 17 20.2		
MOE	**Montemor**	**2.78**	**347**	*e*P		**Pn**	**23 16 47.9**	**+1.4**	
MOE				*e*S		**Sn**	**23 17 17.6**	**-1.2**	
MOE				*i* IAML			23 17 20.4		
MOE				*i* IAML			23 17 20.5		
MOE				*i* IAML			23 17 21.2		
ECAB	**El Cabril**	**2.83**	**37**	Pn		**Pn**	**23 16 47.8**	**+0.5**	
ECAB				Sn		**Sn**	**23 17 17.2**	**-3.0**	
ECAB	**El Cabril**	**2.83**	**37**	Pn		**Pn**	**23 16 49.3**	**+2.1**	
ECAB				*i* IVmb_Lg			23 17 20.0		
ECAB				Sn		**Sn**	**23 17 21.4**	**+1.2**	
EBAD	**Badajoz**	**2.97**	**8**	Pn		**Pn**	**23 16 50.0**	**+0.9**	
EBAD				Sn		**Sn**	**23 17 21.1**	**-2.4**	
EBAD	**Badajoz**	**2.97**	**8**	Pn		**Pn**	**23 16 50.4**	**+1.3**	
EBAD				Sn		**Sn**	**23 17 23.3**	**-0.2**	
EBAD				*i* IVmb_Lg			23 17 23.3		
PARRA	**Arraiolos**	**3.02**	**353**	*e*P		**Pn**	**23 16 50.9**	**+1.1**	
PARRA				*e*S		**Sn**	**23 17 23.1**	**-1.7**	
PARRA				*i* IAML			23 17 24.1		
PARRA				*i* IAML			23 17 24.6		
PARRA				*i* IAML			23 17 24.9		
IFR	**Ifrane**	**3.04**	**138**	Pn		**Pn**	**23 16 51.3**	**+1.0**	
PESTR	**Estremoz**	**3.05**	**359**	Sn		**Sn**	**23 16 51.5**	**+0.3**	
PESTR				Pn		**Pn**	**23 16 50.5**	**+0.3**	
EGOR	**Sierra Gorda,**	**3.06**	**64**	Sn		**Sn**	**23 17 24.9**	**-1.1**	
EGOR				Pn		**Pn**	**23 16 50.0**	**-0.5**	
EGOR	**Sierra Gorda,**	**3.06**	**64**	Pn		Pn	23 16 55.4	+4.8	
EGOR				Sn		**Sn**	**23 17 30.5**	**+4.4**	
EGOR				*i* IVmb_Lg			23 18 26.2		
LCRM	**LCR**	**3.07**	**133**	P		**Pn**	**23 16 52.0**	**+1.3**	
LCRM	**LCR**	**3.07**	**133**	S		**Sn**	**23 17 24.3**	**-1.9**	
AKLM	**AKL**	**3.29**	**112**	P		**Pn**	**23 16 54.8**	**+1.2**	
AKLM	**AKL**	**3.29**	**112**	S		**Sn**	**23 17 29.7**	**-1.9**	
PMTG	**Montargil**	**3.29**	**351**	*e*P		**Pn**	**23 16 54.6**	**+1.1**	
PMTG				*e*S		**Sn**	**23 17 30.0**	**-1.5**	
PMTG				*i* IAML			23 17 32.1		
PMTG				*i* IAML			23 17 33.2		
PMTG				*i* IAML			23 17 33.4		
SRHM	**Skhour des Reh**	**3.34**	**185**	P		**Pn**	**23 16 57.6**	**+3.2**	
SRHM	**Skhour des Reh**	**3.34**	**185**	S		**Sn**	**23 17 35.2**	**+2.4**	
EADA	**Adamuz**	**3.35**	**45**	Sn		**Sn**	**23 17 29.4**	**-3.4**	
EADA				Pn		**Pn**	**23 16 55.5**	**+1.1**	
EADA	**Adamuz**	**3.35**	**45**	Pn		**Pn**	**23 16 55.4**	**+1.1**	
EADA				Sn		**Sn**	**23 17 32.1**	**-0.7**	
EADA				*i* IVmb_Lg			23 17 39.0		
PMAFR	**Mafra**	**3.42**	**337**	Pn		**Pn**	**23 16 56.4**	**+1.0**	
PMAFR				Sn		**Sn**	**23 17 33.4**	**-1.3**	
PMAFR	**Mafra**	**3.42**	**337**	*e*P		**Pn**	**23 16 56.9**	**+1.5**	
EQTA	**Presa de Quent**	**3.59**	**66**	Pn		**Pn**	**23 16 59.3**	**+1.5**	
EQTA				Sn		**Sn**	**23 17 37.3**	**-1.7**	
PMRV	**Marv??o**	**3.61**	**2**	*e*P		**Pn**	**23 16 59.1**	**+1.2**	
PMRV				*e*S		**Sn**	**23 17 37.8**	**-1.5**	
PMRV				*i* IAML			23 17 38.9		
PMRV				*i* IAML			23 17 39.6		
PMRV				*i* IAML			23 17 39.7		
MD31	**MD31**	**3.74**	**141**	P		**Pn**	**23 17 00.5**	**+0.7**	
MD31	**MD31**	**3.74**	**141**	S		**Sn**	**23 17 39.9**	**-2.7**	
PSARD	**Sardoal**	**3.81**	**353**	*e*P		**Pn**	**23 17 01.9**	**+1.3**	
PSARD				*e*S		**Sn**	**23 17 42.8**	**-1.4**	
PSARD				*i* IAML			23 17 44.9		
PSARD				*i* IAML			23 17 44.9		
PSARD				*i* IAML			23 17 45.4		
PSBE	**So Bento**	**3.82**	**345**	*e*P		**Pn**	**23 17 02.2**	**+1.3**	
PSBE				*e*S		**Sn**	**23 17 44.0**	**-0.6**	
MDT	**Midelt**	**3.86**	**140**	P		**Pn**	**23 17 02.2**	**+0.7**	
MDT	**Midelt**	**3.86**	**140**	S		**Sn**	**23 17 43.3**	**-2.3**	
PCBR	**Castelo Branco**	**4.02**	**1**	*e*P		**Pn**	**23 17 04.7**	**+1.1**	
PCBR				*e*S		**Sn**	**23 17 48.2**	**-1.2**	
PCBR				*i* IAML			23 17 48.8		
PCBR				*i* IAML			23 17 49.6		
PCBR				*i* IAML			23 17 57.2		
EQES	**Quesada**	**4.11**	**60**	Pn		**Pn**	**23 17 06.9**	**+2.1**	
EQES				Sn		**Sn**	**23 17 52.8**	**+1.0**	
TISM	**Timmit**	**4.18**	**167**	P		**Pn**	**23 17 05.2**	**-0.6**	
TISM	**Timmit**	**4.18**	**167**	S		**Sn**	**23 17 49.1**	**-4.4**	
PSIM	**Granatula de C**	**4.26**	**44**	Pn		**Pn**	**23 17 07.9**	**+0.9**	
PSIM				Sn		**Sn**	**23 17 53.9**	**-1.6**	
PAB	**San Pablo**	**4.51**	**33**	Pn		**Pn**	**23 17 11.7**	**+1.3**	
PAB				Sn		**Sn**	**23 17 59.7**	**-2.0**	
PAB				*i* IVmb_Lg			23 19 37.0		
OUK	**Oukaimeden**	**4.60**	**183**	P		**Pn**	**23 17 11.4**	**-0.5**	
OUK	**Oukaimeden**	**4.60**	**183**	S		**Sn**	**23 18 00.5**	**-3.7**	
ESDC	**Sonseca Array**	**4.79**	**35**	Sn		**Sn**	**23 18 05.3**	**-3.2**	
TIO	**Tiouine**	**4.88**	**177**	P		**Pn**	**23 17 15.5**	**0.0**	
TIO	**Tiouine**	**4.88**	**177**	S		**Sn**	**23 18 05.6**	**-5.3**	
OUZM	**OUZ**	**4.94**	**172**	P		**Pn**	**23 17 17.2**	**+0.9**	
OUZM	**OUZ**	**4.94**	**172**	S		**Sn**	**23 18 10.9**	**-1.3**	
MVO	**Moncorvo**	**5.36**	**4**	*e*P		**Pn**	**23 17 23.0**	**+1.0**	
MVO				*e*S		**Sn**	**23 18 19.0**	**-3.5**	

IDC 24 23:25:21.9±1.7, 5.77S×130.43E, h0km, mb3.5/1, mbtmp3.4/3, ML3.5/3, Error ellipse: s-maj=62.2km s-min=29.3km az=60.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.60**	**165**	Pn		Pn	23 28 51.4	+1.5
	0.2nm,0.3s,baz=343,slow=13,SNR=6.7							
WRA				Sn		Sn	23 31 20.2	-12
	0.2nm,0.3s,baz=354,slow=24,SNR=6.1							
	0.4nm,0.5s							
PMG	**Port Moresby**	**16.97**	**103**	Pn		Pn	23 29 19.0	-1.9
	7.8nm,0.3s,baz=280,slow=18,SNR=7.1							
ASAR	**Alice Springs**	**18.11**	**170**	P		Pn	23 29 34.8	-0.2
	0.1nm,0.3s,baz=353,slow=10,SNR=6.0							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**67.44**	**326**	P		P	23 36 19.7	+0.2
	0.2nm,0.4s,baz=112,slow=8.1,SNR=7.4							
	0.2nm,0.4s							

*NEIC **24** 23:32:24.9±2.6, 7.42S×146.6E±0.1, h93km±8km, mb4.2/14, Error ellipse: s-maj=17.4km s-min=4.6km az=108.0*

*IDC **24** 23:32:27.6±3.3, 7.59S×146.94E, h112km±41km, mb3.6/8, mbtmp4.0/9, Error ellipse: s-maj=51.8km s-min=30.6km az=136.0*

ISC 24 23:32:25.3±0.7, 7.39S±0.07×146.4E±0.1, h100km, n31, σ2.520/32, mb3.9/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.14**	**160**	P		**Pn**	**23 32 58.2**	**-1.6**
	343nm,0.6s,baz=42,slow=5.2,SNR=21							
PMG				S		**Sn**	**23 33 27.3**	**+1.3**
	260nm,0.6s,baz=160,slow=23,SNR=15							
PMG				LR		LR	23 33 33.9	
	comp=Z,104nm,21.4s,baz=74,slow=36							
PMG	**Port Moresby**	**2.14**	**160**	Pn		**Pn**	**23 32 57.8**	**-2.0**
PMG				Sn		**Sn**	**23 33 27.6**	**+1.6**
COEN	**Coen**	**7.26**	**206**			**Pn**	**23 34 07.8**	**-1.0**
COEN				Sn		**Sn**	**23 35 30.3**	**+0.6**
CTAO	**Charters Tower**	**12.62**	**181**	Pn		**Pn**	**23 35 22.2**	**+0.9**
MTN	**Manton Dam**	**15.98**	**249**	Pn		**Pn**	**23 36 03.2**	**-1.3**
MTN				IAmb		IAmb	23 36 05.8	
	comp=Z,18nm,0.4s							
WB0	**Warramunga Arr**	**16.95**	**222**			**Pn**	**23 36 16.4**	**0.0**
WB0				IAmb		IAmb	23 36 21.7	
	comp=Z,19nm,1.4s							
WR8	**Warramunga Arr**	**17.01**	**222**			**P**	**23 36 18.1**	**+0.7**
WR8				IAmb		IAmb	23 36 23.0	
	comp=Z,21nm,1.5s							
WB2	**Warramunga Arr**	**17.10**	**222**			**Pn**	**23 36 18.8**	**+0.5**
WB2				IAmb		IAmb	23 36 32.6	
	comp=Z,7.2nm,0.8s							
WRA	**Warramunga Arr**	**17.11**	**222**	P		**P**	**23 36 20.9**	**+2.4**
	comp=Z,4.3nm,0.8s,baz=43,slow=11,SNR=16							
KNRA	**Kununurra**	**19.14**	**243**			**P**	**23 36 37.0**	**-3.7**
KNRA				IAmb		IAmb	23 36 46.5	
	comp=Z,17nm,0.9s							
AS31	**Alice Springs**	**20.15**	**215**			**P**	**23 36 51.8**	**0.0**
ASAR	**Alice Springs**	**20.15**	**215**	P		Pn	23 36 55.4	+0.9
	comp=Z,10.0nm,0.9s,baz=40,slow=11,SNR=58							
	comp=Z,10.0nm,0.9s							
ASAR	**Alice Springs**	**20.15**	**215**	P		**P**	**23 36 51.8**	**0.0**
FITZ	**Fitzroy Crossi**	**22.85**	**240**	P		**P**	**23 37 16.1**	**-4.3**
ARMA	**Armidale**	**23.43**	**169**	P		**P**	**23 37 28.9**	**+3.1**
ARMA				IAmb		IAmb	23 38 03.9	
	comp=Z,11nm,1.2s							
CMAR	**Chiang Mai Arr**	**53.40**	**299**	P		P	23 41 41.2	+6.0
	comp=Z,0.8nm,0.4s,baz=122,slow=5.9,SNR=9.2							
	comp=Z,0.8nm,0.4s							
CMAR	**Chiang Mai Arr**	**53.40**	**299**	P		**P**	**23 41 35.8**	**+0.7**
PPTF	**Pamatai, Papee**	**63.09**	**106**	P		**P**	**23 42 40.8**	**-2.1**
SMY	**Shemya**	**64.36**	**18**	P		**P**	**23 42 46.9**	**-3.4**
SONM	**Songino Array**	**65.33**	**332**	P		**P**	**23 43 00.9**	**+3.9**
	comp=Z,0.8nm,0.8s,baz=151,slow=3.3,SNR=3.8							
	comp=Z,0.8nm,0.8s							
MKAR	**Makanchi Array**	**78.19**	**321**	P		**P**	**23 44 17.1**	**+3.2**
	comp=Z,1.5nm,0.7s,baz=110,slow=7.1,SNR=8.7							
	comp=Z,1.5nm,0.7s							
MKAR	**Makanchi Array**	**78.19**	**321**	P		**P**	**23 44 13.1**	**-0.8**
MAKZ	**Makanchi**	**78.39**	**321**	P		**P**	**23 44 14.2**	**-0.8**
ZALV	**Zalesovo Beam**	**79.87**	**328**	P		**P**	**23 44 25.3**	**+2.5**
	comp=Z,0.5nm,0.4s,baz=137,slow=15,SNR=2.6							
	comp=Z,0.5nm,0.4s							
KURK	**Kurchatov**	**81.97**	**324**	P		**P**	**23 44 35.6**	**+1.6**
KURK				IAmb		IAmb	23 45 08.9	
	comp=Z,4.1nm,1.2s							
KURBB	**Kurchatov Arra**	**81.98**	**323**	P		**P**	**23 44 37.9**	**+3.8**
	comp=Z,1.2nm,0.9s,baz=112,slow=4.5,SNR=7.8							
	comp=Z,1.2nm,0.9s							
E19K	**Redstone River**	**84.61**	**19**	P		**P**	**23 44 44.9**	**-2.4**
E19K				IAmb		IAmb	23 44 54.6	
	comp=Z,3.3nm,0.8s							
C19K	**Lookout Ridge**	**84.84**	**17**	P		**P**	**23 44 49.0**	**+0.5**
ILAR	**Eielson Array**	**86.98**	**23**	P		**P**	**23 45 00.5**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=253,slow=5.2,SNR=11							
	comp=Z,0.7nm,0.7s							
ILAR	**Eielson Array**	**86.98**	**23**	P		**P**	**23 44 59.6**	**+0.5**
BVAR	**Borovoye Array**	**87.54**	**324**	P		**P**	**23 45 03.5**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=81,slow=4.9,SNR=4.5							
	comp=Z,0.6nm,0.7s							

*NEIC **24** 23:38:14.8±1.6, 1.58N±0.07×132.90E±0.08, h10km±1km, mb5.1/98, Ms_20 4.0/7, Mww4.8/14, Error ellipse: s-maj=13.1km s-min=11.6km az=79.0*

*DJA **24** 23:38:14.7±0.4, 2.1N±4×13.3E±°, h10km, M4.8/39, mb5.1/39, mB5.3/29, MLv5.2/19, Mw(mB)4.8/29, MwMwp4.6/7, Mwp5.0/7*

*NEIC **24** 23:38:15, 1.57N×132.90E, h20km*

*NEIC **24** 23:38:15, 1.67N×132.80E, h20km, Moment Tensor Solution. Duration: 184 Moment tensor: Scale 10^16 Nm; Mrr=0.85; Mθθ=1.65; Mϕϕ=2.49; Mrθ=0.02; Mrϕ=0.70; Mθϕ=0.20; Fault plane solution: M0=2.31000×10^16 NP1: ϕs=234.43000°, δ87.01000°, λ1.79000°. NP2: ϕs=144.33000°, δ88.21000°, λ177.01000°. Principal axes: T 2.6215, Plg3.0000°, Azm99.0000°; N -0.8590, Plg87.0000°, Azm293.0000°; P -1.7625, Plg1.0000°, Azm189.0000°;*

*GCMT **24** 23:38:17.0±0.3, 1.65N±0.02×132.80E±0.02, h22km±1km, MW4.9/80, Moment Tensor Solution. s26, c30; s80, c117; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.41±.18; Mθθ=2.18±.11; Mϕϕ=3.58±.14; Mrθ=0.03±.20; Mθϕ=0.72±.10; Mϕr=0.37±.18; Best double couple: M0=2.98600×10^16 NP1: ϕs=232.00000°, δ84.00000°, λ-1.00000°. NP2: ϕs=322.00000°, δ89.00000°, λ-174.00000°. Principal axes: T 3.6960, Plg4.0000°, Azm97.0000°; N -1.4300, Plg83.0000°, Azm328.0000°; P -2.2760, Plg5.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **24** 23:38:20.5±3.4, 1.61N×133.03E, h55km±33km, mb4.2/15, mbtmp4.6/19, ML3.5/3, MS3.7/27 Error ellipse: s-maj=22.1km s-min=13.2km az=73.0*

ISC 24 23:38:18.5±0.4, 1.60N±0.05×132.94E±0.05, h35km, n229, σ1.599/173, mb4.9/68, MS3.8/34, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**2.97**	**214**	P		**Pn**	**23 39 00.0**	**-3.1**
RKPI	**Ransiki, Papua**	**3.33**	**158**	P		**Pn**	**23 39 07.5**	**-0.6**
BAKI	**Biak**	**4.21**	**131**	P		**Pn**	**23 39 18.6**	**-1.7**
FAKI	**Fak Fak**	**4.54**	**189**			**Pn**	**23 39 22.8**	**-2.0**
FAKI	**Fak Fak**	**4.54**	**189**	P		**Pn**	**23 39 24.1**	**-0.7**
FAKI	**Fak Fak**	**4.54**	**189**	P		**Pn**	**23 39 23.9**	**-0.9**
SRPI	**Serui, Papua**	**4.77**	**136**	P		**Pn**	**23 39 29.2**	**+1.2**
KMPI	**Kaimana, Papua**	**5.28**	**172**	P		**Pn**	**23 39 34.4**	**-0.6**
	2.3nm2µm6µm576nm,0.8s							
TNTI	**Ternate**	**5.63**	**262**	Pn		**Pn**	**23 39 37.8**	**-2.0**
TNTI	**Ternate**	**5.63**	**262**	P		**Pn**	**23 39 38.6**	**-1.2**
TNTI	**Ternate**	**5.63**	**262**	P		**Pn**	**23 39 37.5**	**-2.3**
	0.7nm2µm178nm,1.0s							
MSAI	**Masohi**	**6.34**	**219**	P		**Pn**	**23 39 49.9**	**+0.3**
BNDI	**Bandanaira**	**6.80**	**206**	P		**Pn**	**23 39 55.3**	**-0.5**
BNDI	**Bandanaira**	**6.80**	**206**	P		**Pn**	**23 39 55.3**	**-0.5**
AAI	**Ambon**	**7.08**	**222**	P		**Pn**	**23 39 59.4**	**-0.3**
	1.2nm3µm296nm,0.9s							
NLAI	**Namlea**	**7.56**	**231**	P		**Pn**	**23 40 05.9**	**-0.4**
	0.8nm2µm211nm,0.5s							
SGSI	**Sangihe**	**7.69**	**286**	P		**Pn**	**23 40 05.6**	**-2.5**
	7µm453nm,0.9s							
SANI	**Sanana**	**7.84**	**242**	P		**Pn**	**23 40 08.2**	**-1.9**
SANI	**Sanana**	**7.84**	**242**	P		**Pn**	**23 40 07.5**	**-2.6**
JAY	**Jayapura**	**8.77**	**118**	P		**Pn**	**23 40 24.5**	**+1.5**
	1.8nm,0.3s,baz=136,slow=22,SNR=9.4							
JAY				S		**Sn**	**23 41 53.8**	**-7.0**
	24nm,1.0s,baz=46,slow=12,SNR=1.7							
JAY				LR		LR	23 43 30.1	
	comp=Z,880nm,19.4s,baz=340,slow=36							
	40nm,0.7s							
JAY	**Jayapura**	**8.77**	**118**	P		**Pn**	**23 40 22.9**	**-0.1**
	41nm,0.8s							
KMSI	**Cibinong**	**9.01**	**264**	P		**Pn**	**23 40 24.0**	**-2.3**
	23nm,0.7s							
DAV	**Davao City (W)**	**9.13**	**307**	LR		LR	23 43 36.1	
	comp=Z,667nm,21.5s,baz=70,slow=34							
SAUI	**Saumlaki**	**9.66**	**190**	Pn		**Pn**	**23 40 31.6**	**-3.5**
SAUI	**Saumlaki**	**9.66**	**190**	P		**Pn**	**23 40 36.5**	**+1.4**
SAUI	**Saumlaki**	**9.66**	**190**	P		**Pn**	**23 40 35.1**	**0.0**
LUWI	**Luwuk**	**10.50**	**256**	Pn		**Pn**	**23 40 42.6**	**-4.1**
LUWI	**Luwuk**	**10.50**	**256**	P		**Pn**	**23 40 43.7**	**-2.9**
	147nm,0.9s							
MRSI	**Marisa**	**11.05**	**264**	P		**Pn**	**23 40 50.8**	**-3.4**
	1µm51nm,0.9s							
APSI	**Ampana**	**11.56**	**258**	P		**Pn**	**23 40 58.7**	**-2.5**
	1µm148nm,0.8s							
TOLI2	**Tolitoli**	**12.16**	**268**	Pn		**Pn**	**23 41 06.4**	**-3.1**
TOLI2	**Tolitoli**	**12.16**	**268**	P		**Pn**	**23 41 07.7**	**-1.7**
MPSI	**Mapaga**	**13.10**	**265**	P		**Pn**	**23 41 19.5**	**-2.7**
PCI	**Palu**	**13.34**	**259**	P		**Pn**	**23 41 23.1**	**-2.4**
TTSI	**Tana Toraja**	**13.90**	**251**	P		**Pn**	**23 41 30.8**	**-2.4**
	1µm49nm,0.9s							
DRS	**Darwin Rock St**	**14.09**	**188**	P		**Pn**	**23 41 33.3**	**-2.4**
BNSI	**Bone**	**14.14**	**245**	P		**Pn**	**23 41 34.5**	**-1.9**
	43nm,1.1s							
KDU	**Kakadu**	**14.20**	**182**	P		Pn	23 41 32.0	-5.3
SOEI	**Soe**	**14.21**	**217**	Pn		**Pn**	**23 41 35.4**	**-2.1**
SOEI	**Soe**	**14.21**	**217**	P		**Pn**	**23 41 37.9**	**+0.4**
SOEI	**Soe**	**14.21**	**217**	P		**Pn**	**23 41 39.3**	**+1.8**
	131nm,1.0s							
SPSI	**Sidrap Palu**	**14.28**	**247**	P		**Pn**	**23 41 37.0**	**-1.3**
	1µm88nm,0.7s							
MTN	**Manton Dam**	**14.46**	**187**	P		**Pn**	**23 41 37.9**	**-3.0**
	comp=Z,86nm,0.7s							
MTN	**Manton Dam**	**14.46**	**187**	Pn		**Pn**	**23 41 36.7**	**-4.1**
BKSI	**Bulukumba**	**14.53**	**242**	P		**Pn**	**23 41 40.7**	**-1.1**
	comp=Z,41nm,1.0s							
BSSI	**Bau Bau, Buton**	**14.62**	**238**	P		**Pn**	**23 41 41.8**	**-1.1**
KAPI	**Kappang**	**14.72**	**243**	P		**Pn**	**23 41 45.8**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=55,slow=13,SNR=11							
	comp=Z,10.0nm,0.8s							
KAPI	**Kappang**	**14.72**	**243**	Pn		**Pn**	**23 41 43.0**	**-1.4**
MMRI	**Maumere**	**14.74**	**226**	P		**P**	**23 41 48.3**	**-1.9**
MMRI	**Maumere**	**14.74**	**226**	P		**Pn**	**23 41 46.0**	**+1.4**
MMRI	**Maumere**	**14.74**	**226**	P		**Pn**	**23 41 46.5**	**+1.9**
	comp=Z,76nm,0.9s							
BATI	**Baumata**	**14.93**	**218**	P		**Pn**	**23 41 49.4**	**+2.3**
	comp=Z,52nm,0.6s,baz=104,slow=1.7,SNR=9.1							
BATI				S		**Sn**	**23 44 36.0**	**+4.5**
	comp=Z,11nm,0.3s,baz=149,slow=5.8,SNR=2.1							
BATI	**Baumata**	**14.93**	**218**	P		**Pn**	**23 41 45.1**	**-2.0**
	comp=Z,74nm,1.1s							
EDFI	**Ende, Flores**	**15.21**	**227**	P		**Pn**	**23 41 50.1**	**-0.9**
	comp=Z,42nm,1.1s							
KNRA	**Kununurra**	**17.66**	**193**	P		**Pn**	**23 42 17.3**	**-4.5**
KNRA	**Kununurra**	**17.66**	**193**	Pn		**Pn**	**23 42 17.3**	**-4.5**
KNRA				IAmb		IAmb	23 42 25.8	
	comp=Z,153nm,0.8s							
PMG	**Port Moresby**	**17.89**	**128**	P		**P**	**23 42 26.0**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=323,slow=7.8,SNR=30							
PMG				LR		LR	23 50 00.9	
	comp=Z,366nm,20.9s,baz=304,slow=39							
	comp=Z,50nm,0.9s							
PMG	**Port Moresby**	**17.89**	**128**			**P**	**23 42 25.8**	**+0.6**
PMG				IAmb		IAmb	23 42 27.9	
	comp=Z,187nm,1.3s							
PMG	**Port Moresby**	**17.89**	**128**	P		**P**	**23 42 26.5**	**+1.3**
COEN	**Coen**	**18.49**	**147**	P		**P**	**23 42 31.8**	**+0.1**
	comp=Z,55nm,1.2s							
COEN	**Coen**	**18.49**	**147**	P		**Pn**	**23 42 32.9**	**+0.8**
COEN	**Coen**	**18.49**	**147**	P		**Pn**	**23 42 34.3**	**+2.2**
BBKI	**Banjar Baru**	**18.78**	**254**	P		**Pn**	**23 42 35.7**	**+0.1**
	comp=Z,96nm,1.3s							
RABL	**Rabaul**	**20.05**	**107**	Pn		**P**	**23 42 49.6**	**+0.7**
RABL				IAmb		IAmb	23 42 58.4	
	comp=Z,69nm,0.6s							
SBUM	**Sibu**	**20.72**	**273**			**P**	**23 42 54.9**	**-1.3**
SBUM				IAmb		IAmb	23 43 02.9	
	comp=Z,105nm,1.2s							
SBUM	**Sibu**	**20.72**	**273**	P		Pn	23 42 57.8	-0.9
FITZ	**Fitzroy Crossi**	**20.85**	**200**	P		**P**	**23 42 57.6**	**+0.1**
	comp=Z,31nm,1.0s							
FITZ	**Fitzroy Crossi**	**20.85**	**200**	P		**P**	**23 42 58.0**	**+0.5**
	comp=Z,123nm,1.0s,baz=30,slow=10,SNR=82							
	comp=Z,123nm,1.0s							
FITZ	**Fitzroy Crossi**	**20.85**	**200**	P		**P**	**23 42 56.3**	**-1.2**
FITZ	**Fitzroy Crossi**	**20.85**	**200**	P		**P**	**23 42 58.3**	**+0.8**
JAGI	**Jajag, Banyuwa**	**21.23**	**242**	P		**P**	**23 42 59.8**	**-1.9**
JAGI				IAmb		IAmb	23 43 19.9	
	comp=Z,140nm,1.8s							
JAGI	**Jajag, Banyuwa**	**21.23**	**242**	P		**P**	**23 43 02.7**	**+1.0**
WB0	**Warramunga Arr**	**21.28**	**176**	P		**P**	**23 43 01.3**	**-0.9**
WRAB	**Tennant Creek**	**21.45**	**176**	P		**P**	**23 43 02.8**	**-1.1**
WRAB	**Tennant Creek**	**21.45**	**176**	P		**P**	**23 43 04.2**	**+0.3**
WRA	**Warramunga Arr**	**21.45**	**176**	P		**P**	**23 43 03.8**	**-0.2**
	comp=Z,107nm,1.0s,baz=355,slow=11,SNR=43							
WRA				S		**S**	**23 46 56.5**	**-3.8**
	comp=Z,0.8nm,0.7s,baz=358,slow=23,SNR=1.4							
	comp=Z,107nm,1.0s							
WRA	**Warramunga Arr**	**21.45**	**176**	P		**P**	**23 43 00.9**	**-3.1**
WR8	**Warramunga Arr**	**21.48**	**176**	P		**P**	**23 43 03.9**	**-0.3**
MTSU	**Mount Surprise**	**22.58**	**151**	P		**P**	**23 43 17.7**	**+1.6**
	comp=Z,13nm,0.8s							
MTSU	**Mount Surprise**	**22.58**	**151**	P		**P**	**23 43 19.5**	**+3.3**
QIS	**Mount Isa**	**22.97**	**164**	P		**P**	**23 43 18.1**	**-2.0**
	comp=Z,32nm,0.8s							
QIS	**Mount Isa**	**22.97**	**164**	P		**P**	**23 43 19.8**	**-0.4**
SMRI	**Semarang**	**24.04**	**249**	P		**P**	**23 43 31.1**	**+0.5**
SMRI	**Semarang**	**24.04**	**249**	P		**P**	**23 43 33.2**	**+2.6**
AS31	**Alice Springs**	**25.13**	**178**	P		**P**	**23 43 39.8**	**-0.7**
ASAR	**Alice Springs**	**25.13**	**178**	P		**P**	**23 43 40.6**	**+0.1**
	comp=Z,48nm,0.8s,baz=1.2,slow=13,SNR=97							
ASAR				S		**S**	**23 48 07.9**	**+4.7**
	comp=Z,0.2nm,0.3s,baz=227,slow=20,SNR=2.0							
ASAR				LR		LR	23 54 16.3	
	comp=Z,258nm,20.7s,baz=8.0,slow=38							
	comp=Z

	comp=Z,210nm,19.2s							
HNS	**HongShan**	**39.39**	**337**	⇑P		**P**	**23 45 48.8**	**+3.9**
HNS	comp=Z,16nm,1.2s			pmax		pmax		
AUDAR	**Daramalan Coll**	**39.67**	**159**	P		**P**	**23 45 50.1**	**+2.8**
CAN	**Canberra**	**39.69**	**159**	P		**P**	**23 45 49.4**	**+1.9**
DZM	**Mont Dzumac**	**40.29**	**128**	*e*LR		LR	23 56 50.8	
	comp=Z,523nm,30.7s							
BJI	**Beijing**	**41.19**	**340**	P		**P**	**23 46 00.0**	**+0.3**
BJI	comp=Z,8.0nm,1.1s			pmax		pmax		
USRK	**Ussuriysk Ar.**	**42.43**	**359**	P		**P**	**23 46 09.6**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=189,slow=8.0,SNR=5.2 comp=Z,3.3nm,0.6s							
HHC	**Hu-ho-hao-te**	**43.60**	**336**	*e*P		**P**	**23 46 20.0**	**+0.5**
HHC	comp=Z,9.0nm,0.6s			pmax		pmax		
HHC	comp=Z,100nm,4.2s			pmax		pmax		
LZDM	**Lanzhou Array**	**43.62**	**325**	P		**P**	**23 46 20.8**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=241,slow=18,SNR=1.2 comp=Z,0.5nm,0.3s							
LZH	**Lanzhou**	**43.63**	**325**	*e*P		P	23 46 10.6	-9.3
LZH				sP		pP	23 46 16.5	-13
LZH				SS		SS	23 56 04.3	+0.9
LZH	comp=Z,16nm,1.1s			pmax		pmax		
LZH	comp=N,240nm,14.9s			LR		LR		
LZH	comp=E,230nm,14.4s			LR		LR		
LZH	comp=Z,270nm,15.1s			LR		LR		
BRDH	**Bariadhala**	**45.23**	**301**	LR		LR	00 06 52.5	
	comp=Z,48nm,19.6s,baz=154,slow=38							
SHL	**Shillong**	**46.15**	**305**	P		**P**	**23 46 39.1**	**-1.1**
SHL	comp=Z,29nm,1.2s			IAmb		IAmb	23 46 42.3	
GTA	**Gaotai**	**48.23**	**325**	*e*P		P	**23 46 57.3**	**+1.1**
GTA				sP		pP	23 47 04.3	-1.1
GTA				PcP		**PcP**	**23 48 28.0**	**+5.0**
GTA	comp=Z,4.0nm,1.4s			pmax		pmax		
GTA	comp=Z,140nm,17.1s			LR		LR		
ULN	**Ulaanbaatar**	**51.24**	**338**	P		**P**	**23 47 18.7**	**-0.2**
ULN	comp=Z,19nm,1.2s			IAmb		IAmb	23 47 29.3	
EVN	**Everest**	**51.26**	**305**	P		**P**	**23 47 19.3**	**-0.7**
EVN	comp=Z,20nm,1.2s			IAmb		IAmb	23 47 29.8	
SONM	**Songino Array**	**51.47**	**337**	P		**P**	**23 47 20.5**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=157,slow=6.8,SNR=6.3							
SONM	comp=Z,79nm,18.0s,baz=154,slow=38 comp=Z,1.4nm,0.8s			LR		LR	00 10 49.3	
PETK	**Petropavlovsk-**	**55.29**	**18**	P		**P**	**23 47 47.8**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=339,slow=24,SNR=4.3							
PETK	comp=Z,48nm,21.7s,baz=202,slow=32 comp=Z,2.8nm,0.6s			LR		LR	00 07 53.7	
URZ	**Urewera**	**56.82**	**139**	LR		LR	00 12 46.0	
	comp=Z,113nm,20.1s,baz=304,slow=36							
WMQ	**Urumqi**	**58.09**	**323**	*e*P		**P**	**23 48 11.0**	**+2.4**
YAK	**Yakutsk**	**60.33**	**358**	P		**P**	**23 48 23.0**	**-0.6**
YAK	comp=Z,17nm,0.8s			IAmb		IAmb	23 48 26.2	
MKAR	**Makanchi Array**	**62.89**	**323**	P		**P**	**23 48 41.7**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=114,slow=7.5,SNR=16 comp=Z,2.6nm,0.7s							
MKAR	**Makanchi Array**	**62.89**	**323**	P		**P**	**23 48 40.4**	**-0.9**
MAKZ	**Makanchi**	**63.09**	**323**	P		**P**	**23 48 41.3**	**-1.2**
MAKZ	comp=Z,14nm,0.8s			IAmb		IAmb	23 48 52.6	
KSH	**Kashi**	**63.95**	**314**	P		**P**	**23 48 48.6**	**+0.1**
KSH				sP		sP	23 48 59.1	-2.7
KSH	comp=Z,4.0nm,1.5s			pmax		pmax		
NIL	**Nilore**	**64.14**	**307**			**P**	**23 48 52.6**	**+2.8**
ZAA0	**Zalesovo Array**	**65.37**	**331**	P		**P**	**23 48 56.3**	**-1.0**
ZALV	**Zalesovo Beam**	**65.37**	**331**	P		**P**	**23 48 56.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=105,slow=5.2,SNR=10 comp=Z,1.9nm,0.6s							
ZALV	**Zalesovo Beam**	**65.37**	**331**	P		**P**	**23 48 56.3**	**-1.0**
AAK	**Ala-Archa**	**66.12**	**317**	P		**P**	**23 49 02.6**	**-0.1**
AAK	comp=Z,12nm,1.4s			IAmb		IAmb	23 49 15.6	
AAK	**Ala-Archa**	**66.12**	**317**	IAMs_20		IAMs_20	00 17 58.0	
	comp=Z,112nm,20.0s							
KURK	**Kurchatov**	**66.92**	**326**	P		**P**	**23 49 07.1**	**-0.2**
KURBB	**Kurchatov Arra**	**66.92**	**326**	P		**P**	**23 49 07.7**	**+0.3**
	comp=Z,6.8nm,0.8s,baz=119,slow=5.9,SNR=27 comp=Z,6.8nm,0.8s							
DRK	**Karamyk**	**66.98**	**313**	P		**P**	**23 49 07.9**	**-0.5**
DRK	comp=Z,12nm,0.7s			IAmb		IAmb	23 49 18.6	
KBL	**Kabul**	**67.75**	**307**	P		**P**	**23 49 12.2**	**-1.0**
GAR	**Garm**	**67.94**	**312**	P		**P**	**23 49 13.1**	**-1.1**
CHGR	**Chuyangaron**	**68.71**	**311**	P		**P**	**23 49 17.6**	**-1.4**
KK31	**Karatay Array**	**69.04**	**316**	P		**P**	**23 49 20.5**	**-0.4**
KK31	comp=Z,11nm,0.8s			IAmb		IAmb	23 49 30.7	
KKAR	**Karatay Array**	**69.04**	**316**	P		**P**	**23 49 20.0**	**-0.8**
RAR	**Rarotonga**	**69.50**	**113**	LR		LR	00 18 39.5	
	comp=Z,17nm,19.0s,baz=209,slow=35							
BVAR	**Borovoye Array**	**72.52**	**326**	P		**P**	**23 49 42.2**	**+0.4**
	comp=Z,8.4nm,0.7s,baz=131,slow=4.1,SNR=32 comp=Z,8.4nm,0.7s							
HRA	**Herat**	**73.21**	**305**	P		**P**	**23 49 45.4**	**-1.2**
HRA	comp=Z,24nm,1.6s			IAmb		IAmb	23 49 50.5	
AB31	**Akbulak array**	**77.73**	**320**	P		**P**	**23 50 10.3**	**-1.6**
ABKAR	**Akbulak array**	**77.73**	**320**	P		**P**	**23 50 10.9**	**-1.0**
PPT2	**Papeete2**	**78.56**	**108**	*e*SS		SS	00 05 12.9	-3.4
PPT2	comp=Z,40nm,24.0s			*e*LR		LR	00 14 33.7	
PPT2	comp=Z,144nm,29.0s			*e*LR		LR	00 14 39.2	
	comp=Z,131nm,30.8s							
K17K	**Iditarod**	**78.96**	**26**	IAmb		IAmb	23 50 30.5	
TBI	comp=Z,20nm,1.2s **Tubuai**	**79.26**	**114**	*e*SS		SS	00 05 22.8	-3.6
TBI	comp=Z,1μm,28.8s			*e*LR		LR	00 14 51.8	
ARTI	comp=Z,965nm,27.5s **Arti**	**80.15**	**327**	P		**P**	**23 50 24.1**	**-0.9**
C19K	**Lookout Ridge**	**80.60**	**20**	P		**P**	**23 50 27.7**	**+0.4**
VNDA	**Vanda**	**80.60**	**174**	P		**P**	**23 50 27.4**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=318,slow=6.3,SNR=15							
VNDA	comp=Z,92nm,19.2s,baz=348,slow=35 comp=Z,3.6nm,0.8s			LR		LR	00 25 30.1	
VNDA	**Vanda**	**80.60**	**174**	P		**P**	**23 50 26.3**	**-0.8**
D19K	**Kuna River**	**80.90**	**20**	IAmb		IAmb	23 50 32.7	
M20K	comp=Z,17nm,1.1s **Styx River**	**81.05**	**27**	IAmb		IAmb	23 50 38.6	
D20K	comp=Z,12nm,1.1s **Etivluk River**	**81.49**	**20**	IAmb		IAmb	23 50 36.0	
IMAR	comp=Z,26nm,1.3s **Indian Mountai**	**81.79**	**23**	P		**P**	**23 50 32.3**	**-1.3**
G21K	**Allakaket**	**82.02**	**23**	IAmb		IAmb	23 50 39.0	
L22K	comp=Z,31nm,1.9s **Petersville**	**82.27**	**27**	IAmb		IAmb	23 50 39.0	
B21K	comp=Z,25nm,1.5s **Ikpikpuk River**	**82.44**	**20**	IAmb		IAmb	23 50 38.1	
H22K	comp=Z,14nm,1.1s **Ishtalitna Cre**	**82.72**	**24**	IAmb		IAmb	23 50 43.6	
PMR	comp=Z,14nm,1.4s **Palmer**	**82.86**	**28**	IAmb		IAmb	23 50 41.5	
MCK	comp=Z,23nm,1.2s **McKinley**	**83.32**	**26**	IAmb		IAmb	23 50 44.0	
G23K	comp=Z,15nm,1.2s **Bananza Creek**	**83.42**	**23**	IAmb		IAmb	23 50 58.7	
H23K	comp=Z,15nm,1.3s **Yukon River**	**83.44**	**24**	IAmb		IAmb	23 50 47.1	
WRH	comp=Z,28nm,1.6s **Wood River Hil**	**83.81**	**25**	IAmb		IAmb	23 50 47.0	
DHY	comp=Z,19nm,1.1s **Denali Highway**	**83.91**	**27**	IAmb		IAmb	23 50 48.6	
CCB	comp=Z,12nm,1.2s **Clear Creek Bu**	**83.96**	**25**	IAmb		IAmb	23 50 47.5	
TOLK	comp=Z,19nm,1.2s **Toolik Lake Re**	**83.97**	**21**	IAmb		IAmb	23 50 48.5	
MAW	comp=Z,9.6nm,1.1s **Mawson**	**83.97**	**201**	LR		LR	00 25 27.1	
	comp=Z,42nm,20.9s,baz=79,slow=34							
ILAR	**Eielson Array**	**84.37**	**25**	P		**P**	**23 50 45.0**	**-1.9**
	comp=Z,3.4nm,1.0s,baz=247,slow=4.6,SNR=25							
ILAR	comp=Z,30nm,20.0s,baz=186,slow=32 comp=Z,3.4nm,1.0s			LR		LR	00 22 44.0	
ILAR	**Eielson Array**	**84.37**	**25**	P		**P**	**23 50 44.9**	**-2.1**
F24K	**Squaw Lake**	**84.39**	**22**	IAmb		IAmb	23 50 51.0	
G24K	comp=Z,8.6nm,1.1s **Hadweenzic Riv**	**84.42**	**23**	IAmb		IAmb	23 50 51.4	
K24K	comp=Z,13nm,1.2s **Donnelly Dome**	**84.72**	**26**	IAmb		IAmb	23 50 57.6	
J25K	comp=Z,14nm,1.0s **Salcha River,**	**84.99**	**25**	IAmb		IAmb	23 50 51.5	
E25K	comp=Z,24nm,1.8s **Arctic Village**	**85.35**	**22**	IAmb		IAmb	23 50 56.5	
GLB	comp=Z,17nm,1.6s **Gilahina Butte**	**85.37**	**29**	IAmb		IAmb	23 50 56.0	
SCRK	comp=Z,20nm,1.2s **Sand Creek**	**85.52**	**26**	P		**P**	**23 50 52.2**	**-0.7**
SCRK	comp=Z,18nm,1.4s			IAmb		IAmb	23 50 55.8	
MENT	**Mentasta**	**85.55**	**27**	IAmb		IAmb	23 51 04.9	
BMAR	comp=Z,20nm,1.4s **Burnt Mountain**	**85.64**	**23**	P		**P**	**23 50 53.2**	**-0.1**
BARN	**Barnard Glacie**	**86.38**	**29**	IAmb		IAmb	23 51 09.7	
L27K	comp=Z,20nm,1.1s **Beaver Creek,**	**86.42**	**27**	IAmb		IAmb	23 51 01.4	
BCAR	comp=Z,9.7nm,1.1s **Beaver Creek A**	**86.44**	**27**	P		**P**	**23 50 57.1**	**-0.3**
I27K	**Kandik River**	**86.66**	**25**	IAmb		IAmb	23 51 03.3	
TAOE	comp=Z,10nm,1.0s **Nuku Hiva Isla**	**87.19**	**99**	*e*LR		LR	00 18 37.8	
GNI	comp=Z,230nm,23.5s **Garni**	**87.60**	**310**	LR		LR	00 37 45.2	
L29M	comp=Z,13nm,18.1s,baz=94,slow=41 **L29M**	**88.10**	**27**	IAmb		IAmb	23 53 10.2	
KBZ	comp=Z,19nm,1.6s **Khabaz**	**88.94**	**314**	LR		LR	00 36 34.6	
QSPA	comp=Z,31nm,18.8s,baz=82,slow=39 **South Pole Qui**	**91.52**	**180**	LR		LR	00 32 46.7	
	comp=Z,126nm,20.3s,baz=1.0,slow=36							
QSPA	**South Pole Qui**	**91.52**	**180**	P		**P**	**23 51 25.2**	**+3.9**
QSPA	comp=Z,6.2nm,1.0s			IAmb		IAmb	23 51 36.8	
SPITS	**Spitsbergen Ar**	**93.73**	**349**	LR		LR	00 36 21.5	
ASF	comp=Z,35nm,20.1s,baz=67,slow=37 **Jabal al Asfar**	**94.27**	**302**	LR		LR	00 40 19.2	
ARCES	comp=Z,13nm,19.6s,baz=101,slow=39 **ARCESS Array B**	**94.55**	**340**	LR		LR	00 36 52.0	
	comp=Z,42nm,21.9s,baz=74,slow=37							
MMAI	**Mount Meron Ar**	**95.46**	**303**	LR		LR	00 40 41.2	
EIL	comp=Z,15nm,18.9s,baz=70,slow=39 **Elat**	**96.16**	**300**	LR		LR	00 42 53.0	
FINES	comp=Z,30nm,18.5s,baz=177,slow=40 **FINESS Array B**	**96.60**	**332**	LR		LR	00 38 01.6	
AKASG	comp=Z,47nm,20.2s,baz=70,slow=37 **Malin Array Be**	**97.43**	**321**	LR		LR	00 39 17.1	
	comp=Z,26nm,21.5s,baz=52,slow=38							
STHS	**Stebnicka Huta**	**102.73**	**322**	*e*PDIFF		**Pdif**	**23 52 12.6**	**+0.2**
PSZ	**Piszkesteto**	**104.05**	**320**	IAMs_20		IAMs_20	00 43 00.0	
	comp=Z,117nm,21.0s							
CLL	**Collm**	**106.95**	**325**	*e*SS		SS	00 12 04.0	+3.2
CLL				*ex*		x	00 21 54.0	
CLL				AMS		AMS	00 37 00.0	
CLL	comp=N,100nm,19.5s			AMS		AMS	00 37 00.0	
CLL	comp=E,100nm,20.2s			LV			00 43 00.0	
	comp=Z,100nm,18.8s							
TORD	**Torodi Ar. Bea**	**129.47**	**288**			PKPpre	23 57 11.9	
CO01	**Juntas del Tor**	**144.29**	**144**	PKPdf		**PKPab**	**23 57 50.0**	**+0.1**
LCO	**Las Campanas**	**144.63**	**143**	PKPdf		PKPbc	23 57 51.7	+0.4
AC05	**El Transito**	**145.02**	**143**			**PKPbc**	**23 57 50.2**	**-2.2**

CATAC 24 23:47:34.4±0.4, 11°N±2°×8°7W±°, *h*9km±2km, M3.2/24, MLv3.2/24, Error ellipse: s-maj=5.2km s-min=3.0km az=44.1, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**0.90**	**55**	P	Pb	23 47 52.3	+0.1
COPN	**Copaltepe**	**0.96**	**12**	P	Pg	23 47 53.0	+0.1
MASN	**Masaya**	**0.97**	**40**	P	Pb	23 47 53.8	+0.3
MAS3	**Al N del Volca**	**0.99**	**37**	P	Pg	23 47 52.8	-0.6
MAS3				S	Sg	23 48 06.5	+0.2
ABCN	**Banco Central**	**1.00**	**28**	P	Pg	23 47 53.5	-0.1
ABCN	**Banco Central**	**1.00**	**28**	S	Sb	23 48 07.1	-0.1
UNAN	**Cigeo UNAN**	**1.01**	**30**	P	Pg	23 47 53.8	-0.1
UNAN				S	Sb	23 48 07.7	+0.3
MGAN	**Managua**	**1.05**	**30**	P	Pg	23 47 54.2	-0.5
MGAN	**Managua**	**1.05**	**30**	S	Sb	23 48 08.0	-0.2
AMTN	**Mateare**	**1.05**	**19**	S	Sb	23 48 09.2	+0.4
AMTN	**Mateare**	**1.05**	**19**	P	Pg	23 47 54.3	-0.5
APQ2	**Apoyeque**	**1.06**	**25**	P	Pg	23 47 54.2	-0.6
APQ2				S	Sg	23 48 08.4	-0.2
WILN	**Americas 2**	**1.09**	**33**	P	Pg	23 47 54.9	-0.5
WILN				S	Sg	23 48 09.4	-0.2
JAPN	**Al SSO del Vol**	**1.13**	**75**	P	Pg	23 47 55.6	-0.5
JAPN				S	Sn	23 48 11.5	-0.5
MORN	**Al O del Volca**	**1.16**	**74**	P	Pb	23 47 55.8	-0.9
MORN				S	Sb	23 48 12.0	+0.2
CONN	**Concepcion**	**1.19**	**74**	P	Pb	23 47 55.8	-1.3
CONN				S	Sn	23 48 13.1	-0.4
MOM2	**El Cardon**	**1.23**	**14**	P	Pn	23 47 56.7	-1.1
MOM2				S	Sb	23 48 13.6	-0.2
CARN	**Rivas**	**1.24**	**92**	P	Pn	23 47 57.3	-0.7
CARN				S	Sb	23 48 14.1	0.0
CNGA	**Al SSO del Vol**	**1.25**	**4**	P	Pn	23 47 57.3	-0.9
CNGA				S	Sb	23 48 14.4	-0.2
CNGN	**Cerro Negro**	**1.26**	**4**	P	Pn	23 47 57.3	-1.0
CNGN	**Cerro Negro**	**1.26**	**4**	S	Sn	23 48 15.4	0.0
MOM3	**MOM3**	**1.30**	**12**	P	Pn	23 47 58.3	-0.4
MOM3				S	Sn	23 48 16.3	+0.1
POLN	**Al Sur del Vol**	**1.41**	**359**	P	Pn	23 47 58.7	-1.6
POLN				S	Sb	23 48 18.8	-0.2
PKGN	**Cerro Pekin**	**1.44**	**353**	P	Pn	23 48 00.6	-0.1
PKGN				S	Sb	23 48 19.8	-0.1
BOAB	**BOACO BROADBAN**	**1.63**	**42**	P	Pn	23 48 02.1	-1.3
BOAB	**BOACO BROADBAN**	**1.63**	**42**	S	Sn	23 48 24.5	0.0
LIMN	**Finca el Limon**	**1.86**	**13**	P	Pn	23 48 05.6	-1.0
LIMN				S	Sn	23 48 31.2	+0.8
MATN	**Matagalpa**	**1.89**	**27**	S	Sn	23 48 31.0	+0.2
CSGN	**Cosiguina Volc**	**1.89**	**337**	P	Pn	23 48 07.2	+0.3
CSGN				S	Sb	23 48 32.2	-0.6
RCPN	**Sur Rio San Ju**	**2.38**	**17**	S	Sn	23 48 44.0	+1.0
RCPN	**Sur Rio San Ju**	**2.38**	**17**	P	Pn	23 48 13.1	-0.6

WEL 25 00:03:49.7±0.8, 35°S±16°×17°9E±2°1, *h*251km±15km, M3.8/15, mB4.0/1, ML3.8/18, MLv3.8/15, Mw(mB)3.0/1, Error ellipse: s-maj=32.3km s-min=10.0km az=126.1, confirmed, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.47**	**192**	P	Pn	00 04 35.6	-1.0
MXZ				S	S	00 05 12.7	-1.1
WMGZ	**Waiomatatini S**	**2.70**	**189**	P	Pn	00 04 38.9	-0.1
WMGZ				S	S	00 05 19.3	+1.2
HAZ	**Te Kaha**	**2.77**	**200**	P	Pn	00 04 39.3	-0.4
HAZ				S	S	00 05 19.7	+0.3
PKGZ	**Pakihiroa**	**2.81**	**194**	P	Pn	00 04 39.8	-0.3
PKGZ				S	S	00 05 20.6	+0.4
PUZ	**Puketiti**	**2.98**	**191**	P	Pn	00 04 41.7	-0.2
PUZ				S	S	00 05 23.7	+0.4
RUGZ	**Raukumara Rang**	**3.00**	**200**	P	Pn	00 04 41.8	-0.5
RUGZ				S	S	00 05 24.0	0.0
TWGZ	**Tauwhareparae**	**3.13**	**194**	P	Pn	00 04 43.8	+0.2
TWGZ				S	S	00 05 27.4	+1.1
MWZ	**Matawai**	**3.38**	**200**	P	Pn	00 04 46.4	0.0
MWZ				S	S	00 05 32.3	+0.8
CNGZ	**Carnagh Statio**	**3.39**	**190**	P	Pn	00 04 46.5	+0.1
URZ	**Urewera**	**3.44**	**205**	P	Pn	00 04 46.7	-0.3
URZ				S	S	00 05 33.8	+1.1
RIGZ	**Rimuhau**	**3.68**	**195**	P	Pn	00 04 49.9	+0.1
RIGZ				S	S	00 05 38.7	+1.1
MUGZ	**Murupara**	**3.76**	**207**	P	Pn	00 04 51.5	+0.8
MUGZ				S	S	00 05 40.7	+1.5
RTZ	**Ruatahuna**	**3.81**	**204**	P	Pn	00 04 51.0	-0.3
RTZ				S	S	00 05 39.8	-0.6
SNGZ	**Shannon Statio**	**3.85**	**199**	P	Pn	00 04 51.6	-0.2
SNGZ				S	S	00 05 42.6	+1.4
MTHZ	**Maungataniwha**	**4.07**	**204**	P	Pn	00 04 54.7	+0.4
MTHZ				S	S	00 05 45.5	-0.2
NMHZ	**Naumai**	**4.30**	**203**	P	Pn	00 04 57.7	+0.6
NMHZ				S	S	00 05 51.4	+0.6
ARHZ	**Aropaoanui**	**4.40**	**200**	P	Pn	00 04 58.8	+0.6
ARHZ				S	S	00 05 53.8	+1.1
BKZ	**Black Stump Fm**	**4.47**	**205**	P	Pn	00 04 59.2	+0.2
BKZ				S	S	00 05 53.1	-1.3
MCHZ	**McNeill Hill**	**4.66**	**202**	P	Pn	00 05 01.6	+0.3
MCHZ				S	S	00 06 01.1	+2.9
NTVZ	**North Tongarir**	**4.74**	**213**	P	Pn	00 05 02.5	+0.1
TMVZ	**Te Maari**	**4.74**	**212**	P	Pn	00 05 03.2	+0.8
OTVZ	**Oturere**	**4.80**	**212**	P	Pn	00 05 03.5	+0.4
SNVZ	**South Ngauruho**	**4.83**	**212**	P	Pn	00 05 03.7	+0.2
KAHZ	**Kahuranaki**	**4.93**	**199**	P	Pn	00 05 04.6	0.0
KRHZ	**Kereru**	**4.94**	**204**	P	Pn	00 05 04.0	-0.7
KRHZ				S	S	00 06 03.0	-1.6
PNHZ	**Pukenui**	**5.24**	**204**	P	Pn	00 05 07.5	-0.9
PNHZ				S	S	00 06 08.7	-2.5
PRHZ	**Porangahau**	**5.43**	**199**	P	Pn	00 05 10.7	-0.1
PRHZ				S	S	00 06 16.3	+0.7

*DSN **25** 00:14:50.1±0.8, 27°.23N×57°.99E, h10km, ML2.2/4, Error ellipse: s-maj=19.0km s-min=6.9km az=126.0*
*TEH **25** 00:14:53.3, 27°.45N×57°.90E, h10km± 129km*
*OMAN **25** 00:14:55.0±0.1, 26°.81N×58°.04E, h10km, ml2.6/12, Error ellipse: s-maj=1.5km s-min=0.8km az=358.0*

ISC 25 00:14:47.9±1.9, 27°.21N±0°.06×58°.12E±0°.06, *h*8km±16km, n31, σ1°83/42, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.82**	**334**	Pg	**Pg**	**00 15 03.1**	**-0.8**
IBND	**Bandar-abas**	**1.42**	**280**	Pg	**Pg**	**00 15 15.3**	**0.0**
GENO	**Geno**	**1.74**	**277**	Pg	**Pb**	**00 15 20.4**	**+0.1**
KBAM	**BAM**	**1.94**	**9**	Pg	**Pn**	**00 15 24.0**	**+2.6**
BANOM	**Banah**	**2.07**	**232**	P	**Pn**	**00 15 24.3**	**+1.3**
BANOM				S	**Sb**	**00 15 50.5**	**-1.1**
BANOM	**Banah**	**2.07**	**232**	P	**Pn**	**00 15 23.7**	**+0.7**
SHME	**Shamm**	**2.11**	**237**	P	**Pb**	**00 15 26.1**	**-0.4**
SHME				S	**Sb**	**00 15 52.2**	**-0.6**
SHME	**Shamm**	**2.11**	**237**	P	**Pn**	**00 15 24.5**	**+1.0**
MDH	**Madha**	**2.50**	**221**	P	**Pn**	**00 15 29.2**	**+0.2**
MDH				S	**Sn**	**00 15 57.9**	**-1.8**
MSFE	**Esma-Masafi**	**2.54**	**224**	P	**Pn**	**00 15 30.3**	**+0.7**
MSFE				S	**Sn**	**00 16 01.7**	**+1.0**
CHMN	**Cheshme madani**	**2.69**	**349**	Pn	**Pn**	**00 15 35.5**	**+3.6**
NGRK	**Negar Kerman**	**2.72**	**334**	Pn	**Pb**	**00 15 35.9**	**-1.1**
UOSS	**Minazif**	**2.83**	**218**	P	**Pn**	**00 15 36.0**	**+2.5**
UOSS				S	**Sn**	**00 16 06.4**	**-1.4**
HATD	**Hatta, Dubai**	**2.97**	**217**	P	**Pn**	**00 15 37.7**	**+2.3**
HATD				S	**Sn**	**00 16 09.2**	**-2.0**
ASHO	**Ashiyiah** SNR=5.3	**3.12**	**217**	P	**Pn**	**00 15 40.4**	**+2.9**
ASHO				S	**Sn**	**00 16 14.6**	**-0.4**
ASHO	**Ashiyiah**	**3.12**	**217**	P	**Pn**	**00 15 39.0**	**+1.6**
NGCH	**Negor - Chabah**	**3.28**	**123**	P	Pn	00 15 45.0	+5.4
FAQ	**Al Faqa, Dubai**	**3.34**	**223**	P	**Pn**	**00 15 43.1**	**+2.7**
SOHO	**SOHO**	**3.38**	**205**	P	**Pn**	**00 15 40.9**	**0.0**
SOHO				S	**Sn**	**00 16 18.4**	**-2.8**
ASUD	**Al Ashush, Dub**	**3.59**	**225**	P	**Pn**	**00 15 46.5**	**+2.6**
ASUD				S	**Sn**	**00 16 27.1**	**+0.5**
HOQ	**Hoqain**	**3.68**	**192**	P	**Pn**	**00 15 46.0**	**+0.8**
ALNE	**Al Ain**	**3.79**	**215**	P	**Pn**	**00 15 49.2**	**+2.5**
ALNE				S	**Sn**	**00 16 31.0**	**-0.6**
WSAR	**Wadi Sarin**	**3.98**	**173**	P	**Pn**	**00 15 51.2**	**+1.9**
WSAR				S	**Sn**	**00 16 35.8**	**-0.3**
ARQ	**Araqi** SNR=7.9	**4.11**	**201**	P	**Pn**	**00 15 54.3**	**+3.1**
SMDO	**Samad**	**4.13**	**181**	P	**Pn**	**00 15 52.8**	**+1.4**
BSY	**Bisya**	**4.52**	**191**	P	**Pn**	**00 15 58.2**	**+1.5**
BSY				S	**Sn**	**00 16 47.3**	**-2.2**
WBK	**Wadi Bani Khal** SNR=6.4	**4.64**	**170**	P	**Pn**	**00 15 59.9**	**+1.5**
JMDO	**Jabal Madar**	**4.81**	**180**	P	**Pn**	**00 16 02.2**	**+1.5**
JLN	**Jalan Bani Buh**	**5.17**	**167**	P	**Pn**	**00 16 07.2**	**+1.6**
DOK	**Doka**	**9.30**	**204**	P	**Pn**	**00 17 04.7**	**+2.3**
SHAO	**Shalim**	**9.42**	**195**	P	**Pn**	**00 17 05.6**	**+1.6**

*JMA **25** 00:15:30.4±0.4, 44°N±2°×148°8E±°, h53km, MV3.7/15, SE OFF ETOROFU*

SKHL 25 00:15:30.3±0.3, 44°20N×148°00E, h34km±3km, mb4.5/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.91**	**249**	*i* P	Pb	00 15 57.3	+10
SHO	100nm,0.2s			AMB	AMB	00 15 57.4	
SHO				*e*S	Sb	00 16 09.9	+11
SHO	1μm,0.2s			A	A	00 16 10.5	
SHO	1μm,0.2s			A	A	00 16 10.5	
KUR	**Kuril'sk**	**1.04**	**355**	*i* P	Pn	00 15 48.4	0.0
KUR	130nm,0.3s			AMB	AMB	00 15 49.6	
KUR				*i* S	Sn	00 16 01.9	+0.2
KUR	410nm,0.4s			A	A	00 16 02.7	
KUR	140nm,0.4s			A	A	00 16 02.7	
YUK	**Yuzh-Kuril'sk**	**1.55**	**265**	*e*P	Pn	00 15 54.9	-0.5
YUK	330nm,0.3s			AMB	AMB	00 15 55.8	
YUK				*e*S	Sn	00 16 13.2	-1.1
YUK	430nm,0.4s			A	A	00 16 15.9	
YUK	400nm,0.4s			A	A	00 16 15.9	
NEM2	**Nemuro 2**	**1.83**	**244**	*e*P	Pn	00 16 00.1	+0.7
NEM2				S	Sn	00 16 22.6	+1.2
NMR

SONM	**Songino Array**	**58.56**	**343**	P		**P**	**00 27 49.1**	**-0.4**
	0.7nm,0.8s,baz=165,slow=6.0,SNR=4.4							
	0.7nm,0.8s							
MKAR	**Makanchi Array**	**67.82**	**328**	P		**P**	**00 28 49.9**	**-0.8**
	0.4nm,0.7s,baz=121,slow=5.6,SNR=2.7							
	0.4nm,0.7s							

CATAC ***25*** *00:21:19.3±0.3, 13°N±3°×8°9W±°, h15km, M3.5/23, MLv3.5/23, Error ellipse: s-maj=6.2km s-min=2.1km az=28.5, confirmed*

GCG ***25*** *00:21:22.7±0.3, 12°.65N×88°.82W, h26km±3km, MD3.7*

SNET ***25*** *00:21:22.3±0.8, 12°.67N×88°.76W, h19km, ML3.4*

UCR ***25*** *00:21:23.5±1.9, 12°.63N×88°.48W, h67km±88km, MW3.5*

ISC 25 00:21:20.8±1.4, 12°.56N±0°.05×88°.70W±0°.03, h29km±13km, n89, σ0°79/109, 1C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**0.94**	**25**	*eP*		**Pb**		**00 21 38.5**	**-0.1**
TECA	**Tecapa**	**0.94**	**12**	*eP*		**Pb**		**00 21 38.4**	**-0.4**
RANC	**El Ranchito**	**0.95**	**25**	*eP*		**Pb**		**00 21 38.8**	**-0.1**
VSM	**San Miguel**	**0.95**	**26**	*eP*		**Pb**		**00 21 39.0**	**0.0**
PACA	**Pacayal**	**0.97**	**22**	*eP*		**Pb**		**00 21 39.0**	**-0.2**
PACA				*eS*		**Sb**		**00 21 52.6**	**+0.9**
PACA	**Pacayal**	**0.97**	**22**	P		**Pb**		**00 21 39.2**	**0.0**
TECO	**Alcaldia de Te**	**0.97**	**355**	*eP*		**Pn**		**00 21 38.4**	**-0.1**
TECO				*eS*		**Sb**		**00 21 51.7**	**+0.1**
TECO	**Alcaldia de Te**	**0.97**	**355**	P		**Pn**		**00 21 38.6**	**0.0**
BLLM	**Bellamira**	**0.98**	**27**	*eP*		**Pb**		**00 21 39.1**	**-0.3**
BLLM				*eS*		**Sb**		**00 21 52.5**	**+0.6**
CNRM	**Centro Naciona**	**1.04**	**29**	P		**Pb**		**00 21 39.9**	**-0.4**
CNRM	**Centro Naciona**	**1.04**	**29**	S		**Sb**		**00 21 54.4**	**+0.8**
SNVI	**San Vicente**	**1.05**	**352**	*eP*		**Pn**		**00 21 39.9**	**+0.1**
UESV	**Universidad de**	**1.07**	**355**	*eP*		**Pn**		**00 21 40.1**	**+0.2**
UESV	**Universidad de**	**1.07**	**355**	P		**Pb**		**00 21 40.3**	**-0.5**
UESV	**Universidad de**	**1.07**	**355**	S		**Sb**		**00 21 54.8**	**+0.3**
CNCH	**Conchagua**	**1.10**	**50**	P		**Pn**		**00 21 40.5**	**+0.1**
CNCH	**Conchagua**	**1.10**	**50**	S		**Sb**		**00 21 56.3**	**+0.9**
LALI	**Alcalda de L**	**1.10**	**327**	*eP*		**Pn**		**00 21 39.1**	**-1.2**
LALI				*eS*		**Sn**		**00 21 53.7**	**-0.8**
LALI	**Alcalda de L**	**1.10**	**327**	P		**Pn**		**00 21 40.4**	**+0.1**
LALI	**Alcalda de L**	**1.10**	**327**	S		**Sb**		**00 21 55.5**	**+0.2**
LFRS	**El Faro**	**1.11**	**341**	*eP*		**Pn**		**00 21 40.6**	**0.0**
PANCS	**Alcalda de**	**1.14**	**336**	S		**Sb**		**00 21 56.7**	**+0.1**
PAVA	**Las Pavas**	**1.17**	**348**	*eP*		**Pn**		**00 21 41.6**	**+0.3**
PAVA	**Las Pavas**	**1.17**	**348**	P		**Pb**		**00 21 41.8**	**-0.7**
PAVA	**Las Pavas**	**1.17**	**348**	S		**Sb**		**00 21 57.3**	**0.0**
LOMA	**Loma Larga**	**1.17**	**337**	*eP*		**Pn**		**00 21 41.2**	**-0.2**
LOMA				*eS*		**Sb**		**00 21 57.0**	**-0.4**
LOMA	**Loma Larga**	**1.17**	**337**	P		**Pn**		**00 21 41.5**	**+0.1**
LOMA	**Loma Larga**	**1.17**	**337**	S		**Sb**		**00 21 57.6**	**+0.2**
CSGN	**Cosiguina Volc**	**1.18**	**70**	P		**Pn**		**00 21 40.9**	**-0.6**
CSGN				S		**Sb**		**00 21 57.8**	**+0.1**
CSGN	**Cosiguina Volc**	**1.18**	**70**	*eP*		**Pn**		**00 21 40.8**	**-0.8**
CSGN				*eS*		**Sn**		**00 21 56.2**	**-0.5**
LBRS	**Las Brisas**	**1.22**	**344**	*eP*		**Pn**		**00 21 42.4**	**+0.5**
UDBS	**Universidad Do**	**1.23**	**339**	P		**Pb**		**00 21 42.9**	**-0.6**
UDBS	**Universidad Do**	**1.23**	**339**	S		**Sb**		**00 21 58.7**	**-0.3**
POTN	**Potosi Cosigui**	**1.24**	**69**	P		**Pn**		**00 21 42.2**	**0.0**
POTN				S		**Sb**		**00 21 59.4**	**+0.2**
POTN	**Potosi Cosigui**	**1.24**	**69**	*eP*		**Pn**		**00 21 41.6**	**-0.6**
POTN				*eS*		**Sn**		**00 21 56.8**	**-1.2**
LFU	**La Fuente**	**1.25**	**341**	*eP*		**Pn**		**00 21 42.7**	**+0.3**
UEES	**Universidad Ev**	**1.26**	**335**	P		**Pb**		**00 21 43.4**	**-0.7**
UEES	**Universidad Ev**	**1.26**	**335**	S		**Sb**		**00 21 59.4**	**-0.5**
PMON	**Piamonte**	**1.29**	**332**	*eP*		**Pn**		**00 21 43.2**	**+0.2**
PMON				*eS*		**Sn**		**00 21 59.5**	**+0.1**
PMON	**Piamonte**	**1.29**	**332**	P		**Pn**		**00 21 43.5**	**+0.4**
PIC2	**El Picacho**	**1.29**	**335**	*eP*		**Pn**		**00 21 43.7**	**+0.5**
BOQS	**Boqueron**	**1.29**	**334**	*eP*		**Pn**		**00 21 43.7**	**+0.5**
BOQS				*eS*		**Sb**		**00 22 00.6**	**-0.5**
JAYA	**Jayaque - finc**	**1.31**	**326**	*eP*		**Pn**		**00 21 43.3**	**-0.1**
JAYA				*eS*		**Sn**		**00 21 59.3**	**-0.6**
JAYA	**Jayaque - finc**	**1.31**	**326**	*eP*		**Pn**		**00 21 43.4**	**+0.1**
JAYA				*eS*		**Sn**		**00 21 59.5**	**-0.4**
JAYA	**Jayaque - finc**	**1.31**	**326**	S		**Sn**		**00 22 00.1**	**+0.2**
CEDA	**San Andres**	**1.41**	**331**	S		**Sb**		**00 22 03.3**	**-0.8**
CEVE	**Cerro Verde**	**1.55**	**324**	S		**Sn**		**00 22 06.6**	**+0.6**
SBLS	**San Blas**	**1.56**	**325**	*eP*		**Pn**		**00 21 45.5**	**+0.7**
LLGN	**La Laguna**	**1.61**	**351**	*eP*		**Pn**		**00 21 48.2**	**+0.8**
LLGN	**La Laguna**	**1.61**	**351**	P		**Pn**		**00 21 48.4**	**+1.0**
CRIN	**San Cristobal**	**1.61**	**85**	P		**Pn**		**00 21 47.8**	**+0.4**
CRIN	**San Cristobal**	**1.61**	**85**	S		**Sb**		**00 22 09.3**	**-0.7**
CRIN	**San Cristobal**	**1.61**	**85**	*eP*		**Pn**		**00 21 47.3**	**-0.1**
RTR	**El Retiro**	**1.62**	**325**	*eP*		**Pn**		**00 21 48.6**	**+1.0**
UNIC	**Universidad Ca**	**1.64**	**330**	*eP*		**Pn**		**00 21 48.6**	**+0.8**
UNIC	**Universidad Ca**	**1.64**	**330**	P		**Pn**		**00 21 48.6**	**+0.8**
UNIC	**Universidad Ca**	**1.64**	**330**	S		**Sb**		**00 22 09.2**	**-1.5**
PKGN	**Cerro Pekin**	**1.68**	**86**	P		**Pn**		**00 21 48.0**	**-0.3**
PKGN				S		**Sn**		**00 22 09.0**	**+0.1**
NUBE	**Las Nubes**	**1.70**	**322**	*eP*		**Pn**		**00 21 49.2**	**+0.5**
NUBE				*eS*		**Sn**		**00 22 09.8**	**+0.2**
NUBE	**Las Nubes**	**1.70**	**322**	*i* P		**Pn**		**00 21 49.3**	**+0.6**
NUBE				*eS*		**Sn**		**00 22 10.0**	**+0.5**
NUBE	**Las Nubes**	**1.70**	**322**	P		**Pn**		**00 21 49.2**	**+0.5**
LOAL	**Lomas de Alarc**	**1.77**	**324**	S		**Sb**		**00 22 13.8**	**-1.3**
LOAL	**Lomas de Alarc**	**1.77**	**324**	P		**Pn**		**00 21 50.2**	**+0.6**
FAME	**Alcaldia de Sa**	**1.81**	**315**	P		**Pn**		**00 21 51.0**	**+1.0**
FAME	**Alcaldia de Sa**	**1.81**	**315**	S		**Sn**		**00 22 12.3**	**+0.2**
RBDL	**Robledal**	**1.82**	**328**	*eP*		**Pn**		**00 21 51.4**	**+1.1**
MTO3	**Montecristo**	**1.94**	**341**	*eP*		**Pn**		**00 21 53.0**	**+1.0**
MTO3	**Montecristo**	**1.94**	**341**	P		**Pn**		**00 21 53.0**	**+1.0**
CNGA	**Al SSO del Vol**	**1.95**	**92**	P		**Pn**		**00 21 51.6**	**-0.4**
CNGA				S		**Sn**		**00 22 15.1**	**-0.5**
CNGN	**Cerro Negro**	**1.95**	**92**	P		**Pn**		**00 21 51.5**	**-0.6**
CNGN	**Cerro Negro**	**1.95**	**92**	*eP*		**Pn**		**00 21 51.1**	**-1.0**
CNGN				*eS*		**Sn**		**00 22 16.3**	**+0.7**
TGUH	**Tegucigalpa,Un**	**2.03**	**43**	P		**Pn**		**00 21 54.1**	**+0.9**
COPN	**Copaltepe**	**2.09**	**100**	P		**Pn**		**00 21 53.0**	**-0.9**
COPN	**Copaltepe**	**2.09**	**100**	*eP*		**Pn**		**00 21 53.1**	**-0.9**
COPN				*eS*		**Sn**		**00 22 17.8**	**-1.2**
MOM3	**MOM3**	**2.13**	**91**	P		**Pn**		**00 21 54.2**	**-0.2**
YUSH	**Yuscaran**	**2.27**	**52**	P		**Pn**		**00 21 57.2**	**+0.6**
LIMN	**Finca el Limon**	**2.33**	**77**	P		**Pn**		**00 21 56.8**	**-0.4**
RCFN	**Al S de San Ju**	**2.60**	**68**	P		**Pn**		**00 22 01.4**	**+0.2**
RCVN	**Varillal2**	**2.64**	**67**	P		**Pn**		**00 22 02.1**	**+0.5**
JAPN	**Al SSO del Vol**	**3.13**	**109**	*eP*		**Pn**		**00 22 08.6**	**+0.4**
LAPC	**Finca la Perla**	**3.66**	**119**	*eP*		**Pn**		**00 22 16.7**	**+1.1**
SAJU	**San Juanillo,**	**3.84**	**130**	*i* P		**Pn**		**00 22 18.3**	**+0.3**
CUI	**Cuipilapa**	**3.94**	**118**	*eP*		**Pn**		**00 22 20.7**	**+1.2**
JTS	**Las Juntas de**	**4.31**	**121**	*eP*		**Pn**		**00 22 25.5**	**+1.0**
JCR1	**Jicaral**	**4.43**	**127**	*eP*		**Pn**		**00 22 27.0**	**+0.8**
PICV	**PH. Pirrs**	**5.29**	**123**	*eP*		**Pn**		**00 22 40.7**	**+2.6**
PICV				*eS*		**Sn**		**00 23 36.0**	**-2.2**
PIEC	**Cerro El Cedra**	**5.49**	**122**	*eP*		**Pn**		**00 22 43.5**	**+2.5**
BUS1	**Rivas**	**5.71**	**121**	*eP*		**Pn**		**00 22 45.9**	**+1.8**
DRK0	**Durika**	**6.28**	**121**	*eP*		**Pn**		**00 22 53.5**	**+1.8**

GCG 25 00:40:31.3±0.4, 14°.93N×92°.20W, h91km±4km, MD3.5, ML3.4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMCA	**Catarina**	**0.14**	**123**	*eP*		Pn		00 40 44.3	0.0
STG8	**El Palmar, Qui**	**0.95**	**120**	*eP*		Pn		00 40 47.9	-2.8
STG8				*eS*		Sn		00 41 01.2	-4.1
STG5	**El Palmar, Qui**	**0.98**	**123**	*eP*		Pn		00 40 48.0	-2.9
STG5				*eS*		Sn		00 41 00.6	-5.0

DJA ***25*** *00:42:22.6±0.4, 7°S±4°×12°9E±°, h217km±14km, M4.5/12, mB4.9/5, mb4.4/7, MLv4.7/12, Mw(mB)4.1/5*

NEIC ***25*** *00:42:23.2±2.1, 7°.44S±0°.09×128°.75E±0°.08, h172km±11km, mb4.0/8, Error ellipse: s-maj=13.9km s-min=10.2km az=155.0*

IDC ***25*** *00:42:28.8±4.0, 8°.05S×128°.40E, h239km±42km, mb3.2/5, mbtmp3.6/7, Error ellipse: s-maj=45.7km s-min=16.8km az=53.0*

ISC 25 00:42:24.1±0.6, 7°.57S±0°.06×128°.72E±0°.05, h200km, n50, σ2s11/53, mb3.6/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.58**	**99**			**Pn**		**00 43 07.6**	**-1.4**
SAUI						Sn	**Sn**	**00 43 39.0**	**-4.9**
SAUI	**Saumlaki**	**2.58**	**99**	P		**Pn**		**00 43 08.5**	**-0.5**
SAUI	**Saumlaki**	**2.58**	**99**	S		**Sn**		**00 43 42.8**	**-1.1**
SAUI	**Saumlaki**	**2.58**	**99**	P		**Pn**		**00 43 08.9**	**-0.1**
BNDI	**Bandanaira**	**3.25**	**21**	P		**Pn**		**00 43 14.3**	**-2.5**
MSAI	**Masohi**	**4.20**	**3**	P		**Pn**		**00 43 27.0**	**-1.5**
SOEI	**Soe**	**4.91**	**243**			**Pn**		**00 43 36.8**	**-0.7**
SOEI	**Soe**	**4.91**	**243**	P		**Pn**		**00 43 37.1**	**-0.5**
SOEI	**Soe**	**4.91**	**243**	P		**Pn**		**00 43 36.9**	**-0.7**
DRS	**Darwin Rock St**	**5.28**	**156**	P		**Pn**		**00 43 43.4**	**+1.2**
BATI	**Baumata**	**5.64**	**242**	P		**Pn**		**00 43 46.5**	**-0.3**
	80nm,0.3s,baz=59,slow=2.9,SNR=14								
BATI					S	**Sn**		**00 44 47.0**	**-5.2**
	124nm,0.4s,baz=88,slow=1.0,SNR=18								
BATI	**Baumata**	**5.64**	**242**	P		**Pn**		**00 43 46.6**	**-0.3**
	0.8nm3µm100nm,0.7s								
MTN	**Manton Dam**	**5.75**	**156**			**Pn**		**00 43 48.7**	**+0.5**
FAKI	**Fak Fak**	**5.80**	**37**			**Pn**		**00 43 45.1**	**-3.9**
FAKI	**Fak Fak**	**5.80**	**37**	P		**Pn**		**00 43 45.5**	**-3.4**
FAKI	**Fak Fak**	**5.80**	**37**	P		**Pn**		**00 43 44.9**	**-4.0**
	0.3nm2µm28nm,0.5s								
KMPI	**Kaimana, Papua**	**6.30**	**52**	P		**Pn**		**00 43 52.5**	**-2.8**
EDFI	**Ende, Flores**	**7.06**	**260**	P		**Pn**		**00 44 04.5**	**-0.8**
SWI	**Sorong**	**7.13**	**21**	P		**Pn**		**00 44 04.1**	**-2.0**
KNRA	**Kununurra**	**8.06**	**180**			**Pn**		**00 44 18.0**	**-0.1**
BASI	**Baing, Sumba**	**8.47**	**251**	P		**Pn**		**00 44 22.4**	**-1.1**
WSI	**Waingapu**	**8.59**	**255**	P		**Pn**		**00 44 23.2**	**-1.9**
FITZ	**Fitzroy Crossi**	**10.89**	**196**	P		**Pn**		**00 44 53.4**	**-1.4**
	10.0nm,0.3s,baz=20,slow=11,SNR=72								
FITZ					S	Sn		00 46 48.8	-7.5
	4.6nm,0.3s,baz=31,slow=18,SNR=4.6								
WB0	**Warramunga Arr**	**13.31**	**156**			**Pn**		**00 45 25.3**	**-0.3**
WRAB	**Tennant Creek**	**13.45**	**157**	Pn		**Pn**		**00 45 28.2**	**+1.0**
WRAB	**Tennant Creek**	**13.45**	**157**	P		**Pn**		**00 45 28.6**	**+1.3**
WRA	**Warramunga Arr**	**13.45**	**157**	P		**Pn**		**00 45 27.1**	**-0.2**
	0.7nm,0.5s,baz=336,slow=11,SNR=19								
WRA					S	S		00 47 50.0	-7.3
	10.0nm,0.6s,baz=330,slow=22,SNR=11								
WRA	**Warramunga Arr**	**13.45**	**157**	Pn		**Pn**		**00 45 26.6**	**-0.7**
WB2	**Warramunga Arr**	**13.45**	**157**	Pn		**Pn**		**00 45 27.8**	**+0.5**
WR8	**Warramunga Arr**	**13.52**	**156**			**Pn**		**00 45 27.7**	**-0.6**
WR0	**Warramunga Arr**	**13.54**	**156**	Pn		**Pn**		**00 45 29.4**	**+0.9**
COEN	**Coen**	**15.54**	**115**			**P**		**00 45 53.9**	**+0.7**
COEN					IAmb	IAmb		00 45 58.0	
	comp=Z,6.9nm,0.9s								
COEN	**Coen**	**15.54**	**115**	P		**P**		**00 45 55.4**	**+2.2**
MBWA	**Marble Bar**	**16.06**	**212**			**Pn**		**00 46 01.6**	**+2.3**
MYLDM	**Lahad Datu**	**16.26**	**321**	P		**Pn**		**00 46 00.6**	**-1.1**
MYLDM					IAmb	IAmb		00 46 07.2	
	comp=Z,10nm,1.1s								
PSA00	**Pilbara Seismi**	**16.35**	**211**			**Pn**		**00 46 04.0**	**+1.3**
PSA00	**Pilbara Seismi**	**16.35**	**211**			**Pn**		**00 46 05.2**	**+2.5**
PSA00					IAmb	IAmb		00 46 12.1	
	comp=Z,22nm,1.4s								
PSA00	**Pilbara Seismi**	**16.35**	**211**	P		**Pn**		**00 46 05.4**	**+2.7**
AS31	**Alice Springs**	**16.76**	**163**	Pn		**Pn**		**00 46 10.1**	**+2.4**
AS31					IAmb	IAmb		00 46 12.8	
	comp=Z,2.3nm,0.3s								
ASAR	**Alice Springs**	**16.76**	**163**	P		**P**		**00 46 03.5**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=344,slow=11,SNR=35								
ASAR					S	**S**		**00 49 07.4**	**-4.0**
	comp=Z,0.9nm,0.3s,baz=340,slow=26,SNR=8.1								
ASAR	**Alice Springs**	**16.76**	**163**			**Pn**		**00 46 08.8**	**+1.1**
EVN	**Everest**	**53.73**	**313**	P		**P**		**00 51 28.1**	**+1.4**
EVN					IAmb	IAmb		00 51 28.6	
	comp=Z,4.4nm,1.2s								
SONM	**Songino Array**	**58.59**	**343**	P		**P**		**00 52 02.4**	**+2.3**
	comp=Z,0.2nm,0.4s,baz=169,slow=8.7,SNR=2.3								
	comp=Z,0.2nm,0.4s								
MK31	**Makanchi Array**	**68.02**	**328**	P		**P**		**00 53 03.8**	**+1.9**
MKAR	**Makanchi Array**	**68.02**	**328**	P		**P**		**00 53 04.4**	**+2.5**
	comp=Z,0.6nm,0.5s,baz=128,slow=7.7,SNR=12								
	comp=Z,0.6nm,0.5s								
MKAR	**Makanchi Array**	**68.02**	**328**	P		**P**		**00 53 02.2**	**+0.3**
ZALV	**Zalesovo Beam**	**71.54**	**334**	P		**P**		**00 53 24.5**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=124,slow=7.2,SNR=1.7								
	comp=Z,0.5nm,0.3s								
KURBB	**Kurchatov Arra**	**72.34**	**329**	P		**P**		**00 53 29.8**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=127,slow=5.1,SNR=10								
	comp=Z,0.5nm,0.5s								
BVAR	**Borovoye Array**	**77.88**	**328**	P		**P**		**00 54 01.9**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=115,slow=9.2,SNR=2.6								
	comp=Z,0.3nm,0.5s								
ABKAR	**Akbulak array**	**82.17**	**322**	P		**P**		**00 54 24.1**	**+1.5**

NOU ***25*** *00:48:46.8, 19°.91S×168°.97E, h177km, MLv4.8/10, Vanuatu Islands*

IDC ***25*** *00:48:49.7±2.4, 19°.81S×168°.66E, h0km, mb3.9/4, mbtmp3.9/5, ML3.7/1, MS3.1/1, Error ellipse: s-maj=86.3km s-min=29.2km az=136.0*

ISC 25 00:48:55.7±1.0, 20°.05S±0°.1×168°.4E±0°.2, h35km, n10, σ1s16/11, mb3.9/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
INH	**Isangel**	**0.89**	**63**	P		**Pn**		**00 49 12.5**	**+0.7**
MARNC	**Mare, Loyalty**	**1.56**	**194**	P		**Pn**		**00 49 20.7**	**-0.3**
YATNC	**Mamie plateau,**	**2.54**	**214**	P		**Pn**		**00 49 33.7**	**-0.7**
DZM	**Mont Dzumac**	**2.81**	**221**	Pn		**Pn**		**00 49 38.4**	**+0.2**
	9.9nm,0.3s,baz=51,slow=18,SNR=73								
DZM					Sn	**Sn**		**00 50 11.6**	**+0.8**
	54nm,0.3s,baz=0.0,slow=20,SNR=9.4								
	38nm,0.4s								
ONTNC	**Ouen Toro**	**2.98**	**218**	P		**Pn**		**00 49 41.1**	**+0.6**
WRA	**Warramunga Arr**	**32.01**	**264**	P		**P**		**00 55 19.3**	**+0.2**
	1.2nm,1.1s,baz=93,slow=8.2,SNR=3.4								
	1.2nm,1.1s								
ASAR	**Alice Springs**	**32.22**	**257**	P		**P**		**00 55 22.9**	**+2.0**
	2.0nm,0.6s,baz=88,slow=8.4,SNR=16								
ASAR					LR	LR		01 07 13.9	
	comp=Z,30nm,18.5s,baz=123,slow=34								
	2.0nm,0.6s								
SONM	**Songino Array**	**87.34**	**323**	P		**P**		**01 01 38.1**	**-1.0**
	0.9nm,0.9s,baz=112,slow=5.7,SNR=4.0								
	0.9nm,0.9s								
ILAR	**Eielson Array**	**91.14**	**18**	P		**P**		**01 01 54.8**	**-1.6**
	0.4nm,0.9s,baz=231,slow=5.3,SNR=6.3								
	0.4nm,0.9s								
GERES	**GERESS Array B**	**144.75**	**331**	PKP		**PKPdf**		**01 08 29.8**	**+0.9**
	0.1nm,0.3s,baz=52,slow=1.6,SNR=1.5								

NEIC ***25*** *00:52:17.0±1.8, 50°.83N±0°.04×179°.08W±0°.05, h10km±1km, mb3.6/41, ML3.0(AEIC), Error ellipse: s-maj=8.0km s-min=3.9km az=143.0*

AEIC ***25*** *00:52:19.0±2.6, 50°.89N±0°.04×179°.10W±0°.07, h5km±4km, Error ellipse: s-maj=6.5km s-min=5.2km az=93.0*

IDC ***25*** *00:52:19.6±1.8, 51°.58N×179°.16W, h0km, mb3.5/9, mbtmp3.5/9, Error ellipse: s-maj=55.5km s-min=23.5km az=2.0*

ISC 25 00:52:17.6±1.8, 50°.85N±0°.08×179°.14W±0°.03, h15km±9km, n88, σ1s21/96, mb3.6/29, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAKI	**Gareloi-Kavalg**	**0.74**	**16**				**Pn**	**00 52 32.9**	**-0.7**
GALAA	**Gareloi Lava P**	**0.95**	**14**				**Pn**	**00 52 36.8**	**+0.4**
GALAA							**Sg**	**00 52 48.0**	**-0.3**
GASW	**Gareloi Southw**	**0.95**	**11**				**Pg**	**00 52 36.7**	**+0.7**
GASW							**Sn**	**00 52 49.3**	**-0.6**
GAEA	**Gareloi East**	**0.97**	**15**				**Pg**	**00 52 37.0**	**+0.6**
GAEA							**Sn**	**00 52 51.1**	**+0.8**
GANO	**Gareloi North**	**1.00**	**12**				**Pg**	**00 52 37.3**	**+0.4**
GANO							**Sn**	**00 52 51.5**	**+0.5**
GANE	**Gareloi Northe**	**1.00**	**13**				**Pg**	**00 52 37.4**	**+0.4**
GANE							**Sn**	**00 52 50.7**	**-0.4**
AMKA	**Amchitka**	**1.12**	**299**				**Pn**	**00 52 38.4**	**-0.3**
TAFL	**Tanaga Flats**	**1.20**	**40**				**Pb**	**00 52 40.2**	**+0.1**
TASE	**Tanaga Southea**	**1.21**	**35**				**Pg**	**00 52 40.7**	**-0.2**
TANO	**Tanaga North**	**1.25**	**30**				**Pg**	**00 52 41.9**	**+0.2**
TANO							**Sg**	**00 52 58.1**	**+0.1**
CERB	**Semis' Cerberu**	**1.33**	**325**				**Pg**	**00 52 43.6**	**+0.3**
CERB							**Sg**	**00 53 02.6**	**+2.0**
CESW	**Semis' Southwe**	**1.33**	**323**				**Pb**	**00 52 43.4**	**+1.0**
CEPE	**Semis' Perret**	**1.35**	**326**				**Pb**	**00 52 43.7**	**+1.0**
KIMD	**Kanaga Island**	**1.51**	**52**				**Pb**	**00 52 44.9**	**-0.5**
KIWB	**Kanaga Island**	**1.60**	**50**				**Pb**	**00 52 46.2**	**-0.8**
KIKV	**Kanaga Island**	**1.61**	**49**				**Pb**	**00 52 46.8**	**-0.3**
KIKV							**Sg**	**00 53 07.5**	**-2.0**
KICM	**Kanaga Island**	**1.62**	**48**				**Pb**	**00 52 47.3**	**0.0**
LSPA	**Little Sitkin**	**1.81**	**309**				**Pb**	**00 52 50.1**	**-0.4**
ADK	**Adak**	**1.86**	**55**				**Pb**	**00 52 50.6**	**-0.7**
ADK	**Adak**	**1.86**	**55**	P			**Pn**	**00 52 49.4**	**+0.5**
ADAG	**Mount Adagdak**	**1.95**	**53**				**Pb**	**00 52 52.6**	**-0.3**
ADAG							**Sb**	**00 53 16.8**	**-0.3**
ETKA	**Kagalaska Isla**	**1.99**	**58**				**Pb**	**00 52 51.9**	**-1.8**
GSMY	**Great Sitkin M**	**2.27**	**57**				**Pb**	**00 52 56.8**	**-1.6**
GSTR	**Great Sitkin T**	**2.30**	**56**	Pn			**Pb**	**00 52 57.6**	**-1.2**
ATKA	**Atka Island**	**3.37**	**64**	Pn			**Pn**	**00 53 11.8**	**+2.0**
SHEM	**Shemya Is, Ala**	**4.60**	**297**	Pn			**Pn**	**00 53 23.4**	**-3.3**
SMY	**Shemya**	**4.60**	**297**	Pn			**Pn**	**00 53 23.6**	**-3.0**
CLES	**Cleveland East**	**6.06**	**67**	Pn			**Pn**	**00 53 49.4**	**+2.7**
UNV	**Unalaska Valle**	**8.30**	**64**	Pn			**Pn**	**00 54 20.9**	**+3.6**
K13K	**Kusilvak Mount**	**13.66**	**30**	Pn			**Pn**	**00 55 29.2**	**-1.4**
NEA2	**Nenana**	**20.87**	**37**	P			**P**	**00 56 57.9**	**-1.0**
D20K	**Etivluk River**	**20.97**	**23**				**P**	**00 57 00.2**	**+0.3**
D20K						IAmb	IAmb	00 57 07.0	
	comp=Z,5.7nm,1.1s								
I23K	**Minto, Yukon-K**	**21.02**	**36**	P		**P**	**P**	**00 57 00.1**	**-0.4**
CCB	**Clear Creek Bu**	**21.39**	**38**	P		**P**	**P**	**00 57 03.6**	**-0.7**
E21K	**Killik River**	**21.46**	**25**	P		**P**	**P**	**00 57 03.5**	**-1.6**
E21K						IAmb	IAmb	00 57 14.5	
	comp=Z,2.5nm,1.1s								
HDA	**Harding Lake**	**21.62**	**39**	P		**P**	**P**	**00 57 06.0**	**-0.9**
N25K	**Chitina, Valde**	**21.74**	**47**	P		**P**	**P**	**00 57 08.1**	**-0.2**
N25K						IAmb	IAmb	00 57 12.8	
	comp=Z,4.0nm,1.1s								
ILAR	**Eielson Array**	**21.80**	**38**	P		**P**	**P**	**00 57 08.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=244,slow=10,SNR=7.7								
	comp=Z,0.2nm,0.5s								
COLD	**Coldfoot**	**21.82**	**30**	P		**P**	**P**	**00 57 08.8**	**-0.3**
COLD						IAmb	IAmb	00 57 18.4	
	comp=Z,2.6nm,1.2s								
E22K	**Anaktuvuk Pass**	**21.87**	**27**	P		**P**	**P**	**00 57 09.1**	**-0.5**
H24K	**Noodor Dome**	**21.89**	**35**	P		**P**	**P**	**00 57 09.3**	**-0.6**
H24K						IAmb	IAmb	00 57

M_{rr}2.60; $M_{\theta\theta}$1.23; $M_{\phi\phi}$-3.83; $M_{r\theta}$0.44; $M_{\theta\phi}$-0.96; $M_{\phi r}$-1.04;
Fault plane solution: $M_0$3.56000×10^{14} NP1:ϕ_s32.00000°, δ41.00000°, λ123.00000°. NP2:ϕ_s171.00000°, δ56.00000°, λ64.00000°.

*JMA **25** 01:03:26.1±0.4, 33°.1N±0°.9×14°.2E±°, h18^{km}, MV3.5/19, E OFF HACHIJOJIMA ISLAND*

ISC 25 01:03:26.6±0.7, **33°.08N**±0°.07×**141°.76E**±0°.08, **h10**^{km}, **n55, σ0^{s}.81/52, mb4.1/26, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Mitsune**	**1.63**	**272**	Pn	**Pn**	**01 03 54.9**	**-0.4**
JHJ	**Hachijo jima 2**	**1.66**	**272**	**Pn**	**Pn**	**01 03 55.6**	**-0.2**
	13nm,0.3s,baz=90,slow=20,SNR=5.0						
JHJ				Sn	**Sn**	**01 04 18.3**	**+1.2**
	60nm,0.3s,baz=87,slow=19,SNR=5.7						
BSO1	**Boso 1**	**1.70**	**338**	*e*P	**Pn**	**01 03 55.5**	**-0.3**
BSO1				*e*S	**Sn**	**01 04 16.9**	**-0.5**
JMKN	**Mikurajimanish**	**1.99**	**295**	*e*P	**Pn**	**01 04 00.4**	**+0.2**
BSO3	**Boso 3**	**2.01**	**329**	*e*P	**Pn**	**01 04 00.3**	**0.0**
BSO3				*e*S	**Sn**	**01 04 26.0**	**+0.6**
JOD2	**Odawara 2**	**3.11**	**315**	*e*P	**Pn**	**01 04 15.3**	**-0.4**
JOD2				*e*S	**Sn**	**01 04 52.1**	**-0.8**
JYN	**Shimob**	**3.59**	**313**	*e*P	**Pn**	**01 04 23.4**	**+1.0**
JYN				*e*S	**Sn**	**01 05 07.4**	**+2.4**
JRY	**Ryogami san**	**3.76**	**322**	*e*P	**Pn**	**01 04 25.8**	**+1.1**
JAG	**Ashikaga**	**3.84**	**331**	*e*P	**Pn**	**01 04 26.0**	**+0.2**
JAG				*e*S	**Sn**	**01 05 09.8**	**-1.2**
JGF	**Kuroka**	**4.43**	**306**	Pn	**Pn**	**01 04 34.2**	**+0.3**
MJAR	**Matsushiro Arr**	**4.53**	**321**	Pn	**Pn**	**01 04 36.0**	**+0.8**
	0.4nm,0.3s,baz=146,slow=11,SNR=17						
MJAR				Sn	**Sn**	**01 05 26.2**	**-1.6**
	0.1nm,0.3s,baz=122,slow=16,SNR=4.2						
	4.8nm,0.4s						
MJAR	**Matsushiro Arr**	**4.53**	**321**	Pn	**Pn**	**01 04 34.7**	**-0.5**
MAJO	**Matsushiro**	**4.53**	**321**	Pn	**Pn**	**01 04 35.6**	**+0.4**
JSD	**Sado**	**5.71**	**331**	Pn	Pn	01 04 50.0	-1.5
JCJ	**Chichijima**	**5.97**	**176**	Pn	Pn	01 04 44.8	-10
	7.9nm,0.3s,baz=272,slow=22,SNR=6.4						
JCJ				Sn	Sn	01 05 47.4	-16
	16nm,0.3s,baz=287,slow=19,SNR=5.9						
JCJ	**Chichijima**	**5.97**	**176**	Pn	Pn	01 04 53.9	-1.2
JMN	**Monobe**	**6.62**	**278**	Pn	**Pn**	**01 05 04.2**	**+0.1**
HILR	**Hailar Array B**	**23.20**	**322**	P	**P**	**01 08 33.7**	**+0.2**
	1.0nm,0.4s,baz=116,slow=11,SNR=2.2						
	1.0nm,0.4s						
MA2	**Magadan**	**27.17**	**10**	LR	LR	01 20 30.8	
	comp=Z,25nm,19.6s,baz=176,slow=38						
SONM	**Songino Array**	**30.38**	**310**	P	**P**	**01 09 39.4**	**+0.6**
	1.1nm,0.7s,baz=115,slow=8.9,SNR=6.5						
	1.1nm,0.7s						
ZALV	**Zalesovo Beam**	**44.86**	**315**	P	**P**	**01 11 40.4**	**-0.4**
	0.6nm,0.8s,baz=77,slow=6.4,SNR=3.8						
	0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**44.86**	**315**	P	**P**	**01 11 40.1**	**-0.8**
MKAR	**Makanchi Array**	**46.55**	**305**	P	**P**	**01 11 54.0**	**-0.4**
	1.1nm,0.8s,baz=66,slow=9.9,SNR=5.3						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**46.55**	**305**	P	**P**	**01 11 53.6**	**-0.8**
P16K	**Nushagak River**	**47.12**	**38**	P	**P**	**01 11 58.6**	**0.0**
KURK	**Kurchatov**	**48.66**	**311**	P	**P**	**01 12 10.2**	**-0.5**
KURK				IAmb	IAmb	01 12 11.4	
	comp=Z,3.4nm,0.9s						
KURBB	**Kurchatov Arra**	**48.73**	**311**	P	**P**	**01 12 10.7**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=85,slow=7.6,SNR=12						
	comp=Z,1.4nm,0.7s						
D22K	**Ayikyak River**	**50.79**	**25**	P	**P**	**01 12 28.1**	**+1.5**
D22K				IAmb	IAmb	01 12 56.8	
	comp=Z,6.6nm,1.3s						
E22K	**Anaktuvuk Pass**	**50.99**	**26**	P	**P**	**01 12 29.0**	**+0.8**
E22K				IAmb	IAmb	01 12 58.6	
	comp=Z,4.0nm,1.1s						
ILAR	**Eielson Array**	**52.71**	**31**	P	**P**	**01 12 41.4**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=253,slow=4.3,SNR=4.1						
	comp=Z,0.2nm,0.7s						
WB0	**Warramunga Arr**	**53.02**	**189**	P	P	01 12 42.9	-0.8
WB0				IAmb	IAmb	01 12 59.7	
	comp=Z,3.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.17**	**199**	P	**P**	**01 12 44.6**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=323,slow=11,SNR=3.0						
	comp=Z,3.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.17**	**199**	P	P	01 12 43.8	-1.0
WR8	**Warramunga Arr**	**53.19**	**189**	P	**P**	**01 12 44.3**	**-0.7**
WR8				IAmb	IAmb	01 13 09.8	
	comp=Z,7.8nm,1.4s						
WRA	**Warramunga Arr**	**53.20**	**189**	P	**P**	**01 12 44.5**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=6.1,slow=7.7,SNR=17						
	comp=Z,1.1nm,0.4s						
WRA	**Warramunga Arr**	**53.20**	**189**	P	P	01 12 44.1	-0.9
BVAR	**Borovoye Array**	**53.49**	**315**	P	**P**	**01 12 46.6**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=49,slow=10,SNR=2.7						
	comp=Z,1.2nm,0.8s						
BMAR	**Burnt Mountain**	**53.68**	**27**	P	**P**	**01 12 50.5**	**+2.3**
ASAR	**Alice Springs**	**56.92**	**189**	P	**P**	**01 13 11.9**	**0.0**
	comp=Z,0.4nm,0.5s,baz=6.7,slow=7.5,SNR=5.3						
	comp=Z,0.4nm,0.5s						
ARTI	**Arti**	**59.65**	**320**	P	**P**	**01 13 30.0**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=93,slow=11,SNR=2.2						
	comp=Z,0.9nm,0.5s						
AB31	**Akbulak array**	**60.75**	**312**	P	P	01 13 37.3	-1.0
AB31				IAmb	IAmb	01 13 57.3	
	comp=Z,2.0nm,1.0s						
ABKAR	**Akbulak array**	**60.75**	**312**	P	P	01 13 37.2	-1.1
C36M	**Paulatuk**	**60.91**	**24**	P	**P**	**01 13 38.4**	**-0.7**
C36M				IAmb	IAmb	01 14 11.7	
	comp=Z,4.1nm,1.3s						
AKTO	**Aktyubinsk**	**61.57**	**314**	P	**P**	**01 13 43.2**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=23,slow=9.3,SNR=2.3						
	comp=Z,1.3nm,0.8s						
KIRV	**Kirov**	**63.59**	**324**	P	**P**	**01 13 56.9**	**-0.3**
	comp=Z,3.3nm,0.5s,baz=121,slow=8.2						
	comp=Z,3.3nm,0.5s						
YKA	**Yellowknife Ar**	**67.09**	**29**	P	**P**	**01 14 20.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=228,slow=12,SNR=1.2						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**72.45**	**333**	P	**P**	**01 14 52.5**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=28,slow=6.7,SNR=2.0						
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**72.45**	**333**	P	**P**	**01 14 52.1**	**-0.7**
KBZ	**Khabaz**	**73.72**	**312**	P	**P**	**01 15 00.3**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=82,slow=7.1,SNR=4.5						
	comp=Z,2.3nm,0.9s						
NVAR	**Mina Array Bea**	**77.15**	**53**	P	**P**	**01 15 21.7**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=308,slow=7.0,SNR=1.3						
	comp=Z,0.1nm,0.3s						
NB2	**NORSAR Subarra**	**77.94**	**338**	P	**P**	**01 15 23.9**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**77.94**	**338**	P	**P**	**01 15 24.2**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=41,slow=5.5,SNR=4.2						
	comp=Z,1.3nm,0.9s						
BRTR	**Keskin Array B**	**81.70**	**312**	P	**P**	**01 15 46.0**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=66,slow=3.1,SNR=4.5						
	comp=Z,0.7nm,0.8s						
BRTR	**Keskin Array B**	**81.70**	**312**	P	**P**	**01 15 46.0**	**+0.5**
TXAR	**Lajitas Array**	**92.30**	**53**	LR	LR	01 50 08.2	
	comp=Z,75nm,20.5s,baz=172,slow=30						

*IDC **25** 01:12:30.2±1.2, 34°.83N×26°.77E, h0^{km}, mb3.9/4, mbtmp3.7/7, ML3.1/4, Error ellipse: s-maj=26.2km s-min=16.4km az=6.0*

*AFAD **25** 01:12:32.4, 34°.70N×26°.86E, h5^{km}±3^{km}, ML2.8*

*ISK **25** 01:12:34.6, 34°.73N×26°.62E, h94^{km}±1^{km}, ML2.7/19*

*ATH **25** 01:12:37.8, 34°.73N×26°.59E, h32^{km}±3^{km}, ML3.0/2, Manual Solution by M.Charalampakis First location: 2019/11/25 01:14:23, This location: 2019/11/25 06:29:40 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 22 km; Longitude uncertainty: 18 km*

*GII **25** 01:12:38.7±0.0, 34°.300N±0°.005×27°.050E±0°.002, h30^{km}, Mws3.3, confirmed*

*THE **25** 01:12:39.8, 35°.9N×2°.7E±°, h30^{km}, M3.2/11, MLh3.2/11*

ISC 25 01:12:33.6±1.6, **34°.58N**±0°.05×**26°.84E**±0°.04, **h25**^{km}±13^{km}, **n83, σ2^{s}.21/102, mb3.6/4, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIT2	**Siteia**	**0.87**	**317**	P	**Pn**	**01 12 50.3**	**+0.3**
KARP	**Karpathos**	**1.00**	**15**	Pg	**Pn**	**01 12 54.6**	**+2.5**
KARP				Sg	**Sn**	**01 13 09.2**	**+3.7**
KARP	**Karpathos**	**1.00**	**15**	P	**Pn**	**01 12 54.5**	**+2.4**
KARP				S	**Sn**	**01 13 12.2**	**+6.7**
KARP	**Karpathos**	**1.00**	**15**	P	**Pn**	**01 12 54.9**	**+2.8**
KARP				S	**Sn**	**01 13 07.5**	**+2.0**
IDI	**Anoyia**	**1.75**	**295**	Pn	**Pn**	**01 13 01.9**	**-0.5**
	5.7nm,0.3s,baz=125,slow=12,SNR=28						
IDI				Sn	**Sn**	**01 13 23.0**	**-0.9**
	6.4nm,0.3s,baz=52,slow=19,SNR=7.3						
IDI	**Anoyia**	**1.75**	**295**	Pn	**Pn**	**01 13 02.2**	**-0.2**
IDI				Sn	**Sn**	**01 13 21.6**	**-2.3**
IDI	**Anoyia**	**1.75**	**295**	P	**Pn**	**01 13 02.4**	**0.0**
IDI				S	**Sn**	**01 13 20.6**	**-3.3**
IDI	**Anoyia**	**1.75**	**295**	P	**Pn**	**01 13 02.6**	**+0.2**
ARG	**Arkhangelos**	**1.95**	**32**	Pn	**Pn**	**01 13 06.9**	**+1.9**
ARG	**Arkhangelos**	**1.95**	**32**	P	**Pn**	**01 13 08.5**	**+0.2**
ARG				S	**Sb**	**01 13 32.0**	**-0.1**
ARG	**Arkhangelos**	**1.95**	**32**	P	**Pb**	**01 13 08.5**	**+0.2**
DAT	**Datca**	**2.23**	**15**	Pn	**Pn**	**01 13 09.7**	**+0.7**
DAT	**Datca**	**2.23**	**15**	P	**Pn**	**01 13 10.2**	**+1.1**
TURN	**Turunc**	**2.48**	**27**	Pn	**Pn**	**01 13 13.6**	**+1.3**
CHAN	**Chania**	**2.48**	**293**	P	**Pn**	**01 13 13.4**	**+1.1**
CHAN				S	**Sn**	**01 13 35.5**	**-6.2**
DALY	**Dalyan (Mula)**	**2.68**	**33**	Pn	**Pn**	**01 13 17.2**	**+2.1**
IZZE	**Mula-Seydike**	**2.69**	**46**	P	**Pn**	**01 13 17.7**	**+2.5**
IZZE				S	**Sn**	**01 13 49.0**	**+1.9**
IZZE				*i* IAML		01 13 55.0	
	comp=N,70nm,0.5s						
IZZE				*i* IAML		01 13 57.0	
	comp=E,43nm,0.5s						
APE	**Apeiranthos**	**2.71**	**337**	Pn	**Pn**	**01 13 14.6**	**-0.9**
APE	**Apeiranthos**	**2.71**	**337**	P	**Pn**	**01 13 15.1**	**-0.4**
APE				S	**Sn**	**01 13 43.3**	**-4.2**
APE	**Apeiranthos**	**2.71**	**337**	P	**Pn**	**01 13 14.6**	**-0.9**
APE	**Apeiranthos**	**2.71**	**337**	P	**Pn**	**01 13 15.0**	**-0.5**
AKAS	**Kas**	**2.80**	**53**	P	**Pn**	**01 13 19.6**	**+2.7**
AKAS				S	**Sn**	**01 13 54.2**	**+4.3**
AKAS				*i* IAML		01 14 05.0	
	comp=E,52nm,0.5s						
AKAS				*i* IAML		01 14 58.0	
	comp=N,94nm,1.2s						
AKAS	**Kas**	**2.80**	**53**	Pn	**Pn**	**01 13 19.6**	**+2.7**
YER	**Yerkesik**	**2.81**	**24**	Pn	**Pn**	**01 13 18.5**	**+1.6**
YER	**Yerkesik**	**2.81**	**24**	P	**Pn**	**01 13 18.9**	**+1.9**
YER				S	**Sb**	**01 13 55.1**	**-2.0**
MLSB	**Milas**	**2.82**	**15**	Pn	**Pn**	**01 13 16.2**	**-0.8**
SABU	**Mula-Dalaman**	**2.83**	**37**	P	**Pn**	**01 13 18.7**	**+1.5**
SABU				*i* IAML		01 14 55.0	
	comp=N,57nm,2.3s						
SABU				*i* IAML		01 15 00.0	
	comp=E,56nm,2.7s						
CAME	**Cameli-Denizli**	**3.10**	**40**	Pn	**Pn**	**01 13 22.8**	**+1.8**
KNIK	**Mula-Seydike**	**3.18**	**44**	P	**Pn**	**01 13 24.7**	**+2.7**
KNIK				S	**Sn**	**01 14 03.7**	**+4.5**
KNIK				*i* IAML		01 14 43.0	
	comp=N,23nm,2.3s						
KNIK				*i* IAML		01 15 03.0	
	comp=E,38nm,2.7s						
DNZT	**Denizli-Tavas-**	**3.23**	**33**	P	**Pn**	**01 13 25.0**	**+2.3**
DNZT				S	**Sn**	**01 14 03.3**	**+2.9**
DNZT				*i* IAML		01 14 59.0	
	comp=E,20nm,3.1s						
CAEL	**Denizli, Camel**	**3.25**	**38**	P	**Pn**	**01 13 26.1**	**+3.1**
CAEL				*i* IAML		01 14 10.0	
	comp=N,113nm,2.1s						
CAEL				*i* IAML		01 14 12.0	
	comp=E,161nm,2.4s						
ELL	**Elmali**	**3.31**	**48**	Pn	**Pn**	**01 13 26.3**	**+2.5**
TAVA	**DENIZLI_Tavas**	**3.34**	**30**	P	**Pn**	**01 13 26.3**	**+2.1**
TAVA				S	**Sn**	**01 14 07.7**	**+4.6**
TAVA				*i* IAML		01 15 10.0	
	comp=N,43nm,2.5s						
TAVA				*i* IAML		01 15 24.0	
	comp=E,21nm,1.8s						
AKUM	**Antalya-Kumluc**	**3.35**	**58**	P	**Pn**	**01 13 26.3**	**+2.0**
AKUM				S	**Sn**	**01 14 05.6**	**+2.3**
AKUM				*i* IAML		01 14 15.0	
	comp=N,13nm,0.8s						
AKUM				*i* IAML		01 14 29.0	
	comp=E,24nm,1.3s						
GOLH	**Golhisar**	**3.46**	**39**	P	**Pn**	**01 13 28.8**	**+3.0**
GOLH				*i* IAML		01 14 17.0	
	comp=N,63nm,2.4s						
GOLH				*i* IAML		01 14 28.0	
	comp=E,50nm,2.5s						
AYDB	**Zeytinkoy-Aydi**	**3.47**	**14**	Pn	**Pn**	**01 13 26.3**	**+0.2**
APMY	**Acipayam-Deniz**	**3.51**	**34**	Pn	**Pn**	**01 13 28.1**	**+1.5**
NAZL	**Nazilli-Aydin**	**3.58**	**19**	Pn	**Pn**	**01 13 28.2**	**+0.7**
KORT	**Korkueli**	**3.74**	**49**	P	Pn	01 13 35.6	+5.8
KORT				S	**Sb**	**01 14 21.6**	**-2.4**
KORT	**Korkueli**	**3.74**	**49**	Pn	**Pn**	**01 13 31.9**	**+2.1**
ODEM	**Odemis-Izmir**	**3.83**	**15**	Pn	**Pn**	**01 13 31.5**	**+0.6**
VLI	**Veliai**	**3.83**	**305**	P	**Pn**	**01 13 31.0**	**+0.1**
ANTB	**Antalya**	**3.88**	**52**	Pn	**Pn**	**01 13 33.8**	**+2.3**
KULA	**Kula-Manisa**	**4.20**	**20**	Pn	**Pn**	**01 13 36.8**	**+0.8**
GORD	**Gordes-Manisa**	**4.46**	**14**	Pn	**Pn**	**01 13 40.0**	**+0.4**
SKY	**Skiros Island**	**4.67**	**338**	P	**Pn**	**01 13 41.2**	**-1.2**
GUR	**Goura**	**4.94**	**314**	P	**Pn**	**01 13 46.5**	**+0.2**
CSS	**Mathiatis**	**5.36**	**84**	P	**Pn**	**01 13 53.7**	**+1.8**
AXS	**Araxos**	**5.70**	**311**	P	**Pn**	**01 13 58.3**	**+1.8**
PRMD	**Pramanda**	**6.75**	**319**	P	**Pn**	**01 14 13.4**	**+2.4**
MMA0B	**Mount Meron ar**	**7.30**	**100**	P	**Pn**	**01 14 21.1**	**+2.5**
MMAI	**Mount Meron Ar**	**7.30**	**100**	Pn	**Pn**	**01 14 19.9**	**+1.3**
	1.2nm,0.3s,baz=289,slow=11,SNR=16						
MMAI				Sn	**Sn**	**01 15 40.5**	**-0.2**
	3.5nm,0.3s,baz=290,slow=22,SNR=11						
	0.5nm,0.3s						
KZIT	**Kziot**	**7.34**	**118**	P	**Pn**	**01 14 20.2**	**+1.0**
KZIT	**Kziot**	**7.34**	**118**	S	**Sn**	**01 15 39.9**	**-1.8**
AMAZ	**Amatzia**	**7.43**	**112**	P	**Pn**	**01 14 21.5**	**+1.1**
AMAZ	**Amatzia**	**7.43**	**112**	S	**Sn**	**01 15 42.4**	**-1.4**
GEM	**Giv'at Ha'Em**	**7.46**	**98**	P	**Pn**	**01 14 21.0**	**+0.2**
GEM	**Giv'at Ha'Em**	**7.46**	**98**	S	**Sn**	**01 15 44.7**	**0.0**
BRTR	**Keskin Array B**	**7.48**	**45**	Pn	**Pn**	**01 14 19.3**	**-1.8**
	baz=225,slow=18,SNR=1.9						
NATI	**Neve Ativ**	**7.51**	**98**	P	**Pn**	**01 14 22.7**	**+1.2**
NATI	**Neve Ativ**	**7.51**	**98**	S	**Sn**	**01 15 46.2**	**+0.4**
YTIR	**Yattir**	**7.66**	**112**	P	**Pn**	**01 14 23.3**	**+1.8**
YTIR	**Yattir**	**7.66**	**112**	S	**Sn**	**01 15 48.4**	**-1.1**
DSI	**Dead Sea**	**7.77**	**110**	P	**Pn**	**01 14 26.2**	**+1.1**
DSI	**Dead Sea**	**7.77**	**110**	S	**Sn**	**01 15 51.7**	**-0.5**
KRMI	**Paran Flat**	**8.02**	**122**	P	**Pn**	**01 14 29.5**	**+1.1**
KRMI	**Paran Flat**	**8.02**	**122**	S	**Sn**	**01 15 54.2**	**-4.1**
PRNI	**Paran**	**8.08**	**119**	P	**Pn**	**01 14 30.5**	**+1.1**
PRNI	**Paran**	**8.08**	**119**	S	**Sn**	**01 15 57.5**	**-2.5**
ZFRI	**Zfri**	**8.10**	**117**	P	**Pn**	**01 14 31.6**	**+2.1**
ZFRI	**Zfri**	**8.10**	**117**	S	**Sn**	**01 15 57.5**	**-2.8**
HRFI	**Mount Harif**	**8.28**	**121**	P	**Pn**	**01 14 33.5**	**+1.4**
HRFI	**Mount Harif**	**8.28**	**121**	S	**Sn**	**01 16 03.5**	**-1.4**
MBRI	**Mt Berech**	**8.34**	**123**	P	**Pn**	**01 14 34.4**	**+1.5**
MBRI	**Mt Berech**	**8.34**	**123**	S	**Sn**	**01 16 03.7**	**-2.6**
EIL	**Elat**	**8.44**	**123**	Pn	**Pn**	**01 14 35.8**	**+1.5**
	0.5nm,0.3s,baz=344,slow=15,SNR=20						
EIL				Sn	**Sn**	**01 16 05.7**	**-3.0**
	2.0nm,0.3s,baz=322,slow=19,SNR=10.0						
	1.5nm,0.3s						
EIL	**Elat**	**8.44**	**123**	P	**Pn**	**01 14 35.7**	**+1.5**
ASF	**Jabal al Asfar**	**8.75**	**103**	Pn	**Pn**	**01 14 40.0**	**+1.5**
	0.2nm,0.3s,baz=293,slow=7.7,SNR=1.9						
ASF				Sn	**Sn**	**01 16 18.1**	**+1.7**
	0.1nm,0.3s,baz=5.6,slow=18,SNR=1.5						
	0.8nm,0.5s						
FINES	**FINESS Array B**	**26.89**	**359**	P	**P**	**01 18 09.1**	**-3.0**
	2.5nm,1.1s,baz=155,slow=10,SNR=3.6						
	2.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**31.20**	**233**	P	**P**	**01 18 50.9**	**-0.1**
	0.5nm,0.8s,baz=36,slow=9.2,SNR=2.4						
ARCES	**ARCESS Array B**	**35.02**	**359**	P	**P**	**01 19 20.7**	**-3.0**
	9.2nm,1.2s,baz=185,slow=8.8,SNR=6.2						
	9.2nm,1.2s						
KURBB	**Kurchatov Arra**	**40.42**	**50**	P	**P**	**01 20 10.3**	**+0.7**
	0.3nm,0.3s,baz=275,slow=8.3,SNR=6.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**42.95**	**56**	P	**P**	**01 20 31.2**	**+0.8**
	0.3nm,0.4s,baz=276,slow=7.3,SNR=2.6						
	0.3nm,0.4s						

*BJI **25** 01:18:19.9, 22°.86N×106°.72E, h10^{km}, mB5.1/30, mb4.8/65, ML5.4/13, Ms5.2/69, Ms7 4.9/62*

*IDC **25** 01:18:20.1±0.4, 22°.90N×106°.69E, h0^{km}, mb4.6/33, mbtmp4.6/35, ML4.6/2, MS4.2/43, Error ellipse: s-maj=13.2km s-min=11.0km az=59.0*

*PLV **25** 01:18:20.3±1.3, 22°.91N×106°.68E, h10^{km}±6^{km}, ML5.0*

*NEIC **25** 01:18:22.2±2.4, 22°.95N±0°.07×106°.69E±0°.07, h10^{km}±1^{km}, mb5.3/250, Mww5.0/24, Error ellipse: s-maj=11.3km s-min=10.5km az=182.0*

*GCMT **25** 01:18:22.2±0.2, 22°.88N±0°.02×106°.68E±0°.02, h12^{km}, MW5.0/110, Moment Tensor Solution. s34,c45; s110,c169; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.09±.07; $M_{\theta\theta}$-1.40±.07; $M_{\phi\phi}$-1.69±.07; $M_{r\theta}$-0.28±.23; $M_{\theta\phi}$-1.77±.06; $M_{\phi r}$-2.15±.24; Best double couple: $M_0$3.87300×10^{16} NP1:ϕ_s60.00000°, δ33.00000°, λ121.00000°. NP2:ϕ_s204.00000°, δ62.00000°, λ71.00000°. Principal axes: T 3.9430, Plg67.0000°, Azm79.0000°; N -0.1400, Plg16.0000°, Azm213.0000°; P -3.8030, Plg15.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **25** 01:18:22.2, 22°.74N×106°.69E, h12^{km}, Moment Tensor Solution. Duration: 1^{s}6 Moment tensor: Scale 10^{16}Nm; M_{rr}2.82; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-1.72; $M_{r\theta}$1.49; $M_{\theta\phi}$-1.48; $M_{\phi r}$-1.12; Fault plane solution: $M_0$3.42000×10^{16} NP1: ϕ_s194.94000°, δ50.14000°, λ53.82000°. NP2:ϕ_s63.70000°, δ51.71000°, λ125.26000°. Principal axes: T 3.7673, Plg63.0000°, Azm38.0000°; N -0.8450, Plg27.0000°, Azm220.0000°; P -2.9223, Plg1.0000°, Azm130.0000°;*

*NEIC **25** 01:18:22.2, 22°.94N×106°.69E, h12^{km}*

*MOS **25** 01:18:23.7±1.0, 22°.88N×106°.63E, h36^{km}, mb5.2/71, MS4.7/28, Error ellipse: s-maj=7.1km s-min=3.9km az=125.7*

*BGR **25** 01:18:30.5, 23°.87N×106°.51E, h33^{km}, mb5.0, Ms4.6*

ISC 25 01:18:21.1±0.9, **22°.95N**±0°.03×**106°.78E**±0°.03, **h8**^{km}±5^{km}, **n875, σ1^{s}38/793, mb5.2/270, MS4.4/69, 49C-30D, Vietnam**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSVB	**Lang Son stati**	**1.09**	**181**	*e*Pn	**Pb**	**01 18 40.8**	**-1.4**
LSVB				IAML		01 18 57.4	
	comp=N,23μm,0.3s						
LSVB				IAML		01 18 58.1	
	comp=E,41μm,2.3s						
HGVB	**Ha Giang**	**1.65**	**267**	*e*Pn	**Pn**	**01 18 48.8**	**-1.6**
HGVB				IAmb	IAmb	01 18 52.3	
	comp=Z,5μm,0.6s						
HGVB				*e*Sg	**Sn**	**01 19 09.6**	**-2.3**
HGVB				IAML		01 19 12.9	
	comp=N,15μm,1.6s						
HGVB				IAML		01 19 13.9	
	comp=E,11μm,0.6s						
BGV	**Bac-Giang**	**1.72**	**197**	*e*Pn	**Pn**	**01 18 49.8**	**-1.6**
BGV				IAmb	IAmb	01 18 53.8	
	comp=Z,4μm,1.1s						
BGV				*e*Sg	**Sn**	**01 19 13.3**	**-0.2**
BGV				IAML		01 19 15.4	
	comp=N,22μm,0.4s						
BGV				IAML		01 19 17.4	
	comp=E,17μm,0.2s						
VTVB	**Vinh Tuy**	**1.87**	**249**	*e*Pn	**Pn**	**01 18 51.2**	**-2.1**
VTVB				*e*Sg	**Sn**	**01 19 15.8**	**-1.4**
VTVB				IAML		01 19 27.6	
	comp=N,7μm,1.2s						
VTVB				IAML		01 19 28.3	
	comp=E,4μm,0.7s						
PLV	**Phu-Lien**	**2.13**	**184**	*e*Pn	**Pn**	**01 18 55.8**	**-1.2**
MLVB	**It Ong**	**2.92**	**241**	*e*Pn	**Pb**	**01 19 14.4**	**+1.0**
MLVB				IAML		01 20 13.4	
	comp=E,3μm,0.4s						
MLVB				IAML		01 20 13.5	
	comp=N,5μm,0.5s						
LAVB	**Lang Chanh**	**3.12**	**207**	*e*Pn	**Pn**	**01 19 08.8**	**-1.8**
LAVB				*e*Pg	**Pb**	**01 19 18.0**	**+1.2**
LAVB				IAML		01 20 02.2	
	comp=N,6μm,0.4s						
LAVB				IAML		01 20 03.5	
	comp=E,7μm,0.3s						
THV	**Thanh Hoa**	**3.22**	**197**	*e*Pn	**Pn**	**01 19 10.1**	**-1.8**
THV				IAML		01 20 05.2	
	comp=E,4μm,0

TNCH LR LR
comp=E,3μm,4.7s
TNCH LR LR
comp=E,1μm,4.9s
CD2 Chengdu 8.38 342 P **Pn** **01 20 22.3 -0.6**
CD2 pmax pmax
comp=E,90nm,0.9s
CHTO Chiang Mai 8.40 242 Pn **Pn** **01 20 21.8 -1.4**
CHTO Chiang Mai 8.40 242 P **Pn** **01 20 21.8 -1.4**
CM31 Chiang Mai Arr 8.59 240 Pn **Pn** **01 20 24.4 -1.3**
CMAR Chiang Mai Arr 8.59 240 Pn **Pn** **01 20 24.4 -1.4**
comp=E,1.1nm,0.3s,baz=53,slow=12,SNR=20
CMAR Sn **Sn** **01 22 01.2 -1.7**
comp=E,0.9nm,0.3s,baz=45,slow=16,SNR=4.6
CMAR Lg Lg 01 22 45.8
comp=E,2.0nm,0.3s,baz=55,slow=18,SNR=5.2
CMAR LR LR 01 24 15.1
comp=E,838nm,19.7s,baz=60,slow=42
comp=E,4.5nm,0.6s
CMAR Chiang Mai Arr 8.59 240 Pn **Pn** **01 20 24.2 -1.6**
WHN Wuhan 10.15 40 ⇓P **Pn** **01 20 47.8 +0.7**
WHN sP 01 20 55.8
WHN S **Sn** **01 22 42.5 +1.3**
WHN LR LR
comp=E,4μm,4.7s
WHN LR LR
comp=E,8μm,4.3s
WHN LR LR
comp=E,7μm,15.3s
KNMB Chin-men Tao 10.74 80 Pn **Pn** **01 20 56.0 +0.7**
XAN Xi'an 11.21 9 P **Pn** **01 21 00.1 -1.7**
XAN S **Sn** **01 23 04.3 -3.1**
XAN pmax pmax
comp=E,37nm,1.0s
XAN LR LR
comp=E,8μm,7.6s
XAN LR LR
comp=E,17μm,9.6s
XAN LR LR
comp=E,7μm,8.9s
LYN LuoYang 12.59 22 P **Pn** **01 21 21.8 +1.3**
LYN PP 01 21 33.1
LYN S **Sn** **01 23 45.6 +4.6**
LYN SS **SnSn** **01 23 59.8 +6.3**
LYN pmax pmax
comp=E,52nm,0.9s
LYN LR LR
comp=E,7μm,7.9s
LYN LR LR
comp=E,11μm,10.0s
LYN LR LR
comp=E,3μm,6.0s
TPUB Ta-pu 12.75 86 Pn **Pn** **01 21 23.7 +0.9**
SSLB Suanglung 13.05 84 Pn **Pn** **01 21 27.2 +0.3**
TWG Pinlang 13.18 88 Pn **Pn** **01 21 30.9 +2.2**
LZDM Lanzhou Array 13.24 349 Pn **Pn** **01 21 28.2 -1.5**
baz=174,slow=16
LZDM Sn Sn 01 23 47.8 -10
baz=183,slow=28
LZDM Lg Lg 01 25 16.0
baz=192,slow=40
LZDM LR LR 01 27 25.6
comp=E,598nm,21.9s,baz=160,slow=41
comp=E,6.1nm,0.4s
LZH Lanzhou 13.34 350 ⇓P **Pn** **01 21 29.9 -1.1**
LZH pP P 01 21 34.3 -6.4
LZH pmax pmax
comp=E,37nm,1.0s
LZH LR LR
comp=E,4μm,12.0s
LZH LR LR
comp=E,7μm,11.5s
LZH LR LR
comp=E,5μm,13.4s
YULB Yu-li 13.36 85 Pn **Pn** **01 21 32.7 +1.5**
YHNB Yeheng 13.47 80 Pn **Pn** **01 21 34.3 +1.5**
SHL Shillong 13.84 284 Pn **Pn** **01 21 36.6 -1.2**
SHL Shillong 13.84 284 P **Pn** **01 21 36.6 -1.2**
BRDH Bariadhala 13.96 272 LR LR 01 27 59.5
comp=E,1μm,19.1s,baz=126,slow=42
NJ2 Nanjing 14.03 47 *e*P **Pn** **01 21 42.0 +1.8**
NJ2 pmax pmax
comp=E,12nm,0.6s
NJ2 pmax pmax
comp=E,470nm,4.0s
NJ2 LR LR
comp=E,3μm,5.9s
NJ2 LR LR
comp=E,2μm,4.2s
NJ2 LR LR
comp=E,2μm,6.6s
TIY Taiyuan 15.50 17 P **P** **01 22 05.4 +0.8**
TIY pmax pmax
comp=E,50nm,0.8s
TIY LR LR
comp=E,2μm,5.7s
TIY LR LR
comp=E,5μm,11.4s
TIY LR LR
comp=E,2μm,5.5s
LSA Lhasa 15.54 299 Pn **Pn** **01 21 59.0 -2.0**
LSA Lhasa 15.54 299 P **Pn** **01 21 59.0 -2.0**
LSA pmax pmax
comp=E,22nm,1.0s
HNS HongShan 15.94 24 ⇓P **Pn** **01 22 06.6 +0.8**
HNS pmax pmax
comp=E,39nm,1.4s
HNS LR LR
comp=E,2μm,12.2s
HNS LR LR
comp=E,3μm,11.8s
HNS LR LR
comp=E,920nm,7.7s
TIA Tai'an 15.98 32 P **Pn** **01 22 06.8 +0.6**
TIA sP **pP** **01 22 12.6 +0.5**
TIA pmax pmax
comp=E,28nm,1.3s
TIA LR LR
comp=E,2μm,9.6s
TIA LR LR
comp=E,840nm,8.2s
TIA LR LR
comp=E,2μm,7.1s
TGY Tagaytay City 16.04 121 LR LR 01 28 06.8
comp=E,1μm,18.4s,baz=308,slow=36
GOMU GeErMu 16.79 325 P **Pn** **01 22 15.5 -1.5**
GOMU S **Sn** **01 25 25.0 +1.0**
GOMU pmax pmax
comp=E,23nm,1.2s
GOMU LR LR
comp=E,4μm,8.4s
GOMU LR LR
comp=E,1μm,9.4s
GTA Gaotai 17.45 342 P **Pn** **01 22 24.8 -0.2**
GTA pP pP 01 22 29.4 +0.8
GTA S **S** **01 25 48.5 +0.5**
GTA pmax pmax
comp=E,15nm,1.3s
GTA pmax pmax
comp=E,240nm,5.9s
GTA LR LR
comp=E,5μm,13.1s
GTA LR LR
comp=E,9μm,12.7s
GTA LR LR
comp=E,6μm,14.2s
BTO Baotou 17.82 8 *e*P **Pn** **01 22 29.8 +0.2**
BTO S **S** **01 25 52.3 -3.1**
BTO pmax pmax
comp=E,25nm,0.6s
BTO pmax pmax
comp=E,560nm,3.9s
BTO LR LR
comp=E,5μm,7.9s
BTO LR LR
comp=E,11μm,9.5s
BTO LR LR
comp=E,12μm,11.5s
HHC Hu-ho-hao-te 18.30 12 *e*P **P** **01 22 35.8 +0.2**
HHC sP sP 01 22 42.8 +3.7
HHC S **Sn** **01 25 53.9 -6.2**
HHC pmax pmax
comp=E,16nm,0.7s
HHC pmax pmax
comp=E,350nm,3.9s
HHC LR LR
comp=Z,2μm,10.3s
HHC LR LR
comp=Z,1μm,9.2s
HHC LR LR
comp=Z,2μm,13.0s
KULM Kulim 18.52 200 P **P** **01 22 37.7 -0.4**
EVN Everest 18.70 290 P **P** **01 22 38.2 -2.5**
BJT Baijiatuau 18.79 23 P **P** **01 22 40.3 -0.6**
BJT Baijiatuau 18.79 23 P **P** **01 22 40.3 -0.6**
BJT pmax pmax
comp=Z,78nm,1.1s
BJI Beijing 18.81 23 P **Pn** **01 22 43.0 +1.4**
BJI pmax pmax
comp=Z,36nm,1.2s
BJI LR LR
comp=Z,530nm,12.8s
BJI LR LR
comp=Z,550nm,11.8s
IPM Ipoh 19.18 198 P **P** **01 22 44.9 -0.4**
JOW Kunigami 19.88 74 LR LR 01 31 12.6
comp=Z,914nm,19.1s,baz=272,slow=39
DL2 Dalian 20.34 35 P Pn 01 23 00.9 +1.1
DL2 pmax pmax
comp=Z,80nm,1.2s
DL2 LR LR
comp=Z,1μm,13.3s
DL2 LR LR
comp=Z,950nm,15.8s
DL2 LR LR
comp=Z,1μm,15.4s
MYLDM Lahad Datu 20.98 146 P Pn 01 23 07.8 +0.3
SBUM Sibu 21.05 165 P **P** **01 23 06.9 +1.3**
MLSI Meulaboh, Aceh 21.11 210 P **P** **01 23 07.9 +1.6**
KCSI Kotacane, Aceh 21.19 206 P **P** **01 23 09.1 +1.9**
comp=Z,27nm,1.4s
MYKOM Kota Tinggi 21.22 188 P **P** **01 23 07.5 0.0**
PSI Prapat 21.42 202 P **P** **01 23 11.2 +1.4**
comp=Z,3.2nm,0.4s,baz=22,slow=12,SNR=13
comp=Z,3.2nm,0.4s
PSI Prapat 21.42 202 P **P** **01 23 11.2 +1.4**
PSI pmax pmax
comp=Z,59nm,1.6s
RPSI Rantau Prapat 21.52 202 P **P** **01 23 11.1 +0.4**
RPSI Rantau Prapat 21.52 202 P **P** **01 23 11.2 +0.5**
TPRI Tanjung Pinang 22.00 186 P **P** **01 23 18.3 +2.4**
XLT XiLinHaoTe 22.27 18 *e*P **P** **01 23 20.3 +1.6**
XLT PP **PnPn** **01 23 49.1 +8.0**
XLT sS sS 01 27 29.9 +2.2
XLT pmax pmax
comp=Z,56nm,1.5s
TJN Taejon 22.28 48⇑ *e*P **P** **01 23 20.1 +1.3**
KSAR Wonju Array Be 23.20 47 P **P** **01 23 28.9 +0.5**
KSAR Wonju Array Be 23.20 47 P **P** **01 23 28.9 +0.5**
KSRS Korea Array 23.23 47 P **P** **01 23 29.4 +0.7**
comp=Z,200nm,1.0s,baz=237,slow=9.5,SNR=19
comp=Z,20nm,1.0s
JNU Nakatsue 23.52 59 P **P** **01 23 34.0 +2.3**
comp=Z,46nm,1.1s,baz=328,slow=2.6,SNR=7.3
JNU LR LR 01 31 59.4
comp=Z,514nm,18.6s,baz=238,slow=35
comp=Z,46nm,1.1s
JNU Nakatsue 23.52 59 P **P** **01 23 31.5 -0.2**
DAV Davao City (W) 24.01 128 LR LR 01 33 57.3
comp=Z,2μm,18.4s,baz=320,slow=39
PPI Padang Panjang 24.08 196 P **P** **01 23 39.7 +2.5**
comp=Z,1μmcomp=Z,59nm,1.5s
PDSI Padang 24.50 195 P **P** **01 23 44.1 +3.0**
comp=Z,8μmcomp=Z,27nm,1.1s
SONM Songino Array 24.84 359 P **P** **01 23 45.7 +1.7**
comp=Z,18nm,1.0s,baz=182,slow=11,SNR=40
SONM LR LR 01 34 26.4
comp=Z,856nm,20.4s,baz=178,slow=39
comp=Z,18nm,1.0s
ULN Ulaanbaatar 24.87 0 P **P** **01 23 44.4 +0.1**
ULN IAmb IAmb 01 23 48.6
comp=Z,73nm,1.2s
ULN Ulaanbaatar 24.87 0*de*P **P** **01 23 46.2 +1.9**
ULN pmax pmax
comp=Z,54nm,1.2s
MTKI Muara Teweh, K 25.02 161 P **P** **01 23 48.5 +2.7**
TPI Tanjungpandan 25.56 178 P **P** **01 23 52.9 +2.3**
comp=Z,18nm,1.4s
TOLI2 Tolitoli 25.61 146 P **P** **01 23 50.6 -0.6**
CN2 Changchun 25.88 32 *e*P **P** **01 23 53.0 -0.4**
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.5s
CN2 LR LR
comp=Z,200nm,11.0s
CN2 LR LR
comp=Z,300nm,11.0s
WMQ Urumqi 26.10 327 *e*P **P** **01 23 57.0 +1.6**
WMQ sP sP 01 24 04.3 +5.3
WMQ S **S** **01 28 29.5 +2.4**
WMQ pmax pmax
comp=Z,21nm,1.1s
WMQ LR LR
comp=Z,2μm,14.9s
WMQ LR LR
comp=Z,2μm,10.1s
MASI Maura Aman, Be 26.30 190 P **P** **01 23 59.2 +1.8**
comp=Z,67nm,1.7s
HYBB Hyderabad (bro 27.03 263 *e*P **P** **01 24 04.7 +0.6**
MDSI Maura Dua 27.38 186 P **P** **01 24 08.4 +1.3**
comp=Z,14nm,0.6s
BBKI Banjar Baru 27.40 162 P **P** **01 24 09.6 +2.3**
ZAK Zakamensk 27.52 355 *e*P **P** **01 24 09.6 +1.4**
ZAK pmax pmax
comp=Z,33nm,1.7s
ZAK pmax pmax
comp=Z,22nm,2.2s
APSI Ampana 27.78 147 P **P** **01 24 12.4 +1.7**
HIA Hailar 28.20 18 P **P** **01 24 14.0 -0.2**
HIA Hailar 28.20 18*d* *i*P **P** **01 24 15.2 +1.0**
HIA pmax pmax
comp=Z,20nm,1.2s
BNX BinXian 28.25 31 ⇑P **P** **01 24 15.3 +0.7**
BNX pmax pmax
comp=Z,17nm,1.5s
HILR Hailar Array B 28.46 18 P **P** **01 24 17.7 +1.2**
comp=Z,10.0nm,0.9s,baz=187,slow=10,SNR=10.0
HILR LR LR 01 37 47.2
comp=Z,200nm,18.8s,baz=105,slow=41
comp=Z,10.0nm,0.9s
LUWI Luwuk 28.48 145 P **P** **01 24 16.9 0.0**
LUWI IAmb IAmb 01 24 19.6
comp=Z,65nm,1.0s
LUWI Luwuk 28.48 145 P **P** **01 24 18.9 +2.0**
KNGR Kungurtug, Tuv 28.54 348⇓ *e*P **P** **01 24 18.7 +1.4**
KNGR pmax pmax
comp=Z,19nm,1.2s
TTSI Tana Toraja 28.80 152 P **P** **01 24 22.3 +2.5**
WUS Wushi 29.42 315 P **P** **01 24 26.1 +0.8**
WUS IAmb IAmb 01 24 28.7
comp=Z,93nm,1.6s
SPSI Sidrap Palu 29.60 153 P **P** **01 24 29.5 +2.6**
USRK Ussuriysk Ar. 29.64 38 P **P** **01 24 27.4 +0.5**
comp=Z,20nm,0.9s,baz=233,slow=8.7,SNR=14
comp=Z,20nm,0.9s
ZSN Zaisan 30.10 330 *e*P **P** **01 24 30.9 -0.2**
ZSN Zaisan 30.10 330 *e*P **P** **01 24 30.9 -0.2**
BNSI Bone 30.14 153 P **P** **01 24 34.0 +2.4**
comp=Z,23nm,0.8s
KPJI Karang Pucung 30.17 176 P **P** **01 24 34.4 +2.5**
comp=Z,36nm,1.3s
SHLS Shalkode 30.29 318 *e*P **P** **01 24 30.3 -2.7**
comp=Z,9.4nm,0.5s
SHLS Shalkode 30.29 318 *e*P **P** **01 24 30.2 -2.7**
SHLS pmax pmax
comp=Z,9.0nm,0.5s
MAJO Matsushiro 30.32 56⇑ *e*P **P** **01 24 34.6 +1.5**
MAJO pmax pmax
comp=Z,17nm,1.4s
MJAR Matsushiro Arr 30.32 56 P **P** **01 24 34.9 +1.7**
comp=Z,8.7nm,0.9s,baz=255,slow=9.7,SNR=14
MJAR PcP **PcP** **01 27 32.1 -1.3**
comp=Z,7.1nm,1.1s,baz=246,slow=3.2,SNR=6.1
MJAR LR LR 01 38 43.0
comp=Z,235nm,20.0s,baz=244,slow=40
comp=Z,8.7nm,0.9s
MJAR Matsushiro Arr 30.32 56 P **P** **01 24 34.4 +1.3**
MJAR Matsushiro Arr 30.32 56 P **P** **01 24 34.4 +1.3**
MJAR 01 27 32.1
MJAR pmax pmax
comp=Z,42nm,1.6s
KAPI Kappang 30.54 154 LR LR 01 39 56.4
comp=Z,158nm,18.3s,baz=2.0,slow=42
KAPI Kappang 30.54 154 P **P** **01 24 36.5 +1.2**
KAPI Kappang 30.54 154*d* *i*P **P** **01 24 37.0 +1.8**
KAPI pmax pmax
comp=Z,17nm,1.0s
UZB Uzynbulak 30.55 318 *e*P **P** **01 24 35.0 -0.3**
comp=Z,30nm,1.3s
UZB Uzynbulak 30.55 318 *e*P **P** **01 24 35.0 -0.3**
UZB pmax pmax
comp=Z,30nm,1.3s
TARG Taragay, Kyrgy 30.61 315 P **P** **01 24 37.3 +1.2**
TARG Taragay, Kyrgy 30.61 315 P **P** **01 24 37.3 +1.2**
TARG pmax pmax
comp=Z,19nm,1.0s
DGZ Jazzator, Alta 30.73 335*de*P **P** **01 24 38.9 +2.1**
DGZ pmax pmax
comp=Z,28nm,1.3s
SATY Saty 30.89 317 *e*P **P** **01 24 37.7 -0.5**
comp=Z,15nm,1.1s
SATY Saty 30.89 317 *e*P **P** **01 24 37.7 -0.5**
SATY pmax pmax
comp=Z,15nm,1.1s
KSH Kashi 30.89 310 P **P** **01 24 41.3 +3.0**
KSH pmax pmax
comp=Z,26nm,1.6s
KSH LR LR
comp=Z,2μm,13.7s
KSH LR LR
comp=Z,2μm,14.0s
MK31 Makanchi Array 30.90 326*de*P **P** **01 24 39.2 +1.0**
MKAR Makanchi Array 30.90 326 P **P** **01 24 39.4 +1.1**
comp=Z,5.9nm,0.7s,baz=129,slow=8.5,SNR=47
MKAR PcP **PcP** **01 27 35.3 +0.6**
comp=Z,3.1nm,0.8s,baz=127,slow=4.5,SNR=6.0
comp=Z,5.9nm,0.7s
MKAR Makanchi Array 30.90 326 P **P** **01 24 38.6 +0.4**
MKAR **PcP** **01 27 35.8 +1.1**
MAKZ Makanchi 31.07 326 P **P** **01 24 40.7 +1.0**
MAKZ Makanchi 31.07 326 P **P** **01 24 40.7 +1.0**
MAKZ pmax pmax
comp=Z,28nm,1.9s
NIL Nilore 31.26 297 P **P** **01 24 41.2 -0.4**
NIL IAmb IAmb 01 24 42.6
comp=Z,36nm,1.1s
NIL Nilore 31.26 297 P **P** **01 24 41.2 -0.4**
NIL pmax pmax
comp=Z,36nm,1.1s
HEH HeiHe 31.68 26 *e*P **P** **01 24 45.4 +0.5**
HEH pmax pmax
comp=Z,34nm,1.1s
HEH LR LR
comp=Z,730nm,7.4s
HEH LR LR
comp=Z,670nm,8.0s
HEH LR LR
comp=Z,600nm,9.4s
MDOK Medeo 31.80 316 *e*P **P** **01 24 45.8 -0.5**
MDOK Medeo 31.80 316 *e*P **P** **01 24 45.8 -0.5**
TNSS Tian-Shan 31.80 316 *e*P **P** **01 24 46.0 -0.7**
TNSS Tian-Shan 31.80 316 *e*P **P** **01 24 45.9 -0.7**
ARXS Arharly 31.85 319 *i* P **P** **01 24 46.5 -0.2**
BSSI Bau Bau, Buton 31.87 153 P **P** **01 24 48.2 +1.3**
AAA Alma-Ata 31.90 316 *e*P **P** **01 24 47.0 -0.2**
comp=Z,15nm,0.5s
AAA Alma-Ata 31.90 316 *e*P **P** **01 24 46.9 -0.2**
AAA pmax pmax
comp=Z,15nm,0.5s
TDK Taldyqorghan 31.94 320 *e*P **P** **01 24 47.3 -0.1**
comp=Z,18nm,1.4s
TDK Taldyqorghan 31.94 320 *e*P **P** **01 24 47.2 -0.1**
TDK pmax pmax
comp=Z,18nm,1.4s
JAGI Jajag, Banyuwa 32.05 166 P **P** **01 24 50.0 +1.5**
JAGI IAmb IAmb 01 24 51.7
comp=Z,58nm,1.3s
JAGI Jajag, Banyuwa 32.05 166 P **P** **01 24 51.6 +3.1**
comp=Z,36nm,1.5s
TKM2 Tokmak 2 32.61 315 P **P** **01 24 55.3 +1.8**
SNR=7.4
NLAI Namlea 32.72 140 P **P** **01 24 58.0 +3.6**
KBK Karagaybulak 32.92 314 P **P** **01 24 58.2 +2.1**
SNR=17
TWSI Taliwang, Sumb 33.01 161 P **P** **01 24 59.4 +2.5**
UCH Uchtor 33.02 313 P **P** **01 24 59.5 +2.1**
SNR=10
AAK Ala-Archa 33.21 314 LR LR 01 40 17.7
comp=Z,3μm,20.9s,baz=112,slow=40
AAK Ala-Archa 33.21 314 P **P** **01 25 00.5 +1.8**
AAK IAmb IAmb 01 25 01.7
comp=Z,36nm,1.1s
AAK Ala-Archa 33.21 314 P **P** **01 25 00.6 +2.0**
SNR=17
AAK Ala-Archa 33.21 314 P **P** **01 25 00.5 +1.8**
AAK pmax pmax
comp=Z,36nm,1.1s
SGDS Sogindy 33.48 315 *e*P **P** **01 25 00.6 -0.3**
comp=Z,13nm,1.2s
USP Ospenovka 33.48 315 P **P** **01 25 02.4 +1.4**
SNR=34
EKS2 Erkin-Say 33.70 314 P **P** **01 25 05.2 +2.3**
SNR=22
MSAI Masohi 33.91 138 P **P** **01 25 08.1 +3.2**
ZEA Zeya 34.43 22 *e*P **P** **01 25 10.6 +1.7**
ZEA pmax pmax
comp=Z,20nm,1.5s
BTLS Baital 34.60 318 *e*P **P** **01 25 10.4 -0.1**
comp=Z,18nm,1.4s
BTLS Baital 34.60 318 *e*P **P** **01 25 10.4 -0.1**
BTLS pmax pmax
comp=Z,18nm,1.4s
WBSI Waikabubak, Su 34.66 158 P **P** **01 25 12.4 +1.1**
EDFI Ende, Flores 34.72 153 P **P** **01 25 15.6 +3.7**
comp=Z,9.3nm,1.7s
MMRI Maumere 34.84 153 P **P** **01 25 13.5 +0.6**
GAR Garm 34.85 306 P **P** **01 25 12.8 -0.1**
GAR IAmb IAmb 01 25 16.9
comp=Z,55nm,1.2s
KBL Kabul 34.86 298 P **P** **01 25 12.7 -0.4**
KBL IAmb IAmb 01 25 15.2
comp=Z,99nm,2.0s
KBL Kabul 34.86 298 P **P** **01 25 12.7 -0.4**
KBL pmax pmax
comp=Z,99nm,2.0s
ZALV Zalesovo Beam 35.11 337 P **P** **01 25 15.6 +0.7**
comp=Z,21nm,0.8s,baz=134,slow=8.5,SNR=77
ZALV LR LR 01 40 37.0
comp=Z,1μm,18.6s,baz=138,slow=38
comp=Z,21nm,0.8s
ZALV Zalesovo Beam 35.11 337 P **P** **01 25 15.3 +0.5**
ZALV Zalesovo Beam 35.11 337 P **P** **01 25 15.3 +0.5**
KURBB Kurchatov Arra 35.31 329 P **P** **01 25 17.3 +0.8**
comp=Z,22nm,0.9s,baz=136,slow=9.4,SNR=130
KURBB PcP **PcP** **01 27 47.4 +0.5**
comp=Z,4.2nm,1.0s,baz=151,slow=2.9,SNR=9.2
KURBB LR LR 01 41 11.1
comp=Z,1μm,18.2s,baz=154,slow=39
comp=Z,22nm,0.9s
KURK Kurchatov 35.33 329 P **P** **01 25 17.1 +0.4**
KURK IAmb IAmb 01 25 19.2
comp=Z,44nm,0.9s
KURK **PcP** **01 27 48.0 +1.0**
KURK Kurchatov 35.33 329 P **P** **01 25 17.1 +0.4**
KURK 01 27 48.0
KURK pmax pmax
comp=Z,44nm,0.9s
DZA Taraz 35.44 313 *e*P **P** **01 25 17.5 -0.3**
comp=Z,16nm,0.8s
DZA Taraz 35.44 313 *e*P **P** **01 25 17.5 -0.3**
DZA pmax pmax
comp=Z,16nm,0.8s
CHGR Chuyangaron 35.63 305 P **P** **01 25 19.4 -0.2**
CHGR Chuyangaron 35.63 305 P **P** **01 25 19.4 -0.2**
IUG Iuzhnay 36.05 311 *e*P **P** **01 25 22.9 -0.3**
comp=Z,29nm,1.6s
IUG Iuzhnay 36.05 311 *e*P **P** **01 25 22.9 -0.3**
IUG pmax pmax
comp=Z,29nm,1.6s
KK31 Karatay Array 36.07 313 P **P** **01 25 24.1 +0.8**
KK31 Karatay Array 36.07 313 P **P** **01 25 24.1 +0.8**
KK31 pmax pmax
comp=Z,22nm,1.1s
KKAR Karatay Array 36.07 313 P **P** **01 25 23.6 +0.3**
KKAR Karatay Array 36.07 313 P **P** **01 25 23.6 +0.3**
CHM Chimkent 36.41 311 *e*P **P** **01 25 25.9 -0.3**
comp=Z,31nm,1.4s

CHM	**Chimkent**	**36.41**	**311**	*e*P		**P**		**01 25 25.9**	**-0.3**
CHM					pmax	pmax			
	comp=Z,31nm,1.4s								
BRLS	**Boroldaу**	**36.51**	**312**	*e*P		**P**		**01 25 26.6**	**-0.4**
BRLS	**Boroldaу**	**36.51**	**312**	*e*P		**P**		**01 25 26.6**	**-0.4**
BATI	**Baumata**	**36.87**	**152**	LR		LR		01 41 33.1	
	comp=Z,307nm,21.4s,baz=337,slow=38								
GUMO	**Guam**	**37.25**	**98**	LR		LR		01 40 42.4	
	comp=Z,431nm,19.7s,baz=286,slow=36								
YSS	**Yuzhno-Sakhali**	**37.49**	**41**⇑	*e*P		**P**		**01 25 36.5**	**+1.2**
YSS					pmax	pmax			
	comp=Z,29nm,1.0s								
SAUI	**Saumlaki**	**39.00**	**139**	P		**P**		**01 25 47.9**	**-0.4**
TYV	**Tymovskoe**	**39.36**	**36**	*e*P		**P**		**01 25 53.6**	**+2.7**
TYV					pmax	pmax			
	comp=Z,35nm,1.3s								
TYV					pmax	pmax			
	comp=Z,600nm,3.1s								
HRA	**Herat**	**40.42**	**297**	P		**P**		**01 25 59.6**	**-0.6**
BVAR	**Borovoye Array**	**40.78**	**327**	P		**P**		**01 26 03.6**	**+0.8**
	comp=Z,8.7nm,0.9s,baz=123,slow=11,SNR=32								
BVAR					PcP	**PcP**		**01 28 03.8**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=127,slow=6.3,SNR=3.9								
BVAR					LR	LR		01 43 56.0	
	comp=Z,291nm,18.2s,baz=117,slow=38								
	comp=Z,8.7nm,0.9s								
YAK	**Yakutsk**	**42.08**	**16**	LR		LR		01 44 58.8	
	comp=Z,400nm,18.6s,baz=210,slow=38								
YAK	**Yakutsk**	**42.08**	**16**	P		**P**		**01 26 13.1**	**-0.1**
YAK	**Yakutsk**	**42.08**	**16**	*e*P		**P**		**01 26 13.6**	**+0.4**
YAK				*e*				01 28 07.4	
YAK				*e*PPP		PPP		01 28 21.7	
YAK				*e*S		**S**		**01 32 33.3**	**+0.7**
YAK				*e*SS		**SS**		**01 35 36.4**	**-3.4**
YAK				*e*SSS		SSS		01 36 11.4	
YAK					pmax	pmax			
	comp=Z,51nm,1.5s								
YAK					pmax	pmax			
	comp=N,23nm,1.4s								
YAK					pmax	pmax			
	comp=E,17nm,1.1s								
YAK					pmax	pmax			
	comp=Z,274nm,3.5s								
YAK					pmax	pmax			
	comp=N,364nm,4.8s								
YAK					pmax	pmax			
	comp=E,246nm,3.3s								
YAK					smax	smax			
	comp=E,428nm,4.8s								
YAK					smax	smax			
	comp=N,314nm,5.1s								
YAK					MLR	MLR			
	comp=Z,451nm,22.0s								
YAK					MLR	MLR			
	comp=N,438nm,21.0s								
YAK					MLR	MLR			
	comp=E,180nm,16.0s								
FITZ	**Fitzroy Crossi**	**44.77**	**154**	P		**P**		**01 26 35.5**	**+0.1**
ABKAR	**Akbulak array**	**45.09**	**318**	P		**P**		**01 26 37.4**	**-0.3**
AKTO	**Aktyubinsk**	**46.64**	**319**	P		**P**		**01 26 50.6**	**+0.7**
	comp=E,4.0nm,1.0s,baz=103,slow=6.9,SNR=10								
AKTO					PcP	**PcP**		**01 28 23.2**	**-0.5**
	comp=E,5.0nm,0.9s,baz=186,slow=2.5,SNR=4.7								
	comp=E,4.0nm,1.0s								
SVE	**Sverdlovsk**	**47.55**	**328**	*e*P		**P**		**01 26 58.3**	**+1.4**
SVE					pmax	pmax			
	comp=Z,42nm,1.3s								
SVE					MLR	MLR			
	comp=Z,419nm,13.0s								
MA2	**Magadan**	**47.84**	**28**	LR		LR		01 48 12.4	
	comp=Z,88nm,18.3s,baz=261,slow=37								
ARTI	**Arti**	**48.50**	**326**	P		**P**		**01 27 04.5**	**+0.2**
	comp=Z,14nm,1.1s,baz=119,slow=5.4,SNR=15								
ARTI					LR	LR		01 48 34.2	
	comp=Z,252nm,19.0s,baz=114,slow=37								
	comp=Z,14nm,1.1s								
ARTI	**Arti**	**48.50**	**326**	P		**P**		**01 27 04.5**	**+0.2**
ARTI					IAmb	IAmb		01 27 06.3	
	comp=Z,51nm,1.6s								
ARTI	**Arti**	**48.50**	**326***c*	*i*P		**P**		**01 27 04.4**	**+0.1**
ARTI								01 28 58.1	
ARTI					S	**S**		**01 34 08.2**	**+2.6**
ARTI					pmax	pmax			
	comp=Z,31nm,1.3s								
ARTI					MLR	MLR			
	comp=Z,324nm,14.0s								
SEY	**Seymchan**	**50.23**	**25**	LR		LR		01 49 08.7	
	comp=Z,125nm,20.2s,baz=246,slow=37								
TIXI	**Tiksi**	**50.34**	**9**	P		**P**		**01 27 17.5**	**-0.6**
TIXI					IAmb	IAmb		01 27 19.8	
	comp=Z,45nm,1.4s								
TIXI	**Tiksi**	**50.34**	**9**⇑	*e*P		**P**		**01 27 17.7**	**-0.4**
TIXI					pmax	pmax			
	comp=Z,47nm,1.7s								
WRAB	**Tennant Creek**	**50.40**	**146**	*de*P		**P**		**01 27 19.6**	**+0.4**
WRAB					pmax	pmax			
	comp=Z,28nm,1.1s								
WRA	**Warramunga Arr**	**50.40**	**146**	P		**P**		**01 27 19.2**	**0.0**
	comp=Z,20nm,1.1s,baz=332,slow=8.2,SNR=59								
WRA					PcP	**PcP**		**01 28 38.0**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=326,slow=8.6,SNR=7.9								
WRA					LR	LR		01 50 57.3	
	comp=Z,123nm,20.2s,baz=324,slow=39								
	comp=Z,20nm,1.1s								
WRA	**Warramunga Arr**	**50.40**	**146**	P		**P**		**01 27 17.7**	**-1.5**
WRA						**PcP**		**01 28 37.1**	**-0.6**
WR8	**Warramunga Arr**	**50.50**	**145**	IAmb		IAmb		01 27 21.8	
	comp=Z,29nm,1.0s								
PMG	**Port Moresby**	**50.95**	**125**	LR		LR		01 50 56.8	
	comp=Z,60nm,19.5s,baz=310,slow=38								
PMG	**Port Moresby**	**50.95**	**125**	*de*P		**P**		**01 27 25.2**	**+1.7**
PMG					pmax	pmax			
	comp=Z,22nm,1.3s								
AKT	**Akhty**	**52.26**	**305**	*e*P		**P**		**01 27 31.3**	**-1.9**
AKT					pmax	pmax			
	comp=Z,20nm,1.2s								
MAK	**Makhachkala**	**52.48**	**307**	*c i*P		P		01 27 28.4	-6.2
MAK				*e*PPP		PPP		01 30 37.0	
MAK				*e*S		S		01 34 51.9	-9.4
MAK				*e*SS		**SS**		**01 38 30.9**	**-8.3**
MAK				*e*SSS		SSS		01 40 18.2	
MAK					pmax	pmax			
	comp=Z,268nm,1.2s								
MAK					MLR	MLR			
	comp=Z,666nm,14.0s								
AS31	**Alice Springs**	**53.31**	**149**	P		**P**		**01 27 40.9**	**0.0**
ASAR	**Alice Springs**	**53.31**	**149**	P		**P**		**01 27 41.2**	**+0.3**
	comp=Z,12nm,1.0s,baz=328,slow=7.0,SNR=52								
ASAR					PcP	**PcP**		**01 28 48.4**	**-0.1**
	comp=Z,4.4nm,0.9s,baz=341,slow=4.1,SNR=7.2								
ASAR					LR	LR		01 52 32.0	
	comp=Z,110nm,18.6s,baz=304,slow=38								
	comp=Z,12nm,1.0s								
ASAR	**Alice Springs**	**53.31**	**149**	P		**P**		**01 27 40.8**	**-0.1**
ASAR					PcP	**PcP**		**01 28 49.0**	**+0.5**
ASAR	**Alice Springs**	**53.31**	**149**	P		**P**		**01 27 40.8**	**-0.1**
ASAR								01 28 49.0	
BELG	**Belogornoye**	**53.42**	**319**	*de*P		**P**		**01 27 41.5**	**+0.2**
BELG					pmax	pmax			
	comp=Z,6.0nm,1.0s								
KIRV	**Kirov**	**53.80**	**327**	P		**P**		**01 27 44.3**	**+0.3**
	comp=Z,7.6nm,0.7s,baz=109,slow=4.9,SNR=5.3								
KIRV					LR	LR		01 54 14.0	
	comp=Z,403nm,18.4s,baz=109,slow=40								
	comp=Z,7.6nm,0.7s								
KIRV	**Kirov**	**53.80**	**327**	*de*P		**P**		**01 27 44.4**	**+0.4**
GNI	**Garni**	**54.53**	**304**	P		**P**		**01 27 49.8**	**-0.1**
GNI	**Garni**	**54.53**	**304**	P		**P**		**01 27 49.8**	**-0.1**
GNI					pmax	pmax			
	comp=Z,22nm,1.2s								
GNI	**Garni**	**54.53**	**304**	P		**P**		**01 27 48.9**	**-1.0**
	comp=Z,18nm,1.4s								
KBZ	**Khabaz**	**55.86**	**308**	P		**P**		**01 27 59.2**	**0.0**
	comp=Z,3.0nm,1.1s,baz=47,slow=9.0,SNR=5.9								
	comp=Z,3.0nm,1.1s								
KBZ	**Khabaz**	**55.86**	**308**⇑	*e*P		**P**		**01 27 59.5**	**+0.3**
KBZ					pmax	pmax			
	comp=Z,7.0nm,1.4s								
KIV	**Kislovodsk**	**56.01**	**308**	P		**P**		**01 27 59.8**	**-0.6**
KIV	**Kislovodsk**	**56.01**	**308**	*e*P		**P**		**01 27 59.1**	**-1.4**
KIV				*e*S		**S**		**01 35 47.9**	**-1.3**
KIV				*e*SS		**SS**		**01 39 35.1**	**+0.1**
KIV					pmax	pmax			
	comp=Z,26nm,1.0s								
KIV					MLR	MLR			
	comp=Z,442nm,16.0s								

KIV	**Kislovodsk**	**56.01**	**308**	P		**P**		**01 28 00.3**	**-0.2**
	comp=Z,363nmcomp=Z,31nm,1.4s								
NWAO	**Narrogin (SRO)**	**56.45**	**169**	LR		LR		01 54 56.9	
	comp=Z,145nm,19.0s,baz=294,slow=39								
GURO	**Guroymak-BITLI**	**56.70**	**302**	IAmb		IAmb		01 28 08.0	
	comp=Z,27nm,1.2s								
VRH	**Novokhopyorsk**	**56.91**	**317**	*e*P		**P**		**01 28 04.4**	**-2.2**
VRH					pmax	pmax			
	comp=Z,10.0nm,1.0s								
LABN	**Labinsk**	**57.42**	**309**	*e*P		**P**		**01 28 10.1**	**-0.2**
LABN					pmax	pmax			
	comp=Z,7.0nm,0.6s								
CTA	**Charters Tower**	**57.56**	**135**	LR		LR		01 53 06.4	
	comp=Z,5.8nm,21.9s,baz=16,slow=36								
CTAO	**Charters Tower**	**57.56**	**135**	P		**P**		**01 28 11.3**	**-0.2**
CTAO					IAmb	IAmb		01 28 14.5	
	comp=Z,40nm,1.3s								
CTAO	**Charters Tower**	**57.56**	**135**	P		**P**		**01 28 11.4**	**-0.2**
CTAO					pmax	pmax			
	comp=Z,40nm,1.3s								
ERBR	**Yeremizino-Bor**	**57.57**	**311**	*e*P		**P**		**01 28 10.6**	**-0.8**
ERBR					pmax	pmax			
	comp=Z,24nm,0.6s								
ERBR					MLR	MLR			
	comp=Z,716nm,17.0s								
BILL	**Bilibino**	**57.64**	**23**⇑	*e*P		**P**		**01 28 12.7**	**+1.2**
BILL					pmax	pmax			
	comp=Z,9.0nm,1.3s								
MARD	**Mardin**	**57.80**	**301**	IAmb		IAmb		01 28 15.1	
	comp=Z,32nm,1.4s								
VSLR	**Vesyoloye**	**57.95**	**308**	*de*P		**P**		**01 28 14.4**	**+0.3**
VSLR					pmax	pmax			
	comp=Z,24nm,1.0s								
SOC	**Sochi**	**58.17**	**308**	*e*P		**P**		**01 28 13.1**	**-2.5**
SOC				*e*				01 30 21.6	
SOC				*e*PPP		PPP		01 31 41.8	
SOC				*e*S		**S**		**01 36 14.6**	**-2.8**
SOC				*e*SSS		SSS		01 42 32.3	
SOC					MLR	MLR			
	comp=Z,375nm,17.0s								
VORR	**Voronezh**	**58.51**	**318**	*e*P		**P**		**01 28 15.1**	**-2.7**
VORR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
VSR	**Storozhevoye**	**58.52**	**317**	*e*P		**P**		**01 28 15.1**	**-2.8**
VSR					pmax	pmax			
	comp=Z,7.0nm,1.0s								
LPSR	**Galich'ya Gora**	**58.72**	**319**	*e*P		**P**		**01 28 16.5**	**-2.8**
LPSR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
KLMR	**Klimovskoe**	**59.17**	**328**	*e*P		**P**		**01 28 19.9**	**-2.4**
KLMR				*e*				01 30 31.2	
KLMR					pmax	pmax			
	comp=Z,59nm,1.4s								
KLMR					MLR	MLR			
	comp=Z,626nm,15.0s								
MOS	**Moscow**	**59.66**	**322**	*e*P		**P**		**01 28 24.0**	**-1.7**
MOS				*e*S		**S**		**01 36 34.0**	**-2.3**
MOS					pmax	pmax			
	comp=Z,65nm,1.5s								
MOS					pmax	pmax			
	comp=Z,200nm,1.8s								
MOS					MLR	MLR			
	comp=E,500nm,19.0s								
MOS					MLR	MLR			
	comp=Z,500nm,19.0s								
ANN	**Anapa**	**59.76**	**310**	*e*P		**P**		**01 28 23.2**	**-3.4**
ANN					pmax	pmax			
	comp=Z,37nm,1.4s								
INKA	**Innaminka**	**60.12**	**145**	P		**P**		**01 28 30.0**	**+0.8**
INKA					IAmb	IAmb		01 28 32.6	
	comp=Z,22nm,1.2s								
OBN	**Obninsk**	**60.23**	**321**	LR		LR		01 55 59.0	
	comp=Z,757nm,20.9s,baz=26,slow=38								
OBN	**Obninsk**	**60.23**	**321**	*de*P		**P**		**01 28 29.9**	**+0.3**
OBN				*i*				01 29 14.9	
OBN				*i*				01 30 40.1	
OBN					pmax	pmax			
	comp=Z,33nm,1.5s								
OBN					MLR	MLR			
	comp=Z,717nm,18.0s								
OBN	**Obninsk**	**60.23**	**321**	P		**P**		**01 28 29.7**	**+0.1**
	comp=Z,24nm,0.5s								
HNR	**Honiara**	**61.18**	**116**	LR		LR		01 51 04.9	
	comp=Z,134nm,21.7s,baz=292,slow=32								
ASF	**Jaal al Asfar**	**61.69**	**295**	LR		LR		02 00 31.8	
	comp=Z,270nm,18.3s,baz=90,slow=41								
ATD	**Arta Tunnel**	**61.71**	**271**	LR		LR		01 56 09.6	
	comp=Z,6.6nm,18.3s,baz=29,slow=37								
SIM	**Simferopol'**	**62.10**	**310**	*e*P		**P**		**01 28 37.9**	**-4.6**
SIM				*e*				01 29 21.0	
SIM					pmax	pmax			
	comp=Z,35nm,1.4s								
SIM					MLR	MLR			
	comp=Z,400nm,23.2s								
APA	**Apatity**	**62.67**	**336**⇓	*i*P		**P**		**01 28 45.1**	**-0.8**
APA				*i*				01 29 21.9	
APA				*i*				01 30 59.9	
APA				*i*	S	**S**		**01 37 11.4**	**-2.9**
APA				*i*	SS	**SS**		**01 41 14.8**	**-3.4**
APA					MLR	MLR			
	comp=Z,1μm,18.4s								
MMAI	**Mount Meron Ar**	**62.77**	**296**	P		**P**		**01 28 47.5**	**+0.2**
	comp=Z,3.7nm,1.1s,baz=99,slow=4.5,SNR=6.6								
	comp=Z,3.7nm,1.1s								
BRTR	**Keskin Array B**	**63.07**	**304**	P		**P**		**01 28 49.4**	**+0.1**
	comp=Z,3.8nm,1.2s,baz=97,slow=3.1,SNR=8.1								
	comp=Z,3.8nm,1.2s								
BRTR	**Keskin Array B**	**63.07**	**304**	P		**P**		**01 28 47.9**	**-1.4**
BRTR	**Keskin Array B**	**63.07**	**304**	*ce*P		**P**		**01 28 48.9**	**-0.4**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
BR105	**Keskin Array S**	**63.08**	**304**	P		**P**		**01 28 48.8**	**-0.6**
	comp=Z,2.8nm,1.4s								
JOF	**Joensuu**	**63.22**	**330**	*e*P		**P**		**01 28 49.7**	**0.0**
ANTO	**Ankara**	**63.69**	**304**	P		**P**		**01 28 53.4**	**+0.1**
	comp=Z,2.2nm,0.7s								
STKA	**Stephens Creek**	**63.89**	**147**	P		**P**		**01 28 54.6**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=5.4,slow=2.5,SNR=5.1								
STKA					LR	LR		02 00 35.5	
	comp=Z,49nm,18.4s,baz=345,slow=40								
	comp=Z,3.3nm,0.9s								
EIDS	**Eidsvold**	**64.43**	**136**	P		**P**		**01 28 57.2**	**-0.9**
AK09	**Malin Array Si**	**64.79**	**317**	P		**P**		**01 28 59.6**	**-0.6**
AK08	**Malin Array Si**	**64.81**	**317**	P		**P**		**01 28 59.4**	**-0.9**
AK10	**Malin Array Si**	**64.81**	**317**	P		**P**		**01 28 59.4**	**-1.0**
AK03	**Malin Array Si**	**64.82**	**317**	P		**P**		**01 28 59.5**	**-0.9**
AKASG	**Malin Array Be**	**64.82**	**317**	P		**P**		**01 28 59.7**	**-0.7**
	comp=Z,6.1nm,0.9s,baz=78,slow=6.1,SNR=20								
	comp=Z,6.1nm,0.9s								
AKASG	**Malin Array Be**	**64.82**	**317**	P		**P**		**01 28 59.3**	**-1.1**
AKASG	**Malin Array Be**	**64.82**	**317**	*ce*P		**P**		**01 29 00.1**	**-0.3**
AKASG					pmax	pmax			
	comp=Z,7.0nm,0.9s								
AKBB	**Malin Array Si**	**64.82**	**317**	IAmb		IAmb		01 29 01.0	
	comp=Z,14nm,0.9s								
AKBB	**Malin Array Si**	**64.82**	**317**	*ce*P		**P**		**01 28 59.5**	**-0.9**
AKBB	**Malin Array Si**	**64.82**	**317**	P		**P**		**01 28 59.8**	**-0.6**
KIEV	**Kiev**	**64.83**	**317**	P		**P**		**01 28 59.1**	**-1.4**
KIEV	**Kiev**	**64.83**	**317**	⇑P		**P**		**01 28 59.6**	**-0.9**
KIEV	**Kiev**	**64.83**	**317**	⇑P		**P**		**01 28 59.6**	**-0.9**
KIEV	**Kiev**	**64.83**	**317**	P		**P**		**01 28 59.8**	**-0.7**
	comp=Z,790nmcomp=Z,62nm,1.4s								
AK02	**Malin Array Si**	**64.83**	**317**	P		**P**		**01 28 59.9**	**-0.6**
MNK	**Minsk**	**65.27**	**321**	*i* P		**P**		**01 29 03.2**	**0.0**
MNK				*i*				01 31 27.9	
MNK				*i* PPP		PPP		01 32 58.2	
MNK				*i* S		**S**		**01 37 47.6**	**+0.7**
MNK				*i* SS		**SS**		**01 42 03.0**	**+3.8**
MNK					pmax	pmax			
	comp=Z,24nm,1.0s								
MNK					pmax	pmax			
	comp=N,20nm,1.0s								
MNK					pmax	pmax			
	comp=E,22nm,1.0s								
MNK					MLR	MLR			
	comp=Z,709nm,18.0s								
MNK					MLR	MLR			
	comp=N,592nm,18.0s								
MNK					MLR	MLR			
	comp=E,116nm,17.0s								
MILM	**Milestii Mici**	**65.55**	**313**	*e*P		**P**		**01 29 03.0**	**-2.2**
MILM				*e*L		L		01 59 17.0	
MILM					LRM	MLR		02 08 13.0	
	comp=E,200nm,19.0s								
VSU	**Vasula**	**65.57**	**325**	*e*P		**P**		**01 29 04.2**	**-0.9**

VSU	**Vasula**	**65.57**	**325**	*de*P		**P**		**01 29 04.3**	**-0.9**
VSU					pmax	pmax			
	comp=Z,24nm,0.9s								
ARCES	**ARCESS Array B**	**65.67**	**338**	P		**P**		**01 29 05.2**	**-0.4**
	comp=Z,6.4nm,0.9s,baz=85,slow=8.0,SNR=16								
ARCES					LR	LR		02 01 20.1	
	comp=Z,457nm,19.2s,baz=94,slow=39								
	comp=Z,6.4nm,0.9s								
ARCES	**ARCESS Array B**	**65.67**	**338**	P		**P**		**01 29 04.9**	**-0.7**
SORM	**Soroca**	**65.69**	**314**	⇑P		**P**		**01 29 05.4**	**-0.7**
SORM	**Soroca**	**65.69**	**314**	⇑P		**P**		**01 29 05.4**	**-0.7**
FINES	**FINESS Array B**	**65.70**	**329**	P		**P**		**01 29 05.8**	**-0.1**
	comp=Z,16nm,1.0s,baz=102,slow=8.0,SNR=18								
FINES					LR	LR		02 00 12.1	
	comp=Z,228nm,21.1s,baz=84,slow=38								
	comp=Z,16nm,1.0s								
FINES	**FINESS Array B**	**65.70**	**329**	*i* P		**P**		**01 29 06.0**	**+0.1**
FINES					pmax	pmax			
	comp=Z,16nm,1.0s								
ISP	**Isparta**	**65.79**	**302**⇓	*e*P		**P**		**01 29 06.1**	**-1.0**
ISP					pmax	pmax			
	comp=Z,16nm,2.5s								
LUBAR	**Lubar, Ukraine**	**65.84**	**316**	P		**P**		**01 29 06.3**	**-0.8**
ARBE	**Arbavere**	**65.89**	**326**	*e*P		**P**		**01 29 07.4**	**+0.3**
GAMB	**Gambell**	**65.94**	**29**	P		**P**		**01 29 09.4**	**+1.9**
	baz=273								
ISAL	**Salakas**	**66.17**	**322**	*e*P		**P**		**01 29 11.3**	**+2.3**
KEF	**Keuruu**	**66.22**	**329**	*e*P		**P**		**01 29 08.3**	**-1.0**
CFR	**Carcaliu**	**66.27**	**311**	⇑P		**P**		**01 29 10.2**	**+0.3**
CFR	**Carcaliu**	**66.27**	**311**	⇑P		**P**		**01 29 10.2**	**+0.3**
GHRR		**66.63**	**312**	P		**P**		**01 29 12.4**	**+0.2**
HORU	**Horodok**	**66.80**	**315**	P		**P**		**01 29 12.7**	**-0.5**
RNPP9	**Sopachiv**	**66.82**	**318**	P		**P**		**01 29 12.5**	**-0.8**
RNPP5	**Staryi Chortor**	**66.85**	**318**	P		**P**		**01 29 12.8**	**-0.7**
RNPP8	**Varash**	**66.85**	**318**	P		**P**		**01 29 12.7**	**-0.8**
KMPD	**K-Podol'skiy**	**66.88**	**315**	P		**P**		**01 29 12.4**	**-1.3**
ODBI	**Odobesti**	**66.92**	**312**	⇑P		**P**		**01 29 14.0**	**-0.1**
TESR	**Tescani**	**67.08**	**312**	⇓P		**P**		**01 29 15.0**	**-0.1**
TESR	**Tescani**	**67.08**	**312**	P		**P**		**01 29 14.4**	**-0.7**
	comp=Z,13nm,1.5s								
VRI	**Vrincioaia**	**67.13**	**312**	⇑P		**P**		**01 29 16.1**	**+0.7**
VRI	**Vrincioaia**	**67.13**	**312**	⇑P		**P**		**01 29 16.1**	**+0.7**
VRI	**Vrincioaia**	**67.13**	**312**	P		**P**		**01 29 15.8**	**+0.3**
	comp=Z,47nm,1.2s								
VAF	**Ylistaro**	**67.16**	**331**	*e*P		**P**		**01 29 15.1**	**-0.2**
PLOR	**Plostina**	**67.19**	**312**	⇑P		**P**		**01 29 15.4**	**-0.4**
PLOR	**Plostina**	**67.19**	**312**	⇑P		**P**		**01 29 15.4**	**-0.4**
BISRR	**Bisoca**	**67.20**	**311**	⇑P		**P**		**01 29 17.2**	**+1.3**
SPIA	**Saint Paul Isl**	**67.26**	**36**	P		**P**		**01 29 17.5**	**+1.5**
	baz=277								
ONER	**Baraj Valea Uz**	**67.28**	**312**	⇑P		**P**		**01 29 16.6**	**+0.2**
VSVD	**Vaisvydziai**	**67.35**	**323**	*e*P		**P**		**01 29 16.9**	**+0.4**
ISR	**Istrita**	**67.39**	**311**	⇓P		**P**		**01 29 18.2**	**+1.1**
ISR	**Istrita**	**67.39**	**311**	⇓P		**P**		**01 29 18.2**	**+1.1**
ISR	**Istrita**	**67.39**	**311**	P		**P**		**01 29 16.6**	**-0.6**
	comp=Z,30nm,1.4s								
PABE	**Paberze**	**67.39**	**322**	P		**P**		**01 29 16.0**	**-0.8**
PABE	**Paberze**	**67.39**	**322**	*e*P		**P**		**01 29 16.9**	**+0.1**
TNA	**Tin City**	**67.42**	**27**	P		**P**		**01 29 18.1**	**+1.2**
	baz=276								
COVR	**Voineasa-Covas**	**67.50**	**312**	⇑P		**P**		**01 29 18.1**	**+0.3**
NEHR	**Nehoiu**	**67.51**	**311**	⇑P		**P**		**01 29 18.5**	**+0.6**
TURR	**Turia**	**67.59**	**312**	⇑P		**P**		**01 29 19.0**	**+0.6**
P08K	**Saint George I**	**67.72**	**36**	P		**P**		**01 29 19.9**	**+1.0**
	baz=278								
MLR	**Muntele Rosu**	**67.74**	**311**	⇑P		**P**		**01 29 19.9**	**+0.5**
MLR	**Muntele Rosu**	**67.74**	**311**	⇑P		**P**		**01 29 19.9**	**+0.5**
MLR	**Muntele Rosu**	**67.74**	**311**	P		**P**		**01 29 19.7**	**+0.3**
	comp=Z,22nm,1.6s								
OZUR		**67.74**	**312**	⇓P		**P**		**01 29 17.9**	**-1.4**
SPITS	**Spitsbergen Ar**	**67.79**	**347**	P		**P**		**01 29 20.3**	**+1.2**
	comp=Z,29nm,1.2s,baz=104,slow=4.6,SNR=2.9								
	comp=Z,29nm,1.2s								
KSV	**Kosov**	**67.83**	**314**	P		**P**		**01 29 19.0**	**-0.8**
BURAR	**Bucovina Array**	**67.85**	**314**	P		**P**		**01 29 18.9**	**-1.2**
BURAR	**Bucovina Array**	**67.85**	**314**	⇓P		**P**		**01 29 20.1**	**0.0**
BURAR	**Bucovina Array**	**67.85**	**314**	⇓P		**P**		**01 29 20.1**	**0.0**
SUW	**Suwalki**	**68.06**	**321**	*e*P		**P**		**01 29 20.9**	**-0.2**
SUW	**Suwalki**	**68.06**	**321**	P		**P**		**01 29 19.7**	**-1.4**
SUW	**Suwalki**	**68.06**	**321**	*e*P		**P**		**01 29 21.0**	**-0.1**
SUW	**Suwalki**	**68.06**	**321**	P		**P**		**01 29 19.7**	**-1.4**
F14K	**Arctic Creek**	**68.09**	**27**	P		**P**		**01 29 22.3**	**+1.2**
	baz=277								
C16K	**Lisburne Hills**	**68.13**	**24**	P		**P**		**01 29 22.1**	**+0.8**
	baz=277								
STNU	**Starunia**	**68.13

F18K **Selawik** 70.58 25 P P 01 29 37.1 +0.6
baz=283
NIE **Niedzica** 70.70 316 eP P 01 29 38.5 +0.8
NIE **Niedzica** 70.70 316 P P 01 29 37.9 +0.3
comp=Z,9.5nm,1.3s
B20K **Meade River** 70.70 21 P P 01 29 37.9 +0.7
baz=284
D19K **Kuna River** 70.73 23 P P 01 29 38.5 +1.1
baz=284
K15K **Wolf Creek Mou** 70.73 30 P P 01 29 37.9 +0.4
baz=283
I17K **Unalakleet** 70.75 28 P P 01 29 37.6 0.0
baz=283,SNR=10
KECS **Kecovo** 70.79 315 eP P 01 29 39.9 +1.8
KECS pmax pmax
comp=Z,14nm,1.1s
KECS **Kecovo** 70.79 315 eP P 01 29 39.9 +1.8
OJC **Ojcow** 70.84 317 eP P 01 29 38.3 -0.1
OJC **Ojcow** 70.84 317 P P 01 29 37.2 -1.2
OJC **Ojcow** 70.84 317 P P 01 29 37.2 -1.2
OJC **Ojcow** 70.84 317 P P 01 29 37.9 -0.5
comp=Z,19nm,1.5s
H17K **Granite Mounta** 70.85 27 P P 01 29 38.7 +0.5
baz=283,SNR=18
M14K **Bethel** 70.87 31 IAmb IAmb 01 29 41.7
comp=Z,26nm,1.0s
M14K **Bethel** 70.87 31 P P 01 29 38.4 +0.1
baz=283
L15K **Ungalak Mounta** 70.89 30 P P 01 29 39.0 +0.5
baz=283
J16K **Anvik River** 70.93 29 IAmb IAmb 01 29 42.1
comp=Z,34nm,1.1s
J16K **Anvik River** 70.93 29 P P 01 29 38.5 -0.2
baz=283
G18K **Tagagawik** 71.14 26 IAmb IAmb 01 29 42.5
comp=Z,39nm,1.2s
G18K **Tagagawik** 71.14 26 P P 01 29 39.7 -0.3
baz=284
A22K **Sinclair Lake** 71.16 20 P P 01 29 40.0 0.0
baz=286
N14K **Kuskokwak Cree** 71.19 32 P P 01 29 40.7 +0.4
baz=283
D20K **Etivluk River** 71.21 23 P P 01 29 40.7 +0.4
baz=285,SNR=22
F19K **Shaleruckik Mo** 71.25 25 P P 01 29 41.4 +0.8
baz=284
LANS **Liptovska Anna** 71.29 316 eP P 01 29 42.3 +1.1
LANS pmax pmax
comp=Z,4.0nm,1.4s
LANS **Liptovska Anna** 71.29 316 eP P 01 29 42.3 +1.1
E19K **Redstone River** 71.30 24 IAmb IAmb 01 29 43.7
comp=Z,31nm,1.0s
E19K **Redstone River** 71.30 24 P P 01 29 41.4 +0.5
baz=285
KIBK **Kibwezi** 71.44 259 P P 01 29 41.0 -1.6
H18K **Honhosa River** 71.44 26 P P 01 29 42.4 +0.6
baz=284
FALS **False Pass** 71.45 38 P P 01 29 42.6 +0.6
baz=284
E20K **Nigu River** 71.48 23 P P 01 29 42.6 +0.6
baz=285,SNR=19
M15K **Kasigluk River** 71.49 31 P P 01 29 42.8 +0.6
baz=284
O14K **Tigyukauivet M** 71.56 33 P P 01 29 43.2 +0.6
baz=284
LODK **Lodwar** 71.56 266 P P 01 29 42.3 -1.1
J17K **VABM Dome** 71.57 28 P P 01 29 43.2 +0.6
baz=284
KMBO **Kilima Mbogo** 71.65 261 P P 01 29 43.9 -0.3
comp=Z,7.0nm,0.9s,baz=45,slow=7.3,SNR=9.8
KMBO LR LR 02 02 11.0
comp=Z,63nm,19.3s,baz=96,slow=37
comp=Z,7.0nm,0.9s
KMBO **Kilima Mbogo** 71.65 261 ceP P 01 29 44.4 +0.2
KMBO pmax pmax
comp=Z,7.0nm,0.9s
B21K **Ikpikpuk River** 71.66 21 P P 01 29 43.2 +0.2
baz=286,SNR=12
GKP **Gorka Klasztor** 71.68 321 eP P 01 29 43.7 +0.3
G19K **Purcell Mounta** 71.70 25 P P 01 29 43.9 +0.6
baz=285
C21K **Knifeblade Rid** 71.73 22 P P 01 29 43.8 +0.4
baz=286,SNR=13
L16K **Owhat River** 71.81 30 P P 01 29 44.4 +0.4
L16K IAmb IAmb 01 29 47.2
comp=Z,22nm,1.2s
L16K **Owhat River** 71.81 30 P P 01 29 44.9 +0.9
baz=285
B22K **Teshekpuk Lake** 71.84 21 IAmb IAmb 01 29 46.5
comp=Z,36nm,0.9s
B22K **Teshekpuk Lake** 71.84 21 P P 01 29 44.1 0.0
baz=287
HFS **Hagfors** 71.89 328 P P 01 29 44.2 -0.4
comp=Z,5.8nm,0.9s,baz=96,slow=4.6,SNR=7.6
comp=Z,5.8nm,0.9s
N15K **Kwethluk River** 71.91 32 IAmb IAmb 01 29 48.1
comp=Z,35nm,1.1s
N15K **Kwethluk River** 71.91 32 P P 01 29 45.4 +0.7
baz=285
OKC **Ostrava-Krasne** 71.96 317 eP P 01 29 46.6 +1.4
OKC MLR MLR
comp=Z,400nm,19.2s
OKC **Ostrava-Krasne** 71.96 317 eP P 01 29 46.6 +1.4
OKC AMS AMS 02 06 00.0
comp=Z,400nm,19.2s
F20K **Avaraart Lake** 71.98 24 IAmb IAmb 01 29 47.6
comp=Z,22nm,1.0s
F20K **Avaraart Lake** 71.98 24 P P 01 29 45.1 +0.2
baz=286
S12K **Black Hills** 72.00 37 P P 01 29 45.9 +0.6
baz=284
NOR **Nord** 72.02 353 i P P 01 29 45.0 0.0
NOR IAmb IAmb 01 29 46.6
comp=Z,20nm,1.1s
K17K **Iditarod** 72.09 29 P P 01 29 45.6 -0.1
baz=285,SNR=17
H19K **Roundabout Mou** 72.11 26 P P 01 29 46.8 +1.0
baz=286
GCSA **Galena City Sc** 72.15 27 P P 01 29 46.3 +0.3
baz=286,SNR=9.7
E21K **Killik River** 72.22 23 P P 01 29 47.0 +0.6
baz=287
M16K **Timber Creek** 72.23 31 P P 01 29 46.9 +0.4
baz=285
L17K **Donlin** 72.24 29 P P 01 29 47.6 +0.9
baz=285
O15K **Ungalikthiuk R** 72.29 33 P P 01 29 47.3 +0.4
baz=285
MORC **Moravsky Berou** 72.36 317 P P 01 29 47.9 +0.2
MORC **Moravsky Berou** 72.36 317 ⇑P P 01 29 47.8 +0.2
MORC **Moravsky Berou** 72.36 317 eP P 01 29 47.8 +0.2
MORC **Moravsky Berou** 72.36 317 P P 01 29 47.9 +0.2
MORC pmax pmax
comp=Z,13nm,1.1s
SRO **Srobarova** 72.36 315 eP P 01 29 48.9 +1.3
SRO pmax pmax
comp=Z,25nm,1.5s
SRO **Srobarova** 72.36 315 eP P 01 29 48.9 +1.3
N16K **Nishlik Lake** 72.47 31 P P 01 29 48.0 0.0
baz=286
JAVC **Velka Javorina** 72.51 316 eP P 01 29 50.0 +1.4
D22K **Ayikyak River** 72.53 22 P P 01 29 48.3 0.0
baz=288
MORH **Mrgy, Hungar** 72.56 313 ⇑P P 01 29 48.7 0.0
MORH **Mrgy, Hungar** 72.56 313 P P 01 29 48.8 0.0
comp=Z,13nm,2.1s
J18K **Innoko River** 72.58 28 IAmb IAmb 01 29 51.5
comp=Z,26nm,1.0s
J18K **Innoko River** 72.58 28 P P 01 29 48.9 +0.2
baz=286
NC405 **NORSAR Array S** 72.58 330 IAmb IAmb 01 29 50.0
comp=Z,32nm,1.3s
NC303 **NORSAR Array S** 72.71 330 IAmb IAmb 01 29 50.2
comp=Z,24nm,1.1s
H20K **Anotleneega Mo** 72.75 26 P P 01 29 49.8 +0.1
baz=287,SNR=13
KRLC **Kraliky** 72.75 318 eP P 01 29 50.7 +0.7
KRLC MLR MLR
comp=Z,300nm,15.7s
KRLC **Kraliky** 72.75 318 eP P 01 29 50.7 +0.7
KRLC AMS AMS 02 06 10.0
comp=Z,300nm,15.7s
F21K **Alatna River** 72.76 24 IAmb IAmb 01 29 52.8
comp=Z,30nm,1.1s
F21K **Alatna River** 72.76 24 P P 01 29 50.3 +0.6
baz=288
NB2 **NORSAR Subarra** 72.83 330 P P 01 29 49.3 -0.9
comp=Z,27nm,1.4s,baz=75,slow=6.2
NOA **NORSAR Array B** 72.83 330 P P 01 29 49.7 -0.5
comp=Z,6.2nm,1.0s,baz=75,slow=6.0,SNR=12
NOA LR LR 02 06 13.3
comp=Z,142nm,18.2s,baz=80,slow=39
comp=Z,6.2nm,1.0s
M17K **Holitna River** 72.84 30 P P 01 29 50.2 0.0
baz=286
KSP **Ksiaz** 72.85 318 eP P 01 29 51.4 +0.9
KSP **Ksiaz** 72.85 318 P P 01 29 49.8 -0.7
comp=Z,23nm,1.3s
MODS **Modra-Piesok** 72.89 316 eP P 01 29 51.6 +0.8
MODS pmax pmax
comp=Z,22nm,1.4s
MODS **Modra-Piesok** 72.89 316 eP P 01 29 51.6 +0.8
J19K **Poorman** 72.89 27 IAmb IAmb 01 29 53.7
comp=Z,32nm,1.1s
J19K **Poorman** 72.89 27 P P 01 29 50.9 +0.5
baz=287,SNR=9.1
C23K **Itkillik River** 72.91 21 IAmb IAmb 01 29 53.1
comp=Z,45nm,1.1s
C23K **Itkillik River** 72.91 21 P P 01 29 50.7 +0.2
baz=290
L18K **Granite Mounta** 72.94 29 P P 01 29 51.2 +0.4
baz=287
SDPT **Sand Point** 72.96 37 P P 01 29 51.4 +0.4
baz=286
DPC **Dobruska-Polom** 72.97 318 eP P 01 29 52.3 +1.1
DPC MLR MLR
comp=Z,400nm,15.7s
DPC **Dobruska-Polom** 72.97 318 eP P 01 29 52.3 +1.1
DPC AMS AMS 02 03 40.0
comp=Z,400nm,15.7s
G21K **Allakaket** 72.97 24 P P 01 29 51.4 +0.5
baz=288
OSTC **Ostas** 72.98 318 eP P 01 29 52.2 +0.9
OSTC MLR MLR
comp=Z,500nm,18.4s
OSTC **Ostas** 72.98 318 eP P 01 29 52.2 +0.9
OSTC AMS AMS 02 03 40.0
comp=Z,500nm,18.4s
O16K **Kokwok River B** 73.03 32 IAmb IAmb 01 29 54.8
comp=Z,35nm,1.2s
O16K **Kokwok River B** 73.03 32 P P 01 29 50.9 -0.4
baz=286
IMAR **Indian Mountai** 73.05 25 P P 01 29 52.1 +0.7
CHVC **Chvalec** 73.07 318 eP P 01 29 52.8 +1.0
CHVC MLR MLR
comp=Z,500nm,19.9s
CHVC **Chvalec** 73.07 318 eP P 01 29 52.8 +1.0
CHVC AMS AMS 02 04 00.0
comp=Z,500nm,19.9s
VRAC **Vranov** 73.08 317 ⇑P P 01 29 52.7 +0.9
VRAC **Vranov** 73.08 317 eP P 01 29 52.7 +0.9
VRAC **Vranov** 73.08 317 ⇑P P 01 29 52.7 +0.9
E22K **Anaktuvuk Pass** 73.08 23 P P 01 29 52.0 +0.4
baz=289,SNR=24
UPC **Upice** 73.11 318 eP P 01 29 53.4 +1.3
UPC MLR MLR
comp=Z,600nm,14.7s
UPC **Upice** 73.11 318 eP P 01 29 53.4 +1.3
UPC AMS AMS 02 04 00.0
comp=Z,600nm,14.7s
I20K **Naaghedeneel** 73.12 26 P P 01 29 52.8 +1.0
baz=288
F22K **John River** 73.15 23 P P 01 29 53.0 +1.0
baz=289
D23K **Nanushuk River** 73.19 22 P P 01 29 52.9 +0.7
baz=290
N17K **Nushagak Hills** 73.20 31 P P 01 29 52.8 +0.5
baz=287
P16K **Nushagak River** 73.24 33 P P 01 29 52.7 +0.2
baz=287
KRUC **Moravsky** 73.27 317 eP P 01 29 53.4 +0.4
J20K **Nowinta River** 73.45 27 IAmb IAmb 01 29 57.2
comp=Z,31nm,1.2s
J20K **Nowinta River** 73.45 27 P P 01 29 54.0 +0.3
baz=288,SNR=12
O17K **Koliganek Bris** 73.47 32 P P 01 29 54.2 +0.3
baz=287
H21K **Melozitna Rive** 73.52 25 P P 01 29 55.4 +1.2
baz=289,SNR=54
M18K **Stony River** 73.55 30 P P 01 29 55.3 +0.9
baz=288
C24K **Franklin Bluff** 73.58 21 P P 01 29 55.1 +0.8
baz=292
G22K **Bettles** 73.59 24 P P 01 29 55.3 +0.7
baz=290
TOLK **Toolik Lake Re** 73.68 22 IAmb IAmb 01 29 57.6
comp=Z,31nm,1.0s
TOLK **Toolik Lake Re** 73.68 22 P P 01 29 55.8 +0.7
baz=291,SNR=14
RONA **Rosalia, Austr** 73.70 315 eP P 01 29 55.4 -0.2
comp=Z,9.3nm,1.0s
K20K **Telida** 73.75 28 IAmb IAmb 01 29 58.9
comp=Z,29nm,1.1s
K20K **Telida** 73.75 28 P P 01 29 55.9 +0.3
baz=289
D24K **Happy Valley** 73.75 21 P P 01 29 56.1 +0.7
baz=292,SNR=12
N18K **Kilae Creek** 73.77 31 P P 01 29 55.7 0.0
baz=288
L19K **White Mountain** 73.78 29 IAmb IAmb 01 29 59.2
comp=Z,27nm,1.1s
L19K **White Mountain** 73.78 29 P P 01 29 56.1 +0.3
baz=288
TREC **Trest** 73.78 317 eP P 01 29 57.4 +1.4
TREC MLR MLR
comp=Z,400nm,15.5s
TREC **Trest** 73.78 317 eP P 01 29 57.4 +1.4
TREC AMS AMS 02 07 20.0
comp=Z,400nm,15.5s
E23K **Chandalar** 73.88 22 IAmb IAmb 01 29 59.1
comp=Z,38nm,1.1s
E23K **Chandalar** 73.88 22 P P 01 29 56.2 -0.1
baz=291
R16K **Pilot Point** 73.88 34 P P 01 29 56.9 +0.6
baz=287
CONA **Conrad Observa** 73.92 316 P P 01 29 57.3 +0.3
comp=Z,24nm,1.4s,SNR=8.2
P17K **Kvichak River** 73.96 32 P P 01 29 57.5 +0.7
baz=288
COLD **Coldfoot** 73.97 23 P P 01 29 57.3 +0.6
baz=291,SNR=9.7
PVCC **Panska Ves** 73.99 318 eP P 01 29 56.1 -1.1
PVCC MLR MLR
comp=Z,400nm,16.8s
PVCC **Panska Ves** 73.99 318 eP P 01 29 56.1 -1.1
PVCC AMS AMS 02 04 20.0
comp=Z,400nm,16.8s
H22K **Ishtalitna Cre** 74.00 25 P P 01 29 57.4 +0.4
baz=290
I21K **Tanana** 74.00 26 P P 01 29 58.9 +2.0
I21K IAmb IAmb 01 30 00.4
comp=Z,40nm,1.1s
I21K **Tanana** 74.00 26 P P 01 29 57.6 +0.6
baz=290,SNR=20
KONO **Kongsberg** 74.01 328 ⇓eP P 01 29 58.0 +0.9
KONO pmax pmax
comp=Z,28nm,1.7s
L20K **Farewell, AK** 74.11 28 IAmb IAmb 01 30 01.9
comp=Z,78nm,1.8s
L20K **Farewell, AK** 74.11 28 P P 01 29 58.0 +0.3
baz=289
PRU **Pruhonice** 74.17 318 eP P 01 29 58.9 +0.7
PRU MLR MLR
comp=Z,500nm,16.4s
PRU **Pruhonice** 74.17 318 eP P 01 29 58.9 +0.7
PRU AMS AMS 02 04 30.0
comp=Z,500nm,16.4s
PRA **Prague** 74.21 318 eP P 01 30 00.0 +1.5
PRA MLR MLR
comp=Z,500nm,17.3s
PRA **Prague** 74.21 318 eP P 01 30 00.0 +1.5
PRA AMS AMS 02 04 30.0
comp=Z,500nm,17.3s
G23K **Bananza Creek** 74.22 24 IAmb IAmb 01 30 01.7
comp=Z,52nm,1.1s
G23K **Bananza Creek** 74.22 24 P P 01 29 59.0 +0.7
baz=291
E24K **Your Creek** 74.26 22 P P 01 29 58.8 +0.3
baz=292
BRG **Berggiesshubel** 74.28 319 eP P 01 29 59.4 +0.5
comp=Z,12nm,1.0s,baz=70,slow=5.8
CHUM **Lake Minchumin** 74.31 27 P P 01 29 59.6 +0.8
baz=290,SNR=8.4
ARSA **Arzberg** 74.33 315 i P P 01 29 59.5 +0.2
comp=Z,13nm,1.4s
O18K **Koktuh Hills** 74.35 31 P P 01 29 59.7 +0.5
baz=289
N19K **Bonanza Creek** 74.38 30 P P 01 29 59.4 0.0
baz=289
R17L **Mt. Peulik Vol** 74.48 34 P P 01 30 00.3 +0.4
baz=288
D25K **Kavik River** 74.49 21 IAmb IAmb 01 30 02.8
comp=Z,54nm,1.1s
D25K **Kavik River** 74.49 21 P P 01 30 00.1 +0.3
baz=294,SNR=45
P18K **Big Mountain,** 74.49 32 P P 01 29 59.8 -0.2
baz=289
Q17K **Contact Creek** 74.52 33 P P 01 29 59.3 -1.0
baz=288
M20K **Styx River** 74.64 29 IAmb IAmb 01 30 04.3
comp=Z,32nm,1.1s
M20K **Styx River** 74.64 29 P P 01 30 00.4 -0.5
baz=290,SNR=8.7
CKRC **Cesky Krumlov** 74.65 317 eP P 01 30 02.2 +1.1
CKRC MLR MLR
comp=Z,500nm,15.2s
CKRC **Cesky Krumlov** 74.65 317 eP P 01 30 02.2 +1.1
CKRC AMS AMS 02 08 10.0
comp=Z,500nm,15.2s
O19K **Port Alsworth** 74.66 31 P P 01 30 00.1 -0.8
baz=289
HSKC **Hora Svate Kat** 74.67 319 eP P 01 30 02.4 +1.2
HSKC AMS AMS 02 04 50.0
comp=Z,500nm,15.9s
F24K **Squaw Lake** 74.69 23 IAmb IAmb 01 30 03.7
comp=Z,27nm,1.0s
F24K **Squaw Lake** 74.69 23 P P 01 30 00.5 -0.5
baz=293,SNR=24
PPLA **Purkeypile** 74.70 28 P P 01 30 01.2 -0.1
baz=290,SNR=7.0
C26K **Camden Bay** 74.71 20 P P 01 30 00.4 -0.6
baz=295
CLL **Collm** 74.71 320 ⇓i P P 01 30 01.9 +0.5
CLL eS S 01 39 43.0 +5.2
CLL pmax pmax
comp=Z,26nm,1.2s
CLL MLR MLR
comp=Z,400nm,21.0s
CLL **Collm** 74.71 320 eP P 01 30 01.6 +0.2
comp=Z,21nm,1.1s,baz=70,slow=5.8
CLL **Collm** 74.71 320 P P 01 30 01.4 0.0
comp=Z,19nm,1.3s
H23K **Yukon River** 74.72 25 IAmb IAmb 01 30 04.6
comp=Z,44nm,1.0s
H23K **Yukon River** 74.72 25 P P 01 30 00.8 -0.4
baz=292
BPAW **Bear Paw Mtn.** 74.78 26 P P 01 30 01.7 +0.1
baz=291,SNR=12
SOKA **Soboth** 74.82 315 eP P 01 30 02.4 +0.1
comp=Z,17nm,1.5s
Q18K **Katmai Hardscr** 74.84 32 P P 01 30 01.3 -0.8
baz=289
MOA **Molln** 74.97 316 P P 01 30 03.0 0.0
comp=Z,21nm,1.5s,SNR=6.1
KHC **Kasperske Hory** 75.02 317 eP P 01 30 04.3 +1.0
KHC MLR MLR
comp=Z,400nm,20.5s
KHC **Kasperske Hory** 75.02 317 eP P 01 30 04.3 +1.0
KHC AMS AMS 02 05 00.0
comp=Z,400nm,20.5s
GEC2 **GERESS Array S** 75.03 317 P P 01 30 03.2 -0.2
GEC2 **GERESS Array S** 75.03 317 eP P 01 30 03.9 +0.6
comp=Z,11nm,1.1s,baz=70,slow=5.8
GERES **GERESS Array B** 75.03 317 P P 01 30 03.2 -0.2
comp=Z,2.4nm,0.6s,baz=66,slow=4.8,SNR=26
comp=Z,2.4nm,0.6s
I23K **Minto, Yukon-K** 75.05 25 IAmb IAmb 01 30 07.6
comp=Z,61nm,1.6s
I23K **Minto, Yukon-K** 75.05 25 P P 01 30 02.6 -0.4
baz=292,SNR=14
G24K **Hadweenzic Riv** 75.16 23 IAmb IAmb 01 30 07.3
comp=Z,68nm,1.6s
G24K **Hadweenzic Riv** 75.16 23 P P 01 30 03.0 -0.7
baz=294
OBKA **Obir** 75.19 314 eP P 01 30 04.3 -0.1
comp=Z,14nm,1.4s
C27K **Jago River** 75.21 20 IAmb IAmb 01 30 07.3
comp=Z,46nm,1.1s
C27K **Jago River** 75.21 20 P P 01 30 02.9 -1.0
baz=296
E25K **Arctic Village** 75.25 22 P P 01 30 03.6 -0.6
baz=295,SNR=7.4
N20K **Mount Spurr** 75.29 29 P P 01 30 02.8 -1.8
baz=291
SPCR **Spurr Chakacha** 75.29 29 P P 01 30 02.6 -2.1
baz=291
TRF **Thorofare Moun** 75.31 27 P P 01 30 05.9 +1.1
TRF **Thorofare Moun** 75.31 27 P P 01 30 03.1 -1.7
baz=292
TANN **Tannenbergstha** 75.31 319 eP P 01 30 05.4 +0.4
comp=Z,21nm,1.3s,baz=70,slow=5.8
SKT **Skwentna** 75.32 29 IAmb IAmb 01 30 06.8
comp=Z,40nm,1.2s
SKT **Skwentna** 75.32 29 P P 01 30 03.2 -1.5
baz=291,SNR=10
H24K **Noodor Dome** 75.35 24 IAmb IAmb 01 30 07.8
comp=Z,21nm,1.0s
H24K **Noodor Dome** 75.35 24 P P 01 30 03.7 -1.2
baz=293,SNR=14
P19K **Oil Pt** 75.36 31 P P 01 30 04.8 -0.2
baz=290
NEA2 **Nenana** 75.38 26 IAmb IAmb 01 30 07.5
comp=Z,44nm,1.1s
NEA2 **Nenana** 75.38 26 P P 01 30 04.6 -0.4
baz=293,SNR=28
Q19K **Cape Douglas,** 75.41 32 P P 01 30 04.8 -0.5
baz=290
BIOA **Bad Ischl, Aus** 75.42 316 P P 01 30 05.7 +0.1
comp=Z,12nm,0.8s,SNR=7.7
FLTG **Flechtingen** 75.44 321 eP P 01 30 05.5 0.0
comp=Z,23nm,1.3s,baz=70,slow=5.8
F25K **Christian Rive** 75.45 22 IAmb IAmb 01 30 09.3
comp=Z,51nm,1.5s
F25K **Christian Rive** 75.45 22 P P 01 30 05.1 -0.3
baz=295
CHIR **Chirikof Islan** 75.45 35 P P 01 30 05.5 0.0
baz=289
WET **Wettzell** 75.45 317 eP P 01 30 06.5 +0.7
comp=Z,13nm,1.2s,baz=70,slow=5.8
R18K **Karluk** 75.47 33 P P 01 30 05.6 0.0
baz=290
PLN **Plauen** 75.48 319 eP P 01 30 06.4 +0.6
comp=Z,6.4nm,1.3s,baz=70,slow=5.8
O20K **Slope Mountain** 75.50 31 P P 01 30 04.9 -0.9
baz=291
G25K **Bearman Lake** 75.63 23 P P 01 30 05.8 -0.5
baz=295
MANZ **Manzenberg** 75.66 318 eP P 01 30 07.7 +0.8
comp=Z,2.7nm,1.2s,baz=70,slow=5.8
ROTZ **Rotzenmuhle** 75.67 318 eP P 01 30 07.8 +0.9
comp=Z,7.0nm,1.2s,baz=70,slow=5.8
CUT **Chulitna** 75.71 28 P P 01 30 06.1 -0.8
baz=292
COLA **College** 75.75 25 P P 01 30 06.8 -0.2
COLA IAmb IAmb 01 30 10.2
comp=Z,22nm,0.9s
COLA **College** 75.75 25 deP P 01 30 08.5 +1.5
COLA pmax pmax
comp=Z,17nm,1.1s
COLA **College** 75.75 25 P P 01 30 06.2 -0.8
baz=294
MOX **Moxa** 75.75 319 eP P 01 30 07.9 +0.5
comp=Z,30nm,1.5s,baz=70,slow=5.8
MCK **McKinley** 75.76 26 P P 01 30 06.5 -0.8
baz=293,SNR=9.0
KBA **Koelnbreinsper** 75.80 315 eP P 01 30 06.4 -1.5
comp=Z,12nm,1.2s
POKR **Poker Plat Res** 75.81 25 IAmb IAmb 01 30 10.8
comp=Z,52nm,1.2s
POKR **Poker Plat Res** 75.81 25 P P 01 30 05.7 -1.8
baz=294,SNR=11
SUA **Susitna One** 75.85 29 IAmb IAmb 01 30 10.4
comp=Z,31nm,0.9s
SUA **Susitna One** 75.85 29 P P 01 30 06.9 -1.0
baz=292
BMAR **Burnt Mountain** 75.89 22 P P 01 30 09.4 +1.5
F26K **Sheenjek River** 75.92 22 IAmb IAmb 01 30 10.9
comp=Z,28nm,1.1s
F26K **Sheenjek River** 75.92 22 P P 01 30 07.1 -1.0
baz=296
RND **Reindeer** 75.92 27 IAmb IAmb 01 30 10.8
comp=Z,49nm,1.1s

CAPN	Captain Cook N baz=292	75.93	30	P		P	01 30 06.9	-1.2	
H25L	Birch Creek baz=295,SNR=10	75.94	23	P		P	01 30 07.7	-0.4	
RJOB	Jochberg comp=Z,9.9nm,1.0s,baz=70,slow=5.8	75.95	316	*e*P		P	01 30 09.1	+0.4	
SII	Sitkinak Island baz=290	75.96	34	P		P	01 30 07.6	-0.9	
M22K	Willow baz=292,SNR=5.4	76.02	29	P		P	01 30 07.3	-1.4	
FYU	Fort Yukon comp=Z,29nm,1.0s	76.03	23	IAmb	IAmb		01 30 11.7		
CLZ	Clausthal comp=Z,30nm,1.2s,baz=70,slow=5.8	76.10	321	*e*P		P	01 30 10.2	+0.8	
HOM	Homer baz=292	76.11	31	P		P	01 30 07.9	-1.3	
LESA	Schwarzleotal comp=Z,14nm,1.0s	76.12	316	*e*P		P	01 30 08.3	-1.4	
Q20K	Shuyak Island baz=291	76.13	32	P		P	01 30 09.2	-0.1	
ILAR	Eielson Array comp=Z,2.7nm,0.9s,baz=284,slow=4.6,SNR=17 comp=Z,2.7nm,0.9s	76.17	25	P		P	01 30 09.2	-0.2	
ILAR	Eielson Array	76.17	25	P		P	01 30 07.8	-1.7	
OHAK	Old Harbor baz=291	76.19	33	P		P	01 30 09.7	0.0	
D27M	Malcolm River comp=Z,48nm,1.6s	76.25	20	IAmb	IAmb		01 30 13.3		
D27M	Malcolm River baz=299	76.25	20	P		P	01 30 09.2	-0.8	
JMIC	Jan Mayen comp=Z,189nm,18.2s,baz=69,slow=40	76.28	342	LR	LR		02 08 56.3		
WAT1	Susitna Watana baz=294	76.28	27	P		P	01 30 09.3	-0.9	
HDA	Harding Lake baz=294,SNR=7.8	76.29	25	P		P	01 30 08.6	-1.6	
KDAK	Kodiak Island baz=291	76.34	33	P		P	01 30 09.7	-0.8	
PRP	Porcupine Dome comp=Z,38nm,1.0s	76.37	24	IAmb	IAmb		01 30 13.4		
PRP	Porcupine Dome baz=295,SNR=33	76.37	24	P		P	01 30 09.9	-0.9	
G26K	Porcupine Rive comp=Z,41nm,1.1s	76.38	22	IAmb	IAmb		01 30 13.7		
G26K	Porcupine Rive baz=297	76.38	22	P		P	01 30 09.6	-1.0	
GTTG	Gottingen comp=Z,23nm,1.2s,baz=70,slow=5.8	76.44	320	*e*P		P	01 30 12.0	+0.7	
RC01	Rabbit Creek A baz=293	76.45	29	P		P	01 30 10.2	-1.0	
ABTA	Abfaltersbach comp=Z,9.4nm,0.9s	76.45	315	*e*P		P	01 30 10.8	-0.8	
STAL	STALIGIAL comp=Z,48nm,1.4s	76.48	315	IAmb	IAmb		01 30 12.8		
BRSE	Bradley Lake S baz=292	76.50	31	P		P	01 30 10.6	-0.9	
PMR	Palmer comp=Z,31nm,1.2s	76.52	28	IAmb	IAmb		01 30 14.1		
PMR	Palmer baz=293,SNR=6.6	76.52	28	P		P	01 30 10.9	-0.6	
GHO	Glory Hole Cre	76.54	28	P		P	01 30 12.9	+1.1	
GHO	comp=Z,60nm,1.7s			IAmb	IAmb		01 30 18.2		
E27K	Coleen River comp=Z,25nm,1.1s	76.55	21	IAmb	IAmb		01 30 14.2		
E27K	Coleen River baz=298	76.55	21	P		P	01 30 10.6	-1.1	
CIMO	Cimolais comp=Z,35nm,1.5s	76.64	315	IAmb	IAmb		01 30 13.8		
DHY	Denali Highway baz=294,SNR=5.3	76.67	27	P		P	01 30 11.6	-0.9	
O22K	Cooper Landing baz=293	76.69	30	P		P	01 30 11.7	-0.8	
WAT6	Susitna Watana baz=294,SNR=8.7	76.72	27	P		P	01 30 12.2	-0.7	
FUR	Furstenfeldbru comp=Z,45nm,1.2s,baz=70,slow=5.8	76.78	317	*e*P		P	01 30 14.3	+1.0	
SML	Sawmill baz=294,SNR=5.5	76.78	28	P		P	01 30 11.5	-1.6	
J25K	Salcha River, comp=Z,32nm,1.7s	76.82	25	IAmb	IAmb		01 30 14.9		
J25K	Salcha River, baz=296,SNR=6.1	76.82	25	P		P	01 30 11.8	-1.5	
WTTA	Wattenberg comp=Z,3.5nm,0.7s,SNR=7.9	76.85	316	P		P	01 30 12.8	-1.1	
WATA	Walderalm comp=Z,4.5nm,1.3s,SNR=4.7	76.86	316	P		P	01 30 13.4	-0.5	
KNK	Knik Glacier comp=Z,40nm,1.2s	76.89	29	IAmb	IAmb		01 30 16.8		
KNK	Knik Glacier baz=294,SNR=5.2	76.89	29	P		P	01 30 12.4	-1.2	
D28M	Stokes Point baz=301,SNR=5.1	76.90	19	P		P	01 30 12.3	-1.2	
SEW	Seward baz=293	76.96	30	P		P	01 30 11.4	-2.6	
E28M	Babbage River comp=Z,46nm,1.3s	77.01	20	IAmb	IAmb		01 30 17.4		
E28M	Babbage River baz=300	77.01	20	P		P	01 30 12.2	-2.0	
K24K	Donnelly Dome baz=296,SNR=19	77.01	26	P		P	01 30 12.9	-1.5	
M23K	Glacier View baz=294,SNR=7.7	77.05	28	P		P	01 30 13.2	-1.4	
SQTA	Sankt Quirin comp=Z,10nm,0.8s,SNR=6.2	77.14	316	P		P	01 30 15.1	-0.3	
PWL	Port Wells baz=294	77.17	29	P		P	01 30 13.7	-1.6	
DBG	Daneborg	77.17	347	*i* P		P	01 30 14.4	-0.6	
DBG	comp=Z,6.4nm,1.2s			IAmb	IAmb		01 30 16.6		
G27K	Doyon Strip comp=Z,21nm,1.0s	77.19	22	IAmb	IAmb		01 30 18.0		
G27K	Doyon Strip baz=299,SNR=18	77.19	22	P		P	01 30 14.2	-1.1	
SCM	Sheep Creek Mo comp=Z,25nm,1.0s	77.21	28	IAmb	IAmb		01 30 18.1		
SCM	Sheep Creek Mo baz=295	77.21	28	P		P	01 30 13.5	-2.0	
I26K	Coal Creek Min baz=298	77.36	24	P		P	01 30 14.7	-1.5	
MBAR	Mbarara comp=Z,87nm,19.8s,baz=60,slow=38	77.39	264	LR	LR		02 06 42.0		
MBAR	Mbarara	77.39	264	P		P	01 30 17.6	+0.1	
MBAR	Mbarara	77.39	264	*de*P		P	01 30 18.3	+0.8	
MBAR	comp=Z,17nm,1.4s			pmax	pmax				
F28M	Old Crow baz=300,SNR=6.8	77.40	21	P		P	01 30 15.2	-1.2	
RIDG	Independent Ri comp=Z,30nm,1.0s	77.41	26	IAmb	IAmb		01 30 18.3		
RIDG	Independent Ri baz=296,SNR=5.9	77.41	26	P		P	01 30 15.3	-1.3	
PAX	Paxson comp=Z,32nm,1.4s	77.50	26	IAmb	IAmb		01 30 20.2		
PAX	Paxson baz=296,SNR=8.5	77.50	26	P		P	01 30 16.0	-1.2	
FETA	Feichten comp=Z,18nm,1.1s,SNR=9.9	77.51	316	P		P	01 30 17.2	-0.4	
H27K	Steamboat Moun comp=Z,44nm,1.2s	77.51	23	IAmb	IAmb		01 30 20.8		
H27K	Steamboat Moun baz=299	77.51	23	P		P	01 30 15.3	-1.8	
J26L	Joseph Creek	77.57	25	P		P	01 30 18.1	+0.6	
J26L	comp=Z,33nm,1.0s			IAmb	IAmb		01 30 19.9		
J26L	Joseph Creek baz=297	77.57	25	P		P	01 30 15.6	-1.9	
M24K	Tolsona, Glenn baz=296,SNR=11	77.58	27	P		P	01 30 17.2	-0.4	
E29M	Blow River baz=302,SNR=26	77.64	20	P		P	01 30 17.5	-0.3	
SCRK	Sand Creek baz=297,SNR=8.0	77.65	25	P		P	01 30 17.4	-0.6	
UBR	Ueberruh comp=Z,16nm,1.1s,baz=70,slow=5.8	77.68	317	*e*P		P	01 30 18.5	0.0	
GLI	Glacier Island baz=295	77.71	29	P		P	01 30 16.9	-1.3	
I27K	Kandik River comp=Z,37nm,1.1s	77.78	23	IAmb	IAmb		01 30 22.3		
I27K	Kandik River baz=299	77.78	23	P		P	01 30 17.2	-1.4	
STU	Stuttgart comp=Z,107nm,1.5s,baz=70,slow=5.8	77.87	318	*e*P		P	01 30 20.2	+0.9	
HARP	HAARP baz=296,SNR=7.2	77.88	27	P		P	01 30 17.5	-1.7	
P23K	Montague Islan baz=295	77.94	30	P		P	01 30 17.9	-1.7	
KLU	Klutina	77.96	28	P		P	01 30 17.9	-1.8	
	baz=296,SNR=9.6								
FID	Port Fidalgo comp=Z,47nm,1.2s	78.04	29	IAmb	IAmb		01 30 22.7		
DAVOX	Davos/Dischmat comp=Z,8.3nm,0.9s,baz=53,slow=13,SNR=15 comp=Z,8.3nm,0.9s	78.14	316	P		P	01 30 21.4	+0.2	
DIV	Divide comp=Z,40nm,1.2s	78.18	28	IAmb	IAmb		01 30 23.6		
VAE	Valguarnera comp=Z,185nm,21.3s,baz=3.0,slow=39	78.19	306	LR	LR		02 09 08.8		
MENT	Mentasta comp=Z,45nm,1.2s	78.23	26	IAmb	IAmb		01 30 24.1		
L26K	Log Cabin Wild comp=Z,24nm,1.2s	78.34	26	IAmb	IAmb		01 30 25.5		
L26K	Log Cabin Wild baz=298,SNR=12	78.34	26	P		P	01 30 20.7	-1.0	
K27K	Chicken comp=Z,35nm,1.2s	78.37	25	IAmb	IAmb		01 30 24.9		
K27K	Chicken baz=299	78.37	25	P		P	01 30 20.3	-1.6	
G29M	Pine Creek comp=Z,36nm,1.2s	78.38	21	IAmb	IAmb		01 30 24.1		
G29M	Pine Creek baz=302,SNR=11	78.38	21	P		P	01 30 20.9	-1.0	
EYAK	Cordova Ski Ar baz=296	78.45	29	P		P	01 30 21.0	-1.3	
I28M	Miner Creek comp=Z,30nm,1.1s	78.47	23	IAmb	IAmb		01 30 25.2		
I28M	Miner Creek baz=300,SNR=13	78.47	23	P		P	01 30 21.6	-0.9	
N25K	Chitina, Valde baz=297,SNR=12	78.48	28	P		P	01 30 22.4	-0.2	
BFO	Black Forest	78.56	318	P		P	01 30 22.3	-1.0	
BFO	Black Forest	78.56	318	P		P	01 30 22.3	-1.0	
BFO	comp=Z,11nm,1.1s			pmax	pmax				
H29M	Whitestone comp=Z,39nm,1.4s	78.62	22	IAmb	IAmb		01 30 25.7		
H29M	Whitestone baz=302,SNR=9.0	78.62	22	P		P	01 30 22.7	-0.6	
Q23K	Middleton Isla baz=296	78.67	30	P		P	01 30 23.1	-0.5	
F30M	Barrier River comp=Z,32nm,1.2s	78.73	20	IAmb	IAmb		01 30 26.1		
F30M	Barrier River baz=304	78.73	20	P		P	01 30 23.6	-0.2	
BMRM	Bremner River baz=297,SNR=13	78.76	28	P		P	01 30 24.2	0.0	
M26K	Nabesna, AK comp=Z,38nm,1.1s	78.78	26	IAmb	IAmb		01 30 27.2		
M26K	Nabesna, AK baz=298,SNR=15	78.78	26	P		P	01 30 24.8	+0.6	
GLB	Gilahina Butte comp=Z,43nm,1.0s	78.89	28	IAmb	IAmb		01 30 28.3		
A36M	Sans Harbour comp=Z,38nm,0.9s	78.93	14	IAmb	IAmb		01 30 27.1		
A36M	Sachs Harbour baz=312,SNR=30	78.93	14	P		P	01 30 24.8	0.0	
L27K	Beaver Creek, comp=Z,24nm,1.1s	78.93	26	IAmb	IAmb		01 30 28.4		
L27K	Beaver Creek, baz=299	78.93	26	P		P	01 30 25.4	+0.4	
G30M	tAoh Zraii Nji comp=Z,57nm,1.2s	78.94	21	IAmb	IAmb		01 30 27.1		
G30M	tAoh Zraii Nji baz=303,SNR=20	78.94	21	P		P	01 30 24.5	-0.5	
BCAR	Beaver Creek A	78.95	26	P		P	01 30 26.9	+1.8	
NEEM	North Greenlan	78.96	355	*i* P		P	01 30 25.8	+0.5	
NEEM	comp=Z,44nm,1.0s			IAmb	IAmb		01 30 27.5		
INK	Inuvik comp=Z,174nm,18.8s,baz=30,slow=40	79.04	19	LR	LR		02 11 17.5		
INK	Inuvik comp=Z,45nm,1.2s	79.04	19	IAmb	IAmb		01 30 27.8		
INK	Inuvik baz=305,SNR=20	79.04	19	P		P	01 30 25.5	+0.1	
EPYK	Eagle Plains comp=Z,23nm,0.9s	79.11	22	IAmb	IAmb		01 30 27.3		
EPYK	Eagle Plains baz=303,SNR=11	79.11	22	P		P	01 30 25.4	-0.5	
VRDI	Verde Repeater comp=Z,34nm,1.0s	79.14	28	IAmb	IAmb		01 30 29.2		
MCARA	McCarthy VSAT baz=298,SNR=12	79.25	27	P		P	01 30 26.6	-0.1	
M27K	Edge Creek, AK comp=Z,27nm,1.1s	79.26	26	IAmb	IAmb		01 30 30.1		
M27K	Edge Creek, AK baz=299,SNR=8.8	79.26	26	P		P	01 30 26.9	-0.1	
KAIM	Kayak Island baz=298	79.32	29	P		P	01 30 25.8	-1.4	
DAWY	Dawson comp=Z,28nm,1.0s	79.38	24	IAmb	IAmb		01 30 29.6		
WLF	Walferdange comp=Z,15nm,1.1s,baz=70,slow=5.8	79.39	319	*e*P		P	01 30 28.8	+1.1	
F31M	Tsiigehtchic comp=Z,34nm,1.0s	79.48	20	IAmb	IAmb		01 30 29.4		
F31M	Tsiigehtchic baz=305,SNR=19	79.48	20	P		P	01 30 26.5	-1.3	
CRQE	Cirque baz=298	79.52	28	P		P	01 30 27.4	-1.0	
G31M	Satah River baz=305,SNR=8.2	79.61	21	P		P	01 30 28.3	-0.3	
TGL	Tana Glacier	79.63	28	P		P	01 30 29.6	+0.6	
TGL	comp=Z,37nm,1.2s			IAmb	IAmb		01 30 32.3		
BVCY	Beaver Creek baz=300,SNR=12	79.64	26	P		P	01 30 28.8	-0.1	
I30M	Mount Dempster comp=Z,32nm,0.9s	79.86	22	IAmb	IAmb		01 30 32.5		
I30M	Mount Dempster baz=303,SNR=34	79.86	22	P		P	01 30 29.7	-0.4	
GRNC	Granite Creek comp=Z,70nm,1.3s	80.11	28	IAmb	IAmb		01 30 35.5		
YUK3	Moose Creek baz=300,SNR=7.9	80.13	26	P		P	01 30 31.2	-0.5	
CTG	Chitna Glacier baz=300,SNR=6.8	80.17	27	P		P	01 30 31.0	-0.9	
CTGM	Chitina Glacie comp=Z,70nm,1.4s	80.17	27	IAmb	IAmb		01 30 36.0		
K29M	Barlow Dome comp=Z,42nm,1.1s	80.19	24	IAmb	IAmb		01 30 35.1		
K29M	Barlow Dome baz=303	80.19	24	P		P	01 30 31.0	-1.0	
H31M	Peel River comp=Z,60nm,1.3s	80.23	21	IAmb	IAmb		01 30 34.3		
H31M	Peel River baz=305	80.23	21	P		P	01 30 31.1	-1.0	
J30M	Hart River baz=304,SNR=15	80.23	23	P		P	01 30 31.4	-0.8	
YAH	Yahtse comp=Z,73nm,1.4s	80.29	28	IAmb	IAmb		01 30 36.8		
MESA	MESA baz=300	80.29	28	P		P	01 30 31.4	-1.3	
L29M	L29M comp=Z,57nm,1.1s	80.36	25	IAmb	IAmb		01 30 36.4		
L29M	L29M baz=302	80.36	25	P		P	01 30 31.6	-1.2	
LOGN	Logan Glacier comp=Z,54nm,1.2s	80.38	27	IAmb	IAmb		01 30 37.1		
MSVF	Nonsavu	80.52	114	P		P	01 30 34.9	+0.5	
MSVF	comp=Z,36nm,1.1s			IAmb	IAmb		01 30 38.4		
MSVF	Nonsavu	80.52	114	P		P	01 30 34.9	+0.5	
MSVF	comp=Z,36nm,1.2s			pmax	pmax				
M29M	Somme Creek baz=302,SNR=7.6	80.58	25	P		P	01 30 33.1	-1.0	
YUK8	Steele Glacier baz=301	80.66	27	P		P	01 30 33.7	-1.1	
O28M	Mount Upton baz=301	80.75	27	P		P	01 30 34.3	-1.0	
MAYO	Mayo, Yukon comp=Z,20nm,0.7s	80.94	24	IAmb	IAmb		01 32 45.5		
C36M	Paulatuk comp=Z,41nm,1.0s	81.03	16	IAmb	IAmb		01 30 37.7		
C36M	Paulatuk baz=314,SNR=24	81.03	16	P		P	01 30 35.9	-0.2	
PINM	Pinnacle baz=301	81.07	28	P		P	01 30 34.6	-2.1	
YUK4	Talbot Arm baz=302	81.09	26	P		P	01 30 35.8	-1.2	
M30M	Minto, Yukon comp=Z,25nm,1.1s	81.16	25	IAmb	IAmb		01 30 39.7		
M30M	Minto, Yukon baz=303,SNR=12	81.16	25	P		P	01 30 36.2	-0.9	
YUK6	Outpost Mounta baz=302	81.42	27	P		P	01 30 38.0	-0.7	
N30M	Aishikik Lake	81.66	26	IAmb	IAmb		01 30 42.8		
	comp=Z,30nm,1.2s								
N30M	Aishikik Lake baz=303	81.66	26	P		P	01 30 37.9	-1.9	
PNL	Peninsula baz=302	81.66	28	P		P	01 30 38.5	-1.2	
O29M	Mount Kennedy baz=302	81.68	27	P		P	01 30 38.7	-1.3	
HYT	Haines Junctio	81.84	26	P		P	01 30 42.5	+1.7	
HYT	comp=Z,27nm,1.3s			IAmb	IAmb		01 30 44.4		
HYT	Haines Junctio baz=303	81.84	26	P		P	01 30 39.5	-1.3	
SUMG	Summit comp=Z,33nm,1.2s	81.87	350	IAmb	IAmb		01 30 43.5		
SUMG	Summit	81.87	350	*i* P		P	01 30 41.0	-0.1	
SUMG	comp=Z,33nm,1.2s			IAmb	IAmb		01 30 42.7		
N31M	Braeburn, Yuko comp=Z,50nm,1.3s	82.17	25	IAmb	IAmb		01 30 45.8		
N31M	Braeburn, Yuko baz=304,SNR=6.1	82.17	25	P		P	01 30 40.9	-1.5	
M31M	Drury Creek, Y baz=306	82.30	24	P		P	01 30 41.6	-1.5	
P29M	Windy Craggy baz=303	82.39	28	P		P	01 30 41.4	-2.2	
O30N	Mendenhall comp=Z,27nm,1.2s	82.45	26	IAmb	IAmb		01 30 47.5		
O30N	Mendenhall baz=304,SNR=5.2	82.45	26	P		P	01 30 41.8	-2.1	
P30M	Million Dollar baz=304	82.45	27	P		P	01 30 42.4	-1.5	
WHY	Whitehorse baz=305	83.00	26	P		P	01 30 44.7	-2.2	
PLBC	Pleasant Camp baz=304	83.07	27	P		P	01 30 45.1	-2.0	
N32M	Quiet Lake comp=Z,35nm,1.2s	83.42	25	IAmb	IAmb		01 30 51.2		
N32M	Quiet Lake baz=307	83.42	25	P		P	01 30 47.0	-2.0	
SKAG	Skagway comp=Z,40nm,1.4s	83.51	27	IAmb	IAmb		01 30 52.5		
SKAG	Skagway baz=305	83.51	27	P		P	01 30 47.9	-1.4	
S31K	Pelican baz=304	83.97	29	P		P	01 30 49.6	-2.1	
P33M	Teslin, Yukon comp=Z,20nm,1.4s	84.09	26	IAmb	IAmb		01 30 55.5		
P33M	Teslin, Yukon baz=307	84.09	26	P		P	01 30 50.0	-2.4	
P32M	Atlin baz=306	84.10	26	P		P	01 30 49.8	-2.7	
R32K	Eaglecrest baz=306	84.54	28	P		P	01 30 52.6	-2.1	
SIT	Sitka baz=305	84.89	29	P		P	01 30 54.4	-2.0	
S32K	Killisnoo baz=306	84.99	28	P		P	01 30 54.6	-2.3	
Q32M	Nakina River baz=308	85.08	26	P		P	01 30 55.1	-2.5	
R33M	Jennings River comp=Z,24nm,1.4s	85.33	26	IAmb	IAmb		01 31 01.9		
R33M	Jennings River baz=309	85.33	26	P		P	01 30 56.3	-2.5	
WRGLY	Wrigley comp=Z,20nm,1.2s	85.49	20	IAmb	IAmb		01 31 01.6		
WRGLY	Wrigley baz=315	85.49	20	P		P	01 30 57.0	-2.3	
WTLY	Watson Lake, Y comp=Z,41nm,1.8s	85.72	24	IAmb	IAmb		01 31 24.9		
WTLY	Watson Lake, Y baz=310	85.72	24	P		P	01 30 58.2	-2.4	
LSZ	Lusaka comp=Z,73nm,19.6s,baz=56,slow=34	85.73	252	LR	LR		02 07 22.8		
LSZ	Lusaka	85.73	252	P		P	01 31 01.9	+0.4	
LSZ	comp=Z,20nm,1.2s			IAmb	IAmb		01 31 03.1		
LSZ	Lusaka	85.73	252	P		P	01 31 01.9	+0.4	
LSZ	comp=Z,20nm,1.2s			pmax	pmax				
S34M	Telegraph Cree baz=309	86.19	27	P		P	01 31 00.7	-2.2	
DLBC	Dease Lake baz=310	86.32	26	P		P	01 31 01.4	-2.2	
U33K	Whale Pass baz=307	86.44	29	P		P	01 31 01.1	-3.0	
WRAK	Wrangell Islan baz=308	86.59	29	P		P	01 31 02.1	-2.8	
CRAG	Craig baz=307	86.82	30	P		P	01 31 03.8	-2.2	
T35M	Bob Quinn baz=309	87.15	27	P		P	01 31 05.2	-2.4	
LIRD	Liard River Hi baz=313	87.22	24	P		P	01 31 05.1	-2.8	
V35K	Ketchikan baz=308	87.59	29	P		P	01 31 06.8	-2.9	
U35K	Hyder baz=310	87.92	28	P		P	01 31 09.0	-2.3	
TOAD	Toad River Com baz=314	87.92	24	P		P	01 31 08.3	-3.0	
YKAW3	Yellowknife Wh comp=Z,29nm,1.5s	88.67	18	IAmb	IAmb		01 31 17.5		
YKA	Yellowknife Ar comp=Z,6.8nm,1.1s,baz=321,slow=5.3,SNR=15 comp=Z,6.8nm,1.1s	88.73	18	P		P	01 31 16.2	+1.2	
YKA	Yellowknife Ar	88.73	18	P		P	01 31 14.9	-0.1	
YKA	Yellowknife Ar	88.73	18	*ce*P		P	01 31 16.0	+1.0	
YKA	comp=Z,4.0nm,0.9s			pmax	pmax				
YKAW1	Yellowknife Wh comp=Z,19nm,1.2s	88.77	18	IAmb	IAmb		01 31 17.3		
URZ	Urewera comp=Z,87nm,20.5s,baz=285,slow=36	89.70	132	LR	LR		02 12 08.1		
MSWZ	Moikau Station	90.06	136	P		P	01 31 21.1	-0.5	
ESDC	Sonseca Array comp=Z,2.6nm,1.2s,baz=60,slow=7.3,SNR=5.7 comp=Z,2.6nm,1.2s	90.31	314	P		P	01 31 23.0	-0.1	
LBTB	Lobatse comp=Z,50nm,18.4s,baz=56,slow=36	91.99	244	LR	LR		02 13 59.2		
BOSA	Boshof comp=Z,4.4nm,1.1s,baz=59,slow=7.2,SNR=3.1 comp=Z,4.4nm,1.1s	93.74	241	P		P	01 31 39.4	+0.4	
BOSA	Boshof comp=Z,41nm,1.6s	93.74	241	IAmb	IAmb		01 31 41.4		
BOSA	Boshof	93.74	241	P		P	01 31 39.4	+0.4	
BOSA	comp=Z,41nm,1.7s			pmax	pmax				
MAW	Mawson comp=Z,70nm,20.1s,baz=74,slow=34	95.94	195	LR	LR		02 11 53.6		
TSUM	Tsumeb comp=Z,100nm,20.0s,baz=24,slow=34	96.57	252	LR	LR		02 13 49.0		
TORD	Torodi Ar. Bea	98.40	288	P		P	01 31 59.0	-1.5	
DLMT	Dillon	103.15	27	Pdif		Pdif	01 32 23.2	+2.0	
NVL	N'lazarevskaya	113.08	201	*i* PKIKP		PKiKP	01 36 59.1	+0.9	
NVL				*e*			01 37 47.2		
NVL				*e*PPP		PPP	01 40 09.2		
NVL				*e*SS		SS	01 53 33.5	+1.5	
NVL				*e*SSS		SSS	01 57 46.1		
NVL	comp=Z,15nm,1.3s			pmax	pmax				
NVL	comp=N,149nm,16.2s			pmax	pmax				
NVL	comp=Z,650nm,23.0s			MLR	MLR				
TXAR	Lajitas Array comp=Z,1.9nm,1.2s,baz=270,slow=0.4,SNR=6.8	120.33	31	PKP		PKiKP	01 37 13.9	+0.1	
TXAR	Lajitas Array	120.33	31			PKPdf	01 37 13.4	-0.3	
TXAR	Lajitas Array	120.33	31	PKIKP		PKPdf	01 37 13.4	-0.3	
SDV	Santo Domingo comp=Z,43nm,1.0s,baz=37,slow=5.1,SNR=6.7	148.26	355	PKPbc		PKPbc	01 38 09.0	0.0	
CPUP	Villa Florida comp=Z,1.1nm,1.2s,baz=6.9,slow=1.4,SNR=3.1	165.16	254	PKP		PKPdf	01 38 26.9	+0.3	
CPUP	Villa Florida	165.16	254	PKPdf		PKPdf	01 38 26.3	-0.3	
CPUP	Villa Florida	165.16	254	PKIKP		PKPdf	01 38 26.3	-0.3	
SIV	San Ignacio baz=90,slow=3.0	166.62	299	PKP		PKPdf	01 38 28.4	+0.3	
CFA	Coronel Fontan comp=Z,0.3nm,0.3s,baz=138,slow=4.5,SNR=3.5	170.30	206	PKP		PKPdf	01 38 30.5	+0.4	
LPAZ	La Paz comp=Z,3.3nm,1.1s,baz=48,slow=4.3,SNR=5.1	171.82	323	PKP		PKPdf	01 38 32.5	+0.5	

*BJI **25** 01:32:40.9,23.98N×121.80E,h10km,mB5.0/12,mb4.2/38, ML4.6/9,Ms4.7/52,Ms7 4.6/47*
*NEIC **25** 01:32:42.0±1.7,24.00N±0.02×121.76E±0.04,h10km±4km, mb5.0/75,Error ellipse: s-maj=5.5km s-min=2.8km az=104.0*

JMA ***25*** *01:32:41.8±0.3,24.0′0N±0.0′3×121.7′7E±0.0′5,h0km±2km, MD4.9/14,MV4.4/14,TAIWAN REGION*
NIED ***25*** *01:32:41.8,23.9′99N×121.7′4E,h0km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.16; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.63; $M_{\theta\phi}$-0.56; $M_{r\phi}$0.47; Fault plane solution: $M_0$1.40000×10^{16} NP1: ϕ_s228.00000°,δ28.00000°,λ87.00000°. NP2:ϕ_s52.00000°, δ62.00000°,λ92.00000°.*
ASIES ***25*** *01:32:42.1,24.0′03N×121.7′5E,h6km,Mw4.4,Fault plane solution: NP1:ϕ_s28.00000°,δ40.00000°,λ78.00000°. NP2:ϕ_s223.00000°,δ51.00000°,λ100.00000°.*
TAP ***25*** *01:32:42.2,24.0′3N×121.7′5E,h5km,ML4.6,C*
IDC ***25*** *01:32:46.8±2.5,23.9′97N×121.9′0E,h47km±24km,mb3.8/23, mbtmp4.1/27,ML4.3/4,MS3.8/10,Error ellipse: s-maj=15.7km s-min=13.5km az=49.0*
ISC 25 01:32:42.7±0.7,24°01′N±0.0′1×121°7′6E±0.0′1,h14km±4km, n337,σ1°34/445,mb4.5/52,MS3.9/11,5C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
HWA	**Hwalien**	**0.15**	**256**	*i*	P	**Pg**	**01 32 46.2**	**-0.2**
HWA				*i*	S	**Sb**	**01 32 49.9**	**-0.4**
TWD	**Chiawan**	**0.17**	**294**	⇓*i*	P	**Pg**	**01 32 45.7**	**-1.0**
TWD				*i*	S	**Sg**	**01 32 48.5**	**-0.9**
ETL	**Fush Village**	**0.19**	**319**	⇓*i*	P	**Pg**	**01 32 46.4**	**-0.8**
TEYL	**Yanliau Villag**	**0.21**	**226**	⇑*i*	P	**Pg**	**01 32 47.2**	**-0.1**
TEYL					S	**Sb**	**01 32 51.5**	**-0.5**
NACB	**Ninganchiao**	**0.22**	**316**		Pg	**Pg**	**01 32 46.5**	**-1.0**
NACB					Sg	**Sg**	**01 32 49.3**	**-1.6**
NACB	**Ninganchiao**	**0.22**	**316**		P	**Pg**	**01 32 46.5**	**-1.0**
NACB	**Ninganchiao**	**0.22**	**316**		P	**Pg**	**01 32 46.6**	**-1.0**
NACB	**Ninganchiao**	**0.22**	**316**		S	**Sg**	**01 32 50.3**	**-0.6**
NACB	**Ninganchiao**	**0.22**	**316**	⇓*i*	P	**Pg**	**01 32 46.8**	**-0.8**
NACB				*i*	S	**Sg**	**01 32 49.8**	**-1.1**
ETM	**Tongmen**	**0.25**	**259**	⇓*i*	P	**Pg**	**01 32 47.5**	**-0.6**
ETM					eS	**Sg**	**01 32 52.4**	**+0.6**
SHUL	**Shoufeng**	**0.29**	**219**		P	**Pb**	**01 32 49.5**	**-0.1**
SHUL					S	**Sb**	**01 32 55.9**	**+1.5**
EHP	**Heping Village**	**0.30**	**356**		P	**Pg**	**01 32 48.8**	**-0.1**
EHP				*i*	S	**Sg**	**01 32 53.9**	**+0.8**
EAHA	**Aohua**	**0.32**	**356**		P	**Pg**	**01 32 49.0**	**-0.3**
EAHA					S	**Sg**	**01 32 54.4**	**+0.8**
ETLH	**Xiulin Townshi**	**0.32**	**307**		P	**Pg**	**01 32 48.7**	**-0.6**
ETLH					eS	**Sg**	**01 32 53.3**	**-0.6**
ESL	**Shilin**	**0.36**	**237**	*i*	P	**Pg**	**01 32 49.7**	**-0.3**
ESL					eS	**Sg**	**01 32 55.4**	**+0.4**
TEGC	**Jichi Village**	**0.36**	**214**		P	**Pb**	**01 32 50.6**	**-0.3**
TEGC					S	**Sn**	**01 32 58.9**	**-1.6**
ENA	**Nanau**	**0.41**	**357**	⇓*i*	P	**Pg**	**01 32 50.9**	**-0.1**
ENA					S	**Sg**	**01 32 57.4**	**+0.8**
EWUT	**Wuta**	**0.43**	**2**		P	**Pg**	**01 32 51.3**	**0.0**
EWUT					S	**Sg**	**01 32 58.0**	**+0.9**
WARBT	**Fenglin Townsh**	**0.45**	**230**	⇑*i*	P	**Pg**	**01 32 51.4**	**-0.3**
WARBT					S	**Sb**	**01 32 58.9**	**-0.3**
EGFH	**Guangfu**	**0.46**	**222**		P	**Pg**	**01 32 51.9**	**+0.1**
WHF	**Hehuan Shan**	**0.47**	**286**	⇓*i*	P	**Pg**	**01 32 51.6**	**-0.6**
WHF					S	**Sg**	**01 32 58.2**	**-0.4**
FUSS	**Fushou**	**0.53**	**296**	*eP*		**Pg**	**01 32 53.0**	**-0.2**
NNSB	**Datong**	**0.54**	**320**	*i*	P	**Pg**	**01 32 52.9**	**-0.4**
NNSB				*i*	S	**Sg**	**01 33 00.9**	**+0.3**
NNSH	**Datong**	**0.54**	**320**	*i*	P	**Pg**	**01 32 53.0**	**-0.3**
NNSH				*i*	S	**Sg**	**01 33 00.8**	**+0.3**
OWD	**Renai**	**0.54**	**264**	*i*	P	**Pg**	**01 32 53.1**	**-0.3**
OWD					eS	**Sg**	**01 33 01.3**	**+0.7**
NNS	**Nan Shan**	**0.55**	**320**		P	**Pg**	**01 32 53.3**	**-0.3**
NNS					S	**Sg**	**01 33 01.3**	**+0.2**
LATG	**Datong**	**0.56**	**338**	⇓	P	**Pg**	**01 32 53.5**	**-0.3**
LATG					eS	**Sg**	**01 33 00.7**	**-0.6**
ESAO	**Su ao**	**0.56**	**8**	*i*	P	**Pg**	**01 32 54.0**	**+0.2**
ESAO					S	**Sb**	**01 33 02.4**	**0.0**
TWT	**Tachien**	**0.59**	**294**	*eP*		**Pg**	**01 32 54.3**	**+0.1**
TWT					eS	**Sb**	**01 33 03.2**	**0.0**
WUSB	**Renai**	**0.59**	**268**	*i*	P	**Pg**	**01 32 54.2**	**-0.1**
WUSB					eS	**Sg**	**01 33 02.5**	**+0.3**
TWC	**Suao**	**0.60**	**8**		P	**Pg**	**01 32 54.6**	**+0.2**
TWC					S	**Sb**	**01 33 03.5**	**+0.2**
TDCB	**Techi**	**0.60**	**294**	*eP*		**Pg**	**01 32 54.4**	**-0.1**
TDCB					eS	**Sb**	**01 33 03.4**	**-0.1**
HGSD	**Ruisui**	**0.60**	**211**	*eP*		**Pb**	**01 32 55.2**	**+0.1**
NDS	**Dongshan**	**0.62**	**356**		P	**Pg**	**01 32 55.0**	**+0.2**
NDS					S	**Sb**	**01 33 04.0**	**+0.1**
VWDT	**VWDT**	**0.62**	**246**	*i*	P	**Pg**	**01 32 55.0**	**+0.1**
VWDT					eS	**Sb**	**01 33 04.4**	**+0.4**
EHYH	**Wanrong**	**0.64**	**217**	*eP*		**Pg**	**01 32 55.4**	**+0.1**
EHYH					eS	**Sn**	**01 33 06.3**	**-1.1**
EHY	**Hungye**	**0.65**	**219**	*eP*		**Pg**	**01 32 54.8**	**-0.6**
ENTT	**Nioudou**	**0.65**	**344**	*i*	P	**Pg**	**01 32 55.4**	**0.0**
ENTT					S	**Sb**	**01 33 05.2**	**+0.4**
TWE	**Neicheng**	**0.71**	**353**	*i*	P	**Pg**	**01 32 56.7**	**+0.2**
TWE					S	**Sb**	**01 33 07.0**	**+0.4**
YHNB	**Yeheng**	**0.74**	**332**		Pg	**Pg**	**01 32 56.9**	**-0.2**
YHNB					Sg	**Sg**	**01 33 06.2**	**-0.8**
YHNB	**Yeheng**	**0.74**	**332**		P	**Pg**	**01 32 57.3**	**+0.1**
YHNB	**Yeheng**	**0.74**	**332**		P	**Pg**	**01 32 57.2**	**+0.1**
YHNB	**Yeheng**	**0.74**	**332**		S	**Sb**	**01 33 07.8**	**+0.3**
YHNB	**Yeheng**	**0.74**	**332**	⇓*i*	P	**Pg**	**01 32 57.3**	**+0.1**
YHNB					S	**Sg**	**01 33 07.4**	**+0.4**
ILA	**Ilan**	**0.75**	**359**	*eP*		**Pg**	**01 32 57.5**	**+0.2**
ILA					S	**Sg**	**01 33 07.7**	**+1.1**
ECBN	**Changbin**	**0.75**	**202**	*eP*		**Pg**	**01 32 57.4**	**+0.1**
ECBN					S	**Sn**	**01 33 09.9**	**-0.2**
YULB	**Yu-li**	**0.75**	**215**		Pg	**Pg**	**01 32 56.1**	**-1.2**
YULB					Sg	**Sg**	**01 33 06.1**	**-1.1**
YULB	**Yu-li**	**0.75**	**215**		P	**Pg**	**01 32 57.4**	**+0.1**
YULB	**Yu-li**	**0.75**	**215**		P	**Pg**	**01 32 57.1**	**-0.2**
YULB	**Yu-li**	**0.75**	**215**	*eP*		**Pg**	**01 32 56.8**	**-0.5**
YULB					eS	**Sn**	**01 33 10.2**	**+0.1**
NSK	**Sanguang**	**0.76**	**331**	⇓*i*	P	**Pg**	**01 32 57.4**	**0.0**
NSK					S	**Sg**	**01 33 07.6**	**+0.3**
FUSB	**Fushanzhiwuyua**	**0.76**	**348**	⇓*i*	P	**Pg**	**01 32 57.7**	**+0.2**
FUSB					S	**Sb**	**01 33 08.5**	**+0.4**
SSLB	**Suanglung**	**0.77**	**253**		Pg	**Pg**	**01 32 57.4**	**-0.3**
SSLB					Sg	**Sg**	**01 33 06.9**	**-1.0**
SSLB	**Suanglung**	**0.77**	**253**		P	**Pg**	**01 32 57.5**	**-0.2**
SSLB	**Suanglung**	**0.77**	**253**		S	**Sg**	**01 33 07.5**	**-0.4**
SSLB	**Suanglung**	**0.77**	**253**	⇑*i*	P	**Pg**	**01 32 57.5**	**-0.2**
SSLB					S	**Sb**	**01 33 08.4**	**0.0**
EYUL	**Yuli**	**0.78**	**212**	*eP*		**Pg**	**01 32 57.7**	**-0.1**
TWF1	**Yuli**	**0.78**	**213**	*eP*		**Pg**	**01 32 57.3**	**-0.6**
TWF1					eS	**Sn**	**01 33 10.6**	**-0.3**
WHP	**Taichung City**	**0.79**	**290**	⇓*i*	P	**Pg**	**01 32 58.3**	**+0.2**
WHP					S	**Sb**	**01 33 09.4**	**+0.5**
NWLT	**Wulai**	**0.80**	**343**	⇓*i*	P	**Pg**	**01 32 58.3**	**+0.1**
NWLT					S	**Sb**	**01 33 09.6**	**+0.5**
SMLT	**Sun Moon Lake**	**0.80**	**261**	*i*	P	**Pg**	**01 32 58.3**	**+0.1**
SMLT					eS	**Sb**	**01 33 09.8**	**+0.6**
TYC	**Yuchr**	**0.84**	**263**	⇑*i*	P	**Pg**	**01 32 58.8**	**-0.1**
TYC					S	**Sb**	**01 33 10.3**	**+0.2**
NTC	**Toucheng**	**0.84**	**4**	*eP*		**Pb**	**01 32 59.2**	**+0.2**
NTC					eS	**Sn**	**01 33 11.9**	**-0.4**
EGS		**0.84**	**11**	*eP*		**Pn**	**01 33 00.2**	**+0.1**
NFF	**Wufeng Townshi**	**0.85**	**316**	⇓*i*	P	**Pg**	**01 32 59.3**	**+0.1**
NFF					eS	**Sb**	**01 33 11.3**	**+0.6**
CHKH	**Chenggong**	**0.88**	**202**	*eP*		**Pb**	**01 32 59.5**	**-0.3**
CHKH				*i*	S	**Sn**	**01 33 14.5**	**+1.1**
WHYT	**Xinyi Township**	**0.89**	**249**	*eP*		**Pb**	**01 32 59.7**	**-0.3**
WHYT					S	**Sb**	**01 33 12.5**	**+0.7**
YUS	**Yu-Shan**	**0.91**	**235**		P	**Pg**	**01 33 00.2**	**-0.2**
YUS					S	**Sn**	**01 33 14.4**	**-0.3**
FULB	**Fuli**	**0.92**	**208**	*eP*		**Pb**	**01 33 00.3**	**-0.1**
FULB					eS	**Sn**	**01 33 16.5**	**+2.3**
LIOB	**Emei**	**0.93**	**313**	⇓*i*	P	**Pg**	**01 33 01.1**	**+0.4**
LIOB					eS	**Sn**	**01 33 14.0**	**-0.5**
NSTT	**Nanjuang**	**0.93**	**312**	*eP*		**Pg**	**01 33 01.1**	**+0.5**
NSTT					eS	**Sg**	**01 33 13.7**	**+0.9**
KSHI	**Guanxi Townshi**	**0.93**	**325**	*eP*		**Pg**	**01 33 01.1**	**+0.5**
KSHI					S	**Sg**	**01 33 13.6**	**+0.7**
NJD	**Zhudong**	**0.95**	**320**	*eP*		**Pg**	**01 33 01.4**	**+0.4**
TIPB	**Shuangxi**	**0.96**	**3**	*i*	P	**Pg**	**01 33 01.6**	**+0.4**
TIPB					S	**Sg**	**01 33 14.6**	**+0.9**
TWQ1	**Liyutan**	**0.96**	**290**		P	**Pn**	**01 33 02.0**	**+0.1**
TWQ1					S	**Sn**	**01 33 16.0**	**+0.7**
WJS	**Zhushan**	**0.97**	**259**		P	**Pn**	**01 33 02.0**	**+0.2**
WJS					S	**Sn**	**01 33 16.6**	**+1.1**
WWF	**Wufeng**	**0.97**	**272**	*eP*		**Pn**	**01 33 02.8**	**+0.9**
WWF					eS	**Sn**	**01 33 18.4**	**+2.8**
TWA	**Mucha**	**0.98**	**350**	*eP*		**Pg**	**01 33 01.9**	**+0.3**
TWA					S	**Sg**	**01 33 15.2**	**+0.9**
CHKT	**Chengkung**	**0.98**	**202**	*eP*		**Pb**	**01 33 00.8**	**-0.7**
CHKT					S	**Sn**	**01 33 16.2**	**+0.5**
TATO	**Taipei**	**0.99**	**345**		Pg	**Pb**	**01 33 01.2**	**-0.5**
TATO	**Taipei**	**0.99**	**345**		P	**Pn**	**01 33 02.5**	**+0.3**
TATO	**Taipei**	**0.99**	**345**		P	**Pg**	**01 33 02.1**	**+0.3**
TATO	**Taipei**	**0.99**	**345**		S	**Sn**	**01 33 16.1**	**+0.1**
TATO	**Taipei**	**0.99**	**345**		P	**Pn**	**01 33 02.3**	**+0.1**
TATO					eS	**Sb**	**01 33 13.8**	**-0.8**
WNT	**Mingjian**	**1.00**	**262**	*i*	P	**Pn**	**01 33 02.8**	**+0.6**
WNT					S	**Sn**	**01 33 17.7**	**+1.6**
WNT1	**Nantou City**	**1.00**	**264**		P	**Pn**	**01 33 02.9**	**+0.6**
WNT1					eS	**Sn**	**01 33 18.2**	**+2.1**
NSY	**Sanyi**	**1.00**	**294**	*eP*		**Pn**	**01 33 03.2**	**+0.9**
EHD	**Haiduan**	**1.00**	**211**		P	**Pn**	**01 33 03.3**	**+0.9**
EHD					eS	**Sn**	**01 33 17.5**	**+1.2**
TCU	**Taichung**	**1.00**	**278**	*i*	P	**Pn**	**01 33 03.5**	**+1.1**
TCU					S	**Sn**	**01 33 18.8**	**+2.6**
ALS	**Alishan**	**1.01**	**240**		P	**Pb**	**01 33 02.3**	**+0.1**
ALS					S	**Sn**	**01 33 17.2**	**+0.3**
TWB1	**Santiao Chiao**	**1.01**	**12**		P	**Pn**	**01 33 02.9**	**+0.4**
TWB1					eS	**Sb**	**01 33 15.3**	**+0.1**
HSN1	**Hsinchu**	**1.02**	**318**	*eP*		**Pn**	**01 33 03.1**	**+0.5**
HSN1					eS	**Sn**	**01 33 19.4**	**+2.6**
NMLH	**Miaoli**	**1.03**	**301**		P	**Pn**	**01 33 04.0**	**+1.2**
NMLH					S	**Sn**	**01 33 17.7**	**+0.7**
TAP	**Taipei**	**1.05**	**347**	*eP*		**Pg**	**01 33 03.4**	**+0.5**
TAP					S	**Sn**	**01 33 18.3**	**+0.9**
SBCB	**Hsinchu**	**1.05**	**318**		P	**Pg**	**01 33 04.2**	**+1.2**
SBCB					eS	**Sn**	**01 33 19.2**	**+1.7**
NWF	**Wu-fen Shan**	**1.05**	**1**	*eP*		**Pb**	**01 33 03.0**	**+0.2**
NWF					S	**Sn**	**01 33 17.8**	**+0.1**
WFSB	**Wu-fen Shan**	**1.05**	**1**		P	**Pg**	**01 33 03.4**	**+0.4**
WFSB					S	**Sn**	**01 33 17.8**	**+0.2**
ELDTW	**Lidau**	**1.07**	**220**	*eP*		**Pb**	**01 33 01.7**	**-1.3**
HSN	**Hsinchu**	**1.07**	**318**	*eP*		**Pg**	**01 33 04.3**	**+1.0**
HSN					eS	**Sn**	**01 33 18.8**	**+0.8**
NTY	**Taoyuan**	**1.07**	**337**		P	**Pg**	**01 33 04.2**	**+0.9**
NTY					eS	**Sn**	**01 33 20.2**	**+2.2**
CHN5	**Tsauling**	**1.08**	**248**		P	**Pg**	**01 33 04.3**	**+0.8**
CHN5					S	**Sn**	**01 33 20.1**	**+1.9**
SXI1	**Grass Mountain**	**1.08**	**5**	*eP*		**Pg**	**01 33 04.0**	**+0.4**
NCU	**National Centr**	**1.09**	**331**	*eP*		**Pb**	**01 33 03.3**	**0.0**
NCU					eS	**Sn**	**01 33 20.8**	**+2.3**
NCUH	**Zhongli**	**1.09**	**331**	*eP*		**Pg**	**01 33 04.5**	**+0.9**
NCUH					eS	**Sn**	**01 33 20.4**	**+2.0**
WCHH	**Zhanghua**	**1.10**	**274**		P	**Pg**	**01 33 05.0**	**+1.1**
WCHH					S	**Sn**	**01 33 22.2**	**+3.4**
WCH1	**Changhua City**	**1.11**	**273**	*eP*		**Pg**	**01 33 05.1**	**+0.9**
WCH1					eS	**Sn**	**01 33 23.1**	**+4.1**
EDH	**Donghe**	**1.12**	**202**		P	**Pb**	**01 33 03.2**	**+0.6**
EDH					S	**Sn**	**01 33 20.1**	**+0.9**
TWS1	**Kuangyinshan**	**1.13**	**344**	*eP*		**Pg**	**01 33 05.5**	**+1.1**
TWS1					S	**Sn**	**01 33 20.8**	**+1.4**
TNOU	**National Taiwa**	**1.13**	**0**		P	**Pg**	**01 33 04.6**	**+0.1**
TNOU					S	**Sn**	**01 33 19.8**	**+0.3**
YM01	**YM01**	**1.14**	**351**	*i*	P	**Pg**	**01 33 05.2**	**+0.5**
YM01					eS	**Sg**	**01 33 19.9**	**+0.3**
WGK	**Gukeng**	**1.15**	**254**	*eP*		**Pn**	**01 33 04.6**	**+0.2**
WGK					eS	**Sg**	**01 33 23.8**	**+4.1**
WDL	**Douliou City**	**1.16**	**255**	*eP*		**Pg**	**01 33 05.9**	**+0.9**
ZUZH	**Zhuzihu**	**1.16**	**350**	*i*	P	**Pg**	**01 33 05.3**	**+0.2**
ZUZH					S	**Sg**	**01 33 21.2**	**+0.9**
JYNG	**Yonagunijimaku**	**1.16**	**68**	*eP*		**Pb**	**01 33 05.0**	**+0.3**
JYNG					eS	**Sg**	**01 33 20.9**	**+0.6**
JYNG	**Yonagunijimaku**	**1.16**	**68**	A		A	01 33 05.0	
	comp=N,31nm,9.7s,comp=S,24nm,4.3s							
WDLH	**Douliu**	**1.17**	**254**	*eP*		**Pg**	**01 33 05.6**	**+0.4**
YM08	**YM08**	**1.18**	**352**	*eP*		**Pg**	**01 33 05.6**	**+0.1**
YM08					eS	**Sg**	**01 33 23.1**	**+2.2**
NTST	**Danshui**	**1.18**	**346**	*eP*		**Pg**	**01 33 06.2**	**+0.8**
ANP	**Anpu**	**1.19**	**349**	P		**Pg**	**01 33 06.0**	**+0.4**
YOJ	**Yonaguni jima**	**1.22**	**68**			**Pn**	**01 33 05.3**	**-0.1**
YOJ	**Yonaguni jima**	**1.22**	**68**	P		**Pg**	**01 33 06.3**	**0.0**
YOJ	**Yonaguni jima**	**1.22**	**68**	P		**Pg**	**01 33 06.4**	**+0.1**
YOJ	**Yonaguni jima**	**1.22**	**68**	S		**Sg**	**01 33 24.3**	**+2.0**
YOJ	**Yonaguni jima**	**1.22**	**68**	P		**Pb**	**01 33 05.8**	**+0.2**
YOJ	**Yonaguni jima**	**1.22**	**68**	A		A	01 33 05.8	
	comp=N,26nm,6.4s,comp=E,29nm,3.0s							
YOJ	**Yonaguni jima**	**1.22**	**68**	P		**Pg**	**01 33 06.1**	**-0.2**
YOJ					eS	**Sg**	**01 33 24.2**	**+2.0**
STYH	**Taoyuan**	**1.23**	**227**	*eP*		**Pn**	**01 33 05.7**	**+0.2**
STYH					eS	**Sg**	**01 33 24.8**	**+2.3**
STYT	**Tauyuan**	**1.25**	**228**	*eP*		**Pn**	**01 33 05.8**	**-0.1**
STYT					eS	**Sg**	**01 33 23.9**	**+0.8**
TPUB	**Ta-pu**	**1.26**	**236**			**Pn**	**01 33 05.8**	**-0.1**
TPUB	**Ta-pu**	**1.26**	**236**		P	**Pb**	**01 33 06.6**	**+0.4**
TPUB	**Ta-pu**	**1.26**	**236**		P	**Pb**	**01 33 06.4**	**+0.2**
TPUB	**Ta-pu**	**1.26**	**236**		S	**Sg**	**01 33 23.4**	**+0.1**
TPUB	**Ta-pu**	**1.26**	**236**	*eP*		**Pb**	**01 33 06.3**	**+0.1**
TPUB					S	**Sg**	**01 33 24.4**	**+1.1**
CHN4	**Tsaushan**	**1.26**	**239**		P	**Pb**	**01 33 06.6**	**+0.4**
CHN4					eS	**Sg**	**01 33 26.4**	**+3.0**
TWY	**Chenhua**	**1.27**	**353**	*eP*		**Pg**	**01 33 07.9**	**+0.8**
TWY					eS	**Sg**	**01 33 23.7**	**+0.2**
CHN2	**Minshiung**	**1.27**	**248**		P	**Sg**	**01 33 07.6**	**+0.4**
CHN2					S	**Sg**	**01 33 27.3**	**+3.5**
WTK	**Tuku**	**1.30**	**256**	*eP*		**Pg**	**01 33 08.1**	**+0.4**
WTK					eS	**Sg**	**01 33 26.7**	**+2.1**
WTP	**Ta-pu**	**1.30**	**234**	*eP*		**Pb**	**01 33 07.3**	**+0.3**
WTP					eS	**Sg**	**01 33 27.4**	**+2.7**
CHY	**Chiayi**	**1.33**	**248**	*eP*		**Pg**	**01 33 08.6**	**+0.3**
CHY					eS	**Sg**	**01 33 28.2**	**+2.6**
TWGBT	**Beinan**	**1.34**	**208**	P		**Pn**	**01 33 05.3**	**-1.8**
TWGBT	**Beinan**	**1.34**	**208**	S		**Sg**	**01 33 26.2**	**+0.1**
TWGBT	**Beinan**	**1.34**	**208**	*eP*		**Pn**	**01 33 05.2**	**-1.9**
TWGBT					eS	**Sg**	**01 33 25.9**	**-0.2**
TWG	**Pinlang**	**1.35**	**208**	Pn		**Pn**	**01 33 04.7**	**-2.4**
TWG	**Pinlang**	**1.35**	**208**	*eP*		**Pn**	**01 33 05.2**	**-1.8**
TWG					eS	**Sg**	**01 33 25.8**	**-0.3**
LDUT	**Ludao**	**1.36**	**191**	*eP*		**Pn**	**01 33 05.2**	**-2.1**
LDUT					eS	**Sn**	**01 33 23.6**	**-1.6**
WTCT	**Ta-ch'eng**	**1.36**	**264**		P	**Pb**	**01 33 08.4**	**+0.4**
WTCT					S	**Sg**	**01 33 28.6**	**+2.0**
TTN	**Taitung**	**1.38**	**204**	*eP*		**Pn**	**01 33 07.3**	**-0.1**
TTN					eS	**Sg**	**01 33 28.6**	**+1.5**
TWK	**Hsinying**	**1.39**	**238**	*eP*		**Pb**	**01 33 08.9**	**+0.5**
TWK					eS	**Sg**	**01 33 30.0**	**+2.6**
CHN1	**Nanshi**	**1.40**	**234**		P	**Pb**	**01 33 09.2**	**+0.5**
CHN1					eS	**Sg**	**01 33 30.9**	**+3.0**
SGST	**Jiashian**	**1.43**	**230**		P	**Pb**	**01 33 09.0**	**-0.1**
SGST					eS	**Sg**	**01 33 30.1**	**+1.4**
WSF	**Szhu**	**1.46**	**255**	*eP*		**Pg**	**01 33 10.5**	**-0.2**
WSF					S	**Sg**	**01 33 31.2**	**+1.4**
WSL	**Shuilin Townsh**	**1.49**	**251**	*eP*		**Pb**	**01 33 10.4**	**+0.3**
WSL					eS	**Sg**	**01 33 32.6**	**+2.0**
ICHU	**Yijhu**	**1.51**	**245**	*eP*		**Pn**	**01 33 09.9**	**+0.6**
CHN8	**Yiju**	**1.57**	**245**	*eP*		**Pb**	**01 33 11.4**	**-0.1**
CHN8					eS	**Sg**	**01 33 35.8**	**+2.5**
CHN3	**Shinhua**	**1.59**	**234**	*eP*		**Pg**	**01 33 12.6**	**+0.8**
CHN3					eS	**Sg**	**01 33 37.7**	**+3.9**
ECL	**Taimali**	**1.59**	**208**	*eP*		**Pn**	**01 33 09.8**	**-0.7**
ECL					eS	**Sn**	**01 33 31.4**	**+0.5**
SCST	**Cishan**	**1.62**	**226**	*eP*		**Pb**	**01 33 13.0**	**+0.6**
SCST					eS	**Sg**	**01 33 36.9**	**+2.1**
SHHT	**Tainan City**	**1.63**	**233**	*eP*		**Pb**	**01 33 13.2**	**+0.6**
PCYT	**Pengchaiyu**	**1.63**	**10**	*eP*		**Pb**	**01 33 12.2**	**-0.4**
SSD	**Sandimen**	**1.63**	**220**	*eP*		**Pb**	**01 33 12.2**	**-0.4**
SSD					eS	**Sb**	**01 33 34.0**	**+0.9**
TSMG	**Majia**	**1.66**	**219**	*eP*		**Pb**	**01 33 12.4**	**-0.6**
SCLT	**Jiali**	**1.66**	**240**	*eP*		**Pb**	**01 33 12.4**	**-0.7**
SCLT					eS	**Sg**	**01 33 38.5**	**+2.2**
TWM1	**Shoushan**	**1.71**	**226**	*eP*		**Pg**	**01 33 14.8**	**-0.7**
SGLT	**Jiouru**	**1.73**	**223**	*eP*		**Pn**	**01 33 13.3**	**+0.9**
MASBT	**Mashibuluo**	**1.74**	**217**	*eP*		**Pn**	**01 33 12.4**	**-0.1**
MASBT					eS	**Sg**	**01 33 39.2**	**+0.6**
TSCK	**Chigu Township**	**1.76**	**241**	P		**Pb**	**01 33 14.2**	**-0.6**
TSCK					S	**Sg**	**01 33 39.1**	**-0.4**
IRIF	**Iriomote-Funau**	**1.82**	**79**	*eP*		**Pn**	**01 33 14.1**	**+0.5**
IRIF					eS	**Sb**	**01 33 37.6**	**-1.0**
IRIF	**Iriomote-Funau**	**1.82**	**79**	A		A	01 33 14.1	
	comp=N,18nm,3.1s,comp=E,14nm,2.1s							
EAST	**Anshuo**	**1.83**	**208**	*eP*		**Pb**	**01 33 15.4**	**-0.6**
TAW	**Tawu**	**1.83**	**206**	*eP*		**Pb**	**01 33 16.1**	**+0.2**
TAWH	**Dawu Township**	**1.85**	**206**	*eP*		**Pb**	**01 33 15.7**	**-0.6**
TAWH					eS	**Sb**	**01 33 40.7**	**+1.4**
HATJ	**Hateruma jima**	**1.87**	**88**	*eP*		**Pn**	**01 33 14.8**	**+0.6**
HATJ					eS	**Sb**	**01 33 40.0**	**+0.1**
HATJ	**Hateruma jima**	**1.87**	**88**	A		A	01 33 14.8	
	comp=N,28nm,2.4s,comp=E,24nm,2.7s							
WSSB	**Gushan**	**1.94**	**226**	*eP*		**Pb**	**01 33 18.2**	**+0.4**
SCZT	**Fangliau**	**1.94**	**213**	*eP*		**Pb**	**01 33 17.2**	**-0.7**
SCZT					eS	**Sb**	**01 33 42.6**	**+0.6**
LAY	**Lan-yu**	**1.98**	**186**	*eP*		**Pn**	**01 33 13.4**	**-2.4**
LYUB	**Lan-yu**	**2.01**	**185**	*eP*		**Pn**	**01 33 14.0**	**-2.2**
JKRS	**Kuro-shima**	**2.06**	**83**	P		**Pn**	**01 33 18.2**	**+1.3**
JKRS	**Kuro-shima**	**2.06**	**83**	A		A	01 33 18.2	
	comp=N,28nm,3.0s,comp=E,30nm,2.7s							
PHUB	**P'eng-hu**	**2.07**	**257**		P	**Pn**	**01 33 17.7**	**+0.7**
PHUB					S	**Sb**	**01 33 45.1**	**-0.5**
WDGT	**Dungji**	**2.07**	**249**		P	**Pn**	**01 33 18.1**	**+1.1**
WDGT					eS	**Sb**	**01 33 44.9**	**-0.8**
PNG	**Penghu**	**2.07**	**258**		P	**Pn**	**01 33 18.6**	**+1.5**
PNG					S	**Sb**	**01 33 45.7**	**+0.1**
TWP	**Hsiaoliuchiu**	**2.10**	**218**	*eP*		**Pb**	**01 33 20.3**	**-0.2**
JIJ	**Ishigaki jima**	**2.20**	**80**	P		**Pn**	**01 33 19.0**	**+0.2**
HEN	**Hengchun**	**2.21**	**205**	*eP*		**Pn**	**01 33 18.1**	**-0.9**
TWKBT	**Hengchun**	**2.24**	**203**	*eP*		**Pn**	**01 33 19.4**	**0.0**
TSEB	**Hengchuen, Pin**	**2.25**	**201**	*eP*		**Pn**	**01 33 21.2**	**+1.7**
VCHM	**Qimei**	**2.29**	**250**	*eP*		**Pn**	**01 33 21.0**	**+1.0**
VCHM					eS	**Sb**	**01 33 51.6**	**-0.3**
JISG	**Ishigakijimahi**	**2.39**	**76**	*eP*		**Pn**	**01 33 22.0**	**+0.5**
JISG					eS	**Sn**	**01 33 52.7**	**+2.0**

	comp=Z,21nm,0.9s							
BTO					pmax	pmax		
	comp=Z,580nm,7.5s							
BTO					LR	LR		
	comp=Z,1μm,6.2s							
BTO					LR	LR		
	comp=Z,4μm,9.2s							
LZH	**Lanzhou**	**19.59**	**312**	*eP*	**Pn**		**01 37 11.9**	**-0.1**
LZH				sP	sP		01 37 21.0	+5.0
LZH				SS	Sn		01 41 19.3	+27
LZH				pmax	pmax			
	comp=Z,14nm,1.2s							
LZH				LR	LR			
	comp=Z,1μm,8.8s							
LZH				LR	LR			
	comp=Z,2μm,10.3s							
LZH				LR	LR			
	comp=Z,2μm,10.7s							
LZDM	**Lanzhou Array**	**19.62**	**311**	P	**Pn**		**01 37 13.3**	**+0.7**
	baz=110,slow=12							
	comp=Z,1.1nm,0.3s							
CN2	**Changchun**	**19.97**	**8**	*eP*	**P**		**01 37 15.4**	**+0.9**
CN2				*eS*	**S**		**01 40 57.8**	**-1.0**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.2s							
CN2				pmax	pmax			
	comp=Z,100nm,3.0s							
CN2				LR	LR			
	comp=Z,1μm,15.0s							
CN2				LR	LR			
	comp=Z,1μm,15.0s							
CN2				LR	LR			
	comp=Z,1μm,14.0s							
XLT	**XiLinHaoTe**	**20.38**	**348**	*eP*	Pn		01 37 21.5	+0.4
XLT				pP	sP		01 37 25.5	+0.9
XLT				pmax	pmax			
	comp=Z,12nm,1.4s							
XLT				LR	LR			
	comp=Z,740nm,15.3s							
XLT				LR	LR			
	comp=Z,450nm,13.9s							
TNCH	**TengChong**	**21.17**	**278**	*eP*	**P**		**01 37 29.0**	**+1.1**
TNCH				S	**S**		**01 41 13.3**	**-10**
TNCH				pmax	pmax			
	comp=Z,290nm,4.4s							
TNCH				LR	LR			
	comp=Z,1μm,7.0s							
TNCH				LR	LR			
	comp=Z,3μm,9.3s							
USRK	**Ussuriysk Ar.**	**21.81**	**20**	P	**P**		**01 37 34.6**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=219,slow=11,SNR=2.3							
	comp=Z,1.5nm,0.5s							
CMAR	**Chiang Mai Arr**	**21.96**	**260**	P	**P**		**01 37 38.5**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=65,slow=9.6,SNR=7.2							
CMAR				LR	LR		01 45 22.6	
	comp=Z,153nm,21.9s,baz=120,slow=34							
	comp=Z,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**21.96**	**260**	P	**P**		**01 37 36.9**	**+0.6**
BNX	**BinXian**	**22.15**	**11**	‖P	**P**		**01 37 37.3**	**-0.8**
BNX				pmax	pmax			
	comp=Z,11nm,1.4s							
GTA	**Gaotai**	**24.08**	**315**	*eP*	**P**		**01 37 59.8**	**+1.9**
GTA				sP	sP		01 38 06.1	+2.5
GTA				pmax	pmax			
	comp=Z,8.0nm,1.8s							
GTA				LR	LR			
	comp=Z,580nm,9.5s							
GTA				LR	LR			
	comp=Z,790nm,11.6s							
GTA				LR	LR			
	comp=Z,880nm,9.8s							
HILR	**Hailar Array B**	**25.55**	**357**	P	**P**		**01 38 13.0**	**+2.0**
	comp=Z,2.4nm,0.5s,baz=179,slow=10,SNR=4.4							
	comp=Z,2.4nm,0.5s							
GOMU	**GeErMu**	**26.19**	**304**	P	**P**		**01 38 18.0**	**+0.6**
GOMU				S	**S**		**01 42 49.3**	**-0.1**
GOMU				pmax	pmax			
	comp=Z,4.0nm,1.0s							
GOMU				LR	LR			
	comp=Z,370nm,10.2s							
GOMU				LR	LR			
	comp=Z,400nm,9.8s							
ASAJ	**Asahikawa**	**26.32**	**35**	P	**P**		**01 38 17.9**	**-0.1**
	comp=Z,4.8nm,0.4s,baz=254,slow=18,SNR=2.2							
ASAJ				LR	LR		01 48 52.3	
	comp=Z,226nm,20.4s,baz=265,slow=37							
	comp=Z,4.8nm,0.4s							
JKA	**Kamikawa-asahi**	**26.32**	**35**	P	**P**		**01 38 17.2**	**-0.8**
JKA				IAmb	IAmb		01 38 20.3	
	comp=Z,58nm,1.4s							
ULN	**Ulaanbaatar**	**26.52**	**337**	P	**P**		**01 38 18.6**	**-1.4**
HEH	**HeiHe**	**26.56**	**8**	*eP*	**P**		**01 38 22.3**	**+2.2**
HEH				pmax	pmax			
	comp=Z,8.0nm,1.4s							
SONM	**Songino Array**	**26.73**	**337**	P	**P**		**01 38 22.6**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=156,slow=10.0,SNR=11							
SONM				LR	LR		01 49 01.5	
	comp=Z,257nm,20.5s,baz=152,slow=36							
	comp=Z,1.8nm,0.6s							
SHL	**Shillong**	**27.15**	**280**	P	**P**		**01 38 24.5**	**-1.4**
LSA	**Lhasa**	**27.84**	**288**	P	**P**		**01 38 33.1**	**+0.7**
BATI	**Baumata**	**34.06**	**177**	LR	LR		01 53 27.9	
	comp=Z,225nm,21.7s,baz=292,slow=36							
WMQ	**Urumqi**	**34.15**	**314**	*eP*	**P**		**01 39 29.6**	**+2.1**
WMQ				LR	LR			
	comp=Z,500nm,10.1s							
WMQ				LR	LR			
	comp=Z,130nm,12.3s							
MKAR	**Makanchi Array**	**38.83**	**316**	P	**P**		**01 40 08.0**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=101,slow=11,SNR=30							
	comp=Z,1.5nm,0.5s							
MKAR	**Makanchi Array**	**38.83**	**316**	P	**P**		**01 40 07.3**	**0.0**
MAKZ	**Makanchi**	**39.03**	**316**	P	**P**		**01 40 09.0**	**0.0**
PETK	**Petropavlovsk-**	**39.71**	**34**	P	**P**		**01 40 13.3**	**-1.2**
	comp=Z,9.6nm,1.1s,baz=288,slow=1.4,SNR=3.5							
	comp=Z,9.6nm,1.1s							
ZAA0	**Zalesovo Array**	**40.67**	**327**	P	**P**		**01 40 21.7**	**-0.7**
ZALV	**Zalesovo Beam**	**40.67**	**327**	P	**P**		**01 40 22.4**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=118,slow=8.4,SNR=15							
ZALV				LR	LR		01 56 56.3	
	comp=Z,92nm,20.2s,baz=126,slow=36							
	comp=Z,2.4nm,0.5s							
ZALV	**Zalesovo Beam**	**40.67**	**327**	P	**P**		**01 40 21.7**	**-0.7**
H11N1	**WAKE ISLAND Hy**	**41.97**	**87**	T	T		02 25 49.8	
	baz=283							
H11N2	**WAKE ISLAND Hy**	**41.97**	**87**	T	T		02 25 56.6	
	baz=283							
H11N3	**WAKE ISLAND Hy**	**41.98**	**87**	T	T		02 25 51.1	
	baz=283							
H11S3	**WAKE ISLAND Hy**	**42.09**	**89**	T	T		02 25 52.1	
	baz=287,slow=74							
H11S1	**WAKE ISLAND Hy**	**42.10**	**89**	T	T		02 25 43.2	
	baz=287,slow=74							
H11S2	**WAKE ISLAND Hy**	**42.11**	**89**	T	T		02 25 43.8	
	baz=287							
KURK	**Kurchatov**	**42.56**	**320**	P	**P**		**01 40 37.6**	**-0.4**
KURBB	**Kurchatov Arra**	**42.58**	**320**	P	**P**		**01 40 38.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=110,slow=7.1,SNR=12							
	comp=Z,0.8nm,0.6s							
AAK	**Ala-Archa**	**43.03**	**307**	LR	LR		02 00 15.5	
	comp=Z,83nm,21.9s,baz=116,slow=38							
COEN	**Coen**	**43.15**	**149**	P	**P**		**01 40 42.5**	**-0.6**
WB0	**Warramunga Arr**	**45.22**	**163**	P	**P**		**01 40 56.6**	**-3.1**
WRA	**Warramunga Arr**	**45.38**	**163**	P	**P**		**01 40 59.4**	**-1.5**
	comp=Z,0.8nm,0.6s,baz=345,slow=8.8,SNR=8.4							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**45.38**	**163**	P	**P**		**01 40 58.1**	**-2.8**
WR8	**Warramunga Arr**	**45.43**	**163**	P	**P**		**01 40 59.5**	**-1.8**
KK31	**Karatay Array**	**45.99**	**307**	P	**P**		**01 41 04.3**	**-1.3**
KKAR	**Karatay Array**	**45.99**	**307**	P	**P**		**01 41 04.8**	**-0.8**
TIXI	**Tiksi**	**47.84**	**3**	P	**P**		**01 41 18.1**	**-1.4**
BVAR	**Borovoye Array**	**48.14**	**321**	P	**P**		**01 41 22.6**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=108,slow=9.0,SNR=17							
	comp=Z,2.3nm,0.5s							
ASAR	**Alice Springs**	**48.84**	**165**	P	**P**		**01 41 27.2**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=333,slow=6.6,SNR=7.5							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**48.84**	**165**	P	**P**		**01 41 25.6**	**-2.3**
AKTO	**Aktyubinsk**	**55.26**	**316**	LR	LR		02 05 39.7	
	comp=Z,100nm,18.8s,baz=166,slow=36							
ARTI	**Arti**	**55.65**	**323**	P	**P**		**01 42 17.8**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=69,slow=2.9,SNR=7.5							
	comp=Z,2.7nm,0.6s							
ARTI	**Arti**	**55.65**	**323**	P	**P**		**01 42 17.8**	**-0.4**
STKA	**Stephens Creek**	**58.72**	**160**	P	**P**		**01 42 39.3**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=329,slow=13,SNR=1.5							
	comp=Z,1.3nm,0.3s							

F17K	**Baldwin Pennin**	**63.04**	**26**	P	**P**		**01 43 09.7**	**+0.7**
C18K	**Utukok River**	**63.15**	**24**	P	**P**		**01 43 08.7**	**-1.1**
L16K	**Owhat River**	**63.85**	**31**	P	**P**		**01 43 14.3**	**-0.2**
B20K	**Meade River**	**64.61**	**22**	P	**P**		**01 43 19.5**	**+0.2**
E21K	**Killik River**	**65.81**	**24**	IAmb	IAmb		01 43 46.2	
	comp=Z,17nm,1.6s							
IMAR	**Indian Mountai**	**66.10**	**26**	P	**P**		**01 43 28.8**	**-0.3**
H21K	**Melozitna Rive**	**66.52**	**27**	IAmb	IAmb		01 43 36.1	
	comp=Z,20nm,1.8s							
E22K	**Anaktuvuk Pass**	**66.64**	**24**	IAmb	IAmb		01 43 38.3	
	comp=Z,19nm,1.5s							
C23K	**Itkillik River**	**66.88**	**22**	P	**P**		**01 43 34.2**	**+0.2**
I21K	**Tanana**	**66.92**	**27**	IAmb	IAmb		01 43 37.0	
	comp=Z,20nm,1.6s							
H22K	**Ishtalitna Cre**	**67.08**	**26**	P	**P**		**01 43 35.6**	**+0.3**
H23K	**Yukon River**	**67.83**	**26**	IAmb	IAmb		01 43 42.4	
	comp=Z,24nm,1.6s							
L22K	**Petersville**	**67.84**	**30**	P	**P**		**01 43 39.7**	**-0.6**
L22K				IAmb	IAmb		01 44 02.9	
	comp=Z,18nm,1.4s							
E24K	**Your Creek**	**67.88**	**24**	IAmb	IAmb		01 43 47.7	
	comp=Z,12nm,1.4s							
OBN	**Obninsk**	**67.96**	**322**	P	**P**		**01 43 40.9**	**-0.1**
	comp=Z,8.0nm,0.7s							
SUA	**Susitna One**	**68.03**	**31**	P	**P**		**01 43 40.3**	**-1.3**
F24K	**Squaw Lake**	**68.20**	**24**	IAmb	IAmb		01 43 47.1	
	comp=Z,4.7nm,0.6s							
NEA2	**Nenana**	**68.23**	**28**	P	**P**		**01 43 42.4**	**-0.3**
H24K	**Noodor Dome**	**68.50**	**26**	IAmb	IAmb		01 43 46.8	
	comp=Z,10nm,1.3s							
RND	**Reindeer**	**68.54**	**29**	P	**P**		**01 43 43.9**	**-0.9**
MARD	**Mardin**	**68.99**	**302**	P	**P**		**01 43 48.4**	**+0.4**
ILAR	**Eielson Array**	**69.12**	**27**	P	**P**		**01 43 48.1**	**0.0**
	comp=Z,0.8nm,0.5s,baz=279,slow=5.3,SNR=20							
	comp=Z,0.8nm,0.5s							
ILAR	**Eielson Array**	**69.12**	**27**	P	**P**		**01 43 47.0**	**-1.1**
DHY	**Denali Highway**	**69.27**	**29**	P	**P**		**01 43 49.2**	**-0.1**
BMAR	**Burnt Mountain**	**69.47**	**24**	P	**P**		**01 43 51.4**	**+1.1**
E27K	**Coleen River**	**70.38**	**23**	P	**P**		**01 43 56.1**	**+0.2**
N25K	**Chitina, Valde**	**70.87**	**30**	P	**P**		**01 43 58.9**	**-0.2**
F28M	**Old Crow**	**71.17**	**24**	IAmb	IAmb		01 44 29.1	
	comp=Z,8.0nm,0.8s							
GLB	**Gilahina Butte**	**71.28**	**30**	P	**P**		**01 44 01.4**	**-0.2**
GLB				IAmb	IAmb		01 44 05.0	
	comp=Z,25nm,1.6s							
K27K	**Chicken**	**71.33**	**28**	IAmb	IAmb		01 44 10.4	
	comp=Z,18nm,1.6s							
L27K	**Beaver Creek,**	**71.71**	**28**	IAmb	IAmb		01 44 13.1	
	comp=Z,21nm,1.6s							
BCAR	**Beaver Creek A**	**71.73**	**28**	P	**P**		**01 44 04.6**	**+0.3**
FINES	**FINESS Array B**	**71.86**	**330**	P	**P**		**01 44 04.7**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=84,slow=5.9,SNR=9.6							
	comp=Z,1.4nm,0.8s							
FINES	**FINESS Array B**	**71.86**	**330**	P	**P**		**01 44 03.9**	**-1.0**
M27K	**Edge Creek, AK**	**71.90**	**29**	P	**P**		**01 44 05.2**	**-0.1**
BARN	**Barnard Glacie**	**72.38**	**30**	P	**P**		**01 44 08.1**	**-0.2**
DAWY	**Dawson**	**72.45**	**27**	IAmb	IAmb		01 44 12.6	
	comp=Z,26nm,1.9s							
EPYK	**Eagle Plains**	**72.74**	**24**	IAmb	IAmb		01 44 18.4	
	comp=Z,9.8nm,1.0s							
INK	**Inuvik**	**73.18**	**22**	IAmb	IAmb		01 44 19.0	
	comp=Z,11nm,1.0s							
I30M	**Mount Dempster**	**73.28**	**26**	P	**P**		**01 44 11.8**	**-1.7**
I30M				IAmb	IAmb		01 44 14.3	
	comp=Z,6.8nm,0.6s							
AKASG	**Malin Array Be**	**73.35**	**318**	P	**P**		**01 44 14.9**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=65,slow=5.2,SNR=1.5							
	comp=Z,0.8nm,0.6s							
AKBB	**Malin Array Si**	**73.35**	**318**	P	**P**		**01 44 13.9**	**-0.1**
KIEV	**Kiev**	**73.36**	**318**	P	**P**		**01 44 13.9**	**-0.2**
	comp=Z,23nm,0.8s							
AK07	**Malin Array Si**	**73.41**	**318**	P	**P**		**01 44 14.1**	**-0.2**
F31M	**Tsiigehtchic**	**73.44**	**23**	P	**P**		**01 44 13.3**	**-0.9**
F31M				IAmb	IAmb		01 44 15.6	
	comp=Z,8.2nm,0.8s							
BRTR	**Keskin Array B**	**73.70**	**307**	P	**P**		**01 44 17.3**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=105,slow=6.1,SNR=8.2							
	comp=Z,0.9nm,0.6s							
BRTR	**Keskin Array B**	**73.70**	**307**	P	**P**		**01 44 16.2**	**-0.3**
BR104	**Keskin Array S**	**73.70**	**307**	P	**P**		**01 44 16.3**	**-0.2**
	comp=Z,2.5nm,1.3s							
BR106	**Keskin Array S**	**73.71**	**307**	P	**P**		**01 44 16.3**	**-0.3**
	comp=Z,2.7nm,1.2s							
A36M	**Sachs Harbour**	**74.13**	**17**	P	**P**		**01 44 17.0**	**-1.2**
A36M				IAmb	IAmb		01 44 19.5	
	comp=Z,20nm,1.0s							
MMAI	**Mount Meron Ar**	**74.44**	**299**	P	**P**		**01 44 21.6**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=56,slow=3.1,SNR=2.6							
	comp=Z,0.4nm,0.5s							
LUBAR	**Lubar, Ukraine**	**74.48**	**318**	P	**P**		**01 44 20.3**	**-0.4**
CSS	**Mathiatis**	**75.44**	**302**	P	**P**		**01 44 26.3**	**-0.2**
HFS	**Hagfors**	**77.97**	**331**	P	**P**		**01 44 39.5**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=325,slow=2.3,SNR=1.2							
	comp=Z,0.8nm,0.7s							
NB2	**NORSAR Subarra**	**78.62**	**332**	P	**P**		**01 44 42.8**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=60,slow=5.3							
NOA	**NORSAR Array B**	**78.62**	**332**	P	**P**		**01 44 42.8**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=46,slow=2.4,SNR=3.5							
	comp=Z,1.2nm,0.9s							
YKAW3	**Yellowknife Wh**	**82.88**	**23**	P	**P**		**01 45 06.9**	**+0.3**
YKAW3				IAmb	IAmb		01 45 33.1	
	comp=Z,19nm,1.5s							
YKA	**Yellowknife Ar**	**82.92**	**23**	P	**P**		**01 45 06.5**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=315,slow=8.5,SNR=16							
	comp=Z,0.9nm,0.5s							
YKA	**Yellowknife Ar**	**82.92**	**23**	P	**P**		**01 45 05.8**	**-1.0**
GERES	**GERESS Array B**	**83.31**	**321**	P	**P**		**01 45 10.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=29,slow=3.0,SNR=3.5							
	comp=Z,0.2nm,0.3s							
FUORN	**Ofenpass-Fuorn**	**86.44**	**320**	P	**P**		**01 45 24.9**	**-0.4**
CLF	**Chambon-Foret**	**90.14**	**324**	P	**P**		**01 45 41.2**	**-1.3**
L04D	**Klamath Falls**	**91.50**	**42**	P	**P**		**01 45 49.6**	**+0.4**
SDV	**Santo Domingo**	**145.13**	**22**	PKPbc	**PKPbc**		**01 52 18.5**	**-1.9**
	comp=Z,6.2nm,0.6s,baz=344,slow=5.7,SNR=11							

*BGR **25** 01:33:33.9, 11.7°10N×85.4°40W, h33km, mb4.9, Ms4.7*
*IDC **25** 01:33:38.9±0.3, 10.4°41N×84.7°4W, h76km±2km, mb4.3/25, mbtmp4.6/29, MS3.6/17, Error ellipse: s-maj=8.8km s-min=7.5km az=91.0*
*NEIC **25** 01:33:40.4±2.3, 10.2°8N±0.7°6×84.6°8W±0.7°4, h79km±3km, mb4.8/389, Mww4.9/26, Error ellipse: s-maj=9.0km s-min=5.3km az=195.0*
*NEIC **25** 01:33:40.4, 10.2°7N×84.6°8W, h60km*
*NEIC **25** 01:33:40.4, 10.3°7N×84.6°8W, h60km, Moment Tensor Solution. Duration: 19s4 Moment tensor: Scale 10^16^Nm; Mrr0.14; Mϑϑ2.06; Mϕϕ -2.20; Mrϑ1.97; Mrϕ0.88; Mϑϕ0.06; Fault plane solution: M0 3.04000×10^16^ NP1:ϕ1=28.19000°, δ60.52000°, λ164.43000°. NP2:ϕ2=125.99000°, δ76.49000°, λ30.41000°. Principal axes: T 3.4032, Plg31.0000°, Azm351.0000°; N -0.9667, Plg57.0000°, Azm148.0000°; P -2.4365, Plg11.0000°, Azm254.0000°;*
*UCR **25** 01:33:40.1, 10.2°6N×84.6°7W, h75km, MD3.6, ML4.9, MW5.3*
*UPA **25** 01:33:41.9±1.6, 10.0°7N×84.4°9W, h6km±6km, MW4.9*
*CATAC **25** 01:33:41.4±0.2, 10.0°N±2.2°×8.2°5W±1.1°, h56km±4km, M5.1/43, MLv5.1/43, Error ellipse: s-maj=4.1km s-min=1.8km az=42.0, confirmed*
*GCMT **25** 01:33:43.4±0.2, 10.3°2N±0.0°1×84.7°4W±0.0°2, h86km±3km, MW4.9/111, Moment Tensor Solution. s33,c42; s111,c166; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.24±.10; Mϑϑ1.36±.10; Mϕϕ -1.61±.09; Mrϑ2.34±.04; Mϑϕ1.45±.10; Mrϕ0.09±.06; Best double couple: M0 3.03100×10^16^ NP1:ϕ1=15.00000°, δ46.00000°, λ171.00000°. NP2:ϕ2=112.00000°, δ83.00000°, λ44.00000°. Principal axes: T 3.4950, Plg35.0000°, Azm343.0000°; N -0.9320, Plg45.0000°, Azm118.0000°; P -2.5670, Plg24.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*SNET **25** 01:33:46.2±1.1, 11.1°18N×84.5°52W, h34km±999km, ML4.9*
ISC 25 01:33:39.2±0.3, 10.2°8N±0.0°03×84.6°7W±0.0°03, h80km±2km, h80km:pP-P, n779, σ1.9/58/714, mb4.8/237, 105C-100D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCE	**Pocosol**	**0.12**	**26**	Pn	**Pn**	**01 33 51.4**	**+0.6**
SOCE				Sn	**Sn**	**01 33 60.0**	**+0.6**
SOCE	**Pocosol**	**0.12**	**26**	‖P	**Pn**	**01 33 51.5**	**+0.7**
SOCE	**Pocosol**	**0.12**	**26**	‖*eP*	**Pn**	**01 33 51.5**	**+0.7**
SOCE				IAML		01 34 01.7	
	comp=Z,75μm,0.3s						
MTEVE	**Monteverde**	**0.16**	**285**	*eP*	**Pn**	**01 33 51.8**	**+0.7**
MTEVE				IAML		01 34 01.7	
	comp=Z,61μm,0.2s						
CASO	**Castillo**	**0.17**	**338**	‖*eP*	**Pn**	**01 33 51.8**	**+0.8**
CASO				*eS*	**Sn**	**01 34 00.8**	**+1.2**
CASO				IAML		01 34 04.0	
	comp=Z,49μm,0.4s						
ARE1	**Arenal 1**	**0.19**	**345**	‖*eP*	**Pn**	**01 33 52.1**	**+1.0**
VARE2	**V. Arenal**	**0.19**	**345**	‖*eP*	**Pn**	**01 33 52.1**	**+1.0**
VARE2				IAML		01 34 02.8	
	comp=Z,183μm,0.4s						
VACR	**Volcan Arenal**	**0.19**	**358**	‖*eP*	**Pn**	**01 33 51.9**	**+0.9**
VACR				IAML		01 34 06.1	
	comp=Z,27μm,0.4s						
CEDE	**Laguna Cedeo**	**0.21**	**351**	‖*eP*	**Pn**	**01 33 52.1**	**+1.0**
QUEU	**Ciudad Quesada**	**0.24**	**79**	‖*eP*	**Pn**	**01 33 52.1**	**+0.8**
QUEU				IAML		01 34 02.5	
	comp=Z,43μm,0.5s						
TABAC	**Tabacon**	**0.24**	**337**	‖*eP*	**Pn**	**01 33 52.4**	**+1.1**
REZ	**Monterrey de S**	**0.25**	**354**	‖*eP*	**Pn**	**01 33 52.4**	**+1.0**
SRA1	**San Ramn**	**0.27**	**136**	‖*eP*	**Pn**	**01 33 51.9**	**+0.3**
RAMO	**San Ramon**	**0.28**	**133**	‖*eP*	**Pn**	**01 33 52.0**	**+0.4**
JTS	**Las Juntas de**	**0.28**	**273**	P	**Pn**	**01 33 51.9**	**+0.5**
	comp=Z,6μm,0.4s,baz=63,slow=6.6						
JTS				S	**Sn**	**01 34 00.8**	**+0.3**
	comp=Z,25μm,0.3s,baz=12,slow=20,SNR=55						
JTS	**Las Juntas de**	**0.28**	**273**	⇑*iP*	**Pn**	**01 33 52.0**	**+0.5**
JTS				*eS*	**Sn**	**01 34 00.8**	**+0.3**
JTS				*i* S		01 34 01.1	
JTS	**Las Juntas de**	**0.28**	**273**	⇑P	**Pn**	**01 33 51.8**	**+0.4**
JTS	**Las Juntas de**	**0.28**	**273**	⇑*eP*	**Pn**	**01 33 51.8**	**+0.4**
ARZA	**Esparza**	**0.28**	**179**	‖*eP*	**Pn**	**01 33 51.7**	**+0.2**
CHIK	**Chiripa**	**0.28**	**305**	‖*eP*	**Pn**	**01 33 52.5**	**+0.9**
VPL2	**V. Platanar**	**0.28**	**84**	‖*eP*	**Pn**	**01 33 52.4**	**+0.7**
ZARE	**Zarcero**	**0.29**	**109**	‖*eP*	**Pn**	**01 33 52.6**	**+0.8**
VPL1	**V. Platanar**	**0.30**	**94**	‖*eP*	**Pn**	**01 33 52.3**	**+0.5**
ROBF	**Roble, Puntare**	**0.30**	**192**	‖*eP*	**Pn**	**01 33 51.6**	**+0.1**
PALD	**Palmares**	**0.32**	**134**	‖*eP*	**Pn**	**01 33 52.0**	**+0.2**
ENAS	**Puntarenas**	**0.34**	**208**	‖*eP*	**Pn**	**01 33 52.1**	**+0.3**
NARAN	**Naranjo de Ala**	**0.34**	**122**	‖*eP*	**Pn**	**01 33 52.5**	**+0.6**
TILA	**Tilaran**	**0.35**	**303**	‖*eP*	**Pn**	**01 33 52.7**	**+0.8**
VPL3	**V. Platanar**	**0.36**	**79**	‖*eP*	**Pn**	**01 33 52.8**	**+0.8**
SARCI	**Sarchi**	**0.37**	**120**	‖*eP*	**Pn**	**01 33 52.8**	**+0.7**
OROT	**Orotina**	**0.39**	**159**	‖*eP*	**Pn**	**01 33 52.4**	**+0.3**
QUEB	**Quebradon, Cot**	**0.41**	**327**	‖*eP*	**Pn**	**01 33 53.2**	**+0.9**
GREC	**Grecia**	**0.41**	**120**	‖*eP*	**Pn**	**01 33 53.1**	**+0.7**
ATEO	**Atenas**	**0.41**	**136**	‖*eP*	**Pn**	**01 33 52.6**	**+0.2**
ITAL	**Pital**	**0.43**	**66**	‖*eP*	**Pn**	**01 33 53.1**	**+0.7**
INVE	**Universidad In**	**0.43**	**297**	‖*eP*	**Pn**	**01 33 53.4**	**+1.0**
VPS0	**V. Poas**	**0.43**	**103**	‖P	**Pn**	**01 33 53.5**	**+0.7**
TCS1	**Tacares**	**0.43**	**123**	⇑P	**Pn**	**01 33 53.2**	**+0.6**
TCS1	**Tacares**	**0.43**	**123**	‖*eP*	**Pn**	**01 33 53.1**	**+0.6**
VPS5	**V. Poas**	**0.44**	**101**	*eP*	**Pn**	**01 33 53.5**	**+0.6**
CNAS	**Canas**	**0.44**	**290**	‖*eP*	**Pn**	**01 33 54.4**	**+1.9**
ARTO	**Ro Cuarto**	**0.45**	**82**	‖*eP*	**Pn**	**01 33 53.2**	**+0.5**
TIMP	**Tierras Morena**	**0.46**	**312**	‖*eP*	**Pn**	**01 33 53.6**	**+0.9**
POAS	**San Pedro de P**	**0.47**	**115**	*eP*	**Pn**	**01 33 53.8**	**+0.9**
COVE	**Coope Vega, Sa**	**0.51**	**31**	‖P	**Pn**	**01 33 53.8**	**+0.7**
TENO	**El Achiote**	**0.52**	**325**	‖*eP*	**Pn**	**01 33 54.2**	**+1.0**
PAQE	**Paquera**	**0.53**	**210**	‖*eP*	**Pn**	**01 33 53.4**	**+0.1**
PURI	**Puriscal**	**0.56**	**140**	‖*eP*	**Pn**	**01 33 54.0**	**+0.4**
BELE	**Belen**	**0.56**	**122**	‖*eP*	**Pn**	**01 33 54.1**	**+0.4**
MOTZ	**Rio Naranjo**	**0.57**	**316**	‖*eP*	**Pn**	**01 33 54.9**	**+1.3**
SANTA	**Santa Ana**	**0.59**	**126**	‖*eP*	**Pn**	**01 33 54.1**	**+0.2**
HEME	**Heredia, Merce**	**0.60**	**118**	‖*eP*	**Pn**	**01 33 55.6**	**+1.6**
HEME				*eS*	**Sn**	**01 34 06.8**	**+1.8**
JCR1	**Jicaral**	**0.61**	**226**	⇑*eP*	**Pn**	**01 33 54.3**	**+0.2**
HDC	**Heredia**	**0.61**	**117**	Pn	**Pn**	**01 33 54.5**	**+0.4**
HDC				Sn	**Sn**	**01 34 05.6**	**+0.3

OCHAL Ojochal 1.55 139 ⇑P Pn 01 34 05.6 +0.5
EDPE Pejibaye, P 1.55 136⇑eP Pn 01 34 06.4 +1.1
MORN Al O del Volca 1.58 323 ⇑P Pn 01 34 06.8 +1.1
CONN Concepcion 1.58 324 ⇑P Pn 01 34 06.7 +1.0
CONN S Sn 01 34 27.8 +2.1
JAPN Al SSO del Vol 1.59 321 ⇑P Pn 01 34 07.3 +1.6
JAPN Al SSO del Vol 1.59 321⇓eP Pn 01 34 07.2 +1.6
LAES El Progreso Va 1.68 108⇓eP Pn 01 34 08.0 +1.2
BURE Buenos Aires 1.71 130⇑eP Pn 01 34 08.3 +0.9
DRK0 Durika 1.73 126 ⇑iP Pn 01 34 08.3 +0.6
DRK0 iS Sn 01 34 29.8 +0.4
DRK0 Durika 1.73 126 ⇑P Pn 01 34 08.4 +0.6
DRK0 Durika 1.73 126⇑eP Pn 01 34 08.2 +0.6
PANP Palmar Norte 1.77 138⇑eP Pn 01 34 09.0 +0.8
FIMO Fila Mora 1.82 134⇑eP Pn 01 34 09.9 +1.0
CEUA Cerro Uatsi, L 1.83 111⇓eP Pn 01 34 11.0 +2.1
EDP2 Potrero Grande 1.94 130 eP Pn 01 34 11.2 +1.0
BRIBI Bribri 1.94 110⇓eP Pn 01 34 12.2 +1.9
ESPN Las Esperanzas 1.94 11 Pn Pn 01 34 11.7 +1.4
ESPN Las Esperanzas 1.94 11 ⇑P Pn 01 34 12.1 +1.7
ESPN Las Esperanzas 1.94 11⇑eP Pn 01 34 12.1 +1.7
ESPN Las Esperanzas 1.94 11 P Pn 01 34 12.0 +1.7
ESPN S Sn 01 34 35.6 +1.6
NADN Granada 1.98 318 S Sn 01 34 36.6 +1.6
RGM0 Gandoca 2.15 108 Pn Pn 01 34 15.0 +2.0
RGM0 Gandoca 2.15 108 eP Pn 01 34 15.6 +2.6
RGM0 Gandoca 2.15 108 ⇓P Pn 01 34 15.6 +2.6
RGM0 Gandoca 2.15 108 S Sn 01 34 42.3 +3.4
RGM0 Gandoca 2.15 108 eP Pn 01 34 15.1 +2.0
JIME Puerto Jimenez 2.18 142 eP Pn 01 34 14.5 +1.0
EDAD Golfito 2.19 137 eP Pn 01 34 13.6 -0.2
PTJ1 Puerto Jimnez 2.20 142⇓eP Pn 01 34 14.0 +2.3
PTJ1 Puerto Jimnez 2.20 142 S Sn 01 34 43.4 +3.3
PTJ1 Puerto Jimnez 2.20 142 eP Pn 01 34 14.6 +0.8
VITO San Vito 2.22 131 eP Pn 01 34 15.5 +1.4
MASN Masaya 2.23 320 ⇓P Pn 01 34 15.9 +1.5
MASN S Sn 01 34 43.8 +2.7
MASN Masaya 2.23 320 eP Pn 01 34 15.5 +1.2
ALCO Alturas Coton, 2.24 126⇑eP Pn 01 34 15.2 +0.6
MAS3 Al N del Volca 2.28 320 P Pn 01 34 16.5 +1.7
MAS3 S Sn 01 34 44.2 +2.0
PIRO Carate, Puerto 2.28 145 Pn Pn 01 34 15.6 +0.7
PIRO Carate, Puerto 2.28 145⇓eP Pn 01 34 15.7 +0.7
PIRO Carate, Puerto 2.28 145 S Sn 01 34 46.1 +3.9
PIRO Carate, Puerto 2.28 145 ⇑P Pn 01 34 15.0 +0.1
PIRO Carate, Puerto 2.28 145 eP Pn 01 34 15.7 +0.9
RSRNO Rio Sereno 2.30 129⇑eP Pn 01 34 16.6 +1.3
CNI2 El Empalme, Bo 2.33 111 eP Pn 01 34 16.1 +0.7
CNI2 iS Sn 01 34 49.0 +5.7
MLIR3 Monte Lirio, C 2.34 129 eP Pn 01 34 17.5 +1.6
NELY Ciudad Neily 2.35 133⇑eP Pn 01 34 16.1 +0.3
SCLRA Santa Clara, W 2.35 127⇑eP Pn 01 34 17.2 +1.2
BOAB BOACO BROADBAN 2.37 336 Pn Pn 01 34 17.2 +1.1
BOAB BOACO BROADBAN 2.37 336 S Sn 01 34 46.3 +2.0
BOAB BOACO BROADBAN 2.37 336 ⇑P Pn 01 34 17.5 +1.5
WILN Americas 2 2.39 322 ⇑P Pn 01 34 18.0 +1.6
WILN S Sn 01 34 47.0 +2.2
UNAN Cigeo UNAN 2.41 319 ⇑P Pn 01 34 18.2 +1.7
UNAN S Sn 01 34 47.8 +2.6
USIM UNAN 2.41 319 Pn Pn 01 34 17.8 +1.2
MGAN Managua 2.42 320 Pn Pn 01 34 18.1 +1.3
MGAN Managua 2.42 320 ⇑P Pn 01 34 18.4 +1.7
MGAN Managua 2.42 320⇑eP Pn 01 34 18.2 +1.5
MGAN Managua 2.42 320 P Pn 01 34 18.2 +1.5
MGAN S Sn 01 34 47.6 +2.2
ABCN Banco Central 2.44 319 S Sn 01 34 48.7 +2.7
BRU2 Volcan 2.45 127 Pn Pn 01 34 17.8 +0.5
BRU2 Volcan 2.45 127⇑iP Pn 01 34 18.3 +1.1
BRU2 eS Sn 01 34 47.0 +0.6
BRU2 Volcan 2.45 127 ⇑P Pn 01 34 18.2 +0.9
BRU2 Volcan 2.45 127⇑eP Pn 01 34 18.1 +0.9
DMCAL E. de Neily 2.45 131⇑eP Pn 01 34 17.8 +0.6
CDITO Canoas 2.45 134 S Sn 01 34 47.4 +1.1
CDITO Canoas 2.45 134 ⇑P Pn 01 34 17.5 +0.3
CORNA Casa Canada 2.47 40⇓eP Pn 01 34 19.1 +1.7
TBS2 2.47 126 eP Pn 01 34 18.1 +0.4
BC3P Paso Ancho 2.50 125⇓iP Pn 01 34 19.2 +1.2
APQ2 Apoyeque 2.50 320 S Sn 01 34 51.5 +3.9
APYN Apoyeque 2.55 320 S Sn 01 34 52.9 +4.2
APQ3 Volcan Apoyequ 2.59 320 P Pn 01 34 23.4 +4.3
LESP3 La Esperanza, 2.63 135⇓eP Pn 01 34 20.0 +0.5
LESP3 iS Sn 01 34 55.8 +5.3
JEFFS S de V. Baru 2.65 127⇑eP Pn 01 34 20.9 +1.0
LNBQ3 Los Naranjos, 2.65 124 eP Pn 01 34 21.1 +1.1
BQTLY Boquete Panama 2.65 125⇑eP Pn 01 34 19.4 +0.9
PTAR3 Potrerillos Ar 2.66 126⇑iP Pn 01 34 21.2 +1.0
PTAR3 iS Sn 01 34 51.6 0.0
COPN Copaltepe 2.67 315 P Pn 01 34 21.5 +1.4
COPN Copaltepe 2.67 315⇑eP Pn 01 34 21.8 +1.6
ARIEL Armuelles 2.67 138 eP Pn 01 34 25.2 +5.1
WILLF Boquete 2.68 124⇑eP Pn 01 34 21.0 +0.6
BQSF3 Alto Boquete, 2.68 124⇓iP Pn 01 34 21.7 +1.3
BAGA3 Bagala, Chiriq 2.78 130 eP Pn 01 34 22.8 +1.2
MOM2 El Cardon 2.79 321 ⇑P Pn 01 34 23.3 +1.6
MOM2 S Sn 01 34 57.6 +3.3
MOMN Momotombo 2.80 319 S Sn 01 34 57.1 +2.3
PBNVO Pueblo Nuevo, 2.81 119⇑eP Pn 01 34 22.9 +0.9
PSOM3 Paja de Sombre 2.81 124⇓iP Pn 01 34 23.3 +1.3
PSOM3 iS Sn 01 34 55.7 +0.8
LMNES Limones 2.81 140 eP Pn 01 34 22.8 +0.8
CHGR2 Aguacate 2.83 118 eP Pn 01 34 24.2 +2.0
RBALA Bur 2.85 119⇑eP Pn 01 34 23.1 +0.6
DVD David 2.85 130⇑eP Pn 01 34 23.5 +0.9
DVD iS Sn 01 34 54.8 -1.2
MOM3 MOM3 2.86 321 ⇑P Pn 01 34 24.1 +1.3
MOM3 S Sn 01 34 58.8 +2.5
LOCO3 Loma Colorada, 2.90 130⇓eP Pn 01 34 24.4 +1.3
LOMA3 Las Lomas, Chi 2.90 129⇑eP Pn 01 34 24.2 +0.9
LOMA3 iS Sn 01 35 02.9 +5.7
MATN Matagalpa 2.91 335 S Sn 01 34 59.3 +1.8
MATN Matagalpa 2.91 335 ⇑P Pn 01 34 24.0 +0.5
PEDE3 Pedregal, Chir 2.91 130⇓eP Pn 01 34 24.5 +1.1
PEDE3 iS Sn 01 34 57.2 -0.2
CNGA Al SSO del Vol 2.97 318 ⇑P Pn 01 34 25.9 +1.7
CNGA S Sn 01 35 01.7 +2.9
CNGN Cerro Negro 2.97 318 Pn Pn 01 34 25.6 +1.4
CNGN Cerro Negro 2.97 318 ⇑P Pn 01 34 25.9 +1.7
CNGN Cerro Negro 2.97 318⇑eP Pn 01 34 26.0 +1.7
CNGN Cerro Negro 2.97 318 P Pn 01 34 25.4 +1.2
CNGN S Sn 01 35 01.8 +2.9
CHIR3 Chiriqui UPA, 2.97 129 iP Pn 01 34 25.3 +1.1
ALEN Leon 3.06 315 S Sn 01 35 02.9 +1.9
HERN Volcan Telica 3.14 318 Pn Pn 01 34 27.4 +0.8
KKNTU Kakint² 3.17 117⇑eP Pn 01 34 27.0 +0.2
LIMN Finca el Limon 3.23 329 ⇓P Pn 01 34 29.5 +1.7
PKGN Cerro Pekin 3.28 317 ⇑P Pn 01 34 30.4 +2.0
PKGN S Sn 01 35 09.0 +2.6
CRIN San Cristobal 3.35 316 Pn Pn 01 34 30.9 +1.4
CRIN San Cristobal 3.35 316 ⇑P Pn 01 34 31.3 +1.9
CRIN San Cristobal 3.35 316⇑eP Pn 01 34 31.3 +1.9
CRIN San Cristobal 3.35 316 P Pn 01 34 31.3 +1.9
CRIN S Sn 01 35 10.7 +2.5
SIUN Universidad Ur 3.42 358 Pn Pn 01 34 31.6 +1.4
SIUN Universidad Ur 3.42 358 ⇑P Pn 01 34 31.9 +1.6
SIUN S Sn 01 35 11.2 +1.5
RCON San Juan de Ri 3.50 336 S Sn 01 35 13.7 +1.7
RCON San Juan de Ri 3.50 336 ⇓P Pn 01 34 33.6 +2.0
RCPN Sur Rio San Ju 3.52 337 P Pn 01 34 33.3 +2.6
NANC3 Nancito, Chiri 3.54 125 eP Pn 01 34 33.2 +1.3
RCVN Varillal2 3.61 336 S Sn 01 35 16.0 +1.4
RCVN Varillal2 3.61 336 ⇓P Pn 01 34 35.1 +2.1
SAIC Isla e San And 3.67 52 P Pn 01 34 35.4 +1.8
PVID3 Puerto Vidal, 3.75 126 eP Pn 01 34 36.3 +1.6
OCON Estacion meteo 3.77 332 P Pn 01 34 37.4 +2.2
POTN Potosi Cosigui 3.88 315 ⇑P Pn 01 34 38.6 +2.1
POTN S Sn 01 35 23.4 +2.5
POTN Potosi Cosigui 3.88 315⇑eP Pn 01 34 38.6 +2.1
CSGN Cosiguina Volc 3.90 314 ⇑P Pn 01 34 38.7 +1.9
CSGN S Sn 01 35 24.3 +2.7
CSGN Cosiguina Volc 3.90 314 eP Pn 01 34 38.8 +1.9
BILN Bilwi Airport 3.96 19 Pn Pn 01 34 39.6 +2.0
BILN Bilwi Airport 3.96 19 P Pn 01 34 39.7 +2.0
BILN Bilwi Airport 3.96 19 eP Pn 01 34 39.5 +2.0
MESA3 La Mesa, Verag 4.04 121 eP Pn 01 34 40.5 +1.7
GMAL Guarumal, Vera 4.22 126⇓eP Pn 01 34 42.1 +1.0
GMAL Guarumal, Vera 4.22 126 eP Pn 01 34 42.2 +1.0
STIA3 Santiago, Vera 4.25 120⇑eP Pn 01 34 43.4 +1.9
CNCH Conchagua 4.30 314 eP Pn 01 34 44.0 +1.7
CNCH eS Sn 01 35 27.9 -3.5
CNCH IAML 01 35 39.6
comp=Z,2µm,0.3s
LCND La Caada 4.36 314 eP Pn 01 34 44.3 +1.2
PRVC Isla de Provid 4.47 46 Pn Pn 01 34 45.4 +0.8
PRVC Isla de Provid 4.47 46⇓iP Pn 01 34 45.8 +1.2
PRVC eS Sn 01 35 47.7 +12
PRVC Isla de Provid 4.47 46 P Pn 01 34 45.9 +1.4
MARI3 Mariato, Verag 4.48 125⇓eP Pn 01 34 47.7 +3.1
CRIS3 El Cristo, Coc 4.48 116 eP Pn 01 34 46.4 +1.7
TGUH Tegucigalpa,Un 4.54 326 Pn Pn 01 34 47.9 +2.3
TGUH Tegucigalpa,Un 4.54 326 P Pn 01 34 48.2 +2.6
PNME Penonome 4.64 112 eP Pn 01 34 48.7 +1.8
PESE3 Pese, Herrera 4.65 120⇑eP Pn 01 34 49.5 +2.5
PESE3 iS Sn 01 35 54.0 +14
VSM San Miguel 4.72 312 eP Pn 01 34 50.4 +2.2
VSM eS Sn 01 35 39.8 -1.9
RANC El Ranchito 4.73 312 eP Pn 01 34 50.4 +2.1
CACAO El Cacao, Vera 4.76 127 eP Pn 01 34 49.8 +1.3
PACA Pacayal 4.78 312 eP Pn 01 34 51.3 +2.3
CHIT3 Chitre 4.79 118 eP Pn 01 34 50.5 +1.5
CHIT3 iS Sn 01 35 53.3 +10
MLIR Monte Lirio 4.86 102⇓iP Pn 01 34 52.1 +2.2
BCIP Isla Barro Col 4.89 103 Pn Pn 01 34 51.3 +0.9
BCIP Isla Barro Col 4.89 103⇓iP Pn 01 34 51.3 +0.9
BCIP eS Sn 01 35 44.6 -1.0
BCIP Isla Barro Col 4.89 103 eP Pn 01 34 51.2 +0.9
BCIP Isla Barro Col 4.89 103 P Pn 01 34 51.2 +0.9
BCIP S Sn 01 35 44.1 -1.6
ZANG Zanguenga, Cho 4.92 105 eP Pn 01 34 52.2 +1.5
ZANG Zanguenga, Cho 4.92 105 eP Pn 01 34 52.1 +1.4
TECA Tecapa 4.93 311 eP Pn 01 34 53.4 +2.4
TECA eS Sn 01 35 46.0 -0.8
FRIJ El Hiral 4.99 102 iP Pn 01 34 53.0 +1.4
AZU Azuero 5.00 119 iP Pn 01 34 54.9 +3.1
AZU eS Sn 01 36 03.6 +15
AZU Azuero 5.00 119 eP Pn 01 34 53.3 +1.6
TOSI3 Tonosi 5.06 124 eP Pn 01 34 52.0 -0.6
ARRA3 Arrajan, Pana 5.11 104 iP Pn 01 34 56.0 +2.6
TECO Alcaldia de Te 5.16 309 eP Pn 01 34 57.0 +2.9
PCRI3 Pocri, Los San 5.20 120 eP Pn 01 35 01.2 +6.7
PCRI3 iS Sn 01 36 10.0 +17
UPA Univ. de Panam 5.23 104 eP Pn 01 34 56.8 +1.9
FLAM Flamenco Islan 5.24 105 iP Pn 01 34 57.8 +2.7
ACHO3 Achotines, Los 5.28 122 eP Pn 01 34 57.0 +1.4
CAZU Cerro Azul, Pa 5.29 101 eP Pn 01 34 57.0 +1.1
PAVA Las Pavas 5.39 310 eP Pn 01 34 59.3 +2.0
PAVA eS Sn 01 35 57.9 -0.2
LFRS El Faro 5.43 308 eP Pn 01 35 00.9 +3.1
RNCC Cayo Roncador, 5.55 53 P Pn 01 35 00.6 +1.3
comp=Z,2µmcomp=Z,508nm,0.7s
UEES Universidad Ev 5.63 308 eP Pn 01 35 03.3 +2.9
BOQS Boqueron 5.67 308 eP Pn 01 35 04.6 +3.4
PMON Piamonte 5.68 307 eP Pn 01 35 04.3 +3.1
JAYA Jayaque - finc 5.75 306 eP Pn 01 35 04.8 +2.5
SERC Banco Serrana, 5.79 46 P Pn 01 35 04.6 +2.0
comp=Z,5µmcomp=Z,526nm,0.8s
MTO3 Montecristo 6.15 312 Pn Pn 01 35 09.9 +2.2
TOTI Torti 6.41 102⇓eP Pn 01 35 13.2 +2.1
UPD2 Meteti 6.79 104⇓iP Pn 01 35 18.6 +2.4
MAPC Malpelo 6.94 154 P Pn 01 35 16.0 -2.3
APG El Apazote 7.35 310 P Pn 01 35 27.2 +3.1
comp=Z,6.8nm,0.8s,baz=140,slow=9.9,SNR=65
APG S Sn 01 36 40.6 -5.5
comp=Z,1.5nm,0.8s,baz=156,slow=12,SNR=1.4
CAP2 Capurgana 7.39 102 eP Pn 01 35 27.6 +3.1
CAPC Capurgana 7.40 102 P Pn 01 35 26.2 +1.6
comp=Z,128nm,0.8s
PTAC Punta Ardita, 7.46 114 eP Pn 01 35 25.4 0.0
PTAC Punta Ardita, 7.46 114 P Pn 01 35 25.8 +0.3
comp=Z,2µmcomp=Z,51nm,0.8s
SOLC Bahia Solano 8.24 119 P Pn 01 35 36.9 +0.9
LCBC Los crdobas, 8.31 99 P Pn 01 35 39.8 +2.8
comp=Z,8µmcomp=Z,972nm,0.7s
PETF Flores 8.31 323 Pn Pn 01 35 40.6 +3.6
DBBC Dabeiba 8.97 110 P Pn 01 35 46.3 +0.2
SJCC San Jacinto, C 9.35 91 eP Pn 01 35 53.5 +2.1
SJCC eS Sn 01 37 33.7 -1.2
SJCC San Jacinto, C 9.35 91 P Pn 01 35 53.1 +1.8
comp=Z,1µmcomp=Z,300nm,0.8s
SJCC S Sn 01 37 33.6 -1.3
comp=Z,1µmcomp=Z,300nm,0.8s
UREC San Jos de Ur 9.37 105 eP Pn 01 35 53.9 +2.4
UREC San Jos de Ur 9.37 105 P Pn 01 35 54.0 +2.5
comp=Z,49nm,0.9s
CBOC Ciudad Bolivar 9.63 116 P Pn 01 35 57.0 +1.8
comp=Z,23nm,0.8s
HELC Santa Helena 9.92 113 eP Pn 01 36 01.5 +2.2
HELC Santa Helena 9.92 113 P Pn 01 35 59.7 +0.4
comp=Z,31nm,0.9s
ARGC Ariguani, Magd 10.27 91 P Pn 01 36 06.2 +2.4
comp=Z,97nm,0.8s
SMRC Santa Marta, M 10.30 84 P Pn 01 36 04.2 0.0
comp=Z,61nm,1.6s
YOTC Yotoco, Valle 10.36 127 P Pn 01 36 05.9 +0.8
comp=Z,12nm,0.8s
TEIG Tepich 10.48 341 P Pn 01 36 07.7 +1.0
baz=132,slow=24,SNR=40
TEIG Tepich 10.48 341 Pn Pn 01 36 10.5 +3.9
TEIG Tepich 10.48 341 P Pn 01 36 09.7 +3.0
comp=Z,7µmcomp=Z,569nm,1.3s
GUY2C Guyana, Caldas 10.50 118 P Pn 01 36 09.6 +2.3
comp=Z,44nm,0.9s
MTDJ Mount Denham 10.50 40 Pn Pn 01 36 10.8 +3.8
MTDJ Mount Denham 10.50 40 iP Pn 01 36 11.5 +4.6
MTDJ Mount Denham 10.50 40 P Pn 01 36 10.7 +3.7
JAMC Jamundi, Valle 10.60 131 P Pn 01 36 10.4 +2.0
comp=Z,17nm,1.2s
PTBC PUERTO BERRIO, 10.77 109 P Pn 01 36 12.4 +1.8
comp=Z,21nm,0.9s
NORC Norcasia 10.78 115 P Pn 01 36 13.6 +2.8
comp=Z,23nm,0.9s
HOJ Hope 10.86 44 iP Pn 01 36 16.1 +4.3
STH Stony Hill 10.87 44 iP Pn 01 36 16.6 +4.6
GWJ Greenwich 10.92 44 iP Pn 01 36 14.8 +2.0
BBAC Balboa, Cauca 11.03 138 P Pn 01 36 16.4 +2.0
comp=Z,768nmcomp=Z,38nm,1.0s
POPC Popayan, Colom 11.05 134 P Pn 01 36 15.4 +0.7
comp=Z,41nm,1.1s
ORTC Ortega, Tolima 11.29 123 P Pn 01 36 22.4 +4.7
BRJC Barrancabermej 11.29 106 P Pn 01 36 19.6 +1.9
comp=Z,42nm,1.0s
OCAC Ocana 11.39 99 P Pn 01 36 21.0 +1.9
comp=Z,63nm,0.6s
SPBC San Pablo de B 11.46 113 P Pn 01 36 23.9 +3.9
CMBC Cumbal 11.51 143 P Pn 01 36 22.9 +1.9
PAC1 Pacto, Paraso 11.54 149 P Pn 01 36 23.8 +2.6
comp=Z,36nm,1.0s
CRUC La Cruz 11.56 138 P Pn 01 36 25.0 +3.2
GCUF Volcan Galeras 11.57 141 P Pn 01 36 24.1 +2.1
comp=Z,67nm,1.2s
ROSC El Rosal 11.59 117 P Pn 01 36 24.6 +2.4
comp=Z,11nm,0.6s,baz=267,slow=18,SNR=8.6
ROSC El Rosal 11.59 117 Pn Pn 01 36 25.1 +2.9
ROSC El Rosal 11.59 117 P Pn 01 36 26.5 +4.3
FLF1 Flavio Alfaro- 11.61 155 P Pn 01 36 28.3 +6.3
CRJC Cerrejon, Guaj 11.61 85 P Pn 01 36 19.3 -2.8
PRAC Prado 11.69 123 P Pn 01 36 23.4 +0.2
comp=Z,21nm,1.5s
CUSE Cuicocha Este 11.71 147 P Pn 01 36 24.1 +0.3
comp=Z,56nm,0.9s
OTAV Otavalo 11.74 148 Pn Pn 01 36 26.5 +2.3
OTAV Otavalo 11.74 148 eP Pn 01 36 25.5 +1.3
OTAV Otavalo 11.74 148 P Pn 01 36 27.3 +3.1
comp=Z,23nm,1.0s
BETC Betania 11.87 129 P Pn 01 36 28.2 +2.5
BARC Barichara 11.94 107 P Pn 01 36 29.2 +2.5
comp=Z,29nm,1.0s
CVER Cruz Verde, Cu 11.96 118 P Pn 01 36 26.2 -1.0
CMIG Matias Romero 12.01 305 P Pn 01 36 28.6 +1.2
comp=Z,73nm,0.6s,baz=142,slow=9.9,SNR=93
CMIG S Sn 01 38 35.3 -4.4
comp=Z,5.8nm,0.6s,baz=59,slow=17,SNR=1.9
BONI La Bonita 12.07 144 P Pn 01 36 32.2 +3.6
comp=Z,98nm,0.8s
GARC Garzon, Huila 12.15 131 P P 01 36 35.9 -3.2
PAMC Pamplona, Colo 12.19 103 P Pn 01 36 32.7 +2.4
comp=Z,182nmcomp=Z,22nm,0.9s
CHIC Chingaza 12.21 117 P Pn 01 36 30.2 -0.4
comp=Z,21nm,0.8s
LMGC Las Mercedes 12.22 36 eP Pn 01 36 29.8 -0.4
PAYG Puerto Ayora 12.23 208 P Pn 01 36 31.5 +1.0
comp=Z,32nm,0.7s
RUSC La Rusia 12.27 110 Pn Pn 01 36 33.6 +2.2
RUSC La Rusia 12.27 110 P Pn 01 36 31.7 +0.2
comp=Z,632nmcomp=Z,34nm,1.3s
URMC La Uribe, Meta 12.37 124 P Pn 01 36 34.4 +1.9
comp=Z,18nm,0.8s
FLOC Florencia 12.45 133 Pn Pn 01 36 35.6 +2.2
FLOC Florencia 12.45 133 P Pn 01 36 36.5 +3.0
comp=Z,36nm,1.3s
VILC Villavicencio, 12.49 119 P Pn 01 36 35.4 +1.3
comp=Z,359nmcomp=Z,42nm,0.7s
CHIV Chivirico 12.50 39 Pn Pn 01 36 35.9 +1.7
URIC Uribia, Colomb 12.53 82 P Pn 01 36 33.6 -0.9
SOR Soroa 12.54 7 Pn Pn 01 36 38.5 +3.9
SOR Soroa 12.54 7 eP Pn 01 36 38.9 +4.2
MGV Manicaragua 12.60 20 eP Pn 01 36 29.8 -5.5
CCCC Cccc 12.73 31 eP Pn 01 36 41.1 +4.0
MARVS Santiago de Cu 12.84 40 eP Pn 01 36 39.4 +0.6
RCC Rio Carpintero 12.97 41 eP Pn 01 36 38.7 -1.7
CAMR Camarioca 13.10 14 eP Pn 01 36 43.8 +1.7
PINC Pinares de May 13.27 39 eP Pn 01 36 41.8 -2.6
GTBY Guantanamo Bay 13.30 43 eP Pn 01 36 44.5 -0.4
HLGC Holguin 13.41 37 eP Pn 01 36 47.1 +0.8
MACC Macarena, Meta 13.45 126 P Pn 01 36 48.1 +1.3
comp=Z,42nm,0.8s
QMBU Quimbuelo 13.70 43 eP Pn 01 36 50.9 +0.9
COHC Cochancay 13.76 157 P Pn 01 36 52.1 +1.2
comp=Z,52nm,1.5s
NMDO Nuevo Mundo 13.84 41 eP Pn 01 36 53.1 +1.2
SDV Santo Domingo 13.91 95 P Pn 01 36 54.1 +1.0
comp=Z,33nm,0.6s,baz=252,slow=5.3,SNR=17
SDV S Sn 01 39 23.5 -2.7
comp=Z,15nm,0.6s,baz=3.0,slow=15,SNR=3.6
SDV LR LR 01 42 42.5
comp=Z,126nm,19.4s,baz=276,slow=39
SDV Santo Domingo 13.91 95 Pn Pn 01 36 53.9 +0.8
SDV Santo Domingo 13.91 95 eP Pn 01 36 52.9 -0.2
SDV Santo Domingo 13.91 95 P Pn 01 36 52.0 -1.1
MOAC Moa 13.93 41 eP Pn 01 36 53.8 +0.8
PTLC Puerto Leguiza 14.04 135 P P 01 36 59.2 -0.7
MCRA Macar, Loja 15.29 162 P Pn 01 37 08.7 -2.0
TLIG Tlapa 15.30 300 P 01 37 14.1 +0.1
SDDR Presa de Saban 15.56 55 P P 01 37 20.4 +3.6
JRQG Juriquilla Cam 18.38 306 P Pn 01 37 49.7 +0.7
ATAH Atahualpa 18.39 160 P Pn 01 37 52.0 +2.6
comp=Z,12nm,0.8s,baz=352,slow=4.9,SNR=7.1
ATAH LR LR 01 44 20.6
comp=Z,236nm,21.3s,baz=358,slow=35
SJG San Juan 19.56 64 P Pn 01 38 02.4 -0.3
comp=Z,13nm,0.3s,baz=325,slow=18,SNR=6.7
SJG LR LR 01 45 27.2
comp=Z,70nm,18.4s,baz=238,slow=36
SJG San Juan 19.56 64 P Pn 01 38 03.2 +0.4
553A Crawfordville 19.81 1 P Pn 01 38 05.5 -0.1
SGC2 Sao Gabriel da 20.42 119 P P 01 38 11.3 +1.1
comp=Z,58nm,1.0s
ZAIG Zacatecas 21.15 308 P P 01 38 20.1 +1.9
HBVL Hebbronville 21.29 324 P P 01 38 20.4 +1.0
HKT Hockley 22.17 334 P P 01 38 28.5 -0.2
MLDN Muldoon 22.60 331 P P 01 38 33.5 +0.3
LRAL Lakeview Retre 22.75 355 P P 01 38 36.4 +1.5
GOGA Godfrey 23.05 3 P P 01 38 38.6 +0.7
GOGA IAmb IAmb 01 38 40.2
comp=Z,57nm,0.8s
NNA Nana 23.45 160 P P 01 38 43.8 +2.0
comp=Z,8.8nm,0.8s,baz=321,slow=7.9,SNR=5.0
NNA pP pP 01 39 00.3 +1.4
comp=Z,8.5nm,0.7s,baz=6.2,slow=9.1,SNR=2.3
comp=Z,8.8nm,0.8s
NNA Nana 23.45 160 P P 01 38 43.0 +1.2
Y52A Lilburn 23.48 1 P P 01 38 42.7 +0.8
Y52A IAmb IAmb 01 38 43.7
comp=Z,31nm,0.6s
Y52A PcP PcP 01 42 26.0 +0.4
HNDO Hondo 23.52 327 IAmb IAmb 01 38 44.4
comp=Z,32nm,0.7s
Y45A Yeager Farm, C 23.90 350 P P 01 38 46.5 +0.9
HODGE Hodges 23.94 5 IAmb IAmb 01 38 48.2
comp=Z,41nm,0.7s
Y57A Sumter 23.95 9 IAmb IAmb 01 38 48.2
comp=Z,35nm,0.6s
Z41A Richland Creek 24.06 343 IAmb IAmb 01 38 49.4
comp=Z,70nm,1.0s
JSC Jenkinsville 24.09 7 IAmb IAmb 01 38 50.9
comp=Z,44nm,1.0s
X48A Hartselle 24.16 355 IAmb IAmb 01 38 51.6
comp=Z,39nm,0.8s
FPAL Fort Paine 24.16 358 IAmb IAmb 01 39 10.9
comp=Z,37nm,1.2s
X51A Calhoun 24.18 360 IAmb IAmb 01 38 51.7
comp=Z,23nm,0.7s
TEFE Tefe 24.20 123 eP P 01 38 49.2 +0.7
OXF Oxford 24.51 351 P P 01 38 50.2 -0.8
JCT Junction City 24.55 327 IAmb IAmb 01 38 55.0
comp=Z,44nm,0.9s
BIRD Birdtown, Kers 24.56 8 IAmb IAmb 01 38 55.4
comp=Z,31nm,0.8s
PAULI Pauline 24.57 6 IAmb IAmb 01 38 55.7
comp=Z,27nm,1.0s
WHTX Lake Whitney, 24.63 333 IAmb IAmb 01 38 56.0
comp=Z,42nm,0.8s
X58A Rowland 24.65 11 IAmb IAmb 01 38 56.4
comp=Z,41nm,0.8s
BG3 Lake Jocassee 24.65 3 P P 01 38 54.0 +1.6
BG3 IAmb IAmb 01 38 57.0
comp=Z,44nm,0.8s
BG3 PcP PcP 01 42 28.1 0.0
W52A Murphy 24.71 1 IAmb IAmb 01 38 55.4
comp=Z,42nm,0.7s
Z38A Mt. Pleasant 24.76 339 IAmb IAmb 01 38 55.9
comp=Z,42nm,0.7s
BRDY Brady 24.77 330 IAmb IAmb 01 38 57.1
comp=Z,35nm,0.7s
PLAL Pickwick Lake 24.79 353 IAmb IAmb 01 38 56.8
comp=Z,30nm,1.1s
W50A Signal Mountai 24.82 359 P P 01 38 54.3 +0.4
SWET Sewanee 24.85 358 IAmb IAmb 01 38 58.4
comp=Z,44nm,1.0s
CPCT Cooper Cave 25.06 0 IAmb IAmb 01 39 00.4
comp=Z,44nm,1.0s
W57A Gilead 25.13 9 IAmb IAmb 01 39 00.5
comp=Z,64nm,1.4s
BOAV Boa Vista 25.23 106 eP P 01 38 59.5 +1.6
BOAV Boa Vista 25.23 106 P P 01 39 00.0 +2.1
comp=Z,16nm,1.0s
TKL Tuckaleechee C 25.28 2 P P 01 38 58.5 +0.4
comp=Z,14nm,0.9s,baz=182,slow=11,SNR=10
TKL LR LR 01 48 40.4
comp=Z,162nm,20.3s,baz=184,slow=36
comp=Z,14nm,0.9s
UALR University of 25.37 345 IAmb IAmb 01 39 00.4
comp=Z,43nm,0.8s
V48A Smith Brothers 25.42 356 P P 01 38 59.6 +0.2
V48A IAmb IAmb 01 39 21.5
comp=Z,30nm,0.9s
MIAR Mount Ida 25.49 343 IAmb IAmb 01 39 02.9
comp=Z,41nm,0.7s
FW06 Azle 25.52 334 IAmb IAmb 01 39 05.4
comp=Z,28nm,0.7s
OZNA Ozona 25.61 326 IAmb IAmb 01 39 04.9
comp=Z,25nm,1.1s
PLPT Palo Pinto 25.71 333 IAmb IAmb 01 39 07.1
comp=Z,32nm,0.7s
HBAR Harrisburg 25.75 349 P P 01 39 01.6 -0.7
WHAR Wooly Hollow 25.85 346 IAmb IAmb 01 39 04.6
comp=Z,41nm,0.8s
WVT Waverly 25.89 354 P P 01 39 02.9 -0.7
WVT IAmb IAmb 01 39 24.8
comp=Z,27nm,1.0s
V58A Windy Hill, Pi 25.90 10 IAmb IAmb 01 39 05.6
comp=Z,32nm,0.8s
TXAR Lajitas Array 25.98 320 P P 01 39 05.1 +0.4
comp=Z,5.7nm,0.6s,baz=147,slow=8.6,SNR=56
TXAR pP pP 01 39 22.6 -0.8
comp=Z,5.4nm,0.8s,baz=147,slow=11,SNR=5.9
TXAR PcP PcP 01 42 31.9 +0.6
comp=Z,1.7nm,0.8s,baz=151,slow=6.1,SNR=5.9
TXAR ScP ScP 01 46 04.9 +0.8
comp=Z,0.8nm,0.7s,baz=143,slow=7.7,SNR=8.1
comp=Z,5.7nm,0.6s
TXAR Lajitas Array 25.98 320 P P 01 39 04.8 +0.2
TXAR PcP 01 42 32.3 +1.0
TXAR ScP 01 46 04.1 +0.1
U49A Red Boiling Sp 26.14 358 IAmb IAmb 01 39 07.4
comp=Z,21nm,0.7s
ABTX Abilene, Hawle 26.18 330 IAmb IAmb 01 39 11.7
comp=Z,34nm,1.0s
U54A Nelsons Funny 26.25 5 IAmb IAmb 01 39 29.2

comp=Z,25nm,0.9s
SGCY Sterling City 26.37 327 IAmb IAmb 01 39 12.5
comp=Z,18nm,0.7s
FCAR Ozark Folk Cen 26.38 346 IAmb IAmb 01 39 09.1
comp=Z,25nm,0.8s
ALPN Alpine 26.68 321 P **P** **01 39 11.6 +0.6**
T47A Sharon Grove 26.68 356 IAmb IAmb 01 39 33.0
comp=Z,33nm,0.9s
PBMO Poplar Bluff 26.89 350 IAmb IAmb 01 39 14.0
comp=Z,25nm,0.8s
APMT Aspermont 26.98 331 IAmb IAmb 01 39 19.1
comp=Z,14nm,0.7s
S51A Beattyville 27.26 2 IAmb IAmb 01 39 18.0
comp=Z,25nm,0.7s
CGM3 Cape Girardeau 27.27 351 IAmb IAmb 01 39 17.2
comp=Z,27nm,0.8s
ODSA Odessa 27.31 325 IAmb IAmb 01 39 17.8
comp=Z,22nm,0.8s
MACA Manacapuru-AM 27.36 118 P **P** **01 39 17.6 +0.4**
MACA Manacapuru-AM 27.36 118 *e*P **P** **01 39 18.0 +0.8**
TUL3 Leonard 27.45 340 IAmb IAmb 01 39 40.7
comp=Z,24nm,1.1s
POST Post 27.47 328 IAmb IAmb 01 39 22.8
comp=Z,17nm,0.6s
SLBS Sierra La Lagu 27.54 302 P **P** **01 39 22.2 +3.4**
SLBS IAmb IAmb 01 39 24.3
comp=Z,36nm,0.9s
SIUC Southern Illin 27.62 352 IAmb IAmb 01 39 20.3
comp=Z,30nm,0.8s
MGMO Mountain Grove 27.62 347 IAmb IAmb 01 39 20.3
comp=Z,33nm,0.8s
VHRN Van Horn 27.80 320 P **P** **01 39 21.6 +0.5**
VHRN PcP **PcP** **01 42 35.7 0.0**
WCI Wyandotte Cave 27.87 357 P **P** **01 39 21.0 -0.4**
OK052 Battle Ridge R 27.87 339 IAmb IAmb 01 39 22.7
comp=Z,21nm,0.6s
R50A Paris 27.89 1 IAmb IAmb 01 39 22.7
comp=Z,18nm,0.8s
FVM French Village 28.07 350 IAmb IAmb 01 39 25.5
comp=Z,27nm,1.5s
CCM Cathedral Cave 28.28 349 P **P** **01 39 24.2 -0.9**
CCM IAmb IAmb 01 39 25.6
comp=Z,32nm,0.8s
SMWD Samnorwood 28.50 333 IAmb IAmb 01 39 33.5
comp=Z,15nm,0.8s
Q52A Bidwell 28.64 4 IAmb IAmb 01 39 32.2
comp=Z,24nm,0.8s
MNTX Cornudas Mount 28.67 321 P **P** **01 39 28.3 -0.4**
MNTX PcP **PcP** **01 42 38.3 +0.6**
R40A Maddies Statio 28.71 347 IAmb IAmb 01 39 35.2
comp=Z,14nm,0.6s
Q44A Meyer Farm, Va 28.77 353 IAmb IAmb 01 39 31.9
comp=Z,31nm,0.8s
BLO Bloomington 28.82 357 IAmb IAmb 01 39 30.7
comp=Z,22nm,0.7s
AMTX Amarillo 29.00 330 P **P** **01 39 31.1 -0.5**
P53A Whipple 29.23 5 IAmb IAmb 01 39 35.3
comp=Z,23nm,0.8s
KAN01 Argonia South 29.25 338 IAmb IAmb 01 39 33.9
comp=Z,16nm,0.5s
P46A Rosedale 29.30 356 IAmb IAmb 01 39 34.8
comp=Z,24nm,0.8s
P52A Corning 29.32 4 IAmb IAmb 01 39 38.7
comp=Z,28nm,0.9s
P43A Skaggs, Pawnee 29.56 352 IAmb IAmb 01 39 37.3
comp=Z,24nm,0.8s
MCWV Mont Chateau 29.57 8 IAmb IAmb 01 39 41.1
comp=Z,24nm,1.0s
O52A Adamsville 29.82 4 IAmb IAmb 01 39 43.5
comp=Z,25nm,0.7s
P40A Paris 29.86 348 IAmb IAmb 01 39 39.4
comp=Z,20nm,0.9s
ACSO Alum Creek Sta 29.87 3 P **P** **01 39 39.2 0.0**
O53A New Philadelph 30.01 5 IAmb IAmb 01 39 44.9
comp=Z,22nm,0.9s
P38A Dawn 30.27 346 IAmb IAmb 01 39 44.0
comp=Z,18nm,0.9s
RTBA Rita Blanca 30.76 331 IAmb IAmb 01 39 48.9
comp=Z,12nm,0.9s
N41A Harden Midland 30.80 351 IAmb IAmb 01 39 47.4
comp=Z,22nm,0.7s
SSPA Standing Stone 30.83 10 P **P** **01 39 48.0 +0.4**
LPAZ La Paz 31.06 148 P **P** **01 39 52.0 +1.5**
comp=Z,3.3nm,0.8s,baz=335,slow=12,SNR=10
LPAZ pP **pP** **01 40 10.8 +1.4**
comp=Z,3.3nm,0.9s,baz=332,slow=8.9,SNR=4.8
LPAZ PcP **PcP** **01 42 45.4 +0.7**
comp=Z,2.6nm,0.9s,baz=324,slow=4.4,SNR=4.2
LPAZ ScP **ScP** **01 46 21.5 +0.8**
comp=Z,1.3nm,0.9s,baz=29,slow=5.9,SNR=2.8
comp=Z,3.3nm,0.8s
LPAZ La Paz 31.06 148 P **P** **01 39 52.0 +1.5**
LPAZ La Paz 31.06 148 P **P** **01 39 52.5 +1.9**
BNM Barren Site 31.13 323 P **P** **01 39 50.1 -0.5**
Y22A Socorro 31.18 322 IAmb IAmb 01 39 54.4
comp=Z,17nm,0.9s
ANMO Albuquerque 31.59 324 P **P** **01 39 54.6 0.0**
ANMO Albuquerque 31.59 324 P **P** **01 39 55.1 +0.5**
TASM ASL Pad, Albuq 31.59 324 IAmb IAmb 01 39 57.5
comp=Z,7.2nm,0.9s
PB16 IPOC Station P 32.13 152 P **P** **01 40 01.7 +1.8**
PB16 IAmb IAmb 01 40 05.2
comp=Z,11nm,0.8s
ITTB Itaituba 32.28 115 *e*P **P** **01 40 01.5 +0.8**
TUC Tucson 32.58 316 P **P** **01 40 04.0 +0.8**
TUC Tucson 32.58 316 P **P** **01 40 05.0 +1.7**
X18A Snowflake 33.41 320 IAmb IAmb 01 40 14.2
comp=Z,24nm,1.2s
GO01 Chusmiza 33.44 153 P **P** **01 40 13.9 +2.8**
GO01 IAmb IAmb 01 40 15.4
comp=Z,18nm,0.8s
VILB Vilhena 33.51 133 P **P** **01 40 12.2 +0.7**
VILB Vilhena 33.51 133 *e*P **P** **01 40 12.1 +0.7**
214A Organ Pipe Nat 33.79 314 IAmb IAmb 01 40 16.6
comp=Z,13nm,0.9s
NPGB Novo Progresso 33.88 119 *e*P **P** **01 40 14.1 -0.6**
PIX Pinacate 34.04 313 IAmb IAmb 01 40 18.8
comp=Z,15nm,1.0s
X16A Lo Mia Camp, P 34.30 319 IAmb IAmb 01 40 23.0
comp=Z,13nm,0.8s
MVCO Mesa Verde 34.36 325 P **P** **01 40 18.0 -0.8**
SADO Sadowa 34.70 7 LR LR 01 54 01.4
comp=Z,198nm,21.4s,baz=164,slow=35
ECSD EROS Data Cent 34.91 345 IAmb IAmb 01 40 22.6
comp=Z,11nm,0.7s
113A Mohawk Valley, 34.91 314 IAmb IAmb 01 40 26.6
comp=Z,9.0nm,0.9s
WUAZ Wupatki 34.94 320 IAmb IAmb 01 40 27.5
comp=Z,18nm,0.9s
PB07 IPOC Station P 34.96 156 IAmb IAmb 01 40 27.9
comp=Z,19nm,1.0s
SIV San Ignacio 35.03 138 P **P** **01 40 25.4 +0.8**
comp=Z,3.5nm,0.7s,baz=274,slow=7.4
SIV PcP **PcP** **01 42 55.8 +0.7**
baz=274,slow=3.5
SIV ScP **ScP** **01 46 33.2 -0.5**
baz=270,slow=4.0
SIV LR LR 01 54 42.4
comp=Z,90nm,18.1s,baz=298,slow=36
comp=Z,3.5nm,0.7s
Y14A Wickenburg 35.05 317 IAmb IAmb 01 40 27.4
comp=Z,12nm,0.8s
G40A Rib Lake 35.19 353 IAmb IAmb 01 40 46.8
comp=Z,18nm,0.9s
PV02 Paradox Valley 35.20 326 IAmb IAmb 01 40 28.4
comp=Z,17nm,1.1s
PV13 Radium Mtn., P 35.22 326 IAmb IAmb 01 40 31.0
comp=Z,7.3nm,0.8s
PDRB Porto dos Gac 35.27 127 *e*P **P** **01 40 26.5 -0.1**
PV03 Paradox Valley 35.30 326 IAmb IAmb 01 40 29.5
comp=Z,14nm,1.0s
PV05 Paradox Valley 35.31 326 P **P** **01 40 27.6 +0.6**
PV05 IAmb IAmb 01 40 28.8
comp=Z,7.6nm,0.7s
PV16 Nyswonger Mesa 35.38 326 IAmb IAmb 01 40 29.6
comp=Z,10nm,0.9s
PV17 East Wray Mesa 35.38 326 IAmb IAmb 01 40 29.5
comp=Z,12nm,0.7s
PV19 Morning Glory 35.41 326 IAmb IAmb 01 40 29.8
comp=Z,17nm,0.8s
PV20 West Nyswonger 35.43 326 IAmb IAmb 01 40 29.9
comp=Z,16nm,0.8s
PV04 Paradox Valley 35.43 326 IAmb IAmb 01 40 30.1
comp=Z,11nm,1.0s
PV22 Blue Mesa, Par 35.47 326 IAmb IAmb 01 40 30.3
comp=Z,8.8nm,0.9s
PV14 Lion Creek, Pa 35.48 326 IAmb IAmb 01 40 30.4
comp=Z,9.6nm,0.9s
PV10 Paradox Valley 35.49 326 IAmb IAmb 01 40 29.9
comp=Z,17nm,0.9s
PV23 Carpenter Ridg 35.53 326 P **P** **01 40 28.5 -0.4**
PV23 IAmb IAmb 01 40 31.5
comp=Z,14nm,1.0s
CLDB Colider 35.58 125 *e*P **P** **01 40 29.3 0.0**
PTLB Pontes e Lacer 35.96 135 IAmb IAmb 01 40 34.1
comp=Z,12nm,0.9s
PTLB Pontes e Lacer 35.96 135 *e*P **P** **01 40 32.8 +0.3**
BLYC Blythe 35.98 315 IAmb IAmb 01 40 36.4
comp=Z,19nm,0.9s
U15A North Rim 36.09 321 IAmb IAmb 01 40 37.6
comp=Z,14nm,1.3s
W13A Hualapai Mount 36.31 317 IAmb IAmb 01 40 39.1
comp=Z,7.0nm,0.9s
O20A White River Ci 36.35 329 IAmb IAmb 01 40 39.3
comp=Z,14nm,1.0s
YUH Yuha Desert 36.39 312 P **P** **01 40 36.7 +0.7**
YUH IAmb IAmb 01 40 39.8
comp=Z,14nm,1.0s
YUH PcP **PcP** **01 42 59.7 +0.8**
BC3 Big Chuckawall 36.58 314 IAmb IAmb 01 40 44.8
comp=Z,6.5nm,0.8s
PKCU Pink Cliffs 36.75 322 P **P** **01 40 40.2 +0.8**
PKCU IAmb IAmb 01 40 43.3
comp=Z,24nm,1.1s
KNB Kanab 36.79 321 IAmb IAmb 01 40 43.3
comp=Z,9.7nm,0.8s
BORC Borrego Spring 37.06 313 P **P** **01 40 43.0 +1.3**
BORC PcP **PcP** **01 43 02.8 +1.8**
BELC Belle Mtn. Jos 37.15 314 IAmb IAmb 01 40 46.0
comp=Z,11nm,0.8s
PMD Palm Desert 37.23 314 IAmb IAmb 01 40 46.5
comp=Z,17nm,0.9s
PFO Pinyon Flats O 37.27 313 LR LR 01 56 13.4
comp=Z,104nm,19.6s,baz=130,slow=36
PFO Pinyon Flats O 37.27 313 P **P** **01 40 43.8 +0.1**
PFO IAmb IAmb 01 40 47.1
comp=Z,12nm,0.9s
PFO Pinyon Flats O 37.27 313 P **P** **01 40 46.1 +2.5**
DPP Dos Picos Cty 37.31 312 IAmb IAmb 01 40 47.1
comp=Z,14nm,1.1s
V12A Nelson 37.32 318 IAmb IAmb 01 40 47.8
comp=Z,11nm,1.0s
TMUT Trail Mountain 37.34 325 IAmb IAmb 01 41 06.0
comp=Z,25nm,1.9s
CPE Camp Elliot 37.37 312 IAmb IAmb 01 40 47.8
comp=Z,18nm,1.1s
TCRU Three Creeks R 37.59 323 IAmb IAmb 01 40 52.1
comp=Z,7.8nm,0.9s
RSSD Black Hills 37.66 337 P **P** **01 40 47.5 +0.6**
SHOC Shoshone, Teco 38.37 317 IAmb IAmb 01 40 56.5
comp=Z,13nm,0.9s
PSUT Pine Spring 38.38 322 IAmb IAmb 01 40 57.9
comp=Z,6.5nm,0.8s
SALV Santo Antonio 38.73 132 *e*P **P** **01 40 56.6 +0.8**
GWY Greenwater Val 38.79 317 IAmb IAmb 01 40 60.0
comp=Z,11nm,0.7s
QSM Queen of Sheba 38.81 316 IAmb IAmb 01 41 00.1
comp=Z,11nm,0.9s
TPNV Topopah Spring 38.94 318 IAmb IAmb 01 41 01.3
comp=Z,12nm,1.3s
SPR3 Spring Creek 3 38.97 322 P **P** **01 40 57.1 -1.0**
SPR3 PcP **PcP** **01 43 07.7 +0.6**
PDAR Pinedale Array 38.98 330 P **P** **01 40 57.1 -0.9**
comp=Z,1.2nm,0.6s,baz=128,slow=9.4,SNR=11
PDAR PcP **PcP** **01 43 07.2 +0.2**
comp=Z,0.6nm,0.5s,baz=142,slow=6.5,SNR=7.6
PDAR ScP **ScP** **01 46 47.0 -1.4**
comp=Z,1.6nm,1.0s,baz=135,slow=5.5,SNR=5.6
PDAR LR LR 01 59 39.6
comp=Z,58nm,18.7s,baz=110,slow=40
comp=Z,1.2nm,0.6s
PDAR Pinedale Array 38.98 330 P **P** **01 40 56.7 -1.3**
S11A Rachel 39.02 319 IAmb IAmb 01 41 03.1
comp=Z,15nm,1.0s
WSHM Spangler Hills 39.04 315 IAmb IAmb 01 41 01.7
comp=Z,18nm,0.9s
LRMC Laurel Mtn Rad 39.10 315 P **P** **01 40 60.0 +0.9**
LRMC IAmb IAmb 01 41 02.4
comp=Z,11nm,0.9s
HWUT Hardware Ranch 39.15 328 IAmb IAmb 01 41 05.1
comp=Z,7.5nm,0.9s
TPO Tropico Hills 39.18 314 IAmb IAmb 01 41 03.3
comp=Z,10nm,0.8s
CLC China Lake 39.22 316 IAmb IAmb 01 41 02.9
comp=Z,8.9nm,0.8s
GRAC Grapevine Rang 39.71 317 IAmb IAmb 01 41 08.2
comp=Z,12nm,1.1s
AC06 Mina Casimiro 39.91 160 IAmb IAmb 01 41 08.9
comp=Z,13nm,0.7s
SNOW Snow King Moun 40.08 330 P **P** **01 41 07.0 -0.1**
LOHW Long Hollow 40.12 330 IAmb IAmb 01 41 10.0
comp=Z,21nm,2.0s
ELK Elko 40.62 324 P **P** **01 41 11.3 -0.3**
ULM Lac du Bonnet 40.91 349 P **P** **01 41 11.6 -2.0**
comp=Z,31nm,0.9s,baz=159,slow=8.8,SNR=20
ULM pP **pP** **01 41 31.4 -1.5**
comp=Z,14nm,1.0s,baz=168,slow=7.2,SNR=3.4
ULM LR LR 01 59 34.8
comp=Z,54nm,19.2s,baz=154,slow=38
comp=Z,31nm,0.9s
NV11 Mina Array Sit 41.03 319 IAmb IAmb 01 41 19.1
comp=Z,13nm,0.8s
NVAR Mina Array Bea 41.12 319 P **P** **01 41 15.9 +0.1**
comp=Z,10nm,0.7s,baz=135,slow=7.3,SNR=46
NVAR PcP **PcP** **01 43 15.0 +1.0**
comp=Z,4.2nm,0.7s,baz=140,slow=4.8,SNR=11
NVAR ScP **ScP** **01 46 58.0 +1.2**
comp=Z,0.7nm,0.6s,baz=136,slow=4.5,SNR=5.6
NVAR LR LR 02 01 06.8
comp=Z,67nm,18.7s,baz=131,slow=40
comp=Z,10nm,0.7s
LHV Little Huntoon 41.16 318 IAmb IAmb 01 41 20.0
comp=Z,11nm,0.8s
MDPB Devils Postpil 41.20 317 IAmb IAmb 01 41 20.5
comp=Z,8.1nm,0.8s
AC05 El Transito 41.30 161 P **P** **01 41 18.6 +1.4**
LCO Las Campanas 41.32 161 P **P** **01 41 19.4 +1.9**
LCO IAmb IAmb 01 41 21.0
comp=Z,20nm,1.1s
LCO Las Campanas 41.32 161 P **P** **01 41 19.8 +2.3**
ARAG Araguaiana, MT 41.54 128 *e*P **P** **01 41 19.5 +0.4**
AQDB Aquidauana 41.79 137 P **P** **01 41 21.2 +1.0**
AQDB IAmb IAmb 01 41 22.8
comp=Z,21nm,0.9s
WAKR Walker 41.91 318 P **P** **01 41 22.9 +0.7**
WAKR IAmb IAmb 01 41 25.9
comp=Z,8.9nm,0.8s
HLID Hailey 42.02 327 P **P** **01 41 22.4 -0.6**
BOZ Bozeman (W) 42.09 332 IAmb IAmb 01 41 26.2
comp=Z,26nm,1.9s
CMB Columbia Colle 42.29 317 P **P** **01 41 25.8 +0.6**
PNTR Pine Nut 42.33 319 P **P** **01 41 26.3 +0.6**
CO03 El Pedregal 43.03 162 IAmb IAmb 01 41 34.6
comp=Z,22nm,1.1s
AMBA Amambai (Brazi 43.98 139 *e*P **P** **01 41 39.6 +0.8**
RPN Rapa Nui 44.22 212 LR LR 01 54 01.5
comp=Z,16nm,20.9s,baz=42,slow=28
BDFB Brasilia 44.51 125 P **P** **01 41 44.3 +1.0**
comp=Z,11nm,0.8s,baz=308,slow=6.8
BDFB PcP **PcP** **01 43 26.1 +0.7**
baz=308,slow=2.7
comp=Z,11nm,0.8s
BDFB Brasilia 44.51 125 P **P** **01 41 43.6 +0.3**
BDFB IAmb IAmb 01 41 45.4
comp=Z,22nm,1.1s
CFA Coronel Fontan 44.52 160 P **P** **01 41 45.2 +2.2**
comp=Z,2.9nm,0.6s,baz=342,slow=7.9,SNR=14
CFA pP **pP** **01 42 03.2 +0.6**
comp=Z,1.3nm,0.5s,baz=312,slow=8.2,SNR=2.4
CFA PcP **PcP** **01 43 25.6 +0.4**
comp=Z,1.0nm,0.7s,baz=34,slow=4.5,SNR=1.6
CFA ScP **ScP** **01 47 11.8 +1.5**
comp=Z,1.4nm,0.9s,baz=350,slow=8.5,SNR=4.7
comp=Z,2.9nm,0.6s
CPUP Villa Florida 45.06 144 P **P** **01 41 47.8 +0.4**
comp=Z,1.5nm,0.9s,baz=276,slow=10,SNR=8.5
CPUP PcP **PcP** **01 43 26.2 -0.8**
comp=Z,0.6nm,0.7s,baz=270,slow=5.1,SNR=3.8
CPUP LR LR 02 00 45.1
comp=Z,26nm,18.8s,baz=187,slow=36
comp=Z,1.5nm,0.9s
CPUP Villa Florida 45.06 144 P **P** **01 41 47.4 +0.1**
CPUP Villa Florida 45.06 144 P **P** **01 41 48.2 +0.8**
MT02 Curacav 45.17 164 IAmb IAmb 01 41 53.1
comp=Z,10nm,1.1s
YBH Yreka Blue Hor 45.76 320 LR LR 02 06 18.1
comp=Z,4.9nm,18.7s,baz=101,slow=43
L04D Klamath Falls 45.76 321 IAmb IAmb 01 41 54.0
comp=Z,31nm,1.4s
MT13 San Alfonso 45.87 163 IAmb IAmb 01 41 58.1
comp=Z,19nm,0.8s
BO04 La Punta 46.01 164 IAmb IAmb 01 41 58.4
comp=Z,23nm,1.1s
BO01 Tunca 46.26 164 P **P** **01 41 57.9 +1.3**
BO01 IAmb IAmb 01 41 59.7
comp=Z,26nm,1.3s
FFC Flin Flon 46.41 346 P **P** **01 41 57.9 +0.2**
SCHQ Schefferville 46.64 14 P **P** **01 41 58.0 -1.5**
comp=Z,12nm,0.7s,baz=220,slow=5.7,SNR=22
SCHQ pP **pP** **01 42 18.4 -0.7**
comp=Z,6.8nm,0.7s,baz=230,slow=7.3,SNR=2.4
SCHQ PcP **PcP** **01 43 30.9 -1.2**
comp=Z,4.1nm,0.6s,baz=218,slow=3.7,SNR=4.3
SCHQ LR LR 02 02 09.1
comp=Z,117nm,18.5s,baz=216,slow=37
comp=Z,12nm,0.7s
BO02 Sierra Bellavi 46.72 164 IAmb IAmb 01 42 03.4
comp=Z,14nm,1.1s
HOOD Mount Hood Mea 47.13 325 IAmb IAmb 01 42 05.8
comp=Z,20nm,1.1s
PSAL Palomas, Salto 48.64 149 *e*P **P** **01 42 15.3 +0.2**
CPSB Cacapava Do Su 50.37 144 *e*P **P** **01 42 29.0 +0.6**
PLTB Pedras Altas 51.30 146 *e*P **P** **01 42 36.4 +1.0**
SJMB Sao Joao De Ma 51.66 124 *e*P **P** **01 42 39.2 +0.9**
GUA01 Guaratinga, BA 51.79 121 *e*P **P** **01 42 39.3 +0.1**
PLCA Paso Flores 52.41 166 P **P** **01 42 45.1 +1.6**
comp=Z,19nm,0.7s,baz=338,slow=8.4,SNR=42
PLCA PcP **PcP** **01 43 53.7 +0.3**
comp=Z,2.0nm,0.7s,baz=299,slow=2.1,SNR=1.2
PLCA LR LR 02 00 31.0
comp=Z,49nm,20.8s,baz=351,slow=31
comp=Z,19nm,0.7s
PLCA Paso Flores 52.41 166 P **P** **01 42 44.0 +0.5**
PLCA Paso Flores 52.41 166 *e*P **P** **01 42 42.4 -1.1**
PLCA Paso Flores 52.41 166 P **P** **01 42 45.4 +1.9**
RIB01 Linhares ES 52.61 124 *e*P **P** **01 42 45.5 +0.1**
FRB Frobisher Bay 54.60 9 LR LR 02 05 43.8
comp=Z,175nm,18.2s,baz=205,slow=35
YKA Yellowknife Ar 56.43 344 P **P** **01 43 11.0 -1.3**
comp=Z,3.4nm,0.9s,baz=122,slow=6.6,SNR=17
YKA pP **pP** **01 43 31.5 -1.1**
comp=Z,3.7nm,0.9s,baz=141,slow=6.6,SNR=6.0
YKA PcP **PcP** **01 44 08.1 -0.2**
comp=Z,0.6nm,0.6s,baz=154,slow=3.9,SNR=4.6
comp=Z,3.4nm,0.9s
YKA Yellowknife Ar 56.43 344 P **P** **01 43 09.9 -2.4**
YKAW3 Yellowknife Wh 56.48 344 IAmb IAmb 01 43 12.3
comp=Z,5.8nm,0.8s
COYC Coyhaique 56.74 169 P **P** **01 43 16.7 +2.0**
NUUK Nuuk 58.60 16 *i* P **P** **01 43 25.6 -1.8**
NUUK IAmb IAmb 01 43 28.0
comp=Z,23nm,1.0s
SFJD Kangerlussuaq 61.09 15 LR LR 02 09 50.5
comp=Z,165nm,20.8s,baz=311,slow=36
ANGG Ammassalik, Gr 63.91 20 *i* P **P** **01 44 00.5 -2.9**
ANGG IAmb IAmb 01 44 01.7
comp=Z,22nm,1.1s
M29M Somme Creek 64.70 335 IAmb IAmb 01 44 10.0
comp=Z,34nm,1.7s
G31M Satah River 65.52 341 P **P** **01 44 15.4 +1.6**
G31M IAmb IAmb 01 44 36.3
comp=Z,28nm,1.8s
TULEG Thule 66.79 4 *i* P **P** **01 44 19.4 -2.3**
TULEG IAmb IAmb 01 44 22.4
comp=Z,32nm,0.9s
E29M Blow River 67.48 341 IAmb IAmb 01 44 29.7
comp=Z,31nm,1.9s
H27K Steamboat Moun 67.66 338 IAmb IAmb 01 44 51.8
comp=Z,9.5nm,1.1s
J26L Joseph Creek 67.67 336 IAmb IAmb 01 44 32.0
comp=Z,5.6nm,0.7s
I26K Coal Creek Min 67.85 337 IAmb IAmb 01 44 32.4
comp=Z,7.2nm,0.9s
SUMG Summit 68.03 14 *i* P **P** **01 44 28.0 -2.1**
E28M Babbage River 68.11 341 IAmb IAmb 01 44 31.5
comp=Z,5.9nm,0.8s
ILAR Eielson Array 69.10 336 P **P** **01 44 35.3 -1.2**
comp=Z,2.4nm,0.6s,baz=124,slow=4.2,SNR=41
ILAR pP **pP** **01 44 56.0 -1.6**
comp=Z,2.0nm,1.0s,baz=110,slow=6.7,SNR=3.9
comp=Z,2.4nm,0.6s
ILAR Eielson Array 69.10 336 P **P** **01 44 34.4 -2.0**
NEEM North Greenlan 69.37 7 *i* P **P** **01 44 36.2 -2.1**
NEEM IAmb IAmb 01 44 38.6
comp=Z,34nm,0.8s
RND Reindeer 69.44 334 P **P** **01 44 37.8 -0.9**
RND IAmb IAmb 01 44 41.1
comp=Z,14nm,0.8s
I23K Minto, Yukon-K 70.22 336 IAmb IAmb 01 44 44.5
comp=Z,5.7nm,0.8s
BPAW Bear Paw Mtn. 70.56 335 IAmb IAmb 01 44 48.2
comp=Z,6.1nm,0.7s
D25K Kavik River 70.64 341 IAmb IAmb 01 44 47.7
comp=Z,12nm,0.8s
COLD Coldfoot 71.22 338 P **P** **01 44 49.1 -0.2**
COLD IAmb IAmb 01 44 51.9
comp=Z,11nm,1.2s
E23K Chandalar 71.28 339 IAmb IAmb 01 44 51.6
comp=Z,8.3nm,0.9s
L20K Farewell, AK 71.38 333 IAmb IAmb 01 44 53.4
comp=Z,20nm,1.4s
SCO Scoresbysund 71.42 18 *i* P **P** **01 44 48.4 -2.2**
SCO IAmb IAmb 01 44 50.4
comp=Z,3.5nm,0.6s
C24K Franklin Bluff 71.55 341 IAmb IAmb 01 44 52.6
comp=Z,9.2nm,0.9s
C23K Itkillik River 72.22 341 IAmb IAmb 01 44 56.6
comp=Z,7.5nm,0.9s
G21K Allakaket 72.25 337 IAmb IAmb 01 44 57.5
comp=Z,12nm,0.8s
VAL Valentia 72.38 39 P **P** **01 44 56.3 -0.3**
F21K Alatna River 72.44 338 IAmb IAmb 01 44 58.8
comp=Z,8.3nm,0.8s
IGLA Glengowla, Co 73.05 37 P **P** **01 44 59.2 -1.3**
B22K Teshekpuk Lake 73.29 341 IAmb IAmb 01 45 14.9
comp=Z,22nm,1.4s
G19K Purcell Mounta 73.57 336 IAmb IAmb 01 45 05.1
comp=Z,9.9nm,1.1s
D20K Etivluk River 73.95 339 IAmb IAmb 01 45 07.3
comp=Z,11nm,0.8s
ILTH Belurgan, Co L 74.90 37 P **P** **01 45 10.7 -0.6**
ESDC Sonseca Array 76.39 52 P **P** **01 45 19.9 -0.4**
comp=Z,7.0nm,1.0s,baz=282,slow=5.4,SNR=27
ESDC pP **pP** **01 45 41.0 -0.4**
comp=Z,5.2nm,1.1s,baz=277,slow=5.5,SNR=6.7
comp=Z,7.0nm,1.0s
ESDC Sonseca Array 76.39 52 P **P** **01 45 19.4 -0.8**
EKA Eskdalemuir Ar 76.79 35 P **P** **01 45 20.7 -1.4**
comp=Z,7.8nm,0.7s,baz=259,slow=6.2,SNR=23
EKA pP **pP** **01 45 42.4 -0.9**
comp=Z,7.1nm,0.9s,baz=278,slow=5.6,SNR=5.0
comp=Z,7.8nm,0.7s
DBIC Dimbokro 78.85 85 P **P** **01 45 34.0 -0.3**
comp=Z,13nm,1.1s,baz=260,slow=7.9,SNR=3.8
comp=Z,13nm,1.1s
DBIC Dimbokro 78.85 85 P **P** **01 45 33.5 -0.9**
DBIC IAmb IAmb 01 45 35.9
comp=Z,14nm,1.1s
DOU Dourbes 81.74 41 *d*P **P** **01 45 48.0 -1.1**
comp=Z,7.4nm,0.9s
BMRD Maredsous 81.82 40 *d*P **P** **01 45 48.4 -1.1**
comp=Z,5.6nm,0.9s
BGES Gesves 82.02 40 *d*P **P** **01 45 49.4 -1.2**
comp=Z,5.6nm,0.9s
RCHB Rochefort 82.13 40 *d*P **P** **01 45 49.5 -1.7**
comp=Z,6.4nm,1.0s
RCHB *d*pP **pP** **01 46 11.9 -0.8**
BCLA Clavier 82.15 40 *d*P **P** **01 45 50.2 -1.1**
comp=Z,5.5nm,0.8s
SPITS Spitsbergen Ar 82.27 12 P **P** **01 45 50.6 -0.8**
comp=Z,7.4nm,0.8s,baz=225,slow=1.8,SNR=7.2
comp=Z,7.4nm,0.8s
BSTI Sart Tilman 82.30 40 *d*P **P** **01 45 50.9 -1.2**
comp=Z,2.9nm,1.1s
MEM Membach 82.58 40 *d*P **P** **01 45 52.3 -1.2**
comp=Z,10nm,1.0s
MEM *d*pP **pP** **01 46 14.7 -0.3**
BHOU Houvegnez 82.61 40 *d*P **P** **01 45 53.2 -0.5**
comp=Z,7.4nm,1.2s
BHOU *d*pP **pP** **01 46 14.6 -0.6**
BTNL Ternell 82.66 40 *d*P **P** **01 45 52.8 -1.2**

	comp=Z,6.9nm,1.1s								
WLF	**Walferdange**	**82.79**	**41**	P		**P**		**01 45 53.4**	**-1.2**
WLF				IAmb		IAmb		01 45 55.2	
	comp=Z,21nm,1.0s								
WLF	**Walferdange**	**82.79**	**41**	*d*P		**P**		**01 45 53.8**	**-0.8**
	comp=Z,13nm,1.1s								
WLF				*d*pP		**pP**		**01 46 16.0**	**-0.1**
WLF	**Walferdange**	**82.79**	**41**	*e*P		**P**		**01 45 54.3**	**-0.4**
	comp=Z,22nm,1.0s,baz=282,slow=5.0								
ADK	**Adak**	**83.24**	**321**	P		**P**		**01 45 56.5**	**-0.4**
ECH	**Echery**	**83.64**	**42**	IAmb		IAmb		01 45 58.8	
	comp=Z,9.2nm,0.9s								
NOA	**NORSAR Array B**	**83.93**	**29**	P		**P**		**01 45 59.4**	**-1.0**
	comp=Z,5.5nm,1.1s,baz=278,slow=5.0,SNR=9.7								
NOA				pP		**pP**		**01 46 21.7**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=278,slow=5.1,SNR=4.9								
	comp=Z,5.5nm,1.1s								
TNS	**Taunus Mts**	**84.18**	**40**	*e*P		**P**		**01 46 00.9**	**-1.0**
	comp=Z,11nm,0.9s,baz=282,slow=5.0								
TORD	**Torodi Ar. Bea**	**84.21**	**78**	P		**P**		**01 46 01.5**	**-1.1**
	comp=Z,4.0nm,0.3s,baz=289,slow=4.4,SNR=7.0								
	comp=Z,4.0nm,0.3s								
STU	**Stuttgart**	**84.89**	**42**	*e*P		**P**		**01 46 04.9**	**-0.5**
	comp=Z,40nm,1.0s,baz=282,slow=5.0								
CLZ	**Clausthal**	**85.10**	**38**	*e*P		**P**		**01 46 05.7**	**-0.7**
	comp=Z,16nm,1.0s,baz=282,slow=5.0								
HFS	**Hagfors**	**85.31**	**30**	P		**P**		**01 46 05.6**	**-1.6**
	comp=Z,1.8nm,0.4s,baz=236,slow=1.6,SNR=23								
HFS				LR		LR		02 22 58.5	
	comp=Z,120nm,18.9s,baz=66,slow=35								
	comp=Z,1.8nm,0.4s								
TUE	**Stuetta**	**85.39**	**44**	P		**P**		**01 46 07.9**	**-0.3**
TUE				IAmb		IAmb		01 46 08.4	
	comp=Z,11nm,0.8s								
FLTG	**Flechtingen**	**85.54**	**38**	*e*P		**P**		**01 46 07.5**	**-1.0**
	comp=Z,9.3nm,0.9s,baz=282,slow=5.0								
DAVA	**Damuels**	**85.60**	**43**	*e*P		**P**		**01 46 08.7**	**-0.5**
	comp=Z,15nm,1.1s								
UBR	**Ueberruh**	**85.68**	**42**	*e*P		**P**		**01 46 08.9**	**-0.5**
	comp=Z,11nm,0.9s,baz=282,slow=5.0								
FUORN	**Ofenpass-Fuorn**	**85.98**	**44**	IAmb		IAmb		01 46 11.4	
	comp=Z,11nm,0.8s								
NEUB	**Neuenburg**	**86.08**	**39**	*e*P		**P**		**01 46 10.3**	**-0.9**
	comp=Z,7.5nm,0.7s,baz=282,slow=5.0								
MOX	**Moxa**	**86.10**	**39**	*e*P		**P**		**01 46 10.6**	**-0.8**
	comp=Z,7.1nm,0.9s,baz=282,slow=5.0								
RETA	**Reutte**	**86.15**	**43**	*e*P		**P**		**01 46 11.1**	**-0.7**
	comp=Z,6.0nm,0.9s								
FETA	**Feichten**	**86.22**	**43**	*e*P		**P**		**01 46 11.8**	**-0.4**
	comp=Z,9.5nm,0.8s								
TAM	**Tamanrasset**	**86.26**	**68**	IAmb		IAmb		01 46 13.7	
	comp=Z,7.0nm,0.9s								
MOTA	**Moosalm**	**86.41**	**43**	*e*P		**P**		**01 46 12.3**	**-0.9**
	comp=Z,2.7nm,0.7s								
PLN	**Plauen**	**86.47**	**39**	*e*P		**P**		**01 46 12.5**	**-0.7**
	comp=Z,6.0nm,1.0s,baz=282,slow=5.0								
SQTA	**Sankt Quirin**	**86.50**	**43**	*e*P		**P**		**01 46 13.0**	**-0.6**
	comp=Z,4.3nm,1.2s								
MANZ	**Manzenberg**	**86.54**	**40**	*e*P		**P**		**01 46 12.9**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=282,slow=5.0								
ROTZ	**Rotzenmuhle**	**86.64**	**40**	*e*P		**P**		**01 46 13.4**	**-0.7**
	comp=Z,2.1nm,1.1s,baz=282,slow=5.0								
TANN	**Tannenbergstha**	**86.67**	**39**	*e*P		**P**		**01 46 13.7**	**-0.5**
	comp=Z,15nm,1.0s,baz=282,slow=5.0								
WATA	**Walderalm**	**86.73**	**43**	*e*P		**P**		**01 46 14.6**	**-0.1**
	comp=Z,2.1nm,0.7s								
WTTA	**Wattenberg**	**86.78**	**43**	*e*P		**P**		**01 46 14.2**	**-0.8**
	comp=Z,3.1nm,0.9s								
CLL	**Collm**	**86.82**	**39**	P		**P**		**01 46 13.5**	**-1.3**
CLL				IAmb		IAmb		01 46 14.8	
	comp=Z,8.7nm,0.8s								
CLL	**Collm**	**86.82**	**39**	*e*P		**P**		**01 46 14.0**	**-0.9**
	comp=Z,9.3nm,0.8s,baz=282,slow=5.0								
CLL	**Collm**	**86.82**	**39**	⇓*i*P		**P**		**01 46 14.1**	**-0.7**
	comp=Z,12nm,0.9s								
CLL				*i* pP		**pP**		**01 46 36.3**	**-0.2**
CLL				AMS		AMS		02 19 00.0	
	comp=N,100nm,19.4s								
CLL				AMS		AMS		02 19 00.0	
	comp=E,100nm,21.3s								
CTI	**Castel Tesino**	**87.03**	**44**	P		**P**		**01 46 14.9**	**-1.2**
WET	**Wettzell**	**87.20**	**41**	*e*P		**P**		**01 46 16.5**	**-0.4**
	comp=Z,11nm,1.0s,baz=282,slow=5.0								
HSKC	**Hora Svate Kat**	**87.23**	**39**	*e*P		**P**		**01 46 16.5**	**-0.4**
KEST	**Kesra**	**87.31**	**54**	P		**P**		**01 46 17.1**	**-0.6**
	comp=E,11nm,0.9s,baz=342,slow=4.2,SNR=6.4								
	comp=E,11nm,0.9s								
LESA	**Schwarzleotal**	**87.44**	**42**	*e*P		**P**		**01 46 17.2**	**-0.9**
	comp=E,3.3nm,0.7s								
ABTA	**Abfaltersbach**	**87.47**	**43**	*e*P		**P**		**01 46 17.7**	**-0.6**
	comp=E,8.5nm,0.8s								
BRG	**Berggiesshubel**	**87.49**	**39**	*e*P		**P**		**01 46 17.4**	**-0.7**
	comp=E,7.7nm,1.3s,baz=282,slow=5.0								
KHC	**Kasperske Hory**	**87.66**	**41**	*e*P		**P**		**01 46 18.5**	**-0.5**
GEC2	**GERESS Array S**	**87.80**	**41**	*e*P		**P**		**01 46 18.6**	**-1.2**
	comp=E,4.7nm,0.9s,baz=282,slow=5.0								
GERES	**GERESS Array B**	**87.80**	**41**	P		**P**		**01 46 18.7**	**-1.1**
	comp=E,2.2nm,0.8s,baz=298,slow=2.9,SNR=13								
	comp=E,2.2nm,0.8s								
KBA	**Koelnbreinsper**	**87.96**	**43**	*e*P		**P**		**01 46 19.9**	**-0.8**
	comp=E,1.8nm,0.7s								
BIOA	**Bad Ischl, Aus**	**88.02**	**42**	*e*P		**P**		**01 46 19.9**	**-0.8**
	comp=E,3.6nm,1.1s								
PRU	**Pruhonice**	**88.07**	**40**	*e*P		**P**		**01 46 20.2**	**-0.7**
MYKA	**Terra Mystica**	**88.26**	**43**	*e*P		**P**		**01 46 21.3**	**-0.7**
	comp=E,5.5nm,0.8s								
MOA	**Molln**	**88.39**	**42**	*e*P		**P**		**01 46 21.6**	**-0.9**
	comp=E,2.4nm,0.8s								
TREC	**Trest**	**88.83**	**40**	*e*P		**P**		**01 46 24.1**	**-0.4**
UPC	**Upice**	**88.86**	**39**	*e*P		**P**		**01 46 24.5**	**-0.1**
CHVC	**Chvalec**	**88.86**	**39**	*e*P		**P**		**01 46 24.2**	**-0.5**
OBKA	**Obir**	**88.89**	**43**	*e*P		**P**		**01 46 23.9**	**-1.1**
	comp=E,3.0nm,0.9s								
OSTC	**Ostas**	**88.97**	**39**	*e*P		**P**		**01 46 24.8**	**-0.4**
DPC	**Dobruska-Polom**	**89.09**	**39**	*e*P		**P**		**01 46 25.7**	**-0.1**
SOKA	**Soboth**	**89.18**	**43**	*e*P		**P**		**01 46 25.2**	**-1.1**
	comp=E,1.3nm,0.7s								
CONA	**Conrad Observa**	**89.42**	**41**	*e*P		**P**		**01 46 26.4**	**-1.0**
	comp=E,3.6nm,1.3s								
KRUC	**Moravsky**	**89.47**	**40**	*e*P		**P**		**01 46 26.9**	**-0.6**
VRAC	**Vranov**	**89.53**	**40**	*e*P		**P**		**01 46 27.6**	**-0.2**
RONA	**Rosalia, Austr**	**89.76**	**42**	*e*P		**P**		**01 46 28.4**	**-0.5**
	comp=E,1.5nm,0.7s								
MORC	**Moravsky Berou**	**90.00**	**39**	*e*P		**P**		**01 46 29.9**	**-0.1**
FINES	**FINESS Array B**	**90.69**	**27**	P		**P**		**01 46 31.4**	**-1.5**
	comp=E,1.3nm,0.5s,baz=276,slow=3.9,SNR=8.8								
	comp=E,1.3nm,0.5s								
FINES	**FINESS Array B**	**90.69**	**27**	P		**P**		**01 46 31.2**	**-1.7**
LANS	**Liptovska Anna**	**91.38**	**40**	*e*P		**P**		**01 46 37.2**	**+0.7**
KURK	**Kurchatov**	**117.54**	**12**			**PKPdf**		**01 52 14.6**	**-1.3**
KURBB	**Kurchatov Arra**	**117.61**	**12**	PKP		**PKPdf**		**01 52 15.1**	**-0.9**
	comp=E,0.4nm,0.4s,baz=331,slow=1.8,SNR=5.0								
SONM	**Songino Array**	**121.32**	**351**	PKP		**PKPdf**		**01 52 21.8**	**-1.7**
	comp=E,0.6nm,0.3s,baz=14,slow=1.7,SNR=3.9								
MKAR	**Makanchi Array**	**122.00**	**11**	PKP		**PKPdf**		**01 52 23.8**	**-0.9**
	comp=E,0.6nm,0.8s,baz=304,slow=3.2,SNR=6.1								
MKAR	**Makanchi Array**	**122.00**	**11**	PKPdf		**PKPdf**		**01 52 23.1**	**-1.6**
KSRS	**Korea Array**	**123.54**	**329**	PKP		**PKPdf**		**01 52 27.3**	**-0.6**
	comp=E,1.8nm,0.6s,baz=0.6,slow=2.9,SNR=3.0								
WMQ	**Urumqi**	**125.71**	**7**	*e*PKP		**PKiKP**		**01 52 32.6**	**+0.2**
WMQ				LR		LR			
	comp=Z,120nm,24.3s								
GAR	**Garm**	**125.72**	**24**	PKPdf		**PKPdf**		**01 52 31.8**	**-0.4**
HHC	**Hu-ho-hao-te**	**126.96**	**345**	*e*P		**PKPdf**		**01 52 33.0**	**-1.5**
BTO	**Baotou**	**127.58**	**346**	*e*PKP		**PKPdf**		**01 52 33.4**	**-2.3**
BTO				PP		**PP**		**01 54 35.1**	**-0.9**
BTO	**Baotou**	**127.58**	**346**	SS		SS		02 11 37.9	-2.2
BTO				pmax		pmax			
	comp=Z,11nm,0.6s								
BTO				pmax		pmax			
	comp=Z,640nm,6.9s								
BTO				LR		LR			
	comp=N,420nm,5.9s								
BTO				LR		LR			
	comp=E,340nm,5.9s								
BTO				LR		LR			
	comp=E,160nm,4.7s								
STKA	**Stephens Creek**	**132.22**	**236**	PKP		**PKPdf**		**01 52 44.9**	**+0.4**
	comp=Z,2.6nm,0.4s,baz=132,slow=9.0,SNR=8.4								
NJ2	**Nanjing**	**132.27**	**333**	*e*P		**PKiKP**		**01 52 46.3**	**+0.6**
NJ2				pmax		pmax			
	comp=E,14nm,0.6s								
LZDM	**Lanzhou Array**	**133.34**	**351**	PKP		**PKPdf**		**01 52 46.6**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=95,slow=3.6,SNR=1.4								
ASAR	**Alice Springs**	**140.92**	**245**	PKhKP		PKPpre		01 52 55.0	
	comp=Z,3.1nm,0.6s,baz=113,slow=3.4,SNR=34								
ASAR				PKP		**PKPdf**		**01 53 01.2**	**+0.3**
	comp=Z,5.3nm,0.6s,baz=95,slow=2.0,SNR=20								
ASAR				SKPbc		**SKPbc**		**01 56 31.2**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=107,slow=2.6,SNR=8.8								
ASAR	**Alice Springs**	**140.92**	**245**	PKPpre		PKPpre		01 52 54.5	
WRA	**Warramunga Arr**	**141.22**	**251**	PKhKP		PKPpre		01 52 56.0	
	comp=Z,3.4nm,0.6s,baz=106,slow=2.7,SNR=34								
WRA				PKP		**PKPdf**		**01 53 02.1**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=96,slow=2.6,SNR=4.9								
WRA				SKPbc		**SKPbc**		**01 56 31.9**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=100,slow=2.3,SNR=5.9								
WRA	**Warramunga Arr**	**141.22**	**251**	PKPpre		PKPpre		01 52 55.8	
PZH	**PanZhiHua**	**142.91**	**350**	PKP		**PKPdf**		**01 53 04.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**151.22**	**353**	PKP		**PKPdf**		**01 53 17.1**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=316,slow=3.1,SNR=5.8								
CMAR				PKPbc		**PKPbc**		**01 53 23.8**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=340,slow=3.1,SNR=21								
CMAR				PKPab		**PKPab**		**01 53 31.1**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=341,slow=3.3,SNR=5.6								
CMAR	**Chiang Mai Arr**	**151.22**	**353**			**PKPdf**		**01 53 17.7**	**-0.7**
CMAR						**PKPbc**		**01 53 23.5**	**-0.9**

*IDC **25** 01:38:21.8±0.8,37.05N×71.69E,h0km,mb3.9/17, mbtmp4.0/23,ML3.4/6,Error ellipse: s-maj=16.6km s-min=14.3km az=22.0*
*NNC **25** 01:38:23.4±2.0,37.12N×71.30E,h0km,mb4.2,mpv4.1, Error ellipse: s-maj=18.0km s-min=16.2km az=61.0*
*NEIC **25** 01:38:25.2±1.7,37.33N±0.03×71.71E±0.06,h10km±1km, mb4.4/12,Error ellipse: s-maj=8.5km s-min=4.8km az=78.0*
*BJI **25** 01:38:25.2,37.36N×71.83E,h10km,mb4.4/12,ML3.9/3*

ISC 25 01:38:24.7±0.5,37.20N±0.05×71.55E±0.05,h10km,n89, σ2$07/94,mb4.1/24,2C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.04**	**332**	Pn	**Pn**	**01 39 00.2**	**+0.9**
DRK	**Karamyk**	**2.28**	**5**	Pn	**Pn**	**01 39 02.8**	**0.0**
CHGR	**Chuyangaron**	**2.38**	**308**	Pn	**Pn**	**01 39 05.0**	**+1.0**
KBL	**Kabul**	**3.34**	**218**	Pn	**Pn**	**01 39 20.0**	**+2.7**
NIL	**Nilore**	**3.81**	**158**	Pn	**Pn**	**01 39 24.8**	**+1.3**
KSH	**Kashi**	**4.18**	**55**	Pg	**Pn**	**01 39 25.8**	**-2.8**
KSH				smax	smax		
	comp=N,650nm,1.4s						
KSH				smax	smax		
	comp=E,130nm,0.9s						
JMU	**Jammu**	**5.25**	**147**	*e*P	**Pn**	**01 39 44.7**	**+1.4**
JMU				*e*S	**Sn**	**01 40 43.6**	**-0.2**
JMU				IAML		01 41 06.2	
	comp=E,746nm,0.9s						
JMU				IAML		01 41 11.6	
	comp=N,678nm,1.0s						
ALCI	**Alchi Leh**	**5.47**	**121**	*e*P	**Pn**	**01 39 43.3**	**-3.3**
UCH	**Uchtor**	**5.52**	**24**	P	**Pn**	**01 39 49.3**	**+2.0**
	SNR=12						
EKS2	**Erkin-Say**	**5.72**	**17**	P	Pn	01 39 54.1	+4.4
	SNR=10						
AAK	**Ala-Archa**	**5.88**	**22**	Pn	**Pn**	**01 39 54.4**	**+2.3**
	comp=N,1.6nm,0.3s,baz=202,slow=8.4,SNR=18						
AAK				Sn	**Sn**	**01 41 04.0**	**+4.3**
	comp=N,1.4nm,0.3s,baz=207,slow=11,SNR=3.7						
	comp=N,14nm,0.5s						
AAK	**Ala-Archa**	**5.88**	**22**	Pn	**Pn**	**01 39 53.1**	**+1.0**
AAK	**Ala-Archa**	**5.88**	**22**	P	**Pn**	**01 39 54.8**	**+2.6**
	SNR=11						
AAK	**Ala-Archa**	**5.88**	**22**	⇑Pn	**Pn**	**01 39 54.5**	**+2.4**
	comp=N,22nm,0.9s						
AAK				⇑Sn	Sb	01 41 05.6	-12
	comp=N,36nm,0.9s						
KK31	**Karatay Array**	**5.95**	**353**	Pn	**Pn**	**01 39 53.7**	**+0.8**
KK31	**Karatay Array**	**5.95**	**353**	Pn	**Pn**	**01 39 54.3**	**+1.4**
	comp=N,7.3nm,0.4s,baz=177,slow=12,SNR=177						
KK31				⇓Sn	**Sn**	**01 41 03.8**	**+2.7**
	comp=N,35nm,0.8s,baz=188,slow=17,SNR=5.6						
KK31				⇓Lg	Lg	01 41 32.7	
	comp=N,44nm,0.8s,baz=188,slow=17,SNR=5.6						
KKAR	**Karatay Array**	**5.95**	**353**	Pn	**Pn**	**01 39 53.5**	**+0.6**
CHMS	**Chumysh**	**6.29**	**22**	P	**Pn**	**01 39 60.0**	**+2.4**
	SNR=5.3						
DHRM	**DHARAMSHALA**	**6.30**	**140**	*e*P	**Pn**	**01 39 59.9**	**+2.0**
DHRM				*e*S	**Sn**	**01 41 09.9**	**-0.2**
DHRM				IAML		01 41 18.5	
	comp=N,202nm,0.6s						
DHRM				IAML		01 41 20.4	
	comp=E,356nm,0.8s						
USP	**Ospenovka**	**6.47**	**20**	P	**Pn**	**01 40 02.0**	**+2.0**
	SNR=8.2						
TKM2	**Tokmak 2**	**6.50**	**27**	P	**Pn**	**01 40 02.7**	**+2.0**
	SNR=14						
KDJ	**Kajisay**	**6.56**	**40**		**Pn**	**01 40 02.1**	**+0.7**
SGDS	**Sogindy**	**6.67**	**20**	P	**Pn**	**01 40 04.6**	**+1.8**
	comp=E,8.2nm,0.6s						
KST	**Kastek**	**6.74**	**29**	Lg	Lg	01 41 29.4	
	comp=E,29nm,0.6s						
DGS	**Degeres**	**6.84**	**27**	P	**Pn**	**01 40 07.7**	**+2.4**
	comp=E,11nm,0.8s						
MTBS	**Maitube**	**7.00**	**31**	P	**Pn**	**01 40 09.7**	**+2.3**
	comp=E,11nm,0.7s						
BHK	**Bhakra**	**7.04**	**144**	*e*P	**Pn**	**01 40 12.2**	**+4.4**
BHK				*e*S	**Sn**	**01 41 29.8**	**+1.9**
BHK				IAML		01 41 33.0	
	comp=N,2μm,0.4s						
WUS	**Wushi**	**7.17**	**54**	Pn	**Pn**	**01 40 11.3**	**+1.5**
SMLA	**Simla**	**7.64**	**141**	*e*P	**Pn**	**01 40 14.9**	**-1.2**
SMLA				*e*S	**Sn**	**01 41 37.2**	**-5.5**
SMLA				IAML		01 41 48.0	
	comp=N,84nm,0.5s						
SMLA				IAML		01 41 49.0	
	comp=E,80nm,0.4s						
HRA	**Herat**	**8.06**	**252**	Pn	**Pn**	**01 40 23.8**	**+1.7**
MAKZ	**Makanchi**	**12.33**	**36**	Pn	**Pn**	**01 41 19.4**	**-1.0**
MK31	**Makanchi Array**	**12.47**	**36**	P	**Pn**	**01 41 21.6**	**-0.6**
	comp=E,2.2nm,0.8s,baz=220,slow=11,SNR=7.0						
MKAR	**Makanchi Array**	**12.47**	**36**	Pn	**Pn**	**01 41 22.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=225,slow=14,SNR=6.4						
MKAR				Lg	Lg	01 44 54.3	
	baz=210,slow=28						
	comp=E,2.2nm,0.8s						
MKAR	**Makanchi Array**	**12.47**	**36**	Pn	**Pn**	**01 41 22.1**	**-0.1**
UDPR	**Udaipur**	**12.72**	**171**	*e*S	Sn	01 43 40.2	-7.2
WMQ	**Urumqi**	**13.94**	**57**	*e*P	**Pn**	**01 41 44.1**	**+1.7**
KURBB	**Kurchatov Arra**	**14.32**	**18**	Pn	**Pn**	**01 41 45.2**	**-2.2**
	comp=E,0.1nm,0.3s,baz=211,slow=12,SNR=7.5						
KURBB				Lg	Lg	01 45 51.8	
	baz=204,slow=29,SNR=5.2						
	comp=E,0.4nm,0.2s						
KURK	**Kurchatov**	**14.43**	**18**	Pn	**Pn**	**01 41 49.9**	**+1.0**
AB31	**Akbulak array**	**14.70**	**329**	Pn	**Pn**	**01 41 50.7**	**-1.9**
AB31	**Akbulak array**	**14.70**	**329**	P	**Pn**	**01 41 50.9**	**-1.8**
	comp=E,4.2nm,0.8s,baz=133,slow=15,SNR=73						
ABKAR	**Akbulak array**	**14.70**	**329**	Pn	**Pn**	**01 41 51.5**	**-1.1**
BHPL	**Bhopal**	**14.80**	**158**	*e*P	**Pn**	**01 41 56.1**	**+1.8**
BHPL				*ex*	x	01 44 30.1	
BVA0	**Borovoye Array**	**15.85**	**357**	P	**Pn**	**01 42 08.5**	**+0.8**
	comp=E,0.2nm,0.8s,baz=142,slow=9.6,SNR=3.6						
BVAR	**Borovoye Array**	**15.85**	**357**	Pn	**Pn**	**01 42 04.1**	**-3.7**
	baz=144,slow=10,SNR=5.1						
BVAR				Sn	Sn	01 44 51.0	-12
	baz=165,slow=28,SNR=2.5						
BVAR				Lg	Lg	01 46 42.0	
	baz=164,slow=27,SNR=2.2						
	comp=E,1.5nm,0.8s						
AKTO	**Aktyubinsk**	**16.41**	**328**	Pn	**Pn**	**01 42 13.8**	**-1.2**
	comp=E,1.1nm,0.3s,baz=130,slow=7.6,SNR=22						
AKTO				Sn	**Sn**	**01 45 06.9**	**-10**
	comp=E,0.2nm,0.3s,baz=128,slow=17,SNR=4.5						
AKTO				Lg	Lg	01 47 07.4	
	comp=E,0.1nm,0.3s,baz=200,slow=16,SNR=0.8						
	comp=E,1.2nm,0.3s						
AKTO	**Aktyubinsk**	**16.41**	**328**	⇓P	**Pn**	**01 42 16.1**	**+1.1**
	comp=E,12nm,1.2s						
ZAA0	**Zalesovo Array**	**19.10**	**25**		**P**	**01 42 45.2**	**-2.2**
ZALV	**Zalesovo Beam**	**19.10**	**25**	P	**P**	**01 42 45.8**	**-1.6**
	comp=E,1.0nm,0.3s,baz=217,slow=10,SNR=20						
	comp=E,7.6nm,0.6s						
ZALV	**Zalesovo Beam**	**19.10**	**25**	P	**P**	**01 42 45.5**	**-1.9**
GNI	**Garni**	**21.11**	**286**	P	**P**	**01 43 10.6**	**+1.0**
	comp=E,11nm,0.8s,baz=24,slow=12,SNR=6.9						
	comp=E,11nm,0.8s						
GNI	**Garni**	**21.11**	**286**	P	**P**	**01 43 11.3**	**+1.7**
GNI				IAmb	IAmb	01 43 24.9	
	comp=Z,14nm,0.8s						
ARTI	**Arti**	**21.13**	**339**	P	**P**	**01 43 09.1**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=151,slow=13,SNR=3.5						
ARTI				S	**S**	**01 47 04.0**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=205,slow=23,SNR=1.5						
ARTI				Lg	Lg	01 49 33.7	
	comp=Z,0.1nm,0.3s,baz=238,slow=19,SNR=1.2						
	comp=Z,1.6nm,0.5s						
ARTI	**Arti**	**21.13**	**339**	P	**P**	**01 43 11.2**	**+1.7**
ARTI				IAmb	IAmb	01 43 21.4	
	comp=Z,17nm,1.4s						
GTA	**Gaotai**	**22.26**	**76**	*e*P	**P**	**01 43 22.5**	**+0.6**
GTA				pP	pP	01 43 25.4	-0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BELG	**Belogornoye**	**22.63**	**320**	P	**P**	**01 43 27.1**	**+1.5**
	comp=Z,19nm,1.0s,baz=123,slow=8.3,SNR=3.4						
	comp=Z,19nm,1.0s						
KBZ	**Khabaz**	**22.68**	**296**	P	**P**	**01 43 27.7**	**+1.5**
	comp=Z,6.3nm,0.9s,baz=120,slow=8.5,SNR=14						
	comp=Z,6.3nm,0.9s						
KIV	**Kislovodsk**	**22.86**	**296**	P	**P**	**01 43 28.9**	**+0.6**
SONM	**Songino Array**	**27.58**	**56**	P	**P**	**01 44 11.5**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=255,slow=10,SNR=2.9						
	comp=Z,0.5nm,0.6s						
PZH	**PanZhiHua**	**27.67**	**104**	P	**P**	**01 44 15.8**	**+2.8**
CMAR	**Chiang Mai Arr**	**30.42**	**120**	P	**P**	**01 44 35.1**	**-2.2**
	comp=Z,1.4nm,0.3s,baz=308,slow=5.3,SNR=2.1						
	comp=Z,1.4nm,0.3s						
HHC	**Hu-ho-hao-te**	**31.11**	**71**	*e*P	**P**	**01 44 45.0**	**+1.6**
HHC				pmax	pmax		
	comp=E,13nm,0.6s						
AKASG	**Malin Array Be**	**32.86**	**308**	P	**P**	**01 44 57.4**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=81,slow=6.7,SNR=2.2						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**37.15**	**325**	P	**P**	**01 45 35.1**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=122,slow=12,SNR=5.2						
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**37.15**	**325**	P	**P**	**01 45 36.9**	**+1.5**
NJ2	**Nanjing**	**38.95**	**83**	*e*P	**P**	**01 45 49.8**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ARCES	**ARCESS Array B**	**40.67**	**337**	P	**P**	**01 46 04.2**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=113,slow=8.0,SNR=7.7						
	comp=Z,2.3nm,0.7s						
ARCES	**ARCESS Array B**	**40.67**	**337**	P	**P**	**01 46 04.5**	**-0.2**
ARCES				IAmb	IAmb	01 46 24.4	
	comp=Z,18nm,1.4s						
CN2	**Changchun**	**40.90**	**63**	*e*P	**P**	**01 46 07.6**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HFS	**Hagfors**	**42.79**	**321**	P	**P**	**01 46 22.2**	**0.0**
	comp=Z,3.4nm,0.6s,baz=95,slow=11,SNR=8.0						
	comp=Z,3.4nm,0.6s						
NB2	**NORSAR Subarra**	**44.09**	**323**	P	**P**	**01 46 34.3**	**+1.5**
	comp=Z,5.9nm,1.2s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.09**	**323**	P	**P**	**01 46 32.5**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=94,slow=7.9,SNR=8.4						
	comp=Z,2.0nm,0.8s						
NC204	**NORSAR Array S**	**44.33**	**323**	P	**P**	**01 46 34.1**	**-0.6**
NC204				IAmb	IAmb	01 46 44.0	

baz=317,slow=76,SNR=22
TIXI Tiksi 34.51 353 LR LR 02 03 56.2
comp=Z,160nm,18.1s,baz=196,slow=40
MKAR Makanchi Array 43.95 301 P **P** **01 49 04.0 0.0**
0.4nm,0.7s,baz=78,slow=7.6,SNR=2.7
0.4nm,0.7s
B20K Meade River 45.11 25 P **P** **01 49 14.4 +1.6**
KURK Kurchatov 45.68 308 P **P** **01 49 16.2 -1.4**
KURK IAmb IAmb 01 49 20.7
comp=Z,1.9nm,0.7s
KURBB Kurchatov Arra 45.75 307 P **P** **01 49 17.6 -0.5**
comp=Z,1.8nm,0.9s,baz=82,slow=8.2,SNR=5.6
comp=Z,1.8nm,0.9s
BVAR Borovoye Array 50.26 312 P **P** **01 49 52.8 -0.2**
comp=Z,0.4nm,0.5s,baz=88,slow=6.5,SNR=1.8
comp=Z,0.4nm,0.5s
G27K Doyon Strip 50.64 30 P **P** **01 49 57.2 +1.6**
G27K IAmb IAmb 01 49 58.5
comp=Z,4.5nm,1.5s
ARTI Arti 56.06 318 P **P** **01 50 34.7 -0.8**
comp=Z,2.2nm,0.4s,baz=77,slow=5.3,SNR=8.4
comp=Z,2.2nm,0.4s
ARTI Arti 56.06 318 P **P** **01 50 35.6 0.0**
AB31 Akbulak array 57.65 310 P **P** **01 50 46.5 -0.5**
ABKAR Akbulak array 57.65 310 P **P** **01 50 46.2 -0.7**
WB0 Warramunga Arr 57.74 188 P **P** **01 50 48.0 +0.2**
WB0 IAmb IAmb 01 51 05.1
comp=Z,5.1nm,1.2s
WR8 Warramunga Arr 57.92 188 P **P** **01 50 48.9 -0.1**
WR8 IAmb IAmb 01 51 07.4
comp=Z,9.4nm,1.4s
WRA Warramunga Arr 57.92 188 P **P** **01 50 49.0 -0.1**
comp=Z,1.3nm,0.5s,baz=6.2,slow=7.2,SNR=4.7
comp=Z,1.3nm,0.5s
WRA Warramunga Arr 57.92 188 P **P** **01 50 49.1 +0.1**
WRA IAmb IAmb 01 50 49.9
comp=Z,0.2nm,0.9s
ASAR Alice Springs 61.65 188 P **P** **01 51 15.0 +0.4**
comp=Z,0.5nm,0.8s,baz=17,slow=6.2,SNR=4.3
comp=Z,0.5nm,0.8s
FINES FINESS Array B 68.23 332 P **P** **01 51 56.8 -0.1**
comp=Z,1.3nm,0.9s,baz=65,slow=14,SNR=1.3
comp=Z,1.3nm,0.9s
DCMP DeCamp, Califo 70.42 55 P **P** **01 52 10.2 -0.7**
DCMP IAmb IAmb 01 52 15.2
comp=Z,16nm,1.1s
HFS Hagfors 73.47 336 P **P** **01 52 28.3 -0.4**
comp=Z,1.9nm,1.0s,baz=46,slow=10,SNR=1.6
comp=Z,1.9nm,1.0s
AKASG Malin Array Be 73.84 322 P **P** **01 52 30.4 -0.7**
comp=Z,0.6nm,0.5s,baz=48,slow=7.2,SNR=2.3
comp=Z,0.6nm,0.5s
TOO Toolangi 75.14 177 P **P** **01 52 36.7 -1.9**
TOO IAmb IAmb 01 52 37.2
comp=Z,3.0nm,0.8s
PDAR Pinedale Array 76.86 46 P **P** **01 52 49.6 +0.7**
comp=Z,0.3nm,0.8s,baz=305,slow=7.4,SNR=1.6
comp=Z,0.3nm,0.8s
FUORN Ofenpass-Fuorn 85.36 329 P **P** **01 53 33.9 -0.1**
FUORN IAmb IAmb 01 53 45.9
comp=Z,7.1nm,1.1s
TXAR Lajitas Array 89.37 53 P **P** **01 53 54.6 +1.1**
comp=Z,0.2nm,0.5s,baz=307,slow=4.6,SNR=3.6
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 89.37 53 P **P** **01 53 54.7 +1.3**
H03N2 Juan Fernandez 146.78 95 T T 04 45 16.5
baz=288
H03N3 Juan Fernandez 146.80 95 T T 04 45 25.2
baz=288
H03N1 Juan Fernandez 146.80 95 T T 04 45 25.7
baz=288

*SDD **25** 01:44:30.5±1.6, 19°.19N×66°.79W, h23km±63km, MD3.5, ML2.0, MW2.5*
*RSPR **25** 01:44:31.5, 19°.15N×66°.61W, h46km±4km, MD3.1/10*
ISC 25 01:44:26.8±2.1, 19°24'N±0°.08×66°67'W±0°.05, h11km±14km, n27, σ0°88/32, 16C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.77**	**170**	⇑*e*P		**Pn**	**01 44 44.1**	**+0.5**
EMPR	**Esperanza - Ma**	**0.77**	**170**	*e*S		**Sb**	**01 44 53.7**	**+1.1**
AGPR	**Aguadilla, PR**	**0.88**	**209**	⇑*e*Pg		**Pb**	**01 44 44.7**	**+0.7**
AGPR				⇑*e*Sg		**Sb**	**01 44 55.0**	**-0.7**
AGPR				IAML			01 45 16.2	
	comp=N,76nm,0.4s							
AOPR	**Arecibo Observ**	**0.89**	**185**	⇑*e*Pg		**Pn**	**01 44 45.5**	**+0.2**
AOPR				⇑*e*Sg		**Sb**	**01 44 57.0**	**+0.8**
AOPR				IAML			01 45 05.1	
	comp=N,100nm,0.2s							
AOPR	**Arecibo Observ**	**0.89**	**185**	⇓*e*P		**Pn**	**01 44 45.4**	**+0.1**
AOPR	**Arecibo Observ**	**0.89**	**185**	*e*S		**Sb**	**01 44 56.5**	**+0.3**
ECPR	**Experimental S**	**0.96**	**162**	⇑*e*P		**Pb**	**01 44 46.0**	**+0.6**
ECPR	**Experimental S**	**0.96**	**162**	*e*S		**Sg**	**01 44 57.7**	**-0.1**
UUPR	**Utuado, UPR, P**	**0.98**	**183**	⇑*e*P		**Pn**	**01 44 47.0**	**+0.5**
UUPR	**Utuado, UPR, P**	**0.98**	**183**	*e*S		**Sb**	**01 44 58.7**	**0.0**
GCPR	**Guaynabo City**	**1.08**	**149**	⇑*e*P		**Pb**	**01 44 48.1**	**+0.7**
GCPR	**Guaynabo City**	**1.08**	**149**	*e*S		**Sg**	**01 45 00.7**	**-0.9**
LSP	**Las Mesas**	**1.13**	**201**	⇑*e*P		**Pn**	**01 44 49.1**	**+0.6**
LSP	**Las Mesas**	**1.13**	**201**	*e*S		**Sg**	**01 45 02.0**	**-1.2**
OBIP	**Obispado Ponce**	**1.19**	**177**	⇑*e*P		**Pn**	**01 44 49.7**	**+0.3**
OBIP	**Obispado Ponce**	**1.19**	**177**	*e*S		**Sb**	**01 45 03.6**	**-1.2**
SJG	**San Juan**	**1.22**	**156**	⇓*e*P		**Pg**	**01 44 50.8**	**+0.5**
SJG	**San Juan**	**1.22**	**156**	*e*S		**Sb**	**01 45 04.8**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.29**	**199**	⇑*e*Pg		**Pn**	**01 44 51.2**	**+0.4**
CRPR				⇑*e*Sg		**Sg**	**01 45 07.8**	**-0.7**
CRPR				IAML			01 45 19.2	
	comp=N,26nm,1.1s							
CRPR	**Cabo Rojo, PR**	**1.29**	**199**	⇓*e*P		**Pb**	**01 44 51.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.29**	**199**	*e*S		**Sb**	**01 45 06.7**	**-1.1**
MLPR	**Magueyes Islan**	**1.31**	**196**	*e*Pg		**Pn**	**01 44 51.3**	**+0.2**
MLPR				⇑*e*Sg		**Sb**	**01 45 07.4**	**-0.9**
MLPR				IAML			01 45 10.7	
	comp=N,7.1nm,0.6s							
MLPR	**Magueyes Islan**	**1.31**	**196**	⇑*e*P		**Pn**	**01 44 51.6**	**+0.6**
MLPR	**Magueyes Islan**	**1.31**	**196**	*e*S		**Sb**	**01 45 07.4**	**-0.9**
HUMP	**Col San Antoni**	**1.34**	**144**	⇑*e*P		**Pn**	**01 44 51.1**	**-0.3**
HUMP	**Col San Antoni**	**1.34**	**144**	*e*S		**Sb**	**01 45 06.6**	**-2.4**
HATOM	**Hato Mayor del**	**2.61**	**261**	⇑*e*Pg		**Pb**	**01 45 14.1**	**+0.6**
HATOM				*e*Sg		**Sb**	**01 45 44.1**	**-1.5**
HATOM				IAML			01 46 25.1	
	comp=N,15nm,4.2s							

*NEIC **25** 01:58:29.6±1.6, 1°.67N±0°.06×132°.9E±0°.2, h10km±1km, mb4.5/25, Error ellipse: s-maj=25.9km s-min=9.7km az=89.0*
*IDC **25** 01:58:33.6±5.3, 1°.61N×133°.03E, h47km±53km, mb3.9/12, mbtmp4.2/13, ML2.6/1, MS3.2/8, Error ellipse: s-maj=36.4km s-min=16.2km az=69.0*
ISC 25 01:58:32.4±0.6, 1°62'N±0°.09×132°9'E±0°.1, h35km, n52, σ0°80/43, mb4.5/21, MS3.0/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.56**	**188**			**Pn**	**01 59 38.2**	**-0.8**
JAY	**Jayapura**	**8.83**	**118**	LR		LR	02 03 33.7	
	comp=Z,254nm,21.0s,baz=353,slow=34							
DAV	**Davao City (W)**	**9.07**	**307**	LR		LR	02 04 15.3	
	comp=Z,101nm,21.4s,baz=104,slow=37							
KAPI	**Kappang**	**14.68**	**243**	LR		LR	02 07 13.6	
	comp=Z,58nm,19.1s,baz=64,slow=35							
KNRA	**Kununurra**	**17.67**	**193**			**P**	**02 02 37.8**	**+1.2**
KNRA				IAmb		IAmb	02 02 40.8	
	comp=Z,35nm,1.5s							
PMG	**Port Moresby**	**17.95**	**128**	P		**Pn**	**02 02 38.3**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=312,slow=11,SNR=6.9							
PMG				LR		LR	02 09 34.2	
	comp=Z,113nm,20.9s,baz=296,slow=37							
	comp=Z,4.4nm,0.3s							
PMG	**Port Moresby**	**17.95**	**128**			**P**	**02 02 39.8**	**0.0**
PMG				IAmb		IAmb	02 02 42.2	
	comp=Z,34nm,1.2s							
COEN	**Coen**	**18.54**	**147**	P		**Pn**	**02 02 47.5**	**+0.9**
SBUM	**Sibu**	**20.67**	**273**	P		Pn	02 03 11.8	-0.2
FITZ	**Fitzroy Crossi**	**20.86**	**200**	P		**P**	**02 03 12.2**	**+0.7**
	comp=Z,8.0nm,0.9s,baz=38,slow=11,SNR=12							
	comp=Z,8.0nm,0.9s							
FITZ	**Fitzroy Crossi**	**20.86**	**200**	P		**P**	**02 03 11.7**	**+0.2**
WB0	**Warramunga Arr**	**21.31**	**176**	P		**P**	**02 03 15.9**	**-0.4**
WB0				IAmb		IAmb	02 03 20.2	
	comp=Z,29nm,1.2s							
WRAB	**Tennant Creek**	**21.47**	**176**	P		**P**	**02 03 17.7**	**-0.4**
WRA	**Warramunga Arr**	**21.48**	**176**	P		**P**	**02 03 18.3**	**+0.1**
	comp=Z,5.0nm,0.7s,baz=355,slow=11,SNR=27							
	comp=Z,5.0nm,0.7s							
WRA	**Warramunga Arr**	**21.48**	**176**	P		**P**	**02 03 17.9**	**-0.3**
WR8	**Warramunga Arr**	**21.50**	**176**	P		**P**	**02 03 18.4**	**-0.1**
WR8				IAmb		IAmb	02 03 28.7	
	comp=Z,34nm,1.4s							
AS31	**Alice Springs**	**25.16**	**178**	P		**P**	**02 03 54.9**	**+0.3**
ASAR	**Alice Springs**	**25.16**	**178**	P		**P**	**02 03 54.6**	**0.0**
	comp=Z,3.2nm,0.6s,baz=360,slow=9.5,SNR=31							
ASAR				LR		LR	02 13 35.6	
	comp=Z,50nm,19.8s,baz=310,slow=36							
	comp=Z,3.2nm,0.6s							
JCJ	**Chichijima**	**26.85**	**19**	LR		LR	02 11 52.9	
	comp=Z,41nm,20.2s,baz=190,slow=30							
FORT	**Forrest**	**32.55**	**188**	P		**P**	**02 05 00.9**	**+0.5**
FORT				IAmb		IAmb	02 05 12.4	
	comp=Z,7.6nm,0.8s							
STKA	**Stephens Creek**	**34.33**	**167**	LR		LR	02 18 59.2	
	comp=Z,70nm,20.8s,baz=17,slow=36							
CMAR	**Chiang Mai Arr**	**37.25**	**299**	P		**P**	**02 05 41.1**	**0.0**
	comp=Z,1.6nm,0.3s,baz=116,slow=6.6,SNR=4.3							
CMAR				LR		LR	02 23 07.2	
	comp=Z,18nm,18.0s,baz=95,slow=39							
	comp=Z,1.6nm,0.3s							
H11N1	**WAKE ISLAND Hy**	**37.80**	**59**	T		T	02 45 44.1	
	baz=245,slow=75,SNR=11							
H11N2	**WAKE ISLAND Hy**	**37.82**	**59**	T		T	02 45 45.8	
	baz=245,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy**	**37.82**	**59**	T		T	02 45 46.2	
	baz=245,slow=75,SNR=12							
SHL	**Shillong**	**46.09**	**305**	P		**P**	**02 06 52.7**	**-1.0**
SONM	**Songino Array**	**51.42**	**337**	P		**P**	**02 07 33.0**	**-1.2**
	comp=Z,1.1nm,1.0s,baz=139,slow=8.1,SNR=5.0							
	comp=Z,1.1nm,1.0s							
MKAR	**Makanchi Array**	**62.84**	**323**	P		**P**	**02 08 55.7**	**+0.9**
	comp=Z,3.5nm,0.7s,baz=116,slow=8.0,SNR=13							
	comp=Z,3.5nm,0.7s							
MKAR	**Makanchi Array**	**62.84**	**323**	P		**P**	**02 08 55.1**	**+0.3**
MAKZ	**Makanchi**	**63.04**	**323**	P		**P**	**02 08 57.2**	**+1.1**
MAKZ				IAmb		IAmb	02 08 58.0	
	comp=Z,4.5nm,0.7s							
ZAA0	**Zalesovo Array**	**65.32**	**331**	P		**P**	**02 09 10.6**	**-0.3**
ZAA0				IAmb		IAmb	02 09 12.0	
	comp=Z,4.0nm,1.1s							
ZALV	**Zalesovo Beam**	**65.32**	**331**	P		**P**	**02 09 11.0**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=106,slow=5.3,SNR=9.1							
	comp=Z,1.9nm,0.7s							
ZALV	**Zalesovo Beam**	**65.32**	**331**	P		**P**	**02 09 10.6**	**-0.3**
KURK	**Kurchatov**	**66.87**	**326**	P		**P**	**02 09 21.1**	**+0.2**
KURK				IAmb		IAmb	02 09 22.7	
	comp=Z,6.1nm,0.8s							
KURBB	**Kurchatov Arra**	**66.87**	**326**	P		**P**	**02 09 21.9**	**+1.0**
	comp=Z,5.9nm,0.8s,baz=119,slow=5.9,SNR=52							
	comp=Z,5.9nm,0.8s							
GAR	**Garm**	**67.88**	**312**	P		**P**	**02 09 28.0**	**+0.2**
KKAR	**Karatay Array**	**68.98**	**316**	P		**P**	**02 09 34.2**	**-0.2**
BVAR	**Borovoye Array**	**72.47**	**326**	P		**P**	**02 09 56.3**	**+0.9**
	comp=Z,4.8nm,0.8s,baz=110,slow=8.1,SNR=20							
	comp=Z,4.8nm,0.8s							
AB31	**Akbulak array**	**77.68**	**320**	P		**P**	**02 10 25.2**	**-0.3**
AB31				IAmb		IAmb	02 10 26.5	
	comp=Z,2.2nm,0.8s							
ABKAR	**Akbulak array**	**77.68**	**320**	P		**P**	**02 10 25.7**	**+0.2**
VNDA	**Vanda**	**80.63**	**174**	P		**P**	**02 10 40.1**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=344,slow=7.4,SNR=2.0							
	comp=Z,0.8nm,0.8s							
VNDA	**Vanda**	**80.63**	**174**	P		**P**	**02 10 42.4**	**+1.3**
VNDA				IAmb		IAmb	02 11 13.0	
	comp=Z,5.4nm,1.4s							
E19K	**Redstone River**	**80.88**	**22**	P		**P**	**02 10 43.6**	**+0.9**
E19K				IAmb		IAmb	02 10 48.9	
	comp=Z,4.8nm,0.9s							
D19K	**Kuna River**	**80.89**	**20**	P		**P**	**02 10 44.1**	**+1.4**
D19K				IAmb		IAmb	02 11 28.0	
	comp=Z,10nm,1.4s							
B21K	**Ikpikpuk River**	**82.44**	**20**	P		**P**	**02 10 51.6**	**+0.8**
B21K				IAmb		IAmb	02 10 55.2	
	comp=Z,5.8nm,1.1s							
B22K	**Teshekpuk Lake**	**83.02**	**19**	P		**P**	**02 10 53.9**	**0.0**
C23K	**Itkillik River**	**83.84**	**20**	P		**P**	**02 10 58.6**	**+0.6**
ILAR	**Eielson Array**	**84.37**	**25**	P		**P**	**02 11 00.4**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=265,slow=5.2,SNR=8.0							
	comp=Z,0.9nm,0.9s							
BMAR	**Burnt Mountain**	**85.64**	**23**	P		**P**	**02 11 09.1**	**+1.8**
QSPA	**South Pole Qui**	**91.54**	**180**	P		**P**	**02 11 35.2**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=56,slow=0.1,SNR=4.5							
	comp=Z,1.1nm,0.7s							
O53A	**New Philadelph**	**127.98**	**33**	PKPdf		**PKiKP**	**02 17 36.9**	**+1.2**
CPUP	**Villa Florida**	**153.54**	**159**	PKPbc		**PKPbc**	**02 18 26.7**	**-1.5**
	comp=Z,0.7nm,1.0s,baz=162,slow=3.2,SNR=2.9							

*JMA **25** 02:12:51.6±0.2, 24°.8N±0°.6×122°.3E±0°.2, h2km±2km, MV2.9/12, TAIWAN REGION*
*TAP **25** 02:12:51.6, 24°.86N×122°.33E, h11km, ML3.0, C*
ISC 25 02:12:51.8±1.0, 24°82'N±0°.02×122°34'E±0°.02, h9km±9km, n62, σ0°46/104, 3C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.37**	**300**	⇑*i*P		**Pg**	**02 12 59.1**	**+0.1**
TWB1				*i* S		**Sg**	**02 13 04.2**	**+0.2**
EGS		**0.37**	**274**	P		**Pg**	**02 12 59.4**	**+0.3**
EGS				S		**Sb**	**02 13 06.4**	**0.0**
NTC	**Toucheng**	**0.47**	**274**	*e*P		**Pb**	**02 13 01.5**	**-0.6**
NTC				*e*S		**Sb**	**02 13 09.9**	**+0.9**
TIPB	**Shuangxi**	**0.49**	**288**	P		**Pb**	**02 13 02.2**	**-0.4**
TIPB				*e*S		**Sb**	**02 13 09.7**	**-0.2**
TWC	**Suao**	**0.49**	**245**	*e*P		**Pg**	**02 13 01.6**	**+0.2**
TWC				S		**Sg**	**02 13 08.1**	**+0.2**
SXI1	**Grass Mountain**	**0.50**	**303**	⇑*i*P		**Pb**	**02 13 01.9**	**-0.8**
SXI1				*i* S		**Sb**	**02 13 09.3**	**-1.0**
ESAO	**Su ao**	**0.51**	**242**	*e*P		**Pg**	**02 13 01.8**	**+0.1**
ESAO				*e*S		**Sb**	**02 13 09.6**	**-0.9**
NWF	**Wu-fen Shan**	**0.56**	**296**	⇑*i*P		**Pb**	**02 13 03.6**	**-0.3**
NWF				*i* S		**Sb**	**02 13 11.7**	**-0.4**
WFSB	**Wu-fen Shan**	**0.56**	**296**	P		**Pb**	**02 13 03.6**	**-0.2**
WFSB				*i* S		**Sb**	**02 13 11.8**	**-0.2**
NDS	**Dongshan**	**0.60**	**252**	*e*P		**Pb**	**02 13 04.5**	**+0.1**
NDS				S		**Sb**	**02 13 13.3**	**+0.4**
TNOU	**National Taiwa**	**0.61**	**303**	*e*P		**Pb**	**02 13 04.0**	**-0.6**
TNOU				S		**Sb**	**02 13 12.7**	**-0.6**
TWE	**Neicheng**	**0.62**	**261**	*e*P		**Pb**	**02 13 04.3**	**-0.5**
TWE				S		**Sb**	**02 13 13.7**	**+0.2**
EWUT	**Wuta**	**0.63**	**234**	*e*P		**Pb**	**02 13 04.8**	**-0.2**
EWUT				*e*S		**Sb**	**02 13 14.0**	**+0.1**
JYNG	**Yonagunijimaku**	**0.66**	**124**	P		**Pg**	**02 13 04.5**	**-0.1**
JYNG				*e*S		**Sg**	**02 13 13.4**	**+0.1**
ENA	**Nanau**	**0.67**	**234**	*i* P		**Pg**	**02 13 04.9**	**+0.2**
ENA				*i* S		**Sb**	**02 13 14.4**	**-0.7**
FUSB	**Fushanzhiwuyua**	**0.69**	**265**	*e*P		**Pb**	**02 13 06.1**	**+0.1**
FUSB				*e*S		**Sb**	**02 13 15.8**	**+0.3**
TWA	**Mucha**	**0.70**	**283**	P		**Pb**	**02 13 05.6**	**-0.6**
TWA				S		**Sb**	**02 13 16.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.71**	**120**	*e*P		**Pg**	**02 13 05.2**	**-0.3**
YOJ				*e*S		**Sg**	**02 13 14.7**	**0.0**
YOJ	**Yonaguni jima**	**0.71**	**120**	P		**Pg**	**02 13 05.2**	**-0.3**
YOJ				*i* S		**Sg**	**02 13 14.9**	**+0.2**
ENTT	**Nioudou**	**0.73**	**256**	*i* P		**Pb**	**02 13 06.4**	**-0.2**
ENTT				*i* S		**Sb**	**02 13 16.8**	**+0.1**
EAHA	**Aohua**	**0.73**	**228**	*e*S		**Sg**	**02 13 16.0**	**+0.5**
NWLT	**Wulai**	**0.76**	**267**	*i* P		**Pb**	**02 13 07.3**	**+0.1**
NWLT				*i* S		**Sb**	**02 13 17.6**	**-0.1**
YM01	**YM01**	**0.77**	**295**	P		**Pg**	**02 13 06.8**	**+0.2**
YM01				*i* S		**Sb**	**02 13 17.8**	**-0.1**
YM08	**YM08**	**0.77**	**298**	*e*P		**Pg**	**02 13 06.6**	**-0.1**
YM08				*i* S		**Sg**	**02 13 16.8**	**+0.1**
LATG	**Datong**	**0.79**	**249**	*e*P		**Pb**	**02 13 07.4**	**-0.4**
LATG				S		**Sb**	**02 13 18.8**	**+0.1**
ZUZH	**Zhuzihu**	**0.80**	**295**	*e*P		**Pg**	**02 13 07.3**	**+0.1**
ZUZH				*e*S		**Sg**	**02 13 17.7**	**+0.2**
TWY	**Chenhua**	**0.81**	**304**	*i* P		**Pb**	**02 13 08.2**	**+0.3**
TWY				*i* S		**Sb**	**02 13 18.7**	**-0.3**
ANP	**Anpu**	**0.83**	**296**	*e*P		**Pb**	**02 13 07.9**	**-0.5**
ANP				*e*S		**Sb**	**02 13 19.7**	**0.0**
PCYT	**Pengchaiyu**	**0.84**	**343**	*e*P		**Pb**	**02 13 08.7**	**+0.1**
NTST	**Danshui**	**0.88**	**293**	*e*P		**Pn**	**02 13 09.9**	**-0.3**
NTST				*e*S		**Sb**	**02 13 21.0**	**0.0**
YHNB	**Yeheng**	**0.89**	**260**	*e*P		**Pb**	**02 13 09.1**	**-0.3**
NSK	**Sanguang**	**0.90**	**261**	*i* P		**Pg**	**02 13 08.8**	**-0.3**
NSK				*i* S		**Sg**	**02 13 21.2**	**+0.3**
NACB	**Ninganchiao**	**0.94**	**227**	*i* P		**Pg**	**02 13 09.7**	**-0.1**
NACB				S		**Sg**	**02 13 22.2**	**+0.2**
NNSB	**Datong**	**0.95**	**246**	*e*P		**Pb**	**02 13 10.7**	**+0.2**
NNSB				*e*S		**Sg**	**02 13 22.8**	**+0.2**
NNS	**Nan Shan**	**0.96**	**247**	P		**Pn**	**02 13 12.2**	**+0.7**
ETLH	**Xiulin Townshi**	**0.99**	**232**	*e*P		**Pg**	**02 13 10.8**	**-0.1**
ETLH				S		**Sg**	**02 13 23.7**	**0.0**
TWD	**Chiawan**	**1.00**	**223**	*e*P		**Pg**	**02 13 10.8**	**-0.2**
NFF	**Wufeng Townshi**	**1.13**	**261**	*e*P		**Pg**	**02 13 13.1**	**-0.3**
NFF				*e*S		**Sn**	**02 13 29.2**	**-0.2**
ETM	**Tongmen**	**1.15**	**222**	*e*P		**Pg**	**02 13 13.7**	**-0.2**
FUSS	**Fushou**	**1.15**	**240**	*e*P		**Pn**	**02 13 14.6**	**+0.4**
FUSS				*e*S		**Sn**	**02 13 29.8**	**-0.4**
TEYL	**Yanliau Villag**	**1.17**	**216**	*e*P		**Pg**	**02 13 13.7**	**-0.5**
WHF	**Hehuan Shan**	**1.19**	**236**	*i* P		**Pb**	**02 13 14.7**	**-0.1**
TWT	**Tachien**	**1.20**	**242**	P		**Pb**	**02 13 14.8**	**0.0**
LIOB	**Emei**	**1.22**	**262**	*e*P		**Pn**	**02 13 15.2**	**+0.2**
SHUL	**Shoufeng**	**1.25**	**215**	*e*P		**Pn**	**02 13 15.3**	**-0.1**
IRIF	**Iriomote-Funau**	**1.35**	**111**	*e*P		**Pn**	**02 13 16.5**	**-0.3**
IRIF				*e*S		**Sb**	**02 13 34.5**	**-0.3**
OWD	**Renai**	**1.37**	**231**	P		**Pg**	**02 13 18.3**	**+0.3**
OWD				*e*S		**Sn**	**02 13 37.8**	**+2.3**
WHP	**Taichung City**	**1.38**	**247**	*e*P		**Pg**	**02 13 19.2**	**+0.9**
WHP				*e*S		**Sg**	**02 13 36.5**	**+0.3**
WUSB	**Renai**	**1.39**	**234**	*e*P		**Pg**	**02 13 18.3**	**-0.1**
WUSB				S		**Sg**	**02 13 36.4**	**0.0**
WARBT	**Fenglin Townsh**	**1.40**	**219**	*e*P		**Pb**	**02 13 18.1**	**0.0**
NMLH	**Miaoli**	**1.44**	**259**	*e*P		**Pg**	**02 13 19.1**	**-0.3**
VWDT	**VWDT**	**1.52**	**226**	P		**Pg**	**02 13 20.8**	**-0.2**
VWDT				S		**Sg**	**02 13 41.2**	**+0.3**
HATJ	**Hateruma jima**	**1.54**	**119**	*e*P		**Pn**	**02 13 19.7**	**+0.3**
HATJ				*e*S		**Sn**	**02 13 39.6**	**+0.2**
HGSD	**Ruisui**	**1.57**	**212**	*e*P		**Pn**	**02 13 18.3**	**-1.5**
JKRS	**Kuro-shima**	**1.63**	**111**	*e*S		**Sn**	**02 13 42.3**	**+0.6**
SSLB	**Suanglung**	**1.63**	**231**	*i* P		**Pg**	**02 13 22.9**	**-0.2**
SSLB				*i* S		**Sg**	**02 13 44.1**	**-0.1**
TYC	**Yuchr**	**1.63**	**236**	*e*P		**Pg**	**02 13 22.6**	**-0.5**
JIJ	**Ishigaki jima**	**1.70**	**105**	*e*S		**Sb**	**02 13 45.4**	**+0.6**
YULB	**Yu-li**	**1.71**	**214**	*e*P		**Pn**	**02 13 20.7**	**-1.1**
WHYT	**Xinyi Township**	**1.76**	**231**	*e*P		**Pb**	**02 13 24.1**	**-0.2**
JISG	**Ishigakijimahi**	**1.81**	**97**	*e*S		**Sb**	**02 13 48.1**	**+0.3**
ALS	**Alishan**	**1.92**	**227**	*e*P		**Pb**	**02 13 26.8**	**-0.2**
ALS				*e*S		**Sg**	**02 13 52.8**	**-0.6**

*NNC **25** 02:19:58.7±0.7, 43°.05N×80°.02E, h8km±3km, mb3.6, mpv3.5, Error ellipse: s-maj=4.9km s-min=3.4km az=150.0*
*KRNET **25** 02:19:59.5±0.1, 43°.14N×80°.04E, h24km, mb3.4*
*SOME **25** 02:19:59.6, 43°.08N×80°.02E, h20km*
ISC 25 02:19:58.3±0.9, 43°06'N±0°.04×80°06'E±0°.03, h10km, n53, σ1°70/94, 16C-18D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**0.44**	**28**	P		**Pb**	**02 20 07.9**	**-0.4**
	101nm,0.1s							
KTMS				S		**Sb**	**02 20 14.1**	**-0.9**
	442nm,0.2s							
KTMS	**Ketmen**	**0.44**	**28**	*e*P		**Pb**	**02 20 07.9**	**-0.4**
KTMS				*e*S		**Sb**	**02 20 14.1**	**-0.9**
KTMS	**Ketmen**	**0.44**	**28**	*e*P		**Pb**	**02 20 07.9**	**-0.4**
	101nm,0.1s							
KTMS				*e*S		**Sb**	**02 20 14.2**	**-0.9**
	442nm,0.2s							
SHLS	**Shalkode**	**0.45**	**283**	P		**Pg**	**02 20 05.0**	**-2.2**
	409nm,0.1s							
SHLS				S		**Sg**	**02 20 08.7**	**-4.5**
	3μm,0.2s							
SHLS	**Shalkode**	**0.45**	**283**	*e*P		**Pg**	**02 20 05.0**	**-2.2**
SHLS				*e*S		**Sg**	**02 20 08.7**	**-4.5**
SHLS	**Shalkode**	**0.45**	**283**	*e*P		**Pg**	**02 20 05.0**	**-2.2**
	409nm,0.1s							
SHLS				*e*S		**Sg**	**02 20 08.7**	**-4.5**
	3μm,0.2s							
PDGK	**Podgornoye**	**0.50**	**303**	⇓P		**Pb**	**02 20 09.3**	**0.0**
	7.

MTBS	**Maitube**	**2.66**	**273**	*e*P		**Pb**	**02 20 46.6**	**+0.5**
	4.5nm,0.2s							
MTBS				*e*S		**Sb**	**02 21 20.0**	**+1.1**
	41nm,0.4s							
KUU	**Kurty**	**2.84**	**288**	Pg		**Pb**	**02 20 49.8**	**+0.8**
	4.4nm,0.1s							
KUU				Lg		Lg	02 21 25.5	
	19nm,0.2s							
KUU	**Kurty**	**2.84**	**288**	*e*P		**Pb**	**02 20 49.8**	**+0.8**
	4.4nm,0.1s							
KUU				*e*S		**Sb**	**02 21 25.5**	**+1.6**
	19nm,0.2s							
ULHL	**Ulahol**	**2.93**	**255**⇑	*i*P		**Pb**	**02 20 47.4**	**-3.4**
ULHL			⇑	*i*S		**Sb**	**02 21 23.7**	**-3.1**
KST	**Kastek**	**3.01**	**271**	Pg		**Pb**	**02 20 53.0**	**+1.0**
	4.1nm,0.3s							
KST				Lg		Lg	02 21 30.8	
	25nm,0.9s							
KST	**Kastek**	**3.01**	**271**	*e*P		**Pb**	**02 20 53.0**	**+1.0**
	4.1nm,0.3s							
KST				*e*S		**Sb**	**02 21 30.9**	**+2.1**
	25nm,0.9s							
BOOM	**Boomskoye usch**	**3.09**	**261**⇓	*e*P		**Pn**	**02 20 49.6**	**+2.3**
BOOM			⇓	*e*S		**Sb**	**02 21 27.3**	**-3.9**
DGS	**Degeres**	**3.15**	**275**	Pg		**Pb**	**02 20 55.4**	**+1.0**
	6.6nm,0.3s							
DGS				Lg		Lg	02 21 34.9	
	30nm,0.6s							
DGS	**Degeres**	**3.15**	**275**	*e*P		**Pb**	**02 20 55.4**	**+1.0**
	6.6nm,0.3s							
DGS				*e*S		**Sb**	**02 21 35.0**	**+2.1**
	30nm,0.6s							
KRBS	**Karabastau**	**3.26**	**283**	Pg		**Pb**	**02 20 57.5**	**+1.2**
	3.9nm,0.4s							
KRBS				Lg		Lg	02 21 38.4	
	10.0nm,0.4s							
KRBS	**Karabastau**	**3.26**	**283**	*e*P		**Pb**	**02 20 57.5**	**+1.2**
KRBS				*e*S		**Sb**	**02 21 38.4**	**+2.3**
TKM2	**Tokmak 2**	**3.28**	**269**⇓	*i*P		**Pn**	**02 20 51.9**	**+1.9**
TKM2			⇓	*i*S		**Sn**	**02 21 31.5**	**+2.4**
JNKS	**Jany-Kuch**	**3.84**	**240**⇓	*e*P		**Pn**	**02 21 00.5**	**+2.8**
JNKS			⇓	*e*S		**Sn**	**02 21 46.1**	**+3.0**
CHMS	**Chumysh**	**3.90**	**271**⇑	*i*P		**Pn**	**02 21 00.4**	**+2.2**
CHMS			⇑	*i*S		**Sn**	**02 21 45.9**	**+1.9**
MAKZ	**Makanchi**	**3.99**	**19**	⇑Pn		**Pn**	**02 21 02.6**	**+3.1**
	1.6nm,0.7s							
MAKZ				⇓Pg		**Pg**	**02 21 12.5**	**-2.1**
	1.0nm,0.3s							
MAKZ				⇓Sn		**Sn**	**02 21 47.6**	**+1.2**
	2.4nm,0.6s							
MAKZ				⇑Lg		Lg	02 22 06.7	
	2.0nm,0.5s							
MK31	**Makanchi Array**	**4.06**	**22**	Pn		**Pn**	**02 21 03.1**	**+2.7**
	0.3nm,0.2s,baz=203,slow=14,SNR=42							
MK31				⇓Pg		**Pg**	**02 21 12.9**	**-3.1**
	0.6nm,0.3s,baz=200,slow=13,SNR=10.0							
MK31				⇑Sn		**Sn**	**02 21 49.9**	**+1.9**
	1.8nm,0.3s,baz=202,slow=17,SNR=5.4							
MK31				⇓Lg		Lg	02 22 05.9	
	0.4nm,0.2s,baz=211,slow=26,SNR=3.9							
USP	**Ospenovka**	**4.08**	**275**⇓	*i*P		**Pn**	**02 21 02.7**	**+2.0**
USP			⇓	*i*S		**Sn**	**02 21 50.2**	**+1.7**
AAK	**Ala-Archa**	**4.12**	**266**	⇑Pg		**Pg**	**02 21 14.5**	**-2.7**
	6.7nm,1.2s							
AAK				⇑Lg		Lg	02 22 09.3	
	5.0nm,0.8s							
UCH	**Uchtor**	**4.18**	**260**⇓	*i*P		**Pn**	**02 21 04.8**	**+2.3**
UCH			⇓	*i*S		**Sn**	**02 21 53.7**	**+2.1**
ARLS	**Aral**	**4.41**	**256**⇑	*e*P		**Pn**	**02 21 08.1**	**+2.6**
ARLS			⇑	*e*S		**Sn**	**02 21 59.0**	**+2.0**

IDC ***25*** *02:22:37.0±0.5, 45°.76N×94°.00E, h0km, mb4.2/25, mbtmp4.2/33, ML4.0/7, MS4.0/54, Error ellipse: s-maj=15.2km s-min=9.6km az=24.0*

MOS ***25*** *02:22:38.7±1.1, 45°.81N×93°.95E, h22km, mb5.0/34, MS4.1/11, Error ellipse: s-maj=6.2km s-min=4.4km az=30.6*

NEIC ***25*** *02:22:39.6±1.4, 45°.86N±0°.08×93°.91E±0°.09, h10km±1km, mb4.9/98, Error ellipse: s-maj=12.8km s-min=10.7km az=178.0*

NNC ***25*** *02:22:39.3±5.7, 45°.76N×93°.66E, h0km±22km, mb5.0, mpv4.9, Error ellipse: s-maj=37.0km s-min=17.0km az=116.0*

GCMT ***25*** *02:22:40.6±0.3, 45°.88N±0°.02×94°.05E±0°.02, h30km±1km, MW4.8/82, Moment Tensor Solution. s22,c25; s82,c101; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.23±.12; Mθθ=0.13±.10; Mφφ=0.36±.09; Mrθ=0.09±.13; Mrφ=1.88±.06; Mθφ=0.30±.10; Best double couple: M0=1.92000×10^16 NP1: ϕs=86.00000°, δ81.00000°, λ2.00000°. NP2: ϕs=356.00000°, δ88.00000°, λ171.00000°. Principal axes: T 2.0480, Plg7.0000°, Azm311.0000°; N -0.2560, Plg81.0000°, Azm165.0000°; P -1.7920, Plg5.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***25*** *02:22:41.3, 45°.86N×94°.17E, h131km, mB5.1/4, mb4.9/16*

ISC 25 02:22:42.1±0.3, 45°.81N±0°.04×93°.92E±0°.03, h35km, n450, σ1ϕ55/433, mb4.8/123, MS4.0/61, 67C-19D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**4.85**	**248**	P		**Pn**	**02 23 55.4**		**+2.8**
WMQ				S		**Sn**	**02 24 51.4**		**+3.8**
WMQ				smax		smax			
	comp=N,5μm,1.7s								
WMQ				smax		smax			
	comp=E,3μm,1.7s								
KNGR	**Kungurtug, Tuv**	**5.37**	**25**⇑	*e*P		**Pn**	**02 23 57.8**		**-1.9**
DGZ	**Jazzator, Alta**	**5.85**	**314**⇓	*e*P		**Pn**	**02 24 05.2**		**-1.2**
ZSN	**Zaisan**	**6.44**	**288**	Pg		**Pn**	**02 24 16.2**		**+1.8**
	49nm,0.9s								
ZSN				Lg		Lg	02 25 27.6		
	540nm,0.8s								
MOY	**Mondy**	**7.50**	**36**	*e*P		Pn	02 24 33.8		+4.9
MOY				*e*S		**Sn**	**02 25 56.8**		**+4.1**
GTA	**Gaotai**	**7.73**	**144**	P		**Pn**	**02 24 29.6**		**-2.6**
GTA				smax		smax			
	comp=N,960nm,0.9s								
GTA				smax		smax			
	comp=E,1μm,0.9s								
GTA				LR		LR			
	comp=N,5μm,7.3s								
GTA				LR		LR			
	comp=E,7μm,8.4s								
GTA				LR		LR			
	comp=Z,3μm,10.5s								
ZAK	**Zakamensk**	**7.76**	**51**	*e*P		**Pn**	**02 24 32.5**		**0.0**
ZAK				pmax		pmax			
	comp=Z,394nm,1.0s								
MK31	**Makanchi Array**	**8.11**	**281**	Pn		**Pn**	**02 24 35.4**		**-1.9**
	comp=Z,24nm,0.5s,baz=95,slow=13,SNR=137								
MK31				⇑Pg			02 25 04.6		
	comp=Z,42nm,0.5s,baz=89,slow=19,SNR=5.2								
MK31				⇑Lg		Lg	02 26 50.4		
	comp=Z,338nm,0.6s,baz=89,slow=31,SNR=4.2								
MK31	**Makanchi Array**	**8.11**	**281**	*ce*P		**Pn**	**02 24 37.7**		**+0.4**
MKAR	**Makanchi Array**	**8.11**	**281**	Pn		**Pn**	**02 24 38.3**		**+1.0**
	comp=Z,3.9nm,0.3s,baz=96,slow=14,SNR=66								
MKAR				Sn		**Sn**	**02 26 08.9**		**+1.2**
	comp=Z,12nm,0.3s,baz=71,slow=26,SNR=4.0								
MKAR				Lg		Lg	02 26 49.7		
	comp=Z,40nm,0.3s,baz=103,slow=25,SNR=5.2								
MKAR				LR		LR	02 27 25.9		
	comp=Z,301nm,19.6s,baz=128,slow=35								
	comp=Z,14nm,0.5s								
MKAR	**Makanchi Array**	**8.11**	**281**			**Pn**	**02 24 36.5**		**-0.8**
MAKZ	**Makanchi**	**8.33**	**281**	Pn		**Pn**	**02 24 39.8**		**-0.4**
MAKZ	**Makanchi**	**8.33**	**281**	⇑Pn		**Pn**	**02 24 38.8**		**-1.4**
	comp=Z,39nm,0.7s								
MAKZ				⇑Pg			02 25 06.4		
	comp=Z,110nm,0.8s								
MAKZ				⇓Lg		Lg	02 26 59.3		
	comp=Z,874nm,0.8s								
MAKZ	**Makanchi**	**8.33**	**281**	P		**Pn**	**02 24 39.8**		**-0.4**
TLY	**Talaya**	**8.70**	**44**	Pn		**Pn**	**02 24 44.9**		**-0.5**
TLY	**Talaya**	**8.70**	**44**⇑	*e*P		**Pn**	**02 24 43.9**		**-1.5**
SONM	**Songino Array**	**8.80**	**72**	Pn		**Pn**	**02 24 46.4**		**-0.3**
	comp=Z,0.4nm,0.3s,baz=254,slow=9.1,SNR=41								
SONM				Pg			02 25 16.5		
	comp=Z,7.5nm,0.3s,baz=262,slow=16,SNR=10								
SONM				Lg		Lg	02 27 10.0		
	comp=Z,36nm,0.3s,baz=265,slow=28,SNR=12								
SONM				LR		LR	02 28 09.4		
	comp=Z,659nm,18.2s,baz=258,slow=38								
	comp=Z,8.6nm,0.8s								
ULN	**Ulaanbaatar**	**9.24**	**72**	Pn		**Pn**	**02 24 54.5**		**+1.6**
ULN	**Ulaanbaatar**	**9.24**	**72**⇑	*e*P		**Pn**	**02 24 52.8**		**0.0**
IRK	**Irkutsk**	**9.36**	**43**	*e*P		Pn	02 24 48.8		-5.5
IRK				pmax		pmax			
	comp=Z,174nm,0.3s								
GOMU	**GeErMu**	**9.63**	**176**	P		**Pn**	**02 24 56.8**		**-1.6**
GOMU				S		**Sn**	**02 26 50.5**		**+5.0**
GOMU				smax		smax			
	comp=Z,380nm,1.1s								
GOMU				smax		smax			
	comp=Z,250nm,1.1s								
ZAA0	**Zalesovo Array**	**10.03**	**328**	Pn		**Pn**	**02 25 02.9**		**-0.6**
ZAA0	**Zalesovo Array**	**10.03**	**328**	⇓Pn		**Pn**	**02 25 05.7**		**+2.1**
	comp=Z,6.6nm,0.9s								
ZAA0				⇓Pg			02 25 41.3		
	comp=Z,4.0nm,0.7s								
ZAA0				⇑Lg		Lg	02 27 56.9		
	comp=Z,160nm,1.1s								
ZALV	**Zalesovo Beam**	**10.03**	**328**	Pn		**Pn**	**02 25 03.5**		**0.0**
	comp=Z,3.3nm,0.6s,baz=147,slow=14,SNR=16								
ZALV				Pg			02 25 41.1		
	comp=Z,2.3nm,0.3s,baz=161,slow=14,SNR=6.5								
ZALV				Lg		Lg	02 27 51.1		
	comp=Z,3.5nm,0.3s,baz=136,slow=22,SNR=3.5								
ZALV				LR		LR	02 29 05.0		
	comp=Z,602nm,18.9s,baz=140,slow=38								
ZALV	**Zalesovo Beam**	**10.03**	**328**	Pn		**Pn**	**02 25 02.0**		**-1.5**
SEM	**Semipalatinsk**	**10.23**	**302**	P		**Pn**	**02 25 08.6**		**+2.2**
	comp=Z,22nm,0.7s								
PDGK	**Podgornoye**	**10.59**	**262**	⇑Pn		**Pn**	**02 25 09.5**		**-1.8**
	comp=Z,69nm,0.7s								
PDGK				⇑Pg			02 25 48.8		
	comp=Z,82nm,0.7s								
PDGK				⇓Lg		Lg	02 28 07.3		
	comp=Z,674nm,1.0s								
PDGK	**Podgornoye**	**10.59**	**262**	P		**Pn**	**02 25 09.5**		**-1.8**
PDGK				pmax		pmax			
	comp=Z,68nm,0.7s								
SHLS	**Shalkode**	**10.66**	**261**	Pg		**Pn**	**02 25 10.4**		**-2.0**
	comp=Z,102nm,0.7s								
SHLS				Lg		Lg	02 27 04.9		
	comp=Z,441nm,0.9s								
SHLS	**Shalkode**	**10.66**	**261**	P		**Pn**	**02 25 09.9**		**-2.5**
TDK	**Taldyqorghan**	**10.94**	**271**	P		**Pn**	**02 25 17.3**		**+1.3**
	comp=Z,152nm,0.6s								
UZB	**Uzynbulak**	**10.97**	**261**	P		**Pn**	**02 25 17.8**		**+1.2**
BLB	**Baldybastay**	**11.08**	**267**	P		**Pn**	**02 25 18.4**		**+0.4**
	comp=Z,66nm,0.6s								
KURK	**Kurchatov**	**11.31**	**301**	Pn		**Pn**	**02 25 19.2**		**-1.8**
KURK	**Kurchatov**	**11.31**	**301**	⇑Pn		**Pn**	**02 25 18.8**		**-2.2**
	comp=Z,26nm,1.1s								
KURK				⇑Pg			02 26 01.0		
	comp=Z,26nm,0.8s								
KURK				⇓Lg		Lg	02 28 33.9		
	comp=Z,231nm,0.7s								
KURK	**Kurchatov**	**11.31**	**301**	*ce*P		**Pn**	**02 25 18.6**		**-2.4**
KURK				pmax		pmax			
	comp=Z,15nm,1.0s								
KURBB	**Kurchatov Arra**	**11.33**	**301**	Pn		**Pn**	**02 25 20.2**		**-1.1**
	comp=Z,0.4nm,0.3s,baz=107,slow=14,SNR=23								
KURBB				Lg		Lg	02 28 36.1		
	comp=Z,2.4nm,0.3s,baz=103,slow=33,SNR=5.8								
KURBB				LR		LR	02 30 00.9		
	comp=Z,681nm,20.5s,baz=151,slow=39								
	comp=Z,7.2nm,0.6s								
ARXS	**Arharly**	**11.50**	**268**	P		**Pn**	**02 25 23.2**		**-0.6**
	comp=Z,54nm,0.6s								
ARXS	**Arharly**	**11.50**	**268**	*i* P		**Pn**	**02 25 24.3**		**+0.5**
WUS	**Wushi**	**11.62**	**252**			**Pn**	**02 25 24.4**		**-1.1**
PRZ	**Przheval'sk**	**11.63**	**259**	Pn		**Pn**	**02 25 27.1**		**+1.4**
PRZ	**Przheval'sk**	**11.63**	**259**	P		**Pn**	**02 25 27.1**		**+1.4**
LZH	**Lanzhou**	**12.27**	**139**	*e*P		**Pn**	**02 25 33.3**		**-1.0**
LZH				S		**Sn**	**02 27 44.6**		**-5.2**
LZH				pmax		pmax			
	comp=Z,29nm,0.9s								
LZH				LR		LR			
	comp=Z,2μm,10.0s								
LZH				LR		LR			
	comp=Z,2μm,8.6s								
LZH				LR		LR			
	comp=Z,2μm,12.4s								
LZDM	**Lanzhou Array**	**12.30**	**140**	Pn		**Pn**	**02 25 33.5**		**-1.5**
	baz=312,slow=12								
LZDM				Lg		Lg	02 29 05.7		
	baz=309,slow=28								
	comp=Z,5.2nm,0.4s								
TARG	**Taragay, Kyrgy**	**12.34**	**256**	Pn		**Pn**	**02 25 35.5**		**0.0**
TARG	**Taragay, Kyrgy**	**12.34**	**256**	P		**Pn**	**02 25 35.5**		**0.0**
KDJ	**Kajisay**	**12.60**	**259**	Pn		**Pn**	**02 25 39.4**		**+0.5**
KDJ	**Kajisay**	**12.60**	**259**	P		**Pn**	**02 25 39.4**		**+0.5**
BTO	**Baotou**	**12.84**	**108**	*e*P		**Pn**	**02 25 41.1**		**-1.0**
BTO				PP		**P**	**02 25 50.6**		**-1.9**
BTO				S		**Sn**	**02 28 04.4**		**+0.6**
BTO				pmax		pmax			
	comp=Z,23nm,0.7s								
BTO				pmax		pmax			
	comp=Z,290nm,3.9s								
BTO				LR		LR			
	comp=Z,4μm,4.4s								
BTO				LR		LR			
	comp=Z,3μm,3.9s								
BTO				LR		LR			
	comp=Z,1μm,5.8s								
BTLS	**Baital**	**13.98**	**274**	P		**Pn**	**02 25 57.0**		**-0.5**
FRU1	**Bishkek**	**14.13**	**265**	Pn		**Pn**	**02 25 59.2**		**-0.4**
FRU1	**Bishkek**	**14.13**	**265**	P		**Pn**	**02 25 59.2**		**-0.4**
AAK	**Ala-Archa**	**14.28**	**264**	Pn		**Pn**	**02 26 00.3**		**-1.5**
	comp=Z,1.3nm,0.3s,baz=104,slow=7.7,SNR=8.0								
AAK				Sn		**Sn**	**02 28 39.3**		**+0.4**
	comp=Z,0.7nm,0.3s,baz=86,slow=19,SNR=1.6								
AAK				Lg		Lg	02 30 11.8		
	comp=Z,0.5nm,0.3s,baz=143,slow=20,SNR=1.8								
AAK				LR		LR	02 32 09.1		
	comp=Z,834nm,18.2s,baz=91,slow=40								
	comp=Z,1.0nm,0.3s								
AAK	**Ala-Archa**	**14.28**	**264**	Pn		**Pn**	**02 26 01.9**		**+0.1**
AAK	**Ala-Archa**	**14.28**	**264**	⇑Pn		**Pn**	**02 26 02.9**		**+1.2**
	comp=Z,12nm,0.7s								
AAK				⇓Lg		Lg	02 30 04.5		
	comp=Z,358nm,1.5s								
AAK	**Ala-Archa**	**14.28**	**264**⇑	*e*P		**Pn**	**02 26 03.4**		**+1.6**
KSH	**Kashi**	**14.61**	**251**	P		**P**	**02 26 12.6**		**+0.4**
KSH				pmax		pmax			
	comp=Z,15nm,0.8s								
KSH				LR		LR			
	comp=Z,2μm,14.7s								
KSH				LR		LR			
	comp=Z,730nm,12.2s								
LSA	**Lhasa**	**16.23**	**189**	P		**P**	**02 26 31.5**		**+0.9**
LSA	**Lhasa**	**16.23**	**189**	P		**P**	**02 26 31.5**		**+0.9**
LSA				pmax		pmax			
	comp=Z,20nm,0.8s								
BVA0	**Borovoye Array**	**16.87**	**304**	Pn		**Pn**	**02 26 33.5**		**-1.8**
	comp=Z,47nm,1.1s,baz=105,slow=14,SNR=98								
BVA0				⇑Lg		Lg	02 31 30.9		
	comp=Z,367nm,1.4s								
BVA0	**Borovoye Array**	**16.87**	**304**	P		**Pn**	**02 26 33.5**		**-1.8**
BVA0				pmax		pmax			
	comp=Z,46nm,1.2s								
BVAR	**Borovoye Array**	**16.87**	**304**	Pn		**Pn**	**02 26 33.5**		**-1.7**
	comp=Z,0.2nm,0.3s,baz=109,slow=13,SNR=67								
BVAR				Lg		Lg	02 31 30.3		
	comp=Z,0.1nm,0.3s,baz=93,slow=16,SNR=1.4								
BVAR				LR		LR	02 33 25.0		
	comp=Z,562nm,18.6s,baz=100,slow=38								
	comp=Z,20nm,0.7s								
KK31	**Karatay Array**	**16.91**	**269**	Pn		**Pn**	**02 26 34.6**		**-1.2**
KK31	**Karatay Array**	**16.91**	**269**	Pn		**Pn**	**02 26 34.9**		**-1.0**
	comp=Z,14nm,0.8s,baz=70,slow=13,SNR=22								
KK31				⇓Lg		Lg	02 31 28.9		
	comp=Z,419nm,2.2s,baz=56,slow=29,SNR=4.4								
KK31	**Karatay Array**	**16.91**	**269**	P		**Pn**	**02 26 34.7**		**-1.2**
KK31				pmax		pmax			
	comp=Z,15nm,0.8s								
KKAR	**Karatay Array**	**16.91**	**269**	Pn		**P**	**02 26 35.5**		**-2.1**
KKAR	**Karatay Array**	**16.91**	**269**	P		**P**	**02 26 35.5**		**-2.1**
HIA	**Hailar**	**17.75**	**69**⇑	*e*P		**P**	**02 26 46.5**		**-0.3**
HIA				pmax		pmax			
	comp=Z,8.0nm,1.2s								
HILR	**Hailar Array B**	**17.76**	**68**	P		**P**	**02 26 46.6**		**-0.3**
	baz=239,slow=8.4								
HILR				Lg		Lg	02 31 56.9		
	baz=273,slow=26								
	comp=Z,2.0nm,0.5s								
LYN	**LuoYang**	**18.05**	**122**	P		**Pn**	**02 26 47.3**		**-2.7**
LYN				pmax		pmax			
	comp=Z,17nm,0.8s								
LYN				LR		LR			
	comp=Z,1μm,15.4s								
LYN				LR		LR			
	comp=Z,1μm,11.1s								
LYN				LR		LR			
	comp=Z,1μm,12.4s								
GAR	**Garm**	**18.67**	**257**	P		**Pn**	**02 26 57.9**		**+0.3**
GAR				lAmb		lAmb	02 27 07.2		
	comp=Z,80nm,1.2s								
EVN	**Everest**	**18.69**	**200**	P		**Pn**	**02 26 58.9**		**+0.5**
EVN				lAmb		lAmb	02 27 09.2		
	comp=Z,42nm,0.8s								
CHGR	**Chuyangaron**	**19.63**	**257**	P		**Pn**	**02 27 08.4**		**-0.7**
CHGR	**Chuyangaron**	**19.63**	**257**	P		**Pn**	**02 27 08.4**		**-0.7**
ENH	**Enshi**	**19.72**	**137**	P		**Pn**	**02 27 09.5**		**-0.7**
NIL	**Nilore**	**19.93**	**240**	P		**Pn**	**02 27 11.3**		**-1.4**
NIL				lAmb		lAmb	02 27 25.8		
	comp=Z,40nm,0.8s								
NIL	**Nilore**	**19.93**	**240**	P		**Pn**	**02 27 11.3**		**-1.4**
NIL				pmax		pmax			
	comp=Z,40nm,0.9s								
SHL	**Shillong**	**20.27**	**185**	P		Pn	02 27 14.5		-2.3
SHL				lAmb		lAmb	02 27 29.7		
	comp=Z,48nm,1.1s								
SHL	**Shillong**	**20.27**	**185**	P		Pn	02 27 14.5		-2.3
SHL				pmax		pmax			
	comp=Z,48nm,1.1s								
KBL	**Kabul**	**22.00**	**248**	P		**P**	**02 27 32.8**		**-0.5**
KBL	**Kabul**	**22.00**	**248**	P		**P**	**02 27 32.8**		**-0.5**
KBL				pmax		pmax			
	comp=Z,23nm,0.9s								
ZEA	**Zeya**	**22.77**	**58**	*e*P		**P**	**02 27 42.3**		**+1.2**
ZEA				pmax		pmax			
	comp=Z,10.0nm,1.1s								
AB31	**Akbulak array**	**23.08**	**291**	P		**P**	**02 27 44.3**		**0.0**
AB31				lAmb		lAmb	02 27 47.0		
	comp=Z,30nm,0.8s								
AB31	**Akbulak array**	**23.08**	**291**	⇑P		**P**	**02 27 44.4**		**0.0**
	comp=Z,24nm,0.8s,baz=93,slow=8.2,SNR=148								
AB31				⇑Lg		Lg	02 34 46.6		
	comp=Z,54nm,1.6s,baz=85,slow=23,SNR=3.6								
AB31	**Akbulak array**	**23.08**	**291**	P		**P**	**02 27 44.4**		**0.0**
AB31				pmax		pmax			
	comp=Z,24nm,0.8s								
ABKAR	**Akbulak array**	**23.08**	**291**	P		**P**	**02 27 44.3**		**-0.1**
BRDH	**Bariadhala**	**23.15**	**185**	LR		LR	02 38 44.0		
	comp=Z,542nm,18.8s,baz=349,slow=42								
SVE	**Sverdlovsk**	**23.30**	**310**	*e*P		**P**	**02 27 47.0**		**+0.5**
SVE				pmax		pmax			
	comp=Z,57nm,1.2s								
SVE				MLR		MLR			
	comp=Z,522nm,10.0s								
AKTO	**Aktyubinsk**	**24.25**	**294**	LR		LR	02 37 47.0		
	comp=Z,358nm,21.2s,baz=236,slow=37								
AKTO	**Aktyubinsk**	**24.25**	**294**	⇓P		**P**	**02 27 55.8**		**+0.3**
	comp=Z,9.3nm,0.7s								
AKTO				⇑Lg		Lg	02 35 24.6		
	comp=Z,59nm,1.5s								
AKTO	**Aktyubinsk**	**24.25**	**294**	P		**P**	**02 27 55.8**		**+0.3**
AKTO				pmax		pmax			
	comp=Z,9.0nm,0.7s								
ARTI	**Arti**	**24.42**	**309**	P		**P**	**02 27 57.9**		**+0.9**
ARTI	**Arti**	**24.42**	**309**	*c* *i*P		**P**	**02 27 57.8**		**+0.8**
ARTI				S		**S**	**02 32 18.2**		**+3.9**
ARTI				SS		**SnSn**	**02 33 03.8**		**+4.2**
ARTI				pmax		pmax			
	comp=Z,105nm,0.8s								
YAK	**Yakutsk**	**26.12**	**39**	*e*P		**P**	**02 28 12.3**		**-0.1**
YAK				*e**PP		**pP**	**02 28 15.8**		**-7.2**
YAK				*e*			02 28 50.0		
YAK				*e*S		**S**	**02 32 44.1**		**+2.8**
YAK				*e**SS		**sS**	**02 32 53.9**		**-5.1**
YAK				*e*SS		**SnSn**	**02 33 41.1**		**+0.1**
YAK				pmax		pmax			
	comp=Z,9.0nm,0.9s								
YAK				pmax		pmax			
	comp=N,4.0nm,1.5s								
YAK				pmax		pmax			
	comp=E,4.0nm,1.4s								
YAK				pmax		pmax			
	comp=Z,305nm,5.5s								
YAK				pmax		pmax			
	comp=N,203nm,3.0s								
YAK				pmax		pmax			
	comp=E,191nm,3.4s								
YAK				smax		smax			
	comp=N,293nm,3.0s								
YAK				smax		smax			
	comp=E,220nm,3.9s								
YAK				MLR		MLR			
	comp=Z,229nm,17.0s								
YAK				MLR		MLR			
	comp=N,137nm,19.0s								
YAK				MLR		MLR			
	comp=E,194nm,15.0s								
KSRS	**Korea Array**	**26.59**	**96**	P		**P**	**02 28 17.1**		**+0.2**
	comp=E,0.8nm,0.4s,baz=291,slow=10,SNR=1.8								
	comp=E,0.8nm,0.4s								
USRK	**Ussuriysk Ar.**	**26.80**	**80**	P		**P**	**02 28 19.3**		**+0.6**
	comp=E,0.8nm,0.6s,baz=282,slow=8.1,SNR=1.6								
	comp=E,0.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**27.59**	**170**	P		**P**	**02 28 25.3**		**-0.7**
	comp=E,1.2nm,0.3s,baz=354,slow

comp=Z,225nm,16.0s
VORD Divnogorie 35.93 299 *e*P **P 02 29 37.9 -0.9**
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 35.95 299 *e*P **P 02 29 37.1 -1.9**
VSR pmax pmax
comp=Z,20nm,0.7s
GNI Garni 35.95 279 LR LR 02 45 03.6
comp=Z,127nm,19.5s,baz=107,slow=37
GNI Garni 35.95 279 P **P 02 29 41.8 +2.5**
GNI IAmb IAmb 02 29 49.2
comp=Z,23nm,1.1s
GNI Garni 35.95 279*c i*P **P 02 29 41.5 +2.2**
GNI pmax pmax
comp=Z,18nm,1.2s
MOS Moscow 36.01 307 *e*P **P 02 29 37.7 -1.7**
MOS pmax pmax
comp=Z,42nm,1.0s
MOS pmax pmax
comp=Z,100nm,1.1s
MOS MLR MLR
comp=Z,500nm,13.0s
ERBR Yeremizino-Bor 36.69 290 *e*P **P 02 29 47.1 +1.8**
ERBR pmax pmax
comp=Z,63nm,0.8s
OBN Obninsk 36.70 306 P **P 02 29 45.3 -0.1**
OBN Obninsk 36.70 306 *e*P **P 02 29 46.0 +0.7**
OBN *i* 02 29 51.0
OBN pmax pmax
comp=Z,21nm,1.3s
OBN MLR MLR
comp=Z,187nm,18.0s
OBN Obninsk 36.70 306 P **P 02 29 45.2 -0.1**
comp=Z,39nm,1.2s
LABN Labinsk 36.90 288 *e*P **P 02 29 49.4 +2.2**
LABN pmax pmax
comp=Z,24nm,0.8s
LVZ Lovozero 37.17 327 P **P 02 29 49.8 +0.6**
LVZ IAmb IAmb 02 30 47.1
comp=Z,58nm,1.5s
LVZ Lovozero 37.17 327 P **P 02 29 49.8 +0.6**
LVZ pmax pmax
comp=Z,58nm,1.5s
APA Apatity 37.62 327⇓ *i*P **P 02 29 49.9 -3.0**
APA MLR MLR
comp=Z,896nm,12.6s
SOC Sochi 37.97 287 *e*P **P 02 29 54.5 -1.7**
SOC *e*PPP PPP 02 31 44.6
SOC *e*S **S 02 35 47.1 +1.3**
SOC *e*SSS SSS 02 39 02.2
SOC pmax pmax
comp=Z,13nm,0.8s
SOC MLR MLR
comp=Z,306nm,17.0s
KOPT Kop Dagi 38.93 281 P **P 02 30 07.1 +2.3**
TGY Tagaytay City 38.96 135 LR LR 02 45 45.0
comp=Z,202nm,19.8s,baz=169,slow=36
ANN Anapa 39.03 290 *e*P **P 02 30 04.4 -0.7**
ANN *e*S S 02 36 10.6 +9.0
ANN pmax pmax
comp=Z,45nm,1.4s
ANN MLR MLR
comp=Z,216nm,15.0s
VADS Vadso 39.25 331 *e*P **P 02 30 07.9 +1.3**
MARD Mardin 40.01 277 P **P 02 30 16.4 +2.9**
MARD IAmb IAmb 02 30 17.1
comp=Z,15nm,0.7s
ARA0 ARCESS Array S 40.58 330 *e*P **P 02 30 18.8 +1.2**
ARCES ARCESS Array B 40.58 330 P **P 02 30 18.7 +1.0**
comp=Z,7.8nm,0.6s,baz=82,slow=9.4,SNR=32
ARCES PP **PP 02 31 48.8 -2.4**
comp=Z,4.1nm,0.8s,baz=20,slow=12,SNR=3.7
ARCES LR LR 02 48 05.1
comp=Z,126nm,18.9s,baz=83,slow=38
comp=Z,7.8nm,0.6s
ARCES ARCESS Array B 40.58 330 P **P 02 30 18.5 +0.8**
ARCES IAmb IAmb 02 31 31.1
comp=Z,65nm,1.8s
ARCES ARCESS Array B 40.58 330 P **P 02 30 18.5 +0.8**
ARCES pmax pmax
comp=Z,65nm,1.8s
ARPR Arapgir-MALATY 40.84 281 P **P 02 30 22.1 +1.7**
PEA0B Petropavlovsk- 40.84 56 P **P 02 30 20.7 +0.6**
PEA0B Petropavlovsk- 40.84 56 P **P 02 30 20.7 +0.6**
PEA0B pmax pmax
comp=Z,186nm,1.9s
PETK Petropavlovsk- 40.84 56 P **P 02 30 20.8 +0.7**
comp=Z,5.1nm,0.8s,baz=235,slow=5.2,SNR=4.8
comp=Z,5.1nm,0.8s
PETK Petropavlovsk- 40.84 56 P **P 02 30 20.0 -0.1**
PETK Petropavlovsk- 40.84 56 P **P 02 30 20.0 -0.1**
FIA1 FINESS Array S 41.10 317 P **P 02 30 22.2 +0.1**
FIA1 IAmb IAmb 02 30 23.9
comp=Z,53nm,1.4s
FINES FINESS Array B 41.10 317 P **P 02 30 23.0 +0.9**
comp=Z,2.7nm,0.6s,baz=65,slow=7.0,SNR=17
FINES PP **PP 02 31 56.1 -0.9**
comp=Z,6.1nm,0.8s,baz=94,slow=12,SNR=5.2
FINES LR LR 02 49 06.7
comp=Z,197nm,18.8s,baz=92,slow=39
comp=Z,2.7nm,0.6s
FINES FINESS Array B 41.10 317 P **P 02 30 22.5 +0.5**
FINES FINESS Array B 41.10 317 P **P 02 30 22.5 +0.5**
SIM Simferopol' 41.14 291 *e*P **P 02 30 19.5 -3.1**
SIM *e* 02 31 57.0
SIM pmax pmax
comp=Z,35nm,0.9s
SIM MLR MLR
comp=Z,100nm,18.4s
HAMF Hammerfest 41.18 332 *e*P **P 02 30 22.9 +0.4**
KTK1 Kautokeino 41.40 329 *e*P **P 02 30 25.5 +1.0**
MNK Minsk 41.73 307 *i*P **P 02 30 29.1 +1.8**
comp=E,13nm,1.0s
MNK *i*P **P 02 30 29.1 +1.8**
comp=N,12nm,1.0s
MNK *i*P **P 02 30 29.1 +1.8**
comp=Z,18nm,0.8s,baz=73
MNK *i*PP **PP 02 32 05.1 +1.1**
MNK *i*PPP PPP 02 32 35.2
MNK *i*S **S 02 36 47.2 +5.4**
MNK *i*SS **SS 02 39 49.2 +1.4**
MNK *i*SSS SSS 02 40 25.4
MNK *i*LQ LQ 02 44 01.8
MNK *i*LR LR 02 46 45.9
MNK *i*LRM MLR 02 50 14.8
comp=E,116nm,15.6s
MNK *i*LRM MLR 02 50 27.2
comp=Z,247nm,16.9s
MNK *i*LRM MLR 02 50 35.8
comp=N,250nm,17.9s
MNK Minsk 41.73 307 *i*P **P 02 30 29.1 +1.8**
MNK *i* 02 32 05.0
MNK *i*PPP PPP 02 32 35.1
MNK *i*S **S 02 36 47.1 +5.4**
MNK *i*SS **SS 02 39 49.2 +1.4**
MNK *i*SSS SSS 02 40 25.4
MNK pmax pmax
comp=Z,18nm,0.8s
MNK pmax pmax
comp=E,13nm,1.0s
MNK pmax pmax
comp=N,12nm,1.0s
MNK MLR MLR
comp=E,116nm,16.0s
MNK MLR MLR
comp=Z,247nm,17.0s
MNK MLR MLR
comp=N,250nm,18.0s
BILL Bilibino 42.10 32⇈ *e*P **P 02 30 31.0 +0.8**
BILL pmax pmax
comp=Z,43nm,2.6s
AK09 Malin Array Si 42.11 301 P **P 02 30 30.9 +0.4**
AK03 Malin Array Si 42.12 301 P **P 02 30 30.6 +0.1**
AKASG Malin Array Be 42.12 301 P **P 02 30 31.4 +0.8**
comp=Z,9.3nm,0.6s,baz=63,slow=8.5,SNR=25
AKASG LR LR 02 48 30.8
comp=Z,331nm,18.7s,baz=68,slow=37
comp=Z,9.3nm,0.6s
AKASG Malin Array Be 42.12 301 P **P 02 30 31.5 +0.9**
AKASG Malin Array Be 42.12 301*c e*P **P 02 30 31.3 +0.8**
AKASG pmax pmax
comp=Z,12nm,0.6s
AKBB Malin Array Si 42.12 301 P **P 02 30 31.4 +0.8**
AKBB IAmb IAmb 02 30 32.2
comp=Z,16nm,0.7s
AKBB Malin Array Si 42.12 301*c e*P **P 02 30 31.2 +0.6**
AKBB Malin Array Si 42.12 301 P **P 02 30 30.4 -0.2**
AK08 Malin Array Si 42.13 301 P **P 02 30 30.8 +0.2**
AK01 Malin Array Si 42.13 301 P **P 02 30 30.3 -0.3**
KIEV Kiev 42.13 301 P **P 02 30 31.4 +0.8**
KIEV IAmb IAmb 02 30 32.2
comp=Z,14nm,0.7s
KIEV Kiev 42.13 301⇑ P **P 02 30 31.5 +0.8**
KIEV Kiev 42.13 301 P **P 02 30 31.4 +0.8**
KIEV pmax pmax
comp=Z,14nm,0.7s
KIEV Kiev 42.13 301 P **P 02 30 30.7 +0.1**
comp=Z,79nm,0.7s
AK10 Malin Array Si 42.14 301 P **P 02 30 30.4 -0.3**
AK02 Malin Array Si 42.15 301 P **P 02 30 30.4 -0.4**
AK04 Malin Array Si 42.15 301 P **P 02 30 30.4 -0.4**
NACGM Naroch 42.23 308⇑ *i*P **P 02 30 32.4 +1.0**
comp=Z,19nm,0.8s,baz=73
AK13 Malin Array Si 42.25 301 P **P 02 30 32.3 +0.7**
JETT Jettan, Norway 42.36 330 *e*P **P 02 30 33.6 +1.3**
JCJ Chichijima 42.37 99 LR LR 02 49 03.5
comp=Z,117nm,18.7s,baz=162,slow=38
BJO1 Bjornoya 42.50 337 *e*P P 02 30 37.6 +4.3
PSI Prapat 43.06 173 LR LR 02 50 07.4
comp=Z,118nm,21.6s,baz=315,slow=38
SPITS Spitsbergen Ar 43.08 343 P **P 02 30 38.1 0.0**
comp=Z,14nm,1.1s,baz=81,slow=10,SNR=6.2
SPITS LR LR 02 52 10.5
comp=Z,194nm,18.5s,baz=80,slow=41
comp=Z,14nm,1.1s
PURM Purcari 43.25 295⇓ P **P 02 30 41.1 +1.4**
LUBAR Lubar, Ukraine 43.27 300 P **P 02 30 39.9 0.0**
SORM Soroca 43.58 298⇑ P **P 02 30 43.2 +0.8**
SORM Soroca 43.58 298 P **P 02 30 43.1 +0.8**
PABE Paberze 43.60 309 P **P 02 30 42.4 -0.1**
PABE IAmb IAmb 02 30 44.5
comp=Z,13nm,0.6s
KIS Kishinev 43.73 296⇑ P **P 02 30 43.8 +0.2**
KIS Kishinev 43.73 296 *e*P **P 02 30 43.0 -0.6**
KIS pmax pmax
comp=Z,60nm,0.5s
KIS Kishinev 43.73 296 *e*P **P 02 30 43.0 -0.6**
comp=Z,60nm,0.5s
BR131 Keskin Array S 43.75 284 P **P 02 30 45.9 +1.8**
BR131 Keskin Array S 43.75 284*d i*P **P 02 30 45.8 +1.8**
BRTR Keskin Array B 43.75 284 P **P 02 30 46.1 +2.0**
comp=Z,3.5nm,0.6s,baz=92,slow=6.9,SNR=28
comp=Z,3.5nm,0.6s
BRTR Keskin Array B 43.75 284 P **P 02 30 45.8 +1.8**
BR104 Keskin Array S 43.75 284 P **P 02 30 45.8 +1.7**
comp=Z,62nmcomp=Z,7.3nm,0.9s
BR106 Keskin Array S 43.76 284 P **P 02 30 45.9 +1.8**
comp=Z,45nmcomp=Z,4.9nm,0.9s
MILM Milestii Mici 43.76 296⇑ P **P 02 30 43.7 -0.2**
MILM Milestii Mici 43.76 296*c i*P **P 02 30 43.0 -0.9**
MILM *e* 02 30 48.0
MILM pmax pmax
comp=Z,46nm,0.8s
MILM pmax pmax
comp=N,500nm,11.5s
MILM Milestii Mici 43.76 296⇑ *i*P **P 02 30 43.0 -0.9**
comp=N,46nm,0.8s
MILM LQM 02 48 05.0
comp=N,500nm,11.5s
BR105 Keskin Array S 43.76 284 P **P 02 30 45.6 +1.4**
comp=N,53nmcomp=N,6.5nm,0.9s
KIRS Kirsehir-Merke 43.84 284⇑ P **P 02 30 46.2 +1.4**
RNPP9 Sopachiv 43.85 303 P **P 02 30 45.3 +0.7**
RNPP8 Varash 43.90 303 P **P 02 30 46.0 +1.1**
RNPP8 pP **pP 02 30 50.7 -5.3**
RNPP5 Staryi Chortor 43.92 303 P **P 02 30 46.1 +1.0**
HORU Horodok 44.34 300 P **P 02 30 49.6 +1.1**
STEI Steigen 44.47 328 *e*P **P 02 30 50.3 +1.1**
TLCR 44.47 294⇑ P **P 02 30 50.4 +0.8**
TLCR 44.47 294 P **P 02 30 50.3 +0.8**
FAUS Fauske 44.57 327 *e*P **P 02 30 50.8 +0.7**
KMPD K-Podol'skiy 44.57 299 P **P 02 30 50.4 +0.1**
VLDR Vladesti 44.66 295⇑ P **P 02 30 52.7 +1.6**
TPGR Topolog 44.87 293⇑ P **P 02 30 54.2 +1.4**
CFR Carcaliu 44.91 294⇑ P **P 02 30 54.0 +0.9**
CFR Carcaliu 44.91 294 P **P 02 30 54.0 +0.9**
GHRR 45.00 295⇑ P **P 02 30 55.5 +1.7**
GHRR 45.00 295 P **P 02 30 54.5 +0.7**
TIRR Tirgusor 45.05 293 P **P 02 30 54.0 -0.2**
TIRR Tirgusor 45.05 293 P **P 02 30 54.0 -0.2**
TIRR pmax pmax
comp=Z,53nm,1.5s
LOF Lofoten 45.05 329 *e*P **P 02 30 53.7 -0.2**
MOR8 Moi Rana 45.17 326 *e*P **P 02 30 54.5 -0.5**
PANC Panciu 45.24 295⇑ P **P 02 30 57.7 +2.0**
RAUS Rausandaksla 45.26 326 *e*P **P 02 30 56.7 +1.0**
TESR Tescani 45.29 296⇑ P **P 02 30 57.6 +1.5**
TESR Tescani 45.29 296 P **P 02 30 57.1 +1.0**
comp=Z,11nm,0.7s
ASF Jabal al Asfar 45.44 273 LR LR 02 51 16.2
comp=Z,102nm,20.9s,baz=23,slow=38
VAGH Vaagaholmen 45.49 327 *e*P **P 02 30 57.0 -0.4**
VRI Vrincioaia 45.51 295⇑ P **P 02 30 59.6 +1.6**
VRI Vrincioaia 45.51 295 P **P 02 30 59.5 +1.6**
ONER Baraj Valea Uz 45.52 296⇑ P **P 02 30 59.4 +1.4**
KSV Kosov 45.52 299 P **P 02 30 58.0 +0.1**
PLOR Plostina 45.57 295⇑ P **P 02 31 00.0 +1.6**
PLOR Plostina 45.57 295 P **P 02 31 00.0 +1.6**
ICOR Ion Corvin 45.59 293⇑ P **P 02 30 59.5 +1.0**
STOK Stokkvaagen 45.69 326 *e*P **P 02 30 59.8 +0.8**
STNU Starunia 45.71 300 P **P 02 30 59.5 +0.1**
LEIR Leirfjorden 45.71 326 *e*P **P 02 30 59.8 +0.7**
BUR08 Bucovina Ar. S 45.72 298 P **P 02 31 00.6 +1.0**
BURAR Bucovina Array 45.72 298 P **P 02 31 00.4 +0.8**
BURAR IAmb IAmb 02 31 02.4
comp=Z,9.2nm,0.7s
BURAR Bucovina Array 45.72 298⇓ P **P 02 31 01.2 +1.6**
BURAR Bucovina Array 45.72 298 P **P 02 31 01.2 +1.6**
BORA Eskisehir 45.82 286 P **P 02 31 01.9 +1.4**
BORA IAmb IAmb 02 32 28.6
comp=Z,19nm,1.5s
COVR Voineasa-Covas 45.85 296⇑ P **P 02 31 02.5 +1.9**
TURR Turia 45.88 296⇑ P **P 02 31 02.9 +2.1**
MORS Morshin 45.90 301 P **P 02 31 02.7 +1.8**
ISR Istrita 45.95 295⇑ P **P 02 31 02.9 +1.5**
ISR Istrita 45.95 295 P **P 02 31 02.9 +1.5**
ISR Istrita 45.95 295 P **P 02 31 03.1 +1.7**
comp=Z,35nm,1.0s
NEHR Nehoiu 45.98 295⇑ P **P 02 31 03.8 +2.3**
MMAI Mount Meron Ar 46.01 275 P **P 02 31 03.7 +1.6**
comp=Z,1.2nm,0.6s,baz=54,slow=4.2,SNR=5.4
comp=Z,1.2nm,0.6s
MLR Muntele Rosu 46.17 295 P **P 02 31 04.8 +1.6**
MLR IAmb IAmb 02 31 22.0
comp=Z,43nm,2.0s
MLR Muntele Rosu 46.17 295⇑ P **P 02 31 04.9 +1.6**
MLR Muntele Rosu 46.17 295 P **P 02 31 04.8 +1.6**
MLR pmax pmax
comp=Z,43nm,2.0s
RAKU Rahkiv 46.19 299 P **P 02 31 02.6 -0.6**
DOPR Dopca 46.31 296⇑ P **P 02 31 06.2 +2.0**
BALJ Balqa 46.37 274 P **P 02 31 06.9 +2.1**
BALJ IAmb IAmb 02 31 19.2
comp=Z,16nm,1.0s
KWP Kalwaria Pacla 46.41 302 *e*P **P 02 31 06.7 +1.8**
KWP Kalwaria Pacla 46.41 302 P **P 02 31 06.2 +1.3**
comp=Z,41nm,0.8s
NSS Namsos 46.62 324 *e*P **P 02 31 07.0 +0.7**
RAZG Razgrad 46.67 293⇑ P **P 02 31 08.8 +1.8**
LOZB Loznitsa 46.71 292⇑ P **P 02 31 08.5 +1.2**
VOIR 46.76 296⇑ P **P 02 31 08.8 +1.0**
VOIR 46.76 296 P **P 02 31 08.8 +1.0**
BERU Beregovo 47.03 300 P **P 02 31 11.0 +1.3**
ARR Arges 47.05 296⇑ P **P 02 31 12.3 +2.3**
HUMR Humele 47.21 295⇑ P **P 02 31 12.3 +1.0**
HFS Hagfors 47.30 318 P **P 02 31 12.3 +0.6**
comp=Z,19nm,0.7s,baz=98,slow=3.3,SNR=46
HFS LR LR 02 52 18.6
comp=Z,352nm,18.1s,baz=68,slow=38
comp=Z,19nm,0.7s
MARR Marisel-Cluj 47.41 298⇑ P **P 02 31 15.3 +2.4**
LOT Lotru 47.56 296⇑ P **P 02 31 16.4 +2.3**
DRGR 47.61 298⇓ P **P 02 31 16.3 +1.9**
DRGR 47.61 298 P **P 02 31 16.3 +1.9**
ELL Elmali 47.78 283 P **P 02 31 17.2 +1.3**
ELL IAmb IAmb 02 31 18.1
comp=Z,13nm,0.7s
ELL Elmali 47.78 283 P **P 02 31 17.2 +1.3**
ELL pmax pmax
comp=Z,13nm,0.7s
NC405 NORSAR Array S 47.87 320 P **P 02 31 16.8 +0.7**
OJC Ojcow 47.88 304 *e*P **P 02 31 17.5 +1.2**
OJC Ojcow 47.88 304 P **P 02 31 17.5 +1.2**
OJC Ojcow 47.88 304 P **P 02 31 17.5 +1.2**
OJC Ojcow 47.88 304 P **P 02 31 17.1 +0.8**
comp=Z,17nm,0.8s
NIE Niedzica 47.92 302 *e*P **P 02 31 18.7 +2.0**
NIE Niedzica 47.92 302 P **P 02 31 18.5 +1.7**
comp=Z,5.4nm,1.0s
NC602 NORSAR Array S 48.08 319 *e*P **P 02 31 17.9 +0.2**
NB2 NORSAR Subarra 48.12 320 P **P 02 31 18.3 +0.2**
comp=Z,5.5nm,0.6s,baz=66,slow=7.4
NOA NORSAR Array B 48.12 320 P **P 02 31 18.4 +0.3**
comp=Z,4.8nm,0.7s,baz=65,slow=7.4,SNR=43
NOA LR LR 02 53 15.8
comp=Z,408nm,18.1s,baz=65,slow=38
comp=Z,4.8nm,0.7s
GZR Gura Zlata 48.20 297⇑ P **P 02 31 19.8 +0.8**
GZR Gura Zlata 48.20 297 P **P 02 31 19.8 +0.8**
EIL Elat 48.25 272 LR LR 02 53 30.1
comp=Z,144nm,19.6s,baz=12,slow=38
SURR Surduc 48.45 297⇑ P **P 02 31 22.2 +1.5**
SIRR Siria 48.50 298⇓ P **P 02 31 22.6 +1.4**
LANS Liptovska Anna 48.53 302 *e*P P 02 31 25.2 +3.8
LANS pmax pmax
comp=Z,2.0nm,0.7s
LANS Liptovska Anna 48.53 302 *e*P P 02 31 25.2 +3.8
HERR Herculane 48.67 296⇑ P **P 02 31 23.8 +1.3**
DOMB Dombas 48.70 321 *e*P **P 02 31 22.9 +0.4**
OSL Oslo 48.76 318 *e*P **P 02 31 23.9 +0.9**
BZS Buzias 48.83 297⇓ P **P 02 31 24.5 +0.8**
BZS Buzias 48.83 297 P **P 02 31 24.5 +0.8**
MOL Molde 49.16 322 *e*P **P 02 31 27.0 +1.0**
MORC Moravsky Berou 49.38 304 P **P 02 31 29.6 +1.6**
MORC Moravsky Berou 49.38 304⇑ P **P 02 31 29.5 +1.6**
MORC Moravsky Berou 49.38 304 *e*P **P 02 31 29.3 +1.3**
MORC Moravsky Berou 49.38 304 P **P 02 31 29.5 +1.6**
KONO Kongsberg 49.39 318 *e*P **P 02 31 25.9 -1.9**
AKN Aaknes 49.55 322 *e*P **P 02 31 30.3 +1.3**
SKAR Skarslia 49.57 320 *e*P **P 02 31 30.5 +1.3**
KSP Ksiaz 49.63 306 *e*P **P 02 31 31.1 +1.4**
KSP Ksiaz 49.63 306 P **P 02 31 30.6 +0.9**
comp=Z,11nm,0.8s
BOVS Bovan 49.71 295⇑ P **P 02 31 31.9 +1.4**
JAVC Velka Javorina 49.72 303 *e*P **P 02 31 33.5 +2.9**
OSTC Ostas 49.80 305 *e*P **P 02 31 33.8 +2.7**
OSTC Ostas 49.80 305 *e*P **P 02 31 33.8 +2.7**
SRO Srobarova 49.82 301 *e*P **P 02 31 33.8 +2.6**
SRO pmax pmax
comp=Z,9.0nm,0.7s
SRO Srobarova 49.82 301 *e*P **P 02 31 33.8 +2.6**
DPC Dobruska-Polom 49.83 305 *e*P **P 02 31 33.5 +2.1**
DPC Dobruska-Polom 49.83 305 *e*P **P 02 31 33.5 +2.1**
DPC Dobruska-Polom 49.83 305 P **P 02 31 33.1 +1.7**
comp=Z,9.8nm,1.0s
CHVC Chvalec 49.88 305 *e*P **P 02 31 33.7 +2.0**
CHVC Chvalec 49.88 305 *e*P **P 02 31 33.7 +2.0**
UPC Upice 49.94 305 *e*P **P 02 31 34.0 +1.9**
UPC Upice 49.94 305 *e*P **P 02 31 34.0 +1.9**
VRAC Vranov 50.15 304 LR LR 02 53 44.2
comp=Z,285nm,19.4s,baz=74,slow=37
VRAC Vranov 50.15 304 *e*P **P 02 31 35.4 +1.7**
SHEM Shemya Is, Ala 50.22 51 LR LR 02 53 49.6
comp=Z,82nm,19.8s,baz=290,slow=37
MORH Mrgy, Hungar 50.37 299⇓ P **P 02 31 36.5 +1.1**
MORH Mrgy, Hungar 50.37 299 P **P 02 31 36.2 +0.8**
comp=Z,7.9nm,0.9s
KRUC Moravsky 50.38 304 *e*P **P 02 31 36.9 +1.5**
PVCC Panska Ves 50.75 306 *e*P **P 02 31 40.2 +2.0**
PVCC Panska Ves 50.75 306 *e*P **P 02 31 40.2 +2.0**
TREC Trest 50.80 304 *e*P **P 02 31 40.5 +1.9**
TREC Trest 50.80 304 *e*P **P 02 31 40.5 +1.9**
PRU Pruhonice 51.01 305 *e*P **P 02 31 41.9 +1.7**
PRU Pruhonice 51.01 305 *e*P **P 02 31 41.9 +1.7**
RONA Rosalia, Austr 51.08 302 *i*P **P 02 31 42.8 +2.0**
comp=Z,2.7nm,0.6s,SNR=6.8
CONA Conrad Observa 51.22 302 *e*P **P 02 31 43.9 +2.0**
comp=Z,9.8nm,0.7s,SNR=14
CLL Collm 51.27 307 P **P 02 31 42.7 +0.6**
CLL IAmb IAmb 02 31 44.0
comp=Z,8.4nm,0.6s
CLL Collm 51.27 307 P **P 02 31 42.7 +0.6**
CLL pmax pmax
comp=Z,8.0nm,0.6s
CLL Collm 51.27 307 P **P 02 31 43.3 +1.2**
comp=Z,12nm,0.8s
CLL Collm 51.27 307 *i*P **P 02 31 43.1 +1.0**
comp=Z,9.0nm,0.7s
CLL *e*PcP **PcP 02 32 59.0 +2.2**
CLL *e*SS SKiKP 02 42 42.0 -26
CLL AMS AMS 02 52 00.0
comp=N,200nm,19.0s
CLL AMS AMS 02 52 00.0
comp=E,100nm,18.6s
CKRC Cesky Krumlov 51.70 304 *e*P **P 02 31 47.4 +2.0**
CKRC Cesky Krumlov 51.70 304 *e*P **P 02 31 47.4 +2.0**
ARSA Arzberg 51.75 302 P **P 02 31 47.4 +1.6**
ARSA IAmb IAmb 02 32 48.3
comp=Z,25nm,1.8s
ARSA Arzberg 51.75 302 *e*P **P 02 31 47.2 +1.4**
comp=Z,3.1nm,1.0s
PDG Podgorica 51.87 295 P **P 02 31 48.1 +1.4**
KHC Kasperske Hory 51.97 305 *e*P **P 02 31 48.8 +1.3**
KHC Kasperske Hory 51.97 305 *e*P **P 02 31 48.8 +1.3**
IDI Anoyia 51.99 284 P **P 02 31 46.8 -1.0**
GERES GERESS Array B 52.04 304 P **P 02 31 49.0 +0.9**
comp=Z,0.8nm,0.7s,baz=63,slow=6.1,SNR=6.7
GERES LR LR 02 54 52.7
comp=Z,270nm,20.0s,baz=76,slow=37
comp=Z,0.8nm,0.7s
GERES GERESS Array B 52.04 304 P **P 02 31 49.0 +0.9**
MOA Molln 52.20 303 *e*P **P 02 31 49.9 +0.7**
comp=Z,8.4nm,1.2s
SOKA Soboth 52.33 301 *e*P **P 02 31 51.4 +1.2**
comp=Z,0.1nm,0.3s
KBA Koelnbreinsper 53.13 303 *e*pP **P 02 31 57.8 +1.6**
comp=Z,1.4nm,0.7s
LESA Schwarzleotal 53.34 303 *e*pP **P 02 31 59.3 +1.6**
comp=Z,0.2nm,0.3s
SABO M.te Sabotino 53.54 301 P **P 02 31 59.7 +0.7**
ABTA Abfaltersbach 53.79 303 *e*P **P 02 32 00.8 -0.1**
comp=Z,9.2nm,1.6s
WTTA Wattenberg 54.03 304 *e*P **P 02 32 04.2 +1.4**
comp=Z,3.0nm,0.7s
CIMO Cimolais 54.05 302 P **P 02 32 03.0 +0.1**
CIMO IAmb IAmb 02 32 04.1
comp=Z,8.3nm,0.7s
MOTA Moosalm 54.30 304 *i*P **P 02 32 05.6 +0.8**
comp=Z,3.1nm,1.2s,SNR=5.1
SQTA Sankt Quirin 54.30 304 *e*P **P 02 32 05.4 +0.6**
comp=Z,4.4nm,0.8s,SNR=9.0
RETA Reutte 54.43 304 *e*P **P 02 32 06.3 +0.7**
comp=Z,0.2nm,0.4s
FETA Feichten 54.69 304 *e*P **P 02 32 07.4 -0.2**
comp=Z,1.6nm,1.1s
FUORN Ofenpass-Fuorn 55.17 303 P **P 02 32 12.3 +1.1**
FUORN IAmb IAmb 02 32 13.3
comp=Z,5.3nm,0.6s
SCO Scoresbysund 55.21 338 P **P 02 32 13.0 +2.2**
SCO IAmb IAmb 02 32 37.2
comp=Z,13nm,1.4s
SCO Scoresbysund 55.21 338 P **P 02 32 13.0 +2.2**
SCO pmax pmax
comp=Z,13nm,1.4s
DAVOX Davos/Dischmat 55.31 304 LR LR 02 56 59.9
comp=Z,339nm,18.2s,baz=68,slow=37
FDMO Fiordimonte 55.41 298 P **P 02 32 14.2 +1.6**
E21K Killik River 55.47 25 IAmb IAmb 02 32 21.9
comp=Z,14nm,1.4s
NRCA Norcia 55.50 298 P **P 02 32 14.7 +1.3**
C23K Itkillik River 55.52 22 P **P 02 32 13.6 +0.5**
C23K IAmb IAmb 02 32 15.0
comp=Z,30nm,1.7s
TUE Stuetta 55.78 304 P **P 02 32 15.7 +0.1**
C24K Franklin Bluff 56.10 22 IAmb IAmb 02 32 26.9
comp=Z,12nm,1.1s
E22K Anaktuvuk Pass 56.29 24 P **P 02 32 18.9 +0.2**
E22K IAmb IAmb 02 34 14.2
comp=Z,9.7nm,1.3s
TOLK Toolik Lake Re 56.59 23 P **P 02 32 21.4 +0.6**
TOLK IAmb IAmb 02 32 30.3
comp=Z,13nm,1.3s

COLD Coldfoot 57.35 25 P **P** 02 32 26.7 +0.6
COLD IAmb IAmb 02 32 39.8
comp=Z,6.5nm,0.8s
EKA Eskdalemuir Ar 57.50 318 P **P** **02 32 28.1 +0.7**
comp=Z,2.8nm,0.7s,baz=65,slow=7.3,SNR=7.0
comp=Z,2.8nm,0.7s
H21K Melozitna Rive 57.60 27 P **P** **02 32 28.8 +0.9**
H21K IAmb IAmb 02 32 45.6
comp=Z,9.0nm,1.1s
BNI Bardonecchia 58.13 304 P **P** **02 32 33.0 +0.9**
BNI Bardonecchia 58.13 304 P **P** **02 32 33.0 +0.9**
BNI pmax pmax
comp=Z,49nm,1.9s
F25K Christian Rive 58.38 23 P **P** **02 32 34.0 +0.5**
BMAR Burnt Mountain 58.79 23 P **P** **02 32 37.1 +0.9**
BORG Borgarnes 58.83 333 LR LR 03 01 11.5
comp=Z,84nm,18.5s,baz=64,slow=39
E27K Coleen River 59.01 21 P **P** **02 32 37.9 +0.1**
A36M Sachs Harbour 59.30 13 P **P** **02 32 40.4 +0.8**
A36M IAmb IAmb 02 32 41.3
comp=Z,9.0nm,0.7s
PPLA Purkeypile 59.63 29 P **P** **02 32 43.4 +1.1**
RES Resolute Bay 59.65 3 LR LR 02 59 42.3
comp=Z,89nm,18.6s,baz=348,slow=37
E29M Blow River 59.76 20 IAmb IAmb 02 32 52.7
comp=Z,17nm,1.6s
F28M Old Crow 59.87 21 P **P** **02 32 44.6 +0.9**
F28M IAmb IAmb 02 33 12.4
comp=Z,12nm,1.4s
WRH Wood River Hil 59.88 26 P **P** **02 32 43.7 -0.1**
WRH IAmb IAmb 02 33 15.4
comp=Z,11nm,1.2s
IL31 60.03 26 P **P** **02 32 45.0 +0.3**
ILAR Eielson Array 60.03 26 P **P** **02 32 45.0 +0.2**
comp=Z,0.9nm,0.7s,baz=307,slow=4.8,SNR=13
ILAR LR LR 03 04 17.7
comp=Z,76nm,19.1s,baz=25,slow=42
comp=Z,0.9nm,0.7s
L22K Petersville 60.37 29 P **P** **02 32 47.5 +0.3**
STLK Strandline Lak 60.70 30 P **P** **02 32 50.4 +0.9**
STLK IAmb IAmb 02 32 59.6
comp=Z,7.3nm,1.0s
INK Inuvik 60.82 18 P **P** **02 32 50.4 +0.4**
INK IAmb IAmb 02 34 19.4
comp=Z,23nm,1.8s
INK Inuvik 60.82 18 P **P** **02 32 50.4 +0.4**
INK pmax pmax
comp=Z,23nm,1.8s
F30M Barrier River 60.87 20 P **P** **02 32 51.1 +0.7**
F30M IAmb IAmb 02 33 04.8
comp=Z,6.1nm,0.7s
I27K Kandik River 60.94 23 IAmb IAmb 02 33 06.0
comp=Z,6.4nm,0.8s
SUA Susitna One 61.11 30 P **P** **02 32 53.2 +0.9**
ACHA Angle Creek He 61.63 34 P **P** **02 32 56.5 +0.6**
G31M Satah River 61.77 19 P **P** **02 32 56.2 -0.3**
G31M IAmb IAmb 02 33 05.1
comp=Z,6.0nm,0.7s
C36M Paulatuk 61.80 14 P **P** **02 32 56.3 -0.3**
C36M IAmb IAmb 02 33 10.4
comp=Z,7.7nm,0.6s
SEW Seward 62.52 30 P **P** **02 33 01.5 -0.2**
I30M Mount Dempster 62.62 21 P **P** **02 33 02.3 -0.2**
BCAR Beaver Creek A 62.82 25 P **P** **02 33 03.7 0.0**
KDAK Kodiak Island 62.99 33 LR LR 03 01 23.6
comp=Z,144nm,20.4s,baz=304,slow=37
N25K Chitina, Valde 63.05 27 P **P** **02 33 05.6 +0.3**
M27K Edge Creek, AK 63.33 26 P **P** **02 33 08.2 +1.0**
M27K IAmb IAmb 02 33 42.9
comp=Z,13nm,1.1s
SFJD Kangerlussuaq 64.32 345 LR LR 03 05 07.1
comp=Z,109nm,19.1s,baz=21,slow=40
CTGM Chitina Glacie 64.57 26 P **P** **02 33 16.8 +1.4**
LODK Lodwar 66.01 249 P **P** **02 33 26.4 +1.2**
ESDC Sonseca Array 67.64 304 P **P** **02 33 36.0 +0.7**
comp=Z,1.6nm,0.8s,baz=47,slow=5.6,SNR=13
ESDC LR LR 03 04 05.1
comp=Z,88nm,19.7s,baz=56,slow=37
comp=Z,1.6nm,0.8s
ESDC Sonseca Array 67.64 304 P **P** **02 33 36.2 +0.9**
KMBO Kilima Mbogo 68.26 244 P **P** **02 33 41.0 +1.3**
comp=Z,2.2nm,0.6s,baz=62,slow=15,SNR=3.8
KMBO LR LR 03 08 38.1
comp=Z,41nm,18.2s,baz=44,slow=40
comp=Z,2.2nm,0.6s
YKA Yellowknife Ar 69.66 14 P **P** **02 33 47.6 +0.2**
comp=Z,0.7nm,0.7s,baz=334,slow=6.7,SNR=5.1
YKA LR LR 03 07 05.7
comp=Z,30nm,20.4s,baz=6.5,slow=38
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 69.66 14 P **P** **02 33 48.1 +0.7**
FITZ Fitzroy Crossi 69.81 148 P **P** **02 33 47.6 -1.2**
comp=Z,2.3nm,1.0s,baz=346,slow=5.9,SNR=5.2
comp=Z,2.3nm,1.0s
FITZ Fitzroy Crossi 69.81 148 P **P** **02 33 50.1 +1.3**
FRB Frobisher Bay 69.91 352 LR LR 03 07 09.0
comp=Z,78nm,18.5s,baz=80,slow=38
MBAR Mbarara 72.05 250 LR LR 03 08 41.5
comp=Z,65nm,18.6s,baz=38,slow=38
MD01 Midelt array s 72.71 299 P **P** **02 34 07.8 +1.2**
WB0 Warramunga Arr 74.88 141 P **P** **02 34 20.6 +1.5**
WRAB Tennant Creek 75.01 141 P **P** **02 34 20.5 +0.6**
WRAB IAmb IAmb 02 36 20.3
comp=Z,14nm,0.8s
WRAB Tennant Creek 75.01 141↑ *eP* **P** **02 34 19.1 -0.7**
WRAB pmax pmax
comp=Z,13nm,1.4s
WRA Warramunga Arr 75.01 141 P **P** **02 34 19.5 -0.4**
comp=Z,0.9nm,0.8s,baz=338,slow=5.1,SNR=6.9
comp=Z,0.9nm,0.8s
WRA Warramunga Arr 75.01 141 P **P** **02 34 20.3 +0.4**
BBB Bella Bella 75.92 25 LR LR 03 13 44.6
comp=Z,155nm,19.8s,baz=33,slow=40
ASAR Alice Springs 78.11 143 P **P** **02 34 37.6 +0.3**
comp=Z,0.4nm,0.5s,baz=331,slow=5.6,SNR=5.3
ASAR LR LR 03 12 52.6
comp=Z,21nm,18.1s,baz=288,slow=39
comp=Z,0.4nm,0.5s
ASAR Alice Springs 78.11 143 P **P** **02 34 38.4 +1.1**
SCHQ Schefferville 78.41 349 P **P** **02 34 38.0 -0.7**
comp=Z,3.3nm,0.7s,baz=14,slow=7.0,SNR=5.8
SCHQ LR LR 03 10 57.0
comp=Z,60nm,18.2s,baz=10,slow=37
comp=Z,3.3nm,0.7s
VOI Vohitsoka 79.81 224 P **P** **02 34 48.5 +1.7**
TORD Torodi Ar. Bea 82.23 281 P **P** **02 34 59.3 -0.6**
comp=Z,2.0nm,0.3s,baz=31,slow=7.8,SNR=1.4
comp=Z,2.0nm,0.3s
TORD Torodi Ar. Bea 82.23 281 P **P** **02 34 59.9 +0.1**
NEW Newport 82.46 20 LR LR 03 15 00.9
comp=Z,80nm,18.5s,baz=350,slow=38
MXC Moxie City 83.20 23 P **P** **02 35 06.0 +1.6**
MXC IAmb IAmb 02 35 15.7
comp=Z,7.8nm,1.1s
JTMT Jette 83.61 19 P **P** **02 35 08.0 +1.3**
ULM Lac du Bonnet 83.94 6 LR LR 03 12 22.2
comp=Z,67nm,21.1s,baz=3.0,slow=36
LSZ Lusaka 84.81 242 LR LR 03 14 52.6
comp=Z,56nm,21.3s,baz=37,slow=37
VLDQ Val d'Or 86.16 354 P **P** **02 35 20.9 +1.6**
VLDQ IAmb IAmb 02 35 26.8
comp=Z,15nm,1.2s
PDAR Pinedale Array 89.36 17 P **P** **02 35 34.4 -0.7**
comp=Z,0.3nm,0.8s,baz=342,slow=4.6,SNR=2.2
PDAR LR LR 03 22 07.0
comp=Z,28nm,18.2s,baz=338,slow=40
comp=Z,0.3nm,0.8s
PDAR Pinedale Array 89.36 17 P **P** **02 35 35.5 +0.5**
SADO Sadowa 89.59 355 LR LR 03 16 02.1
comp=Z,52nm,21.1s,baz=338,slow=36
HWUT Hardware Ranch 90.04 19 P **P** **02 35 38.7 +0.5**
HWUT IAmb IAmb 02 35 48.8
comp=Z,9.2nm,1.4s
BSUT Blindstream Ca 91.24 19 P **P** **02 35 45.4 +1.4**
BSUT IAmb IAmb 02 35 54.7
comp=Z,4.4nm,0.8s
NVAR Mina Array Bea 91.28 25 LR LR 03 23 00.7
comp=Z,72nm,20.6s,baz=332,slow=40
SPR3 Spring Creek 3 91.84 22 P **P** **02 35 49.2 +2.4**
SPR3 IAmb IAmb 02 35 53.5
comp=Z,7.3nm,1.5s
TSUM Tsumeb 94.44 247 LR LR 03 23 17.5
comp=Z,42nm,19.8s,baz=150,slow=38
PFO Pinyon Flats O 96.30 25 LR LR 03 23 18.6
comp=Z,78nm,21.7s,baz=334,slow=38
BOSA Boshof 96.70 236 LR LR 03 21 27.4
comp=Z,54nm,20.0s,baz=30,slow=36
ANMO Albuquerque 97.53 17 LR LR 03 25 54.2
comp=Z,56nm,18.2s,baz=90,slow=39
TKL Tuckaleechee C 98.88 358 LR LR 03 22 35.4
comp=Z,60nm,18.5s,baz=4.0,slow=36
LPAZ La Paz 146.95 327 PKPbc **PKPab** **02 42 20.9 -2.3**
comp=Z,1.8nm,0.6s,baz=34,slow=1.2,SNR=9.9
LPAZ La Paz 146.95 327 **PKPdf** **02 42 18.6 -1.2**
LPAZ La Paz 146.95 327 PKIKP **PKPdf** **02 42 18.6 -1.2**
CPUP Villa Florida 149.95 300 PKPbc **PKPbc** **02 42 27.3 -1.3**
comp=Z,0.7nm,0.7s,baz=134,slow=1.0,SNR=5.6
CPUP Villa Florida 149.95 300 **PKPbc** **02 42 27.1 -1.5**
CPUP Villa Florida 149.95 300 PKHKP PKPpre 02 42 27.1

*IDC **25** 02:31:31.1±0.7,3.7°2S×128.8°8E, h0km, mb4.2/7, mbtmp4.3/12, ML4.2/4, MS3.4/4, Error ellipse: s-maj=29.2km s-min=12.7km az=72.0*
*DJA **25** 02:31:33.3±0.3,4.4°S±4.4°×12.9°E±1.1°, h10km, M4.7/13, mB5.1/1, mb5.2/2, MLv4.5/13, Mw(mB)4.5/1*
*NEIC **25** 02:31:37.0±1.6,3.7°3S±0.7°×128.7°9E±0.7°06, h32km±6km, mb4.5/20, Error ellipse: s-maj=11.4km s-min=5.9km az=213.0*

ISC 25 02:31:33.9±0.4,3.78S±0.06×128.81E±0.05,h10km,n75,
σ1§37/68,mb4.5/12,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.45**	**15**	P	**Pg**	**02 31 41.0**	**-1.8**
AAI	**Ambon**	**0.63**	**279**	P	**Pg**	**02 31 44.5**	**-1.6**
AAI				S	**Sg**	**02 31 52.1**	**-2.2**
BNDI	**Bandanaira**	**1.31**	**124**	P	**Pn**	**02 31 58.1**	**-0.2**
BNDI	**Bandanaira**	**1.31**	**124**	P	Pn	02 31 56.8	-1.5
NLAI	**Namlea**	**1.79**	**287**	P	**Pn**	**02 32 03.3**	**-1.7**
SANI	**Sanana**	**3.31**	**301**	P	Pn	02 32 23.3	-2.5
FAKI	**Fak Fak**	**3.53**	**76**		**Pn**	**02 32 29.1**	**+0.2**
FAKI	**Fak Fak**	**3.53**	**76**	P	**Pn**	**02 32 30.0**	**+1.0**
FAKI	**Fak Fak**	**3.53**	**76**	P	**Pn**	**02 32 28.9**	**-0.1**
SWI	**Sorong**	**3.79**	**40**	P	**Pn**	**02 32 32.0**	**-0.5**
TNTI	**Ternate**	**4.75**	**342**	Pn	**Pn**	**02 32 45.6**	**-0.1**
TNTI	**Ternate**	**4.75**	**342**	P	Pn	02 32 51.1	+5.4
KMPI	**Kaimana, Papua**	**4.88**	**89**	P	**Pn**	**02 32 47.9**	**+0.4**
RKPI	**Ransiki, Papua**	**5.81**	**67**	P	**Pn**	**02 33 00.4**	**+0.1**
	224nm,0.7s						
LUWI	**Luwuk**	**6.62**	**294**	Pn	**Pn**	**02 33 10.7**	**-0.7**
LUWI	**Luwuk**	**6.62**	**294**	P	**Pn**	**02 33 15.7**	**+4.3**
LUWI	**Luwuk**	**6.62**	**294**	P	Pn	02 33 08.4	-3.0
BATI	**Baumata**	**8.18**	**218**	Pn	**Pn**	**02 33 34.0**	**+1.2**
	7.3nm,0.3s,baz=49,slow=9.3,SNR=3.9						
BATI				LR	LR	02 36 58.6	
	comp=Z,377nm,18.8s,baz=46,slow=40						
	14nm,0.3s						
KAPI	**Kappang**	**9.12**	**262**	Pn	**Pn**	**02 33 46.2**	**+0.5**
	1.4nm,0.3s,baz=105,slow=10,SNR=6.1						
KAPI				LR	LR	02 37 10.7	
	comp=Z,190nm,21.1s,baz=69,slow=37						
	5.1nm,0.4s						
KAPI	**Kappang**	**9.12**	**262**	Pn	**Pn**	**02 33 44.3**	**-1.4**
KAPI	**Kappang**	**9.12**	**262**	P	**Pn**	**02 33 48.4**	**+2.7**
MTN	**Manton Dam**	**9.29**	**166**	Pn	**Pn**	**02 33 49.9**	**+1.9**
TOLI2	**Tolitoli**	**9.38**	**301**	Pn	**Pn**	**02 33 49.4**	**0.0**
TOLI2	**Tolitoli**	**9.38**	**301**	P	Pn	02 33 54.9	+5.5
KNRA	**Kununurra**	**11.82**	**180**	Pn	**Pn**	**02 34 22.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**14.56**	**192**	Pn	Pn	02 34 58.9	-1.4
	0.5nm,0.3s,baz=29,slow=11,SNR=6.5						
	1.7nm,0.7s						
WB0	**Warramunga Arr**	**16.79**	**162**	Pn	**Pn**	**02 35 26.6**	**-2.8**
WB0				IAmb	IAmb	02 35 33.9	
	comp=Z,36nm,1.2s						
WRAB	**Tennant Creek**	**16.94**	**162**	Pn	**Pn**	**02 35 29.6**	**-1.6**
WRAB				IAmb	IAmb	02 35 35.6	
	comp=Z,38nm,1.4s						
WRAB	**Tennant Creek**	**16.94**	**162**	P	**Pn**	**02 35 31.8**	**+0.6**
WRA	**Warramunga Arr**	**16.94**	**162**	Pn	**Pn**	**02 35 28.4**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=339,slow=13,SNR=15						
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**16.94**	**162**	Pn	**Pn**	**02 35 28.4**	**-2.9**
WR8	**Warramunga Arr**	**17.00**	**161**	Pn	**Pn**	**02 35 30.5**	**-1.6**
COEN	**Coen**	**17.41**	**126**	Pn	**Pn**	**02 35 34.7**	**-2.4**
COEN				IAmb	IAmb	02 35 41.1	
	comp=Z,29nm,0.9s						
COEN	**Coen**	**17.41**	**126**	P	**Pn**	**02 35 37.6**	**+0.5**
PMG	**Port Moresby**	**19.05**	**108**	P	**P**	**02 35 56.2**	**-0.3**
	comp=Z,12nm,0.8s,baz=268,slow=5.6,SNR=4.3						
PMG	**Port Moresby**	**19.05**	**108**	P	**P**	**02 35 56.7**	**+0.2**
PMG				IAmb	IAmb	02 35 58.5	
	comp=Z,13nm,0.8s						
QIS	**Mount Isa**	**19.71**	**149**	P	**P**	**02 36 03.5**	**-0.2**
PSA00	**Pilbara Seismi**	**19.71**	**205**	P	**P**	**02 36 03.4**	**-0.4**
PSA00				IAmb	IAmb	02 36 09.7	
	comp=Z,33nm,1.4s						
PSA00	**Pilbara Seismi**	**19.71**	**205**	P	**P**	**02 36 02.7**	**-1.1**
PSA00				IAmb	IAmb	02 36 39.0	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**20.37**	**166**	P	**P**	**02 36 11.2**	**+0.3**
AS31				IAmb	IAmb	02 36 14.8	
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**20.37**	**166**	P	**P**	**02 36 11.2**	**+0.3**
	comp=Z,29nm,0.7s,baz=344,slow=10,SNR=71						
ASAR				S	**S**	**02 39 60.0**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=352,slow=22,SNR=4.2						
ASAR				PcP	**PcP**	**02 40 22.3**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=11,slow=1.3,SNR=4.3						
ASAR				LR	LR	02 44 46.0	
	comp=Z,131nm,18.2s,baz=326,slow=39						
	comp=Z,29nm,0.7s						
ASAR	**Alice Springs**	**20.37**	**166**	P	**P**	**02 36 11.1**	**+0.1**
AUALC	**St Philip's Co**	**20.39**	**167**	P	**P**	**02 36 11.9**	**+0.8**
MTSU	**Mount Surprise**	**20.83**	**134**	P	**P**	**02 36 16.1**	**+0.2**
CTA	**Charters Tower**	**23.49**	**135**	P	**P**	**02 36 44.0**	**-0.1**
CTAO	**Charters Tower**	**23.49**	**135**	P	**P**	**02 36 43.9**	**-0.1**
CTAO				IAmb	IAmb	02 36 47.6	
	comp=Z,14nm,0.9s						
CTAO	**Charters Tower**	**23.49**	**135**	P	**P**	**02 36 44.0**	**-0.1**
INKA	**Innaminka**	**26.40**	**156**	P	**P**	**02 37 10.6**	**-0.2**
QLP	**Quilpie**	**27.05**	**148**	P	**P**	**02 37 16.2**	**-0.5**
BBOO	**Buckleboo**	**29.66**	**168**	P	**P**	**02 37 40.8**	**+0.9**
STKA	**Stephens Creek**	**30.42**	**158**	P	**P**	**02 37 46.3**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=322,slow=3.7,SNR=3.8						
	comp=Z,1.4nm,0.3s						
CMSA	**Comet Meteorol**	**31.85**	**152**	P	**P**	**02 37 59.2**	**0.0**
CMAR	**Chiang Mai Arr**	**36.80**	**308**	LR	LR	02 55 34.2	
	comp=Z,25nm,20.9s,baz=100,slow=39						
NJ2	**Nanjing**	**36.87**	**346**	*eP*	**P**	**02 38 43.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
PBA	**Port Blair**	**39.02**	**294**	P	**P**	**02 39 01.0**	**-0.1**
PZH	**PanZhiHua**	**39.91**	**321**	P	**P**	**02 39 09.4**	**+0.9**
HHC	**Hu-ho-hao-te**	**47.14**	**342**	*eP*	**P**	**02 40 09.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,4.0s						
EVN	**Everest**	**51.29**	**311**	P	**P**	**02 40 37.9**	**-1.4**
TUWZ	**Tuamarina**	**55.07**	**139**	P	**P**	**02 41 06.5**	**+0.4**
MKAR	**Makanchi Array**	**64.91**	**327**	P	**P**	**02 42 12.1**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=119,slow=8.3,SNR=6.8						
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**64.91**	**327**	P	P	02 42 11.0	-2.6
ZAA0	**Zalesovo Array**	**68.19**	**334**	P	**P**	**02 42 34.0**	**-0.4**
ZAA0				IAmb	IAmb	02 42 39.2	
	comp=Z,9.4nm,1.4s						
ZALV	**Zalesovo Beam**	**68.19**	**334**	P	P	02 42 32.2	-2.3
	comp=Z,1.1nm,0.6s,baz=114,slow=3.7,SNR=5.9						
	comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**68.19**	**334**	P	**P**	**02 42 32.5**	**-1.9**
KURBB	**Kurchatov Arra**	**69.17**	**328**	P	**P**	**02 42 39.2**	**-1.4**
	comp=Z,2.7nm,0.9s,baz=130,slow=5.6,SNR=12						
	comp=Z,2.7nm,0.9s						
KURK	**Kurchatov**	**69.17**	**328**	P	**P**	**02 42 38.9**	**-1.7**
KURK				IAmb	IAmb	02 42 43.7	
	comp=Z,6.4nm,0.9s						
BVAR	**Borovoye Array**	**74.73**	**328**	P	**P**	**02 43 13.4**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=125,slow=14,SNR=3.6						
	comp=Z,2.0nm,0.9s						
AB31	**Akbulak array**	**79.27**	**322**	P	**P**	**02 43 38.0**	**-1.6**
ABKAR	**Akbulak array**	**79.27**	**322**	P	**P**	**02 43 38.0**	**-1.6**
B22K	**Teshekpuk Lake**	**89.43**	**19**	P	**P**	**02 44 29.6**	**-1.1**
D23K	**Nanushuk River**	**90.10**	**21**	P	**P**	**02 44 32.6**	**-1.3**
D23K				IAmb	IAmb	02 44 51.2	
	comp=Z,6.6nm,1.4s						
ILAR	**Eielson Array**	**90.96**	**25**	P	P	02 44 35.9	-2.0
	comp=Z,0.2nm,0.7s,baz=257,slow=5.4,SNR=5.3						
	comp=Z,0.2nm,0.7s						
BMAR Burnt Mountain 92.16 23 P **P** **02 44 42.8 -0.7**
G31M Satah River 96.18 23 P **P** **02 45 01.1 -0.8**
TXAR Lajitas Array 124.23 57 PKP **PKPdf** **02 50 33.4 -0.5**
comp=Z,0.2nm,0.8s,baz=328,slow=4.1,SNR=1.5

KRSC 25 02:31:49.3±1.7,48.08N×156.16E,h16km±36km,MI3.9,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.60**	**359**	*eS*	Sn	02 33 03.9	+2.0
PAU	**Pauzhetka**	**3.41**	**7**	*eP*	Pn	02 32 43.4	+1.6
PAU				*eS*	Sn	02 33 25.1	+3.3
KDTR	**Khodutka, Kamc**	**3.93**	**18**	*eP*	Pn	02 32 52.1	+3.3
KDTR				*eS*	Sb	02 33 40.1	-5.2
ASAK	**Asacha**	**4.45**	**14**	*eP*	Pn	02 33 00.2	+4.1
MTVR	**Mutnovka**	**4.59**	**16**	*eP*	Pn	02 33 02.0	+3.9
MTVR				*eS*	Sn	02 33 57.1	+6.0
GRL	**Gorelyy**	**4.64**	**15**	*eP*	Pn	02 33 03.0	+4.3
UGLR	**Uglovaya**	**5.40**	**17**	*eP*	Pn	02 33 15.1	+5.9
AVH	**Avacha**	**5.44**	**17**	*eP*	Pn	02 33 14.9	+5.2
KOK	**Koryaka**	**5.45**	**16**	*eP*	Pn	02 33 14.5	+4.7
SDLR	**Sedlovina**	**5.48**	**17**	*eP*	Pn	02 33 13.7	+3.5
KRX	**Arik**	**5.51**	**16**	*eP*	Pn	02 33 15.5	+4.8
SPN	**Mys Shipunski**	**5.59**	**25**	*eP*	Pn	02 33 15.9	+4.2
SPN				*eS*	Sn	02 34 21.6	+6.1
KBTR	**Krutoberegovo**	**9.10**	**24**	*eP*	Pn	02 34 04.2	+4.4

*IDC **25** 02:32:36.0±1.7,3.4°5S×129.1°8E, h0km, mb4.0/3, mbtmp4.1/6, ML4.0/3, MS3.5/1, Error ellipse: s-maj=55.0km s-min=25.5km az=72.0*
*DJA **25** 02:32:38.6±0.9,4.1°S±6.1°×12.9°E±1.1°, h10km, M4.2/5, MLv4.2/5*

ISC 25 02:32:38.0±0.9,3.71S±0.08×128.77E±0.07,h10km,n11,
σ1§11/9,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.40**	**24**	P	**Pg**	**02 32 46.0**	**+0.2**
AAI	**Ambon**	**0.57**	**273**	P	**Pg**	**02 32 49.6**	**+0.5**
AAI				S	**Sb**	**02 32 57.9**	**-0.4**
BNDI	**Bandanaira**	**1.39**	**125**	P	Pg	02 33 16.5	+12
SANI	**Sanana**	**3.23**	**301**	P	**Pn**	**02 33 29.2**	**+0.4**
KAPI	**Kappang**	**9.08**	**261**	Pn	Pn	02 34 54.6	+5.4
	1.3nm,0.3s,baz=80,slow=5.6,SNR=1.6						
	7.0nm,0.5s						
JAY	**Jayapura**	**11.98**	**85**	LR	LR	02 40 59.8	
	comp=Z,225nm,21.4s,baz=304,slow=44						
FITZ	**Fitzroy Crossi**	**14.62**	**192**	Pn	**P**	**02 36 09.6**	**-1.9**
	0.5nm,0.3s,baz=6.3,slow=9.2,SNR=1.2						
	3.8nm,0.9s						
WRA	**Warramunga Arr**	**17.02**	**162**	P	**Pn**	**02 36 37.8**	**+1.5**
	0.4nm,0.3s,baz=346,slow=12,SNR=1.4						
	3.1nm,0.7s						
ASAR	**Alice Springs**	**20.45**	**166**	P	**P**	**02 37 16.7**	**+0.9**
	8.1nm,0.5s,baz=350,slow=12,SNR=4.9						
	8.1nm,0.5s						
MKAR	**Makanchi Array**	**64.82**	**327**	P	**P**	**02 43 16.9**	**-0.2**
	0.5nm,0.5s,baz=116,slow=8.0,SNR=1.8						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**69.08**	**328**	P	**P**	**02 43 43.7**	**-0.4**
	1.5nm,0.8s,baz=130,slow=5.8,SNR=4.3						
	1.5nm,0.8s						

*GCG **25** 02:38:15.1±0.3, 14.5°0N×92.8°3W, h4km±7km, MD4.0, ML3.5*
*MEX **25** 02:38:16.3±1.1, 14.2°5N×93.3°7W, h19km±73km, MD4.1*

ISC 25 02:38:06.9±1.5,14.22N±0.08×93.20W±0.05,h10km,n9,
σ1§73/16,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.49**	**78**	*eP*	**Pb**	**02 38 36.0**	**+1.3**
RTAL				*eS*	**Sn**	**02 38 53.6**	**+0.2**
STG2	**El Palmar, Qui**	**1.78**	**83**	*eP*	Pn	02 38 37.7	-0.2
STG5	**El Palmar, Qui**	**1.81**	**84**	*eP*	Pn	02 38 37.7	-0.5
CCIG	**Comitan**	**2.29**	**27**	*eP*	**Pg**	**02 38 50.7**	**-0.2**
CCIG				*eS*	**Sg**	**02 39 19.1**	**-1.5**
TGIG		**2.54**	**2**	*eP*	**Pb**	**02 38 53.5**	**+0.8**
TGIG				*eS*	**Sb**	**02 39 23.1**	**-0.9**
TGIG		**2.54**	**2**	*eP*	**Pb**	**02 38 53.5**	**+0.8**
TGIG				*eS*	**Sb**	**02 39 23.4**	**-0.6**
HUIG	**Huatulco**	**3.20**	**299**	*eP*	**Pb**	**02 39 04.4**	**+0.6**
HUIG				*eS*	**Sb**	**02 39 39.9**	**-3.0**
UXUV	**UXUV**	**3.21**	**344**	*eP*	**Pb**	**02 39 03.0**	**-1.0**
UXUV				*eS*	Sn	02 39 38.4	+2.8
NEUV	**Arroyo Zacate**	**4.28**	**325**	*eP*	Pn	02 39 15.1	+3.1
NEUV				*eS*	**Sn**	**02 39 59.8**	**-2.3**

*JMA **25** 02:58:30.4±0.2,33.0°N±2.1°×13.8°E±1.1°, h340km, MV3.3/37, FAR S OFF TOKAI DISTRICT*
*IDC **25** 02:58:34.2±0.7,33.39N×138.16E, h311km±8km, mb3.1/13, mbtmp3.7/17, Error ellipse: s-maj=23.4km s-min=10.6km az=68.0*

ISC 25 02:58:34.0±0.7,33.40N±0.08×138.13E±0.07,h300km,n42,
σ1§69/45,mb3.3/13,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.63**	**330**	*eP*	**Pn**	**02 59 14.8**	**+2.2**
TTO3	**TONANKAI O.B.S**	**0.77**	**307**	*eP*	**Pn**	**02 59 15.6**	**+2.4**
TTO4	**TONANKAI O.B.S**	**0.79**	**321**	*eP*	**Pn**	**02 59 14.9**	**+1.8**
TTO5	**TONANKAI O.B.S**	**0.92**	**338**	*eP*	**Pn**	**02 59 15.8**	**+2.1**
TTO2	**TONANKAI O.B.S**	**0.98**	**290**	*eP*	**Pn**	**02 59 16.4**	**+2.5**
TTO1	**TONANKAI O.B.S**	**1.15**	**282**	*eP*	**Pn**	**02 59 16.9**	**+2.2**
JMKN	**Mikurajimanish**	**1.31**	**67**	*eP*	**Pn**	**02 59 16.7**	**+0.7**
JMKN				*eS*	**S**	**02 59 52.3**	**+2.9**
JHJ	**Hachijo jima 2**	**1.41**	**101**	P	**Pn**	**02 59 17.5**	**+0.9**
	56nm,0.4s,baz=309,slow=13,SNR=1.8						
JHJ				S	**S**	**02 59 53.8**	**+3.3**
	38nm,0.3s,baz=252,slow=20,SNR=1.5						
JHJ2	**Mitsune**	**1.44**	**101**	*eS*	**S**	**02 59 53.3**	**+2.5**
JIE	**Ise**	**1.55**	**310**	*eP*	**Pn**	**02 59 19.1**	**+1.7**
JOD2	**Odawara 2**	**2.02**	**23**	*eP*	**Pn**	**02 59 22.5**	**+1.6**
JOD2				*eS*	**S**	**03 00 02.0**	**+3.7**
JYN	**Shimodo**	**2.12**	**9**	*eP*	**Pn**	**02 59 23.2**	**+1.4**
JTNC	**Tanabenakahech**	**2.15**	**282**	*eP*	**Pn**	**02 59 23.4**	**+1.4**
JWY	**Kouya**	**2.27**	**292**	*eP*	**Pn**	**02 59 25.0**	**+1.9**
JYTA	**Yamagatataniai**	**2.48**	**333**	*eP*	**Pn**	**02 59 26.7**	**+1.9**
BSO1	**Boso 1**	**2.67**	**61**

0.9nm,0.6s,baz=0.1,slow=7.5,SNR=15
0.9nm,0.6s
ASAR Alice Springs 56.89 185 P **P** **03 07 47.6 -0.7**
0.2nm,0.5s,baz=16,slow=11,SNR=4.5
0.2nm,0.5s
ARCES ARCESS Array B 66.44 339 P **P** **03 08 50.5 -0.6**
3.0nm,1.0s,baz=58,slow=5.6,SNR=1.3
3.0nm,1.0s
FINES FINESS Array B 70.76 332 P **P** **03 09 17.2 -0.5**
0.7nm,0.4s,baz=65,slow=4.7,SNR=13
0.7nm,0.4s
HFS Hagfors 76.26 335 P **P** **03 09 48.4 -1.2**
2.3nm,1.0s,baz=61,slow=6.8,SNR=1.6
2.3nm,1.0s
NVAR Mina Array Bea 79.34 51 P **P** **03 10 06.8 -0.3**
0.2nm,0.5s,baz=331,slow=9.0,SNR=2.8
0.2nm,0.5s
TXAR Lajitas Array 94.48 51 P **P** **03 11 19.4 -1.5**
0.3nm,0.8s,baz=352,slow=3.3,SNR=2.8
0.3nm,0.8s

GCG 25 03:13:06.1±1.2, 13°.90N×91°.07W, h62km±12km, MD3.6, ML3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.53**	**26**	*e*P	Pn	03 13 18.7	+0.1
STG5	**El Palmar, Qui**	**0.57**	**331**	*e*P	Pn	03 13 23.0	+3.9
STG5				*e*S	Sn	03 13 35.9	+7.4
ESSJ	**San Jos, E**	**0.65**	**121**	*i* P	Pn	03 13 16.4	-3.4
FG16	**Alotenango, Sa**	**0.66**	**56**	*e*P	Pn	03 13 20.1	0.0
FG16				*e*S	Sn	03 13 30.3	0.0
FG16				IAML		03 13 32.3	
	comp=E,13µm,0.2s						
PCG5	**San Vicente Pa**	**0.74**	**65**	*e*P	Pn	03 13 20.4	-0.7
APG	**El Apazote**	**1.24**	**28**	*e*P	Pn	03 13 29.1	+1.4
NUBE	**Las Nubes**	**1.25**	**90**	*i* P	Pn	03 13 27.9	+0.2
NUBE				*e*S	Sn	03 13 43.9	+0.1

*IDC **25** 03:16:53.7±3.8, 21°.93S×179°.35W, h582km±44km, mb3.3/10, mbtmp4.2/12, Error ellipse: s-maj=31.7km s-min=22.1km az=158.0*
*NEIC **25** 03:16:54.2±1.1, 21°.85S±0°.1×179°.4W±0°.2, h583km±10km, mb4.2/28, Error ellipse: s-maj=24.2km s-min=17.8km az=105.0*
ISC 25 03:16:54.0±0.7, 22°.1S±0°.1×179°.3W±0°.1, h592km, n60, σ1§13/57, mb4.1/24, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.01**	**330**	P	**P**	**03 18 27.0**	**+0.3**
MARNC	**Mare, Loyalty**	**11.76**	**271**	P	**P**	**03 19 30.4**	**+0.1**
DZM	**Mont Dzumac**	**13.19**	**268**	P	**P**	**03 19 44.5**	**-0.4**
	6.6nm,0.6s,baz=80,slow=18,SNR=7.1						
TOZ	**Tahuroa Road**	**16.19**	**195**	P	**P**	**03 20 17.4**	**+4.2**
TOZ				IAmb	IAmb	03 20 18.8	
	comp=Z,6.5nm,0.6s						
URZ	**Urewera**	**16.38**	**190**	P	**P**	**03 20 15.4**	**+0.4**
	comp=Z,4.3nm,0.4s,baz=263,slow=2.1,SNR=9.2						
URZ				S	**S**	**03 22 53.7**	**-5.0**
	comp=Z,9.4nm,1.1s,baz=32,slow=19,SNR=1.5						
RTZ	**Ruatahuna**	**16.75**	**190**	P	**P**	**03 20 19.2**	**+0.8**
EIDS	**Eidsvold**	**27.25**	**257**	P	**P**	**03 21 52.4**	**0.0**
EIDS				IAmb	IAmb	03 22 00.6	
	comp=Z,8.7nm,1.1s						
ARMA	**Armidale**	**27.26**	**246**	P	**P**	**03 21 55.1**	**+2.4**
ARMA				IAmb	IAmb	03 21 55.8	
	comp=Z,3.2nm,0.7s						
CTAO	**Charters Tower**	**32.13**	**267**	P	**P**	**03 22 34.7**	**+0.2**
TOO	**Toolangi**	**33.95**	**235**	P	**P**	**03 22 51.5**	**+1.9**
PMG	**Port Moresby**	**34.54**	**286**	P	**P**	**03 22 54.8**	**0.0**
	comp=Z,11nm,0.5s,baz=240,slow=1.7,SNR=3.7						
	comp=Z,11nm,0.5s						
STKA	**Stephens Creek**	**35.98**	**246**	P	**P**	**03 23 07.5**	**+0.9**
	comp=Z,2.4nm,0.4s,baz=74,slow=10.0,SNR=6.7						
	comp=Z,2.4nm,0.4s						
COEN	**Coen**	**36.48**	**276**	P	**P**	**03 23 10.4**	**-0.5**
COEN				IAmb	IAmb	03 23 12.3	
	comp=Z,3.9nm,0.8s						
BBOO	**Buckleboo**	**40.73**	**245**	P	**P**	**03 23 45.4**	**+0.6**
ASAR	**Alice Springs**	**42.96**	**259**	P	**P**	**03 24 02.9**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=94,slow=8.3,SNR=36						
	comp=Z,4.9nm,0.8s						
ASAR	**Alice Springs**	**42.96**	**259**	P	**P**	**03 24 03.1**	**+0.6**
WR8	**Warramunga Arr**	**43.02**	**264**	P	**P**	**03 24 02.1**	**-0.8**
WB0	**Warramunga Arr**	**43.16**	**264**	P	**P**	**03 24 03.3**	**-0.7**
WB0				IAmb	IAmb	03 24 04.5	
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**43.17**	**264**	P	**P**	**03 24 04.0**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=94,slow=7.8,SNR=23						
	comp=Z,2.3nm,0.6s						
WRA	**Warramunga Arr**	**43.17**	**264**	P	**P**	**03 24 03.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**51.60**	**264**	P	**P**	**03 25 07.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=61,slow=6.4,SNR=12						
	comp=Z,1.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**51.60**	**264**	P	**P**	**03 25 07.4**	**+0.2**
JHJ	**Hachijo jima 2**	**67.37**	**323**	P	**P**	**03 26 49.9**	**-1.6**
	comp=Z,134nm,0.7s,baz=120,slow=11,SNR=2.1						
PETK	**Petropavlovsk-**	**77.52**	**346**	P	**P**	**03 27 49.1**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=188,slow=7.0,SNR=2.7						
	comp=Z,3.7nm,0.7s						
PETK	**Petropavlovsk-**	**77.52**	**346**	P	**P**	**03 27 49.4**	**0.0**
NVAR	**Mina Array Bea**	**83.05**	**44**	P	**P**	**03 28 18.2**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=248,slow=5.9,SNR=4.6						
	comp=Z,0.5nm,0.7s						
N15K	**Kwethluk River**	**83.48**	**10**	P	**P**	**03 28 21.3**	**+1.3**
N15K				IAmb	IAmb	03 28 54.8	
	comp=Z,12nm,1.1s						
K15K	**Wolf Creek Mou**	**85.31**	**8**	P	**P**	**03 28 29.6**	**+0.7**
K15K				IAmb	IAmb	03 29 01.0	
	comp=Z,4.1nm,1.1s						
L18K	**Granite Mounta**	**85.97**	**10**	P	**P**	**03 28 32.8**	**+0.8**
L18K				IAmb	IAmb	03 28 34.6	
	comp=Z,4.1nm,1.2s						
SUA	**Susitna One**	**86.41**	**13**	P	**P**	**03 28 34.0**	**-0.2**
SUA				IAmb	IAmb	03 28 43.2	
	comp=Z,5.5nm,1.0s						
PMR	**Palmer**	**86.87**	**14**	P	**P**	**03 28 36.1**	**-0.1**
PMR				IAmb	IAmb	03 29 09.5	
	comp=Z,5.4nm,1.1s						
GHO	**Glory Hole Cre**	**87.08**	**14**	P	**P**	**03 28 37.2**	**-0.1**
L22K	**Petersville**	**87.36**	**13**	P	**P**	**03 28 37.9**	**-0.7**
SCM	**Sheep Creek Mo**	**87.50**	**15**	P	**P**	**03 28 39.3**	**0.0**
N25K	**Chitina, Valde**	**87.97**	**16**	P	**P**	**03 28 41.6**	**+0.1**
TRF	**Thorofare Moun**	**88.28**	**13**	P	**P**	**03 28 42.5**	**-0.6**
RND	**Reindeer**	**88.54**	**13**	P	**P**	**03 28 43.5**	**-0.7**
RND				IAmb	IAmb	03 28 45.0	
	comp=Z,3.6nm,0.8s						
TXAR	**Lajitas Array**	**88.97**	**58**	P	**P**	**03 28 48.4**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=208,slow=6.9,SNR=5.3						
	comp=Z,0.6nm,0.9s						
M27K	**Edge Creek, AK**	**89.30**	**16**	P	**P**	**03 28 47.9**	**+0.1**
M27K				IAmb	IAmb	03 28 59.0	
	comp=Z,4.6nm,1.1s						
H21K	**Melozitna Rive**	**89.81**	**11**	P	**P**	**03 28 50.0**	**+0.1**
IMAR	**Indian Mountai**	**89.95**	**10**	P	**P**	**03 28 50.4**	**-0.2**
ILAR	**Eielson Array**	**90.16**	**13**	P	**P**	**03 28 50.8**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=216,slow=4.8,SNR=6.2						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**90.16**	**13**	P	**P**	**03 28 51.0**	**-0.5**
H22K	**Ishtalitna Cre**	**90.28**	**11**	P	**P**	**03 28 52.1**	**0.0**
J25K	**Salcha River,**	**90.35**	**14**	P	**P**	**03 28 52.1**	**-0.4**
J25K				IAmb	IAmb	03 28 54.0	
	comp=Z,2.9nm,1.1s						
PDAR	**Pinedale Array**	**90.98**	**44**	P	**P**	**03 28 56.2**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=180,slow=3.0,SNR=3.5						
	comp=Z,0.4nm,0.8s						
DAWY	**Dawson**	**91.35**	**16**	P	**P**	**03 28 57.3**	**+0.2**
DAWY				IAmb	IAmb	03 29 19.5	
	comp=Z,1.6nm,1.2s						
BVAR	**Borovoye Array**	**119.50**	**319**	PKP	**PKiKP**	**03 34 37.0**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=106,slow=2.8,SNR=5.0						
ARCES	**ARCESS Array B**	**130.27**	**349**	PKP	**PKPdf**	**03 34 57.2**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=45,slow=3.9,SNR=5.3						
FINES	**FINESS Array B**	**136.95**	**342**	PKP	**PKPdf**	**03 35 09.2**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=113,slow=2.5,SNR=4.2						
HFS	**Hagfors**	**140.92**	**350**	PKhKP	PKPpre	03 35 11.4	
	comp=Z,0.8nm,0.4s,baz=52,slow=3.0,SNR=12						
AKASG	**Malin Array Be**	**143.79**	**329**	PKP	PKPbc	03 35 21.0	-0.6
	comp=Z,0.9nm,0.3s,baz=45,slow=3.9,SNR=8.9						
AKBB	**Malin Array Si**	**143.79**	**329**	PKPdf	PKPbc	03 35 21.4	-0.2
KIEV	**Kiev**	**143.80**	**329**	PKPdf	PKPbc	03 35 21.1	-0.6
EKA	**Eskdalemuir Ar**	**146.71**	**4**	PKPbc	**PKPbc**	**03 35 29.6**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=9.2,slow=2.9,SNR=4.4						
BRTR	**Keskin Array B**	**146.96**	**310**	PKPbc	**PKPbc**	**03 35 31.6**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=137,slow=4.5,SNR=4.3						
BRTR	**Keskin Array B**	**146.96**	**310**		**PKPbc**	**03 35 30.9**	**-0.5**
BUR08	**Bucovina Ar. S**	**147.80**	**328**	PKPbc	**PKiKP**	**03 35 34.0**	**-0.6**
BURAR	**Bucovina Array**	**147.81**	**328**	PKPbc	**PKiKP**	**03 35 34.1**	**-0.6**
GERES	**GERESS Array B**	**151.38**	**342**	PKPbc	**PKPbc**	**03 35 41.4**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=38,slow=6.8,SNR=4.2						

IDC 25 03:17:58.7±2.3, 1°.58N×132°.66E, h0km, mb3.4/5, mbtmp3.5/5, MS2.5/1, Error ellipse: s-maj=109.0km s-min=22.2km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.74**	**199**	P	P	03 22 40.4	-0.7
	1.4nm,0.8s,baz=15,slow=12,SNR=1.9						
	1.4nm,0.8s						
WRA	**Warramunga Arr**	**21.45**	**176**	P	P	03 22 49.8	+0.9
	0.4nm,0.7s,baz=355,slow=11,SNR=5.3						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**25.12**	**177**	P	P	03 23 25.3	-0.3
	0.5nm,0.7s,baz=355,slow=11,SNR=5.0						
	0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.07**	**299**	LR	LR	03 41 26.0	
	comp=Z,6.3nm,19.1s,baz=335,slow=38						
MKAR	**Makanchi Array**	**62.74**	**323**	P	P	03 28 25.9	+0.1
	0.5nm,0.6s,baz=105,slow=7.9,SNR=5.5						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**66.78**	**326**	P	P	03 28 52.0	0.0
	0.7nm,0.7s,baz=118,slow=5.1,SNR=4.9						
	0.7nm,0.7s						

*NNC **25** 03:21:05.0±0.7, 44°.89N×78°.77E, h0km±6km, mb2.5, mpv2.8, Error ellipse: s-maj=7.3km s-min=4.3km az=116.0*
*SOME **25** 03:21:06.8, 44°.83N×78°.83E, h5km*
ISC 25 03:21:06.2±1.1, 44°.88N±0°.04×78°.81E±0°.04, h9km±13km, n8, σ0§46/14, 3C, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDK	**Taldyqorghan**	**0.31**	**294**	*e*P	**Pg**	**03 21 12.7**	**+0.3**
	38nm,0.2s						
TDK				*e*S	**Sg**	**03 21 16.8**	**+0.2**
	38nm,0.2s						
KAPS	**Kapalarasan**	**0.56**	**43**	P	**Pg**	**03 21 16.7**	**-0.4**
	4.4nm,0.1s						
KAPS				S	**Sg**	**03 21 23.7**	**-0.8**
	87nm,0.1s						
KNOS	**Konyrlen**	**0.58**	**153**	P	**Pg**	**03 21 17.5**	**+0.1**
	9.1nm,0.1s						
KNOS				S	**Sg**	**03 21 25.1**	**0.0**
	6.8nm,0.1s						
ARXS	**Arharly**	**0.96**	**227**	P	**Pb**	**03 21 24.8**	**-0.3**
	3.8nm,0.2s						
ARXS				S	**Sb**	**03 21 37.5**	**-0.4**
	4.4nm,0.1s						
ARXS	**Arharly**	**0.96**	**227**	*e*P	**Pb**	**03 21 24.8**	**-0.3**
ARXS				*e*S	**Sb**	**03 21 37.5**	**-0.4**
KPKS	**Kokpek**	**1.41**	**184**	P	**Pb**	**03 21 32.8**	**+0.1**
	2.8nm,0.2s						
KPKS				S	**Sb**	**03 21 51.1**	**+0.3**
	5.2nm,0.4s						
PDGK	**Podgornoye**	**1.62**	**162**	⇑Pn	**Pn**	**03 21 35.2**	**+0.2**
	0.4nm,0.2s						
PDGK				⇑Lg	Lg	03 21 57.8	
	1.0nm,0.2s						
MK31	**Makanchi Array**	**3.10**	**51**	⇑Pg	**Pb**	**03 22 02.1**	**+0.7**
	0.5nm,0.6s						
MK31				Lg	Lg	03 22 41.5	
	0.4nm,0.6s,baz=303,slow=52,SNR=4.8						

*NIED **25** 03:22:01.6, 36°.20N×140°.96E, h45km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}0.13; $M_{\theta\theta}$0.44; $M_{\phi\phi}$-0.57; $M_{r\theta}$-0.42; $M_{r\phi}$-0.53; $M_{\theta\phi}$0.92; Fault plane solution: $M_0$1.25000×10¹⁵ NP1: ϕ_s245.00000°, δ36.00000°, λ174.00000°. NP2: ϕ_s340.00000°, δ86.00000°, λ54.00000°.*
*JMA **25** 03:22:01.6±0.1, 36°.2N±0°.3×141°.0E±0°.8, h45km±1km, MV3.9/36, E OFF IBARAKI PREF*
JMA Felt II J1 at E OFF IBARAKI PREF .
*IDC **25** 03:22:05.6±2.4, 36°.08N×140°.76E, h63km±21km, mb3.4/12, mbtmp3.7/14, MS3.1/6, Error ellipse: s-maj=22.3km s-min=9.2km az=66.0*
ISC 25 03:22:01.8±2.0, 36°.23N±0°.04×140°.98E±0°.06, h30km±14km, n36, σ1§04/30, mb3.8/12, MS2.9/4, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.34**	**289**	⇓*i*P	**Pn**	**03 22 10.6**	**0.0**
JHYU				⇓*e*S	**Sn**	**03 22 16.7**	**+0.3**
JIHU	**Itakohorinouch**	**0.45**	**234**	⇓*i*P	**Pn**	**03 22 12.2**	**0.0**
JIHU				⇓S	**Sn**	**03 22 19.7**	**+0.4**
JHO	**Hitachi**	**0.50**	**319**	⇓*i*P	**Pn**	**03 22 12.5**	**-0.5**
JHO				⇓S	**Sb**	**03 22 19.9**	**+0.4**
JYT	**Yasato**	**0.64**	**270**	⇓*i*P	**Pn**	**03 22 14.0**	**-0.7**
JYT				⇓S	**Sn**	**03 22 22.4**	**-1.4**
ONAJ	**Iwakimizuishiy**	**0.88**	**351**	*i* P	**Pn**	**03 22 17.8**	**-0.5**
ONAJ				S	**Sn**	**03 22 28.6**	**-1.5**
JFK	**Kawauchi**	**1.14**	**356**	P	**Pn**	**03 22 21.1**	**-0.7**
JFK				S	**Sn**	**03 22 34.8**	**-1.6**
JAG	**Ashikaga**	**1.25**	**279**	⇓*i*P	**Pn**	**03 22 22.9**	**-0.4**
JAG				⇓*e*S	**Sn**	**03 22 38.1**	**-0.8**
MJAR	**Matsushiro Arr**	**2.26**	**279**	P	**Pn**	**03 22 37.5**	**+0.4**
	33nm,0.3s,baz=86,slow=9.8,SNR=185						
MJAR				S	**Sn**	**03 23 04.1**	**+0.2**
	24nm,0.3s,baz=306,slow=27,SNR=5.4						
MJAR				LR	LR	03 23 41.2	
	comp=Z,362nm,19.2s,baz=150,slow=45						
JHJ	**Hachijo jima 2**	**3.26**	**198**	P	**Pn**	**03 22 49.9**	**-1.0**
	49nm,0.4s,baz=44,slow=21,SNR=6.3						
JHJ				S	**Sn**	**03 23 27.8**	**-0.7**
	142nm,0.3s,baz=58,slow=23,SNR=7.8						
JNU	**Nakatsue**	**8.88**	**252**	LR	LR	03 28 00.3	
	comp=Z,154nm,19.2s,baz=66,slow=41						
JCJ	**Chichijima**	**9.16**	**173**	P	Pn	03 23 59.4	-13
	23nm,0.3s,baz=108,slow=24,SNR=6.4						
JCJ				S	Sn	03 25 33.9	-20
	33nm,0.4s,baz=292,slow=22,SNR=1.8						
PETK	**Petropavlovsk-**	**20.56**	**30**	LR	LR	03 35 34.7	
	comp=Z,24nm,18.1s,baz=250,slow=39						
MA2	**Magadan**	**24.21**	**12**	LR	LR	03 36 25.4	
	comp=Z,40nm,19.5s,baz=122,slow=35						
YAK	**Yakutsk**	**26.78**	**348**	LR	LR	03 38 37.3	
	comp=Z,32nm,18.0s,baz=98,slow=37						
SONM	**Songino Array**	**27.95**	**305**	P	**P**	**03 27 48.8**	**-0.8**
	0.6nm,0.5s,baz=100,slow=8.2,SNR=2.4						
	0.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.05**	**119**	T	T	03 57 11.6	
	baz=311,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.06**	**119**	T	T	03 57 04.6	
	baz=311,slow=75,SNR=9.4						
H11N3	**WAKE ISLAND Hy**	**28.07**	**119**	T	T	03 57 11.2	
	baz=311,slow=75,SNR=9.3						
H11S1	**WAKE ISLAND Hy**	**28.73**	**121**	T	T	03 57 58.7	
	baz=314,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**28.73**	**121**	T	T	03 58 07.3	
	baz=314,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**28.75**	**121**	T	T	03 58 07.3	
	baz=314,slow=76,SNR=20						
ZALV	**Zalesovo Beam**	**42.20**	**313**	P	**P**	**03 29 50.9**	**-0.8**
	0.7nm,0.4s,baz=91,slow=7.3,SNR=3.7						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**44.25**	**303**	P	**P**	**03 30 08.6**	**+0.1**
	0.2nm,0.6s,baz=80,slow=11,SNR=2.4						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**46.22**	**309**	P	**P**	**03 30 23.9**	**-0.1**
	1.4nm,0.6s,baz=82,slow=7.6,SNR=16						
	1.4nm,0.6s						
ILAR	**Eielson Array**	**50.36**	**32**	P	**P**	**03 30 58.2**	**+2.6**
	0.3nm,0.7s,baz=270,slow=6.5,SNR=12						
	0.3nm,0.7s						
AAK	**Ala-Archa**	**50.57**	**299**	LR	LR	03 53 39.8	
	comp=Z,38nm,20.0s,baz=77,slow=38						
FITZ	**Fitzroy Crossi**	**55.95**	**198**	P	**P**	**03 31 36.0**	**-1.2**
	1.7nm,0.9s,baz=6.3,slow=9.2,SNR=2.0						
	1.7nm,0.9s						
WRA	**Warramunga Arr**	**56.22**	**188**	P	**P**	**03 31 38.0**	**-1.2**
	1.4nm,0.7s,baz=2.0,slow=7.5,SNR=15						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**59.95**	**187**	P	**P**	**03 32 04.4**	**-0.8**
	1.0nm,0.7s,baz=9.8,slow=7.9,SNR=12						
	1.0nm,0.7s						
FINES	**FINESS Array B**	**69.36**	**332**	P	**P**	**03 33 07.0**	**+0.8**
	3.0nm,0.9s,baz=46,slow=4.0,SNR=5.2						
	3.0nm,0.9s						
NOA	**NORSAR Array B**	**74.79**	**337**	P	**P**	**03 33 37.8**	**-1.0**
	0.7nm,0.7s,baz=39,slow=5.8,SNR=3.5						
	0.7nm,0.7s						
NVAR	**Mina Array Bea**	**75.75**	**53**	P	**P**	**03 33 45.7**	**+0.7**
	0.1nm,0.4s,baz=311,slow=6.0,SNR=2.6						
	0.1nm,0.4s						
PDAR	**Pinedale Array**	**78.48**	**45**	P	**P**	**03 34 02.2**	**+2.0**
	0.2nm,0.6s,baz=280,slow=6.8,SNR=1.4						
	0.2nm,0.6s						
H03N2	**Juan Fernandez**	**147.28**	**97**	T	T	06 26 21.7	
	baz=291,slow=76,SNR=3.7						
H03N3	**Juan Fernandez**	**147.29**	**97**	T	T	06 26 21.4	
	baz=291,slow=76,SNR=4.2						
H03N1	**Juan Fernandez**	**147.30**	**97**	T	T	06 26 23.6	
	baz=291,slow=76,SNR=5.3						

SDD 25 03:27:33.8±2.0, 19°.54N×69°.14W, h0km±402km, MD3.5, ML2.4, MW2.6, 17C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMDR	**Samana, DR**	**0.26**	**191**	⇓*e*Pg	Pg	03 27 38.3	-0.4
SMDR				⇑*e*Sg	Sg	03 27 41.2	-0.9
SMDR				IAML		03 27 42.1	
	comp=N,1µm,0.2s						
MIDR	**Miches**	**0.56**	**171**	⇑*e*Pg	Pg	03 27 43.6	-1.0
MIDR				⇑*e*Sg	Sg	03 27 51.0	-0.9
MIDR				IAML		03 27 52.5	
	comp=N,63nm,0.2s						
HATOM	**Hato Mayor del**	**0.79**	**197**	⇑*e*Pg	Pg	03 27 47.6	-1.3
HATOM				⇑*e*Sg	Sg	03 27 57.6	-1.4
HATOM				IAML		03 27 59.9	
	comp=N,57nm,0.2s						
DR08	**Loma La Naviza**	**1.01**	**235**	⇑*e*Pg	Pg	03 27 53.5	+0.3
DR08				⇑*e*Sg	Sg	03 28 06.6	+0.1
DR08				IAML		03 28 09.2	
	comp=N,967nm,0.1s						
HIDR	**Higuey Centro**	**1.03**	**157**	⇑*e*Pg	Pg	03 27 52.1	-1.4
HIDR				⇑*e*Sg	Sg	03 28 06.7	-0.1
HIDR				IAML		03 28 09.5	
	comp=N,78nm,0.2s						
PCDR	**Punta Cana, DR**	**1.25**	**145**	⇑*e*Pg	Pg	03 27 55.4	-2.4
PCDR				⇑*e*Sg	Sb	03 28 14.7	-0.2
PCDR				IAML		03 28 19.0	
	comp=N,92nm,2.4s						
SDD	**Santo Domingo**	**1.30**	**214**	⇑*e*Sg	Sg	03 28 13.7	-2.0
SDD				IAML		03 28 25.0	
	comp=N,9.0nm,0.5s						
BANI	**BANI**	**1.63**	**225**	⇑*e*Pg	Pn	03 28 03.4	-0.4
BANI				⇑*e*Sg	Sn	03 28 25.1	-0.4
BANI				IAML		03 28 30.8	
	comp=N,67nm,0.2s						
REDR	**Restauracion**	**2.16**	**260**	⇑*e*Pg	Pg	03 28 16.9	+1.6
REDR				⇑*e*Sg	Sg	03 28 49.5	+6.1
REDR				IAML		03 28 53.2	
	comp=N,33nm,0.2s						
CRPR	**Cabo Rojo, PR**	**2.46**	**128**	*e*Pg	Pb	03 28 17.8	-1.0
CRPR				⇑*e*Sg	Sb	03 28 50.2	+0.7
CRPR				IAML		03 28 58.9	
	comp=N,28nm,1.8s						

GCG 25 03:42:58.7±0.3, 14°.45N×92°.41W, h72km±27km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**1.00**	**90**	*e*P	Pn	03 43 16.1	-1.4
STG8	**El Palmar, Qui**	**1.03**	**90**	*i* P	Pn	03 43 16.5	-1.4
STG8				*e*S	Sn	03 43 30.2	-2.0
STG5	**El Palmar, Qui**	**1.03**	**92**	*i* P	Pn	03 43 15.6	-2.2
STG5				*i* S	Sn	03 43 29.0	-3.0
APG	**El Apazote**	**1.97**	**73**	*e*P	Pn	03 43 31.0	+0.8

*SOME **25** 03:52:39.4, 40°.07N×71°.02E, h10km*
*KRNET **25** 03:52:41.8±0.1, 40°.02N×70°.56E, h35km, mb2.7*
*ISU **25** 03:52:42, 40°.21N×70°.71E, h4km*
ISC 25 03:52:41.9±1.6, 40°.10N±0°.06×70°.74E±0°.05, h9km±10km, n18, σ1§17/31, 10C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMI	**Chimion**	**0.62**	**74**	P	**Pg**	**03 52 52.9**	**-1.1**
CHMI				S	**Sg**	**03 53 02.6**	**+0.4**
FRG	**Fergana**	**0.84**	**71**	S	**Sn**	**03 53 12.8**	**+0.2**
DRK	**Karamyk**	**1.02**	**127**	⇓*e*P	**Pn**	**03 53 02.4**	**-0.4**
DRK				⇓*e*S	**Sn**	**03 53 17.2**	**-0.2**
TSTA	**Tashata**	**1.41**	**70**	P	**Pb**	**03 53 09.0**	**+0.5**
TSTA				S	**Sg**	**03 53 29.0**	**+1.7**
TRKS	**Terek-Say**	**1.46**	**12**	⇑*i*P	**Pn**	**03 53 07.9**	**-0.8**
TRKS				⇑*i*S	**Sn**	**03 53 27.2**	**-0.8**
CHMG	**Chimgan**	**1.55**	**339**	P	**Pg**	**03 53 12.5**	**+0.8**
CHMG				S	**Sg**	**03 53 32.9**	**+1.1**
TGS	**TashGRES**	**1.61**	**325**	S	Sg	03 53 43.9	+10
OHH	**Osh**	**1.62**	**74**	⇑*e*P

baz=103

KEV				SB	Sg	04 04 55.5	-2.6
RAJF	**Raja-Jooseppi**	**1.39**	**222**	PG	Pg	04 04 36.1	-5.2
TERR	**Teriberka**	**1.56**	**100**	P	Pn	04 04 41.9	-1.8
TERR				S	Sn	04 05 02.1	-2.4
VRF	**Varrio**	**1.84**	**194**	PG	Pn	04 04 44.4	-3.2
VRF				smax	smax	04 05 04.6	
	comp=Z,3.1nm,0.2s						
VRF				SN	Sn	04 05 06.9	-4.6
ARA0	**ARCESS Array S**	**1.86**	**273**	PG	Pn	04 04 46.7	-1.2
ARA0				SN	Sn	04 05 10.7	-1.5
ARCES	**ARCESS Array B**	**1.86**	**273**	P	Pn	04 04 46.5	-1.5
ARCES				S	Sn	04 05 10.6	-1.6
KTK1	**Kautokeino**	**2.74**	**263**	PN	Pn	04 04 56.9	-3.1
KTK1				SG	Sn	04 05 36.0	+2.2
KTK1	**Kautokeino**	**2.74**	**263**	PG	Pn	04 04 56.9	-3.1
HEF	**Hetta**	**2.81**	**250**	PN	Pn	04 04 58.2	-2.8
HEF				smax	smax	04 05 34.4	
	comp=Z,1.1nm,0.2s						
HEF				SG	Sn	04 05 36.0	+0.5
KVDA	**Kovda**	**2.95**	**164**	P	Pn	04 05 02.5	-0.3
KVDA				S	Sn	04 05 39.0	+0.2
OLKF	**Oulanka, Finla**	**3.26**	**190**	SN	Sn	04 05 43.2	-3.5
OLKF				smax	smax	04 05 45.5	
	comp=Z,0.5nm,0.2s						
LANU	**Lannavaara**	**3.53**	**249**	PG	Pn	04 05 13.6	+2.7

HEL 25 04:04:31.5±0.2, 67.91N×25.54E, h0km, ML0.9,
Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEF	**Hetta**	**0.86**	**306**	PG	Pg	04 04 46.7	-1.4
	baz=126						
KLF	**Kolari**	**0.91**	**223**	PB	Pg	04 04 48.0	-0.8
	baz=38						
KLF				smax	smax	04 04 59.5	
	comp=Z,1.0nm,0.2s						
KLF				SB	Sb	04 05 02.6	0.0
RAJF	**Raja-Jooseppi**	**1.18**	**60**	PG	Pg	04 04 53.0	-1.1
RNF	**Rovaniemi**	**1.32**	**172**	PN	Pg	04 04 56.4	-0.3
LANU	**Lannavaara**	**1.34**	**278**	PB	Pg	04 04 55.8	-1.4
ARA0	**ARCESS Array S**	**1.64**	**360**	PN	Pb	04 05 02.5	0.0
ERTU	**Ertsjaerv**	**1.88**	**225**	PG	Pb	04 05 06.1	-0.6
KIF	**Kilpisjarvi**	**2.07**	**304**	PN	Pn	04 05 08.6	+1.2
KIF	**Kilpisjarvi**	**2.07**	**304**	PG	Pn	04 05 08.6	+1.2
KIF				smax	smax	04 05 33.4	
	comp=Z,0.4nm,0.2s						
KIF				SG	Sb	04 05 35.0	-1.0

SDD 25 04:31:55.7±2.3, 19.08N×67.67W, h0km±999km, MD3.4,
ML2.0, MW2.2, 11C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.80**	**139**	↑*e*Pg	Pg	04 32 09.0	-2.1
AGPR				↑*e*Sg	Sg	04 32 20.5	-1.0
AGPR				IAML		04 32 26.4	
	comp=N,62nm,1.5s						
PCDR	**Punta Cana, DR**	**0.88**	**231**	↑*e*Pg	Pg	04 32 11.6	-0.9
PCDR				↑*e*Sg	Sg	04 32 21.8	-2.1
PCDR				IAML		04 33 00.1	
	comp=N,86nm,2.1s						
HIDR	**Higuey Centro**	**1.10**	**244**	↑*e*Sg	Sg	04 32 29.1	-2.2
HIDR				IAML		04 32 34.9	
	comp=N,22nm,0.2s						
AOPR	**Arecibo Observ**	**1.13**	**130**	*e*Pg	Pg	04 32 15.4	-1.9
AOPR				↑*e*Sg	Sg	04 32 30.7	-1.3
AOPR				IAML		04 32 38.7	
	comp=N,31nm,2.0s						
CRPR	**Cabo Rojo, PR**	**1.19**	**153**	↑*e*Pg	Pg	04 32 18.1	-0.4
CRPR				↑*e*Sg	Sb	04 32 34.5	-0.5
CRPR				IAML		04 32 37.3	
	comp=N,38nm,2.3s						
MIDR	**Miches**	**1.31**	**266**	↑*e*Pg	Pg	04 32 18.7	-2.2
MIDR				IAML		04 33 16.2	
	comp=N,9.5nm,2.5s						
HATOM	**Hato Mayor del**	**1.65**	**260**	↑*e*Pg	Pn	04 32 25.7	-0.3
HATOM				↑*e*Sg	Sn	04 32 48.0	+0.1
HATOM				IAML		04 33 10.7	
	comp=N,11nm,2.3s						

IDC 25 04:35:24.1±1.8, 1.86N×126.83E, h0km, mb3.5/4,
mbtmp3.5/4, Error ellipse: s-maj=171.2km
s-min=21.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.89**	**162**	P	P	04 40 29.3	-0.3
	1.1nm,0.6s,baz=340,slow=11,SNR=11						
	1.1nm,0.6s						
ASAR	**Alice Springs**	**26.29**	**165**	P	P	04 41 01.9	+0.3
	0.2nm,0.4s,baz=353,slow=15,SNR=6.1						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	P	04 45 26.7	0.0
	0.3nm,0.4s,baz=130,slow=6.9,SNR=6.3						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	P	04 45 55.1	-0.1
	0.4nm,0.6s,baz=130,slow=6.1,SNR=5.0						
	0.4nm,0.6s						

IDC 25 04:39:32.6±15.0, 19.58S×177.94W, h453km±124km,
mb3.2/2, mbtmp4.2/3, Error ellipse: s-maj=200.7km
s-min=87.9km az=135.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.81**	**258**	P	P	04 42 41.6	-0.2
	7.8nm,0.6s,baz=83,slow=18,SNR=5.5						
ASAR	**Alice Springs**	**44.79**	**256**	P	P	04 47 04.7	-0.2
	2.0nm,0.8s,baz=86,slow=8.5,SNR=18						
ASAR				PcP	PcP	04 48 36.8	-0.9
	0.3nm,0.6s,baz=96,slow=3.5,SNR=2.1						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**44.79**	**261**	P	P	04 47 05.0	0.0
	1.0nm,0.4s,baz=97,slow=7.6,SNR=20						
	1.0nm,0.4s						
BRTR	**Keskin Array B**	**146.26**	**313**	PKPbc	PKPbc	04 58 21.4	-0.6
	0.4nm,0.5s,baz=31,slow=1.8,SNR=4.3						

*UCR **25** 05:39:57.0±2.2, 16.03N×93.90W, h65km, MW4.2*
*CATAC **25** 05:41:12.9±0.4, 13.1N±3.8×9.9W±1.2, h30km±2km, M4.4/26,*
MLv4.4/26, Error ellipse: s-maj=5.9km s-min=2.1km
az=27.0, confirmed
*NEIC **25** 05:41:14.2±2.0, 13.07N±0.08×88.96W±0.09, h65km±12km,*
mb4.1/9, Error ellipse: s-maj=15.1km s-min=7.7km
az=51.0
*IDC **25** 05:41:14.2±1.7, 13.11N×88.88W, h78km±13km, mb3.3/4,*
mbtmp3.7/7, MS3.0/2, Error ellipse: s-maj=49.0km
s-min=10.1km az=42.0
*SNET **25** 05:41:14.2±1.1, 13.10N×88.99W, h42km, ML4.3*
*GCG **25** 05:41:15.2±1.1, 13.12N×89.12W, h44km±17km, MD4.6,*
ML4.4

ISC 25 05:41:13.4±0.8, 13.05N±0.05×89.03W±0.03, h57km±7km,
n168, σ1°11/192, mb4.1/8, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.52**	**327**	*e*P	Pn	05 41 25.1	-0.3
LALI				*e*S	Sn	05 41 33.4	-0.6
LALI	**Alcalda de L**	**0.52**	**327**	*i* P	Pn	05 41 25.1	-0.3
LALI	**Alcalda de L**	**0.52**	**327**	P	Pn	05 41 25.0	-0.3
TECO	**Alcaldia de Te**	**0.54**	**26**	*e*P	Pn	05 41 25.3	-0.3
TECO				*e*S	Sn	05 41 34.2	-0.3
TECO	**Alcaldia de Te**	**0.54**	**26**	P	Pn	05 41 25.3	-0.3
LFRS	**El Faro**	**0.57**	**357**	*e*P	Pn	05 41 25.7	-0.4
PANCS	**Alcalda de**	**0.58**	**345**	*e*P	Pn	05 41 25.4	-0.7
PANCS				*e*S	Sn	05 41 34.6	-0.7
PANCS	**Alcalda de**	**0.58**	**345**	S	Sn	05 41 35.0	-0.2
PANCS	**Alcalda de**	**0.58**	**345**	P	Pn	05 41 25.6	-0.5
SNVI	**San Vicente**	**0.59**	**18**	*e*P	Pn	05 41 26.0	-0.3
LOMA	**Loma Larga**	**0.61**	**347**	*e*P	Pn	05 41 26.1	-0.4
LOMA				*e*S	Sn	05 41 35.7	-0.3
LOMA	**Loma Larga**	**0.61**	**347**	P	Pn	05 41 26.1	-0.4
UESV	**Universidad de**	**0.63**	**22**	*e*P	Pn	05 41 26.5	-0.1
UESV				*e*S	Sn	05 41 36.5	+0.3
UESV	**Universidad de**	**0.63**	**22**	P	Pn	05 41 26.6	-0.1
PAVA	**Las Pavas**	**0.67**	**8**	*e*P	Pn	05 41 27.2	0.0
PAVA				*e*S	Sn	05 41 37.6	+0.4
PAVA	**Las Pavas**	**0.67**	**8**	P	Pn	05 41 27.2	0.0
UTEC	**Universidad Te**	**0.67**	**345**	*e*P	Pn	05 41 27.0	-0.2
UTEC				*e*S	Sn	05 41 37.3	+0.1
UTEC	**Universidad Te**	**0.67**	**345**	P	Pn	05 41 27.1	-0.2
UDBS	**Universidad Do**	**0.67**	**349**	*e*P	Pn	05 41 27.0	-0.2
UDBS				*e*S	Sn	05 41 37.0	-0.2
UDBS	**Universidad Do**	**0.67**	**349**	P	Pn	05 41 27.1	-0.1
IGN	**Direccin Gen**	**0.67**	**348**	*e*P	Pn	05 41 27.1	-0.1
TECA	**Tecapa**	**0.68**	**49**	*e*P	Pn	05 41 27.3	-0.1
LBRS	**Las Brisas**	**0.68**	**359**	*e*P	Pn	05 41 27.5	+0.1
UESS	**Universidad de**	**0.69**	**346**	*e*P	Pn	05 41 27.4	0.0
UESS				*e*S	Sn	05 41 37.8	+0.3
UEES	**Universidad Ev**	**0.69**	**343**	*e*P	Pn	05 41 27.4	-0.1
UEES				*e*S	Sn	05 41 38.1	+0.3
UEES	**Universidad Ev**	**0.69**	**343**	P	Pn	05 41 27.4	-0.1
LFU	**La Fuente**	**0.70**	**353**	*e*P	Pn	05 41 27.6	0.0
PMON	**Piamonte**	**0.71**	**337**	*e*P	Pn	05 41 27.6	-0.1
PMON				*e*S	Sn	05 41 38.2	0.0
PMON	**Piamonte**	**0.71**	**337**	P	Pn	05 41 27.7	-0.1
BOQS	**Boqueron**	**0.72**	**340**	*e*P	Pn	05 41 28.0	0.0
BOQS				*e*S	Sn	05 41 38.9	+0.3
PIC2	**El Picacho**	**0.72**	**342**	*e*P	Pn	05 41 28.2	+0.2
PIC2				*e*S	Sn	05 41 39.4	+0.7
JAYA	**Jayaque - finc**	**0.73**	**326**	*e*P	Pn	05 41 27.7	-0.3
JAYA	**Jayaque - finc**	**0.73**	**326**	*i* P	Pn	05 41 27.7	-0.3
JAYA	**Jayaque - finc**	**0.73**	**326**	S	Sn	05 41 38.9	+0.3
JAYA	**Jayaque - finc**	**0.73**	**326**	P	Pn	05 41 27.8	-0.3
PACA	**Pacayal**	**0.80**	**59**	*e*P	Pn	05 41 29.3	+0.4
PACA				*e*S	Sn	05 41 41.0	+0.7
PACA	**Pacayal**	**0.80**	**59**	P	Pn	05 41 29.1	+0.2
LCY	**Lacayo**	**0.81**	**63**	*e*P	Pn	05 41 28.8	-0.1
QUEZ	**Alcaldia de Qu**	**0.81**	**343**	*e*P	Pn	05 41 29.0	+0.2
QUEZ				*e*S	Sn	05 41 40.6	+0.2
RANC	**El Ranchito**	**0.81**	**62**	*e*P	Pn	05 41 28.9	-0.1
VSM	**San Miguel**	**0.82**	**63**	*e*P	Pn	05 41 29.2	-0.1
CEDA	**San Andres**	**0.83**	**335**	*e*P	Pn	05 41 29.1	-0.1
CEDA	**San Andres**	**0.83**	**335**	P	Pn	05 41 29.2	+0.1
BLLM	**Bellamira**	**0.86**	**63**	*e*P	Pn	05 41 29.5	-0.1
CEVE	**Cerro Verde**	**0.97**	**323**	*e*P	Pn	05 41 31.5	+0.4
CEVE				*e*S	Sn	05 41 45.5	+1.4
CEVE	**Cerro Verde**	**0.97**	**323**	P	Pn	05 41 31.5	+0.4
SBLS	**San Blas**	**0.97**	**324**	*e*P	Pn	05 41 31.5	+0.3
SBLS				*e*P		05 41 31.7	
SBLS				*e*S	Sn	05 41 45.3	+1.0
SNJE	**San Jose**	**0.99**	**325**	*e*P	Pn	05 41 31.6	+0.2
SNJE				*e*S	Sn	05 41 45.4	+0.8
RTR	**El Retiro**	**1.03**	**325**	*e*P	Pn	05 41 32.3	+0.3
UNIC	**Universidad Ca**	**1.05**	**331**	*e*P	Pn	05 41 32.4	+0.2
UNIC	**Universidad Ca**	**1.05**	**331**	S	Sn	05 41 47.0	+1.0
UNIC	**Universidad Ca**	**1.05**	**331**	P	Pn	05 41 32.4	+0.2
CAHU	**Cacaocatique**	**1.07**	**48**	*e*P	Pn	05 41 32.4	0.0
LLGN	**La Laguna**	**1.11**	**4**	*e*P	Pn	05 41 32.9	0.0
LLGN	**La Laguna**	**1.11**	**4**	P	Pn	05 41 33.0	0.0
NUBE	**Las Nubes**	**1.12**	**319**	*e*P	Pn	05 41 33.2	+0.2
NUBE				*e*S	Sn	05 41 47.8	+0.1
NUBE	**Las Nubes**	**1.12**	**319**	*i* P	Pn	05 41 33.2	+0.2
NUBE				*e*S	Sn	05 41 47.6	0.0
NUBE	**Las Nubes**	**1.12**	**319**	S	Sn	05 41 48.1	+0.5
NUBE	**Las Nubes**	**1.12**	**319**	P	Pn	05 41 33.3	+0.2
LCND	**La Caada**	**1.14**	**77**	*e*P	Pn	05 41 32.9	-0.2
LCND				*e*P		05 41 33.1	
LCND	**La Caada**	**1.14**	**77**	S	Sn	05 41 48.9	+1.1
LCND	**La Caada**	**1.14**	**77**	P	Pn	05 41 33.0	-0.2
CNCH	**Conchagua**	**1.19**	**79**	*e*P	Pn	05 41 33.6	-0.3
CNCH				*e*S	Sn	05 41 49.2	0.0
CNCH	**Conchagua**	**1.19**	**79**	P	Pn	05 41 33.6	-0.3
LOAL	**Lomas de Alarc**	**1.19**	**322**	*e*P	Pn	05 41 34.5	+0.5
LOAL	**Lomas de Alarc**	**1.19**	**322**	P	Pn	05 41 34.5	+0.5
LOAL	**Lomas de Alarc**	**1.19**	**322**	S	Sn	05 41 51.4	+2.2
SLOZ	**Alcaldia de Sa**	**1.22**	**323**	S	Sn	05 41 49.7	-0.1
RBDL	**Robledal**	**1.23**	**329**	*e*P	Pn	05 41 34.9	+0.3
FAME	**Alcaldia de Sa**	**1.24**	**309**	P	Pn	05 41 34.6	0.0
MTO3	**Montecristo**	**1.38**	**347**	Pn	Pn	05 41 36.9	+0.2
MTO3				Sn	Sn	05 41 54.5	+0.5
MTO3	**Montecristo**	**1.38**	**347**	*e*P	Pn	05 41 36.8	+0.2
MTO3	**Montecristo**	**1.38**	**347**	*i* P	Pn	05 41 36.9	+0.2
MTO3	**Montecristo**	**1.38**	**347**	P	Pn	05 41 36.9	+0.2
CSGN	**Cosiguina Volc**	**1.43**	**93**	P	Pn	05 41 37.0	-0.2
CSGN				S	Sn	05 41 55.6	+0.5
JUAM	**Asuncion Mita**	**1.44**	**333**	*i* P	Pn	05 41 37.6	+0.4
POTN	**Potosi Cosigui**	**1.48**	**92**	P	Pn	05 41 37.5	-0.3
POTN				S	Sn	05 41 55.5	-0.7
ESQI	**Esquipulas**	**1.53**	**349**	Pn	Pn	05 41 39.3	+0.7
ESQI				Sn	Sn	05 41 59.0	+1.5
ESQI	**Esquipulas**	**1.53**	**349**	*e*P	Pn	05 41 39.2	+0.7
ESQI	**Esquipulas**	**1.53**	**349**	P	Pn	05 41 39.3	+0.7
ESQI	**Esquipulas**	**1.53**	**349**	S	Sn	05 41 57.8	+0.4
ZAFR2	**Estanzuela, Za**	**1.55**	**348**	*i* P	Pn	05 41 45.4	+6.7
CRIN	**San Cristobal**	**1.96**	**100**	Pn	Pn	05 41 44.5	+0.2
CRIN	**San Cristobal**	**1.96**	**100**	P	Pn	05 41 44.7	+0.3
CRIN	**San Cristobal**	**1.96**	**100**	S	Sn	05 42 09.5	+1.6
TGUH	**Tegucigalpa,Un**	**1.98**	**59**	Pn	Pn	05 41 44.7	+0.1
TGUH	**Tegucigalpa,Un**	**1.98**	**59**	P	Pn	05 41 44.8	+0.1
TGUH				S	Sn	05 42 09.3	+0.8
PKGN	**Cerro Pekin**	**2.04**	**100**	P	Pn	05 41 44.9	-0.4
PKGN				S	Sn	05 42 09.6	-0.1
HERN	**Volcan Telica**	**2.19**	**101**	Pn	Pn	05 41 45.8	-1.7
YUSH	**Yuscaran**	**2.31**	**67**	P	Pn	05 41 49.1	0.0
CNGA	**Al SSO del Vol**	**2.34**	**103**	P	Pn	05 41 49.0	-0.5
CNGN	**Cerro Negro**	**2.34**	**103**	Pn	Pn	05 41 48.8	-0.7
CNGN	**Cerro Negro**	**2.34**	**103**	P	Pn	05 41 49.0	-0.5
APG	**El Apazote**	**2.39**	**325**	P	Pn	05 41 51.3	+0.9
	1.5nm,0.4s,baz=135,slow=11,SNR=18						
APG				S	Sn	05 42 21.4	+2.8
	3.2nm,0.4s,baz=84,slow=16,SNR=3.5						
APG	**El Apazote**	**2.39**	**325**	*i* P	Pn	05 41 51.3	+0.9
MOM3	**MOM3**	**2.51**	**102**	P	Pn	05 41 51.2	-0.6
MOM3				S	Sn	05 42 21.9	+0.7
STG5	**El Palmar, Qui**	**2.62**	**301**	*e*P	Pn	05 41 58.8	+5.4
STG2	**El Palmar, Qui**	**2.66**	**301**	*e*P	Pn	05 41 59.2	+5.1
MGAN	**Managua**	**2.86**	**108**	Pn	Pn	05 41 56.4	-0.2
BOAB	**BOACO BROADBAN**	**3.33**	**100**	Pn	Pn	05 42 01.9	-1.2
JAPN	**Al SSO del Vol**	**3.61**	**114**	*e*P	Pn	05 42 08.3	+1.5
CARN	**Rivas**	**3.90**	**118**	*e*P	Pn	05 42 11.8	+1.0
PETF	**Flores**	**3.93**	**348**	*i* P	Pn	05 42 13.2	+2.0
ELIJ	**Hacienda Flor**	**4.16**	**125**	*e*P	Pn	05 42 13.7	+2.0
LAPC	**Finca la Perla**	**4.19**	**122**	*e*P	Pn	05 42 15.6	+0.8
SIUN	**Universidad Ur**	**4.19**	**80**	Pn	Pn	05 42 15.0	+0.1
ALIBA	**Liberia Airpor**	**4.19**	**125**	*e*P	Pn	05 42 17.5	+2.6
BUAI	**Buenos Aires**	**4.21**	**120**	*e*P	Pn	05 42 17.3	+2.1
VRLE	**La Escondida,**	**4.23**	**122**	*e*P	Pn	05 42 16.6	+1.1
DELF	**Filadelfia**	**4.28**	**127**	*e*P	Pn	05 42 17.7	+1.8
MESS	**Mesas**	**4.40**	**121**	*e*P	Pn	05 42 19.3	+1.6
VMAR	**Armenia, Volca**	**4.43**	**120**	*e*P	Pn	05 42 18.4	+0.3
BAGA	**Bagaces**	**4.46**	**124**	*e*P	Pn	05 42 21.1	+2.6
JUD3	**Juan Diaz 3**	**4.46**	**130**	Pn	Pn	05 42 19.5	+0.9
JUD3	**Juan Diaz 3**	**4.46**	**130**	*e*P	Pn	05 42 19.4	+0.8
CUI	**Cuipilapa**	**4.47**	**122**	*e*P	Pn	05 42 19.7	+1.0
TIMP	**Tierras Morena**	**4.63**	**122**	*e*P	Pn	05 42 25.9	+5.0
CMARA	**Lajas Hojancha**	**4.64**	**130**	*e*P	Pn	05 42 21.9	+0.9
INVE	**Universidad In**	**4.65**	**123**	*e*P	Pn	05 42 31.6	+10
ESPN	**Las Esperanzas**	**4.69**	**100**			05 42 21.7	0.0
QUEB	**Quebradon, Cot**	**4.71**	**120**	*e*P	Pn	05 42 23.5	+1.5
NYURE	**Nandayure**	**4.79**	**129**	*e*P	Pn	05 42 24.1	+1.2
JTS	**Las Juntas de**	**4.84**	**124**	P	Pn	05 42 24.7	+0.9
	6.5nm,0.3s,baz=312,slow=7.5,SNR=19						
JTS				S	Sn	05 43 16.9	-1.8
	12nm,0.3s,baz=341,slow=22,SNR=1.2						
JTS	**Las Juntas de**	**4.84**	**124**	*e*P	Pn	05 42 24.9	+1.0
ARE1	**Arenal 1**	**4.94**	**121**	*e*P	Pn	05 42 28.1	+2.9
VARE2	**V. Arenal**	**4.94**	**121**	*e*P	Pn	05 42 27.8	+2.5
CASO	**Castillo**	**4.94**	**121**	*e*P	Pn	05 42 26.1	+0.8
JCR1	**Jicaral**	**4.99**	**129**	*e*P	Pn	05 42 26.9	+1.1
SOCE	**Pocosol**	**5.07**	**121**	*e*P	Pn	05 42 31.8	+4.9
PALD	**Palmares**	**5.40**	**123**	*e*P	Pn	05 42 34.2	+2.7
ATEO	**Atenas**	**5.48**	**123**	*e*P	Pn	05 42 32.9	+0.2
BILN	**Bilwi Airport**	**5.59**	**79**	Pn	Pn	05 42 34.3	+0.4
ACOS	**Acosta**	**5.76**	**124**	*e*P	Pn	05 42 32.1	+5.6
PICV	**PH. Pirrs**	**5.83**	**125**	*e*P	Pn	05 42 39.5	+2.0
PITB	**Pirrs, San**	**5.95**	**124**	*e*P	Pn	05 42 42.4	+3.2
REPA	**Paraso**	**5.99**	**122**	*e*P	Pn	05 42 42.9	+3.2
PIEC	**Cerro El Cedra**	**6.03**	**124**	*e*P	Pn	05 42 42.2	+1.9
BUS1	**Rivas**	**6.24**	**123**	*e*P	Pn	05 42 43.8	+0.5
EDPE	**Pejibaye, P**	**6.61**	**125**	*e*P	Pn	05 42 50.5	+2.5
DRK0	**Durika**	**6.81**	**123**	*e*P	Pn	05 42 53.0	+2.1
FIMO	**Fila Mora**	**6.88**	**125**	*e*P	Pn	05 42 55.1	+3.3
CMIG	**Matias Romero**	**6.94**	**306**	P	Pn	05 42 55.0	+2.5
	1.9nm,0.3s,baz=141,slow=7.3,SNR=8.9						
CMIG				S	Sn	05 44 09.4	-0.7
	4.9nm,0.4s,baz=100,slow=5.0,SNR=3.9						
EDP2	**Potrero Grande**	**7.00**	**124**	*e*P	Pn	05 42 55.8	+2.3
TEIG	**Tepich**	**7.17**	**6**	P	Pn	05 42 57.2	+1.5
	baz=312,slow=24,SNR=28						
TEIG	**Tepich**	**7.17**	**6**	Pn	Pn	05 42 57.3	+1.6
PIRO	**Carate, Puerto**	**7.25**	**129**	Pn	Pn	05 42 59.6	+2.8
PIRO	**Carate, Puerto**	**7.25**	**129**	*e*P	Pn	05 42 58.8	+2.0
ALCO	**Alturas Coton,**	**7.32**	**123**	*e*P	Pn	05 42 59.7	+1.8
RBALA	**Bur**	**7.92**	**121**	*e*P	Pn	05 43 07.3	+1.3
SOR	**Soroa**	**11.25**	**30**	Pn	Pn	05 43 54.6	+3.0
JRQG	**Juriquilla Cam**	**13.31**	**306**	Pn	Pn	05 44 20.2	+0.4
SDV	**Santo Domingo**	**18.52**	**101**	P	P	05 45 24.2	-1.4
	3.8nm,0.6s,baz=331,slow=8.7,SNR=4.9						
SDV				LR	LR	05 52 05.5	
	comp=Z,42nm,20.8s,baz=198,slow=35						
BRDY	**Brady**	**20.34**	**335**	P	P	05 45 45.0	-0.1
BRDY				IAmb	IAmb	05 45 46.4	
	comp=Z,4.6nm,0.7s						
TXAR	**Lajitas Array**	**21.15**	**322**	P	P	05 45 55.0	+1.1
	comp=Z,1.5nm,0.7s,baz=146,slow=11,SNR=21						
	comp=Z,1.5nm,0.7s						
TXAR	**Lajitas Array**	**21.15**	**322**	P	P	05 45 54.8	+0.9
TKL	**Tuckaleechee C**	**23.00**	**11**	LR	LR	05 54 17.2	
	comp=Z,46nm,20.8s,baz=171,slow=34						
FNO	**Franklin**	**23.37**	**343**	P	P	05 46 17.9	+0.8
FNO				IAmb	IAmb	05 46 18.5	
	comp=Z,3.0nm,0.4s						
CCM	**Cathedral Cave**	**24.98**	**356**	P	P	05 46 31.1	-0.7
CCM				IAmb	IAmb	05 46 32.5	
	comp=Z,4.8nm,0.7s						
PV19	**Morning Glory**	**30.78**	**328**	P	P	05 47 24.7	+0.8
PV19				IAmb	IAmb	05 47 25.9	
	comp=Z,3.9nm,0.6s						
PDAR	**Pinedale Array**	**34.53**	**333**	P	P	05 47 55.4	-1.2
	comp=Z,0.3nm,0.7s,baz=142,slow=7.0,SNR=3.0						
PDAR				PcP	PcP	05 50 28.8	-1.8
	comp=Z,0.4nm,0.5s,baz=108,slow=4.3,SNR=5.6						
	comp=Z,0.3nm,0.7s						
SNOW	**Snow King Moun**	**35.62**	**332**	P	P	05 48 06.4	+0.5
SNOW				IAmb	IAmb	05 48 08.6	
	comp=Z,3.1nm,1.0s						
NVAR	**Mina Array Bea**	**36.24**	**319**	PcP	PcP	05 50 36.1	+0.5
	comp=Z,0.7nm,0.7s,baz=147,slow=3.7,SNR=6.9						
YKA	**Yellowknife Ar**	**52.64**	**345**	P	P	05 50 19.2	-2.2
	comp=Z,1.7nm,0.9s,baz=149,slow=6.6,SNR=17						
	comp=Z,1.7nm,0.9s						
INK	**Inuvik**	**62.18**	**343**	P	P	05 51 27.2	-1.3
ILAR	**Eielson Array**	**64.85**	**336**	P	P	05 51 44.2	-2.1
	comp=Z,0.4nm,0.8s,baz=150,slow=5.8,SNR=7.4						
	comp=Z,0.4nm,0.8s						
BMAR	**Burnt Mountain**	**65.18**	**339**	P	P	05 51 47.5	-0.9
B21K	**Ikpikpuk River**	**69.44**	**340**	P	P	05 52 14.3	-0.9
WRA	**Warramunga Arr**	**137.95**	**255**	PKP	**PKPdf**	06 00 32.2	-0.3
	comp=Z,0.6nm,0.6s,baz=88,slow=2.0,SNR=7.5						

*SNET **25** 06:15:45.4±0.9, 13.56N×89.85W, h94km, ML3.2*
*CATAC **25** 06:15:46.2±0.6, 13.4°×9.0W±, h73km±4km, M3.2/13,*
MLv3.2/13, Error ellipse: s-maj=9.9km s-min=5.5km
az=35.2, confirmed
*GCG **25** 06:15:47.0±1.2, 13.61N×89.80W, h88km±12km, MD3.9*

ISC 25 06:15:46.9±2.0, 13.54N±0.08×89.85W±0.07, h87km±9km,
n71, σ0.9°69/85, El Salvador

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

mB5.4/16,mb5.0/23,MLv4.8/19,Mw(mB)4.8/16, MwMwp5.0/1,Mwp5.3/1

ISC 25 06:17:06.5±0.4, 1°03S±0.04×127°52E±0.05, h50km, n94, σ1°76/95, mb4.5/23, MS3.0/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.80**	**355**		**Pn**	**06 17 36.3**	**+1.2**
TNTI				Sn	**Sn**	**06 17 56.8**	**0.0**
TNTI	**Ternate**	**1.80**	**355**	P	**Pn**	**06 17 36.9**	**+1.8**
TNTI	**Ternate**	**1.80**	**355**	S	**Sn**	**06 18 00.1**	**+3.3**
TNTI	**Ternate**	**1.80**	**355**	P	**Pn**	**06 17 36.4**	**+1.2**
SANI	**Sanana**	**1.83**	**237**	P	**Pn**	**06 17 36.1**	**+0.6**
SANI	**Sanana**	**1.83**	**237**	S	**Sn**	**06 17 57.0**	**-0.6**
SANI	**Sanana**	**1.83**	**237**	P	**Pn**	**06 17 35.4**	**-0.1**
NLAI	**Namlea**	**2.23**	**191**	P	**Pn**	**06 17 42.4**	**+1.4**
NLAI				S	**Sn**	**06 18 08.7**	**+1.4**
MSAI	**Masohi**	**2.69**	**149**	P	**Pn**	**06 17 50.5**	**+3.2**
MSAI				S	**Sn**	**06 18 22.0**	**+3.2**
AAI	**Ambon**	**2.72**	**166**	P	**Pn**	**06 17 50.3**	**+2.6**
SWI	**Sorong**	**3.74**	**87**	P	**Pn**	**06 18 04.1**	**+2.4**
KMSI	**Cibinong**	**3.88**	**294**	P	**Pn**	**06 18 05.6**	**+1.9**
BNDI	**Bandanaira**	**4.21**	**146**	P	**Pn**	**06 18 10.0**	**+1.9**
LUWI	**Luwuk**	**4.75**	**270**		**Pn**	**06 18 16.3**	**+0.8**
LUWI	**Luwuk**	**4.75**	**270**	P	**Pn**	**06 18 16.3**	**+0.8**
LUWI	**Luwuk**	**4.75**	**270**	P	**Pn**	**06 18 16.2**	**+0.7**
FAKI	**Fak Fak**	**5.08**	**112**		**Pn**	**06 18 19.7**	**-0.4**
FAKI	**Fak Fak**	**5.08**	**112**	P	**Pn**	**06 18 21.6**	**+1.4**
FAKI	**Fak Fak**	**5.08**	**112**	S	**Sn**	**06 19 19.6**	**+2.0**
FAKI	**Fak Fak**	**5.08**	**112**	P	**Pn**	**06 18 21.2**	**+1.0**
	0.6nm97nm,0.8s						
MRSI	**Marisa**	**5.78**	**285**	P	**Pn**	**06 18 30.4**	**+0.7**
	1.4nm2µm86nm,0.5s						
APSI	**Ampana**	**5.87**	**271**	P	**Pn**	**06 18 32.2**	**+1.2**
	9µm369nm,0.6s						
TOLI2	**Tolitoli**	**7.07**	**288**		**Pn**	**06 18 49.2**	**+1.8**
TOLI2	**Tolitoli**	**7.07**	**288**	P	**Pn**	**06 18 49.3**	**+1.9**
MPSI	**Mapaga**	**7.74**	**280**	P	**Pn**	**06 18 58.4**	**+1.8**
	0.3nm2µm53nm,0.7s						
TTSI	**Tana Toraja**	**7.95**	**255**	P	**Pn**	**06 19 00.9**	**+1.4**
	0.7nm6µm5µm180nm,0.7s						
BNSI	**Bone**	**8.12**	**246**	P	**Pn**	**06 19 04.0**	**+2.1**
	942nm68nm,0.7s						
SPSI	**Sidrap Palu**	**8.27**	**249**	P	**Pn**	**06 19 05.8**	**+1.9**
BSSI	**Bau Bau, Buton**	**8.66**	**234**	P	**Pn**	**06 19 11.6**	**+2.4**
	2µm192nm,0.7s						
KAPI	**Kappang**	**8.71**	**243**	Pn	**Pn**	**06 19 13.5**	**+3.7**
	14nm,0.3s,baz=60,slow=6.3,SNR=56						
KAPI				Sn	**Sn**	**06 20 48.5**	**+1.8**
	3.0nm,0.3s,baz=230,slow=22,SNR=5.8						
KAPI				LR	LR	06 22 53.9	
	comp=Z,63nm,19.9s,baz=30,slow=38						
	102nm,0.6s						
KAPI	**Kappang**	**8.71**	**243**		**Pn**	**06 19 11.5**	**+1.7**
KAPI	**Kappang**	**8.71**	**243**	P	**Pn**	**06 19 12.5**	**+2.7**
KAPI	**Kappang**	**8.71**	**243**	S	**Sn**	**06 20 48.5**	**+1.8**
MMRI	**Maumere**	**9.20**	**215**	Pn	**Pn**	**06 19 14.6**	**-2.1**
EDFI	**Ende, Flores**	**9.61**	**217**	P	**Pn**	**06 19 24.9**	**+2.5**
	477nm29nm,1.1s						
MYLDM	**Lahad Datu**	**10.92**	**304**	P	**Pn**	**06 19 43.0**	**+2.8**
AUDHS	**Darwin High Sc**	**11.80**	**164**	P	**Pn**	**06 19 52.3**	**+0.2**
DRS	**Darwin Rock St**	**11.81**	**164**	P	**Pn**	**06 19 53.0**	**+0.7**
MTN	**Manton Dam**	**12.27**	**163**	Pn	**Pn**	**06 19 58.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**17.06**	**186**	P	**P**	**06 21 02.9**	**+0.2**
	0.3nm,0.3s,baz=10,slow=9.0,SNR=8.9						
	2.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.06**	**186**		**Pn**	**06 21 01.3**	**-0.3**
KPJI	**Karang Pucung**	**19.56**	**251**	P	**Pn**	**06 21 32.6**	**+0.6**
	61nm,0.8s						
WB0	**Warramunga Arr**	**19.80**	**161**		**P**	**06 21 31.8**	**-1.1**
WB0				IAmb	IAmb	06 21 34.1	
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**19.94**	**161**	P	**P**	**06 21 33.6**	**-0.8**
WRA	**Warramunga Arr**	**19.94**	**161**	P	**P**	**06 21 33.2**	**-1.2**
	comp=Z,15nm,0.7s,baz=340,slow=12,SNR=82						
WRA				S	**S**	**06 25 13.0**	**-3.3**
	comp=Z,0.4nm,0.6s,baz=275,slow=29,SNR=2.4						
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**19.94**	**161**		**P**	**06 21 32.7**	**-1.7**
WR8	**Warramunga Arr**	**20.01**	**160**		**P**	**06 21 34.2**	**-1.0**
WR8				IAmb	IAmb	06 21 37.0	
	comp=Z,15nm,0.8s						
COEN	**Coen**	**20.12**	**130**	P	Pn	06 21 37.2	-1.4
PMG	**Port Moresby**	**21.24**	**114**	LR	LR	06 32 13.5	
	comp=Z,62nm,19.8s,baz=310,slow=44						
GUMO	**Guam**	**22.51**	**49**	LR	LR	06 30 43.7	
	comp=Z,16nm,18.5s,baz=64,slow=38						
QIS	**Mount Isa**	**22.72**	**149**	P	**P**	**06 22 03.8**	**-0.5**
AS31	**Alice Springs**	**23.33**	**165**		**P**	**06 22 09.5**	**-1.0**
ASAR	**Alice Springs**	**23.33**	**165**	P	**P**	**06 22 09.7**	**-0.8**
	comp=Z,9.2nm,0.6s,baz=342,slow=9.9,SNR=159						
ASAR				S	**S**	**06 26 16.6**	**-3.1**
	comp=Z,3.1nm,1.0s,baz=347,slow=22,SNR=10						
	comp=Z,9.2nm,0.6s						
ASAR	**Alice Springs**	**23.33**	**165**		**P**	**06 22 09.6**	**-0.9**
MDSI	**Maura Dua**	**23.56**	**261**	P	**P**	**06 22 13.4**	**+0.7**
	comp=Z,38nm,0.9s						
MTSU	**Mount Surprise**	**23.68**	**137**	P	**P**	**06 22 14.4**	**+0.6**
MASI	**Maura Aman, Be**	**25.35**	**265**	P	**P**	**06 22 35.1**	**+6.0**
RPSI	**Rantau Prapat**	**28.83**	**277**		**P**	**06 23 00.4**	**+0.1**
RPSI				IAmb	IAmb	06 23 01.3	
	comp=Z,14nm,0.8s						
PSI	**Prapat**	**28.84**	**278**	P	**P**	**06 23 00.7**	**+0.1**
MLSI	**Meulaboh, Aceh**	**31.54**	**280**	P	**P**	**06 23 24.9**	**+0.6**
	comp=Z,2µmcomp=Z,76nm,0.9s						
STKA	**Stephens Creek**	**33.44**	**158**	P	**P**	**06 23 40.0**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=331,slow=12,SNR=4.6						
	comp=Z,3.8nm,0.8s						
NJ2	**Nanjing**	**33.91**	**347**	*eP*	**P**	**06 23 46.4**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PZH	**PanZhiHua**	**36.98**	**320**	P	**P**	**06 24 13.5**	**+2.1**
KSRS	**Korea Array**	**38.30**	**1**	LR	LR	06 39 28.5	
	comp=Z,6µm,21.9s,baz=175,slow=36						
LZH	**Lanzhou**	**43.01**	**332**	*eP*	P	06 25 07.8	+6.4
LZH				sP	sP	06 25 28.8	+8.4
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
SHL	**Shillong**	**43.43**	**310**		**P**	**06 25 04.7**	**-0.2**
HHC	**Hu-ho-hac-te**	**44.15**	**343**	*eP*	**P**	**06 25 11.9**	**+1.6**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,4.4s						
LSA	**Lhasa**	**46.24**	**314**	P	**P**	**06 25 26.3**	**-1.2**
LSA	**Lhasa**	**46.24**	**314**	P	**P**	**06 25 24.6**	**-3.0**
LSA				pmax	pmax		
	comp=Z,18nm,0.7s						
GTA	**Gaotai**	**47.59**	**331**	*eP*	**P**	**06 25 38.1**	**+0.6**
GTA				sP	pwP	06 25 55.1	+4.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EVN	**Everest**	**48.54**	**310**		**P**	**06 25 45.2**	**-0.4**
SONM	**Songino Array**	**52.04**	**342**	P	**P**	**06 26 09.3**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=162,slow=5.9,SNR=2.7						
	comp=Z,0.4nm,0.6s						
TCW	**Tory Channel**	**58.09**	**140**	P	**P**	**06 26 53.3**	**-1.5**
MK31	**Makanchi Array**	**61.91**	**326**	P	**P**	**06 27 20.1**	**-0.9**
MK31				IAmb	IAmb	06 27 20.6	
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**61.91**	**326**	P	**P**	**06 27 19.9**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=120,slow=8.1,SNR=26						
	comp=Z,2.2nm,0.5s						
MAKZ	**Makanchi**	**62.10**	**326**	P	**P**	**06 27 21.3**	**-0.9**
MAKZ				IAmb	IAmb	06 27 52.1	
	comp=Z,9.8nm,1.5s						
ARSB	**Arslanbob**	**64.84**	**317**	P	**P**	**06 27 40.1**	**-0.6**
ARSB				IAmb	IAmb	06 28 06.3	
	comp=Z,12nm,1.5s						
ZALV	**Zalesovo Beam**	**65.17**	**334**	P	**P**	**06 27 39.6**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=126,slow=6.2,SNR=3.7						
	comp=Z,0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**66.17**	**328**	P	**P**	**06 27 47.1**	**-1.7**
	comp=Z,3.6nm,0.7s,baz=128,slow=5.9,SNR=30						
	comp=Z,3.6nm,0.7s						
KURK	**Kurchatov**	**66.17**	**328**	P	**P**	**06 27 47.1**	**-1.7**
KURK				IAmb	IAmb	06 27 48.4	
	comp=Z,5.6nm,0.8s						
KK31	**Karatay Array**	**67.26**	**318**	P	**P**	**06 27 54.0**	**-2.0**
KKAR	**Karatay Array**	**67.26**	**318**	P	**P**	**06 27 54.2**	**-1.8**
BVAR	**Borovoye Array**	**71.73**	**328**	P	**P**	**06 28 21.6**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=126,slow=7.5,SNR=10						
	comp=Z,1.8nm,0.6s						
TIXI	**Tiksi**	**72.57**	**0**	P	**P**	**06 28 26.3**	**-1.6**
TIXI				IAmb	IAmb	06 29 03.0	
	comp=Z,9.6nm,1.5s						
AB31	**Akbulak array**	**76.33**	**321**	P	**P**	**06 28 48.5**	**-1.7**
ABKAR	**Akbulak array**	**76.33**	**321**	P	**P**	**06 28 48.6**	**-1.7**
M17K	**Holitna River**	**83.77**	**28**	P	**P**	**06 29 29.8**	**-0.3**
L18K	**Granite Mounta**	**84.31**	**27**	P	**P**	**06 29 32.1**	**-0.8**
L18K				IAmb	IAmb	06 30 02.3	
	comp=Z,5.5nm,1.4s						
D19K	**Kuna River**	**85.26**	**21**	P	**P**	**06 29 37.2**	**-0.4**
D19K				IAmb	IAmb	06 30 18.5	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**88.90**	**180**	P	**P**	**06 29 57.2**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=288,slow=1.6,SNR=6.2						
	comp=Z,0.9nm,0.6s						
QSPA	**South Pole Qui**	**88.90**	**180**		**P**	**06 29 54.2**	**-1.1**
QSPA				IAmb	IAmb	06 30 05.2	
	comp=Z,4.5nm,1.3s						
FIA1	**FINESS Array S**	**96.37**	**332**	P	**P**	**06 30 29.1**	**-0.7**
FINES	**FINESS Array B**	**96.38**	**332**	P	**P**	**06 30 29.2**	**-0.6**
PAMR	**Moraine State**	**133.07**	**29**	PKPdf	**PKPdf**	**06 36 16.1**	**-0.8**

*NOU **25** 06:24:03.0,41°.31S×172°.56E,h134km,MLv3.5/12,South Island, New Zealand*

*WEL **25** 06:24:04.1±1.1,41°.5S±6°×17°.3E±°,h135km±7km,M2.4/6, MLv2.4/6,Error ellipse: s-maj=8.7km s-min=7.2km az=114.7,confirmed*

ISC 25 06:24:01.8±1.6, 41°.32S±0°.05×172°.68E±0°.06, h156km±9km, n27, σ0°.93/37, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRNZ	**Matariki Terra**	**0.10**	**141**	P	**Pn**	**06 24 23.4**	**+0.8**
MRNZ				S	**Sn**	**06 24 38.3**	**-0.4**
MATW	**Matariki Wadsw**	**0.11**	**169**	P	**Pn**	**06 24 23.5**	**+0.9**
MATW				S	**Sn**	**06 24 38.2**	**-0.4**
BTWS	**Nelson Brightw**	**0.35**	**101**	P	**Pn**	**06 24 24.3**	**+1.2**
TKNZ	**Takaka Hill**	**0.36**	**36**	P	**Pn**	**06 24 23.6**	**+0.3**
TKNZ				S	**Sn**	**06 24 39.2**	**-0.4**
KLDS	**Kikiwa Line De**	**0.38**	**157**	P	**Pn**	**06 24 24.5**	**+1.2**
KASC	**Karamea School**	**0.43**	**280**	P	**Pn**	**06 24 24.9**	**+1.5**
THZ	**Tophouse**	**0.47**	**159**	P	**Pn**	**06 24 24.7**	**+1.0**
THZ				S	**Sn**	**06 24 40.6**	**0.0**
TSFS	**Takaka Scotts**	**0.49**	**13**	P	**Pn**	**06 24 24.3**	**+0.5**
QRZ	**Quartz Range**	**0.51**	**347**	P	**Pn**	**06 24 24.2**	**+0.3**
QRZ	**Quartz Range**	**0.51**	**347**	S	**Sn**	**06 24 40.0**	**-0.7**
QRZ	**Quartz Range**	**0.51**	**347**	P	**Pn**	**06 24 24.5**	**+0.6**
QRZ				S	**Sn**	**06 24 39.8**	**-0.9**
NNZ	**Nelson**	**0.54**	**79**	P	**Pn**	**06 24 24.1**	**+0.2**
NNZ				S	**Sn**	**06 24 40.5**	**-0.4**
TUWZ	**Tuamarina**	**0.96**	**97**	P	**Pn**	**06 24 27.6**	**+0.9**
BSWZ	**Blackbirch Sta**	**0.98**	**114**	P	**Pn**	**06 24 27.2**	**+0.3**
BSWZ				S	**Sn**	**06 24 46.0**	**-0.2**
DUWZ	**D'Urville Isla**	**1.08**	**61**	P	**Pn**	**06 24 27.8**	**0.0**
DUWZ				S	**Sn**	**06 24 46.6**	**-1.0**
TCW	**Tory Channel**	**1.21**	**85**	P	**Pn**	**06 24 28.9**	**0.0**
TCW				S	**Sn**	**06 24 47.6**	**-2.1**
KHZ	**Kahutara**	**1.27**	**150**	P	**Pn**	**06 24 30.1**	**+0.7**
KHZ	**Kahutara**	**1.27**	**150**	P	**Sn**	**06 24 49.9**	**-0.8**
KHZ	**Kahutara**	**1.27**	**150**	P	**Pn**	**06 24 30.3**	**+0.9**
KHZ				S	**Sn**	**06 24 49.3**	**-1.4**
KHEZ	**Kahui Hut**	**2.27**	**27**	P	**Pn**	**06 24 40.5**	**0.0**
KHEZ	**Kahui Hut**	**2.27**	**27**	P	**Sn**	**06 25 09.5**	**-0.9**
RPZ	**Rata Peaks**	**2.67**	**206**	P	**Pn**	**06 24 45.4**	**+0.1**
BKZ	**Black Stump Fm**	**3.63**	**55**	P	**Pn**	**06 24 59.7**	**+2.3**
JCZ	**Jackson Bay**	**3.97**	**225**	P	**Pn**	**06 25 01.8**	**0.0**
JCZ	**Jackson Bay**	**3.97**	**225**	S	**Sn**	**06 25 47.4**	**-1.2**
ODZ	**Otahua Downs**	**4.00**	**201**	P	**Pn**	**06 25 02.7**	**+0.5**
ODZ	**Otahua Downs**	**4.00**	**201**	S	**Sn**	**06 25 49.3**	**+0.1**

*IDC **25** 06:38:38.0±5.1,6°.40S×104°.88E,h0km,mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=299.8km s-min=25.1km az=47.0*

*DJA **25** 06:38:54.5±0.4,6°.5±4°×10°.6E±°,h128km±6km,M4.2/15, mB5.2/1,mb4.8/1,MLv4.0/15,Mw(mB)4.5/1*

ISC 25 06:38:56.6±1.2, 6°.43S±0°.10×105°.75E±0°.08, h100km, n26, σ1°61/17, mb3.5/4, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	**Serang**	**0.49**	**51**	P	**Pn**	**06 39 13.7**	**+1.4**
SKJI	**Sukabumi**	**0.99**	**125**	P	**Pn**	**06 39 17.4**	**+0.5**
DBJI	**Dramaga**	**1.00**	**97**	P	**Pn**	**06 39 17.6**	**+0.5**
DBJI				S	**Sn**	**06 39 35.1**	**+2.6**
BLSI	**Bandar Lampung**	**1.17**	**335**	P	**Pn**	**06 39 19.7**	**+0.7**
BLSI				S	**Sn**	**06 39 38.2**	**+2.4**
KASI	**Kota Agung**	**1.54**	**306**	P	**Pn**	**06 39 23.7**	**+0.4**
CNJI	**Cibinong**	**1.63**	**122**	P	**Pn**	**06 39 23.0**	**-1.4**
KLJ	**Kotabumi**	**1.79**	**330**	P	**Pn**	**06 39 26.7**	**+0.1**
LWLI	**Liwa**	**2.19**	**310**	P	**Pn**	**06 39 32.1**	**+0.3**
MDSI	**Maura Dua**	**2.48**	**321**	P	**Pn**	**06 39 35.0**	**-0.5**
KPJI	**Karang Pucung**	**3.29**	**106**	P	**Pn**	**06 39 45.1**	**-1.1**
TPI	**Tanjungpandan**	**4.12**	**28**	P	**Pn**	**06 39 55.2**	**-2.2**
KSI	**Kapahiang**	**4.18**	**311**	P	**Pn**	**06 39 57.5**	**-0.9**
PPSI	**Pulau Pagai**	**6.78**	**302**	P	**Pn**	**06 40 30.3**	**-3.3**
H01W3	**Cape Leeuwin H**	**29.35**	**166**	T	T	07 15 32.2	
	baz=345						
H01W1	**Cape Leeuwin H**	**29.36**	**166**	T	T	07 15 33.3	
	baz=345						
H01W2	**Cape Leeuwin H**	**29.36**	**166**	T	T	07 15 33.8	
	baz=345						
WRA	**Warramunga Arr**	**30.84**	**119**	P	**P**	**06 45 02.4**	**-1.0**
	0.3nm,0.7s,baz=302,slow=7.8,SNR=6.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**32.03**	**125**	P	**P**	**06 45 13.7**	**-0.2**
	0.3nm,0.5s,baz=302,slow=8.3,SNR=4.3						
	0.3nm,0.5s						
H08S2	**Diego Garcia H**	**33.02**	**266**	T	T	07 19 58.6	
	baz=90						
H08S3	**Diego Garcia H**	**33.03**	**266**	T	T	07 19 59.4	
	baz=90						
H08S1	**Diego Carcia H**	**33.04**	**266**	T	T	07 20 04.7	
	baz=90						
MKAR	**Makanchi Array**	**56.94**	**341**	P	P	06 48 23.8	-7.7
	0.3nm,0.5s,baz=159,slow=8.8,SNR=4.6						
	0.3nm,0.5s						
H04N2	**CROZET ISLANDS**	**60.88**	**220**	T	T	07 54 55.1	
	baz=68,slow=75,SNR=5.3						
H04N1	**CROZET ISLANDS**	**60.90**	**220**	T	T	07 54 56.6	
	baz=68,slow=75,SNR=3.7						
H04N3	**CROZET ISLANDS**	**60.90**	**220**	T	T	07 54 54.2	
	baz=68,slow=75,SNR=4.1						
ARTI	**Arti**	**73.63**	**335**	P	P	06 50 09.9	-9.0
	1.8nm,0.4s,baz=126,slow=8.7,SNR=3.9						
	1.8nm,0.4s						

SSNC 25 06:47:01.8±1.4, 18°.41N×81°.56W, h21km±56km, MD3.7, ML3.3, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTDJ	**Mount Denham**	**3.83**	**92**	*eP*	Pn	06 47 58.1	-1.5
MGV	**Manicaragua**	**3.97**	**22**	*eP*	Pn	06 47 59.1	-2.4
MGV				*eS*	Sn	06 48 39.2	-8.2
MGV				IAML		06 48 43.8	
	comp=N,32nm,0.2s						
MGV				IAML		06 48 43.9	
	comp=E,20nm,0.2s						
CCCC	**Cccc**	**4.52**	**51**	*eP*	Pn	06 48 11.4	+2.3
CCCC				*eS*	Sn	06 49 02.8	+1.7
SOR	**Soroa**	**4.57**	**343**	*eP*	Pn	06 48 08.1	-1.7
SOR				*eS*	Sn	06 48 57.4	-4.9
SOR				IAML		06 49 00.6	
	comp=N,3.2nm,0.2s						
SOR				IAML		06 49 01.3	
	comp=E,5.1nm,0.2s						
LMGC	**Las Mercedes**	**4.61**	**68**	*eP*	Pn	06 48 09.2	-1.0
LMGC				*eS*	Sn	06 48 57.5	-5.6
LMGC				IAML		06 49 01.9	
	comp=N,1.7nm,0.1s						
LMGC				IAML		06 49 02.2	
	comp=E,1.3nm,0.1s						
CAMR	**Camarioca**	**4.63**	**2**	*eP*	Pn	06 48 09.3	-1.2
CAMR				*eS*	Sn	06 48 59.0	-4.8
MARVS	**Santiago de Cu**	**5.58**	**73**	*eP*	Pn	06 48 21.4	-2.2
MARVS				*eS*	Sn	06 49 21.3	-5.7
MARVS				IAML		06 49 22.2	
	comp=E,2.4nm,0.2s						
MARVS				IAML		06 49 22.5	
	comp=N,2.4nm,0.3s						
HLGC	**Holguin**	**5.74**	**64**	*eP*	Pn	06 48 24.1	-1.7
PINC	**Pinares de May**	**5.82**	**68**	*eP*	Pn	06 48 26.4	-0.5
PINC				*eS*	Sn	06 49 28.5	-4.5

*IDC **25** 06:47:20.0±1.5,13°.45N×144°.27E,h0km,mb3.8/5, mbtmp3.8/5,Error ellipse: s-maj=68.0km s-min=32.0km az=73.0*

ISC 25 06:47:35.1±1.6, 13°.3N±0°.2×144°.3E±0°.5, h129km, n6, σ0°.70/6, mb3.7/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.47**	**197**	P	**P**	**06 54 10.6**	**-0.1**
	0.3nm,0.5s,baz=14,slow=8.5,SNR=2.2						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**61.28**	**316**	P	**P**	**06 57 37.0**	**+0.2**
	0.2nm,0.5s,baz=82,slow=8.4,SNR=1.5						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**64.46**	**320**	P	**P**	**06 57 57.8**	**+0.1**
	0.3nm,0.3s,baz=103,slow=6.6,SNR=4.5						
	0.3nm,0.3s						
BVAR	**Borovoye Array**	**69.78**	**322**	P	**P**	**06 58 31.9**	**+0.6**
	1.0nm,0.5s,baz=100,slow=6.2,SNR=4.4						
	1.0nm,0.5s						
FINES	**FINESS Array B**	**91.16**	**335**	P	**P**	**07 00 24.3**	**-0.9**
	0.8nm,0.6s,baz=47,slow=3.4,SNR=3.9						
	0.8nm,0.6s						
LPAZ	**La Paz**	**148.55**	**99**	PKPbc	**PKiKP**	**07 07 10.4**	**+0.5**
	0.4nm,0.4s,baz=302,slow=1.4,SNR=4.8						

*IDC **25** 06:55:37.1±1.1,8°.89S×108°.42W,h0km,mb3.6/8, mbtmp3.6/8,MS3.6/21,Error ellipse: s-maj=43.2km s-min=21.6km az=61.0*

ISC 25 06:55:39.6±1.1, 8°.9S±0°.2×108°.3W±0°.3, h15km, n32, σ1°.12/9, mb3.6/8, MS3.7/20, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**18.20**	**183**	LR	LR	07 04 34.3	
	comp=Z,179nm,20.8s,baz=20,slow=30						
CMIG	**Matias Romero**	**29.01**	**27**	LR	LR	07 10 49.5	
	comp=Z,107nm,21.6s,baz=206,slow=31						
ATAH	**Atahualpa**	**29.69**	**89**	LR	LR	07 09 09.2	
	comp=Z,16nm,20.9s,baz=290,slow=27						
JTS	**Las Juntas de**	**30.06**	**51**	LR	LR	07 10 51.9	
	comp=Z,188nm,21.9s,baz=223,slow=30						
LPIG	**La Paz**	**32.82**	**357**	LR	LR	07 12 09.1	
	comp=Z,142nm,19.7s,baz=202,slow=30						
H03N2	**Juan Fernandez**	**36.51**	**136**	T	T	07 41 31.4	
	baz=308,slow=77,SNR=44						
H03N1	**Juan Fernandez**	**36.52**	**136**	T	T	07 41 32.7	
	baz=308,slow=77,SNR=45						
H03N3	**Juan Fernandez**	**36.52**	**136**	T	T	07 41 37.4	
	baz=308,slow=77,SNR=36						
TXAR	**Lajitas Array**	**38.24**	**7**	P	**P**	**07 02 59.9**	**+0.6**
	0.2nm,0.6s,baz=201,slow=5.5,SNR=2.4						
	0.2nm,0.6s						
LPAZ	**La Paz**	**39.87**	**105**	P	**P**	**07 03 15.1**	**+1.3**
	2.0nm,0.8s,baz=262,slow=9.4,SNR=9.8						
LPAZ				LR	LR	07 16 19.7	
	comp=Z,59nm,19.8s,baz=254,slow=31						
	2.0nm,0.8s						
PPT	**Papeete**	**41.00**	**253**	LR	LR	07 15 22.7	
	comp=Z,113nm,22.0s,baz=73,slow=29						
SDV	**Santo Domingo**	**41.48**	**66**	LR	LR	07 18 38.9	
	comp=Z,31nm,20.9s,baz=240,slow=33						
PFO	**Pinyon Flats O**	**42.94**	**350**	LR	LR	07 17 07.9	
	comp=Z,127nm,18.8s,baz=173,slow=30						
ANMO	**Albuquerque**	**43.60**	**2**	LR	LR	07 19 08.6	
	comp=Z,134nm,18.3s,baz=271,slow=32						
PLCA	**Paso Flores**	**46.13**	**140**	LR	LR	07 18 41.4	
	comp=Z,136nm,18.6s,baz=269,slow=30						
NVAR	**Mina Array Bea**	**47.95**	**349**	P	**P**	**07 04 18.3**	**+0.3**
	0.8nm,0.8s,baz=172,slow=9.7,SNR=6.7						
NVAR				LR	LR	07 20 14.6	
	comp=Z,138nm,18.3s,baz=192,slow=31						
	0.8nm,0.8s						
SJG	**San Juan**	**49.52**	**57**	LR	LR	07 22 40.5	
	comp=Z,41nm,19.4s,baz=252,slow=33						
ELK	**Elko**	**49.77**	**353**	P	**P**	**07 04 31.7**	**-0.2**
	0.4nm,0.5s,baz=211,slow=5.9,SNR=3.2						
	0.4nm,0.5s						
TKL	**Tuckaleechee C**	**49.97**	**26**	LR	LR	07 25 47.8	
	comp=Z,38nm,19.5s,baz=65,slow=36						
CPUP	**Villa Florida**	**51.28**	**117**	P	**P**	**07 04 41.6**	**-1.7**
	0.6nm,0.8s,baz=207,slow=9.5,S

UUPR					Sn	06 57 28.4	+0.2
UUPR	**Utuado, UPR, P**	**1.11**	**231**	*e*P	**Pn**	**06 57 13.7**	**-0.3**
UUPR	**Utuado, UPR, P**	**1.11**	**231**	*e*S	**Sn**	**06 57 28.4**	**+0.2**
OBIP	**Obispado Ponce**	**1.18**	**219**		**Pn**	**06 57 15.1**	**+0.1**
OBIP				IAML		06 57 36.6	
	comp=E,109nm,0.5s						
OBIP	**Obispado Ponce**	**1.18**	**219**		**Sn**	**06 57 30.6**	**+0.6**
OBIP	**Obispado Ponce**	**1.18**	**219**	⇑*e*P	**Pn**	**06 57 15.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.18**	**219**	*e*S	**Sn**	**06 57 30.6**	**+0.6**
AGPR	**Aguadilla, PR**	**1.32**	**248**	⇑*e*Pg	**Pn**	**06 57 15.7**	**-1.1**
AGPR				⇑*e*Sg	**Sn**	**06 57 32.5**	**-0.9**
AGPR				IAML		06 57 40.7	
	comp=N,121nm,0.3s						
AGPR	**Aguadilla, PR**	**1.32**	**248**	⇑*e*P	**Pn**	**06 57 15.9**	**-0.9**
AGPR	**Aguadilla, PR**	**1.32**	**248**	*e*S	**Sn**	**06 57 32.5**	**-0.9**
LSP	**Las Mesas**	**1.43**	**237**		**Pn**	**06 57 18.0**	**-0.5**
LSP	**Las Mesas**	**1.43**	**237**	⇑*e*P	**Pn**	**06 57 18.0**	**-0.5**
PRSN	**Puerto Rico Se**	**1.46**	**240**		**Sn**	**06 57 36.8**	**0.0**
PRSN	**Puerto Rico Se**	**1.46**	**240**	*e*S	**Sn**	**06 57 36.8**	**0.0**
MLPR	**Magueyes Islan**	**1.52**	**230**	⇓*e*Pg	**Pn**	**06 57 19.6**	**0.0**
MLPR				*e*Sg	**Sn**	**06 57 38.6**	**+0.1**
MLPR				IAML		06 57 41.5	
	comp=N,15nm,1.5s						
MLPR	**Magueyes Islan**	**1.52**	**230**	⇑*e*P	**Pn**	**06 57 19.5**	**-0.1**
MLPR	**Magueyes Islan**	**1.52**	**230**	*e*S	**Sn**	**06 57 38.8**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.55**	**232**		**Pn**	**06 57 19.8**	**-0.2**
CRPR					**Sn**	**06 57 39.5**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.55**	**232**	IAML		06 57 41.4	
	comp=E,59nm,0.5s						
CRPR				IAML		06 57 45.5	
	comp=N,64nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.55**	**232**	⇑*e*Pg	**Pn**	**06 57 20.2**	**+0.2**
CRPR				⇑*e*Sg	**Sn**	**06 57 38.1**	**-1.0**
CRPR				IAML		06 57 45.3	
	comp=N,70nm,0.6s						
CRPR	**Cabo Rojo, PR**	**1.55**	**232**	⇑*e*P	**Pn**	**06 57 19.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.55**	**232**	*e*S	**Sn**	**06 57 39.5**	**+0.4**
DR12	**Loma Pena Alta**	**3.38**	**268**	Pn	**Pn**	**06 57 45.9**	**+0.6**
HATOM	**Hato Mayor del**	**3.38**	**268**	⇑*e*Sg	**Sn**	**06 58 27.3**	**+3.0**
HATOM				IAML		06 59 00.0	
	comp=N,9.5nm,1.7s						

*BKK **25** 06:58:37.5±0.5, 19°N±3°×100°E±°, h3km±4km, M5.5/31, mb0.0/1, mB1.1/1, Mjma4.2/31, ML4.5/26, MLv4.3/31, Mw(mB)2.2/1*
*IDC **25** 06:58:37.4±1.2, 19°.41N×101°.37E, h0km, mb3.6/5, mbtmp3.5/6, ML3.9/1, MS3.1/3, Error ellipse: s-maj=18.7km s-min=18.1km az=73.0*
*NEIC **25** 06:58:40.6±1.4, 19°.43N±0°.05×101°.1E±0°.1, h10km±2km, mb4.0/3, Error ellipse: s-maj=18.9km s-min=6.8km az=73.0*
ISC 25 06:58:39.0±0.8, **19°.41N**±0°.09×**101°.25E**±0°.06, **h10**km, **n34,** σ**0**s**58**/32, **mb3.8**/8, **Laos**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAMP	**Lampang**	**1.77**	**240**	P	**Pn**	**06 59 09.9**	**+0.3**
UTTA	**Uttaradit**	**1.78**	**202**	P	**Pn**	**06 59 09.9**	**+0.1**
CMAI	**Chiengmai2**	**2.14**	**284**	P	**Pn**	**06 59 13.6**	**-1.3**
CHTO	**Chiang Mai**	**2.26**	**255**		**Pn**	**06 59 16.3**	**-0.1**
CHTO	**Chiang Mai**	**2.26**	**255**	P	**Pn**	**06 59 16.1**	**-0.3**
CM09	**Chiang Mai Arr**	**2.34**	**246**	P	**Pn**	**06 59 18.6**	**+1.0**
CM04	**Chiang Mai Arr**	**2.37**	**245**	P	**Pn**	**06 59 18.1**	**+0.1**
CM31	**Chiang Mai Arr**	**2.38**	**247**		**Pn**	**06 59 17.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**2.38**	**247**	Pn	**Pn**	**06 59 18.9**	**+0.9**
	6.6nm,0.3s,baz=67,slow=18,SNR=33						
CMAR				Lg	Lg	06 59 56.6	
	13nm,0.3s,baz=70,slow=32,SNR=7.7						
CMAR				LR	LR	07 00 21.0	
	comp=Z,249nm,21.1s,baz=65,slow=42						
	8.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**2.38**	**247**		**Pn**	**06 59 16.9**	**-1.2**
CM01	**Chiang Mai Arr**	**2.38**	**246**	P	**Pn**	**06 59 18.2**	**+0.1**
CM02	**Chiang Mai Arr**	**2.39**	**246**	P	**Pn**	**06 59 18.5**	**+0.3**
CM05	**Chiang Mai Arr**	**2.40**	**246**	P	**Pn**	**06 59 18.3**	**-0.1**
CM13	**Chiang Mai Arr**	**2.43**	**246**	P	**Pn**	**06 59 18.8**	**+0.1**
PBKT	**Sadao Pong**	**2.84**	**185**	P	**Pn**	**06 59 24.2**	**-0.1**
MHMT	**Maesarieng**	**3.38**	**249**	P	**Pn**	**06 59 31.8**	**0.0**
KHON	**Khomkaen**	**3.40**	**154**	P	**Pn**	**06 59 31.7**	**-0.4**
SKNT	**Sakolnakorn**	**3.55**	**133**	P	**Pn**	**06 59 34.0**	**-0.2**
PANO	**Nakornpanom**	**3.91**	**125**	P	**Pn**	**06 59 39.1**	**0.0**
UTHA	**Uthaitani**	**4.20**	**204**	P	**Pn**	**06 59 42.9**	**-0.2**
SHL	**Shillong**	**10.61**	**307**	Pn	**Pn**	**07 01 10.6**	**-0.6**
PSI	**Prapat**	**16.66**	**188**	LR	LR	07 09 12.6	
	comp=Z,42nm,19.7s,baz=242,slow=38						
GTA	**Gaotai**	**19.97**	**357**	*e*P	**P**	**07 03 12.8**	**+1.2**
GTA				pP	pP	07 03 17.5	+2.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MK31	**Makanchi Array**	**31.42**	**335**	P	**P**	**07 05 00.5**	**+0.2**
MK31				IAmb	IAmb	07 05 06.0	
	comp=Z,2.8nm,1.1s						
MKAR	**Makanchi Array**	**31.42**	**335**	P	**P**	**07 05 00.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=153,slow=9.6,SNR=4.5						
	comp=Z,0.4nm,0.4s						
KURBB	**Kurchatov Arra**	**35.98**	**335**	P	**P**	**07 05 39.2**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=142,slow=10,SNR=2.2						
	comp=Z,0.2nm,0.5s						
ZAA0	**Zalesovo Array**	**36.72**	**344**	P	**P**	**07 05 45.5**	**-0.6**
ZAA0				IAmb	IAmb	07 05 46.5	
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**36.72**	**344**	P	**P**	**07 05 45.8**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=153,slow=8.6,SNR=7.9						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**36.72**	**344**	P	**P**	**07 05 45.5**	**-0.6**
AB31	**Akbulak array**	**44.43**	**322**	P	**P**	**07 06 50.5**	**+0.5**
AB31				IAmb	IAmb	07 07 20.0	
	comp=Z,1.7nm,1.0s						
ABKAR	**Akbulak array**	**44.43**	**322**	P	**P**	**07 06 50.4**	**+0.4**
WRA	**Warramunga Arr**	**50.81**	**138**	P	**P**	**07 07 39.9**	**0.0**
	comp=Z,0.4nm,0.8s,baz=322,slow=8.4,SNR=1.0						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**53.36**	**142**	P	**P**	**07 07 59.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=318,slow=7.5,SNR=2.4						
	comp=Z,0.3nm,0.5s						
JMIC	**Jan Mayen**	**78.02**	**342**	LR	LR	07 50 44.1	
	comp=Z,25nm,21.8s,baz=212,slow=40						

IDC 25 06:58:41.7±2.1, **6°.31S**×**130°.61E, h0**km, **mb3.7**/2, **mbtmp3.6**/4, **ML3.6**/2, **Error ellipse: s-maj=141.1km s-min=29.6km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.02**	**165**	Pn	Pn	07 02 00.8	-1.0
	0.3nm,0.3s,baz=348,slow=13,SNR=10.0						
WRA				Sn	Sn	07 04 29.8	-8.5
	0.6nm,0.3s,baz=333,slow=24,SNR=7.3						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**17.54**	**170**	P	P	07 02 48.5	-0.5
	0.3nm,0.3s,baz=356,slow=11,SNR=14						
ASAR				S	Sn	07 05 56.9	-7.1
	0.4nm,0.7s,baz=358,slow=28,SNR=4.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**67.99**	**326**	P	P	07 09 43.0	+0.3
	0.5nm,0.5s,baz=120,slow=7.9,SNR=6.8						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**72.25**	**328**	P	P	07 10 08.4	-0.3
	0.2nm,0.4s,baz=126,slow=4.9,SNR=5.1						
	0.2nm,0.4s						

*FUNV **25** 07:00:57.7, 10°.37N×62°.37W, h1km, MW3.4*
*TRN **25** 07:00:59.4, 10°.19N×62°.24W, h65km, MD3.9, Gulf of Paria.*
ISC 25 07:00:58.7±1.3, **10°.29N**±0°.07×**62°.38W**±0°.05, **h30**km±15km, **n18,** σ**1**s**56**/32, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMDM	**Guralp CMG5TDE**	**0.91**	**64**	*e*P	**Pn**	**07 01 13.8**	**-1.7**
DMDM				*e*S	**Sb**	**07 01 28.0**	**+0.3**
TPP	**Pointe-a-Pierr**	**0.92**	**88**	*e*P	**Pb**	**07 01 17.4**	**+1.3**
TRN	**Trinidad (W)**	**1.03**	**70**	*e*P	**Pn**	**07 01 16.1**	**-1.0**
TRN				*e*S	**Sb**	**07 01 31.9**	**+0.8**
GRFF	**Grenada Fort F**	**1.86**	**20**	⇓*e*P	**Pb**	**07 01 30.6**	**-1.5**
GRFF				*e*S	**Sn**	**07 01 52.2**	**+1.2**
GRGR	**Grenville**	**1.96**	**21**	*e*P	**Pb**	**07 01 32.2**	**-1.6**
GRGR				*e*S	**Sn**	**07 01 54.6**	**+0.9**
GRSS	**Sisters**	**2.13**	**21**	*e*P	**Pb**	**07 01 34.4**	**-2.3**
GRSS				*e*S	**Sn**	**07 01 59.2**	**+1.4**
PCRV	**Puerto La Cruz**	**2.22**	**267**	*e*P	**Pn**	**07 01 34.2**	**+0.6**
PCRV				*e*S	**Sn**	**07 02 01.9**	**+1.8**
PCRV	**Puerto La Cruz**	**2.22**	**267**	*e*P	**Pb**	**07 01 37.6**	**-0.6**
PCRV				*e*S	**Sn**	**07 02 02.4**	**+2.3**
GCMP	**Grenada, Carri**	**2.37**	**23**	*e*P	**Pn**	**07 01 36.4**	**+0.7**
GCMP				*e*S	**Sn**	**07 02 03.8**	**0.0**
SVB	**Belmont**	**3.16**	**20**	*e*S	**Sn**	**07 02 23.6**	**+0.3**
MCLT	**Moule a Chique**	**3.68**	**22**	*e*P	**Pn**	**07 01 54.6**	**+0.9**
MCLT				*e*S	**Sn**	**07 02 35.9**	**-0.1**
SLBI	**Saint Lucia, B**	**3.96**	**20**	*e*P	**Pn**	**07 01 59.4**	**+1.9**
SLBI				*e*S	**Sn**	**07 02 43.2**	**+0.4**
BIM	**Bigot**	**4.39**	**17**	*e*P	**Pn**	**07 02 04.6**	**+1.1**
BIM				*e*S	**Sn**	**07 02 52.6**	**-1.0**
TACV	**Tcata**	**4.58**	**268**	*e*P	**Pn**	**07 02 06.9**	**+0.9**
TACV				*e*S	**Sn**	**07 02 58.0**	**-0.3**
CACV	**CAICARA DEL OR**	**4.92**	**237**	*e*P	**Pn**	**07 02 06.3**	**-4.4**
CACV				*e*S	Sn	07 02 57.7	-9.0
BENV	**Beln**	**5.15**	**267**	*e*P	**Pn**	**07 02 15.2**	**+1.3**
BENV				*e*S	**Sn**	**07 03 11.7**	**-0.7**
DSLB	**Salisbury**	**5.20**	**10**	*e*P	**Pn**	**07 02 15.9**	**+1.3**
MAPV	**Macapo**	**6.00**	**266**	*e*P	**Pn**	**07 02 26.6**	**+1.0**
MAPV				*e*S	**Sn**	**07 03 30.9**	**-2.4**

*IDC **25** 07:06:05.1±1.4, 1°.68N×89°.40E, h0km, mb3.7/8, mbtmp3.8/10, ML4.5/2, MS3.0/2, Error ellipse: s-maj=43.5km s-min=21.7km az=49.0*
ISC 25 07:06:06.5±1.2, **1°.7N**±0°.2×**89°.2E**±0°.1, **h10**km, **n18,** σ**1**s**39**/12, **mb3.8**/8, **North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**10.15**	**303**	Pn	**Pn**	**07 08 33.5**	**+1.1**
	1.1nm,0.3s,baz=112,slow=12,SNR=4.2						
PALK				Sn	**Sn**	**07 10 23.4**	**-3.0**
	2.1nm,0.3s,baz=30,slow=19,SNR=6.4						
	9.1nm,1.0s						
H08S2	**Diego Garcia H**	**19.11**	**241**	T	T	07 31 04.7	
	baz=60,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**19.11**	**241**	T	T	07 30 49.3	
	baz=60,slow=76,SNR=19						
H08S1	**Diego Carcia H**	**19.13**	**241**	T	T	07 30 47.4	
	baz=60,slow=76,SNR=7.7						
CMAR	**Chiang Mai Arr**	**19.18**	**29**	P	**P**	**07 10 29.8**	**-0.8**
	1.3nm,0.3s,baz=216,slow=9.2,SNR=4.1						
CMAR				LR	LR	07 17 39.8	
	comp=Z,24nm,18.2s,baz=155,slow=36						
	1.7nm,0.3s						
MKAR	**Makanchi Array**	**45.32**	**353**	P	**P**	**07 14 25.5**	**+0.9**
	0.6nm,0.6s,baz=162,slow=10,SNR=4.6						
	0.6nm,0.6s						
SONM	**Songino Array**	**48.29**	**15**	P	**P**	**07 14 48.0**	**-0.1**
	1.9nm,0.6s,baz=194,slow=9.3,SNR=13						
	1.9nm,0.6s						
WRA	**Warramunga Arr**	**49.17**	**118**	P	**P**	**07 14 53.9**	**-1.4**
	0.4nm,0.7s,baz=295,slow=7.6,SNR=2.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**49.58**	**351**	P	**P**	**07 14 58.6**	**+0.9**
	1.1nm,0.7s,baz=178,slow=7.4,SNR=20						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**50.21**	**123**	P	**P**	**07 15 02.2**	**-0.8**
	0.2nm,0.5s,baz=300,slow=8.1,SNR=4.2						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**52.20**	**357**	P	**P**	**07 15 17.3**	**-0.1**
	0.9nm,0.4s,baz=176,slow=4.5,SNR=3.8						
	0.9nm,0.4s						
BVAR	**Borovoye Array**	**53.49**	**346**	P	**P**	**07 15 27.2**	**+0.2**
	0.5nm,0.7s,baz=168,slow=7.4,SNR=2.4						
	0.5nm,0.7s						
H04N2	**CROZET ISLANDS**	**57.97**	**210**	T	T	08 17 50.7	
	baz=52,slow=75,SNR=12						
H04N1	**CROZET ISLANDS**	**57.98**	**210**	T	T	08 17 49.8	
	baz=52,slow=75,SNR=9.8						
H04N3	**CROZET ISLANDS**	**57.99**	**210**	T	T	08 17 49.5	
	baz=52,slow=75,SNR=13						
EIL	**Elat**	**58.51**	**304**	LR	LR	07 39 56.3	
	comp=Z,24nm,18.0s,baz=182,slow=35						
BRTR	**Keskin Array B**	**62.98**	**314**	P	**P**	**07 16 35.4**	**+1.5**
	0.6nm,0.6s,baz=132,slow=7.7,SNR=3.8						
	0.6nm,0.6s						
TXAR	**Lajitas Array**	**146.76**	**21**	PKPbc	**PKPdf**	**07 25 48.6**	**+0.5**
	0.2nm,0.8s,baz=318,slow=1.7,SNR=3.8						

*ECX **25** 07:13:13.7±0.4, 31°.34N×115°.36W, h5km±2km, MD3.4, ML3.6, Fault plane solution: NP1:ϕs110.00000°, δ70.00000°, λ-157.00000°.*
*MEX **25** 07:13:14.5±0.6, 31°.19N×115°.35W, h17km±6km, MD4.1*
ISC 25 07:13:11.7±0.9, **31°.29N**±0°.02×**115°.30W**±0°.03, **h15**km±7km, **n31,** σ**0**s**90**/44, **10C-9D, Baja California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPIG	**San Pedro Mart**	**0.28**	**211**	⇑*e*P	**Pb**	**07 13 19.6**	**+1.0**
SPIG				*e*S	**Sb**	**07 13 24.3**	**+1.1**
SPIG	**San Pedro Mart**	**0.28**	**211**	*i* P	**Pb**	**07 13 19.5**	**+1.0**
SPIG				*e*S	**Sb**	**07 13 23.9**	**+0.8**
ECBX	**El Chinero**	**0.28**	**49**	⇑*i*P	**Pb**	**07 13 18.9**	**+0.5**
ECBX				*e*S	**Sb**	**07 13 22.9**	**0.0**
ECBX				IAML		07 13 23.2	
	comp=N,7μm,0.2s						
ECBX				⇑*e*		07 13 23.2	
ECBX				⇑*e*		07 13 23.2	
ECBX				IAML		07 13 23.2	
	comp=E,8μm,0.2s						
VTX	**Valle De La Tr**	**0.43**	**284**	⇑*i*P	**Pb**	**07 13 20.5**	**-0.4**
VTX				*e*S	**Sg**	**07 13 25.7**	**-0.5**
VTX				IAML		07 13 26.2	
	comp=N,4μm,0.1s						
VTX				IAML		07 13 26.3	
	comp=E,7μm,0.1s						
SFX	**San Felipe**	**0.46**	**123**	⇓*i*P	**Pn**	**07 13 23.4**	**-0.2**
SFX				*e*S	**Sn**	**07 13 30.6**	**-0.9**
SFX				IAML		07 13 33.4	
	comp=E,5μm,0.2s						
SFX				IAML		07 13 33.5	
	comp=N,6μm,0.2s						
SFX	**San Felipe**	**0.46**	**123**	*i* P	**Pn**	**07 13 23.3**	**-0.3**
SFX				*e*S	**Sn**	**07 13 30.4**	**-1.1**
SJX	**San Joaquin**	**0.74**	**310**	⇓*i*P	**Pn**	**07 13 28.5**	**+1.1**
SJX				*e*S	**Sn**	**07 13 39.7**	**+1.3**
SJX				IAML		07 13 42.5	
	comp=E,3μm,0.2s						
SJX				IAML		07 13 43.2	
	comp=N,2μm,0.1s						
ALAMX	**Rancho Alamar**	**0.80**	**334**	⇓*i*P	**Pg**	**07 13 26.7**	**-0.6**
ALAMX				*e*S	**Sg**	**07 13 36.6**	**-1.2**
ALAMX				IAML		07 13 37.2	
	comp=N,2μm,0.3s						
ALAMX				IAML		07 13 39.4	
	comp=E,3μm,0.2s						
SV2X	**San Vicente**	**0.81**	**274**	⇑*i*P	**Pb**	**07 13 27.1**	**-0.3**
SV2X				*e*S	**Sg**	**07 13 37.0**	**-1.0**
EDOMX	**El Doctor, EDO**	**0.82**	**35**	⇑*e*P	**Pn**	**07 13 28.9**	**+0.3**
RHX	**Rio Hardy**	**0.85**	**1**	⇓*i*P	**Pb**	**07 13 27.8**	**-0.2**
SQX	**San Quintin**	**0.86**	**215**	⇑*i*P	**Pn**	**07 13 29.4**	**+0.2**
SQX				IAML		07 13 41.8	
	comp=E,3μm,0.3s						
SQX				IAML		07 13 43.8	
	comp=N,2μm,0.4s						
AGSX	**Ej. Aguas Cali**	**0.98**	**7**	⇓*i*P	**Pb**	**07 13 30.6**	**+0.3**
GUVIX	**Guadalupe Vict**	**1.03**	**11**	*e*P	**Pg**	**07 13 31.8**	**+0.2**
MBIG	**Mexicali**	**1.12**	**4**	*e*P	**Pg**	**07 13 34.2**	**+0.8**
MBIG	**Mexicali**	**1.12**	**4**	*e*P	**Pg**	**07 13 33.5**	**+0.1**
MBIG				*e*P	**Pb**	**07 13 34.0**	**+1.3**
MBIG				*e*S	**Sg**	**07 13 49.0**	**+1.0**
MBIG				*e*S	**Sn**	**07 13 50.1**	**+2.1**
CPBX	**Cerro Prieto**	**1.13**	**360**	*e*P	**Pn**	**07 13 32.9**	**0.0**
CTLX	**Tlaxcala, TLX**	**1.19**	**6**	⇑*e*P	**Pn**	**07 13 33.6**	**-0.2**
JARAX	**Ej. Heriberto**	**1.27**	**349**	⇓*e*P	**Pn**	**07 13 34.2**	**-0.6**
PBX	**Punta Banda**	**1.30**	**291**	⇑*i*P	**Pb**	**07 13 35.5**	**-0.3**
PBX				IAML		07 13 52.1	
	comp=N,654nm,0.2s						
CCX	**Cicese**	**1.30**	**297**	*e*P	**Pb**	**07 13 35.5**	**-0.3**
YUH2	**Yuha Desert**	**1.46**	**339**	⇓*e*P	**Pn**	**07 13 37.1**	**-0.3**
RMX	**La Rumorosa**	**1.47**	**333**	*e*P	**Pn**	**07 13 36.8**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**1.52**	**333**	⇓*e*P	**Pn**	**07 13 38.5**	**+0.1**
CBX	**Cerro Bola**	**1.55**	**312**	⇓*e*P	**Pb**	**07 13 39.4**	**-0.7**
CBX				IAML		07 14 01.7	
	comp=N,2μm,0.3s						
CBX	**Cerro Bola**	**1.55**	**312**	*e*P	**Pb**	**07 13 40.0**	**-0.1**
CBX				*e*S	**Sb**	**07 13 59.2**	**-0.4**
TJIG	**Tijuana**	**1.64**	**315**	*e*P	**Pb**	**07 13 40.6**	**-0.9**
TJIG				*e*S	**Sn**	**07 14 01.1**	**+0.4**
BAR	**Barrett**	**1.81**	**320**	IAML		07 14 08.5	
	comp=E,883nm,0.2s						
BAR				IAML		07 14 08.9	
	comp=N,570nm,0.1s						
EML	**El Monte Cty P**	**2.07**	**321**	IAML		07 14 15.8	
	comp=E,366nm,0.4s						
BAHB	**Baha de los**	**2.78**	**147**	*e*P	**Pg**	**07 14 03.3**	**-1.6**
TUC	**Tucson**	**3.98**	**74**	*e*P	**Pn**	**07 14 11.7**	**-0.4**
TUC				*e*S	**Sb**	**07 15 07.0**	**-2.4**

*AEIC **25** 07:15:10.8±1.6, 51°.76N±0°.07×174°.69W±0°.07, h22km±7km, Error ellipse: s-maj=11.0km s-min=3.5km az=152.0*
NEIC 25 07:15:08.3±0.9, **51°.59N**±0°.04×**174°.64W**±0°.04, **h10**km±1km, **mb3.6**/5, **ML3.5**/10, **ML3.0**(AEIC), **Error ellipse: s-maj=6.7km s-min=3.2km az=153.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.67**	**24**		Pb	07 15 21.8	-0.4
ATKA				IAML		07 15 30.5	
	comp=N,2μm,0.3s						
ATKA	**Atka Island**	**0.67**	**24**		Sg	07 15 30.3	+0.1
KOFP	**Korovin Flat P**	**0.77**	**26**		Pb	07 15 23.5	-0.3
KOFP					Sg	07 15 33.2	+0.1
KOKL	**Mount Kliuchef**	**0.78**	**20**		Pg	07 15 23.5	0.0
KOKL					Sg	07 15 32.8	-1.0
KOWE	**Korovin West**	**0.81**	**17**		Pg	07 15 24.0	-0.1
KOWE					Sg	07 15 34.0	-0.7
KOKV	**Korovin Volcan**	**0.83**	**21**		Pg	07 15 24.4	+0.1
KOKV					Sg	07 15 34.8	-0.3
KOSE	**Korovin Southe**	**0.84**	**26**		Pg	07 15 24.6	0.0
KONW	**Korovin Northw**	**0.85**	**18**		Pg	07 15 24.5	-0.3
KONW					Sg	07 15 35.2	-0.7
KONE	**Korovin Northe**	**0.87**	**22**		Pg	07 15 24.7	-0.4
GSIG	**Igitkin Island**	**0.89**	**297**		Pb	07 15 25.8	-0.1
GSIG					Sg	07 15 37.3	+0.2
GSTR	**Great Sitkin T**	**1.01**	**300**		Pg	07 15 27.8	-0.1
GSTR				Sg	Sg	07 15 41.0	0.0
GSTR				IAML		07 15 43.6	
	comp=E,1μm,0.3s						
GSTD	**Great Sitkin T**	**1.04**	**297**		Sg	07 15 41.5	-0.5
GSSP	**Great Sitkin S**	**1.08**	**299**		Pg	07 15 28.8	-0.2
ADAG	**Mount Adagdak**	**1.28**	**289**		Pn	07 15 32.3	+0.1
ADK	**Adak**	**1.30**	**284**		Pn	07 15 32.2	-0.3
ADK				IAML		07 15 50.2	
	comp=E,1μm,0.3s						
ADK	**Adak**	**1.30**	**284**	Sn	Sb	07 15 48.5	-1.2
KIWB	**Kanaga Island**	**1.58**	**281**		Pn	07 15 36.7	+0.3
KIWB				IAML		07 15 57.1	
	comp=N,522nm,0.5s						
KIWB				IAML		07 16 01.1	
	comp=E,598nm,0.4s						
KIKV	**Kanaga Island**	**1.60**	**281**		Pn	07 15 36.9	+0.2
KIMD	**Kanaga Island**	**1.62**	**277**		Pn	07 15 37.2	+0.2
TAPA	**Tanaga Point A**	**1.99**	**278**		Pn	07 15 42.7	+0.7
TASE	**Tanaga Southea**	**2.13**	**278**		Pn	07 15 44.6	+0.6
NIKH	**Nikolski High**	**3.81**	**66**	Pn	Pn	07 16 05.3	-1.8
NIKH				IAML		07 17 04.7	
	comp=N,55nm,0.5s						
O14K	**Tigyukauivet M**	**10.79**	**39**	Pn	Pn	07 17 42.6	0.0
N14K	**Kuskokwak Cree**	**11.07**	**36**	Pn	Pn	07 17 46.6	0.0
O15K	**Ungalikthiuk R**	**11.33**	**42**	Pn	Pn	07 17 50.2	+0.2
N15K	**Kwethluk River**	**11.83**	**38**	Pn	Pn	07 17 57.9	+1.0
O16K	**Kolwok River B**	**12.29**	**43**	Pn	Pn	07 18 03.9	+0.6
L16K	**Owhat River**	**13.09**	**33**	Pn	Pn	07 18 14.8	+0.6
L18K	**Granite Mounta**	**14.42**	**35**	Pn	Pn	07 18 32.9	+0.7
H19K	**Roundabout Mou**	**16.79**	**27**	Pn	Pn	07 19 02.2	-0.9
H19K				IAmb	IAmb	07 19 23.7	
	comp=Z,5.9nm,1.4s						
HDA	**Harding Lake**	**19.29**	**38**	P	P	07 19 30.1	-2.8
IL31		**19.48**	**37**		P	07 19 31.7	-3.4
SCRK	**Sand Creek**	**20.26**	**41**	P	P	07 19 39.3	-4.4
SCRK				IAmb	IAmb	07 19 55.0	
	comp=Z,4.0nm,1.4s						
J26L	**Joseph Creek**	**20.64**	**39**	P	P	07 19 43.1	-4.7
J26L				IAmb	IAmb	07 19 60.0	
	comp=Z,4.5nm,1.4s		

PETK **Petropavlovsk-** 64.19 19 P P 07 39 20.7 -1.6
MKAR **Makanchi Array** 67.41 327 P P 07 39 42.4 -0.7
comp=Z,0.6nm,0.3s,baz=116,slow=6.2,SNR=18
comp=Z,0.6nm,0.3s
MKAR **Makanchi Array** 67.41 327 P P 07 39 40.6 -2.5
YAK **Yakutsk** 68.41 0 P P 07 39 46.8 -2.1
comp=Z,21nm,0.7s,baz=140,slow=7.9,SNR=2.3
ZALV **Zalesovo Beam** 70.83 334 P P 07 40 02.2 -1.6
comp=Z,1.2nm,0.6s,baz=103,slow=4.7,SNR=4.3
comp=Z,1.2nm,0.6s
KURBB **Kurchatov Arra** 71.71 329 P P 07 40 08.3 -0.8
comp=Z,1.1nm,0.6s,baz=130,slow=4.9,SNR=14
comp=Z,1.1nm,0.6s
KURK **Kurchatov** 71.72 329 P P 07 40 06.8 -2.4
BVAR **Borovoye Array** 77.26 328 P P 07 40 39.9 -1.2
comp=Z,0.3nm,0.4s,baz=126,slow=7.3,SNR=2.2
comp=Z,0.3nm,0.4s
AB31 **Akbulak array** 81.66 322 P P 07 41 02.7 -2.2
ABKAR **Akbulak array** 81.66 322 P P 07 41 02.9 -2.0
M16K **Timber Creek** 87.08 28 P 07 41 29.9 -1.9
J16K **Anvik River** 87.12 25 P 07 41 29.5 -2.5
J16K IAmb IAmb 07 41 58.3
comp=Z,14nm,1.5s
G18K **Tagagawik** 88.80 23 P P 07 41 38.6 -1.3
G18K IAmb IAmb 07 42 15.4
comp=Z,8.9nm,1.5s
C19K **Lookout Ridge** 89.53 20 P P 07 41 42.5 -0.8
C19K IAmb IAmb 07 42 11.2
comp=Z,11nm,1.3s
D19K **Kuna River** 89.83 21 P P 07 41 43.6 -1.2
D19K IAmb IAmb 07 42 23.3
comp=Z,7.8nm,1.4s
B21K **Ikpikpuk River** 91.36 20 P P 07 41 50.6 -1.2
C23K **Itkillik River** 92.77 20 P P 07 41 57.3 -1.0
C23K IAmb IAmb 07 42 31.1
comp=Z,6.7nm,1.4s
ILAR **Eielson Array** 93.33 25 P P 07 41 58.9 -2.1
comp=Z,0.3nm,0.7s,baz=252,slow=4.9,SNR=2.6
comp=Z,0.3nm,0.7s
BMAR **Burnt Mountain** 94.59 23 P P 07 42 06.1 -0.7
L27K **Beaver Creek,** 95.37 27 P P 07 42 09.6 -0.8
L27K IAmb IAmb 07 42 15.5
comp=Z,6.8nm,1.5s
BCAR **Beaver Creek A** 95.39 27 P 07 42 08.8 -1.7
I28M **Miner Creek** 96.31 25 P P 07 42 13.6 -1.1
GO02 **Mina Guanaco** 143.56 151 PKPdf PKPab 07 48 18.0 -0.1
TA01 **Diego Aracena** 147.01 145 **PKPdf** 07 48 25.6 -1.2
HMBC **Humberstone** 147.40 145 **PKPdf** 07 48 28.1 +0.4
PSGCX **Pisagua** 147.80 144 PKPab **PKPbc** 07 48 32.0 +0.6
BOAV **Boa Vista** 169.50 113 PKPdf **PKPdf** 07 48 52.4 -1.3

NOU ***25*** *07:29:20.2,22.˚83S×173.˚18E,h0km,ML5.5/6,Southeast of Loyalty Islands*
IDC ***25*** *07:29:47.6±0.5,22.˚49S×170.˚98E,h0km,mb4.8/17, mbtmp4.7/19,ML4.2/2,MS4.2/38,Error ellipse: s-maj=19.0km s-min=16.8km az=173.0*
NEIC ***25*** *07:29:54.1±1.7,22.˚47S±0.˚09×170.˚73E±0.˚08,h24km±2km, mb5.0/75,Error ellipse: s-maj=13.5km s-min=10.2km az=178.0*
GCMT ***25*** *07:29:55.1±0.2,22.˚62S±0.˚01×170.˚81E±0.˚02,h28km, MW5.1/98,Moment Tensor Solution. s75,c111; s98,c151; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.07±.17; Mθθ-4.76±.12; Mϕϕ-0.30±.11; Mrθ2.29±.20; Mθϕ1.99±.09; Mϕr0.15±.20; Best double couple: Ms5.77900×10¹⁶ NP1:ϕ₁302.00000°, δ35.00000°, λ107.00000°. NP2:ϕ₂101.00000°, δ57.00000°,λ78.00000°. Principal axes: T 5.6370, Plg75.0000°, Azm336.0000°; N 0.2900, Plg10.0000°, Azm107.0000°; P -5.9210, Plg11.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 07:29:53.8±0.3,22.˚48S±0.˚07×170.˚84E±0.˚06,h35km,n265, σ1º29/219,mb5.0/70,MS4.3/37,16C-26D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	2.79	290		**Pn**	07 30 35.0	-1.0
MARNC	**Mare, Loyalty**	2.79	290	P	**Pn**	07 30 35.4	-0.6
PINNC	**Pines Island,**	3.14	267		**Pn**	07 30 40.0	-0.8
PINNC	**Pines Island,**	3.14	267	P	**Pn**	07 30 40.0	-0.8
YATNC	**Mamie plateau,**	3.69	276	P	**Pn**	07 30 47.8	-0.5
OUENC	**Ouen Island, N**	3.70	270	P	**Pn**	07 30 48.6	+0.1
ONTNC	**Ouen Toro**	4.07	272		**Pn**	07 30 53.7	+0.2
ONTNC	**Ouen Toro**	4.07	272	P	**Pn**	07 30 53.8	+0.3
DZM	**Mont Dzumac**	4.10	275	Pn	**Pn**	07 30 53.2	-0.8
	26nm,0.3s,baz=113,slow=10,SNR=1100						
DZM				Sn	**Sn**	07 31 39.7	-1.1
	35nm,0.3s,baz=100,slow=19,SNR=7.4						
	54nm,0.3s						
MSVF	**Nonsavu**	8.26	56		**Pn**	07 31 53.2	+2.0
TOZ	**Tahuroa Road**	15.72	166		**P**	07 33 34.8	-1.4
HIZ	**Hauiti**	16.34	169		**Pn**	07 33 42.0	+1.4
HIZ				IAmb	IAmb	07 33 51.0	
	comp=Z,65nm,0.9s						
URZ	**Urewera**	16.62	163	Pn	**Pn**	07 33 42.5	-1.6
	comp=Z,0.5nm,0.3s,baz=280,slow=4.4,SNR=6.9						
URZ				LR	LR	07 39 03.8	
	comp=Z,2μm,18.4s,baz=336,slow=34						
	comp=Z,33nm,1.2s						
HNR	**Honiara**	16.66	319	Pn	**P**	07 33 47.0	+0.2
	comp=Z,12nm,0.3s,baz=284,slow=4.8,SNR=7.3						
HNR				LR	LR	07 39 14.2	
	comp=Z,542nm,21.4s,baz=148,slow=34						
HNR	**Honiara**	16.66	319		**Pn**	07 33 44.7	0.0
RTZ	**Ruatahuna**	16.92	163		**P**	07 33 49.2	-0.4
EIDS	**Eidsvold**	18.29	257		**P**	07 34 04.0	-0.8
TCW	**Tory Channel**	18.89	172	P	**P**	07 34 11.7	+0.5
MRNZ	**Matariki Terra**	18.93	176	P	**Pn**	07 34 13.3	+0.9
THZ	**Tophouse**	19.30	175		**Pn**	07 34 19.3	+2.3
THZ				IAmb	IAmb	07 34 20.0	
	comp=Z,93nm,1.5s						
BSWZ	**Blackbirch Sta**	19.34	173		**Pn**	07 34 19.1	+1.6
KHZ	**Kahutara**	20.00	174		Pn	07 34 26.2	+1.0
KHZ				IAmb	IAmb	07 34 27.7	
	comp=Z,174nm,1.4s						
LTZ	**Lake Taylor**	20.28	177		Pn	07 34 28.4	-0.1
LTZ				IAmb	IAmb	07 34 39.4	
	comp=Z,172nm,1.8s						
FOZ	**Fox Glacier**	21.01	182	P	**P**	07 34 39.9	+5.7
FOZ				IAmb	IAmb	07 34 40.9	
	comp=Z,108nm,1.3s						
RPZ	**Rata Peaks**	21.18	180	P	**P**	07 34 35.2	-0.9
	comp=Z,32nm,0.9s,baz=320,slow=2.4,SNR=9.5						
RPZ				LR	LR	07 42 21.7	
	comp=Z,879nm,18.4s,baz=328,slow=36						
	comp=Z,32nm,0.9s						
RPZ	**Rata Peaks**	21.18	180		**P**	07 34 36.7	+0.6
CAN	**Canberra**	22.95	231		**P**	07 34 54.7	-0.4
CAN				IAmb	IAmb	07 35 06.6	
	comp=Z,100nm,1.5s						
CTA	**Charters Tower**	23.03	271	LR	LR	07 43 35.6	
	comp=Z,22nm,18.0s,baz=79,slow=36						
CTAO	**Charters Tower**	23.03	271		**P**	07 34 55.8	-0.2
PMG	**Port Moresby**	26.17	296	P	**P**	07 35 25.3	+0.2
	comp=Z,19nm,0.9s,baz=102,slow=7.8,SNR=6.1						
PMG				LR	LR	07 44 24.0	
	comp=Z,616nm,20.4s,baz=141,slow=33						
	comp=Z,19nm,0.9s						
PMG	**Port Moresby**	26.17	296		**P**	07 35 25.7	+0.6
PMG				IAmb	IAmb	07 35 46.4	
	comp=Z,26nm,0.9s						
RAR	**Rarotonga**	27.29	93	LR	LR	07 46 19.6	
	comp=Z,206nm,18.2s,baz=275,slow=36						
STKA	**Stephens Creek**	27.58	244	P	**P**	07 35 37.3	-0.5
	comp=Z,5.7nm,0.8s,baz=96,slow=11,SNR=8.3						
STKA				LR	LR	07 45 46.3	
	comp=Z,442nm,19.2s,baz=75,slow=35						
	comp=Z,5.7nm,0.8s						
INKA	**Innaminka**	27.71	253		**P**	07 35 39.7	+0.8
AS31	**Alice Springs**	33.95	261	P	**P**	07 36 33.5	-0.5
ASAR	**Alice Springs**	33.95	261	P	**P**	07 36 33.8	-0.3
	comp=Z,13nm,0.8s,baz=88,slow=8.9,SNR=50						
ASAR				ScP	**ScP**	07 42 58.4	+4.1
	comp=Z,0.6nm,0.9s,baz=71,slow=3.8,SNR=2.5						
ASAR				LR	LR	07 50 22.0	
	comp=Z,514nm,18.8s,baz=98,slow=36						
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	34.07	267	P	**P**	07 36 34.0	-1.1
	comp=Z,3.0nm,0.6s,baz=95,slow=8.1,SNR=6.2						
WRA				PcP	**PcP**	07 39 12.2	-0.2
	comp=Z,2.0nm,1.0s,baz=77,slow=2.1,SNR=3.5						
WRA				ScP	**ScP**	07 43 00.4	+5.7
	comp=Z,1.3nm,1.1s,baz=95,slow=3.0,SNR=4.6						
WRA				LR	LR	07 50 31.5	
	comp=Z,797nm,18.5s,baz=104,slow=36						
	comp=Z,3.0nm,0.6s						
JAY	**Jayapura**	35.35	300	LR	LR	07 50 27.4	
	comp=Z,348nm,19.3s,baz=233,slow=35						
PPT	**Papeete**	37.43	90	LR	LR	07 48 23.7	
	comp=Z,170nm,20.9s,baz=252,slow=30						
MTN	**Manton Dam**	38.93	277	P	**P**	07 37 16.0	-0.6
MTN				IAmb	IAmb	07 37 17.0	
	comp=Z,13nm,0.7s						
FAKI	**Fak Fak**	42.17	292		**P**	07 37 42.7	-0.7
FAKI	**Fak Fak**	42.17	292	P	**P**	07 37 43.6	+0.2
	comp=Z,679nmcomp=Z,38nm,1.2s						
FITZ	**Fitzroy Crossi**	42.50	267	P	**P**	07 37 45.9	-0.2
	comp=Z,32nm,0.9s,baz=112,slow=8.9,SNR=8.0						
FITZ				LR	LR	07 55 42.4	
	comp=Z,592nm,18.3s,baz=112,slow=36						
	comp=Z,32nm,0.9s						
GUMO	**Guam**	43.97	322	LR	LR	07 57 26.2	
	comp=Z,158nm,18.1s,baz=128,slow=38						
SWI	**Sorong**	44.08	294	P	**P**	07 38 00.1	+1.3
	comp=Z,1μmcomp=Z,66nm,1.2s						
BATI	**Baumata**	46.70	277	LR	LR	07 59 06.4	
	comp=Z,801nm,18.5s,baz=128,slow=38						
PSA00	**Pilbara Seismi**	47.09	261	P	**P**	07 38 21.8	-0.9
PSA00	**Pilbara Seismi**	47.09	261	P	**P**	07 38 22.1	-0.6
PSA00				IAmb	IAmb	07 38 55.1	
	comp=Z,36nm,1.7s						
MBWA	**Marble Bar**	47.28	261	P	**P**	07 38 24.4	+0.3
SANI	**Sanana**	48.03	289	P	**P**	07 38 30.8	+0.8
NWAO	**Narrogin (SRO)**	48.15	245	LR	LR	07 58 02.7	
	comp=Z,478nm,19.5s,baz=95,slow=35						
NWAO	**Narrogin (SRO)**	48.15	245		**P**	07 38 31.0	+0.3
EDFI	**Ende, Flores**	49.05	278	P	**P**	07 38 38.0	+0.1
	comp=Z,624nmcomp=Z,13nm,1.5s						
LUWI	**Luwuk**	51.33	288	P	**P**	07 38 55.3	+0.1
BNSI	**Bone**	52.22	282	P	**P**	07 39 03.7	+2.0
	comp=Z,21nm,1.2s						
KAPI	**Kappang**	52.29	281	P	**P**	07 39 02.9	+0.7
	comp=Z,7.7nm,0.5s,baz=99,slow=4.5,SNR=12						
KAPI				LR	LR	08 01 53.0	
	comp=Z,122nm,19.6s,baz=106,slow=37						
	comp=Z,7.7nm,0.5s						
KAPI	**Kappang**	52.29	281	P	**P**	07 39 02.6	+0.3
TOLI2	**Tolitoli**	54.10	289	P	**P**	07 39 15.7	+0.1
MPSI	**Mapaga**	54.51	288	P	**P**	07 39 19.0	+0.4
	comp=Z,26nm,1.0s						
VNDA	**Vanda**	55.26	182	LR	LR	08 00 30.7	
	comp=Z,340nm,18.6s,baz=14,slow=33						
SBUM	**Sibu**	62.29	286	P	**P**	07 40 14.0	+1.1
SBUM				IAmb	IAmb	07 40 15.2	
	comp=Z,20nm,1.1s						
JOW	**Kunigami**	64.03	318	LR	LR	08 07 59.9	
	comp=Z,139nm,18.4s,baz=350,slow=36						
TPI	**Tanjungpandan**	64.22	278	P	**P**	07 40 25.8	+0.1
	comp=Z,29nm,1.3s						
MJAR	**Maushiro Arr**	66.31	332	P	**P**	07 40 37.8	-0.9
	comp=Z,3.9nm,0.9s,baz=165,slow=7.2,SNR=5.9						
MJAR				LR	LR	08 05 14.2	
	comp=Z,75nm,22.0s,baz=122,slow=32						
	comp=Z,3.9nm,0.9s						
MDSI	**Maura Dua**	66.75	275	P	**P**	07 40 41.0	-1.1
	comp=Z,34nm,1.1s						
JNU	**Nakatsue**	67.16	324	LR	LR	08 10 38.4	
	comp=Z,49nm,18.2s,baz=126,slow=36						
QSPA	**South Pole Qui**	67.59	180	P	**P**	07 40 49.2	+2.5
	comp=Z,16nm,1.0s,baz=13,slow=3.4,SNR=34						
QSPA				LR	LR	08 08 16.2	
	comp=Z,182nm,18.1s,baz=46,slow=34						
QSPA	**South Pole Qui**	67.59	180	P	**P**	07 40 49.6	+2.9
QSPA				IAmb	IAmb	07 40 50.9	
	comp=Z,17nm,0.9s						
MYKOM	**Kota Tinggi**	69.54	281	P	**P**	07 41 00.5	+0.9
ASAJ	**Asahikawa**	71.15	339	LR	LR	08 08 57.4	
	comp=Z,148nm,20.2s,baz=127,slow=33						
RPN	**Rapa Nui**	71.45	112	LR	LR	08 04 26.8	
	comp=Z,158nm,19.3s,baz=300,slow=29						
MNSI	**Mandailing Nat**	73.03	278	P	**P**	07 41 20.3	-0.4
IPM	**Ipoh**	73.22	282	P	**P**	07 41 22.2	+0.3
NJ2	**Nanjing**	73.57	316	*e*P	**P**	07 41 26.3	+2.9
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KULM	**Kulim**	73.90	283	P	**P**	07 41 26.4	+0.6
RPSI	**Rantau Prapat**	74.40	280		**P**	07 41 28.1	-0.6
PSI	**Prapat**	74.44	280	LR	LR	08 17 03.5	
	comp=Z,190nm,18.8s,baz=94,slow=38						
PSI	**Prapat**	74.44	280	P	**P**	07 41 28.4	-0.7
GSI	**Gunungsitoli**	75.07	278	P	**P**	07 41 33.0	+0.4
GSI	**Gunungsitoli**	75.07	278	P	**P**	07 41 33.9	+1.3
MAW	**Mawson**	76.00	202	LR	LR	08 13 07.7	
	comp=Z,144nm,18.1s,baz=101,slow=34						
PETK	**Petropavlovsk-**	76.13	352	P	**P**	07 41 38.0	+0.2
	comp=Z,12nm,0.9s,baz=175,slow=8.6,SNR=7.6						
PETK				LR	LR	08 11 58.4	
	comp=Z,231nm,18.6s,baz=153,slow=33						
	comp=Z,12nm,0.9s						
TIA	**Tai'an**	77.35	318	P	**P**	07 41 45.5	+0.4
TIA				pmax	pmax		
	comp=Z,26nm,1.0s						
CN2	**Changchun**	78.00	328	*e*P	**P**	07 41 47.8	-0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BELA	**Belgrano 2**	78.75	175	P	**P**	07 41 50.8	-1.5
BELA				IAmb	IAmb	07 41 51.8	
	comp=Z,12nm,0.9s						
GYA	**Guiyang**	78.89	305	⇓P	**P**	07 41 54.8	+0.8
GYA				pmax	pmax		
	comp=Z,15nm,1.4s						
LYN	**LuoYang**	79.30	314	P	**P**	07 41 56.5	+0.6
LYN				pmax	pmax		
	comp=Z,34nm,0.8s						
HNS	**HongShan**	79.60	318	⇓P	**P**	07 41 58.5	+1.1
HNS				pmax	pmax		
	comp=Z,16nm,0.8s						
CM31	**Chiang Mai Arr**	81.19	294	P	**P**	07 42 07.7	+1.3
CM31				IAmb	IAmb	07 42 09.5	
	comp=Z,21nm,1.1s						
CMAR	**Chiang Mai Arr**	81.19	294	P	**P**	07 42 07.8	+1.4
	comp=Z,7.9nm,0.7s,baz=132,slow=4.0,SNR=40						
CMAR				LR	LR	08 21 58.2	
	comp=Z,29nm,18.2s,baz=140,slow=38						
	comp=Z,7.9nm,0.7s						
KMI	**Kunming**	81.25	302	P	**P**	07 42 08.8	+1.9
KMI				pmax	pmax		
	comp=Z,26nm,1.1s						
CHTO	**Chiang Mai**	81.36	294		**P**	07 42 08.8	+1.6
CHTO				IAmb	IAmb	07 42 10.1	
	comp=Z,25nm,1.1s						
XAN	**Xi'an**	81.39	312	P	**P**	07 42 07.5	+0.3
XAN				pmax	pmax		
	comp=Z,23nm,1.2s						
SYO	**Syowa Base**	82.25	196	⇓*e*P	**P**	07 42 10.2	-0.9
SYO	**Syowa Base**	82.25	196	⇓*e*PcP	**PcP**	07 42 15.6	-0.8
PZH	**PanZhiHua**	82.71	302	P	**P**	07 42 17.5	+3.1
HHC	**Hu-ho-hao-te**	83.64	319	*e*P	**P**	07 42 19.5	+0.6
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
BTO	**Baotou**	84.45	318	*e*P	**P**	07 42 26.8	+3.8
BTO				pmax	pmax		
	comp=Z,16nm,0.7s						
BTO				pmax	pmax		
	comp=Z,380nm,4.6s						
TROLL	**Troll, Antarti**	85.42	184	⇑P	**P**	07 42 26.3	-1.2
	comp=Z,2μm,0.8s						
SNAA	**Sanae**	86.00	182	⇑P	**P**	07 42 28.7	-1.6
	comp=Z,270nm,0.8s						
SNAA	**Sanae**	86.00	182	P	**P**	07 42 28.8	-1.5
	comp=Z,15nm,0.9s,baz=193,slow=5.4,SNR=52						
SNAA				LR	LR	08 17 27.1	
	comp=Z,133nm,21.1s,baz=194,slow=33						
	comp=Z,15nm,0.9s						
SNAA	**Sanae**	86.00	182	P	**P**	07 42 28.9	-1.4
LZH	**Lanzhou**	86.00	312	*e*P	**P**	07 42 32.0	+1.1
LZH				pP	pP	07 42 38.8	-1.9
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZDM	**Lanzhou Array**	86.03	311	P	**P**	07 42 30.3	-1.0
	comp=Z,1.3nm,0.3s,baz=103,slow=6.5,SNR=6.3						
	comp=Z,1.3nm,0.3s						
SEY	**Seymchan**	86.38	352	LR	LR	08 17 25.4	
	comp=Z,240nm,19.4s,baz=145,slow=33						
VNA3	**Neumayer Olymp**	86.53	180	⇑P	**P**	07 42 31.1	-1.7
	comp=Z,26nm,0.7s						
VNA2	**Neumayer--Watz**	86.84	181	⇑P	**P**	07 42 33.4	-0.9
	comp=Z,29nm,0.8s,baz=160,slow=4.4						
VNA1	**Neumayer--Stat**	87.12	180	⇑P	**P**	07 42 34.4	-1.3
	comp=Z,28nm,0.9s						
ISA	**Isabella, Lake**	88.37	50	IAmb	IAmb	07 42 43.4	
	comp=Z,6.9nm,1.0s						
PFO	**Pinyon Flats O**	88.85	53	LR	LR	08 13 46.9	
	comp=Z,219nm,21.3s,baz=250,slow=30						
MDPB	**Devils Postpil**	88.91	48	IAmb	IAmb	07 42 46.1	
	comp=Z,10nm,1.3s						
WSHM	**Spangler Hills**	89.04	51	IAmb	IAmb	07 42 46.4	
	comp=Z,7.6nm,1.2s						
CLC	**China Lake**	89.07	50	IAmb	IAmb	07 42 46.7	
	comp=Z,9.7nm,1.2s						
CCCA	**Chr Cany lake**	89.09	51	IAmb	IAmb	07 42 49.0	
	comp=Z,7.2nm,1.0s						
PNTR	**Pine Nut**	89.28	47		**P**	07 42 47.2	+0.5
PNTR				IAmb	IAmb	07 42 50.3	
	comp=Z,7.1nm,0.9s						
BELC	**Belle Mtn. Jos**	89.37	53	IAmb	IAmb	07 42 47.7	
	comp=Z,4.8nm,0.9s						
LPIG	**La Paz**	89.48	64	LR	LR	08 13 43.7	
	comp=Z,104nm,21.7s,baz=256,slow=30						
DSP	**Deep Springs**	89.55	49	IAmb	IAmb	07 42 51.0	
	comp=Z,6.6nm,1.0s						
LHV	**Little Huntoon**	89.61	48	IAmb	IAmb	07 42 48.8	
	comp=Z,11nm,1.2s						
PAHR	**Pah Rah Range**	89.73	46	IAmb	IAmb	07 42 49.6	
	comp=Z,8.2nm,1.1s						
GLA	**Glamis**	89.80	54	IAmb	IAmb	07 42 50.5	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	89.83	48	P	**P**	07 42 48.8	-0.5
	comp=Z,3.6nm,0.8s,baz=226,slow=8.6,SNR=18						
	comp=Z,3.6nm,0.8s						
NVAR	**Mina Array Bea**	89.83	48		**P**	07 42 49.4	+0.1
NV11	**Mina Array Sit**	89.94	48	IAmb	IAmb	07 42 52.7	
	comp=Z,6.5nm,1.1s						
IRM	**Iron Mountain**	90.07	53	IAmb	IAmb	07 42 51.6	
	comp=Z,11nm,1.4s						
J05D	**Fort Rock, OR**	90.34	43	IAmb	IAmb	07 42 56.0	
	comp=Z,8.9nm,0.9s						
BLYC	**Blythe**	90.35	53	IAmb	IAmb	07 42 52.7	
	comp=Z,10nm,1.4s						
YAK	**Yakutsk**	90.40	342	LR	LR	08 24 05.8	
	comp=Z,77nm,18.0s,baz=104,slow=36						
GTA	**Gaotai**	90.43	313	*e*P	**P**	07 42 52.8	+0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SONM	**Songino Array**	90.70	323	P	**P**	07 42 52.4	-0.6
	comp=Z,13nm,1.0s,baz=135,slow=4.8,SNR=29						
	comp=Z,13nm,1.0s						
V12A	**Nelson**	91.00	52	IAmb	IAmb	07 42 58.4	
	comp=Z,5.2nm,1.2s						
BBB	**Bella Bella**	91.37	33	LR	LR	08 18 37.9	
	comp=Z,184nm,18.1s,baz=243,slow=32						
WVOR	**Wild Horse Val**	91.56	44	IAmb	IAmb	07 43 04.2	
	comp=Z,8.4nm,1.4s						
PRN	**Pahroc Range**	91.62	50	IAmb	IAmb	07 43 00.9	
	comp=Z,8.5nm,1.2s						
GNW	**Green Mountain**	91.62	38	P	**P**	07 42 58.1	+1.1
LCMT	**Little Creek M**	92.73	51	IAmb	IAmb	07 43 09.1	
	comp=Z,4.2nm,1.1s						
G08A	**Pilot Rock**	92.76	42		**P**	07 43 04.2	+1.7
G08A				IAmb	IAmb	07 43 06.9	
	comp=Z,4.6nm,1.1s						
PALK	**Pallekele**	92.87	277	LR	LR	08 26 46.6	
	comp=Z,114nm,18.9s,baz=125,slow=37						
ILAR	**Eielson Array**	92.88	17	P	**P**	07 43 00.6	-1.9
	comp=Z,0.9nm,1.0s,baz=209,slow=4.6,SNR=5.3						
	comp=Z,0.9nm,1.0s						
U15A	**North Rim**	93.17	52	IAmb	IAmb	07 43 06.2	
	comp=Z,4.8nm,1.0s						
DLBC	**Dease Lake**	94.23	27	LR	LR	08 18 09.0	
	comp=Z,141nm,19.7s,baz=254,slow=31						
PLCA	**Paso Flores**	95.13	138	P	**P**	07 43 12.8	-0.9
	comp=Z,3.0nm,1.1s,baz=225,slow=11,SNR=3.3						
	comp=Z,3.0nm,1.1s						
EVN	**Everest**	95.29	298	IAmb	IAmb	07 43 16.8	
	comp=Z,7.2nm,1.0s						
NEW	**Newport**	95.29	40	LR	LR	08 23 11.2	
	comp=Z,199nm,18.1s,baz=248,slow=34						
TXAR	**Lajitas Array**	97.00	61	P	**P**	07 43 21.7	-0.6
	comp=Z,1.0nm,1.0s,baz=265,slow=6.8,SNR=6.6						
TXAR				LR	LR	08 19 32.6	
	comp=Z,96nm,18.6s,baz=248,slow=31						
	comp=Z,1.0nm,1.0s						
PDAR	**Pinedale Array**	97.72	47	LR	LR	08 23 55.4	
	comp=Z,80nm,18.2s,baz=250,slow=33						
INK	**Inuvik**	99.14	18	LR	LR	08 29 47.3	
	comp=Z,82nm,18.1s,baz=320,slow=36						
WMQ	**Urumqi**	100.51	313	*e*P	**Pdif**	07 43 41.5	+3.8
MKAR	**Makanchi Array**	105.08	315	Pdiff	**Pdif**	07 43 58.8	+1.0
	comp=Z,0.9nm,0.7s,baz=101,slow=5.1,SNR=5.0						
KURBB	**Kurchatov Arra**	108.47	318	PKiKP	**PKiKP**	07 48 16.6	-1.8
	comp=Z,0.7nm,0.8s,baz=96,slow=2.1,SNR=5.5						
KURBB				PKKPbc	**PKKPbc**	07 59 27.9	-2.0
	comp=Z,0.8nm,1.0s,baz=298,slow=4.4,SNR=5.1						
BVAR	**Borovoye Array**	113.85	319	PKiKP	**PKiKP**	07 48 27.4	-1.2
	comp=Z,1.0nm,0.4s,baz=116,slow=3.4,SNR=3.9						
ARTI	**Arti**	120.83	323	PKP	**PKPdf**	07 48 40.8	-1.1
	comp=Z,9.1nm,1.0s,baz=72,slow=0.8,SNR=6.8						
ARTI	**Arti**	120.83	323		**PKPdf**	07 48 41.7	-0.2
NEEM	**North Greenlan**	121.44	10	*i* P	**PKPdf**	07 48 41.5	-1.5
AKTO	**Aktyubinsk**	121.45	316	PKP	**PKPdf**	07 48 42.4	-0.9
	comp=Z,2.5nm,0.6s,baz=98,slow=0.9,SNR=9.1						
SPITS	**Spitsbergen Ar

LAWE	**Loch Awe, Argy**	**146.15**	**356**	*e*P		**PKPdf**	**07 49 29.2**	**+0.3**
JAVC	**Velka Javorina**	**146.16**	**328**	*e*PKP		**PKPab**	**07 49 30.8**	**-0.2**
VRAC	**Vranov**	**146.38**	**329**	⇓P		**PKPbc**	**07 49 31.4**	**+0.5**
VRAC	**Vranov**	**146.38**	**329**	*e*PKP		**PKPbc**	**07 49 31.1**	**+0.2**
PVCC	**Panska Ves**	**146.42**	**332**	*e*PKP		**PKPab**	**07 49 32.2**	**+0.3**
CLL	**Collm**	**146.48**	**335**			**PKPbc**	**07 49 30.6**	**-0.5**
KRUC	**Moravsky**	**146.64**	**329**	*e*PKP		**PKPdf**	**07 49 30.3**	**+0.3**
MODS	**Modra-Piesok**	**146.68**	**327**	*e*PKP		**PKPbc**	**07 49 31.9**	**+0.1**
PRU	**Pruhonice**	**146.83**	**332**	*e*PKP		**PKPbc**	**07 49 32.2**	**+0.1**
HSKC	**Hora Svate Kat**	**146.84**	**333**	*e*PKP		**PKPbc**	**07 49 32.2**	**0.0**
EKA	**Eskdalemuir Ar**	**146.89**	**354**	PKPbc		**PKPdf**	**07 49 30.9**	**+0.7**
	comp=Z,126nm,0.6s,baz=339,slow=2.6,SNR=36							
ESK	**Eskdalemuir**	**146.91**	**354**	*e*P		**PKPdf**	**07 49 31.0**	**+0.7**
BOVS	**Bovan**	**146.92**	**317**	⇑P		**PKPbc**	**07 49 32.3**	**-0.3**
NEWG	**New Galloway**	**147.20**	**355**	*e*P		**PKPbc**	**07 49 32.1**	**-0.9**
EDMD	**Edmundbyers**	**147.25**	**352**	*e*P		**PKPdf**	**07 49 32.0**	**+1.2**
MORH	**Mrgy, Hungar**	**147.32**	**323**	⇓P		**PKPbc**	**07 49 34.0**	**+0.3**
GAL1	**Galloway**	**147.49**	**355**	*e*P		**PKPdf**	**07 49 32.5**	**+1.3**
RONA	**Rosalia, Austr**	**147.62**	**327**	*e*PKP		**PKPdf**	**07 49 31.4**	**-0.3**
	comp=Z,9.3nm,0.9s							
CONA	**Conrad Observa**	**147.68**	**328**	*i* PKP		**PKPbc**	**07 49 35.1**	**+0.4**
	comp=Z,20nm,1.4s,SNR=5.9							
CKRC	**Cesky Krumlov**	**147.79**	**330**	*e*PKP		**PKPbc**	**07 49 35.0**	**+0.1**
KHC	**Kasperske Hory**	**147.89**	**331**	*e*PKP		**PKPbc**	**07 49 35.3**	**+0.1**
GERES	**GERESS Array B**	**148.04**	**331**	PKPbc		**PKPbc**	**07 49 35.1**	**-0.6**
	comp=Z,19nm,1.0s,baz=29,slow=3.0,SNR=32							
HPK	**Haverah Park**	**148.06**	**352**	*e*P		**PKPbc**	**07 49 34.4**	**-1.0**
MOA	**Molln**	**148.50**	**329**	*e*PKP		**PKPbc**	**07 49 36.4**	**-0.4**
	comp=Z,0.5nm,0.6s							
LBWR	**Ladybower, Pea**	**148.61**	**351**	*e*P		**PKPbc**	**07 49 36.1**	**-0.8**
BIOA	**Bad Ischl, Aus**	**148.91**	**330**	*e*PKP		**PKPbc**	**07 49 37.3**	**-0.5**
	comp=Z,0.3nm,0.3s							
WME	**Myndd Eilian**	**148.91**	**354**	*e*P		**PKPbc**	**07 49 37.4**	**-0.2**
SOKA	**Soboth**	**148.94**	**327**	*e*PKP		**PKPbc**	**07 49 37.7**	**-0.3**
	comp=Z,10nm,0.8s							
BLY	**Banja Luka**	**149.02**	**322**	⇓P		**PKPbc**	**07 49 38.7**	**+0.5**
CWF	**Charnwood Fore**	**149.20**	**351**	*e*P		**PKPbc**	**07 49 37.5**	**-0.9**
OBKA	**Obir**	**149.30**	**327**	*e*PKP		**PKPbc**	**07 49 38.1**	**-0.8**
	comp=Z,0.3nm,0.4s							
FOEL	**Foel Wylfa**	**149.30**	**353**	*e*P		**PKPbc**	**07 49 37.9**	**-0.7**
LLW	**Llanuwychllyn**	**149.39**	**353**	*e*P		**PKPbc**	**07 49 37.5**	**-1.3**
KBA	**Koelnbreinsper**	**149.49**	**329**	*e*PKP		**PKPbc**	**07 49 38.1**	**-1.4**
	comp=Z,0.5nm,0.4s							
MEM	**Membach**	**149.52**	**341**	*d*PKP		**PKPbc**	**07 49 38.7**	**-0.5**
LESA	**Schwarzleotal**	**149.55**	**330**	*i* PKP		**PKPbc**	**07 49 38.5**	**-1.0**
	comp=Z,8.7nm,0.6s							
HLM1	**Long Mynd**	**149.63**	**352**	*e*P		**PKPbc**	**07 49 38.6**	**-0.8**
LJU	**Ljubljana**	**149.63**	**326**	*i* PKPbc		**PKPab**	**07 49 42.9**	**-1.9**
MYKA	**Terra Mystica**	**149.67**	**328**	*e*PKP		**PKPbc**	**07 49 39.0**	**-0.9**
	comp=Z,20nm,1.7s							
BSTI	**Sart Tilman**	**149.68**	**341**	*d*PKP		**PKPbc**	**07 49 39.6**	**0.0**
BHOU	**Houvegnez**	**149.75**	**341**	*d*PKP		**PKPbc**	**07 49 39.6**	**-0.2**
CEY	**Cerknica**	**149.89**	**326**	*i* PKPbc		**PKiKP**	**07 49 43.6**	**+2.3**
BCLA	**Clavier**	**149.90**	**341**	*d*PKPdf		**PKPbc**	**07 49 39.1**	**-1.1**
BGES	**Gesves**	**150.00**	**342**	*d*PKPdf		**PKPbc**	**07 49 39.9**	**-0.5**
WATA	**Walderalm**	**150.12**	**331**	*i* PKP		**PKPbc**	**07 49 40.7**	**-0.3**
	comp=Z,27nm,1.0s,SNR=6.9							
ABTA	**Abfaltersbach**	**150.13**	**329**	*e*PKP		**PKPbc**	**07 49 39.2**	**-1.8**
	comp=Z,27nm,1.0s							
WTTA	**Wattenberg**	**150.15**	**331**	*i* PKP		**PKPbc**	**07 49 40.8**	**-0.4**
	comp=Z,44nm,1.1s,SNR=9.0							
MCH1	**Michaelchurch**	**150.16**	**352**	*e*P		**PKPbc**	**07 49 39.8**	**-0.9**
RCHB	**Rochefort**	**150.16**	**341**	*d*PKPdf		**PKPbc**	**07 49 40.6**	**-0.2**
BMRD	**Maredsous**	**150.16**	**342**	*d*PKP		**PKPbc**	**07 49 40.7**	**-0.1**
MONM	**Monmouth**	**150.28**	**352**	*e*P		**PKPbc**	**07 49 40.1**	**-0.9**
WLF	**Walferdange**	**150.30**	**340**	*d*PKP		**PKiKP**	**07 49 41.6**	**-0.3**
MOTA	**Moosalm**	**150.32**	**332**	*i* PKP		**PKPbc**	**07 49 41.0**	**-0.5**
	comp=Z,44nm,1.1s,SNR=7.9							
RETA	**Reutte**	**150.36**	**332**	*e*PKP		**PKPbc**	**07 49 41.0**	**-0.4**
	comp=Z,0.9nm,0.3s							
SQTA	**Sankt Quirin**	**150.37**	**331**	*i* PKP		**PKPbc**	**07 49 41.5**	**-0.1**
	comp=Z,24nm,1.1s,SNR=10							
DOU	**Dourbes**	**150.40**	**342**	*d*PKP		**PKPbc**	**07 49 40.8**	**-0.6**
SWN1	**Swindon**	**150.46**	**351**	*e*P		**PKPbc**	**07 49 40.3**	**-1.2**
BFO	**Black Forest**	**150.68**	**336**			**PKPbc**	**07 49 41.7**	**-0.4**
FETA	**Feichten**	**150.73**	**332**	*i* PKP		**PKPbc**	**07 49 41.9**	**-0.7**
	comp=Z,32nm,1.1s,SNR=13							
DAVA	**Damuels**	**150.89**	**333**	*e*PKP		**PKPbc**	**07 49 42.1**	**-0.8**
	comp=Z,2.4nm,0.4s							
ESDC	**Sonseca Array**	**162.30**	**347**	PKPab		**PKPab**	**07 50 39.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=358,slow=4.5,SNR=4.9							

IDC 25 07:32:12.7±29.0, 17°91S×172°63W, h0km, mb4.4/4, mbtmp4.4/4, Error ellipse: s-maj=575.8km s-min=168.6km az=86.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.48**	**242**	P	P	07 40 18.6	**+0.7**
	2.4nm,0.7s,baz=63,slow=9.0,SNR=2.0						
	2.4nm,0.7s						
WRA	**Warramunga Arr**	**50.03**	**259**	P	P	07 41 09.1	-0.4
	2.1nm,0.3s,baz=98,slow=7.0,SNR=29						
	2.1nm,0.3s						
ASAR	**Alice Springs**	**50.08**	**254**	P	P	07 41 09.6	-0.3
	8.0nm,0.6s,baz=91,slow=7.8,SNR=30						
	8.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**58.44**	**259**	P	P	07 42 10.8	0.0
	1.0nm,0.4s,baz=85,slow=7.3,SNR=1.3						
	1.0nm,0.4s						

*NEIC **25** 07:32:44.8±0.9, 35°.13N×0°.02×95°.36W×0°.02, h7km±2km, Error ellipse: s-maj=3.0km s-min=2.1km az=136.0*

NEIC 25 07:32:44.6±0.8, 35°.13N×0°.02×95°.350W×0°.008, h5km±1km, mb_Lg2.3/8, ML2.6/8, ML2.7/14, Error ellipse: s-maj=3.3km s-min=2.6km az=344.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUL3	**Leonard**	**0.86**	**335**		Pg	07 33 01.1	-0.1
TUL3					Sg	07 33 12.5	+0.1
RLO	**Rose Lookout**	**1.07**	**14**		Pg	07 33 04.9	-0.3
RLO					Sg	07 33 19.2	+0.2
RLO				IAML		07 33 21.1	
	comp=E,269nm,0.2s						
RLO				IAML		07 33 25.1	
	comp=N,293nm,0.2s						
DEOK	**Depew**	**1.18**	**308**		Pg	07 33 06.8	-0.4
DEOK					Sg	07 33 22.3	-0.2
DEOK				IAML		07 33 22.6	
	comp=N,174nm,0.1s						
DEOK				IAML		07 33 26.9	
	comp=E,170nm,0.2s						
OK052	**Battle Ridge R**	**1.47**	**307**		Pn	07 33 11.6	-0.2
OK052					Sn	07 33 31.3	-0.1
QUOK	**Quay**	**1.52**	**314**		Pn	07 33 12.4	-0.1
QUOK					Sb	07 33 33.0	+0.2
U38A	**Gravette**	**1.53**	**31**		Pn	07 33 12.8	+0.2
U38A					Sn	07 33 33.0	+0.1
MIAR	**Mount Ida**	**1.57**	**111**		Pb	07 33 13.8	-0.3
MIAR					Sb	07 33 34.4	+0.1
HHAR	**Hobbs**	**1.63**	**44**		Pn	07 33 14.2	+0.3
HHAR					Sb	07 33 36.4	+0.4
FNO	**Franklin**	**1.68**	**275**		Pn	07 33 14.7	0.0
FNO					Sb	07 33 38.1	+0.5
OKCSW	**OKLAHOMA CITY**	**1.73**	**280**		Pb	07 33 16.2	-0.7
OKCSW				IAmb_Lg		07 33 40.5	
	comp=Z,26nm,0.7s						
OK048	**Pawnee Station**	**1.83**	**315**		Pn	07 33 17.4	+0.7
T35A	**Sooner Cattle**	**2.02**	**333**		Pn	07 33 20.1	+0.7
WHAR	**Wooly Hollow**	**2.51**	**85**	Pn	Pn	07 33 27.3	+1.2
FCAR	**Ozark Folk Cen**	**2.74**	**73**		Pn	07 33 29.9	+0.7
FCAR				IAmb_Lg		07 34 12.8	
	comp=Z,5.5nm,0.8s						
WMOK	**Wichita Mounta**	**2.84**	**263**		Pn	07 33 31.3	+0.6
MGMO	**Mountain Grove**	**3.21**	**50**	IAmb_Lg		07 34 32.0	
	comp=Z,6.4nm,1.1s						
R40A	**Maddies Statio**	**4.01**	**37**	Pn	Pn	07 33 48.2	+1.5
T25A	**Trinidad**	**7.60**	**288**	IAmb_Lg		07 36 45.5	
	comp=Z,6.2nm,1.1s						

*KRSC **25** 07:45:56.0±1.8, 55°.28N×166°.59E, h36km±9km, Ml4.3*
*IDC **25** 07:45:55.9±0.7, 55°.59N×166°.50E, h0km, mb3.7/12, mbtmp3.8/13, ML3.1/1, MS3.6/4, Error ellipse: s-maj=25.2km s-min=15.5km az=164.0*
*NEIC **25** 07:45:57.4±1.9, 55°.3N±0°.1×166°.7E±0°.1, h10km±1km, mb4.2/14, Error ellipse: s-maj=24.7km s-min=10.2km az=11.0*
*MOS **25** 07:45:59.1±0.8, 55°.36N×166°.48E, h41km, mb4.3/1, Error ellipse: s-maj=9.6km s-min=6.3km az=159.6*

ISC 25 07:45:58.3±0.5, 55°.42N±0°.05×166°.64E±0°.04, h20km, n121, σ1327/122, mb3.9/16, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.44**	**241**	PN	**Pb**	**07 46 05.5**	**-1.7**
BKI				S	**Sb**	**07 46 11.7**	**-1.7**
BKI	**Bering**	**0.44**	**241**	*i* P	**Pb**	**07 46 05.6**	**-1.7**
BKI				*e*S	**Sb**	**07 46 11.7**	**-1.7**
KBTR	**Krutoberegovo**	**2.30**	**292**	PN	**Pn**	**07 46 32.8**	**-2.2**
KBTR	**Krutoberegovo**	**2.30**	**292**	*e*P	**Pn**	**07 46 32.9**	**-2.2**
KBG	**Krutoberegovo**	**2.37**	**292**	PN	**Pn**	**07 46 33.6**	**-2.4**
KBG	**Krutoberegovo**	**2.37**	**292**	*e*P	**Pn**	**07 46 33.6**	**-2.4**
SMKR	**Semkarok**	**3.13**	**294**	PN	**Pn**	**07 46 46.4**	**-0.1**
SMKR	**Semkarok**	**3.13**	**294**	*e*P	**Pn**	**07 46 46.4**	**-0.1**
SRKR	**Sorokina**	**3.31**	**294**	PN	**Pn**	**07 46 48.8**	**-0.2**
SRKR	**Sorokina**	**3.31**	**294**	*e*P	**Pn**	**07 46 48.9**	**-0.2**
ZLN	**Zelenaya**	**3.36**	**283**	PN	**Pn**	**07 46 49.7**	**+0.1**
ZLN	**Zelenaya**	**3.36**	**283**	*e*P	**Pn**	**07 46 49.8**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**3.41**	**281**	PN	Pb	07 46 51.8	-6.1
BZGR	**Bezymyannyi-Gr**	**3.41**	**281**	*e*P	Pb	07 46 51.9	-6.1
KLY	**Klyuchi**	**3.49**	**287**	PN	**Pn**	**07 46 50.1**	**-1.3**
KLY	**Klyuchi**	**3.49**	**287**	*e*P	**Pn**	**07 46 50.1**	**-1.3**
BZWR	**Bezymyannyi-We**	**3.52**	**281**	PN	**Pn**	**07 46 52.4**	**+0.5**
BZWR	**Bezymyannyi-We**	**3.52**	**281**	*e*P	**Pn**	**07 46 52.5**	**+0.5**
TUMD	**Tumrok D**	**3.57**	**269**	PN	**Pn**	**07 46 52.7**	**+0.2**
TUMD				S	**Sn**	**07 47 34.8**	**+0.7**
TUMD	**Tumrok D**	**3.57**	**269**	*e*P	**Pn**	**07 46 52.8**	**+0.2**
TUMD				*e*S	**Sn**	**07 47 34.9**	**+0.7**
KIRR	**Kirishev**	**3.61**	**281**	PN	**Pn**	**07 46 53.6**	**+0.5**
KIRR	**Kirishev**	**3.61**	**281**	*e*P	**Pn**	**07 46 53.7**	**+0.5**
KZV	**Kizimen**	**3.64**	**268**	PN	**Pn**	**07 46 53.7**	**+0.1**
KZV	**Kizimen**	**3.64**	**268**	*e*P	**Pn**	**07 46 53.8**	**+0.1**
KMNR	**Kamenistaya**	**3.65**	**278**	PN	**Pn**	**07 46 54.2**	**+0.6**
KMNR	**Kamenistaya**	**3.65**	**278**	*e*P	**Pn**	**07 46 54.3**	**+0.6**
KPT	**Kopyto**	**3.67**	**281**	PN	**Pn**	**07 46 54.6**	**+0.6**
KPT	**Kopyto**	**3.67**	**281**	*e*P	**Pn**	**07 46 54.6**	**+0.6**
KOZ	**Kozyrevsk**	**3.88**	**282**	PN	**Pn**	**07 46 57.9**	**+1.2**
KOZ	**Kozyrevsk**	**3.88**	**282**	*e*P	**Pn**	**07 46 58.0**	**+1.2**
OSSR	**Ossora**	**4.30**	**335**	*e*S	**Sb**	**07 47 57.3**	**-7.3**
KII	**Karymskiy**	**4.39**	**255**	PN	**Pn**	**07 47 03.5**	**-0.3**
KII	**Karymskiy**	**4.39**	**255**	*e*P	**Pn**	**07 47 03.5**	**-0.3**
SPN	**Mys Shipunski**	**4.52**	**242**	PN	**Pn**	**07 47 04.0**	**-1.5**
SPN	**Mys Shipunski**	**4.52**	**242**	*e*P	**Pn**	**07 47 04.1**	**-1.5**
SPN				*e*S	**Sn**	**07 47 54.5**	**-3.0**
ESO	**Esso**	**4.53**	**280**	PN	**Pn**	**07 47 06.9**	**+1.3**
ESO	**Esso**	**4.53**	**280**	*e*P	**Pn**	**07 47 06.9**	**+1.3**
NLC	**Nalytchevo**	**4.83**	**245**	PN	**Pn**	**07 47 09.7**	**0.0**
NLC				S	**Sn**	**07 48 03.2**	**-1.8**
NLC	**Nalytchevo**	**4.83**	**245**	*e*P	**Pn**	**07 47 09.7**	**0.0**
NLC				*e*S	**Sn**	**07 48 03.2**	**-1.8**
SDLR	**Sedlovina**	**5.02**	**248**	PN	**Pn**	**07 47 12.7**	**+0.2**
SDLR	**Sedlovina**	**5.02**	**248**	*e*P	**Pn**	**07 47 12.7**	**+0.2**
KRER	**Koryakskii**	**5.08**	**249**	PN	**Pn**	**07 47 13.6**	**+0.3**
KRER	**Koryakskii**	**5.08**	**249**	*e*P	**Pn**	**07 47 13.7**	**+0.3**
UGLR	**Uglovaya**	**5.08**	**247**	PN	**Pn**	**07 47 13.5**	**+0.1**
UGLR	**Uglovaya**	**5.08**	**247**	*e*P	**Pn**	**07 47 13.5**	**+0.1**
AVH	**Avacha**	**5.10**	**248**	PN	**Pn**	**07 47 14.0**	**+0.4**
AVH	**Avacha**	**5.10**	**248**	*e*P	**Pn**	**07 47 14.1**	**+0.4**
KRX	**Arik**	**5.11**	**249**	PN	**Pn**	**07 47 13.5**	**-0.2**
KRX	**Arik**	**5.11**	**249**	*e*P	**Pn**	**07 47 13.5**	**-0.2**
KOK	**Koryaka**	**5.14**	**249**	PN	**Pn**	**07 47 14.4**	**+0.2**
KOK	**Koryaka**	**5.14**	**249**	*e*P	**Pn**	**07 47 14.4**	**+0.2**
SHEM	**Shemya Is, Ala**	**5.15**	**118**	Pn	**Pn**	**07 47 12.9**	**-1.2**
	5.5nm,0.3s,baz=280,slow=19,SNR=1.7						
SHEM				Sn	**Sn**	**07 48 09.8**	**-3.1**
	2.0nm,0.3s,baz=264,slow=20,SNR=1.3						
SHEM	**Shemya Is, Ala**	**5.15**	**118**	Pn	**Pn**	**07 47 13.3**	**-0.9**
DALK	**Dalny**	**5.21**	**246**	PN	**Pn**	**07 47 15.1**	**+0.2**
DALK	**Dalny**	**5.21**	**246**	*e*P	**Pn**	**07 47 15.1**	**+0.2**
PET	**Petropavlovsk**	**5.26**	**246**	Pn	**Pn**	**07 47 16.6**	**+0.9**
PET	**Petropavlovsk**	**5.26**	**246**	*e*PN	**Pn**	**07 47 16.0**	**+0.3**
PET				MLR	MLR		
	comp=Z,100nm,11.0s						
PET	**Petropavlovsk**	**5.26**	**246**	*e*P	**Pn**	**07 47 15.7**	**0.0**
INSR	**Institute**	**5.27**	**247**	*e*S	**Sn**	**07 48 15.7**	**-0.2**
KRMR	**Karymshinskiy**	**5.63**	**246**	PN	**Pn**	**07 47 20.0**	**-0.8**
KRMR	**Karymshinskiy**	**5.63**	**246**	*e*P	**Pn**	**07 47 20.0**	**-0.8**
RUS	**Russkaya**	**5.66**	**241**	PN	**Pn**	**07 47 20.2**	**-0.8**
RUS	**Russkaya**	**5.66**	**241**	*e*P	**Pn**	**07 47 20.3**	**-0.8**
PEA0B	**Petropavlovsk-**	**5.73**	**250**	Pn	**Pn**	**07 47 22.9**	**+0.8**
PEA0B	**Petropavlovsk-**	**5.73**	**250**	PN	**Pn**	**07 47 22.9**	**+0.8**
PETK	**Petropavlovsk-**	**5.73**	**250**	Pn	**Pn**	**07 47 21.7**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=74,slow=16,SNR=21						
PETK				Sn	**Sn**	**07 48 28.1**	**+0.8**
	comp=Z,2.3nm,0.3s,baz=68,slow=12,SNR=5.9						
PETK				LR	LR	07 49 48.4	
	comp=Z,163nm,21.5s,baz=66,slow=41						
	comp=Z,7.8nm,0.5s						
PETK	**Petropavlovsk-**	**5.73**	**250**		**Pn**	**07 47 22.2**	**0.0**
MTVR	**Mutnovka**	**5.79**	**243**	PN	**Pn**	**07 47 23.1**	**0.0**
MTVR	**Mutnovka**	**5.79**	**243**	*e*P	**Pn**	**07 47 23.2**	**0.0**
GRL	**Gorelyy**	**5.81**	**244**	PN	**Pn**	**07 47 23.5**	**+0.1**
GRL	**Gorelyy**	**5.81**	**244**	*e*P	**Pn**	**07 47 23.5**	**+0.1**
ASAK	**Asacha**	**5.99**	**243**	PN	**Pn**	**07 47 27.1**	**+1.3**
ASAK	**Asacha**	**5.99**	**243**	*e*P	**Pn**	**07 47 27.1**	**+1.3**
KDTR	**Khodutka, Kamc**	**6.25**	**238**	PN	**Pn**	**07 47 29.0**	**-0.2**
KDTR	**Khodutka, Kamc**	**6.25**	**238**	*e*P	**Pn**	**07 47 29.1**	**-0.2**
MA2	**Magadan**	**9.50**	**302**	LR	LR	07 52 01.6	
	comp=Z,91nm,19.8s,baz=115,slow=39						
ATKA	**Atka Island**	**11.77**	**98**	Pn	**Pn**	**07 48 43.9**	**-1.0**
P08K	**Saint George I**	**13.36**	**75**	Pn	**Pn**	**07 49 06.7**	**+0.2**
NIKH	**Nikolski High**	**14.53**	**90**	Pn	**Pn**	**07 49 21.9**	**-0.6**
J14K	**Nanvaranak Lak**	**16.85**	**52**		**P**	**07 49 54.7**	**0.0**
J14K				IAmb	IAmb	07 50 30.2	
	comp=Z,24nm,1.5s						
L14K	**Kuka Creek**	**17.03**	**57**		**P**	**07 49 57.6**	**+1.0**
L14K				IAmb	IAmb	07 50 07.7	
	comp=Z,19nm,1.3s						
YSS	**Yuzhno-Sakhali**	**17.13**	**250**	*e*P	**P**	**07 50 01.4**	**+3.5**
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
K15K	**Wolf Creek Mou**	**17.70**	**54**	P	**P**	**07 50 06.2**	**+2.2**
C19K	**Lookout Ridge**	**20.47**	**35**	P	Pn	07 50 37.0	+0.5
C19K				IAmb	IAmb	07 50 52.0	
	comp=Z,16nm,1.1s						
J19K	**Poorman**	**20.58**	**50**	P	Pn	07 50 37.6	-0.3
E19K	**Redstone River**	**20.68**	**40**	P	Pn	07 50 39.4	+0.4
E19K				IAmb	IAmb	07 50 49.9	
	comp=Z,9.9nm,0.9s						
IMAR	**Indian Mountai**	**21.67**	**45**	P	**P**	**07 50 49.2**	**+1.9**
IL31		**24.42**	**49**	P	**P**	**07 51 16.1**	**+1.0**
IL31				IAmb	IAmb	07 51 23.4	
	comp=Z,7.1nm,1.1s						
ILAR	**Eielson Array**	**24.42**	**49**	P	**P**	**07 51 14.9**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=254,slow=8.0,SNR=10.0						
	comp=Z,1.6nm,1.0s						
ILAR	**Eielson Array**	**24.42**	**49**	P	**P**	**07 51 16.2**	**+1.1**
BMAR	**Burnt Mountain**	**25.46**	**42**	P	**P**	**07 51 26.5**	**+2.0**
BCAR	**Beaver Creek A**	**26.78**	**52**	P	**P**	**07 51 38.1**	**+1.6**
MJAR	**Matsushiro Arr**	**27.02**	**238**	P	**P**	**07 51 39.2**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=23,slow=9.9,SNR=2.3						
	comp=Z,1.8nm,0.8s						
SONM	**Songino Array**	**37.09**	**284**	P	**P**	**07 53 06.4**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=76,slow=7.9,SNR=4.4						
	comp=Z,0.6nm,0.6s						
SPITS	**Spitsbergen Ar**	**45.43**	**352**	P	**P**	**07 54 15.0**	**0.0**
	comp=Z,3.6nm,0.7s,baz=40,slow=11,SNR=1.5						
	comp=Z,3.6nm,0.7s						
SPITS	**Spitsbergen Ar**	**45.43**	**352**	P	**P**	**07 54 15.0**	**0.0**
KURK	**Kurchatov**	**49.71**	**304**	P	**P**	**07 54 48.4**	**-0.1**
KURK				IAmb	IAmb	07 54 48.9	
	comp=Z,1.8nm,0.8s						
KURK	**Kurchatov**	**49.71**	**304**	P	**P**	**07 54 48.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**49.81**	**304**	P	**P**	**07 54 48.7**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=53,slow=7.7,SNR=13						
	comp=Z,1.7nm,0.8s						
MK31	**Makanchi Array**	**50.55**	**298**	P	**P**	**07 54 54.4**	**-0.6**
MK31	**Makanchi Array**	**50.55**	**298**	P	**P**	**07 54 54.4**	**-0.6**
MKAR	**Makanchi Array**	**50.55**	**298**	P	**P**	**07 54 53.4**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=60,slow=6.8,SNR=4.1						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**50.55**	**298**	P	**P**	**07 54 54.1**	**-0.8**
MKAR	**Makanchi Array**	**50.55**	**298**	P	**P**	**07 54 54.1**	**-0.8**
WAKR	**Walker**	**50.71**	**77**	P	**P**	**07 54 56.6**	**+0.1**
NVAR	**Mina Array Bea**	**51.39**	**76**	P	**P**	**07 55 00.7**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=290,slow=7.4,SNR=3.8						
	comp=Z,0.5nm,0.7s						
ELK	**Elko**	**51.44**	**72**	LR	LR	08 16 00.9	
	comp=Z,178nm,21.3s,baz=258,slow=35						
BVAR	**Borovoye Array**	**51.89**	**310**	P	**P**	**07 55 04.8**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=46,slow=8.3,SNR=6.1						
	comp=Z,1.6nm,0.7s						
PD31	**Pinedale Array**	**53.05**	**66**	P	**P**	**07 55 13.7**	**-0.2**
PDAR	**Pinedale Array**	**53.05**	**66**	P	**P**	**07 55 15.0**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=293,slow=8.4,SNR=2.4						
	comp=Z,0.2nm,0.5s						
PDAR	**Pinedale Array**	**53.05**	**66**	P	**P**	**07 55 13.6**	**-0.4**
TX31	**Lajitas Ar. Si**	**66.23**	**73**	P	**P**	**07 56 44.9**	**+0.1**
TX31				IAmb	IAmb	07 56 52.9	
	comp=Z,2.5nm,1.1s						
TXAR	**Lajitas Array**	**66.23**	**73**	P	**P**	**07 56 45.8**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=303,slow=4.7,SNR=9.4						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**66.23**	**73**	P	**P**	**07 56 45.0**	**+0.3**
TXAR	**Lajitas Array**	**66.23**	**73**	P	**P**	**07 56 45.0**	**+0.3**
TKL	**Tuckaleechee C**	**71.27**	**54**	LR	LR	08 31 05.7	
	comp=Z,149nm,18.2s,baz=268,slow=38						
BUR08	**Bucovina Ar. S**	**72.32**	**334**	P	**P**	**07 57 23.7**	**+1.5**
BURAR	**Bucovina Array**	**72.34**	**334**	P	**P**	**07 57 24.0**	**+1.7**
BURAR				IAmb	IAmb	07 57 30.7	
	comp=Z,0.9nm,0.6s						
WRA	**Warramunga Arr**	**79.93**	**211**	P	**P**	**07 58 07.2**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=19,slow=5.9,SNR=2.4						
	comp=Z,0.4nm,0.8s						
ASAR	**Alice Springs**	**83.58**	**210**	P	**P**	**07 58 25.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=21,slow=6.2,SNR=5.9						
	comp=Z,0.6nm,0.7s						
QSPA	**South Pole Qui**	**145.17**	**180**	PKPbc	**PKiKP**	**08 05 35.5**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=344,slow=1.4,SNR=5.6						

*IDC **25** 08:04:48.5±3.8, 53°.85N×88°.22E, h0km, mbtmp2.9/2, ML1.9/1, Error ellipse: s-maj=34.3km s-min=20.2km az=52.0*

**ASRS 25 08:04:47.0±0.6, 53°

QRWL	Qaraoun	2.20	3	*eP*		Pn	08 08 21.0	+1.2
QRWL				*eS*		Sn	08 08 47.6	+0.9
HBST	Basata	2.24	199	P		Pn	08 08 21.0	+0.7
DQRL	Deir Qamar	2.35	0	*eS*		Sn	08 08 51.0	+0.5
BHL	Bhannes	2.55	2	*eP*		Pn	08 08 25.5	+0.8
HWQ	Hawqa	2.94	6	*eP*		Pn	08 08 31.5	+1.4
FKH	Fakeheh	2.98	14	*eP*		Pn	08 08 32.9	+2.3
HKAT	Jabal Katrina	3.12	206	P		Pn	08 08 32.0	-0.6
BEIL	Beino	3.23	9	*eP*		Pn	08 08 35.1	+1.1
HRDS	Abu Rudays	3.27	217	P		Pn	08 08 34.5	-0.1
GRB	Gharib	3.90	219	P		Pn	08 08 41.9	-1.2

IDC ***25*** *08:22:07.6±0.9, 38°.96S×46°.48E, h0km, mb3.8/4, mbtmp3.8/4, MS3.4/1, Error ellipse: s-maj=40.5km s-min=28.4km az=16.0*

ISC 25 08:22:10.2±1.3, 39°.0S±0°.3×46°.4E±0°.3, h18km, n17, σ1§52/6, mb3.8/3, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H04N1	**CROZET ISLANDS**	**8.23**	**153**	T	T	08 32 22.9	
	baz=330,slow=76,SNR=450						
H04N2	**CROZET ISLANDS**	**8.24**	**153**	T	T	08 32 19.4	
	baz=330,slow=76,SNR=399						
H04N3	**CROZET ISLANDS**	**8.24**	**153**	T	T	08 32 20.5	
	baz=330,slow=76,SNR=9.2						
BOSA	**Boshof**	**20.31**	**294**	P	Pn	08 26 46.8	-0.6
	2.0nm,0.7s,baz=134,slow=8.8,SNR=4.7 2.0nm,0.7s						
LBTB	**Lobatse**	**22.37**	**302**	LR	LR	08 34 56.3	
	comp=Z,81nm,18.3s,baz=144,slow=34						
H08S1	**Diego Carcia H**	**39.04**	**44**	T	T	09 11 13.7	
	baz=213						
H08S2	**Diego Garcia H**	**39.05**	**44**	T	T	09 11 10.9	
	baz=213						
H08S3	**Diego Garcia H**	**39.06**	**44**	T	T	09 11 14.0	
	baz=213						
SNAA	**Sanae**	**40.95**	**201**	P	**P**	**08 29 51.0**	**-0.5**
	1.4nm,0.9s,baz=79,slow=5.2,SNR=4.6 1.4nm,0.9s						
WRA	**Warramunga Arr**	**76.22**	**105**	P	**P**	**08 33 58.3**	**+0.5**
	0.8nm,0.7s,baz=232,slow=5.1,SNR=7.3 0.8nm,0.7s						
INK	**Inuvik**	**150.60**	**360**	PKPbc	**PKiKP**	**08 41 59.8**	**-0.8**
	1.5nm,0.8s,baz=347,slow=1.8,SNR=6.6						
ILAR	**Eielson Array**	**153.00**	**12**	PKPbc	**PKPbc**	**08 42 04.3**	**-1.2**
	0.9nm,0.8s,baz=318,slow=3.9,SNR=10						
TXAR	**Lajitas Array**	**153.50**	**258**	PKPbc	**PKiKP**	**08 42 10.1**	**+2.1**
	0.2nm,0.5s,baz=39,slow=5.5,SNR=5.9						

IDC 25 08:47:52.0±7.6, 15°.67S×173°.18W, h0km, mb3.8/2, mbtmp3.8/2, Error ellipse: s-maj=339.9km s-min=61.9km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.99**	**257**	P	P	08 56 48.4	-0.2
	0.2nm,0.5s,baz=93,slow=7.7,SNR=10 0.2nm,0.5s						
ASAR	**Alice Springs**	**50.23**	**252**	P	P	08 56 50.3	0.0
	2.7nm,0.6s,baz=89,slow=8.1,SNR=38 2.7nm,0.6s						
BRTR	**Keskin Array B**	**146.50**	**321**	PKPbc	PKPdf	09 07 34.9	+0.5
	1.0nm,0.8s,baz=47,slow=3.7,SNR=5.4						

ASRS ***25*** *08:49:16.0±1.8, 53°.77N×91°.09E, h0km, M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC ***25*** *08:49:21.9±3.2, 53°.68N×90°.82E, h0km, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=27.7km s-min=23.3km az=43.0*

NNC ***25*** *08:49:29.3±2.1, 53°.31N×90°.35E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=18.8km s-min=16.8km az=14.0, Suspected Mining explosion.*

ISC 25 08:49:23.0±4.0, 53°.7N±0°.1×90°.7E±0°.2, h0km, n9, σ1§37/11, 5C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.47**	**276**	⇑Pn	**Pb**	**08 50 23.5**	**-1.7**
	0.7nm,0.3s						
ZAA0				⇑Lg	Lg	08 51 14.6	
	9.3nm,0.9s						
ZALV	**Zalesovo Beam**	**3.47**	**276**	Pn	**Pn**	**08 50 19.4**	**+1.3**
	2.4nm,0.3s,baz=91,slow=15,SNR=15						
ZALV				Lg	Lg	08 51 14.8	
	5.4nm,0.3s,baz=88,slow=25,SNR=12 2.9nm,0.3s						
KURK	**Kurchatov**	**7.97**	**253**	⇓Pn	**Pn**	**08 51 21.5**	**+1.4**
	0.8nm,0.7s						
KURK				⇓Sn	**Sn**	**08 52 52.9**	**+2.1**
	3.6nm,0.8s						
KURK				⇑Lg	Lg	08 53 34.3	
	9.8nm,0.8s						
KURBB	**Kurchatov Arra**	**8.07**	**252**	Pn	**Pn**	**08 51 21.1**	**-0.2**
	0.2nm,0.3s,baz=66,slow=15,SNR=11						
KURBB				Sn	**Sn**	**08 52 52.5**	**-0.7**
	0.1nm,0.3s,baz=68,slow=26,SNR=11						
KURBB				Lg	Lg	08 53 39.1	
	0.1nm,0.3s,baz=70,slow=33,SNR=3.1 2.0nm,0.5s						
KURBB	**Kurchatov Arra**	**8.07**	**252**	⇑Pn	**Pn**	**08 51 22.9**	**+1.6**
	4.8nm,0.6s						
KURBB				⇓Sn	**Sn**	**08 52 52.3**	**-0.8**
	33nm,0.8s						
KURBB				⇓Lg	Lg	08 53 39.1	
	36nm,1.1s						
MK31	**Makanchi Array**	**8.74**	**221**	Pn	**Pn**	**08 51 31.1**	**+0.5**
	2.8nm,1.0s,baz=38,slow=12,SNR=13						
MK31				⇑Lg	Lg	08 53 56.1	
	16nm,1.1s,baz=38,slow=24,SNR=3.7						
MKAR	**Makanchi Array**	**8.74**	**221**	Pn	**Pn**	**08 51 30.8**	**+0.1**
	0.2nm,0.3s,baz=37,slow=13,SNR=10						
MKAR				Sn	**Sn**	**08 53 10.3**	**+0.4**
	0.2nm,0.3s,baz=40,slow=27,SNR=3.0						
MKAR				Lg	Lg	08 53 57.5	
	0.1nm,0.3s,baz=32,slow=22,SNR=5.3 0.7nm,0.6s						
SONM	**Songino Array**	**11.56**	**114**	Lg	Lg	08 55 17.5	
	0.1nm,0.3s,baz=305,slow=28,SNR=8.9						
I34MN	**SONGINO INFRAS**	**11.59**	**114**	I	I	09 54 30.0	
	baz=312,slow=327,SNR=0.6						

IDC ***25*** *08:49:35.7±0.9, 22°.09N×142°.96E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=38.9km s-min=21.7km az=73.0*

ISC 25 08:49:41.0±1.0, 22°.1N±0°.2×142°.9E±0°.3, h35km, n12, σ0§86/9, mb3.9/8, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S3	**WAKE ISLAND Hy**	**22.60**	**95**	T	T	09 17 55.6	
	baz=284,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	**22.61**	**95**	T	T	09 17 56.2	
	baz=284,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	**22.61**	**95**	T	T	09 17 56.9	
	baz=284,slow=75,SNR=12						
WRA	**Warramunga Arr**	**42.58**	**192**	P	**P**	**08 57 35.1**	**+1.2**
	0.6nm,0.7s,baz=14,slow=9.0,SNR=5.6 0.6nm,0.7s						
ASAR	**Alice Springs**	**46.30**	**191**	P	**P**	**08 58 02.3**	**-1.2**
	0.4nm,0.7s,baz=16,slow=10,SNR=5.5 0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**53.75**	**322**	P	**P**	**08 58 59.5**	**-0.2**
	1.3nm,0.4s,baz=91,slow=8.1,SNR=6.1 1.3nm,0.4s						
MKAR	**Makanchi Array**	**54.25**	**312**	P	**P**	**08 59 04.1**	**+0.6**
	0.7nm,0.7s,baz=103,slow=9.7,SNR=2.9 0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**57.07**	**317**	P	**P**	**08 59 23.7**	**+0.1**
	0.8nm,0.5s,baz=96,slow=7.4,SNR=7.6 0.8nm,0.5s						
BVAR	**Borovoye Array**	**62.21**	**319**	P	**P**	**08 59 59.3**	**+0.3**
	3.0nm,0.6s,baz=85,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**82.73**	**334**	P	**P**	**09 02 00.5**	**-0.5**
	1.6nm,1.0s,baz=67,slow=6.4,SNR=3.7 1.6nm,1.0s						
NVAR	**Mina Array Bea**	**83.13**	**51**	P	**P**	**09 02 04.4**	**+0.5**
	0.4nm,0.6s,baz=292,slow=3.9,SNR=5.1 0.4nm,0.6s						
LPAZ	**La Paz**	**150.18**	**84**	PKPbc	**PKPbc**	**09 09 29.2**	**-0.6**
	1.1nm,0.5s,baz=252,slow=3.2,SNR=6.7						

IDC ***25*** *08:54:33.7±0.6, 22°.02N×143°.12E, h0km, mb4.2/19, mbtmp4.2/19, MS3.2/9, Error ellipse: s-maj=20.4km s-min=14.8km az=84.0*

NEIC ***25*** *08:54:37.2±0.7, 22°.10N±0°.08×142°.8E±0°.2, h10km±1km, mb4.5/29, Error ellipse: s-maj=29.2km s-min=13.7km az=80.0*

ISC 25 08:54:39.8±0.5, 22°.08N±0°.08×143°.0E±0°.1, h35km, n70, σ0§89/60, mb4.5/33, MS3.9/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.05**	**352**	Pn	Pn	08 55 44.1	-8.9
	8.7nm,0.3s,baz=289,slow=22,SNR=1.8						
JCJ				Sn	Sn	08 56 42.5	-7.5
	5.6nm,0.3s,baz=124,slow=24,SNR=1.9						
JGF	**Kuroka**	**14.34**	**341**	Pn	**Pn**	**08 57 58.6**	**-1.7**
MJAR	**Matsushiro Arr**	**14.99**	**345**	LR	LR	09 03 16.2	
	comp=Z,53nm,21.8s,baz=152,slow=35						
KSRS	**Korea Array**	**20.09**	**323**	P	**P**	**08 59 11.4**	**+1.1**
	3.2nm,0.8s,baz=144,slow=8.0,SNR=5.5						
KSRS				LR	LR	09 05 56.1	
	comp=Z,18µm,20.6s,baz=125,slow=34 3.2nm,0.8s						
DAV	**Davao City (W)**	**22.45**	**231**	LR	LR	09 06 12.9	
	comp=Z,71nm,21.8s,baz=51,slow=31						
H11S3	**WAKE ISLAND Hy**	**22.52**	**95**	T	T	09 22 59.5	
	baz=283,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**22.53**	**95**	T	T	09 22 57.7	
	baz=283,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**22.54**	**95**	T	T	09 22 58.0	
	baz=283,slow=75,SNR=10						
PETK	**Petropavlovsk-**	**32.97**	**16**	LR	LR	09 12 02.0	
	comp=Z,43nm,21.5s,baz=166,slow=32						
KAPI	**Kappang**	**35.24**	**223**	LR	LR	09 16 51.3	
	comp=Z,12nm,19.5s,baz=87,slow=38						
COEN	**Coen**	**35.81**	**180**	P	**P**	**09 01 36.9**	**+0.9**
BATI	**Baumata**	**37.26**	**213**	P	**P**	**09 01 48.2**	**-0.2**
	35nm,0.5s,baz=44,slow=4.4,SNR=3.5						
SONM	**Songino Array**	**38.92**	**320**	P	**P**	**09 02 03.0**	**+0.7**
	1.7nm,0.8s,baz=136,slow=5.1,SNR=6.8 1.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.35**	**273**	P	**P**	**09 02 23.9**	**+1.3**
	3.1nm,0.3s,baz=63,slow=10,SNR=6.0						
CMAR				LR	LR	09 17 47.2	
	comp=Z,15nm,21.0s,baz=85,slow=34 3.1nm,0.3s						
CTAO	**Charters Tower**	**42.03**	**175**	P	**P**	**09 02 28.5**	**+0.4**
CTAO				IAmb	IAmb	09 02 45.8	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**42.60**	**192**	P	**P**	**09 02 32.1**	**-0.5**
WRA	**Warramunga Arr**	**42.61**	**192**	P	**P**	**09 02 31.4**	**-1.3**
	comp=Z,2.5nm,0.7s,baz=12,slow=8.7,SNR=22 comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**	**42.61**	**192**	P	**P**	**09 02 31.6**	**-1.2**
FITZ	**Fitzroy Crossi**	**43.38**	**204**	P	**P**	**09 02 37.4**	**-1.6**
	comp=Z,3.7nm,1.1s,baz=21,slow=8.6,SNR=1.8 comp=Z,3.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**43.38**	**204**	P	**P**	**09 02 38.4**	**-0.6**
AS31	**Alice Springs**	**46.32**	**192**	P	**P**	**09 03 02.6**	**+0.2**
ASAR	**Alice Springs**	**46.32**	**192**	P	**P**	**09 03 00.7**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=12,slow=7.8,SNR=12						
ASAR				LR	LR	09 20 56.8	
	comp=Z,54nm,20.0s,baz=327,slow=34 comp=Z,1.2nm,0.7s						
ASAR	**Alice Springs**	**46.32**	**192**	P	**P**	**09 03 02.0**	**-0.3**
ARMA	**Armidale**	**52.85**	**171**	P	**P**	**09 03 52.4**	**+0.2**
ARMA				IAmb	IAmb	09 04 32.6	
	comp=Z,14nm,1.2s						
ZAA0	**Zalesovo Array**	**53.79**	**322**	P	**P**	**09 03 58.8**	**+0.1**
ZAA0				IAmb	IAmb	09 03 59.5	
	comp=Z,6.2nm,0.8s						
ZALV	**Zalesovo Beam**	**53.79**	**322**	P	**P**	**09 03 58.7**	**0.0**
	comp=Z,6.0nm,0.7s,baz=102,slow=7.0,SNR=24 comp=Z,6.0nm,0.7s						
ANM	**Nome**	**54.16**	**25**	P	**P**	**09 04 02.1**	**+0.9**
MK31	**Makanchi Array**	**54.30**	**312**	P	**P**	**09 04 02.5**	**-0.1**
MK31				IAmb	IAmb	09 04 05.2	
	comp=Z,5.0nm,1.1s						
MKAR	**Makanchi Array**	**54.30**	**312**	P	**P**	**09 04 03.3**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=93,slow=9.3,SNR=9.6 comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**54.30**	**312**	P	**P**	**09 04 02.3**	**-0.3**
KURK	**Kurchatov**	**57.06**	**317**		**P**	**09 04 22.3**	**0.0**
KURK				IAmb	IAmb	09 04 33.8	
	comp=Z,4.2nm,0.9s						
KURBB	**Kurchatov Arra**	**57.11**	**317**	P	**P**	**09 04 22.8**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=95,slow=7.7,SNR=32 comp=Z,4.0nm,0.8s						
H18K	**Honhosa River**	**57.15**	**25**	P	**P**	**09 04 23.9**	**+1.2**
H18K				IAmb	IAmb	09 05 04.5	
	comp=Z,12nm,1.4s						
KDAK	**Kodiak Island**	**58.00**	**35**	LR	LR	09 26 25.0	
	comp=Z,26nm,22.0s,baz=240,slow=33						
IMAR	**Indian Mountai**	**59.23**	**25**	P	**P**	**09 04 38.6**	**+1.4**
C23K	**Itkillik River**	**61.37**	**21**	P	**P**	**09 04 53.1**	**+1.4**
TOLK	**Toolik Lake Re**	**61.45**	**23**	P	**P**	**09 04 53.9**	**+1.5**
ILAR	**Eielson Array**	**61.79**	**27**	P	**P**	**09 04 53.5**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=263,slow=6.1,SNR=5.3 comp=Z,0.6nm,0.8s						
D24K	**Happy Valley**	**61.82**	**22**	P	**P**	**09 04 56.2**	**+1.3**
D24K				IAmb	IAmb	09 04 57.1	
	comp=Z,3.8nm,1.1s						
BVAR	**Borovoye Array**	**62.25**	**319**	P	**P**	**09 04 58.4**	**+0.3**
	comp=Z,8.4nm,0.6s,baz=90,slow=7.9,SNR=38 comp=Z,8.4nm,0.6s						
KK31	**Karatay Array**	**62.66**	**308**		**P**	**09 05 01.4**	**+0.4**
KK31				IAmb	IAmb	09 05 02.6	
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**62.66**	**308**		**P**	**09 05 01.6**	**+0.6**
D25K	**Kavik River**	**62.71**	**22**	P	**P**	**09 05 02.1**	**+1.2**
D25K				IAmb	IAmb	09 05 11.1	
	comp=Z,3.8nm,1.1s						
BMAR	**Burnt Mountain**	**63.08**	**24**		**P**	**09 05 05.2**	**+1.8**
CHGR	**Chuyangaron**	**64.22**	**303**	P	**P**	**09 05 11.2**	**-0.2**
G31M	**Satah River**	**67.08**	**25**	P	**P**	**09 05 30.4**	**+1.2**
ARTI	**Arti**	**68.94**	**324**	P	**P**	**09 05 40.5**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=110,slow=3.3,SNR=3.0						
ARTI				LR	LR	09 36 50.4	
	comp=Z,23nm,19.8s,baz=20,slow=37 comp=Z,1.8nm,0.3s						
AB31	**Akbulak array**	**69.14**	**316**		**P**	**09 05 42.5**	**0.0**
AB31				IAmb	IAmb	09 05 43.3	
	comp=Z,2.5nm,0.9s						
ABKAR	**Akbulak array**	**69.14**	**316**		**P**	**09 05 42.6**	**+0.1**
YKA	**Yellowknife Ar**	**76.21**	**28**	P	**P**	**09 06 23.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=285,slow=7.3,SNR=4.5 comp=Z,0.3nm,0.6s						
ARCES	**ARCESS Array B**	**78.50**	**341**	P	**P**	**09 06 36.5**	**-0.4**
	comp=Z,3.7nm,0.9s,baz=61,slow=5.7,SNR=5.3 comp=Z,3.7nm,0.9s						
ARCES	**ARCESS Array B**	**78.50**	**341**	P	**P**	**09 06 37.2**	**+0.2**
NEW	**Newport**	**80.13**	**42**	LR	LR	09 34 03.4	
	comp=Z,44nm,20.4s,baz=319,slow=30						
BEKR	**Beckworth**	**81.04**	**51**	P	**P**	**09 06 52.5**	**+0.9**
CMB	**Columbia Colle**	**81.69**	**52**	P	**P**	**09 06 55.6**	**+0.7**
PNTR	**Pine Nut**	**81.88**	**51**	P	**P**	**09 06 56.8**	**+0.8**
PNTR				IAmb	IAmb	09 07 27.4	
	comp=Z,6.6nm,1.3s						
KBZ	**Khabaz**	**81.96**	**314**	P	**P**	**09 06 55.9**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=85,slow=2.8,SNR=7.2 comp=Z,3.9nm,0.9s						
FIA1	**FINESS Array S**	**82.75**	**334**	P	**P**	**09 06 59.8**	**0.0**
FINES	**FINESS Array B**	**82.75**	**334**	P	**P**	**09 06 58.5**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=65,slow=9.5,SNR=6.8 comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**82.75**	**334**	P	**P**	**09 06 59.9**	**0.0**
NVAR	**Mina Array Bea**	**83.06**	**51**	P	**P**	**09 07 02.1**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=275,slow=4.9,SNR=16 comp=Z,1.6nm,0.7s						
NVAR	**Mina Array Bea**	**83.06**	**51**	P	**P**	**09 07 02.5**	**+0.3**
DUG	**Dugway, Tooele**	**86.23**	**48**	P	**P**	**09 07 18.6**	**+0.5**
DUG				IAmb	IAmb	09 07 19.3	
	comp=Z,2.3nm,0.7s						
AKASG	**Malin Array Be**	**87.08**	**324**	P	**P**	**09 07 20.5**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=55,slow=4.6,SNR=7.3 comp=Z,1.2nm,0.6s						
PDAR	**Pinedale Array**	**87.26**	**45**	P	**P**	**09 07 22.8**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=310,slow=7.5,SNR=3.9 comp=Z,0.6nm,0.9s						
BUR08	**Bucovina Ar. S**	**90.97**	**323**	P	**P**	**09 07 39.4**	**-1.0**
BUR08				IAmb	IAmb	09 07 50.8	
	comp=Z,5.1nm,1.2s						
BURAR	**Bucovina Array**	**90.98**	**323**	P	**P**	**09 07 40.1**	**-0.3**
BURAR				IAmb	IAmb	09 07 41.3	
	comp=Z,1.6nm,0.8s						
LPAZ	**La Paz**	**150.10**	**84**	PKPbc	**PKPbc**	**09 14 27.9**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=300,slow=2.0,SNR=20						
LPAZ	**La Paz**	**150.10**	**84**		**PKPbc**	**09 14 28.5**	**+0.1**
CFA	**Coronel Fontan**	**150.67**	**116**	PKPbc	**PKPbc**	**09 14 27.8**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=282,slow=1.4,SNR=4.3						

WEL 25 08:56:23.6±1.6, 34°.S±21°.×17°.9W±2°.0, h202km±58km, M4.0/4, ML3.9/7, MLv4.0/4, Error ellipse: s-maj=26.9km s-min=25.6km az=172.0, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.59**	**208**	P	Pn	08 57 34.2	+1.4
MXZ				S	S	08 58 26.3	-0.5
WMGZ	**Waiomatatini S**	**4.77**	**206**	P	Pn	08 57 35.1	0.0
WMGZ				S	S	08 58 32.3	+1.2
PKGZ	**Pakihiroa**	**4.94**	**208**	P	Pn	08 57 36.7	-0.6
PKGZ				S	S	08 58 37.0	+2.0
HAZ	**Te Kaha**	**4.97**	**211**	P	Pn	08 57 37.7	+0.1
HAZ				S	S	08 58 36.8	+1.3
PUZ	**Puketiti**	**5.05**	**205**	P	Pn	08 57 38.7	0.0
PUZ				S	S	08 58 38.4	+0.7
RUGZ	**Raukumara Rang**	**5.19**	**211**	P	Pn	08 57 40.0	-0.5
RUGZ				S	S	08 58 40.8	-0.1
CNGZ	**Carnagh Statio**	**5.44**	**204**	P	Pn	08 57 43.1	-0.5
MWZ	**Matawai**	**5.56**	**210**	P	Pn	08 57 44.3	-1.0
MWZ				S	S	08 58 50.6	+1.1
URZ	**Urewera**	**5.68**	**213**	P	Pn	08 57 46.7	0.0
URZ				S	S	08 58 52.5	+0.3
SNGZ	**Shannon Statio**	**6.02**	**208**	P	Pn	08 57 51.8	+0.7
SNGZ				S	S	08 59 01.0	+0.8
OUZ	**Omahuta**	**6.36**	**253**	P	Pn	08 57 55.6	+0.1

IDC 25 09:08:11.1±2.3, 2°.03S×128°.60E, h0km, mb3.3/2, mbtmp3.4/4, ML3.1/2, MS2.7/1, Error ellipse: s-maj=126.1km s-min=27.5km az=71.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**9.49**	**211**	LR	LR	09 14 52.9	
	comp=Z,40nm,18.2s,baz=106,slow=42						
FITZ	**Fitzroy Crossi**	**16.23**	**190**	Pn	Pn	09 12 01.9	+1.2
	baz=14,slow=12,SNR=1.2 1.1nm,0.8s						
WRA	**Warramunga Arr**	**18.67**	**163**	P	Pn	09 12 31.1	0.0
	0.1nm,0.3s,baz=344,slow=12,SNR=7.2 0.9nm,0.8s						
ASAR	**Alice Springs**	**22.12**	**167**	P	P	09 13 08.0	-0.3
	1.1nm,0.7s,baz=345,slow=10,SNR=11 1.1nm,0.7s						
MKAR	**Makanchi Array**	**63.34**	**326**	P	P	09 18 41.9	-0.2
	0.3nm,0.7s,baz=111,slow=6.3,SNR=1.2 0.3nm,0.7s						

AEIC ***25*** *09:25:12.5±0.6, 53°.43N±0°.09×163°.44W±0°.09, h24km±9km, Error ellipse: s-maj=13.5km s-min=6.1km az=156.0*

NEIC 25 09:25:10.7±0.7, 53°.5N±0°.1×163°.47W±0°.09, h16km±15km, ML2.5/12, ML2.4(AEIC), Error ellipse: s-maj=18.7km s-min=5.5km az=161.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WEBT	**Westdahl Beart**	**1.37**	**327**		Pn	09 25 34.9	-0.4
SSBA	**Shishaldin**	**1.38**	**344**		Pn	09 25 35.0	-0.4
FALS	**False Pass**	**1.41**	**1**		Pn	09 25 35.9	+0.2
FALS					Sn	09 25 53.1	-0.9
AKUT	**Akutan**	**1.53**	**298**	Pn	Pn	09 25 37.3	0.0
AKUT				IAML		09 25 56.7	
	comp=E,34nm,1.2s						
AKLV	**Akutan Long Va**	**1.64**	**297**		Pn	09 25 38.8	-0.1
AKLV					Sn	09 25 59.5	-0.2
AKMO	**Akutan Morgan**	**1.64**	**294**		Pn	09 25 38.9	+0.1
AKGG	**Akutan Green G**	**1.67**	**298**		Pn	09 25 39.4	0.0
AKGG					Sn	09 26 00.7	+0.2
LVA	**Lava Point**	**1.68**	**296**	Pn	Pn	09 25 39.5	+0.1
LVA				IAML		09 26 43.9	
	comp=E,59nm,1.0s						
AKRB	**Akutan Reef Bi**	**1.68**	**295**		Pn	09 25 39.8	+0.2
DT1	**Dutton Round H**	**1.80**	**22**		Pn	09 25 40.7	-0.4
UNV	**Unalaska Valle**	**1.85**	**284**		Pn	09 25 41.5	-0.3
DOL	**Dolgoi Island**	**1.95**	**28**		Pn	09 25 43.2	+0.1
MNAT	**Makushin Natee**	**1.96**	**284**		Pn	09 25 43.3	0.0
MSW	**Makushin Switc**	**2.02**	**285**		Pn	09 25 44.1	-0.1
MSW					Sn	09 26 08.3	-0.9
S12K	**Black Hills**	**2.41**	**19**	Pn	Pn	09 25 48.9	-0.5
S12K				IAML		09 26 37.2	
	comp=E,33nm,1.2s						
S12K				IAML		09 27 05.7	
	comp=N,33nm,1.2s						
SDPT	**Sand Point**	**2.59**	**41**	Pn	Pn	09 25 52.3	+0.4
SDPT				IAML		09 26 21.8	
	comp=E,15nm,1.1s						
SDPT				IAML		09 26 37.4	
	comp=N,17nm,1.1s						
OKTU	**Okmok Mt. Tuli**	**2.73**	**270**		Pn	09 25 54.5	+0.6

DJA ***25*** *09:27:15.6±0.9, 2°.N±3°.×9°.6E±°, h12km±4km, M4.2/13, mbB4.8/1, mb4.7/2, MLv4.0/13, Mw(mB)4.1/1*

NEIC ***25*** *09:27:20.1±2.1, 2°.23N±0°.08×96°.42E±0°.10, h38km±10km, mb4.3/6, Error ellipse: s-maj=16.1km s-min=8.7km az=53.0.*

IDC ***25*** *09:27:23.1±5.6, 2°.43N×96°.61E, h67km±46km, mb3.6/8, mbtmp3.9/10, ML3.9/2, MS3.2/5, Error ellipse: s-maj=49.4km s-min=16.1km az=54.0*

ISC 25 09:27:17.3±1.4, 2°.25N±0°.06×96°.34E±0°.07, h23km±9km, n47, σ1§10/36, mb4.1/12, MS3.4/3, Northern Sumatera

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

H01W1	**Cape Leeuwin H**	**40.55**	**157**	T		T		10 17 57.2	
	baz=333,slow=76,SNR=34								
WRA	**Warramunga Arr**	**43.32**	**122**	P		**P**		**09 35 17.3**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=301,slow=9.1,SNR=7.0								
	comp=Z,0.5nm,0.8s								
WR8	**Warramunga Arr**	**43.46**	**122**	P		**P**		**09 35 19.0**	**0.0**
WR8				IAmb		IAmb		09 35 59.3	
	comp=Z,4.5nm,1.2s								
AAK	**Ala-Archa**	**44.71**	**337**	LR		LR		09 55 42.5	
	comp=Z,18nm,18.8s,baz=48,slow=38								
ASAR	**Alice Springs**	**44.71**	**127**	P		**P**		**09 35 28.6**	**-0.4**
ASAR	comp=Z,0.4nm,0.6s,baz=301,slow=7.6,SNR=8.4			PcP		**PcP**		**09 37 11.7**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=326,slow=4.7,SNR=1.6								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**46.03**	**347**	P		**P**		**09 35 38.6**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=159,slow=8.8,SNR=21								
	comp=Z,4.3nm,0.9s								
MKAR	**Makanchi Array**	**46.03**	**347**			**P**		**09 35 38.7**	**-0.4**
MAKZ	**Makanchi**	**46.12**	**346**	P		**P**		**09 35 40.4**	**+0.6**
MAKZ				IAmb		IAmb		09 35 41.0	
	comp=Z,5.4nm,0.9s								
SONM	**Songino Array**	**46.24**	**9**	P		**P**		**09 35 40.3**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=189,slow=10,SNR=8.8								
SONM				PcP		**PcP**		**09 37 15.6**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=213,slow=1.7,SNR=3.8								
	comp=Z,1.3nm,0.6s								
KURBB	**Kurchatov Array**	**50.51**	**345**	P		**P**		**09 36 13.4**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=166,slow=6.7,SNR=6.3								
	comp=Z,0.8nm,0.6s								
KURK	**Kurchatov**	**50.57**	**345**	P		**P**		**09 36 13.4**	**-0.6**
KURK	**Kurchatov**	**50.57**	**345**	IAmb		IAmb		09 36 46.1	
	comp=Z,1.4nm,0.8s								
ZAA0	**Zalesovo Array**	**52.40**	**351**	P		**P**		**09 36 28.9**	**+1.3**
ZALV	**Zalesovo Beam**	**52.40**	**351**	P		**P**		**09 36 26.9**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=171,slow=10,SNR=5.5								
	comp=Z,1.9nm,0.4s								
ATD	**Arta Tunnel**	**53.81**	**283**	LR		LR		09 55 53.6	
	comp=Z,36nm,21.8s,baz=9.0,slow=32								
BVAR	**Borovoye Array**	**54.99**	**341**	P		**P**		**09 36 45.4**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=147,slow=8.5,SNR=6.7								
	comp=Z,1.1nm,0.6s								
ABKAR	**Akbulak array**	**56.19**	**332**	P		**P**		**09 36 55.1**	**-0.2**
H04N2	**CROZET ISLANDS**	**62.16**	**213**	T		T		10 44 54.0	
	baz=52,slow=75,SNR=1125								
H04N1	**CROZET ISLANDS**	**62.17**	**213**	T		T		10 44 53.5	
	baz=52,slow=75,SNR=1106								
H04N3	**CROZET ISLANDS**	**62.17**	**213**	T		T		10 44 52.1	
	baz=52,slow=75,SNR=1123								
H04S1	**CROZET ISLANDS**	**62.51**	**213**	T		T		10 45 17.5	
	baz=52,slow=75,SNR=69								
H04S3	**CROZET ISLANDS**	**62.52**	**213**	T		T		10 45 16.4	
	baz=52,slow=75,SNR=95								
H04S2	**CROZET ISLANDS**	**62.53**	**213**	T		T		10 45 18.5	
	baz=52,slow=75,SNR=67								
BRTR	**Keskin Array B**	**67.77**	**312**	P		**P**		**09 38 15.9**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=145,slow=5.3,SNR=1.7								
	comp=Z,0.2nm,0.3s								
GERES	**GERESS Array B**	**83.46**	**319**	LR		LR		10 22 53.2	
	comp=Z,35nm,18.0s,baz=170,slow=40								

ASRS 25 09:35:09.0±1.1, 53°.66N×86°.78E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 25 09:35:24.0±0.7, 54°.15N×87°.10E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

*SJA **25** 09:35:23.5±0.8, 20°.21S×70°.81W, h30km±5km, ML4.4, MW4.1*
*NEIC **25** 09:35:24.7±2.0, 20°.31S±0°.04×70°.77W±0°.06, h10km±1km, mb4.1/4, Error ellipse: s-maj=9.4km s-min=6.3km az=283.0*
*GUC **25** 09:35:24.9±0.8, 20°.21S×70°.77W, h39km±2km, ML3.6*
*IDC **25** 09:35:38.2±3.4, 20°.17S×69°.84W, h104km±30km, mb3.4/2, mbtmp3.7/5, MS3.8/1, Error ellipse: s-maj=76.4km s-min=17.6km az=100.0*

ISC 25 09:35:25.2±1.6, 20°.24S±0°.03×70°.77W±0°.06, h13km±9km, n71, σ1°.44/77, 4C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.60**	**93**	*i* P		**Pg**		**09 35 37.0**	**+0.1**
TA02				*e*S		**Sg**		**09 35 45.5**	**+0.8**
TA02	**Huaiquique**	**0.60**	**93**	*e*P		**Pg**		**09 35 37.0**	**+0.1**
TA02				IAML				09 36 35.0	
	comp=Z,27μm,0.3s								
TA01	**Diego Aracena**	**0.64**	**121**			**Pg**		**09 35 37.9**	**+0.3**
TA01	**Diego Aracena**	**0.64**	**121**	*i* P		**Pg**		**09 35 37.9**	**+0.3**
TA01				*e*S		**Sg**		**09 35 46.9**	**+0.9**
TA01				IAML				09 35 49.5	
	comp=E,6μm,0.3s								
TA01	**Diego Aracena**	**0.64**	**121**	*e*P		**Pg**		**09 35 37.2**	**-0.4**
TA01				IAML				09 36 37.2	
	comp=Z,14μm,0.3s								
PATCX	**Punta Patache**	**0.81**	**135**			**Pb**		**09 35 41.0**	**-0.3**
PATCX	**Punta Patache**	**0.81**	**135**	*i* P		**Pb**		**09 35 40.9**	**-0.4**
PATCX				*e*S		**Sb**		**09 35 52.3**	**0.0**
PATCX				IAML				09 35 57.6	
	comp=N,4μm,0.5s								
PATCX	**Punta Patache**	**0.81**	**135**	*e*P		**Pb**		**09 35 40.8**	**-0.4**
PATCX				IAML				09 36 43.0	
	comp=Z,9μm,1.1s								
HMBC	**Humberstone**	**0.83**	**93**			**Pb**		**09 35 40.7**	**-0.8**
HMBC	**Humberstone**	**0.83**	**93**	⇓*i* P		**Pb**		**09 35 40.7**	**-0.8**
HMBC	**Humberstone**	**0.83**	**93**	*e*P		**Pb**		**09 35 40.0**	**-1.5**
HMBC				IAML				09 36 48.6	
	comp=Z,9μm,0.4s								
PSGCX	**Pisagua**	**0.88**	**44**			**Pb**		**09 35 41.0**	**-1.3**
PSGCX	**Pisagua**	**0.88**	**44**	⇓*i* P		**Pb**		**09 35 41.1**	**-1.3**
PSGCX				*e*S		**Sb**		**09 35 52.7**	**-1.5**
PX03	**IPOC Station P**	**1.08**	**99**	*e*P		**Pb**		**09 35 44.2**	**-1.5**
PX03				*e*S		**Sb**		**09 35 59.0**	**-0.9**
PB11	**IPOC Station P**	**1.15**	**66**			**Pn**		**09 35 45.5**	**-1.6**
PB11	**IPOC Station P**	**1.15**	**66**	⇓*i* P		**Pn**		**09 35 45.5**	**-1.6**
PB11	**IPOC Station P**	**1.15**	**66**	*e*P		**Pn**		**09 35 44.8**	**-2.3**
PB11				IAML				09 36 51.4	
	comp=Z,7μm,0.4s								
PB02	**IPOC Station P**	**1.35**	**143**			**Pn**		**09 35 49.2**	**-0.6**
PB02	**IPOC Station P**	**1.35**	**143**	⇑*i* P		**Pn**		**09 35 49.2**	**-0.6**
PB02				*e*S		**Sn**		**09 36 08.0**	**+0.3**
PB02	**IPOC Station P**	**1.35**	**143**	*e*P		**Pn**		**09 35 49.2**	**-0.6**
PB02				IAML				09 36 59.9	
	comp=Z,10μm,0.2s								
PX02	**IPOC Station P**	**1.38**	**23**	*e*P		**Pn**		**09 35 48.5**	**-1.7**
PX02				*e*S		**Sn**		**09 36 08.2**	**-0.2**
PB01	**IPOC Station P**	**1.44**	**124**			**Pn**		**09 35 50.6**	**-0.4**
PB01	**IPOC Station P**	**1.44**	**124**	*i* P		**Pn**		**09 35 50.6**	**-0.4**
PB01				*e*S		**Sn**		**09 36 09.2**	**-0.7**
PB01				IAML				09 36 15.9	
	comp=E,4μm,0.2s								
PB01	**IPOC Station P**	**1.44**	**124**	*e*P		**Pn**		**09 35 50.6**	**-0.4**
PB08	**IPOC Station P**	**1.52**	**87**			**Pn**		**09 35 52.0**	**-0.4**
PB08	**IPOC Station P**	**1.52**	**87**	⇓*i* P		**Pn**		**09 35 52.0**	**-0.4**
PB08				*e*S		**Sn**		**09 36 12.6**	**+0.3**
PB08	**IPOC Station P**	**1.52**	**87**	*e*P		**Pn**		**09 35 51.9**	**-0.4**
GO01	**Chusmiza**	**1.58**	**69**			**Pn**		**09 35 53.1**	**-0.3**
GO01	**Chusmiza**	**1.58**	**69**	⇑*i* P		**Pn**		**09 35 52.8**	**-0.6**
GO01				*e*S		**Sn**		**09 36 14.4**	**+0.4**
GO01	**Chusmiza**	**1.58**	**69**	*e*P		**Pn**		**09 35 52.1**	**-1.3**
PB12	**IPOC Station P**	**1.67**	**14**			**Pn**		**09 35 53.2**	**-1.0**
PB12	**IPOC Station P**	**1.67**	**14**	⇑*i* P		**Pn**		**09 35 52.5**	**-1.7**
PB12	**IPOC Station P**	**1.67**	**14**	*e*P		**Pn**		**09 35 52.6**	**-1.7**
PB12				IAML				09 37 09.4	
	comp=Z,4μm,0.5s								
PB07	**IPOC Station P**	**1.69**	**151**			**Pn**		**09 35 53.9**	**-0.8**
PB07	**IPOC Station P**	**1.69**	**151**	⇑*i* P		**Pn**		**09 35 53.8**	**-0.8**
PB07	**IPOC Station P**	**1.69**	**151**	*e*P		**Pn**		**09 35 53.8**	**-0.8**
PB07				IAML				09 37 12.7	
	comp=Z,3μm,0.4s								
AP01	**Chacalluta**	**1.90**	**12**			**Pn**		**09 35 57.2**	**-0.1**
AP01	**Chacalluta**	**1.90**	**12**	*e*P		**Pn**		**09 35 56.7**	**-0.7**
AP01				IAML				09 37 18.1	
	comp=Z,5μm,1.0s								
PB03	**IPOC Station P**	**2.03**	**152**			**Pn**		**09 35 58.5**	**-0.8**
PB03	**IPOC Station P**	**2.03**	**152**	*e*P		**Pn**		**09 35 58.5**	**-0.8**
PB03				IAML				09 37 22.9	
	comp=Z,2μm,0.8s								
PB09	**IPOC Station P**	**2.10**	**138**			**Pn**		**09 36 01.0**	**+0.7**
PB16	**IPOC Station P**	**2.24**	**32**			**Pn**		**09 36 03.0**	**+0.5**
PB16	**IPOC Station P**	**2.24**	**32**	*e*P		**Pn**		**09 36 01.6**	**-0.9**
PB16				IAML				09 37 29.2	
	comp=Z,3μm,0.7s								
PB05	**IPOC Station P**	**2.65**	**169**			**Pn**		**09 36 06.0**	**-1.8**
PB05	**IPOC Station P**	**2.65**	**169**	*e*P		**Pn**		**09 36 05.8**	**-2.0**
PB05				*e*S		**Sb**		**09 36 44.5**	**-0.7**
PB06	**IPOC Station P**	**2.69**	**156**			**Pn**		**09 36 07.3**	**-1.1**
PB06	**IPOC Station P**	**2.69**	**156**	*e*P		**Pn**		**09 36 06.6**	**-1.8**
PB06				IAML				09 37 43.3	
	comp=Z,1μm,1.3s								
PB14	**IPOC Station P**	**4.38**	**176**			**Pn**		**09 36 29.1**	**-2.6**
PB14	**IPOC Station P**	**4.38**	**176**	*e*P		**Pn**		**09 36 29.1**	**-2.6**
PB14				IAML				09 38 38.6	
	comp=Z,144nm,2.0s								
LPAZ	**La Paz**	**4.66**	**33**	P		**Pn**		**09 36 40.3**	**+4.4**
	comp=Z,4.1nm,0.3s,baz=200,slow=12,SNR=37								
LPAZ				S		**Sn**		**09 37 30.0**	**-0.2**
	comp=Z,15nm,0.3s,baz=9.5,slow=1.5,SNR=9.8								
LPAZ	**La Paz**	**4.66**	**33**			**Pn**		**09 36 39.9**	**+4.0**
GO02	**Mina Guanaco**	**5.02**	**168**			**Pn**		**09 36 38.9**	**-1.6**
AC05	**El Transito**	**8.57**	**177**	Pn		**Pn**		**09 37 26.9**	**-2.2**
SIV	**San Ignacio**	**10.14**	**67**	P		**Pn**		**09 37 48.6**	**-2.0**
	comp=Z,2.2nm,0.4s,baz=262,slow=9.4,SNR=12								
SIV	**San Ignacio**	**10.14**	**67**			**Pn**		**09 37 48.6**	**-2.0**
CFA	**Coronel Fontan**	**11.54**	**169**	P		Pn		09 38 18.2	+8.5
	comp=Z,0.7nm,0.5s,baz=350,slow=13,SNR=3.0								
VILB	**Vilhena**	**12.45**	**56**			**Pn**		**09 38 23.6**	**+1.3**
H03N1	**Juan Fernandez**	**15.01**	**207**	T		T		09 54 36.8	
	baz=24								
H03N2	**Juan Fernandez**	**15.02**	**207**	T		T		09 54 25.3	
	baz=24								
H03N3	**Juan Fernandez**	**15.03**	**207**	T		T		09 54 24.3	
	baz=24								
TRQA	**Tornquist**	**19.32**	**159**			**P**		**09 39 49.4**	**-0.8**
PLCA	**Paso Flores**	**20.43**	**180**	P		Pn		09 40 08.5	+4.1
	comp=Z,4.5nm,1.1s,baz=2.9,slow=12,SNR=2.7								
	comp=Z,4.5nm,1.1s								
PLCA	**Paso Flores**	**20.43**	**180**	P		**P**		**09 40 02.6**	**+0.3**
PLCA				IAmb		IAmb		09 40 45.1	
	comp=Z,11nm,1.3s								
BOAV	**Boa Vista**	**24.64**	**25**	P		**P**		**09 40 44.8**	**-0.9**
BOAV				IAmb		IAmb		09 40 52.4	
	comp=Z,4.4nm,0.9s								
ROSC	**El Rosal**	**25.17**	**352**	LR		LR		09 52 58.1	
	comp=Z,241nm,20.5s,baz=224,slow=41								
QSPA	**South Pole Qui**	**69.94**	**180**	P		**P**		**09 46 39.5**	**+3.4**
	comp=Z,0.4nm,0.6s,baz=160,slow=3.7,SNR=1.4								
	comp=Z,0.4nm,0.6s								
QSPA	**South Pole Qui**	**69.94**	**180**	P		**P**		**09 46 39.5**	**+3.4**
WRA	**Warramunga Arr**	**133.10**	**213**	PKP		**PKPdf**		**09 54 40.7**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=130,slow=1.5,SNR=1.6								
WRA	**Warramunga Arr**	**133.10**	**213**			**PKPdf**		**09 54 40.7**	**-0.8**
MKAR	**Makanchi Array**	**145.59**	**33**	PKPbc		**PKPdf**		**09 55 02.3**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=321,slow=3.7,SNR=9.3								
MKAR	**Makanchi Array**	**145.59**	**33**			**PKPdf**		**09 55 02.3**	**-1.0**

*SDD **25** 09:35:40.4±2.7, 18°.45N×69°.09W, h142km±8km, MD4.0, ML4.0, MW3.9*
*RSNC **25** 09:35:41.6±0.9, 18°N±3°×6°9W±°, h34km±15km, M3.7, mB5.1, mb4.5, ML3.0, Mw(mB)4.4*

ISC 25 09:35:38.1±0.8, 18°.52N±0°.05×69°.18W±0°.04, h148km±7km, n68, σ1°92/99, 45C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPM1	**San Pedro UASD**	**0.14**	**238**	⇑*e*Pg		**Pn**		**09 35 58.2**	**+0.2**
SPM1				⇑*e*Sg		**Sn**		**09 36 12.4**	**-0.8**
SPM1				IAML				09 36 13.1	
	comp=N,4μm,0.6s								
HATOM	**Hato Mayor del**	**0.33**	**324**	⇑*e*Pg		**Pn**		**09 35 58.5**	**-0.1**
HATOM				⇑*e*Sg		**Sn**		**09 36 12.0**	**-2.2**
HATOM				IAML				09 36 13.3	
	comp=N,3μm,0.3s								
HIDR	**Higuey Centro**	**0.45**	**81**	⇑*e*Pg		**Pn**		**09 35 58.9**	**-0.1**
HIDR				⇑*e*Sg		**Sn**		**09 36 13.3**	**-1.5**
HIDR				IAML				09 36 15.2	
	comp=N,11μm,0.2s								
MIDR	**Miches**	**0.48**	**15**	⇑*e*Pg		**Pn**		**09 35 59.6**	**+0.5**
MIDR				⇑*e*Sg		**Sn**		**09 36 15.2**	**0.0**
MIDR				IAML				09 36 15.6	
	comp=N,2μm,0.1s								
SDD	**Santo Domingo**	**0.70**	**265**	⇑*e*Pg		**Pn**		**09 36 01.1**	**+0.8**
SDD				⇑*e*Sg		**Sn**		**09 36 16.5**	**-0.8**
SDD				IAML				09 36 17.3	
	comp=N,434nm,0.2s								
PCDR	**Punta Cana, DR**	**0.76**	**90**	⇑*e*Pg		**Pn**		**09 36 01.4**	**+0.6**
PCDR				⇑*e*Sg		**Sn**		**09 36 17.9**	**-0.2**
PCDR				IAML				09 36 21.2	
	comp=N,4μm,0.6s								
SMDR	**Samana, DR**	**0.76**	**359**	⇑*e*Pg		**Pn**		**09 36 01.1**	**+0.2**
SMDR				⇑*e*Sg		**Sn**		**09 36 18.2**	**0.0**
SMDR				IAML				09 36 22.2	
	comp=N,2μm,0.8s								
DR08	**Loma La Naviza**	**0.91**	**299**	⇑*e*Pg		**Pn**		**09 36 02.8**	**+0.7**
DR08				⇑*e*Sg		**Sn**		**09 36 19.8**	**-0.5**
DR08				IAML				09 36 22.8	
	comp=N,51μm,0.2s								
BANI	**BANI**	**1.12**	**264**	⇑*e*Pg		**Pn**		**09 36 05.5**	**+1.5**
BANI				⇑*e*Sg		**Sn**		**09 36 25.1**	**+1.5**
BANI				IAML				09 36 26.9	
	comp=N,10μm,0.2s								
SFDR	**San Fco. de Ma**	**1.26**	**307**	⇑*e*Pg		**Pn**		**09 36 06.8**	**+1.7**
SFDR				⇑*e*Sg		**Sn**		**09 36 27.8**	**+2.1**
CADR	**Cabrera**	**1.35**	**328**	⇑*e*Sg		**Sn**		**09 36 26.8**	**-0.5**
CADR				IAML				09 36 28.7	
	comp=N,3μm,0.2s								
ABDR	**Alto Bandera**	**1.40**	**282**	⇑*e*Pg		**Pn**		**09 36 08.7**	**+1.8**
ABDR				⇑*e*Sg		**Sn**		**09 36 30.0**	**+1.2**
ABDR				IAML				09 36 59.1	
	comp=N,0.3nm,0.8s								
SC01	**Santiago de Io**	**1.72**	**302**	⇑*e*Pg		**Pn**		**09 36 11.8**	**+1.9**
SC01				IAML				09 36 39.2	
	comp=N,2μm,0.3s								
SODR	**Sosua Marina B**	**1.80**	**313**	⇑*e*Pg		**Pn**		**09 36 12.0**	**+1.2**
SODR				⇑*e*Sg		**Sn**		**09 36 38.3**	**+2.4**
SODR				IAML				09 36 53.4	
	comp=N,1μm,0.6s								
AGPR	**Aguadilla, PR**	**1.96**	**91**	⇑*e*Pg		**Pn**		**09 36 13.3**	**+0.6**
AGPR				IAML				09 36 46.0	
	comp=N,984nm,0.6s								
PODR	**Polo**	**2.03**	**260**	⇑*e*Pg		**Pn**		**09 36 15.0**	**+1.4**
PODR				⇑*e*Sg		**Sn**		**09 36 40.8**	**-0.1**
PODR				IAML				09 36 44.8	
	comp=N,2μm,0.3s								
CRPR	**Cabo Rojo, PR**	**2.03**	**104**	⇑*e*Pg		**Pn**		**09 36 13.3**	**-0.2**
CRPR				IAML				09 36 48.2	
	comp=N,248nm,0.8s								
SDDR	**Presa de Saban**	**2.05**	**283**	⇑*e*Pg		**Pn**		**09 36 16.2**	**+2.5**
SDDR				IAML				09 36 52.0	
	comp=N,498nm,0.8s								
SDDR	**Presa de Saban**	**2.05**	**283**	*e*P		**Pn**		**09 36 16.3**	**+2.5**
SDDR	**Presa de Saban**	**2.05**	**283**	P		**Pn**		**09 36 16.1**	**+2.3**
SDDR				S		**Sn**		**09 36 43.0**	**+1.9**
MLPR	**Magueyes Islan**	**2.10**	**105**	⇑*e*Pg		**Pn**		**09 36 14.0**	**-0.3**
MLPR				IAML				09 36 50.8	
	comp=N,64nm,0.3s								
NEDR	**Neiba UASD**	**2.12**	**269**	⇑*e*Pg		**Pn**		**09 36 15.3**	**+0.7**
NEDR				⇑*e*Sg		**Sn**		**09 36 43.5**	**+0.9**
NEDR				IAML				09 36 48.4	
	comp=N,402nm,0.8s								
LUDR	**Luperon**	**2.16**	**309**	⇑*e*Pg		**Pn**		**09 36 15.8**	**+0.8**
LUDR				⇑*e*Sg		**Sn**		**09 36 45.0**	**+1.6**
REDR	**Restauracion**	**2.19**	**287**	⇑*e*Pg		Pn		09 36 20.3	+4.9
REDR				IAML				09 36 55.1	
	comp=N,1μm,0.3s								
AOPR	**Arecibo Observ**	**2.31**	**94**	⇑*e*Pg		**Pn**		**09 36 16.8**	**-0.1**
AOPR				IAML				09 36 54.1	
	comp=N,872nm,0.8s								
AOPR	**Arecibo Observ**	**2.31**	**94**	*e*P		**Pn**		**09 36 16.7**	**-0.2**
JIDR	**Jimani**	**2.53**	**270**	⇑*e*Pg		**Pn**		**09 36 21.9**	**+2.3**
JIDR				IAML				09 36 55.0	
	comp=N,454nm,0.3s								
LODA1	**ITESIL, Dajabo**	**2.60**	**293**	⇑*e*Sg		**Sn**		**09 36 54.7**	**+1.9**
LODA1				IAML				09 36 60.0	
	comp=N,2μm,3.4s								
MCDR	**Montecristi**	**2.71**	**301**	⇑*e*Pg		**Pn**		**09 36 21.9**	**+0.1**
MCDR				⇑*e*Sg		**Sn**		**09 36 57.1**	**+1.7**
MCDR				IAML				09 37 01.8	
	comp=N,586nm,0.1s								
SJG	**San Juan**	**2.91**	**98**	*e*P		**Pn**		**09 36 25.0**	**+0.8**
SJG	**San Juan**	**2.91**	**98**	P		**Pn**		**09 36 24.7**	**+0.5**
SJG				S		**Sn**		**09 36 58.7**	**-1.1**
GRTK	**Grand Turk**	**3.50**	**329**	⇑*e*Pg		**Pn**		**09 36 32.2**	**+0.5**
GRTK				⇓*e*Sg		**Sn**		**09 37 12.0**	**-1.4**
GRTK				IAML				09 37 13.4	
	comp=N,518nm,0.6s								
GRTK	**Grand Turk**	**3.50**	**329**	P		**Pn**		**09 36 32.0**	**+0.3**
GRTK				S		**Sn**		**09 37 11.6**	**-1.8**
MASC	**Masc**	**5.04**	**290**	*e*P		**Pn**		**09 36 50.3**	**-1.8**
MASC				*e*Pg				09 36 51.8	
MASC				*e*S		**Sn**		**09 37 46.4**	**-3.4**
MASC				IAML				09 37 51.0	
	comp=N,36nm,0.1s								
MASC				IAML				09 37 51.4	
	comp=E,27nm,0.1s								
QMBU	**Quimbuelo**	**5.57**	**288**	*e*P		**Pn**		**09 36 56.8**	**-2.3**
QMBU				*e*S		**Sn**		**09 37 59.3**	**-3.1**
QMBU				IAML				09 38 02.3	
	comp=N,43nm,0.2s								
QMBU				IAML				09 38 02.6	
	comp=E,28nm,0.3s								
GTBY	**Guantanamo Bay**	**5.78**	**285**	*e*P		**Pn**		**09 37 01.2**	**-0.6**
GTBY				*e*S		**Sn**		**09 38 04.7**	**-2.5**
GTBY				IAML				09 38 08.4	
	comp=E,4.4nm,0.2s								
GTBY				IAML				09 38 09.1	
	comp=E,11nm,0.2s								
GTBY	**Guantanamo Bay**	**5.78**	**285**	P		**Pn**		**09 37 00.5**	**-1.3**
GTBY				S		**Sn**		**09 38 05.8**	**-1.4**
NMDO	**Nuevo Mundo**	**5.83**	**291**	*e*P		**Pn**		**09 37 00.8**	**-1.8**
NMDO				⇑*e*S		**Sn**		**09 38 04.2**	**-4.5**
NMDO				IAML				09 38 08.1	
	comp=N,25nm,0.2s								
NMDO				IAML				09 38 08.4	
	comp=E,25nm,0.3s								
MOAC	**Moa**	**5.85**	**292**	*e*P		**Pn**		**09 37 01.4**	**-1.4**
MOAC				*e*S		**Sn**		**09 38 04.2**	**-4.8**
MOAC				IAML				09 38 06.3	
	comp=E,36nm,0.3s								
MOAC				IAML				09 38 06.5	
	comp=N,20nm,0.3s								
SKI	**Saint Kitts**	**6.25**	**100**	*e*P		**Pn**		**09 37 08.0**	**-0.2**
RCC	**Rio Carpintero**	**6.33**	**284**	*e*P		**Pn**		**09 37 07.5**	**-1.7**
RCC				*e*S		**Sn**		**09 38 17.6**	**-2.8**
RCC				IAML				09 38 21.8	
	comp=N,5.5nm,0.2s								
RCC				IAML				09 38 22.0	
	comp=E,7.9nm,0.3s								
MARVS	**Santiago de Cu**	**6.51**	**284**	*e*P		**Pn**		**09 37 09.9**	**-1.8**
MARVS				*e*S		**Sn**		**09 38 22.7**	**-2.2**
MARVS				IAML				09 38 27.6	
	comp=E,5.9nm,0.4s								
MARVS				IAML				09 38 27.7	
	comp=N,5.4nm,0.2s								
PINC	**Pinares de May**	**6.53**	**288**	*e*P		**Pn**		**09 37 09.6**	**-2.3**
PINC				*e*S		**Sn**		**09 38 22.3**	**-3.1**
PINC				IAML				09 38 23.6	
	comp=N,16nm,0.1s								
PINC				IAML				09 38 23.9	
	comp=E,8.6nm,0.1s								
HLGC	**Holguin**	**6.89**	**291**	⇑*e*P		**Pn**		**09 37 17.0**	**+0.2**
HLGC				⇓*e*S		**Sn**		**09 38 33.6**	**-0.5**
HLGC				IAML				09 38 39.5	
	comp=E,24nm,0.2s								
HLGC				IAML				09 38 39.5	
	comp=N,20nm,0.2s								
ANWB	**Willy Bob**	**7.08**	**96**	*e*P		**Pn**		**09 37 17.0**	**-2.3**
URIC	**Uribia, Colomb**	**7.30**	**202**	P		**Pn**		**09 37 23.0**	**+0.7**
	comp=N,1μmcomp=N,16nm,0.6s								
URIC				S		**Sn**		**09 38 41.0**	**-3.0**
	comp=N,1μmcomp=N,16nm,0.6s						

comp=N,20µm,0.3s
PB11 IPOC Station P 1.15 67 Pn **Pn 09 36 34.2 -0.6**
PB11 IPOC Station P 1.15 67 *eP* **Pn 09 36 34.5 -0.3**
PB11 *eS* **Sn 09 36 50.1 +0.1**
PB11 IAML 09 36 55.7
comp=E,11µm,0.5s
PX02 IPOC Station P 1.36 24 *eP* **Pn 09 36 37.0 -0.5**
PX02 *eS* **Sb 09 36 55.8 +0.3**
PX02 IAML 09 37 00.8
comp=N,9µm,0.6s
PB02 IPOC Station P 1.38 143 Pn **Pn 09 36 38.3 +0.4**
PB02 IPOC Station P 1.38 143 *eP* **Pn 09 36 37.9 +0.1**
PB02 *eS* **Sb 09 36 56.7 +0.6**
PB02 IAML 09 37 02.3
comp=E,21µm,0.5s
PB01 IPOC Station P 1.47 124 Pn **Pb 09 36 40.0 -0.4**
PB01 IPOC Station P 1.47 124 *eP* **Pb 09 36 39.9 -0.4**
PB01 *eS* **Sb 09 36 59.1 +0.5**
PB01 IAML 09 37 04.4
comp=E,9µm,0.3s
PB08 IPOC Station P 1.54 88 Pn **Pb 09 36 41.0 -0.6**
PB08 IPOC Station P 1.54 88 *eP* **Pb 09 36 41.4 -0.2**
PB08 *eS* **Sb 09 37 00.3 -0.4**
GO01 Chusmiza 1.59 70 Pn **Pn 09 36 41.8 +0.8**
GO01 Chusmiza 1.59 70 *eP* **Pb 09 36 42.2 -0.5**
GO01 *eS* **Sb 09 37 03.0 +0.5**
GO01 IAML 09 37 05.5
comp=N,12µm,0.3s
PB12 IPOC Station P 1.65 15 Pn **Pb 09 36 42.8 -0.5**
PB12 IPOC Station P 1.65 15 *eP* **Pb 09 36 42.5 -0.8**
AP01 Chacalluta 1.88 13 *eP* **Pn 09 36 43.7 -0.9**
AP01 IAML 09 37 23.0
comp=E,6µm,0.8s
PB16 IPOC Station P 2.22 33 Pn **Pn 09 36 52.0 -1.4**
PB14 IPOC Station P 4.41 175 Pn **Pn 09 37 18.1 -1.6**
LPAZ La Paz 4.65 33 P **Pb 09 37 37.2 +2.4**
comp=Z,70nm,0.7s,baz=169,slow=9.0,SNR=5.7
LPAZ S **Sb 09 38 36.7 +6.1**
comp=Z,52nm,0.7s,baz=140,slow=6.5,SNR=1.2
LPAZ LR LR 09 39 39.0
comp=Z,1µm,18.9s,baz=248,slow=42
LPAZ La Paz 4.65 33 Pn **Pn 09 37 23.8 +0.6**
GO02 Mina Guanaco 5.05 168 Pn **Pn 09 37 28.3 -0.2**
AC01 Pan de Azucar 5.91 178 Pn **Pn 09 37 39.8 -0.2**
AC06 Mina Casimiro 7.12 177 **Pn 09 37 57.8 +1.1**
NNA Nana 10.04 324 P Pn 09 38 42.7 +6.0
comp=Z,4.5nm,0.4s,baz=205,slow=8.7,SNR=3.9
NNA S **Sn 09 40 23.9 -4.9**
comp=Z,8.8nm,0.5s,baz=200,slow=6.9,SNR=2.0
NNA Nana 10.04 324 Pn 09 38 42.7 +6.0
NNA **Sn 09 40 23.9 -4.9**
SIV San Ignacio 10.14 67 P **Pn 09 38 41.2 +3.0**
comp=Z,16nm,0.6s,baz=245,slow=14,SNR=8.2
SIV LR LR 09 43 08.3
comp=Z,850nm,18.6s,baz=278,slow=39
SIV San Ignacio 10.14 67 **Pn 09 38 41.2 +3.0**
CFA Coronel Fontan 11.57 169 P Pn 09 39 10.7 +13
comp=Z,1.3nm,0.3s,baz=356,slow=14,SNR=5.4
CFA S Sn 09 41 26.2 +20
comp=Z,3.8nm,1.0s,baz=126,slow=17,SNR=4.3
PTLB Pontes e Lacer 12.06 69 *eP* **Pn 09 39 03.6 -0.8**
VILB Vilhena 12.45 56 Pn **Pn 09 39 10.5 +0.7**
VILB Vilhena 12.45 56 *eP* **Pn 09 39 09.9 +0.2**
VILB *eS* **Sn 09 41 28.5 +0.6**
CPUP Villa Florida 13.78 119 P **P 09 39 32.6 -3.6**
comp=Z,0.6nm,0.6s,baz=164,slow=13,SNR=4.1
CPUP Villa Florida 13.78 119 **Pn 09 39 27.5 -0.3**
AQDB Aquidauana 14.15 94 Pn **Pn 09 39 33.7 +0.7**
ATAH Atahualpa 14.95 329 LR LR 09 45 57.1
comp=Z,143nm,19.9s,baz=2.6,slow=39
SALV Santo Antonio 14.98 76 *eP* **Pn 09 39 44.5 +0.2**
H03N1 Juan Fernandez 15.03 207 T T 09 55 18.8
baz=33,slow=72,SNR=253
H03N2 Juan Fernandez 15.04 207 T T 09 55 04.8
baz=33,slow=72,SNR=298
H03N3 Juan Fernandez 15.05 207 T T 09 55 03.8
baz=33,slow=72,SNR=177
PP1B Ponte de Pedra 15.28 83 *eP* **Pn 09 39 46.8 -1.4**
H03S3 Juan Fernandez 15.36 206 T T 09 55 33.2
baz=27
H03S1 Juan Fernandez 15.37 206 T T 09 55 37.8
baz=27
H03S2 Juan Fernandez 15.38 206 T T 09 55 42.6
baz=27
PDRB Porto dos Gac 15.99 60 *eP* **Pn 09 39 57.4 0.0**
C2SB Chapadao do Su 16.98 88 *eP* **Pn 09 40 10.2 +0.1**
CLDB Colider 17.16 59 *eP* **Pn 09 40 11.5 -0.8**
TEFE Tefe 17.65 21 *eP* **Pn 09 40 16.9 -1.6**
ITAB Concordia 18.44 116 P **Pn 09 40 28.0 -0.1**
ARAG Araguaiana, MT 18.59 79 *eP* **P 09 40 28.2 -1.5**
TRQA Tornquist 19.36 159 P **Pn 09 40 38.8 -0.2**
COHC Cochancay 19.48 334 P **Pn 09 40 42.4 +1.7**
MACA Manacapuru-AM 19.60 31 **P 09 40 41.0 +0.2**
MACA IAmb IAmb 09 40 41.8
comp=Z,24nm,0.7s
MACA Manacapuru-AM 19.60 31 *eP* **P 09 40 39.6 -1.1**
NPGB Novo Progresso 19.88 51 *eP* **P 09 40 41.5 -2.2**
FRTB Fartura 19.95 103 *eP* **P 09 40 43.4 -1.2**
PLCA Paso Flores 20.45 179 P Pn 09 40 52.7 +0.6
comp=Z,5.9nm,1.1s,baz=346,slow=10.0,SNR=4.5
PLCA Paso Flores 20.45 179 P Pn 09 40 52.7 +0.6
BB19B Bebedouro 20.85 96 *eP* **P 09 40 54.0 -0.4**
IPMB Ipameri, GO 21.45 88 *eP* **P 09 40 59.8 -1.0**
ITTB Itaituba 21.51 45 *eP* **P 09 40 58.5 -2.9**
OTAV Otavalo 21.67 339 *eP* **P 09 41 03.5 0.0**
BDFB Brasilia 22.13 82 P **P 09 41 09.5 +1.3**
BDFB LR LR 09 51 21.0
comp=Z,697nm,18.1s,baz=308,slow=40
BDFB Brasilia 22.13 82 P **P 09 41 09.5 +1.3**
FLOC Florencia 22.18 347 **P 09 41 09.7 +1.1**
FLOC IAmb IAmb 09 41 43.2
comp=Z,27nm,1.1s
VAO Valinhos 22.32 101 P **P 09 41 08.5 -1.7**
VAO IAmb IAmb 09 41 28.6
comp=Z,38nm,1.5s
MAL2 Monte Alegre, 24.29 44 P **P 09 41 29.6 -0.2**
MAL2 IAmb IAmb 09 41 36.8
comp=Z,17nm,0.7s
BOAV Boa Vista 24.62 25 **P 09 41 33.1 +0.3**
BOAV Boa Vista 24.62 25 *eP* **P 09 41 32.9 +0.1**
PRPB Parauapebas 24.68 58 *eP* **P 09 41 32.8 -0.7**
SMTB Santa Maria do 25.09 67 *eP* **P 09 41 37.3 +0.2**
JANB Januaria 25.73 83 *eP* **P 09 41 41.1 -1.9**
TEIG Tepich 43.69 336 P **P 09 44 17.6 +0.4**
TEIG IAmb IAmb 09 44 29.8
comp=Z,22nm,1.5s
WLAR White Oak Lake 57.67 338 **P 09 46 04.3 +1.7**
TXAR Lajitas Array 58.58 326 P **P 09 46 09.4 +0.2**
comp=Z,0.4nm,0.8s,baz=129,slow=5.2,SNR=5.4
comp=Z,0.4nm,0.8s
TXAR Lajitas Array 58.58 326 P **P 09 46 09.4 +0.2**
GNAR Gosnell 58.77 342 P **P 09 46 11.4 +1.2**
SNAA Sanae 64.06 161 P P 09 46 51.8 +6.1
comp=Z,1.9nm,0.9s,baz=265,slow=5.6,SNR=6.0
comp=Z,1.9nm,0.9s
SNAA Sanae 64.06 161 P **P 09 46 46.9 +1.2**
SNAA IAmb IAmb 09 46 54.9
comp=Z,8.3nm,1.4s
KNB Kanab 69.36 325 P **P 09 47 22.6 +2.5**
KNB IAmb IAmb 09 47 33.8
comp=Z,9.2nm,1.4s
QSPA South Pole Qui 69.97 180 P **P 09 47 27.8 +4.4**
comp=Z,1.7nm,1.0s,baz=130,slow=3.9,SNR=3.7
comp=Z,1.7nm,1.0s
QSPA South Pole Qui 69.97 180 P **P 09 47 26.6 +3.2**
QSPA IAmb IAmb 09 47 40.2
comp=Z,3.5nm,0.9s
CCUT Cedar City 70.05 325 IAmb IAmb 09 47 39.2
comp=Z,4.7nm,0.9s
WCT Wildcat Mounta 71.31 323 IAmb IAmb 09 47 46.7
comp=Z,5.3nm,1.1s
PDAR Pinedale Array 72.13 331 P **P 09 47 36.7 -0.2**
comp=Z,0.3nm,0.7s,baz=151,slow=4.5,SNR=2.5
comp=Z,0.3nm,0.7s
PDAR Pinedale Array 72.13 331 P **P 09 47 36.7 -0.2**
NVAR Mina Array Bea 73.41 323 P **P 09 47 45.8 +1.3**
comp=Z,0.7nm,0.7s,baz=140,slow=2.8,SNR=5.6
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 73.41 323 P **P 09 47 45.8 +1.3**
ULM Lac du Bonnet 73.58 344 LR LR 10 25 42.9
comp=Z,49nm,18.2s,baz=184,slow=40
YNE Yellowstone No 74.09 332 IAmb IAmb 09 47 51.1
comp=Z,5.2nm,0.9s
TAM Tamanrasset 85.82 64 P **P 09 48 52.7 +0.4**

ESDC Sonseca Array 86.17 45 P **P 09 48 53.3 -0.2**
comp=Z,1.5nm,1.0s,baz=236,slow=9.1,SNR=4.8
comp=Z,1.5nm,1.0s
ESDC Sonseca Array 86.17 45 P **P 09 48 53.3 -0.2**
YKA Yellowknife Ar 89.40 341 P **P 09 49 08.7 +0.3**
comp=Z,3.3nm,1.0s,baz=144,slow=3.9,SNR=8.8
comp=Z,3.3nm,1.0s
YKA Yellowknife Ar 89.40 341 P **P 09 49 08.7 +0.3**
H11S2 WAKE ISLAND Hyl 25.96 279 T T 12 14 45.6
baz=102,slow=74,SNR=38
H11S1 WAKE ISLAND Hyl 25.97 279 T T 12 14 30.2
baz=102,slow=74,SNR=4.5
H11S3 WAKE ISLAND Hyl 25.98 279 T T 12 14 46.9
baz=102,slow=74,SNR=5.2
H11N3 WAKE ISLAND Hyl 26.02 280 T T 12 14 43.5
baz=101
H11N2 WAKE ISLAND Hyl 26.03 280 T T 12 14 45.2
baz=101
H11N1 WAKE ISLAND Hyl 26.03 280 T T 12 14 43.4
baz=101
ASAR Alice Springs 130.19 210 PKP **PKPdf 09 55 22.3 -0.8**
comp=Z,0.2nm,0.3s,baz=168,slow=1.7,SNR=2.0
ASAR Alice Springs 130.19 210 **PKPdf 09 55 22.3 -0.8**
WRA Warramunga Arr 133.12 213 PKP **PKPdf 09 55 28.9 +0.2**
comp=Z,0.3nm,0.6s,baz=154,slow=2.0,SNR=7.7
WRA Warramunga Arr 133.12 213 **PKPdf 09 55 28.9 +0.2**
MKAR Makanchi Array 145.58 33 PKPbc **PKPab 09 55 51.0 +0.2**
comp=Z,9.6nm,1.0s,baz=316,slow=4.0,SNR=16
MKAR Makanchi Array 145.58 33 **PKPbc 09 55 50.7 +0.1**
HILR Hailar Array B 149.54 346 PKPbc **PKPbc 09 56 00.0 -1.4**
comp=Z,2.4nm,0.6s,baz=21,slow=8.4,SNR=1.6
HILR Hailar Array B 149.54 346 **PKPbc 09 56 00.1 -1.4**
MJAR Matsushiro Arr 149.90 309 PKPbc **PKPbc 09 56 00.8 -1.9**
comp=Z,0.6nm,0.4s,baz=25,slow=4.2,SNR=1.8
MJAR Matsushiro Arr 149.90 309 **PKPbc 09 56 00.8 -1.9**
SONM Songino Array 152.35 4 PKPbc **PKPbc 09 56 08.3 +0.1**
comp=Z,0.5nm,0.4s,baz=346,slow=1.8,SNR=3.8
SONM PKPab **PKPab 09 56 18.2 +0.1**
comp=Z,1.1nm,0.7s,baz=357,slow=3.0,SNR=4.0
SONM Songino Array 152.35 4 **PKPbc 09 56 08.3 +0.1**
SONM **PKPab 09 56 18.2 +0.1**

*IDC **25** 09:52:57.3±1.4, 14.°96N×39.°65E, h0km, mb4.2/18, mbtmp4.2/19, ML1.3/1, MS3.7/38, Error ellipse: s-maj=34.7km s-min=15.7km az=40.0*
*NEIC **25** 09:53:00.6±1.4, 15.°2N±0.°1×39.°8E±0.°1, h10km±1km, mb4.5/14, Error ellipse: s-maj=22.9km s-min=15.8km az=195.0*
ISC 25 09:52:59.6±1.0, **15.°1N**±0.°1×**39.°8E**±0.°1, **h10**km, **n71,**
σ0**9**4/38, **mb4.2**/22, **MS3.8**/35, **Ethiopia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**4.63**	**139**	Pn	**Pn**		**Pn**	**09 54 07.9**	**-1.7**
baz=241,slow=7.3,SNR=3.6									
ATD				Lg		Lg	Lg	09 55 24.5	
0.3nm,0.3s,baz=87,slow=23,SNR=8.2									
ATD	**Arta Tunnel**	**4.63**	**139**				**Pn**	**09 54 11.4**	**+1.8**
KMBO	**Kilima Mbogo**	**16.29**	**189**	LR		LR	LR	10 02 18.9	
comp=Z,281nm,21.2s,baz=44,slow=35									
ASF	**Jabal al Asfar**	**17.22**	**352**	P			**Pn**	**09 57 01.2**	**+0.8**
4.6nm,0.8s,baz=171,slow=9.5,SNR=5.1									
ASF				LR		LR	LR	10 02 48.2	
comp=Z,371nm,18.1s,baz=162,slow=34									
MBAR	**Mbarara**	**17.96**	**211**	LR		LR	LR	10 05 01.1	
comp=Z,62nm,18.7s,baz=18,slow=41									
UOSS	**Minazif**	**18.28**	**55**				**Pn**	**09 57 11.2**	**-2.3**
UOSS					IAmb		IAmb	09 57 24.3	
comp=Z,24nm,1.1s									
MMAI	**Mount Meron Ar**	**18.30**	**348**	LR		LR	LR	10 03 11.8	
comp=Z,152nm,19.6s,baz=156,slow=33									
IDI	**Anoyia**	**24.16**	**329**	LR		LR	LR	10 07 17.8	
comp=Z,172nm,18.4s,baz=290,slow=36									
BR131	**Keskin Array S**	**25.14**	**349**				**P**	**09 58 25.6**	**+0.6**
BR131					IAmb		IAmb	09 58 28.4	
comp=Z,10nm,0.9s									
BRTR	**Keskin Array B**	**25.14**	**349**	P			**P**	**09 58 26.3**	**+1.3**
comp=Z,6.0nm,0.8s,baz=167,slow=12,SNR=27									
comp=Z,6.0nm,0.8s									
BRTR	**Keskin Array B**	**25.14**	**349**				**P**	**09 58 25.9**	**+0.9**
GNI	**Garni**	**25.36**	**9**	LR		LR	LR	10 08 55.7	
comp=Z,157nm,18.8s,baz=206,slow=38									
KBZ	**Khabaz**	**28.68**	**5**	P			**P**	**09 58 56.9**	**+0.3**
comp=Z,2.4nm,0.8s,baz=231,slow=3.9,SNR=4.9									
comp=Z,2.4nm,0.8s									
LSZ	**Lusaka**	**32.26**	**201**	LR		LR	LR	10 12 54.2	
comp=Z,177nm,18.4s,baz=26,slow=37									
KEST	**Kesra**	**34.10**	**313**	LR		LR	LR	10 16 20.7	
comp=Z,318nm,18.0s,baz=152,slow=41									
BURAR	**Bucovina Array**	**34.62**	**343**	P			**P**	**09 59 49.5**	**+0.6**
KIEV	**Kiev**	**36.54**	**349**	P			**P**	**10 00 04.9**	**-0.3**
KIEV					IAmb		IAmb	10 00 05.7	
comp=Z,4.9nm,0.8s									
AKASG	**Malin Array Be**	**36.54**	**349**	P			**P**	**10 00 04.3**	**-0.9**
comp=Z,2.0nm,0.8s,baz=167,slow=7.0,SNR=11									
comp=Z,2.0nm,0.8s									
AKBB	**Malin Array Si**	**36.54**	**349**	P			**P**	**10 00 04.9**	**-0.4**
AKBB					IAmb		IAmb	10 00 05.7	
comp=Z,5.5nm,0.8s									
MATP	**Matopo**	**36.98**	**198**	LR		LR	LR	10 15 11.3	
comp=Z,159nm,18.8s,baz=24,slow=36									
AB31	**Akbulak array**	**37.87**	**22**	P			**P**	**10 00 16.4**	**-0.2**
ABKAR	**Akbulak array**	**37.87**	**22**	P			**P**	**10 00 16.2**	**-0.4**
AKTO	**Aktyubinsk**	**38.24**	**19**	LR		LR	LR	10 18 57.1	
comp=Z,47nm,18.7s,baz=191,slow=41									
KK31	**Karatay Array**	**38.36**	**37**				**P**	**10 00 21.9**	**+1.0**
KKAR	**Karatay Array**	**38.36**	**37**				**P**	**10 00 20.2**	**-0.7**
GERES	**GERESS Array B**	**39.89**	**333**	P			**P**	**10 00 32.2**	**-1.4**
comp=Z,1.5nm,0.7s,baz=147,slow=6.1,SNR=9.8									
comp=Z,1.5nm,0.7s									
TSUM	**Tsumeb**	**40.46**	**213**	LR		LR	LR	10 18 21.6	
comp=Z,126nm,18.5s,baz=302,slow=38									
AAK	**Ala-Archa**	**40.51**	**40**	LR		LR	LR	10 19 30.6	
comp=Z,125nm,18.3s,baz=254,slow=39									
PALK	**Pallekele**	**40.84**	**96**	LR		LR	LR	10 14 33.9	
comp=Z,96nm,20.3s,baz=285,slow=32									
NACGM	**Naroch**	**41.01**	**349**	*eP*			**P**	**10 00 41.5**	**-1.2**
comp=N,10.0nm,0.8s									
LBTB	**Lobatse**	**42.18**	**199**	LR		LR	LR	10 18 18.8	
comp=N,136nm,20.5s,baz=354,slow=36									
ARTI	**Arti**	**43.62**	**15**	LR		LR	LR	10 21 37.2	
comp=N,48nm,18.1s,baz=202,slow=39									
ARTI	**Arti**	**43.62**	**15**				**P**	**10 01 04.3**	**+0.3**
ARTI					IAmb		IAmb	10 01 05.1	
comp=Z,8.6nm,0.7s									
MDT	**Midelt**	**43.88**	**302**	LR		LR	LR	10 21 29.7	
comp=Z,184nm,18.6s,baz=62,slow=39									
MD01	**Midelt array s**	**44.01**	**302**	P			**P**	**10 01 07.6**	**-0.1**
KIRV	**Kirov**	**44.03**	**7**	LR		LR	LR	10 19 56.5	
comp=Z,80nm,18.5s,baz=201,slow=37									
BVAR	**Borovoye Array**	**44.91**	**26**	P			**P**	**10 01 13.9**	**-0.5**
comp=Z,1.7nm,0.9s,baz=212,slow=5.3,SNR=4.5									
BVAR				LR		LR	LR	10 21 55.6	
comp=Z,87nm,19.0s,baz=214,slow=39									
comp=Z,1.7nm,0.9s									
ESDC	**Sonseca Array**	**45.33**	**311**	P			**P**	**10 01 17.8**	**-0.2**
comp=Z,2.2nm,0.8s,baz=110,slow=7.1,SNR=8.4									
ESDC				LR		LR	LR	10 21 28.0	
comp=Z,49nm,19.0s,baz=120,slow=38									
comp=Z,2.2nm,0.8s									
BOSA	**Boshof**	**45.65**	**198**	LR		LR	LR	10 19 49.1	
comp=Z,129nm,18.4s,baz=26,slow=35									
MAKZ	**Makanchi**	**47.21**	**39**	P			**P**	**10 01 33.8**	**+1.2**
KURBB	**Kurchatov Arra**	**47.23**	**33**	P			**P**	**10 01 33.5**	**+0.9**
comp=Z,2.7nm,0.2s,baz=237,slow=7.7,SNR=7.9									
KURBB				LR		LR	LR	10 23 04.1	
comp=Z,72nm,18.1s,baz=181,slow=38									
comp=Z,2.7nm,0.2s									
FINES	**FINESS Array B**	**47.34**	**351**	P			**P**	**10 01 33.5**	**+0.2**
comp=Z,1.9nm,0.8s,baz=148,slow=9.0,SNR=7.4									
comp=Z,1.9nm,0.8s									
MKAR	**Makanchi Array**	**47.39**	**39**	P			**P**	**10 01 34.7**	**+0.6**
comp=Z,2.3nm,0.7s,baz=232,slow=6.9,SNR=10									
MKAR				LR		LR	LR	10 23 34.0	
comp=Z,98nm,20.6s,baz=284,slow=39									
comp=Z,2.3nm,0.7s									
MKAR	**Makanchi Array**	**47.39**	**39**				**P**	**10 01 34.4**	**+0.3**
HFS	**Hagfors**	**48.85**	**343**	P			**P**	**10 01 44.7**	**-0.4**
comp=Z,1.6nm,0.7s,baz=147,slow=14,SNR=2.1									
comp=Z,1.6nm,0.7s									
NOA	**NORSAR Array B**	**50.30**	**342**	P			**P**	**10 01 55.6**	**-0.6**
comp=Z,2.5nm,1.0s,baz=138,slow=7.9,SNR=3.7									
NOA				LR		LR	LR	10 26 43.1	
comp=Z,22nm,18.1s,baz=130,slow=40									
comp=Z,2.5nm,1.0s									
EKA	**Eskdalemuir Ar**	**51.95**	**330**	P			**P**	**10 02 08.0**	**-0.6**
comp=Z,1.5nm,0.6s,baz=120,slow=7.5,SNR=4.9									
comp=Z,1.5nm,0.6s									
ZAA0	**Zalesovo Array**	**52.27**	**32**	IAmb		IAmb		10 02 12.1	
comp=Z,12nm,1.4s									
ZALV	**Zalesovo Beam**	**52.27**	**32**	P			**P**	**10 02 11.0**	**0.0**
comp=Z,2.1nm,0.6s,baz=235,slow=6.7,SNR=8.2									
ZALV				LR		LR		10 25 22.8	
comp=Z,36nm,18.8s,baz=232,slow=37									
comp=Z,2.1nm,0.6s									
ZALV	**Zalesovo Beam**	**52.27**	**32**				**P**	**10 02 10.3**	**-0.7**
BBTS	**Babate**	**54.29**	**277**	LR		LR		10 26 46.1	
comp=Z,2µm,21.3s,baz=253,slow=37									
ARCES	**ARCESS Array B**	**55.16**	**354**	P			**P**	**10 02 31.6**	**-0.4**
comp=Z,3.7nm,1.1s,baz=157,slow=6.6,SNR=9.5									
comp=Z,3.7nm,1.1s									
ARCES	**ARCESS Array B**	**55.16**	**354**	IAmb		IAmb		10 02 36.5	
comp=Z,20nm,1.5s									
CMAR	**Chiang Mai Arr**	**56.55**	**78**	P			**P**	**10 02 42.1**	**-0.7**
comp=Z,0.7nm,0.3s,baz=274,slow=6.6,SNR=4.5									
comp=Z,0.7nm,0.3s									
PSI	**Prapat**	**59.52**	**96**	LR		LR		10 25 14.5	
comp=Z,62nm,20.6s,baz=233,slow=32									
SONM	**Songino Array**	**63.31**	**44**	P			**P**	**10 03 29.7**	**+0.8**
comp=Z,1.2nm,0.7s,baz=258,slow=6.3,SNR=6.6									
SONM				LR		LR		10 33 45.2	
comp=Z,77nm,20.4s,baz=252,slow=39									
comp=Z,1.2nm,0.7s									
SPB2	**Spitsbergen Ar**	**64.16**	**355**	P			**P**	**10 03 34.3**	**+0.4**
SPITS	**Spitsbergen Ar**	**64.17**	**355**	P			**P**	**10 03 34.4**	**+0.4**
comp=Z,7.7nm,0.9s,baz=131,slow=10,SNR=6.3									
comp=Z,7.7nm,0.9s									
HILR	**Hailar Array B**	**72.20**	**42**	P			**P**	**10 04 26.7**	**+1.8**
comp=Z,0.7nm,0.4s,baz=283,slow=13,SNR=1.7									
comp=Z,0.7nm,0.4s									
TIXI	**Tiksi**	**75.52**	**19**	LR		LR	LR	10 42 32.6	
comp=Z,51nm,18.8s,baz=215,slow=39									
YAK	**Yakutsk**	**76.78**	**29**	LR		LR	LR	10 43 23.6	
comp=Z,31nm,18.9s,baz=258,slow=39									
SEY	**Seymchan**	**86.56**	**25**	LR		LR	LR	10 49 07.6	
comp=Z,52nm,18.4s,baz=325,slow=39									
MA2	**Magadan**	**87.34**	**28**	LR		LR	LR	10 49 48.9	
comp=Z,33nm,18.9s,baz=312,slow=39									
MJAR	**Matsushiro Arr**	**87.76**	**53**	LR		LR	LR	10 48 39.8	
comp=Z,38nm,19.3s,baz=120,slow=38									
ASAJ	**Asahikawa**	**88.58**	**45**	LR		LR	LR	10 49 08.5	
comp=Z,54nm,20.1s,baz=329,slow=38									
MDP	**Montagnes des**	**91.01**	**276**	LR		LR	LR	10 43 52.1	
comp=Z,68nm,21.9s,baz=60,slow=34									
SNAA	**Sanae**	**91.16**	**192**	LR		LR	LR	10 44 03.9	
comp=Z,62nm,19.2s,baz=14,slow=34									
PETK	**Petropavlovsk-**	**93.82**	**32**	LR		LR	LR	10 52 39.7	
comp=Z,42nm,18.6s,baz=101,slow=38									
SADO	**Sadowa**	**98.70**	**321**	LR		LR	LR	10 54 14.4	
comp=Z,13nm,19.5s,baz=87,slow=37									
ASAR	**Alice Springs**	**99.61**	**112**	LR		LR	LR	10 43 34.0	
comp=Z,30nm,21.4s,baz=304,slow=30									
SJG	**San Juan**	**99.91**	**292**	LR		LR	LR	10 51 06.4	
comp=Z,27nm,19.4s,baz=93,slow=35									

*ASRS **25** 09:55:13.0±0.9, 53.°72N×86.°74E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 25 09:55:13.6±3.0, **53.°87N**×**86.°87E**, **h0**km, **mbtmp3.1**/2, **ML2.5**/2, **Error ellipse: s-maj=27.9km s-min=15.6km az=59.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.22**	**275**	I		I	I	10 00 40.0	
0.1nm,1.2s,baz=94,slow=339,SNR=2.1									
ZALV	**Zalesovo Beam**	**1.22**	**275**	Pg		Pg	Pg	09 55 35.8	-1.1
0.8nm,0.3s,baz=95,slow=14,SNR=7.9									
ZALV				Lg		Lg	Lg	09 55 53.9	
0.7nm,0.3s,baz=92,slow=29,SNR=6.7									
KURBB	**Kurchatov Arra**	**6.07**	**241**	Pn		Pn	Pn	09 56 45.2	+0.8
0.1nm,0.3s,baz=55,slow=13,SNR=1.4									
1.1nm,0.3s									
MKAR	**Makanchi Array**	**7.66**	**204**	Pn		Pn	Pn	09 57 07.7	+1.3
0.2nm,0.3s,baz=25,slow=14,SNR=8.4									
0.2nm,0.3s									

ASRS 25 09:55:52.0±1.5, **54.°17N**×**87.°12E**, **h0**km, **M2.5, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia**

IDC 25 10:06:08.2±3.4, **16.°39S**×**174.°88W**, **h0**km, **mb3.7**/4, **mbtmp3.7**/4, **Error ellipse: s-maj=183.2km s-min=27.9km az=147.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.24**	**258**	P		P	P	10 14 51.3	0.0
0.5nm,0.9s,baz=94,slow=6.7,SNR=6.8									
0.5nm,0.9s									
ASAR	**Alice Springs**	**48.46**	**253**	P		P	P	10 14 52.7	-0.2
1.1nm,0.5s,baz=88,slow=8.4,SNR=33									
1.1nm,0.5s									
NVAR	**Mina Array Bea**	**76.01**	**42**	P		P	P	10 17 58.1	+0.3
0.4nm,0.8s,baz=239,slow=8.5,SNR=3.7									
0.4nm,0.8s									
ILAR	**Eielson Array**	**83.69**	**12**	P		P	P	10 18 38.2	-0.3
0.8nm,1.1s,baz=218,slow=5.2,SNR=6.0									
0.8nm,1.1s									

IDC 25 10:07:27.8±3.7, **53.°80N**×**87.°92E**, **h0**km, **mbtmp2.6**/2, **ML2.2**/2, **Error ellipse: s-maj=34.4km s-min=19.2km az=49.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**276**	I		I	I	10 17 10.0	
baz=90,slow=343,SNR=3.8									
ZALV	**Zalesovo Beam**	**1.84**	**276**	Pg		Pn	Pn	10 08 01.2	+0.7
1.0nm,0.3s,baz=98,slow=15,SNR=12									
ZALV				Lg		Lg	Lg	10 08 26.2	
1.4nm,0.3s,baz=98,slow=24,SNR=8.0									
KURBB	**Kurchatov Arra**	**6.59**	**245**	Pn		Pn	Pn	10 09 06.6	+0.9
baz=59,slow=13,SNR=3.1									
0.2nm,0.

CMAR	**Chiang Mai Arr**	**5.21**	**92**	Pn		**Pn**	**10 12 16.4**	**-1.6**
	0.5nm,0.3s,baz=272,slow=14,SNR=1.7							
CMAR				Sn		**Sn**	**10 13 18.2**	**+1.4**
	baz=276,slow=26							
	0.7nm,0.3s							
MKAR	**Makanchi Array**	**29.49**	**344**	P		**P**	**10 17 03.4**	**+0.1**
	0.7nm,0.4s,baz=160,slow=9.1,SNR=12							
	0.7nm,0.4s							
KURBB	**Kurchatov Arra**	**34.00**	**343**	P		**P**	**10 17 42.6**	**-0.2**
	1.5nm,0.7s,baz=159,slow=8.5,SNR=8.9							
	1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**35.81**	**351**	P		**P**	**10 17 59.0**	**+0.6**
	1.5nm,0.7s,baz=168,slow=7.6,SNR=6.0							
	1.5nm,0.7s							
WRA	**Warramunga Arr**	**55.52**	**132**	P		**P**	**10 20 34.6**	**+0.2**
	0.2nm,0.8s,baz=311,slow=7.5,SNR=1.5							
	0.2nm,0.8s							
ASAR	**Alice Springs**	**57.71**	**135**	P		**P**	**10 20 50.7**	**+0.6**
	0.2nm,0.7s,baz=305,slow=7.7,SNR=2.2							
	0.2nm,0.7s							
H04N2	**CROZET ISLANDS**	**74.75**	**209**	T		T	11 44 41.4	
	baz=45							
H04N1	**CROZET ISLANDS**	**74.76**	**209**	T		T	11 44 48.1	
	baz=45							
H04N3	**CROZET ISLANDS**	**74.77**	**209**	T		T	11 44 46.1	
	baz=45							

UPP ***25*** *10:41:03.8±0.6,55.99N×15.54E,h0km,ML2.6,Suspected explosion*
DNK ***25*** *10:41:04.1±1.0,55.98N×15.54E,h0km,ML1.8, ML2.6(UPP),Explosion*
IDC ***25*** *10:41:05.4±2.9,56.07N×15.46E,h0km,mbtmp3.0/4, ML2.1/4,Error ellipse: s-maj=27.1km s-min=15.5km az=33.0*

ISC 25 10:41:00.8±1.0,55.94N±0.03×15.71E±0.05,h0km,n22, σ0s93/33,Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res
BSD	**Bornholm Skovb**	**0.94**	**209**	*e*		**Pg**	**10 41 17.9**	**-0.9**
	baz=19,slow=16							
BSD				*i* P		**Pb**	**10 41 20.8**	**+0.8**
BSD				*i* S		**Sb**	**10 41 33.8**	**+0.9**
BSD				IAML			10 41 34.8	
	comp=Z,17nm,0.4s							
VXJU	**Vaexsjoe**	**1.08**	**337**	P		**Pb**	**10 41 22.3**	**+0.1**
	baz=164							
VXJU				S		**Sg**	**10 41 35.5**	**+0.2**
VXJU	**Vaexsjoe**	**1.08**	**337**	P		**Pb**	**10 41 22.3**	**+0.1**
	baz=164							
VXJU				S		**Sg**	**10 41 35.5**	**+0.2**
DEL	**Delary**	**1.16**	**298**	P		**Pb**	**10 41 23.6**	**-0.1**
DEL	**Delary**	**1.16**	**298**	*i* P		**Pb**	**10 41 23.4**	**-0.2**
DEL				P		**Pb**	**10 41 23.6**	**-0.1**
DEL				IAML			10 41 41.7	
	comp=Z,8.1nm,0.4s							
OSKU	**Oskarshamn**	**1.28**	**10**	P		**Pn**	**10 41 26.9**	**+1.0**
OSKU	**Oskarshamn**	**1.28**	**10**	P		**Pn**	**10 41 26.9**	**+1.0**
LUNU	**Lund**	**1.31**	**257**	P		**Pn**	**10 41 26.8**	**+0.4**
LUNU				S		**Sb**	**10 41 43.6**	**-0.1**
LUNU	**Lund**	**1.31**	**257**	*i* P		**Pb**	**10 41 26.5**	**+0.2**
LUNU				P		**Pn**	**10 41 26.8**	**+0.4**
LUNU				S		**Sb**	**10 41 43.6**	**-0.1**
BJUU	**Bjuv**	**1.52**	**276**	P		**Pb**	**10 41 29.8**	**0.0**
BJUU	**Bjuv**	**1.52**	**276**	P		**Pb**	**10 41 29.8**	**0.0**
BJUU				*i* P		**Pg**	**10 41 29.9**	**+0.1**
EKSU	**Eksjoe**	**1.66**	**352**	P		**Pg**	**10 41 32.9**	**+0.4**
EKSU	**Eksjoe**	**1.66**	**352**	P		**Pg**	**10 41 32.9**	**+0.4**
GNOU	**Gnosjoe**	**1.73**	**322**	P		**Pb**	**10 41 33.5**	**0.0**
GNOU	**Gnosjoe**	**1.73**	**322**	P		**Pb**	**10 41 33.5**	**0.0**
FABU	**Falkenberg**	**1.97**	**304**	*i* P		**Pb**	**10 41 37.7**	**+0.2**
BORU	**Boraas**	**2.35**	**318**	*i* P		**Pb**	**10 41 43.9**	**0.0**
ONAU	**Onsala**	**2.55**	**307**	*e* P		**Pn**	**10 41 45.3**	**+1.9**
HFS	**Hagfors**	**4.34**	**347**	Pn		**Pn**	**10 42 07.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=169,slow=15,SNR=1.4							
HFS				Sn		**Sn**	**10 42 57.3**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=160,slow=24,SNR=1.4							
HFS				Lg	Lg		10 43 15.5	
	comp=Z,1.1nm,0.3s,baz=164,slow=28,SNR=10							
	comp=Z,0.9nm,0.6s							
NOA	**NORSAR Array B**	**5.63**	**337**	Pn		**Pn**	**10 42 26.2**	**+0.5**
	baz=158,slow=15,SNR=1.4							
NOA				Lg	Lg		10 43 57.2	
	comp=Z,0.1nm,0.3s,baz=168,slow=18,SNR=6.6							
	comp=Z,0.2nm,0.5s							
FINES	**FINESS Array B**	**7.72**	**40**	Pn		**Pn**	**10 42 56.2**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=223,slow=11,SNR=11							
FINES				Sn		**Sn**	**10 44 22.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=236,slow=20,SNR=1.7							
	comp=Z,0.8nm,0.4s							
ARCES	**ARCESS Array B**	**14.33**	**14**	Pn		**Pn**	**10 44 21.7**	**-3.0**
	baz=197,slow=12,SNR=1.2							
	comp=Z,1.5nm,0.9s							

ROM 25 11:35:00.7±0.1,41.049N±0.003×14.741E±0.004, h12km±1km,ML2.9/76,3C-5D,Error ellipse: s-maj=0.4km s-min=0.1km az=39.0,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res
PAOL	**Paolisi**	**0.13**	**262**	P		Pg	11 35 04.6	+0.6
PAOL				S		Sg	11 35 07.5	+1.0
PAOL				AML		AML		
	comp=E,7475μm,1.3s							
PAOL				AML		AML		
	comp=N,9545μm,0.5s							
PAOL				AML		AML		
	comp=E,7780μm,1.3s							
PAOL				AML		AML		
	comp=E,7470μm,1.3s							
PAOL				AML		AML		
	comp=N,9540μm,0.5s							
PAOL				AML		AML		
	comp=N,10045μm,0.5s							
PAOL				AML		AML		
	comp=N,9540μm,1.5s							
PAOL				AML		AML		
	comp=N,10045μm,1.5s							
PAOL				AML		AML		
	comp=E,7780μm,0.7s							
PAOL				AML		AML		
	comp=E,7475μm,0.7s							
VITU	**Vitulano (BN)**	**0.16**	**328**	⇓P		Pg	11 35 04.3	-0.1
VITU				S		Sg	11 35 07.6	+0.5
VITU				AML		AML		
	comp=E,4745μm,0.7s							
VITU				AML		AML		
	comp=E,4745μm,1.3s							
VITU				AML		AML		
	comp=N,11450μm,0.6s							
VITU				AML		AML		
	comp=N,11800μm,0.6s							
VITU				AML		AML		
	comp=E,12200μm,0.6s							
PSB1	**Pescosannita**	**0.18**	**17**	⇓P		Pg	11 35 05.1	+0.3
PSB1				S		Sg	11 35 08.5	+0.8
MRB1	**Monte Rocchett**	**0.19**	**66**	⇑P		Pb	11 35 05.6	-0.6
MRB1				S		Sg	11 35 08.9	+1.0
MRB1				AML		AML		
	comp=N,19850μm,0.5s							
MRB1				AML		AML		
	comp=E,15050μm,0.4s							
MRB1				AML		AML		
	comp=N,19500μm,0.5s							
MRB1				AML		AML		
	comp=E,15300μm,0.4s							
VBKN	**Vesuvio Bunker**	**0.32**	**227**	P		Pb	11 35 07.9	-0.5
VBKN				AML		AML		
	comp=N,11600μm,0.9s							
VBKN				AML		AML		
	comp=E,7025μm,1.0s							
VVDG	**Vesuvio Valle**	**0.32**	**229**	P		Pg	11 35 07.7	+0.5
VCRE	**Vesuvio Crater**	**0.33**	**226**	P		Pb	11 35 08.0	-0.5
VCRE				AML		AML		
	comp=E,9115μm,0.6s							
VCRE				AML		AML		
	comp=N,7730μm,0.9s							
VCRE				AML		AML		
	comp=E,8995μm,1.1s							
VCRE				AML		AML		
	comp=N,7730μm,1.1s							
BIOG	**Biogem**	**0.33**	**63**	P		Pg	11 35 08.0	+0.5
VTIR	**Vesuvio Tirone**	**0.34**	**225**	P		Pb	11 35 08.4	-0.3
SACR	**S. Croce Del S**	**0.35**	**356**	⇓P		Pg	11 35 08.0	+0.2
SACR				AML		AML		
	comp=E,1210μm,0.8s							
SACR				AML		AML		
	comp=N,1245μm,0.9s							
SACR				AML		AML		
	comp=N,1370μm,0.9s							
SACR				AML		AML		
	comp=E,1215μm,0.8s							
SACR				AML		AML		
	comp=E,1255μm,1.1s							
SACR				AML		AML		
	comp=E,1255μm,0.9s							
SACR				AML		AML		
	comp=N,1370μm,1.1s							
SACR				AML		AML		
	comp=N,1245μm,1.1s							
SNAL	**S. Angelo Dei**	**0.38**	**109**	⇑P		Pg	11 35 08.5	+0.2
SNAL				S		Sb	11 35 14.2	-0.9
SNAL				AML		AML		
	comp=N,3210μm,0.6s							
SNAL				AML		AML		
	comp=E,3235μm,0.6s							
SNAL				AML		AML		
	comp=E,3245μm,0.6s							
SNAL				AML		AML		
	comp=N,3185μm,0.6s							
CAFE	**Carife**	**0.38**	**93**	⇑P		Pg	11 35 08.7	+0.4
CAFE				AML		AML		
	comp=N,1930μm,0.3s							
CAFE				AML		AML		
	comp=E,2000μm,0.8s							
CAFE				AML		AML		
	comp=N,2030μm,1.0s							
CAFE				AML		AML		
	comp=E,2045μm,0.8s							
MCRV	**Calabrutti - M**	**0.42**	**129**	P		Pg	11 35 09.0	0.0
MCRV				S		Sg	11 35 15.4	+0.8
MCRV				AML		AML		
	comp=N,8355μm,0.3s							
MCRV				AML		AML		
	comp=E,7080μm,0.3s							
PIGN	**Pignataro Magg**	**0.45**	**290**	P		Pg	11 35 09.6	+0.1
PIGN				S		Sb	11 35 16.6	-0.6
PIGN				AML		AML		
	comp=N,1035μm,0.5s							
PIGN				AML		AML		
	comp=E,952μm,0.7s							
PIGN				AML		AML		
	comp=E,876μm,0.5s							
PIGN				AML		AML		
	comp=N,1055μm,0.6s							
PIGN				AML		AML		
	comp=E,876μm,0.5s							
PIGN				AML		AML		
	comp=E,952μm,0.7s							
SGTA	**Sant Agata di**	**0.48**	**79**	P		Pb	11 35 10.7	-0.4
SGTA				AML		AML		
	comp=E,1160μm,0.7s							
SGTA				AML		AML		
	comp=E,1175μm,0.7s							
SGTA				AML		AML		
	comp=N,1134μm,0.3s							
SGTA				AML		AML		
	comp=N,1040μm,0.3s							
BSSO	**Busso**	**0.51**	**347**	P		Pg	11 35 10.6	-0.1
BSSO				AML		AML		
	comp=E,380μm,0.6s							
BSSO				AML		AML		
	comp=N,356μm,0.8s							
BSSO				AML		AML		
	comp=N,356μm,1.2s							
VAGA	**Valle Agricola**	**0.53**	**314**	P		Pg	11 35 11.0	-0.1
VAGA				AML		AML		
	comp=E,1005μm,1.1s							
VAGA				AML		AML		
	comp=N,1770μm,1.0s							
VAGA				AML		AML		
	comp=E,1049μm,1.1s							
VAGA				AML		AML		
	comp=N,1810μm,1.1s							
VAGA				AML		AML		
	comp=E,1049μm,0.9s							
VAGA				AML		AML		
	comp=E,1005μm,0.9s							
CIGN	**Sant'Elia a Pi**	**0.62**	**12**	P		Pg	11 35 12.4	-0.4
VULT	**Monte Vulture**	**0.67**	**98**	P		Pg	11 35 13.3	-0.4
CDRU	**Civita di Ruta**	**0.70**	**142**	⇓P		Pg	11 35 13.6	-0.8
CDRU				AML		AML		
	comp=N,1445μm,1.3s							
CDRU				AML		AML		
	comp=N,1445μm,0.7s							
CDRU				AML		AML		
	comp=E,1995μm,0.6s							
MELA	**Melanico ??? S**	**0.72**	**24**	P		Pg	11 35 14.3	-0.3
MELA				AML		AML		
	comp=E,1395μm,1.6s							
MELA				AML		AML		
	comp=N,1505μm,0.4s							
MELA				AML		AML		
	comp=E,1435μm,0.3s							
MELA				AML		AML		
	comp=N,1505μm,0.4s							
MELA				AML		AML		
	comp=N,1555μm,0.4s							
MELA				AML		AML		
	comp=E,1435μm,1.7s							
MELA				AML		AML		
	comp=N,1555μm,1.6s							
MELA				AML		AML		
	comp=E,1395μm,1.6s							
MELA				AML		AML		
	comp=N,1505μm,1.6s							
CAGG	**Caggiano**	**0.76**	**130**	P		Pg	11 35 15.4	-0.1
RNI2	**Rionero Sannit**	**0.79**	**326**	P		Pg	11 35 15.2	-0.8
CAPA	**Cerignola FG**	**0.82**	**82**	P		Pg	11 35 16.5	-0.1
CAPA				AML		AML		
	comp=E,644μm,0.9s							
CAPA				AML		AML		
	comp=E,1265μm,0.8s							
CAPA				AML		AML		
	comp=N,728μm,0.9s							
CAPA				AML		AML		
	comp=N,1350μm,0.9s							
CAPA				AML		AML		
	comp=E,1265μm,1.2s							
CAPA				AML		AML		
	comp=E,644μm,1.1s							
CMPR	**Campora**	**0.85**	**149**	⇓P		Pg	11 35 16.0	-1.1
CMPR				AML		AML		
	comp=E,774μm,0.4s							
CMPR				AML		AML		
	comp=N,1004μm,0.4s							
FRES	**Fresagrandinar**	**0.93**	**357**	P		Pg	11 35 18.3	-0.3
PALZ	**Palazzo San Ge**	**0.93**	**96**	P		Pg	11 35 18.0	-0.6
PALZ				AML		AML		
	comp=N,3580μm,0.6s							
PALZ				AML		AML		
	comp=E,2085μm,1.1s							
PALZ				AML		AML		
	comp=N,3580μm,1.4s							
PALZ				AML		AML		
	comp=E,2085μm,0.9s							
SLCN	**Sala Consilina**	**0.94**	**134**	P		Pg	11 35 18.3	-0.6
ACER	**Acerenza**	**0.95**	**106**	P		Pg	11 35 18.4	-0.5
ACER				AML		AML		
	comp=E,2105μm,0.7s							
ACER				AML		AML		
	comp=E,2215μm,0.7s							
ACER				AML		AML		
	comp=N,2945μm,0.6s							
ACER				AML		AML		
	comp=N,2800μm,0.5s							
POFI	**Posta Fibreno**	**1.02**	**311**	P		Pb	11 35 20.0	-0.4
SGRT	**San Giovanni R**	**1.03**	**47**	P		Pb	11 35 20.0	-0.6
SGRT				AML		AML		
	comp=E,994μm,0.6s							
SGRT				AML		AML		
	comp=N,814μm,0.6s							
LRP	**Arpino**	**1.05**	**305**	P		Pb	11 35 20.5	-0.4
BULG	**Bulgheria - Ca**	**1.08**	**153**	P		Pb	11 35 20.5	-0.9
MCEL	**Monticello**	**1.08**	**132**	P		Pb	11 35 21.0	-0.4
MCEL				AML		AML		
	comp=E,814μm,0.4s							
MCEL				AML		AML		
	comp=N,784μm,1.2s							
MCEL				AML		AML		
	comp=E,816μm,0.4s							
MCEL				AML		AML		
	comp=E,829μm,0.4s							
MCEL				AML		AML		
	comp=N,794μm,1.2s							
MGR	**Morigerati**	**1.10**	**146**	P		Pb	11 35 19.9	-1.7
MSAG	**Monte S. Angel**	**1.10**	**53**	P		Pb	11 35 21.2	-0.6
MSAG				AML		AML		
	comp=E,846μm,1.6s							
MSAG				AML		AML		
	comp=E,354μm,1.6s							
MSAG				AML		AML		
	comp=N,2015μm,0.4s							
MSAG				AML		AML		
	comp=N,844μm,0.4s							
MSAG				AML		AML		
	comp=N,844μm,1.6s							
MSAG				AML		AML		
	comp=E,354μm,0.4s							
MSAG				AML		AML		
	comp=E,846μm,0.4s							
MSAG				AML		AML		
	comp=N,2015μm,1.6s							
PTRP	**Pietrapertosa**	**1.13**	**117**	P		Pb	11 35 21.7	-0.5
PTRP				AML		AML		
	comp=E,675μm,0.8s							
PTRP				AML		AML		
	comp=N,677μm,0.8s							
PTRP				AML		AML		
	comp=N,677μm,1.2s							
PTRP				AML		AML		
	comp=E,675μm,1.2s							
VVLD	**Villa Vallelon**	**1.18**	**315**	P		Pb	11 35 22.6	-0.4
VVLD				AML		AML		
	comp=E,269μm,0.9s							
VVLD				AML		AML		
	comp=E,276μm,0.8s							
VVLD				AML		AML		
	comp=E,276μm,1.2s							
VVLD				AML		AML		
	comp=N,242μm,0.7s							
VVLD				AML		AML		
	comp=E,269μm,1.1s							
VVLD				AML		AML		
	comp=N,246μm,0.7s							
SIRI	**Monte Sirino -**	**1.22**	**135**	P		Pn	11 35 23.4	-0.3
SIRI				AML		AML		
	comp=N,470μm,0.7s							
SIRI				AML		AML		
	comp=E,558μm,0.4s							
SIRI				AML		AML		
	comp=N,452μm,0.7s							
SIRI				AML		AML		
	comp=E,558μm,0.4s							
SIRI				AML		AML		
	comp=N,470μm,1.3s							
SIRI				AML		AML		
	comp=N,452μm,1.3s							
SCHR	**S. Chirico Rap**	**1.32**	**129**	P		Pn	11 35 25.1	0.0
AMUR	**Altamura**	**1.42**	**95**	AML		AML		
	comp=N,442μm,0.8s							
AMUR				AML		AML		
	comp=E,378μm,0.5s							
AMUR				AML		AML		
	comp=N,442μm,1.2s							
AMUR				AML		AML		
	comp=E,378μm,1.5s							
CRAC	**Craco**	**1.46**	**117**	AML		AML		
	comp=E,463μm,0.7s							
CRAC				AML		AML		
	comp=E,463μm,1.3s							
CRAC				AML		AML		
	comp=N,491μm,1.1s							
LTRZ	**Laterza**	**1.64**	**105**	P		Pn	11 35 29.8	+0.5
APEC	**Apecchio**	**3.04**	**326**	AML		AML		
	comp=N,124μm,0.1s							
APEC				AML		AML		
	comp=E,151μm,1.4s							
APEC				AML		AML		
	comp=E,151μm,0.6s							

ROM 25 11:35:22.8±0.1,41.068N±0.005×14.763E±0.005,h11km, ML2.4/2,Error ellipse: s-maj=0.7km s-min=0.4km az=17.0,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res
PAOL	**Paolisi**	**0.15**	**256**	P		Pg	11 35 26.7	+0.4
PAOL				S		Sg	11 35 30.2	+1.3
PAOL				AML		AML		
	comp=N,9545μm,0.5s							
PAOL				AML		AML		
	comp=E,7780μm,1.3s							
PAOL				AML		AML		
	comp=E,7470μm,1.3s							
PAOL				AML		AML		
	comp=N,9540μm,0.5s							
PAOL				AML		AML		
	comp=E,7475μm,1.3s							
PAOL				AML		AML		
	comp=N,10045μm,0.5s							
PAOL				END				
VITU	**Vitulano (BN)**	**0.15**	**319**	P		Pg	11 35 26.2	-0.2
VITU				S		Sg	11 35 29.6	+0.7
VITU				AML		AML		
	comp=N,11450μm,0.6s							
VITU				AML		AML		
	comp=N,11800μm,0.6s							
VITU				AML		AML		
	comp=E,4745μm,0.7s							
VITU				AML		AML		
	comp=E,12200μm,0.6s							
VITU				END				
MRB1	**Monte Rocchett**	**0.17**	**70**	P		Pg	11 35 27.2	+0.5
MRB1				S		Sg	11 35 30.5	+1.2
MRB1				AML		AML		
	comp=E,15050μm,0.4s							
MRB1				AML		AML		
	comp=N,19500μm,0.5s							
MRB1				AML		AML		
	comp=E,15300μm,0.4s							
MRB1				AML		AML		
	comp=N,19850μm,0.5s							
NL9	**Nola**	**0.22**	**228**	P		Pg	11 35 27.9	+0.4
RSF3	**Rocca San Feli**	**0.33**	**108**	P		Pg	11 35 29.5	+0.1
RSF3				S		Sb	11 35 35.0	-1.0
SACR	**S. Croce Del S**	**0.33**	**353**	P		Pg	11 35 30.1	+0.6
SACR				AML		AML		
	comp=E,1210μm,0.8s							
SACR				AML		AML		
	comp=N,1245μm,0.9s							
SACR				AML		AML		
	comp=E,1255μm,1.1s							
SACR				AML		AML		
	comp=E,1215μm,0.8s							
SACR				AML		AML		
	comp=N,1370μm,0.9s							
PTRJ	**Pietraroja**	**0.34**	**329**	P		Pg	11 35 30.0	+0.2
VBKN	**Vesuvio Bunker**	**0.35**	**227**	AML		AML		
	comp=N,11600μm,0.9s							
VBKN				AML		AML		
	comp=E,7025μm,1.0s							
NSC3	**Nusco**	**0.35**	**129**	P		Pb	11 35 30.6	-0.5
VCRE	**Vesuvio Crater**	**0.35**	**225**	AML		AML		
	comp=N,7730μm,0.9s							
VCRE				AML		AML		
	comp=E,9115μm,0.6s							
VCRE				AML		AML		
	comp=E,8995μm,1.1s							
LIO3	**Lioni**	**0.36**	**118**	P		Pg	11 35 30.1	+0.1
CAFE	**Carife**	**0.36**	**96**	AML		AML		
	comp=E,2045μm,0.8s							
CAFE				AML		AML		
	comp=N,2030μm,1.0s							
CAFE				AML		AML		
	comp=N,1930μm,0.3s							
CAFE				AML		AML		
	comp=E,2000μm,0.8s							
SNAL	**S. Angelo Dei**	**0.37**	**113**	P		Pg	11 35 30.2	+0.1
SNAL				S		Sb	11 35 36.3	-0.8
SNAL				AML		AML		
	comp=N,3185μm,0.6s							
SNAL				AML		AML		
	comp=E,3235μm,0.6s							
SNAL				AML		AML		
	comp=N,3210μm,0.6s							
SNAL				AML		AML		

	comp=E,3245µm,0.6s								
SNAL					AML	AML			
	comp=N,828µm,0.7s								
SNAL					AML	AML			
	comp=N,852µm,2.1s								
MCRV	**Calabrutti - M**	**0.42**	**133**		P	Pg	11 35 31.5	+0.4	
MCRV					AML	AML			
	comp=E,7080µm,0.3s								
MCRV					AML	AML			
	comp=N,8355µm,0.3s								
PIGN	**Pignataro Magg**	**0.46**	**287**		P	Pg	11 35 32.3	+0.5	
PIGN					AML	AML			
	comp=E,952µm,0.7s								
PIGN					AML	AML			
	comp=E,876µm,0.5s								
PIGN					AML	AML			
	comp=E,952µm,0.7s								
PIGN					AML	AML			
	comp=N,1035µm,0.5s								
PIGN					AML	AML			
	comp=E,876µm,0.5s								
PIGN					AML	AML			
	comp=N,1055µm,0.6s								
SGTA	**Sant Agata di**	**0.46**	**81**		AML	AML			
	comp=E,1160µm,0.7s								
SGTA					AML	AML			
	comp=N,1040µm,0.3s								
SGTA					AML	AML			
	comp=E,1175µm,0.7s								
SGTA					AML	AML			
	comp=N,1134µm,0.3s								
SNR3	**Senerchia**	**0.47**	**135**		P	Pg	11 35 31.9	0.0	
BSSO	**Busso**	**0.49**	**345**		P	Pg	11 35 32.8	+0.3	
BSSO					AML	AML			
	comp=E,380µm,0.6s								
BSSO					AML	AML			
	comp=N,356µm,0.8s								
VAGA	**Valle Agricola**	**0.53**	**311**		P	Pg	11 35 33.4	+0.3	
VAGA					AML	AML			
	comp=E,1005µm,1.1s								
VAGA					AML	AML			
	comp=E,1049µm,1.1s								
VAGA					AML	AML			
	comp=N,1810µm,1.1s								
VAGA					AML	AML			
	comp=N,1770µm,1.0s								
MELA	**Melanico ??? S**	**0.69**	**23**		AML	AML			
	comp=N,1555µm,0.4s								
MELA					AML	AML			
	comp=E,1395µm,1.6s								
MELA					AML	AML			
	comp=N,1505µm,0.4s								
MELA					AML	AML			
	comp=E,1395µm,1.6s								
MELA					AML	AML			
	comp=N,1505µm,0.4s								
MELA					AML	AML			
	comp=E,1435µm,0.3s								
CDRU	**Civita di Ruta**	**0.71**	**144**		AML	AML			
	comp=N,1445µm,1.3s								
CDRU					AML	AML			
	comp=E,1995µm,0.6s								
CMPR	**Campora**	**0.85**	**151**		AML	AML			
	comp=N,1004µm,0.4s								
CMPR					AML	AML			
	comp=E,774µm,0.4s								
STN3	**Satriano di Lu**	**0.86**	**128**		AML	AML			
	comp=N,73600µm,0.4s								
STN3					AML	AML			
	comp=E,62000µm,0.7s								
RM33	**Pellescritta (**	**1.85**	**322**		AML	AML			
	comp=E,98µm,1.6s								
RM33					AML	AML			
	comp=N,89µm,0.8s								

ROM 25 11:35:40.4±0.1, 41°07'1N±0°0'.006×14°7'47E±0°0'.007, h8km, Md2.4/12, Error ellipse: s-maj=0.6km s-min=0.5km az=221.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
PAOL	**Paolisi**	**0.14**	**254**	P		Pg	11 35 43.7	+0.3	
PAOL				S		Sg	11 35 46.9	+1.4	
PAOL					AML	AML			
	comp=E,7470µm,1.3s								
PAOL					AML	AML			
	comp=N,9540µm,0.5s								
PAOL					AML	AML			
	comp=E,7780µm,1.3s								
PAOL					AML	AML			
	comp=N,10045µm,0.5s								
PAOL					AML	AML			
	comp=N,9540µm,1.5s								
PAOL					AML	AML			
	comp=N,10045µm,1.5s								
PAOL					AML	AML			
	comp=E,7780µm,0.7s								
PAOL					AML	AML			
	comp=E,7475µm,0.7s								
PAOL				END					
VITU	**Vitulano (BN)**	**0.14**	**322**	P		Pg	11 35 43.4	-0.1	
VITU				S		Sg	11 35 45.8	+0.2	
VITU					AML	AML			
	comp=E,4745µm,0.7s								
VITU					AML	AML			
	comp=N,8755µm,0.5s								
VITU					AML	AML			
	comp=E,11400µm,0.7s								
VITU					AML	AML			
	comp=N,9050µm,0.5s								
VITU					AML	AML			
	comp=N,8755µm,1.5s								
VITU					AML	AML			
	comp=N,9050µm,1.5s								
VITU					AML	AML			
	comp=E,4745µm,1.3s								
VITU					AML	AML			
	comp=E,11400µm,1.3s								
VITU				END					
PSB1	**Pescosannita**	**0.16**	**18**	P		Pg	11 35 44.2	+0.5	
PSB1				S		Sg	11 35 47.4	+1.3	
MRB1	**Monte Rocchett**	**0.18**	**72**	P		Pg	11 35 44.6	+0.5	
MRB1					AML	AML			
	comp=N,11400µm,0.7s								
MRB1					AML	AML			
	comp=N,10950µm,0.7s								
MRB1					AML	AML			
	comp=E,11150µm,0.9s								
MRB1					AML	AML			
	comp=E,11300µm,0.9s								
BIOG	**Biogem**	**0.32**	**66**	P		Pb	11 35 47.9	-0.5	
BIOG					AML	AML			
	comp=N,3665µm,1.0s								
BIOG					AML	AML			
	comp=E,3165µm,0.6s								
BIOG					AML	AML			
	comp=N,3950µm,0.9s								
BIOG					AML	AML			
	comp=E,3125µm,0.5s								
BIOG					AML	AML			
	comp=N,3950µm,1.1s								
BIOG					AML	AML			
	comp=N,3665µm,1.0s								
SACR	**S. Croce Del S**	**0.33**	**355**	P		Pg	11 35 47.6	+0.7	
SACR					AML	AML			
	comp=E,1210µm,0.8s								
SACR					AML	AML			
	comp=N,1156µm,1.0s								
SACR					AML	AML			
	comp=N,1370µm,0.9s								
SACR					AML	AML			
	comp=E,1215µm,0.8s								
SACR					AML	AML			
	comp=N,1157µm,1.0s								
SACR					AML	AML			
	comp=E,1255µm,1.1s								
SACR					AML	AML			
	comp=N,1073µm,0.8s								
SACR					AML	AML			
	comp=N,1157µm,1.0s								
SACR					AML	AML			
	comp=E,1255µm,0.9s								
SACR				END					
VCRE	**Vesuvio Crater**	**0.35**	**224**		AML	AML			
	comp=N,7730µm,1.1s								
VCRE					AML	AML			
	comp=E,9115µm,0.6s								
VCRE					AML	AML			
	comp=N,7730µm,0.9s								
CAFE	**Carife**	**0.37**	**96**	P		Pg	11 35 48.2	+0.5	
CAFE					AML	AML			
	comp=N,2030µm,1.0s								
CAFE					AML	AML			
	comp=E,2000µm,0.8s								
CAFE					AML	AML			
	comp=N,1930µm,0.3s								
CAFE					AML	AML			
	comp=E,2045µm,0.8s								
CAFE				END					
SNAL	**S. Angelo Dei**	**0.38**	**112**	P		Pg	11 35 48.0	+0.2	
SNAL				S		Sb	11 35 54.2	-1.2	
SNAL					AML	AML			
	comp=N,3185µm,0.6s								
SNAL					AML	AML			
	comp=N,3210µm,0.6s								
SNAL					AML	AML			
	comp=E,3245µm,0.6s								
SNAL					AML	AML			
	comp=E,3235µm,0.6s								
SNAL				END					
MCRV	**Calabrutti - M**	**0.43**	**132**	P		Pg	11 35 48.8	0.0	
MCRV				S		Sg	11 35 55.1	+0.7	
MCRV					AML	AML			
	comp=E,7080µm,0.3s								
MCRV					AML	AML			
	comp=N,8355µm,0.3s								
MCRV				END					
PIGN	**Pignataro Magg**	**0.45**	**287**	P		Pg	11 35 49.6	+0.6	
PIGN				S		Sb	11 35 57.0	-0.4	
PIGN					AML	AML			
	comp=E,950µm,0.7s								
PIGN					AML	AML			
	comp=N,1030µm,0.5s								
PIGN					AML	AML			
	comp=E,876µm,0.5s								
PIGN					AML	AML			
	comp=E,951µm,0.7s								
PIGN					AML	AML			
	comp=E,876µm,0.5s								
PIGN					AML	AML			
	comp=N,1055µm,0.6s								
PIGN					AML	AML			
	comp=N,1035µm,0.5s								
PIGN					AML	AML			
	comp=E,952µm,0.7s								
GATE	**Gambatesa**	**0.46**	**16**	P		Pb	11 35 50.4	-0.3	
GATE					AML	AML			
	comp=E,950µm,0.5s								
GATE					AML	AML			
	comp=N,986µm,0.6s								
GATE					AML	AML			
	comp=E,928µm,0.5s								
GATE					AML	AML			
	comp=N,1020µm,0.6s								
GATE				END					
SGTA	**Sant Agata di**	**0.47**	**82**	P		Pb	11 35 50.5	-0.5	
SGTA					AML	AML			
	comp=E,1160µm,0.7s								
SGTA					AML	AML			
	comp=N,1040µm,0.3s								
SGTA					AML	AML			
	comp=E,1175µm,0.7s								
SGTA					AML	AML			
	comp=N,1134µm,0.3s								
SGTA					AML	AML			
	comp=N,1041µm,0.3s								
SGTA					AML	AML			
	comp=N,1134µm,0.3s								
BSSO	**Busso**	**0.49**	**346**	P		Pg	11 35 49.9	0.0	
BSSO				S		Sb	11 35 58.2	-0.5	
BSSO					AML	AML			
	comp=E,380µm,0.6s								
BSSO					AML	AML			
	comp=N,356µm,0.8s								
BSSO					AML	AML			
	comp=N,356µm,1.2s								
BSSO				END					
VAGA	**Valle Agricola**	**0.52**	**312**	P		Pb	11 35 51.2	-0.6	
VAGA				END					
CIGN	**Sant'Elia a Pi**	**0.59**	**12**		AML	AML			
	comp=N,456µm,1.6s								
CIGN					AML	AML			
	comp=E,363µm,0.6s								
VULT	**Monte Vulture**	**0.67**	**100**	P		Pg	11 35 53.3	0.0	
VULT					AML	AML			
	comp=E,1620µm,1.4s								
VULT					AML	AML			
	comp=N,3625µm,0.8s								
VULT					AML	AML			
	comp=E,1710µm,1.4s								
VULT					AML	AML			
	comp=N,3710µm,0.8s								
VULT					AML	AML			
	comp=E,1710µm,0.6s								
VULT					AML	AML			
	comp=E,1620µm,0.6s								
MELA	**Melanico ??? S**	**0.70**	**24**	P		Pb	11 35 54.9	+0.1	
MELA					AML	AML			
	comp=N,1505µm,0.4s								
MELA					AML	AML			
	comp=E,1435µm,0.3s								
MELA					AML	AML			
	comp=N,1555µm,0.4s								
MELA					AML	AML			
	comp=E,1435µm,1.7s								
MELA					AML	AML			
	comp=E,1395µm,1.6s								
MELA					AML	AML			
	comp=N,1555µm,1.6s								
MELA					AML	AML			
	comp=N,1505µm,1.6s								
MELA				END					
CDRU	**Civita di Ruta**	**0.72**	**144**	P		Pb	11 35 55.3	+0.1	
CDRU					AML	AML			
	comp=E,1995µm,0.6s								
CDRU					AML	AML			
	comp=N,1445µm,1.3s								
CDRU					AML	AML			
	comp=N,1445µm,0.7s								
CDRU				END					
CAPA	**Cerignola FG**	**0.81**	**83**	P		Pg	11 35 55.7	-0.4	
CAPA					AML	AML			
	comp=N,728µm,0.9s								
CAPA					AML	AML			
	comp=E,644µm,0.9s								
CAPA					AML	AML			
	comp=E,1265µm,0.8s								
CAPA					AML	AML			
	comp=N,1350µm,0.9s								
CAPA					AML	AML			
	comp=E,1265µm,1.2s								
CAPA					AML	AML			
	comp=E,644µm,1.1s								
CMPR	**Campora**	**0.86**	**150**	P		Pg	11 35 57.1	+0.1	
STN3	**Satriano di Lu**	**0.87**	**128**		AML	AML			
	comp=N,73600µm,0.4s								
STN3					AML	AML			
	comp=E,62000µm,0.7s								
PALZ	**Palazzo San Ge**	**0.93**	**97**	P		Pg	11 35 58.4	+0.2	
PALZ					AML	AML			
	comp=E,2085µm,1.1s								
PALZ					AML	AML			
	comp=N,3580µm,0.6s								
PALZ					AML	AML			
	comp=N,3580µm,1.4s								
PALZ					AML	AML			
	comp=E,2085µm,0.9s								
PALZ				END					
ACER	**Acerenza**	**0.95**	**107**	P		Pg	11 35 58.2	-0.4	
ACER					AML	AML			
	comp=E,2105µm,0.7s								
ACER					AML	AML			
	comp=N,2800µm,0.5s								
ACER					AML	AML			
	comp=E,2215µm,0.7s								
ACER					AML	AML			
	comp=N,2945µm,0.6s								
SLCN	**Sala Consilina**	**0.96**	**135**	P		Pb	11 35 59.6	+0.3	
SGRT	**San Giovanni R**	**1.01**	**47**	P		Pg	11 36 00.0	+0.1	
SGRT					AML	AML			
	comp=E,994µm,0.6s								
SGRT					AML	AML			
	comp=N,814µm,0.6s								
MCEL	**Monticello**	**1.09**	**133**	P		Pg	11 36 01.4	0.0	
MCEL					AML	AML			
	comp=E,812µm,0.4s								
MCEL					AML	AML			
	comp=N,784µm,1.2s								
MCEL					AML	AML			
	comp=E,829µm,0.4s								
MCEL					AML	AML			
	comp=E,816µm,0.4s								
MCEL					AML	AML			
	comp=N,794µm,1.2s								
MCEL					AML	AML			
	comp=N,784µm,1.2s								
BULG	**Bulgheria - Ca**	**1.10**	**154**	P		Pg	11 36 01.3	-0.2	
BULG					AML	AML			
	comp=E,460µm,0.6s								
BULG					AML	AML			
	comp=E,452µm,0.6s								
BULG					AML	AML			
	comp=E,452µm,1.4s								
BULG					AML	AML			
	comp=E,460µm,1.4s								
BULG					AML	AML			
	comp=N,737µm,1.4s								
BULG					AML	AML			
	comp=N,726µm,1.4s								
PTRP	**Pietrapertosa**	**1.14**	**118**	P		Pg	11 36 02.2	-0.1	
PTRP					AML	AML			
	comp=E,675µm,0.8s								
PTRP					AML	AML			
	comp=N,677µm,0.8s								
PTRP					AML	AML			
	comp=N,677µm,1.2s								
PTRP					AML	AML			
	comp=E,675µm,1.2s								
VVLD	**Villa Vallelon**	**1.16**	**314**		AML	AML			
	comp=N,242µm,0.7s								
VVLD					AML	AML			
	comp=E,269µm,0.9s								
VVLD					AML	AML			
	comp=E,276µm,0.8s								
VVLD					AML	AML			
	comp=E,269µm,1.1s								
VVLD					AML	AML			
	comp=E,276µm,1.2s								
VVLD					AML	AML			
	comp=N,246µm,0.7s								
SIRI	**Monte Sirino -**	**1.23**	**136**	P		Pb	11 36 03.3	-0.7	
SIRI					AML	AML			
	comp=E,558µm,0.4s								
SIRI					AML	AML			
	comp=N,452µm,0.7s								
SIRI					AML	AML			
	comp=N,470µm,0.7s								
SIRI					AML	AML			
	comp=N,470µm,1.3s								
SIRI					AML	AML			
	comp=N,452µm,1.3s								
SIRI					AML	AML			
	comp=E,558µm,0.4s								
SIRI					AML	AML			
	comp=E,558µm,0.4s								

*HLW **25** 11:39:31.6, 31°.34N×35°.55E, h14km, Ml3.6*
*JSO **25** 11:39:31.1±0.2, 31°.N±1°×3°.6E±°, h8km±2km, M4.0/24, Md4.1/19, ML4.1/22, MLv4.0/24, MLv4.0/24*
*GRAL **25** 11:39:31.6±1.1, 31°.31N×35°.57E, h4km±13km, MD3.9*
*GII **25** 11:39:31.5±0.0, 31°.35N±0°.01×35°.533E±0°.008, h12km, Mws3.5, confirmed*

ISC 25 11:39:31.6±0.8, 31°.34N±0°.02×35°.55E±0°.03, h16km±4km, n93, σ0857/107, 10C-8D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
GHAJ	**Ghor Haditha**	**0.04**	**162**	P		Pg	**11 39 34.1**	**-0.3**	
GHAJ	**Ghor Haditha**	**0.04**	**162**	⇓P		Pg	**11 39 34.2**	**-0.3**	
GHAJ	**Ghor Haditha**	**0.04**	**162**	S		Sg	**11 39 36.0**	**-0.4**	
LISJ	**El Lisan**	**0.12**	**210**	P		Pg	**11 39 35.2**	**0.0**	
MSBI	**Mazada**	**0.17**	**260**	P		Pg	**11 39 35.6**	**-0.3**	
MSBI	**Mazada**	**0.17**	**260**	S		Sg	**11 39 38.6**	**-0.1**	
KEGD	**Kibutz Ein-Ged**	**0.18**	**307**	P		Pg	**11 39 36.0**	**-0.1**	
KEGD	**Kibutz Ein-Ged**	**0.18**	**307**	S		Sg	**11 39 39.4**	**+0.4**	
NVZR	**Neve Zohar**	**0.25**	**220**	P		Pg	**11 39 37.3**	**+0.2**	
DSI	**Dead Sea**	**0.27**	**327**	P		Pg	**11 39 37.6**	**+0.1**	
DSI	**Dead Sea**	**0.27**	**327**	⇓P		Pg	**11 39 37.7**	**+0.2**	
DSI	**Dead Sea**	**0.27**	**327**	S		Sb	**11 39 42.2**	**-0.3**	
ARADI	**Arad**	**0.30**	**252**	⇑P		Pg	**11 39 37.7**	**-0.3**	
YTIR	**Yattir**	**0.37**	**273**	P		Pg	**11 39 39.0**	**-0.3**	
YTIR	**Yattir**	**0.37**	**273**	⇑P		Pg	**11 39 39.0**	**-0.3**	
YTIR	**Yattir**	**0.37**	**273**	S		Sg	**11 39 44.5**	**-0.1**	
NTKR	**Neot Hakikar**	**0.43**	**200**	P		Pb	**11 39 41.2**	**+0.3**	
SWQJ	**Swaqa**	**0.45**	**103**	P		Pb	**11 39 40.9**	**-0.3**	
SWQJ				S		Sb	**11 39 47.8**	**+0.1**	
VJRH	**Vered Jericho**	**0.49**	**348**	P		Pg	**11 39 41.2**	**-0.2**	
JER	**Jerusalem**	**0.52**	**325**	P		Pg	**11 39 41.5**	**-0.6**	
JER	**Jerusalem**	**0.52**	**325**	S		Sg	**11 39 49.3**	**+0.2**	
IDAN	**Idan**	**0.56**	**205**	P		Pg	**11 39 42.6**	**-0.1**	
AMAZ	**Amatzia**	**0.58**	**289**	⇓P		Pg	**11 39 42.7**	**-0.3**	
AMAZ	**Amatzia**	**0.58**	**289**	S		Sg	**11 39 50.8**	**+0.1**	
UJAP	**Al Uja**	**0.61**	**353**	P		Pg	**11 39 43.2**	**-0.4**	
YITV	**Yitav**	**0.61**	**350**	P		Pg	**11 39 43.3**	**-0.4**	
EYHV	**Ein Yahav**	**0.73**	**202**	P		Pg	**11 39 46.0**	**+0.1**	
MEFR	**Maale Efrayim**	**0.74**	**350**	P		Pg	**11 39 45.4**	**-0.6**	
MEFR	**Maale Efrayim**	**0.74**	**350**	S		Sg	**11 39 55.7**	**-0.1**	
SALP	**Salfit**	**0.79**	**337**	P		Pg	**11 39 46.0**	**-1.0**	
SALP				S		Sg	**11 39 57.2**	**-0.2**	
SALP	**Salfit**	**0.79**	**337**	⇓P		Pg	**11 39 46.2**	**-0.8**	
MSPR	**Moshav SAPIR**	**0.79**	**203**	P		Pg	**11 39 46.9**	**-0.1**	
RGMN	**Argaman**	**0.82**	**358**	P		Pg	**11 39 46.8**	**-0.8**	
ZFRI	**Zfri**	**0.85**	**202**	P		Pg	**11 39 47.6**	**-0.6**	
ZFRI				S		Sg	**11 39 59.1**	**-0.2**	
ZFRI	**Zfri**	**0.85**	**202**	⇓P		Pg	**11 39 47.6**	**-0.6**	
HMRA	**Hamra**	**0.86**	**353**	P		Pg	**11 39 47.3**	**-1.0**	
HMRA	**Hamra**	**0.86**	**353**	S		Sg	**11 39 59.5**	**-0.2**	
HMDT	**Nahal Hemdat**	**0.91**	**359**	P		Pg	**11 39 48.2**	**-1.1**	
HMDT				S		Sb	**11 40 01.3**	**+0.4**	
HMDT	**Nahal Hemdat**	**0.91**	**359**	⇑P		Pg	**11 39 48.2**	**-1.1**	
HMDT	**Nahal Hemdat**	**0.91**	**359**	S		Sg	**11 40 01.0**	**-0.2**	
HSUJ	**Al Zarqa**	**0.94**	**36**	P		Pg	**11 39 48.6**	**-1.2**	
QRNJ	**Al-Qirein**	**0.99**	**1**	P		Pb	**11 39 50.0**	**-0.4**	
QRNJ				S		Sb	**11 40 03.9**	**+0.7**	
SLTI	**Sal'it**	**0.99**	**334**	P		Pb	**11 39 49.8**	**-0.8**	
SLTI				S		Sb	**11 40 04.1**	**+0.7**	
SLTI	**Sal'it**	**0.99**	**334**	⇓P		Pb	**11 39 49.7**	**-0.8**	
SLTI	**Sal'it**	**0.99**	**334**	S		Sb	**11 40 03.9**	**+0.5**	
KZIT	**Kziot**	**1.08**	**247**	⇑P		Pb	**11 39 51.3**	**-0.7**	
KZIT	**Kziot**	**1.08**	**247**	S		Sb	**11 40 05.8**	**0.0**	
HSNJ	**Maan**	**1.09**	**174**	P		Pb	**11 39 51.6**	**-0.6**	
HSNJ				S		Sg	**11 40 06.9**	**-0.1**	
PRNI	**Paran**	**1.09**	**206**	P		Pb	**11 39 51.8**	**-0.4**	
PRNI				S		Sg	**11 40 07.2**	**+0.1**	
PRNI	**Paran**	**1.09**	**206**	⇑P		Pb	**11 39 51.9**	**-0.4**	
MMLI	**Mount Malkishu**	**1.10**	**354**	⇑P		Pb	**11 39 51.5**	**-0.8**	
MMLI	**Mount Malkishu**	**1.10**	**354**	S		Sb	**11 40 06.7**	**+0.3**	
OFRI	**`Ofer**	**1.36**	**339**	P		Pn	**11 39 55.8**	**-0.2**	
OFRI				S		Sb	**11 40 14.3**	**+0.3**	
OFRI	**`Ofer**	**1.36**	**339**	P		Pn	**11 39 55.6**	**-0.4**	
HRFI	**Mount Harif**	**1.38**	**199**	P		Pn	**11 39 55.7**	**-0.5**	
HRFI	**Mount Harif**	**1.38**	**199**	S		Sn	**11 40 14.7**	**+0.6**	
KRMI	**Paran Flat**	**1.41**	**210**	P		Pn	**11 39 56.4**	**-0.4**	
KRMI				S		Sn	**11 40 15.7**	**+0.6**	
KRMI	**Paran Flat**	**1.41**	**210**	⇑P		Pn	**11 39 56.4**	**-0.4**	
BLGI	**Bet Lehem HaGe**	**1.42**	**348**	P		Pn	**11 39 56.8**	**0.0**	
BLGI				S		Sb	**11 40 15.9**	**+0.3**	
BLGI	**Bet Lehem HaGe**	**1.42**	**348**	P		Pn	**11 39 56.9**	**+0.1**	
BLGI	**Bet Lehem HaGe**	**1.42**	**348**	S		Sb	**11 40 16.2**	**+0.6**	
MBRI	**Mt Berech**	**1.64**	**200**	P		Pn	**11 39 59.6**	**-0.3**	
MBRI	**Mt Berech**	**1.64**	**200**	P		Pn	**11 39 59.6**	**-0.3**	
KSHT	**Keshet**	**1.65**	**8**	P		Pn	**11 40 00.1**	**+0.1**	
KSHT	**Keshet**	**1.65**	**8**	S		Sn	**11 40 21.9**	**+1.0**	
AQBJ	**Aqaba**	**1.67**	**195**	P		Pn	**11 40 00.7**	**+0.5**	
MMA0B	**Mount Meron ar**	**1.67**	**356**	⇑P		Pn	**11 40 00.3**	**-0.1**	
MMA0B	**Mount Meron ar**	**1.67**	**356**	S		Sb	**11 40 22.8**	**-0.2**	
MMC7	**Mount Meron ar**	**1.68**	**355**	⇓P		Pn	**11 40 00.7**	**+0.2**	
EIL	**Elat**	**1.75**	**197**	⇓P		Pn	**11 40 01.0**	**-0.3**	
HNTI	**Hanita**	**1.76**	**350**	P		Pn	**11 40 02.3**	**+0.8**	
GEM	**Giv'at Ha'Em**	**1.86**	**3**	P		Pn	**11 40 03.1**	**+0.2**	
GEM	**Giv'at Ha'Em**	**1.86**	**3**	⇑P		Pn	**11 40 03.2**	**+0.2**	
NATI	**Neve Ativ**	**1.92**	**5**	P		Pn	**11 40 03.9**	**+0.2**	
NATI	**Neve Ativ**	**1.92**	**5**	⇑P		Pn	**11 40 03.8**	**+0.2**	
NATI	**Neve Ativ**	**1.92**	**5**	S		Sn	**11 40 28.6**	**+1.1**	
SHBL	**Chebaa**	**2.01**	**5**	*e*P		Pn	**11 40 05.0**	**0.0**	

RCY	Rachaya	2.16	6	*eP*	Pn	11 40 07.6	+0.4	
RCY				*eS*	Sn	11 40 34.9	+1.2	
QRWL	Qaraoun	2.20	3	*eP*	Pn	11 40 08.3	+0.7	
QRWL				*eS*	Sn	11 40 35.6	+1.0	
HBST	Basata	2.23	199	P	Pn	11 40 08.0	0.0	
DQRL	Deir Qamar	2.36	0	*eP*	Pn	11 40 11.1	+1.3	
DQRL				*eS*	Sn	11 40 38.2	-0.2	
NUB	Nuweibaa	2.44	199	P	Pn	11 40 11.1	+0.3	
ZAHL	Zahle	2.52	6	*eP*	Pn	11 40 12.8	+0.7	
BHL	Bhannes	2.56	2	*eP*	Pn	11 40 13.2	+0.7	
HDHB	Dhahab	2.73	197	P	Pn	11 40 14.7	-0.2	
HWQ	Hawqa	2.94	6	*eP*	Pn	11 40 18.9	+1.0	
FKH	Fakeheh	2.98	14	*eP*	Pn	11 40 19.2	+0.8	
ZNM	Zenema	3.03	230	P	Pn	11 40 18.3	-0.6	
HKAT	Jabal Katrina	3.12	206	P	Pn	11 40 19.4	-1.0	
BEIL	Beino	3.23	9	*eP*	Pn	11 40 22.9	+1.1	
HRDS	Abu Rudays	3.27	217	P	Pn	11 40 21.7	-0.6	
TR1	Tor 1	3.60	203	P	Pn	11 40 26.0	-0.8	
HHRG	Al Ghardaqah	4.46	203	P	Pn	11 40 39.8	+1.2	

*HLW **25** 11:48:47.0, 31°.35N × 35°.54E, h13km, MI3.9*
*JSO **25** 11:48:46.4±0.2, 31°.1 × 3°.6E±°, h9km±2km, M4.0/24, Md3.9/24, ML4.2/23, MLv4.0/24, MLv4.0/24*
*GRAL **25** 11:48:46.8±0.8, 31°.33N × 35°.57E, h0km±8km, MD3.7*
*GII **25** 11:48:46.9±0.0, 31°.356N±0°.003 × 35°.542E±0°.001, h15km, Mws3.5, confirmed*

ISC 25 11:48:47.0±0.8, **31°.35N**±0°.02×**35°.55E**±0°.03, **h16**km±4km, **n90**, σ0**51**/100, **4C-3D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHAJ	**Ghor Haditha**	**0.05**	**159**	P	**Pg**	**11 48 49.5**	**-0.4**
GHAJ	**Ghor Haditha**	**0.05**	**159**	P	**Pg**	**11 48 49.5**	**-0.4**
GHAJ	**Ghor Haditha**	**0.05**	**159**	S	**Sg**	**11 48 51.8**	**0.0**
LISJ	**El Lisan**	**0.12**	**208**	P	**Pg**	**11 48 50.5**	**-0.1**
LISJ				S	**Sb**	**11 48 53.3**	**-0.2**
MSBI	**Mazada**	**0.17**	**258**	P	**Pg**	**11 48 50.9**	**-0.4**
MSBI	**Mazada**	**0.17**	**258**	S	**Sg**	**11 48 54.1**	**+0.1**
KEGD	**Kibutz Ein-Ged**	**0.17**	**307**	P	**Pg**	**11 48 51.4**	**0.0**
KEGD	**Kibutz Ein-Ged**	**0.17**	**307**	S	**Sb**	**11 48 54.9**	**-0.2**
NVZR	**Neve Zohar**	**0.25**	**219**	P	**Pg**	**11 48 52.7**	**+0.2**
MZS	**Mizpe Shalem**	**0.25**	**330**	P	**Pg**	**11 48 52.7**	**+0.1**
DSI	**Dead Sea**	**0.26**	**327**	P	**Pg**	**11 48 52.9**	**0.0**
DSI	**Dead Sea**	**0.26**	**327**	P	**Pg**	**11 48 52.8**	**0.0**
DSI	**Dead Sea**	**0.26**	**327**	S	**Sb**	**11 48 57.7**	**-0.1**
ARADI	**Arad**	**0.30**	**251**	P	**Pg**	**11 48 53.2**	**-0.2**
ARADI	**Arad**	**0.30**	**251**	S	**Sg**	**11 48 58.0**	**+0.3**
YTIR	**Yattir**	**0.37**	**272**	P	**Pg**	**11 48 54.3**	**-0.4**
YTIR				S	**Sg**	**11 49 00.0**	**+0.1**
YTIR	**Yattir**	**0.37**	**272**	⇑P	**Pg**	**11 48 54.4**	**-0.2**
YTIR	**Yattir**	**0.37**	**272**	S	**Sg**	**11 48 59.9**	**+0.1**
NTKR	**Neot Hakikar**	**0.44**	**200**	P	**Pg**	**11 48 56.3**	**0.0**
ALMO	**Almog**	**0.45**	**351**	P	**Pg**	**11 48 56.0**	**-0.1**
SWQJ	**Swaqa**	**0.45**	**103**	P	**Pb**	**11 48 56.3**	**-0.4**
SWQJ				S	**Sb**	**11 49 03.3**	**+0.1**
KARV	**Kedem Haarava**	**0.46**	**355**	P	**Pg**	**11 48 56.1**	**-0.1**
VJRH	**Vered Jericho**	**0.49**	**349**	P	**Pg**	**11 48 56.6**	**-0.2**
JER	**Jerusalem**	**0.52**	**325**	P	**Pg**	**11 48 57.1**	**-0.3**
JER	**Jerusalem**	**0.52**	**325**	S	**Sb**	**11 49 04.9**	**-0.2**
NAAM	**Naama**	**0.56**	**353**	P	**Pg**	**11 48 57.9**	**-0.3**
IDAN	**Idan**	**0.56**	**205**	P	**Pg**	**11 48 58.0**	**-0.2**
AMAZ	**Amatzia**	**0.57**	**289**	⇓P	**Pg**	**11 48 58.1**	**-0.2**
AMAZ	**Amatzia**	**0.57**	**289**	S	**Sb**	**11 49 06.5**	**-0.1**
UJAP	**Al Uja**	**0.61**	**353**	P	**Pg**	**11 48 58.6**	**-0.4**
YITV	**Yitav**	**0.61**	**350**	P	**Pg**	**11 48 58.7**	**-0.3**
HZVA	**Hazeva**	**0.62**	**202**	P	**Pg**	**11 48 59.4**	**+0.1**
MEFR	**Maale Efrayim**	**0.73**	**350**	P	**Pg**	**11 49 00.9**	**-0.5**
MEFR	**Maale Efrayim**	**0.73**	**350**	S	**Sb**	**11 49 11.5**	**+0.3**
EYHV	**Ein Yahav**	**0.74**	**201**	P	**Pb**	**11 49 01.5**	**+0.1**
SLMZ	**Shlomzion**	**0.75**	**356**	P	**Pg**	**11 49 01.0**	**-0.7**
SALP	**Salfit**	**0.78**	**337**	P	**Pg**	**11 49 01.5**	**-0.8**
SALP				S	**Sb**	**11 49 12.8**	**+0.2**
SALP	**Salfit**	**0.78**	**337**	P	**Pg**	**11 49 01.6**	**-0.7**
MSPR	**Moshav SAPIR**	**0.79**	**203**	P	**Pg**	**11 49 02.2**	**-0.3**
RGMN	**Argaman**	**0.82**	**358**	P	**Pg**	**11 49 02.3**	**-0.7**
ZFRI	**Zfri**	**0.85**	**202**	P	**Pg**	**11 49 03.0**	**-0.7**
ZFRI	**Zfri**	**0.85**	**202**	⇓P	**Pg**	**11 49 02.9**	**-0.7**
ZFRI	**Zfri**	**0.85**	**202**	S	**Sb**	**11 49 15.2**	**+0.6**
HMRA	**Hamra**	**0.85**	**354**	P	**Pg**	**11 49 02.8**	**-0.9**
ROII	**Roi**	**0.90**	**357**	P	**Pg**	**11 49 03.4**	**-1.1**
HMDT	**Nahal Hemdat**	**0.90**	**359**	P	**Pg**	**11 49 03.7**	**-0.9**
HMDT				S	**Sb**	**11 49 16.5**	**+0.4**
HMDT	**Nahal Hemdat**	**0.90**	**359**	⇑P	**Pg**	**11 49 03.6**	**-0.9**
HSUJ	**Al Zarqa**	**0.93**	**36**	P	**Pg**	**11 49 04.1**	**-1.1**
QRNJ	**Al-Qirein**	**0.98**	**1**	P	**Pb**	**11 49 05.4**	**-0.3**
SLTI	**Sal'it**	**0.99**	**334**	P	**Pb**	**11 49 05.3**	**-0.5**
SLTI				S	**Sg**	**11 49 19.4**	**+0.2**
SLTI	**Sal'it**	**0.99**	**334**	⇓P	**Pb**	**11 49 05.1**	**-0.7**
RMNI	**Mount Ramon**	**1.01**	**222**	P	**Pb**	**11 49 05.6**	**-0.5**
RMNI	**Mount Ramon**	**1.01**	**222**	S	**Sg**	**11 49 19.9**	**+0.1**
KZIT	**Kziot**	**1.08**	**246**	⇑P	**Pb**	**11 49 06.6**	**-0.7**
KZIT	**Kziot**	**1.08**	**246**	S	**Sb**	**11 49 21.6**	**+0.4**
MMLI	**Mount Malkishu**	**1.09**	**354**	⇑P	**Pb**	**11 49 06.9**	**-0.7**
HSNJ	**Maan**	**1.09**	**174**	P	**Pb**	**11 49 07.0**	**-0.7**
HSNJ				S	**Sb**	**11 49 22.2**	**+0.4**
PRNI	**Paran**	**1.10**	**205**	P	**Pb**	**11 49 07.2**	**-0.5**
PRNI	**Paran**	**1.10**	**205**	P	**Pb**	**11 49 07.1**	**-0.5**
PRNI	**Paran**	**1.10**	**205**	S	**Sn**	**11 49 23.0**	**+0.4**
OFRI	**`Ofer**	**1.36**	**340**	P	**Pn**	**11 49 11.3**	**-0.1**
HRFI	**Mount Harif**	**1.38**	**199**	P	**Pn**	**11 49 11.4**	**-0.3**
HRFI	**Mount Harif**	**1.38**	**199**	S	**Sb**	**11 49 30.3**	**+0.4**
SHMJ	**Saham**	**1.39**	**8**	P	**Pn**	**11 49 11.5**	**-0.3**
LOTA	**Lotan**	**1.41**	**196**	P	**Pn**	**11 49 12.7**	**+0.6**
BLGI	**Bet Lehem HaGe**	**1.41**	**348**	P	**Pn**	**11 49 12.3**	**+0.2**
KRMI	**Paran Flat**	**1.42**	**210**	P	**Pn**	**11 49 11.9**	**-0.3**
KRMI	**Paran Flat**	**1.42**	**210**	P	**Pn**	**11 49 11.8**	**-0.3**
KRMI	**Paran Flat**	**1.42**	**210**	S	**Sn**	**11 49 30.9**	**+0.4**
KNHM	**Kefar Nahum**	**1.53**	**1**	P	**Pn**	**11 49 14.3**	**+0.5**
MBRI	**Mt Berech**	**1.64**	**200**	P	**Pn**	**11 49 15.0**	**-0.3**
MBRI				S	**Sn**	**11 49 37.1**	**+0.9**
AQBJ	**Aqaba**	**1.67**	**195**	P	**Pn**	**11 49 15.6**	**0.0**
GEM	**Giv'at Ha'Em**	**1.86**	**3**	P	**Pn**	**11 49 18.6**	**+0.3**
NATI	**Neve Ativ**	**1.92**	**5**	P	**Pn**	**11 49 19.2**	**+0.2**
NATI				S	**Sn**	**11 49 44.2**	**+1.4**
SHBL	**Chebaa**	**2.00**	**5**	*eP*	**Pn**	**11 49 20.5**	**+0.1**
RCY	**Rachaya**	**2.16**	**6**	*eP*	**Pn**	**11 49 22.9**	**+0.4**
RCY				*eS*	**Sn**	**11 49 49.7**	**+0.7**
QRWL	**Qaraoun**	**2.20**	**3**	*eP*	**Pn**	**11 49 23.4**	**+0.4**
HBST	**Basata**	**2.24**	**199**	P	**Pn**	**11 49 23.6**	**+0.1**
DQRL	**Deir Qamar**	**2.35**	**0**	*eP*	**Pn**	**11 49 26.1**	**+0.9**
NUB	**Nuweibaa**	**2.44**	**199**	P	**Pn**	**11 49 26.5**	**+0.3**
ZAHL	**Zahle**	**2.52**	**6**	*eP*	**Pn**	**11 49 27.5**	**+0.0**
BHL	**Bhannes**	**2.55**	**2**	*eP*	**Pn**	**11 49 28.8**	**+0.9**
HDHB	**Dhahab**	**2.74**	**197**	P	**Pn**	**11 49 30.2**	**-0.1**
SUZ	**Suez**	**2.78**	**238**	P	**Pn**	**11 49 30.3**	**-0.6**
HWQ	**Hawqa**	**2.94**	**6**	*eP*	**Pn**	**11 49 34.1**	**+0.8**
FKH	**Fakeheh**	**2.98**	**14**	*eP*	**Pn**	**11 49 34.4**	**+0.6**
ZNM	**Zenema**	**3.03**	**230**	P	**Pn**	**11 49 34.0**	**-0.3**
HKAT	**Jabal Katrina**	**3.12**	**206**	P	**Pn**	**11 49 34.8**	**-1.0**
BEIL	**Beino**	**3.23**	**9**	*eP*	**Pn**	**11 49 38.1**	**+1.0**
HRDS	**Abu Rudays**	**3.27**	**217**	P	**Pn**	**11 49 37.4**	**-0.3**

*AEIC **25** 12:16:33.5±1.9, 53°.61N±0°.05 × 164°.89W±0°.02, h22km±8km, Error ellipse: s-maj=8.0km s-min=1.3km az=171.0*

NEIC 25 12:16:32.6±1.0, **53°.65N**±0°.08×**164°.92W**±0°.08, **h24**km±13km, **ML3.1**/16, **ML2.8**(AEIC), **Error ellipse: s-maj=12.8km s-min=4.9km az=158.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUT	**Akutan**	**0.70**	**315**		Pn	12 16 46.7	-0.3
AKUT					IAML	12 16 57.4	
	comp=N,622nm,0.6s						
AKUT					IAML	12 16 57.9	
	comp=E,459nm,0.4s						
AKUT	**Akutan**	**0.70**	**315**		Sn	12 16 57.2	+0.1
AKMO	**Akutan Morgan**	**0.79**	**305**		Pb	12 16 47.8	+0.2
AKMO					Sn	12 16 58.9	-0.2
AKLV	**Akutan Long Va**	**0.80**	**311**		Pb	12 16 47.9	0.0
AKLV					Sn	12 16 59.1	-0.5
AKRB	**Akutan Reef Bi**	**0.83**	**306**		Pb	12 16 48.6	+0.2
AKRB					Sn	12 17 00.2	-0.2
LVA	**Lava Point**	**0.84**	**309**		Pn	12 16 48.7	-0.2
LVA					IAML	12 17 04.0	
	comp=N,779nm,0.6s						
LVA					IAML	12 17 07.0	
	comp=E,587nm,0.8s						
LVA	**Lava Point**	**0.84**	**309**		Sn	12 17 00.7	+0.2
AKGG	**Akutan Green G**	**0.84**	**312**		Pb	12 16 48.7	+0.2
AKGG					Sn	12 17 00.6	+0.1
WEBT	**Westdahl Beart**	**0.95**	**6**		Pb	12 16 50.2	-0.2
WEBT					Sn	12 17 03.2	-0.1
UNV	**Unalaska Valle**	**0.96**	**283**		Pb	12 16 49.9	-0.7
MREP	**Makushin Rep't**	**1.10**	**279**		Pn	12 16 52.1	-0.4
MSW	**Makushin Switc**	**1.14**	**284**		Pn	12 16 52.5	-0.5
MGOD	**Makushin Gods**	**1.17**	**278**		Pn	12 16 53.2	-0.3
SSBA	**Shishaldin**	**1.22**	**22**		Pn	12 16 53.6	-0.6
SSBA					Sn	12 17 08.3	-1.7
ISNN	**Isanotski Nort**	**1.37**	**29**		Pn	12 16 55.8	-0.4
FALS	**False Pass**	**1.50**	**35**		Pn	12 16 57.3	-0.7
OKTU	**Okmok Mt. Tuli**	**1.88**	**263**		Pn	12 17 03.3	+0.1
HAG	**Hague Volcano**	**2.43**	**45**		Pn	12 17 11.6	+0.8
NIKH	**Nikolski High**	**2.46**	**256**	Pn	Pn	12 17 12.2	+1.1
PS4A	**Pavlof South-4**	**2.47**	**45**		Pn	12 17 12.2	+0.9
PS1A	**Pavlof South-1**	**2.57**	**45**		Pn	12 17 13.6	+1.0
S12K	**Black Hills**	**2.65**	**38**	Pn	Pn	12 17 14.3	+0.5
S12K					IAML	12 17 54.9	
	comp=E,75nm,0.5s						
S12K					IAML	12 17 57.6	
	comp=N,72nm,0.5s						
SDPT	**Sand Point**	**3.10**	**55**		Pn	12 17 20.0	0.0
SDPT	**Sand Point**	**3.10**	**55**		IAML	12 18 08.5	
	comp=E,55nm,0.9s						
SDPT					IAML	12 18 08.8	
	comp=N,61nm,0.9s						
CNBA	**Chernabura Isl**	**3.34**	**67**	Pn	Pn	12 17 22.9	-0.4
O14K	**Tigyukauivet M**	**5.98**	**18**	Pn	Pn	12 18 00.7	+1.3
O15K	**Ungalikthiuk R**	**6.22**	**25**	Pn	Pn	12 18 03.2	+0.4
N14K	**Kuskokwak Cree**	**6.54**	**14**	Pn	Pn	12 18 08.5	+1.3
O16K	**Kokwok River B**	**7.05**	**30**	Pn	Pn	12 18 15.6	+1.4
M14K	**Bethel**	**7.30**	**12**	Pn	Pn	12 18 20.2	+2.6
M16K	**Timber Creek**	**8.07**	**21**	Pn	Pn	12 18 28.2	+0.1
J17K	**VABM Dome**	**10.24**	**15**	Pn	Pn	12 19 00.3	+2.4

*IDC **25** 12:17:55.0±1.7, 34°.39N × 23°.08E, h0km, mb3.8/9, mbtmp3.8/14, ML3.1/5, MS2.7/3, Error ellipse: s-maj=36.7km s-min=16.6km az=8.0*
*THE **25** 12:18:00.5, 35°N±22°×2°.3E±3°.0, h0km±20km, M3.0/4, MLh3.0/4*
*ATH **25** 12:18:04.2, 34°.95N × 23°.56E, h13km±3km, ML3.2/7, Manual Solution by A.Agalos First location: 2019/11/25 12:19:38, This location: 2019/11/25 13:08:11 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 4 km*

ISC 25 12:17:57.8±2.4, **34°.66N**±0°.08×**23°.34E**±0°.05, **h5**km±12km, **n51**, σ1**84**/54, **mb4.0**/9, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.62**	**22**	P	**Pg**	**12 18 10.3**	**+0.4**
KNDR				S	**Sg**	**12 18 18.0**	**0.0**
KNDR	**Palaiochora Ch**	**0.62**	**22**	P	**Pg**	**12 18 10.3**	**+0.4**
KNDR				S	**Sg**	**12 18 14.7**	**-3.3**
GVD	**Gavdhos**	**0.64**	**73**	P	**Pn**	**12 18 13.7**	**0.0**
GVD				S	**Sn**	**12 18 24.2**	**-0.1**
GVD	**Gavdhos**	**0.64**	**73**	P	**Pn**	**12 18 13.3**	**-0.3**
GVD				S	**Sb**	**12 18 19.3**	**-1.7**
CHNB	**Souda**	**1.02**	**36**	P	**Pg**	**12 18 17.1**	**-0.4**
CHAN	**Chania**	**1.04**	**34**	P	**Pg**	**12 18 18.0**	**+0.3**
ANKY	**Antikythira Is**	**1.21**	**359**	P	**Pn**	**12 18 20.0**	**-1.5**
ANKY				S	**Sb**	**12 18 35.6**	**-1.6**
ANKY	**Antikythira Is**	**1.21**	**359**	P	**Pn**	**12 18 20.6**	**-0.8**
IDI	**Anoyia**	**1.42**	**63**	Pn	**Pg**	**12 18 26.5**	**+1.4**
	6.3nm,0.3s,baz=250,slow=14,SNR=36						
IDI					Sn	12 18 51.5	+7.8
	17nm,0.3s,baz=322,slow=22,SNR=6.5						
IDI	**Anoyia**	**1.42**	**63**	P	**Pg**	**12 18 26.0**	**+0.8**
IDI	**Anoyia**	**1.42**	**63**	P	**Pg**	**12 18 25.9**	**+0.8**
KTHA	**Kythira Island**	**1.61**	**352**	P	**Pn**	**12 18 27.2**	**+0.1**
VLI	**Veliai**	**2.08**	**351**	P	**Pn**	**12 18 36.0**	**+2.5**
MHLO	**Agia Marina, M**	**2.21**	**23**	P	**Pn**	**12 18 36.4**	**+1.2**
SNT5	**Nea Kammeni, S**	**2.42**	**43**	P	**Pn**	**12 18 38.8**	**+0.7**
THERA	**Ancient Thera,**	**2.44**	**45**	P	**Pn**	**12 18 39.7**	**+1.3**
PYL	**PYLOS**	**2.58**	**330**	P	**Pn**	**12 18 42.7**	**+2.3**
MET2	**Kameni Chora,**	**2.95**	**360**	P	**Pn**	**12 18 47.6**	**+2.2**
MET5	**Makryloggos,Me**	**2.96**	**0**	P	**Pn**	**12 18 47.3**	**+1.7**
MET4	**Agioi Theodoro**	**2.96**	**1**	P	**Pn**	**12 18 47.9**	**+2.3**
KARP	**Karpathos**	**3.26**	**73**	P	**Pn**	**12 18 51.2**	**+1.6**
ATHU	**Athens Univers**	**3.33**	**6**	P	**Pn**	**12 18 51.9**	**+1.3**
GUR	**Goura**	**3.37**	**346**	P	**Pn**	**12 18 53.4**	**+2.1**
LTK	**Loutraki**	**3.38**	**355**	P	**Pn**	**12 18 53.1**	**+1.9**
DION	**Dionisos Attik**	**3.45**	**8**	P	**Pn**	**12 18 53.9**	**+1.6**
KARY	**Karystos**	**3.49**	**14**	P	**Pn**	**12 18 54.1**	**+1.4**
KLV	**Kalavryta, Ach**	**3.52**	**345**	P	**Pn**	**12 18 55.5**	**+2.3**
TRIZ	**Trizonia**	**3.84**	**345**	P	**Pn**	**12 19 00.3**	**+2.6**
AXS	**Araxos**	**3.87**	**336**	P	**Pn**	**12 19 00.3**	**+2.2**
EFP	**Efpalio**	**3.94**	**343**	P	**Pn**	**12 19 01.4**	**+2.4**
LKR	**Lokris**	**4.00**	**356**	P	**Pn**	**12 19 01.4**	**+1.7**
KYMI	**Kymi, Euboea I**	**4.02**	**9**	P	**Pn**	**12 19 01.4**	**+1.4**
ATAL	**Atalanti**	**4.04**	**356**	P	**Pn**	**12 19 01.2**	**+0.9**
ANX	**Ano Chora**	**4.09**	**344**	P	**Pn**	**12 19 03.1**	**+1.9**
PVO	**Paravola**	**4.21**	**340**	P	**Pn**	**12 19 05.5**	**+2.7**
VAE	**Valguarnera**	**7.76**	**294**	Pn	Pn	12 19 48.7	-2.8
	9.2nm,0.3s,baz=110,slow=13,SNR=7.7						
VAE					Sn	**12 21 15.9**	**-3.9**
	17nm,0.3s,baz=184,slow=11,SNR=2.5						
	33nm,0.4s						
BRTR	**Keskin Array B**	**9.65**	**55**	Pn	**Pn**	**12 20 21.1**	**+3.5**
	0.1nm,0.3s,baz=239,slow=15,SNR=4.5						
	0.9nm,0.6s						
EIL	**Elat**	**11.02**	**114**	Pn	**Pn**	**12 20 33.4**	**-2.9**
	0.5nm,0.3s,baz=324,slow=17,SNR=1.7						
	1.5nm,0.4s						
VRAC	**Vrancy**	**15.47**	**343**	LR	LR	12 28 58.1	
	comp=Z,32nm,18.2s,baz=177,slow=42						
GERES	**GERESS Array B**	**15.88**	**336**	Pn	**Pn**	**12 21 44.5**	**+2.4**
	baz=158,slow=11,SNR=1.6						
GERES				LR	LR	12 29 26.9	
	comp=Z,31nm,19.3s,baz=145,slow=43						
	0.4nm,0.5s						
KBZ	**Khabaz**	**17.63**	**53**	P	**P**	**12 22 07.2**	**+2.0**
	0.1nm,0.3s,baz=259,slow=7.7,SNR=3.9						
	4.0nm,1.1s						
ESDC	**Sonseca Array**	**22.29**	**291**	P	**P**	**12 22 52.3**	**-3.7**
	0.3nm,0.5s,baz=86,slow=11,SNR=3.3						
	0.3nm,0.5s						
HFS	**Hagfors**	**26.26**	**349**	P	**P**	**12 23 34.5**	**+0.7**
	1.7nm,0.6s,baz=134,slow=8.5,SNR=6.2						
	1.7nm,0.6s						
NOA	**NORSAR Array B**	**27.53**	**347**	LR	LR	12 36 10.2	
	comp=Z,8.9nm,21.5s,baz=260,slow=40						
ARCES	**ARCESS Array B**	**34.95**	**1**	P	**P**	**12 24 49.6**	**-0.9**
	1.9nm,0.9s,baz=196,slow=7.9,SNR=1.6						
	1.9nm,0.9s						
BVAR	**Borovoye Array**	**37.78**	**46**	P	**P**	**12 25 15.2**	**+0.4**
	0.3nm,0.5s,baz=259,slow=15,SNR=1.8						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**42.60**	**51**	P	**P**	**12 25 54.9**	**+0.1**
	1.2nm,0.5s,baz=274,slow=8.6,SNR=20						
	1.2nm,0.5s						
MKAR	**Makanchi Array**	**45.30**	**56**	P	**P**	**12 26 17.1**	**+0.5**
	1.2nm,0.5s,baz=263,slow=8.0,SNR=14						
	1.2nm,0.5s						
ZALV	**Zalesovo Beam**	**46.43**	**46**	P	**P**	**12 26 25.1**	**-0.2**
	1.1nm,0.5s,baz=266,slow=8.6,SNR=7.5						
	1.1nm,0.5s						
SONM	**Songino Array**	**60.96**	**50**	P	**P**	**12 28 13.1**	**+1.0**
	0.6nm,0.5s,baz=283,slow=8.6,SNR=2.3						
	0.6nm,0.5s						
CMAR	**Chiang Mai Arr**	**68.12**	**82**	P	**P**	**12 28 59.8**	**+0.6**
	0.3nm,0.3s,baz=298,slow=8.9,SNR=4.6						
	0.3nm,0.3s						

*IDC **25** 12:25:12.3±1.3, 22°.10N × 143°.20E, h0km, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=60.3km s-min=20.9km az=74.0*

ISC 25 12:25:17.0±1.6, **22°.1N**±0°.2×**143°.4E**±0°.5, **h35**km, **n15**, σ0**50**/9, **mb3.8**/8, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N1	**WAKE ISLAND Hy**	**22.12**	**92**	T	T	12 53 44.3	
	baz=280						
H11N2	**WAKE ISLAND Hy**	**22.12**	**92**	T	T	12 53 31.1	
	baz=280						
H11N3	**WAKE ISLAND Hy**	**22.14**	**92**	T	T	12 53 43.1	
	baz=280						
H11S3	**WAKE ISLAND Hy**	**22.18**	**95**	T	T	12 53 32.1	
	baz=284,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**22.19**	**95**	T	T	12 53 29.5	
	baz=284,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**22.20**	**95**	T	T	12 53 36.3	
	baz=284,slow=75,SNR=8.1						
SONM	**Songino Array**	**39.12**	**320**	P	**P**	**12 32 41.5**	**+0.3**
	0.3nm,0.3s,baz=105,slow=9.1,SNR=1.7						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**42.71**	**193**	P	**P**	**12 33 11.5**	**+0.7**
	0.8nm,0.8s,baz=12,slow=9.0,SNR=6.6						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**46.42**	**192**	P	**P**	**12 33 39.7**	**-0.8**
	0.3nm,0.8s,baz=13,slow=9.2,SNR=5.4						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**53.98**	**321**	P	**P**	**12 34 37.2**	**-0.1**
	0.9nm,0.4s,baz=116,slow=7.2,SNR=5.6						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**54.53**	**312**	P	**P**	**12 34 41.7**	**+0.2**
	0.4nm,0.6s,baz=92,slow=9.3,SNR=4.0						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**57.33**	**317**	P	**P**	**12 35 01.4**	**-0.1**
	1.0nm,0.8s,baz=93,slow=7.5,SNR=8.3						
	1.0nm,0.8s						
BVAR	**Borovoye Array**	**62.46**	**319**	P	**P**	**12 35 36.4**	**-0.3**
	1.5nm,0.6s,baz=87,slow=7.7,SNR=6.6						
	1.5nm,0.6s						
FINES	**FINESS Array B**	**82.87**	**335**	P	**P**	**12 37 37.4**	**-0.3**
	3.4nm,1.0s,baz=77,slow=8.2,SNR=5.1						
	3.4nm,1.0s						
LPAZ	**La Paz**	**149.75**	**85**	PKPbc	**PKiKP**	**12 45 06.2**	**+0.4**
	0.9nm,0.5s,baz=314,slow=3.7,SNR=5.1						

AUST 25 12:28:04.5±1.4, **18°S**±10°×**12°0E**±°, **h10**km, **mb3.9**/1, **ML2.5**/3, **Error ellipse: s-maj=21.3km s-min=9.5km az=168.6, Western Australia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAAN	**Eighty Mile Be**	**1.43**	**123**	P	Pn	12 28 29.8	-0.7
CAAN				S	Sn	12 28 49.3	0.0
MBWA	**Marble Bar**	**2.71**	**190**	P	Pn	12 28 47.9	-0.3
PSAC1	**Pilbara Seismi**	**3.07**	**188**	P	Pn	12 28 52.7	-0.4
PSA00	**Pilbara Seismi**	**3.10**	**187**	P	Pn	12 28 53.9	+0.3
PSA00				S	Sn	12 29 31.4	+0.7
MEEK	**Meekatharra**	**8.26**	**190**	P	Pn	12 30 04.9	+0.4
	comp=Z,0.1nmcomp=Z,18nm,2.5s						

*IDC **25** 12:30:48.0±4.2, 29°.62N × 50°.45E, h0km, mb3.9/11, mbtmp4.0/12, ML3.4/1, Error ellipse: s-maj=80.4km s-min=28.1km az=6.0*
*NEIC **25** 12:30:50.7±1.8, 29°.69N±0°.05 × 50°.5E±0°.1, h10km±1km, mb4.1/7, Error ellipse: s-maj=18.4km s-min=3.4km az=244.0*
*TEH **25** 12:30:51.9, 29°.72N × 50°.72E, h13km±2km*

ISC 25 12:30:50.8±0.7, **29°.69N**±0°.07×**50°.64E**±0°.07, **h10**km, **n48**, σ1**32**/46, **mb3.9**/15, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAZ2	**K

RM33				AML	AML		
	comp=E,392µm,0.3s						
RM33				AML	AML		
	comp=E,398µm,0.8s						
RM33				AML	AML		
	comp=N,622µm,1.3s						
RM33				AML	AML		
	comp=N,542µm,0.5s						
RM33				AML	AML		
	comp=E,392µm,0.3s						
RM33				AML	AML		
	comp=N,542µm,1.5s						
RM33				AML	AML		
	comp=E,338µm,0.1s						
RM33				AML	AML		
	comp=N,456µm,0.1s						
RM33				AML	AML		
	comp=N,423µm,0.1s						
RM33				AML	AML		
	comp=E,340µm,0.1s						
AQU	**L'Aquila**	**0.14**	**165**	P	Pg	12 31 06.0	+0.1
AQU				S	Sb	12 31 09.3	-0.4
SMA1	**SAN MARTINO**	**0.14**	**355**	⇑P	Pg	12 31 06.3	+0.3
SMA1				S	Sb	12 31 09.2	-0.6
SMA1				AML	AML		
	comp=E,796µm,0.9s						
SMA1				AML	AML		
	comp=N,906µm,0.4s						
SMA1				AML	AML		
	comp=E,796µm,0.9s						
SMA1				AML	AML		
	comp=N,684µm,0.2s						
SMA1				AML	AML		
	comp=E,777µm,0.2s						
GIGS	**Gran Sasso**	**0.16**	**103**	P	Pg	12 31 06.3	+0.1
GIGS				S	Sg	12 31 09.3	+0.3
GIGS				AML	AML		
	comp=E,179µm,0.1s						
GIGS				AML	AML		
	comp=N,362µm,0.2s						
GIGS				AML	AML		
	comp=E,179µm,0.1s						
GIGS				AML	AML		
	comp=N,362µm,0.2s						
TERO	**Teramo**	**0.23**	**54**	P	Pg	12 31 07.4	+0.2
TERO				S	Sg	12 31 11.4	+0.8
TERO				AML	AML		
	comp=E,310µm,0.2s						
TERO				AML	AML		
	comp=N,360µm,0.7s						
TERO				AML	AML		
	comp=E,310µm,0.2s						
TERO				AML	AML		
	comp=N,317µm,0.1s						
LNSS	**Leonessa**	**0.26**	**296**	P	Pg	12 31 08.0	+0.2
LNSS				S	Sg	12 31 12.3	+0.8
LNSS				AML	AML		
	comp=E,683µm,0.1s						
LNSS				AML	AML		
	comp=N,465µm,0.4s						
LNSS				AML	AML		
	comp=E,683µm,0.1s						
LNSS				AML	AML		
	comp=E,643µm,0.1s						
LNSS				AML	AML		
	comp=N,299µm,0.1s						
LNSS				AML	AML		
	comp=N,269µm,0.1s						
MTRA	**Matera**	**0.27**	**7**	⇑P	Pg	12 31 08.0	+0.1
MTRA				S	Sg	12 31 12.3	+0.5
MTRA				AML	AML		
	comp=E,1185µm,0.8s						
MTRA				AML	AML		
	comp=N,1020µm,0.2s						
MTRA				AML	AML		
	comp=E,1188µm,0.8s						
MTRA				AML	AML		
	comp=N,1026µm,0.2s						
MTRA				AML	AML		
	comp=E,1186µm,0.8s						
MTRA				AML	AML		
	comp=E,1189µm,0.8s						
MTRA				AML	AML		
	comp=E,1186µm,1.2s						
MTRA				AML	AML		
	comp=E,1189µm,1.2s						
MTRA				AML	AML		
	comp=N,1026µm,0.2s						
MTRA				AML	AML		
	comp=N,1020µm,0.2s						
MTRA				AML	AML		
	comp=E,887µm,0.2s						
MTRA				AML	AML		
	comp=N,1020µm,0.2s						
MTRA				AML	AML		
	comp=N,1024µm,0.2s						
MTRA				AML	AML		
	comp=E,892µm,0.2s						
FAGN	**Fagnano**	**0.28**	**142**	P	Pg	12 31 08.4	+0.3
FAGN				S	Sb	12 31 13.3	-0.4
FAGN				AML	AML		
	comp=N,650µm,1.2s						
FAGN				AML	AML		
	comp=E,672µm,0.5s						
FAGN				AML	AML		
	comp=N,650µm,0.8s						
FAGN				AML	AML		
	comp=E,671µm,0.5s						
FAGN				AML	AML		
	comp=N,607µm,0.4s						
FIAM	**Fiamignano**	**0.28**	**219**	P	Pg	12 31 08.5	+0.3
VCEL	**Villa Celiera**	**0.37**	**104**	P	Pb	12 31 10.6	-0.2
VCEL				S	Sg	12 31 15.7	+0.8
VCEL				AML	AML		
	comp=N,334µm,1.6s						
VCEL				AML	AML		
	comp=N,334µm,0.4s						
VCEL				AML	AML		
	comp=E,364µm,1.1s						
VCEL				AML	AML		
	comp=E,305µm,0.2s						
VCEL				AML	AML		
	comp=N,295µm,0.2s						
NRCA	**Norcia**	**0.39**	**333**	P	Pg	12 31 10.1	0.0
NRCA				S	Sb	12 31 16.2	-0.7
NRCA				AML	AML		
	comp=N,912µm,0.1s						
NRCA				AML	AML		
	comp=N,1060µm,0.1s						
NRCA				AML	AML		
	comp=E,1175µm,0.1s						
NRCA				AML	AML		
	comp=E,1106µm,0.1s						
NRCA				AML	AML		
	comp=N,1060µm,0.1s						
NRCA				AML	AML		
	comp=E,1107µm,0.1s						
NRCA				AML	AML		
	comp=N,913µm,0.1s						
NRCA				AML	AML		
	comp=E,1177µm,0.1s						
T0110	**Collepietro**	**0.41**	**130**	P	Pg	12 31 10.4	0.0
T0110				S	Sb	12 31 16.8	-0.7
T0110				AML	AML		
	comp=E,190µm,1.1s						
T0110				AML	AML		
	comp=E,190µm,0.9s						
T0110				AML	AML		
	comp=N,208µm,0.2s						
T0110				AML	AML		
	comp=N,208µm,0.2s						
T0110				AML	AML		
	comp=E,159µm,0.2s						
MMO1	**Montemonaco**	**0.41**	**357**	P	Pg	12 31 10.5	0.0
MMO1				S	Sb	12 31 17.1	-0.5
MC2	**Monte Cornacci**	**0.44**	**344**	P	Pg	12 31 11.3	+0.2
MC2				S	Sg	12 31 17.7	+0.6
MF5	**Montefalcone A**	**0.51**	**9**	P	Pb	12 31 12.7	-0.3
MF5				S	Sb	12 31 19.9	-0.4
GUMA	**Gualdo di Mace**	**0.57**	**359**	P	Pb	12 31 13.9	-0.2
GUMA				AML	AML		
	comp=E,352µm,0.3s						
GUMA				AML	AML		
	comp=N,373µm,1.5s						
GUMA				AML	AML		
	comp=N,288µm,0.2s						
GUMA				AML	AML		
	comp=E,311µm,0.3s						
GUMA				AML	AML		
	comp=E,353µm,0.3s						
FDMO	**Fiordimonte**	**0.58**	**340**	P	Pg	12 31 13.7	0.0
FDMO				S	Sb	12 31 22.2	-0.2
FDMO				AML	AML		
	comp=E,122µm,0.7s						
FDMO				AML	AML		
	comp=E,122µm,1.3s						
FDMO				AML	AML		
	comp=N,118µm,0.8s						
FDMO				AML	AML		
	comp=N,105µm,0.2s						
FDMO				AML	AML		
	comp=E,108µm,0.2s						
CESI	**CESI - Serrava**	**0.61**	**328**	P	Pg	12 31 14.0	-0.2
CESI				AML	AML		
	comp=N,145µm,0.2s						
CESI				AML	AML		
	comp=E,76µm,0.3s						
CSP1	**Cessapalombo**	**0.61**	**350**	P	Pg	12 31 14.2	-0.1
CSP1				AML	AML		
	comp=E,132µm,0.2s						
CSP1				AML	AML		
	comp=N,116µm,0.2s						

ROM 25 12:31:42.8±0.1, 41°.059N±0°.006×14°.754E±0°.006, h11km, ML2.3/22, Error ellipse: s-maj=0.7km s-min=0.5km az=339.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BENI	**Universita' De**	**0.07**	**11**	P	Pg	12 31 45.5	+0.4
BENI				S	Sg	12 31 47.8	+0.9
PAOL	**Paolisi**	**0.14**	**259**	P	Pg	12 31 46.6	+0.4
PAOL				S	Sg	12 31 49.9	+1.4
PAOL				AML	AML		
	comp=E,1375µm,1.4s						
PAOL				AML	AML		
	comp=N,2285µm,1.4s						
PAOL				AML	AML		
	comp=E,1520µm,1.4s						
PAOL				AML	AML		
	comp=N,2375µm,1.4s						
PAOL				AML	AML		
	comp=N,2285µm,0.6s						
PAOL				AML	AML		
	comp=N,2375µm,0.6s						
PAOL				AML	AML		
	comp=E,1520µm,0.6s						
PAOL				AML	AML		
	comp=E,1375µm,0.6s						
VITU	**Vitulano (BN)**	**0.16**	**323**	P	Pg	12 31 46.3	-0.1
VITU				S	Sg	12 31 49.7	+0.8
VITU				AML	AML		
	comp=E,949µm,0.2s						
VITU				AML	AML		
	comp=E,947µm,0.2s						
VITU				AML	AML		
	comp=N,2670µm,0.3s						
VITU				AML	AML		
	comp=N,2790µm,0.3s						
VITU				AML	AML		
	comp=E,2405µm,1.2s						
MRB1	**Monte Rocchett**	**0.18**	**68**	P	Pg	12 31 47.4	+0.7
MRB1				AML	AML		
	comp=N,2105µm,0.5s						
MRB1				AML	AML		
	comp=N,2105µm,0.5s						
MRB1				AML	AML		
	comp=N,2200µm,0.5s						
MRB1				AML	AML		
	comp=E,1805µm,1.0s						
MRB1				AML	AML		
	comp=N,2200µm,1.5s						
MRB1				AML	AML		
	comp=N,2105µm,1.5s						
MRB1				AML	AML		
	comp=E,1780µm,1.0s						
NL9	**Nola**	**0.21**	**229**	P	Pg	12 31 47.7	+0.5
BIOG	**Biogem**	**0.32**	**64**	P	Pb	12 31 50.6	0.0
RSF3	**Rocca San Feli**	**0.33**	**106**	P	Pb	12 31 50.3	-0.5
RSF3				S	Sg	12 31 55.0	+1.0
VBKN	**Vesuvio Bunker**	**0.34**	**227**	P	Pb	12 31 50.3	-0.6
VBKN				AML	AML		
	comp=E,2065µm,0.6s						
VBKN				AML	AML		
	comp=N,1295µm,1.0s						
VBKN				AML	AML		
	comp=E,2065µm,1.4s						
VVDG	**Vesuvio Valle**	**0.34**	**228**	P	Pg	12 31 49.9	+0.4
SACR	**S. Croce Del S**	**0.34**	**354**	P	Pg	12 31 49.9	+0.2
VCRE	**Vesuvio Crater**	**0.34**	**226**	P	Pb	12 31 50.4	-0.6
NSC3	**Nusco**	**0.35**	**127**	P	Pg	12 31 49.9	0.0
NSC3				S	Sb	12 31 56.0	-0.7
VTIR	**Vesuvio Tirone**	**0.35**	**225**	P	Pg	12 31 50.5	+0.6
VTIR				AML	AML		
	comp=E,516µm,0.5s						
VTIR				AML	AML		
	comp=N,379µm,1.0s						
VTIR				AML	AML		
	comp=N,379µm,1.0s						
VTIR				AML	AML		
	comp=E,516µm,1.5s						
SSB3	**San Sossio Bar**	**0.36**	**87**	P	Pb	12 31 50.7	-0.5
LIO3	**Lioni**	**0.36**	**116**	P	Pg	12 31 50.2	+0.2
LIO3				S	Sg	12 31 55.5	+0.6
CAFE	**Carife**	**0.37**	**95**	P	Pg	12 31 50.3	+0.2
CAFE				S	Sb	12 31 56.2	-1.0
SNAL	**S. Angelo Dei**	**0.37**	**111**	P	Pg	12 31 50.3	+0.2
SNAL				S	Sb	12 31 56.9	-0.3
SNAL				AML	AML		
	comp=E,327µm,0.6s						
SNAL				AML	AML		
	comp=N,360µm,0.7s						
SNAL				AML	AML		
	comp=E,332µm,1.2s						
SNAL				AML	AML		
	comp=N,356µm,0.6s						
SNAL				AML	AML		
	comp=E,327µm,1.4s						
SNAL				AML	AML		
	comp=E,332µm,0.8s						
MCRV	**Calabrutti - M**	**0.42**	**131**	P	Pg	12 31 50.8	-0.3
MCRV				S	Sg	12 31 57.4	+0.8
PIGN	**Pignataro Magg**	**0.46**	**288**	P	Pg	12 31 51.7	0.0
SNR3	**Senerchia**	**0.46**	**134**	P	Pg	12 31 51.8	-0.1
BSSO	**Busso**	**0.50**	**346**	P	Pg	12 31 52.6	0.0
BSSO				AML	AML		
BSSO				AML	AML		
BSSO				AML	AML		
BSSO				AML	AML		
BSSO				AML	AML		
	comp=N,25µm,0.3s						
BSSO				AML	AML		
	comp=E,48µm,0.6s						
VAGA	**Valle Agricola**	**0.53**	**312**	P	Pg	12 31 53.2	0.0
CIGN	**Sant'Elia a Pi**	**0.61**	**11**	P	Pb	12 31 55.4	-0.1

AUST 25 12:37:10.1±0.6, 18°S±5°×12°0E±°, h10km, mb3.9/5, ML2.6/3, Error ellipse: s-maj=11.2km s-min=5.4km az=146.6, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAAN	**Eighty Mile Be**	**1.69**	**130**	P	Pn	12 37 40.1	+0.5
CAAN				S	Sn	12 38 01.9	+0.5
AUBRM	**Broome Senior**	**1.99**	**84**	P	Pn	12 37 45.1	+1.2
AUBRM				S	Sn	12 38 09.8	+0.9
MBWA	**Marble Bar**	**2.99**	**188**	P	Pn	12 37 58.3	+0.6
MBWA				S	Sn	12 38 33.3	-0.4
PSAC1	**Pilbara Seismi**	**3.36**	**185**	P	Pn	12 38 03.3	+0.6
PSAC1				S	Sn	12 38 40.5	-2.2
PSA00	**Pilbara Seismi**	**3.39**	**185**	P	Pn	12 38 03.9	+0.8
PSA00				S	Sn	12 38 40.7	-2.8
FITZ	**Fitzroy Crossi**	**5.22**	**90**	P	Pn	12 38 26.4	-2.0
GIRL	**Giralia**	**7.11**	**230**	P	Pn	12 38 55.0	+0.8
	comp=Z,0.1nmcomp=Z,43nm,1.1s						
GIRL				S	Sn	12 40 12.7	-2.4
MEEK	**Meekatharra**	**8.54**	**189**	P	Pn	12 39 13.4	-0.6
	comp=Z,0.1nmcomp=Z,17nm,2.3s						
KNRA	**Kununurra**	**8.61**	**75**	P	Pn	12 39 13.9	-1.0
	comp=Z,0.0nmcomp=Z,8.9nm,1.8s						
WRKA	**Warakurna**	**10.20**	**133**	P	Pn	12 39 37.8	+1.1
	comp=Z,0.0nmcomp=Z,3.3nm,2.0s						
BLDU	**Ballidu**	**12.77**	**194**	P	Pn	12 40 10.4	-1.5
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**13.54**	**100**	P	Pn	12 40 19.7	-2.8

*IDC **25** 13:01:13.4±2.7, 61°.12N×30°.26E, h0km, mbtmp2.9/2, ML1.9/2, Error ellipse: s-maj=24.0km s-min=12.4km az=158.0*

*HEL **25** 13:01:18.4±0.4, 61°.13N×29°.94E, h0km, ML1.8, Suspected explosion*

ISC 25 13:01:17.3±1.6, 61°.09N±0°.06×30°.00E±0°.07, h0km, n14, σ1§28/18, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.61**	**304**	PG	**Pg**	**13 01 28.9**	**-0.1**
RUF				SG	**Sg**	**13 01 35.2**	**-1.7**
RUF				smax	smax	13 01 36.3	
	comp=Z,9.7nm,0.2s						
VJF	**Virojoki**	**1.32**	**246**	PG	**Pg**	**13 01 41.4**	**-1.1**
	baz=57						
VJF				smax	smax	13 01 58.1	
	comp=Z,12nm,0.2s						
VJF				SN	**Sn**	**13 02 02.6**	**+1.5**
FIA0	**FINESS Array S**	**1.93**	**282**	PG	**Pn**	**13 01 51.9**	**+0.6**
	baz=102						
FIA0				smax	smax	13 02 14.6	
	comp=Z,5.3nm,0.2s						
FIA0				SG	**Sb**	**13 02 17.6**	**-0.3**
FINES	**FINESS Array B**	**1.93**	**282**	Pn	**Pn**	**13 01 51.9**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=98,slow=15,SNR=32						
FINES				Lg	Lg	13 02 17.3	
	comp=Z,1.5nm,0.3s,baz=96,slow=28,SNR=25						
	comp=Z,1.9nm,0.3s						
JOF	**Joensuu**	**1.94**	**18**	PG	**Pn**	**13 01 52.5**	**+1.0**
	baz=196						
JOF				SG	**Sn**	**13 02 17.3**	**+0.8**
PVF	**Pernaja**	**2.10**	**257**	PB	**Pn**	**13 01 54.9**	**+1.3**
PVF				smax	smax	13 02 20.1	
	comp=Z,5.3nm,0.2s						
PVF				SG	**Sb**	**13 02 23.8**	**+1.0**
SUF	**Sumiainen**	**2.45**	**314**	PG	**Pb**	**13 02 01.2**	**-0.9**
SUF				smax	smax	13 02 29.1	
	comp=Z,2.5nm,0.2s						
SUF				SG	**Sb**	**13 02 32.5**	**-0.3**
KEF	**Keuruu**	**2.68**	**296**	PB	**Pn**	**13 02 03.8**	**+2.2**
KEF				smax	smax	13 02 35.9	
	comp=Z,2.2nm,0.2s						
KEF				SG	**Sn**	**13 02 36.8**	**+2.1**
NUR	**Nurmijarvi**	**2.69**	**260**	PB	**Pb**	**13 02 05.2**	**-1.0**
NUR				smax	smax	13 02 36.9	
	comp=Z,3.7nm,0.2s						
MEF	**Metsahovi**	**2.90**	**255**	PB	**Pb**	**13 02 08.3**	**-1.4**
MEF				smax	smax	13 02 43.1	
	comp=Z,3.2nm,0.2s						
KU2	**Taivalkoski**	**4.71**	**351**	PN	**Pn**	**13 02 29.5**	**+0.1**
I43RU	**DUBNA INFRASON**	**5.76**	**136**	I	I	13 34 10.0	
	comp=Z,0.1nm,0.8s,baz=326,slow=329,SNR=4.5						
ARCES	**ARCESS Array B**	**8.69**	**349**	Pn	Pn	13 03 15.7	-8.3
	baz=161,slow=11,SNR=0.8						
ARCES				Sn	Sn	13 04 53.3	-9.2
	baz=165,slow=24,SNR=1.4						
ARCES				Lg	Lg	13 05 39.8	
	comp=Z,0.1nm,0.3s,baz=163,slow=32,SNR=1.7						
	comp=Z,1.1nm,0.9s						
I31KZ	**AKTYUBINSK INF**	**18.90**	**112**	I	I	14 54 00.0	
	baz=317,slow=312,SNR=0.6						

HEL 25 13:02:16.9±0.4, 66°.19N×29°.05E, h0km, ML0.8, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OLKF	**Oulanka, Finla**	**0.19**	**48**	PG	Pg	13 02 20.2	-0.3
OLKF				SG	Sg	13 02 20.8	-2.1
MSF	**Maaselka**	**0.28**	**181**	PG	Pg	13 02 21.8	-0.5
	baz=0.0						
MSF				SG	Sg	13 02 22.3	-3.7
KU6	**Riekki**	**0.38**	**116**	PG	Pg	13 02 23.8	-0.4
	baz=293						
KU6				SG	Sg	13 02 29.3	+0.2
KU2	**Taivalkoski**	**0.59**	**215**	PG	Pg	13 02 27.1	-1.0
	baz=35						
KU2				SG	Sg	13 02 35.7	-0.2
KU1	**Kurvinen**	**0.67**	**162**	PG	Pg	13 02 28.6	-1.0
	baz=356						
KU1				SG	Sg	13 02 38.3	0.0
RANF	**Ranua**	**0.94**	**260**	PB	Pg	13 02 34.2	-0.7
	baz=75						
RANF				SB	Sg	13 02 47.1	+0.1
RNF	**Rovaniemi**	**1.29**	**290**	SN	Sn	13 03 01.7	+1.5
KLF	**Kolari**	**2.28**	**300**	smax	smax	13 03 24.3	
	comp=Z,0.3nm,0.2s						
KLF				SG	Sb	13 03 28.5	+1.1
ERTU	**Ertsjaerv**	**2.79**	**281**	PN	Pn	13 03 02.1	-0.6

*IDC **25** 13:03:49.7±5.5, 23°.73N×144°.31E, h0km, mb3.5/6, mbtmp3.5/6, Error ellipse: s-maj=206.7km s-min=23.7km az=78.0*

ISC 25 13:03:55.7±4.5, 23°.9N±0°.3×14°4E±°, h35km, n7, σ2§30/8, mb3.5/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.52**	**336**	Pn	**Pn**	**13 04 45.9**	**-2.0**
	3.3nm,0.3s,baz=262,slow=22,SNR=7.5						
JCJ				Sn	**Sn**	**13 05 26.9**	**-1.4**
	10.0nm,0.3s,baz=299,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**44.51**	**193**	P	**P**	**13 12 03.0**	**-1.1**
	0.3nm,0.8s,baz=17,slow=8.8,SNR=5.9						
	0.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**45.31**	**205**	P	**P**	**13 12 08.8**	**-1.6**
	1.6nm,1.0s,baz=17,slow=13,SNR=1.8						
	1.6nm,1.0s						
ASAR	**Alice Springs**	**48.21**	**192**	P	**P**	**13 12 33.1**	**0.0**
	0.4nm,0.9s,baz=5.6,slow=12,SNR=2.7						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**53.65**	**311**	P	**P**	**13 13 16.2**	**+2.4**
	0.3nm,0.5s,baz=90,slow=8.4,SNR=6.3						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**56.33**	**316**	P	**P**	**13 13 34.8**	**+1.8**
	0.2nm,0.4s,baz=94,slow=7.6,SNR=2.5						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**61.39**	**319**	P	**P**	**13 14 11.0**	**+2.8**
	0.3nm,0.3s,baz=97,slow=8.6,SNR=2.6						
	0.3nm,0.3s						

*RSNC **25** 13:17:05.5±0.0, 8°N±1°×7°3W±°, h108km±2km, M3.5, mb4.2, ML3.2*

*IDC **25** 13:17:06.6±4.5, 7°.93N×73°.44W, h133km±34km, mb3.0/3, mbtmp3.5/4, Error ellipse: s-maj=72.6km s-min=23.7km az=75.0*

ISC 25 13:17:04.5±0.8, 7°.96N±0°.03×73°.57W±0°.04, h106km±7km, n40, σ1§66/73, mb3.2/3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCAC	**Ocana**	**0.38**	**41**	P	**Pn**	**13 17 20.9**	**+0.5**
OCAC				S	**Sn**	**13 17 32.8**	**+0.6**
BRJC	**Barrancabermej**	**0.99**	**190**	P	**Pn**	**13 17 25.5**	**+0.2**
BRJC				S	**Sn**	**13 17 41.3**	**+0.4**
PAMC	**Pamplona, Colo**	**1.06**	**125**	P	**Pn**	**13 17 27.3**	**+0.8**
PAMC				S	**Sn**	**13 17 43.8**	**+0.8**
BARC	**Barichara**	**1.41**	**164**	P	**Pn**	**13 17 30.5**	**+0.3**
BARC				S	**Sn**	**13 17 49.2**	**-0.5**
PTBC	**PUERTO BERRIO,**	**1.66**	**212**	P	**Pn**	**13 17 33.0**	**-0.1**
PTBC				S	**Sn**	**13 17 55.8**	**+1.0**
UREC	**San Jos de Ur**	**1.96**	**264**	P	**Pn**	**13 17 36.8**	**0.0**
UREC				S	**Sn**	**13 18 01.7**	**+0.3**
ARGC	**Ariguani, Magd**	**2.01**	**341**	P	**Pn**	**13 17 39.8**	**+2.4**
ARGC				S	**Sn**	**13 18 06.4**	**+3.8**
RUSC	**La Rusia**	**2.10**	**167**	P	**Pn**	**13 17 38.7**	**-0.5**
RUSC				S	**Sn**	**13 18 03.8**	**-1.7**
SPBC	**San Pablo de B**	**2.34**	**192**	P	**Pn**	**13 17 42.6**	**+0.7**
SPBC				S	**Sn**	**13 18 10.9**	**+0.5**
SJCC	**San Jacinto, C**	**2.50**	**321**	P	**Pn**	**13 17 44.5**	**+0.6**
SJCC				S	**Sn**	**13 18 14.6**	**+0.5**
HELC	**Santa Helena**	**2.62**	**228**	P	**Pn**	**13 17 47.6**	**+1.9**
HELC				S	**Sn**	**13 18 17.5**	**+0.2**
NORC	**Norcasia**	**2.70**	**209**	P	**Pn**	**13 17 47.2**	**+0.6**

NORC				S		**Sn**	**13 18 19.5**	**+0.6**
DBBC	**Dabeiba**	**2.78**	**251**	P		**Pn**	**13 17 49.8**	**+2.2**
DBBC				S		**Sn**	**13 18 20.7**	**0.0**
LCBC	**Los crdobas,**	**2.91**	**288**	P		**Pn**	**13 17 49.7**	**+0.5**
LCBC				S		**Sn**	**13 18 26.4**	**+2.7**
SDV	**Santo Domingo**	**3.05**	**72**	P		**Pn**	**13 17 51.7**	**+0.5**
SDV				S		**Sn**	**13 18 24.8**	**-2.5**
CRJC	**Cerrejon, Guaj**	**3.12**	**12**	P		**Pn**	**13 17 51.8**	**-0.3**
CRJC				S		**Sn**	**13 18 28.4**	**-0.4**
ROSC	**El Rosal**	**3.18**	**194**	P		**Pn**	**13 17 55.2**	**+2.0**
	20nm,0.3s,baz=116,slow=23,SNR=5.7							
ROSC				S		**Sn**	**13 18 35.2**	**+4.5**
	52nm,0.3s,baz=211,slow=17,SNR=6.0							
ROSC	**El Rosal**	**3.18**	**194**	P		**Pn**	**13 17 55.0**	**+1.8**
ROSC				S		**Sn**	**13 18 29.2**	**-1.5**
CBOC	**Ciudad Bolivar**	**3.19**	**230**	P		**Pn**	**13 17 54.8**	**+1.6**
CBOC				S		**Sn**	**13 18 32.2**	**+1.5**
GUY2C	**Guyana, Caldas**	**3.25**	**213**	P		**Pn**	**13 17 55.8**	**+1.6**
GUY2C				S		**Sn**	**13 18 35.2**	**+2.8**
CHIC	**Chingaza**	**3.31**	**183**	P		**Pn**	**13 17 56.7**	**+1.8**
CHIC				S		**Sn**	**13 18 35.6**	**+1.9**
CVER	**Cruz Verde, Cu**	**3.45**	**188**	P		**Pn**	**13 18 01.2**	**+4.3**
CVER				S		**Sn**	**13 18 36.8**	**-0.4**
CMAN1	**Manizales, Cal**	**3.46**	**214**	P		**Pn**	**13 17 57.0**	**+0.2**
CMAN1				S		**Sn**	**13 18 36.0**	**-1.2**
CAPC	**Capurgana**	**3.80**	**281**	P		**Pn**	**13 17 59.9**	**-1.3**
CAPC				S		**Sn**	**13 18 42.3**	**-2.8**
VILC	**Villavicencio,**	**3.82**	**182**	P		**Pn**	**13 18 03.6**	**+2.1**
VILC				S		**Sn**	**13 18 46.4**	**+0.7**
PTGC	**Puerto Gaitan,**	**4.00**	**159**	P		**Pn**	**13 18 03.3**	**-0.5**
PTGC				S		**Sn**	**13 18 48.0**	**-1.7**
URIC	**Uribia, Colomb**	**4.04**	**23**	P		**Pn**	**13 18 03.4**	**-0.9**
URIC				S		**Sn**	**13 18 49.1**	**-1.5**
ORTC	**Ortega, Tolima**	**4.35**	**203**	P		**Pn**	**13 18 11.7**	**+3.1**
ORTC				S		**Sn**	**13 18 59.6**	**+1.2**
PRAC	**Prado**	**4.41**	**197**	P		**Pn**	**13 18 10.7**	**+1.3**
PRAC				S		**Sn**	**13 19 01.3**	**+1.5**
URMC	**La Uribe, Meta**	**4.75**	**190**	P		**Pn**	**13 18 15.1**	**+1.1**
URMC				S		**Sn**	**13 19 08.6**	**+0.6**
YOTC	**Yotoco, Valle**	**4.81**	**215**	P		**Pn**	**13 18 14.2**	**-0.7**
MACC	**Macarena, Meta**	**5.78**	**183**	P		**Pn**	**13 18 27.1**	**-0.8**
	28nm,0.5s							
MACC				S		**Sn**	**13 19 30.9**	**-2.0**
	28nm,0.5s							
GARC	**Garzon, Huila**	**6.04**	**199**	P		**Pn**	**13 18 32.2**	**+0.5**
BCIP	**Isla Barro Col**	**6.32**	**281**	P		**Pn**	**13 18 33.6**	**-1.5**
BCIP				S		**Sn**	**13 19 42.4**	**-3.5**
FLOC	**Florencia**	**6.66**	**198**	P		**Pn**	**13 18 40.3**	**+0.4**
FLOC				S		**Sn**	**13 19 52.7**	**-1.7**
LPAZ	**La Paz**	**24.68**	**167**	P		**P**	**13 22 15.9**	**-0.6**
	0.4nm,0.4s,baz=326,slow=3.6,SNR=1.9 0.4nm,0.4s							
TXAR	**Lajitas Array**	**35.38**	**311**	P		**P**	**13 23 50.9**	**+0.5**
	0.1nm,0.7s,baz=81,slow=7.8,SNR=2.9 0.1nm,0.7s							
YKA	**Yellowknife Ar**	**62.05**	**340**	P		**P**	**13 27 13.4**	**-0.1**
	0.8nm,0.7s,baz=134,slow=6.1,SNR=6.5 0.8nm,0.7s							
ASAR	**Alice Springs**	**149.39**	**236**	PKPbc		**PKPbc**	**13 36 40.5**	**-1.6**
	0.4nm,0.6s,baz=110,slow=2.9,SNR=7.9							
WRA	**Warramunga Arr**	**150.47**	**243**	PKPbc		**PKPbc**	**13 36 43.4**	**-1.4**
	0.5nm,0.4s,baz=104,slow=2.5,SNR=12							

IDC 25 13:18:33.1±526.0, 54°.54N×3°.54E, h0 km, Error ellipse: s-maj=222.1km s-min=150.0km az=103.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**8.50**	**128**	I	I	14 07 50.0	
	baz=317,slow=321,SNR=0.9						
I37NO	**I37NO**	**16.15**	**20**	I	I	14 57 24.7	
	baz=215,slow=330,SNR=0.9						
I43RU	**DUBNA INFRASON**	**19.03**	**70**	I	I	15 16 16.0	
	baz=278,slow=317,SNR=4.5						
I31KZ	**AKTYUBINSK INF**	**32.75**	**74**	I	I	16 37 10.0	
	baz=301,slow=323,SNR=2.7						

*IDC **25** 13:50:11.1±2.7, 11°.49S×122°.98E, h0 km, mb3.4/1, mbtmp3.6/3, ML3.7/2, MS3.0/1, Error ellipse: s-maj=198.5km s-min=34.6km az=50.0*
*DJA **25** 13:50:12.8±0.4, 10°.5±5°×12°.3E±°, h23 km±7 km, M3.8/12, mb4.1/3, MLv3.6/12*

ISC 25 13:50:10.6±1.0, 10°.64S±0°.07×123°.05E±0°.06, h35 km, n21, σ1°83/22, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.74**	**54**	P		**Pn**	**13 50 25.0**	**+0.4**
BATI				S		**Sn**	**13 50 36.8**	**+2.0**
SOEI	**Soe**	**1.49**	**54**	P		**Pn**	**13 50 36.7**	**+1.7**
SOEI	**Soe**	**1.49**	**54**	P		**Pn**	**13 50 36.9**	**+1.9**
SOEI				S		**Sn**	**13 50 56.1**	**+2.8**
MMRI	**Maumere**	**2.15**	**338**	P		**Pn**	**13 50 44.2**	**+0.2**
MMRI	**Maumere**	**2.15**	**338**	S		**Sn**	**13 51 10.7**	**+1.3**
MMRI	**Maumere**	**2.15**	**338**	P		**Pn**	**13 50 44.0**	**0.0**
MMRI				S		**Sn**	**13 51 09.4**	**0.0**
EDFI	**Ende, Flores**	**2.31**	**324**	P		**Pn**	**13 50 45.8**	**-0.5**
BASI	**Baing, Sumba**	**2.47**	**280**	P		**Pn**	**13 50 50.9**	**+2.6**
WBSI	**Waikabubak, Su**	**3.74**	**285**	P		**Pn**	**13 51 08.4**	**+2.6**
BSSI	**Bau Bau, Buton**	**5.14**	**330**	P		**Pn**	**13 51 25.5**	**+0.4**
PLAI	**Plampang**	**5.50**	**289**	P		**Pn**	**13 51 31.0**	**+0.9**
PLAI	**Plampang**	**5.50**	**289**	P		**Pn**	**13 51 30.5**	**+0.4**
	23nm,0.6s							
TWSI	**Taliwang, Sumb**	**6.37**	**287**	P		**Pn**	**13 51 42.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**7.82**	**162**	P		**Pn**	**13 52 03.7**	**+1.7**
DRS	**Darwin Rock St**	**7.90**	**104**	P		**Pn**	**13 52 02.7**	**-0.3**
WRA	**Warramunga Arr**	**14.28**	**132**	Pn		**Pn**	**13 53 26.9**	**-3.5**
	0.4nm,0.3s,baz=304,slow=14,SNR=39							
WRA				Sn		Sn	13 55 54.9	-13
	1.0nm,0.3s,baz=301,slow=24,SNR=11 0.4nm,0.3s							
WRAB	**Tennant Creek**	**14.28**	**132**	P		**Pn**	**13 53 27.7**	**-2.7**
MEEK	**Meekatharra**	**16.45**	**194**	P		**Pn**	**13 53 58.5**	**-0.3**
ASAR	**Alice Springs**	**16.58**	**143**	Pn		**Pn**	**13 53 58.2**	**-2.3**
	0.3nm,0.3s,baz=318,slow=12,SNR=32							
ASAR				Sn		Sn	13 56 51.0	-13
	0.4nm,0.3s,baz=326,slow=25,SNR=11 1.3nm,0.6s							
ASAJ	**Asahikawa**	**57.32**	**17**	LR		LR	14 26 06.9	
	comp=Z,12nm,19.6s,baz=217,slow=37							
MKAR	**Makanchi Array**	**67.77**	**331**	P		P	14 01 15.2	+10
	0.2nm,0.5s,baz=137,slow=5.7,SNR=1.6 0.2nm,0.5s							

TRN 25 13:57:28.8, 17°.40N×62°.18W, h57 km, MD3.5, South-west of Barbuda., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.46**	**55**	*eP*	Pn	13 57 41.5	+1.3
ANWB				*eS*	Sn	13 57 50.6	+2.3
SKI	**Saint Kitts**	**0.54**	**263**	*eP*	Pn	13 57 42.2	+1.2
SKI				*eS*	Sn	13 57 52.1	+2.2
DHSZ	**Broadband at M**	**1.19**	**160**	*eP*	Pn	13 57 50.7	+1.4
DHSZ				*eS*	Sn	13 58 06.9	+2.4
ATGZ	**Broadband at L**	**1.37**	**161**	*eP*	Pn	13 57 50.8	-0.9
ATGZ				*eS*	Sn	13 58 09.6	+0.8
MMLZ	**Guadeloupe Bro**	**1.44**	**160**	*eP*	Pn	13 57 54.3	+1.7
MMLZ				*eS*	Sn	13 58 13.1	+2.7
DSDZ	**La Diserade, G**	**1.52**	**135**	*eP*	Pn	13 57 54.8	+1.1
DSDZ				*eS*	Sn	13 58 14.1	+1.7
TBG	**Guadaloupe-3**	**1.62**	**162**	*eP*	Pn	13 57 54.1	-1.1
TBG				*eS*	Sn	13 58 16.2	+1.2
DWS	**Wesley**	**2.00**	**155**	*eS*	Sn	13 58 26.2	+1.9
DSLB	**Salisbury**	**2.08**	**159**	*eP*	Pn	13 58 03.5	+2.0
DSLB				*eS*	Sn	13 58 29.2	+2.9
ILAM	**Ilet Lapin Mar**	**2.90**	**154**	*eS*	Sn	13 58 47.0	+0.8
BIM	**Bigot**	**3.06**	**159**	*eP*	Pn	13 58 16.8	+1.9
SLBI	**Saint Lucia, B**	**3.56**	**161**	*eS*	Sn	13 59 03.0	+0.7

*IDC **25** 14:08:17.9±1.4, 18°.92N×147°.23E, h0 km, mb3.6/9, mbtmp3.6/9, MS2.6/1, Error ellipse: s-maj=51.1km s-min=21.3km az=86.0*

ISC 25 14:08:23.4±1.3, 18°.9N±0°.2×147°.2E±0°.3, h37 km, n13, σ0°84/9, mb3.6/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**18.45**	**88**	T	T	14 31 36.8	
	baz=276,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**18.46**	**88**	T	T	14 31 38.8	
	baz=276,slow=74,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**18.47**	**88**	T	T	14 31 37.5	
	baz=276,slow=74,SNR=7.1						
KSRS	**Korea Array**	**25.04**	**322**	P	**P**	**14 13 44.4**	**+0.4**
	1.1nm,0.7s,baz=146,slow=7.8,SNR=1.9 1.1nm,0.7s						
WRA	**Warramunga Arr**	**40.61**	**199**	P	**P**	**14 15 59.8**	**0.0**
	0.3nm,0.5s,baz=20,slow=8.0,SNR=5.7 0.3nm,0.5s						
ASAR	**Alice Springs**	**44.25**	**198**	P	**P**	**14 16 29.3**	**-0.1**
	0.2nm,0.7s,baz=16,slow=6.1,SNR=7.4 0.2nm,0.7s						
YAK	**Yakutsk**	**44.81**	**348**	LR	LR	14 34 46.1	
	comp=Z,8.0nm,20.6s,baz=278,slow=36						
ZALV	**Zalesovo Beam**	**58.74**	**322**	P	**P**	**14 18 15.6**	**-1.8**
	0.3nm,0.3s,baz=99,slow=9.2,SNR=3.5 0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.37**	**314**	P	**P**	**14 18 22.5**	**+0.5**
	0.3nm,0.7s,baz=86,slow=7.9,SNR=7.1 0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**62.14**	**318**	P	**P**	**14 18 40.5**	**-0.2**
	0.5nm,0.6s,baz=93,slow=7.7,SNR=5.4 0.5nm,0.6s						
ILAR	**Eielson Array**	**62.84**	**26**	P	**P**	**14 18 45.1**	**0.0**
	0.4nm,0.9s,baz=263,slow=5.3,SNR=2.0 0.4nm,0.9s						
BVAR	**Borovoye Array**	**67.24**	**320**	P	**P**	**14 19 14.3**	**+0.3**
	0.6nm,0.4s,baz=86,slow=7.4,SNR=4.4 0.6nm,0.4s						
FINES	**FINESS Array B**	**87.31**	**336**	P	**P**	**14 21 06.5**	**+0.4**
	2.0nm,1.0s,baz=67,slow=6.7,SNR=5.3 2.0nm,1.0s						

*NEIC **25** 14:08:49.8±1.2, 66°.34N±0°.02×157°.24W±0°.02, h10 km±1 km, Error ellipse: s-maj=3.1km s-min=2.8km az=198.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr1.10; Mθθ1.59; Mϕϕ-2.69; Mrθ0.30; Mrϕ0.66; Mθϕ0.95; Fault plane solution: M0 2.63000×10^14 NP1:ϕ=30.26000°, δ77.21000°, λ147.40000°. NP2:ϕ=128.31000°, δ58.30000°, λ15.08000°. Principal axes: T 1.9610, Plg32.0000°, Azm345.0000°; N 1.0280, Plg55.0000°, Azm191.0000°; P -2.9889, Plg12.0000°, Azm83.0000°;*
*NEIC **25** 14:08:49.7, 66°.35N×157°.26W, h10 km*

AEIC 25 14:08:49.7±1.3, 66°.35N±0°.01×157°.27W±0°.05, h11 km±3 km, ML3.4, ML3.6/152(NEIC), Mwr3.5/34(NEIC), Error ellipse: s-maj=2.8km s-min=1.5km az=100.0, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
G19K	**Purcell Mounta**	**0.22**	**160**		Pg	14 08 54.1	-0.1
G19K					Sg	14 08 57.3	0.0
G19K	**Purcell Mounta**	**0.22**	**160**	IAML		14 08 57.8	
	comp=E,21μm,0.5s						
G19K				IAML		14 08 57.8	
	comp=N,16μm,0.6s						
F19K	**Shaleruckik Mo**	**0.53**	**338**		Pg	14 08 59.9	-0.1
F19K					Sg	14 09 07.4	+0.4
G18K	**Tagagawik**	**0.72**	**232**		Pg	14 09 03.5	-0.1
G18K					Sg	14 09 13.2	+0.2
H19K	**Roundabout Mou**	**0.89**	**157**	Pg	Pg	14 09 06.2	-0.6
H19K				IAML		14 09 22.0	
	comp=E,2μm,0.4s						
H19K				IAML		14 09 22.9	
	comp=N,2μm,0.2s						
H19K	**Roundabout Mou**	**0.89**	**157**		Sg	14 09 18.1	-0.2
F20K	**Avaraart Lake**	**0.94**	**40**		Pg	14 09 07.1	-0.6
F20K					Sg	14 09 19.4	-0.5
F20K	**Avaraart Lake**	**0.94**	**40**	IAML		14 09 23.6	
	comp=N,2μm,0.8s						
F18K	**Selawik**	**0.99**	**286**		Pg	14 09 08.3	-0.4
F18K					Sb	14 09 21.9	0.0
E19K	**Redstone River**	**1.12**	**1**		Pb	14 09 10.7	-0.3
E19K				IAML		14 09 29.3	
	comp=E,1μm,0.6s						
E19K				IAML		14 09 33.0	
	comp=N,984nm,0.6s						
E19K	**Redstone River**	**1.12**	**1**		Sb	14 09 25.2	-0.4
H18K	**Honhosa River**	**1.28**	**201**		Pn	14 09 13.1	-0.4
H18K					Sb	14 09 29.8	-0.4
H18K	**Honhosa River**	**1.28**	**201**	IAML		14 09 34.0	
	comp=E,997nm,0.3s						
H20K	**Anotleneega Mo**	**1.30**	**130**		Pn	14 09 13.7	-0.1
IMAR	**Indian Mountai**	**1.48**	**103**		Pn	14 09 16.0	-0.3
G21K	**Allakaket**	**1.52**	**82**		Pn	14 09 16.7	-0.2
G21K					Sb	14 09 37.3	0.0
G21K	**Allakaket**	**1.52**	**82**	IAML		14 09 40.7	
	comp=N,965nm,0.5s						
F17K	**Baldwin Pennin**	**1.60**	**275**		Pn	14 09 17.9	0.0
F17K	**Baldwin Pennin**	**1.60**	**275**	IAML		14 09 42.0	
	comp=N,520nm,0.8s						
F17K				IAML		14 09 42.5	
	comp=E,605nm,1.1s						
GCSA	**Galena City Sc**	**1.61**	**174**		Pn	14 09 18.6	+0.5
G17K	**Kiwalik Mounta**	**1.62**	**240**		Pn	14 09 18.0	-0.3
G17K					Sb	14 09 40.7	+0.5
E18K	**Tukpahlearik C**	**1.70**	**311**		Pn	14 09 20.0	+0.7
E18K					Pb	14 09 20.2	-0.8
F21K	**Alatna River**	**1.74**	**58**		Pn	14 09 20.0	+0.1
F21K	**Alatna River**	**1.74**	**58**	IAML		14 09 49.8	
	comp=N,650nm,0.8s						
H17K	**Granite Mounta**	**1.79**	**219**		Pn	14 09 20.4	-0.1
H17K	**Granite Mounta**	**1.79**	**219**	IAML		14 09 49.5	
	comp=E,612nm,1.0s						
H17K				IAML		14 09 50.4	
	comp=N,621nm,0.7s						
I20K	**Naaghedeneel**	**1.94**	**142**		Pn	14 09 22.8	+0.2
H21K	**Melozitna Rive**	**1.95**	**109**		Pn	14 09 22.5	-0.3
H21K				IAML		14 09 54.7	
	comp=N,556nm,0.6s						
E17K	**Hotham Inlet**	**1.96**	**294**		Pn	14 09 23.6	+0.8
E20K	**Nigu River**	**1.97**	**12**		Pb	14 09 24.6	-0.9
D19K	**Kuna River**	**2.18**	**352**		Pn	14 09 27.4	+1.5
G16K	**Koyuk River**	**2.30**	**248**		Pn	14 09 26.9	-0.6
G22K	**Bettles**	**2.37**	**73**		Pn	14 09 28.3	-0.2
D20K	**Etivluk River**	**2.39**	**6**		Pn	14 09 30.2	+1.4
D20K	**Etivluk River**	**2.39**	**6**	IAML		14 10 11.7	
	comp=E,233nm,0.6s						
H22K	**Ishtalitna Cre**	**2.44**	**98**		Pn	14 09 29.5	0.0
H22K				IAML		14 10 07.8	
	comp=N,270nm,0.5s						
E21K	**Killik River**	**2.46**	**30**		Pn	14 09 30.8	+1.0
E21K	**Killik River**	**2.46**	**30**	IAML		14 10 12.8	
	comp=E,268nm,0.6s						
E21K				IAML		14 10 17.1	
	comp=N,234nm,0.5s						
J19K	**Poorman**	**2.46**	**163**		Pn	14 09 30.3	+0.5
J19K				IAML		14 10 13.1	
	comp=N,226nm,0.8s						
I21K	**Tanana**	**2.48**	**116**		Pn	14 09 29.9	-0.1
J20K	**Nowinta River**	**2.54**	**147**		Pn	14 09 31.3	+0.4
J20K				IAML		14 10 15.2	
	comp=E,267nm,0.7s						
J20K				IAML		14 10 17.7	
	comp=N,266nm,0.7s						
D17K	**Noatak River**	**2.65**	**303**		Pn	14 09 32.9	+0.5
H16K	**Elim**	**2.69**	**233**		Pn	14 09 31.9	-0.9
C18K	**Utukok River**	**2.76**	**329**		Pn	14 09 34.3	+0.3
E22K	**Anaktuvuk Pass**	**2.78**	**47**		Pn	14 09 34.6	+0.5
RDOG	**Red Dog Mine**	**2.79**	**311**		Pn	14 09 35.6	+1.3
I17K	**Unalakleet**	**2.86**	**212**		Pn	14 09 35.6	+0.3
I17K				IAML		14 10 31.2	
	comp=N,200nm,0.8s						
J18K	**Innoko River**	**2.90**	**175**		Pn	14 09 36.1	+0.2
J18K	**Innoko River**	**2.90**	**175**	IAML		14 10 29.0	
	comp=E,159nm,0.8s						
C19K	**Lookout Ridge**	**2.91**	**343**		Pn	14 09 37.0	+1.0
G23K	**Bananza Creek**	**2.92**	**79**		Pn	14 09 35.4	-0.7
G23K				IAML		14 10 23.0	
	comp=N,212nm,0.6s						
G23K				IAML		14 10 27.1	
	comp=E,144nm,0.7s						
COLD	**Coldfoot**	**2.94**	**69**		Pn	14 09 35.8	-0.5
COLD				IAML		14 10 27.0	
	comp=N,138nm,0.7s						
C21K	**Knifeblade Rid**	**2.98**	**17**		Pn	14 09 37.4	+0.6
C21K					Pb	14 09 37.6	-5.1
J17K	**VABM Dome**	**3.06**	**195**		Pn	14 09 38.5	+0.5
J17K				IAML		14 10 32.6	
	comp=E,131nm,0.8s						
J17K				IAML		14 10 34.8	
	comp=N,138nm,1.0s						
D22K	**Ayikyak River**	**3.09**	**33**		Pn	14 09 39.6	+1.2
G15K	**Niukluk**	**3.11**	**247**		Pn	14 09 38.2	-0.5
C17K	**DeLong Mountai**	**3.13**	**316**		Pn	14 09 39.6	+0.7
K20K	**Telida**	**3.30**	**154**		Pn	14 09 41.7	+0.5
K20K	**Telida**	**3.30**	**154**	IAML		14 10 42.7	
	comp=N,104nm,0.8s						
J16K	**Anvik River**	**3.39**	**206**		Pn	14 09 42.9	+0.4
J16K	**Anvik River**	**3.39**	**206**	IAML		14 10 40.1	
	comp=N,144nm,0.9s						
J16K				IAML		14 10 46.6	
	comp=E,125nm,1.0s						
B21K	**Ikpikpuk River**	**3.44**	**16**		Pn	14 09 42.8	-0.3
B21K				IAML		14 10 48.4	
	comp=N,157nm,0.8s						
B21K				IAML		14 10 52.4	
	comp=E,164nm,0.7s						
BPAW	**Bear Paw Mtn.**	**3.48**	**128**		Pn	14 09 43.7	0.0
BPAW				IAML		14 10 43.0	
	comp=E,144nm,1.2s						
I23K	**Minto, Yukon-K**	**3.48**	**107**		Pn	14 09 43.2	-0.5
B18K	**Kokolik River**	**3.48**	**333**		Pn	14 09 44.6	+0.8
K17K	**Iditarod**	**3.67**	**187**		Pn	14 09 46.5	+0.2
K17K	**Iditarod**	**3.67**	**187**	IAML		14 10 55.6	
	comp=N,79nm,0.9s						
C16K	**Lisburne Hills**	**3.68**	**305**		Pn	14 09 47.4	+1.0
B20K	**Meade River**	**3.68**	**1**		Pn	14 09 47.2	+0.8
B20K	**Meade River**	**3.68**	**1**	IAML		14 10 53.3	
	comp=N,82nm,1.1s						
B20K				IAML		14 11 03.3	
	comp=E,88nm,0.9s						
TOLK	**Toolik Lake Re**	**3.75**	**49**		Pn	14 09 48.5	+1.0
TOLK				IAML		14 10 54.4	
	comp=N,122nm,0.9s						
E24K	**Your Creek**	**3.83**	**59**	IAML		14 11 00.4	
	comp=E,82nm,0.6s						
E24K				IAML		14 11 04.6	
	comp=N,68nm,1.0s						
NEA2	**Nenana**	**3.85**	**113**		Pn	14 09 49.2	+0.4
NEA2				IAML		14 10 53.8	
	comp=E,92nm,1.2s						
NEA2				IAML		14 11 00.3	
	comp=N,111nm,1.2s						
H24K	**Noodor Dome**	**3.86**	**93**		Pn	14 09 49.0	0.0
H24K				IAML		14 11 00.2	
	comp=E,101nm,1.0s						
H24K				IAML		14 11 03.3	
	comp=N,106nm,1.1s						
F24K	**Squaw Lake**	**3.88**	**68**		Pn	14 09 49.0	-0.2
F24K	**Squaw Lake**	**3.88**	**68**	IAML		14 11 02.6	
	comp=N,112nm,0.8s						
KTH	**Kantishna Hill**	**3.89**	**133**		Pn	14 09 49.2	-0.3
KTH				IAML		14 11 00.5	
	comp=E,95nm,0.8s						
G24K	**Hadweenzic Riv**	**3.94**	**80**		Pn	14 09 49.4	-0.6
BWN	**Browne**	**3.94**	**120**		Pn	14 09 50.9	+0.8
PPLA	**Purkeypile**	**4.10**	**145**		Pn	14 09 52.6	+0.2
PPLA				IAML		14 11 02.8	
	comp=E,73nm,1.0s						
A19K	**Wainwright**	**4.12**	**342**		Pn	14 09 53.6	+1.1
L18K	**Granite Mounta**	**4.15**	**176**		Pn	14 09 53.9	+0.9
L20K	**Farewell, AK**	**4.15**	**158**	IAML		14 10 44.5	
	comp=E,80nm,0.6s						
L20K				IAML		14 11 17.8	
	comp=N,64nm,1.1s						
TRF	**Thorofare Moun**	**4.16**	**131**		Pn	14 09 54.0	+0.8
TRF	**Thorofare Moun**	**4.16**	**131**	IAML		14 11 04.7	
	comp=E,82nm,1.0s						
COLA	**College**	**4.18**	**106**		Pn	14 09 53.3	0.0
POKR	**Poker Plat Res**	**4.24**	**102**		Pn	14 09 54.3	0.0
POKR	**Poker Plat Res**	**4.24**	**102**	IAML		14 11 07.4	
	comp=N,62nm,0.5s						
L17K	**Donlin**	**4.25**	**187**		Pn	14 09 54.9	+0.5
B22K	**Teshekpuk Lake**	**4.26**	**18**		Pn	14 09 54.0	-0.4
B22K	**Teshekpuk Lake**	**4.26**	**18**	IAML		14 11 14.1	
	comp=E,81nm,0.8s						
B22K				IAML		14 11 19.6	
	comp=N,56nm,0.9s						
WRH	**Wood River Hil**	**4.27**	**112**		Pn	14 09 54.7	+0.1
WRH	**Wood River Hil**	**4.27**	**112**	IAML		14 11 08.9	
	comp=E,78nm,0.8s						
WRH				IAML		14 11 12.3	
	comp=N,58nm,1.2s						
CCB	**Clear Creek Bu**	**4.30**	**109**		Pn	14 09 54.7	-0.2
CCB	**Clear Creek Bu**	**4.30**	**109**	IAML		14 11 06.2	
	comp=N,78nm,0.7s						
CCB				IAML		14 11 07.0	
	comp=E,60nm,0.9s						
C23K	**Itkillik River**	**4.30**	**32**		Pn	14 09 55.3	+0.3
C23K	**Itkillik River**	**4.30**	**32**	IAML		14 11 15.4	
	comp=E,64nm,0.9s						
C23K				IAML		14 11 17.8	
	comp=N,75nm,0.7s						
L19K	**White Mountain**	**4.31**	**165**	IAML		14 11 13.8	
	comp=E,51nm,1.0s						
MCK	**McKinley**	**4.40**	**123**	IAML		14 11 11.5	
	comp=E,43nm,0.8s						
MCK				IAML		14 11 24.6	
	comp=N,47nm,1.0s						
K15K	**Wolf Creek Mou**	**4.47**	**206**	IAML		14 11 21.7	
	comp=N,42nm,1.1s						
J14K	**Nanvaranak Lak**	**4.51**	**220**		Pn	14 09 57.4	-0.5
J14K	**Nanvaranak Lak**	**4.51**	**220**	IAML		14 11 18.0	
	comp=N,45nm,1.0s						
J14K				IAML		14 11 20.3	
	comp=E,59nm,1.1s						
C24K	**Franklin Bluff**	**4.67**	**40**	IAML		14 11 27.5	
	comp=N,51nm,0.7s						
HDA	**Harding Lake**	**4.74**	**109**	IAML		14 11 19.8	
	comp=E,48nm,0.8s						
L16K	**Owhat River**	**4.75**	**193**		Pn	14 10 01.4

Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.39**	**242**	*e*P	**Pn**	**14 11 31.1**	**+0.3**
KDTR				*e*S	**Sn**	**14 11 38.7**	**+0.4**
RUS	**Russkaya**	**0.45**	**350**	*i* P	**Pn**	**14 11 31.3**	**0.0**
RUS				*e*S	**Sn**	**14 11 39.3**	**-0.1**
MTVR	**Mutnovka**	**0.56**	**331**	*e*P	**Pn**	**14 11 33.3**	**+0.6**
ASAK	**Asacha**	**0.60**	**311**	*e*P	**Pn**	**14 11 34.2**	**+1.1**
GRL	**Gorelyy**	**0.66**	**329**	*e*P	**Pn**	**14 11 34.7**	**+0.8**
KRMR	**Karymshinskiy**	**0.89**	**340**	*e*P	**Pn**	**14 11 37.4**	**+0.8**
KRMR				*e*S	**Sn**	**14 11 50.0**	**+1.2**
PET	**Petropavlovsk**	**1.03**	**1**	*e*P	**Pn**	**14 11 38.5**	**0.0**
PET				*e*S	**Sn**	**14 11 52.2**	**+0.2**
DALK	**Dalny**	**1.04**	**4**	*e*P	**Pn**	**14 11 38.7**	**+0.1**
INSR	**Institute**	**1.07**	**359**	*e*P	**Pn**	**14 11 39.2**	**+0.2**
INSR				*e*S	**Sn**	**14 11 53.7**	**+0.7**
MIPR	**Malaya Ipel'ka**	**1.19**	**284**	*e*P	**Pn**	**14 11 42.2**	**+1.6**
UGLR	**Uglovaya**	**1.22**	**5**	*e*P	**Pn**	**14 11 41.9**	**+0.8**
PAU	**Pauzhetka**	**1.25**	**246**	*e*P	**Pn**	**14 11 42.5**	**+1.1**
PAU				*e*S	**Sn**	**14 11 58.8**	**+1.6**
PETK	**Petropavlovsk-** 112nm,0.4s,baz=122,slow=17,SNR=351	**1.25**	**333**	P	**Pn**	**14 11 41.4**	**0.0**
PETK				S	**Sn**	**14 11 56.1**	**-1.2**
	124nm,0.5s,baz=166,slow=19,SNR=13						
PETK				LR	LR	14 12 18.3	
	comp=Z,109nm,19.9s,baz=123,slow=54						
NLC	**Nalytchevo**	**1.26**	**20**	*e*P	**Pn**	**14 11 40.1**	**-1.4**
AVH	**Avacha**	**1.27**	**3**	*e*P	**Pn**	**14 11 42.5**	**+0.7**
SDLR	**Sedlovina**	**1.29**	**7**	*e*P	**Pn**	**14 11 41.9**	**-0.3**
APC	**Apacha**	**1.30**	**317**	*e*P	**Pn**	**14 11 43.3**	**+1.3**
KOK	**Koryaka**	**1.30**	**0**	*e*P	**Pn**	**14 11 43.2**	**+1.1**
KRER	**Koryakskii**	**1.31**	**3**	*e*P	**Pn**	**14 11 43.3**	**+0.9**
KRX	**Arik**	**1.37**	**0**	*e*P	**Pn**	**14 11 43.7**	**+0.6**
SPN	**Mys Shipunski**	**1.39**	**37**	*e*P	**Pn**	**14 11 43.2**	**0.0**
SPN				*e*S	**Sn**	**14 12 00.2**	**-0.4**
SKR	**Severo-Kuril's**	**2.05**	**231**	*e*P	**Pn**	**14 11 53.0**	**+0.7**
SKR				*e*S	**Sn**	**14 12 17.0**	**+0.3**
KII	**Karymskiy**	**2.10**	**13**	*e*P	**Pn**	**14 11 55.7**	**+2.6**
KZV	**Kizimen**	**3.28**	**17**	*e*P	**Pn**	**14 12 11.1**	**+2.0**
KMNR	**Kamenistaya**	**3.89**	**13**	*e*P	**Pn**	**14 12 21.7**	**+4.3**
SMKR	**Semkarok**	**4.89**	**19**	*e*P	**Pn**	**14 12 34.3**	**+3.2**
SRKR	**Sorokina**	**4.90**	**17**	*e*P	**Pn**	**14 12 35.4**	**+4.2**
MA2	**Magadan** comp=Z,32nm,19.7s,baz=152,slow=41	**8.79**	**333**	LR	LR	14 17 17.0	
ASAJ	**Asahikawa** 11nm,1.0s,baz=15,slow=16,SNR=9.8	**13.29**	**240**	P	**Pn**	**14 14 25.9**	**0.0**
YAK	**Yakutsk** comp=Z,24nm,20.9s,baz=278,slow=36	**18.53**	**314**	LR	LR	14 22 28.9	
MJAR	**Matsushiro Arr** 4.2nm,0.8s,baz=22,slow=9.4,SNR=8.0 4.2nm,0.8s	**21.16**	**231**	P	**P**	**14 16 01.6**	**+1.1**
TIXI	**Tiksi** comp=Z,24nm,20.0s,baz=210,slow=40	**23.73**	**337**	LR	LR	14 27 09.2	
ILAR	**Eielson Array** 1.0nm,0.7s,baz=260,slow=7.5,SNR=11 1.0nm,0.7s	**30.23**	**44**	P	**P**	**14 17 24.8**	**-0.1**
H11N2	**WAKE ISLAND Hy** baz=351,slow=76,SNR=100	**32.84**	**166**	T	T	14 52 52.4	
H11N3	**WAKE ISLAND Hy** baz=351,slow=76,SNR=87	**32.86**	**166**	T	T	14 52 53.6	
H11N1	**WAKE ISLAND Hy** baz=351,slow=76,SNR=88	**32.86**	**166**	T	T	14 52 53.7	
H11S1	**WAKE ISLAND Hy** baz=351,slow=76,SNR=31	**34.01**	**166**	T	T	14 54 17.5	
H11S3	**WAKE ISLAND Hy** baz=351,slow=76,SNR=56	**34.02**	**166**	T	T	14 54 06.0	
H11S2	**WAKE ISLAND Hy** baz=351,slow=76,SNR=20	**34.03**	**166**	T	T	14 54 21.5	
KURBB	**Kurchatov Arra** 0.2nm,0.4s,baz=70,slow=7.6,SNR=1.6 0.2nm,0.4s	**47.66**	**302**	P	**P**	**14 19 48.8**	**-1.5**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=54,slow=7.7,SNR=4.8 0.2nm,0.5s	**47.83**	**296**	P	**P**	**14 19 49.5**	**-2.3**
BVAR	**Borovoye Array** 0.4nm,0.6s,baz=57,slow=5.3,SNR=1.0 0.4nm,0.6s	**50.37**	**308**	P	**P**	**14 20 08.3**	**-2.8**
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=50,slow=6.6,SNR=4.0 0.9nm,0.3s	**57.08**	**257**	P	**P**	**14 21 01.0**	**+0.5**
BRDH	**Bariadhala** comp=Z,32nm,18.4s,baz=316,slow=39	**58.37**	**267**	LR	LR	14 49 35.3	
PDAR	**Pinedale Array** 0.4nm,0.8s,baz=314,slow=8.9,SNR=3.8	**58.84**	**59**	P	**P**	**14 21 13.1**	**+0.2**
PDAR				LR	LR	14 46 32.5	
	comp=Z,18nm,18.1s,baz=267,slow=36 0.4nm,0.8s						
TXAR	**Lajitas Array** 0.5nm,0.7s,baz=303,slow=3.9,SNR=7.7 0.5nm,0.7s	**71.90**	**66**	P	**P**	**14 22 37.7**	**+0.4**
EKA	**Eskdalemuir Ar** 1.1nm,0.5s,baz=15,slow=5.9,SNR=4.2 1.1nm,0.5s	**71.98**	**349**	P	**P**	**14 22 36.7**	**-0.4**
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=14,slow=5.9,SNR=2.4 0.4nm,0.7s	**74.71**	**204**	P	**P**	**14 22 53.1**	**-0.5**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=16,slow=5.2,SNR=8.6 0.3nm,0.7s	**78.39**	**203**	P	**P**	**14 23 15.3**	**+0.9**
H03N2	**Juan Fernandez** baz=314,slow=77,SNR=186	**135.10**	**89**	T	T	17 01 00.3	
H03N1	**Juan Fernandez** baz=314,slow=77,SNR=173	**135.12**	**89**	T	T	17 01 07.5	
H03N3	**Juan Fernandez** baz=314,slow=77,SNR=136	**135.12**	**89**	T	T	17 01 06.5	

*ISU **25** 14:19:21,40˚39N×71˚95E,h21km*
*KRNET **25** 14:19:21.5±0.1,40˚42N×72˚00E,h15km,mb2.5*
*SOME **25** 14:19:22.8,40˚58N×71˚95E,h10km*
*NNC **25** 14:19:26.9±4.9,40˚59N×71˚66E,h0km,mb3.1,mpv2.7,*
Error ellipse: s-maj=41.1km s-min=17.5km az=1.0

ISC 25 14:19:21.9±1.0,40˚48N±0˚03×72˚00E±0˚02,h18km±4km,
n26,σ1ᵗˢ39/46,20C-9D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.19**	**237**	P	**Pg**	**14 19 27.3**	**+0.5**
FRG				S	**Sg**	**14 19 30.9**	**+0.8**
TSTA	**Tashata**	**0.38**	**75**	P	**Pg**	**14 19 30.7**	**+0.8**
TSTA				S	**Sb**	**14 19 37.5**	**+1.7**
CHMI	**Chimion**	**0.42**	**240**	P	**Pg**	**14 19 30.0**	**-0.5**
CHMI				S	**Sg**	**14 19 35.8**	**-0.5**
OHH	**Osh**	**0.60**	**85**	↑*i*P	**Pg**	**14 19 33.4**	**-0.6**
OHH				↑*i*S	**Sg**	**14 19 41.7**	**-0.4**
DRK	**Karamyk**	**1.01**	**189**	↓*i*P	**Pb**	**14 19 39.4**	**-1.6**
DRK				↓*i*S	**Sb**	**14 19 52.4**	**-1.6**
CHDK	**Chadak**	**1.07**	**298**	P	**Pn**	**14 19 43.3**	**+1.3**
CHDK				S	**Sn**	**14 19 58.6**	**+2.2**
ARSB	**Arslanbob**	**1.13**	**41**	↑*i*P	**Pg**	**14 19 43.6**	**-0.2**
ARSB				↑*i*S	**Sn**	**14 19 59.7**	**+1.6**
TRKS	**Terek-Say**	**1.23**	**329**	↓*i*P	**Pn**	**14 19 44.3**	**-0.1**
TRKS				↓*i*S	**Sn**	**14 20 00.9**	**+0.2**
SFK	**Sufi-Kurgan**	**1.24**	**111**	↑*i*P	**Pn**	**14 19 44.3**	**-0.3**
SFK				↑*i*S	**Sb**	**14 20 01.0**	**+0.2**
ARK	**Arkit**	**1.32**	**359**	↓*e*P	**Pg**	**14 19 47.1**	**-0.3**
ARK				↓*e*S	**Sg**	**14 20 05.8**	**+1.1**
SALK	**Salom-Alik**	**1.45**	**73**	↑*i*P	**Pn**	**14 19 48.8**	**+1.5**
SALK				↑*i*S	**Sb**	**14 20 08.4**	**+1.8**
PSK	**Pskem**	**1.90**	**320**	S	**Sg**	**14 20 22.4**	**-0.6**
CHRV	**Charvak**	**1.93**	**308**	S	**Sg**	**14 20 22.8**	**-1.4**
MNAS	**Manas**	**2.04**	**11**	↑*i*P	**Pg**	**14 19 59.2**	**-2.0**
MNAS				↑*i*S	**Sg**	**14 20 26.6**	**-1.1**
IUG	**Iuzhnay** 14nm,0.2s	**2.23**	**319**	Pg	**Pg**	**14 20 03.4**	**-1.3**
IUG				Lg	Lg	14 20 31.6	
	33nm,0.5s						
ARLS	**Aral**	**2.24**	**51**	↑*i*P	**Pb**	**14 20 01.5**	**-0.4**
ARLS				↑*i*S	**Sb**	**14 20 30.5**	**+1.2**
MRKS	**Merke** 1.4nm,0.2s	**2.45**	**22**	Pg	**Pg**	**14 20 08.0**	**-0.8**
MRKS				Lg	Lg	14 20 39.4	
	4.3nm,0.4s						
MRKS	**Merke** 1.4nm,0.2s	**2.45**	**22**	*e*P	**Pg**	**14 20 08.0**	**-0.8**
MRKS				*e*S	**Sg**	**14 20 39.5**	**-1.1**
	4.3nm,0.4s						
EKS2	**Erkin-Say**	**2.56**	**31**	↑*e*P	**Pb**	**14 20 06.0**	**-1.4**
EKS2				↑*i*S	**Sb**	**14 20 38.6**	**+0.1**
UCH	**Uchtor**	**2.58**	**47**	↑*i*P	**Pb**	**14 20 06.4**	**-1.5**
UCH				↑*i*S	**Sb**	**14 20 39.2**	**-0.2**
KK31	**Karatay Array** 0.4nm,0.2s,baz=166,slow=16,SNR=7.4	**2.85**	**338**	Pn	**Pb**	**14 20 11.8**	**-0.4**
KK31				⇑Lg	Lg	14 20 51.3	
	0.6nm,0.2s,baz=166,slow=32,SNR=4.1						
AAK	**Ala-Archa** 0.6nm,0.7s	**2.86**	**40**	⇑Pn	**Pg**	**14 20 15.8**	**-0.9**
AAK				⇓Sn	**Sg**	**14 20 53.2**	**-0.6**
	0.8nm,0.5s						
AAK	**Ala-Archa**	**2.86**	**40**	⇓*i*P	**Pb**	**14 20 10.3**	**-2.2**
AAK				⇓*i*S	**Sb**	**14 20 45.6**	**-1.6**
BRLS	**Borolday** 1.4nm,0.4s	**3.02**	**328**	Pg	**Pb**	**14 20 15.6**	**+0.5**
BRLS				Lg	Lg	14 20 52.6	
	3.1nm,0.3s						
BRLS	**Borolday** 1.4nm,0.4s	**3.02**	**328**	*e*P	**Pb**	**14 20 15.7**	**+0.5**
BRLS				*e*S	**Sb**	**14 20 52.6**	**+0.9**
	3.1nm,0.3s						
USP	**Ospenovka**	**3.36**	**33**	⇑*i*P	**Pn**	**14 20 17.0**	**+3.5**
USP				⇑*i*S	**Sb**	**14 20 57.6**	**-3.8**

WEL 25 14:19:29.3±1.2,33˚S±21˚×18˚0E±2˚2,h317km±51km,
mB4.2/3,ML3.9/8,MLv4.0/3,Mw(mB)3.3/3,Error ellipse:
s-maj=29.4km s-min=26.4km az=120.6,confirmed,
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.25**	**190**	P	Pn	14 20 48.6	-1.7
WMGZ				S	S	14 21 55.8	+0.3
HAZ	**Te Kaha**	**5.31**	**195**	P	Pn	14 20 50.9	0.0
HAZ				S	S	14 22 00.2	+3.5
PKGZ	**Pakihiroa**	**5.36**	**193**	P	Pn	14 20 52.7	+1.3
PKGZ				S	S	14 21 56.7	-1.0
WCZ	**Waipu Caves**	**5.43**	**231**	P	Pn	14 20 52.9	+0.6
PUZ	**Puketiti**	**5.53**	**191**	P	Pn	14 20 54.1	+0.7
PUZ				S	S	14 22 00.7	-0.6
RUGZ	**Raukumara Rang**	**5.54**	**196**	P	Pn	14 20 53.8	+0.2
RUGZ				S	S	14 22 02.0	+0.3
TWGZ	**Tauwhareparae**	**5.68**	**193**	P	Pn	14 20 56.4	+1.1
TWGZ				S	S	14 22 07.5	+2.9
MWZ	**Matawai**	**5.92**	**196**	P	Pn	14 20 58.7	+0.7
MWZ				S	S	14 22 11.1	+1.3
URZ	**Urewera**	**5.96**	**199**	P	Pn	14 20 57.8	-0.6
URZ				S	S	14 22 11.4	+0.9
MUGZ	**Murupara**	**6.26**	**201**	P	Pn	14 21 02.0	0.0
MUGZ				S	S	14 22 15.5	-1.4
RTZ	**Ruatahuna**	**6.33**	**199**	P	Pn	14 21 01.5	-1.4
RTZ				S	S	14 22 18.6	0.0
SNZZ	**Shannon Statio**	**6.39**	**196**	P	Pn	14 21 03.0	-0.6
SNGZ				S	S	14 22 21.9	+2.0

*SDD **25** 14:28:23.6±1.3,19˚07N×67˚19W,h15km±999km,MD3.3,*
ML1.7,MW2.1
*RSPR **25** 14:28:23.1,19˚21N×67˚28W,h37km±10km,MD2.9/7*

ISC 25 14:28:22.4±1.9,19˚12N±0˚10×67˚18W±0˚06,h29km,n19,
σ0ˢ70/23,6C-3D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.65**	**174**	⇑*e*P	**Pb**	**14 28 34.5**	**-0.7**
AGPR	**Aguadilla, PR**	**0.65**	**174**	*e*S	**Sn**	**14 28 45.0**	**0.0**
IDE	**Isla Desecheo**	**0.78**	**201**	⇓*e*P	**Pb**	**14 28 37.6**	**+0.2**
IDE	**Isla Desecheo**	**0.78**	**201**	*e*S	**Sn**	**14 28 48.4**	**+0.2**
AOPR	**Arecibo Observ**	**0.87**	**152**	*e*Pg	**Pn**	**14 28 37.7**	**-1.0**
AOPR				*e*Sg	**Sb**	**14 28 49.1**	**-1.1**
AOPR				IAML		14 29 02.5	
	comp=N,37nm,1.0s						
AOPR	**Arecibo Observ**	**0.87**	**152**	⇑*e*P	**Pb**	**14 28 38.9**	**0.0**
AOPR	**Arecibo Observ**	**0.87**	**152**	*e*S	**Sn**	**14 28 51.7**	**+1.4**
LSP	**Las Mesas**	**0.94**	**174**	⇓*e*P	**Pb**	**14 28 40.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.11**	**176**	*e*Pg	**Pb**	**14 28 42.7**	**-0.3**
CRPR				*e*Sg	**Sn**	**14 28 55.0**	**-1.2**
CRPR				IAML		14 29 12.7	
	comp=N,28nm,4.3s						
CRPR	**Cabo Rojo, PR**	**1.11**	**176**	⇑*e*P	**Pn**	**14 28 42.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.11**	**176**	*e*S	**Sb**	**14 28 57.6**	**+0.7**
ECPR	**Experimental S**	**1.11**	**136**	⇑*e*P	**Pb**	**14 28 42.8**	**-0.2**
ECPR	**Experimental S**	**1.11**	**136**	*e*S	**Sb**	**14 28 58.3**	**+1.2**
MLPR	**Magueyes Islan**	**1.15**	**174**	⇓*e*Pg	**Pb**	**14 28 43.1**	**-0.5**
MLPR				*e*Sg	**Sn**	**14 28 57.8**	**+0.6**
MLPR				IAML		14 29 16.7	
	comp=N,6.0nm,3.1s						
MLPR	**Magueyes Islan**	**1.15**	**174**	⇑*e*P	**Pn**	**14 28 42.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.15**	**174**	*e*S	**Sb**	**14 28 58.0**	**-0.2**
OBIP	**Obispado Ponce**	**1.20**	**153**	⇑*e*P	**Pb**	**14 28 44.2**	**-0.3**
OBIP	**Obispado Ponce**	**1.20**	**153**	*e*S	**Sb**	**14 29 00.4**	**+0.8**
HATOM	**Hato Mayor del**	**2.11**	**261**	*e*Pg	**Pb**	**14 28 59.8**	**-0.2**
HATOM				*e*Sg	**Sb**	**14 29 26.0**	**+0.3**
HATOM				IAML		14 29 32.2	
	comp=N,9.0nm,3.2s						

IDC 25 14:32:49.3±1.2,14˚71S×173˚82W,h0km,mb3.7/5,
mbtmp3.7/5,MS3.1/2,Error ellipse: s-maj=53.3km
s-min=29.4km az=140.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** comp=Z,32nm,18.6s,baz=30,slow=34	**20.09**	**246**	LR	LR	14 44 08.8	
H11S2	**WAKE ISLAND Hy** baz=146,slow=76,SNR=5.0	**38.16**	**329**	T	T	15 20 57.6	
H11S3	**WAKE ISLAND Hy** baz=146,slow=76,SNR=4.2	**38.18**	**329**	T	T	15 21 00.6	
H11S1	**WAKE ISLAND Hy** baz=146,slow=76,SNR=3.9	**38.18**	**329**	T	T	15 20 57.6	
WRA	**Warramunga Arr** 0.2nm,0.5s,baz=91,slow=6.9,SNR=4.9 0.2nm,0.5s	**49.61**	**256**	P	P	14 41 43.3	+0.4
ASAR	**Alice Springs** 1.4nm,0.5s,baz=90,slow=8.0,SNR=20	**49.94**	**251**	P	P	14 41 44.8	-0.6
ASAR				LR	LR	15 01 14.9	
	comp=Z,34nm,19.3s,baz=127,slow=34 1.4nm,0.5s						
QSPA	**South Pole Qui** 1.3nm,1.0s,baz=57,slow=4.7,SNR=2.7 1.3nm,1.0s	**75.33**	**180**	P	P	14 44 34.6	+0.2
ILAR	**Eielson Array** 0.2nm,0.9s,baz=210,slow=5.5,SNR=1.2 0.2nm,0.9s	**81.85**	**11**	P	P	14 45 09.5	-0.5
PDAR	**Pinedale Array** 0.4nm,0.7s,baz=229,slow=1.9,SNR=3.8 0.4nm,0.7s	**82.03**	**42**	P	P	14 45 11.8	+0.1
BRTR	**Keskin Array B** 0.7nm,0.8s,baz=3.8,slow=4.3,SNR=2.4	**145.37**	**321**	PKPbc	PKPbc	14 52 29.5	-0.1

*DNK **25** 14:33:05.7±0.8,61˚04N×12˚06E,h0km,ML2.8(UPP),*
Suspected explosion
*UPP **25** 14:33:05.8±0.6,61˚02N×12˚11E,h0km,ML2.8,Presumed*
earthquake
*BER **25** 14:33:07.5±0.8,61˚01N×12˚18E,h0km,ML1.6,Suspected*
explosion

ISC 25 14:33:05.9±1.0,61˚02N±0˚05×12˚27E±0˚04,h0km,n19,
σ0ˢ32/26,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NC602	**NORSAR Array S**	**0.46**	**231**	*e*P	**Pg**	**14 33 14.7**	**+0.1**
NC602				*e*S	**Sg**	**14 33 20.6**	**+0.2**
NC602				IAML		14 33 25.7	
	comp=Z,37nm,0.6s						
NB201	**NORSAR Array S**	**0.47**	**274**	*e*P	**Pg**	**14 33 15.1**	**+0.1**
NB201				*e*S	**Sg**	**14 33 21.2**	**+0.1**
NB201				IAML		14 33 26.9	
	comp=Z,52nm,0.7s						
NC303	**NORSAR Array S**	**0.48**	**296**	*e*P	**Pg**	**14 33 15.4**	**+0.3**
NC303				*e*S	**Sg**	**14 33 21.8**	**+0.5**
NC303				IAML		14 33 28.1	
	comp=Z,47nm,0.7s						
NAO01	**NORSAR Array S**	**0.70**	**256**	*e*P	**Pg**	**14 33 19.0**	**-0.2**
NAO01				*e*S	**Sg**	**14 33 27.7**	**-0.5**
NBO00	**NORSAR Array S**	**0.72**	**271**	*e*P	**Pg**	**14 33 19.6**	**-0.1**
NBO00				*e*S	**Sg**	**14 33 28.7**	**-0.4**
NC204	**NORSAR Array S**	**0.77**	**290**	*e*P	**Pg**	**14 33 20.5**	**-0.2**
UDD	**Uddeholm**	**1.15**	**144**	P	**Pg**	**14 33 27.7**	**-0.1**
UDD				S	**Sb**	**14 33 44.5**	**+0.6**
UDD	**Uddeholm**	**1.15**	**144**	P	**Pg**	**14 33 27.7**	**-0.1**
UDD				S	**Sb**	**14 33 44.5**	**+0.6**
ROTU	**Roteberg**	**1.76**	**75**	P	**Pb**	**14 33 38.6**	**-0.4**
ROTU	**Roteberg**	**1.76**	**75**	P	**Pb**	**14 33 38.6**	**-0.4**
FALU	**Falun**	**1.83**	**105**	P	**Pb**	**14 33 39.9**	**-0.3**
FALU	**Falun**	**1.83**	**105**	P	**Pb**	**14 33 39.9**	**-0.3**
SKAR	**Skarslia**	**1.97**	**262**	*e*P	**Pn**	**14 33 40.6**	**+0.1**
NRAU	**Nora**	**2.01**	**135**	P	**Pb**	**14 33 42.8**	**-0.4**
NRAU	**Nora**	**2.01**	**135**	P	**Pb**	**14 33 42.8**	**-0.4**
STRU	**Stroemstad**	**2.07**	**196**	P	**Pn**	**14 33 41.8**	**+0.1**
STRU	**Stroemstad**	**2.07**	**196**	P	**Pn**	**14 33 41.8**	**+0.1**
NASU	**Vaermlandsnaes**	**2.15**	**167**	P	**Pn**	**14 33 43.0**	**+0.1**
NASU	**Vaermlandsnaes**	**2.15**	**167**	P	**Pn**	**14 33 43.0**	**+0.1**

*KRSC **25** 14:47:44.5±1.6,50˚47N×157˚64E,h68km±27km,Ml4.5,*
Felt [II-III] at cape Lopatka.
*MOS **25** 14:47:45.0±0.6,50˚45N×157˚41E,h90km,mb4.1/4,Error*
ellipse: s-maj=14.8km s-min=4.3km az=81.6
*IDC **25** 14:47:48.7±2.5,50˚77N×157˚50E,h121km±31km,mb3.2/5,*
mbtmp3.5/7,MS2.1/1,Error ellipse: s-maj=46.7km
s-min=28.1km az=84.0

ISC 25 14:47:44.8±1.3,50˚39N±0˚09×157˚51E±0˚08,h78km±11km,
n72,σ1ᵗˢ13/91,mb3.6/7,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.94**	**289**	*e*PN	**Pn**	**14 48 03.2**	**+0.3**
SKR				*e*S	**Sn**	**14 48 15.4**	**-1.0**
SKR				pmax	pmax		
	comp=Z,165nm,0.2s						
SKR				smax	smax		
	comp=N,2μm,0.4s						
SKR				smax	smax		
	comp=E,557nm,0.3s						
SKR	**Severo-Kuril's**	**0.94**	**289**	*e*P	**Pn**	**14 48 03.2**	**+0.3**
SKR				*e*S	**Sn**	**14 48 15.6**	**-0.8**
PAU	**Pauzhetka**	**1.16**	**338**	PN	**Pn**	**14 48 06.2**	**+0.5**
PAU				S	**Sn**	**14 48 21.4**	**+0.1**
PAU	**Pauzhetka**	**1.16**	**338**	*e*P	**Pn**	**14 48 06.2**	**+0.5**
PAU				*e*S	**Sn**	**14 48 21.5**	**+0.1**
KDTR	**Khodutka, Kamc**	**1.46**	**14**	PN	**Pn**	**14 48 09.9**	**+0.4**
KDTR				S	**Sn**	**14 48 27.6**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.46**	**14**	*e*P	**Pn**	**14 48 10.0**	**+0.4**
KDTR				*e*S	**Sn**	**14 48 27.6**	**-0.5**
MIPR	**Malaya Ipel'ka**	**1.94**	**346**	PN	**Pn**	**14 48 16.7**	**+0.9**
MIPR	**Malaya Ipel'ka**	**1.94**	**346**	*e*P	**Pn**	**14 48 16.8**	**+0.9**
ASAK	**Asacha**	**2.01**	**7**	PN	**Pn**	**14 48 17.6**	**+0.9**
ASAK	**Asacha**	**2.01**	**7**	*e*P	**Pn**	**14 48 17.7**	**+0.9**
MTVR	**Mutnovka**	**2.13**	**11**	PN	**Pn**	**14 48 19.3**	**+0.8**
MTVR				S	**Sn**	**14 48 43.9**	**-0.3**
MTVR	**Mutnovka**	**2.13**	**11**	*e*P	**Pn**	**14 48 19.4**	**+0.8**
MTVR				*e*S	**Sn**	**14 48 43.9**	**-0.3**
RUS	**Russkaya**	**2.14**	**17**	PN	**Pn**	**14 48 18.7**	**+0.3**
RUS				S	**Sn**	**14 48 42.9**	**-1.1**
RUS	**Russkaya**	**2.14**	**17**	*e*P	**Pn**	**14 48 18.7**	**+0.3**
RUS				*e*S	**Sn**	**14 48 42.9**	**-1.1**
GRL	**Gorelyy**	**2.19**	**9**	PN	**Pn**	**14 48 20.4**	**+1.2**
GRL				S	**Sn**	**14 48 45.9**	**+0.4**
GRL	**Gorelyy**	**2.19**	**9**	*e*P	**Pn**	**14 48 20.5**	**+1.2**
GRL				*e*S	**Sn**	**14 48 45.9**	**+0.4**
KRMR	**Karymshinskiy**	**2.47**	**9**	PN	**Pn**	**14 48 24.1**	**+1.2**
KRMR				S	**Sn**	**14 48 52.9**	**+0.9**
KRMR	**Karymshinskiy**	**2.47**	**9**	*e*P	**Pn**	**14 48 24.1**	**+1.2**
KRMR				*e*S	**Sn**	**14 48 53.0**	**+0.9**
APC	**Apacha**	**2.54**	**355**	PN	**Pn**	**14 48 24.9**	**+1.0**
APC	**Apacha**	**2.54**	**355**	*e*P	**Pn**	**14 48 24.9**	**+1.0**
PEA0B	**Petropavlovsk-**	**2.72**	**2**	PN	**Pn**	**14 48 27.3**	**+1.0**
PETK	**Petropavlovsk-** comp=E,29nm,0.5s,baz=188,slow=12,SNR=93	**2.72**	**2**	P	**Pn**	**14 48 26.5**	**+0.2**
PETK				S	**Sn**	**14 48 56.2**	**-2.0**
	comp=E,24nm,0.6s,baz=124,slow=19,SNR=2.0						
PETK				LR	LR	14 49 26.5	
	comp=E,40nm,18.0s,baz=65,slow=42						
PET	**Petropavlovsk**	**2.73**	**15**	PN	**Pn**	**14 48 27.1**	**+0.8**
PET				S	**Sn**	**14 48 58.6**	**+0.3**
PET	**Petropavlovsk**	**2.73**	**15**	*e*P	**Pn**	**14 48 27.2**	**+0.8**
PET				*e*S	**Sn**	**14 48 58.6**	**+0.3**
DALK	**Dalny**	**2.75**	**16**	PN	**Pn**	**14 48 27.4**	**+0.7**
DALK				S	**Sn**	**14 48 57.8**	**-1.0**
DALK	**Dalny**	**2.75**	**16**	*e*P	**Pn**	**14 48 27.5**	**+0.7**
DALK				*e*S	**Sn**	**14 48 57.9**	**-1.0**
INSR	**Institute**	**2.76**	**14**	PN	**Pn**	**14 48 28.0**	**+1.2**
INSR				S	**Sn**	**14 48 59.2**	**+0.1**
INSR	**Institute**	**2.76**	**14**	*e*P	**Pn**	**14 48 28.0**	**+1.2**
INSR				*e*S	**Sn**	**14 48 59.2**	**+0.1**
UGLR	**Uglovaya**	**2.93**	**16**	PN	**Pn**	**14 48 30.1**	**+0.8**
UGLR	**Uglovaya**	**2.93**	**16**	*e*P	**Pn**	**14 48 30.1**	**+0.8**
AVH	**Avacha**	**2.97**	**14**	PN	**Pn**	**14 48 31.4**	**+1.6**
AVH	**Avacha**	**2.97**	**14**	*e*P	**Pn**	**14 48 31.5**	**+1.6**
KOK	**Koryaka**	**2.98**	**13**	PN	**Pn**	**14 48 32.0**	**+2.0**
KOK	**Koryaka**	**2.98**	**13**	*e*P	**Pn**	**14 48 32.0**	**+2.0**
NLC	**Nalytchevo**	**3.00**	**22**	PN	**Pn

mb_Lg2.6/27,**ML2.8**/84,**ML2.8**/32,**Error ellipse: s-maj=2.7km s-min=1.6km az=252.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCOK	**Bluff Creek, N**	**0.42**	**116**		Pg	15 40 36.8	+0.7
BCOK					Sg	15 40 43.0	+1.4
OK029	**Liberty Lake**	**0.51**	**95**		Pg	15 40 37.7	0.0
OK029					Sb	15 40 45.7	-1.3
CSTR	**Hydro, Custer**	**0.54**	**249**		Pg	15 40 38.5	+0.2
CSTR					Sg	15 40 46.5	+1.2
OK004	**Okla Sci Mus**	**0.58**	**123**		Pg	15 40 39.7	+0.6
OK004					Sb	15 40 48.1	-1.2
ADOK	**Arcadia Dam**	**0.60**	**108**		Pg	15 40 40.0	+0.4
CROK	**Carrier**	**0.67**	**6**		Pg	15 40 41.0	+0.2
CROK					Sb	15 40 50.5	-1.1
CROK				IAML		15 40 60.0	
	comp=E,428nm,0.3s						
CROK				IAML		15 41 01.6	
	comp=N,432nm,0.3s						
FNO	**Franklin**	**0.80**	**137**		Pg	15 40 43.9	+0.5
FNO					Sb	15 40 54.7	-0.8
FNO				IAML		15 40 57.5	
	comp=E,301nm,0.5s						
OK038	**West end E0370**	**0.83**	**320**		Pg	15 40 43.9	-0.1
GC02	**Grant County #**	**1.02**	**10**		Pg	15 40 47.5	-0.1
GC02					Sb	15 41 01.4	-0.5
OK052	**Battle Ridge R**	**1.04**	**81**		Pg	15 40 47.8	-0.2
OK052				IAML		15 41 04.5	
	comp=E,213nm,0.2s						
OK052				IAML		15 41 07.1	
	comp=E,196nm,0.3s						
OK048	**Pawnee Station**	**1.08**	**58**		Pg	15 40 48.5	-0.2
OK048				IAML		15 41 05.4	
	comp=E,300nm,0.2s						
ELIS	**Ellis County**	**1.11**	**282**	IAML		15 41 05.3	
	comp=N,220nm,0.3s						
ELIS				IAML		15 41 11.2	
	comp=E,166nm,0.2s						
KAN14	**Manchester OK**	**1.12**	**5**	IAML		15 41 09.3	
	comp=E,290nm,0.1s						
KAN14				IAML		15 41 11.1	
	comp=N,258nm,0.1s						
QUOK	**Quay**	**1.16**	**73**		Pg	15 40 49.7	-0.5
QUOK				IAML		15 41 09.0	
	comp=N,283nm,0.2s						
OK051	**E0350 and S346**	**1.20**	**56**		Pg	15 40 50.6	-0.4
X34A	**Smith Ranch, M**	**1.25**	**171**		Pg	15 40 51.9	-0.1
X34A				IAML		15 41 11.1	
	comp=E,177nm,0.3s						
X34A				IAML		15 41 11.3	
	comp=N,131nm,0.2s						
DEOK	**Depew**	**1.28**	**90**		Pg	15 40 51.6	-0.9
DEOK				IAML		15 41 12.8	
	comp=E,136nm,0.1s						
DEOK				IAML		15 41 12.9	
	comp=N,136nm,0.1s						
KAN01	**Argonia South**	**1.33**	**11**		Pn	15 40 52.6	-0.7
KAN01				IAML		15 41 12.7	
	comp=N,159nm,0.1s						
KAN01				IAML		15 41 15.1	
	comp=E,142nm,0.2s						
T35A	**Sooner Cattle**	**1.65**	**49**		Pn	15 40 57.7	0.0
TUL3	**Leonard**	**1.85**	**87**		Pn	15 41 00.9	+0.5
TUL3				IAmb_Lg		15 41 28.0	
	comp=Z,32nm,0.9s						
LOOK	**Love County**	**1.99**	**158**	Pn	Pn	15 41 02.4	+0.2
WTFS	**Witchita Falls**	**2.10**	**189**		Pn	15 41 04.1	+0.4
DKNS	**Dickens**	**3.20**	**228**	IAmb_Lg		15 42 17.5	
	comp=Z,12nm,0.7s						
CBKS	**Cedar Bluff**	**3.25**	**336**	IAmb_Lg		15 42 18.5	
	comp=Z,16nm,0.8s						
TREL	**Terrell**	**3.51**	**152**	IAmb_Lg		15 42 27.8	
	comp=Z,20nm,0.8s						
SN07	**Snyder 07**	**3.60**	**221**	IAmb_Lg		15 42 27.1	
	comp=Z,11nm,0.7s						
Z38A	**Mt. Pleasant**	**3.62**	**134**	IAmb_Lg		15 42 32.2	
	comp=Z,23nm,0.8s						
MIAR	**Mount Ida**	**3.90**	**108**	IAmb_Lg		15 42 41.2	
	comp=Z,14nm,0.9s						
POST	**Post**	**3.96**	**227**	IAmb_Lg		15 42 39.9	
	comp=Z,18nm,0.8s						
X40A	**Basin Creek Fa**	**4.50**	**106**	IAmb_Lg		15 42 53.8	
	comp=Z,15nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.83**	**88**	IAmb_Lg		15 43 00.4	
	comp=Z,7.0nm,0.8s						
P38A	**Dawn**	**5.22**	**42**	IAmb_Lg		15 43 23.7	
	comp=Z,9.9nm,1.0s						
R40A	**Maddies Statio**	**5.25**	**61**	IAmb_Lg		15 43 27.3	
	comp=Z,7.8nm,0.8s						
JCT	**Junction City**	**5.54**	**196**	IAmb_Lg		15 43 38.2	
	comp=Z,12nm,0.8s						
PBMO	**Poplar Bluff**	**6.24**	**79**	IAmb_Lg		15 43 45.2	
	comp=Z,11nm,0.8s						
JFWS	**Jewell Farm**	**9.30**	**38**	IAmb_Lg		15 45 50.1	
	comp=Z,7.8nm,0.8s						

MOS ***25*** *16:00:18.8±1.1,6˚21S×154˚79E,h47km,mb5.8/46, MS4.8/10,Error ellipse: s-maj=7.6km s-min=5.6km az=124.2*

BJI ***25*** *16:00:19.3,6˚11S×155˚30E,h69km,mB5.3/41,mb5.6/83, Ms4.9/50,Ms7 4.7/51*

NEIC ***25*** *16:00:20.9±1.7,6˚28S±0˚06×154˚80E±0˚06,h43km±1km, mb5.7/582,Mwb5.5/63,Mww5.4/25,Error ellipse: s-maj=11.1km s-min=9.5km az=219.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.05; Mθθ-1.49; Mϕϕ-0.56; Mrθ0.06; Mrϕ0.46; Mθϕ-0.11; Fault plane solution: M₀1.90000×10¹⁷ NP1:φs290.60000°, δ43.48000°,λ87.32000°. NP2:φs114.29000°,δ46.58000°, λ92.54000°. Principal axes: T 2.0582, Plg88.0000°, Azm72.0000°; N -0.3716, Plg2.0000°, Azm293.0000°; P -1.6866, Plg2.0000°, Azm202.0000°;*

NEIC ***25*** *16:00:20.5,6˚30S×154˚80E,h38km*

GCMT ***25*** *16:00:21.9±0.1,6˚44S±0˚01×154˚61E±0˚01,h51km, MW5.4/136,Moment Tensor Solution. s136,c228; s123,c220; Duration: 1§3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.71±.02; Mθθ-0.87±.02; Mϕϕ-0.84±.02; Mrθ0.01±.02; Mrϕ1.03±.01; Mθϕ0.11±.02; Best double couple: M₀1.80200×10¹⁷ NP1:φs131.00000°,δ44.00000°, λ85.00000°. NP2:φs318.00000°,δ46.00000°,λ95.00000°. Principal axes: T 1.7160, Plg87.0000°, Azm296.0000°; N 0.1690, Plg3.0000°, Azm135.0000°; P -1.8870, Plg1.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***25*** *16:00:21.7±0.3,6˚S±3˚×15˚5E±˚,h58km±2km,M5.5/116, mB6.0/89,mb5.8/116,MLv5.7/1,Mw(mB)5.6/89, MwMwp5.1/25,Mwp5.4/25*

IDC ***25*** *16:00:22.8±1.3,6˚22S×154˚81E,h68km±11km,mb5.3/24, mbtmp5.6/28,MS4.6/54,Error ellipse: s-maj=9.9km s-min=8.4km az=62.0*

NEIC ***25*** *16:00:23.9,6˚26S×154˚69E,h50km,Moment Tensor Solution. Duration: 2§2 Moment tensor: Scale 10¹⁷Nm; Mrr1.61; Mθθ-0.67; Mϕϕ-0.94; Mrθ0.05; Mθϕ0.94; Mϕr0.12; Fault plane solution: M₀1.69000×10¹⁷ NP1: φs134.67000°,δ44.28000°,λ83.49000°. NP2: φs323.73000°,δ46.08000°,λ96.31000°. Principal axes: T 1.6201, Plg85.0000°, Azm308.0000°; N 0.1392, Plg5.0000°, Azm139.0000°; P -1.7593, Plg1.0000°, Azm49.0000°;*

NEIC ***25*** *16:00:23.9,6˚36S×154˚79E,h50km*

ISC 25 16:00:22.1±0.3,6˚25S±0˚03×154˚81E±0˚03,h65km±2km, h65km:pP-P,n1391,σ1§47/1185,mb5.7/439,47C-22D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.33**	**308**		**Pn**	**16 01 11.5**	**-0.3**
I40PG	**Keravat**	**3.39**	**305**	P	**Pn**	**16 01 16.0**	**+3.4**
	baz=101,slow=18						
I40PG				S	**Sn**	**16 01 55.0**	**+3.3**
	baz=74,slow=278						
I40PG				I	I	16 19 40.0	
	90nm,0.6s,baz=122,slow=314,SNR=2.0						
TATA	**Tatamba Isabel**	**5.39**	**114**	P	**Pn**	**16 01 41.4**	**+1.4**
TATA	**Tatamba Isabel**	**5.39**	**114**	S	**Sn**	**16 02 44.1**	**+3.3**
SAVO	**Savo Central**	**5.74**	**120**	P	**Pn**	**16 01 47.0**	**+2.2**
HNR	**Honiara**	**5.99**	**122**	P	**Pn**	**16 01 50.3**	**+2.0**
	6µm,0.9s,baz=223,slow=1.9,SNR=87						
HNR					S	**Sn**	**16 02 58.1**	**+2.5**
	17µm,1.0s,baz=249,slow=22,SNR=14						
HNR					LR	LR	16 04 09.4	
	comp=Z,8µm,21.2s,baz=294,slow=38						
HNR	**Honiara**	**5.99**	**122**			**Pn**	**16 01 47.1**	**-1.2**
HNR	**Honiara**	**5.99**	**122**	P		**Pn**	**16 01 51.0**	**+2.7**
HNR	**Honiara**	**5.99**	**122**	S		**Sn**	**16 02 59.0**	**+3.4**
HNR	**Honiara**	**5.99**	**122**	P		**Pn**	**16 01 47.1**	**-1.2**
HNR							16 02 58.1	
ALEG	**Aligegeo Malai**	**6.34**	**113**	P		**Pn**	**16 01 55.3**	**+2.2**
ALEG	**Aligegeo Malai**	**6.34**	**113**	S		**Sn**	**16 03 07.5**	**+3.3**
NGOA	**Tingoa Renbel**	**7.40**	**136**	P		**Pn**	**16 02 09.9**	**+2.4**
HURO	**Huro Makira**	**8.17**	**121**	P		**Pn**	**16 02 20.0**	**+1.9**
PMG	**Port Moresby**	**8.20**	**247**	P		**Pn**	**16 02 19.4**	**+0.9**
	955nm,0.8s,baz=64,slow=6.5,SNR=73						
PMG					S	**Sn**	**16 03 51.0**	**+1.3**
	241nm,0.6s,baz=173,slow=23,SNR=8.5						
PMG					LR	LR	16 05 23.0	
	comp=Z,9µm,21.5s,baz=62,slow=36						
PMG	**Port Moresby**	**8.20**	**247**			**Pn**	**16 02 18.0**	**-0.5**
PMG	**Port Moresby**	**8.20**	**247**	P		**Pn**	**16 02 19.6**	**+1.1**
PMG	**Port Moresby**	**8.20**	**247**	P		**Pn**	**16 02 18.0**	**-0.5**
PMG							16 03 51.1	
MANU	**Manus Island**	**8.52**	**299**			**Pn**	**16 02 22.3**	**-0.5**
COEN	**Coen**	**13.77**	**235**	P		**Pn**	**16 03 33.6**	**-0.8**
COEN	**Coen**	**13.77**	**235**			**Pn**	**16 03 33.1**	**-1.3**
COEN	**Coen**	**13.77**	**235**	P		**Pn**	**16 03 35.2**	**+0.7**
MMPI	**Merauke**	**14.47**	**260**	P		**Pn**	**16 03 43.3**	**-0.4**
	5µm10µm444nm,0.7s						
JAY	**Jayapura**	**14.54**	**284**	P		**Pn**	**16 03 45.4**	**+0.8**
	49nm,1.0s,baz=122,slow=7.4,SNR=6.2						
JAY					S	**Sn**	**16 06 27.9**	**+3.3**
	11nm,0.8s,baz=51,slow=24,SNR=1.0						
JAY					LR	LR	16 09 09.6	
	comp=Z,4µm,21.0s,baz=75,slow=36						
JAY	**Jayapura**	**14.54**	**284**	P		**Pn**	**16 03 44.2**	**-0.4**
GENI	**Genyem**	**15.04**	**283**	P		**Pn**	**16 03 51.6**	**+0.6**
GENI	**Genyem**	**15.04**	**283**	P		**Pn**	**16 03 51.3**	**+0.3**
TV1H	**Townsville Har**	**15.10**	**210**	P		**Pn**	**16 03 53.0**	**+1.2**
SANVU	**Saraoutou**	**15.21**	**128**			**Pn**	**16 03 51.5**	**-1.8**
SANVU					IAmb	IAmb	16 04 00.7	
	comp=Z,478nm,0.8s						
SANVU	**Saraoutou**	**15.21**	**128**	P		**Pn**	**16 03 54.8**	**+1.6**
MTSU	**Mount Surprise**	**15.63**	**220**	P		**Pn**	**16 03 59.8**	**+1.1**
	comp=Z,73nm,1.1s						
MTSU	**Mount Surprise**	**15.63**	**220**	P		**Pn**	**16 03 59.9**	**+1.3**
CTA	**Charters Tower**	**16.07**	**210**	P		**Pn**	**16 04 05.5**	**+1.4**
	comp=Z,2.7nm,1.0s							
CTA	**Charters Tower**	**16.07**	**210**	LR		LR	16 09 51.0	
	comp=Z,97nm,19.4s,baz=23,slow=35							
CTA	**Charters Tower**	**16.07**	**210**	P		**Pn**	**16 04 05.3**	**+1.1**
CTAO	**Charters Tower**	**16.07**	**210**	Pn		**Pn**	**16 04 02.8**	**-1.4**
CTAO	**Charters Tower**	**16.07**	**210**	P		**Pn**	**16 04 05.4**	**+1.2**
CTAO	**Charters Tower**	**16.07**	**210**	P		**Pn**	**16 04 02.8**	**-1.4**
CTAO					pmax	pmax		
	comp=Z,195nm,1.5s							
DVP	**Devils Point**	**17.34**	**132**	P		**P**	**16 04 22.4**	**+1.9**
AUNRC	**North Rockhamp**	**17.50**	**193**	P		**P**	**16 04 23.9**	**+1.8**
SRPI	**Serui, Papua**	**19.02**	**282**	P		**P**	**16 04 39.0**	**0.0**
INH	**Isangel**	**19.30**	**135**	P		**P**	**16 04 43.6**	**+1.6**
BAKI	**Biak**	**19.32**	**284**	P		**Pn**	**16 04 44.7**	**+0.8**
	comp=Z,3µmcomp=Z,170nm,0.8s							
DZM	**Mont Dzumac**	**19.34**	**146**	P		**P**	**16 04 43.7**	**+1.2**
	comp=Z,341nm,0.9s,baz=302,slow=9.7,SNR=158							
DZM					S	**S**	**16 08 19.0**	**+0.9**
	comp=Z,6.9nm,0.8s,baz=149,slow=23,SNR=1.0							
DZM					LR	LR	16 11 18.4	
	comp=Z,3µm,21.5s,baz=325,slow=34							
EIDS	**Eidsvold**	**19.35**	**190**	P		**Pn**	**16 04 44.7**	**+0.7**
	comp=Z,64nm,1.0s							
EIDS	**Eidsvold**	**19.35**	**190**			**P**	**16 04 43.1**	**+0.7**
EIDS	**Eidsvold**	**19.35**	**190**	P		**Pn**	**16 04 44.4**	**+0.3**
ONTNC	**Ouen Toro**	**19.53**	**146**			**P**	**16 04 44.2**	**-0.3**
ONTNC					IAmb	IAmb	16 04 46.8	
	comp=Z,367nm,0.9s							
ONTNC	**Ouen Toro**	**19.53**	**146**	P		**P**	**16 04 45.9**	**+1.5**
YATNC	**Mamie plateau,**	**19.58**	**145**	P		**P**	**16 04 46.6**	**+1.6**
MARNC	**Mare, Loyalty**	**19.83**	**141**			**P**	**16 04 47.0**	**-0.7**
MARNC	**Mare, Loyalty**	**19.83**	**141**	P		**P**	**16 04 48.9**	**+1.2**
OUENC	**Ouen Island, N**	**19.83**	**145**	P		**P**	**16 04 49.4**	**+1.6**
PINNC	**Pines Island,**	**20.33**	**144**		Pn	**P**	**16 04 54.7**	**+1.6**
PINNC					IAmb	IAmb	16 04 58.9	
	comp=Z,328nm,1.1s							
PINNC	**Pines Island,**	**20.33**	**144**	P		**P**	**16 04 54.6**	**+1.4**
QIS	**Mount Isa**	**20.49**	**225**	P		**P**	**16 04 55.8**	**+0.8**
	comp=Z,115nm,0.9s,comp=Z,0.0nm							
QIS	**Mount Isa**	**20.49**	**225**	P		**P**	**16 04 56.3**	**+1.4**
AUBSH	**Beerwah State**	**20.57**	**185**	P		**P**	**16 04 57.9**	**+2.2**
AUWSH	**Wavell State H**	**21.10**	**184**	P		**P**	**16 05 04.0**	**+2.6**
RKPI	**Ransiki, Papua**	**21.11**	**282**	P		**P**	**16 05 02.4**	**+0.7**
	comp=Z,4µmcomp=Z,173nm,0.8s							
TW1H	**Toowoomba 1 Ha**	**21.35**	**187**	P		**P**	**16 05 06.1**	**+1.9**
GC1S	**Gold Coast 1 S**	**21.83**	**183**	P		**P**	**16 05 11.4**	**+2.2**
GUMO	**Guam**	**22.04**	**333**	LR		LR	16 13 17.0	
	comp=Z,712nm,20.6s,baz=152,slow=35							
QLP	**Quilpie**	**22.59**	**205**	P		**P**	**16 05 18.2**	**+0.7**
	comp=Z,277nm,0.9s,comp=Z,0.0nm							
QLP	**Quilpie**	**22.59**	**205**	P		**P**	**16 05 17.9**	**+0.4**
FAKI	**Fak Fak**	**22.73**	**277**	P		**P**	**16 05 18.9**	**-0.1**
FAKI					IAmb	IAmb	16 05 21.8	
	comp=Z,282nm,0.8s							
FAKI	**Fak Fak**	**22.73**	**277**	P		**P**	**16 05 19.2**	**+0.2**
FAKI	**Fak Fak**	**22.73**	**277**	P		**P**	**16 05 18.6**	**-0.4**
	comp=Z,3µmcomp=Z,410nm,0.9s							
KDU	**Kakadu**	**22.93**	**252**	P		**P**	**16 05 21.1**	**+0.1**
	comp=Z,45nm,0.8s,comp=Z,0.0nm							
SAUI	**Saumlaki**	**23.39**	**264**	P		**P**	**16 05 25.7**	**+0.2**
SAUI	**Saumlaki**	**23.39**	**264**	P		**P**	**16 05 26.9**	**+1.4**
SAUI	**Saumlaki**	**23.39**	**264**	P		**P**	**16 05 24.6**	**-0.9**
	comp=Z,8µmcomp=Z,512nm,1.9s							
AULRC	**Lightning Ridg**	**23.94**	**195**	P		**P**	**16 05 30.9**	**+0.5**
WB0	**Warramunga Arr**	**23.96**	**234**	P		**P**	**16 05 31.1**	**+0.4**
WR8	**Warramunga Arr**	**23.98**	**233**	P		**P**	**16 05 31.7**	**+0.9**
WR8					IAmb	IAmb	16 05 33.2	
	comp=Z,196nm,0.9s							
WRAB	**Tennant Creek**	**24.08**	**234**	P		**P**	**16 05 32.3**	**+0.5**
WRAB					IAmb	IAmb	16 05 34.2	
	comp=Z,167nm,1.0s							
WRAB	**Tennant Creek**	**24.08**	**234**	P		**P**	**16 05 32.9**	**+1.1**
WRAB	**Tennant Creek**	**24.08**	**234**	*i* P		**P**	**16 05 31.2**	**-0.6**
WRAB					pmax	pmax		
	comp=Z,119nm,0.8s							
SWI	**Sorong**	**24.10**	**282**	P		**P**	**16 05 32.4**	**+0.5**
	comp=Z,2µmcomp=Z,277nm,1.0s							
WRA	**Warramunga Arr**	**24.10**	**234**	P		**P**	**16 05 32.0**	**+0.1**
	comp=Z,118nm,0.8s,baz=57,slow=9.3,SNR=178							
WRA					PcP	**PcP**	**16 09 12.4**	**+0.4**
	comp=Z,34nm,0.8s,baz=57,slow=2.1,SNR=12							
WRA					S	**S**	**16 09 43.9**	**-1.4**
	comp=Z,37nm,1.2s,baz=56,slow=14,SNR=9.3							
WRA					ScP	**ScP**	**16 12 44.1**	**-1.0**
	comp=Z,4.0nm,0.9s,baz=55,slow=1.9,SNR=5.4							
WRA					LR	LR	16 14 47.0	
	comp=Z,3µm,20.4s,baz=86,slow=36							
WRA					PKiKP	**PKiKP**	**16 16 53.5**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=354,slow=1.4,SNR=6.1							
	comp=Z,118nm,0.8s							
ARMA	**Armidale**	**24.23**	**187**	P		**P**	**16 05 33.3**	**+0.2**
	comp=Z,122nm,1.0s,comp=Z,0.0nm							
ARMA	**Armidale**	**24.23**	**187**	P		**P**	**16 05 33.6**	**+0.5**
ARMA	**Armidale**	**24.23**	**187**	P		**P**	**16 05 34.5**	**+1.4**
MTN	**Manton Dam**	**24.24**	**253**	P		**P**	**16 05 33.9**	**+0.7**
	comp=Z,156nm,0.9s,comp=Z,0.0nm							
FUNA	**Funafuti**	**24.29**	**97**	P		**P**	**16 05 33.8**	**+0.1**
FUNA					IAmb	IAmb	16 05 56.7	
	comp=Z,261nm,1.2s							
FUNA	**Funafuti**	**24.29**	**97**	P		**P**	**16 05 36.7**	**+3.0**
DRS	**Darwin Rock St**	**24.37**	**254**	P		**P**	**16 05 35.4**	**+1.0**
AUDHS	**Darwin High Sc**	**24.43**	**254**	P		**P**	**16 05 35.6**	**+0.6**
BNDI	**Bandanaira**	**24.85**	**273**	P		**P**	**16 05 39.8**	**+1.0**
BNDI	**Bandanaira**	**24.85**	**273**	P		**P**	**16 05 39.5**	**+0.7**
	comp=Z,3µmcomp=Z,4µmcomp=Z,365nm,0.6s							
AUPHS	**Peel High Scho**	**25.00**	**188**	P		**P**	**16 05 41.4**	**+1.4**
MSVF	**Nonsavu**	**25.40**	**119**	P		**P**	**16 05 42.8**	**-1.1**
MSVF	**Nonsavu**	**25.40**	**119**	P		**P**	**16 05 44.4**	**+0.5**
MSVF	**Nonsavu**	**25.40**	**119**	P		**P**	**16 05 42.8**	**-1.1**
MSVF					pmax	pmax		
	comp=Z,81nm,1.2s							
LHI	**Lord Howe Isla**	**25.46**	**172**	P		**P**	**16 05 44.7**	**+0.6**
	comp=Z,153nm,0.8s							
LHI	**Lord Howe Isla**	**25.46**	**172**	P		**P**	**16 05 44.4**	**+0.3**
MSAI	**Masohi**	**25.95**	**275**	P		**P**	**16 05 47.6**	**-1.2**
	comp=Z,1µmcomp=Z,147nm,0.8s							
DGTI	**Dogotuki**	**26.38**	**114**	P		**P**	**16 05 52.2**	**-0.4**
AUDCS	**Dubbo College**	**26.49**	**192**	P		**P**	**16 05 54.4**	**+1.0**
ASAR	**Alice Springs**	**26.54**	**227**	P		**P**	**16 05 54.3**	**+0.3**
	comp=Z,47nm,0.7s,baz=58,slow=8.7,SNR=344							
ASAR					PcP	**PcP**	**16 09 18.2**	**+0.8**
	comp=Z,43nm,0.7s,baz=62,slow=2.4,SNR=20							
ASAR					S	**S**	**16 10 26.3**	**+2.3**
	comp=Z,7.3nm,1.1s,baz=178,slow=34,SNR=4.6							
ASAR					ScP	**ScP**	**16 12 54.3**	**+2.3**
	comp=Z,2.7nm,0.7s,baz=56,slow=1.8,SNR=4.8							
ASAR					LR	LR	16 15 60.0	
	comp=Z,3µm,20.8s,baz=106,slow=35							
ASAR					PKiKP	**PKiKP**	**16 16 55.0**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=71,slow=1.5,SNR=4.1							
ASAR					P3KPbc		16 38 32.5	
	comp=Z,0.5nm,0.6s,baz=224,slow=2.6,SNR=10							
	comp=Z,47nm,0.7s							
ASAR	**Alice Springs**	**26.54**	**227**	P		**P**	**16 05 54.0**	**0.0**
AUALC	**St Philip's Co**	**26.56**	**227**	P		**P**	**16 05 54.8**	**+0.5**
CMSA	**Cobar Meteorol**	**26.57**	**198**	P		**P**	**16 05 54.3**	**+0.1**
	comp=Z,53nm,2.1s,comp=Z,0.0nm							
CMSA	**Cobar Meteorol**	**26.57**	**198**	P		**P**	**16 05 54.3**	**+0.1**
AAI	**Ambon**	**26.63**	**274**	P		**P**	**16 05 55.4**	**+0.4**
	comp=Z,2µmcomp=Z,189nm,0.8s							
TAVE	**Taveuni**	**26.84**	**115**	P		**P**	**16 05 58.1**	**+1.4**
MGCD	**Mangrove Creek**	**27.05**	**187**	P		**P**	**16 05 59.6**	**+1.2**
	comp=Z,89nm,1.1s							
MGCD	**Mangrove Creek**	**27.05**	**187**	P		**P**	**16 06 00.7**	**+2.3**
KNRA	**Kununurra**	**27.20**	**248**	P		**P**	**16 06 00.6**	**+0.5**
	comp=Z,68nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**27.23**	**25**	T		T	16 34 11.2	
	baz=205,slow=76,SNR=44							
H11S2	**WAKE ISLAND Hy**	**27.24**	**25**	T		T	16 34 00.7	
	baz=205,slow=76,SNR=87							
H11S1	**WAKE ISLAND Hy**	**27.25**	**25**	T		T	16 34 12.6	
	baz=205,slow=76,SNR=58							
SYDH	**Sydney Hard Ro**	**27.64**	**187**	P		**P**	**16 06 05.1**	**+1.4**
RIV	**Riverview**	**27.65**	**187**	P		**P**	**16 06 05.2**	**+1.4**
	comp=Z,130nm,0.9s							
RIV	**Riverview**	**27.65**	**187**	P		**P**	**16 06 05.4**	**+1.6**
NLAI	**Namlea**	**27.77**	**275**	P		**P**	**16 06 06.5**	**+1.3**
	comp=Z,2µmcomp=Z,2µmcomp=Z,123nm,0.7s							
TNTI	**Ternate**	**28.27**	**283**	P		**P**	**16 06 09.5**	**-0.1**
TNTI	**Ternate**	**28.27**	**283**	P		**P**	**16 06 10.3**	**+0.7**
TNTI	**Ternate**	**28.27**	**283**	P		**P**	**16 06 09.3**	**-0.3**
STKA	**Stephens Creek**	**28.33**	**204**	P		**P**	**16 06 09.7**	**-0.3**
	comp=Z,15nm,0.8s,baz=11,slow=8.0,SNR=17							
STKA					PcP	**PcP**	**16 09 22.1**	**+0.5**
	comp=Z,30nm,0.8s,baz=29,slow=4.2,SNR=8.3							
STKA					LR	LR	16 17 28.4	
	comp=Z,3µm,19.9s,baz=17,slow=36							
	comp=Z,15nm,0.8s							
STKA	**Stephens Creek**	**28.33**	**204**	P		**P**	**16 06 10.2**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**28.41**	**24**	T		T	16 35 43.1	
	baz=194,slow=76							
H11N3	**WAKE ISLAND Hy**	**28.42**	**25**	T		T	16 35 41.2	
	baz=194							
H11N2	**WAKE ISLAND Hy**	**28.43**	**24**	T		T	16 36 15.7	
	baz=194,slow=76							
YNG	**Young**	**28.54**	**191**	P		**P**	**16 06 12.0**	**+0.2**
	comp=Z,24nm,0.8s							
SANI	**Sanana**	**29.04**	**277**	P		**P**	**16 06 17.2**	**+0.7**
SANI	**Sanana**	**29.04**	**277**	P		**P**	**16 06 15.7**	**-0.8**
	comp=Z,2µmcomp=Z,273nm,0.9s							
CNB	**Canberra Magne**	**29.36**	**189**	P		**P**	**16 06 20.6**	**+1.5**
CAN	**Canberra**	**29.42**	**190**	P		**P**	**16 06 20.8**	**+1.1**
	comp=Z,37nm,0.9s							
SOEI	**Soe**	**30.44**	**261**	IAmb	IAmb	16 06 42.2		
	comp=Z,120nm,0.8s							
SOEI	**Soe**	**30.44**	**261**	P		**P**	**16 06 30.0**	**+1.0**
SOEI	**Soe**	**30.44**	**261**	P		**P**	**16 06 28.3**	**-0.7**
	comp=Z,2µmcomp=Z,2µmcomp=Z,157nm,1.0s							
AUJCS	**Jamestown Cent**	**30.76**	**207**	P		**P**	**16 06 32.9**	**+1.5**
FITZ	**Fitzroy Crossi**	**30.79**	**245**	P		**P**	**16 06 31.6**	**-0.3**
	comp=Z,57nm,0.7s,baz=66,slow=8.1,SNR=76							
FITZ					PcP	**PcP**	**16 09 29.0**	**+0.9**
	comp=Z,56nm,0.8s,baz=176,slow=1.5,SNR=7.4							
FITZ					LR	LR	16 19 30.7	
	comp=Z,3µm,20.2s,baz=80,slow=37							
	comp=Z,57nm,0.7s							
FITZ	**Fitzroy Crossi**	**

AWAZ Awhitu Peninsu 35.62 152 P P 16 07 15.7 +2.0
WIAZ Waiheke Island 35.63 151 P P 16 07 15.6 +1.8
CORO Coronation Par 35.72 190 P P 16 07 16.4 +2.0
KUZ Kuaotunu 35.87 151 P P 16 07 17.6 +1.7
KUZ Kuaotunu 35.87 151 P P 16 07 17.6 +1.7
MKAZ Moumakai 35.89 152 P P 16 07 17.7 +1.6
TOZ Tahuroa Road 36.56 152 P P 16 07 22.8 +1.1
TOZ Tahuroa Road 36.56 152 P P 16 07 23.6 +1.9
MOO Moorlands 36.67 189 P P 16 07 24.4 +1.8
PLAI Plampang 36.79 264 P P 16 07 23.4 -0.6
PLAI Plampang 36.79 264 P P 16 07 22.6 -1.4
HIZ Hauiti 36.90 153 IAmb IAmb 16 07 30.4
comp=Z,103nm,0.6s
HIZ Hauiti 36.90 153 P P 16 07 26.8 +2.1
TGRZ Tauranga 36.92 151 P P 16 07 27.8 +3.1
MBWA Marble Bar 37.04 243 P P 16 07 25.5 -0.6
MBWA Marble Bar 37.04 243 P P 16 07 26.0 -0.1
TLZ Tolley Road 37.06 152 P P 16 07 27.7 +1.7
PSA00 Pilbara Seismi 37.07 242 P P 16 07 25.7 -0.6
PSA00 Pilbara Seismi 37.07 242 P P 16 07 26.3 -0.1
TAU Tasmania Unive 37.11 189 P P 16 07 26.5 +0.2
TAU IAmb IAmb 16 07 29.2
comp=Z,113nm,0.8s
TAU Tasmania Unive 37.11 189 P P 16 07 28.2 +1.9
TAU Tasmania Unive 37.11 189 P P 16 07 26.5 +0.2
TAU pmax pmax
comp=Z,113nm,0.9s
TAU Tasmania Unive 37.11 189 P P 16 07 28.3 +2.0
KARZ Kaharoa 37.14 151 P P 16 07 28.1 +1.4
OPRZ Ohinepanea 37.15 151 P P 16 07 28.2 +1.5
NGRZ Ngongotaha 37.18 152 P P 16 07 28.6 +1.6
MARZ Manawahe 37.32 151 P P 16 07 30.0 +1.8
VRZ Vera Road 37.36 154 P P 16 07 32.0 +3.5
TARZ Mount Tarawera 37.44 151 P P 16 07 31.4 +2.1
EDRZ Edgecumbe 37.45 151 P P 16 07 32.5 +3.1
HRRZ Handcock Road 37.45 152 P P 16 07 31.5 +2.1
TWVZ Taurewa 37.62 153 P P 16 07 32.2 +1.3
KATZ Kakaramea 37.65 153 P P 16 07 32.9 +1.7
TWSI Taliwang, Sumb 37.67 264 P P 16 07 30.4 -1.1
comp=Z,1µmcomp=Z,138nm,0.9s
HAZ Te Kaha 37.69 150 P P 16 07 32.3 +1.1
WTVZ West Tongariro 37.72 153 P P 16 07 33.3 +1.6
URZ Urewera 37.74 151 LR LR 16 22 37.7
comp=Z,690nm,18.8s,baz=322,slow=35
URZ Urewera 37.74 151 P P 16 07 32.6 +0.8
MUGZ Murupara 37.75 151 P P 16 07 33.1 +1.2
NGZ Ngauruhoe 37.77 153 P P 16 07 33.9 +1.7
OTVZ Oturere 37.79 153 P P 16 07 34.2 +1.8
RUGZ Raukumara Rang 37.79 150 P P 16 07 32.8 +0.5
SNVZ South Ngauruho 37.80 153 P P 16 07 34.3 +1.9
MXZ Matakaoa Point 37.80 149 IAmb IAmb 16 07 35.7
comp=Z,108nm,0.8s
MXZ Matakaoa Point 37.80 149 P P 16 07 33.5 +1.2
MXZ Matakaoa Point 37.80 149 P P 16 07 33.3 +1.0
MRHZ Matea Rd 37.87 152 P P 16 07 34.0 +1.1
QRZ Quartz Range 37.91 158 IAmb IAmb 16 07 35.8
comp=Z,93nm,1.0s
QRZ Quartz Range 37.91 158 P P 16 07 35.1 +2.0
QRZ Quartz Range 37.91 158 P P 16 07 34.8 +1.7
PKGZ Pakihiroa 37.92 149 P P 16 07 34.6 +1.3
RTZ Ruatahuna 37.96 151 P P 16 07 34.5 +0.8
WAZ Wanganui 37.98 154 P P 16 07 39.0 +5.2
MWZ Matawai 38.01 150 P P 16 07 35.2 +1.2
MTHZ Maungataniwha 38.09 152 P P 16 07 35.4 +0.7
PUZ Puketiti 38.17 149 P P 16 07 36.2 +0.8
BKZ Black Stump Fm 38.17 152 P P 16 07 36.3 +0.8
BKZ Black Stump Fm 38.17 152 P P 16 07 36.2 +0.7
RIGZ Rimuhau 38.41 151 P P 16 07 38.2 +0.7
DSZ Denniston Nort 38.45 159 IAmb IAmb 16 07 46.0
comp=Z,90nm,1.0s
DSZ Denniston Nort 38.45 159 P P 16 07 38.5 +0.8
NNZ Nelson 38.56 157 IAmb IAmb 16 07 44.4
comp=Z,58nm,0.7s
NNZ Nelson 38.56 157 P P 16 07 38.4 -0.2
KNZ Kokohu 38.62 151 P P 16 07 39.2 +0.1
TSZ Takapari Road 38.66 154 P P 16 07 39.8 +0.4
THZ Tophouse 38.86 158 IAmb IAmb 16 07 45.6
comp=Z,125nm,0.7s
THZ Tophouse 38.86 158 P P 16 07 41.8 +0.6
MRZ Mangatainoka R 38.99 155 P P 16 07 42.1 -0.1
MRZ IAmb IAmb 16 07 46.3
comp=Z,96nm,0.6s
MRZ Mangatainoka R 38.99 155 P P 16 07 42.1 -0.1
PXZ Pawanui 39.04 153 P P 16 07 43.6 +1.0
SNZO South Karori 39.17 156 P P 16 07 44.1 +0.5
SNZO IAmb IAmb 16 07 49.0
comp=Z,89nm,0.9s
BSWZ Blackbirch Sta 39.18 157 P P 16 07 44.0 +0.2
TGY Tagaytay City 39.22 301 LR LR 16 22 02.7
comp=Z,921nm,21.8s,baz=108,slow=33
WVZ Waitaha Valley 39.28 161 P P 16 07 45.4 +0.9
BFZ Birch Farm 39.29 154 IAmb IAmb 16 07 49.6
comp=Z,83nm,0.6s
BFZ Birch Farm 39.29 154 P P 16 07 45.1 +0.4
BFZ Birch Farm 39.29 154 P P 16 07 45.6 +0.8
BHW Baring Head 39.32 156 IAmb IAmb 16 07 51.5
comp=Z,52nm,0.5s
SRBI Singaraja 39.32 265 P P 16 07 44.2 -1.1
comp=Z,1µmcomp=Z,63nm,0.8s
DNP Denpasar 39.33 264 P P 16 07 43.4 -2.0
IGBI Denpasar 39.39 264 P P 16 07 45.3 -0.6
FOZ Fox Glacier 39.41 163 IAmb IAmb 16 07 53.1
comp=Z,118nm,1.2s
FOZ Fox Glacier 39.41 163 P P 16 07 45.9 +0.2
LTZ Lake Taylor 39.53 160 IAmb IAmb 16 07 49.3
comp=Z,67nm,0.9s
LTZ Lake Taylor 39.53 160 P P 16 07 47.1 +0.4
JCZ Jackson Bay 39.62 164 P P 16 07 48.6 +1.1
JCZ Jackson Bay 39.62 164 P P 16 07 48.2 +0.7
KHZ Kahutara 39.66 158 IAmb IAmb 16 07 48.6
comp=Z,147nm,1.0s
KHZ Kahutara 39.66 158 P P 16 07 47.3 -0.4
BBKI Banjar Baru 39.91 272 P P 16 07 51.0 +0.7
comp=Z,131nm,1.0s
OXZ Oxford 39.93 160 IAmb IAmb 16 07 58.0
comp=Z,100nm,0.5s
OXZ Oxford 39.93 160 P P 16 07 50.0 0.0
MSZ Milford Sound 39.96 165 P P 16 07 52.4 +2.3
GVZ Greta Valley S 39.96 159 IAmb IAmb 16 07 54.5
comp=Z,122nm,0.7s
GVZ Greta Valley S 39.96 159 P P 16 07 50.6 +0.3
RPZ Rata Peaks 39.96 162 LR LR 16 23 51.5
comp=Z,1µm,18.3s,baz=321,slow=35
RPZ Rata Peaks 39.96 162 P P 16 07 50.9 +0.7
RPZ Rata Peaks 39.96 162 P P 16 07 51.3 +1.0
MEEK Meekatharra 39.98 235 P P 16 07 51.2 +0.5
MTKI Muara Teweh, K 40.16 276 P P 16 07 53.5 +1.1
comp=Z,58nm,0.7s
LBZ Lake Benmore 40.30 163 P P 16 07 52.8 -0.3
LBZ Lake Benmore 40.30 163 P P 16 07 53.6 +0.5
JAGI Jajag, Banyuwa 40.37 264 P P 16 07 52.1 -1.9
JAGI Jajag, Banyuwa 40.37 264 P P 16 07 52.7 -1.4
JAGI Jajag, Banyuwa 40.37 264 P P 16 07 52.9 -1.2
comp=Z,2µmcomp=Z,259nm,0.8s
MQZ McQueen's Vall 40.47 160 P P 16 07 54.8 +0.4
TMZ Timaru 40.55 162 P P 16 07 54.3 -0.8
MLZ Mavora Lakes 40.65 166 P P 16 07 56.2 +0.2
MLZ IAmb IAmb 16 08 02.6
comp=Z,130nm,1.0s
MLZ Mavora Lakes 40.65 166 P P 16 07 56.6 +0.6
EAZ Earnscleugh 40.83 164 P P 16 07 57.2 -0.2
ODZ Otahua Downs 41.04 163 P P 16 07 59.2 +0.1
ODZ Otahua Downs 41.04 163 P P 16 07 59.2 +0.1
WHZ Wether Hill Ro 41.10 166 P P 16 07 59.1 -0.5
WHZ Wether Hill Ro 41.10 166 P P 16 07 59.8 +0.1
TUZ Tuapeka 41.59 164 P P 16 08 04.0 +0.5
JHJ Hachijo jima 2 41.67 341 LR LR 16 23 12.5
comp=Z,509nm,21.6s,baz=92,slow=33
JOW Kunigami 41.74 323 LR LR 16 22 06.8
comp=Z,473nm,20.1s,baz=124,slow=31
JOW Kunigami 41.74 323 P P 16 08 06.4 +1.3
JOW IAmb IAmb 16 08 09.5
comp=Z,96nm,0.6s
JOW Kunigami 41.74 323 P P 16 08 03.8 -1.3
HHSZ Highcliff Hill 41.79 163 P P 16 08 05.8 +0.5
APZ The Paps 42.00 166 P P 16 08 06.3 -0.7
SYZ Scrubby Hill 42.00 165 P P 16 08 08.0 +1.0
KLBR Kellerberrin 42.83 229 P P 16 08 13.6 -0.4
NGJI Ngawi 43.04 266 P P 16 08 16.2 +0.3
comp=Z,44nm,0.7s
MORW Morawa 43.05 233 P P 16 08 15.4 -0.4
MORW IAmb IAmb 16 08 16.9
comp=Z,100nm,0.8s
MORW Morawa 43.05 233 P P 16 08 16.0 +0.2
BLDU Ballidu 43.18 231 P P 16 08 17.0 +0.2
PCJI Pacitan 43.31 265 P P 16 08 17.8 -0.3
comp=Z,5µmcomp=Z,438nm,1.3s
SBUM Sibu 43.39 280 P P 16 08 19.4 +0.7
SBUM IAmb IAmb 16 08 21.8
comp=Z,184nm,1.5s
SBUM Sibu 43.39 280 P P 16 08 20.2 +1.5
TWGBT Beinan 43.85 312 P P 16 08 22.5 +0.3
NWAO Narrogin (SRO) 43.85 228 LR LR 16 26 41.1
comp=Z,2µm,20.0s,baz=73,slow=36
NWAO Narrogin (SRO) 43.85 228 P P 16 08 21.9 -0.3
NWAO Narrogin (SRO) 43.85 228 P P 16 08 22.1 -0.1
NWAO Narrogin (SRO) 43.85 228 P P 16 08 22.0 -0.1
NWAO Narrogin (SRO) 43.85 228 P P 16 08 21.9 -0.3
NWAO pmax pmax
comp=Z,51nm,0.9s
NWAO Narrogin (SRO) 43.85 228 P P 16 08 22.1 -0.1
TWG Pinlang 43.86 312 P P 16 08 21.9 -0.4
UGM Wanagama 43.96 265 P P 16 08 23.5 +0.1
UGM Wanagama 43.96 265 P P 16 08 24.1 +0.7
UGM Wanagama 43.96 265 P P 16 08 23.3 -0.1
comp=Z,132nm,1.4s
YULB Yu-li 44.04 313 IAmb IAmb 16 08 26.4
comp=Z,104nm,0.8s
YULB Yu-li 44.04 313 P P 16 08 24.2 +0.4
SMRI Semarang 44.06 266 P P 16 08 25.2 +1.0
MUN Mundaring 44.17 230 P P 16 08 25.1 +0.3
YOGI Yogyakarta 44.19 265 P P 16 08 24.4 -0.8
comp=Z,4µmcomp=Z,297nm,0.8s
NACB Ninganchiao 44.31 314 IAmb IAmb 16 08 31.4
comp=Z,215nm,1.1s
NACB Ninganchiao 44.31 314 P P 16 08 26.8 +0.9
AUALB St Joseph's Co 44.41 225 P P 16 08 27.9 +1.3
JMN Monobe 44.43 335 IAmb IAmb 16 08 31.4
comp=Z,122nm,1.3s
TPUB Ta-pu 44.47 312 IAmb IAmb 16 08 28.3
comp=Z,112nm,0.8s
TPUB Ta-pu 44.47 312 P P 16 08 27.6 +0.4
SSLB Suanglung 44.53 313 IAmb IAmb 16 08 32.7
comp=Z,118nm,0.7s
SSLB Suanglung 44.53 313 P P 16 08 28.2 +0.5
YHNB Yeheng 44.77 315 IAmb IAmb 16 08 34.6
comp=Z,128nm,0.9s
YHNB Yeheng 44.77 315 P P 16 08 30.2 +0.5
CTZ Chatham Island 44.98 151 P P 16 08 32.2 +1.2
CTZ Chatham Island 44.98 151 P P 16 08 32.9 +1.9
CTZ Chatham Island 44.98 151 P P 16 08 32.3 +1.3
JNU Nakatsue 45.27 331 IAmb IAmb 16 08 37.0
comp=Z,99nm,0.7s
JNU Nakatsue 45.27 331 P P 16 08 33.6 +0.1
MJAR Matsushiro Arr 45.32 341 P P 16 08 32.8 -1.0
comp=Z,8.8nm,0.7s,baz=172,slow=7.3,SNR=27
MJAR PcP PcP 16 10 12.3 -0.2
comp=Z,19nm,0.8s,baz=154,slow=3.8,SNR=10.0
comp=Z,8.8nm,0.7s
MJAR Matsushiro Arr 45.32 341 P P 16 08 33.2 -0.6
MAJO Matsushiro 45.32 341 P P 16 08 33.2 -0.5
MAJO Matsushiro 45.32 341 P P 16 08 33.5 -0.2
MAJO Matsushiro 45.32 341 *i* P P 16 08 33.6 -0.2
MAJO pmax pmax
comp=Z,30nm,1.5s
KPJI Karang Pucung 45.55 266 P P 16 08 37.1 +1.1
comp=Z,2µmcomp=Z,228nm,0.7s
RAR Rarotonga 46.37 113 LR LR 16 24 36.8
comp=Z,913nm,21.9s,baz=284,slow=31
RAR Rarotonga 46.37 113 P P 16 08 41.4 -0.9
RAR IAmb IAmb 16 08 43.5
comp=Z,60nm,0.9s
RAR Rarotonga 46.37 113 P P 16 08 42.3 0.0
RAR Rarotonga 46.37 113 P P 16 08 41.4 -0.9
RAR pmax pmax
comp=Z,60nm,1.0s
RAR Rarotonga 46.37 113 P P 16 08 41.7 -0.6
RAR pP pP 16 08 52.8 -5.9
BBJI Bungbulang 46.82 266 P P 16 08 45.9 -0.1
QZH Quanzhou 46.94 313 P P 16 08 48.3 +1.7
QZH pmax pmax
comp=Z,190nm,0.9s
TPI Tanjungpandan 47.12 272 P P 16 08 49.1 +0.8
comp=Z,1µmcomp=Z,1µmcomp=Z,72nm,1.0s
CNJI Cibinong 47.34 266 P P 16 08 49.8 -0.2
comp=Z,3µmcomp=Z,332nm,0.9s
DBJI Dramaga 47.75 267 P P 16 08 52.4 -0.8
comp=Z,105nm,0.7s
SKJI Sukabumi 47.92 266 P P 16 08 53.3 -1.2
XMAS Kiritimati 48.38 82 P P 16 08 59.0 +1.0
XMAS IAmb IAmb 16 09 02.0
comp=Z,92nm,0.8s
HKPS Hong Kong Po S 48.88 307 P P 16 09 03.0 +1.3
DLV Lat 49.48 291 P P 16 09 06.4 -0.3
DLV IAmb IAmb 16 09 08.4
comp=Z,56nm,0.9s
DLV Lat 49.48 291 P P 16 09 06.4 -0.3
TJN Taejon 49.60 331 P P 16 09 07.4 +0.5
TJN Taejon 49.60 331 *i* P P 16 09 06.6 -0.3
TJN pmax pmax
comp=Z,2.0nm,0.6s
KLSI 49.86 269 P P 16 09 09.6 +0.2
KASI Kota Agung 50.04 268 P P 16 09 08.2 -2.5
comp=Z,1µmcomp=Z,167nm,0.9s
KSRS Korea Array 50.20 332 P P 16 09 11.7 +0.2
comp=Z,39nm,0.9s,baz=149,slow=8.1,SNR=66
KSRS PcP PcP 16 10 30.6 +0.7
comp=Z,9.4nm,0.7s,baz=162,slow=2.9,SNR=9.1
KSRS LR LR 16 28 44.9
comp=Z,103µm,21.6s,baz=140,slow=34
comp=Z,39nm,0.9s
KSAR Wonju Array Be 50.20 332 P P 16 09 11.8 +0.3
KSAR Wonju Array Be 50.20 332 P P 16 09 11.8 +0.3
MDSI Maura Dua 50.42 269 P P 16 09 13.1 -0.5
comp=Z,1µmcomp=Z,91nm,1.3s
DSRI Dabo 50.45 275 P P 16 09 12.9 -0.9
comp=Z,1µmcomp=Z,145nm,0.9s
LWLI Liwa 50.51 269 P P 16 09 13.7 -0.7
comp=Z,253nm,0.9s
TPRI Tanjung Pinang 50.69 276 P P 16 09 15.9 +0.2
comp=Z,156nm,1.0s
INCN Inchon 50.83 331 P P 16 09 16.9 +0.7
INCN Inchon 50.83 331 P P 16 09 16.6 +0.3
INCN Inchon 50.83 331 P P 16 09 16.9 +0.7
INCN pmax pmax
comp=Z,143nm,0.8s
INCN Inchon 50.83 331 P P 16 09 17.0 +0.7
INCN PcP PcP 16 10 33.0 +0.7
QIZ Qiongzhong 50.92 301 IAmb IAmb 16 09 20.1
comp=Z,59nm,0.8s
QIZ Qiongzhong 50.92 301 P P 16 09 19.0 +1.7
QIZ S S 16 16 34.5 +5.0
QIZ pmax pmax
comp=Z,75nm,0.9s
QIZ LR LR
comp=Z,450nm,9.9s
QIZ LR LR
comp=Z,440nm,16.5s
QIZ LR LR
comp=Z,730nm,30.6s
QIZ Qiongzhong 50.92 301 P P 16 09 19.2 +1.9
NJ2 Nanjing 51.23 320 ⇑P P 16 09 20.3 +1.0
NJ2 pmax pmax
comp=Z,27nm,0.9s
JMBI JAMBI 51.23 273 P P 16 09 20.0 +0.3
ASAJ Asahikawa 51.33 349 LR LR 16 28 57.5
comp=Z,743nm,20.8s,baz=180,slow=33
MYKOM Kota Tinggi 51.50 277 IAmb IAmb 16 09 23.5
comp=Z,78nm,0.8s
MYKOM Kota Tinggi 51.50 277 P P 16 09 22.2 +0.5
BTDF Bukit Timah Da 51.51 277 P P 16 09 22.3 +0.5
KSI Kapahiang 52.07 270 P P 16 09 23.6 -2.4
comp=Z,50nm,0.8s
CNSH ChangSha 52.94 312 P P 16 09 33.5 +1.4
CNSH pmax pmax
comp=Z,81nm,1.0s
WHN Wuhan 53.28 316 ⇑P P 16 09 35.5 +0.9
WHN pmax pmax
comp=Z,250nm,1.1s
KRJI Kerinci 53.34 272 P P 16 09 35.2 -0.3
UBPT Khong Chiam 53.36 294 P P 16 09 36.1 +0.7
YSS Yuzhno-Sakhali 54.04 350 *eP* P 16 09 39.9 +0.1
YSS *e* 16 10 44.8
YSS *eS* S 16 17 05.0 -6.1
YSS *eSS* SS 16 20 50.9 -2.7
YSS pmax pmax
comp=Z,500nm,3.7s
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,800nm,19.0s
YSS MLR MLR
comp=N,800nm,17.0s
YSS MLR MLR
comp=E,700nm,17.0s
BKNI Bangkinang 54.06 275 P P 16 09 41.4 +0.8
BKNI Bangkinang 54.06 275 P P 16 09 41.1 +0.5
USRK Ussuriysk Ar. 54.27 340 P P 16 09 42.2 +0.7
comp=E,18nm,0.9s,baz=150,slow=4.7,SNR=29
comp=E,18nm,0.9s
DL2 Dalian 54.44 328 P P 16 09 42.8 -0.1
DL2 S S 16 17 13.0 -3.8
DL2 pmax pmax
comp=E,120nm,0.9s
DL2 pmax pmax
comp=E,190nm,5.0s
DL2 LR LR
comp=E,400nm,23.2s
DL2 LR LR
comp=E,620nm,23.2s
DL2 LR LR
comp=E,920nm,24.3s
PDSI Padang 54.47 273 P P 16 09 41.6 -2.1
comp=E,2µmcomp=E,292nm,0.7s
PPI Padang Panjang 54.59 274 P P 16 09 43.1 -1.4
PPSI Pulau Pagai 54.72 271 P P 16 09 45.3 -0.1
comp=E,118nm,1.4s
IPM Ipoh 54.74 280 P P 16 09 45.8 +0.2
KHLU Kahalu`u 54.89 61 P P 16 09 48.1 +1.4
TIA Tai'an 55.06 323 P P 16 09 47.5 0.0
TIA PcP PcP 16 10 49.0 +0.7
TIA pmax pmax
comp=E,51nm,0.9s
POHA Pohakuloa 55.26 61 P P 16 09 50.0 +0.5
POHA Pohakuloa 55.26 61 P P 16 09 51.6 +2.1
KULM Kulim 55.27 281 IAmb IAmb 16 09 50.0
comp=Z,52nm,0.7s
KULM Kulim 55.27 281 P P 16 09 49.6 +0.2
PPT Papeete 55.39 107 P P 16 09 51.0 +0.8
comp=Z,19nm,0.8s,baz=2.8,slow=14,SNR=2.7
PPT LR LR 16 28 44.9
comp=Z,219nm,21.6s,baz=270,slow=31
comp=Z,19nm,0.8s
MDJ Mudanjiang 55.48 338 P P 16 09 50.5 +0.2
MDJ pmax pmax
comp=Z,51nm,1.0s
MDJ Mudanjiang 55.48 338 P P 16 09 51.1 +0.8
MNSI Mandailing Nat 55.57 275 P P 16 09 49.9 -1.6
comp=Z,318nm,0.8s
SISI Saibi 55.79 273 P P 16 09 52.8 -0.3
comp=Z,2µmcomp=Z,180nm,0.6s
CN2 Changchun 56.44 335 *eP* P 16 09 57.3 +0.1
CN2 *eS* S 16 17 40.8 -2.6
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,11.0s
CN2 LR LR
comp=Z,200nm,11.0s
CN2 LR LR
comp=Z,100nm,10.0s
RPSI Rantau Prapat 56.50 277 IAmb IAmb 16 09 58.8
comp=Z,33nm,0.6s
PSI Prapat 56.52 277 P P 16 09 57.6 -0.9
ENH Enshi 56.60 313 IAmb IAmb 16 10 00.2
comp=Z,67nm,0.9s
ENH Enshi 56.60 313 P P 16 09 59.0 +0.4
ENH Enshi 56.60 313 P P 16 09 59.0 +0.4
ENH pP pP 16 10 11.0 -4.6
GYA Guiyang 56.86 307 ⇑P P 16 10 01.8 +1.2
GYA S S 16 17 48.0 -1.7
GYA pmax pmax
comp=Z,56nm,1.0s
GYA pmax pmax
comp=Z,560nm,3.9s
GYA LR LR
comp=Z,380nm,20.4s
GYA LR LR
comp=Z,410nm,14.9s
GYA LR LR
comp=Z,630nm,18.8s
LYN LuoYang 56.94 318 P P 16 10 01.3 +0.4
LYN S S 16 17 49.5 -0.8
LYN pmax pmax
comp=Z,71nm,0.8s
LYN pmax pmax
comp=Z,340nm,8.2s
LYN LR LR
comp=Z,480nm,18.2s
LYN LR LR
comp=Z,430nm,18.2s
LYN LR LR
comp=Z,1µm,22.7s
TSI Tuntungan 56.99 278 P P 16 10 01.0 -0.6
comp=Z,106nm,0.4s
BNX BinXian 57.25 337 ⇑P P 16 10 02.8 -0.1
BNX pmax pmax
comp=Z,72nm,0.9s
HNS HongShan 57.30 322 ⇑P P 16 10 03.8 +0.4
HNS pmax pmax
comp=Z,54nm,1.0s
HNS LR LR
comp=Z,410nm,21.6s
COCO West Island 57.44 260 P P 16 10 04.6 -0.2
COCO West Island 57.44 260 P P 16 10 06.6 +1.8
COCO West Island 57.44 260 P P 16 10 04.6 -0.2
COCO pmax pmax
comp=Z,129nm,0.9s
GSI Gunungsitoli 57.62 276 P P 16 10 05.0 -1.2
GSI Gunungsitoli 57.62 276 P P 16 10 05.4 -0.8
comp=Z,2µmcomp=Z,262nm,0.8s
KCSI Kotacane, Aceh 57.77 278 P P 16 10 05.1 -2.1
comp=Z,623nmcomp=Z,53nm,0.7s
KCSI pP pP 16 10 20.0 -3.8
comp=Z,623nmcomp=Z,53nm,0.7s
TYV Tymovskoe 57.84 351 *eP* P 16 10 08.3 +1.4
TYV *eS* S 16 18 02.0 +0.5
TYV pmax pmax
comp=Z,32nm,0.7s
TYV pmax pmax
comp=Z,600nm,3.7s
TYV smax smax
comp=N,700nm,4.2s
TYV smax smax
comp=E,700nm,4.2s
BJT Baijiatuau 58.19 326 IAmb IAmb 16 10 14.1
comp=Z,29nm,0.6s
BJT Baijiatuau 58.19 326 P P 16 10 10.0 +0.4
BJI Beijing 58.20 326 P P 16 10 09.3 -0.4
BJI pP pP 16 10 25.8 -0.8
BJI pmax pmax
comp=Z,20nm,0.6s
BJI LR LR
comp=Z,110nm,24.1s
BJI LR LR
comp=Z,160nm,22.0s
BJI LR LR
comp=Z,190nm,24.0s
TPTI 58.31 278 P P 16 10 08.8 -2.1
comp=Z,637nmcomp=Z,51nm,0.8s
GRNR Gornyy 58.97 346 *eP* P 16 10 10.4 -4.4
XAN Xi'an 59.04 316 ⇑P P 16 10 16.0 +0.3
XAN pP pP 16 10 30.8 -1.9
XAN pmax pmax
comp=Z,110nm,0.7s
XAN LR LR
comp=Z,340nm,22.0s
XAN LR LR
comp=Z,390nm,22.0s
XAN LR LR
comp=Z,600nm,20.6s
XAN Xi'an 59.04 316 P P 16 10 15.8 +0.1
XAN pP pP 16 10 28.1 -4.6
PET Petropavlovsk 59.13 3 P P 16 10 16.8 +0.9
PET Petropavlovsk 59.13 3 P P 16 10 17.7 +1.8
PET Petropavlovsk 59.13 3 *eP* P 16 10 17.2 +1.3
PET *eS* S 16 18 23.6 +5.4
PET pmax pmax
comp=Z,211nm,0.7s
PET pmax pmax
comp=Z,100nm,18.1s
PEA0B Petropavlovsk- 59.18 2 P P 16 10 17.5 +1.3

PEA0B	**Petropavlovsk-**	**59.18**	**2**	P	**P**	**16 10 17.5 +1.3**
PEA0B				pmax	pmax	
	comp=Z,130nm,0.8s					
PETK	**Petropavlovsk-**	**59.18**	**2**	P	**P**	**16 10 17.0 +0.8**
	comp=Z,126nm,0.7s,baz=170,slow=7.2,SNR=90					
PETK				PcP	**PcP**	**16 11 03.0 -1.1**
	comp=Z,10nm,0.6s,baz=162,slow=3.8,SNR=1.1					
PETK				LR	LR	16 32 05.0
	comp=Z,742nm,22.0s,baz=180,slow=32					
	comp=Z,126nm,0.7s					
PETK	**Petropavlovsk-**	**59.18**	**2**	P	**P**	**16 10 17.0 +0.8**
PETK						16 11 03.0
MLSI	**Meulaboh, Aceh**	**59.24**	**279**	P	**P**	**16 10 15.9 -1.5**
	comp=Z,2µmcomp=Z,203nm,0.9s					
KMI	**Kunming**	**59.45**	**304**	⇑P	**P**	**16 10 20.8 +1.9**
KMI				pP	pP	16 10 33.3 -2.2
KMI				S	**S**	**16 18 32.0 +8.2**
KMI				pmax	pmax	
	comp=Z,200nm,0.9s					
KMI				pmax	pmax	
	comp=Z,400nm,3.8s					
KMI				LR	LR	
	comp=Z,310nm,18.3s					
KMI				LR	LR	
	comp=Z,510nm,24.2s					
KMI				LR	LR	
	comp=Z,750nm,26.6s					
CM31	**Chiang Mai Arr**	**60.30**	**295**	P	**P**	**16 10 25.8 +1.2**
CMAR	**Chiang Mai Arr**	**60.30**	**295**	P	**P**	**16 10 26.3 +1.7**
	comp=Z,247nm,0.8s,baz=119,slow=5.2,SNR=1203					
CMAR				LR	LR	16 34 56.2
	comp=Z,272nm,21.6s,baz=105,slow=34					
CMAR				PKPPKP	**P'P'df**	**16 39 44.9 -3.5**
	comp=Z,1.8nm,1.1s,baz=242,slow=1.2,SNR=4.4					
CMAR				PKP2bc	**P'P'bc**	**16 39 58.3 +0.3**
	comp=Z,5.4nm,1.0s,baz=296,slow=3.0,SNR=11					
	comp=Z,247nm,0.8s					
CHTO	**Chiang Mai**	**60.41**	**296**	P	**P**	**16 10 26.4 +1.0**
CHTO	**Chiang Mai**	**60.41**	**296**	P	**P**	**16 10 26.6 +1.3**
CHTO	**Chiang Mai**	**60.41**	**296**	P	**P**	**16 10 26.4 +1.0**
CHTO				pmax	pmax	
	comp=Z,178nm,0.9s					
CHTO	**Chiang Mai**	**60.41**	**296**	P	**P**	**16 10 26.7 +1.3**
PZH	**PanZhiHua**	**60.84**	**305**	P	**P**	**16 10 29.0 +0.7**
PZH				pmax	pmax	
	comp=Z,40nm,0.9s					
PZH				pmax	pmax	
	comp=Z,210nm,5.3s					
PZH				LR	LR	
	comp=Z,340nm,20.2s					
PZH				LR	LR	
	comp=Z,360nm,20.3s					
PZH				LR	LR	
	comp=Z,470nm,19.4s					
XLT	**XiLinHaoTe**	**60.93**	**329**	*e*P	**P**	**16 10 29.0 +0.5**
XLT				PcP	**PcP**	**16 11 11.5 +0.1**
XLT				pmax	pmax	
	comp=Z,170nm,0.7s					
XLT				LR	LR	
	comp=Z,420nm,22.8s					
XLT				LR	LR	
	comp=Z,700nm,23.3s					
SHEM	**Shemya Is, Ala**	**61.00**	**13**	LR	LR	16 33 58.4
	comp=Z,1µm,20.3s,baz=146,slow=33					
HEH	**HeiHe**	**61.07**	**340**	*e*P	**P**	**16 10 28.8 -0.4**
HEH				pmax	pmax	
	comp=Z,43nm,0.7s					
AMKA	**Amchitka**	**61.13**	**17**	P	**P**	**16 10 31.0 +1.4**
CD2	**Chengdu**	**61.19**	**310**	⇑P	**P**	**16 10 31.3 +0.8**
CD2				pmax	pmax	
	comp=Z,200nm,0.6s					
CD2				pmax	pmax	
	comp=Z,720nm,7.3s					
CD2				LR	LR	
	comp=Z,860nm,19.0s					
CD2				LR	LR	
	comp=Z,870nm,18.4s					
CD2				LR	LR	
	comp=Z,730nm,17.1s					
HHC	**Hu-ho-hao-te**	**61.38**	**324**	*e*P	**P**	**16 10 32.3 +0.6**
HHC				S	**S**	**16 18 52.3 +4.5**
HHC				pmax	pmax	
	comp=Z,28nm,0.8s					
HHC				pmax	pmax	
	comp=Z,170nm,5.4s					
HHC				LR	LR	
	comp=Z,250nm,16.0s					
HHC				LR	LR	
	comp=Z,200nm,17.6s					
HHC				LR	LR	
	comp=Z,410nm,16.4s					
BTO	**Baotou**	**62.15**	**323**	*e*P	**P**	**16 10 38.5 +1.7**
BTO				sP	**sP**	**16 11 04.0 +2.8**
BTO				S	**S**	**16 19 00.0 +2.5**
BTO				pmax	pmax	
	comp=Z,49nm,0.8s					
BTO				pmax	pmax	
	comp=Z,300nm,3.9s					
BTO				LR	LR	
	comp=Z,440nm,18.3s					
BTO				LR	LR	
	comp=Z,460nm,17.8s					
BTO				LR	LR	
	comp=Z,1µm,22.7s					
ADK	**Adak**	**62.83**	**19**	P	**P**	**16 10 42.6 +1.7**
ADK	**Adak**	**62.83**	**19**	P	**P**	**16 10 43.0 +2.1**
ADK	**Adak**	**62.83**	**19**	P	**P**	**16 10 42.6 +1.7**
ADK				pmax	pmax	
	comp=Z,316nm,0.7s					
HIA	**Hailar**	**63.17**	**335**	IAmb	IAmb	16 10 44.9
	comp=Z,76nm,0.8s					
HIA	**Hailar**	**63.17**	**335**	P	**P**	**16 10 43.9 +0.6**
HIA	**Hailar**	**63.17**	**335**	P	**P**	**16 10 43.6 +0.3**
HIA				pP	**pP**	**16 10 56.0 -4.5**
GSTR	**Great Sitkin T**	**63.22**	**20**	P	**P**	**16 10 45.3 +1.7**
HILR	**Hailar Array B**	**63.39**	**335**	P	**P**	**16 10 45.4 +0.5**
	comp=Z,60nm,0.7s,baz=138,slow=8.5,SNR=88					
HILR				PcP	**PcP**	**16 11 20.9 -0.3**
	comp=Z,17nm,0.8s,baz=134,slow=8.3,SNR=1.9					
	comp=Z,60nm,0.7s					
LZH	**Lanzhou**	**63.66**	**315**	⇑P	**P**	**16 10 48.3 +1.3**
LZH				S	**S**	**16 19 19.3 +2.7**
LZH				pmax	pmax	
	comp=Z,99nm,1.1s					
LZH				pmax	pmax	
	comp=Z,390nm,5.3s					
LZH				LR	LR	
	comp=Z,390nm,18.0s					
LZH				LR	LR	
	comp=Z,520nm,17.9s					
LZH				LR	LR	
	comp=Z,660nm,20.1s					
LZDM	**Lanzhou Array**	**63.69**	**315**	P	**P**	**16 10 48.8 +1.3**
	comp=Z,46nm,0.6s,baz=146,slow=6.4,SNR=28					
LZDM				LR	LR	16 37 27.4
	comp=Z,279nm,21.5s,baz=175,slow=35					
	comp=Z,46nm,0.6s					
ATKA	**Atka Island**	**63.94**	**21**	P	**P**	**16 10 49.5 +1.2**
ZEA	**Zeya**	**64.11**	**342**	*e*P	**P**	**16 10 50.1 +0.7**
ZEA				pmax	pmax	
	comp=N,20nm,1.0s					
ZEA				pmax	pmax	
	comp=Z,60nm,1.0s					
DGPR	**DIGLIPUR**	**64.41**	**288**	*e*P	**P**	**16 10 52.0 0.0**
TAOE	**Nuku Hiva Isla**	**64.47**	**97**	P	**P**	**16 10 52.7 0.0**
MA2	**Magadan**	**65.69**	**358**	LR	LR	16 37 00.3
	comp=Z,283nm,21.9s,baz=183,slow=34					
MA2	**Magadan**	**65.69**	**358**	P	**P**	**16 11 00.1 +0.6**
MA2	**Magadan**	**65.69**	**358**	P	**P**	**16 11 00.3 +0.8**
MA2	**Magadan**	**65.69**	**358**	P	**P**	**16 11 00.2 +0.6**
MA2				pmax	pmax	
	comp=Z,109nm,0.8s					
NIKH	**Nikolski High**	**66.53**	**23**	P	**P**	**16 11 06.5 +1.4**
NIKH	**Nikolski High**	**66.53**	**23**	P	**P**	**16 11 06.3 +1.3**
	baz=220,SNR=11					
PASG	**PASIGHAT**	**66.70**	**304**	*e*P	P	16 11 07.5 -16
PASG				IAmb	IAmb	16 11 11.0
	comp=Z,34nm,0.7s					
IMP	**Imphal**	**66.75**	**300**	*e*P	**P**	**16 11 06.8 -0.4**
IMP				IAmb	IAmb	16 11 07.9
	comp=Z,112nm,0.6s					
MOKO	**MOKOCHONG**	**66.77**	**302**	*e*P	**P**	**16 11 07.3 0.0**
MOKO				IAmb	IAmb	16 11 12.3
	comp=Z,71nm,0.8s					
SAIH	**SAIHA**	**66.86**	**298**	*e*P	**P**	**16 11 08.5 +0.6**
SAIH				IAmb	IAmb	16 11 13.3
	comp=Z,83nm,0.9s					
KOHI	**KOHIMA**	**66.91**	**301**	*e*P	**P**	**16 11 07.6 -0.6**
KOHI				IAmb	IAmb	16 11 09.8
	comp=Z,78nm,0.9s					
CASY	**Casey**	**67.24**	**198**	P	**P**	**16 11 09.4 0.0**
ITAN	**ITANAGAR**	**67.71**	**303**	*e*P	**P**	**16 11 14.2 +1.1**
ZIRO	**ZIRO**	**67.74**	**303**	*e*P	**P**	**16 11 14.3 +0.8**
ZIRO				IAmb	IAmb	16 11 15.1
	comp=Z,118nm,0.6s					
GTA	**Gaotai**	**68.07**	**317**	P	**P**	**16 11 17.0 +1.7**
GTA				pP	pP	16 11 29.8 -2.8
GTA				S	**S**	**16 20 12.3 +2.1**
GTA				pmax	pmax	
	comp=Z,81nm,1.4s					
GTA				pmax	pmax	
	comp=Z,260nm,6.9s					
GTA				LR	LR	
	comp=Z,270nm,20.0s					
GTA				LR	LR	
	comp=Z,330nm,20.7s					
GTA				LR	LR	
	comp=Z,580nm,23.3s					
BRDH	**Bariadhala**	**68.10**	**297**	LR	LR	16 40 14.3
	comp=Z,122nm,21.1s,baz=153,slow=35					
UNV	**Unalaska Valle**	**68.12**	**24**	IAmb	IAmb	16 11 16.8
	comp=Z,72nm,0.7s					
UNV	**Unalaska Valle**	**68.12**	**24**	P	**P**	**16 11 16.1 +1.0**
UNV	**Unalaska Valle**	**68.12**	**24**	P	**P**	**16 11 16.0 +1.0**
	baz=222,SNR=12					
ULN	**Ulaanbaatar**	**68.28**	**328**	P	**P**	**16 11 16.6 +0.2**
ULN	**Ulaanbaatar**	**68.28**	**328**	*ce*P	**P**	**16 11 17.3 +0.9**
ULN				pmax	pmax	
	comp=Z,30nm,0.7s					
ULN	**Ulaanbaatar**	**68.28**	**328**	P	**P**	**16 11 17.4 +0.9**
ULN				PcP	**PcP**	**16 11 42.2 +0.5**
TEZP	**TEZPUR**	**68.31**	**302**	*e*P	**P**	**16 11 17.2 +0.3**
TEZP				IAmb	IAmb	16 11 18.0
	comp=Z,90nm,0.6s					
SONM	**Songino Array**	**68.61**	**327**	P	**P**	**16 11 19.2 +0.8**
	comp=Z,23nm,0.5s,baz=141,slow=5.4,SNR=116					
SONM				PKP2bc	**P'P'bc**	**16 39 34.5 +1.2**
	comp=Z,3.7nm,0.9s,baz=278,slow=3.0,SNR=12					
SONM				LR	LR	16 42 50.9
	comp=Z,250nm,18.9s,baz=138,slow=37					
	comp=Z,23nm,0.5s					
AKUT	**Akutan**	**68.62**	**24**	IAmb	IAmb	16 11 21.7
	comp=Z,94nm,0.8s					
AKUT	**Akutan**	**68.62**	**24**	P	**P**	**16 11 19.5 +1.3**
SHL	**Shillong**	**68.76**	**300**	*e*P	**P**	**16 11 20.5 +0.6**
SEY	**Seymchan**	**69.01**	**359**	LR	LR	16 42 41.9
	comp=Z,221nm,19.2s,baz=164,slow=37					
SEY	**Seymchan**	**69.01**	**359**	*ce*P	**P**	**16 11 21.5 +1.1**
SEY				pmax	pmax	
	comp=Z,39nm,1.0s					
P08K	**Saint George I**	**69.10**	**20**	P	**P**	**16 11 22.2 +1.1**
	baz=218					
SPIA	**Saint Paul Isl**	**69.32**	**19**	P	**P**	**16 11 23.6 +1.2**
	baz=217					
TAWA	**Tawang**	**69.42**	**302**	*e*P	**P**	**16 11 25.5 +1.4**
TAWA				IAmb	IAmb	16 11 26.8
	comp=Z,116nm,0.7s					
FALS	**False Pass**	**70.09**	**24**	P	**P**	**16 11 28.6 +1.4**
FALS	**False Pass**	**70.09**	**24**	P	**P**	**16 11 28.4 +1.1**
	baz=225,SNR=5.3					
GOMU	**GeErMu**	**70.21**	**312**	P	**P**	**16 11 29.8 +0.9**
GOMU				pP	pP	16 11 43.5 -2.8
GOMU				PcP	**sP**	**16 11 53.3 -0.2**
GOMU				S	**S**	**16 20 41.3 +5.2**
GOMU				pmax	pmax	
	comp=Z,9.0nm,0.8s					
GOMU				LR	LR	
	comp=Z,180nm,12.7s					
GOMU				LR	LR	
	comp=Z,210nm,13.8s					
DHUB	**DHUBRI**	**70.52**	**300**	*e*P	**P**	**16 11 31.0 +0.5**
DHUB				IAmb	IAmb	16 11 33.1
	comp=Z,47nm,1.0s					
LSA	**Lhasa**	**70.70**	**304**	IAmb	IAmb	16 11 35.5
	comp=Z,53nm,0.6s					
LSA	**Lhasa**	**70.70**	**304**	P	**P**	**16 11 29.0 -3.1**
LSA				pmax	pmax	
	comp=Z,54nm,0.8s					
LSA				LR	LR	
	comp=Z,120nm,15.9s					
LSA				LR	LR	
	comp=Z,230nm,15.9s					
LSA				LR	LR	
	comp=Z,370nm,16.8s					
YAK	**Yakutsk**	**70.79**	**348**	LR	LR	16 40 50.5
	comp=Z,345nm,21.9s,baz=128,slow=34					
YAK	**Yakutsk**	**70.79**	**348**	P	**P**	**16 11 31.6 +0.3**
YAK				IAmb	IAmb	16 11 35.7
	comp=Z,98nm,0.8s					
YAK	**Yakutsk**	**70.79**	**348**	*e*P	**P**	**16 11 31.7 +0.3**
YAK				*e**PP	**PcP**	**16 11 52.1 +0.4**
YAK				*e*		16 14 07.9
YAK				*e*PPP	PPP	16 15 52.5
YAK				*e*S	**S**	**16 20 41.1 +0.1**
YAK				*e**SS	**sS**	**16 21 16.3 +5.8**
YAK				*e*		16 21 30.2
YAK				*e*SS	**SS**	**16 25 15.3 +0.7**
YAK				pmax	pmax	
	comp=Z,103nm,0.9s					
YAK				pmax	pmax	
	comp=N,39nm,1.8s					
YAK				pmax	pmax	
	comp=E,10.0nm,1.4s					
YAK				pmax	pmax	
	comp=Z,436nm,4.2s					
YAK				pmax	pmax	
	comp=N,579nm,4.9s					
YAK				pmax	pmax	
	comp=E,276nm,6.1s					
YAK				smax	smax	
	comp=N,337nm,2.9s					
YAK				smax	smax	
	comp=E,254nm,3.6s					
YAK	**Yakutsk**	**70.79**	**348**	P	**P**	**16 11 32.0 +0.7**
YAK				PcP	**pP**	**16 11 51.4 +2.6**
CCD	**Concordia, Ant**	**71.12**	**188**	P	**P**	**16 11 34.6 +0.9**
S12K	**Black Hills**	**71.24**	**24**	P	**P**	**16 11 35.6 +1.3**
	baz=226,SNR=5.9					
VNDA	**Vanda**	**71.33**	**178**	P	**P**	**16 11 35.1 +0.6**
	comp=E,16nm,0.7s,baz=328,slow=6.6,SNR=68					
VNDA				LR	LR	16 38 33.8
	comp=E,171nm,19.3s,baz=353,slow=32					
	comp=E,16nm,0.7s					
VNDA	**Vanda**	**71.33**	**178**	P	**P**	**16 11 35.1 +0.6**
VNDA	**Vanda**	**71.33**	**178**	P	**P**	**16 11 35.1 +0.6**
VNDA				pmax	pmax	
	comp=Z,22nm,0.9s					
SDPT	**Sand Point**	**71.65**	**25**	P	**P**	**16 11 37.7 +1.0**
SDPT	**Sand Point**	**71.65**	**25**	P	**P**	**16 11 37.6 +1.0**
	baz=227,SNR=6.7					
CNBA	**Chernabura Isl**	**71.68**	**26**	IAmb	IAmb	16 11 38.9
	comp=Z,150nm,1.5s					
CHNA	**Chernabura Isl**	**71.69**	**26**	P	**P**	**16 11 38.0 +1.1**
CHNA	**Chernabura Isl**	**71.69**	**26**	P	**P**	**16 11 37.8 +0.8**
	baz=228,SNR=6.9					
ZAK	**Zakamensk**	**71.77**	**328**	*e*P	**P**	**16 11 36.9 -0.8**
ZAK				pmax	pmax	
	comp=Z,75nm,1.0s					
SBA	**Scott Base**	**71.84**	**177**	P	**P**	**16 11 38.7 +1.1**
SBA	**Scott Base**	**71.84**	**177**	P	**P**	**16 11 38.7 +1.1**
SBA				pmax	pmax	
	comp=Z,36nm,1.2s					
GTK	**Tadong**	**72.09**	**301**	*e*P	**P**	**16 11 41.0 +0.8**
GTK				IAmb	IAmb	16 11 43.5
	comp=Z,42nm,0.8s					
TLY	**Talaya**	**72.33**	**329**	P	**P**	**16 11 40.9 0.0**
TLY	**Talaya**	**72.33**	**329**	*ce*P	**P**	**16 11 41.7 +0.8**
TLY				pmax	pmax	
	comp=Z,30nm,1.0s					
IRK	**Irkutsk**	**72.35**	**330**	*e*P	**P**	**16 11 39.6 -1.4**
IRK				pmax	pmax	
	comp=Z,87nm,0.8s					
M11K	**Mekoryuk**	**73.14**	**19**	IAmb	IAmb	16 11 48.5
	comp=Z,100nm,0.7s					
M11K	**Mekoryuk**	**73.14**	**19**	P	**P**	**16 11 47.6 +2.1**
	baz=221,SNR=5.8					
BOK	**Bokaro**	**73.49**	**297**	*e*P	**P**	**16 11 49.4 +1.0**
MOY	**Mondy**	**73.68**	**328**	*e*P	**P**	**16 11 49.4 +0.4**
MOY				pmax	pmax	
	comp=Z,42nm,1.5s					
EVN	**Everest**	**73.79**	**301**	IAmb	IAmb	16 11 57.1
	comp=Z,51nm,0.6s					
O14K	**Tigyukauivet M**	**74.03**	**22**	P	**P**	**16 11 52.9 +2.1**
	baz=226,SNR=15					
CHIR	**Chirikof Islan**	**74.06**	**27**	P	**P**	**16 11 52.5 +1.5**
	baz=232					
M13K	**Dall Lake**	**74.12**	**20**	P	**P**	**16 11 53.5 +2.3**
	baz=224,SNR=21					
GAMB	**Gambell**	**74.25**	**15**	IAmb	IAmb	16 11 56.4
	comp=Z,96nm,0.8s					
GAMB	**Gambell**	**74.25**	**15**	P	**P**	**16 11 53.5 +1.7**
	baz=215					
GAYA	**Gaya**	**74.33**	**298**	*e*P	**P**	**16 11 53.6 +0.4**
R16K	**Pilot Point**	**74.33**	**24**	P	**P**	**16 11 54.0 +1.5**
	baz=230					
N14K	**Kuskokwak Cree**	**74.35**	**21**	IAmb	IAmb	16 11 57.4
	comp=Z,81nm,0.8s					
N14K	**Kuskokwak Cree**	**74.35**	**21**	P	**P**	**16 11 54.0 +1.5**
	baz=225,SNR=8.3					
VIS	**Vishakhapatnam**	**74.44**	**290**	*e*P	**P**	**16 11 55.0 +1.0**
O15K	**Ungalikthiuk R**	**74.52**	**22**	IAmb	IAmb	16 11 56.1
	comp=Z,60nm,0.7s					
O15K	**Ungalikthiuk R**	**74.52**	**22**	P	**P**	**16 11 54.8 +1.3**
	baz=227					
BILL	**Bilibino**	**74.56**	**4**	P	**P**	**16 11 54.3 +0.7**
BILL	**Bilibino**	**74.56**	**4**	*ce*P	**P**	**16 11 54.9 +1.3**
BILL				pmax	pmax	
	comp=Z,206nm,1.0s					
RAGD	**RAYAGADA**	**74.64**	**292**	*e*P	**P**	**16 11 56.3 +1.2**
K13K	**Kusilvak Mount**	**74.81**	**19**	P	**P**	**16 11 57.4 +2.3**
	baz=222,SNR=26					
M14K	**Bethel**	**74.84**	**20**	P	**P**	**16 11 57.4 +2.1**
	baz=225,SNR=29					
R17L	**Mt. Peulik Vol**	**74.88**	**25**	P	**P**	**16 11 57.2 +1.5**
	baz=231,SNR=17					
JHSG	**JHARSUGUGA**	**74.90**	**294**	*e*P	**P**	**16 11 57.8 +1.2**
KNGR	**Kungurtug, Tuv**	**74.99**	**326**	*i* P	**P**	**16 11 57.3 +0.6**
KNGR				pmax	pmax	
	comp=Z,65nm,1.0s					
L14K	**Kuka Creek**	**75.02**	**20**	P	**P**	**16 11 58.3 +1.9**
	baz=224					
N15K	**Kwethluk River**	**75.09**	**21**	IAmb	IAmb	16 11 59.8
	comp=Z,92nm,0.8s					
N15K	**Kwethluk River**	**75.09**	**21**	P	**P**	**16 11 59.2 +2.3**
	baz=227,SNR=26					
P16K	**Nushagak River**	**75.12**	**23**	IAmb	IAmb	16 11 58.8
	comp=Z,96nm,0.9s					
P16K	**Nushagak River**	**75.12**	**23**	P	**P**	**16 11 58.2 +1.1**
	baz=229,SNR=10					
PALK	**Pallekele**	**75.14**	**279**	P	**P**	**16 11 58.5 +0.3**
PALK				IAmb	IAmb	16 12 00.3
	comp=Z,136nm,1.0s					
PALK	**Pallekele**	**75.14**	**279**	P	**P**	**16 11 58.5 +0.3**
PALK				pmax	pmax	
	comp=Z,136nm,1.0s					
PALK	**Pallekele**	**75.14**	**279**	P	**P**	**16 11 59.1 +1.0**
SII	**Sitkinak Islan**	**75.15**	**26**	P	**P**	**16 11 58.6 +1.3**
SII	**Sitkinak Islan**	**75.15**	**26**	P	**P**	**16 11 58.6 +1.3**
	baz=233,SNR=5.4					
M15K	**Kasigluk River**	**75.24**	**21**	P	**P**	**16 11 59.2 +1.5**
	baz=226					
Q16K	**King Salmon**	**75.42**	**24**	P	**P**	**16 11 59.0 +0.3**
	baz=230,SNR=7.0					
O16K	**Kokwok River B**	**75.45**	**23**	P	**P**	**16 11 59.4 +0.5**
	baz=229					
Q17K	**Contact Creek**	**75.47**	**24**	P	**P**	**16 11 59.9 +0.7**
	baz=231					
R18K	**Karluk**	**75.64**	**26**	P	**P**	**16 12 00.6 +0.6**
	baz=232					
L15K	**Ungalak Mounta**	**75.66**	**20**	P	**P**	**16 12 01.3 +1.2**
	baz=225					
ACHA	**Angle Creek He**	**75.67**	**25**	IAmb	IAmb	16 12 02.7
	comp=Z,48nm,0.8s					
J14K	**Nanvaranak Lak**	**75.76**	**18**	P	**P**	**16 12 02.8 +2.3**
	baz=223,SNR=32					
N16K	**Nishlik Lake**	**75.79**	**22**	P	**P**	**16 12 03.3 +2.4**
	baz=228					
P17K	**Kvichak River**	**75.84**	**24**	P	**P**	**16 12 01.8 +0.7**
	baz=230,SNR=6.5					
OHAK	**Old Harbor**	**75.94**	**26**	P	**P**	**16 12 03.2 +1.4**
OHAK	**Old Harbor**	**75.94**	**26**	P	**P**	**16 12 03.2 +1.4**
	baz=234,SNR=7.1					
O17K	**Koliganek Bris**	**75.95**	**23**	P	**P**	**16 12 03.3 +1.5**
	baz=230,SNR=19					
Q18K	**Katmai Hardscr**	**76.07**	**24**	P	**P**	**16 12 03.4 +0.8**
	baz=232,SNR=30					
K15K	**Wolf Creek Mou**	**76.08**	**19**	P	**P**	**16 12 04.6 +2.1**
	baz=225					
M16K	**Timber Creek**	**76.09**	**21**	P	**P**	**16 12 04.8 +2.2**
	baz=228					
L16K	**Owhat River**	**76.37**	**21**	IAmb	IAmb	16 12 06.7
	comp=Z,72nm,0.7s					
L16K	**Owhat River**	**76.37**	**21**	P	**P**	**16 12 06.0 +1.9**
	baz=227,SNR=33					
N17K	**Nushagak Hills**	**76.41**	**22**	IAmb	IAmb	16 12 07.9
	comp=Z,142nm,1.6s					
N17K	**Nushagak Hills**	**76.41**	**22**	P	**P**	**16 12 06.8 +2.5**
	baz=229					
P18K	**Big Mountain,**	**76.45**	**24**	P	**P**	**16 12 06.1 +1.5**
	baz=232					
BLSP	**Bilaspur**	**76.47**	**294**	*e*P	**P**	**16 12 05.4 -0.2**
BLSP				IAmb	IAmb	16 12 07.3
	comp=Z,103nm,1.3s					
ANM	**Nome**	**76.57**	**17**	IAmb	IAmb	16 12 08.1
	comp=Z,94nm,0.7s					
ANM	**Nome**	**76.57**	**17**	P	**P**	**16 12 07.1 +1.9**
	baz=221					
KDAK	**Kodiak Island**	**76.58**	**26**	LR	LR	16 40 47.8
	comp=Z,444nm,21.8s,baz=234,slow=32					
KDAK	**Kodiak Island**	**76.58**	**26**	P	**P**	**16 12 06.3 +0.9**
KDAK				IAmb	IAmb	16 12 08.3
	comp=Z,55nm,0.9s					
KDAK	**Kodiak Island**	**76.58**	**26**	*i* P	**P**	**16 12 07.0 +1.6**
KDAK				pmax	pmax	
	comp=Z,75nm,0.9s					
KDAK	**Kodiak Island**	**76.58**	**26**	P	**P**	**16 12 06.8 +1.5**
	baz=234					
TNA	**Tin City**	**76.65**	**15**	IAmb	IAmb	16 12 10.4
	comp=Z,59nm,0.8s					
TNA	**Tin City**	**76.65**	**15**	P	**P**	**16 12 07.1 +1.4**
	baz=218					
O18K	**Koktuh Hills**	**76.74**	**23**	P	**P**	**16 12 07.2 +0.9**
	baz=231,SNR=5.4					
Q19K	**Cape Douglas,**	**76.81**	**25**	P	**P**	**16 12 07.5 +0.8**
	baz=233,SNR=13					
M17K	**Holitna River**	**76.89**	**21**	IAmb	IAmb	16 12 12.8
	comp=Z,75nm,0.8s					
M17K	**Holitna River**	**76.89**	**21**	P	**P**	**16 12 09.4 +2.4**
	baz=229,SNR=28					
N18K	**Kilae Creek**	**77.00**	**23**	P	**P**	**16 12 09.8 +2.1**
	baz=231					
F14K	**Arctic Creek**	**77.00**	**16**	P	**P**	**16 12 09.4 +1.8**
	baz=220					
L17K	**Donlin**	**77.07**	**21**	P	**P**	**16 12 10.3 +2.2**
	baz=228					
J16K	**Anvik River**	**77.08**	**19**	IAmb	IAmb	16 12 11.4
	comp=Z,73nm,0.7s					
J16K	**Anvik River**	**77.08**	**19**	P	**P**	**16 12 10.5 +2.4**
	baz=226,SNR=29					
Q20K	**Shuyak Island**	**77.14**	**25**	P	**P**	**16 12 09.8 +1.2**
	baz=234					
G15K	**Niukluk**	**77.27**	**17**	P	**P**	**16 12 10.7 +1.6**
	baz=222					
O19K	**Port Alsworth**	**77.31**	**23**	P	**P**	**16 12 10.2 +0.8**
	baz=232,SNR=7.3					
P19K	**Oil Pt**	**77.41**	**24**	P	**P**	**16 12 10.9 +0.8**
	baz=233,SNR=8.9					
K17K	**Iditarod**	**77.46**	**20**	IAmb	IAmb	16 12 13.4
	comp=Z,83nm,0.9s					
K17K	**Iditarod**	**77.46**	**20**	P	**P**	**16 12 12.3 +2.1**
	baz=228					
ALBI	**Allahabad**	**77.46**	**298**	*e*P	**P**	**16 12 10.8 -0.2**
ALBI				IAmb	IAmb	16 12 13.3
	comp=Z,58nm,0.6s					
I17K	**Unalakleet**	**77.47**	**19**	IAmb	IAmb	16 12 13.7
	comp=Z,86nm,0.9s					
I17K	**Unalakleet**	**77.47**	**19**	P	**P**	**16 12 12.7 +2.4**
	baz=226,SNR=33					
H16K	**Elim**	**77.54**	**17**	P	**P**	**16 12 12.2 +1.6**
	baz=224,SNR=12					
M18K	**Stony River**	**77.54**	**22**	P	**P**	**16 12 12.7 +2.0**
	baz=230					
**

J17K **VABM Dome** 77.66 19 P P 16 12 13.5 +2.1
baz=227,SNR=64
L18K **Granite Mounta** 77.69 21 IAmb IAmb 16 12 14.9
comp=Z,86nm,0.9s
L18K **Granite Mounta** 77.69 21 P P 16 12 13.9 +2.3
baz=230
O20K **Slope Mountain** 77.92 24 P P 16 12 13.8 +0.9
baz=234
G16K **Koyuk River** 78.05 17 P P 16 12 15.4 +1.9
baz=224
HOM **Homer** 78.07 25 P P 16 12 15.0 +1.4
baz=235
WMQ **Urumqi** 78.16 317 *e*P P 16 12 15.8 +1.2
WMQ S S 16 22 05.3 +1.0
WMQ pmax pmax
comp=Z,25nm,0.9s
WMQ pmax pmax
comp=Z,170nm,6.1s
WMQ LR LR
comp=Z,420nm,24.9s
WMQ LR LR
comp=Z,370nm,18.3s
WMQ LR LR
comp=Z,290nm,22.7s
SALM **Salem** 78.24 283 *e*P P 16 12 16.9 +1.3
L19K **White Mountain** 78.33 22 P P 16 12 17.0 +1.9
baz=231
BRLK **Bradley Lake** 78.44 25 IAmb IAmb 16 12 17.9
comp=Z,47nm,0.8s
H17K **Granite Mounta** 78.45 18 IAmb IAmb 16 12 18.1
comp=Z,52nm,0.7s
H17K **Granite Mounta** 78.45 18 P P 16 12 17.6 +1.9
baz=226
BRSE **Bradley Lake S** 78.49 25 P P 16 12 17.3 +1.2
baz=236,SNR=6.8
J18K **Innoko River** 78.50 20 IAmb IAmb 16 12 18.4
comp=Z,58nm,0.8s
J18K **Innoko River** 78.50 20 P P 16 12 17.5 +1.5
baz=229,SNR=50
G17K **Kiwalik Mounta** 78.63 17 P P 16 12 18.6 +1.9
baz=225
KOD **Kodaikanal** 78.73 282 *e*P P 16 12 19.3 +0.6
KOD IAmb IAmb 16 12 21.6
comp=Z,113nm,1.0s
N20K **Mount Spurr** 78.74 23 P P 16 12 18.0 +0.5
baz=234
SPCR **Spurr Chakacha** 78.74 23 P P 16 12 17.9 +0.4
baz=234
M20K **Styx River** 78.79 22 IAmb IAmb 16 12 22.2
comp=Z,58nm,0.9s
M20K **Styx River** 78.79 22 P P 16 12 19.2 +1.4
baz=233
HYBB **Hyderabad (bro** 78.85 289 *e*P P 16 12 19.2 +0.2
HYBB *es*P pP 16 12 37.5 +1.1
L20K **Farewell, AK** 78.88 22 IAmb IAmb 16 12 22.9
comp=Z,64nm,1.0s
L20K **Farewell, AK** 78.88 22 P P 16 12 20.2 +2.1
baz=232,SNR=30
CAPN **Captain Cook N** 78.91 24 P P 16 12 18.9 +0.7
baz=235
H18K **Honhosa River** 79.08 18 P P 16 12 20.0 +0.9
baz=228
F17K **Baldwin Pennin** 79.12 16 IAmb IAmb 16 12 24.2
comp=Z,76nm,0.8s
F17K **Baldwin Pennin** 79.12 16 P P 16 12 20.9 +1.6
baz=225
J19K **Poorman** 79.21 20 P P 16 12 21.6 +1.7
baz=230,SNR=31
SEW **Seward** 79.23 25 IAmb IAmb 16 12 24.3
comp=Z,57nm,0.8s
SEW **Seward** 79.23 25 P P 16 12 21.5 +1.4
baz=237,SNR=7.3
GCSA **Galena City Sc** 79.28 19 P P 16 12 21.9 +1.7
baz=229,SNR=11
O22K **Cooper Landing** 79.33 25 P P 16 12 21.9 +1.4
baz=236,SNR=7.8
K20K **Telida** 79.35 21 P P 16 12 22.4 +1.7
baz=232
C16K **Lisburne Hills** 79.41 14 IAmb IAmb 16 12 45.8
comp=Z,169nm,1.8s
C16K **Lisburne Hills** 79.41 14 P P 16 12 22.1 +1.3
baz=220
E17K **Hotham Inlet** 79.42 16 P P 16 12 22.9 +1.9
baz=224,SNR=62
SKT **Skwentna** 79.46 23 P P 16 12 20.9 -0.4
baz=234,SNR=9.5
SUA **Susitna One** 79.47 23 IAmb IAmb 16 12 25.1
comp=Z,74nm,0.6s
SUA **Susitna One** 79.47 23 P P 16 12 21.9 +0.4
baz=235,SNR=21
G18K **Tagagawik** 79.50 18 P P 16 12 22.6 +1.2
baz=227,SNR=30
D17K **Noatak River** 79.54 15 P P 16 12 23.2 +1.6
baz=223,SNR=21
TIXI **Tiksi** 79.59 352 LR LR 16 46 03.6
comp=Z,210nm,21.3s,baz=192,slow=34
TIXI **Tiksi** 79.59 352 P P 16 12 22.2 +0.4
TIXI **Tiksi** 79.59 352 *ce*P P 16 12 21.7 -0.1
TIXI pmax pmax
comp=Z,20nm,0.6s
RC01 **Rabbit Creek A** 79.66 24 P P 16 12 23.4 +1.0
baz=236,SNR=17
F18K **Selawik** 79.69 17 P P 16 12 23.7 +1.4
baz=226,SNR=14
PPLA **Purkeypile** 79.75 22 P P 16 12 23.3 +0.3
baz=234
J20K **Nowinta River** 79.83 20 IAmb IAmb 16 12 26.1
comp=Z,55nm,0.8s
J20K **Nowinta River** 79.83 20 P P 16 12 24.9 +1.7
baz=232,SNR=42
RDOG **Red Dog Mine** 79.85 15 P P 16 12 24.8 +1.5
baz=223,SNR=60
H19K **Roundabout Mou** 79.93 19 IAmb IAmb 16 12 26.4
comp=Z,112nm,0.9s
H19K **Roundabout Mou** 79.93 19 P P 16 12 25.4 +1.7
baz=229,SNR=80
E18K **Tukpahlearik C** 80.00 16 P P 16 12 25.8 +1.7
baz=225,SNR=27
P23K **Montague Islan** 80.05 26 P P 16 12 25.6 +1.2
baz=239
C17K **DeLong Mountai** 80.09 15 P P 16 12 26.1 +1.5
baz=222
I20K **Naaghedeneel** 80.11 20 IAmb IAmb 16 12 27.7
comp=Z,114nm,1.0s
I20K **Naaghedeneel** 80.11 20 P P 16 12 26.6 +1.9
baz=231,SNR=20
PWL **Port Wells** 80.11 25 P P 16 12 26.1 +1.2
baz=238,SNR=9.8
G19K **Purcell Mounta** 80.14 18 IAmb IAmb 16 12 27.6
comp=Z,74nm,0.9s
G19K **Purcell Mounta** 80.14 18 P P 16 12 26.6 +1.7
baz=229,SNR=47
PMR **Palmer** 80.18 24 IAmb IAmb 16 12 28.9
comp=Z,63nm,0.8s
PMR **Palmer** 80.18 24 P P 16 12 25.9 +0.8
PMR **Palmer** 80.18 24 P P 16 12 26.0 +0.8
baz=237,SNR=25
CUT **Chulitna** 80.19 23 IAmb IAmb 16 12 28.4
comp=Z,58nm,0.7s
CUT **Chulitna** 80.19 23 P P 16 12 25.1 -0.1
baz=236,SNR=11
CHUM **Lake Minchumin** 80.29 21 P P 16 12 27.0 +1.3
baz=234,SNR=41
KNK **Knik Glacier** 80.36 24 IAmb IAmb 16 12 28.6
comp=Z,109nm,1.2s
KNK **Knik Glacier** 80.36 24 P P 16 12 27.5 +1.3
baz=237,SNR=11
GHO **Glory Hole Cre** 80.36 24 IAmb IAmb 16 12 30.6
comp=Z,61nm,0.7s
JHNI **Jhansi** 80.38 297 *e*P P 16 12 25.6 -1.5
JHNI IAmb IAmb 16 12 26.8
comp=Z,53nm,0.8s
F19K **Shaleruckik Mo** 80.39 17 P P 16 12 27.3 +1.1
baz=228
H20K **Anotleneega Mo** 80.41 19 P P 16 12 27.9 +1.6
baz=231
DGZ **Jazzator, Alta** 80.44 323 *i* P P 16 12 27.0 -0.1
DGZ pmax pmax
comp=Z,64nm,0.9s
SML **Sawmill** 80.62 24 P P 16 12 28.9 +1.3
baz=238,SNR=28
GLI **Glacier Island** 80.64 25 IAmb IAmb 16 12 29.3
comp=Z,59nm,0.6s
GLI **Glacier Island** 80.64 25 P P 16 12 28.4 +0.8
baz=239,SNR=6.2
HIN **Hinchinbrook I** 80.64 25 IAmb IAmb 16 12 30.1
comp=Z,160nm,1.4s
C18K **Utukok River** 80.72 15 P P 16 12 29.0 +1.0
baz=224
TRF **Thorofare Moun** 80.78 22 P P 16 12 28.6 0.0
baz=235,SNR=17
FID **Port Fidalgo** 80.83 25 IAmb IAmb 16 12 33.9
comp=Z,92nm,1.2s
M23K **Glacier View** 80.86 24 P P 16 12 29.1 +0.2
baz=238,SNR=8.3
AKL **Akola** 80.86 292 *e*P P 16 12 29.5 -0.2
BPAW **Bear Paw Mtn.** 80.89 21 P P 16 12 29.2 +0.2
baz=235,SNR=14
BHPL **Bhopal** 80.95 295 *e*P P 16 12 29.8 -0.4
BHPL IAmb IAmb 16 12 31.6
comp=Z,68nm,0.6s
E19K **Redstone River** 80.97 17 P P 16 12 30.8 +1.5
baz=228
EYAK **Cordova Ski Ar** 81.04 26 P P 16 12 30.5 +0.8
baz=240
SCM **Sheep Creek Mo** 81.04 24 IAmb IAmb 16 12 34.6
comp=Z,74nm,1.0s
SCM **Sheep Creek Mo** 81.04 24 P P 16 12 31.1 +1.2
baz=238,SNR=11
B18K **Kokolik River** 81.08 14 P P 16 12 31.2 +1.3
baz=224
IMAR **Indian Mountai** 81.08 19 P P 16 12 31.2 +1.3
NRDN **NARMADA NAGAR** 81.09 294 *e*P P 16 12 33.5 +2.5
WAT1 **Susitna Watana** 81.09 23 P P 16 12 30.7 +0.6
baz=237
F20K **Avaraart Lake** 81.14 18 P P 16 12 31.6 +1.4
baz=230,SNR=43
I21K **Tanana** 81.18 20 IAmb IAmb 16 12 33.1
comp=Z,55nm,0.9s
I21K **Tanana** 81.18 20 P P 16 12 32.0 +1.5
baz=234,SNR=40
H21K **Melozitna Rive** 81.19 19 P P 16 12 31.8 +1.2
baz=233,SNR=38
ZSN **Zaisan** 81.26 320 *e*P P 16 12 30.7 -0.6
ZSN *e*S S 16 22 35.9 -0.8
ZSN **Zaisan** 81.26 320 *e*P P 16 12 30.7 -0.6
ZSN *e*S S 16 22 35.9 -0.8
WAT6 **Susitna Watana** 81.27 23 P P 16 12 32.0 +0.8
baz=238,SNR=22
RND **Reindeer** 81.29 22 IAmb IAmb 16 12 34.4
comp=Z,64nm,0.8s
GUNA **GUNA** 81.30 296 *e*P P 16 12 31.6 -0.4
GUNA IAmb IAmb 16 12 33.4
comp=Z,77nm,0.5s
KAIM **Kayak Island** 81.31 26 P P 16 12 33.5 +2.2
baz=241
DIV **Divide** 81.32 25 IAmb IAmb 16 12 33.9
comp=Z,110nm,1.4s
RAGM **Ragged Mountai** 81.42 26 IAmb IAmb 16 12 36.5
comp=Z,115nm,1.4s
D19K **Kuna River** 81.42 16 IAmb IAmb 16 12 33.5
comp=Z,58nm,0.7s
D19K **Kuna River** 81.42 16 P P 16 12 33.0 +1.2
baz=227,SNR=47
MCK **McKinley** 81.44 22 P P 16 12 32.2 +0.3
baz=237,SNR=88
KLU **Klutina** 81.44 25 IAmb IAmb 16 12 37.0
comp=Z,71nm,0.9s
KLU **Klutina** 81.44 25 P P 16 12 33.4 +1.4
baz=240,SNR=25
C19K **Lookout Ridge** 81.45 15 IAmb IAmb 16 12 34.6
comp=Z,77nm,0.9s
C19K **Lookout Ridge** 81.45 15 P P 16 12 33.5 +1.6
baz=226
BWN **Browne** 81.49 21 IAmb IAmb 16 12 59.1
comp=Z,88nm,1.1s
G21K **Allakaket** 81.49 19 P P 16 12 33.3 +1.2
baz=232
HMT **Hamilton** 81.58 26 IAmb IAmb 16 12 36.2
comp=Z,198nm,1.6s
M24K **Tolsona, Glenn** 81.65 24 IAmb IAmb 16 13 03.4
comp=Z,99nm,0.8s
M24K **Tolsona, Glenn** 81.65 24 P P 16 12 34.7 +1.6
baz=239,SNR=11
DHY **Denali Highway** 81.67 23 IAmb IAmb 16 12 37.3
comp=Z,41nm,0.8s
DHY **Denali Highway** 81.67 23 P P 16 12 34.1 +0.8
baz=238,SNR=29
BMRM **Bremner River** 81.73 25 IAmb IAmb 16 12 38.6
comp=Z,56nm,1.0s
BMRM **Bremner River** 81.73 25 P P 16 12 34.7 +1.2
baz=241,SNR=6.9
E20K **Nigu River** 81.80 17 P P 16 12 35.4 +1.7
baz=229,SNR=65
H22K **Ishtalitna Cre** 81.81 20 P P 16 12 35.2 +1.4
baz=234,SNR=25
NEA2 **Nenana** 81.86 21 IAmb IAmb 16 12 35.2
comp=Z,53nm,1.0s
NEA2 **Nenana** 81.86 21 P P 16 12 34.2 +0.1
baz=236,SNR=45
A19K **Wainwright** 81.86 14 P P 16 12 34.7 +0.8
baz=224
BGLC **Bering Glacier** 81.91 26 P P 16 12 35.0 +0.6
baz=242
F21K **Alatna River** 81.94 18 P P 16 12 35.6 +1.1
baz=232,SNR=30
D20K **Etivluk River** 81.98 16 P P 16 12 35.8 +1.1
baz=229
N25K **Chitina, Valde** 82.05 25 IAmb IAmb 16 12 38.0
comp=Z,79nm,1.4s
N25K **Chitina, Valde** 82.05 25 P P 16 12 36.6 +1.3
baz=241,SNR=12
I23K **Minto, Yukon-K** 82.07 21 P P 16 12 35.5 +0.4
baz=236,SNR=25
NDI **New Delhi** 82.18 300 *e*P P 16 12 35.1 -1.4
HARP **HAARP** 82.21 24 P P 16 12 36.5 +0.5
baz=240,SNR=5.3
WAX **Waxell Ridge** 82.25 26 IAmb IAmb 16 12 39.6
comp=Z,104nm,1.4s
CRQM **Cirque** 82.27 26 IAmb IAmb 16 12 40.3
comp=Z,97nm,1.2s
CRQE **Cirque** 82.28 26 P P 16 12 36.8 +0.3
baz=242,SNR=7.6
GLB **Gilahina Butte** 82.30 25 IAmb IAmb 16 12 40.9
comp=Z,65nm,1.0s
PAX **Paxson** 82.37 23 P P 16 12 37.4 +0.5
baz=240,SNR=11
G22K **Bettles** 82.37 19 P P 16 12 37.7 +1.0
baz=234
H23K **Yukon River** 82.39 20 P P 16 12 37.7 +0.8
baz=236
COLA **College** 82.46 21 P P 16 12 36.8 -0.3
COLA IAmb IAmb 16 12 39.8
comp=Z,56nm,0.7s
COLA **College** 82.46 21 P P 16 12 37.0 -0.1
COLA **College** 82.46 21 P P 16 12 36.8 -0.3
COLA pmax pmax
comp=Z,56nm,0.7s
COLA **College** 82.46 21 P P 16 12 37.0 -0.1
baz=238
COLA **College** 82.46 21 P P 16 12 36.9 -0.3
F22K **John River** 82.51 18 P P 16 12 38.8 +1.3
baz=233
MESA **MESA** 82.53 27 P P 16 12 38.8 +0.9
baz=244
HDA **Harding Lake** 82.54 22 IAmb IAmb 16 12 39.6
comp=Z,57nm,1.2s
HDA **Harding Lake** 82.54 22 P P 16 12 37.7 +0.1
baz=238,SNR=48
ISLE **Juniper Island** 82.54 26 IAmb IAmb 16 12 43.2
comp=Z,62nm,1.2s
E21K **Killik River** 82.55 17 P P 16 12 38.8 +1.1
baz=231
MCARA **McCarthy VSAT** 82.61 25 IAmb IAmb 16 12 42.5
comp=Z,110nm,1.3s
MCARA **McCarthy VSAT** 82.61 25 P P 16 12 39.1 +1.1
baz=242,SNR=11
K24K **Donnelly Dome** 82.67 23 IAmb IAmb 16 13 10.4
comp=Z,70nm,1.0s
K24K **Donnelly Dome** 82.67 23 P P 16 12 39.3 +0.9
baz=240,SNR=18
B20K **Meade River** 82.70 15 IAmb IAmb 16 12 40.5
comp=Z,76nm,0.8s
B20K **Meade River** 82.70 15 P P 16 12 39.5 +1.2
baz=228,SNR=13
KUDL **Kundal** 82.70 299 *e*P P 16 12 37.8 -1.4
KUDL IAmb IAmb 16 12 40.5
comp=Z,68nm,0.8s
SMLA **Simla** 82.71 302 *e*P P 16 12 38.6 -0.6
SMLA IAmb IAmb 16 12 43.4
comp=Z,85nm,0.8s
MK31 **Makanchi Array** 82.72 319 *i* P P 16 12 38.4 -0.6
MK31 pmax pmax
comp=Z,74nm,0.7s
MKAR **Makanchi Array** 82.72 319 P P 16 12 39.0 0.0
comp=Z,59nm,0.7s,baz=93,slow=6.2,SNR=296
MKAR PKKPbc PKKPdf 16 30 59.0 +3.0
comp=Z,1.2nm,0.8s,baz=273,slow=2.7,SNR=5.3
MKAR LR LR 16 50 02.9
comp=Z,213nm,20.4s,baz=110,slow=36
comp=Z,59nm,0.7s
MKAR **Makanchi Array** 82.72 319 P P 16 12 39.1 0.0
MKAR **Makanchi Array** 82.72 319 P P 16 12 39.0 0.0
G23K **Bananza Creek** 82.73 19 IAmb IAmb 16 12 41.0
comp=Z,45nm,0.9s
G23K **Bananza Creek** 82.73 19 P P 16 12 39.9 +1.2
baz=235
POKR **Poker Plat Res** 82.74 21 P P 16 12 38.2 -0.5
baz=238,SNR=12
ILAR **Eielson Array** 82.75 22 P P 16 12 38.2 -0.5
comp=Z,18nm,0.5s,baz=240,slow=5.0,SNR=313
ILAR PKKPbc PKKPdf 16 30 59.8 +3.3
comp=Z,0.9nm,0.7s,baz=338,slow=1.8,SNR=4.2
ILAR LR LR 16 44 55.8
comp=Z,1µm,21.6s,baz=235,slow=32
comp=Z,18nm,0.5s
ILAR **Eielson Array** 82.75 22 P P 16 12 38.4 -0.4
C21K **Knifeblade Rid** 82.77 16 P P 16 12 40.3 +1.6
baz=230,SNR=21
GRNC **Granite Creek** 82.86 26 IAmb IAmb 16 12 42.0
comp=Z,122nm,1.7s
MAKZ **Makanchi** 82.94 319 P P 16 12 39.7 -0.4
MAKZ **Makanchi** 82.94 319 P P 16 12 39.7 -0.4
MAKZ pmax pmax
comp=Z,106nm,0.9s
H24K **Noodor Dome** 82.97 20 P P 16 12 41.0 +1.1
baz=237
COLD **Coldfoot** 82.97 19 P P 16 12 41.2 +1.4
baz=235,SNR=30
RIDG **Independent Ri** 82.99 23 IAmb IAmb 16 12 44.0
comp=Z,69nm,1.1s
RIDG **Independent Ri** 82.99 23 P P 16 12 40.8 +0.8
baz=240,SNR=25
E22K **Anaktuvuk Pass** 83.00 18 IAmb IAmb 16 12 42.4
comp=Z,46nm,0.9s
E22K **Anaktuvuk Pass** 83.00 18 P P 16 12 41.4 +1.4
baz=234,SNR=33
TABL **Table Mountain** 83.00 27 IAmb IAmb 16 12 42.8
comp=Z,53nm,0.7s
BARN **Barnard Glacie** 83.05 26 IAmb IAmb 16 12 45.0
comp=Z,47nm,0.8s
MENT **Mentasta** 83.05 24 IAmb IAmb 16 12 44.2
comp=Z,34nm,0.5s
MENT **Mentasta** 83.05 24 P P 16 12 41.6 +1.2
M26K **Nabesna, AK** 83.09 25 P P 16 12 41.6 +1.0
baz=242,SNR=9.2
B21K **Ikpikpuk River** 83.11 16 IAmb IAmb 16 12 42.8
comp=Z,67nm,1.1s
B21K **Ikpikpuk River** 83.11 16 P P 16 12 41.8 +1.3
baz=231
CTG **Chitna Glacier** 83.14 26 P P 16 12 41.9 +0.9
baz=244,SNR=12
CTGM **Chitina Glacie** 83.15 26 IAmb IAmb 16 12 45.4
comp=Z,46nm,0.6s
D22K **Ayikyak River** 83.19 17 P P 16 12 42.6 +1.6
baz=233
J25K **Salcha River,** 83.23 22 IAmb IAmb 16 12 43.1
comp=Z,111nm,1.2s
J25K **Salcha River,** 83.23 22 P P 16 12 42.2 +0.9
baz=240,SNR=76
LOGN **Logan Glacier** 83.23 26 IAmb IAmb 16 12 45.7
comp=Z,35nm,0.6s
L26K **Log Cabin Wild** 83.24 24 P P 16 12 42.6 +1.3
baz=242,SNR=25
DOT **Dot Lake** 83.25 23 IAmb IAmb 16 12 45.3
comp=Z,45nm,0.9s
PCA **Pinnacle** 83.25 27 IAmb IAmb 16 12 43.5
comp=Z,54nm,0.7s
PINM **Pinnacle** 83.25 27 P P 16 12 42.9 +1.4
baz=245,SNR=5.8
ALCI **Alchi Leh** 83.33 305 *e*P P 16 12 42.6 -0.3
ALCI IAmb IAmb 16 12 44.4
comp=Z,94nm,0.6s
WUS **Wushi** 83.35 313 IAmb IAmb 16 12 44.9
comp=Z,38nm,0.7s
WUS **Wushi** 83.35 313 P P 16 12 43.0 +0.4
BHK **Bhakra** 83.40 303 *e*P P 16 12 42.6 -0.2
BHK IAmb IAmb 16 12 47.5
comp=Z,50nm,0.7s
SCRK **Sand Creek** 83.44 23 P P 16 12 43.4 +0.9
baz=241,SNR=32
POO **Poona** 83.45 289 *e*P P 16 12 43.0 -0.3
ZAA0 **Zalesovo Array** 83.46 326 IAmb IAmb 16 12 43.2
comp=Z,68nm,0.8s
ZALV **Zalesovo Beam** 83.46 326 P P 16 12 41.6 -1.0
comp=Z,81nm,0.9s,baz=110,slow=5.5,SNR=234
ZALV PKKPbc PKKPdf 16 31 00.1 +5.2
comp=Z,0.6nm,0.5s,baz=318,slow=1.9,SNR=3.7
ZALV LR LR 16 47 24.5
comp=Z,122nm,21.8s,baz=102,slow=34
comp=Z,81nm,0.9s
ZALV **Zalesovo Beam** 83.46 326 P P 16 12 41.8 -0.8
ZALV **Zalesovo Beam** 83.46 326 *i* P P 16 12 41.5 -1.1
ZALV pmax pmax
comp=Z,81nm,0.9s
PNL **Peninsula** 83.47 28 P P 16 12 43.5 +0.9
baz=246
BCPM **Bancas Point** 83.48 27 IAmb IAmb 16 12 44.8
comp=Z,60nm,0.8s
M27K **Edge Creek, AK** 83.53 25 IAmb IAmb 16 13 13.9
comp=Z,94nm,1.0s
M27K **Edge Creek, AK** 83.53 25 P P 16 12 45.0 +2.0
baz=243
G24K **Hadweenzic Riv** 83.57 20 P P 16 12 44.2 +1.3
baz=238
O28M **Mount Upton** 83.57 27 IAmb IAmb 16 12 45.5
comp=Z,34nm,0.7s
O28M **Mount Upton** 83.57 27 P P 16 12 44.9 +1.5
baz=245
E23K **Chandalar** 83.62 18 IAmb IAmb 16 12 45.8
comp=Z,70nm,1.1s
E23K **Chandalar** 83.62 18 P P 16 12 44.6 +1.3
baz=236,SNR=46
PRP **Porcupine Dome** 83.63 21 P P 16 12 44.3 +0.9
baz=240
DHRM **DHARAMSHALA** 83.66 303 *e*P P 16 12 43.6 -0.8
DHRM IAmb IAmb 16 12 48.1
comp=Z,88nm,0.7s
SHLS **Shalkode** 83.66 315 *i*P P 16 12 41.8 -2.3
SHLS **Shalkode** 83.66 315 *c i*P P 16 12 41.8 -2.3
PDGK **Podgornoye** 83.69 315 P P 16 12 43.0 -1.2
A21K **Barrow** 83.71 14 P P 16 12 44.4 +0.9
baz=229,SNR=11
QSPA **South Pole Qui** 83.72 180 P P 16 12 47.5 +3.5
comp=Z,158nm,0.7s,baz=325,slow=0.7,SNR=885
QSPA PKKPbc PKKPbc 16 31 03.1 -0.8
comp=Z,1.9nm,0.7s,baz=234,slow=1.8,SNR=9.8
QSPA **South Pole Qui** 83.72 180 P P 16 12 47.7 +3.7
D23K **Nanushuk River** 83.83 17 P P 16 12 46.2 +2.0
baz=234,SNR=102
J26L **Joseph Creek** 83.86 23 P P 16 12 45.6 +1.0
baz=242,SNR=24
L27K **Beaver Creek,** 83.87 24 P P 16 12 46.0 +1.4
baz=243
F24K **Squaw Lake** 83.87 19 IAmb IAmb 16 12 47.3
comp=Z,51nm,0.7s
F24K **Squaw Lake** 83.87 19 P P 16 12 46.0 +1.5
baz=237
YUK3 **Moose Creek** 83.88 26 P P 16 12 46.0 +1.2
baz=245,SNR=5.9
B22K **Teshekpuk Lake** 83.89 16 IAmb IAmb 16 12 46.4
comp=Z,79nm,0.9s
B22K **Teshekpuk Lake** 83.89 16 P P 16 12 45.5 +1.1
baz=232
BCAR **Beaver Creek A** 83.89 24 P P 16 12 45.9 +1.2
A22K **Sinclair Lake** 83.91 15 P P 16 12 45.7 +1.2
baz=230
H25L **Birch Creek** 83.91 21 P P 16 12 45.6 +1.0
baz=238,SNR=5.3
TOLK **Toolik Lake Re** 83.97 18 IAmb IAmb 16 12 47.3
comp=Z,57nm,0.9s
TOLK **Toolik Lake Re** 83.97 18 P P 16 12 46.4 +1.4
baz=236,SNR=40
YUK8 **Steele Glacier** 83.97 26 P P 16 12 46.2 +0.8
baz=245,SNR=13
UZB **Uzynbulak** 83.97 314 *e*P P 16 12 44.8 -0.9
UZB **Uzynbulak** 83.97 314 *e*P P 16 12 44.8 -0.9
BVCY **Beaver Creek** 83.98 25 P P 16 12 47.0 +1.9
baz=244,SNR=10
E24K **Your Creek** 83.99 18 P P 16 12 46.1 +1.0
baz=237,SNR=21
G25K **Bearman Lake** 84.07 20 P P 16 12 46.7 +1.3
baz=239,SNR=18

O29M Mount Kennedy 84.10 27 IAmb IAmb 16 12 48.3
comp=Z,32nm,0.6s
O29M Mount Kennedy 84.10 27 P **P** **16 12 47.5 +1.5**
baz=246,SNR=13
K27K Chicken 84.21 23 P **P** **16 12 48.3 +2.0**
baz=243
P29M Windy Craggy 84.23 28 P **P** **16 12 48.0 +1.6**
baz=247
PRZ Przheval'sk 84.26 314 IAmb IAmb 16 12 50.2
comp=Z,103nm,1.0s
S31K Pelican 84.33 30 P **P** **16 12 48.1 +1.2**
baz=249
C23K Itkillik River 84.35 16 IAmb IAmb 16 12 50.0
comp=Z,86nm,0.9s
C23K Itkillik River 84.35 16 P **P** **16 12 48.4 +1.5**
baz=234
SATY Saty 84.39 314 *e*P **P** **16 12 47.1 -0.8**
SATY Saty 84.39 314 *e*P **P** **16 12 47.0 -0.8**
I26K Coal Creek Min 84.39 22 P **P** **16 12 47.9 +0.7**
baz=242
YUK6 Outpost Mounta 84.46 27 P **P** **16 12 48.7 +0.8**
baz=247,SNR=8.6
SIT Sitka 84.47 31 P **P** **16 12 48.7 +1.1**
baz=250
D24K Happy Valley 84.48 17 IAmb IAmb 16 12 50.1
comp=Z,53nm,0.8s
D24K Happy Valley 84.48 17 P **P** **16 12 49.1 +1.6**
baz=236,SNR=45
YUK4 Talbot Arm 84.49 26 P **P** **16 12 50.3 +2.4**
baz=246,SNR=16
TARG Taragay, Kyrgy 84.51 313 IAmb IAmb 16 13 01.9
comp=Z,36nm,0.8s
UDPR Udaipur 84.53 295 *e*P **P** **16 12 48.4 -0.4**
F25K Christian Rive 84.65 19 P **P** **16 12 49.8 +1.4**
baz=239,SNR=34
R31K City Hall, Gus 84.74 30 P **P** **16 12 50.1 +1.2**
baz=249
P30M Million Dollar 84.78 28 P **P** **16 12 50.9 +1.7**
baz=248,SNR=16
HYT Haines Junctio 84.80 27 IAmb IAmb 16 12 53.8
comp=Z,53nm,0.6s
HYT Haines Junctio 84.80 27 P **P** **16 12 51.5 +2.1**
baz=247,SNR=29
PLBC Pleasant Camp 84.81 29 P **P** **16 12 50.7 +1.4**
baz=248
TDK Taldyqorghan 84.86 316 *e*P **P** **16 12 49.5 -0.5**
comp=Z,51nm,0.9s
TDK Taldyqorghan 84.86 316 *e*P **P** **16 12 49.4 -0.5**
TDK pmax pmax
comp=Z,51nm,0.9s
BMAR Burnt Mountain 84.92 20 P **P** **16 12 51.1 +1.4**
E25K Arctic Village 84.94 19 P **P** **16 12 51.3 +1.5**
baz=239,SNR=27
G26K Porcupine Rive 84.95 20 P **P** **16 12 51.8 +1.9**
baz=241,SNR=74
S32K Killisnoo 84.99 31 IAmb IAmb 16 14 26.5
comp=Z,70nm,1.6s
S32K Killisnoo 84.99 31 P **P** **16 12 51.5 +1.3**
baz=250
M29M Somme Creek 85.01 25 P **P** **16 12 51.9 +1.4**
baz=246,SNR=26
MAW Mawson 85.01 203 P **P** **16 12 50.5 +0.2**
comp=Z,105nm,0.6s,baz=95,slow=5.9,SNR=164
MAW LR LR 16 47 06.0
comp=Z,390nm,21.7s,baz=86,slow=33
comp=Z,105nm,0.6s
MOBC Moresby Island 85.03 35 IAmb IAmb 16 12 53.4
comp=Z,64nm,0.9s
CRAG Craig 85.10 33 P **P** **16 12 52.0 +1.2**
baz=252
I27K Kandik River 85.10 22 IAmb IAmb 16 12 53.4
comp=Z,42nm,0.7s
I27K Kandik River 85.10 22 P **P** **16 12 52.0 +1.3**
baz=243,SNR=38
F26K Sheenjek River 85.19 20 P **P** **16 12 52.7 +1.5**
baz=241,SNR=51
N30M Aishikik Lake 85.22 27 P **P** **16 12 52.7 +1.2**
baz=248
BESE Bessie Mountai 85.23 30 IAmb IAmb 16 12 54.6
comp=Z,136nm,1.7s
HG4B Hotspring 85.24 36 IAmb IAmb 16 12 54.4
comp=Z,64nm,0.7s
R32K Eaglecrest 85.29 30 IAmb IAmb 16 13 49.0
comp=Z,115nm,1.9s
R32K Eaglecrest 85.29 30 P **P** **16 12 53.1 +1.3**
baz=250
U33K Whale Pass 85.30 32 IAmb IAmb 16 12 56.7
comp=Z,77nm,1.3s
U33K Whale Pass 85.30 32 P **P** **16 12 53.2 +1.4**
baz=252
SKAG Skagway 85.31 29 IAmb IAmb 16 12 54.9
comp=Z,60nm,1.4s
SKAG Skagway 85.31 29 P **P** **16 12 54.0 +2.2**
SKAG Skagway 85.31 29 P **P** **16 12 53.1 +1.3**
baz=249,SNR=7.3
D25K Kavik River 85.31 18 IAmb IAmb 16 12 54.2
comp=Z,47nm,0.9s
D25K Kavik River 85.31 18 P **P** **16 12 52.7 +1.0**
baz=239
MDOK Medeo 85.38 314 *e*P **P** **16 12 51.9 -0.9**
MDOK Medeo 85.38 314 *e*P **P** **16 12 51.9 -0.9**
KSH Kashi 85.39 310 P **P** **16 12 54.8 +1.9**
KSH pP pP 16 13 08.3 -2.5
KSH S **S** **16 23 24.8 +5.7**
KSH pmax pmax
comp=Z,91nm,0.8s
KSH LR LR
comp=Z,280nm,22.0s
KSH LR LR
comp=Z,190nm,17.6s
KSH LR LR
comp=Z,270nm,23.3s
H27K Steamboat Moun 85.42 21 IAmb IAmb 16 12 56.9
comp=Z,38nm,0.8s
H27K Steamboat Moun 85.42 21 P **P** **16 12 54.0 +1.6**
baz=243,SNR=48
L29M L29M 85.42 25 IAmb IAmb 16 12 57.4
comp=Z,35nm,0.7s
L29M L29M 85.42 25 P **P** **16 12 53.9 +1.6**
baz=247,SNR=26
O30N Mendenhall 85.42 27 P **P** **16 12 54.1 +1.6**
baz=249,SNR=11
TNSS Tian-Shan 85.43 314 *e*P **P** **16 12 52.2 -1.2**
TNSS Tian-Shan 85.43 314 *e*P **P** **16 12 52.1 -1.2**
AAA Alma-Ata 85.49 314 *e*P **P** **16 12 52.6 -0.6**
comp=Z,33nm,0.7s
AAA Alma-Ata 85.49 314 *e*P **P** **16 12 52.6 -0.6**
AAA pmax pmax
comp=Z,33nm,0.7s
G27K Doyon Strip 85.63 21 P **P** **16 12 55.0 +1.7**
baz=243
I28M Miner Creek 85.66 22 P **P** **16 12 54.9 +1.3**
baz=245
M30M Minto, Yukon 85.78 26 IAmb IAmb 16 12 58.9
comp=Z,33nm,0.8s
M30M Minto, Yukon 85.78 26 P **P** **16 12 55.5 +1.3**
baz=248,SNR=22
WRAK Wrangell Islan 85.81 32 P **P** **16 12 55.8 +1.4**
baz=252,SNR=5.9
N31M Braeburn, Yuko 85.82 27 P **P** **16 12 55.9 +1.5**
baz=249,SNR=21
V35K Ketchikan 85.88 33 P **P** **16 12 56.4 +1.7**
baz=253,SNR=10
WHY Whitehorse 85.94 28 IAmb IAmb 16 12 57.1
comp=Z,47nm,1.2s
WHY Whitehorse 85.94 28 P **P** **16 12 56.4 +1.3**
baz=250,SNR=5.9
K29M Barlow Dome 85.96 24 IAmb IAmb 16 13 00.0
comp=Z,64nm,0.8s
K29M Barlow Dome 85.96 24 P **P** **16 12 56.9 +1.8**
baz=247,SNR=50
BOOM Boomskoye usch 86.03 313 IAmb IAmb 16 13 01.0
comp=Z,52nm,0.7s
C26K Camden Bay 86.06 17 P **P** **16 12 57.4 +2.1**
baz=240,SNR=113
P32M Atlin 86.12 29 P **P** **16 12 57.1 +1.2**
baz=251,SNR=6.0
KURK Kurchatov 86.13 322 P **P** **16 12 55.0 -1.1**
KURK IAmb IAmb 16 12 56.3
comp=Z,36nm,0.5s
KURK Kurchatov 86.13 322 *i* P **P** **16 12 54.6 -1.5**
KURK pmax pmax
comp=Z,75nm,1.3s
KURBB Kurchatov Arra 86.17 322 P **P** **16 12 55.6 -0.7**
comp=Z,21nm,0.5s,baz=97,slow=4.7,SNR=110
KURBB PKKPbc **PKKPbc** **16 30 54.7 -2.4**
comp=Z,1.3nm,0.7s,baz=289,slow=2.7,SNR=8.9
KURBB PKPPKP **P'P'df** **16 38 59.9 -1.5**
comp=Z,0.4nm,0.7s,baz=274,slow=2.5,SNR=4.1
KURBB LR LR 16 51 03.8
comp=Z,142nm,21.9s,baz=176,slow=35
comp=Z,21nm,0.5s
C27K Jago River 86.28 18 P **P** **16 12 58.0 +1.6**
baz=241,SNR=94
E27K Coleen River 86.28 20 P **P** **16 12 58.2 +1.7**
baz=243,SNR=90
TKM2 Tokmak 2 86.37 314 P **P** **16 12 57.4 -0.3**
SNR=43
NIL Nilore 86.44 304 P **P** **16 12 57.4 -0.7**
NIL Nilore 86.44 304 P **P** **16 12 57.4 -0.7**
NIL pmax pmax
comp=Z,50nm,0.6s
MAYO Mayo, Yukon 86.54 25 P **P** **16 12 59.3 +1.4**
baz=249
H29M Whitestone 86.57 22 P **P** **16 12 59.3 +1.3**
baz=246
F28M Old Crow 86.61 20 IAmb IAmb 16 13 01.2
comp=Z,46nm,0.8s
F28M Old Crow 86.61 20 P **P** **16 12 59.7 +1.6**
baz=245,SNR=58
Q32M Nakina River 86.63 30 P **P** **16 12 59.9 +1.3**
baz=252
M31M Drury Creek, Y 86.69 26 IAmb IAmb 16 13 00.9
comp=Z,54nm,1.2s
M31M Drury Creek, Y 86.69 26 P **P** **16 12 59.9 +1.3**
baz=250,SNR=14
J30M Hart River 86.72 24 IAmb IAmb 16 13 03.7
comp=Z,56nm,0.8s
J30M Hart River 86.72 24 P **P** **16 13 00.6 +1.7**
baz=248,SNR=52
P33M Teslin, Yukon 86.75 28 P **P** **16 13 00.2 +1.1**
baz=252
KBK Karagaybulak 86.78 313 P **P** **16 13 00.1 +0.3**
SNR=17
S34M Telegraph Cree 86.89 31 IAmb IAmb 16 13 02.8
comp=Z,53nm,0.8s
S34M Telegraph Cree 86.89 31 P **P** **16 13 01.4 +1.8**
baz=253,SNR=17
U35K Hyder 86.91 33 P **P** **16 13 00.9 +1.2**
baz=254
N32M Quiet Lake 86.93 28 P **P** **16 13 01.2 +1.3**
baz=251
I30M Mount Dempster 86.94 23 IAmb IAmb 16 13 02.4
comp=Z,36nm,0.8s
I30M Mount Dempster 86.94 23 P **P** **16 13 01.1 +1.1**
baz=248
D27M Malcolm River 86.96 19 IAmb IAmb 16 13 02.6
comp=Z,49nm,0.8s
D27M Malcolm River 86.96 19 P **P** **16 13 01.6 +1.8**
baz=244,SNR=83
G29M Pine Creek 86.97 21 P **P** **16 13 01.2 +1.3**
baz=246
CHMS Chunysh 86.99 314 P **P** **16 13 00.3 -0.2**
SNR=17
UCH Uchtor 87.02 313 P **P** **16 13 01.6 +0.4**
SNR=18
BBB Bella Bella 87.04 37 LR LR 16 44 37.4
comp=Z,669nm,22.0s,baz=245,slow=30
T35M Bob Quinn 87.08 32 IAmb IAmb 16 13 03.7
comp=Z,40nm,0.9s
T35M Bob Quinn 87.08 32 P **P** **16 13 02.4 +1.7**
baz=254,SNR=11
AAK Ala-Archa 87.11 313 LR LR 16 54 25.4
comp=Z,96nm,19.9s,baz=96,slow=37
AAK Ala-Archa 87.11 313 P **P** **16 13 00.8 -0.5**
AAK IAmb IAmb 16 13 06.6
comp=Z,31nm,0.7s
AAK Ala-Archa 87.11 313 P **P** **16 13 01.3 0.0**
SNR=32
AAK Ala-Archa 87.11 313 P **P** **16 13 00.8 -0.5**
AAK pmax pmax
comp=Z,31nm,0.7s
AAK Ala-Archa 87.11 313 P **P** **16 13 01.4 +0.1**
AAK pP **pP** **16 13 14.4 -4.9**
E28M Babbage River 87.15 20 IAmb IAmb 16 13 03.5
comp=Z,97nm,1.4s
E28M Babbage River 87.15 20 P **P** **16 13 02.3 +1.6**
baz=245
SGDS Sogindy 87.17 314 *e*P **P** **16 13 00.8 -0.7**
USP Ospenovka 87.22 314 P **P** **16 13 01.1 -0.6**
SNR=26
EPYK Eagle Plains 87.24 22 P **P** **16 13 02.7 +1.4**
baz=248,SNR=46
R33M Jennings River 87.40 30 P **P** **16 13 04.0 +1.7**
baz=253
KMRM Mail Ridge 87.52 49 IAmb IAmb 16 13 11.1
comp=Z,53nm,1.2s
DLBC Dease Lake 87.60 31 LR LR 16 45 25.4
comp=Z,566nm,21.7s,baz=261,slow=31
DLBC Dease Lake 87.60 31 P **P** **16 13 05.0 +1.9**
baz=254,SNR=18
E29M Blow River 87.61 20 P **P** **16 13 04.0 +1.0**
baz=247
EKS2 Erkin-Say 87.63 313 P **P** **16 13 03.8 0.0**
SNR=30
G30M tAoh Zraii Nji 87.66 22 IAmb IAmb 16 13 05.3
comp=Z,61nm,1.1s
G30M tAoh Zraii Nji 87.66 22 P **P** **16 13 04.2 +0.9**
baz=248
D28M Stokes Point 87.71 19 P **P** **16 13 04.7 +1.4**
baz=246
BTLS Baital 87.89 316⇑ *i*P **P** **16 13 04.2 -0.6**
comp=Z,23nm,1.1s
BTLS Baital 87.89 316 *c i*P **P** **16 13 04.1 -0.6**
BTLS pmax pmax
comp=Z,23nm,1.1s
H31M Peel River 87.94 23 IAmb IAmb 16 13 06.3
comp=Z,40nm,0.7s
H31M Peel River 87.94 23 P **P** **16 13 05.7 +1.1**
baz=250
GDXM Geysers 87.98 51 IAmb IAmb 16 13 10.9
comp=Z,29nm,0.8s
K02D Willamette Mer 88.00 47 IAmb IAmb 16 13 09.4
comp=Z,55nm,1.1s
F30M Barrier River 88.05 21 P **P** **16 13 06.2 +1.2**
baz=249
O02D Mt. Diablo Mer 88.21 49 IAmb IAmb 16 13 10.2
comp=Z,36nm,0.7s
CBB Campbell River 88.25 39 IAmb IAmb 16 13 08.6
comp=Z,60nm,0.9s
MNRC McLaughlin Min 88.26 51 IAmb IAmb 16 13 10.1
comp=Z,36nm,0.8s
G31M Satah River 88.35 22 IAmb IAmb 16 13 08.6
comp=Z,66nm,1.1s
G31M Satah River 88.35 22 P **P** **16 13 07.5 +1.1**
baz=250,SNR=41
YBH Yreka Blue Hor 88.53 48 LR LR 16 46 46.9
comp=Z,107nm,20.3s,baz=285,slow=32
MHC Mount Hamilton 88.64 52 IAmb IAmb 16 13 11.0
comp=Z,33nm,1.2s
WTLY Watson Lake, Y 88.65 29 P **P** **16 13 08.9 +0.8**
baz=255
NLWA Neilton Lookou 88.71 42 IAmb IAmb 16 13 12.3
comp=Z,51nm,1.1s
F31M Tsiigehtchic 88.72 21 IAmb IAmb 16 13 10.1
comp=Z,59nm,1.4s
F31M Tsiigehtchic 88.72 21 P **P** **16 13 08.8 +0.6**
baz=250,SNR=16
CLRS Cowichan Lake 88.80 41 IAmb IAmb 16 13 11.5
comp=Z,26nm,1.0s
SUTB Sutter Butte 88.82 51 IAmb IAmb 16 13 12.8
comp=Z,39nm,0.8s
M03C McCloud 88.89 48 IAmb IAmb 16 13 13.1
comp=Z,44nm,0.8s
O03E Paynes Creek 88.97 49 IAmb IAmb 16 13 14.9
comp=Z,27nm,0.8s
H04D Lenon 88.98 45 IAmb IAmb 16 13 13.0
comp=Z,38nm,0.9s
INK Inuvik 89.09 21 PKKP 16 30 44.0
comp=Z,4.2nm,0.9s,baz=118,slow=2.4,SNR=10
INK LR LR 16 50 17.6
comp=Z,1µm,20.6s,baz=235,slow=34
INK Inuvik 89.09 21 IAmb IAmb 16 13 11.6
comp=Z,49nm,1.2s
INK Inuvik 89.09 21 P **P** **16 13 10.5 +0.6**
baz=251,SNR=22
HATC Hat Creek Radi 89.31 49 IAmb IAmb 16 13 15.1
comp=Z,32nm,1.0s
H04A Detroit Lake 89.39 45 IAmb IAmb 16 13 14.3
comp=Z,30nm,1.0s
GNW Green Mountain 89.43 42 IAmb IAmb 16 13 14.1
comp=Z,27nm,0.8s
DZA Taraz 89.45 313 *e*P **P** **16 13 11.4 -0.8**
DZA Taraz 89.45 313 *e*P **P** **16 13 11.4 -0.8**
LIRD Liard River Hi 89.81 30 P **P** **16 13 14.3 +0.8**
baz=257
J05D Fort Rock, OR 89.85 47 IAmb IAmb 16 13 17.9
comp=Z,42nm,0.9s
HOOD Mount Hood Mea 89.87 45 IAmb IAmb 16 13 16.9
comp=Z,49nm,1.1s
D05A Enumclaw 89.93 43 IAmb IAmb 16 13 17.7
comp=Z,98nm,1.6s
BEKR Beckworth 90.01 50 IAmb IAmb 16 13 17.7
comp=Z,56nm,0.8s
K05A Summer Lake 90.02 47 IAmb IAmb 16 13 20.5
comp=Z,34nm,1.0s
KBL Kabul 90.02 305 P **P** **16 13 13.1 -2.3**
KBL IAmb IAmb 16 13 15.5
comp=Z,19nm,0.7s
KBL Kabul 90.02 305 P **P** **16 13 13.1 -2.3**
KBL pmax pmax
comp=Z,19nm,0.7s
KK31 Karatay Array 90.07 313 *i* P **P** **16 13 14.0 -1.1**
KKAR Karatay Array 90.07 313 P **P** **16 13 13.9 -1.2**
KKAR Karatay Array 90.07 313 P **P** **16 13 13.9 -1.2**
G05A Wamic 90.09 45 IAmb IAmb 16 13 17.3
comp=Z,34nm,0.9s
TOAD Toad River Com 90.13 31 P **P** **16 13 15.8 +0.8**
baz=258
PINE Pine Mountain 90.14 46 IAmb IAmb 16 13 19.2
comp=Z,21nm,0.8s
IUG luzhnay 90.28 312⇑ *i*P **P** **16 13 15.6 -0.7**
IUG luzhnay 90.28 312 *c i*P **P** **16 13 15.5 -0.7**
WAKR Walker 90.53 51 IAmb IAmb 16 13 20.6
comp=Z,26nm,0.7s
LLLB Lillooet 90.55 39 IAmb IAmb 16 13 19.1
comp=Z,31nm,1.2s
BRLS Boroldaу 90.55 313 *e*P **P** **16 13 16.7 -0.6**
BRLS Boroldaу 90.55 313 *e*P **P** **16 13 16.7 -0.6**
OSI Osito Audit: C 90.61 55 IAmb IAmb 16 13 21.5
comp=Z,49nm,1.3s
CHM Chimkent 90.62 312 *e*P **P** **16 13 17.0 -0.7**
CHM Chimkent 90.62 312 *e*P **P** **16 13 17.0 -0.7**
PAHR Pah Rah Range 90.73 50 IAmb IAmb 16 13 21.2
comp=Z,38nm,0.9s
LTY Liberty 90.83 43 IAmb IAmb 16 13 20.3
comp=Z,33nm,1.2s
ISA Isabella, Lake 90.94 54 IAmb IAmb 16 13 22.3
comp=Z,36nm,1.2s
KOTAN Kotaneelee Air 90.97 30 P **P** **16 13 19.8 +0.9**
baz=259
MXC Moxie City 90.99 43 IAmb IAmb 16 13 21.3
comp=Z,21nm,1.0s
TPO Tropico Hills 91.05 55 IAmb IAmb 16 13 23.4
comp=Z,45nm,0.9s
F07A Phinny Hill Vi 91.15 44 IAmb IAmb 16 13 22.2
comp=Z,26nm,0.9s
I07A Izee 91.21 46 IAmb IAmb 16 13 22.8
comp=Z,36nm,1.3s
E07A Sunnyside 91.29 43 IAmb IAmb 16 13 22.8
comp=Z,37nm,0.9s
CWC Cottonwood Cre 91.35 54 IAmb IAmb 16 13 24.4
comp=Z,32nm,1.2s
NVAR Mina Array Bea 91.41 52 P **P** **16 13 23.4 +1.7**
comp=Z,56nm,0.9s,baz=254,slow=6.5,SNR=104
NVAR PKKPbc **PKKPbc** **16 30 44.4 +0.5**
comp=Z,1.1nm,0.5s,baz=47,slow=3.5,SNR=5.1
NVAR LR LR 16 48 56.9
comp=Z,488nm,19.8s,baz=271,slow=32
comp=Z,56nm,0.9s
NVAR Mina Array Bea 91.41 52 P **P** **16 13 22.4 +0.7**
HAWA Hanford 91.49 44 IAmb IAmb 16 13 23.7
comp=Z,33nm,0.9s
WAH2 Wahluke Slope 91.51 43 IAmb IAmb 16 13 23.7
comp=Z,31nm,0.8s
DSP Deep Springs 91.54 53 IAmb IAmb 16 13 25.4
comp=Z,32nm,0.9s
ELS Elsinore Mount 91.56 56 IAmb IAmb 16 13 25.4
comp=Z,22nm,0.9s
BVA0 Borovoye Array 91.59 323 P **P** **16 13 19.9 -2.0**
BVAR Borovoye Array 91.59 323 P **P** **16 13 20.5 -1.4**
comp=Z,65nm,0.8s,baz=101,slow=4.6,SNR=175
BVAR LR LR 16 53 57.6
comp=Z,209nm,21.3s,baz=90,slow=35
comp=Z,65nm,0.8s
WVOR Wild Horse Val 91.63 48 IAmb IAmb 16 13 24.8
comp=Z,32nm,1.2s
CLC China Lake 91.67 54 IAmb IAmb 16 13 25.9
comp=Z,42nm,0.9s
WSHM Spangler Hills 91.73 55 IAmb IAmb 16 13 26.2
comp=Z,43nm,0.9s
G08A Pilot Rock 91.75 45 IAmb IAmb 16 13 25.0
comp=Z,30nm,1.1s
MPMC Manual Prospec 91.78 54 IAmb IAmb 16 13 26.6
comp=Z,41nm,1.0s
YPT Yellepit 91.84 44 IAmb IAmb 16 13 25.4
comp=Z,39nm,1.0s
B08A Colville Reser 91.87 42 IAmb IAmb 16 13 25.0
comp=Z,38nm,1.2s
GRAC Grapevine Rang 91.98 53 IAmb IAmb 16 13 26.7
comp=Z,34nm,1.1s
D08A Wollman Farm, 91.99 43 IAmb IAmb 16 13 25.9
comp=Z,31nm,1.0s
CBX Cerro Bola 92.06 58 IAmb IAmb 16 13 28.8
comp=Z,17nm,0.8s
BAR Barrett 92.09 58 IAmb IAmb 16 13 29.0
comp=Z,18nm,0.7s
BORC Borrego Spring 92.36 57 IAmb IAmb 16 13 29.1
comp=Z,38nm,1.1s
PFO Pinyon Flats O 92.36 57 LR LR 16 51 05.4
comp=Z,559nm,18.1s,baz=254,slow=33
PFO Pinyon Flats O 92.36 57 P **P** **16 13 27.0 +0.9**
PFO IAmb IAmb 16 13 29.2
comp=Z,46nm,1.1s
PFO Pinyon Flats O 92.36 57 P **P** **16 13 27.0 +0.9**
PFO pmax pmax
comp=Z,45nm,1.1s
RPN Rapa Nui 92.37 117 LR LR 16 46 46.7
comp=Z,348nm,21.9s,baz=6.5,slow=30
PMD Palm Desert 92.43 57 IAmb IAmb 16 13 29.3
comp=Z,45nm,1.0s
GWY Greenwater Val 92.45 54 IAmb IAmb 16 13 29.3
comp=Z,28nm,0.8s
ESJX Sierra Juarez 92.63 58 IAmb IAmb 16 13 32.4
comp=Z,18nm,0.7s
C36M Paulatuk 92.67 21 IAmb IAmb 16 13 27.8
comp=Z,31nm,0.7s
C36M Paulatuk 92.67 21 P **P** **16 13 26.7 +0.2**
baz=260
VTX Valle De La Tr 92.71 59 IAmb IAmb 16 13 33.6
comp=Z,17nm,0.8s
A36M Sachs Harbour 92.79 18 P **P** **16 13 27.3 +0.3**
baz=258
SYO Syowa Base 92.97 199⇑ *i*P **P** **16 13 28.1 +0.1**
SYO Syowa Base 92.97 199⇑ *e*PcP **PcP** **16 13 29.3 +0.7**
SYO Syowa Base 92.97 199⇑ *i*pP pP 16 13 41.0 -4.2
F10A Beach Ranch, E 93.03 44 IAmb IAmb 16 13 30.5
comp=Z,33nm,1.0s
BC3 Big Chuckawall 93.20 57 IAmb IAmb 16 13 33.4
comp=Z,48nm,1.0s
MTPC Mountain Pass 93.29 55 IAmb IAmb 16 13 33.4
comp=Z,26nm,1.0s
NEW Newport 93.33 42 LR LR 16 48 48.5
comp=Z,2µm,21.3s,baz=298,slow=31
NEW Newport 93.33 42 IAmb IAmb 16 13 31.7
comp=Z,49nm,1.1s
S11A Rachel 93.33 53 IAmb IAmb 16 13 33.3
comp=Z,22nm,0.7s
R11B Troy Canyon, C 93.52 52 IAmb IAmb 16 13 34.3
comp=Z,30nm,1.0s
GLA Glamis 93.67 57 IAmb IAmb 16 13 35.7
comp=Z,28nm,0.8s
SHPR Sheep Range 93.70 54 IAmb IAmb 16 13 35.6
comp=Z,25nm,0.9s
PRN Pahroc Range 93.86 53 IAmb IAmb 16 13 38.0
comp=Z,35nm,0.9s
V12A Nelson 93.88 55 IAmb IAmb 16 13 36.1
comp=Z,30nm,0.8s
BLYC Blythe 93.98 57 IAmb IAmb 16 13 36.8
comp=Z,24nm,0.9s
W13A Hualapai Mount 94.61 55 IAmb IAmb 16 13 40.2
comp=Z,36nm,0.9s
PSUT Pine Spring 94.89 52 IAmb IAmb 16 13 40.7
comp=Z,45nm,1.3s
CCUT Cedar City 95.21 53 IAmb IAmb 16 13 42.6
comp=Z,16nm,0.7s
SZCU Shurtz Canyon 95.43 53 IAmb IAmb 16 13 43.4
comp=Z,14nm,0.7s
HRA Herat 95.60 304 IAmb IAmb 16 13 44.3
comp=Z,15nm,0.7s
KNB Kanab 95.61 53 IAmb IAmb 16 13 44.5
comp=Z,27nm,1.1s
YKA Yellowknife Ar 95.77 28 P **P** **16 13 41.1 +0.3**
comp=Z,15nm,0.8s,baz=269,slow=5.1,SNR=82

YKA PKiKP **PKiKP** **16 18 20.7 +0.7**
comp=Z,0.3nm,0.5s,baz=302,slow=4.8,SNR=4.2
YKA PKKP **PKKPbc** **16 30 29.9 -3.3**
comp=Z,1.4nm,0.5s,baz=75,slow=2.2,SNR=20
YKA LR LR 16 53 11.2
comp=Z,202nm,20.2s,baz=288,slow=33
comp=Z,15nm,0.8s
YKA Yellowknife Ar 95.77 28 P **P** **16 13 41.7 +0.8**
YKAW3 Yellowknife Wh 95.77 28 IAmb IAmb 16 13 42.9
comp=Z,25nm,0.8s
YKAW1 Yellowknife Wh 95.82 28 IAmb IAmb 16 13 43.1
comp=Z,24nm,0.8s
BELA Belgrano 2 95.83 178 IAmb IAmb 16 13 42.0
comp=Z,30nm,0.9s
HVU Hansel Valley 95.92 49 IAmb IAmb 16 13 44.6
comp=Z,23nm,0.9s
U15A North Rim 96.00 54 IAmb IAmb 16 13 46.4
comp=Z,28nm,0.9s
PKCU Pink Cliffs 96.04 53 IAmb IAmb 16 13 47.2
comp=Z,34nm,1.0s
MTPU Mount Pierson 96.17 52 IAmb IAmb 16 13 47.6
comp=Z,27nm,0.8s
WUAZ Wupatki 96.69 55 IAmb IAmb 16 13 51.0
comp=Z,16nm,0.8s
LPIG La Paz 96.96 67 LR LR 16 49 44.1
comp=Z,606nm,20.9s,baz=247,slow=30
TMUT Trail Mountain 97.00 51 IAmb IAmb 16 13 50.3
comp=Z,20nm,0.8s
Q16A Castle Valley 97.01 52 IAmb IAmb 16 13 50.4
comp=Z,64nm,1.8s
P17A Butcher Ranch, 97.36 51 IAmb IAmb 16 13 51.5
comp=Z,13nm,0.8s
YFT Old Faithful 97.44 46 IAmb IAmb 16 13 54.1
comp=Z,27nm,1.0s
SVE Sverdlovsk 97.47 326 *eP* **P** **16 13 46.8 -1.9**
SVE pmax pmax
comp=Z,11nm,0.8s
AB31 Akbulak array 97.87 319 P **P** **16 13 48.1 -2.6**
ABKAR Akbulak array 97.87 319 P **P** **16 13 48.1 -2.6**
W18A Petrified Fore 98.01 55 IAmb IAmb 16 13 55.3
comp=Z,16nm,0.8s
EGMT Eagleton 98.24 42 IAmb IAmb 16 13 54.0
comp=Z,12nm,0.7s
BW06 Boulder Array 98.34 48 IAmb IAmb 16 13 55.7
comp=Z,26nm,1.4s
PD31 Pinedale Array 98.34 48 IAmb IAmb 16 13 55.6
comp=Z,26nm,1.4s
PDAR Pinedale Array 98.34 48 P **P** **16 13 53.4 +0.1**
comp=Z,6.3nm,0.8s,baz=233,slow=2.2,SNR=48
PDAR PKiKP **PKiKP** **16 18 27.1 +1.6**
comp=Z,0.5nm,0.5s,baz=300,slow=1.5,SNR=6.5
PDAR PKKPbc **PKKPbc** **16 30 24.1 -1.6**
comp=Z,0.7nm,0.5s,baz=89,slow=2.2,SNR=7.3
PDAR LR LR 16 54 42.6
comp=Z,378nm,19.1s,baz=277,slow=33
comp=Z,6.3nm,0.8s
PDAR Pinedale Array 98.34 48 P **P** **16 13 53.1 -0.1**
PV05 Paradox Valley 98.61 53 IAmb IAmb 16 13 57.8
comp=Z,22nm,1.3s
PV10 Paradox Valley 98.66 52 IAmb IAmb 16 13 57.0
comp=Z,22nm,0.8s
PV14 Lion Creek, Pa 98.67 52 IAmb IAmb 16 13 57.7
comp=Z,37nm,1.4s
PV20 West Nyswonger 98.72 52 IAmb IAmb 16 13 57.8
comp=Z,42nm,1.2s
PV17 East Wray Mesa 98.72 52 IAmb IAmb 16 13 57.8
comp=Z,30nm,1.6s
ARTI Arti 98.73 326 LR LR 17 01 05.8
comp=Z,147nm,20.4s,baz=82,slow=37
ARTI Arti 98.73 326 P **P** **16 13 51.9 -2.5**
ARTI Arti 98.73 326 *c iP* **P** **16 13 52.0 -2.4**
ARTI 16 17 52.2
ARTI S **SKSac** **16 24 23.3 -3.5**
ARTI pmax pmax
comp=Z,19nm,0.7s
PV18 Skein Mesa, Pa 98.76 52 IAmb IAmb 16 13 57.9
comp=Z,43nm,1.5s
PV04 Paradox Valley 98.77 52 IAmb IAmb 16 13 58.1
comp=Z,18nm,0.9s
PV11 David Mesa, Pa 98.79 52 IAmb IAmb 16 13 59.4
comp=Z,44nm,1.3s
PV12 Saucer Basin, 98.85 52 IAmb IAmb 16 13 59.7
comp=Z,37nm,1.0s
PV02 Paradox Valley 98.89 52 IAmb IAmb 16 13 59.7
comp=Z,29nm,1.2s
AKTO Aktyubinsk 99.11 320 LR LR 16 58 42.3
comp=Z,129nm,22.0s,baz=97,slow=35
AKTO Aktyubinsk 99.11 320 P **Pdif** **16 13 53.7 -2.5**
NVL N'lazarevskaya 99.27 192 *eP* **Pdif** **16 13 53.4 -3.1**
NVL *e* 16 17 56.9
NVL *eS* **SKSac** **16 24 25.7 -3.3**
NVL *eSS* **SS** **16 32 11.1 -0.8**
NVL *eSSS* SSS 16 36 00.2
NVL pmax pmax
comp=Z,15nm,1.1s
TROLL Troll, Antarti 99.83 188 ⇑Pdiff **Pdif** **16 13 59.2 -0.1**
comp=Z,1μm,1.0s
SNAA Sanae 100.86 187 ⇑Pdiff **Pdif** **16 14 03.2 -0.5**
comp=Z,125nm,0.6s
SNAA Sanae 100.86 187 P **Pdif** **16 14 03.5 -0.2**
comp=Z,5.3nm,0.9s,baz=212,slow=9.6,SNR=20
SNAA PKiKP **PKiKP** **16 18 28.8 -0.2**
comp=Z,1.7nm,0.4s,baz=170,slow=7.2,SNR=15
SNAA PKKPbc **PKKPbc** **16 30 16.8 -2.2**
comp=Z,1.7nm,0.9s,baz=22,slow=5.5,SNR=5.1
RES Resolute Bay 101.29 15 PKKPbc PKKPbc 16 30 14.6 -3.3
comp=Z,4.3nm,0.8s,baz=142,slow=5.0,SNR=6.4
VNA3 Neumayer Olymp 101.98 185 ⇑Pdiff **Pdif** **16 14 08.1 -0.6**
comp=Z,16nm,0.9s
VNA2 Neumayer--Stat 102.07 186 ⇑Pdiff **Pdif** **16 14 09.1 +0.1**
comp=Z,11nm,0.8s,baz=167,slow=5.0
VNA1 Neumayer--Stat 102.42 186 ⇑Pdiff **Pdif** **16 14 10.7 +0.1**
comp=Z,8.0nm,0.8s
TXAR Lajitas Array 103.07 61 Pdiff **Pdif** **16 14 16.4 +1.9**
comp=Z,0.9nm,0.8s,baz=257,slow=4.0,SNR=6.0
TXAR PKiKP **PP** **16 18 32.0 +2.1**
comp=Z,2.1nm,1.0s,baz=339,slow=3.2,SNR=5.9
TXAR PKKPbc **PKKPbc** **16 30 08.7 -2.7**
comp=Z,4.5nm,0.7s,baz=69,slow=3.4,SNR=28
PMSA Palmer Station 103.54 164 *eP* **Pdif** **16 14 14.7 -0.9**
SPITS Spitsbergen Ar 105.02 352 Pdiff **Pdif** **16 14 19.7 -2.3**
comp=Z,5.7nm,0.8s,baz=349,slow=3.1,SNR=5.2
SPITS PKKPbc **PKKPbc** **16 30 03.0 -3.9**
comp=Z,3.0nm,0.7s,baz=170,slow=4.4,SNR=4.0
ULM Lac du Bonnet 107.10 39 Pdiff **Pdif** **16 14 29.9 -1.9**
comp=Z,2.7nm,0.4s,baz=273,slow=0.4,SNR=3.4
ULM PKKPbc **PKKPbc** **16 29 56.8 -3.0**
comp=Z,3.4nm,0.5s,baz=82,slow=3.2,SNR=3.7
APA Apatity 107.38 340 ⇓*eP* **Pdif** **16 14 29.1 -3.5**
APA MLR MLR
comp=Z,641nm,24.0s
KLMR Klimovskoe 107.59 332 *eP* **Pdif** **16 14 30.5 -3.2**
KLMR pmax pmax
comp=Z,23nm,1.1s
KLMR MLR MLR
comp=Z,251nm,24.0s
ARCES ARCESS Array B 108.82 343 Pdiff **Pdif** **16 14 37.8 -1.3**
comp=Z,1.8nm,0.6s,baz=46,slow=5.2,SNR=7.4
ARCES PKiKP **PKiKP** **16 18 44.2 +0.7**
comp=Z,1.4nm,0.5s,baz=50,slow=2.3,SNR=15
ARCES PKKPbc **PKKPbc** **16 29 48.5 -6.4**
comp=Z,1.5nm,0.5s,baz=242,slow=1.9,SNR=12
KIV Kislovodsk 110.19 315 *i* PKiKP **PKiKP** **16 18 44.1 -2.9**
KIV *e* 16 19 18.4
KIV *ePS* **PS** **16 28 48.1 -4.2**
KIV *eSS* SS 16 34 40.8 -2.8
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,105nm,21.0s
OBN Obninsk 111.02 327 *i* PKiKP **PKiKP** **16 18 48.6 +0.6**
OBN pmax pmax
comp=Z,6.0nm,0.8s
SOC Sochi 112.37 315 *i* PKiKP **PKiKP** **16 18 48.3 -2.7**
SOC *e* 16 19 34.0
SOC *ePPP* PPP 16 21 56.3
SOC *ePS* **PS** **16 29 08.6 -3.5**
SOC *eSS* SS 16 35 12.3 -0.2
SOC MLR MLR
comp=Z,169nm,22.0s
FINES FINESS Array B 113.18 336 Pdiff **Pdif** **16 14 57.0 -1.5**
comp=Z,3.1nm,0.7s,baz=106,slow=2.7,SNR=9.1
FINES PKiKP **PKiKP** **16 18 51.1 -0.9**
comp=Z,2.2nm,0.8s,baz=108,slow=4.5,SNR=5.9
FINES PP **PP** **16 19 42.6 +0.3**
comp=Z,6.0nm,0.9s,baz=98,slow=4.2,SNR=5.0
FINES PKKPbc **PKKPbc** **16 29 37.4 -2.9**
comp=Z,2.2nm,0.5s,baz=190,slow=2.5,SNR=20
MNK Minsk 115.86 329 *i* PKiKP **PKiKP** **16 18 54.2 -3.1**
MNK *i* 16 19 14.2
MNK *i* 16 19 58.8
MNK *i* PPP PPP 16 22 25.5
MNK *i* SSS SSS 16 40 17.8
MNK pmax pmax
comp=Z,11nm,0.6s
MNK pmax pmax
comp=N,5.0nm,0.7s
MNK pmax pmax
comp=E,18nm,0.8s
MNK MLR MLR
comp=Z,298nm,23.0s
MNK MLR MLR
comp=N,276nm,20.0s
MNK MLR MLR
comp=E,358nm,22.0s
AKASG Malin Array Be 116.83 325 PKP **PKPdf** **16 18 58.4 -0.9**
comp=E,3.0nm,0.5s,baz=52,slow=2.5,SNR=13
AKASG PP **PP** **16 20 05.5 -2.7**
comp=E,1.8nm,0.7s,baz=60,slow=5.5,SNR=4.8
AKASG PKKPbc **PKKPbc** **16 29 25.1 -2.3**
comp=E,1.6nm,0.4s,baz=260,slow=4.0,SNR=5.8
KIEV Kiev 116.84 325 ⇓P **PKPdf** **16 18 58.0 -1.3**
KIEV Kiev 116.84 325 ⇓PKiKP **PKPdf** **16 18 58.0 -1.3**
KMBO Kilima Mbogo 117.24 266 PKP **PKPdf** **16 19 01.1 -0.5**
comp=E,2.2nm,0.4s,baz=157,slow=13,SNR=1.8
PLCA Paso Flores 117.42 142 PKP **PKPdf** **16 19 00.7 -0.3**
comp=E,4.3nm,0.6s,baz=218,slow=3.0,SNR=11
PLCA PKKPab **PKKPbc** **16 29 24.0 -1.2**
comp=E,5.9nm,0.8s,baz=76,slow=3.7,SNR=8.9
KIRS Kirsehir-Merke 117.70 311 ⇑P **PKPdf** **16 18 59.8 -1.7**
BRTR Keskin Array B 117.75 312 PKP **PKPdf** **16 19 00.8 -0.8**
comp=E,2.6nm,0.6s,baz=139,slow=3.7,SNR=13
BRTR PP **PP** **16 20 16.1 +0.7**
comp=E,2.5nm,1.0s,baz=76,slow=5.8,SNR=3.9
BRTR PKKPab **PKKPbc** **16 29 23.8 -0.2**
comp=E,2.1nm,0.9s,baz=237,slow=3.9,SNR=7.7
MMAI Mount Meron Ar 117.95 304 PKP **PKPdf** **16 19 02.0 -0.1**
comp=E,1.4nm,0.6s,baz=93,slow=10,SNR=5.2
SORM Soroca 118.42 322 ⇑P **PKPdf** **16 19 01.7 -0.8**
SORM Soroca 118.42 322 ⇑PKiKP **PKPdf** **16 19 01.7 -0.8**
HFS Hagfors 118.74 339 PKP **PKPdf** **16 19 01.6 -1.1**
comp=E,1.6nm,0.4s,baz=90,slow=1.5,SNR=13
HFS PKKPbc **PKKPbc** **16 29 17.7 -3.2**
comp=E,1.7nm,0.6s,baz=222,slow=1.9,SNR=6.4
NB2 NORSAR Subarra 118.94 341 PKPdf **PKPdf** **16 19 01.8 -1.4**
comp=Z,2.0nm,0.8s,baz=39,slow=1.9
NB2 PKKP **PKKPbc** **16 29 18.1 -2.2**
comp=Z,2.8nm,1.0s,baz=224,slow=4.3
NOA NORSAR Array B 118.94 341 PKP **PKPdf** **16 19 02.2 -0.9**
comp=Z,3.6nm,0.8s,baz=44,slow=1.9,SNR=17
NOA PKKPbc **PKKPbc** **16 29 17.1 -3.2**
comp=Z,1.4nm,0.8s,baz=43,slow=3.5,SNR=5.7
SAHE Sakarya_HENDEK 119.45 314 ⇑P **PKPdf** **16 19 03.2 -1.5**
SADO Sadowa 119.51 41 PKKPbc PKKPbc 16 29 16.2 -1.4
comp=Z,2.6nm,0.6s,baz=132,slow=3.6,SNR=5.9
CFR Carcaliu 119.76 319 ⇑P **PKPdf** **16 19 05.1 0.0**
CFR Carcaliu 119.76 319 ⇑PKiKP **PKPdf** **16 19 05.1 0.0**
TESR Tescani 120.16 321 ⇑P **PKPdf** **16 19 05.9 0.0**
BOSA Boshof 120.34 232 PKP **PKPdf** **16 19 07.1 +0.1**
comp=Z,29nm,0.8s,baz=147,slow=5.1,SNR=10
BOSA PKKPbc **PKKPbc** **16 29 14.4 +0.1**
comp=Z,7.4nm,0.7s,baz=291,slow=3.1,SNR=14
VRI Vrincioaia 120.38 320 ⇑P **PKPdf** **16 19 05.2 -1.1**
VRI Vrincioaia 120.38 320 ⇑PKiKP **PKPdf** **16 19 05.2 -1.1**
ONER Baraj Valea Uz 120.39 321 ⇓P **PKPdf** **16 19 06.6 +0.2**
BURAR Bucovina Array 120.55 323 ⇓P **PKiKP** **16 19 07.8 +0.9**
BURAR Bucovina Array 120.55 323 ⇓PKiKP **PKiKP** **16 19 07.8 +0.9**
MLR Muntele Rosu 121.04 320 PKKPbc PKKPbc 16 29 09.4 -2.8
comp=Z,10nm,0.7s,baz=197,slow=4.8,SNR=4.5
MLR Muntele Rosu 121.04 320 ⇓P **PKPdf** **16 19 06.8 -1.0**
MLR Muntele Rosu 121.04 320 ⇓PKiKP **PKPdf** **16 19 06.8 -1.0**
MREMI Moremi 121.09 239 *i* P **PKPdf** **16 19 08.2 -0.4**
SCHQ Schefferville 121.20 27 PKP **PKPdf** **16 19 07.2 -0.4**
comp=Z,4.3nm,0.6s,baz=214,slow=9.2,SNR=3.9
SCHQ PKKPbc **PKKPab** **16 29 08.1 -2.6**
comp=Z,7.8nm,0.7s,baz=141,slow=6.5,SNR=4.7
BAND Balkesir-Ban 121.59 314 ⇑P **PKPdf** **16 19 07.8 -1.1**
VOIR 121.63 321 ⇑P **PKPdf** **16 19 09.5 +0.6**
VOIR 121.63 321 ⇑PKiKP **PKPdf** **16 19 09.5 +0.6**
BROLN Tlhalogang 121.74 241 *i* P **PKPdf** **16 19 09.5 -0.3**
ARR Arges 121.92 321 ⇑P **PKiKP** **16 19 10.6 +1.1**
MAKGR Makgori 121.96 234 *i* P **PKPdf** **16 19 10.0 -0.2**
STHS Stebnicka Huta 121.96 326 *e*PKiKP **PKPdf** **16 19 08.8 -0.5**
STHS Stebnicka Huta 121.96 326 *e*PKP **PKPdf** **16 19 08.8 -0.5**
LPHEP Lephephe 122.12 238 *i* P **PKPdf** **16 19 10.3 -0.2**
ELND Elena 122.16 318 ⇓P **PKPdf** **16 19 10.0 +0.1**
MARR Marisel-Cluj 122.25 323 ⇑P **PKiKP** **16 19 12.0 +1.8**
PLVB Pleven 122.80 319 ⇓P **PKPdf** **16 19 11.5 +0.5**
EZN Ezine 123.05 314 ⇓P **PKPdf** **16 19 10.3 -1.3**
GZR Gura Zlata 123.07 321 ⇑P **PKPdf** **16 19 10.3 -1.3**
LANS Liptovska Anna 123.08 327 *e*PKiKP **PKiKP** **16 19 12.7 +1.0**
LANS Liptovska Anna 123.08 327 *e*PKP **PKiKP** **16 19 12.7 +1.0**
SKOMA Sekoma 123.23 235 *i* P **PKPdf** **16 19 12.5 -0.1**
SURR Surduc 123.30 322 ⇑P **PKPdf** **16 19 10.3 -1.6**
SIRR Siria 123.33 323 ⇓P **PKPdf** **16 19 11.7 -0.4**
OKC Ostrava-Krasne 123.41 328 AMS AMS 17 18 30.0
comp=Z,300nm,23.4s
CAMR Camarioca 123.49 67 *e*P **PKiKP** **16 19 14.2 +1.0**
PSZ Piszkesteto 123.51 325 ⇓P **PKPdf** **16 19 12.0 -0.4**
PSZ Piszkesteto 123.51 325 ⇓PKiKP **PKPdf** **16 19 12.0 -0.4**
HERR Herculane 123.54 321 ⇓P **PKPdf** **16 19 08.8 -3.6**
BZS Buzias 123.68 322 ⇓P **PKPdf** **16 19 12.7 0.0**
MORC Moravsky Berou 123.76 328 ⇓P **PKPdf** **16 19 12.7 -0.1**
MORC Moravsky Berou 123.76 328 *e*PKP **PKPdf** **16 19 12.5 -0.3**
MORC *e* 16 29 00.3
MORC Moravsky Berou 123.76 328 ⇓PKiKP **PKPdf** **16 19 12.7 -0.1**
OSTC Ostas 123.98 329 AMS AMS 17 12 20.0
comp=Z,500nm,24.9s
KRLC Kraliky 123.98 329 *e*PKiKP **PKPdf** **16 19 13.9 +0.7**
KRLC MLR MLR
comp=Z,400nm,16.9s
KRLC Kraliky 123.98 329 *e*PKPDF **PKPdf** **16 19 13.9 +0.7**
KRLC AMS AMS 17 14 50.0
comp=Z,400nm,16.9s
MDVR Moldovita 124.03 321 ⇓P **PKPdf** **16 19 13.3 -0.1**
CHVC Chvalec 124.04 330 *e*PKiKP **PKPdf** **16 19 14.0 +0.7**
CHVC MLR MLR
comp=Z,500nm,25.6s
CHVC Chvalec 124.04 330 *e*PKPDF **PKPdf** **16 19 14.0 +0.7**
CHVC AMS AMS 17 12 50.0
comp=Z,500nm,25.6s
DPC Dobruska-Polom 124.05 329 AMS AMS 17 12 20.0
comp=Z,400nm,17.7s
UPC Upice 124.11 329 AMS AMS 17 13 00.0
comp=Z,500nm,24.9s
JAVC Velka Javorina 124.22 327 *e*PKP **PKiKP** **16 19 14.7 +0.7**
JAVC *e* 16 28 59.7
BSEG Bad Segeberg 124.45 335 *e*pPKPdf **PKPdf** **16 19 14.3 +0.4**
VRAC Vranov 124.53 328 *e*PKP **PKPdf** **16 19 13.8 -0.4**
VRAC *e* 16 28 57.1
MODS Modra-Piesok 124.72 327 *e*PKiKP **PKPdf** **16 19 15.5 +0.9**
MODS Modra-Piesok 124.72 327 *e*PKP **PKPdf** **16 19 15.5 +0.9**
KRUC Moravsky 124.79 328 *e*PKP **PKPdf** **16 19 14.8 +0.1**
KRUC *e* 16 28 56.0
PVCC Panska Ves 124.82 330 AMS AMS 17 17 30.0
comp=Z,200nm,15.5s
KSANE Kasane 124.85 243 *i* P **PKPdf** **16 19 16.0 +0.1**
MGV Manicaragua 124.89 67 *e*P **PKPdf** **16 19 16.1 +0.5**
BRG Berggiesshubel 124.91 331 *e*pPKPdf **PKPdf** **16 19 14.7 -0.1**
CLL Collm 125.07 332 *i* PKiKP **PKPdf** **16 19 14.9 -0.3**
CLL *e* 16 21 03.0
CLL pmax pmax
comp=Z,13nm,0.8s
CLL Collm 125.07 332 *e*pPKPdf **PKPdf** **16 19 14.9 -0.3**
TREC Trest 125.12 329 AMS AMS 17 16 20.0
comp=Z,400nm,19.1s
MORH Mrgy, Hungar 125.15 324 ⇑P **PKPdf** **16 19 15.9 +0.4**
PRU Pruhonice 125.17 330 *e*PKiKP **PKPdf** **16 19 15.9 +0.5**
PRU MLR MLR
comp=Z,300nm,23.6s
PRU Pruhonice 125.17 330 *e*PKPDF **PKPdf** **16 19 15.9 +0.5**
PRU AMS AMS 17 13 30.0
comp=Z,300nm,23.6s
PRA Prague 125.18 330 AMS AMS 17 13 30.0
comp=Z,300nm,22.7s
FLTG Flechtingen 125.19 334 *e*pPKPdf **PKPdf** **16 19 15.0 -0.3**
ATAH Atahualpa 125.28 103 PKP **PKiKP** **16 19 18.4 +0.9**
comp=Z,24nm,0.8s,baz=270,slow=4.8,SNR=11
HSKC Hora Svate Kat 125.33 331 *e*PKPDF **PKPdf** **16 19 16.2 +0.5**
HSKC AMS AMS 17 10 00.0
comp=Z,600nm,36.9s
KGCAE Kacgae 125.38 236 *i* P **PKPdf** **16 19 17.2 +0.4**
LKGWB Lokgwabe 125.62 235 *i* P **PKPdf** **16 19 16.4 -0.8**
RONA Rosalia, Austr 125.64 327 *i* PKP **PKPdf** **16 19 16.5 0.0**
comp=Z,9.7nm,1.0s
CONA Conrad Observa 125.75 327 *e*PKP **PKPdf** **16 19 16.4 -0.2**
comp=Z,6.0nm,0.8s
CLZ Clausthal 125.91 334 *e*pPKPdf **PKPdf** **16 19 16.9 +0.1**
TANN Tannenbergstha 125.92 331 *e*pPKPdf **PKPdf** **16 19 17.1 +0.2**
SLIND Selinda 126.02 242 *i* P **PKPdf** **16 19 10.9 +0.9**
CKRC Cesky Krumlov 126.02 329 *e*PKiKP **PKPdf** **16 19 17.9 +0.8**
CKRC MLR MLR
comp=Z,300nm,21.2s
CKRC Cesky Krumlov 126.02 329 *e*PKPDF **PKPdf** **16 19 17.9 +0.8**
CKRC AMS AMS 17 13 40.0
comp=Z,300nm,21.2s
MOX Moxa 126.17 332 *eL* L 17 18 26.7
comp=Z,222nm,20.6s
KHC Kasperske Hory 126.20 329 *e*PKiKP **PKPdf** **16 19 18.1 +0.6**
KHC MLR MLR
comp=Z,400nm,17.2s
KHC Kasperske Hory 126.20 329 *e*PKPDF **PKPdf** **16 19 18.1 +0.6**
KHC AMS AMS 17 14 30.0
comp=Z,400nm,17.2s
GEC2 GERESS Array S 126.32 329 *e*pPKPdf **PKPdf** **16 19 17.1 -0.7**
GERES GERESS Array B 126.32 329 PKP **PKPdf** **16 19 17.8 +0.1**
comp=Z,5.8nm,0.7s,baz=40,slow=2.3,SNR=37
ARSA Arzberg 126.33 327 *i* PKP **PKPdf** **16 19 17.8 +0.1**
comp=Z,2.1nm,0.6s
MANZ Manzenberg 126.37 331 *e*pPKPdf **PKPdf** **16 19 17.7 0.0**
OTAV Otavalo 126.52 94 ⇑PKiKP **PKPdf** **16 19 20.4 +0.8**
WET Wettzell 126.55 330 *e*pPKPdf **PKPdf** **16 19 18.4 +0.3**
MOA Molln 126.65 328 *i* PKP **PKPdf** **16 19 18.5 +0.1**
comp=Z,11nm,1.3s
GRTLG Ghanzi 126.86 238 *i* P **PKPdf** **16 19 19.9 +0.2**
SOKA Soboth 126.94 326 *e*PKP **PKPdf** **16 19 18.5 -0.5**
comp=Z,9.9nm,1.2s
KOOLE Kule 126.97 235 *i* P **PKPdf** **16 19 20.3 +0.5**
CCCC Cccc 127.06 68 *e*P **PKPdf** **16 19 20.6 +0.8**
KASTN Kahler Asten 127.22 334 *e*pPKPdf **PKPdf** **16 19 19.0 -0.3**
KBA Koelnbreinsper 127.62 327 *i* PKP **PKPdf** **16 19 19.7 -0.7**
comp=Z,12nm,1.3s
MTDJ Mount Denham 127.65 72 *e*P **PKPdf** **16 19 20.7 -0.4**
QNGWA Qangwa 127.67 240 *i* P **PKPdf** **16 19 22.0 +0.8**
MYKA Terra Mystica 127.73 327 *i* PKP **PKPdf** **16 19 19.5 -1.0**
comp=Z,0.8nm,1.1s
GCUF Volcan Galeras 127.74 93 P **PKPdf** **16 19 21.9 -0.1**
LESA Schwarzleotal 127.75 328 *i* PKP **PKPdf** **16 19 19.6 -0.9**
comp=Z,11nm,0.7s,SNR=5.1
BBAC Balboa, Cauca 127.93 92 P **PKPdf** **16 19 21.1 -0.9**
XAUDM Khaudum 127.93 241 *i* P **PKPdf** **16 19 22.4 +0.7**
EKA Eskdalemuir Ar 127.97 344 PKP **PKPdf** **16 19 20.6 +0.1**
comp=Z,2.0nm,0.5s,baz=15,slow=2.6,SNR=10
EKA PP **PP** **16 21 20.9 -2.2**
comp=Z,0.8nm,0.6s,baz=38,slow=8.1,SNR=3.8
PIZC Pizarro, Choco 128.08 89 P **PKPdf** **16 19 22.1 +0.1**
ABTA Abfaltersbach 128.27 328 *i* PKP **PKPdf** **16 19 20.4 -1.1**
comp=Z,12nm,1.0s
WATA Walderalm 128.38 329 *i* PKP **PKPdf** **16 19 21.2 -0.6**
comp=Z,13nm,1.0s
WTTA Wattenberg 128.40 329 *e*PKP **PKPdf** **16 19 21.7 -0.2**
comp=Z,20nm,0.9s,SNR=5.3
YAR Yar 128.48 69 *e*P **PKPdf** **16 19 22.4 -0.2**
CHIV Chivirico 128.49 70 *e*P **PKPdf** **16 19 22.0 -0.5**
POPC Popayan, Colom 128.55 92 P **PKPdf** **16 19 22.0 -1.2**
MOTA Moosalm 128.62 329 *i* PKP **PKPdf** **16 19 22.1 -0.2**
comp=Z,15nm,0.8s,SNR=6.4
JAMC Jamundi, Valle 128.62 91 P **PKPdf** **16 19 22.5 -0.8**
SQTA Sankt Quirin 128.65 329 *i* PKP **PKPdf** **16 19 22.1 -0.2**
comp=Z,13nm,0.9s
BTNL Ternell 128.66 335 *d*PKPdf **PKPdf** **16 19 22.7 +0.6**
MEM Membach 128.69 335 *d*PKPdf **PKPdf** **16 19 22.0 -0.1**
RETA Reutte 128.70 329 *i* PKP **PKPdf** **16 19 21.8 -0.5**
comp=Z,7.2nm,1.0s
PINC Pinares de May 128.99 69 *e*P **PKPdf** **16 19 23.4 -0.1**
YOTC Yotoco, Valle 129.02 90 P **PKPdf** **16 19 23.3 -0.7**
FETA Feichten 129.03 329 *i* PKP **PKPdf** **16 19 23.0 -0.1**
comp=Z,17nm,1.0s
DAVA Damuels 129.28 330 *i* PKP **PKPdf** **16 19 23.3 -0.3**
comp=Z,11nm,0.8s
BMRD Maredsous 129.44 336 *d*PKPdf **PKPdf** **16 19 23.4 -0.2**
FLOC Florencia 129.46 93 P **PKPdf** **16 19 23.8 -0.9**
CBOC Ciudad Bolivar 129.48 88 P **PKPdf** **16 19 24.2 -0.7**
GARC Garzon, Huila 129.69 92 P **PKPdf** **16 19 25.3 -0.1**
BETC Betania 129.79 92 P **PKPdf** **16 19 25.8 +0.4**
QMBU Quimbuelo 129.94 69 *e*P **PKPdf** **16 19 25.2 -0.2**
HELC Santa Helena 129.97 87 P **PKPdf** **16 19 25.9 -0.2**
GUY2C Guyana, Caldas 130.08 88 P **PKPdf** **16 19 26.6 +0.2**
ORTC Ortega, Tolima 130.10 90 P **PKPdf** **16 19 24.6 -1.3**
PTLC Puerto Leguiza 130.13 95 P **PKPdf** **16 19 25.5 -0.5**
PRAC Prado 130.44 90 P **PKPdf** **16 19 26.0 -0.6**
NORC Norcasia 130.60 88 P **PKPdf** **16 19 26.2 -0.7**
URMC La Uribe, Meta 130.91 91 P **PKPdf** **16 19 27.2 -0.3**
PTBO PUERTO BERRIO 131.06 87 P **PKPdf** **16 19 26.1 -1.6**
ROSC El Rosal 131.09 89 PKP **PKPdf** **16 19 28.8 +0.6**
comp=Z,104nm,0.6s,baz=103,slow=4.7,SNR=21
ROSC El Rosal 131.09 89 P **PKPdf** **16 19 28.4 +0.2**
MACC Macarena, Meta 131.32 93 P **PKPdf** **16 19 28.1 -0.1**
SPBC San Pablo de B 131.39 88 P **PKPdf** **16 19 28.0 -0.4**
PSAL Palomas, Salto 131.64 142 *e*P **PKPdf** **16 19 26.7 -1.6**
CHIC Chingaza 131.66 89 P **PKPdf** **16 19 28.1 -1.2**
LPAZ La Paz 131.97 118 PKP **PKPdf** **16 19 30.6 +0.5**
comp=Z,12nm,0.9s,baz=45,slow=0.9,SNR=24
LPAZ SKPbc **SKPbc** **16 22 50.2 -0.6**
comp=Z,0.9nm,0.6s,baz=236,slow=4.4,SNR=1.7
RUSC La Rusia 132.39 88 P **PKPdf** **16 19 27.6 -3.2**
PAMC Pamplona, Colo 132.83 86 P **PKPdf** **16 19 31.0 -0.6**
PTGC Puerto Gaitan, 133.22 90 P **PKPdf** **16 19 29.6 -2.2**
PLTB Pedras Altas 133.49 146 *e*P **PKPdf** **16 19 30.5 -1.4**
CPSB Cacapava Do Su 134.60 145 *e*P **PKPdf** **16 19 32.7 -1.2**
CPUP Villa Florida 135.05 137 PKP **PKPdf** **16 19 34.9 +0.1**
comp=Z,2.4nm,0.8s,baz=141,slow=1.6,SNR=16
KEST Kesra 136.81 318 PKP **PKPdf** **16 19 39.4 +1.4**
comp=Z,8.6nm,0.9s,baz=45,slow=2.9,SNR=4.1
VILB Vilhena 140.33 119 *e*P **PKPdf** **16 19 42.0 -2.9**
ESDC Sonseca Array 141.62 333 PKP **PKPdf** **16 19 44.4 -2.2**
comp=Z,1.5nm,0.8s,baz=26,slow=2.8,SNR=6.1
ESDC PP **PP** **16 22 48.5 -1.3**
comp=Z,2.7nm,1.0s,baz=32,slow=5.8,SNR=5.1
MVO Moncorvo 141.63 338 *e*PKP **PKPdf** **16 19 42.9 -3.7**
POLO Lamas de Olo 141.74 339 *e*PKP **PKPdf** **16 19 41.5 -5.3**
PVRL Vila Real 141.79 339 *e*PKP **PKPdf** **16 19 41.8 -5.1**
PP1B Ponte de Pedra 142.30 129 *e*P **PKPdf** **16 19 45.0 -3.4**
PVIS Viseu 142.35 338 *e*PKP **PKPdf** **16 19 43.5 -4.4**
SALV Santo Antonio 142.63 126 *e*P **PKPdf** **16 19 44.7 -4.3**
PCBR Castelo Branco 142.95 337 *e*PKP **PKPdf** **16 19 45.5 -3.4**
PCAS Casmilo, Conde 143.15 338 *e*PKP **PKPdf** **16 19 49.3 +0.1**
PMRV Marv??o 143.27 337 *e*PKP PKPab 16 19 46.6 +1.2
MACA Manacapuru-AM 143.35 104 *e*P PKPab 16 19 47.5 +1.1
PSBE So Bento 143.73 338 *e*PKP PKPab 16 19 48.4 +1.2
PESTR Estremoz 143.83 336 *e*PKP PKPab 16 19 47.9 +0.3
PMTG Montargil 143.91 337 *e*PKP PKPab 16 19 48.3 +0.5
PDRB Porto dos Gac 143.96 119 *e*P PKPab 16 19 48.4 -0.4
VAO Valinhos 143.97 144 *e*P PKPab 16 19 49.4 +0.8
PARRA Arraiolos 144.06 337 *e*PKP **PKPab** **16 19 49.0 -0.8**
RCLB Rio Claro- Sao 144.08 143 *e*P **PKPab** **16 19 49.1 +0.1**
PBAR Barrancos 144.20 335 *e*PKP **PKPab** **16 19 49.6 +0.7**
ITRB Iturama 144.24 137 *e*P **PKPab** **16 19 48.8 -0.8**
EVO Evora 144.29 337 *e*PKP **PKPab** **16 19 49.6 +0.3**
PMAFR Mafra 144.40 338 *e*PKP **PKPab** **16 19 50.4 +0.8**
MOE Montemor 144.43 337 *e*PKP **PKPab** **16 19 50.4 +0.6**
PARB Paraibuna 144.46 146 *e*P **PKPab** **16 19 49.6 -0.8**
BOAV Boa Vista 144.57 95 *e*P **PKPab** **16 19 49.5 -1.6**
PBEJ Beja 144.67 336 *e*PKP **PKPab** **16 19 51.2 +0.5**
MESJ Messejana 144.97 336 *e*PKP **PKPab** **16 19 52.1 +0.4**
MESJ Messejana 144.97 336 *e*PKP **PKPab** **16 19 52.2 +0.4**
PCVE Castro Verde 145.07 336 *e*PKP **PKPbc** **16 19 52.5 +0.4**
CLDB Colider 145.11 119 *e*P **PKPbc** **16 19 49.9 -3

PRPB	**Parauapebas**	**152.50**	**116**	*e*P	**PKPdf**	**16**	**20**	**03.0 -2.3**
PMOZ	**Porto Moniz, M**	**152.53**	**345**	*e*PKPbc	**PKiKP**	**16**	**20**	**13.2 +1.0**
PMAR	**Madeira**	**152.55**	**345**	*e*PKPbc	**PKiKP**	**16**	**20**	**13.1 +0.7**
TORD	**Torodi Ar. Bea**	**152.64**	**287**	PKP	**PKPdf**	**16**	**20**	**04.6 -0.9**
	comp=Z,6.1nm,0.8s,baz=50,slow=4.1,SNR=5.5							
TORD				PKPbc	**PKPbc**	**16**	**20**	**11.8 -0.7**
	comp=Z,27nm,0.7s,baz=52,slow=4.5,SNR=18							
SMTB	**Santa Maria do**	**153.10**	**124**	*e*P	**PKPdf**	**16**	**20**	**03.6 -2.6**
TMAB	**Tom-Au,PA,Br**	**155.58**	**110**	*e*P	**PKPdf**	**16**	**20**	**06.4 -3.2**
DBIC	**Dimbokro**	**159.79**	**272**	PKP	**PKPdf**	**16**	**20**	**14.4 -0.4**
	comp=Z,3.3nm,0.7s,baz=79,slow=3.5,SNR=6.5							
DBIC				PKPab	**PKPab**	**16**	**20**	**53.6 -0.4**
	comp=Z,63nm,0.8s,baz=119,slow=5.6,SNR=34							
DBIC				PP	**PP**	**16**	**24**	**37.2 +1.0**
	comp=Z,7.4nm,0.8s,baz=110,slow=3.3,SNR=4.6							

AEIC ***25*** *16:19:58.6±1.5,54.°52N±0.°06×160.°71W±0.°05,h19*^{km}*±7km, Error ellipse: s-maj=8.4km s-min=4.4km az=180.0*

NEIC 25 16:19:57.7±1.0,54.°58N±0.°04×160.°74W±0.°04,h19^{km}**±7km, ML2.9/20,ML2.8(AEIC),Error ellipse: s-maj=6.3km s-min=3.7km az=186.0,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.71**	**70**		Pb	16 20 10.8	-0.6
CNBA	**Chernabura Isl**	**0.71**	**70**		Sb	16 20 20.4	-0.3
SDPT	**Sand Point**	**0.79**	**11**		Pb	16 20 12.6	-0.1
SDPT				IAML		16 20 29.7	
	comp=N,366nm,0.6s						
SDPT	**Sand Point**	**0.79**	**11**		Sb	16 20 22.7	-0.3
DOL	**Dolgoi Island**	**0.87**	**312**		Pb	16 20 13.7	-0.4
DOL					Sb	16 20 25.4	+0.1
HAG	**Hague Volcano**	**1.00**	**318**		Pb	16 20 16.3	-0.1
PS4A	**Pavlof South-4**	**1.00**	**320**		Pb	16 20 16.3	-0.2
PS4A					Sn	16 20 30.2	-0.1
PS1A	**Pavlof South-1**	**1.02**	**326**		Pb	16 20 16.6	-0.1
PS1A					Sn	16 20 30.6	-0.2
DT1	**Dutton Round H**	**1.04**	**301**		Pb	16 20 16.1	-0.9
DT1					Sb	16 20 29.6	-0.6
S12K	**Black Hills**	**1.36**	**327**		Pn	16 20 21.7	0.0
S12K				IAML		16 20 43.2	
	comp=N,306nm,0.3s						
S12K				IAML		16 20 44.8	
	comp=E,356nm,0.2s						
FALS	**False Pass**	**1.58**	**281**		Pn	16 20 24.7	+0.1
VNKR	**Veniaminof 5**	**1.65**	**28**		Pn	16 20 26.3	+0.6
VNSG	**Veniaminof 6**	**1.81**	**31**		Pn	16 20 28.7	+0.8
VNHG	**Veniaminof 1**	**1.88**	**28**		Pn	16 20 29.8	+1.0
AKUT	**Akutan**	**2.98**	**263**	Pn	Pn	16 20 43.9	+0.1
AKUT				IAML		16 21 34.2	
	comp=N,23nm,0.5s						
AKUT				IAML		16 21 36.3	
	comp=E,24nm,1.1s						
CHIR	**Chirikof Isl**	**3.19**	**65**		Pn	16 20 46.6	-0.1
CHIR	**Chirikof Isl**	**3.19**	**65**	IAML		16 21 52.2	
	comp=N,52nm,1.2s						
SII	**Sitkinak Islan**	**4.22**	**59**	Pn	Pn	16 21 00.9	0.0
O14K	**Tigyukauivet M**	**4.70**	**357**	Pn	Pn	16 21 08.8	+1.4
O14K				IAML		16 22 06.7	
	comp=N,13nm,1.1s						
O14K				IAML		16 22 25.8	
	comp=E,10nm,1.1s						
ACHA	**Angle Creek He**	**4.72**	**37**	Pn	Pn	16 21 08.2	+0.4
OHAK	**Old Harbor**	**4.96**	**55**	Pn	Pn	16 21 10.2	-0.9
OHAK				IAML		16 22 43.8	
	comp=E,5.6nm,1.1s						
OHAK				IAML		16 23 07.4	
	comp=N,6.9nm,1.1s						
KDAK	**Kodiak Island**	**5.57**	**52**	Pn	Pn	16 21 18.5	-0.9
M14K	**Bethel**	**6.22**	**354**	Pn	Pn	16 21 28.5	+0.1
M16K	**Timber Creek**	**6.53**	**8**	Pn	Pn	16 21 33.2	+0.6
L14K	**Kuka Creek**	**6.86**	**352**	Pn	Pn	16 21 37.0	-0.1
M17K	**Holitna River**	**7.06**	**13**	Pn	Pn	16 21 40.7	+0.8
L18K	**Granite Mounta**	**7.95**	**14**	Pn	Pn	16 21 52.2	+0.2
J16K	**Anvik River**	**8.73**	**0**	Pn	Pn	16 22 03.3	+0.5
J17K	**VABM Dome**	**8.89**	**5**	Pn	Pn	16 22 04.7	-0.2
HIN	**Hinchinbrook I**	**9.62**	**47**	Pn	Pn	16 22 14.8	-0.1
FID	**Port Fidalgo**	**9.81**	**45**	Pn	Pn	16 22 16.8	-0.9
RAGM	**Ragged Mountai**	**10.41**	**50**	Pn	Pn	16 22 25.6	-0.2

CATAC 25 16:22:17.6±0.5,11.°N±3.°×8.°6W±.°,h47^{km}**±5**^{km}**,M2.8/12, MLv2.8/12,Error ellipse: s-maj=9.3km s-min=3.5km az=47.1,confirmed,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**0.43**	**37**	P	Pn	16 22 29.3	+1.4
NADN				S	Sn	16 22 38.2	+3.0
MASN	**Masaya**	**0.60**	**14**	S	Sn	16 22 41.5	+2.6
MAS3	**AI N del Volca**	**0.63**	**11**	P	Pn	16 22 31.0	+0.6
MORN	**AI O del Volca**	**0.65**	**77**	P	Pn	16 22 31.5	+0.9
MORN				S	Sn	16 22 42.1	+2.1
CONN	**Concepcion**	**0.68**	**76**	P	Pn	16 22 31.6	+0.6
CONN				S	Sn	16 22 42.5	+2.0
UNAN	**Cigeo UNAN**	**0.70**	**2**	P	Pn	16 22 32.1	+0.8
UNAN				S	Sn	16 22 43.1	+1.8
WLN	**Americas 2**	**0.76**	**8**	S	Sn	16 22 44.2	+1.6
CARN	**Rivas**	**0.79**	**106**	P	Pn	16 22 32.8	+0.4
CARN				S	Sn	16 22 45.2	+2.0
COPN	**Copaltepe**	**0.82**	**339**	P	Pn	16 22 33.1	+0.2
MOMN	**Momotombo**	**1.03**	**347**	P	Pn	16 22 35.8	+0.1
MOM2	**El Cardon**	**1.04**	**350**	P	Pn	16 22 36.2	+0.3
MOM2				S	Sn	16 22 50.4	+1.0
MOM3	**MOM3**	**1.12**	**349**	P	Pn	16 22 37.0	0.0
CNGA	**AI SSO del Vol**	**1.16**	**340**	P	Pn	16 22 37.4	-0.1
CNGA				S	Sn	16 22 52.9	+0.7
CNGN	**Cerro Negro**	**1.16**	**340**	S	Sn	16 22 52.6	+0.4
CNGN	**Cerro Negro**	**1.16**	**340**	P	Pn	16 22 36.7	-0.8
ALEN	**Leon**	**1.19**	**332**	S	Sn	16 22 53.4	+0.4
BOAB	**BOACO BROADBAN**	**1.21**	**31**	P	Pn	16 22 38.3	+0.2
BOAB	**BOACO BROADBAN**	**1.21**	**31**	S	Sn	16 22 53.9	+0.5
POLN	**AI Sur del Vol**	**1.34**	**338**	P	Pn	16 22 40.3	+0.3
POLN				S	Sn	16 22 56.7	0.0
PKGN	**Cerro Pekin**	**1.42**	**332**	P	Pn	16 22 41.5	+0.4
PKGN				S	Sn	16 22 59.2	+0.5

NEIC ***25*** *16:36:46.0±0.2,35.°800N±0.°009×96.°66W±0.°01,h6*^{km}*±2km, ML1.9/42,ML1.8/7, Error ellipse: s-maj=1.4km s-min=1.2km az=141.0*

NEIC 25 16:36:46.1±0.4,35.°803N±0.°010×96.°65W±0.°01,h7^{km}**±1km, Error ellipse: s-maj=2.0km s-min=1.1km az=122.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEOK	**Depew**	**0.13**	**72**		Pg	16 36 49.4	+0.4
DEOK					Sg	16 36 51.6	+0.8
DEOK				IAML		16 36 51.8	
	comp=E,327nm,0.3s						
OK052	**Battle Ridge R**	**0.23**	**328**		Pg	16 36 50.8	+0.2
OK052					Sg	16 36 54.5	+0.8
OK052				IAML		16 36 54.7	
	comp=E,329nm,0.2s						
QUOK	**Quay**	**0.37**	**353**		Pg	16 36 53.6	+0.2
QUOK					Sg	16 36 59.1	+0.8
QUOK				IAML		16 36 59.2	
	comp=E,181nm,0.2s						
TUL3	**Leonard**	**0.71**	**81**		Pg	16 36 60.0	+0.2
TUL3					Sg	16 37 09.3	+0.3
OK051	**E0350 and S346**	**0.72**	**348**	Pg	Pg	16 37 00.0	+0.1
OKCSW	**OKLAHOMA CITY**	**0.75**	**238**		Pg	16 37 00.7	+0.1
OKCSW					Sg	16 37 11.2	+0.8
FNO	**Franklin**	**0.82**	**228**		Pg	16 37 01.9	0.0
FNO					Sg	16 37 12.9	+0.5
FNO				IAML		16 37 22.5	
	comp=E,32nm,2.2s						
BLOK	**Blackwell**	**1.06**	**335**	IAML		16 37 17.1	
	comp=N,30nm,0.4s						
T35A	**Sooner Cattle**	**1.12**	**6**	Pg	Pg	16 37 07.0	-0.6
RLO	**Rose Lookout**	**1.37**	**74**		Pn	16 37 11.9	+0.2
X34A	**Smith Ranch, M**	**1.54**	**219**		Pn	16 37 14.1	0.0
KAN08	**Anthony NE Sta**	**1.77**	**324**	Pn	Pn	16 37 17.6	+0.3
U38A	**Gravette**	**1.94**	**70**	Pn	Pn	16 37 20.1	+0.5

CATAC 25 16:41:38.1±0.4,11.°N±3.°×8.°6W±.°,h35^{km}**±3**^{km}**,M3.0/18, MLv3.0/18,Error ellipse: s-maj=8.2km s-min=3.1km az=49.0,confirmed,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NADN	**Granada**	**0.49**	**47**	P	Pn	16 41 49.1	+0.4
NADN				S	Sn	16 41 58.8	+2.8
CRUN	**El Crucero**	**0.57**	**9**	P	Pb	16 41 51.0	+0.9
MAS3	**AI N del Volca**	**0.64**	**20**	P	Pn	16 41 50.9	+0.1
MAS3				S	Sb	16 42 01.4	+1.4
UNAN	**Cigeo UNAN**	**0.70**	**10**	P	Pb	16 41 52.3	+0.2
UNAN				S	Sb	16 42 03.0	+1.3
MGAN	**Managua**	**0.74**	**11**	P	Pb	16 41 52.7	0.0
MGAN	**Managua**	**0.74**	**11**	S	Sb	16 42 03.8	+1.1
MORN	**AI O del Volca**	**0.74**	**80**	P	Pb	16 41 52.9	+0.1
MORN				S	Sb	16 42 04.1	+1.4
ALLN	**Telcor Managua**	**0.74**	**9**	S	Sb	16 42 04.0	+1.2
WILN	**Americas 2**	**0.77**	**15**	S	Sb	16 42 04.5	+1.1
CONN	**Concepcion**	**0.77**	**79**	P	Pb	16 41 52.9	-0.3
CONN				S	Sb	16 42 04.8	+1.4
APQ2	**Apoyeque**	**0.78**	**5**	S	Sb	16 42 04.0	+0.2
COPN	**Copaltepe**	**0.78**	**346**	P	Pb	16 41 53.2	-0.2
APYN	**Apoyeque**	**0.81**	**3**	P	Pb	16 41 54.0	0.0
APYN				S	Sb	16 42 05.5	+0.7
APQ3	**Volcan Apoyequ**	**0.85**	**2**	P	Pb	16 41 54.5	-0.1
CARN	**Rivas**	**0.89**	**105**	P	Pn	16 41 54.6	+0.5
CARN				S	Sb	16 42 07.4	+0.7
MOMN	**Momotombo**	**1.00**	**352**	P	Pn	16 41 55.9	+0.2
MOM2	**El Cardon**	**1.02**	**355**	P	Pn	16 41 56.3	+0.3
MOM2				S	Sb	16 42 09.9	-0.7
MOM3	**MOM3**	**1.10**	**354**	S	Sb	16 42 12.0	-0.7
CNGA	**AI SSO del Vol**	**1.11**	**344**	P	Pn	16 41 57.8	+0.5
CNGN	**Cerro Negro**	**1.12**	**345**	P	Pn	16 41 58.2	+0.8
ALEN	**Leon**	**1.14**	**336**	P	Pn	16 41 57.6	0.0
ALEN	**Leon**	**1.14**	**336**	S	Sn	16 42 11.6	-0.4
BOAB	**BOACO BROADBAN**	**1.25**	**35**	P	Pn	16 41 59.3	+0.1
POLN	**AI Sur del Vol**	**1.29**	**342**	P	Pn	16 41 59.9	+0.2
POLN				S	Sn	16 42 16.5	+0.6
PKGN	**Cerro Pekin**	**1.37**	**336**	P	Pn	16 42 01.5	+0.6
PKGN				S	Sn	16 42 18.3	+0.5
LIMN	**Finca el Limon**	**1.64**	**1**	P	Pn	16 42 04.6	-0.1
RCVN	**Varillal2**	**2.16**	**5**	P	Pn	16 42 12.8	+0.9

IDC ***25*** *16:46:18.9±1.6,4.°04S×129.°69E,h0*^{km}*,mb3.8/5, mbtmp3.7/8,ML3.6/3,Error ellipse: s-maj=77.0km s-min=22.4km az=73.0*

DJA ***25*** *16:46:21.2±0.3,4.°3S±3.°×13.°0E±.°,h10*^{km}*,M4.0/11,mb4.7/1, MLv3.7/11*

NEIC ***25*** *16:46:26.3±1.1,4.°19S±0.°08×129.°75E±0.°07,h5*^{km}*±8km, mb4.3/19,Error ellipse: s-maj=12.9km s-min=9.0km az=214.0*

ISC 25 16:46:23.7±0.5,4.°16S±0.°05×129.°63E±0.°05,h36^{km}**,n45, σ1s26/49,mb4.3/11,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.46**	**143**	P	**Pn**	**16 46 31.9**	**-1.7**
BNDI				S	**Sn**	**16 46 38.7**	**-1.9**
MSAI	**Masohi**	**1.06**	**319**	P	**Pn**	**16 46 40.8**	**-1.2**
MSAI				S	**Sn**	**16 46 53.6**	**-2.0**
AAI	**Ambon**	**1.50**	**288**	P	**Pn**	**16 46 46.4**	**-1.7**
AAI				S	**Sn**	**16 47 05.0**	**-1.5**
NLAI	**Namlea**	**2.68**	**290**	P	**Pn**	**16 47 07.4**	**+3.1**
FAKI	**Fak Fak**	**2.89**	**65**		**Pn**	**16 47 08.2**	**+1.0**
FAKI	**Fak Fak**	**2.89**	**65**	P	**Pn**	**16 47 08.6**	**+1.5**
SWI	**Sorong**	**3.65**	**27**	P	**Pn**	**16 47 18.1**	**+0.4**
SANI	**Sanana**	**4.19**	**300**	P	**Pn**	**16 47 24.9**	**-0.2**
SANI				S	**Sn**	**16 48 13.8**	**+0.9**
RKPI	**Ransiki, Papua**	**5.25**	**60**	P	**Pn**	**16 47 41.4**	**+1.8**
MTN	**Manton Dam**	**8.76**	**170**	Pn	**Pn**	**16 48 29.7**	**+1.9**
KAPI	**Kappang**	**9.88**	**265**	Pn	**Pn**	**16 48 45.6**	**+2.3**
KNRA	**Kununurra**	**11.48**	**184**	Pn	**Pn**	**16 49 05.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**14.40**	**195**	Pn	**Pn**	**16 49 48.0**	**+3.0**
	0.3nm,0.3s,baz=39,slow=4.5,SNR=6.0 0.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**14.40**	**195**	P	**P**	**16 49 52.2**	**+0.8**
JAGI	**Jajag, Banyuwa**	**15.97**	**254**		**P**	**16 50 09.8**	**+0.9**
JAGI				IAmb	IAmb	16 50 34.4	
	comp=Z,36nm,1.4s						
WB0	**Warramunga Arr**	**16.20**	**164**	Pn	**Pn**	**16 50 07.2**	**-1.4**
WB0				IAmb	IAmb	16 50 23.9	
	comp=Z,7.3nm,1.2s						
WRA	**Warramunga Arr**	**16.35**	**164**	Pn	**Pn**	**16 50 10.7**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=3.8 comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**16.35**	**164**		**Pn**	**16 50 09.2**	**-1.4**
WR8	**Warramunga Arr**	**16.41**	**164**	Pn	**Pn**	**16 50 09.6**	**-1.7**
COEN	**Coen**	**16.54**	**127**	Pn	**Pn**	**16 50 11.2**	**-1.7**
PMG	**Port Moresby**	**18.17**	**108**	P	**Pn**	**16 50 32.4**	**-0.8**
PMG				IAmb	IAmb	16 50 47.5	
	comp=Z,8.0nm,0.9s						
MBWA	**Marble Bar**	**19.45**	**209**	P	**Pn**	**16 50 48.7**	**0.0**
MBWA				IAmb	IAmb	16 51 14.7	
	comp=Z,35nm,1.4s						
PSA00	**Pilbara Seismi**	**19.75**	**208**	P	**Pn**	**16 50 52.2**	**0.0**
PSA00				IAmb	IAmb	16 50 53.0	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**19.83**	**168**	P	**P**	**16 50 51.1**	**-0.3**
ASAR	**Alice Springs**	**19.83**	**168**	P	**Pn**	**16 50 52.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=346,slow=10,SNR=23 comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**19.83**	**168**	P	**P**	**16 50 51.5**	**0.0**
CTAO	**Charters Tower**	**22.65**	**136**	P	**P**	**16 51 21.6**	**-0.4**
CTAO				IAmb	IAmb	16 51 34.5	
	comp=Z,5.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.67**	**308**	P	**P**	**16 53 36.3**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=121,slow=8.3,SNR=5.8 comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.67**	**308**	P	**P**	**16 53 35.8**	**+0.1**
EVN	**Everest**	**52.14**	**310**	P	**P**	**16 55 31.7**	**+0.1**
EVN				IAmb	IAmb	16 55 33.0	
	comp=Z,6.1nm,1.4s						
HIZ	**Hauiti**	**53.44**	**136**	P	**P**	**16 55 38.3**	**-1.9**
BKZ	**Black Stump Fm**	**54.87**	**136**	P	**P**	**16 55 50.2**	**-0.5**
BKZ				IAmb	IAmb	16 55 56.1	
	comp=Z,14nm,1.1s						
SONM	**Songino Array**	**55.65**	**341**	P	**P**	**16 55 56.3**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=149,slow=7.1,SNR=2.6 comp=Z,0.5nm,0.8s						
PEA0B	**Petropavlovsk-**	**61.76**	**19**	P	**P**	**16 56 39.3**	**+0.8**
MKAR	**Makanchi Array**	**65.66**	**326**	P	**P**	**16 57 04.8**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=119,slow=7.1,SNR=6.9 comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**65.66**	**326**	P	**P**	**16 57 04.6**	**+0.2**
MAKZ	**Makanchi**	**65.84**	**326**	P	**P**	**16 57 05.8**	**+0.3**
MAKZ				IAmb	IAmb	16 57 32.6	
	comp=Z,3.2nm,1.2s						
AMKA	**Amchitka**	**69.61**	**31**	P	**P**	**16 57 29.0**	**-0.1**
KURBB	**Kurchatov Arra**	**69.91**	**328**	P	**P**	**16 57 31.2**	**+0.2**
	comp=Z,0.9nm,0.2s,baz=126,slow=5.6,SNR=7.2 comp=Z,0.9nm,0.2s						
KURK	**Kurchatov**	**69.92**	**328**	P	**P**	**16 57 31.6**	**+0.6**
KURK				IAmb	IAmb	16 58 03.4	
	comp=Z,6.2nm,0.2s						
KIWB	**Kanaga Island**	**71.70**	**32**	P	**P**	**16 57 40.9**	**-1.0**
BVAR	**Borovoye Array**	**75.48**	**328**	P	**P**	**16 58 04.4**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=107,slow=1.5,SNR=3.1 comp=Z,0.6nm,0.7s						
ABKAR	**Akbulak array**	**80.07**	**321**	P	**P**	**16 58 29.7**	**+0.1**
G18K	**Tagagawik**	**86.39**	**23**	P	**P**	**16 59 01.3**	**-0.7**
G18K				IAmb	IAmb	16 59 08.2	
	comp=Z,4.3nm,1.3s						
GHO	**Glory Hole Cre**	**89.59**	**28**	P	**P**	**16 59 16.9**	**-0.5**

NOU ***25*** *16:50:35.4,19.°73S×172.°82W,h0*^{km}*,MLv4.8/7,Tonga Islands Region*

IDC ***25*** *16:50:37.9±0.7,18.°62S×173.°65W,h0*^{km}*,mb4.2/12, mbtmp4.2/12,MS3.8/10,Error ellipse: s-maj=26.9km s-min=19.9km az=133.0*

NEIC ***25*** *16:50:39.5±1.8,18.°6S±0.°1×173.°39W±0.°10,h10*^{km}*±1km, mb5.0/51,Error ellipse: s-maj=21.0km s-min=13.5km az=149.0*

ISC 25 16:50:36.5±0.5,19.°5S±0.°1×172.°94W±0.°07,h10^{km}**,n105, σ1s54/80,mb4.8/31,MS3.9/9,1C,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.87**	**83**		**Pn**	**16 51 22.6**	**+0.3**
NIUE	**Niue**	**2.87**	**83**	P	**Pn**	**16 51 22.6**	**+0.3**
NIUE	**Niue**	**2.87**	**83**	S	**Sn**	**16 51 55.5**	**-1.4**
AFI	**Afiamalu**	**5.63**	**12**		Pn	16 51 50.8	-10
AFI	**Afiamalu**	**5.63**	**12**	P	**Pn**	**16 52 04.4**	**+4.0**

LKBA	**Tubou, Lakemba**	**5.70**	**281**	P	**Pn**	**16**	**52**	**04.2 +3.0**
TAVE	**Taveuni**	**7.17**	**291**	P	**Pn**	**16**	**52**	**23.9 +2.4**
DGTI	**Dogotuki**	**7.65**	**293**	P	**Pn**	**16**	**52**	**29.3 +1.2**
MSVF	**Nonsavu**	**8.72**	**280**	Pn	Pn	16	52	37.7 -5.1
MSVF	**Nonsavu**	**8.72**	**280**	P	**Pn**	**16**	**52**	**45.5 +2.7**
RAR	**Rarotonga**	**12.47**	**100**	Pn	Pn	16	53	36.0 +1.9
	5.4nm,0.3s,baz=245,slow=3.2,SNR=9.9							
RAR				LR	LR	16	57	47.2
	comp=Z,120nm,18.9s,baz=268,slow=32							
RAR	**Rarotonga**	**12.47**	**100**	Pn	Pn	16	53	36.2 +2.1
MARNC	**Mare, Loyalty**	**17.95**	**260**	P	**P**	**16**	**54**	**46.8 0.0**
MARNC				IAmb	IAmb	16	54	49.1
	comp=Z,244nm,1.6s							
PINNC	**Pines Island,**	**18.58**	**257**	P	**Pn**	**16**	**54**	**55.8 +1.9**
PINNC				IAmb	IAmb	16	54	56.7
	comp=Z,79nm,1.0s							
DZM	**Mont Dzumac**	**19.45**	**259**	P	**Pn**	**16**	**55**	**04.7 0.0**
	comp=Z,24nm,1.0s,baz=87,slow=19,SNR=7.9							
DZM				LR	LR	17	01	40.4
	comp=Z,389nm,18.2s,baz=112,slow=35							
URZ	**Urewera**	**20.63**	**203**	P	Pn	16	55	24.4 +6.1
	comp=Z,7.2nm,0.4s,baz=357,slow=1.1,SNR=9.0							
URZ				S	Sn	16	59	13.4 +2.3
	comp=Z,6.1nm,0.7s,baz=84,slow=16,SNR=2.6 comp=Z,7.2nm,0.4s							
TOZ	**Tahuroa Road**	**20.81**	**207**	P	Pn	16	55	26.7 +6.3
PPT	**Papeete**	**22.23**	**89**	LR	LR	17	02	12.2
	comp=Z,114nm,18.7s,baz=256,slow=30							
TCW	**Tory Channel**	**24.27**	**204**	P	P	16	56	00.5 +6.7
DSZ	**Denniston Nort**	**25.72**	**207**	P	P	16	56	15.5 +8.4
DSZ				IAmb	IAmb	16	56	19.1
	comp=Z,34nm,0.9s							
LTZ	**Lake Taylor**	**26.39**	**205**		P	16	56	21.9 +8.7
LTZ				IAmb	IAmb	16	56	41.0
	comp=Z,14nm,0.8s							
RPZ	**Rata Peaks**	**27.66**	**206**	LR	LR	17	08	25.8
	comp=Z,313nm,18.2s,baz=116,slow=38							
FOZ	**Fox Glacier**	**28.03**	**207**	P	P	16	56	36.1 +8.4
HNR	**Honiara**	**28.05**	**287**	LR	LR	17	05	57.4
	comp=Z,402nm,18.1s,baz=102,slow=34							
TAOE	**Nuku Hiva Isla**	**33.43**	**76**	P	P	16	57	19.8 +3.8
EIDS	**Eidsvold**	**33.71**	**253**	P	**P**	**16**	**57**	**17.6 -0.5**
EIDS				IAmb	IAmb	16	57	45.0
	comp=Z,37nm,2.0s							
ARMA	**Armidale**	**33.80**	**244**	P	**P**	**16**	**57**	**20.5 +1.5**
ARMA				IAmb	IAmb	16	57	21.7
	comp=Z,22nm,1.4s							
CAN	**Canberra**	**37.05**	**237**	P	**P**	**16**	**57**	**49.2 +2.4**
CAN				IAmb	IAmb	16	58	08.0
	comp=Z,90nm,2.0s							
CTA	**Charters Tower**	**38.34**	**262**	LR	LR	17	12	52.3
	comp=Z,5.5nm,18.3s,baz=75,slow=35							
CTAO	**Charters Tower**	**38.34**	**262**		**P**	**16**	**57**	**56.1 -1.8**
PMG	**Port Moresby**	**39.83**	**279**	P	**P**	**16**	**58**	**06.4 -4.0**
	comp=Z,11nm,0.8s,baz=108,slow=9.4,SNR=4.9 comp=Z,11nm,0.8s							
PMG	**Port Moresby**	**39.83**	**279**	P	**P**	**16**	**58**	**06.9 -3.4**
TOO	**Toolangi**	**40.36**	**235**	P	**P**	**16**	**58**	**16.5 +1.9**
COEN	**Coen**	**42.30**	**270**	P	**P**	**16**	**58**	**29.2 -1.6**
STKA	**Stephens Creek**	**42.52**	**244**	P	**P**	**16**	**58**	**32.1 -0.3**
	comp=Z,3.8nm,0.7s,baz=72,slow=9.3,SNR=4.8 comp=Z,3.8nm,0.7s							
INKA	**Inamanika**	**43.03**	**250**	P	**P**	**16**	**58**	**37.5 +0.9**
BBOO	**Buckleboo**	**47.26**	**243**	P	**P**	**16**	**59**	**10.8 +0.6**
WR8	**Warramunga Arr**	**49.31**	**260**		**P**	**16**	**59**	**24.6 -1.6**
WR8				IAmb	IAmb	17	00	37.4
	comp=Z,11nm,1.4s							
AS31	**Alice Springs**	**49.39**	**255**		**P**	**16**	**59**	**26.1 -0.7**
ASAR	**Alice Springs**	**49.39**	**255**	P	**P**	**16**	**59**	**26.0 -0.7**
	comp=Z,16nm,0.7s,baz=90,slow=7.9,SNR=254							
ASAR				PcP	**PcP**	**17**	**00**	**51.0 +1.8**
	comp=Z,1.4nm,0.6s,baz=98,slow=4.1,SNR=4.4 comp=Z,16nm,0.7s							
ASAR	**Alice Springs**	**49.39**	**255**		**P**	**16**	**59**	**26.3 -0.4**
WB0	**Warramunga Arr**	**49.44**	**260**		**P**	**16**	**59**	**25.8 -1.4**
WB0				IAmb	IAmb	16	59	26.9
	comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**49.46**	**260**	P	**P**	**16**	**59**	**25.7 -1.7**
	comp=Z,2.4n

SNAA	**Sanae**	**88.85**	**177**	P		P		17 03 36.7	+6.1
	comp=Z,1.1nm,0.9s,baz=256,slow=8.3,SNR=3.6								
	comp=Z,1.1nm,0.9s								
SNAA	**Sanae**	**88.85**	**177**	P		P		17 03 37.0	+6.4
SNAA				IAmb		IAmb		17 04 53.0	
	comp=Z,14nm,1.9s								
D22K	**Ayikyak River**	**89.31**	**7**	P		**P**		**17 03 32.0**	**-0.4**
D25K	**Kavik River**	**90.56**	**9**	P		**P**		**17 03 38.0**	**-0.4**
D25K				IAmb		IAmb		17 05 01.7	
	comp=Z,9.4nm,1.6s								
F31M	**Tsiigehtchic**	**91.34**	**14**	P		**P**		**17 03 41.4**	**-0.5**
YKAW3	**Yellowknife Wh**	**93.67**	**23**	P		**P**		**17 03 53.3**	**+0.5**
YKAW3				IAmb		IAmb		17 03 56.2	
	comp=Z,14nm,1.4s								
CMAR	**Chiang Mai Arr**	**94.29**	**288**	P		**P**		**17 03 57.5**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=99,slow=3.8,SNR=7.6								
	comp=Z,0.7nm,0.8s								
BVAR	**Borovoye Array**	**121.32**	**321**	PKP		**PKiKP**		**17 09 30.5**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=97,slow=0.7,SNR=5.6								
AKASG	**Malin Array Be**	**144.22**	**336**	PKP		**PKPdf**		**17 10 11.8**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=18,slow=0.3,SNR=6.0								
BRTR	**Keskin Array B**	**149.50**	**317**	PKPbc		**PKiKP**		**17 10 27.4**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=113,slow=3.3,SNR=9.4								
GERES	**GERESS Array B**	**150.20**	**351**	PKPbc		**PKiKP**		**17 10 29.5**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=26,slow=3.7,SNR=5.9								
CONA	**Conrad Observa**	**150.72**	**348**	*e*PKiKP		**PKPab**		**17 10 32.9**	**-3.0**
	comp=Z,6.9nm,1.5s								
RONA	**Rosalia, Austr**	**150.85**	**347**	*e*PKP		**PKiKP**		**17 10 31.1**	**+1.1**
	comp=Z,3.7nm,0.8s								
ARSA	**Arzberg**	**151.44**	**348**	*e*PKP		**PKiKP**		**17 10 32.6**	**+1.4**
	comp=Z,3.4nm,0.9s								
KBA	**Koelnbreinsper**	**151.98**	**351**	*e*PKP		**PKiKP**		**17 10 34.0**	**+1.5**
	comp=Z,3.8nm,0.8s								
MOTA	**Moosalm**	**152.00**	**354**	*e*PKP		**PKiKP**		**17 10 33.8**	**+1.3**
	comp=Z,6.2nm,1.3s								
WTTA	**Wattenberg**	**152.02**	**353**	*i* PKP		**PKiKP**		**17 10 33.9**	**+1.3**
	comp=Z,3.8nm,0.6s								
SOKA	**Soboth**	**152.08**	**348**	*e*PKP		**PKiKP**		**17 10 33.7**	**+1.1**
	comp=Z,4.4nm,1.1s								
DAVA	**Damuels**	**152.15**	**356**	*i* PKP		**PKPbc**		**17 10 28.9**	**-3.6**
DAVA									
	comp=Z,5.3nm,1.1s								
				*e*PKP		**sPKPbc**		**17 10 34.0**	**+1.0**
ABTA	**Abfaltersbach**	**152.42**	**352**	*e*PKP		**PKiKP**		**17 10 34.5**	**+1.1**
	comp=Z,11nm,1.1s								

*IDC **25** 17:06:44.9±0.7, 1.°73N×126.°42E, h0km, mb4.0/11, mbtmp4.0/12, ML3.8/1, Error ellipse: s-maj=62.0km s-min=13.8km az=70.0*
*NEIC **25** 17:06:49.6±1.8, 1.°73N±0.°09×126.°48E±0.°06, h29km±6km, mb4.4/19, Error ellipse: s-maj=13.6km s-min=8.2km az=202.0*
*DJA **25** 17:06:49.2±0.3, 2.°N±3.°×12.°6E±.°, h10km, M4.1/15, mB4.8/4, mb4.3/9, MLv4.0/15, Mw(mB)4.0/4*
ISC 25 17:06:49.5±0.6, 1.°76N±0.°06×126.°54E±0.°08, h35km, n48, σ1§18/48, mb4.1/18, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.28**	**140**		**Pn**	**17 07 11.8**	**+0.8**
TNTI	**Ternate**	**1.28**	**140**	P	**Pn**	**17 07 12.9**	**+1.9**
SGSI	**Sangihe**	**2.16**	**332**	P	**Pn**	**17 07 24.2**	**+1.1**
KMSI	**Cibinong**	**2.82**	**245**	P	**Pn**	**17 07 32.9**	**+0.8**
GTOI	**Gorontalo**	**3.70**	**252**	P	**Pn**	**17 07 45.8**	**+1.5**
SANI	**Sanana**	**3.83**	**188**	P	**Pn**	**17 07 46.8**	**+0.8**
LUWI	**Luwuk**	**4.69**	**234**		**Pn**	**17 07 58.3**	**+0.5**
LUWI	**Luwuk**	**4.69**	**234**	P	**Pn**	**17 07 59.8**	**+2.0**
MRSI	**Marisa**	**4.77**	**255**	P	**Pn**	**17 08 00.0**	**+1.0**
NLAI	**Namlea**	**5.00**	**174**	P	**Pn**	**17 08 03.4**	**+1.3**
	0.1nm678nm20nm,0.7s						
APSI	**Ampana**	**5.56**	**242**	P	**Pn**	**17 08 11.7**	**+1.8**
TOLI2	**Tolitoli**	**5.79**	**264**		**Pn**	**17 08 12.2**	**-0.9**
MPSI	**Mapaga**	**6.79**	**258**	P	**Pn**	**17 08 27.2**	**+0.5**
	0.1nm2µm14nm,0.7s						
TTSI	**Tana Toraja**	**8.24**	**235**	P	**Pn**	**17 08 46.1**	**-0.6**
	378nm18nm,0.7s						
SPSI	**Sidrap Palu**	**8.84**	**230**	P	**Pn**	**17 08 55.8**	**+0.9**
	7.1nm,0.5s						
BNSI	**Bone**	**8.88**	**226**	P	**Pn**	**17 08 54.8**	**-0.6**
	8.4nm,0.7s						
BSSI	**Bau Bau, Buton**	**9.91**	**218**	P	**Pn**	**17 09 11.6**	**+2.1**
SBUM	**Sibu**	**14.33**	**273**		**Pn**	**17 10 08.4**	**-1.6**
MTN	**Manton Dam**	**15.21**	**163**	Pn	**Pn**	**17 10 21.3**	**-0.5**
MTN				IAmb	IAmb	17 11 04.5	
	comp=Z,19nm,1.5s						
KNRA	**Kununurra**	**17.46**	**173**	Pn	**Pn**	**17 10 49.2**	**-1.3**
KNRA				IAmb	IAmb	17 10 54.1	
	comp=Z,19nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.75**	**183**	P	**P**	**17 11 15.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=0.5,slow=11,SNR=9.7						
	comp=Z,1.1nm,0.4s						
TPUB	**Ta-pu**	**22.17**	**345**	P	**P**	**17 11 41.1**	**-1.5**
SSLB	**Suanglung**	**22.55**	**347**	P	**P**	**17 11 48.0**	**+1.2**
COEN	**Coen**	**22.71**	**134**	P	**P**	**17 11 47.5**	**-1.0**
COEN				IAmb	IAmb	17 11 59.8	
	comp=Z,5.5nm,1.1s						
WB0	**Warramunga Arr**	**22.74**	**161**		**P**	**17 11 48.3**	**-0.5**
WB0				IAmb	IAmb	17 12 04.9	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**17 11 50.0**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=339,slow=11,SNR=27						
WRA				PcP	**PcP**	**17 15 42.0**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=334,slow=2.1,SNR=1.6						
	comp=Z,3.7nm,0.5s						
WRA	**Warramunga Arr**	**22.89**	**161**	IAmb	IAmb	17 11 58.3	
	comp=Z,0.7nm,1.4s						
WR8	**Warramunga Arr**	**22.95**	**160**		**P**	**17 11 50.7**	**-0.2**
WR8				IAmb	IAmb	17 12 00.3	
	comp=Z,4.9nm,0.7s						
AS31	**Alice Springs**	**26.27**	**165**	P	**P**	**17 12 21.9**	**+0.1**
ASAR	**Alice Springs**	**26.27**	**165**	P	**P**	**17 12 22.4**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=341,slow=7.5,SNR=57						
ASAR				PcP	**PcP**	**17 15 49.2**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=348,slow=2.4,SNR=10.0						
	comp=Z,1.1nm,0.4s						
JNU	**Nakatsue**	**31.46**	**7**	P	**P**	**17 13 04.8**	**-3.1**
MORW	**Morawa**	**32.26**	**197**	P	**P**	**17 13 13.3**	**-1.6**
MORW				IAmb	IAmb	17 13 31.8	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**35.54**	**166**	P	**P**	**17 13 43.5**	**+0.1**
BBOO				IAmb	IAmb	17 13 53.1	
	comp=Z,21nm,1.1s						
STKA	**Stephens Creek**	**36.38**	**158**	P	**P**	**17 13 51.1**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=318,slow=7.5,SNR=3.3						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**49.10**	**342**	P	**P**	**17 15 35.8**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=161,slow=6.1,SNR=1.9						
SONM				PcP	**PcP**	**17 16 58.0**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=145,slow=5.3,SNR=2.6						
	comp=Z,0.2nm,0.3s						
MKAR	**Makanchi Array**	**59.06**	**326**	P	**P**	**17 16 46.6**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=119,slow=7.6,SNR=32						
	comp=Z,1.0nm,0.4s						
MAKZ	**Makanchi**	**59.25**	**326**	P	**P**	**17 16 47.5**	**0.0**
MAKZ				IAmb	IAmb	17 17 10.3	
	comp=Z,3.6nm,1.1s						
KDJ	**Kajisay**	**59.69**	**319**	P	**P**	**17 16 51.6**	**+0.8**
ZALV	**Zalesovo Beam**	**62.25**	**334**	P	**P**	**17 17 07.6**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=138,slow=8.8,SNR=3.2						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**63.29**	**328**	P	**P**	**17 17 15.3**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=129,slow=6.1,SNR=11						
	comp=Z,1.2nm,0.5s						
KURK	**Kurchatov**	**63.30**	**328**	P	**P**	**17 17 15.2**	**+0.4**
KURK				IAmb	IAmb	17 17 17.9	
	comp=Z,3.0nm,0.5s						
BVAR	**Borovoye Array**	**68.86**	**327**	P	**P**	**17 17 51.0**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=158,slow=9.1,SNR=6.5						
	comp=Z,0.7nm,0.5s						
AB31	**Akbulak array**	**73.55**	**321**	P	**P**	**17 18 18.2**	**-0.7**
ARTI	**Arti**	**76.57**	**328**	P	**P**	**17 18 36.4**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=149,slow=5.0,SNR=4.1						
	comp=Z,2.3nm,0.7s						
ARTI	**Arti**	**76.57**	**328**	IAmb	IAmb	17 18 37.6	
	comp=Z,3.8nm,0.5s						
VNDA	**Vanda**	**81.51**	**173**	P	**P**	**17 19 03.6**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=325,slow=7.9,SNR=7.8						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**81.51**	**173**	IAmb	IAmb	17 19 05.3	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**86.95**	**25**	P	**P**	**17 19 31.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=246,slow=4.8,SNR=8.3						
	comp=Z,0.3nm,0.5s						

*TXNET **25** 17:22:47.0, 31.°7N×0.°7×10.°4W±.°, h6km±1km, ML3.1/10, Error ellipse: s-maj=1.6km s-min=0.9km az=66.2, final*
NEIC 25 17:22:47.0±0.9, 31.°686N±0.°010×104.°31W±0.°01, h5km±1km, mb_Lg3.0/56, ML3.1/75, 6C, Error ellipse: s-maj=2.7km s-min=1.9km az=304.0, Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPB09	**Culberson Coun**	**0.09**	**6**	⇑P	Pg	17 22 49.9	+0.9
TPB09				S	Sg	17 22 51.2	+0.9
TPB11	**China Draw**	**0.34**	**44**	⇑P	Pg	17 22 54.2	+0.6
TPB11				S	Sg	17 22 58.8	+0.6
TPB13	**Reeves - Culbe**	**0.42**	**108**	P	Pb	17 22 56.4	-0.6
TPB13				S	Sg	17 23 01.6	+1.1
PECS	**Pecos**	**0.49**	**129**		Pg	17 22 57.1	+0.6
PECS	**Pecos**	**0.49**	**129**	P	Pg	17 22 57.2	+0.7
PECS				S	Sg	17 23 03.8	+0.9
GDL2	**Guadalupe Moun**	**0.52**	**355**		Pg	17 22 57.1	+0.2
GDL2	**Guadalupe Moun**	**0.52**	**355**	P	Pg	17 22 57.5	+0.6
TPB07	**Mentone**	**0.56**	**101**	P	Pb	17 22 58.8	-0.5
TPB07				S	Sb	17 23 06.9	-0.7
TPB12	**Southwest of T**	**0.56**	**147**	P	Pg	17 22 58.4	+0.7
TPB12				S	Sg	17 23 05.2	+0.1
TPB10	**Southeast of T**	**0.62**	**130**	P	Pb	17 22 59.7	-0.7
TPB10				S	Sg	17 23 08.2	+1.1
CLNB	**Carlsbad**	**0.68**	**32**		Pg	17 23 00.4	+0.3
CLNB	**Carlsbad**	**0.68**	**32**	P	Pg	17 23 00.7	+0.6
CLNB				S	Sb	17 23 10.3	-1.0
CLNB	**Carlsbad**	**0.68**	**32**	P	Pg	17 23 00.6	+0.4
PCOS	**Crockett Middl**	**0.74**	**112**		Pb	17 23 02.3	0.0
PCOS	**Crockett Middl**	**0.74**	**112**	P	Pb	17 23 02.3	0.0
PCOS				S	Sg	17 23 11.6	+0.8
LWM1	**Layne Water Mi**	**0.74**	**128**	⇑P	Pb	17 23 01.9	-0.4
LWM1				S	Sb	17 23 12.0	-0.8
LWM2	**Layne Water Mi**	**0.75**	**124**	P	Pb	17 23 02.1	-0.4
LWM2				S	Sb	17 23 12.3	-0.8
CLN7	**Carlsbad 7**	**0.84**	**30**		Pg	17 23 03.1	-0.1
TPB01	**Permian Basin**	**0.87**	**148**	P	Pg	17 23 03.5	-0.2
TPB01				S	Sg	17 23 15.2	+0.3
TPB03	**Saragosa**	**0.91**	**131**	P	Pb	17 23 04.9	-0.4
TPB03				S	Sg	17 23 16.8	+0.6
MNTX	**Cornudas Mount**	**0.91**	**271**		Pg	17 23 04.5	+0.1
MNTX	**Cornudas Mount**	**0.91**	**271**	P	Pg	17 23 04.8	+0.3
MNTX				S	Sb	17 23 17.3	-0.5
HTMS	**Hat Mesa**	**0.97**	**36**		Pg	17 23 05.1	-0.5
TPB04	**Verhalen**	**1.02**	**119**	P	Pg	17 23 06.8	+0.3
TPB16	**Coyonosa**	**1.06**	**121**	P	Pg	17 23 07.6	+0.2
TPB16				S	Sb	17 23 21.9	-0.3
VHRN	**Van Horn**	**1.07**	**213**		Pg	17 23 07.1	-0.3
VHRN				IAML		17 23 30.4	
	390nm,0.5s						
VHRN	**Van Horn**	**1.07**	**213**	⇑P	Pg	17 23 07.4	0.0
VHRN				S	Sb	17 23 22.7	+0.4
TPB19	**West of Imperi**	**1.10**	**110**	P	Pb	17 23 08.5	-0.1
TPB05	**Hovey Rd**	**1.14**	**132**	⇑P	Pg	17 23 08.8	0.0
TPB05				S	Sb	17 23 24.0	-0.4
MNHN	**Monahans**	**1.37**	**104**		Pn	17 23 12.3	-0.5
CPRX	**Cap Rock**	**1.39**	**16**		Pn	17 23 12.8	-0.4
ALPN	**Alpine**	**1.43**	**156**		Pn	17 23 13.1	-0.6
ALPN	**Alpine**	**1.43**	**156**	⇑P	Pn	17 23 13.1	-0.6
ALPN				S	Sb	17 23 32.6	-0.1
ODSA	**Odessa**	**1.56**	**73**		Pn	17 23 15.1	-0.4
ODSA	**Odessa**	**1.56**	**73**	P	Pn	17 23 15.8	+0.4
EPT	**El Paso**	**1.87**	**273**		Pn	17 23 20.4	+0.7
EPT	**El Paso**	**1.87**	**273**	P	Pn	17 23 20.4	+0.7
SAND	**Sanderson**	**2.55**	**132**	IAmb_Lg		17 24 14.6	
	comp=Z,60nm,0.8s						
SAND	**Sanderson**	**2.55**	**132**	P	Pb	17 23 31.5	-1.8
SGCY	**Sterling City**	**2.72**	**84**	IAmb_Lg		17 24 17.5	
	comp=Z,52nm,0.9s						
POST	**Post**	**2.75**	**59**	IAmb_Lg		17 24 18.6	
	comp=Z,69nm,0.8s						
OZNA	**Ozona**	**2.83**	**105**	IAmb_Lg		17 24 19.0	
	comp=Z,59nm,1.2s						
121A	**Cookes Peak, D**	**3.06**	**287**	IAML		17 24 27.7	
121A	comp=N,59nm,0.9s			IAML		17 24 35.2	
	comp=E,48nm,0.6s						
Y22A	**Socorro**	**3.17**	**316**	IAML		17 24 27.4	
Y22A	comp=E,72nm,0.4s			IAML		17 24 28.2	
	comp=N,65nm,0.5s						
SN07	**Snyder 07**	**3.21**	**63**	IAmb_Lg		17 24 29.5	
	comp=Z,44nm,0.8s						
DKNS	**Dickens**	**3.47**	**54**	IAmb_Lg		17 24 39.1	
	comp=Z,35nm,0.8s						
ABQ	**Albuquerque**	**3.71**	**332**	IAML		17 24 42.0	
	comp=Z,41nm,0.7s						
ABQ				IAmb_Lg		17 24 44.3	
	comp=Z,28nm,1.0s						
ABQ				IAML		17 24 45.6	
	comp=Z,32nm,0.7s						
ANMO	**Albuquerque**	**3.71**	**332**	IAML		17 24 41.7	
	comp=Z,19nm,0.7s						
ANMO				IAML		17 24 42.4	
	comp=Z,22nm,0.6s						
ANMO				IAmb_Lg		17 24 42.5	
	comp=Z,18nm,0.7s						
TASM	**ASL Pad, Albuq**	**3.71**	**332**	IAML		17 24 42.6	
	comp=Z,40nm,0.6s						
TASM				IAML		17 24 45.7	
	comp=Z,31nm,0.8s						
TASM	**ASL Pad, Albuq**	**3.71**	**332**	IAML		17 24 42.5	
	comp=Z,40nm,0.6s						
TASM				IAML		17 24 45.7	
	comp=Z,36nm,0.9s						
TASM				IAmb_Lg		17 24 49.9	
	comp=Z,20nm,0.9s						
TASM	**ASL Pad, Albuq**	**3.71**	**332**	IAML		17 24 43.7	
	comp=Z,36nm,0.7s						
TASM				IAmb_Lg		17 24 44.1	
	comp=Z,18nm,0.7s						
TASM				IAML		17 24 45.7	
	comp=Z,37nm,0.8s						
APMT	**Aspermont**	**3.90**	**64**	IAmb_Lg		17 24 50.3	
	comp=Z,33nm,1.0s						
JCT	**Junction City**	**4.05**	**106**	IAmb_Lg		17 24 59.4	
	comp=Z,30nm,0.8s						
ABTX	**Abilene, Hawle**	**4.07**	**75**	IAmb_Lg		17 25 07.0	
	comp=Z,28nm,0.9s						
BRDY	**Brady**	**4.56**	**94**	IAmb_Lg		17 25 15.8	
	comp=Z,20nm,0.9s						
RTBA	**Rita Blanca**	**4.92**	**15**	IAmb_Lg		17 25 25.4	
	comp=Z,25nm,0.8s						
PLPT	**Palo Pinto**	**5.20**	**76**	IAmb_Lg		17 25 33.9	
	comp=Z,22nm,1.1s						
WMOK	**Wichita Mounta**	**5.54**	**55**	IAmb_Lg		17 25 55.5	
	comp=Z,14nm,0.8s						
435B	**Jarrell**	**5.83**	**97**	IAmb_Lg		17 26 06.6	
	comp=Z,29nm,0.9s						
EF04	**Eagle Ford 04**	**6.15**	**112**	IAmb_Lg		17 26 15.9	
	comp=Z,27nm,0.8s						

*SNET **25** 17:36:01.6±0.6, 13.°09N×89.°29W, h34km, ML3.3*
CATAC 25 17:36:02.0±0.6, 13.°N±4.°×8.°9W±.°, h36km±3km, M3.2/12, MLv3.2/12, Error ellipse: s-maj=9.0km s-min=4.5km az=25.5, confirmed, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.35**	**350**	S	Sn	17 36 19.2	+2.2
LALI	**Alcalda de L**	**0.35**	**350**	P	Pn	17 36 11.7	+1.3
LOMA	**Loma Larga**	**0.50**	**9**	S	Sn	17 36 22.6	+2.3
LOMA	**Loma Larga**	**0.50**	**9**	P	Pn	17 36 13.5	+0.7
LFRS	**El Faro**	**0.51**	**22**	*i* P	Pn	17 36 13.7	+0.8
JAYA	**Jayaque - finc**	**0.54**	**340**	P	Pn	17 36 13.9	+0.5
JAYA	**Jayaque - finc**	**0.54**	**340**	S	Sn	17 36 23.6	+2.3
PMON	**Piamonte**	**0.57**	**354**	S	Sn	17 36 24.3	+2.4
PMON	**Piamonte**	**0.57**	**354**	P	Pn	17 36 14.4	+0.6
UEES	**Universidad Ev**	**0.57**	**2**	*e*P	Pn	17 36 14.5	+0.7
UEES				*e*S	Sn	17 36 24.1	+2.2
UEES	**Universidad Ev**	**0.57**	**2**	P	Pn	17 36 14.6	+0.8
IGN	**Direccin Gen**	**0.57**	**8**	S	Sn	17 36 24.6	+2.6
UDBS	**Universidad Do**	**0.58**	**10**	S	Sn	17 36 24.4	+2.3
BOQS	**Boqueron**	**0.59**	**358**	*e*P	Pn	17 36 14.8	+0.6
TECO	**Alcaldia de Te**	**0.61**	**50**	P	Pn	17 36 14.5	+0.3
TECO	**Alcaldia de Te**	**0.61**	**50**	S	Sn	17 36 24.3	+1.6
SNVI	**San Vicente**	**0.62**	**41**	*e*P	Pn	17 36 14.8	+0.3
PAVA	**Las Pavas**	**0.65**	**29**	P	Pn	17 36 15.5	+0.6
PAVA	**Las Pavas**	**0.65**	**29**	S	Sn	17 36 25.9	+2.1
CEDA	**San Andres**	**0.67**	**348**	S	Sn	17 36 26.2	+1.9
UESV	**Universidad de**	**0.67**	**43**	P	Pn	17 36 15.5	+0.5
UESV	**Universidad de**	**0.67**	**43**	S	Sn	17 36 26.1	+1.8
SCLA	**Alcaldia de Sa**	**0.76**	**43**	P	Pn	17 36 16.8	+0.6
CEVE	**Cerro Verde**	**0.77**	**332**	*e*P	Pn	17 36 17.1	+0.5
CEVE				*e*S	Sn	17 36 29.0	+2.0
CEVE	**Cerro Verde**	**0.77**	**332**	P	Pn	17 36 17.3	+0.8
SBLS	**San Blas**	**0.78**	**333**	*e*P	Pn	17 36 17.3	+0.6
UNIC	**Universidad Ca**	**0.88**	**341**	S	Sn	17 36 30.9	+1.3
NUBE	**Las Nubes**	**0.91**	**326**	P	Pn	17 36 18.7	+0.3
NUBE	**Las Nubes**	**0.91**	**326**	S	Sn	17 36 31.3	+0.9
PACA	**Pacayal**	**0.96**	**70**	*e*P	Pn	17 36 20.1	+1.0
PACA				*e*S	Sn	17 36 34.1	+2.5
PACA	**Pacayal**	**0.96**	**70**	P	Pn	17 36 20.1	+1.0
FAME	**Alcaldia de Sa**	**1.01**	**313**	S	Sn	17 36 33.0	+0.3
LLGN	**La Laguna**	**1.06**	**17**	P	Pn	17 36 20.1	-0.3
MTO3	**Montecristo**	**1.25**	**355**	P	Pn	17 36 22.9	-0.2
MTO3	**Montecristo**	**1.25**	**355**	S	Sn	17 36 38.8	-0.1
ESQI	**Esquipulas**	**1.41**	**357**	S	Sn	17 36 43.3	+0.7

*IDC **25** 17:38:41.7±2.1, 1.°84N×91.°13E, h0km, mb3.9/5, mbtmp3.9/8, ML3.9/3, MS3.5/3, Error ellipse: s-maj=48.6km s-min=26.4km az=38.0*
ISC 25 17:38:42.7±1.5, 1.°9N±0.°2×91.°0E±0.°1, h10km, n13, σ1§68/9, mb3.9/5, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.93**	**83**	Pn	**Pn**	**17 40 37.3**	**-1.0**
	2.0nm,0.3s,baz=243,slow=4.5,SNR=2.4						
PSI				Sn	Sn	17 41 51.5	-17
	1.0nm,0.3s,baz=292,slow=5.4,SNR=1.3						
PSI				LR	LR	17 43 29.3	
	comp=Z,129nm,21.3s,baz=236,slow=37						
	5.9nm,0.4s						
PALK	**Pallekele**	**11.62**	**298**	Pn	**Pn**	**17 41 30.4**	**+1.6**
	1.3nm,0.3s,baz=118,slow=14,SNR=13						
PALK				Sn	**Sn**	**17 43 35.4**	**-3.3**
	0.7nm,0.3s,baz=180,slow=20,SNR=1.9						
	3.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**18.21**	**25**	P	**Pn**	**17 42 55.5**	**-0.4**
	0.1nm,0.3s,baz=220,slow=12,SNR=6.6						
	0.5nm,0.8s						
H08S2	**Diego Garcia H**	**20.78**	**243**	T	T	18 05 08.2	
	baz=65,slow=76,SNR=6.9						
H08S3	**Diego Garcia H**	**20.78**	**243**	T	T	18 05 10.9	
	baz=65,slow=76,SNR=6.0						
H08S1	**Diego Garcia H**	**20.80**	**243**	T	T	18 05 09.3	
	baz=65,slow=76,SNR=7.1						
MKAR	**Makanchi Array**	**45.39**	**352**	P	**P**	**17 47 02.0**	**+0.6**
	0.9nm,0.8s,baz=163,slow=8.9,SNR=5.9						
	0.9nm,0.8s						
SONM	**Songino Array**	**47.68**	**14**	P	**P**	**17 47 20.0**	**+0.5**
	0.5nm,0.5s,baz=201,slow=8.2,SNR=4.5						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**47.68**	**119**	P	**P**	**17 47 19.5**	**-0.3**
	0.5nm,0.8s,baz=294,slow=7.9,SNR=2.8						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**49.72**	**350**	P	**P**	**17 47 36.0**	**+1.0**
	3.5nm,0.2s,baz=174,slow=7.0,SNR=4.9						
	3.5nm,0.2s						
ZALV	**Zalesovo Beam**	**52.16**	**355**	P	**P**	**17 47 54.2**	**+0.9**
	0.6nm,0.4s,baz=188,slow=7.9,SNR=5.2						
	0.6nm,0.4s						
STKA	**Stephens Creek**	**58.45**	**130**	LR	LR	18 12 29.7	
	comp=Z,80nm,21.9s,baz=32,slow=35						
TIXI	**Tiksi**	**73.69**	**12**	LR	LR	18 24 22.3	
	comp=Z,44nm,20.2s,baz=7.5,slow=37						

IDC 25 17:59:50.1±285.0, 63.°09N×42.°44E, h0km, Error ellipse: s-maj=135.8km s-min=101.1km az=6.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**6.90**	**205**	I	I	18 38 40.0	
	baz=20,slow=341,SNR=1.3						
I37NO	**I37NO**	**11.32**	**312**	I	I	19 08 20.0	
	baz=109,slow=329,SNR=1.6						
I31KZ	**AKTYUBINSK INF**	**15.26**	**139**	I	I	19 30 40.0	
	baz=334,slow=328,SNR=1.4						
I46RU	**ZALESOVO INFRA**	**23.52**	**93**	I	I	20 25 22.1	
	baz=311,slow=336,SNR=4.1						
**

AAK	**Ala-Archa**	**2.94**	**51**	⇑Pn		**Pb**	**18 03 44.6**	**+1.0**
	0.8nm,0.5s							
AAK				⇓Sn		**Sb**	**18 04 21.5**	**+1.7**
	1.8nm,0.5s							
AAK	**Ala-Archa**	**2.94**	**51**	⇑*i*P		**Pn**	**18 03 38.1**	**0.0**
AAK				⇑*i*S		**Sn**	**18 04 13.1**	**-0.7**
KBK	**Karagaybulak**	**3.22**	**55**	⇓*i*P		**Pn**	**18 03 41.9**	**-0.1**
KBK				⇓*i*S		**Sn**	**18 04 19.8**	**-1.0**
JNKS	**Jany-Kuch**	**3.24**	**85**	⇑*i*P		**Pn**	**18 03 42.8**	**+0.5**
JNKS				⇑*i*S		**Sn**	**18 04 21.3**	**-0.1**
CHMS	**Chumysh**	**3.31**	**48**	Pg		Pn	18 03 27.7	-15
CHMS	68nm,0.2s			Lg		Lg	18 03 55.0	
	582nm,0.3s							
USP	**Ospenovka**	**3.35**	**43**	⇑*i*P		**Pn**	**18 03 43.7**	**0.0**
USP				⇑*i*S		**Sn**	**18 04 23.1**	**-0.8**
TKM2	**Tokmak 2**	**3.77**	**55**	⇑*e*P		**Pn**	**18 03 49.5**	**-0.1**
TKM2				⇑*i*S		**Sn**	**18 04 32.5**	**-1.8**
DGS	**Degeres**	**4.05**	**52**	Pg		**Pb**	**18 04 03.3**	**+0.7**
	1.1nm,0.3s							
DGS				Lg		Lg	18 04 55.7	
	6.1nm,0.6s							
KST	**Kastek**	**4.06**	**56**	Pg		**Pb**	**18 04 03.6**	**+0.9**
	1.1nm,0.3s							
KST				Lg		Lg	18 04 56.2	
	7.2nm,0.5s							
KST	**Kastek**	**4.06**	**56**	*e*P		**Pb**	**18 04 03.6**	**+0.9**
	1.1nm,0.3s							
KST				*e*S		**Sb**	**18 04 56.2**	**+4.1**
	7.2nm,0.5s							
KRBS	**Karabastau**	**4.27**	**47**	Pg		**Pb**	**18 04 07.5**	**+1.3**
	0.9nm,0.4s							
KRBS				Lg		Lg	18 05 03.0	
	5.7nm,0.7s							

IDC ***25*** *18:40:13.9±4.2,20˚.30S×177˚.98W,h522km±45km,mb3.2/8, mbtmp4.0/9,Error ellipse: s-maj=24.5km s-min=16.2km az=118.0*

ISC 25 18:40:15.0±0.7,20˚.3S±0˚.1×178˚.0W±0˚.2,h534km,n15, σ0§78/16,mb3.6/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.41**	**192**	P	**P**	**18 43 57.3**	**+0.1**
	2.7nm,0.3s,baz=257,slow=4.1,SNR=7.4						
URZ				S	**S**	**18 46 58.3**	**+0.2**
	7.1nm,0.9s,baz=12,slow=9.7,SNR=2.1						
ASAR	**Alice Springs**	**44.58**	**257**	P	**P**	**18 47 39.6**	**-0.3**
	0.9nm,0.5s,baz=97,slow=7.4,SNR=26						
ASAR				PcP	**PcP**	**18 49 11.2**	**-0.3**
	0.4nm,0.6s,baz=105,slow=4.1,SNR=6.1						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	**44.65**	**262**	P	**P**	**18 47 39.3**	**-1.1**
	0.4nm,0.4s,baz=97,slow=8.5,SNR=7.7						
	0.4nm,0.4s						
PETK	**Petropavlovsk-**	**76.06**	**345**	P	**P**	**18 51 07.8**	**+0.4**
	3.3nm,0.8s,baz=149,slow=3.1,SNR=1.7						
	3.3nm,0.8s						
NVAR	**Mina Array Bea**	**80.86**	**43**	P	**P**	**18 51 33.2**	**-0.4**
	0.9nm,0.6s,baz=230,slow=9.3,SNR=3.6						
	0.9nm,0.6s						
TXAR	**Lajitas Array**	**86.93**	**57**	P	**P**	**18 52 04.5**	**+0.8**
	0.6nm,0.6s,baz=234,slow=6.7,SNR=8.9						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**88.10**	**13**	P	**P**	**18 52 07.5**	**-0.7**
	0.6nm,0.6s,baz=217,slow=5.8,SNR=9.5						
	0.6nm,0.6s						
PDAR	**Pinedale Array**	**88.79**	**43**	P	**P**	**18 52 11.8**	**-0.4**
	0.5nm,0.6s,baz=244,slow=3.2,SNR=4.9						
	0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**90.06**	**290**	P	**P**	**18 52 20.4**	**+2.0**
	0.6nm,0.7s,baz=122,slow=3.1,SNR=5.8						
	0.6nm,0.7s						
BVAR	**Borovoye Array**	**118.92**	**320**	PKP	**PKPdf**	**18 58 01.8**	**-0.8**
	0.5nm,0.4s,baz=85,slow=1.8,SNR=5.6						
AKASG	**Malin Array Be**	**142.83**	**331**	PKhKP	PKPpre	18 58 44.4	
	3.2nm,0.6s,baz=43,slow=4.1,SNR=16						
EKA	**Eskdalemuir Ar**	**144.78**	**5**	PKP	**PKPdf**	**18 58 50.6**	**-0.2**
	1.1nm,0.6s,baz=350,slow=2.5,SNR=2.3						
BRTR	**Keskin Array B**	**146.70**	**313**	PKPbc	**PKPbc**	**18 58 57.1**	**-0.3**
	1.0nm,0.7s,baz=107,slow=4.1,SNR=4.9						
MMAI	**Mount Meron Ar**	**147.72**	**300**	PKPbc	**PKPbc**	**18 58 60.0**	**-0.2**
	1.1nm,0.5s,baz=68,slow=6.6,SNR=1.9						
GERES	**GERESS Array B**	**149.99**	**344**	PKPbc	**PKPbc**	**18 59 05.2**	**0.0**
	0.3nm,0.6s,baz=35,slow=3.6,SNR=3.4						

SOME ***25*** *18:54:29.0,42˚.35N×81˚.67E,h10km*
NNC ***25*** *18:54:31.1±2.1,42˚.29N×81˚.55E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=16.0km s-min=8.8km az=160.0*

ISC 25 18:54:27.7±2.7,42˚.4N±0˚.1×81˚.77E±0˚.09,h10km,n15, σ1§98/23,4C-5D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.84**	**294**	P	**Pn**	**18 54 58.2**	**-1.3**
	12nm,0.2s						
SHLS				S	**Sn**	**18 55 20.1**	**-2.9**
	27nm,0.3s						
SHLS	**Shalkode**	**1.84**	**294**	*e*P	**Pn**	**18 54 58.2**	**-1.3**
	12nm,0.2s						
SHLS				*e*S	**Sn**	**18 55 19.1**	**-3.9**
	27nm,0.3s						
PDGK	**Podgornoye**	**1.90**	**299**	⇓P	**Pb**	**18 55 03.6**	**+1.1**
	6.2nm,0.5s						
PDGK				⇓S	**Sg**	**18 55 29.7**	**+1.0**
	41nm,0.8s						
UZB	**Uzynbulak**	**2.14**	**290**	Pg	**Pb**	**18 55 08.1**	**+1.4**
	6.6nm,0.2s						
UZB				Lg	Lg	18 55 36.3	
	12nm,0.2s						
UZB	**Uzynbulak**	**2.14**	**290**	*e*P	**Pb**	**18 55 08.1**	**+1.4**
	6.6nm,0.2s						
UZB				*e*S	**Sg**	**18 55 36.3**	**-0.3**
	12nm,0.2s						
KPKS	**Kokpek**	**2.49**	**296**	Pg	**Pb**	**18 55 13.9**	**+1.3**
	2.9nm,0.2s						
KPKS				Lg	Lg	18 55 46.2	
	28nm,0.2s						
SATY	**Saty**	**2.55**	**285**	Pg	**Pb**	**18 55 15.3**	**+1.6**
	4.6nm,0.3s						
SATY				Lg	Lg	18 55 48.6	
	15nm,0.3s						
KNOS	**Konyrlen**	**2.70**	**316**	Pg	**Pb**	**18 55 19.0**	**+2.9**
	2.6nm,0.2s						
KNOS				Lg	Lg	18 55 55.0	
	23nm,0.4s						
BLB	**Baldybastay**	**2.92**	**306**	Pg	**Pb**	**18 55 22.4**	**+2.4**
	2.6nm,0.1s						
BLB				Lg	Lg	18 56 00.7	
	18nm,0.5s						
KAPS	**Kapalarasan**	**3.34**	**329**	Pg	**Pb**	**18 55 28.5**	**+1.4**
	1.4nm,0.1s						
KAPS				Lg	Lg	18 56 12.1	
	17nm,0.3s						
ARXS	**Arharly**	**3.38**	**303**	*e*P	**Pb**	**18 55 30.2**	**+2.5**
ARXS				*e*S	**Sg**	**18 56 14.6**	**-1.7**
KOTS	**Kotyrbulak**	**3.52**	**285**	Pg	**Pb**	**18 55 31.4**	**+1.2**
	2.1nm,0.2s						
KOTS				Lg	Lg	18 56 16.4	
	10nm,0.5s						
KOTS	**Kotyrbulak**	**3.52**	**285**	*e*P	**Pb**	**18 55 31.4**	**+1.2**
	2.1nm,0.2s						
KOTS				*e*S	**Sb**	**18 56 16.4**	**+3.5**
	10nm,0.5s						
MK31	**Makanchi Array**	**4.38**	**5**	⇑Pn	Pn	18 55 41.8	+7.6
	baz=186,slow=13,SNR=19						
MK31				⇑Pg	**Pg**	**18 55 52.0**	**+0.5**
	0.1nm,0.2s,baz=179,slow=18,SNR=4.2						
MK31				⇓Sn	**Sb**	**18 56 37.2**	**-0.3**
	1.3nm,0.5s,baz=152,slow=39,SNR=4.8						
MK31				Lg	Lg	18 56 53.5	
	3.7nm,0.8s,baz=184,slow=28,SNR=4.0						
MAKZ	**Makanchi**	**4.38**	**2**	⇑Pn	Pb	18 55 42.1	-2.5
	2.1nm,0.7s						
MAKZ				⇓Pg	**Pg**	**18 55 51.9**	**+0.3**
	4.5nm,1.3s						
MAKZ				⇑Sn	**Sb**	**18 56 37.7**	**+0.2**
	2.7nm,0.5s						
MAKZ				⇓Lg	Lg	18 56 50.1	
	4.1nm,0.8s						

NEIC ***25*** *18:54:44.4±0.8,35˚.607N±0˚.006×117˚.588W±0˚.009, h5km,Error ellipse: s-maj=1.1km s-min=0.9km az=76.0*

PAS 25 18:54:44.7±0.6,35˚.611N±0˚.008×117˚.586W±0˚.004,

h6km±1km,ML3.1,ML2.7/116(NEIC),Error ellipse: s-maj=1.2km s-min=0.5km az=173.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPO	**China Lake**	**0.07**	**302**		Pg	18 54 46.8	+0.2
GPO					Sg	18 54 48.1	+0.1
WSHM	**Spangler Hills**	**0.08**	**98**		Pg	18 54 46.6	-0.1
WSHM					Sg	18 54 48.1	+0.1
LRMC	**Laurel Mtn Rad**	**0.15**	**211**		Sg	18 54 50.4	+0.3
LRMC	**Laurel Mtn Rad**	**0.15**	**211**		Pg	18 54 47.9	0.0
LRMC				IAML		18 54 50.5	
	comp=E,9μm,0.4s						
LRMC				IAML		18 54 51.2	
	comp=N,9μm,0.2s						
SRTC	**Snort**	**0.15**	**301**		Pg	18 54 48.4	+0.4
SRTC					Sg	18 54 51.6	+1.4
CCCA	**Chr Cany lake**	**0.20**	**115**		Pg	18 54 49.1	+0.4
TOW	**Tower One**	**0.24**	**324**		Pg	18 54 50.0	+0.4
WNMM	**Nine Mile Cany**	**0.35**	**312**		Pg	18 54 51.5	0.0
WNMM					Sb	18 54 57.7	-1.3
WVPM	**Volcano Peak E**	**0.39**	**331**		Pg	18 54 52.1	-0.2
DTP	**Desert Tortois**	**0.40**	**212**		Pg	18 54 52.2	-0.4
JRC2	**Joshua Ridge**	**0.41**	**334**		Pg	18 54 52.5	-0.3
WCSM	**Coso Springs S**	**0.44**	**341**		Pg	18 54 53.1	-0.2
MPMC	**Manual Prospec**	**0.45**	**10**		Pg	18 54 53.3	-0.3
MPMC				IAML		18 55 01.4	
	comp=N,693nm,0.6s						
MPMC				IAML		18 55 02.1	
	comp=E,748nm,0.8s						
WBSM	**Bird Springs**	**0.46**	**261**		Pg	18 54 53.4	-0.2
WRVM	**Rose V. Centra**	**0.47**	**328**		Pg	18 54 53.5	-0.3
WORM	**Onyx Ranch**	**0.54**	**279**		Pg	18 54 54.8	-0.4
MFS	**McCloud Flat S**	**0.55**	**337**		Pg	18 54 55.1	-0.3
CCAC	**Calif City Air**	**0.58**	**218**		Pg	18 54 55.6	-0.2
WHFM	**Hanning Flat**	**0.63**	**278**		Pg	18 54 56.4	-0.4
QSM	**Queen of Sheba**	**0.68**	**59**	IAML		18 55 10.3	
	comp=E,482nm,0.5s						
QSM				IAML		18 55 10.8	
	comp=N,354nm,0.3s						
ISA	**Isabella, Lake**	**0.72**	**274**	IAML		18 55 08.8	
	comp=N,566nm,0.2s						
EDW2	**Edwards Air Fo**	**0.80**	**205**		Pg	18 54 59.5	-0.6
TPO	**Tropico Hills**	**0.90**	**216**		Pg	18 55 01.3	-0.7
CWC	**Cottonwood Cre**	**0.92**	**334**		Pg	18 55 01.7	-0.7
CWC				IAML		18 55 18.0	
	comp=E,154nm,0.1s						
GWY	**Greenwater Val**	**0.94**	**52**		Pg	18 55 02.1	-0.7
GWY				IAML		18 55 19.4	
	comp=N,181nm,0.5s						
GWY				IAML		18 55 21.3	
	comp=E,209nm,0.3s						
CGO	**Cerro Gordo**	**0.95**	**349**		Pg	18 55 02.9	-0.2
CGO					Sg	18 55 15.7	+0.2
FURC	**Furnace Creek,**	**1.04**	**34**		Pg	18 55 04.0	-0.6
FURC				IAML		18 55 21.2	
	comp=N,272nm,0.4s						
FURC				IAML		18 55 24.0	
	comp=E,333nm,0.9s						
SHOC	**Shoshone, Teco**	**1.10**	**75**		Pg	18 55 05.3	-0.6
SPG2	**Springville 2**	**1.12**	**302**		Pg	18 55 05.3	-1.0
CJV	**Casa Juvan**	**1.17**	**203**		Pg	18 55 07.1	-0.1
VES	**Vestal, Richgr**	**1.24**	**281**		Pb	18 55 07.9	-0.6
VES				IAML		18 55 25.4	
	comp=E,264nm,0.4s						
DSCC	**Desert Studies**	**1.30**	**111**		Pn	18 55 08.4	-0.9
OSI	**Osito Audit: C**	**1.36**	**223**	IAML		18 55 32.2	
	comp=E,108nm,0.8s						
OSI				IAML		18 55 38.3	
	comp=N,107nm,1.1s						
BFSC	**Mount Baldy Ra**	**1.37**	**183**		Pn	18 55 10.2	-0.3
BFSC				IAML		18 55 28.8	
	comp=N,114nm,0.3s						
BFSC				IAML		18 55 29.0	
	comp=E,137nm,0.6s						
WCT	**Wildcat Mounta**	**1.41**	**33**		Pn	18 55 09.9	-1.1
MWC	**Mount Wilson**	**1.44**	**196**	IAML		18 55 32.5	
	comp=E,192nm,0.6s						
MWC				IAML		18 55 36.7	
	comp=N,190nm,0.6s						
CLTC	**Calectric**	**1.53**	**172**		Pn	18 55 13.0	+0.4
TPNV	**Topopah Spring**	**1.72**	**39**		Pn	18 55 14.3	-1.0
TPNV				IAML		18 55 43.2	
	comp=N,73nm,0.5s						
TPNV				IAML		18 55 44.6	
	comp=N,67nm,0.6s						
ELS	**Elsinore Mount**	**1.96**	**176**	Pn	Pn	18 55 18.0	-0.5
ELS				IAML		18 55 48.7	
	comp=E,48nm,0.4s						
DANC	**Danby, Needles**	**2.05**	**118**		Pn	18 55 18.9	-0.8
BELC	**Belle Mtn. Jos**	**2.07**	**140**	IAML		18 55 54.2	
	comp=E,52nm,0.4s						
BELC				IAML		18 55 55.0	
	comp=N,52nm,0.7s						
V12A	**Nelson**	**2.23**	**86**	IAML		18 55 56.1	
	comp=N,31nm,0.8s						
MDPB	**Devils Dspil**	**2.35**	**330**	IAML		18 56 02.8	
	comp=N,27nm,0.6s						
MDPB				IAML		18 56 14.0	
	comp=E,28nm,0.7s						
IRM	**Iron Mountain**	**2.48**	**125**	IAML		18 56 03.8	
	comp=E,32nm,0.4s						
IRM				IAML		18 56 05.4	
	comp=N,24nm,0.4s						
S11A	**Rachel**	**2.51**	**36**	IAML		18 56 10.1	
	comp=N,40nm,1.1s						
S11A				IAML		18 56 12.9	
	comp=E,43nm,1.0s						
BORC	**Borrego Spring**	**2.53**	**157**	IAML		18 56 10.4	
	comp=N,24nm,0.8s						
BC3	**Big Chuckawall**	**2.63**	**137**	IAML		18 56 15.7	
	comp=N,29nm,0.5s						
DPP	**Dos Picos Cty**	**2.66**	**168**	IAML		18 56 11.1	
	comp=E,25nm,0.6s						
PRN	**Pahroc Range**	**2.72**	**48**	IAML		18 56 22.3	
	comp=N,20nm,0.8s						
PRN				IAML		18 56 24.3	
	comp=E,24nm,0.8s						
BAR	**Barrett**	**3.02**	**165**	IAML		18 56 08.2	
	comp=N,33nm,0.1s						
BAR				IAML		18 56 09.5	
	comp=E,38nm,0.1s						
W13A	**Hualapai Mount**	**3.07**	**99**	IAML		18 56 26.2	
	comp=E,15nm,0.9s						
PNTR	**Pine Nut**	**3.83**	**336**	IAML		18 56 34.2	
	comp=E,18nm,5.0s						
PNTR				IAML		18 57 37.9	
	comp=N,16nm,4.7s						
CCUT	**Cedar City**	**3.91**	**59**	IAML		18 57 36.8	
	comp=N,8.3nm,5.0s						
CCUT				IAML		18 57 54.4	
	comp=E,8.1nm,4.9s						
KNB	**Kanab**	**4.09**	**69**	IAML		18 57 31.9	
	comp=E,9.7nm,4.3s						
KNB				IAML		18 58 09.2	
	comp=N,9.1nm,4.9s						
PSUT	**Pine Spring**	**4.17**	**45**	IAML		18 57 05.7	
	comp=N,7.0nm,2.9s						
PSUT				IAML		18 57 15.3	
	comp=E,9.6nm,4.5s						
SPR3	**Spring Creek 3**	**4.26**	**37**	IAML		18 57 02.2	
	comp=E,7.8nm,2.9s						
SPR3				IAML		18 57 23.3	
	comp=N,6.7nm,4.9s						
U15A	**North Rim**	**4.37**	**78**	IAML		18 56 43.9	
	comp=N,8.4nm,4.4s						
U15A				IAML		18 57 20.4	
	comp=E,12nm,4.9s						

IDC ***25*** *19:38:18.2±1.1,52˚.76S×141˚.03E,h0km,mb3.8/6, mbtmp3.9/6,MS3.5/13,Error ellipse: s-maj=93.5km s-min=19.4km az=82.0*
NEIC ***25*** *19:38:20.2±2.3,52˚.7S±0˚.1×140˚.9E±0˚.1,h10km±1km, mb4.2/7,Error ellipse: s-maj=22.2km s-min=11.7km az=150.0*

ISC 25 19:38:20.3±0.7,52˚.79S±0˚.10×140˚.9E±0˚.2,h10km,n35, σ0§97/17,mb4.0/6,MS3.5/13,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGBR	**Mount Gambier**	**15.07**	**359**	P	**Pn**	**19 41 55.0**	**+1.9**
MLZ	**Mavora Lakes**	**19.24**	**78**	P	**P**	**19 42 44.1**	**-0.4**
MLZ				IAmb	IAmb	19 43 08.9	
	comp=Z,13nm,1.1s						
CASY	**Casey**	**20.19**	**216**	P	**P**	**19 42 55.1**	**+0.5**
CASY				IAmb	IAmb	19 43 09.0	
	comp=Z,22nm,1.5s						
STKA	**Stephens Creek**	**20.91**	**2**	P	**P**	**19 43 02.8**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=214,slow=1.7,SNR=3.4						
	comp=Z,4.7nm,1.0s						
INKA	**Innaminka**	**25.02**	**360**	P	**P**	**19 43 44.9**	**+0.6**
INKA				IAmb	IAmb	19 43 55.4	
	comp=Z,5.5nm,1.1s						
VNDA	**Vanda**	**26.00**	**170**	P	**P**	**19 43 52.3**	**-0.4**
	comp=Z,2.9nm,1.1s,baz=9.0,slow=7.2,SNR=3.7						
VNDA				LR	LR	19 53 21.1	
	comp=Z,141nm,18.1s,baz=358,slow=35						
	comp=Z,2.9nm,1.1s						
VNDA	**Vanda**	**26.00**	**170**	IAmb	IAmb	19 43 59.7	
	comp=Z,9.8nm,1.3s						
H01W1	**Cape Leeuwin H**	**26.07**	**303**	T	T	20 10 55.6	
	baz=142,slow=75,SNR=9.0						
H01W2	**Cape Leeuwin H**	**26.07**	**303**	T	T	20 10 56.0	
	baz=142,slow=75,SNR=7.3						
H01W3	**Cape Leeuwin H**	**26.08**	**303**	T	T	20 10 56.3	
	baz=142,slow=75,SNR=9.6						
NWAO	**Narrogin (SRO)**	**26.15**	**310**	LR	LR	19 51 48.1	
	comp=Z,44nm,19.2s,baz=20,slow=31						
ASAR	**Alice Springs**	**29.56**	**347**	P	**P**	**19 44 23.9**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=167,slow=10,SNR=5.5						
ASAR				PcP	**PcP**	**19 47 29.4**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=157,slow=2.5,SNR=4.4						
ASAR				LR	LR	19 55 17.6	
	comp=Z,60nm,18.3s,baz=128,slow=34						
	comp=Z,0.6nm,0.8s						
WRA	**Warramunga Arr**	**33.18**	**349**	P	**P**	**19 44 56.0**	**-0.9**
	comp=Z,1.6nm,1.0s,baz=173,slow=7.2,SNR=6.3						
WRA				PcP	**PcP**	**19 47 38.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=165,slow=2.8,SNR=2.3						
	comp=Z,1.6nm,1.0s						
WRA	**Warramunga Arr**	**33.18**	**349**	IAmb	IAmb	19 44 58.9	
	comp=Z,0.3nm,1.1s						
FITZ	**Fitzroy Crossi**	**36.62**	**335**	LR	LR	19 59 32.8	
	comp=Z,98nm,21.4s,baz=173,slow=35						
QSPA	**South Pole Qui**	**37.32**	**180**	P	**P**	**19 45 31.7**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=5.7,slow=4.1,SNR=6.5						
QSPA				LR	LR	20 00 11.2	
	comp=Z,132nm,20.4s,baz=7.0,slow=35						
	comp=Z,2.7nm,0.8s						
QSPA	**South Pole Qui**	**37.32**	**180**	P	**P**	**19 45 33.9**	**+1.5**
QSPA				IAmb	IAmb	19 45 41.0	
	comp=Z,5.4nm,1.1s						
RAO	**Raoul Island**	**38.23**	**68**	LR	LR	20 00 23.8	
	comp=Z,214nm,19.6s,baz=136,slow=35						
BATI	**Baumata**	**44.69**	**336**	LR	LR	20 05 31.6	
	comp=Z,93nm,18.6s,baz=187,slow=36						
HNR	**Honiara**	**45.92**	**27**	LR	LR	20 02 37.8	
	comp=Z,66nm,18.0s,baz=83,slow=32						
KAPI	**Kappang**	**50.71**	**332**	LR	LR	20 08 27.8	
	comp=Z,27nm,20.1s,baz=186,slow=36						
SNAA	**Sanae**	**53.22**	**194**	LR	LR	20 09 39.5	
	comp=Z,95nm,20.6s,baz=192,slow=35						
H04S1	**CROZET ISLANDS**	**54.18**	**238**	T	T	20 46 23.7	
	baz=130						
H04S2	**CROZET ISLANDS**	**54.19**	**238**	T	T	20 46 23.0	
	baz=130,slow=74						
H04S3	**CROZET ISLANDS**	**54.20**	**238**	T	T	20 46 19.7	
	baz=130,slow=74						
RAR	**Rarotonga**	**54.92**	**79**	LR	LR	20 07 55.7	
	comp=Z,24nm,19.1s,baz=236,slow=32						
DAV	**Davao City (W)**	**61.04**	**343**	LR	LR	20 14 29.1	
	comp=Z,26nm,19.9s,baz=250,slow=36						
H08S2	**Diego Garcia H**	**70.93**	**283**	T	T	21 06 47.7	
	baz=141						
H08S1	**Diego Carcia H**	**70.94**	**283**	T	T	21 06 47.4	
	baz=141						
H08S3	**Diego Garcia H**	**70.95**	**283**	T	T	21 06 47.8	
	baz=141						
CMAR	**Chiang Mai Arr**	**79.70**	**320**	P	**P**	**19 50 27.3**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=171,slow=4.5,SNR=4.4						
CMAR				LR	LR	20 24 05.8	
	comp=Z,8.4nm,21.2s,baz=145,slow=34						
	comp=Z,0.6nm,0.8s						
FINES	**FINESS Array B**	**145.00**	**310**	PKPbc	**PKPab**	**19 57 55.4**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=116,slow=4.4,SNR=5.6						
ARCES	**ARCESS Array B**	**146.64**	**325**	PKPbc	**PKPdf**	**19 57 59.3**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=100,slow=5.0,SNR=5.2						
GERES	**GERESS Array B**	**147.02**	**285**	PKPbc	**PKPbc**	**19 58 02.3**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=142,slow=3.7,SNR=6.1						
SPITS	**Spitsbergen Ar**	**148.03**	**341**	PKPbc	**PKPdf**	**19 58 02.4**	**+1.3**
	comp=Z,11nm,0.9s,baz=90,slow=4.2,SNR=4.3						

IDC ***25*** *19:50:08.7±4.7,11˚.40S×161˚.66E,h35km±39km,mb3.5/4, mbtmp3.7/6,ML3.7/2,MS3.2/1,Error ellipse: s-maj=35.8km s-min=23.8km az=71.0*

ISC 25 19:50:08.6±1.1,11˚.4S±0˚.1×161˚.7E±0˚.2,h35km,n6, σ0§64/8,mb3.6/4,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.60**	**319**	Pn	**Pn**	**19 50 47.7**	**-0.5**
	31nm,0.3s,baz=155,slow=2.3,SNR=8.9						
HNR				Sn	**Sn**	**19 51 19.3**	**+0.8**
	48nm,0.3s,baz=122,slow=14,SNR=6.1						
	51nm,0.4s						
DZM	**Mont Dzumac**	**11.54**	**157**	Pn	**Pn**	**19 52 51.6**	**+0.5**
	0.2nm,0.3s,baz=4.0,slow=14,SNR=1.3						
DZM				Sn	**Sn**	**19 54 58.4**	**-0.4**
	0.2nm,0.3s,baz=254,slow=20,SNR=2.2						
	2.8nm,0.8s						
WRA	**Warramunga Arr**	**27.61**	**249**	P	**P**	**19 55 53.0**	**-0.1**
	0.2nm,0.3s,baz=78,slow=8.6,SNR=1.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**29.08**	**242**	P	**P**	**19 56 06.3**	**+0.2**
	0.6nm,0.8s,baz=74,slow=9.6,SNR=7.0						
ASAR				LR	LR	20 07 00.8	
	comp=Z,46nm,18.2s,baz=93,slow=35						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**85.17**	**20**	P	**P**	**20 02 41.3**	**+0.3**
	0.4nm,0.6s,baz=206,slow=5.0,SNR=2.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**91.07**	**318**	P	**P**	**20 03 08.9**	**-0.7**
	0.4nm,0.8s,baz=108,slow=4.7,SNR=1.6						
	0.4nm,0.8s						

NEIC ***25*** *19

ML2.8/10,**ML2.5**(AEIC),**Error ellipse: s-maj=4.3km s-min=3.0km az=40.0,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.75**	**65**		Pb	20 10 45.6	-0.3
CNBA	**Chernabura Isl**	**0.75**	**65**		Sg	20 10 54.2	-0.7
SDPT	**Sand Point**	**0.85**	**11**		Pg	20 10 47.4	+0.1
SDPT				IAML		20 10 58.1	
	comp=E,129nm,0.6s						
SDPT				IAML		20 11 04.3	
	comp=N,200nm,0.5s						
DOL	**Dolgoi Island**	**0.90**	**315**		Pg	20 10 48.3	+0.1
DOL					Sg	20 10 59.5	-0.4
HAG	**Hague Volcano**	**1.04**	**321**		Pb	20 10 51.0	+0.1
PS4A	**Pavlof South-4**	**1.05**	**323**		Pg	20 10 50.9	-0.1
PS4A					Sg	20 11 04.6	0.0
DT1	**Dutton Round H**	**1.06**	**305**		Sg	20 10 50.7	-0.5
DT1					Sg	20 11 04.2	-0.9
PS1A	**Pavlof South-1**	**1.07**	**329**		Pg	20 10 51.3	-0.1
PS1A					Sg	20 11 05.2	-0.2
PN7A	**Pavlof North-7**	**1.17**	**323**		Pn	20 10 53.2	0.0
S12K	**Black Hills**	**1.41**	**328**		Sn	20 11 14.6	-0.5
S12K	**Black Hills**	**1.41**	**328**		Pn	20 10 56.0	-0.4
S12K				IAML		20 11 18.0	
	comp=N,173nm,0.4s						
S12K				IAML		20 11 19.9	
	comp=E,186nm,0.2s						
FALS	**False Pass**	**1.58**	**284**		Pn	20 10 59.2	+0.4
VNWF	**Veniaminof 8**	**1.78**	**22**		Pn	20 11 01.9	+0.3
VNSG	**Veniaminof 6**	**1.88**	**30**		Pn	20 11 02.7	-0.3
PLK4	**Peulik 4**	**3.98**	**36**	Pn	Pn	20 11 32.2	+0.3
PLK4				IAML		20 12 38.0	
	comp=E,14nm,0.9s						
PLK4				IAML		20 12 40.7	
	comp=N,18nm,1.1s						
N15K	**Kwethluk River**	**5.68**	**3**	Pn	Pn	20 11 55.8	+0.6
M16K	**Timber Creek**	**6.60**	**8**	Pn	Pn	20 12 09.3	+1.6
L14K	**Kuka Creek**	**6.93**	**352**	Pn	Pn	20 12 13.0	+0.9
M17K	**Holitna River**	**7.13**	**13**	Pn	Pn	20 12 16.9	+1.9
K13K	**Kusilvak Mount**	**7.72**	**346**	Pn	Pn	20 12 24.6	+1.5
HIN	**Hinchinbrook I**	**9.67**	**47**	Pn	Pn	20 12 49.4	-0.5

*IDC **25** 20:18:22.7±4.2,38°.86S×176°.73E,h61km±31km,mb3.3/2, mbtmp3.6/2,Error ellipse: s-maj=80.6km s-min=44.4km az=161.0*

*WEL **25** 20:18:23.2±0.6,38°.5±4°.×17°.8E±°,h71km±6km,M3.7/45, ML3.7/44,MLv3.7/45,Error ellipse: s-maj=5.5km s-min=5.3km az=3.0,confirmed*

ISC 25 20:18:21.9±1.0,**37°.86S**±0°.04×**177°.57E**±0°.04,**h96**km±6km, **n119,**σ0°**83**/124,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUGZ	**Raukumara Rang**	**0.14**	**142**	P	**Pn**	**20 18 34.7**	**-0.9**
RUGZ				S	**Sn**	**20 18 43.7**	**-2.0**
HAZ	**Te Kaha**	**0.20**	**59**	P	**Pn**	**20 18 35.1**	**-0.5**
HAZ				S	**Sn**	**20 18 44.2**	**-1.5**
PKGZ	**Pakihiroa**	**0.40**	**91**	P	**Pn**	**20 18 37.0**	**+0.4**
PKGZ				S	**Sn**	**20 18 47.9**	**+0.3**
TWGZ	**Tauwhareparae**	**0.45**	**135**	P	**Pn**	**20 18 37.7**	**+0.7**
TWGZ				S	**Sn**	**20 18 50.0**	**+1.7**
WHRZ	**Whale Island**	**0.47**	**270**	P	**Pn**	**20 18 36.5**	**-0.5**
MWZ	**Matawai**	**0.48**	**184**	P	**Pn**	**20 18 37.4**	**+0.2**
MWZ				S	**Sn**	**20 18 49.1**	**+0.6**
URZ	**Urewera**	**0.54**	**222**	P	**Pn**	**20 18 37.1**	**-0.5**
	3μm,0.3s,baz=237,slow=3.8,SNR=7240						
URZ				S	**Sn**	**20 18 48.5**	**-0.7**
	1μm,0.4s,baz=146,slow=20,SNR=8.0						
URZ	**Urewera**	**0.54**	**222**	P	**Pn**	**20 18 37.4**	**-0.1**
URZ				S	**Sn**	**20 18 48.5**	**-0.7**
PUZ	**Puketiti**	**0.58**	**112**	P	**Pn**	**20 18 38.3**	**+0.4**
PUZ				S	**Sn**	**20 18 50.0**	**+0.1**
TKGZ	**Te Karaka**	**0.62**	**159**	P	**Pn**	**20 18 38.7**	**+0.5**
TKGZ				S	**Sn**	**20 18 50.9**	**+0.5**
RAGZ	**Rawiri**	**0.65**	**191**	P	**Pn**	**20 18 39.2**	**+0.7**
RAGZ				S	**Sn**	**20 18 52.5**	**+1.5**
MXZ	**Matakaoa Point**	**0.65**	**63**	P	**Pn**	**20 18 39.0**	**+0.5**
WMGZ	**Waiomatatini S**	**0.67**	**87**	P	**Pn**	**20 18 39.3**	**+0.7**
WMGZ				S	**Sn**	**20 18 51.6**	**+0.4**
EDRZ	**Edgecumbe**	**0.70**	**249**	P	**Pn**	**20 18 38.8**	**-0.2**
MARZ	**Manawahe**	**0.72**	**260**	P	**Pn**	**20 18 38.7**	**-0.4**
CNGZ	**Carnagh Statio**	**0.80**	**141**	P	**Pn**	**20 18 40.9**	**+1.0**
OPRZ	**Ohinepanea**	**0.80**	**271**	P	**Pn**	**20 18 39.4**	**-0.5**
RIGZ	**Rimuhau**	**0.86**	**170**	P	**Pn**	**20 18 41.1**	**+0.6**
MUGZ	**Murupara**	**0.88**	**225**	P	**Pn**	**20 18 40.8**	**+0.1**
RTZ	**Ruatahuna**	**0.89**	**211**	P	**Pn**	**20 18 40.8**	**-0.1**
MKRZ	**Makatiti**	**0.92**	**252**	P	**Pn**	**20 18 41.5**	**+0.4**
TARZ	**Mount Tarawera**	**0.92**	**246**	P	**Pn**	**20 18 41.5**	**+0.2**
SNGZ	**Shannon Statio**	**0.94**	**191**	P	**Pn**	**20 18 42.0**	**+0.6**
RRRZ	**Republican Roa**	**0.96**	**240**	P	**Pn**	**20 18 41.8**	**+0.2**
OMRZ	**Omania**	**0.98**	**255**	P	**Pn**	**20 18 42.1**	**+0.3**
HLHZ	**Highlands Stat**	**1.00**	**247**	P	**Pn**	**20 18 42.9**	**+0.4**
TGRZ	**Tauranga**	**1.05**	**277**	P	**Pn**	**20 18 42.0**	**+0.5**
KARZ	**Kaharoa**	**1.06**	**261**	P	**Pn**	**20 18 42.8**	**+0.1**
PRGZ	**Paritu Road**	**1.09**	**167**	P	**Pn**	**20 18 43.4**	**+0.4**
NGRZ	**Ngongotaha**	**1.12**	**257**	P	**Pn**	**20 18 44.6**	**+1.2**
RAHZ	**Arahi**	**1.12**	**200**	P	**Pn**	**20 18 44.2**	**+0.7**
PRRZ	**Plateau Road**	**1.13**	**235**	P	**Pn**	**20 18 43.7**	**+0.2**
UTU	**Utuhina**	**1.13**	**253**	P	**Pn**	**20 18 44.9**	**+1.4**
HSRZ	**Hossack Road**	**1.14**	**246**	P	**Pn**	**20 18 44.3**	**+0.7**
HRRZ	**Handcock Road**	**1.15**	**242**	P	**Pn**	**20 18 44.0**	**+0.3**
MTHZ	**Maungataniwha**	**1.15**	**210**	P	**Pn**	**20 18 43.8**	**+0.1**
KNZ	**Kokohu**	**1.16**	**176**	P	**Pn**	**20 18 44.2**	**+0.3**
ALRZ	**Allen Road**	**1.20**	**234**	P	**Pn**	**20 18 44.5**	**+0.3**
MYRZ	**Mayor Island**	**1.20**	**298**	P	**Pn**	**20 18 44.0**	**-0.4**
WHHZ	**Waihua**	**1.25**	**192**	P	**Pn**	**20 18 45.5**	**+0.7**
GRRZ	**Galatos Road**	**1.25**	**247**	P	**Pn**	**20 18 45.8**	**+0.9**
KMRZ	**Kaimai**	**1.29**	**270**	P	**Pn**	**20 18 45.2**	**-0.2**
WPRZ	**Whakapapatarin**	**1.29**	**239**	P	**Pn**	**20 18 45.9**	**+0.5**
MRHZ	**Matea Rd**	**1.33**	**223**	P	**Pn**	**20 18 46.1**	**+0.2**
NMHZ	**Naumai**	**1.37**	**206**	P	**Pn**	**20 18 47.5**	**+1.0**
ARHZ	**Aropaoanui**	**1.47**	**198**	P	**Pn**	**20 18 48.2**	**+0.6**
WHTZ	**Whakaora**	**1.50**	**237**	P	**Pn**	**20 18 48.9**	**+0.9**
KUTZ	**Kaahu Road**	**1.51**	**245**	P	**Pn**	**20 18 48.8**	**+0.7**
HATZ	**Hinemaiaia**	**1.55**	**228**	P	**Pn**	**20 18 49.0**	**+0.4**
BKZ	**Black Stump Fm**	**1.56**	**213**	P	**Pn**	**20 18 48.9**	**+0.3**
TOZ	**Tahuroa Road**	**1.64**	**274**	P	**Pn**	**20 18 49.7**	**0.0**
TLZ	**Tolley Road**	**1.67**	**253**	P	**Pn**	**20 18 50.4**	**+0.3**
MCHZ	**McNeill Hill**	**1.73**	**203**	P	**Pn**	**20 18 51.2**	**+0.4**
RATZ	**Rangitukua**	**1.73**	**234**	P	**Pn**	**20 18 51.7**	**+0.7**
RITZ	**Rihia Road**	**1.75**	**230**	P	**Pn**	**20 18 51.9**	**+0.9**
KWHZ	**Kaweka Forest**	**1.80**	**210**	P	**Pn**	**20 18 51.9**	**+0.1**
CKHZ	**Cape Kidnapper**	**1.84**	**192**	P	**Pn**	**20 18 52.0**	**-0.2**
KUZ	**Kuaotunu**	**1.85**	**306**	P	**Pn**	**20 18 51.7**	**-0.6**
KATZ	**Kakaramea**	**1.85**	**232**	P	**Pn**	**20 18 53.1**	**+0.7**
TMVZ	**Te Maari**	**1.93**	**229**	P	**Pn**	**20 18 54.0**	**+0.5**
NTVZ	**North Tongarir**	**1.94**	**230**	P	**Pn**	**20 18 54.2**	**+0.6**
ETVZ	**East Tongariro**	**1.94**	**228**	P	**Pn**	**20 18 54.1**	**+0.5**
KRVZ	**Karewarewa**	**1.95**	**230**	P	**Pn**	**20 18 54.4**	**+0.6**
OTVZ	**Oturere**	**1.98**	**228**	P	**Pn**	**20 18 54.7**	**+0.5**
NNVZ	**North Ngauruho**	**1.99**	**230**	P	**Pn**	**20 18 55.0**	**+0.7**
WTVZ	**West Tongariro**	**2.00**	**230**	P	**Pn**	**20 18 55.1**	**+0.7**
KAHZ	**Kahuranaki**	**2.01**	**195**	P	**Pn**	**20 18 54.2**	**-0.2**
SNVZ	**South Ngauruho**	**2.01**	**228**	P	**Pn**	**20 18 55.1**	**+0.4**
KRHZ	**Kereru**	**2.01**	**207**	P	**Pn**	**20 18 54.1**	**-0.4**
NGZ	**Ngauruhoe**	**2.03**	**229**	P	**Pn**	**20 18 55.3**	**+0.5**
TUVZ	**Tukino**	**2.06**	**226**	P	**Pn**	**20 18 55.5**	**+0.3**
MKAZ	**Moumakai**	**2.06**	**291**	P	**Pn**	**20 18 55.0**	**0.0**
TWVZ	**Taurewa**	**2.07**	**233**	P	**Pn**	**20 18 55.7**	**+0.5**
COVZ	**Chateau Observ**	**2.08**	**229**	P	**Pn**	**20 18 56.1**	**+0.6**
MOVZ	**Moawhango**	**2.10**	**222**	P	**Pn**	**20 18 55.5**	**-0.2**
WHVZ	**Whangaehu Hut**	**2.11**	**227**	P	**Pn**	**20 18 56.0**	**+0.1**
FWVZ	**Far West T-bar**	**2.11**	**228**	P	**Pn**	**20 18 56.3**	**+0.4**
MAVZ	**Mataranga**	**2.11**	**228**	P	**Pn**	**20 18 56.3**	**+0.3**
WAVZ	**Wahianoa**	**2.13**	**226**	P	**Pn**	**20 18 56.3**	**+0.1**
TRVZ	**Turoa**	**2.14**	**227**	P	**Pn**	**20 18 56.5**	**+0.1**
WIAZ	**Waiheke Island**	**2.21**	**298**	P	**Pn**	**20 18 57.1**	**0.0**
HIZ	**Hauiti**	**2.24**	**252**	P	**Pn**	**20 18 58.4**	**+1.0**
PXZ	**Pawanui**	**2.24**	**194**	P	**Pn**	**20 18 56.4**	**-1.0**
MTVZ	**Mangateitei**	**2.24**	**227**	P	**Pn**	**20 18 57.7**	**+0.2**
PKVZ	**Pokaka**	**2.25**	**230**	P	**Pn**	**20 18 58.5**	**+0.9**
ETAZ	**East Tamaki Re**	**2.29**	**292**	P	**Pn**	**20 18 58.6**	**+0.5**
PNHZ	**Pukenui**	**2.31**	**207**	P	**Pn**	**20 18 57.5**	**-0.9**
GRZ	**Great Barrier**	**2.33**	**313**	P	**Pn**	**20 18 58.5**	**-0.1**
WPHZ	**Waipukurau**	**2.37**	**201**	P	**Pn**	**20 18 58.3**	**-0.9**
MBAZ	**Motutapu North**	**2.39**	**296**	P	**Pn**	**20 18 59.8**	**+0.3**
AWAZ	**Awhitu Peninsu**	**2.46**	**288**	P	**Pn**	**20 19 01.0**	**+0.6**
PRHZ	**Porangahau**	**2.51**	**197**	P	**Pn**	**20 18 59.9**	**-1.1**
ABAZ	**Army Bay**	**2.52**	**299**	P	**Pn**	**20 19 01.7**	**+0.5**
TSZ	**Takapari Road**	**2.53**	**209**	P	**Pn**	**20 19 00.0**	**-1.2**
VRZ	**Vera Road**	**2.54**	**239**	P	**Pn**	**20 19 02.5**	**+1.1**
WTAZ	**Waiatarua**	**2.56**	**290**	P	**Pn**	**20 19 02.5**	**+0.8**
DVHZ	**Dannevirke**	**2.67**	**204**	P	**Pn**	**20 19 01.3**	**-1.8**
ANWZ	**Angora Road**	**2.73**	**198**	P	**Pn**	**20 19 02.6**	**-1.3**
WAZ	**Wanganui**	**2.77**	**226**	P	**Pn**	**20 19 05.0**	**+0.6**
POWZ	**Post Office Ro**	**2.89**	**208**	P	**Pn**	**20 19 04.6**	**-1.5**
OHWZ	**Ohakea**	**2.93**	**216**	P	**Pn**	**20 19 06.3**	**-0.2**
LREZ	**Lake Rotokare**	**2.95**	**236**	P	**Pn**	**20 19 07.8**	**+1.0**
PRWZ	**Pori Road**	**2.96**	**204**	P	**Pn**	**20 19 05.7**	**-1.4**
BFZ	**Birch Farm**	**3.00**	**200**	P	**Pn**	**20 19 05.5**	**-2.0**
PKE	**Pukeiti**	**3.11**	**244**	P	**Pn**	**20 19 10.3**	**+1.3**
KHEZ	**Kahui Hut**	**3.13**	**242**	P	**Pn**	**20 19 11.1**	**+1.7**
TIWZ	**Tintock**	**3.19**	**204**	P	**Pn**	**20 19 08.3**	**-1.9**
MRZ	**Mangatainoka R**	**3.20**	**208**	P	**Pn**	**20 19 07.9**	**-2.2**
CPWZ	**Castlepoint**	**3.23**	**199**	P	**Pn**	**20 19 09.1**	**-1.4**
OGWZ	**Otaki Gorge**	**3.49**	**211**	P	**Pn**	**20 19 11.8**	**-2.3**
ASAR	**Alice Springs**	**39.74**	**278**	P	**P**	**20 25 45.9**	**+0.6**
	0.4nm,0.5s,baz=122,slow=7.3,SNR=12 0.4nm,0.5s						
WRA	**Warramunga Arr**	**41.43**	**283**	P	**P**	**20 25 59.5**	**+0.3**
	0.5nm,0.5s,baz=125,slow=7.8,SNR=6.8 0.5nm,0.5s						
H03S2	**Juan Fernandez** baz=229	**79.34**	**125**	T	T	21 56 49.1	
H03S1	**Juan Fernandez** baz=229	**79.35**	**125**	T	T	21 56 46.1	
H03S3	**Juan Fernandez** baz=229	**79.36**	**125**	T	T	21 56 46.9	
H03N3	**Juan Fernandez** baz=234,slow=72	**79.58**	**124**	T	T	21 57 02.4	
H03N2	**Juan Fernandez** baz=234,slow=72	**79.59**	**124**	T	T	21 56 55.6	
H03N1	**Juan Fernandez** baz=234,slow=72	**79.60**	**124**	T	T	21 57 04.3	
FINES	**FINESS Array B** 1.5nm,0.9s,baz=64,slow=3.2,SNR=5.7	**150.48**	**332**	PKPbc	**PKPab**	**20 38 07.6**	**-0.7**

*SJA **25** 20:40:11.1±0.7,31°.02S×71°.39W,h64km±2km,ML3.6, MW3.8*

*GUC **25** 20:40:11.1±0.8,31°.05S×71°.27W,h65km±2km,ML3.8*

ISC 25 20:40:13.4±1.2,**31°.05S**±0°.02×**71°.31W**±0°.04,**h56**km±7km, **n74,**σ2°**22**/112,**4C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.31**	**120**	⇑*i*P	**Pn**	**20 40 23.0**	**-0.3**
CO02				*e*S	**Sn**	**20 40 31.1**	**+0.6**
CO02	**Combarbal**	**0.31**	**120**	*e*P	**Pn**	**20 40 22.9**	**-0.5**
CO02				IAML		20 40 31.7	
	comp=Z,3μm,0.2s						
CO02				*e*S	**Sn**	**20 40 31.7**	**+1.2**
CO06	**Fray Jorge**	**0.46**	**323**	⇓*i*P	**Pn**	**20 40 24.4**	**-0.3**
CO06				*e*S	**Sn**	**20 40 33.6**	**+0.8**
CO06				IAML		20 40 35.4	
	comp=E,13μm,0.2s						
CO03	**El Pedregal**	**0.57**	**69**	⇑*i*P	**Pn**	**20 40 25.4**	**-0.6**
CO03				*e*S	**Sn**	**20 40 35.2**	**0.0**
CO03				IAML		20 40 36.4	
	comp=E,10μm,0.3s						
CO03	**El Pedregal**	**0.57**	**69**	*e*P	**Pn**	**20 40 25.4**	**-0.6**
CO03				*e*S	**Sn**	**20 40 35.6**	**+0.4**
CO03				IAML		20 40 36.6	
	comp=Z,2μm,0.2s						
GO04	**Tololo Observa**	**0.98**	**27**	*e*P	**Pn**	**20 40 30.6**	**-0.7**
GO04				*e*S	**Sn**	**20 40 44.7**	**+0.3**
GO04	**Tololo Observa**	**0.98**	**27**	*e*P	**Pn**	**20 40 30.7**	**-0.6**
GO04				*e*S	**Sn**	**20 40 45.0**	**+0.6**
GO04				IAML		20 40 46.5	
	comp=Z,5μm,0.4s						
CO04	**Los Peladeros**	**1.03**	**164**	⇑*i*P	**Pn**	**20 40 31.2**	**-0.8**
CO04				*e*S	**Sn**	**20 40 45.7**	**-0.1**
CO04				IAML		20 40 47.0	
	comp=N,6μm,0.2s						
CO01	**Juntas del Tor**	**1.50**	**45**	⇑*i*P	**Pn**	**20 40 38.4**	**+0.2**
CO01				*e*S	**Sn**	**20 40 57.6**	**+0.8**
CO01				IAML		20 40 58.6	
	comp=N,3μm,0.2s						
CO01	**Juntas del Tor**	**1.50**	**45**	*e*P	**Pn**	**20 40 38.4**	**+0.2**
CO01				*e*S	**Sn**	**20 40 58.0**	**+1.1**
CO01				IAML		20 40 59.1	
	comp=Z,1μm,0.3s						
VA06	**Catapilco**	**1.51**	**180**	*e*P	**Pn**	**20 40 37.1**	**-1.1**
VA06				*e*S	**Sn**	**20 40 57.1**	**+0.3**
VA06				IAML		20 41 02.1	
	comp=N,2μm,0.3s						
AROD	**Rodeo**	**1.81**	**62**	*e*P	**Pn**	**20 40 44.5**	**+1.9**
AROD				*e*S	**Sn**	**20 41 03.1**	**-1.5**
VA03	**San Esteban**	**1.83**	**159**	*e*P	**Pn**	**20 40 42.1**	**-0.5**
VA03				*e*S	**Sn**	**20 41 05.3**	**+0.6**
VA03				IAML		20 41 10.1	
	comp=E,2μm,0.1s						
VA03	**San Esteban**	**1.83**	**159**	*e*P	**Pn**	**20 40 42.5**	**-0.1**
VA03				*e*S	**Sn**	**20 41 06.2**	**+1.5**
VA03				IAML		20 41 10.5	
	comp=Z,566nm,0.2s						
RTLS	**Leoncito**	**1.88**	**114**	*e*P	**Pn**	**20 40 45.4**	**+1.9**
RTLS				IAML		20 41 21.3	
	comp=Z,610nm,0.5s						
ROCH	**El Roble**	**1.94**	**172**	*e*P	**Pn**	**20 40 43.0**	**-1.2**
ROCH				IAML		20 41 12.9	
	comp=N,836nm,0.3s						
ROC1	**El Roble**	**1.94**	**173**	*e*P	**Pn**	**20 40 43.4**	**-0.9**
ROC1				*e*S	**Sn**	**20 41 11.1**	**+3.4**
ACCO	**Cerro Coronel**	**1.99**	**77**	*e*P	**Pn**	**20 40 46.7**	**+1.7**
ACCO				*e*S	**Sn**	**20 41 08.1**	**-0.8**
VA01	**Torpederas**	**1.99**	**188**	*e*P	**Pn**	**20 40 47.1**	**+2.4**
VA01				IAML		20 41 20.4	
	comp=Z,163nm,0.6s						
ACDV	**Cuesta del Vie**	**2.08**	**66**	*e*P	**Pn**	**20 40 48.6**	**+2.5**
ACDV				*e*S	**Sn**	**20 41 07.0**	**-4.1**
ACDV				IAML		20 41 18.5	
	comp=Z,223nm,0.6s						
LCO	**Las Campanas**	**2.10**	**15**	*i*P	**Pn**	**20 40 46.1**	**-0.4**
LCO	**Las Campanas**	**2.10**	**15**	*e*P	Pn	20 40 40.7	-5.8
LCO				*e*P		20 40 45.5	
LCO				*e*S	**Sn**	**20 41 12.6**	**+1.0**
LCO				IAML		20 41 16.3	
	comp=Z,623nm,0.3s						
PEL	**Peldehue**	**2.16**	**166**	*e*P	**Pn**	**20 40 46.4**	**-0.7**
PEL				IAML		20 41 23.0	
	comp=E,468nm,0.3s						
PEL	**Peldehue**	**2.16**	**166**	*e*P	**Pn**	**20 40 46.6**	**-0.5**
PEL				*e*S	**Sn**	**20 41 04.8**	**-7.9**
PEL				IAML		20 41 33.7	
	comp=Z,216nm,0.4s						
MT02	**Curacav**	**2.21**	**176**	*e*P	**Pn**	**20 40 46.1**	**-1.6**
MT02	**Curacav**	**2.21**	**176**	*e*P	**Pn**	**20 40 46.5**	**-1.2**
MT02				*e*S	**Sn**	**20 41 17.6**	**+3.7**
MT02				IAML		20 41 22.9	
	comp=Z,199nm,0.3s						
ZON	**Zonda**	**2.31**	**103**	*e*P	Pn	20 40 36.3	-13
ZON				*e*S	**Sn**	**20 41 15.4**	**-1.0**
ZON				IAML		20 41 21.4	
	comp=Z,111nm,0.4s						
MT10	**Hacienda Santa**	**2.31**	**164**	*e*P	**Pn**	**20 40 48.7**	**-0.6**
MT10				IAML		20 41 25.7	
	comp=E,1μm,0.3s						
AC05	**El Transito**	**2.38**	**23**	*e*P	**Pn**	**20 40 50.4**	**+0.3**
AC05				IAML		20 41 22.1	
	comp=N,544nm,0.3s						
AC05	**El Transito**	**2.38**	**23**	*e*P	**Pn**	**20 40 50.5**	**+0.3**
AC05				*e*S	**Sn**	**20 41 19.0**	**+0.8**
AC05				IAML		20 41 26.6	
	comp=Z,256nm,0.5s						
MT05	**Renca**	**2.39**	**168**	*e*P	**Pn**	**20 40 49.6**	**-0.6**
MT05				IAML		20 41 27.6	
	comp=E,767nm,0.4s						
MT05	**Renca**	**2.39**	**168**	*e*P	**Pn**	**20 40 49.7**	**-0.6**
MT05				*e*S	Sn	20 41 02.1	-16
MT05				IAML		20 41 33.5	
	comp=Z,324nm,0.5s						
MT14	**Cerro Cal¡n**	**2.43**	**165**	*e*P	**Pn**	**20 40 50.2**	**-0.6**
MT14				IAML		20 41 34.8	
	comp=E,850nm,0.4s						
RTLL	**Cerro Villicun**	**2.45**	**97**	*e*P	**Pn**	**20 40 52.1**	**+1.1**
RTLL				*e*S	Sn	20 41 08.6	-11
RTLL				IAML		20 41 25.1	
	comp=Z,195nm,0.5s						
MT16	**CCHEN**	**2.47**	**164**	*e*P	**Pn**	**20 40 50.5**	**-0.8**
MT03	**Universidad Ad**	**2.53**	**165**	*e*P	**Pn**	**20 40 51.7**	**-0.6**
MT03				IAML		20 41 39.0	
	comp=N,630nm,0.2s						
MT03	**Universidad Ad**	**2.53**	**165**	*e*P	**Pn**	**20 40 52.4**	**+0.2**
MT03				*e*S	**Sn**	**20 41 24.2**	**+2.2**
MT03				IAML		20 41 39.3	
	comp=Z,318nm,0.5s						
MT04	**Ro Olivares**	**2.55**	**157**	*e*P	**Pn**	**20 40 53.4**	**+0.8**
MT04				IAML		20 41 28.6	
	comp=E,299nm,0.4s						
MT04	**Ro Olivares**	**2.55**	**157**	*e*P	**Pn**	**20 40 53.6**	**+1.0**
MT04				*e*S	**Sn**	**20 41 26.0**	**+3.4**
MT04				IAML		20 41 29.1	
	comp=Z,266nm,0.4s						
ASAL	**Salagasta**	**2.61**	**127**	*e*P	**Pn**	**20 40 55.4**	**+2.1**
ASAL				*e*S	**Sn**	**20 41 15.9**	**-8.0**
VA05	**Santo Domingo**	**2.62**	**186**	IAML		20 41 34.4	
	comp=N,446nm,0.5s						
MT08	**Bocatoma Ro**	**2.63**	**156**	*e*P	**Pn**	**20 40 55.2**	**+1.5**
MT08				IAML		20 41 33.0	
	comp=E,330nm,0.5s						
MT08	**Bocatoma Ro**	**2.63**	**156**	*e*P	**Pn**	**20 40 50.5**	**-3.2**
MT08				*e*P		20 40 54.9	
MT08				*e*S	**Sn**	**20 41 24.0**	**-0.5**
MT08				IAML		20 41 34.9	
	comp=Z,247nm,0.5s						
MT15	**Las Vizcachas**	**2.63**	**165**	*e*P	**Pn**	**20 40 52.6**	**-1.0**
MT15				IAML		20 41 36.4	
	comp=N,774nm,0.4s						
CFA	**Coronel Fontan**	**2.69**	**103**	*e*P	**Pn**	**20 40 54.8**	**+0.5**
CFA				*e*S	**Sn**	**20 41 24.4**	**-1.3**
ARCO	**CERRO ARCO**	**2.70**	**132**	*e*P	**Pn**	**20 40 57.2**	**+2.6**
ARCO				*e*S	**Sn**	**20 41 18.1**	**-8.1**
ARCO				IAML		20 41 39.4	
	comp=Z,156nm,0.7s						
MT09	**Talagante**	**2.73**	**174**	*e*P	**Pn**	**20 40 54.0**	**-1.0**
MT09				IAML		20 41 34.2	
	comp=N,384nm,0.3s						
MT12	**Pirque**	**2.75**	**167**	*e*P	**Pn**	**20 40 54.7**	**-0.5**
MT12				IAML		20 41 47.1	
	comp=N,536nm,0.4s						
MT01	**Popeta**	**2.81**	**179**	*e*P	**Pn**	**20 40 54.4**	**-1.6**
MT01				IAML		20 41 40.2	
	comp=E,261nm,0.2s						
MT01	**Popeta**	**2.81**	**179**	*e*P	**Pn**	**20 40 54.7**	**-1.2**
MT01				*e*S	Sn	20 41 36.4	+7.8
MT01				IAML		20 41 36.9	
	comp=Z,206nm,0.4s						
AC04	**Llanos de Chal**	**2.84**	**4**	*e*P	**Pn**	**20 40 55.2**	**-1.2**
AC04				IAML		20 41 41.2	
	comp=E,224nm,0.3s						
AC04	**Llanos de Chal**	**2.84**	**4**	*e*P	**Pn**	**20 40 55.8**	**-0.6**
AC04				*e*S	**Sn**	**20 41 27.7**	**-1.7**
AC04				IAML		20 41 37.8	
	comp=Z,188nm,0.5s						
AGUA	**GUANDACOL**	**2.89**	**58**	*e*P	**Pn**	**20 41 00.2**	**+3.0**
AGUA				*e*S	**Sn**	**20 41 31.4**	**+0.5**
AGUA				IAML		20 41 38.2	
	comp=Z,436nm,0.5s						
AAGR	**Agrelo**	**2.93**	**135**	*e*P	**Pn**	**20 41 00.5**	**+2.8**
AAGR				*e*S	**Sn**	**20 41 24.6**	**-7.1**
AAGR				IAML		20 41 45.6	
	comp=Z,123nm,0.4s						
LMEL	**Las Melosas**	**2.95**	**162**	*e*P	**Pn**	**20 40 58.2**	**+0.3**
LMEL				IAML		20 41 39.4	
	comp=N,406nm,0.4s						
LMEL	**Las Melosas**	**2.95**	**162**	*e*P	**Pn**	**20 40 58.5**	**+0.6**
LMEL				*e*S	**Sn**	**20 41 34.2**	**+2.0**
LMEL				IAML		20 41 41.0	
	comp=Z,294nm,0.6s						
BO04	**La Punta**	**2.99**	**169**	*e*P	**Pn**	**20 40 57

	2.8nm,0.4s							
ZAA0	**Zalesovo Array**	**4.19**	**357**	⇓Sn	**Sb**	**20 58 24.3**	**-0.2**
	0.3nm,0.4s							
ZAA0				⇓Lg	Lg	20 58 46.8		
	0.8nm,0.5s							
KURK	**Kurchatov**	**4.31**	**285**	⇑Lg	Lg	20 58 41.3		
	7.8nm,0.7s							
KURBB	**Kurchatov Arra**	**4.35**	**284**	⇑Lg	Lg	20 58 43.4		
	23nm,0.6s							

*IDC **25** 20:57:14.6±1.6, 41˚.40N×19˚.38E, h0km, mb3.8/6, mbtmp3.6/11, ML2.9/4, Error ellipse: s-maj=22.5km s-min=13.4km az=25.0*
*SKO **25** 20:57:16.9, 41˚.40N×19˚.35E, h0km, ML3.4*
*NEIC **25** 20:57:17.0±2.3, 41˚.45N±0˚.04×19˚.54E±0˚.08, h10km±1km, mb4.2/6, Error ellipse: s-maj=10.0km s-min=7.2km az=280.0*
*TIR **25** 20:57:17.6, 41˚.56N×19˚.47E, h66km±2km, Ml3.6/6*
*BEO **25** 20:57:18.9±0.5, 41˚.42N×19˚.49E, h9km±2km, ML3.2/12*

ISC 25 20:57:17.5±1.0, 41˚.41'N±0˚.02×19˚.48'E±0˚.02, h18km±5km, n164, σ1§70/213, mb4.2/7, 30C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**101**	⇓Pg	**Pg**	**20 57 23.6**	**-0.4**
TIR				Sg	**Sg**	**20 57 28.2**	**-0.2**
TIR				AML	AML	20 57 28.4	
	12nm,0.2s						
TIR	**Tirane**	**0.30**	**101**	⇓Pg	**Pg**	**20 57 23.6**	**-0.4**
TIR	**Tirane**	**0.30**	**101**	*i* Pg	**Pg**	**20 57 23.6**	**-0.4**
TIR				*i* Sg	**Sg**	**20 57 28.6**	**+0.2**
SDA	**Shkodra**	**0.65**	**1**	⇑Pg	**Pg**	**20 57 30.6**	**+0.3**
SDA				Sg	**Sn**	**20 57 42.0**	**+0.5**
SDA	**Shkodra**	**0.65**	**1**	Pg	**Pg**	**20 57 30.5**	**+0.3**
SDA				Sg	**Sn**	**20 57 42.3**	**+0.7**
PHP	**Peshkopia**	**0.77**	**69**	⇑Pg	**Pb**	**20 57 31.5**	**-0.9**
PHP				Sg	**Sn**	**20 57 45.3**	**+0.5**
PHP				AML	AML	20 57 47.8	
	9.3nm,0.5s						
PHP	**Peshkopia**	**0.77**	**69**	⇑Pg	**Pb**	**20 57 31.5**	**-0.9**
PHP				Sg	**Sn**	**20 57 44.6**	**-0.2**
PHP				AML	AML	20 57 47.8	
	9.3nm,0.5s						
DRME	**Dracevica, Mon**	**0.81**	**344**	*e*Pg	**Pg**	**20 57 33.8**	**+0.5**
VLO	**Vlora**	**0.94**	**179**	⇑Pg	**Pn**	**20 57 37.9**	**+2.1**
VLO				Sg	**Sn**	**20 57 51.3**	**+2.7**
VLO				AML	AML	20 57 57.1	
	12nm,0.5s						
VLO	**Vlora**	**0.94**	**179**	⇑Pg	**Pn**	**20 57 37.8**	**+2.1**
VLO				Sg	**Sn**	**20 57 52.4**	**+3.7**
VLO				AML	AML	20 57 57.1	
	12nm,0.5s						
PDG	**Podgorica**	**1.04**	**351**	⇓Pg	**Pn**	**20 57 37.4**	**+0.3**
PDG	**Podgorica**	**1.04**	**351**		**Pb**	**20 57 36.7**	**-0.2**
PDG	**Podgorica**	**1.04**	**351**	⇓P	**Pn**	**20 57 37.4**	**+0.3**
PDG	**Podgorica**	**1.04**	**351**	*e*Pg	**Pb**	**20 57 37.4**	**+0.3**
OHR	**Ohrid**	**1.04**	**106**	*i* Pg	**Pb**	**20 57 37.1**	**+0.2**
OHR				*i* Sg	**Sn**	**20 57 53.8**	**+2.5**
OHR				*e*Lg	Lg	20 57 54.1	
	comp=N,815nm,0.7s						
OHR				*e*Lg	Lg	20 57 55.9	
	comp=E,552nm,0.4s						
PVY	**Plav**	**1.24**	**17**	*e*Pg	**Pn**	**20 57 40.2**	**+0.1**
KBN	**Korca**	**1.26**	**128**	⇑Pg	**Pg**	**20 57 41.4**	**-0.5**
KBN				Sg	**Sg**	**20 57 58.8**	**+0.4**
KBN	**Korca**	**1.26**	**128**	P	**Pg**	**20 57 41.8**	**0.0**
KBN				S	**Sg**	**20 57 59.6**	**+1.3**
KBN				AML	AML	20 58 06.0	
	comp=E,2.2nm,0.4s						
KOME	**Kolasin**	**1.44**	**1**	*e*Pg	**Pb**	**20 57 44.5**	**+0.6**
BEY	**Berane**	**1.50**	**12**	*e*Pg	**Pb**	**20 57 45.4**	**+0.6**
NEST	**Nestorio**	**1.55**	**129**	⇓Pn	**Pb**	**20 57 46.3**	**+0.6**
NEST				Sn	**Sg**	**20 58 06.9**	**-0.6**
NEST				AML	AML	20 58 13.1	
	comp=E,1.6nm,0.4s						
NEST	**Nestorio**	**1.55**	**129**	⇓Pn	**Pb**	**20 57 46.3**	**+0.6**
NEST				Sn	**Sg**	**20 58 07.8**	**+0.3**
NEST				AML	AML	20 58 13.1	
	comp=E,1.6nm,0.4s						
TREB	**Trebinje**	**1.56**	**328**	*e*Pn	**Pb**	**20 57 46.0**	**+0.2**
TREB	**Trebinje**	**1.56**	**328**	*e*Pg	**Pb**	**20 57 46.2**	**+0.4**
SKO	**Skopje**	**1.57**	**68**	*i* Pg	**Pg**	**20 57 47.5**	**-0.3**
SKO				*i* Sg	**Sg**	**20 58 09.2**	**+0.9**
KEK	**Kerkira**	**1.71**	**172**	⇓Pn	**Pg**	**20 57 52.1**	**+1.8**
KEK	**Kerkira**	**1.71**	**172**		**Pg**	**20 57 51.4**	**+1.1**
KLINJ	**Klinje**	**1.88**	**340**	*e*Pn	**Pb**	**20 57 50.9**	**-0.5**
SJES	**Sjenica**	**1.89**	**11**	*e*Pn	**Pb**	**20 57 52.7**	**+1.2**
SJES				*e*Sg	**Sg**	**20 58 18.4**	**0.0**
PLE	**Pljevlja**	**1.92**	**358**	*e*Pn	**Pb**	**20 57 53.2**	**+1.1**
NOCI	**Noci**	**1.93**	**252**	⇑Pn	**Pn**	**20 57 50.1**	**+0.8**
NOCI				Sn	**Sb**	**20 58 14.9**	**-0.9**
NOCI				AML	AML	20 58 19.4	
NOCI	**Noci**	**1.93**	**252**	⇑Pn	**Pn**	**20 57 50.1**	**+0.8**
NOCI				Sn	**Sb**	**20 58 15.8**	**+0.1**
NOCI				AML	AML	20 58 22.5	
	comp=E,2.2nm,0.5s						
STON	**Ston**	**1.97**	**319**	*e*Pn	**Pb**	**20 57 51.7**	**-1.2**
IGT	**Igoumenitsa**	**1.98**	**161**	⇑Pn	**Pb**	**20 57 52.4**	**-0.6**
IGT				Sn	**Sb**	**20 58 18.4**	**+1.1**
IGT	**Igoumenitsa**	**1.98**	**161**	⇑Pn	**Pb**	**20 57 52.5**	**-0.6**
IGT				Sn	**Sg**	**20 58 19.8**	**-1.5**
SELS	**Selova**	**2.18**	**33**	*e*Pn	**Pb**	**20 57 55.1**	**-1.4**
SELS				*e*Sn	**Sb**	**20 58 23.1**	**-0.1**
RUDO	**Rudo**	**2.21**	**358**	*e*Pn	**Pb**	**20 57 55.5**	**-1.5**
RUDO	**Rudo**	**2.21**	**358**	*e*Pn	**Pb**	**20 57 56.1**	**-0.9**
IVAS	**Ivanjica**	**2.23**	**13**	*e*Pn	**Pb**	**20 57 55.7**	**-1.5**
IVAS				*e*Sn	**Sb**	**20 58 24.8**	**+0.3**
MATE	**Matera**	**2.23**	**251**	⇑P	**Pn**	**20 57 54.8**	**+1.2**
VAY	**Valandovo**	**2.33**	**91**	*i* Pn	**Pn**	**20 57 56.7**	**+1.8**
GOCS	**Kraljevo Serbi**	**2.39**	**25**	*e*Pn	**Pn**	**20 57 58.0**	**+2.2**
GOCS				*e*Sn	**Sb**	**20 58 27.8**	**-1.4**
BBLS	**Lazi&#263i**	**2.46**	**359**	*e*Pn	**Pb**	**20 57 59.5**	**-1.7**
BBLS				*e*Sn	**Sb**	**20 58 30.6**	**-0.6**
KNT	**Kendrikon**	**2.59**	**94**	*i* Pn	**Pn**	**20 58 00.4**	**+1.9**
GRUS	**Gruza**	**2.64**	**20**	*e*Pn	**Pn**	**20 58 01.6**	**+2.4**
THL	**Klokotos Trika**	**2.67**	**133**	P	**Pn**	**20 58 01.1**	**+1.5**
DIVS	**Divibare**	**2.72**	**8**	*e*Pn	**Pn**	**20 58 02.3**	**+2.0**
ACER	**Acerenza**	**2.74**	**258**		**Pn**	**20 58 02.4**	**+1.8**
THE	**Thessaloniki**	**2.75**	**105**	Pn	**Pn**	**20 58 02.0**	**+1.3**
THE	**Thessaloniki**	**2.75**	**105**	*i* Pn	**Pn**	**20 58 02.1**	**+1.5**
LKD2	**Lefkada island**	**2.77**	**161**	⇓Pn	**Pn**	**20 58 01.9**	**+1.0**
BOVS	**Bovan**	**2.77**	**36**	⇑P	**Pn**	**20 58 03.0**	**+2.0**
BOVS	**Bovan**	**2.77**	**36**	*e*Pn	**Pn**	**20 58 03.0**	**+2.0**
BOVS				*e*Sn	**Sn**	**20 58 35.0**	**+1.0**
KKB	**Krupnik**	**2.77**	**80**	*i* Pn	**Pn**	**20 58 03.3**	**+2.3**
SGRT	**San Giovanni R**	**2.82**	**278**	Pn	**Pn**	**20 58 02.8**	**+1.1**
SGRT				Sn	**Sn**	**20 58 35.9**	**+0.5**
SGRT				AML	AML	20 58 39.4	
	comp=E,0.4nm,0.3s						
SGRT	**San Giovanni R**	**2.82**	**278**	⇑Pn	**Pn**	**20 58 02.9**	**+1.1**
SGRT				Sn	**Sn**	**20 58 36.8**	**+1.4**
SGRT				AML	AML	20 58 39.4	
	comp=E,0.4nm,0.3s						
SGRT	**San Giovanni R**	**2.82**	**278**		**Pn**	**20 58 01.9**	**+0.1**
TRUS	**Trudelj**	**2.90**	**13**	*e*Pn	**Pn**	**20 58 05.2**	**+2.5**
SOH	**Sokhos**	**2.99**	**100**	*i* Pn	**Pn**	**20 58 05.7**	**+1.8**
ZAPS	**Zavoj**	**2.99**	**50**	*e*Pn	**Pn**	**20 58 06.8**	**+2.7**
ZAPS				*e*Sn	**Sn**	**20 58 42.7**	**+3.2**
TIP	**Timpagrande**	**3.04**	**224**	P	**Pn**	**20 58 05.7**	**+0.9**
TIP	**Timpagrande**	**3.04**	**224**		**Pn**	**20 58 05.4**	**+0.6**
TIP	**Timpagrande**	**3.04**	**224**	⇑P	**Pn**	**20 58 05.4**	**+0.6**
VTS	**Vitosha**	**3.05**	**65**	*e*Pn	**Pn**	**20 58 07.1**	**+2.1**
SRS	**Serrai**	**3.12**	**94**	*i* Pn	**Pn**	**20 58 07.4**	**+1.7**
CUC	**Castrocucco**	**3.12**	**244**	Pn	**Pn**	**20 58 08.1**	**+2.2**
CUC				Sn	**Sn**	**20 58 42.8**	**+0.1**
CUC	**Castrocucco**	**3.12**	**244**		**Pn**	**20 58 07.5**	**+1.7**
TEKS	**Tekeris**	**3.14**	**1**	*e*Pn	**Pn**	**20 58 07.8**	**+1.7**
TEKS				*e*Sn	**Sn**	**20 58 44.4**	**+1.2**
ZAGS	**Zajecar**	**3.15**	**39**	*e*Pn	**Pn**	**20 58 08.4**	**+2.2**
ZAGS				*e*Sn	**Sn**	**20 58 45.5**	**+2.2**
MMB	**Musomishta**	**3.21**	**86**	*i* Pn	**Pn**	**20 58 09.4**	**+2.3**
BORS2	**Bor- Borsko je**	**3.27**	**34**	*e*Pn	**Pn**	**20 58 08.7**	**+0.8**
BORS2				*e*Sn	**Sn**	**20 58 47.2**	**+0.9**
AVAS	**Avala Beograd**	**3.38**	**13**	*e*Pn	**Pn**	**20 58 11.2**	**+1.9**
AVAS				*e*Sn	**Sn**	**20 58 49.7**	**+0.8**
KUBS	**Kucevo**	**3.41**	**27**	*e*Pn	**Pn**	**20 58 10.5**	**+0.7**
KUBS				*e*Sn	**Sn**	**20 58 50.6**	**+0.8**
BLY	**Banja Luka**	**3.74**	**334**	*e*Pn	**Pn**	**20 58 16.4**	**+2.1**
BLY	**Banja Luka**	**3.74**	**334**	⇓P	**Pn**	**20 58 15.2**	**+0.9**
BLY	**Banja Luka**	**3.74**	**334**	*e*Pn	**Pn**	**20 58 16.3**	**+2.0**
MDVR	**Moldovita**	**3.75**	**25**	⇑P	**Pn**	**20 58 15.7**	**+1.2**
MDVR	**Moldovita**	**3.75**	**25**	*e*Pn	**Pn**	**20 58 16.5**	**+2.0**
FRGS	**Fruska Gora**	**3.76**	**4**	*e*Pn	**Pn**	**20 58 16.1**	**+1.5**
FRGS				*e*Sn	**Sn**	**20 58 59.8**	**+1.4**
VRSS	**Vrsac**	**3.95**	**19**	*e*Pn	**Pn**	**20 58 18.9**	**+1.7**
VRSS				*e*Sn	**Sn**	**20 59 03.3**	**+0.2**
PLD	**Plovdiv**	**4.01**	**78**	*e*Pn	**Pn**	**20 58 20.2**	**+2.2**
HERR	**Herculane**	**4.08**	**31**	⇓P	**Pn**	**20 58 21.3**	**+2.3**
CEL	**Celeste**	**4.18**	**222**	Pn	**Pn**	**20 58 19.8**	**-0.6**
SRE	**Strehaia**	**4.25**	**39**	⇓P	**Pn**	**20 58 23.7**	**+2.4**
PLVB	**Pleven**	**4.29**	**61**	⇑P	**Pn**	**20 58 23.7**	**+1.8**
BZS	**Buzias**	**4.49**	**20**	⇓P	**Pn**	**20 58 26.1**	**+1.5**
RDO	**Rodhopi**	**4.57**	**91**	Pn	**Pn**	**20 58 27.1**	**+1.3**
AQU	**L'Aquila**	**4.63**	**284**	*e*Pn	**Pn**	**20 58 28.6**	**+2.0**
GZR	**Gura Zlata**	**4.65**	**30**	⇓P	**Pn**	**20 58 28.1**	**+1.2**
CAMP	**Campotosto**	**4.66**	**286**		**Pn**	**20 58 28.7**	**+1.6**
SURR	**Surduc**	**4.75**	**23**	⇑P	**Pn**	**20 58 29.5**	**+1.3**
MORH	**Mrgy, Hungar**	**4.85**	**353**	*e*Pn	**Pn**	**20 58 31.1**	**+1.6**
MORH	**Mrgy, Hungar**	**4.85**	**353**	⇑P	**Pn**	**20 58 31.1**	**+1.6**
MORH	**Mrgy, Hungar**	**4.85**	**353**	*e*Pn	**Pn**	**20 58 31.2**	**+1.7**
NRCA	**Norcia**	**4.94**	**289**		**Pn**	**20 58 32.7**	**+1.8**
ELND	**Elena**	**4.99**	**70**	⇑P	**Pn**	**20 58 34.2**	**+2.7**
FDMO	**Fiordimonte**	**5.02**	**291**		**Pn**	**20 58 33.5**	**+1.6**
HUMR	**Humele**	**5.10**	**50**	⇑P	**Pn**	**20 58 35.4**	**+2.4**
LOT	**Lotru**	**5.11**	**36**	⇑P	**Pn**	**20 58 34.4**	**+1.2**
SIRR	**Siria**	**5.11**	**17**	*e*Pn	**Pn**	**20 58 34.8**	**+1.7**
BOJS	**Bojanci**	**5.12**	**325**	*e*Pn	**Pn**	**20 58 35.2**	**+1.9**
CESX	**Cesi**	**5.28**	**285**		**Pn**	**20 58 37.5**	**+2.0**
ARR	**Arges**	**5.46**	**42**	⇓P	**Pn**	**20 58 39.8**	**+1.8**
MURB	**Monte Urbino**	**5.48**	**292**		**Pn**	**20 58 40.5**	**+2.2**
CEY	**Cerknica**	**5.68**	**321**	*e*Pn	**Pn**	**20 58 42.8**	**+1.9**
VOIR		**5.72**	**43**	⇑Pn	**Pn**	**20 58 44.0**	**+2.5**
SKDS	**Skadanscina**	**5.74**	**318**	*e*Pn	**Pn**	**20 58 42.9**	**+1.1**
LJU	**Ljubljana**	**5.86**	**324**	*e*Pn	**Pn**	**20 58 45.3**	**+1.9**
DRGR		**5.87**	**22**	⇑P	**Pn**	**20 58 46.2**	**+2.6**
SOKA	**Soboth**	**6.17**	**330**	*e*Pn	**Pn**	**20 58 49.4**	**+1.7**
	comp=E,0.8nm,0.2s						
SOKA				*i* Sn	**Sn**	**20 59 58.2**	**+0.4**
	comp=E,1.2nm,0.4s						
OBKA	**Obir**	**6.22**	**327**	*i* Pn	**Pn**	**20 58 50.2**	**+1.8**
	comp=E,0.9nm,0.1s						
OBKA				*e*Sn	**Sn**	**21 00 00.9**	**+1.9**
	comp=E,5.2nm,0.3s						
MLR	**Muntele Rosu**	**6.23**	**47**	Pn	**Pn**	**20 58 49.9**	**+1.3**
	comp=E,0.8nm,0.3s,baz=157,slow=7.7,SNR=16						
MLR				Sn	**Sn**	**21 00 03.2**	**+3.8**
	comp=E,0.5nm,0.3s,baz=94,slow=18,SNR=1.4						
	comp=E,2.9nm,0.4s						
MLR	**Muntele Rosu**	**6.23**	**47**		**Pn**	**20 58 51.0**	**+2.4**
MLR	**Muntele Rosu**	**6.23**	**47**	⇑P	**Pn**	**20 58 51.0**	**+2.4**
SABO	**M.te Sabotino**	**6.25**	**319**	Pn	**Pn**	**20 58 45.5**	**-3.3**
NEHR	**Nehoiu**	**6.39**	**49**	⇑P	**Pn**	**20 58 53.4**	**+2.7**
OSSC	**Osservatorio P**	**6.45**	**292**	Pn	**Pn**	**20 58 52.9**	**+1.4**
ARSA	**Arzberg**	**6.50**	**335**	Pn	**Pn**	**20 58 51.4**	**-0.7**
PSZ	**Piesteteo**	**6.52**	**2**	Pn	**Pn**	**20 58 52.3**	**-0.2**
CASP	**Castiglione de**	**6.55**	**285**	Pn	**Pn**	**20 58 55.2**	**+2.2**
ICOR	**Ion Corvin**	**6.70**	**63**	⇑P	**Pn**	**20 58 57.2**	**+2.3**
MYKA	**Terra Mystica**	**6.71**	**323**	*i* Pn	**Pn**	**20 58 56.9**	**+1.8**
	comp=E,1.2nm,0.4s						
MYKA				*i* Sn	**Sn**	**21 00 13.2**	**+2.1**
	comp=E,1.8nm,0.3s						
PLOR	**Plostina**	**6.84**	**47**	⇓P	**Pn**	**20 58 59.3**	**+2.3**
VRI	**Vrincioaia**	**6.89**	**47**	⇑P	**Pn**	**20 59 00.4**	**+2.8**
ZCCA	**Zocca**	**6.90**	**298**	Pn	**Pn**	**20 58 58.1**	**+0.3**
TEOL	**Teolo**	**6.92**	**307**		**Pn**	**20 58 59.1**	**+1.0**
CIMO	**Cimolais**	**7.06**	**316**	Pn	**Pn**	**20 59 00.3**	**+0.4**
KECS	**Kecovo**	**7.11**	**5**	*e*P	**Pn**	**20 59 03.3**	**+2.7**
ABTA	**Abfaltersbach**	**7.32**	**319**	*i* Pn	**Pn**	**20 59 05.3**	**+1.7**
	comp=E,0.6nm,0.2s						
ABTA				*i* Sn	**Sn**	**21 00 24.6**	**-1.7**
	comp=E,2.3nm,0.2s						
CTI	**Castel Tesino**	**7.33**	**312**	Pn	**Pn**	**20 59 03.2**	**-0.5**
CFR	**Carcaliu**	**7.36**	**56**	⇑P	**Pn**	**20 59 06.3**	**+2.4**
BURAR	**Bucovina Array**	**7.44**	**32**	Pn	**Pn**	**20 59 09.1**	**+3.9**
BURAR	**Bucovina Array**	**7.44**	**32**	⇑P	**Pn**	**20 59 06.7**	**+1.5**
IDI	**Anoyia**	**7.44**	**143**	Pn	**Pn**	**20 59 04.6**	**-0.6**
	comp=E,4.9nm,0.7s,baz=324,slow=8.7,SNR=1.7						
IDI				Sn	**Sn**	**21 00 22.7**	**-6.4**
	comp=E,0.4nm,0.3s,baz=84,slow=9.2,SNR=2.1						
BUR08	**Bucovina Ar. S**	**7.46**	**31**	Pn	**Pn**	**20 59 09.1**	**+3.7**
BIOA	**Bad Ischl, Aus**	**7.54**	**328**	*i* Pn	**Pn**	**20 59 09.2**	**+2.7**
	comp=E,1.4nm,0.2s						
BIOA				*i* Sn	**Sn**	**21 00 33.7**	**+2.1**
	comp=E,0.8nm,0.2s						
LESA	**Schwarzleotal**	**7.74**	**323**	*e*Pn	**Pn**	**20 59 10.8**	**+1.6**
	comp=E,3.2nm,0.5s						
LESA				*e*Sn	**Sn**	**21 00 35.1**	**-1.3**
	comp=E,2.6nm,0.3s						
TLCR		**7.79**	**58**	⇑P	**Pn**	**20 59 12.5**	**+2.6**
MSSA	**Maissana**	**7.87**	**295**	Pn	**Pn**	**20 59 11.4**	**+0.2**
WTTA	**Wattenberg**	**8.11**	**319**	*i* Pn	**Pn**	**20 59 17.5**	**+3.0**
	comp=E,6.2nm,0.5s						
WTTA				*i* Sn	**Sn**	**21 00 45.6**	**-0.3**
	comp=E,3.7nm,0.5s						
WATA	**Walderalm**	**8.19**	**319**	*i* Pn	**Pn**	**20 59 18.6**	**+3.0**
	comp=E,1.2nm,0.3s						
WATA				*i* Sn	**Sn**	**21 00 47.1**	**-0.6**
	comp=E,2.2nm,0.3s						
SQTA	**Sankt Quirin**	**8.30**	**317**	*i* Pn	**Pn**	**20 59 20.0**	**+3.0**
	comp=E,2.2nm,0.3s						
SQTA				*e*Sn	**Sn**	**21 00 50.0**	**-0.3**
	comp=E,6.7nm,0.8s						
FETA	**Feichten**	**8.42**	**315**	*i* Sn	**Sn**	**21 00 54.5**	**+1.1**
	comp=E,1.3nm,0.4s						
MOTA	**Moosalm**	**8.44**	**318**	*e*Pn	**Pn**	**20 59 21.5**	**+2.6**
	comp=E,1.0nm,0.2s						
MOTA				*i* Sn	**Sn**	**21 00 55.1**	**+1.4**
	comp=E,10nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**8.44**	**311**	Pn	**Pn**	**20 59 21.7**	**+2.6**
GERES	**GERESS Array B**	**8.48**	**333**	Pn	**Pn**	**20 59 18.8**	**-0.7**
	baz=156,slow=14,SNR=4.2						
GERES				Sn	**Sn**	**21 00 53.9**	**-0.9**
	baz=147,slow=25,SNR=1.4						
	comp=E,0.2nm,0.3s						
RETA	**Reutte**	**8.70**	**317**	*i* Sn	**Sn**	**21 00 59.3**	**-0.9**
	comp=E,2.8nm,0.5s						
DAVOX	**Davos/Dischmat**	**8.75**	**311**	Pn	**Pn**	**20 59 23.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=179,slow=18,SNR=1.6						
DAVOX				Sn	**Sn**	**21 01 01.5**	**+0.1**
	comp=E,0.3nm,0.3s,baz=145,slow=22,SNR=1.3						
	comp=E,0.9nm,0.5s						
TUE	**Stuetta**	**8.89**	**308**	Pn	**Pn**	**20 59 26.2**	**+1.1**
DAVA	**Damuels**	**9.04**	**314**	*i* Pn	**Pn**	**20 59 31.6**	**+4.4**
	comp=E,1.0nm,0.4s						
DAVA				*i* Sn	**Sn**	**21 01 09.1**	**+0.5**
	comp=E,2.4nm,0.5s						
SENIN	**Lac Senin/Sane**	**10.09**	**303**	Pn	**Pn**	**20 59 41.7**	**+0.1**
HFS	**Hagfors**	**19.09**	**351**	P	**P**	**21 01 39.4**	**+0.5**
	comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=1.3						
	comp=E,0.6nm,0.6s						
NOA	**NORSAR Array B**	**20.30**	**348**	P	Pn	21 01 53.5	-0.6
	comp=E,0.1nm,0.5s,baz=158,slow=10,SNR=1.8						
EKA	**Eskdalemuir Ar**	**20.37**	**321**	P	**P**	**21 01 52.5**	**-0.4**
	comp=E,0.9nm,0.8s,baz=112,slow=9.1,SNR=3.5						
	comp=E,0.9nm,0.8s						
FINES	**FINESS Array B**	**20.46**	**9**	P	**P**	**21 01 53.4**	**-0.4**
	comp=E,1.1nm,0.5s,baz=178,slow=11,SNR=10						
	comp=E,1.1nm,0.5s						
FIA1	**FINESS Array S**	**20.46**	**9**	P	**P**	**21 01 53.2**	**-0.6**
FIA1				IAmb	IAmb	21 02 13.6	
	comp=Z,14nm,0.9s						
ARTI	**Arti**	**29.17**	**46**	P	**P**	**21 03 15.0**	**-2.5**
BVAR	**Borovoye Array**	**35.75**	**53**	P	**P**	**21 04 15.8**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=266,slow=8.6,SNR=7.7						
	comp=Z,1.2nm,0.8s						
MAKZ	**Makanchi**	**44.16**	**61**	P	**P**	**21 05 23.3**	**-1.7**
MAKZ				IAmb	IAmb	21 05 37.9	
	comp=Z,5.4nm,1.5s						
ZAA0	**Zalesovo Array**	**44.20**	**50**	P	**P**	**21 05 24.1**	**-1.0**
ZAA0				IAmb	IAmb	21 05 25.8	
	comp=Z,2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**44.20**	**50**	P	**P**	**21 05 25.4**	**+0.3**
	comp=Z,2.2nm,0.4s,baz=282,slow=9.0,SNR=13						
	comp=Z,2.2nm,0.4s						
MKAR	**Makanchi Array**	**44.37**	**61**	P	**P**	**21 05 26.8**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=283,slow=7.7,SNR=25						
	comp=Z,1.7nm,0.5s						
EVN	**Everest**	**55.69**	**81**	P	**P**	**21 06 52.0**	**-1.6**
EVN				IAmb	IAmb	21 07 01.9	
	comp=Z,3.1nm,1.2s						
SONM	**Songino Array**	**59.06**	**52**	P	**P**	**21 07 16.9**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=302,slow=6.7,SNR=4.1						
	comp=Z,0.8nm,0.8s						

DJA 25 21:05:23.4±1.1, 0˚.5S±2˚.×12˚.5E±˚, h19km±10km, M3.8/17, mB5.6/2, mb3.9/5, MLv3.7/17, Mw(mB)5.1/2, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.06**	**325**	P	Pb	21 05 41.5	-1.7
GTOI	**Gorontalo**	**1.83**	**300**	P	Pn	21 05 54.7	+0.8
LUWI	**Luwuk**	**1.96**	**248**	P	Pn	21 05 55.7	0.0
LUWI				S	Sb	21 06 21.8	-0.8
SANI	**Sanana**	**2.23**	**141**	P	Pn	21 05 58.9	-0.5
SANI				S	Sn	21 06 24.7	-1.7
MRSI	**Marisa**	**2.76**	**286**	P	Pn	21 06 04.3	-2.3
APSI	**Ampana**	**3.00**	**258**	P	Pn	21 06 11.1	+1.1
NLAI	**Namlea**	**3.85**	**139**	P	Pn	21 06 22.0	+0.4
KDI	**Kendari**	**4.13**	**208**	P	Pn	21 06 25.7	+0.1
MPSI	**Mapaga**	**4.74**	**278**	P	Pn	21 06 34.4	+0.6
TTSI	**Tana Toraja**	**5.49**	**240**	P	Pn	21 06 45.3	+1.0
SPSI	**Sidrap Palu**	**6.04**	**233**	P	Pn	21 06 51.8	0.0
	0.0nm9.1nm,0.5s						
BNSI	**Bone**	**6.05**	**228**	P	Pn	21 06 52.1	+0.1
BKSI	**Bulukumba**	**6.69**	**222**	P	Pn	21 07 00.4	-0.3
BSSI	**Bau Bau, Buton**	**7.10**	**215**	P	Pn	21 07 07.5	+1.1
	7.7nm,0.8s						
EDFI	**Ende, Flores**	**8.88**	**199**	P	Pn	21 07 31.0	+0.1
	4.3nm,1.0s						
SAUI	**Saumlaki**	**10.15**	**139**	P	Pn	21 07 48.8	+0.6

*IDC **25** 21:15:01.8±4.0, 31˚.31N×51˚.07E, h0km, mb3.7/10, mbtmp3.7/14, ML3.7/4, MS2.9/3, Error ellipse: s-maj=79.4km s-min=21.8km az=171.0*
*TEH **25** 21:15:04.3, 31˚.63N×51˚.08E, h5km*
*DSN **25** 21:15:12.5±2.1, 31˚.04N×51˚.22E, h15km, ML3.7/12, Error ellipse: s-maj=27.8km s-min=9.4km az=10.0*
*OMAN **25** 21:15:14.4±0.7, 31˚.25N×51˚.31E, h224km±7km, mb4.5/25, Error ellipse: s-maj=5.0km s-min=4.8km az=42.0*

ISC 25 21:15:04.8±0.5, 31˚.61N±0˚.03×51˚.10E±0˚.04, h10km, n111, σ2§65/139, mb3.8/10, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBRJ	**Brojen**	**0.33**	**25**	Pg	**Pg**	**21 15 11.3**	**-0.2**
ZNGN	**Zangian**	**0.55**	**338**	Pg	**Pg**	**21 15 15.8**	**+0.2**
JHBN	**Jahan bin**	**0.72**	**329**	Pg

SOHO	**SOHO**	**8.86**	**146**	P		**Pn**	**21 17 13.5**	**+0.5**
SOHO				S		**Sn**	**21 18 50.0**	**-2.9**
SOHO	**SOHO**	**8.86**	**146**	*i* P		**Pn**	**21 17 12.0**	**-0.9**
	SNR=7.8							
RAYN	**Ar Rayn**	**9.46**	**213**	P		**Pn**	**21 17 22.6**	**+1.3**
RAYN	**Ar Rayn**	**9.46**	**213**	P		**Pn**	**21 17 21.8**	**+0.5**
ARQ	**Araqi**	**9.54**	**148**	P		**Pn**	**21 17 23.1**	**+0.8**
	SNR=14							
ARQ				S		**Sn**	**21 19 07.1**	**-2.6**
UMZA	**Um Al Zommool**	**9.57**	**157**	P		**Pn**	**21 17 24.2**	**+1.5**
UMZA				S		**Sn**	**21 19 06.2**	**-4.1**
HOQ	**Hoqain**	**9.71**	**144**	P		**Pn**	**21 17 25.9**	**+1.3**
	SNR=6.6							
HOQ				S		**Sn**	**21 19 11.4**	**-2.3**
BSY	**Bisya**	**10.36**	**147**	P		**Pn**	**21 17 34.4**	**+0.9**
BSY				S		**Sn**	**21 19 25.4**	**-4.4**
SMDO	**Samad**	**10.52**	**142**	P		**Pn**	**21 17 35.4**	**-0.4**
SMDO				S		**Sn**	**21 19 30.9**	**-2.9**
	SNR=8.8							
NGCH	**Negor - Chabah**	**10.80**	**123**	P		**Pn**	**21 17 40.2**	**+0.7**
	SNR=38							
ASF	**Jabal al Asfar**	**12.09**	**276**	Pn		**Pn**	**21 17 55.6**	**-1.6**
	2.0nm,0.3s,baz=73,slow=9.8,SNR=8.8							
ASF				Sn		**Sn**	**21 20 06.3**	**-5.8**
	0.4nm,0.3s,baz=86,slow=23,SNR=2.0							
	3.9nm,0.3s							
MHTO	**MHTO**	**12.24**	**148**	P		**Pn**	**21 17 57.5**	**-1.7**
	SNR=7.2							
MHTO				S		**Sn**	**21 20 09.3**	**-6.5**
DOK	**Doka**	**13.22**	**167**	P		**Pn**	**21 18 09.7**	**-3.0**
	SNR=9.5							
DOK				S		**Sn**	**21 20 32.7**	**-7.1**
MMAI	**Mount Meron Ar**	**13.35**	**280**	Pn		**Pn**	**21 18 12.5**	**-2.0**
	0.5nm,0.3s,baz=80,slow=19,SNR=1.7							
	0.3nm,0.3s							
WHFO	**Wadi Hawf**	**13.84**	**169**	P		**Pn**	**21 18 19.4**	**-1.8**
	SNR=36							
WHFO				S		**Sn**	**21 20 49.2**	**-5.9**
EIL	**Elat**	**14.04**	**266**	Pn		**Pn**	**21 18 20.9**	**-2.9**
	0.2nm,0.3s,baz=1.4,slow=10,SNR=1.2							
EIL				LR		LR	21 25 04.2	
	comp=Z,36nm,18.9s,baz=154,slow=43							
	1.5nm,0.6s							
DMTO	**DMTO**	**14.27**	**165**	P		Pn	21 18 22.7	-4.2
	SNR=7.5							
ABTO	**Aybut**	**14.33**	**171**	P		**Pn**	**21 18 25.7**	**-2.3**
	SNR=16							
ABTO				S		**Sn**	**21 20 59.4**	**-7.7**
BRTR	**Keskin Array B**	**16.32**	**305**	Pn		**Pn**	**21 18 55.6**	**+1.4**
	0.1nm,0.3s,baz=128,slow=14,SNR=6.7							
	0.3nm,0.5s							
AKASG	**Malin Array Be**	**25.04**	**326**	P		**P**	**21 20 29.8**	**+0.8**
	0.7nm,0.4s,baz=136,slow=8.9,SNR=6.8							
AKASG				LR		LR	21 32 39.7	
	comp=Z,24nm,18.6s,baz=221,slow=42							
	0.7nm,0.4s							
BVAR	**Borovoye Array**	**25.56**	**28**	P		**P**	**21 20 35.4**	**+1.7**
	0.4nm,0.4s,baz=231,slow=10,SNR=2.4							
	0.4nm,0.4s							
MKAR	**Makanchi Array**	**28.30**	**49**	P		**P**	**21 20 59.1**	**+0.6**
	0.2nm,0.6s,baz=258,slow=8.0,SNR=2.6							
	0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**32.84**	**37**	P		**P**	**21 21 38.5**	**+0.1**
	0.6nm,0.4s,baz=247,slow=8.2,SNR=4.7							
	0.6nm,0.4s							
GERES	**GERESS Array B**	**32.93**	**312**	P		**P**	**21 21 39.6**	**+0.1**
	0.2nm,0.5s,baz=102,slow=7.3,SNR=2.2							
	0.2nm,0.5s							
FINES	**FINESS Array B**	**34.01**	**339**	P		**P**	**21 21 49.1**	**+0.5**
	1.5nm,0.9s,baz=138,slow=8.2,SNR=6.9							
	1.5nm,0.9s							
HFS	**Hagfors**	**37.74**	**330**	P		**P**	**21 22 20.9**	**+0.3**
	1.1nm,0.3s,baz=128,slow=9.6,SNR=16							
HFS				LR		LR	21 38 41.4	
	comp=Z,22nm,19.4s,baz=236,slow=37							
	1.1nm,0.3s							
NOA	**NORSAR Array B**	**39.26**	**330**	P		**P**	**21 22 34.4**	**+1.0**
	0.2nm,0.4s,baz=112,slow=9.5,SNR=3.9							
	0.2nm,0.4s							
ARCES	**ARCESS Array B**	**40.63**	**347**	P		**P**	**21 22 45.0**	**+0.3**
	2.7nm,1.0s,baz=134,slow=6.9,SNR=4.1							
	2.7nm,1.0s							
EKA	**Eskdalemuir Ar**	**44.54**	**319**	P		**P**	**21 23 17.4**	**+0.9**
	1.2nm,0.8s,baz=90,slow=9.1,SNR=3.5							
	1.2nm,0.8s							

DJA 25 21:16:25.7±0.2, 3°S±2°×12°8E±°, h10km, M4.0/14, mB5.0/1, mb4.4/7, MLv3.8/14, Mw(mB)4.3/1, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.61**	**130**	P	Pb	21 16 38.1	-0.4
AAI	**Ambon**	**0.78**	**200**	P	Pg	21 16 40.6	-0.2
AAI				S	Sg	21 16 51.1	+0.2
NLAI	**Namlea**	**1.39**	**258**	P	Pn	21 16 51.4	+0.3
NLAI				S	Sg	21 17 11.7	+1.3
BNDI	**Bandanaira**	**2.12**	**137**	P	Pb	21 17 03.0	-1.3
SANI	**Sanana**	**2.63**	**290**	P	Pn	21 17 06.1	-2.1
SANI				S	Sn	21 17 36.4	-3.8
SWI	**Sorong**	**3.48**	**54**	P	Pn	21 17 18.3	-1.7
FAKI	**Fak Fak**	**3.78**	**90**	P	Pn	21 17 24.5	+0.4
LUWI	**Luwuk**	**5.99**	**288**	P	Pn	21 17 53.5	-1.0
	0.1nm28nm,0.6s						
APSI	**Ampana**	**7.10**	**286**	P	Pn	21 18 10.3	+0.5
BAKI	**Biak**	**7.84**	**77**	P	Pn	21 18 20.1	+0.2
	54nm,1.0s						
SPSI	**Sidrap Palu**	**8.73**	**263**	P	Pn	21 18 33.7	+1.5

KRSC 25 21:17:26.0±1.8, 49°27N×156°85E, h46km±29km, MI3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.49**	**342**	*e*S	Sn	21 18 09.6	+1.0
PAU	**Pauzhetka**	**2.20**	**359**	*e*P	Pn	21 18 02.5	+2.5
PAU				*e*S	Sn	21 18 28.6	+2.5
KDTR	**Khodutka, Kamc**	**2.66**	**17**	*e*P	Pn	21 18 10.2	+3.9
KDTR				*e*S	Sn	21 18 42.2	+4.8
MTVR	**Mutnovka**	**3.33**	**14**	*e*P	Pn	21 18 20.0	+4.3
MTVR				*e*S	Sn	21 18 58.5	+4.5
RUS	**Russkaya**	**3.34**	**18**	*e*P	Pn	21 18 19.0	+3.4
RUS				*e*S	Sn	21 18 57.5	+3.5
GRL	**Gorelyy**	**3.38**	**13**	*e*P	Pn	21 18 20.6	+4.2
GRL				*e*S	Sn	21 19 00.9	+5.7
SDLR	**Sedlovina**	**4.21**	**17**	*e*P	Pn	21 18 31.2	+3.4
KRX	**Arik**	**4.25**	**15**	*e*P	Pn	21 18 32.5	+4.2
KBTR	**Krutoberegovo**	**7.84**	**25**	*e*P	Pn	21 19 20.6	+3.3

*JMA **25** 21:17:24.9±0.2, 28°N±1°×13°0E±°, h37km±2km, MV3.5/17, NEAR AMAMI-OSHIMA ISLAND*
*IDC **25** 21:17:29.3±5.2, 28°20N×130°17E, h35km±46km, mb3.2/4, mbtmp3.5/6, ML3.4/2, MS2.7/1, Error ellipse: s-maj=39.7km s-min=18.7km az=105.0*
ISC 25 21:17:27.6±1.4, 28°10N±0°04×130°28E±0°05, h25km±11km, n21, σ0°69/29, mb3.4/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.35**	**309**	*i* P	Pb	21 17 35.2	-0.1
JZK				*e*S	Sn	21 17 43.0	-0.1
JAM	**Amami Oshima**	**0.67**	**298**	*i* P	Pb	21 17 40.1	-0.6
JAM				S	Sb	21 17 50.3	+0.7
JAMN	**Amaminishikomi**	**0.98**	**279**	P	Pn	21 17 44.9	-0.9
JTK	**Tokunoshima**	**1.22**	**255**	*i* P	Pn	21 17 48.8	-0.2
JTK				*e*S	Sn	21 18 04.8	+0.2
JTAJ	**Takarajima**	**1.41**	**318**	P	Pn	21 17 51.3	-0.4
JTAJ				S	Sn	21 18 09.6	+0.1
JYRO	**Yoronjima**	**1.94**	**237**	P	Pn	21 17 58.9	0.0
JYRO				*e*S	Sn	21 18 22.3	-0.2
JYAK	**Yakushimahirau**	**2.14**	**5**	P	Pn	21 18 02.0	+0.3
JYAK				*e*S	Sn	21 18 27.6	+0.1
JOW	**Kunigami**	**2.18**	**235**	Pn	Pn	21 18 02.4	+0.1
	21nm,0.3s,baz=103,slow=22,SNR=25						
JOW				Sn	Sn	21 18 29.4	+1.0
	21nm,0.3s,baz=113,slow=25,SNR=6.1						
	70nm,0.3s						
JOW	**Kunigami**	**2.18**	**235**	P	Pn	21 18 02.3	+0.1
JIH	**Iheya**	**2.31**	**243**	P	Pn	21 18 03.7	-0.3
JKDJ	**Kitadaitoujima**	**2.33**	**157**	*e*S	Sn	21 18 31.0	-0.9
JMZ	**Minamidaito 2**	**2.42**	**159**	S	Sn	21 18 33.2	-1.1
JNTH	**Nagotoyohara**	**2.55**	**232**	P	Pn	21 18 07.3	-0.1
JNTH				*e*S	Sn	21 18 37.5	0.0
JTN	**Tanegashima 3**	**2.62**	**13**	*e*P	Pn	21 18 09.0	+0.7
JKE	**Kume jima 2**	**3.58**	**241**	*e*P	Pn	21 18 21.4	0.0
JNU	**Nakatsue**	**5.03**	**6**	Pn	Pn	21 18 41.8	+0.3
	1.3nm,0.3s,baz=3.5,slow=8.4,SNR=9.7						
JNU				Sn	Sn	21 19 37.4	-1.5
	baz=237,slow=21						
	18nm,0.8s						
JCJ	**Chichijima**	**10.61**	**93**	LR	LR	21 23 34.3	
	comp=Z,42nm,18.6s,baz=332,slow=34						
MKAR	**Makanchi Array**	**41.70**	**310**	P	**P**	**21 25 13.3**	**-0.9**
	0.3nm,0.9s,baz=96,slow=8.7,SNR=1.6						
	0.3nm,0.9s						
WRA	**Warramunga Arr**	**47.92**	**175**	P	**P**	**21 26 05.1**	**+1.1**
	0.6nm,0.6s,baz=354,slow=7.9,SNR=5.0						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**51.58**	**176**	P	**P**	**21 26 33.2**	**+1.3**
	0.3nm,0.7s,baz=7.4,slow=15,SNR=5.5						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**61.93**	**29**	P	**P**	**21 27 44.6**	**-0.2**
	0.3nm,0.8s,baz=274,slow=8.9,SNR=2.2						
	0.3nm,0.8s						

*NDI **25** 21:27:04.8±2.7, 34°76N×73°14E, h10km, ML3.3, MW3.4*
*IDC **25** 21:27:05.4±1.9, 34°78N×73°71E, h0km, mb3.7/5, mbtmp3.7/10, ML3.4/5, MS3.3/3, Error ellipse: s-maj=48.3km s-min=18.1km az=73.0*
*NNC **25** 21:27:13.3±2.9, 35°09N×72°76E, h0km, mb3.7, mpv3.7, Error ellipse: s-maj=31.5km s-min=22.0km az=110.0*
ISC 25 21:27:07.6±0.8, 34°69N±0°06×73°44E±0°09, h22km, n24, σ2°34/31, mb3.5/4, MS3.3/3, 5C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**2.32**	**148**	*e*P	**Pn**	**21 27 45.7**	**+1.3**
JMU				*e*S	**Sb**	**21 28 16.0**	**-0.8**
JMU				IAML		21 28 20.1	
	comp=E,934nm,0.2s						
JMU				IAML		21 28 20.8	
	comp=N,793nm,0.2s						
ALCI	**Alchi Leh**	**3.13**	**98**	*e*P	**Pn**	**21 27 56.9**	**+1.0**
ALCI				*e*S	**Sb**	**21 28 38.1**	**-2.5**
ALCI				IAML		21 28 44.8	
	comp=N,77nm,0.7s						
ALCI				IAML		21 28 49.7	
	comp=E,71nm,0.5s						
DHRM	**DHARAMSHALA**	**3.41**	**135**	*e*P	**Pn**	**21 28 02.1**	**+2.4**
DHRM				*e*S	**Sn**	**21 28 43.1**	**+3.5**
DHRM				IAML		21 28 46.6	
	comp=N,241nm,0.3s						
DHRM				IAML		21 28 47.4	
	comp=E,383nm,0.3s						
TLWR	**Talawar**	**3.45**	**142**	*e*S	**Sn**	**21 28 44.1**	**+3.9**
SMLA	**Simla**	**4.74**	**138**	*e*P	**Pn**	**21 28 19.6**	**+1.9**
SMLA				*e*S	**Sn**	**21 29 11.7**	**-0.2**
SMLA				IAML		21 29 16.5	
	comp=N,108nm,0.2s						
SMLA				IAML		21 29 18.7	
	comp=E,70nm,0.3s						
KUDL	**Kundal**	**7.03**	**157**	*e*P	**Pn**	**21 28 49.9**	**+0.7**
KUDL				*e*S	**Sn**	**21 30 05.4**	**-3.0**
KUDL				IAML		21 30 08.8	
	comp=N,9.7nm,0.4s						
KUDL				IAML		21 30 10.6	
	comp=E,14nm,0.4s						
LGTI	**Lohaghat**	**7.79**	**130**	*e*P	**Pn**	**21 28 58.6**	**-1.0**
LGTI				*e*S	**Sn**	**21 30 22.3**	**-4.8**
LGTI				IAML		21 30 24.8	
	comp=E,6.6nm,0.8s						
LGTI				IAML		21 30 26.1	
	comp=N,9.0nm,0.3s						
AAK	**Ala-Archa**	**7.97**	**6**	Pn	**Pn**	**21 29 03.1**	**+0.8**
	comp=N,0.6nm,0.3s,baz=193,slow=14,SNR=8.3						
AAK				Sn	**Sn**	**21 30 34.9**	**+3.0**
	comp=N,0.3nm,0.3s,baz=271,slow=22,SNR=1.5						
	comp=N,1.2nm,0.3s						
AAK	**Ala-Archa**	**7.97**	**6**	⇑P	**Pn**	**21 29 06.8**	**+4.5**
	comp=N,0.7nm,0.5s						
AAK				⇑S	**Sn**	**21 30 33.4**	**+1.6**
	comp=N,5.4nm,1.1s						
KK31	**Karatay Array**	**8.70**	**346**	⇑P	**Pn**	**21 29 14.0**	**+1.9**
	comp=N,4.2nm,0.3s,baz=152,slow=11,SNR=161						
KK31				⇑S	**Sn**	**21 30 49.1**	**-0.5**
	comp=N,3.2nm,0.5s,baz=174,slow=22,SNR=9.5						
MKAR	**Makanchi Array**	**13.81**	**26**	Pn	**Pn**	**21 30 20.4**	**-1.6**
	comp=N,0.1nm,0.3s,baz=208,slow=13,SNR=4.6						
	comp=N,0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**16.35**	**12**	Pn	**Pn**	**21 30 53.9**	**-1.6**
	comp=N,0.1nm,0.3s,baz=213,slow=10,SNR=5.2						
	comp=N,0.7nm,0.3s						
AB31	**Akbulak array**	**17.64**	**330**	P	**Pn**	**21 31 11.3**	**-0.4**
	comp=N,0.4nm,0.5s,baz=140,slow=12,SNR=14						
AB31				S	**Sn**	**21 34 22.2**	**-5.3**
	comp=N,0.3nm,0.4s,baz=143,slow=25,SNR=4.2						
BVAR	**Borovoye Array**	**18.45**	**354**	P	**Pn**	**21 31 22.4**	**+0.7**
	comp=N,0.1nm,0.3s,baz=187,slow=13,SNR=5.2						
	comp=N,1.0nm,0.4s						
AKTO	**Aktyubinsk**	**19.34**	**329**	P	**Pn**	**21 31 33.2**	**+0.7**
	comp=N,0.3nm,0.3s,baz=124,slow=13,SNR=6.2						
	comp=N,1.4nm,0.5s						
AKTO	**Aktyubinsk**	**19.34**	**329**	⇑P	**Pn**	**21 31 32.7**	**+0.2**
	comp=N,2.1nm,1.1s						
ZALV	**Zalesovo Beam**	**20.85**	**19**	P	**P**	**21 31 46.1**	**-1.6**
	comp=N,2.8nm,0.4s,baz=213,slow=9.4,SNR=21						
	comp=N,2.8nm,0.4s						
SONM	**Songino Array**	**27.80**	**52**	P	**P**	**21 32 54.4**	**-0.7**
	comp=N,0.5nm,0.5s,baz=262,slow=11,SNR=1.4						
	comp=N,0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**27.84**	**119**	P	**P**	**21 32 56.4**	**+0.8**
	comp=N,1.0nm,0.9s,baz=303,slow=11,SNR=7.6						
	comp=N,1.0nm,0.9s						
MJAR	**Matsushiro Arr**	**51.77**	**68**	LR	LR	21 58 19.7	
	comp=N,21nm,18.2s,baz=232,slow=36						
ASAJ	**Asahikawa**	**52.82**	**58**	LR	LR	22 01 25.3	
	comp=N,40nm,18.5s,baz=150,slow=39						
KAPI	**Kappang**	**58.81**	**123**	LR	LR	22 05 25.1	
	comp=N,24nm,20.0s,baz=78,slow=39						
WRA	**Warramunga Arr**	**79.34**	**123**	P	**P**	**21 39 12.0**	**+0.1**
	comp=N,0.3nm,0.6s,baz=328,slow=5.4,SNR=1.9						
	comp=N,0.3nm,0.6s						
ASAR	**Alice Springs**	**81.59**	**126**	P	**P**	**21 39 24.1**	**+0.3**
	comp=N,0.2nm,0.6s,baz=317,slow=5.1,SNR=4.2						
	comp=N,0.2nm,0.6s						

*CATAC **25** 21:46:35.8±0.7, 10°N±3°×8°6W±°, h9km±4km, M3.1/8, MLv3.1/8, Error ellipse: s-maj=8.5km s-min=5.2km az=47.2, confirmed*
*UCR **25** 21:46:36.6±0.8, 10°39N×86°29W, h23km±6km, MW3.6*
ISC 25 21:46:37.7±2.0, 10°34N±0°06×86°26W±0°09, h23km, n35, σ1°11/37, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SACU	**Santa Cruz**	**0.67**	**97**	*e*P	**Pb**	**21 46 50.0**	**-0.7**
DELF	**Filadelfia**	**0.70**	**81**	*e*P	**Pb**	**21 46 50.6**	**-0.7**
DELF				*e*S	**Sb**	**21 47 01.2**	**+0.6**
JUD3	**Juan Diaz 3**	**0.73**	**104**	*e*P	**Pb**	**21 46 50.8**	**-1.0**
ALIBA	**Liberia Airpor**	**0.75**	**70**	*e*P	**Pb**	**21 46 51.8**	**-0.3**
ELI1	**Hacienda Flor**	**0.76**	**66**	P	**Pb**	**21 46 52.3**	**0.0**
ELI1	**Hacienda Flor**	**0.76**	**66**	S	**Sn**	**21 47 04.4**	**+0.6**
ELI1	**Hacienda Flor**	**0.76**	**66**	*e*P	**Pb**	**21 46 52.2**	**0.0**
CMARA	**Lajas Hojancha**	**0.88**	**111**	S	**Sn**	**21 47 08.1**	**+1.1**
CMARA	**Lajas Hojancha**	**0.88**	**111**	P	**Pb**	**21 46 54.4**	**-0.1**
CMARA	**Lajas Hojancha**	**0.88**	**111**	*e*P	**Pb**	**21 46 54.3**	**-0.1**
LAPC	**Finca la Perla**	**0.92**	**62**	*e*P	**Pb**	**21 46 53.7**	**-1.3**
GPS2	**Hotel Rincn d**	**0.98**	**65**	*e*P	**Pn**	**21 46 54.9**	**-1.3**
VRLE	**La Escondida,**	**0.99**	**63**	*e*P	**Pn**	**21 46 54.8**	**-1.4**
GPS1	**Guardaparques**	**0.99**	**64**	*e*P	**Pn**	**21 46 55.0**	**-1.4**
BAGA	**Bagaces**	**1.00**	**79**	*e*P	**Pn**	**21 46 53.5**	**-2.8**
BUAI	**Buenos Aires**	**1.06**	**60**	*e*P	**Pn**	**21 46 56.4**	**-0.8**
PEJA	**Penjamo Buenos**	**1.08**	**59**	*e*P	**Pn**	**21 46 57.1**	**-0.4**
CARN	**Rivas**	**1.11**	**41**	P	**Pn**	**21 46 56.3**	**-1.6**
CARN				S	**Sn**	**21 47 13.7**	**+1.2**
CARN	**Rivas**	**1.11**	**41**	*e*P	**Pn**	**21 46 56.1**	**-1.8**
MESS	**Mesas**	**1.12**	**69**	*e*P	**Pn**	**21 46 56.8**	**-1.3**
CUI	**Cuipilapa**	**1.12**	**74**	*e*P	**Pn**	**21 46 57.1**	**-1.0**
VMAR	**Armenia, Volca**	**1.22**	**67**	*e*P	**Pn**	**21 46 58.6**	**-0.8**
JCR1	**Jicaral**	**1.23**	**113**	*e*P	**Pn**	**21 46 58.7**	**-0.9**
TIMP	**Tierras Morena**	**1.25**	**79**	*e*P	**Pn**	**21 46 59.4**	**-0.4**
JTS	**Las Juntas de**	**1.29**	**92**	S	**Sb**	**21 47 19.5**	**+2.1**
JTS	**Las Juntas de**	**1.29**	**92**	*e*P	**Pn**	**21 46 59.8**	**-0.5**
JAPN	**Al SSO del Vol**	**1.31**	**26**	P	**Pb**	**21 47 00.9**	**-0.7**
TENO	**El Achiote**	**1.31**	**74**	*e*P	**Pn**	**21 46 59.2**	**-1.5**
MORN	**Al O del Volca**	**1.34**	**27**	P	**Pn**	**21 47 00.9**	**-0.2**
CONN	**Concepcion**	**1.37**	**27**	P	**Pn**	**21 47 01.0**	**-0.4**
ARE1	**Arenal 1**	**1.52**	**85**	*e*P	**Pn**	**21 47 03.5**	**-0.1**
SOCE	**Pocosol**	**1.62**	**88**	P	**Pb**	**21 47 06.1**	**-0.8**
SOCE	**Pocosol**	**1.62**	**88**	S	**Sb**	**21 47 28.3**	**+1.3**
COPN	**Copaltepe**	**1.86**	**350**	P	**Pn**	**21 47 08.0**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.17**	**15**	P	**Pn**	**21 47 12.2**	**-0.3**

*IDC **25** 21:47:40.3±0.8, 26°21N×126°11E, h0km, mb3.8/12, mbtmp3.8/13, ML3.4/1, MS3.1/9, Error ellipse: s-maj=23.9km s-min=18.6km az=40.0*
*JMA **25** 21:47:42.7±0.1, 26°N±3°×12°6E±°, h66km, MV3.3/19, NEAR OKINAWAJIMA ISLAND*
*NEIC **25** 21:47:43.1±1.6, 26°2N±0°1×126°09E±0°09, h10km±1km, mb4.6/22, Error ellipse: s-maj=23.1km s-min=11.1km az=160.0*
ISC 25 21:47:44.1±0.8, 25°6N±0°1×126°27E±0°08, h50km, n71, σ1°09/60, mb4.1/24, MS3.2/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.87**	**33**	P	**Pn**	**21 47 59.3**	**-0.7**
JIKM	**Ikemajima**	**1.14**	**234**	P	**Pn**	**21 48 02.9**	**-0.7**
JIKM				*e*S	**Sn**	**21 48 19.4**	**+1.3**
JOGS	**Gusukube**	**1.14**	**223**	*e*P	**Pn**	**21 48 03.5**	**-0.2**
JOGS				*e*S	**Sn**	**21 48 18.6**	**+0.4**
JMJ2	**Miyako jima3**	**1.20**	**225**	*e*P	**Pn**	**21 48 03.3**	**-1.2**
JIRB	**Irabujima**	**1.25**	**233**	*e*P	**Pn**	**21 48 04.0**	**-1.1**
JAGN	**Aguni-jima**	**1.33**	**41**	*e*P	**Pn**	**21 48 06.1**	**-0.1**
JJT3	**Tamagusuku3**	**1.48**	**68**	*e*P	**Pn**	**21 48 09.2**	**+0.9**
JTJ	**Tarama**	**1.70**	**237**	*e*P	**Pn**	**21 48 10.3**	**-1.1**
JIH	**Iheya**	**2.10**	**46**	*e*P	**Pn**	**21 48 16.2**	**-0.6**
JOW	**Kunigami**	**2.19**	**55**	Pn	**Pn**	**21 48 17.0**	**-1.0**
	19nm,0.3s,baz=242,slow=13,SNR=13						
JOW				Sn	**Sn**	**21 48 43.8**	**-0.2**
	27nm,0.3s,baz=301,slow=19,SNR=7.0						
	43nm,0.3s						
JOW	**Kunigami**	**2.19**	**55**		**Pn**	**21 48 17.2**	**-0.8**
JOW	**Kunigami**	**2.19**	**55**	*e*P	**Pn**	**21 48 17.6**	**-0.5**
JYRO	**Yoronjima**	**2.43**	**53**	*e*P	**Pn**	**21 48 20.9**	**-0.3**
JOKE	**Okinoerabujima**	**2.72**	**49**	*e*P	**Pn**	**21 48 24.6**	**-0.7**
JAMN	**Amaminishikomi**	**3.71**	**44**	*e*P	**Pn**	**21 48 38.2**	**-0.6**
JAM	**Amami Oshima**	**4.09**	**46**	*e*P	**Pn**	**21 48 42.2**	**-2.0**
NACB	**Ninganchiao**	**4.47**	**253**	Pn	**Pn**	**21 48 47.9**	**-1.4**
JMZ	**Minamidaito 2**	**4.48**	**86**	*e*P	Pn	21 48 43.0	-6.4
JMZ				*e*S	Sn	21 49 27.6	-13
YHNB	**Yeheng**	**4.53**	**259**	Pn	**Pn**	**21 48 52.1**	**+1.9**
JKDJ	**Kitadaitoujima**	**4.55**	**84**	*e*P	Pn	21 48 44.5	-6.0
JKDJ				*e*S	Sn	21 49 29.7	-12
YULB	**Yu-ii**	**5.03**	**245**	Pn	**Pn**	**21 48 53.1**	**-3.9**
SSLB	**Suanglung**	**5.15**	**251**	Pn	**Pn**	**21 48 56.6**	**-2.2**
TPUB	**Ta-pu**	**5.62**	**247**	Pn	**Pn**	**21 49 07.5**	**+2.4**
JNU	**Nakatsue**	**8.51**	**27**	LR	LR	21 53 01.9	
	comp=Z,80nm,18.5s,baz=180,slow=40						
MJAR	**Matsushiro Arr**	**14.95**	**40**	Pn	Pn	21 51 06.4	-5.8
DAV	**Davao City (W)**	**18.43**	**182**	LR	LR	21 58 39.2	
	comp=Z,36nm,20.9s,baz=31,slow=35						
CMAR	**Chiang Mai Arr**	**26.27**	**260**	LR	LR	22 04 38.4	
	comp=Z,8.9nm,19.7s,baz=70,slow=39						
MA2	**Magadan**	**38.00**	**20**	LR	LR	22 11 03.1	
	comp=Z,21nm,20.1s,baz=247,slow=37						
MKAR	**Makanchi Array**	**40.66**	**313**	P	**P**	**21 55 18.4**	**-1.1**
	0.6nm,0.4s,baz=102,slow=11,SNR=7.3						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**40.66**	**313**	P	**P**	**21 55 18.7**	**-0.7**
MAKZ	**Makanchi**	**40.87**	**313**	P	**P**	**21 55 21.5**	**+0.3**
ZALV	**Zalesovo Beam**	**41.70**	**324**	P	**P**	**21 55 26.4**	**-1.4**
	0.4nm,0.4s,baz=121,slow=8.1,SNR=4.1						
ZALV				LR	LR	22 14 12.8	
	comp=Z,24nm,19.6s,baz=18,slow=39						
	0.4nm,0.4s						
KURK	**Kurchatov**	**44.08**	**318**	P	**P**	**21 55 46.9**	**-0.2**
KURBB	**Kurchatov Arra**	**44.11**	**317**	P	**P**	**21 55 46.4**	**-0.9**
	0.6nm,0.3s,baz=55,slow=4.9,SNR=1.9						
	0.6nm,0.3s						
AAK	**Ala-Archa**	**45.39**	**305**	LR	LR	22 18 09.1	
	comp=Z,24nm,18.1s,baz=279,slow=41						
WRA	**Warramunga Arr**	**45.94**	**169**	P	P	21 56 10.1	+8.0
	1.0nm,0.6s,baz=351,slow=8.3,SNR=5.5						
	1.0nm,0.6s						
WR8	**Warramunga Arr**	**45.98**	**169**	P	P	21 56 11.4	+8.9
WR8				IAmb	IAmb	21 56 13.9	
	comp=Z,7.5nm,1.4s						
TIXI	**Tiks

ISC 25 22:10:53.5±2.6, 9°83N±0°05×71°60W±0°03, h1km±19km, n11, σ1°15/20, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.95**	**283**	*eP*	**Pn**	**22 11 15.0**	**+1.0**
MCQV				*eS*	**Sn**	**22 11 29.2**	**+1.0**
SOCV	**Socops**	**1.71**	**154**	*eP*	**Pn**	**22 11 24.9**	**+0.5**
SOCV				*eS*	**Sn**	**22 11 47.0**	**+0.1**
CRJC	**Cerrejon, Guaj**	**1.73**	**313**	P	**Pn**	**22 11 25.1**	**+0.3**
CRJC				S	**Sn**	**22 11 46.7**	**-0.9**
URIC	**Uribia, Colomb**	**1.90**	**348**	P	**Pn**	**22 11 26.5**	**-0.6**
URIC				S	**Sg**	**22 11 55.3**	**+0.7**
CAPV	**Capacho**	**2.08**	**200**	*eP*	**Pn**	**22 11 30.7**	**+0.9**
CAPV				*eS*	**Sn**	**22 11 55.4**	**-1.0**
TEPV	**Terepaima**	**2.37**	**87**	*eP*	**Pn**	**22 11 34.6**	**+0.9**
TEPV				*eS*	**Sn**	**22 12 04.4**	**+0.9**
ARGC	**Ariguani, Magd**	**2.61**	**271**	P	**Pb**	**22 11 39.7**	**-1.5**
MAPV	**Macapo**	**3.10**	**90**	*eP*	**Pn**	**22 11 45.0**	**+1.4**
MAPV				*eS*	**Sn**	**22 12 21.1**	**-0.2**
SJCC	**San Jacinto, C**	**3.53**	**271**	P	**Pn**	**22 11 51.6**	**+2.0**
SJCC				S	**Sn**	**22 12 33.0**	**+0.9**
BENV	**Beln**	**3.94**	**88**	*eP*	**Pn**	**22 11 56.4**	**+1.1**
BENV				*eS*	**Sn**	**22 12 40.4**	**-1.9**
PTBC	**PUERTO BERRIO,**	**4.33**	**221**	P	**Pn**	**22 12 00.2**	**-0.3**

JMA ***25*** *22:11:54.6±0.2, 35°.5N±0°.6×14°.1E±°, h37km±1km, MV3.0/32, NEAR CHOSHI CITY*
IDC ***25*** *22:11:58.8±2.6, 34°.50N×138°.66E, h0km, mb3.4/3, mbtmp3.2/4, ML2.0/1, Error ellipse: s-maj=85.5km s-min=24.8km az=82.0*

ISC 25 22:11:55.2±1.4, 35°50N±0°06×141°0E±0°.1, h33km, n17, σ0°80/14, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.46**	**289**	*eP*	**Pn**	**22 12 04.8**	**-0.7**
JSMT				*eS*	**Sn**	**22 12 11.7**	**-0.9**
JIHU	**Itakohorinouch**	**0.60**	**322**	P	**Pn**	**22 12 06.7**	**-0.7**
JIHU				*eS*	**Sn**	**22 12 15.6**	**-0.4**
KTR	**Katsuura**	**0.65**	**238**	*eP*	**Pb**	**22 12 07.6**	**-0.6**
BSO4	**Boso 4**	**0.73**	**227**	*eP*	**Pn**	**22 12 08.8**	**-0.4**
BSO3	**Boso 3**	**0.79**	**209**	P	**Pn**	**22 12 09.6**	**-0.3**
BSO3				*eX*		22 12 21.2	
BSO1	**Boso 1**	**0.84**	**180**	P	**Pn**	**22 12 09.9**	**-0.4**
JYT	**Yasato**	**0.97**	**319**	P	**Pn**	**22 12 11.5**	**-1.0**
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=100,slow=8.4,SNR=17	**2.48**	**296**	Pn	**Pn**	**22 12 34.5**	**+1.1**
MJAR				Sn	**Sn**	**22 13 03.3**	**+0.8**
	0.3nm,0.3s,baz=203,slow=17,SNR=4.6 2.2nm,0.4s						
H11N2	**WAKE ISLAND Hy** baz=309,slow=74	**27.70**	**118**	T	T	22 46 42.7	
H11N1	**WAKE ISLAND Hy** baz=309,slow=74	**27.71**	**118**	T	T	22 46 47.6	
H11N3	**WAKE ISLAND Hy** baz=309,slow=74	**27.72**	**118**	T	T	22 46 46.3	
H11S1	**WAKE ISLAND Hy** baz=312,slow=75,SNR=12	**28.36**	**120**	T	T	22 47 31.3	
H11S3	**WAKE ISLAND Hy** baz=312,slow=75,SNR=9.1	**28.36**	**120**	T	T	22 47 30.1	
H11S2	**WAKE ISLAND Hy** baz=312,slow=75,SNR=5.4	**28.37**	**120**	T	T	22 47 31.3	
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=94,slow=9.0,SNR=2.2 0.1nm,0.4s	**44.66**	**303**	P	**P**	**22 20 05.6**	**+0.9**
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=89,slow=7.6,SNR=5.2 0.4nm,0.5s	**46.69**	**309**	P	**P**	**22 20 21.3**	**+0.7**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=8.8,slow=7.8,SNR=2.3 0.2nm,0.3s	**55.49**	**188**	P	**P**	**22 21 27.1**	**+0.1**

NEIC ***25*** *22:42:19.0±0.5, 19°.7N±0°.1×64°.54W±0°.08, h10km±2km, ML2.6/12, Md3.6/5(RSPR), Error ellipse: s-maj=18.3km s-min=12.5km az=344.0*
RSPR ***25*** *22:42:23.1, 19°.55N×64°.53W, h98km±15km, MD3.6/5*

ISC 25 22:42:22.0±3.1, 19°6N±0°.2×64°50W±0°.08, h27km, n17, σ0°72/21, 5C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUMP	**Col San Antoni**	**1.93**	**222**		**Pn**	**22 42 52.6**	**-0.4**
HUMP					**Sn**	**22 43 17.6**	**+1.2**
HUMP				IAML		22 43 21.8	
	comp=E,32nm,0.2s						
HUMP	**Col San Antoni**	**1.93**	**222**	⇑*eP*	**Pn**	**22 42 53.7**	**+0.7**
HUMP	**Col San Antoni**	**1.93**	**222**	*eS*	**Sb**	**22 43 19.2**	**-0.9**
GCPR	**Guaynabo City**	**1.97**	**230**	Pn	**Pn**	**22 42 52.9**	**-0.6**
ECPR	**Experimental S**	**2.17**	**234**	⇑*eP*	**Pn**	**22 42 56.4**	**+0.1**
ECPR	**Experimental S**	**2.17**	**234**	*eS*	**Sn**	**22 43 20.3**	**+0.6**
AOPR	**Arecibo Observ**	**2.47**	**240**	Pn	**Pn**	**22 42 59.3**	**-1.1**
AOPR				IAML		22 43 24.0	
	comp=N,38nm,3.8s						
AOPR				Sn	**Sn**	**22 43 29.9**	**+0.1**
AOPR	**Arecibo Observ**	**2.47**	**240**	⇑*eP*	**Pn**	**22 43 01.2**	**+0.8**
AOPR	**Arecibo Observ**	**2.47**	**240**	*eS*	**Sn**	**22 43 30.5**	**+0.8**
UUPR	**Utuado, UPR, P**	**2.49**	**238**		**Pn**	**22 43 01.1**	**+0.3**
UUPR					**Sn**	**22 43 30.6**	**+0.4**
UUPR	**Utuado, UPR, P**	**2.49**	**238**	⇑*eP*	**Pn**	**22 43 01.1**	**+0.3**
UUPR	**Utuado, UPR, P**	**2.49**	**238**	*eS*	**Sn**	**22 43 30.6**	**+0.4**
OBIP	**Obispado Ponce**	**2.52**	**233**	Pn	**Pn**	**22 43 00.1**	**-1.1**
OBIP				Sn	**Sn**	**22 43 30.4**	**-0.6**
OBIP				IAML		22 43 37.9	
	comp=N,17nm,1.6s						
OBIP				IAML		22 43 40.0	
	comp=E,18nm,3.9s						
OBIP	**Obispado Ponce**	**2.52**	**233**	⇑*eP*	**Pn**	**22 43 01.6**	**+0.5**
OBIP	**Obispado Ponce**	**2.52**	**233**	*eS*	**Sn**	**22 43 31.8**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.93**	**238**	Pn	**Pn**	**22 43 06.5**	**-0.3**
CRPR				IAML		22 43 29.0	
	comp=E,23nm,1.5s						
CRPR				IAML		22 44 54.6	
	comp=N,31nm,1.4s						
GDHS	**Morne Mazeau,**	**4.21**	**141**	Pn	**Pn**	**22 43 24.4**	**-0.1**

TIR ***25*** *22:51:15.6, 41°.32N×19°.41E, h5km, Ml2.5/3*
BEO ***25*** *22:51:17.7±2.4, 41°.26N×19°.37E, h8km±5km, ML2.2/3*

ISC 25 22:51:16.6±1.3, 41°31N±0°.03×19°41E±0°.04, h1km±14km, n19, σ0°89/25, 2C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.34**	**83**	⇓*Pg*	**Pg**	**22 51 22.9**	**-0.2**
TIR				Sg	**Sg**	**22 51 27.9**	**+0.3**
TIR				AML	AML	22 51 29.1	
	1.5nm,0.3s						
SDA	**Shkodra**	**0.75**	**5**	⇑*Pg*	**Pg**	**22 51 30.1**	**-0.8**
SDA				Sg	**Sg**	**22 51 41.0**	**+0.4**
PHP	**Peshkopia**	**0.86**	**64**	⇑*Pg*	**Pg**	**22 51 31.5**	**-1.6**
PHP				Sg	**Sg**	**22 51 44.6**	**+0.4**
PHP				AML	AML	22 51 48.1	
	0.6nm,0.5s						
DRME	**Dracevica, Mon**	**0.90**	**349**	*ePg*	**Pb**	**22 51 34.5**	**-0.4**
PDG	**Podgorica**	**1.13**	**354**	*ePg*	**Pn**	**22 51 39.1**	**-0.4**
PVY	**Plav**	**1.35**	**17**	*ePg*	**Pg**	**22 51 43.1**	**+0.6**
KOME	**Kolasin**	**1.55**	**3**	*ePg*	**Pg**	**22 51 46.3**	**+0.1**
BEY	**Berane**	**1.60**	**13**	*ePg*	**Pn**	**22 51 45.9**	**-0.2**
TREB	**Trebinje**	**1.62**	**331**	*ePn*	**Pn**	**22 51 45.4**	**-0.8**
TREB				*eSn*	**Sn**	**22 52 07.3**	**-0.4**
NOCI	**Noci**	**1.85**	**255**	Pn	**Pb**	**22 51 50.5**	**-0.7**
NOCI				Sn	**Sg**	**22 52 16.8**	**+0.8**
NOCI				AML	AML	22 52 26.4	
	0.2nm,0.5s						
IGT	**Igoumenitsa**	**1.91**	**158**	Pn	**Pg**	**22 51 52.9**	**-0.2**
IGT				Sn	**Sg**	**22 52 18.9**	**+1.1**
SJES	**Sjenica**	**2.00**	**12**	*ePn*	**Pb**	**22 51 53.3**	**-0.5**
SELS	**Selova**	**2.29**	**33**	*ePn*	**Pn**	**22 51 55.2**	**-0.3**
RUDO	**Rudo**	**2.31**	**359**	*ePn*	**Pb**	**22 51 59.2**	**+0.2**
IVAS	**Ivanjica**	**2.33**	**13**	*ePn*	**Pn**	**22 51 56.9**	**+0.8**
BBLS	**Lazi&#263i**	**2.56**	**360**	*ePn*	**Pn**	**22 52 00.4**	**+1.2**
TRUS	**Trudelj**	**3.01**	**14**	*ePn*	**Pn**	**22 52 07.9**	**+2.6**
ZAGS	**Zajecar**	**3.26**	**39**	*ePn*	**Pn**	**22 52 08.9**	**+0.2**
BLKB	**Belogradchik**	**3.34**	**45**	*ePn*	**Pn**	**22 52 10.5**	**+0.5**

IDC ***25*** *22:56:43.0±1.0, 13°.82N×145°.06E, h133km±5km, mb3.4/8, mbtmp3.8/8, MS2.9/1, Error ellipse: s-maj=40.2km s-min=19.5km az=93.0*

NEIC ***25*** *22:56:44.4±1.8, 13°.8N±0°.1×144°.9E±0°.2, h137km±5km, mb3.9/15, Error ellipse: s-maj=28.3km s-min=8.1km az=117.0*

ISC 25 22:56:42.7±0.7, 13°8N±0°.1×144°8E±0°.2, h125km, n34, σ1°37/28, mb3.8/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.24**	**170**	P	**Pn**	**22 57 03.1**	**+3.1**
	2µm,0.2s,baz=0.0,slow=2.0,SNR=56						
GUMO				S	**Sn**	**22 57 16.4**	**+3.3**
	3µm,0.6s,baz=163,slow=9.4,SNR=6.7						
JOW	**Kunigami**	**20.18**	**312**	LR	LR	23 08 25.1	
	comp=Z,39nm,20.9s,baz=350,slow=34						
H11S3	**WAKE ISLAND Hy** baz=261	**21.50**	**75**	T	T	23 23 37.6	
H11S1	**WAKE ISLAND Hy** baz=261	**21.51**	**75**	T	T	23 23 37.7	
H11S2	**WAKE ISLAND Hy** baz=261	**21.51**	**75**	T	T	23 23 38.2	
H11N1	**WAKE ISLAND Hy** baz=258	**21.91**	**71**	T	T	23 24 38.6	
H11N2	**WAKE ISLAND Hy** baz=258	**21.92**	**71**	T	T	23 24 40.3	
H11N3	**WAKE ISLAND Hy** baz=258	**21.93**	**71**	T	T	23 24 41.0	
MJAR	**Matsushiro Arr** 3.4nm,1.0s,baz=161,slow=9.0,SNR=1.4 3.4nm,1.0s	**23.39**	**346**	P	**P**	**23 01 39.1**	**-1.2**
COEN	**Coen**	**27.65**	**183**	P	**P**	**23 02 16.8**	**-2.0**
COEN				IAmb	IAmb	23 02 37.5	
	comp=Z,4.3nm,1.1s						
WB0	**Warramunga Arr**	**34.92**	**197**	P	**P**	**23 03 22.3**	**-0.3**
WB0				IAmb	IAmb	23 03 33.7	
	comp=Z,1.8nm,0.9s						
WR8	**Warramunga Arr**	**35.07**	**197**	P	**P**	**23 03 22.4**	**-1.4**
WR8				IAmb	IAmb	23 03 45.4	
	comp=Z,1.5nm,1.1s						
WRA	**Warramunga Arr** comp=Z,0.4nm,0.6s,baz=14,slow=8.2,SNR=2.0 comp=Z,0.4nm,0.6s	**35.10**	**197**	P	**P**	**23 03 22.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**36.94**	**211**	P	**P**	**23 03 39.3**	**-0.5**
ASAR	**Alice Springs** comp=Z,0.2nm,0.6s,baz=20,slow=13,SNR=4.4 comp=Z,0.2nm,0.6s	**38.76**	**196**	P	**P**	**23 03 55.6**	**+0.5**
BBOO	**Buckleboo**	**47.12**	**190**	P	**P**	**23 05 01.9**	**-0.3**
HLK	**Haleakala**	**56.43**	**74**	P	**P**	**23 06 10.2**	**-1.8**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.7s,baz=94,slow=8.7,SNR=2.3 comp=Z,0.4nm,0.7s	**61.30**	**316**	P	**P**	**23 06 46.4**	**+1.4**
O18K	**Koktuh Hills**	**63.23**	**29**	P	**P**	**23 06 58.3**	**+0.7**
KURK	**Kurchatov**	**64.38**	**320**	P	**P**	**23 07 04.6**	**-0.6**
KURK				IAmb	IAmb	23 07 06.9	
	comp=Z,1.9nm,0.8s						
KURBB	**Kurchatov Arra** comp=Z,1.3nm,0.7s,baz=104,slow=7.3,SNR=8.3 comp=Z,1.3nm,0.7s	**64.42**	**320**	P	**P**	**23 07 05.4**	**-0.2**
L20K	**Farewell, AK**	**64.72**	**27**	P	**P**	**23 07 08.9**	**+1.6**
L20K				IAmb	IAmb	23 07 33.5	
	comp=Z,5.9nm,1.2s						
IL31		**68.37**	**25**	P	**P**	**23 07 29.5**	**-0.9**
IL31				IAmb	IAmb	23 07 57.1	
	comp=Z,2.5nm,1.1s						
ILAR	**Eielson Array** comp=Z,0.4nm,0.4s,baz=261,slow=6.3,SNR=8.9 comp=Z,0.4nm,0.4s	**68.37**	**25**	P	**P**	**23 07 29.1**	**-1.4**
D24K	**Happy Valley**	**68.83**	**21**	P	**P**	**23 07 33.4**	**+0.2**
D24K				IAmb	IAmb	23 07 42.6	
	comp=Z,1.6nm,1.1s						
J25K	**Salcha River,**	**68.97**	**26**	P	**P**	**23 07 34.0**	**-0.2**
J25K				IAmb	IAmb	23 07 48.8	
	comp=Z,1.6nm,1.1s						
BVAR	**Borovoye Array** comp=Z,1.3nm,0.5s,baz=88,slow=7.4,SNR=7.2 comp=Z,1.3nm,0.5s	**69.72**	**322**	P	**P**	**23 07 40.2**	**+1.2**
BMAR	**Burnt Mountain**	**69.90**	**23**	P	**P**	**23 07 39.6**	**-0.3**
C27K	**Jago River**	**70.70**	**21**	P	**P**	**23 07 45.2**	**+0.6**
L29M	**L29M**	**71.91**	**28**	P	**P**	**23 07 52.8**	**+0.7**
L29M				IAmb	IAmb	23 08 03.5	
	comp=Z,2.0nm,1.1s						
G31M	**Satah River**	**73.81**	**24**	P	**P**	**23 08 03.0**	**-0.2**
R33M	**Jennings River**	**75.28**	**32**	P	**P**	**23 08 13.2**	**+1.2**
FINES	**FINESS Array B** comp=Z,2.0nm,1.0s,baz=61,slow=5.5,SNR=4.3 comp=Z,2.0nm,1.0s	**90.93**	**335**	P	**P**	**23 09 31.6**	**-0.6**
FINES	**FINESS Array B**	**90.93**	**335**	P	**P**	**23 09 31.4**	**-0.8**

IDC ***25*** *22:58:10.1±1.9, 33°.90N×133°.14E, h0km, mb3.3/2, mbtmp3.3/5, ML3.2/3, MS2.6/1, Error ellipse: s-maj=33.5km s-min=12.5km az=155.0*
NIED ***25*** *22:58:11.1, 34°.05N×133°.06E, h15km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.58; $M_{\theta\theta}$1.53; $M_{\phi\phi}$-0.94; $M_{r\theta}$1.01; $M_{\theta\phi}$-3.58; $M_{\phi r}$1.46; Fault plane solution: $M_0$4.21000×10^{14} NP1: ϕ_s263.00000°, δ72.00000°, λ-162.00000°. NP2: ϕ_s168.00000°, δ73.00000°, λ-19.00000°.*
JMA ***25*** *22:58:11.1±0.0, 34°.1N±0°.1×133°.1E±0°.1, h15km, MD3.8/20, MV4.1/20, HIUCHINADA SETONAIKAI*
JMA Felt III J1 at HIUCHINADA SETONAIKA! .

ISC 25 22:58:10.9±1.1, 34°02N±0°.03×133°16E±0°.03, h9km±8km, n27, σ1°45/26, 3D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JET	**Tanbara**	**0.26**	**201**	*i* P	**Pg**	**22 58 17.0**	**+0.9**
JET				*e*S	**Sg**	**22 58 20.6**	**+1.1**
JET	**Tanbara** comp=N,35nm,0.2s,comp=E,33nm,0.3s	**0.26**	**201**	A	A	22 58 17.0	
JKHR	**Kochiharuno** comp=N,10.0nm,0.5s,comp=E,23nm,0.5s	**0.58**	**151**	A	A	22 58 23.5	
JJG	**Jouge**	**0.62**	**360**	*i* P	**Pg**	**22 58 22.7**	**-0.3**
JJG				S	**Sg**	**22 58 30.9**	**-0.2**
JJG	**Jouge** comp=N,5.0nm,0.6s,comp=E,6.0nm,0.4s	**0.62**	**360**	A	A	22 58 22.7	
JMN	**Monobe**	**0.67**	**115**	⇓*i*P	**Pn**	**22 58 25.5**	**-1.0**
JMN				⇓S	**Sn**	**22 58 35.9**	**-1.3**
JMN	**Monobe** comp=N,4.0nm,1.0s,comp=E,4.0nm,0.9s	**0.67**	**115**	A	A	22 58 25.5	
JKU	**Kubokawa**	**0.71**	**186**	*i* P	**Pb**	**22 58 25.4**	**-0.1**
JKU				S	**Sb**	**22 58 35.1**	**-0.2**
JNA	**Nagahama**	**0.73**	**231**	*i* P	**Pg**	**22 58 24.2**	**-0.8**
JJS	**Sakaide**	**0.73**	**61**	*i* P	**Pb**	**22 58 25.6**	**-0.3**
JJS				S	**Sb**	**22 58 36.0**	**0.0**
JJS	**Sakaide** comp=N,5.0nm,0.5s,comp=E,4.0nm,0.7s	**0.73**	**61**	A	A	22 58 25.6	
JHT	**Toyohira**	**0.89**	**317**	⇓*i*P	**Pg**	**22 58 26.2**	**-1.7**
JHT	**Toyohira** comp=N,3.0nm,1.5s,comp=E,4.0nm,0.2s	**0.89**	**317**	A	A	22 58 26.2	
UWA2	**Uwa jima 2**	**0.92**	**209**	*i* P	**Pb**	**22 58 28.5**	**-0.5**
UWA2				S	**Sb**	**22 58 40.5**	**-0.8**
JHS	**Saijyo**	**0.98**	**358**	*i* P	**Pg**	**22 58 28.8**	**-1.0**
JHS				S	**Sg**	**22 58 41.5**	**-1.0**
JHIK	**Hikimi** comp=N,2.0nm,0.3s,comp=E,2.0nm,0.3s	**1.14**	**297**	A	A	22 58 30.7	
JGT2	**ShimaneMisato** comp=N,3.0nm,0.7s,comp=E,3.0nm,6.2s	**1.17**	**333**	A	A	22 58 31.6	
JTO	**Tosashimizu** comp=N,4.0nm,1.2s,comp=E,4.0nm,1.8s	**1.19**	**194**	A	A	22 58 33.0	
JKI	**Kunimi** comp=N,7.0nm,0.6s,comp=E,5.0nm,0.9s	**1.38**	**254**	A	A	22 58 34.7	
JISK	**Izumosakaura** comp=N,6.0nm,0.8s,comp=E,5.0nm,6.0s	**1.50**	**350**	A	A	22 58 37.1	
JBEP	**Beppuamama** comp=N,7.0nm,7.2s,comp=E,9.0nm,0.7s	**1.61**	**245**	A	A	22 58 38.4	
JNU	**Nakatsue** comp=E,44nm,0.3s,baz=38,slow=6.7,SNR=78	**2.10**	**245**	Pn	**Pn**	**22 58 46.1**	**-0.2**
JNU				Sn	**Sn**	**22 59 11.6**	**-1.0**
	comp=E,39nm,0.3s,baz=144,slow=17,SNR=4.4						
JNU				Lg	Lg	22 59 16.0	
	comp=E,40nm,0.3s,baz=141,slow=20,SNR=5.4 comp=E,91nm,0.3s						
MJAR	**Matsushiro Arr** comp=E,0.2nm,0.3s,baz=242,slow=13,SNR=6.5	**4.84**	**57**	Pn	**Pn**	**22 59 26.6**	**+2.7**
MJAR				Pg	**Pg**	**22 59 41.4**	**-2.2**
	comp=E,0.3nm,0.3s,baz=253,slow=15,SNR=10						
MJAR				Sn	**Sn**	**23 00 24.1**	**+4.0**
	baz=218,slow=16						
MJAR				Lg	Lg	23 00 47.3	
	comp=E,0.2nm,0.3s,baz=230,slow=29,SNR=5.7 comp=E,2.3nm,0.4s						
KSRS	**Korea Array** comp=E,0.4nm,0.3s,baz=257,slow=28,SNR=2.2	**5.46**	**310**	Pn	**Pn**	**22 59 34.4**	**+1.9**
KSRS				Pg	**Pg**	**22 59 56.7**	**+1.1**
	comp=E,0.6nm,0.3s,baz=126,slow=17,SNR=5.3						
KSRS				Sn	**Sn**	**23 00 34.3**	**-1.1**
	comp=E,1.4nm,0.3s,baz=128,slow=25,SNR=7.3						
KSRS				Lg	Lg	23 01 08.2	
	baz=52,slow=14 comp=E,1.0nm,0.4s						
MKAR	**Makanchi Array** comp=E,0.3nm,0.6s,baz=90,slow=10,SNR=2.5 comp=E,0.3nm,0.6s	**40.11**	**304**	P	**P**	**23 05 46.5**	**-0.3**
KAPI	**Kappang** comp=E,9.1nm,20.9s,baz=156,slow=38	**40.84**	**201**	LR	LR	23 23 36.2	
KURBB	**Kurchatov Arra** comp=E,0.4nm,0.7s,baz=90,slow=6.5,SNR=1.8 comp=E,0.4nm,0.7s	**42.65**	**310**	P	**P**	**23 06 07.9**	**+0.3**

IDC 25 23:03:33.9±2.0, 7°34S×148°45E, h0km, mb3.6/2, mbtmp3.8/4, ML3.6/1, MS2.5/1, Error ellipse: s-maj=122.0km s-min=24.1km az=123.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 86nm,0.5s,baz=34,slow=9.2,SNR=32	**2.42**	**212**	Pn	Pn	23 04 15.0	+0.3
PMG				LR	LR	23 04 38.7	
	comp=Z,96nm,20.1s,baz=329,slow=27						
PMG				Sn	Sb	23 04 47.6	-1.1
	12nm,0.3s,baz=353,slow=23,SNR=3.8						
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=51,slow=11,SNR=10.0	**18.55**	**226**	P	P	23 07 51.9	-0.5
WRA				S	Sn	23 11 08.9	-12
	0.2nm,0.4s,baz=39,slow=23,SNR=2.5 2.6nm,0.9s						
ASAR	**Alice Springs** 1.1nm,0.5s,baz=55,slow=9.6,SNR=15	**21.41**	**219**	P	P	23 08 23.2	-0.4
ASAR				S	S	23 12 20.7	-1.5
	0.2nm,0.4s,baz=39,slow=27,SNR=2.2 1.1nm,0.5s						
ILAR	**Eielson Array** 0.4nm,0.7s,baz=230,slow=5.1,SNR=4.8 0.4nm,0.7s	**86.14**	**23**	P	P	23 16 16.8	+0.2

SJA ***25*** *23:17:55.9±0.7, 21°.71S×68°.55W, h137km±4km, ML3.9, MW3.8*
NEIC ***25*** *23:17:57.0±1.5, 21°.72S±0°.04×68°.61W±0°.09, h137km±8km, mb4.3/5, ML4.1(GUC), Error ellipse: s-maj=11.5km s-min=6.5km az=88.0*
GUC ***25*** *23:17:56.4±0.8, 21°.72S×68°.55W, h131km±3km, ML4.1*

ISC 25 23:17:56.5±0.9, 21°73S±0°.03×68°59W±0°.06, h138km±7km, n61, σ0°87/85, 7C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.61**	**264**		**Pn**	**23 18 17.5**	**+0.1**
PB09	**IPOC Station P**	**0.61**	**264**	⇑*iP*	**Pn**	**23 18 17.7**	**+0.3**
PB09				*eS*	**Sn**	**23 18 33.2**	**0.0**
PB09	**IPOC Station P**	**0.61**	**264**	*i* P	**Pn**	**23 18 17.0**	**-0.4**
PB09				*i* S	**Sn**	**23 18 33.0**	**-0.2**
PB09				IAML		23 18 35.5	
	comp=Z,812nm,0.5s						
PB01	**IPOC Station P**	**1.08**	**309**	Pn	**Pn**	**23 18 21.1**	**0.0**
PB01				Sn	**Sn**	**23 18 39.5**	**-0.3**
PB01	**IPOC Station P**	**1.08**	**309**	⇑*iP*	**Pn**	**23 18 21.1**	**0.0**
PB01				*eS*	**Sn**	**23 18 39.7**	**-0.1**
PB01				IAML		23 18 41.6	
	comp=E,5µm,0.2s						
PB01	**IPOC Station P**	**1.08**	**309**	*i* P	**Pn**	**23 18 21.0**	**0.0**
PB01				*i* S	**Sn**	**23 18 38.7**	**-1.0**
PB01				IAML		23 18 40.6	
	comp=Z,4µm,0.2s						
PB03	**IPOC Station P**	**1.13**	**254**	Pn	**Pn**	**23 18 21.8**	**+0.3**
PB03				Sn	**Sn**	**23 18 40.7**	**+0.1**
PB03	**IPOC Station P**	**1.13**	**254**	⇑*iP*	**Pn**	**23 18 22.1**	**+0.6**
PB03				*eS*	**Sn**	**23 18 40.6**	**+0.1**
PB03				IAML		23 18 41.1	
	comp=E,2µm,0.3s						
PB03	**IPOC Station P**	**1.13**	**254**	*i* P	**Pn**	**23 18 21.9**	**+0.3**
PB03				*i* S	**Sn**	**23 18 41.3**	**+0.7**
PB03				IAML		23 18 42.2	
	comp=Z,2µm,0.2s						
PB07	**IPOC Station P**	**1.21**	**270**	Pn	**Pn**	**23 18 22.8**	**+0.5**
PB07	**IPOC Station P**	**1.21**	**270**	⇑*iP*	**Pn**	**23 18 22.8**	**+0.5**
PB07				*eS*	**Sn**	**23 18 42.5**	**+0.5**
PB07				IAML		23 18 43.1	
	comp=N,4µm,0.2s						
PB07	**IPOC Station P**	**1.21**	**270**	⇓*iP*	**Pn**	**23 18 22.6**	**+0.3**
PB07				*i* S	**Sn**	**23 18 42.5**	**+0.5**
PB07				IAML		23 18 44.4	
	comp=Z,2µm,0.2s						
AF01	**San Pedro de A**	**1.27**	**163**	Pn	**Pn**	**23 18 23.4**	**+0.3**
AF01	**San Pedro de A**	**1.27**	**163**	⇓*eP*	**Pn**	**23 18 23.3**	**+0.2**
AF01	**San Pedro de A**	**1.27**	**163**	*i* P	**Pn**	**23 18 23.6**	**+0.4**
AF01				IAML		23 19 06.1	
	comp=Z,1µm,1.2s						
PB02	**IPOC Station P**	**1.29**	**288**	Pn	**Pn**	**23 18 23.3**	**+0.3**
PB02				Sn	**Sn**	**23 18 43.2**	**0.0**
PB02	**IPOC Station P**	**1.29**	**288**	⇑*iP*	**Pn**	**23 18 23.5**	**+0.4**
PB02				*eS*	**Sn**	**23 18 43.8**	**+0.5**
PB02				IAML		23 18 45.3	
	comp=E,5µm,0.2s						
PB02	**IPOC Station P**	**1.29**	**288**	*i* P	**Pn**	**23 18 23.4**	**+0.3**
PB02				*i* S	**Sn**	**23 18 42.5**	**-0.8**
PB02				IAML		23 18 45.4	
	comp=Z,6µm,0.4s						
PB06	**IPOC Station P**	**1.33**	**223**	Sn	**Sn**	**23 18 44.7**	**+0.5**
PB06	**IPOC Station P**	**1.33**	**223**	*i* P	**Pn**	**23 18 24.3**	**+0.7**
PB06				*eS*	**Sn**	**23 18 44.5**	**+0.3**
PB06				IAML		23 18 45.7	
	comp=N,2µm,0.5s						
PB06	**IPOC Station P**	**

PB14	**IPOC Station P**	**3.33**	**210**	Pn	**Pn**	**23 18 47.9**	**0.0**
PB14	**IPOC Station P**	**3.33**	**210**	*e*P	**Pn**	**23 18 48.0**	**0.0**
PB14	**IPOC Station P**	**3.33**	**210**	*i* P	**Pn**	**23 18 48.7**	**+0.7**
PB14				IAML		23 19 41.1	
	comp=Z,142nm,0.5s						
PB12	**IPOC Station P**	**3.51**	**332**	Pn	**Pn**	**23 18 49.1**	**-1.0**
PB12	**IPOC Station P**	**3.51**	**332**	*e*P	**Pn**	**23 18 49.2**	**-0.9**
PB12	**IPOC Station P**	**3.51**	**332**	*i* P	**Pn**	**23 18 50.1**	**0.0**
PB12				*i* S	**Sn**	**23 19 31.1**	**-0.5**
PB12				IAML		23 19 50.8	
	comp=Z,145nm,0.6s						
GO02	**Mina Guanaco**	**3.54**	**195**	Pn	**Pn**	**23 18 50.8**	**+0.2**
GO02	**Mina Guanaco**	**3.54**	**195**	⇑*e*P	**Pn**	**23 18 50.7**	**0.0**
GO02				IAML		23 19 59.8	
	comp=N,201nm,0.7s						
GO02	**Mina Guanaco**	**3.54**	**195**	*i* P	**Pn**	**23 18 51.8**	**+1.1**
GO02				IAML		23 20 07.1	
	comp=Z,151nm,0.6s						
AC01	**Pan de Azucar**	**4.77**	**202**	Pn	**Pn**	**23 19 05.3**	**-1.3**
AC02	**Maricunga**	**5.11**	**185**	Pn	**Pn**	**23 19 11.7**	**+0.1**
AC02	**Maricunga**	**5.11**	**185**	IAML		23 20 16.1	
	comp=Z,194nm,0.8s						
LPAZ	**La Paz**	**5.43**	**5**	Pn	**Pn**	**23 19 17.3**	**+1.1**
AC06	**Mina Casimiro**	**5.83**	**196**	Pn	**Pn**	**23 19 18.9**	**-1.9**
GO03	**Copiapo**	**6.03**	**194**	Pn	**Pn**	**23 19 23.1**	**-0.4**
AC04	**Llanos de Chal**	**6.83**	**199**	Pn	**Pn**	**23 19 30.3**	**-3.9**
AC05	**El Transito**	**7.24**	**192**	Pn	**Pn**	**23 19 37.6**	**-2.2**
LCO	**Las Campanas**	**7.50**	**194**	Pn	**Pn**	**23 19 40.2**	**-3.2**
ITAB	**Concordia**	**15.95**	**113**		**P**	**23 21 34.0**	**0.0**
ITAB				IAmb	IAmb	23 22 02.5	
	comp=Z,19nm,1.2s						
MACA	**Manacapuru-AM**	**19.99**	**24**	P	**P**	**23 22 16.8**	**-1.6**
MACA				IAmb	IAmb	23 22 23.1	
	comp=Z,15nm,0.9s						
VAO	**Valinhos**	**20.04**	**98**	P	**P**	**23 22 17.7**	**-1.1**
VAO				IAmb	IAmb	23 22 29.8	
	comp=Z,19nm,1.5s						
BOAV	**Boa Vista**	**25.24**	**19**	P	**P**	**23 23 10.7**	**+0.8**
BELA	**Belgrano 2**	**58.48**	**172**		**P**	**23 27 38.3**	**+0.8**

*SKO **25** 23:24:39.4, 41°.37N× 19°.38E, h0km, ML2.5*
*BEO **25** 23:24:39.9±0.6, 41°.31N× 19°.77E, h0km, ML2.4/4*
*TIR **25** 23:24:39.9, 41°.51N× 19°.48E, h64km±3km, Ml2.9/5*
ISC 25 23:24:39.7±1.2**, 41°.36N**±0°.02×**19°.47E**±0°.03**, h4**km±10km**,**
n30, σ0°.77/44**, 1C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**93**	⇓Pg	**Pg**	**23 24 45.4**	**-0.1**
TIR				Sg	**Sg**	**23 24 50.0**	**+0.7**
TIR				AML	AML	23 24 52.2	
	2.7nm,0.4s						
TIR	**Tirane**	**0.29**	**93**	⇓*i* Pg	**Pg**	**23 24 45.3**	**-0.1**
TIR				*i* Sg	**Sg**	**23 24 50.0**	**+0.7**
SDA	**Shkodra**	**0.69**	**2**	⇓Pg	**Pg**	**23 24 53.2**	**+0.3**
SDA				Sg	**Sb**	**23 25 03.1**	**-0.9**
PHP	**Peshkopia**	**0.79**	**66**	Pg	**Pg**	**23 24 53.5**	**-1.5**
PHP				Sg	**Sb**	**23 25 06.8**	**-0.3**
PHP				AML	AML	23 25 09.6	
	1.2nm,0.7s						
DRME	**Dracevica, Mon**	**0.85**	**345**	*e*Pg	**Pn**	**23 24 57.2**	**-1.2**
VLO	**Vlora**	**0.89**	**179**	⇓Pg	**Pn**	**23 25 00.2**	**+1.3**
VLO				Sg	**Sn**	**23 25 13.1**	**+0.8**
VLO				AML	AML	23 25 17.2	
	2.1nm,0.4s						
OHR	**Ohrid**	**1.03**	**104**	*i* Pg	**Pg**	**23 24 58.9**	**-0.5**
OHR				*i* Sg	**Sn**	**23 25 15.6**	**-0.2**
OHR				*e*Lg	Lg	23 25 16.0	
	comp=N,121nm,0.7s						
OHR				*e*Lg	Lg	23 25 16.6	
	comp=E,86nm,0.6s						
PDG	**Podgorica**	**1.08**	**351**	*e*Pg	**Pn**	**23 25 01.1**	**-0.4**
PDG				*e*Sg	**Sn**	**23 25 18.5**	**+1.6**
KBN	**Korca**	**1.24**	**126**	P	**Pn**	**23 25 03.0**	**-0.8**
KBN				S	**Sn**	**23 25 20.9**	**-1.9**
PVY	**Plav**	**1.28**	**16**	*e*Pg	**Pg**	**23 25 05.5**	**+1.2**
KOME	**Kolasin**	**1.49**	**1**	*e*Pg	**Pg**	**23 25 08.9**	**+0.7**
NEST	**Nestorio**	**1.52**	**128**	⇑Pn	**Pb**	**23 25 08.3**	**-0.2**
NEST				Sn	**Sg**	**23 25 29.2**	**+0.6**
NEST				AML	AML	23 25 34.8	
	comp=E,0.3nm,0.5s						
BEY	**Berane**	**1.54**	**12**	*e*Pg	**Pb**	**23 25 08.7**	**-0.1**
TREB	**Trebinje**	**1.59**	**329**	*e*Pg	**Pg**	**23 25 09.9**	**-0.3**
SKO	**Skopje**	**1.59**	**67**	*i* Pg	**Pg**	**23 25 09.8**	**-0.4**
SKO				*i* Sg	**Sg**	**23 25 31.2**	**+0.3**
NOCI	**Noci**	**1.91**	**253**	Pn	**Pn**	**23 25 12.5**	**-0.5**
NOCI				Sn	**Sb**	**23 25 38.3**	**-0.9**
NOCI				AML	AML	23 25 50.5	
	comp=E,0.3nm,0.3s						
SJES	**Sjenica**	**1.93**	**11**	*e*Pg	**Pb**	**23 25 14.9**	**-0.6**
SJES				*e*Sg	**Sg**	**23 25 42.2**	**+0.4**
IGT	**Igoumenitsa**	**1.94**	**160**	Pn	**Pb**	**23 25 14.6**	**-1.0**
IGT				Sn	**Sb**	**23 25 40.9**	**+0.7**
IGT	**Igoumenitsa**	**1.94**	**160**	*i* Pn	**Pn**	**23 25 13.8**	**+0.4**
STON	**Ston**	**2.00**	**319**	*e*Pn	**Pn**	**23 25 14.3**	**+0.1**
SELS	**Selova**	**2.22**	**33**	*e*Pg	**Pn**	**23 25 18.0**	**+0.7**
SELS				*e*Sg	**Sn**	**23 25 45.7**	**+0.6**
IVAS	**Ivanjica**	**2.27**	**13**	*e*Pn	**Pn**	**23 25 17.6**	**-0.3**
GOCS	**Kraljevo Serbi**	**2.43**	**25**	*e*Pn	**Pn**	**23 25 20.5**	**+0.3**
BBLS	**Lazi&#263i**	**2.50**	**359**	*e*Pn	**Pb**	**23 25 24.0**	**-1.2**
GRUS	**Gruza**	**2.69**	**20**	*e*Pn	**Pb**	**23 25 27.4**	**-0.9**
DIVS	**Divibare**	**2.76**	**8**	*e*Pn	**Pn**	**23 25 24.8**	**+0.1**
TRUS	**Trudelj**	**2.94**	**13**	*e*Pn	**Pn**	**23 25 28.7**	**+1.6**
ZAPS	**Zavoj**	**3.02**	**50**	*e*Pn	**Pn**	**23 25 28.5**	**+0.2**
VTS	**Vitosha**	**3.07**	**65**	*e*Pn	**Pn**	**23 25 29.7**	**+0.6**
ZAGS	**Zajecar**	**3.19**	**39**	*e*Pn	**Pn**	**23 25 30.3**	**-0.2**

*OSUNB **25** 23:27:25.6±0.2, 20°.42S× 43°.92W, h0km, mR3.4/23, Error ellipse: s-maj=1.3km s-min=1.5km az=0.0*
*VAO **25** 23:27:26.0, 20°.43S× 43°.92W, h0km±1km, mbR3.5*
ISC 25 23:27:25.6±0.9**, 20°.41S**±0°.03×**43°.94W**±0°.03**, h5**km±6km**,**
n51, σ1s**24/76, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FABR	**Ouro Preto, Br**	**0.03**	**115**	*e*P	**Pg**	**23 27 26.6**	**-0.2**
FABR				*e*S	**Sg**	**23 27 27.2**	**-0.6**
FJAO	**Mina do Feijao**	**0.35**	**331**	*e*P	**Pg**	**23 27 33.8**	**+1.4**
FJAO				*e*S	**Sg**	**23 27 39.0**	**+1.9**
AGLP	**Mina gua Lim**	**0.82**	**55**	*e*P	**Pg**	**23 27 41.8**	**+0.5**
AGLP				*e*S	**Sg**	**23 27 52.0**	**0.0**
BSCB	**Bom Sucesso**	**0.97**	**233**	P	**Pg**	**23 27 43.9**	**-0.5**
BSCB				S	**Sg**	**23 27 56.6**	**-0.5**
BSCB	**Bom Sucesso**	**0.97**	**233**	*e*P	**Pg**	**23 27 43.9**	**-0.5**
BSCB				*e*S	**Sg**	**23 27 56.2**	**-0.8**
CHCR	**Itabira, Brazi**	**1.03**	**40**	*e*P	**Pg**	**23 27 45.5**	**+0.1**
CHCR				*e*S	**Sg**	**23 27 59.5**	**+0.7**
SIM2	**UHE Simplicio**	**1.84**	**145**	P	**Pn**	**23 27 58.5**	**+0.5**
SIM2				S	**Sn**	**23 28 22.0**	**+0.4**
VAS01	**Vassouras-RJ**	**1.92**	**166**	P	**Pn**	**23 27 59.9**	**+0.7**
VAS01				S	**Sn**	**23 28 24.1**	**+0.4**
VAS01	**Vassouras-RJ**	**1.92**	**166**	*e*P	**Pn**	**23 27 59.8**	**+0.7**
VAS01				*e*S	**Sn**	**23 28 24.1**	**+0.4**
DIAM	**Diamantina, MG**	**2.11**	**7**	P	**Pn**	**23 28 03.3**	**+1.5**
DIAM				S	**Sb**	**23 28 31.9**	**+0.7**
DIAM	**Diamantina, MG**	**2.11**	**7**	*e*P	**Pn**	**23 28 03.3**	**+1.5**
DIAM				*e*S	**Sb**	**23 28 31.5**	**+0.3**
DUB01	**Friburgo-RJ**	**2.22**	**139**	P	**Pn**	**23 28 03.4**	**+0.2**
DUB01				S	**Sn**	**23 28 32.3**	**+1.2**
DUB01	**Friburgo-RJ**	**2.22**	**139**	*e*P	**Pn**	**23 28 03.2**	**0.0**
DUB01				*e*S	**Sn**	**23 28 31.1**	**0.0**
CANS	**Sao Roque de M**	**2.30**	**272**	P	**Pn**	**23 28 05.3**	**+1.0**
CANS				S	**Sb**	**23 28 37.4**	**+0.9**
CAM01	**Campos-RJ**	**2.56**	**124**	P	**Pn**	**23 28 08.3**	**+0.5**
CAM01	**Campos-RJ**	**2.56**	**124**	*e*P	**Pn**	**23 28 08.3**	**+0.5**
CAM01				*e*S	**Sn**	**23 28 38.9**	**-0.4**
PMNB	**Patos De Minas**	**3.00**	**308**	P	**Pn**	**23 28 15.2**	**+1.2**
PMNB	**Patos De Minas**	**3.00**	**308**	*e*P	**Pn**	**23 28 15.0**	**+1.1**
SJMB	**Sao Joao De Ma**	**3.10**	**57**	P	**Pn**	**23 28 16.2**	**+0.9**
SJMB				S	**Sn**	**23 28 54.1**	**+1.3**
SJMB	**Sao Joao De Ma**	**3.10**	**57**	*e*P	**Pn**	**23 28 16.3**	**+0.9**
SJMB				*e*S	**Sn**	**23 28 52.8**	**-0.1**
JQT1	**Jequitai-MG**	**3.17**	**353**	P	**Pn**	**23 28 17.2**	**+0.9**
JQT1				S	**Sn**	**23 28 55.8**	**+1.1**
PARB	**Paraibuna**	**3.31**	**208**	P	**Pn**	**23 28 18.7**	**+0.5**
PARB				S	**Sn**	**23 28 59.2**	**+1.3**
PARB	**Paraibuna**	**3.31**	**208**	*e*P	**Pn**	**23 28 18.7**	**+0.5**
RIB01	**Linhares ES**	**3.51**	**73**	P	**Pn**	**23 28 21.7**	**+0.8**
RIB01				S	**Sn**	**23 29 02.4**	**-0.6**
RIB01	**Linhares ES**	**3.51**	**73**	*e*P	**Pn**	**23 28 21.6**	**+0.6**
RIB01				*e*S	**Sn**	**23 29 01.7**	**-1.2**
MC01	**Montes Claros**	**3.68**	**0**	P	**Pn**	**23 28 24.0**	**+0.7**
VAO	**Valinhos**	**3.82**	**227**	*e*P	**Pn**	**23 28 26.3**	**+1.1**
VAO				*e*S	**Sn**	**23 29 10.7**	**+0.1**
VABB	**Valinhos**	**3.82**	**227**	P	**Pn**	**23 28 26.1**	**+0.9**
SFA1	**Serra Facao**	**4.30**	**304**	P	**Pn**	**23 28 32.7**	**+0.9**
BB19B	**Bebedouro**	**4.34**	**260**	P	**Pn**	**23 28 33.4**	**+1.1**
BB19B	**Bebedouro**	**4.34**	**260**	*e*P	**Pn**	**23 28 33.1**	**+0.7**
BAT2	**UHE Batalha**	**4.51**	**312**	P	**Pn**	**23 28 35.5**	**+0.7**
BAT3	**Ipameri**	**4.53**	**311**	P	**Pn**	**23 28 35.8**	**+0.8**
IPMB	**Ipameri, GO**	**4.70**	**300**	P	**Pn**	**23 28 37.0**	**-0.3**
IPMB	**Ipameri, GO**	**4.70**	**300**	*e*P	**Pn**	**23 28 37.2**	**-0.1**
PET01	**Itanhaem-SP**	**4.94**	**218**	P	**Pn**	**23 28 41.1**	**+0.5**
ITU3	**Corumbazu**	**5.13**	**294**	P	**Pn**	**23 28 43.1**	**-0.2**
JANB	**Januaria**	**5.33**	**356**	P	**Pn**	**23 28 45.8**	**-0.2**
JANB	**Januaria**	**5.33**	**356**	*e*P	**Pn**	**23 28 45.5**	**-0.5**
JANB				*e*S	**Sn**	**23 29 45.2**	**-2.7**
GUA01	**Guaratinga, BA**	**5.47**	**47**	P	**Pn**	**23 28 47.7**	**-0.1**
GUA01	**Guaratinga, BA**	**5.47**	**47**	*e*P	**Pn**	**23 28 47.8**	**0.0**
GUA01				*e*S	**Sn**	**23 29 47.7**	**-3.4**
FRTB	**Fartura**	**5.98**	**240**	P	**Pn**	**23 28 54.8**	**-0.1**
FRTB	**Fartura**	**5.98**	**240**	*e*P	**Pn**	**23 28 54.9**	**-0.1**
ITRB	**Iturama**	**6.07**	**276**	P	**Pn**	**23 28 57.0**	**+0.9**
ITRB	**Iturama**	**6.07**	**276**	*e*P	**Pn**	**23 28 56.9**	**+0.7**
CMC01	**Camacan, BA**	**6.55**	**41**	P	**Pn**	**23 29 02.6**	**-0.2**
NBIT	**Itapeh - BA**	**6.94**	**39**	P	**Pn**	**23 29 07.3**	**-0.7**
SDBA	**SAO DESIDERIO**	**8.01**	**353**	P	**Pn**	**23 29 22.1**	**-0.7**
SDBA	**SAO DESIDERIO**	**8.01**	**353**	*e*P	**Pn**	**23 29 20.9**	**-1.9**
SDBA				*e*S	**Sn**	**23 30 47.0**	**-6.8**
PTGB	**Pitanga**	**8.64**	**239**	P	**Pn**	**23 29 31.0**	**-0.6**
ARAG	**Araguaiana, MT**	**8.82**	**301**	*e*P	**Pn**	**23 29 34.6**	**+0.7**

*CATAC **25** 23:30:28.0±0.4, 13°.N±3°× 8°.9W±°, h31km±3km, M3.5/20, MLv3.5/20, Error ellipse: s-maj=6.4km s-min=3.0km az=32.9, confirmed*
*GCG **25** 23:30:28.3±0.5, 13°.24N× 89°.40W, h62km±5km, MD4.0*
ISC 25 23:30:28.5±1.5**, 13°.16N**±0°.07×**89°.39W**±0°.05**, h53**km±11km**,**
n53, σ0s**51/58, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.33**	**11**	*i* P	**Pn**	**23 30 38.0**	**-0.2**
LALI	**Alcalda de L**	**0.33**	**11**	P	**Pn**	**23 30 38.0**	**-0.2**
LALI	**Alcalda de L**	**0.33**	**11**	S	**Sn**	**23 30 45.0**	**-0.2**
PANCS	**Alcalda de**	**0.49**	**24**	S	**Sn**	**23 30 48.3**	**+0.1**
JAYA	**Jayaque - finc**	**0.50**	**353**	*i* P	**Pn**	**23 30 39.7**	**-0.3**
JAYA				*e*S	**Sn**	**23 30 48.3**	**-0.1**
JAYA	**Jayaque - finc**	**0.50**	**353**	P	**Pn**	**23 30 39.8**	**-0.3**
LOMA	**Loma Larga**	**0.53**	**24**	P	**Pn**	**23 30 39.8**	**-0.6**
LOMA	**Loma Larga**	**0.53**	**24**	S	**Sn**	**23 30 49.2**	**+0.2**
PMON	**Piamonte**	**0.56**	**7**	P	**Pn**	**23 30 40.4**	**-0.3**
PMON	**Piamonte**	**0.56**	**7**	S	**Sn**	**23 30 50.1**	**+0.6**
UTEC	**Universidad Te**	**0.57**	**19**	S	**Sn**	**23 30 50.3**	**+0.6**
UEES	**Universidad Ev**	**0.57**	**15**	P	**Pn**	**23 30 40.7**	**-0.3**
UEES	**Universidad Ev**	**0.57**	**15**	S	**Sn**	**23 30 50.2**	**+0.4**
IGN	**Direccin Gen**	**0.59**	**21**	S	**Sn**	**23 30 51.0**	**+0.8**
TECO	**Alcaldia de Te**	**0.70**	**57**	P	**Pn**	**23 30 41.6**	**-0.8**
TECO	**Alcaldia de Te**	**0.70**	**57**	S	**Sn**	**23 30 52.2**	**-0.3**
CEVE	**Cerro Verde**	**0.70**	**341**	P	**Pn**	**23 30 42.7**	**0.0**
CEVE	**Cerro Verde**	**0.70**	**341**	S	**Sn**	**23 30 53.9**	**+0.9**
PAVA	**Las Pavas**	**0.70**	**38**	P	**Pn**	**23 30 42.3**	**-0.2**
PAVA	**Las Pavas**	**0.70**	**38**	S	**Sn**	**23 30 53.1**	**+0.3**
UESV	**Universidad de**	**0.75**	**51**	P	**Pn**	**23 30 42.7**	**-0.4**
UESV	**Universidad de**	**0.75**	**51**	S	**Sn**	**23 30 53.8**	**0.0**
NUBE	**Las Nubes**	**0.83**	**333**	*i* P	**Pn**	**23 30 43.9**	**-0.4**
NUBE				*e*S	**Sn**	**23 30 55.8**	**+0.1**
NUBE	**Las Nubes**	**0.83**	**333**	P	**Pn**	**23 30 44.0**	**-0.2**
NUBE	**Las Nubes**	**0.83**	**333**	S	**Sn**	**23 30 56.1**	**+0.4**
UNIC	**Universidad Ca**	**0.83**	**349**	S	**Sn**	**23 30 56.6**	**+1.0**
SCLA	**Alcaldia de Sa**	**0.84**	**50**	P	**Pn**	**23 30 43.9**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.84**	**50**	S	**Sn**	**23 30 56.4**	**+0.7**
FAME	**Alcaldia de Sa**	**0.91**	**318**	P	**Pn**	**23 30 44.7**	**-0.4**
FAME	**Alcaldia de Sa**	**0.91**	**318**	S	**Sn**	**23 30 57.6**	**+0.2**
LOAL	**Lomas de Alarc**	**0.92**	**335**	P	**Pn**	**23 30 44.6**	**-0.7**
LOAL	**Lomas de Alarc**	**0.92**	**335**	S	**Sn**	**23 30 58.8**	**+1.2**
PACA	**Pacayal**	**1.08**	**73**	P	**Pn**	**23 30 47.9**	**+0.4**
PACA	**Pacayal**	**1.08**	**73**	S	**Sn**	**23 31 02.5**	**+0.9**
LLGN	**La Laguna**	**1.09**	**23**	P	**Pn**	**23 30 46.9**	**-0.7**
MTO3	**Montecristo**	**1.23**	**1**	*i* P	**Pn**	**23 30 49.1**	**-0.5**
MTO3	**Montecristo**	**1.23**	**1**	P	**Pn**	**23 30 49.1**	**-0.5**
MTO3	**Montecristo**	**1.23**	**1**	S	**Sn**	**23 31 05.2**	**-0.2**
ESQI	**Esquipulas**	**1.39**	**2**	P	**Pn**	**23 30 51.6**	**-0.1**
ESQI	**Esquipulas**	**1.39**	**2**	S	**Sn**	**23 31 09.7**	**+0.6**
CNCH	**Conchagua**	**1.52**	**85**	P	**Pn**	**23 30 53.3**	**-0.1**
CNCH	**Conchagua**	**1.52**	**85**	S	**Sn**	**23 31 13.0**	**+0.9**
CSGN	**Cosiguina Volc**	**1.79**	**96**	P	**Pn**	**23 30 57.0**	**-0.1**
CSGN				S	**Sn**	**23 31 18.9**	**+0.1**
PKGN	**Cerro Pekin**	**2.40**	**101**	P	**Pn**	**23 31 05.3**	**-0.1**
PKGN				S	**Sn**	**23 31 33.7**	**+0.1**
POLN	**Al Sur del Vol**	**2.56**	**101**	P	**Pn**	**23 31 06.7**	**-0.9**
YUSH	**Yuscaran**	**2.60**	**72**	P	**Pn**	**23 31 07.7**	**-0.4**
CNGN	**Cerro Negro**	**2.70**	**104**	P	**Pn**	**23 31 09.8**	**+0.2**
CNGN	**Cerro Negro**	**2.70**	**104**	S	**Sn**	**23 31 41.7**	**+0.6**
MOM3	**MOM3**	**2.87**	**103**	S	**Sn**	**23 31 45.0**	**-0.2**
MOMN	**Momotombo**	**2.88**	**105**	P	**Pn**	**23 31 11.4**	**-0.5**
COPN	**Copaltepe**	**2.90**	**109**	P	**Pn**	**23 31 12.6**	**+0.4**
LIMN	**Finca el Limon**	**2.95**	**92**	P	**Pn**	**23 31 12.7**	**-0.2**
LIMN				S	**Sn**	**23 31 47.2**	**+0.1**
BOAB	**BOACO BROADBAN**	**3.70**	**101**	P	**Pn**	**23 31 22.4**	**-0.8**

*IDC **25** 23:44:34.9±0.9, 2°.36N× 126°.74E, h0km, mb3.8/8, mbtmp3.8/8, MS2.9/2, Error ellipse: s-maj=63.9km s-min=16.8km az=72.0*
*NEIC **25** 23:44:40.7±1.6, 2°.4N±0°.1× 126°.96E±0°.07, h35km±2km, mb4.0/7, Error ellipse: s-maj=21.2km s-min=6.3km az=31.0*
*DJA **25** 23:44:40.1±0.3, 2°.N±3°× 12°.7E±°, h10km, M4.2/13, mB4.9/1, mb4.3/6, MLv4.1/13, Mw(mB)4.2/1*
ISC 25 23:44:39.9±0.8**, 2°.38N**±0°.07×**126°.9E**±0°.1**, h35**km**, n26,**
σ2s**09/26, mb4.1/10, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.66**	**164**		**Pn**	**23 45 09.2**	**+2.7**
TNTI	**Ternate**	**1.66**	**164**	P	**Pn**	**23 45 09.6**	**+3.1**
SGSI	**Sangihe**	**1.91**	**313**	P	**Pn**	**23 45 10.0**	**+0.1**
GTOI	**Gorontalo**	**4.28**	**246**	P	**Pn**	**23 45 43.4**	**+0.8**
LUWI	**Luwuk**	**5.36**	**231**	P	**Pn**	**23 46 00.1**	**+2.6**
	0.4nm66nm,0.9s						
APSI	**Ampana**	**6.20**	**238**	P	**Pn**	**23 46 11.5**	**+2.4**
	0.2nm860nm37nm,1.1s						
TOLI2	**Tolitoli**	**6.26**	**259**		**Pn**	**23 46 08.6**	**-1.3**
MPSI	**Mapaga**	**7.31**	**254**	P	**Pn**	**23 46 26.6**	**+2.3**
	8.0nm,1.0s						
MYLDM	**Lahad Datu**	**8.85**	**289**		**Pn**	**23 46 47.8**	**+2.3**
KNRA	**Kununurra**	**18.03**	**174**	P	**Pn**	**23 48 48.2**	**+0.3**
KNRA				IAmb	IAmb	23 49 09.1	
	comp=Z,9.2nm,1.2s						
FITZ	**Fitzroy Crossi**	**20.39**	**184**	P	**P**	**23 49 12.4**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=14,slow=10,SNR=11						
FITZ				S	**S**	**23 52 53.2**	**-7.3**
	comp=Z,0.6nm,0.4s,baz=231,slow=23,SNR=1.7						
	comp=Z,1.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.39**	**184**	P	**P**	**23 49 13.5**	**-0.3**
FITZ				IAmb	IAmb	23 49 21.4	
	comp=Z,1.9nm,1.5s						
WB0	**Warramunga Arr**	**23.20**	**162**	P	**P**	**23 49 43.9**	**0.0**
WB0				IAmb	IAmb	23 49 46.4	
	comp=Z,5.5nm,0.6s						
PMG	**Port Moresby**	**23.32**	**120**	LR	LR	00 01 00.3	
	comp=Z,38nm,19.6s,baz=290,slow=42						
WRA	**Warramunga Arr**	**23.34**	**162**	P	**P**	**23 49 45.6**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=341,slow=10,SNR=18						
	comp=Z,4.3nm,0.7s						
WRA	**Warramunga Arr**	**23.34**	**162**	P	**P**	**23 49 45.5**	**+0.2**
WR8	**Warramunga Arr**	**23.41**	**162**	P	**P**	**23 49 46.3**	**+0.4**
WR8				IAmb	IAmb	23 49 48.7	
	comp=Z,4.9nm,0.8s						
ASAR	**Alice Springs**	**26.76**	**166**	P	**P**	**23 50 17.1**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=344,slow=8.4,SNR=9.6						
ASAR				PcP	**PcP**	**23 53 39.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=347,slow=2.2,SNR=4.1						
ASAR				LR	LR	00 01 56.7	
	comp=Z,16nm,19.6s,baz=94,slow=39						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**26.76**	**166**	P	**P**	**23 50 16.2**	**-0.5**
SONM	**Songino Array**	**48.63**	**342**	P	**P**	**23 53 20.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=157,slow=8.8,SNR=3.5						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**58.77**	**326**	P	**P**	**23 54 34.1**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=120,slow=7.6,SNR=23						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**62.98**	**328**	P	**P**	**23 55 02.5**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=136,slow=6.2,SNR=2.6						
	comp=Z,0.7nm,0.4s						
KURK	**Kurchatov**	**62.98**	**328**	P	**P**	**23 55 02.5**	**-0.6**
KURK	**Kurchatov**	**62.98**	**328**	IAmb	IAmb	23 55 06.5	
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**68.55**	**327**	P	**P**	**23 55 39.1**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=129,slow=4.6,SNR=3.7						
	comp=Z,0.6nm,0.5s						
ILAR	**Eielson Array**	**86.23**	**25**	P	**P**	**23 57 18.4**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=246,slow=5.2,SNR=4.3						
	comp=Z,0.1nm,0.5s						

*NEIC **26** 00:06:02.7±1.3, 35°.572N±0°.005× 117°.36W±0°.01, h5km±2km, Error ellipse: s-maj=1.2km s-min=0.8km az=103.0*
*PAS **26** 00:06:03.2±1.2, 35°.566N±0°.006× 117°.35W±0°.01, h3km±3km, Mwr3.6/4, ML3.4/158(NEIC), Error ellipse: s-maj=1.2km s-min=0.9km az=103.0*
ISC 26 00:06:02.9±0.8**, 35°.56N**±0°.02×**117°.35W**±0°.02**, h8**km±6km**,**
n101, σ0s**79/108, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCCA	**Chr Cany lake**	**0.04**	**195**	Pg	**Pg**	**00 06 04.5**	**-0.1**
CCCA				Sg	**Sg**	**00 06 05.6**	**-0.2**
WSHM	**Spangler Hills**	**0.12**	**288**	Pg	**Pg**	**00 06 05.7**	**0.0**
WSHM				Sg	**Sg**	**00 06 07.7**	**+0.1**
WSHM				IAML		00 06 08.2	
	12µm,0.1s						
WSHM				IAML		00 06 08.2	
	9µm,0.2s						
GPO	**China Lake**	**0.27**	**289**		**Pg**	**00 06 08.6**	**+0.4**
LRMC	**Laurel Mtn Rad**	**0.28**	**253**	Pg	**Pg**	**00 06 08.6**	**0.0**
LRMC				Sg	**Sg**	**00 06 12.9**	**+0.5**
LRMC				IAML		00 06 14.5	
	comp=N,8µm,0.2s						
LRMC				IAML		00 06 14.9	
	comp=E,7µm,0.2s						
CLC	**China Lake**	**0.32**	**322**	Pg	**Pg**	**00 06 09.3**	**0.0**
SRTC	**Snort**	**0.35**	**292**		**Pg**	**00 06 10.3**	**+0.5**
SRTC					**Sg**	**00 06 15.6**	**+1.2**
TOW	**Tower One**	**0.42**	**306**		**Pg**	**00 06 11.6**	**+0.6**
TOW					**Sb**	**00 06 18.2**	**-0.8**
DTP	**Desert Tortois**	**0.50**	**234**		**Pg**	**00 06 12.7**	**+0.1**
DTP					**Sg**	**00 06 19.7**	**+0.5**
MPMC	**Manual Prospec**	**0.51**	**347**	Pg	**P

BC3	**Big Chuckawall**	**2.46**	**140**	Pn	**Pn**	**00 06 42.7**	**-0.8**
BC3				IAML		00 07 30.4	
	comp=N,166nm,0.5s						
BC3				IAML		00 07 30.8	
	comp=E,202nm,1.0s						
MDPB	**Devils Postpil**	**2.49**	**327**	Pn	**Pn**	**00 06 43.3**	**-0.6**
MDPB				IAML		00 07 32.0	
	comp=N,112nm,1.2s						
MDPB				IAML		00 07 32.9	
	comp=E,194nm,1.2s						
DPP	**Dos Picos Cty**	**2.58**	**172**	Pn	**Pn**	**00 06 44.9**	**-0.1**
DPP				IAML		00 07 25.4	
	comp=E,107nm,0.6s						
PKD	**Bear Valley Ra**	**2.62**	**279**	Pn	**Pn**	**00 06 45.6**	**0.0**
PKD				IAML		00 07 52.3	
	comp=E,110nm,2.4s						
EML	**El Monte Cty P**	**2.70**	**171**		**Pb**	**00 06 50.5**	**-0.9**
LHV	**Little Huntoon**	**2.84**	**341**	Pn	**Pn**	**00 06 48.8**	**+0.4**
LHV				IAML		00 07 39.6	
	comp=N,173nm,1.1s						
W13A	**Hualapai Mount**	**2.87**	**98**	Pn	**Pn**	**00 06 48.6**	**-0.6**
W13A				IAML		00 07 39.5	
	comp=N,135nm,0.9s						
W13A				IAML		00 07 45.0	
	comp=E,79nm,1.0s						
PMPB	**Monarch Peak**	**2.88**	**284**	Pn	**Pn**	**00 06 50.0**	**+0.9**
BAR	**Barrett**	**2.93**	**169**	Pn	**Pn**	**00 06 50.4**	**+0.6**
BAR				IAML		00 07 36.1	
	comp=E,90nm,0.3s						
BAR				IAML		00 07 36.5	
	comp=N,68nm,0.2s						
NV11	**Mina Array Sit**	**2.94**	**348**	Pn	**Pn**	**00 06 50.8**	**+0.9**
NV11				IAML		00 07 40.6	
	comp=E,97nm,1.4s						
BLYC	**Blythe**	**2.95**	**127**	Pn	**Pn**	**00 06 48.9**	**-1.2**
BLYC				IAML		00 07 44.5	
	comp=E,115nm,0.9s						
BLYC				IAML		00 07 44.9	
	comp=N,148nm,0.6s						
NVAR	**Mina Array Bea**	**2.96**	**345**	Pn	**Pn**	**00 06 50.8**	**+0.4**
R11B	**Troy Canyon, C**	**3.12**	**26**	Pn	**Pn**	**00 06 52.9**	**+0.4**
YUH	**Yuha Desert**	**3.14**	**157**	Pn	**Pn**	**00 06 53.7**	**+1.1**
BBGB	**Big Mountain B**	**3.15**	**290**	Pn	**Pn**	**00 06 53.6**	**+0.7**
HULI	**Fort Hunter Li**	**3.19**	**279**	Pn	**Pn**	**00 06 54.9**	**+1.5**
HULI				IAML		00 07 44.7	
	comp=N,118nm,2.3s						
HULI				IAML		00 08 16.6	
	comp=E,122nm,2.9s						
RYN	**Ryan**	**3.20**	**343**	Pn	**Pn**	**00 06 52.6**	**-1.0**
RYN				IAML		00 07 56.7	
	comp=E,59nm,1.2s						
GLA	**Glamis**	**3.26**	**139**	Pn	**Pn**	**00 06 53.6**	**-0.7**
GLA				IAML		00 07 52.2	
	comp=N,107nm,0.4s						
CBX	**Cerro Bola**	**3.29**	**170**	Pn	**Pn**	**00 06 55.2**	**+0.3**
WAKR	**Walker**	**3.38**	**331**	Pn	**Pn**	**00 06 56.4**	**+0.3**
WAKR				IAML		00 07 55.7	
	comp=N,50nm,1.8s						
WAKR				IAML		00 07 59.9	
	comp=E,50nm,1.7s						
CMB	**Columbia Colle**	**3.47**	**316**	Pn	**Pn**	**00 06 57.5**	**+0.4**
CMB				IAML		00 08 01.3	
	comp=E,65nm,1.1s						
CMB				IAML		00 08 02.0	
	comp=N,57nm,0.7s						
LCMT	**Little Creek M**	**3.62**	**65**	Pn	**Pn**	**00 07 00.7**	**+1.3**
ESJX	**Sierra Juarez**	**3.74**	**161**	Pn	**Pn**	**00 07 01.6**	**+0.6**
Y14A	**Wickenburg**	**3.93**	**113**	Pn	**Pn**	**00 07 04.1**	**+0.5**
Y14A				IAML		00 08 09.7	
	comp=E,72nm,0.4s						
KNB	**Kanab**	**3.94**	**67**	Pn	**Pn**	**00 07 04.6**	**+0.8**
KNB				IAML		00 08 13.2	
	comp=N,62nm,1.1s						
KNB				IAML		00 08 25.2	
	comp=E,55nm,1.9s						
113A	**Mohawk Valley,**	**4.08**	**132**	Pn	**Pn**	**00 07 05.5**	**+0.1**
PSUT	**Pine Spring**	**4.08**	**42**	Pn	**Pn**	**00 07 06.5**	**+0.7**
PSUT				IAML		00 08 23.1	
	comp=N,40nm,1.0s						
PSUT				IAML		00 08 29.6	
	comp=E,48nm,1.4s						
U15A	**North Rim**	**4.19**	**77**	Pn	**Pn**	**00 07 08.0**	**+0.6**
U15A				IAML		00 08 17.3	
	comp=N,61nm,1.1s						
TCRU	**Three Creeks R**	**4.96**	**51**	Pn	**Pn**	**00 07 17.6**	**-0.3**
TCRU				IAML		00 08 49.6	
	comp=N,32nm,1.1s						
X16A	**Lo Mia Camp, P**	**4.99**	**102**	Pn	**Pn**	**00 07 20.9**	**+2.7**
X16A				IAML		00 08 51.5	
	comp=E,35nm,1.1s						
214A	**Organ Pipe Nat**	**5.22**	**132**	Pn	**Pn**	**00 07 19.8**	**-1.5**
214A				IAML		00 09 03.0	
	comp=N,27nm,1.4s						
214A				IAML		00 09 05.4	
	comp=E,27nm,1.5s						
ELK	**Elko**	**5.43**	**17**	Pn	**Pn**	**00 07 25.0**	**+0.6**
DUG	**Dugway, Tooele**	**5.85**	**36**	Pn	**Pn**	**00 07 30.8**	**+0.7**
X18A	**Snowflake**	**6.16**	**98**	Pn	**Pn**	**00 07 36.3**	**+2.0**
TUC	**Tucson**	**6.35**	**119**	Pn	**Pn**	**00 07 35.4**	**-1.4**
PV10	**Paradox Valley**	**7.22**	**65**	Pn	**Pn**	**00 07 49.2**	**+0.2**
PV18	**Skein Mesa, Pa**	**7.28**	**66**	Pn	**Pn**	**00 07 53.0**	**+3.3**
PV13	**Radium Mtn., P**	**7.31**	**67**	Pn	**Pn**	**00 07 52.5**	**+2.2**
PV02	**Paradox Valley**	**7.39**	**67**	Pn	**Pn**	**00 07 50.0**	**-1.3**

IDC 26 00:24:02.8±9.0, 6°02S×129°05E, h377km±112km, mb2.6/2, mbtmp3.6/5, Error ellipse: s-maj=64.8km s-min=43.9km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.46**	**195**	P	P	00 26 46.8	-1.6
	1.4nm,0.7s,baz=31,slow=11,SNR=8.7						
FITZ				S	S	00 29 04.3	-1.3
	1.4nm,1.0s,baz=32,slow=11,SNR=1.6						
WRA	**Warramunga Arr**	**14.76**	**160**	P	P	00 27 12.7	-1.0
	0.5nm,0.4s,baz=345,slow=11,SNR=5.8						
WRA				S	S	00 29 52.9	+1.1
	0.3nm,0.5s,baz=333,slow=21,SNR=1.9						
ASAR	**Alice Springs**	**18.16**	**166**	P	P	00 27 51.1	+0.9
	3.6nm,0.6s,baz=348,slow=11,SNR=46						
MKAR	**Makanchi Array**	**66.90**	**327**	P	P	00 34 15.5	-0.3
	0.1nm,0.3s,baz=150,slow=6.0,SNR=4.2						
	0.1nm,0.3s						
KURBB	**Kurchatov Arra**	**71.19**	**329**	P	P	00 34 42.1	+0.3
	0.1nm,0.4s,baz=123,slow=4.2,SNR=1.7						
	0.1nm,0.4s						

*THE **26** 00:25:43.9,38°N±1°×2°7E±°, h9km±3km, M3.0/7, MLh3.0/7*
*ATH **26** 00:25:43.5,37°73N×27°12E, h12km±1km, ML2.9/5,*
Manual Solution by N.Liadopoulou First location:
2019/11/26 00:27:12, This location: 2019/11/26 08:34:16
ML Amplitudes are expressed in micrometers, All
distances are expressed in degrees Latitude uncertainty: 1
km; Longitude uncertainty: 1 km
*AFAD **26** 00:25:43.3, 37°74N×27°11E, h9km±1km, ML2.9*
*ISK **26** 00:25:43.2, 37°75N×27°11E, h6km, ML2.8/35*

ISC 26 00:25:43.6±0.8, 37°75N±0°02×27°12E±0°02, h12km±5km, n85, σ0s56/113, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.11**	**119**	P	**Pg**	**00 25 46.4**	**-0.1**
GCAM				*i* IAML		00 25 48.0	
	comp=E,1μm,0.3s						
GCAM				S	**Sg**	**00 25 48.2**	**-0.3**
GCAM				*i* IAML		00 25 49.0	
	comp=N,8μm,0.2s						
GCAM	**G?zelcaml?**	**0.11**	**119**	Pg	**Pg**	**00 25 46.2**	**-0.3**
GCAM				Sg	**Sg**	**00 25 48.4**	**-0.1**
KUSD	**Kusadasi-Aydin**	**0.17**	**51**	Pg	**Pg**	**00 25 47.4**	**-0.1**
KUSD				Sg	**Sg**	**00 25 50.4**	**+0.2**
SMG	**Samos**	**0.23**	**259**	P	**Pg**	**00 25 48.2**	**-0.2**
SMG				S	**Sg**	**00 25 51.7**	**+0.1**
SMG	**Samos**	**0.23**	**259**	P	**Pg**	**00 25 48.5**	**+0.1**
SMG				S	**Sg**	**00 25 51.7**	**+0.1**
DDIM	**Aydin, Didim**	**0.31**	**161**	P	**Pg**	**00 25 50.0**	**+0.1**
DDIM				S	**Sg**	**00 25 54.6**	**+0.6**
DDIM				*i* IAML		00 25 56.0	
	comp=E,1μm,0.4s						
KRL1	**Karlovasi Samo**	**0.33**	**278**	P	**Pg**	**00 25 50.2**	**0.0**
KRL1				S	**Sg**	**00 25 54.8**	**+0.2**
GMLD	**Gumuldur**	**0.36**	**334**	Pg	**Pg**	**00 25 51.2**	**+0.4**

DIDI	**Didim-Aydin**	**0.39**	**165**	Pg	**Pg**	**00 25 51.1**	**-0.2**
BLCB	**Balcova**	**0.64**	**355**	Pg	**Pg**	**00 25 55.9**	**-0.1**
BLCB	**Balcova**	**0.64**	**355**	P	**Pg**	**00 25 55.7**	**-0.3**
YKAV	**Yalikavak-Bodr**	**0.64**	**168**	Pg	**Pg**	**00 25 55.6**	**-0.4**
YKAV				Sg	**Sb**	**00 26 05.0**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.64**	**72**	Pg	**Pg**	**00 25 56.3**	**+0.2**
ZEYE	**Izmir, Urla-Ze**	**0.69**	**315**	P	**Pg**	**00 25 56.8**	**-0.1**
ZEYE				S	**Sb**	**00 26 06.6**	**-0.4**
ZEYE				*i* IAML		00 26 07.0	
	comp=N,2μm,0.4s						
BODT	**Bodrum**	**0.70**	**167**	Pg	**Pb**	**00 25 57.9**	**0.0**
BODT	**Bodrum**	**0.70**	**167**	P	**Pb**	**00 25 58.4**	**+0.5**
BODT				S	**Sb**	**00 26 08.7**	**+1.2**
BDRM	**Kayabasi**	**0.73**	**159**	P	**Pg**	**00 25 56.8**	**-1.0**
BDRM				S	**Sg**	**00 26 06.7**	**-0.7**
BDRM				*i* IAML		00 26 07.0	
	comp=E,368nm,0.3s						
URLA	**Izmir**	**0.73**	**326**	P	**Pb**	**00 25 58.2**	**-0.1**
URLA				S	**Sb**	**00 26 08.1**	**-0.4**
URLA				*i* IAML		00 26 11.0	
	comp=E,1μm,0.5s						
URLA	**Izmir**	**0.73**	**326**	Pg	**Pg**	**00 25 57.9**	**+0.1**
IZMR	**zmir-demi**	**0.77**	**60**	P	**Pg**	**00 25 58.0**	**-0.4**
IZMR				P	**Pg**	**00 25 58.1**	**-0.4**
IZMR				S	**Sg**	**00 26 06.8**	**-1.7**
IZMR				S	**Sb**	**00 26 07.2**	**-2.1**
KLNA	**Kalymnos**	**0.80**	**188**	P	**Pg**	**00 25 58.6**	**-0.5**
KLNA				S	**Sg**	**00 26 09.6**	**0.0**
CESE	**eme**	**0.87**	**312**	Pg	**Pg**	**00 26 00.3**	**0.0**
ODEM	**Odemis-Izmir**	**0.92**	**55**	Pg	**Pg**	**00 26 00.9**	**-0.5**
NAZL	**Nazilli-Aydin**	**0.95**	**77**	Pg	**Pg**	**00 26 01.9**	**-0.1**
ESEN	**Aydn-Nazilli**	**0.98**	**87**	P	**Pg**	**00 26 02.4**	**0.0**
CHOS	**Chios island**	**1.05**	**307**	Pg	**Pb**	**00 26 03.9**	**+0.1**
CHOS	**Chios island**	**1.05**	**307**	P	**Pg**	**00 26 03.4**	**-0.4**
CHOS				S	**Sb**	**00 26 18.2**	**+0.6**
CHOS	**Chios island**	**1.05**	**307**	P	**Pg**	**00 26 03.3**	**-0.5**
CHOS				S	**Sb**	**00 26 17.6**	**0.0**
KARB	**zmir-Karabur**	**1.07**	**329**	P	**Pn**	**00 26 04.7**	**+0.3**
KARB				S	**Sg**	**00 26 17.9**	**-0.1**
MULA	**Mugla, Merkez-**	**1.08**	**117**	P	**Pb**	**00 26 04.5**	**+0.3**
MULA				S	**Sg**	**00 26 18.1**	**-0.3**
MULA				*i* IAML		00 26 22.0	
	comp=N,137nm,0.8s						
MULA				*i* IAML		00 26 24.0	
	comp=E,153nm,0.5s						
DATC	**Datca-Mugla**	**1.08**	**156**	Pn	**Pg**	**00 26 04.2**	**-0.2**
DAT	**Datca**	**1.08**	**160**	Pn	**Pg**	**00 26 04.3**	**-0.2**
YAZI	**Mula-Dat§a-**	**1.10**	**166**	P	**Pg**	**00 26 04.0**	**-0.8**
KIRA	**zmir-Kiraz**	**1.11**	**66**	P	**Pg**	**00 26 04.5**	**-0.5**
KIRA				S	**Sg**	**00 26 18.1**	**-1.3**
YER	**Yerkesik**	**1.11**	**123**	Pn	**Pg**	**00 26 04.9**	**-0.2**
YER	**Yerkesik**	**1.11**	**123**	P	**Pg**	**00 26 04.9**	**-0.2**
YER				S	**Sn**	**00 26 21.6**	**+1.1**
EAG2	**Marmaro, Chios**	**1.12**	**315**	P	**Pg**	**00 26 05.0**	**-0.2**
EAG2				S	**Sb**	**00 26 20.2**	**+0.6**
GOMA	**Golmarmara-Man**	**1.14**	**33**	Pn	**Pb**	**00 26 05.6**	**+0.3**
AKHS	**Akhisar**	**1.25**	**26**	P	**Pb**	**00 26 07.4**	**+0.2**
AKS	**Akhisar**	**1.25**	**26**	Pn	**Pb**	**00 26 07.5**	**+0.3**
TURN	**Turunc**	**1.33**	**137**	P	**Pb**	**00 26 08.6**	**+0.2**
TURN				S	**Sg**	**00 26 26.9**	**+0.6**
TURN				*i* IAML		00 26 35.0	
	comp=N,304nm,0.8s						
TURN				*i* IAML		00 26 40.0	
	comp=E,196nm,1.1s						
TURN	**Turunc**	**1.33**	**137**	Pn	**Pb**	**00 26 08.6**	**+0.2**
DKL	**Dikili**	**1.33**	**353**	Pn	**Pn**	**00 26 08.3**	**+0.3**
ASTA	**Astypalaia**	**1.35**	**207**	P	**Pn**	**00 26 08.3**	**0.0**
GORD	**Gordes-Manisa**	**1.43**	**36**	Pn	**Pb**	**00 26 10.4**	**+0.2**
APE	**Apeiranthos**	**1.44**	**242**	Pn	**Pb**	**00 26 10.3**	**0.0**
APE	**Apeiranthos**	**1.44**	**242**	P	**Pn**	**00 26 09.2**	**-0.4**
APE				S	**Sg**	**00 26 30.1**	**+0.3**
APE	**Apeiranthos**	**1.44**	**242**	S	**Pn**	**00 26 09.0**	**-0.5**
APE				S	**Sn**	**00 26 28.3**	**0.0**
KULA	**Kula-Manisa**	**1.44**	**58**	Pn	**Pb**	**00 26 10.7**	**+0.3**
SOMA	**Soma-Manisa**	**1.44**	**13**	Pn	**Pb**	**00 26 10.5**	**+0.1**
NAX1	**Naxos Island**	**1.53**	**245**	P	**Pn**	**00 26 10.3**	**-0.5**
DALY	**Dalyan (Mula)**	**1.54**	**127**	Pn	**Pb**	**00 26 12.5**	**+0.4**
PRK	**Paraskevi**	**1.63**	**336**	P	**Pn**	**00 26 11.6**	**-0.6**
PRK				S	**Sg**	**00 26 36.3**	**+0.2**
ARG	**Arkhangelos**	**1.73**	**152**	Pn	**Pb**	**00 26 14.8**	**-0.6**
ARG	**Arkhangelos**	**1.73**	**152**	P	**Pn**	**00 26 13.3**	**-0.3**
APMY	**Acipayam-Deniz**	**1.76**	**98**	Pn	**Pb**	**00 26 15.2**	**-0.7**
SIGR	**SIGRI**	**1.76**	**326**	Pn	**Pb**	**00 26 15.1**	**-0.8**
SIGR	**SIGRI**	**1.76**	**326**	P	**Pb**	**00 26 16.4**	**+0.6**
SIGR				S	**Sb**	**00 26 38.1**	**+0.1**
SIGR	**SIGRI**	**1.76**	**326**	P	**Pb**	**00 26 15.7**	**-0.2**
YAYO	**Edremit-Balk**	**1.86**	**359**	Pn	**Pn**	**00 26 16.5**	**+1.2**
CAME	**Cameli-Denizli**	**1.92**	**114**	Pn	**Pn**	**00 26 17.5**	**+1.2**
BALB	**Balikesir**	**1.98**	**17**	Pn	**Pb**	**00 26 18.6**	**-1.0**
SIMA	**Simav-Kutahya**	**1.98**	**47**	Pn	**Pn**	**00 26 18.4**	**+1.3**
KARY	**Karystos**	**2.14**	**278**	P	**Pn**	**00 26 19.2**	**0.0**
KARY	**Karystos**	**2.14**	**278**	P	**Pn**	**00 26 18.8**	**-0.4**
EZN	**Ezine**	**2.16**	**344**	Pn	**Pb**	**00 26 21.3**	**-1.4**
SKY	**Skiros Island**	**2.31**	**300**	P	**Pn**	**00 26 21.7**	**+0.2**
BASM	**Basmaki-Afyon**	**2.33**	**85**	Pn	**Pn**	**00 26 23.0**	**+1.1**
DION	**Dionisos Attik**	**2.54**	**278**	P	**Pn**	**00 26 24.8**	**+0.1**
DION	**Dionisos Attik**	**2.54**	**278**	P	**Pn**	**00 26 24.8**	**+0.1**
PTL	**Penteli**	**2.59**	**278**	P	**Pn**	**00 26 25.5**	**+0.1**
LIA	**Limnos Island**	**2.62**	**325**	P	**Pn**	**00 26 26.4**	**+0.7**
VLY	**Voula,Athens**	**2.63**	**273**	P	**Pn**	**00 26 25.9**	**-0.1**
VLY	**Voula,Athens**	**2.63**	**273**	P	**Pn**	**00 26 25.9**	**-0.1**
ATHU	**Athens Univers**	**2.65**	**276**	P	**Pn**	**00 26 26.2**	**0.0**
MET4	**Agioi Theodoro**	**2.95**	**269**	P	**Pn**	**00 26 29.9**	**-0.4**
MET1	**Methana Town,**	**2.96**	**268**	P	**Pn**	**00 26 31.1**	**+0.6**
SMTH	**Samothraki Isl**	**2.98**	**336**	P	**Pn**	**00 26 31.1**	**+0.4**
MET5	**Makryloggos,Me**	**2.98**	**269**	P	**Pn**	**00 26 31.3**	**+0.5**
MET2	**Kameni Chora,**	**3.01**	**269**	P	**Pn**	**00 26 30.8**	**-0.3**
IDI	**Anoyia**	**3.04**	**217**	P	**Pn**	**00 26 31.6**	**-0.1**
LTK	**Loutraki**	**3.29**	**276**	P	**Pn**	**00 26 34.6**	**-0.4**
RDO	**Rodhopi**	**3.60**	**341**	P	**Pn**	**00 26 39.9**	**+0.6**
GUR	**Goura**	**3.78**	**274**	P	**Pn**	**00 26 42.1**	**+0.2**
KLV	**Kalavryta, Ach**	**3.94**	**276**	P	**Pn**	**00 26 44.7**	**+0.7**

AFAD 26 00:34:45.4, 37°76N×27°16E, h13km±2km, ML2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.09**	**136**	P	Pg	00 34 48.6	+0.4
GCAM				S	Sg	00 34 50.6	+0.3
GCAM				*i* IAML		00 34 51.0	
	comp=N,1μm,0.2s						
DDIM	**Aydin, Didim**	**0.31**	**168**	P	Pg	00 34 52.2	+0.4
DDIM				S	Sb	00 34 57.0	-0.7
ZEYE	**Izmir, Urla-Ze**	**0.70**	**313**	P	Pn	00 35 00.6	-0.5
ZEYE				S	Sb	00 35 08.8	-0.3
ZEYE				*i* IAML		00 35 09.0	
	comp=N,148nm,0.4s						
IZMR	**zmir-demi**	**0.73**	**59**	P	Pn	00 35 04.5	+3.1
IZMR				S	Sb	00 35 09.6	-0.3
URLA	**Izmir**	**0.74**	**324**	P	Pn	00 35 03.5	+1.8
URLA				S	Sb	00 35 10.9	+0.6

ISK 26 00:35:25.9, 37°69N×26°99E, h19km, ML2.0/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.19**	**86**	Pg	Pg	00 35 31.2	+0.4
GCAM				Sg	Sg	00 35 35.0	+0.9
GMLD	**Gumuldur**	**0.39**	**351**	Pg	Pb	00 35 34.7	+0.3
GMLD				Sg	Sb	00 35 40.9	+0.8
BODT	**Bodrum**	**0.67**	**158**	Pg	Pg	00 35 39.7	+0.5
BLCB	**Balcova**	**0.70**	**3**	Pg	Pg	00 35 40.2	+0.5
URLA	**Izmir**	**0.74**	**335**	Pg	Pg	00 35 40.9	+0.4
AYDB	**Zeytinkoy-Aydi**	**0.76**	**70**	Pg	Pg	00 35 41.2	+0.4

*IPEC **26** 00:46:07.2±0.2, 51°59N×16°19E, h1km, ML2.1/6, Error ellipse: s-maj=1.6km s-min=1.3km az=74.0*
*DNK **26** 00:46:07.1±1.9, 51°69N×15°90E, h0km±81km, ML2.8*
*PRU **26** 00:46:08.8, 51°52N×16°11E, h0km*
*VIE **26** 00:46:09.1±0.8, 51°44N×16°02E, h0km, mb2.4/2, ml2.6/2, Error ellipse: s-maj=10.5km s-min=5.2km az=60.0 79 km WNW of Wroclaw Suspected Mining induced.*

ISC 26 00:46:05.6±0.8, 51°65N±0°03×16°12E±0°03, h0km, n35, σ1s15/74, Poland

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

KSP	**Ksiaz**	**0.82**	**172**	*e*Pg	**Pg**	**00 46 21.9**	**+0.6**
KSP				*e*Sg	**Sg**	**00 46 31.5**	**-0.3**
CHVC	**Chvalec**	**1.07**	**182**	*e*PG	**Pb**	**00 46 26.6**	**-0.3**
CHVC				*e*SG	**Sg**	**00 46 39.4**	**-0.4**
	comp=Z,38nm,0.5s						
OSTC	**Ostas**	**1.10**	**177**	*e*PG	**Pb**	**00 46 27.1**	**-0.4**
OSTC				*e*SG	**Sg**	**00 46 40.4**	**-0.4**
	comp=Z,26nm,0.4s						
UPC	**Upice**	**1.15**	**183**	*e*PG	**Pg**	**00 46 27.8**	**+0.2**
UPC				*e*SG	**Sg**	**00 46 41.6**	**-0.8**
	comp=Z,58nm,0.4s						
DPC	**Dobruska-Polom**	**1.31**	**174**	*e*PG	**Pg**	**00 46 30.7**	**0.0**
DPC				*e*SG	**Sg**	**00 46 45.5**	**-2.1**
	comp=Z,21nm,0.5s						
PVCC	**Panska Ves**	**1.49**	**221**	*e*PG	**Pb**	**00 46 34.8**	**+0.7**
PVCC				*e*SG	**Sn**	**00 46 54.5**	**+0.8**
	comp=Z,129nm,0.2s						
PIVO	**Bartosovice**	**1.49**	**169**	*e*Pg	**Pn**	**00 46 33.8**	**+0.1**
	baz=351						
PIVO				*e*Sg	**Sg**	**00 46 51.8**	**-1.7**
	26nm,0.3s,baz=351						
KRLC	**Kraliky**	**1.64**	**165**	*e*PG	**Pn**	**00 46 36.1**	**+0.5**
KRLC				*e*SG	**Sn**	**00 46 56.0**	**-1.4**
RYBC	**Ceska Rybna**	**1.85**	**181**	*e*Pn	**Pn**	**00 46 38.9**	**+0.4**
	baz=2.5						
RYBC				*e*Sg	**Sn**	**00 47 03.1**	**+0.5**
	16nm,0.2s,baz=2.5						
PRU	**Pruhonice**	**1.94**	**212**	*e*PG	**Pb**	**00 46 41.9**	**+0.1**
PRU				*e*SG	**Sb**	**00 47 06.7**	**+0.1**
	comp=Z,20nm,0.3s						
CLL	**Collm**	**1.98**	**261**	*e*Pn	**Pn**	**00 46 41.0**	**+0.7**
CLL				*e*Pg	**Pg**	**00 46 44.0**	**+0.6**
CLL				*e*Sg	**Sg**	**00 47 10.0**	**+1.0**
	comp=Z,18nm,0.3s						
HSKC	**Hora Svate Kat**	**1.99**	**239**	*e*PG	**Pb**	**00 46 42.8**	**+0.2**
HSKC				*e*SG	**Sg**	**00 47 09.7**	**+0.3**
	comp=Z,23nm,0.6s						
STEB	**Steborice**	**2.02**	**148**	*e*PN	**Pn**	**00 46 40.6**	**-0.2**
STEB				*e*PG	**Pb**	**00 46 43.5**	**+0.4**
STEB				*e*SG	**Sb**	**00 47 09.5**	**+0.8**
	comp=Z,30nm,0.4s						
MORC	**Moravsky Berou**	**2.09**	**154**	*e*Pn	**Pn**	**00 46 41.9**	**+0.1**
	baz=335						
MORC				*e*Sg	**Sb**	**00 47 10.2**	**-0.5**
	comp=Z,13nm,0.4s,baz=335						
OKC	**Ostrava-Krasne**	**2.23**	**144**	*e*PG	**Pg**	**00 46 48.3**	**0.0**
VRAC	**Vranov**	**2.37**	**172**	*e*Pn	**Pn**	**00 46 46.3**	**+0.7**
	baz=354						
VRAC				*e*Sg	**Sb**	**00 47 19.2**	**+0.4**
	comp=Z,7.3nm,0.3s,baz=354						
TREC	**Trest**	**2.40**	**190**	*e*PN	**Pn**	**00 46 46.6**	**+0.6**
TREC				*e*SG	**Sb**	**00 47 19.8**	**+0.2**
KRUC	**Moravsky**	**2.60**	**176**	*e*Pn	**Pn**	**00 46 49.5**	**+0.7**
	baz=357						
KRUC	**Moravsky**	**2.60**	**176**	*e*Pg	**Pb**	**00 46 53.5**	**+0.5**
	baz=357						
KRUC				*e*Sg	**Sb**	**00 47 26.8**	**+1.3**
	comp=Z,6.6nm,0.4s,baz=357						
OJC	**Ojcow**	**2.74**	**120**	*e*Pg	**Pg**	**00 46 58.1**	**+0.1**
OJC				*e*Sg	**Sg**	**00 47 33.1**	**-0.3**
JAVC	**Velka Javorina**	**2.97**	**160**	*e*PN	**Pn**	**00 46 54.5**	**+0.5**
JAVC	**Velka Javorina**	**2.97**	**160**	*e*Pn	**Pn**	**00 46 54.4**	**+0.5**
	baz=341						
KHC	**Kasperske Hory**	**3.00**	**214**	*e*PN	**Pn**	**00 46 55.0**	**+0.6**
KHC				*e*PG	**Pb**	**00 47 00.3**	**+0.4**
KHC				*e*SN	**Sn**	**00 47 29.2**	**-1.9**
KHC				*e*SG	**Sg**	**00 47 39.7**	**-2.2**
	comp=Z,6.7nm,0.3s						
CKRC	**Cesky Krumlov**	**3.06**	**203**	*e*PN	**Pn**	**00 46 56.5**	**+1.3**
CKRC				*e*PG	**Pb**	**00 47 02.4**	**+1.5**
CKRC				*e*SG	**Sg**	**00 47 42.7**	**-1.2**
LANS	**Liptovska Anna**	**3.30**	**138**	*e*PN	**Pn**	**00 46 59.4**	**+0.9**
LANS				*e*PG	**Pg**	**00 47 08.1**	**-0.6**
LANS				*e*SG	**Sg**	**00 47 50.0**	**-1.4**
MODS	**Modra-Piesok**	**3.37**	**167**	*e*PN	**Pn**	**00 47 00.0**	**+0.6**
MODS				*e*PG	**Pg**	**00 47 11.4**	**+1.3**
MODS				*e*SG	**Sg**	**00 47 53.4**	**-0.3**
NIE	**Niedzica**	**3.48**	**128**	*e*Pg	**Pg**	**00 47 12.9**	**+0.6**
NIE				*e*Sg	**Sg**	**00 47 57.5**	**+0.1**
BSD	**Bornholm Skovb**	**3.54**	**349**	*e*P	**Pn**	**00 47 02.9**	**+1.1**
BSD				*i* S	**Sn**	**00 47 42.7**	**-1.6**
BSD				IAML		00 48 10.1	
	comp=Z,13nm,1.2s						
CONA	**Conrad Observa**	**3.73**	**183**	*i* Pn	**Pn**	**00 47 05.0**	**+0.5**

SMRC				S	**Sn**	**01 22 23.8**	**-0.9**
SJCC	**San Jacinto, C**	**2.40**	**257**	P	**Pn**	**01 22 12.9**	**+0.5**
SJCC				S	**Sn**	**01 22 41.8**	**-0.7**
CAPV	**Capacho**	**2.61**	**169**	*e*P	**Pn**	**01 22 15.6**	**+0.3**
CAPV				*e*S	**Sn**	**01 22 45.2**	**-2.5**
SDV	**Santo Domingo**	**2.65**	**126**	P	**Pn**	**01 22 17.0**	**+1.2**
SDV				S	**Sn**	**01 22 48.7**	**+0.3**
PAMC	**Pamplona, Colo**	**3.09**	**178**	P	**Pn**	**01 22 22.6**	**+0.9**
PAMC				S	**Sn**	**01 22 58.2**	**-0.8**
BRJC	**Barrancabermej**	**3.57**	**195**	P	**Pn**	**01 22 28.0**	**+0.5**
BRJC				S	**Sn**	**01 23 09.7**	**+0.1**
TEPV	**Terepaima**	**3.59**	**97**	*e*P	**Pn**	**01 22 28.3**	**+0.5**
MAPV	**Macapo**	**4.33**	**98**	*e*P	**Pn**	**01 22 37.8**	**+0.2**
BENV	**Beln**	**5.15**	**95**	*e*P	**Pn**	**01 22 48.4**	**-0.2**
CACV	**CAICARA DEL OR**	**6.82**	**114**	*e*P	Pn	01 23 16.6	+5.7

NAO ***26*** *01:47:40.6, 40˚.57N×22˚.33E, h10km, MB3.8*
MOS ***26*** *01:47:53.9±0.9, 41˚.34N×19˚.37E, h17km, mb4.8/19, Error ellipse: s-maj=4.9km s-min=2.9km az=75.0*
SKO ***26*** *01:47:53.2, 41˚.44N×19˚.26E, h0km, ML4.4*
TIR ***26*** *01:47:55.0, 41˚.49N×19˚.46E, h82km±4km, Ml4.6/8*
PRU ***26*** *01:47:54.4, 41˚.10N×19˚.55E, h10km, MA4.4*
NEIC ***26*** *01:47:55.2±1.2, 41˚.35N±0˚.04×19˚.50E±0˚.06, h10km±1km, mb4.6/67, Error ellipse: s-maj=7.5km s-min=6.3km az=262.0*
THE ***26*** *01:47:55.9, 41˚N±7˚×1˚9E±1˚2, h11km, M4.5/38, mb4.9/6, MLh4.1/38*
RHSSO ***26*** *01:47:56.5±1.0, 41˚.40N×19˚.52E, h8km±4km, ML4.3/5*
BEO ***26*** *01:47:56.2±0.5, 41˚.31N×19˚.44E, h12km±2km, ML4.3/9*
IDC ***26*** *01:47:56.8±3.7, 41˚.42N×19˚.46E, h20km±24km, mb4.3/23, mbtmp4.3/38, ML4.0/13, MS3.6/31, Error ellipse: s-maj=11.1km s-min=9.1km az=14.0*
ROM ***26*** *01:47:56.3±0.1, 41˚.361N±0˚.007×19˚.54E±0˚.02, h22km±2km, ML4.4/182, Error ellipse: s-maj=1.9km s-min=0.7km az=77.0*
PDG ***26*** *01:47:56.7±0.6, 41˚.36N×19˚.44E, h21km±1km, MD4.3/11, ML4.3/13, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
MED_RC ***26*** *01:47:56.0±0.4, 41˚.33N×19˚.41E, h18km±1km, MW4.3/19, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s19,c20; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr3.20±.51; Mθθ0.18±.35; Mϕϕ-3.38±.34; Mrθ0.91±.57; Mθϕ1.78±.16; Mϕr-1.49±.43; Best double couple: M≈4.06000×10¹⁵ NP1:φs344.00000°, δ33.00000°, λ100.00000°. NP2:φs152.00000°, δ58.00000°, λ84.00000°. Principal axes: T 3.6100, Plg76.0000°, Azm43.0000°; N 0.8900, Plg5.0000°, Azm156.0000°; P -4.5000, Plg13.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
AFAD ***26*** *01:48:00.0, 41˚.36N×19˚.58E, h35km, MW4.3*

ISC 26 01:47:56.5±0.7, 41˚.39N±0˚.02×19˚.53E±0˚.02, h20km±5km, n702, σ1$72/799, mb4.7/61, MS3.6/22, 88C-40D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.26**	**100**	⇓P	*i* Pg	**Pb**	**01 48 02.1**	**-0.5**
TIR					Sg	**Sb**	**01 48 07.2**	**+0.4**
TIR					AML	AML	01 48 08.4	
	139nm,0.8s							
TIR	**Tirane**	**0.26**	**100**		*i* Pg	**Pb**	**01 48 02.1**	**-0.5**
TIR					*i* Sg	**Sb**	**01 48 06.9**	**+0.1**
TIR	**Tirane**	**0.26**	**100**	⇓P		**Pb**	**01 48 02.0**	**-0.6**
TIR					S	**Sb**	**01 48 06.7**	**-0.1**
TIR					AML	AML		
TIR					AML	AML		
	comp=N,96100μm,1.0s							
TIR					AML	AML		
	comp=N,81897μm,0.4s							
TIR					AML	AML		
	comp=N,96100μm,1.0s							
TIR					AML	AML		
TIR					AML	AML		
ULC	**Ulcinj**	**0.61**	**340**	⇑	*i* Pg	**Pb**	**01 48 07.6**	**-1.0**
ULC					*i* Sg	**Sn**	**01 48 18.0**	**-1.3**
SDA	**Shkodra**	**0.66**	**358**	⇓P		**Pb**	**01 48 09.5**	**+0.1**
SDA					Sg	**Sn**	**01 48 21.4**	**+0.9**
PHP	**Peshkopia**	**0.74**	**67**	⇑P		**Pb**	**01 48 10.2**	**-0.6**
PHP					Sg	**Sn**	**01 48 24.7**	**+2.0**
PHP					AML	AML	01 48 27.1	
	comp=N,83nm,0.5s							
PHP	**Peshkopia**	**0.74**	**67**		P	**Pb**	**01 48 09.9**	**-1.0**
PHP					S	**Sb**	**01 48 21.3**	**+0.7**
DRME	**Dracevica, Mon**	**0.83**	**342**	*e*	Pg	**Pb**	**01 48 12.0**	**-0.3**
DRME	**Dracevica, Mon**	**0.83**	**342**	⇓	*i* Pg	**Pb**	**01 48 12.4**	**+0.1**
DRME					*i* Sg	**Sn**	**01 48 26.1**	**+1.3**
VLO	**Vlora**	**0.92**	**182**		Pg	**Pn**	**01 48 15.9**	**+1.6**
VLO					Sg	**Sn**	**01 48 29.7**	**+2.8**
VLO					AML	AML	01 48 34.1	
	comp=N,103nm,0.6s							
VLO	**Vlora**	**0.92**	**182**		P	**Pn**	**01 48 15.6**	**+1.3**
VLO					S	**Sn**	**01 48 27.8**	**+0.9**
VLO	**Vlora**	**0.92**	**182**		P	**Pn**	**01 48 14.5**	**+0.2**
VLO					S	**Sb**	**01 48 24.6**	**-1.0**
VLO					AML	AML		
	comp=E,35800μm,0.8s							
VLO					AML	AML		
	comp=N,33500μm,0.6s							
VLO					AML	AML		
	comp=E,35699μm,0.7s							
VLO					AML	AML		
	comp=N,33504μm,0.6s							
VLO					AML	AML		
	comp=N,33500μm,1.4s							
OHR	**Ohrid**	**1.00**	**106**	*i*	Pg	**Pb**	**01 48 14.6**	**-0.5**
OHR					*i* Sg	**Sn**	**01 48 32.1**	**+3.1**
OHR					*e*Lg	Lg	01 48 33.2	
	comp=N,9μm,0.7s							
OHR					*e*Lg	Lg	01 48 33.2	
	comp=E,6μm,0.6s							
BUM	**Brajici-Budva**	**1.02**	**333**	⇓	*i* Pg	**Pn**	**01 48 15.9**	**+0.1**
BUM					*i* Sg	**Sn**	**01 48 31.6**	**+2.0**
PDG	**Podgorica**	**1.06**	**349**		P	**Pb**	**01 48 15.9**	**-0.2**
PDG	**Podgorica**	**1.06**	**349**		P	**Pn**	**01 48 17.2**	**+1.0**
PDG	**Podgorica**	**1.06**	**349**			**Pb**	**01 48 15.3**	**-0.8**
PDG					Sg	**Sn**	**01 48 30.6**	**+0.3**
PDG	**Podgorica**	**1.06**	**349**	⇑	P	**Pn**	**01 48 16.5**	**+0.4**
PDG	**Podgorica**	**1.06**	**349**	*e*	Pg	**Pb**	**01 48 15.9**	**-0.2**
PDG				*e*	Sg	**Sn**	**01 48 33.8**	**+3.5**
PDG	**Podgorica**	**1.06**	**349**	⇓	P	**Pb**	**01 48 15.8**	**-0.3**
PDG					S	**Sn**	**01 48 31.5**	**+1.3**
PDG					AML	AML		
	comp=E,12200μm,0.5s							
PDG					AML	AML		
	comp=N,17694μm,0.4s							
PDG					AML	AML		
	comp=N,17755μm,0.4s							
PDG					AML	AML		
	comp=N,17750μm,0.4s							
PDG					AML	AML		
	comp=N,17700μm,0.4s							
PDG					AML	AML		
	comp=E,12166μm,0.5s							
PDG					AML	AML		
	comp=E,12088μm,0.5s							
PDG					AML	AML		
	comp=E,12100μm,0.5s							
PDG	**Podgorica**	**1.06**	**349**	⇑	*i* Pg	**Pb**	**01 48 15.6**	**-0.5**
PDG					*i* Sg	**Sn**	**01 48 33.4**	**+3.1**
KBN	**Korca**	**1.22**	**128**	⇑	Pg	**Pb**	**01 48 19.4**	**+0.4**
KBN					Sg	**Sn**	**01 48 37.3**	**+2.8**
KBN	**Korca**	**1.22**	**128**		P	**Pn**	**01 48 18.2**	**-0.3**
KBN					S	**Sn**	**01 48 39.0**	**+4.5**
KBN	**Korca**	**1.22**	**128**	⇑	P	**Pb**	**01 48 19.1**	**+0.1**
CEME	**Cevo**	**1.24**	**339**	⇑	*i* Pg	**Pb**	**01 48 19.5**	**+0.2**
CEME					*i* Sg	**Sn**	**01 48 38.6**	**+3.7**
PVY	**Plav**	**1.24**	**15**	⇑	*i* Pg	**Pn**	**01 48 19.0**	**+0.1**
PVY					*i* Sg	**Sn**	**01 48 39.8**	**+4.7**
HCY	**Herceg Novi**	**1.31**	**324**	⇑	*i* Pg	**Pb**	**01 48 20.5**	**+0.1**
HCY					*i* Sg	**Sb**	**01 48 39.4**	**+2.7**
NKME	**Niksic**	**1.44**	**343**	⇓	*i* Pg	**Pb**	**01 48 23.1**	**+0.4**
NKME					*i* Sg	**Sb**	**01 48 42.9**	**+2.3**
KOME	**Kolasin**	**1.46**	**360**	*e*	Pg	**Pb**	**01 48 23.0**	**0.0**
KOME	**Kolasin**	**1.46**	**360**	⇑	*i* Pg	**Pb**	**01 48 23.4**	**+0.4**
KOME					*i* Sg	**Sb**	**01 48 44.1**	**+3.0**
MESG	**Mesagne**	**1.50**	**238**	⇓	P	**Pn**	**01 48 22.3**	**+0.1**
MESG					S	**Sb**	**01 48 41.9**	**-0.4**
IVA	**Berane**	**1.50**	**10**	⇓	*i* Pg	**Pb**	**01 48 23.5**	**-0.3**
IVA					*i* Sg	**Sb**	**01 48 45.4**	**+3.0**
NEST	**Nestorio**	**1.51**	**130**	⇑	Pn	**Pb**	**01 48 24.7**	**+0.8**
NEST					Sn	**Sb**	**01 48 45.0**	**+2.4**
NEST					AML	AML	01 48 51.9	
	comp=E,14nm,1.0s							
NEST	**Nestorio**	**1.51**	**130**		P	**Pb**	**01 48 23.7**	**-0.2**
SKO	**Skopje**	**1.54**	**67**	*i*	Pg	**Pb**	**01 48 23.8**	**-0.7**
SKO				*i*	Sg	**Sb**	**01 48 47.9**	**+4.4**
TREB	**Trebinje**	**1.59**	**327**	⇑	*i* Pg	**Pb**	**01 48 24.5**	**-0.7**
TREB				*e*	Sg	**Sb**	**01 48 46.3**	**+1.5**
BRY	**Bratogost**	**1.68**	**334**	⇑	*i* Pn	**Pn**	**01 48 25.7**	**+0.9**
BRY				*i*	Sn	**Sb**	**01 48 48.1**	**+0.6**
KEK	**Kerkira**	**1.69**	**173**	*e*	P	**Pb**	**01 48 31.0**	**+4.1**
KEK	**Kerkira**	**1.69**	**173**		P	**Pb**	**01 48 30.2**	**+3.3**
KEK					S	**Sb**	**01 48 53.6**	**+5.9**
KEK	**Kerkira**	**1.69**	**173**			**Pb**	**01 48 29.4**	**+2.5**
PENT	**Pentalofos**	**1.71**	**134**		P	**Pb**	**01 48 28.4**	**+1.1**
UPM	**Unac-Piva**	**1.87**	**346**	⇓	*i* Pn	**Pb**	**01 48 29.5**	**-0.5**
UPM					*i* Sn	**Sb**	**01 48 52.9**	**-0.1**
SJES	**Sjenica**	**1.90**	**10**	*e*	Pn	**Pb**	**01 48 31.2**	**+0.7**
SJES				*e*	Sn	**Sb**	**01 48 57.0**	**+3.2**
TAR1	**Taranto**	**1.91**	**244**	⇓	P	**Pn**	**01 48 27.7**	**-0.1**
TAR1					AML	AML		
	comp=E,7615μm,0.5s							
TAR1					AML	AML		
	comp=N,5870μm,0.6s							
TAR1					AML	AML		
	comp=N,5870μm,0.6s							
TAR1					AML	AML		
	comp=E,7616μm,0.5s							
TAR1					AML	AML		
	comp=E,7615μm,1.5s							
KLINJ	**Klinje**	**1.91**	**339**	*e*	Pn	**Pn**	**01 48 29.2**	**+1.2**
KLINJ				*e*	Sn	**Sb**	**01 48 53.6**	**-0.5**
PLE	**Pljevlja**	**1.94**	**357**	⇑	*i* Pn	**Pb**	**01 48 30.2**	**-1.0**
PLE				*i*	Sn	**Sb**	**01 48 55.4**	**+0.4**
IGT	**Igoumenitsa**	**1.96**	**161**		Pn	**Pb**	**01 48 30.8**	**-0.7**
IGT					Sn	**Sb**	**01 48 56.5**	**+1.1**
IGT					AML	AML	01 49 07.5	
	comp=E,8.0nm,0.8s							
IGT	**Igoumenitsa**	**1.96**	**161**		P	**Pn**	**01 48 29.7**	**+1.2**
NOCI	**Noci**	**1.96**	**253**	⇑	Pn	**Pn**	**01 48 28.6**	**0.0**
NOCI					Sn	**Sn**	**01 48 53.0**	**+0.5**
NOCI					AML	AML	01 48 58.2	
	comp=E,15nm,0.4s							
NOCI	**Noci**	**1.96**	**253**		P	**Pn**	**01 48 28.6**	**0.0**
NOCI					AML	AML		
	comp=E,5940μm,0.4s							
NOCI					AML	AML		
	comp=N,7705μm,0.5s							
NOCI					AML	AML		
	comp=N,7707μm,0.5s							
NOCI					AML	AML		
	comp=E,5940μm,0.4s							
JAN	**Janina**	**2.00**	**149**		P	**Pb**	**01 48 31.2**	**-1.1**
STON	**Ston**	**2.01**	**318**	*e*	Pn	**Pn**	**01 48 30.0**	**+0.8**
STON				*e*	Sn	**Sn**	**01 48 54.9**	**+1.2**
STON	**Ston**	**2.01**	**318**		P	**Pn**	**01 48 29.9**	**+0.6**
STON					S	**Sn**	**01 48 55.0**	**+1.2**
STON					AML	AML		
	comp=E,2580μm,1.5s							
STON					AML	AML		
	comp=N,2445μm,0.3s							
STON					AML	AML		
	comp=N,2446μm,0.3s							
STON					AML	AML		
	comp=N,2445μm,1.7s							
STON					AML	AML		
	comp=E,2227μm,0.4s							
STON					AML	AML		
	comp=E,2580μm,0.5s							
KZN	**Kozani**	**2.02**	**122**		P	**Pb**	**01 48 31.8**	**-0.7**
SELS	**Selova**	**2.17**	**32**	*e*	Pn	**Pb**	**01 48 33.7**	**-1.5**
SELS				*e*	Sn	**Sb**	**01 49 02.8**	**+1.1**
LTRZ	**Laterza**	**2.20**	**250**		P	**Pn**	**01 48 31.4**	**-0.4**
LTRZ					AML	AML		
	comp=N,4660μm,1.2s							
LTRZ					AML	AML		
	comp=N,11μm,0.1s							
LTRZ					AML	AML		
	comp=N,4439μm,0.4s							
LTRZ					AML	AML		
	comp=E,4181μm,0.6s							
LTRZ					AML	AML		
	comp=E,4028μm,0.6s							
LTRZ					AML	AML		
	comp=E,4025μm,0.6s							
PRMD	**Pramanda**	**2.21**	**147**		P	**Pb**	**01 48 34.6**	**-1.2**
IVAS	**Ivanjica**	**2.23**	**12**	*e*	Pn	**Pn**	**01 48 34.2**	**+1.8**
MATE	**Matera**	**2.26**	**252**	*e*	P	**Pn**	**01 48 33.3**	**+0.6**
MATE	**Matera**	**2.26**	**252**	⇓	P	**Pn**	**01 48 31.6**	**-1.1**
MATE	**Matera**	**2.26**	**252**	*e*	P	**Pb**	**01 48 38.2**	**+1.6**
VAY	**Valandovo**	**2.29**	**91**	*i*	Pn	**Pn**	**01 48 34.9**	**+1.7**
VAY				*i*	Sn	**Sb**	**01 49 05.6**	**+0.6**
VAY				*e*	Lg	Lg	01 49 06.0	
	comp=E,846nm,0.7s							
VAY				*e*	Lg	Lg	01 49 06.7	
	comp=N,979nm,0.8s							
GOCS	**Kraljevo Serbi**	**2.39**	**24**	*e*	Pn	**Pn**	**01 48 36.6**	**+2.1**
GOCS				*e*	Sn	**Sb**	**01 49 08.1**	**+0.2**
BBLS	**Lazi&#263i**	**2.47**	**358**	*e*	Pn	**Pn**	**01 48 37.9**	**+2.2**
KNT	**Kendrikon**	**2.55**	**94**		P	**Pn**	**01 48 38.2**	**+1.5**
KNT	**Kendrikon**	**2.55**	**94**	*i*	Pn	**Pn**	**01 48 38.5**	**+1.7**
KNT				*i*	Sn	**Sn**	**01 49 09.8**	**+2.6**
CRAC	**Craco**	**2.56**	**247**		P	**Pn**	**01 48 37.5**	**+0.7**
CRAC					AML	AML		
	comp=E,6700μm,0.6s							
CRAC					AML	AML		
	comp=N,6835μm,0.7s							
CRAC					AML	AML		
	comp=N,6810μm,0.7s							
CRAC					AML	AML		
	comp=E,6701μm,0.6s							
LIT	**Litokhoron**	**2.59**	**119**		SPECP		01 48 39.0	
LIT					P	**Pn**	**01 48 39.0**	**+1.7**
LIT					S	**Sn**	**01 49 10.1**	**+1.9**
LIT				*i*	IAML		01 49 26.0	
	comp=E,830nm,0.7s							
LIT	**Litokhoron**	**2.59**	**119**		P	**Pn**	**01 48 39.1**	**+1.8**
LIT	**Litokhoron**	**2.59**	**119**			**Pn**	**01 48 38.9**	**+1.7**
LIT	**Litokhoron**	**2.59**	**119**	*i*	Pn	**Pn**	**01 48 39.0**	**+1.7**
LIT	**Litokhoron**	**2.59**	**119**		P	**Pn**	**01 48 38.9**	**+1.6**
THL	**Klokotos Trika**	**2.63**	**133**		P	**Pn**	**01 48 39.2**	**+1.4**
GRUS	**Gruza**	**2.64**	**19**	*e*	Pn	**Pn**	**01 48 40.0**	**+2.0**
TYRN	**Tyrnavos**	**2.66**	**128**		P	**Pn**	**01 48 39.6**	**+1.5**
ORI	**Oriolo Calabro**	**2.69**	**241**		P	**Pn**	**01 48 38.7**	**+0.1**
ORI					AML	AML		
	comp=N,6758μm,0.5s							
ORI					AML	AML		
	comp=N,6760μm,0.5s							
ORI					AML	AML		
	comp=E,6875μm,0.7s							
ORI					AML	AML		
	comp=E,6875μm,0.7s							
TSLK	**Tsoukalades, L**	**2.71**	**161**		P	**Pn**	**01 48 39.7**	**+0.9**
THE	**Thessaloniki**	**2.71**	**105**		Pn	**Pn**	**01 48 40.4**	**+1.6**
THE	**Thessaloniki**	**2.71**	**105**		P	**Pn**	**01 48 40.1**	**+1.3**
THE	**Thessaloniki**	**2.71**	**105**	*i*	Pn	**Pn**	**01 48 40.3**	**+1.5**
THE				*i*	Sn	**Sb**	**01 49 15.1**	**-2.0**
DIVS	**Divibare**	**2.73**	**7**	*e*	Pn	**Pn**	**01 48 40.9**	**+1.7**
PALZ	**Palazzo San Ge**	**2.73**	**262**		AML	AML		
	comp=N,6415μm,1.2s							
PALZ					AML	AML		
	comp=E,8670μm,0.9s							
PALZ					AML	AML		
	comp=N,6415μm,0.8s							
PALZ					AML	AML		
	comp=N,6415μm,0.8s							
PALZ					AML	AML		
	comp=E,8670μm,1.1s							
PALZ					AML	AML		
	comp=E,8672μm,0.9s							
TRAN	**Tran**	**2.73**	**57**		P	**Pn**	**01 48 41.6**	**+2.3**
KKB	**Krupnik**	**2.74**	**79**		P	**Pn**	**01 48 41.5**	**+2.2**
KKB	**Krupnik**	**2.74**	**79**	*i*	P	**Pn**	**01 48 41.6**	**+2.3**
KKB					S	**Sn**	**01 49 14.4**	**+2.6**
KKB	**Krupnik**	**2.74**	**79**	*i*	Pn	**Pn**	**01 48 41.5**	**+2.2**
LKD2	**Lefkada island**	**2.74**	**161**		Pn	**Pn**	**01 48 40.4**	**+1.0**
LKD2	**Lefkada island**	**2.74**	**161**		P	**Pn**	**01 48 39.9**	**+0.6**
BOVS	**Bovan**	**2.76**	**35**	⇓	P	**Pn**	**01 48 42.1**	**+2.6**
BOVS	**Bovan**	**2.76**	**35**	*e*	Pn	**Pn**	**01 48 41.3**	**+1.7**
PTRP	**Pietrapertosa**	**2.77**	**253**		P	**Pn**	**01 48 40.4**	**+0.6**
PTRP					AML	AML		
	comp=E,6100μm,0.7s							
PTRP					AML	AML		
	comp=N,6480μm,0.7s							
PTRP					AML	AML		
	comp=N,6479μm,0.7s							
PTRP					AML	AML		
	comp=N,6480μm,1.3s							
PTRP					AML	AML		
	comp=E,6099μm,0.7s							
ACER	**Acerenza**	**2.78**	**259**			**Pn**	**01 48 39.9**	**0.0**
ACER	**Acerenza**	**2.78**	**259**	⇓	P	**Pn**	**01 48 40.4**	**+0.5**
ACER					AML	AML		
	comp=E,6380μm,0.5s							
ACER					AML	AML		
	comp=E,6620μm,0.5s							
ACER					AML	AML		
	comp=E,6381μm,0.5s							
ACER					AML	AML		
	comp=E,6616μm,0.5s							
ACER					AML	AML		
	comp=N,7309μm,0.7s							
ACER					AML	AML		
	comp=N,6992μm,0.7s							
ACER					AML	AML		
	comp=N,7310μm,0.7s							
ACER					AML	AML		
	comp=N,6995μm,0.7s							
AMPL	**Ampelaki**	**2.78**	**152**		P	**Pn**	**01 48 41.5**	**+1.5**
CAPA	**Cerignola FG**	**2.81**	**266**	⇓	P	**Pn**	**01 48 40.9**	**+0.7**
CAPA					AML	AML		
	comp=E,3125μm,1.2s							
CAPA					AML	AML		
	comp=N,4450μm,0.9s							
CAPA					AML	AML		
	comp=E,7230μm,0.9s							
CAPA					AML	AML		
	comp=N,10365μm,1.0s							
CAPA					AML	AML		
	comp=N,4452μm,0.9s							
CAPA					AML	AML		
	comp=N,10343μm,1.0s							
CAPA					AML	AML		
	comp=N,4450μm,1.1s							
CAPA					AML	AML		
	comp=N,10365μm,1.0s							
CAPA					AML	AML		
	comp=E,3123μm,1.2s							
CAPA					AML	AML		
	comp=E,3125μm,0.8s							
CAPA					AML	AML		
	comp=E,7232μm,0.9s							
HORT	**Hortiatis**	**2.82**	**105**		P	**Pn**	**01 48 41.7**	**+1.2**
NYDR	**Nydri-Lefkada**	**2.82**	**161**		P	**Pn**	**01 48 40.6**	**+0.2**
SALB	**San Lorenzo Be**	**2.85**	**239**		P	**Pn**	**01 48 40.3**	**-0.7**
SALB					AML	AML		
	comp=E,2245μm,0.9s							
SALB					AML	AML		
	comp=E,2245μm,0.9s							
SALB					AML	AML		
	comp=N,1942μm,0.5s							
SALB					AML	AML		
	comp=N,1945μm,0.5s							
SGRT	**San Giovanni R**	**2.86**	**279**	⇑	Pn	**Pn**	**01 48 41.6**	**+0.5**
SGRT					Sn	**Sn**	**01 49 14.4**	**-0.6**
SGRT					AML	AML	01 49 39.0	
	comp=N,4.6nm,0.5s							
SGRT	**San Giovanni R**	**2.86**	**279**			**Pn**	**01 48 41.0**	**-0.1**
SGRT	**San Giovanni R**	**2.86**	**279**	⇓	P	**Pn**	**01 48 41.4**	**+0.4**
SGRT					AML	AML		
	comp=E,1365μm,0.7s							
SGRT					AML	AML		
	comp=N,1500μm,0.5s							
SGRT					AML	AML		
	comp=N,1502μm,0.5s							
SGRT					AML	AML		
	comp=E,1420μm,1.3s							
LADO	**San Nicola del**	**2.87**	**224**		P	**Pn**	**01 48 41.1**	**0.0**
LADO					AML	AML		
	comp=E,138μm,0.6s							
LADO					AML	AML		
	comp=N,122μm,0.6s							
LADO					AML	AML		
	comp=E,138μm,0.6s							
LADO					AML	AML		
	comp=N,122μm,0.6s							
LADO					AML	AML		
	comp=N,122μm,1.4s							
SCHR	**S. Chirico Rap**	**2.88**	**247**		P	**Pn**	**01 48 41.7**	**+0.4**
SCHR					AML	AML		
	comp=N,2395μm,0.9s							
SCHR					AML	AML		
	comp=E,1736μm,0.7s							
SCHR					AML	AML		
	comp=E,1735μm,0.7s							
SCHR					AML	AML		
	comp=N,2397μm,0.9s							
EVGI	**Lefkada island**	**2.90**	**162**		P	**Pn**	**01 48 41.2**	**-0.3**
TRUS	**Trudelj**	**2.90**	**13**	*e*	Pn	**Pn**	**01 48 42.3**	**+0.8**
SOH	**Sokhos**	**2.95**	**100**		P	**Pn**	**01 48 43.7**	**+1.5**
ZAPS	**Zavoj**	**2.97**	**50**	*e*	Pn	**Pn**	**01 48 44.9**	**+2.4**
ZAPS				*e*	Sn	**Sb**	**01 49 21.5**	**-3.2**
MCEL	**Monticello**	**3.02**	**251**		P	**Pn**	**01 48 43.5**	**+0.3**
MCEL					AML	AML		
	comp=N,3355μm,0.8s							
MCEL					AML	AML		
	comp=N,3405μm,0.8s							
MCEL					AML	AML		
	comp=N,3405μm,1.2s							
MCEL					AML	AML		
	comp=N,3404μm,0.8s							
MCEL					AML	AML		
	comp=N,3355μm,1.2s							
MCEL					AML	AML		
	comp=N,3353μm,0.8s							
MCEL					AML	AML		
	comp=E,2325μm,0.6s							
MCEL					AML	AML		
	comp=E,2324μm,0.6s							
MCEL					AML	AML		
	comp=E,2290μm,0.6s							
MCEL					AML	AML		
	comp=E,2291μm,0.6s							
VTS	**Vitosha**	**3.02**	**65**		P	**Pn**	**01 48 45.4**	**+2.1**
VTS	**Vitosha**	**3.02**	**65**		P	**Pn**	**01 48 45.8**	**+2.4**
VTS					S	**Sn**	**01 49 22.5**	**+3.5**
VTS	**Vitosha**	**3.02**	**65**	*e*	Pn	**Pn**	**01 48 45.7**	**+2.4**
VTS				*e*	Sn	**Sn**	**01 49 22.1**	**+3.1**
EVR	**Evrytania**	**3.03**	**144**		P	**Pn**	**01 48 45.9**	**+2.6**
FSK	**Fiskardo**	**3.04**	**164**		P	**Pn**	**01 48 43.2**	**-0.2**
CELI	**Celico**	**3.04**	**230**		P	**Pn**	**01 48 43.4**	**-0.2**
CELI					AML	AML		
	comp=E,1420μm,0.8s							
CELI					AML	AML		
	comp=N,661μm,1.4s							
CELI					AML	AML		
	comp=E,3535μm,0.9s							
CELI					AML	AML		
	comp=N,1570μm,1.4s							
CELI					AML	AML		
	comp=N,646μm,0.8s							
CELI					AML	AML		
	comp=N,1511μm,0.8s							
CELI					AML	AML		
	comp=E,1419μm,0.8s							
CELI					AML	AML		
	comp=E,3536μm,0.9s							
CELI					AML	AML		
	comp=N,1570μm

	comp=E,692µm,0.8s						
TIP					AML	AML	
	comp=E,719µm,0.8s						
TIP					AML	AML	
	comp=N,761µm,1.2s						
TIP					AML	AML	
	comp=N,765µm,1.2s						
SRS	**Serrai**	**3.08**	**94**	P	**Pn**	**01 48 45.6 +1.7**	
SRS	**Serrai**	**3.08**	**94**	*i* Pn	**Pn**	**01 48 45.7 +1.7**	
MMN	**Mormanno**	**3.08**	**242**	P	**Pn**	**01 48 44.7 +0.8**	
MMN					AML	AML	
	comp=N,1790µm,0.8s						
MMN					AML	AML	
	comp=N,1788µm,0.8s						
MMN					AML	AML	
	comp=N,1790µm,1.2s						
MMN					AML	AML	
	comp=E,1225µm,0.6s						
MMN					AML	AML	
	comp=E,1505µm,0.6s						
MAKR	**Makrakomi, Fth**	**3.10**	**139**	P	**Pn**	**01 48 46.7 +2.4**	
SLCN	**Sala Consilina**	**3.12**	**253**	P	**Pn**	**01 48 45.5 +0.9**	
SLCN					AML	AML	
	comp=N,2250µm,0.8s						
SLCN					AML	AML	
	comp=E,3545µm,0.6s						
SLCN					AML	AML	
	comp=N,2300µm,0.8s						
SLCN					AML	AML	
	comp=E,3543µm,0.6s						
SLCN					AML	AML	
	comp=E,3178µm,0.6s						
SLCN					AML	AML	
	comp=E,3180µm,0.6s						
SLCN					AML	AML	
	comp=N,2295µm,0.8s						
SLCN					AML	AML	
	comp=N,2247µm,0.8s						
SLCN					AML	AML	
	comp=N,2250µm,1.2s						
SVIS	**Svilajnac**	**3.13**	**23**	*e*Pn	**Pn**	**01 48 47.2 +2.6**	
ZAGS	**Zajecar**	**3.14**	**39**	*e*Pn	**Pn**	**01 48 47.0 +2.3**	
ZAGS				*e*Sn	**Sn**	**01 49 24.3 +2.7**	
CUC	**Castrocucco**	**3.15**	**245**		**Pn**	**01 48 45.1 +0.1**	
CUC	**Castrocucco**	**3.15**	**245**	P	**Pn**	**01 48 45.5 +0.5**	
CUC					AML	AML	
	comp=E,2635µm,0.9s						
CUC					AML	AML	
	comp=N,2000µm,0.6s						
CUC					AML	AML	
	comp=N,1995µm,0.6s						
CUC					AML	AML	
	comp=N,1993µm,0.6s						
CUC					AML	AML	
	comp=N,2000µm,0.6s						
CUC					AML	AML	
	comp=E,2638µm,0.9s						
CUC					AML	AML	
	comp=E,2583µm,0.9s						
CUC					AML	AML	
	comp=E,2580µm,0.9s						
TEKS	**Tekeris**	**3.16**	**0**	*e*Pn	**Pn**	**01 48 46.3 +1.3**	
PVO	**Paravola**	**3.17**	**150**	P	**Pn**	**01 48 46.8 +1.6**	
MMB	**Musomishta**	**3.18**	**86**	P	**Pn**	**01 48 47.1 +1.7**	
MMB	**Musomishta**	**3.18**	**86**	*i* P	**Pn**	**01 48 48.4 +3.1**	
MMB				S	**Sb**	**01 49 36.2 +5.7**	
MMB	**Musomishta**	**3.18**	**86**	*i* Pn	**Pn**	**01 48 47.4 +2.1**	
AGG	**Agios Georgios**	**3.19**	**137**	P	**Pn**	**01 48 47.7 +2.1**	
AGG				S	**Sn**	**01 49 24.1 +1.0**	
AGG				*i* IAML		01 49 32.0	
	comp=E,200nm,0.7s						
AGG				*i* IAML		01 49 37.0	
	comp=E,173nm,0.8s						
AGG	**Agios Georgios**	**3.19**	**137**	P	**Pn**	**01 48 47.3 +1.7**	
SPS2	**Spezzano della**	**3.21**	**230**	P	**Pn**	**01 48 46.1 +0.3**	
SPS2					AML	AML	
	comp=N,402µm,1.2s						
SPS2					AML	AML	
	comp=N,375µm,0.8s						
SPS2					AML	AML	
	comp=E,424µm,0.6s						
SPS2					AML	AML	
	comp=E,424µm,0.6s						
DMLN	**Damoulianata-K**	**3.22**	**168**	P	**Pn**	**01 48 45.7 -0.1**	
BLKB	**Belogradchik**	**3.22**	**45**	*e*Pn	**Pn**	**01 48 48.5 +2.5**	
BORS2	**Bor- Borsko je**	**3.26**	**33**	*e*Pn	**Pn**	**01 48 47.1 +0.6**	
MGR	**Morigerati**	**3.27**	**249**	P	**Pn**	**01 48 47.6 +1.1**	
MGR					AML	AML	
	comp=E,1945µm,0.6s						
MGR					AML	AML	
	comp=N,1500µm,0.5s						
MGR					AML	AML	
	comp=N,2035µm,0.5s						
MGR					AML	AML	
	comp=E,1462µm,0.5s						
MGR					AML	AML	
	comp=E,1460µm,0.5s						
MGR					AML	AML	
	comp=E,1945µm,1.4s						
MGR					AML	AML	
	comp=E,1943µm,0.6s						
MGR					AML	AML	
	comp=N,2035µm,0.5s						
MGR					AML	AML	
	comp=N,2035µm,1.5s						
MGR					AML	AML	
	comp=N,1500µm,1.5s						
MGR					AML	AML	
	comp=N,1501µm,0.5s						
CET2	**Cetraro**	**3.30**	**237**	P	**Pn**	**01 48 47.8 +0.7**	
CET2					AML	AML	
	comp=E,3230µm,0.8s						
CET2					AML	AML	
	comp=N,4320µm,0.7s						
CET2					AML	AML	
	comp=E,3228µm,0.8s						
CET2					AML	AML	
	comp=N,4570µm,0.7s						
VLS	**Valsamata**	**3.31**	**165**	P	**Pn**	**01 48 47.0 -0.2**	
VLS	**Valsamata**	**3.31**	**165**	P	**Pn**	**01 48 47.0 -0.2**	
VLS					AML	AML	
	comp=E,717µm,0.6s						
VLS					AML	AML	
	comp=N,862µm,0.6s						
VLS					AML	AML	
	comp=N,862µm,0.6s						
VLS					AML	AML	
	comp=E,785µm,0.9s						
CAR1	**CAROLEI**	**3.31**	**231**	P	**Pn**	**01 48 47.8 +0.5**	
CAR1					AML	AML	
	comp=E,1780µm,0.7s						
CAR1					AML	AML	
	comp=N,1830µm,0.6s						
CAR1					AML	AML	
	comp=E,1710µm,0.7s						
CAR1					AML	AML	
	comp=N,1945µm,0.6s						
CAR1					AML	AML	
	comp=E,1779µm,0.7s						
CAR1					AML	AML	
	comp=E,1567µm,0.8s						
CAR1					AML	AML	
	comp=N,1945µm,1.4s						
CAR1					AML	AML	
	comp=N,1947µm,0.6s						
CAR1					AML	AML	
	comp=N,1830µm,1.4s						
CAR1					AML	AML	
	comp=N,1829µm,0.6s						
MELA	**Melanico ??? S**	**3.32**	**277**	P	**Pn**	**01 48 48.0 +0.8**	
MELA					AML	AML	
	comp=E,2905µm,0.6s						
MELA					AML	AML	
	comp=E,3080µm,0.6s						
MELA					AML	AML	
	comp=E,3080µm,1.4s						
MELA					AML	AML	
	comp=E,3082µm,0.6s						
MELA					AML	AML	
	comp=E,2904µm,0.6s						
MELA					AML	AML	
	comp=E,2905µm,1.4s						
MELA					AML	AML	
	comp=N,3935µm,0.6s						
MELA					AML	AML	
	comp=N,3935µm,0.6s						
MELA					AML	AML	
	comp=N,3847µm,0.6s						
MELA					AML	AML	
	comp=N,3845µm,0.6s						
CDRU	**Civita di Ruta**	**3.32**	**256**	P	**Pn**	**01 48 48.0 +0.5**	
CDRU					AML	AML	
	comp=E,845µm,0.8s						
CDRU					AML	AML	
	comp=N,646µm,0.7s						
CDRU					AML	AML	
	comp=N,589µm,0.4s						
CDRU					AML	AML	
	comp=N,646µm,1.3s						
CDRU					AML	AML	
	comp=E,845µm,1.2s						
CDRU					AML	AML	
	comp=E,845µm,0.8s						
ANX	**Ano Chora**	**3.34**	**146**	P	**Pn**	**01 48 50.2 +2.5**	
CMPR	**Campora**	**3.38**	**253**	P	**Pn**	**01 48 48.6 +0.5**	
CMPR					AML	AML	
	comp=E,1110µm,0.6s						
CMPR					AML	AML	
	comp=N,916µm,0.8s						
CMPR					AML	AML	
	comp=N,916µm,0.8s						
CMPR					AML	AML	
	comp=N,916µm,1.2s						
CMPR					AML	AML	
	comp=E,1111µm,0.6s						
AVAS	**Avala Beograd**	**3.38**	**12**	*e*Pn	**Pn**	**01 48 49.6 +1.5**	
KUBS	**Kucevo**	**3.41**	**27**	*e*Pn	**Pn**	**01 48 49.0 +0.5**	
KUBS				*e*Sn	**Sn**	**01 49 29.4 +1.2**	
BULG	**Bulgheria - Ca**	**3.42**	**249**	P	**Pn**	**01 48 49.3 +0.6**	
BULG					AML	AML	
	comp=E,1460µm,0.6s						
BULG					AML	AML	
	comp=E,1495µm,0.6s						
BULG					AML	AML	
	comp=N,2190µm,1.0s						
BULG					AML	AML	
	comp=E,1495µm,1.4s						
BULG					AML	AML	
	comp=E,1460µm,1.4s						
BULG					AML	AML	
	comp=E,1456µm,0.6s						
BULG					AML	AML	
	comp=E,1491µm,0.6s						
BULG					AML	AML	
	comp=N,2140µm,1.0s						
BULG					AML	AML	
	comp=N,2190µm,1.0s						
BULG					AML	AML	
	comp=N,2141µm,1.0s						
MRB1	**Monte Rocchett**	**3.44**	**267**	P	**Pn**	**01 48 50.3 +1.3**	
MRB1					AML	AML	
	comp=E,2010µm,0.6s						
MRB1					AML	AML	
	comp=N,2565µm,0.6s						
MRB1					AML	AML	
	comp=N,2545µm,0.7s						
MRB1					AML	AML	
	comp=E,2007µm,0.6s						
MRB1					AML	AML	
	comp=E,2073µm,0.6s						
MRB1					AML	AML	
	comp=E,2070µm,0.6s						
MRB1					AML	AML	
	comp=N,2567µm,0.6s						
MRB1					AML	AML	
	comp=N,2544µm,0.7s						
MTMR	**Montemarano**	**3.45**	**264**	P	**Pn**	**01 48 49.7 +0.6**	
MTMR					AML	AML	
	comp=E,1305µm,0.8s						
MTMR					AML	AML	
	comp=E,1235µm,0.7s						
MTMR					AML	AML	
	comp=N,1093µm,0.4s						
MTMR					AML	AML	
	comp=N,1081µm,0.4s						
MTMR					AML	AML	
	comp=E,1235µm,0.7s						
MTMR					AML	AML	
	comp=E,1303µm,0.8s						
MTMR					AML	AML	
	comp=E,1305µm,1.2s						
MTMR					AML	AML	
	comp=E,1235µm,1.3s						
MTMR					AML	AML	
	comp=N,1245µm,1.1s						
MTMR					AML	AML	
	comp=N,1195µm,1.1s						
GATE	**Gambatesa**	**3.47**	**274**	P	**Pn**	**01 48 50.9 +1.5**	
GATE					AML	AML	
	comp=E,1475µm,0.6s						
GATE					AML	AML	
	comp=N,1690µm,1.1s						
GATE					AML	AML	
	comp=E,1477µm,0.6s						
GATE					AML	AML	
	comp=E,1480µm,0.6s						
GATE					AML	AML	
	comp=E,1477µm,0.6s						
GATE					AML	AML	
	comp=N,1750µm,1.1s						
GATE					AML	AML	
	comp=N,1749µm,1.1s						
GATE					AML	AML	
	comp=N,1691µm,1.1s						
EFP	**Efpalio**	**3.48**	**148**	P	**Pn**	**01 48 51.4 +1.9**	
CIGN	**Sant'Elia a Pi**	**3.48**	**276**	P	**Pn**	**01 48 50.5 +1.0**	
CIGN					AML	AML	
	comp=E,1260µm,1.5s						
CIGN					AML	AML	
	comp=N,886µm,0.6s						
CIGN					AML	AML	
	comp=E,892µm,1.1s						
CIGN					AML	AML	
	comp=N,886µm,0.6s						
CIGN					AML	AML	
	comp=E,1260µm,0.5s						
BEO	**Beograd**	**3.48**	**11**	*e*Pn	**Pn**	**01 48 50.6 +1.1**	
AXS	**Araxos**	**3.50**	**155**	P	**Pn**	**01 48 50.3 +0.6**	
NEO	**Neokhori**	**3.51**	**125**	P	**Pn**	**01 48 51.1 +1.2**	
OUR	**Ouranopolis**	**3.54**	**106**	*e*P	**Pn**	**01 48 52.0 +1.7**	
OUR	**Ouranopolis**	**3.54**	**106**	P	**Pn**	**01 48 51.6 +1.4**	
SERG	**Sergoula**	**3.55**	**146**	P	**Pn**	**01 48 52.4 +1.8**	
AXAR	**Agios Charalam**	**3.56**	**136**	P	**Pn**	**01 48 52.4 +1.8**	
KALE	**Kalithea**	**3.61**	**145**	P	**Pn**	**01 48 53.0 +1.7**	
RLS	**Riolos of Patr**	**3.65**	**155**	P	**Pn**	**01 48 52.7 +0.9**	
MPEP	**Malo Peshtene**	**3.69**	**56**	*i* P	**Pn**	**01 48 55.2 +2.9**	
MDVR	**Moldovita**	**3.75**	**25**	⇑P	**Pn**	**01 48 55.0 +1.8**	
MDVR	**Moldovita**	**3.75**	**25**	*e*Pn	**Pn**	**01 48 54.7 +1.5**	
MDVR				*e*Sn	**Sn**	**01 49 38.0 +1.3**	
BLY	**Banja Luka**	**3.77**	**334**	⇑*i* Pn	**Pn**	**01 48 55.1 +1.7**	
BLY				*e*Sn	**Sn**	**01 49 37.9 +0.7**	
BLY	**Banja Luka**	**3.77**	**334**	⇓P	**Pn**	**01 48 54.7 +1.3**	
BLY	**Banja Luka**	**3.77**	**334**	*e*Pn	**Pn**	**01 48 55.1 +1.7**	
FRGS	**Fruska Gora**	**3.77**	**3**	*e*Pn	**Pn**	**01 48 54.7 +1.2**	
PLAC	**Placanica**	**3.78**	**220**	P	**Pn**	**01 48 53.3 -0.3**	
PLAC					AML	AML	
	comp=E,722µm,0.6s						
PLAC					AML	AML	
	comp=N,636µm,0.8s						
PLAC					AML	AML	
	comp=E,638µm,0.8s						
PLAC					AML	AML	
	comp=E,638µm,0.8s						
PLAC					AML	AML	
	comp=N,637µm,0.8s						
PLAC					AML	AML	
	comp=N,730µm,0.6s						
PLAC					AML	AML	
	comp=N,730µm,0.6s						
PLAC					AML	AML	
	comp=E,722µm,0.6s						
KAVA	**Kavala**	**3.78**	**94**	P	**Pn**	**01 48 55.2 +1.6**	
PUNG	**Punghina**	**3.82**	**40**	⇑P	**Pn**	**01 48 56.0 +2.0**	
PUNG	**Punghina**	**3.82**	**40**	*e*Pn	**Pn**	**01 48 56.1 +2.0**	
LKR	**Lokris**	**3.82**	**135**	P	**Pn**	**01 48 55.5 +1.4**	
DRO	**Drossia**	**3.83**	**153**	P	**Pn**	**01 48 55.2 +1.0**	
BAIL	**Bailesti**	**3.85**	**46**	⇑P	**Pn**	**01 48 57.1 +2.6**	
KLV	**Kalavryta, Ach**	**3.91**	**148**	P	**Pn**	**01 48 57.4 +1.9**	
RZN	**Rozhen**	**3.92**	**84**	P	**Pn**	**01 48 58.0 +2.2**	
RZN	**Rozhen**	**3.92**	**84**	*i* P	**Pn**	**01 48 57.8 +2.1**	
DJES	**Djerdap**	**3.94**	**33**	⇑P	**Pn**	**01 48 57.8 +2.0**	
JOPP	**Joppolo**	**3.94**	**226**	P	**Pn**	**01 48 55.8 -0.1**	
JOPP					AML	AML	
	comp=E,413µm,0.8s						
JOPP					AML	AML	
	comp=N,336µm,0.8s						
JOPP					AML	AML	
	comp=E,413µm,0.8s						
JOPP					AML	AML	
	comp=N,316µm,0.5s						
VRSS	**Vrsac**	**3.95**	**19**	*e*Pn	**Pn**	**01 48 57.2 +1.2**	
PLD	**Plovdiv**	**3.98**	**77**	*e*P	**Pn**	**01 48 58.7 +2.4**	
PLD	**Plovdiv**	**3.98**	**77**	P	**Pn**	**01 48 58.4 +2.1**	
PLD	**Plovdiv**	**3.98**	**77**	*e*Pn	**Pn**	**01 48 58.9 +2.6**	
PLD				*e*Sn	**Sn**	**01 49 43.7 +1.4**	
AOS	**Alonnisos**	**4.00**	**122**	P	**Pn**	**01 48 57.1 +0.5**	
RMGR	**Halanga-Turnu**	**4.01**	**34**	⇓P	**Pn**	**01 48 59.6 +2.9**	
HERR	**Herculane**	**4.08**	**30**	⇑P	**Pn**	**01 48 59.7 +2.0**	
BANR	**Banloc**	**4.16**	**16**	⇓P	**Pn**	**01 49 01.0 +2.2**	
BANR	**Banloc**	**4.16**	**16**	*e*Pn	**Pn**	**01 49 00.7 +2.0**	
CEL	**Celeste**	**4.20**	**223**		**Pn**	**01 48 58.3 -1.1**	
CEL	**Celeste**	**4.20**	**223**	P	**Pn**	**01 48 59.0 -0.4**	
CEL					AML	AML	
	comp=N,472µm,0.9s						
CEL					AML	AML	
	comp=N,456µm,0.9s						
CEL					AML	AML	
	comp=E,499µm,0.6s						
CEL					AML	AML	
	comp=E,505µm,0.6s						
CEL					AML	AML	
	comp=E,499µm,0.6s						
CEL					AML	AML	
	comp=E,505µm,0.6s						
CEL					AML	AML	
	comp=N,450µm,0.5s						
CEL					AML	AML	
	comp=N,439µm,0.6s						
CEL					AML	AML	
	comp=N,456µm,1.1s						
CEL					AML	AML	
	comp=N,472µm,1.1s						
SRE	**Strehaia**	**4.24**	**38**	⇑P	**Pn**	**01 49 02.0 +2.1**	
SRE	**Strehaia**	**4.24**	**38**	P	**Pn**	**01 49 01.9 +2.1**	
PLVB	**Pleven**	**4.27**	**60**	⇓P	**Pn**	**01 49 02.9 +2.6**	
LTK	**Loutraki**	**4.28**	**141**	P	**Pn**	**01 49 00.9 +0.3**	
SICLA	**Scilla**	**4.29**	**224**	AML	AML		
	comp=N,658µm,0.6s						
SICLA					AML	AML	
	comp=E,618µm,1.1s						
SICLA					AML	AML	
	comp=E,618µm,0.9s						
KDZ	**Kurdzhali**	**4.37**	**85**	*e*P	**Pn**	**01 49 03.9 +2.2**	
KDZ	**Kurdzhali**	**4.37**	**85**	P	**Pn**	**01 49 04.0 +2.3**	
KDZ	**Kurdzhali**	**4.37**	**85**	P	**Pn**	**01 49 03.3 +1.6**	
MSRU	**Castanea**	**4.40**	**226**	P	**Pn**	**01 49 00.8 -1.3**	
MSRU					AML	AML	
	comp=E,776µm,0.4s						
MSRU					AML	AML	
	comp=N,528µm,1.0s						
MSRU					AML	AML	
	comp=E,777µm,0.4s						
MSRU					AML	AML	
	comp=N,528µm,1.0s						
STFN	**Stefani**	**4.46**	**135**	P	**Pn**	**01 49 04.7 +1.7**	
BZS	**Buzias**	**4.49**	**19**	*e*P	**Pn**	**01 49 04.3 +1.0**	
BZS	**Buzias**	**4.49**	**19**	⇑P	**Pn**	**01 49 04.8 +1.5**	
BZS	**Buzias**	**4.49**	**19**	P	**Pn**	**01 49 04.8 +1.5**	
TIM	**Timisoara**	**4.51**	**15**	⇑P	**Pn**	**01 49 05.2 +1.5**	
TIM	**Timisoara**	**4.51**	**15**	P	**Pn**	**01 49 05.1 +1.5**	
RDO	**Rodhopi**	**4.54**	**91**	⇓Pn	**Pn**	**01 49 05.9 +2.0**	
RDO	**Rodhopi**	**4.54**	**91**	*e*P	**Pn**	**01 49 05.2 +1.2**	
RDO	**Rodhopi**	**4.54**	**91**	P	**Pn**	**01 49 05.5 +1.5**	
RDO	**Rodhopi**	**4.54**	**91**		**Pn**	**01 49 05.7 +1.7**	
LIA	**Limnos Island**	**4.55**	**107**	P	**Pn**	**01 49 05.4 +1.2**	
VLX	**Vlachokerasia**	**4.58**	**150**	P	**Pn**	**01 49 07.5 +2.7**	
SKY	**Skiros Island**	**4.60**	**121**	P	**Pn**	**01 49 06.2 +1.4**	
ITM	**Ithomi**	**4.60**	**155**	Pn	**Pn**	**01 49 06.1 +1.2**	
ITM	**Ithomi**	**4.60**	**155**	P	**Pn**	**01 49 05.8 +1.0**	
ITM	**Ithomi**	**4.60**	**155**		**Pn**	**01 49 04.8 -0.1**	
SMTH	**Samothraki Isl**	**4.64**	**99**	P	**Pn**	**01 49 06.5 +1.1**	
GZR	**Gura Zlata**	**4.65**	**30**	⇑P	**Pn**	**01 49 08.4 +2.9**	
GZR	**Gura Zlata**	**4.65**	**30**	P	**Pn**	**01 49 07.0 +1.4**	
AQU	**L'Aquila**	**4.67**	**284**	*e*Pn	**Pn**	**01 49 06.2 +0.3**	
AQU				*e*Sn	**Sn**	**01 49 59.9 +0.3**	
ATH	**Athens Observa**	**4.70**	**135**	P	**Pn**	**01 49 07.5 +1.3**	
CAMP	**Campotosto**	**4.70**	**286**		**Pn**	**01 49 07.0 +0.6**	
PTL	**Penteli**	**4.72**	**134**	P	**Pn**	**01 49 07.9 +1.3**	
DION	**Dionisos Attik**	**4.74**	**133**	P	**Pn**	**01 49 08.1 +1.3**	
SURR	**Surduc**	**4.75**	**23**	⇑P	**Pn**	**01 49 08.0 +1.1**	
PYL	**PYLOS**	**4.81**	**158**	P	**Pn**	**01 49 07.4 -0.3**	
VLY	**Voula,Athens**	**4.83**	**136**	P	**Pn**	**01 49 08.9 +0.9**	
MORH	**Mrgy, Hungar**	**4.86**	**353**	⇑*i* Pn	**Pn**	**01 49 09.0 +0.5**	
MORH				*e*Sn	**Sn**	**01 50 03.8 -0.3**	
MORH	**Mrgy, Hungar**	**4.86**	**353**	⇑P	**Pn**	**01 49 08.9 +0.5**	
MORH	**Mrgy, Hungar**	**4.86**	**353**	*e*Pn	**Pn**	**01 49 09.5 +1.0**	
GUMA	**Gualdo di Mace**	**4.89**	**292**		**Pn**	**01 49 09.1 +0.2**	
ELND	**Elena**	**4.96**	**70**	⇑P	**Pn**	**01 49 13.4 +3.6**	
NRCA	**Norcia**	**4.98**	**289**		**Pn**	**01 49 10.2 0.0**	
GOAD	**anakkale-G¶**	**5.00**	**102**	SPECP		01 49 12.0	
GOAD				P	**Pn**	**01 49 12.2 +1.8**	
COPA	**Copaceanca**	**5.00**	**55**	⇑P	**Pn**	**01 49 12.9 +2.5**	
ENEZ	**Enez**	**5.05**	**95**	*e*P	**Pn**	**01 49 12.4 +1.4**	
FDMO	**Fiordimonte**	**5.06**	**291**		**Pn**	**01 49 11.3 +0.1**	
HUMR	**Humele**	**5.08**	**50**	⇓P	**Pn**	**01 49 14.1 +2.6**	
LOT	**Lotru**	**5.10**	**36**	*e*P	**Pn**	**01 49 13.5 +1.7**	
LOT	**Lotru**	**5.10**	**36**	⇑P	**Pn**	**01 49 14.2 +2.4**	
SIRR	**Siria**	**5.11**	**17**	⇓P	**Pn**	**01 49 13.2 +1.3**	
SIRR	**Siria**	**5.11**	**17**	*e*Pn	**Pn**	**01 49 13.2 +1.3**	
SIRR				*e*Sn	**Sn**	**01 50 11.0 +0.7**	
DEV	**Deva**	**5.11**	**27**	⇑P	**Pn**	**01 49 14.5 +2.5**	
DEV	**Deva**	**5.11**	**27**	P	**Pn**	**01 49 14.4 +2.5**	
SZH	**Strazhitsa**	**5.13**	**66**	P	**Pn**	**01 49 15.2 +3.0**	
BOJS	**Bojanci**	**5.16**	**324**	*e*Pn	**Pn**	**01 49 13.6 +1.1**	
BOJS				*e*Sn	**Sn**	**01 50 10.0 -1.3**	
BOJS	**Bojanci**	**5.16**	**324**	⇑*i* Pn	**Pn**	**01 49 13.6 +1.1**	
BOJS				*e*Sn	**Sn**	**01 50 08.8 -2.6**	
BOJS				IAML		01 50 16.3	
	comp=Z,115nm,0.6s						
STFAR	**Stefanesti-Arg**	**5.28**	**47**	⇓P	**Pn**	**01 49 17.6 +3.5**	
CESX	**Cesi**	**5.32**	**286**		**Pn**	**01 49 14.7 0.0**	
CRES	**Cresnjevec Ost**	**5.33**	**328**	⇑*i* Pn	**Pn**	**01 49 15.8 +0.9**	
ERIK	**Erikli-Kesan**	**5.33**	**95**	SPECP		01 49 16.0	
ERIK				P	**Pn**	**01 49 16.5 +1.6**	
ERIK	**Erikli-Kesan**	**5.33**	**95**	*e*P	**Pn**	**01 49 17.1 +2.2**	
GELI	**Tayfur-Gelibol**	**5.36**	**98**	*e*P	**Pn**	**01 49 16.9 +1.6**	
UKOP	**Uzunkopru-Edir**	**5.36**	**90**	*e*P	**Pn**	**01 49 18.3 +3.0**	
VLI	**Veliai**	**5.37**	**149**	P	**Pn**	**01 49 15.4 0.0**	
	comp=Z,153nm,1.0s						
RIY	**Rijeka**	**5.38**	**319**	*e*Pn	**Pn**	**01 49 16.8 +1.2**	
KOCA	**Canakkale, Ayv**	**5.38**	**108**	P	**Pn**	**01 49 17.0 +1.4**	
EZN	**Ezine**	**5.41**	**105**	P	**Pn**	**01 49 17.4 +1.6**	
EZN				S	**Sn**	**01 50 16.1 -1.4**	
EZN				*i* IAML		01 50 23.0	
	comp=Z,57nm,1.1s						
EZN	**Ezine**	**5.41**	**105**	*e*P	**Pn**	**01 49 17.5 +1.6**	
EZN	**Ezine**	**5.41**	**105**	⇑P	**Pn**	**01 49 17.6 +1.7**	
EZN	**Ezine**	**5.41**	**105**	P	**Pn**	**01 49 17.6 +1.7**	
EDRB	**Edirne**	**5.43**	**83**	SPECP		01 49 17.0	
EDRB				P	**Pn**	**01 49 17.9 +1.6**	
COMU	**Canakkale**	**5.43**	**101**	*e*P	**Pn**	**01 49 18.4 +2.1**	
KESN	**Edirne-Kesan**	**5.43**	**94**	P	**Pn**	**01 49 18.1 +1.5**	
KESN				S	**Sn**	**01 50 13.6 -5.1**	
KESN				*i* IAML		01 50 57.0	
	comp=Z,93nm,0.9s						
ARR	**Arges**	**5.44**	**41**	⇑P	**Pn**	**01 49 19.3 +2.8**	
BEHE	**Becsehely**	**5.45**	**340**		**Pn**	**01 49 16.7 +0.1**	
BEHE	**Becsehely**	**5.45**	**340**	*e*Pn	**Pn**	**01 49 17.6 +1.1**	
BEHE				*e*Sn	**Sn**	**01 50 18.1 -0.5**	
TNR	**Turnu Rosu**	**5.48**	**37**	⇑P	**Pn**	**01 49 19.0 +2.0**	
TNR	**Turnu Rosu**	**5.48**	**37**	P	**Pn**	**01 49 19.0 +2.0**	
MURB	**Monte Urbino**	**5.52**	**292**		**Pn**	**01 49 17.1 -0.4**	
SGRR	**Singureni**	**5.52**	**57**	⇑P	**Pn**	**01 49 20.4 +2.9**	
VAE	**Valguarnera**	**5.56**	**227**	Pn	**Pn**	**01 49 19.2 +1.1**	
	comp=Z,10nm,0.7s,baz=354,slow=20,SNR=1.5						
VAE				Sn	**Sn**	**01 50 21.0 -0.5**	
	comp=Z,0.7nm,0.3s,baz=103,slow=20,SNR=1.3						
VAE				LR	LR	01 51 48.2	
	comp=Z,386nm,21.1s,baz=250,slow=42						
MTUR	**Matau**	**5.57**	**45**	⇑P	**Pn**	**01 49 21.3 +3.0**	
MTUR	**Matau**	**5.57**	**45**	P	**Pn**	**01 49 21.2 +3.0**	
LPK	**Lapseki**	**5.58**	**98**	*e*P	**Pn**	**01 49 20.3 +2.0**	
PRK	**Paraskevi**	**5.58**	**110**	P	**Pn**	**01 49 20.2 +1.9**	
	comp=Z,90nm,0.6s						
LOZB	**Loznitsa**	**5.59**	**67**	⇑P	**Pn**	**01 49 22.1 +3.6**	

BAYC CANAKKALE_Bayr 5.59 105 SPECP 01 49 20.0
BAYC P **Pn** **01 49 20.9 +2.3**
BAYC S **Sn** **01 50 18.2 -4.0**
BAYC *i* IAML 01 50 26.0
comp=Z,9.7nm,0.3s
VOIR 5.70 43 ⇓P **Pn** **01 49 22.8 +2.7**
VOIR 5.70 43 P **Pn** **01 49 22.7 +2.7**
CEY Cerknica 5.71 321 *e*Pn **Pn** **01 49 21.2 +1.1**
CEY *e*Sn **Sn** **01 50 25.1 +0.1**
SKDS Skadanscina 5.77 318 *e*Pn **Pn** **01 49 21.2 +0.2**
SKDS *e*Sn **Sn** **01 50 24.5 -2.1**
KTHA Kythira Island 5.82 151 P **Pn** **01 49 22.9 +1.2**
comp=Z,123nm,1.8s
RKY Sarkoy-Tekirda 5.83 94 P **Pn** **01 49 24.1 +2.3**
SART Tekirdag 5.83 94 P **Pn** **01 49 23.6 +1.8**
GROS Grobnik 5.84 332 *i* Pn **Pn** **01 49 22.4 +0.4**
CHOS Chios island 5.85 119 *e*P **Pn** **01 49 24.5 +2.4**
CHOS Chios island 5.85 119 P **Pn** **01 49 24.2 +2.1**
GBAS Gorenja Brezov 5.85 323 *i* Pn **Pn** **01 49 22.8 +0.8**
GBAS *i* Sn **Sn** **01 50 28.0 -0.4**
AYVA Ayvalik 5.85 108 P **Pn** **01 49 23.6 +1.5**
DRGR 5.86 22 *e*P **Pn** **01 49 23.8 +1.5**
DRGR 5.86 22 ⇑P **Pn** **01 49 23.9 +1.5**
DRGR 5.86 22 P **Pn** **01 49 23.8 +1.5**
MARR Marisel-Cluj 5.88 25 ⇓P **Pn** **01 49 25.1 +2.6**
CANM Can-anakkale 5.88 101 *e*P **Pn** **01 49 25.1 +2.6**
LJU Ljubljana 5.89 324 *e*Pn **Pn** **01 49 24.1 +1.5**
MDB Medias 5.91 35 ⇑P **Pn** **01 49 24.8 +2.0**
MDB Medias 5.91 35 P **Pn** **01 49 24.8 +2.0**
SULR 5.92 54 ⇑P **Pn** **01 49 25.8 +2.8**
BSZH Besenyszg 5.93 5 ⇑P **Pn** **01 49 25.5 +2.4**
ARMN Kirklareli, Me 5.94 83 SPECP 01 49 24.0
ARMN P **Pn** **01 49 24.9 +1.7**
KRBG Karabiga-Canak 5.97 97 P **Pn** **01 49 26.2 +2.5**
PHSR Pinarhisar 6.01 85 ⇑P **Pn** **01 49 26.8 +2.6**
TRI Trieste 6.01 318 **Pn** **01 49 24.4 +0.2**
TRI Trieste 6.01 318 P **Pn** **01 49 24.4 +0.2**
YAYO Edremit-Balk 6.02 105 *e*P **Pn** **01 49 26.7 +2.3**
BUHA Balikesir, Bur 6.06 106 P **Pn** **01 49 27.4 +2.5**
CJR Cluj-Napoca 6.07 27 ⇓P **Pn** **01 49 27.6 +2.5**
CJR Cluj-Napoca 6.07 27 P **Pn** **01 49 27.6 +2.5**
DKL Dikili 6.10 110 P **Pn** **01 49 27.9 +2.4**
CBBR Cluj-Babes-Bol 6.11 27 ⇑P **Pn** **01 49 27.9 +2.4**
LEHL Lehliu 6.17 58 ⇑P **Pn** **01 49 30.0 +3.5**
CICN Ciocanesti 6.19 61 ⇑P **Pn** **01 49 29.9 +3.3**
SOKA Soboth 6.20 330 *e*Pn **Pn** **01 49 27.4 +0.5**
comp=Z,51nm,0.6s,SNR=92
SOKA *i* Sn **Sn** **01 50 34.6 -2.5**
comp=Z,43nm,0.8s
MLR Muntele Rosu 6.21 47 Pn **Pn** **01 49 30.0 +2.9**
comp=Z,9.2nm,0.3s,baz=268,slow=4.0,SNR=103
MLR Sn **Sn** **01 50 35.3 -2.3**
baz=110,slow=20
MLR LR LR 01 52 30.0
comp=Z,529nm,18.5s,baz=221,slow=44
MLR Muntele Rosu 6.21 47 *e*P **Pn** **01 49 30.7 +3.6**
MLR Muntele Rosu 6.21 47 P **Pn** **01 49 28.3 +1.2**
MLR Muntele Rosu 6.21 47 ⇓P **Pn** **01 49 30.4 +3.3**
MLR Muntele Rosu 6.21 47 P **Pn** **01 49 28.3 +1.2**
MLR 01 50 35.3
URLA Izmir 6.22 117 SPECP 01 49 29.0
URLA P **Pn** **01 49 29.0 +1.8**
ZEYE Izmir, Urla-Ze 6.22 118 SPECP 01 49 29.0
ZEYE P **Pn** **01 49 29.0 +1.9**
DOPR Dopca 6.24 41 ⇑P **Pn** **01 49 30.3 +2.8**
OBKA Obir 6.25 327 *i* Pn **Pn** **01 49 28.4 +0.8**
comp=Z,20nm,0.3s,SNR=29
OBKA *i* Sn **Sn** **01 50 39.6 +1.1**
comp=Z,76nm,0.6s
MESR Meseseni 6.26 22 ⇓P **Pn** **01 49 29.7 +2.1**
ZEDA zmir-Bergama 6.27 110 P **Pn** **01 49 28.9 +1.1**
SABO M.te Sabotino 6.28 319 **Pn** **01 49 27.9 -0.1**
ISR Istrita 6.33 52 ⇑P **Pn** **01 49 32.1 +3.4**
ISR Istrita 6.33 52 P **Pn** **01 49 32.1 +3.4**
APE Apeiranthos 6.35 131 P **Pn** **01 49 30.0 +0.9**
APE Apeiranthos 6.35 131 P **Pn** **01 49 29.8 +0.8**
APE Apeiranthos 6.35 131 ⇑P **Pn** **01 49 29.9 +0.9**
APE Apeiranthos 6.35 131 P **Pn** **01 49 29.9 +0.9**
NEHR Nehoiu 6.37 48 ⇑P **Pn** **01 49 32.0 +2.9**
BALY Balya 6.38 102 SPECP 01 49 31.0
BALY P **Pn** **01 49 31.8 +2.5**
BOSR Bodos 6.45 41 ⇓P **Pn** **01 49 33.3 +2.9**
SRO Srobarova 6.48 353 *e*P **Pn** **01 49 31.1 +0.5**
SRO *e* 01 50 48.0
SRO Srobarova 6.48 353 *e*PN **Pn** **01 49 31.1 +0.5**
SRO *e*SN **Sn** **01 50 48.0 +4.1**
OSSC Osservatorio P 6.49 292 **Pn** **01 49 30.6 -0.1**
ARSA Arzberg 6.52 335 **Pn** **01 49 31.7 +0.4**
ARSA Arzberg 6.52 335 *e*Pn **Pn** **01 49 32.2 +0.9**
comp=Z,15nm,0.3s,SNR=34
ARSA *i* Sn **Sn** **01 50 47.4 +2.4**
comp=Z,16nm,0.6s
ARSA Arzberg 6.52 335 *e*Pn **Pn** **01 49 32.3 +1.0**
OZUR 6.53 42 ⇑P **Pn** **01 49 33.2 +1.8**
PSZ Piszkesteto 6.53 2 **Pn** **01 49 31.9 +0.5**
PSZ Piszkesteto 6.53 2 ⇓P **Pn** **01 49 32.3 +0.8**
PSZ Piszkesteto 6.53 2 *e*P **Pn** **01 49 32.9 +1.4**
PSZ Piszkesteto 6.53 2 P **Pn** **01 49 31.9 +0.5**
AMRR Amara 6.56 58 ⇑P **Pn** **01 49 35.5 +3.6**
AMRR Amara 6.56 58 P **Pn** **01 49 33.4 +3.6**
STEP BALIKESIR_Sava 6.57 105 SPECP 01 49 34.0
STEP P **Pn** **01 49 34.3 +2.4**
COVR Voineasa-Covas 6.58 45 ⇓P **Pn** **01 49 35.7 +3.6**
BAND Balkesir-Ban 6.58 96 ⇑P **Pn** **01 49 33.9 +1.8**
CASP Castiglione de 6.59 285 Pn **Pn** **01 49 32.0 -0.3**
BALB Balikesir 6.60 103 P **Pn** **01 49 34.5 +2.2**
BALB Balikesir 6.60 103 **Pn** **01 49 32.9 +0.6**
BKES Balkesir-Mer 6.61 102 SPECP 01 49 34.0
BKES P **Pn** **01 49 35.0 +2.5**
TURR Turia 6.62 43 ⇓P **Pn** **01 49 34.3 +1.7**
CEI Carei 6.63 17 ⇑P **Pn** **01 49 35.9 +3.1**
CEI Carei 6.63 17 P **Pn** **01 49 35.8 +3.1**
SUSR Susurluk-Balik 6.66 100 *e*P **Pn** **01 49 35.5 +2.3**
ICOR Ion Corvin 6.67 63 ⇓P **Pn** **01 49 36.6 +3.3**
BISRR Bisoca 6.67 49 ⇑P **Pn** **01 49 35.2 +1.8**
RODP Rodopos 6.70 149 *e*P Pn 01 49 42.5 +8.8
RONA Rosalia, Austr 6.71 341 *i* Pn **Pn** **01 49 35.0 +1.1**
comp=Z,11nm,0.4s,SNR=10
RONA *i* Sn **Sn** **01 50 52.3 +2.5**
comp=Z,8.7nm,0.4s
GRER 6.73 51 ⇓P **Pn** **01 49 37.7 +3.6**
MYKA Terra Mystica 6.74 323 *i* Pn **Pn** **01 49 34.5 +0.2**
comp=Z,8.4nm,0.3s,SNR=16
MYKA *i* Sn **Sn** **01 50 50.1 -0.3**
comp=Z,20nm,0.4s
KCTX Karacabey (Bur 6.79 97 P **Pn** **01 49 37.0 +2.1**
PLOR Plostina 6.82 47 ⇓P **Pn** **01 49 37.9 +2.4**
PLOR Plostina 6.82 47 P **Pn** **01 49 37.8 +2.4**
VRI Vrincioaia 6.88 47 *e*P **Pn** **01 49 37.9 +1.8**
VRI Vrincioaia 6.88 47 ⇑P **Pn** **01 49 39.6 +3.4**
VRI Vrincioaia 6.88 47 P **Pn** **01 49 39.5 +3.4**
CVDA Cernavoda 6.91 62 ⇑P **Pn** **01 49 39.9 +3.4**
STAL STALIGIAL 6.92 317 **Pn** **01 49 36.3 -0.5**
ZCCA Zocca 6.94 298 **Pn** **01 49 37.6 +0.5**
TEOL Teolo 6.96 307 **Pn** **01 49 37.2 -0.1**
ODBI Odobesti 7.00 49 ⇓P **Pn** **01 49 40.7 +3.0**
TLBR Topalu 7.00 60 ⇑P **Pn** **01 49 40.2 +2.5**
ONER Baraj Valea Uz 7.00 43 ⇑P **Pn** **01 49 39.9 +2.1**
CONA Conrad Observa 7.04 339 *i* Pn **Pn** **01 49 39.8 +1.4**
comp=Z,6.3nm,0.4s,SNR=6.1
DURS Dursunbey 7.05 102 P **Pn** **01 49 41.2 +2.6**
GORD Gordes-Manisa 7.07 108 *e*P **Pn** **01 49 41.9 +3.0**
CIMO Cimolais 7.10 316 **Pn** **01 49 38.8 -0.4**
MFTR Murfatlar 7.11 64 ⇑P **Pn** **01 49 41.7 +2.4**
PANC Panciu 7.11 48 ⇑P **Pn** **01 49 42.8 +3.4**
KECS Kecovo 7.12 5 *e*P **Pn** **01 49 41.8 +2.3**
KECS *e* 01 50 59.7
KECS Kecovo 7.12 5 *e*PN **Pn** **01 49 41.8 +2.3**
KECS *e*SN **Sn** **01 50 59.7 -0.1**
MODS Modra-Piesok 7.16 348 *e*P **Pn** **01 49 42.6 +2.6**
MODS *e* 01 51 00.8
MODS MLR MLR
comp=Z,3μm,14.2s
MODS Modra-Piesok 7.16 348 *e*PN **Pn** **01 49 42.6 +2.6**
MODS *e*SN **Sn** **01 51 00.8 +0.1**
MODS *e*L L 01 53 10.9
TIRR Tirgusor 7.21 62 **Pn** **01 49 42.1 +1.5**
TIRR Tirgusor 7.21 62 P **Pn** **01 49 42.1 +1.5**
KBA Koelnbreinsper 7.21 324 *e*Pn **Pn** **01 49 41.5 +0.6**
comp=Z,13nm,0.4s,SNR=6.6
KBA *i* Sn **Sn** **01 51 01.9 -0.3**
comp=Z,29nm,0.5s
TESR Tescani 7.25 43 ⇓P **Pn** **01 49 43.8 +2.5**
ODEM Odemis-Izmir 7.28 113 *e*P **Pn** **01 49 44.4 +2.7**
CFR Carcaliu 7.33 56 ⇑P **Pn** **01 49 45.2 +2.8**
CFR Carcaliu 7.33 56 P **Pn** **01 49 45.1 +2.8**
ABTA Abfaltersbach 7.36 319 *e*Pn **Pn** **01 49 42.7 -0.1**
comp=Z,18nm,0.4s,SNR=30
ABTA *e*Sn **Sn** **01 51 03.9 -1.8**
comp=Z,48nm,0.5s
CTI Castel Tesino 7.36 312 **Pn** **01 49 42.7 -0.2**
CTI Castel Tesino 7.36 312 P **Pn** **01 49 42.7 -0.2**
TPGR Topolog 7.37 59 ⇑P **Pn** **01 49 46.1 +3.2**
GHRR 7.37 48 ⇑P **Pn** **01 49 45.8 +2.9**
IDI Anoyia 7.41 144 Pn **Pn** **01 49 42.6 -0.9**
comp=Z,6.3nm,0.4s,baz=214,slow=13,SNR=15
IDI Sn **Sn** **01 51 01.3 -5.7**
comp=Z,2.5nm,0.3s,baz=102,slow=14,SNR=2.4
IDI Anoyia 7.41 144 **Pn** **01 49 42.1 -1.4**
BURAR Bucovina Array 7.43 31 **Pn** **01 49 45.2 +1.4**
BURAR Bucovina Array 7.43 31 ⇑P **Pn** **01 49 46.9 +3.1**
BURAR Bucovina Array 7.43 31 P **Pn** **01 49 46.9 +3.1**
BUR08 Bucovina Ar. S 7.45 31 **Pn** **01 49 44.8 +0.8**
MOA Molln 7.47 332 *i* Pn **Pn** **01 49 45.6 +1.4**
comp=Z,15nm,0.3s,SNR=42
MOA *e*Sn **Sn** **01 51 05.6 -2.6**
comp=Z,22nm,0.7s
MOA Molln 7.47 332 *e*Pn **Pn** **01 49 46.2 +2.0**
TATR Tatarca 7.49 53 ⇑P **Pn** **01 49 46.9 +2.4**
SCTR Scanteiesti 7.49 52 ⇑P **Pn** **01 49 46.4 +1.8**
MANT Manisa 7.52 110 P **Pn** **01 49 47.5 +2.3**
MANT Manisa 7.52 110 **Pn** **01 49 45.2 +0.1**
VARL Varlezi 7.53 50 ⇑P **Pn** **01 49 47.5 +2.4**
KIRA zmir-Kiraz 7.54 112 SPECP 01 49 48.0
KIRA P **Pn** **01 49 48.3 +3.0**
PRMA PARMA 7.54 300 **Pn** **01 49 44.6 -0.5**
BIOA Bad Ischl, Aus 7.57 328 *i* Pn **Pn** **01 49 46.6 +0.9**
comp=Z,30nm,0.6s,SNR=41
BIOA *i* Sn **Sn** **01 51 09.3 -1.5**
comp=Z,30nm,0.5s
NAZL Nazilli-Aydin 7.58 114 *e*P **Pn** **01 49 48.6 +2.8**
JAVC Velka Javorina 7.58 351 *e*PN **Pn** **01 49 48.5 +2.7**
KULA Kula-Manisa 7.58 109 P **Pn** **01 49 48.5 +2.6**
BIR Birlad 7.62 48 ⇑P **Pn** **01 49 48.9 +2.6**
BIR Birlad 7.62 48 P **Pn** **01 49 48.8 +2.6**
VLDR Vladesti 7.63 51 ⇑P **Pn** **01 49 49.3 +2.8**
ESEN Aydn-Nazilli 7.70 115 SPECP 01 49 49.0
ESEN P **Pn** **01 49 50.0 +2.6**
LANS Liptovska Anna 7.76 360 *e*P **Pn** **01 49 49.7 +1.4**
LANS *e* 01 51 21.6
LANS Liptovska Anna 7.76 360 *e*PN **Pn** **01 49 49.7 +1.4**
LANS *e*SN **Sn** **01 51 21.6 +6.1**
TLCR 7.76 58 ⇑P **Pn** **01 49 51.8 +3.5**
TLCR 7.76 58 P **Pn** **01 49 51.7 +3.5**
LESA Schwarzleotal 7.77 323 *e*Pn **Pn** **01 49 49.1 +0.6**
comp=Z,21nm,0.4s,SNR=52
LESA *i* Sn **Sn** **01 51 14.2 -1.7**
comp=Z,27nm,0.4s
MSSA Maissana 7.91 295 **Pn** **01 49 50.3 -0.2**
VASR Vaslui 7.94 46 ⇑P **Pn** **01 49 54.2 +3.6**
KRUC Moravsky 7.98 345 *e*PN **Pn** **01 49 53.0 +1.7**
MAUC Maruska 8.06 352 *e*PN **Pn** **01 49 55.1 +2.7**
STHS Stebnicka Huta 8.12 8 *e*P **Pn** **01 49 55.4 +2.3**
STHS *e* 01 51 24.7
STHS Stebnicka Huta 8.12 8 *e*PN **Pn** **01 49 55.4 +2.3**
STHS *e*SN **Sn** **01 51 24.7 +0.5**
WTTA Wattenberg 8.15 319 *i* Pn **Pn** **01 49 54.4 +0.6**
comp=Z,59nm,0.4s,SNR=42
WTTA *i* Sn **Sn** **01 51 24.3 -0.9**
comp=Z,77nm,0.7s
VRAC Vranov 8.18 346 Pn **Pn** **01 49 54.7 +0.7**
comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=7.7
VRAC Sn **Sn** **01 51 26.6 +0.8**
comp=Z,0.6nm,0.3s,baz=259,slow=19,SNR=1.3
VRAC LR LR 01 53 31.6
comp=Z,304nm,18.4s,baz=168,slow=41
comp=Z,4.0nm,0.8s
VRAC Vranov 8.18 346 ⇑P **Pn** **01 49 54.8 +0.7**
VRAC Vranov 8.18 346 *e*PN **Pn** **01 49 55.7 +1.7**
WATA Walderalm 8.23 319 *i* Pn **Pn** **01 49 55.9 +1.1**
comp=Z,48nm,0.5s,SNR=27
WATA *i* Sn **Sn** **01 51 25.9 -1.2**
comp=Z,18nm,0.4s
CKRC Cesky Krumlov 8.29 335 *e*P **Pn** **01 49 57.2 +1.7**
CKRC MLR MLR
comp=Z,600nm,12.9s
CKRC Cesky Krumlov 8.29 335 *e*PN **Pn** **01 49 57.2 +1.7**
CKRC AMS AMS 01 53 30.0
comp=Z,600nm,12.9s
SQTA Sankt Quirin 8.34 317 *i* Pn **Pn** **01 49 57.5 +1.2**
comp=Z,32nm,0.4s,SNR=21
SQTA *e*Sn **Sn** **01 51 27.5 -2.2**
comp=Z,38nm,0.5s
TREC Trest 8.40 342 *e*P **Pn** **01 49 59.2 +2.2**
TREC Trest 8.40 342 *e*PN **Pn** **01 49 59.2 +2.2**
BORA Eskisehir 8.45 97 **Pn** **01 49 57.9 +0.1**
FETA Feichten 8.46 315 *e*Pn **Pn** **01 49 58.2 +0.2**
comp=Z,7.4nm,0.4s
FETA *i* Sn **Sn** **01 51 31.3 -1.6**
comp=Z,19nm,0.6s
MOTA Moosalm 8.47 317 *i* Pn **Pn** **01 49 59.0 +0.8**
comp=Z,12nm,0.3s,SNR=15
MOTA *i* Sn **Sn** **01 51 33.7 +0.6**
comp=Z,96nm,0.8s
FUORN Ofenpass-Fuorn 8.48 311 **Pn** **01 49 58.0 -0.3**
MORC Moravsky Berou 8.50 351 **Pn** **01 49 59.3 +0.9**
MORC Moravsky Berou 8.50 351 ⇑P **Pn** **01 50 00.5 +2.1**
MORC Moravsky Berou 8.50 351 *e*PN **Pn** **01 50 00.4 +2.0**
MORC Moravsky Berou 8.50 351 P **Pn** **01 49 59.3 +0.9**
GEC2 GERESS Array S 8.51 333 **Pn** **01 49 58.2 -0.4**
GERES GERESS Array B 8.51 333 Pn **Pn** **01 49 59.4 +0.7**
comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=40
GERES Sn **Sn** **01 51 33.4 -0.6**
comp=Z,0.3nm,0.3s,baz=148,slow=23,SNR=4.7
GERES LR LR 01 54 06.1
comp=Z,389nm,19.6s,baz=140,slow=44
comp=Z,3.2nm,0.4s
STEB Steborice 8.63 352 *e*PN **Pn** **01 50 02.5 +2.3**
MILM Milestii Mici 8.66 47 *e*P **Pn** **01 50 02.0 +1.4**
comp=Z,40nm,0.9s
MILM *e*S **Sn** **01 51 39.0 +1.4**
MILM *e*L L 01 53 50.0
MILM LRM MLR 01 54 16.0
comp=Z,750nm,15.5s
KIS Kishinev 8.71 47 *e*P **Pn** **01 50 03.0 +1.7**
comp=Z,20nm,0.6s
KIS *e*S **Sn** **01 51 40.0 +1.2**
KIS *e*L L 01 53 31.0
KIS LRM MLR 01 54 25.0
comp=Z,400nm,16.0s
RETA Reutte 8.74 317 *e*Pn **Pn** **01 50 02.0 +0.2**
comp=Z,7.3nm,0.4s,SNR=5.9
RETA *i* Sn **Sn** **01 51 39.2 -0.4**
comp=Z,26nm,0.6s
DAVOX Davos/Dischmat 8.79 311 Pn **Pn** **01 50 03.0 +0.5**
comp=Z,2.5nm,0.3s,baz=122,slow=17,SNR=28
DAVOX Sn **Sn** **01 51 38.5 -2.4**
comp=Z,2.1nm,0.3s,baz=155,slow=23,SNR=1.2
DAVOX LR LR 01 54 29.0
comp=Z,240nm,20.0s,baz=104,slow=45
comp=Z,11nm,0.4s
DAVOX Davos/Dischmat 8.79 311 P **Pn** **01 50 03.0 +0.5**
KHC Kasperske Hory 8.80 334 **Pn** **01 50 02.7 +0.2**
KHC Kasperske Hory 8.80 334 *ce*P **Pn** **01 50 03.3 +0.7**
KHC pmax pmax
comp=Z,3.0nm,0.6s
KHC Kasperske Hory 8.80 334 *e*PN **Pn** **01 50 03.2 +0.7**
KHC *e*SN **Sn** **01 51 42.1 +1.1**
KHC AMS AMS 01 53 40.0
comp=Z,600nm,12.7s
KRLC Kraliky 8.89 348 *e*P **Pn** **01 50 05.2 +1.4**
KRLC MLR MLR
comp=Z,1μm,12.6s
KRLC Kraliky 8.89 348 *e*PN **Pn** **01 50 05.2 +1.4**
KRLC AMS AMS 01 54 10.0
comp=Z,1μm,12.6s
TUE Stuetta 8.93 308 **Pn** **01 50 04.3 -0.1**
DAVA Damuels 9.08 314 *i* Pn **Pn** **01 50 07.5 +1.0**
comp=Z,21nm,0.5s,SNR=8.3
DAVA *i* Sn **Sn** **01 51 47.6 -0.5**
comp=Z,28nm,0.5s
ISP Isparta 9.20 109 *i* P **Pn** **01 50 09.7 +1.6**
SORM Soroca 9.21 40 ⇑P **Pn** **01 50 11.3 +3.2**
SORM Soroca 9.21 40 P **Pn** **01 50 11.2 +3.2**
DPC Dobruska-Polom 9.23 347 *e*P **Pn** **01 50 10.3 +1.8**
DPC MLR MLR
comp=Z,1μm,13.3s
DPC Dobruska-Polom 9.23 347 *e*PN **Pn** **01 50 10.3 +1.8**
DPC AMS AMS 01 54 30.0
comp=Z,1μm,13.3s
PRU Pruhonice 9.28 340 *e*P **Pn** **01 50 10.8 +1.8**
PRU MLR MLR
comp=Z,500nm,16.1s
PRU Pruhonice 9.28 340 *e*PN **Pn** **01 50 10.8 +1.8**
PRU AMS AMS 01 54 10.0
comp=Z,500nm,16.1s
UPC Upice 9.44 346 AMS AMS 01 54 40.0
comp=Z,800nm,14.3s
OSTC Ostas 9.45 347 AMS AMS 01 54 40.0
comp=Z,900nm,14.8s
KEST Kesra 9.77 238 Pn **Pn** **01 50 14.8 -1.1**
comp=Z,5.9nm,1.1s,baz=34,slow=17,SNR=1.9
KEST LR LR 01 55 13.9
comp=Z,474nm,18.5s,baz=23,slow=45
KEST Kesra 9.77 238 **Pn** **01 50 14.4 -1.5**
BNI Bardonecchia 10.07 296 **Pn** **01 50 17.9 -2.1**
BNI Bardonecchia 10.07 296 P **Pn** **01 50 17.9 -2.1**
SENIN Lac Senin/Sane 10.13 303 **Pn** **01 50 20.0 -0.8**
STU Stuttgart 10.38 319 **Pn** **01 50 23.4 -0.7**
STU Stuttgart 10.38 319 P **Pn** **01 50 23.4 -0.7**
BFO Black Forest 10.54 315 **Pn** **01 50 25.8 -0.6**
BFO Black Forest 10.54 315 P **Pn** **01 50 25.8 -0.6**
BR131 Keskin Array S 10.87 94 *i* P **Pn** **01 50 32.8 +1.8**
BRTR Keskin Array B 10.87 94 Pn **Pn** **01 50 33.9 +2.9**
comp=Z,0.2nm,0.3s,baz=305,slow=30,SNR=7.9
BRTR Sn **Sn** **01 52 32.8 +0.8**
comp=Z,0.1nm,0.3s,baz=3.5,slow=22,SNR=1.3
BRTR LR LR 01 55 43.8
comp=Z,243nm,18.2s,baz=286,slow=43
comp=Z,2.2nm,0.9s
BRTR Keskin Array B 10.87 94 **Pn** **01 50 30.4 -0.6**
BRTR **Sn** **01 52 31.5 -0.5**
BRTR Keskin Array B 10.87 94 P **Pn** **01 50 30.4 -0.6**
BRTR 01 52 31.5
CLL Collm 10.89 338 *e*P **Pn** **01 50 34.0 +2.9**
CLL Collm 10.89 338 *e*Pn **Pn** **01 50 34.0 +2.9**
CLL *e*Pg 01 51 25.0
CLL *e*Sn Sn 01 52 14.0 -18
CLL *e*Sb 01 53 02.0
CLL *e*Sg 01 53 38.0
CLL AMS AMS 01 55 00.0
ECH Echery 11.12 312 **Pn** **01 50 33.7 -0.5**
ECH Echery 11.12 312 P **Pn** **01 50 33.7 -0.5**
AKASG Malin Array Be 11.48 33 Pn **Pn** **01 50 39.8 +0.7**
comp=Z,1.0nm,0.3s,baz=221,slow=13,SNR=8.8
AKASG Lg Lg 01 54 05.8
baz=254,slow=24
comp=Z,0.6nm,0.4s
AKASG Malin Array Be 11.48 33 **Pn** **01 50 37.3 -1.8**
AKBB Malin Array Si 11.48 33 *i* P **Pn** **01 50 40.8 +1.6**
SSB Saint Sauveur 11.58 295 **Pn** **01 50 40.1 -0.5**
SSB Saint Sauveur 11.58 295 P **Pn** **01 50 40.1 -0.5**
SUW Suwalki 12.86 10 **Pn** **01 50 57.7 -0.3**
SUW Suwalki 12.86 10 *e*P **P** **01 51 10.0 +1.3**
SUW Suwalki 12.86 10 P **Pn** **01 50 57.7 -0.3**
BSD Bornholm Skovb 14.07 349 *i* P **P** **01 51 22.1 +0.1**
BSD IAmb IAmb 01 51 44.0
comp=Z,27nm,1.1s
MNK Minsk 14.25 20 *i* P **Pn** **01 51 18.8 +1.8**
comp=E,15nm,1.0s
MNK *i* P **Pn** **01 51 18.8 +1.8**
comp=N,4.0nm,0.8s
MNK *i* P **Pn** **01 51 18.8 +1.8**
comp=Z,16nm,0.9s,baz=207
MNK *i* PP **P** **01 51 23.9 -0.2**
MNK *i* S **Sn** **01 53 57.8 +3.5**
MNK *i* SS **SnSn** **01 54 09.3 +2.6**
MNK *i* LQ LQ 01 55 25.9
MNK *i* LR LR 01 56 30.7
MNK *i* LRM MLR 01 57 19.1
comp=E,251nm,17.0s
MNK *i* LRM MLR 01 57 22.7
comp=Z,378nm,17.2s
MNK *i* LRM MLR 01 57 30.3
comp=N,131nm,16.2s
MNK Minsk 14.25 20 *i* P **Pn** **01 51 18.7 +1.8**
MNK *i* S **Sn** **01 53 57.7 +3.5**
MNK pmax pmax
comp=E,15nm,1.0s
MNK pmax pmax
comp=Z,16nm,0.9s
MNK pmax pmax
comp=N,4.0nm,0.8s
MNK MLR MLR
comp=E,251nm,17.0s
MNK MLR MLR
comp=Z,378nm,17.0s
MNK MLR MLR
comp=N,131nm,16.0s
GAZ Gaziantep 14.33 101 **Pn** **01 51 19.8 +1.6**
NACGM Naroch 14.35 17 *e*P **Pn** **01 51 19.4 +1.1**
NACGM Naroch 14.35 17 *e*P **P** **01 51 25.0 -0.2**
comp=Z,59nm,0.9s,baz=203
PABE Paberze 14.42 10 **Pn** **01 51 19.8 +0.5**
PABE Paberze 14.42 10 *e*P **P** **01 51 26.4 +0.4**
LUNU Lund 14.80 346 *i* P **P** **01 51 31.9 +1.6**
ISAL Salakas 14.84 15 *e*P **P** **01 51 32.2 +1.6**
SOC Sochi 15.05 75 *e*P **Pn** **01 51 27.5 -0.4**
SOC *e* 01 54 16.6
SOC MLR MLR
comp=Z,85nm,17.0s
MMAI Mount Meron Ar 15.15 118 Pn **Pn** **01 51 28.2 -1.1**
comp=Z,1.2nm,0.3s,baz=308,slow=13,SNR=13
MMAI LR LR 01 58 41.8
comp=Z,122nm,18.4s,baz=300,slow=42
comp=Z,1.3nm,0.4s
BJUU Bjuv 15.30 346 *i* P **P** **01 51 41.9 +6.2**
DEL Delary 15.53 348 *i* P **P** **01 51 38.1 -0.2**
DEL Delary 15.53 348 *i* P **P** **01 51 38.6 +0.2**
KOPT Kop Dagi 15.96 88 Pn **Pn** **01 51 40.6 +0.5**
FABU Falkenberg 16.23 347 *i* P **P** **01 51 47.3 +1.2**
FABU Falkenberg 16.23 347 *i* P **P** **01 51 48.7 +2.7**
SLIT Slitere, Latvi 16.35 5 *e*P **P** **01 51 47.6 +0.3**
VORD Divnogorie 16.66 48 *e*P **Pn** **01 51 49.1 +0.6**
VORD pmax pmax
comp=Z,10.0nm,0.9s
ASF Jabal al Asfar 16.66 118 Pn **Pn** **01 51 49.0 +0.2**
comp=Z,2.0nm,0.3s,baz=324,slow=4.8,SNR=4.0
comp=Z,1.9nm,0.6s
ASF Jabal al Asfar 16.66 118 P **Pn** **01 51 49.0 +0.2**
VSR Storozhevoye 16.70 47 *e*P **Pn** **01 51 49.7 +0.6**
VSR pmax pmax
comp=Z,10.0nm,0.8s
BORU Boraas 16.82 347 *i* P **P** **01 51 53.9 +1.2**
MARD Mardin 16.93 97 **P** **01 51 53.4 -0.7**
VORR Voronezh 16.95 46 *e*P **Pn** **01 51 51.9 -0.3**
VORR pmax pmax
comp=Z,55nm,0.4s
EIL Elat 17.13 128 P **Pn** **01 51 51.4 -3.2**
comp=Z,5.3nm,0.6s,baz=330,slow=19,SNR=6.3
EIL S Sn 01 54 53.7 -11
comp=Z,4.4nm,0.7s,baz=66,slow=15,SNR=3.1
SHA1 Shidzhatmaz 17.19 74 *i* P **P** **01 51 58.8 +1.7**
KIV Kislovodsk 17.21 74 **Pn** **01 51 54.9 -0.8**
KIV Kislovodsk 17.21 74 *e*P **P** **01 51 58.3 +1.1**
KIV pmax pmax
comp=Z,11nm,0.9s
KIV MLR MLR
comp=Z,29nm,14.0s
LPSR Galich'ya Gora 17.28 43 *e*P **P** **01 51 57.2 -0.5**
LPSR pmax pmax
comp=Z,28nm,1.4s
KBZ Khabaz 17.36 74 P **P** **01 51 58.7 0.0**
comp=Z,0.3nm,0.3s,baz=295,slow=9.0,SNR=16
KBZ LR LR 02 00 51.1
comp=Z,42nm,18.9s,baz=307,slow=44
comp=Z,9.6nm,0.8s
KBZ Khabaz 17.36 74 *ce*P **P** **01 52 01.1 +2.4**
KBZ pmax pmax
comp=Z,10.0nm,0.8s
GURO Guroymak-BITLI 17.48 92 P **Pn** **01 51 57.7 -1.3**
GOF Gofitskoye 17.51 70 *ce*P **P** **01 52 00.4 +0.1**
VSU Vasula 17.69 13 *e*P **P** **01 52 02.5 +0.3**
VSU Vasula 17.69 13 *ce*P **P** **01 52 02.4 +0.3**
VSU pmax pmax
comp=Z,173nm,0.7s
OBN Obninsk 17.74 34 P **P** **01 52 03.1 +0.3**
comp=Z,3.8nm,0.3s,baz=114,slow=1.1,SNR=10
comp=Z,14nm,0.5s
OBN Obninsk 17.74 34 **Pn** **01 52 00.5 -1.6**

OBN IAmb IAmb 01 52 03.9
comp=Z,84nm,1.2s
OBN Obninsk 17.74 34 *de*P **Pn 01 52 02.0 0.0**
OBN pmax pmax
comp=Z,69nm,1.7s
OBN MLR MLR
comp=Z,172nm,11.0s
NCK Nalchik 17.88 75 *i*P **P 01 52 05.8 +1.4**
NCK pmax pmax
comp=Z,6.0nm,0.9s
ESDC Sonseca Array 17.93 272 P **Pn 01 52 03.9 -0.7**
comp=Z,0.1nm,0.3s,baz=72,slow=13,SNR=5.9
ESDC LR LR 01 59 23.1
comp=Z,116nm,18.3s,baz=98,slow=38
comp=Z,0.9nm,0.7s
ESDC Sonseca Array 17.93 272 P **Pn 01 52 03.0 -1.6**
VRH Novokhopyorsk 18.14 50 *e*P **Pn 01 52 06.2 -0.8**
VRH pmax pmax
comp=Z,14nm,0.6s
ARBE Arbavere 18.51 10 *e*P **P 01 52 11.2 -0.1**
MOS Moscow 18.61 33 *e*P **P 01 52 10.6 -1.7**
MOS pmax pmax
comp=Z,40nm,0.7s
AAL Aland 18.81 1 *e*P **P 01 52 14.6 +0.1**
MEF Metsahovi 19.09 7 *e*P **P 01 52 17.6 +0.1**
HFS Hagfors 19.11 351 P **P 01 52 18.0 +0.2**
comp=Z,1.1nm,0.3s,baz=171,slow=13,SNR=36
HFS LR LR 02 00 43.7
comp=Z,71nm,21.0s,baz=176,slow=40
comp=Z,4.7nm,0.5s
GNI Garni 19.12 85 P **Pn 01 52 20.2 +1.0**
comp=Z,0.7nm,0.3s,baz=338,slow=3.6,SNR=8.2
comp=Z,20nm,0.9s
GNI Garni 19.12 85 **P 01 52 18.5 +0.2**
GNI IAmb IAmb 01 52 20.8
comp=Z,23nm,0.9s
GNI Garni 19.12 85 *ce*P **Pn 01 52 20.5 +1.3**
GNI pmax pmax
comp=Z,18nm,0.7s
PUL Pulkovo 19.59 16 *ce*P **Pn 01 52 25.5 +1.1**
PUL pmax pmax
comp=Z,49nm,0.4s
RAF Rauma 19.71 3 *e*P **P 01 52 23.7 -0.5**
NC602 NORSAR Array S 19.98 348 P **P 01 52 26.4 -0.9**
NAO01 NORSAR Array S 20.18 348 P **P 01 52 28.8 -0.8**
NC405 NORSAR Array S 20.32 349 **P 01 52 30.3 -0.6**
NB2 NORSAR Subarra 20.32 348 P **P 01 52 30.1 -1.0**
comp=Z,3.2nm,0.6s,baz=156,slow=11
NOA NORSAR Array B 20.32 348 P **P 01 52 29.0 -2.0**
comp=Z,0.3nm,0.4s,baz=176,slow=17,SNR=21
NOA LR LR 02 01 47.2
comp=Z,174nm,18.0s,baz=170,slow=41
EKA Eskdalemuir Ar 20.41 321 P **P 01 52 31.8 -0.2**
comp=Z,4.5nm,0.6s,baz=109,slow=9.1,SNR=34
comp=Z,4.5nm,0.6s
FINES FINESS Array B 20.47 9 P **P 01 52 31.7 -0.9**
comp=Z,14nm,0.5s,baz=178,slow=11,SNR=117
FINES LR LR 02 01 23.4
comp=Z,260nm,18.2s,baz=198,slow=39
comp=Z,14nm,0.5s
FINES FINESS Array B 20.47 9 **P 01 52 31.9 -0.7**
FINES FINESS Array B 20.47 9 P **P 01 52 31.9 -0.7**
FIA1 FINESS Array S 20.47 9 **P 01 52 31.7 -0.9**
NC303 NORSAR Array S 20.47 349 P **P 01 52 32.0 -0.7**
NC204 NORSAR Array S 20.61 348 **P 01 52 34.3 0.0**
MAK Makhachkala 20.76 76 *d i*P **P 01 52 32.4 -3.5**
MAK *e*S **S 01 56 23.6 -3.0**
MAK pmax pmax
comp=Z,287nm,1.3s
MAK MLR MLR
comp=Z,130nm,14.0s
MDT Midelt 21.02 254 LR LR 02 00 53.4
comp=Z,54nm,18.3s,baz=62,slow=37
KEF Keuruu 21.05 7 *e*P **P 01 52 38.7 -0.2**
MD01 Midelt array s 21.10 254 **P 01 52 39.4 -0.5**
MD31 MD31 21.10 254 P **P 01 52 39.5 -0.3**
AKT Akhty 21.11 80 *e*P **P 01 52 41.3 +1.4**
AKT *e*PPP PPP 01 53 07.2
AKT pmax pmax
comp=Z,9.0nm,0.7s
VAF Ylistaro 21.77 4 *e*P **P 01 52 47.4 +0.9**
TAM Tamanrasset 21.96 217 P **P 01 52 48.1 -1.1**
TAM Tamanrasset 21.96 217 P **P 01 52 48.1 -1.1**
TAM pmax pmax
comp=Z,11nm,0.8s
BELG Belogornoye 21.99 50 P **P 01 52 49.5 +0.6**
comp=Z,53nm,0.8s,baz=321,slow=0.8,SNR=23
comp=Z,53nm,0.8s
JOF Joensuu 22.66 14 *e*P **P 01 52 56.3 +0.1**
KLMR Klimovskoe 23.00 25 *e*P **P 01 52 58.1 -1.6**
KLMR pmax pmax
comp=Z,59nm,1.2s
KLMR MLR MLR
comp=Z,307nm,16.0s
KIRV Kirov 25.47 37 LR LR 02 03 53.4
comp=Z,156nm,18.9s,baz=238,slow=38
KIRV Kirov 25.47 37 *ce*P **P 01 53 22.6 -0.3**
APA Apatity 27.30 12 *e*P **P 01 53 40.9 +1.6**
APA MLR MLR
comp=Z,477nm,3.7s
AKTO Aktyubinsk 27.99 58 LR LR 02 08 59.8
comp=Z,124nm,18.8s,baz=286,slow=45
ARCES ARCESS Array B 28.38 4 P **P 01 53 47.6 -1.4**
comp=Z,0.6nm,0.4s,baz=195,slow=8.7,SNR=8.4
comp=Z,0.6nm,0.4s
ARCES ARCESS Array B 28.38 4 P **P 01 53 48.0 -1.0**
ARCES IAmb IAmb 01 54 11.9
comp=Z,18nm,1.5s
ARCES ARCESS Array B 28.38 4 P **P 01 53 48.0 -1.0**
ARCES pmax pmax
comp=Z,18nm,1.5s
ARTI Arti 29.16 46 LR LR 02 06 38.7
comp=Z,143nm,20.4s,slow=38
ARTI Arti 29.16 46 **P 01 53 55.4 -0.6**
ARTI Arti 29.16 46 *ce*P **P 01 53 55.3 -0.7**
ARTI pmax pmax
comp=Z,29nm,0.7s
AB31 Akbulak array 29.20 61 **P 01 53 56.2 -0.2**
ABKAR Akbulak array 29.20 61 P **P 01 53 55.9 -0.5**
SVE Sverdlovsk 30.47 45 *e*P **P 01 54 08.2 +0.6**
SVE pmax pmax
comp=Z,36nm,0.8s
TORD Torodi Ar. Bea 32.16 214 P **P 01 54 23.3 +0.5**
comp=Z,0.7nm,0.6s,baz=20,slow=13,SNR=5.9
comp=Z,0.7nm,0.6s
BORG Borgarnes 32.95 329 LR LR 02 10 41.1
comp=Z,125nm,18.3s,baz=138,slow=42
UOSS Minazif 34.51 107 P **P 01 54 41.7 -1.6**
UOSS IAmb IAmb 01 54 42.6
comp=Z,5.9nm,0.7s
BORK Borovoye 35.68 53 *i*P **P 01 54 54.2 +1.1**
BORK pmax pmax
comp=Z,18nm,0.8s
BVAR Borovoye Array 35.73 53 P **P 01 54 54.1 +0.6**
comp=Z,17nm,0.8s,baz=284,slow=6.0,SNR=70
BVAR LR LR 02 10 59.3
comp=Z,53nm,18.6s,baz=279,slow=39
comp=Z,17nm,0.8s
KK31 Karatay Array 37.31 70 **P 01 55 07.1 0.0**
KK31 Karatay Array 37.31 70 P **P 01 55 07.1 0.0**
KK31 pmax pmax
comp=Z,3.0nm,0.7s
CHGR Chuyangaron 37.69 77 **P 01 55 10.3 -0.2**
CHGR IAmb IAmb 01 55 10.8
comp=Z,11nm,0.7s
CHGR Chuyangaron 37.69 77 P **P 01 55 10.3 -0.2**
CHGR pmax pmax
comp=Z,11nm,0.7s
GAR Garm 38.42 76 P **P 01 55 15.7 -1.1**
GAR IAmb IAmb 01 55 25.5
comp=Z,20nm,1.5s
AAK Ala-Archa 40.25 69 LR LR 02 15 10.2
comp=Z,44nm,18.3s,baz=316,slow=40
AAK Ala-Archa 40.25 69 *i*P **P 01 55 31.9 -0.1**
AAK pmax pmax
comp=Z,8.0nm,1.7s
DBIC Dimbokro 40.83 219 P **P 01 55 37.2 +0.4**
comp=Z,2.1nm,0.6s,baz=114,slow=6.4,SNR=1.7
comp=Z,2.1nm,0.6s
DBIC Dimbokro 40.83 219 P **P 01 55 35.8 -1.0**
DBIC IAmb IAmb 01 55 46.3
comp=Z,10nm,1.0s
DBIC Dimbokro 40.83 219 P **P 01 55 35.8 -1.0**
DBIC pmax pmax
comp=Z,10.0nm,1.0s
KURBB Kurchatov Arra 41.01 56 P **P 01 55 37.9 -0.1**
comp=Z,1.6nm,0.4s,baz=261,slow=8.6,SNR=24
KURBB PcP **PcP 01 57 37.3 -0.3**
comp=Z,1.1nm,0.6s,baz=289,slow=3.7,SNR=5.4
KURBB LR LR 02 16 18.9
comp=Z,86nm,18.2s,baz=168,slow=42
comp=Z,1.6nm,0.4s
KURK Kurchatov 41.05 56 **P 01 55 38.3 +0.1**
KURK IAmb IAmb 01 55 39.6
comp=Z,14nm,1.3s
KURK **PcP 01 57 38.0 +0.2**
KURK Kurchatov 41.05 56 *i*P **P 01 55 38.0 -0.2**
KURK pmax pmax
comp=Z,6.0nm,0.7s
KSH Kashi 42.34 73 P **P 01 55 50.0 +0.8**
KSH pmax pmax
comp=Z,3.0nm,0.9s
MBAR Mbarara 43.02 163 LR LR 02 16 45.8
comp=Z,49nm,18.4s,baz=345,slow=40
MAKZ Makanchi 44.13 61 **P 01 56 03.5 +0.1**
MAKZ IAmb IAmb 01 56 04.6
comp=Z,11nm,0.9s
MAKZ Makanchi 44.13 61 P **P 01 56 03.5 +0.1**
MAKZ pmax pmax
comp=Z,11nm,1.0s
ZAA0 Zalesovo Array 44.17 50 **P 01 56 03.9 +0.3**
ZALV Zalesovo Beam 44.17 50 P **P 01 56 03.8 +0.2**
comp=Z,21nm,0.4s,baz=281,slow=8.6,SNR=104
ZALV PP **PP 01 57 45.6 -0.8**
comp=Z,1.2nm,0.6s,baz=294,slow=11,SNR=2.0
ZALV LR LR 02 16 43.1
comp=Z,136nm,18.4s,baz=264,slow=39
comp=Z,21nm,0.4s
ZALV Zalesovo Beam 44.17 50 **P 01 56 03.9 +0.3**
ZALV **PP 01 57 45.5 -0.9**
MK31 Makanchi Array 44.34 61 *i*P **P 01 56 05.5 +0.4**
MKAR Makanchi Array 44.34 61 P **P 01 56 05.6 +0.5**
comp=Z,19nm,0.6s,baz=284,slow=7.6,SNR=123
MKAR PcP **PcP 01 57 48.7 -0.1**
comp=Z,1.0nm,0.6s,baz=286,slow=3.6,SNR=2.5
MKAR LR LR 02 17 26.2
comp=Z,73nm,18.3s,baz=291,slow=40
comp=Z,19nm,0.6s
SFJD Kangerlussuaq 45.08 329 LR LR 02 16 48.6
comp=Z,69nm,19.6s,baz=76,slow=38
DGZ Jazzator, Alta 46.78 56 ⇑ *i*P **P 01 56 25.4 +0.9**
DGZ pmax pmax
comp=Z,20nm,0.9s
KNGR Kungurtug, Tuv 52.60 52 *i*P **P 01 57 09.7 +1.0**
FRB Frobisher Bay 53.04 326 LR LR 02 19 54.9
comp=Z,84nm,19.0s,baz=103,slow=36
SCHQ Schefferville 55.60 316 P **P 01 57 29.8 -0.7**
comp=Z,3.3nm,0.6s,baz=16,slow=5.7,SNR=3.9
SCHQ LR LR 02 20 32.0
comp=Z,60nm,18.6s,baz=78,slow=35
comp=Z,3.3nm,0.6s
EVN Everest 55.66 81 **P 01 57 31.2 -0.8**
TLY Talaya 55.70 49 *i*P **P 01 57 32.9 +1.7**
TLY pmax pmax
comp=Z,12nm,0.9s
TIXI Tiksi 56.92 21 LR LR 02 25 42.8
comp=Z,92nm,18.1s,baz=206,slow=40
LSA Lhasa 57.92 77 P P 01 57 43.0 -4.8
GTA Gaotai 59.01 63 *e*P **P 01 57 54.5 -0.4**
GTA sP pP 01 58 02.0 +0.5
GTA pmax pmax
comp=Z,11nm,0.8s
SONM Songino Array 59.04 52 P **P 01 57 55.7 +0.7**
comp=Z,8.1nm,0.9s,baz=291,slow=8.7,SNR=35
comp=Z,8.1nm,0.9s
ULN Ulaanbaatar 59.41 51 **P 01 57 58.0 +0.4**
ULN IAmb IAmb 01 57 59.1
comp=Z,4.9nm,0.9s
ULN Ulaanbaatar 59.41 51 *i*P **P 01 57 58.0 +0.4**
ULN pmax pmax
comp=Z,6.0nm,0.9s
SHL Shillong 60.74 81 P **P 01 58 05.0 -2.1**
SHL Shillong 60.74 81 P **P 01 58 05.0 -2.1**
SHL pmax pmax
comp=Z,11nm,1.0s
YAK Yakutsk 62.70 30 LR LR 02 28 06.0
comp=Z,64nm,19.3s,baz=280,slow=38
LZDM Lanzhou Array 63.44 64 P **P 01 58 25.7 +0.5**
comp=Z,3.8nm,0.5s,baz=321,slow=3.8,SNR=5.0
comp=Z,3.8nm,0.5s
LZH Lanzhou 63.47 64 *e*P **P 01 58 25.8 +0.6**
LZH pP sP 01 58 33.0 -1.3
LZH pmax pmax
comp=Z,22nm,1.4s
A36M Sachs Harbour 64.23 349 P **P 01 58 29.4 +0.1**
A36M IAmb IAmb 01 58 30.3
comp=Z,4.3nm,0.7s
C27K Jago River 68.61 354 P **P 01 58 58.2 +0.7**
C27K IAmb IAmb 01 58 59.4
comp=Z,4.9nm,1.1s
E29M Blow River 69.24 351 P **P 01 59 01.8 +0.5**
F31M Tsiigehtchic 69.61 349 **P 01 59 03.4 -0.3**
BOSA Boshof 69.86 175 P **P 01 59 06.5 +0.8**
comp=Z,1.4nm,0.6s,baz=8.1,slow=5.5,SNR=4.1
comp=Z,1.4nm,0.6s
BOSA Boshof 69.86 175 P **P 01 59 06.0 +0.3**
BOSA IAmb IAmb 01 59 33.4
comp=Z,8.8nm,1.2s
BOSA Boshof 69.86 175 P **P 01 59 06.0 +0.3**
BOSA pmax pmax
comp=Z,9.0nm,1.3s
YKA Yellowknife Ar 70.11 339 P **P 01 59 07.2 +0.4**
comp=Z,3.1nm,0.9s,baz=10,slow=7.4,SNR=12
comp=Z,3.1nm,0.9s
YKA Yellowknife Ar 70.11 339 P **P 01 59 06.7 -0.2**
YKA Yellowknife Ar 70.11 339 *i*P **P 01 59 07.1 +0.3**
YKA pmax pmax
comp=Z,1.0nm,0.5s
F28M Old Crow 70.20 352 P **P 01 59 07.6 +0.2**
F28M IAmb IAmb 01 59 16.0
comp=Z,2.6nm,0.7s
CMAR Chiang Mai Arr 70.22 83 P **P 01 59 07.2 -1.1**
comp=Z,2.4nm,0.3s,baz=306,slow=8.5,SNR=6.3
comp=Z,2.4nm,0.3s
G29M Pine Creek 70.67 351 P **P 01 59 10.2 0.0**
G29M IAmb IAmb 01 59 13.0
comp=Z,6.4nm,1.0s
Q56A Snyder Ridge, 71.07 306 P **P 01 59 13.5 +0.4**
COLD Coldfoot 71.43 356 P **P 01 59 15.4 +0.7**
COLD IAmb IAmb 01 59 16.0
comp=Z,7.9nm,1.2s
I30M Mount Dempster 72.07 350 P **P 01 59 19.2 +0.3**
I30M IAmb IAmb 01 59 20.0
comp=Z,3.4nm,0.8s
ULM Lac du Bonnet 72.67 323 P **P 01 59 22.8 +0.2**
comp=Z,7.7nm,0.7s,baz=87,slow=5.3,SNR=6.2
ULM LR LR 02 30 55.1
comp=Z,44nm,19.2s,baz=40,slow=36
comp=Z,7.7nm,0.7s
ULM Lac du Bonnet 72.67 323 P **P 01 59 22.7 +0.2**
ULM Lac du Bonnet 72.67 323 P **P 01 59 22.7 +0.2**
ULM pmax pmax
comp=Z,11nm,0.9s
J30M Hart River 72.68 349 P **P 01 59 23.2 +0.7**
J30M IAmb IAmb 01 59 24.5
comp=Z,7.7nm,1.1s
H21K Melozitna Rive 73.12 357 P **P 01 59 26.2 +1.3**
H21K IAmb IAmb 01 59 28.0
comp=Z,5.4nm,1.0s
DAWY Dawson 73.57 351 P **P 01 59 28.4 +0.8**
DAWY IAmb IAmb 01 59 29.8
comp=Z,5.0nm,1.0s
J26L Joseph Creek 73.61 352 P **P 01 59 28.3 +0.4**
ILAR Eielson Array 73.64 354 P **P 01 59 28.8 +0.8**
comp=Z,0.8nm,0.8s,baz=3.0,slow=5.2,SNR=9.2
ILAR LR LR 02 32 28.9
comp=Z,22nm,19.8s,baz=288,slow=36
comp=Z,0.8nm,0.8s
ILAR Eielson Array 73.64 354 P **P 01 59 28.4 +0.4**
ILAR Eielson Array 73.64 354 P **P 01 59 28.4 +0.4**
HDA Harding Lake 74.00 354 P **P 01 59 30.2 0.0**
HDA IAmb IAmb 01 59 31.3
comp=Z,5.9nm,1.0s
T47A Sharon Grove 77.16 308 P **P 01 59 49.1 +0.4**
KSRS Korea Array 77.88 51 P **P 01 59 53.1 +0.4**
comp=Z,0.8nm,0.5s,baz=317,slow=5.2,SNR=2.3
comp=Z,0.8nm,0.5s
N38A Joes South For 78.01 314 P **P 01 59 53.9 +0.4**
X48A Hartselle 78.84 306 P **P 01 59 58.6 +0.5**
X48A IAmb IAmb 02 00 06.9
comp=Z,5.3nm,0.8s
EGMT Eagleton 80.30 328 P **P 02 00 06.3 +0.4**
JTMT Jette 82.27 331 P **P 02 00 17.1 +0.6**
YNE Yellowstone No 82.85 327 P **P 02 00 20.7 +1.0**
YNE IAmb IAmb 02 00 22.1
comp=Z,6.0nm,0.8s
YHL Hebgen Lake 83.46 327 **P 02 00 23.6 +0.7**
YHL IAmb IAmb 02 00 27.1
comp=Z,3.8nm,0.9s
YMR Madison River 83.52 327 P **P 02 00 23.5 +0.4**
YMR IAmb IAmb 02 00 26.0
comp=Z,7.1nm,1.1s
BDFB Brasilia 84.24 243 P **P 02 00 27.9 +1.0**
comp=Z,1.4nm,0.5s
comp=Z,1.4nm,0.5s
BDFB Brasilia 84.24 243 P **P 02 00 26.5 -0.4**
BDFB Brasilia 84.24 243 P **P 02 00 26.5 -0.4**
BDFB pmax pmax
comp=Z,13nm,1.5s
BW06 Boulder Array 84.47 325 P **P 02 00 28.4 +0.4**
BW06 IAmb IAmb 02 00 29.1
comp=Z,2.3nm,0.8s
PD31 Pinedale Array 84.47 325 P **P 02 00 28.2 +0.3**
PD31 IAmb IAmb 02 00 37.4
comp=Z,2.9nm,1.1s
PDAR Pinedale Array 84.47 325 P **P 02 00 28.4 +0.4**
comp=Z,1.1nm,0.7s,baz=62,slow=5.5,SNR=10
comp=Z,1.1nm,0.7s
PDAR Pinedale Array 84.47 325 P **P 02 00 28.3 +0.3**
BMO Blue Mountains 85.83 331 P **P 02 00 34.6 0.0**
BMO IAmb IAmb 02 00 35.6
comp=Z,2.6nm,0.7s
BMO Blue Mountains 85.83 331 P **P 02 00 34.6 0.0**
BMO pmax pmax
comp=Z,3.0nm,0.7s
MFID Camas Ranch 86.50 329 **P 02 00 38.3 +0.4**
MFID IAmb IAmb 02 00 40.0
comp=Z,4.2nm,0.8s
DUG Dugway, Tooele 87.98 325 **P 02 00 45.9 +0.7**
DUG IAmb IAmb 02 00 46.9
comp=Z,3.7nm,0.9s
DUG Dugway, Tooele 87.98 325 P **P 02 00 45.9 +0.7**
DUG pmax pmax
comp=Z,4.0nm,1.0s
PSUT Pine Spring 89.81 325 P **P 02 00 54.4 +0.4**
PSUT IAmb IAmb 02 01 05.3
comp=Z,3.5nm,1.0s
DRIO Del Rio 90.44 311 P **P 02 00 57.2 +0.4**
DRIO IAmb IAmb 02 00 59.3
comp=Z,4.2nm,1.0s
S11A Rachel 91.36 326 P **P 02 01 00.9 -0.2**
NVAR Mina Array Bea 91.73 328 P **P 02 01 03.7 +0.8**
comp=Z,0.2nm,0.3s,baz=34,slow=5.1,SNR=1.7
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 91.73 328 P **P 02 01 03.5 +0.6**
TX31 Lajitas Ar. Si 92.21 313 **P 02 01 06.0 +0.9**
TX31 IAmb IAmb 02 01 47.2
comp=Z,5.2nm,1.4s
TXAR Lajitas Array 92.21 313 P **P 02 01 06.0 +0.9**
comp=Z,1.3nm,0.9s,baz=46,slow=5.4,SNR=8.9
comp=Z,1.3nm,0.9s
TXAR Lajitas Array 92.21 313 P **P 02 01 05.3 +0.3**
TXAR Lajitas Array 92.21 313 P **P 02 01 05.4 +0.3**
WRA Warramunga Arr 121.36 90 PKP **PKPdf 02 06 47.2 -1.2**
comp=Z,2.7nm,0.9s,baz=321,slow=1.1,SNR=3.2
WRA Warramunga Arr 121.36 90 **PKPdf 02 06 47.0 -1.4**
WRA Warramunga Arr 121.36 90 PKIKP **PKPdf 02 06 47.0 -1.4**
ASAR Alice Springs 123.21 93 PKP **PKPdf 02 06 51.1 -0.8**
comp=Z,1.3nm,0.6s,baz=309,slow=1.7,SNR=14

NEIC ***26*** *01:53:37.0± 1.6, 58.5°S± 0.1°× 25.3°W± 0.2°, h35km± 1km, mb4.7/17, Error ellipse: s-maj=18.2km s-min=13.3km az=28.0*
IDC ***26*** *01:53:38.9± 5.0, 58.5°S× 25.2°W, h55km± 43km, mb4.2/9, mbtmp4.5/10, ML5.2/1, MS3.4/11, Error ellipse: s-maj=20.9km s-min=18.2km az=52.0*
ISC 26 01:53:36.6±0.4, **58.51°S**±0.08°×**25.2°W**±0.1, **h35**km, **n185, s75**/168, **mb4.6**/12, **MS3.4**/9, **5C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.54**	**299**	Pn	Pn	01 55 29.7	+5.9
VNA1	**Neumayer--Stat**	**14.12**	**156**	⇑P	**Pn**	**01 56 52.3**	**-1.3**
	comp=Z,90nm,0.5s						
VNA3	**Neumayer Olymp**	**14.32**	**159**	⇑P	**Pn**	**01 56 54.4**	**-2.0**
	comp=Z,112nm,0.5s						
VNA2	**Neumayer--Watz**	**14.51**	**156**	⇑P	**Pn**	**01 56 56.9**	**-2.2**
	comp=Z,57nm,0.5s,baz=320,slow=13						
SNAA	**Sanae**	**16.06**	**154**	⇑P	**Pn**	**01 57 18.2**	**-1.2**
	comp=Z,701nm,0.4s						
SNAA	**Sanae**	**16.06**	**154**	P	**Pn**	**01 57 18.7**	**-0.7**
	comp=Z,8.4nm,0.3s,baz=318,slow=15,SNR=492						
SNAA				S	Sn	02 00 01.9	-14
	comp=Z,2.4nm,0.6s,baz=327,slow=13,SNR=2.7						
SNAA				LR	LR	02 02 14.7	
	comp=Z,225nm,19.3s,baz=326,slow=32						
	comp=Z,31nm,0.5s						
SNAA	**Sanae**	**16.06**	**154**	Pn	**Pn**	**01 57 18.5**	**-0.9**
SNAA				IAmb	IAmb	01 57 21.7	
	comp=Z,35nm,0.6s						
TROLL	**Troll, Antarti**	**17.57**	**151**	⇑P	**Pn**	**01 57 38.5**	**+0.1**
	comp=Z,2μm,0.5s						
PMSA	**Palmer Station**	**19.21**	**235**	LR	LR	02 04 20.7	
	comp=Z,125nm,20.6s,baz=75,slow=34						
BELA	**Belgrano 2**	**19.72**	**186**		**P**	**01 58 02.0**	**-0.5**
QSPA	**South Pole Qui**	**31.74**	**180**	LR	LR	02 12 44.0	
	comp=Z,139nm,19.4s,baz=200,slow=36						
QSPA	**South Pole Qui**	**31.74**	**180**	P	**P**	**02 00 00.7**	**+3.8**
QSPA				IAmb	IAmb	02 00 02.5	
	comp=Z,15nm,1.5s						
PLCA	**Paso Flores**	**33.51**	**282**	P	**P**	**02 00 12.8**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=149,slow=7.4,SNR=8.9						
PLCA				LR	LR	02 13 56.4	
	comp=Z,28nm,18.7s,baz=118,slow=36						
	comp=Z,3.9nm,0.7s						
PLCA	**Paso Flores**	**33.51**	**282**	P	**P**	**02 00 12.1**	**-0.4**
PLCA				IAmb	IAmb	02 00 20.1	
	comp=Z,11nm,1.3s						
MAW	**Mawson**	**37.55**	**141**	LR	LR	02 15 17.7	
	comp=Z,60nm,19.8s,baz=98,slow=35						
CPUP	**Villa Florida**	**39.23**	**311**	LR	LR	02 14 10.9	
	comp=Z,17nm,21.5s,baz=23,slow=31						
VNDA	**Vanda**	**44.16**	**182**	P	**P**	**02 01 42.8**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=193,slow=7.2,SNR=8.0						
VNDA				LR	LR	02 18 43.9	
	comp=Z,56nm,21.8s,baz=176,slow=34						
	comp=Z,2.2nm,0.8s						
VNDA	**Vanda**	**44.16**	**182**	P	**P**	**02 01 41.8**	**+0.7**
H04S2	**CROZET ISLANDS**	**45.63**	**111**	T	T	02 51 25.3	
	baz=226,slow=76,SNR=36						
H04S3	**CROZET ISLANDS**	**45.64**	**111**	T	T	02 51 29.7	
	baz=226,slow=76,SNR=23						
BOSA	**Boshof**	**45.64**	**72**	P	**P**	**02 01 53.6**	**0.0**
	comp=Z,5.1nm,0.6s,baz=210,slow=7.0,SNR=19						
	comp=Z,5.1nm,0.6s						
BOSA	**Boshof**	**45.64**	**72**	P	**P**	**02 01 53.6**	**0.0**
BOSA				IAmb	IAmb	02 01 54.3	
	comp=Z,5.2nm,0.6s						
H04S1	**CROZET ISLANDS**	**45.65**	**111**	T	T	02 51 29.8	
	baz=226,slow=76,SNR=25						
BDFB	**Brasilia**	**46.02**	**329**	P	**P**	**02 01 57.5**	**+0.9**
	comp=Z,2.2nm,0.5s						
	comp=Z,2.2nm,0.5s						
BDFB	**Brasilia**	**46.02**	**329**	P	**P**	**02 01 57.5**	**+0.9**
BDFB				IAmb	IAmb	02 02 06.0	
	comp=Z,17nm,1.5s						
LBTB	**Lobatse**	**48.80**	**69**	LR	LR	02 18 10.1	
	comp=Z,71nm,21.1s,baz=260,slow=30						
KGCAE	**Kacgae**	**48.99**	**64**	P	**P**	**02 02 19.7**	**0.0**
PTLB	**Pontes e Lacer**	**49.80**	**315**	P	**P**	**02 02 25.1**	**-0.5**
PTLB				IAmb	IAmb	02 02 26.7	
	comp=Z,4.4nm,0.9s						
TSUM	**Tsumeb**	**50.05**	**57**	LR	LR	02 18 48.3	
	comp=Z,49nm,20.8s,baz=283,slow=30						
H10S2	**ASCENSION HYDR**	**50.10**	**14**	T	T	02 56 52.6	
	baz=167,slow=74,SNR=43						
H10S3	**ASCENSION HYDR**	**50.10**	**14**	T	T	02 57 00.7	
	baz=33,slow=74,SNR=38						
H10N1	**ASCENSION HYDR**	**51.21**	**14**	T	T	02 58 10.7	
	baz=186,slow=75,SNR=17						
H10N3	**ASCENSION HYDR**	**51.22**	**14**	T	T	02 58 25.3	
	baz=186,slow=75,SNR=32						
H10N2	**ASCENSION HYDR**	**51.23**	**14**	T	T	02 58 15.3	
	baz=186,slow=75,SNR=37						
LPAZ	**La Paz**	**52.66**	**305**	P	**P**	**02 02 47.1**	**-0.7**
	comp=Z,2.6nm,0.4s,baz=121,slow=4.6,SNR=16						

LPAZ				PcP	PcP	02 03 57.7	+0.2	
	comp=Z,1.4nm,0.5s,baz=173,slow=6.6,SNR=1.9							
	comp=Z,2.6nm,0.4s							
LPAZ	La Paz	52.66	305	P	P	02 02 47.1	-0.7	
LPAZ					PcP	02 03 57.4	-0.1	
VA02	Isla de Pascua	64.29	260	P	P	02 04 07.9	-0.3	
BOAV	Boa Vista	66.87	321	P	P	02 04 23.8	-1.0	
BOAV				IAmb	IAmb	02 04 24.5		
	comp=Z,5.9nm,0.9s							
DBIC	Dimbokro	67.01	22	P	P	02 04 26.4	+0.7	
	comp=Z,4.3nm,0.6s,baz=191,slow=5.7,SNR=7.3							
DBIC				LR	LR	02 27 06.4		
	comp=Z,25nm,19.9s,baz=153,slow=30							
	comp=Z,4.3nm,0.6s							
DBIC	Dimbokro	67.01	22	P	P	02 04 26.4	+0.7	
DBIC				IAmb	IAmb	02 04 27.0		
	comp=Z,9.8nm,1.1s							
TORD	Torodi Ar. Bea	74.72	27	P	P	02 05 13.6	+1.2	
	comp=Z,2.3nm,0.5s,baz=318,slow=16,SNR=37							
	comp=Z,2.3nm,0.5s							
TORD	Torodi Ar. Bea	74.72	27	P	P	02 05 13.6	+1.2	
SDV	Santo Domingo	76.49	314	LR	LR	02 38 18.7		
	comp=Z,53nm,21.9s,baz=126,slow=35							
THZ	Tophouse	78.96	194	P	P	02 05 36.4	+0.1	
THZ				IAmb	IAmb	02 05 42.2		
	comp=Z,7.4nm,0.8s							
MRNZ	Matariki Terra	79.33	194	P	P	02 05 38.4	+0.1	
FORT	Forrest	88.30	157	P	P	02 06 24.0	-0.2	
STKA	Stephens Creek	89.29	169	P	P	02 06 27.8	-1.0	
	comp=Z,3.2nm,0.7s,baz=196,slow=7.4,SNR=4.1							
	comp=Z,3.2nm,0.7s							
PSA00	Pilbara Seismi	95.14	148	P	P	02 06 57.1	+1.1	
ASAR	Alice Springs	96.32	161	P	P	02 07 00.2	-1.2	
	comp=Z,1.2nm,0.8s,baz=204,slow=2.0,SNR=9.2							
	comp=Z,1.2nm,0.8s							
HFS	Hagfors	122.17	22	PKP	PKPdf	02 12 23.9	-2.0	
	comp=Z,1.3nm,0.9s,baz=184,slow=4.5,SNR=4.5							
PDAR	Pinedale Array	122.52	300	PKP	PKPdf	02 12 26.8	-0.8	
	comp=Z,0.8nm,0.5s,baz=127,slow=5.2,SNR=12							
NOA	NORSAR Array B	122.55	20	PKP	PKPdf	02 12 26.4	-0.3	
	comp=Z,0.4nm,0.7s,baz=206,slow=2.0,SNR=3.3							
CMAR	Chiang Mai Arr	123.22	110	PKP	PKPdf	02 12 28.2	-1.0	
	comp=Z,1.0nm,0.3s,baz=249,slow=3.9,SNR=4.6							
CMAR	Chiang Mai Arr	123.22	110		PKPdf	02 12 27.2	-2.0	
NVAR	Mina Array Bea	123.29	290	PKP	PKPdf	02 12 29.6	+0.5	
	comp=Z,2.0nm,0.7s,baz=138,slow=3.7,SNR=10							
NVAR	Mina Array Bea	123.29	290		PKPdf	02 12 28.4	-0.7	
FINES	FINESS Array B	126.07	28	PKP	PKPdf	02 12 32.8	-0.5	
	comp=Z,2.1nm,0.5s,baz=201,slow=1.2,SNR=24							
FINES	FINESS Array B	126.07	28		PKPdf	02 12 33.5	+0.2	
LRM	Limekiln Ridge	126.20	300	PKPdf	PKiKP	02 12 35.8	+0.9	
ARCES	ARCESS Array B	132.84	22	PKP	PKPdf	02 12 45.9	-0.1	
	comp=Z,2.0nm,0.7s,baz=203,slow=1.7,SNR=10							
BVAR	Borovoye Array	135.19	59	PKP	PKPdf	02 12 50.4	-0.5	
	comp=Z,2.7nm,0.8s,baz=186,slow=1.5,SNR=9.0							
MKAR	Makanchi Array	136.64	73	PKP	PKPdf	02 12 53.1	-0.8	
	comp=Z,0.6nm,0.8s,baz=258,slow=7.2,SNR=4.2							
MKAR	Makanchi Array	136.64	73		PKPdf	02 12 53.6	-0.3	
KURBB	Kurchatov Arra	137.37	66	PKP	PKPdf	02 12 54.6	-0.4	
	comp=Z,0.7nm,0.7s,baz=230,slow=2.5,SNR=6.0							
YKAW1	Yellowknife Wh	138.64	315	PKPdf	PKPdf	02 12 57.1	+0.2	
YKA	Yellowknife Ar	138.69	315	PKP	PKPdf	02 12 56.0	-1.1	
	comp=Z,1.0nm,0.4s,baz=137,slow=1.8,SNR=22							
YKA	Yellowknife Ar	138.69	315	PKPdf	PKPdf	02 12 56.8	-0.2	
ZALV	Zalesovo Beam	142.46	66	PKhKP	PKPpre	02 12 59.8		
	comp=Z,0.8nm,0.5s,baz=230,slow=2.6,SNR=4.6							
P33M	Teslin, Yukon	144.75	304	P	PKPab	02 13 06.2	-0.9	
	baz=120							
S31K	Pelican	145.12	300	PKPbc	PKPdf	02 13 09.0	+0.3	
C36M	Paulatuk	145.52	322	P	PKPdf	02 13 07.8	-1.2	
	baz=114							
PLBC	Pleasant Camp	145.93	302	P	PKPdf	02 13 10.4	+0.4	
	baz=119							
P29M	Windy Craggy	146.63	301	PKPdf	PKPbc	02 13 12.8	-0.2	
P29M	Windy Craggy	146.63	301	P	PKPbc	02 13 13.9	+1.0	
	baz=118							
A36M	Sachs Harbour	146.85	326	P	PKPdf	02 13 11.8	+0.6	
	baz=109							
M30M	Minto, Yukon	147.53	307		PKPbc	02 13 15.4	-0.1	
M30M	Minto, Yukon	147.53	307	P	PKPbc	02 13 15.3	-0.1	
	baz=115							
YUK4	Talbot Arm	147.81	304	P	PKPbc	02 13 16.8	+0.4	
	baz=115							
H31M	Peel River	147.81	313	P	PKPbc	02 13 15.9	-0.1	
	baz=111							
PINM	Pinnacle	147.97	301	P	PKPbc	02 13 16.9	+0.2	
	baz=116							
J30M	Hart River	148.13	310	PKPbc	PKPbc	02 13 17.3	+0.2	
J30M	Hart River	148.13	310	P	PKPbc	02 13 17.2	+0.1	
	baz=112							
F31M	Tsiigehtchic	148.16	316	P	PKPbc	02 13 16.6	-0.2	
	baz=109							
G31M	Satah River	148.18	315	P	PKPbc	02 13 16.6	-0.3	
	baz=110							
M29M	Somme Creek	148.18	306	P	PKPbc	02 13 17.6	+0.3	
	baz=114							
O28M	Mount Upton	148.24	302	P	PKPbc	02 13 18.3	+0.6	
	baz=115							
YUK8	Steele Glacier	148.27	303	P	PKPbc	02 13 17.9	+0.2	
	baz=115							
L29M	L29M	148.31	307	PKPbc	PKPbc	02 13 18.0	+0.5	
L29M	L29M	148.31	307	P	PKPbc	02 13 17.8	+0.3	
	baz=113							
K29M	Barlow Dome	148.34	309	P	PKPbc	02 13 17.4	-0.3	
	baz=112							
INK	Inuvik	148.36	318	P	PKPbc	02 13 17.1	-0.2	
	baz=108							
I30M	Mount Dempster	148.39	311	P	PKPbc	02 13 17.5	-0.3	
	baz=111							
LOGN	Logan Glacier	148.62	302	PKPbc	PKPbc	02 13 19.3	+0.8	
YAH	Yahtse	148.76	301	PKPbc	PKPbc	02 13 19.6	+0.6	
YUK3	Moose Creek	148.77	304	P	PKPbc	02 13 19.0	0.0	
	baz=114							
CTGM	Chitina Glacie	148.83	302	PKPbc	PKPbc	02 13 19.4	+0.4	
CTG	Chitna Glacier	148.83	302	P	PKPbc	02 13 19.0	0.0	
	baz=114							
EPYK	Eagle Plains	148.91	313	P	PKPbc	02 13 18.9	0.0	
	baz=109							
G30M	tAoh Zraii Nji	148.92	315	PKPbc	PKPbc	02 13 19.1	+0.2	
G30M	tAoh Zraii Nji	148.92	315	P	PKPbc	02 13 18.8	-0.2	
	baz=108							
F30M	Barrier River	148.96	316	PKPbc	PKPbc	02 13 18.9	0.0	
F30M	Barrier River	148.96	316	P	PKPbc	02 13 19.1	+0.1	
	baz=108							
DAWY	Dawson	149.19	308	PKPbc	PKPbc	02 13 19.4	-0.3	
DAWY	Dawson	149.19	308	P	PKPbc	02 13 19.4	-0.3	
	baz=111,SNR=16							
BVCY	Beaver Creek	149.20	305	P	PKPbc	02 13 19.8	+0.1	
	baz=112,SNR=6.7							
WAX	Waxell Ridge	149.29	301	PKPbc	PKPbc	02 13 20.7	+0.6	
H29M	Whitestone	149.50	313	P	PKPbc	02 13 20.3	0.0	
	baz=108							
CRQE	Cirque	149.53	301	P	PKPbc	02 13 21.0	+0.3	
	baz=114							
CRQM	Cirque	149.55	301	PKPbc	PKPbc	02 13 21.2	+0.3	
G29M	Pine Creek	149.58	314	P	PKPbc	02 13 20.5	0.0	
	baz=107							
M27K	Edge Creek, AK	149.62	304	PKPbc	PKPbc	02 13 21.0	0.0	
M27K	Edge Creek, AK	149.62	304	P	PKPbc	02 13 20.9	0.0	
	baz=112,SNR=9.6							
BERG	Berg Lake	149.66	300	PKPbc	PKPbc	02 13 21.5	+0.6	
MCARA	McCarthy VSAT	149.75	302	PKPbc	PKPbc	02 13 21.8	+0.7	
MCARA	McCarthy VSAT	149.75	302	P	PKPbc	02 13 21.4	+0.4	
	baz=113							
BCAR	Beaver Creek A	149.84	306	PKPbc	PKPbc	02 13 21.5	+0.2	
L27K	Beaver Creek,	149.85	306	PKPbc	PKPbc	02 13 21.6	+0.3	
L27K	Beaver Creek,	149.85	306	P	PKPbc	02 13 21.7	+0.3	
	baz=111							
I28M	Miner Creek	149.87	311	PKPbc	PKPbc	02 13 21.4	0.0	
I28M	Miner Creek	149.87	311	P	PKPbc	02 13 21.0	-0.4	
	baz=108,SNR=9.8							
VRDI	Verde Repeater	149.88	302	PKPbc	PKPbc	02 13 21.8	+0.2	
E29M	Blow River	149.94	317	PKPbc	PKPbc	02 13 21.1	-0.3	
E29M	Blow River	149.94	317	P	PKPbc	02 13 21.0	-0.3	
	baz=105							
GLB	Gilahina Butte	150.12	302	PKPbc	PKPbc	02 13 22.2	+0.2	
K27K	Chicken	150.29	308	P	PKiKP	02 13 23.1	+0.1	
	baz=109							
BMRM	Bremner River	150.29	301	PKPbc	PKiKP	02 13 23.8	+0.6	
BMRM	Bremner River	150.29	301	P	PKPbc	02 13 23.1	+0.6	
	baz=113							
D28M	Stokes Point	150.46	319	P	PKPbc	02 13 23.1	+0.6	
	baz=102							
F28M	Old Crow	150.46	315	P	PKPbc	02 13 22.6	0.0	
	baz=105							
L26K	Log Cabin Wild	150.49	305	P	PKPbc	02 13 23.3	+0.5	
	baz=110							
N25K	Chitina, Valde	150.53	302	P	PKiKP	02 13 23.8	+0.1	
	baz=112,SNR=10							
E28M	Babbage River	150.58	317	P	PKPbc	02 13 22.3	-0.5	
	baz=103							
I27K	Kandik River	150.59	311	P	PKPbc	02 13 23.5	+0.5	
	baz=107,SNR=33							
EYAK	Cordova Ski Ar	150.65	300	P	PKiKP	02 13 24.0	+0.1	
	baz=113							
H27K	Steamboat Moun	150.73	312	P	PKPbc	02 13 23.8	+0.4	
	baz=106							
G27K	Doyon Strip	150.93	313	P	PKPbc	02 13 23.8	0.0	
	baz=105							
J26L	Joseph Creek	151.05	308	P	PKPbc	02 13 24.6	+0.4	
	baz=107,SNR=9.0							
SCRK	Sand Creek	151.07	307	P	PKPbc	02 13 24.9	+0.6	
	baz=108,SNR=16							
KLU	Klutina	151.08	301	P	PKiKP	02 13 25.1	+0.2	
	baz=111,SNR=11							
I26K	Coal Creek Min	151.12	310	P	PKPbc	02 13 24.5	+0.3	
	baz=106							
D27M	Malcolm River	151.22	318	P	PKPbc	02 13 25.0	+0.6	
	baz=101							
E27K	Coleen River	151.23	316	P	PKPbc	02 13 24.8	+0.3	
	baz=102							
RIDG	Independent Ri	151.36	306	P	PKiKP	02 13 25.8	+0.4	
	baz=108							
PAX	Paxson	151.38	304	P	PKPbc	02 13 25.0	0.0	
	baz=109							
M24K	Tolsona, Glenn	151.41	303	P	PKPbc	02 13 26.0	+0.5	
	baz=110,SNR=7.1							
G26K	Porcupine Rive	151.78	313	P	PKPbc	02 13 26.0	+0.4	
	baz=103							
SCM	Sheep Creek Mo	151.83	302	P	PKiKP	02 13 26.7	+0.3	
	baz=110,SNR=6.5							
J25K	Salcha River,	151.83	308	P	PKPbc	02 13 26.2	+0.3	
	baz=106							
PWL	Port Wells	151.95	299	P	PKPbc	02 13 26.3	+0.1	
	baz=111							
M23K	Glacier View	151.99	301	P	PKPbc	02 13 26.5	+0.1	
	baz=110,SNR=8.2							
F26K	Sheenjek River	152.07	314	P	PKiKP	02 13 27.1	+0.4	
	baz=101							
PRP	Porcupine Dome	152.13	310	P	PKPbc	02 13 26.8	+0.1	
	baz=104,SNR=11							
C27K	Jago River	152.24	319	P	PKPbc	02 13 27.1	+0.4	
	baz=98							
DHY	Denali Highway	152.24	304	P	PKPbc	02 13 27.5	+0.4	
	baz=107,SNR=7.8							
WAT6	Susitna Watana	152.25	303	P	PKPbc	02 13 27.5	+0.4	
	baz=108,SNR=14							
SML	Sawmill	152.27	301	P	PKPbc	02 13 27.2	+0.1	
	baz=109,SNR=8.1							
ILAR	Eielson Array	152.50	308	PKPbc	PKPbc	02 13 27.6	+0.2	
	comp=Z,15nm,0.8s,baz=144,slow=5.9,SNR=156							
ILAR	Eielson Array	152.50	308		PKPbc	02 13 27.7	+0.3	
F25K	Christian Rive	152.62	314	P	PKiKP	02 13 28.2	+0.3	
	baz=100							
G25K	Bearman Lake	152.64	312	P	PKiKP	02 13 28.5	+0.7	
	baz=101,SNR=12							
BRSE	Bradley Lake S	152.66	296	P	PKPbc	02 13 28.2	+0.3	
	baz=112							
E25K	Arctic Village	152.68	315	P	PKPbc	02 13 28.2	+0.5	
	baz=99							
WAT1	Susitna Watana	152.68	303	P	PKPbc	02 13 27.8	-0.1	
	baz=107							
C26K	Camden Bay	152.69	319	P	PKiKP	02 13 29.0	+1.2	
	baz=96							
M22K	Willow	153.06	301	P	PKPbc	02 13 28.9	+0.2	
	baz=108							
MCK	McKinley	153.10	305	P	PKPbc	02 13 29.0	+0.3	
	baz=105,SNR=16							
D25K	Kavik River	153.13	318	P	PKPbc	02 13 28.7	0.0	
	baz=96							
H24K	Noodor Dome	153.15	310	P	PKPbc	02 13 28.8	0.0	
	baz=102,SNR=6.4							
G24K	Hadweenzic Riv	153.16	312	P	PKPbc	02 13 29.3	+0.5	
	baz=100							
NEA2	Nenana	153.37	307	P	PKPbc	02 13 28.8	-0.5	
	baz=103,SNR=8.7							
F24K	Squaw Lake	153.45	314	P	PKiKP	02 13 30.1	+0.6	
	baz=98							
TRF	Thorofare Moun	153.61	304	P	PKPbc	02 13 30.2	+0.1	
	baz=105,SNR=5.4							
I23K	Minto, Yukon-K	153.62	308	P	PKPbc	02 13 29.4	-0.4	
	baz=102							
E24K	Your Creek	153.75	315	P	PKPbc	02 13 30.6	+0.4	
	baz=97							
SKT	Skwentna	153.76	301	P	PKPbc	02 13 30.4	+0.1	
	baz=107							
C24K	Franklin Bluff	153.98	318	P	PKPbc	02 13 30.8	+0.4	
	baz=93							
D24K	Happy Valley	153.98	317	P	PKPbc	02 13 30.6	+0.1	
	baz=94							
BPAW	Bear Paw Mtn.	154.07	305	P	PKPbc	02 13 30.7	-0.2	
	baz=103,SNR=13							
G23K	Bananza Creek	154.16	311	P	PKiKP	02 13 31.5	+0.4	
	baz=98							
PPLA	Purkeypile	154.31	302	P	PKPbc	02 13 31.3	-0.2	
	baz=105							
M20K	Styx River	154.46	300	P	PKPbc	02 13 29.4	-2.4	
	baz=106							
CHUM	Lake Minchumin	154.59	305	P	PKPbc	02 13 31.5	-0.4	
	baz=102							
C23K	Itkillik River	154.65	319	P	PKPbc	02 13 28.4	-3.5	
	baz=91							
F22K	John River	155.09	313	P	PKPdf	02 13 33.3	+9.3	
	baz=95							
H21K	Meloziina Rive	155.12	309	P	PKPdf	02 13 33.5	+9.4	
	baz=98							

*SKO **26** 02:07:44.5, 41°.47N × 19°.36E, h0km, ML2.5*
*BEO **26** 02:07:47.4 ± 1.2, 41°.34N × 19°.48E, h26km ± 5km, ML2.3/6*
*PDG **26** 02:07:47.5 ± 0.4, 41°.40N × 19°.47E, h18km ± 1km, MD2.6/1, ML2.6/13, Error ellipse: s-maj=2.0km s-min=2.6km az=0.0*

ISC 26 02:07:46.0 ± 1.2, 41°.37N ± 0°.04 × 19°.47E ± 0°.04, h11 km ± 9km, n37, σ 0°87/54, 6C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.30	93	*i*	Pg	Pg	02 07 51.5	-0.5
TIR				*i*	Sg	Sg	02 07 56.3	+0.3
ULC	Ulcinj	0.62	344	⇓*i*	Pg	Pg	02 07 57.8	-0.2
ULC				*i*	Sg	Sb	02 08 07.8	+0.1
DRME	Dracevica, Mon	0.85	346	*e*	Pg	Pn	02 08 04.5	+0.6
DRME	Dracevica, Mon	0.85	346	⇓*i*	Pg	Pb	02 08 02.4	-0.4
DRME				*i*	Sg	Sn	02 08 14.8	-1.6
BUM	Brajici-Budva	1.03	335	⇓*i*	Pg	Pb	02 08 05.7	-0.2
BUM				*i*	Sg	Sn	02 08 20.7	-0.2
OHR	Ohrid	1.03	104	*i*	Pg	Pb	02 08 05.1	-0.9
OHR				*i*	Sg	Sn	02 08 21.4	+0.4
OHR				*e*	Lg	Lg	02 08 22.3	
	comp=N,97nm,0.8s							
OHR				*e*	Lg	Lg	02 08 23.8	
	comp=E,71nm,0.4s							
PDG	Podgorica	1.08	352	*e*	Pg	Pn	02 08 07.1	+0.1
PDG				*e*	Sg	Sn	02 08 23.4	+1.4
PDG	Podgorica	1.08	352	⇓*i*	Pg	Pb	02 08 05.8	-0.8
PDG				*i*	Sg	Sn	02 08 23.3	+1.3
CEME	Cevo	1.25	341	⇑*i*	Pg	Pg	02 08 10.1	+0.1
CEME				*i*	Sg	Sn	02 08 27.4	+1.0
PVY	Plav	1.28	16	*e*	Pg	Pg	02 08 11.0	+0.4
PVY	Plav	1.28	16	⇑*i*	Pg	Pg	02 08 10.4	-0.2
PVY				*i*	Sg	Sg	02 08 29.4	+2.1
HCY	Herceg Novi	1.30	326	⇓*i*	Pg	Pb	02 08 10.2	-0.3
HCY				*i*	Sg	Sg	02 08 29.5	+1.6
NKME	Niksic	1.45	345	⇑*i*	Pg	Pb	02 08 12.4	-0.7
NKME				*i*	Sg	Sg	02 08 33.2	+0.5
KOME	Kolasin	1.48	1	*e*	Pg	Pg	02 08 14.6	+0.1
KOME	Kolasin	1.48	1	⇓*i*	Pg	Pb	02 08 13.5	-0.2
KOME				*i*	Sg	Sg	02 08 35.2	+1.4
BEY	Berane	1.54	12	*e*	Pg	Pg	02 08 15.4	-0.1
IVA	Berane	1.54	12	⇑*i*	Pg	Pn	02 08 13.6	+0.1
IVA				*i*	Sg	Sg	02 08 35.5	0.0
TREB	Trebinje	1.59	329	*e*	Pn	Pb	02 08 15.4	0.0
BRY	Bratogost	1.68	336	⇓*i*	Pn	Pb	02 08 16.7	-0.4
BRY				*i*	Sn	Sg	02 08 39.1	-1.0
UPM	Unac-Piva	1.88	347	⇑*i*	Pn	Pb	02 08 19.3	-1.2
UPM				*i*	Sn	Sn	02 08 41.5	-0.7
SJES	Sjenica	1.93	11	*e*	Pn	Pb	02 08 20.8	-0.5
IGT	Igoumenitsa	1.95	160	*i*	Pn	Pn	02 08 20.3	+1.2
IGT				*i*	Sg	Sg	02 08 48.2	-0.4
PLE	Pljevlja	1.96	358	⇑*i*	Pn	Pn	02 08 20.0	+0.6
PLE				*i*	Sn	Sb	02 08 44.9	-1.5
STON	Ston	2.00	319	*e*	Pn	Pn	02 08 19.5	-0.2
SELS	Selova	2.22	33	*e*	Pn	Pn	02 08 23.5	+0.7
IVAS	Ivanjica	2.27	13	*e*	Pn	Pn	02 08 23.5	0.0
BBLS	Lazi&#263i	2.50	359	*e*	Pn	Pn	02 08 28.2	+1.5
KNT	Kendrikon	2.59	93	*i*	Pn	Pn	02 08 28.5	+0.6
GRUS	Gruza	2.68	20	*e*	Pn	Pn	02 08 28.2	-1.0
DIVS	Divibare	2.76	8	*e*	Pn	Pn	02 08 29.6	-0.7
KKB	Krupnik	2.79	79	*i*	Pn	Pn	02 08 31.6	+1.0
ZAPS	Zavoj	3.02	50	*e*	Pn	Pn	02 08 34.7	+0.8
VTS	Vitosha	3.07	65	*e*	Pn	Pn	02 08 35.2	+0.5
TEKS	Tekeris	3.18	1	*e*	Pn	Pn	02 08 35.7	-0.3
ZAGS	Zajecar	3.19	39	*e*	Pn	Pn	02 08 35.7	-0.3
BLKB	Belogradchik	3.27	45	*e*	Pn	Pn	02 08 38.5	+1.2
KUBS	Kucevo	3.45	27	*e*	Pn	Pn	02 08 38.4	-1.3

*MOS **26** 02:08:53.7 ± 1.5, 54°.80N × 111°.70E, h10km, mb3.5/1, Error ellipse: s-maj=17.6km s-min=13.5km az=77.8*
*IDC **26** 02:08:53.6 ± 3.1, 54°.75N × 111°.99E, h0km, mb2.9/1, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=40.8km s-min=23.7km az=32.0*
*BYKL **26** 02:08:53.7 ± 0.1, 54°.87N × 111°.71E, h10km ± 2km*

ISC 26 02:08:53.1 ± 1.1, 54°.96N ± 0°.02 × 111°.80E ± 0°.02, h3 km ± 10km, n48, σ 2°.62/94, 2C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YLYR	Ulyunkhan	0.38	258	⇑*i*	Pg	Pg	02 08 59.3	-1.0
YLYR				*e*	Sg	Sg	02 09 04.2	-1.1
YLYR				Pmax				
	2μm,0.5s							
YLYR				Smax				
	7μm,0.6s							
YLYR	Ulyunkhan	0.38	258	⇑*i*	PG	Pg	02 08 59.3	-1.0
YLYR				*e*			02 09 04.2	
YLYR				pmax	pmax			
	comp=Z,2μm,0.3s							
YLYR				smax	smax			
	comp=N,6μm,0.4s							
KMO	Kumora	0.99	340	*e*	Pg	Pg	02 09 12.4	+0.3
KMO				*e*	Sg	Sn	02 09 26.5	-2.0
KMO				*e*			02 09 33.6	
KMO				Pmax				
	comp=N,142nm,0.5s							
KMO				max				
	comp=N,616nm,0.9s							
KMO	Kumora	0.99	340	*e*	PG	Pn	02 09 12.6	-1.3
KMO				*e*			02 09 26.7	
KMO				pmax	pmax			
	comp=Z,141nm,0.4s							
KMO				smax	smax			
	comp=E,624nm,0.8s							
UKT	Uakit	1.17	62	*e*	Pg	Pg	02 09 15.7	+0.2
UKT				*e*			02 09 21.5	
UKT				*e*	Sg	Sg	02 09 32.8	+2.1
UKT				*e*	Sb	Sn	02 09 34.1	+1.1
UKT				*e*			02 09 37.6	
UKT				max				
	comp=E,170nm,0.6s							
UKT				max				
	comp=E,1μm,0.7s							
UKT	Uakit	1.17	62	*e*	PG	Pg	02 09 15.8	+0.2
UKT				*e*			02 09 32.7	
UKT				pmax	pmax			
	comp=Z,13nm,0.1s							
UKT				smax	smax			
	comp=E,581nm,0.2s							
YOAB	Uoyan, Buryati	1.19	358	*e*	Pg	Pg	02 09 15.7	-0.1
YOAB				*e*			02 09 19.2	
YOAB				*e*	Sg	Sg	02 09 33.6	+2.5
YOAB				*e*	Sb	Sn	02 09 37.1	+3.8
YOAB				max				
	comp=E,115nm,0.5s							
YOAB				max				
	comp=E,734nm,0.9s							
NIZB	Nizh Angarsk	1.52	303	⇓*i*	Pg	Pb	02 09 21.5	-0.5
NIZB				*e*			02 09 23.3	
NIZB				*e*	Sg	Sb	02 09 42.0	+0.3
NIZB				*e*			02 09 45.6	
NIZB				max				
	comp=E,115nm,0.9s							
NIZB				max				
	comp=E,785nm,0.6s							
NIZB	Nizh Angarsk	1.52	303	*e*	PN	Pb	02 09 21.5	-0.5
NIZB				*e*			02 09 42.7	
NIZB				pmax	pmax			
	comp=Z,115nm,0.7s							
NIZB				smax	smax			
	comp=E,783nm,0.4s							
SVKR	Severomuysk	1.53	40	*e*	Pg	Pg	02 09 23.9	+1.5
SVKR				*e*	Sg	Sg	02 09 44.9	+2.7
SVKR				Pmax				
	comp=E,175nm,0.6s							
SVKR				Smax				
	comp=E,1μm,1.3s							
SYVR	Suvo	1.68	220	⇓*i*	Pg	Pn	02 09 22.2	-1.1
SYVR				*e*			02 09 24.9	
SYVR				*e*	Sg	Sn	02 09 43.5	-1.9
SYVR				*e*			02 09 46.5	
SYVR				max				
	comp=E,227nm,0.6s							
SYVR				max				
	comp=E,813nm,0.6s							
SYVR	Su

	comp=E,694nm,1.0s							
TRG	**Tyrgan**	**3.91**	**238**	*e*Pn		**Pn**	**02 09 53.2**	**-0.8**
TRG				*e*Pg		**Pb**	**02 10 01.8**	**-0.8**
TRG				*e*			02 10 05.9	
TRG				*e*Sn		**Sn**	**02 10 36.9**	**-3.5**
TRG				*e*Sg		**Sb**	**02 10 51.6**	**+1.3**
TRG				max				
	comp=E,11nm,0.4s							
TRG				Smax				
	comp=E,149nm,0.7s							
CRS	**Chara**	**4.12**	**59**	*e*Pn		**Pn**	**02 09 58.7**	**+1.7**
CRS				*e*Pg		**Pg**	**02 10 09.7**	**-2.3**
CRS				*e*Sg		**Sg**	**02 11 03.7**	**-1.7**
CRS				Pmax				
	comp=E,56nm,1.2s							
CRS				Smax				
	comp=E,120nm,0.6s							
FFNB	**Fofonovo**	**4.19**	**228**	*e*Pn		**Pn**	**02 09 57.1**	**-0.8**
FFNB				*e*Pg		**Pb**	**02 10 07.4**	**0.0**
FFNB				*e*Sg		**Sb**	**02 10 59.9**	**+1.5**
KAB	**Kabansk**	**4.24**	**229**	*e*Sg		**Sb**	**02 11 02.8**	**+3.1**
KAB				Smax				
	comp=E,471nm,1.3s							
STDB	**Stepnoy Dvoret**	**4.28**	**231**	*e*Sg		**Sb**	**02 11 03.9**	**+3.0**
HRMR	**Khuramsha**	**4.43**	**223**	*e*Pn		**Pn**	**02 10 00.5**	**-0.6**
HRMR				*e*Pg		**Pb**	**02 10 12.4**	**+1.0**
HRMR				*e*Sg		**Sb**	**02 11 08.3**	**+3.1**
HRMR				Pmax				
	comp=E,75nm,0.7s							
HRMR				Smax				
	comp=E,288nm,0.6s							
VTMR	**Vitim**	**4.51**	**5**	*e*Sg		**Sg**	**02 11 16.1**	**-1.7**
TUP	**Tupik**	**4.76**	**93**	*e*Pn		**Pn**	**02 10 06.5**	**+0.8**
TUP				*e*			02 10 09.6	
TUP				*e*Pg		**Pb**	**02 10 19.6**	**+2.5**
TUP				*e*Sn		**Sn**	**02 11 00.1**	**-1.2**
TUP				*e*Sg		**Sg**	**02 11 21.8**	**-4.0**
TUP				Pmax				
	comp=E,13nm,0.8s							
TUP				Smax				
	comp=E,158nm,0.7s							
TUP	**Tupik**	**4.76**	**93**	*e*PN		**Pn**	**02 10 06.5**	**+0.8**
TUP				*e*			02 10 18.9	
TUP				*e*S		**Sn**	**02 11 00.2**	**-1.1**
TUP				*e*			02 11 23.0	
TUP				pmax	pmax			
	comp=Z,25nm,0.4s							
TUP				smax	smax			
	comp=N,152nm,0.7s							
BGT	**Bolshoye Golou**	**4.80**	**235**	*e*Pg		**Pb**	**02 10 18.0**	**+0.1**
BGT				*e*Sg		**Sb**	**02 11 20.0**	**+3.9**
BGT				Pmax				
	comp=N,5.0nm,0.1s							
BGT				Smax				
	comp=N,85nm,0.8s							
LSTR	**Listvyanka**	**5.19**	**236**	*e*Pg		**Pb**	**02 10 26.0**	**+1.5**
LSTR				*e*Sg		**Sb**	**02 11 31.5**	**+4.3**
LSTR				Smax				
	comp=N,58nm,0.8s							
IRK	**Irkutsk**	**5.25**	**242**	*e*Sg		**Sb**	**02 11 32.7**	**+4.0**
IRK				Smax				
	comp=N,289nm,0.9s							
KPC	**Khapcheranga**	**5.28**	**176**	*e*Pn		**Pn**	**02 10 12.1**	**-0.7**
KPC				*e*Pg		**Pb**	**02 10 27.4**	**+1.5**
KPC				*e*Sg		**Sb**	**02 11 34.1**	**+4.5**
KPC				Pmax				
	comp=N,3.0nm,0.3s							
KPC				Smax				
	comp=N,157nm,0.9s							
IVK	**Ivanovka**	**5.44**	**237**	*e*Pg		**Pb**	**02 10 29.6**	**+1.0**
IVK				*e*Sg		**Sb**	**02 11 39.3**	**+5.1**
IVK				Pmax				
	comp=N,2.0nm,0.2s							
IVK				Smax				
	comp=N,169nm,1.4s							
YKLR	**Yuktali**	**5.80**	**70**	*e*Sg		**Sg**	**02 11 55.9**	**-3.1**
TLY	**Talaya**	**5.89**	**239**	*e*Pg		**Pb**	**02 10 38.4**	**+2.1**
TLY				*e*Sg		**Sb**	**02 11 52.7**	**+5.5**
TLY				Pmax				
	comp=N,1.0nm,0.1s							
TLY				Smax				
	comp=N,61nm,1.1s							
ARS	**Arshan**	**6.38**	**245**	*e*Pg		**Pb**	**02 10 46.4**	**+1.7**
ARS				*e*Sg		**Sb**	**02 12 08.8**	**+7.5**
ARS				Pmax				
	comp=N,9.0nm,0.6s							
ARS				Smax				
	comp=N,266nm,0.9s							
ZAK	**Zakamensk**	**6.92**	**232**	*e*Pg		**Pb**	**02 10 56.9**	**+3.0**
ZAK				*e*Sg		**Sb**	**02 12 24.5**	**+7.7**
ZAK				Pmax				
	comp=N,2.0nm,0.2s							
ZAK				Smax				
	comp=N,29nm,1.4s							
MOY	**Mondy**	**7.27**	**247**	*e*Sg		**Sb**	**02 12 35.3**	**+8.4**
MOY				Smax				
	comp=N,88nm,1.3s							
HILR	**Hailar Array B**	**7.28**	**135**	Pn		**Pn**	**02 10 39.1**	**-1.2**
	baz=322,slow=14							
HILR				Lg		Lg	02 12 36.0	
	baz=328,slow=28							
	comp=N,0.8nm,0.3s							
ORL	**Orlik**	**7.51**	**256**	*e*Pn		**Pn**	**02 10 44.2**	**+0.6**
ORL				*e*Sn		**Sn**	**02 12 04.2**	**-5.1**
ORL				*e*Sg		Sb	02 12 43.0	+9.0
ORL				max				
	comp=N,2.0nm,0.5s							
ORL				Smax				
	comp=N,89nm,1.2s							
CLNS	**Chul'man**	**7.60**	**70**	*e*Sg		Sb	02 12 51.0	+15
SONM	**Songino Array**	**7.89**	**208**	Pn		**Pn**	**02 10 48.4**	**-0.4**
	comp=N,1.0nm,0.3s,baz=23,slow=13,SNR=20							
SONM				Lg		Lg	02 13 00.2	
	comp=N,1.9nm,0.3s,baz=25,slow=25,SNR=13							
	comp=N,1.4nm,0.3s							
ZALV	**Zalesovo Beam**	**15.69**	**277**	Pn		**Pn**	**02 12 35.5**	**+0.7**
	comp=N,0.1nm,0.3s,baz=79,slow=9.2,SNR=4.4							
	comp=N,1.4nm,0.8s							
KURK	**Kurchatov**	**20.37**	**272**	P		Pn	02 13 34.1	+1.5
KURBB	**Kurchatov Arra**	**20.46**	**272**	P		Pn	02 13 34.1	+0.5
	comp=N,0.2nm,0.4s,baz=63,slow=12,SNR=4.3							
	comp=N,0.2nm,0.4s							

*IDC **26** 02:19:15.1±2.6,41°.33N×19°.33E,h0km,mb3.8/3, mbtmp3.8/5,ML3.5/1,Error ellipse: s-maj=47.0km s-min=25.7km az=116.0*
*NEIC **26** 02:19:17.0±2.1,41°.24N±0°.04×19°.47E±0°.07,h10km±1km, mb4.3/7,Error ellipse: s-maj=8.9km s-min=6.3km az=257.0*
*SKO **26** 02:19:17.7,41°.40N×19°.37E,h2km,ML3.1*
*THE **26** 02:19:18.3,42°N±25°×1°.9E±2°.6,h8km±33km,M2.9/8, MLh2.9/8*
*PDG **26** 02:19:19.3±0.4,41°.34N×19°.53E,h21km±1km,MD3.2/2, ML3.1/12,Error ellipse: s-maj=1.9km s-min=2.9km az=0.0*
*TIR **26** 02:19:20.2,41°.48N×19°.57E,h32km±2km,Ml3.1/4*
*BEO **26** 02:19:20.6±0.5,41°.37N×19°.46E,h22km±3km,ML2.9/9*

ISC 26 02:19:18.5±0.9,41°.38N±0°.02×19°.46E±0°.02,h16km±6km, n129,σ1§52/179,mb4.1/3,13C-8D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**96**	⇓*i*Pg		**Pg**	**02 19 24.5**	**-0.5**
TIR				Sg		**Sg**	**02 19 29.1**	**-0.2**
TIR				AML		AML	02 19 29.4	
	9.3nm,0.3s							
TIR	**Tirane**	**0.30**	**96**	*i* Pg		**Pg**	**02 19 24.5**	**-0.5**
TIR				*i* Sg		**Sg**	**02 19 29.1**	**-0.2**
ULC	**Ulcinj**	**0.60**	**344**	⇓*i*Pg		**Pb**	**02 19 30.4**	**-0.3**
ULC				*i* Sg		**Sn**	**02 19 41.4**	**-0.5**
SDA	**Shkodra**	**0.67**	**2**	Pg		**Pb**	**02 19 31.5**	**-0.3**
SDA				Sg		**Sb**	**02 19 40.9**	**+0.1**
PHP	**Peshkopia**	**0.79**	**67**	Pg		**Pg**	**02 19 32.6**	**-1.4**
PHP				Sg		**Sg**	**02 19 44.1**	**-0.3**
PHP				AML		AML	02 19 46.8	
	3.9nm,0.2s							
PHP	**Peshkopia**	**0.79**	**67**	P		**Pg**	**02 19 32.3**	**-1.7**
PHP				S		**Sg**	**02 19 44.4**	**0.0**
DRME	**Dracevica, Mon**	**0.83**	**346**	*e*Pg		**Pn**	**02 19 35.6**	**+0.1**
DRME	**Dracevica, Mon**	**0.83**	**346**	⇑*i*Pg		**Pn**	**02 19 35.2**	**-0.3**
DRME				*i* Sg		**Sn**	**02 19 48.5**	**+1.1**
VLO	**Vlora**	**0.91**	**178**	Pg		**Pn**	**02 19 39.0**	**+2.4**
VLO				Sg		**Sn**	**02 19 52.5**	**+3.2**
VLO				AML		AML	02 20 01.3	
	4.3nm,0.3s							
VLO	**Vlora**	**0.91**	**178**	P		**Pn**	**02 19 38.6**	**+2.1**
BUM	**Brajici-Budva**	**1.01**	**335**	⇑*i*Pg		**Pn**	**02 19 38.6**	**+0.5**
BUM				*i* Sg		**Sn**	**02 19 54.4**	**+2.4**
OHR	**Ohrid**	**1.04**	**105**	*i* Pg		**Pb**	**02 19 38.0**	**-0.1**
OHR				*i* Sg		**Sn**	**02 19 54.4**	**+1.8**
OHR				*e*Lg		Lg	02 19 55.5	
	comp=N,385nm,0.5s							
OHR				*e*Lg		Lg	02 19 57.9	
	comp=E,407nm,0.7s							
PDG	**Podgorica**	**1.06**	**352**	⇓Pn		**Pg**	**02 19 39.9**	**+0.9**
PDG	**Podgorica**	**1.06**	**352**	Pn		**Pg**	**02 19 39.3**	**+0.3**
PDG				Sn		**Sn**	**02 19 54.5**	**+1.5**
PDG	**Podgorica**	**1.06**	**352**	*e*Pg		**Pg**	**02 19 39.7**	**+0.7**
PDG				*e*Sg		**Sn**	**02 19 55.8**	**+2.8**
PDG	**Podgorica**	**1.06**	**352**	⇑*i*Pg		**Pg**	**02 19 39.2**	**+0.2**
PDG				*i* Sg		**Sn**	**02 19 55.7**	**+2.7**
CEME	**Cevo**	**1.23**	**341**	⇓*i*Pg		**Pg**	**02 19 43.0**	**+0.7**
CEME				*i* Sg		**Sg**	**02 20 00.1**	**+1.7**
KBN	**Korca**	**1.25**	**127**	Pn		**Pg**	**02 19 43.3**	**+0.7**
KBN				Sn		**Sg**	**02 20 00.7**	**+1.6**
KBN	**Korca**	**1.25**	**127**	P		**Pg**	**02 19 42.8**	**+0.1**
KBN				S		**Sg**	**02 20 02.1**	**+3.0**
PVY	**Plav**	**1.27**	**17**	⇑*i*Pg		**Pg**	**02 19 41.1**	**-0.5**
PVY				*i* Sg		**Sg**	**02 20 01.3**	**+1.8**
HCY	**Herceg Novi**	**1.29**	**326**	⇓*i*Pg		**Pg**	**02 19 43.9**	**+0.6**
HCY				*i* Sg		**Sg**	**02 20 02.8**	**+2.7**
NKME	**Niksic**	**1.44**	**345**	⇓*i*Pg		**Pg**	**02 19 46.0**	**-0.1**
NKME				*i* Sg		**Sg**	**02 20 06.1**	**+1.3**
KOME	**Kolasin**	**1.47**	**1**	*e*Pg		**Pg**	**02 19 47.2**	**+0.4**
KOME	**Kolasin**	**1.47**	**1**	⇑*i*Pg		**Pg**	**02 19 47.1**	**+0.3**
KOME				*i* Sg		**Sg**	**02 20 07.2**	**+1.3**
IVA	**Berane**	**1.52**	**12**	⇑*i*Pg		**Pb**	**02 19 46.4**	**0.0**
IVA				*i* Sg		**Sg**	**02 20 07.8**	**+0.2**
NEST	**Nestorio**	**1.54**	**128**	Pn		**Pg**	**02 19 48.1**	**0.0**
NEST				Sn		**Sg**	**02 20 09.4**	**+1.2**
NEST				AML		AML	02 20 16.5	
	comp=E,0.8nm,0.4s							
NEST	**Nestorio**	**1.54**	**128**	P		**Pg**	**02 19 47.9**	**-0.2**
SKO	**Skopje**	**1.59**	**68**	*i* Pg		**Pb**	**02 19 47.9**	**+0.4**
SKO				*i* Sg		**Sg**	**02 20 09.4**	**-0.5**
BRY	**Bratogost**	**1.67**	**336**	⇑*i*Pn		**Pn**	**02 19 48.4**	**-0.5**
BRY				*i* Sn		**Sg**	**02 20 12.6**	**+0.3**
KEK	**Kerkira**	**1.69**	**171**	Pn		**Pn**	**02 19 43.6**	**-3.6**
PENT	**Pentalofos**	**1.74**	**132**	P		**Pb**	**02 19 50.7**	**+0.7**
UPM	**Unac-Piva**	**1.87**	**347**	⇓*i*Pn		**Pn**	**02 19 50.8**	**+0.9**
UPM				*i* Sn		**Sg**	**02 20 18.2**	**-0.4**
NOCI	**Noci**	**1.91**	**253**	Pn		**Pg**	**02 19 55.3**	**+0.2**
SJES	**Sjenica**	**1.92**	**11**	*e*Pn		**Pb**	**02 19 53.9**	**+0.8**
PLE	**Pljevlja**	**1.95**	**358**	⇓*i*Pn		**Pb**	**02 19 52.9**	**-0.7**
PLE				*i* Sn		**Sg**	**02 20 19.4**	**-1.8**
IGT	**Igoumenitsa**	**1.96**	**160**	Pn		Pn	02 19 44.4	-6.6
IGT				Sn		**Sg**	**02 20 21.8**	**+0.3**
IGT	**Igoumenitsa**	**1.96**	**160**	*i* Pn		**Pb**	**02 19 53.5**	**-0.3**
IGT				*i* Sn		**Sg**	**02 20 22.2**	**+0.7**
STON	**Ston**	**1.98**	**319**	*e*Pn		**Pb**	**02 19 53.8**	**-0.4**
STON				*e*Sn		**Sb**	**02 20 17.5**	**-1.1**
KZN	**Kozani**	**2.05**	**121**	P		**Pb**	**02 19 54.6**	**-0.7**
SELS	**Selova**	**2.21**	**33**	*e*Pn		**Pb**	**02 19 56.7**	**-1.3**
SELS				*e*Sn		**Sb**	**02 20 24.7**	**-0.5**
PRMD	**Pramanda**	**2.23**	**145**	P		**Pb**	**02 19 57.9**	**-0.4**
IVAS	**Ivanjica**	**2.25**	**13**	*e*Pn		**Pn**	**02 19 56.8**	**+1.7**
VAY	**Valandovo**	**2.34**	**90**	*i* Pn		**Pn**	**02 19 57.9**	**+1.7**
VAY				*i* Sn		**Sn**	**02 20 26.6**	**+2.1**
VAY				*e*Lg		Lg	02 20 30.9	
	comp=N,40nm,0.6s							
VAY				*e*Lg		Lg	02 20 34.7	
	comp=E,33nm,0.6s							
GOCS	**Kraljevo Serbi**	**2.42**	**25**	*e*Pn		**Pn**	**02 19 59.0**	**+1.6**
GOCS				*e*Sn		**Sn**	**02 20 29.0**	**+2.3**
BBLS	**Lazi&#263i**	**2.48**	**359**	*e*Pn		**Pb**	**02 20 01.4**	**-1.3**
BBLS				*e*Sn		**Sb**	**02 20 31.5**	**-1.6**
KNT	**Kendrikon**	**2.60**	**94**	*i* Pn		**Pn**	**02 20 01.3**	**+1.6**
KNT				*i* Sn		**Sn**	**02 20 32.2**	**+1.2**
LIT	**Litokhoron**	**2.63**	**118**	Pn		**Pn**	**02 19 58.6**	**-1.6**
GRUS	**Gruza**	**2.67**	**20**	*e*Pn		**Pn**	**02 20 02.6**	**+1.8**
ACER	**Acerenza**	**2.73**	**259**	Pn		**Pn**	**02 20 00.3**	**-1.3**
DIVS	**Divibare**	**2.74**	**8**	*e*Pn		**Pn**	**02 20 03.2**	**+1.3**
LKD2	**Lefkada island**	**2.75**	**160**	P		**Pn**	**02 20 02.4**	**+0.5**
THE	**Thessaloniki**	**2.75**	**105**	P		**Pn**	**02 20 02.7**	**+0.8**
THE	**Thessaloniki**	**2.75**	**105**	*i* Pn		**Pn**	**02 20 02.9**	**+1.0**
THE				*i* Sn		**Sn**	**02 20 35.7**	**+0.9**
KKB	**Krupnik**	**2.79**	**79**	P		**Pn**	**02 20 03.6**	**+1.2**
KKB	**Krupnik**	**2.79**	**79**	*i* Pn		**Pn**	**02 20 03.9**	**+1.5**
KKB				*i* Sn		**Sn**	**02 20 37.2**	**+1.5**
BOVS	**Bovan**	**2.80**	**36**	⇑P		**Pn**	**02 20 04.2**	**+1.7**
BOVS	**Bovan**	**2.80**	**36**	*e*Pn		**Pn**	**02 20 04.3**	**+1.8**
BOVS				*e*Sn		**Sn**	**02 20 38.2**	**+2.3**
SGRT	**San Giovanni R**	**2.82**	**279**	Pn		**Pn**	**02 20 03.1**	**+0.2**
NYDR	**Nydri-Lefkada**	**2.83**	**160**	P		**Pn**	**02 20 03.7**	**+0.8**
HORT	**Hortiatis**	**2.86**	**105**	P		**Pn**	**02 20 04.0**	**+0.5**
SOH	**Sokhos**	**2.99**	**99**	P		**Pn**	**02 20 06.4**	**+1.1**
ZAPS	**Zavoj**	**3.02**	**50**	*e*Pn		**Pn**	**02 20 07.6**	**+2.0**
ZAPS				*e*Sn		**Sn**	**02 20 43.4**	**+2.0**
TIP	**Timpagrande**	**3.02**	**224**	Pn		**Pn**	**02 20 03.8**	**-1.9**
TIP	**Timpagrande**	**3.02**	**224**	⇑P		Pn	02 19 57.5	-8.2
VTS	**Vitosha**	**3.07**	**65**	*e*Pn		**Pn**	**02 20 07.9**	**+1.5**
VTS				*e*Sn		**Sn**	**02 20 44.5**	**+1.6**
CUC	**Castrocucco**	**3.10**	**245**	Pn		**Pn**	**02 20 05.6**	**-1.1**
MAKR	**Makrakomi, Fth**	**3.12**	**138**	P		**Pn**	**02 20 09.6**	**+2.6**
TEKS	**Tekeris**	**3.17**	**1**	*e*Pn		**Pn**	**02 20 08.6**	**+1.0**
ZAGS	**Zajecar**	**3.18**	**39**	*e*Pn		**Pn**	**02 20 09.4**	**+1.7**
ZAGS				*e*Sn		**Sn**	**02 20 46.2**	**+1.0**
PVO	**Paravola**	**3.18**	**149**	P		**Pn**	**02 20 09.7**	**+1.9**
AGG	**Agios Georgios**	**3.22**	**136**	P		**Pn**	**02 20 10.0**	**+1.7**
BORS2	**Bor- Borsko je**	**3.30**	**34**	*e*Pn		**Pn**	**02 20 09.5**	**+0.1**
BORS2				*e*Sn		**Sn**	**02 20 47.7**	**-0.5**
KUBS	**Kucevo**	**3.44**	**27**	*e*Pn		**Pn**	**02 20 11.4**	**+0.1**
KUBS				*e*Sn		**Sn**	**02 20 50.9**	**-0.8**
OUR	**Ouranopolis**	**3.58**	**105**	P		**Pn**	**02 20 14.3**	**+1.0**
FRGS	**Fruska Gora**	**3.78**	**4**	*e*Pn		**Pn**	**02 20 17.1**	**+1.0**
VRSS	**Vrsac**	**3.98**	**19**	*e*Pn		**Pn**	**02 20 20.6**	**+1.8**
PLD	**Plovdiv**	**4.03**	**77**	*e*Pn		**Pn**	**02 20 21.4**	**+2.0**
HERR	**Herculane**	**4.11**	**31**	⇑P		**Pn**	**02 20 19.4**	**-1.1**
RDO	**Rodhopi**	**4.58**	**91**	Pn		**Pn**	**02 20 27.3**	**+0.3**
GZR	**Gura Zlata**	**4.68**	**30**	⇑P		**Pn**	**02 20 26.8**	**-1.6**
MORH	**Mrgy, Hungar**	**4.87**	**353**	*e*Pn		**Pn**	**02 20 32.3**	**+1.4**
NRCA	**Norcia**	**4.94**	**289**			**Pn**	**02 20 32.4**	**+0.4**
FDMO	**Fiordimonte**	**5.02**	**291**			**Pn**	**02 20 32.8**	**-0.3**
LOT	**Lotru**	**5.13**	**36**	⇑P		**Pn**	**02 20 34.9**	**+0.2**
BOJS	**Bojanci**	**5.14**	**325**	*e*Pn		**Pn**	**02 20 36.0**	**+1.4**
BOJS				*e*Sn		**Sn**	**02 21 32.0**	**-1.5**
SIRR	**Siria**	**5.14**	**17**	*e*Pn		**Pn**	**02 20 36.3**	**+1.6**
SIRR				*e*Sn		**Sn**	**02 21 32.2**	**-1.4**
CESX	**Cesi**	**5.28**	**286**	Pn		**Pn**	**02 20 35.7**	**-0.9**
MURB	**Monte Urbino**	**5.48**	**292**			**Pn**	**02 20 39.9**	**+0.5**
CEY	**Cerknica**	**5.69**	**322**	*e*Pn		**Pn**	**02 20 44.6**	**+2.3**
CEY				*e*Sn		**Sn**	**02 21 47.2**	**0.0**
RAFF	**Raffo Rosso**	**5.74**	**225**	Pn		**Pn**	**02 20 39.4**	**-3.5**
SKDS	**Skadanscina**	**5.75**	**318**	*e*Pn		**Pn**	**02 20 45.3**	**+2.2**
SKDS				*e*Sn		**Sn**	**02 21 46.6**	**-2.1**
SOKA	**Soboth**	**6.18**	**330**	*i* Pn		**Pn**	**02 20 51.8**	**+2.7**
	comp=E,0.5nm,0.2s							
OBKA	**Obir**	**6.23**	**327**	*i* Pn		**Pn**	**02 20 52.3**	**+2.5**
OBKA	comp=E,0.4nm,0.2s							
	comp=E,4.0nm,0.4s			*i* Sn		**Sn**	**02 22 02.0**	**+1.3**
MLR	**Muntele Rosu**	**6.25**	**47**	Pn		**Pn**	**02 20 53.2**	**+3.1**
	comp=E,0.5nm,0.3s,baz=148,slow=7.3,SNR=12							
MLR				Sn		**Sn**	**02 22 02.9**	**+1.6**
	comp=E,0.2nm,0.3s,baz=167,slow=17,SNR=1.5							
	comp=E,1.6nm,0.4s							
MLR	**Muntele Rosu**	**6.25**	**47**			**Pn**	**02 20 51.9**	**+1.8**
SABO	**M.te Sabotino**	**6.26**	**319**	Pn		**Pn**	**02 20 50.5**	**+0.4**
OSSC	**Osservatorio P**	**6.45**	**292**	Pn		**Pn**	**02 20 53.0**	**+0.3**
PSZ	**Piszkesteto**	**6.54**	**3**	Pn		**Pn**	**02 20 54.0**	**0.0**
PLOR	**Plostina**	**6.87**	**47**	⇑P		**Pn**	**02 21 00.9**	**+2.5**
TEOL	**Teolo**	**6.93**	**308**	Pn		**Pn**	**02 20 58.9**	**-0.4**
CTI	**Castel Tesino**	**7.33**	**312**	Pn		**Pn**	**02 21 05.2**	**+0.3**
ABTA	**Abfaltersbach**	**7.34**	**319**	*i* Pn		**Pn**	**02 21 07.0**	**+2.1**
	comp=E,0.8nm,0.3s							
ABTA				*i* Sn		**Sn**	**02 22 27.2**	**-0.6**
	comp=E,2.2nm,0.4s							
IDI	**Anoyia**	**7.43**	**143**	Pn		**Pn**	**02 21 04.7**	**-1.5**
	comp=E,6.1nm,0.9s,baz=229,slow=19,SNR=1.6							
IDI				Sn		**Sn**	**02 22 26.5**	**-3.6**
	comp=E,0.3nm,0.3s,baz=252,slow=20,SNR=2.1							
IDI	**Anoyia**	**7.43**	**143**			**Pn**	**02 21 04.8**	**-1.3**
BURAR	**Bucovina Array**	**7.46**	**31**	Pn		**Pn**	**02 21 07.6**	**+0.9**
BUR08	**Bucovina Ar. S**	**7.48**	**31**	Pn		**Pn**	**02 21 09.1**	**+2.2**
PRMA	**PARMA**	**7.50**	**300**	Pn		**Pn**	**02 21 07.9**	**+0.8**
BIOA	**Bad Ischl, Aus**	**7.56**	**329**	*e*Pn		**Pn**	**02 21 10.6**	**+2.7**
	comp=E,1.0nm,0.3s							
BIOA				*i* Sn		**Sn**	**02 22 33.3**	**+0.2**
	comp=E,1.3nm,0.4s							
LESA	**Schwarzleotal**	**7.75**	**323**	*i* Sn		**Sn**	**02 22 36.3**	**-1.7**
	comp=E,1.1nm,0.3s							
WTTA	**Wattenberg**	**8.13**	**319**	*i* Pn		**Pn**	**02 21 18.8**	**+3.0**
	comp=E,2.0nm,0.3s							
WTTA				*i* Sn		**Sn**	**02 22 48.3**	**+0.9**
	comp=E,3.1nm,0.4s							
SQTA	**Sankt Quirin**	**8.31**	**317**	*i* Pn		**Pn**	**02 21 20.1**	**+1.7**
	comp=E,1.0nm,0.4s							
MOTA	**Moosalm**	**8.45**	**318**	*i* Pn		**Pn**	**02 21 22.9**	**+2.7**
	comp=E,1.0nm,0.4s							
MOTA				*e*Sn		**Sn**	**02 22 55.8**	**+0.5**
	comp=E,3.4nm,0.6s							
DAVOX	**Davos/Dischmat**	**8.76**	**311**	Pn		**Pn**	**02 21 26.9**	**+2.4**
	comp=E,0.1nm,0.3s,baz=315,slow=14,SNR=2.4							
DAVOX				Sn		**Sn**	**02 22 57.9**	**-5.0**
	comp=E,0.2nm,0.3s,baz=156,slow=20,SNR=1.8							
TUE	**Stuetta**	**8.90**	**308**	Pn		**Pn**	**02 21 27.6**	**+1.2**
KEST	**Kesra**	**9.72**	**238**	Pn		**Pn**	**02 21 35.3**	**-2.4**
SENIN	**Lac Senin/Sane**	**10.09**	**304**	Pn		**Pn**	**02 21 40.8**	**-2.0**
KONO	**Kongsberg**	**19.30**	**345**	P		**Pn**	**02 23 44.1**	**+0.7**
KONO				IAmb		IAmb	02 23 53.9	
	comp=Z,32nm,1.3s							
NB201	**NORSAR Array S**	**20.32**	**349**	P		**P**	**02 23 52.3**	**-1.2**
NB201				IAmb		IAmb	02 23 54.5	
	comp=Z,12nm,1.2s							
EKB	**Eskdalemuir**	**20.40**	**321**	P		Pn	02 23 55.7	-0.9
NC303	**NORSAR Array S**	**20.48**	**349**	P		Pn	02 23 56.3	-1.1
NC303				IAmb		IAmb	02 24 02.5	
	comp=Z,16nm,1.3s							
FINES	**FINESS Array B**	**20.49**	**9**	P		**P**	**02 23 54.1**	**-1.2**
	comp=Z,2.3nm,0.9s,baz=188,slow=10,SNR=4.7							
	comp=Z,2.3nm,0.9s							
FINES	**FINESS Array B**	**20.49**	**9**	P		**P**	**02 23 54.2**	**-1.1**
FIA1	**FINESS Array S**	**20.49**	**9**	P		**P**	**02 23 54.6**	**-0.7**
FIA1				IAmb		IAmb	02 24 26.1	
	comp=Z,17nm,1.1s							
NC204	**NORSAR Array S**	**20.61**	**348**	P		**P**	**02 23 55.6**	**-1.1**
PVAQ	**Vaqueiros**	**21.34**	**268**	P		**P**	**02 24 05.0**	**+0.2**
PVAQ				IAmb		IAmb	02 24 28.1	
	comp=Z,27nm,1.5s							
ZALV	**Zalesovo Beam**	**44.22**	**50**	P		**P**	**02 27 26.4**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=289,slow=9.0,SNR=5.3							
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**44.22**	**50**	P		**P**	**02 27 25.9**	**-0.6**
MKAR	**Makanchi Array**	**44.39**	**61**	P		**P**	**02 27 27.5**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=284,slow=8.1,SNR=9.9							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**44.39**	**61**	P		**P**	**02 27 27.8**	**-0.2**

*NEIC **26** 02:47:06.8±1.9,47°.972N±0°.010×122°.46W±0°.01, h10km±1km,Error ellipse: s-maj=2.6km s-min=1.6km az=146.0*
*SEA **26** 02:47:07.7±2.2,47°.963N±0°.010×122°.44W±0°.01, h13km±2km,ML2.6/22,ML2.6/44(NEIC),Error ellipse: s-maj=1.6km s-min=1.3km az=141.0*
*PGC **26** 02:47:07.7,47°.96N×122°.44W,h13km,ML2.2/18, ML2.6(SEA),38km northeast of Seattle, Washington, Usa Washington*

**ISC 26 02:47:07.3±0.8

CPW	**Capitol Peak**	**1.08**	**204**	P	**Pb**	**02 47 26.5**	**-1.1**
WRW	**Wenatchee Ridg**	**1.08**	**95**		**Pb**	**02 47 26.7**	**-1.0**
NLWA	**Neilton Lookou**	**1.09**	**239**		**Pb**	**02 47 27.7**	**-0.1**
NLWA				IAML		02 47 47.8	
	comp=N,104nm,0.4s						
NLWA				IAML		02 47 48.3	
	comp=N,100nm,0.4s						
P403	**Sandy Floe Qua**	**1.12**	**276**		**Pg**	**02 47 30.2**	**+1.3**
OBSR	**Observation Ro**	**1.15**	**157**		**Pb**	**02 47 27.4**	**-1.5**
FMW	**Mount Fremont**	**1.16**	**151**		**Pb**	**02 47 27.6**	**-1.5**
B017	**Montesano**	**1.21**	**218**		**Pn**	**02 47 29.2**	**-0.3**
REMR	**Mount Rainier-**	**1.22**	**159**		**Pn**	**02 47 28.3**	**-1.5**
RCM	**Mount Rainier-**	**1.23**	**155**		**Pn**	**02 47 28.8**	**-1.4**
PANH	**Panhandle Gap,**	**1.24**	**152**		**Pn**	**02 47 28.7**	**-1.5**
LON	**Longmire**	**1.29**	**159**		**Pn**	**02 47 29.4**	**-1.4**
LON	**Longmire**	**1.29**	**159**		**Pn**	**02 47 29.2**	**-1.5**
LON				IAML		02 47 46.6	
	comp=E,44nm,0.2s						
LON				IAML		02 47 46.6	
	comp=N,37nm,0.1s						
LON	**Longmire**	**1.29**	**159**	P	**Pn**	**02 47 29.2**	**-1.5**
LON				S	**Sb**	**02 47 46.2**	**-1.4**
CLRS	**Cowichan Lake**	**1.40**	**309**		**Pn**	**02 47 31.3**	**-0.8**
CLRS	**Cowichan Lake**	**1.40**	**309**	P	**Pn**	**02 47 31.1**	**-1.0**
B926	**Mesachie Lake**	**1.40**	**309**		**Pn**	**02 47 31.2**	**-0.9**
B926	**Mesachie Lake**	**1.40**	**309**	P	**Pn**	**02 47 31.2**	**-0.9**
B926				S	**Sn**	**02 47 50.5**	**+0.3**
E04D	**Cinebar**	**1.40**	**182**		**Pn**	**02 47 31.9**	**-0.3**
LTY	**Liberty**	**1.41**	**119**		**Pn**	**02 47 31.5**	**-0.9**
LTY				IAML		02 47 51.2	
	comp=N,67nm,0.4s						
LTY	**Liberty**	**1.41**	**119**	P	**Pn**	**02 47 32.2**	**-0.2**
LTY				S	**Sn**	**02 47 50.2**	**-0.6**
PTRF	**Port Renfrew**	**1.42**	**295**		**Pn**	**02 47 31.2**	**-1.2**
PTRF	**Port Renfrew**	**1.42**	**295**	P	**Pn**	**02 47 31.2**	**-1.2**
PTRF				S	**Sn**	**02 47 50.0**	**-0.8**
NLW	**Nelson Butte**	**1.45**	**84**		**Pn**	**02 47 33.2**	**+0.2**
TBM	**Table Mountain**	**1.50**	**121**		**Pn**	**02 47 34.2**	**+0.5**
E03A	**Lebam**	**1.59**	**208**	Pn	**Pn**	**02 47 35.0**	**+0.3**
E03A				Sn	**Sn**	**02 47 56.9**	**+1.9**
HOPB	**Hope**	**1.59**	**26**	Pn	**Pb**	**02 47 36.2**	**-0.2**
HOPB				Sn	**Sb**	**02 47 56.9**	**+0.6**
NLLB	**Nanaimo Lost L**	**1.62**	**322**	Pn	**Pn**	**02 47 35.7**	**+0.5**
NLLB				Sn	**Sn**	**02 47 57.2**	**+1.5**
TDL	**Tradedollar La**	**1.62**	**173**		**Pn**	**02 47 35.1**	**-0.2**
ERK	**Elk Rock**	**1.66**	**177**		**Pn**	**02 47 35.6**	**-0.2**
B201	**Coldwater, Mou**	**1.66**	**175**		**Pn**	**02 47 35.6**	**-0.2**
NAC	**Naches**	**1.66**	**137**		**Pn**	**02 47 36.3**	**+0.5**
EBG	**Ellensburg**	**1.67**	**128**		**Pb**	**02 47 37.7**	**0.0**
JRO	**Jston Ridge Ob**	**1.69**	**174**		**Pn**	**02 47 35.8**	**-0.5**
B202	**Windy Ridge, M**	**1.73**	**172**		**Pn**	**02 47 36.8**	**+0.1**
FL2	**Flat Top 2**	**1.76**	**177**		**Pn**	**02 47 37.4**	**+0.1**
WPB	**Watts Point**	**1.77**	**344**	Pn	**Pn**	**02 47 37.6**	**+0.4**
WPB				Sn	**Sn**	**02 48 00.7**	**+1.3**
SHW	**Mount Saint He**	**1.77**	**174**		**Pn**	**02 47 38.0**	**+0.5**
ESD	**East Dome**	**1.77**	**173**		**Pn**	**02 47 38.4**	**+0.9**
SWF2	**Southwest Flan**	**1.79**	**174**		**Pn**	**02 47 38.4**	**+0.7**
B2QR	**Quarry, Mount**	**1.79**	**177**		**Pn**	**02 47 37.7**	**+0.1**
HSR	**South Ridge**	**1.80**	**173**		**Pn**	**02 47 38.6**	**+0.8**
MGRB	**Mount Grey**	**1.81**	**306**	Pn	**Pn**	**02 47 37.6**	**-0.2**
JLK	**June Lake**	**1.82**	**173**		**Pn**	**02 47 38.7**	**+0.6**
CDFW	**Cedar Flats**	**1.87**	**171**		**Pn**	**02 47 39.4**	**+0.8**
SHB	**Sechelt**	**1.88**	**331**	Pn	**Pn**	**02 47 39.5**	**+0.6**
SHB				Sn	**Sn**	**02 48 04.2**	**+1.8**
B023	**Clatskanie**	**1.89**	**193**		**Pn**	**02 47 39.3**	**+0.4**
ASR	**Mount Adams--S**	**1.91**	**161**		**Pn**	**02 47 40.1**	**+0.9**
F04D	**Rainier, OR**	**1.91**	**191**		**Pn**	**02 47 40.0**	**+0.8**
MTMW	**Mount Mitchell**	**1.94**	**174**		**Pn**	**02 47 40.7**	**+1.0**
YA2	**Yakima**	**1.95**	**136**		**Pn**	**02 47 41.5**	**+1.7**
B928	**Bamfield**	**1.97**	**297**	Pn	**Pn**	**02 47 40.9**	**+0.9**
BFSB	**Bamfield**	**1.97**	**297**	Pn	**Pn**	**02 47 41.0**	**+1.0**
B927	**Port Alberni**	**2.00**	**310**		**Pn**	**02 47 41.7**	**+1.4**
B927	**Port Alberni**	**2.00**	**310**	Pn	**Pn**	**02 47 40.8**	**+0.5**
PABB	**Port Alberni**	**2.00**	**310**	Pn	**Pn**	**02 47 40.8**	**+0.5**
PABB				Sn	**Sn**	**02 48 07.3**	**+2.3**
MXC	**Moxie City**	**2.03**	**132**		**Pn**	**02 47 42.2**	**+1.3**
MXC				IAML		02 48 10.1	
	comp=N,38nm,0.5s						
MXC				IAML		02 48 11.6	
	comp=E,58nm,0.8s						
B08A	**Colville Reser**	**2.15**	**78**		**Pn**	**02 47 42.5**	**0.0**
B08A	**Colville Reser**	**2.15**	**78**	Pg	**Pb**	**02 47 46.2**	**+0.4**
TXDB	**Texada**	**2.17**	**324**	Pn	**Pn**	**02 47 43.4**	**+0.7**
WSLR	**Whistler**	**2.19**	**353**	Pn	**Pn**	**02 47 44.6**	**+1.5**
WSLR				Sn	**Sb**	**02 48 13.0**	**-0.5**
E07A	**Sunnyside**	**2.27**	**127**	Pn	**Pn**	**02 47 44.8**	**+0.6**
E07A				IAML		02 48 20.1	
	comp=E,60nm,0.5s						
WAH2	**Wahluke Slope**	**2.32**	**120**		**Pn**	**02 47 45.1**	**+0.3**
WAH2				IAML		02 48 23.1	
	comp=N,74nm,0.5s						
PNT	**Penticton**	**2.34**	**53**	Pn	**Pn**	**02 47 46.0**	**+0.9**
PNT				Sg	**Sb**	**02 48 19.2**	**+1.5**
BENWA	**Benson Ranch**	**2.37**	**126**		**Pb**	**02 47 50.0**	**+0.4**
LOCW	**Locke Island**	**2.42**	**120**		**Pb**	**02 47 50.0**	**-0.4**
HAWA	**Hanford**	**2.55**	**127**		**Pn**	**02 47 48.2**	**+0.2**
HAWA				IAML		02 48 27.1	
	comp=N,19nm,0.5s						
HAWA				IAML		02 48 31.3	
	comp=N,23nm,0.7s						
LLLB	**Lillooet**	**2.68**	**8**	Pn	**Pn**	**02 47 50.3**	**+0.4**
LLLB				IAML		02 48 34.7	
	comp=N,24nm,0.5s						
LLLB				IAML		02 48 35.3	
	comp=E,28nm,0.8s						
C09A	**Chrisman Ranch**	**2.84**	**92**		**Pn**	**02 47 51.5**	**-0.4**
LNOR	**Lincton Mounta**	**3.55**	**124**	Pn	**Pn**	**02 48 03.0**	**+1.2**
LNOR				IAML		02 48 28.2	
	comp=N,15nm,4.5s						
LNOR				IAML		02 49 59.2	
	comp=E,16nm,5.0s						
F10A	**Beach Ranch, E**	**4.11**	**117**		**Pn**	**02 48 10.4**	**+0.9**
F10A				IAML		02 49 29.6	
	comp=N,15nm,4.2s						

SKO ***26*** *02:54:07.7, 41°.52N×19°.21E, h1km, ML6.2*

PRU ***26*** *02:54:07.3, 40°.96N×19°.65E, h10km, M6.2, Damaging Earthquake Near Tirana*

GII ***26*** *02:54:08.6±0.0, 41°.52N×19°.56E, h20km, confirmed*

IDC ***26*** *02:54:08.9±0.3, 41°.43N×19°.53E, h0km, mb5.7/41, mbtmp5.7/55, ML4.8/11, MS6.5/93, Error ellipse: s-maj=7.1km s-min=6.1km az=158.0*

MOS ***26*** *02:54:08.5±1.1, 41°.34N×19°.40E, h14km, mb6.2/61, MS6.5/74, Error ellipse: s-maj=3.8km s-min=2.6km az=73.9*

BJI ***26*** *02:54:08.1, 41°.43N×19°.42E, h10km, mB6.6/82, mb5.9/93, Ms6.8/98, Ms7 6.7/96*

NAO ***26*** *02:54:09.2, 41°.43N×19°.53E, h10km, MB5.9*

RHSSO ***26*** *02:54:10.2±0.9, 41°.27N×19°.54E, h8km, ML6.5/5*

IPGP ***26*** *02:54:10.0, 41°.42N×19°.48E, h24km, Mw6.5, Fault plane solution: NP1:φs357.00000°, δ20.00000°, λ115.00000°. NP2:φs151.00000°, δ72.00000°, λ81.00000°.*

BGS ***26*** *02:54:10.0±1.6, 41°.58N×20°.27E, h22km, mb6.0, ms6.6, MW6.4(NEIC)*

BEO ***26*** *02:54:11.6±0.4, 41°.30N×19°.48E, h11km±2km, ML6.4/19*

ROM ***26*** *02:54:11.3±0.1, 41°.400N±0°.004×19°.521E±0°.007, h22km, ML6.2/310, Mw6.2, Error ellipse: s-maj=0.6km s-min=0.3km az=48.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr 0.40; Mθθ 0.02; Mφφ -0.43; Mrθ 1.60; Mrφ 0.78; Mθφ -1.60; Fault plane solution: M0 2.38041×10¹⁸ NP1:φs134.00000°, δ82.00000°, λ84.00000°. NP2:φs350.00000°, δ10.00000°, λ126.00000°.*

PDG ***26*** *02:54:11.5±0.6, 41°.36N×19°.46E, h22km±1km, MD6.3/12, ML6.2/13 Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*

NEIC ***26*** *02:54:11.2, 41°.47N×19°.53E, h20km*

TIR ***26*** *02:54:11.4, 41°.46N×19°.44E, h40km±1km, Ml6.3/7*

NEIC ***26*** *02:54:11.2, 41°.47N×19°.53E, h20km, Moment Tensor Solution. Duration: 7s8 Moment tensor: Scale 10¹⁸Nm; Mrr 3.42; Mθθ -0.15; Mφφ -3.26; Mrθ 1.09; Mθφ 1.62; Mrr-2.41; Fault plane solution: M0 4.56000×10¹⁸ NP1: φs337.94000°, δ27.17000°, λ91.68000°. NP2: φs156.05000°, δ62.85000°, λ89.14000°. Principal axes: T 4.2686, Plg72.0000°, Azm64.0000°; N 0.5375, Plg1.0000°, Azm156.0000°; P -4.8062, Plg18.0000°, Azm247.0000°;*

MED_RC ***26*** *02:54:11.0±0.1, 41°.43N×19°.37E, h21km, MW6.4/37,*

Moment Tensor Solution. Body waves: s34,c48;Mantle waves: s37,c65; Duration: 4s2 Moment tensor: Scale 10¹⁸Nm; Mrr 3.53±.06; Mθθ -0.17±.05; Mφφ -3.36±.05; Mrθ 2.61±.13; Mrφ 1.81±.04; Mθφ -3.09±.13; Best double couple: M0 5.60000×10¹⁸ NP1:φs350.00000°, δ24.00000°, λ115.00000°. NP2:φs143.00000°, δ69.00000°, λ79.00000°. Principal axes: T 5.3700, Plg65.0000°, Azm36.0000°; N 0.4500, Plg10.0000°, Azm147.0000°; P -5.8300, Plg23.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

BGR ***26*** *02:54:11.8±0.6, 41°.22N×19°.33E, h10km, ML6.6 Error ellipse: s-maj=10.0km s-min=6.7km az=170.0*

ISC-PP ***26*** *02:54:12, 41°.51N×19°.53E, h48km, Mwppsm6.8, Moment Tensor Solution. s45 Moment tensor: Scale 10¹⁹Nm; Mrr 0.27±.20; Mθθ -0.38±.19; Mφφ 0.10±.15; Mrθ 0.14±.17; Mrφ -0.48±.13; Mθφ 0.37±.19; Fault plane solution: M0 2.04000×10¹⁹ NP1:φs153.50000°, δ75.70000°, λ126.90000°. NP2:φs261.80000°, δ39.20000°, λ23.00000°.*

NEIC ***26*** *02:54:12.9±1.2, 41°.51N±0°.03×19°.53E±0°.06, h22km±1km, mb6.2/878, Ms_20 6.6/734, Mwb6.3/265, Mww6.4/72 Error ellipse: s-maj=8.0km s-min=5.4km az=255.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr 1.31; Mθθ 1.06; Mφφ -2.37; Mrθ 1.94; Mθφ 0.38; Mrr-2.14; Fault plane solution: M0 3.57000×10¹⁸ NP1:φs28.55000°, δ28.97000°, λ153.35000°. NP2:φs142.25000°, δ77.45000°, λ63.67000°. Principal axes: T 3.4658, Plg51.0000°, Azm23.0000°; N 0.1970, Plg26.0000°, Azm148.0000°; P -3.6628, Plg28.0000°, Azm253.0000°;*

NEIC ***26*** *02:54:12.8, 41°.52N×19°.54E, h20km*

THE ***26*** *02:54:12.7, 41°.N±9°.×2°.0E±1°.2, h7km, M6.3/20, mb6.4/5, MLh6.1/20, MwMwp6.6/4, Mwp6.5/4*

AFAD ***26*** *02:54:15.0, 41°.30N×19°.66E, h7km, MW6.2*

GCMT ***26*** *02:54:17.9±0.0, 41°.39N×19°.45E, h24km, MW6.4/158, Moment Tensor Solution. s148,c376; s158,c638; Duration: 4s0 Moment tensor: Scale 10¹⁸Nm; Mrr 3.78±.02; Mθθ -0.25±.02; Mφφ -3.53±.02; Mrθ 2.56±.04; Mθφ 1.68±.01; Mrr-3.04±.04; Best double couple: M0 5.65500×10¹⁸ NP1:φs351.00000°, δ25.00000°, λ114.00000°. NP2:φs145.00000°, δ68.00000°, λ79.00000°. Principal axes: T 5.5290, Plg66.0000°, Azm36.0000°; N 0.2540, Plg10.0000°, Azm149.0000°; P -5.7800, Plg22.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 26 02:54:12.2±0.3, 41°.45N±0°.01×19°.63E±0°.01, h18km±1km, h18km:pP-P,n2739,σ2s12/2732,mb6.2/632,MS6.6/555, 137C-104D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.20**	**120**	⇓Pg		**Pb**		**02 54 17.2**	**0.0**
TIR				Sg		**Sg**		**02 54 21.1**	**+0.5**
TIR				AML		AML		02 54 27.1	
	4μm,1.0s								
TIR	**Tirane**	**0.20**	**120**	⇓P		**Pb**		**02 54 17.1**	**0.0**
TIR				S		**Sg**		**02 54 22.2**	**+1.6**
ULC	**Ulcinj**	**0.59**	**331**	⇑*i*Pg		**Pb**		**02 54 23.2**	**-0.9**
ULC				*i* Sg		**Sn**		**02 54 34.0**	**-1.0**
SDA	**Shkodra**	**0.61**	**351**	⇑Pg		**Pg**		**02 54 24.2**	**-0.1**
SDA				Sg		**Sg**		**02 54 33.0**	**+0.5**
PHP	**Peshkopia**	**0.65**	**68**	⇓Pg		**Pb**		**02 54 25.0**	**-0.1**
PHP				Sg		**Sn**		**02 54 38.0**	**+1.5**
PHP				AML		AML		02 54 43.4	
	4μm,0.9s								
PHP	**Peshkopia**	**0.65**	**68**	P		**Pb**		**02 54 24.8**	**-0.3**
PHP				S		**Sn**		**02 54 36.8**	**+0.3**
DRME	**Dracevica, Mon**	**0.81**	**336**	*e*Pg		**Pb**		**02 54 27.2**	**-0.6**
DRME	**Dracevica, Mon**	**0.81**	**336**	⇑*i*Pg		**Pb**		**02 54 27.0**	**-0.8**
DRME				*i* Sg		**Sn**		**02 54 41.3**	**+0.9**
OHR	**Ohrid**	**0.94**	**111**	*i* Pg		**Pb**		**02 54 30.5**	**+0.4**
OHR				*i* Sg		**Sn**		**02 54 47.9**	**+4.2**
OHR				*e*Lg		Lg		02 54 50.8	
	comp=N,457μm,0.8s								
OHR				*e*Lg		Lg		02 54 52.8	
	comp=E,326μm,0.7s								
VLO	**Vlora**	**0.98**	**186**	⇑Pg		**Pb**		**02 54 30.6**	**-0.1**
VLO				Sg		**Sb**		**02 54 43.2**	**-0.2**
VLO				AML		AML		02 54 55.4	
	comp=E,4μm,0.8s								
VLO	**Vlora**	**0.98**	**186**	P		**Pb**		**02 54 29.8**	**-1.0**
VLO				S		**Sn**		**02 54 51.9**	**+7.3**
VLO	**Vlora**	**0.98**	**186**	⇓P		**Pb**		**02 54 29.9**	**-0.8**
BUM	**Brajici-Budva**	**1.01**	**327**	⇓*i*Pg		**Pn**		**02 54 31.5**	**-0.2**
BUM				*i* Sg		**Sn**		**02 54 47.3**	**+1.8**
PDG	**Podgorica**	**1.02**	**344**	Pn		**Pb**		**02 54 30.7**	**-0.7**
PDG				Sn		**Sb**		**02 54 43.9**	**-0.6**
PDG	**Podgorica**	**1.02**	**344**	P		**Pn**		**02 54 31.4**	**-0.3**
PDG	**Podgorica**	**1.02**	**344**			**Pb**		**02 54 30.4**	**-1.0**
PDG						**Sb**		**02 54 43.8**	**-0.6**
PDG	**Podgorica**	**1.02**	**344**	⇑P		**Pg**		**02 54 33.2**	**+1.1**
PDG	**Podgorica**	**1.02**	**344**	*e*Pg		**Pb**		**02 54 31.3**	**-0.1**
PDG				*e*Sg		**Sg**		**02 54 48.1**	**+2.6**
PDG	**Podgorica**	**1.02**	**344**	⇑P		**Pb**		**02 54 30.5**	**-0.9**
PDG				S		**Sg**		**02 54 45.6**	**+0.1**
PDG				AML		AML			
PDG				AML		AML			
PDG				AML		AML			
PDG				AML		AML			
PDG	**Podgorica**	**1.02**	**344**	⇑*i*Pg		**Pb**		**02 54 30.5**	**-0.9**
PDG				*i* Sg		**Sg**		**02 54 48.3**	**+2.8**
PVY	**Plav**	**1.17**	**12**	*e*Pg		**Pg**		**02 54 37.0**	**+2.1**
PVY	**Plav**	**1.17**	**12**	⇑*i*Pg		**Pg**		**02 54 34.5**	**-0.4**
PVY				*i* Sg		**Sg**		**02 54 53.1**	**+2.8**
KBN	**Korca**	**1.20**	**133**	⇓P		**Pn**		**02 54 33.6**	**-0.6**
KBN				Sn		**Sg**		**02 54 52.7**	**+1.5**
KBN	**Korca**	**1.20**	**133**	P		**Pn**		**02 54 33.2**	**-1.1**
KBN				S		**Sg**		**02 54 57.8**	**+6.6**
KBN	**Korca**	**1.20**	**133**	⇓P		**Pn**		**02 54 33.3**	**-0.9**
KBN				S		**Sg**		**02 54 51.8**	**+0.6**
CEME	**Cevo**	**1.22**	**334**	⇑*i*Pg		**Pb**		**02 54 34.6**	**-0.2**
CEME				*i* Sg		**Sg**		**02 54 53.0**	**+1.2**
HCY	**Herceg Novi**	**1.31**	**320**	⇓*i*Pg		**Pb**		**02 54 36.3**	**0.0**
HCY				*i* Sg		**Sg**		**02 54 54.4**	**-0.3**
KOME	**Kolasin**	**1.40**	**356**	*e*Pg		**Pg**		**02 54 39.2**	**-0.1**
KOME	**Kolasin**	**1.40**	**356**	⇑*i*Pg		**Pb**		**02 54 38.2**	**+0.2**
KOME				*i* Sg		**Sg**		**02 54 58.9**	**+1.2**
NKME	**Niksic**	**1.41**	**339**	⇓*i*Pg		**Pb**		**02 54 38.2**	**+0.1**
NKME				*i* Sg		**Sg**		**02 54 57.6**	**-0.3**
BEY	**Berane**	**1.44**	**8**	*e*Pg		**Pg**		**02 54 42.4**	**+2.5**
IVA	**Berane**	**1.44**	**8**	⇓*i*Pg		**Pb**		**02 54 39.0**	**+0.5**
IVA				*i* Sg		**Sg**		**02 54 59.9**	**+1.2**
SKO	**Skopje**	**1.45**	**68**	*i* Pg		**Pb**		**02 54 38.5**	**-0.2**
NEST	**Nestorio**	**1.49**	**133**	⇑Pn		**Pb**		**02 54 39.5**	**+0.1**
NEST				Sn		**Sg**		**02 55 00.9**	**+0.6**
NEST				AML		AML		02 55 10.9	
	comp=E,1μm,1.5s								
NEST	**Nestorio**	**1.49**	**133**	P		**Pn**		**02 54 38.4**	**+0.2**
NEST				S		**Sg**		**02 55 03.9**	**+3.5**
TREB	**Trebinje**	**1.59**	**323**	⇑*i*Pn		**Pn**		**02 54 39.6**	**+0.1**
TREB				*e*Sn		**Sg**		**02 55 02.0**	**-1.5**
TREB	**Trebinje**	**1.59**	**323**	*e*Pn		**Pg**		**02 54 42.3**	**-0.5**
MESG	**Mesagne**	**1.60**	**238**	⇓P		**Pn**		**02 54 37.6**	**-2.0**
MESG				S		**Sn**		**02 54 57.0**	**-2.7**
MESG				AML		AML			
MESG				AML		AML			
BRY	**Bratogost**	**1.66**	**331**	⇓*i*Pn		**Pb**		**02 54 41.7**	**-0.8**
BRY				*i* Sn		**Sb**		**02 55 03.2**	**+0.1**
KEK	**Kerkira**	**1.74**	**176**	*e*P		**Pg**		**02 54 48.3**	**+2.6**
KEK	**Kerkira**	**1.74**	**176**	P		**Pg**		**02 54 45.5**	**-0.1**
KEK	**Kerkira**	**1.74**	**176**			**Pg**		**02 54 45.2**	**-0.5**
KEK				Sn		**Sb**		**02 55 06.1**	**+1.0**
KEK	**Kerkira**	**1.74**	**176**	⇓P		**Pg**		**02 54 45.7**	**0.0**
SJES	**Sjenica**	**1.83**	**8**	*e*Pn		**Pg**		**02 54 46.6**	**-0.8**
UPM	**Unac-Piva**	**1.83**	**343**	⇑*i*Pn		**Pb**		**02 54 44.5**	**-0.8**
UPM				*i* Sn		**Sb**		**02 55 08.2**	**+0.1**
KLINJ	**Klinje**	**1.89**	**336**	*e*Pn		**Pn**		**02 54 44.2**	**+0.5**
KLINJ				*e*Sn		**Sb**		**02 55 09.9**	**+0.4**
PLE	**Pljevlja**	**1.89**	**355**	*e*Pg		**Pg**		**02 54 47.6**	**-1.0**
PLE	**Pljevlja**	**1.89**	**355**	⇑*i*Pn		**Pb**		**02 54 46.6**	**+0.3**
PLE				*i* Sn		**Sb**		**02 55 10.2**	**+0.6**
KZN	**Kozani**	**1.98**	**124**	P		**Pn**		**02 54 46.1**	**+1.2**
KZN				S		**Sg**		**02 55 17.8**	**+1.7**
IGT	**Igoumenitsa**	**1.99**	**164**	⇑Pn		**Pn**		**02 54 46.2**	**+1.2**
IGT				Sn		**Sb**		**02 55 12.5**	**+0.3**
IGT	**Igoumenitsa**	**1.99**	**164**	P		**Pn**		**02 54 45.2**	**+0.3**
IGT				S		**Sg**		**02 55 15.9**	**-0.3**

TAR1	**Taranto**	**2.00**	**243**	⇓P		**Pn**	**02 54 42.8**	**-2.3**
TAR1				AML		AML		
TAR1				AML		AML		
JAN	**Janina**	**2.02**	**152**	P		**Pn**	**02 54 46.9**	**+1.5**
STON	**Ston**	**2.02**	**315**	*e*Pn		**Pn**	**02 54 45.3**	**-0.1**
STON				*e*Sn		**Sb**	**02 55 12.7**	**-0.5**
STON	**Ston**	**2.02**	**315**	P		**Pn**	**02 54 45.0**	**-0.4**
STON				AML		AML		
STON				AML		AML		
LFKM	**Lefkimmi**	**2.03**	**171**	P		**Pn**	**02 54 45.5**	**0.0**
LFKM				S		**Sg**	**02 55 17.0**	**-0.5**
NOCI	**Noci**	**2.05**	**252**	⇑Pn		**Pn**	**02 54 43.7**	**-2.1**
NOCI				Sn		**Sn**	**02 55 09.4**	**-1.5**
NOCI				AML		AML	02 55 29.3	
	comp=E,1μm,1.0s							
NOCI	**Noci**	**2.05**	**252**	⇓P		**Pn**	**02 54 43.6**	**-2.1**
NOCI				AML		AML		
NOCI				AML		AML		
SELS	**Selova**	**2.09**	**31**	*e*Pn		**Pb**	**02 54 49.4**	**-0.2**
SELS				*e*Sn		**Sg**	**02 55 17.8**	**-1.6**
IVAS	**Ivanjica**	**2.16**	**10**	*e*Pn		**Pb**	**02 54 49.5**	**-1.4**
IVAS				*e*Sn		**Sg**	**02 55 19.8**	**-2.0**
RUDO	**Rudo**	**2.18**	**355**	*e*Pn		**Pb**	**02 54 49.4**	**-1.7**
RUDO				*e*Sn		**Sb**	**02 55 17.9**	**+0.1**
RUDO	**Rudo**	**2.18**	**355**	*e*Pn		**Pb**	**02 54 52.1**	**+1.0**
VAY	**Valandovo**	**2.21**	**92**	*i* Pn		**Pb**	**02 54 50.4**	**-1.3**
VAY				*i* Sn		**Sb**	**02 55 21.4**	**+2.6**
VAY				*e*Lg		Lg	02 55 25.5	
	comp=E,119μm,1.2s							
VAY				*e*Lg		Lg	02 55 31.6	
	comp=N,353μm,1.3s							
PRMD	**Pramanda**	**2.22**	**149**	P		**Pn**	**02 54 49.7**	**+1.5**
LTRZ	**Laterza**	**2.29**	**249**	⇓P		**Pn**	**02 54 46.8**	**-2.3**
LTRZ				AML		AML		
LTRZ				AML		AML		
LTRZ				AML		AML		
LTRZ				AML		AML		
	comp=N,646μm,1.6s							
GOCS	**Kraljevo Serbi**	**2.30**	**23**	*e*Pn		**Pb**	**02 54 51.7**	**-1.6**
GOCS				*e*Sn		**Sb**	**02 55 23.0**	**+1.5**
MATE	**Matera**	**2.35**	**251**	*e*P		**Pn**	**02 54 51.4**	**+1.4**
MATE	**Matera**	**2.35**	**251**	⇑P		**Pn**	**02 54 48.3**	**-1.7**
MATE	**Matera**	**2.35**	**251**	⇓P		**Pn**	**02 54 47.7**	**-2.2**
MATE				AML		AML		
MATE				AML		AML		
BBLS	**Lazi&#263i**	**2.42**	**356**	*e*Pn		**Pn**	**02 54 52.9**	**+1.9**
TETR	**Tetrakomo, Epi**	**2.45**	**149**	P		**Pn**	**02 54 52.6**	**+1.2**
TETR				S		**Sg**	**02 55 29.7**	**-1.2**
KNT	**Kendrikon**	**2.48**	**96**	P		**Pn**	**02 54 53.5**	**+1.8**
LIT	**Litokhoron**	**2.55**	**121**	SPECP			02 54 55.0	
LIT				P		**Pb**	**02 54 55.6**	**-1.9**
LIT	**Litokhoron**	**2.55**	**121**	P		**Pn**	**02 54 53.6**	**+0.8**
LIT	**Litokhoron**	**2.55**	**121**			**Pn**	**02 54 53.6**	**+0.8**
GRUS	**Gruza**	**2.57**	**18**	*e*Pn		**Pb**	**02 54 55.4**	**-2.3**
THL	**Klokotos Trika**	**2.62**	**135**	P		**Pn**	**02 54 54.5**	**+0.9**
THL	**Klokotos Trika**	**2.62**	**135**	⇑P		**Pn**	**02 54 54.7**	**+1.1**
THL				AML		AML		
	comp=E,15450μm,0.4s							
THL				AML		AML		
	comp=N,21750μm,1.6s							
TYRN	**Tyrnavos**	**2.63**	**130**	P		**Pn**	**02 54 55.3**	**+1.4**
TRAN	**Tran**	**2.64**	**57**	P		**Pb**	**02 54 56.9**	**-2.1**
KKB	**Krupnik**	**2.65**	**80**	P		**Pn**	**02 54 56.3**	**+2.2**
KKB	**Krupnik**	**2.65**	**80**	*i* P		**Pb**	**02 54 57.5**	**-1.7**
THE	**Thessaloniki**	**2.65**	**107**	P		**Pn**	**02 54 55.2**	**+1.2**
THE	**Thessaloniki**	**2.65**	**107**	*i* Pn		**Pn**	**02 54 55.6**	**+1.5**
CRAC	**Craco**	**2.65**	**247**	⇓P		**Pn**	**02 54 52.1**	**-2.0**
CRAC				AML		AML		
CRAC				AML		AML		
DIVS	**Divibare**	**2.66**	**6**	*e*Pn		**Pn**	**02 54 56.0**	**+1.7**
BOVS	**Bovan**	**2.67**	**34**	⇓P		**Pb**	**02 54 57.1**	**-2.4**
BOVS

MDVR	Moldovita	3.66	24	⇑P		Pn	02 55 09.8	+1.8
MDVR	Moldovita	3.66	24	*e*Pn		Pn	02 55 09.8	+1.8
MDVR				*e*Sn		Sn	02 55 54.1	+3.3
ORTH	Orthonies,Zaky	3.69	167	P		Pn	02 55 08.0	-0.3
FRGS	Fruska Gora	3.71	2	*e*Pn		Pn	02 55 09.9	+1.2
KAVA	Kavala	3.71	95	P		Pn	02 55 10.3	+1.7
PUNG	Punghina	3.73	40	*e*Pn		Pn	02 55 11.1	+2.3
BLY	Banja Luka	3.75	332	⇑*i*Pn		Pn	02 55 10.2	+1.0
BLY				*e*Sn		Sn	02 55 54.7	+1.7
BLY	Banja Luka	3.75	332	⇓P		Pn	02 55 10.7	+1.4
BLY	Banja Luka	3.75	332	*e*Pn		Pn	02 55 10.4	+1.2
ATAL	Atalanti	3.79	136	P		Pn	02 55 10.5	+0.8
LKR	Lokris	3.81	136	P		Pn	02 55 11.0	+1.0
RZN	Rozhen	3.84	85	P		Pn	02 55 13.1	+2.5
RZN	Rozhen	3.84	85	P		Pb	02 55 15.3	-4.2
RZN				S		Sn	02 55 59.0	+3.7
DRO	Drossia	3.84	155	P		Pn	02 55 10.7	+0.2
LTHK	Lithakia	3.85	166	P		Pn	02 55 09.6	-0.9
DJES	Djerdap	3.85	32	*e*Pn		Pn	02 55 12.7	+2.1
DJES				*e*Sn		Sn	02 55 58.0	+2.7
VRSS	Vrsac	3.88	18	*e*Pn		Pn	02 55 12.4	+1.5
VRSS				*e*Sn		Sn	02 55 59.6	+3.6
PLD	Plovdiv	3.89	78	*e*P		Pn	02 55 13.7	+2.7
PLD	Plovdiv	3.89	78	P		Pn	02 55 13.5	+2.5
PLD	Plovdiv	3.89	78	P		Pn	02 55 15.7	+4.6
PLD	Plovdiv	3.89	78	*e*Pn		Pn	02 55 13.8	+2.7
KLV	Kalavryta, Ach	3.92	149	P		Pn	02 55 12.1	+0.6
RMGR	Halanga-Turnu	3.92	34	⇓P		Pn	02 55 14.6	+3.2
AOS	Alonnisos	3.96	124	P		Pn	02 55 14.2	+2.1
HERR	Herculane	3.99	30	⇑P		Pn	02 55 14.7	+2.3
BANR	Banloc	4.08	15	*e*Pn		Pn	02 55 15.6	+1.9
BANR				*e*Sn		Sn	02 56 04.0	+3.0
GUR	Goura	4.08	148	P		Pn	02 55 14.2	+0.3
SRE	Strehaia	4.14	38	P		Pn	02 55 17.1	+2.5
PLVB	Pleven	4.17	61	⇑P		Pn	02 55 18.8	+3.8
CRAR	CRAIOVA	4.20	45	P		Pn	02 55 18.1	+2.7
LTK	Loutraki	4.28	142	P		Pn	02 55 16.4	-0.1
KDZ	Kurdzhali	4.29	86	*e*P		Pn	02 55 18.9	+2.3
KDZ	Kurdzhali	4.29	86	P		Pn	02 55 19.0	+2.3
KDZ	Kurdzhali	4.29	86	P		Pb	02 55 22.9	-4.2
CEL	Celeste	4.29	223			Pn	02 55 14.3	-2.4
BZS	Buzias	4.41	18	*e*P		Pn	02 55 19.6	+1.3
BZS	Buzias	4.41	18	⇑P		Pn	02 55 20.0	+1.8
BZS	Buzias	4.41	18	P		Pn	02 55 19.5	+1.3
KYMI	Kymi, Euboea I	4.43	128	P		Pn	02 55 19.7	+1.1
TIM	Timisoara	4.44	15	P		Pn	02 55 20.3	+1.7
STFN	Stefani	4.44	136	P		Pn	02 55 20.0	+1.2
RDO	Rodhopi	4.46	92	*e*P		Pn	02 55 21.1	+2.2
RDO	Rodhopi	4.46	92	P		Pn	02 55 20.6	+1.7
RDO	Rodhopi	4.46	92			Pn	02 55 20.6	+1.7
DIM	Dimitrovgrad	4.49	80	P		Pn	02 55 22.1	+2.8
LIA	Limnos Island	4.50	108	P		Pn	02 55 20.7	+1.3
MAGU	Magoula	4.50	137	P		Pn	02 55 20.5	+1.0
SKY	Skiros Island	4.56	123	P		Pn	02 55 22.0	+1.7
GZR	Gura Zlata	4.56	29	⇑P		Pn	02 55 23.0	+2.6
GZR	Gura Zlata	4.56	29	P		Pn	02 55 21.9	+1.5
SMTH	Samothraki Isl	4.57	100	P		Pn	02 55 21.5	+1.0
VLX	Vlachokerasia	4.59	152	P		Pn	02 55 21.9	+1.0
ITM	Ithomi	4.62	157	*e*P		Pn	02 55 24.6	+3.4
ITM	Ithomi	4.62	157	P		Pn	02 55 21.1	0.0
ITM	Ithomi	4.62	157			Pn	02 55 21.5	+0.3
SUBS	Subotica	4.66	0	*e*Pn		Pn	02 55 24.8	+3.1
SURR	Surduc	4.67	22	⇓P		Pn	02 55 23.4	+1.6
ATH	Athens Observa	4.69	136	P		Pn	02 55 23.0	+0.9
PTL	Penteli	4.71	135	P		Pn	02 55 23.3	+0.9
DION	Dionisos Attik	4.72	134	P		Pn	02 55 23.6	+1.0
ATHU	Athens Univers	4.73	2	P		Pn	02 55 23.5	+0.9
AQU	L'Aquila	4.74	283	P		Pn	02 55 22.1	-0.7
AQU	L'Aquila	4.74	283	*e*Pn		Pn	02 55 21.8	-1.0
AQU				*e*Sn		Sn	02 56 14.3	-3.0
CAMP	Campotosto	4.76	285			Pn	02 55 21.9	-1.3
VLY	Voula,Athens	4.82	137	P		Pn	02 55 24.5	+0.6
MORH	Mrgy, Hungar	4.82	352	*e*Pn		Pn	02 55 24.3	+0.5
MORH				*e*Sn		Sn	02 56 21.2	+2.0
MORH	Mrgy, Hungar	4.82	352	⇑P		Pn	02 55 26.2	+2.4
MORH	Mrgy, Hungar	4.82	352	*e*Pn		Pn	02 55 24.4	+0.6
PYL	PYLOS	4.83	159	P		Pn	02 55 23.1	-1.0
ELND	Elena	4.87	70	⇓P		Pn	02 55 28.6	+4.0
COPA	Copaceanca	4.91	55	⇓P		Pn	02 55 28.7	+3.6
GADA	Gvkgeada	4.92	103	*e*P		Pn	02 55 30.1	+4.9
GUMA	Gualdo di Mace	4.94	291			P	02 55 24.0	-1.6
ENEZ	Enez	4.98	96	*e*P		Pn	02 55 28.4	+2.3
ENZZ	Sultanice-Enez	4.99	98	P		Pn	02 55 29.3	+3.1
CAVK	Edirne/Enez-Ca	5.00	97	SPECP			02 55 30.0	
CAVK				P		Pn	02 55 31.0	+4.7
CAVK	Edirne/Enez-Ca	5.00	97	⇑P		Pn	02 55 28.9	+2.6
LOT	Lotru	5.00	36	*e*P		Pn	02 55 28.6	+2.1
LOT	Lotru	5.00	36	⇓P		Pn	02 55 30.0	+3.4
DEV	Deva	5.03	27	⇑P		Pn	02 55 30.6	+3.9
DEV	Deva	5.03	27	P		Pn	02 55 30.6	+3.9
KARY	Karystos	5.04	131	P		Pn	02 55 27.8	+1.0
	comp=N,4μm,1.0s							
SIRR	Siria	5.04	16	⇑P		Pn	02 55 28.4	+1.5
SIRR	Siria	5.04	16	*e*Pn		Pn	02 55 28.3	+1.5
SIRR				*e*Sn		Sn	02 56 26.3	+1.7
SZH	Strazhitsa	5.04	67	P		Pn	02 55 29.8	+2.9
NRCA	Norcia	5.04	288			Pn	02 55 25.8	-1.2
FDMO	Fiordimonte	5.11	290			Pn	02 55 26.7	-1.2
BOZC	Bozcaada	5.14	106	SPECP			02 55 32.0	
BOZC				P		Pn	02 55 32.6	+4.3
BOZC	Bozcaada	5.14	106	*e*P		Pn	02 55 31.5	+3.2
BOJS	Bojanci	5.16	323	*e*Pn		Pn	02 55 29.1	+0.6
BOJS				*e*Sn		Sn	02 56 26.3	-1.2
BOJS	Bojanci	5.16	323	⇑*i*Pn		Pn	02 55 28.7	+0.2
BOJS				*e*Sn		Sn	02 56 25.8	-1.7
BOJS				IAML			02 57 02.8	
	comp=Z,261μm,2.5s							
ECEA	Canakkale, Ece	5.16	104	SPECP			02 55 33.0	
ECEA				P		Pn	02 55 33.1	+4.6
JMB	Yambol	5.25	76	*e*P		Pn	02 55 34.9	+5.2
SIGR	SIGRI	5.25	113	*e*P		Pn	02 55 35.3	+5.5
ERIK	Erikli-Kesan	5.26	96	SPECP			02 55 33.0	
ERIK				P		Pn	02 55 33.1	+3.2
ERIK	Erikli-Kesan	5.26	96	*e*P		Pn	02 55 32.1	+2.2
UKOP	Uzunkopru-Edir	5.28	91	SPECP			02 55 34.0	
UKOP				P		Pn	02 55 34.2	+4.0
UKOP	Uzunkopru-Edir	5.28	91	*e*P		Pn	02 55 33.0	+2.8
GELI	Tayfur-Gelibol	5.29	99	*e*P		Pn	02 55 32.2	+1.9
CRES	Cresnjevec Ost	5.32	327	⇑*i*Pn		Pn	02 55 30.8	0.0
KOCA	Canakkale, Ayv	5.33	109	P		Pn	02 55 32.6	+1.7
EDRB	Edirne	5.34	83	*e*P		Pn	02 55 33.6	+2.5
EZN	Ezine	5.34	105	SPECP			02 55 33.0	
EZN				P		Pn	02 55 33.7	+2.6
EZN				S		Sn	02 56 31.8	-0.3
EZN				*i* IAML			02 57 15.0	
	comp=Z,2μm,1.7s							
EZN	Ezine	5.34	105	*e*P		Pn	02 55 32.9	+1.8
EZN	Ezine	5.34	105	⇓P		Pn	02 55 33.7	+2.6
EZN	Ezine	5.34	105	P		Pn	02 55 33.6	+2.6
GPNR	Gulpinar-Canak	5.34	110	P		Pn	02 55 31.5	+0.5
ARR	Arges	5.35	41	⇓P		Pn	02 55 34.3	+3.1
COMU	Canakkale	5.37	102	*e*P		Pn	02 55 32.2	+0.8
VLI	Veliai	5.38	150	P		Pn	02 55 31.0	-0.5
	comp=Z,24nmcomp=Z,771μmcomp=Z,3μm,0.7s							
CESX	Cesi	5.38	285			Pn	02 55 28.9	-2.7
TNR	Turnu Rosu	5.39	37	⇑P		Pn	02 55 35.2	+3.5
TNR	Turnu Rosu	5.39	37	P		Pn	02 55 35.2	+3.5
RIY	Rijeka	5.39	318	*e*Pn		Pn	02 55 31.8	+0.1
RIY				*e*Sn		Sn	02 56 33.2	-0.1
SGRR	Singureni	5.42	57	⇑P		Pn	02 55 35.5	+3.3
BEHE	Becsehely	5.43	339			Pn	02 55 33.0	+0.8
BEHE	Becsehely	5.43	339	*e*Pn		Pn	02 55 33.1	+0.8
BEHE				*e*Sn		Sn	02 56 34.8	+0.6
MTUR	Matau	5.47	45	⇑P		Pn	02 55 37.7	+4.8
MTUR	Matau	5.47	45	P		Pn	02 55 37.7	+4.8
LOZB	Loznitsa	5.50	67	⇑P		Pn	02 55 37.2	+4.0
RAZG	Razgrad	5.50	65	⇓P		Pn	02 55 36.9	+3.6
LPK	Lapseki	5.51	99	*e*P		Pn	02 55 35.8	+2.5
BUC1	Bucharest	5.52	56	⇑P		Pn	02 55 36.7	+3.2
BUC1	Bucharest	5.52	56	P		Pn	02 55 36.6	+3.2
BUC	Bucharest	5.59	56	⇓P		Pn	02 55 38.1	+3.6
BUC	Bucharest	5.59	56	P		Pn	02 55 38.1	+3.6
VOIR		5.61	43	⇓P		Pn	02 55 39.4	+4.6
VOIR		5.61	43	P		Pn	02 55 39.4	+4.6
INCR	INCERC-Sediu C	5.65	56	⇑P		Pn	02 55 39.3	+4.0
VAE	Valguarnera	5.66	227	Pn		Pn	02 55 34.4	-1.1
	comp=Z,213nm,0.8s,baz=26,slow=2.1,SNR=17							
VAE				Sn		Sn	02 56 40.4	+0.3
	comp=Z,59nm,0.3s,baz=337,slow=22,SNR=3.2							
VAE				LR		LR	02 58 10.9	
	comp=Z,378μm,20.7s,baz=330,slow=43							
CEY	Cerknica	5.72	320	*e*Pn		Pn	02 55 36.7	+0.5
RKY	Sarkoy-Tekirda	5.75	95	*e*P		Pn	02 55 39.4	+2.6
SART	Tekirdag	5.76	95	SPECP			02 55 40.0	
SART				P		Pn	02 55 40.8	+4.0
DRGR		5.78	21	*e*P		Pn	02 55 38.7	+1.5
DRGR		5.78	21	⇓P		Pn	02 55 41.1	+3.9
DRGR		5.78	21	P		Pn	02 55 41.1	+3.9
SKDS	Skadanscina	5.79	317	*e*Pn		Pn	02 55 36.3	-0.9
SKDS				*e*Sn		Sn	02 56 42.1	-0.9
AYVA	Ayvalik	5.80	109	SPECP			02 55 41.0	
AYVA				P		Pn	02 55 41.3	+4.0
CHOS	Chios island	5.81	120	*e*P		Pn	02 55 39.5	+2.0
CHOS	Chios island	5.81	120	P		Pn	02 55 40.1	+2.6
MDB	Medias	5.81	35	⇓P		Pn	02 55 42.2	+4.7
MDB	Medias	5.81	35	P		Pn	02 55 42.2	+4.7
CANM	Can-anakkale	5.82	102	*e*P		Pn	02 55 40.1	+2.5
PLAR	PLOIESTI	5.82	51	⇑P		Pn	02 55 42.3	+4.7
SULR		5.83	54	⇑P		Pn	02 55 41.6	+3.9
GROS	Grobnik	5.83	331	⇑*i*Pn		Pn	02 55 37.5	-0.3
KTHA	Kythira Island	5.83	152	*e*P		Pn	02 55 38.6	+0.8
KTHA	Kythira Island	5.83	152	P		Pn	02 55 38.3	+0.5
	comp=Z,379μmcomp=Z,4μm,1.1s							
BORR	Bors	5.85	15	⇓P		Pn	02 55 40.5	+2.5
GBAS	Gorenja Brezov	5.85	322	⇑*i*Pn		Pn	02 55 37.9	-0.2
GBAS				*i*			02 55 38.6	
GBAS				*i* Sn		Sn	02 56 43.9	-0.8
GBAS				*i*			02 57 15.8	
GBAS				IAML			02 57 39.7	
	comp=Z,444μm,3.7s							
VNDS	Vrh nad Dolski	5.86	324	⇑*i*Pn		Pn	02 55 38.1	-0.1
BSZH	Besenyszg	5.87	4	⇑P		Pn	02 55 40.2	+1.9
RAFF	Raffo Rosso	5.87	226			Pn	02 55 35.2	-3.2
LJU	Ljubljana	5.90	323	*e*Pn		Pn	02 55 39.3	+0.6
KARB	zmir-Karabur	5.90	116	SPECP			02 55 42.0	
KARB				P		Pn	02 55 42.4	+3.7
KRBG	Karabiga-Canak	5.90	98	SPECP			02 55 43.0	
KRBG				P		Pn	02 55 43.5	+4.7
KRBG	Karabiga-Canak	5.90	98	*e*P		Pn	02 55 41.2	+2.5
PHSR	Pinarhisar	5.92	86	*e*P		Pn	02 55 44.5	+5.4
PHSR	Pinarhisar	5.92	86	⇑P		Pn	02 55 42.3	+3.2
YAYO	Edremit-Balk	5.96	105	*e*P		Pn	02 55 41.8	+2.3
CJR	Cluj-Napoca	5.99	27	⇓P		Pn	02 55 42.7	+2.7
CJR	Cluj-Napoca	5.99	27	P		Pn	02 55 42.7	+2.7
CESE	eme	6.00	119	P		Pn	02 55 42.9	+2.9
BUHA	Balikesir, Bur	6.00	106	SPECP			02 55 43.0	
BUHA				P		Pn	02 55 43.5	+3.4
CBBR	Cluj-Babes-Bol	6.02	27	⇑P		Pn	02 55 43.1	+2.8
TRI	Trieste	6.02	317			Pn	02 55 39.0	-1.4
TRI	Trieste	6.02	317	P		Pn	02 55 39.0	-1.4
DKL	Dikili	6.05	111	SPECP			02 55 45.0	
DKL				P		Pn	02 55 45.1	+4.3
DKL	Dikili	6.05	111	*e*P		Pn	02 55 43.3	+2.5
BUD	Budapest	6.05	356	*e*Sn		Sn	02 56 52.5	+2.9
LEHL	Lehliu	6.08	58	⇓P		Pn	02 55 45.0	+3.9
CICN	Ciocanesti	6.09	61	⇑P		Pn	02 55 44.2	+2.9
MLR	Muntele Rosu	6.12	47	Pn		Pn	02 55 44.8	+3.0
	comp=Z,1μm,0.7s,baz=139,slow=18							
MLR				Sn		Sn	02 56 57.1	+5.8
	comp=Z,247nm,0.3s,baz=183,slow=14,SNR=4.0							
MLR				LR		LR	02 58 37.5	
	comp=Z,556μm,21.1s,baz=213,slow=43							
MLR	Muntele Rosu	6.12	47	*e*P		Pn	02 55 45.0	+3.2
MLR	Muntele Rosu	6.12	47			Pn	02 55 42.9	+1.1
MLR	Muntele Rosu	6.12	47	⇑P		Pn	02 55 46.5	+4.7
MLR	Muntele Rosu	6.12	47	P		Pn	02 55 42.9	+1.1
MLR	Muntele Rosu	6.12	47	*e*Pn		Pn	02 55 46.1	+4.3
MLR				*e*Sn		Sn	02 56 57.5	+6.1
DOPR	Dopca	6.15	41	⇑P		Pn	02 55 46.2	+4.0
MESR	Meseseni	6.18	22	⇓P		Pn	02 55 44.7	+2.2
URLA	Izmir	6.18	118	SPECP			02 55 45.0	
URLA				P		Pn	02 55 45.6	+3.1
TGMR	Targu Mures	6.18	33	⇑P		Pn	02 55 46.5	+3.9
ZEYE	Izmir, Urla-Ze	6.18	119	SPECP			02 55 46.0	
ZEYE				P		Pn	02 55 46.2	+3.6
SOKA	Soboth	6.19	329	*i* Pn		Pn	02 55 42.4	-0.3
	comp=Z,930nm,0.6s,SNR=506							
SOKA				*i* Sn		Sn	02 56 48.8	-4.3
	comp=Z,3μm,0.9s							
VOJS	Vojsko	6.19	320	⇑*i*Pn		Pn	02 55 42.3	-0.5
ISR	Istrita	6.24	52	⇑P		Pn	02 55 48.0	+4.6
ISR	Istrita	6.24	52	P		Pn	02 55 48.0	+4.6
OBKA	Obir	6.25	326	*i* Pn		Pn	02 55 43.6	+0.1
	comp=Z,804nm,0.7s,SNR=185							
OBKA				*e*Sn		Sn	02 56 49.5	-5.0
	comp=Z,4μm,0.7s							
NEHR	Nehoiu	6.27	48	⇓P		Pn	02 55 48.5	+4.6
GONE	Gonen-Balikesi	6.28	100	P		Pn	02 55 48.9	+5.0
SABO	M.te Sabotino	6.29	318			Pn	02 55 43.2	-0.9
APE	Apeiranthos	6.33	132	P		Pn	02 55 46.7	+2.1
APE	Apeiranthos	6.33	132	P		Pn	02 55 44.9	+0.3
APE	Apeiranthos	6.33	132	⇑P		Pn	02 55 45.4	+0.7
APE	Apeiranthos	6.33	132	*de*P		Pn	02 55 45.3	+0.6
BOSR	Bodos	6.36	41	⇓P		Pn	02 55 48.2	+3.2
PGOR	Pogoanele	6.39	55	⇑P		Pn	02 55 49.9	+4.5
SRO	Srobarova	6.43	352	*e*P		Pn	02 55 46.9	+0.9
SRO				*e*			02 57 02.8	
SRO				MLR	MLR			
	comp=Z,106μm,3.0s							
SRO	Srobarova	6.43	352	*e*PN		Pn	02 55 46.9	+0.9
SRO				*e*SN		Sn	02 57 02.8	+3.9
SRO				*e*LG		Lg	02 58 03.8	
OZUR		6.43	42	⇓P		Pn	02 55 50.1	+4.0
SOMA	Soma-Manisa	6.46	108	*e*P		Pn	02 55 49.6	+3.2
BLCB	Balcova	6.46	116	P		Pn	02 55 51.6	+5.2
BLCB	Balcova	6.46	116	*e*P		Pn	02 55 51.4	+4.9
AMRR	Amara	6.47	58	⇑P		Pn	02 55 49.8	+3.2
AMRR	Amara	6.47	58	P		Pn	02 55 49.7	+3.2
PSZ	Piszkesteto	6.47	2			Pn	02 55 45.3	-1.3
PSZ	Piszkesteto	6.47	2	⇑P		Pn	02 55 48.4	+1.7
PSZ	Piszkesteto	6.47	2	P		Pn	02 55 48.3	+1.7
PSZ	Piszkesteto	6.47	2	*e*Sn		Sn	02 57 03.4	+3.4
COVR	Voineasa-Covas	6.48	45	⇑P		Pn	02 55 50.4	+3.7
CTYL	Yalikoy Yolu	6.50	87	⇑P		Pn	02 55 49.4	+2.4
ARSA	Arzberg	6.50	334			Pn	02 55 45.8	-1.3
ARSA	Arzberg	6.50	334	*e*Pn		Pn	02 55 47.0	-0.1
	comp=Z,1μm,0.4s,SNR=395							
ARSA	Arzberg	6.50	334	*e*Pn		Pn	02 55 47.8	+0.8
BAND	Balkesir-Ban	6.51	97	⇓P		Pn	02 55 50.1	+3.0
STEP	BALIKESIR_Sava	6.51	106	SPECP			02 55 51.0	
STEP				P		Pn	02 55 51.1	+4.0
TURR	Turia	6.52	43	⇑P		Pn	02 55 51.4	+4.1
BALB	Balikesir	6.54	103	*e*P		Pn	02 55 50.0	+2.5
OSSC	Osservatorio P	6.54	291			Pn	02 55 45.5	-1.9
CEI	Carei	6.55	17	⇑P		Pn	02 55 50.6	+2.9
CEI	Carei	6.55	17	P		Pn	02 55 50.6	+2.9
ICOR	Ion Corvin	6.58	63	⇑P		Pn	02 55 52.1	+4.1
ARCR	ARCALIA	6.58	29	⇑P		Pn	02 55 51.3	+3.3
BISRR	Bisoca	6.58	49	⇑P		Pn	02 55 52.8	+4.7
SUSR	Susurluk-Balik	6.59	100	*e*P		Pn	02 55 50.7	+2.5
SOP	Sopron	6.61	342	*e*Pn		Pn	02 55 50.7	+2.3
SOP				*e*Sn		Sn	02 57 05.2	+1.9
GRER		6.63	51	⇑P		Pn	02 55 53.6	+4.8
CASP	Castiglione de	6.66	285			Pn	02 55 47.5	-1.6
RONA	Rosalia, Austr	6.69	340	*e*Pn		Pn	02 55 49.8	+0.2
	comp=Z,147nm,0.5s,SNR=253							
RONA				*e*Sn		Sn	02 57 07.8	+2.5
	comp=Z,1μm,0.5s							
KCTX	Karacabey (Bur	6.72	97	*e*P		Pn	02 55 52.4	+2.4
PLOR	Plostina	6.73	47	⇓P		Pn	02 55 54.8	+4.7
PLOR	Plostina	6.73	47	P		Pn	02 55 54.8	+4.7
MYKA	Terra Mystica	6.74	322	*e*Pn		Pn	02 55 49.8	-0.5
	comp=Z,698nm,0.6s,SNR=263							
MYKA				*e*Sn		Sn	02 57 07.7	+1.0
	comp=Z,2μm,0.5s							
AKHS	Akhisar	6.77	110	SPECP			02 55 53.0	
AKHS				P		Pn	02 55 53.8	+3.1
AKS	Akhisar	6.77	110	P		Pn	02 55 52.2	+1.5
VRI	Vrincioaia	6.78	47	*e*P		Pn	02 55 53.9	+3.1
VRI	Vrincioaia	6.78	47	⇑P		Pn	02 55 54.8	+3.9
VRI	Vrincioaia	6.78	47	P		Pn	02 55 54.7	+3.9
CVDA	Cernavoda	6.81	62	⇓P		Pn	02 55 54.8	+3.6
WDD	Wied Dalam	6.88	217			Pn	02 55 48.7	-3.5
ODBI	Odobesti	6.90	49	⇓P		Pn	02 55 57.3	+4.8
TLBR	Topalu	6.90	61	⇑P		Pn	02 55 56.3	+3.9
ONER	Baraj Valea Uz	6.91	43	⇓P		Pn	02 55 56.5	+4.0
KNDR	Palaiochora Ch	6.95	152	*e*P		Pn	02 55 56.2	+3.1
GCAM	G?zelcaml?	6.96	120	SPECP			02 55 55.0	
GCAM				P		Pn	02 55 56.0	+2.7
GCAM	G?zelcaml?	6.96	120	*e*P		Pn	02 55 56.9	+3.6
ZCCA	Zocca	6.99	297			Pn	02 55 53.4	-0.2
CONA	Conrad Observa	7.01	339	*e*Pn		Pn	02 55 54.0	0.0
	comp=Z,339nm,0.5s,SNR=161							
CONA				*e*Sn		Sn	02 57 15.1	+1.8
	comp=Z,3μm,0.7s							
MANR	Mangalia	7.02	67	⇓P		Pn	02 55 57.7	+3.7
MFTR	Murfatlar	7.02	64	⇑P		Pn	02 55 57.8	+3.8
GORD	Gordes-Manisa	7.02	108	*e*P		Pn	02 55 56.3	+2.2
PANC	Panciu	7.02	48	⇑P		Pn	02 55 58.3	+4.3
TSMN	Mangalia Port-	7.02	67	⇑P		Pn	02 55 58.1	+4.0
ARMT	Armutlu	7.04	94	*e*P		Pn	02 55 58.4	+4.0
KECS	Kecovo	7.06	5	*e*PN		Pn	02 55 56.6	+2.0
KECS				*e*SN		Sn	02 57 16.6	+2.2
KECS				*e*LG		Lg	02 58 31.6	
MDNY	Mudanya-Bursa	7.09	96	*e*P		Pn	02 55 57.5	+2.4
COSR	Cosmesti PH	7.10	49	⇑P		Pn	02 55 59.0	+3.9
DDIM	Aydin, Didim	7.11	122	SPECP			02 55 59.0	
DDIM				P		Pn	02 55 59.8	+4.5
TIRR	Tirgusor	7.11	62	*e*P		Pn	02 56 01.2	+5.9
TIRR	Tirgusor	7.11	62			Pn	02 55 57.7	+2.4
TIRR	Tirgusor	7.11	62	⇓P		Pn	02 55 59.4	+4.0
TIRR	Tirgusor	7.11	62	P		Pn	02 55 59.3	+4.0
TIRR	Tirgusor	7.11	62	*e*Pn		Pn	02 55 58.0	+2.7
CIMO	Cimolais	7.11	316			Pn	02 55 54.6	-0.7
MODS	Modra-Piesok	7.12	347	*e*P		Pn	02 55 57.2	+1.7
MODS				MLR	MLR			
	comp=Z,204μm,2.8s							
MODS	Modra-Piesok	7.12	347	*e*PN		Pn	02 55 57.2	+1.7
MODS				*e*LG		Lg	02 58 37.7	
EFOR	EFORIE	7.13	65	⇑P		Pn	02 55 58.7	+3.2
TESR	Tescani	7.16	43	⇑P		Pn	02 56 00.4	+4.4
TUDR		7.16	52	⇑P		Pn	02 56 00.2	+4.2
TSCT	Constanta Port	7.17	65	⇑P		Pn	02 56 00.6	+4.4
IZVR	Izvoarele	7.19	53	⇑P		Pn	02 55 59.4	+2.9
KBA	Koelnbreinsper	7.21	323	*i* Pn		Pn	02 55 56.6	-0.3
	comp=Z,463nm,0.3s

comp=Z,467nm,0.4s,SNR=406
SQTA *i* Sn **Sn** **02 57 47.3 +1.0**
comp=Z,2µm,0.6s
TREC Trest 8.37 341 *e*P **Pn** **02 56 14.1 +1.5**
TREC MLR MLR
comp=Z,455µm,15.4s
TREC Trest 8.37 341 *e*PN **Pn** **02 56 14.1 +1.5**
TREC AMS AMS 02 59 40.0
comp=Z,455µm,15.4s
TREC Trest 8.37 341 *e*Pn **Pn** **02 56 14.1 +1.5**
BORA Eskisehir 8.37 97 Pn **Pn** **02 56 13.3 +0.6**
DALY Dalyan (Mula) 8.40 120 *e*P Pn 02 56 19.0 +6.0
ARG Arkhangelos 8.44 126 *e*P **Pn** **02 56 13.5 -0.1**
ARG Arkhangelos 8.44 126 Pn **Pn** **02 56 16.2 +2.6**
ARG Arkhangelos 8.44 126 P **Pn** **02 56 16.2 +2.6**
OKC Ostrava-Krasne 8.45 353 AMS AMS 03 00 00.0
comp=Z,709µm,10.4s
OKC Ostrava-Krasne 8.45 353 *e*Pn **Pn** **02 56 14.8 +1.0**
OKC *e*Sn **Sn** **02 57 48.1 -0.6**
MORC Moravsky Berou 8.46 351 **Pn** **02 56 12.4 -1.4**
MORC Moravsky Berou 8.46 351 ⇑P **Pn** **02 56 16.8 +2.9**
MORC Moravsky Berou 8.46 351 *e*PN **Pn** **02 56 15.3 +1.5**
MORC Moravsky Berou 8.46 351 P **Pn** **02 56 12.4 -1.4**
MORC Moravsky Berou 8.46 351 *e*Pn **Pn** **02 56 15.8 +1.9**
KWP Kalwaria Pacla 8.46 14 *e*P **Pn** **02 56 18.4 +4.5**
KWP *e*S Sn 02 58 01.1 +12
KWP *e*L L 02 59 59.5
comp=Z,746µm,17.1s
APMY Acipayam-Deniz 8.47 115 *e*P Pn 02 56 19.5 +5.5
FETA Feichten 8.48 314 *i* Pn **Pn** **02 56 13.9 -0.3**
comp=Z,1µm,0.8s,SNR=152
FETA *e*Sn **Sn** **02 57 49.1 -0.4**
comp=Z,1µm,0.6s
MOTA Moosalm 8.48 317 *i* Pn **Pn** **02 56 14.1 -0.2**
comp=Z,463nm,0.5s,SNR=318
MOTA *i* Sn **Sn** **02 57 49.2 -0.5**
comp=Z,4µm,0.6s
SAHE Sakarya_HENDEK 8.49 90 ⇓P **Pn** **02 56 18.5 +4.2**
GEC2 GERESS Array S 8.50 332 **Pn** **02 56 14.4 -0.1**
GEC2 GERESS Array S 8.50 332 *e*Pn **Pn** **02 56 14.4 -0.1**
GERES GERESS Array B 8.50 332 Pn **Pn** **02 56 14.6 +0.1**
comp=Z,1.0nm,0.3s,baz=150,slow=14,SNR=196
GERES Sn **Sn** **02 57 48.9 -1.0**
comp=Z,16nm,0.3s,baz=156,slow=23,SNR=5.8
GERES LR LR 03 00 12.8
comp=Z,410µm,18.2s,baz=144,slow=43
comp=Z,289nm,0.8s
FUORN Ofenpass-Fuorn 8.50 311 **Pn** **02 56 13.2 -1.4**
MILM Milestii Mici 8.57 47 ⇑P **Pn** **02 56 18.0 +2.7**
MILM Milestii Mici 8.57 47 P **Pn** **02 56 17.9 +2.7**
MILM Milestii Mici 8.57 47 *e*P **Pn** **02 56 15.5 +0.2**
comp=Z,4µm,1.1s
MILM *i* S **Sn** **02 57 50.0 -1.4**
MILM *e*L L 02 59 36.0
MILM LRM MLR 03 00 14.0
comp=Z,561µm,15.5s
STEB Steborice 8.59 352 *e*PN **Pn** **02 56 17.3 +1.7**
KIS Kishinev 8.62 47 ⇓P **Pn** **02 56 19.5 +3.5**
KIS Kishinev 8.62 47 P **Pn** **02 56 19.4 +3.5**
KIS Kishinev 8.62 47 *e*P **Pn** **02 56 17.0 +1.0**
comp=Z,2µm,0.9s
KIS *e*S **Sn** **02 57 51.0 -1.6**
KIS *e*L L 02 59 33.0
KIS LRM MLR 03 00 20.0
comp=Z,179µm,16.0s
RAC Raciborz 8.70 354 *e*P **Pn** **02 56 17.1 +0.1**
RAC Raciborz 8.70 354 *e*P **Pn** **02 56 17.1 +0.1**
RAC MLR MLR
comp=Z,611µm,14.7s
CAME Cameli-Denizli 8.75 118 *e*P **Pn** **02 56 22.1 +4.1**
RETA Reutte 8.75 317 *i* Pn **Pn** **02 56 17.3 -0.6**
comp=Z,112nm,0.3s,SNR=124
RETA *e*Sn **Sn** **02 57 56.7 +0.5**
comp=Z,1µm,0.5s
BASM Basmaki-Afyon 8.77 110 *e*P **Pn** **02 56 21.5 +3.3**
OJC Ojcow 8.77 1 *e*P **Pn** **02 56 20.6 +2.4**
OJC *e*S **Sn** **02 57 59.5 +2.9**
OJC *e*L L 03 00 12.3
comp=Z,590µm,15.7s
OJC Ojcow 8.77 1 **Pn** **02 56 18.7 +0.6**
OJC Ojcow 8.77 1 P **Pn** **02 56 18.7 +0.6**
OJC Ojcow 8.77 1 *e*Pn **Pn** **02 56 20.7 +2.6**
KHC Kasperske Hory 8.79 333 **Pn** **02 56 17.8 -0.5**
KHC Kasperske Hory 8.79 333 *ce*P **Pn** **02 56 17.8 -0.5**
KHC pmax pmax
comp=Z,506nm,0.8s
KHC Kasperske Hory 8.79 333 *e*PN **Pn** **02 56 18.1 -0.2**
KHC *e*SN **Sn** **02 57 59.1 +2.3**
KHC AMS AMS 03 00 00.0
comp=Z,446µm,16.2s
KHC Kasperske Hory 8.79 333 *e*Pn **Pn** **02 56 18.3 -0.1**
DAVOX Davos/Dischmat 8.81 311 Pn **Pn** **02 56 18.6 -0.2**
comp=Z,10.0nm,0.3s,baz=131,slow=15,SNR=60
DAVOX Sn **Sn** **02 57 58.7 +1.1**
comp=Z,164nm,0.3s,baz=1.3,slow=23,SNR=5.6
DAVOX LR LR 03 00 45.7
comp=Z,256µm,19.4s,baz=116,slow=45
comp=Z,204nm,0.6s
KRLC Kraliky 8.85 348 *e*P **Pn** **02 56 19.9 +0.6**
KRLC MLR MLR
comp=Z,853µm,16.1s
KRLC Kraliky 8.85 348 *e*PN **Pn** **02 56 19.9 +0.6**
KRLC AMS AMS 03 00 20.0
comp=Z,853µm,16.1s
SHUT Suhut-Afyon 8.87 105 *e*P **Pn** **02 56 23.2 +3.7**
TUE Stuetta 8.96 308 **Pn** **02 56 19.5 -1.3**
PURM Purcari 8.96 52 ⇓P **Pn** **02 56 23.9 +3.3**
FUR Furstenfeldbru 8.96 321 *e*Pn **Pn** **02 56 19.8 -1.0**
CIFT Cifteler, Eski 8.97 100 *e*P **Pn** **02 56 25.0 +4.1**
WET Wettzell 9.04 331 *e*Pn **Pn** **02 56 21.3 -0.5**
DAVA Damuels 9.10 313 *i* Pn **Pn** **02 56 22.9 +0.2**
comp=Z,594nm,0.4s,SNR=142
DAVA *i* Sn **Sn** **02 58 04.3 -0.4**
comp=Z,2µm,0.6s
SORM Soroca 9.11 40 ⇓P **Pn** **02 56 26.4 +3.7**
SORM Soroca 9.11 40 P **Pn** **02 56 26.4 +3.7**
ISP Isparta 9.15 110 *e*P Pn 02 56 30.6 +7.2
ISP Isparta 9.15 110 **Pn** **02 56 24.6 +1.3**
ISP Isparta 9.15 110 *e*P **Pn** **02 56 28.0 +4.6**
ISP Isparta 9.15 110 *ce*P **Pn** **02 56 26.9 +3.5**
ISP pmax pmax
comp=Z,648nm,1.3s
BLVD Bolvadin-AFYON 9.17 103 *e*P **Pn** **02 56 27.9 +4.1**
YUVA Yuva-Kibriscik 9.19 93 *e*P **Pn** **02 56 27.1 +3.1**
DPC Dobruska-Polom 9.20 347 AMS AMS 03 00 30.0
comp=Z,815µm,13.3s
DPC Dobruska-Polom 9.20 347 *e*Pn **Pn** **02 56 25.4 +1.4**
UBR Ueberruh 9.22 316 *e*Pn **Pn** **02 56 24.9 +0.7**
PRU Pruhonice 9.25 339 *e*P **Pn** **02 56 26.0 +1.3**
PRU MLR MLR
comp=Z,387µm,16.8s
PRU Pruhonice 9.25 339 *e*PN **Pn** **02 56 26.0 +1.3**
PRU AMS AMS 03 00 20.0
comp=Z,387µm,16.8s
PRU Pruhonice 9.25 339 *e*Pn **Pn** **02 56 25.6 +1.0**
ELL Elmali 9.26 117 *e*P Pn 02 56 30.7 +5.7
SVRH Sivrihisar-ESK 9.28 99 *e*P **Pn** **02 56 28.3 +3.0**
PRA Prague 9.35 339 *e*P **Pn** **02 56 27.5 +1.4**
PRA MLR MLR
comp=Z,392µm,16.4s
PRA Prague 9.35 339 *e*PN **Pn** **02 56 27.5 +1.4**
PRA AMS AMS 03 00 10.0
comp=Z,392µm,16.4s
AKAS Kas 9.36 121 *e*P Pn 02 56 35.2 +8.9
AKAS Kas 9.36 121 **Pn** **02 56 26.9 +0.6**
BCK Bucak 9.36 112 *e*P Pn 02 56 32.3 +6.0
UPC Upice 9.40 346 *e*P **Pn** **02 56 27.9 +1.1**
UPC MLR MLR
comp=Z,627µm,15.3s
UPC Upice 9.40 346 *e*PN **Pn** **02 56 27.9 +1.1**
UPC AMS AMS 03 00 50.0
comp=Z,627µm,15.3s
OSTC Ostas 9.41 347 *e*P **Pn** **02 56 26.7 -0.2**
OSTC MLR MLR
comp=Z,795µm,13.5s
OSTC Ostas 9.41 347 *e*PN **Pn** **02 56 26.7 -0.2**
OSTC AMS AMS 03 00 50.0
comp=Z,795µm,13.5s
KORT Korkueli 9.43 115 *e*P Pn 02 56 34.4 +7.2
CHVC Chvalec 9.47 346 *e*P **Pn** **02 56 28.4 +0.7**
CHVC MLR MLR
comp=Z,633µm,13.9s
CHVC Chvalec 9.47 346 *e*PN **Pn** **02 56 28.4 +0.7**
CHVC AMS AMS 03 00 50.0
comp=Z,633µm,13.9s
KSP Ksiaz 9.68 347 *e*P **Pn** **02 56 34.4 +3.9**
KSP *e*S **Sn** **02 58 17.1 -1.5**
KSP *e*L L 03 00 54.1
comp=Z,864µm,15.6s
KSP Ksiaz 9.68 347 *e*Pn **Pn** **02 56 31.9 +1.4**
ANTB Antalya 9.69 114 *e*P Pn 02 56 37.6 +6.9
POLA Polati-ANKAR 9.70 96 *e*P **Pn** **02 56 34.4 +3.5**
KIZT Kizilcal 9.72 101 *e*P Pn 02 56 36.1 +4.8
PVCC Panska Ves 9.74 341 *e*P **Pn** **02 56 32.4 +1.1**
PVCC MLR MLR
comp=Z,356µm,17.0s
PVCC Panska Ves 9.74 341 *e*PN **Pn** **02 56 32.4 +1.1**
PVCC AMS AMS 03 00 30.0
comp=Z,356µm,17.0s
PVCC Panska Ves 9.74 341 *e*Pn **Pn** **02 56 32.2 +0.9**
ROTZ Rotzenmuhle 9.81 331 *e*Pn **Pn** **02 56 31.1 -1.2**
KURC Kurucasile-Bar 9.82 83 *e*P Pn 02 56 39.8 +7.3
KEST Kesra 9.87 238 Pn **Pn** **02 56 33.1 -0.1**
comp=Z,2.9nm,0.3s,baz=8.1,slow=1.3,SNR=33
KEST Sn **Sn** **02 58 27.4 +3.9**
comp=Z,2.4nm,0.3s,baz=45,slow=16,SNR=0.6
KEST LR LR 03 01 35.7
comp=Z,617µm,19.0s,baz=75,slow=46
comp=Z,118nm,1.2s
KEST Kesra 9.87 238 P Pn 02 56 38.1 +4.9
SNR=75
KEST P Pn 02 56 38.1 +4.9
SNR=75
KEST P Pn 02 56 38.1 +4.9
SNR=75
KEST Kesra 9.87 238 **Pn** **02 56 34.0 +0.8**
RICC Richard 9.88 339 *e*PN **Pn** **02 56 33.9 +0.7**
RICC AMS AMS 03 00 40.0
comp=Z,338µm,15.4s
CIDE Kastamonu/Cide 9.98 83 ⇑P **Pn** **02 56 39.2 +4.6**
MANZ Manzenberg 10.02 331 *e*Pn **Pn** **02 56 33.7 -1.6**
LOD Lodumlu 10.10 95 *e*P **Pn** **02 56 40.6 +4.2**
BNI Bardonecchia 10.11 295 **Pn** **02 56 33.4 -3.2**
BNI Bardonecchia 10.11 295 P **Pn** **02 56 33.4 -3.2**
HSKC Hora Svate Kat 10.12 337 *e*PN **Pn** **02 56 36.7 +0.1**
HSKC AMS AMS 03 00 50.0
comp=Z,381µm,19.2s
ANTO Ankara 10.13 95 *e*P Pn 02 56 43.3 +6.5
ANTO Ankara 10.13 95 Pn **Pn** **02 56 37.9 +1.1**
ANTO Ankara 10.13 95 ⇑P **Pn** **02 56 40.0 +3.2**
ANTO Ankara 10.13 95 P **Pn** **02 56 37.9 +1.1**
ANTO Ankara 10.13 95 P **Pn** **02 56 37.2 +0.4**
ANTO S **Sn** **02 58 35.7 +5.8**
SENIN Lac Senin/Sane 10.16 303 **Pn** **02 56 35.8 -1.6**
BRG Berggiesshubel 10.22 339 *e*Pn **Pn** **02 56 38.1 +0.3**
TANN Tannenbergstha 10.26 333 *e*Pn **Pn** **02 56 39.9 +1.3**
SEYD Seydisehir-KON 10.27 109 *e*P **Pn** **02 56 42.9 +4.1**
LADK Ladik-KONYA 10.32 104 *e*P Pn 02 56 46.2 +6.8
STU Stuttgart 10.39 318 **Pn** **02 56 39.0 -1.2**
STU Stuttgart 10.39 318 *e*P **Pn** **02 56 43.5 +3.3**
STU Stuttgart 10.39 318 P **Pn** **02 56 39.0 -1.2**
STU Stuttgart 10.39 318 *e*Pn **Pn** **02 56 39.9 -0.4**
KONT Konya--Tatoy 10.41 105 *e*P Pn 02 56 48.0 +7.3
BEL Belsk 10.42 4 *e*P **Pn** **02 56 44.1 +3.4**
BEL *e*S Sn 02 58 47.7 +11
BEL *e*L L 03 01 18.2
comp=Z,686µm,16.6s
PLN Plauen 10.42 333 *e*Pn **Pn** **02 56 42.9 +2.2**
AFSR Afar-Bala (An 10.44 97 *e*P **Pn** **02 56 44.4 +3.3**
KULU Kulu 10.50 99 *e*P Pn 02 56 47.1 +5.2
BFO Black Forest 10.56 314 **Pn** **02 56 40.8 -1.8**
BFO Black Forest 10.56 314 P **Pn** **02 56 40.8 -1.8**
BFO Black Forest 10.56 314 *e*Pn **Pn** **02 56 40.7 -1.9**
CHBY Cihanbeyli 10.56 101 *e*P Pn 02 56 47.8 +5.0
ILGA Ilgaz 10.62 87 **Pn** **02 56 43.6 0.0**
CMAH Djebel Manchou 10.65 247 P **Pn** **02 56 46.7 +2.8**
MOX Moxa 10.75 332 *e*Pn **Pn** **02 56 44.1 -1.0**
BZK Bozkurt 10.76 83 *e*P **Pn** **02 56 47.3 +1.9**
BZK Bozkurt 10.76 83 **Pn** **02 56 46.9 +1.6**
ABSA Djebel Ababsia 10.79 245 P **Pn** **02 56 46.3 +0.4**
BR131 Keskin Array S 10.79 95 **Pn** **02 56 46.8 +0.8**
BR131 Keskin Array S 10.79 95 P **Pn** **02 56 46.8 +0.8**
BRTR Keskin Array B 10.79 95 Pn **Pn** **02 56 49.0 +3.1**
comp=Z,1.6nm,0.3s,baz=273,slow=11,SNR=50
BRTR Lg Lg 02 59 51.9
baz=275,slow=33
BRTR LR LR 03 01 46.2
comp=Z,312µm,18.3s,baz=286,slow=42
BRTR PKiKP **PKiKP** **03 10 46.2 +1.0**
comp=Z,2.4nm,0.9s,baz=276,slow=3.9,SNR=3.9
comp=Z,41nm,0.8s
BRTR Keskin Array B 10.79 95 **Pn** **02 56 47.1 +1.1**
BRTR Keskin Array B 10.79 95 *i* P **Pn** **02 56 49.4 +3.4**
BRTR pmax pmax
comp=Z,40nm,0.8s
R9F13 Warsaw-Wawer 10.83 5 *e*P **Pn** **02 56 49.9 +3.7**
R9F13 *e*S **Sn** **02 58 44.9 -1.9**
R9F13 *e*Sn Sn 02 58 51.4 +4.6
CLL Collm 10.87 337 **Pn** **02 56 46.1 -0.7**
CLL Collm 10.87 337 *e*P **Pn** **02 56 49.0 +2.2**
CLL Collm 10.87 337 *e*Pn **Pn** **02 56 46.7 0.0**
CLL Collm 10.87 337 *e*Pn **Pn** **02 56 49.0 +2.2**
CLL *e*Pg 02 57 43.0
CLL *ex* x 02 58 25.0
CLL *e*Sn Sn 02 58 32.0 -16
CLL *ex* x 02 59 02.0
CLL *e*Sb 02 59 16.0
CLL *ex* x 02 59 42.0
CLL *e*Sg 02 59 57.0
CLL AMS AMS 03 01 00.0
KAMT Kaman 10.94 96 *e*P Pn 02 56 54.2 +6.3
SERE Sereflikochisa 10.95 99 *e*P Pn 02 56 55.3 +7.3
CAEH 'Ain El Ouahch 10.97 249 P **Pn** **02 56 48.3 +0.1**
SIM Simferopol' 11.14 67 *e*P **Pn** **02 56 52.6 +2.1**
SIM *e* 02 58 58.0
SIM pmax pmax
comp=Z,7µm,5.9s
SIM smax smax
comp=N,2µm,1.1s
SIM MLR MLR
comp=Z,146µm,13.0s
ECH Echery 11.14 312 **Pn** **02 56 48.8 -1.8**
ECH Echery 11.14 312 P **Pn** **02 56 48.8 -1.8**
SULT Sultanhani-AKS 11.16 102 *e*P Pn 02 56 56.7 +5.8
GAZI Gazipasa 11.17 114 *e*P **Pn** **02 56 55.3 +4.2**
CKFL Kef-Lekhel 11.25 248 P **Pn** **02 56 52.8 +0.6**
KIEV Kiev 11.38 32 **Pn** **02 56 53.0 -0.8**
KIEV Kiev 11.38 32 P **Pn** **02 56 54.9 +1.2**
KIEV Kiev 11.38 32 P **Pn** **02 56 53.0 -0.8**
KRMN Karaman 11.39 108 *e*P Pn 02 57 02.3 +8.2
AKASG Malin Array Be 11.39 32 Pn **Pn** **02 56 55.6 +1.7**
comp=Z,3.9nm,0.3s,baz=223,slow=13,SNR=58
AKASG Lg Lg 03 00 18.2
baz=222,slow=29
AKASG LR LR 03 01 50.5
comp=Z,365µm,18.6s,baz=210,slow=40
AKASG Malin Array Be 11.39 32 **Pn** **02 56 53.5 -0.5**
AKASG Malin Array Be 11.39 32 P **Pn** **02 56 53.5 -0.5**
AKBB Malin Array Si 11.39 32 *i* P **Pn** **02 56 55.2 +1.3**
CORM Corum 11.44 91 *e*P Pn 02 57 04.6 +10
CASM Ain Smara 11.48 247 P Pn 02 57 00.2 +4.9
YESY Yesilyurt 11.48 104 *e*P Pn 02 57 02.8 +7.4
SSB Saint Sauveur 11.63 294 **Pn** **02 56 54.0 -3.3**
SSB Saint Sauveur 11.63 294 P **Pn** **02 56 54.0 -3.3**
CTEI Djebel Teioual 11.64 247 P Pn 02 57 03.5 +6.0
GULA Gulagac 11.64 101 *e*P Pn 02 57 02.8 +5.3
TNS Taunus Mts 11.73 322 *e*Pn **Pn** **02 56 57.4 -1.3**
RUE Ruedersdorf 11.73 342 *e*P **Pn** **02 57 01.7 +3.1**
RUE Ruedersdorf 11.73 342 *i* P **Pn** **02 56 59.1 +0.5**
BERE Bereket-Mersin 11.75 111 *e*P Pn 02 57 03.9 +4.9
MAHO Mahon 11.77 267 P **Pn** **02 57 00.5 +1.3**
MAHO Mahon 11.77 267 **Pn** **02 56 58.1 -1.1**
TEKE Tekeli-Mersin 11.77 112 *e*P Pn 02 57 04.2 +4.9
KOZK Kozakli-Nevseh 11.84 96 *e*P Pn 02 57 07.6 +7.3
GKP Gorka Klasztor 11.94 353 *e*P **Pn** **02 57 03.2 +1.8**
GKP *e*L L 03 01 21.4
comp=Z,183µm,21.2s
GKP Gorka Klasztor 11.94 353 *e*P **Pn** **02 57 03.3 +1.9**
KEBE Keben-Mersin 12.04 110 *e*P Pn 02 57 08.2 +5.2
YOZ Yozgat 12.07 93 *e*P Pn 02 57 09.2 +5.7
GTTG Gottingen 12.09 330 *e*Pn **Pn** **02 57 05.6 +2.1**
CLZ Clausthal 12.18 332 *e*Pn **Pn** **02 57 06.7 +2.0**
CLZ Clausthal 12.18 332 *i* P **Pn** **02 57 05.7 +0.9**
SILI Silifke-Mersin 12.23 110 *e*P P 02 57 12.5 -5.3
SET Setif 12.27 249 P Pn 02 57 12.0 +5.9
CKHR Kef el Ahmar 12.28 248 P **Pn** **02 57 11.0 +4.7**
ASSE Asse, Remlinge 12.31 333 *i* P **Pn** **02 57 06.2 -0.3**
KIZK Mersin 12.33 109 *e*P Pn 02 57 11.9 +5.0
MERS Mersin 12.43 107 *e*P **P** **02 57 16.2 -3.9**
CMRD Camardi-Nigde 12.44 103 *e*P P 02 57 14.5 -5.8
KASTN Kahler Asten 12.45 325 *e*Pn **Pn** **02 57 07.6 -0.8**
WLF Walferdange 12.51 316 P **Pn** **02 57 08.4 -0.8**
WLF Walferdange 12.51 316 **Pn** **02 57 09.2 0.0**
WLF Walferdange 12.51 316 *d*P **Pn** **02 57 09.8 +0.6**
WLF *d*S **Sn** **02 59 23.5 -4.4**
WLF Walferdange 12.51 316 P **Pn** **02 57 09.2 0.0**
WLF Walferdange 12.51 316 *e*Pn **Pn** **02 57 08.9 -0.2**
EJON La Jonquera 12.51 280 P **Pn** **02 57 05.6 -3.7**
LFK Lefkose 12.52 115 *e*P **Pn** **02 57 14.1 +4.6**
CSS Mathiatis 12.56 117 *e*P **Pn** **02 57 14.6 +4.5**
KARA Karaisali 12.65 104 *e*P Pn 02 57 16.4 +5.2
BNN Bunyan 12.68 96 *e*P **P** **02 57 18.2 -4.7**
SUW Suwalki 12.79 9 *e*P **Pn** **02 57 13.8 +0.8**
SUW *e*S **Sn** **02 59 36.0 +1.1**
SUW *e*L L 03 03 01.0
comp=Z,483µm,17.0s
SUW Suwalki 12.79 9 **Pn** **02 57 13.0 -0.1**
SUW Suwalki 12.79 9 *e*P **Pn** **02 57 16.5 +3.5**
SUW Suwalki 12.79 9 P **Pn** **02 57 13.0 -0.1**
SUW Suwalki 12.79 9 *e*Pn **Pn** **02 57 15.9 +2.8**
TOKT Tokat 12.85 89 *e*P **Pn** **02 57 18.1 +4.1**
ETOS Mallorca 12.89 268 P **Pn** **02 57 14.7 +0.1**
BHOU Houvegnez 13.00 318 *d*P **Pn** **02 57 15.1 -0.8**
BTNL Ternell 13.08 319 *d*P **Pn** **02 57 15.7 -1.3**
CORI Orista 13.15 278 **Pn** **02 57 17.1 -1.0**
MEM Membach 13.15 319 *d*P **Pn** **02 57 17.7 -0.3**
MEM *d*S **Sn** **02 59 38.9 -4.8**
CEYT Ceyhan 13.26 104 *e*P **P** **02 57 26.1 -3.1**
SVSK Karacayir 13.27 91 *e*P **Pn** **02 57 23.7 +4.0**
RCHB Rochefort 13.28 316 *d*P **Pn** **02 57 17.8 -1.9**
RCHB *d*S **Sn** **02 59 41.4 -5.3**
BSTI Sart Tilman 13.36 318 *d*P **Pn** **02 57 21.9 +1.1**
BCLA Clavier 13.39 317 *d*P **Pn** **02 57 23.4 +2.1**
BCLA *d*S **Sn** **02 59 45.9 -3.7**
ANN Anapa 13.43 70 *d* iP **Pn** **02 57 20.7 -1.1**
ANN *i* S **Sn** **02 59 51.2 +0.8**
ANN pmax pmax
comp=N,74nm,1.0s
ANN pmax pmax
comp=Z,132nm,0.9s
ANN pmax pmax
comp=E,51nm,0.8s
ANN MLR MLR
comp=Z,82µm,12.0s
ANN MLR MLR
comp=E,92µm,14.0s
ANN MLR MLR
comp=N,40µm,13.0s
BEBN Eben Emael 13.44 319 *d*P **Pn** **02 57 24.5 +2.6**
BEBN *d*S **Sn** **02 59 48.1 -2.5**
BGES Gesves 13.48 316 *d*P **Pn** **02 57 21.5 -1.0**
BGES *d*S **Sn** **02 59 50.1 -1.7**
IBBN Ibbenburen 13.54 327 *i* P **Pn** **02 57 23.8 +0.6**
DOU Dourbes 13.58 315 *d*P **Pn** **02 57 22.6 -1.2**
HAM4 Hamburger Ster 13.59 335 *i* P **Pn** **02 57 24.5 +0.6**
BMRD Maredsous 13.60 316 *d*P **Pn** **02 57 23.2 -1.0**
RGN Rugen 13.76 344 **Pn** **02 57 24.6 -1.6**
RGN Rugen 13.76 344 *i* P **Pn** **02 57 24.1 -2.1**
TAHT Tahtakopru-Hat 13.84 106 *e*P **Pn** **02 57 29.6 +2.1**
KMRS Kahramanmaras 13.91 101 *e*P **P** **02 57 33.4 -3.1**
BSEG Bad Segeberg 13.96 337 *e*Pn **Pn** **02 57 28.4 -0.6**
BSEG Bad Segeberg 13.96 337 *i* P **Pn** **02 57 29.1 +0.1**
BSD Bornholm Skovb 14.03 349 *i* P **Pn** **02 57 28.1 -1.8**
UCC Uccle 14.10 317 **Pn** **02 57 29.8 -1.2**
UCC Uccle 14.10 317 *d*P **Pn** **02 57 30.0 -1.0**
UCC Uccle 14.10 317 P **Pn** **02 57 29.8 -1.2**
MNK Minsk 14.17 20 *i* P **Pn** **02 57 29.3 -2.5**
comp=E,515nm,1.2s
MNK *i* P **Pn** **02 57 29.3 -2.5**
comp=N,96nm,1.2s
MNK *i* P **Pn** **02 57 29.3 -2.5**
comp=Z,303nm,1.0s,baz=207
MNK *i* PP **P** **02 57 37.8 -1.4**
MNK *i* S **Sn** **03 00 05.2 -3.3**
MNK *i* SS **SnSn** **03 00 18.7 -2.1**
MNK *i* LQ LQ 03 01 36.7
MNK *i* LR LR 03 02 23.8
MNK *i* LRM MLR 03 03 17.3
comp=Z,286µm,13.4s
MNK *i* LRM MLR 03 03 24.5
comp=E,347µm,18.1s
MNK *i* LRM MLR 03 03 35.1
comp=N,110µm,16.6s
MNK Minsk 14.17 20 *i* P **Pn** **02 57 29.3 -2.5**
MNK *i* S **Sn** **03 00 05.1 -3.3**
MNK pmax pmax
comp=N,96nm,1.2s
MNK pmax pmax
comp=Z,303nm,1.0s
MNK pmax pmax
comp=E,515nm,1.2s
MNK MLR MLR
comp=Z,286µm,13.0s
MNK MLR MLR
comp=E,347µm,18.0s
MNK MLR MLR
comp=N,110µm,17.0s
EIBI Ibiza 14.18 266 P **Pn** **02 57 31.1 -1.0**
GAZ Gaziantep 14.26 102 *e*P **P** **02 57 37.9 -2.6**
NACGM Naroch 14.27 17 ⇑ *i* P **Pn** **02 57 34.3 +1.0**
PABE Paberze 14.35 10 P **Pn** **02 57 33.3 -1.0**
PABE Paberze 14.35 10 *e*P **P** **02 57 42.8 +1.5**
ILIC ilic-Erzincan 14.56 92 *e*P **P** **02 57 42.5 -1.3**
HWQ Hawqa 14.73 114 *e*P **Pn** **02 57 41.5 +1.7**
BHL Bhannes 14.74 116 *e*P **Pn** **02 57 39.6 -0.3**
ISAL Salakas 14.76 15 *e*P **P** **02 57 47.2 +1.4**
VSVD Vaisvydziai 14.81 9 *e*P **P** **02 57 47.8 +1.4**
SKMB Sankelmark Bun 14.90 336 *i* P **Pn** **02 57 41.1 -0.7**
HNTI Hanita 14.91 119 P **Pn** **02 57 39.3 -2.8**
HLG Helgoland 14.96 332 *i* P **Pn** **02 57 41.7 -0.9**
SOC Sochi 14.96 75 *e*P **Pn** **02 57 43.4 +0.6**
SOC *i* 03 00 31.7
SOC pmax pmax
comp=Z,924nm,1.0s
SOC MLR MLR
comp=Z,43µm,14.0s
COP Copenhagen 15.01 344 *i* P **Pn** **02 57 41.1 -2.2**
OFRI `Ofer 15.08 121 P **Pn** **02 57 41.7 -2.7**
MMA0B Mount Meron ar 15.11 119 P **Pn** **02 57 42.4 -2.4**
MMAI Mount Meron Ar 15.11 119 Pn **Pn** **02 57 43.3 -1.5**
comp=Z,5.6nm,0.3s,baz=312,slow=12,SNR=42
MMAI LR LR 03 04 34.8
comp=Z,87µm,22.0s,baz=307,slow=41
comp=Z,39nm,0.5s
BLGI Bet Lehem HaGe 15.14 120 P **Pn** **02 57 42.5 -2.7**
GEM Giv'at Ha'Em 15.16 118 P **Pn** **02 57 42.7 -2.7**
NATI Neve Ativ 15.18 117 P **Pn** **02 57 43.1 -2.5**
VSLR Vesyoloye 15.19 76 *i* P **Pn** **02 57 47.7 +1.9**
SLTI Sal'it 15.36 122 P **Pn** **02 57 45.7 -2.4**
ERZN Erzincan 15.39 90 *e*P **P** **02 57 51.6 -1.5**
KSHT Keshet 15.39 118 P **Pn** **02 57 46.5 -2.1**
SVRC Sivrice-ELAZID 15.40 95 *e*P **Pn** **02 57 48.9 +0.1**
MMLI Mount Malkishu 15.48 120 *e*P **Pn** **02 57 48.4 -1.3**
MMLI Mount Malkishu 15.48 120 P **Pn** **02 57 47.1 -2.6**
SSRD Sdr. Stenderup 15.50 338 *i* P **Pn** **02 57 48.2 -1.6**
BAYT Aydıntepe-Bayb 15.54 87 *e*P **P** **02 57 54.6 -0.2**
HMDT Nahal Hemdat 15.67 121 P **Pn** **02 57 49.7 -2.4**
ERBR Yeremizino-Bor 15.69 67 *e*P **Pn** **02 57 53.9 +1.6**
ERBR *e*S **Sn** **03 00 51.3 +5.7**
ERBR pmax pmax
comp=Z,615nm,1.0s
ERBR MLR MLR
comp=N,71µm,13.0s
ERBR MLR MLR
comp=Z,120µm,13.0s
ERBR MLR MLR
comp=E,187µm,11.0s
LABN Labinsk 15.74 71 *e*P **P** **02 57 56.3 -0.5**
LABN *e*S **S** **03 00 56.0 -5.5**
LABN pmax pmax
comp=Z,1µm,0.9s
LABN MLR MLR
comp=N,46µm,13.0s
LABN MLR MLR
comp=E,110µm,13.0s
LABN MLR MLR
comp=Z,72µm,15.0s
ECHE Chera 15.78 270 P **Pn** **02 57 50.9 -2.6**
UJAP Al Uja 15.82 122 *e*P **Pn** **02 57 51.0 -3.0**

KOPT	**Kop Dagi**	**15.88**	**88**	Pn		**Pn**	**02 57 55.5**	**+0.4**
CHOM	**Cayeli-Rize**	**15.89**	**84**	*e*P		**P**	**02 57 57.5**	**-1.0**
YTIR	**Yattir**	**16.00**	**124**	P		**Pn**	**02 57 52.9**	**-3.5**
DSI	**Dead Sea**	**16.02**	**123**	P		**Pn**	**02 57 53.5**	**-3.2**
DYBB	**Diyarbakir**	**16.16**	**96**	*e*P		**P**	**02 58 02.8**	**+1.2**
MSBI	**Mazada**	**16.18**	**124**	P		**Pn**	**02 57 55.6**	**-3.0**
BNGB	**Bingl**	**16.26**	**92**	*e*P		**P**	**02 58 02.7**	**0.0**
SLIT	**Slitere, Latvi**	**16.29**	**5**	*e*P		**P**	**02 58 03.1**	**+0.4**
GHAJ	**Ghor Haditha**	**16.32**	**123**	Pn		**Pn**	**02 57 58.9**	**-1.5**
GHAJ	**Ghor Haditha**	**16.32**	**123**	P		**Pn**	**02 57 57.6**	**-2.8**
CART	**Cartagena**	**16.38**	**263**	P		**Pn**	**02 57 58.7**	**-2.4**
CART	**Cartagena**	**16.38**	**263**	Pn		**Pn**	**02 58 00.1**	**-1.0**
ETOB	**Tobarra**	**16.45**	**267**	P		**Pn**	**02 58 01.1**	**-1.1**
EMUR	**La Murta**	**16.47**	**264**	P		**Pn**	**02 58 00.2**	**-2.1**
MUD	**Monsted U'grnd**	**16.48**	**339**	*i* P		**Pn**	**02 58 01.0**	**-1.3**
BATM	**Batumi**	**16.52**	**82**	*e*P		**P**	**02 58 04.9**	**-0.6**
VORD	**Divnogorie**	**16.56**	**48**	*e*P		**Pn**	**02 58 03.1**	**-0.3**
VORD				*e*S		**S**	**03 01 15.2**	**-2.9**
VORD					pmax	pmax		
	comp=Z,2µm,1.1s							
VORD					smax	smax		
	comp=N,2µm,6.1s							
VORD					MLR	MLR		
	comp=Z,106µm,9.0s							
ZFRI	**Zfri**	**16.60**	**126**	P		**Pn**	**02 58 01.7**	**-2.2**
VSR	**Storozhevoye**	**16.61**	**47**	*e*P		**Pn**	**02 58 02.0**	**-2.0**
VSR				*e*S		**Sn**	**03 01 12.4**	**+4.6**
VSR					pmax	pmax		
	comp=Z,2µm,1.2s							
VSR					smax	smax		
	comp=E,5µm,6.4s							
VSR					MLR	MLR		
	comp=Z,466µm,17.0s							
ASF	**Jabal al Asfar**	**16.61**	**118**	Pn		**P**	**02 58 07.4**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=287,slow=10,SNR=18							
PRNI	**Paran**	**16.64**	**127**	P		**Pn**	**02 58 02.1**	**-2.4**
KRMI	**Paran Flat**	**16.64**	**128**	P		**Pn**	**02 58 00.9**	**-3.6**
VRTB	**Varto-Mus**	**16.80**	**91**	*e*P		**P**	**02 58 09.8**	**+1.0**
VORR	**Voronezh**	**16.85**	**46**	*e*P		**Pn**	**02 58 07.4**	**+0.3**
VORR				*e*S		**Sn**	**03 01 18.1**	**+4.4**
VORR					pmax	pmax		
	comp=Z,2µm,1.0s							
VORR					smax	smax		
	comp=E,2µm,5.5s							
VORR					MLR	MLR		
	comp=Z,149µm,11.0s							
HRFI	**Mount Harif**	**16.88**	**128**	P		**Pn**	**02 58 04.6**	**-3.0**
KOPR	**Koprukoy-ERZUR**	**16.91**	**88**	*e*P		**P**	**02 58 11.8**	**+1.9**
GOET	**G??ttrup**	**16.98**	**340**	*i* P		**Pn**	**02 58 08.0**	**-0.6**
MBRI	**Mt Bersch**	**16.99**	**128**	P		**Pn**	**02 58 06.5**	**-2.5**
OVD	**Ostervraa, Den**	**17.00**	**342**	*i* P		**Pn**	**02 58 08.0**	**-0.9**
SHA1	**Shidzhatmaz**	**17.10**	**75**	*i* P		**P**	**02 58 11.9**	**-0.2**
EIL	**Elat**	**17.10**	**129**	P		**Pn**	**02 58 05.8**	**-4.5**
	comp=Z,64nm,0.6s,baz=324,slow=14,SNR=38							
EIL					S	Sn	03 01 06.8	-13
	comp=Z,212nm,0.8s,baz=8,2,slow=7.3,SNR=5.8							
EIL	**Elat**	**17.10**	**129**	P		**Pn**	**02 58 07.3**	**-3.0**
WACR	**West Acre**	**17.11**	**318**	*e*P		**Pn**	**02 58 10.0**	**-0.2**
KIV	**Kislovodsk**	**17.12**	**74**	*e*P		**P**	**02 58 13.0**	**+0.8**
KIV	**Kislovodsk**	**17.12**	**74**	Pn		**Pn**	**02 58 11.0**	**+0.4**
KIV	**Kislovodsk**	**17.12**	**74**	*i* P		**Pn**	**02 58 10.4**	**-0.2**
	SNR=224							
KIV	**Kislovodsk**	**17.12**	**74**	*e*P		**P**	**02 58 12.5**	**+0.3**
KIV				*e*S		**Sn**	**03 01 23.7**	**+3.2**
KIV					pmax	pmax		
	comp=Z,567nm,1.1s							
KIV					MLR	MLR		
	comp=Z,24µm,14.0s							
KIV	**Kislovodsk**	**17.12**	**74**	P		**Pn**	**02 58 10.8**	**+0.2**
KIV				S		**Sn**	**03 01 21.1**	**+0.6**
KVAR	**Kislovodsk Arr**	**17.13**	**74**	P		**P**	**02 58 12.6**	**+0.3**
	baz=108,slow=20							
KVAR					LR	LR	03 06 27.8	
	comp=Z,50µm,18.8s,baz=194,slow=43							
	comp=Z,12nm,0.7s							
NEUR	**Neytrino**	**17.14**	**76**	*i* P		**P**	**02 58 14.2**	**+1.7**
SENK	**Senkaya-Erzuru**	**17.17**	**85**	*e*P		**P**	**02 58 12.5**	**-0.4**
LPSR	**Galich'ya Gora**	**17.19**	**43**	*ce*P		**Pn**	**02 58 09.3**	**-1.9**
LPSR				*e*S		**Sn**	**03 01 23.7**	**+1.9**
LPSR					pmax	pmax		
	comp=Z,3µm,1.4s							
LPSR					MLR	MLR		
	comp=Z,348µm,18.0s							
KBZ	**Khabaz**	**17.27**	**75**	P		**P**	**02 58 15.3**	**+1.6**
	comp=Z,141nm,0.8s,baz=280,slow=8.9,SNR=82							
KBZ					S	**S**	**03 01 32.6**	**-0.1**
	comp=Z,47nm,1.1s,baz=57,slow=14,SNR=1.2							
KBZ					LR	LR	03 06 50.9	
	comp=Z,54µm,19.1s,baz=282,slow=44							
KBZ	**Khabaz**	**17.27**	**75**	*ce*P		**P**	**02 58 13.7**	**-0.1**
KBZ					pmax	pmax		
	comp=Z,66nm,0.5s							
KBZ					MLR	MLR		
	comp=Z,47µm,15.0s							
UCM	**Universidad Co**	**17.33**	**274**	P		**P**	**02 58 14.0**	**-0.6**
GURO	**Guroymak-BITLI**	**17.40**	**92**	*e*P		**P**	**02 58 17.8**	**+2.4**
GOF	**Gofitskoye**	**17.42**	**70**	*c* *i*P		**P**	**02 58 14.9**	**-0.5**
VSU	**Vasula**	**17.62**	**12**	*e*P		**P**	**02 58 17.0**	**-0.5**
VSU	**Vasula**	**17.62**	**12**	*ce*P		**Pn**	**02 58 13.3**	**-3.2**
VSU					pmax	pmax		
	comp=Z,2µm,0.6s							
VSU					MLR	MLR		
	comp=Z,282µm,17.0s							
MLAZ	**Malazgirt-MUS**	**17.63**	**90**	*e*P		**P**	**02 58 19.5**	**+1.6**
OBN	**Obninsk**	**17.65**	**34**	P		**Pn**	**02 58 16.3**	**-0.7**
	comp=Z,24nm,0.3s,baz=16,slow=1.5,SNR=38							
OBN					S	**S**	**03 01 37.6**	**-2.7**
	comp=Z,137nm,0.8s,baz=264,slow=19,SNR=1.9							
OBN					LR	LR	03 05 37.6	
	comp=Z,193µm,19.4s,baz=166,slow=39							
	comp=Z,427nm,0.8s							
OBN	**Obninsk**	**17.65**	**34**	Pn		**Pn**	**02 58 14.8**	**-2.2**
OBN	**Obninsk**	**17.65**	**34**	*ce*P		**Pn**	**02 58 14.9**	**-2.1**
OBN				*e*S		**Sn**	**03 01 33.7**	**+0.7**
OBN					pmax	pmax		
	comp=Z,612nm,1.0s							
OBN					MLR	MLR		
	comp=Z,175µm,17.0s							
SWN1	**Swindon**	**17.80**	**312**	*e*P		**P**	**02 58 20.0**	**+0.5**
AGRB	**Hanur-Agry**	**17.85**	**88**	*e*P		**P**	**02 58 22.4**	**+2.0**
BGD	**Bogdanovka**	**17.99**	**83**	*e*P		**P**	**02 58 23.8**	**+1.9**
ESBB	**Sonseca Array**	**18.01**	**272**			**Pn**	**02 58 21.0**	**-0.6**
ESDC	**Sonseca Array**	**18.01**	**272**	P		**Pn**	**02 58 21.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=77,slow=10,SNR=28							
ESDC					S	**Sn**	**03 01 41.3**	**-0.7**
	comp=Z,26nm,1.2s,baz=72,slow=7.3,SNR=1.3							
ESDC					LR	LR	03 05 41.7	
	comp=Z,99µm,19.4s,baz=78,slow=39							
ESDC				P3KPbc			03 33 08.2	
	comp=Z,1.3nm,0.9s,baz=259,slow=4.8,SNR=4.0							
	comp=Z,110nm,1.1s							
ESDC	**Sonseca Array**	**18.01**	**272**			**Pn**	**02 58 20.2**	**-1.4**
VRH	**Novokhopyorsk**	**18.04**	**50**	*e*P		**Pn**	**02 58 20.9**	**-0.9**
VRH				*e*S		**S**	**03 01 47.6**	**-0.7**
VRH					pmax	pmax		
	comp=Z,1µm,1.0s							
VRH					smax	smax		
	comp=E,6µm,6.3s							
VRH					MLR	MLR		
	comp=Z,241µm,13.0s							
CWF	**Charnwood Fore**	**18.11**	**316**	*e*P		**Pn**	**02 58 22.5**	**-0.2**
STRD	**Stroud**	**18.12**	**312**	*e*P		**P**	**02 58 23.0**	**-0.1**
AKDM	**Akdamar-Van**	**18.18**	**92**	*e*P		**P**	**02 58 25.9**	**+1.9**
HOMB	**Homborsund**	**18.26**	**341**	*e*P		**Pn**	**02 58 23.2**	**-1.2**
HOMB				*e*S		**Sn**	**03 01 49.1**	**+1.5**
HOMB	**Homborsund**	**18.26**	**341**	*i* P		**Pn**	**02 58 22.9**	**-1.5**
PAB	**San Pablo**	**18.33**	**272**			**Pn**	**02 58 24.2**	**-1.3**
PAB	**San Pablo**	**18.33**	**272**	P		**Pn**	**02 58 24.2**	**-1.3**
PAB					pmax	pmax		
	comp=Z,682nm,1.7s							
ARBE	**Arbavere**	**18.44**	**10**	*e*P		**Pn**	**02 58 27.2**	**+0.6**
MONM	**Monmouth**	**18.51**	**312**	*e*P		**Pn**	**02 58 28.2**	**+0.7**
MONM					IAMs_20	IAMs_20	03 08 04.4	
	comp=Z,209µm,19.1s							
MOS	**Moscow**	**18.52**	**33**	*c* *i*P		**P**	**02 58 24.5**	**-2.9**
MOS				*e*S		**Sn**	**03 01 51.7**	**-2.3**
MOS					pmax	pmax		
	comp=Z,16µm,2.8s							
MOS					pmax	pmax		
	comp=N,21µm,4.6s							
MOS					pmax	pmax		
	comp=E,27µm,4.6s							
MOS					pmax	pmax		
	comp=N,1µm,0.9s							
MOS					pmax	pmax		
	comp=E,2µm,0.9s							
MOS					pmax	pmax		
	comp=Z,4µm,1.0s							
MOS					smax	smax		
	comp=N,24µm,4.3s							
MOS					smax	smax		
	comp=E,17µm,4.5s							
MOS					MLR	MLR		
	comp=N,102µm,15.0s							
MOS					MLR	MLR		
	comp=E,118µm,15.0s							
MOS					MLR	MLR		
	comp=Z,172µm,15.0s							
SNART	**Snartemo**	**18.65**	**339**	*e*P		**Pn**	**02 58 30.8**	**+1.6**
SNART				IVmB_BB			02 58 41.9	
	comp=Z,41µm,7.2s							
SNART				*e*S		**S**	**03 01 59.3**	**-1.1**
SNART	**Snartemo**	**18.65**	**339**	*i* P		**Pn**	**02 58 29.9**	**+0.7**
LBWR	**Ladybower, Pea**	**18.67**	**317**	*e*P		**P**	**02 58 28.5**	**-0.6**
LBWR				IAMs_20		IAMs_20	03 08 41.3	
	comp=Z,130µm,16.8s							
MCH1	**Michaelchurch**	**18.68**	**312**	*e*P		**P**	**02 58 29.1**	**-0.1**
MCH1				IAMs_20		IAMs_20	03 08 37.0	
	comp=Z,212µm,15.9s							
TASB	**TASBURUN-IGDIR**	**18.70**	**86**	*e*P		**P**	**02 58 29.1**	**-0.5**
WMELI	**Melilla**	**18.71**	**258**	P		**P**	**02 58 27.5**	**-2.2**
AAL	**Aland**	**18.76**	**1**	*e*P		**P**	**02 58 28.8**	**-1.2**
TBLG	**Delisi**	**18.77**	**81**	*e*P		**Pn**	**02 58 32.3**	**+1.5**
HLM1	**Long Mynd**	**18.85**	**314**	*e*P		**P**	**02 58 30.6**	**-0.5**
HLM1				IAMs_20		IAMs_20	03 09 00.3	
	comp=Z,316µm,14.2s							
HPK	**Haverah Park**	**18.91**	**319**	*e*P		**P**	**02 58 31.1**	**-0.7**
HPK				IAmb		IAmb	02 58 39.6	
	comp=Z,2µm,1.5s							
MEF	**Metsahovi**	**19.02**	**7**	*e*P		**Pn**	**02 58 34.5**	**+0.8**
GNI	**Garni**	**19.04**	**86**	P		**Pn**	**02 58 35.0**	**+0.8**
	comp=Z,12nm,0.3s,baz=244,slow=1.2,SNR=116							
GNI					LR	LR	03 06 41.9	
	comp=Z,37µm,18.8s,baz=289,slow=39							
	comp=Z,369nm,0.8s							
GNI	**Garni**	**19.04**	**86**	*e*P		**P**	**02 58 30.7**	**-2.8**
GNI	**Garni**	**19.04**	**86**	P		**Pn**	**02 58 35.2**	**+1.0**
GNI				P		**Pn**	**02 58 35.2**	**+1.0**
GNI				S		**Sn**	**03 02 07.4**	**+0.3**
GNI				S		**Sn**	**03 02 07.4**	**+0.3**
GNI	**Garni**	**19.04**	**86**			**Pn**	**02 58 34.1**	**-0.2**
GNI				IAmb		IAmb	02 58 47.3	
	comp=Z,2µm,1.1s							
GNI	**Garni**	**19.04**	**86**	P		**Pn**	**02 58 34.7**	**+0.4**
GNI	**Garni**	**19.04**	**86**	*ce*P		**Pn**	**02 58 34.4**	**+0.1**
GNI					pmax	pmax		
	comp=Z,175nm,0.6s							
GNI					MLR	MLR		
	comp=Z,30µm,16.0s							
HFS	**Hagfors**	**19.07**	**351**	P		**P**	**02 58 32.4**	**-1.0**
	comp=Z,28nm,0.3s,baz=168,slow=9.2,SNR=119							
HFS					S	**Sn**	**03 01 59.1**	**-8.0**
	comp=Z,43nm,1.0s,baz=177,slow=29,SNR=1.2							
HFS					LR	LR	03 06 17.2	
	comp=Z,91µm,20.5s,baz=170,slow=38							
	comp=Z,522nm,0.7s							
HTL	**Hartland**	**19.15**	**308**	*e*P		**Pn**	**02 58 35.8**	**+0.5**
HTL				IAMs_20		IAMs_20	03 08 24.1	
	comp=Z,158µm,15.8s							
FOEL	**Foel Wylfa**	**19.19**	**314**	*e*P		**Pn**	**02 58 35.8**	**0.0**
FOEL				IAMs_20		IAMs_20	03 09 12.0	
	comp=Z,323µm,15.1s							
KONO	**Kongsberg**	**19.27**	**344**			**P**	**02 58 34.1**	**-1.4**
KONO				IAmb		IAmb	02 58 40.0	
	comp=Z,2µm,1.7s							
KONO	**Kongsberg**	**19.27**	**344**	*e*P		**P**	**02 58 35.4**	**-0.2**
KONO				IVmB_BB			02 58 37.2	
	comp=Z,20µm,3.0s							
KONO	**Kongsberg**	**19.27**	**344**	*ce*P		**P**	**02 58 33.4**	**-2.2**
KONO					pmax	pmax		
	comp=Z,79nm,0.7s							
KONO					MLR	MLR		
	comp=Z,154µm,17.0s							
OSL	**Oslo**	**19.32**	**346**	*e*P		**P**	**02 58 35.6**	**-0.5**
OSL				IVmB_BB			02 58 37.7	
	comp=Z,24µm,3.2s							
CCA1	**Carnmenellis**	**19.33**	**305**	*e*P		**P**	**02 58 36.7**	**+0.3**
CCA1				IAmb		IAmb	02 58 40.8	
	comp=Z,139nm,0.8s							
CCA1				IAMs_20		IAMs_20	03 09 34.0	
	comp=Z,190µm,13.7s							
LLW	**Llanuwychllyn**	**19.43**	**314**	*e*P		**P**	**02 58 37.3**	**-0.1**
PUL	**Pulkovo**	**19.51**	**16**	*e*P		**Pn**	**02 58 39.4**	**-0.2**
PUL	**Pulkovo**	**19.51**	**16**	*ce*P		**P**	**02 58 37.3**	**-1.0**
PUL					pmax	pmax		
	comp=Z,675nm,0.5s							
PUL					MLR	MLR		
	comp=Z,299µm,18.0s							
EDMD	**Edmundbyers**	**19.56**	**321**	*e*P		**P**	**02 58 38.0**	**-0.9**
EDMD				IAMs_20		IAMs_20	03 07 49.5	
	comp=Z,173µm,14.5s							
STAV	**Stavanger**	**19.57**	**338**	*i* P		**P**	**02 58 37.9**	**-1.0**
RAF	**Rauma**	**19.65**	**3**	*e*P		**Pn**	**02 58 41.0**	**-0.2**
RSBS	**Rosebush, Pemb**	**19.65**	**311**	*e*P		**Pn**	**02 58 40.5**	**-0.8**
PBRG	**Braganca**	**19.70**	**280**	*e*P		**P**	**02 58 39.7**	**-0.9**
PBRG				*i* IAmb		IAmb	02 59 04.7	
	comp=Z,1µm,1.4s							
BLS5	**Blasjo**	**19.79**	**340**	*e*P		**Pn**	**02 58 42.0**	**-0.9**
BLS5				IVmB_BB			02 58 54.8	
	comp=Z,22µm,10.4s							
BLS5				*e*S		**S**	**03 02 20.6**	**-2.7**
KMY	**Karmoy**	**19.93**	**338**	*e*P		**P**	**02 58 41.3**	**-1.6**
KMY				IVmB_BB			02 58 51.5	
	comp=Z,14µm,3.1s							
KMY				*e*S		**S**	**03 02 22.7**	**-3.5**
NC602	**NORSAR Array S**	**19.94**	**348**	P		**P**	**02 58 41.0**	**-1.9**
NC602				IAmb		IAmb	02 58 46.6	
	comp=Z,2µm,1.6s							
NC602	**NORSAR Array S**	**19.94**	**348**	*e*P		**P**	**02 58 42.3**	**-0.6**
NC602				IVmB_BB			02 58 44.8	
	comp=Z,22µm,3.5s							
KESW	**Keswick, Cumbr**	**19.99**	**319**	*e*P		**P**	**02 58 43.2**	**-0.2**
KESW				IAMs_20		IAMs_20	03 07 11.8	
	comp=Z,127µm,20.8s							
MVO	**Moncorvo**	**20.01**	**278**	*e*P		**P**	**02 58 43.0**	**-1.0**
MVO				*i* IAmb		IAmb	02 58 52.3	
	comp=Z,1µm,1.4s							
MVO				*e*S		**S**	**03 02 27.3**	**-0.9**
MVO				*i* IAMs_20		IAMs_20	03 07 60.0	
	comp=Z,104µm,18.0s							
WLF1	**Llynfaes**	**20.02**	**314**	*e*P		**P**	**02 58 44.0**	**+0.2**
WLF1				IAMs_20		IAMs_20	03 09 37.7	
	comp=Z,547µm,14.8s							
NAO01	**NORSAR Array S**	**20.15**	**348**	P		**P**	**02 58 44.0**	**-1.2**
ODD1	**Odda**	**20.17**	**341**	*e*P		**P**	**02 58 44.8**	**-0.7**
ODD1				IVmB_BB			02 58 58.3	
	comp=Z,12µm,13.8s							
ODD1				*e*S		**S**	**03 02 29.4**	**-1.6**
CEU	**Ceuta**	**20.26**	**262**	P		**P**	**02 58 43.7**	**-2.9**
NC405	**NORSAR Array S**	**20.28**	**349**			**P**	**02 58 45.6**	**-1.0**
NB201	**NORSAR Array S**	**20.28**	**348**	P		**P**	**02 58 44.9**	**-1.7**
NB201				IAmb		IAmb	02 58 57.9	
	comp=Z,2µm,1.6s							
NB2	**NORSAR Subarra**	**20.28**	**348**	P		**P**	**02 58 44.4**	**-2.3**
	comp=Z,756nm,1.1s,baz=162,slow=11							
NOA	**NORSAR Array B**	**20.28**	**348**	P		**P**	**02 58 45.5**	**-1.2**
	comp=Z,264nm,0.9s,baz=348,slow=19,SNR=147							
NOA					S	**S**	**03 02 30.9**	**-2.4**
	comp=Z,19nm,1.0s,baz=162,slow=20,SNR=1.7							
NOA					LR	LR	03 07 54.6	
	comp=Z,143µm,18.7s,baz=170,slow=41							
NOA				P3KPbc			03 33 01.1	
	comp=Z,1.2nm,0.9s,baz=348,slow=5.3,SNR=3.4							
	comp=Z,264nm,0.9s							
NBO00	**NORSAR Array S**	**20.34**	**348**			**P**	**02 58 46.1**	**-1.2**
NBO00				IAmb		IAmb	02 58 54.4	
	comp=Z,899nm,1.1s							
FINES	**FINES Array B**	**20.40**	**9**	P		**P**	**02 58 47.0**	**-0.9**
	comp=Z,918nm,0.7s,baz=177,slow=7.7,SNR=239							
FINES					S	**S**	**03 02 33.2**	**-2.3**
	comp=Z,33nm,0.6s,baz=201,slow=11,SNR=1.9							
FINES					LR	LR	03 07 48.2	
	comp=Z,379µm,18.1s,baz=194,slow=40							
	comp=Z,918nm,0.7s							
FINES	**FINES Array B**	**20.40**	**9**	P		**P**	**02 58 47.2**	**-0.7**
FINES	**FINES Array B**	**20.40**	**9**	*i* P		**P**	**02 58 46.7**	**-1.2**
FINES					pmax	pmax		
	comp=Z,2µm,1.0s							
FIA1	**FINES Array S**	**20.40**	**9**	P		**P**	**02 58 47.2**	**-0.8**
EKA	**Eskdalemuir Ar**	**20.41**	**321**	P		**P**	**02 58 47.9**	**-0.3**
	comp=Z,351nm,0.8s,baz=115,slow=10.0,SNR=110							
EKA				*e*S		**S**	**03 02 33.6**	**-2.2**
	comp=Z,64nm,1.2s,baz=129,slow=9.4,SNR=1.7							
	comp=Z,351nm,0.8s							
ESK	**Eskdalemuir**	**20.43**	**321**	P		**P**	**02 58 47.2**	**-1.0**
ESK				IAmb		IAmb	02 59 03.4	
	comp=Z,1µm,1.1s							
ESK	**Eskdalemuir**	**20.43**	**321**	*e*P		**P**	**02 58 48.0**	**-0.3**
ESK				IAmb		IAmb	02 58 52.4	
	comp=Z,856nm,1.0s							
ESK				IAMs_20		IAMs_20	03 08 25.0	
	comp=Z,161µm,14.9s							
ESK	**Eskdalemuir**	**20.43**	**321**	P		**P**	**02 58 47.3**	**-1.0**
ESK				pmax		pmax		
	comp=Z,1µm,1.1s							
ESK				MLR		MLR		
	comp=Z,105µm,20.0s							
NC303	**NORSAR Array S**	**20.43**	**349**	P		**P**	**02 58 47.3**	**-1.0**
NC303				IAmb		IAmb	02 58 51.6	
	comp=Z,1µm,1.0s							
SKAR	**Skarslia**	**20.47**	**344**	*e*P		**P**	**02 58 48.8**	**0.0**
SKAR				IVmB_BB			02 58 59.3	
	comp=Z,14µm,4.6s							
SKAR				*e*S		**S**	**03 02 33.2**	**-3.9**
PVRL	**Vila Real**	**20.50**	**279**	*e*P		Pn	02 58 50.7	-0.7
PVRL				*i* IAmb		IAmb	02 59 10.4	
	comp=Z,2µm,1.7s							
MTE	**Manteigas**	**20.54**	**276**	P		**P**	**02 58 48.5**	**-1.2**
MTE	**Manteigas**	**20.54**	**276**	*e*P		**P**	**02 58 49.1**	**-0.5**
MTE				*i* IAmb		IAmb	02 59 11.6	
	comp=Z,1µm,1.8s							
MTE				*e*S		**S**	**03 02 37.1**	**-1.6**
MTE				*i* IAMs_20		IAMs_20	03 08 47.4	
	comp=Z,94µm,16.0s							
MTE	**Manteigas**	**20.54**	**276**	*e*P		**P**	**02 58 48.9**	**-0.7**
POLO	**Lamas de Olo**	**20.54**	**279**	*e*P		Pn	02 58 51.4	-0.7
POLO				*i* IAmb		IAmb	02 59 11.2	
	comp=Z,1µm,1.8s							
IOMK	**Kirk Michael**	**20.56**	**317**	*e*P		**P**	**02 58 49.3**	**-0.4**
IOMK				IAMs_20		IAMs_20	03 09 51.0	
	comp=Z,94µm,14.1s							
NC204	**NORSAR Array S**	**20.58**	**348**	P		**P**	**02 58 48.6**	**-1.3**
NC204				IAmb		IAmb	02 59 02.6	
	comp=Z,1µm,1.1s							
NC204	**NORSAR Array S**	**20.58**	**348**	*e*P		**P**	**02 58 50.1**	**+0.2**
CNIL	**Conil**	**20.59**	**264**	P		**P**	**02 58 49.9**	**-0.3**
PCBR	**Castelo Branco**	**20.61**	**275**	*e*P		**P**	**02 58 50.5**	**+0.1**
PCBR				*i* IAmb		IAmb	02 59 13.2	
	comp=Z,877nm,1.6s							
PMRV	**Marv??o**	**20.64**	**273**	*e*P		**P**	**02 58 49.8**	**-0.9**
PMRV				*i* IAmb		IAmb	02 59 00.1	
	comp=Z,1µm,1.7s							
PMRV				*e*S		**S**	**03 02 39.8**	**-0.9**
PMRV				*i* IAMs_20		IAMs_20	03 09 05.3	
	comp=Z,80µm,18.0s							
PCAB	**Cabril**	**20.66**	**280**	*e*P		**P**	**02 58 51.2**	**+0.2**
PCAB				*i* IAmb		IAmb	02 59 01.4	
	comp=Z,2µm,1.9s							
SFS	**San Fernando**	**20.67**	**265**	P		**P**	**02 58 48.3**	**-2.7**
SFS	**San Fernando**	**20.67**	**265**	P		**P**	**02 58 50.3**	**-0.7**
SFS				IAMs_20		IAMs_20	03 06 55.3	
	comp=Z,184µm,20.0s							
SFS	**San Fernando**	**20.67**	**265**	P		**P**	**02 58 50.3**	**-0.7**
SFS				pmax		pmax		
	comp=Z,5µm,1.0s							
SFS				MLR		MLR		
	comp=Z,184µm,20.0s							
MAK	**Makhachkala**	**20.67**	**76**	*d* *i*P		**P**	**02 58 51.0**	**0.0**
MAK				*e*S		Sn	03 02 44.2	-1.8
MAK				pmax		pmax		
	comp=Z,2µm,1.0s							
MAK				MLR		MLR		
	comp=Z,92µm,13.0s							
PBAR	**Barrancos**	**20.72**	**270**	ǁ*e*P		**P**	**02 58 49.7**	**-1.8**
PBAR				*i* IAmb		IAmb	02 59 19.6	
	comp=Z,4µm,1.6s							
PVIS	**Viseu**	**20.73**	**277**	*e*P		Pn	02 58 53.2	-1.0
EDI	**Edinburgh**	**20.76**	**322**	*e*P		**P**	**02 58 51.2**	**-0.6**
EDI				IAMs_20		IAMs_20	03 08 38.6	
	comp=Z,190µm,15.0s							
NEWG	**New Galloway**	**20.82**	**319**	*e*P		**P**	**02 58 51.9**	**-0.6**
NEWG				IAMs_20		IAMs_20	03 07 36.5	
	comp=Z,120µm,20.2s							
BER	**Bergen**	**20.91**	**340**	*e*P		**P**	**02 58 52.6**	**-0.7**
BER				IVmB_BB			02 59 05.8	
	comp=Z,12µm,3.5s							
BER				*e*S		**S**	**03 02 44.5**	**-1.0**
BER	**Bergen**	**20.91**	**340**	*i* P		**P**	**02 58 51.8**	**-1.5**
GAL1	**Galloway**	**20.93**	**318**	*e*P

PVAQ **Vaqueiros** 21.47 268 ⇓ *e* P P 02 59 00.2 +0.5
PVAQ *i* IAmb IAmb 02 59 22.0
comp=Z,4μm,1.6s
PVAQ *e* S S 03 02 56.1 -1.0
PVAQ *i* IAMs_20 IAMs_20 03 09 33.5
comp=Z,47μm,16.0s
DOMB **Dombas** 21.58 346 *e* P P 02 59 00.1 -0.6
DOMB IVmB_BB 02 59 14.9
comp=Z,22μm,3.2s
DOMB *e* S S 03 02 55.6 -3.3
MOE **Montemor** 21.60 271 ⇓ *e* P P 02 59 01.9 +0.8
MOE *i* IAmb IAmb 02 59 24.1
comp=Z,2μm,1.4s
SUE **Sulen** 21.63 340 *e* P P 02 59 00.2 -0.9
SUE IVmB_BB 02 59 15.8
comp=Z,12μm,3.5s
SUE *e* S S 03 02 58.7 -1.0
PCVE **Castro Verde** 21.64 269 ⇓ *e* P P 02 59 02.2 +0.7
PCVE *i* IAmb IAmb 02 59 24.5
comp=Z,2μm,1.5s
PSBE **So Bento** 21.67 274 *e* P P 02 59 02.8 +0.9
PSBE *i* IAmb IAmb 02 59 28.3
comp=Z,2μm,1.5s
PBDV **Barranco-do-Ve** 21.69 268 ⇓ *e* P P 02 59 03.1 +1.1
PBDV *i* IAmb IAmb 02 59 24.5
comp=Z,4μm,1.6s
VAF **Ylistaro** 21.70 4 *e* P P 02 59 03.2 +1.3
MESJ **Messejana** 21.71 270 *e* P P 02 59 01.0 -1.2
MESJ *e* S S 03 03 00.9 -0.9
MESJ IAMs_20 IAMs_20 03 08 22.9
comp=Z,194μm,14.8s
MESJ **Messejana** 21.71 270 P P P 02 59 00.0 -2.2
MESJ IAmb IAmb 02 59 21.2
comp=Z,2μm,1.5s
MESJ **Messejana** 21.71 270 *e* P P 02 59 01.0 -1.2
MESJ *e* S S 03 03 00.9 -0.9
CLGH **Cloghs, Cushen** 21.74 318 *e* P P 02 59 01.8 -0.6
CLGH IAMs_20 IAMs_20 03 11 18.2
comp=Z,145μm,14.5s
MCD **Coleburn Disti** 21.77 326 *e* P P 02 59 01.3 -1.5
MCD IAmb IAmb 02 59 05.4
comp=Z,662nm,0.7s
MCD IAMs_20 IAMs_20 03 09 32.2
comp=Z,246μm,17.8s
BELG **Belogornoye** 21.89 50 P P 02 59 04.0 -0.1
comp=Z,1μm,1.0s,baz=14,slow=0.3,SNR=263
BELG S S 03 03 08.7 +3.7
comp=Z,93nm,0.8s,baz=319,slow=19,SNR=1.4
BELG LR LR 03 08 34.8
comp=Z,156μm,21.6s,baz=251,slow=39
comp=Z,1μm,1.0s
BELG **Belogornoye** 21.89 50 ⇑ *i* P P 02 59 03.9 -0.1
BELG pmax pmax
comp=Z,33nm,0.4s
BELG MLR MLR
comp=Z,27μm,15.0s
LAWE **Loch Awe, Argy** 21.98 321 *e* P P 02 59 04.2 -0.7
LAWE IAMs_20 IAMs_20 03 09 30.0
comp=Z,110μm,12.5s
FOO **Floro** 22.02 341 *e* P P 02 59 05.5 +0.2
FOO IVmB_BB 02 59 07.2
comp=Z,8μm,4.2s
FOO *e* S S 03 03 06.4 -1.0
TAM **Tamanrasset** 22.05 217 P P 02 59 06.2 0.0
TAM **Tamanrasset** 22.05 217 P P 02 59 06.2 0.0
TAM pmax pmax
comp=Z,2μm,1.2s
AKN **Aaknes** 22.10 344 *e* P P 02 59 05.0 -1.3
AKN IVmB_BB 02 59 46.1
comp=Z,14μm,9.6s
AKN *e* S S 03 03 06.4 -2.5
LIS **Lisbon** 22.15 272 *e* P P 02 59 05.5 -1.4
LIS *e* S S 03 03 09.4 -0.8
LIS IAMs_20 IAMs_20 03 10 15.6
comp=Z,205μm,12.2s
LIS **Lisbon** 22.15 272 ⇓ *e* P P 02 59 07.9 +1.0
LIS *i* IAmb IAmb 02 59 41.5
comp=Z,2μm,1.8s
LIS **Lisbon** 22.15 272 *e* P P 02 59 05.5 -1.4
LIS *e* S S 03 03 09.4 -0.8
PMAFR **Mafra** 22.18 273 ⇓ *e* P P 02 59 09.1 +1.7
PMAFR *i* IAmb IAmb 02 59 43.6
comp=Z,2μm,2.4s
PTEO **Sao Teotonio** 22.18 269 ⇓ *e* P P 02 59 07.9 +0.6
PTEO *i* IAmb IAmb 02 59 29.7
comp=Z,2μm,1.4s
MORF **Marmelete** 22.21 269 *e* P P 02 59 06.3 -1.3
MORF *e* S S 03 03 10.4 -1.0
MORF IAMs_20 IAMs_20 03 09 15.8
comp=Z,119μm,14.8s
MORF **Marmelete** 22.21 269 P P P 02 59 06.6 -1.0
MORF **Marmelete** 22.21 269 ⇓ *e* P P 02 59 07.6 0.0
MORF *i* IAmb IAmb 02 59 40.9
comp=Z,1μm,1.4s
MORF **Marmelete** 22.21 269 P P P 02 59 06.6 -1.0
MORF pmax pmax
comp=Z,595nm,1.1s
MOL **Molde** 22.35 345 *e* P P 02 59 09.2 +0.3
MOL IVmB_BB 02 59 11.5
comp=Z,13μm,3.5s
MOL *e* S S 03 03 11.2 -2.2
PFVI **Vila Bisbo** 22.40 268 P P P 02 59 08.9 -0.7
PFVI **Vila Bisbo** 22.40 268 ⇓ *e* P P 02 59 09.8 +0.2
PFVI *i* IAmb IAmb 02 59 34.2
comp=Z,2μm,1.5s
IDGL **Inch Island, C** 22.45 317 P P P 02 59 08.6 -1.4
IDGL S S 03 03 19.6 +4.1
IDGL **Inch Island, C** 22.45 317 *e* P P 02 59 09.2 -0.8
IDGL IAMs_20 IAMs_20 03 11 12.6
comp=Z,247μm,15.4s
JOF **Joensuu** 22.59 14 *e* P P 02 59 11.4 0.0
BIGH **Upper Bighouse** 22.61 327 *e* P P 02 59 09.9 -1.8
BIGH IAmb IAmb 02 59 15.3
comp=Z,142nm,0.7s
BIGH IAMs_20 IAMs_20 03 12 10.6
comp=Z,179μm,14.6s
KPL **Plockton** 22.68 323 *e* P P 02 59 11.3 -1.1
KPL IAMs_20 IAMs_20 03 10 05.7
comp=Z,282μm,17.5s
LRW **Lerwick** 22.69 333 *e* P P 02 59 10.3 -2.2
LRW IAMs_20 IAMs_20 03 10 07.6
comp=Z,142μm,16.7s
IGLA **Glengowla, Co** 22.81 312 P P P 02 59 12.4 -1.4
IGLA S S 03 03 24.8 +2.8
IGLA **Glengowla, Co** 22.81 312 *e* P P 02 59 14.0 +0.2
IGLA IAMs_20 IAMs_20 03 11 56.8
comp=Z,186μm,13.0s
VAL **Valentia** 22.86 307 P P P 02 59 13.0 -1.4
VAL **Valentia** 22.86 307 P P P 02 59 16.8 +2.4
VAL S S 03 03 22.8 -0.2
AVE **Averroes** 22.91 258 P P P 02 59 11.7 -3.4
AVE **Averroes** 22.91 258 P P P 02 59 13.2 -1.9
KLMR **Klimovskoe** 22.91 25 *c i* P P P 02 59 12.7 -2.2
KLMR S S 03 03 20.3 -3.4
KLMR pmax pmax
comp=Z,6μm,1.1s
KLMR MLR MLR
comp=Z,151μm,13.0s
NSS **Namsos** 23.54 352 *e* P P 02 59 20.2 -0.9
NSS IVmB_BB 02 59 22.8
comp=Z,19μm,2.9s
NSS *e* S S 03 03 32.1 -1.9
TIO **Tiouine** 24.02 253 P P P 02 59 24.2 -2.0
MOR8 **Moi Rana** 24.94 355 *e* P P 02 59 35.0 +0.8
MOR8 IVmB_BB 02 59 39.4
comp=Z,10μm,5.9s
MOR8 *e* S S 03 03 58.7 +2.2
LEIR **Leirfjorden** 24.98 354 *e* P P 02 59 34.2 -0.2
LEIR IVmB_BB 02 59 57.0
comp=Z,8μm,1.2s
LEIR *e* S S 03 03 57.3 +0.2
RAUS **Rausandaksla** 25.23 355 *e* P P 02 59 35.6 -1.1
RAUS IVmB_BB 02 59 59.8
comp=Z,9μm,3.6s
RAUS *e* S S 03 04 01.2 +0.1
KIRV **Kirov** 25.38 37 P P 02 59 36.9 -1.2
comp=Z,508nm,0.9s,baz=235,slow=2.9,SNR=79
KIRV S S 03 04 11.7 +8.2
comp=Z,58nm,0.8s,baz=162,slow=19,SNR=2.0
KIRV LR LR 03 10 09.8
comp=Z,203μm,20.4s,baz=241,slow=38
comp=Z,508nm,0.9s
VAGH **Vaagaholmen** 25.58 354 *e* P P 02 59 39.3 -0.5
VAGH IVmB_BB 02 59 50.7
comp=Z,8μm,3.9s

FAUS **Fauske** 26.10 356 *e* P P 02 59 44.3 -0.3
FAUS IVmB_BB 02 59 57.1
comp=Z,7μm,7.3s
STEI **Steigen** 26.64 356 *e* P P 02 59 49.4 -0.1
STEI IVmB_BB 03 00 07.2
comp=Z,7μm,3.6s
LOF **Lofoten** 26.94 355 *e* P P 02 59 51.6 -0.6
APA **Apatity** 27.23 12 ⇓ *i* P P 02 59 54.8 0.0
APA *i* 03 00 39.0
APA *i* S S 03 04 31.6 -1.1
APA MLR MLR
comp=Z,232μm,19.3s
KTK1 **Kautokeino** 27.69 3 *e* P P 02 59 58.9 -0.1
LVZ **Lovozero** 27.73 12 P P 02 59 58.1 -1.1
LVZ IAMs_20 IAMs_20 03 11 49.3
comp=Z,237μm,20.0s
LVZ **Lovozero** 27.73 12 P P 02 59 58.2 -1.1
LVZ pmax pmax
comp=Z,3μm,2.0s
LVZ MLR MLR
comp=Z,237μm,20.0s
AKTO **Aktyubinsk** 27.89 58 LR LR 03 13 25.0
comp=Z,120μm,19.1s,baz=256,slow=41
RAYN **Ar Rayn** 28.05 122 P P 03 00 03.3 +0.8
RAYN S S 03 04 44.3 -2.1
RAYN **Ar Rayn** 28.05 122 P P 03 00 02.2 -0.4
RAYN **Ar Rayn** 28.05 122 P P 03 00 02.2 -0.4
RAYN pmax pmax
comp=Z,431nm,1.9s
JETT **Jettan, Norway** 28.18 1 *e* P P 03 00 02.9 -0.3
TRO **Tromso** 28.25 359 *e* P P 03 00 03.3 -0.5
ARA0 **ARCESS Array S** 28.32 4 *e* P P 03 00 03.3 -1.2
ARCES **ARCESS Array B** 28.32 4 P P 03 00 02.4 -2.1
comp=Z,52nm,0.5s,baz=189,slow=11,SNR=102
ARCES S S 03 04 45.9 -3.9
comp=Z,24nm,0.9s,baz=202,slow=14,SNR=1.1
ARCES LR LR 03 13 07.8
comp=Z,146μm,18.4s,baz=192,slow=40
comp=Z,52nm,0.5s
ARCES **ARCESS Array B** 28.32 4 P P 03 00 02.5 -1.9
ARCES IAmb IAmb 03 00 56.6
comp=Z,468nm,1.2s
ARCES **ARCESS Array B** 28.32 4 P P 03 00 02.6 -1.9
ARCES S S 03 04 45.9 -3.9
ARCES pmax pmax
comp=Z,468nm,1.3s
KEV **Kevo** 28.63 5 P P 03 00 05.5 -1.8
KEV **Kevo** 28.63 5 P P 03 00 05.5 -1.8
KEV pmax pmax
comp=Z,237nm,0.8s
KEV MLR MLR
comp=Z,32μm,18.0s
KEV **Kevo** 28.63 5 P P 03 00 07.5 +0.2
KEV S S 03 04 50.8 -3.8
ARTI **Arti** 29.06 46 P P 03 00 10.4 -0.9
comp=Z,714nm,0.8s,baz=251,slow=7.1,SNR=478
ARTI LR LR 03 12 35.6
comp=Z,166μm,19.5s,baz=256,slow=38
ARTI **Arti** 29.06 46 P P 03 00 10.4 -0.9
ARTI IAMs_20 IAMs_20 03 12 44.2
comp=Z,199μm,18.0s
ARTI **Arti** 29.06 46 *c i* P P 03 00 10.5 -0.7
ARTI 03 01 02.4
ARTI 03 03 19.4
ARTI S S 03 05 03.1 +1.4
ARTI SS SnSn 03 06 34.4 +8.8
ARTI pmax pmax
comp=Z,643nm,0.7s
ARTI MLR MLR
comp=Z,198μm,17.0s
AB31 **Akbulak array** 29.10 61 P P 03 00 11.3 -0.3
AB31 **Akbulak array** 29.10 61 *e* P P 03 00 10.6 -1.1
ABKAR **Akbulak array** 29.10 61 P P 03 00 11.5 -0.1
VADS **Vadso** 29.18 7 *e* P P 03 00 12.0 -0.1
HAMF **Hammerfest** 29.34 3 *e* P P 03 00 13.4 -0.1
PMPST **Porto Santo, M** 29.65 265 *e* P P 03 00 16.6 -0.1
PMPST *i* IAmb IAmb 03 01 49.5
comp=Z,410nm,1.8s
PMPS **Porto Santo** 29.66 265 *e* P P 03 00 18.8 +2.1
PMPS *i* IAmb IAmb 03 01 06.3
comp=Z,273nm,1.4s
SHMA **Al-Shehemyia** 30.16 111 P P 03 00 20.9 -0.4
SNR=20
SHMA S S 03 05 15.8 -3.7
PMAR **Madeira** 30.25 265 ⇓ *e* P P 03 00 24.6 +2.4
PMAR *i* IAmb IAmb 03 00 57.0
comp=Z,577nm,1.6s
FUL **Funchal** 30.26 265 *e* P P 03 00 27.1 +5.0
FUL *i* IAmb IAmb 03 01 11.7
comp=Z,404nm,1.7s
SVE **Sverdlovsk** 30.38 46 *d i* P P 03 00 22.8 -0.1
SVE *e* S S 03 05 23.9 +1.6
SVE pmax pmax
comp=Z,705nm,0.9s
SVE pmax pmax
comp=Z,7μm,16.4s
SVE MLR MLR
comp=Z,194μm,15.0s
SVE MLR MLR
comp=E,137μm,15.0s
PMOZ **Porto Moniz, M** 30.41 266 *e* P P 03 00 24.4 +0.8
PMOZ *i* IAmb IAmb 03 01 20.4
comp=E,383nm,1.5s
PMOZ *i* IAMs_20 IAMs_20 03 13 05.8
comp=E,28μm,20.0s
SMRA **Abu-Samra** 30.77 113 P P 03 00 26.4 -0.2
SNR=13
TRNA **Turayna** 31.05 113 P P 03 00 29.4 +0.3
SNR=11
TRNA S S 03 05 29.0 -4.4
SLWR **Sila** 31.81 113 P P 03 00 37.6 +1.8
SLWR P P 03 00 37.6 +1.8
SLWR P P 03 00 37.6 +1.8
SLWR S S 03 05 41.0 -4.2
SLWR S S 03 05 41.0 -4.2
SLWR S S 03 05 41.0 -4.2
JRN **Qarnain Island** 32.06 110 P P 03 00 38.0 +0.1
SNR=10.0
JRN S S 03 05 46.6 -2.6
TOA0 **Torodi Ar. Sit** 32.25 214 P P 03 00 39.5 -0.2
SNR=57
TOA0 P P 03 00 39.5 -0.2
SNR=57
TOA0 S S 03 05 49.1 -3.1
TOA0 S S 03 05 49.1 -3.1
TORD **Torodi Ar. Bea** 32.25 214 P P 03 00 37.8 -1.9
comp=E,41nm,1.1s,baz=26,slow=11,SNR=52
TORD S S 03 05 48.7 -3.5
comp=E,9.4nm,1.1s,baz=38,slow=19,SNR=1.6
comp=E,41nm,1.1s
TORD **Torodi Ar. Bea** 32.25 214 IAmb IAmb 03 00 55.8
comp=Z,480nm,1.4s
GHWR **Ruwais** 32.70 112 P P 03 00 44.9 +1.3
GHWR P P 03 00 44.9 +1.3
GHWR P P 03 00 44.9 +1.3
GHWR S S 03 05 56.2 -2.9
GHWR S S 03 05 56.2 -2.9
GHWR S S 03 05 56.2 -2.9
JNE **Jan Mayen East** 32.79 344 *e* P P 03 00 43.6 -0.3
JMIC **Jan Mayen** 32.83 343 P P 03 00 43.3 -1.0
comp=Z,125nm,1.0s,baz=127,slow=9.6,SNR=10
JMIC LR LR 03 15 37.2
comp=Z,22μm,18.0s,baz=145,slow=39
comp=Z,125nm,1.0s
JMIC **Jan Mayen** 32.83 343 *e* P P 03 00 44.0 -0.3
JMIC **Jan Mayen** 32.83 343 *i* P P 03 00 44.3 0.0
JMI **Jan Mayen** 32.83 343 *e* P P 03 00 44.1 -0.2
JNW **Jan Mayen West** 32.84 344 *e* P P 03 00 43.8 -0.6
BORG **Borgarnes** 32.94 329 P P 03 00 45.4 +0.1
comp=Z,42nm,0.9s,baz=106,slow=6.5,SNR=8.4
BORG LR LR 03 16 05.6
comp=Z,75μm,18.4s,baz=131,slow=40
comp=Z,42nm,0.9s
BORG **Borgarnes** 32.94 329 P P 03 00 44.8 -0.5
BORG **Borgarnes** 32.94 329 IAMs_20 IAMs_20 03 16 12.5
comp=Z,82μm,18.0s
BORG **Borgarnes** 32.94 329 P P 03 00 44.8 -0.5
BORG pmax pmax
comp=Z,132nm,1.1s
BORG MLR MLR
comp=Z,82μm,18.0s
BJO1 **Bjornoya** 33.15 360 *e* P P 03 00 46.6 -0.3
BJO1 **Bjornoya** 33.15 360 *i* P P 03 00 46.3 -0.7
MZWR **Madinat Zayed** 33.53 111 P P 03 00 50.0 -0.9
MZWR P P 03 00 50.0 -0.9

MZWR P P 03 00 50.0 -0.9
MZWR S S 03 06 08.2 -3.9
MZWR S S 03 06 08.2 -3.9
MZWR S S 03 06 08.2 -3.9
UMQ **Umm Al-Quwin** 33.71 107 P P 03 00 52.4 0.0
SNR=24
UMQ P P 03 00 52.4 0.0
SNR=24
UMQ P P 03 00 52.4 0.0
SNR=24
UMQ **Umm Al-Quwin** 33.71 107 *i* P P 03 00 51.5 -0.9
SNR=25
SHME **Shamm** 33.74 106 P P 03 00 51.2 -1.5
SNR=38
SHME P P 03 00 51.2 -1.5
SNR=38
SHME P P 03 00 51.2 -1.5
SNR=38
SHME S S 03 06 11.3 -4.0
SHME S S 03 06 11.3 -4.0
SHME S S 03 06 11.3 -4.0
SHME **Shamm** 33.74 106 *i* P P 03 00 50.1 -2.6
SNR=8.3
MZR **Muzera** 33.74 112 P P 03 00 52.7 0.0
SNR=20
MZR P P 03 00 52.7 0.0
SNR=20
MZR S S 03 06 10.1 -5.4
MZR S S 03 06 10.1 -5.4
MZR **Muzera** 33.74 112 *i* P P 03 00 50.5 -2.3
SNR=22
AJN **Ajban** 33.81 109 P P 03 00 53.0 -0.3
SNR=19
AJN P P 03 00 53.0 -0.3
SNR=19
AJN P P 03 00 53.0 -0.3
SNR=19
AJN S S 03 06 15.4 -1.1
AJN S S 03 06 15.4 -1.1
AJN S S 03 06 15.4 -1.1
AJN **Ajban** 33.81 109 *i* P P 03 00 51.6 -1.8
SNR=27
BANOM **Banah** 33.93 106 P P 03 00 53.3 -1.1
BANOM P P 03 00 53.3 -1.1
BANOM S S 03 06 14.3 -4.1
BANOM S S 03 06 14.3 -4.1
BANOM **Banah** 33.93 106 *i* P P 03 00 52.1 -2.3
SNR=88
ASUD **Al Ashush, Dub** 34.02 108 P P 03 00 54.8 -0.3
SNR=22
ASUD P P 03 00 54.8 -0.3
SNR=22
ASUD **Al Ashush, Dub** 34.02 108 *i* P P 03 00 54.0 -1.1
SNR=21
NAZ **Nazwa, Dubai** 34.03 107 P P 03 00 53.6 -1.7
HRA **Herat** 34.08 88 P P 03 00 55.7 -0.1
FAQ **Al Faqa, Dubai** 34.13 108 P P 03 00 55.0 -1.1
SNR=34
FAQ P P 03 00 55.0 -1.1
SNR=34
FAQ P P 03 00 55.0 -1.1
SNR=34
FAQ S S 03 06 16.1 -5.3
FAQ S S 03 06 16.1 -5.3
FAQ S S 03 06 16.1 -5.3
FAQ **Al Faqa, Dubai** 34.13 108 *i* P P 03 00 53.9 -2.2
SNR=27
MASF **Masafi** 34.16 106 P P 03 00 54.8 -1.6
SNR=36
MASF P P 03 00 54.8 -1.6
SNR=36
MASF S S 03 06 16.9 -4.9
MASF S S 03 06 16.9 -4.9
MSFE **Esma-Masafi** 34.16 106 *i* P P 03 00 54.3 -2.2
SNR=40
MDH **Madha** 34.30 106 P P 03 00 56.0 -1.6
SNR=48
MDH P P 03 00 56.0 -1.6
SNR=48
MDH S S 03 06 18.9 -5.2
MDH S S 03 06 18.9 -5.2
MDH **Madha** 34.30 106 *i* P P 03 00 55.3 -2.2
SNR=36
UOSS **Minazif** 34.45 107 P P 03 00 57.1 -1.8
UOSS P P 03 00 57.1 -1.8
UOSS P P 03 00 57.1 -1.8
UOSS S S 03 06 20.8 -5.5
UOSS S S 03 06 20.8 -5.5
UOSS S S 03 06 20.8 -5.5
UOSS **Minazif** 34.45 107 P P 03 00 57.0 -1.8
UOSS IAmb IAmb 03 01 18.9
comp=Z,158nm,0.7s
UOSS **Minazif** 34.45 107 P P 03 00 56.1 -2.8
UOSS S S 03 06 17.5 -8.8
HATD **Hatta, Dubai** 34.47 107 P P 03 00 57.6 -1.5
SNR=54
HATD P P 03 00 57.6 -1.5
SNR=54
HATD P P 03 00 57.6 -1.5
SNR=54
HATD S S 03 06 22.3 -4.3
HATD S S 03 06 22.3 -4.3
HATD S S 03 06 22.3 -4.3
HATD **Hatta, Dubai** 34.47 107 *i* P P 03 00 56.9 -2.2
SNR=46
ASHO **Ashiyiah** 34.50 108 P P 03 00 58.0 -1.4
SNR=64
ASHO P P 03 00 58.0 -1.4
SNR=64
ASHO **Ashiyiah** 34.50 108 *i* P P 03 00 56.9 -2.4
SNR=43
ALNE **Al Ain** 34.67 109 P P 03 00 59.3 -1.5
SNR=84
ALNE P P 03 00 59.3 -1.5
SNR=84
ALNE **Al Ain** 34.67 109 *i* P P 03 00 58.8 -2.0
SNR=41
UMZA **Um Al Zommool** 35.11 111 P P 03 01 03.7 -0.9
UMZA P P 03 01 03.7 -0.9
UMZA P P 03 01 03.7 -0.9
SOHO **SOHO** 35.18 108 P P 03 01 03.4 -1.7
SOHO P P 03 01 03.4 -1.7
SOHO P P 03 01 03.4 -1.7
SOHO **SOHO** 35.18 108 *i* P P 03 01 02.8 -2.3
SNR=71
HOPEN **Hopen** 35.24 2 *e* P P 03 01 04.9 -0.2
BORK **Borovoye** 35.59 53 IAMs_20 IAMs_20 03 17 25.2
comp=Z,95μm,20.0s
BORK **Borovoye** 35.59 53 *c e* P P 03 01 08.6 +0.2
BORK pmax pmax
comp=Z,154nm,0.4s
BORK MLR MLR
comp=Z,78μm,15.0s
BVAR **Borovoye Array** 35.63 53 P P 03 01 09.1 +0.3
comp=Z,181nm,0.7s,baz=274,slow=6.8,SNR=563
BVAR S S 03 06 46.9 +2.9
comp=Z,20nm,1.1s,baz=269,slow=15,SNR=2.1
BVAR LR LR 03 17 38.9
comp=Z,71μm,18.6s,baz=265,slow=40
comp=Z,181nm,0.7s
ARQ **Araqi** 35.67 109 P P 03 01 08.0 -1.4
SNR=55
HSPB **Hornsund (broa** 35.70 358 *e* P P 03 01 11.1 +2.0
HSPB *e* L L 03 17 02.1
comp=Z,75μm,20.1s
SCO **Scoresbysund** 35.90 338 *i* P P 03 01 11.0 +0.2
SCO IAmb IAmb 03 01 15.2
comp=Z,430nm,1.2s
SCO IAmb IAmb 03 01 15.3
comp=Z,483nm,1.3s
HOQ **Hoqain** 36.08 108 P P 03 01 12.0 -1.0
SNR=42
HOQ P P 03 01 12.0 -1.0
SNR=42
HOQ P P 03 01 12.0 -1.0
SNR=42
HOQ S S 03 06 47.0 -4.5
HOQ S S 03 06 47.0 -4.5
HOQ S S 03 06 47.0 -4.5
ATD **Arta Tunnel** 36.09 139 P P 03 01 15.0 +1.9
SNR=44
ATD S S 03 06 57.0 +5.3
ATD **Arta Tunnel** 36.09 139 P P 03 01 13.6 +0.5
ATD IAmb IAmb 03 01 29.1
comp=Z,368nm,1.1s

BSY Bisya 36.53 109 P P 03 01 16.7 -0.1
SNR=26
BSY P P 03 01 16.7 -0.1
SNR=26
BIDO Bidbid 36.70 107 P P 03 01 16.9 -1.3
SNR=40
BIDO P P 03 01 16.9 -1.3
SNR=40
BRLS Boroldaу 36.76 70 eP P 03 01 18.3 -0.3
BRLS eS S 03 07 02.4 +0.9
BRLS Boroldaу 36.76 70 eP P 03 01 18.3 -0.3
BRLS eS S 03 07 02.4 +0.9
CHM Chimkent 36.78 72 eP P 03 01 18.9 +0.1
CHM eS S 03 07 03.2 +1.3
CHM LR LR 03 18 00.6
comp=Z,37µm,16.7s
CHM Chimkent 36.78 72 eP P 03 01 18.8 +0.1
CHM eS S 03 07 03.2 +1.3
CHM MLR MLR
comp=Z,37µm,17.0s
SPB2 Spitsbergen Ar 36.86 359 P P 03 01 18.5 -0.6
SPB2 IAmb IAmb 03 01 22.6
comp=Z,830nm,1.9s
SPA0 Spitsbergen Ar 36.87 359 eP P 03 01 18.1 -1.0
SPITS Spitsbergen Ar 36.87 359 P P 03 01 18.5 -0.6
comp=Z,7.9nm,0.4s,baz=152,slow=11,SNR=31
SPITS PP PP 03 02 39.1 -3.9
comp=Z,176nm,0.9s,baz=152,slow=14,SNR=7.3
SPITS LR LR 03 18 37.4
comp=Z,127µm,18.4s,baz=174,slow=40
comp=Z,7.9nm,0.4s
SPITS Spitsbergen Ar 36.87 359 P P 03 01 18.4 -0.7
SPITS pmax pmax
comp=Z,625nm,1.6s
SMDO Samad 36.94 108 P P 03 01 18.4 -2.0
SNR=49
SMDO P P 03 01 18.4 -2.0
SNR=49
SMDO P P 03 01 18.4 -2.0
SNR=49
IUG luzhnay 37.13 72 eP P 03 01 20.1 -1.8
IUG luzhnay 37.13 72 eP P 03 01 20.9 -1.0
DOK Doka 37.17 117 P P 03 01 20.8 -1.4
SNR=14
DOK P P 03 01 20.8 -1.4
SNR=14
DOK P P 03 01 20.8 -1.4
SNR=14
KK31 Karatay Array 37.21 70 P P 03 01 22.6 +0.2
KK31 Karatay Array 37.21 70 iP P 03 01 21.9 -0.5
KKAR Karatay Array 37.21 70 P P 03 01 22.1 -0.3
KKAR Karatay Array 37.21 70 P P 03 01 22.1 -0.3
WSAR Wadi Sarin 37.24 107 LR LR 03 19 42.0
comp=Z,130nm,21.8s,baz=318,slow=41
WSAR Wadi Sarin 37.24 107 P P 03 01 21.1 -1.7
SNR=20
WSAR S S 03 07 05.6 -3.6
BRZS Berezniki 37.31 58 eP P 03 01 22.9 -0.2
BRZS eS S 03 07 10.7 +0.9
BRZS Berezniki 37.31 58 eP P 03 01 22.9 -0.2
BRZS eS S 03 07 10.6 +0.9
JMDO Jabal Madar 37.41 109 P P 03 01 22.4 -1.9
SNR=27
JMDO P P 03 01 22.4 -1.9
SNR=27
JMDO P P 03 01 22.4 -1.9
SNR=27
WHFO Wadi Hawf 37.43 118 P P 03 01 23.3 -1.2
WHFO P P 03 01 23.3 -1.2
WHFO P P 03 01 23.3 -1.2
ABTO Aybut 37.53 120 P P 03 01 25.2 -0.1
SNR=6.7
CHGR Chuyangaron 37.60 77 P P 03 01 25.7 -0.2
CHGR IAmb IAmb 03 01 36.7
comp=Z,355nm,0.8s
CHGR Chuyangaron 37.60 77 P P 03 01 25.7 -0.2
CHGR pmax pmax
comp=Z,355nm,0.8s
DBG Daneborg 37.66 343 iP P 03 01 24.2 -1.6
DBG IAmb IAmb 03 01 29.2
comp=Z,150nm,1.4s
NGCH Negor - Chabah 37.79 102 P P 03 01 27.1 -0.3
SNR=7.9
DZA Taraz 37.85 70 eP P 03 01 27.6 -0.2
DZA Taraz 37.85 70 eP P 03 01 27.6 -0.2
WBK Wadi Bani Khal 37.88 107 P P 03 01 27.4 -0.9
SNR=20
RBK Rabkut 38.02 118 P P 03 01 28.5 -1.0
SNR=7.9
RBK P P 03 01 28.5 -1.0
SNR=7.9
RBK S S 03 07 17.7 -3.4
RBK S S 03 07 17.7 -3.4
MHTO MHTO 38.20 110 P P 03 01 29.8 -1.2
SNR=38
MHTO P P 03 01 29.8 -1.2
SNR=38
GAR Garm 38.33 76 P P 03 01 32.6 +0.6
GAR IAmb IAmb 03 01 59.9
comp=Z,453nm,1.0s
DMTO DMTO 38.36 117 P P 03 01 30.4 -1.9
DMTO P P 03 01 30.4 -1.9
DMTO P P 03 01 30.4 -1.9
EDA Edea 38.46 195 P P 03 01 33.6 +0.5
JLN Jalan Bani Buh 38.48 108 P P 03 01 31.8 -1.6
SNR=21
JLN P P 03 01 31.8 -1.6
SNR=21
JLN P P 03 01 31.8 -1.6
SNR=21
SHAO Shalim 38.60 116 P P 03 01 33.0 -1.3
SNR=6.5
SHAO P P 03 01 33.0 -1.3
SNR=6.5
SHAO P P 03 01 33.0 -1.3
SNR=6.5
SHAO Shalim 38.60 116 iP P 03 01 31.1 -3.2
SNR=10
DQM DQM 38.60 112 P P 03 01 32.2 -2.1
SNR=17
DQM P P 03 01 32.2 -2.1
SNR=17
KBL Kabul 39.11 84 P P 03 01 38.5 -0.2
SNR=44
KBL P P 03 01 38.5 -0.2
SNR=44
KBL S S 03 07 34.1 -3.6
KBL S S 03 07 34.1 -3.6
KBL Kabul 39.11 84 P P 03 01 37.9 -0.8
KBL Kabul 39.11 84 P P 03 01 37.9 -0.8
KBL pmax pmax
comp=Z,105nm,1.0s
KBU Kabul Universi 39.19 84 P P 03 01 37.0 -2.4
DRK Karamyk 39.24 75 P P 03 01 39.5 -0.4
DRK Karamyk 39.24 75 P P 03 01 39.5 -0.4
DRK pmax pmax
comp=Z,120nm,0.9s
ARSB Arslanbob 39.49 72 P P 03 01 41.5 -0.2
ARSB Arslanbob 39.49 72 P P 03 01 41.5 -0.2
ARSB pmax pmax
comp=Z,282nm,1.2s
EKS2 Erkin-Say 39.64 70 P P 03 01 43.2 +0.2
SNR=34
ANGG Ammassalik, Gr 39.77 327 iP P 03 01 44.8 +1.3
ANGG IAmb IAmb 03 01 58.1
comp=Z,54nm,0.7s
ACRG Accra 39.81 212 P P 03 01 43.9 -0.6
USP Ospenovka 39.97 68 P P 03 01 44.3 -1.3
SNR=22
SGDS Sogindy 40.01 68 eP P 03 01 45.9 -0.1
AAK Ala-Archa 40.15 69 LR LR 03 21 18.5
comp=Z,42µm,19.6s,baz=310,slow=40
AAK Ala-Archa 40.15 69 P P 03 01 47.5 +0.3
AAK P P 03 01 47.5 +0.3
AAK S S 03 07 51.0 -2.1
AAK S S 03 07 51.0 -2.1
AAK Ala-Archa 40.15 69 P P 03 01 47.2 0.0
AAK IAmb IAmb 03 01 54.4
comp=Z,706nm,1.8s
AAK Ala-Archa 40.15 69 IAMs_20 IAMs_20 03 21 33.0
comp=Z,57µm,18.0s
AAK Ala-Archa 40.15 69 P P 03 01 47.5 +0.3
SNR=20
AAK Ala-Archa 40.15 69 iP P 03 01 46.9 -0.3
SNR=63

AAK Ala-Archa 40.15 69 ceP P 03 01 47.4 +0.1
AAK pmax pmax
comp=Z,426nm,1.7s
AAK Ala-Archa 40.15 69 P P 03 01 47.1 -0.1
AAK S S 03 07 52.0 -1.0
FRU1 Bishkek 40.20 69 P P 03 01 47.9 +0.3
FRU1 Bishkek 40.20 69 P P 03 01 47.9 +0.3
FRU1 pmax pmax
comp=Z,366nm,1.1s
CHMS Chumysh 40.23 69 P P 03 01 48.1 +0.3
SNR=7.0
UCH Uchtor 40.29 70 P P 03 01 48.7 -0.1
SNR=18
LODK Lodwar 40.41 155 P P 03 01 51.5 +2.0
SNR=113
LODK Lodwar 40.41 155 P P 03 01 50.0 +0.5
KBK Karagaybulak 40.47 69 P P 03 01 49.4 -0.5
SNR=15
TKM2 Tokmak 2 40.84 69 P P 03 01 52.7 -0.4
SNR=25
KURBB Kurchatov Arra 40.91 56 P P 03 01 52.9 -0.4
comp=Z,38nm,0.5s,baz=284,slow=9.0,SNR=201
KURBB PP PP 03 03 22.9 -4.6
comp=Z,37nm,1.0s,baz=282,slow=11,SNR=2.2
KURBB LR LR 03 22 18.3
comp=Z,75µm,18.7s,baz=283,slow=41
comp=Z,38nm,0.5s
DBIC Dimbokro 40.92 219 P P 03 01 52.4 -1.2
comp=Z,64nm,1.1s,baz=48,slow=9.1,SNR=29
DBIC S S 03 08 03.1 -1.4
comp=Z,13nm,0.9s,baz=37,slow=16,SNR=1.3
DBIC LR LR 03 21 33.1
comp=Z,39µm,18.1s,baz=45,slow=40
comp=Z,64nm,1.1s
DBIC Dimbokro 40.92 219 P P 03 01 52.6 -1.0
DBIC IAmb IAmb 03 02 08.9
comp=Z,454nm,1.2s
DBIC Dimbokro 40.92 219 P P 03 01 55.0 +1.4
DBIC S S 03 07 58.9 -5.6
KURK Kurchatov 40.95 56 P P 03 01 53.3 -0.2
KURK P P 03 01 53.3 -0.2
KURK Kurchatov 40.95 56 P P 03 01 53.4 -0.1
KURK Kurchatov 40.95 56 PP 03 03 22.9 -5.0
KURK Kurchatov 40.95 56 IAMs_20 IAMs_20 03 22 00.3
comp=Z,66µm,20.0s
KURK Kurchatov 40.95 56c iP P 03 01 53.2 -0.3
KURK pmax pmax
comp=Z,345nm,1.3s
KURK MLR MLR
comp=Z,75µm,17.0s
KUU Kurty 41.07 67 eP P 03 01 54.5 -0.1
comp=Z,15µm,12.4s
KUU LR LR 03 20 45.0
comp=Z,15µm,12.4s
KUU Kurty 41.07 67 eP P 03 01 54.5 -0.1
KUU MLR MLR
comp=Z,15µm,12.0s
BBTS Babate 41.13 240 LR LR 03 20 37.9
comp=Z,93µm,18.9s,baz=267,slow=39
BOOM Boomskoye usch 41.22 69 P P 03 01 56.5 +0.4
BOOM Boomskoye usch 41.22 69 P P 03 01 56.5 +0.4
BOOM pmax pmax
comp=Z,121nm,0.9s
ULHL Ulahol 41.50 69 P P 03 01 58.5 0.0
SNR=13
SUMG Summit 41.54 337 P P 03 01 57.7 -0.9
SUMG IAMs_20 IAMs_20 03 21 44.7
comp=Z,45µm,18.0s
SUMG Summit 41.54 337 iP P 03 01 58.5 -0.1
SUMG IAmb IAmb 03 02 02.5
comp=Z,300nm,1.1s
MBO M'Bour 41.60 240 IAMs_20 IAMs_20 03 20 41.3
comp=Z,110µm,19.0s
AAA Alma-Ata 41.67 68 eP P 03 01 59.3 -0.4
comp=Z,179nm,0.9s
AAA LR LR 03 21 17.6
comp=Z,39µm,13.3s
AAA Alma-Ata 41.67 68 eP P 03 01 59.3 -0.4
AAA pmax pmax
comp=Z,179nm,0.9s
AAA MLR MLR
comp=Z,39µm,13.0s
KNDC Almaty 41.70 68 P P 03 02 00.1 +0.2
MDOK Medeo 41.78 68 eP P 03 02 00.3 -0.4
MDOK eS S 03 08 18.2 +0.9
MDOK LR LR 03 21 22.1
MDOK Medeo 41.78 68 eP P 03 02 00.2 -0.4
MDOK eS S 03 08 18.1 +0.9
ARXS Arharly 42.00 66 eP P 03 02 01.9 -0.5
NOR Nord 42.15 353 iP P 03 02 01.0 -2.0
NOR IAmb IAmb 03 02 06.0
comp=Z,412nm,1.1s
TDK Taldyqorghan 42.16 65⇑iP P 03 02 03.5 -0.2
comp=Z,117nm,0.7s
TDK eS S 03 08 23.6 +1.0
TDK LR LR 03 21 36.4
comp=Z,34µm,15.0s
TDK Taldyqorghan 42.16 65c iP P 03 02 03.4 -0.2
TDK eS S 03 08 23.6 +1.0
TDK pmax pmax
comp=Z,117nm,0.7s
TDK MLR MLR
comp=Z,34µm,15.0s
KDJ Kajisay 42.20 69 P P 03 02 04.1 0.0
KDJ Kajisay 42.20 69 P P 03 02 04.1 0.0
KDJ pmax pmax
comp=Z,504nm,1.6s
KSH Kashi 42.25 73 P P 03 02 03.3 -1.2
KSH PP PP 03 03 47.5 +5.2
KSH S S 03 08 32.5 +8.3
KSH pmax pmax
comp=Z,130nm,1.3s
KSH pmax pmax
comp=Z,5µm,13.4s
KSH LR LR
comp=Z,48µm,17.2s
KSH LR LR
comp=Z,58µm,16.5s
NIL Nilore 42.64 83 P P 03 02 07.4 -0.2
NIL Nilore 42.64 83 P P 03 02 07.4 -0.2
NIL pmax pmax
comp=Z,2µm,1.7s
NIL MLR MLR
comp=Z,18µm,22.0s
TARG Taragay, Kyrgy 42.77 69 P P 03 02 09.4 +0.3
TARG Taragay, Kyrgy 42.77 69 P P 03 02 09.4 +0.3
TARG pmax pmax
comp=Z,165nm,0.9s
MBAR Mbarara 43.05 164 LR LR 03 21 47.6
comp=Z,43µm,21.3s,baz=352,slow=38
MBAR Mbarara 43.05 164 P P 03 02 13.1 +1.9
MBAR S S 03 08 39.5 +3.2
MBAR Mbarara 43.05 164 P P 03 02 12.2 +1.0
MBAR Mbarara 43.05 164ceP P 03 02 13.0 +1.9
MBAR pmax pmax
comp=Z,109nm,1.3s
NRS Narsarsuaq 43.07 320 iP P 03 02 10.5 -0.2
NRS iP P 03 02 10.5 -0.2
NRS IAmb IAmb 03 02 14.4
comp=Z,177nm,1.3s
NRS IAmb IAmb 03 02 15.0
comp=Z,82nm,1.0s
UZB Uzynbulak 43.15 67⇑iP P 03 02 11.5 -0.4
UZB eS S 03 08 38.1 +0.5
UZB Uzynbulak 43.15 67c iP P 03 02 11.4 -0.4
UZB eS S 03 08 38.0 +0.5
PDGK Podgornoye 43.42 67 P P 03 02 13.2 -0.7
SHLS Shalkode 43.45 67 eP P 03 02 16.4 +2.1
comp=Z,357nm,2.0s
SHLS Shalkode 43.45 67 eP P 03 02 16.3 +2.1
SHLS pmax pmax
comp=Z,357nm,2.0s
WUS Wushi 43.95 70 P 03 02 18.1 -0.2
WUS Wushi 43.95 70 IAMs_20 IAMs_20 03 23 07.6
comp=Z,46µm,21.0s
MAKZ Makanchi 44.03 61 P P 03 02 18.8 +0.1
MAKZ IAmb IAmb 03 02 26.2
comp=Z,656nm,1.4s
MAKZ IAMs_20 IAMs_20 03 22 44.2
comp=Z,70µm,20.0s
MAKZ Makanchi 44.03 61 P P 03 02 18.1 -0.6
ZAA0 Zalesovo Array 44.08 50 P P 03 02 18.9 -0.1
ZALV Zalesovo Beam 44.08 50 P P 03 02 18.8 -0.2
comp=Z,174nm,0.4s,baz=280,slow=8.6,SNR=790
ZALV S S 03 08 54.3 +4.0
comp=Z,4.9nm,0.9s,baz=297,slow=22,SNR=1.6
ZALV LR LR 03 23 00.0
comp=Z,173µm,19.1s,baz=280,slow=39
comp=Z,174nm,0.4s
ZALV Zalesovo Beam 44.08 50 iP P 03 02 18.7 -0.2
ZALV pmax pmax
comp=Z,173nm,0.4s
JASL Jaisalmer 44.20 92 eP P 03 02 19.1 -1.1
JASL IAmb IAmb 03 02 29.2
comp=Z,306nm,1.0s
JASL IAMs_20 IAMs_20 03 22 18.3
comp=Z,34µm,19.8s
MK31 Makanchi Array 44.24 61 iP P 03 02 19.8 -0.6
MK31 pmax pmax
comp=Z,206nm,0.7s
MKAR Makanchi Array 44.24 61 P P 03 02 20.4 0.0
comp=Z,202nm,0.8s,baz=284,slow=6.3,SNR=1027
MKAR PP PcP 03 04 04.7 +0.1
comp=Z,45nm,0.8s,baz=291,slow=4.5,SNR=2.6
MKAR LR LR 03 23 55.4
comp=Z,66µm,20.4s,baz=274,slow=40
comp=Z,202nm,0.8s
MKAR Makanchi Array 44.24 61 P P 03 02 20.5 +0.1
JMU Jammu 44.29 83 eP P 03 02 20.1 -0.8
JMU IAMs_20 IAMs_20 03 23 26.0
comp=Z,30µm,20.0s
IVI Ivigtut 44.40 320 P P 03 02 20.5 -0.8
IVI IAmb IAmb 03 02 37.0
comp=Z,257nm,1.0s
IVI IAMs_20 IAMs_20 03 20 02.5
comp=Z,46µm,21.0s
IVI Ivigtut 44.40 320 iP P 03 02 20.0 -1.3
IVI IAmb IAmb 03 02 25.5
comp=Z,315nm,1.2s
SRGN SRI GANGA NAGA 44.88 87 IAMs_20 IAMs_20 03 22 28.6
comp=Z,42µm,17.5s
THN Thein Dam 45.03 83 eP P 03 02 26.1 -0.7
THN IAmb IAmb 03 02 35.1
comp=Z,342nm,1.1s
SFJD Kangerlussuaq 45.07 329 LR LR 03 23 59.7
comp=Z,92µm,18.4s,baz=88,slow=40
SFJD Kangerlussuaq 45.07 329 IAMs_20 IAMs_20 03 22 07.2
comp=Z,83µm,20.0s
SFJD Kangerlussuaq 45.07 329 P P 03 02 26.1 -0.6
SFJD pmax pmax
comp=Z,516nm,1.4s
SFJD MLR MLR
comp=Z,83µm,20.0s
SFJD Kangerlussuaq 45.07 329 iP P 03 02 25.9 -0.7
SFJD IAmb IAmb 03 02 29.9
comp=Z,192nm,1.0s
SFJD Kangerlussuaq 45.07 329 P P 03 02 25.7 -1.0
SFJD S S 03 09 02.4 -2.0
ILULI Ilulissat 45.21 332 IAmb IAmb 03 02 31.0
comp=Z,540nm,1.3s
ILULI Ilulissat 45.21 332 iP P 03 02 27.9 +0.2
ILULI IAmb IAmb 03 02 30.7
comp=Z,522nm,1.3s
KMBO Kilima Mbogo 45.29 155 P P 03 02 30.4 +1.1
comp=Z,46nm,0.9s,baz=357,slow=8.0,SNR=30
KMBO S S 03 09 10.9 +1.8
comp=Z,1.3nm,0.3s,baz=305,slow=8.8,SNR=1.7
KMBO LR LR 03 23 59.6
comp=Z,15µm,19.9s,baz=344,slow=40
comp=Z,46nm,0.9s
KMBO Kilima Mbogo 45.29 155 iP P 03 02 31.8 +2.5
KMBO pmax pmax
comp=Z,46nm,0.9s
ALCI Alchi Leh 45.30 80 eP P 03 02 28.2 -1.2
ALCI IAmb IAmb 03 02 54.8
comp=Z,362nm,1.5s
BHUJ Bhuj 45.32 98 eP P 03 02 28.5 -0.7
SAATT Saattut 45.40 334 iP P 03 02 28.0 -1.2
SAATT IAmb IAmb 03 02 32.5
comp=Z,542nm,1.1s
BKNR BIKANER 45.40 90 eP P 03 02 28.4 -1.4
BKNR IAmb IAmb 03 02 35.0
comp=Z,1µm,0.5s
BKNR IAMs_20 IAMs_20 03 21 57.7
comp=Z,33µm,20.7s
TLWR Talawar 45.44 83 eP P 03 02 29.1 -1.0
TLWR IAMs_20 IAMs_20 03 23 14.8
comp=Z,23µm,20.7s
DHRM DHARAMSHALA 45.56 83 eP P 03 02 29.8 -1.5
DHRM IAmb IAmb 03 02 50.6
comp=Z,558nm,1.1s
SACV Santiago Islan 45.69 248 IAMs_20 IAMs_20 03 23 06.2
comp=Z,61µm,18.0s
NUUK Nuuk 45.73 325 iP P 03 02 32.5 +0.6
NUUK IAmb IAmb 03 02 35.0
comp=Z,208nm,1.4s
ZSN Zaisan 45.73 59⇑iP P 03 02 32.0 -0.3
comp=Z,328nm,1.9s
ZSN Zaisan 45.73 59c iP P 03 02 31.9 -0.3
ZSN pmax pmax
comp=Z,328nm,1.9s
NEEM North Greenlan 45.75 343 iP P 03 02 30.5 -1.8
NEEM IAmb IAmb 03 02 35.5
comp=Z,762nm,1.3s
NUUG Nuugaatsiaq 45.91 335 iP P 03 02 31.3 -1.9
NUUG IAmb IAmb 03 02 36.3
comp=Z,343nm,1.3s
BHK Bhakra 46.04 84 eP P 03 02 33.2 -1.7
BHK IAmb IAmb 03 02 46.4
comp=Z,382nm,1.1s
BHK IAMs_20 IAMs_20 03 22 44.9
comp=Z,30µm,18.4s
NIAQ Niaqornat 46.07 334 iP P 03 02 32.8 -1.7
NIAQ IAmb IAmb 03 02 34.7
comp=Z,15nm,0.9s
GDH Godhavn 46.07 332 iP P 03 02 32.5 -2.0
GDH IAmb IAmb 03 02 38.0
comp=Z,509nm,1.0s
DGZ Jazzator, Alta 46.69 56c iP P 03 02 40.4 +0.5
DGZ pmax pmax
comp=Z,254nm,0.7s
DGZ MLR MLR
comp=Z,65µm,16.0s
KIBK Kibwezi 46.69 154 P P 03 02 40.5 +0.4
KIBK Kibwezi 46.69 154 P P 03 02 42.2 +2.1
SNR=61
KIBK Kibwezi 46.69 154 P P 03 02 40.5 +0.4
SMLA Simla 46.74 83 eP P 03 02 38.3 -2.0
UPNV Upernavik 46.80 337 iP P 03 02 38.2 -2.0
UPNV IAmb IAmb 03 02 44.4
comp=Z,403nm,1.2s
KULLO Kullorsuaq 47.07 339 iP P 03 02 41.3 -1.0
KULLO IAmb IAmb 03 02 46.1
comp=Z,322nm,1.1s
RTK Rohtak 47.23 86 IAMs_20 IAMs_20 03 23 36.1
comp=Z,37µm,17.7s
AJM Ajmer 47.25 90 eP P 03 02 43.3 -1.1
AJM IAmb IAmb 03 02 50.2
comp=Z,479nm,1.0s
AJM IAMs_20 IAMs_20 03 13 46.2
comp=Z,38µm,21.2s
HNLY HANLEY 47.29 80 eP P 03 02 44.6 -0.7
HNLY IAmb IAmb 03 03 14.9
comp=Z,363nm,1.5s
HNLY IAMs_20 IAMs_20 03 20 33.3
comp=Z,31µm,23.2s
UDPR Udaipur 47.60 93 eP P 03 02 45.8 -1.4
UDPR IAmb IAmb 03 02 59.3
comp=Z,270nm,0.9s
UDPR IAMs_20 IAMs_20 03 23 30.3
comp=Z,29µm,21.3s
JHJR Jhajjar 47.62 87 IAMs_20 IAMs_20 03 23 08.0
comp=Z,25µm,21.1s
KUDL Kundal 47.75 87 eP P 03 02 47.0 -1.2
KUDL IAmb IAmb 03 02 53.5
comp=Z,449nm,0.8s
NPLP NPLP New Delhi 48.00 86 eP P 03 02 49.0 -1.2
NDI New Delhi 48.01 86 eP P 03 02 48.0 -2.3
NDI IAMs_20 IAMs_20 03 23 00.1
comp=Z,36µm,21.1s
AYAN Aya Nagar 48.05 87 eP P 03 02 48.9 -1.6
AYAN IAmb IAmb 03 02 56.1
comp=Z,444nm,0.9s
AYAN IAMs_20 IAMs_20 03 22 51.5
comp=Z,30µm,21.0s
LDR Lodi Road 48.07 86 IAMs_20 IAMs_20 03 22 40.2
comp=Z,28µm,22.0s
WMQ Urumqi 48.83 63 ⇑P P 03 02 57.0 +0.5
WMQ sP sP 03 03 07.5 +3.1
WMQ PP PP 03 04 54.5 +5.0
WMQ S S 03 10 02.5 +3.6

WMQ pmax pmax
comp=Z,90nm,1.1s
WMQ pmax pmax
comp=Z,6µm,6.1s
WMQ LR LR
comp=Z,42µm,22.1s
WMQ LR LR
comp=Z,69µm,15.9s
WMQ LR LR
comp=Z,45µm,22.1s
TULEG Thule 49.77 342 IAMs_20 IAMs_20 03 25 10.3
comp=Z,48µm,21.0s
TULEG Thule 49.77 342 ⇓*i*P **P** **03 03 00.5 -2.6**
TULEG IAmb IAmb 03 03 05.9
comp=Z,722nm,1.3s
LGTI Lohaghat 49.89 84 *e*P **P** **03 03 01.8 -2.8**
LGTI IAmb IAmb 03 03 08.8
comp=Z,151nm,1.0s
GUNA GUNA 50.28 91 *e*P **P** **03 03 05.7 -2.0**
GUNA IAmb IAmb 03 03 20.1
comp=Z,1µm,1.3s
GUNA IAMs_20 IAMs_20 03 21 05.2
comp=Z,26µm,22.9s
JHNI Jhansi 50.73 89 *e*P **P** **03 03 08.8 -2.3**
JHNI IAmb IAmb 03 03 15.9
comp=Z,461nm,0.8s
JHNI IAMs_20 IAMs_20 03 22 21.6
comp=Z,35µm,21.0s
BHPL Bhopal 51.15 92 *e*P **P** **03 03 11.8 -2.5**
BHPL IAmb IAmb 03 03 18.9
comp=Z,262nm,0.9s
NRDN NARMADA NAGAR 51.26 93 *e*P **P** **03 03 10.4 -4.6**
NRDN IAmb IAmb 03 03 25.1
comp=Z,348nm,1.2s
NRDN IAMs_20 IAMs_20 03 21 21.6
comp=Z,29µm,21.0s
POO Poona 51.29 99 *e*P **P** **03 03 13.0 -2.4**
POO IAmb IAmb 03 03 27.7
comp=Z,131nm,1.0s
KAD Karad 52.30 100 *e*P **P** **03 03 20.6 -2.4**
KAD IAmb IAmb 03 03 35.1
comp=Z,79nm,1.0s
KAD IAMs_20 IAMs_20 03 21 37.0
comp=Z,6µm,22.2s
AKL Akola 52.33 95 *e*P **P** **03 03 20.8 -2.3**
AKL IAmb IAmb 03 03 29.1
comp=Z,346nm,1.3s
AKL IAMs_20 IAMs_20 03 17 35.8
comp=Z,22µm,18.5s
KNGR Kungurtug, Tuv 52.50 52 *i*P **P** **03 03 23.8 -0.3**
KNGR pmax pmax
comp=Z,41nm,0.5s
KNGR MLR MLR
comp=Z,50µm,17.0s
DRLN Deer Lake 52.57 306 IAmb IAmb 03 03 48.2
comp=Z,369nm,1.3s
FRB Frobisher Bay 53.04 326 LR LR 03 28 23.6
comp=Z,69µm,18.6s,baz=80,slow=39
FRB Frobisher Bay 53.04 326 *i*P **P** **03 03 26.0 -1.7**
POIN Pond Inlet 53.16 338 IAmb IAmb 03 03 32.4
comp=Z,336nm,1.4s
ALBI Allahabad 53.28 87 *e*P **P** **03 03 27.1 -2.9**
ALBI IAmb IAmb 03 03 40.4
comp=Z,392nm,0.9s
ALBI IAMs_20 IAMs_20 03 20 28.9
comp=Z,23µm,17.5s
NGP Nagpur 53.59 93 *e*P **P** **03 03 29.4 -2.9**
MOY Mondy 54.11 49 *e*P **P** **03 03 36.8 +0.9**
MOY pmax pmax
comp=Z,547nm,3.4s
VAR Varanasi 54.19 86 *e*P **P** **03 03 34.8 -1.9**
KUQ Kuujjuuaa 55.08 320 IAmb IAmb 03 03 46.8
comp=Z,311nm,1.6s
BLSP Bilaspur 55.33 90 *e*P **P** **03 03 42.4 -2.7**
BLSP IAmb IAmb 03 03 56.5
comp=Z,471nm,1.2s
BLSP IAMs_20 IAMs_20 03 16 42.1
comp=Z,30µm,18.6s
HYBB Hyderabad (bro 55.48 97 *e*P **P** **03 03 43.3 -2.9**
HYBB IVmB_BB 03 03 48.2
comp=Z,2µm,5.9s
HYBB *ep*P **sP** **03 03 53.8 -0.3**
HYBB *e*PcP **PcP** **03 04 46.5 +0.3**
HYBB *e*PP **PP** **03 05 50.7 +0.6**
HYBB *e*ScP **ScP** **03 08 43.4 -0.7**
HYBB *e*S **S** **03 11 31.5 +0.9**
HYBB *e*ScS **ScS** **03 13 34.4 -0.4**
HYBB *e*SS **SS** **03 15 18.4 +3.1**
HYBB IVMs_BB IVMs_BB 03 28 39.5
comp=Z,6µm,24.8s
EVN Everest 55.57 81 P **P** **03 03 46.4 -1.0**
TLY Talaya 55.61 49 P **P** **03 03 48.1 +1.4**
TLY P **P** **03 03 48.1 +1.4**
TLY S **S** **03 11 30.1 -1.3**
TLY S **S** **03 11 30.1 -1.3**
TLY Talaya 55.61 49 P **P** **03 03 47.1 +0.4**
TLY Talaya 55.61 49 *i*P **P** **03 03 46.4 -0.2**
TLY pmax pmax
comp=Z,64nm,0.8s
TLY MLR MLR
comp=Z,150µm,19.0s
SCHQ Schefferville 55.62 316 P **P** **03 03 45.8 -0.9**
comp=Z,142nm,1.0s,baz=75,slow=6.4,SNR=40
SCHQ LR LR 03 26 29.3
comp=Z,42µm,20.6s,baz=62,slow=35
comp=Z,142nm,1.0s
ILON Igloolik, Nuna 55.69 335 IAmb IAmb 03 03 50.3
comp=Z,395nm,1.2s
IRK Irkutsk 55.72 48 *e*P **P** **03 03 46.9 -0.5**
IRK pmax pmax
comp=Z,939nm,2.2s
ZAK Zakamensk 55.96 50 *e*P **P** **03 03 49.6 +0.3**
ZAK pmax pmax
comp=Z,434nm,1.9s
GAYA Gaya 56.13 85 *e*P **P** **03 03 47.9 -2.8**
GAYA IAmb IAmb 03 03 54.8
comp=Z,212nm,0.7s
RES Resolute Bay 56.44 343 LR LR 03 29 54.9
comp=Z,50µm,19.4s,baz=62,slow=38
RES Resolute Bay 56.44 343 IAmb IAmb 03 03 56.4
comp=Z,308nm,1.4s
RES Resolute Bay 56.44 343 *i*P **P** **03 03 51.0 -1.2**
JHSG JHARSUGUDA 56.78 89 *e*P **P** **03 03 52.8 -2.6**
JHSG IAmb IAmb 03 04 09.9
comp=Z,22µm,1.3s
JHSG IAMs_20 IAMs_20 03 19 45.0
comp=Z,36µm,19.6s
TIXI Tiksi 56.84 21 LR LR 03 31 41.6
comp=Z,127µm,18.3s,baz=326,slow=40
TIXI Tiksi 56.84 21 P **P** **03 03 54.4 -0.6**
TIXI Tiksi 56.84 21 ⇓P **P** **03 03 54.2 -0.8**
GOMU GeErMu 57.09 69 P **P** **03 03 57.3 -0.6**
GOMU pP pP 03 04 00.8 -2.9
GOMU sP sP 03 04 05.0 -0.9
GOMU PP **PP** **03 06 07.8 +3.3**
GOMU S **S** **03 11 52.3 0.0**
GOMU pmax pmax
comp=Z,23nm,1.0s
GOMU LR LR
comp=Z,19µm,18.5s
GOMU LR LR
comp=Z,22µm,18.0s
GOMU LR LR
comp=Z,28µm,18.0s
BOK Bokaro 57.19 86 *e*P **P** **03 03 55.9 -2.4**
BOK IAmb IAmb 03 04 09.0
comp=Z,254nm,0.8s
VJD Vijayawada 57.61 96 *ex* x 03 04 04.9
VJD IAmb IAmb 03 04 19.0
comp=Z,328nm,1.4s
JPG JALPAIGURI 57.76 82 *e*P **P** **03 04 01.0 -1.2**
LSA Lhasa 57.83 77 IAmb IAmb 03 04 09.3
comp=Z,187nm,0.9s
LSA Lhasa 57.83 77 P P 03 03 58.0 -5.3
LSA S **S** **03 11 53.8 -8.5**
LSA pmax pmax
comp=Z,84nm,0.9s
LSA LR LR
comp=N,11µm,18.5s
LSA LR LR
comp=E,13µm,17.2s
LSA LR LR
comp=Z,25µm,16.5s
LSA Lhasa 57.83 77 P **P** **03 04 02.3 -1.0**
RAGD RAYAGADA 58.04 92 *e*P **P** **03 04 01.3 -3.0**
RAGD IAmb IAmb 03 04 16.1
comp=Z,423nm,1.3s
RAGD IAMs_20 IAMs_20 03 21 30.4
comp=Z,34µm,19.0s
ICQ Pointe Anglais 58.22 310 P **P** **03 04 04.4 -0.7**
ICQ IAmb IAmb 03 04 09.8
comp=Z,324nm,1.1s
HAL Halifax 58.33 304 P **P** **03 04 05.6 -0.3**
HAL Halifax 58.33 304 P **P** **03 04 05.6 -0.3**
HAL pmax pmax
comp=Z,374nm,1.0s
LMN Caledonia Moun 58.50 305 P **P** **03 04 06.7 -0.5**
LMN IAmb IAmb 03 04 11.1
comp=Z,275nm,1.1s
HMDM Hanimaadhoo 58.61 111 P **P** **03 04 10.6 +2.3**
VIS Vishakhapatnam 58.87 93 *e*P **P** **03 04 07.5 -2.6**
SALM Salem 58.91 103 *e*P **P** **03 04 07.7 -2.7**
SALM IAMs_20 IAMs_20 03 17 49.7
comp=Z,25µm,22.4s
GTA Gaotai 58.92 63 ⇑P **P** **03 04 09.5 -0.9**
GTA pP pP 03 04 15.8 -0.4
GTA S **S** **03 12 18.0 +2.4**
GTA pmax pmax
comp=Z,100nm,1.0s
GTA pmax pmax
comp=Z,6µm,11.9s
GTA LR LR
comp=Z,30µm,20.3s
GTA LR LR
comp=Z,40µm,20.3s
GTA LR LR
comp=Z,56µm,21.1s
SONM Songino Array 58.94 52 P **P** **03 04 10.4 0.0**
comp=Z,132nm,0.8s,baz=291,slow=8.4,SNR=295
SONM LR LR 03 31 54.6
comp=Z,124µm,20.3s,baz=310,slow=38
SONM PKP2bc P'P'bc 03 33 41.6 -20
comp=Z,3.0nm,1.1s,baz=159,slow=2.3,SNR=4.1
comp=Z,132nm,0.8s
DHUB DHUBRI 59.00 81 *e*P **P** **03 04 08.7 -2.2**
DHUB IAmb IAmb 03 04 15.5
comp=Z,220nm,1.0s
KSANE Kasane 59.17 174 *i*P **P** **03 04 14.4 +2.3**
BWNR Bhubaneshwar 59.17 89 *e*P **P** **03 04 09.4 -2.8**
BWNR IAmb IAmb 03 04 24.2
comp=Z,304nm,1.1s
KOD Kodaikanal 59.31 104 *e*P **P** **03 04 10.2 -3.4**
KOD IAmb IAmb 03 04 18.4
comp=Z,185nm,1.1s
KOD IAMs_20 IAMs_20 03 19 18.2
comp=Z,26µm,21.2s
ULN Ulaanbaatar 59.31 51 P **P** **03 04 13.5 +0.4**
ULN P **P** **03 04 13.5 +0.4**
ULN S **S** **03 12 23.8 +3.2**
ULN S **S** **03 12 23.8 +3.2**
ULN Ulaanbaatar 59.31 51 P **P** **03 04 12.8 -0.2**
ULN IAmb IAmb 03 04 17.7
comp=Z,226nm,1.1s
ULN Ulaanbaatar 59.31 51*c i*P **P** **03 04 12.6 -0.4**
ULN pmax pmax
comp=Z,261nm,1.2s
ULN MLR MLR
comp=Z,127µm,19.0s
TAWA Tawang 59.51 79 *e*P **P** **03 04 14.2 -0.7**
TAWA IAmb IAmb 03 04 20.5
comp=Z,256nm,0.6s
XAUDM Khaudum 59.70 178 *i*P **P** **03 04 18.1 +2.4**
SLIND Selinda 59.87 176 *i*P **P** **03 04 18.7 +1.8**
TSUM Tsumeb 60.37 182 LR LR 03 33 40.2
comp=Z,25µm,18.3s,baz=4.5,slow=39
TSUM Tsumeb 60.37 182 P **P** **03 04 21.1 +0.8**
TSUM Tsumeb 60.37 182 IAMs_20 IAMs_20 03 34 44.2
comp=Z,39µm,18.0s
G65A Princeton 60.50 306 IAmb IAmb 03 04 25.2
comp=Z,238nm,1.1s
G65A IAMs_20 IAMs_20 03 32 25.0
comp=Z,52µm,18.0s
F64A Sherman 60.65 307 IAmb IAmb 03 04 26.9
comp=Z,237nm,1.1s
F64A IAMs_20 IAMs_20 03 32 20.7
comp=Z,49µm,18.0s
SHL Shillong 60.66 81 P **P** **03 04 20.2 -2.4**
SNR=100
SHL Shillong 60.66 81 P **P** **03 04 20.1 -2.5**
SHL IAmb IAmb 03 04 26.9
comp=Z,228nm,0.8s
SHL Shillong 60.66 81 *e*P **P** **03 04 19.6 -2.9**
SHL IAmb IAmb 03 04 26.6
comp=Z,227nm,1.0s
SHL IAMs_20 IAMs_20 03 20 15.1
comp=Z,25µm,18.2s
SHL Shillong 60.66 81 P **P** **03 04 20.1 -2.5**
SHL pmax pmax
comp=Z,228nm,0.8s
QNGWA Qangwa 60.68 178 *i*P **P** **03 04 24.5 +2.0**
TEZP TEZPUR 60.74 79 *e*P **P** **03 04 20.9 -2.0**
TEZP IAmb IAmb 03 04 36.7
comp=Z,242nm,1.3s
CIT Chita 60.88 45 *e*P **P** **03 04 23.0 -0.5**
CIT *e* 03 05 05.0
CIT *e* 03 06 38.2
CIT pmax pmax
comp=Z,857nm,2.1s
E62A Clayton Lake 60.96 308 IAmb IAmb 03 04 29.1
comp=Z,277nm,1.1s
E62A IAMs_20 IAMs_20 03 33 13.0
comp=Z,26µm,18.0s
ZIRO ZIRO 61.01 78 *e*P **P** **03 04 23.2 -1.7**
ZIRO IAmb IAmb 03 04 37.2
comp=Z,270nm,1.0s
ITAN ITANAGAR 61.12 78 *e*P **P** **03 04 24.6 -0.9**
ITAN IAmb IAmb 03 04 31.3
comp=Z,387nm,0.9s
AGT Agartala 61.15 83 *e*P **P** **03 04 25.2 -0.5**
AGT IAmb IAmb 03 04 31.4
comp=Z,230nm,0.7s
LDAQ Lac Daran 61.28 310 IAmb IAmb 03 04 30.6
comp=Z,283nm,1.4s
SBV Sambava 61.38 146 P **P** **03 04 28.8 +1.7**
SNR=12
PKME Peaks-Kenny Pk 61.52 307 P **P** **03 04 26.8 -1.1**
PKME IAmb IAmb 03 04 33.2
comp=Z,171nm,1.1s
PKME IAMs_20 IAMs_20 03 31 27.9
comp=Z,43µm,19.0s
BELO BELONIA 61.67 83 *e*P **P** **03 04 28.1 -1.1**
PASG PASIGHAT 61.79 76 *e*P P 03 04 28.4 +14
PASG IAmb IAmb 03 04 36.7
comp=Z,178nm,0.6s
SILR SILCHAR 61.79 81 *e*P **P** **03 04 29.3 -0.7**
SILR IAmb IAmb 03 04 46.1
comp=Z,170nm,0.9s
MATP Matopo 62.10 171 LR LR 03 34 18.9
comp=Z,24µm,19.7s,baz=356,slow=39
BRDH Bariadhala 62.15 84 LR LR 03 36 55.8
comp=Z,13µm,18.1s,baz=302,slow=41
MOKO MOKOCHONG 62.17 78 *e*P **P** **03 04 31.2 -1.6**
MOKO IAmb IAmb 03 04 37.9
comp=Z,411nm,1.0s
KOHI KOHIMA 62.22 79 *e*P **P** **03 04 31.2 -1.9**
KOHI IAmb IAmb 03 04 47.0
comp=Z,290nm,1.4s
G62A West of Eustis 62.29 307 IAmb IAmb 03 04 52.6
comp=Z,410nm,1.6s
G62A IAMs_20 IAMs_20 03 33 20.2
comp=Z,43µm,18.0s
GRTLG Ghanzi 62.51 178 IAmb IAmb 03 04 57.9
comp=Z,168nm,1.1s
GRTLG Ghanzi 62.51 178 *i*P **P** **03 04 37.4 +2.6**
IMP Imphal 62.61 80 *e*P **P** **03 04 34.6 -1.0**
IMP IAmb IAmb 03 04 41.2
comp=Z,276nm,1.2s
YAK Yakutsk 62.61 30 P **P** **03 04 33.7 -1.1**
comp=Z,115nm,0.7s,baz=302,slow=8.1,SNR=20
YAK LR LR 03 34 33.0
comp=Z,90µm,19.7s,baz=304,slow=39
comp=Z,115nm,0.7s
YAK Yakutsk 62.61 30 P **P** **03 04 33.8 -1.1**
YAK Yakutsk 62.61 30 *e*P **P** **03 04 32.9 -2.0**
YAK *e**PP **sP** **03 04 42.8 -0.1**
YAK *e* 03 05 10.9
YAK *e* 03 06 50.3
YAK *e*PPP PPP 03 08 19.3
YAK *e*S **S** **03 12 59.6 -2.1**
YAK *e**SS **sS** **03 13 18.5 +7.2**
YAK *e* 03 14 21.4
YAK *e*SS **SS** **03 17 05.7 +0.5**
YAK pmax pmax
comp=Z,151nm,0.9s
YAK pmax pmax
comp=E,79nm,1.5s
YAK pmax pmax
comp=N,88nm,1.4s
YAK pmax pmax
comp=Z,636nm,2.5s
YAK pmax pmax
comp=N,204nm,2.0s
YAK pmax pmax
comp=E,349nm,3.6s
YAK smax smax
comp=E,2µm,5.2s
YAK smax smax
comp=N,1µm,4.4s
YAK MLR MLR
comp=Z,120µm,25.0s
YAK MLR MLR
comp=E,41µm,17.0s
YAK MLR MLR
comp=N,29µm,23.0s
BROLN Tlhalogang 62.64 172 *i*P **P** **03 04 38.0 +2.3**
I63A Otisfield 62.94 306 IAMs_20 IAMs_20 03 32 11.5
comp=Z,36µm,19.0s
KAAM Kaadhehdhoo 62.98 116 P **P** **03 04 38.4 +0.3**
H62A Milan 63.01 307 IAmb IAmb 03 04 58.0
comp=Z,173nm,1.1s
H62A IAMs_20 IAMs_20 03 33 10.3
comp=Z,37µm,18.0s
BLKN Baker Lake 63.14 334 P **P** **03 04 37.3 -1.1**
BLKN IAmb IAmb 03 04 58.2
comp=Z,305nm,1.5s
SAIH SAIHA 63.26 83 *e*P **P** **03 04 38.9 -1.2**
SAIH IAmb IAmb 03 04 52.2
comp=Z,341nm,0.9s
LZDM Lanzhou Array 63.35 65 P **P** **03 04 40.5 -0.2**
comp=Z,58nm,0.5s,baz=289,slow=4.5,SNR=36
LZDM LR LR 03 37 06.7
comp=Z,30µm,18.4s,baz=335,slow=41
comp=Z,58nm,0.5s
LZH Lanzhou 63.38 64 *e*P **P** **03 04 40.8 +0.1**
LZH sP sP 03 04 49.8 +1.1
LZH pmax pmax
comp=Z,310nm,1.3s
LZH pmax pmax
comp=Z,5µm,4.1s
LZH LR LR
comp=Z,33µm,15.8s
LZH LR LR
comp=Z,35µm,16.1s
LZH LR LR
comp=Z,58µm,15.1s
I62A Tamworth 63.50 306 IAmb IAmb 03 04 56.2
comp=Z,188nm,1.1s
I62A IAMs_20 IAMs_20 03 32 37.2
comp=Z,35µm,19.0s
LBNH Lisbon 63.65 307 IAmb IAmb 03 04 47.4
comp=Z,179nm,1.2s
LBNH IAMs_20 IAMs_20 03 33 12.3
comp=Z,39µm,18.0s
PALK Pallekele 63.66 104 LR LR 03 35 09.6
comp=Z,10µm,21.5s,baz=314,slow=39
PALK Pallekele 63.66 104 P **P** **03 04 40.8 -1.8**
PALK P **P** **03 04 40.8 -1.8**
PALK S **S** **03 13 11.7 -4.5**
PALK S **S** **03 13 11.7 -4.5**
PALK Pallekele 63.66 104 P **P** **03 04 41.0 -1.6**
PALK IAmb IAmb 03 04 60.0
comp=Z,313nm,1.4s
PALK Pallekele 63.66 104 ⇓P **P** **03 04 40.9 -1.8**
PALK Pallekele 63.66 104 P **P** **03 04 40.4 -2.2**
WIN Windhoek 63.73 183 IAMs_20 IAMs_20 03 36 31.2
comp=Z,37µm,20.0s
MNTQ Montreal, Queb 63.97 309 IAmb IAmb 03 04 48.8
comp=Z,208nm,1.4s
KGCAE Kacgae 64.02 177 P **P** **03 04 44.8 0.0**
KGCAE Kacgae 64.02 177 *i*P **P** **03 04 47.4 +2.7**
VT1 Waterbury 64.10 307 IAMs_20 IAMs_20 03 33 16.4
comp=Z,29µm,19.0s
MREMI Moremi 64.10 172 *i*P **P** **03 04 48.3 +3.0**
KOOLE Kule 64.11 179 *i*P **P** **03 04 48.3 +2.9**
TRQ Mont Tremblant 64.12 310 IAmb IAmb 03 04 49.6
comp=Z,210nm,1.1s
A36M Sachs Harbour 64.19 349 IAMs_20 IAMs_20 03 34 42.2
comp=Z,28µm,20.0s
A36M Sachs Harbour 64.19 349 P **P** **03 04 44.7 -0.5**
baz=29,SNR=182
A36M S **S** **03 13 21.2 +0.1**
baz=29
L64A Middleborough 64.25 304 IAMs_20 IAMs_20 03 33 27.2
comp=Z,50µm,20.0s
M65A Busby, Falmout 64.33 304 IAMs_20 IAMs_20 03 34 58.5
comp=Z,30µm,18.0s
M65A Busby, Falmout 64.33 304 P **P** **03 04 45.0 -1.7**
baz=56
M65A S **S** **03 13 26.3 +2.5**
baz=56
HRV Adam Dziewonsk 64.38 305 IAMs_20 IAMs_20 03 34 49.7
comp=Z,46µm,18.0s
HRV Adam Dziewonsk 64.38 305 ⇓P **P** **03 04 50.9 +3.9**
J61A Chester 64.53 306 IAmb IAmb 03 04 54.5
comp=Z,214nm,1.2s
VLDQ Val d'Or 64.70 313 IAmb IAmb 03 04 54.1
comp=Z,274nm,1.1s
K62A Royalston 64.71 305 IAmb IAmb 03 04 54.4
comp=Z,297nm,1.3s
K62A IAMs_20 IAMs_20 03 35 02.3
comp=Z,50µm,18.0s
LPHEP Lephephe 64.74 174 *i*P **P** **03 04 52.6 +3.1**
BTO Baotou 64.94 57 ⇑*i*P **P** **03 04 49.5 -1.3**
BTO sP **pP** **03 04 56.5 -0.1**
BTO PP **PP** **03 07 12.5 -0.8**
BTO S **S** **03 13 30.0 -1.6**
BTO pmax pmax
comp=Z,260nm,1.2s
BTO pmax pmax
comp=Z,13µm,4.8s
BTO LR LR
comp=Z,38µm,16.5s
BTO LR LR
comp=Z,25µm,13.7s
BTO LR LR
comp=Z,60µm,22.0s
OPO Ambohidratompo 64.95 151 LR LR 03 36 33.6
comp=Z,7µm,19.2s,baz=174,slow=39
LONY Lake Ozonia 65.03 308 IAmb IAmb 03 05 11.2
comp=Z,191nm,1.2s
LONY IAMs_20 IAMs_20 03 33 29.6
comp=Z,51µm,19.0s
L61B Northampton 65.10 305 IAmb IAmb 03 05 06.0
comp=Z,374nm,1.5s
L61B IAMs_20 IAMs_20 03 35 12.7
comp=Z,47µm,18.0s
LKGWB Lokgwabe 65.24 178 *i*P **P** **03 04 54.3 +1.6**
M63A Gales Ferry 65.30 304 IAmb IAmb 03 05 13.4
comp=Z,235nm,1.1s
ABPO Ambohimpanom 65.37 151 P **P** **03 04 53.7 0.0**
ABPO Ambohimpanom 65.37 151 P **P** **03 04 53.7 0.0**
ABPO pmax pmax
comp=Z,53nm,1.1s
ABPO MLR MLR
comp=Z,11µm,21.0s
HILR Hailar Array B 65.52 45 P **P** **03 04 54.5 +0.2**
comp=Z,24nm,0.7s,baz=273,slow=2.7,SNR=22
HILR LR LR 03 36 55.6
comp=Z,65µm,18.8s,baz=85,slow=39
comp=Z,24nm,0.7s
J59A Piesco 65.64 307 IAmb IAmb 03 05 00.3
comp=Z,242nm,1.3s
HIA Hailar 65.68 45 IAmb IAmb 03 05 07.1
comp=Z,262nm,1.1s
HIA Hailar 65.68 45 P **P** **03 04 55.1 -0.3**
SKOMA Sekoma 65.75 176 *i*P **P** **03 04 58.6 +2.7**
HHC Hu-ho-hao-te 65.77 56 *e*P **P** **03 04 56.3 +0.1**
HHC pP pP 03 05 03.0 +1.0
HHC sP sP 03 05 05.8 +1.6
HHC PP **PP** **03 07 23.3 +2.7**
HHC S **S** **03 13 40.3 -1.5**
HHC sS pS 03 13 49.3 +0.1
HHC SS **SS** **03 17 55.8 +0.1**
HHC pmax pmax
comp=Z,94nm,1.2s
HHC pmax pmax
comp=Z,5µm,4.7s
HHC LR LR
comp=Z,25µm,16.8s

HHC					LR	LR			
	comp=Z,55µm,16.0s								
HHC					LR	LR			
	comp=Z,75µm,16.8s								
TNCH	**TengChong**	**65.86**	**77**		P	**P**	**03 04 56.5**	**-0.6**	
TNCH					S	**S**	**03 13 42.3**	**-1.2**	
TNCH					SS	**SS**	**03 17 57.5**	**-0.5**	
TNCH					pmax	pmax			
	comp=Z,270nm,1.9s								
TNCH					pmax	pmax			
	comp=Z,4µm,5.3s								
TNCH					LR	LR			
	comp=Z,11µm,14.9s								
TNCH					LR	LR			
	comp=Z,5µm,17.4s								
TNCH					LR	LR			
	comp=Z,21µm,20.3s								
KSCT	**Kent School, K**	**66.00**	**305**		IAmb	IAmb	03 05 18.2		
	comp=Z,310nm,1.3s								
CD2	**Chengdu**	**66.22**	**69**	⇑	P	**P**	**03 04 58.3**	**-0.9**	
CD2					ScP		03 09 30.8		
CD2					S	**S**	**03 13 46.8**	**-0.7**	
CD2					ScS	**ScS**	**03 14 56.3**	**+1.4**	
CD2					pmax	pmax			
	comp=Z,200nm,1.1s								
CD2					pmax	pmax			
	comp=Z,7µm,5.7s								
CD2					LR	LR			
	comp=Z,15µm,15.9s								
CD2					LR	LR			
	comp=Z,14µm,15.9s								
CD2					LR	LR			
	comp=Z,31µm,20.3s								
WSPT	**Westport, CT**	**66.23**	**305**		IAMs_20	IAMs_20	03 34 46.6		
	comp=Z,49µm,20.0s								
C36M	**Paulatuk**	**66.32**	**347**		IAmb	IAmb	03 05 02.9		
	comp=Z,385nm,1.4s								
C36M					IAMs_20	IAMs_20	03 35 49.8		
	comp=Z,26µm,21.0s								
C36M	**Paulatuk**	**66.32**	**347**		P	**P**	**03 04 58.5**	**-0.6**	
	baz=29,SNR=88								
C36M					S	**S**	**03 13 45.9**	**-1.4**	
	baz=29								
LBTB	**Lobatse**	**66.36**	**174**		LR	LR	03 36 16.4		
	comp=Z,49µm,20.2s,baz=356,slow=38								
LBTB	**Lobatse**	**66.36**	**174**		IAmb	IAmb	03 05 17.2		
	comp=Z,216nm,1.3s								
N62A	**Caumsett State**	**66.45**	**304**		IAMs_20	IAMs_20	03 35 46.7		
	comp=Z,48µm,18.0s								
J57A	**Williamstown**	**66.56**	**308**		IAmb	IAmb	03 05 05.9		
	comp=Z,206nm,1.2s								
PHPEN	**Phepeng**	**66.65**	**177**	*i*	P	**P**	**03 05 03.2**	**+1.5**	
PAL	**Palisades**	**66.68**	**305**		IAmb	IAmb	03 05 21.8		
	comp=Z,188nm,1.1s								
L59A	**Walton**	**66.69**	**306**		IAMs_20	IAMs_20	03 34 53.0		
	comp=Z,41µm,18.0s								
ZEA	**Zeya**	**66.72**	**38**	*e*	P	**P**	**03 04 58.6**	**-3.3**	
ZEA				*e*			03 05 02.0		
ZEA				*e*			03 05 24.6		
ZEA				*e*			03 07 32.3		
ZEA				*e*	S	**S**	**03 13 55.1**	**+2.5**	
ZEA					pmax	pmax			
	comp=E,400nm,10.9s								
ZEA					pmax	pmax			
	comp=N,400nm,6.5s								
ZEA					pmax	pmax			
	comp=Z,2µm,9.6s								
ZEA					smax	smax			
	comp=E,2µm,15.2s								
ZEA					MLR	MLR			
	comp=E,12µm,13.0s								
ZEA					MLR	MLR			
	comp=N,8µm,16.0s								
ZEA					MLR	MLR			
	comp=Z,36µm,14.0s								
XLT	**XiLinHaoTe**	**66.76**	**51**	*e*	P	**P**	**03 05 02.3**	**-0.1**	
XLT					pP	pP	03 05 06.0	-2.3	
XLT					sP	sP	03 05 09.3	-1.2	
XLT					S	**S**	**03 13 53.0**	**-0.7**	
XLT					SS	**SS**	**03 18 18.0**	**+7.2**	
XLT					pmax	pmax			
	comp=Z,58nm,1.3s								
XLT					pmax	pmax			
	comp=Z,4µm,5.8s								
XLT					LR	LR			
	comp=Z,54µm,19.5s								
XLT					LR	LR			
	comp=Z,108µm,19.1s								
PECO	**Prince Edward**	**66.84**	**309**		IAmb	IAmb	03 05 23.2		
	comp=Z,265nm,1.2s								
DELO	**Deloro Mine**	**66.86**	**309**		IAmb	IAmb	03 05 08.0		
	comp=Z,242nm,1.3s								
MAKGR	**Makgori**	**67.09**	**175**	*i*	P	**P**	**03 05 06.4**	**+1.8**	
BINY	**Binghamton**	**67.25**	**307**		IAmb	IAmb	03 05 10.6		
	comp=Z,234nm,1.2s								
BINY					IAMs_20	IAMs_20	03 36 37.9		
	comp=Z,48µm,18.0s								
K57A	**Scipio Center**	**67.26**	**307**		IAMs_20	IAMs_20	03 34 49.1		
	comp=Z,37µm,18.0s								
PZH	**PanZhiHua**	**67.35**	**74**		P	**P**	**03 05 05.0**	**-1.5**	
PZH					pP	**pP**	**03 05 11.3**	**-1.1**	
PZH					sP	**sP**	**03 05 16.3**	**+1.8**	
PZH					PP	**PP**	**03 07 36.0**	**+1.3**	
PZH					SKS	**SKiKP**	**03 15 04.3**	**-0.4**	
PZH					pmax	pmax			
	comp=Z,220nm,1.3s								
PZH					pmax	pmax			
	comp=Z,3µm,7.1s								
PZH					LR	LR			
	comp=Z,14µm,20.4s								
PZH					LR	LR			
	comp=Z,17µm,18.0s								
PZH					LR	LR			
	comp=Z,17µm,24.6s								
A21K	**Barrow**	**67.51**	**359**		P	**P**	**03 05 06.9**	**+0.3**	
	baz=3.2								
A21K					S	**S**	**03 14 03.2**	**+1.6**	
	baz=3.2								
SADO	**Sadowa**	**67.59**	**310**		LR	LR	03 35 16.7		
	comp=Z,33µm,18.0s,baz=80,slow=36								
J55A	**Hilton**	**67.72**	**308**		IAmb	IAmb	03 05 13.3		
	comp=Z,321nm,1.2s								
J55A					IAMs_20	IAMs_20	03 35 02.1		
	comp=Z,49µm,18.0s								
A22K	**Sinclair Lake**	**67.79**	**358**		P	**P**	**03 05 08.6**	**+0.2**	
	baz=4.5								
A22K					S	**S**	**03 14 07.5**	**+2.5**	
	baz=4.5								
VOI	**Vohitsoka**	**67.88**	**153**		P	**P**	**03 05 10.7**	**+1.1**	
	SNR=14								
VOI	**Vohitsoka**	**67.88**	**153**		P	**P**	**03 05 10.2**	**+0.6**	
VOI					IAmb	IAmb	03 05 47.9		
	comp=Z,217nm,1.4s								
XAN	**Xi'an**	**67.97**	**64**	⇑	P	**P**	**03 05 09.8**	**-0.4**	
XAN					pP	pP	03 05 14.0	-2.1	
XAN					sP	sP	03 05 16.5	-1.7	
XAN					PP	**PP**	**03 07 43.0**	**+3.2**	
XAN					S	**S**	**03 14 06.5**	**-1.9**	
XAN					pmax	pmax			
	comp=Z,270nm,1.2s								
XAN					pmax	pmax			
	comp=Z,8µm,6.2s								
XAN					LR	LR			
	comp=Z,18µm,15.1s								
XAN					LR	LR			
	comp=Z,33µm,16.5s								
XAN					LR	LR			
	comp=Z,32µm,15.1s								
BILL	**Bilibino**	**67.99**	**13**		P	**P**	**03 05 08.5**	**-1.1**	
BILL					IAMs_20	IAMs_20	03 39 12.4		
	comp=Z,40µm,18.0s								
BILL	**Bilibino**	**67.99**	**13**	⇑	P	**P**	**03 05 08.6**	**-1.1**	
P61A	**Hammonton**	**68.00**	**304**		IAMs_20	IAMs_20	03 36 53.8		
	comp=Z,36µm,18.0s								
MMNY	**Mt. Morris Dam**	**68.09**	**308**		IAmb	IAmb	03 05 16.2		
	comp=Z,264nm,1.1s								
TIY	**Taiyuan**	**68.13**	**59**		P	**P**	**03 05 11.0**	**-0.2**	
TIY					pP	**sP**	**03 05 19.8**	**+0.6**	
TIY					PP	**PP**	**03 07 47.0**	**+5.8**	
TIY					S	**S**	**03 14 11.5**	**+1.2**	
TIY					SS	**SS**	**03 18 38.0**	**+5.7**	
TIY					pmax	pmax			
	comp=Z,70nm,0.7s								
TIY					pmax	pmax			
	comp=Z,4µm,5.8s								
TIY					LR	LR			
	comp=Z,27µm,18.6s								
TIY					LR	LR			
	comp=Z,26µm,18.6s								
TIY					LR	LR			
	comp=Z,27µm,18.6s								
L56A	**Greenwood**	**68.24**	**307**		IAmb	IAmb	03 05 16.7		
	comp=Z,229nm,1.1s								
L56A					IAMs_20	IAMs_20	03 35 45.9		
	comp=Z,44µm,18.0s								
PSUB	**Penn St. - Bra**	**68.26**	**304**		IAmb	IAmb	03 05 16.4		
	comp=Z,353nm,1.3s								
C26K	**Camden Bay**	**68.37**	**354**		P	**P**	**03 05 12.6**	**+0.5**	
	baz=13,SNR=108								
C26K					S	**S**	**03 14 13.6**	**+1.6**	
	baz=13								
D28M	**Stokes Point**	**68.39**	**352**		P	**P**	**03 05 12.4**	**+0.3**	
	baz=17,SNR=96								
D28M					S	**S**	**03 14 13.7**	**+1.5**	
	baz=17								
B22K	**Teshekpuk Lake**	**68.41**	**357**		IAmb	IAmb	03 05 16.9		
	comp=Z,331nm,1.4s								
B22K					IAMs_20	IAMs_20	03 34 05.8		
	comp=Z,24µm,22.0s								
B22K	**Teshekpuk Lake**	**68.41**	**357**		P	**P**	**03 05 12.3**	**0.0**	
	baz=5.7								
B22K					S	**S**	**03 14 14.3**	**+1.9**	
	baz=5.7								
M57A	**Sunshine Farm,**	**68.45**	**306**		IAmb	IAmb	03 05 18.9		
	comp=Z,260nm,1.0s								
M57A					IAMs_20	IAMs_20	03 34 52.6		
	comp=Z,34µm,20.0s								
N58A	**Sunbury**	**68.50**	**306**		IAmb	IAmb	03 05 18.3		
	comp=Z,240nm,1.2s								
N58A					IAMs_20	IAMs_20	03 35 40.9		
	comp=Z,47µm,19.0s								
DGAR	**Diego Garcia**	**68.53**	**122**		P	**P**	**03 05 14.9**	**+1.2**	
DGAR	**Diego Garcia**	**68.53**	**122**		P	**P**	**03 05 14.4**	**+0.6**	
DGAR	**Diego Garcia**	**68.53**	**122**		P	**P**	**03 05 14.4**	**+0.6**	
DGAR					pmax	pmax			
	comp=Z,704nm,1.3s								
C27K	**Jago River**	**68.56**	**354**		IAMs_20	IAMs_20	03 35 07.9		
	comp=Z,26µm,21.0s								
C27K	**Jago River**	**68.56**	**354**		P	**P**	**03 05 13.4**	**+0.1**	
	baz=14								
C27K					S	**S**	**03 14 16.5**	**+2.2**	
	baz=14								
A19K	**Wainwright**	**68.66**	**0**		P	**P**	**03 05 13.8**	**0.0**	
	baz=360								
A19K					S	**S**	**03 14 18.0**	**+2.6**	
	baz=360								
D27M	**Malcolm River**	**68.69**	**353**		IAmb	IAmb	03 05 35.1		
	comp=Z,136nm,0.9s								
D27M	**Malcolm River**	**68.69**	**353**		P	**P**	**03 05 14.0**	**-0.2**	
	baz=16								
D27M					S	**S**	**03 14 16.1**	**0.0**	
	baz=16								
INK	**Inuvik**	**68.73**	**350**		LR	LR	03 37 37.4		
	comp=Z,20µm,20.8s,baz=32,slow=38								
INK	**Inuvik**	**68.73**	**350**		P	**P**	**03 05 13.3**	**-1.0**	
	baz=22,SNR=57								
INK					S	**S**	**03 14 15.8**	**-0.4**	
	baz=22								
MVL	**Millersville**	**68.78**	**305**		IAmb	IAmb	03 05 31.6		
	comp=Z,258nm,1.5s								
C23K	**Itkillik River**	**68.80**	**356**		IAMs_20	IAMs_20	03 35 35.1		
	comp=Z,23µm,19.0s								
C23K	**Itkillik River**	**68.80**	**356**		P	**P**	**03 05 15.2**	**+0.5**	
	baz=8.0								
C23K					S	**S**	**03 14 18.9**	**+1.8**	
	baz=8.0								
C24K	**Franklin Bluff**	**68.82**	**356**		P	**P**	**03 05 15.0**	**+0.1**	
	baz=9.5								
C24K					S	**S**	**03 14 17.3**	**0.0**	
	baz=9.5								
B20K	**Meade River**	**68.83**	**359**		IAmb	IAmb	03 05 19.7		
	comp=Z,270nm,1.2s								
B20K					IAMs_20	IAMs_20	03 35 13.2		
	comp=Z,28µm,21.0s								
B20K	**Meade River**	**68.83**	**359**		P	**P**	**03 05 15.2**	**+0.2**	
	baz=2.7								
B20K					S	**S**	**03 14 19.5**	**+2.0**	
	baz=2.7								
PAGS	**Pennsylvania G**	**68.87**	**305**		IAmb	IAmb	03 05 35.5		
	comp=Z,155nm,1.2s								
KMI	**Kunming**	**68.89**	**75**	⇑	P	**P**	**03 05 15.0**	**-1.3**	
KMI					pP	pP	03 05 19.5	-2.7	
KMI					PP	**PP**	**03 07 48.0**	**-0.2**	
KMI					S	**S**	**03 14 12.8**	**-7.1**	
KMI					SKS	**SKSac**	**03 15 12.5**	**-2.9**	
KMI					pmax	pmax			
	comp=Z,140nm,1.6s								
KMI					pmax	pmax			
	comp=Z,4µm,6.6s								
KMI					LR	LR			
	comp=Z,12µm,16.0s								
KMI					LR	LR			
	comp=Z,7µm,19.1s								
KMI					LR	LR			
	comp=Z,24µm,20.3s								
DGPR	**DIGLIPUR**	**68.91**	**91**	*e*	P	**P**	**03 05 15.2**	**-1.1**	
DGPR					IAmb	IAmb	03 05 27.9		
	comp=Z,283nm,1.1s								
HEH	**HeiHe**	**69.01**	**41**	*e*	P	**P**	**03 05 16.0**	**-0.3**	
HEH					pP	**pP**	**03 05 19.5**	**-2.7**	
HEH					S	**S**	**03 14 21.8**	**+1.7**	
HEH					sS	**sS**	**03 14 29.3**	**-0.6**	
HEH					ScS	**SKSac**	**03 15 13.3**	**-1.7**	
HEH					SS	**SS**	**03 18 51.8**	**+6.8**	
HEH					pmax	pmax			
	comp=Z,210nm,1.4s								
HEH					pmax	pmax			
	comp=Z,7µm,8.0s								
HEH					LR	LR			
	comp=Z,39µm,15.8s								
HEH					LR	LR			
	comp=Z,101µm,15.1s								
HEH					LR	LR			
	comp=Z,137µm,15.7s								
D25K	**Kavik River**	**69.06**	**355**		IAmb	IAmb	03 05 44.8		
	comp=Z,250nm,1.2s								
D25K					IAMs_20	IAMs_20	03 35 27.1		
	comp=Z,27µm,21.0s								
D25K	**Kavik River**	**69.06**	**355**		P	**P**	**03 05 16.4**	**-0.1**	
	baz=11								
D25K					S	**S**	**03 14 20.1**	**-0.3**	
	baz=11								
BJI	**Beijing**	**69.10**	**55**		P	**P**	**03 05 16.8**	**-0.3**	
BJI					PP	**PP**	**03 07 55.0**	**+5.7**	
BJI					S	**S**	**03 14 24.0**	**+2.5**	
BJI					sS	**sS**	**03 14 32.8**	**+1.6**	
BJI					pmax	pmax			
	comp=Z,69nm,1.4s								
BJI					pmax	pmax			
	comp=Z,2µm,6.3s								
BJI					LR	LR			
	comp=Z,27µm,18.0s								
BJI					LR	LR			
	comp=Z,22µm,21.5s								
BJI					LR	LR			
	comp=Z,50µm,20.3s								
RCBR	**Riachuelo**	**69.10**	**241**		P	**P**	**03 05 16.8**	**-0.6**	
RCBR					IAmb	IAmb	03 05 33.3		
	comp=Z,161nm,1.1s								
RCBR	**Riachuelo**	**69.10**	**241**		IAMs_20	IAMs_20	03 36 42.3		
	comp=Z,35µm,18.0s								
RCBR	**Riachuelo**	**69.10**	**241**		P	**P**	**03 05 16.8**	**-0.6**	
RCBR					pmax	pmax			
	comp=Z,161nm,1.2s								
RCBR					MLR	MLR			
	comp=Z,35µm,18.0s								
RCBR	**Riachuelo**	**69.10**	**241**		P	**P**	**03 05 21.0**	**+3.6**	
RCBR					S	**S**	**03 14 30.0**	**+7.8**	
RCBR	**Riachuelo**	**69.10**	**241**	*e*	P	**P**	**03 05 18.1**	**+0.6**	
BJT	**Baijiatuau**	**69.11**	**55**		P	**P**	**03 05 17.2**	**+0.1**	
R61A	**Willards**	**69.14**	**303**		IAMs_20	IAMs_20	03 35 03.0		
	comp=Z,33µm,20.0s								
B21K	**Ikpikpuk River**	**69.17**	**358**		IAMs_20	IAMs_20	03 35 37.0		
	comp=Z,26µm,20.0s								
B21K	**Ikpikpuk River**	**69.17**	**358**		P	**P**	**03 05 17.5**	**+0.5**	
	baz=4.7,SNR=29								
B21K					S	**S**	**03 14 22.4**	**+1.0**	
	baz=4.7								
E28M	**Babbage River**	**69.17**	**352**		IAmb	IAmb	03 05 21.5		
	comp=Z,356nm,1.4s								
E28M					IAMs_20	IAMs_20	03 41 00.8		
	comp=Z,23µm,21.0s								
E28M	**Babbage River**	**69.17**	**352**		P	**P**	**03 05 17.0**	**-0.1**	
	baz=17								
E28M					S	**S**	**03 14 23.6**	**+2.1**	
	baz=17								
E29M	**Blow River**	**69.19**	**351**		P	**P**	**03 05 17.2**	**0.0**	
	baz=18,SNR=278								
E29M					S	**S**	**03 14 21.3**	**-0.6**	
	baz=18								
SEY	**Seymchan**	**69.33**	**21**		P	**P**	**03 05 17.8**	**-0.3**	
	comp=Z,39nm,0.7s,baz=303,slow=5.2,SNR=20								
SEY					LR	LR	03 41 37.8		
	comp=Z,63µm,18.1s,baz=327,slow=41								
	comp=Z,39nm,0.7s								
SEY	**Seymchan**	**69.33**	**21**	*i*	P	**P**	**03 05 17.7**	**-0.4**	
SEY					pmax	pmax			
	comp=Z,81nm,0.9s								
SSPA	**Standing Stone**	**69.33**	**306**		P	**P**	**03 05 17.7**	**-0.8**	
SSPA					IAmb	IAmb	03 05 31.0		
	comp=Z,266nm,1.0s								
SSPA	**Standing Stone**	**69.33**	**306**		IAMs_20	IAMs_20	03 35 38.0		
	comp=Z,43µm,20.0s								
D24K	**Happy Valley**	**69.39**	**356**		IAmb	IAmb	03 05 35.0		
	comp=Z,210nm,1.2s								
D24K					IAMs_20	IAMs_20	03 36 04.7		
	comp=Z,22µm,20.0s								
D24K	**Happy Valley**	**69.39**	**356**		P	**P**	**03 05 18.5**	**+0.2**	
	baz=9.4								
D24K					S	**S**	**03 14 25.0**	**+0.9**	
	baz=9.4								
E46A	**Sault Ste Mari**	**69.49**	**314**		IAMs_20	IAMs_20	03 34 25.9		
	comp=Z,46µm,20.0s								
B18K	**Kokolik River**	**69.50**	**1**		P	**P**	**03 05 19.6**	**+0.5**	
	baz=359								
B18K					S	**S**	**03 14 28.3**	**+2.9**	
	baz=359								
F31M	**Tsiigehtchic**	**69.57**	**349**		P	**P**	**03 05 18.9**	**-0.6**	
	baz=21,SNR=155								
F31M					S	**S**	**03 14 26.5**	**+0.3**	
	baz=21								
C21K	**Knifeblade Rid**	**69.64**	**358**		P	**P**	**03 05 20.2**	**+0.3**	
	baz=4.6								
C21K					S	**S**	**03 14 28.7**	**+1.6**	
	baz=4.6								
D23K	**Nanushuk River**	**69.67**	**356**		IAMs_20	IAMs_20	03 36 14.1		
	comp=Z,32µm,20.0s								
D23K	**Nanushuk River**	**69.67**	**356**		P	**P**	**03 05 20.7**	**+0.5**	
	baz=7.9								
D23K					S	**S**	**03 14 28.4**	**+1.0**	
	baz=7.9								
F30M	**Barrier River**	**69.68**	**350**		IAmb	IAmb	03 05 56.9		
	comp=Z,142nm,0.9s								
F30M	**Barrier River**	**69.68**	**350**		P	**P**	**03 05 19.5**	**-0.7**	
	baz=20,SNR=29								
F30M					S	**S**	**03 14 26.4**	**-1.3**	
	baz=20								
PBA	**Port Blair**	**69.74**	**92**		P	**P**	**03 05 22.0**	**+0.6**	
S61A	**Accomac**	**69.74**	**303**		IAMs_20	IAMs_20	03 36 38.9		
	comp=Z,36µm,19.0s								
C19K	**Lookout Ridge**	**69.77**	**360**		IAmb	IAmb	03 05 43.1		
	comp=Z,245nm,1.3s								
C19K					IAMs_20	IAMs_20	03 36 15.8		
	comp=Z,36µm,20.0s								
C19K	**Lookout Ridge**	**69.77**	**360**		P	**P**	**03 05 21.3**	**+0.5**	
	baz=0.7,SNR=16								
C19K					S	**S**	**03 14 31.2**	**+2.5**	
	baz=0.7								
HNS	**HongShan**	**69.77**	**58**	⇑	P	**P**	**03 05 20.8**	**-0.4**	
HNS					PP	**PP**	**03 07 56.3**	**+1.1**	
HNS					S	**S**	**03 14 35.5**	**+6.0**	
HNS					pmax	pmax			
	comp=Z,160nm,1.5s								
HNS					pmax	pmax			
	comp=Z,6µm,8.4s								
HNS					LR	LR			
	comp=Z,38µm,18.6s								
HNS					LR	LR			
	comp=Z,34µm,21.0s								
HNS					LR	LR			
	comp=Z,43µm,22.5s								
E27K	**Coleen River**	**69.78**	**353**		IAmb	IAmb	03 05 25.4		
	comp=Z,354nm,1.3s								
E27K	**Coleen River**	**69.78**	**353**		P	**P**	**03 05 20.8**	**-0.1**	
	baz=15,SNR=183								
E27K					S	**S**	**03 14 29.9**	**+1.1**	
	baz=15								
D22K	**Ayikyak River**	**69.84**	**357**		IAmb	IAmb	03 05 26.0		
	comp=Z,305nm,1.3s								
D22K					IAMs_20	IAMs_20	03 35 14.7		
	comp=Z,24µm,22.0s								
D22K	**Ayikyak River**	**69.84**	**357**		P	**P**	**03 05 21.6**	**+0.4**	
	baz=6.3,SNR=46								
D22K					S	**S**	**03 14 32.0**	**+2.5**	
	baz=6.3								
NBPA	**Parau_RN**	**69.84**	**242**		P	**P**	**03 05 24.5**	**+2.5**	
PAOC	**Oil Creek Stat**	**69.87**	**308**		IAmb	IAmb	03 05 27.5		
	comp=Z,282nm,1.0s								
BOSA	**Boshof**	**69.90**	**175**		P	**P**	**03 05 22.2**	**+0.1**	
	comp=Z,61nm,0.8s,baz=356,slow=6.5,SNR=96								
BOSA					LR	LR	03 38 23.2		
	comp=Z,50µm,20.2s,baz=2.5,slow=38								
	comp=Z,61nm,0.8s								
BOSA	**Boshof**	**69.90**	**175**		IAmb	IAmb	03 05 39.1		
	comp=Z,374nm,1.6s								
BOSA	**Boshof**	**69.90**	**175**		P	**P**	**03 05 25.2**	**+3.1**	
BOSA					S	**S**	**03 14 32.3**	**+1.1**	
CHTO	**Chiang Mai**	**69.91**	**82**		P	**P**	**03 05 20.8**	**-1.6**	
CHTO					P	**P**	**03 05 20.8**	**-1.6**	
CHTO					S	**S**	**03 14 28.5**	**-3.2**	
CHTO					S	**S**	**03 14 28.5**	**-3.2**	
CHTO	**Chiang Mai**	**69.91**	**82**		P	**P**	**03 05 21.4**	**-1.0**	
CHTO					IAmb	IAmb	03 05 33.9		
	comp=Z,136nm,0.8s								
CHTO	**Chiang Mai**	**69.91**	**82**		P	**P**	**03 05 20.4**	**-2.1**	
CHTO	**Chiang Mai**	**69.91**	**82**		P	**P**	**03 05 21.4**	**-1.0**	
CHTO					pmax	pmax			
	comp=Z,136nm,0.9s								
CHTO	**Chiang Mai**	**69.91**	**82**		P	**P**	**03 05 20.3**	**-2.1**	
CHTO					S	**S**	**03 14 27.8**	**-4.0**	
TOLK	**Toolik Lake Re**	**69.94**	**356**		P	**P**	**03 05 22.1**	**+0.2**	
	baz=8.7,SNR=57								
TOLK					S	**S**	**03 14 31.3**	**+0.7**	
	baz=8.7								
LYN	**LuoYang**	**70.03**	**61**	⇑	P	**P**	**03 05 22.5**	**-0.4**	
LYN					pP	pP	03 05 26.5	-2.3	
LYN					sP	sP	03 05 29.3	-1.7	
LYN					PP	**PP**	**03 08 03.3**	**+5.8**	
LYN					S	**S**	**03 14 32.5**	**-0.2**	
LYN					sS	sS	03 14 44.5	+2.2	
LYN					pmax	pmax			
	comp=Z,98nm,1.3s								
LYN					pmax	pmax			
	comp=Z,8µm,9.6s								
LYN					LR	LR			
	comp=Z,34µm,17.5s								
LYN					LR	LR			
	comp=Z,22µm,20.0s								
LYN					LR	LR			
	comp=Z,46µm,21.9s								
YKAW3	**Yellowknife Wh**	**70.03**	**339**		IAmb	IAmb	03 05 26.5		
	comp=Z,326nm,1.2s								
NBMO	**Morrinhos-CE**	**70.05**	**246**		P	**P**	**03 05 27.4**	**+4.1**	
YKAW1	**Yellowknife Wh**	**70.07**	**339**		IAmb	IAmb	03 05 26.6		
	comp=Z,237nm,1.2s								
YKA	**Yellowknife Ar**	**70.09**	**339**		P	**P**	**03 05 22.2**	**-0.6**	
	comp=Z,138nm,1.1s,baz=29,slow=5.8,SNR=80								
YKA					LR	LR	03 38 38.9		
	comp=Z,25µm,18.6s,baz=36,slow=38								
	comp=Z,138nm,1.1s								
YKA	**Yellowknife Ar**	**70.09**	**339**		P	**P**	**03 05 21.8**	**-1.0**	
YKA	**Yellowknife Ar**	**70.09**	**339**	*i*	P	**P**	**03 05 22.2**	**-0.6**	
YKA					pmax	pmax			
	comp=Z,177nm,1.

CM31	**Chiang Mai Arr**	**70.13**	**83**	P	**P**	**03 05 22.3**	**-1.5**
	SNR=48						
CM31				P	**P**	**03 05 22.3**	**-1.5**
	SNR=46						
CM31	**Chiang Mai Arr**	**70.13**	**83**	IAmb	IAmb	03 05 36.0	
	comp=Z,406nm,1.5s						
CMAR	**Chiang Mai Arr**	**70.13**	**83**	P	**P**	**03 05 22.6**	**-1.2**
	comp=Z,46nm,0.8s,baz=307,slow=7.5,SNR=59						
CMAR				PKPPKP	**P'P'df**	**03 33 27.6**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=120,slow=3.2,SNR=8.2						
CMAR				LR	LR	03 42 36.3	
	comp=Z,8µm,19.7s,baz=305,slow=41						
	comp=Z,46nm,0.8s						
CMAR	**Chiang Mai Arr**	**70.13**	**83**	P	**P**	**03 05 22.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**70.13**	**83**	*i* P	**P**	**03 05 22.0**	**-1.8**
CMAR				pmax	pmax		
	comp=Z,40nm,0.6s						
F28M	**Old Crow**	**70.16**	**352**	P	**P**	**03 05 22.7**	**-0.5**
	baz=16,SNR=93						
F28M				S	**S**	**03 14 32.7**	**-0.6**
	baz=16						
E25K	**Arctic Village**	**70.19**	**354**	IAmb	IAmb	03 05 28.0	
	comp=Z,363nm,1.6s						
E25K				IAMs_20	IAMs_20	03 36 06.9	
	comp=Z,26µm,21.0s						
E25K	**Arctic Village**	**70.19**	**354**	P	**P**	**03 05 23.6**	**+0.2**
	baz=12,SNR=63						
E25K				S	**S**	**03 14 35.0**	**+1.4**
	baz=12						
C18K	**Utukok River**	**70.22**	**0**	IAmb	IAmb	03 05 48.9	
	comp=Z,339nm,1.2s						
C18K				IAMs_20	IAMs_20	03 36 33.0	
	comp=Z,23µm,21.0s						
C18K	**Utukok River**	**70.22**	**0**	P	**P**	**03 05 23.9**	**+0.3**
	baz=360						
C18K				S	**S**	**03 14 35.2**	**+1.2**
	baz=360						
E21K	**Killik River**	**70.33**	**357**	P	**P**	**03 05 24.0**	**-0.2**
	baz=5.2						
E21K				S	**S**	**03 14 36.7**	**+1.5**
	baz=5.2						
G30M	**tAoh Zraii Nji**	**70.33**	**350**	IAmb	IAmb	03 05 39.3	
	comp=Z,121nm,0.8s						
G30M	**tAoh Zraii Nji**	**70.33**	**350**	P	**P**	**03 05 23.5**	**-0.8**
	baz=19,SNR=50						
G30M				S	**S**	**03 14 35.8**	**+0.5**
	baz=19						
D19K	**Kuna River**	**70.37**	**359**	IAMs_20	IAMs_20	03 36 35.8	
	comp=Z,27µm,21.0s						
D19K	**Kuna River**	**70.37**	**359**	P	**P**	**03 05 24.5**	**+0.1**
	baz=1.9						
D19K				S	**S**	**03 14 36.1**	**+0.4**
	baz=1.9						
C17K	**DeLong Mountai**	**70.38**	**1**	P	**P**	**03 05 25.0**	**+0.4**
	baz=358,SNR=35						
C17K				S	**S**	**03 14 38.3**	**+2.5**
	baz=358						
E24K	**Your Creek**	**70.43**	**355**	IAMs_20	IAMs_20	03 36 19.4	
	comp=Z,22µm,21.0s						
E24K	**Your Creek**	**70.43**	**355**	P	**P**	**03 05 24.8**	**-0.1**
	baz=9.6,SNR=55						
E24K				S	**S**	**03 14 39.0**	**+2.5**
	baz=9.6						
PAMR	**Moraine State**	**70.48**	**308**	IAmb	IAmb	03 05 31.2	
	comp=Z,308nm,1.1s						
F26K	**Sheenjek River**	**70.49**	**354**	IAmb	IAmb	03 05 30.1	
	comp=Z,310nm,1.4s						
F26K	**Sheenjek River**	**70.49**	**354**	P	**P**	**03 05 25.7**	**+0.4**
	baz=13,SNR=111						
F26K				S	**S**	**03 14 38.9**	**+1.7**
	baz=13						
CBN	**Corbin Frederi**	**70.49**	**304**	IAmb	IAmb	03 05 31.1	
	comp=Z,227nm,0.8s						
CBN				IAMs_20	IAMs_20	03 38 36.7	
	comp=Z,34µm,18.0s						
E23K	**Chandalar**	**70.52**	**356**	P	**P**	**03 05 25.8**	**+0.3**
	baz=8.7						
E23K				S	**S**	**03 14 39.1**	**+1.5**
	baz=8.7						
SBBR	**Sobral**	**70.53**	**246**	P	**P**	**03 05 30.8**	**+4.7**
C16K	**Lisburne Hills**	**70.54**	**2**	IAmb	IAmb	03 05 29.7	
	comp=Z,295nm,1.2s						
C16K				IAMs_20	IAMs_20	03 37 07.2	
	comp=Z,31µm,21.0s						
C16K	**Lisburne Hills**	**70.54**	**2**	P	**P**	**03 05 25.5**	**+0.1**
	baz=356,SNR=9.1						
C16K				S	**S**	**03 14 39.3**	**+1.8**
	baz=356						
E22K	**Anaktuvuk Pass**	**70.55**	**357**	IAmb	IAmb	03 05 57.1	
	comp=Z,226nm,1.2s						
E22K				IAMs_20	IAMs_20	03 37 01.6	
	comp=Z,20µm,19.0s						
E22K	**Anaktuvuk Pass**	**70.55**	**357**	P	**P**	**03 05 25.5**	**-0.1**
	baz=6.9,SNR=66						
E22K				S	**S**	**03 14 38.5**	**+0.6**
	baz=6.9						
E20K	**Nigu River**	**70.57**	**358**	P	**P**	**03 05 25.9**	**+0.1**
	baz=3.5						
E20K				S	**S**	**03 14 40.3**	**+2.1**
	baz=3.5						
ENH	**Enshi**	**70.58**	**67**	IAMs_20	IAMs_20	03 41 30.3	
	comp=Z,21µm,19.0s						
ENH	**Enshi**	**70.58**	**67**	P	**P**	**03 05 25.4**	**-1.1**
G29M	**Pine Creek**	**70.62**	**351**	IAmb	IAmb	03 05 31.3	
	comp=Z,309nm,1.1s						
G29M	**Pine Creek**	**70.62**	**351**	P	**P**	**03 05 25.6**	**-0.5**
	baz=18,SNR=109						
G29M				S	**S**	**03 14 38.0**	**-0.7**
	baz=18						
GLMI	**Grayling**	**70.63**	**313**	IAMs_20	IAMs_20	03 37 38.2	
	comp=Z,45µm,18.0s						
TBO	**Thunder Bay**	**70.68**	**318**	IAmb	IAmb	03 05 31.3	
	comp=Z,280nm,1.2s						
F25K	**Christian Rive**	**70.71**	**354**	IAMs_20	IAMs_20	03 36 23.6	
	comp=Z,28µm,21.0s						
F25K	**Christian Rive**	**70.71**	**354**	P	**P**	**03 05 26.8**	**+0.2**
	baz=12,SNR=59						
F25K				S	**S**	**03 14 40.3**	**+0.5**
	baz=12						
BMAR	**Burnt Mountain**	**70.79**	**354**	P	**P**	**03 05 26.9**	**-0.2**
RDOG	**Red Dog Mine**	**70.81**	**1**	IAmb	IAmb	03 05 41.1	
	comp=Z,113nm,0.8s						
RDOG				IAMs_20	IAMs_20	03 35 41.4	
	comp=Z,24µm,22.0s						
RDOG	**Red Dog Mine**	**70.81**	**1**	P	**P**	**03 05 27.0**	**-0.1**
	baz=358,SNR=17						
RDOG				S	**S**	**03 14 42.2**	**+1.4**
	baz=358						
K50A	**Casco**	**70.81**	**310**	IAMs_20	IAMs_20	03 34 00.9	
	comp=Z,51µm,22.0s						
M52A	**Chesterland**	**70.85**	**309**	IAMs_20	IAMs_20	03 36 49.0	
	comp=Z,39µm,19.0s						
GYA	**Guiyang**	**70.91**	**71**	⇓P	**P**	**03 05 27.8**	**-0.8**
GYA				S	**S**	**03 14 38.8**	**-4.6**
GYA				SKS	**SKSac**	**03 15 29.8**	**-0.6**
GYA				SS	**SS**	**03 19 19.0**	**+3.3**
GYA				pmax	pmax		
	comp=Z,53nm,1.5s						
GYA				pmax	pmax		
	comp=Z,4µm,4.9s						
GYA				LR	LR		
	comp=Z,3µm,21.7s						
GYA				LR	LR		
	comp=Z,3µm,15.0s						
GYA				LR	LR		
	comp=Z,4µm,19.0s						
F24K	**Squaw Lake**	**70.95**	**355**	IAmb	IAmb	03 05 33.1	
	comp=Z,295nm,1.2s						
F24K	**Squaw Lake**	**70.95**	**355**	P	**P**	**03 05 28.3**	**+0.2**
	baz=10.0,SNR=120						
F24K				S	**S**	**03 14 44.2**	**+1.7**
	baz=10.0						
R58B	**Mineral**	**70.96**	**304**	IAmb	IAmb	03 05 33.9	
	comp=Z,185nm,1.0s						
R58B				IAMs_20	IAMs_20	03 39 08.0	
	comp=Z,38µm,18.0s						
EPYK	**Eagle Plains**	**70.98**	**350**	IAmb	IAmb	03 05 33.2	
	comp=Z,377nm,1.4s						
EPYK				IAMs_20	IAMs_20	03 38 20.8	
	comp=Z,23µm,21.0s						
EPYK	**Eagle Plains**	**70.98**	**350**	P	**P**	**03 05 27.7**	**-0.5**
	baz=19,SNR=52						
EPYK				S	**S**	**03 14 43.1**	**+0.2**
	baz=19						
Q56A	**Snyder Ridge,**	**71.10**	**306**	IAMs_20	IAMs_20	03 37 37.7	
	comp=Z,44µm,19.0s						
O54A	**Avella**	**71.11**	**307**	IAMs_20	IAMs_20	03 36 59.0	
	comp=Z,42µm,20.0s						
MCWV	**Mont Chateau**	**71.12**	**306**	IAMs_20	IAMs_20	03 36 34.2	
	comp=Z,34µm,20.0s						
G27K	**Doyon Strip**	**71.12**	**352**	P	**P**	**03 05 29.3**	**+0.2**
	baz=15,SNR=98						
G27K				S	**S**	**03 14 47.3**	**+2.8**
	baz=15						
D17K	**Noatak River**	**71.16**	**1**	P	**P**	**03 05 29.5**	**+0.3**
	baz=358,SNR=62						
D17K				S	**S**	**03 14 46.0**	**+1.2**
	baz=358						
G26K	**Porcupine Rive**	**71.19**	**353**	P	**P**	**03 05 29.7**	**+0.3**
	baz=13,SNR=136						
G26K				S	**S**	**03 14 47.3**	**+2.2**
	baz=13						
H31M	**Peel River**	**71.19**	**349**	IAMs_20	IAMs_20	03 38 27.2	
	comp=Z,24µm,21.0s						
H31M	**Peel River**	**71.19**	**349**	P	**P**	**03 05 28.9**	**-0.6**
	baz=20						
H31M				S	**S**	**03 14 44.0**	**-1.4**
	baz=20						
F22K	**John River**	**71.19**	**357**	P	**P**	**03 05 29.9**	**+0.4**
	baz=6.6						
F22K				S	**S**	**03 14 46.6**	**+1.3**
	baz=6.6						
H29M	**Whitestone**	**71.33**	**351**	IAmb	IAmb	03 05 43.9	
	comp=Z,160nm,0.7s						
H29M	**Whitestone**	**71.33**	**351**	P	**P**	**03 05 29.9**	**-0.5**
	baz=17,SNR=67						
H29M				S	**S**	**03 14 44.8**	**-2.1**
	baz=17						
NBPB	**Pedra_Branca-C**	**71.36**	**244**	P	**P**	**03 05 34.9**	**+3.6**
T59A	**Double "B" Far**	**71.36**	**303**	IAmb	IAmb	03 05 36.3	
	comp=Z,173nm,1.1s						
T59A				IAMs_20	IAMs_20	03 37 09.8	
	comp=Z,37µm,20.0s						
COLD	**Coldfoot**	**71.38**	**356**	IAmb	IAmb	03 05 52.0	
	comp=Z,226nm,1.0s						
COLD				IAMs_20	IAMs_20	03 37 20.3	
	comp=Z,28µm,20.0s						
COLD	**Coldfoot**	**71.38**	**356**	P	**P**	**03 05 30.5**	**-0.1**
	baz=8.2,SNR=137						
COLD				S	**S**	**03 14 48.1**	**+0.7**
	baz=8.2						
E19K	**Redstone River**	**71.40**	**359**	IAmb	IAmb	03 05 36.9	
	comp=Z,222nm,0.8s						
E19K				IAMs_20	IAMs_20	03 37 09.9	
	comp=Z,25µm,22.0s						
E19K	**Redstone River**	**71.40**	**359**	P	**P**	**03 05 30.9**	**+0.2**
	baz=2.6						
E19K				S	**S**	**03 14 48.2**	**+0.6**
	baz=2.6						
E18K	**Tukpahlearik C**	**71.46**	**0**	IAmb	IAmb	03 05 45.3	
	comp=Z,171nm,1.0s						
E18K				IAMs_20	IAMs_20	03 37 33.6	
	comp=Z,27µm,20.0s						
E18K	**Tukpahlearik C**	**71.46**	**0**	P	**P**	**03 05 31.1**	**0.0**
	baz=360,SNR=44						
E18K				S	**S**	**03 14 48.2**	**-0.1**
	baz=360						
V61A	**Roper**	**71.47**	**302**	IAMs_20	IAMs_20	03 39 44.6	
	comp=Z,41µm,18.0s						
F21K	**Alatna River**	**71.53**	**357**	IAmb	IAmb	03 05 36.4	
	comp=Z,350nm,1.2s						
F21K	**Alatna River**	**71.53**	**357**	P	**P**	**03 05 32.0**	**+0.4**
	baz=5.6						
F21K				S	**S**	**03 14 49.9**	**+0.6**
	baz=5.6						
G25K	**Bearman Lake**	**71.56**	**354**	P	**P**	**03 05 32.3**	**+0.6**
	baz=11						
G25K				S	**S**	**03 14 53.8**	**+4.3**
	baz=11						
MA2	**Magadan**	**71.58**	**24**	P	**P**	**03 05 32.3**	**+0.4**
	comp=Z,49nm,0.7s,baz=329,slow=6.3,SNR=9.6						
MA2				LR	LR	03 41 04.7	
	comp=Z,106µm,18.0s,baz=324,slow=39						
	comp=Z,49nm,0.7s						
MA2	**Magadan**	**71.58**	**24**	P	**P**	**03 05 32.1**	**+0.2**
MA2				IAmb	IAmb	03 05 40.4	
	comp=Z,229nm,1.0s						
MA2	**Magadan**	**71.58**	**24**	P	**P**	**03 05 34.1**	**+2.2**
MA2	**Magadan**	**71.58**	**24**	*i* P	**P**	**03 05 31.3**	**-0.6**
MA2				pmax	pmax		
	comp=Z,134nm,0.8s						
MA2				MLR	MLR		
	comp=Z,98µm,18.0s						
WRGLY	**Wrigley**	**71.59**	**343**	IAmb	IAmb	03 05 43.7	
	comp=Z,268nm,1.0s						
WRGLY	**Wrigley**	**71.59**	**343**	P	**P**	**03 05 32.2**	**+0.2**
	baz=28,SNR=56						
WRGLY				S	**S**	**03 14 50.1**	**+0.2**
	baz=28						
H27K	**Steamboat Moun**	**71.67**	**352**	IAmb	IAmb	03 05 37.3	
	comp=Z,419nm,1.4s						
H27K	**Steamboat Moun**	**71.67**	**352**	P	**P**	**03 05 32.7**	**+0.2**
	baz=15						
H27K				S	**S**	**03 14 51.5**	**+0.6**
	baz=15						
FYU	**Fort Yukon**	**71.69**	**354**	IAMs_20	IAMs_20	03 37 37.6	
	comp=Z,22µm,22.0s						
AAM	**Ann Arbor**	**71.70**	**310**	IAmb	IAmb	03 05 38.1	
	comp=Z,282nm,1.1s						
G24K	**Hadweenzic Riv**	**71.73**	**355**	IAmb	IAmb	03 05 37.7	
	comp=Z,416nm,1.6s						
G24K	**Hadweenzic Riv**	**71.73**	**355**	P	**P**	**03 05 32.8**	**0.0**
	baz=10,SNR=69						
G24K				S	**S**	**03 14 53.1**	**+1.6**
	baz=10						
G22K	**Bettles**	**71.75**	**356**	P	**P**	**03 05 32.9**	**+0.1**
	baz=7.1,SNR=90						
G22K				S	**S**	**03 14 53.7**	**+2.1**
	baz=7.1						
S57A	**Dark Hollow, R**	**71.75**	**304**	IAMs_20	IAMs_20	03 38 59.0	
	comp=Z,38µm,18.0s						
F20K	**Avaraart Lake**	**71.77**	**358**	IAMs_20	IAMs_20	03 37 12.9	
	comp=Z,24µm,22.0s						
F20K	**Avaraart Lake**	**71.77**	**358**	P	**P**	**03 05 33.2**	**+0.2**
	baz=3.8						
F20K				S	**S**	**03 14 53.4**	**+1.5**
	baz=3.8						
E17K	**Hotham Inlet**	**71.79**	**1**	P	**P**	**03 05 32.6**	**-0.4**
	baz=359,SNR=42						
E17K				S	**S**	**03 14 52.3**	**+0.2**
	baz=359						
NBPS	**Pedro II - PI**	**71.80**	**247**	P	**P**	**03 05 37.0**	**+3.0**
G23K	**Bananza Creek**	**71.88**	**356**	IAmb	IAmb	03 05 38.4	
	comp=Z,205nm,1.3s						
G23K				IAMs_20	IAMs_20	03 37 46.6	
	comp=Z,22µm,20.0s						
G23K	**Bananza Creek**	**71.88**	**356**	P	**P**	**03 05 34.0**	**+0.3**
	baz=8.3,SNR=65						
G23K				S	**S**	**03 14 54.0**	**+0.8**
	baz=8.3						
M50A	**Fremont**	**71.92**	**309**	IAmb	IAmb	03 06 12.0	
	comp=Z,212nm,1.2s						
M50A				IAMs_20	IAMs_20	03 37 11.2	
	comp=Z,40µm,19.0s						
F42A	**Maple Grove Fa**	**71.92**	**315**	IAMs_20	IAMs_20	03 35 54.2	
	comp=Z,45µm,20.0s						
BNX	**BinXian**	**71.94**	**45**	⇑P	**P**	**03 05 33.5**	**-0.8**
BNX				pP	**pP**	**03 05 37.0**	**-3.2**
BNX				PP	**PP**	**03 08 13.8**	**+0.2**
BNX				S	**S**	**03 14 55.0**	**+0.5**
BNX				pmax	pmax		
	comp=Z,55nm,1.0s						
BNX				pmax	pmax		
	comp=Z,4µm,5.4s						
BNX				LR	LR		
	comp=Z,55µm,15.1s						
BNX				LR	LR		
	comp=Z,64µm,16.4s						
BNX				LR	LR		
	comp=Z,99µm,16.3s						
TIA	**Tai'an**	**72.03**	**57**	P	**P**	**03 05 34.3**	**-0.7**
TIA				PP	**PP**	**03 08 21.3**	**+6.6**
TIA				S	**S**	**03 14 55.8**	**0.0**
TIA				SS	**SS**	**03 19 40.3**	**+8.2**
TIA				pmax	pmax		
	comp=Z,110nm,1.5s						
TIA				pmax	pmax		
	comp=Z,6µm,7.8s						
TIA				LR	LR		
	comp=Z,20µm,16.7s						
TIA				LR	LR		
	comp=Z,30µm,20.6s						
TIA				LR	LR		
	comp=Z,42µm,19.6s						
FFC	**Flin Flon**	**72.03**	**329**	P	**P**	**03 05 34.2**	**-0.5**
FFC	**Flin Flon**	**72.03**	**329**	P	**P**	**03 05 34.2**	**-0.5**
FFC				pmax	pmax		
	comp=Z,174nm,1.2s						
FFC				MLR	MLR		
	comp=Z,58µm,20.0s						
I30M	**Mount Dempster**	**72.03**	**350**	IAmb	IAmb	03 05 48.0	
	comp=Z,160nm,0.7s						
I30M	**Mount Dempster**	**72.03**	**350**	P	**P**	**03 05 34.2**	**-0.4**
	baz=19,SNR=144						
I30M				S	**S**	**03 14 54.9**	**-0.3**
	baz=19						
I45A	**Fountain**	**72.03**	**313**	IAMs_20	IAMs_20	03 38 30.1	
	comp=Z,44µm,18.0s						
F19K	**Shaleruckik Mo**	**72.03**	**359**	IAmb	IAmb	03 05 38.3	
	comp=Z,216nm,1.1s						
F19K	**Shaleruckik Mo**	**72.03**	**359**	P	**P**	**03 05 34.2**	**-0.3**
	baz=2.2						
F19K				S	**S**	**03 14 56.2**	**+1.4**
	baz=2.2						
H25L	**Birch Creek**	**72.03**	**354**	P	**P**	**03 05 35.4**	**+0.9**
	baz=12,SNR=98						
H25L				S	**S**	**03 14 59.5**	**+4.7**
	baz=12						
EPLO	**Experimental L**	**72.08**	**321**	IAmb	IAmb	03 05 39.2	
	comp=Z,330nm,1.2s						
NBMA	**Muriti-CE**	**72.14**	**243**	P	**P**	**03 05 39.8**	**+3.8**
Q54A	**Coxs Mills**	**72.14**	**306**	IAmb	IAmb	03 05 41.3	
	comp=Z,212nm,0.9s						
Q54A				IAMs_20	IAMs_20	03 37 15.2	
	comp=Z,29µm,20.0s						
R55A	**Marlinton**	**72.14**	**305**	IAmb	IAmb	03 05 48.1	
	comp=Z,261nm,0.9s						
CN2	**Changchun**	**72.15**	**47**	P	**P**	**03 05 35.3**	**-0.4**
CN2				PP	**PP**	**03 08 18.5**	**+3.0**
CN2				S	**S**	**03 14 55.3**	**-1.7**
CN2				SS	**SS**	**03 19 33.8**	**+0.2**
CN2				pmax	pmax		
	comp=Z,190nm,1.4s						
CN2				pmax	pmax		
	comp=Z,5µm,5.0s						
CN2				LR	LR		
	comp=Z,32µm,16.0s						
CN2				LR	LR		
	comp=Z,38µm,16.0s						
CN2				LR	LR		
	comp=Z,51µm,15.0s						
P53A	**Whipple**	**72.16**	**307**	IAMs_20	IAMs_20	03 37 50.6	
	comp=Z,43µm,19.0s						
EYMN	**Ely**	**72.18**	**319**	IAmb	IAmb	03 05 40.1	
	comp=Z,383nm,1.4s						
ANWB	**Willy Bob**	**72.19**	**278**	*e*P	**P**	**03 05 40.1**	**+3.9**
NBAN	**Anadia - AL**	**72.21**	**239**	P	**P**	**03 05 39.5**	**+3.2**
G21K	**Allakaket**	**72.24**	**357**	IAmb	IAmb	03 05 40.4	
	comp=Z,286nm,1.2s						
G21K	**Allakaket**	**72.24**	**357**	P	**P**	**03 05 35.6**	**-0.2**
	baz=5.5						
G21K				S	**S**	**03 14 60.0**	**+2.7**
	baz=5.5						
I28M	**Miner Creek**	**72.25**	**351**	IAmb	IAmb	03 05 49.8	
	comp=Z,135nm,0.8s						
I28M	**Miner Creek**	**72.25**	**351**	P	**P**	**03 05 35.6**	**-0.5**
	baz=16,SNR=106						
I28M				S	**S**	**03 14 58.3**	**+0.6**
	baz=16						
F18K	**Selawik**	**72.28**	**360**	P	**P**	**03 05 35.9**	**-0.1**
	baz=0.7,SNR=35						
F18K				S	**S**	**03 14 58.6**	**+0.9**
	baz=0.7						
I27K	**Kandik River**	**72.29**	**352**	IAmb	IAmb	03 05 40.7	
	comp=Z,251nm,1.2s						
I27K	**Kandik River**	**72.29**	**352**	P	**P**	**03 05 36.3**	**+0.2**
	baz=15,SNR=116						
I27K				S	**S**	**03 15 01.1**	**+3.0**
	baz=15						
SNY	**Shenyang**	**72.38**	**50**	⇑P	**P**	**03 05 35.3**	**-1.7**
SNY				sP	**PcP**	**03 05 50.3**	**-4.6**
SNY				S	**S**	**03 14 54.5**	**-5.1**
SNY				SS	**SS**	**03 19 42.5**	**+5.4**
SNY				pmax	pmax		
	comp=Z,76nm,1.7s						
SNY				pmax	pmax		
	comp=Z,4µm,5.9s						
SNY				LR	LR		
	comp=Z,25µm,19.8s						
SNY				LR	LR		
	comp=Z,58µm,20.2s						
SNY				LR	LR		
	comp=Z,72µm,18.8s						
T57A	**Hurt**	**72.41**	**304**	IAMs_20	IAMs_20	03 34 28.5	
	comp=Z,27µm,21.0s						
F17K	**Baldwin Pennin**	**72.44**	**0**	P	**P**	**03 05 36.8**	**-0.1**
	baz=359						
F17K				S	**S**	**03 15 01.6**	**+2.1**
	baz=359						
DSDZ	**La Diserade, G**	**72.50**	**276**	*e*P	P	03 05 45.3	+7.3
GDSD	**La Dsirade Is**	**72.50**	**276**	IAMs_20	IAMs_20	03 31 59.9	
	comp=Z,24µm,22.0s						
H43A	**Windswept, Lux**	**72.58**	**314**	IAmb	IAmb	03 05 52.9	
	comp=Z,253nm,0.8s						
H43A				IAMs_20	IAMs_20	03 35 05.6	
	comp=Z,34µm,22.0s						
ROSB	**Rosrio**	**72.61**	**250**	S	**S**	**03 15 06.3**	**+3.4**
H24K	**Noodor Dome**	**72.61**	**355**	P	**P**	**03 05 38.2**	**+0.1**
	baz=9.9,SNR=79						
H24K				S	**S**	**03 15 03.9**	**+2.2**
	baz=9.9						
ACSO	**Alum Creek Sta**	**72.63**	**308**	IAmb	IAmb	03 05 43.6	
	comp=Z,381nm,1.1s						
J30M	**Hart River**	**72.64**	**349**	IAmb	IAmb	03 05 51.6	
	comp=Z,224nm,0.7s						
J30M				IAMs_20	IAMs_20	03 43 44.5	
	comp=Z,20µm,21.0s						
J30M	**Hart River**	**72.64**	**349**	P	**P**	**03 05 38.5**	**+0.2**
	baz=19,SNR=185						
J30M				S	**S**	**03 15 02.7**	**+0.5**
	baz=19						
ULM	**Lac du Bonnet**	**72.67**	**323**	P	**P**	**03 05 37.8**	**-0.9**
	comp=Z,231nm,0.9s,baz=46,slow=6.1,SNR=48						
ULM				LR	LR	03 38 40.9	
	comp=Z,41µm,19.3s,baz=42,slow=37						
	comp=Z,231nm,0.9s						
ABD	**La Joyeuse, An**	**72.71**	**277**	IAMs_20	IAMs_20	03 32 17.6	
	comp=Z,31µm,22.0s						
G19K	**Purcell Mounta**	**72.71**	**359**	IAmb	IAmb	03 05 43.3	
	comp=Z,228nm,1.1s						
G19K	**Purcell Mounta**	**72.71**	**359**	P	**P**	**03 05 38.7**	**+0.1**
	baz=2.7						
G19K				S	**S**	**03 15 05.8**	**+3.0**
	baz=2.7						
H23K	**Yukon River**	**72.73**	**355**	IAmb	IAmb	03 05 43.8	
	comp=Z,347nm,1.2s						
H23K				IAMs_20	IAMs_20	03 38 14.2	
	comp=Z,20µm,21.0s						
H23K	**Yukon River**	**72.73**	**355**	P	**P**	**03 05 39.1**	**+0.3**
	baz=8.6						
H23K				S	**SKiKP**	**03 15 07.1**	**-4.3**
	baz=8.6						
I26K	**Coal Creek Min**	**72.74**	**353**	P	**P**	**03 05 38.8**	**0.0**
	baz=14						
I26K				S	**S**	**03 15 05.8**	**+2.8**
	baz=14						
PRP	**Porcupine Dome**	**72.75**	**354**	IAmb	IAmb	03 05 43.7	
	comp=Z,224nm,1.2s						
PRP				IAMs_20	IAMs_20	03 38 21.5	
	comp=Z,20µm,21.0s						
PRP	**Porcupine Dome**	**72.75**	**354**	P	**P**	**03 05 39.2**	**+0.3**
	baz=12,SNR=78						
PRP				S	**S**	**03 15 05.9**	**+2.5**
	baz=12						
H22K	**Ishtalitna Cre**	**72.77**	**356**	IAmb	IAmb	03 05 44.3	
	comp=Z,386nm,1.2s						
H22K	**Ishtalitna Cre**	**72.77**	**356**	P	**P**	**03 05 39.9**	**+0.9**
	baz=7.2,SNR=92						
H22K				S	**S**	**03 15 06.9**	**+3.5**
	baz=7.2						
IMAR	**Indian Mountai**	**72.78**	**357**	P	**P**	**03 05 38.7**	**-0.3**
GRNR	**Gornyy**	**72.89**	**36**	⇑*i*P	**P**	**03 05 39.1**	**-0.8**
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,30µm,16.0s						
GRNR				MLR	MLR		
	comp=N,23µm,15.0s						
GRNR			

NBTA Tacaratu-PE 72.97 241 P **P** 03 05 44.3 +3.4
G18K Tagagawik 72.98 359 IAmb IAmb 03 05 44.6
comp=Z,326nm,1.2s
G18K Tagagawik 72.98 359 P **P** **03 05 40.5 +0.3**
baz=1.5,SNR=59
G18K S **S** **03 15 07.4 +1.5**
baz=1.5
BLA Blacksburg 73.00 305 IAmb IAmb 03 05 54.5
comp=Z,472nm,1.8s
BLA IAMs_20 IAMs_20 03 39 30.1
comp=Z,43µm,18.0s
Q52A Bidwell 73.01 307 IAmb IAmb 03 05 46.0
comp=Z,354nm,1.1s
GDHS Morne Mazeau, 73.04 277 IAMs_20 IAMs_20 03 32 26.2
comp=Z,30µm,22.0s
DHSZ Broadband at M 73.04 277 *e*P **P** **03 05 42.2 +0.9**
W59A Clinton 73.05 302 IAMs_20 IAMs_20 03 38 33.4
comp=Z,23µm,19.0s
CBE Ff, Capester 73.05 277 IAMs_20 IAMs_20 03 32 26.8
comp=Z,29µm,22.0s
H21K Melozitna Rive 73.07 357 P **P** **03 05 41.3 +0.6**
baz=6.0
H21K S **SKiKP** **03 15 09.5 -2.4**
baz=6.0
V58A Windy Hill, Pi 73.08 303 IAMs_20 IAMs_20 03 37 21.2
comp=Z,35µm,20.0s
MLYT Lee's Yard 73.08 278 *e*P **P** **03 05 45.4 +3.8**
SKI Saint Kitts 73.11 278 *e*P **P** **03 05 46.1 +4.3**
DL2 Dalian 73.11 53 P **P** **03 05 42.5 +1.1**
DL2 PP **PP** **03 08 23.8 0.0**
DL2 S **S** **03 15 07.0 -1.1**
DL2 SKS **SKSac** **03 15 44.8 -1.6**
DL2 SS **SS** **03 19 52.5 +4.1**
DL2 pmax pmax
comp=Z,130nm,1.0s
DL2 pmax pmax
comp=Z,6µm,6.1s
DL2 LR LR
comp=Z,28µm,18.9s
DL2 LR LR
comp=Z,37µm,18.9s
DL2 LR LR
comp=Z,82µm,17.3s
MMLZ Guadeloupe Bro 73.11 277 *e*P **P** **03 05 43.7 +1.9**
E38A The Farm, Brul 73.12 318 IAmb IAmb 03 05 56.6
comp=Z,199nm,1.1s
E38A IAMs_20 IAMs_20 03 38 39.9
comp=Z,40µm,18.0s
ATGZ Broadband at L 73.12 277 *e*P **P** **03 05 42.1 +0.3**
F15K North Star Dit 73.13 2 IAmb IAmb 03 05 45.4
comp=Z,210nm,1.1s
F15K IAMs_20 IAMs_20 03 38 48.6
comp=Z,29µm,22.0s
F15K North Star Dit 73.13 2 P **P** **03 05 41.2 +0.1**
baz=357
F15K S **S** **03 15 08.3 +0.8**
baz=357
DWS Wesley 73.15 276 *e*P **P** **03 05 45.1 +3.2**
TNA Tin City 73.17 3 IAMs_20 IAMs_20 03 39 03.8
comp=Z,23µm,21.0s
TNA Tin City 73.17 3 P **P** **03 05 41.0 -0.3**
baz=354
TNA S **SKiKP** **03 15 10.2 -1.8**
baz=354
TBG Guadaloupe-3 73.22 276 *e*P **P** **03 05 40.8 -1.5**
DLPL La Plaine 73.25 276 *e*P P 03 05 47.3 +4.8
POKR Poker Plat Res 73.29 354 IAmb IAmb 03 05 46.7
comp=Z,382nm,1.2s
POKR IAMs_20 IAMs_20 03 38 13.9
comp=Z,22µm,22.0s
POKR Poker Plat Res 73.29 354 P **P** **03 05 42.1 0.0**
baz=10,SNR=59
POKR S **SKiKP** **03 15 11.2 -1.0**
baz=10
DSLB Salisbury 73.31 276 *e*P **P** **03 05 45.1 +2.1**
H20K Anotleneega Mo 73.31 358 P **P** **03 05 42.4 +0.3**
baz=4.4,SNR=54
H20K S **SKiKP** **03 15 13.5 +1.2**
baz=4.4
F14K Arctic Creek 73.31 3 P **P** **03 05 42.1 -0.1**
baz=355
F14K S **SKiKP** **03 15 11.5 -0.8**
baz=355
H19K Roundabout Mou 73.32 358 IAmb IAmb 03 05 46.9
comp=Z,207nm,1.2s
H19K Roundabout Mou 73.32 358 P **P** **03 05 42.4 +0.2**
baz=3.2
H19K S **SKiKP** **03 15 12.3 0.0**
baz=3.2
ILAM Ilet Lapin Mar 73.32 275 *e*P P 03 05 50.1 +7.2
G40A Rib Lake 73.33 316 IAmb IAmb 03 06 02.7
comp=Z,180nm,1.0s
G40A IAMs_20 IAMs_20 03 36 48.5
comp=Z,34µm,20.0s
BBGH Gun Hill 73.36 273 IAMs_20 IAMs_20 03 34 25.0
comp=Z,21µm,20.0s
BBGH Gun Hill 73.36 273 *e*P **P** **03 05 41.9 -1.4**
MDP Montagnes des 73.37 262 LR LR 03 34 16.2
comp=Z,19µm,20.3s,baz=40,slow=33
L46A Eue Claire 73.38 312 IAmb IAmb 03 05 58.6
comp=Z,282nm,1.2s
G17K Kiwalik Mounta 73.39 0 P **P** **03 05 42.6 0.0**
baz=360,SNR=19
G17K S **SKiKP** **03 15 13.1 +0.7**
baz=360
I23K Minto, Yukon-K 73.39 355 IAmb IAmb 03 05 47.3
comp=Z,243nm,1.2s
I23K IAMs_20 IAMs_20 03 38 44.6
comp=Z,20µm,21.0s
I23K Minto, Yukon-K 73.39 355 P **P** **03 05 42.9 +0.3**
baz=8.7,SNR=81
I23K S **SKiKP** **03 15 13.1 +0.7**
baz=8.7
O49A Covington 73.45 309 IAmb IAmb 03 05 48.1
comp=Z,317nm,1.0s
SUR Sutherland 73.47 179 P **P** **03 05 48.1 +4.5**
SUR S **SKiKP** **03 15 16.8 +3.4**
G16K Koyuk River 73.48 1 IAmb IAmb 03 05 47.7
comp=Z,301nm,1.3s
G16K IAMs_20 IAMs_20 03 38 51.0
comp=Z,27µm,21.0s
G16K Koyuk River 73.48 1 P **P** **03 05 43.4 +0.2**
baz=359
G16K S **SKiKP** **03 15 13.3 +0.8**
baz=359
K29M Barlow Dome 73.50 350 P **P** **03 05 43.3 -0.1**
baz=18
K29M S **SKiKP** **03 15 12.4 -0.3**
baz=18
MAYO Mayo, Yukon 73.50 349 IAmb IAmb 03 05 57.9
comp=Z,270nm,1.0s
MAYO Mayo, Yukon 73.50 349 P **P** **03 05 43.4 0.0**
baz=19,SNR=26
MAYO S **SKiKP** **03 15 12.9 +0.2**
baz=19
I21K Tanana 73.51 356 P **P** **03 05 43.8 +0.5**
baz=6.7,SNR=82
I21K S **SKiKP** **03 15 15.5 +2.9**
baz=6.7
DAWY Dawson 73.52 351 IAmb IAmb 03 05 47.9
comp=Z,365nm,1.2s
DAWY Dawson 73.52 351 P **P** **03 05 43.5 0.0**
baz=16,SNR=161
DAWY S **SKiKP** **03 15 13.4 +0.7**
baz=16
U56A King 73.53 304 IAmb IAmb 03 05 49.9
comp=Z,201nm,0.9s
U56A IAMs_20 IAMs_20 03 35 24.0
comp=Z,25µm,22.0s
COLA College 73.56 354 P **P** **03 05 43.2 -0.4**
COLA IAmb IAmb 03 05 47.8
comp=Z,266nm,1.4s
COLA College 73.56 354 IAMs_20 IAMs_20 03 38 22.1
comp=Z,23µm,22.0s
COLA College 73.56 354 P **P** **03 05 43.4 -0.2**
COLA College 73.56 354 ⇓P **P** **03 05 44.1 +0.5**
COLA College 73.56 354 P **P** **03 05 43.4 -0.2**
baz=9.9
COLA S **SKiKP** **03 15 14.1 +1.5**
baz=9.9
COLA College 73.56 354 P **P** **03 05 43.1 -0.5**
COLA S **SKiKP** **03 15 13.2 +0.6**
J26L Joseph Creek 73.56 353 P **P** **03 05 43.6 -0.2**
baz=13,SNR=123
J26L S **SKiKP** **03 15 12.8 0.0**
baz=13
I42A Draeger Farm, 73.58 314 IAMs_20 IAMs_20 03 39 12.0
comp=Z,41µm,18.0s
IL31 73.59 354 IAmb IAmb 03 05 47.9
comp=Z,270nm,1.6s
ILAR Eielson Array 73.59 354 P **P** **03 05 43.0 -0.8**
comp=Z,24nm,0.8s,baz=2.9,slow=4.6,SNR=108
ILAR PKKPbc **PKKPbc** **03 25 19.4 +1.5**
comp=Z,1.0nm,1.1s,baz=234,slow=2.0,SNR=5.0
ILAR PKPPKP **P'P'df** **03 33 19.9 -7.2**
comp=Z,2.2nm,1.1s,baz=238,slow=1.6,SNR=5.2
ILAR LR LR 03 38 45.5
comp=Z,18µm,21.0s,baz=3.5,slow=36
comp=Z,24nm,0.8s
ILAR Eielson Array 73.59 354 P **P** **03 05 43.7 -0.1**
Q51A Peebles 73.62 308 IAmb IAmb 03 05 49.4
comp=Z,340nm,1.1s
J25K Salcha River, 73.62 353 IAMs_20 IAMs_20 03 38 18.6
comp=Z,24µm,22.0s
J25K Salcha River, 73.62 353 P **P** **03 05 43.8 -0.3**
baz=12
J25K S **S** **03 15 13.2 -0.1**
baz=12
BIM Bigot 73.63 275 *e*P **P** **03 05 46.5 +1.6**
Y60A Bolivia 73.63 301 IAMs_20 IAMs_20 03 41 01.9
comp=Z,32µm,18.0s
H18K Honhosa River 73.73 359 IAmb IAmb 03 06 06.6
comp=Z,318nm,1.4s
H18K IAMs_20 IAMs_20 03 43 33.5
comp=Z,18µm,19.0s
H18K Honhosa River 73.73 359 P **P** **03 05 44.6 -0.1**
baz=1.7
H18K S **S** **03 15 17.2 +2.9**
baz=1.7
WHN Wuhan 73.73 64 ⇑P **P** **03 05 44.5 -0.7**
WHN PP **PP** **03 08 32.8 +3.4**
WHN S **S** **03 15 17.5 +2.1**
WHN pmax pmax
comp=Z,2µm,1.8s
WHN pmax pmax
comp=Z,9µm,6.1s
WHN LR LR
comp=Z,31µm,15.3s
WHN LR LR
comp=Z,73µm,19.4s
WHN LR LR
comp=Z,96µm,19.7s
N47A Urbana 73.78 310 IAmb IAmb 03 05 49.9
comp=Z,249nm,1.1s
MDJ Mudanjiang 73.84 44 P **P** **03 05 47.0 +1.4**
MDJ PcP **PcP** **03 06 01.8 +0.7**
MDJ PP **PP** **03 08 30.8 +0.9**
MDJ S **S** **03 15 17.3 +1.1**
MDJ ScS **ScS** **03 15 55.0 +0.6**
MDJ pmax pmax
comp=Z,60nm,1.9s
MDJ pmax pmax
comp=Z,4µm,6.3s
MDJ LR LR
comp=Z,80µm,14.9s
MDJ LR LR
comp=Z,79µm,17.5s
MDJ LR LR
comp=Z,136µm,17.5s
MDJ Mudanjiang 73.84 44 P **P** **03 05 47.1 +1.4**
G15K Niukluk 73.86 2 P **P** **03 05 45.2 -0.1**
baz=357
G15K S **S** **03 15 18.0 +2.3**
baz=357
SLBI Saint Lucia, B 73.87 275 *e*P **P** **03 05 49.7 +3.5**
K27K Chicken 73.87 352 IAmb IAmb 03 05 50.4
comp=Z,411nm,1.2s
K27K Chicken 73.87 352 P **P** **03 05 45.7 +0.2**
baz=14
K27K S **S** **03 15 18.8 +2.9**
baz=14
O48B Farmland 73.88 310 IAmb IAmb 03 05 49.8
comp=Z,431nm,1.4s
O48B IAMs_20 IAMs_20 03 37 29.2
comp=Z,37µm,21.0s
NEA2 Nenana 73.92 355 IAmb IAmb 03 05 49.9
comp=Z,234nm,1.2s
NEA2 Nenana 73.92 355 P **P** **03 05 45.3 -0.5**
baz=8.9,SNR=33
NEA2 S **S** **03 15 17.5 +1.0**
baz=8.9
H17K Granite Mounta 73.95 360 IAMs_20 IAMs_20 03 38 51.5
comp=Z,19µm,20.0s
H17K Granite Mounta 73.95 360 P **P** **03 05 45.9 0.0**
baz=0.5,SNR=12
H17K S **S** **03 15 18.5 +1.7**
baz=0.5
HDA Harding Lake 73.95 354 IAmb IAmb 03 05 59.7
comp=Z,199nm,0.7s
HDA Harding Lake 73.95 354 P **P** **03 05 45.5 -0.5**
baz=11,SNR=105
HDA S **S** **03 15 16.8 0.0**
baz=11
WRH Wood River Hil 73.98 354 IAmb IAmb 03 05 50.0
comp=Z,278nm,1.2s
I20K Naaghedeneel 73.99 357 IAMs_20 IAMs_20 03 38 53.6
comp=Z,19µm,20.0s
I20K Naaghedeneel 73.99 357 P **P** **03 05 46.8 +0.7**
baz=4.7
I20K S **S** **03 15 19.2 +2.0**
baz=4.7
X58A Rowland 74.00 302 IAMs_20 IAMs_20 03 39 10.7
comp=Z,28µm,20.0s
W57A Gilead 74.04 303 IAMs_20 IAMs_20 03 37 38.7
comp=Z,30µm,20.0s
MCLT Moule a Chique 74.04 274 *e*P **P** **03 05 50.0 +2.8**
AGMN Agassiz Nation 74.05 321 IAMs_20 IAMs_20 03 36 46.3
comp=Z,41µm,22.0s
K43A Burlington 74.06 313 IAMs_20 IAMs_20 03 39 49.7
comp=Z,42µm,18.0s
GCSA Galena City Sc 74.11 358 P **P** **03 05 47.2 +0.4**
baz=2.8,SNR=27
GCSA S **S** **03 15 22.0 +3.5**
baz=2.8
SCRK Sand Creek 74.12 353 P **P** **03 05 47.3 +0.2**
baz=13,SNR=59
SCRK S **S** **03 15 20.7 +1.7**
baz=13
L44A Lake County Fo 74.17 313 IAmb IAmb 03 06 03.1
comp=Z,329nm,1.1s
NBLA Lagarto - SE 74.19 239 P **P** **03 05 51.2 +3.3**
NBLA Lagarto - SE 74.19 239 *e*P **P** **03 05 47.2 -0.8**
CNSH ChangSha 74.24 66 P **P** **03 05 47.5 -0.7**
CNSH S **S** **03 15 22.0 +0.8**
CNSH pmax pmax
comp=Z,110nm,1.0s
CNSH LR LR
comp=Z,18µm,19.4s
CNSH LR LR
comp=Z,11µm,15.1s
CNSH LR LR
comp=Z,21µm,17.8s
H16K Elim 74.24 1 P **P** **03 05 47.7 +0.1**
baz=359,SNR=27
H16K S **S** **03 15 21.5 +1.5**
baz=359
GULI GuiLin 74.25 70 P **P** **03 05 49.0 +0.7**
GULI S **S** **03 15 18.5 -2.9**
GULI pmax pmax
comp=Z,140nm,2.3s
GULI pmax pmax
comp=Z,5µm,6.3s
GULI LR LR
comp=Z,19µm,17.1s
GULI LR LR
comp=Z,14µm,16.7s
GULI LR LR
comp=Z,26µm,17.3s
ANM Nome 74.25 2 IAmb IAmb 03 05 51.7
comp=Z,317nm,1.4s
ANM IAMs_20 IAMs_20 03 38 56.5
comp=Z,21µm,21.0s
ANM Nome 74.25 2 P **P** **03 05 47.6 -0.1**
baz=356
ANM S **S** **03 15 21.2 +1.0**
baz=356
L29M L29M 74.28 350 IAMs_20 IAMs_20 03 40 18.0
comp=Z,22µm,21.0s
L29M L29M 74.28 350 P **P** **03 05 47.7 -0.2**
baz=17
L29M S **S** **03 15 22.5 +1.8**
baz=17
U54A Nelsons Funny 74.31 305 IAmb IAmb 03 05 54.2
comp=Z,336nm,1.0s
V55A Taylorsville 74.36 304 IAmb IAmb 03 05 54.8
comp=Z,225nm,1.0s
V55A IAMs_20 IAMs_20 03 40 10.1
comp=Z,19µm,18.0s
BWN Browne 74.37 355 IAmb IAmb 03 06 24.1
comp=Z,466nm,1.6s
RIDG Independent Ri 74.43 353 P **P** **03 05 49.1 +0.3**
baz=12,SNR=72
RIDG S **S** **03 15 23.4 +1.0**
baz=12
DOT Dot Lake 74.45 353 IAmb IAmb 03 05 53.7
comp=Z,370nm,1.3s
K24K Donnelly Dome 74.45 353 IAmb IAmb 03 05 54.4
comp=Z,236nm,1.1s
K24K IAMs_20 IAMs_20 03 38 42.7
comp=Z,20µm,22.0s
K24K Donnelly Dome 74.45 353 P **P** **03 05 48.8 -0.2**
baz=11,SNR=56
K24K S **S** **03 15 23.1 +0.5**
baz=11
KOTAN Kotaneelee Air 74.47 342 P **P** **03 05 49.3 +0.2**
baz=28,SNR=28
KOTAN S **S** **03 15 24.0 +1.2**
baz=28
BPAW Bear Paw Mtn. 74.53 356 IAmb IAmb 03 05 53.0
comp=Z,199nm,1.2s
BPAW Bear Paw Mtn. 74.53 356 P **P** **03 05 48.7 -0.6**
baz=7.4,SNR=72
BPAW S **S** **03 15 24.0 +0.6**
baz=7.4
SVB Belmont 74.55 274 *e*P **P** **03 05 54.2 +4.0**
P48A Milroy 74.56 309 IAmb IAmb 03 05 53.6
comp=Z,275nm,1.2s
M31M Drury Creek, Y 74.59 348 IAMs_20 IAMs_20 03 44 59.4
comp=Z,29µm,19.0s
M31M Drury Creek, Y 74.59 348 P **P** **03 05 50.2 +0.4**
baz=20,SNR=56
M31M S **S** **03 15 25.5 +1.4**
baz=20
J20K Nowinta River 74.60 357 P **P** **03 05 49.8 0.0**
baz=5.0,SNR=39
J20K S **S** **03 15 26.9 +2.8**
baz=5.0
M30M Minto, Yukon 74.61 349 IAMs_20 IAMs_20 03 42 12.7
comp=Z,28µm,19.0s
M30M Minto, Yukon 74.61 349 P **P** **03 05 49.6 -0.2**
baz=18,SNR=28
M30M S **S** **03 15 26.9 +2.6**
baz=18
Y58A Scranton 74.62 302 IAmb IAmb 03 05 55.8
comp=Z,209nm,1.1s
Y58A IAMs_20 IAMs_20 03 41 09.2
comp=Z,23µm,19.0s
SPMN Marine on St. 74.70 317 IAmb IAmb 03 05 54.9
comp=Z,282nm,1.3s
GAMB Gambell 74.73 5 IAMs_20 IAMs_20 03 42 21.3
comp=Z,24µm,20.0s
GAMB Gambell 74.73 5 P **P** **03 05 49.7 -0.7**
baz=351
GAMB S **S** **03 15 25.7 +0.2**
baz=351
MCK McKinley 74.77 355 IAMs_20 IAMs_20 03 39 10.1
comp=Z,21µm,22.0s
MCK McKinley 74.77 355 P **P** **03 05 50.0 -0.7**
baz=9.0,SNR=73
MCK S **S** **03 15 25.8 -0.3**
baz=9.0
BCAR Beaver Creek A 74.78 351 P **P** **03 05 50.6 -0.2**
M44A Midewin, Midew 74.78 312 IAmb IAmb 03 05 55.2
comp=Z,288nm,1.3s
L27K Beaver Creek, 74.78 351 IAmb IAmb 03 05 55.8
comp=Z,269nm,1.2s
L27K Beaver Creek, 74.78 351 P **P** **03 05 51.3 +0.5**
baz=14,SNR=161
L27K S **S** **03 15 29.2 +2.9**
baz=14
CHUM Lake Minchumin 74.82 356 P **P** **03 05 51.1 +0.2**
baz=6.4,SNR=69
CHUM S **S** **03 15 27.3 +0.8**
baz=6.4
J19K Poorman 74.83 358 IAmb IAmb 03 05 55.9
comp=Z,262nm,1.2s
J19K IAMs_20 IAMs_20 03 39 19.8
comp=Z,20µm,21.0s
J19K Poorman 74.83 358 P **P** **03 05 51.5 +0.4**
baz=3.8,SNR=51
J19K S **S** **03 15 29.5 +2.8**
baz=3.8
KMSC Kings Mountain 74.89 304 IAmb IAmb 03 05 57.2
comp=Z,167nm,1.0s
KMSC IAMs_20 IAMs_20 03 41 06.1
comp=Z,30µm,18.0s
SFIN Lafayette 74.92 311 IAmb IAmb 03 06 05.8
comp=Z,170nm,0.9s
JFWS Jewell Farm 74.95 314 IAmb IAmb 03 05 56.1
comp=Z,370nm,1.5s
M29M Somme Creek 74.97 350 IAmb IAmb 03 05 57.0
comp=Z,347nm,1.2s
M29M Somme Creek 74.97 350 P **P** **03 05 52.5 +0.5**
baz=17,SNR=116
M29M S **S** **03 15 30.6 +2.2**
baz=17
L26K Log Cabin Wild 74.98 352 IAmb IAmb 03 05 56.8
comp=Z,284nm,1.4s
L26K Log Cabin Wild 74.98 352 P **P** **03 05 52.3 +0.3**
baz=13,SNR=64
L26K S **S** **03 15 30.3 +1.9**
baz=13
I17K Unalakleet 75.01 0 P **P** **03 05 51.9 -0.1**
baz=360,SNR=6.9
I17K S **S** **03 15 30.1 +1.6**
baz=360
Y57A Sumter 75.02 302 IAmb IAmb 03 05 58.6
comp=Z,306nm,1.1s
Y57A IAMs_20 IAMs_20 03 39 49.6
comp=Z,28µm,19.0s
TMAB Tom-Au,PA,Br 75.07 253 P **P** **03 05 55.6 +2.4**
TMAB Tom-Au,PA,Br 75.07 253 *e*P **P** **03 05 52.3 -0.9**
RND Reindeer 75.09 355 IAMs_20 IAMs_20 03 39 31.5
comp=Z,22µm,22.0s
MENT Mentasta 75.11 352 P **P** **03 05 53.4 +0.7**
TRF Thorofare Moun 75.14 355 IAmb IAmb 03 05 56.8
comp=Z,273nm,1.4s
TRF Thorofare Moun 75.14 355 P **P** **03 05 52.5 -0.6**
baz=7.9,SNR=30
TRF S **S** **03 15 29.2 -1.3**
baz=7.9
SJG San Juan 75.15 281 LR LR 03 34 42.4
comp=Z,10µm,21.2s,baz=66,slow=32
SJG San Juan 75.15 281 *e*P **P** **03 05 53.2 -0.4**
SJG San Juan 75.15 281 P **P** **03 05 57.9 +4.3**
comp=Z,6µmcomp=Z,2µmcomp=Z,73nm,2.1s
R49A Shelbyville 75.18 308 IAmb IAmb 03 05 57.7
comp=Z,346nm,1.4s
GCMP Grenada, Carri 75.18 274 *e*P **P** **03 05 56.3 +2.5**
PAX Paxson 75.25 353 P **P** **03 05 53.3 -0.3**
baz=12,SNR=26
PAX S **S** **03 15 33.1 +1.6**
baz=12
L42A Oliver, Polo 75.26 313 IAmb IAmb 03 05 58.0
comp=Z,310nm,1.3s
L42A IAMs_20 IAMs_20 03 38 50.5
comp=Z,39µm,20.0s
NBBC Barra do Corda 75.27 249 P **P** **03 05 57.2 +2.9**
NBBC Barra do Corda 75.27 249 *e*P **P** **03 05 53.5 -0.8**
BVCY Beaver Creek 75.30 351 P **P** **03 05 54.4 +0.6**
baz=15,SNR=82
BVCY S **S** **03 15 34.7 +2.6**
baz=15
DHY Denali Highway 75.31 354 P **P** **03 05 53.8 -0.2**
baz=10,SNR=111
DHY S **S** **03 15 33.1 +0.7**
baz=10
TZTN Tazewell 75.35 306 IAmb IAmb 03 06 10.6
comp=Z,561nm,1.8s
N32M Quiet Lake 75.36 347 IAmb IAmb 03 05 59.0
comp=Z,293nm,1.1s
N32M IAMs_20 IAMs_20 03 45 14.6
comp=Z,20µm,20.0s
N32M Quiet Lake 75.36 347 P **P** **03 05 54.8 +0.5**
baz=21
N32M S **S** **03 15 34.2 +1.4**
baz=21
USRK Ussuriysk Ar. 75.38 43 P **P** **03 05 53.7 -0.9**
comp=Z,26nm,0.8s,baz=298,slow=4.1,SNR=30
comp=Z,26nm,0.8s
J18K Innoko River 75.39 358 P **P** **03 05 54.6 +0.2**
baz=3.0

J18K				S	S	03 15 36.9	+4.0	baz=3.0
PAULI	Pauline	75.40	304	IAmb	IAmb	03 06 00.1		comp=Z,198nm,0.9s
K20K	Telida	75.42	357	P	P	03 05 54.5	0.0	baz=5.0,SNR=68
K20K				S	S	03 15 37.1	+3.8	baz=5.0
GRSS	Sisters	75.44	274	eP	P	03 05 59.9	+4.6	
AOPR	Arecibo Observ	75.44	282	eP	P	03 05 51.6	-3.7	
PYAG	Pyongyang	75.45	51	P	P	03 05 54.2	-0.8	
PYAG				S	S	03 15 32.3	-2.0	
PYAG				AmB				comp=Z,3µm,4.6s
PYAG				AMS	AMS			comp=Z,55µm,16.9s
NHSC	New Hope	75.46	301	IAMs_20	IAMs_20	03 42 24.4		comp=Z,31µm,19.0s
V53A	Saluda	75.47	305	IAMs_20	IAMs_20	03 40 56.4		comp=Z,33µm,18.0s
M27K	Edge Creek, AK	75.47	351	IAmb	IAmb	03 06 00.1		comp=Z,367nm,1.4s
M27K	Edge Creek, AK	75.47	351	P	P	03 05 54.4	-0.6	baz=14,SNR=51
M27K				S	S	03 15 36.5	+2.3	baz=14
P46A	Rosedale	75.49	310	IAmb	IAmb	03 06 09.0		comp=Z,147nm,0.8s
P46A				IAMs_20	IAMs_20	03 38 11.7		comp=Z,45µm,21.0s
N31M	Braeburn, Yuko	75.49	348	IAmb	IAmb	03 05 59.1		comp=Z,229nm,1.1s
N31M				IAMs_20	IAMs_20	03 42 40.1		comp=Z,27µm,19.0s
N31M	Braeburn, Yuko	75.49	348	P	P	03 05 54.8	-0.1	baz=19,SNR=36
N31M				S	S	03 15 34.9	+0.8	baz=19
TYV	Tymovskoe	75.49	33	eP	P	03 05 57.3	+2.2	
TYV				eS	S	03 15 38.2	+3.8	
TYV				pmax	pmax			comp=Z,61nm,1.4s
TYV				pmax	pmax			comp=Z,5µm,7.2s
TYV				smax	smax			comp=N,2µm,9.9s
TYV				smax	smax			comp=E,4µm,9.9s
TYV				MLR	MLR			comp=Z,25µm,16.0s
TYV				MLR	MLR			comp=N,28µm,16.0s
J17K	VABM Dome	75.50	359	IAmb	IAmb	03 06 16.9		comp=Z,350nm,1.2s
J17K	VABM Dome	75.50	359	P	P	03 05 55.3	+0.4	baz=1.1,SNR=45
J17K				S	S	03 15 37.1	+3.1	baz=1.1
GRHS	Sauteurs	75.51	274	eP	P	03 05 55.7	0.0	
WTLY	Watson Lake, Y	75.52	344	IAmb	IAmb	03 06 00.2		comp=Z,361nm,1.3s
WTLY	Watson Lake, Y	75.52	344	P	P	03 05 55.5	+0.4	baz=24,SNR=16
WTLY				S	S	03 15 37.2	+2.6	baz=24
M26K	Nabesna, AK	75.56	352	IAmb	IAmb	03 06 00.1		comp=Z,202nm,1.2s
M26K	Nabesna, AK	75.56	352	P	P	03 05 55.7	+0.3	baz=14,SNR=70
M26K				S	S	03 15 37.0	+2.1	baz=14
GRW	Mount Saint Ca	75.56	274	eP	P	03 05 59.7	+3.6	
GRGR	Grenville	75.58	274	eP	P	03 05 57.3	+1.2	
GRGR	Grenville	75.58	274	P	P	03 06 00.7	+4.6	comp=Z,16µmcomp=Z,937nm,1.2s
LIRD	Liard River Hi	75.58	343	P	P	03 05 56.2	+0.8	baz=26,SNR=69
LIRD				S	S	03 15 37.1	+1.9	baz=26
J16K	Anvik River	75.61	0	IAmb	IAmb	03 06 00.0		comp=Z,252nm,1.4s
J16K	Anvik River	75.61	0	P	P	03 05 55.5	0.0	baz=360
J16K				S	S	03 15 37.0	+1.6	baz=360
WAT1	Susitna Watana	75.64	354	P	P	03 05 54.5	-1.3	baz=9.2
WAT1				S	S	03 15 36.2	+0.5	baz=9.2
GRFF	Grenada Fort F	75.69	273	eP	P	03 05 59.9	+3.1	
N30M	Aishikik Lake	75.71	349	IAmb	IAmb	03 06 00.9		comp=Z,242nm,1.4s
N30M				IAMs_20	IAMs_20	03 42 47.9		comp=Z,25µm,20.0s
N30M	Aishikik Lake	75.71	349	P	P	03 05 56.5	+0.2	baz=18,SNR=41
N30M				S	S	03 15 37.0	+0.3	baz=18
NJ2	Nanjing	75.76	60	⇑P	P	03 05 56.0	-0.9	
NJ2				pP	pP	03 06 00.5	-2.4	
NJ2				sP	sP	03 06 03.0	-2.0	
NJ2				PP	PP	03 08 43.5	-3.0	
NJ2				S	S	03 15 35.5	-2.5	
NJ2				pmax	pmax			comp=Z,56nm,1.2s
NJ2				pmax	pmax			comp=Z,5µm,6.6s
NJ2				LR	LR			comp=Z,22µm,18.7s
NJ2				LR	LR			comp=Z,20µm,20.1s
NJ2				LR	LR			comp=Z,32µm,21.1s
HARP	HAARP	75.78	353	P	P	03 05 56.6	0.0	baz=12,SNR=19
HARP				S	S	03 15 41.2	+3.9	baz=12
PPLA	Purkeypile	75.80	356	IAmb	IAmb	03 06 09.5		comp=Z,191nm,1.0s
PPLA				IAMs_20	IAMs_20	03 40 21.2		comp=Z,19µm,21.0s
PPLA	Purkeypile	75.80	356	P	P	03 05 56.4	-0.4	baz=6.4,SNR=40
PPLA				S	S	03 15 37.6	-0.2	baz=6.4
T50A	Nancy	75.82	307	IAmb	IAmb	03 06 13.0		comp=Z,448nm,1.6s
WAT6	Susitna Watana	75.82	354	P	P	03 05 56.2	-0.8	baz=9.9,SNR=41
WAT6				S	S	03 15 36.4	-1.6	baz=9.9
PSTR	Posyet	75.83	45	iP	P	03 05 56.4	-0.7	
I37A	Lemond, Waseca	75.85	317	IAMs_20	IAMs_20	03 40 06.2		comp=Z,26µm,20.0s
YUK3	Moose Creek	75.87	350	P	P	03 05 57.7	+0.4	baz=15,SNR=80
YUK3				S	S	03 15 39.6	+0.9	baz=15
HHU	Hamhung	75.88	49	P	P	03 05 56.5	-1.0	
HHU				S	S	03 15 36.8	-2.3	
HHU				AmB				comp=Z,3µm,3.7s
HHU				AMS	AMS			comp=Z,47µm,15.2s
WCI	Wyandotte Cave	75.88	309	P	P	03 05 56.9	-0.7	
WCI				IAmb	IAmb	03 06 11.8		comp=Z,218nm,0.9s
WCI	Wyandotte Cave	75.88	309	P	P	03 05 56.9	-0.7	
WCI				pmax	pmax			comp=Z,218nm,1.0s
WCI				MLR	MLR			comp=Z,45µm,18.0s
TOAD	Toad River Com	75.89	342	P	P	03 05 57.5	+0.3	baz=27,SNR=50
TOAD				S	S	03 15 41.4	+2.7	baz=27
F33A	5 Mile Ranch,	76.01	320	IAmb	IAmb	03 06 17.8		comp=Z,234nm,1.2s
YUK4	Talbot Arm	76.05	349	P	P	03 05 58.1	-0.3	baz=17,SNR=22
L40A	Anamosa	76.06	314	IAmb	IAmb	03 06 02.3		comp=Z,357nm,1.3s
L40A				IAMs_20	IAMs_20	03 40 29.8		comp=Z,38µm,19.0s
TKL	Tuckaleechee C	76.07	305	LR	LR	03 40 33.5		comp=Z,35µm,18.0s,baz=64,slow=37
VLA	Vladivostok	76.07	44	iP	P	03 05 58.3	-0.2	
VLA				pmax	pmax			comp=Z,204nm,1.0s
VLA				MLR	MLR			comp=Z,82µm,16.0s
HJU	Haeju	76.11	51	P	P	03 05 57.9	-0.9	
HJU				S	S	03 15 39.5	-2.0	
HJU				AmB				comp=Z,7µm,5.0s
HJU				AMS	AMS			comp=Z,68µm,16.2s
MDND	Maddock	76.11	323	IAmb	IAmb	03 06 02.7		comp=Z,412nm,1.3s
MDND				IAMs_20	IAMs_20	03 40 29.7		comp=Z,31µm,19.0s
J14K	Nanvaranak Lak	76.12	2	IAMs_20	IAMs_20	03 45 33.8		comp=Z,25µm,18.0s
J14K	Nanvaranak Lak	76.12	2	P	P	03 05 58.2	-0.2	baz=358
J14K				S	S	03 15 41.6	+0.7	baz=358
WHY	Whitehorse	76.13	347	P	P	03 05 58.8	0.0	baz=20,SNR=23
WHY				S	S	03 15 43.6	+2.2	baz=20
M24K	Tolsona, Glenn	76.16	353	IAmb	IAmb	03 06 03.3		comp=Z,258nm,1.2s
M24K	Tolsona, Glenn	76.16	353	P	P	03 05 58.5	-0.3	baz=11,SNR=18
M24K				S	S	03 15 43.0	+1.4	baz=11
K17K	Iditarod	76.17	359	P	P	03 05 58.8	0.0	baz=1.7
K17K				S	S	03 15 41.4	-0.1	baz=1.7
CUT	Chulitna	76.18	355	IAmb	IAmb	03 06 18.8		comp=Z,220nm,1.0s
CUT	Chulitna	76.18	355	P	P	03 05 57.7	-1.1	baz=7.9,SNR=7.7
CUT				S	S	03 15 39.7	-1.8	baz=7.9
P33M	Teslin, Yukon	76.20	346	IAmb	IAmb	03 06 03.7		comp=Z,291nm,1.4s
P33M				IAMs_20	IAMs_20	03 41 51.8		comp=Z,19µm,20.0s
P33M	Teslin, Yukon	76.20	346	P	P	03 05 59.0	-0.1	baz=21,SNR=31
P33M				S	S	03 15 44.0	+1.9	baz=21
O30N	Mendenhall	76.22	348	IAMs_20	IAMs_20	03 43 11.3		comp=Z,31µm,18.0s
O30N	Mendenhall	76.22	348	P	P	03 05 59.0	-0.2	baz=19,SNR=32
O30N				S	S	03 15 43.3	+1.0	baz=19
YUK8	Steele Glacier	76.25	350	P	P	03 05 59.5	-0.1	baz=16,SNR=11
YUK8				S	S	03 15 44.3	+1.3	baz=16
L20K	Farewell, AK	76.29	357	P	P	03 05 59.7	+0.2	baz=5.1,SNR=12
L20K				S	S	03 15 42.5	-0.5	baz=5.1
TRN	Trinidad (W)	76.34	272	eP	P	03 06 01.4	+0.9	
HYT	Haines Junctio	76.38	349	P	P	03 06 00.5	+0.3	baz=18,SNR=43
HYT				S	S	03 15 44.2	0.0	baz=18
YUK6	Outpost Mounta	76.39	349	P	P	03 06 00.2	-0.1	baz=17,SNR=46
YUK6				S	S	03 15 45.5	+1.0	baz=17
N25K	Chitina, Valde	76.50	352	P	P	03 06 00.5	-0.3	baz=12,SNR=28
N25K				S	S	03 15 46.6	+1.2	baz=12
SCM	Sheep Creek Mo	76.53	354	P	P	03 06 00.7	-0.2	baz=10,SNR=35
SCM				S	S	03 15 47.2	+1.5	baz=10
W52A	Murphy	76.53	305	IAMs_20	IAMs_20	03 41 55.6		comp=Z,32µm,18.0s
MCARA	McCarthy VSAT	76.55	352	IAMs_20	IAMs_20	03 42 04.2		comp=Z,19µm,21.0s
MCARA	McCarthy VSAT	76.55	352	P	P	03 06 01.1	+0.2	baz=13,SNR=20
MCARA				S	S	03 15 47.3	+1.5	baz=13
OLIL	Olney	76.59	310	IAmb	IAmb	03 06 06.1		comp=Z,292nm,1.1s
M23K	Glacier View	76.60	354	P	P	03 06 01.1	-0.1	baz=9.8,SNR=40
M23K				S	S	03 15 48.0	+1.7	baz=9.8
UGL	Uglegorsk	76.60	35	eP	P	03 06 03.0	+1.6	
UGL				eS	S	03 15 49.3	+2.7	
UGL				pmax	pmax			comp=Z,300nm,1.3s
UGL				pmax	pmax			comp=Z,6µm,7.7s
UGL				MLR	MLR			comp=N,47µm,16.0s
UGL				MLR	MLR			comp=Z,48µm,16.0s
K15K	Wolf Creek Mou	76.60	1	IAMs_20	IAMs_20	03 40 48.5		comp=Z,22µm,22.0s
K15K	Wolf Creek Mou	76.60	1	P	P	03 06 01.3	+0.1	baz=359
K15K				S	S	03 15 48.1	+1.8	baz=359
R33M	Jennings River	76.62	345	IAMs_20	IAMs_20	03 42 23.7		comp=Z,36µm,20.0s
R33M	Jennings River	76.62	345	P	P	03 06 02.3	+0.7	baz=22,SNR=71
R33M				S	S	03 15 50.1	+3.3	baz=22
L19K	White Mountain	76.62	357	IAmb	IAmb	03 06 06.0		comp=Z,413nm,1.3s
L19K	White Mountain	76.62	357	P	P	03 06 01.5	+0.1	baz=4.4,SNR=70
L19K				S	S	03 15 48.6	+2.0	baz=4.4
SML	Sawmill	76.64	354	IAmb	IAmb	03 06 05.5		comp=Z,381nm,1.3s
SML	Sawmill	76.64	354	P	P	03 06 01.1	-0.4	baz=9.4,SNR=39
SML				S	S	03 15 46.9	+0.2	baz=9.4
GRTK	Grand Turk	76.64	287	IAMs_20	IAMs_20	03 40 23.3		comp=Z,18µm,19.0s
GRTK	Grand Turk	76.64	287	eP	P	03 06 05.2	+3.1	
L18K	Granite Mounta	76.64	358	IAmb	IAmb	03 06 06.4		comp=Z,252nm,1.2s
L18K	Granite Mounta	76.64	358	P	P	03 06 01.5	0.0	baz=3.0,SNR=44
L18K				S	S	03 15 48.3	+1.6	baz=3.0
CPCT	Cooper Cave	76.66	306	IAmb	IAmb	03 06 06.8		comp=Z,275nm,1.4s
SKT	Skwentna	76.67	356	P	P	03 06 00.5	-1.2	baz=6.9,SNR=56
SKT				S	S	03 15 45.9	-1.2	baz=6.9
GHO	Glory Hole Cre	76.71	354	IAmb	IAmb	03 06 06.0		comp=Z,238nm,1.2s
U49A	Red Boiling Sp	76.72	307	IAmb	IAmb	03 06 07.4		comp=Z,266nm,1.1s
257A	Skidaway Islan	76.74	301	IAMs_20	IAMs_20	03 42 55.3		comp=Z,26µm,19.0s
KLU	Klutina	76.74	353	IAmb	IAmb	03 06 06.3		comp=Z,206nm,1.2s
KLU	Klutina	76.74	353	P	P	03 06 01.9	-0.3	baz=11,SNR=36
KLU				S	S	03 15 49.6	+1.6	baz=11
VRDI	Verde Repeater	76.75	352	IAMs_20	IAMs_20	03 42 11.5		comp=Z,20µm,21.0s
L17K	Donlin	76.75	359	P	P	03 06 01.7	-0.4	baz=1.7
L17K				S	S	03 15 51.0	+3.1	baz=1.7
CTGM	Chitina Glacie	76.76	351	IAmb	IAmb	03 06 07.0		comp=Z,222nm,1.4s
CTG	Chitna Glacier	76.77	351	P	P	03 06 02.4	+0.1	baz=15,SNR=8.0
CTG				S	S	03 15 50.2	+1.7	baz=15
P43A	Skaggs, Pawnee	76.79	311	IAmb	IAmb	03 06 06.8		comp=Z,366nm,1.4s
N41A	Harden Midland	76.80	313	IAmb	IAmb	03 06 17.8		comp=Z,347nm,1.1s
O28M	Mount Upton	76.81	350	IAmb	IAmb	03 06 07.4		comp=Z,250nm,1.4s
O28M	Mount Upton	76.81	350	P	P	03 06 02.9	+0.1	baz=16,SNR=25
O28M				S	S	03 15 51.7	+2.5	baz=16
M22K	Willow	76.81	355	P	P	03 06 01.7	-0.6	baz=8.0,SNR=25
M22K				S	S	03 15 48.8	+0.3	baz=8.0
M20K	Styx River	76.85	356	IAmb	IAmb	03 06 06.4		comp=Z,221nm,1.3s
M20K				IAMs_20	IAMs_20	03 45 02.2		comp=Z,20µm,21.0s
M20K	Styx River	76.85	356	P	P	03 06 02.2	-0.6	baz=5.7,SNR=34
M20K				S	S	03 15 49.9	+0.6	baz=5.7
LOGN	Logan Glacier	76.86	350	IAmb	IAmb	03 06 07.5		comp=Z,272nm,1.3s
LOGN				IAMs_20	IAMs_20	03 42 36.3		comp=Z,22µm,22.0s
M19K	Big River Lodg	76.89	357	IAmb	IAmb	03 06 07.9		comp=Z,255nm,1.3s
M19K	Big River Lodg	76.89	357	P	P	03 06 02.5	-0.4	baz=4.7
M19K				S	S	03 15 51.7	+2.3	baz=4.7
PMR	Palmer	76.91	355	IAmb	IAmb	03 06 16.7		comp=Z,169nm,1.0s
PMR	Palmer	76.91	355	P	P	03 06 02.6	-0.3	
PMR	Palmer	76.91	355	P	P	03 06 02.5	-0.4	baz=8.8,SNR=29
PMR				S	S	03 15 48.9	-0.7	baz=8.8
K13K	Kusilvak Mount	76.91	2	IAMs_20	IAMs_20	03 41 09.6		comp=Z,21µm,21.0s
K13K	Kusilvak Mount	76.91	2	P	P	03 06 02.5	-0.5	baz=357
K13K				S	S	03 15 50.3	+0.6	baz=357
P32M	Atlin	76.94	346	IAMs_20	IAMs_20	03 42 26.5		comp=Z,26µm,20.0s
P32M	Atlin	76.94	346	P	P	03 06 02.6	-0.6	baz=20,SNR=18
P32M				S	S	03 15 51.1	+0.9	baz=20
P30M	Million Dollar	76.97	348	P	P	03 06 03.8	+0.4	baz=18,SNR=22
P30M				S	S	03 15 52.6	+2.0	baz=18
UBPT	Khong Chiam	76.98	81	P	P	03 06 02.5	-1.6	
Q44A	Meyer Farm, Va	77.00	311	IAmb	IAmb	03 06 17.9		comp=Z,185nm,0.9s
INCN	Inchon	77.01	51	P	P	03 06 03.3	-0.7	
INCN	Inchon	77.01	51	P	P	03 06 03.9	-0.1	
INCN	Inchon	77.01	51	P	P	03 06 05.5	+1.5	
INCN	Inchon	77.01	51	P	P	03 06 03.9	-0.1	
INCN				pmax	pmax			comp=Z,138nm,1.0s
INCN				MLR	MLR			comp=Z,57µm,18.0s
KNK	Knik Glacier	77.03	354	IAmb	IAmb	03 06 08.0		comp=Z,280nm,1.2s
KNK	Knik Glacier	77.03	354	P	P	03 06 03.5	-0.2	baz=9.3,SNR=24
KNK				S	S	03 15 52.1	+1.0	baz=9.3
O29M	Mount Kennedy	77.04	349	IAMs_20	IAMs_20	03 46 47.8		comp=Z,22µm,18.0s
O29M	Mount Kennedy	77.04	349	P	P	03 06 03.7	-0.1	baz=17
O29M				S	S	03 15 52.5	+1.1	baz=17
GRNC	Granite Creek	77.04	351	IAmb	IAmb	03 06 08.4		comp=Z,376nm,1.2s
DIV	Divide	77.08	353	IAMs_20	IAMs_20	03 42 21.2		comp=Z,20µm,20.0s
TEY	Ternei	77.10	40	⇑eP	P	03 06 03.1	-1.2	
TEY				pmax	pmax			comp=E,10.0nm,1.1s
TEY				pmax	pmax			comp=N,10.0nm,1.2s
TEY				pmax	pmax			comp=Z,20nm,1.0s
TEY				pmax	pmax			comp=N,100nm,13.9s
TEY				pmax	pmax			comp=Z,400nm,7.0s
BMRM	Bremner River	77.13	352	IAmb	IAmb	03 06 08.5		comp=Z,354nm,1.2s
BMRM	Bremner River	77.13	352	P	P	03 06 03.9	-0.3	baz=12,SNR=27
BMRM				S	S	03 15 53.5	+1.3	baz=12
SUA	Susitna One	77.14	355	P	P	03 06 04.2	-0.3	baz=7.5,SNR=44
SUA				S	S	03 15 51.9	-0.6	baz=7.5
TGL	Tana Glacier	77.14	351	IAmb	IAmb	03 06 20.1		comp=Z,413nm,1.6s
CRQE	Cirque	77.18	351	P	P	03 06 04.1	-0.6	baz=13,SNR=20
CRQE				S	S	03 15 55.9	+3.0	baz=13
CRQM	Cirque	77.18	351	IAmb	IAmb	03 06 20.1		comp=Z,395nm,1.2s
CRQM				IAMs_20	IAMs_20	03 40 34.7		comp=Z,20µm,21.0s
L16K	Owhat River	77.19	360	IAMs_20	IAMs_20	03 46 01.1		comp=Z,20µm,20.0s
L16K	Owhat River	77.19	360	P	P	03 06 04.6	+0.1	baz=0.8,SNR=6.6
L16K				S	S	03 15 55.6	+2.9	baz=0.8
L15K	Ungalak Mounta	77.22	1	P	P	03 06 04.9	+0.2	baz=359
L15K				S	S	03 15 55.3	+2.3	baz=359
ISLE	Juniper Island	77.24	351	IAmb	IAmb	03 06 09.3		comp=Z,341nm,1.3s
ISLE				IAMs_20	IAMs_20	03 41 48.3		comp=Z,22µm,22.0s
TABL	Table Mountain	77.25	350	IAmb	IAmb	03 06 16.2		comp=Z,157nm,1.0s
TABL				IAMs_20	IAMs_20	03 42 58.6		comp=Z,19µm,21.0s
Q32M	Nakina River	77.27	346	IAmb	IAmb	03 06 20.7		comp=Z,451nm,1.6s
Q32M				IAMs_20	IAMs_20	03 46 52.0		comp=Z,35µm,18.0s
Q32M	Nakina River	77.27	346	P	P	03 06 05.9	+0.6	baz=21
Q32M				S	S	03 15 58.0	+3.9	baz=21
MLSI	Meulaboh, Aceh	77.27	96	P	P	03 06 02.3	-3.4	
W50A	Signal Mountai	77.31	306	IAmb	IAmb	03 06 21.7		comp=Z,310nm,1.1s
DLBC	Dease Lake	77.31	344	LR	LR	03 41 57.3		comp=Z,22µm,20.5s,baz=5.5,slow=37
DLBC	Dease Lake	77.31	344	P	P	03 06 06.3	+0.9	baz=23,SNR=19
DLBC				S	S	03 15 58.3	+3.9	baz=23
SKAG	Skagway	77.34	347	P	P	03 06 05.9	+0.5	
SKAG	Skagway	77.34	347	P	P	03 06 05.3	-0.1	baz=19,SNR=5.7
SKAG				S	S	03 15 56.3	+2.0	baz=19
M18K	Stony River	77.35	358	P	P	03 06 05.4	0.0	baz=3.6
M18K				S	S	03 15 56.4	+2.0	baz=3.6
GOGA	Godfrey	77.36	303	IAMs_20	IAMs_20	03 41 15.4		comp=Z,24µm,19.0s
YAH	Yahtse	77.40	351	IAmb	IAmb	03 06 10.8		comp=Z,281nm,1.2s
YAH				IAMs_20	IAMs_20	03 42 43.7		comp=Z,18µm,20.0s
Y52A	Lilburn	77.43	304	IAmb	IAmb	03 06 11.6		comp=Z,204nm,0.9s
Y52A				IAMs_20	IAMs_20	03 42 43.3		comp=Z,27µm,18.0s
WAX	Waxell Ridge	77.45	351	IAmb	IAmb	03 06 23.4		comp=Z,244nm,1.2s
WAX				IAMs_20	IAMs_20	03 43 41.8		

comp=Z,20µm,19.0s
RC01 Rabbit Creek A 77.45 355 IAmb IAmb 03 06 19.6
comp=Z,247nm,0.8s
RC01 Rabbit Creek A 77.45 355 P **P** **03 06 05.9 -0.1**
baz=8.3,SNR=26
RC01 S **S** **03 15 55.7 +0.2**
baz=8.3
GLI Glacier Island 77.45 353 P **P** **03 06 05.5 -0.5**
baz=10
GLI S **S** **03 15 55.7 +0.1**
baz=10
X51A Calhoun 77.45 305 IAmb IAmb 03 06 18.5
comp=Z,141nm,0.8s
PCA Pinnacle 77.47 350 IAMs_20 IAMs_20 03 46 31.4
comp=Z,21µm,19.0s
PINM Pinnacle 77.47 350 P **P** **03 06 06.3 +0.1**
baz=15,SNR=16
PINM S **S** **03 15 60.0 +4.0**
baz=15
M17K Holitna River 77.48 359 P **P** **03 06 06.1 -0.1**
baz=2.4
M17K S **S** **03 15 59.3 +3.4**
baz=2.4
N20K Mount Spurr 77.49 356 P **P** **03 06 05.0 -1.4**
baz=6.4,SNR=25
N20K S **S** **03 15 56.0 -0.2**
baz=6.4
SPCR Spurr Chakacha 77.49 356 P **P** **03 06 04.7 -1.6**
baz=6.4,SNR=9.4
SPCR S **S** **03 15 55.1 -1.0**
baz=6.4
PLBC Pleasant Camp 77.51 348 P **P** **03 06 05.7 -0.6**
baz=18,SNR=13
PLBC S **S** **03 15 59.0 +2.7**
baz=18
BCPM Bancas Point 77.52 349 IAMs_20 IAMs_20 03 43 28.8
comp=Z,19µm,21.0s
FID Port Fidalgo 77.52 353 IAmb IAmb 03 06 11.0
comp=Z,301nm,1.3s
FID IAMs_20 IAMs_20 03 44 58.7
comp=Z,17µm,20.0s
L14K Kuka Creek 77.55 1 IAmb IAmb 03 06 10.8
comp=Z,306nm,1.9s
L14K IAMs_20 IAMs_20 03 41 47.5
comp=Z,19µm,21.0s
L14K Kuka Creek 77.55 1 P **P** **03 06 06.2 -0.2**
baz=358
L14K S **S** **03 15 58.4 +1.9**
baz=358
E28A Huff 77.55 322 IAMs_20 IAMs_20 03 39 15.9
comp=Z,39µm,22.0s
P29M Windy Craggy 77.56 348 IAmb IAmb 03 06 11.3
comp=Z,327nm,1.2s
P29M IAMs_20 IAMs_20 03 43 55.7
comp=Z,35µm,20.0s
P29M Windy Craggy 77.56 348 P **P** **03 06 06.6 -0.1**
baz=17,SNR=44
P29M S **S** **03 15 59.2 +2.4**
baz=17
PAL2 UHE Estreito - 77.57 249 P **P** **03 06 09.8 +2.5**
PWL Port Wells 77.57 354 IAmb IAmb 03 06 20.2
comp=Z,174nm,0.8s
PWL Port Wells 77.57 354 P **P** **03 06 06.2 -0.5**
baz=9.3
PWL S **S** **03 15 56.4 -0.5**
baz=9.3
BERG Berg Lake 77.60 352 IAMs_20 IAMs_20 03 42 47.7
comp=Z,23µm,21.0s
MESA MESA 77.60 351 IAmb IAmb 03 06 11.9
comp=Z,292nm,1.2s
MESA IAMs_20 IAMs_20 03 42 11.0
comp=Z,22µm,21.0s
MESA MESA 77.60 351 P **P** **03 06 05.7 -1.5**
baz=14,SNR=5.9
MESA S **S** **03 16 00.8 +3.1**
baz=14
154A Montrose 77.65 303 IAmb IAmb 03 06 13.1
comp=Z,333nm,1.1s
154A IAMs_20 IAMs_20 03 40 51.4
comp=Z,28µm,20.0s
EYAK Cordova Ski Ar 77.66 353 IAmb IAmb 03 06 11.8
comp=Z,240nm,1.3s
EYAK IAMs_20 IAMs_20 03 42 49.3
comp=Z,34µm,21.0s
EYAK Cordova Ski Ar 77.66 353 P **P** **03 06 08.0 +0.9**
EYAK Cordova Ski Ar 77.66 353 P **P** **03 06 06.5 -0.6**
baz=11,SNR=7.0
EYAK S **S** **03 16 00.2 +2.5**
baz=11
PAL01 Palmeiras do T 77.66 250 P **P** **03 06 09.8 +2.0**
DGMT Dagmar 77.66 326 IAMs_20 IAMs_20 03 43 39.8
comp=Z,37µm,18.0s
SWET Sewanee 77.68 306 IAmb IAmb 03 06 20.8
comp=Z,430nm,1.9s
RAGM Ragged Mountai 77.71 352 IAMs_20 IAMs_20 03 46 56.7
comp=Z,18µm,20.0s
SNH Sunshine Point 77.71 351 IAMs_20 IAMs_20 03 43 59.7
comp=Z,24µm,19.0s
HMT Hamilton 77.71 352 IAMs_20 IAMs_20 03 42 41.9
comp=Z,20µm,20.0s
GZH Guangzhou 77.74 70 P **P** **03 06 09.5 +1.2**
GZH pP **pP** **03 06 13.5 -0.7**
GZH PP **PP** **03 09 04.3 +0.9**
GZH S **S** **03 15 59.5 -0.4**
GZH ScS **SKKSac** **03 16 23.5 +1.4**
GZH pmax pmax
comp=Z,260nm,1.1s
GZH LR LR
comp=Z,25µm,19.6s
GZH LR LR
comp=Z,19µm,18.8s
GZH LR LR
comp=Z,36µm,21.5s
PNL Peninsula 77.76 349 P **P** **03 06 10.5 +2.7**
PNL Peninsula 77.76 349 P **P** **03 06 07.0 -0.8**
baz=16,SNR=6.2
PNL S **S** **03 16 00.4 +1.3**
baz=16
KSRS Korea Array 77.79 51 P **P** **03 06 07.7 -0.6**
comp=Z,21nm,0.6s,baz=317,slow=5.1,SNR=37
KSRS LR LR 03 43 52.7
comp=Z,37925µm,18.3s,baz=315,slow=38
comp=Z,21nm,0.6s
QIZ Qiongzhong 77.81 75 IAmb IAmb 03 06 22.0
comp=Z,337nm,1.5s
QIZ Qiongzhong 77.81 75 IAMs_20 IAMs_20 03 45 53.5
comp=Z,17µm,18.0s
QIZ Qiongzhong 77.81 75 P **P** **03 06 08.0 -0.7**
QIZ PP **PP** **03 09 05.8 +1.7**
QIZ S **S** **03 15 58.5 -2.3**
QIZ SS **SS** **03 21 03.8 +3.0**
QIZ pmax pmax
comp=Z,120nm,1.7s
QIZ pmax pmax
comp=Z,3µm,5.8s
QIZ LR LR
comp=Z,8µm,20.6s
QIZ LR LR
comp=Z,13µm,20.1s
QIZ LR LR
comp=Z,17µm,17.9s
QIZ Qiongzhong 77.81 75 P **P** **03 06 09.4 +0.7**
BGLC Bering Glacier 77.82 351 P **P** **03 06 08.6 +0.6**
baz=13
CAPN Captain Cook N 77.86 355 P **P** **03 06 08.5 +0.3**
baz=7.2
CAPN S **S** **03 16 02.6 +2.7**
baz=7.2
V48A Smith Brothers 77.86 307 IAmb IAmb 03 06 13.6
comp=Z,259nm,1.1s
HIN Hinchinbrook I 77.88 353 IAmb IAmb 03 06 12.8
comp=Z,269nm,1.2s
M16K Timber Creek 77.88 359 IAmb IAmb 03 06 13.4
comp=Z,369nm,1.4s
M16K IAMs_20 IAMs_20 03 41 53.2
comp=Z,21µm,21.0s
M16K Timber Creek 77.88 359 P **P** **03 06 09.0 +0.6**
baz=1.2,SNR=18
M16K S **S** **03 16 02.8 +2.6**
baz=1.2
SLM Saint Louis 77.88 311 IAmb IAmb 03 06 24.3
comp=Z,293nm,1.1s
SSE Sheshan 77.89 59 P **P** **03 06 08.5 -0.5**
SSE S **S** **03 16 01.8 +0.5**
SSE pmax pmax
comp=Z,58nm,1.9s
SSE pmax pmax
comp=Z,2µm,9.8s
SSE LR LR
comp=Z,5µm,17.5s
SUCK Suckling Hills 77.92 352 IAMs_20 IAMs_20 03 42 57.3
comp=Z,22µm,20.0s
SIUC Southern Illin 77.93 310 IAmb IAmb 03 06 24.5
comp=Z,299nm,1.1s
S44A Carbondale 77.97 310 IAmb IAmb 03 06 24.6
comp=Z,309nm,1.2s
N19K Bonanza Creek 77.98 357 IAMs_20 IAMs_20 03 41 19.8
comp=Z,19µm,21.0s
N19K Bonanza Creek 77.98 357 P **P** **03 06 09.2 +0.1**
baz=4.6,SNR=20
N19K S **S** **03 16 02.1 +0.6**
baz=4.6
S34M Telegraph Cree 78.03 345 IAmb IAmb 03 06 14.8
comp=Z,220nm,1.4s
S34M Telegraph Cree 78.03 345 P **P** **03 06 10.0 +0.8**
baz=22,SNR=23
S34M S **S** **03 16 06.8 +5.0**
baz=22
N38A Joes South For 78.03 314 IAmb IAmb 03 06 24.1
comp=Z,203nm,0.9s
O22K Cooper Landing 78.05 355 IAmb IAmb 03 06 41.4
comp=Z,229nm,1.0s
O22K Cooper Landing 78.05 355 P **P** **03 06 08.8 -0.6**
baz=8.3
O22K S **S** **03 16 03.7 +1.7**
baz=8.3
SLKM Skilak Lake 78.06 355 IAmb IAmb 03 06 13.3
comp=Z,264nm,1.3s
T45A Paducah 78.07 309 IAmb IAmb 03 06 25.7
comp=Z,127nm,0.8s
T45A IAMs_20 IAMs_20 03 43 20.3
comp=Z,36µm,18.0s
BESE Bessie Mountai 78.09 347 IAMs_20 IAMs_20 03 43 12.0
comp=Z,27µm,20.0s
KAIM Kayak Island 78.13 352 IAMs_20 IAMs_20 03 42 32.9
comp=Z,18µm,20.0s
KAIM Kayak Island 78.13 352 P **P** **03 06 08.2 -1.6**
baz=12
KAIM S **S** **03 16 04.5 +1.6**
baz=12
M14K Bethel 78.15 1 IAmb IAmb 03 06 14.2
comp=Z,339nm,1.2s
M14K IAMs_20 IAMs_20 03 42 06.4
comp=Z,20µm,20.0s
M14K Bethel 78.15 1 P **P** **03 06 09.9 +0.1**
baz=359,SNR=8.6
M14K S **S** **03 16 05.1 +2.1**
baz=359
N18K Kilae Creek 78.16 358 P **P** **03 06 10.2 +0.2**
baz=3.5,SNR=16
N18K S **S** **03 16 06.4 +3.1**
baz=3.5
NBIT Itapeh - BA 78.19 238 P **P** **03 06 15.2 +4.5**
NBIT Itapeh - BA 78.19 238 *e*P **P** **03 06 09.3 -1.4**
TJN Taejon 78.19 52 P **P** **03 06 11.9 +1.3**
WVT Waverly 78.20 308 P **P** **03 06 09.6 -1.0**
WVT IAmb IAmb 03 06 29.7
comp=Z,386nm,1.5s
WVT Waverly 78.20 308 P **P** **03 06 09.6 -1.0**
WVT pmax pmax
comp=Z,386nm,1.5s
WVT MLR MLR
comp=Z,73µm,19.0s
456A Hilliard 78.20 301 IAMs_20 IAMs_20 03 43 40.0
comp=Z,22µm,18.0s
M15K Kasigluk River 78.21 0 P **P** **03 06 10.3 +0.1**
baz=360
M15K S **S** **03 16 05.5 +1.7**
baz=360
P40A Paris 78.27 313 IAMs_20 IAMs_20 03 41 01.3
comp=Z,35µm,19.0s
RED Redoubt Volcan 78.30 356 IAmb IAmb 03 06 14.2
comp=Z,272nm,1.2s
JIS Juneau Island 78.30 346 P **P** **03 06 14.7 +4.0**
R32K Eaglecrest 78.32 346 IAMs_20 IAMs_20 03 43 27.0
comp=Z,23µm,20.0s
R32K Eaglecrest 78.32 346 P **P** **03 06 11.3 +0.3**
baz=20
N17K Nushagak Hills 78.35 358 IAMs_20 IAMs_20 03 41 40.6
comp=Z,20µm,20.0s
N17K Nushagak Hills 78.35 358 P **P** **03 06 11.1 +0.1**
baz=2.5
N17K S **S** **03 16 08.3 +3.1**
baz=2.5
P23K Montague Islan 78.35 353 P **P** **03 06 10.8 -0.3**
baz=10.0
P23K S **S** **03 16 07.0 +1.8**
baz=10.0
SDDR Presa de Saban 78.36 285 IAMs_20 IAMs_20 03 43 09.9
comp=Z,17µm,18.0s
SDDR Presa de Saban 78.36 285 *e*P **P** **03 06 16.0 +4.2**
R31K City Hall, Gus 78.40 347 P **P** **03 06 11.2 -0.1**
baz=19
R31K S **S** **03 16 09.0 +3.1**
baz=19
SEW Seward 78.41 354 P **P** **03 06 11.0 -0.3**
baz=8.5,SNR=6.7
SEW S **S** **03 16 05.2 -0.6**
baz=8.5
M11K Mekoryuk 78.41 3 IAMs_20 IAMs_20 03 47 29.4
comp=Z,21µm,18.0s
M11K Mekoryuk 78.41 3 P **P** **03 06 10.8 -0.4**
baz=356
M11K S **S** **03 16 08.7 +2.9**
baz=356
N16K Nishlik Lake 78.42 359 P **P** **03 06 11.9 +0.4**
baz=1.3
N16K S **S** **03 16 09.2 +3.0**
baz=1.3
FVM French Village 78.44 311 IAmb IAmb 03 06 27.4
comp=Z,203nm,1.1s
SNSI Sinabang, Aceh 78.44 97 P **P** **03 06 10.8 -1.4**
comp=Z,6µmcomp=Z,171nm,1.0s
M13K Dall Lake 78.47 2 IAmb IAmb 03 06 16.6
comp=Z,390nm,1.2s
M13K IAMs_20 IAMs_20 03 42 06.8
comp=Z,18µm,20.0s
M13K Dall Lake 78.47 2 P **P** **03 06 10.7 -0.9**
baz=358
M13K S **S** **03 16 09.8 +3.4**
baz=358
CGM3 Cape Girardeau 78.47 310 IAmb IAmb 03 06 26.0
comp=Z,237nm,1.1s
TPTI 78.52 96 P **P** **03 06 10.0 -2.7**
comp=Z,14µmcomp=Z,4µmcomp=Z,95nm,0.7s
YSS Yuzhno-Sakhali 78.52 36 P **P** **03 06 12.0 -0.2**
YSS Yuzhno-Sakhali 78.52 36 P **P** **03 06 12.5 +0.3**
YSS Yuzhno-Sakhali 78.52 36 *ae*P **P** **03 06 12.1 -0.1**
YSS *e**SP **pP** **03 06 17.5 -0.6**
YSS *e* 03 09 10.5
YSS *e*S **S** **03 16 06.1 -1.4**
YSS *e*PS PnS 03 16 24.4 -25
YSS *e*PPS PPS 03 16 59.0
YSS pmax pmax
comp=Z,900nm,3.2s
YSS pmax pmax
comp=E,300nm,3.0s
YSS pmax pmax
comp=Z,110nm,0.9s
YSS pmax pmax
comp=N,20nm,1.0s
YSS pmax pmax
comp=E,40nm,0.7s
YSS pmax pmax
comp=N,900nm,14.6s
YSS pmax pmax
comp=E,900nm,13.0s
YSS smax smax
comp=N,2µm,10.8s
YSS MLR MLR
comp=Z,69µm,15.0s
YSS MLR MLR
comp=N,48µm,16.0s
YSS MLR MLR
comp=E,60µm,16.0s
CMC01 Camacan, BA 78.56 238 P **P** **03 06 16.5 +3.7**
CMC01 Camacan, BA 78.56 238 *e*P **P** **03 06 12.0 -0.7**
O19K Port Alsworth 78.59 357 IAmb IAmb 03 06 16.0
comp=Z,208nm,1.2s
O19K IAMs_20 IAMs_20 03 41 48.1
comp=Z,19µm,20.0s
O19K Port Alsworth 78.59 357 P **P** **03 06 11.3 -1.0**
baz=4.7,SNR=25
O19K S **S** **03 16 07.1 -0.7**
baz=4.7
O20K Slope Mountain 78.63 356 P **P** **03 06 10.4 -2.3**
baz=6.0,SNR=17
O20K S **S** **03 16 07.7 -0.7**
baz=6.0
152A Waverly Hall 78.63 304 IAmb IAmb 03 06 18.3
comp=Z,208nm,1.1s
152A IAMs_20 IAMs_20 03 40 40.2
comp=Z,30µm,20.0s
ATM1 UHE Belo Monte 78.69 255 P **P** **03 06 17.3 +3.7**
ATM1 S **S** **03 16 13.7 +3.5**
T35M Bob Quinn 78.71 344 IAMs_20 IAMs_20 03 45 57.1
comp=Z,28µm,19.0s
T35M Bob Quinn 78.71 344 P **P** **03 06 13.5 +0.4**
baz=23,SNR=14
T35M S **S** **03 16 15.2 +5.9**
baz=23
ANA01 Lindo Horizont 78.73 239 P **P** **03 06 17.2 +3.4**
TIGA Tifton 78.74 302 IAMs_20 IAMs_20 03 44 17.1
comp=Z,22µm,18.0s
N15K Kwethluk River 78.74 360 IAmb IAmb 03 06 18.0
comp=Z,230nm,1.2s
N15K Kwethluk River 78.74 360 P **P** **03 06 13.4 +0.2**
baz=0.3
N15K S **S** **03 16 11.3 +1.8**
baz=0.3
ILSW Iliamna Southw 78.75 356 IAmb IAmb 03 06 27.8
comp=Z,469nm,2.0s
KCSI Kotacane, Aceh 78.79 95 P **P** **03 06 10.9 -3.3**
comp=Z,9µmcomp=Z,2µmcomp=Z,108nm,1.2s
Q23K Middleton Isla 78.81 353 P **P** **03 06 13.0 -0.6**
baz=11
HKPS Hong Kong Po S 78.83 70 P **P** **03 06 13.8 -0.5**
HKPS IAmb IAmb 03 06 28.0
comp=Z,318nm,1.1s
HKPS IAMs_20 IAMs_20 03 45 46.0
comp=Z,26µm,20.0s
HKPS Hong Kong Po S 78.83 70 P **P** **03 06 14.8 +0.5**
BRLK Bradley Lake 78.84 355 IAmb IAmb 03 06 17.8
comp=Z,294nm,1.2s
L34A Svendsen Farm, 78.84 317 IAMs_20 IAMs_20 03 40 12.3
comp=Z,31µm,20.0s
CCM Cathedral Cave 78.85 311 P **P** **03 06 13.5 -0.7**
CCM Cathedral Cave 78.85 311 P **P** **03 06 13.5 -0.7**
CCM pmax pmax
comp=Z,123nm,0.8s
CCM MLR MLR
comp=Z,56µm,20.0s
BRSE Bradley Lake S 78.86 355 P **P** **03 06 13.3 -0.5**
baz=7.5,SNR=9.5
BRSE S **S** **03 16 11.1 +0.3**
baz=7.5
X48A Hartselle 78.87 306 IAmb IAmb 03 06 19.3
comp=Z,345nm,1.0s
S31K Pelican 78.92 347 IAmb IAmb 03 06 19.5
comp=Z,288nm,1.4s
S31K IAMs_20 IAMs_20 03 43 41.5
comp=Z,22µm,20.0s
S31K Pelican 78.92 347 P **P** **03 06 14.6 +0.5**
baz=18
S31K S **S** **03 16 15.6 +4.2**
baz=18
PRPB Parauapebas 78.93 252 P **P** **03 06 17.8 +2.9**
PRPB Parauapebas 78.93 252 *e*P **P** **03 06 14.1 -0.9**
O18K Koktuh Hills 78.97 357 P **P** **03 06 14.2 -0.3**
baz=4.1,SNR=42
O18K S **S** **03 16 13.0 +1.0**
baz=4.1
N14K Kuskokwak Cree 78.98 1 IAMs_20 IAMs_20 03 42 31.4
comp=Z,20µm,20.0s
N14K Kuskokwak Cree 78.98 1 P **P** **03 06 14.1 -0.4**
baz=359
N14K S **S** **03 16 12.7 +0.7**
baz=359
HOM Homer 79.00 356 P **P** **03 06 14.5 -0.1**
baz=6.8
HOM S **S** **03 16 14.0 +1.8**
baz=6.8
P38A Dawn 79.02 314 IAmb IAmb 03 06 29.9
comp=Z,240nm,0.9s
P19K Oil Pt 79.09 356 IAMs_20 IAMs_20 03 41 13.2
comp=Z,20µm,22.0s
P19K Oil Pt 79.09 356 P **P** **03 06 15.0 -0.2**
baz=5.6
P19K S **S** **03 16 12.4 -0.9**
baz=5.6
S32K Killisnoo 79.10 346 IAMs_20 IAMs_20 03 48 11.3
comp=Z,24µm,19.0s
S32K Killisnoo 79.10 346 P **P** **03 06 15.2 0.0**
baz=20,SNR=5.7
S32K S **S** **03 16 17.4 +4.1**
baz=20
O17K Koliganek Bris 79.10 358 P **P** **03 06 15.5 +0.4**
baz=2.6,SNR=28
O17K S **S** **03 16 15.8 +2.5**
baz=2.6
CNPM China Poot 79.10 355 IAmb IAmb 03 06 19.3
comp=Z,313nm,1.2s
PETK Petropavlovsk- 79.11 24 P **P** **03 06 15.7 +0.3**
comp=Z,23nm,0.9s,baz=46,slow=4.2,SNR=8.0
PETK LR LR 03 46 09.7
comp=Z,101µm,18.4s,baz=328,slow=39
comp=Z,23nm,0.9s
PLAL Pickwick Lake 79.13 307 IAmb IAmb 03 06 30.9
comp=Z,289nm,1.2s
SMTB Santa Maria do 79.24 248 P **P** **03 06 17.6 +1.0**
SMTB Santa Maria do 79.24 248 *e*P **P** **03 06 15.8 -0.8**
MAL2 Monte Alegre, 79.26 258 P **P** **03 06 19.0 +2.3**
MAL2 S **S** **03 16 20.3 +4.0**
N35A Tabor 79.26 316 IAmb IAmb 03 06 32.0
comp=Z,294nm,1.0s
N35A IAMs_20 IAMs_20 03 40 02.4
comp=Z,40µm,21.0s
R40A Maddies Statio 79.26 312 IAmb IAmb 03 06 30.6
comp=Z,173nm,0.9s
PBMO Poplar Bluff 79.28 310 IAmb IAmb 03 06 32.2
comp=Z,287nm,1.2s
O16K Kokwok River B 79.30 359 IAmb IAmb 03 06 20.9
comp=Z,204nm,1.2s
O16K IAMs_20 IAMs_20 03 42 49.8
comp=Z,22µm,21.0s
O16K Kokwok River B 79.30 359 P **P** **03 06 16.6 +0.4**
baz=1.9,SNR=20
O16K S **S** **03 16 18.2 +2.8**
baz=1.9
T33K Petersburg 79.41 345 P **P** **03 06 16.9 0.0**
baz=21
656A Willston 79.43 300 IAmb IAmb 03 06 23.1
comp=Z,188nm,1.0s
656A IAMs_20 IAMs_20 03 42 58.5
comp=Z,28µm,19.0s
P18K Big Mountain, 79.43 357 P **P** **03 06 14.6 -2.5**
baz=4.0
P18K S **S** **03 16 17.2 +0.3**
baz=4.0
PET Petropavlovsk 79.47 24 *e*P **P** **03 06 17.5 +0.2**
PET *e*S **S** **03 16 15.0 -2.4**
PET smax smax
comp=E,4µm,22.2s
PET smax smax
comp=N,2µm,17.1s
PET MLR MLR
comp=Z,77µm,18.0s
PET MLR MLR
comp=Z,82µm,19.0s
060A Indiantown 79.53 297 IAMs_20 IAMs_20 03 38 48.2
comp=Z,20µm,20.0s
DWPF Disney Wildern 79.53 298 IAMs_20 IAMs_20 03 40 14.4
comp=Z,26µm,20.0s
DWPF Disney Wildern 79.53 298 *e*P P 03 06 36.7 +19
352A Blakely 79.56 303 IAMs_20 IAMs_20 03 42 45.2
comp=Z,28µm,19.0s
SIT Sitka 79.62 346 P **P** **03 06 22.4 +4.4**
SIT Sitka 79.62 346 P **P** **03 06 15.6 -2.3**
baz=19
SIT S **S** **03 16 23.6 +4.8**
baz=19
U35K Hyder 79.65 343 P **P** **03 06 17.5 -0.7**
baz=23
U35K S **S** **03 16 20.5 +1.3**
baz=23
O14K Tigyukauivet M 79.66 0 IAMs_20 IAMs_20 03 45 57.2
comp=Z,17µm,20.0s
O14K Tigyukauivet M 79.66 0 P **P** **03 06 17.4 -0.7**
baz=359
O14K S **S** **03 16 19.3 +0.1**
baz=359
GUA01 Guaratinga, BA 79.66 237 P **P** **03 06 22.6 +3.8**

GUA01 Guaratinga, BA 79.66 237 *e*P P 03 06 18.1 -0.7
WRAK Wrangell Islan 79.66 345 IAMs_20 IAMs_20 03 47 08.3
comp=Z,31µm,19.0s
WRAK Wrangell Islan 79.66 345 P P 03 06 17.0 -1.2
baz=21,SNR=5.7
WRAK S S 03 16 23.0 +3.7
baz=21
P17K Kvichak River 79.66 358 P P 03 06 17.2 -1.0
baz=3.1,SNR=7.4
P17K S S 03 16 21.4 +2.2
baz=3.1
MASC Masc 79.72 288 *e*P P 03 06 22.7 +3.6
O15K Ungalikthiuk R 79.73 360 IAmb IAmb 03 06 23.1
comp=Z,225nm,1.3s
O15K Ungalikthiuk R 79.73 360 P P 03 06 17.2 -1.5
baz=0.5
O15K S S 03 16 23.1 +3.0
baz=0.5
KULM Kulim 79.79 92 P P 03 06 18.2 -1.4
KULM IAmb IAmb 03 06 32.9
comp=Z,194nm,0.9s
KULM Kulim 79.79 92 P P 03 06 18.0 -1.6
LRAL Lakeview Retre 79.80 305 IAmb IAmb 03 06 24.6
comp=Z,315nm,1.0s
LRAL IAMs_20 IAMs_20 03 42 12.0
comp=Z,32µm,18.0s
Q19K Cape Douglas, 79.83 356 IAMs_20 IAMs_20 03 42 47.8
comp=Z,18µm,21.0s
Q19K Cape Douglas, 79.83 356 P P 03 06 17.8 -1.4
baz=5.2
Q19K S S 03 16 19.3 -1.8
baz=5.2
P16K Nushagak River 79.86 359 IAmb IAmb 03 06 24.1
comp=Z,368nm,1.2s
P16K IAMs_20 IAMs_20 03 43 06.7
comp=Z,27µm,22.0s
P16K Nushagak River 79.86 359 P P 03 06 17.8 -1.4
baz=1.9
P16K S S 03 16 25.4 +4.1
baz=1.9
SDBA SAO DESIDERIO 79.92 244 P P 03 06 23.9 +3.6
SDBA SAO DESIDERIO 79.92 244 *e*P P 03 06 19.5 -0.8
K30B Basset 79.95 319 IAMs_20 IAMs_20 03 42 23.5
comp=Z,28µm,20.0s
ABR01 Abrolhos, BA 80.00 235 P P 03 06 25.0 +4.5
ABR01 Abrolhos, BA 80.00 235 *e*P P 03 06 19.9 -0.7
NMDO Nuevo Mundo 80.01 288 IAmb IAmb 03 06 37.3
comp=Z,222nm,1.2s
MGMO Mountain Grove 80.06 311 IAmb IAmb 03 06 37.0
comp=Z,471nm,1.4s
250A Grady 80.06 304 IAmb IAmb 03 06 26.1
comp=Z,337nm,1.1s
250A IAMs_20 IAMs_20 03 43 11.2
comp=Z,21µm,18.0s
Q20K Shuyak Island 80.08 356 P P 03 06 18.7 -1.8
baz=6.2,SNR=16
Q20K S S 03 16 25.7 +2.0
baz=6.2
U33K Whale Pass 80.10 345 IAMs_20 IAMs_20 03 47 49.9
comp=Z,31µm,19.0s
U33K Whale Pass 80.10 345 P P 03 06 19.4 -1.2
baz=20
U33K S S 03 16 28.1 +4.1
baz=20
GSI Gunungsitoli 80.10 97 P P 03 06 20.5 -0.8
GSI Gunungsitoli 80.10 97 P P 03 06 20.8 -0.5
GSI Gunungsitoli 80.10 97 P P 03 06 20.1 -1.2
comp=Z,16µmcomp=Z,7µmcomp=Z,284nm,1.4s
553A Crawfordville 80.11 302 IAMs_20 IAMs_20 03 43 57.4
comp=Z,22µm,19.0s
QMBU Quimbuelo 80.12 288 *e*P P 03 06 24.8 +3.4
PSI Prapat 80.12 95 LR LR 03 45 60.0
comp=Z,5µm,21.5s,baz=308,slow=39
PSI Prapat 80.12 95 P P 03 06 19.5 -2.1
Q18K Katmai Hardscr 80.17 357 P P 03 06 18.1 -3.0
baz=4.2
Q18K S S 03 16 21.4 -3.5
baz=4.2
Q16K King Salmon 80.19 358 P P 03 06 20.3 -0.8
baz=2.9
Q16K S S 03 16 25.1 +0.3
baz=2.9
RPSI Rantau Prapat 80.19 95 IAmb IAmb 03 06 34.0
comp=Z,267nm,0.9s
QZH Quanzhou 80.20 66 *i*P P 03 06 22.5 +0.8
QZH PP PP 03 09 24.5 +0.7
QZH S S 03 16 22.0 -4.0
QZH SKS SKSac 03 16 34.0 -4.6
QZH pmax pmax
comp=Z,210nm,1.0s
QZH pmax pmax
comp=Z,5µm,6.9s
QZH LR LR
comp=Z,18µm,19.2s
QZH LR LR
comp=Z,23µm,16.1s
QZH LR LR
comp=Z,36µm,21.3s
Z47A Carrollton 80.34 306 IAmb IAmb 03 06 41.4
comp=Z,417nm,1.8s
Z47A IAMs_20 IAMs_20 03 41 38.5
comp=Z,25µm,21.0s
KNMB Chin-men Tao 80.37 66 IAmb IAmb 03 06 35.5
comp=Z,392nm,1.3s
KNMB IAMs_20 IAMs_20 03 46 27.6
comp=Z,25µm,21.0s
GTBY Guantanamo Bay 80.51 288 IAMs_20 IAMs_20 03 39 15.6
comp=Z,20µm,20.0s
GTBY Guantanamo Bay 80.51 288 *e*P P 03 06 27.6 +4.2
V35K Ketchikan 80.53 344 P P 03 06 21.0 -1.9
baz=22,SNR=6.5
V35K S S 03 16 32.8 +4.3
baz=22
LAJE UHE Lajeado 80.53 248 P P 03 06 23.3 -0.3
HLGC Holguin 80.56 289 *e*P P 03 06 29.4 +5.7
Q17K Contact Creek 80.58 358 P P 03 06 21.3 -2.1
baz=3.5,SNR=20
Q17K S S 03 16 28.0 -1.2
baz=3.5
IPM Ipoh 80.60 92 P P 03 06 22.0 -2.0
PINC Pinares de May 80.63 289 *e*P P 03 06 26.6 +2.5
ASAJ Asahikawa 80.63 38 P P 03 06 23.3 -0.4
comp=Z,87nm,0.8s,baz=301,slow=11,SNR=16
ASAJ LR LR 03 46 35.5
comp=Z,57µm,18.2s,baz=346,slow=39
comp=Z,87nm,0.8s
JKA Kamikawa-asahi 80.63 38 IAmb IAmb 03 06 44.1
comp=Z,294nm,1.2s
451A Vernon 80.66 303 IAMs_20 IAMs_20 03 42 53.0
comp=Z,23µm,19.0s
061Z Ochoppi 80.66 296 IAMs_20 IAMs_20 03 38 50.4
comp=Z,20µm,20.0s
SKR Severo-Kuril's 80.68 26 *e*P P 03 06 14.5 -9.3
SKR *e*PPP PPP 03 09 30.6
SKR pmax pmax
comp=Z,1µm,6.5s
SKR MLR MLR
comp=Z,40µm,20.0s
CRAG Craig 80.71 345 P P 03 06 22.8 -1.1
baz=20
FCAR Ozark Folk Cen 80.87 310 IAmb IAmb 03 06 41.1
comp=Z,296nm,1.2s
RCC Rio Carpintero 80.88 288 *e*P P 03 06 28.4 +3.0
KDAK Kodiak Island 80.92 356 LR LR 03 43 08.7
comp=Z,17µm,21.4s,baz=7.8,slow=36
KDAK Kodiak Island 80.92 356 P P 03 06 24.3 -0.7
KDAK IAmb IAmb 03 06 29.5
comp=Z,467nm,1.3s
KDAK Kodiak Island 80.92 356 P P 03 06 24.3 -0.7
KDAK pmax pmax
comp=Z,467nm,1.3s
KDAK MLR MLR
comp=Z,17µm,22.0s
KDAK Kodiak Island 80.92 356 P P 03 06 24.0 -1.0
baz=6.0
KDAK S S 03 16 32.5 +0.1
baz=6.0
RSSD Black Hills 80.95 323 P P 03 06 24.1 -1.6
RSSD Black Hills 80.95 323 IAMs_20 IAMs_20 03 42 09.8
comp=Z,28µm,22.0s
RSSD Black Hills 80.95 323 P P 03 06 24.1 -1.6
RSSD pmax pmax
comp=Z,112nm,1.0s
RSSD MLR MLR
comp=Z,28µm,22.0s
MARVS Santiago de Cu 81.02 289 *e*P P 03 06 25.1 -1.1
BOAV Boa Vista 81.04 265 P P 03 06 29.7 +3.4
BOAV S SKSac 03 16 40.5 -4.2
BOAV Boa Vista 81.04 265 *e*P P 03 06 25.6 -0.8
BOAV Boa Vista 81.04 265 P P 03 06 30.0 +3.7
comp=Z,5µmcomp=Z,132nm,1.0s
BRAL Brewton 81.10 304 IAMs_20 IAMs_20 03 43 52.7
comp=Z,24µm,18.0s
R17L Mt. Peulik Vol 81.23 358 P P 03 06 25.2 -1.5
baz=3.1
R17L S S 03 16 35.0 -0.8
baz=3.1
R16K Pilot Point 81.32 358 P P 03 06 25.9 -1.2
baz=2.2
146A Union 81.33 306 IAMs_20 IAMs_20 03 44 04.6
comp=Z,25µm,19.0s
DLV Lat 81.36 82 IAmb IAmb 03 06 41.6
comp=Z,213nm,1.2s
DLV Lat 81.36 82 P P 03 06 28.5 +0.2
SPIA Saint Paul Isl 81.39 5 IAMs_20 IAMs_20 03 44 56.3
comp=Z,25µm,21.0s
SPIA Saint Paul Isl 81.39 5 P P 03 06 26.0 -1.5
baz=353
WHAR Wooly Hollow 81.39 310 IAmb IAmb 03 06 42.5
comp=Z,381nm,1.1s
CHIV Chivirico 81.40 289 IAmb IAmb 03 06 45.0
comp=Z,225nm,1.2s
CHIV Chivirico 81.40 289 *e*P P 03 06 32.5 +4.3
JANB Januaria 81.44 241 P P 03 06 32.4 +4.0
JANB Januaria 81.44 241 *e*P P 03 06 27.7 -0.7
OHAK Old Harbor 81.52 356 IAmb IAmb 03 06 32.6
comp=Z,222nm,1.3s
OHAK Old Harbor 81.52 356 P P 03 06 28.8 +0.6
OHAK Old Harbor 81.52 356 P P 03 06 27.7 -0.5
baz=5.5,SNR=7.2
OHAK S S 03 16 38.9 +0.2
baz=5.5
CCCC Cccc 81.56 291 *e*P P 03 06 31.8 +2.7
HHAR Hobbs 81.63 312 IAmb IAmb 03 06 44.8
comp=Z,260nm,1.3s
LMGC Las Mercedes 81.77 289 *e*P P 03 06 34.3 +4.2
UALR University of 81.79 310 IAmb IAmb 03 06 45.9
comp=Z,219nm,1.2s
MNSI Mandailing Nat 81.94 96 P P 03 06 28.9 -2.2
comp=Z,6µmcomp=Z,120nm,1.0s
ITTB Itaituba 81.98 257 P P 03 06 34.9 +3.6
ITTB S S 03 16 44.4 -0.4
ITTB Itaituba 81.98 257 *e*P P 03 06 30.6 -0.7
BSFB Barra de Sao F 81.99 236 *e*P P 03 06 30.5 -0.6
P08K Saint George I 82.01 5 IAMs_20 IAMs_20 03 45 14.6
comp=Z,21µm,21.0s
P08K Saint George I 82.01 5 P P 03 06 30.8 0.0
baz=353
RIB01 Linhares ES 82.07 236 P P 03 06 35.9 +4.3
RIB01 Linhares ES 82.07 236 *e*P P 03 06 31.0 -0.6
KUR Kuril'sk 82.08 34 *e*P P 03 06 30.3 -1.0
KUR *e*S S 03 16 43.1 -1.8
KUR pmax pmax
comp=Z,417nm,1.1s
KUR MLR MLR
comp=Z,35µm,16.0s
KUR MLR MLR
comp=E,8µm,13.0s
KUR MLR MLR
comp=N,37µm,16.0s
SJMB Sao Joao De Ma 82.11 237 P P 03 06 35.0 +3.2
SJMB Sao Joao De Ma 82.11 237 *e*P P 03 06 31.2 -0.6
TATO Taipei 82.14 64 P P 03 06 31.7 -0.3
TATO Taipei 82.14 64 IAMs_20 IAMs_20 03 47 34.5
comp=Z,19µm,21.0s
YUK Yuzh-Kuril'sk 82.17 36 *c i*P P 03 06 32.6 +0.8
YUK *e* 03 06 37.5
YUK *e* 03 09 40.7
YUK *e*PPP PPP 03 11 31.3
YUK *e*S S 03 16 47.1 +1.3
YUK pmax pmax
comp=Z,1µm,3.3s
YUK pmax pmax
comp=Z,391nm,1.5s
YUK pmax pmax
comp=N,296nm,1.3s
YUK pmax pmax
comp=E,245nm,1.1s
SII Sitkinak Islan 82.22 357 IAmb IAmb 03 06 36.6
comp=Z,378nm,1.3s
SII IAMs_20 IAMs_20 03 49 59.0
comp=Z,17µm,19.0s
SII Sitkinak Islan 82.22 357 P P 03 06 34.1 +2.1
SII Sitkinak Islan 82.22 357 P P 03 06 31.5 -0.4
baz=4.8,SNR=5.1
SII S S 03 16 46.6 +0.5
baz=4.8
YHNB Yeheng 82.27 64 IAmb IAmb 03 06 56.9
comp=Z,255nm,1.1s
YHNB IAMs_20 IAMs_20 03 47 38.7
comp=Z,21µm,20.0s
YHNB Yeheng 82.27 64 P P 03 06 33.6 +0.8
X40A Basin Creek Fa 82.28 310 IAmb IAmb 03 06 48.5
comp=Z,287nm,1.5s
RLO Rose Lookout 82.32 312 IAmb IAmb 03 06 48.5
comp=Z,432nm,1.5s
MC01 Montes Claros 82.40 240 P P 03 06 36.5 +3.1
OGNE Ogallala 82.44 319 IAMs_20 IAMs_20 03 44 03.4
comp=Z,32µm,20.0s
RLMT Red Lodge 82.44 326 IAmb IAmb 03 06 38.9
comp=Z,272nm,1.3s
346A Big Creek Wild 82.45 305 IAmb IAmb 03 06 48.8
comp=Z,289nm,0.9s
346A IAMs_20 IAMs_20 03 42 29.2
comp=Z,22µm,20.0s
JTM Tenmabayashi 82.45 41 IAmb IAmb 03 06 43.6
comp=Z,336nm,1.1s
JTM Tenmabayashi 82.45 41 P P 03 06 31.9 -1.5
MGV Manicaragua 82.51 293 *e*P P 03 06 38.7 +4.7
ERM Erimo 82.51 39 P P 03 06 33.0 -0.7
ERM IAmb IAmb 03 06 44.4
comp=Z,278nm,1.1s
ERM Erimo 82.51 39 IAMs_20 IAMs_20 03 46 23.9
comp=Z,32µm,20.0s
ERM Erimo 82.51 39 P P 03 06 35.3 +1.6
ERM Erimo 82.51 39 P P 03 06 33.0 -0.7
ERM pmax pmax
comp=Z,277nm,1.1s
ERM MLR MLR
comp=Z,32µm,20.0s
ERM Erimo 82.51 39 P P 03 06 36.2 +2.5
ERM S S 03 16 48.8 -0.6
JNU Nakatsue 82.53 52 P P 03 06 34.8 +0.7
comp=Z,65nm,1.0s,baz=14,slow=3.5,SNR=11
JNU LR LR 03 46 54.0
comp=Z,50µm,18.1s,baz=316,slow=38
comp=Z,65nm,1.0s
JNU Nakatsue 82.53 52 IAmb IAmb 03 06 46.5
comp=Z,169nm,1.0s
JNU Nakatsue 82.53 52 P P 03 06 35.5 +1.5
SSLB Suanglung 82.57 65 IAMs_20 IAMs_20 03 49 00.6
comp=Z,30µm,18.0s
SSLB Suanglung 82.57 65 P P 03 06 34.3 -0.1
BBB Bella Bella 82.63 341 LR LR 03 46 38.9
comp=Z,36µm,18.6s,baz=28,slow=38
MIAR Mount Ida 82.66 310 IAmb IAmb 03 06 51.0
comp=Z,313nm,1.1s
TPUB Ta-pu 82.67 65 IAmb IAmb 03 06 49.1
comp=Z,314nm,1.1s
TPUB IAMs_20 IAMs_20 03 48 05.3
comp=Z,25µm,20.0s
TPUB Taipu 82.67 65 P P 03 06 35.7 +0.8
NACB Ninganchiao 82.75 64 IAMs_20 IAMs_20 03 47 56.3
comp=Z,23µm,21.0s
NEW Newport 82.83 333 PKKPbc PKKPbc 03 24 59.6 +2.0
comp=Z,3.4nm,0.8s,baz=218,slow=6.0,SNR=7.1
NEW LR LR 03 46 14.6
comp=Z,46µm,18.4s,baz=36,slow=38
CAMR Camarioca 82.84 294 *e*P P 03 06 39.8 +4.1
GWJ Greenwich 82.87 288 *i*P P 03 06 40.7 +4.6
CBKS Cedar Bluff 82.90 317 IAMs_20 IAMs_20 03 43 26.7
comp=Z,34µm,20.0s
STH Stony Hill 82.93 288 *i*P P 03 06 40.3 +4.0
STH Stony Hill 82.93 288 *e*P P 03 06 38.3 +2.1
HOJ Hope 82.93 288 *i*P P 03 06 40.8 +4.5
TUL3 Leonard 82.93 312 IAMs_20 IAMs_20 03 43 17.7
comp=Z,37µm,20.0s
WLAR White Oak Lake 83.01 309 IAmb IAmb 03 07 23.1
comp=Z,321nm,1.3s
CHIR Chirikof Islan 83.02 357 IAMs_20 IAMs_20 03 44 40.1
comp=Z,21µm,22.0s
CHIR Chirikof Islan 83.02 357 P P 03 06 37.3 +1.2
CHIR Chirikof Islan 83.02 357 P P 03 06 35.8 -0.3
baz=3.7
CHIR S S 03 16 53.9 -0.3
baz=3.7
BOZ Bozeman (W) 83.02 328 IAmb IAmb 03 06 41.7
comp=Z,306nm,1.4s
JQT1 Jequitai-MG 83.06 240 P P 03 06 40.8 +4.0
YULB Yu-li 83.07 65 IAmb IAmb 03 06 53.0
comp=Z,131nm,0.9s
YULB IAMs_20 IAMs_20 03 49 16.8
comp=Z,30µm,20.0s
YULB Yu-li 83.07 65 P P 03 06 37.8 +0.9
JSD Sado 83.09 44 P P 03 06 39.7 +2.9
Z41A Richland Creek 83.13 309 IAmb IAmb 03 06 52.1
comp=Z,169nm,0.9s
KAN08 Anthony NE Sta 83.15 315 IAmb IAmb 03 06 41.9
comp=Z,274nm,1.2s
S12K Black Hills 83.21 1 P P 03 06 36.3 -0.8
baz=359
S12K S S 03 16 55.7 -0.5
baz=359
K22A Casper 83.23 323 IAMs_20 IAMs_20 03 43 54.1
comp=Z,37µm,21.0s
TWGBT Beinan 83.30 66 P P 03 06 42.2 +4.1
BKNI Bangkinang 83.34 95 P P 03 06 34.6 -3.8
MTDJ Mount Denham 83.35 288 *i*P P 03 06 41.9 +3.3
MTDJ *i*P sP 03 06 48.4 +1.7
LKWY Lake 83.37 327 IAmb IAmb 03 06 44.8
comp=Z,272nm,1.1s
DIAM Diamantina, MG 83.39 239 P P 03 06 43.4 +4.8
DIAM Diamantina, MG 83.39 239 *e*P P 03 06 37.8 -0.9
YHL Hebgen Lake 83.45 327 IAmb IAmb 03 06 44.4
comp=Z,306nm,1.2s
NPGB Novo Progresso 83.52 255 P P 03 06 42.6 +3.3
NPGB Novo Progresso 83.52 255 *e*P P 03 06 38.6 -0.7
URIC Uribia, Colomb 83.57 280 P P 03 06 45.3 +5.7
comp=Z,13µmcomp=Z,5µmcomp=Z,133nm,2.0s
SDPT Sand Point 83.57 0 P P 03 06 38.2 -0.7
SDPT IAmb IAmb 03 06 58.8
comp=Z,159nm,0.9s
SDPT Sand Point 83.57 0 P P 03 06 38.9 0.0
SDPT Sand Point 83.57 0 P P 03 06 37.7 -1.2
baz=0.0
SDPT S S 03 16 56.4 -3.4
baz=0.0
SHEM Shemya Is, Ala 83.63 15 LR LR 03 48 56.5
comp=Z,21µm,18.7s,baz=339,slow=39
PDSI Padang 83.72 97 P P 03 06 38.5 -1.9
comp=Z,5µmcomp=Z,254nm,1.6s
JMN Monobe 83.85 50 P P 03 06 41.8 +1.0
SNDB Serra Nova Dou 84.00 248 P P 03 06 43.9 +2.1
SNDB S S 03 17 08.4 +3.2
SNDB Serra Nova Dou 84.00 248 *e*P P 03 06 41.0 -0.7
FALS False Pass 84.03 2 IAMs_20 IAMs_20 03 45 32.1
comp=Z,18µm,21.0s
FALS False Pass 84.03 2 P P 03 06 39.3 -2.0
baz=358
CHNA Chernabura Isl 84.09 360 P P 03 06 42.1 +0.5
CHNA Chernabura Isl 84.09 360 P P 03 06 40.6 -1.0
baz=0.7
CHNA S S 03 17 04.6 -0.4
baz=0.7
CNBA Chernabura Isl 84.10 360 IAmb IAmb 03 07 01.5
comp=Z,291nm,1.5s
CNBA IAMs_20 IAMs_20 03 49 52.6
comp=Z,17µm,21.0s
SOR Soroa 84.13 295 IAmb IAmb 03 06 59.0
comp=Z,219nm,1.5s
SOR Soroa 84.13 295 *e*P P 03 06 46.5 +4.1
MJB9 Matsu-Tunnel 84.18 45 IAmb IAmb 03 06 51.4
comp=Z,236nm,1.2s
MAJO Matsushiro 84.18 45 P P 03 06 41.6 -0.9
MAJO IAmb IAmb 03 06 50.1
comp=Z,242nm,1.2s
MAJO Matsushiro 84.18 45 P P 03 06 41.6 -0.9
MAJO Matsushiro 84.18 45 P P 03 06 41.6 -0.9
MAJO pmax pmax
comp=Z,242nm,1.3s
MAJO MLR MLR
comp=Z,45µm,18.0s
MAJO Matsushiro 84.18 45 P P 03 06 43.0 +0.6
MJAR Matsushiro Arr 84.18 45 P P 03 06 41.7 -0.8
comp=Z,116nm,1.1s,baz=316,slow=4.8,SNR=43
MJAR LR LR 03 47 53.7
comp=Z,44µm,18.1s,baz=331,slow=38
comp=Z,116nm,1.1s
MJAR Matsushiro Arr 84.18 45 P P 03 06 41.4 -1.1
MJAR IAmb IAmb 03 06 53.3
comp=Z,127nm,1.0s
MJAR Matsushiro Arr 84.18 45 P P 03 06 41.4 -1.1
MJAR pmax pmax
comp=Z,127nm,1.0s
LOHW Long Hollow 84.23 326 IAmb IAmb 03 06 48.1
comp=Z,180nm,1.4s
FNO Franklin 84.30 313 IAmb IAmb 03 06 59.5
comp=Z,262nm,1.8s
BDFB Brasilia 84.33 244 LR LR 03 41 18.6
comp=Z,23µm,22.0s,baz=128,slow=34
SDV Santo Domingo 84.39 277 LR LR 03 39 48.2
comp=Z,15µm,21.9s,baz=48,slow=32
SDV Santo Domingo 84.39 277 P P 03 06 41.8 -2.2
SDV Santo Domingo 84.39 277 P P 03 06 43.9 -0.2
SDV S S 03 17 08.7 -1.0
SDV Santo Domingo 84.39 277 *e*P P 03 06 43.0 -1.0
SDV Santo Domingo 84.39 277 P P 03 06 44.4 +0.4
comp=Z,12µmcomp=Z,5µmcomp=Z,265nm,1.4s
JGF Kuroka 84.42 46 IAmb IAmb 03 07 08.4
comp=Z,177nm,1.2s
JGF Kuroka 84.42 46 P P 03 06 43.3 -0.4
INU Inuyama 84.42 47 IAMs_20 IAMs_20 03 47 25.4
comp=Z,23µm,20.0s
INU Inuyama 84.42 47 P P 03 06 45.3 +1.6
BW06 Boulder Array 84.47 325 IAmb IAmb 03 06 48.1
comp=Z,224nm,1.4s
PD31 Pinedale Array 84.47 325 IAmb IAmb 03 06 48.1
comp=Z,247nm,1.4s
PDAR Pinedale Array 84.47 325 P P 03 06 43.3 -0.8
comp=Z,61nm,1.0s,baz=57,slow=3.8,SNR=96
PDAR PKKPbc PKKPbc 03 24 56.2 +2.2
comp=Z,1.0nm,0.8s,baz=229,slow=4.3,SNR=5.5
PDAR LR LR 03 46 49.4
comp=Z,32µm,18.4s,baz=26,slow=37
comp=Z,61nm,1.0s
MYKOM Kota Tinggi 84.48 92 P P 03 06 44.4 +0.2
CLRS Cowichan Lake 84.60 337 IAmb IAmb 03 06 48.9
comp=Z,322nm,1.6s
CRJC Cerrejon, Guaj 84.67 280 P P 03 06 48.9 +3.6
comp=Z,12µmcomp=Z,4µmcomp=Z,187nm,1.3s
BTDF Bukit Timah Da 84.71 93 P P 03 06 44.8 -0.6
CAM01 Campos-RJ 84.73 235 P P 03 06 47.4 +2.2
CAM01 Campos-RJ 84.73 235 *e*P P 03 06 44.7 -0.5
BCYI Bear Canyon 84.79 328 IAmb IAmb 03 06 50.9
comp=Z,371nm,1.7s
MACA Manacapuru-AM 84.83 261 P P 03 06 48.6 +2.6
MACA S SKSac 03 17 08.7 -1.0
MACA Manacapuru-AM 84.83 261 *e*P P 03 06 45.2 -0.8
F10A Beach Ranch, E 84.83 331 IAmb IAmb 03 06 49.8
comp=Z,256nm,1.3s
OZB Mount Ozzard 84.87 338 IAmb IAmb 03 07 17.5
comp=Z,184nm,1.1s
LTY Liberty 84.91 334 IAmb IAmb 03 06 49.9
comp=Z,199nm,1.5s
UNV Unalaska Valle 84.93 4 P P 03 06 43.5 -2.4
baz=356
UNV S S 03 17 10.9 -2.6
baz=356
B04A Port Angeles 85.09 336 IAmb IAmb 03 07 04.6
comp=Z,214nm,1.6s
BAT2 UHE Batalha 85.19 242 P P 03 06 50.9 +3.1
FSCY Frank Sound, G 85.21 291 *e*P P 03 06 21.4 -26
BAT3 Ipameri 85.27 242 P P 03 06 51.1 +3.0
NATX Nacogdoches 85.30 309 IAMs_20 IAMs_20 03 44 20.5
comp=Z,25µm,20.0s
JOW Kunigami 85.33 58 P P 03 06 48.0 -0.4
comp=Z,160nm,0.9s,baz=4.5,slow=7.1,SNR=12
JOW LR LR 03 48 43.2
comp=Z,35µm,20.6s,baz=332,slow=38
comp=Z,160nm,0.9s
JOW Kunigami 85.33 58 P P 03 06 49.4 +1.0
PMNB Patos De Minas 85.36 240 P P 03 06 52.1 +3.5
PMNB Patos De Minas 85.36 240 *e*P P 03 06 47.9 -0.7
DUB01 Friburgo-RJ 85.36 235 P P 03 06 52.0 +3.5
DUB01 S S 03 17 20.4 +1.9
DUB01 Friburgo-RJ 85.36 235 *e*P P 03 06 47.8 -0.6
SIM2 UHE Simplicio 85.51 236 P P 03 06 51.6 +2.4
SMRC Santa Marta, M 85.57 281 P P 03 06 55.4 +5.7
comp=Z,14µmcomp=Z,194nm,1.8s

NIKH Nikolski High 85.67 5 IAMs_20 IAMs_20 03 47 36.5
comp=Z,15µm,20.0s
NIKH Nikolski High 85.67 5 P P 03 06 47.0 -2.6
baz=354
LON Longmire 85.72 335 IAmb IAmb 03 06 55.6
comp=Z,313nm,1.8s
SFA1 Serra Facao 85.78 242 P P 03 06 52.7 +2.0
NLWA Neilton Lookou 85.80 336 IAmb IAmb 03 07 30.8
comp=Z,214nm,1.4s
BMO Blue Mountains 85.82 331 IAMs_20 IAMs_20 03 46 34.4
comp=Z,33µm,20.0s
ATKA Atka Island 85.96 8 IAmb IAmb 03 06 55.1
comp=Z,164nm,1.0s
ATKA IAMs_20 IAMs_20 03 48 29.2
comp=Z,28µm,20.0s
ATKA Atka Island 85.96 8 P P 03 06 52.4 +1.4
ADK Adak 85.97 10 IAMs_20 IAMs_20 03 48 43.6
comp=Z,22µm,20.0s
BSCB Bom Sucesso 86.07 238 P P 03 06 55.3 +3.3
BSCB Bom Sucesso 86.07 238 eP P 03 06 51.3 -0.7
IPMB Ipameri, GO 86.13 242 P P 03 06 56.4 +4.0
IPMB Ipameri, GO 86.13 242 eP P 03 06 51.5 -0.8
VAS01 Vassouras-RJ 86.17 236 P P 03 06 57.0 +4.5
VAS01 Vassouras-RJ 86.17 236 eP P 03 06 51.8 -0.6
HWUT Hardware Ranch 86.28 326 IAmb IAmb 03 07 08.5
comp=Z,256nm,1.5s
SZP Santa 86.39 70 P P 03 06 54.4 +0.7
CLDB Colider 86.43 252 P P 03 06 57.2 +3.3
CLDB Colider 86.43 252 eP P 03 06 53.1 -0.8
ARGC Ariguani, Magd 86.44 280 P P 03 06 59.3 +5.3
comp=Z,15µmcomp=Z,7µmcomp=Z,317nm,1.0s
T25A Trinidad 86.55 318 IAmb IAmb 03 07 08.2
comp=Z,312nm,2.0s
CANS Sao Roque de M 86.59 239 P P 03 06 58.7 +4.1
HVU Hansel Valley 86.64 326 IAmb IAmb 03 07 10.6
comp=Z,173nm,1.5s
ITU3 Corumbazu 86.74 242 P P 03 06 59.7 +4.4
OCAC Ocana 86.81 278 P P 03 06 59.2 +3.1
comp=Z,9µmcomp=Z,3µmcomp=Z,77nm,0.7s
HOOD Mount Hood Mea 86.93 334 IAmb IAmb 03 07 00.8
comp=Z,271nm,1.5s
PAMC Pamplona, Colo 86.94 277 P P 03 07 00.1 +3.0
comp=Z,349nmcomp=Z,33nm,1.1s
ARAG Araguaiana, MT 86.96 246 eP P 03 06 55.7 -0.7
SJCC San Jacinto, C 87.11 281 P P 03 07 02.5 +5.1
comp=Z,13µmcomp=Z,5µmcomp=Z,343nm,1.3s
HKT Hockley 87.30 308 P P 03 06 57.3 -0.6
HKT Hockley 87.30 308 P P 03 06 57.3 -0.6
HKT pmax pmax
comp=Z,380nm,1.6s
HKT MLR MLR
comp=Z,39µm,20.0s
G04A Mulino 87.31 334 IAmb IAmb 03 07 15.2
comp=Z,119nm,0.9s
BGU Big Grassy Mou 87.46 326 IAmb IAmb 03 07 03.3
comp=Z,173nm,1.3s
SGC2 Sao Gabriel da 87.55 268 P P 03 07 02.7 +3.2
SGC2 S S 03 17 43.8 +3.6
SGC2 Sao Gabriel da 87.55 268 P P 03 07 02.6 +3.2
comp=Z,5µmcomp=Z,208nm,1.3s
PV07 Paradox Valley 87.56 322 IAmb IAmb 03 07 14.8
comp=Z,161nm,1.3s
PV15 Paradox Valley 87.56 322 IAmb IAmb 03 07 14.8
comp=Z,116nm,1.1s
PDRB Porto dos Gac 87.61 252 P P 03 07 03.0 +3.4
PDRB Porto dos Gac 87.61 252 eP P 03 06 58.7 -0.9
JHJ Hachijo jima 2 87.61 47 LR LR 03 49 40.0
comp=Z,20µm,19.9s,baz=25,slow=38
PV21 Cone Mtn., Par 87.61 322 IAmb IAmb 03 07 03.8
comp=Z,155nm,1.4s
PV11 David Mesa, Pa 87.78 322 IAmb IAmb 03 07 04.6
comp=Z,235nm,1.2s
PV14 Lion Creek, Pa 87.79 322 IAmb IAmb 03 07 04.6
comp=Z,190nm,1.4s
PV02 Paradox Valley 87.79 322 IAmb IAmb 03 07 04.7
comp=Z,191nm,1.2s
PV03 Paradox Valley 87.80 322 IAmb IAmb 03 07 16.1
comp=Z,128nm,1.2s
SN07 Snyder 07 87.83 314 IAmb IAmb 03 07 12.6
comp=Z,364nm,2.0s
PV17 East Wray Mesa 87.83 322 IAmb IAmb 03 07 16.1
comp=Z,114nm,1.1s
DUG Dugway, Tooele 87.98 326 IAmb IAmb 03 07 05.5
comp=Z,120nm,1.1s
TEFE Tefe 88.00 264 P P 03 07 03.9 +2.3
TEFE S S 03 17 44.6 +0.1
TEFE Tefe 88.00 264 eP P 03 07 00.7 -0.8
PINE Pine Mountain 88.04 333 IAmb IAmb 03 07 07.2
comp=Z,243nm,1.4s
PV05 Paradox Valley 88.06 322 IAmb IAmb 03 07 15.9
comp=Z,258nm,1.7s
WIFE Three Sisters- 88.10 333 IAmb IAmb 03 07 47.3
comp=Z,142nm,1.2s
RUSC La Rusia 88.18 276 IAmb IAmb 03 07 19.4
comp=Z,201nm,1.4s
PARB Paraibuna 88.31 237 P P 03 07 07.5 +4.6
PARB Paraibuna 88.31 237 eP P 03 07 02.2 -0.7
Q16A Castle Valley 88.32 324 IAmb IAmb 03 07 06.8
comp=Z,138nm,1.3s
WVOR Wild Horse Val 88.40 330 IAmb IAmb 03 07 07.8
comp=Z,194nm,1.6s
WVOR IAMs_20 IAMs_20 03 48 12.8
comp=Z,18µm,18.0s
MVCO Mesa Verde 88.48 321 IAmb IAmb 03 07 30.0
comp=Z,181nm,1.3s
ELK Elko 88.52 327 PKKPbc PKKPbc 03 24 47.8 +3.4
comp=Z,1.8nm,0.8s,baz=199,slow=1.8,SNR=6.0
ELK LR LR 03 49 19.0
comp=Z,49µm,19.3s,baz=34,slow=37
BB19B Bebedouro 88.53 240 P P 03 07 08.4 +4.5
BB19B Bebedouro 88.53 240 eP P 03 07 03.2 -0.7
I04A Tendick Farm, 88.54 334 IAmb IAmb 03 07 07.7
comp=Z,100nm,1.1s
J05D Fort Rock, OR 88.58 333 IAmb IAmb 03 07 09.5
comp=Z,183nm,1.3s
COCO West Island 88.60 107 P P 03 07 04.0 -0.3
COCO West Island 88.60 107 P P 03 07 04.3 0.0
PTBC PUERTO BERRIO, 88.78 278 P P 03 07 08.6 +3.3
comp=Z,10µmcomp=Z,5µmcomp=Z,228nm,1.6s
ITRB Iturama 88.78 242 P P 03 07 09.4 +4.3
ITRB Iturama 88.78 242 eP P 03 07 04.3 -0.7
UREC San Jos de Ur 88.78 279 P P 03 07 09.4 +4.1
comp=Z,11µmcomp=Z,3µmcomp=Z,106nm,1.7s
MDSI Maura Dua 88.85 97 P P 03 07 02.5 -3.1
comp=Z,5µmcomp=Z,225nm,1.1s
RCLB Rio Claro- Sao 88.86 239 P P 03 07 07.7 +2.3
RCLB Rio Claro- Sao 88.86 239 eP P 03 07 04.7 -0.7
VAO Valinhos 88.92 238 eP P 03 07 05.0 -0.7
VABB Valinhos 88.92 238 P P 03 07 10.1 +4.3
I03D Drain, OR 88.93 334 IAmb IAmb 03 07 10.5
comp=Z,225nm,1.4s
TGY Tagaytay City 89.04 72 LR LR 03 52 29.9
comp=Z,13µm,20.6s,baz=342,slow=39
SPBC San Pablo de B 89.07 277 P P 03 07 11.8 +5.0
comp=Z,7µmcomp=Z,3µmcomp=Z,73nm,1.6s
LWLI Liwa 89.11 97 P P 03 07 05.7 -1.2
TCRU Three Creeks R 89.13 324 IAmb IAmb 03 07 11.6
comp=Z,192nm,1.2s
MAS01 UHE Manso 89.18 249 P P 03 07 10.4 +3.4
735A Kenedy 89.27 309 IAMs_20 IAMs_20 03 49 44.4
comp=Z,28µm,19.0s
ANMO Albuquerque 89.30 318 PKKPbc PKKPbc 03 24 45.1 +2.8
comp=Z,1.8nm,0.5s,baz=200,slow=5.1,SNR=8.5
ANMO LR LR 03 47 31.0
comp=Z,38µm,20.2s,baz=41,slow=36
ANMO Albuquerque 89.30 318 P P 03 07 06.5 -1.2
ANMO Albuquerque 89.30 318 P P 03 07 06.5 -1.2
ANMO pmax pmax
comp=Z,34nm,1.1s
ANMO MLR MLR
comp=Z,44µm,18.0s
K04D Chiloquin, OR 89.35 333 IAmb IAmb 03 07 23.6
comp=Z,198nm,1.2s
KLSI 89.40 97 P P 03 07 05.3 -2.8
comp=Z,4µmcomp=Z,187nm,1.2s
TEIG Tepich 89.45 297 IAMs_20 IAMs_20 03 52 19.2
comp=Z,16µm,19.0s
MTPU Mount Pierson 89.49 324 IAmb IAmb 03 07 24.9
comp=Z,177nm,1.2s
CHIC Chingaza 89.49 276 P P 03 07 13.6 +4.5
comp=Z,8µmcomp=Z,2µmcomp=Z,48nm,1.2s
SPR3 Spring Creek 3 89.62 326 IAmb IAmb 03 07 14.7
comp=Z,265nm,1.4s
SPB Sao Paulo 89.64 238 IAMs_20 IAMs_20 03 45 57.3
comp=Z,29µm,22.0s
SPB Sao Paulo 89.64 238 eP P 03 07 08.4 -0.6

DBBC Dabeiba 89.77 279 P P 03 07 14.6 +4.6
KASI Kota Agung 89.78 98 P P 03 07 07.8 -2.1
SALV Santo Antonio 89.79 249 P P 03 07 13.7 +3.9
SALV S S 03 18 01.9 +0.8
SALV Santo Antonio 89.79 249 eP P 03 07 09.1 -0.7
C2SB Chapadao do Su 89.79 245 P P 03 07 13.2 +3.5
C2SB Chapadao do Su 89.79 245 eP P 03 07 09.1 -0.7
ROSC El Rosal 89.79 276 P P 03 07 11.5 +1.0
comp=Z,18nm,0.7s,baz=50,slow=5.5,SNR=15
ROSC LR LR 03 44 05.0
comp=Z,13µm,21.8s,baz=36,slow=33
comp=Z,18nm,0.7s
ROSC El Rosal 89.79 276 P P 03 07 16.1 +5.6
comp=Z,9µmcomp=Z,3µmcomp=Z,45nm,1.0s
HELC Santa Helena 89.80 278 P P 03 07 14.6 +4.1
comp=Z,9µmcomp=Z,3µmcomp=Z,89nm,2.0s
PSUT Pine Spring 89.81 325 IAmb IAmb 03 07 14.8
comp=Z,154nm,1.1s
L04D Klamath Falls 89.90 333 IAmb IAmb 03 07 14.6
comp=Z,280nm,1.4s
PET01 Itanhaem-SP 90.04 237 P P 03 07 15.1 +4.2
PET01 Itanhaem-SP 90.04 237 eP P 03 07 10.3 -0.6
MNHN Monahans 90.19 314 IAmb IAmb 03 07 16.1
comp=Z,174nm,1.4s
GUY2C Guyana, Caldas 90.32 277 P P 03 07 18.1 +5.0
comp=Z,8µmcomp=Z,3µmcomp=Z,81nm,2.2s
TPI Tanjungpandan 90.32 93 P P 03 07 11.2 -1.2
comp=Z,12µmcomp=Z,3µmcomp=Z,260nm,1.2s
SBUM Sibu 90.34 86 IAmb IAmb 03 07 26.3
comp=Z,100nm,1.0s
SBUM Sibu 90.34 86 P P 03 07 12.7 +0.1
CBOC Ciudad Bolivar 90.38 278 P P 03 07 14.2 +1.2
comp=Z,10µmcomp=Z,2µmcomp=Z,157nm,1.5s
PP1B Ponte de Pedra 90.39 247 eP P 03 07 11.9 -0.7
YBH Yreka Blue Hor 90.47 333 PKKPbc PKKPbc 03 24 42.3 +2.8
comp=Z,0.4nm,0.9s,baz=195,slow=5.4,SNR=6.5
YBH LR LR 03 51 23.2
comp=Z,2µm,18.1s,baz=40,slow=38
833A Chaparral WMA, 90.59 310 IAmb IAmb 03 07 30.7
comp=Z,264nm,1.5s
R11B Troy Canyon, C 90.69 326 IAmb IAmb 03 07 18.8
comp=Z,179nm,1.5s
PCMB Pacaembu 90.71 242 eP P 03 07 13.4 -0.6
PECS Pecos 90.76 314 IAmb IAmb 03 07 19.9
comp=Z,182nm,1.2s
KSXB Camp Six Broad 90.78 334 IAmb IAmb 03 07 19.3
comp=Z,148nm,1.3s
KSXB IAMs_20 IAMs_20 03 53 22.6
comp=Z,30µm,18.0s
M02C Callahan 90.82 333 IAMs_20 IAMs_20 03 49 54.8
comp=Z,34µm,21.0s
FRTB Fartura 90.83 239 P P 03 07 18.8 +4.3
FRTB Fartura 90.83 239 eP P 03 07 13.9 -0.7
HATC Hat Creek Radi 90.84 332 IAmb IAmb 03 07 29.7
comp=Z,195nm,1.2s
HATC IAMs_20 IAMs_20 03 49 00.3
comp=Z,33µm,20.0s
PTAC Punta Ardita, 90.86 280 P P 03 07 19.8 +4.8
comp=Z,3µmcomp=Z,143nm,1.1s
SAND Sanderson 90.90 312 IAmb IAmb 03 07 20.0
comp=Z,251nm,1.5s
PRAC Prado 90.95 276 P P 03 07 19.2 +3.7
comp=Z,9µmcomp=Z,4µmcomp=Z,103nm,2.1s
VILB Vilhena 91.00 254 P P 03 07 19.6 +4.1
VILB Vilhena 91.00 254 eP P 03 07 14.7 -0.9
BCIP Isla Barro Col 91.02 283 P P 03 07 20.8 +5.1
comp=Z,4µmcomp=Z,214nm,2.1s
PAHR Pah Rah Range 91.04 330 IAmb IAmb 03 07 20.6
comp=Z,178nm,1.5s
ORTC Ortega, Yolima 91.10 276 P P 03 07 16.8 +0.6
comp=Z,9µmcomp=Z,3µmcomp=Z,190nm,1.0s
N02D Trinity Center 91.14 332 IAmb IAmb 03 07 20.4
comp=Z,177nm,1.5s
N02D IAMs_20 IAMs_20 03 50 05.2
comp=Z,29µm,19.0s
WUAZ Wupatki 91.20 322 IAmb IAmb 03 07 21.2
comp=Z,235nm,1.4s
MACC Macarena, Meta 91.21 274 P P 03 07 17.7 +1.1
comp=Z,3µmcomp=Z,112nm,2.1s
PRN Patroc Range 91.26 326 IAmb IAmb 03 07 34.0
comp=Z,137nm,1.2s
MNTX Cornudas Mount 91.31 316 IAmb IAmb 03 07 20.8
comp=Z,160nm,1.5s
O03E Paynes Creek 91.42 332 IAmb IAmb 03 07 40.6
comp=Z,177nm,1.6s
KRPM Rodgers 91.42 333 IAMs_20 IAMs_20 03 51 46.8
comp=Z,25µm,19.0s
SIUN Universidad Ur 91.51 290 IAmb IAmb 03 07 35.2
comp=Z,166nm,1.4s
RPRD Ribas do Rio P 91.56 244 eP P 03 07 17.3 -0.7
KHMM Horse Mountain 91.58 333 IAmb IAmb 03 07 22.9
comp=Z,145nm,1.3s
KHBM Hayfork Bally 91.59 333 IAmb IAmb 03 07 33.4
comp=Z,138nm,1.3s
RYN Ryan 91.64 328 IAmb IAmb 03 07 35.2
comp=Z,221nm,2.0s
NVAR Mina Array Bea 91.73 328 P P 03 07 18.9 0.0
comp=Z,11nm,1.0s,baz=50,slow=3.7,SNR=26
NVAR PP PP 03 10 55.8 -1.0
comp=Z,6.7nm,0.9s,baz=48,slow=6.4,SNR=4.8
NVAR PKKPbc PKKPbc 03 24 37.4 +1.0
comp=Z,7.0nm,0.9s,baz=253,slow=4.5,SNR=13
NVAR PKPPKP 03 32 46.0
comp=Z,1.0nm,0.8s,baz=189,slow=6.8,SNR=4.3
NVAR LR LR 03 51 59.6
comp=Z,40µm,18.6s,baz=30,slow=38
comp=Z,11nm,1.0s
NVAR Mina Array Bea 91.73 328 P P 03 07 18.2 -0.8
JCC Jacoby Creek, 91.73 333 IAMs_20 IAMs_20 03 51 47.9
comp=Z,18µm,18.0s
LDASE Londrina, Braz 91.87 240 eP P 03 07 18.6 -0.8
TIJ01 Guaruva-PR 91.87 237 P P 03 07 26.0 +6.5
O02D Mt. Diablo Mer 91.87 332 IAmb IAmb 03 07 34.4
comp=Z,244nm,1.8s
PTLB Pontes e Lacer 91.91 251 P P 03 07 23.5 +3.8
PTLB Pontes e Lacer 91.91 251 eP P 03 07 19.0 -0.7
ORV Oroville 91.96 331 IAmb IAmb 03 07 23.8
comp=Z,142nm,1.4s
ORV IAMs_20 IAMs_20 03 50 32.2
comp=Z,25µm,19.0s
WAKR Walker 92.11 329 IAmb IAmb 03 07 25.9
comp=Z,156nm,1.5s
KMPM Mount Pierce 92.12 333 IAMs_20 IAMs_20 03 52 18.2
comp=Z,30µm,18.0s
X16A Lo Mia Camp, P 92.14 321 IAmb IAmb 03 07 37.4
comp=Z,155nm,1.5s
TPNV Topopah Spring 92.16 326 IAMs_20 IAMs_20 03 50 07.6
comp=Z,26µm,21.0s
TXAR Lajitas Array 92.23 313 P P 03 07 21.4 +0.1
comp=Z,115nm,1.1s,baz=65,slow=3.7,SNR=98
TXAR PKKPbc PKKPbc 03 24 38.3 +3.5
comp=Z,2.0nm,0.7s,baz=188,slow=6.7,SNR=16
TXAR LR LR 03 49 45.3
comp=Z,33µm,20.1s,baz=42,slow=36
comp=Z,115nm,1.1s
TXAR Lajitas Array 92.23 313 P P 03 07 20.1 -1.2
TXAR Lajitas Array 92.23 313 P P 03 07 20.1 -1.2
SUTB Sutter Butte 92.35 331 IAMs_20 IAMs_20 03 50 35.5
comp=Z,19µm,18.0s
GARC Garzon, Huila 92.41 275 P P 03 07 25.1 +2.6
comp=Z,7µmcomp=Z,2µmcomp=Z,78nm,2.2s
TRCB Terra Rica 92.45 242 eP P 03 07 21.4 -0.7
DSP Deep Springs 92.51 327 IAmb IAmb 03 07 27.7
comp=Z,144nm,1.5s
KCPM Cahto Peak 92.59 332 IAMs_20 IAMs_20 03 51 20.6
comp=Z,29µm,18.0s
V12A Nelson 92.59 324 IAmb IAmb 03 07 27.8
comp=Z,139nm,1.4s
LABB Lıbrea 92.60 260 P P 03 07 25.1 +2.2
JAMC Jamundi, Valle 92.62 277 P P 03 07 26.6 +3.2
comp=Z,7µmcomp=Z,1µmcomp=Z,64nm,1.2s
WELL Weller Preserv 92.66 330 IAMs_20 IAMs_20 03 51 05.5
comp=Z,22µm,19.0s
W13A Hualapai Mount 92.69 323 IAmb IAmb 03 07 39.8
comp=Z,201nm,2.0s
FURC Furnace Creek, 92.83 326 IAmb IAmb 03 07 28.9
comp=Z,232nm,1.7s
FURC IAMs_20 IAMs_20 03 53 30.2
comp=Z,27µm,18.0s
AQDB Aquidauana 92.91 245 P P 03 07 28.0 +3.8
AQDB Aquidauana 92.91 245 eP P 03 07 23.6 -0.7
FLOC Florencia 92.93 275 P P 03 07 28.1 +3.5
comp=Z,6µmcomp=Z,2µmcomp=Z,98nm,1.5s
GWY Greenwater Val 92.98 326 IAmb IAmb 03 07 41.1
comp=Z,183nm,1.5s
TGUH Tegucigalpa,Un 93.04 292 IAMs_20 IAMs_20 03 44 49.7
comp=Z,16µm,22.0s

POPC Popayan, Colom 93.07 276 P P 03 07 28.2 +2.7
comp=Z,1µmcomp=Z,34nm,1.4s
PTLC Puerto Leguiza 93.22 273 P P 03 07 29.8 +3.9
comp=Z,7µmcomp=Z,2µmcomp=Z,90nm,1.5s
MYLDM Lahad Datu 93.23 80 P P 03 07 26.3 +0.4
QSM Queen of Sheba 93.26 326 P P 03 07 26.0 +0.2
QSM IAmb IAmb 03 07 42.2
comp=Z,182nm,1.8s
QSM PP 03 11 08.0 -0.6
CVS Carmenet Viney 93.38 331 IAMs_20 IAMs_20 03 51 07.6
comp=Z,28µm,19.0s
BBJI Bungbulang 93.40 97 P P 03 07 25.3 -1.5
PTGB Pitanga 93.41 240 P P 03 07 30.7 +4.1
PTGB Pitanga 93.41 240 eP P 03 07 25.7 -0.8
JCJ Chichijima 93.55 49 LR LR 03 54 31.3
comp=Z,21µm,18.8s,baz=355,slow=39
TUC Tucson 93.55 320 P P 03 07 26.5 -0.8
TUC IAmb IAmb 03 07 32.1
comp=Z,129nm,1.6s
TUC Tucson 93.55 320 P P 03 07 26.5 -0.8
TUC pmax pmax
comp=Z,129nm,1.6s
TUC MLR MLR
comp=Z,50µm,20.0s
HDC Heredia 93.56 287 IAMs_20 IAMs_20 03 44 16.1
comp=Z,15µm,21.0s
HDC Heredia 93.56 287 eP P 03 07 26.6 -1.1
319A Douglas 93.57 318 IAmb IAmb 03 07 44.4
comp=Z,98nm,1.4s
BDQN Bodoquena, MS 93.61 246 eP P 03 07 26.9 -0.6
SIV San Ignacio 93.66 252 P P 03 07 27.7 -0.1
baz=94,slow=9.5
SIV LR LR 03 50 39.7
comp=Z,14µm,18.3s,baz=70,slow=36
CLC China Lake 93.69 326 P P 03 07 27.7 -0.2
CLC PP 03 11 12.2 +0.1
CLC China Lake 93.69 326 P P 03 07 27.7 -0.2
CLC 03 11 12.2
CLC pmax pmax
comp=Z,35nm,1.2s
MCCM Marconi Confer 93.71 331 IAMs_20 IAMs_20 03 51 37.4
comp=Z,29µm,20.0s
HERN Volcan Telica 93.72 290 IAmb IAmb 03 07 43.1
comp=Z,210nm,1.2s
DANC Danby, Needles 93.74 324 IAmb IAmb 03 07 33.0
comp=Z,127nm,1.5s
BBAC Balboa, Cauca 93.83 276 P P 03 07 32.5 +3.5
CCCA Chr Cany lake 93.84 326 IAmb IAmb 03 07 33.4
comp=Z,97nm,1.3s
MHC Mount Hamilton 93.96 330 IAMs_20 IAMs_20 03 51 28.2
comp=Z,26µm,19.0s
JTS Las Juntas de 93.97 287 LR LR 03 46 20.4
comp=Z,12µm,20.4s,baz=33,slow=33
JTS Las Juntas de 93.97 287 P P 03 07 28.4 -1.0
JTS Las Juntas de 93.97 287 IAMs_20 IAMs_20 03 46 17.8
comp=Z,13µm,20.0s
JTS Las Juntas de 93.97 287 P P 03 07 28.4 -1.0
JTS pmax pmax
comp=Z,30nm,1.3s
IRM Iron Mountain 94.05 324 IAmb IAmb 03 07 34.4
comp=Z,126nm,1.5s
AMBA Amambai (Brazi 94.11 243 eP P 03 07 29.1 -0.7
BLYC Blythe 94.11 323 IAmb IAmb 03 07 34.6
comp=Z,115nm,1.4s
BBSD Serra de San D 94.12 251 eP P 03 07 29.1 -0.8
JRSC Jasper Ridge 94.13 330 IAMs_20 IAMs_20 03 52 46.6
comp=Z,16µm,19.0s
FARB Farallon Islan 94.15 331 IAMs_20 IAMs_20 03 51 40.1
comp=Z,22µm,19.0s
ISA Isabella, Lake 94.18 327 IAmb IAmb 03 07 46.3
comp=Z,86nm,1.1s
ISA PP 03 11 17.8 +1.9
MTO3 Montecristo 94.25 293 IAmb IAmb 03 07 51.0
comp=Z,150nm,1.4s
KPJI Karang Pucung 94.27 96 P P 03 07 30.0 -0.7
comp=Z,7µmcomp=Z,1µmcomp=Z,68nm,1.1s
VES Vestal, Richgr 94.28 327 IAMs_20 IAMs_20 03 50 55.6
comp=Z,28µm,21.0s
SAO San Andreas Ge 94.40 330 IAmb IAmb 03 07 35.9
comp=Z,98nm,1.2s
APG El Apazote 94.59 294 LR LR 03 47 00.8
comp=Z,720nm,20.4s,baz=59,slow=34
FORD Fort Ord Natur 94.59 330 IAMs_20 IAMs_20 03 51 46.8
comp=Z,30µm,20.0s
BC3 Big Chuckawall 94.61 324 IAMs_20 IAMs_20 03 52 47.5
comp=Z,25µm,19.0s
TPO Tropico Hills 94.76 326 IAmb IAmb 03 07 37.8
comp=Z,113nm,1.3s
PKD Bear Valley Ra 94.77 329 IAmb IAmb 03 07 37.6
comp=Z,178nm,1.5s
HULI Fort Hunter Li 94.97 329 IAMs_20 IAMs_20 03 53 02.8
comp=Z,19µm,18.0s
MURT Porto Murtinho 95.02 246 eP P 03 07 33.2 -0.7
BFSC Mount Baldy Ra 95.07 326 IAMs_20 IAMs_20 03 52 09.6
comp=Z,25µm,20.0s
BONI La Bonita 95.08 275 P P 03 07 38.5 +3.7
comp=Z,5µmcomp=Z,2µmcomp=Z,70nm,1.7s
PFO Pinyon Flats O 95.08 324 LR LR 03 53 34.4
comp=Z,28µm,19.6s,baz=30,slow=38
PFO Pinyon Flats O 95.08 324 P P 03 07 33.6 -0.8
PFO IAmb IAmb 03 07 50.6
comp=Z,102nm,1.4s
PFO PP PP 03 11 22.4 -0.6
PFO Pinyon Flats O 95.08 324 IAMs_20 IAMs_20 03 53 32.2
comp=Z,26µm,20.0s
DNR Dunn Ranch,Anz 95.20 325 IAmb IAmb 03 07 39.9
comp=Z,115nm,1.3s
ITAB Concordia 95.20 238 eP P 03 07 34.0 -0.7
BORC Borrego Spring 95.36 324 PP PP 03 11 24.1 -0.9
CUSE Cuicocha Este 95.83 276 P P 03 07 43.1 +4.7
comp=Z,2µmcomp=Z,105nm,1.3s
CNLB Canela 95.85 236 P P 03 07 42.1 +4.5
CNLB Canela 95.85 236 eP P 03 07 37.0 -0.6
OTAV Otavalo 95.91 276 P P 03 07 37.8 -1.0
OTAV IAmb IAmb 03 07 55.6
comp=Z,132nm,1.3s
OTAV Otavalo 95.91 276 IAMs_20 IAMs_20 03 47 04.3
comp=Z,13µm,22.0s
OTAV Otavalo 95.91 276 P P 03 07 37.8 -1.0
OTAV pmax pmax
comp=Z,132nm,1.3s
OTAV Otavalo 95.91 276 P P 03 07 42.7 +3.9
OTAV Otavalo 95.91 276 eP P 03 07 37.4 -1.4
OTAV Otavalo 95.91 276 P P 03 07 42.7 +3.9
comp=Z,2µmcomp=Z,76nm,1.4s
CMIG Matias Romero 96.07 299 LR LR 03 51 12.3
comp=Z,25µm,19.7s,baz=35,slow=36
PAC1 Pacto, Paraso 96.15 276 P P 03 07 43.3 +3.8
DAV Davao City (W) 97.14 74 LR LR 03 58 36.5
comp=Z,17µm,19.5s,baz=336,slow=40
DAV Davao City (W) 97.14 74 IAMs_20 IAMs_20 03 58 24.8
comp=Z,16µm,20.0s
MPSI Mapaga 97.48 83 P P 03 07 43.6 -1.7
comp=Z,7µmcomp=Z,1µmcomp=Z,77nm,1.0s
TOLI2 Tolitoli 97.62 82 P Pdif 03 07 46.2 +0.1
CPUP Villa Florida 97.97 242 P Pdif 03 07 52.9 +5.7
comp=Z,1.6nm,1.0s,baz=262,slow=9.1,SNR=3.1
CPUP LR LR 03 54 26.5
comp=Z,16µm,18.7s,baz=279,slow=37
CPUP Villa Florida 97.97 242 eP P 03 07 46.5 -0.7
CPSB Cacapava Do Su 98.22 237 eP P 03 07 47.6 -0.6
JAGI Jajag, Banyuwa 98.92 93 P Pdif 03 07 51.8 0.0
LPAZ La Paz 98.95 256 P Pdif 03 07 53.5 +0.9
comp=Z,4.3nm,1.1s,baz=24,slow=6.8,SNR=7.2
LPAZ PP PP 03 11 48.4 -6.4
comp=Z,11nm,1.1s,baz=22,slow=5.4,SNR=4.3
LPAZ PKKPbc PKKPbc 03 24 15.7 -2.0
comp=Z,1.6nm,0.9s,baz=209,slow=7.2,SNR=4.0
LPAZ LR LR 03 50 32.5
comp=Z,10µm,21.9s,baz=52,slow=34
comp=Z,4.3nm,1.1s
LPAZ La Paz 98.95 256 P Pdif 03 07 54.1 +1.5
LPAZ La Paz 98.95 256 eP P 03 07 50.8 -1.8
PLTB Pedras Altas 99.25 236 eP Pdif 03 07 52.2 -0.7
ITQB Itaqui 99.75 239 eP Pdif 03 07 54.4 -0.7
LPIG La Paz 99.98 315 LR LR 03 54 33.9
comp=Z,27µm,20.0s,baz=34,slow=36
SLBS Sierra La Lagu 100.12 314 IAMs_20 IAMs_20 03 57 01.2
comp=Z,23µm,18.0s
LUWI Luwuk 100.53 82 P Pdif 03 07 59.3 +0.3
LUWI Luwuk 100.53 82 P Pdif 03 07 58.9 -0.1
ATAH Atahualpa 100.69 270 P Pdif 03 08 03.4 +3.2
comp=Z,10nm,1.0s,baz=20,slow=5.8,SNR=5.2
ATAH PP PP 03 12 09.2 +1.6
comp=Z,30nm,1.2s,baz=90,slow=7.8,SNR=4.8
PAF Port-aux-Franc 100.76 149 IAMs_20 IAMs_20 03 58 21.1

	comp=Z,11µm,19.0s							
PB18	**Visviri**	**100.78**	**256**	IAMs_20	IAMs_20	03 58 51.6		
	comp=Z,15µm,18.0s							
KAPI	**Kappang**	**100.89**	**87**	P	**Pdif**	**03 08 00.5**	**0.0**	
KAPI	**Kappang**	**100.89**	**87**	P	**Pdif**	**03 08 00.2**	**-0.3**	
KAPI	**Kappang**	**100.89**	**87**	P	**Pdif**	**03 08 02.1**	**+1.6**	
PB16	**IPOC Station P**	**101.27**	**256**	IAMs_20	IAMs_20	04 00 10.9		
	comp=Z,23µm,18.0s							
PSAL	**Palomas, Salto**	**101.32**	**239**	*e*P	**Pdif**	**03 08 01.3**	**-0.7**	
GO01	**Chusmiza**	**101.89**	**254**	IAMs_20	IAMs_20	03 55 45.3		
	comp=Z,13µm,21.0s							
AP01	**Chacalluta**	**101.90**	**256**	IAMs_20	IAMs_20	03 59 20.5		
	comp=Z,13µm,19.0s							
PB12	**IPOC Station P**	**102.05**	**256**	IAMs_20	IAMs_20	03 59 40.3		
	comp=Z,13µm,19.0s							
PB08	**IPOC Station P**	**102.17**	**254**	IAMs_20	IAMs_20	03 56 05.6		
	comp=Z,21µm,20.0s							
TNTI	**Ternate**	**102.72**	**78**	P	**Pdif**	**03 08 08.6**	**-0.1**	
PB01	**IPOC Station P**	**102.98**	**253**	IAMs_20	IAMs_20	03 57 05.1		
	comp=Z,16µm,20.0s							
TA01	**Diego Aracena**	**103.18**	**254**	IAMs_20	IAMs_20	04 02 20.4		
	comp=Z,12µm,18.0s							
AF01	**San Pedro de A**	**103.25**	**251**	IAMs_20	IAMs_20	03 57 41.4		
	comp=Z,11µm,20.0s							
PB09	**IPOC Station P**	**103.28**	**253**	IAMs_20	IAMs_20	03 58 26.1		
	comp=Z,14µm,20.0s							
PB02	**IPOC Station P**	**103.45**	**253**	IAMs_20	IAMs_20	04 00 08.6		
	comp=Z,14µm,19.0s							
SANI	**Sanana**	**103.59**	**81**	P	**Pdif**	**03 08 09.2**	**-3.4**	
PB07	**IPOC Station P**	**103.70**	**253**	IAMs_20	IAMs_20	03 57 46.2		
	comp=Z,15µm,19.0s							
PB03	**IPOC Station P**	**103.81**	**253**	IAMs_20	IAMs_20	03 59 31.1		
	comp=Z,15µm,20.0s							
PB06	**IPOC Station P**	**104.09**	**252**	IAMs_20	IAMs_20	03 59 48.6		
	comp=Z,12µm,19.0s							
PB05	**IPOC Station P**	**104.63**	**252**	IAMs_20	IAMs_20	03 59 13.0		
	comp=Z,13µm,20.0s							
GO02	**Mina Guanaco**	**105.64**	**250**	IAMs_20	IAMs_20	03 59 30.8		
	comp=Z,15µm,19.0s							
PB14	**IPOC Station P**	**105.88**	**251**	IAMs_20	IAMs_20	04 04 02.2		
	comp=Z,10µm,18.0s							
HOPE	**Hope Point**	**106.77**	**211**	IAMs_20	IAMs_20	03 55 46.5		
	comp=Z,14µm,19.0s							
AC01	**Pan de Azucar**	**106.96**	**250**	IAMs_20	IAMs_20	03 58 02.8		
	comp=Z,16µm,21.0s							
AC06	**Mina Casimiro**	**107.53**	**249**	IAMs_20	IAMs_20	04 00 57.0		
	comp=Z,17µm,20.0s							
GO03	**Copiapo**	**107.59**	**249**	IAMs_20	IAMs_20	03 58 27.6		
	comp=Z,16µm,21.0s							
AC04	**Llanos de Chal**	**108.56**	**249**	IAMs_20	IAMs_20	04 04 05.0		
	comp=Z,17µm,18.0s							
TRQA	**Tornquist**	**108.56**	**235**	*e*P	**Pdif**	**03 08 33.4**	**-0.7**	
MIDW	**Midway**	**108.92**	**16**	IAMs_20	IAMs_20	03 59 32.4		
	comp=Z,15µm,22.0s							
CO06	**Fray Jorge**	**110.43**	**247**	IAMs_20	IAMs_20	04 00 27.9		
	comp=Z,22µm,22.0s							
SYO	**Syowa Base**	**111.13**	**172**⇑	*e*PP	**PP**	**03 13 24.0**	**+0.6**	
VA06	**Catapilco**	**111.32**	**245**	IAMs_20	IAMs_20	04 02 50.4		
	comp=Z,20µm,19.0s							
VA01	**Torpederas**	**111.83**	**245**	IAMs_20	IAMs_20	04 00 32.7		
	comp=Z,26µm,22.0s							
NVL	**N'lazarevskaya**	**112.05**	**183**	*i* PKIKP	**PKiKP**	**03 12 48.0**	**+2.9**	
NVL				*e*		03 13 28.7		
NVL				*e*PPP	PPP	03 15 54.1		
NVL				*e*SS	SS	03 29 10.6	+3.9	
NVL				*e*SSS	SSS	03 33 20.5		
NVL				pmax	pmax			
	comp=Z,35nm,1.9s							
NVL				MLR	MLR			
	comp=Z,27µm,20.0s							
VA05	**Santo Domingo**	**112.17**	**244**	IAMs_20	IAMs_20	04 02 33.1		
	comp=Z,21µm,20.0s							
WAKE	**Wake Island**	**112.28**	**34**	IAMs_20	IAMs_20	04 00 42.0		
	comp=Z,12µm,22.0s							
VNA1	**Neumayer--Stat**	**113.59**	**190**	P	**PKiKP**	**03 12 51.6**	**+3.5**	
VNA2	**Neumayer--Watz**	**113.74**	**189**	P	**PKiKP**	**03 12 51.7**	**+3.3**	
	baz=11,slow=4.2							
TROLL	**Troll, Antarti**	**113.80**	**186**	P	**PKiKP**	**03 12 50.4**	**+1.8**	
SNAA	**Sanae**	**113.94**	**188**	P	**PKiKP**	**03 12 50.2**	**+1.4**	
SNAA	**Sanae**	**113.94**	**188**	PKiKP	**PKiKP**	**03 12 50.3**	**+1.5**	
	comp=Z,5.0nm,1.0s,baz=278,slow=1.2,SNR=16							
SNAA				PKKPab	**PKKPab**	**03 23 33.2**	**-1.2**	
	comp=Z,1.6nm,1.0s,baz=197,slow=5.9,SNR=3.3							
SNAA	**Sanae**	**113.94**	**188**	IAMs_20	IAMs_20	04 06 00.5		
	comp=Z,13µm,19.0s							
VNA3	**Neumayer Olymp**	**114.32**	**190**	P	**PKiKP**	**03 12 51.8**	**+2.3**	
EFI	**East Falkland**	**114.60**	**222**	IAMs_20	IAMs_20	04 01 24.6		
	comp=Z,21µm,20.0s							
PLCA	**Paso Flores**	**115.50**	**237**	PKP	**PKPdf**	**03 12 52.6**	**-0.1**	
	comp=Z,6.1nm,0.8s,baz=74,slow=1.4,SNR=9.2							
PLCA				PKKPab	**PKKPab**	**03 23 28.8**	**-0.7**	
	comp=Z,1.7nm,0.7s,baz=181,slow=3.6,SNR=3.2							
PLCA	**Paso Flores**	**115.50**	**237**	*e*P	**PKPdf**	**03 12 52.3**	**-0.5**	
NWAO	**Narrogin (SRO)**	**116.13**	**112**		**PKPdf**	**03 12 54.0**	**-0.1**	
NWAO	**Narrogin (SRO)**	**116.13**	**112**	PKIKP	**PKPdf**	**03 12 54.0**	**-0.1**	
NWAO				MLR	MLR			
	comp=Z,6µm,20.0s							
VA04	**Juan Fernndez**	**117.12**	**248**	IAMs_20	IAMs_20	04 02 35.1		
	comp=Z,16µm,22.0s							
AY01	**Puyuhuapi**	**118.78**	**235**	IAMs_20	IAMs_20	04 05 56.1		
	comp=Z,20µm,20.0s							
POHA	**Pohakuloa**	**118.94**	**355**	IAMs_20	IAMs_20	04 08 30.9		
	comp=Z,19µm,19.0s							
COYC	**Coyhaique**	**119.02**	**233**	IAMs_20	IAMs_20	04 06 27.6		
	comp=Z,15µm,20.0s							
AY03	**Cochrane**	**120.17**	**232**	IAMs_20	IAMs_20	04 04 29.1		
	comp=Z,15µm,21.0s							
MG02	**Cerro Sombrero**	**120.98**	**225**	IAMs_20	IAMs_20	04 05 44.4		
	comp=Z,17µm,20.0s							
MG01	**Puerto William**	**121.19**	**222**	IAMs_20	IAMs_20	04 03 56.9		
	comp=Z,20µm,21.0s							
WRA	**Warramunga Arr**	**121.28**	**90**	PKP	**PKPdf**	**03 12 04.2**	**-2.0**	
	comp=Z,13nm,0.8s,baz=320,slow=2.0,SNR=44							
WRA				PP	**PP**	**03 14 28.3**	**-7.1**	
	comp=Z,13nm,1.0s,baz=307,slow=6.1,SNR=7.2							
WRA	**Warramunga Arr**	**121.28**	**90**		**PKPdf**	**03 13 03.9**	**-0.5**	
WRAB	**Tennant Creek**	**121.28**	**90**		**PKPdf**	**03 13 02.7**	**-1.7**	
WRAB				PP	**PP**	**03 14 32.9**	**-2.6**	
WRAB	**Tennant Creek**	**121.28**	**90**	PKIKP	**PKPdf**	**03 13 02.7**	**-1.7**	
WRAB						03 14 32.9		
MG05	**Puerto Natales**	**122.24**	**227**	IAMs_20	IAMs_20	04 04 56.7		
	comp=Z,20µm,20.0s							
ASAR	**Alice Springs**	**123.13**	**94**	PKhKP	PKPpre	03 12 56.0		
	comp=Z,0.4nm,0.5s,baz=352,slow=2.3,SNR=4.7							
ASAR				PKP	**PKPdf**	**03 13 06.1**	**-1.8**	
	comp=Z,38nm,0.5s,baz=304,slow=1.6,SNR=80							
ASAR				PP	**PP**	**03 14 46.4**	**-1.7**	
	comp=Z,23nm,1.2s,baz=308,slow=4.1,SNR=7.2							
BELA	**Belgrano 2**	**123.48**	**192**		**PKPdf**	**03 13 05.8**	**-1.1**	
PMG	**Port Moresby**	**123.98**	**71**		**PKPdf**	**03 13 09.0**	**-0.8**	
PMG	**Port Moresby**	**123.98**	**71**	IAMs_20	IAMs_20	04 10 55.5		
	comp=Z,9µm,22.0s							
PMG	**Port Moresby**	**123.98**	**71**	PKIKP	**PKPdf**	**03 13 09.0**	**-0.8**	
PMSA	**Palmer Station**	**124.08**	**211**	IAMs_20	IAMs_20	04 16 53.4		
	comp=Z,10µm,19.0s							
PMSA	**Palmer Station**	**124.08**	**211**	*e*P	**PKiKP**	**03 13 09.0**	**+0.4**	
CASY	**Casey**	**127.44**	**149**	IAMs_20	IAMs_20	04 16 05.3		
	comp=Z,10µm,18.0s							
TARA	**Tarawa**	**130.99**	**37**	IAMs_20	IAMs_20	04 12 34.1		
	comp=Z,16µm,21.0s							
QSPA	**South Pole Qui**	**131.30**	**180**	PKP	**PKiKP**	**03 13 23.7**	**+0.6**	
	comp=Z,18nm,0.6s,baz=251,slow=0.9,SNR=30							
QSPA				SKP	**SKPdf**	**03 16 53.0**	**-3.4**	
	comp=Z,40nm,1.2s,baz=300,slow=2.3,SNR=6.0							
QSPA	**South Pole Qui**	**131.30**	**180**		**PKiKP**	**03 13 23.6**	**+0.4**	
HNR	**Honiara**	**132.70**	**59**	IAMs_20	IAMs_20	04 15 32.5		
	comp=Z,10µm,22.0s							
STKA	**Stephens Creek**	**133.25**	**98**	PKP	**PKPdf**	**03 13 26.1**	**-0.8**	
	comp=Z,22nm,0.5s,baz=333,slow=3.7,SNR=14							
VA02	**Isla de Pascua**	**136.18**	**272**	IAMs_20	IAMs_20	04 11 33.7		
	comp=Z,7µm,22.0s							
VNDA	**Vanda**	**140.62**	**168**	PKP	**PKPdf**	**03 13 38.6**	**-0.5**	
	comp=Z,5.2nm,0.8s,baz=223,slow=1.8,SNR=12							
VNDA				PP	PP	03 16 47.2	+8.0	
	comp=Z,6.7nm,1.1s,baz=173,slow=8.7,SNR=3.6							
VNDA	**Vanda**	**140.62**	**168**		**PKPdf**	**03 13 39.8**	**+0.7**	
VNDA	**Vanda**	**140.62**	**168**	PKIKP	**PKPdf**	**03 13 39.8**	**+0.7**	
SBA	**Scott Base**	**141.10**	**169**	IAMs_20	IAMs_20	04 16 08.4		
	comp=Z,7µm,21.0s							
TAU	**Tasmania Unive**	**141.72**	**110**	IAMs_20	IAMs_20	04 12 15.6		
	comp=Z,7µm,22.0s							
SANVU	**Saraoutou**	**141.85**	**57**	IAMs_20	IAMs_20	04 18 42.6		
	comp=Z,16µm,22.0s							
LHI	**Lord Howe Isla**	**146.18**	**86**		**PKPbc**	**03 13 51.0**	**-0.3**	
ONTNC	**Ouen Toro**	**146.26**	**66**	IAMs_20	IAMs_20	04 23 13.3		
	comp=Z,9µm,20.0s							
MARNC	**Mare, Loyalty**	**146.76**	**63**	PKPdf	**PKPdf**	**03 13 51.2**	**-0.4**	
MSVF	**Nonsavu**	**149.98**	**44**	IAMs_20	IAMs_20	04 36 32.7		
	comp=Z,10µm,18.0s							
AFI	**Afiamalu**	**150.82**	**23**	PKPdf	**PKPdf**	**03 13 56.8**	**-1.6**	
AFI	**Afiamalu**	**150.82**	**23**	IAMs_20	IAMs_20	04 16 59.2		
	comp=Z,7µm,22.0s							
AFI	**Afiamalu**	**150.82**	**23**	PKIKP	**PKPdf**	**03 13 56.8**	**-1.6**	
PPTF	**Pamatai, Papee**	**154.48**	**335**	IAMs_20	IAMs_20	04 29 50.1		
	comp=Z,12µm,19.0s							
PYZ	**Puysegur Point**	**155.86**	**112**	IAMs_20	IAMs_20	04 31 42.7		
	comp=Z,7µm,21.0s							
DCZ	**Deep Cove**	**156.18**	**111**	IAMs_20	IAMs_20	04 39 17.1		
	comp=Z,7µm,20.0s							
WHZ	**Wether Hill Ro**	**156.74**	**112**	IAMs_20	IAMs_20	04 37 45.0		
	comp=Z,13µm,21.0s							
FOZ	**Fox Glacier**	**157.97**	**105**	IAMs_20	IAMs_20	04 38 36.6		
	comp=Z,9µm,20.0s							
LBZ	**Lake Benmore**	**158.29**	**108**	IAMs_20	IAMs_20	04 40 00.0		
	comp=Z,11µm,20.0s							
ODZ	**Otahua Downs**	**158.63**	**109**	IAMs_20	IAMs_20	04 41 52.2		
	comp=Z,10µm,19.0s							
OUZ	**Omahuta**	**158.69**	**82**	IAMs_20	IAMs_20	04 42 09.1		
	comp=Z,9µm,19.0s							
RPZ	**Rata Peaks**	**158.88**	**106**	IAMs_20	IAMs_20	04 39 35.6		
	comp=Z,11µm,20.0s							
INZ	**Inchbonnie**	**159.08**	**103**	IAMs_20	IAMs_20	04 42 04.9		
	comp=Z,8µm,20.0s							
DSZ	**Denniston Nort**	**159.22**	**100**	IAMs_20	IAMs_20	04 39 31.6		
	comp=Z,9µm,20.0s							
OXZ	**Oxford**	**159.56**	**105**	IAMs_20	IAMs_20	04 40 15.8		
	comp=Z,8µm,20.0s							
QRZ	**Quartz Range**	**159.60**	**97**	IAMs_20	IAMs_20	04 38 46.8		
	comp=Z,11µm,21.0s							
LTZ	**Lake Taylor**	**159.69**	**103**	PKPab	**PKPab**	**03 14 49.1**	**+0.7**	
LTZ				IAMs_20	IAMs_20	04 39 52.1		
	comp=Z,11µm,20.0s							
RAR	**Rarotonga**	**159.82**	**358**	IAMs_20	IAMs_20	04 24 21.2		
	comp=Z,14µm,22.0s							

*RSNC **26** 02:57:09.0±1.3,4˚S±10˚×8˚0W±2˚2, h99km±50km, M3.1, mb3.7, ML3.1*
*IGQ **26** 02:57:11.3±0.2,3˚S±2˚×8˚0W±˚, h38km±2km, MLv3.8/20*
ISC 26 02:57:06.8±1.6,**3˚54S**±0.05×**79˚97W**±0.09,**h100**km,**n60,**
σ2§36/57,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARNL	**Arenillas**	**0.10**	**263**	P	Pn	02 57 20.1	-0.7
ARNL				S	Sn	02 57 27.6	-3.6
ACH2	**Ecuador-Machal**	**0.32**	**31**	P	Pn	02 57 19.2	-2.3
ACH2				S	Sn	02 57 26.2	-6.3
PCRA	**Pucara 2**	**0.57**	**55**	S	**Sn**	**02 57 29.3**	**-7.0**
PCRA				P	**Pn**	**02 57 20.9**	**-2.8**
ISPG	**Isla Puna-Puer**	**0.60**	**341**	S	**Sn**	**02 57 34.6**	**-1.3**
ISPG				P	Pn	02 57 23.4	0.0
AMCR	**Ecuador-Macara**	**0.83**	**179**	P	**Pn**	**02 57 28.0**	**+2.4**
MCRA	**Macar, Loja**	**0.83**	**179**	P	**Pn**	**02 57 28.0**	**+2.4**
ALJ1	**Ecuador-Loja-U**	**0.89**	**120**	P	**Pn**	**02 57 27.9**	**+1.5**
GONZ	**Gonzanam**	**0.91**	**140**	P	**Pn**	**02 57 28.5**	**+1.8**
MORR	**Playas El Morr**	**0.96**	**338**	S	Sn	02 57 39.6	-2.3
MORR				P	Pn	02 57 26.9	+0.1
ACUE	**Ecuador-Cuenca**	**1.19**	**58**	P	**Pn**	**02 57 29.7**	**0.0**
GYE1	**Ecuador-Trinit**	**1.28**	**3**	P	**Pn**	**02 57 30.1**	**-0.3**
COHC	**Cochancay**	**1.28**	**34**	P	**Pn**	**02 57 29.7**	**-0.8**
MILO	**Milagro-Astudi**	**1.32**	**18**	P	**Pn**	**02 57 31.9**	**+1.0**
AZOG	**Ecuador-Azogue**	**1.37**	**55**	P	**Pn**	**02 57 31.6**	**-0.1**
AC07	**Ecuador-Guayaq**	**1.38**	**360**	P	**Pn**	**02 57 31.6**	**-0.1**
AGUAY	**Guayaquil**	**1.47**	**1**	P	Pn	02 57 32.1	-0.7
BOSC	**San Juan Bosco**	**1.52**	**76**	P	**Pn**	**02 57 34.9**	**+1.3**
ZUMB	**Zumba**	**1.56**	**148**	P	Pn	02 57 38.7	+4.7
SALI	**Salinas**	**1.68**	**323**	P	Pn	02 57 36.3	+0.9
JSCH	**Cashca Totoras**	**2.06**	**29**	P	**Pn**	**02 57 39.7**	**-0.9**
PPLP	**Puerto Lpez**	**2.13**	**338**	P	Pn	02 57 42.3	+1.1
CHSH	**Refugio Sur-Vo**	**2.31**	**29**	P	**Pn**	**02 57 44.1**	**+0.1**
TAMH	**Tambohuasha Ch**	**2.31**	**31**	P	**Pn**	**02 57 44.5**	**+0.6**
IGUA	**Igualata**	**2.43**	**33**	P	**Pn**	**02 57 46.6**	**+1.0**
ISPT	**Isla de la Pla**	**2.51**	**334**	P	Pn	02 57 47.3	+1.2
BIL2	**Estacion Bilba**	**2.54**	**35**	P	**Pn**	**02 57 48.5**	**+1.8**
BPAT	**Tungurahua Vol**	**2.54**	**37**	P	**Pn**	**02 57 48.3**	**+1.4**
BBIL	**Ulba Tungurahu**	**2.55**	**36**	P	**Pn**	**02 57 49.0**	**+2.0**
PUYO	**Puyo, Santa Ro**	**2.81**	**44**	P	**Pn**	**02 57 51.4**	**+1.2**
PKYU	**Pakayacu**	**3.03**	**52**	P	**Pn**	**02 57 54.2**	**+1.2**
PIAT	**Ana Tenorio**	**3.05**	**34**	P	**Pn**	**02 57 55.0**	**+1.4**
VCES	**Cotopaxi**	**3.14**	**30**	P	**Pn**	**02 57 57.4**	**+2.4**
SLOR	**San Lorenzo -**	**3.15**	**28**	P	**Pn**	**02 57 58.0**	**+2.9**
FLF1	**Flavio Alfaro-**	**3.16**	**2**	P	**Pn**	**02 57 55.3**	**+0.5**
FLF1				S	Sn	02 58 27.2	-4.6
CAMI	**Rancho Maria**	**3.20**	**27**	P	**Pn**	**02 57 59.4**	**+3.7**
SUCR	**Mariscal Sucre**	**3.23**	**27**	P	**Pn**	**02 57 59.5**	**+3.3**
TAMB	**Tambo**	**3.25**	**30**	P	**Pn**	**02 57 58.5**	**+2.1**
ARDO	**Archidona, Ten**	**3.33**	**41**	P	**Pn**	**02 57 58.1**	**+1.0**
PITA	**Cotopaxi Volc**	**3.33**	**28**	P	**Pn**	**02 58 00.1**	**+2.6**
ANTG	**Antisana-Guama**	**3.47**	**30**	P	**Pn**	**02 58 02.6**	**+3.3**
JUA2	**San Juan 2**	**3.57**	**23**	P	**Pn**	**02 58 03.6**	**+2.9**
GGPC	**Guagua Pichinc**	**3.61**	**22**	P	**Pn**	**02 58 05.7**	**+4.4**
TERV	**Terraza Guagua**	**3.61**	**22**	P	**Pn**	**02 58 03.9**	**+2.6**
PINO	**Pino**	**3.62**	**22**	P	**Pn**	**02 58 04.7**	**+3.1**
YANA	**Yana**	**3.67**	**22**	P	**Pn**	**02 58 05.0**	**+2.9**
BV15	**Puerto Quito-O**	**3.75**	**12**	P	**Pn**	**02 58 02.3**	**-0.4**
PAC1	**Pacto, Paraso**	**3.96**	**17**	P	**Pn**	**02 58 06.5**	**+0.9**
PAC1	**Pacto, Paraso**	**3.96**	**17**	P	**Pn**	**02 58 06.2**	**+0.6**
PAC1				S	**Sn**	**02 58 47.8**	**-3.3**
OTAV	**Otavalo**	**4.04**	**22**	P	**Pn**	**02 58 08.4**	**+1.3**
OTAV				S	**Sn**	**02 58 54.4**	**+0.7**
CUSE	**Cuicocha Este**	**4.13**	**22**	P	**Pn**	**02 58 10.7**	**+2.5**
CUSE	**Cuicocha Este**	**4.13**	**22**	P	**Pn**	**02 58 10.0**	**+1.8**
CUSE				S	**Sn**	**02 58 58.2**	**+2.5**
CUIC	**Cuicocha-Domo**	**4.14**	**23**	P	**Pn**	**02 58 11.4**	**+3.1**
RVRD	**Rio Verde**	**4.61**	**7**	P	**Pn**	**02 58 15.0**	**+0.7**
CHMA	**Chilma**	**4.77**	**24**	P	**Pn**	**02 58 20.0**	**+3.3**
ECEN	**Cerro Negro**	**4.77**	**25**	P	**Pn**	**02 58 21.6**	**+4.6**
GCUF	**Volcan Galeras**	**5.41**	**29**	P	**Pn**	**02 58 27.5**	**+1.9**
	20nm,0.9s						
BBAC	**Balboa, Cauca**	**6.16**	**26**	P	**Pn**	**02 58 38.3**	**+2.8**
	5.1nm,0.7s						
BBAC				S	**Sn**	**02 59 45.8**	**+1.2**
	5.1nm,0.7s						
FLOC	**Florencia**	**6.67**	**40**	P	**Pn**	**02 58 40.5**	**-1.8**
GARC	**Garzon, Huila**	**7.24**	**38**	P	**Pn**	**02 58 49.6**	**-0.6**
URMC	**La Uribe, Meta**	**8.76**	**40**	P	**Pn**	**02 59 11.1**	**+0.4**

*MOS **26** 02:57:10.8±1.2,45˚.05N×150˚.27E, h62km, mb4.2/1, Error ellipse: s-maj=16.0km s-min=13.8km az=46.1*
MOS Felt (II) at Kuril'sk.
*SKHL **26** 02:57:13.4±0.1,45˚.10N×150˚.10E, h72km±8km, mb5.2/3*
*JMA **26** 02:57:14.4±0.5,45˚N±3˚×15˚0E±˚, h112km, MV3.9/13, SE OFF ETOROFU*
*NIED **26** 02:57:14.4,44˚.67N×150˚.09E, h112km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr0.48; Mθθ-0.06; Mφφ-0.42; Mrθ1.21; Mθφ-0.40; Mφr-0.00; Fault plane solution: M₀1.32000×10¹⁵ NP1: φs191.00000°, δ22.00000°, λ24.00000°. NP2:φs79.00000°, δ81.00000°, λ111.00000°.*
ISC 26 02:57:11.7±1.2,**45˚01N**±0.07×**150˚22E**±0.09,**h51**km,**n32,**
σ1§80/47,2C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.68**	**279***c*	*i* PN	**Pn**	**02 57 37.8**	**-0.9**
KUR				*i* S	**Sn**	**02 57 57.2**	**-1.9**
KUR				pmax	pmax		
	comp=Z,477nm,0.1s						
KUR				smax	smax		
	comp=E,5µm,0.4s						
KUR				smax	smax		
	comp=N,2µm,0.3s						
KUR	**Kuril'sk**	**1.68**	**279**	*i* P	**Pn**	**02 57 39.0**	**+0.3**
KUR				AMB	AMB	02 57 39.1	
	comp=N,480nm,0.2s						
KUR				*i* S	**Sn**	**02 57 58.3**	**-0.8**
KUR				A	A	02 57 58.5	
	comp=N,2µm,0.4s						
KUR				A	A	02 57 58.5	
	comp=N,5µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.27**	**254***c*	*i* PN	**Pn**	**02 58 02.5**	**+2.2**
YUK				*e*S	**Sn**	**02 58 38.8**	**+0.9**
YUK				pmax	pmax		
	comp=N,36nm,0.2s						
YUK				pmax	pmax		
	comp=E,50nm,0.2s						
YUK				pmax	pmax		
	comp=Z,215nm,0.2s						
YUK				smax	smax		
	comp=N,747nm,0.4s						
YUK				smax	smax		
	comp=E,426nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.27**	**254**	*e*P	**Pn**	**02 58 01.7**	**+1.4**
YUK				AMB	AMB	02 58 02.7	
	comp=E,220nm,0.2s						
YUK				*e*S	**Sn**	**02 58 38.0**	**+0.1**
YUK				A	A	02 58 42.8	
	comp=E,750nm,0.4s						
YUK				A	A	02 58 42.8	
	comp=E,430nm,0.4s						
NEM2	**Nemuro 2**	**3.62**	**245**	*e*P	**Pn**	**02 58 06.3**	**+1.2**
NEM2				*e*S	**Sn**	**02 58 45.7**	**-0.8**
NMR	**Nemuro--Hokkai**	**3.62**	**245**	*e*PN	**Pn**	**02 58 06.1**	**+0.9**
NMR				*e*S	**Sn**	**02 58 45.5**	**-1.2**
NMR	**Nemuro--Hokkai**	**3.62**	**245**	*e*P	**Pn**	**02 58 06.1**	**+0.9**
NMR				*e*S	**Sn**	**02 58 45.5**	**-1.2**
RUSJ	**Misakicho**	**3.67**	**258**	*e*PN	**Pn**	**02 58 09.6**	**+3.8**
RUSJ				*e*S	**Sn**	**02 58 51.4**	**+3.6**
JRA	**Rausu**	**3.80**	**256**	*e*P	**Pn**	**02 58 10.2**	**+2.6**
JRA				*e*S	**Sn**	**02 58 53.3**	**+2.2**
JNK	**Nakash**	**4.20**	**252**	P	**Pn**	**02 58 15.2**	**+2.1**
JNK				*e*S	**Sn**	**02 59 02.3**	**+1.4**
AKK	**Akkeshi**	**4.36**	**245**	*e*P	**Pn**	**02 58 16.5**	**+1.2**
JAK	**Akkeshi**	**4.46**	**245**	P	**Pn**	**02 58 17.7**	**+0.9**
JAK				*e*S	**Sn**	**02 59 06.2**	**-1.2**
JTKR	**Abashiri--Toko**	**4.63**	**259**	*e*P	**Pn**	**02 58 20.9**	**+1.9**
JAR	**Ashorobuto**	**4.95**	**252**	P	**Pn**	**02 58 25.8**	**+2.4**
JAR				*e*S	**Sn**	**02 59 20.1**	**+0.8**
JOB	**Onbets**	**5.07**	**248**	*e*P	**Pn**	**02 58 26.4**	**+1.4**
JOB				*e*S	**Sn**	**02 59 21.8**	**-0.4**
JKK2	**Kamakawa 2**	**5.47**	**261**	*e*P	**Pn**	**02 58 32.2**	**+1.6**
JCH	**Churui**	**5.51**	**247**	*e*P	**Pn**	**02 58 32.1**	**+1.0**
JCH				*e*S	**Sn**	**02 59 31.4**	**-1.7**
YSS	**Yuzhno-Sakhali**	**5.56**	**293**	*e*PN	**Pn**	**02 58 31.9**	**+0.2**
YSS				*e*S	**Sn**	**02 59 34.1**	**-0.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				smax	smax		
	comp=N,20nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS	**Yuzhno-Sakhali**	**5.56**	**293**	*e*P	**Pn**	**02 58 32.1**	**+0.4**
YSS				AMB	AMB	02 58 32.4	
	comp=E,20nm,0.7s						
YSS				*e*S	**Sn**	**02 59 33.1**	**-1.1**
YSS				A	A	02 59 40.4	
	comp=E,20nm,0.6s						
YSS				A	A	02 59 40.4	
	comp=E,20nm,0.6s						
JNBK	**Urakawa-nobuka**	**6.07**	**246**	*e*P	**Pn**	**02 58 39.0**	**+0.3**
TYV	**Tymovskoe**	**7.75**	**322**	*e*P	**Pn**	**02 59 03.

ZAGS	Zajecar	3.08	39	*e*Pn		Pn	03 00 12.9	+0.7
TEKS	Tekeris	3.11	360	*e*Pn		Pn	03 00 15.2	+2.6
TIP	Timpagrande	3.11	224	Pn		Pn	03 00 11.7	-1.1
CUC	Castrocucco	3.19	244	Pn		Pn	03 00 14.0	+0.2
KUBS	Kucevo	3.35	27	*e*Pn		Pn	03 00 15.2	-0.7
CEL	Celeste	4.25	223	Pn		Pn	03 00 27.4	-0.9
CAMP	Campotosto	4.71	285	Pn		Pn	03 00 35.0	+0.3
GUMA	Gualdo di Mace	4.89	291	Pn		Pn	03 00 38.5	+1.3
NRCA	Norcia	4.99	288	Pn		Pn	03 00 38.5	-0.1
FDMO	Fiordimonte	5.06	291	Pn		Pn	03 00 39.1	-0.4
MURB	Monte Urbino	5.52	292	Pn		Pn	03 00 46.2	+0.4
VAE	Valguarnera	5.61	227	Pn		Pn	03 00 47.5	+0.4
	1.7nm,0.3s,baz=248,slow=19,SNR=0.6							
	106nm,0.9s							
MLR	Muntele Rosu	6.16	47	Pn		Pn	03 00 57.1	+2.5
	64nm,0.7s,baz=288,slow=20,SNR=0.7							
MLR	Muntele Rosu	6.16	47			Pn	03 00 55.6	+0.9
CTI	Castel Tesino	7.35	311	Pn		Pn	03 01 11.9	+1.1
IDI	Anoyia	7.43	144	Pn		Pn	03 01 10.1	-1.9
	3.5nm,0.3s,baz=135,slow=11,SNR=1.0							
IDI				Sn		Sn	03 02 28.5	-7.7
	3.1nm,0.3s,baz=104,slow=14,SNR=1.5							
	81nm,1.0s							
IDI	Anoyia	7.43	144	Pn		Pn	03 01 11.3	-0.8
MANT	Manisa	7.51	110	Pn		Pn	03 01 14.1	+0.8
BORA	Eskisehir	8.43	97	Pn		Pn	03 01 26.1	+0.4
GEC2	GERESS Array S	8.48	333	Pn		Pn	03 01 27.2	+0.7
GERES	GERESS Array B	8.48	333	Pn		Pn	03 01 27.1	+0.7
	57nm,1.0s,baz=151,slow=14,SNR=0.9							
GERES				Sn		Sn	03 03 00.2	-1.7
	0.2nm,0.3s,baz=133,slow=24,SNR=1.3							
DAVOX	Davos/Dischmat	8.77	311	Pn		Pn	03 01 31.8	+1.3
	2.7nm,0.3s,baz=162,slow=20,SNR=3.7							
DAVOX				Sn		Sn	03 03 04.7	-4.5
	2.4nm,0.3s,baz=270,slow=13,SNR=2.4							
OJC	Ojcow	8.78	1	Pn		Pn	03 01 31.8	+1.3
TUE	Stuetta	8.92	308	Pn		Pn	03 01 33.1	+0.6
BZK	Bozkurt	10.82	82	Pn		Pn	03 01 59.3	+0.9
ECH	Echery	11.10	312	Pn		Pn	03 02 03.5	+1.2
GAZ	Gaziantep	14.31	102	Pn		Pn	03 02 46.4	+0.1
CART	Cartagena	16.32	263	Pn		Pn	03 03 13.1	+0.4
CART				IAmb	IAmb		03 03 13.7	
	comp=Z,320nm,1.9s							
OBN	Obninsk	17.69	34			P	03 03 33.2	+2.6
OBN				IAmb	IAmb		03 03 38.7	
	comp=Z,145nm,1.0s							
GNI	Garni	19.09	86	P		P	03 03 46.0	-0.4
GNI				IAmb	IAmb		03 03 53.8	
	comp=Z,154nm,1.4s							
NC405	NORSAR Array S	20.27	349	P		Pn	03 03 60.0	-0.9
FINES	FINESS Array B	20.42	9	P		P	03 03 57.8	-2.6
	comp=Z,55nm,0.8s,baz=189,slow=10,SNR=6.8							
	comp=Z,55nm,0.8s							
FINES	FINESS Array B	20.42	9	P		P	03 04 00.7	+0.3
MTE	Manteigas	20.48	276	P		P	03 04 02.2	+0.9
MTE				IAmb	IAmb		03 04 10.5	
	comp=Z,152nm,1.7s							
AB31	Akbulak array	29.15	61	P		P	03 05 25.3	+0.9
ABKAR	Akbulak array	29.15	61	P		P	03 05 25.2	+0.8
BORK	Borovoye	35.63	53	P		P	03 06 20.9	-0.3
BORK				IAmb	IAmb		03 06 21.7	
	comp=Z,17nm,0.7s							
BVAR	Borovoye Array	35.68	53	P		P	03 06 19.8	-1.7
	comp=Z,15nm,0.8s,baz=256,slow=5.8,SNR=3.2							
	comp=Z,15nm,0.8s							
KK31	Karatay Array	37.27	70	P		P	03 06 34.7	-0.6
KKAR	Karatay Array	37.27	70	P		P	03 06 35.5	+0.3
EDA	Edea	38.44	195	P		P	03 06 43.7	-1.6
KURBB	Kurchatov Arra	40.96	56	P		P	03 07 05.0	-1.0
	comp=Z,7.4nm,1.1s,baz=286,slow=9.9,SNR=2.1							
	comp=Z,7.4nm,1.1s							
KURK	Kurchatov	41.00	56	P		P	03 07 07.3	+1.0
KURK				IAmb	IAmb		03 07 16.1	
	comp=Z,36nm,1.1s							
ZAA0	Zalesovo Array	44.12	50	P		P	03 07 30.6	-1.1
ZAA0				IAmb	IAmb		03 07 36.1	
	comp=Z,35nm,1.1s							
ZALV	Zalesovo Beam	44.12	50	P		P	03 07 30.4	-1.2
	comp=Z,19nm,0.7s,baz=278,slow=7.3,SNR=6.3							
	comp=Z,19nm,0.7s							
ZALV	Zalesovo Beam	44.12	50	P		P	03 07 30.6	-1.1
MKAR	Makanchi Array	44.30	61	P		P	03 07 32.0	-1.2
	comp=Z,16nm,0.6s,baz=280,slow=7.5,SNR=10							
	comp=Z,16nm,0.6s							
MKAR	Makanchi Array	44.30	61	P		P	03 07 32.3	-0.9
WMQ	Urumqi	48.88	63	*e*P		P	03 08 12.0	+2.8
DRLN	Deer Lake	52.53	306	P		P	03 08 38.0	+1.4
HYBB	Hyderabad (bro	55.53	97	*e*P		P	03 08 59.7	+0.8
EVN	Everest	55.62	81	P		P	03 08 58.6	-1.6
EVN				IAmb	IAmb		03 09 07.6	
	comp=Z,33nm,1.1s							
SONM	Songino Array	58.99	52	P		P	03 09 22.8	-0.3
	comp=Z,8.0nm,1.0s,baz=279,slow=8.3,SNR=2.9							
	comp=Z,8.0nm,1.0s							
LZDM	Lanzhou Array	63.40	65	P		P	03 09 52.8	-0.6
	comp=Z,4.4nm,0.5s,baz=305,slow=5.1,SNR=4.4							
	comp=Z,4.4nm,0.5s							
BTO	Baotou	64.98	57	*e*P		P	03 10 03.0	-0.5
BTO				PP		PP	03 12 24.0	-2.1
BTO				S		S	03 18 45.3	+0.3
BTO				pmax	pmax			
	comp=Z,34nm,1.0s							
HHC	Hu-ho-hao-te	65.82	56	*e*P		P	03 10 09.8	+0.9
HHC				pmax	pmax			
	comp=Z,6.0nm,0.6s							
XLT	XiLinHaoTe	66.80	51	*e*P		P	03 10 15.0	-0.1
XLT				PcP		PcP	03 10 41.8	-2.1
XLT				pmax	pmax			
	comp=Z,15nm,1.4s							
PZH	PanZhiHua	67.40	74	P		P	03 10 21.0	+1.8
ILAR	Eielson Array	73.59	354	P		P	03 10 55.5	-0.7
	comp=Z,1.3nm,0.9s,baz=356,slow=8.6,SNR=1.4							
	comp=Z,1.3nm,0.9s							
ILAR	Eielson Array	73.59	354	P		P	03 10 55.9	-0.3
NJ2	Nanjing	75.81	60	*e*P		P	03 11 09.5	-0.1
NJ2				pmax	pmax			
	comp=Z,25nm,0.9s							
QIZ	Qiongzhong	77.87	75	P		P	03 11 19.5	-1.9
QIZ				S		S	03 21 20.5	+6.3

BJI **26** *03:02:55.7, 42˚.04N×19˚.21E, h7km, mb4.9/16*
IDC **26** *03:02:57.2±1.2, 41˚.50N×19˚.48E, h0km, mb4.3/14, mbtmp4.3/18, ML3.0/3, MS5.8/1, Error ellipse: s-maj=26.0km s-min=12.0km az=42.0*
SKO **26** *03:02:58.2, 41˚.44N×19˚.36E, h4km, ML4.3*
NEIC **26** *03:02:59.6±1.8, 41˚.42N±0˚.04×19˚.64E±0˚.07, h10km±1km, mb5.3/18, Error ellipse: s-maj=9.4km s-min=6.8km az=244.0*
ROM **26** *03:03:00.3, 41˚.49N×19˚.53E, h10km, mb5.3*
THE **26** *03:03:00.1, 42˚.N±5˚×1˚.9E±˚, h11km, M4.2/13, MLh4.2/13*
TIR **26** *03:03:01.7, 41˚.51N×19˚.72E, h12km±1km, Ml4.4/8*
BEO **26** *03:03:01.6±0.5, 41˚.40N×19˚.60E, h20km±3km, ML4.3/8*
RHSSO **26** *03:03:01.3±0.9, 41˚.40N×19˚.54E, h12km, ML4.6/3*
PDG **26** *03:03:02.8±0.4, 41˚.51N×19˚.65E, h11km±1km, MD4.4/12, ML4.3/12, Error ellipse: s-maj=1.6km s-min=2.2km az=0.0*
PRU **26** *03:03:03.0, 41˚.36N×19˚.47E, h10km, M5.3*

ISC 26 03:03:00.5±0.9, **41˚.48N**±0˚.02×**19˚.59E**±0˚.02, **h17**km±6km, **n265**,σt**42**/319, **mb4.9**/20, **32C-26D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.24	122	Pg	Pg	03 03 06.0	+0.1
TIR				Sg	Sg	03 03 09.2	-0.4
TIR				AML	AML	03 03 13.8	
	96nm,0.8s						
ULC	Ulcinj	0.55	332	⇓*i* Pg	Pn	03 03 12.5	-1.1
ULC				*i* Sg	Sn	03 03 22.3	-0.2
SDA	Shkodra	0.58	353	Pg	Pb	03 03 12.8	+0.6
SDA				Sg	Sn	03 03 21.5	-1.6
PHP	Peshkopia	0.67	72	Pg	Pg	03 03 13.1	-0.5
PHP				Sg	Sg	03 03 20.6	-2.0
PHP				AML	AML	03 03 27.8	
	105nm,0.5s						
PHP	Peshkopia	0.67	72	P	Pg	03 03 13.1	-0.5
PHP				S	Sg	03 03 21.3	-1.3
DRME	Dracevica, Mon	0.77	337	*e*Pg	Pn	03 03 16.6	0.0
DRME	Dracevica, Mon	0.77	337	⇑*i* Pg	Pn	03 03 16.3	-0.3
DRME				*i* Sg	Sn	03 03 28.7	+0.8
BUM	Brajici-Budva	0.97	328	⇓*i* Pg	Pn	03 03 20.4	+0.9
BUM				*i* Sg	Sn	03 03 35.4	+2.4
OHR	Ohrid	0.98	111	*i* Pg	Pb	03 03 19.1	0.0
OHR				*i* Sg	Sn	03 03 33.8	+0.7
OHR				*e*Lg	Lg	03 03 34.1	
	comp=N,7μm,0.8s						
OHR				*e*Lg	Lg	03 03 36.9	
	comp=E,7μm,0.9s						
PDG	Podgorica	0.98	345	Pg	Pn	03 03 20.6	+1.0
PDG				Sg	Sn	03 03 35.5	+2.4
PDG				AML	AML	03 03 37.9	
	comp=E,98μm,0.4s						
PDG	Podgorica	0.98	345		Pn	03 03 19.9	+0.3
PDG				Sn	Sn	03 03 35.0	+1.9
PDG	Podgorica	0.98	345	⇓P	Pn	03 03 20.8	+1.2
PDG	Podgorica	0.98	345	*e*Pg	Pn	03 03 20.6	+1.0
PDG				*e*Sg	Sn	03 03 36.6	+3.5
PDG	Podgorica	0.98	345	⇑*i* Pg	Pn	03 03 19.5	-0.1
PDG				*i* Sg	Sn	03 03 34.5	+1.4
VLO	Vlora	1.01	184	Pg	Pn	03 03 21.5	+1.7
VLO				Sg	Sn	03 03 38.4	+4.7
VLO				AML	AML	03 03 41.3	
	comp=E,42nm,0.3s						
VLO	Vlora	1.01	184	P	Pn	03 03 21.4	+1.5
VLO				S	Sn	03 03 38.0	+4.3
PVY	Plav	1.15	14	⇓*i* Pg	Pg	03 03 22.2	-0.5
PVY				*i* Sg	Sn	03 03 39.5	+2.1
CEME	Cevo	1.18	335	⇓*i* Pg	Pg	03 03 23.5	+0.2
CEME				*i* Sg	Sn	03 03 40.8	+2.7
KBN	Korca	1.24	133	Pn	Pg	03 03 24.7	+0.3
KBN				Sn	Sg	03 03 41.9	+1.2
KBN	Korca	1.24	133	P	Pg	03 03 24.5	+0.1
KBN				S	Sg	03 03 42.4	+1.7
HCY	Herceg Novi	1.27	320	⇑*i* Pg	Pg	03 03 26.0	+1.0
HCY				*i* Sg	Sg	03 03 45.8	+4.3
KOME	Kolasin	1.37	358	*e*Pg	Pg	03 03 27.6	+0.6
KOME	Kolasin	1.37	358	⇑*i* Pg	Pg	03 03 28.7	+1.7
KOME				*i* Sg	Sg	03 03 47.4	+2.5
NKME	Niksic	1.37	340	⇓*i* Pg	Pg	03 03 26.4	-0.6
NKME				*i* Sg	Sg	03 03 47.1	+2.2
IVA	Berane	1.41	9	⇑*i* Pg	Pg	03 03 27.4	-0.3
IVA				*i* Sg	Sg	03 03 47.8	+1.7
SKO	Skopje	1.47	70	*i* Pg	Pb	03 03 27.7	+0.3
SKO				*i* Sg	Sg	03 03 48.5	+0.6
NEST	Nestorio	1.53	133	Pn	Pg	03 03 29.4	-0.5
NEST				Sn	Sg	03 03 49.9	0.0
NEST				AML	AML	03 03 56.1	
	comp=E,15nm,0.5s						
NEST	Nestorio	1.53	133	P	Pg	03 03 29.3	-0.7
NEST				S	Sg	03 03 49.9	0.0
TREB	Trebinje	1.55	324	*e*Pn	Pg	03 03 29.3	-0.9
TREB				*e*Sn	Sg	03 03 49.1	-1.2
BRY	Bratogost	1.62	332	⇓*i* Pn	Pg	03 03 30.5	-1.2
BRY				*i* Sn	Sg	03 03 54.2	+1.3
PENT	Pentalofos	1.74	137	P	Pb	03 03 32.2	+0.3
KEK	Kerkira	1.77	175	P	Pg	03 03 35.6	+1.1
KEK	Kerkira	1.77	175	Pn	Pn	03 03 29.8	-0.6
UPM	Unac-Piva	1.80	344	⇓*i* Pn	Pg	03 03 33.8	-1.3
UPM				*i* Sn	Sg	03 03 58.3	-0.2
SJES	Sjenica	1.81	9	*e*Pn	Pg	03 03 34.1	-1.1
KLNJ	Klinje	1.85	337	*e*Pn	Sn	03 03 33.5	-0.1
KLINJ				*e*Sn	Sb	03 03 57.6	+0.8
PLE	Pljevlja	1.86	355	⇓*i* Pn	Pn	03 03 32.5	+0.8
PLE				*i* Sn	Sb	03 03 57.5	+0.4
IGT	Igoumenitsa	2.02	164	Pn	Pg	03 03 38.7	-0.6
IGT				Sn	Sn	03 03 59.5	+0.8
IGT	Igoumenitsa	2.02	164	P	Pn	03 03 35.0	+1.2
KZN	Kozani	2.02	125	P	Pn	03 03 35.3	+1.4
NOCI	Noci	2.03	251	Pn	Pn	03 03 34.7	+0.8
NOCI				AML	AML	03 04 16.2	
	comp=E,14nm,0.5s						
SELS	Selova	2.08	33	*e*Pn	Pb	03 03 36.4	-1.4
SELS				*e*Sn	Sb	03 04 03.1	-0.2
IVAS	Ivanjica	2.14	11	*e*Pn	Pb	03 03 37.3	-1.5
RUDO	Rudo	2.15	356	*e*Pn	Pb	03 03 37.9	-1.0
RUDO				*e*Sn	Sb	03 04 05.0	-0.3
VAY	Valandovo	2.25	93	*i* Pn	Pn	03 03 38.0	+1.1
VAY				*i* Sn	Sb	03 04 08.9	+0.8
VAY				*e*Lg	Lg	03 04 14.9	
	comp=N,1μm,0.7s						
VAY				*e*Lg	Lg	03 04 18.3	
	comp=E,1μm,0.9s						
PRMD	Pramanda	2.26	149	P	Pn	03 03 38.7	+1.5
GOCS	Kraljevo Serbi	2.29	24	*e*Pn	Pn	03 03 39.4	+1.8
GOCS				*e*Sn	Sb	03 04 08.5	-1.0
MATE	Matera	2.33	250	⇑P	Pn	03 03 37.4	-0.6
BBLS	Lazi&#263i	2.39	357	*e*Pn	Pb	03 03 41.5	-1.6
BBLS				*e*Sn	Sb	03 04 12.5	+0.1
TETR	Tetrakomo, Epi	2.49	148	P	Pn	03 03 41.3	+1.0
KNT	Kendrikon	2.51	96	P	Pn	03 03 40.9	+0.3
GRUS	Gruzan	2.55	119	*e*Pn	Pn	03 03 43.2	+2.1
LIT	Litokhoron	2.59	121	P	Pn	03 03 42.0	+1.2
LIT	Litokhoron	2.59	121	Pn	Pn	03 03 41.6	-0.1
DIVS	Divibare	2.64	6	*e*Pn	Pn	03 03 43.9	+1.5
DIVS				*e*Sn	Sn	03 04 15.9	+1.9
THL	Klokotos Trika	2.66	135	P	Pn	03 03 44.0	+1.4
BOVS	Bovan	2.66	35	⇓P	Pn	03 03 44.4	+1.8
BOVS	Bovan	2.66	35	*e*Pn	Pn	03 03 44.4	+1.8
BOVS				*e*Sn	Sn	03 04 15.8	+1.3
TYRN	Tyrnavos	2.67	130	P	Pn	03 03 44.1	+1.3
KKB	Krupnik	2.68	81	P	Pn	03 03 44.0	+1.1
KKB	Krupnik	2.68	81	*i* Pn	Pn	03 03 44.2	+1.3
KKB				*i* Sn	Sn	03 04 16.0	+1.1
THE	Thessaloniki	2.69	107	*i* Pn	Pn	03 03 43.0	0.0
THE				*i* Sn	Sn	03 04 15.6	+0.5
TSLK	Tsoukalades, L	2.77	163	P	Pn	03 03 44.8	+0.6
HORT	Hortiatis	2.79	107	P	Pn	03 03 45.0	+0.4
LKD2	Lefkada island	2.81	163	P	Pn	03 03 45.0	+0.3
TRUS	Trudelj	2.81	12	*e*Pn	Pn	03 03 46.6	+1.9
AMPL	Ampelaki	2.84	154	P	Pn	03 03 46.2	+1.2
ACER	Acerenza	2.84	257	Pn	Pn	03 03 46.0	+0.8
ZAPS	Zavoj	2.88	50	*e*Pn	Pn	03 03 47.5	+1.8
ZAPS				*e*Sn	Sn	03 04 22.1	+2.1
NYDR	Nydri-Lefkada	2.89	163	P	Pn	03 03 45.9	+0.2
SGRT	San Giovanni R	2.90	277	Pn	Pn	03 03 45.6	-0.3
SOH	Sokhos	2.92	102	P	Pn	03 03 47.0	+0.9
VTS	Vitosha	2.94	66	P	Pn	03 03 47.8	+1.2
VTS	Vitosha	2.94	66	*e*Pn	Pn	03 03 48.1	+1.5
EVGI	Lefkada island	2.97	164	P	Pn	03 03 46.9	+0.1
SVIS	Svilajnac	3.03	23	*e*Pn	Pn	03 03 50.2	+2.5
SRS	Serrai	3.04	95	P	Pn	03 03 48.4	+0.6
SRS	Serrai	3.04	95	*i* Pn	Pn	03 03 48.9	+1.1
ZAGS	Zajecar	3.04	39	*e*Pn	Pn	03 03 49.4	+1.6
ZAGS				*e*Sn	Sn	03 04 26.1	+2.3
EVR	Evrytania	3.07	146	P	Pn	03 03 50.5	+2.2
TEKS	Tekeris	3.07	359	*e*Pn	Pn	03 03 49.8	+1.5
FSK	Fiskardo	3.10	166	P	Pn	03 03 48.0	-0.7
MMB	Musomishta	3.12	87	P	Pn	03 03 50.1	+1.1
MMB	Musomishta	3.12	87	*i* Pn	Pn	03 03 49.9	+0.9
BLKB	Belogradchik	3.13	46	*e*Pn	Pn	03 03 51.5	+2.4
BLKB				*e*Sn	Sn	03 04 28.7	+2.6
MAKR	Makrakomi, Fth	3.14	141	P	Pn	03 03 50.6	+1.4
AST1	Astakos	3.15	158	P	Pn	03 03 49.7	+0.5
TIP	Timpagrande	3.15	224	Pn	Pn	03 03 49.5	0.0
TIP	Timpagrande	3.15	224	⇓P	Pn	03 03 49.7	+0.2
BORS2	Bor- Borsko je	3.17	34	*e*Pn	Pn	03 03 49.6	+0.1
BORS2				*e*Sn	Sn	03 04 26.8	-0.1
PVO	Paravola	3.22	152	P	Pn	03 03 51.4	+1.1
AGG	Agios Georgios	3.23	139	P	Pn	03 03 51.6	+1.2
CUC	Castrocucco	3.23	244	Pn	Pn	03 03 51.4	+0.9
AVAS	Avala Beograd	3.29	12	*e*Pn	Pn	03 03 52.2	+1.0
AVAS				*e*Sn	Sn	03 04 31.1	+1.1
DMLN	Damoulianata-K	3.29	169	P	Pn	03 03 50.1	-1.2
KUBS	Kucevo	3.31	27	*e*Pn	Pn	03 03 51.6	+0.1
VLS	Valsamata	3.38	167	P	Pn	03 03 51.8	-0.7
ANX	Ano Chora	3.39	147	P	Pn	03 03 54.6	+1.9
RTZL	Ratzakli, Kefa	3.52	165	P	Pn	03 03 54.4	0.0
OUR	Ouranopolis	3.52	107	P	Pn	03 03 54.6	+0.3
EFP	Efpalio	3.53	149	P	Pn	03 03 55.5	+1.0
AXAR	Agios Charalam	3.59	138	P	Pn	03 03 55.9	+0.5
MDVR	Moldovita	3.65	24	⇑P	Pn	03 03 57.5	+1.3
MDVR	Moldovita	3.65	24	*e*Pn	Pn	03 03 57.4	+1.1
KALE	Kalithea	3.65	147	P	Pn	03 03 57.4	+1.1
RLS	Riolos of Patr	3.71	156	P	Pn	03 03 57.4	+0.5
BLY	Banja Luka	3.71	332	*e*Pn	Pn	03 03 58.9	+1.8
BLY				*e*Sn	Sn	03 04 42.5	+2.0
PUNG	Punghina	3.72	40	⇑P	Pn	03 03 58.8	+1.6
PUNG	Punghina	3.72	40	*e*Pn	Pn	03 03 58.9	+1.7
KAVA	Kavala	3.74	96	P	Pn	03 03 58.2	+0.7
ATAL	Atalanti	3.83	135	P	Pn	03 03 59.4	+0.8
DJES	Djerdap	3.84	33	⇑P	Pn	03 04 00.3	+1.5
LKR	Lokris	3.85	136	P	Pn	03 03 59.4	+0.5
VRSS	Vrsac	3.86	19	*e*Pn	Pn	03 04 00.1	+1.0
RZN	Rozhen	3.87	85	P	Pn	03 04 00.8	+1.4
DRO	Drossia	3.88	154	P	Pn	03 03 59.9	+0.5
PLD	Plovdiv	3.91	78	P	Pn	03 04 01.3	+1.5
PLD	Plovdiv	3.91	78	*i* Pn	Pn	03 04 01.1	+1.3
PLD	Plovdiv	3.91	78	*e*Pn	Pn	03 04 01.4	+1.6
KLV	Kalavryta, Ach	3.96	149	P	Pn	03 04 01.3	+0.9
HERR	Herculane	3.98	30	⇑P	Pn	03 04 02.2	+1.4
SRE	Strehaia	4.14	39	⇑P	Pn	03 04 04.5	+1.6
CEL	Celeste	4.29	223	Pn	Pn	03 04 04.4	-0.7
KDZ	Kurdzhali	4.32	86	P	Pn	03 04 06.8	+1.4
LTK	Loutraki	4.32	142	P	Pn	03 04 05.4	-0.1
BZS	Buzias	4.39	19	⇑P	Pn	03 04 07.9	+1.5
KYMI	Kymi, Euboea I	4.48	128	P	Pn	03 04 08.5	+1.0
STFN	Stefani	4.49	136	P	Pn	03 04 08.3	+0.6
RDO	Rodhopi	4.49	92	P	Pn	03 04 08.7	+1.0
RDO	Rodhopi	4.49	92	Pn	Pn	03 04 08.2	+0.5
LIA	Limnos Island	4.53	109	P	Pn	03 04 08.6	+0.2
GZR	Gura Zlata	4.55	30	⇑P	Pn	03 04 10.2	+1.6
SKY	Skiros Island	4.60	123	P	Pn	03 04 10.1	+0.8
SURR	Surduc	4.65	22	⇑P	Pn	03 04 11.3	+1.3
ITM	Ithomi	4.66	156	Pn	Pn	03 04 10.3	+0.2
AQU	L'Aquila	4.70	283	*e*Pn	Pn	03 04 11.8	+1.1
AQU				*e*Sn	Sn	03 05 03.9	-1.0
CAMP	Campotosto	4.73	285	Pn	Pn	03 04 12.1	+1.0
PTL	Penteli	4.75	135	P	Pn	03 04 11.8	+0.4
DION	Dionisos Attik	4.76	134	P	Pn	03 04 12.3	+0.7
ATHU	Athens Univers	4.77	136	P	Pn	03 04 11.7	+0.2
MORH	Mrgy, Hungar	4.79	352	⇑*i* Pn	Pn	03 04 13.0	+1.2
MORH				*e*Sn	Sn	03 05 08.8	+2.0
MORH	Mrgy, Hungar	4.79	352	*e*Pn	Pn	03 04 13.2	+1.4
GUMA	Gualdo di Mace	4.91	291	Pn	Pn	03 04 14.4	+0.9
HUMR	Humele	4.99	51	⇑P	Pn	03 04 16.2	+1.5
LOT	Lotru	5.00	36	⇓P	Pn	03 04 16.4	+1.5
NRCA	Norcia	5.00	288	Pn	Pn	03 04 16.0	+1.2
DEV	Deva	5.02	27	⇑P	Pn	03 04 17.9	+3.0
SIRR	Siria	5.02	17	*e*Pn	Pn	03 04 17.2	+2.2
SIRR				*e*Sn	Sn	03 05 13.0	+0.4
FDMO	Fiordimonte	5.07	290	Pn	Pn	03 04 16.9	+1.1
BOJS	Bojanci	5.12	323	*e*Sn	Sn	03 05 14.0	-1.0
CESX	Cesi	5.34	285	Pn	Pn	03 04 20.4	+0.9
RIY	Rijeka	5.35	318	*e*Pn	Pn	03 04 21.0	+1.4
RIY				*e*Sn	Sn	03 05 19.7	-1.1
EZN	Ezine	5.38	106	⇓P	Pn	03 04 22.1	+2.2
BEHE	Becsehely	5.39	339	Pn	Pn	03 04 21.1	+1.0
BEHE	Becsehely	5.39	339	*e*Sn	Sn	03 05 22.0	+0.3
SGRR	Singureni	5.44	58	⇑P	Pn	03 04 22.5	+1.8
MTUR	Matau	5.47	45	⇑P	Pn	03 04 23.3	+2.0
LOZB	Loznitsa	5.52	68	⇑P	Pn	03 04 22.8	+0.9
RAZG	Razgrad	5.52	65	⇑P	Pn	03 04 23.5	+1.5
MURB	Monte Urbino	5.53	291	Pn	Pn	03 04 23.7	+1.6
VOIR		5.61	43	⇑P	Pn	03 04 26.0	+2.8
CEY	Cerknica	5.67	320	*e*Pn	Pn	03 04 26.0	+2.0
CEY				*e*Sn	Sn	03 05 29.9	+1.1
SULR		5.83	55	⇑P	Pn	03 04 27.2	+1.0
LJU	Ljubljana	5.86	323	*e*Pn	Pn	03 04 28.3	+1.8
RAFF	Raffo Rosso	5.87	225	Pn	Pn	03 04 25.3	-1.5
TRI	Trieste	5.98	317	Pn	Pn	03 04 28.2	0.0
CBBR	Cluj-Babes-Bol	6.01	27	⇓P	Pn	03 04 31.4	+2.8
LEHL	Lehliu	6.09	58	⇑P	Pn	03 04 30.7	+1.1

BORK						IAmb	IAmb	03 10 57.4	
	comp=Z,85nm,1.6s								
BVAR	**Borovoye Array**	**35.64**	**53**	P		**P**		**03 09 58.4**	**+1.1**
	comp=Z,8.6nm,0.8s,baz=291,slow=7.0,SNR=5.5								
	comp=Z,8.6nm,0.8s								
KURBB	**Kurchatov Arra**	**40.92**	**56**	P		**P**		**03 10 40.8**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=291,slow=9.1,SNR=7.5								
	comp=Z,1.9nm,0.8s								
KURK	**Kurchatov**	**40.96**	**56**	P		**P**		**03 10 41.6**	**-0.5**
ZAA0	**Zalesovo Array**	**44.08**	**50**	P		**P**		**03 11 06.3**	**-1.1**
ZALV	**Zalesovo Beam**	**44.08**	**50**	P		**P**		**03 11 06.7**	**-0.7**
	comp=Z,13nm,0.7s,baz=281,slow=7.3,SNR=13								
	comp=Z,13nm,0.7s								
ZALV	**Zalesovo Beam**	**44.08**	**50**	P		**P**		**03 11 06.5**	**-0.9**
MKAR	**Makanchi Array**	**44.26**	**61**	P		**P**		**03 11 08.3**	**-0.7**
	comp=Z,6.7nm,0.6s,baz=299,slow=5.9,SNR=16								
	comp=Z,6.7nm,0.6s								
WMQ	**Urumqi**	**48.84**	**63**	*e*P		**P**		**03 11 46.3**	**+1.3**
WMQ				pmax		pmax			
	comp=Z,30nm,1.1s								
HYBB	**Hyderabad (bro**	**55.51**	**97**	*e*P		**P**		**03 12 34.6**	**-0.3**
SCHQ	**Schefferville**	**55.58**	**316**	P		**P**		**03 12 34.3**	**-0.5**
	comp=Z,7.0nm,1.0s,baz=83,slow=16,SNR=2.2								
	comp=Z,7.0nm,1.0s								
SONM	**Songino Array**	**58.95**	**52**	P		**P**		**03 12 58.2**	**-0.7**
	comp=Z,7.1nm,0.8s,baz=290,slow=8.1,SNR=9.2								
	comp=Z,7.1nm,0.8s								
LZDM	**Lanzhou Array**	**63.36**	**65**	P		**P**		**03 13 28.4**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=282,slow=2.7,SNR=2.1								
	comp=Z,1.2nm,0.3s								
LZH	**Lanzhou**	**63.39**	**64**	*e*P		**P**		**03 13 28.3**	**-0.9**
LZH				pP		pP		03 13 34.0	-0.6
LZH				pmax		pmax			
	comp=Z,25nm,1.4s								
BTO	**Baotou**	**64.94**	**57**	*e*P		P		03 13 33.5	-5.8
BTO				PP		**PP**		**03 16 01.3**	**-0.5**
BTO				S		S		03 22 10.5	-10
BTO				pmax		pmax			
	comp=Z,17nm,0.5s								
BTO				pmax		pmax			
	comp=Z,3µm,5.2s								
BTO				LR		LR			
	comp=N,19µm,13.1s								
BTO				LR		LR			
	comp=E,40µm,14.4s								
BTO				LR		LR			
	comp=Z,34µm,15.3s								
HHC	**Hu-ho-hao-te**	**65.78**	**56**	*e*P		**P**		**03 13 44.8**	**+0.1**
HHC				pmax		pmax			
	comp=Z,15nm,0.5s								
L59A	**Walton**	**66.65**	**306**	P		**P**		**03 13 50.5**	**+0.3**
PZH	**PanZhiHua**	**67.37**	**74**	P		**P**		**03 13 56.8**	**+1.7**
F31M	**Tsiigehtchic**	**69.53**	**349**	P		**P**		**03 14 07.2**	**-0.6**
BOSA	**Boshof**	**69.94**	**175**	P		**P**		**03 14 10.3**	**-0.4**
	comp=Z,3.3nm,1.0s,baz=6.0,slow=9.3,SNR=3.8								
	comp=Z,3.3nm,1.0s								
BOSA	**Boshof**	**69.94**	**175**	P		**P**		**03 14 10.3**	**-0.4**
BOSA				IAmb		IAmb		03 14 49.5	
	comp=Z,41nm,1.7s								
G31M	**Satah River**	**70.09**	**349**	P		**P**		**03 14 10.5**	**-0.7**
G31M				IAmb		IAmb		03 15 15.6	
	comp=Z,46nm,1.5s								
Q56A	**Snyder Ridge,**	**71.06**	**306**	P		**P**		**03 14 18.1**	**+0.5**
Q56A				IAmb		IAmb		03 15 06.7	
	comp=Z,73nm,1.9s								
CN2	**Changchun**	**72.16**	**47**	P		**P**		**03 14 23.3**	**-0.8**
IL31		**73.56**	**354**	P		**P**		**03 14 32.3**	**+0.3**
IL31				IAmb		IAmb		03 17 05.3	
	comp=Z,39nm,2.0s								
ILAR	**Eielson Array**	**73.56**	**354**	P		**P**		**03 14 31.3**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=20,slow=2.9,SNR=1.8								
	comp=Z,0.7nm,0.8s								
ILAR	**Eielson Array**	**73.56**	**354**	P		**P**		**03 14 32.5**	**+0.4**
PPLA	**Purkeypile**	**75.77**	**356**	P		**P**		**03 14 45.2**	**+0.2**
PPLA				IAmb		IAmb		03 15 47.2	
	comp=Z,86nm,1.8s								
KSRS	**Korea Array**	**77.79**	**51**	P		**P**		**03 14 54.6**	**-2.2**
	comp=Z,2.0nm,0.7s,baz=318,slow=5.4,SNR=4.9								
	comp=Z,2.0nm,0.7s								

*IDC **26** 03:09:54.7±7.6,41°.86N×19°.52E,h0km,mb4.0/4, mbtmp3.6/7,ML2.3/3,Error ellipse: s-maj=147.6km s-min=19.0km az=35.0*
*NEIC **26** 03:09:58.0±1.4,41°.83N±0°.05×20°.00E±0°.07,h10km±1km, mb4.3/7,Error ellipse: s-maj=11.7km s-min=5.3km az=44.0*
ISC 26 03:09:57.5±1.1,**41°.85N**±0°.08×**19°.82E**±0°.08,**h11**km,**n24,** σ1§**71**/**24**,**mb4.2**/**5**,**Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.72**	**325**	Pg		**Pn**	**03 10 13.5**	**-0.1**
PDG				Sg		**Sn**	**03 10 25.2**	**+0.6**
KEK	**Kerkira**	**2.13**	**180**	Pn		**Pn**	**03 10 33.6**	**+0.6**
LIT	**Litokhoron**	**2.67**	**130**	Pn		**Pn**	**03 10 38.8**	**-1.7**
SGRT	**San Giovanni R**	**3.05**	**270**	Pn		**Pn**	**03 10 47.7**	**+2.0**
MLR	**Muntele Rosu**	**5.75**	**49**	Pn		**Pn**	**03 11 23.0**	**+0.2**
TRI	**Trieste**	**5.84**	**313**	Pn		**Pn**	**03 11 26.0**	**+2.0**
SABO	**M.te Sabotino**	**6.10**	**315**	Pn		**Pn**	**03 11 28.6**	**+1.0**
KECS	**Kecovo**	**6.65**	**4**	*e*PN		Pn	03 11 40.7	+5.6
KECS				*e*SN		**Sn**	**03 12 54.6**	**+3.7**
GERES	**GERESS Array B**	**8.21**	**330**	Pn		**Pn**	**03 11 55.4**	**-1.3**
	baz=126,slow=13,SNR=1.4							
	0.3nm,0.4s							
BRTR	**Keskin Array B**	**10.70**	**97**	Pn		**Pn**	**03 12 34.8**	**+4.1**
	baz=18,slow=6.4,SNR=1.0							
	0.3nm,0.6s							
BRTR	**Keskin Array B**	**10.70**	**97**			**Pn**	**03 12 29.0**	**-1.7**
NOA	**NORSAR Array B**	**19.92**	**348**	P		**P**	**03 14 25.9**	**-3.2**
	baz=163,slow=11,SNR=1.5							
	0.5nm,0.8s							
FINES	**FINESS Array B**	**19.99**	**9**	P		**P**	**03 14 30.0**	**+0.3**
	2.3nm,0.6s,baz=182,slow=9.7,SNR=6.5							
	2.3nm,0.6s							
FINES	**FINESS Array B**	**19.99**	**9**	P		**P**	**03 14 30.1**	**+0.4**
FIA1	**FINESS Array S**	**19.99**	**9**	P		**P**	**03 14 30.0**	**+0.3**
FIA1				IAmb		IAmb	03 14 39.2	
	comp=Z,19nm,1.4s							
NC303	**NORSAR Array S**	**20.07**	**348**	P		**Pn**	**03 14 32.4**	**0.0**
NC303				IAmb		IAmb	03 14 37.6	
	comp=Z,10nm,1.2s							
EKB	**Eskdalemuir**	**20.21**	**320**	P		Pn	03 14 36.2	+2.1
EKB				IAmb		IAmb	03 14 46.0	
	comp=Z,30nm,1.5s							
ARTI	**Arti**	**28.68**	**46**	P		**P**	**03 15 53.2**	**-1.0**
ARTI				IAmb		IAmb	03 15 53.9	
	comp=Z,5.1nm,0.5s							
BORK	**Borovoye**	**35.24**	**54**	P		**P**	**03 16 51.1**	**-0.7**
BVAR	**Borovoye Array**	**35.28**	**54**	P		**P**	**03 16 52.6**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=270,slow=4.3,SNR=3.7							
	comp=Z,1.3nm,0.7s							
ZAA0	**Zalesovo Array**	**43.72**	**51**	P		**P**	**03 18 02.3**	**-0.1**
ZAA0				IAmb		IAmb	03 18 23.7	
	comp=Z,6.9nm,1.4s							
ZALV	**Zalesovo Beam**	**43.72**	**51**	P		**P**	**03 18 01.8**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=288,slow=9.1,SNR=8.0							
	comp=Z,2.5nm,0.6s							
MKAR	**Makanchi Array**	**43.93**	**61**	P		**P**	**03 18 03.4**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=288,slow=7.5,SNR=7.9							
	comp=Z,1.5nm,0.6s							
MKAR	**Makanchi Array**	**43.93**	**61**	P		**P**	**03 18 03.1**	**-1.1**

*IDC **26** 03:13:21.7±3.1,41°.28N×18°.56E,h0km,mb3.8/4, mbtmp3.8/7,ML3.7/2,Error ellipse: s-maj=48.4km s-min=32.1km az=68.0*
ISC 26 03:13:24.5±1.9,**41°.26N**±0°.09×**19°.0E**±0°.2,**h10**km,**n7,** σ2§**70**/**8**,**mb4.2**/**3**,**Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**6.61**	**48**	Pn		**Pn**	**03 15 04.6**	**+2.8**
	1.4nm,0.3s,baz=301,slow=7.8,SNR=6.0							
MLR				Sn		**Sn**	**03 16 14.6**	**-2.7**
	0.6nm,0.3s,baz=58,slow=19,SNR=2.0							
	4.9nm,0.5s							
IDI	**Anoyia**	**7.57**	**140**	Pn		**Pn**	**03 15 16.1**	**+1.2**
	14nm,1.0s,baz=319,slow=9.3,SNR=2.0							
IDI				Sn		**Sn**	**03 16 37.9**	**-2.9**
	0.7nm,0.3s,baz=180,slow=14,SNR=1.7							
HFS	**Hagfors**	**19.18**	**352**	P		**P**	**03 17 44.8**	**-3.1**
	0.1nm,0.3s,baz=153,slow=13,SNR=4.7							
	0.9nm,0.5s							
FINES	**FINESS Array B**	**20.67**	**10**	P		Pn	03 18 04.3	-2.1
	0.5nm,0.3s,baz=188,slow=10.0,SNR=5.4							
	0.5nm,0.3s							
KURBB	**Kurchatov Arra**	**41.43**	**56**	P		**P**	**03 21 12.0**	**+1.0**
	0.5nm,0.9s,baz=287,slow=9.6,SNR=1.9							
	0.5nm,0.9s							
ZALV	**Zalesovo Beam**	**44.58**	**50**	P		**P**	**03 21 37.1**	**+0.6**
	1.8nm,0.3s,baz=286,slow=8.8,SNR=8.2							
	1.8nm,0.3s							
MKAR	**Makanchi Array**	**44.77**	**61**	P		**P**	**03 21 38.5**	**+0.4**
	1.7nm,0.6s,baz=286,slow=7.5,SNR=14							
	1.7nm,0.6s							

*BUT **26** 03:13:46.9±1.4,46°.25N±0°.02×111°.38W±0°.04,h5km±5km, Error ellipse: s-maj=4.2km s-min=2.2km az=52.0*
NEIC 26 03:13:46.5±1.4,**46°.23N**±0°.01×**111°.38W**±0°.03,**h5**km±2km, **ML2.5**/36,**ML2.8**/16(BUT),**Error ellipse: s-maj=4.0km s-min=2.9km az=72.0,Montana**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SXM	**Sixmile**	**0.14**	**126**			Pg	03 13 50.0	+0.5
HRY	**Holter Researc**	**0.57**	**327**			Pg	03 13 57.3	-0.2
BOZ	**Bozeman (W)**	**0.66**	**196**			Pg	03 13 59.5	+0.3
BOZ						Sb	03 14 09.1	-1.0
BZMT	**Bozeman Pass**	**0.71**	**145**			Pb	03 14 01.0	-0.5
BEMT	**Mount Belmont**	**0.84**	**308**			Pg	03 14 02.2	-0.3
BUT	**Butte**	**0.85**	**256**			Pg	03 14 03.1	+0.2
BUT						Sb	03 14 15.0	-0.8
LRM	**Limekiln Ridge**	**0.85**	**242**			Pg	03 14 03.1	+0.2
MSMT	**Mission Creek**	**0.93**	**130**			Pb	03 14 04.9	-0.4
HBMT	**Mount Humbug**	**0.96**	**243**			Pg	03 14 05.2	+0.2
LYMT	**Lyon Mountain**	**0.97**	**320**			Pg	03 14 04.9	-0.2
BGMT	**Barton Gulch**	**1.10**	**205**			Pg	03 14 07.8	+0.2
YMV	**Mammoth Vall**	**1.35**	**159**			Pb	03 14 13.2	+0.9
YHL	**Hebgen Lake**	**1.39**	**174**			Pn	03 14 12.8	0.0
YHL	**Hebgen Lake**	**1.39**	**174**	IAML			03 14 34.9	
	comp=N,68nm,0.5s							
YHL				IAML			03 14 35.7	
	comp=E,116nm,0.7s							
OVMT	**Ovando**	**1.39**	**307**			Pn	03 14 12.4	-0.3
QLMT	**Earthquake Lak**	**1.40**	**182**			Pn	03 14 12.5	-0.4
BPMT	**Black Pine Rid**	**1.45**	**279**			Pn	03 14 13.2	-0.4
GCR	**Grayling Creek**	**1.45**	**172**			Pg	03 14 14.2	-0.1
CHMT	**Chamberlain Mo**	**1.46**	**298**			Pn	03 14 13.9	+0.2
YHB	**Horse Butte**	**1.49**	**175**			Pn	03 14 13.9	-0.2
YHB				IAML			03 14 36.1	
	comp=N,81nm,0.6s							
YHB				IAML			03 14 42.0	
	comp=E,42nm,0.6s							
YHH	**Holmes Hill**	**1.49**	**165**			Pb	03 14 14.7	-0.1
YMC	**Maple Creek**	**1.50**	**170**			Pb	03 14 14.7	-0.1
TPMT	**Tepee Creek**	**1.52**	**188**			Pg	03 14 16.1	+0.6
YPDC	**Denny Creek**	**1.53**	**176**			Pb	03 14 15.5	+0.1
YNE	**Yellowstone No**	**1.56**	**141**			Pb	03 14 15.7	-0.2
YNE	**Yellowstone No**	**1.56**	**141**	IAML			03 14 39.6	
	comp=E,53nm,0.5s							
YNE				IAML			03 14 39.9	
	comp=N,71nm,0.3s							
YNM	**Yellowstone No**	**1.58**	**162**			Pn	03 14 15.5	+0.1
YNM				IAML			03 15 12.4	
	comp=E,87nm,0.1s							
YMR	**Madison River**	**1.59**	**169**			Pb	03 14 16.1	-0.4
YMR	**Madison River**	**1.59**	**169**	IAML			03 14 41.7	
	comp=E,69nm,1.1s							
YMR				IAML			03 14 47.7	
	comp=N,53nm,0.9s							
YNR	**Norris Junctio**	**1.59**	**162**			Pb	03 14 16.1	-0.4
YNR				IAML			03 14 25.9	
	comp=E,39nm,0.3s							
YPSB	**Soda Butte**	**1.60**	**147**			Pn	03 14 16.1	+0.5
YUF	**Upper Falls**	**1.64**	**158**			Pg	03 14 18.2	+0.3
YPWB	**West Boundary**	**1.64**	**173**			Pb	03 14 17.0	-0.4
CMI	**Centennial Mou**	**1.72**	**186**			Pn	03 14 17.8	+0.6
YMP	**Mirror Lake Pl**	**1.72**	**150**			Pn	03 14 17.1	-0.3
YMP				IAML			03 14 45.2	
	comp=E,45nm,0.3s							
YMP				IAML			03 14 50.6	
	comp=N,39nm,0.4s							
MCMT	**McKenzie Canyo**	**1.75**	**217**			Pn	03 14 17.4	-0.3
MOMT	**Monida**	**1.79**	**204**			Pb	03 14 19.3	-0.6
LKWY	**Lake**	**1.80**	**157**			Pn	03 14 18.7	+0.2
LKWY				IAML			03 14 28.7	
	comp=N,37nm,0.5s							
YPK	**Parker Peak, Y**	**1.82**	**145**			Pn	03 14 19.4	+0.7
YFT	**Old Faithful**	**1.82**	**168**	Pn		Pn	03 14 18.8	+0.1
RLMT	**Red Lodge**	**1.85**	**126**			Pb	03 14 20.6	-0.2
MSO	**Missoula**	**1.87**	**290**			Pn	03 14 18.4	-0.8
MSO				IAML			03 14 47.8	
	comp=N,60nm,0.4s							
MSO				IAML			03 14 48.0	
	comp=N,54nm,0.2s							
VCMT	**Victor**	**1.96**	**277**			Pb	03 14 23.0	+0.3
YPP	**Pitchstone Pla**	**2.00**	**168**	Pn		Pn	03 14 21.2	0.0
MCID	**Moose Creek**	**2.05**	**176**			Pn	03 14 22.2	+0.9
PCMT	**Pistol Creek**	**2.07**	**299**			Pb	03 14 24.4	-0.3
EGMT	**Eagleton**	**2.11**	**31**			Pn	03 14 23.8	+1.3
SWMT	**Swartz Lake**	**2.21**	**306**			Pn	03 14 24.0	+0.1
ALMT	**Alberton, Mont**	**2.26**	**292**			Pn	03 14 25.5	+0.9
BCYI	**Bear Canyon**	**2.40**	**217**	Pn		Pn	03 14 26.7	+0.1
FBMT	**Ferry Basin**	**2.40**	**300**			Pn	03 14 27.1	+0.6
YBMT	**Yellow Bay**	**2.43**	**313**			Pn	03 14 28.1	+1.1
JTMT	**Jette**	**2.50**	**308**			Pn	03 14 27.6	-0.3
NDMT	**Ninemile Divid**	**2.57**	**295**			Pn	03 14 28.6	-0.4
LOHW	**Long Hollow**	**2.68**	**168**	Pn		Pn	03 14 31.0	+0.6
LOHW				IAML			03 14 52.0	
	comp=N,14nm,4.7s							
HLID	**Hailey**	**3.43**	**220**	Pn		Pn	03 14 41.4	+0.6
HLID				IAML			03 15 38.3	
	comp=N,11nm,0.3s							
HLID				IAML			03 15 41.6	
	comp=N,16nm,0.8s							
F10A	**Beach Ranch, E**	**4.08**	**268**	Pn		Pn	03 14 50.4	+0.8
MFID	**Camas Ranch**	**4.24**	**230**	Pn		Pn	03 14 53.1	+1.3

*IDC **26** 03:16:45.7±2.6,41°.44N×19°.41E,h0km,mb3.8/6, mbtmp3.8/10,ML3.2/4,Error ellipse: s-maj=42.9km s-min=18.5km az=24.0*
*SKO **26** 03:16:47.9,41°.47N×19°.25E,h14km,ML3.7*
*BEO **26** 03:16:51.3±0.9,41°.54N×19°.59E,h12km±4km,ML3.4/11*
ISC 26 03:16:49.4±1.3,**41°.54N**±0°.04×**19°.45E**±0°.03,**h11**km±9km, **n93,**σ1§**54**/108,**mb4.1**/**4**,**17C-12D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.91**	**351**	⇑P		**Pg**	**03 17 06.6**	**-0.2**
PDG	**Podgorica**	**0.91**	**351**	*e*Pg		**Pg**	**03 17 06.7**	**-0.1**
PDG				*e*Sg		**Sn**	**03 17 21.2**	**+0.1**
OHR	**Ohrid**	**1.10**	**112**	*i* Pg		**Pg**	**03 17 09.7**	**-0.8**
OHR				*i* Sg		**Sb**	**03 17 26.8**	**+2.1**
OHR				*e*Lg		Lg	03 17 28.0	
	comp=N,2µm,0.5s							
OHR				*e*Lg		Lg	03 17 29.4	
	comp=E,3µm,1.0s							
PVY	**Plav**	**1.12**	**19**	*e*Pg		**Pn**	**03 17 13.1**	**+2.0**
BEY	**Berane**	**1.38**	**14**	*e*Pg		**Pb**	**03 17 15.5**	**+0.4**
TREB	**Trebinje**	**1.44**	**326**	*e*Pg		**Pg**	**03 17 16.8**	**-0.2**
SKO	**Skopje**	**1.55**	**73**	*i* Pg		**Pb**	**03 17 18.7**	**+0.6**
SKO				*i* Sg		**Sb**	**03 17 39.4**	**+1.7**
SJES	**Sjenica**	**1.77**	**12**	*e*Pg		**Pg**	**03 17 23.0**	**-0.3**
SJES				*e*Sg		**Sg**	**03 17 46.7**	**+0.5**
PLE	**Pljevlja**	**1.79**	**359**	*e*Pg		**Pg**	**03 17 24.3**	**+0.5**
STON	**Ston**	**1.86**	**316**	*e*Pn		**Pg**	**03 17 24.3**	**-0.8**
STON				*e*Sn		**Sg**	**03 17 49.0**	**-0.3**
RUDO	**Rudo**	**2.08**	**358**	*e*Pn		**Pb**	**03 17 27.0**	**-0.1**
SELS	**Selova**	**2.09**	**36**	*e*Pn		**Pn**	**03 17 24.0**	**-0.3**
IVAS	**Ivanjica**	**2.10**	**14**	*e*Pn		**Pn**	**03 17 26.4**	**+1.8**
IGT	**Igoumenitsa**	**2.11**	**161**	*i* Pn		**Pn**	**03 17 25.6**	**+1.0**
IGT				*i* Sn		**Sn**	**03 17 52.0**	**+1.3**
MATE	**Matera**	**2.26**	**248**	⇓P		**Pg**	**03 17 32.1**	**-0.5**
GOCS	**Kraljevo Serbi**	**2.28**	**27**	*e*Pn		**Pn**	**03 17 28.0**	**+1.0**
BBLS	**Lazi&#263i**	**2.33**	**359**	*e*Pn		**Pg**	**03 17 33.0**	**-1.0**
VAY	**Valandovo**	**2.35**	**94**	*i* Pn		**Pn**	**03 17 28.6**	**+0.7**
VAY				*i* Sn		**Sn**	**03 17 58.6**	**+1.8**
VAY				*e*Lg		Lg	03 17 59.7	
	comp=E,224nm,0.9s							
VAY				*e*Lg		Lg	03 17 59.7	
	comp=N,224nm,0.6s							
GRUS	**Gruza**	**2.53**	**21**	*e*Pn		**Pn**	**03 17 32.0**	**+1.7**
DIVS	**Divibare**	**2.59**	**9**	*e*Pn		**Pn**	**03 17 32.8**	**+1.5**
KNT	**Kendrikon**	**2.62**	**97**	*i* Pn		**Pn**	**03 17 33.8**	**+2.2**
BOVS	**Bovan**	**2.68**	**38**	⇑P		**Pn**	**03 17 33.6**	**+1.2**
BOVS	**Bovan**	**2.68**	**38**	*e*Pn		**Pn**	**03 17 32.9**	**+0.5**
LIT	**Litokhoron**	**2.71**	**121**	*i* Pn		**Pn**	**03 17 35.2**	**+2.3**
LIT				*i* Sn		**Sn**	**03 18 06.0**	**+0.3**
KKB	**Krupnik**	**2.77**	**82**	*i* Pn		**Pn**	**03 17 35.0**	**+1.4**
TRUS	**Trudelj**	**2.78**	**14**	*e*Pn		**Pn**	**03 17 36.7**	**+3.0**
THE	**Thessaloniki**	**2.81**	**108**	*i* Pn		**Pn**	**03 17 34.4**	**+0.3**
THE				*i* Sn		**Sn**	**03 18 07.8**	**0.0**
ZAPS	**Zavoj**	**2.93**	**53**	*e*Pn		**Pn**	**03 17 36.9**	**+1.1**
TEKS	**Tekeris**	**3.01**	**1**	*e*Pn		**Pn**	**03 17 37.3**	**+0.3**
VTS	**Vitosha**	**3.02**	**68**	*e*Pn		**Pn**	**03 17 38.3**	**+1.1**
ZAGS	**Zajecar**	**3.06**	**41**	*e*Pn		**Pn**	**03 17 38.6**	**+0.9**
SRS	**Serrai**	**3.15**	**96**	*i* Pn		**Pn**	**03 17 39.5**	**+0.7**
SRS				*i* Sn		**Sn**	**03 18 16.3**	**0.0**
BLKB	**Belogradchik**	**3.17**	**48**	*e*Pn		**Pn**	**03 17 40.6**	**+1.5**
BORS2	**Bor- Borsko je**	**3.18**	**36**	*e*Pn		**Pn**	**03 17 38.7**	**-0.5**
MMB	**Musomishta**	**3.23**	**88**	*i* Pn		**Pn**	**03 17 41.5**	**+1.5**
AVAS	**Avala Beograd**	**3.25**	**13**	*e*Pn		**Pn**	**03 17 40.9**	**+0.6**
KUBS	**Kucevo**	**3.31**	**29**	*e*Pn		**Pn**	**03 17 40.2**	**-0.8**
MDVR	**Moldovita**	**3.64**	**26**	⇑P		**Pn**	**03 17 45.8**	**+0.1**
MDVR	**Moldovita**	**3.64**	**26**	*e*Pn		**Pn**	**03 17 46.4**	**+0.7**
PUNG	**Punghina**	**3.75**	**42**	⇑P		**Pn**	**03 17 47.8**	**+0.7**
VRSS	**Vrsac**	**3.84**	**20**	*e*Pn		**Pn**	**03 17 48.3**	**0.0**
DJES	**Djerdap**	**3.85**	**35**	⇓P		**Pn**	**03 17 48.8**	**+0.3**
HERR	**Herculane**	**3.98**	**32**	⇑P		**Pn**	**03 17 51.5**	**+1.2**
PLD	**Plovdiv**	**4.00**	**79**	*i* Pn		**Pn**	**03 17 51.8**	**+1.2**
PLD	**Plovdiv**	**4.00**	**79**	*e*Pn		**Pn**	**03 17 51.4**	**+0.8**
SRE	**Strehaia**	**4.16**	**40**	⇑P		**Pn**	**03 17 53.3**	**+0.5**
PLVB	**Pleven**	**4.25**	**62**	⇑P		**Pn**	**03 17 55.4**	**+1.5**
BZS	**Buzias**	**4.37**	**20**	⇓P		**Pn**	**03 17 56.3**	**+0.6**
GZR	**Gura Zlata**	**4.55**	**31**	⇑P		**Pn**	**03 17 57.8**	**-0.4**
SURR	**Surduc**	**4.64**	**24**	⇓P		**Pn**	**03 17 59.6**	**+0.3**
MORH	**Mrgy, Hungar**	**4.71**	**353**	⇓P		**Pn**	**03 18 01.0**	**+0.7**
ELND	**Elena**	**4.97**	**72**	⇓P		**Pn**	**03 18 04.5**	**+0.7**
DEV	**Deva**	**5.01**	**29**	⇓P		**Pn**	**03 18 04.9**	**+0.4**
LOT	**Lotru**	**5.02**	**37**	⇓P		**Pn**	**03 18 05.6**	**+1.0**
HUMR	**Humele**	**5.04**	**52**	⇓P		**Pn**	**03 18 04.2**	**-0.6**
ARR	**Arges**	**5.38**	**43**	⇓P		**Pn**	**03 18 10.6**	**+1.1**
VOIR		**5.64**	**44**	⇓P		**Pn**	**03 18 13.4**	**+0.3**
MARR	**Marisel-Cluj**	**5.78**	**26**	⇑P		**Pn**	**03 18 16.4**	**+1.3**
SOKA	**Soboth**	**6.04**	**330**	*e*Pn		**Pn**	**03 18 19.7**	**+1.0**
	comp=N,3.1nm,0.4s							
OBKA	**Obir**	**6.10**	**326**	*i* Pn		**Pn**	**03 18 20.9**	**+1.5**
	comp=N,1.4nm,0.4s							
MLR	**Muntele Rosu**	**6.16**	**48**	Pn		**Pn**	**03 18 21.5**	**+1.2**
	comp=N,1.6nm,0.3s,baz=290,slow=21,SNR=11							
	comp=N,11nm,0.6s							
NEHR	**Nehoiu**	**6.32**	**50**	⇑P		**Pn**	**03 18 22.1**	**-0.3**
BOSR	**Bodos**	**6.38**	**43**	⇑P		**Pn**	**03 18 24.2**	**+0.9**
OZUR		**6.46**	**43**	⇑P		**Pn**	**03 18 25.0**	**+0.6**
COVR	**Voineasa-Covas**	**6.52**	**46**	⇑P		**Pn**	**03 18 27.3**	**+2.1**
TURR	**Turia**	**6.55**	**44**	⇑P		**Pn**	**03 18 25.9**	**+0.3**
RONA	**Rosalia, Austr**	**6.56**	**341**	*e*Pn		**Pn**	**03 18 30.5**	**+4.8**
	comp=N,2.0nm,0.5s							
RONA				*i* Sn		**Sn**	**03 19 41.1**	**+0.6**
	comp=N,3.5nm,0.4s							
PLOR	**Plostina**	**6.77**	**48**	⇑P		**Pn**	**03 18 29.5**	**+0.9**
VRI	**Vrincioaia**	**6.82**	**48**	⇑P		**Pn**	**03 18 29.8**	**+0.5**
KECS	**Kecovo**	**6.99**	**6**	*e*PN		Pn	03 18 36.

BATI Baumata 6.00 236 P Pn 03 19 17.1 0.0
MTN Manton Dam 6.44 158 Pn Pn 03 19 22.6 -0.1
SWI Sorong 6.46 23 P Pn 03 19 20.7 -2.3
MMRI Maumere 6.64 254 Pn Pn 03 19 25.2 -0.2
MMRI Maumere 6.64 254 P Pn 03 19 26.1 +0.7
MMRI Maumere 6.64 254 S S 03 20 42.7 +1.2
MMRI Maumere 6.64 254 P Pn 03 19 25.8 +0.4
0.8nm4µm200nm,0.5s
RKPI Ransiki, Papua 7.61 46 P Pn 03 19 36.0 -1.8
TNTI Ternate 7.67 350 Pn Pn 03 19 37.9 -0.7
TNTI Ternate 7.67 350 P Pn 03 19 38.4 -0.2
0.5nm120nm,1.0s
BSSI Bau Bau, Buton 8.18 274 P Pn 03 19 46.1 +0.9
79nm,0.9s
LUWI Luwuk 8.24 314 P Pn 03 19 47.5 +1.5
133nm,0.8s
BKSI Bulukumba 8.65 280 P Pn 03 19 50.1 -1.2
23nm,0.7s
BASI Baing, Sumba 8.70 247 P Pn 03 19 50.3 -1.6
4µm331nm,0.7s
WSI Waingapu 8.77 251 P Pn 03 19 52.0 -0.8
KNRA Kununurra 8.79 180 Pn Pn 03 19 52.2 -0.9
BNSI Bone 8.88 285 P Pn 03 19 53.9 -0.3
30nm,0.9s
SRPI Serui, Papua 8.99 57 P Pn 03 19 54.6 -1.1
317nm,0.7s
KAPI Kappang 9.07 281 P Pn 03 19 57.9 +1.2
5.6nm,0.4s,baz=137,slow=8.9,SNR=4.9
KAPI Kappang 9.07 281 Pn 03 19 56.0 -0.7
APSI Ampana 9.16 310 P Pn 03 19 58.0 +0.2
69nm,0.9s
BAKI Biak 9.28 53 P Pn 03 19 58.8 -0.5
SPSI Sidrap Palu 9.33 287 P Pn 03 20 00.0 0.0
GTOI Gorontalo 9.34 322 P Pn 03 20 03.8 +3.7
TTSI Tana Toraja 9.61 293 P Pn 03 20 06.4 +2.9
WBSI Waikabubak, Su 9.62 252 P Pn 03 20 03.4 -0.4
98nm,0.8s
MRSI Marisa 9.90 317 P Pn 03 20 08.5 +1.1
19µm2µm37nm,0.9s
SGSI Sangihe 10.91 343 P Pn 03 20 20.0 -0.3
PLAI Plampang 10.99 259 P Pn 03 20 19.3 -2.0
PLAI Plampang 10.99 259 P Pn 03 20 19.1 -2.2
96nm,1.0s
TOLI2 Tolitoli 11.16 315 Pn Pn 03 20 22.3 -1.1
MPSI Mapaga 11.30 309 P Pn 03 20 26.4 +1.2
FITZ Fitzroy Crossi 11.59 195 P Pn 03 20 27.9 -0.9
263nm,0.5s,baz=28,slow=11,SNR=406
FITZ S S 03 22 28.6 -8.2
60nm,0.3s,baz=288,slow=18,SNR=5.7
FITZ Fitzroy Crossi 11.59 195 Pn Pn 03 20 27.7 -1.1
FITZ Fitzroy Crossi 11.59 195 P Pn 03 20 29.2 +0.4
TWSI Taliwang, Sumb 11.85 260 P Pn 03 20 30.6 -1.6
34nm,0.8s
GENI Genyem 12.19 70 P Pn 03 20 36.7 +0.3
349nm,0.9s
JAY Jayapura 12.71 71 P Pn 03 20 43.2 +0.1
82nm,0.7s,baz=184,slow=8.2,SNR=8.5
JAY Jayapura 12.71 71 P Pn 03 20 42.4 -0.7
111nm,1.2s
IGBI Denpasar 13.56 261 P Pn 03 20 53.3 -0.2
WB0 Warramunga Arr 14.00 157 Pn Pn 03 20 56.8 -2.1
WRAB Tennant Creek 14.14 158 Pn Pn 03 20 58.9 -1.7
WRAB Tennant Creek 14.14 158 P Pn 03 21 00.5 -0.1
WRA Warramunga Arr 14.14 158 P Pn 03 20 59.2 -1.4
182nm,0.3s,baz=334,slow=12,SNR=148
WRA S S 03 23 33.9 -3.3
35nm,0.4s,baz=334,slow=23,SNR=15
WRA Warramunga Arr 14.14 158 Pn Pn 03 20 58.9 -1.7
DAV Davao City (W) 14.15 347 P Pn 03 21 00.6 -0.2
201nm,0.4s,baz=268,slow=8.5,SNR=3.9
DAV Davao City (W) 14.15 347 P Pn 03 21 00.2 -0.6
WR8 Warramunga Arr 14.21 157 Pn Pn 03 20 59.2 -2.3
JAGI Jajag, Banyuwa 14.50 263 Pn Pn 03 21 03.0 -2.1
JAGI Jajag, Banyuwa 14.50 263 P Pn 03 21 05.2 +0.1
JAGI Jajag, Banyuwa 14.50 263 P Pn 03 21 04.7 -0.4
43nm,0.7s
BLJI Banyuglugur 15.00 266 P P 03 21 12.9 +1.5
141nm,0.6s
COEN Coen 15.90 118 P Pn 03 21 21.9 -0.1
COEN Coen 15.90 118 P Pn 03 21 22.5 +0.5
MBWA Marble Bar 16.68 210 P P 03 21 30.2 +0.4
MBWA Marble Bar 16.68 210 P Pn 03 21 31.2 0.0
PSA00 Pilbara Seismi 16.97 209 P P 03 21 32.6 -0.4
PSA00 Pilbara Seismi 16.97 209 P P 03 21 33.0 0.0
PSA00 Pilbara Seismi 16.97 209 P P 03 21 33.5 +0.5
QIS Mount Isa 17.27 143 P Pn 03 21 37.6 -0.5
QIS Mount Isa 17.27 143 S S 03 24 47.3 +2.6
PCJI Pacitan 17.42 264 P Pn 03 21 39.1 -0.8
73nm,1.3s
AS31 Alice Springs 17.47 164 P P 03 21 39.4 +0.9
ASAR Alice Springs 17.47 164 P Pn 03 21 40.1 -0.4
190nm,0.7s,baz=345,slow=11,SNR=1706
ASAR S S 03 24 49.1 +0.2
34nm,0.9s,baz=342,slow=22,SNR=11
ASAR Alice Springs 17.47 164 P P 03 21 39.4 +0.9
PMG Port Moresby 18.46 99 P Pn 03 21 51.1 -1.1
21nm,0.4s,baz=292,slow=4.7,SNR=9.8
SBUM Sibu 18.85 299 P P 03 21 54.2 +0.7
MTSU Mount Surprise 18.93 128 P P 03 21 55.3 +1.0
MTSU Mount Surprise 18.93 128 S S 03 25 18.8 +1.0
BBJI Bungbulang 20.89 267 P P 03 22 15.7 +0.3
TPI Tanjungpandan 21.35 280 P P 03 22 22.0 +2.0
20nm,0.8s
CNJI Cibinong 21.40 267 P P 03 22 19.6 -1.0
36nm,0.9s
TV1H Townsville Har 21.50 127 P P 03 22 22.7 +1.2
CTA Charters Tower 21.54 129 P P 03 22 22.6 +0.7
CTAO Charters Tower 21.54 129 P P 03 22 22.3 +0.4
CTAO Charters Tower 21.54 129 P P 03 22 22.9 +1.0
MEEK Meekatharra 21.91 205 P P 03 22 25.9 +0.4
INKA Innaminka 23.73 153 P P 03 22 42.6 +0.6
FORT Forrest 23.83 181 P P 03 22 42.9 +0.1
QLP Quilpie 24.59 145 P P 03 22 50.4 +0.5
MORW Morawa 25.14 207 P P 03 22 55.3 +0.5
MORW IAmb IAmb 03 23 41.1
comp=Z,39nm,0.8s
BLDU Ballidu 26.20 204 P P 03 23 05.3 +1.0
KLBR Kellerberrin 26.67 201 P P 03 23 09.0 +0.5
BBOO Buckleboo 26.74 166 P P 03 23 08.9 -0.2
BBOO Buckleboo 26.74 166 P P 03 23 09.4 +0.3
STKA Stephens Creek 27.68 156 P P 03 23 17.9 +0.5
comp=Z,24nm,0.5s,baz=328,slow=9.1,SNR=53
comp=Z,24nm,0.5s
STKA Stephens Creek 27.68 156 P P 03 23 18.1 +0.7
NWAO Narrogin (SRO) 28.07 201 P P 03 23 21.3 +0.5
comp=Z,8.0nm,0.4s,baz=42,slow=7.5,SNR=16
NWAO pP pwP 03 24 08.3 +1.3
comp=Z,15nm,0.6s,baz=22,slow=8.8,SNR=4.6
comp=Z,8.0nm,0.4s
NWAO Narrogin (SRO) 28.07 201 P P 03 23 21.2 +0.3
NWAO IAmb IAmb 03 24 14.6
comp=Z,37nm,1.1s
NWAO Narrogin (SRO) 28.07 201 P P 03 23 21.3 +0.5
HTT Hallett 28.12 162 P P 03 23 21.7 +0.3
EIDS Eidsvold 28.24 133 P P 03 23 21.7 -0.8
CMSA Cobar Meteorol 29.27 149 P P 03 23 32.3 +0.8
GC1S Gold Coast 1 S 31.65 135 P P 03 23 53.7 +1.2
ARMA Armidale 31.85 140 P P 03 23 55.0 +0.7
ARMA IAmb IAmb 03 23 57.2
comp=Z,12nm,0.6s
ARMA Armidale 31.85 140 P P 03 23 55.7 +1.4
MGBR Mount Gambier 32.60 162 P P 03 24 01.8 +1.2
JOW Kunigami 33.47 359 P P 03 24 07.2 -1.0
JOW Kunigami 33.47 359 P P 03 24 07.1 -1.1
CAN Canberra 33.95 149 P P 03 24 14.3 +1.9
CAN Canberra 33.95 149 P P 03 24 14.0 +1.6
CAN Canberra 33.95 149 P P 03 24 14.5 +2.1
CAN Canberra 33.95 149 pP pP 03 24 59.4 +2.8
CNB Canberra Magne 34.13 149 P P 03 24 14.4 +0.4
TOO Toolangi 34.20 156 P P 03 24 16.3 +1.8
CMAR Chiang Mai Arr 38.63 311 P P 03 24 51.5 -0.6
comp=Z,1.5nm,0.3s,baz=129,slow=8.6,SNR=6.8
CMAR ScP ScP 03 30 25.6 -1.6
comp=Z,1.2nm,0.3s,baz=158,slow=2.5,SNR=6.7
comp=Z,1.5nm,0.3s
CMAR Chiang Mai Arr 38.63 311 P P 03 24 51.0 -1.1
DZM Mont Dzumac 39.43 117 P P 03 24 59.6 +0.7
JNU Nakatsue 39.78 3 P P 03 24 59.8 -1.7
JNU IAmb IAmb 03 25 01.3
comp=Z,33nm,0.9s
JNU Nakatsue 39.78 3 P P 03 25 00.4 -1.1
NJ2 Nanjing 39.79 347 eP P 03 25 03.5 +2.1
NJ2 pmax pmax
comp=Z,14nm,0.6s

JMN Monobe 40.63 7 P P 03 25 07.0 -1.4
JMN Monobe 40.63 7 P P 03 25 09.1 +0.7
PZH PanZhiHua 42.20 323 P P 03 25 22.5 +1.1
KSAR Wonju Array Be 44.05 359 P P 03 25 35.5 -0.3
MJAR Matsushiro Arr 44.06 11 P P 03 25 33.6 -2.3
comp=Z,25nm,0.9s,baz=188,slow=9.2,SNR=36
MJAR ScP ScP 03 30 45.6 -2.8
comp=Z,1.8nm,0.9s,baz=169,slow=4.7,SNR=4.2
comp=Z,25nm,0.9s
MJAR Matsushiro Arr 44.06 11 P P 03 25 34.3 -1.7
MAJO Matsushiro 44.06 11 P P 03 25 33.8 -2.2
MAJO IAmb IAmb 03 25 34.8
comp=Z,34nm,0.8s
MAJO Matsushiro 44.06 11 P P 03 25 33.6 -2.4
KSRS Korea Array 44.06 359 P P 03 25 34.8 -1.1
comp=Z,11nm,0.6s,baz=176,slow=9.5,SNR=40
comp=Z,11nm,0.6s
MJB9 Matsu-Tunnel 44.06 11 P P 03 25 35.4 -0.6
MJB9 IAmb IAmb 03 25 36.2
comp=Z,34nm,0.9s
KS19 Wonju Array Si 44.11 359 P P 03 25 35.6 -0.7
KS19 IAmb IAmb 03 25 49.5
comp=Z,47nm,1.4s
CD2 Chengdu 44.48 329 P P 03 25 37.5 -1.9
CD2 pmax pmax
comp=Z,10.0nm,0.6s
XAN Xi'an 44.75 336 ⇑P P 03 25 39.5 -2.0
XAN pP pP 03 26 26.0 -1.0
XAN pmax pmax
comp=Z,12nm,1.3s
HNS HongShan 45.90 344 ⇑P P 03 25 49.0 -1.4
HNS pmax pmax
comp=Z,21nm,0.9s
BJI Beijing 48.05 347 P P 03 26 05.5 -1.4
BJI pmax pmax
comp=Z,6.0nm,0.9s
LZDM Lanzhou Array 48.61 333 P P 03 26 10.4 -1.4
comp=Z,1.4nm,0.3s,baz=176,slow=11,SNR=5.3
comp=Z,1.4nm,0.3s
JTM Tenmabayashi 48.73 13 P P 03 26 12.1 0.0
HHC Hu-ho-hao-te 49.99 343 eP P 03 26 24.5 +2.7
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,3µm,4.5s
BTO Baotou 50.23 342 eP P 03 26 27.0 +3.4
BTO PP PP 03 28 24.8 +3.4
BTO S S 03 33 25.0 +6.1
BTO pmax pmax
comp=Z,7.0nm,0.5s
BTO pmax pmax
comp=Z,12µm,8.5s
BTO LR LR
comp=N,22µm,13.7s
BTO LR LR
comp=E,39µm,15.3s
BTO LR LR
comp=Z,14µm,14.7s
USRK Ussuriysk Ar. 50.88 3 P P 03 26 27.4 -0.8
comp=Z,20nm,0.6s,baz=188,slow=7.4,SNR=39
comp=Z,20nm,0.6s
FOZ Fox Glacier 51.31 142 P P 03 26 32.3 +0.8
FOZ IAmb IAmb 03 26 33.2
comp=Z,40nm,0.7s
WHZ Wether Hill Ro 51.57 146 P 03 26 34.1 +0.6
QRZ Quartz Range 51.65 138 P P 03 26 35.6 +1.5
XLT XiLinHaoTe 51.77 348 eP P 03 26 34.3 -0.6
XLT pmax pmax
comp=Z,25nm,0.8s
INZ Inchbonnie 51.89 141 P P 03 26 36.9 +1.0
INZ IAmb IAmb 03 26 39.1
comp=Z,32nm,0.6s
LBZ Lake Benmore 52.00 143 P 03 26 37.2 +0.6
LBZ IAmb IAmb 03 26 38.2
comp=Z,48nm,1.1s
MRNZ Matariki Terra 52.08 138 P P 03 26 37.8 +0.5
RPZ Rata Peaks 52.16 142 P P 03 26 39.3 +1.4
RPZ Rata Peaks 52.16 142 P P 03 26 39.2 +1.4
BNX BinXian 52.34 359 ⇑P P 03 26 37.5 -1.5
BNX pmax pmax
comp=Z,9.0nm,0.8s
THZ Tophouse 52.35 139 P 03 26 40.1 +0.8
THZ IAmb IAmb 03 26 42.5
comp=Z,20nm,0.7s
LTZ Lake Taylor 52.44 140 P 03 26 40.7 +0.7
LTZ IAmb IAmb 03 26 43.4
comp=Z,17nm,0.7s
OXZ Oxford 52.57 141 P P 03 26 41.5 +0.7
ODZ Otahua Downs 52.64 143 P P 03 26 41.5 +0.2
KHZ Kahutara 53.08 139 P 03 26 45.1 +0.6
KHZ Kahutara 53.08 139 P P 03 26 45.5 +1.0
EVN Everest 53.20 312 P P 03 26 45.5 -0.9
GTA Gaotai 53.21 332 eP P 03 26 45.8 +0.1
GTA pmax pmax
comp=Z,14nm,1.1s
SNZO South Karori 53.33 137 P P 03 26 47.0 +0.6
BKZ Black Stump Fm 53.64 134 P 03 26 49.2 +0.4
BKZ IAmb IAmb 03 26 49.8
comp=Z,18nm,0.8s
BKZ Black Stump Fm 53.64 134 P P 03 26 49.5 +0.7
URZ Urewera 53.73 133 P P 03 26 49.5 +0.2
RTZ Ruatahuna 53.77 134 P 03 26 49.9 +0.1
RTZ IAmb IAmb 03 26 55.0
comp=Z,34nm,0.7s
BFZ Birch Farm 54.10 136 P P 03 26 51.8 -0.2
MXZ Matakaoa Point 54.34 132 P P 03 26 54.3 +0.5
HILR Hailar Array B 56.69 353 P P 03 27 09.8 -0.5
comp=Z,8.5nm,0.7s,baz=168,slow=11,SNR=9.5
comp=Z,8.5nm,0.7s
HEH HeiHe 56.86 359 eP P 03 27 10.3 -1.1
HEH pmax pmax
comp=Z,20nm,1.0s
ULN Ulaanbaatar 57.71 343 P P 03 27 16.5 -1.1
ULN IAmb IAmb 03 28 06.0
comp=Z,30nm,1.8s
ULN Ulaanbaatar 57.71 343 P P 03 27 17.1 -0.5
SONM Songino Array 57.88 342 P P 03 27 18.4 -0.4
comp=Z,8.5nm,0.9s,baz=160,slow=7.2,SNR=28
SONM pP PcP 03 28 10.4 +1.8
comp=Z,1.9nm,0.9s,baz=146,slow=8.7,SNR=2.1
comp=Z,8.5nm,0.9s
PETK Petropavlovsk- 64.58 19 P P 03 28 02.5 -0.8
comp=Z,7.8nm,0.6s,baz=170,slow=3.8,SNR=5.0
comp=Z,7.8nm,0.6s
MKAR Makanchi Array 67.38 327 P P 03 28 21.1 -0.2
comp=Z,7.7nm,0.6s,baz=117,slow=8.4,SNR=62
MKAR pP pP 03 29 13.2 +2.8
comp=Z,1.6nm,0.6s,baz=125,slow=7.6,SNR=2.1
comp=Z,7.7nm,0.6s
MKAR Makanchi Array 67.38 327 P P 03 28 20.7 -0.7
MKAR pP pP 03 29 12.0 +1.6
MAKZ Makanchi 67.56 327 P P 03 28 22.1 -0.4
MAKZ Makanchi 67.56 327 PcP PcP 03 28 47.5 -0.5
CCD Concordia, Ant 68.30 181 P P 03 28 28.0 +0.9
CCD Concordia, Ant 68.30 181 PcP PcP 03 28 51.5 +0.4
ZAA0 Zalesovo Array 70.86 334 P 03 28 41.5 -1.1
ZAA0 IAmb IAmb 03 28 42.1
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 70.86 334 P P 03 28 41.4 -1.1
comp=Z,10nm,0.7s,baz=124,slow=5.1,SNR=37
ZALV pP pwP 03 29 37.8 -1.0
comp=Z,5.4nm,0.8s,baz=108,slow=4.7,SNR=5.1
comp=Z,10nm,0.7s
ZALV Zalesovo Beam 70.86 334 P P 03 28 41.4 -1.1
ZALV pP pP 03 29 32.0 -0.1
CHGR Chuyangaron 71.29 315 P 03 28 45.2 -0.4
KURBB Kurchatov Arra 71.69 329 P P 03 28 47.2 -0.4
comp=Z,12nm,0.7s,baz=131,slow=4.9,SNR=107
KURBB pP pwP 03 29 43.5 -0.5
comp=Z,3.1nm,0.7s,baz=130,slow=5.5,SNR=4.5
comp=Z,12nm,0.7s
KURK Kurchatov 71.70 329 P 03 28 47.3 -0.3
KURK IAmb IAmb 03 28 48.0
comp=Z,15nm,0.8s
KURK pP pP 03 29 37.5 +0.1
KURK Kurchatov 71.70 329 P P 03 28 47.3 -0.3
KURK Kurchatov 71.70 329 pP pP 03 29 37.8 +0.5
VNDA Vanda 72.77 173 P P 03 28 53.6 0.0
comp=Z,5.8nm,0.8s,baz=318,slow=6.9,SNR=16
comp=Z,5.8nm,0.8s
VNDA Vanda 72.77 173 P 03 28 53.5 0.0
VNDA Vanda 72.77 173 P P 03 28 53.7 0.0
MAW Mawson 74.63 201 P P 03 29 04.6 +0.1
comp=Z,12nm,0.8s,baz=62,slow=9.5,SNR=7.8
comp=Z,12nm,0.8s

BVAR Borovoye Array 77.23 328 P P 03 29 19.0 -0.4
comp=Z,3.0nm,0.7s,baz=140,slow=7.2,SNR=9.1
BVAR pP pwP 03 30 15.6 -0.9
comp=Z,3.7nm,0.8s,baz=131,slow=6.3,SNR=4.1
comp=Z,3.0nm,0.7s
BORK Borovoye 77.28 328 P P 03 29 19.4 -0.3
TIXI Tiksi 78.32 0 P P 03 29 24.0 -1.0
TIXI Tiksi 78.32 0 pP pP 03 30 15.8 +0.2
AB31 Akbulak array 81.57 322 P P 03 29 42.3 -0.6
ABKAR Akbulak array 81.57 322 P P 03 29 42.0 -0.9
ABKAR pP pP 03 30 34.9 +1.0
QSPA South Pole Qui 83.14 180 P P 03 29 53.8 +2.9
comp=Z,12nm,0.5s,baz=271,slow=0.8,SNR=46
QSPA South Pole Qui 83.14 180 P P 03 29 53.0 +2.0
QSPA IAmb IAmb 03 29 54.7
comp=Z,20nm,1.0s
QSPA South Pole Qui 83.14 180 P P 03 29 54.6 +3.6
RAYN Ar Rayn 86.49 294 P P 03 30 07.8 -0.6
RAYN Ar Rayn 86.49 294 P P 03 30 08.0 -0.3
RAYN Ar Rayn 86.49 294 pP pP 03 31 01.7 +1.7
ILAR Eielson Array 93.75 25 P P 03 30 39.0 -2.3
comp=Z,0.4nm,0.8s,baz=262,slow=4.8,SNR=4.6
comp=Z,0.4nm,0.8s
ILAR Eielson Array 93.75 25 P P 03 30 41.0 -0.3
TROLL Troll, Antarti 94.00 195 ⇑P P 03 30 43.1 +0.6
comp=Z,303nm,0.7s
SNAA Sanae 95.52 194 ⇑P P 03 30 49.2 -0.2
comp=Z,87nm,1.0s
SNAA Sanae 95.52 194 P P 03 30 48.7 -0.7
comp=Z,4.1nm,1.0s,baz=206,slow=5.0,SNR=12
comp=Z,4.1nm,1.0s
SNAA Sanae 95.52 194 P P 03 30 49.5 +0.1
SNAA IAmb IAmb 03 30 50.8
comp=Z,7.0nm,1.1s
VNA2 Neumayer--Watz 97.10 193 ⇑P Pdif 03 30 56.8 +0.3
comp=Z,1.6nm,0.7s,baz=140,slow=5.4
VNA3 Neumayer Olymp 97.37 193 ⇑P Pdif 03 30 58.1 +0.4
comp=Z,2.3nm,0.8s
ARCES ARCESS Array B 100.97 340 P Pdif 03 31 11.3 -2.4
comp=Z,3.0nm,1.1s,baz=77,slow=4.9,SNR=1.6
PDAR Pinedale Array 117.69 45 PKP PKPdf 03 36 08.8 -1.4
comp=Z,0.5nm,0.7s,baz=207,slow=0.7,SNR=4.3
PDAR Pinedale Array 117.69 45 PKPdf 03 36 09.4 -0.9
TORD Torodi Ar. Bea 127.50 281 PKP PKPdf 03 36 28.6 -0.9
comp=Z,6.4nm,0.4s,baz=25,slow=4.2,SNR=5.1
PLCA Paso Flores 129.47 161 PKP PKPdf 03 36 33.0 +0.2
comp=Z,2.4nm,0.7s,baz=228,slow=0.6,SNR=5.8
PLCA Paso Flores 129.47 161 PKPdf 03 36 32.9 +0.1
CFA Coronel Fontan 138.50 158 PKhKP PKPpre 03 36 43.5
comp=Z,1.9nm,0.9s,baz=225,slow=5.7,SNR=3.7
CFA PKP PKPdf 03 36 48.5 -1.4
comp=Z,1.8nm,0.6s,baz=192,slow=4.1,SNR=5.2
TKL Tuckaleechee C 138.66 41 PKP PKPdf 03 36 49.3 -0.7
comp=Z,1.1nm,0.6s,baz=242,slow=2.3,SNR=5.4
TKL Tuckaleechee C 138.66 41 PKPdf 03 36 50.2 +0.3
CPUP Villa Florida 146.52 170 PKPbc PKPbc 03 37 05.8 -0.1
comp=Z,3.5nm,0.6s,baz=47,slow=2.2,SNR=30
CPUP Villa Florida 146.52 170 PKPbc 03 37 05.4 -0.5
NNA Nana 148.47 126 PKPbc PKiKP 03 37 12.4 -0.5
comp=Z,7.9nm,0.6s,baz=231,slow=7.3,SNR=4.3
ATAH Atahualpa 149.63 117 PKP PKPdf 03 37 11.5 +1.4
comp=Z,5.8nm,0.9s,baz=256,slow=8.0,SNR=2.0
ATAH PKPbc PKiKP 03 37 16.4 +0.6
comp=Z,14nm,0.9s,baz=301,slow=2.8,SNR=6.9
LPAZ La Paz 151.63 144 PKP PKPdf 03 37 14.3 +1.0
comp=Z,4.0nm,1.0s,baz=189,slow=0.8,SNR=9.0
LPAZ PKPbc PKiKP 03 37 20.2 +0.1
comp=Z,3.9nm,0.7s,baz=35,slow=2.7,SNR=20
LPAZ PKPab PKPab 03 37 30.0 +1.0
comp=Z,7.8nm,0.7s,baz=196,slow=3.5,SNR=12
LPAZ La Paz 151.63 144 PKPdf 03 37 12.1 -1.2
LPAZ PKPbc 03 37 19.1 -0.6

IDC ***26*** *03:18:34.9±4.8, 41°.29N×19°.63E, h0km, mb3.6/3, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=71.0km s-min=46.1km az=28.0*
PDG ***26*** *03:18:35.1±0.6, 41°.46N×19°.72E, h3km±1km, MD3.7/8, ML3.6/13, Error ellipse: s-maj=2.2km s-min=3.2km az=0.0*
SKO ***26*** *03:18:36.7, 41°.50N×19°.32E, h0km, ML3.3*
THE ***26*** *03:18:37.4, 42°.N±7°.×19°.9E±°, h11km, M3.5/7, MLh3.5/7*
BEO ***26*** *03:18:39.7±1.1, 41°.47N×19°.51E, h11km±4km, ML3.4/7*
ISC 26 03:18:37.1±1.1, 41°.47N±0°.02×19°.45E±0°.03, h6km±9km, n61, σ1°.930/86, 5C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TIR	Tirane	0.34	111	*i* Pg		Pg	03 18 41.8	-1.9
TIR				*i* Sg		Sb	03 18 50.2	-1.0
ULC	Ulcinj	0.52	343	*e*Pg		Pg	03 18 46.9	-0.2
ULC				*i* Sg		Sb	03 18 55.9	-0.5
DRME	Dracevica, Mon	0.74	345	*e*Pg		Pg	03 18 53.9	-0.3
DRME	Dracevica, Mon	0.74	345	⇑*i*Pg		Pg	03 18 51.6	+0.2
DRME				*i* Sg		Sb	03 19 04.1	+1.2
BUM	Brajici-Budva	0.93	334	⇑*i*Pg		Pb	03 18 56.0	+0.4
BUM				*i* Sg		Sn	03 19 11.2	+0.8
PDG	Podgorica	0.97	352	*e*Pg		Pn	03 18 56.8	-0.5
PDG				*e*Sg		Sn	03 19 12.2	+0.8
PDG	Podgorica	0.97	352	⇓*i*Pg		Pg	03 18 53.5	-2.2
PDG				*i* Sg		Sb	03 19 09.7	+0.3
OHR	Ohrid	1.08	109	*i* Pg		Pn	03 18 59.8	+0.9
OHR				*i* Sg		Sn	03 19 15.2	+1.1
OHR				*e*Lg		Lg	03 19 17.0	
	comp=N,718nm,0.7s							
OHR				*e*Lg		Lg	03 19 18.3	
	comp=E,716nm,0.6s							
CEME	Cevo	1.15	340	*e*Pg		Pg	03 18 57.7	-1.4
CEME				*i* Sg		Sn	03 19 16.8	+1.0
PVY	Plav	1.19	19	*e*Pg		Pn	03 19 03.0	+2.6
PVY	Plav	1.19	19	⇑*i*Pg		Pb	03 18 54.9	-5.2
PVY				*i* Sg		Sg	03 19 14.7	-0.6
HCY	Herceg Novi	1.21	324	⇓*i*Pg		Pb	03 18 59.5	-0.9
HCY				*i* Sg		Sn	03 19 18.6	+1.3
KBN	Korca	1.32	129	P		Pg	03 19 03.2	+0.8
KBN				S		Sn	03 19 22.8	+2.7
NKME	Niksic	1.35	344	*e*Pg		Pn	03 19 01.1	-1.4
NKME				*i* Sg		Sg	03 19 22.3	+1.9
KOME	Kolasin	1.38	2	*e*Pg		Pg	03 19 06.4	+2.8
KOME	Kolasin	1.38	2	⇓*i*Pg		Pn	03 18 59.2	-3.8
KOME				*i* Sg		Sg	03 19 23.3	+1.8
BEY	Berane	1.44	13	*e*Pg		Pg	03 19 06.2	+1.5
IVA	Berane	1.44	13	⇓*i*Pg		Pn	03 19 01.0	-2.8
IVA				*i* Sg		Sg	03 19 28.6	+0.2
TREB	Trebinje	1.49	327	*e*Pn		Pn	03 19 02.7	-1.7
TREB				*e*Sg		Sg	03 19 25.7	+0.7
SKO	Skopje	1.57	71	*i* Pg		Sg	03 19 07.3	0.0
SKO				*i* Sg		Sg	03 19 28.6	+0.9
BRY	Bratogost	1.58	335	⇓*i*Pn		Pn	03 19 06.3	+0.5
BRY				*i* Sn		Sg	03 19 30.6	+2.7
NEST	Nestorio	1.61	130	P		Pg	03 19 08.0	+0.1
NEST				S		Sg	03 19 30.3	+1.6
UPM	Unac-Piva	1.78	347	⇑*i*Pn		Pb	03 19 09.4	-0.8
UPM				*i* Sn		Sg	03 19 34.9	+0.7
SJES	Sjenica	1.83	12	*e*Pg		Pg	03 19 12.3	+0.1
SJES				*e*Sg		Sg	03 19 36.1	+0.1
PLE	Pljevlja	1.86	359	*e*Pg		Pg	03 19 12.3	-0.4
PLE	Pljevlja	1.86	359	⇑*i*Pn		Pb	03 19 11.8	+0.2
PLE				*i* Sn		Sg	03 19 36.1	-0.8
STON	Ston	1.91	318	*e*Pn		Pb	03 19 13.2	+0.9
STON				*e*Sn		Sg	03 19 39.5	+1.1
IGT	Igoumenitsa	2.05	160	*i* Pn		Pb	03 19 13.6	-1.1
IGT				*i* Sn		Sg	03 19 42.9	0.0
JAN	Janina	2.10	149	P		Pb	03 19 16.4	+0.8
KZN	Kozani	2.11	123	P		Pb	03 19 14.7	-1.1
KZN				S		Sb	03 19 41.9	-0.4
SELS	Selova	2.14	35	*e*Pn		Pn	03 19 14.6	+1.1
RUDO	Rudo	2.15	359	*e*Pn		Pb	03 19 16.6	+0.2
IVAS	Ivanjica	2.17	14	*e*Pn		Pn	03 19 14.9	+1.1
GOCS	Kraljevo Serbi	2.34	26	*e*Pn		Pb	03 19 18.1	-1.7
VAY	Valandovo	2.35	93	*i* Pn		Pn	03 19 16.4	+0.1
VAY				*i* Sn		Sn	03 19 46.5	+1.0
VAY				*e*Lg		Lg	03 19 48.7	
	comp=N,68nm,0.6s							
VAY				*e*Lg		Lg	03 19 49.8	
	comp=E,75nm,0.7s							
BBLS	Lazi&#263i	2.40	359	*e*Pn		Pb	03 19 19.5	-1.2
GRUS	Gruza	2.59	21	*e*Pn		Pn	03 19 20.7	+1.1
KNT	Kendrikon	2.62	96	P		Pn	03 19 20.7	+0.7
DIVS	Divibare	2.66	9	*e*Pn		Pb	03 19 23.8	-1.3
THL	Klokotos Trika	2.73	133	P		Pn	03 19 23.1	+1.6
THE	Thessaloniki	2.79	106	P		Pn	03 19 22.6	+0.4
THE	Thessaloniki	2.79	106	*i* Pn		Pn	03 19 22.6	+0.4

THE				*i* Sn		**Sn**	03 19 56.1	-0.2
TSLK	**Tsoukalades, L**	**2.80**	**160**	P		**Pn**	03 19 23.2	+0.8
LKD2	**Lefkada island**	**2.83**	**160**	P		**Pn**	03 19 23.4	+0.5
TRUS	**Trudelj**	**2.84**	**14**	*e*Pn		**Pb**	03 19 26.4	-1.8
HORT	**Hortiatis**	**2.90**	**106**	P		**Pn**	03 19 24.4	+0.6
NYDR	**Nydri-Lefkada**	**2.92**	**160**	P		**Pn**	03 19 24.5	+0.5
EVGI	**Lefkada island**	**2.99**	**162**	P		**Pn**	03 19 25.0	0.0
SOH	**Sokhos**	**3.02**	**101**	P		**Pn**	03 19 26.2	+0.7
ZAGS	**Zajecar**	**3.12**	**40**	*e*Pn		**Pn**	03 19 27.8	+1.0
FSK	**Fiskardo**	**3.13**	**164**	P		**Pn**	03 19 26.7	-0.2
KUBS	**Kucevo**	**3.37**	**28**	*e*Pn		**Pn**	03 19 29.4	-0.8
ARG2	**Argostoli**	**3.38**	**166**	P		**Pn**	03 19 30.1	-0.4
VLS	**Valsamata**	**3.40**	**165**	P		**Pn**	03 19 30.4	-0.4
FRGS	**Fruska Gora**	**3.70**	**4**	*e*Pn		**Pn**	03 19 37.1	+2.3
KAVA	**Kavala**	**3.85**	**95**	P		**Pn**	03 19 37.4	+0.6
MLR	**Muntele Rosu**	**6.20**	**47**	Pn		**Pn**	03 20 10.4	+1.1
	comp=E,1.0nm,0.3s,baz=128,slow=19,SNR=1.9 comp=E,3.6nm,0.5s							
HFS	**Hagfors**	**19.02**	**351**	P		**Pn**	03 23 01.9	+1.7
	comp=E,0.1nm,0.3s,baz=167,slow=14,SNR=4.1 comp=E,1.7nm,0.8s							
FINES	**FINESS Array B**	**20.40**	**9**	P		**P**	03 23 12.9	-1.6
	comp=E,1.6nm,0.7s,baz=183,slow=12,SNR=4.8 comp=E,1.6nm,0.7s							
ZALV	**Zalesovo Beam**	**44.17**	**50**	P		**P**	03 26 44.4	-2.0
	comp=E,0.4nm,0.3s,baz=266,slow=7.6,SNR=2.2 comp=E,0.4nm,0.3s							
MKAR	**Makanchi Array**	**44.36**	**61**	P		**P**	03 26 46.8	-1.3
	comp=E,0.4nm,0.4s,baz=282,slow=7.6,SNR=6.1 comp=E,0.4nm,0.4s							

IDC 26 03:19:35.5±4.8, 41°.15N×19°.22E, h0km, mb3.7/3, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=72.7km s-min=65.0km az=123.0, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MLR	**Muntele Rosu**	**6.55**	**46**	Pn		Pn	03 21 15.0	+1.8
	1.2nm,0.3s,baz=146,slow=11,SNR=5.9 3.9nm,0.6s							
KECS	**Kecovo**	**7.39**	**7**	*e*PN		Pb	03 21 35.2	-9.3
KECS				*e*SN		Sn	03 22 44.2	-4.9
FINES	**FINESS Array B**	**20.75**	**9**	P		P	03 24 17.7	+0.1
	1.5nm,0.9s,baz=182,slow=9.5,SNR=1.3 1.5nm,0.9s							
ZALV	**Zalesovo Beam**	**44.51**	**50**	P		P	03 27 47.6	-0.9
	0.8nm,0.4s,baz=279,slow=9.6,SNR=3.0 0.8nm,0.4s							
MKAR	**Makanchi Array**	**44.66**	**61**	P		P	03 27 50.2	+0.4
	0.6nm,0.5s,baz=284,slow=7.1,SNR=6.4 0.6nm,0.5s							

*IDC **26** 03:20:42.1±1.4, 11°.97N×87°.43W, h0km, mb4.1/5, mbtmp4.0/6, ML3.1/2, Error ellipse: s-maj=46.3km s-min=15.3km az=49.0*
*SNET **26** 03:20:43.0±0.6, 11°.61N×87°.65W, h19km±23km, ML3.8*
*CATAC **26** 03:20:45.2±0.5, 12°.N±2°.×8°.8W±°, h28km±4km, M3.9/39, MLv3.9/39, Error ellipse: s-maj=3.9km s-min=2.0km az=38.0, confirmed*
*UCR **26** 03:20:46.5±1.7, 11°.68N×87°.61W, h35km, MB4.1(NEIC)*
*NEIC **26** 03:20:47.2±1.5, 11°.79N±0°.06×87°.58W±0°.05, h35km±2km, mb4.1/19, Error ellipse: s-maj=12.4km s-min=4.9km az=212.0*
ISC 26 03:20:45.3±1.4, 11°.68N±0°.03×87°.66W±0°.04, h30km±11km, n138, σ0s96/160, mb4.1/15, 22C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ALEN	**Leon**	**1.09**	**45**	S		**Sb**	03 21 20.3	+0.7
ALEN	**Leon**	**1.09**	**45**	P		**Pn**	03 21 04.5	-0.1
COPN	**Copaltepe**	**1.16**	**64**	↑P		**Pn**	03 21 05.8	+0.3
COPN	**Copaltepe**	**1.16**	**64**	*i*P		**Pn**	03 21 06.8	+0.3
CRIN	**San Cristobal**	**1.18**	**30**	Pn		**Pn**	03 21 06.1	+0.3
CRIN	**San Cristobal**	**1.18**	**30**	S		**Sb**	03 21 22.5	+0.5
CRIN	**San Cristobal**	**1.18**	**30**	↓P		**Pn**	03 21 06.6	+0.8
CRIN	**San Cristobal**	**1.18**	**30**	↑*i*P		**Pn**	03 21 06.3	+0.5
PKGN	**Cerro Pekin**	**1.19**	**34**	↑P		**Pn**	03 21 06.1	+0.2
PKGN				S		**Sb**	03 21 22.1	-0.3
HERN	**Volcan Telica**	**1.23**	**41**	Pn		**Pn**	03 21 05.5	-1.0
CNGA	**AI SSO del Vol**	**1.24**	**49**	↑P		**Pn**	03 21 07.2	+0.5
CNGA				S		**Sn**	03 21 22.2	-0.2
CNGN	**Cerro Negro**	**1.25**	**49**			**Pn**	03 21 06.5	-0.2
CNGN	**Cerro Negro**	**1.25**	**49**	↑P		**Pn**	03 21 06.9	+0.1
CNGN	**Cerro Negro**	**1.25**	**49**	↑*i*P		**Pn**	03 21 06.8	+0.1
POLN	**AI Sur del Vol**	**1.27**	**41**	↑P		**Pn**	03 21 06.5	-0.6
CSGN	**Cosiguina Volc**	**1.29**	**4**	↑P		**Pn**	03 21 07.6	+0.2
CSGN				S		**Sn**	03 21 24.7	+0.9
CSGN	**Cosiguina Volc**	**1.29**	**4**	↑*i*P		**Pn**	03 21 07.5	+0.1
CSGN				*e*S		**Sb**	03 21 25.2	-0.2
MOMN	**Momotombo**	**1.31**	**56**	↓P		**Pn**	03 21 07.7	0.0
MOMN				S		**Sb**	03 21 25.5	-0.4
POTN	**Potosi Cosigui**	**1.32**	**7**	↑P		**Pn**	03 21 07.9	+0.2
POTN				S		**Sn**	03 21 24.8	+0.4
POTN	**Potosi Cosigui**	**1.32**	**7**	*e*P		**Pn**	03 21 07.7	0.0
AMTN	**Mateare**	**1.32**	**65**	P		**Pn**	03 21 08.1	+0.4
AMTN	**Mateare**	**1.32**	**65**	S		**Sb**	03 21 26.2	+0.1
MOM2	**El Cardon**	**1.38**	**57**	↑P		**Pn**	03 21 08.6	+0.2
MOM2				S		**Sb**	03 21 27.2	-0.4
MOM3	**MOM3**	**1.39**	**53**	↑P		**Pn**	03 21 08.7	0.0
MOM3				S		**Sn**	03 21 27.2	+1.1
APYN	**Apoyeque**	**1.40**	**67**	P		**Pn**	03 21 09.7	+1.0
APYN				S		**Sb**	03 21 27.8	-0.4
APQ2	**Apoyeque**	**1.41**	**68**	P		**Pn**	03 21 09.0	+0.2
APQ2				S		**Sn**	03 21 27.4	+1.1
USIM	**UNAN**	**1.43**	**72**	Pn		**Pn**	03 21 08.6	-0.5
UNAN	**Cigeo UNAN**	**1.43**	**72**	↑P		**Pn**	03 21 09.3	+0.1
UNAN				S		**Sn**	03 21 28.2	+1.3
ALLN	**Telcor Managua**	**1.44**	**71**	P		**Pn**	03 21 10.2	+0.9
ALLN	**Telcor Managua**	**1.44**	**71**	S		**Sb**	03 21 28.6	-0.8
MGAN	**Managua**	**1.46**	**71**			**Pn**	03 21 09.3	-0.3
MGAN	**Managua**	**1.46**	**71**	P		**Pn**	03 21 09.6	0.0
MGAN	**Managua**	**1.46**	**71**	S		**Sb**	03 21 29.5	-0.5
MGAN	**Managua**	**1.46**	**71**	*i*P		**Pn**	03 21 09.6	0.0
MAS3	**AI N del Volca**	**1.49**	**76**	P		**Pn**	03 21 10.1	0.0
MAS3				S		**Sb**	03 21 30.4	-0.6
WILN	**Americas 2**	**1.52**	**71**	P		**Pn**	03 21 10.6	+0.1
WILN				S		**Sb**	03 21 31.2	-0.5
NANN	**Nandasmo**	**1.53**	**80**	S		**Sn**	03 21 30.7	+1.2
NANN	**Nandasmo**	**1.53**	**80**	↑P		**Pn**	03 21 11.6	+1.0
AERN	**Aeropuerto Man**	**1.53**	**72**	S		**Sb**	03 21 31.5	-0.6
NADN	**Granada**	**1.60**	**87**	P		**Pn**	03 21 11.7	+0.3
NADN				S		**Sb**	03 21 32.8	-1.1
NADN	**Granada**	**1.60**	**87**	*e*P		**Pn**	03 21 11.2	-0.3
CNCH	**Conchagua**	**1.60**	**354**	↑*e*P		**Pn**	03 21 11.7	+0.1
CNCH				*e*S		**Sb**	03 21 34.2	+0.1
CNCH	**Conchagua**	**1.60**	**354**	S		**Sn**	03 21 32.2	+0.9
CNCH	**Conchagua**	**1.60**	**354**	↑P		**Pn**	03 21 11.7	+0.1
LCND	**La Caada**	**1.64**	**352**	*e*P		**Pn**	03 21 12.2	+0.2
LCND	**La Caada**	**1.64**	**352**	↓P		**Pn**	03 21 12.4	+0.3
LIMN	**Finca el Limon**	**1.87**	**42**	↓P		**Pn**	03 21 15.6	+0.3
PACA	**Pacayal**	**1.90**	**340**	*e*P		**Pn**	03 21 16.0	+0.3
PACA	**Pacayal**	**1.90**	**340**	S		**Sn**	03 21 39.8	+1.1
PACA	**Pacayal**	**1.90**	**340**	P		**Pn**	03 21 16.0	+0.3
JAPN	**AI SSO del Vol**	**1.95**	**94**	↑P		**Pn**	03 21 16.8	+0.5
TECA	**Tecapa**	**1.98**	**336**	*e*P		**Pn**	03 21 16.8	-0.2
CONN	**Concepcion**	**2.00**	**93**	P		**Pn**	03 21 16.8	-0.2
BOAB	**BOACO BROADBAN**	**2.10**	**68**			**Pn**	03 21 17.8	-0.5
BOAB	**BOACO BROADBAN**	**2.10**	**68**	P		**Pn**	03 21 18.1	-0.2
BOAB	**BOACO BROADBAN**	**2.10**	**68**	S		**Sn**	03 21 44.1	+0.6
MATN	**Matagalpa**	**2.10**	**54**	P		**Pn**	03 21 17.6	-0.9
MATN	**Matagalpa**	**2.10**	**54**	S		**Sn**	03 21 45.0	+1.3
TECO	**Alcaldia de Te**	**2.15**	**330**	P		**Pn**	03 21 19.5	+0.4
TECO	**Alcaldia de Te**	**2.15**	**330**	S		**Sn**	03 21 45.5	+0.8
CARN	**Rivas**	**2.15**	**103**	P		**Pn**	03 21 19.4	+0.3
CARN				S		**Sn**	03 21 46.4	+1.6
UESV	**Universidad de**	**2.24**	**331**	S		**Sn**	03 21 48.1	+1.1
UESV	**Universidad de**	**2.24**	**331**	P		**Pn**	03 21 21.2	+0.9
OCON	**Estacion meteo**	**2.26**	**31**	P		**Pn**	03 21 21.4	+0.8
OCON				S		**Sn**	03 21 48.8	+1.2
SCLA	**Alcaldia de Sa**	**2.27**	**333**	*e*P		**Pn**	03 21 21.2	+0.4
SCLA	**Alcaldia de Sa**	**2.27**	**333**	P		**Pn**	03 21 21.2	+0.4
SCLA	**Alcaldia de Sa**	**2.27**	**333**	S		**Sn**	03 21 48.8	+1.0
ELI1	**Hacienda Flor**	**2.31**	**116**	S		**Sn**	03 21 49.8	+1.1
RCON	**San Juan de Ri**	**2.32**	**39**	P		**Pn**	03 21 22.6	+1.0
ALIBA	**Liberia Airpor**	**2.34**	**117**	*e*P		**Pn**	03 21 22.5	+0.8
LAPC	**Finca la Perla**	**2.37**	**112**	*e*P		**Pn**	03 21 22.9	+0.9
RCVN	**Varillal2**	**2.38**	**37**	↓P		**Pn**	03 21 22.9	+0.5
PAVA	**Las Pavas**	**2.38**	**329**	S		**Sn**	03 21 52.0	+1.5
PAVA	**Las Pavas**	**2.38**	**329**	P		**Pn**	03 21 23.3	+1.0
TGUH	**Tegucigalpa,Un**	**2.40**	**9**			**Pn**	03 21 22.8	+0.2
TGUH	**Tegucigalpa,Un**	**2.40**	**9**	P		**Pn**	03 21 23.6	+1.0
YUSH	**Yuscaran**	**2.40**	**19**	↑P		**Pn**	03 21 23.5	+0.8
BUAI	**Buenos Aires**	**2.42**	**109**	*e*P		**Pn**	03 21 24.1	+1.3
SAJU	**San Juanillo,**	**2.50**	**130**	*e*P		**Pn**	03 21 23.1	-0.7
JUD3	**Juan Diaz 3**	**2.57**	**126**			**Pn**	03 21 24.9	0.0
JUD3	**Juan Diaz 3**	**2.57**	**126**	*e*P		**Pn**	03 21 24.6	-0.3
MESS	**Mesas**	**2.59**	**111**	*e*P		**Pn**	03 21 26.7	+1.4
HORNC	**Hornillas**	**2.62**	**111**	*e*P		**Pn**	03 21 26.6	+1.0
JAYA	**Jayaque - finc**	**2.63**	**319**	*e*P		**Pn**	03 21 25.5	-0.3
CUI	**Cuipilapa**	**2.65**	**112**	*e*P		**Pn**	03 21 27.1	+1.0
CMARA	**Lajas Hojancha**	**2.75**	**127**	P		**Pn**	03 21 27.7	+0.3
CMARA	**Lajas Hojancha**	**2.75**	**127**	S		**Sn**	03 21 59.4	-0.2
CMARA	**Lajas Hojancha**	**2.75**	**127**	*e*P		**Pn**	03 21 27.5	+0.1
TENO	**El Achiote**	**2.81**	**110**	*e*P		**Pn**	03 21 28.7	+0.5
TIMP	**Tierras Morena**	**2.81**	**112**	*e*P		**Pn**	03 21 29.2	+1.0
QUEB	**Quebradon, Cost**	**2.91**	**111**	*e*P		**Pn**	03 21 30.2	+0.6
JTS	**Las Juntas de**	**3.00**	**117**	Pn		**Pn**	03 21 31.7	+1.0
	1.5nm,0.3s,baz=104,slow=22,SNR=12							
JTS				Pg		**Pb**	03 21 37.6	-0.3
	4.4nm,0.3s,baz=293,slow=9.9,SNR=15							
JTS				Sn		**Sn**	03 22 05.6	-0.1
	8.3nm,0.3s,baz=294,slow=20,SNR=7.0							
JTS	**Las Juntas de**	**3.00**	**117**			**Pn**	03 21 31.5	+0.8
JTS	**Las Juntas de**	**3.00**	**117**	P		**Pn**	03 21 31.8	+1.0
JTS				S		**Sn**	03 22 05.8	+0.1
JTS	**Las Juntas de**	**3.00**	**117**	*e*P		**Pn**	03 21 31.4	+0.7
NUBE	**Las Nubes**	**3.03**	**317**	P		**Pn**	03 21 31.6	+0.3
NUBE	**Las Nubes**	**3.03**	**317**	S		**Sn**	03 22 06.2	-0.4
JCR1	**Jicaral**	**3.09**	**126**	*e*P		**Pn**	03 21 32.6	+0.5
JCR1				*e*S		**Sn**	03 22 06.2	-2.0
ARE1	**Arenal 1**	**3.13**	**112**	*e*P		**Pn**	03 21 33.3	+0.7
VARE2	**V. Arenal**	**3.13**	**112**	*e*P		**Pn**	03 21 34.4	+1.7
MTO3	**Montecristo**	**3.17**	**329**			**Pn**	03 21 33.7	+0.3
PICV	**PH. Pirrs**	**3.97**	**121**	*e*P		**Pn**	03 21 46.3	+2.1
RAFA	**San Farael, Vo**	**4.15**	**114**	Pn		**Pn**	03 21 49.8	+2.9
PIEC	**Cerro El Cedra**	**4.17**	**119**	↑*i*P		**Pn**	03 21 49.5	+2.3
ABRB	**Las Abras (San**	**4.21**	**113**	*e*P		**Pn**	03 21 51.4	+3.7
BUS1	**Rivas**	**4.39**	**118**	↑*i*P		**Pn**	03 21 52.5	+2.2
BUS1				*e*S		**Sn**	03 22 40.9	+0.2
EDPE	**Pejibaye, P**	**4.74**	**122**	*e*P		**Pn**	03 21 56.9	+2.2
ALCO	**Alturas Coton,**	**5.47**	**119**	*e*P		**Pn**	03 22 06.5	+1.6
BRU2	**Volcan**	**5.67**	**120**			**Pn**	03 22 09.6	+1.9
JEFFS	**S de V. Baru**	**5.87**	**120**	*e*P		**Pn**	03 22 11.8	+1.4
BQTLY	**Boquete Panama**	**5.88**	**119**	*e*P		**Pn**	03 22 12.0	+1.4
CCIG	**Comitan**	**6.31**	**317**	Pn		**Pn**	03 22 16.8	+0.3
CMIG	**Matias Romero**	**8.83**	**308**	Pn		**Pn**	03 22 50.6	-0.3
	0.3nm,0.3s,baz=142,slow=12,SNR=8.2 1.6nm,0.7s							
553A	**Crawfordville**	**18.66**	**9**	Pn		**Pn**	03 25 02.0	+0.7
GOGA	**Godfrey**	**21.97**	**9**	P		**P**	03 25 37.4	+0.7
GOGA				IAmb		IAmb	03 25 39.2	
	comp=Z,3.5nm,0.6s							
Y49A	**Blount Mountai**	**22.11**	**3**	P		**P**	03 25 38.2	0.0
HODGE	**Hodges**	**22.99**	**12**	P		**P**	03 25 47.7	+0.2
HODGE				IAmb		IAmb	03 25 49.0	
	comp=Z,5.7nm,1.1s							
TXAR	**Lajitas Array**	**23.05**	**322**	P		**P**	03 25 49.5	+1.2
	comp=Z,0.8nm,0.5s,baz=139,slow=9.3,SNR=11 comp=Z,0.8nm,0.5s							
TXAR	**Lajitas Array**	**23.05**	**322**	P		**P**	03 25 48.5	+0.2
TX31	**Lajitas Ar. Si**	**23.05**	**322**	P		**P**	03 25 49.6	+1.3
MIAR	**Mount Ida**	**23.39**	**348**	P		**P**	03 25 51.4	-0.2
MIAR				IAmb		IAmb	03 26 06.5	
	comp=Z,8.2nm,1.2s							
W50A	**Signal Mountai**	**23.52**	**5**	P		**P**	03 25 53.0	+0.1
W50A				IAmb		IAmb	03 25 53.8	
	comp=Z,4.3nm,0.5s							
CPCT	**Cooper Cave**	**23.84**	**6**	P		**P**	03 25 55.9	0.0
CPCT				IAmb		IAmb	03 25 57.5	
	comp=Z,4.7nm,0.9s							
TKL	**Tuckaleechee C**	**24.13**	**8**	P		**P**	03 25 58.3	-0.3
	comp=Z,1.5nm,0.3s,baz=177,slow=12,SNR=8.8 comp=Z,1.5nm,0.3s							
TKL	**Tuckaleechee C**	**24.13**	**8**	P		**P**	03 25 58.0	-0.7
TKL				IAmb		IAmb	03 26 09.0	
	comp=Z,5.8nm,1.1s							
CLTN	**Cedars of Leba**	**24.34**	**3**	P		**P**	03 26 00.8	+0.3
V55A	**Taylorsville**	**24.77**	**13**	P		**P**	03 26 03.9	-0.5
V55A				IAmb		IAmb	03 26 41.4	
	comp=Z,8.9nm,1.4s							
U49A	**Red Boiling Sp**	**24.79**	**4**	P		**P**	03 26 04.0	-0.5
TZTN	**Tazewell**	**25.04**	**8**	P		**P**	03 26 06.0	-0.8
TZTN				IAmb		IAmb	03 26 26.7	
	comp=Z,11nm,1.4s							
V58A	**Windy Hill, Pi**	**25.23**	**16**	P		**P**	03 26 07.7	-0.8
V58A				IAmb		IAmb	03 26 09.1	
	comp=Z,5.7nm,0.6s							
FVM	**French Village**	**26.31**	**355**	P		**P**	03 26 16.4	-2.0
FVM				IAmb		IAmb	03 26 16.7	
	comp=Z,3.2nm,0.7s							
F33A	**5 Mile Ranch,**	**34.83**	**349**	P		**P**	03 27 32.2	-1.3
F33A				IAmb		IAmb	03 28 07.7	
	comp=Z,6.2nm,1.2s							
SIV	**San Ignacio**	**38.05**	**136**	P		**P**	03 28 02.2	+0.8
	comp=Z,1.7nm,0.6s,baz=274,slow=8.9 comp=Z,1.7nm,0.6s							
ULM	**Lac du Bonnet**	**39.05**	**352**	P		**P**	03 28 07.4	-1.9
	comp=Z,4.7nm,0.8s,baz=172,slow=5.6,SNR=3.6 comp=Z,4.7nm,0.8s							
ULM	**Lac du Bonnet**	**39.05**	**352**	P		**P**	03 28 07.5	-1.8
AF01	**San Pedro de A**	**39.35**	**151**	P		**P**	03 28 14.0	+1.5
SCHQ	**Schefferville**	**46.07**	**17**	P		**P**	03 29 03.4	-2.9
	comp=Z,5.3nm,0.9s,baz=225,slow=11,SNR=5.8 comp=Z,5.3nm,0.9s							
CMAR	**Chiang Mai Arr**	**149.36**	**348**	PKPbc		**PKPbc**	03 40 32.9	+0.7
	comp=Z,1.4nm,0.3s,baz=338,slow=3.9,SNR=5.7							

*IDC **26** 03:21:45.3±1.7, 41°.54N×19°.42E, h0km, mb3.7/6, mbtmp3.8/11, ML3.5/4, Error ellipse: s-maj=22.9km s-min=19.5km az=33.0*
*SKO **26** 03:21:46.3, 41°.63N×19°.39E, h0km, ML4.0*
*BEO **26** 03:21:48.5±1.0, 41°.45N×19°.71E, h6km±4km, ML3.7/13*
*THE **26** 03:21:48.0, 42°.N±9°.×1°.9E±1°.5, h20km, M3.8/21, MLh3.8/21*
*PDG **26** 03:21:49.4±0.4, 41°.52N×19°.61E, h5km±1km, MD3.6/10, ML3.5/13, Error ellipse: s-maj=1.6km s-min=1.8km az=0.0*
ISC 26 03:21:49.0±0.9, 41°.54N±0°.02×19°.55E±0°.03, h18km±6km, n123, σ1s78/157, mb4.2/3, 23C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**129**	*i* Pg		**Pg**	03 21 54.8	-0.7
TIR				*i* Sg		**Sg**	03 22 00.1	+0.1
ULC	**Ulcinj**	**0.48**	**332**	↓*i*Pg		**Pg**	03 21 57.8	-1.0
ULC				*i* Sg		**Sn**	03 22 07.4	-1.8
PHP	**Peshkopia**	**0.68**	**77**	P		**Pg**	03 22 00.9	-1.6
PHP				S		**Sg**	03 22 11.4	-0.2
DRME	**Dracevica, Mon**	**0.70**	**337**	*e*Pg		**Pb**	03 22 02.8	0.0
DRME	**Dracevica, Mon**	**0.70**	**337**	↑*i*Pg		**Pb**	03 22 02.2	-0.6
DRME				*i* Sg		**Sn**	03 22 14.1	-0.5
BUM	**Brajici-Budva**	**0.91**	**327**	↑*i*Pg		**Pg**	03 22 06.0	-0.7
BUM				*i* Sg		**Sn**	03 22 19.7	0.0
PDG	**Podgorica**	**0.92**	**346**	↓P		**Pg**	03 22 06.2	-0.7
PDG	**Podgorica**	**0.92**	**346**	*e*Pg		**Pg**	03 22 06.1	-0.8
PDG				*e*Sg		**Sn**	03 22 22.7	+2.9
PDG	**Podgorica**	**0.92**	**346**	↓*i*Pg		**Pb**	03 22 05.7	-0.7
PDG				*i* Sg		**Sn**	03 22 19.1	-0.7
OHR	**Ohrid**	**1.03**	**114**	*i* Pg		**Pb**	03 22 07.7	-0.7
OHR				*i* Sg		**Sn**	03 22 24.1	+1.4
OHR				*e*Lg		Lg	03 22 26.9	
	comp=N,3μm,0.7s							
OHR				*e*Lg		Lg	03 22 27.4	
	comp=E,2μm,0.6s							
VLO	**Vlora**	**1.07**	**182**	P		**Pg**	03 22 09.8	+0.1
VLO				S		**Sn**	03 22 25.8	+2.3
PVY	**Plav**	**1.10**	**16**	*e*Pg		**Pb**	03 22 09.2	-0.4
PVY	**Plav**	**1.10**	**16**	↓*i*Pg		**Pb**	03 22 08.7	-0.9
PVY				*i* Sg		**Sn**	03 22 25.6	+1.1
CEME	**Cevo**	**1.11**	**335**	↑*i*Pg		**Pg**	03 22 10.6	0.0
CEME				*i* Sg		**Sn**	03 22 27.3	+2.5
HCY	**Herceg Novi**	**1.20**	**319**	↑*i*Pg		**Pg**	03 22 12.2	-0.1
HCY				*i* Sg		**Sg**	03 22 29.8	+1.8
NKME	**Niksic**	**1.31**	**340**	↓*i*Pg		**Pb**	03 22 12.7	-0.4
NKME				*i* Sg		**Sg**	03 22 32.7	+1.4
KBN	**Korca**	**1.31**	**134**	P		**Pb**	03 22 13.6	+0.5
KBN				S		**Sg**	03 22 34.6	+3.3
KOME	**Kolasin**	**1.31**	**359**	*e*Pg		**Pg**	03 22 15.1	+0.8
KOME	**Kolasin**	**1.31**	**359**	↓*i*Pg		**Pg**	03 22 14.0	-0.3
KOME				*i* Sg		**Sg**	03 22 32.7	+1.2
BEY	**Berane**	**1.36**	**11**	*e*Pg		**Pb**	03 22 13.7	-0.3
IVA	**Berane**	**1.36**	**11**	↓*i*Pg		**Pn**	03 22 13.1	-0.1
IVA				*i* Sg		**Sg**	03 22 33.9	+1.0
SKO	**Skopje**	**1.48**	**72**	*i* Pg		**Pb**	03 22 16.1	+0.2
SKO				*i* Sg		**Sg**	03 22 36.3	-0.4
TREB	**Trebinje**	**1.48**	**323**	*e*Pn		**Pg**	03 22 16.4	-1.1
TREB				*e*Sn		**Sg**	03 22 38.1	+1.3
BRY	**Bratogost**	**1.56**	**331**	↑*i*Pn		**Pb**	03 22 17.5	+0.1
BRY				*i* Sn		**Sg**	03 22 41.0	+1.7
NEST	**Nestorio**	**1.59**	**134**	P		**Pb**	03 22 17.9	-0.2
UPM	**Unac-Piva**	**1.73**	**344**	↑*i*Pn		**Pb**	03 22 20.7	+0.3
UPM				*i* Sn		**Sg**	03 22 45.6	+0.7
SJES	**Sjenica**	**1.75**	**10**	*e*Pg		**Pg**	03 22 21.7	-1.0
SJES				*e*Sg		**Sg**	03 22 45.5	+0.1
PLE	**Pljevlja**	**1.79**	**356**	*e*Pg		**Pg**	03 22 22.7	-0.8
PLE	**Pljevlja**	**1.79**	**356**	↓*i*Pg		**Pg**	03 22 22.1	-1.4
PLE				*i* Sn		**Sg**	03 22 47.4	+0.5
PENT	**Pentalofos**	**1.80**	**138**	P		**Pn**	03 22 20.7	+1.3
KEK	**Kerkira**	**1.83**	**174**	P		**Pg**	03 22 24.4	+0.2
STON	**Ston**	**1.92**	**315**	*e*Pn		**Pg**	03 22 24.6	-1.2
SELS	**Selova**	**2.04**	**34**	*e*Pn		**Pb**	03 22 24.1	-1.5
KZN	**Kozani**	**2.08**	**125**	P		**Pn**	03 22 24.0	+0.8
RUDO	**Rudo**	**2.08**	**356**	*e*Pn		**Pb**	03 22 26.8	+0.5
IVAS	**Ivanjica**	**2.08**	**12**	*e*Pn		**Pb**	03 22 25.0	-1.4
IGT	**Igoumenitsa**	**2.09**	**163**	P		**Pn**	03 22 23.9	+0.7
IGT				S		**Sb**	03 22 51.7	-0.3
JAN	**Janina**	**2.12**	**152**	P		**Pn**	03 22 24.9	+1.2
GOCS	**Kraljevo Serbi**	**2.25**	**25**	*e*Pn		**Pn**	03 22 26.9	+1.5
VAY	**Valandovo**	**2.28**	**94**	*i* Pn		**Pn**	03 22 26.4	+0.7
VAY				*i* Sn		**Sn**	03 22 55.9	+2.4
VAY				*e*Lg		Lg	03 23 03.0	
	comp=N,831nm,0.8s							
VAY				*e*Lg	

*IDC **26** 03:24:02.4±5.0, 40.°99N×18.°89E, h0km, mb3.6/3, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=73.4km s-min=66.6km az=145.0*
*SKO **26** 03:24:10.7, 41.°46N×19.°48E, h0km, ML3.6*
ISC 26 03:24:09.4±2.5, 41.°3N±0.°1×19.°4E±0.°1, h13km±9km, n11, σ1°32/18, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**77**	*i* Pg	**Pg**	**03 24 16.0**	**-0.1**
TIR				*i* Sg	**Sg**	**03 24 19.9**	**-0.7**
OHR	**Ohrid**	**1.04**	**98**	*i* Pg	**Pb**	**03 24 30.1**	**+0.8**
OHR				*i* Sg	**Sn**	**03 24 44.9**	**+0.7**
OHR				*e*Lg	Lg	03 24 46.6	
	comp=N,1μm,0.4s						
OHR				*e*Lg	Lg	03 24 46.7	
	comp=E,2μm,0.6s						
SKO	**Skopje**	**1.66**	**64**	*i* Pg	**Pn**	**03 24 39.3**	**+1.1**
SKO				*i* Sg	**Sb**	**03 24 59.7**	**-0.9**
VAY	**Valandovo**	**2.36**	**88**	*i* Pn	**Pn**	**03 24 49.4**	**+1.5**
VAY				*i* Sn	**Sn**	**03 25 17.2**	**+0.5**
VAY				*e*Lg	Lg	03 25 17.9	
	comp=E,204nm,0.9s						
VAY				*e*Lg	Lg	03 25 21.3	
	comp=N,67nm,0.7s						
KNT	**Kendrikon**	**2.61**	**91**	*i* Pn	**Pn**	**03 24 52.6**	**+1.3**
KNT				*i* Sn	**Sn**	**03 25 22.9**	**-0.1**
SRS	**Serrai**	**3.14**	**91**	*i* Pn	**Pn**	**03 24 59.4**	**+0.8**
SRS				*i* Sn	**Sn**	**03 25 35.3**	**-0.6**
MMB	**Musomishta**	**3.25**	**84**	*i* Pn	**Pn**	**03 25 01.4**	**+1.2**
MMB				*i* Sn	**Sn**	**03 25 38.2**	**-0.6**
MLR	**Muntele Rosu**	**6.34**	**46**	Pn	**Pn**	**03 25 45.6**	**+2.9**
	comp=N,2.0nm,0.3s,baz=211,slow=19,SNR=6.2						
	comp=N,12nm,0.7s						
FINES	**FINESS Array B**	**20.60**	**9**	P	**P**	**03 28 46.4**	**-1.5**
	comp=N,1.4nm,0.7s,baz=194,slow=9.6,SNR=3.6						
	comp=N,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**44.30**	**50**	P	**P**	**03 32 18.2**	**-0.4**
	comp=N,0.7nm,0.5s,baz=288,slow=7.9,SNR=2.8						
	comp=N,0.7nm,0.5s						
MKAR	**Makanchi Array**	**44.46**	**61**	P	**P**	**03 32 18.5**	**-1.6**
	comp=N,0.6nm,0.6s,baz=286,slow=7.5,SNR=2.8						
	comp=N,0.6nm,0.6s						

*PRU **26** 03:25:20.9, 41.°28N×19.°95E, h10km, M4.2*
*IDC **26** 03:25:23.1±1.6, 41.°70N×19.°69E, h0km, mb3.7/8, mbtmp3.8/13, ML3.4/4, Error ellipse: s-maj=24.3km s-min=15.5km az=12.0*
*NEIC **26** 03:25:23.8±1.1, 41.°57N±0.°03×19.°62E±0.°09, h10km±1km, mb4.2/12, Error ellipse: s-maj=11.2km s-min=4.4km az=72.0*
*SKO **26** 03:25:24.3, 41.°53N×19.°36E, h1km, ML3.6*
*BEO **26** 03:25:25.8±0.6, 41.°52N×19.°68E, h0km, ML3.5/11*
*NAO **26** 03:25:25.3, 41.°78N×19.°77E, h10km, MB3.5*
*PDG **26** 03:25:25.7±0.5, 41.°58N×19.°64E, h10km±1km, MD3.6/12, ML3.5/13, Error ellipse: s-maj=2.1km s-min=2.6km az=0.0*
*VIE **26** 03:25:27.7±1.8, 41.°49N×18.°98E, h10km, mb3.5/1, ms4.7/5, Error ellipse: s-maj=39.8km s-min=14.0km az=45.0 46 km WNW of Durres*
ISC 26 03:25:25.8±1.0, 41.°55N±0.°03×19.°51E±0.°03, h23km±8km, n126, σ1°61/160, mb4.1/9, 10C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**127**	*i* Pg	**Pb**	**03 25 32.3**	**-1.0**
TIR				*i* Sg	**Sb**	**03 25 37.5**	**-0.9**
ULC	**Ulcinj**	**0.46**	**334**	⇓*i* Pg	**Pb**	**03 25 34.0**	**-1.3**
ULC				*i* Sg	**Sb**	**03 25 42.0**	**+0.2**
DRME	**Dracevica, Mon**	**0.68**	**339**	*e*Pg	**Pn**	**03 25 39.9**	**-0.1**
DRME	**Dracevica, Mon**	**0.68**	**339**	⇑*i* Pg	**Pb**	**03 25 37.7**	**-1.4**
DRME				*i* Sg	**Sb**	**03 25 45.6**	**-2.5**
BUM	**Brajici-Budva**	**0.88**	**329**	⇓*i* Pg	**Pn**	**03 25 40.9**	**-1.9**
BUM				*i* Sg	**Sn**	**03 25 56.6**	**+1.7**
PDG	**Podgorica**	**0.90**	**348**	Pg	**Pn**	**03 25 42.2**	**-0.8**
PDG					**Sn**	**03 25 55.3**	**0.0**
PDG	**Podgorica**	**0.90**	**348**	*e*Pg	**Pn**	**03 25 42.3**	**-0.8**
PDG				*e*Sg	**Sn**	**03 25 57.1**	**+1.8**
PDG	**Podgorica**	**0.90**	**348**	⇑*i* Pg	**Pn**	**03 25 41.4**	**-1.6**
PDG				*i* Sg	**Sn**	**03 25 55.8**	**+0.5**
OHR	**Ohrid**	**1.06**	**114**	*i* Pg	**Pb**	**03 25 45.4**	**-0.2**
OHR				*i* Sg	**Sb**	**03 26 01.5**	**+2.4**
OHR				*e*Lg	Lg	03 26 02.8	
	comp=N,1μm,0.6s						
OHR				*e*Lg	Lg	03 26 04.0	
	comp=E,688nm,0.5s						
CEME	**Cevo**	**1.09**	**336**	⇑*i* Pg	**Pn**	**03 25 45.3**	**-0.4**
CEME				*i* Sg	**Sb**	**03 26 02.4**	**+2.6**
PVY	**Plav**	**1.09**	**18**	*e*Pg	**Pb**	**03 25 47.1**	**+0.9**
PVY	**Plav**	**1.09**	**18**	⇑*i* Pg	**Pb**	**03 25 44.1**	**-1.8**
PVY				*i* Sg	**Sn**	**03 25 59.3**	**-1.0**
HCY	**Herceg Novi**	**1.17**	**320**	⇓*i* Pg	**Pb**	**03 25 48.1**	**+0.7**
HCY				*i* Sg	**Sb**	**03 26 04.1**	**+1.9**
NKME	**Niksic**	**1.28**	**341**	⇑*i* Pg	**Pn**	**03 25 48.9**	**+0.5**
NKME				*i* Sg	**Sb**	**03 26 06.9**	**+1.4**
KOME	**Kolasin**	**1.30**	**0**	*e*Pg	**Pb**	**03 25 50.4**	**+0.8**
KOME	**Kolasin**	**1.30**	**0**	⇓*i* Pg	**Pb**	**03 25 49.9**	**+0.3**
KOME				*i* Sg	**Sb**	**03 26 07.8**	**+1.9**
BEY	**Berane**	**1.35**	**12**	*e*Pg	**Pn**	**03 25 49.8**	**+0.5**
IVA	**Berane**	**1.35**	**12**	⇓*i* Pg	**Pn**	**03 25 49.3**	**0.0**
IVA				*i* Sg	**Sb**	**03 26 08.0**	**+0.6**
TREB	**Trebinje**	**1.45**	**324**	*e*Pg	**Pb**	**03 25 52.3**	**+0.1**
TREB				*e*Sg	**Sb**	**03 26 15.4**	**+5.2**
SKO	**Skopje**	**1.50**	**73**	*i* Pg	**Pb**	**03 25 53.5**	**+0.5**
SKO				*i* Sg	**Sb**	**03 26 13.9**	**+2.2**
BRY	**Bratogost**	**1.53**	**332**	⇓*i* Pg	**Pb**	**03 25 53.5**	**-0.1**
BRY				*i* Sg	**Sb**	**03 26 14.6**	**+2.0**
UPM	**Unac-Piva**	**1.71**	**345**	⇓*i* Pn	**Pn**	**03 25 55.6**	**+1.2**
UPM				*i* Sn	**Sb**	**03 26 19.9**	**+2.0**
SJES	**Sjenica**	**1.74**	**11**	*e*Pn	**Pb**	**03 25 58.9**	**+1.7**
SJES				*e*Sg	**Sb**	**03 26 20.9**	**+2.2**
PLE	**Pljevlja**	**1.78**	**357**	*e*Pg	**Pb**	**03 25 58.2**	**+0.3**
PLE	**Pljevlja**	**1.78**	**357**	⇑*i* Pn	**Pb**	**03 25 57.7**	**-0.2**
PLE				*i* Sn	**Sb**	**03 26 20.6**	**+0.8**
KEK	**Kerkira**	**1.85**	**173**	Pg	**Pb**	**03 26 02.0**	**+3.1**
STON	**Ston**	**1.88**	**315**	*e*Pn	**Pb**	**03 25 59.6**	**+0.1**
SELS	**Selova**	**2.05**	**35**	*e*Pn	**Pn**	**03 26 00.8**	**+1.9**
RUDO	**Rudo**	**2.07**	**357**	*e*Pn	**Pb**	**03 26 02.5**	**-0.2**
IVAS	**Ivanjica**	**2.08**	**13**	*e*Pn	**Pb**	**03 26 02.0**	**-0.9**
IGT	**Igoumenitsa**	**2.11**	**162**	*i* Pn	**Pb**	**03 26 01.7**	**-1.8**
IGT				*i* Sn	**Sb**	**03 26 32.4**	**+3.2**
GOCS	**Kraljevo Serbi**	**2.25**	**26**	*e*Pn	**Pn**	**03 26 03.3**	**+1.6**
VAY	**Valandovo**	**2.31**	**95**	*i* Pn	**Pb**	**03 26 04.5**	**-2.3**
VAY				*i* Sn	**Sn**	**03 26 32.0**	**+1.9**
VAY				*e*Lg	Lg	03 26 32.7	
	comp=E,206nm,0.6s						
VAY				*e*Lg	Lg	03 26 34.1	
	comp=N,158nm,0.6s						
BBLS	**Lazi&#263i**	**2.31**	**358**	*e*Pn	**Pb**	**03 26 08.1**	**+1.2**
GRUS	**Gruza**	**2.50**	**20**	*e*Pn	**Pn**	**03 26 06.7**	**+1.7**
DIVS	**Divibare**	**2.57**	**8**	*e*Pn	**Pb**	**03 26 14.9**	**+3.6**
KNT	**Kendrikon**	**2.58**	**98**	*i* Pn	**Pn**	**03 26 07.8**	**+1.6**
BOVS	**Bovan**	**2.64**	**37**	*e*Pn	**Pn**	**03 26 08.6**	**+1.6**
LIT	**Litokhoron**	**2.69**	**122**	*i* Pn	**Pn**	**03 26 08.6**	**+0.9**
KKB	**Krupnik**	**2.73**	**83**	*i* Pn	**Pn**	**03 26 10.0**	**+1.9**
KKB				*i* Sn	**Sn**	**03 26 42.2**	**+1.9**
THE	**Thessaloniki**	**2.77**	**108**	*i* Pn	**Pn**	**03 26 09.7**	**+1.0**
ACER	**Acerenza**	**2.80**	**255**	Pn	**Pn**	**03 26 10.2**	**+1.0**
VTS	**Vitosha**	**2.97**	**68**	*e*Pn	**Pn**	**03 26 13.2**	**+1.5**
ZAGS	**Zajecar**	**3.02**	**41**	*e*Pn	**Pn**	**03 26 14.5**	**+2.3**
SRS	**Serrai**	**3.10**	**97**	*i* Pn	**Pn**	**03 26 14.7**	**+1.3**
BORS2	**Bor- Borsko je**	**3.14**	**35**	*e*Pn	**Pn**	**03 26 13.7**	**-0.1**
TIP	**Timpagrande**	**3.17**	**222**	Pn	**Pn**	**03 26 14.2**	**-0.1**
MMB	**Musomishta**	**3.18**	**89**	*i* Pn	**Pn**	**03 26 17.0**	**+2.6**
CUC	**Castrocucco**	**3.21**	**242**	Pn	**Pn**	**03 26 15.5**	**+0.7**
KUBS	**Kucevo**	**3.27**	**28**	*e*Pn	**Pn**	**03 26 15.0**	**-0.7**
MDVR	**Moldovita**	**3.61**	**26**	*e*Pn	**Pn**	**03 26 21.2**	**+0.9**
FRGS	**Fruska Gora**	**3.61**	**3**	*e*Pn	**Pn**	**03 26 21.0**	**+0.6**
VRSS	**Vrsac**	**3.81**	**20**	*e*Pn	**Pn**	**03 26 23.6**	**+0.6**
PLD	**Plovdiv**	**3.96**	**80**	*e*Pn	**Pn**	**03 26 26.7**	**+1.6**
CEL	**Celeste**	**4.31**	**221**	Pn	**Pn**	**03 26 29.1**	**-0.8**
CAMP	**Campotosto**	**4.65**	**284**	Pn	**Pn**	**03 26 35.0**	**+0.3**
NRCA	**Norcia**	**4.92**	**287**		**Pn**	**03 26 38.6**	**+0.2**
FDMO	**Fiordimonte**	**4.99**	**289**	Pn	**Pn**	**03 26 39.9**	**+0.6**
MURB	**Monte Urbino**	**5.45**	**291**	Pn	**Pn**	**03 26 45.6**	**0.0**
SOKA	**Soboth**	**6.05**	**329**	*i* Pn	**Pn**	**03 26 54.0**	**+0.1**
	comp=N,5.2nm,0.5s						
OBKA	**Obir**	**6.11**	**326**	*e*Pn	**Pn**	**03 26 56.0**	**+1.2**
	comp=N,6.0nm,0.4s						
OBKA				*i* Sn	**Sn**	**03 28 08.2**	**+4.3**
	comp=N,21nm,0.6s						
MLR	**Muntele Rosu**	**6.11**	**48**	Pn	**Pn**	**03 26 54.0**	**-0.8**
	comp=N,2.8nm,0.3s,baz=272,slow=3.7,SNR=8.5						
MLR				Sn	**Sn**	**03 28 01.6**	**-2.4**
	comp=N,0.3nm,0.3s,baz=255,slow=20,SNR=1.1						
	comp=N,5.0nm,0.5s						
MLR	**Muntele Rosu**	**6.11**	**48**		**Pn**	**03 26 53.1**	**-1.7**
MLR	**Muntele Rosu**	**6.11**	**48**	⇑P	**Pn**	**03 26 58.3**	**+3.5**
SABO	**M.te Sabotino**	**6.16**	**318**	Pn	**Pn**	**03 26 53.8**	**-1.5**
NEHR	**Nehoiu**	**6.27**	**50**	⇑P	**Pn**	**03 26 59.8**	**+2.9**
ARSA	**Arzberg**	**6.37**	**335**	Pn	**Pn**	**03 26 58.1**	**-0.2**
ARSA	**Arzberg**	**6.37**	**335**	*i* Pn	**Pn**	**03 26 59.5**	**+1.3**
	comp=N,3.5nm,0.4s						
PSZ	**Piszkesteto**	**6.37**	**2**	Pn	**Pn**	**03 26 57.7**	**-0.6**
OZUR		**6.42**	**43**	⇓P	**Pn**	**03 27 01.3**	**+2.4**
CASP	**Castiglione de**	**6.54**	**284**	Pn	**Pn**	**03 27 01.0**	**+0.4**
MYKA	**Terra Mystica**	**6.60**	**322**	*i* Pn	**Pn**	**03 27 02.6**	**+1.2**
	comp=N,1.7nm,0.3s						
PLOR	**Plostina**	**6.72**	**48**	⇑P	**Pn**	**03 27 06.1**	**+2.9**
VRI	**Vrincioaia**	**6.78**	**48**	⇑P	**Pn**	**03 27 07.4**	**+3.6**
STAL	**STALIGIAL**	**6.80**	**316**	Pn	**Pn**	**03 27 04.2**	**+0.1**
TEOL	**Teolo**	**6.86**	**306**	Pn	**Pn**	**03 27 04.8**	**-0.1**
ZCCA	**Zocca**	**6.86**	**297**	Pn	**Pn**	**03 27 05.1**	**+0.2**
KECS	**Kecovo**	**6.97**	**5**	*e*PN	**Pn**	**03 27 09.3**	**+2.9**
KECS				*e*SN	**Sn**	**03 28 25.2**	**+0.4**
CIMO	**Cimolais**	**6.97**	**315**	Pn	**Pn**	**03 27 05.2**	**-1.4**
ABTA	**Abfaltersbach**	**7.23**	**318**	*i* Pn	**Pn**	**03 27 12.1**	**+2.0**
	comp=N,1.0nm,0.2s						
CTI	**Castel Tesino**	**7.25**	**311**	Pn	**Pn**	**03 27 09.3**	**-1.1**
MOA	**Molln**	**7.32**	**331**	*e*Pn	**Pn**	**03 27 13.0**	**+1.7**
	comp=N,0.9nm,0.2s						
BIOA	**Bad Ischl, Aus**	**7.43**	**328**	*e*Pn	**Pn**	**03 27 13.4**	**+0.6**
	comp=N,4.1nm,0.3s						
IDI	**Anoia**	**7.54**	**144**	Pn	**Pn**	**03 27 14.1**	**-0.4**
	comp=N,2.8nm,0.3s,baz=106,slow=20,SNR=1.8						
IDI				Sn	**Sn**	**03 28 33.2**	**-6.0**
	comp=N,0.5nm,0.3s,baz=259,slow=19,SNR=1.4						
IDI	**Anoyia**	**7.54**	**144**		**Pn**	**03 27 13.1**	**-1.3**
LESA	**Schwarzleotal**	**7.64**	**323**	*i* Pn	**Pn**	**03 27 16.3**	**+0.6**
	comp=N,4.5nm,0.3s						
LESA				*e*Sn	**Sn**	**03 28 40.0**	**-1.5**
	comp=N,3.1nm,0.4s						
MSSA	**Maissana**	**7.84**	**294**	Pn	**Pn**	**03 27 18.3**	**-0.1**
WTTA	**Wattenberg**	**8.02**	**318**	*e*Pn	**Pn**	**03 27 22.0**	**+0.9**
	comp=N,3.4nm,0.3s						
WTTA				*e*Sn	**Sn**	**03 28 51.3**	**+0.2**
	comp=N,6.8nm,0.5s						
WATA	**Walderalm**	**8.10**	**318**	*e*Pn	**Pn**	**03 27 23.3**	**+1.2**
	comp=N,5.8nm,0.3s						
WATA				*e*Sn	**Sn**	**03 28 51.1**	**-1.8**
	comp=N,2.9nm,0.4s						
CKRC	**Cesky Krumlov**	**8.14**	**335**	*e*PN	**Pn**	**03 27 24.0**	**+1.5**
SQTA	**Sankt Quirin**	**8.21**	**316**	*i* Pn	**Pn**	**03 27 24.9**	**+1.3**
	comp=N,2.4nm,0.3s						
SQTA				*e*Sn	**Sn**	**03 28 53.4**	**-2.2**
	comp=N,4.5nm,0.5s						
MOTA	**Moosalm**	**8.35**	**317**	*e*Pn	**Pn**	**03 27 26.3**	**+0.9**
	comp=N,1.2nm,0.2s						
MOTA				*i* Sn	**Sn**	**03 28 58.7**	**-0.3**
	comp=N,5.3nm,0.6s						
GEC2	**GERESS Array S**	**8.37**	**333**	Pn	**Pn**	**03 27 24.5**	**-1.1**
GERES	**GERESS Array B**	**8.37**	**333**	Pn	**Pn**	**03 27 25.9**	**+0.3**
	comp=N,0.1nm,0.3s,baz=163,slow=14,SNR=4.5						
	comp=N,1.4nm,0.5s						
RETA	**Reutte**	**8.62**	**316**	*e*Pn	**Pn**	**03 27 30.1**	**+1.1**
	comp=N,2.4nm,0.4s						
RETA				*e*Sn	**Sn**	**03 29 03.4**	**-2.1**
	comp=N,3.6nm,0.5s						
KHC	**Kasperske Hory**	**8.65**	**333**	Pn	**Pn**	**03 27 29.5**	**-0.1**
KHC	**Kasperske Hory**	**8.65**	**333**	*e*PN	**Pn**	**03 27 29.8**	**+0.3**
DAVOX	**Davos/Dischmat**	**8.67**	**310**	Pn	**Pn**	**03 27 31.4**	**+1.5**
	comp=N,0.6nm,0.3s,baz=158,slow=19,SNR=3.4						
	comp=N,1.6nm,0.3s						
TUE	**Stuetta**	**8.82**	**307**	Pn	**Pn**	**03 27 32.8**	**+0.8**
DAVA	**Damuels**	**8.96**	**313**	*i* Pn	**Pn**	**03 27 36.0**	**+2.1**
	comp=N,1.5nm,0.3s						
DAVA				*i* Sn	**Sn**	**03 29 11.2**	**-2.9**
	comp=N,5.4nm,0.6s						
SENIN	**Lac Senin/Sane**	**10.03**	**303**	Pn	**Pn**	**03 27 48.6**	**0.0**
BFO	**Black Forest**	**10.42**	**314**	Pn	**Pn**	**03 27 53.3**	**-0.4**
HFS	**Hagfors**	**18.95**	**351**	P	**P**	**03 29 44.1**	**-0.9**
	comp=N,0.2nm,0.3s,baz=170,slow=11,SNR=9.1						
	comp=N,2.3nm,0.6s						
NC602	**NORSAR Array S**	**19.82**	**348**	P	**P**	**03 29 53.3**	**-1.2**
NC405	**NORSAR Array S**	**20.16**	**349**	P	**P**	**03 29 57.9**	**-0.3**
NC405				IAmb	IAmb	03 30 00.7	
	comp=Z,16nm,1.5s						
NB201	**NORSAR Array S**	**20.16**	**348**	P	**P**	**03 29 58.3**	**+0.1**
NB2	**NORSAR Subarra**	**20.16**	**348**	P	**P**	**03 29 57.8**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=153,slow=10						
NOA	**NORSAR Array B**	**20.16**	**348**	P	**P**	**03 29 57.1**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=150,slow=9.8,SNR=4.3						
	comp=Z,0.3nm,0.6s						
EKA	**Eskdalemuir Ar**	**20.28**	**321**	P	**P**	**03 29 59.7**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=121,slow=9.2,SNR=9.2						
	comp=Z,1.4nm,0.5s						
EKB	**Eskdalemuir**	**20.29**	**321**	P	**P**	**03 29 59.3**	**-0.4**
NC303	**NORSAR Array S**	**20.32**	**349**	P	**P**	**03 29 59.7**	**-0.2**
NC303				IAmb	IAmb	03 30 25.8	
	comp=Z,17nm,1.4s						
FINES	**FINESS Array B**	**20.32**	**9**	P	**P**	**03 29 58.6**	**-1.3**
	comp=Z,3.0nm,0.5s,baz=188,slow=9.5,SNR=15						
	comp=Z,3.0nm,0.5s						
FIA1	**FINESS Array S**	**20.32**	**9**	P	**P**	**03 29 58.6**	**-1.3**
ARCES	**ARCESS Array B**	**28.22**	**4**	P	**P**	**03 31 14.3**	**-2.2**
ARTI	**Arti**	**29.06**	**46**	P	**P**	**03 31 22.7**	**-1.3**
ARTI				IAmb	IAmb	03 31 23.2	
	comp=Z,4.2nm,0.5s						
BORK	**Borovoye**	**35.60**	**54**	P	**P**	**03 32 21.7**	**+0.4**
BORK				IAmb	IAmb	03 32 22.6	
	comp=Z,1.8nm,0.5s						
BVAR	**Borovoye Array**	**35.64**	**54**	P	**P**	**03 32 20.9**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=258,slow=7.2,SNR=2.3						
	comp=Z,0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**40.93**	**56**	P	**P**	**03 33 05.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=291,slow=7.8,SNR=1.8						
	comp=Z,0.2nm,0.3s						
DBIC	**Dimbokro**	**40.94**	**219**	P	**P**	**03 33 08.5**	**+1.9**
DBIC				IAmb	IAmb	03 33 42.4	
	comp=Z,9.6nm,1.2s						
KURK	**Kurchatov**	**40.97**	**56**	P	**P**	**03 33 05.5**	**-1.0**
KURK				IAmb	IAmb	03 33 42.8	
	comp=Z,6.3nm,1.5s						
ZALV	**Zalesovo Beam**	**44.08**	**51**	P	**P**	**03 33 31.0**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=274,slow=7.8,SNR=7.5						
	comp=Z,1.8nm,0.4s						
ZALV	**Zalesovo Beam**	**44.08**	**51**	P	**P**	**03 33 31.2**	**-0.5**
MK31	**Makanchi Array**	**44.27**	**61**	P	**P**	**03 33 31.8**	**-1.6**
MKAR	**Makanchi Array**	**44.27**	**61**	P	**P**	**03 33 33.4**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=282,slow=7.7,SNR=12						
	comp=Z,1.2nm,0.5s						
MKAR	**Makanchi Array**	**44.27**	**61**	P	**P**	**03 33 33.0**	**-0.5**
SONM	**Songino Array**	**58.95**	**52**	P	**P**	**03 35 22.0**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=283,slow=7.2,SNR=1.2						
	comp=Z,0.7nm,0.8s						

*ATH **26** 03:32:18.7, 38.°38N×21.°86E, h6km±1km, ML2.9/13, Manual Solution by A.Moschou First location: 2019/11/26 03:33:06, This location: 2019/11/26 03:56:19 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
THE 26 03:32:18.8, 38.°4N±0.°6×21.°9E±0.°6, h5km±1km, M2.8/22, MLh2.8/22, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.06**	**27**	P	Pg	03 32 20.4	+0.1
EFP				S	Sg	03 32 21.9	+0.4
EFP	**Efpalio**	**0.06**	**27**	P	Pg	03 32 20.3	0.0
EFP				S	Sg	03 32 21.8	+0.4
UPR	**University Cam**	**0.11**	**217**	P	Pg	03 32 21.1	+0.1
UPR				S	Sg	03 32 23.4	+0.9
UPR	**University Cam**	**0.11**	**217**	P	Pg	03 32 21.4	+0.4
UPR				S	Sg	03 32 23.6	+1.0
SERG	**Sergoula**	**0.15**	**74**	P	Pg	03 32 22.1	+0.2
SERG				S	Sg	03 32 24.7	+0.7
SERG	**Sergoula**	**0.15**	**74**	P	Pg	03 32 22.2	+0.3
SERG				S	Sg	03 32 24.4	+0.4
TRIZ	**Trizonia**	**0.16**	**91**	P	Pg	03 32 22.3	+0.3
TRIZ				S	Sg	03 32 24.8	+0.6
PATG	**Patra B**	**0.17**	**220**	P	Pg	03 32 22.5	+0.3
PATG				S	Sg	03 32 25.3	+0.8
KALE	**Kalithea**	**0.21**	**84**	P	Pg	03 32 23.1	+0.1
KALE				S	Sg	03 32 26.6	+0.8
KALE	**Kalithea**	**0.21**	**84**	P	Pg	03 32 23.2	+0.2
KALE				S	Sg	03 32 26.6	+0.7
ANX	**Ano Chora**	**0.23**	**10**	P	Pg	03 32 23.4	+0.1
ANX				S	Sg	03 32 27.0	+0.7
ANX	**Ano Chora**	**0.23**	**10**	P	Pg	03 32 23.4	+0.1
ANX				S	Sg	03 32 26.6	+0.2
PVO	**Paravola**	**0.36**	**313**	P	Pg	03 32 25.8	-0.1
PVO				S	Sg	03 32 32.1	+1.4
PVO	**Paravola**	**0.36**	**313**	P	Pg	03 32 25.7	-0.1
PVO				S	Sg	03 32 31.2	+0.5
KLV1	**Kalavrita**	**0.39**	**151**	P	Pg	03 32 26.0	-0.3
KLV1				S	Sg	03 32 32.1	+0.7
KLV	**Kalavryta, Ach**	**0.39**	**146**	P	Pg	03 32 26.0	-0.4
KLV	**Kalavryta, Ach**	**0.39**	**146**	P	Pg	03 32 26.0	-0.4
KLV				S	Sg	03 32 32.2	+0.6
AXS	**Araxos**	**0.42**	**246**	P	Pg	03 32 26.6	-0.4
AXS				S	Sg	03 32 33.5	+1.0
DRO	**Drossia**	**0.43**	**197**	P	Pg	03 32 26.9	-0.3
DRO				S	Sg	03 32 33.7	+0.8
DRO	**Drossia**	**0.43**	**197**	P	Pg	03 32 26.9	-0.3
DRO				S	Sg	03 32 33.5	+0.6
RLS	**Riolos of Patr**	**0.44**	**226**	P	Pg	03 32 27.3	-0.1
RLS				S	Sg	03 32 34.1	+1.0
RLS	**Riolos of Patr**	**0.44**	**226**	P	Pg	03 32 27.3	-0.1
RLS				S	Sg	03 32 34.0	+0.8
EVR	**Evrytania**	**0.55**	**355**	P	Pg	03 32 29.1	-0.2
EVR				S	Sg	03 32 37.7	+1.1
EVR	**Evrytania**	**0.55**	**355**	P	Pg	03 32 29.1	-0.3
EVR				S	Sg	03 32 37.4	+0.9
GUR	**Goura**	**0.57**	**139**	P	Pg	03 32 29.0	-0.8
GUR				S	Sg	03 32 37.7	+0.4
GUR	**Goura**	**0.57**	**139**	P	Pg	03 32 29.3	-0.5
GUR				S	Sg	03 32 37.9	+0.6
MAKR	**Makrakomi, Fth**	**0.68**	**18**	P	Pg	03 32 31.8	0.0
MAKR				S	Sg	03 32 41.5	+0.9
MAKR	**Makrakomi, Fth**	**0.68**	**18**	P	Pg	03 32 31.9	+0.1
MAKR				S	Sg	03 32 41.5	+0.9
AXAR	**Agios Charalam**	**0.73**	**57**	P	Pg	03 32 32.1	-0.8
AXAR				S	Sb	03 32 44.1	-0.4
AXAR	**Agios Charalam**	**0.73**	**57**	P	Pg	03 32 32.3	-0.6
AXAR				S	Sg	03 32 42.8	+0.3
AGG	**Agios Georgios**	**0.74**	**29**	P	Pg	03 32 32.1	-1.0
AGG	**Agios Georgios**	**0.74**	**29**	P	Pg	03 32 33.5	+0.3
AGG				S	Sb	03 32 43.8	-1.0
CLEM	**Kyllini,Ilia,G**	**0.75**	**231**	P	Pg	03 32 33.6	+0.4
CLEM				S	Sg	03 32 43.1	+0.1
AMT	**Artemida-Makis**	**0.85**	**189**	P	Pg	03 32 35.0	0.0
RTZL	**Ratzakli, Kefa**	**0.91**	**252**	P	Pg	03 32 36.1	-0.2
LKR	**Lokris**	**0.93**	**72**	P	Pg	03 32 35.6	-1.0
LTK	**Loutraki**	**0.93**	**111**	P	Pg	03 32 36.4	-0.3
ATAL	**Atalanti**	**0.96**	**70**	P	Pg	03 32 36.9	-0.3
ATAL				S	Sb	03 32 50.6	-0.4
VLS	**Valsamata

BORS2	**Bor- Borsko je**	3.38	33	*e*Pn		Pn	03 33 37.3	-0.6
KUBS	**Kucevo**	3.52	27	*e*Pn		Pn	03 33 39.3	-0.6
MDVR	**Moldovita**	3.86	25	⇑P		Pn	03 33 42.6	-2.1
MDVR	**Moldovita**	3.86	25	*e*Pn		Pn	03 33 45.3	+0.6
FRGS	**Fruska Gora**	3.88	4	*e*Pn		Pn	03 33 45.2	+0.4
PLD	**Plovdiv**	4.05	76	*e*Pn		Pn	03 33 49.3	+2.2
VRSS	**Vrsac**	4.07	19	*e*Pn		Pn	03 33 48.9	+1.5
BZS	**Buzias**	4.60	19	⇑P		Pn	03 33 54.0	-0.8
SOKA	**Soboth**	6.27	331	*i* Pn		Pn	03 34 18.3	+0.6
	comp=E,0.7nm,0.2s							
OBKA	**Obir**	6.31	327	*i* Pn		Pn	03 34 20.7	+2.3
	comp=E,1.8nm,0.3s							
OBKA				*i* Sn		Sn	03 35 28.6	-1.2
	comp=E,2.3nm,0.3s							
MYKA	**Terra Mystica**	6.79	324	*i* Pn		Pn	03 34 26.4	+1.5
	comp=E,0.5nm,0.2s							
IDI	**Anoyia**	7.35	143	Pn		Pn	03 34 36.4	+3.8
	comp=E,0.6nm,0.3s,baz=338,slow=19,SNR=1.7							
IDI				Sn		Sn	03 35 54.7	-0.7
	comp=E,0.3nm,0.3s,baz=139,slow=19,SNR=1.4							
	comp=E,9.5nm,0.9s							
ABTA	**Abfaltersbach**	7.41	320	*i* Pn		Pn	03 34 34.0	+0.7
	comp=E,0.6nm,0.1s							
ABTA				*i* Sn		Sn	03 35 52.9	-3.9
	comp=E,1.4nm,0.3s							
MOA	**Molln**	7.54	332	*i* Pn		Pn	03 34 37.2	+2.1
	comp=E,0.6nm,0.2s							
MOA				*e*Sn		Sn	03 35 60.0	+0.1
	comp=E,1.6nm,0.3s							
BIOA	**Bad Ischl, Aus**	7.64	329	*i* Pn		Pn	03 34 38.4	+2.0
	comp=E,1.5nm,0.4s							
LESA	**Schwarzleotal**	7.83	324	*i* Pn		Pn	03 34 40.1	+1.0
	comp=E,1.3nm,0.2s							
LESA				*e*Sn		Sn	03 36 05.8	-1.3
	comp=E,1.4nm,0.4s							
WTTA	**Wattenberg**	8.20	319	*i* Pn		Pn	03 34 46.6	+2.4
	comp=E,0.9nm,0.2s							
WTTA				*i* Sn		Sn	03 36 12.0	-4.4
	comp=E,1.6nm,0.3s							
WATA	**Walderalm**	8.28	320	*i* Pn		Pn	03 34 47.6	+2.3
	comp=E,1.0nm,0.2s							
SQTA	**Sankt Quirin**	8.38	318	*i* Pn		Pn	03 34 48.7	+1.9
	comp=E,0.7nm,0.2s							
MOTA	**Moosalm**	8.52	318	*i* Sn		Sn	03 36 19.7	-4.5
	comp=E,1.6nm,0.4s							
FINES	**FINESS Array B**	20.58	9	P		P	03 37 22.8	-0.9
	comp=E,0.8nm,0.5s,baz=187,slow=9.9,SNR=5.5							
	comp=E,0.8nm,0.5s							
ZALV	**Zalesovo Beam**	44.28	50	P		P	03 40 54.5	+0.2
	comp=E,0.8nm,0.4s,baz=289,slow=9.0,SNR=3.0							
	comp=E,0.8nm,0.4s							
MKAR	**Makanchi Array**	44.43	61	P		P	03 40 55.7	0.0
	comp=E,0.9nm,0.6s,baz=288,slow=6.9,SNR=6.8							
	comp=E,0.9nm,0.6s							

IDC ***26*** *03:39:51.4±3.0, 41°.42N×19°.35E, h0km, mb3.7/7, mbtmp3.7/10, ML3.0/3, Error ellipse: s-maj=48.3km s-min=19.0km az=19.0*

PRU ***26*** *03:39:51.3, 41°.15N×19°.70E, h10km*

RHSSO ***26*** *03:39:52.9±1.0, 41°.33N×19°.63E, h10km, ML3.7/5*

SKO ***26*** *03:39:54.6, 41°.56N×19°.38E, h10km, ML3.5*

THE ***26*** *03:39:55.7, 42°.N±6°×1°.9E±°, h11km, M3.2/11, MLh3.2/11*

PDG ***26*** *03:39:55.0±0.5, 41°.51N×19°.57E, h14km±1km, MD3.4/4, ML3.3/13, Error ellipse: s-maj=2.0km s-min=2.7km az=0.0*

BEO ***26*** *03:39:57.5±0.6, 41°.60N×19°.51E, h14km±3km, ML3.4/8*

VIE ***26*** *03:40:02.2±1.7, 41°.97N×19°.30E, h10km, mb3.1/12, ms4.3/1, Error ellipse: s-maj=42.2km s-min=13.3km az=45.0 25 km ESE of Shkoder*

ISC 26 03:39:55.7±0.9, 41°.57N±0°.02×19°.48E±0°.02, h17km±7km, n138, σ1§62/184, mb3.9/4, 34C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	0.36	127	*i* Pg		Pg	03 40 02.5	-0.6
TIR				*i* Sg		Sg	03 40 08.3	+0.1
ULC	**Ulcinj**	0.43	336	⇑*i* Pg		Pg	03 40 04.3	-0.2
ULC				*i* Sg		Sg	03 40 10.3	-0.2
DRME	**Dracevica, Mon**	0.66	340	*e*Pg		Pn	03 40 09.7	-0.6
DRME	**Dracevica, Mon**	0.66	340	⇑*i* Pg		Pg	03 40 07.6	-1.0
DRME				*i* Sg		Sb	03 40 18.1	+0.5
BUM	**Brajici-Budva**	0.86	329	⇓*i* Pg		Pg	03 40 10.4	-1.9
BUM				*i* Sg		Sn	03 40 27.9	+2.7
PDG	**Podgorica**	0.88	349	⇑P		Pg	03 40 12.2	-0.5
PDG	**Podgorica**	0.88	349	*e*Pg		Pg	03 40 12.3	-0.5
PDG	**Podgorica**	0.88	349	⇑*i* Pg		Pg	03 40 11.3	-1.5
PDG				*i* Sg		Sn	03 40 25.2	-0.5
CEME	**Cevo**	1.07	337	⇑*i* Pg		Pn	03 40 16.3	+0.4
CEME				*i* Sg		Sn	03 40 32.2	+1.8
PVY	**Plav**	1.09	19	⇓*i* Pg		Pb	03 40 14.8	-1.3
PVY				*i* Sg		Sn	03 40 31.7	+0.7
OHR	**Ohrid**	1.09	114	*i* Pg		Pb	03 40 15.4	-0.7
OHR				*i* Sg		Sn	03 40 33.4	+2.5
OHR				*e*Lg		Lg	03 40 33.8	
	comp=N,706nm,0.6s							
OHR				*e*Lg		Lg	03 40 37.7	
	comp=E,808nm,0.6s							
VLO	**Vlora**	1.10	180	P		Pg	03 40 17.1	+0.2
HCY	**Herceg Novi**	1.15	320	⇓*i* Pg		Pg	03 40 17.5	-0.4
HCY				*i* Sg		Sn	03 40 36.5	+4.2
NKME	**Niksic**	1.26	342	⇑*i* Pg		Pn	03 40 18.7	+0.1
NKME				*i* Sg		Sg	03 40 38.3	+1.7
KOME	**Kolasin**	1.28	1	*e*Pg		Pg	03 40 20.4	-0.1
KOME	**Kolasin**	1.28	1	⇓*i* Pg		Pg	03 40 19.6	+0.2
KOME				*i* Sg		Sg	03 40 38.8	+1.6
IVA	**Berane**	1.34	13	⇑*i* Pg		Pn	03 40 19.9	+0.2
IVA				*i* Sg		Sg	03 40 40.6	+1.6
KBN	**Korca**	1.36	133	P		Pg	03 40 21.6	-0.4
KBN				S		Sg	03 40 40.4	+0.6
TREB	**Trebinje**	1.43	324	⇑*i* Pn		Pb	03 40 21.7	-0.1
TREB				*e*Sn		Sg	03 40 43.6	+1.9
BRY	**Bratogost**	1.51	333	⇓*i* Pn		Pg	03 40 23.9	-0.8
BRY				*i* Sn		Sg	03 40 45.8	+1.4
SKO	**Skopje**	1.52	74	*i* Pg		Pb	03 40 24.1	+0.7
SKO				*i* Sg		Sg	03 40 45.2	+0.6
NEST	**Nestorio**	1.65	134	P		Pb	03 40 26.0	+0.3
NEST				S		Sg	03 40 48.6	-0.3
UPM	**Unac-Piva**	1.69	346	⇑*i* Pn		Pb	03 40 25.6	-0.8
UPM				*i* Sn		Sg	03 40 50.5	+0.3
SJES	**Sjenica**	1.73	12	*e*Pn		Pg	03 40 28.2	-0.8
KLINJ	**Klinje**	1.73	338	*e*Pn		Pb	03 40 26.4	-0.7
KLINJ				*e*Sn		Sg	03 40 52.2	+0.6
PLE	**Pljevlja**	1.76	358	⇑*i* Pn		Pb	03 40 26.8	-0.8
PLE				*i* Sn		Sg	03 40 51.6	-0.9
PENT	**Pentalofos**	1.86	137	P		Pb	03 40 29.9	+0.7
STON	**Ston**	1.86	315	*e*Pn		Pb	03 40 29.8	+0.6
KEK	**Kerkira**	1.87	173	P		Pg	03 40 31.6	+0.1
SELS	**Selova**	2.05	36	*e*Pn		Pn	03 40 30.9	+1.5
SELS				*e*Sn		Sb	03 40 56.9	-0.7
RUDO	**Rudo**	2.05	358	*e*Pn		Pb	03 40 31.3	-1.2
RUDO				*e*Sn		Sb	03 40 59.0	+1.3
IVAS	**Ivanjica**	2.07	14	*e*Pn		Pb	03 40 31.4	-1.4
IGT	**Igoumenitsa**	2.13	162	P		Pn	03 40 31.4	+0.8
IGT	**Igoumenitsa**	2.13	162	*i* Pn		Pb	03 40 32.8	-1.1
KZN	**Kozani**	2.14	125	P		Pn	03 40 32.4	+1.7
GOCS	**Kraljevo Serbi**	2.24	27	*e*Pn		Pn	03 40 33.8	+1.7
GOCS				*e*Sn		Sn	03 41 01.7	+2.2
VAY	**Valandovo**	2.33	95	*i* Pn		Pn	03 40 34.2	+0.9
VAY				*i* Sn		Sn	03 41 02.6	+1.0
VAY				*e*Lg		Lg	03 41 03.1	
	comp=N,237nm,0.7s							
VAY				*e*Lg		Lg	03 41 03.8	
	comp=E,146nm,0.6s							
PRMD	**Pramanda**	2.38	148	P		Pn	03 40 36.0	+2.0
GRUS	**Gruza**	2.49	21	*e*Pn		Pn	03 40 36.9	+1.5
DIVS	**Divibare**	2.56	8	*e*Pn		Pb	03 40 39.8	-1.4
KNT	**Kendrikon**	2.60	98	P		Pn	03 40 37.8	+0.9
KNT	**Kendrikon**	2.60	98	*i* Pn		Pn	03 40 38.2	+1.2
KNT				*i* Sn		Sn	03 41 08.8	+0.6
BOVS	**Bovan**	2.64	38	⇓P		Pn	03 40 38.9	+1.4
BOVS	**Bovan**	2.64	38	*e*Pn		Pn	03 40 38.7	+1.2
BOVS				*e*Sn		Sn	03 41 10.6	+1.5
TRUS	**Trudelj**	2.74	14	*e*Pn		Pn	03 40 40.7	+1.8
KKB	**Krupnik**	2.74	83	P		Pn	03 40 39.7	+0.7
KKB	**Krupnik**	2.74	83	*i* Pn		Pn	03 40 40.3	+1.4
KKB				*i* Sn		Sn	03 41 12.3	+0.6
THE	**Thessaloniki**	2.79	108	*i* Pn		Pn	03 40 40.3	+0.7
THE				*i* Sn		Sn	03 41 13.3	+0.5
TSLK	**Tsoukalades, L**	2.88	161	P		Pn	03 40 40.6	-0.2
ZAPS	**Zavoj**	2.89	53	*e*Pn		Pn	03 40 42.9	+1.9
ZAPS				*e*Sn		Sn	03 41 17.9	+2.6
HORT	**Hortiatis**	2.90	108	P		Pn	03 40 42.3	+1.2
LKD2	**Lefkada island**	2.92	162	P		Pn	03 40 40.9	-0.4
TEKS	**Tekeris**	2.98	1	*e*Pn		Pn	03 40 43.2	+1.0
VTS	**Vitosha**	2.98	68	P		Pn	03 40 43.7	+1.4
VTS				S		Sn	03 41 19.4	+1.7
VTS	**Vitosha**	2.98	68	*e*Pn		Sn	03 40 43.9	+1.6
VTS				*e*Sn		Sn	03 41 18.0	+0.2
NYDR	**Nydri-Lefkada**	3.00	162	P		Pn	03 40 42.1	-0.2
SOH	**Sokhos**	3.01	103	P		Pn	03 40 43.2	+0.5
ZAGS	**Zajecar**	3.02	41	*e*Pn		Pn	03 40 44.4	+1.6
SRS	**Serrai**	3.13	97	P		Pn	03 40 44.8	+0.6
SRS	**Serrai**	3.13	97	*i* Pn		Pn	03 40 45.1	+1.0
BORS2	**Bor- Borsko je**	3.14	36	*e*Pn		Pn	03 40 44.5	+0.2
TIP	**Timpagrande**	3.17	222	⇑P		Pn	03 40 45.4	+0.7
MMB	**Musomishta**	3.20	89	*i* Pn		Pn	03 40 47.2	+2.0
FSK	**Fiskardo**	3.21	165	P		Pn	03 40 44.7	-0.7
AVAS	**Avala Beograd**	3.22	13	*e*Pn		Pn	03 40 46.4	+1.0
AVAS				*e*Sn		Sn	03 41 24.1	+0.7
KUBS	**Kucevo**	3.27	29	*e*Pn		Pn	03 40 45.9	-0.2
KUBS				*e*Sn		Sn	03 41 24.0	-0.6
DMLN	**Damoulianata-K**	3.39	168	P		Pn	03 40 47.3	-0.6
BLY	**Banja Luka**	3.60	333	⇑*i* Pn		Pn	03 40 51.5	+0.9
BLY				*e*Sn		Sn	03 41 35.9	+3.2
BLY	**Banja Luka**	3.60	333	⇑P		Pn	03 40 52.3	+1.6
BLY	**Banja Luka**	3.60	333	*e*Pn		Pn	03 40 52.7	+2.1
FRGS	**Fruska Gora**	3.60	4	*e*Pn		Pn	03 40 51.5	+0.8
MDVR	**Moldovita**	3.60	26	⇑P		Pn	03 40 51.7	+1.0
MDVR	**Moldovita**	3.60	26	*e*Pn		Pn	03 40 51.6	+0.8
PUNG	**Punghina**	3.71	42	⇓P		Pn	03 40 53.4	+1.2
VRSS	**Vrsac**	3.80	20	*e*Pn		Pn	03 40 54.7	+1.3
DJES	**Djerdap**	3.81	35	⇑P		Pn	03 40 54.8	+1.2
HERR	**Herculane**	3.94	32	⇑P		Pn	03 40 57.1	+1.7
PLD	**Plovdiv**	3.97	80	*i* Pn		Pn	03 40 57.5	+1.7
PLD				*i* Sn		Sn	03 41 38.6	-3.3
PLD	**Plovdiv**	3.97	80	*e*Pn		Pn	03 40 57.5	+1.7
SRE	**Strehaia**	4.12	40	⇑P		Pn	03 40 59.7	+1.8
PLVB	**Pleven**	4.21	63	⇑P		Pn	03 41 00.2	+1.2
BZS	**Buzias**	4.33	20	⇑P		Pn	03 41 02.5	+1.8
GZR	**Gura Zlata**	4.51	31	⇑P		Pn	03 41 05.6	+2.3
AQU	**L'Aquila**	4.60	282	⇑*i* Pn		Pn	03 41 04.8	+0.3
AQU				*e*Sn		Sn	03 41 57.9	+0.3
SURR	**Surduc**	4.60	24	⇑P		Pn	03 41 06.0	+1.5
MORH	**Mrgy, Hungar**	4.69	353	*e*Pn		Pn	03 41 06.0	+0.4
MORH				*e*Sn		Sn	03 42 02.0	+2.5
MORH	**Mrgy, Hungar**	4.69	353	*e*Pn		Pn	03 41 07.7	+2.1
SIRR	**Siria**	4.96	18	⇑P		Pn	03 41 11.2	+1.9
SIRR	**Siria**	4.96	18	*e*Pn		Pn	03 41 11.4	+2.1
SIRR				*e*Sn		Sn	03 42 05.8	-0.4
DEV	**Deva**	4.98	29	⇑P		Pn	03 41 12.2	+2.6
LOT	**Lotru**	4.98	37	⇑P		Pn	03 41 12.0	+2.3
BOJS	**Bojanci**	5.00	323	*e*Pn		Pn	03 41 11.7	+1.9
HUMR	**Humele**	5.00	52	⇑P		Pn	03 41 12.2	+2.3
RIY	**Rijeka**	5.23	318	*e*Pn		Pn	03 41 14.7	+1.6
ARR	**Arges**	5.34	43	⇑P		Pn	03 41 17.2	+2.7
MTUR	**Matau**	5.47	46	⇑P		Pn	03 41 18.3	+1.9
CEY	**Cerknica**	5.55	320	*e*Pn		Pn	03 41 18.7	+1.2
VOIR		5.60	44	⇓P		Pn	03 41 20.1	+1.9
SKDS	**Skadanscina**	5.62	317	*e*Pn		Pn	03 41 21.1	+2.6
SKDS				*e*Sn		Sn	03 42 21.5	-1.2
LJU	**Ljubljana**	5.73	323	*e*Pn		Pn	03 41 21.4	+1.4
MARR	**Marisel-Cluj**	5.74	26	⇑P		Pn	03 41 21.9	+1.7
SOKA	**Soboth**	6.03	329	*e*Pn		Pn	03 41 25.3	+1.1
	comp=E,1.7nm,0.3s							
OBKA	**Obir**	6.09	326	*e*Pn		Pn	03 41 26.8	+1.9
	comp=E,2.1nm,0.2s							
OBKA				*i* Sn		Sn	03 42 30.9	-3.3
	comp=E,5.6nm,0.6s							
MLR	**Muntele Rosu**	6.12	48	Pn		Pn	03 41 27.7	+2.3
	comp=E,1.3nm,0.3s,baz=183,slow=7.0,SNR=14							
	comp=E,11nm,0.6s							
MLR	**Muntele Rosu**	6.12	48	⇑P		Pn	03 41 26.5	+1.1
DOPR	**Dopca**	6.13	42	⇓P		Pn	03 41 27.6	+2.1
NEHR	**Nehoiu**	6.28	50	⇓P		Pn	03 41 28.0	+0.6
ARSA	**Arzberg**	6.35	335	*e*Pn		Pn	03 41 29.1	+0.7
	comp=E,3.8nm,0.5s							
OZUR		6.42	43	⇓P		Pn	03 41 30.6	+1.1
COVR	**Voineasa-Covas**	6.48	46	⇑P		Pn	03 41 31.5	+1.2
TURR	**Turia**	6.51	44	⇑P		Pn	03 41 32.1	+1.4
MYKA	**Terra Mystica**	6.58	322	*i* Pn		Pn	03 41 31.3	-0.4
	comp=E,1.9nm,0.4s							
PLOR	**Plostina**	6.73	48	⇑P		Pn	03 41 35.7	+2.0
VRI	**Vrincioaia**	6.78	48	⇑P		Pn	03 41 35.8	+1.4
ONER	**Baraj Valea Uz**	6.90	44	⇓P		Pn	03 41 37.3	+1.3
KECS	**Kecovo**	6.95	6	*e*PN		Pn	03 41 41.5	+4.8
KECS				*e*SN		Sn	03 42 59.9	+4.5
ABTA	**Abfaltersbach**	7.21	318	*i* Pn		Pn	03 41 41.5	+1.2
	comp=E,0.7nm,0.2s							
ABTA				*i* Sn		Sn	03 43 01.5	-0.2
	comp=E,6.5nm,0.8s							
MOA	**Molln**	7.30	331	*i* Pn		Pn	03 41 44.4	+2.9
	comp=E,1.3nm,0.3s							
BIOA	**Bad Ischl, Aus**	7.41	328	*i* Pn		Pn	03 41 44.4	+1.4
	comp=E,2.4nm,0.5s							
BIOA				*i* Sn		Sn	03 43 06.2	-0.4
	comp=E,3.8nm,0.5s							
IDI	**Anoyia**	7.57	144	Sn		Sn	03 43 04.3	-6.4
	comp=E,0.5nm,0.3s,baz=112,slow=19,SNR=0.8							
LESA	**Schwarzleotal**	7.61	323	*i* Pn		Pn	03 41 46.6	+0.8
	comp=E,1.8nm,0.3s							
TLCR		7.70	59	⇓P		Pn	03 41 49.4	+2.4
STHS	**Stebnicka Huta**	7.95	8	*e*PN		Pn	03 41 52.8	+2.4
WTTA	**Wattenberg**	8.00	318	*i* Pn		Pn	03 41 53.4	+2.2
	comp=E,0.9nm,0.2s							
WTTA				*i* Sn		Sn	03 43 18.0	-3.3
	comp=E,4.2nm,0.5s							
WATA	**Walderalm**	8.08	318	*i* Pn		Pn	03 41 55.2	+2.9
	comp=E,1.5nm,0.2s							
SQTA	**Sankt Quirin**	8.19	316	*i* Pn		Pn	03 41 55.1	+1.4
	comp=E,1.8nm,0.4s							
SQTA				*i* Sn		Sn	03 43 25.1	-0.8
	comp=E,1.6nm,0.4s							
MOTA	**Moosalm**	8.32	317	*e*Pn		Pn	03 41 58.5	+2.9
	comp=E,1.0nm,0.4s							
MOTA				*i* Sn		Sn	03 43 31.1	+1.8
	comp=E,4.4nm,0.6s							
GERES	**GERESS Array B**	8.34	333	Pn		Pn	03 41 56.6	+0.8
	baz=169,slow=11,SNR=4.2							
	comp=E,0.7nm,0.6s							
KHC	**Kasperske Hory**	8.63	333	*e*PN		Pn	03 42 00.5	+0.8
DAVOX	**Davos/Dischmat**	8.65	310	Pn		Pn	03 42 01.6	+1.5
	comp=E,0.3nm,0.3s,baz=148,slow=14,SNR=4.3							
HFS	**Hagfors**	18.93	351	P		P	03 44 14.1	-1.4
	comp=E,0.1nm,0.3s,baz=178,slow=13,SNR=3.9							
	comp=E,2.1nm,0.7s							
NOA	**NORSAR Array B**	20.14	348	P		P	03 44 27.9	-0.9
	comp=E,0.3nm,0.7s,baz=155,slow=9.7,SNR=4.3							
	comp=E,0.3nm,0.7s							
EKA	**Eskdalemuir Ar**	20.25	321	P		P	03 44 29.2	-0.8
	comp=E,2.3nm,0.9s,baz=105,slow=11,SNR=3.6							
	comp=E,2.3nm,0.9s							
FINES	**FINESS Array B**	20.30	9	P		P	03 44 29.1	-1.3
	comp=E,3.5nm,0.8s,baz=180,slow=8.7,SNR=11							
	comp=E,3.5nm,0.8s							
BVAR	**Borovoye Array**	35.65	54	P		P	03 46 52.5	0.0
	comp=E,0.9nm,0.7s,baz=261,slow=5.6,SNR=4.7							
	comp=E,0.9nm,0.7s							
ZALV	**Zalesovo Beam**	44.09	51	P		P	03 48 02.0	-0.5
	comp=E,2.6nm,0.6s,baz=280,slow=9.2,SNR=8.6							
	comp=E,2.6nm,0.6s							
MKAR	**Makanchi Array**	44.28	61	P		P	03 48 03.7	-0.6
	comp=E,1.3nm,0.6s,baz=286,slow=6.5,SNR=10							
	comp=E,1.3nm,0.6s							
SONM	**Songino Array**	58.96	52	P		P	03 49 53.4	-0.7
	comp=E,0.4nm,0.6s,baz=290,slow=8.6,SNR=2.7							
	comp=E,0.4nm,0.6s							

BEO ***26*** *03:43:57.2±0.7, 41°.35N×19°.65E, h0km, ML3.1/13*

IDC ***26*** *03:43:58.2±4.0, 41°.50N×19°.45E, h0km, mb3.5/5, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=61.4km s-min=42.2km az=22.0*

PDG ***26*** *03:43:58.6±0.3, 41°.49N×19°.62E, h9km±1km, MD3.2/2, ML3.2/13, Error ellipse: s-maj=1.3km s-min=1.6km az=0.0*

SKO ***26*** *03:43:59.1, 41°.40N×19°.26E, h1km, ML3.2*

ISC 26 03:43:58.9±1.2, 41°.48N±0°.03×19°.45E±0°.04, h4km±9km, n51, σ1§51/72, mb3.9/3, 7C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	0.34	112	*i* Pg		Pb	03 44 07.3	-0.2
TIR				*i* Sg		Sb	03 44 12.7	-0.6
ULC	**Ulcinj**	0.51	343	⇓*i* Pg		Pg	03 44 06.7	-2.1
ULC				*i* Sg		Sg	03 44 16.1	+0.7
DRME	**Dracevica, Mon**	0.74	345	*e*Pg		Pg	03 44 13.0	-0.1
DRME	**Dracevica, Mon**	0.74	345	⇓*i* Pg		Pg	03 44 11.9	-1.2
DRME				*i* Sg		Sg	03 44 24.0	+1.3
BUM	**Brajici-Budva**	0.92	333	⇓*i* Pg		Pg	03 44 15.8	-0.9
BUM				*i* Sg		Sb	03 44 30.9	+0.7
PDG	**Podgorica**	0.96	351	*e*Pg		Pg	03 44 17.6	+0.2
PDG				*e*Sg		Sn	03 44 34.4	+1.0
PDG	**Podgorica**	0.96	351	⇓*i* Pg		Pg	03 44 16.0	-1.4
PDG				*i* Sg		Sg	03 44 30.4	+0.4
OHR	**Ohrid**	1.08	109	*i* Pg		Pn	03 44 20.5	-0.4
OHR				*i* Sg		Sn	03 44 37.0	+0.7
OHR				*e*Lg		Lg	03 44 37.7	
	comp=N,344nm,0.5s							
OHR				*e*Lg		Lg	03 44 39.0	
	comp=E,549nm,0.5s							
CEME	**Cevo**	1.14	340	⇑*i* Pg		Pg	03 44 20.0	-0.8
CEME				*i* Sg		Sb	03 44 36.9	+0.4
PVY	**Plav**	1.18	19	*e*Pg		Pg	03 44 20.8	-0.8
PVY	**Plav**	1.18	19	⇓*i* Pg		Pg	03 44 18.5	-3.1
HCY	**Herceg Novi**	1.21	324	⇑*i* Pg		Pg	03 44 21.5	-0.5
HCY				*i* Sg		Sn	03 44 40.1	+0.7
NKME	**Niksic**	1.34	344	⇑*i* Pg		Pn	03 44 22.4	-2.1
NKME				*i* Sg		Sg	03 44 43.1	+1.0
KOME	**Kolasin**	1.38	2	*e*Pg		Pn	03 44 24.2	-0.8
KOME	**Kolasin**	1.38	2	⇑*i* Pg		Pn	03 44 22.9	-2.1
KOME				*i* Sg		Sb	03 44 43.6	+0.4
BEY	**Berane**	1.43	13	*e*Pg		Pn	03 44 24.9	-0.9
IVA	**Berane**	1.43	13	⇓*i* Pg		Pn	03 44 22.7	-3.1
IVA				*i* Sg		Sn	03 44 43.9	-1.2
TREB	**Trebinje**	1.49	327	*e*Pg		Pg	03 44 29.2	+1.8
TREB				*e*Sg		Sg	03 44 50.5	+3.8
SKO	**Skopje**	1.57	71	*i* Pg		Pg	03 44 30.1	+1.1
SKO				*i* Sg		Sg	03 44 51.1	+1.7
BRY	**Bratogost**	1.58	335	⇑*i* Pn		Pn	03 44 27.4	-0.4
BRY				*i* Sn		Sg	03 44 51.2	+1.6
UPM	**Unac-Piva**	1.77	347	⇑*i* Pn		Pn	03 44 30.5	-0.1
UPM				*i* Sn		Sb	03 44 56.0	+1.2
SJES	**Sjenica**	1.83	12	*e*Pg		Pb	03 44 32.5	-0.5
SJES				*e*Sg		Sg	03 44 59.4	+1.8
PLE	**Pljevlja**	1.85	359	⇑*i* Pn		Pn	03 44 31.4	-0.2
PLE				*i* Sn		Sn	03 44 56.5	+1.0
IGT	**Igoumenitsa**	2.05	161	*i* Pn		Pb	03 44 36.3	-0.5
IGT				*i* Sn		Sg	03 45 03.1	-1.7
SELS	**Selova**	2.14	35	*e*Pn		Pn	03 44 33.2	-2.2
RUDO	**Rudo**	2.14	358	*e*Pn		Pn	03 44 37.1	+1.6
IVAS	**Ivanjica**	2.16	14	*e

HCY					*i* Sg		**Sb**	**03 49 58.6**	**+1.0**	
KOME	**Kolasin**	**1.45**	**357**	⇑	*i* Pg		**Pb**	**03 49 42.7**	**0.0**	
KOME					*i* Sg		**Sb**	**03 50 03.7**	**+2.9**	
NKME	**Niksic**	**1.45**	**340**	⇓	*i* Pg		**Pb**	**03 49 42.3**	**-0.5**	
NKME					*i* Sg		**Sb**	**03 50 02.1**	**+1.3**	
SKO	**Skopje**	**1.47**	**67**		*i* Pg		**Pb**	**03 49 43.9**	**+0.8**	
SKO					*i* Sg		**Sb**	**03 50 05.2**	**+3.8**	
IVA	**Berane**	**1.48**	**8**	⇑	*i* Pg		**Pn**	**03 49 41.9**	**-0.1**	
IVA					*i* Sg		**Sb**	**03 50 05.7**	**+4.0**	
BRY	**Bratogost**	**1.70**	**332**	⇓	*i* Pn		**Pb**	**03 49 46.3**	**-0.8**	
BRY					*i* Sn		**Sb**	**03 50 10.1**	**+2.0**	
UPM	**Unac-Piva**	**1.88**	**344**	⇓	*i* Pn		**Pb**	**03 49 49.3**	**-0.8**	
UPM					*i* Sn		**Sb**	**03 50 14.9**	**+1.7**	
PLE	**Pljevlja**	**1.93**	**355**	⇑	*i* Pn		**Pb**	**03 49 50.3**	**-0.7**	
PLE					*i* Sn		**Sb**	**03 50 15.8**	**+1.1**	
IGT	**Igoumenitsa**	**1.94**	**164**		*i* Pn		**Pb**	**03 49 51.1**	**0.0**	
IGT					*i* Sn		**Sb**	**03 50 20.6**	**+5.7**	
VAY	**Valandovo**	**2.22**	**91**		*i* Pn		**Pb**	**03 49 54.6**	**-1.2**	
VAY					*i* Sn		**Sb**	**03 50 20.9**	**-1.9**	
VAY					*e*Lg		Lg	03 50 23.1		
	comp=N,90nm,0.7s									
VAY					*e*Lg		Lg	03 50 23.6		
	comp=E,56nm,0.6s									
KNT	**Kendrikon**	**2.48**	**94**		*i* Pn		**Pb**	**03 49 58.1**	**-2.1**	
KNT					*i* Sn		**Sb**	**03 50 28.5**	**-1.8**	
LIT	**Litokhoron**	**2.54**	**120**		Pn		**Pn**	**03 49 56.0**	**-0.4**	
LIT	**Litokhoron**	**2.54**	**120**		*i* Pn		**Pb**	**03 50 00.8**	**-0.4**	
KKB	**Krupnik**	**2.66**	**79**		*i* Pn		**Pb**	**03 50 01.1**	**-2.2**	
SGRT	**San Giovanni R**	**2.93**	**278**		Pn		**Pn**	**03 50 01.2**	**-0.7**	
SRS	**Serrai**	**3.00**	**94**		*i* Pn		**Pn**	**03 50 05.1**	**+2.3**	
SRS					*i* Sn		**Sb**	**03 50 41.9**	**-3.5**	
MMB	**Musomishta**	**3.10**	**86**		*i* Pn		**Pb**	**03 50 08.1**	**-2.8**	
PLD	**Plovdiv**	**3.90**	**77**		*i* Pn		**Pb**	**03 50 18.2**	**+3.1**	
BZS	**Buzias**	**4.45**	**18**	⇑	P		Pn	03 50 14.5	-8.2	
ITM	**Ithomi**	**4.58**	**156**		Pn		**Pn**	**03 50 25.2**	**+0.8**	
GUMA	**Gualdo di Mace**	**4.96**	**292**		Pn		**Pn**	**03 50 29.2**	**-0.5**	
NRCA	**Norcia**	**5.05**	**289**				**Pn**	**03 50 30.8**	**-0.2**	
FDMO	**Fiordimonte**	**5.12**	**291**		Pn		**Pn**	**03 50 31.8**	**-0.1**	
ARR	**Arges**	**5.39**	**41**	⇑	P		**Pn**	**03 50 37.0**	**+1.4**	
MURB	**Monte Urbino**	**5.58**	**292**				**Pn**	**03 50 38.5**	**+0.2**	
MLR	**Muntele Rosu**	**6.15**	**46**	⇑	P		**Pn**	**03 50 49.0**	**+2.8**	
SABO	**M.te Sabotino**	**6.32**	**318**		Pn		**Pn**	**03 50 47.6**	**-0.8**	
PLOR	**Plostina**	**6.76**	**47**	⇓	P		**Pn**	**03 50 56.9**	**+2.4**	
VRI	**Vrincioaia**	**6.81**	**47**	⇓	P		**Pn**	**03 50 59.2**	**+4.1**	
CTI	**Castel Tesino**	**7.41**	**311**		Pn		**Pn**	**03 51 02.9**	**-0.5**	
MSSA	**Maissana**	**7.98**	**295**		Pn		**Pn**	**03 51 10.5**	**-0.6**	
FUORN	**Ofenpass-Fuorn**	**8.53**	**311**		Pn		**Pn**	**03 51 17.6**	**-1.3**	
GERES	**GERESS Array B**	**8.54**	**333**		Pn		**Pn**	**03 51 17.8**	**-1.0**	
	baz=146,slow=14,SNR=2.0									
	comp=E,0.3nm,0.5s									
KHC	**Kasperske Hory**	**8.82**	**333**		*e*SN		**Sn**	**03 53 01.1**	**-0.4**	
TUE	**Stuetta**	**8.98**	**308**		Pn		**Pn**	**03 51 25.0**	**0.0**	
SENIN	**Lac Senin/Sane**	**10.18**	**303**		Pn		**Pn**	**03 51 41.1**	**-0.4**	
BFO	**Black Forest**	**10.59**	**315**		Pn		**Pn**	**03 51 45.8**	**-1.1**	
NAO01	**NORSAR Array S**	**20.19**	**348**		P		**P**	**03 53 49.1**	**-0.4**	
NAO01					IAmb		IAmb	03 53 51.7		
	comp=Z,8.9nm,1.2s									
FINES	**FINESS Array B**	**20.45**	**9**		P		**P**	**03 53 50.6**	**-1.6**	
	comp=Z,0.9nm,0.3s,baz=190,slow=9.7,SNR=11									
	comp=Z,0.9nm,0.3s									
FINES	**FINESS Array B**	**20.45**	**9**		P		**P**	**03 53 51.2**	**-1.0**	
FIA1	**FINESS Array S**	**20.45**	**9**		P		**P**	**03 53 50.4**	**-1.9**	
AB31	**Akbulak array**	**29.13**	**61**		P		**P**	**03 55 14.0**	**-1.7**	
ABKAR	**Akbulak array**	**29.13**	**61**		P		**P**	**03 55 14.7**	**-1.0**	
ZAA0	**Zalesovo Array**	**44.11**	**50**		P		**P**	**03 57 22.9**	**0.0**	
ZAA0					IAmb		IAmb	03 57 23.2		
	comp=Z,2.0nm,0.8s									
ZALV	**Zalesovo Beam**	**44.11**	**50**		P		**P**	**03 57 22.2**	**-0.7**	
	comp=Z,1.0nm,0.4s,baz=264,slow=8.6,SNR=5.4									
	comp=Z,1.0nm,0.4s									
ZALV	**Zalesovo Beam**	**44.11**	**50**		P		**P**	**03 57 22.7**	**-0.3**	
NRIK	**Noril'sk**	**44.25**	**28**		P		**P**	**03 57 23.7**	**-0.1**	
NRIK					IAmb		IAmb	03 57 31.5		
	comp=Z,4.4nm,1.4s									
MKAR	**Makanchi Array**	**44.27**	**61**		P		**P**	**03 57 24.4**	**0.0**	
	comp=Z,0.8nm,0.6s,baz=288,slow=8.0,SNR=8.0									
	comp=Z,0.8nm,0.6s									
MKAR	**Makanchi Array**	**44.27**	**61**		P		**P**	**03 57 23.8**	**-0.6**	

*IDC **26** 03:49:23.5±10.0, 41.°23N×19.°02E, h0km, mb3.7/3, mbtmp3.6/4, ML2.4/1, MS4.4/1, Error ellipse: s-maj=203.7km s-min=29.3km az=34.0*
*VIE **26** 03:49:23.0±1.0, 41.°56N×18.°85E, h10km, mb3.1/4, ms4.2/3, Error ellipse: s-maj=31.6km s-min=7.1km az=46.0 57 km SSW of Shkoder*
ISC 26 03:49:26.5±2.2, 41.°8N±0.°2×18.°91E±0.°09, h11km, n12, σ1℘37/11, 1D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.72**	**21**	⇓	P		Pn	03 49 49.6	+7.0
SOKA	**Soboth**	**5.65**	**332**		*i* Pn		**Pn**	**03 50 49.4**	**-1.0**
	1.7nm,0.4s								
KECS	**Kecovo**	**6.82**	**9**		*e*PN		**Pn**	**03 51 06.6**	**+0.2**
KECS					*e*SN		**Sn**	**03 52 22.7**	**-1.2**
WTTA	**Wattenberg**	**7.57**	**319**		*i* Pn		**Pn**	**03 51 15.4**	**-1.4**
	1.3nm,0.3s								
WTTA					*i* Sn		**Sn**	**03 52 44.1**	**+1.5**
	3.3nm,0.4s								
WATA	**Walderalm**	**7.65**	**319**		*i* Pn		**Pn**	**03 51 16.3**	**-1.6**
	1.5nm,0.3s								
WATA					*i* Sn		**Sn**	**03 52 44.8**	**+0.3**
	2.6nm,0.4s								
MOTA	**Moosalm**	**7.89**	**318**		*i* Sn		**Sn**	**03 52 52.6**	**+2.1**
	4.6nm,0.6s								
GERES	**GERESS Array B**	**7.98**	**334**		Pn		Pn	03 51 29.1	+6.8
	baz=151,slow=14,SNR=2.1								
	0.3nm,0.4s								
RETA	**Reutte**	**8.15**	**317**		*i* Sn		**Sn**	**03 52 57.4**	**+0.5**
	3.4nm,0.5s								
KVAR	**Kislovodsk Arr**	**17.57**	**75**		LR		LR	04 00 39.6	
	comp=Z,1μm,21.0s,baz=272,slow=38								
FINES	**FINESS Array B**	**20.19**	**10**		P		Pn	03 54 05.0	+2.3
	1.1nm,0.8s,baz=187,slow=9.7,SNR=1.6								
	1.1nm,0.8s								
ZALV	**Zalesovo Beam**	**44.30**	**51**		P		**P**	**03 57 37.0**	**+1.0**
	1.1nm,0.4s,baz=262,slow=7.1,SNR=3.7								
	1.1nm,0.4s								
MKAR	**Makanchi Array**	**44.57**	**61**		P		**P**	**03 57 38.4**	**0.0**
	0.8nm,0.6s,baz=298,slow=7.3,SNR=6.8								
	0.8nm,0.6s								

*BJI **26** 03:53:45.2, 23.°83N×94.°26E, h93km, mb4.2/15*
*NEIC **26** 03:53:46.7±1.4, 24.°16N±0.°04×94.°31E±0.°07, h70km±3km, mb4.5/25, Error ellipse: s-maj=9.1km s-min=5.8km az=114.0*
*NDI **26** 03:53:47.6±2.5, 24.°10N×94.°24E, h70km, ML4.1, MW4.0*
*IDC **26** 03:53:47.4±1.6, 24.°02N×94.°29E, h85km±15km, mb3.9/15, mbtmp4.2/18, Error ellipse: s-maj=14.2km s-min=11.3km az=67.0*
ISC 26 03:53:45.9±0.7, 24.°12N±0.°04×94.°18E±0.°05, h71km±6km, n90, σ1℘89/116, mb4.3/30, 1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.74**	**343**		*e*P		**Pn**	**03 54 03.2**	**+1.8**
IMP					*e*S		**Sn**	**03 54 15.0**	**+2.2**
IMP					IAML			03 54 15.6	
	comp=N,3μm,0.2s								
IMP					IAML			03 54 15.8	
	comp=E,3μm,0.2s								
SILR	**SILCHAR**	**1.42**	**298**		*i* P		**Pn**	**03 54 10.5**	**+0.7**
SILR					*e*P		**Pn**	**03 54 10.5**	**+0.7**
SILR					*e*S		**Sn**	**03 54 31.5**	**+3.7**
SILR					IAML			03 54 35.3	
	comp=E,3μm,0.4s								
SILR					IAML			03 54 35.4	
	comp=N,3μm,0.3s								
KOHI	**KOHIMA**	**1.59**	**358**		*e*P		**Pn**	**03 54 13.9**	**+1.6**
KOHI					*e*S		**Sn**	**03 54 34.3**	**+2.1**
KOHI					IAML			03 54 49.1	
	comp=N,3μm,0.7s								
KOHI					IAML			03 54 50.3	
	comp=E,3μm,0.6s								
SAIH	**SAIHA**	**1.96**	**214**		*e*P		**Pn**	**03 54 18.4**	**+1.3**
SAIH					*e*S		**Sn**	**03 54 42.3**	**+1.4**
SAIH					IAML			03 54 48.1	
	comp=N,2μm,0.5s								
SAIH					IAML			03 54 48.4	
	comp=E,5μm,0.6s								

MOKO	**MOKOCHONG**	**2.21**	**8**		*e*P		**Pn**	**03 54 24.4**	**+3.9**
MOKO					*e*S		**Sn**	**03 54 48.7**	**+1.7**
SHL	**Shillong**	**2.53**	**305**				**Pn**	**03 54 25.6**	**+0.7**
BELO	**BELONIA**	**2.65**	**251**		*e*P		**Pn**	**03 54 27.6**	**+1.3**
BELO					*e*S		**Sn**	**03 55 00.3**	**+2.8**
BRDH	**Bariadhala**	**2.74**	**239**		P		**Pn**	**03 54 28.4**	**+0.9**
	comp=E,482nm,0.4s,baz=62,slow=10,SNR=18								
BRDH					S		**Sn**	**03 55 02.9**	**+3.4**
	comp=E,762nm,0.2s,baz=229,slow=22,SNR=22								
ITAN	**ITANAGAR**	**3.04**	**352**		*e*S		**Sn**	**03 55 06.7**	**-0.2**
ZIRO	**ZIRO**	**3.40**	**355**		*e*S		**Sn**	**03 55 15.4**	**-0.6**
ZIRO					IAML			03 55 31.2	
	comp=E,1μm,0.7s								
ZIRO					IAML			03 55 35.2	
	comp=N,1μm,0.4s								
TAWA	**Tawang**	**4.04**	**329**		*e*S		**Sn**	**03 55 30.7**	**-1.1**
TAWA					IAML			03 55 34.9	
	comp=N,811nm,0.2s								
TAWA					IAML			03 55 36.6	
	comp=E,616nm,0.2s								
DHUB	**DHUBRI**	**4.24**	**297**		*e*P		**Pn**	**03 54 48.5**	**+0.5**
TAPN	**Taplejung**	**6.66**	**300**		Pn		**Pn**	**03 55 22.2**	**+0.8**
	baz=310,slow=0.0								
TAPN					Sn		**Sn**	**03 56 36.0**	**0.0**
	comp=E,236nm,0.4s,baz=310,slow=0.0								
ODAN	**Odare**	**6.71**	**295**		Pn		**Pn**	**03 55 22.5**	**+0.5**
	baz=305,slow=0.0								
ODAN					Sn		**Sn**	**03 56 35.1**	**-2.1**
	comp=E,141nm,0.2s,baz=305,slow=0.0								
CM31	**Chiang Mai Arr**	**7.17**	**141**		Pn		**Pn**	**03 55 27.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**7.17**	**141**		P		**Pn**	**03 55 28.7**	**+0.5**
	comp=E,4.1nm,0.5s,baz=317,slow=14,SNR=7.8								
CMAR					S		Sn	03 57 01.2	+13
	comp=E,7.7nm,0.9s,baz=324,slow=14,SNR=1.4								
CMAR	**Chiang Mai Arr**	**7.17**	**141**				**Pn**	**03 55 27.8**	**-0.4**
PZH	**PanZhiHua**	**7.24**	**69**		P		**Pn**	**03 55 29.5**	**+0.3**
RAMN	**Ramite**	**7.40**	**294**		Pn		**Pn**	**03 55 31.4**	**-0.1**
	baz=303,slow=0.0								
RAMN					Sn		**Sn**	**03 56 50.8**	**-3.3**
	comp=E,106nm,0.3s,baz=303,slow=0.0								
EVN	**Everest**	**7.64**	**302**				**Pn**	**03 55 36.1**	**+1.0**
KMI	**Kunming**	**7.85**	**81**		P		Pn	03 55 41.3	+3.7
JIRN	**Jiri**	**8.01**	**298**		Pn		**Pn**	**03 55 40.5**	**+0.6**
	baz=306,slow=0.0								
JIRN					Sn		**Sn**	**03 57 06.9**	**-2.3**
	baz=306,slow=0.0								
GUN	**Gumba**	**8.36**	**299**		Pn		**Pn**	**03 55 44.8**	**+0.1**
	baz=306,slow=0.0								
GUN					Sn		**Sn**	**03 57 16.5**	**-1.3**
	baz=306,slow=0.0								
PKI	**Pulchoki**	**8.61**	**295**		Pn		**Pn**	**03 55 47.7**	**-0.4**
	baz=303,slow=0.0								
PKI					Sn		**Sn**	**03 57 20.7**	**-3.2**
	baz=303,slow=0.0								
PKIN	**Phulchoki**	**8.63**	**295**		Pn		**Pn**	**03 55 47.6**	**-0.6**
	baz=303,slow=0.0								
PKIN					Sn		**Sn**	**03 57 20.1**	**-4.0**
	baz=303,slow=0.0								
KKN	**Kakani**	**8.80**	**296**		Pn		**Pn**	**03 55 51.1**	**+0.5**
	baz=304,slow=0.0								
KKN					Sn		**Sn**	**03 57 24.9**	**-3.4**
	comp=E,64nm,0.3s,baz=304,slow=0.0								
DMN	**Daman**	**8.88**	**295**		Pn		**Pn**	**03 55 48.5**	**-3.2**
	baz=302,slow=0.0								
DMN					Sn		**Sn**	**03 57 26.5**	**-3.8**
	baz=302,slow=0.0								
GKN	**Gorkha**	**9.41**	**296**		Pn		**Pn**	**03 55 58.1**	**-0.7**
	baz=303,slow=0.0								
GKN					Sn		**Sn**	**03 57 39.2**	**-3.9**
	baz=303,slow=0.0								
KOLN	**Koldanda**	**10.19**	**293**		Pn		**Pn**	**03 56 07.8**	**-1.7**
	baz=300,slow=0.0								
KOLN					Sn		**Sn**	**03 57 56.8**	**-5.4**
	comp=E,40nm,0.3s,baz=300,slow=0.0								
DANN	**Dangsing**	**10.26**	**296**		Pn		**Pn**	**03 56 09.3**	**-1.2**
	baz=303,slow=0.0								
DANN					Sn		**Sn**	**03 58 00.4**	**-3.6**
	baz=303,slow=0.0								
PYUN	**Piuthan**	**10.81**	**294**		Pn		**Pn**	**03 56 16.1**	**-1.8**
	baz=300,slow=0.0								
PYUN					Sn		**Sn**	**03 58 11.1**	**-6.2**
	baz=300,slow=0.0								
LZDM	**Lanzhou Array**	**14.38**	**33**		P		**P**	**03 57 08.7**	**-2.4**
	comp=E,0.7nm,0.3s,baz=207,slow=12,SNR=3.6								
WMQ	**Urumqi**	**20.36**	**346**		*e*P		Pn	03 58 19.5	+0.3
IPM	**Ipoh**	**20.61**	**160**				**P**	**03 58 16.5**	**-3.0**
IPM					IAmb		IAmb	03 58 18.7	
	comp=Z,17nm,0.6s								
BTO	**Baotou**	**21.14**	**35**		*e*P		**P**	**03 58 27.5**	**+2.4**
BTO					pP		**sP**	**03 58 46.3**	**-2.7**
BTO					S		Sn	04 02 20.5	-6.5
BTO					pmax		pmax		
	comp=Z,8.0nm,0.6s								
BTO					LR		LR		
	comp=Z,8μm,13.9s								
BTO					LR		LR		
	comp=Z,7μm,15.6s								
BTO					LR		LR		
	comp=Z,10μm,14.3s								
PSI	**Prapat**	**21.69**	**167**		P		**P**	**03 58 32.9**	**+1.8**
	comp=Z,6.1nm,0.7s,baz=334,slow=15,SNR=5.9								
	comp=Z,6.1nm,0.7s								
KSH	**Kashi**	**21.73**	**319**		P		**P**	**03 58 37.3**	**+5.9**
KSH					pmax		pmax		
	comp=Z,8.0nm,0.9s								
RPSI	**Rantau Prapat**	**21.79**	**167**		P		**P**	**03 58 32.9**	**+0.8**
HHC	**Hu-ho-hao-te**	**22.14**	**37**		*e*P		**P**	**03 58 35.5**	**-0.3**
HHC					pmax		pmax		
	comp=Z,8.0nm,0.5s								
TARG	**Taragay, Kyrgy**	**22.23**	**326**		P		**P**	**03 58 38.1**	**+1.0**
TARG					IAmb		IAmb	03 59 11.1	
	comp=Z,10nm,0.8s								
KDJ	**Kajisay**	**22.84**	**326**		P		**P**	**03 58 43.5**	**+0.2**
KDJ					IAmb		IAmb	03 59 10.6	
	comp=Z,28nm,1.2s								
NJ2	**Nanjing**	**23.12**	**65**		*e*P		**P**	**03 58 45.5**	**-0.5**
NJ2					pmax		pmax		
	comp=Z,8.0nm,0.6s								
BOOM	**Boomskoye usch**	**23.74**	**325**		P		**P**	**03 58 52.3**	**+0.5**
BOOM					IAmb		IAmb	03 59 07.6	
	comp=Z,19nm,1.4s								
MKAR	**Makanchi Array**	**24.55**	**340**		P		**P**	**03 59 01.1**	**+2.3**
	comp=Z,1.9nm,0.5s,baz=148,slow=10,SNR=22								
MKAR					PcP		**PcP**	**04 02 33.7**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=168,slow=1.3,SNR=4.7								
	comp=Z,1.9nm,0.5s								
MKAR	**Makanchi Array**	**24.55**	**340**				**P**	**03 58 58.9**	**0.0**
MKAR							**PcP**	**04 02 35.7**	**+0.4**
AAK	**Ala-Archa**	**24.62**	**323**		P		**P**	**03 59 01.1**	**+1.4**
MAKZ	**Makanchi**	**24.66**	**340**		P		**P**	**03 59 01.0**	**+1.1**
GAR	**Garm**	**25.07**	**312**		P		**P**	**03 59 06.0**	**+2.2**
SONM	**Songino Array**	**25.58**	**19**		P		**P**	**03 59 09.4**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=200,slow=9.4,SNR=12								
	comp=Z,2.6nm,0.8s								
KURBB	**Kurchatov Arra**	**29.11**	**339**		P		**P**	**03 59 40.5**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=148,slow=8.7,SNR=6.5								
KURBB					PcP		**PcP**	**04 02 44.9**	**-1.1**
	comp=Z,1.2nm,0.2s,baz=161,slow=2.1,SNR=7.2								
KURBB					ScP		**ScP**	**04 06 20.1**	**-1.3**
	comp=Z,0.8nm,0.2s,baz=157,slow=2.2,SNR=5.6								
	comp=Z,1.4nm,0.6s								
KURK	**Kurchatov**	**29.16**	**340**		P		**P**	**03 59 40.2**	**0.0**
KURK	**Kurchatov**	**29.16**	**340**				**ScP**	**04 06 20.1**	**-1.5**
ZAA0	**Zalesovo Array**	**30.61**	**349**				**P**	**03 59 53.2**	**+0.3**
ZALV	**Zalesovo Beam**	**30.61**	**349**		P		**P**	**03 59 54.6**	**+1.7**
	comp=Z,1.4nm,0.4s,baz=179,slow=7.0,SNR=10								
	comp=Z,1.4nm,0.4s								
ZALV	**Zalesovo Beam**	**30.61**	**349**		P		**P**	**03 59 53.5**	**+0.6**
BVAR	**Borovoye Array**	**34.02**	**334**		P		**P**	**04 00 25.1**	**+2.3**
	comp=Z,0.6nm,0.4s,baz=144,slow=10,SNR=2.8								
BVAR					PcP		**PcP**	**04 02 58.4**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=153,slow=1.6,SNR=4.5								
	comp=Z,0.6nm,0.4s								
AB31	**Akbulak array**	**36.69**	**322**		P		**P**	**04 00 46.6**	**+0.8**
AB31					IAmb		IAmb	04 00 48.8	
	comp=Z,3.2nm,0.8s								
AB31					PcP		**PcP**	**04 03 06.7**	**-0.3**
ABKAR	**Akbulak array**	**36.69**	**322**		P		**P**	**04 00 46.7**	**+1.0**
TIXI	**Tiksi**	**51.43**	**13**		P		**P**	**04 02 43.6**	**+0.3**
TIXI					IAmb		IAmb	04 02 44.5	
	comp=Z,4.9nm,0.6s								
AKASG	**Malin Array Be**	**55.97**	**316**		P		**P**	**04 03 17.2**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=81,slow=6.7,SNR=5.0								
	comp=Z,0.7nm,0.5s								
AKASG	**Malin Array Be**	**55.97**	**316**		P		**P**	**04 03 17.7**	**+0.9**
WB0	**Warramunga Arr**	**58.63**	**135**		P		**P**	**04 03 34.7**	**-1.2**
WB0					IAmb		IAmb	04 03 35.2	
	comp=Z,5.3nm,0.8s								
WRA	**Warramunga Arr**	**58.73**	**135**		P		**P**	**04 03 35.3**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=323,slow=7.4,SNR=38								
	comp=Z,3.7nm,0.6s								
WRA	**Warramunga Arr**	**58.73**	**135**		P		**P**	**04 03 34.9**	**-1.6**
ARCES	**ARCESS Array B**	**60.18**	**338**		P		**P**	**04 03 47.4**	**+1.5**
	comp=Z,3.9nm,1.1s,baz=109,slow=6.7,SNR=5.7								
	comp=Z,3.9nm,1.1s								
AS31	**Alice Springs**	**61.17**	**138**		IAmb		IAmb	04 03 53.0	
	comp=Z,1.3nm,0.6s								
AS31					P		**P**	**04 03 53.1**	**-0.2**
ASAR	**Alice Springs**	**61.18**	**138**		P		**P**	**04 03 52.2**	**-1.1**
	comp=Z,3.0nm,0.6s,baz=321,slow=6.8,SNR=49								
	comp=Z,3.0nm,0.6s								
ASAR	**Alice Springs**	**61.18**	**138**		P		**P**	**04 03 52.9**	**-0.5**
HFS	**Hagfors**	**64.70**	**327**		P		**P**	**04 04 17.5**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=112,slow=10,SNR=2.5								
	comp=Z,1.9nm,0.8s								
NB2	**NORSAR Subarra**	**65.83**	**328**		P		**P**	**04 04 23.4**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=84,slow=6.2								
NOA	**NORSAR Array B**	**65.83**	**328**		P		**P**	**04 04 23.1**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=86,slow=6.8,SNR=3.6								
	comp=Z,1.2nm,0.9s								
BMRD	**Maredsous**	**71.47**	**317**		*d*P		**P**	**04 04 60.0**	**+1.2**
STKA	**Stephens Creek**	**71.79**	**139**		P		**P**	**04 04 59.2**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=332,slow=14,SNR=4.3								
	comp=Z,1.0nm,0.3s								
C23K	**Itkillik River**	**75.75**	**19**		P		**P**	**04 05 24.4**	**+0.9**
TOLK	**Toolik Lake Re**	**76.70**	**20**		P		**P**	**04 05 29.3**	**+0.3**
TOLK					IAmb		IAmb	04 05 30.0	
	comp=Z,8.6nm,1.1s								
BMAR	**Burnt Mountain**	**78.93**	**20**		P		**P**	**04 05 43.2**	**+1.8**
G26K	**Porcupine Rive**	**79.47**	**20**		P		**P**	**04 05 44.5**	**+0.2**
G26K					IAmb		IAmb	04 05 46.4	
	comp=Z,6.8nm,0.8s								
E28M	**Babbage River**	**79.65**	**17**		P		**P**	**04 05 45.8**	**+0.5**
E28M					IAmb		IAmb	04 05 46.5	
	comp=Z,2.9nm,0.8s								
ILAR	**Eielson Array**	**79.76**	**22**		P		**P**	**04 05 45.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=301,slow=4.9,SNR=8.9								
	comp=Z,0.7nm,0.7s								
A36M	**Sachs Harbour**	**80.41**	**12**				**P**	**04 05 50.0**	**+0.8**
G30M	**tAoh Zraii Nji**	**81.69**	**18**				**P**	**04 05 56.5**	**+0.3**
G30M					IAmb		IAmb	04 05 56.9	
	comp=Z,6.7nm,0.6s								
LBTB	**Lobatse**	**82.42**	**238**				**P**	**04 06 02.0**	**+1.2**
BOSA	**Boshof**	**84.53**	**236**		P		**P**	**04 06 12.8**	**+1.2**
	comp=Z,10nm,0.8s,baz=74,slow=3.7,SNR=20								
	comp=Z,10nm,0.8s								
BOSA	**Boshof**	**84.53**	**236**		P		**P**	**04 06 12.7**	**+1.2**
TXAR	**Lajitas Array**	**124.15**	**19**		PKP		**PKiKP**	**04 12 36.9**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=354,slow=1.3,SNR=4.0								
TXAR	**Lajitas Array**	**124.15**	**19**				**PKPdf**	**04 12 36.7**	**-0.3**
ROSC	**El Rosal**	**149.11**	**337**		PKPbc		**PKiKP**	**04 13 29.2**	**+0.5**
	comp=Z,14nm,0.5s,baz=333,slow=2.3,SNR=8.7								
ROSC	**El Rosal**

HCY Herceg Novi 1.14 321⇓iPg Pg 03 58 15.6 0.0
HCY iSg Sg 03 58 32.5 +1.9
NKME Niksic 1.26 343⇓iPg Pb 03 58 17.0 +0.3
NKME iSg Sg 03 58 35.4 +1.0
KOME Kolasin 1.28 2 ePg Pb 03 58 17.3 +0.1
KOME Kolasin 1.28 2⇓iPg Pb 03 58 16.9 -0.3
KOME iSg Sg 03 58 35.2 -0.1
IVA Berane 1.34 14⇓iPg Pb 03 58 18.1 -0.1
IVA iSg Sg 03 58 37.1 -0.1
KBN Korca 1.38 133 Pn Pg 03 58 20.1 -0.1
KBN Sn Sg 03 58 39.5 +1.3
KBN AML AML 03 58 47.7
comp=E,7.9nm,0.6s
KBN Korca 1.38 133 P Pb 03 58 19.4 +0.7
KBN S Sg 03 58 39.3 +1.1
KBN Korca 1.38 133 P Pb 03 58 19.1 +0.3
KBN S Sg 03 58 38.4 +0.1
TREB Trebinje 1.41 325 ePg Pg 03 58 20.1 -0.8
TREB eSg Sg 03 58 39.2 -0.2
BRY Bratogost 1.50 333⇑iPg Pg 03 58 21.7 -0.8
BRY iSg Sg 03 58 41.9 -0.2
SKO Skopje 1.54 74 iPg Pb 03 58 21.5 +0.1
SKO iSg Sg 03 58 44.0 +0.7
MESG Mesagne 1.56 232 P Pn 03 58 20.2 0.0
NEST Nestorio 1.67 133 P Pb 03 58 24.3 +0.6
UPM Unac-Piva 1.69 346⇓iPn Pg 03 58 24.9 -1.2
UPM iSn Sb 03 58 45.3 +0.3
KLINJ Klinje 1.73 338 ePn Pb 03 58 25.3 +0.6
KLINJ eSn Sb 03 58 47.1 +1.0
SJES Sjenica 1.74 13 ePn Pb 03 58 26.0 -1.0
PLE Pljevlja 1.76 358⇓iPn Pb 03 58 25.6 +0.3
PLE iSn Sb 03 58 47.3 +0.2
STON Ston 1.84 316 ePn Pg 03 58 27.9 -1.2
STON eSn Sg 03 58 52.1 -1.0
STON Ston 1.84 316 P Pb 03 58 26.2 -0.4
STON AML AML
comp=E,2635μm,0.6s
STON AML AML
comp=N,2165μm,1.0s
STON AML AML
comp=E,2635μm,1.4s
KEK Kerkira 1.87 172 P Pg 03 58 29.7 +0.1
KEK Kerkira 1.87 172 P Pg 03 58 29.8 +0.3
PENT Pentalofos 1.87 137 P Pb 03 58 27.8 +0.6
NOCI Noci 1.97 248 Pn Pg 03 58 29.9 -1.5
NOCI Sn Sn 03 58 49.5 -0.5
RUDO Rudo 2.05 358 ePn Pb 03 58 29.9 -0.3
RUDO eSn Sb 03 58 56.8 +1.5
SELS Selova 2.06 36 ePn Pb 03 58 29.2 -1.2
SELS eSn Sb 03 58 56.0 +0.4
IVAS Ivanjica 2.07 14 ePn Pb 03 58 29.4 -1.2
IVAS eSn Sb 03 58 56.9 +0.9
IGT Igoumenitsa 2.14 162 P Pn 03 58 29.4 +1.2
IGT Igoumenitsa 2.14 162 iPn Pn 03 58 29.9 +1.7
KZN Kozani 2.16 125 P Pb 03 58 30.6 -1.4
JAN Janina 2.18 150 P Pb 03 58 31.4 -1.1
LTRZ Laterza 2.21 245 P Pn 03 58 29.0 -0.2
LTRZ AML AML
comp=E,1250μm,0.5s
LTRZ AML AML
comp=N,1052μm,0.6s
LTRZ AML AML
comp=E,1250μm,1.5s
LTRZ AML AML
comp=N,1052μm,1.4s
GOCS Kraljevo Serbi 2.25 27 ePn Pb 03 58 32.5 -1.2
GOCS eSn Sb 03 59 00.8 -0.4
MATE Matera 2.27 247 ⇓P Pn 03 58 30.2 +0.2
MATE Matera 2.27 247 P Pn 03 58 30.0 0.0
MATE AML AML
comp=N,1115μm,0.9s
MATE AML AML
comp=E,1022μm,0.6s
MATE AML AML
comp=N,1115μm,1.1s
BBLS Lazi&#263i 2.30 359 ePn Pb 03 58 33.6 -0.8
BBLS eSn Sb 03 59 02.7 +0.2
VAY Valandovo 2.35 95 iPn Pn 03 58 32.6 +1.5
VAY iSn Sb 03 59 03.2 -0.7
VAY eLg Lg 03 59 03.4
comp=N,598nm,0.8s
VAY eLg Lg 03 59 03.5
comp=E,502nm,0.7s
GRUS Gruza 2.50 21 ePn Pb 03 58 36.0 -1.8
DIVS Divibare 2.56 9 ePn Pb 03 58 35.8 +1.7
CRAC Craco 2.58 243 P Pn 03 58 34.9 +0.5
CRAC AML AML
comp=E,2445μm,0.7s
CRAC AML AML
comp=N,1705μm,1.0s
CRAC AML AML
comp=N,1705μm,1.0s
KNT Kendrikon 2.62 98 P Pn 03 58 36.6 +1.7
KNT Kendrikon 2.62 98 iPn Pn 03 58 36.4 +1.5
KNT iSn Sn 03 59 08.9 +2.8
BOVS Bovan 2.65 38 ⇓P Pn 03 58 37.4 +2.1
BOVS Bovan 2.65 38 ePn Pn 03 58 37.0 +1.8
BOVS eSn Sn 03 59 09.2 +2.4
TRAN Tran 2.69 61 P Pb 03 58 38.7 -2.4
PALZ Palazzo San Ge 2.71 258 P Pn 03 58 36.6 +0.6
PALZ AML AML
comp=N,2040μm,0.9s
PALZ AML AML
comp=E,3795μm,1.1s
PALZ AML AML
comp=N,2040μm,1.1s
LIT Litokhoron 2.73 121 Pn 03 58 37.0 +0.7
LIT Litokhoron 2.73 121 P Pn 03 58 37.0 +0.7
TRUS Trudelj 2.75 14 ePn Pn 03 58 38.9 +2.4
KKB Krupnik 2.76 83 P Pn 03 58 38.4 +1.6
KKB Krupnik 2.76 83 P Pn 03 58 38.7 +1.9
KKB Krupnik 2.76 83 iPn Pn 03 58 38.8 +1.9
KKB iSn Sn 03 59 12.2 +2.5
ACER Acerenza 2.77 255 Pn 03 58 36.8 -0.1
ACER Acerenza 2.77 255 P Pn 03 58 36.7 -0.1
ACER AML AML
comp=E,1875μm,0.6s
ACER AML AML
comp=N,1955μm,0.8s
ACER AML AML
comp=E,1920μm,0.6s
ACER AML AML
comp=N,1980μm,0.8s
ACER AML AML
comp=N,1980μm,1.2s
ACER AML AML
comp=N,1955μm,1.2s
ACER AML AML
comp=E,1920μm,1.4s
ACER AML AML
comp=E,1875μm,1.4s
SGRT San Giovanni R 2.79 275 Pn Pn 03 58 37.3 +0.1
SGRT Sn Sn 03 59 07.6 -2.7
SGRT San Giovanni R 2.79 275 Pn 03 58 37.3 +0.1
SGRT San Giovanni R 2.79 275 P Pn 03 58 37.3 +0.1
SGRT AML AML
comp=E,489μm,0.8s
SGRT AML AML
comp=N,678μm,1.2s
SGRT AML AML
comp=E,489μm,1.2s
THE Thessaloniki 2.81 108 P Pn 03 58 38.4 +1.0
THE Thessaloniki 2.81 108 iPn Pn 03 58 38.6 +1.2
TSLK Tsoukalades, L 2.89 161 P Pn 03 58 39.0 +0.5
SALB San Lorenzo Be 2.91 236 P Pn 03 58 38.4 -0.5
SALB AML AML
comp=E,570μm,1.3s
SALB AML AML
comp=N,552μm,1.1s
SCHR S. Chirico Rap 2.91 243 P Pn 03 58 39.4 +0.6
SCHR AML AML
comp=E,544μm,0.9s
SCHR AML AML
comp=N,428μm,0.8s
SCHR AML AML
comp=E,544μm,1.1s
ZAPS Zavoj 2.91 53 ePn Pn 03 58 41.2 +2.4
ZAPS eSn Sb 03 59 16.9 -3.0
LKD2 Lefkada island 2.92 161 P Pn 03 58 39.1 +0.1
TEKS Tekeris 2.98 1 ePn Pn 03 58 41.0 +1.2
VTS Vitosha 3.00 68 P Pn 03 58 42.0 +1.8
VTS Vitosha 3.00 68 P Pn 03 58 41.3 +1.1
VTS Vitosha 3.00 68 ePn Pn 03 58 42.2 +2.0
VTS eSn Sn 03 59 19.2 +3.5
NYDR Nydri-Lefkada 3.00 161 P Pn 03 58 39.8 -0.3
MCEL Monticello 3.03 247 P Pn 03 58 41.5 +0.9
MCEL AML AML
comp=E,596μm,0.7s
MCEL AML AML
comp=N,662μm,0.9s
MCEL AML AML
comp=E,604μm,0.6s
MCEL AML AML
comp=N,679μm,0.9s
MCEL AML AML
comp=E,604μm,1.4s
MCEL AML AML
comp=E,596μm,1.3s
ZAGS Zajecar 3.04 41 ePn Pn 03 58 42.6 +2.1
ZAGS eSn Sn 03 59 19.4 +3.1
MMN Mormanno 3.12 239 P Pn 03 58 43.3 +1.6
MMN AML AML
comp=E,490μm,0.9s
MMN AML AML
comp=N,576μm,0.5s
MMN AML AML
comp=E,490μm,1.1s
MMN AML AML
comp=N,576μm,1.5s
SLCN Sala Consilina 3.12 249 P Pn 03 58 42.6 +0.8
SLCN AML AML
comp=E,1085μm,0.5s
SLCN AML AML
comp=N,956μm,0.8s
SLCN AML AML
comp=E,1175μm,0.5s
SLCN AML AML
comp=N,935μm,0.9s
SLCN AML AML
comp=E,1085μm,1.5s
SLCN AML AML
comp=E,1175μm,1.5s
SLCN AML AML
comp=N,956μm,1.2s
SLCN AML AML
comp=N,935μm,1.1s
SRS Serrai 3.15 97 P Pn 03 58 43.1 +1.0
SRS Serrai 3.15 97 iPn Pn 03 58 43.6 +1.6
BORS2 Bor- Borsko je 3.15 36 ePn Pn 03 58 42.6 +0.5
BORS2 eSn Sn 03 59 20.0 +0.9
TIP Timpagrande 3.15 222 Pn 03 58 42.4 +0.2
TIP Timpagrande 3.15 222 ⇑P Pn 03 58 42.3 +0.2
TIP Timpagrande 3.15 222 P Pn 03 58 42.3 +0.1
TIP AML AML
comp=E,226μm,0.7s
TIP AML AML
comp=N,196μm,1.5s
TIP AML AML
comp=E,233μm,0.8s
TIP AML AML
comp=N,152μm,1.4s
TIP AML AML
comp=N,152μm,0.6s
TIP AML AML
comp=E,233μm,1.2s
TIP AML AML
comp=E,226μm,1.3s
TIP AML AML
comp=N,196μm,0.5s
CUC Castrocucco 3.18 242 Pn 03 58 43.4 +0.9
CUC Castrocucco 3.18 242 P Pn 03 58 43.5 +0.9
CUC AML AML
comp=E,592μm,1.6s
CUC AML AML
comp=E,594μm,1.6s
CUC AML AML
comp=N,442μm,1.1s
CUC AML AML
comp=N,414μm,1.1s
MMB Musomishta 3.22 89 P Pn 03 58 45.2 +2.1
MMB Musomishta 3.22 89 iPn Pn 03 58 45.6 +2.5
AVAS Avala Beograd 3.22 14 ePn Pn 03 58 45.3 +2.2
MELA Melanico ??? S 3.25 274 P Pn 03 58 44.1 +0.6
MELA AML AML
comp=E,1033μm,0.5s
MELA AML AML
comp=E,1003μm,0.5s
MELA AML AML
comp=N,1194μm,0.6s
MELA AML AML
comp=N,1198μm,0.6s
MELA AML AML
comp=E,1003μm,1.5s
MELA AML AML
comp=E,1033μm,1.5s
KUBS Kucevo 3.28 29 ePn Pn 03 58 44.3 +0.4
KUBS eSn Sn 03 59 22.7 +0.4
MGR Morigerati 3.29 246 P Pn 03 58 45.2 +1.2
MGR AML AML
comp=E,505μm,1.3s
MGR AML AML
comp=N,458μm,0.8s
MGR AML AML
comp=N,458μm,1.2s
MGR AML AML
comp=E,505μm,0.7s
SPS2 Spezzano della 3.29 227 P Pn 03 58 44.6 +0.5
SPS2 AML AML
comp=E,146μm,0.8s
SPS2 AML AML
comp=N,145μm,1.1s
SPS2 AML AML
comp=N,145μm,0.9s
CDRU Civita di Ruta 3.32 252 P Pn 03 58 45.1 +0.6
CDRU AML AML
comp=N,224μm,0.7s
CDRU AML AML
comp=N,224μm,1.3s
CDRU AML AML
comp=E,260μm,0.8s
MCRV Calabrutti - M 3.33 258 P Pn 03 58 45.4 +0.7
MCRV AML AML
comp=E,370μm,0.5s
MCRV AML AML
comp=N,435μm,1.0s
CET2 Cetraro 3.36 234 P Pn 03 58 46.0 +1.0
CET2 AML AML
comp=E,1024μm,1.0s
CET2 AML AML
comp=N,796μm,0.8s
CET2 AML AML
comp=N,796μm,1.2s
CET2 AML AML
comp=E,1024μm,1.0s
CMPR Campora 3.38 250 P Pn 03 58 46.1 +0.7
CMPR AML AML
comp=N,266μm,1.6s
CMPR AML AML
comp=E,301μm,1.0s
CAR1 CAROLEI 3.39 228 P Pn 03 58 46.1 +0.7
CAR1 AML AML
comp=E,539μm,0.7s
CAR1 AML AML
comp=N,570μm,0.9s
CAR1 AML AML
comp=N,512μm,0.9s
CAR1 AML AML
comp=E,530μm,0.8s
MRB1 Monte Rocchett 3.41 264 P Pn 03 58 46.9 +1.2
MRB1 AML AML
comp=N,708μm,1.4s
MRB1 AML AML
comp=E,570μm,1.6s
MRB1 AML AML
comp=N,750μm,1.1s
MRB1 AML AML
comp=E,570μm,0.6s
MRB1 AML AML
comp=N,708μm,0.6s
MRB1 AML AML
comp=E,570μm,0.4s
MRB1 AML AML
comp=N,750μm,0.9s
MTMR Montemarano 3.42 261 P Pn 03 58 46.5 +0.6
MTMR AML AML
comp=E,288μm,0.6s
MTMR AML AML
comp=N,370μm,0.9s
BULG Bulgheria - Ca 3.43 246 P Pn 03 58 46.9 +0.8
BULG AML AML
comp=N,797μm,1.1s
BULG AML AML
comp=N,792μm,1.1s
BULG AML AML
comp=N,792μm,0.9s
BULG AML AML
comp=N,797μm,0.9s
BULG AML AML
comp=E,455μm,0.8s
BULG AML AML
comp=E,474μm,0.8s
VLS Valsamata 3.50 165 P Pn 03 58 46.4 -0.5
VLS AML AML
comp=E,224μm,1.1s
VLS AML AML
comp=N,224μm,0.6s
BLY Banja Luka 3.59 333 ePn Pn 03 58 50.7 +2.6
BLY eSn Sn 03 59 32.9 +3.0
BLY Banja Luka 3.59 333 ⇑P Pn 03 58 47.9 -0.2
BLY Banja Luka 3.59 333 ePn Pn 03 58 49.5 +1.4
FRGS Fruska Gora 3.60 4 ePn Pn 03 58 49.3 +1.0
MDVR Moldovita 3.61 26 ⇓P Pn 03 58 50.1 +1.6
MDVR Moldovita 3.61 26 ePn Pn 03 58 50.0 +1.5
MDVR eSn Sn 03 59 32.4 +1.8
VALD Valchedram 3.62 53 P Pn 03 58 52.0 +3.4
MPEP Malo Peshtene 3.64 59 P Pn 03 58 52.0 +3.2
PGB Panagyurishte 3.64 73 P Pn 03 58 51.5 +2.7
OUR Ouranopolis 3.64 108 P Pn 03 58 50.0 +1.2
BSSO Busso 3.65 271 P Pn 03 58 49.9 +0.9
BSSO AML AML
comp=E,100μm,0.5s
BSSO AML AML
comp=N,114μm,0.8s
BSSO AML AML
comp=E,100μm,1.5s
BSSO AML AML
comp=N,114μm,1.2s
VITU Vitulano (BN) 3.65 266 P Pn 03 58 50.5 +1.4
VITU AML AML
comp=E,454μm,0.6s
VITU AML AML
comp=N,478μm,0.6s
VITU AML AML
comp=E,454μm,1.4s
AXS Araxos 3.68 156 P Pn 03 58 50.2 +0.9
PUNG Punghina 3.72 42 ⇑P Pn 03 58 52.0 +2.0
PUNG Punghina 3.72 42 ePn Pn 03 58 51.2 +1.3
PUNG eSn Sn 03 59 35.7 +2.5
BAIL Bailesti 3.77 48 ⇑P Pn 03 58 52.5 +2.0
VRSS Vrsac 3.81 20 ePn Pn 03 58 52.5 +1.4
DJES Djerdap 3.82 35 ⇑P Pn 03 58 53.2 +1.8
KAVA Kavala 3.85 97 P Pn 03 58 53.4 +1.6
VBKN Vesuvio Bunker 3.86 261 P Pn 03 58 52.4 +0.4
VBKN AML AML
comp=E,854μm,0.9s
VBKN AML AML
comp=E,854μm,1.1s
VBKN AML AML
comp=N,697μm,0.7s
VTIR Vesuvio Tirone 3.87 260 P Pn 03 58 53.4 +1.3
VTIR AML AML
comp=E,196μm,0.5s
VTIR AML AML
comp=N,256μm,0.9s
RMGR Halanga-Turnu 3.90 36 ⇑P Pn 03 58 55.0 +2.7
LPEL Lama dei Pelig 3.97 279 P Pn 03 58 54.5 +1.0
LPEL AML AML
comp=E,306μm,0.8s
LPEL AML AML
comp=N,298μm,0.7s
LPEL AML AML
comp=E,308μm,0.8s
LPEL AML AML
comp=N,271μm,0.7s
RNI2 Rionero Sannit 3.98 274 P Pn 03 58 55.0 +1.4
RNI2 AML AML
comp=E,282μm,0.9s
RNI2 AML AML
comp=N,277μm,0.8s
RNI2 AML AML
comp=N,282μm,0.9s
RNI2 AML AML
comp=E,282μm,1.6s
RNI2 AML AML
comp=E,282μm,1.1s
PLD Plovdiv 3.99 80 P Pn 03 58 56.2 +2.5
PLD Plovdiv 3.99 80 iPn Pn 03 58 55.7 +2.1
PLD Plovdiv 3.99 80 ePn Pn 03 58 55.8 +2.1
PLD eSn Sn 03 59 41.4 +1.5
BANR Banloc 4.00 17 ⇑P Pn 03 58 55.3 +1.5
SRE Strehaia 4.13 40 ⇑P Pn 03 58 58.0 +2.3
SRE Strehaia 4.13 40 P Pn 03 58 57.9 +2.3
PLVB Pleven 4.23 63 ⇑P Pn 03 58 58.6 +1.6
T0110 Collepietro 4.29 281 P Pn 03 58 59.1 +1.3
T0110 AML AML
comp=E,385μm,1.6s
T0110 AML AML
comp=N,332μm,0.8s
T0110 AML AML
comp=N,332μm,1.2s
T0110 AML AML
comp=E,385μm,0.4s
POFI Posta Fibreno 4.31 274 P Pn 03 58 59.6 +1.5
POFI AML AML
comp=E,157μm,0.9s
POFI AML AML
comp=N,102μm,0.7s
BZS Buzias 4.34 20 ⇑P Pn 03 59 00.4 +1.9
BZS Buzias 4.34 20 P Pn 03 59 00.2 +1.7
VLAD Vladila 4.38 55 ⇑P Pn 03 59 01.3 +2.4
VVLD Villa Vallelon 4.38 276 P Pn 03 59 00.4 +1.4
VVLD AML AML
comp=E,188μm,0.7s
VVLD AML AML
comp=N,234μm,1.1s
GZR Gura Zlata 4.52 31 ⇑P Pn 03 59 02.4 +1.4
GZR Gura Zlata 4.52 31 P Pn 03 59 02.4 +1.4
AQU L'Aquila 4.58 282 ePn Pn 03 59 02.5 +0.6
AQU eSn Sn 03 59 54.0 -0.6
RDO Rodhopi 4.59 93 Pn 03 59 03.6 +1.6
MNTT Montottone 4.60 291 P Pn 03 59 03.9 +1.8
MNTT AML AML
comp=E,848μm,1.4s
MNTT AML AML
comp=N,824μm,0.5s
CAMP Campotosto 4.61 284 Pn 03 59 02.9 +0.7
SURR Surduc 4.61 24 ⇓P Pn 03 59 03.8 +1.6
MF5 Montefalcone A 4.67 290 P Pn 03 59 04.2 +1.2
MF5 AML AML
comp=E,324μm,0.5s
MF5 AML AML
comp=N,344μm,1.0s
MF5 AML AML
comp=E,324μm,1.5s
MORH Mrgy, Hungar 4.68 353 ePn Pn 03 59 05.9 +2.7
MORH eSn Sn 03 59 59.4 +2.5
MORH Mrgy, Hungar 4.68 353 ⇓P Pn 03 59 04.4 +1.2
MORH Mrgy, Hungar 4.68 353 ePn Pn 03 59 04.4 +1.2
MORH eSn Sn 03 59 56.5 -0.4
FIAM Fiamignano 4.78 281 P Pn 03 59 06.0 +1.4
FIAM AML AML
comp=N,142μm,0.7s
FIAM AML AML
comp=N,142μm,1.3s
FIAM AML AML
comp=E,170μm,0.6s
MC2 Monte Cornacci 4.84 288 P Pn 03 59 06.7 +1.1
CSP1 Cessapalombo 4.88 290 P Pn 03 59 06.6 +0.7
CSP1 AML AML
comp=E,184μm,0.9s
CSP1 AML AML
comp=N,216μm,0.5s
NRCA Norcia 4.88 287 Pn 03 59 06.8 +0.9
NRCA Norcia 4.88 287 P Pn 03 59 07.0 +1.1
NRCA AML AML
comp=N,306μm,1.1s
NRCA AML AML
comp=N,228μm,0.4s
NRCA AML AML
comp=E,380μm,0.7s
NRCA AML AML
comp=E,374μm,0.7s
NRCA AML AML
comp=N,228μm,1.6s
NRCA AML AML

	comp=N,306μm,0.9s								
RCAV	**Rocca di Cave**	**4.88**	**275**		P		**Pn**	**03 59 07.2**	**+1.2**
RCAV					AML		AML		
	comp=E,95μm,1.6s								
RCAV					AML		AML		
	comp=N,97μm,0.6s								
RCAV					AML		AML		
	comp=E,95μm,0.4s								
FDMO	**Fiordimonte**	**4.95**	**289**				**Pn**	**03 59 07.2**	**+0.3**
FDMO	**Fiordimonte**	**4.95**	**289**		P		**Pn**	**03 59 07.7**	**+0.8**
FDMO					AML		AML		
	comp=N,156μm,0.9s								
FDMO					AML		AML		
	comp=E,226μm,1.0s								
FDMO					AML		AML		
	comp=N,156μm,1.1s								
COPA	**Copaceanca**	**4.95**	**57**	⇑	P		**Pn**	**03 59 09.4**	**+2.6**
ELND	**Elena**	**4.95**	**72**	⇓	P		**Pn**	**03 59 08.7**	**+1.8**
SIRR	**Siria**	**4.96**	**18**		*e*Pn		**Pn**	**03 59 09.5**	**+2.5**
SIRR					*e*Sn		**Sn**	**04 00 03.7**	**-0.1**
BOJS	**Bojanci**	**4.98**	**324**		*e*Pn		**Pn**	**03 59 08.7**	**+1.4**
BOJS	**Bojanci**	**4.98**	**324**		P		**Pn**	**03 59 08.7**	**+1.4**
DEV	**Deva**	**4.99**	**29**	⇓	P		**Pn**	**03 59 09.7**	**+2.4**
DEV	**Deva**	**4.99**	**29**		P		**Pn**	**03 59 09.7**	**+2.4**
LOT	**Lotru**	**4.99**	**37**	⇑	P		**Pn**	**03 59 09.2**	**+1.8**
VLY	**Voula,Athens**	**4.99**	**137**		P		**Pn**	**03 59 08.9**	**+1.4**
HUMR	**Humele**	**5.01**	**52**	⇓	P		**Pn**	**03 59 10.7**	**+3.0**
EL6	**Elcito**	**5.02**	**293**		P		**Pn**	**03 59 08.2**	**+0.3**
ARVD	**Arcevia**	**5.19**	**294**		P		**Pn**	**03 59 10.4**	**+0.3**
ARVD					AML		AML		
	comp=E,122μm,1.1s								
ARVD					AML		AML		
	comp=N,74μm,0.9s								
ARVD					AML		AML		
	comp=N,74μm,1.1s								
RIY	**Rijeka**	**5.22**	**318**		*e*Pn		**Pn**	**03 59 12.9**	**+2.4**
CESX	**Cesi**	**5.22**	**284**				**Pn**	**03 59 10.8**	**+0.2**
CESX	**Cesi**	**5.22**	**284**		P		**Pn**	**03 59 11.7**	**+1.1**
BEHE	**Becsehely**	**5.27**	**339**				**Pn**	**03 59 11.6**	**+0.4**
BEHE	**Becsehely**	**5.27**	**339**		*e*Pn		**Pn**	**03 59 14.0**	**+2.8**
BEHE					*e*Sn		**Sn**	**04 00 12.1**	**+0.7**
ATCC	**AVT- Casa Cast**	**5.30**	**290**		P		**Pn**	**03 59 12.4**	**+0.7**
FRON	**Frontone**	**5.34**	**294**		P		**Pn**	**03 59 12.8**	**+0.5**
ARR	**Arges**	**5.35**	**43**	⇓	P		**Pn**	**03 59 14.0**	**+1.6**
MPAG	**Monte Paganucc**	**5.36**	**295**		P		**Pn**	**03 59 12.8**	**+0.3**
KOGS	**Kog**	**5.40**	**336**		P		**Pn**	**03 59 13.4**	**+0.4**
ATFO	**Monte Foce - G**	**5.40**	**292**		P		**Pn**	**03 59 13.9**	**+0.8**
MURB	**Monte Urbino**	**5.41**	**291**				**Pn**	**03 59 13.5**	**+0.4**
MURB	**Monte Urbino**	**5.41**	**291**		P		**Pn**	**03 59 14.3**	**+1.2**
NARO	**Abbazia di Nar**	**5.47**	**294**		P		**Pn**	**03 59 14.4**	**+0.5**
SGRR	**Singureni**	**5.47**	**59**	⇑	P		**Pn**	**03 59 16.8**	**+2.8**
MTUR	**Matau**	**5.48**	**46**		P		**Pn**	**03 59 17.6**	**+3.4**
ATTE	**AVT- Monte Tez**	**5.51**	**290**		P		**Pn**	**03 59 15.8**	**+1.2**
CEY	**Cerknica**	**5.54**	**321**		*e*Pn		**Pn**	**03 59 16.4**	**+1.4**
CEY					*e*Sn		**Sn**	**04 00 19.6**	**+1.5**
APEC	**Apecchio**	**5.56**	**293**		P		**Pn**	**03 59 16.2**	**+0.9**
LOZB	**Loznitsa**	**5.58**	**69**	⇑	P		**Pn**	**03 59 17.7**	**+2.2**
RAZG	**Razgrad**	**5.58**	**67**	⇑	P		**Pn**	**03 59 17.8**	**+2.4**
SKDS	**Skadanscina**	**5.61**	**317**		*e*Pn		**Pn**	**03 59 16.7**	**+0.8**
SKDS					*e*Sn		**Sn**	**04 00 19.3**	**-0.5**
VOIR		**5.61**	**45**	⇓	P		**Pn**	**03 59 18.7**	**+2.6**
VOIR		**5.61**	**45**		P		**Pn**	**03 59 18.6**	**+2.6**
GROS	**Grobnik**	**5.66**	**331**		*i* Pn		**Pn**	**03 59 17.7**	**+1.0**
GBAS	**Gorenja Brezov**	**5.68**	**322**	⇑	*i* Pn		**Pn**	**03 59 17.9**	**+1.1**
LJU	**Ljubljana**	**5.72**	**323**		*e*Pn		**Pn**	**03 59 19.0**	**+1.6**
LJU	**Ljubljana**	**5.72**	**323**		P		**Pn**	**03 59 18.6**	**+1.1**
DRGR		**5.72**	**23**	⇑	P		**Pn**	**03 59 18.7**	**+1.1**
DRGR		**5.72**	**23**		P		**Pn**	**03 59 18.6**	**+1.1**
MDB	**Medias**	**5.79**	**36**	⇑	P		**Pn**	**03 59 21.1**	**+2.6**
MDB	**Medias**	**5.79**	**36**		P		**Pn**	**03 59 21.0**	**+2.6**
TRI	**Trieste**	**5.85**	**317**		Pn		**Pn**	**03 59 19.1**	**-0.1**
TRI	**Trieste**	**5.85**	**317**		P		**Pn**	**03 59 19.1**	**-0.1**
VOJS	**Vojsko**	**6.01**	**320**		*i* Pn		**Pn**	**03 59 22.5**	**+1.0**
SOKA	**Soboth**	**6.02**	**330**		*e*Pn		**Pn**	**03 59 22.8**	**+1.2**
	comp=N,9.0nm,0.3s,SNR=10								
SOKA					*i* Sn		**Sn**	**04 00 28.3**	**-1.7**
	comp=N,20nm,0.6s								
PHSR	**Pinarhisar**	**6.05**	**87**	⇓	P		**Pn**	**03 59 23.9**	**+2.0**
OBKA	**Obir**	**6.08**	**326**		*e*Pn		**Pn**	**03 59 24.2**	**+1.8**
	comp=N,4.0nm,0.3s								
OBKA					*e*Sn		**Sn**	**04 00 32.0**	**+0.7**
	comp=N,36nm,0.8s								
SABO	**M.te Sabotino**	**6.12**	**318**				**Pn**	**03 59 22.7**	**-0.2**
SABO	**M.te Sabotino**	**6.12**	**318**		P		**Pn**	**03 59 23.1**	**+0.1**
MLR	**Muntele Rosu**	**6.13**	**48**		Pn		**Pn**	**03 59 26.4**	**+3.2**
	comp=N,9.3nm,0.3s,baz=166,slow=0.8,SNR=30								
MLR					Sn		**Sn**	**04 00 32.8**	**-0.1**
	baz=197,slow=17								
MLR	**Muntele Rosu**	**6.13**	**48**				**Pn**	**03 59 24.3**	**+1.1**
MLR	**Muntele Rosu**	**6.13**	**48**	⇑	P		**Pn**	**03 59 25.6**	**+2.4**
MLR	**Muntele Rosu**	**6.13**	**48**		P		**Pn**	**03 59 26.8**	**+3.6**
DOPR	**Dopca**	**6.15**	**42**	⇓	P		**Pn**	**03 59 26.0**	**+2.7**
ISR	**Istrita**	**6.27**	**53**	⇑	P		**Pn**	**03 59 27.4**	**+2.4**
ISR	**Istrita**	**6.27**	**53**		P		**Pn**	**03 59 27.3**	**+2.4**
NEHR	**Nehoiu**	**6.29**	**50**	⇑	P		**Pn**	**03 59 27.7**	**+2.4**
SRO	**Srobarova**	**6.30**	**353**		*e*P		Pn	03 59 31.7	+6.4
SRO					*e*			04 00 40.1	
ARSA	**Arzberg**	**6.34**	**335**				**Pn**	**03 59 26.6**	**+0.7**
ARSA	**Arzberg**	**6.34**	**335**		Pn		**Pn**	**03 59 27.9**	**+1.9**
	comp=N,11nm,0.4s,SNR=4.6								
ARSA	**Arzberg**	**6.34**	**335**		*e*Pn		**Pn**	**03 59 27.5**	**+1.5**
ARSA	**Arzberg**	**6.34**	**335**		P		**Pn**	**03 59 28.0**	**+2.0**
BOSR	**Bodos**	**6.36**	**43**	⇑	P		**Pn**	**03 59 27.6**	**+1.4**
PSZ	**Piszkesteto**	**6.36**	**3**				**Pn**	**03 59 27.4**	**+1.2**
PSZ	**Piszkesteto**	**6.36**	**3**	⇑	P		**Pn**	**03 59 26.4**	**+0.2**
PSZ	**Piszkesteto**	**6.36**	**3**		P		**Pn**	**03 59 26.4**	**+0.2**
OSSC	**Osservatorio P**	**6.37**	**291**				**Pn**	**03 59 27.2**	**+0.8**
PGOR	**Pogoanele**	**6.43**	**56**	⇓	P		**Pn**	**03 59 30.7**	**+3.5**
OZUR		**6.44**	**43**	⇓	P		**Pn**	**03 59 30.0**	**+2.7**
COVR	**Voineasa-Covas**	**6.50**	**47**	⇑	P		**Pn**	**03 59 30.9**	**+2.8**
CASP	**Castiglione de**	**6.50**	**284**				**Pn**	**03 59 28.2**	**+0.1**
APE	**Apeiranthos**	**6.51**	**132**		*i* P		**Pn**	**03 59 28.7**	**+0.4**
TURR	**Turia**	**6.53**	**44**	⇓	P		**Pn**	**03 59 32.2**	**+3.7**
RONA	**Rosalia, Austr**	**6.53**	**341**		*i* Pn		**Pn**	**03 59 30.8**	**+2.2**
	comp=N,2.6nm,0.3s								
RONA					*e*Sn		**Sn**	**04 00 43.0**	**+0.5**
	comp=N,7.6nm,0.3s								
GEPF	**Gemona**	**6.55**	**318**		P		**Pn**	**03 59 29.8**	**+1.0**
MYKA	**Terra Mystica**	**6.57**	**322**		*i* Pn		**Pn**	**03 59 29.6**	**+0.5**
	comp=N,2.2nm,0.3s								
MYKA					*e*Sn		**Sn**	**04 00 44.1**	**+0.7**
	comp=N,11nm,0.5s								
BISRR	**Bisoca**	**6.60**	**51**	⇑	P		**Pn**	**03 59 32.8**	**+3.2**
ICOR	**Ion Corvin**	**6.64**	**65**	⇓	P		**Pn**	**03 59 33.4**	**+3.4**
GRER		**6.67**	**53**	⇑	P		**Pn**	**03 59 34.0**	**+3.6**
PLOR	**Plostina**	**6.74**	**48**	⇓	P		**Pn**	**03 59 34.6**	**+3.1**
PLOR	**Plostina**	**6.74**	**48**		P		**Pn**	**03 59 34.2**	**+2.7**
STAL	**STALIGIAL**	**6.76**	**316**				**Pn**	**03 59 31.9**	**+0.1**
VRI	**Vrincioaia**	**6.80**	**48**	⇑	P		**Pn**	**03 59 36.1**	**+3.9**
VRI	**Vrincioaia**	**6.80**	**48**		P		**Pn**	**03 59 35.4**	**+3.2**
ZCCA	**Zocca**	**6.81**	**297**				**Pn**	**03 59 33.0**	**+0.5**
TEOL	**Teolo**	**6.82**	**306**				**Pn**	**03 59 32.7**	**+0.2**
CONA	**Conrad Observa**	**6.86**	**339**		*e*Pn		**Pn**	**03 59 34.9**	**+1.9**
	comp=N,5.0nm,0.4s								
CONA					*e*Sn		**Sn**	**04 00 51.5**	**+1.0**
	comp=N,9.9nm,0.5s								
ONER	**Baraj Valea Uz**	**6.91**	**44**	⇓	P		**Pn**	**03 59 36.4**	**+2.7**
CIMO	**Cimolais**	**6.94**	**315**				**Pn**	**03 59 34.4**	**+0.3**
KECS	**Kecovo**	**6.96**	**6**		*e*P		**Pn**	**03 59 38.9**	**+4.6**
KECS					*e*			04 00 53.5	
KECS	**Kecovo**	**6.96**	**6**		*e*PN		**Pn**	**03 59 38.9**	**+4.6**
KECS					*e*SN		**Sn**	**04 00 53.5**	**+0.7**
KECS					*e*LG		Lg	04 00 56.6	
TLBR	**Topalu**	**6.96**	**62**	⇑	P		**Pn**	**03 59 36.3**	**+1.9**
MODS	**Modra-Piesok**	**6.98**	**348**		*e*P		**Pn**	**03 59 39.3**	**+4.6**
MODS					*e*			04 00 53.7	
MODS	**Modra-Piesok**	**6.98**	**348**		*e*PN		**Pn**	**03 59 39.3**	**+4.6**
MODS					*e*SN		**Sn**	**04 00 53.7**	**+0.2**
KBA	**Koelnbreinsper**	**7.04**	**324**		*i* Pn		**Pn**	**03 59 36.7**	**+1.0**
	comp=N,6.1nm,0.5s								
KBA					*e*Sn		**Sn**	**04 00 54.1**	**-1.1**
	comp=N,18nm,0.7s								
ABTA	**Abfaltersbach**	**7.19**	**318**		*i* Pn		**Pn**	**03 59 37.9**	**+0.2**
	comp=N,2.1nm,0.3s								
ABTA					*e*Sn		**Sn**	**04 00 59.0**	**+0.2**
	comp=N,30nm,0.8s								
CTI	**Castel Tesino**	**7.21**	**311**				**Pn**	**03 59 37.8**	**-0.1**
CTI	**Castel Tesino**	**7.21**	**311**		P		**Pn**	**03 59 37.8**	**-0.1**
CFR	**Carcaliu**	**7.28**	**57**	⇑	P		**Pn**	**03 59 41.0**	**+2.2**
CFR	**Carcaliu**	**7.28**	**57**		P		**Pn**	**03 59 40.9**	**+2.2**
MOA	**Molln**	**7.29**	**331**		*e*Pn		**Pn**	**03 59 41.5**	**+2.6**
	comp=N,5.6nm,0.3s,SNR=6.5								
MOA					*e*Sn		**Sn**	**04 01 01.2**	**+0.1**
	comp=N,5.4nm,0.4s								
MOA	**Molln**	**7.29**	**331**		*e*Pn		**Pn**	**03 59 41.5**	**+2.6**
GHRR		**7.29**	**49**	⇑	P		**Pn**	**03 59 42.6**	**+3.6**
BURAR	**Bucovina Array**	**7.31**	**32**				**Pn**	**03 59 39.2**	**-0.1**
BURAR	**Bucovina Array**	**7.31**	**32**	⇑	P		**Pn**	**03 59 41.7**	**+2.3**
BURAR	**Bucovina Array**	**7.31**	**32**		P		**Pn**	**03 59 41.6**	**+2.3**
BUR08	**Bucovina Ar. S**	**7.33**	**32**				**Pn**	**03 59 39.5**	**-0.1**
DOSS	**Dosso del Somm**	**7.38**	**309**		P		**Pn**	**03 59 40.3**	**-0.1**
BIOA	**Bad Ischl, Aus**	**7.40**	**328**		*e*Pn		**Pn**	**03 59 41.8**	**+1.3**
	comp=N,6.3nm,0.6s,SNR=9.0								
BIOA					*i* Sn		**Sn**	**04 01 06.1**	**+2.3**
	comp=N,11nm,0.4s								
JAVC	**Velka Javorina**	**7.40**	**351**		*e*PN		**Pn**	**03 59 44.4**	**+3.9**
TATR	**Tatarca**	**7.42**	**54**	⇓	P		**Pn**	**03 59 43.5**	**+2.7**
VLDR	**Vladesti**	**7.57**	**53**	⇑	P		**Pn**	**03 59 45.2**	**+2.5**
IDI	**Anoyia**	**7.58**	**144**		Pn		**Pn**	**03 59 42.3**	**-0.7**
	comp=N,1.8nm,0.3s,baz=333,slow=16,SNR=1.3								
IDI					Sn		**Sn**	**04 01 05.5**	**-2.9**
	comp=N,0.8nm,0.3s,baz=19,slow=17,SNR=2.3								
IDI	**Anoyia**	**7.58**	**144**				**Pn**	**03 59 42.0**	**-1.1**
LANS	**Liptovska Anna**	**7.58**	**0**		*e*P		Pn	03 59 48.7	+5.7
LANS					*e*			04 01 03.9	
LANS	**Liptovska Anna**	**7.58**	**0**		*e*PN		Pn	03 59 48.7	+5.7
LANS					*e*SN		**Sn**	**04 01 03.9**	**-4.5**
LANS					*e*LG		Lg	04 01 21.3	
LESA	**Schwarzleotal**	**7.60**	**323**		*e*Pn		**Pn**	**03 59 44.2**	**+1.0**
	comp=N,6.6nm,0.4s								
LESA					*e*Sn		**Sn**	**04 01 07.9**	**-0.9**
	comp=N,12nm,0.6s								
MANT	**Manisa**	**7.63**	**111**				**Pn**	**03 59 43.8**	**0.0**
MSSA	**Maissana**	**7.79**	**294**				**Pn**	**03 59 45.3**	**-0.6**
KRUC	**Moravsky**	**7.80**	**345**		*e*PN		**Pn**	**03 59 48.9**	**+3.0**
NIE	**Niedzica**	**7.87**	**4**		*e*P		**Pn**	**03 59 50.8**	**+3.8**
STHS	**Stebnicka Huta**	**7.95**	**8**		*e*P		**Pn**	**03 59 51.2**	**+3.2**
STHS					*e*			04 01 15.3	
STHS	**Stebnicka Huta**	**7.95**	**8**		*e*PN		**Pn**	**03 59 51.2**	**+3.2**
STHS					*e*SN		**Sn**	**04 01 15.3**	**-2.1**
STHS					*e*LG		Lg	04 01 29.1	
WTTA	**Wattenberg**	**7.98**	**318**		*e*Pn		**Pn**	**03 59 50.8**	**+2.2**
	comp=N,7.5nm,0.4s								
WTTA					*e*Sn		**Sn**	**04 01 17.9**	**-0.5**
	comp=N,15nm,0.5s								
VRAC	**Vranov**	**8.00**	**346**		Pn		**Pn**	**03 59 51.6**	**+2.9**
	comp=N,0.3nm,0.3s,baz=159,slow=15,SNR=1.9								
VRAC					Sn		**Sn**	**04 01 22.2**	**+3.6**
	comp=N,0.6nm,0.3s,baz=78,slow=12,SNR=3.7								
	comp=N,1.2nm,0.4s								
VRAC	**Vranov**	**8.00**	**346**		*e*PN		**Pn**	**03 59 50.8**	**+2.1**
WATA	**Walderalm**	**8.06**	**318**		*i* Pn		**Pn**	**03 59 51.2**	**+1.5**
	comp=N,4.4nm,0.3s								
WATA					*e*Sn		**Sn**	**04 01 20.1**	**-0.2**
	comp=N,21nm,0.9s								
CKRC	**Cesky Krumlov**	**8.11**	**335**		*e*P		**Pn**	**03 59 52.1**	**+1.9**
CKRC	**Cesky Krumlov**	**8.11**	**335**		*e*PN		**Pn**	**03 59 52.1**	**+1.9**
SQTA	**Sankt Quirin**	**8.17**	**317**		*e*Pn		**Pn**	**03 59 52.0**	**+0.8**
	comp=N,9.3nm,0.4s								
SQTA					*i* Sn		**Sn**	**04 01 22.0**	**-0.9**
	comp=N,17nm,0.7s								
FETA	**Feichten**	**8.30**	**314**		*i* Pn		**Pn**	**03 59 54.4**	**+1.4**
	comp=N,2.6nm,0.6s								
FETA					*i* Sn		**Sn**	**04 01 28.2**	**+2.0**
	comp=N,9.1nm,0.8s								
MOTA	**Moosalm**	**8.31**	**317**		*e*Pn		**Pn**	**03 59 54.2**	**+1.1**
	comp=N,9.3nm,0.7s,SNR=9.7								
MOTA					*i* Sn		**Sn**	**04 01 27.2**	**+0.8**
	comp=N,33nm,0.8s								
MORC	**Moravsky Berou**	**8.32**	**351**		*e*PN		**Pn**	**03 59 54.7**	**+1.6**
FUORN	**Ofenpass-Fuorn**	**8.32**	**310**				**Pn**	**03 59 53.0**	**-0.3**
GEC2	**GERESS Array S**	**8.33**	**333**				**Pn**	**03 59 54.0**	**+0.6**
GERES	**GERESS Array B**	**8.33**	**333**		Pn		**Pn**	**03 59 54.3**	**+1.0**
	comp=N,0.1nm,0.3s,baz=158,slow=14,SNR=13								
GERES					Sn		**Sn**	**04 01 24.9**	**-2.0**
	comp=N,0.1nm,0.3s,baz=141,slow=19,SNR=6.5								
	comp=N,3.1nm,0.9s								
KWP	**Kalwaria Pacla**	**8.38**	**15**		*e*P		**Pn**	**03 59 58.6**	**+4.7**
RETA	**Reutte**	**8.58**	**317**		*i* Pn		**Pn**	**03 59 58.0**	**+1.4**
	comp=N,2.0nm,0.4s								
RETA					*i* Sn		**Sn**	**04 01 33.8**	**+1.0**
	comp=N,11nm,0.7s								
MILM	**Milestii Mici**	**8.58**	**48**	⇑	P		**Pn**	**03 59 58.4**	**+1.7**
MILM	**Milestii Mici**	**8.58**	**48**		P		**Pn**	**03 59 58.4**	**+1.7**
KHC	**Kasperske Hory**	**8.62**	**333**				**Pn**	**03 59 58.0**	**+0.8**
KHC	**Kasperske Hory**	**8.62**	**333**		*ce*P		**Pn**	**03 59 58.0**	**+0.8**
KHC						pmax	pmax		
	comp=Z,8.0nm,1.7s								
KHC	**Kasperske Hory**	**8.62**	**333**		*e*PN		**Pn**	**03 59 58.2**	**+1.0**
KHC					*e*SN		**Sn**	**04 01 33.0**	**-0.9**
DAVOX	**Davos/Dischmat**	**8.63**	**310**		Pn		**Pn**	**03 59 58.8**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=121,slow=16,SNR=11								
	comp=Z,2.6nm,0.3s								
KRLC	**Kraliky**	**8.71**	**349**		*e*SN		**Sn**	**04 01 34.1**	**-2.0**
TUE	**Stuetta**	**8.78**	**307**				**Pn**	**04 00 00.7**	**+1.1**
DAVA	**Damuels**	**8.92**	**313**		*i* Pn		**Pn**	**04 00 01.1**	**-0.3**
	comp=Z,3.3nm,0.5s								
DAVA					*i* Sn		**Sn**	**04 01 41.0**	**-0.4**
	comp=Z,12nm,0.7s								
DPC	**Dobruska-Polom**	**9.05**	**347**		*e*P		**Pn**	**04 00 06.8**	**+3.7**
DPC	**Dobruska-Polom**	**9.05**	**347**		*e*PN		**Pn**	**04 00 06.8**	**+3.7**
PRU	**Pruhonice**	**9.09**	**340**		*e*P		**Pn**	**04 00 04.6**	**+0.9**
PRU	**Pruhonice**	**9.09**	**340**		*e*PN		**Pn**	**04 00 04.6**	**+0.9**
SORM	**Soroca**	**9.11**	**41**	⇑	P		**Pn**	**04 00 06.5**	**+2.6**
SORM	**Soroca**	**9.11**	**41**		P		**Pn**	**04 00 06.4**	**+2.6**
SENIN	**Lac Senin/Sane**	**9.99**	**303**				**Pn**	**04 00 16.1**	**0.0**
CLL	**Collm**	**10.71**	**338**		*e*P		**Pn**	**04 00 27.0**	**+1.3**
BR131	**Keskin Array S**	**10.93**	**95**		*i* P		**Pn**	**04 00 31.4**	**+2.4**
BRTR	**Keskin Array B**	**10.93**	**95**		Pn		**Pn**	**04 00 32.6**	**+3.5**
	comp=Z,0.1nm,0.3s,baz=263,slow=12,SNR=1.5								
BRTR					LR		LR	04 05 56.4	
	comp=Z,2μm,18.9s,baz=26,slow=44								
BRTR	**Keskin Array B**	**10.93**	**95**				**Pn**	**04 00 29.3**	**+0.2**
BRTR	**Keskin Array B**	**10.93**	**95**		P		**Pn**	**04 00 29.3**	**+0.2**
KIEV	**Kiev**	**11.35**	**33**				**Pn**	**04 00 35.3**	**+0.8**
KIEV	**Kiev**	**11.35**	**33**		P		**Pn**	**04 00 35.3**	**+0.8**
AKASG	**Malin Array Be**	**11.36**	**33**		Pn		**Pn**	**04 00 36.7**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=223,slow=12,SNR=9.9								
	comp=Z,3.6nm,0.9s								
AKASG	**Malin Array Be**	**11.36**	**33**				**Pn**	**04 00 35.6**	**+0.9**
AKASG	**Malin Array Be**	**11.36**	**33**		*i* P		**Pn**	**04 00 35.9**	**+1.2**
AKASG						pmax	pmax		
	comp=Z,2.0nm,0.6s								
AKBB	**Malin Array Si**	**11.36**	**33**				**Pn**	**04 00 35.6**	**+0.9**
AKBB	**Malin Array Si**	**11.36**	**33**		*ce*P		**Pn**	**04 00 36.9**	**+2.2**
MNK	**Minsk**	**14.10**	**21**		*i* P		**Pn**	**04 01 09.1**	**-3.0**
	comp=E,8.0nm,0.8s								
MNK					*i* P		**Pn**	**04 01 09.1**	**-3.0**
	comp=N,13nm,1.0s								
MNK					*i* P		**Pn**	**04 01 09.1**	**-3.0**
	comp=Z,8.0nm,0.9s,baz=207								
MNK					*i* PP		**P**	**04 01 17.6**	**-2.1**
MNK					*i* S		**Sn**	**04 03 45.6**	**-2.3**
MNK					*i* SS		**SnSn**	**04 03 59.9**	**-0.4**
MNK					*i* LRM		MLR	04 07 26.0	
	comp=Z,2μm,17.7s								
MNK					*i* LRM		MLR	04 07 37.0	
	comp=N,2μm,17.6s								
MNK					*i* LRM		MLR	04 08 00.1	
	comp=E,652nm,14.6s								
MNK	**Minsk**	**14.10**	**21**		*i* P		**Pn**	**04 01 09.0**	**-3.0**
MNK					*i* S		**Sn**	**04 03 45.5**	**-2.3**
MNK						pmax	pmax		
	comp=N,13nm,1.0s								
MNK						pmax	pmax		
	comp=E,8.0nm,0.8s								
MNK						pmax	pmax		
	comp=Z,8.0nm,0.9s								
MNK						MLR	MLR		
	comp=Z,2μm,18.0s								
MNK						MLR	MLR		
	comp=N,2μm,18.0s								
MNK						MLR	MLR		
	comp=E,652nm,15.0s								
NACGM	**Naroch**	**14.20**	**17**		*e*P		**Pn**	**04 01 14.6**	**+1.2**
	comp=Z,10.0nm,0.8s,baz=203								
NACGM	**Naroch**	**14.20**	**17**		*e*P		**P**	**04 01 19.2**	**-1.5**
	comp=Z,22nm,0.8s,baz=203								
PABE	**Paberze**	**14.26**	**10**		Pn		**Pn**	**04 01 14.7**	**+0.5**
MMAI	**Mount Meron Ar**	**15.28**	**119**		Pn		**Pn**	**04 01 26.8**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=327,slow=15,SNR=3.7								
VORD	**Divnogorie**	**16.58**	**49**		*e*P		**Pn**	**04 01 45.7**	**+0.9**
VORD						pmax	pmax		
	comp=Z,10.0nm,1.0s								
VSR	**Storozhevoye**	**16.63**	**48**		*e*P		**Pn**	**04 01 44.7**	**-0.6**
VSR						pmax	pmax		
	comp=Z,9.0nm,0.9s								
VORR	**Voronezh**	**16.87**	**46**		*e*P		**Pn**	**04 01 48.2**	**-0.2**
VORR						pmax	pmax		
	comp=Z,10.0nm,1.0s								
LPSR	**Galich'ya Gora**	**17.19**	**43**		*e*P		**Pn**	**04 01 52.1**	**-0.3**
LPSR						pmax	pmax		
	comp=Z,10.0nm,1.0s								
KIV	**Kislovodsk**	**17.21**	**74**		*e*P		**Pn**	**04 01 53.3**	**+0.4**
KIV						pmax	pmax		
	comp=Z,5.0nm,1.0s								
KBZ	**Khabaz**	**17.37**	**75**		P		**P**	**04 01 57.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=265,slow=11,SNR=4.3								
	comp=Z,3.2nm,1.0s								
VSU	**Vasula**	**17.53**	**13**		*ce*P		**P**	**04 01 57.6**	**0.0**
VSU						pmax	pmax		
	comp=Z,19nm,0.7s								
OBN	**Obninsk**	**17.63**	**34**		*e*P		**Pn**	**04 01 56.9**	**-0.9**
OBN						pmax	pmax		
	comp=Z,20nm,1.7s								
ESDC	**Sonseca Array**	**17.87**	**272**		P		**P**	**04 02 03.6**	**+2.0**
	comp=Z,2.0nm,1.1s,baz=77,slow=7.8,SNR=5.0								
ESDC	**Sonseca Array**	**17.87**	**272**				**Pn**	**04 02 00.6**	**-0.5**
VRH	**Novokhopyorsk**	**18.07**	**50**		*e*P		**Pn**	**04 02 02.7**	**-0.6**
VRH						pmax	pmax		
	comp=Z,9.0nm,1.0s								
HFS	**Hagfors**	**18.93**	**351**		P		**P**	**04 02 12.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=169,slow=11,SNR=8.8								
	comp=Z,7.4nm,1.0s								
GNI	**Garni**	**19.16**	**86**		P		**Pn**	**04 02 17.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=220,slow

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDOMX	**El Doctor, EDO**	**0.49**	**316**	*e*P	Pn	04 06 20.8	+1.4
EDOMX				IAML		04 06 29.9	
	comp=N,4μm,0.2s						
ECBX	**El Chinero**	**0.62**	**258**↑	*e*P	Pn	04 06 20.5	-0.5
ECBX				*e*S	Sb	04 06 28.3	+0.5
ECBX				IAML		04 06 28.7	
	comp=N,907nm,0.1s						
PPXB	**Puerto Peasco**	**0.66**	**113**↑	*e*P	Pn	04 06 22.9	+1.2
PPXB				*e*S	Sn	04 06 32.2	+0.1
SFX	**San Felipe**	**0.71**	**218**	Pg	Pg	04 06 20.2	+0.3
SFX				Sg	Sb	04 06 29.9	-0.6
SFX	**San Felipe**	**0.71**	**218**↓	*e*P	Pn	04 06 21.9	-0.4
SFX				*e*S	Sb	04 06 30.2	-0.3
SFX				IAML		04 06 31.0	
	comp=E,3μm,0.2s						
SFX				IAML		04 06 31.1	
	comp=N,3μm,0.2s						
PIX	**Pinacate**	**0.76**	**93**		Pn	04 06 23.9	+1.0
PIX					Sg	04 06 31.0	+0.3
PIX				IAML		04 06 36.5	
	comp=N,425nm,0.5s						
PIX				IAML		04 06 36.8	
	comp=E,352nm,0.5s						
PIX	**Pinacate**	**0.76**	**93**	*e*P	Pn	04 06 24.6	+1.6
PIX				*e*S	Sn	04 06 35.2	+0.7
SLRCX	**San Luis Rio C**	**0.91**	**340**↓	*i*P	Pn	04 06 28.2	+3.2
SLRCX				*e*S	Sn	04 06 41.7	+3.6
SLRCX				IAML		04 06 42.5	
	comp=N,2μm,0.3s						
PESCX	**Ej. Pescaderos**	**0.98**	**328**	*e*P	Pn	04 06 28.3	+2.3
SPIG	**San Pedro Mart**	**1.11**	**240**↑	*e*P	Pn	04 06 29.4	+1.3
SPIG				*e*S	Sn	04 06 43.0	-0.6
SPIG				IAML		04 06 43.9	
	comp=N,403nm,0.4s						
CPBX	**Cerro Prieto**	**1.15**	**315**		Pb	04 06 27.5	-0.7
CPBX					Sn	04 06 43.9	-0.3
ALAMX	**Rancho Alamar**	**1.23**	**290**	*e*P	Pg	04 06 30.1	+0.3
VTX	**Valle De La Tr**	**1.25**	**261**	Pn	Pg	04 06 30.1	-0.1
VTX				IAML		04 06 48.8	
	comp=E,274nm,0.4s						
VTX				IAML		04 06 48.9	
	comp=N,268nm,0.3s						
VTX	**Valle De La Tr**	**1.25**	**261**	*e*P	Pg	04 06 30.9	+0.7
113A	**Mohawk Valley,**	**1.26**	**23**	Pn	Pg	04 06 30.6	+0.2
214A	**Organ Pipe Nat**	**1.35**	**74**	Pn	Pg	04 06 32.4	+0.2
214A				IAML		04 06 52.6	
	comp=E,320nm,0.5s						
214A				IAML		04 06 52.8	
	comp=N,158nm,0.4s						
SJX	**San Joaquin**	**1.39**	**277**↑	*e*P	Pg	04 06 33.1	+0.3
ESJX	**Sierra Juarez**	**1.42**	**287**	Pn	Pn	04 06 32.1	-0.2
ESJX				IAML		04 06 55.6	
	comp=E,123nm,0.1s						
ESJX				IAML		04 06 56.3	
	comp=N,112nm,0.2s						
GLA	**Glamis**	**1.50**	**344**	Pn	Pn	04 06 33.2	0.0
GLA	**Glamis**	**1.50**	**344**↓	*i*P	Pg	04 06 36.0	+1.0
SQX	**San Quintin**	**1.66**	**232**	*e*P	Pg	04 06 38.0	-0.1
SQX				*e*S	Sg	04 06 59.3	-0.4
SQX				IAML		04 07 00.6	
	comp=E,303nm,0.4s						
YUH	**Yuha Desert**	**1.70**	**308**	Pn	Pn	04 06 35.3	-0.6
YUH				IAML		04 07 05.6	
	comp=E,118nm,0.4s						
CBX	**Cerro Bola**	**2.09**	**290**	Pn	Pb	04 06 43.3	-1.1
BLYC	**Blythe**	**2.15**	**356**	Pn	Pn	04 06 41.8	-0.3
BLYC				IAML		04 07 24.0	
	comp=E,52nm,0.6s						
BLYC				IAML		04 07 29.1	
	comp=N,51nm,0.5s						
BAR	**Barrett**	**2.25**	**299**	Pn	Pn	04 06 44.9	+1.4
BAR				IAML		04 07 22.4	
	comp=N,115nm,0.2s						
BC3	**Big Chuckawall**	**2.25**	**336**	Pn	Pb	04 06 46.3	-0.8
BC3				IAML		04 07 36.6	
	comp=E,50nm,0.6s						
BC3				IAML		04 07 41.5	
	comp=N,75nm,0.8s						
BORC	**Borrego Spring**	**2.42**	**314**	Pn	Pn	04 06 46.8	+1.0
Y14A	**Wickenburg**	**2.59**	**25**	Pn	Pn	04 06 49.5	+1.3
Y14A				IAML		04 07 36.1	
	comp=E,71nm,0.4s						
Y14A				IAML		04 07 45.3	
	comp=N,83nm,0.6s						
DPP	**Dos Picos Cty**	**2.60**	**303**	Pn	Pn	04 06 48.3	-0.1
DPP				IAML		04 07 33.7	
	comp=E,56nm,0.3s						
IRM	**Iron Mountain**	**2.64**	**345**	Pn	Pb	04 06 51.5	-2.1
IRM				IAML		04 07 42.7	
	comp=N,33nm,0.5s						
PMD	**Palm Desert**	**2.67**	**320**	Pn	Pn	04 06 50.4	+1.2
CPE	**Camp Elliot**	**2.67**	**299**	Pn	Pn	04 06 51.6	+2.4
CPE				IAML		04 07 33.4	
	comp=E,80nm,0.3s						
PFO	**Pinyon Flats O**	**2.68**	**319**	Pn	Pn	04 06 50.2	+0.6
DNR	**Dunn Ranch,Anz**	**2.75**	**316**	Pn	Pn	04 06 51.1	+0.6
DNR				IAML		04 07 42.1	
	comp=E,49nm,0.6s						
DNR				IAML		04 07 59.3	
	comp=N,46nm,0.9s						
TUC	**Tucson**	**3.11**	**76**	Pn	Pn	04 06 55.9	+0.6
TUC				IAML		04 07 51.7	
	comp=N,20nm,0.4s						
ELS	**Elsinore Mount**	**3.31**	**309**	Pn	Pn	04 06 57.3	-0.8
ELS				IAML		04 08 14.2	
	comp=E,20nm,2.3s						
ELS				IAML		04 08 17.5	
	comp=N,24nm,4.0s						
X16A	**Lo Mia Camp, P**	**3.72**	**40**	Pn	Pn	04 07 05.2	+1.3
319A	**Douglas**	**4.33**	**92**	Pn	Pn	04 07 10.6	-1.7
WUAZ	**Wupatki**	**4.63**	**32**	Pn	Pn	04 07 16.0	-0.3

*IDC **26** 04:09:00.5±4.1, 41°.15N×18°.81E, h0km, mb3.5/3, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=67.5km s-min=35.4km az=84.0*
*SKO **26** 04:09:10.2, 41°.59N×19°.82E, h0km, ML2.9*
ISC 26 04:09:07.3±1.4, 41°.57N±0°.06×19°.54E±0°.08, h10km, n17, σ2s38/18, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**132**	*i* Pg	**Pg**	**04 09 13.1**	**-0.7**
TIR				*i* Sg	**Sg**	**04 09 17.3**	**-1.0**
OHR	**Ohrid**	**1.05**	**115**	*i* Pg	**Pg**	**04 09 26.8**	**-0.7**
OHR				*i* Sg	**Sb**	**04 09 39.6**	**-1.8**
OHR				*e*Lg	Lg	04 09 43.1	
	comp=N,292nm,0.4s						
OHR				*e*Lg	Lg	04 09 44.2	
	comp=E,243nm,0.4s						
SKO	**Skopje**	**1.48**	**73**	*i* Pg	**Pg**	**04 09 36.1**	**+0.5**
SKO				*i* Sg	**Sb**	**04 09 47.5**	**-6.2**
VAY	**Valandovo**	**2.29**	**95**	*i* Pn	**Pn**	**04 09 46.3**	**+1.1**
VAY				*i* Sn	**Sg**	**04 10 25.3**	**+4.4**
VAY				*e*Lg	Lg	04 10 27.8	
	comp=N,52nm,0.6s						
KNT	**Kendrikon**	**2.56**	**98**	*i* Pn	**Pn**	**04 09 50.0**	**+1.1**
LIT	**Litokhoron**	**2.67**	**122**	*i* Pn	**Pn**	**04 09 53.3**	**+2.9**
KKB	**Krupnik**	**2.70**	**83**	*i* Pn	**Pn**	**04 09 52.9**	**+2.0**
THE	**Thessaloniki**	**2.75**	**109**	*i* Pn	**Pn**	**04 09 52.0**	**+0.6**
SRS	**Serrai**	**3.08**	**97**	*i* Pn	**Pn**	**04 09 57.2**	**+1.1**
MMB	**Musomishta**	**3.16**	**89**	*i* Pn	**Pn**	**04 09 59.1**	**+2.0**
MLR	**Muntele Rosu**	**6.08**	**48**	Pn	Pn	04 10 43.0	+5.6
	comp=N,0.9nm,0.3s,baz=328,slow=13,SNR=4.8 comp=N,2.1nm,0.4s						
KECS	**Kecovo**	**6.95**	**5**	*e*PN	Pn	04 10 59.8	+11
MODS	**Modra-Piesok**	**6.99**	**347**	*e*PN	**Pg**	**04 11 20.5**	**-0.6**
IDI	**Anoyia**	**7.54**	**144**	Pn	Pn	04 10 52.8	-4.6
	comp=N,4.5nm,0.9s,baz=34,slow=18,SNR=1.2						
FINES	**FINESS Array B**	**20.30**	**9**	P	**P**	**04 13 43.6**	**+0.6**
	comp=N,1.0nm,0.6s,baz=187,slow=9.4,SNR=4.8 comp=N,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**44.05**	**51**	P	**P**	**04 17 14.9**	**-0.2**
	comp=N,0.4nm,0.4s,baz=273,slow=8.5,SNR=3.6 comp=N,0.4nm,0.4s						
MKAR	**Makanchi Array**	**44.24**	**61**	P	**P**	**04 17 16.3**	**-0.5**
	comp=N,0.2nm,0.3s,baz=291,slow=10,SNR=1.6 comp=N,0.2nm,0.3s						

*IDC **26** 04:09:12.0±4.0, 41°.26N×18°.82E, h0km, mb3.6/3, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=63.9km s-min=35.1km az=86.0*
*PDG **26** 04:09:22.2±0.3, 41°.52N×19°.49E, h11km±1km, MD3.5/6, ML3.4/13, Error ellipse: s-maj=1.8km s-min=2.0km az=0.0*
ISC 26 04:09:15.5±2.1, 41°.28N±0°.08×19°.46E±0°.08, h3km±11km, n18, σ1s30/31, 5C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.70**	**347**↓	*i*Pg	**Pb**	**04 09 30.8**	**+0.4**
ULC				*i* Sg	**Sb**	**04 09 39.7**	**-0.8**
DRME	**Dracevica, Mon**	**0.93**	**347**↓	*i*Pg	**Pn**	**04 09 34.9**	**-0.5**
DRME				*i* Sg	**Sn**	**04 09 47.2**	**-2.1**
BUM	**Brajici-Budva**	**1.11**	**337**↓	*i*Pg	**Pn**	**04 09 39.3**	**+1.4**
BUM				*i* Sg	**Sn**	**04 09 53.2**	**-0.5**
PDG	**Podgorica**	**1.16**	**352**↑	*i*Pg	**Pn**	**04 09 38.7**	**+0.1**
PDG				*i* Sg	**Sn**	**04 09 54.2**	**-0.7**
CEME	**Cevo**	**1.33**	**342**↑	*i*Pg	**Pn**	**04 09 42.3**	**+1.3**
CEME				*i* Sg	**Sn**	**04 10 00.5**	**+1.3**
PVY	**Plav**	**1.36**	**16**↑	*i*Pg	**Pn**	**04 09 42.2**	**+0.7**
PVY				*i* Sg	**Sg**	**04 09 59.4**	**+0.1**
HCY	**Herceg Novi**	**1.37**	**328**↓	*i*Pg	**Pn**	**04 09 42.4**	**+0.9**
HCY				*i* Sg	**Sn**	**04 10 00.6**	**+0.4**
NKME	**Niksic**	**1.54**	**346**↑	*i*Pg	**Pg**	**04 09 45.5**	**+0.6**
NKME				*i* Sg	**Sn**	**04 10 06.5**	**+2.3**
KOME	**Kolasin**	**1.57**	**1**↓	*i*Pg	**Pg**	**04 09 45.8**	**+0.2**
KOME				*i* Sg	**Sg**	**04 10 05.7**	**-0.2**
IVA	**Berane**	**1.62**	**11**↓	*i*Pg	**Pb**	**04 09 46.6**	**+0.5**
IVA				*i* Sg	**Sb**	**04 10 07.4**	**+0.4**
BRY	**Bratogost**	**1.76**	**337**↓	*i*Pg	**Pg**	**04 09 49.3**	**+0.1**
BRY				*i* Sg	**Sg**	**04 10 12.6**	**+0.5**
UPM	**Unac-Piva**	**1.97**	**348**↓	*i*Pn	**Pg**	**04 09 52.4**	**-0.8**
UPM				*i* Sn	**Sg**	**04 10 16.7**	**-2.0**
PLE	**Pljevlja**	**2.05**	**358**↑	*i*Pn	**Pb**	**04 09 53.1**	**-0.3**
PLE				*i* Sn	**Sb**	**04 10 18.0**	**-1.3**
MLR	**Muntele Rosu**	**6.33**	**46**	Pn	**Pn**	**04 10 53.5**	**+3.8**
	1.5nm,0.3s,baz=268,slow=4.5,SNR=6.4 3.7nm,0.4s						
IDI	**Anoyia**	**7.34**	**143**	Pn	**Pn**	**04 11 05.3**	**+1.7**
	3.9nm,0.4s,baz=327,slow=17,SNR=1.7						
FINES	**FINESS Array B**	**20.59**	**9**	P	**P**	**04 13 53.8**	**-1.5**
	0.8nm,0.5s,baz=182,slow=10,SNR=6.0 0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**44.28**	**50**	P	**P**	**04 17 26.1**	**0.0**
	0.8nm,0.3s,baz=268,slow=7.3,SNR=3.5 0.8nm,0.3s						
MKAR	**Makanchi Array**	**44.44**	**61**	P	**P**	**04 17 27.0**	**-0.4**
	0.5nm,0.7s,baz=281,slow=8.4,SNR=3.0 0.5nm,0.7s						

*IDC **26** 04:13:03.0±2.5, 41°.42N×19°.47E, h0km, mb3.7/4, mbtmp3.7/6, ML3.4/2, MS4.6/1, Error ellipse: s-maj=45.3km s-min=29.0km az=148.0*
*SKO **26** 04:13:05.2, 41°.47N×19°.39E, h4km, ML3.2*
*THE **26** 04:13:06.5, 42°.N±5°.×1°.9E±°., h10km, M3.1/15, MLh3.1/15*
*BEO **26** 04:13:07.5±1.0, 41°.47N×19°.58E, h12km±5km, ML3.0/12*
ISC 26 04:13:06.9±1.0, 41°.49N±0°.02×19°.51E±0°.03, h17km±7km, n73, σ1s09/94, mb3.9/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**117**	*i* Pg	**Pg**	**04 13 12.2**	**-1.1**
TIR				*i* Sg	**Sg**	**04 13 17.5**	**-0.2**
DRME	**Dracevica, Mon**	**0.74**	**341**	*e*Pg	**Pg**	**04 13 21.1**	**-0.3**
PDG	**Podgorica**	**0.96**	**349**	*e*Pg	**Pb**	**04 13 25.8**	**+0.7**
PDG				*e*Sg	**Sn**	**04 13 40.5**	**+1.5**
VLO	**Vlora**	**1.02**	**181**	P	**Pn**	**04 13 27.5**	**+1.1**
VLO				S	**Sn**	**04 13 43.9**	**+3.6**
OHR	**Ohrid**	**1.04**	**111**	*i* Pg	**Pb**	**04 13 25.8**	**-0.8**
OHR				*i* Sg	**Sg**	**04 13 41.1**	**+0.4**
OHR				*e*Lg	Lg	04 13 43.8	
	comp=E,556nm,0.5s						
OHR				*e*Lg	Lg	04 13 44.5	
	comp=N,343nm,0.4s						
PVY	**Plav**	**1.16**	**17**	*e*Pg	**Pg**	**04 13 29.6**	**+0.3**
KBN	**Korca**	**1.29**	**131**	P	**Pb**	**04 13 31.2**	**+0.3**
KBN				S	**Sg**	**04 13 50.3**	**+1.5**
KOME	**Kolasin**	**1.36**	**0**	*e*Pg	**Pb**	**04 13 32.8**	**+0.7**
BEY	**Berane**	**1.41**	**12**	*e*Pg	**Pn**	**04 13 32.7**	**+0.7**
TREB	**Trebinje**	**1.50**	**325**	*e*Pg	**Pb**	**04 13 34.4**	**0.0**
TREB				*e*Sg	**Sb**	**04 13 54.9**	**+1.7**
SKO	**Skopje**	**1.52**	**71**	*i* Pg	**Pn**	**04 13 34.4**	**+0.9**
SKO				*i* Sg	**Sb**	**04 13 55.2**	**+1.3**
NEST	**Nestorio**	**1.58**	**132**	P	**Pb**	**04 13 35.8**	**0.0**
NEST				S	**Sg**	**04 13 58.2**	**+0.3**
KEK	**Kerkira**	**1.79**	**173**	P	**Pg**	**04 13 41.6**	**+0.4**
KEK				S	**Sg**	**04 14 05.6**	**+1.2**
PENT	**Pentalofos**	**1.79**	**136**	P	**Pn**	**04 13 38.5**	**+1.4**
SJES	**Sjenica**	**1.81**	**11**	*e*Pg	**Pb**	**04 13 40.2**	**+0.6**
SJES				*e*Sg	**Sb**	**04 14 04.4**	**-0.7**
PLE	**Pljevlja**	**1.84**	**357**	*e*Pg	**Pb**	**04 13 40.4**	**+0.1**
STON	**Ston**	**1.93**	**316**	*e*Pn	**Pb**	**04 13 41.5**	**-0.1**
IGT	**Igoumenitsa**	**2.05**	**162**	P	**Pn**	**04 13 40.5**	**-0.2**
IGT	**Igoumenitsa**	**2.05**	**162**	*i* Pn	**Pn**	**04 13 41.3**	**+0.6**
IGT				*i* Sn	**Sn**	**04 14 06.2**	**+0.3**
KZN	**Kozani**	**2.08**	**124**	P	**Pn**	**04 13 42.5**	**+1.3**
SELS	**Selova**	**2.10**	**34**	*e*Pn	**Pn**	**04 13 41.5**	**+0.1**
IVAS	**Ivanjica**	**2.14**	**13**	*e*Pn	**Pn**	**04 13 42.9**	**+0.9**
PRMD	**Pramanda**	**2.30**	**148**	P	**Pn**	**04 13 45.4**	**+1.3**
GOCS	**Kraljevo Serbi**	**2.31**	**25**	*e*Pn	**Pn**	**04 13 44.7**	**+0.4**
VAY	**Valandovo**	**2.31**	**93**	*i* Pn	**Pn**	**04 13 44.7**	**+0.5**
VAY				*i* Sn	**Sn**	**04 14 14.2**	**+2.0**
VAY				*e*Lg	Lg	04 14 14.6	
	comp=E,61nm,0.8s						
VAY				*e*Lg	Lg	04 14 15.1	
	comp=N,90nm,0.7s						
BBLS	**Lazi&#263i**	**2.38**	**358**	*e*Pn	**Pn**	**04 13 47.6**	**+2.4**
GRUS	**Gruza**	**2.56**	**20**	*e*Pn	**Pn**	**04 13 49.6**	**+1.9**
KNT	**Kendrikon**	**2.57**	**96**	P	**Pn**	**04 13 47.7**	**-0.1**
KNT	**Kendrikon**	**2.57**	**96**	*i* Pn	**Pn**	**04 13 48.3**	**+0.5**
KNT				*i* Sn	**Sn**	**04 14 19.3**	**+0.6**
DIVS	**Divibare**	**2.63**	**8**	*e*Pn	**Pn**	**04 13 49.4**	**+0.6**
BOVS	**Bovan**	**2.69**	**36**	*e*Pn	**Pn**	**04 13 50.2**	**+0.7**
THL	**Klokotos Trika**	**2.71**	**134**	P	**Pn**	**04 13 50.5**	**+0.8**
THL				S	**Sn**	**04 14 23.7**	**+1.6**
TYRN	**Tyrnavos**	**2.73**	**130**	P	**Pn**	**04 13 51.1**	**+1.2**
KKB	**Krupnik**	**2.74**	**81**	P	**Pn**	**04 13 50.2**	**+0.1**
KKB	**Krupnik**	**2.74**	**81**	*i* Pn	**Pn**	**04 13 50.8**	**+0.7**
KKB				*i* Sn	**Sn**	**04 14 24.0**	**+1.2**
THE	**Thessaloniki**	**2.75**	**107**	*i* Pn	**Pn**	**04 13 50.3**	**+0.1**
TSLK	**Tsoukalades, L**	**2.80**	**161**	P	**Pn**	**04 13 50.9**	**-0.1**
TRUS	**Trudelj**	**2.81**	**13**	*e*Pn	**Pb**	**04 13 58.9**	**+2.2**
LKD2	**Lefkada island**	**2.83**	**162**	P	**Pn**	**04 13 51.3**	**-0.1**
HORT	**Hortiatis**	**2.86**	**107**	P	**Pn**	**04 13 51.7**	**-0.1**
AMPL	**Ampelaki**	**2.87**	**152**	P	**Pn**	**04 13 52.8**	**+0.8**
NYDR	**Nydri-Lefkada**	**2.92**	**161**	P	**Pn**	**04 13 52.0**	**-0.5**
ZAPS	**Zavoj**	**2.92**	**51**	*e*Pn	**Pn**	**04 13 53.2**	**+0.5**
SOH	**Sokhos**	**2.98**	**102**	P	**Pn**	**04 13 53.9**	**+0.5**
EVGI	**Lefkada island**	**2.99**	**163**	P	**Pn**	**04 13 52.8**	**-0.8**
VTS	**Vitosha**	**3.00**	**67**	P	**Pn**	**04 13 54.2**	**+0.4**
VTS	**Vitosha**	**3.00**	**67**	*e*Pn	**Pn**	**04 13 54.5**	**+0.7**
ZAGS	**Zajecar**	**3.07**	**40**	*e*Pn	**Pn**	**04 13 55.3**	**+0.6**
SRS	**Serrai**	**3.10**	**95**	P	**Pn**	**04 13 55.1**	**0.0**
SRS	**Serrai**	**3.10**	**95**	*i* Pn	**Pn**	**04 13 55.3**	**+0.3**
SRS				*i* Sn	**Sn**	**04 14 32.0**	**+0.3**
EVR	**Evrytania**	**3.11**	**145**	P	**Pn**	**04 13 56.8**	**+1.5**
BLKB	**Belogradchik**	**3.17**	**47**	*e*Pn	**Pn**	**04 13 56.9**	**+0.9**
MMB	**Musomishta**	**3.19**	**88**	*i* Pn	**Pn**	**04 13 56.9**	**+0.6**
BORS2	**Bor- Borsko je**	**3.19**	**35**	*e*Pn	**Pn**	**04 13 55.0**	**-1.3**
AGG	**Agios Georgios**	**3.27**	**138**	P	**Pn**	**04 13 58.1**	**+0.6**
KUBS	**Kucevo**	**3.33**	**28**	*e*Pn	**Pn**	**04 13 57.1**	**-1.1**
FRGS	**Fruska Gora**	**3.68**	**3**	*e*Pn	**Pn**	**04 14 02.7**	**-0.3**
PLD	**Plovdiv**	**3.97**	**79**	*i* Pn	**Pn**	**04 14 08.1**	**+1.1**
SOKA	**Soboth**	**6.11**	**330**	*i* Pn	**Pn**	**04 14 36.3**	**-0.2**
	comp=N,1.4nm,0.2s						
MLR	**Muntele Rosu**	**6.16**	**47**	Pn	**Pn**	**04 14 39.4**	**+2.2**
	comp=N,0.7nm,0.3s,baz=305,slow=17,SNR=7.9						
MLR				Sn	**Sn**	**04 15 47.5**	**+0.2**
	baz=214,slow=11 comp=N,5.2nm,0.7s						
OBKA	**Obir**	**6.16**	**326**	*e*Pn	**Pn**	**04 14 38.0**	**+0.7**
	comp=N,1.4nm,0.3s						
OBKA				*i* Sn	**Sn**	**04 15 48.7**	**+1.3**
	comp=N,6.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**7.48**	**328**	*i* Pn	**Pn**	**04 14 56.3**	**+1.0**
	comp=N,1.3nm,0.3s						
LESA	**Schwarzleotal**	**7.69**	**323**	*i* Pn	**Pn**	**04 14 57.4**	**-0.7**
	comp=N,0.2nm,0.1s						
WTTA	**Wattenberg**	**8.07**	**318**	*i* Pn	**Pn**	**04 15 05.2**	**+1.7**
	comp=N,2.2nm,0.2s						
WTTA				*i* Sn	**Sn**	**04 16 33.5**	**-0.9**
	comp=N,3.2nm,0.4s						
WATA	**Walderalm**	**8.15**	**319**	*i* Pn	**Pn**	**04 15 06.1**	**+1.6**
	comp=N,2.0nm,0.2s						
WATA				*i* Sn	**Sn**	**04 16 35.9**	**-0.4**
	comp=N,3.1nm,0.5s						
SQTA	**Sankt Quirin**	**8.26**	**317**	*i* Pn	**Pn**	**04 15 06.4**	**+0.4**
	comp=N,2.4nm,0.3s						
SQTA				*i* Sn	**Sn**	**04 16 37.5**	**-1.4**
	comp=N,2.8nm,0.5s						
MOTA	**Moosalm**	**8.39**	**317**	*i* Pn	**Pn**	**04 15 08.4**	**+0.5**
	comp=N,0.8nm,0.2s						
MOTA				*i* Sn	**Sn**	**04 16 40.1**	**-2.2**
	comp=N,2.5nm,0.6s						
OBN	**Obninsk**	**17.67**	**34**	LR	LR	04 24 16.3	
	comp=N,2μm,19.4s,baz=353,slow=38						
HFS	**Hagfors**	**19.02**	**351**	P	**P**	**04 17 27.3**	**-0.4**
	comp=N,0.1nm,0.3s,baz=159,slow=8.6,SNR=5.3 comp=N,0.7nm,0.6s						
FINES	**FINESS Array B**	**20.38**	**9**	P	**P**	**04 17 40.6**	**-2.0**
	comp=N,1.4nm,0.5s,baz=185,slow=9.0,SNR=6.3 comp=N,1.4nm,0.5s						
BVAR	**Borovoye Array**	**35.68**	**53**	P	**P**	**04 20 03.5**	**-0.6**
	comp=N,0.3nm,0.4s,baz=282,slow=7.1,SNR=2.8 comp=N,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	**P**	**04 21 12.8**	**-1.4**
	comp=N,0.9nm,0.4s,baz=291,slow=9.1,SNR=3.9 comp=N,0.9nm,0.4s						
MKAR	**Makanchi Array**	**44.31**	**61**	P	**P**	**04 21 14.1**	**-1.7**
	comp=N,0.8nm,0.4s,baz=283,slow=7.8,SNR=18 comp=N,0.8nm,0.4s						

*IDC **26** 04:15:49.5±2.9, 41°.33N×19°.15E, h0km, mb3.6/3, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=50.6km s-min=29.6km az=153.0*
*SKO **26** 04:15:52.8, 41°.56N×19°.24E, h0km, ML3.2*
*PDG **26** 04:15:56.6±0.3, 41°.55N×19°.55E, h16km±1km, MD3.3/5, ML3.2/12, Error ellipse: s-maj=1.3km s-min=1.8km az=0.0*
ISC 26 04:15:54.1±1.2, 41°.47N±0°.04×19°.32E±0°.05, h15km±8km, n29, σ1s56/47, 5C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.42**	**106**	*i* Pg	**Pg**	**04 16 02.5**	**-0.1**
TIR				*i* Sg	**Sg**	**04 16 08.4**	**+0.1**
ULC	**Ulcinj**	**0.50**	**353**↓	*i*Pg	**Pb**	**04 16 04.3**	**-0.3**
ULC				*i* Sg	**Sb**	**04 16 12.2**	**+0.4**
DRME	**Dracevica, Mon**	**0.73**	**352**↓	*i*Pg	**Pn**	**04 16 09.3**	**-0.5**
DRME				*i* Sg	**Sn**	**04 16 19.2**	**-1.5**
BUM	**Brajici-Budva**	**0.89**	**339**↑	*i*Pg	**Pn**	**04 16 12.3**	**+0.1**
BUM				*i* Sg	**Sn**	**04 16 26.5**	**+1.6**
PDG	**Podgorica**	**0.96**	**357**↑	*i*Pg	**Pb**	**04 16 11.5**	**-1.0**
PDG				*i* Sg	**Sn**	**04 16 26.9**	**+0.4**
CEME	**Cevo**	**1.12**	**344**↓	*i*Pg	**Pn**	**04 16 16.2**	**+0.9**
CEME				*i* Sg	**Sn**	**04 16 33.3**	**+2.8**
HCY	**Herceg Novi**	**1.16**	**328**↓	*i*Pg	**Pn**	**04 16 18.2**	**+2.4**
HCY				*i* Sg	**Sn**	**04 16 36.3**	**+4.9**
OHR	**Ohrid**	**1.17**	**107**	*i* Pg	**Pn**	**04 16 15.4**	**-0.5**
OHR				*i* Sg	**Sg**	**04 16 32.3**	**+1.4**
OHR				*e*Lg	Lg	04 16 33.9	
	comp=N,398nm,0.4s						
OHR				*e*Lg	Lg	04 16 34.8	
	comp=E,508nm,0.6s						
PVY	**Plav**	**1.22**	**23**↓	*i*Pg	**Pn**	**04 16 16.1**	**-0.7**
PVY				*i* Sg	**Sb**	**04 16 32.3**	**-0.3**
NKME	**Niksic**	**1.33**	**348**↓	*i*Pg	**Pg**	**04 16 19.5**	**-0.2**
NKME				*i* Sg	**Sg**	**04 16 38.6**	**+1.6**
KOME	**Kolasin**	**1.39**	**6**↓	*i*Pg	**Pg**	**04 16 20.8**	**-0.1**
KOME				*i* Sg	**Sg**	**04 16 39.4**	**+0.4**
IVA	**Berane**	**1.47**	**17**↑	*i*Pg	**Pn**	**04 16 19.5**	**-0.6**
IVA				*i* Sg	**Sb**	**04 16 40.4**	**+0.8**
BRY	**Bratogost**	**1.55**	**338**↑	*i*Pg	**Pg**	**04 16 24.2**	**+0.3**
BRY				*i* Sg	**Sg**	**04 16 46.1**	**+2.1**
SKO	**Skopje**	**1.66**	**72**	*i* Pg	**Pn**	**04 16 23.4**	**+0.7**
SKO				*i* Sg	**Sn**	**04 16 45.0**	**+1.2**
UPM	**Unac-Piva**	**1.76**	**350**↑	*i*Pn	**Pg**	**04 16 26.1**	**-1.9**
UPM				*i* Sn	**Sg

DRME				*i* Sg	**Sb**	**04 22 24.1**	**-0.4**
BUM	**Brajici-Budva**	**0.96**	**330**	*i* Pg	**Pb**	**04 22 17.8**	**0.0**
BUM				*i* Sg	**Sn**	**04 22 31.9**	**+0.3**
PDG	**Podgorica**	**0.98**	**348**	Pg	**Pb**	**04 22 18.6**	**+0.5**
PDG				Sg	**Sn**	**04 22 32.7**	**+0.7**
PDG	**Podgorica**	**0.98**	**348**		**Pn**	**04 22 18.8**	**+0.3**
PDG				Sn	**Sn**	**04 22 33.5**	**+1.4**
PDG	**Podgorica**	**0.98**	**348**	*e*Pg	**Pn**	**04 22 18.9**	**+0.3**
PDG				*e*Sg	**Sn**	**04 22 33.6**	**+1.6**
PDG	**Podgorica**	**0.98**	**348**	⇑*i*Pg	**Pb**	**04 22 17.9**	**-0.2**
PDG				*i* Sg	**Sb**	**04 22 31.6**	**+0.8**
VLO	**Vlora**	**1.00**	**182**	Pg	**Pg**	**04 22 20.9**	**+2.0**
VLO				Sg	**Sn**	**04 22 33.5**	**+1.3**
VLO				AML	AML	04 22 40.7	
	30nm,0.6s						
VLO				AML	AML	04 22 42.1	
	34nm,0.5s						
VLO	**Vlora**	**1.00**	**182**	P	**Pg**	**04 22 20.9**	**+2.0**
VLO				S	**Sn**	**04 22 34.4**	**+2.1**
OHR	**Ohrid**	**1.02**	**110**	*i* Pg	**Pb**	**04 22 18.9**	**+0.2**
OHR				*i* Sg	**Sn**	**04 22 35.1**	**+2.2**
OHR				*e*Lg	Lg	04 22 37.0	
	comp=E,2μm,0.6s						
OHR				*e*Lg	Lg	04 22 38.1	
	comp=N,3μm,0.8s						
PVY	**Plav**	**1.17**	**16**	*e*Pg	**Pg**	**04 22 22.9**	**+0.6**
PVY	**Plav**	**1.17**	**16**	⇑*i*Pg	**Pg**	**04 22 22.2**	**-0.1**
PVY				*i* Sg	**Sg**	**04 22 38.5**	**+0.9**
CEME	**Cevo**	**1.17**	**337**	⇑*i*Pg	**Pb**	**04 22 21.7**	**+0.3**
CEME				*i* Sg	**Sn**	**04 22 37.4**	**+0.6**
HCY	**Herceg Novi**	**1.25**	**322**	⇓*i*Pg	**Pg**	**04 22 23.6**	**-0.1**
HCY				*i* Sg	**Sg**	**04 22 40.8**	**+0.8**
KBN	**Korca**	**1.27**	**131**	Pg	**Pg**	**04 22 25.0**	**+1.0**
KBN				Sg	**Sg**	**04 22 42.6**	**+2.0**
KBN				AML	AML	04 22 48.6	
	comp=N,14nm,0.7s						
KBN	**Korca**	**1.27**	**131**	P	**Pg**	**04 22 24.4**	**+0.3**
KBN				S	**Sg**	**04 22 42.5**	**+1.8**
NKME	**Niksic**	**1.37**	**342**	⇑*i*Pg	**Pb**	**04 22 24.9**	**+0.2**
NKME				*i* Sg	**Sg**	**04 22 44.2**	**+0.3**
KOME	**Kolasin**	**1.38**	**360**	*e*Pg	**Pg**	**04 22 26.8**	**+0.5**
KOME	**Kolasin**	**1.38**	**360**	⇑*i*Pg	**Pb**	**04 22 25.3**	**+0.3**
KOME				*i* Sg	**Sg**	**04 22 44.8**	**+0.5**
BEY	**Berane**	**1.43**	**11**	*e*Pg	**Pg**	**04 22 26.9**	**-0.3**
IVA	**Berane**	**1.43**	**11**	⇓*i*Pg	**Pn**	**04 22 25.5**	**+0.7**
IVA				*i* Sg	**Sg**	**04 22 46.0**	**+0.2**
SKO	**Skopje**	**1.52**	**70**	*i* Pg	**Pg**	**04 22 28.3**	**-0.5**
SKO				*i* Sg	**Sg**	**04 22 50.2**	**+1.8**
TREB	**Trebinje**	**1.53**	**325**	*e*Pg	**Pg**	**04 22 29.7**	**+0.7**
TREB				*e*Sg	**Sg**	**04 22 49.0**	**+0.1**
NEST	**Nestorio**	**1.56**	**132**	Pn	**Pg**	**04 22 29.7**	**+0.2**
NEST				AML	AML	04 22 56.6	
	comp=N,5.3nm,0.9s						
BRY	**Bratogost**	**1.61**	**333**	⇑*i*Pg	**Pb**	**04 22 29.4**	**+0.5**
BRY				*i* Sg	**Sg**	**04 22 51.8**	**+0.1**
KEK	**Kerkira**	**1.76**	**173**	Pn	**Pn**	**04 22 28.8**	**-0.5**
UPM	**Unac-Piva**	**1.80**	**345**	⇑*i*Pn	**Pb**	**04 22 31.5**	**-0.6**
UPM				*i* Sn	**Sg**	**04 22 56.8**	**-0.7**
SJES	**Sjenica**	**1.82**	**10**	*e*Pn	**Pg**	**04 22 34.1**	**-0.5**
SJES				*e*Sg	**Sg**	**04 22 58.2**	**-0.2**
PLE	**Pljevlja**	**1.87**	**357**	⇑*i*Pn	**Pb**	**04 22 33.2**	**0.0**
PLE				*i* Sn	**Sb**	**04 22 57.9**	**+1.6**
STON	**Ston**	**1.96**	**317**	*e*Pn	**Pb**	**04 22 35.9**	**+1.2**
STON				*e*Sn	**Sg**	**04 23 02.3**	**-0.2**
IGT	**Igoumenitsa**	**2.03**	**162**	Pn	**Pn**	**04 22 28.1**	**-4.8**
IGT	**Igoumenitsa**	**2.03**	**162**	P	**Pb**	**04 22 34.3**	**-1.5**
IGT	**Igoumenitsa**	**2.03**	**162**	*i* Pn	**Pb**	**04 22 35.6**	**-0.2**
IGT				*i* Sn	**Sb**	**04 23 01.3**	**+0.6**
JAN	**Janina**	**2.07**	**150**	P	**Pb**	**04 22 36.1**	**-0.6**
IVAS	**Ivanjica**	**2.16**	**12**	*e*Pn	**Pn**	**04 22 36.3**	**+1.6**
PRMD	**Pramanda**	**2.27**	**148**	P	**Pb**	**04 22 38.9**	**-1.2**
VAY	**Valandovo**	**2.29**	**93**	*i* Pn	**Pn**	**04 22 38.1**	**+1.7**
VAY				*i* Sn	**Sb**	**04 23 07.5**	**-0.9**
VAY				*e*Lg	Lg	04 23 07.8	
	comp=N,566nm,1.1s						
VAY				*e*Lg	Lg	04 23 08.7	
	comp=E,302nm,0.8s						
GOCS	**Kraljevo Serbi**	**2.32**	**25**	*e*Pn	**Pn**	**04 22 39.2**	**+2.2**
BBLS	**Lazi&#263i**	**2.40**	**358**	*e*Pn	**Pb**	**04 22 43.5**	**+1.2**
TETR	**Tetrakomo, Epi**	**2.50**	**147**	P	**Pb**	**04 22 42.1**	**-1.9**
KNT	**Kendrikon**	**2.55**	**96**	*i* Pn	**Pn**	**04 22 42.2**	**+2.1**
KNT				*i* Sn	**Sn**	**04 23 12.9**	**+2.1**
GRUS	**Gruza**	**2.57**	**19**	*e*Pn	**Pn**	**04 22 42.4**	**+2.0**
LIT	**Litokhoron**	**2.63**	**120**		**Pn**	**04 22 40.3**	**-0.8**
LIT	**Litokhoron**	**2.63**	**120**	*i* Pn	**Pb**	**04 22 45.0**	**-1.2**
DIVS	**Divibare**	**2.65**	**7**	*e*Pn	**Pn**	**04 22 43.4**	**+1.8**
THL	**Klokotos Trika**	**2.68**	**134**	P	**Pn**	**04 22 43.6**	**+1.7**
BOVS	**Bovan**	**2.70**	**36**	*e*Pn	**Pn**	**04 22 43.6**	**+1.5**
TYRN	**Tyrnavos**	**2.70**	**130**	P	**Pn**	**04 22 44.5**	**+2.4**
KKB	**Krupnik**	**2.72**	**81**	*i* Pn	**Pn**	**04 22 44.9**	**+2.4**
KKB				*i* Sn	**Sn**	**04 23 16.9**	**+2.0**
THE	**Thessaloniki**	**2.73**	**107**	*i* Pn	**Pn**	**04 22 44.0**	**+1.5**
THE				*i* Sn	**Sn**	**04 23 16.6**	**+1.6**
TSLK	**Tsoukalades, L**	**2.77**	**162**	P	**Pn**	**04 22 44.3**	**+1.2**
ACER	**Acerenza**	**2.79**	**257**	Pn	**Pn**	**04 22 44.2**	**+0.7**
LKD2	**Lefkada island**	**2.81**	**162**	P	**Pn**	**04 22 44.7**	**+1.0**
HORT	**Hortiatis**	**2.83**	**107**	P	**Pn**	**04 22 45.5**	**+1.4**
AMPL	**Ampelaki**	**2.85**	**153**	P	**Pn**	**04 22 46.0**	**+1.8**
SGRT	**San Giovanni R**	**2.85**	**277**	Pn	**Pn**	**04 22 44.3**	**-0.1**
NYDR	**Nydri-Lefkada**	**2.89**	**162**	P	**Pn**	**04 22 44.8**	**+0.1**
EVGI	**Lefkada island**	**2.97**	**163**	P	**Pn**	**04 22 46.2**	**+0.4**
VTS	**Vitosha**	**2.99**	**66**	*e*Pn	**Pn**	**04 22 48.0**	**+1.8**
ZAGS	**Zajecar**	**3.08**	**39**	*e*Pn	**Pn**	**04 22 48.9**	**+1.6**
SRS	**Serrai**	**3.08**	**95**	*i* Pn	**Pn**	**04 22 49.0**	**+1.6**
SRS				*i* Sn	**Sn**	**04 23 24.8**	**+1.1**
TEKS	**Tekeris**	**3.08**	**360**	*e*Pn	**Pn**	**04 22 48.7**	**+1.3**
FSK	**Fiskardo**	**3.11**	**165**	P	**Pn**	**04 22 47.4**	**-0.2**
TIP	**Timpagrande**	**3.12**	**224**		**Pn**	**04 22 48.1**	**+0.2**
MMB	**Musomishta**	**3.17**	**87**	*i* Pn	**Pn**	**04 22 51.6**	**+3.0**
MMB				*i* Sn	**Sb**	**04 23 32.2**	**-1.4**
CUC	**Castrocucco**	**3.18**	**244**	Pn	**Pn**	**04 22 49.1**	**+0.3**
BORS2	**Bor- Borsko je**	**3.20**	**34**	*e*Pn	**Pn**	**04 22 49.2**	**+0.2**
KUBS	**Kucevo**	**3.34**	**27**	*e*Pn	**Pn**	**04 22 50.9**	**0.0**
VLS	**Valsamata**	**3.38**	**166**	P	**Pn**	**04 22 51.5**	**0.0**
MDVR	**Moldovita**	**3.68**	**25**	*e*Pn	**Pn**	**04 22 56.5**	**+0.9**
FRGS	**Fruska Gora**	**3.70**	**3**	*e*Pn	**Pn**	**04 22 56.4**	**+0.6**
VRSS	**Vrsac**	**3.88**	**19**	*e*Pn	**Pn**	**04 22 59.6**	**+1.2**
PLD	**Plovdiv**	**3.96**	**78**	*i* Pn	**Pn**	**04 23 01.6**	**+2.2**
PLD	**Plovdiv**	**3.96**	**78**	*e*Pn	**Pn**	**04 23 01.3**	**+1.9**
CEL	**Celeste**	**4.25**	**222**	Pn	**Pn**	**04 23 02.2**	**-1.3**
RDO	**Rodhopi**	**4.54**	**92**	Pn	**Pn**	**04 23 07.2**	**-0.1**
ITM	**Ithomi**	**4.67**	**156**	Pn	**Pn**	**04 23 08.4**	**-0.7**
CAMP	**Campotosto**	**4.69**	**285**	Pn	**Pn**	**04 23 10.4**	**+0.8**
MORH	**Mrgy, Hungar**	**4.79**	**353**	*e*Pn	**Pn**	**04 23 13.7**	**+2.9**
NRCA	**Norcia**	**4.96**	**288**		**Pn**	**04 23 14.0**	**+0.7**
FDMO	**Fiordimonte**	**5.03**	**290**		**Pn**	**04 23 14.6**	**+0.4**
SIRR	**Siria**	**5.04**	**17**	*e*Pn	**Pn**	**04 23 16.2**	**+1.9**
CESX	**Cesi**	**5.30**	**285**	Pn	**Pn**	**04 23 17.6**	**-0.2**
MURB	**Monte Urbino**	**5.49**	**291**		**Pn**	**04 23 21.2**	**+0.6**
RAFF	**Raffo Rosso**	**5.83**	**225**	Pn	**Pn**	**04 23 24.9**	**-0.3**
TRI	**Trieste**	**5.96**	**317**	Pn	**Pn**	**04 23 29.8**	**+2.9**
SOKA	**Soboth**	**6.13**	**330**	*i* Pn	**Pn**	**04 23 30.7**	**+1.3**
	comp=E,0.7nm,0.2s						
MLR	**Muntele Rosu**	**6.16**	**47**	Pn	**Pn**	**04 23 33.6**	**+3.8**
	comp=E,1.3nm,0.3s,baz=196,slow=1.9,SNR=6.9						
	comp=E,6.1nm,0.5s						
MLR	**Muntele Rosu**	**6.16**	**47**		**Pn**	**04 23 30.6**	**+0.8**
OBKA	**Obir**	**6.19**	**326**	*i* Pn	**Pn**	**04 23 33.0**	**+2.9**
	comp=E,2.8nm,0.3s						
SABO	**M.te Sabotino**	**6.23**	**318**	Pn	**Pn**	**04 23 31.9**	**+1.2**
KECS	**Kecovo**	**7.05**	**5**	*e*PN	**Pn**	**04 23 46.1**	**+4.3**
KECS				*e*SN	**Sn**	**04 24 59.9**	**-1.6**
ABTA	**Abfaltersbach**	**7.30**	**319**	*i* Pn	**Pn**	**04 23 47.0**	**+1.6**
	comp=E,0.5nm,0.2s						
ABTA				*i* Sn	**Sn**	**04 25 06.2**	**-1.7**
	comp=E,1.8nm,0.3s						
BIOA	**Bad Ischl, Aus**	**7.51**	**328**	*i* Pn	**Pn**	**04 23 50.0**	**+1.8**
	comp=E,2.5nm,0.4s						
LESA	**Schwarzleotal**	**7.71**	**323**	*i* Pn	**Pn**	**04 23 54.8**	**+3.7**
	comp=E,0.7nm,0.2s						
STHS	**Stebnicka Huta**	**8.04**	**8**	*e*PN	**Pn**	**04 23 58.9**	**+3.4**
WTTA	**Wattenberg**	**8.10**	**318**	*i* Pn	**Pn**	**04 23 59.0**	**+2.6**
	comp=E,1.3nm,0.2s						
WTTA				*i* Sn	**Sn**	**04 25 29.6**	**+2.1**
	comp=E,5.6nm,0.6s						
WATA	**Walderalm**	**8.18**	**319**	*i* Pn	**Pn**	**04 24 00.4**	**+3.0**
	comp=E,1.6nm,0.2s						
SQTA	**Sankt Quirin**	**8.28**	**317**	*i* Pn	**Pn**	**04 24 00.7**	**+1.8**
	comp=E,1.0nm,0.2s						
MOTA	**Moosalm**	**8.42**	**317**	*e*Pn	**Pn**	**04 24 03.2**	**+2.4**
	comp=E,0.5nm,0.2s						
MOTA				*e*Sn	**Sn**	**04 25 35.3**	**-0.1**
	comp=E,1.5nm,0.3s						
PABE	**Paberze**	**14.35**	**10**	Pn	**Pn**	**04 25 22.1**	**+0.4**
HFS	**Hagfors**	**19.04**	**351**	P	**Pn**	**04 26 21.3**	**0.0**
	comp=E,0.1nm,0.3s,baz=177,slow=12,SNR=4.8						
	comp=E,1.0nm,0.5s						
FINES	**FINESS Array B**	**20.40**	**9**	P	**P**	**04 26 34.8**	**-0.5**
	comp=E,2.6nm,0.6s,baz=164,slow=10.0,SNR=7.8						
	comp=E,2.6nm,0.6s						
FIA1	**FINESS Array S**	**20.40**	**9**	P	**P**	**04 26 35.3**	**0.0**
FIA1				IAmb	IAmb	04 26 43.5	
	comp=Z,30nm,1.2s						
PFVI	**Vila Bisbo**	**22.32**	**268**	P	**P**	**04 26 56.5**	**+0.3**
ABKAR	**Akbulak array**	**29.16**	**61**	P	**P**	**04 27 56.4**	**-3.1**
BVAR	**Borovoye Array**	**35.68**	**53**	P	**P**	**04 28 56.0**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=274,slow=7.1,SNR=5.2						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	**P**	**04 30 05.8**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=271,slow=7.3,SNR=8.0						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	**P**	**04 30 06.2**	**-0.5**
MKAR	**Makanchi Array**	**44.30**	**61**	P	**P**	**04 30 07.9**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=279,slow=7.4,SNR=16						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**44.30**	**61**	P	**P**	**04 30 07.5**	**-0.7**
EVN	**Everest**	**55.64**	**81**	P	**P**	**04 31 33.5**	**-1.8**
EVN				IAmb	IAmb	04 31 34.8	
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**58.99**	**52**	P	**P**	**04 31 57.1**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=292,slow=7.6,SNR=4.3						
	comp=Z,0.8nm,0.8s						
ULN	**Ulaanbaatar**	**59.36**	**51**	P	**P**	**04 32 01.2**	**+0.5**
ULN				IAmb	IAmb	04 32 11.8	
	comp=Z,3.5nm,1.2s						

NOU ***26*** *04:23:38.9, 44˚.39S×167˚.86E, h5km, MLv3.8/6, South Island, New Zealand*
WEL ***26*** *04:23:39.0±0.6, 45˚.3±3˚×16˚.8E±˚, h5km, M3.6/9, ML3.5/9, MLv3.6/9, Error ellipse: s-maj=5.4km s-min=3.1km az=126.3, confirmed*

ISC 26 04:23:38.1±1.3, 44˚.49S±0˚.03×167˚.85E±0˚.04, h7km±10km, n47, σ0°73/58, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MSZ	**Milford Sound**	**0.19**	**163**	P	**Pg**		**04 23 42.9**	**+0.9**
GLNY	**Glenorchy**	**0.54**	**133**	P	**Pg**		**04 23 48.6**	**-0.1**
GLNY				S	**Sg**		**04 23 55.2**	**-0.5**
NSBS	**Neils Beach**	**0.77**	**50**	P	**Pb**		**04 23 53.8**	**0.0**
NSBS				S	**Sb**		**04 24 04.9**	**+0.5**
QTPS	**Queenstown Pol**	**0.79**	**133**	P	**Pg**		**04 23 53.0**	**-0.3**
QTPS				S	**Sg**		**04 24 02.5**	**-1.2**
JCZ	**Jackson Bay**	**0.79**	**58**	P	**Pg**		**04 23 53.2**	**-0.2**
JCZ	**Jackson Bay**	**0.79**	**58**	P	**Pg**		**04 23 53.5**	**+0.2**
JCZ				S	**Sg**		**04 24 03.8**	**+0.2**
MLZ	**Mavora Lakes**	**0.89**	**168**	P	**Pg**		**04 23 54.6**	**-0.7**
TAFS	**Te Anau Fire S**	**0.93**	**186**	P	**Pg**		**04 23 56.0**	**0.0**
TAFS				S	**Sg**		**04 24 08.4**	**+0.4**
WNPS	**Wanaka Nationa**	**0.94**	**103**	P	**Pg**		**04 23 56.4**	**+0.2**
WNPS				S	**Sg**		**04 24 08.9**	**+0.3**
DCZ	**Deep Cove**	**1.09**	**207**	P	**Pg**		**04 23 58.1**	**-0.9**
DCZ				S	**Sg**		**04 24 12.1**	**-1.1**
EAZ	**Earnscleugh**	**1.27**	**126**	P	**Pg**		**04 24 01.5**	**-1.0**
WHZ	**Wether Hill Ro**	**1.40**	**177**	P	**Pn**		**04 24 03.2**	**-1.0**
WHZ				S	**Sb**		**04 24 21.8**	**-1.0**
LBZ	**Lake Benmore**	**1.68**	**87**	P	**Pn**		**04 24 08.6**	**+0.6**
LBZ				S	**Sn**		**04 24 30.5**	**+0.7**
FOZ	**Fox Glacier**	**1.71**	**57**	P	**Pb**		**04 24 09.9**	**-0.1**
PYZ	**Puysegur Point**	**1.87**	**206**	P	**Pb**		**04 24 13.7**	**+1.1**
PYZ	**Puysegur Point**	**1.87**	**206**	P	**Pn**		**04 24 11.9**	**+1.3**
TUZ	**Tuapeka**	**1.93**	**140**	P	**Pn**		**04 24 11.7**	**+0.3**
TUZ				S	**Sn**		**04 24 35.7**	**-0.2**
ODZ	**Otahua Downs**	**2.06**	**106**	P	**Pb**		**04 24 16.1**	**+0.1**
ODZ	**Otahua Downs**	**2.06**	**106**	P	**Pn**		**04 24 14.4**	**+1.1**
SYZ	**Scrubby Hill**	**2.24**	**157**	P	**Pn**		**04 24 15.8**	**+0.2**
SYZ	**Scrubby Hill**	**2.24**	**157**	P	**Pn**		**04 24 15.9**	**+0.3**
SYZ				S	**Sn**		**04 24 43.7**	**+0.2**
TMZ	**Timaru**	**2.26**	**88**	P	**Pn**		**04 24 15.9**	**-0.1**
APZ	**The Paps**	**2.34**	**178**	P	**Pn**		**04 24 17.6**	**+0.5**
HHSZ	**Highcliff Hill**	**2.39**	**127**	P	**Pn**		**04 24 18.2**	**+0.5**
RPZ	**Rata Peaks**	**2.44**	**72**	P	**Pn**		**04 24 19.1**	**+0.7**
RPZ	**Rata Peaks**	**2.44**	**72**	P	**Pn**		**04 24 18.6**	**+0.2**
ARCZ	**Arundel**	**2.45**	**78**	P	**Pn**		**04 24 18.5**	**-0.1**
WVZ	**Waitaha Valley**	**2.53**	**57**	P	**Pn**		**04 24 19.5**	**-0.1**
MHCZ	**Mount Hutt**	**2.85**	**72**	P	**Pn**		**04 24 24.1**	**0.0**
WACZ	**Wakanui South**	**2.92**	**81**	P	**Pn**		**04 24 25.3**	**+0.2**
INZ	**Inchbonnie**	**3.15**	**57**	P	**Pn**		**04 24 28.4**	**+0.2**
OXZ	**Oxford**	**3.24**	**70**	P	**Pn**		**04 24 29.0**	**-0.5**
MQZ	**McQueen's Vall**	**3.55**	**79**	P	**Pn**		**04 24 33.0**	**-0.7**
LTZ	**Lake Taylor**	**3.64**	**63**	P	**Pn**		**04 24 33.7**	**-1.3**
AKCZ	**Akaroa Harbour**	**3.69**	**82**	P	**Pn**		**04 24 35.0**	**-0.7**
OKCZ	**Okains Bay**	**3.83**	**80**	P	**Pn**		**04 24 37.4**	**-0.2**
DSZ	**Denniston Nort**	**3.99**	**48**	P	**Pn**		**04 24 38.6**	**-1.2**
THZ	**Tophouse**	**4.60**	**55**	P	**Pn**		**04 24 48.2**	**0.0**
MRNZ	**Matariki Terra**	**4.75**	**51**	P	**Pn**		**04 24 50.1**	**0.0**
QRZ	**Quartz Range**	**5.03**	**45**	P	**Pn**		**04 24 53.1**	**-1.0**
QRZ	**Quartz Range**	**5.03**	**45**	P	**Pn**		**04 24 53.1**	**-1.0**
TKNZ	**Takaka Hill**	**5.11**	**49**	P	**Pn**		**04 24 54.9**	**-0.2**
NNZ	**Nelson**	**5.22**	**53**	P	**Pn**		**04 24 56.1**	**-0.5**
TUWZ	**Tuamarina**	**5.42**	**58**	P	**Pn**		**04 25 01.6**	**+2.3**
TCW	**Tory Channel**	**5.75**	**57**	P	**Pn**		**04 25 05.3**	**+1.3**
DUWZ	**D'Urville Isla**	**5.80**	**53**	P	**Pn**		**04 25 04.9**	**+0.3**
PKE	**Pukeiti**	**7.00**	**43**	P	**Pn**		**04 25 21.1**	**0.0**

SKO ***26*** *04:42:54.1, 41˚.49N×19˚.32E, h0km, ML3.3*
BEO ***26*** *04:42:55.8±0.9, 41˚.44N×19˚.60E, h4km±4km, ML3.2/20*
THE ***26*** *04:42:55.6, 42˚.N±6˚×1˚.9E±˚, h10km, M3.2/12, MLh3.2/12*
TIR ***26*** *04:42:56.3, 41˚.58N×19˚.60E, h36km±2km, Ml3.7/7*
RHSSO ***26*** *04:42:57.7±1.0, 41˚.47N×19˚.36E, h12km±4km, ML3.6/4*

ISC 26 04:42:56.2±1.0, 41˚.50N±0˚.02×19˚.53E±0˚.02, h10km±8km, n111, σ1°16/142, 11C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
TIR	**Tirane**	**0.29**	**120**	Pg	**Pg**		**04 43 02.2**	**+0.1**
TIR				Sg	**Sg**		**04 43 05.8**	**-0.2**
TIR				AML	AML		04 43 06.5	
	119nm,0.5s							
TIR	**Tirane**	**0.29**	**120**	*i* Pg	**Pg**		**04 43 02.1**	**+0.1**
TIR				*i* Sg	**Sb**		**04 43 07.7**	**-0.8**
SDA	**Shkodra**	**0.56**	**358**	Pg	**Pg**		**04 43 06.5**	**-0.5**
SDA				Sg	**Sg**		**04 43 14.5**	**+0.2**
PHP	**Peshkopia**	**0.71**	**74**	Pg	**Pg**		**04 43 08.9**	**-1.0**
PHP				Sg	**Sg**		**04 43 18.4**	**-0.8**
PHP				AML	AML		04 43 24.5	
	5.5nm,0.5s							
PHP	**Peshkopia**	**0.71**	**74**	P	**Pg**		**04 43 08.7**	**-1.2**
PHP				S	**Sb**		**04 43 21.5**	**+1.0**
DRME	**Dracevica, Mon**	**0.74**	**340**	*e*Pg	**Pg**		**04 43 09.8**	**-0.6**
PDG	**Podgorica**	**0.95**	**348**	Pg	**Pg**		**04 43 13.6**	**-1.0**
PDG	**Podgorica**	**0.95**	**348**	*e*Pg	**Pg**		**04 43 13.9**	**-0.7**
PDG				*e*Sg	**Sn**		**04 43 29.2**	**-0.1**
VLO	**Vlora**	**1.03**	**181**	Pg	**Pn**		**04 43 16.9**	**+0.3**
VLO				Sg	**Sn**		**04 43 31.5**	**+0.5**
VLO				AML	AML		04 43 38.6	
	10nm,0.4s							
VLO	**Vlora**	**1.03**	**181**	P	**Pb**		**04 43 16.7**	**+0.7**
VLO				S	**Sn**		**04 43 33.2**	**+2.2**
OHR	**Ohrid**	**1.03**	**111**	*i* Pg	**Pg**		**04 43 15.0**	**-1.0**
OHR				*i* Sg	**Sn**		**04 43 31.7**	**+0.4**
OHR				*e*Lg	Lg		04 43 32.7	
	comp=N,764nm,0.7s							
OHR				*e*Lg	Lg		04 43 33.2	
	comp=E,646nm,0.5s							
PVY	**Plav**	**1.14**	**16**	*e*Pg	**Pb**		**04 43 16.7**	**-1.4**
KBN	**Korca**	**1.29**	**132**	Pg	**Pb**		**04 43 20.9**	**+0.2**
KBN				AML	AML		04 43 42.0	
	comp=E,5.8nm,0.6s							
KBN	**Korca**	**1.29**	**132**	P	**Pb**		**04 43 20.8**	**+0.2**
KBN				S	**Sn**		**04 43 40.0**	**+2.2**
KOME	**Kolasin**	**1.35**	**360**	*e*Pg	**Pb**		**04 43 22.0**	**+0.3**
BEY	**Berane**	**1.40**	**11**	*e*Pg	**Pn**		**04 43 21.7**	**-0.2**
TREB	**Trebinje**	**1.50**	**325**	⇑*i*Pg	**Pn**		**04 43 23.4**	**+0.2**
TREB				*e*Sg	**Sb**		**04 43 44.2**	**+0.9**
TREB	**Trebinje**	**1.50**	**325**	*e*Pg	**Pb**		**04 43 24.4**	**+0.2**
TREB				*e*Sg	**Sg**		**04 43 45.3**	**+0.8**
SKO	**Skopje**	**1.51**	**71**	*i* Pg	**Pn**		**04 43 23.8**	**+0.6**
SKO				*i* Sg	**Sg**		**04 43 45.5**	**+0.9**
NEST	**Nestorio**	**1.58**	**133**	Pn	**Pb**		**04 43 25.5**	**0.0**
NEST				AML	AML		04 43 50.8	
	comp=E,2.2nm,0.4s							
NEST				AML	AML		04 43 52.1	
	comp=E,1.5nm,0.5s							
PENT	**Pentalofos**	**1.78**	**136**	P	**Pb**		**04 43 28.7**	**-0.3**
KEK	**Kerkira**	**1.79**	**173**	P	**Pg**		**04 43 30.8**	**+0.3**
SJES	**Sjenica**	**1.79**	**10**	*e*Pg	**Pb**		**04 43 30.0**	**+0.8**
SJES				*e*Sg	**Sg**		**04 43 54.0**	**+0.1**
KLINJ	**Klinje**	**1.81**	**338**	*e*Pn	**Pn**		**04 43 28.3**	**+0.7**
KLINJ				*e*Sn	**Sn**		**04 43 51.7**	**+1.0**
PLE	**Pljevlja**	**1.83**	**357**	*e*Pg	**Pb**		**04 43 29.8**	**-0.1**
STON	**Ston**	**1.93**	**316**	*e*Pn	**Pn**		**04 43 30.4**	**+1.3**
STON				*e*Sn	**Sb**		**04 43 57.1**	**+1.4**
NOCI	**Noci**	**1.99**	**250**	Pn	**Pn**		**04 43 28.2**	**-1.7**
NOCI				AML	AML		04 44 10.4	
	comp=E,1.7nm,0.3s							
IGT	**Igoumenitsa**	**2.06**	**162**	Pn	**Pn**		**04 43 31.6**	**+0.8**
IGT	**Igoumenitsa**	**2.06**	**162**	P	**Pn**		**04 43 30.5**	**-0.3**
IGT	**Igoumenitsa**	**2.06**	**162**	*i* Pn	**Pn**		**04 43 30.8**	**0.0**
KZN	**Kozani**	**2.07**	**124**	P	**Pn**		**04 43 31.9**	**+0.8**
SELS	**Selova**	**2.09**	**34**	*e*Pn	**Pn**		**04 43 31.9**	**+0.6**
JAN	**Janina**	**2.10**	**151**	P	**Pn**		**04 43 32.1**	**+0.7**
RUDO	**Rudo**	**2.12**	**357**	*e*Pn	**Pn**		**04 43 33.5**	**+1.7**
RUDO				*e*Sn	**Sb**		**04 44 00.2**	**-1.0**
RUDO	**Rudo**	**2.12**	**357**	*e*Pn	**Pn**		**04 43 33.7**	**+1.9**
IVAS	**Ivanjica**	**2.13**	**12**	*e*Pn	**Pn**		**04 43 33.5**	**+1.6**
GOCS	**Kraljevo Serbi**	**2.29**	**25**	*e*Pn	**Pn**		**04 43 35.7**	**+1.6**
VAY	**Valandovo**	**2.29**	**93**	*i* Pn	**Pn**		**04 43 34.6**	**+0.5**
VAY				*i* Sn	**Sb**		**04 44 05.1**	**-1.0**
VAY				*e*Lg	Lg		04 44 10.0	
	comp=E,70nm,0.6s							
VAY				*

WB2	Warramunga Arr	24.15	234	P		P	04 51 10.1	-0.7
WRA	Warramunga Arr	24.16	234	P		P	04 51 10.3	-0.6
	comp=Z,1.5nm,0.8s,baz=61,slow=9.7,SNR=6.1							
	comp=Z,1.5nm,0.8s							
WRA	Warramunga Arr	24.16	234	P		P	04 51 10.2	-0.7
ARMA	Armidale	24.22	187	P		P	04 51 10.7	-0.8
ARMA				IAmb	IAmb		04 51 46.1	
	comp=Z,29nm,1.4s							
ASAR	Alice Springs	26.59	227	P		P	04 51 31.6	-1.4
	comp=Z,0.5nm,0.5s,baz=58,slow=8.9,SNR=7.6							
	comp=Z,0.5nm,0.5s							
FITZ	Fitzroy Crossi	30.86	245	P		P	04 52 09.6	-1.4
CM31	Chiang Mai Arr	60.38	295	P		P	04 56 05.3	+1.5
CM31				IAmb	IAmb		04 56 08.3	
	comp=Z,3.9nm,0.8s							
CMAR	Chiang Mai Arr	60.38	295	P		P	04 56 04.2	+0.4
	comp=Z,1.6nm,0.3s,baz=125,slow=5.3,SNR=7.4							
	comp=Z,1.6nm,0.3s							
CMAR	Chiang Mai Arr	60.38	295	P		P	04 56 03.9	+0.1
N18K	Kilae Creek	76.98	22	P		P	04 57 48.7	+2.4
F15K	North Star Dit	77.63	16	P		P	04 57 49.8	0.0
J17K	VABM Dome	77.65	19	P		P	04 57 50.8	+0.9
L18K	Granite Mounta	77.68	21	P		P	04 57 50.8	+0.6
L18K				IAmb	IAmb		04 58 27.1	
	comp=Z,15nm,1.5s							
L19K	White Mountain	78.32	22	P		P	04 57 54.3	+0.5
L19K				IAmb	IAmb		04 57 55.9	
	comp=Z,8.6nm,1.1s							
SLKM	Skilak Lake	79.12	24	P		P	04 57 58.4	+0.2
E19K	Redstone River	80.96	17	P		P	04 58 08.6	+0.6
E19K				IAmb	IAmb		04 58 26.1	
	comp=Z,4.8nm,1.1s							
IMAR	Indian Mountai	81.07	19	P		P	04 58 09.2	+0.6
G21K	Allakaket	81.48	19	P		P	04 58 11.8	+1.0
G21K				IAmb	IAmb		04 58 40.0	
	comp=Z,8.5nm,1.5s							
DHY	Denali Highway	81.66	23	P		P	04 58 12.5	+0.6
DHY				IAmb	IAmb		04 58 18.9	
	comp=Z,5.3nm,1.4s							
HDA	Harding Lake	82.52	22	P		P	04 58 17.7	+1.4
B20K	Meade River	82.69	15	P		P	04 58 17.6	+0.6
ILAR	Eielson Array	82.74	22	P		P	04 58 16.9	-0.4
	comp=Z,0.3nm,0.8s,baz=246,slow=5.2,SNR=6.8							
	comp=Z,0.3nm,0.8s							
ILAR	Eielson Array	82.74	22	P		P	04 58 18.5	+1.2
D22K	Ayikyak River	83.19	17	P		P	04 58 20.6	+1.0
QSPA	South Pole Qui	83.70	180	P		P	04 58 25.1	+2.6
	comp=Z,1.4nm,0.6s,baz=262,slow=1.4,SNR=9.3							
QSPA	South Pole Qui	83.70	180	P		P	04 58 24.4	+1.8
QSPA				IAmb	IAmb		04 58 41.6	
	comp=Z,9.4nm,1.5s							
D23K	Nanushuk River	83.82	17	P		P	04 58 24.3	+1.5
D23K				IAmb	IAmb		04 58 25.2	
	comp=Z,8.3nm,1.5s							
L27K	Beaver Creek,	83.85	24	P		P	04 58 24.4	+1.2
L27K				IAmb	IAmb		04 58 39.6	
	comp=Z,3.3nm,1.2s							
F24K	Squaw Lake	83.86	19	P		P	04 58 23.6	+0.5
F24K				IAmb	IAmb		04 58 35.5	
	comp=Z,7.1nm,1.5s							

*IDC **26** 04:46:58.0±2.3, 41°.49N×19°.54E, h0km, mb4.1/5, mbtmp4.1/7, ML4.1/1, Error ellipse: s-maj=44.8km s-min=24.9km az=117.0*
*BEO **26** 04:47:00.4±0.9, 41°.37N×19°.50E, h14km±4km, ML3.4/19*
*NEIC **26** 04:47:00.5±2.0, 41°.50N±0°.03×19°.43E±0°.07, h10km±1km, mb4.1/4, Error ellipse: s-maj=9.1km s-min=4.6km az=256.0*
*RHSSO **26** 04:47:00.7±1.0, 41°.44N×19°.55E, h9km±4km, ML3.6/5*
*TIR **26** 04:47:01.2, 41°.53N×19°.59E, h29km±4km, Ml3.6/8*
*SKO **26** 04:47:03.4, 41°.54N×19°.74E, h7km, ML3.2*
ISC 26 04:46:59.8±1.0, **41°.46N**±0°.02×**19°.48E**±0°.02, **h12**km±7km, **n109**, σ1°**34**/137, **mb4.2**/5, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.31	111	Pg	Pg	04 47 05.2	-1.0
TIR				Sg	Sg	04 47 08.2	-2.1
TIR				AML	AML	04 47 10.7	
	29nm,0.3s						
TIR				AML	AML	04 47 10.8	
	30nm,0.2s						
TIR	Tirane	0.31	111	*i* Pg	Pg	04 47 06.3	+0.2
TIR				*i* Sg	Sg	04 47 11.4	+1.0
SDA	Shkodra	0.59	1	Pg	Pg	04 47 11.4	-0.1
SDA				Sg	Sb	04 47 20.2	-0.3
PHP	Peshkopia	0.76	72	Pg	Pg	04 47 13.7	-0.8
PHP				Sg	Sg	04 47 23.9	-0.5
PHP				AML	AML	04 47 28.6	
	12nm,0.4s						
DRME	Dracevica, Mon	0.76	343	*e*Pg	Pn	04 47 17.6	+1.2
VLO	Vlora	0.99	179	Pg	Pn	04 47 20.4	+1.0
VLO				Sg	Sn	04 47 36.4	+3.2
VLO				AML	AML	04 47 40.3	
	18nm,0.5s						
PDG	Podgorica	0.99	350	Pg	Pg	04 47 19.1	+0.2
PDG				Sg	Sn	04 47 34.9	+1.6
PDG				AML	AML	04 47 38.4	
	24µm,0.2s						
PDG	Podgorica	0.99	350		Pb	04 47 18.6	-0.2
PDG				Sn	Sn	04 47 33.1	-0.2
PDG	Podgorica	0.99	350	*e*Pg	Pn	04 47 20.1	+0.7
PDG				*e*Sg	Sn	04 47 36.8	+3.5
OHR	Ohrid	1.05	109	*i* Pg	Pb	04 47 19.8	-0.1
OHR				*i* Sg	Sn	04 47 35.8	+0.9
OHR				*e*Lg	Lg	04 47 37.3	
	comp=E,648nm,0.7s						
OHR				*e*Lg	Lg	04 47 37.9	
	comp=N,1µm,0.6s						
PVY	Plav	1.19	17	*e*Pg	Pn	04 47 22.7	+0.3
KBN	Korca	1.29	130	Pg	Pg	04 47 25.6	+0.9
KBN				AML	AML	04 47 46.7	
	comp=N,3.7nm,0.5s						
KOME	Kolasin	1.39	1	*e*Pg	Pg	04 47 27.4	+0.8
BEY	Berane	1.45	12	*e*Pg	Pg	04 47 27.5	-0.1
TREB	Trebinje	1.52	327	*e*Pg	Pb	04 47 28.6	+0.8
TREB				*e*Sg	Sg	04 47 50.0	+1.4
TREB	Trebinje	1.52	327	*e*Pg	Pg	04 47 28.8	-0.1
TREB				*e*Sg	Sg	04 47 50.4	+1.8
SKO	Skopje	1.55	70	*i* Pg	Pb	04 47 29.1	+0.6
SKO				*i* Sg	Sb	04 47 48.6	+0.5
NEST	Nestorio	1.58	131	Pn	Pb	04 47 29.6	+0.6
NEST				AML	AML	04 47 55.4	
	comp=N,2.6nm,0.5s						
KEK	Kerkira	1.76	172		Pg	04 47 34.2	+0.6
KLINJ	Klinje	1.84	339	*e*Pn	Pb	04 47 33.1	-0.3
KLINJ				*e*Sn	Sb	04 47 56.5	+0.2
SJES	Sjenica	1.84	11	*e*Pg	Pg	04 47 34.7	-0.4
SJES				*e*Sg	Sg	04 48 01.1	+2.1
PLE	Pljevlja	1.87	358	*e*Pg	Pb	04 47 34.9	+0.9
NOCI	Noci	1.94	251	Pn	Pn	04 47 32.7	+0.1
NOCI				AML	AML	04 48 09.6	
	comp=N,1.8nm,0.3s						
IGT	Igoumenitsa	2.03	161	Pn	Pb	04 47 36.5	-0.1
IGT	Igoumenitsa	2.03	161	*i* Pn	Pn	04 47 35.0	+1.2
IGT				*i* Sn	Sg	04 48 04.5	-0.6
SELS	Selova	2.14	34	*e*Pn	Pn	04 47 36.4	+1.1
RUDO	Rudo	2.16	358	*e*Pn	Pn	04 47 36.8	+1.2
RUDO				*e*Sn	Sb	04 48 04.4	-1.2
RUDO	Rudo	2.16	358	*e*Pn	Pb	04 47 38.0	-0.9
IVAS	Ivanjica	2.18	13	*e*Pn	Pn	04 47 37.5	+1.6
VAY	Valandovo	2.33	92	*i* Pn	Pn	04 47 39.0	+1.1
VAY				*i* Sn	Sn	04 48 08.2	+1.8
VAY				*e*Lg	Lg	04 48 13.7	
	comp=E,101nm,0.7s						
VAY				*e*Lg	Lg	04 48 14.3	
	comp=N,109nm,0.6s						
GOCS	Kraljevo Serbi	2.34	26	*e*Pn	Pn	04 47 39.7	+1.5
BBLS	Lazi&#263i	2.41	359	*e*Pn	Pb	04 47 42.7	-0.4
KNT	Kendrikon	2.59	95	*i* Pn	Pn	04 47 42.9	+1.4
KNT				*i* Pn	Sn	04 48 13.6	+0.7
GRUS	Gruza	2.59	20	*e*Pn	Pn	04 47 43.4	+1.8
LIT	Litokhoron	2.66	120		Pn	04 47 44.9	+2.5
DIVS	Divibare	2.67	8	*e*Pn	Pn	04 47 44.0	+1.4
BOVS	Bovan	2.73	36	*e*Pn	Pn	04 47 44.9	+1.5
ACER	Acerenza	2.76	257	Pn	Pn	04 47 43.7	-0.1
KKB	Krupnik	2.76	81	*i* Pn	Pn	04 47 45.3	+1.5
KKB				*i* Sn	Sn	04 48 19.1	+2.0
THE	Thessaloniki	2.76	106	*i* Pn	Pn	04 47 44.5	+0.7
THE				*i* Sn	Sn	04 48 18.4	+1.4
SGRT	San Giovanni R	2.82	277	Pn	Pn	04 47 44.8	0.0
SGRT	San Giovanni R	2.82	277	Pn	Pn	04 47 44.7	0.0
TRUS	Trudelj	2.85	14	*e*Pn	Pn	04 47 46.6	+1.6
ZAPS	Zavoj	2.96	51	*e*Pn	Pn	04 47 48.5	+1.9
VTS	Vitosha	3.03	66	*e*Pn	Pn	04 47 49.2	+1.6
TIP	Timpagrande	3.08	223		Pn	04 47 48.2	-0.1
TEKS	Tekeris	3.09	1	*e*Pn	Pn	04 47 49.4	+1.0
ZAGS	Zajecar	3.11	40	*e*Pn	Pn	04 47 50.1	+1.5
SRS	Serrai	3.12	95	*i* Pn	Pn	04 47 49.9	+1.1
CUC	Castrocucco	3.15	244		Pn	04 47 50.1	+0.9
BLKB	Belogradchik	3.20	46	*e*Pn	Pn	04 47 51.9	+1.9
MMB	Musomishta	3.21	87	*i* Pn	Pn	04 47 51.4	+1.4
BORS2	Bor- Borsko je	3.23	35	*e*Pn	Pn	04 47 50.3	0.0
AVAS	Avala Beograd	3.33	13	*e*Pn	Pn	04 47 52.4	+0.8
KUBS	Kucevo	3.37	28	*e*Pn	Pn	04 47 52.1	-0.1
BLY	Banja Luka	3.70	334	*e*Pn	Pn	04 47 59.1	+2.4
BLY				*e*Sn	Sn	04 48 42.5	+2.4
MDVR	Moldovita	3.70	25	*e*Pn	Pn	04 47 57.9	+1.1
FRGS	Fruska Gora	3.71	4	*e*Pn	Pn	04 47 57.6	+0.7
VRSS	Vrsac	3.90	20	*e*Pn	Pn	04 48 00.6	+1.0
PLD	Plovdiv	4.00	78	*i* Pn	Pn	04 48 02.5	+1.7
RDO	Rodhopi	4.57	92		Pn	04 48 09.9	+1.2
AQU	L'Aquila	4.62	283	*e*Pn	Pn	04 48 10.4	+0.9
AQU				*e*Sn	Sn	04 49 04.1	+1.0
CAMP	Campotosto	4.65	285		Pn	04 48 10.3	+0.4
MORH	Mrgy, Hungar	4.79	353	*e*Pn	Pn	04 48 12.6	+0.8
MORH				*e*Sn	Sn	04 49 06.7	-0.5
MORH	Mrgy, Hungar	4.79	353	*e*Pn	Pn	04 48 13.8	+2.0
GUMA	Gualdo di Mace	4.83	291	Pn	Pn	04 48 13.0	+0.7
NRCA	Norcia	4.93	288		Pn	04 48 14.4	+0.7
FDMO	Fiordimonte	5.00	291		Pn	04 48 14.9	+0.2
SIRR	Siria	5.06	17	*e*Pn	Pn	04 48 17.0	+1.5
BOJS	Bojanci	5.08	324	*e*Pn	Pn	04 48 16.6	+0.9
CESX	Cesi	5.27	285	Pn	Pn	04 48 19.4	+1.1
RIY	Rijeka	5.31	318	*e*Pn	Pn	04 48 19.9	+1.0
BEHE	Becsehely	5.38	340	*e*Pn	Pn	04 48 21.5	+1.7
MURB	Monte Urbino	5.46	292		Pn	04 48 22.0	+1.0
CEY	Cerknica	5.64	321	*e*Pn	Pn	04 48 24.6	+1.2
SKDS	Skadanscina	5.70	318	*e*Pn	Pn	04 48 24.9	+0.6
SOKA	Soboth	6.12	330	*i* Pn	Pn	04 48 31.6	+1.4
	comp=N,1.0nm,0.2s						
SOKA				*e*Sn	Sn	04 49 36.9	-3.1
	comp=N,2.9nm,0.6s						
OBKA	Obir	6.18	327	*i* Pn	Pn	04 48 31.8	+0.9
	comp=N,2.8nm,0.3s						
OBKA				*i* Sn	Sn	04 49 41.6	+0.2
	comp=N,9.2nm,0.5s						
MLR	Muntele Rosu	6.19	47	Pn	Pn	04 48 33.9	+2.8
	comp=N,2.5nm,0.3s,baz=212,slow=6.7,SNR=13						
MLR				Sn	Sn	04 49 39.2	-2.7
	baz=246,slow=18						
	comp=N,8.8nm,0.5s						
MLR	Muntele Rosu	6.19	47		Pn	04 48 33.6	+2.5
SABO	M.te Sabotino	6.21	319	Pn	Pn	04 48 31.0	-0.3
OSSC	Osservatorio P	6.43	291	Pn	Pn	04 48 35.0	+0.7
ARSA	Arberg	6.45	335	*i* Pn	Pn	04 48 35.8	+1.3
	comp=N,1.3nm,0.2s						
ARSA				*i* Sn	Sn	04 49 47.2	-0.8
	comp=N,1.0nm,0.2s						
MYKA	Terra Mystica	6.67	323	*i* Sn	Sn	04 49 52.3	-1.1
	comp=N,2.6nm,0.4s						
KECS	Kecovo	7.06	5	*e*PN	Pn	04 48 47.1	+4.2
KECS				*e*SN	Sn	04 50 01.9	-1.1
ABTA	Abfaltersbach	7.29	319	*e*Pn	Pn	04 48 47.1	+1.1
	comp=N,1.0nm,0.2s						
IDI	Anoyia	7.48	144	Pn	Pn	04 48 47.5	-1.3
	comp=N,6.5nm,0.7s,baz=143,slow=20,SNR=1.3						
IDI	Anoyia	7.48	144		Pn	04 48 49.0	+0.2
BIOA	Bad Ischl, Aus	7.50	328	*i* Pn	Pn	04 48 51.6	+2.7
	comp=N,1.7nm,0.3s						
BIOA				*e*Sn	Sn	04 50 14.1	+0.2
	comp=N,2.6nm,0.4s						
MANT	Manisa	7.57	110	Pn	Pn	04 48 52.1	+2.0
LESA	Schwarzleotal	7.70	323	*e*Pn	Pn	04 48 52.5	+0.8
	comp=N,1.0nm,0.3s						
MSSA	Maissana	7.86	295	Pn	Pn	04 48 54.0	+0.2
STHS	Stebnicka Huta	8.06	8	*e*PN	Pn	04 49 02.6	+6.0
WTTA	Wattenberg	8.08	319	*e*Pn	Pn	04 48 59.2	+2.1
	comp=N,1.8nm,0.2s						
WATA	Walderalm	8.16	319	*e*Pn	Pn	04 48 59.8	+1.7
	comp=N,1.9nm,0.2s						
TUE	Stuetta	8.86	308	Pn	Pn	04 49 08.3	+0.5
NC405	NORSAR Array S	20.25	349	P	P	04 51 34.0	-0.7
NC405				IAmb	IAmb	04 52 04.1	
	comp=Z,16nm,1.4s						
FINES	FINESS Array B	20.41	9	P	P	04 51 34.9	-1.5
	comp=Z,1.4nm,0.3s,baz=186,slow=10,SNR=14						
	comp=Z,1.4nm,0.3s						
FINES	FINESS Array B	20.41	9	P	P	04 51 35.9	-0.5
FIA1	FINESS Array S	20.41	9	P	P	04 51 35.7	-0.7
MD01	Midelt array s	21.08	254	P	P	04 51 43.8	-0.3
ARTI	Arti	29.14	46	P	P	04 52 58.6	-1.7
	comp=Z,1.4nm,0.3s,baz=246,slow=12,SNR=4.6						
	comp=Z,1.4nm,0.3s						
AB31	Akbulak array	29.20	61	P	P	04 53 00.0	-0.9
ABKAR	Akbulak array	29.20	61	P	P	04 53 01.1	+0.2
BORK	Borovoye	35.67	53	P	P	04 53 56.2	-1.3
BORK				IAmb	IAmb	04 54 21.5	
	comp=Z,2.3nm,0.9s						
BVAR	Borovoye Array	35.72	53	P	P	04 53 57.6	-0.3
	comp=Z,1.4nm,0.8s,baz=258,slow=5.6,SNR=5.4						
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	44.16	50	P	P	04 55 07.0	-1.0
	comp=Z,1.7nm,0.5s,baz=281,slow=9.0,SNR=8.1						
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	44.34	61	P	P	04 55 08.9	-0.7
	comp=Z,2.0nm,0.6s,baz=283,slow=7.7,SNR=20						
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	44.34	61	P	P	04 55 09.1	-0.6

*AEIC **26** 04:47:21.9±0.8, 54°.01N±0°.05×163°.57W±0°.06, h27km±8km, Error ellipse: s-maj=9.2km s-min=2.1km az=149.0*
NEIC 26 04:47:22.7±0.7, **54°.04N**±0°.06×**163°.57W**±0°.08, **h30**km±14km, **ML2.5**/14, **ML2.3**(AEIC), **Error ellipse: s-maj=10.6km s-min=2.1km az=144.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSLS	Shishaldin Sou	0.71	340		Pb	04 47 36.5	-0.2
SSLS					Sn	04 47 47.0	+0.2
ISNN	Isanotski Nort	0.80	351		Pb	04 47 38.1	0.0
ISNN					Sn	04 47 49.5	+0.7
SSLN	Shishaldin Nor	0.81	342		Sn	04 47 49.9	+0.8
FALS	False Pass	0.82	6		Sb	04 47 49.0	-0.1
FALS	False Pass	0.82	6		Pn	04 47 37.5	-0.6
AKUT	Akutan	1.30	275	Pn	Pn	04 47 44.4	-0.3
AKUT					Sn	04 48 00.8	-0.2
AKUT				IAML		04 48 01.3	
	comp=E,104nm,0.4s						
DT1	Dutton Round H	1.31	35		Pn	04 47 44.8	0.0
DT1					Sn	04 48 00.9	-0.3
LVA	Lava Point	1.45	276		Pn	04 47 47.0	0.0
LVA				IAML		04 48 14.3	
	comp=E,129nm,1.1s						
DOL	Dolgoi Island	1.49	41		Pn	04 47 47.2	-0.2
UNV	Unalaska Valle	1.74	265		Pn	04 47 50.7	-0.2
UNV	Unalaska Valle	1.74	265		Sn	04 48 12.3	+0.3
UNV	Unalaska Valle	1.74	265	IAML		04 48 05.3	
	comp=E,11nm,1.2s						
S12K	Black Hills	1.88	27		Pn	04 47 53.5	+0.8
S12K	Black Hills	1.88	27	IAML		04 48 18.7	
	comp=N,38nm,0.8s						
S12K				IAML		04 48 38.2	
	comp=E,37nm,1.1s						
MSW	Makushin Switc	1.90	267		Pn	04 47 53.1	+0.1
MSW					Sn	04 48 16.2	+0.3
SDPT	Sand Point	2.22	53		Pn	04 47 57.9	+0.5
SDPT	Sand Point	2.22	53	IAML		04 48 30.3	
	comp=E,25nm,0.9s						
SDPT				IAML		04 49 02.7	
	comp=N,22nm,1.2s						
CNBA	Chernabura Isl	2.46	70		Pn	04 48 00.6	0.0
CNBA	Chernabura Isl	2.46	70	IAML		04 48 42.0	
	comp=E,15nm,1.2s						
CNBA				IAML		04 49 03.9	
	comp=N,14nm,1.1s						

ROM 26 04:49:01.4±0.1, **43°.089N**±0°.004×**12°.955E**±0°.006, **h11**km, **ML1.1**/10, **Error ellipse: s-maj=0.5km s-min=0.3km az=239.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CESI	CESI - Serrava	0.09	203	P	Pg	04 49 04.5	+0.5
CESI				S	Sg	04 49 06.7	+0.7
CESI				AML	AML		
	comp=E,188µm,0.4s						
CESI				AML	AML		
	comp=N,95µm,1.4s						
CESI				AML	AML		
	comp=E,188µm,1.6s						
FDMO	Fiordimonte	0.11	118	P	Pg	04 49 04.6	+0.4
FDMO				S	Sg	04 49 07.0	+0.7
FDMO				AML	AML		
	comp=E,75µm,0.2s						
FDMO				AML	AML		
	comp=N,71µm,0.4s						
FEMA	Monte Fema	0.14	151	P	Pg	04 49 05.3	+0.4
FEMA				S	Sg	04 49 08.1	+0.8
SNTG	Esanatoglia	0.17	356	P	Pg	04 49 05.5	+0.4
SNTG				S	Sg	04 49 08.8	+1.1
SNTG				AML	AML		
	comp=E,55µm,0.1s						
SNTG				AML	AML		
	comp=N,83µm,1.4s						
SNTG				AML	AML		
	comp=N,83µm,0.6s						
CSP1	Cessapalombo	0.18	89	P	Pg	04 49 05.9	+0.5
CSP1				S	Sg	04 49 09.4	+1.1
EL6	Elcito	0.26	24	P	Pg	04 49 07.1	+0.2
EL6				S	Sb	04 49 11.9	-0.8
ARVD	Arcevia	0.41	359	P	Pg	04 49 09.4	0.0
ARVD				S	Sb	04 49 16.1	-0.7
ARVD				AML	AML		
	comp=N,48µm,0.8s						
ARVD				AML	AML		
	comp=E,64µm,0.8s						
ARVD				AML	AML		
	comp=N,48µm,1.2s						
ARVD				AML	AML		
	comp=E,64µm,1.2s						

*NAO **26** 04:49:20.3, 37°.69N×24°.71E, h33km, MB4.4*
*ATH **26** 04:49:28.6, 38°.37N×21°.88E, h8km, Mw4.1, Moment Tensor Solution. s8 Moment tensor: Mrr=1.88; Mθθ 1.72; Mφφ 0.17; Mrθ -0.58; Mθφ 0.41; Mφr 0.52; Fault plane solution: NP1:φs 241.00000°, δ40.00000°, λ -115.00000°. NP2: φs 93.00000°, δ54.00000°, λ -70.00000°.*
*THE **26** 04:49:28.6, 38°.4N±0°.6×21°.9E±0°.6, h6km±2km, M4.0/33, MLh4.0/33*
*NEIC **26** 04:49:29.2±1.0, 38°.25N±0°.06×21°.97E±0°.07, h12km±2km, mb4.6/56, Error ellipse: s-maj=9.4km s-min=8.0km az=210.0*
*MOS **26** 04:49:29.2±1.2, 38°.34N×21°.97E, h25km, mb4.7/15, Error ellipse: s-maj=7.4km s-min=4.3km az=74.1*
*AFAD **26** 04:49:29.0, 38°.51N×21°.67E, h26km±23km, MW4.4*
*IDC **26** 04:49:33.0±1.7, 38°.46N×21°.91E, h38km±15km, mb4.1/24, mbtmp4.2/33, ML3.4/7, Error ellipse: s-maj=12.9km s-min=11.6km az=6.0*
ISC 26 04:49:28.8±0.6, **38°.37N**±0°.01×**21°.89E**±0°.01, **h11**km±3km, **n423**, σ1°**32**/485, **mb4.6**/58, **23C-12D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	Efpalio	0.06	14	P	Pg	04 49 30.3	-0.7
EFP				S	Sg	04 49 31.8	-0.8
EFP	Efpalio	0.06	14	P	Pg	04 49 30.2	-0.8
EFP				S	Sg	04 49 31.9	-0.7
UPR	University Cam	0.12	223	P	Pg	04 49 31.0	-0.7
UPR				S	Sg	04 49 33.9	+0.1
UPR	University Cam	0.12	223	P	Pg	04 49 31.1	-0.5
UPR				S	Sg	04 49 33.5	-0.3
SERG	Sergoula	0.14	72	P	Pg	04 49 31.8	-0.3
SERG				S	Sg	04 49 34.4	0.0
SERG	Sergoula	0.14	72	P	Pg	04 49 31.8	-0.3
SERG				S	Sg	04 49 34.4	0.0
PATC	Patra C	0.14	225	P	Pg	04 49 31.4	-0.6
PATC				S	Sg	04 49 33.9	-0.5
TRIZ	Trizonia	0.14	92	P	Pg	04 49 32.0	-0.2
TRIZ				S	Sg	04 49 34.7	+0.3
PATG	Patra B	0.18	224	P	Pg	04 49 32.5	-0.2
PATG				S	Sg	04 49 35.1	-0.3
KALE	Kalithea	0.20	84	P	Pg	04 49 32.8	-0.3
KALE				S	Sg	04 49 36.4	+0.4
KALE	Kalithea	0.20	84	P	Pg	04 49 32.9	-0.3
KALE				S	Sg	04 49 36.4	+0.4
ANX	Ano Chora	0.22	7	P	Pg	04 49 33.1	-0.4
ANX				S	Sg	04 49 37.0	+0.2
ANX	Ano Chora	0.22	7	P	Pg	04 49 33.1	-0.4
ANX				S	Sg	04 49 36.4	-0.4
MSL1	Messolongi	0.36	271	P	Pg	04 49 35.6	-0.4
MSL1				S	Sg	04 49 40.8	-0.1
PVO	Paravola	0.38	311	P	Pg	04 49 35.5	-0.7
PVO	Paravola	0.38	311	P	Pg	04 49 35.8	-0.5
PVO				S	Sg	04 49 41.2	-0.1
KLV1	Kalavrita	0.38	153	P	Pg	04 49 36.0	-0.4
KLV1				S	Sg	04 49 40.9	-0.5
KLV	Kalavryta, Ach	0.39	148	P	Pg	04 49 36.0	-0.5
KLV	Kalavryta, Ach	0.39	148	P	Pg	04 49 35.8	-0.6
KLV				S	Sg	04 49 40.8	-0.8
AXS	Araxos	0.44	247	P	Pg	04 49 36.8	-0.6
AXS				S	Sg	04 49 43.6	+0.4
AXS	Araxos	0.44	247	P	Pg	04 49 36.6	-0.8
AXS				S	Sg	04 49 43.4	+0.2
DRO	Drossia	0.44	199	P	Pg	04 49 36.9	-0.6
DRO				S	Sg	04 49 43.9	+0.6
DRO	Drossia	0.44	199	P	Pg	04 49 36.9	-0.6
DRO				S	Sg	04 49 43.6	+0.3
RLS	Riolos of Patr	0.46	227	P	Pg	04 49 37.1

ATAL Atalanti 0.95 70 P **Pg** 04 49 45.2 -1.8
ATAL S **Sn** 04 50 01.0 -0.6
ATAL Atalanti 0.95 70 P **Pg** 04 49 46.2 -0.8
ZAK2 Zakynthos 0.97 234 P **Pg** 04 49 47.3 -0.2
ZAK2 S **Sn** 04 50 04.3 +2.1
SOFA Sofades 0.98 10 P **Pg** 04 49 47.1 -0.5
SMHA Samh 0.98 263 P **Pg** 04 49 45.7 -2.0
ARS1 Argos 0.99 138 P **Pg** 04 49 46.9 -1.0
NYDR Nydri-Lefkada 0.99 291 P **Pg** 04 49 46.8 -1.1
NYDR S **Sn** 04 50 03.9 +1.1
NYDR Nydri-Lefkada 0.99 291 P **Pg** 04 49 46.9 -1.0
EVGI Lefkada island 1.00 285 P **Pg** 04 49 46.8 -1.2
EVGI Lefkada island 1.00 285 P **Pg** 04 49 47.3 -0.7
KYPS Kipseli, Zakin 1.00 237 P **Pg** 04 49 47.7 -0.9
AIDA Aidipsos 1.03 62 P **Pg** 04 49 47.7 -0.9
VLS Valsamata 1.04 260 P **Pg** 04 49 47.0 -1.8
VLS S **Sn** 04 50 03.9 0.0
VLS Valsamata 1.04 260 P **Pg** 04 49 47.8 -1.0
ART2 Arta 1.04 318 P **Pg** 04 49 48.8 -0.1
FSK Fiskardo 1.04 275 P **Pb** 04 49 47.3 -1.6
FSK S **Sn** 04 50 04.0 -0.1
FSK Fiskardo 1.04 275 P **Pb** 04 49 47.7 -1.3
LKD2 Lefkada island 1.05 294 P **Pg** 04 49 47.7 -1.3
LKD2 Lefkada island 1.05 294 P **Pg** 04 49 48.6 -0.4
ARTB Arta 1.06 318 P **Pb** 04 49 49.0 -0.1
LTHK Lithakia 1.06 232 P **Pb** 04 49 47.7 -1.5
LTHK Lithakia 1.06 232 P **Pb** 04 49 47.8 -1.4
TSLK Tsoukalades, L 1.07 296 P **Pb** 04 49 49.1 -0.2
VLX Vlachokerasia 1.07 159 P **Pg** 04 49 47.8 -1.6
ORTH Orthonies,Zaky 1.07 241 P **Pb** 04 49 48.6 -0.8
ORTH Orthonies,Zaky 1.07 241 P **Pb** 04 49 49.2 -0.2
NPLA Nafplio 1.08 138 P **Pb** 04 49 48.7 -0.8
TETR Tetrakomo, Epi 1.08 334 P **Pb** 04 49 49.7 0.0
ARG2 Argostoli 1.12 261 P **Pb** 04 49 48.5 -1.7
ARG2 Argostoli 1.12 261 P **Pb** 04 49 48.7 -1.5
ITM Ithomi 1.19 179 *e*P **Pb** 04 49 50.4 -1.0
ITM Ithomi 1.19 179 P **Pb** 04 49 50.2 -1.2
ITM Ithomi 1.19 179 **Pb** 04 49 50.4 -1.0
ITM Ithomi 1.19 179 P **Pb** 04 49 50.1 -1.2
THL Klokotos Trika 1.20 5 P **Pb** 04 49 50.9 -0.7
THL Klokotos Trika 1.20 5 P **Pb** 04 49 50.9 -0.7
DMLN Damoulianata-K 1.20 264 P **Pn** 04 49 50.6 -1.0
PRMD Pramanda 1.31 332 P **Pn** 04 49 53.4 +0.2
MAGU Magoula 1.31 102 P **Pb** 04 49 53.3 -0.1
MAGU Magoula 1.31 102 P **Pb** 04 49 53.4 -0.1
STFN Stefani 1.32 98 P **Pb** 04 49 53.5 -0.1
STFN Stefani 1.32 98 P **Pn** 04 49 53.3 +0.1
ELFA Athens-Elefsin 1.34 104 P **Pb** 04 49 54.0 0.0
GINA Giannouli 1.35 17 P **Pn** 04 49 53.8 +0.1
TYRN Tyrnavos 1.37 11 P **Pb** 04 49 54.4 0.0
MET2 Kameni Chora, 1.37 123 P **Pn** 04 49 53.9 0.0
MET5 Makryloggos,Me 1.38 122 P **Pb** 04 49 54.5 -0.2
NEO Neokhori 1.40 48 P **Pn** 04 49 54.4 0.0
NEO Neokhori 1.40 48 P **Pn** 04 49 54.4 0.0
MET4 Agioi Theodoro 1.41 122 P **Pb** 04 49 54.8 -0.3
MET1 Methana Town, 1.42 123 P **Pn** 04 49 54.5 -0.1
PYL1 Pylos 1.46 186 P **Pn** 04 49 55.0 -0.2
PYL PYLOS 1.48 185 P **Pn** 04 49 55.1 -0.3
PYL PYLOS 1.48 185 P **Pn** 04 49 55.3 -0.1
ACHAR Athens-Acharne 1.49 101 P **Pb** 04 49 56.0 -0.5
ATH Athens Observa 1.50 105 P **Pb** 04 49 56.1 -0.5
ATH Athens Observa 1.50 105 P **Pb** 04 49 56.0 -0.5
NOAC Athens-Thissio 1.50 105 P **Pb** 04 49 56.0 -0.6
ATH5 Athens Parliam 1.51 105 P **Pn** 04 49 55.5 -0.3
JAN Janina 1.52 328 P **Pb** 04 49 56.9 -0.2
ATHP Athens-Neo Psi 1.53 103 P **Pb** 04 49 56.6 -0.6
ATHU Athens Univers 1.55 105 P **Pn** 04 49 56.4 +0.2
ATHU Athens Univers 1.55 105 P **Pn** 04 49 56.4 0.0
MTHA Methoni 1.55 185 P **Pb** 04 49 57.3 -0.3
PTL Penteli 1.59 101 P **Pn** 04 49 57.4 +0.4
PTL Penteli 1.59 101 P **Pn** 04 49 57.2 +0.2
VLY Voula,Athens 1.59 108 P **Pn** 04 49 57.3 +0.3
VLY Voula,Athens 1.59 108 P **Pn** 04 49 57.2 +0.3
YDRA Hydra 1.61 129 P **Pb** 04 49 58.0 -0.6
DION Dionisos Attik 1.64 100 P **Pn** 04 49 58.0 +0.4
DION Dionisos Attik 1.64 100 P **Pn** 04 49 58.2 +0.6
IGT Igoumenitsa 1.68 314 P **Pb** 04 49 59.3 -0.5
AOS2 Alonissos-2 1.71 62 P **Pn** 04 49 58.1 -0.5
AOS Alonnisos 1.75 62 P **Pn** 04 49 58.3 -0.8
KYMI Kymi, Euboea I 1.76 81 P **Pn** 04 49 59.2 -0.1
KYMI Kymi, Euboea I 1.76 81 P **Pn** 04 49 59.1 -0.1
LIT Litokhoron 1.79 15 P **Pn** 04 50 00.4 +0.6
LIT Litokhoron 1.79 15 **Pb** 04 50 00.7 -1.0
LIT Litokhoron 1.79 15 P **Pb** 04 50 00.7 -1.0
LIT Litokhoron 1.79 15 P **Pb** 04 50 00.8 +0.3
VLI Veliai 1.85 153 P **Pn** 04 50 01.0 +0.5
VLI Veliai 1.85 153 P **Pn** 04 50 01.0 -0.4
MNVA Monemvasia 1.91 151 P **Pn** 04 50 02.9 +1.1
KZN Kozani 1.94 357 P **Pn** 04 50 03.4 +0.4
KARY Karystos 2.04 99 P **Pn** 04 50 03.9 +0.3
NPS1 Neapolis Lacon 2.08 153 P **Pn** 04 50 04.7 +0.1
KEK Kerkira 2.11 310 *e*P **Pg** 04 50 10.0 +0.8
KEK Kerkira 2.11 310 Pn **Pn** 04 50 05.4 +1.3
SKY Skiros Island 2.15 76 P **Pn** 04 50 04.7 +0.1
KTHA Kythira Island 2.31 156 *e*P **Pb** 04 50 09.7 -0.8
OUR Ouranopolis 2.55 39 *e*P **Pn** 04 50 10.3 +0.2
OHR Ohrid 2.86 343 *i* Pn **Pb** 04 50 18.5 -1.5
VAY Valandovo 2.99 10 *i* Pn **Pn** 04 50 17.6 +1.4
APE Apeiranthos 3.17 113 P **Pn** 04 50 19.3 +0.7
APE S **Sn** 04 50 51.6 -4.9
APE Apeiranthos 3.17 113 *e*P **Pn** 04 50 18.8 +0.1
APE Apeiranthos 3.17 113 ⇑P **Pn** 04 50 18.4 -0.3
APE Apeiranthos 3.17 113 P **Pn** 04 50 18.4 -0.3
RODP Rodopos 3.18 151 *e*P **Pg** 04 50 31.5 +1.8
SIGR SIGRI 3.21 74 *e*P **Pn** 04 50 21.2 +2.0
CHOS Chios island 3.27 88 *e*P **Pn** 04 50 21.1 +0.9
KNDR Palaiochora Ch 3.43 155 *e*P **Pb** 04 50 28.2 -1.3
MMB Musomishta 3.48 24 *i* P **Pn** 04 50 24.3 +1.3
MMB S **Sn** 04 51 04.3 +0.1
KOCA Canakkale, Ayv 3.50 70 SPECP 04 50 22.0
KOCA P **Pn** 04 50 22.6 -0.7
BOZC Bozcaada 3.56 64 SPECP 04 50 23.0
BOZC P **Pn** 04 50 23.1 -0.9
KKB Krupnik 3.60 15 P **Pn** 04 50 26.4 +1.9
KKB S **Sn** 04 51 09.0 +2.0
GOAD anakkale-G¶ 3.60 59 SPECP 04 50 23.0
GOAD P **Pn** 04 50 23.1 -1.5
GADA Gvkgeada 3.60 58 *e*P **Pn** 04 50 24.9 +0.3
ZEYE Izmir, Urla-Ze 3.63 91 SPECP 04 50 25.0
ZEYE P **Pn** 04 50 27.0 +0.7
URLA Izmir 3.70 89 SPECP 04 50 27.0
URLA P **Pn** 04 50 27.3 +1.3
URLA Izmir 3.70 89 *e*P **Pn** 04 50 27.2 +1.3
EZN Ezine 3.75 66 *e*P **Pn** 04 50 27.8 +1.2
EZN Ezine 3.75 66 ⇑P **Pn** 04 50 27.6 +1.1
EZN Ezine 3.75 66 P **Pn** 04 50 27.6 +1.1
AYVA Ayvalik 3.87 74 P **Pn** 04 50 26.8 -1.4
BAYC CANAKKALE_Bayr 3.88 68 P **Pn** 04 50 28.9 +0.5
IDI Anoyia 3.91 141 Pn **Pn** 04 50 30.2 +1.3
18nm,0.4s,baz=313,slow=18,SNR=14
IDI Sn **Sn** 04 51 15.6 +0.8
10.0nm,0.3s,baz=207,slow=20,SNR=4.7
IDI Anoyia 3.91 141 *e*P **Pn** 04 50 29.6 +0.7
IDI Anoyia 3.91 141 P **Pn** 04 50 27.1 -1.8
RDO Rodhopi 3.95 44 *e*P **Pn** 04 50 30.1 +0.7
RDO Rodhopi 3.95 44 **Pn** 04 50 29.9 +0.6
COMU Canakkale 3.96 63 *e*P **Pn** 04 50 30.2 +0.7
RZN Rozhen 3.98 32 P **Pn** 04 50 31.6 +1.7
DKL Dikili 3.99 78 SPECP 04 50 30.0
DKL P **Pn** 04 50 30.5 +0.6
DKL Dikili 3.99 78 *e*P **Pn** 04 50 31.2 +1.3
BLCB Balcova 4.05 88 SPECP 04 50 32.0
BLCB P **Pn** 04 50 32.0 +1.3
BLCB Balcova 4.05 88 *e*P **Pn** 04 50 31.6 +0.8
TIP Timpagrande 4.09 283 **Pn** 04 50 33.2 +1.8
TIP Timpagrande 4.09 283 ⇓P **Pn** 04 50 32.9 +1.5
GELI Tayfur-Gelibol 4.09 59 *e*P **Pn** 04 50 30.7 -0.6
KDZ Kurdzhali 4.20 38 *e*P **Pn** 04 50 32.6 -0.2
BUHA Balikesir, Bur 4.20 73 SPECP 04 50 33.0
BUHA P **Pn** 04 50 33.1 +0.3
YAYO Edremit-Balk 4.23 71 *e*P **Pn** 04 50 33.0 +0.7
ERIK Erikli-Kesan 4.25 56 SPECP 04 50 33.0
ERIK P **Pn** 04 50 33.1 -0.4
PLNA Plana 4.27 15 P **Pn** 04 50 35.5 +1.7
GCAM G?zelcaml? 4.27 97 *e*P **Pn** 04 50 34.4 +0.6
LPK Lapseki 4.27 61 *e*P **Pn** 04 50 34.1 +0.3
PLD Plovdiv 4.36 29 *e*P **Pn** 04 50 35.4 +0.4
VTS Vitosha 4.37 13 P **Pn** 04 50 36.6 +1.4
KESN Edirne-Kesan 4.44 55 SPECP 04 50 37.0
KESN P **Pn** 04 50 37.3 +0.9
SOMA Soma-Manisa 4.48 78 *e*P **Pn** 04 50 38.6 +1.9
BODT Bodrum 4.49 105 *e*P **Pn** 04 50 39.9 +3.0
PDG Podgorica 4.53 334 *e*P **Pn** 04 50 39.3 +2.0
PDG Podgorica 4.53 334 **Pn** 04 50 40.0 +2.7
UKOP Uzunkopru-Edir 4.58 52 *e*P **Pn** 04 50 37.5 -0.5
MATE Matera 4.61 301 ⇑P **Pn** 04 50 39.7 +1.3
KRBG Karabiga-Canak 4.65 63 *e*P **Pn** 04 50 40.9 +1.9
RKY Sarkoy-Tekirda 4.70 59 *e*P **Pn** 04 50 41.7 +2.0
CEL Celeste 4.71 271 **Pn** 04 50 41.4 +1.4
AYDB Zeytinkoy-Aydi 4.75 93 *e*P **Pn** 04 50 41.7 +1.2
BALB Balikesir 4.84 73 *e*P **Pn** 04 50 42.1 +0.6
BALB Balikesir 4.84 73 Pn **Pn** 04 50 42.2 +0.6
ODEM Odemis-Izmir 4.87 89 *e*P **Pn** 04 50 44.1 +2.0
GORD Gordes-Manisa 4.95 82 *e*P **Pn** 04 50 44.7 +1.5
CUC Castrocucco 4.99 291 **Pn** 04 50 46.0 +2.3
NAZL Nazilli-Aydin 5.06 93 *e*P **Pn** 04 50 46.1 +1.4
SUSR Susurluk-Balik 5.07 70 *e*P **Pn** 04 50 46.7 +1.9
KARP Karpathos 5.08 122 **Pn** 04 50 42.8 -2.1
MPEP Malo Peshtene 5.17 15 P **Pn** 04 50 49.8 +3.6
ACER Acerenza 5.19 300 **Pn** 04 50 47.3 +0.9
MANT Manisa 5.24 87 **Pn** 04 50 46.1 -1.2
BOVS Bovan 5.26 359 ⇓P **Pn** 04 50 49.8 +2.4
ARG Arkhangelos 5.42 111 Pn **Pn** 04 50 48.5 -1.0
ARG Arkhangelos 5.42 111 P **Pn** 04 50 48.5 -1.0
PLVB Pleven 5.42 22 ⇑P **Pn** 04 50 53.1 +3.5
ELND Elena 5.47 32 ⇓P **Pn** 04 50 52.5 +2.2
SGRT San Giovanni R 5.80 308 Pn **Pn** 04 50 55.2 +0.3
CAME Cameli-Denizli 6.05 101 *e*P **Pn** 04 51 02.1 +3.7
RAFF Raffo Rosso 6.07 261 Pn **Pn** 04 50 59.4 +0.9
LOZB Loznitsa 6.14 34 ⇓P **Pn** 04 51 02.4 +2.9
AKAS Kas 6.51 107 Pn **Pn** 04 51 03.3 -1.4
HERR Herculane 6.52 3 ⇓P **Pn** 04 51 08.0 +3.4
ELL Elmali 6.57 102 **Pn** 04 51 05.5 -0.1
ELL Elmali 6.57 102 P **Pn** 04 51 05.5 -0.1
BORA Eskisehir 6.83 75 **Pn** 04 51 08.9 -0.1
ISP Isparta 6.83 92 **Pn** 04 51 07.9 -1.2
ISP Isparta 6.83 92 P **Pn** 04 51 07.9 -1.2
GZR Gura Zlata 7.05 5 ⇓P **Pn** 04 51 15.0 +2.9
GZR Gura Zlata 7.05 5 P **Pn** 04 51 14.9 +2.9
LOT Lotru 7.21 11 ⇑P **Pn** 04 51 15.2 +1.0
BZS Buzias 7.24 358 ⇑P **Pn** 04 51 17.7 +3.0
BZS Buzias 7.24 358 P **Pn** 04 51 17.6 +3.0
ARR Arges 7.29 15 ⇓P **Pn** 04 51 17.7 +2.5
SAHE Sakarya_HENDEK 7.35 67 ⇑P **Pn** 04 51 16.9 +0.7
VOIR 7.44 17 ⇑P **Pn** 04 51 21.2 +3.8
VOIR 7.44 17 P **Pn** 04 51 21.2 +3.8
ISR Istrita 7.59 26 ⇑P **Pn** 04 51 23.4 +4.0
ISR Istrita 7.59 26 P **Pn** 04 51 23.4 +4.0
CAMP Campotosto 7.69 305 **Pn** 04 51 22.7 +1.8
MLR Muntele Rosu 7.73 22 Pn **Pn** 04 51 23.6 +2.2
12nm,0.8s,baz=275,slow=1.9,SNR=7.6
MLR Muntele Rosu 7.73 22 **Pn** 04 51 21.3 -0.1
MLR Muntele Rosu 7.73 22 ⇓P **Pn** 04 51 24.1 +2.6
MLR Muntele Rosu 7.73 22 P **Pn** 04 51 24.0 +2.6
NEHR Nehoiu 7.78 24 ⇑P **Pn** 04 51 24.8 +2.8
GUMA Gualdo di Mace 8.01 309 **Pn** 04 51 27.3 +2.2
BISRR Bisoca 8.02 25 ⇓P **Pn** 04 51 28.3 +3.0
DOPR Dopca 8.02 18 ⇑P **Pn** 04 51 29.3 +3.9
NRCA Norcia 8.03 307 **Pn** 04 51 26.8 +1.4
COVR Voineasa-Covas 8.13 22 ⇑P **Pn** 04 51 29.7 +2.9
FDMO Fiordimonte 8.15 308 **Pn** 04 51 28.7 +1.6
BOSR Bodos 8.19 19 ⇓P **Pn** 04 51 30.9 +3.3
OZUR 8.24 19 ⇓P **Pn** 04 51 30.9 +2.5
TURI Turia 8.27 29 ⇓P **Pn** 04 51 32.3 +3.9
PLOR Plostina 8.27 24 ⇑P **Pn** 04 51 32.2 +3.5
PLOR Plostina 8.27 24 P **Pn** 04 51 32.2 +3.5
VRI Vrincioaia 8.31 24 ⇑P **Pn** 04 51 32.4 +3.1
VRI Vrincioaia 8.31 24 P **Pn** 04 51 32.3 +3.1
ANTO Ankara 8.61 77 **Pn** 04 51 33.3 -0.1
ANTO Ankara 8.61 77 P **Pn** 04 51 33.3 -0.1
MURB Monte Urbino 8.62 308 Pn **Pn** 04 51 34.7 +1.2
ONER Baraj Valea Uz 8.63 21 ⇑P **Pn** 04 51 37.8 +4.2
BR131 Keskin Array S 9.24 78 **Pn** 04 51 41.0 -1.2
BR131 Keskin Array S 9.24 78 P **Pn** 04 51 41.0 -1.2
BRTR Keskin Array B 9.24 78 Pn **Pn** 04 51 44.5 +2.3
1.1nm,0.3s,baz=258,slow=12,SNR=22
6.7nm,0.6s
BRTR Keskin Array B 9.24 78 **Pn** 04 51 41.8 -0.4
BRTR Keskin Array B 9.24 78 *i* P **Pn** 04 51 44.5 +2.3
BRTR pmax pmax
comp=Z,6.0nm,0.6s
BUR08 Bucovina Ar. S 9.58 14 Pn **Pn** 04 51 47.7 +1.0
PSZ Piszkesteto 9.65 352 Pn **Pn** 04 51 49.4 +1.7
PSZ Piszkesteto 9.65 352 P **Pn** 04 51 49.4 +1.7
MODS Modra-Piesok 10.54 343 *e*P **Pn** 04 52 02.6 +2.7
MODS Modra-Piesok 10.54 343 *e*PN **Pn** 04 52 02.6 +2.7
MODS *e* 05 28 15.7
ABTA Abfaltersbach 10.85 323 *e*Pn **Pn** 04 52 05.2 +1.0
comp=Z,4.7nm,0.7s
MOA Molln 10.98 332 *e*Pn **Pn** 04 52 08.1 +2.3
comp=Z,2.0nm,0.4s
LESA Schwarzleotal 11.28 326 *i* Pn **Pn** 04 52 11.2 +1.1
comp=Z,3.9nm,0.5s
KRUC Moravsky 11.40 341 *e*PN **Pn** 04 52 12.4 +0.9
VRAC Vranov 11.58 342 *e*PN **Pn** 04 52 14.5 +0.5
WTTA Wattenberg 11.64 323 *i* Pn **Pn** 04 52 16.3 +1.3
comp=Z,5.4nm,0.6s
WATA Walderalm 11.72 323 *e*Pn **Pn** 04 52 18.7 +2.7
comp=Z,3.4nm,0.5s
SQTA Sankt Quirin 11.81 322 *i* Pn **Pn** 04 52 18.4 +1.1
comp=Z,3.8nm,0.5s
MOTA Mosalm 11.95 322 *e*Pn **Pn** 04 52 21.4 +2.2
comp=Z,6.5nm,0.6s
GERES GERESS Array B 12.03 333 Pn **Pn** 04 52 23.6 +3.4
baz=138,slow=16,SNR=4.2
comp=Z,0.9nm,0.8s
DAVOX Davos/Dischmat 12.19 317 Pn **Pn** 04 52 23.4 +0.8
comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=1.9
DAVOX Sn **Sn** 04 54 39.6 +1.0
comp=Z,0.3nm,0.3s,baz=184,slow=19,SNR=3.3
comp=Z,0.9nm,0.3s
MMAI Mount Meron Ar 12.21 112 Pn **Pn** 04 52 26.5 +3.7
comp=Z,1.3nm,0.3s,baz=291,slow=15,SNR=4.3
comp=Z,1.8nm,0.4s
KHC Kasperske Hory 12.31 334 *i* P **Pn** 04 52 23.2 -0.8
KHC Kasperske Hory 12.31 334 *e*PN **Pn** 04 52 24.0 0.0
AKASG Malin Array Be 13.38 21 Pn **Pn** 04 52 38.0 -0.6
comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=4.3
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 13.38 21 P **Pn** 04 52 38.0 -0.6
AKBB Malin Array Si 13.38 21 *i* P **Pn** 04 52 39.4 +0.8
EIL Elat 13.87 125 Pn **Pn** 04 52 48.2 +2.9
comp=Z,0.5nm,0.3s,baz=275,slow=21,SNR=3.9
comp=Z,5.3nm,0.6s
CLL Collm 14.37 337 Pn **Pn** 04 52 54.8 +2.7
CLL Collm 14.37 337 *e*P **P** 04 52 56.0 -3.2
CLL Collm 14.37 337 *e*P **P** 04 52 56.0 -3.2
CLL *es*P Pn 04 53 00.0 +7.8
CLL *e*PP **PnPn** 04 53 02.0 +1.9
comp=Z,12nm,1.0s
CLL *es*PP 04 53 07.0
SUW Suwalki 15.67 3 Pn **Pn** 04 53 10.2 +0.7
SUW Suwalki 15.67 3 *e*P **P** 04 53 13.4 -0.1
SUW Suwalki 15.67 3 P **Pn** 04 53 10.2 +0.7
GURO Guroymak-BITLI 15.78 83 Pn **Pn** 04 53 11.7 +0.5
MNK Minsk 16.65 12 *i* P **Pn** 04 53 20.8 -1.2
comp=E,18nm,0.8s
MNK *i* P **Pn** 04 53 20.8 -1.2
comp=N,9.0nm,0.7s
MNK *i* P **Pn** 04 53 20.8 -1.2
comp=Z,14nm,0.7s,baz=197
MNK *i* PP **sP** 04 53 29.8 +0.8
MNK *i* PPP PPP 04 53 38.3
MNK *i* S **Sn** 04 56 23.9 -2.8
MNK *i* SS **SnSn** 04 56 39.1 -0.7
MNK *i* SSS SSS 04 56 51.8
MNK *i* LQ LQ 04 58 12.6
MNK *i* LR LR 04 59 04.6
MNK *i* LRM MLR 04 59 44.9
comp=Z,1µm,18.6s
MNK *i* LRM MLR 04 59 54.0
comp=E,996nm,17.6s
MNK *i* LRM MLR 05 00 57.5
comp=N,372nm,17.9s
MNK Minsk 16.65 12 *i* P **Pn** 04 53 20.7 -1.2
MNK *i* S **Sn** 04 56 23.8 -2.8
MNK pmax pmax
comp=E,18nm,0.8s
MNK pmax pmax
comp=N,9.0nm,0.7s
MNK pmax pmax
comp=Z,14nm,0.7s
MNK MLR MLR
comp=Z,1µm,19.0s
MNK MLR MLR
comp=E,996nm,18.0s
MNK MLR MLR
comp=N,372nm,18.0s
KBZ Khabaz 16.71 65 Pn **P** 04 53 26.0 +0.9
comp=N,0.1nm,0.3s,baz=336,slow=4.7,SNR=6.0
comp=N,3.4nm,0.9s
NACGM Naroch 16.87 10 *e*P **P** 04 53 26.7 -0.1
comp=Z,20nm,1.0s,baz=193
PABE Paberze 17.20 4 Pn **Pn** 04 53 28.7 -0.2
PABE IAmb IAmb 04 53 38.4
comp=Z,38nm,0.9s
PABE Paberze 17.20 4 *e*P **Pn** 04 53 29.3 +0.4
VSR Storozhevoye 17.70 38 *e*P **Pn** 04 53 34.7 -0.5
VSR pmax pmax
comp=Z,5.0nm,1.0s
LPSR Galich'ya Gora 18.51 34 *e*P **P** 04 53 43.2 -1.8
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VRH Novokhopyorsk 18.97 41 *e*P **Pn** 04 53 51.3 +0.6
VRH pmax pmax
comp=Z,10.0nm,0.9s
OBN Obninsk 19.47 26 *e*P **P** 04 53 54.8 -0.6
OBN pmax pmax
comp=Z,11nm,0.8s
ESDC Sonseca Array 20.11 282 P Pn 04 54 03.8 -0.7
comp=Z,2.7nm,0.6s,baz=78,slow=11,SNR=22
comp=Z,2.7nm,0.6s
ESDC Sonseca Array 20.11 282 **P** 04 54 03.6 +0.9
MOS Moscow 20.33 26 *e*P **P** 04 54 04.0 -0.8
MOS pmax pmax
comp=Z,35nm,0.8s
VSU Vasula 20.35 7 *e*P **P** 04 54 04.4 -0.6
VSU Vasula 20.35 7 *ce*P **P** 04 54 04.9 -0.1
VSU pmax pmax
comp=Z,167nm,1.7s
PAB San Pablo 20.42 282 P **P** 04 54 06.5 +0.5
PAB San Pablo 20.42 282 P **P** 04 54 06.5 +0.5
PAB pmax pmax
comp=Z,24nm,1.3s
ARBE Arbavere 21.25 6 *e*P **P** 04 54 17.9 +3.2
AAL Aland 21.86 357 *e*P **P** 04 54 21.5 +0.2
MD01 Midelt array s 22.31 264 P **P** 04 54 26.4 -0.1
MD31 MD31 22.31 264 P **P** 04 54 26.4 -0.1
HFS Hagfors 22.40 349 P **P** 04 54 26.2 -0.8
comp=Z,2.2nm,0.5s,baz=162,slow=10,SNR=23
comp=Z,2.2nm,0.5s
BELG Belogornoye 22.72 44 P **P** 04 54 28.9 -1.6
comp=Z,20nm,1.1s,baz=25,slow=7.1,SNR=4.6
comp=Z,20nm,1.1s
BELG Belogornoye 22.72 44 *i* P **P** 04 54 30.4 -0.1
BELG pmax pmax
comp=Z,6.0nm,1.1s
FINES FINESS Array B 23.25 5 P **P** 04 54 34.5 -1.4
comp=Z,3.5nm,0.7s,baz=172,slow=9.6,SNR=11
FINES PcP **PcP** 04 58 23.2 0.0
comp=Z,1.4nm,0.7s,baz=134,slow=5.5,SNR=4.4
comp=Z,3.5nm,0.7s
NC602 NORSAR Array S 23.31 347 P **P** 04 54 35.7 -0.9
NC602 IAmb IAmb 04 54 36.7
comp=Z,24nm,1.2s
NC602 NORSAR Array S 23.31 347 *e*P **P** 04 54 35.2 -1.4
NAO01 NORSAR Array S 23.53 346 P **P** 04 54 38.4 -0.5
NAO01 IAmb IAmb 04 54 51.6
comp=Z,23nm,1.3s
NC405 NORSAR Array S 23.64 348 **P** 04 54 39.6 -0.2
NB201 NORSAR Array S 23.65 347 P **P** 04 54 39.5 -0.5
NB201 IAmb IAmb 04 54 40.4
comp=Z,28nm,1.2s
NB2 NORSAR Subarra 23.66 347 P **P** 04 54 39.1 -1.0
comp=Z,12nm,1.0s,baz=154,slow=10
NOA NORSAR Array B 23.66 347 P **P** 04 54 38.6 -1.5
comp=Z,2.8nm,0.9s,baz=172,slow=12,SNR=17
comp=Z,2.8nm,0.9s
NC303 NORSAR Array S 23.80 347 P **P** 04 54 40.9 -0.5
KEF Keuruu 23.90 3 *e*P **P** 04 54 42.0 -0.2
EKA Eskdalemuir Ar 23.90 323 P **P** 04 54 42.1 -0.3
comp=Z,9.3nm,0.7s,baz=123,slow=9.7,SNR=18
comp=Z,9.3nm,0.7s
NC204 NORSAR Array S 23.96 347 **P** 04 54 42.7 -0.3
NC204 IAmb IAmb 04 54 46.2
comp=Z,25nm,1.2s
VAF Ylistaro 24.71 1 *e*P **P** 04 54 49.8 +0.1
KLMR Klimovskoe 25.07 20 *e*P **P** 04 54 50.7 -2.3
KLMR pmax pmax
comp=Z,31nm,1.0s
KIRV Kirov 26.91 32 P **P** 04 55 07.8 -1.9
comp=Z,10nm,0.5s,baz=263,slow=10,SNR=4.7
comp=Z,10nm,0.5s
KIRV Kirov 26.91 32 *ce*P **P** 04 55 09.7 0.0
ARTI Arti 30.10 41 P **P** 04 55 37.7 -0.4
comp=Z,4.1nm,0.8s,baz=224,slow=6.0,SNR=5.1
comp=Z,4.1nm,0.8s
ARTI Arti 30.10 41 P **P** 04 55 39.0 +0.9
ARTI Arti 30.10 41 *c i* P **P** 04 55 37.8 -0.4
ARTI 04 56 31.0
ARTI S **S** 05 00 37.1 +0.7
ARTI SS **SnSn** 05 02 06.7 -2.1
ARTI pmax pmax
comp=Z,6.0nm,1.1s
TORD Torodi Ar. Bea 30.87 221 P **P** 04 55 46.7 +1.4
comp=Z,2.2nm,0.4s,baz=28,slow=13,SNR=4.2
comp=Z,2.2nm,0.4s
ARCES ARCESS Array B 31.29 2 P **P** 04 55 48.1 -0.4
comp=Z,2.7nm,0.8s,baz=182,slow=8.3,SNR=14
comp=Z,2.7nm,0.8s
ARCES ARCESS Array B 31.29 2 P **P** 04 55 48.3 -0.2
BORK Borovoye 36.13 50 *ce*P **P** 04 56 30.4 -0.4
BORK pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 36.17 50 P **P** 04 56 31.2 +0.1
comp=Z,1.1nm,0.5s,baz=266,slow=6.4,SNR=6.0
BVAR PcP **PcP** 04 58 56.1 -0.3
comp=Z,0.9nm,0.6s,baz=349,slow=1.5,SNR=4.0
comp=Z,1.1nm,0.5s
CHGR Chuyangaron 36.66 74 P **P** 04 56 35.7 +0.1
CHGR Chuyangaron 36.66 74 P **P** 04 56 35.7 +0.1
CHGR pmax pmax
comp=Z,13nm,0.7s
KK31 Karatay Array 36.73 67 **P** 04 56 36.3 +0.2
KK31 IAmb IAmb 04 56 37.8
comp=Z,7.3nm,0.6s
KK31 Karatay Array 36.73 67 P **P** 04 56 36.3 +0.2
KK31 pmax pmax
comp=Z,7.0nm,0.6s
KKAR Karatay Array 36.73 67 **P** 04 56 36.1 +0.1
KKAR Karatay Array 36.73 67 P **P** 04 56 36.2 +0.1
GAR Garm 37.45 73 P **P** 04 56 43.2 +0.8
GAR IAmb IAmb 04 56 43.9
comp=Z,14nm,0.8s
ARSB Arslanbob 38.88 69 **P** 04 56 54.7 +0.3
ARSB IAmb IAmb 04 57 05.0
comp=Z,10nm,1.0s
ARSB Arslanbob 38.88 69 P **P** 04 56 54.7 +0.3
ARSB pmax pmax
comp=Z,10.0nm,1.0s
AAK Ala-Archa 39.70 67 P **P** 04 57 01.4 +0.2
comp=Z,2.3nm,0.7s,baz=261,slow=9.4,SNR=4.7
comp=Z,2.3nm,0.7s
AAK Ala-Archa 39.70 67 P **P** 04 57 01.8 +0.6
AAK Ala-Archa 39.70 67 *ce*P **P** 04 57 02.8 +1.6
AAK pmax pmax
comp=Z,7.0nm,1.7s
DBIC Dimbokro 39.77 224 P **P** 04 57 02.9 +1.0
comp=Z,3.0nm,0.6s,baz=36,slow=3.1,SNR=4.1
comp=Z,3.0nm,0.6s
DBIC Dimbokro 39.77 224 P **P** 04 57 00.9 -0.9
SPITS Spitsbergen Ar 39.98 358 P **P** 04 57 03.4 +0.4
comp=Z,3.9nm,0.7s,baz=188,slow=4.4,SNR=4.6
comp=Z,3.9nm,0.7s
KURBB Kurchatov Arra 41.25 54 P **P** 04 57 13.8 0.0
comp=Z,1.5nm,0.3s,baz=280,slow=8.9,SNR=8.7
KURBB PcP **PcP** 04 59 12.9 +0.5
comp=Z,0.4nm,0.2s,baz=272,slow=3.9,SNR=4.6
comp=Z,1.5nm,0.3s
KURK Kurchatov 41.30 54 P **P** 04 57 14.6 +0.5
KURK **PcP** 04 59 13.1 +0.5
KURK Kurchatov 41.30 54 *ce*P **P** 04 57 14.6 +0.5
KURK pmax pmax
comp=Z,7.0nm,1.3s
KSH Kashi 41.55 71 P **P** 04 57 15.8 -0.7
KSH pmax pmax
comp=Z,5.0nm,0.7s
MK31 Makanchi Array 44.28 59 *ce*P **P** 04 57 38.8 +0.3

MKAR	**Makanchi Array**	**44.28**	**59**	P		**P**		04 57 38.6	**+0.1**
	comp=Z,4.1nm,0.5s,baz=277,slow=7.1,SNR=47								
	comp=Z,4.1nm,0.5s								
MKAR	**Makanchi Array**	**44.28**	**59**			**P**		04 57 38.4	**-0.1**
MKAR	**Makanchi Array**	**44.28**	**59**	*i* P		**P**		04 57 38.4	**-0.1**
MKAR					pmax	pmax			
	comp=Z,4.0nm,0.5s								
ZAA0	**Zalesovo Array**	**44.76**	**48**			**P**		04 57 41.9	**-0.2**
ZAA0					IAmb	IAmb		04 57 43.4	
	comp=Z,13nm,1.3s								
ZALV	**Zalesovo Beam**	**44.76**	**48**	P		**P**		04 57 41.9	**-0.2**
	comp=Z,5.0nm,0.4s,baz=272,slow=8.6,SNR=25								
	comp=Z,5.0nm,0.4s								
ZALV	**Zalesovo Beam**	**44.76**	**48**			**P**		04 57 41.2	**-0.9**
ZALV	**Zalesovo Beam**	**44.76**	**48**	*i* P		**P**		04 57 41.7	**-0.4**
ZALV					pmax	pmax			
	comp=Z,5.0nm,0.4s								
DGZ	**Jazzator, Alta**	**47.04**	**54**	*i* P		**P**		04 57 59.6	**-0.8**
DGZ					pmax	pmax			
	comp=Z,3.0nm,0.5s								
SCHQ	**Schefferville**	**59.05**	**318**	P		**P**		04 59 27.0	**-1.6**
	comp=Z,4.4nm,0.8s,baz=80,slow=6.1,SNR=2.0								
	comp=Z,4.4nm,0.8s								
SONM	**Songino Array**	**59.50**	**51**	P		**P**		04 59 32.0	**-0.1**
	comp=Z,2.1nm,0.7s,baz=284,slow=8.3,SNR=11								
	comp=Z,2.1nm,0.7s								
SONM	**Songino Array**	**59.50**	**51**	P		**P**		04 59 32.0	**-0.1**
ULN	**Ulaanbaatar**	**59.89**	**51**	*ce*P		**P**		04 59 34.1	**-0.7**
ULN					pmax	pmax			
	comp=Z,3.0nm,0.6s								
HHC	**Hu-ho-hao-te**	**66.04**	**56**	*e*P		**P**		05 00 15.8	**+0.1**
HHC					pmax	pmax			
	comp=Z,9.0nm,0.6s								
HHC					pmax	pmax			
	comp=Z,300nm,6.2s								
PZH	**PanZhiHua**	**66.52**	**74**	P		**P**		05 00 19.8	**+0.8**
A36M	**Sachs Harbour**	**67.54**	**349**			**P**		05 00 25.4	**+0.8**
A36M					IAmb	IAmb		05 00 47.5	
	comp=Z,5.3nm,0.9s								
C27K	**Jago River**	**71.80**	**355**	P		**P**		05 00 52.4	**+1.5**
C27K					IAmb	IAmb		05 00 53.3	
	comp=Z,6.1nm,1.1s								
D27M	**Malcolm River**	**71.95**	**354**	P		**P**		05 00 52.9	**+0.9**
E28M	**Babbage River**	**72.44**	**353**	P		**P**		05 00 55.8	**+1.0**
E29M	**Blow River**	**72.49**	**352**	P		**P**		05 00 55.9	**+0.8**
D23K	**Nanushuk River**	**72.84**	**357**	P		**P**		05 00 58.3	**+1.1**
F31M	**Tsiigehtchic**	**72.90**	**350**			**P**		05 00 58.0	**+0.6**
E27K	**Coleen River**	**73.04**	**354**			**P**		05 00 58.9	**+0.5**
E27K					IAmb	IAmb		05 01 00.6	
	comp=Z,6.7nm,1.1s								
F28M	**Old Crow**	**73.44**	**353**	P		**P**		05 01 01.2	**+0.4**
F28M					IAmb	IAmb		05 01 02.8	
	comp=Z,6.5nm,1.2s								
F26K	**Sheenjek River**	**73.73**	**354**	P		**P**		05 01 03.6	**+1.1**
G29M	**Pine Creek**	**73.92**	**352**	P		**P**		05 01 04.4	**+0.8**
G29M					IAmb	IAmb		05 01 05.2	
	comp=Z,8.1nm,0.9s								
F24K	**Squaw Lake**	**74.15**	**356**	P		**P**		05 01 05.5	**+0.6**
F24K					IAmb	IAmb		05 01 07.1	
	comp=Z,5.7nm,1.1s								
G27K	**Doyon Strip**	**74.39**	**353**	P		**P**		05 01 06.9	**+0.5**
G27K					IAmb	IAmb		05 01 15.8	
	comp=Z,7.2nm,1.3s								
G26K	**Porcupine River**	**74.43**	**354**	P		**P**		05 01 07.7	**+1.2**
G26K					IAmb	IAmb		05 01 09.4	
	comp=Z,5.3nm,0.9s								
E19K	**Redstone River**	**74.49**	**360**	P		**P**		05 01 07.5	**+0.6**
H29M	**Whitestone**	**74.63**	**352**			**P**		05 01 08.3	**+0.6**
H29M					IAmb	IAmb		05 01 35.2	
	comp=Z,10nm,1.4s								
F21K	**Alatna River**	**74.67**	**358**	P		**P**		05 01 08.7	**+0.7**
F21K					IAmb	IAmb		05 01 10.4	
	comp=Z,7.8nm,1.1s								
H27K	**Steamboat Moun**	**74.94**	**353**			**P**		05 01 10.7	**+1.1**
H27K					IAmb	IAmb		05 01 11.7	
	comp=Z,4.3nm,0.9s								
I28M	**Miner Creek**	**75.55**	**352**			**P**		05 01 13.8	**+0.6**
I28M					IAmb	IAmb		05 01 14.8	
	comp=Z,5.6nm,1.1s								
NJ2	**Nanjing**	**75.79**	**60**	*e*P		**P**		05 01 15.3	**+0.4**
NJ2					pmax	pmax			
	comp=Z,8.0nm,0.5s								
J30M	**Hart River**	**75.97**	**350**	P		**P**		05 01 16.6	**+1.0**
H21K	**Melozitna Rive**	**76.22**	**358**	P		**P**		05 01 17.9	**+1.0**
ILAR	**Eielson Array**	**76.81**	**355**	P		**P**		05 01 20.6	**+0.4**
	comp=Z,1.6nm,0.9s,baz=0.9,slow=4.0,SNR=17								
	comp=Z,1.6nm,0.9s								
ILAR	**Eielson Array**	**76.81**	**355**	P		**P**		05 01 21.2	**+0.9**
DAWY	**Dawson**	**76.83**	**352**	P		**P**		05 01 21.4	**+1.0**
K27K	**Chicken**	**77.15**	**353**	P		**P**		05 01 23.1	**+1.0**
HDA	**Harding Lake**	**77.18**	**355**	P		**P**		05 01 22.9	**+0.7**
HDA					IAmb	IAmb		05 01 23.7	
	comp=Z,8.7nm,1.1s								
WRH	**Wood River Hil**	**77.19**	**356**	P		**P**		05 01 22.7	**+0.4**
WRH					IAmb	IAmb		05 01 24.8	
	comp=Z,6.1nm,1.0s								
L27K	**Beaver Creek,**	**78.07**	**352**	P		**P**		05 01 27.9	**+0.5**
L27K					IAmb	IAmb		05 01 30.3	
	comp=Z,5.2nm,1.1s								
M29M	**Somme Creek**	**78.29**	**351**	P		**P**		05 01 29.5	**+0.9**
KSRS	**Korea Array**	**78.37**	**51**	P		**P**		05 01 28.8	**-0.6**
	comp=Z,1.5nm,0.6s,baz=305,slow=5.2,SNR=4.5								
	comp=Z,1.5nm,0.6s								
L19K	**White Mountain**	**79.76**	**358**			**P**		05 01 37.3	**+0.7**
L19K					IAmb	IAmb		05 01 38.9	
	comp=Z,9.2nm,1.0s								
R33M	**Jennings River**	**80.02**	**346**	P		**P**		05 01 39.5	**+1.3**
STLK	**Strandline Lak**	**80.35**	**357**	P		**P**		05 01 40.0	**+0.2**
STLK					IAmb	IAmb		05 02 15.4	
	comp=Z,13nm,1.4s								
BDFB	**Brasilia**	**84.57**	**245**	P		**P**		05 02 01.8	**-0.8**
	comp=Z,7.2nm,0.7s,baz=128,slow=2.1								
	comp=Z,7.2nm,0.7s								
BDFB	**Brasilia**	**84.57**	**245**	P		**P**		05 02 02.3	**-0.3**
YNE	**Yellowstone No**	**86.37**	**328**	P		**P**		05 02 12.2	**+0.8**
YNE					IAmb	IAmb		05 02 22.0	
	comp=Z,3.5nm,1.0s								
PDAR	**Pinedale Array**	**87.99**	**326**	P		**P**		05 02 19.0	**-0.3**
	comp=Z,0.4nm,0.6s,baz=98,slow=3.0,SNR=4.4								
	comp=Z,0.4nm,0.6s								
PDAR	**Pinedale Array**	**87.99**	**326**	P		**P**		05 02 19.4	**+0.1**
HWUT	**Hardware Ranch**	**89.80**	**327**	P		**P**		05 02 28.1	**+0.4**
HWUT					IAmb	IAmb		05 02 28.9	
	comp=Z,3.1nm,0.7s								
LENM	**Lemitar**	**93.63**	**320**	P		**P**		05 02 46.3	**+0.7**
TXAR	**Lajitas Array**	**95.61**	**314**	P		**P**		05 02 55.3	**+0.6**
	comp=Z,0.5nm,0.9s,baz=50,slow=3.9,SNR=4.3								
	comp=Z,0.5nm,0.9s								
TXAR	**Lajitas Array**	**95.61**	**314**	P		**P**		05 02 54.8	**+0.1**
ASAR	**Alice Springs**	**121.13**	**97**	PKP		**PKPdf**		05 08 21.2	**-0.8**
	comp=Z,0.4nm,0.7s,baz=292,slow=0.7,SNR=5.0								
ASAR	**Alice Springs**	**121.13**	**97**			**PKPdf**		05 08 21.9	**-0.1**
ASAR	**Alice Springs**	**121.13**	**97**	PKIKP		**PKPdf**		05 08 21.9	**-0.1**

*UPA **26** 04:50:32.4±1.6, 9.°67N×83.°81W, h10km±8km, ML3.8, MW4.2*

*CATAC **26** 04:50:33.8±0.2, 9°N±2″×8°4W±″, h44km±3km, M3.6/20, MLv3.6/20, Error ellipse: s-maj=4.6km s-min=2.1km az=41.7, confirmed*

*UCR **26** 04:50:33.2±1.3, 9.°47N×83.°98W, h63km±2km, MW3.8*

ISC 26 04:50:34.1±1.2, 9°45N±0.°02×83°99W±0.°02, h55km±4km, n182, σ0s81/277, 58C-26D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LLNJ	**Naranjito**	**0.11**	**280**					**04 50 42.7**	**+0.1**
LLNJ								04 50 50.0	+1.4
PIEC	**Cerro El Cedra**	**0.17**	**10**					**04 50 42.8**	**-0.4**
QUEP	**Quepos**	**0.17**	**262**	P				**04 50 42.7**	**-0.2**
QUEP	**Quepos**	**0.17**	**262**					**04 50 42.5**	**-0.3**
QUEP								04 50 49.9	+0.8
SVQ2	**Quepos**	**0.18**	**263**					**04 50 42.6**	**-0.2**
SVQ2								04 50 49.9	+0.8
RAZU	**San Marcos de**	**0.21**	**351**					**04 50 42.9**	**-0.4**
PITB	**Pirrs, San**	**0.21**	**351**					**04 50 42.9**	**-0.4**
PITB								04 50 50.1	+0.3
BUS1	**Rivas**	**0.26**	**67**					**04 50 43.2**	**-0.8**
BUS1								04 50 50.4	-0.5
PICV	**PH. Pirrs**	**0.27**	**310**					**04 50 43.1**	**-0.4**
PICV								04 50 50.7	+0.4
LCR2	**La Lucha 2**	**0.29**	**357**	P				**04 50 43.8**	**-0.1**
LCR2	**La Lucha 2**	**0.29**	**357**	S				**04 50 50.8**	**0.0**
ZEDO	**Perez Zeledon**	**0.32**	**108**					**04 50 43.8**	**-0.2**
ZEDO								04 50 51.8	+0.8
ACOS	**Acosta**	**0.38**	**333**					**04 50 43.9**	**-0.7**
ACOS								04 50 51.9	-0.2
REPA	**Paraso**	**0.39**	**18**					**04 50 44.2**	**-0.6**
REPA								04 50 52.5	+0.2
TAGO	**Cartago**	**0.41**	**9**					**04 50 44.4**	**-0.6**
TAGO								04 50 53.1	+0.3
AMPA	**Desamparados**	**0.45**	**351**					**04 50 44.7**	**-0.6**
AMPA								04 50 53.3	0.0
TRIO	**Tres Rios**	**0.45**	**359**					**04 50 44.8**	**-0.6**
TRIO								04 50 53.6	+0.2
LUJA	**Lujan**	**0.48**	**350**					**04 50 45.0**	**-0.6**
LUJA								04 50 54.1	+0.2
CENT	**San Jose**	**0.48**	**349**					**04 50 46.0**	**+0.3**
CENT								04 50 55.0	+1.1
ECI	**Escuela Centro**	**0.48**	**353**					**04 50 45.4**	**-0.3**
ECI								04 50 54.6	+0.6
SJS3	**Mercedes San J**	**0.48**	**353**					**04 50 45.5**	**-0.3**
SJS3								04 50 54.9	+0.8
SJS	**Escuela Geolog**	**0.49**	**352**					**04 50 45.5**	**-0.3**
SJS								04 50 54.7	+0.6
OCHAL	**Ojochal**	**0.49**	**136**	P				**04 50 45.4**	**-0.2**
OCHAL	**Ojochal**	**0.49**	**136**	S				**04 50 54.9**	**+1.0**
PCAYA	**Pacayas**	**0.49**	**21**					**04 50 45.3**	**-0.6**
PCAYA								04 50 54.2	-0.1
MEXI	**Barrio Mexico**	**0.49**	**349**					**04 50 45.5**	**-0.3**
MEXI								04 50 54.4	+0.2
LUPE	**Guadalupe**	**0.49**	**352**					**04 50 45.1**	**-0.8**
LUPE								04 50 54.5	+0.3
VINA	**Juan Vinas**	**0.50**	**29**					**04 50 45.0**	**-0.9**
VINA								04 50 53.7	-0.6
PAVB	**Pavas, San Jos**	**0.50**	**345**					**04 50 45.2**	**-0.6**
PAVB								04 50 54.2	-0.1
PURI	**Puriscal**	**0.50**	**321**					**04 50 45.3**	**-0.6**
PURI								04 50 54.3	0.0
EDPE	**Pejibaye, P**	**0.51**	**125**					**04 50 45.5**	**-0.3**
EDPE								04 50 55.0	+0.7
SANTA	**Santa Ana**	**0.51**	**338**					**04 50 45.2**	**-0.8**
SANTA								04 50 54.4	-0.2
CORON	**Coronado**	**0.52**	**358**					**04 50 46.0**	**-0.1**
CORON								04 50 55.5	+0.8
RAFA	**San Farael, Vo**	**0.53**	**19**					**04 50 45.8**	**-0.6**
RAFA								04 50 55.0	-0.3
VICA	**Volcano Irazu**	**0.55**	**15**					**04 50 46.0**	**-0.7**
VICA								04 50 55.6	-0.2
BELE	**Belen**	**0.56**	**339**					**04 50 45.8**	**-0.7**
BELE								04 50 55.3	-0.1
HEME	**Heredia, Merce**	**0.56**	**345**					**04 50 47.1**	**+0.6**
HEME								04 50 56.9	+1.5
HDC	**Heredia**	**0.56**	**347**					**04 50 46.0**	**-0.5**
HDC								04 50 55.7	+0.2
VERB	**Verbena**	**0.57**	**31**					**04 50 45.8**	**-0.9**
CVIMO	**Finca Echandi**	**0.57**	**5**					**04 50 46.2**	**-0.5**
CVIMO								04 50 55.9	+0.1
VTCV	**VTCV, Calle Va**	**0.59**	**26**					**04 50 46.1**	**-0.8**
CVTQ	**Turrialba Volc**	**0.59**	**22**					**04 50 46.6**	**-0.5**
CVTQ								04 50 56.6	+0.1
CVTV	**Tajo**	**0.59**	**23**					**04 50 46.7**	**-0.5**
CVTV								04 50 56.8	+0.2
VTR0	**Volcan Turrial**	**0.60**	**22**					**04 50 46.9**	**-0.5**
VTR0								04 50 57.0	+0.1
CVTR	**Volcan Turrial**	**0.61**	**22**					**04 50 46.9**	**-0.5**
CVTR								04 50 56.3	-0.7
ABRB	**Las Abras (San**	**0.61**	**26**					**04 50 46.8**	**-0.5**
ABRB								04 50 56.8	+0.1
ATEO	**Atenas**	**0.65**	**323**					**04 50 46.9**	**-0.7**
ATEO								04 50 57.2	-0.1
TCS1	**Tacares**	**0.66**	**332**					04 50 57.8	+1.0
RESJ	**San Isidro (Tu**	**0.67**	**31**					**04 50 47.4**	**-0.4**
RESJ								04 50 58.1	+0.4
POAS	**San Pedro de P**	**0.67**	**338**					**04 50 47.6**	**-0.2**
POAS								04 50 59.0	+1.2
GREC	**Grecia**	**0.69**	**333**					**04 50 47.7**	**-0.4**
OROT	**Orotina**	**0.70**	**311**					**04 50 47.4**	**-0.7**
OROT								04 50 58.5	+0.3
BURE	**Buenos Aires**	**0.70**	**113**					**04 50 47.4**	**-0.7**
BURE								04 50 57.9	-0.5
PANP	**Palmar Norte**	**0.72**	**133**					**04 50 48.0**	**-0.4**
PANP								04 50 59.4	+0.7
CVTG	**V. Turrialba,**	**0.72**	**17**					**04 50 48.1**	**-0.3**
CVTG								04 50 59.8	+1.0
PALD	**Palmares**	**0.74**	**324**					**04 50 48.0**	**-0.8**
PALD								04 50 59.5	+0.1
NARAN	**Naranjo de Ala**	**0.74**	**329**					**04 50 48.6**	**-0.2**
LCOC	**El Coco**	**0.76**	**34**					**04 50 48.2**	**-0.6**
LCOC								04 51 00.1	+0.6
DRK0	**Durika**	**0.76**	**104**					**04 50 48.1**	**-0.9**
DRK0							*i*	04 50 59.5	-0.4
DRK0	**Durika**	**0.76**	**104**	P				**04 50 48.2**	**-0.9**
DRK0	**Durika**	**0.76**	**104**					**04 50 48.0**	**-0.9**
DRK0								04 50 59.4	-0.5
VPS8	**V Poas**	**0.76**	**341**					**04 50 49.1**	**-0.1**
VPS8								04 51 01.2	+1.0
VPS5	**V. Poas**	**0.77**	**342**					**04 50 48.8**	**-0.5**
VPS5								04 51 00.7	+0.3
FIMO	**Fila Mora**	**0.78**	**126**					**04 50 48.8**	**-0.4**
RAMO	**San Ramon**	**0.79**	**323**					**04 50 48.7**	**-0.7**
RAMO								04 51 00.7	+0.3
SRA1	**San Ramn**	**0.79**	**322**					**04 50 48.8**	**-0.6**
SRA1								04 51 01.0	+0.5
IRES	**Siquirres**	**0.80**	**37**					**04 50 48.9**	**-0.5**
IRES								04 51 00.8	+0.3
ZARE	**Zarcero**	**0.83**	**331**					**04 51 00.8**	**-0.1**
ZARE								04 50 48.8	-0.3
EGUB	**Earth Gu¡pi**	**0.85**	**28**					**04 50 49.8**	**-0.3**
EGUB								04 51 03.0	+1.3
ARZA	**Esparza**	**0.86**	**309**					**04 50 49.7**	**-0.4**
ARZA								04 51 03.4	+1.5
VPL1	**V. Platanar**	**0.88**	**335**					**04 50 50.2**	**-0.5**
VPL1								04 51 03.4	+0.7
ROBF	**Roble, Puntare**	**0.90**	**305**					**04 50 50.4**	**-0.3**
ARTO	**Ro Cuarto**	**0.91**	**346**					**04 50 50.5**	**-0.4**
ARTO								04 51 03.6	+0.5
EDP2	**Potrero Grande**	**0.91**	**118**					**04 50 50.5**	**-0.3**
EDP2								04 51 04.0	+0.9
VERH	**Veragua Rainfo**	**0.92**	**59**					**04 50 50.4**	**-0.6**
VERH								04 51 03.7	+0.4
VPL2	**V. Platanar**	**0.93**	**335**					**04 50 51.1**	**-0.1**
CARI	**Cariari**	**0.94**	**15**					**04 50 50.9**	**-0.3**
CARI								04 51 05.2	+1.5
LAES	**El Progreso Va**	**0.98**	**72**					**04 50 51.1**	**-0.6**
LAES								04 51 04.6	0.0
SARA	**Sarapiqu**	**0.99**	**358**					**04 50 51.4**	**-0.5**
PAQE	**Paquera**	**1.00**	**291**					**04 50 50.6**	**-1.3**
ITAL	**Pital**	**1.03**	**344**					**04 50 52.2**	**-0.2**
CEUA	**Cerro Uatsi, L**	**1.05**	**81**					**04 50 52.8**	**+0.1**
CEUA								04 51 08.7	+2.2
CBL1	**Cabuya**	**1.10**	**277**					**04 50 51.7**	**-1.6**
CBL1								04 51 06.9	-0.6
SOCE	**Pocosol**	**1.11**	**326**	P				**04 50 53.7**	**+0.2**
SOCE	**Pocosol**	**1.11**	**326**	S				**04 51 08.0**	**0.0**
SOCE	**Pocosol**	**1.11**	**326**					**04 50 53.5**	**-0.1**
JIME	**Puerto Jimenez**	**1.12**	**144**					**04 50 54.0**	**+0.4**
TRT2	**Tortugero**	**1.12**	**13**	P				**04 50 53.1**	**-0.6**
TRT2	**Tortugero**	**1.12**	**13**					**04 50 53.0**	**-0.6**
TRT2								04 51 08.3	+0.1
PTJ1	**Puerto Jimnez**	**1.14**	**143**					**04 50 54.5**	**+0.6**
PTJ1	**Puerto Jimnez**	**1.14**	**143**	P				**04 50 53.3**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.14**	**143**	S				**04 51 08.9**	**+0.5**
EDAD	**Golfito**	**1.14**	**134**					**04 50 52.9**	**-1.1**
BRIBI	**Bribri**	**1.17**	**82**					**04 50 54.2**	**0.0**
BRIBI								04 51 11.5	+2.3
JCR1	**Jicaral**	**1.18**	**290**					**04 50 53.2**	**-1.2**
VITO	**San Vito**	**1.19**	**122**					**04 50 54.5**	**-0.1**
FORC	**Fortuna**	**1.21**	**326**					**04 50 55.1**	**+0.3**
CASO	**Castillo**	**1.22**	**323**					**04 50 55.1**	**+0.1**
CASO								04 51 11.9	+1.3
VACR	**Volcan Arenal**	**1.22**	**326**					**04 50 55.1**	**+0.1**
VACR								04 51 12.5	+2.0
PIRO	**Carate, Puerto**	**1.23**	**148**					**04 50 54.3**	**-0.8**
PIRO								04 51 14.4	+3.8
PIRO	**Carate, Puerto**	**1.23**	**148**	P				**04 50 54.4**	**-0.8**
PIRO	**Carate, Puerto**	**1.23**	**148**	S				**04 51 11.0**	**+0.4**
PIRO	**Carate, Puerto**	**1.23**	**148**					**04 50 54.2**	**-0.8**
ARE1	**Arenal 1**	**1.23**	**324**					**04 50 55.4**	**+0.2**
ARE1								04 51 13.0	+2.2
VARE2	**V. Arenal**	**1.23**	**324**					**04 50 55.4**	**+0.2**
VARE2								04 51 12.8	+1.9
CEDE	**Laguna Cedeo**	**1.24**	**326**					**04 50 55.7**	**+0.3**
CEDE								04 51 13.3	+2.1
ALCO	**Alturas Coton,**	**1.25**	**114**					**04 50 54.5**	**-1.0**
JUNT	**Juntas**	**1.26**	**311**					**04 50 55.1**	**-0.4**
JTS	**Las Juntas de**	**1.26**	**311**					**04 50 55.2**	**-0.4**
JTS								04 51 11.6	0.0
JTS	**Las Juntas de**	**1.26**	**311**	P				**04 50 55.1**	**-0.5**
JTS				S				04 51 11.6	0.0
JTS	**Las Juntas de**	**1.26**	**311**					**04 50 55.1**	**-0.5**
JTS								04 51 11.5	0.0
REZ	**Monterrey de S**	**1.27**	**327**					**04 50 55.8**	**0.0**
RSRNO	**Rio Sereno**	**1.28**	**120**					**04 50 55.4**	**-0.4**
TABAC	**Tabacon**	**1.29**	**324**					**04 50 56.3**	**+0.3**
NELV	**Ciudad Neily**	**1.30**	**128**					**04 50 54.8**	**-1.3**
NELV								04 51 12.1	-0.3
COVE	**Coope Vega, Sa**	**1.32**	**342**	P				**04 50 55.8**	**-0.5**
MLIR3	**Monte Lirio, C**	**1.32**	**120**					**04 50 56.7**	**+0.3**
NYURE	**Nandayure**	**1.36**	**293**					**04 50 55.8**	**-1.0**
RGM0	**Gandoca**	**1.37**	**84**	S				**04 51 14.1**	**0.0**
TILA	**Tilaran**	**1.40**	**316**					**04 50 57.1**	**-0.3**
TILA								04 51 16.2	+1.4
CDITO	**Canoas**	**1.41**	**128**	P				**04 50 56.1**	**-1.4**
CDITO	**Canoas**	**1.41**	**128**	S				**04 51 14.2**	**-0.8**
DMCAL	**E. de Neily**	**1.42**	**123**					**04 50 56.7**	**-1.0**
BRU2	**Volcan**	**1.44**	**117**					**04 50 57.6**	**-0.5**
BRU2							AMP	04 50 57.7	
	comp=Z,2µm,0.1s								
BRU2								04 51 16.3	+0.3
BRU2	**Volcan**	**1.44**	**117**	P				**04 50 57.6**	**-0.5**
BRU2	**Volcan**	**1.44**	**117**					**04 50 57.6**	**-0.5**
BRU2								04 51 15.7	-0.3
CNLS	**Canas**	**1.46**	**312**					**04 50 59.2**	**+1.0**
QUEB	**Quebradon, Cot**	**1.47**	**323**					**04 50 58.3**	**0.0**
TBS2		**1.47**	**116**					**04 50 58.0**	**-0.5**
CNI2	**El Empalme, Bo**	**1.50**	**91**					**04 50 57.8**	**-0.9**
CNI2								04 51 17.1	-0.1
BC3P	**Paso Ancho**	**1.50**	**115**					**04 50 58.2**	**-0.7**
BC3P								04 51 17.3	-0.3
TIMP	**Tierras Morena**	**1.51**	**318**					**04 50 58.8**	**-0.2**
TIMP								04 51 18.6	+1.0
CMARA	**Lajas Hojancha**	**1.52**	**292**	P				**04 50 58.0**	**-1.1**
CMARA	**Lajas Hojancha**	**1.52**	**292**					**04 50 57.9**	**-1.1**
CMARA								04 51 17.3	-0.6
CLLRA	**Cordillera,**	**1.53**	**117**					**04 50 58.6**	**-0.7**
INDI	**Punta indio, G**	**1.55**	**285**					**04 50 57.4**	**-1.9**
LESP3	**La Esperanza,**	**1.58**	**131**					**04 51 00.8**	**+1.0**
LESP3								04 51 23.6	+4.5
TENO	**El Achiote**	**1.58**	**322**					**04 50 59.6**	**-0.2**
TENO								04 51 20.0	+0.8
PLVR	**Palo Verde**	**1.61**	**304**					**04 50 59.8**	**-0.6**
ARIEL	**Armuelles**	**1.61**	**136**					Pn 04 51 08.5	+8.2
MOTZ	**Rio Naranjo**	**1.62**	**319**					**04 51 00.9**	**+0.4**
MOTZ								04 51 21.6	+1.3
JEFFS	**S de V. Baru**	**1.64**	**118**					**04 50 59.9**	**-0.7**
PTAR3	**Potrerillos Ar**	**1.66**	**117**					**04 51 00.5**	**-0.5**
PTAR3								04 51 22.1	+0.8
BQTLY	**Boquete Panama**	**1.66**	**115**					**04 51 00.4**	**-0.7**
CUI	**Cuipilapa**	**1.66**	**316**					**04 51 00.7**	**-0.4**
LNBQ3	**Los Naranjos,**	**1.67**	**113**					**04 51 00.2**	**-0.9**
LNBQ3								04 51 21.0	-0.5
JUD3	**Juan Diaz 3**	**1.68**	**295**					**04 51 00.3**	**-1.0**
WILLF	**Boquete**	**1.69**	**114**					**04 51 00.7**	**-0.7**
BQSF3	**Alto Boquete,**	**1.69**	**115**					**04 51 00.8**	**-0.6**
BQSF3								04 51 19.5	-2.6
HORNC	**Hornillas**	**1.71**	**317**					**04 51 01.1**	**-0.6**
**MES

AC01				IAML		04 59 35.7	
	comp=Z,45nm,0.3s						
PB01	**IPOC Station P**	**3.80**	**324**	*e*P	**Pn**	**04 58 45.6**	**-0.8**
PB01				*e*S	**Sn**	**04 59 31.0**	**-1.3**
PB01				IAML		04 59 33.0	
	comp=Z,103nm,0.2s						
PB02	**IPOC Station P**	**3.82**	**317**	*e*P	**Pn**	**04 58 46.7**	**0.0**
PB02				*e*S	**Sn**	**04 59 31.4**	**-1.5**
PB02				IAML		04 59 37.4	
	comp=Z,248nm,0.4s						
PATCX	**Punta Patache**	**4.36**	**319**	*e*P	**Pn**	**04 58 53.2**	**-0.2**
PATCX				*e*S	**Sn**	**04 59 46.5**	**+1.5**
PATCX				IAML		04 59 46.8	
	comp=Z,58nm,0.5s						
PB08	**IPOC Station P**	**4.42**	**334**	*e*P	**Pn**	**04 58 54.9**	**+0.3**
PB08				*e*S	**Sn**	**04 59 46.4**	**-0.5**
PB08				IAML		04 59 47.3	
	comp=Z,38nm,0.4s						
CYA	**Choya**	**4.44**	**165**	*e*P	**Pn**	**04 58 54.5**	**+0.1**
GO03	**Copiapo**	**4.47**	**219**	*e*P	**Pn**	**04 58 54.3**	**-0.5**
GO03				*e*S	**Sn**	**04 59 46.0**	**-1.5**
GO03				IAML		04 59 48.9	
	comp=Z,71nm,0.4s						
TA01	**Diego Aracena**	**4.57**	**320**	*e*P	**Pn**	**04 58 55.7**	**-0.4**
TA01				*e*S	**Sn**	**04 59 47.1**	**-2.7**
TA01				IAML		04 59 53.1	
	comp=Z,33nm,0.3s						
VCA	**Vinchina**	**4.69**	**192**	*e*P	**Pn**	**04 58 54.9**	**-2.9**
VCA				*e*S	Sn	05 00 02.5	+10
PB11	**IPOC Station P**	**4.97**	**331**	*e*S	**Sn**	**04 59 55.0**	**-4.4**
PB11				IAML		05 00 01.2	
	comp=Z,50nm,0.4s						
ACLC	**CERRO LA CRUZ**	**5.27**	**179**	*e*P	**Pn**	**04 59 05.0**	**-0.3**

IDC ***26*** *04:58:08.1±2.8, 41°.42N×19°.10E, h0km, mb3.8/3, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=67.2km s-min=31.5km az=141.0*
SKO ***26*** *04:58:12.1, 41°.60N×19°.33E, h0km, ML3.2*
TIR ***26*** *04:58:12.5, 41°.54N×19°.52E, h33km±4km, Ml3.2/6*
NEIC ***26*** *04:58:13.0±1.6, 41°.48N±0°.02×19°.44E±0°.07, h10km±2km, mb4.1/4, Error ellipse: s-maj=9.5km s-min=3.6km az=259.0*
BEO ***26*** *04:58:15.7±1.0, 41°.59N×19°.65E, h10km±4km, ML3.1/19*

ISC 26 05:58:12.5±1.1, 41°.50N±0°.02×19°.43E±0°.03, h12km±8km, n106, σ1§48/127, mb4.0/3, 9C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.36**	**114**	Pg		**Pg**		**04 58 19.8**	**+0.1**
TIR				Sg		**Sg**		**04 58 24.4**	**-0.2**
TIR				AML		AML		04 58 25.1	
	12nm,0.3s								
TIR	**Tirane**	**0.36**	**114**	*i* Pg		**Pg**		**04 58 20.4**	**+0.6**
TIR				*i* Sg		**Sb**		**04 58 26.0**	**-0.5**
SDA	**Shkodra**	**0.56**	**6**	Pg		**Pb**		**04 58 23.3**	**-0.9**
SDA				Sg		**Sb**		**04 58 31.3**	**-0.8**
DRME	**Dracevica, Mon**	**0.71**	**345**	*e*Pg		**Pb**		**04 58 27.3**	**+0.4**
PHP	**Peshkopia**	**0.78**	**76**	Pg		**Pg**		**04 58 26.6**	**-1.1**
PHP				Sg		**Sg**		**04 58 35.8**	**-2.2**
PHP				AML		AML		04 58 42.4	
	5.8nm,0.4s								
PDG	**Podgorica**	**0.94**	**352**	Pg		**Pb**		**04 58 30.2**	**-0.5**
PDG				Sg		**Sn**		**04 58 45.2**	**+0.3**
PDG	**Podgorica**	**0.94**	**352**	Pg		**Pn**		**04 58 30.9**	**-0.6**
PDG				Sg		**Sn**		**04 58 43.5**	**-1.4**
PDG	**Podgorica**	**0.94**	**352**	*e*Pg		**Pn**		**04 58 31.6**	**+0.1**
PDG				*e*Sg		**Sn**		**04 58 45.5**	**+0.6**
VLO	**Vlora**	**1.03**	**177**	Pg		**Pn**		**04 58 36.6**	**+3.8**
VLO				Sg		**Sg**		**04 58 45.8**	**0.0**
OHR	**Ohrid**	**1.10**	**110**	*i* Pg		**Pn**		**04 58 34.2**	**+0.3**
OHR				*e*Lg		Lg		04 58 51.1	
	comp=N,392nm,0.7s								
OHR				*i* Sg		**Sn**		**04 58 51.8**	**+2.7**
OHR				*e*Lg		Lg		04 58 53.1	
	comp=E,480nm,0.6s								
PVY	**Plav**	**1.17**	**20**	*e*Pg		**Pn**		**04 58 35.6**	**+0.8**
KBN	**Korca**	**1.35**	**130**	Pg		**Pn**		**04 58 37.8**	**+0.6**
KBN				Sg		**Sb**		**04 58 53.9**	**-1.1**
KBN				AML		AML		04 59 01.3	
	comp=E,1.2nm,0.5s								
KOME	**Kolasin**	**1.35**	**3**	*e*Pg		**Pg**		**04 58 40.5**	**+2.0**
BEY	**Berane**	**1.42**	**14**	*e*Pg		**Pg**		**04 58 39.1**	**-0.6**
TREB	**Trebinje**	**1.46**	**327**	*e*Pg		**Pg**		**04 58 41.4**	**+0.9**
TREB				*e*Sg		**Sg**		**04 59 02.0**	**+2.6**
SKO	**Skopje**	**1.58**	**72**	*i* Pg		**Pb**		**04 58 41.7**	**0.0**
SKO				*i* Sg		**Sg**		**04 59 03.5**	**+0.2**
NEST	**Nestorio**	**1.64**	**131**	Pn		**Pn**		**04 58 42.3**	**+1.1**
NEST				AML		AML		04 59 08.0	
	comp=E,0.7nm,0.6s								
SJES	**Sjenica**	**1.81**	**13**	*e*Pg		**Pg**		**04 58 47.2**	**0.0**
PLE	**Pljevlja**	**1.83**	**359**	*e*Pg		**Pg**		**04 58 46.8**	**-0.8**
STON	**Ston**	**1.88**	**318**	*e*Pn		**Pg**		**04 58 47.5**	**-1.0**
NOCI	**Noci**	**1.92**	**249**	Pn		**Pn**		**04 58 45.9**	**+0.9**
NOCI				Sn		**Sn**		**04 59 08.4**	**-0.7**
NOCI				AML		AML		04 59 20.4	
	comp=E,1.2nm,0.3s								
IGT	**Igoumenitsa**	**2.08**	**160**	Pn		**Pn**		**04 58 44.5**	**-2.8**
IGT	**Igoumenitsa**	**2.08**	**160**	*i* Pn		**Pn**		**04 58 46.6**	**-0.7**
IGT				*i* Sn		**Sn**		**04 59 15.5**	**+2.3**
RUDO	**Rudo**	**2.12**	**359**	*e*Pn		**Pb**		**04 58 51.0**	**+0.1**
SELS	**Selova**	**2.13**	**36**	*e*Pg		**Pb**		**04 58 49.3**	**-1.7**
SELS				*e*Sg		**Sb**		**04 59 16.4**	**-1.0**
IVAS	**Ivanjica**	**2.15**	**14**	*e*Pn		**Pb**		**04 58 50.0**	**-1.3**
MATE	**Matera**	**2.23**	**248**	⇓P		**Pn**		**04 58 47.6**	**-1.6**
GOCS	**Kraljevo Serbi**	**2.32**	**27**	*e*Pn		**Pn**		**04 58 51.8**	**+1.1**
BBLS	**Lazi&#263i**	**2.37**	**360**	*e*Pn		**Pb**		**04 58 55.7**	**+0.6**
VAY	**Valandovo**	**2.37**	**93**	*i* Pn		**Pn**		**04 58 52.6**	**+1.4**
VAY				*i* Sn		**Sn**		**04 59 22.1**	**+1.8**
VAY				*e*Lg		Lg		04 59 23.2	
	comp=N,73nm,0.6s								
VAY				*e*Lg		Lg		04 59 27.3	
	comp=E,33nm,0.6s								
GRUS	**Gruza**	**2.57**	**21**	*e*Pn		**Pn**		**04 58 55.6**	**+1.6**
DIVS	**Divibare**	**2.63**	**9**	*e*Pn		**Pn**		**04 58 56.8**	**+1.9**
KNT	**Kendrikon**	**2.64**	**96**	*i* Pn		**Pn**		**04 58 56.5**	**+1.6**
LIT	**Litokhoron**	**2.71**	**120**	Pn		**Pn**		**04 58 55.7**	**-0.3**
BOVS	**Bovan**	**2.72**	**38**	⇓P		**Pn**		**04 58 57.2**	**+1.2**
BOVS	**Bovan**	**2.72**	**38**	*e*Pn		**Pn**		**04 58 57.3**	**+1.2**
ACER	**Acerenza**	**2.73**	**256**			**Pn**		**04 58 57.3**	**+1.2**
SGRT	**San Giovanni R**	**2.77**	**277**	Pn		**Pn**		**04 58 57.0**	**+0.2**
SGRT	**San Giovanni R**	**2.77**	**277**	Pn		**Pn**		**04 58 56.7**	**-0.2**
KKB	**Krupnik**	**2.79**	**82**	*i* Pn		**Pn**		**04 58 58.7**	**+1.6**
THE	**Thessaloniki**	**2.81**	**107**	*i* Pn		**Pn**		**04 58 58.2**	**+0.9**
THE				*i* Sn		**Sn**		**04 59 31.6**	**+0.5**
TRUS	**Trudelj**	**2.82**	**15**	*e*Pn		**Pb**		**04 59 00.3**	**-2.5**
ZAPS	**Zavoj**	**2.96**	**52**	*e*Pn		**Pn**		**04 59 01.1**	**+1.7**
VTS	**Vitosha**	**3.05**	**67**	*e*Pn		**Pn**		**04 59 02.0**	**+1.3**
TEKS	**Tekeris**	**3.05**	**1**	*e*Pn		**Pn**		**04 59 02.3**	**+1.7**
TIP	**Timpagrande**	**3.09**	**222**	Pn		**Pn**		**04 59 01.6**	**+0.5**
TIP	**Timpagrande**	**3.09**	**222**	⇑P		**Pn**		**04 59 02.0**	**+0.8**
ZAGS	**Zajecar**	**3.10**	**41**	*e*Pn		**Pn**		**04 59 02.9**	**+1.6**
CUC	**Castrocucco**	**3.13**	**242**	Pn		**Pn**		**04 59 03.0**	**+1.4**
SRS	**Serrai**	**3.16**	**96**	*i* Pn		**Pn**		**04 59 03.3**	**+1.2**
BLKB	**Belogradchik**	**3.20**	**47**	*e*Pn		**Pn**		**04 59 04.4**	**+1.7**
BORS2	**Bor- Borsko je**	**3.22**	**36**	*e*Pn		**Pn**		**04 59 02.8**	**-0.1**
KUBS	**Kucevo**	**3.35**	**29**	*e*Pn		**Pn**		**04 59 02.8**	**-1.9**
FRGS	**Fruska Gora**	**3.67**	**4**	*e*Pn		**Pn**		**04 59 10.3**	**+1.2**
MDVR	**Moldovita**	**3.68**	**26**	⇑P		**Pn**		**04 59 09.4**	**0.0**
MDVR	**Moldovita**	**3.68**	**26**	*e*Pn		**Pn**		**04 59 10.0**	**+0.7**
VRSS	**Vrsac**	**3.88**	**20**	*e*Pn		**Pn**		**04 59 13.1**	**+1.1**
HERR	**Herculane**	**4.03**	**32**	⇑P		**Pn**		**04 59 15.2**	**+1.2**
CEL	**Celeste**	**4.22**	**221**	Pn		**Pn**		**04 59 17.2**	**+0.4**
PLVB	**Pleven**	**4.28**	**62**	⇑P		**Pn**		**04 59 19.7**	**+2.2**
BZS	**Buzias**	**4.41**	**20**	⇑P		**Pn**		**04 59 19.2**	**-0.1**
GZR	**Gura Zlata**	**4.59**	**31**	⇓P		**Pn**		**04 59 22.8**	**+1.0**
CAMP	**Campotosto**	**4.60**	**285**			**Pn**		**04 59 23.9**	**+1.9**
RDO	**Rodhopi**	**4.62**	**92**	Pn		**Pn**		**04 59 22.0**	**-0.1**
SURR	**Surduc**	**4.68**	**24**	⇑P		**Pn**		**04 59 23.4**	**+0.4**
ITM	**Ithomi**	**4.73**	**155**	Pn		**Pn**		**04 59 24.5**	**+0.9**
MORH	**Mrgy, Hungar**	**4.75**	**353**	*e*Pn		**Pn**		**04 59 27.0**	**+3.1**
GUMA	**Gualdo di Mace**	**4.78**	**291**	Pn		**Pn**		**04 59 25.4**	**+1.0**
NRCA	**Norcia**	**4.88**	**288**			**Pn**		**04 59 27.2**	**+1.4**
FDMO	**Fiordimonte**	**4.95**	**290**			**Pn**		**04 59 27.8**	**+1.1**
SIRR	**Siria**	**5.03**	**18**	⇑P		**Pn**		**04 59 27.6**	**-0.2**
SIRR	**Siria**	**5.03**	**18**	*e*Pn		**Pn**		**04 59 29.1**	**+1.3**
LOT	**Lotru**	**5.06**	**37**	⇓P		**Pn**		**04 59 29.7**	**+1.4**
MURB	**Monte Urbino**	**5.41**	**291**			**Pn**		**04 59 34.7**	**+1.7**
ARR	**Arges**	**5.42**	**43**	⇓P		**Pn**		**04 59 34.1**	**+0.9**
VOIR		**5.68**	**44**	⇓P		**Pn**		**04 59 39.2**	**+2.4**
DRGR		**5.79**	**23**	⇓P		**Pn**		**04 59 39.0**	**+0.7**
RAFF	**Raffo Rosso**	**5.80**	**224**	Pn		**Pn**		**04 59 38.2**	**-0.1**
SOKA	**Soboth**	**6.07**	**330**	*i* Pn		**Pn**		**04 59 43.5**	**+1.4**
SOKA	comp=E,1.6nm,0.3s			*i* Sn		**Sn**		**05 00 49.3**	**-2.2**
	comp=E,3.8nm,0.8s								
SABO	**M.te Sabotino**	**6.15**	**319**	Pn		**Pn**		**04 59 44.1**	**+0.9**
MLR	**Muntele Rosu**	**6.20**	**48**	Pn		**Pn**		**04 59 46.3**	**+2.4**
MLR	comp=E,1.1nm,0.3s,baz=237,slow=5.1,SNR=7.7			Sn		**Sn**		**05 00 58.6**	**+3.9**
	comp=E,0.5nm,0.3s,baz=120,slow=20,SNR=2.0 comp=E,2.4nm,0.4s								
MLR	**Muntele Rosu**	**6.20**	**48**	⇓P		**Pn**		**04 59 44.4**	**+0.5**
ARSA	**Arzberg**	**6.39**	**335**	Pn		**Pn**		**04 59 48.4**	**+1.9**
PLOR	**Plostina**	**6.81**	**48**	⇑P		**Pn**		**04 59 54.5**	**+2.3**
TEOL	**Teolo**	**6.84**	**307**	Pn		**Pn**		**04 59 52.8**	**+0.3**
VRI	**Vrincioaia**	**6.86**	**48**	⇓P		**Pn**		**04 59 53.6**	**+0.7**
KECS	**Kecovo**	**7.02**	**6**	*e*PN		Pn		05 00 01.5	+6.4
KECS				*e*SN		**Sn**		**05 01 16.0**	**+1.1**
ABTA	**Abfaltersbach**	**7.23**	**319**	*i* Pn		**Pn**		**05 00 00.7**	**+2.7**
	comp=E,0.6nm,0.3s								
ABTA				*e*Sn		**Sn**		**05 01 19.6**	**-0.5**
	comp=E,2.4nm,0.4s								
LESA	**Schwarzleotal**	**7.64**	**323**	*i* Pn		**Pn**		**05 00 05.0**	**+1.4**
	comp=E,0.8nm,0.3s								
LESA				*i* Sn		**Sn**		**05 01 28.2**	**-1.9**
	comp=E,1.1nm,0.4s								
TLCR		**7.77**	**59**	⇑P		**Pn**		**05 00 08.1**	**+2.8**
MSSA	**Maissana**	**7.80**	**294**	Pn		**Pn**		**05 00 06.3**	**+0.4**
WTTA	**Wattenberg**	**8.02**	**319**	*e*Pn		**Pn**		**05 00 12.1**	**+3.1**
	comp=E,1.0nm,0.2s								
WATA	**Walderalm**	**8.10**	**319**	*e*Pn		**Pn**		**05 00 13.8**	**+3.8**
	comp=E,0.9nm,0.2s								
FETA	**Feichten**	**8.33**	**314**	*e*Sn		**Sn**		**05 01 46.0**	**-1.2**
	comp=E,1.7nm,0.5s								
TUE	**Stuetta**	**8.80**	**308**	Pn		**Pn**		**05 00 20.5**	**+0.8**
SENIN	**Lac Senin/Sane**	**10.01**	**303**	Pn		**Pn**		**05 00 37.1**	**+0.9**
ECH	**Echery**	**10.99**	**312**	Pn		**Pn**		**05 00 51.6**	**+2.1**
EKB	**Eskdalemuir**	**20.29**	**321**	P		P		**05 02 48.0**	**+0.1**
EKB				IAmb		IAmb		05 02 55.7	
	comp=Z,8.4nm,1.1s								
FINES	**FINESS Array B**	**20.38**	**9**	P		**P**		**05 02 47.2**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=183,slow=9.7,SNR=6.9 comp=Z,2.2nm,0.7s								
FINES	**FINESS Array B**	**20.38**	**9**	P		**P**		**05 02 47.7**	**-1.1**
FIA1	**FINESS Array S**	**20.38**	**9**	P		**P**		**05 02 48.0**	**-0.8**
BORK	**Borovoye**	**35.68**	**53**	P		**P**		**05 05 11.1**	**+0.7**
BORK				IAmb		IAmb		05 05 11.4	
	comp=Z,1.6nm,0.5s								
ZALV	**Zalesovo Beam**	**44.17**	**50**	P		**P**		**05 06 19.8**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=282,slow=8.4,SNR=4.5 comp=Z,1.3nm,0.6s								
MKAR	**Makanchi Array**	**44.35**	**61**	P		**P**		**05 06 21.8**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=276,slow=8.4,SNR=7.9 comp=Z,1.1nm,0.6s								
MKAR	**Makanchi Array**	**44.35**	**61**	P		**P**		**05 06 22.1**	**-0.5**
EVN	**Everest**	**55.72**	**81**	P		**P**		**05 07 48.7**	**-1.1**

NNC 26 05:00:33.3±7.5, 38°.60N×68°.94E, h0km, mb3.6, mpv3.2, 5C, Error ellipse: s-maj=65.7km s-min=48.3km az=79.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.64**	**13**	Pg		Pg	Pb	05 01 38.6	-0.1
	16nm,0.7s								
IUG				Lg		Lg		05 02 32.6	
	69nm,0.9s								
BRLS	**Borolday**	**4.48**	**8**	Pg		Pg	Pb	05 01 49.8	-3.1
	1.9nm,0.7s								
BRLS				Lg		Lg		05 02 51.4	
	14nm,1.3s								
KK31	**Karatay Array**	**4.66**	**14**	⇑Pn		Pn		05 01 42.2	-2.7
	0.3nm,0.2s,baz=187,slow=9.7,SNR=3.3								
KK31				Pg		Pb		05 01 56.6	+0.8
	1.2nm,0.3s,baz=197,slow=18,SNR=16								
KK31				⇑Lg		Lg		05 03 03.2	
	21nm,0.7s,baz=184,slow=30,SNR=4.5								
MRKS	**Merke**	**5.27**	**37**	Pg		Pb		05 02 05.1	-1.3
	3.4nm,0.9s								
MRKS				Lg		Lg		05 03 17.7	
	6.3nm,1.3s								
AAK	**Ala-Archa**	**5.84**	**45**	⇑Pn		Pn		05 02 04.7	+3.3
	2.8nm,0.9s								
AAK				⇑Pg		Pg		05 02 24.2	-1.1
	2.2nm,0.6s								
AAK				⇑Lg		Lg		05 03 32.5	
	5.3nm,0.8s								

GCG 26 05:02:54.1±1.3, 15°.98N×89°.53W, h41km±40km, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PETF	**Flores**	**0.99**	**341**	*i* P		Pn		05 03 11.9	+0.4
PETF				*i* S		Sn		05 03 24.3	+0.1
APG	**El Apazote**	**1.32**	**223**	*i* P		Pn		05 03 16.2	-0.1
APG				*i* S		Sn		05 03 34.9	+2.0
MTO3	**Montecristo**	**1.58**	**174**	*i* P		Pn		05 03 20.4	+0.5
QUIS	**Sacapulas**	**1.65**	**246**	*i* P		Pn		05 03 24.4	+3.6

IDC ***26*** *05:06:04.5±2.7, 41°.54N×19°.29E, h0km, mb3.8/4, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=69.1km s-min=31.2km az=141.0*
SKO ***26*** *05:06:08.8, 41°.60N×19°.42E, h18km, ML3.0*

ISC 26 05:06:07.6±2.7, 41°.52N±0°.06×19°.40E±0°.09, h16km±15km, n15, σ1§51/22, mb3.8/3, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**1.13**	**111**	*i* Pg		**Pn**		**04 58 49.6**	**+0.9**
OHR				*i* Sg		**Sn**		**05 06 45.3**	**+1.4**
OHR				*e*Lg		Lg		05 06 46.1	
	comp=N,199nm,0.5s								
OHR				*e*Lg		Lg		05 06 48.9	
	comp=E,226nm,0.5s								
SKO	**Skopje**	**1.59**	**73**	*i* Pg		**Pb**		**05 06 36.7**	**+0.1**
SKO				*i* Sg		**Sg**		**05 06 58.3**	**-0.6**
IGT	**Igoumenitsa**	**2.11**	**160**	*i* Pn		**Pb**		**05 06 46.2**	**+0.8**
VAY	**Valandovo**	**2.39**	**94**	*i* Pn		**Pn**		**05 06 47.2**	**+1.2**
VAY				*i* Sn		**Sn**		**05 07 16.7**	**+1.7**
VAY				*e*Lg		Lg		05 07 16.8	
	comp=E,48nm,0.5s								
VAY				*e*Lg		Lg		05 07 18.0	
	comp=N,44nm,0.7s								
KNT	**Kendrikon**	**2.66**	**97**	*i* Pn		**Pn**		**05 06 51.1**	**+1.4**
KNT				*i* Sn		**Sn**		**05 07 20.6**	**-0.9**
LIT	**Litokhoron**	**2.74**	**120**	*i* Pn		**Pb**		**05 06 54.7**	**-1.4**
KKB	**Krupnik**	**2.81**	**82**	*i* Pn		**Pn**		**05 06 53.4**	**+1.5**
KKB				*i* Sn		**Sn**		**05 07 26.2**	**+0.8**
THE	**Thessaloniki**	**2.83**	**107**	*i* Pn		**Pn**		**05 06 54.1**	**+2.0**
SRS	**Serrai**	**3.18**	**96**	*i* Pn		**Pn**		**05 06 57.7**	**+0.8**
SRS				*i* Sn		**Sn**		**05 07 34.4**	**0.0**
MMB	**Musomishta**	**3.26**	**88**	*i* Pn		**Pn**		**05 06 60.0**	**+1.9**
MLR	**Muntele Rosu**	**6.20**	**48**	Pn		**Pn**		**05 07 41.7**	**+3.3**
	comp=N,0.8nm,0.3s,baz=157,slow=5.8,SNR=7.3								
MLR				Sn		**Sn**		**05 08 49.3**	**+0.3**
	baz=180,slow=19 comp=N,3.7nm,0.5s								
FINES	**FINESS Array B**	**20.36**	**9**	P		**P**		**05 10 42.2**	**-0.8**
	comp=N,0.8nm,0.5s,baz=187,slow=9.8,SNR=6.0 comp=N,0.8nm,0.5s								
ARTI	**Arti**	**29.14**	**46**	P		**P**		**05 12 05.4**	**-2.1**
	comp=N,1.8nm,0.5s,baz=333,slow=6.8,SNR=3.3 comp=N,1.8nm,0.5s								
ZALV	**Zalesovo Beam**	**44.17**	**50**	P		**P**		**05 14 14.6**	**-0.7**
	comp=N,0.8nm,0.5s,baz=297,slow=9.7,SNR=4.0 comp=N,0.8nm,0.5s								
MKAR	**Makanchi Array**	**44.36**	**61**	P		**P**		**05 14 16.6**	**-0.3**
	comp=N,0.6nm,0.6s,baz=281,slow=8.5,SNR=4.7 comp=N,0.6nm,0.6s								

IDC 26 05:14:54.5±89.0, 42°.23N×20°.39E, h0km, mb3.6/2, mbtmp3.6/3, ML2.9/1, Error ellipse: s-maj=1611.0km s-min=71.2km az=51.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**19.55**	**8**	P		P	P	05 19 23.4	0.0
	0.1nm,0.3s,baz=190,slow=9.7,SNR=5.0 1.0nm,0.6s								
ZALV	**Zalesovo Beam**	**43.15**	**51**	P		P	P	05 22 56.3	-0.2
	0.4nm,0.3s,baz=287,slow=10,SNR=2.2								
MKAR	**Makanchi Array**	**43.38**	**62**	P			P	05 22 58.4	-0.1
	0.4nm,0.5s,baz=290,slow=9.0,SNR=2.9 0.4nm,0.5s								

SCB ***26*** *05:16:26.6±1.3, 21°.49S×66°.80W, h217km±9km, MB5.1, ML4.0/3, Error ellipse: s-maj=4.9km s-min=4.1km az=0.0*
SJA ***26*** *05:16:26.8±1.0, 21°.46S×67°.05W, h246km±12km, ML3.7, MW3.7*

ISC 26 05:16:26.2±2.0, 21°.44S±0°.05×66°.85W±0°.05, h222km±16km, n36, σ1§24/47, 2D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.14**	**81**	Pg		**Pn**		**05 16 59.9**	**+0.1**
MOCB				Sg		**S**		**05 17 24.7**	**-1.0**
MOCB				IAML				05 17 25.3	
	349nm,0.4s								
AOVT	**TarijaAcel**	**2.00**	**93**	Pg		**Pn**		**05 17 06.2**	**-0.4**
PB09	**IPOC Station P**	**2.25**	**260**	Pg		**Pn**		**05 17 10.9**	**+1.8**
PB09	**IPOC Station P**	**2.25**	**260**	*i* P		**Pn**		**05 17 10.3**	**+1.2**
PB09				*i* S		**S**		**05 17 42.1**	**-0.3**
PB09				IAML				05 17 49.8	
	comp=Z,109nm,0.4s								
PB01	**IPOC Station P**	**2.49**	**279**	Pg		**Pn**		**05 17 13.1**	**+1.6**
PB01				Sg		**S**		**05 17 47.3**	**+0.5**
PB01				IAML				05 17 48.9	
	comp=Z,243nm,0.3s								
PB01	**IPOC Station P**	**2.49**	**279**	*i* P		**Pn**		**05 17 12.3**	**+0.7**
PB01				*i* S		**S**		**05 17 46.1**	**-0.7**
PB01				IAML				05 17 48.7	
	comp=Z,173nm,0.2s								
PB08	**IPOC Station P**	**2.51**	**300**	Pg		**Pn**		**05 17 13.4**	**+1.3**
PB08	**IPOC Station P**	**2.51**	**300**	*e*P		**Pn**		**05 17 13.6**	**+1.5**
PB03	**IPOC Station P**	**2.77**	**257**	⇓P		**Pn**		**05 17 15.8**	**+1.2**
PB03				*i* S		**S**		**05 17 50.8**	**-1.5**
PB03				IAML				05 17 54.6	
	comp=Z,433nm,0.2s								
GO01	**Chusmiza**	**2.81**	**308**	Pg		**Pn**		**05 17 17.1**	**+1.6**
GO01	**Chusmiza**	**2.81**	**308**	*i* P		**Pn**		**05 17 16.4**	**+0.9**
SALTA		**2.81**	**170**	*i* P		**Pn**		**05 17 17.9**	**+2.5**
PB06	**IPOC Station P**	**2.82**	**243**	Pg		**Pn**		**05 17 16.7**	**+1.5**
PB06	**IPOC Station P**	**2.82**	**243**	*e*P		**Pn**		**05 17 16.4**	**+1.2**
PB06				*i* S		**S**		**05 17 51.7**	**-1.7**
PB06				IAML				05 18 00.9	
	comp=Z,86nm,0.2s								
PB07	**IPOC Station P**	**2.84**	**264**	*e*P		**Pn**		**05 17 16.4**	**+0.9**
PB07				*i* S		**S**		**05 17 52.4**	**-1.4**
PB07				IAML				05 17 54.9	
	comp=Z,380nm,0.2s								
PB02	**IPOC Station P**	**2.84**	**272**	Pg		**Pn**		**05 17 16.7**	**+1.3**
PB02				Sg		**S**		**05 17 53.4**	**-0.3**
PB02				IAML				05 17 54.3	
	comp=Z,926nm,0.5s								
PB02	**IPOC Station P**	**2.84**	**272**	*i* P		**Pn**		**05 17 15.9**	**+0.5**
PB02				*i* S		**S**		**05 17 51.6**	**-2.1**
SOEO	**Opoqueri**	**3.02**	**341**	Pg		**Pn**		**05 17 19.7**	**+1.9**
PB11	**IPOC Station P**	**3.11**	**302**	Pg		**Pn**		**05 17 19.5**	**+1.0**
PB11	**IPOC Station P**	**3.11**	**302**	*e*P		**Pn**		**05 17 19.2**	**+0.7**
PATCX	**Punta Patache**	**3.14**	**281**	*i* P		**Pn**		**05 17 19.4**	**+0.6**
PATCX				IAML				05 18 03.0	
	comp=Z,121nm,0.4s								
TA01	**

SDA	**Shkodra**	**0.61**	**3**	Pg		**Pg**	05 32 34.5	**0.0**
SDA				Sg		**Sb**	05 32 43.4	**0.0**
DRME	**Dracevica, Mon**	**0.77**	**345**	*e*Pg		**Pn**	05 32 38.4	**-0.5**
DRME				*e*Sg		**Sn**	05 32 52.6	**+2.2**
DRME	**Dracevica, Mon**	**0.77**	**345**	⇑*i*Pg		**Pg**	05 32 37.3	**-0.2**
DRME				*i* Sg		**Sn**	05 32 50.2	**-0.2**
PHP	**Peshkopia**	**0.78**	**71**	Pg		**Pg**	05 32 36.6	**-1.1**
PHP				Sg		**Sg**	05 32 48.1	**+0.1**
PHP				AML	AML		05 32 50.5	
	11nm,0.6s							
PHP	**Peshkopia**	**0.78**	**71**	P		**Pg**	05 32 36.7	**-0.9**
PHP				S		**Sb**	05 32 48.6	**+0.2**
BUM	**Brajici-Budva**	**0.96**	**334**	⇓*i*Pg		**Pn**	05 32 43.3	**+1.8**
BUM				*i* Sg		**Sn**	05 32 57.0	**+2.0**
VLO	**Vlora**	**0.97**	**178**	Pg		**Pn**	05 32 43.8	**+2.2**
VLO				Sg		**Sn**	05 32 57.6	**+2.5**
VLO				AML	AML		05 33 03.0	
	13nm,0.5s							
VLO	**Vlora**	**0.97**	**178**	P		**Pn**	05 32 43.5	**+1.9**
VLO				S		**Sn**	05 32 59.2	**+4.1**
PDG	**Podgorica**	**1.00**	**352**	Pg		**Pb**	05 32 37.6	**-4.0**
PDG				Sg		**Sn**	05 32 57.6	**+1.7**
PDG	**Podgorica**	**1.00**	**352**	⇑P		**Pb**	05 32 39.7	**-1.8**
PDG	**Podgorica**	**1.00**	**352**	*e*Pg		**Pn**	05 32 42.3	**+0.3**
PDG				*e*Sg		**Sn**	05 32 58.2	**+2.3**
PDG	**Podgorica**	**1.00**	**352**	⇓*i*Pg		**Pb**	05 32 37.6	**-3.9**
PDG				*i* Sg		**Sn**	05 32 56.2	**+0.3**
OHR	**Ohrid**	**1.07**	**107**	*i* Pg		**Pb**	05 32 42.9	**+0.2**
OHR				*i* Sg		**Sn**	05 32 58.6	**+1.0**
OHR				*e*Lg	Lg		05 32 60.0	
	comp=E,534nm,0.6s							
OHR				*e*Lg	Lg		05 33 00.5	
	comp=N,786nm,0.6s							
CEME	**Cevo**	**1.18**	**340**	⇓*i*Pg		**Pb**	05 32 43.5	**-1.1**
CEME				*i* Sg		**Sn**	05 33 03.3	**+2.9**
PVY	**Plav**	**1.22**	**18**	⇓*i*Pg		**Pn**	05 32 44.6	**-0.5**
PVY				*i* Sg		**Sn**	05 33 02.8	**+1.4**
KBN	**Korca**	**1.30**	**128**	Pg		**Pb**	05 32 47.0	**+0.4**
KBN	**Korca**	**1.30**	**128**	P		**Pg**	05 32 47.7	**+0.2**
NKME	**Niksic**	**1.38**	**345**	⇓*i*Pg		**Pg**	05 32 48.3	**-0.6**
NKME				*i* Sg		**Sg**	05 33 08.6	**+1.7**
KOME	**Kolasin**	**1.41**	**2**	*e*Pg		**Pg**	05 32 49.7	**+0.1**
KOME				*e*Sg		**Sg**	05 33 09.3	**+1.3**
KOME	**Kolasin**	**1.41**	**2**	⇓*i*Pg		**Pg**	05 32 49.8	**+0.2**
KOME				*i* Sg		**Sg**	05 33 08.9	**+0.9**
IVA	**Berane**	**1.47**	**13**	⇑*i*Pg		**Pb**	05 32 49.6	**0.0**
IVA				*i* Sg		**Sg**	05 33 12.2	**+2.4**
SKO	**Skopje**	**1.58**	**70**	*i* Pg		**Pb**	05 32 51.7	**+0.3**
SKO				*i* Sg		**Sg**	05 33 13.7	**+0.3**
NEST	**Nestorio**	**1.59**	**130**	Pn		**Pg**	05 32 52.7	**-0.2**
NEST				AML	AML		05 33 22.5	
	comp=N,1.5nm,0.6s							
NEST	**Nestorio**	**1.59**	**130**	P		**Pb**	05 32 52.4	**+0.9**
NEST				S		**Sg**	05 33 13.9	**+0.5**
BRY	**Bratogost**	**1.61**	**335**	⇑*i*Pn		**Pb**	05 32 51.9	**-0.1**
BRY				*i* Sn		**Sg**	05 33 16.8	**+2.5**
PENT	**Pentalofos**	**1.78**	**134**	P		**Pb**	05 32 55.4	**+0.5**
UPM	**Unac-Piva**	**1.81**	**347**	⇓*i*Pn		**Pb**	05 32 56.0	**+0.5**
UPM				*i* Sn		**Sg**	05 33 21.4	**+0.7**
SJES	**Sjenica**	**1.86**	**12**	*e*Pg		**Pg**	05 32 57.5	**-0.7**
SJES				*e*Sg		**Sg**	05 33 22.0	**-0.4**
PLE	**Pljevlja**	**1.89**	**359**	⇓*i*Pn		**Pg**	05 32 57.7	**-1.0**
PLE				*i* Sn		**Sg**	05 33 22.9	**-0.4**
NOCI	**Noci**	**1.92**	**251**	Pn		**Pg**	05 32 59.5	**+0.3**
NOCI				AML	AML		05 33 31.2	
	comp=N,1.4nm,0.5s							
IGT	**Igoumenitsa**	**2.02**	**160**	P		**Pn**	05 32 57.3	**+1.2**
IGT	**Igoumenitsa**	**2.02**	**160**	*i* Pn		**Pb**	05 32 57.8	**-1.1**
IGT				*i* Sn		**Sg**	05 33 27.1	**-0.2**
KZN	**Kozani**	**2.09**	**122**	P		**Pb**	05 32 59.2	**-1.0**
SELS	**Selova**	**2.17**	**34**	*e*Pn		**Pn**	05 32 59.5	**+1.4**
SELS				*e*Sn		**Sn**	05 33 26.2	**+1.4**
IVAS	**Ivanjica**	**2.20**	**13**	*e*Pn		**Pn**	05 32 59.6	**+1.0**
IVAS				*e*Sn		**Sb**	05 33 28.5	**-0.6**
MATE	**Matera**	**2.22**	**250**	⇑P		**Pn**	05 32 59.8	**+1.0**
PRMD	**Pramanda**	**2.28**	**146**	P		**Pb**	05 33 02.4	**-1.0**
VAY	**Valandovo**	**2.35**	**92**	*i* Pn		**Pn**	05 33 01.7	**+1.1**
VAY				*i* Sn		**Sn**	05 33 30.9	**+1.6**
VAY				*e*Lg	Lg		05 33 37.3	
	comp=N,71nm,0.7s							
VAY				*e*Lg	Lg		05 33 37.4	
	comp=E,83nm,0.7s							
GOCS	**Kraljevo Serbi**	**2.37**	**26**	*e*Pn		**Pn**	05 33 02.4	**+1.5**
GOCS				*e*Sn		**Sn**	05 33 31.3	**+1.4**
BBLS	**Lazi&#263i**	**2.43**	**359**	*e*Pn		**Pn**	05 33 03.8	**+2.1**
BBLS				*e*Sn		**Sb**	05 33 33.8	**-1.9**
TETR	**Tetrakomo, Epi**	**2.51**	**146**	P		**Pn**	05 33 05.0	**+2.1**
KNT	**Kendrikon**	**2.61**	**95**	P		**Pn**	05 33 05.2	**+1.0**
KNT	**Kendrikon**	**2.61**	**95**	*i* Pn		**Pn**	05 33 05.6	**+1.4**
KNT				*i* Sn		**Sn**	05 33 36.5	**+0.7**
GRUS	**Gruza**	**2.62**	**20**	*e*Pn		**Pn**	05 33 06.2	**+1.9**
GRUS				*e*Sn		**Sn**	05 33 38.4	**+2.5**
LIT	**Litokhoron**	**2.67**	**119**	*i* Pn		**Pn**	05 33 07.4	**+2.4**
DIVS	**Divibare**	**2.69**	**8**	*e*Pn		**Pn**	05 33 06.9	**+1.6**
DIVS				*e*Sn		**Sn**	05 33 40.2	**+2.5**
THL	**Klokotos Trika**	**2.71**	**133**	P		**Pn**	05 33 06.5	**+1.0**
TYRN	**Tyrnavos**	**2.73**	**128**	P		**Pn**	05 33 07.2	**+1.4**
BOVS	**Bovan**	**2.76**	**36**	⇓P		**Pn**	05 33 08.4	**+2.2**
BOVS	**Bovan**	**2.76**	**36**	*e*Pn		**Pn**	05 33 07.6	**+1.4**
BOVS				*e*Sn		**Sn**	05 33 39.1	**-0.1**
TSLK	**Tsoukalades, L**	**2.77**	**160**	P		**Pn**	05 33 07.2	**+0.9**
THE	**Thessaloniki**	**2.78**	**106**	*i* Pn		**Pn**	05 33 07.3	**+0.8**
THE				*i* Sn		**Sn**	05 33 40.3	**+0.5**
KKB	**Krupnik**	**2.79**	**80**	*i* Pn		**Pn**	05 33 08.5	**+1.9**
SGRT	**San Giovanni R**	**2.80**	**278**	P		**Pn**	05 33 07.9	**+1.0**
LKD2	**Lefkada island**	**2.80**	**160**	P		**Pn**	05 33 07.5	**+0.7**
TRUS	**Trudelj**	**2.87**	**14**	*e*Pn		**Pn**	05 33 09.5	**+1.7**
TRUS				*e*Sn		**Sn**	05 33 41.6	**-0.5**
HORT	**Hortiatis**	**2.89**	**106**	P		**Pn**	05 33 08.6	**+0.5**
ZAPS	**Zavoj**	**2.99**	**51**	*e*Pn		**Pn**	05 33 11.0	**+1.6**
ZAPS				*e*Sn		**Sn**	05 33 46.3	**+1.3**
SOH	**Sokhos**	**3.01**	**101**	*i* Pn		**Pn**	05 33 10.9	**+1.2**
TIP	**Timpagrande**	**3.06**	**223**	⇓P		**Pn**	05 33 10.9	**+0.6**
TEKS	**Tekeris**	**3.11**	**1**	*e*Pn		**Pn**	05 33 11.8	**+0.7**
SRS	**Serrai**	**3.14**	**95**	*i* Pn		**Pn**	05 33 12.4	**+1.0**
ZAGS	**Zajecar**	**3.14**	**40**	*e*Pn		**Pn**	05 33 12.8	**+1.4**
ZAGS				*e*Sn		**Sn**	05 33 50.7	**+2.1**
MMB	**Musomishta**	**3.23**	**87**	*i* Pn		**Pn**	05 33 14.1	**+1.4**
MMB				*i* Sn		**Sn**	05 33 51.8	**+0.8**
BORS2	**Bor- Borsko je**	**3.25**	**35**	*e*Pn		**Pn**	05 33 13.1	**+0.1**
BORS2				*e*Sn		**Sn**	05 33 50.3	**-1.3**
AVAS	**Avala Beograd**	**3.35**	**13**	*e*Pn		**Pn**	05 33 14.8	**+0.5**
AVAS				*e*Sn		**Sn**	05 33 54.1	**+0.2**
KUBS	**Kucevo**	**3.39**	**28**	*e*Pn		**Pn**	05 33 14.5	**-0.4**
KUBS				*e*Sn		**Sn**	05 33 54.0	**-0.9**
FRGS	**Fruska Gora**	**3.73**	**4**	*e*Pn		**Pn**	05 33 20.5	**+1.0**
MDVR	**Moldovita**	**3.73**	**26**	⇑P		**Pn**	05 33 21.2	**+1.6**
VRSS	**Vrsac**	**3.93**	**20**	*e*Pn		**Pn**	05 33 23.1	**+0.8**
VRSS				*e*Sn		**Sn**	05 34 07.5	**-0.7**
HERR	**Herculane**	**4.07**	**31**	⇑P		**Pn**	05 33 26.0	**+1.8**
BANR	**Banloc**	**4.13**	**17**	⇓P		**Pn**	05 33 26.0	**+1.0**
PLVB	**Pleven**	**4.29**	**61**	⇑P		**Pn**	05 33 29.6	**+2.3**
BZS	**Buzias**	**4.46**	**20**	⇓P		**Pn**	05 33 31.4	**+1.8**
GZR	**Gura Zlata**	**4.64**	**30**	⇑P		**Pn**	05 33 33.4	**+1.4**
SURR	**Surduc**	**4.73**	**23**	⇓P		**Pn**	05 33 34.5	**+1.2**
MORH	**Mrgy, Hungar**	**4.81**	**353**	⇑P		**Pn**	05 33 34.4	**0.0**
ARR	**Arges**	**5.45**	**42**	⇑P		**Pn**	05 33 45.7	**+2.5**
VOIR		**5.71**	**44**	⇑P		**Pn**	05 33 49.6	**+2.8**
MARR	**Marisel-Cluj**	**5.86**	**26**	⇓P		**Pn**	05 33 50.4	**+1.5**
OBKA	**Obir**	**6.18**	**327**	*i* Pn		**Pn**	05 33 56.0	**+2.8**
	comp=E,1.6nm,0.3s							
OBKA				*i* Sn		**Sn**	05 35 04.2	**+0.4**
	comp=E,9.2nm,0.5s							
MLR	**Muntele Rosu**	**6.22**	**47**	Pn		**Pn**	05 33 56.2	**+2.3**
	comp=E,7.0nm,0.5s,baz=175,slow=2.9,SNR=12							
MLR				Sn		**Sn**	05 35 08.0	**+3.1**
	comp=E,0.2nm,0.3s,baz=128,slow=19,SNR=1.6							
MLR	**Muntele Rosu**	**6.22**	**47**	⇑P		**Pn**	05 33 57.0	**+3.1**
PLOR	**Plostina**	**6.83**	**47**	⇑P		**Pn**	05 34 04.7	**+2.5**
VRI	**Vrincioaia**	**6.89**	**48**	⇑P		**Pn**	05 34 06.1	**+3.2**
KECS	**Kecovo**	**7.08**	**6**	*e*PN		**Pn**	05 34 09.5	**+3.9**
KECS				*e*SN		**Sn**	05 35 23.8	**-2.0**
ABTA	**Abfaltersbach**	**7.29**	**319**	*i* Pn		**Pn**	05 34 09.4	**+1.0**
	comp=E,0.5nm,0.2s							
ABTA				*i* Sn		**Sn**	05 35 29.0	**-1.9**
	comp=E,6.4nm,0.6s							
IDI	**Anoyia**	**7.48**	**143**	Pn		**Pn**	05 34 09.8	**-1.4**
	comp=E,0.3nm,0.3s,baz=330,slow=20,SNR=1.9							
IDI				Sn		**Sn**	05 35 29.2	**-6.6**
	comp=E,0.8nm,0.3s,baz=312,slow=19,SNR=1.2							
	comp=E,7.2nm,0.9s							

LESA	**Schwarzleotal**	**7.70**	**323**	*i* Sn		**Sn**	05 35 39.7	**-1.4**
	comp=E,1.6nm,0.2s							
TLCR		**7.79**	**58**	⇓P		**Pn**	05 34 18.4	**+3.1**
WTTA	**Wattenberg**	**8.07**	**319**	*e*Pn		**Pn**	05 34 20.8	**+1.4**
	comp=E,3.2nm,0.6s							
WATA	**Walderalm**	**8.15**	**319**	*e*Pn		**Pn**	05 34 22.0	**+1.6**
	comp=E,1.4nm,0.2s							
SQTA	**Sankt Quirin**	**8.26**	**317**	*i* Pn		**Pn**	05 34 24.6	**+2.7**
	comp=E,1.7nm,0.3s							
SQTA				*i* Sn		**Sn**	05 35 51.1	**-3.9**
	comp=E,2.2nm,0.3s							
MOTA	**Moosalm**	**8.40**	**317**	*i* Pn		**Pn**	05 34 25.7	**+1.9**
	comp=E,1.7nm,0.5s							
MOTA				*i* Sn		**Sn**	05 35 57.2	**-1.2**
	comp=E,6.7nm,0.7s							
GERES	**GERESS Array B**	**8.44**	**333**	Pn		**Pn**	05 34 24.7	**+0.3**
	baz=147,slow=13,SNR=1.5							
	comp=E,0.3nm,0.4s							
DAVOX	**Davos/Dischmat**	**8.71**	**311**	Pn		**Pn**	05 34 27.0	**-1.1**
	comp=E,0.1nm,0.3s,baz=162,slow=20,SNR=1.8							
	comp=E,1.0nm,0.4s							
FINES	**FINESS Array B**	**20.43**	**9**	P		**P**	05 36 58.0	**-1.0**
	comp=E,1.0nm,0.4s,baz=183,slow=11,SNR=10							
	comp=E,1.0nm,0.4s							
BVAR	**Borovoye Array**	**35.74**	**53**	P		**P**	05 39 20.2	**-0.3**
	comp=E,0.6nm,0.5s,baz=257,slow=14,SNR=3.7							
	comp=E,0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**41.03**	**56**	P		**P**	05 40 04.4	**-0.6**
	comp=E,0.2nm,0.6s,baz=287,slow=8.8,SNR=2.4							
	comp=E,0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**44.19**	**50**	P		**P**	05 40 29.6	**-0.9**
	comp=E,1.1nm,0.4s,baz=279,slow=9.2,SNR=6.0							
	comp=E,1.1nm,0.4s							
MKAR	**Makanchi Array**	**44.37**	**61**	P		**P**	05 40 31.7	**-0.5**
	comp=E,1.6nm,0.6s,baz=285,slow=7.5,SNR=15							
	comp=E,1.6nm,0.6s							

*IDC **26** 05:35:14.3±2.2,41.50N×19.17E,h0km,mb3.9/6, mbtmp3.9/8,ML3.6/2,Error ellipse: s-maj=44.1km s-min=28.4km az=149.0*
*THE **26** 05:35:17.6,42.2°N±8.1°×19.9E±1.3,h11km,M3.3/16, MLh3.3/16*
*SKO **26** 05:35:18.1,41.54N×19.40E,h8km,ML3.4*
*TIR **26** 05:35:18.8,41.58N×19.47E,h34km±4km,Ml3.8/6*
*BEO **26** 05:35:19.9±0.9,41.52N×19.66E,h10km±4km, ML3.3/18*
*PDG **26** 05:35:19.7±0.3,41.52N×19.63E,h6km±1km,MD3.5/8, ML3.5/13,Error ellipse: s-maj=1.6km s-min=1.7km az=0.0*

ISC 26 05:35:19.1±0.9,41°52N±0.02×19°51E±0.02,h16km±7km, n121,σ1§45/158,mb4.2/5,18C-16D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**122**	Pg		**Pg**		**05 35 25.0**	**-0.7**
TIR				Sg		**Sg**		**05 35 29.0**	**-1.3**
TIR				AML	AML			05 35 29.8	
	51nm,0.4s								
TIR	**Tirane**	**0.32**	**122**	*i* Pg		**Pg**		**05 35 25.2**	**-0.5**
ULC	**Ulcinj**	**0.49**	**336**	⇓*i*Pg		**Pg**		**05 35 28.5**	**-0.3**
ULC				*i* Sg		**Sb**		**05 35 36.5**	**+0.2**
SDA	**Shkodra**	**0.54**	**359**	Pg		**Pg**		**05 35 29.1**	**-0.6**
SDA				Sg		**Sb**		**05 35 37.6**	**0.0**
DRME	**Dracevica, Mon**	**0.71**	**340**	*e*Pg		**Pb**		**05 35 33.1**	**0.0**
DRME	**Dracevica, Mon**	**0.71**	**340**	⇑*i*Pg		**Pg**		**05 35 32.7**	**-0.3**
DRME				*i* Sg		**Sn**		**05 35 44.5**	**-0.7**
PHP	**Peshkopia**	**0.72**	**76**	Pg		**Pg**		**05 35 31.6**	**-1.6**
PHP				Sg		**Sg**		**05 35 42.7**	**0.0**
PHP				AML	AML			05 35 48.6	
	15nm,0.5s								
PHP	**Peshkopia**	**0.72**	**76**	P		**Pg**		**05 35 31.7**	**-1.5**
PHP				S		**Sb**		**05 35 44.0**	**+1.0**
BUM	**Brajici-Budva**	**0.91**	**330**	⇑*i*Pg		**Pg**		**05 35 36.7**	**0.0**
BUM				*i* Sg		**Sn**		**05 35 51.5**	**+1.4**
PDG	**Podgorica**	**0.93**	**348**	Pg		**Pb**		**05 35 36.4**	**-0.5**
PDG				Sg		**Sb**		**05 35 48.5**	**-0.5**
PDG	**Podgorica**	**0.93**	**348**	*e*Pg		**Pb**		**05 35 36.6**	**-0.3**
PDG	**Podgorica**	**0.93**	**348**	*e*Pg		**Pn**		**05 35 38.4**	**+0.9**
PDG				*e*Sg		**Sn**		**05 35 52.3**	**+1.7**
PDG	**Podgorica**	**0.93**	**348**	⇓P		**Pn**		**05 35 38.6**	**+1.1**
PDG	**Podgorica**	**0.93**	**348**	⇓*i*Pg		**Pb**		**05 35 36.1**	**-0.8**
PDG				*i* Sg		**Sn**		**05 35 51.0**	**+0.4**
VLO	**Vlora**	**1.05**	**180**	Pg		**Pg**		**05 35 40.5**	**+1.2**
VLO				Sg		**Sn**		**05 35 54.4**	**+1.0**
VLO				AML	AML			05 36 01.0	
	12nm,0.4s								
VLO	**Vlora**	**1.05**	**180**	P		**Pg**		**05 35 40.6**	**+1.2**
OHR	**Ohrid**	**1.05**	**112**	*i* Pg		**Pb**		**05 35 37.9**	**-1.1**
OHR				*i* Sg		**Sn**		**05 35 54.8**	**+1.1**
OHR				*e*Lg	Lg			05 35 57.0	
	comp=E,762nm,0.5s								
OHR				*e*Lg	Lg			05 35 58.0	
	comp=N,561nm,0.7s								
CEME	**Cevo**	**1.12**	**337**	⇑*i*Pg		**Pn**		**05 35 40.1**	**-0.1**
CEME				*i* Sg		**Sn**		**05 35 57.8**	**+2.5**
PVY	**Plav**	**1.13**	**17**	*e*Pg		**Pb**		**05 35 40.3**	**0.0**
PVY	**Plav**	**1.13**	**17**	⇑*i*Pg		**Pb**		**05 35 38.9**	**-1.4**
PVY				*i* Sg		**Sb**		**05 35 55.1**	**+0.3**
HCY	**Herceg Novi**	**1.20**	**321**	⇓*i*Pg		**Pg**		**05 35 42.2**	**0.0**
HCY				*i* Sg		**Sg**		**05 35 59.1**	**+2.3**
NKME	**Niksic**	**1.31**	**342**	⇓*i*Pg		**Pg**		**05 35 43.2**	**-0.3**
NKME				*i* Sg		**Sg**		**05 36 01.9**	**+0.3**
KBN	**Korca**	**1.32**	**132**	Pn		**Pg**		**05 35 44.1**	**-0.4**
KBN				Sg		**Sg**		**05 36 03.9**	**+2.3**
KBN	**Korca**	**1.32**	**132**	P		**Pb**		**05 35 43.9**	**+0.5**
KBN				S		**Sg**		**05 36 03.6**	**+2.0**
KOME	**Kolasin**	**1.33**	**0**	*e*Pg		**Pg**		**05 35 44.3**	**-0.5**
KOME	**Kolasin**	**1.33**	**0**	⇑*i*Pg		**Pb**		**05 35 43.6**	**-0.2**
KOME				*i* Sg		**Sg**		**05 36 04.5**	**+2.4**
BEY	**Berane**	**1.38**	**12**	*e*Pg		**Pn**		**05 35 44.2**	**+0.3**
IVA	**Berane**	**1.38**	**12**	⇑*i*Pg		**Pn**		**05 35 43.8**	**-0.1**
IVA				*i* Sg		**Sg**		**05 36 05.1**	**+1.3**
TREB	**Trebinje**	**1.48**	**325**	*e*Pg		**Pg**		**05 35 46.8**	**-0.7**
SKO	**Skopje**	**1.52**	**72**	*i* Pg		**Pb**		**05 35 47.4**	**+0.6**
SKO				*i* Sg		**Sg**		**05 36 07.9**	**0.0**
BRY	**Bratogost**	**1.56**	**333**	⇓*i*Pn		**Pb**		**05 35 47.7**	**0.0**
BRY				*i* Sn		**Sg**		**05 36 12.4**	**+3.0**
NEST	**Nestorio**	**1.60**	**133**	Pn		**Pb**		**05 35 48.7**	**+0.3**
NEST				AML	AML			05 36 15.5	
	comp=N,1.8nm,0.7s								
NEST	**Nestorio**	**1.60**	**133**	P		**Pb**		**05 35 48.6**	**+0.2**
UPM	**Unac-Piva**	**1.74**	**345**	⇓*i*Pn		**Pb**		**05 35 51.0**	**+0.2**
UPM				*i* Sn		**Sg**		**05 36 15.9**	**+0.6**
SJES	**Sjenica**	**1.78**	**11**	*e*Pg		**Pb**		**05 35 51.7**	**+0.3**
SJES				*e*Sg		**Sg**		**05 36 16.7**	**+0.4**
PENT	**Pentalofos**	**1.81**	**136**	P		**Pb**		**05 35 51.2**	**-0.7**
PLE	**Pljevlja**	**1.81**	**357**	*e*Pg		**Pb**		**05 35 52.6**	**+0.6**
PLE	**Pljevlja**	**1.81**	**357**	⇑*i*Pn		**Pb**		**05 35 52.1**	**+0.1**
PLE				*i* Sn		**Sg**		**05 36 17.1**	**-0.4**
KEK	**Kerkira**	**1.82**	**173**	P		**Pg**		**05 35 54.5**	**+0.6**
STON	**Ston**	**1.91**	**316**	*e*Pn		**Pb**		**05 35 53.3**	**-0.2**
NOCI	**Noci**	**1.98**	**249**	Pn		**Pn**		**05 35 52.1**	**+0.1**
NOCI				AML	AML			05 36 31.4	
	comp=N,2.5nm,0.5s								
SELS	**Selova**	**2.08**	**35**	*e*Pg		**Pn**		**05 35 54.6**	**+1.3**
SELS				*e*Sg		**Sb**		**05 36 22.3**	**+0.2**
IGT	**Igoumenitsa**	**2.08**	**162**	P		**Pn**		**05 35 53.6**	**+0.3**
IGT	**Igoumenitsa**	**2.08**	**162**	*i* Pn		**Pn**		**05 35 54.0**	**+0.7**
IGT				*i* Sn		**Sn**		**05 36 19.4**	**+0.5**
KZN	**Kozani**	**2.10**	**124**	P		**Pn**		**05 35 55.3**	**+1.6**
RUDO	**Rudo**	**2.10**	**357**	*e*Pn		**Pb**		**05 35 55.7**	**-1.1**
IVAS	**Ivanjica**	**2.11**	**13**	*e*Pn		**Pn**		**05 35 54.9**	**+1.1**
GOCS	**Kraljevo Serbi**	**2.28**	**26**	*e*Pn		**Pn**		**05 35 57.8**	**+1.6**
VAY	**Valandovo**	**2.31**	**94**	*i* Pn		**Pn**		**05 35 57.6**	**+1.1**
VAY				*i* Sn		**Sn**		**05 36 26.3**	**+1.7**
VAY				*e*Lg	Lg			05 36 27.8	
	comp=E,163nm,0.8s								
VAY				*e*Lg	Lg			05 36 29.6	
	comp=N,251nm,1.2s								
PRMD	**Pramanda**	**2.33**	**148**	P		**Pn**		**05 35 58.3**	**+1.5**
BBLS	**Lazi&#263i**	**2.35**	**358**	*e*Pn		**Pn**		**05 35 59.0**	**+1.9**
GRUS	**Gruza**	**2.53**	**20**	*e*Pn		**Pn**		**05 36 01.1**	**+1.6**
KNT	**Kendrikon**	**2.58**	**97**	P		**Pn**		**05 36 00.9**	**+0.7**
KNT	**Kendrikon**	**2.58**	**97**	*i* Pn		**Pn**		**05 36 01.3**	**+1.1**
DIVS	**Divibare**	**2.60**	**8**	*e*Pn		**Pn**		**05 36 01.5**	**+0.9**
BOVS	**Bovan**	**2.67**	**37**	*e*Pn		**Pn**		**05 36 02.6**	**+1.2**
BOVS	**Bovan**	**2.67**	**37**	⇑P		**Pn**		**05 36 03.8**	**+2.4**
THL	**Klokotos Trika**	**2.73**	**135**	P		**Pn**		**05 36 03.9**	**+1.7**
KKB	**Krupnik**	**2.73**	**82**	P		**Pn**		**05 36 03.5**	**+1.1**
KKB	**Krupnik**	**2.73**	**82**	*i* Pn		**Pn**		**05 36 03.7**	**+1.4**
KKB				*i* Sn		**Sn**		**05 36 37.1**	**+2.1**
TYRN	**Tyrnavos**	**2.75**	**130**	P		**Pn**		**05 36 04.0**	**+1.5**
THE	**Thessaloniki**	**2.76**	**108**	*i* Pn		**Pn**		**05 36 03.2**	**+0.5**
TRUS	**Trudelj**	**2.79**	**13**	*e*Pn		**Pn**		**05 36 04.1**	**+1.1**
TSLK	**Tsoukalades, L**	**2.83**	**162**	P		**Pn**		**05 36 03.5**	**-0.1**
SGRT	**San Giovanni R**	**2.83**	**276**	Pn		**Pn**		**05 36 02.9**	**-0.8**
LKD2	**Lefkada island**	**2.86**	**162**	P		**Pn**		**05 36 04.1**	**-0.1**
HORT	**Hortiatis**	**2.87**	**107**	P		**Pn**		**05 36 04.7**	**+0.5**
ZAPS	**Zavoj**	**2.91**	**52**	*e*Pn		**Pn**		**05 36 06.0**	**+1.3**
NYDR	**Nydri-Lefkada**	**2.94**	**162**	P		**Pn**		**05 36 04.9**	**-0.3**
VTS	**Vitosha**	**2.98**	**67**	P		**Pn**		**05 36 07.2**	**+1.3**
VTS	**Vitosha**	**2.98**	**67**	*e*Pn		**Pn**		**05 36 07.3**	**+1.3**
SOH	**Sokhos**	**2.99**	**102**	P		**Pn**		**05 36 06.6**	**+0.8**
SOH	**Sokhos**	**2.99**	**102**	*i* Pn		**Pn**		**05 36 06.8**	**+1.0**
SOH				*i* Sn		**Sn**		**05 36 43.4**	**+2.1**
EVGI	**Lefkada island**	**3.02**	**163**	P		**Pn**		**05 36 05.9**	**-0.5**
TEKS	**Tekeris**	**3.03**	**0**	*e*Pn		**Pn**		**05 36 07.1**	**+0.7**
ZAGS	**Zajecar**	**3.05**	**40**	*e*Pn		**Pn**		**05 36 08.0**	**+1.3**
SRS	**Serrai**	**3.10**	**96**	P		**Pn**		**05 36 08.1**	**+0.7**
SRS	**Serrai**	**3.10**	**96**	*i* Pn		**Pn**		**05 36 08.2**	**+0.8**
TIP	**Timpagrande**	**3.14**	**223**	⇓P		**Pn**		**05 36 07.2**	**-0.8**
BLKB	**Belogradchik**	**3.15**	**47**	*e*Pn	

PDG	**Podgorica**	**0.88**	**351**	*e*Pg	**Pn**	**05 41 35.3**	**-0.5**
PDG				*i* Sg	**Sn**	**05 41 49.1**	**+0.8**
CEME	**Cevo**	**1.06**	**339**	⇑*i*Pg	**Pn**	**05 41 39.6**	**+1.3**
CEME				*i* Sg	**Sn**	**05 41 55.4**	**+2.5**
PVY	**Plav**	**1.10**	**21**	⇓*i*Pg	**Pb**	**05 41 38.2**	**-0.6**
PVY				*i* Sg	**Sn**	**05 41 55.3**	**+1.2**
OHR	**Ohrid**	**1.12**	**113**	*i* Pg	**Pn**	**05 41 38.7**	**-0.5**
OHR				*i* Sg	**Sn**	**05 41 56.0**	**+1.6**
OHR				*e*Lg	Lg	05 41 56.6	
	comp=N,1μm,0.7s						
OHR				*e*Lg	Lg	05 41 58.0	
	comp=E,3μm,1.1s						
HCY	**Herceg Novi**	**1.13**	**322**	⇓*i*Pg	**Pn**	**05 41 40.5**	**+1.3**
HCY				*i* Sg	**Sn**	**05 41 59.3**	**+4.8**
NKME	**Niksic**	**1.26**	**344**	⇓*i*Pg	**Pg**	**05 41 42.7**	**+0.6**
NKME				*i* Sg	**Sg**	**05 42 01.7**	**+3.3**
KOME	**Kolasin**	**1.29**	**3**	⇑*i*Pg	**Pg**	**05 41 42.2**	**-0.5**
KOME				*i* Sg	**Sg**	**05 42 01.8**	**+2.3**
IVA	**Berane**	**1.35**	**14**	⇓*i*Pg	**Pb**	**05 41 42.5**	**-0.5**
IVA				*i* Sg	**Sg**	**05 42 03.1**	**+1.6**
BRY	**Bratogost**	**1.49**	**334**	⇑*i*Pg	**Pg**	**05 41 46.1**	**-0.5**
BRY				*i* Sg	**Sg**	**05 42 07.3**	**+1.2**
SKO	**Skopje**	**1.56**	**74**	*i* Pg	**Pb**	**05 41 47.2**	**+0.8**
SKO				*i* Sg	**Sb**	**05 42 08.4**	**+2.4**
UPM	**Unac-Piva**	**1.69**	**347**	⇑*i*Pn	**Pg**	**05 41 48.1**	**-2.2**
UPM				*i* Sn	**Sg**	**05 42 11.6**	**-0.6**
PLE	**Pljevlja**	**1.77**	**359**	*e*Pn	**Pn**	**05 41 45.9**	**-2.2**
PLE				*i* Sn	**Sg**	**05 42 13.5**	**-1.3**
VAY	**Valandovo**	**2.37**	**95**	*i* Pn	**Pn**	**05 41 57.3**	**+1.0**
KNT	**Kendrikon**	**2.64**	**98**	*i* Pn	**Pn**	**05 42 01.1**	**+1.1**
KKB	**Krupnik**	**2.78**	**83**	*i* Pn	**Pn**	**05 42 03.2**	**+1.3**
THE	**Thessaloniki**	**2.83**	**108**	*i* Pn	**Pn**	**05 42 03.4**	**+0.8**
SRS	**Serrai**	**3.16**	**97**	*i* Pn	**Pn**	**05 42 08.3**	**+1.1**
MLR	**Muntele Rosu**	**6.15**	**48**	Pn	**Pn**	**05 42 48.2**	**-0.1**
	comp=E,1.3nm,0.3s,baz=152,slow=11,SNR=9.1						
	comp=E,7.5nm,0.6s						
GERES	**GERESS Array B**	**8.33**	**333**	Pn	**Pn**	**05 43 14.8**	**-3.4**
	comp=E,0.4nm,0.5s,baz=145,slow=12,SNR=5.3						
EKA	**Eskdalemuir Ar**	**20.23**	**321**	P	Pn	05 45 52.0	-2.3
	baz=107,slow=9.9						
	comp=E,1.2nm,0.7s						
FINES	**FINESS Array B**	**20.31**	**9**	P	**P**	**05 45 52.4**	**-0.8**
	comp=E,1.4nm,0.6s,baz=186,slow=9.6,SNR=4.3						
	comp=E,1.4nm,0.6s						
BELG	**Belogornoye**	**21.93**	**51**	P	**P**	**05 46 10.5**	**-0.2**
	comp=E,5.2nm,0.4s,baz=321,slow=5.7,SNR=3.8						
	comp=E,5.2nm,0.4s						
ARTI	**Arti**	**29.09**	**46**	P	**P**	**05 47 16.2**	**-1.5**
	comp=E,2.4nm,0.4s,baz=252,slow=5.8,SNR=4.4						
	comp=E,2.4nm,0.4s						
BVAR	**Borovoye Array**	**35.68**	**54**	P	**P**	**05 48 15.2**	**-0.3**
	comp=E,1.0nm,0.7s,baz=289,slow=4.5,SNR=5.0						
	comp=E,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**40.97**	**56**	P	**P**	**05 48 59.0**	**-1.0**
	comp=E,0.2nm,0.5s,baz=290,slow=9.4,SNR=2.3						
	comp=E,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**44.12**	**51**	P	**P**	**05 49 24.3**	**-1.2**
	comp=E,1.5nm,0.4s,baz=276,slow=8.5,SNR=8.9						
	comp=E,1.5nm,0.4s						
MKAR	**Makanchi Array**	**44.32**	**61**	P	**P**	**05 49 26.8**	**-0.4**
	comp=E,1.8nm,0.6s,baz=271,slow=9.9,SNR=5.7						
	comp=E,1.8nm,0.6s						
SONM	**Songino Array**	**58.99**	**52**	P	**P**	**05 51 16.3**	**-0.6**
	comp=E,0.6nm,0.9s,baz=311,slow=9.4,SNR=2.4						
	comp=E,0.6nm,0.9s						

CNRM ***26*** *05:44:11.6, 32˚.57N×4˚.22W, h2km, ML3.6*
INMG ***26*** *05:44:12.5±1.5, 32˚.65N×4˚.17W, h14±7km, ML2.8, Error ellipse: s-maj=6.8km s-min=4.1km az=107.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Fez (Marr)*
IGIL ***26*** *05:44:13.7, 32˚.89N×3˚.96W, h5km*
MDD ***26*** *05:44:14.2±1.0, 32˚.73N×4˚.31W, h6km±6km, Mb4.2/8, M_mb3.5/8, Error ellipse: s-maj=6.8km s-min=4.7km az=132.0*

ISC 26 05:44:11.7±0.8, 32˚.66N±0˚.02×4˚.28W±0˚.02, h10km, n164, σ1s65/201, 7C, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**0.31**	**299**	P		**Pg**	**05 44 18.6**	**+0.5**
MDT	**Midelt**	**0.31**	**299**	S		**Sb**	**05 44 25.2**	**+0.5**
MDT	**Midelt**	**0.31**	**299**	P		**Pb**	**05 44 19.6**	**+0.1**
MDT	**Midelt**	**0.31**	**299**	P		**Pb**	**05 44 19.6**	**0.1**
MDT	**Midelt**	**0.31**	**299**	P		**Pb**	**05 44 19.6**	**0.0**
MDT	**Midelt**	**0.31**	**299**	P		**Pb**	**05 44 19.6**	**0.0**
MDT	**Midelt**	**0.31**	**299**	P		**Pb**	**05 44 19.6**	**0.0**
MDT	**Midelt**	**0.31**	**299**	P		**Pg**	**05 44 18.6**	**+0.5**
MDT	**Midelt**	**0.31**	**299**	P		**Pg**	**05 44 18.6**	**+0.5**
CZD	**Col de Zad**	**0.74**	**300**	P		**Pn**	**05 44 27.8**	**-0.7**
CZD	**Col de Zad**	**0.74**	**300**	S		**Sn**	**05 44 39.1**	**-0.9**
CZD	**Col de Zad**	**0.74**	**300**	P		**Pn**	**05 44 27.8**	**-0.7**
CZD	**Col de Zad**	**0.74**	**300**	P		**Pn**	**05 44 27.8**	**-0.7**
CZD	**Col de Zad**	**0.74**	**300**	P		**Pn**	**05 44 27.8**	**-0.7**
CZD	**Col de Zad**	**0.74**	**300**	P		**Pn**	**05 44 27.8**	**-0.7**
IFR	**Ifrane**	**1.11**	**320**	Pg		**Pn**	**05 44 34.8**	**+1.2**
IFR				Sg		**Sn**	**05 44 48.9**	**-0.1**
GOLM	**Goulmima**	**1.11**	**211**	P		**Pb**	**05 44 33.2**	**+0.1**
GOLM	**Goulmima**	**1.11**	**211**	S		**Sn**	**05 44 50.0**	**+1.1**
GOLM	**Goulmima**	**1.11**	**211**	P		**Pb**	**05 44 33.2**	**+0.1**
GOLM	**Goulmima**	**1.11**	**211**	P		**Pb**	**05 44 33.2**	**+0.1**
LCRM	**LCR**	**1.13**	**335**	P		**Pn**	**05 44 35.1**	**+1.3**
LCRM	**LCR**	**1.13**	**335**	S		**Sn**	**05 44 49.9**	**+0.5**
LCRM	**LCR**	**1.13**	**335**	P		**Pn**	**05 44 35.1**	**+1.3**
LCRM	**LCR**	**1.13**	**335**	P		**Pn**	**05 44 35.1**	**+1.3**
LCRM	**LCR**	**1.13**	**335**	P		**Pn**	**05 44 35.1**	**+1.3**
LCRM	**LCR**	**1.13**	**335**	P		**Pn**	**05 44 35.1**	**+1.3**
ARF	**Arif**	**1.23**	**178**	P		**Pn**	**05 44 34.1**	**-1.0**
ARF	**Arif**	**1.23**	**178**	S		**Sb**	**05 44 49.8**	**-1.2**
ARF	**Arif**	**1.23**	**178**	P		**Pn**	**05 44 34.1**	**-1.0**
ARF	**Arif**	**1.23**	**178**	P		**Pn**	**05 44 34.1**	**-1.0**
ARF	**Arif**	**1.23**	**178**	P		**Pn**	**05 44 34.1**	**-1.0**
ARF	**Arif**	**1.23**	**178**	P		**Pn**	**05 44 34.1**	**-1.0**
AKLM	**AKL**	**1.88**	**11**	P		**Pg**	**05 44 48.0**	**+0.2**
AKLM	**AKL**	**1.88**	**11**	S		**Sg**	**05 45 14.4**	**+2.3**
AKLM	**AKL**	**1.88**	**11**	P		**Pg**	**05 44 48.0**	**+0.2**
AKLM	**AKL**	**1.88**	**11**	P		**Pg**	**05 44 48.0**	**+0.2**
AKLM	**AKL**	**1.88**	**11**	P		**Pb**	**05 44 47.0**	**+0.8**
AKLM	**AKL**	**1.88**	**11**	P		**Pb**	**05 44 47.0**	**+0.8**
AKLM	**AKL**	**1.88**	**11**	P		**Pb**	**05 44 46.0**	**-0.2**
AKLM	**AKL**	**1.88**	**11**	P		**Pb**	**05 44 46.0**	**-0.2**
AKLM	**AKL**	**1.88**	**11**	P		**Pb**	**05 44 46.0**	**-0.2**
AKLM	**AKL**	**1.88**	**11**	P		**Pb**	**05 44 46.0**	**-0.2**
TISM	**Timmit**	**2.06**	**243**	P		**Pn**	**05 44 47.5**	**+1.1**
TISM	**Timmit**	**2.06**	**243**	S		**Sb**	**05 45 14.6**	**-0.2**
TISM	**Timmit**	**2.06**	**243**	P		**Pb**	**05 44 49.0**	**-0.1**
TISM	**Timmit**	**2.06**	**243**	P		**Pb**	**05 44 49.0**	**-0.1**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 49.1**	**-1.4**
ZHG	**ZHG**	**2.13**	**292**	S		**Sg**	**05 45 23.0**	**+2.7**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 50.0**	**-0.5**
ZHG	**ZHG**	**2.13**	**292**	S		**Sg**	**05 45 23.0**	**+2.7**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 50.0**	**-0.5**
ZHG	**ZHG**	**2.13**	**292**	S		**Sg**	**05 45 23.0**	**+2.7**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 49.1**	**-1.4**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 49.1**	**-1.4**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 49.1**	**-1.4**
ZHG	**ZHG**	**2.13**	**292**	P		**Pb**	**05 44 49.1**	**-1.4**
TZRR	**Tazzarine**	**2.17**	**211**	P		**Pn**	**05 44 49.0**	**+1.0**
TZRR	**Tazzarine**	**2.17**	**211**	S		**Sg**	**05 45 20.0**	**-1.5

0.3nm,0.4s,baz=273,slow=8.8,SNR=7.2
0.3nm,0.4s

*IDC **26** 05:50:09.8±3.8, 41°.40N×19°.34E, h0km, mb3.5/4, mbtmp3.7/6, ML3.9/2, MS4.1/1, Error ellipse: s-maj=60.1km s-min=28.8km az=7.0*
*THE **26** 05:50:15.2, 42°N±16"×2°0E±1°.8, h8km±43km, M3.3/14, MLh3.3/14*
*TIR **26** 05:50:15.7, 41°.56N×19°.68E, h12km±4km, Ml3.8/7*
*SKO **26** 05:50:16.4, 41°.59N×19°.66E, h6km, ML3.8*
*BEO **26** 05:50:16.3±0.8, 41°.56N×19°.84E, h8km±3km, ML3.4/17*

ISC 26 05:50:15.5±0.9, **41°.56N**±0°.02×**19°.64E**±0°.03, **h17**km±6km, **n103**,σ1°§**41**/131, **10C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**140**	Pg	**Pg**	**05 50 21.6**	**+0.2**
TIR				Sg	**Sg**	**05 50 25.5**	**0.0**
TIR				AML	AML	05 50 27.4	
	57nm,0.4s						
TIR	**Tirane**	**0.27**	**140**	⇑*i* Pg	**Pg**	**05 50 21.6**	**+0.2**
TIR				*i* Sg	**Sb**	**05 50 26.7**	**+0.6**
SDA	**Shkodra**	**0.51**	**348**	Pg	**Pg**	**05 50 23.5**	**-2.1**
SDA				Sg	**Sb**	**05 50 34.8**	**+1.8**
PHP	**Peshkopia**	**0.62**	**78**	Pg	**Pg**	**05 50 26.3**	**-1.4**
PHP				Sg	**Sg**	**05 50 35.4**	**-0.5**
PHP				AML	AML	05 50 37.5	
	20nm,0.3s						
PHP	**Peshkopia**	**0.62**	**78**	P	**Pg**	**05 50 26.3**	**-1.4**
PHP				S	**Sg**	**05 50 35.3**	**-0.5**
DRME	**Dracevica, Mon**	**0.72**	**332**	*e*Pg	**Pb**	**05 50 30.9**	**+1.4**
PDG	**Podgorica**	**0.92**	**342**	Pg	**Pg**	**05 50 32.5**	**-0.8**
PDG				Sg	**Sn**	**05 50 47.7**	**+1.3**
PDG	**Podgorica**	**0.92**	**342**	*e*Pg	**Pb**	**05 50 34.4**	**+1.4**
PDG				*e*Sg	**Sn**	**05 50 49.4**	**+3.0**
PDG	**Podgorica**	**0.92**	**342**	⇓P	**Pb**	**05 50 34.4**	**+1.4**
PDG				⇑S	**Sn**	**05 50 49.5**	**+3.0**
OHR	**Ohrid**	**0.98**	**116**	*i* Pg	**Pg**	**05 50 34.0**	**-0.5**
OHR				*i* Sg	**Sb**	**05 50 47.6**	**+0.9**
OHR				*e*Lg	Lg	05 50 48.4	
	comp=N,3μm,0.6s						
OHR				*e*Lg	Lg	05 50 48.9	
	comp=E,3μm,0.6s						
PVY	**Plav**	**1.07**	**13**	*e*Pg	**Pg**	**05 50 36.0**	**-0.1**
VLO	**Vlora**	**1.09**	**186**	Pg	**Pb**	**05 50 37.0**	**+1.2**
VLO				Sg	**Sb**	**05 50 51.8**	**+2.1**
VLO				AML	AML	05 50 59.1	
	comp=E,18nm,0.2s						
VLO				AML	AML	05 51 00.3	
	comp=E,21nm,0.5s						
VLO	**Vlora**	**1.09**	**186**	P	**Pb**	**05 50 37.2**	**+1.3**
VLO				S	**Sn**	**05 50 55.1**	**+4.6**
KBN	**Korca**	**1.27**	**137**	Pn	**Pn**	**05 50 39.3**	**+0.8**
KBN				Sn	**Sn**	**05 50 57.5**	**+2.3**
KBN	**Korca**	**1.27**	**137**	P	**Pn**	**05 50 39.4**	**+0.8**
KBN				S	**Sn**	**05 50 57.8**	**+2.6**
KOME	**Kolasin**	**1.30**	**356**	*e*Pg	**Pg**	**05 50 41.0**	**+0.5**
BEY	**Berane**	**1.33**	**8**	*e*Pg	**Pn**	**05 50 40.6**	**+1.3**
SKO	**Skopje**	**1.41**	**72**	*i* Pg	**Pn**	**05 50 41.3**	**+0.9**
SKO				*i* Sg	**Sg**	**05 51 00.7**	**-0.3**
TREB	**Trebinje**	**1.50**	**321**	*e*Pg	**Pn**	**05 50 43.2**	**+1.5**
TREB				*e*Sg	**Sg**	**05 51 04.5**	**+0.4**
NEST	**Nestorio**	**1.56**	**136**	Pn	**Pn**	**05 50 44.1**	**+1.6**
NEST				AML	AML	05 51 11.8	
	comp=E,4.1nm,0.4s						
NEST	**Nestorio**	**1.56**	**136**	P	**Pn**	**05 50 44.0**	**+1.4**
SJES	**Sjenica**	**1.72**	**8**	*e*Pg	**Pb**	**05 50 47.2**	**+0.5**
SJES				*e*Sg	**Sg**	**05 51 12.0**	**+1.0**
PLE	**Pljevlja**	**1.78**	**354**	*e*Pg	**Pb**	**05 50 48.5**	**+0.7**
STON	**Ston**	**1.95**	**313**	*e*Pn	**Pb**	**05 50 50.9**	**+0.4**
STON				*e*Sn	**Sg**	**05 51 18.6**	**+0.4**
SELS	**Selova**	**1.99**	**33**	*e*Pg	**Pn**	**05 50 50.0**	**+1.6**
SELS				*e*Sg	**Sn**	**05 51 15.1**	**+2.2**
KZN	**Kozani**	**2.04**	**127**	P	**Pn**	**05 50 50.3**	**+1.2**
IVAS	**Ivanjica**	**2.06**	**10**	*e*Pn	**Pn**	**05 50 50.3**	**+1.0**
RUDO	**Rudo**	**2.07**	**355**	*e*Pn	**Pb**	**05 50 53.5**	**+0.9**
NOCI	**Noci**	**2.09**	**249**	Pn	**Pb**	**05 50 54.1**	**+1.2**
NOCI				Sn	**Sn**	**05 51 13.3**	**-1.9**
NOCI				AML	AML	05 51 29.8	
	comp=E,4.7nm,0.3s						
NOCI				AML	AML	05 51 31.3	
	comp=E,4.7nm,0.3s						
IGT	**Igoumenitsa**	**2.09**	**165**	P	**Pn**	**05 50 50.3**	**+0.6**
JAN	**Janina**	**2.11**	**154**	P	**Pn**	**05 50 50.9**	**+0.9**
GRG	**Griva**	**2.17**	**105**	P	**Pn**	**05 50 50.8**	**0.0**
GOCS	**Kraljevo Serbi**	**2.20**	**24**	*e*Pn	**Pn**	**05 50 52.5**	**+1.1**
VAY	**Valandovo**	**2.22**	**95**	*i* Pn	**Pn**	**05 50 51.8**	**+0.4**
VAY				*i* Sg	**Sn**	**05 51 17.8**	**-0.7**
VAY				*e*Lg	Lg	05 51 18.7	
	comp=E,282nm,0.6s						
VAY				*e*Lg	Lg	05 51 18.9	
	comp=N,319nm,0.6s						
PRMD	**Pramanda**	**2.31**	**151**	P	**Pn**	**05 50 54.3**	**+1.5**
BBLS	**Lazi&#263i**	**2.32**	**356**	*e*Pn	**Pb**	**05 50 56.8**	**0.0**
MATE	**Matera**	**2.39**	**249**	⇓P	**Pn**	**05 50 54.2**	**+0.4**
GRUS	**Gruza**	**2.46**	**18**	*e*Pn	**Pn**	**05 50 55.9**	**+1.1**
KNT	**Kendrikon**	**2.48**	**98**	P	**Pn**	**05 50 55.4**	**+0.2**
KNT	**Kendrikon**	**2.48**	**98**	*i* Pn	**Pn**	**05 50 55.4**	**+0.2**
DIVS	**Divibare**	**2.56**	**6**	*e*Pn	**Pn**	**05 50 56.7**	**+0.5**
BOVS	**Bovan**	**2.58**	**36**	*e*Pn	**Pn**	**05 50 57.1**	**+0.7**
BOVS	**Bovan**	**2.58**	**36**	⇑P	**Pn**	**05 50 57.4**	**+1.0**
KKB	**Krupnik**	**2.63**	**83**	P	**Pn**	**05 50 57.5**	**+0.4**
KKB	**Krupnik**	**2.63**	**83**	*i* Pn	**Pn**	**05 50 57.7**	**+0.6**
THE	**Thessaloniki**	**2.68**	**109**	P	**Pn**	**05 50 57.7**	**0.0**
THE	**Thessaloniki**	**2.68**	**109**	*i* Pn	**Pn**	**05 50 57.8**	**+0.1**
TRUS	**Trudelj**	**2.73**	**12**	*e*Pn	**Pn**	**05 51 00.4**	**+2.0**
HORT	**Hortiatis**	**2.79**	**109**	P	**Pn**	**05 50 59.0**	**-0.3**
ZAPS	**Zavoj**	**2.81**	**51**	*e*Pn	**Pn**	**05 50 59.8**	**+0.2**
TSLK	**Tsoukalades, L**	**2.84**	**164**	P	**Pn**	**05 50 59.7**	**-0.3**
LKD2	**Lefkada island**	**2.87**	**164**	P	**Pn**	**05 51 00.1**	**-0.4**
VTS	**Vitosha**	**2.88**	**67**	P	**Pn**	**05 51 01.1**	**+0.4**
VTS	**Vitosha**	**2.88**	**67**	*e*Pn	**Pn**	**05 51 01.4**	**+0.7**
SVIS	**Svilajnac**	**2.95**	**23**	*e*Pn	**Pn**	**05 51 04.2**	**+2.8**
NYDR	**Nydri-Lefkada**	**2.95**	**164**	P	**Pn**	**05 51 01.0**	**-0.6**
ZAGS	**Zajecar**	**2.96**	**39**	*e*Pn	**Pn**	**05 51 02.5**	**+0.9**
TEKS	**Tekeris**	**2.99**	**359**	*e*Pn	**Pn**	**05 51 02.6**	**+0.5**
SRS	**Serrai**	**3.01**	**97**	P	**Pn**	**05 51 02.1**	**-0.3**
SRS	**Serrai**	**3.01**	**97**	*i* Pn	**Pn**	**05 51 02.2**	**-0.2**
EVGI	**Lefkada island**	**3.03**	**165**	P	**Pn**	**05 51 01.9**	**-0.7**
BLKB	**Belogradchik**	**3.05**	**46**	*e*Pn	**Pn**	**05 51 04.5**	**+1.6**
BORS2	**Bor- Borsko je**	**3.08**	**34**	*e*Pn	**Pn**	**05 51 02.7**	**-0.6**
MMB	**Musomishta**	**3.09**	**89**	P	**Pn**	**05 51 03.6**	**+0.2**
MMB	**Musomishta**	**3.09**	**89**	*i* Pn	**Pn**	**05 51 04.0**	**+0.6**
AVAS	**Avala Beograd**	**3.20**	**11**	*e*Pn	**Pn**	**05 51 04.8**	**-0.2**
KUBS	**Kucevo**	**3.22**	**27**	*e*Pn	**Pn**	**05 51 04.7**	**-0.6**
TIP	**Timpagrande**	**3.24**	**224**	⇑P	**Pn**	**05 51 05.5**	**0.0**
MDVR	**Moldovita**	**3.56**	**25**	*e*Pn	**Pn**	**05 51 10.7**	**+0.7**
MDVR	**Moldovita**	**3.56**	**25**	⇓P	**Pn**	**05 51 10.8**	**+0.7**
FRGS	**Fruska Gora**	**3.60**	**2**	*e*Pn	**Pn**	**05 51 11.1**	**+0.6**
VRSS	**Vrsac**	**3.77**	**18**	*e*Pn	**Pn**	**05 51 12.8**	**0.0**
PLD	**Plovdiv**	**3.86**	**79**	*e*Pn	**Pn**	**05 51 14.8**	**+0.8**
HERR	**Herculane**	**3.90**	**30**	⇑P	**Pn**	**05 51 15.6**	**+1.1**
SRE	**Strehaia**	**4.06**	**39**	⇑P	**Pn**	**05 51 17.9**	**+1.2**
BZS	**Buzias**	**4.31**	**19**	⇑P	**Pn**	**05 51 20.8**	**+0.7**
GZR	**Gura Zlata**	**4.46**	**30**	⇑P	**Pn**	**05 51 24.4**	**+2.0**
SURR	**Surduc**	**4.57**	**22**	⇑P	**Pn**	**05 51 24.2**	**+0.5**
ELND	**Elena**	**4.83**	**71**	⇓P	**Pn**	**05 51 28.0**	**+0.7**
ARR	**Arges**	**5.27**	**42**	⇓P	**Pn**	**05 51 34.9**	**+1.5**
VOIR		**5.53**	**44**	⇑P	**Pn**	**05 51 39.0**	**+2.0**
MLR	**Muntele Rosu**	**6.04**	**47**	Pn	**Pn**	**05 51 46.3**	**+2.2**
	comp=N,3.6nm,0.3s,baz=159,slow=7.4,SNR=13						
MLR				Sn	**Sn**	**05 52 52.3**	**-0.6**
	comp=N,0.5nm,0.3s,baz=152,slow=15,SNR=1.6						
	comp=N,10nm,0.4s						
SOKA	**Soboth**	**6.10**	**329**	*i* Pn	**Pn**	**05 51 44.3**	**-0.6**
	comp=N,1.4nm,0.2s						
OBKA	**Obir**	**6.16**	**325**	*i* Pn	**Pn**	**05 51 48.1**	**+2.4**
	comp=N,1.9nm,0.2s						
ARSA	**Arzberg**	**6.41**	**334**	*i* Pn	Pn	05 51 54.0	+4.9
	comp=N,1.6nm,0.2s						
MYKA	**Terra Mystica**	**6.66**	**322**	*e*Pn	**Pn**	**05 51 54.2**	**+1.6**
	comp=N,2.2nm,0.3s						
KECS	**Kecovo**	**6.95**	**5**	*e*PN	**Pn**	**05 51 59.9**	**+3.4**
KECS				*e*SN	**Sn**	**05 53 13.4**	**-1.7**
ABTA	**Abfaltersbach**	**7.29**	**318**	*i* Pn	**Pn**	**05 52 01.8**	**+0.6**
	comp=N,3.1nm,0.4s						
ABTA				*i* Sn	**Sn**	**05 53 23.6**	**0.0**
	comp=N,5.6nm,0.4s						
MOA	**Molln**	**7.36**	**331**	*i* Pn	**Pn**	**05 52 04.0**	**+1.8**
	comp=N,1.0nm,0.2s						
MOA				*i* Sn	**Sn**	**05 53 29.4**	**+4.1**
	comp=N,2.5nm,0.3s						
LESA	**Schwarzleotal**	**7.69**	**322**	*i* Pn	**Pn**	**05 52 07.8**	**+1.1**
	comp=N,3.5nm,0.4s						
LESA				*i* Sn	**Sn**	**05 53 33.1**	**-0.4**
	comp=N,1.7nm,0.3s						
STHS	**Stebnicka Huta**	**7.94**	**8**	*e*PN	**Pn**	**05 52 12.7**	**+2.6**
STHS				*e*SN	**Sn**	**05 53 42.2**	**+2.7**
WTTA	**Wattenberg**	**8.08**	**318**	*i* Pn	**Pn**	**05 52 12.9**	**+0.8**
	comp=N,2.4nm,0.2s						
WTTA				*i* Sn	**Sn**	**05 53 43.4**	**+0.2**
	comp=N,8.1nm,0.7s						
WATA	**Walderalm**	**8.16**	**318**	*i* Pn	**Pn**	**05 52 14.4**	**+1.2**
	comp=N,4.4nm,0.3s						
SQTA	**Sankt Quirin**	**8.27**	**316**	*i* Pn	**Pn**	**05 52 16.3**	**+1.6**
	comp=N,3.9nm,0.3s						
SQTA				*i* Sn	**Sn**	**05 53 46.1**	**-1.7**
	comp=N,4.9nm,0.5s						
FETA	**Feichten**	**8.40**	**314**	*e*Pn	**Pn**	**05 52 16.8**	**+0.3**
	comp=N,2.4nm,0.6s						
MOTA	**Moosalm**	**8.41**	**316**	*i* Pn	**Pn**	**05 52 18.5**	**+1.9**
	comp=N,1.7nm,0.3s						
MOTA				*i* Sn	**Sn**	**05 53 51.9**	**+0.7**
	comp=N,3.8nm,0.5s						
DAVA	**Damuels**	**9.03**	**313**	*i* Pn	**Pn**	**05 52 25.8**	**+0.8**
	comp=N,0.9nm,0.2s						
DAVA				*e*Sn	**Sn**	**05 54 04.5**	**-1.9**
	comp=N,7.0nm,0.5s						
HFS	**Hagfors**	**18.96**	**351**	P	**P**	**05 54 34.0**	**-1.6**
	comp=N,0.2nm,0.3s,baz=177,slow=10,SNR=5.2						
	comp=N,2.7nm,0.7s						
FINES	**FINESS Array B**	**20.30**	**9**	P	**P**	**05 54 48.3**	**-1.8**
	comp=N,0.8nm,0.3s,baz=182,slow=9.4,SNR=11						
	comp=N,0.8nm,0.3s						
EKA	**Eskdalemuir Ar**	**20.33**	**320**	P	**P**	**05 54 47.4**	**-3.2**
	comp=N,0.7nm,0.6s,baz=112,slow=9.5,SNR=4.1						
	comp=N,0.7nm,0.6s						
JMIC	**Jan Mayen**	**32.73**	**343**	LR	LR	06 10 03.8	
	comp=N,313nm,20.1s,baz=192,slow=36						
ZALV	**Zalesovo Beam**	**44.01**	**51**	P	**P**	**05 58 20.8**	**-0.9**
	comp=N,0.7nm,0.5s,baz=295,slow=9.8,SNR=3.5						
	comp=N,0.7nm,0.5s						
MKAR	**Makanchi Array**	**44.19**	**61**	P	**P**	**05 58 22.2**	**-1.1**
	comp=N,0.9nm,0.9s,baz=282,slow=7.3,SNR=6.7						
	comp=N,0.9nm,0.9s						

IDC 26 05:51:29.2±6.1, **42°.05N×20°.48E, h0km, mb3.9**/2, **mbtmp3.8**/4, **ML2.7**/2, **Error ellipse: s-maj=132.1km s-min=37.2km az=79.0, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**7.58**	**152**	Pn	Pn	05 53 21.0	0.0
	0.8nm,0.3s,baz=306,slow=19,SNR=1.9						
	3.4nm,0.2s						
FINES	**FINESS Array B**	**19.71**	**8**	P	P	05 55 59.9	0.0
	0.1nm,0.3s,baz=187,slow=10,SNR=1.3						
	0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**43.20**	**51**	P	P	05 59 31.4	-0.2
	0.9nm,0.4s,baz=285,slow=8.2,SNR=2.7						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**43.40**	**62**	P	P	05 59 33.4	0.0
	0.7nm,0.6s,baz=286,slow=7.0,SNR=7.2						
	0.7nm,0.6s						

*NAO **26** 05:56:10.7, 40°.60N×19°.62E, h10km, MB3.6*
*GII **26** 05:56:10.4±0.0, 41°.49N×19°.46E, h10km, confirmed*
*MOS **26** 05:56:16.6±1.6, 41°.37N×19°.36E, h14km, mb4.7/11, Error ellipse: s-maj=8.5km s-min=4.6km az=71.4*
*IDC **26** 05:56:18.7±0.7, 41°.46N×19°.43E, h0km, mb4.2/17, mbtmp4.1/25, ML3.4/6, Error ellipse: s-maj=13.7km s-min=10.9km az=161.0*
*PRU **26** 05:56:19.8, 41°.12N×19°.40E, h10km, M4.5*
*NEIC **26** 05:56:21.5±2.6, 41°.50N±0°.05×19°.45E±0°.07, h10km±1km, mb4.5/10, Error ellipse: s-maj=9.2km s-min=8.6km az=186.0*
*SKO **26** 05:56:21.4, 41°.52N×19°.40E, h2km, ML4.3*
*ROM **26** 05:56:21.9±0.1, 41°.474N±0°.008×19°.508E±0°.010, h22km, ML4.3/186, Error ellipse: s-maj=1.0km s-min=0.6km az=41.0*
*TIR **26** 05:56:22.8, 41°.55N×19°.57E, h35km±2km, Ml4.4/9*
*THE **26** 05:56:22.5, 42°N±9"×1°9E±1°2, h9km±39km, M3.9/24, MLh3.9/24*
*RHSSO **26** 05:56:22.7±0.9, 41°.44N×19°.43E, h7km±4km, ML4.2/5*
*PDG **26** 05:56:23.5±0.4, 41°.54N×19°.56E, h11km±1km, MD3.9/13, ML3.9/1, Error ellipse: s-maj=1.7km s-min=2.0km az=0.0*

ISC 26 05:56:21.2±0.9, **41°.48N**±0°.02×**19°.47E**±0°.02, **h13**km±6km, **n259**,σ1°§**58**/306, **mb4.4**/24, **30C-25D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**114**	Pg	**Pg**	**05 56 28.4**	**+0.6**
TIR				Sg	**Sg**	**05 56 32.5**	**+0.3**
TIR				AML	AML	05 56 32.9	
	383nm,0.4s						
TIR				AML	AML	05 56 33.3	
	158nm,0.2s						
TIR	**Tirane**	**0.33**	**114**	⇓*i* Pg	**Pg**	**05 56 28.5**	**+0.6**
TIR				*i* Sg	**Sb**	**05 56 33.9**	**-0.2**
TIR	**Tirane**	**0.33**	**114**	⇓P	**Pg**	**05 56 28.4**	**+0.6**
TIR				S	**Sb**	**05 56 33.8**	**-0.3**
ULC	**Ulcinj**	**0.51**	**341**	⇑*i* Pg	**Pb**	**05 56 31.9**	**-0.3**
ULC				*i* Sg	**Sb**	**05 56 38.8**	**-0.8**
SDA	**Shkodra**	**0.57**	**2**	Pg	**Pg**	**05 56 32.5**	**+0.1**
SDA				Sg	**Sb**	**05 56 41.7**	**+0.5**
DRME	**Dracevica, Mon**	**0.74**	**343**	⇓*i* Pg	**Pb**	**05 56 36.1**	**+0.1**
DRME				*i* Sg	**Sb**	**05 56 46.1**	**+0.1**
PHP	**Peshkopia**	**0.76**	**74**	Pg	**Pg**	**05 56 35.4**	**-0.5**
PHP				Sg	**Sg**	**05 56 45.5**	**-0.4**
PHP				AML	AML	05 56 52.3	
	65nm,0.6s						
PHP	**Peshkopia**	**0.76**	**74**	P	**Pg**	**05 56 34.9**	**-1.0**
PHP				S	**Sb**	**05 56 47.4**	**+0.8**
BUM	**Brajici-Budva**	**0.93**	**333**	⇓*i* Pg	**Pn**	**05 56 40.1**	**0.0**
BUM				*i* Sg	**Sn**	**05 56 53.1**	**-0.2**
PDG	**Podgorica**	**0.96**	**351**	Pg	**Pn**	**05 56 40.7**	**+0.2**
PDG				Sg	**Sn**	**05 56 54.8**	**+0.7**
PDG	**Podgorica**	**0.96**	**351**		**Pn**	**05 56 41.1**	**+0.6**
PDG	**Podgorica**	**0.96**	**351**	⇓P	**Pn**	**05 56 41.2**	**+0.7**
PDG				⇑S	**Sn**	**05 56 54.2**	**+0.1**
PDG	**Podgorica**	**0.96**	**351**	P	**Pg**	**05 56 39.7**	**-0.1**
PDG				S	**Sn**	**05 56 54.1**	**0.0**
PDG	**Podgorica**	**0.96**	**351**	⇓*i* Pg	**Pg**	**05 56 39.5**	**-0.3**
PDG				*i* Sg	**Sn**	**05 56 53.5**	**-0.6**
VLO	**Vlora**	**1.01**	**179**	Pg	**Pn**	**05 56 43.0**	**+1.9**
VLO				Sg	**Sn**	**05 56 57.4**	**+2.2**
VLO				AML	AML	05 57 04.1	
	55nm,0.5s						
VLO	**Vlora**	**1.01**	**179**	P	**Pn**	**05 56 43.4**	**+2.3**
VLO				S	**Sn**	**05 57 00.1**	**+4.9**
VLO	**Vlora**	**1.01**	**179**	P	**Pn**	**05 56 42.9**	**+1.7**
VLO				S	**Sn**	**05 56 57.4**	**+2.2**
OHR	**Ohrid**	**1.07**	**110**	*i* Pg	**Pb**	**05 56 41.5**	**-0.1**
OHR				*i* Sg	**Sn**	**05 56 58.1**	**+1.3**
OHR				*e*Lg	Lg	05 56 59.7	
	comp=N,7μm,0.6s						
OHR				*e*Lg	Lg	05 57 00.2	
	comp=E,5μm,0.5s						
CEME	**Cevo**	**1.14**	**339**	⇑*i* Pg	**Pg**	**05 56 43.9**	**+0.7**
CEME				*i* Sg	**Sn**	**05 56 59.5**	**+0.8**
PVY	**Plav**	**1.17**	**18**	⇓*i* Pg	**Pb**	**05 56 42.6**	**-0.9**
PVY				*i* Sg	**Sn**	**05 56 59.4**	**+0.1**
HCY	**Herceg Novi**	**1.21**	**323**	⇑*i* Pg	**Pg**	**05 56 45.3**	**+0.8**
HCY				*i* Sg	**Sn**	**05 57 02.9**	**+2.7**
KBN	**Korca**	**1.31**	**130**	Pg	**Pb**	**05 56 46.3**	**+0.5**
KBN				AML	AML	05 57 08.7	
	comp=E,28nm,0.6s						
KBN	**Korca**	**1.31**	**130**	P	**Pg**	**05 56 47.3**	**+0.8**
KBN				S	**Sg**	**05 57 06.3**	**+2.8**
KBN	**Korca**	**1.31**	**130**	P	**Pn**	**05 56 45.4**	**0.0**
KBN				S	**Sb**	**05 57 02.2**	**-0.4**
NKME	**Niksic**	**1.34**	**344**	⇑*i* Pg	**Pg**	**05 56 47.2**	**+0.1**
NKME				*i* Sg	**Sg**	**05 57 06.3**	**+1.8**
KOME	**Kolasin**	**1.37**	**1**	⇓*i* Pg	**Pg**	**05 56 48.6**	**+1.0**
KOME				*i* Sg	**Sg**	**05 57 07.5**	**+2.1**
IVA	**Berane**	**1.43**	**13**	⇓*i* Pg	**Pb**	**05 56 47.5**	**-0.3**
IVA				*i* Sg	**Sg**	**05 57 08.0**	**+0.8**
TREB	**Trebinje**	**1.49**	**326**	⇑*i* Pg	**Pg**	**05 56 49.4**	**-0.5**
TREB				*e*Sg	**Sg**	**05 57 10.7**	**+1.5**
MESG	**Mesagne**	**1.51**	**235**	P	**Pn**	**05 56 48.4**	**+0.4**
SKO	**Skopje**	**1.56**	**71**	*i* Pg	**Pb**	**05 56 50.3**	**+0.4**
SKO				*i* Sg	**Sg**	**05 57 11.7**	**+0.4**
BRY	**Bratogost**	**1.58**	**334**	⇑*i* Pg	**Pg**	**05 56 51.2**	**-0.4**
BRY				*i* Sg	**Sg**	**05 57 14.1**	**+2.0**
NEST	**Nestorio**	**1.60**	**131**	Pn	**Pg**	**05 56 52.1**	**+0.2**
NEST				AML	AML	05 57 16.9	
	comp=E,12nm,0.5s						
NEST	**Nestorio**	**1.60**	**131**	P	**Pg**	**05 56 52.2**	**+0.2**
NEST				S	**Sg**	**05 57 13.6**	**+0.9**
UPM	**Unac-Piva**	**1.77**	**347**	⇑*i* Pn	**Pb**	**05 56 53.8**	**+0.1**
UPM				*i* Sn	**Sg**	**05 57 18.8**	**+0.5**
KEK	**Kerkira**	**1.78**	**172**		**Pg**	**05 56 57.9**	**+2.5**
KEK	**Kerkira**	**1.78**	**172**	P	**Pg**	**05 56 57.7**	**+2.3**
KEK				AML	AML		
	comp=E,3360μm,1.2s						
KEK				AML	AML		
	comp=N,2780μm,1.3s						
PENT	**Pentalofos**	**1.80**	**135**	P	**Pb**	**05 56 55.1**	**+0.9**
KLINJ	**Klinje**	**1.81**	**339**	*e*Pn	**Pb**	**05 56 54.8**	**+0.5**
KLINJ				*e*Sn	**Sg**	**05 57 18.4**	**-1.1**
PLE	**Pljevlja**	**1.85**	**358**	⇓*i* Pn	**Pb**	**05 56 54.6**	**-0.4**
PLE				*i* Sn	**Sg**	**05 57 19.8**	**-1.0**
TAR1	**Taranto**	**1.91**	**241**	P	**Pn**	**05 56 53.9**	**+0.4**
TAR1				AML	AML		
	comp=E,3375μm,0.6s						
TAR1				AML	AML		
	comp=N,2480μm,0.4s						
TAR1				AML	AML		
	comp=E,3375μm,1.4s						
STON	**Ston**	**1.92**	**317**	P	**Pb**	**05 56 55.0**	**-1.0**
STON				AML	AML		
	comp=N,2120μm,0.7s						
STON				AML	AML		
	comp=N,2120μm,1.3s						
STON				AML	AML		
	comp=E,1695μm,1.5s						
NOCI	**Noci**	**1.94**	**250**	Pn	**Pn**	**05 56 54.8**	**+0.8**
NOCI				Sn	**Sg**	**05 57 23.6**	**0.0**
NOCI				AML	AML	05 57 32.9	
	comp=E,8.7nm,0.4s						
NOCI	**Noci**	**1.94**	**250**	P	**Pn**	**05 56 54.5**	**+0.5**
NOCI				AML	AML		
	comp=N,2825μm,0.4s						
NOCI				AML	AML		
	comp=E,2535μm,0.8s						
NOCI				AML	AML		
	comp=E,2535μm,1.2s						
IGT	**Igoumenitsa**	**2.05**	**161**	Pn	**Pn**	**05 56 56.0**	**+0.5**
IGT				AML	AML	05 57 35.8	
	comp=E,5.1nm,0.4s						
IGT	**Igoumenitsa**	**2.05**	**161**	P	**Pb**	**05 56 57.2**	**-1.2**
IGT				S	**Sg**	**05 57 25.9**	**-1.3**
KZN	**Kozani**	**2.10**	**123**	P	**Pb**	**05 56 58.0**	**-1.2**
JAN	**Janina**	**2.10**	**150**	P	**Pb**	**05 56 58.9**	**-0.3**
RUDO	**Rudo**	**2.14**	**358**	*e*Pn	**Pb**	**05 56 59.7**	**-0.2**
RUDO				*e*Sn	**Sb**	**05 57 26.4**	**+0.1**
LTRZ	**Laterza**	**2.19**	**247**	P	**Pn**	**05 56 57.7**	**+0.3**
LTRZ				AML	AML		
	comp=E,1430μm,0.8s						
LTRZ				AML	AML		
	comp=N,1705μm,0.7s						
LTRZ				AML	AML		
	comp=N,1705μm,1.3s						
LTRZ				AML	AML		
	comp=E,1430μm,1.2s						
MATE	**Matera**	**2.25**	**249**	⇑P	**Pn**	**05 56 59.0**	**+0.8**
MATE	**Matera**	**2.25**	**249**	P	**Pn**	**05 56 58.9**	**+0.8**
MATE				AML	AML		
	comp=E,2070μm,0.8s						
MATE				AML	AML		
	comp=N,1855μm,0.6s						
MATE				AML	AML		
	comp=N,1855μm,1.4s						
GRG	**Griva**	**2.27**	**102**	P	**Pn**	**05 56 59.9**	**+1.3**
PRMD	**Pramanda**	**2.31**	**147**	P	**Pb**	**05 57 01.7**	**-1.1**
TETR	**Tetrakomo, Epi**	**2.54**	**147**	P	**Pn**	**05 57 04.6**	**+2.4**
KNT	**Kendrikon**	**2.60**	**96**	P	**Pn**	**05 57 04.1**	**+1.0**
KNT	**Kendrikon**	**2.60**	**96**	*i* Pn	**Pn**	**05 57 04.4**	**

VALD Valchedram 3.67 52 P Pn 05 57 19.7 +2.0
BLY Banja Luka 3.67 334 *e*Pn **Pn 05 57 20.3 +2.6**
BLY *e*Sn **Sn 05 58 03.3 +2.4**
BLY Banja Luka 3.67 334 ⇓P **Pn 05 57 19.3 +1.6**
MPEP Malo Peshtene 3.68 58 P **Pn 05 57 19.7 +1.9**
MDVR Moldovita 3.69 26 ⇑P **Pn 05 57 19.2 +1.2**
PUNG Punghina 3.78 41 ⇑P **Pn 05 57 20.4 +1.1**
DJES Djerdap 3.89 34 ⇓P **Pn 05 57 22.0 +1.2**
RZN Rozhen 3.96 85 P **Pn 05 57 23.8 +1.9**
RZN S **Sn 05 58 10.6 +2.3**
HERR Herculane 4.03 31 ⇓P **Pn 05 57 23.9 +1.3**
SRE Strehaia 4.20 39 ⇑P **Pn 05 57 26.7 +1.7**
SRE Strehaia 4.20 39 P **Pn 05 57 26.7 +1.7**
CEL Celeste 4.23 222 Pn 05 57 25.4 -0.1
PLVB Pleven 4.26 62 ⇑P **Pn 05 57 27.7 +1.8**
SOI Samo 4.30 219 AML AML
comp=N,245μm,0.7s
SOI AML AML
comp=E,201μm,1.0s
SOI AML AML
comp=E,201μm,1.0s
BZS Buzias 4.42 20 ⇑P **Pn 05 57 29.7 +1.6**
BZS Buzias 4.42 20 P **Pn 05 57 29.6 +1.6**
PVL Pavlikeni 4.54 67 P **Pn 05 57 32.6 +3.0**
RDO Rodhopi 4.58 92 P **Pn 05 57 31.4 +1.2**
RDO Rodhopi 4.58 92 **Pn 05 57 30.9 +0.6**
GZR Gura Zlata 4.59 31 ⇓P **Pn 05 57 32.7 +2.1**
GZR Gura Zlata 4.59 31 P **Pn 05 57 32.6 +2.1**
AQU L'Aquila 4.61 283 *e*Pn **Pn 05 57 32.2 +1.5**
AQU *e*Sn **Sn 05 58 24.5 +0.3**
LIA Limnos Island 4.62 108 P **Pn 05 57 31.0 +0.3**
CAMP Campotosto 4.64 285 Pn 05 57 32.3 +1.2
SURR Surduc 4.69 23 ⇓P **Pn 05 57 33.0 +1.3**
ITM Ithomi 4.70 155 Pn 05 57 33.2 +1.4
MORH Mrgy, Hungar 4.77 353 *e*Pn **Pn 05 57 34.6 +1.8**
MORH *e*Sn **Sn 05 58 30.1 +2.1**
MORH Mrgy, Hungar 4.77 353 ⇑P **Pn 05 57 34.7 +1.8**
GUMA Gualdo di Mace 4.82 291 Pn 05 57 33.7 +0.2
NRCA Norcia 4.91 288 Pn 05 57 35.5 +0.7
FDMO Fiordimonte 4.99 290 Pn 05 57 36.5 +0.7
SIRR Siria 5.04 18 ⇓P **Pn 05 57 37.8 +1.3**
LOT Lotru 5.05 37 ⇓P **Pn 05 57 38.7 +1.9**
HUMR Humele 5.06 51 ⇓P **Pn 05 57 39.0 +2.2**
LAV9 Lanuvio 5.08 274 AML AML
comp=N,586μm,0.3s
LAV9 AML AML
comp=E,490μm,0.4s
LAV9 AML AML
comp=E,490μm,1.6s
CESX Cesi 5.25 285 Pn 05 57 41.0 +1.5
BEHE Becsehely 5.36 340 *e*Pn **Pn 05 57 43.2 +2.3**
BEHE *e*Sn **Sn 05 58 42.9 +0.5**
ARR Arges 5.41 42 ⇑P **Pn 05 57 43.4 +1.7**
MURB Monte Urbino 5.44 291 Pn 05 57 43.4 +1.2
MTUR Matau 5.54 46 ⇓P **Pn 05 57 45.6 +2.1**
MTUR Matau 5.54 46 P **Pn 05 57 45.5 +2.1**
DRGR 5.80 23 ⇓P **Pn 05 57 48.3 +1.2**
DRGR 5.80 23 P **Pn 05 57 48.3 +1.2**
SOKA Soboth 6.10 330 *e*Pn **Pn 05 57 52.1 +0.9**
comp=E,2.7nm,0.2s
SOKA *i*Sn **Sn 05 58 58.1 -2.8**
comp=E,18nm,0.6s
OBKA Obir 6.15 326 *i*Pn **Pn 05 57 52.6 +0.7**
comp=E,10nm,0.4s
OBKA *e*Sn **Sn 05 58 59.1 -3.1**
comp=E,32nm,0.8s
MLR Muntele Rosu 6.19 47 Pn **Pn 05 57 54.6 +2.2**
comp=E,23nm,0.5s,baz=159,slow=7.2,SNR=39
MLR Sn **Sn 05 59 05.7 +2.7**
comp=E,1.5nm,0.3s,baz=139,slow=19,SNR=1.6
MLR Muntele Rosu 6.19 47 Pn 05 57 54.0 +1.6
MLR Muntele Rosu 6.19 47 ⇑P **Pn 05 57 54.7 +2.3**
MLR Muntele Rosu 6.19 47 P **Pn 05 57 54.0 +1.6**
MLR 05 59 05.7
SABO M.te Sabotino 6.19 319 Pn 05 57 52.3 -0.1
DOPR Dopca 6.21 42 ⇓P **Pn 05 57 54.2 +1.6**
OSSC Osservatorio P 6.41 291 Pn 05 57 56.6 +1.3
ARSA Arzberg 6.42 335 Pn 05 57 56.6 +1.0
ARSA Arzberg 6.42 335 *e*Pn **Pn 05 57 56.9 +1.4**
comp=E,7.3nm,0.4s
ARSA *i*Sn **Sn 05 59 10.9 +2.1**
comp=E,5.4nm,0.5s
APE Apeiranthos 6.44 131 ⇓P **Pn 05 57 56.6 +0.8**
APE Apeiranthos 6.44 131 P **Pn 05 57 56.6 +0.8**
PSZ Piszkesteto 6.45 3 Pn 05 57 56.4 +0.5
PSZ Piszkesteto 6.45 3 P **Pn 05 57 56.4 +0.5**
RONA Rosalia, Austr 6.62 341 *i*Pn **Pn 05 57 60.0 +1.7**
comp=E,3.1nm,0.4s
RONA *i*Sn **Sn 05 59 15.8 +2.2**
comp=E,8.1nm,0.5s
MYKA Terra Mystica 6.64 323 *i*Pn **Pn 05 57 59.1 +0.5**
comp=E,2.0nm,0.3s
MYKA *i*Sn **Sn 05 59 14.6 +0.4**
comp=E,8.4nm,0.5s
PLOR Plostina 6.80 48 ⇑P **Pn 05 58 03.0 +2.3**
PLOR Plostina 6.80 48 P **Pn 05 58 03.0 +2.3**
STAL STALIGIAL 6.83 317 Pn 05 58 01.8 +0.6
VRI Vrincioaia 6.85 48 ⇓P **Pn 05 58 04.1 +2.7**
VRI Vrincioaia 6.85 48 P **Pn 05 58 04.1 +2.7**
CONA Conrad Observa 6.94 340 *e*Pn **Pn 05 58 04.9 +2.2**
comp=E,2.0nm,0.3s
KECS Kecovo 7.04 6 *e*P **Pn 05 58 06.2 +2.2**
KECS 05 59 21.5 *e*
KECS Kecovo 7.04 6 *e*PN **Pn 05 58 06.2 +2.2**
KECS *e*SN **Sn 05 59 21.5 -2.4**
MODS Modra-Piesok 7.07 348 *e*P Pn 05 58 09.5 +5.1
MODS Modra-Piesok 7.07 348 *e*PN Pn 05 58 09.5 +5.1
KBA Koelnbreinsper 7.12 324 *e*Pn **Pn 05 58 06.7 +1.5**
comp=E,5.5nm,0.4s
KBA *i*Sn **Sn 05 59 25.7 -0.3**
comp=E,7.2nm,0.5s
TESR Tescani 7.22 43 ⇑P **Pn 05 58 07.9 +1.4**
ABTA Abfaltersbach 7.26 319 *i*Pn **Pn 05 58 08.0 +0.8**
comp=E,3.2nm,0.3s
ABTA *i*Sn **Sn 05 59 27.2 -2.3**
comp=E,29nm,0.7s
TPGR Topolog 7.36 60 ⇑P **Pn 05 58 10.3 +1.9**
MOA Molln 7.37 332 *i*Pn **Pn 05 58 10.0 +1.5**
comp=E,3.7nm,0.3s
MOA *i*Sn **Sn 05 59 35.0 +3.0**
comp=E,9.3nm,0.5s
BURAR Bucovina Array 7.38 32 Pn 05 58 11.2 +2.4
BUR08 Bucovina Ar. S 7.40 32 Pn 05 58 10.5 +1.5
BIOA Bad Ischl, Aus 7.47 328 *i*Pn **Pn 05 58 10.3 +0.3**
comp=E,5.3nm,0.4s
IDI Anoyia 7.50 144 Pn **Pn 05 58 09.0 -1.5**
comp=E,2.7nm,0.2s,baz=261,slow=4.2,SNR=8.3
IDI Sn **Sn 05 59 31.1 -4.3**
comp=E,5.6nm,0.3s,baz=185,slow=7.1,SNR=9.9
MANT Manisa 7.59 110 Pn 05 58 13.4 +1.6
LESA Schwarzleotal 7.67 323 *i*Pn **Pn 05 58 13.4 +0.6**
comp=E,5.8nm,0.5s,SNR=5.2
LESA *e*Sn **Sn 05 59 39.5 -0.1**
comp=E,10nm,0.5s
TLCR 7.75 58 ⇑P **Pn 05 58 16.1 +2.3**
TLCR 7.75 58 P **Pn 05 58 16.0 +2.3**
STHS Stebnicka Huta 8.04 8 *e*P **Pn 05 58 22.0 +4.3**
STHS *e* 05 59 51.8
STHS Stebnicka Huta 8.04 8 *e*PN **Pn 05 58 22.0 +4.3**
STHS *e*SN **Sn 05 59 51.8 +3.4**
WTTA Wattenberg 8.05 319 *i*Pn **Pn 05 58 19.5 +1.4**
comp=E,6.7nm,0.3s
WTTA *i*Sn **Sn 05 59 49.0 -0.1**
comp=E,29nm,0.6s
WATA Walderalm 8.13 319 *e*Pn **Pn 05 58 21.3 +2.1**
comp=E,4.5nm,0.2s,SNR=7.2
WATA *i*Sn **Sn 05 59 50.9 -0.1**
comp=E,27nm,0.6s
CKRC Cesky Krumlov 8.19 335 *e*P **Pn 05 58 21.1 +1.3**
CKRC Cesky Krumlov 8.19 335 *e*PN **Pn 05 58 21.1 +1.3**
SQTA Sankt Quirin 8.24 317 *e*Pn **Pn 05 58 22.5 +1.9**
comp=E,5.3nm,0.3s
SQTA *i*Sn **Sn 05 59 53.5 -0.1**
comp=E,20nm,0.6s
FETA Feichten 8.37 314 *e*Pn **Pn 05 58 23.7 +1.4**
comp=E,0.8nm,0.4s
FETA *e*Sn **Sn 05 59 58.6 +1.9**
comp=E,9.2nm,1.0s
MOTA Moosalm 8.38 317 *e*Pn **Pn 05 58 23.6 +1.1**
comp=E,5.7nm,0.4s
MOTA *e*Sn **Sn 05 59 57.6 +0.5**
comp=E,15nm,0.7s
GERES GERESS Array B 8.41 333 Pn **Pn 05 58 23.6 +0.6**
baz=157,slow=14,SNR=8.1
comp=E,1.3nm,0.6s
BORA Eskisehir 8.50 97 Pn 05 58 26.9 +2.8
RETA Reutte 8.65 317 *i*Sn **Sn 06 00 02.9 -0.6**
comp=E,10nm,0.4s
DAVOX Davos/Dischmat 8.69 311 Pn **Pn 05 58 28.3 +1.4**
comp=E,2.0nm,0.3s,baz=336,slow=4.8,SNR=12
KHC Kasperske Hory 8.70 334 Pn 05 58 26.2 -0.6
KHC Kasperske Hory 8.70 334 *ce*P **Pn 05 58 26.5 -0.3**
KHC pmax pmax
comp=E,8.0nm,2.5s
KHC Kasperske Hory 8.70 334 *e*PN **Pn 05 58 27.3 +0.5**
KHC *e*SN **Sn 06 00 05.8 +1.0**
DAVA Damuels 8.99 313 *i*Pn **Pn 05 58 32.7 +1.8**
comp=Z,7.1nm,0.5s
DAVA *i*Sn **Sn 06 00 09.6 -2.4**
comp=Z,7.9nm,0.6s
SENIN Lac Senin/Sane 10.04 303 Pn 05 58 44.5 -0.9
BRTR Keskin Array B 10.92 95 Pn **Pn 05 58 58.9 +1.5**
comp=Z,0.1nm,0.3s,baz=257,slow=10,SNR=4.0
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 11.43 33 Pn **Pn 05 59 04.0 -0.2**
comp=Z,0.3nm,0.3s,baz=223,slow=13,SNR=6.3
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 11.43 33 P **Pn 05 59 04.0 -0.2**
AKBB Malin Array Si 11.43 33 *ce*P **Pn 05 59 03.5 -0.6**
PABE Paberze 14.35 10 P **P 05 59 50.3 -0.7**
MMAI Mount Meron Ar 15.23 119 Pn **P 05 59 58.9 -2.1**
comp=Z,2.2nm,0.3s,baz=312,slow=12,SNR=4.4
GEM Giv'at Ha'Em 15.28 117 P Pn 05 59 46.3 -10
MMLI Mont Hallkshu 15.60 120 P Pn 05 59 50.6 -10
HMDT Nahal Hemdat 15.79 121 P Pn 05 59 52.8 -10
DSI Dead Sea 16.14 123 P Pn 05 59 57.3 -11
PRNI Paran 16.75 127 P Pn 06 00 04.8 -11
KRMI Paran Flat 16.76 128 P Pn 06 00 05.3 -10
KIV Kislovodsk 17.23 74 *e*P **P 06 00 22.6 -0.6**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KBZ Khabaz 17.39 75 P **P 06 00 24.4 -0.3**
comp=Z,0.3nm,0.3s,baz=236,slow=5.6,SNR=8.1
comp=Z,3.2nm,0.7s
VSU Vasula 17.61 13 *ce*P **Pn 06 00 26.6 +0.4**
VSU pmax pmax
comp=Z,21nm,0.8s
OBN Obninsk 17.70 34 *e*P **Pn 06 00 27.1 -0.1**
OBN pmax pmax
comp=Z,8.0nm,0.9s
ESDC Sonseca Array 17.88 272 P **Pn 06 00 30.0 +0.3**
comp=Z,0.1nm,0.3s,baz=90,slow=9.0,SNR=4.7
comp=Z,1.8nm,1.0s
ESDC Sonseca Array 17.88 272 IAmb IAmb 06 00 32.1
comp=Z,4.2nm,1.5s
HFS Hagfors 19.02 351 P **P 06 00 41.8 -0.8**
comp=Z,0.4nm,0.3s,baz=165,slow=12,SNR=10
comp=Z,2.9nm,0.6s
GNI Garni 19.16 86 *ce*P **P 06 00 43.2 -1.3**
GNI pmax pmax
comp=Z,7.0nm,0.7s
NB2 NORSAR Subarra 20.23 348 P **P 06 00 55.5 -0.3**
comp=Z,3.6nm,1.1s,baz=151,slow=10
NOA NORSAR Array B 20.23 348 P **P 06 00 54.4 -1.4**
comp=Z,1.0nm,0.7s,baz=152,slow=9.8,SNR=5.4
EKA Eskdalemuir Ar 20.31 321 P **P 06 00 56.9 +0.1**
comp=Z,1.8nm,0.8s,baz=112,slow=9.0,SNR=6.0
comp=Z,1.8nm,0.8s
FINES FINESS Array B 20.39 9 P **P 06 00 56.4 -1.2**
comp=Z,6.3nm,0.7s,baz=179,slow=9.3,SNR=20
comp=Z,6.3nm,0.7s
FINES FINESS Array B 20.39 9 *i*P **P 06 00 56.9 -0.7**
FINES pmax pmax
comp=Z,6.0nm,0.7s
MDT Midelt 21.00 253 P **P 06 01 02.9 -1.7**
comp=Z,3.7nm,0.8s,baz=76,slow=15,SNR=6.0
comp=Z,3.7nm,0.8s
AKT Akhty 21.14 81 *e*P **P 06 01 05.1 -0.9**
AKT pmax pmax
comp=Z,7.0nm,0.6s
BELG Belogornoye 21.97 51 P **P 06 01 13.5 -1.1**
comp=Z,24nm,0.8s,baz=241,slow=3.2,SNR=7.8
comp=Z,24nm,0.8s
BELG Belogornoye 21.97 51 *i*P **P 06 01 13.5 -1.1**
BELG pmax pmax
comp=Z,5.0nm,0.9s
KLMR Klimovskoe 22.94 26 *e*P **P 06 01 23.0 -1.9**
KLMR pmax pmax
comp=Z,26nm,1.1s
KIRV Kirov 25.43 38 *i*P **P 06 01 45.9 -2.5**
AKTO Aktyubinsk 27.98 58 P **P 06 02 09.4 -2.2**
comp=Z,0.9nm,0.4s,baz=253,slow=14,SNR=2.0
comp=Z,0.9nm,0.4s
ARCES ARCESS Array B 28.30 4 P **P 06 02 12.7 -1.4**
comp=Z,3.9nm,1.1s,baz=186,slow=8.3,SNR=2.0
comp=Z,3.9nm,1.1s
ARCES ARCESS Array B 28.30 4 IAmb IAmb 06 02 53.8
comp=Z,9.8nm,1.4s
ARTI Arti 29.13 46 P **P 06 02 20.2 -1.5**
comp=Z,9.7nm,0.7s,baz=253,slow=6.4,SNR=15
comp=Z,9.7nm,0.7s
ARTI Arti 29.13 46 P **P 06 02 20.2 -1.5**
ARTI Arti 29.13 46 *d*P **P 06 02 20.6 -1.0**
ARTI 06 03 14.9
ARTI S **S 06 07 17.5 +4.4**
ARTI SS **SnSn 06 08 45.8 +8.6**
ARTI pmax pmax
comp=Z,9.0nm,0.6s
TORD Torodi Ar. Bea 32.20 214 P **P 06 02 50.1 +1.0**
comp=Z,2.9nm,0.5s,baz=22,slow=11,SNR=1.6
comp=Z,2.9nm,0.5s
TORD Torodi Ar. Bea 32.20 214 IAmb IAmb 06 03 16.7
comp=Z,3.9nm,0.6s
BORK Borovoye 35.67 53 *ce*P **P 06 03 19.2 +0.3**
BORK pmax pmax
comp=Z,7.0nm,0.6s
BVAR Borovoye Array 35.71 53 P **P 06 03 19.4 +0.1**
comp=Z,3.8nm,0.7s,baz=271,slow=5.9,SNR=20
comp=Z,3.8nm,0.7s
DBIC Dimbokro 40.86 219 P **P 06 04 02.8 -0.2**
comp=Z,0.1nm,0.8s,baz=27,slow=9.0,SNR=1.5
comp=Z,2.0nm,0.8s
DBIC Dimbokro 40.86 219 IAmb IAmb 06 04 15.4
comp=Z,12nm,1.4s
KURBB Kurchatov Arra 41.00 56 P **P 06 04 03.0 -0.7**
comp=Z,1.0nm,0.6s,baz=286,slow=9.9,SNR=7.8
comp=Z,1.0nm,0.6s
KURK Kurchatov 41.04 56 P **P 06 04 03.0 -1.0**
KURK Kurchatov 41.04 56 *i*P **P 06 04 02.6 -1.5**
KURK pmax pmax
comp=Z,4.0nm,1.5s
ZAA0 Zalesovo Array 44.15 50 IAmb IAmb 06 04 29.4
comp=Z,6.7nm,0.8s
ZALV Zalesovo Beam 44.15 50 P **P 06 04 28.6 -0.8**
comp=Z,6.2nm,0.5s,baz=281,slow=8.6,SNR=29
comp=Z,6.2nm,0.5s
MK31 Makanchi Array 44.34 61 *ce*P **P 06 04 30.5 -0.5**
MKAR Makanchi Array 44.34 61 P **P 06 04 30.4 -0.6**
comp=Z,8.0nm,0.6s,baz=282,slow=7.8,SNR=54
comp=Z,8.0nm,0.6s
DGZ Jazzator, Alta 46.77 56 *i*P **P 06 04 49.1 -1.3**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
EVN Everest 55.69 81 P **P 06 05 56.5 -1.7**
SONM Songino Array 59.02 52 P **P 06 06 20.5 -0.3**
comp=Z,1.4nm,0.7s,baz=291,slow=9.4,SNR=7.4
comp=Z,1.4nm,0.7s
ULN Ulaanbaatar 59.39 51 *i*P **P 06 06 22.2 -1.2**
ULN pmax pmax
comp=Z,6.0nm,1.8s
LZDM Lanzhou Array 63.45 64 P **P 06 06 50.6 -0.6**
comp=Z,1.8nm,0.3s,baz=356,slow=4.8,SNR=3.7
comp=Z,1.8nm,0.3s
E29M Blow River 69.15 351 P **P 06 07 27.7 +0.9**
E29M IAmb IAmb 06 07 46.9
comp=Z,1.9nm,0.9s
F31M Tsiigehtchic 69.52 349 IAmb IAmb 06 07 41.4
comp=Z,13nm,1.4s
CMAR Chiang Mai Arr 70.25 83 P **P 06 07 32.6 -1.7**
comp=Z,0.6nm,0.3s,baz=320,slow=5.6,SNR=4.3
comp=Z,0.6nm,0.3s
COLA College 73.52 354 *e*P **P 06 07 54.0 +0.8**
COLA pmax pmax
comp=Z,30nm,3.3s
ILAR Eielson Array 73.55 354 P **P 06 07 53.0 -0.4**
comp=Z,0.2nm,0.6s,baz=3.1,slow=4.0,SNR=5.4
comp=Z,0.2nm,0.6s
PDAR Pinedale Array 84.38 325 P **P 06 08 56.8 +3.3**
comp=Z,0.5nm,0.7s,baz=52,slow=6.9,SNR=2.3

KRNET ***26*** *05:58:39.7±0.1,40.°34N×70.°10E,h20km,mb3.5*
SOME ***26*** *05:58:39.4,40.°32N×70.°18E,h15km*
ISU ***26*** *05:58:40,40.°22N×69.°99E,h30km*
NNC ***26*** *05:58:42.4±2.7,40.°41N×70.°12E,h0km,mb3.7,mpv3.3,*
Error ellipse: s-maj=20.1km s-min=11.1km az=25.0
ISC 26 05:58:42.7±1.1,40.°27N±0.°03×70.°05E±0.°03,h31km±10km,
n53,σ2§14/74,27C-15D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MINT	**Mingtut**	**0.73**	**74**	S	**Sn**	**05 59 09.5**	**+2.3**
CHMI	**Chimion**	**1.13**	**89**	P	**Pb**	**05 59 03.5**	**-0.2**
CHMI				S	**Sb**	**05 59 20.6**	**+2.5**
NZBK	**Nazarbek**	**1.19**	**324**	P	Pb	05 59 07.1	+2.4
NZBK				S	**Sb**	**05 59 25.6**	**+5.9**
TGS	**TashGRES**	**1.22**	**341**	S	**Sb**	**05 59 21.2**	**+0.5**
CHMG	**Chimgan**	**1.28**	**359**	P	Pn	05 58 59.9	-4.7
CHMG				S	**Sn**	**05 59 19.5**	**-1.3**
GAR	**Garm**	**1.28**	**171**	⇑*e*P	**Pb**	**05 59 04.5**	**-1.9**
GAR				⇑*i*S	**Sb**	**05 59 22.4**	**-0.2**
FRG	**Fergana**	**1.33**	**85**	S	**Sb**	**05 59 26.5**	**+2.7**
TVKS	**Tavaksay**	**1.34**	**347**	P	**Pb**	**05 59 05.3**	**-2.0**
TVKS				S	**Sb**	**05 59 25.7**	**+1.6**
CHRV	**Charvak**	**1.37**	**357**	P	**Pb**	**05 59 05.1**	**-2.8**
CHRV				S	**Sb**	**05 59 26.1**	**+1.0**
TRKS	**Terek-Say**	**1.51**	**33**	⇓*i*P	**Pn**	**05 59 05.3**	**-2.5**
TRKS				⇓*i*S	**Sn**	**05 59 24.0**	**-2.5**
DRK	**Karamyk**	**1.56**	**120**	⇑*i*P	**Pb**	**05 59 08.4**	**-2.8**
DRK				⇑*i*S	**Sb**	**05 59 29.3**	**-1.4**
BXML	**Bakhmal**	**1.66**	**250**	P	Pb	05 59 16.2	+3.5
BXML				S	Sb	05 59 40.7	+7.5
PSK	**Pskem**	**1.68**	**8**	P	**Pb**	**05 59 10.5**	**-2.5**
PSK				S	**Sb**	**05 59 35.3**	**+1.5**
DZI	**Dzhizak**	**1.71**	**266**	P	**Pb**	**05 59 13.3**	**-0.2**
CHGR	**Chuyangaron**	**1.75**	**203**	⇑*i*P	**Pb**	**05 59 12.9**	**-1.4**
CHGR				⇑*i*S	**Sb**	**05 59 37.0**	**+1.1**
IUG	**Iuzhnay** 544nm,0.3s	**1.88**	**360**	Pg	**Pb**	**05 59 14.6**	**-1.8**
IUG				Lg	Lg	05 59 40.7	
	662nm,0.6s						
TSTA	**Tashata**	**1.88**	**80**	P	**Pb**	**05 59 13.3**	**-3.1**
TSTA				S	**Sb**	**05 59 39.8**	**+0.3**
CHM	**Chimkent** 128nm,0.3s	**2.08**	**351**	*e*P	**Pb**	**05 59 18.3**	**-1.4**
CHM				*e*S	**Sb**	**05 59 46.3**	**+1.1**
	436nm,0.5s						
ARK	**Arkit**	**2.11**	**43**	⇑*i*P	**Pn**	**05 59 15.9**	**0.0**
ARK				⇑*i*S	**Sn**	**05 59 42.2**	**+1.1**
OHH	**Osh**	**2.11**	**82**	⇑*i*P	**Pn**	**05 59 16.1**	**+0.2**
OHH				⇑*i*S	**Sb**	**05 59 42.5**	**-3.6**
ARSB	**Arslanbob**	**2.46**	**64**	⇓*i*P	**Pn**	**05 59 20.7**	**-0.2**
ARSB				⇓*i*S	**Sn**	**05 59 50.8**	**+0.8**
AGL	**Agalyk**	**2.55**	**254**	P	**Pb**	**05 59 28.9**	**+1.1**
AGL				S	**Sb**	**06 00 02.2**	**+3.4**
SFK	**Sufi-Kurgan**	**2.66**	**94**	⇑*i*P	**Pn**	**05 59 24.1**	**+0.4**
SFK				⇑*i*S	**Sn**	**05 59 56.6**	**+1.6**
BRLS	**Borolday** 4.0nm,0.4s	**2.76**	**357**	Pg	**Pn**	**05 59 23.8**	**-1.1**
BRLS				Lg	Lg	05 59 55.9	
	0.7nm,0.5s						
BRLS	**Borolday** 4.0nm,0.4s	**2.76**	**357**	*e*P	**Pn**	**05 59 23.8**	**-1.1**
BRLS				*e*S	**Sn**	**05 59 55.9**	**-1.4**
	0.7nm,0.5s						
KK31	**Karatay Array** 0.6nm,0.2s,baz=208,slow=15,SNR=128	**2.85**	**7**	Pn	Pb	05 59 27.9	-5.0
KK31				⇓Pg	Pn	05 59 32.1	+6.0
	7.3nm,0.3s,baz=201,slow=22,SNR=5.3						
KK31				⇓Lg	Lg	06 00 08.8	
	9.3nm,0.3s,baz=189,slow=29,SNR=8.2						
MNAS	**Manas**	**2.89**	**39**	⇑*i*P	**Pn**	**05 59 26.6**	**-0.1**
MNAS				⇑*i*S	**Sn**	**06 00 00.8**	**+0.4**
SALK	**Salom-Alik**	**2.94**	**77**	⇓*i*P	**Pn**	**05 59 27.4**	**0.0**
SALK				⇓*i*S	**Sn**	**06 00 02.5**	**+0.8**
BAYS	**Baysun**	**3.02**	**228**	S	Sb	06 00 19.6	+7.3
PKMR	**Pachkamar**	**3.32**	**240**	S	Sb	06 00 30.4	+10
MRKS	**Merke** 2.1nm,0.8s	**3.44**	**43**	Pg	**Pb**	**05 59 40.5**	**-2.5**
MRKS				Lg	Lg	06 00 24.7	
	17nm,0.5s						
MRKS	**Merke** 2.1nm,0.8s	**3.44**	**43**	*e*P	**Pb**	**05 59 40.5**	**-2.5**
MRKS				*e*S	**Sb**	**06 00 24.7**	**+0.4**
	17nm,0.5s						
ARLS	**Aral**	**3.60**	**62**	⇑*i*P	**Pn**	**05 59 36.5**	**-0.1**
ARLS				⇑*i*S	**Sn**	**06 00 18.1**	**0.0**
EKS2	**Erkin-Say**	**3.68**	**48**	⇑*i*P	**Pn**	**05 59 37.6**	**0.0**
EKS2				⇑*i*S	**Sn**	**06 00 20.0**	**-0.1**
UCH	**Uchtor**	**3.89**	**58**	⇓*i*P	**Pn**	**05 59 40.8**	**0.0**
UCH				⇓*i*S	**Sn**	**06 00 25.4**	**-0.3**
AAK	**Ala-Archa** 0.9nm,0.4s	**4.09**	**53**	⇓Pn	**Pn**	**05 59 45.6**	**+2.3**
AAK				⇑Pg	Pb	05 59 57.7	+3.5
	2.5nm,0.5s						
AAK				⇑Sn	**Sn**	**06 00 35.7**	**+5.5**
	2.4nm,0.5s						
AAK	**Ala-Archa**	**4.09**	**53**	⇓*i*P	**Pn**	**05 59 43.3**	**0.0**
AAK				⇓*i*S	**Sn**	**06 00 29.9**	**-0.3**
JNKS	**Jany-Kuch**	**4.34**	**78**	⇑*i*P	**Pn**	**05 59 47.1**	**+0.4**
JNKS				⇑*i*S	**Sn**	**06 00 36.2**	**-0.1**
USP	**Ospenovka**	**4.48**	**47**	⇑*i*P	**Pn**	**05 59 48.7**	**+0.2**
USP				⇑*i*S	**Sn**	**06 00 38.8**	**-0.7**
SGDS	**Sogindy** 1.8nm,0.4s	**4.67**	**46**	Pg	**Pb**	**06 00 03.9**	**0.0**
SGDS				Lg	Lg	06 01 04.6	
	4.3nm,0.3s						
TKM2	**Tokmak 2**	**4.93**	**56**	⇓*e*P	**Pn**	**05 59 55.2**	**+0.3**
TKM2				⇓*i*S	**Sn**	**06 00 50.2**	**-0.8**
BOOM	**Boomskoye usch**	**4.96**	**61**	⇑*e*P	**Pn**	**05 59 55.5**	**+0.3**
BOOM				⇑*i*S	**Sn**	**06 00 50.8**	**-0.7**
KST	**Kastek** 2.2nm,0.4s	**5.23**	**56**	Pg	**Pb**	**06 00 13.9**	**+0.5**
KST				Lg	Lg	06 01 22.4	
	9.4nm,0.6s						
KST	**Kastek** 2.2nm,0.4s	**5.23**	**56**	*e*P	**Pb**	**06 00 13.9**	**+0.5**
KST				*e*S	**Sb**	**06 01 22.4**	**+6.7**
	9.4nm,0.6s						
KRBS	**Karabastau** 1.5nm,0.5s	**5.41**	**49**	Pg	**Pb**	**06 00 16.6**	**0.0**
KRBS				Lg	Lg	06 01 27.5	
	8.8nm,0.7s						
MTBS	**Maitube** 2.5nm,0.3s	**5.57**	**57**	Pg	**Pb**	**06 00 20.7**	**+1.5**
MTBS				Lg	Lg	06 01 33.3	
	4.2nm,0.7s						
MTBS	**Maitube** 2.5nm,0.3s	**5.57**	**57**	*e*P	**Pb**	**06 00 20.7**	**+1.5**
MTBS				*e*S	**Sb**	**06 01 33.3**	**+7.8**
	4.2nm,0.7s						
KTBS	**Karatobe** 1.5nm,0.8s	**6.02**	**53**	Pg	**Pb**	**06 00 27.6**	**+0.7**
KTBS				Lg	Lg	06 01 45.9	
	0.2nm,0.6s						
KOTS	**Kotyrbulak** 3.0nm,0.6s	**6.06**	**58**	Pg	Pb	06 00 30.8	+3.2
KOTS				Lg	Lg	06 01 50.6	
	6.1nm,0.6s						
KOTS	**Kotyrbulak** 3.0nm,0.6s	**6.06**	**58**	*e*P	Pb	06 00 30.8	+3.2
KOTS				*e*S	Sb	06 01 50.5	+11
	6.1nm,0.6s						
ARXS	**Arharly** 1.0nm,0.6s	**6.99**	**53**	Pg	Pb	06 00 47.2	+3.9
ARXS				Lg	Lg	06 02 19.2	
	3.7nm,0.5s						
ARXS	**Arharly**	**6.99**	**53**	*e*P	Pb	06 00 47.2	+3.9
ARXS				*e*S	Sb	06 02 19.2	+13
AB31	**Akbulak array** 0.2nm,0.3s,baz=161,slow=12,SNR=13	**11.49**	**325**	⇑P	Pn	06 01 27.5	+3.0

NEIC ***26*** *06:06:20.2±1.6,21.°8S±0.°2×178.°6W±0.°2,h563km±9km,*
mb4.1/13,Error ellipse: s-maj=24.8km s-min=19.5km
az=157.0
IDC ***26*** *06:06:21.6±5.0,21.°68S×178.°80W,h578km±58km,mb3.2/9,*
mbtmp4.2/10,Error ellipse: s-maj=40.8km s-min=24.5km
az=163.0
ISC 26 06:06:19.1±0.8,21.°8S±0.°1×178.°7W±0.°1,h550km,n29,
σ1§11/27,mb4.0/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.09**	**322**	P	**P**	**06 07 52.6**	**+2.7**

URZ	**Urewera**	**16.81 192**	P	**P**	**06 09 47.1**	**+1.2**
	3.7nm,0.3s,baz=291,slow=2.9,SNR=8.8						
BKZ	**Black Stump Fm**	**17.80 192**	P	**P**	**06 09 54.4**	**-0.7**
THZ	**Tophouse**	**21.14 198**	P	**P**	**06 10 27.7**	**+2.4**
THZ			IAmb	IAmb	06 11 06.0		
	comp=Z,11nm,1.2s						
ARMA	**Armidale**	**27.96 246**	P	**P**	**06 11 26.3**	**+0.2**
STKA	**Stephens Creek**	**36.69 246**	P	**P**	**06 12 40.4**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=56,slow=9.6,SNR=4.1						
	comp=Z,2.5nm,0.8s						
COEN	**Coen**	**37.07 276**	P	**P**	**06 12 43.1**	**-0.2**
COEN			IAmb	IAmb	06 13 05.9		
	comp=Z,12nm,1.5s						
BBOO	**Buckleboo**	**41.43 245**	P	**P**	**06 13 17.9**	**-0.3**
AS31	**Alice Springs**	**43.64 258**	P	**P**	**06 13 35.9**	**+0.3**
ASAR	**Alice Springs**	**43.64 258**	P	**P**	**06 13 35.3**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=94,slow=7.9,SNR=42						
ASAR			PcP	**PcP**	**06 15 10.1**	**-0.6**	
	comp=Z,1.1nm,0.7s,baz=109,slow=3.8,SNR=7.4						
	comp=Z,3.9nm,0.7s						
WR8	**Warramunga Arr**	**43.68 264**	P	**P**	**06 13 34.9**	**-1.0**
WR8			IAmb	IAmb	06 14 06.3		
	comp=Z,9.0nm,1.4s						
WB0	**Warramunga Arr**	**43.81 264**	P	**P**	**06 13 36.1**	**-0.8**
WB0			IAmb	IAmb	06 13 36.6		
	comp=Z,3.6nm,0.7s						
WRAB	**Tennant Creek**	**43.82 264**	P	**P**	**06 13 35.8**	**-1.2**
WRAB			IAmb	IAmb	06 13 36.7		
	comp=Z,4.2nm,1.0s						
WRA	**Warramunga Arr**	**43.83 264**	P	**P**	**06 13 36.1**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=97,slow=7.5,SNR=47						
	comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**43.83 264**	IAmb	IAmb	06 13 36.8		
	comp=Z,0.4nm,0.9s						
KNRA	**Kununurra**	**49.98 267**	P	**P**	**06 14 22.7**	**-0.7**
KNRA			IAmb	IAmb	06 14 49.0		
	comp=Z,7.2nm,1.2s						
FITZ	**Fitzroy Crossi**	**52.26 264**	P	**P**	**06 14 39.6**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=82,slow=5.9,SNR=10						
	comp=Z,0.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**52.26 264**	IAmb	IAmb	06 14 45.0		
	comp=Z,1.4nm,1.4s						
MBWA	**Marble Bar**	**56.98 258**	P	**P**	**06 15 12.3**	**-0.7**
MBWA			IAmb	IAmb	06 15 38.6		
	comp=Z,13nm,1.1s						
PETK	**Petropavlovsk-**	**77.36 346**	P	**P**	**06 17 16.4**	**-0.8**
	comp=Z,4.7nm,0.9s,baz=198,slow=6.8,SNR=1.5						
	comp=Z,4.7nm,0.9s						
TXAR	**Lajitas Array**	**88.27 58**	P	**P**	**06 18 13.7**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=246,slow=3.6,SNR=5.0						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**89.71 13**	P	**P**	**06 18 17.4**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=217,slow=5.1,SNR=7.9						
	comp=Z,0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.97 290**	P	**P**	**06 18 20.4**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=118,slow=2.9,SNR=4.3						
	comp=Z,0.6nm,0.3s						
PDAR	**Pinedale Array**	**90.32 43**	P	**P**	**06 18 21.5**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=257,slow=4.8,SNR=3.5						
	comp=Z,0.4nm,0.8s						
BVAR	**Borovoye Array**	**119.67 320**	PKP	**PKPdf**	**06 24 04.8**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=89,slow=3.9,SNR=5.6						
SPITS	**Spitsbergen Ar**	**123.11 356**	PKP	**PKPdf**	**06 24 12.1**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=169,slow=1.5,SNR=1.1						
ARCES	**ARCESS Array B**	**130.07 349**	PKP	**PKPdf**	**06 24 25.1**	**-0.8**
	comp=Z,3.7nm,1.0s,baz=42,slow=1.1,SNR=9.4						
AKASG	**Malin Array Be**	**143.83 330**	PKP	PKPbc	06 24 49.5	-1.3	
	comp=Z,1.2nm,0.4s,baz=43,slow=4.1,SNR=11						
BRTR	**Keskin Array B**	**147.23 310**	PKPbc	**PKPdf**	**06 24 59.7**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=119,slow=4.5,SNR=3.9						

NAO ***26*** *06:08:11.3, 40˚.55N×18˚.54E, h10km, MB5.2*
PRU ***26*** *06:08:16.5, 40˚.85N×19˚.19E, h10km, M5.4*
MOS ***26*** *06:08:17.9±1.3, 41˚.49N×19˚.39E, h13km, mb5.5/52, MS5.4/60, Error ellipse: s-maj=4.0km s-min=2.5km az=71.5*
GII ***26*** *06:08:19.0±0.0, 41˚.58N×19˚.43E, h10km, confirmed*
BJI ***26*** *06:08:18.3, 41˚.32N×19˚.26E, h21km, mB5.6/44, mb5.3/81, Ms5.7/76, Ms7 5.4/75*
BGR ***26*** *06:08:20.5±1.8, 41˚.18N×19˚.22E, h10km, ML5.8, Error ellipse: s-maj=42.3km s-min=11.1km az=9.0*
IDC ***26*** *06:08:20.0±0.4, 41˚.62N×19˚.46E, h0km, mb5.0/33, mbtmp5.0/46, ML4.3/11, MS5.2/83, Error ellipse: s-maj=8.1km s-min=7.8km az=15.0*
SKO ***26*** *06:08:21.8, 41˚.62N×19˚.35E, h0km, ML5.4*
NEIC ***26*** *06:08:21.8±2.7, 41˚.57N±0˚.05×19˚.42E±0˚.06, h10km±1km, mb5.5/769, Ms_20 5.4/385, Mww5.5/65, Error ellipse: s-maj=9.1km s-min=8.2km az=194.0*
NEIC ***26*** *06:08:21.8, 41˚.55N×19˚.42E, h22km*
BGS ***26*** *06:08:21.6±2.4, 41˚.57N×19˚.42E, h10km, mb5.5*
PDG ***26*** *06:08:21.9±0.3, 41˚.47N×19˚.45E, h11km±1km, MD5.5/12, ML5.4/12, Error ellipse: s-maj=1.1km s-min=2.2km az=0.0*
NEIC ***26*** *06:08:21.8, 41˚.65N×19˚.42E, h22km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17Nm; Mrr2.21; Mθθ-0.77; Mϕϕ-1.44; Mrθ-0.02; Mθϕ1.25; Mϕr-0.20; Fault plane solution: M0 2.32000×10^17 NP1: ϕs318.65000°, δ43.34000°, λ84.39000°. NP2: ϕs146.34000°, δ46.92000°, λ95.27000°. Principal axes: T 2.2277, Plg86.0000°, Azm118.0000°; N 0.1795, Plg4.0000°, Azm323.0000°; P -2.4071, Plg2.0000°, Azm233.0000°;*
THE ***26*** *06:08:22.1, 42˚.N±4˚×1˚.9E±˚, h10km, M5.4/51, mb5.5/6, MLh5.2/51, MwMwp5.5/7, Mwp5.7/7*
ROM ***26*** *06:08:22.9±0.1, 41˚.536N±0˚.006×19˚.466E±0˚.010, h20km±1km, ML5.4/280, Error ellipse: s-maj=0.7km s-min=0.7km az=56.0*
RHSSO ***26*** *06:08:22.0±0.9, 41˚.43N×19˚.47E, h10km±4km, ML5.8/6*
MCSM ***26*** *06:08:22.5±0.3, 42˚.N±3˚×1˚.9E±˚, h11km±2km, mb5.5, mB5.7, MLv6.0, Mw(mB)5.3*
BEO ***26*** *06:08:22.5±0.5, 41˚.48N×19˚.57E, h8km±2km, ML5.7/19*
MED_RC ***26*** *06:08:22.0±0.1, 41˚.57N×19˚.45E, h21km, MW5.5/60, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s60,c124; Duration: 1s8 Moment tensor: Scale 10^17Nm; Mrr2.18±.06; Mθθ-0.48±.04; Mϕϕ-1.70±.03; Mrθ0.18±.05; Mθϕ1.35±.02; Mϕr0.10±.04; Best double couple: M0 2.39000×10^17 NP1:ϕs334.00000°, δ45.00000°, λ99.00000°. NP2:ϕs141.00000°, δ46.00000°, λ81.00000°. Principal axes: T 2.2000, Plg84.0000°, Azm329.0000°; N 0.3700, Plg6.0000°, Azm147.0000°; P -2.5700, Plg0.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
TIR ***26*** *06:08:23.2, 41˚.62N×19˚.51E, h34km±3km, Ml5.5/8*
GCMT ***26*** *06:08:25.8±0.1, 41˚.45N±0˚.01×19˚.52E±0˚.01, h22km, MW5.5/138, Moment Tensor Solution. s104,c155; s138,c258; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr2.37±.06; Mθθ-0.79±.04; Mϕϕ-1.58±.04; Mrθ1.13±.07; Mθϕ1.16±.02; Mϕr0.17±.06; Best double couple: M0 2.63400×10^17 NP1:ϕs343.00000°, δ42.00000°, λ120.00000°. NP2:ϕs125.00000°, δ55.00000°, λ66.00000°. Principal axes: T 2.7970, Plg69.0000°, Azm340.0000°; N -0.3230, Plg20.0000°, Azm139.0000°; P -2.4710, Plg7.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 06:08:22.7±0.5, 41˚.57N±0˚.01×19˚.52E±0˚.02, h19km±1km, n2158, σ1ˢ71/1849, mb5.5/506, MS5.4/308, 120C-140D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**130**	Pg	**Pb**	**06 08 30.3**	**+0.1**
TIR				Sg	**Sg**	**06 08 34.9**	**-0.1**
TIR				AML	AML	06 08 36.0	
	910nm,0.4s						
TIR				AML	AML	06 08 36.1	
	1μm,0.3s						
TIR	**Tirane**	**0.34**	**130**	⇑*i* Pg	**Pb**	**06 08 30.4**	**+0.1**
TIR				*i* Sg	**Sb**	**06 08 36.4**	**+1.1**
TIR	**Tirane**	**0.34**	**130**	⇓P	**Pb**	**06 08 30.1**	**-0.1**
TIR				S	**Sb**	**06 08 36.2**	**+1.0**
TIR				AML	AML		
TIR				AML	AML		
ULC	**Ulcinj**	**0.45**	**332**	*i* Pg	**Pg**	**06 08 31.4**	**-0.6**
ULC				*i* Sg	**Sb**	**06 08 38.9**	**+0.5**
SDA	**Shkodra**	**0.48**	**358**	Pg	**Pg**	**06 08 32.2**	**-0.4**
SDA				Sg	**Sb**	**06 08 39.8**	**+0.4**
DRME	**Dracevica, Mon**	**0.67**	**338**	*e* Pg	**Pb**	**06 08 35.7**	**0.0**
DRME				*e* Sg	**Sn**	**06 08 47.1**	**0.0**
DRME	**Dracevica, Mon**	**0.67**	**338**	*i* Pg	**Pb**	**06 08 35.1**	**-0.6**
DRME				*i* Sg	**Sn**	**06 08 46.5**	**-0.6**
PHP	**Peshkopia**	**0.70**	**80**	Pg	**Pb**	**06 08 36.0**	**-0.2**
PHP				Sg	**Sg**	**06 08 47.1**	**+1.2**
PHP				AML	AML	06 08 52.3	
	894nm,0.9s						
PHP	**Peshkopia**	**0.70**	**80**	P	**Pb**	**06 08 36.1**	**-0.2**
PHP				S	**Sg**	**06 08 47.0**	**+1.1**
PDG	**Podgorica**	**0.88**	**347**	Pg	**Pb**	**06 08 39.5**	**0.0**
PDG				Sg	**Sn**	**06 08 52.6**	**+0.1**
PDG	**Podgorica**	**0.88**	**347**	*e* P	**Pn**	**06 08 41.6**	**+1.5**
PDG	**Podgorica**	**0.88**	**347**	Pn	**Pb**	**06 08 39.4**	**0.0**
PDG	**Podgorica**	**0.88**	**347**	⇓P	**Pb**	**06 08 39.2**	**-0.3**
PDG				⇑S	**Sg**	**06 08 52.3**	**+0.6**
PDG	**Podgorica**	**0.88**	**347**	*e* Pg	**Pb**	**06 08 39.8**	**+0.3**
PDG				*e* Sg	**Sn**	**06 08 52.6**	**+0.1**
PDG	**Podgorica**	**0.88**	**347**	⇓*i* P	**Pb**	**06 08 39.0**	**-0.5**
PDG				S	**Sn**	**06 08 52.5**	**+0.1**
PDG				AML	AML		
PDG				AML	AML		
PDG				AML	AML		
PDG				AML	AML		
PDG	**Podgorica**	**0.88**	**347**	⇓*i* Pg	**Pb**	**06 08 39.0**	**-0.5**
PDG				*i* Sg	**Sn**	**06 08 53.4**	**+1.0**
OHR	**Ohrid**	**1.06**	**115**	*i* Pg	**Pg**	**06 08 43.3**	**-0.1**
OHR				*i* Sg	**Sg**	**06 09 00.7**	**+3.3**
OHR				*e* Lg	Lg	06 09 02.9	
	comp=E,43μm,0.5s						
OHR				*e* Lg	Lg	06 09 03.8	
	comp=N,92μm,0.9s						
CEME	**Cevo**	**1.08**	**336**	⇓*i* Pg	**Pb**	**06 08 41.9**	**-0.9**
CEME				*i* Sg	**Sg**	**06 09 00.3**	**+2.5**
PVY	**Plav**	**1.08**	**17**	⇓*i* Pg	**Pb**	**06 08 42.5**	**-0.3**
PVY				*i* Sg	**Sg**	**06 09 00.6**	**+2.7**
VLO	**Vlora**	**1.10**	**181**	Pg	**Pg**	**06 08 44.9**	**+0.9**
VLO				Sg	**Sg**	**06 08 59.2**	**+0.8**
VLO				AML	AML	06 09 08.0	
	comp=N,989nm,0.8s						
VLO	**Vlora**	**1.10**	**181**	P	**Pg**	**06 08 44.4**	**+0.4**
VLO				S	**Sg**	**06 09 01.1**	**+2.6**
VLO	**Vlora**	**1.10**	**181**	⇓P	**Pg**	**06 08 44.2**	**+0.1**
VLO				S	**Sg**	**06 09 00.9**	**+2.4**
VLO				AML	AML		
VLO				AML	AML		
HCY	**Herceg Novi**	**1.17**	**319**	⇑*i* Pg	**Pg**	**06 08 44.8**	**-0.5**
HCY				*i* Sg	**Sg**	**06 09 02.9**	**+2.3**
NKME	**Niksic**	**1.27**	**341**	⇑*i* Pg	**Pb**	**06 08 46.2**	**+0.1**
NKME				*i* Sg	**Sg**	**06 09 06.1**	**+2.1**
KOME	**Kolasin**	**1.28**	**360**	*e* Pg	**Pg**	**06 08 47.2**	**-0.4**
KOME				*e* Sg	**Sg**	**06 09 07.4**	**+3.0**
KOME	**Kolasin**	**1.28**	**360**	⇓*i* Pg	**Pn**	**06 08 46.2**	**+0.5**
KOME				*i* Sg	**Sg**	**06 09 07.6**	**+3.2**
IVA	**Berane**	**1.33**	**12**	⇓*i* Pg	**Pb**	**06 08 47.6**	**+0.4**
IVA				*i* Sg	**Sg**	**06 09 09.4**	**+3.4**
KBN	**Korca**	**1.34**	**134**	Pg	**Pg**	**06 08 49.3**	**+0.5**
KBN				AML	AML	06 09 15.3	
	comp=N,314nm,0.7s						
KBN	**Korca**	**1.34**	**134**	P	**Pg**	**06 08 49.2**	**+0.5**
KBN				S	**Sg**	**06 09 07.8**	**+1.6**
KBN	**Korca**	**1.34**	**134**	⇓P	**Pb**	**06 08 48.0**	**+0.6**
KBN				S	**Sb**	**06 09 05.2**	**+1.0**
TREB	**Trebinje**	**1.44**	**323**	*e* Pg	**Pb**	**06 08 49.1**	**+0.1**
TREB				*e* Sg	**Sg**	**06 09 10.4**	**+1.0**
SKO	**Skopje**	**1.49**	**74**	*i* Pg	**Pb**	**06 08 50.5**	**+0.7**
SKO				*i* Sg	**Sg**	**06 09 13.1**	**+2.1**
BRY	**Bratogost**	**1.52**	**332**	⇑*i* Pn	**Pb**	**06 08 50.5**	**+0.1**
BRY				*i* Sn	**Sg**	**06 09 13.0**	**+1.1**
MESG	**Mesagne**	**1.60**	**233**	⇓*i* P	**Pn**	**06 08 49.9**	**0.0**
MESG				AML	AML		
	comp=E,80800μm,0.8s						
MESG				AML	AML		
NEST	**Nestorio**	**1.63**	**134**	Pg	**Pg**	**06 08 53.9**	**-0.2**
NEST				Sn	**Sn**	**06 09 11.6**	**+0.5**
NEST				AML	AML	06 09 21.6	
	comp=E,160nm,0.4s						
NEST				AML	AML	06 09 23.9	
	comp=E,119nm,1.0s						
NEST	**Nestorio**	**1.63**	**134**	P	**Pg**	**06 08 53.6**	**-0.6**
NEST				S	**Sg**	**06 09 16.9**	**+1.4**
UPM	**Unac-Piva**	**1.70**	**345**	⇓*i* Pn	**Pb**	**06 08 53.7**	**+0.3**
UPM				*i* Sn	**Sg**	**06 09 17.8**	**+0.2**
SJES	**Sjenica**	**1.73**	**11**	*e* Pg	**Pb**	**06 08 55.0**	**+1.1**
SJES				*e* Sg	**Sg**	**06 09 19.3**	**+0.8**
KLINJ	**Klinje**	**1.75**	**337**	*e* Pn	**Pb**	**06 08 53.7**	**-0.5**
KLINJ				*e* Sn	**Sg**	**06 09 17.9**	**-1.2**
PLE	**Pljevlja**	**1.76**	**357**	⇓*i* Pn	**Pb**	**06 08 54.8**	**+0.3**
PLE				*i* Sn	**Sg**	**06 09 19.7**	**+0.0**
PENT	**Pentalofos**	**1.84**	**138**	P	**Pb**	**06 08 56.6**	**+0.8**
KEK	**Kerkira**	**1.86**	**173**	*e* P	**Pg**	**06 08 59.3**	**+0.7**
KEK	**Kerkira**	**1.86**	**173**	P	**Pg**	**06 08 59.4**	**+0.7**
KEK				S	**Sg**	**06 09 21.9**	**-1.0**
KEK	**Kerkira**	**1.86**	**173**		**Pg**	**06 08 59.2**	**+0.7**
KEK	**Kerkira**	**1.86**	**173**	⇓P	**Pg**	**06 08 59.3**	**+0.7**
STON	**Ston**	**1.88**	**315**	⇑*i* P	**Pn**	**06 08 54.5**	**+0.7**
STON				AML	AML		
STON				AML	AML		
TAR1	**Taranto**	**1.99**	**239**	⇓P	**Pn**	**06 08 54.8**	**-0.5**
TAR1				AML	AML		
	comp=N,58450μm,0.7s						
TAR1				AML	AML		
	comp=E,68850μm,0.8s						
NOCI	**Noci**	**2.01**	**248**	Pn	**Pn**	**06 08 55.6**	**0.0**
NOCI				AML	AML	06 09 35.6	
	comp=E,162nm,0.7s						
NOCI	**Noci**	**2.01**	**248**	⇓P	**Pn**	**06 08 55.5**	**-0.2**
NOCI				AML	AML		
	comp=N,52600μm,0.7s						
NOCI				AML	AML		
	comp=E,48100μm,1.5s						
SELS	**Selova**	**2.03**	**35**	*e* Pn	**Pb**	**06 08 58.1**	**-0.9**
SELS				*e* Sn	**Sn**	**06 09 22.0**	**+1.2**
RUDO	**Rudo**	**2.05**	**357**	⇓*i* Pn	**Pb**	**06 08 58.2**	**-1.2**
RUDO				*e* Sn	**Sb**	**06 09 25.6**	**+1.1**
IVAS	**Ivanjica**	**2.06**	**13**	*e* Pn	**Pb**	**06 08 58.6**	**-1.0**
IVAS				*e* Sn	**Sb**	**06 09 25.4**	**+0.6**
KZN	**Kozani**	**2.12**	**126**	P	**Pb**	**06 08 59.9**	**-0.6**
IGT	**Igoumenitsa**	**2.12**	**163**	Pg	**Pb**	**06 08 58.9**	**-1.8**
IGT				Sn	**Sb**	**06 09 25.8**	**-0.7**
IGT				AML	AML	06 09 46.8	
	comp=E,90nm,0.9s						
IGT	**Igoumenitsa**	**2.12**	**163**	P	**Pb**	**06 08 58.8**	**-1.8**
IGT				S	**Sb**	**06 09 26.7**	**+0.1**
LFKM	**Lefkimmi**	**2.16**	**169**	P	**Pn**	**06 08 59.0**	**+1.3**
JAN	**Janina**	**2.16**	**152**	P	**Pb**	**06 09 00.1**	**-1.1**
JAN				S	**Sb**	**06 09 28.4**	**+0.8**
GOCS	**Kraljevo Serbi**	**2.23**	**26**	*e* Pn	**Pb**	**06 09 01.3**	**-1.2**
GOCS				*e* Sn	**Sn**	**06 09 26.4**	**+0.6**
LTRZ	**Laterza**	**2.26**	**246**	⇓*e* P	**Pn**	**06 08 58.6**	**-0.5**
LTRZ				AML	AML		
	comp=N,906μm,1.5s						
LTRZ				AML	AML		
	comp=E,26250μm,0.5s						
LTRZ				AML	AML		
	comp=N,33900μm,0.7s						
LTRZ				AML	AML		
	comp=E,25950μm,1.0s						
BBLS	**Lazi&#263i**	**2.30**	**358**	*e* Pn	**Pb**	**06 09 02.4**	**-1.2**
BBLS				*e* Sn	**Sb**	**06 09 33.4**	**+1.7**
MATE	**Matera**	**2.32**	**248**	*e* P	**Pn**	**06 08 59.5**	**-0.3**
MATE	**Matera**	**2.32**	**248**	⇓P	**Pn**	**06 08 59.2**	**-0.6**
MATE	**Matera**	**2.32**	**248**	*e* P	**Pb**	**06 09 04.2**	**+0.3**
MATE	**Matera**	**2.32**	**248**	⇓*i* P	**Pn**	**06 08 59.5**	**-0.3**
MATE				AML	AML		
	comp=N,31300μm,0.9s						
MATE				AML	AML		
	comp=E,28750μm,0.7s						
PRMD	**Pramanda**	**2.36**	**149**	P	**Pb**	**06 09 03.1**	**-1.7**
GRUS	**Gruza**	**2.48**	**20**	*e* Pn	**Pn**	**06 09 04.3**	**+2.2**
DIVS	**Divibare**	**2.55**	**8**	*e* Pn	**Pn**	**06 09 05.1**	**+1.9**
DIVS				*e* Sn	**Sb**	**06 09 38.2**	**-0.8**
KNT	**Kendrikon**	**2.57**	**98**	P	**Pn**	**06 09 05.4**	**+2.0**
KNT	**Kendrikon**	**2.57**	**98**	*i* Pn	**Pn**	**06 09 05.8**	**+2.4**
TETR	**Tetrakomo, Epi**	**2.59**	**148**	P	**Pb**	**06 09 06.3**	**-2.3**
BOVS	**Bovan**	**2.62**	**37**	⇑P	**Pn**	**06 09 06.4**	**+2.4**
BOVS	**Bovan**	**2.62**	**37**	*e* Pn	**Pn**	**06 09 05.9**	**+1.9**
BOVS				*e* Sn	**Sn**	**06 09 36.0**	**+0.7**
CRAC	**Craco**	**2.63**	**244**	⇓*i* P	**Pn**	**06 09 03.9**	**-0.2**
CRAC				AML	AML		
	comp=N,66350μm,1.4s						
CRAC				AML	AML		
	comp=E,83600μm,1.1s						
TRAN	**Tran**	**2.65**	**60**	P	**Pn**	**06 09 07.3**	**+2.9**
LIT	**Litokhoron**	**2.69**	**122**	P	**Pn**	**06 09 06.6**	**+1.6**
LIT	**Litokhoron**	**2.69**	**122**		**Pn**	**06 09 06.8**	**+1.8**
LIT	**Litokhoron**	**2.69**	**122**	P	**Pn**	**06 09 06.8**	**+1.8**
KKB	**Krupnik**	**2.71**	**83**	P	**Pn**	**06 09 07.9**	**+2.6**
KKB	**Krupnik**	**2.71**	**83**	P	**Pn**	**06 09 07.9**	**+2.6**
KKB				S	**Sn**	**06 09 41.3**	**+3.7**
KKB	**Krupnik**	**2.71**	**83**	*i* Pn	**Pn**	**06 09 08.1**	**+2.8**
TRUS	**Trudelj**	**2.73**	**13**	*e* Pn	**Pn**	**06 09 07.8**	**+2.2**
TRUS				*e* Sn	**Sb**	**06 09 42.0**	**-2.1**
PALZ	**Palazzo San Ge**	**2.76**	**258**	⇓*i* P	**Pn**	**06 09 06.0**	**+0.1**
PALZ				AML	AML		
	comp=N,82050μm,0.9s						
PALZ				AML	AML		
THL	**Klokotos Trika**	**2.76**	**136**	P	**Pn**	**06 09 07.6**	**+1.7**
THL	**Klokotos Trika**	**2.76**	**136**	⇑*i* P	**Pn**	**06 09 07.6**	**+1.7**
THL				AML	AML		
	comp=N,2435μm,0.9s						
THL				AML	AML		
	comp=E,2505μm,1.3s						
THE	**Thessaloniki**	**2.77**	**109**	P	**Pn**	**06 09 07.6**	**+1.6**
THE	**Thessaloniki**	**2.77**	**109**	*i* Pn	**Pn**	**06 09 07.8**	**+1.8**
ORI	**Oriolo Calabro**	**2.77**	**236**	⇓*i* P	**Pn**	**06 09 06.0**	**-0.1**
ORI				AML	AML		
	comp=E,45100μm,1.0s						
ORI				AML	AML		
	comp=N,50350μm,0.9s						
TYRN	**Tyrnavos**	**2.77**	**131**	P	**Pn**	**06 09 08.4**	**+2.3**
ACER	**Acerenza**	**2.81**	**255**		**Pn**	**06 09 07.0**	**+0.3**
ACER	**Acerenza**	**2.81**	**255**	⇓*i* P	**Pn**	**06 09 06.9**	**+0.2**
ACER				AML	AML		
	comp=N,63050μm,1.2s						
ACER				AML	AML		
	comp=N,61150μm,1.2s						
ACER				AML	AML		
	comp=E,87150μm,0.9s						
ACER				AML	AML		
	comp=E,84150μm,0.9s						
CAPA	**Cerignola FG**	**2.82**	**263**	⇓*i* P	**Pn**	**06 09 06.8**	**0.0**
CAPA				AML	AML		
	comp=N,38550μm,1.0s						
CAPA				AML	AML		
	comp=E,68450μm,0.9s						
CAPA				AML	AML		
	comp=E,29200μm,1.2s						
CAPA				AML	AML		
	comp=N,57550μm,1.1s						
PTRP	**Pietrapertosa**	**2.82**	**249**	⇓*i* P	**Pn**	**06 09 07.1**	**+0.3**
PTRP				AML	AML		
	comp=N,49850μm,0.4s						
PTRP				AML	AML		
	comp=E,41100μm,1.1s						
SGRT	**San Giovanni R**	**2.84**	**275**	Pn	**Pn**	**06 09 07.2**	**+0.2**
SGRT	**San Giovanni R**	**2.84**	**275**		**Pn**	**06 09 07.1**	**0.0**
SGRT	**San Giovanni R**	**2.84**	**275**	*e* P	**Pn**	**06 09 06.8**	**-0.3**
SGRT				AML	AML		
	comp=E,20250μm,1.3s						
SGRT				AML	AML		
	comp=N,22050μm,1.2s						
ZAPS	**Zavoj**	**2.87**	**52**	*e* Pn	**Pn**	**06 09 10.3**	**+2.9**
ZAPS				*e* Sn	**Sn**	**06 09 45.1**	**+3.7**
HORT	**Hortiatis**	**2.87**	**109**	P	**Pn**	**06 09 09.3**	**+1.7**
TSLK	**Tsoukalades, L**	**2.87**	**162**	P	**Pn**	**06 09 08.8**	**+1.3**
LKD2	**Lefkada island**	**2.91**	**162**	P	**Pn**	**06 09 09.1**	**+1.0**
AMPL	**Ampelaki**	**2.94**	**153**	P	**Pn**	**06 09 10.5**	**+2.0**
SALB	**San Lorenzo Be**	**2.94**	**236**	⇓*i* P	**Pn**	**06 09 07.8**	**-0.8**
SALB				AML	AML		
	comp=E,15150μm,0.9s						
SALB				AML	AML		
	comp=N,12300μm,1.3s						
SCHR	**S. Chirico Rap**	**2.95**	**244**	⇓*i* P	**Pn**	**06 09 08.5**	**-0.1**
SCHR				AML	AML		
	comp=E,13400μm,0.4s						
SCHR				AML	AML		
	comp=N,13150μm,0.9s						
PZUN	**Potenza**	**2.95**	**253**	P	**Pn**	**06 09 09.0**	**+0.4**
PZUN				AML	AML		
	comp=N,35650μm,1.0s						
PZUN				AML	AML		
	comp=N,36600μm,1.0s						
PZUN				AML	AML		
	comp=E,31400μm,1.2s						
PZUN				AML	AML		
	comp=E,33900μm,1.2s						
VTS	**Vitosha**	**2.96**	**68**	P	**Pn**	**06 09 11.3**	**+2.5**
VTS	**Vitosha**	**2.96**	**68**	P	**Pn**	**06 09 11.2**	**+2.5**
VTS				S	**Sn**	**06 09 47.8**	**+4.0**
SVIS	**Svilajnac**	**2.97**	**24**	*e* Pn	**Pn**	**06 09 12.3**	**-2.7**
TEKS	**Tekeris**	**2.98**	**0**	*e* Pn	**Pn**	**06 09 10.3**	**+1.3**
TEKS				*e* Sn	**Sb**	**06 09 48.6**	**-2.6**
SOH	**Sokhos**	**2.99**	**103**	*i* Pn	**Pn**	**06 09 11.4**	**+2.3**
NYDR	**Nydri-Lefkada**	**2.99**	**162**	P	**Pn**	**06 09 09.9**	**+0.9**
LADO	**San Nicola del**	**3.00**	**221**	⇓*i* P	**Pn**	**06 09 08.7**	**-0.5**
LADO				AML	AML		
	comp=N,974μm,1.4s						
LADO				AML	AML		
	comp=E,1325μm,0.9s						
ZAGS	**Zajecar**	**3.00**	**41**	*e* Pn	**Pn**	**06 09 11.8**	**+2.5**
ZAGS				*e* Sn	**

TIP AML AML
comp=E,8085µm,0.8s
TIP AML AML
comp=E,8210µm,0.8s
TIP Timpagrande 3.19 222 P **Pn 06 09 11.5 -0.3**
FSK Fiskardo 3.21 165 P **Pn 06 09 12.2 +0.1**
AVAS Avala Beograd 3.21 13 *e*Pn **Pn 06 09 13.7 +1.6**
CUC Castrocucco 3.22 242 **Pn 06 09 12.8 +0.5**
CUC Castrocucco 3.22 242 *e*P **Pn 06 09 12.2 -0.1**
CUC AML AML
comp=N,12650µm,1.4s
CUC AML AML
comp=N,12600µm,1.4s
CUC AML AML
comp=E,17050µm,0.7s
CUC AML AML
comp=E,16700µm,0.7s
MAKR Makrakomi, Fth 3.24 141 P **Pn 06 09 15.0 +2.5**
AST1 Astakos 3.25 158 P **Pn 06 09 13.9 +1.3**
KUBS Kucevo 3.25 28 *e*Pn **Pn 06 09 13.2 +0.5**
VSK1 VASILIKIADES 3.25 165 P **Pn 06 09 12.6 -0.1**
MELA Melanico ??? S 3.30 274 *e*P **Pn 06 09 13.4 +0.1**
MELA AML AML
comp=E,43100µm,0.7s
MELA AML AML
comp=E,41750µm,0.7s
MELA AML AML
comp=N,36150µm,0.4s
MELA AML AML
comp=N,35250µm,0.4s
BEO Beograd 3.31 12 *e*Pn **Pn 06 09 14.8 +1.3**
SNAL S. Angelo Dei 3.31 260 ⇓P **Pn 06 09 13.7 +0.1**
SNAL AML AML
comp=E,28450µm,1.0s
SNAL AML AML
comp=E,26300µm,1.0s
SNAL AML AML
comp=N,45600µm,1.5s
SNAL AML AML
comp=N,46850µm,1.5s
BIOG Biogem 3.32 265 P **Pn 06 09 15.1 +1.4**
BIOG AML AML
comp=E,45850µm,0.4s
BIOG AML AML
comp=E,40150µm,0.4s
BIOG AML AML
comp=N,59700µm,0.4s
BIOG AML AML
comp=N,52500µm,0.4s
PVO Paravola 3.32 152 P **Pn 06 09 15.7 +2.1**
SPS2 Spezzano della 3.33 226 ⇓*i*P **Pn 06 09 13.5 -0.2**
SPS2 AML AML
comp=N,3695µm,1.0s
SPS2 AML AML
comp=E,4260µm,0.7s
MGR Morigerati 3.33 246 ⇓*i*P **Pn 06 09 13.7 -0.1**
MGR AML AML
comp=N,13950µm,1.3s
MGR AML AML
comp=N,11150µm,1.3s
MGR AML AML
comp=E,15950µm,0.9s
MGR AML AML
comp=E,17350µm,1.1s
CDRU Civita di Ruta 3.37 253 ⇓*i*P **Pn 06 09 14.1 -0.3**
CDRU AML AML
comp=E,8935µm,0.4s
CDRU AML AML
comp=N,9950µm,1.1s
MCRV Calabrutti - M 3.38 258 ⇓*i*P **Pn 06 09 14.3 -0.2**
MCRV AML AML
comp=E,11850µm,0.9s
MCRV AML AML
comp=N,16050µm,0.7s
DMLN Damoulianata-K 3.39 169 P **Pn 06 09 14.4 -0.2**
CET2 Cetraro 3.40 234 ⇓*i*P **Pn 06 09 15.2 +0.5**
CET2 AML AML
comp=N,42150µm,0.9s
CET2 AML AML
comp=E,26150µm,1.0s
CAR1 CAROLEI 3.42 229 P **Pn 06 09 15.2 +0.1**
CAR1 AML AML
comp=E,17950µm,0.8s
CAR1 AML AML
comp=N,18450µm,1.1s
CAR1 AML AML
comp=N,17250µm,1.1s
CAR1 AML AML
comp=E,17450µm,0.7s
CMPR Campora 3.43 250 ⇓*i*P **Pn 06 09 15.1 -0.1**
CMPR AML AML
comp=N,7875µm,0.9s
CMPR AML AML
comp=E,11630µm,0.8s
MRB1 Monte Rocchett 3.45 264 ⇓*i*P **Pn 06 09 16.1 +0.6**
MRB1 AML AML
comp=E,20400µm,0.7s
MRB1 AML AML
comp=E,20900µm,0.7s
MRB1 AML AML
comp=N,26250µm,0.8s
MRB1 AML AML
comp=N,26850µm,0.8s
CIGN Sant'Elia a Pi 3.46 273 *e*P **Pn 06 09 16.1 +0.5**
CIGN AML AML
comp=E,12845µm,0.8s
CIGN AML AML
comp=N,12100µm,1.3s
GATE Gambatesa 3.46 271 *e*P **Pn 06 09 16.6 +1.0**
GATE AML AML
comp=N,17600µm,1.0s
GATE AML AML
comp=N,17550µm,1.0s
GATE AML AML
comp=E,14600µm,1.1s
GATE AML AML
comp=E,14250µm,1.1s
MTMR Montemarano 3.47 261 ⇓*e*P **Pn 06 09 15.9 +0.2**
MTMR AML AML
comp=E,10400µm,0.8s
MTMR AML AML
comp=E,10950µm,1.1s
MTMR AML AML
comp=N,9075µm,1.0s
MTMR AML AML
comp=N,9600µm,1.6s
BULG Bulgheria - Ca 3.48 246 ⇓*i*P **Pn 06 09 16.2 +0.4**
BULG AML AML
comp=N,22800µm,1.0s
BULG AML AML
comp=N,22300µm,1.0s
BULG AML AML
comp=E,17215µm,0.5s
BULG AML AML
comp=E,17625µm,0.5s
VLS Valsamata 3.48 166 ⇓*i*P **Pn 06 09 15.8 -0.1**
VLS AML AML
comp=N,9810µm,0.4s
VLS AML AML
comp=E,8410µm,1.5s
ANX Ano Chora 3.50 147 P **Pn 06 09 18.6 +2.4**
VALD Valchedram 3.58 52 P **Pn 06 09 19.9 +2.7**
MDVR Moldovita 3.59 26 ⇑P **Pn 06 09 19.4 +2.0**
PGB Panagyurishte 3.59 73 P **Pn 06 09 20.6 +3.2**
FRGS Fruska Gora 3.59 3 *e*Pn **Pn 06 09 18.2 +0.8**
FRGS *e*Sn **Sn 06 10 03.8 +4.5**
OUR Ouranopolis 3.60 109 *e*P **Pn 06 09 19.6 +2.2**
OUR Ouranopolis 3.60 109 P **Pn 06 09 19.4 +2.0**
MPEP Malo Peshtene 3.60 59 P **Pn 06 09 20.5 +3.1**
BLY Banja Luka 3.61 333 ⇑*i*Pn **Pn 06 09 19.6 +1.9**
BLY *e*Sn **Sn 06 10 02.0 +2.3**
BLY Banja Luka 3.61 333 ⇓P **Pn 06 09 19.2 +1.6**
BLY Banja Luka 3.61 333 *e*Pn **Pn 06 09 19.5 +1.9**
BLY *e*Sn **Sn 06 10 02.5 +2.8**
BLY Banja Luka 3.61 333 ⇑*i*P **Pn 06 09 19.3 +1.7**
BLY AML AML
comp=N,34650µm,0.5s
BLY AML AML
comp=N,35000µm,0.9s
BLY AML AML
comp=E,42750µm,1.6s
BLY AML AML
comp=E,41900µm,1.6s
NEO Neokhori 3.62 127 P **Pn 06 09 18.9 +1.1**
RTZL Ratzakli, Kefa 3.62 164 P **Pn 06 09 17.8 +0.1**
SACR S. Croce Del S 3.62 269 ⇓*i*P **Pn 06 09 18.5 +0.6**

SACR AML AML
comp=N,12455µm,1.0s
SACR AML AML
comp=N,12185µm,0.4s
SACR AML AML
comp=E,7895µm,1.0s
SACR AML AML
comp=E,8200µm,1.0s
GRI Girifalco 3.63 222 ⇑*i*P **Pn 06 09 17.4 -0.5**
GRI AML AML
comp=N,6210µm,1.3s
GRI AML AML
comp=E,7310µm,0.4s
EFP Efpalio 3.63 149 P **Pn 06 09 19.8 +1.9**
FRES Fresagrandinar 3.65 278 ⇓*i*P **Pn 06 09 19.2 +1.0**
FRES AML AML
comp=N,18850µm,1.2s
FRES AML AML
comp=E,21000µm,1.2s
AXAR Agios Charalam 3.69 138 P **Pn 06 09 20.9 +2.2**
BSSO Busso 3.70 271 ⇓*i*P **Pn 06 09 19.5 +0.6**
BSSO AML AML
comp=E,3300µm,1.0s
BSSO AML AML
comp=N,4020µm,0.7s
VITU Vitulano (BN) 3.70 266 ⇓*i*P **Pn 06 09 19.5 +0.5**
VITU AML AML
comp=E,4740µm,0.4s
VITU AML AML
comp=N,13325µm,0.8s
VITU AML AML
comp=N,13620µm,0.9s
VITU AML AML
comp=E,13600µm,0.7s
SERG Sergoula 3.70 147 P **Pn 06 09 20.9 +2.0**
BAIL Bailesti 3.73 48 ⇓P **Pn 06 09 21.7 +2.5**
KALE Kalithea 3.76 147 P **Pn 06 09 21.4 +1.7**
PTRJ Pietraroja 3.76 269 ⇓*i*P **Pn 06 09 20.2 +0.4**
PTRJ AML AML
comp=E,36µm,0.9s
PTRJ AML AML
comp=N,10725µm,1.2s
PTRJ AML AML
comp=N,10700µm,1.1s
PTRJ AML AML
comp=E,11400µm,0.7s
VRSS Vrsac 3.79 20 *e*Pn **Pn 06 09 21.5 +1.4**
VRSS *e*Sn **Sn 06 10 04.9 +0.8**
DJES Djerdap 3.80 34 *e*Pn **Pn 06 09 22.3 +2.1**
KAVA Kavala 3.81 97 P **Pn 06 09 22.2 +1.9**
ORTH Orthonies,Zaky 3.82 166 P **Pn 06 09 21.1 +0.6**
RMGR Halanga-Turnu 3.87 36 ⇓P **Pn 06 09 24.3 +3.2**
PLAC Placanica 3.91 218 ⇓*i*P **Pn 06 09 21.1 -0.7**
PLAC AML AML
comp=N,6735µm,0.8s
PLAC AML AML
comp=E,6595µm,0.9s
PLAC AML AML
comp=N,5660µm,1.2s
PLAC AML AML
comp=E,5740µm,1.3s
VBKN Vesuvio Bunker 3.91 261 ⇓*i*P **Pn 06 09 22.5 +0.7**
VBKN AML AML
comp=N,22600µm,0.9s
VBKN AML AML
comp=E,24200µm,0.9s
RZN Rozhen 3.91 86 P **Pn 06 09 25.1 +3.1**
RZN Rozhen 3.91 86 ⇑*i*P **Pn 06 09 25.1 +3.1**
VCRE Vesuvio Crater 3.91 261 ⇓*i*P **Pn 06 09 22.7 +0.8**
VCRE AML AML
comp=E,28300µm,1.2s
VCRE AML AML
comp=N,25150µm,0.4s
VTIR Vesuvio Tirone 3.92 260 *e*P **Pn 06 09 22.6 +0.7**
VTIR AML AML
comp=E,6220µm,1.0s
VTIR AML AML
comp=N,5435µm,0.8s
HERR Herculane 3.93 32 ⇑P **Pn 06 09 24.2 +2.2**
ATAL Atalanti 3.93 136 P **Pn 06 09 24.0 +2.0**
PLD Plovdiv 3.95 80 *e*P **Pn 06 09 25.5 +3.3**
PLD Plovdiv 3.95 80 P **Pn 06 09 25.1 +2.9**
PLD Plovdiv 3.95 80 P **Pn 06 09 25.2 +2.9**
LKR Lokris 3.95 136 P **Pn 06 09 24.2 +1.9**
LTHK Lithakia 3.98 165 P **Pn 06 09 22.8 0.0**
BANR Banloc 3.99 17 ⇓P **Pn 06 09 24.6 +1.8**
LPEL Lama dei Pelig 4.02 279 ⇓*i*P **Pn 06 09 24.1 +0.8**
LPEL AML AML
comp=E,10220µm,0.8s
LPEL AML AML
comp=E,9945µm,0.5s
LPEL AML AML
comp=N,10075µm,1.2s
LPEL AML AML
comp=N,10150µm,1.1s
FERC Galatro 4.06 221 *e*P **Pn 06 09 23.5 -0.3**
KLV Kalavryta, Ach 4.06 149 P **Pn 06 09 26.0 +2.1**
KLV Kalavryta, Ach 4.06 149 ⇑*i*P **Pn 06 09 25.5 +1.6**
KLV AML AML
comp=N,3165µm,0.8s
KLV AML AML
comp=E,3585µm,0.5s
JOPP Joppolo 4.06 225 ⇓*i*P **Pn 06 09 22.9 -1.0**
JOPP AML AML
comp=E,4615µm,0.8s
JOPP AML AML
comp=N,4760µm,0.8s
AOS Alonnisos 4.10 124 P **Pn 06 09 25.6 +1.2**
SRE Strehaia 4.10 40 ⇑P **Pn 06 09 27.1 +2.7**
SRE Strehaia 4.10 40 P **Pn 06 09 27.1 +2.7**
CPOZ Campi Flegrei, 4.14 261 *e*P **Pn 06 09 25.7 +0.7**
CPOZ AML AML
comp=N,18450µm,0.8s
CPOZ AML AML
comp=E,41950µm,1.0s
CRAR CRAIOVA 4.18 47 P **Pn 06 09 29.1 +3.7**
PLVB Pleven 4.19 63 ⇑P **Pn 06 09 29.0 +3.4**
GUR Goura 4.23 148 P **Pn 06 09 27.4 +1.2**
MCI Monte Cassino 4.28 271 *e*P **Pn 06 09 28.0 +1.1**
MCI AML AML
comp=E,11075µm,0.5s
MCI AML AML
comp=N,8485µm,0.8s
IST3 Stromboli F 4.29 231 *e*P **Pn 06 09 25.6 -1.5**
IST3 AML AML
comp=E,5910µm,0.7s
IST3 AML AML
comp=N,6550µm,0.8s
VCEL Villa Celiera 4.32 283 ⇓*i*P **Pn 06 09 28.1 +0.7**
VCEL AML AML
comp=E,13650µm,1.1s
VCEL AML AML
comp=N,13450µm,0.9s
IOCA Ischia Osserva 4.32 261 ⇓*i*P **Pn 06 09 27.3 -0.1**
IOCA AML AML
comp=N,12700µm,0.8s
IOCA AML AML
comp=E,14750µm,0.7s
BZS Buzias 4.32 20 *e*P **Pn 06 09 26.9 -0.5**
BZS Buzias 4.32 20 ⇓P **Pn 06 09 29.4 +1.9**
BZS Buzias 4.32 20 P **Pn 06 09 29.1 +1.7**
CEL Celeste 4.32 221 **Pn 06 09 26.7 -0.8**
CEL Celeste 4.32 221 ⇓*i*P **Pn 06 09 26.7 -0.8**
CEL AML AML
comp=E,4365µm,0.7s
CEL AML AML
comp=E,4405µm,0.7s
CEL AML AML
comp=N,5075µm,0.8s
CEL AML AML
comp=N,5205µm,0.8s
CEL Celeste 4.32 221 P **Pn 06 09 26.8 -0.8**
T0110 Collepietro 4.34 281 ⇓*i*P **Pn 06 09 28.4 +0.7**
T0110 AML AML
comp=N,12300µm,0.7s
T0110 AML AML
comp=E,10430µm,1.4s
IMTC Ischia Forio M 4.35 261 ⇓*i*P **Pn 06 09 27.9 +0.1**
IMTC AML AML
comp=E,7990µm,1.2s
IMTC AML AML
comp=N,9155µm,1.3s
TIM Timisoara 4.35 16 ⇑P **Pn 06 09 29.7 +2.0**
TIM Timisoara 4.35 16 P **Pn 06 09 31.0 +3.3**
TRTR Tortoreto Alta 4.35 288 ⇓*e*P **Pn 06 09 29.4 +1.7**

TRTR AML AML
comp=E,27250µm,0.8s
TRTR AML AML
comp=N,25950µm,1.1s
POFI Posta Fibreno 4.36 274 *e*P **Pn 06 09 28.6 +0.6**
POFI AML AML
comp=E,6450µm,1.3s
POFI AML AML
comp=N,3900µm,1.2s
IFOR Ischia Forio P 4.36 261 *e*P **Pn 06 09 28.1 +0.2**
IFOR AML AML
comp=N,43500µm,0.7s
IFOR AML AML
comp=E,27900µm,0.8s
KDZ Kurdzhali 4.36 87 *e*P **Pn 06 09 31.7 +3.7**
KDZ Kurdzhali 4.36 87 P **Pn 06 09 30.7 +2.8**
KDZ Kurdzhali 4.36 87 P **Pn 06 09 30.8 +2.8**
SOI Samo 4.39 219 ⇓*i*P **Pn 06 09 27.3 -1.1**
SOI AML AML
comp=N,4020µm,0.8s
SOI AML AML
comp=E,4900µm,0.8s
SICLA Scilla 4.42 223 *e*P **Pn 06 09 27.4 -1.3**
SICLA AML AML
comp=N,6215µm,0.7s
SICLA AML AML
comp=E,5445µm,0.5s
LTK Loutraki 4.42 142 P **Pn 06 09 29.8 +1.0**
VVLD Villa Vallelon 4.43 276 ⇓*i*P **Pn 06 09 29.2 +0.3**
VVLD AML AML
comp=E,7035µm,0.4s
VVLD AML AML
comp=E,6950µm,0.4s
VVLD AML AML
comp=N,8365µm,0.9s
VVLD AML AML
comp=N,8100µm,0.9s
GMB Gambarie 4.43 221 ⇓*i*P **Pn 06 09 28.0 -1.0**
GMB AML AML
comp=E,13550µm,0.6s
GMB AML AML
comp=N,15750µm,0.7s
LRP Arpino 4.45 273 *e*P **Pn 06 09 30.0 +0.8**
LRP AML AML
comp=N,4540µm,0.5s
LRP AML AML
comp=E,4895µm,1.2s
PVL Pavlikeni 4.47 68 P **Pn 06 09 32.9 +3.5**
FAGN Fagnano 4.49 281 *e*P **Pn 06 09 30.3 +0.6**
FAGN AML AML
comp=N,22900µm,0.5s
FAGN AML AML
comp=E,22600µm,0.7s
GZR Gura Zlata 4.50 31 ⇓P **Pn 06 09 31.9 +2.0**
GZR Gura Zlata 4.50 31 P **Pn 06 09 31.9 +2.0**
GIGS Gran Sasso 4.52 283 *e*P **Pn 06 09 30.6 +0.3**
GIGS AML AML
comp=N,2535µm,0.7s
GIGS AML AML
comp=E,2690µm,0.8s
TERO Teramo 4.53 285 *e*P **Pn 06 09 31.0 +0.7**
TERO AML AML
comp=N,7755µm,0.5s
TERO AML AML
comp=E,5985µm,0.7s
OFFI Offida 4.54 289 *e*P **Pn 06 09 31.9 +1.5**
OFFI AML AML
comp=N,27000µm,1.2s
OFFI AML AML
comp=E,21200µm,0.6s
SUBS Subotica 4.54 1 *e*Pn **Pn 06 09 32.8 +2.4**
SUBS *e*Sn **Sn 06 10 24.9 +2.2**
RDO Rodhopi 4.55 93 *e*P **Pn 06 09 28.8 -1.7**
RDO Rodhopi 4.55 93 P **Pn 06 09 32.6 +2.1**
RDO Rodhopi 4.55 93 **Pn 06 09 33.0 +2.5**
DIM Dimitrovgrad 4.55 82 P **Pn 06 09 33.3 +2.8**
DIM Dimitrovgrad 4.55 82 P **Pn 06 09 33.4 +2.8**
KYMI Kymi, Euboea I 4.57 128 P **Pn 06 09 32.0 +1.1**
STFN Stefani 4.59 136 P **Pn 06 09 32.4 +1.3**
PTQR Pietraquaria 4.60 278 *e*P **Pn 06 09 31.8 +0.6**
LIA Limnos Island 4.61 109 P **Pn 06 09 32.6 +1.2**
AQU L'Aquila 4.63 282 P **Pn 06 09 32.5 +0.8**
AQU L'Aquila 4.63 282 ⇓*i*Pn **Pn 06 09 32.4 +0.7**
AQU *e*Sn **Sn 06 10 23.1 -1.8**
MNTT Montottone 4.64 291 *e*P **Pn 06 09 33.5 +1.6**
MNTT AML AML
comp=E,44900µm,0.6s
MNTT AML AML
comp=N,40100µm,0.4s
CAMP Campotosto 4.65 284 **Pn 06 09 32.7 +0.6**
CAMP Campotosto 4.65 284 ⇓*i*P **Pn 06 09 32.7 +0.6**
CAMP AML AML
comp=N,6170µm,0.7s
CAMP AML AML
comp=E,6035µm,0.4s
GUAR Guarcino 4.66 275 *e*P **Pn 06 09 32.6 +0.6**
GUAR AML AML
comp=N,5185µm,1.6s
GUAR AML AML
comp=E,3675µm,0.5s
VENT Ventotene 4.67 262 ⇓*i*P **Pn 06 09 31.8 -0.3**
VENT AML AML
comp=N,2300µm,1.5s
VENT AML AML
comp=E,3800µm,1.5s
SMTH Samothraki Isl 4.68 102 P **Pn 06 09 33.9 +1.7**
MPNC Port Mandanici 4.69 225 ⇓*i*P **Pn 06 09 30.5 -2.0**
MPNC AML AML
comp=N,7700µm,0.5s
MPNC AML AML
comp=E,7360µm,0.4s
MORH Mrgy, Hungar 4.69 353 ⇑*i*Pn **Pn 06 09 33.3 +0.9**
MORH *e*Sn **Sn 06 10 27.6 +1.4**
MORH Mrgy, Hungar 4.69 353 ⇑P **Pn 06 09 33.3 +0.9**
MORH Mrgy, Hungar 4.69 353 P **Pn 06 09 33.5 +1.1**
SKY Skiros Island 4.69 123 P **Pn 06 09 34.1 +1.5**
LLI Lipari 4.70 230 *e*P **Pn 06 09 31.9 -0.7**
LLI AML AML
comp=E,39900µm,0.9s
LLI AML AML
comp=N,51550µm,0.6s
GIUL Giuliano Di Ro 4.70 272 *e*P **Pn 06 09 32.7 0.0**
GIUL AML AML
comp=N,4260µm,0.9s
GIUL AML AML
comp=E,3495µm,0.8s
MTRA Matera 4.71 287 *e*P **Pn 06 09 33.4 +0.6**
MTRA AML AML
comp=N,11400µm,0.8s
MTRA AML AML
comp=N,11500µm,0.8s
MTRA AML AML
comp=E,12900µm,0.5s
MTRA AML AML
comp=E,12900µm,0.5s
MF5 Montefalcone A 4.72 290 *e*P **Pn 06 09 33.7 +0.8**
MF5 AML AML
comp=N,12800µm,0.6s
MF5 AML AML
comp=E,11950µm,0.5s
VPL Vulcano Piano 4.72 229 *e*P **Pn 06 09 31.5 -1.5**
VPL AML AML
comp=E,7405µm,0.5s
VPL AML AML
comp=N,8775µm,0.7s
SMA1 SAN MARTINO 4.72 285 P **Pn 06 09 33.7 +0.6**
SMA1 AML AML
comp=E,13050µm,1.2s
SMA1 AML AML
comp=N,13700µm,0.6s
VLX Vlachokerasia 4.74 151 P **Pn 06 09 35.5 +2.3**
ITM Ithomi 4.76 156 *e*P **Pn 06 09 34.7 +1.2**
ITM Ithomi 4.76 156 P **Pn 06 09 34.3 +0.8**
ITM Ithomi 4.76 156 **Pn 06 09 33.6 +0.2**
ITM Ithomi 4.76 156 ⇑*i*P **Pn 06 09 34.6 +1.1**
ITM AML AML
comp=N,598µm,1.5s
ITM AML AML
comp=E,620µm,0.9s
MMO1 Montemonaco 4.79 288 *e*P **Pn 06 09 34.6 +0.7**
SAP2 Sant'Angelo in 4.79 291 *e*P **Pn 06 09 34.7 +0.9**
SAP2 AML AML
comp=N,56700µm,1.6s
SAP2 AML AML
comp=E,7030µm,1.4s

ZIMR		4.79	62	⇑P		Pn	06 09 37.6	+3.7
ZIMR		4.79	62	P		Pn	06 09 37.5	+3.7
AOI	**Ancona**	4.80	296	*e*P		Pn	06 09 34.3	+0.3
AOI					AML	AML		
	comp=E,6565µm,1.2s							
AOI					AML	AML		
	comp=N,8935µm,0.7s							
GUMA	**Gualdo di Mace**	4.82	290			Pn	06 09 34.8	+0.5
GUMA	**Gualdo di Mace**	4.82	290	*e*P		Pn	06 09 34.9	+0.5
GUMA					AML	AML		
	comp=E,20600µm,1.5s							
GUMA					AML	AML		
	comp=E,22000µm,0.5s							
GUMA					AML	AML		
	comp=N,16450µm,1.5s							
GUMA					AML	AML		
	comp=N,15800µm,1.3s							
FIAM	**Fiamignano**	4.83	280	*e*P		Pn	06 09 35.7	+1.3
FIAM					AML	AML		
	comp=E,4795µm,1.4s							
FIAM					AML	AML		
	comp=E,11080µm,0.9s							
FIAM					AML	AML		
	comp=N,5705µm,0.8s							
FIAM					AML	AML		
	comp=N,10345µm,0.8s							
PTL	**Penteli**	4.85	135	P		Pn	06 09 36.0	+1.3
	comp=N,2.4nmcomp=N,31µmcomp=N,673nm,0.7s							
DION	**Dionisos Attik**	4.87	134	P		Pn	06 09 36.3	+1.4
	comp=N,2.6nmcomp=N,830nm,1.0s							
AIO	**Antillo**	4.88	224	*e*P		Pn	06 09 33.5	-1.7
AIO					AML	AML		
	comp=N,3050µm,0.4s							
AIO					AML	AML		
	comp=E,2830µm,0.7s							
MC2	**Monte Cornacci**	4.89	288	*e*P		Pn	06 09 36.2	+0.8
CERT	**Cerreto**	4.91	277	P		Pn	06 09 36.0	+0.5
CERT					AML	AML		
	comp=E,4710µm,0.7s							
CERT					AML	AML		
	comp=N,3235µm,1.2s							
ELND	**Elena**	4.91	72	⇑P		Pn	06 09 39.2	+3.8
COPA	**Copaceanca**	4.91	57	⇓P		Pn	06 09 38.7	+3.2
CSP1	**Cessapalombo**	4.92	290	⇓*e*P		Pn	06 09 36.0	+0.2
CSP1					AML	AML		
	comp=N,8460µm,0.7s							
CSP1					AML	AML		
	comp=E,7600µm,0.7s							
LATB	**Latina**	4.92	271	⇑*i*P		Pn	06 09 35.4	-0.2
LATB					AML	AML		
	comp=N,1260µm,0.4s							
LATB					AML	AML		
	comp=E,1680µm,1.2s							
NRCA	**Norcia**	4.92	287			Pn	06 09 36.5	+0.7
NRCA	**Norcia**	4.92	287	*e*P		Pn	06 09 36.5	+0.7
LNSS	**Leonessa**	4.93	284	*e*P		Pn	06 09 36.9	+1.0
LNSS					AML	AML		
	comp=E,10740µm,1.1s							
LNSS					AML	AML		
	comp=E,10765µm,1.1s							
LNSS					AML	AML		
	comp=N,11805µm,0.4s							
LNSS					AML	AML		
	comp=N,11020µm,0.4s							
SIRR	**Siria**	4.95	17	⇓P		Pn	06 09 37.6	+1.6
LOT	**Lotru**	4.96	37	*e*P		Pn	06 09 38.7	+2.5
LOT	**Lotru**	4.96	37	⇑P		Pn	06 09 38.5	+2.3
DEV	**Deva**	4.96	28	⇓P		Pn	06 09 39.0	+2.8
DEV	**Deva**	4.96	28	P		Pn	06 09 39.0	+2.8
HUMR	**Humele**	4.97	52	⇓P		Pn	06 09 39.0	+2.7
IACL	**Alicudi**	4.99	234	*e*P		Pn	06 09 35.1	-1.5
FDMO	**Fiordimonte**	4.99	289			Pn	06 09 37.3	+0.7
FDMO	**Fiordimonte**	4.99	289	*e*P		Pn	06 09 37.1	+0.5
FDMO					AML	AML		
	comp=E,8795µm,0.6s							
FDMO					AML	AML		
	comp=N,4965µm,0.5s							
ECTS	**Castiglione**	5.00	224	*e*P		Pn	06 09 36.0	-0.9
BOJS	**Bojanci**	5.01	323	*i* Pn		Pn	06 09 38.0	+1.2
BOJS				*e*Sn		Sn	06 10 33.5	-0.7
BOJS	**Bojanci**	5.01	323	*e*P		Pn	06 09 38.0	+1.2
BOJS					AML	AML		
	comp=E,34750µm,1.1s							
BOJS					AML	AML		
	comp=N,28250µm,1.0s							
MUCR	**Ucria**	5.02	227	⇓*i*P		Pn	06 09 35.5	-1.6
MUCR					AML	AML		
	comp=N,2870µm,0.6s							
MUCR					AML	AML		
	comp=E,2475µm,0.7s							
GADA	**Gvkgeada**	5.03	104	*e*P		Pn	06 09 39.0	+1.9
EL6	**Elcito**	5.07	292	*e*P		Pn	06 09 37.7	0.0
SZH	**Strazhitsa**	5.07	68	P		Pn	06 09 41.0	+3.3
ENEZ	**Enez**	5.08	97	*e*P		Pn	06 09 40.9	+3.2
CAVK	**Edirne/Enez-Ca**	5.09	98	⇑P		Pn	06 09 40.5	+2.5
SENI	**Senigallia**	5.11	297	*e*P		Pn	06 09 38.8	+0.7
SENI					AML	AML		
	comp=E,7420µm,1.0s							
SENI					AML	AML		
	comp=E,22100µm,0.4s							
SENI					AML	AML		
	comp=N,12850µm,0.7s							
SENI					AML	AML		
	comp=N,6415µm,1.2s							
CESI	**CEŠI - Serrava**	5.11	289	*e*P		Pn	06 09 39.1	+0.8
EMSG	**Monte Spagnolo**	5.14	225	*e*P		Pn	06 09 39.0	+0.2
SNTG	**Esanatoglia**	5.16	291	*e*P		Pn	06 09 39.0	+0.1
SNTG					AML	AML		
	comp=N,7275µm,1.5s							
SNTG					AML	AML		
	comp=N,7045µm,1.5s							
SNTG					AML	AML		
	comp=E,4740µm,1.0s							
SNTG					AML	AML		
	comp=E,4815µm,1.0s							
CRES	**Cresnjevec Ost**	5.18	327	*i* Pn		Pn	06 09 40.0	+0.9
EPZF	**Pizzo Felice**	5.19	225	*e*P		Pn	06 09 39.0	-0.4
EPZF					AML	AML		
	comp=E,6940µm,0.5s							
EPZF					AML	AML		
	comp=N,7640µm,0.5s							
COR1	**Corinaldo**	5.24	295	*e*P		Pn	06 09 40.7	+0.8
BOZC	**Bozcaada**	5.25	107	*e*P		Pn	06 09 42.7	+2.5
CESX	**Cesi**	5.27	284			Pn	06 09 41.2	+0.7
CESX	**Cesi**	5.27	284	⇓*i*P		Pn	06 09 41.0	+0.6
BEHE	**Becsehely**	5.29	339			Pn	06 09 42.2	+1.6
BEHE	**Becsehely**	5.29	339	⇑*i* Pn		Pn	06 09 42.3	+1.6
BEHE				*e*Sn		Sn	06 10 42.6	+1.6
JMB	**Yambol**	5.30	78	*e*P		Pn	06 09 44.0	+3.2
JMB	**Yambol**	5.30	78	P		Pn	06 09 43.8	+2.9
JMB	**Yambol**	5.30	78	P		Pn	06 09 43.8	+2.9
ARR	**Arges**	5.32	43	⇑P		Pn	06 09 43.8	+2.6
SSFR	**Montelago di S**	5.32	293	*e*P		Pn	06 09 41.4	+0.2
LEGS	**Legarje**	5.33	327	⇑*i* Pn		Pn	06 09 42.2	+0.9
TNR	**Turnu Rosu**	5.34	39	⇓P		Pn	06 09 44.6	+3.1
TNR	**Turnu Rosu**	5.34	39	P		Pn	06 09 44.6	+3.1
ATCC	**AVT- Casa Cast**	5.35	290	*e*P		Pn	06 09 42.1	+0.6
ERIK	**Erikli-Kesan**	5.36	97	*e*P		Pn	06 09 44.1	+2.5
UKOP	**Uzunkopru-Edir**	5.37	92	*e*P		Pn	06 09 44.9	+3.1
BRJN	**Brijuni**	5.38	310	*e*P		Pn	06 09 42.4	+0.6
SIGR	**SIGRI**	5.38	114	*e*P		Pn	06 09 46.0	+4.1
SIGR	**SIGRI**	5.38	114	P		Pn	06 09 46.7	+4.8
	comp=N,33µmcomp=N,259nm,0.7s							
FRON	**Frontone**	5.38	293	*e*P		Pn	06 09 42.2	+0.1
GELI	**Tayfur-Gelibol**	5.39	100	*e*P		Pn	06 09 44.5	+2.4
MPAG	**Monte Paganucc**	5.40	295	*e*P		Pn	06 09 42.4	+0.1
EDRB	**Edirne**	5.41	85	*e*P		Pn	06 09 45.3	+2.9
KOGS	**Kog**	5.42	335	⇑*i*P		Pn	06 09 43.4	+0.9
GALF	**Gagliano Caste**	5.43	226	*e*P		Pn	06 09 43.8	+1.1
SGRR	**Singureni**	5.43	59	⇑P		Pn	06 09 45.6	+3.0
ATFO	**Monte Foce - G**	5.45	292	*e*P		Pn	06 09 43.3	+0.4
MTUR	**Matau**	5.45	46	⇓P		Pn	06 09 46.1	+3.2
MTUR	**Matau**	5.45	46	P		Pn	06 09 46.1	+3.2
MURB	**Monte Urbino**	5.45	290	*e*P		Pn	06 09 43.9	+0.9
HAGA	**Augusta**	5.45	220	P		Pn	06 09 40.4	-2.5
EZN	**Ezine**	5.46	106	*e*P		Pn	06 09 46.2	+3.2
EZN	**Ezine**	5.46	106	P		Pn	06 09 45.2	+2.3
	comp=N,433nm,0.7s							
EZN	**Ezine**	5.46	106	⇑P		Pn	06 09 45.4	+2.5
EZN	**Ezine**	5.46	106	P		Pn	06 09 45.4	+2.5
PESA	**Pesaro**	5.46	298	⇑*i*P		Pn	06 09 43.5	+0.5
COMU	**Canakkale**	5.47	103	*e*P		Pn	06 09 45.0	+1.8
NARO	**Abbazia di Nar**	5.51	294	P		Pn	06 09 44.5	+0.7
VLI	**Veliai**	5.52	150	P		Pn	06 09 43.8	-0.1
BUC1	**Bucharest**	5.52	58	⇓P		Pn	06 09 47.9	+4.0
BUC1	**Bucharest**	5.52	58	P		Pn	06 09 47.8	+4.0
LOZB	**Loznitsa**	5.53	69	⇓P		Pn	06 09 47.3	+3.3
RAZG	**Razgrad**	5.53	67	⇑P		Pn	06 09 47.2	+3.2
HLNI	**Lentini**	5.54	222	*e*P		Pn	06 09 41.4	-2.8
ATTE	**AVT- Monte Tez**	5.55	289	*e*P		Pn	06 09 45.2	+0.9
VOIR		5.58	44	⇑P		Pn	06 09 47.7	+3.0
VOIR		5.58	44	P		Pn	06 09 47.7	+3.0
VOIR		5.58	44	P		Pn	06 09 48.3	+3.6
	comp=N,7.6nmcomp=N,10µmcomp=N,988nm,0.6s							
PE3	**Peglio**	5.60	295	*e*P		Pn	06 09 45.3	+0.3
LPK	**Lapseki**	5.61	100	*e*P		Pn	06 09 47.3	+2.7
APEC	**Apecchio**	5.61	293	*e*P		Pn	06 09 45.7	+0.6
TOLF	**Tolfa**	5.64	278	*e*P		Pn	06 09 45.6	+0.1
ATMI	**Monte Miggiano**	5.65	291	*e*P		Pn	06 09 47.0	+1.3
VAE	**Valguarnera**	5.68	226	Pn		Pn	06 09 47.5	+1.4
	comp=N,36nm,0.4s,baz=176,slow=8.6,SNR=8.7							
DRGR		5.70	23	*e*P		Pn	06 09 48.1	+1.7
DRGR		5.70	23	⇑P		Pn	06 09 48.2	+1.8
DRGR		5.70	23	P		Pn	06 09 48.2	+1.8
BADI	**Badiali**	5.71	292	*e*P		Pn	06 09 47.8	+1.2
VNDS	**Vrh nad Dolski**	5.72	324	⇑*i* Pn		Pn	06 09 47.5	+0.9
LJU	**Ljubljana**	5.75	323	*e*P		Pn	06 09 47.7	+0.7
BORR	**Bors**	5.75	16	⇑P		Pn	06 09 49.4	+2.3
BSZH	**Besenyszg**	5.76	5	⇓P		Pn	06 09 49.4	+2.3
RESU	**Resuttano**	5.76	229	*e*P		Pn	06 09 48.9	+1.7
CPGN	**Carpegna, Ital**	5.76	295	*e*P		Pn	06 09 48.1	+0.9
PARC	**Parchiule**	5.76	294	*e*P		Pn	06 09 47.8	+0.6
MDB	**Medias**	5.76	36	⇓P		Pn	06 09 50.0	+2.8
MDB	**Medias**	5.76	36	P		Pn	06 09 50.0	+2.8
PLAR	**PLOIESTI**	5.81	53	⇑P		Pn	06 09 51.9	+4.1
SSP9	**Sansepolcro**	5.81	293	*e*P		Pn	06 09 49.1	+1.3
SULR		5.83	55	⇓P		Pn	06 09 51.4	+3.4
LATE	**Laterza**	5.84	283	P		Pn	06 09 48.6	+0.4
RKY	**Sarkoy-Tekirda**	5.85	96	*e*P		Pn	06 09 50.3	+1.9
TRI	**Trieste**	5.88	317	*e*P		Pn	06 09 48.9	+0.1
RAFF	**Raffo Rosso**	5.90	224	*e*P		Pn	06 09 47.8	-1.3
CJR	**Cluj-Napoca**	5.92	28	⇓P		Pn	06 09 51.5	+2.1
CJR	**Cluj-Napoca**	5.92	28	P		Pn	06 09 51.5	+2.1
CANM	**Can-anakkale**	5.92	103	*e*P		Pn	06 09 52.9	+3.5
BUD	**Budapest**	5.93	357	*e*Pg		Pn	06 09 48.3	-1.1
CHOS	**Chios island**	5.94	120	*e*P		Pn	06 09 52.3	+2.6
CHOS	**Chios island**	5.94	120	P		Pn	06 09 52.6	+2.9
HPAC	**Pachino**	5.95	217	*e*P		Pn	06 09 47.5	-2.3
CRE	**Caprese Michel**	5.95	293	*e*P		Pn	06 09 50.2	+0.3
PHSR	**Pinarhisar**	6.00	87	*e*P		Pn	06 09 53.3	+2.9
PHSR	**Pinarhisar**	6.00	87	⇑P		Pn	06 09 53.4	+2.9
KRBG	**Karabiga-Canak**	6.00	99	*e*P		Pn	06 09 53.8	+3.4
SOKA	**Soboth**	6.04	329	*i* Pn		Pn	06 09 51.9	+0.8
	comp=N,424nm,0.8s,SNR=150							
SOKA				*e*Sn		Sn	06 10 58.5	-1.3
	comp=N,486nm,0.8s							
VOJS	**Vojsko**	6.04	319	*e*Sn		Sn	06 10 59.5	-0.3
PRD	**Provadia**	6.06	72	P		Pn	06 09 54.6	+3.4
YAYO	**Edremit-Balk**	6.07	106	*e*P		Pn	06 09 54.4	+3.0
LEHL	**Lehliu**	6.09	59	⇑P		Pn	06 09 55.1	+3.5
MLR	**Muntele Rosu**	6.10	48	Pn		Pn	06 09 55.6	+3.7
	comp=N,129nm,0.3s,baz=228,slow=4.5,SNR=376							
MLR				Sn		Sn	06 11 03.1	+2.0
	comp=N,116nm,0.3s,baz=180,slow=11,SNR=5.4							
MLR				LR		LR	06 13 20.5	
	comp=N,19µm,19.8s,baz=176,slow=49							
MLR	**Muntele Rosu**	6.10	48	*e*P		Pn	06 09 55.6	+3.7
MLR	**Muntele Rosu**	6.10	48			Pn	06 09 55.1	+3.2
MLR	**Muntele Rosu**	6.10	48	⇑P		Pn	06 09 55.3	+3.4
MLR	**Muntele Rosu**	6.10	48	*e*Pn		Pn	06 09 56.4	+4.5
MLR	**Muntele Rosu**	6.10	48	P		Pn	06 09 55.3	+3.4
	comp=N,10nmcomp=N,22µmcomp=N,2µm,0.6s							
MESR	**Meseseni**	6.10	23	⇑P		Pn	06 09 55.1	+3.3
OBKA	**Obir**	6.10	326	*i* Pn		Pn	06 09 52.5	+0.6
	comp=N,145nm,0.2s,SNR=80							
CICN	**Ciocanesti**	6.11	62	⇑P		Pn	06 09 55.3	+3.4
CROCE	**Santa Croce Ca**	6.11	221	*e*P		Pn	06 09 49.6	-2.4
DOPR	**Dopca**	6.11	42	⇑P		Pn	06 09 54.8	+2.8
SFI	**Santa Sofia**	6.12	295	*e*P		Pn	06 09 53.0	+0.9
ASQU	**Asqua**	6.12	294	*e*P		Pn	06 09 52.9	+0.7
TGMR	**Targu Mures**	6.13	34	⇑P		Pn	06 09 55.5	+3.3
SABO	**M.te Sabotino**	6.15	318	*e*P		Pn	06 09 52.6	+0.1
CLTA	**Licata**	6.16	226	*e*P		Pn	06 09 52.9	+0.3
DKL	**Dikili**	6.17	111	*e*P		Pn	06 09 54.3	+1.5
CRLT	**Corlu**	6.20	91	*e*P		Pn	06 09 59.9	+6.7
MBFT	**Monte Bonifato**	6.22	237	⇓*i*P		Pn	06 09 53.1	-0.4
ISR	**Istrita**	6.23	53	⇓P		Pn	06 09 57.3	+3.7
ISR	**Istrita**	6.23	53	P		Pn	06 09 57.3	+3.7
ISR	**Istrita**	6.23	53	P		Pn	06 09 57.2	+3.6
	comp=N,13nmcomp=N,27µmcomp=N,3µm,0.6s							
NEHR	**Nehoiu**	6.26	50	⇓P		Pn	06 09 57.6	+3.6
DRE	**Drenchia**	6.26	319	⇑*i*P		Pn	06 09 54.4	+0.2
CRJA	**Costa Raja**	6.28	235	P		Pn	06 09 54.8	+0.5
SRO	**Srobarova**	6.30	353	*e*P		Pn	06 09 57.6	+3.0
SRO				*e*			06 11 10.8	
SRO					MLR	MLR		
	comp=Z,5µm,1.6s							
SRO	**Srobarova**	6.30	353	*e*PN		Pn	06 09 57.6	+3.0
SRO				*e*SN		Sn	06 11 10.8	+4.8
SRO				*e*LG		Lg	06 12 06.6	
URLA	**Izmir**	6.31	118	*e*P		Pn	06 09 58.3	+3.6
MAON	**Monte Argentar**	6.31	281	⇓*e*P		Pn	06 09 54.6	-0.1
RUFI	**Rufina**	6.32	294	*e*P		Pn	06 09 55.4	+0.5
BOD	**Bodos**	6.33	43	⇓P		Pn	06 09 58.1	+3.2
PSZ	**Piszkesteto**	6.36	2			Pn	06 09 56.1	+0.7
PSZ	**Piszkesteto**	6.36	2	⇑P		Pn	06 09 56.6	+1.2
PSZ	**Piszkesteto**	6.36	2	*e*P		Pn	06 09 55.6	+0.2
PSZ	**Piszkesteto**	6.36	2	P		Pn	06 09 56.6	+1.2
PSZ	**Piszkesteto**	6.36	2	*e*Sn		Sn	06 11 12.7	+5.3
ARSA	**Arzberg**	6.36	335			Pn	06 09 55.8	+0.4
ARSA	**Arzberg**	6.36	335	*i* Pn		Pn	06 09 56.1	+0.8
	comp=Z,148nm,0.4s,SNR=89							
ARSA				*e*Sn		Sn	06 11 07.8	+0.3
	comp=Z,316nm,0.5s							
ARSA	**Arzberg**	6.36	335	⇑*i*P		Pn	06 09 56.2	+0.8
CSNT	**Castellina Chi**	6.37	290	*e*P		Pn	06 09 55.6	0.0
PGOR	**Pogoanele**	6.39	56	⇑P		Pn	06 09 59.9	+4.1
FROS	**Frosini**	6.41	218	⇑*i*P		Pn	06 09 56.4	+0.2
OSSC	**Osservatorio P**	6.42	290	P		Pn	06 09 56.4	+0.2
BRIS	**BRISIGHELLA**	6.43	296	⇑*i*P		Pn	06 09 55.1	-1.2
COVR	**Voineasa-Covas**	6.46	46	⇓P		Pn	06 10 00.7	+3.9
CEI	**Carei**	6.46	18	⇑P		Pn	06 10 00.3	+3.4
CEI	**Carei**	6.46	18	P		Pn	06 10 00.2	+3.4
APE	**Apeiranthos**	6.47	132	*e*P		Pn	06 09 58.3	+1.3
APE	**Apeiranthos**	6.47	132	P		Pn	06 09 58.3	+1.3
	comp=Z,378nm,1.0s							
APE	**Apeiranthos**	6.47	132	*i* P		Pn	06 09 57.5	+0.5
AMRR	**Amara**	6.48	59	⇓P		Pn	06 10 00.9	+3.9
AMRR	**Amara**	6.48	59	P		Pn	06 10 00.9	+3.9
TURR	**Turia**	6.49	44	⇑P		Pn	06 10 00.1	+2.8
SEI	**Scarperia**	6.50	295	⇑*i*P		Pn	06 09 58.6	+1.3
SLVT	**Silivri**	6.54	90	*e*P		Pn	06 09 59.3	+1.4
RONA	**Rosalia, Austr**	6.55	341	*i* Pn		Pn	06 09 58.9	+0.9
	comp=Z,85nm,0.5s,SNR=64							
RONA				*e*Sn		Sn	06 11 12.0	-0.1
	comp=Z,461nm,0.6s							
BISRR	**Bisoca**	6.56	50	⇓P		Pn	06 10 02.1	+3.8
BISRR	**Bisoca**	6.56	50	P		Pn	06 10 02.2	+3.9
	comp=Z,21nmcomp=Z,55µmcomp=Z,8µm,0.8s							
PTCC	**Patocco-Chiusa**	6.57	319	*e*P		Pn	06 09 58.4	0.0
TRIF	**Trifonti**	6.57	286	*e*P		Pn	06 09 58.1	-0.2
CTYL	**Yalikoy Yolu**	6.58	88	*e*P		Pn	06 10 01.3	+2.9
CTYL	**Yalikoy Yolu**	6.58	88	⇑P		Pn	06 10 02.2	+3.8
GEPF	**Gemona**	6.58	318	*e*P		Pn	06 09 58.1	-0.3
BLCB	**Balcova**	6.59	116	*e*P		Pn	06 10 01.3	+2.7
ACOM	**Acomizza, Ital**	6.60	321	⇑P		Pn	06 09 59.2	+0.4
MYKA	**Tea Mystica**	6.60	322	*i* Pn		Pn	06 09 59.0	+0.3
	comp=Z,318nm,0.7s,SNR=109							
MYKA				*e*Sn		Sn	06 11 13.7	+0.3
	comp=Z,516nm,0.7s							
ICOR	**Ion Corvin**	6.60	65	⇓P		Pn	06 10 01.9	+3.2
MOCL	**Monte Cuccoli**	6.60	294	*e*P		Pn	06 09 59.3	+0.6
BAND	**Balkesir-Ban**	6.61	98	⇓P		Pn	06 10 01.6	+2.8
MPRI	**Monte Prat**	6.64	317	*e*P		Pn	06 09 59.1	-0.2
BALB	**Balikesir**	6.65	104	*e*P		Pn	06 10 02.4	+3.1
BALB	**Balikesir**	6.65	104			Pn	06 10 02.3	+3.1
MPPT	**Montemurlo**	6.65	294	⇑*i*P		Pn	06 09 59.8	+0.4
PSN	**Preselentsi**	6.69	69	P		Pn	06 10 03.6	+3.8
SUSR	**Susurluk-Balik**	6.70	101	*e*P		Pn	06 10 03.1	+3.1
PLOR	**Plostina**	6.71	48	⇑P		Pn	06 10 03.2	+3.0
PLOR	**Plostina**	6.71	48	P		Pn	06 10 03.2	+3.0
FUSE	**Fusea**	6.75	318	⇑*i*P		Pn	06 10 00.4	-0.4
VRI	**Vrincioaia**	6.76	48	*e*P		Pn	06 10 04.1	+3.2
VRI	**Vrincioaia**	6.76	48	⇑P		Pn	06 10 04.0	+3.2
VRI	**Vrincioaia**	6.76	48	P		Pn	06 10 04.0	+3.2
VRI	**Vrincioaia**	6.76	48	P		Pn	06 10 04.2	+3.3
	comp=Z,8.4nmcomp=Z,20µmcomp=Z,3µm,0.6s							
STAL	**STALIGIAL**	6.79	316	*e*P		Pn	06 10 00.8	-0.6
KCTX	**Karacabey (Bur**	6.82	98	*e*P		Pn	06 10 04.6	+2.9
CVDA	**Cernavoda**	6.83	63	⇓P		Pn	06 10 06.1	+4.3
SMG	**Samos**	6.83	122	P		Pn	06 10 04.2	+2.2
TEOL	**Teolo**	6.85	306	⇑*i*P		Pn	06 10 01.9	-0.3
ZCCA	**Zocca**	6.86	297	⇑*i*P		Pn	06 10 04.0	+1.8
CONA	**Conrad Observa**	6.87	339	*i* Pn		Pn	06 10 02.5	0.0
	comp=Z,32nm,0.4s,SNR=33							
CONA				*i* Sn		Sn	06 11 22.9	+2.7
	comp=Z,484nm,0.6s							
ONER	**Baraj Valea Uz**	6.88	44	⇑P		Pn	06 10 05.5	+3.0
ODBI	**Odobesti**	6.89	50	⇓P		Pn	06 10 06.6	+4.0
TLBR	**Topalu**	6.92	62	⇑P		Pn	06 10 06.3	+3.3
WDD	**Wied Dalam**	6.93	216			Pn	06 10 01.2	-2.0
KECS	**Kecovo**	6.95	5	*e*P		Pn	06 10 05.8	+2.3
KECS				*e*			06 11 22.3	
KECS	**Kecovo**	6.95	5	*e*PN		Pn	06 10 05.8	+2.3
KECS				*e*SN		Sn	06 11 22.3	+0.4
BGKT	**Bogazkoy**	6.97	90	*e*P		Pn	06 10 04.9	+1.1
CIMO	**Cimolais**	6.97	315	*e*P		Pn	06 10 03.1	-0.7
PII	**Pisa**	6.97	291	*e*P		Pn	06 10 03.6	-0.2
FVI	**Forni Avoltri**	6.99	318	*e*P		Pn	06 10 04.0	0.0
MODS	**Modra-Piesok**	6.99	348	*e*P		Pn	06 10 06.3	+2.3
MODS				*e*			06 11 27.4	
MODS					MLR	MLR		
	comp=Z,38µm,3.1s							
MODS	**Modra-Piesok**	6.99	348	*e*PN		Pn	06 10 06.3	+2.3
MODS				*e*SN		Sn	06 11 27.4	+4.5
MODS				*e*LG		Lg	06 12 30.0	
PANC	**Panciu**	7.00	50	⇓P		Pn	06 10 08.1	+3.9
BERU	**Beregovo**	7.02	17	P		Pn	06 10 06.4	+1.9
MFTR	**Murfatlar**	7.04	65	⇓P		Pn	06 10 08.8	+4.1
KBA	**Koelnbreinsper**	7.07	323	*i* Pn		Pn	06 10 06.0	+0.7
	comp=Z,177nm,0.7s,SNR=103							
KBA				*i* Sn		Sn	06 11 27.1	+2.0
	comp=Z,417nm,0.7s				

VRAC	**Vranov**	**8.01**	**346**	*e*PN		**Pn**	**06 10 19.6**	**+1.6**
VRAC				*e*SN		**Sn**	**06 11 48.3**	**+0.3**
WTTA	**Wattenberg**	**8.02**	**318**	*i* Pn		**Pn**	**06 10 18.4**	**+0.2**
	comp=Z,196nm,0.4s,SNR=94							
WTTA				*i* Sn		**Sn**	**06 11 48.6**	**+0.2**
	comp=Z,789nm,0.7s							
WATA	**Walderalm**	**8.09**	**318**	*i* Pn		**Pn**	**06 10 19.9**	**+0.5**
	comp=Z,418nm,0.7s,SNR=110							
WATA				*i* Sn		**Sn**	**06 11 50.0**	**-0.3**
	comp=Z,686nm,0.6s							
YER	**Yerkesik**	**8.10**	**120**	*e*P		Pn	06 10 24.2	+4.8
CKRC	**Cesky Krumlov**	**8.13**	**335**	*e*P		**Pn**	**06 10 21.5**	**+1.8**
CKRC				MLR		MLR		
	comp=Z,29µm,11.6s							
CKRC	**Cesky Krumlov**	**8.13**	**335**	*e*PN		**Pn**	**06 10 21.5**	**+1.8**
CKRC				AMS		AMS	06 13 40.0	
	comp=Z,29µm,11.6s							
CKRC	**Cesky Krumlov**	**8.13**	**335**	*e*Pn		**Pn**	**06 10 21.5**	**+1.8**
SAUV	**Serdivan-Sakar**	**8.20**	**92**	*e*P		**Pn**	**06 10 23.2**	**+2.6**
SQTA	**Sankt Quirin**	**8.21**	**316**	*i* Pn		**Pn**	**06 10 21.9**	**+1.1**
	comp=Z,205nm,0.4s,SNR=111							
SQTA				*i* Sn		**Sn**	**06 11 51.8**	**-1.2**
	comp=Z,646nm,0.5s							
TREC	**Trest**	**8.23**	**341**	*e*P		**Pn**	**06 10 23.9**	**+2.8**
TREC				MLR		MLR		
	comp=Z,33µm,13.8s							
TREC	**Trest**	**8.23**	**341**	*e*PN		**Pn**	**06 10 23.9**	**+2.8**
TREC				AMS		AMS	06 13 50.0	
	comp=Z,33µm,13.8s							
TREC	**Trest**	**8.23**	**341**	*e*Pn		**Pn**	**06 10 23.2**	**+2.1**
TURN	**Turunc**	**8.29**	**122**	*e*P		Pn	06 10 27.2	+5.3
MORC	**Moravsky Berou**	**8.33**	**351**	⇑P		**Pn**	**06 10 24.1**	**+1.7**
MORC	**Moravsky Berou**	**8.33**	**351**	*e*PN		**Pn**	**06 10 24.7**	**+2.3**
MORC				*e*SN		**Sn**	**06 11 57.7**	**+1.9**
MORC	**Moravsky Berou**	**8.33**	**351**	P		**Pn**	**06 10 24.0**	**+1.7**
MORC	**Moravsky Berou**	**8.33**	**351**	*e*Pn		**Pn**	**06 10 24.8**	**+2.5**
OKC	**Ostrava-Krasne**	**8.33**	**354**	AMS		AMS	06 14 00.0	
	comp=Z,56µm,10.7s							
OKC	**Ostrava-Krasne**	**8.33**	**354**	*e*Pn		**Pn**	**06 10 24.8**	**+2.5**
FETA	**Feichten**	**8.33**	**314**	*i* Pn		**Pn**	**06 10 23.1**	**+0.5**
	comp=Z,92nm,0.5s,SNR=122							
FETA				*i* Sn		**Sn**	**06 11 55.2**	**-1.0**
	comp=Z,323nm,0.6s							
MOTA	**Moosalm**	**8.34**	**317**	*i* Pn		**Pn**	**06 10 23.6**	**+0.9**
	comp=Z,307nm,0.9s,SNR=110							
MOTA				*i* Sn		**Sn**	**06 11 57.5**	**+1.1**
	comp=Z,440nm,0.6s							
GEC2	**GERESS Array S**	**8.35**	**333**	*e*Pn		**Pn**	**06 10 23.6**	**+0.8**
GERES	**GERESS Array B**	**8.35**	**333**	Pn		**Pn**	**06 10 23.5**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=153,slow=13,SNR=319							
GERES				Sn		**Sn**	**06 11 54.4**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=175,slow=15,SNR=1.2							
GERES				LR		LR	06 14 24.2	
	comp=Z,14µm,20.4s,baz=140,slow=44							
	comp=Z,62nm,0.6s							
KWP	**Kalwaria Pacla**	**8.37**	**14**	*e*P		**Pn**	**06 10 27.6**	**+4.7**
KWP				*e*S		Sn	06 12 11.8	+15
KWP				*e*L		L	06 14 04.2	
	comp=Z,46µm,15.6s							
GULT	**Gulveren**	**8.39**	**94**	*e*P		**Pn**	**06 10 27.5**	**+4.1**
STEB	**Steborice**	**8.46**	**352**	*e*PN		**Pn**	**06 10 26.9**	**+2.8**
KARP	**Karpathos**	**8.48**	**133**	*e*P		**Pn**	**06 10 26.9**	**+2.4**
KARP	**Karpathos**	**8.48**	**133**			**Pn**	**06 10 26.0**	**+1.5**
KARP	**Karpathos**	**8.48**	**133**	*e*P		**Pn**	**06 10 24.5**	**0.0**
KARP	**Karpathos**	**8.48**	**133**	P		**Pn**	**06 10 25.6**	**+1.1**
	comp=Z,323nm,1.1s							
KMPD	**K-Podol'skiy**	**8.54**	**33**	P		**Pn**	**06 10 27.9**	**+2.6**
KMPD				P		**Pn**	**06 10 27.9**	**+2.6**
MILM	**Milestii Mici**	**8.55**	**48**	⇑P		**Pn**	**06 10 27.6**	**+2.3**
MILM	**Milestii Mici**	**8.55**	**48**	*d* iP		**Pn**	**06 10 26.0**	**+0.6**
MILM				*e*S		**Sn**	**06 12 00.0**	**-1.2**
MILM				pmax		pmax		
	comp=Z,1µm,0.9s							
MILM				MLR		MLR		
	comp=N,30µm,15.0s							
MILM				MLR		MLR		
	comp=Z,51µm,15.0s							
MILM				MLR		MLR		
	comp=E,36µm,14.0s							
MILM	**Milestii Mici**	**8.55**	**48**	⇓ *i*P		**Pn**	**06 10 26.0**	**+0.6**
	comp=E,1µm,0.9s							
MILM				*e*S		**Sn**	**06 12 00.0**	**-1.2**
MILM				*e*L		L	06 13 50.0	
MILM				LRM		MLR	06 14 31.0	
	comp=E,30µm,15.0s							
RAC	**Raciborz**	**8.57**	**354**	*e*P		**Pn**	**06 10 28.9**	**+3.3**
RAC	**Raciborz**	**8.57**	**354**	*e*SG			06 13 02.9	
RAC				AMS		AMS	06 14 19.0	
	comp=E,53nm,13.4s							
RAC	**Raciborz**	**8.57**	**354**	*e*P		**Pn**	**06 10 28.9**	**+3.3**
RAC				MLR		MLR		
	comp=Z,53µm,13.4s							
SAHE	**Sakarya_HENDEK**	**8.57**	**91**	⇑P		**Pn**	**06 10 29.8**	**+4.0**
KIS	**Kishinev**	**8.60**	**48**	⇑P		**Pn**	**06 10 29.5**	**+3.4**
KIS	**Kishinev**	**8.60**	**48**	*e*P		**Pn**	**06 10 28.0**	**+2.0**
KIS				*e*S		**Sn**	**06 12 02.0**	**-0.4**
KIS				pmax		pmax		
	comp=Z,500nm,0.9s							
KIS				MLR		MLR		
	comp=Z,22µm,15.0s							
KIS				MLR		MLR		
	comp=E,18µm,14.0s							
KIS	**Kishinev**	**8.60**	**48**	*e*P		**Pn**	**06 10 28.0**	**+2.0**
	comp=E,500nm,0.9s							
KIS				*e*S		**Sn**	**06 12 02.0**	**-0.4**
KIS				*e*L		L	06 13 54.0	
KIS				LRM		MLR	06 14 33.0	
	comp=E,12µm,14.5s							
RETA	**Reutte**	**8.61**	**316**	*i* Pn		**Pn**	**06 10 26.8**	**+0.5**
	comp=E,49nm,0.3s,SNR=25							
RETA				*i* Sn		**Sn**	**06 12 01.9**	**-1.0**
	comp=E,303nm,0.5s							
KHC	**Kasperske Hory**	**8.64**	**333**			**Pn**	**06 10 27.4**	**+0.6**
KHC	**Kasperske Hory**	**8.64**	**333**	*ce*P		**Pn**	**06 10 25.5**	**-1.2**
KHC				pmax		pmax		
	comp=Z,196nm,0.8s							
KHC	**Kasperske Hory**	**8.64**	**333**	*e*PN		**Pn**	**06 10 27.9**	**+1.2**
KHC				*e*SN		**Sn**	**06 12 04.8**	**+1.2**
KHC				AMS		AMS	06 14 00.0	
	comp=Z,25µm,13.1s							
OJC	**Ojcow**	**8.66**	**1**	*e*P		**Pn**	**06 10 28.7**	**+1.9**
OJC				*e*S		Sn	06 12 18.0	+14
OJC				*e*L		L	06 14 17.3	
	comp=Z,36µm,15.5s							
DAVOX	**Davos/Dischmat**	**8.67**	**310**	Pn		**Pn**	**06 10 28.0**	**+0.8**
	comp=Z,19nm,0.3s,baz=122,slow=14,SNR=106							
DAVOX				Sn		**Sn**	**06 12 06.8**	**+2.3**
	comp=Z,24nm,0.3s,baz=297,slow=21,SNR=4.7							
DAVOX				LR		LR	06 14 21.6	
	comp=Z,12µm,20.1s,baz=120,slow=42							
	comp=Z,108nm,0.5s							
KRLC	**Kraliky**	**8.72**	**348**	*e*P		**Pn**	**06 10 29.5**	**+1.7**
KRLC				MLR		MLR		
	comp=Z,67µm,12.2s							
KRLC	**Kraliky**	**8.72**	**348**	*e*PN		**Pn**	**06 10 29.5**	**+1.7**
KRLC				AMS		AMS	06 14 30.0	
	comp=Z,67µm,12.2s							
FUR	**Furstenfeldbru**	**8.82**	**321**	*e*Pn		**Pn**	**06 10 28.6**	**-0.5**
TUE	**Stuetta**	**8.82**	**307**	P		**Pn**	**06 10 29.8**	**+0.5**
	comp=Z,14µmcomp=Z,2µm,0.8s							
CAME	**Cameli-Denizli**	**8.88**	**118**	*e*P		**Pn**	**06 10 34.3**	**+4.2**
BASM	**Basmaki-Afyon**	**8.89**	**111**	*e*P		Pn	06 10 35.9	+5.7
WET	**Wettzell**	**8.90**	**331**	*e*Pn		**Pn**	**06 10 30.4**	**+0.2**
PURM	**Purcari**	**8.95**	**53**	⇑P		**Pn**	**06 10 34.2**	**+3.3**
DAVA	**Damuels**	**8.96**	**313**	*e*Pn		**Pn**	**06 10 31.5**	**+0.3**
	comp=Z,127nm,0.6s,SNR=41							
DAVA				*i* Sn		**Sn**	**06 12 09.7**	**-1.8**
	comp=Z,395nm,0.8s							
SHUT	**Suhut-Afyon**	**8.98**	**106**	*e*P		**Pn**	**06 10 35.6**	**+4.2**
DPC	**Dobruska-Polom**	**9.06**	**347**	*e*P		**Pn**	**06 10 34.6**	**+2.1**
DPC				*e*			06 12 20.7	
DPC				MLR		MLR		
	comp=Z,62µm,12.5s							
DPC	**Dobruska-Polom**	**9.06**	**347**	*e*PN		**Pn**	**06 10 34.6**	**+2.1**
DPC				*e*SN		**Sn**	**06 12 20.7**	**+6.8**
DPC				AMS		AMS	06 14 50.0	
	comp=Z,62µm,12.5s							
DPC	**Dobruska-Polom**	**9.06**	**347**	P		**Pn**	**06 10 33.8**	**+1.3**
	comp=Z,132nm,1.0s							
SORM	**Soroca**	**9.07**	**41**	⇑P		**Pn**	**06 10 35.1**	**+2.4**
SORM	**Soroca**	**9.07**	**41**	P		**Pn**	**06 10 35.0**	**+2.4**
PRU	**Pruhonice**	**9.11**	**339**	*e*P		**Pn**	**06 10 35.3**	**+2.2**
PRU				MLR		MLR		
	comp=Z,23µm,14.3s							
PRU	**Pruhonice**	**9.11**	**339**	*e*PN		**Pn**	**06 10 35.3**	**+2.2**
PRU				AMS		AMS	06 14 10.0	
	comp=Z,23µm,14.3s							
PRU	**Pruhonice**	**9.11**	**339**	*e*Pn		**Pn**	**06 10 35.3**	**+2.2**
PRA	**Prague**	**9.21**	**339**	*e*P		**Pn**	**06 10 36.7**	**+2.2**
PRA				MLR		MLR		
	comp=Z,22µm,15.4s							
PRA	**Prague**	**9.21**	**339**	*e*PN		**Pn**	**06 10 36.7**	**+2.2**
PRA				AMS		AMS	06 14 20.0	
	comp=Z,22µm,15.4s							
ISP	**Isparta**	**9.27**	**110**	*ce*P		**Pn**	**06 10 37.5**	**+2.1**
ISP				pmax		pmax		
	comp=Z,93nm,1.0s							
UPC	**Upice**	**9.27**	**346**	*e*P		**Pn**	**06 10 37.4**	**+2.2**
UPC				MLR		MLR		
	comp=Z,56µm,11.6s							
UPC	**Upice**	**9.27**	**346**	*e*PN		**Pn**	**06 10 37.4**	**+2.2**
UPC				AMS		AMS	06 14 50.0	
	comp=Z,56µm,11.6s							
OSTC	**Ostas**	**9.28**	**347**	*e*P		**Pn**	**06 10 37.4**	**+2.0**
OSTC				MLR		MLR		
	comp=Z,59µm,12.5s							
OSTC	**Ostas**	**9.28**	**347**	*e*PN		**Pn**	**06 10 37.4**	**+2.0**
OSTC				AMS		AMS	06 14 50.0	
	comp=Z,59µm,12.5s							
YUVA	**Yuva-Kibriscik**	**9.28**	**93**	*e*P		**Pn**	**06 10 38.1**	**+2.6**
BLVD	**Bolvadin-AFYON**	**9.28**	**104**	*e*P		**Pn**	**06 10 38.5**	**+2.9**
CHVC	**Chvalec**	**9.34**	**346**	*e*P		**Pn**	**06 10 38.3**	**+2.1**
CHVC				MLR		MLR		
	comp=Z,53µm,12.1s							
CHVC	**Chvalec**	**9.34**	**346**	*e*PN		**Pn**	**06 10 38.3**	**+2.1**
CHVC				AMS		AMS	06 15 00.0	
	comp=Z,53µm,12.1s							
SVRH	**Sivrihisar-ESK**	**9.38**	**99**	*e*P		**Pn**	**06 10 39.8**	**+2.8**
AKAS	**Kas**	**9.49**	**121**	*e*P		Pn	06 10 44.1	+5.6
KSP	**Ksiaz**	**9.54**	**348**	*e*P		**Pn**	**06 10 40.5**	**+1.4**
KSP				*e*L		L	06 14 59.5	
	comp=Z,57µm,15.0s							
KSP	**Ksiaz**	**9.54**	**348**	P		**Pn**	**06 10 40.4**	**+1.4**
	comp=Z,2µmcomp=Z,95nm,0.9s							
PVCC	**Panska Ves**	**9.60**	**341**	*e*P		**Pn**	**06 10 41.7**	**+1.9**
PVCC				MLR		MLR		
	comp=Z,20µm,12.2s							
PVCC	**Panska Ves**	**9.60**	**341**	*e*PN		**Pn**	**06 10 41.7**	**+1.9**
PVCC				AMS		AMS	06 14 40.0	
	comp=Z,20µm,12.2s							
NE56	**Odesa**	**9.64**	**54**	P		**Pn**	**06 10 42.5**	**+2.2**
ROTZ	**Rotzenmuhle**	**9.66**	**331**	*e*Pn		**Pn**	**06 10 39.9**	**-0.8**
RICC	**Richard**	**9.73**	**339**	*e*PN		**Pn**	**06 10 43.0**	**+1.4**
RICC				AMS		AMS	06 14 50.0	
	comp=Z,19µm,11.8s							
POLA	**Polatl-ANKAR**	**9.79**	**97**	*e*P		**Pn**	**06 10 44.1**	**+1.5**
KIZT	**Kizilcal**	**9.83**	**102**	*e*P		**Pn**	**06 10 45.5**	**+2.4**
KEST	**Kesra**	**9.86**	**237**	Pn		**Pn**	**06 10 44.5**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=354,slow=1.8,SNR=15							
KEST				LR		LR	06 15 36.1	
	comp=Z,23µm,18.7s,baz=71,slow=44							
	comp=Z,36nm,0.9s							
KEST	**Kesra**	**9.86**	**237**	P		**Pn**	**06 10 46.3**	**+2.8**
MANZ	**Manzenberg**	**9.88**	**331**	*e*Pn		**Pn**	**06 10 43.2**	**-0.5**
KURC	**Kurucasile-Bar**	**9.89**	**84**	*e*P		**Pn**	**06 10 46.1**	**+2.3**
HSKC	**Hora Svate Kat**	**9.98**	**337**	*e*PN		**Pn**	**06 10 45.8**	**+0.8**
HSKC				AMS		AMS	06 14 50.0	
	comp=Z,24µm,10.7s							
BRG	**Berggiesshubel**	**10.07**	**339**	*e*Pn		**Pn**	**06 10 47.4**	**+1.1**
TANN	**Tannenbergstha**	**10.12**	**333**	*e*Pn		**Pn**	**06 10 46.6**	**-0.3**
LUBAR	**Lubar, Ukraine**	**10.14**	**32**	P		**Pn**	**06 10 49.9**	**+2.7**
ANTO	**Ankara**	**10.22**	**95**			**Pn**	**06 10 50.7**	**+2.3**
ANTO	**Ankara**	**10.22**	**95**	P		**Pn**	**06 10 50.7**	**+2.3**
STU	**Stuttgart**	**10.24**	**318**	*e*P		**Pn**	**06 10 48.7**	**+0.1**
STU	**Stuttgart**	**10.24**	**318**	*e*Pn		**Pn**	**06 10 47.3**	**-1.3**
PLN	**Plauen**	**10.28**	**333**	*e*Pn		**Pn**	**06 10 48.7**	**-0.4**
BEL	**Belsk**	**10.31**	**4**	*e*P		**Pn**	**06 10 52.7**	**+3.3**
BEL				*e*L		L	06 15 32.3	
	comp=Z,47µm,15.5s							
SEYD	**Seydisehir-KON**	**10.39**	**110**	*e*P		**Pn**	**06 10 54.1**	**+3.4**
BFO	**Black Forest**	**10.42**	**314**			**Pn**	**06 10 49.9**	**-1.1**
BFO	**Black Forest**	**10.42**	**314**	P		**Pn**	**06 10 49.9**	**-1.1**
BFO	**Black Forest**	**10.42**	**314**	*e*Pn		**Pn**	**06 10 50.0**	**-1.1**
LADK	**Ladik-KONYA**	**10.43**	**105**	*e*P		**Pn**	**06 10 54.7**	**+3.4**
KULU	**Kulu**	**10.60**	**99**	*e*P		Pn	06 10 45.8	-7.9
MOX	**Moxa**	**10.60**	**332**	*e*Pn		**Pn**	**06 10 53.4**	**-0.1**
RNPP5	**Staryi Chortor**	**10.61**	**22**	P		**Pn**	**06 10 57.1**	**+3.5**
R9F13	**Warsaw-Wawer**	**10.71**	**5**	*e*P		**Pn**	**06 10 59.3**	**+4.3**
R9F13				*e*S		**Sn**	**06 12 52.2**	**-2.1**
CLL	**Collm**	**10.72**	**337**			**Pn**	**06 10 56.1**	**+0.9**
CLL	**Collm**	**10.72**	**337**	*e*P		**Pn**	**06 10 56.0**	**+0.9**
CLL	**Collm**	**10.72**	**337**	*e*Pn		**Pn**	**06 10 56.2**	**+0.9**
CLL	**Collm**	**10.72**	**337**	P		**Pn**	**06 10 55.6**	**+0.4**
	comp=Z,1µmcomp=Z,137nm,1.0s							
CLL	**Collm**	**10.72**	**337**	*e*Pn		**Pn**	**06 10 56.0**	**+0.9**
CLL				*e*Pg			06 11 46.0	
CLL				*ex*		x	06 12 20.0	
CLL				*e*Sn		Sn	06 12 35.0	-20
CLL				*e*Sb			06 13 29.0	
CLL				*ex*		x	06 13 49.0	
CLL				AMS		AMS	06 14 00.0	
CLL				*e*Sg			06 14 03.0	
RNPP9	**Sopachiv**	**10.78**	**22**	P		**Pn**	**06 10 58.7**	**+2.8**
BZK	**Bozkurt**	**10.83**	**93**	*e*P		**Pn**	**06 11 01.1**	**+4.5**
BR106	**Keskin Array S**	**10.87**	**95**	P		**Pn**	**06 11 00.8**	**+3.5**
	comp=Z,200nmcomp=Z,17nm,0.8s							
BR105	**Keskin Array S**	**10.87**	**95**	P		**Pn**	**06 11 00.8**	**+3.4**
	comp=Z,272nmcomp=Z,37nm,0.9s							
BR131	**Keskin Array S**	**10.89**	**95**	*i* P		**Pn**	**06 11 00.4**	**+2.8**
BRTR	**Keskin Array B**	**10.89**	**95**	Pn		**Pn**	**06 11 00.9**	**+3.4**
	comp=Z,1.4nm,0.3s,baz=282,slow=12,SNR=25							
BRTR				Sn		**Sn**	**06 12 56.1**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=302,slow=12,SNR=0.9							
BRTR				LR		LR	06 16 10.8	
	comp=Z,13µm,19.1s,baz=285,slow=43							
	comp=Z,9.1nm,0.7s							
BRTR	**Keskin Array B**	**10.89**	**95**			**Pn**	**06 11 00.1**	**+2.5**
BRTR	**Keskin Array B**	**10.89**	**95**	P		**Pn**	**06 11 00.1**	**+2.5**
BR104	**Keskin Array S**	**10.89**	**95**	P		**Pn**	**06 11 00.5**	**+2.8**
	comp=Z,251nmcomp=Z,27nm,0.9s							
ECH	**Echery**	**11.00**	**311**			**Pn**	**06 10 57.8**	**-1.1**
ECH	**Echery**	**11.00**	**311**	P		**Pn**	**06 10 57.8**	**-1.1**
KAMT	**Kaman**	**11.03**	**97**	*e*P		Pn	06 11 04.5	+4.9
SERE	**Sereflikochisa**	**11.05**	**99**	*e*P		Pn	06 11 05.0	+5.2
SIM	**Simferopol'**	**11.17**	**68**	*e*P		**Pn**	**06 11 05.0**	**+3.7**
SIM				*e*			06 13 12.0	
SIM				pmax		pmax		
	comp=Z,115nm,0.4s							
SIM				smax		smax		
	comp=N,2µm,6.6s							
SIM				MLR		MLR		
	comp=Z,16µm,14.0s							
AK13	**Malin Array Si**	**11.20**	**33**	P		**Pn**	**06 11 03.7**	**+2.0**
AK07	**Malin Array Si**	**11.21**	**33**	P		**Pn**	**06 11 03.9**	**+2.0**
AK14	**Malin Array Si**	**11.23**	**33**	P		**Pn**	**06 11 04.6**	**+2.4**
AK06	**Malin Array Si**	**11.24**	**33**	P		**Pn**	**06 11 04.6**	**+2.4**
AK17	**Malin Array Si**	**11.26**	**33**	P		**Pn**	**06 11 04.8**	**+2.4**
AK12	**Malin Array Si**	**11.26**	**33**	P		**Pn**	**06 11 04.8**	**+2.2**
AK16	**Malin Array Si**	**11.26**	**33**	P		**Pn**	**06 11 04.8**	**+2.2**
AK05	**Malin Array Si**	**11.27**	**33**	P		**Pn**	**06 11 04.8**	**+2.2**
SULT	**Sultanhani-AKS**	**11.27**	**103**	*e*P		**Pn**	**06 11 05.4**	**+2.6**
AK19	**Malin Array Si**	**11.27**	**32**	P		**Pn**	**06 11 04.8**	**+2.2**
AK10	**Malin Array Si**	**11.27**	**33**	P		**Pn**	**06 11 04.8**	**+2.2**
AK20	**Malin Array Si**	**11.28**	**32**	P		**Pn**	**06 11 05.0**	**+2.2**
AK18	**Malin Array Si**	**11.29**	**33**	P		**Pn**	**06 11 05.1**	**+2.2**
AK15	**Malin Array Si**	**11.29**	**33**	P		**Pn**	**06 11 05.1**	**+2.2**
AK02	**Malin Array Si**	**11.30**	**33**	P		**Pn**	**06 11 05.2**	**+2.2**
AK09	**Malin Array Si**	**11.30**	**33**	P		**Pn**	**06 11 05.0**	**+2.0**
AK11	**Malin Array Si**	**11.30**	**33**	P		**Pn**	**06 11 05.0**	**+2.0**
AK08	**Malin Array Si**	**11.30**	**33**	P		**Pn**	**06 11 05.0**	**+2.0**
GAZI	**Gazipasa**	**11.30**	**114**	*e*P		Pn	06 11 08.4	+5.3
KIEV	**Kiev**	**11.32**	**33**			**Pn**	**06 11 05.3**	**+1.9**
KIEV	**Kiev**	**11.32**	**33**	⇓P		**Pn**	**06 11 05.9**	**+2.5**
KIEV	**Kiev**	**11.32**	**33**	*i* P		**Pn**	**06 11 05.8**	**+2.5**
	SNR=115							
KIEV	**Kiev**	**11.32**	**33**	P		**Pn**	**06 11 05.3**	**+1.9**
AKASG	**Malin Array Be**	**11.34**	**33**	Pn		**Pn**	**06 11 05.1**	**+1.5**
	comp=Z,6.2nm,0.3s,baz=226,slow=13,SNR=185							
AKASG				Lg		Lg	06 14 27.5	
	baz=230,slow=29							
AKASG				LR		LR	06 16 10.7	
	comp=Z,8µm,18.3s,baz=213,slow=42							
AKASG	**Malin Array Be**	**11.34**	**33**			**Pn**	**06 11 05.4**	**+1.8**
AKASG	**Malin Array Be**	**11.34**	**33**	*i* P		**Pn**	**06 11 05.3**	**+1.8**
AKASG				pmax		pmax		
	comp=Z,91nm,0.9s							
AKBB	**Malin Array Si**	**11.34**	**33**			**Pn**	**06 11 05.3**	**+1.7**
AKBB	**Malin Array Si**	**11.34**	**33**	*ce*P		**Pn**	**06 11 04.9**	**+1.4**
SSB	**Saint Sauveur**	**11.51**	**294**			**Pn**	**06 11 03.9**	**-2.1**
SSB	**Saint Sauveur**	**11.51**	**294**	P		**Pn**	**06 11 03.9**	**-2.1**
TNS	**Taunus Mts**	**11.58**	**322**	*e*Pn		**Pn**	**06 11 06.8**	**-0.2**
GKP	**Gorka Klasztor**	**11.81**	**353**	*e*P		**Pn**	**06 11 12.5**	**+2.5**
GKP				*e*L		L	06 16 35.1	
	comp=Z,27µm,14.1s							
GKP	**Gorka Klasztor**	**11.81**	**353**	*e*P		**Pn**	**06 11 14.1**	**+4.2**
GTTG	**Gottingen**	**11.94**	**330**	*e*Pn		**Pn**	**06 11 12.2**	**+0.4**
FLTG	**Flechtingen**	**12.15**	**335**	*e*Pn		**Pn**	**06 11 16.0**	**+1.3**
KASTN	**Kahler Asten**	**12.30**	**325**	*e*Pn		**Pn**	**06 11 15.8**	**-0.9**
WLF	**Walferdange**	**12.36**	**315**	P		**Pn**	**06 11 18.0**	**+0.4**
WLF	**Walferdange**	**12.36**	**315**	*d*P		**Pn**	**06 11 18.9**	**+1.3**
EJON	**La Jonquera**	**12.41**	**280**	P		**Pn**	**06 11 18.4**	**+0.1**
SUW	**Suwalki**	**12.69**	**10**	*e*P		**Pn**	**06 11 23.2**	**+1.2**
SUW				*e*L		L	06 17 07.1	
	comp=Z,29µm,15.9s							
SUW	**Suwalki**	**12.69**	**10**	*e*P		**Pn**	**06 11 25.0**	**+3.0**
GORT1	**Trebel**	**12.70**	**337**	*e*Pn		**Pn**	**06 11 22.4**	**+0.3**
ETOS	**Mallorca**	**12.81**	**267**	P		**Pn**	**06 11 23.7**	**-0.1**
BHOU	**Houvegnez**	**12.85**	**318**	*d*P		**Pn**	**06 11 24.5**	**+0.2**
BHOU				*d*S		**Sn**	**06 13 43.9**	**-2.8**
BTNL	**Ternell**	**12.94**	**319**	*d*P		**Pn**	**06 11 25.3**	**-0.2**
MEM	**Membach**	**13.01**	**319**	*d*P		**Pn**	**06 11 27.1**	**+0.7**
RETH	**Rethem/Aller,**	**13.12**	**332**	*e*Pn		**Pn**	**06 11 30.9**	**+3.0**
RCHB	**Rochefort**	**13.13**	**316**	*d*P		**Pn**	**06 11 28.2**	**+0.1**
BSTI	**Sart Tilman**	**13.21**	**318**	*d*P		**Pn**	**06 11 29.9**	**+0.8**
BCLA	**Clavier**	**13.25**	**317**	*d*P		**Pn**	**06 11 30.9**	**+1.2**
BEBN	**Eben Emael**	**13.29**	**319**	*d*P		**Pn**	**06 11 30.8**	**+0.5**
BEBN				*d*S		**Sn**	**06 13 52.6**	**-4.8**
BGES	**Gesves**	**13.34**	**316**	*d*P		**Pn**	**06 11 31.5**	**+0.6**
BGES				*d*S		Sn	06 13 49.1	-10
IBBN	**Ibbenburen**	**13.40**	**327**	*e*Pn		**Pn**	**06 11 34.9**	**+3.2**
DOU	**Dourbes**	**13.44**	**314**	*d*P		**Pn**	**06 11 32.5**	**+0.3**
DOU				*d*S		**Sn**	**06 13 59.9**	**-1.0**
BMRD	**Maredsous**	**13.46**	**315**	*d*P		**Pn**	**06 11 32.4**	**-0.2**
ANN	**Anapa**	**13.46**	**70**	*e*P		**Pn**	**06 11 33.6**	**+1.0**
ANN				*e*S		**Sn**	**06 14 06.7**	**+5.1**
ANN				pmax		pmax		
	comp=Z,104nm,1.1s							
ANN				MLR		MLR		
	comp=N,11µm,14.0s							
ANN				MLR		MLR		
	comp=Z,6µm,12.0s							
ANN				MLR		MLR		
	comp=E,9µm,13.0s							
CEST	**Esterri de Car**	**13.61**	**280**	Pn		**Pn**	**06 11 35.4**	**+0.7**
BSEG	**Bad Segeberg**	**13.82**	**337**	*e*Pn		**Pn**	**06 11 37.0**	**-0.4**
BSD	**Bornholm Skovb**	**13.89**	**349**	*i* P		**Pn**	**06 11 37.5**	**-1.0**
UCC	**Uccle**	**13.96**	**317**			**Pn**	**

comp=Z,29µm,16.0s
BORU Boraas 16.65 347 *i* P **Pn** **06 12 13.9 -0.9**
ZFRI Zfri 16.74 126 P **Pn** **06 12 15.6 -0.5**
ASF Jabal al Asfar 16.75 118 Pn **Pn** **06 12 16.9 +0.6**
comp=Z,0.3nm,0.3s,baz=146,slow=2.2,SNR=5.1
ASF LR LR 06 20 09.7
comp=Z,6µm,18.1s,baz=301,slow=42
comp=Z,12nm,1.1s
PRNI Paran 16.78 127 P **Pn** **06 12 14.8 -1.8**
KRMI Paran Flat 16.78 128 P **Pn** **06 12 14.8 -1.8**
VORR Voronezh 16.83 46 *e*P **Pn** **06 12 14.0 -3.1**
VORR *e*S **Sn** **06 15 25.7 +2.3**
VORR pmax pmax
comp=Z,660nm,1.2s
VORR smax smax
comp=E,310nm,5.5s
VORR MLR MLR
comp=Z,7µm,9.0s
HRFI Mount Harif 17.02 128 P **Pn** **06 12 17.9 -1.9**
MBRI Mt Berech 17.13 128 P **Pn** **06 12 18.8 -2.3**
SHA1 Shidzhatmaz 17.15 75 *i* P **P** **06 12 24.4 +1.4**
LPSR Galich'ya Gora 17.16 43 *e*P **Pn** **06 12 19.5 -1.7**
LPSR pmax pmax
comp=Z,513nm,1.0s
KIV Kislovodsk 17.17 74 P **P** **06 12 24.6 +1.6**
KIV P **P** **06 12 24.6 +1.6**
KIV Kislovodsk 17.17 74 P **P** **06 12 22.9 -0.2**
KIV Kislovodsk 17.17 74 *i* P **Pn** **06 12 22.6 +1.1**
SNR=14
KIV Kislovodsk 17.17 74 *e*P **P** **06 12 22.8 -0.2**
KIV *e*S **Sn** **06 15 36.1 +4.2**
KIV pmax pmax
comp=Z,137nm,1.1s
KIV MLR MLR
comp=Z,2µm,14.0s
KIV Kislovodsk 17.17 74 P **P** **06 12 23.0 -0.1**
comp=Z,2µmcomp=Z,106nm,1.2s
KVAR Kislovodsk Arr 17.18 74 P **P** **06 12 25.6 +2.4**
comp=Z,7.3nm,0.6s,baz=270,slow=20,SNR=3.4
KVAR LR LR 06 19 58.4
comp=Z,3µm,19.7s,baz=198,slow=41
NEUR Neytrino 17.19 77 *i* P **P** **06 12 26.1 +2.7**
NEUR pmax pmax
comp=Z,72nm,1.2s
TJOU Tjoern 17.23 346 *i* P **Pn** **06 12 21.6 -0.5**
EIL Elat 17.24 129 P **Pn** **06 12 18.8 -3.6**
comp=Z,19nm,0.6s,baz=325,slow=4.2,SNR=17
EIL S Sn 06 15 20.5 -13
comp=Z,43nm,0.6s,baz=186,slow=15,SNR=7.2
EIL Elat 17.24 129 P **Pn** **06 12 20.2 -2.2**
KBZ Khabaz 17.32 75 P **P** **06 12 26.6 +1.9**
comp=Z,40nm,0.9s,baz=268,slow=7.3,SNR=29
KBZ LR LR 06 21 05.2
comp=Z,4µm,18.1s,baz=288,slow=44
KBZ Khabaz 17.32 75*c**e*P **P** **06 12 26.5 +1.9**
KBZ pmax pmax
comp=Z,59nm,0.9s
GOF Gofitskoye 17.45 71*c**e*P **Pn** **06 12 25.2 +0.2**
VSU Vasula 17.52 13 *e*P **Pn** **06 12 26.0 +0.4**
VSU Vasula 17.52 13*c**e*P **Pn** **06 12 23.7 -1.9**
VSU pmax pmax
comp=Z,762nm,1.0s
OBN Obninsk 17.60 34 P **Pn** **06 12 26.9 +0.2**
comp=Z,3.5nm,0.3s,baz=118,slow=23,SNR=5.9
OBN S **Sn** **06 15 37.4 -4.6**
comp=Z,30nm,0.4s,baz=18,slow=20,SNR=2.0
OBN Lg Lg 06 17 36.7
comp=Z,7.1nm,0.3s,baz=180,slow=20,SNR=1.6
OBN LR LR 06 19 15.2
comp=Z,3µm,19.3s,baz=169,slow=37
comp=Z,126nm,0.5s
OBN Obninsk 17.60 34 **Pn** **06 12 27.1 +0.5**
OBN Obninsk 17.60 34 *e*P **Pn** **06 12 25.0 -1.6**
OBN pmax pmax
comp=Z,331nm,1.1s
OBN MLR MLR
comp=Z,9µm,17.0s
NCK Nalchik 17.84 76 *i* P **P** **06 12 32.6 +2.2**
ESBB Sonseca Array 17.92 272 P **P** **06 12 30.9 -0.4**
ESDC Sonseca Array 17.92 272 P **P** **06 12 31.7 +0.4**
comp=Z,0.3nm,0.3s,baz=71,slow=12,SNR=34
ESDC PcP **PcP** **06 17 06.6 +0.4**
comp=Z,1.0nm,0.8s,baz=6.8,slow=3.6,SNR=4.0
ESDC LR LR 06 19 50.0
comp=Z,3µm,18.8s,baz=84,slow=39
ESDC ScP **ScP** **06 20 43.2 +2.9**
comp=Z,1.5nm,1.1s,baz=25,slow=5.5,SNR=4.2
comp=Z,23nm,1.0s
ESDC Sonseca Array 17.92 272 P **P** **06 12 31.0 -0.4**
STRD Stroud 17.98 312 *e*P **P** **06 12 32.8 +0.9**
VRH Novokhopyorsk 18.03 50 *e*P **Pn** **06 12 30.7 -1.3**
VRH *e*S **Sn** **06 15 48.6 -3.9**
VRH pmax pmax
comp=Z,400nm,0.8s
VRH smax smax
comp=E,1µm,2.8s
VRH MLR MLR
comp=Z,15µm,12.0s
PAB San Pablo 18.24 272 P **Pn** **06 12 32.9 -1.9**
PAB San Pablo 18.24 272 P **Pn** **06 12 32.9 -1.9**
PAB pmax pmax
comp=Z,105nm,1.5s
STRU Stroemstad 18.25 346 *i* P **Pn** **06 12 33.1 -1.6**
EQTA Presa de Quent 18.26 264 P **Pn** **06 12 34.5 -0.6**
ARBE Arbavere 18.34 11 *e*P **Pn** **06 12 36.4 +0.6**
MONM Monmouth 18.37 312 *e*P **Pn** **06 12 37.3 +1.2**
MONM IAmb IAmb 06 12 38.3
comp=Z,121nm,0.9s
MOS Moscow 18.47 34 *e*P **P** **06 12 35.0 -2.1**
MOS *e*S **Sn** **06 16 00.2 -2.8**
MOS pmax pmax
comp=Z,800nm,1.4s
MOS pmax pmax
comp=Z,562nm,1.4s
MOS pmax pmax
comp=E,241nm,1.0s
MOS pmax pmax
comp=N,178nm,1.0s
MOS MLR MLR
comp=Z,10µm,14.0s
MOS MLR MLR
comp=E,8µm,13.0s
MOS MLR MLR
comp=N,8µm,14.0s
ELGU Los Guajares, 18.52 263 P **Pn** **06 12 38.2 0.0**
LBWR Ladybower, Pea 18.52 317 *e*P **P** **06 12 37.9 0.0**
LBWR IAmb IAmb 06 12 40.7
comp=Z,175nm,0.9s
MCH1 Michaelchurch 18.54 312 *e*P **Pn** **06 12 38.7 +0.4**
MCH1 IAmb IAmb 06 12 42.8
comp=Z,148nm,0.9s
GDLE Glaisdale, N Y 18.64 321 *e*P **P** **06 12 38.7 -0.3**
GDLE IAmb IAmb 06 12 41.1
comp=Z,151nm,1.1s
AAL Aland 18.64 1 *e*P **P** **06 12 38.6 -0.4**
HLM1 Long Mynd 18.71 313 *e*P **P** **06 12 39.6 -0.3**
HLM1 IAmb IAmb 06 12 43.6
comp=Z,201nm,1.0s
HPK Haverah Park 18.77 319 *e*P **P** **06 12 40.5 0.0**
HPK IAmb IAmb 06 12 42.9
comp=Z,334nm,1.0s
MEF Metsahovi 18.91 8 *e*P **P** **06 12 42.2 +0.2**
HFS Hagfors 18.94 351 P **P** **06 12 42.0 -0.3**
comp=Z,5.6nm,0.3s,baz=169,slow=10,SNR=143
HFS LR LR 06 20 50.1
comp=Z,5µm,18.6s,baz=170,slow=40
comp=Z,307nm,1.0s
FOEL Foel Wylfa 19.05 314 *e*P **P** **06 12 43.5 -0.2**
GNI Garni 19.11 86 P **Pn** **06 12 46.3 +0.8**
comp=Z,2.0nm,0.3s,baz=268,slow=1.5,SNR=42
GNI LR LR 06 21 06.0
comp=Z,3µm,18.3s,baz=284,slow=40
comp=Z,165nm,1.1s
GNI Garni 19.11 86 P **Pn** **06 12 46.5 +1.0**
GNI P **Pn** **06 12 46.5 +1.0**
GNI Garni 19.11 86 P **Pn** **06 12 46.4 +1.0**
GNI Garni 19.11 86 P **Pn** **06 12 46.0 +0.6**
GNI Garni 19.11 86*c**e*P **Pn** **06 12 46.6 +1.1**
GNI pmax pmax
comp=Z,236nm,1.3s
GNI Garni 19.11 86 P **Pn** **06 12 45.5 0.0**
comp=Z,3µmcomp=Z,191nm,1.1s
KONO Kongsberg 19.13 345 P **P** **06 12 43.0 -1.4**
KONO Kongsberg 19.13 345 *e*P **P** **06 12 42.5 -1.9**
KONO Kongsberg 19.13 345*c**e*P **P** **06 12 43.1 -1.3**
KONO pmax pmax
comp=Z,120nm,1.3s
OSL Oslo 19.18 346 *e*P **P** **06 12 43.2 -1.8**
LLW Llanuwchllyn 19.28 314 *e*P **P** **06 12 46.0 -0.1**
EDMD Edmundbyers 19.42 320 *e*P **P** **06 12 47.0 -0.6**
PUL Pulkovo 19.42 17 *e*P **P** **06 12 47.6 0.0**
PUL Pulkovo 19.42 17*c**e*P **P** **06 12 47.9 +0.3**
PUL pmax pmax
comp=Z,179nm,0.4s
RAF Rauma 19.53 3 *e*P **P** **06 12 48.8 0.0**
PBRG Braganca 19.60 279 *e*P **Pn** **06 12 50.5 -0.6**
PBRG *i* IAmb IAmb 06 13 09.9
comp=Z,155nm,1.4s
BLS5 Blasjo 19.65 340 *e*P **P** **06 12 50.7 +0.6**
KMY Karmoy 19.79 338 *e*P **P** **06 12 51.1 -0.5**
NC602 NORSAR Array S 19.81 348 P **P** **06 12 50.5 -1.3**
NC602 NORSAR Array S 19.81 348 *e*P **P** **06 12 50.7 -1.1**
KESW Keswick, Cumbr 19.84 319 *e*P **P** **06 12 51.8 -0.4**
KESW IAmb IAmb 06 12 55.2
comp=Z,182nm,1.0s
MVO Moncorvo 19.91 278 *e*P **P** **06 12 53.1 -0.1**
MVO *i* IAmb IAmb 06 13 04.5
comp=Z,208nm,1.5s
MVO *e*S **Sn** **06 16 37.7 -0.5**
MVO *e*LR LR 06 21 03.1
MVO *i* IAMs_20 IAMs_20 06 21 49.1
comp=Z,4µm,18.0s
NAO01 NORSAR Array S 20.01 348 IAmb IAmb 06 13 06.6
comp=Z,286nm,1.1s
ODD1 Odda 20.03 341 *e*P Pn 06 12 55.7 -0.4
NC405 NORSAR Array S 20.14 349 IAmb IAmb 06 13 04.9
comp=Z,328nm,0.9s
NB2 NORSAR Subarra 20.15 348 P **P** **06 12 54.4 -1.2**
comp=Z,150nm,1.1s,baz=164,slow=11
NOA NORSAR Array B 20.15 348 P **P** **06 12 54.4 -1.2**
comp=Z,67nm,1.0s,baz=166,slow=11,SNR=62
NOA LR LR 06 22 05.2
comp=Z,7µm,19.3s,baz=170,slow=41
comp=Z,67nm,1.0s
NBO00 NORSAR Array S 20.21 348 P **P** **06 12 55.5 -0.6**
EKA Eskdalemuir Ar 20.27 321 P **P** **06 12 56.4 -0.5**
comp=Z,120nm,0.8s,baz=117,slow=10.0,SNR=135
EKA PcP **PcP** **06 17 08.7 -1.2**
comp=Z,3.9nm,0.8s,baz=48,slow=1.1,SNR=4.2
comp=Z,120nm,0.8s
ESK Eskdalemuir 20.28 320 P **P** **06 12 56.5 -0.5**
ESK IAmb IAmb 06 12 59.8
comp=Z,260nm,0.8s
ESK Eskdalemuir 20.28 320 *e*P **P** **06 12 57.0 0.0**
ESK IAmb IAmb 06 12 59.6
comp=Z,296nm,0.9s
ESK Eskdalemuir 20.28 320 P **P** **06 12 56.5 -0.5**
ESK pmax pmax
comp=Z,259nm,0.9s
ESK MLR MLR
comp=Z,5µm,20.0s
FINES FINESS Array B 20.30 9 P **P** **06 12 56.5 -0.6**
comp=Z,215nm,0.7s,baz=174,slow=10,SNR=445
FINES LR LR 06 21 18.7
comp=Z,8µm,20.1s,baz=195,slow=38
comp=Z,215nm,0.7s
FINES FINESS Array B 20.30 9 P **P** **06 12 56.6 -0.5**
FINES FINESS Array B 20.30 9 *i* P **P** **06 12 56.5 -0.6**
FINES pmax pmax
comp=Z,218nm,0.7s
FIA1 FINESS Array S 20.30 9 P **P** **06 12 56.4 -0.7**
NC303 NORSAR Array S 20.30 349 P **P** **06 12 56.2 -1.0**
NC303 IAmb IAmb 06 13 08.2
comp=Z,226nm,0.9s
SKAR Skarslia 20.34 344 *e*P **P** **06 12 57.4 -0.2**
PVRL Vila Real 20.40 278 *i* IAmb IAmb 06 13 12.3
comp=Z,325nm,1.6s
MTE Manteigas 20.44 276 P **P** **06 12 59.1 +0.2**
MTE IAmb IAmb 06 13 11.5
comp=Z,214nm,1.2s
MTE Manteigas 20.44 276 *e*P **P** **06 12 59.7 +0.7**
MTE *i* IAmb IAmb 06 13 12.3
comp=Z,228nm,1.7s
MTE *e*S **S** **06 16 46.9 -0.1**
MTE *e*LR LR 06 21 32.6
MTE *i* IAMs_20 IAMs_20 06 22 45.8
comp=Z,6µm,16.0s
MTE Manteigas 20.44 276 *e*P **P** **06 12 59.2 +0.3**
POLO Lamas de Olo 20.44 279 *e*P **P** **06 12 59.8 +0.8**
POLO *i* IAmb IAmb 06 13 12.9
comp=Z,127nm,1.6s
PCBR Castelo Branco 20.52 274 *e*P Pn 06 13 00.6 -1.3
PCBR *i* IAmb IAmb 06 13 13.0
comp=Z,69nm,1.2s
CNIL Conil 20.52 264 P **P** **06 13 00.4 +0.7**
PMRV Marv??o 20.55 273 *e*P **P** **06 13 00.7 +0.6**
PMRV *i* IAmb IAmb 06 13 36.1
comp=Z,200nm,1.5s
PMRV *e*S **S** **06 16 47.6 -1.5**
PMRV *e*LR LR 06 21 32.6
PMRV *i* IAMs_20 IAMs_20 06 22 28.4
comp=Z,4µm,16.0s
SFS San Fernando 20.59 264 P Pn 06 13 02.0 -0.8
SFS San Fernando 20.59 264 P **P** **06 13 00.8 +0.3**
SFS IAmb IAmb 06 13 13.4
comp=Z,296nm,0.9s
SFS San Fernando 20.59 264 P **P** **06 13 00.8 +0.3**
SFS pmax pmax
comp=Z,296nm,0.9s
SFS MLR MLR
comp=Z,10µm,19.0s
EDI Edinburgh 20.61 322 *e*P **P** **06 13 00.3 -0.3**
PBAR Barrancos 20.64 269 *e*P Pn 06 13 02.7 -0.6
PBAR *i* IAmb IAmb 06 13 15.0
comp=Z,312nm,1.6s
PVIS Viseu 20.64 277 *e*P **P** **06 13 02.0 +1.0**
NEWG New Galloway 20.67 319 *e*P **P** **06 13 00.6 -0.7**
NEWG IAmb IAmb 06 13 04.5
comp=Z,98nm,0.8s
MAK Makhachkala 20.72 77 *e*P **P** **06 13 00.0 -1.9**
MAK *e*S **S** **06 16 52.6 +0.2**
MAK pmax pmax
comp=Z,390nm,1.1s
MAK MLR MLR
comp=Z,9µm,12.0s
BER Bergen 20.76 340 *e*P **P** **06 13 02.0 -0.2**
GAL1 Galloway 20.78 318 *e*P **P** **06 13 01.6 -0.8**
GAL1 IAmb IAmb 06 13 04.7
comp=Z,138nm,0.9s
IWEX Carrickbyrne, 20.83 310 P Pn 06 13 05.6 +0.1
IWEX S **S** **06 16 55.7 +1.3**
PESTR Estremoz 20.85 272 *e*P Pn 06 13 04.7 -1.2
KEF Keuruu 20.88 7 *e*P **P** **06 13 03.5 +0.1**
ASK Askoy 20.89 340 *e*P **P** **06 13 03.1 -0.3**
DRUM Mains of Drumt 20.89 325 *e*P **P** **06 13 02.2 -1.3**
DRUM IAmb IAmb 06 13 04.0
comp=Z,80nm,0.8s
DSB Dublin 20.93 313 P **P** **06 13 03.2 -0.9**
DSB Dublin 20.93 313 P Pn 06 13 07.0 +0.3
DSB S Sn 06 17 02.0 -0.5
DSB Dublin 20.93 313 P **P** **06 13 03.5 -0.6**
MDT Midelt 21.06 253 P **P** **06 13 05.8 +0.1**
comp=Z,23nm,0.9s,baz=73,slow=11,SNR=17
MDT LR LR 06 21 22.2
comp=Z,3µm,18.1s,baz=52,slow=37
comp=Z,23nm,0.9s
IFR Ifrane 21.08 256 P **P** **06 13 05.9 -0.2**
PSARD Sardoal 21.09 274 *e*P **P** **06 13 07.6 +1.7**
AKT Akhty 21.09 81 *e*P **P** **06 13 06.4 +0.4**
AKT *e* 06 13 26.5
AKT *e*PPP PPP 06 13 34.2
AKT *e*S **S** **06 17 00.7 +0.8**
AKT *e* 06 17 13.6
AKT *e*SS **SnSn** **06 17 27.9 +6.6**
AKT pmax pmax
comp=Z,254nm,1.8s
MD01 Midelt array s 21.14 254 P **P** **06 13 06.1 -0.6**
PARRA Arraiolos 21.20 272 *e*P P 06 13 06.5 -8.7
PCAS Casmilo, Conde 21.23 275 *e*P **P** **06 13 09.2 +1.8**
HYA Hoyanger 21.24 342 *e*P **P** **06 13 07.2 0.0**
ILTH Belurgan, Co L 21.24 315 P **P** **06 13 08.9 +1.6**
ILTH S **S** **06 17 04.4 +2.0**
EVO Evora 21.26 271 P **P** **06 13 08.6 +0.9**
EVO Evora 21.26 271 *e*P **P** **06 13 09.4 +1.7**
PMTG Montargil 21.27 272 *e*P **P** **06 13 09.6 +1.7**
PMTG *i* IAmb IAmb 06 13 22.4
comp=Z,378nm,1.8s
INVG Invergeldie, C 21.29 322 *e*P **P** **06 13 07.6 -0.3**
INVG IAmb IAmb 06 13 10.1
comp=Z,325nm,0.8s
PBEJ Beja 21.30 269 *e*P **P** **06 13 09.7 +1.5**
PVAQ Vaqueiros 21.39 268 P **P** **06 13 09.8 +0.7**
PVAQ IAmb IAmb 06 13 24.4
comp=Z,303nm,1.2s
PVAQ Vaqueiros 21.39 268 *e*P **P** **06 13 10.8 +1.6**
PVAQ *i* IAmb IAmb 06 13 36.0
comp=Z,344nm,1.3s
PVAQ *e*S **S** **06 17 00.9 -4.8**
PVAQ *e*LR LR 06 21 34.1
PVAQ *i* IAMs_20 IAMs_20 06 22 26.8
comp=Z,5µm,18.0s
DOMB Dombas 21.45 346 *e*P **P** **06 13 08.9 -0.6**
SUE Sulen 21.49 340 *e*P **P** **06 13 08.9 -1.1**
MOE Montemor 21.52 271 *e*P **P** **06 13 11.8 +1.4**
MOE *i* IAmb IAmb 06 13 29.6
comp=Z,151nm,1.3s
PCVE Castro Verde 21.56 269 *e*P **P** **06 13 12.6 +1.7**
PCVE *i* IAmb IAmb 06 13 46.7
comp=Z,240nm,1.4s
PSBE So Bento 21.58 274 *e*P **P** **06 13 08.9 -2.4**
PSBE *i* IAmb IAmb 06 13 27.0
comp=Z,277nm,1.4s
VAF Ylistaro 21.59 4 *e*P **P** **06 13 11.1 0.0**
CLGH Cloghs, Cushen 21.59 317 *e*P **P** **06 13 10.9 -0.3**
CLGH IAmb IAmb 06 13 13.6
comp=Z,425nm,0.9s
PBDV Barranco-do-Ve 21.61 268 *e*P **P** **06 13 11.9 +0.4**
PBDV *i* IAmb IAmb 06 13 26.4
comp=Z,327nm,1.5s
MESJ Messejana 21.63 269 *e*P **P** **06 13 11.8 +0.1**
MESJ *e*S **S** **06 17 10.7 +0.3**
MESJ IAMs_20 IAMs_20 06 22 31.4
comp=Z,9µm,21.0s
MESJ Messejana 21.63 269 *e*P **P** **06 13 12.3 +0.6**
MESJ *i* IAmb IAmb 06 13 27.4
comp=Z,194nm,1.3s
MESJ Messejana 21.63 269 *e*P **P** **06 13 11.8 +0.1**
MESJ *e*S **S** **06 17 10.7 +0.3**
MCD Coleburn Disti 21.63 326 *e*P **P** **06 13 10.4 -1.1**
MCD IAmb IAmb 06 13 14.1
comp=Z,182nm,0.7s
LAWE Loch Awe, Argy 21.84 321 *e*P **P** **06 13 13.5 -0.2**
LAWE IAmb IAmb 06 13 17.4
comp=Z,164nm,0.9s
BELG Belogornoye 21.88 51 *i* P **P** **06 13 14.4 +0.2**
comp=Z,917nm,1.0s,baz=67,slow=2.0,SNR=167
BELG Belogornoye 21.88 51*c* *i*P **P** **06 13 14.2 0.0**
BELG pmax pmax
comp=Z,260nm,1.1s
BELG MLR MLR
comp=Z,2µm,15.0s
FOO Floro 21.88 341 *e*P **P** **06 13 14.2 0.0**
AKN Aaknes 21.96 344 *e*P **P** **06 13 14.8 -0.3**
LIS Lisbon 22.06 272 *e*S **S** **06 17 19.2 +0.5**
LIS IAMs_20 IAMs_20 06 23 34.0
comp=Z,9µm,11.8s
PMAFR Mafra 22.09 273 *e*P **P** **06 13 20.4 +3.7**
PMAFR *i* IAmb IAmb 06 13 32.3
comp=Z,317nm,1.7s
PTEO Sao Teotonio 22.10 269 *e*P **P** **06 13 18.2 +1.5**
PTEO *i* IAmb IAmb 06 13 55.8
comp=Z,221nm,1.9s
TAM Tamanrasset 22.10 216 P **P** **06 13 18.1 +1.1**
TAM IAmb IAmb 06 13 29.2
comp=Z,128nm,0.9s
TAM Tamanrasset 22.10 216 P **P** **06 13 18.1 +1.1**
TAM pmax pmax
comp=Z,129nm,0.9s
MORF Marmelete 22.13 268 *e*P **P** **06 13 17.2 +0.1**
MORF *e*S **S** **06 17 20.6 +0.5**
MORF IAMs_20 IAMs_20 06 25 14.4
comp=Z,5µm,10.3s
MORF Marmelete 22.13 268 *e*P **P** **06 13 19.6 +2.4**
MORF *i* IAmb IAmb 06 13 43.0
comp=Z,168nm,1.7s
MORF Marmelete 22.13 268 *e*P **P** **06 13 17.2 +0.1**
MORF *e*S **S** **06 17 20.6 +0.5**
MOL Molde 22.21 345 *e*P **P** **06 13 17.8 +0.1**
IDGL Inch Island, C 22.31 316 P **P** **06 13 18.2 -0.6**
IDGL Inch Island, C 22.31 316 *e*P **P** **06 13 17.6 -1.2**
IDGL IAmb IAmb 06 13 20.9
comp=Z,225nm,1.0s
PFVI Vila Bisbo 22.32 268 *e*P **P** **06 13 21.2 +2.1**
PFVI *i* IAmb IAmb 06 13 52.2
comp=Z,215nm,1.3s
BIGH Upper Bighouse 22.47 327 *e*P **P** **06 13 19.0 -1.5**
BIGH IAmb IAmb 06 13 20.0
comp=Z,160nm,1.1s
JOF Joensuu 22.50 14 *e*P **P** **06 13 20.9 +0.1**
KPL Plockton 22.54 323 *e*P **P** **06 13 20.2 -1.0**
KPL IAmb IAmb 06 13 23.0
comp=Z,100nm,1.1s
LRW Lerwick 22.55 333 *e*P **P** **06 13 19.6 -1.7**
LRW IAmb IAmb 06 13 22.0
comp=Z,164nm,1.1s
IGLA Glengowla, Co 22.67 311 P **P** **06 13 22.5 -0.2**
VAL Valentia 22.73 307 P **P** **06 13 22.2 -1.1**
VAL Valentia 22.73 307 P **P** **06 13 23.6 +0.3**
LINV Loch Inver, As 22.80 325 *e*P **P** **06 13 22.3 -1.7**
KLMR Klimovskoe 22.84 26 *e*P **P** **06 13 22.6 -1.8**
KLMR pmax pmax
comp=Z,886nm,1.3s
KLMR MLR MLR
comp=Z,17µm,14.0s
AVE Averroes 22.86 258 P **P** **06 13 24.5 -0.4**
NSS Namsos 23.41 352 *e*P **P** **06 13 28.8 -1.4**
TIO Tiouine 23.98 252 P **P** **06 13 35.9 -0.3**
MOR8 Moi Rana 24.82 355 *e*P **P** **06 13 43.5 +0.2**
LEIR Leirfjorden 24.85 354 *e*P **P** **06 13 44.5 +0.9**
RAUS Rausandaksla 25.11 355 *e*P **P** **06 13 46.8 +0.9**
KIRV Kirov 25.34 38 LR LR 06 24 22.4
comp=Z,10µm,19.3s,baz=240,slow=38
KIRV Kirov 25.34 38*c* *i*P **P** **06 13 47.1 -0.9**
VAGH Vaagaholmen 25.45 354 *e*P **P** **06 13 48.4 -0.6**
FAUS Fauske 25.97 356 *e*P **P** **06 13 52.5 -1.2**
STEI Steigen 26.52 356 *e*P **P** **06 13 57.6 -1.1**
APA Apatity 27.13 12 *i*P **P** **06 14 02.1 -2.1**
APA *i* 06 14 46.9
APA *i*S **S** **06 18 37.6 -3.7**
APA MLR MLR
comp=Z,15µm,19.1s
KTK1 Kautokeino 27.58 3 *e*P **P** **06 14 06.8 -1.4**
LVZ Lovozero 27.63 12 P **P** **06 14 06.9 -1.9**
LVZ IAmb IAmb 06 14 46.3
comp=Z,202nm,1.4s
LVZ IAMs_20 IAMs_20 06 26 12.2
comp=Z,11µm,19.0s
LVZ Lovozero 27.63 12*c* *i*P **P** **06 14 07.8 -0.9**
LVZ pmax pmax
comp=Z,86nm,1.3s
LVZ MLR MLR
comp=Z,11µm,17.0s
AKTO Aktyubinsk 27.90 58 LR LR 06 27 38.9
comp=Z,7µm,18.6s,baz=256,slow=42
AKTO Aktyubinsk 27.90 58 P **P** **06 14 10.6 -0.7**
JETT Jettan, Norway 28.06 1 *e*P **P** **06 14 11.3 -1.3**
TRO Tromso 28.13 360 *e*P **P** **06 14 11.2 -1.9**
RAYN Ar Rayn 28.18 122 P **P** **06 14 13.9 -0.1**
RAYN Ar Rayn 28.18 122 P **P** **06 14 13.4 -0.7**
RAYN Ar Rayn 28.18 122 P **P** **06 14 13.4 -0.7**
RAYN pmax pmax
comp=Z,16nm,1.1s
ARA0 ARCESS Array S 28.21 4 *e*P **P** **06 14 11.7 -2.1**
ARCES ARCESS Array B 28.21 4 P **P** **06 14 12.3 -1.5**
comp=Z,24nm,0.8s,baz=194,slow=10,SNR=44
ARCES LR LR 06 26 05.9
comp=Z,5µm,21.3s,baz=186,slow=38
comp=Z,24nm,0.8s
ARCES ARCESS Array B 28.21 4 P **P** **06 14 12.3 -1.5**
KEV Kevo 28.52 5 P **P** **06 14 15.4 -1.2**
KEV IAmb IAmb 06 15 12.5
comp=Z,81nm,1.1s
KEV Kevo 28.52 5 P **P** **06 14 15.4 -1.2**
KEV pmax pmax
comp=Z,81nm,1.1s
KEV MLR MLR
comp=Z,2µm,22.0s
ARTI Arti 29.04 46 LR LR 06 26 49.1
comp=Z,8µm,20.6s,baz=258,slow=38
ARTI Arti 29.04 46 P **P** **06 14 20.8 -0.5**
ARTI IAMs_20 IAMs_20 06 26 35.7
comp=Z,10µm,21.0s
ARTI Arti 29.04 46*c* *i*P **P** **06 14 20.7 -0.6**
ARTI pmax pmax

comp=Z,332nm,1.3s
ARTI MLR MLR
comp=Z,12µm,16.0s
VADS Vadso 29.07 7 *e*P **P 06 14 20.4 -1.1**
AB31 Akbulak array 29.11 61 *e*P **P 06 14 21.7 -0.4**
ABKAR Akbulak array 29.11 61 P **P 06 14 21.8 -0.3**
SHMA Al-Shehemyia 30.28 111 P **P 06 14 32.7 +0.1**
PMOZ Porto Moniz, M 30.34 265 *e*LR LR 06 22 34.6
PMOZ *i* IAMs_20 IAMs_20 06 27 33.6
comp=Z,1µm,18.0s
SVE Sverdlovsk 30.35 46 *d i*P **P 06 14 33.3 +0.3**
SVE *e*S **S 06 19 34.4 +2.3**
SVE pmax pmax
comp=Z,248nm,1.1s
SVE MLR MLR
comp=Z,15µm,14.0s
TRNA Turayna 31.17 113 P **P 06 14 40.0 -0.5**
JRN Qarnain Island 32.18 111 P **P 06 14 48.6 -0.8**
JRN P **P 06 14 48.6 -0.8**
TORD Torodi Ar. Bea 32.30 214 P **P 06 14 51.0 +0.7**
comp=Z,4.5nm,0.3s,baz=23,slow=12,SNR=4.5
comp=Z,4.5nm,0.3s
TORD Torodi Ar. Bea 32.30 214 P **P 06 14 50.0 -0.5**
TORD IAmb IAmb 06 15 00.7
comp=Z,112nm,1.6s
JMIC Jan Mayen 32.69 343 LR LR 06 29 11.0
comp=Z,1µm,19.9s,baz=145,slow=38
BORG Borgarnes 32.80 329 LR LR 06 30 00.1
comp=Z,3µm,18.8s,baz=131,slow=40
MZWR Madinat Zayed 33.65 111 P **P 06 15 01.9 -0.4**
MZWR P **P 06 15 01.9 -0.4**
SHME Shamm 33.85 106 P **P 06 15 03.1 -0.9**
SHME P **P 06 15 03.1 -0.9**
SHME Shamm 33.85 106 P **P 06 15 02.0 -2.0**
MZR Muzera 33.87 113 P **P 06 15 03.6 -0.6**
MZR P **P 06 15 03.6 -0.6**
AJN Ajban 33.93 109 P **P 06 15 04.0 -0.6**
BANOM Banah 34.04 106 P **P 06 15 04.3 -1.4**
BANOM P **P 06 15 04.3 -1.4**
BANOM Banah 34.04 106 *i* P **P 06 15 04.0 -1.6**
SNR=7.1
ASUD Al Ashush, Dub 34.13 108 P **P 06 15 05.9 -0.5**
NAZ Nazwa, Dubai 34.15 108 P **P 06 15 05.7 -0.8**
SNR=11
NAZ P **P 06 15 05.7 -0.8**
SNR=11
NAZ Nazwa, Dubai 34.15 108 P **P 06 15 05.2 -1.3**
HRA Herat 34.16 88 IAmb IAmb 06 15 09.0
comp=Z,74nm,1.4s
MASF Masafi 34.27 107 P **P 06 15 06.6 -1.1**
MASF P **P 06 15 06.6 -1.1**
MSFE Esma-Masafi 34.28 107 *i* P **P 06 15 06.1 -1.7**
SNR=6.2
MDH Madha 34.41 106 P **P 06 15 07.7 -1.2**
SNR=9.2
MDH Madha 34.41 106 *i* P **P 06 15 07.1 -1.8**
SNR=15
UOSS Minazif 34.56 107 P **P 06 15 08.5 -1.7**
UOSS P **P 06 15 08.5 -1.7**
UOSS Minazif 34.56 107 P **P 06 15 08.7 -1.5**
HATD Hatta, Dubai 34.58 107 P **P 06 15 09.3 -1.1**
SNR=16
HATD P **P 06 15 09.3 -1.1**
SNR=16
HATD P **P 06 15 09.3 -1.1**
SNR=16
HATD Hatta, Dubai 34.58 107 *i* P **P 06 15 08.2 -2.2**
SNR=11
ASHO Ashiyiah 34.62 108 P **P 06 15 09.3 -1.3**
SNR=16
ASHO P **P 06 15 09.3 -1.3**
SNR=16
ASHO Ashiyiah 34.62 108 *i* P **P 06 15 08.6 -2.0**
SNR=15
ALNE Al Ain 34.79 109 P **P 06 15 11.2 -1.0**
SNR=17
ALNE Al Ain 34.79 109 *i* P **P 06 15 10.3 -1.8**
SNR=17
UMZA Um Al Zommool 35.23 111 P **P 06 15 15.2 -0.6**
UMZA P **P 06 15 15.2 -0.6**
UMZA P **P 06 15 15.2 -0.6**
SOHO SOHO 35.30 108 P **P 06 15 14.7 -1.7**
SOHO P **P 06 15 14.7 -1.7**
SOHO SOHO 35.30 108 *i* P **P 06 15 13.9 -2.6**
SNR=20
BORK Borovoye 35.58 54 IAMs_20 IAMs_20 06 31 37.0
comp=Z,6µm,20.0s
BORK Borovoye 35.58 54 *c i*P **P 06 15 19.2 +0.5**
BORK pmax pmax
comp=Z,248nm,1.7s
BORK MLR MLR
comp=Z,5µm,15.0s
BVA0 Borovoye Array 35.62 54 *i* P **P 06 15 19.1 +0.1**
BVAR Borovoye Array 35.62 54 P **P 06 15 19.6 +0.5**
comp=Z,41nm,0.7s,baz=277,slow=5.8,SNR=221
BVAR LR LR 06 31 52.7
comp=Z,4µm,21.8s,baz=262,slow=40
comp=Z,41nm,0.7s
SCO Scoresbysund 35.76 338 *i* P **P 06 15 20.5 +0.6**
SCO IAmb IAmb 06 15 21.9
comp=Z,41nm,1.2s
ARQ Araqi 35.79 109 P **P 06 15 19.9 -0.8**
SNR=9.2
HOQ Hoqain 36.20 108 P **P 06 15 23.2 -1.1**
SNR=8.7
HOQ P **P 06 15 23.2 -1.1**
SNR=8.7
ATD Arta Tunnel 36.23 139 LR LR 06 30 28.1
comp=Z,22nm,21.1s,baz=338,slow=37
ATD Arta Tunnel 36.23 139 P **P 06 15 26.8 +2.2**
BSY Bisya 36.64 109 P **P 06 15 27.4 -0.7**
BSY P **P 06 15 27.4 -0.7**
SPITS Spitsbergen Ar 36.75 359 P **P 06 15 27.9 -0.4**
comp=Z,5.7nm,0.6s,baz=160,slow=9.8,SNR=12
SPITS LR LR 06 32 30.8
comp=Z,4µm,20.9s,baz=173,slow=40
comp=Z,5.7nm,0.6s
BRLS Borolday 36.79 70 *e*P **P 06 15 27.9 -1.3**
BRLS Borolday 36.79 70 *e*P **P 06 15 27.9 -1.3**
BIDO Bidbid 36.82 107 P **P 06 15 28.7 -0.8**
BIDO P **P 06 15 28.7 -0.8**
CHM Chimkent 36.82 72 *e*P **P 06 15 28.5 -0.9**
CHM LR LR 06 32 55.8
comp=Z,3µm,17.0s
CHM Chimkent 36.82 72 *e*P **P 06 15 28.5 -0.9**
CHM MLR MLR
comp=Z,3µm,17.0s
SMDO Samad 37.05 108 P **P 06 15 30.4 -1.3**
SNR=10.0
SMDO P **P 06 15 30.4 -1.3**
SNR=10.0
IUG Iuzhnay 37.17 72 *e*P **P 06 15 31.7 -0.9**
IUG Iuzhnay 37.17 72 *e*P **P 06 15 31.6 -0.9**
KK31 Karatay Array 37.25 70 *i* P **P 06 15 32.5 -0.6**
KKAR Karatay Array 37.25 70 P **P 06 15 32.9 -0.2**
KKAR Karatay Array 37.25 70 P **P 06 15 32.9 -0.2**
DOK Doka 37.30 117 P **P 06 15 32.5 -1.2**
DOK P **P 06 15 32.5 -1.2**
DOK P **P 06 15 32.5 -1.2**
BRZS Berezniki 37.32 58 *e*P **P 06 15 32.8 -0.8**
BRZS Berezniki 37.32 58 *e*P **P 06 15 32.7 -0.8**
WSAR Wadi Sarin 37.35 107 LR LR 06 35 48.1
comp=Z,7.5nm,18.1s,baz=326,slow=44
WSAR Wadi Sarin 37.35 107 P **P 06 15 33.0 -1.1**
DBG Daneborg 37.52 343 *i* P **P 06 15 36.0 +1.1**
DBG IAmb IAmb 06 15 41.3
comp=Z,9.8nm,1.2s
JMDO Jabal Madar 37.52 109 P **P 06 15 34.6 -1.0**
JMDO P **P 06 15 34.6 -1.0**
WHFO Wadi Hawf 37.56 118 P **P 06 15 34.8 -1.2**
CHGR Chuyangaron 37.66 78 IAmb IAmb 06 15 59.2
comp=Z,59nm,0.9s
ABTO Aybut 37.66 120 P **P 06 15 36.2 -0.6**
DZA Taraz 37.89 70 *e*P **P 06 15 37.6 -0.8**
DZA Taraz 37.89 70 *e*P **P 06 15 37.6 -0.8**
WBK Wadi Bani Khal 37.99 107 P **P 06 15 38.7 -0.8**
RBK Rabkut 38.15 118 P **P 06 15 39.9 -1.0**
RBK P **P 06 15 39.9 -1.0**
MHTO MHTO 38.32 110 P **P 06 15 41.1 -1.1**
SNR=6.0
MHTO P **P 06 15 41.1 -1.1**
SNR=6.0
GAR Garm 38.38 77 IAmb IAmb 06 15 44.3
comp=Z,97nm,1.2s
DMTO DMTO 38.49 117 P **P 06 15 42.5 -1.1**
DMTO P **P 06 15 42.5 -1.1**
EDA Edea 38.55 195 P **P 06 15 45.2 +1.0**
JLN Jalan Bani Buh 38.60 108 P **P 06 15 43.4 -1.2**
JLN P **P 06 15 43.4 -1.2**
JLN P **P 06 15 43.4 -1.2**
DQM DQM 38.72 112 P **P 06 15 44.3 -1.4**
DQM P **P 06 15 44.3 -1.4**
SHAO Shalim 38.72 116 P **P 06 15 44.5 -1.2**
KBL Kabul 39.18 84 P **P 06 15 49.9 +0.3**
SNR=7.5
KBL Kabul 39.18 84 P **P 06 15 49.9 +0.3**
KBL Kabul 39.18 84 P **P 06 15 49.9 +0.3**
KBL pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 39.68 70 P **P 06 15 54.4 +0.8**
SNR=30
USP Ospenovka 40.00 69 P **P 06 15 56.4 +0.2**
SNR=11
SGDS Sogindy 40.04 68 *e*P **P 06 15 55.5 -1.0**
AAK Ala-Archa 40.19 69 LR LR 06 35 33.0
comp=Z,3µm,18.8s,baz=300,slow=41
AAK Ala-Archa 40.19 69 P **P 06 15 58.5 +0.6**
AAK Ala-Archa 40.19 69 P **P 06 15 58.5 +0.6**
AAK Ala-Archa 40.19 69 P **P 06 15 58.5 +0.6**
SNR=21
AAK Ala-Archa 40.19 69 *i* P **P 06 15 58.2 +0.3**
SNR=27
AAK Ala-Archa 40.19 69 *c i*P **P 06 15 58.6 +0.7**
AAK pmax pmax
comp=Z,70nm,1.7s
CHMS Chumysh 40.26 69 P **P 06 15 58.6 +0.3**
SNR=6.0
UCH Uchtor 40.33 70 P **P 06 16 00.0 +0.6**
SNR=15
KBK Karagaybulak 40.50 69 P **P 06 16 01.6 +1.1**
SNR=6.0
LODK Lodwar 40.55 155 P **P 06 16 02.2 +1.2**
SNR=12
LODK Lodwar 40.55 155 P **P 06 16 02.0 +1.0**
TKM2 Tokmak 2 40.88 69 P **P 06 16 03.7 +0.1**
SNR=10
KURBB Kurchatov Arra 40.92 56 P **P 06 16 03.4 -0.1**
comp=Z,9.3nm,0.7s,baz=286,slow=9.4,SNR=94
KURBB PP **PP 06 17 37.4 -0.5**
comp=Z,6.1nm,0.7s,baz=284,slow=11,SNR=3.1
comp=Z,9.3nm,0.7s
KURK Kurchatov 40.95 56 P **P 06 16 04.1 +0.2**
KURK Kurchatov 40.95 56 PP 06 17 37.4 -0.9
KURK Kurchatov 40.95 56 P **P 06 16 03.6 -0.3**
KURK Kurchatov 40.95 56 IAMs_20 IAMs_20 06 36 14.2
comp=Z,5µm,18.0s
KURK Kurchatov 40.95 56 *c i*P **P 06 16 03.9 0.0**
KURK pmax pmax
comp=Z,97nm,1.7s
KURK MLR MLR
comp=Z,5µm,17.0s
DBIC Dimbokro 40.96 219 P **P 06 16 04.7 +0.4**
comp=Z,23nm,0.7s,baz=47,slow=8.4,SNR=25
DBIC LR LR 06 34 03.9
comp=Z,2µm,18.0s,baz=38,slow=38
comp=Z,23nm,0.7s
DBIC Dimbokro 40.96 219 P **P 06 16 04.2 -0.1**
DBIC Dimbokro 40.96 219 P **P 06 16 04.2 -0.1**
DBIC pmax pmax
comp=Z,64nm,1.2s
SUMG Summit 41.39 337 P **P 06 16 07.5 -0.2**
SUMG Summit 41.39 337 P **P 06 16 07.2 -0.5**
SUMG Summit 41.39 337 *i* P **P 06 16 07.9 +0.2**
SUMG IAmb IAmb 06 16 10.1
comp=Z,72nm,1.2s
ULHL Ulahol 41.54 69 P **P 06 16 09.8 +0.7**
SNR=7.0
MBO M'Bour 41.59 240 IAMs_20 IAMs_20 06 35 06.3
comp=Z,6µm,18.0s
AAA Alma-Ata 41.70 68 *e*P **P 06 16 09.3 -1.0**
comp=Z,64nm,1.2s
AAA Alma-Ata 41.70 68 *e*P **P 06 16 09.2 -1.0**
AAA pmax pmax
comp=Z,64nm,1.2s
TNSS Tian-Shan 41.78 68 *e*P **P 06 16 09.9 -1.4**
TNSS Tian-Shan 41.78 68 *e*P **P 06 16 09.9 -1.4**
MDOK Medeo 41.81 68 *e*P **P 06 16 10.0 -1.2**
MDOK *e*S **S 06 22 27.8 -0.1**
MDOK LR LR 06 35 30.1
MDOK Medeo 41.81 68 *e*P **P 06 16 10.0 -1.2**
MDOK *e*S **S 06 22 27.8 -0.1**
NOR Nord 42.02 353 *i* P **P 06 16 11.8 -0.4**
NOR IAmb IAmb 06 16 13.3
comp=Z,30nm,0.7s
ARXS Arharly 42.03 66 *e*P **P 06 16 12.8 -0.1**
TDK Taldyqorghan 42.19 65 *e*P **P 06 16 13.1 -1.1**
comp=Z,54nm,1.1s
TDK LR LR 06 35 38.3
comp=Z,2µm,14.0s
TDK Taldyqorghan 42.19 65 *e*P **P 06 16 13.0 -1.1**
TDK pmax pmax
comp=Z,54nm,1.1s
TDK MLR MLR
comp=Z,2µm,14.0s
KSH Kashi 42.30 73 P **P 06 16 14.0 -1.2**
KSH sP pP 06 16 21.8 +0.6
KSH PcP **PcP 06 18 07.5 -1.2**
KSH S **S 06 22 33.3 -1.8**
KSH pmax pmax
comp=Z,25nm,1.3s
KSH LR LR
comp=Z,3µm,14.8s
KSH LR LR
comp=Z,4µm,16.2s
KSH LR LR
comp=Z,4µm,15.5s
NIL Nilore 42.70 83 P **P 06 16 18.9 +0.4**
NIL IAmb IAmb 06 16 19.9
comp=Z,128nm,1.2s
NIL Nilore 42.70 83 P **P 06 16 18.9 +0.4**
NIL pmax pmax
comp=Z,128nm,1.3s
SATY Saty 42.79 67 *e*P **P 06 16 18.1 -1.0**
SATY *e*S **S 06 22 42.4 +0.1**
SATY Saty 42.79 67 *e*P **P 06 16 18.1 -1.0**
SATY *e*S **S 06 22 42.3 +0.1**
NRS Narsarsuaq 42.93 320 *i* P **P 06 16 20.8 +1.0**
NRS IAmb IAmb 06 16 23.7
comp=Z,40nm,1.1s
UZB Uzunbulak 43.18 67 *e*P **P 06 16 21.1 -1.4**
UZB Uzunbulak 43.18 67 *e*P **P 06 16 21.0 -1.4**
MBAR Mbarara 43.19 163 LR LR 06 36 18.3
comp=Z,2µm,21.1s,baz=348,slow=39
MBAR Mbarara 43.19 163 P **P 06 16 23.2 +0.6**
MBAR P **P 06 16 23.2 +0.6**
MBAR Mbarara 43.19 163 P **P 06 16 23.6 +1.0**
MBAR Mbarara 43.19 163 *c i*P **P 06 16 23.2 +0.6**
MBAR pmax pmax
comp=Z,20nm,1.2s
PDGK Podgornoye 43.45 67 P **P 06 16 24.6 +0.1**
SHLS Shalkode 43.48 67 *e*P **P 06 16 26.1 +1.2**
SHLS Shalkode 43.48 67 *e*P **P 06 16 26.0 +1.2**
MAKZ Makanchi 44.05 61 P **P 06 16 29.2 0.0**
MAKZ IAmb IAmb 06 16 30.8
comp=Z,84nm,1.1s
MAKZ IAMs_20 IAMs_20 06 37 42.2
comp=Z,4µm,20.0s
MAKZ Makanchi 44.05 61 P **P 06 16 29.2 0.0**
MAKZ pmax pmax
comp=Z,84nm,1.2s
MAKZ MLR MLR
comp=Z,4µm,20.0s
ZALV Zalesovo Beam 44.07 51 P **P 06 16 29.2 +0.1**
comp=Z,132nm,0.8s,baz=282,slow=8.7,SNR=386
ZALV PP **PcP 06 18 14.6 +0.4**
comp=Z,11nm,0.7s,baz=290,slow=7.4,SNR=3.9
ZALV LR LR 06 37 03.5
comp=Z,10µm,18.7s,baz=277,slow=39
comp=Z,132nm,0.8s
ZALV Zalesovo Beam 44.07 51 *i* P **P 06 16 29.2 +0.1**
ZALV pmax pmax
comp=Z,133nm,0.8s
IVI Ivigtut 44.25 320 P **P 06 16 29.9 -0.5**
IVI IAmb IAmb 06 16 39.2
comp=Z,60nm,1.0s
IVI IAMs_20 IAMs_20 06 36 57.0
comp=Z,4µm,18.0s
IVI Ivigtut 44.25 320 *i* P **P 06 16 30.4 -0.1**
IVI IAmb IAmb 06 16 31.5
comp=Z,56nm,1.1s
MK31 Makanchi Array 44.26 61 *c i*P **P 06 16 31.0 +0.2**
MKAR Makanchi Array 44.26 61 P **P 06 16 31.1 +0.2**
comp=Z,63nm,0.7s,baz=282,slow=7.5,SNR=488
MKAR LR LR 06 37 15.0
comp=Z,4µm,18.9s,baz=274,slow=39
comp=Z,63nm,0.7s
SFJD Kangerlussuaq 44.93 328 LR LR 06 36 31.9
comp=Z,3µm,19.0s,baz=83,slow=38
SFJD Kangerlussuaq 44.93 328 IAMs_20 IAMs_20 06 36 20.0
comp=Z,3µm,20.0s
SFJD Kangerlussuaq 44.93 328 P **P 06 16 34.1 -1.7**
SFJD pmax pmax
comp=Z,43nm,1.1s
SFJD MLR MLR
comp=Z,3µm,20.0s
SFJD Kangerlussuaq 44.93 328 *i* P **P 06 16 35.2 -0.6**
SFJD IAmb IAmb 06 16 36.5
comp=Z,37nm,1.0s
ILULI Ilulissat 45.06 332 IAMs_20 IAMs_20 06 36 31.6
comp=Z,6µm,20.0s
SAATT Saattut 45.25 334 *i* P **P 06 16 36.8 -1.6**
SAATT IAmb IAmb 06 16 40.6
comp=Z,110nm,1.2s
ALCI Alchi Leh 45.37 80 *e*P **P 06 16 38.9 -1.4**
ALCI IAmb IAmb 06 16 47.8
comp=Z,19nm,0.7s
KMBO Kilima Mbogo 45.44 155 P **P 06 16 42.4 +1.7**
comp=Z,12nm,1.0s,baz=6.3,slow=6.6,SNR=14
comp=Z,12nm,1.0s
BKNR BIKANER 45.48 90 *e*P **P 06 16 39.9 -0.8**
NUUK Nuuk 45.58 325 *i* P **P 06 16 40.1 -1.0**
NUUK IAmb IAmb 06 16 41.9
comp=Z,33nm,1.2s
NEEM North Greenlan 45.61 343 *i* P **P 06 16 41.6 +0.1**
NEEM IAmb IAmb 06 16 42.2
comp=Z,94nm,1.3s
DHRM DHARAMSHALA 45.62 83 *e*P **P 06 16 40.9 -1.2**
DHRM IAmb IAmb 06 16 53.5
comp=Z,152nm,1.1s
ZSN Zaisan 45.74 59 *e*P **P 06 16 41.5 -1.2**
comp=Z,60nm,1.3s
ZSN Zaisan 45.74 59 *e*P **P 06 16 41.4 -1.2**
ZSN pmax pmax
comp=Z,60nm,1.3s
GDH Godhavn 45.93 332 *i* P **P 06 16 43.3 -0.4**
GDH IAmb IAmb 06 16 49.4
comp=Z,68nm,0.9s
BHK Bhakra 46.11 84 *e*P **P 06 16 44.5 -1.2**
DGZ Jazzator, Alta 46.69 56 *c i*P **P 06 16 50.7 +0.5**
DGZ pmax pmax
comp=Z,55nm,0.8s
DGZ MLR MLR
comp=Z,5µm,17.0s
SMLA Simla 46.81 83 *e*P **P 06 16 49.7 -1.5**
KIBK Kibwezi 46.84 154 P **P 06 16 52.0 +0.4**
KIBK Kibwezi 46.84 154 P **P 06 16 52.2 +0.7**
KIBK Kibwezi 46.84 154 P **P 06 16 52.2 +0.7**
AJM Ajmer 47.33 90 *e*P **P 06 16 54.6 -0.7**
AJM IAmb IAmb 06 16 56.8
comp=Z,243nm,1.4s
HNLY HANLEY 47.35 81 *e*P **P 06 16 55.6 -0.4**
HNLY IAmb IAmb 06 17 12.4
comp=Z,20nm,1.2s
UDPR Udaipur 47.69 93 *e*P **P 06 16 57.5 -0.6**
UDPR IAmb IAmb 06 17 04.9
comp=Z,56nm,1.0s
KUDL Kundal 47.83 87 *e*P **P 06 16 57.5 -1.6**
KUDL IAmb IAmb 06 17 09.8
comp=Z,72nm,0.9s
NDI New Delhi 48.09 86 *e*P **P 06 16 59.7 -1.5**
AYAN Aya Nagar 48.13 87 *e*P **P 06 17 00.5 -0.9**
AYAN IAmb IAmb 06 17 11.6
comp=Z,74nm,0.9s
WMQ Urumqi 48.85 63 ⇑P **P 06 17 07.8 +0.9**
WMQ S **S 06 24 14.5 +5.1**
WMQ pmax pmax
comp=Z,62nm,1.3s
WMQ pmax pmax
comp=Z,580nm,5.3s
WMQ LR LR
comp=Z,3µm,16.1s
WMQ LR LR
comp=Z,4µm,18.9s
WMQ LR LR
comp=Z,3µm,20.9s
TULEG Thule 49.63 342 IAmb IAmb 06 17 13.0
comp=Z,75nm,1.1s
TULEG Thule 49.63 342 *i* P **P 06 17 11.7 -0.6**
TULEG IAmb IAmb 06 17 12.6
comp=Z,77nm,1.1s
PTH Pithoragarh 49.88 84 *e*P **P 06 17 13.2 -1.9**
LGTI Lohaghat 49.96 84 *e*P **P 06 17 13.3 -2.1**
LGTI IAmb IAmb 06 17 25.6
comp=Z,19nm,0.9s
GUNA GUNA 50.37 91 *e*P **P 06 17 17.2 -1.4**
GUNA IAmb IAmb 06 17 18.1
comp=Z,443nm,1.6s
JHNI Jhansi 50.81 89 *e*P **P 06 17 20.1 -1.9**
JHNI IAmb IAmb 06 17 22.5
comp=Z,75nm,0.9s
BHPL Bhopal 51.24 92 *e*P **P 06 17 23.1 -2.2**
BHPL IAmb IAmb 06 17 24.5
comp=Z,55nm,0.7s
NRDN NARMADA NAGAR 51.35 93 *e*P **P 06 17 22.1 -3.9**
NRDN IAmb IAmb 06 17 24.4
comp=Z,77nm,1.3s
AKL Akola 52.42 95 *e*P **P 06 17 32.1 -2.0**
AKL IAmb IAmb 06 17 47.6
comp=Z,30nm,0.8s
KNGR Kungurtug, Tuv 52.49 52 *d i*P **P 06 17 35.7 +1.3**
KNGR pmax pmax
comp=Z,150nm,1.5s
KNGR MLR MLR
comp=Z,2µm,15.0s
FRB Frobisher Bay 52.89 326 LR LR 06 40 04.8
comp=Z,3µm,20.5s,baz=77,slow=36
ALBI Allahabad 53.35 87 *e*P **P 06 17 38.3 -2.6**
ALBI IAmb IAmb 06 17 40.5
comp=Z,87nm,0.5s
NGP Nagpur 53.68 93 *e*P **P 06 17 41.0 -2.4**
MOY Mondy 54.09 50 *e*P **P 06 17 47.0 +0.9**
MOY pmax pmax
comp=Z,85nm,2.1s
BLSP Bilaspur 55.41 90 *e*P **P 06 17 53.4 -2.5**
BLSP IAmb IAmb 06 17 59.4
comp=Z,31nm,0.8s
SCHQ Schefferville 55.48 316 P **P 06 17 55.8 -0.2**
comp=Z,19nm,0.8s,baz=65,slow=4.9,SNR=21
SCHQ LR LR 06 42 39.7
comp=Z,3µm,18.0s,baz=62,slow=37
comp=Z,19nm,0.8s
ILON Igloolik, Nuna 55.54 335 IAmb IAmb 06 17 57.0
comp=Z,50nm,1.0s
HYBB Hyderabad (bro 55.58 97 *e*P **P 06 17 57.8 +0.6**
TLY Talaya 55.59 49 P **P 06 17 58.2 +1.4**
TLY P **P 06 17 58.2 +1.4**
TLY Talaya 55.59 49 P **P 06 17 57.8 +0.9**
TLY Talaya 55.59 49 *c i*P **P 06 17 58.3 +1.5**
TLY pmax pmax
comp=Z,244nm,1.7s
TLY MLR MLR
comp=Z,10µm,18.0s
EVN Everest 55.63 81 P **P 06 17 57.0 -1.3**
IRK Irkutsk 55.70 48 *e*P **P 06 17 56.8 -0.8**
IRK pmax pmax
comp=Z,131nm,1.6s
ZAK Zakamensk 55.94 50 *e*P **P 06 18 00.0 +0.5**
ZAK pmax pmax
comp=Z,74nm,1.6s
RES Resolute Bay 56.30 343 LR LR 06 43 47.9
comp=Z,2µm,19.7s,baz=49,slow=38
RES Resolute Bay 56.30 343 IAmb IAmb 06 18 11.1
comp=Z,49nm,1.1s
TIXI Tiksi 56.75 21 LR LR 06 45 44.4
comp=Z,6µm,18.4s,baz=323,slow=40
TIXI Tiksi 56.75 21 P **P 06 18 04.3 -0.5**
TIXI Tiksi 56.75 21 *c i*P **P 06 18 04.0 -0.8**
TIXI pmax pmax
comp=Z,28nm,1.3s
TIXI MLR MLR
comp=Z,6µm,17.0s
GOMU GeErMu 57.13 69 P **P 06 18 08.3 -0.2**
GOMU pP pP 06 18 11.5 -3.1
GOMU sP sP 06 18 15.5 -1.4
GOMU pmax pmax
comp=Z,11nm,1.0s

GOMU LR LR
comp=Z,1μm,18.3s
GOMU LR LR
comp=Z,980nm,18.9s
GOMU LR LR
comp=Z,1μm,18.2s
BOK Bokaro 57.26 86 *e*P **P 06 18 07.7 -1.5**
BOK IAmb IAmb 06 18 08.5
comp=Z,26nm,0.5s
LSA Lhasa 57.89 77 P P 06 18 09.0 -5.0
LSA S S 06 26 03.3 -10
LSA pmax pmax
comp=Z,29nm,0.8s
LSA LR LR
comp=Z,1μm,16.5s
LSA LR LR
comp=Z,820nm,18.5s
LSA LR LR
comp=Z,2μm,17.9s
RAGD RAYAGADA 58.12 92 *e*P **P 06 18 12.7 -2.5**
SONM Songino Array 58.93 52 P **P 06 18 21.0 +0.4**
comp=Z,67nm,1.2s,baz=291,slow=7.6,SNR=115
SONM LR LR 06 46 18.4
comp=Z,7μm,19.6s,baz=312,slow=39
comp=Z,67nm,1.2s
GTA Gaotai 58.94 63 ⇑P **P 06 18 20.3 -0.5**
GTA pP pP 06 18 24.3 -2.7
GTA S S 06 26 17.0 -9.0
GTA pmax pmax
comp=Z,59nm,1.1s
GTA pmax pmax
comp=Z,520nm,11.9s
GTA LR LR
comp=Z,2μm,21.9s
GTA LR LR
comp=Z,3μm,15.5s
GTA LR LR
comp=Z,3μm,19.5s
DHUB DHUBRI 59.06 81 *e*P **P 06 18 19.8 -1.8**
BWNR Bhubaneshwar 59.26 89 *e*P **P 06 18 21.3 -1.7**
BWNR IAmb IAmb 06 18 33.6
comp=Z,136nm,1.5s
KSANE Kasane 59.30 174 *i*P **P 06 18 22.9 -0.4**
ULN Ulaanbaatar 59.31 51 P **P 06 18 23.9 +0.6**
ULN P **P 06 18 23.9 +0.6**
ULN P **P 06 18 23.9 +0.6**
ULN Ulaanbaatar 59.31 51 P **P 06 18 23.7 +0.4**
ULN IAmb IAmb 06 18 25.1
comp=Z,79nm,1.4s
ULN Ulaanbaatar 59.31 51*c i*P **P 06 18 22.3 -1.0**
ULN pmax pmax
comp=Z,79nm,1.7s
ULN MLR MLR
comp=Z,8μm,20.0s
KOD Kodaikanal 59.42 104 *e*P **P 06 18 21.4 -3.2**
XAUDM Khaudum 59.82 178 *i*P **P 06 18 26.4 -0.5**
G65A Princeton 60.37 306 IAMs_20 IAMs_20 06 44 35.2
comp=Z,3μm,20.0s
TSUM Tsumeb 60.49 182 LR LR 06 46 26.7
comp=Z,2μm,18.8s,baz=352,slow=38
TSUM Tsumeb 60.49 182 IAMs_20 IAMs_20 06 49 02.0
comp=Z,2μm,18.0s
F64A Sherman 60.51 307 IAMs_20 IAMs_20 06 46 59.9
comp=Z,3μm,18.0s
SHL Shillong 60.72 81 P **P 06 18 31.5 -1.8**
SNR=18
SHL Shillong 60.72 81 P **P 06 18 31.4 -1.8**
SHL IAmb IAmb 06 18 32.3
comp=Z,68nm,1.2s
SHL Shillong 60.72 81 *e*P **P 06 18 30.8 -2.5**
SHL IAmb IAmb 06 18 35.5
comp=Z,34nm,1.0s
SHL Shillong 60.72 81 P **P 06 18 31.5 -1.8**
SHL pmax pmax
comp=Z,68nm,1.2s
TEZP TEZPUR 60.80 79 *e*P **P 06 18 31.6 -2.0**
TEZP IAmb IAmb 06 18 36.6
comp=Z,79nm,1.6s
QNGWA Qangwa 60.80 178 *i*P **P 06 18 33.7 +0.1**
LMQ La Malbaie 60.82 309 IAmb IAmb 06 18 34.6
comp=Z,48nm,1.2s
E62A Clayton Lake 60.82 308 IAmb IAmb 06 18 35.3
comp=Z,88nm,1.4s
CIT Chita 60.85 45 *e*P **P 06 18 33.4 -0.2**
CIT *e* 06 19 13.8
CIT *e* 06 20 58.8
CIT pmax pmax
comp=Z,122nm,1.7s
LDAQ Lac Daran 61.14 310 P **P 06 18 36.4 +0.7**
LDAQ IAmb IAmb 06 20 37.7
comp=Z,105nm,1.8s
ITAN ITANAGAR 61.18 78 *e*P **P 06 18 35.5 -0.7**
ITAN IAmb IAmb 06 18 37.6
comp=Z,107nm,0.8s
SBV Sambava 61.52 146 P **P 06 18 39.5 +1.1**
PASG PASIGHAT 61.84 76 *e*P P 06 18 39.6 +15
PASG IAmb IAmb 06 18 48.4
comp=Z,29nm,0.5s
G62A West of Eustis 62.15 307 IAMs_20 IAMs_20 06 46 02.4
comp=Z,3μm,19.0s
BRDH Bariadhala 62.22 83 LR LR 06 50 04.1
comp=Z,1μm,19.8s,baz=311,slow=40
MOKO MOKOCHONG 62.23 78 *e*P **P 06 18 42.2 -1.2**
MOKO IAmb IAmb 06 18 44.3
comp=Z,41nm,0.8s
MATP Matopo 62.24 170 LR LR 06 48 29.3
comp=Z,2μm,18.8s,baz=357,slow=39
YAK Yakutsk 62.55 30 LR LR 06 48 45.2
comp=Z,5μm,19.1s,baz=302,slow=39
YAK Yakutsk 62.55 30 P **P 06 18 43.6 -1.2**
YAK Yakutsk 62.55 30 *e*P **P 06 18 44.1 -0.7**
YAK *e* 06 19 18.6
YAK *e* 06 21 01.8
YAK *e*S **S 06 27 12.9 +1.8**
YAK *e*SS **SS 06 31 19.7 +5.3**
YAK pmax pmax
comp=Z,48nm,1.5s
YAK pmax pmax
comp=N,32nm,1.4s
YAK pmax pmax
comp=E,35nm,1.5s
YAK pmax pmax
comp=N,162nm,2.6s
YAK pmax pmax
comp=Z,301nm,4.3s
YAK pmax pmax
comp=E,201nm,2.8s
YAK smax smax
comp=E,75nm,2.6s
YAK smax smax
comp=N,233nm,3.4s
YAK MLR MLR
comp=Z,6μm,26.0s
YAK MLR MLR
comp=N,2μm,22.0s
YAK MLR MLR
comp=E,4μm,24.0s
GRTLG Ghanzi 62.63 178 *i*P **P 06 18 45.6 -0.2**
IMP Imphal 62.67 80 *e*P **P 06 18 45.6 -0.7**
IMP IAmb IAmb 06 18 56.3
comp=Z,58nm,1.4s
BROLN Tlhalogang 62.77 172 *i*P **P 06 18 46.4 -0.4**
H62A Milan 62.87 307 IAMs_20 IAMs_20 06 46 50.5
comp=Z,2μm,18.0s
BLKN Baker Lake 62.99 334 P **P 06 18 46.7 -1.0**
BLKN IAmb IAmb 06 18 57.2
comp=Z,70nm,1.4s
SAIH SAIHA 63.33 83 *e*P **P 06 18 50.4 -0.4**
SAIH IAmb IAmb 06 18 52.3
comp=Z,45nm,1.0s
I62A Tamworth 63.36 306 IAMs_20 IAMs_20 06 46 43.4
comp=Z,2μm,19.0s
LZDM Lanzhou Array 63.37 65 P **P 06 18 51.4 +0.2**
comp=Z,12nm,0.5s,baz=282,slow=7.1,SNR=22
LZDM LR LR 06 50 07.2
comp=Z,1μm,18.8s,baz=350,slow=40
comp=Z,12nm,0.5s
LZH Lanzhou 63.40 64 ⇑P **P 06 18 51.5 +0.4**
LZH sP sP 06 18 59.3 -0.4
LZH pmax pmax
comp=Z,120nm,1.3s
LZH pmax pmax
comp=Z,380nm,4.5s
LZH LR LR
comp=Z,3μm,14.4s
LZH LR LR
comp=Z,2μm,15.8s
LZH LR LR
comp=Z,4μm,14.8s
LBNH Lisbon 63.52 307 IAMs_20 IAMs_20 06 47 01.5
comp=Z,3μm,19.0s
PALK Pallekele 63.77 104 LR LR 06 48 16.5
comp=Z,609nm,21.2s,baz=316,slow=38
PALK Pallekele 63.77 104 P **P 06 18 52.9 -0.8**
PALK Pallekele 63.77 104 *i*P **P 06 18 52.4 -1.3**
PALK pmax pmax
comp=Z,59nm,1.6s
MNTQ Montreal, Queb 63.84 309 IAmb IAmb 06 18 57.5
comp=Z,58nm,1.6s
WIN Windhoek 63.85 182 IAmb IAmb 06 19 12.1
comp=Z,22nm,0.9s
WIN IAMs_20 IAMs_20 06 51 07.1
comp=Z,2μm,19.0s
TRQ Mont Tremblant 63.98 310 P **P 06 18 54.3 -0.4**
TRQ IAmb IAmb 06 18 57.6
comp=Z,42nm,1.3s
HNH Hanover 64.03 306 IAmb IAmb 06 18 58.8
comp=Z,44nm,1.3s
HNH IAMs_20 IAMs_20 06 47 27.1
comp=Z,2μm,19.0s
A36M Sachs Harbour 64.06 348 IAMs_20 IAMs_20 06 51 20.7
comp=Z,2μm,18.0s
A36M Sachs Harbour 64.06 348 P **P 06 18 55.0 +0.4**
comp=Z,29,SNR=37
BCX Boston College 64.10 304 IAMs_20 IAMs_20 06 47 23.0
comp=Z,2μm,19.0s
KGCAE Kacgae 64.14 177 IAmb IAmb 06 19 24.4
comp=Z,56nm,1.1s
KGCAE Kacgae 64.14 177 *i*P **P 06 18 55.7 -0.2**
WES Weston 64.17 305 IAmb IAmb 06 18 59.2
comp=Z,57nm,1.2s
WES IAMs_20 IAMs_20 06 47 53.8
comp=Z,2μm,19.0s
M65A Busby, Falmout 64.20 304 IAMs_20 IAMs_20 06 48 30.7
comp=Z,2μm,20.0s
M65A Busby, Falmout 64.20 304 P **P 06 18 56.0 -0.1**
baz=56
MREMI Moremi 64.23 172 *i*P **P 06 18 56.0 -0.4**
J61A Chester 64.39 306 IAmb IAmb 06 19 00.1
comp=Z,60nm,1.3s
VLDQ Val d'Or 64.56 313 P **P 06 18 59.5 +1.2**
VLDQ IAmb IAmb 06 19 01.0
comp=Z,62nm,1.3s
K62A Royalston 64.57 305 IAMs_20 IAMs_20 06 46 52.5
comp=Z,2μm,20.0s
LPHEP Lephephe 64.87 174 *i*P **P 06 19 01.1 +0.5**
LONY Lake Ozonia 64.89 308 IAmb IAmb 06 19 03.4
comp=Z,42nm,1.3s
LONY IAMs_20 IAMs_20 06 47 24.9
comp=Z,2μm,18.0s
BTO Baotou 64.94 57 *e*P **P 06 19 00.5 -0.6**
BTO PP **PP 06 21 24.8 +1.2**
BTO S **S 06 27 40.3 -1.5**
BTO pmax pmax
comp=Z,68nm,0.9s
BTO pmax pmax
comp=Z,820nm,4.5s
BTO LR LR
comp=Z,2μm,14.4s
BTO LR LR
comp=Z,2μm,11.0s
BTO LR LR
comp=Z,2μm,17.8s
L61B Northampton 64.97 305 IAMs_20 IAMs_20 06 47 22.9
comp=Z,2μm,19.0s
WBO Williamsburg 65.08 309 IAmb IAmb 06 19 04.5
comp=Z,39nm,1.4s
OPO Ambohidratompo 65.09 151 LR LR 06 50 44.8
comp=Z,342nm,19.1s,baz=174,slow=39
M63A Gales Ferry 65.16 304 IAmb IAmb 06 19 04.3
comp=Z,46nm,1.1s
LKGWB Lokgwabe 65.37 178 *i*P **P 06 19 04.1 +0.3**
TRY Troy 65.41 306 IAmb IAmb 06 19 06.9
comp=Z,48nm,1.4s
TRY IAMs_20 IAMs_20 06 49 46.6
comp=Z,2μm,18.0s
HILR Hailar Array B 65.49 45 P **P 06 19 05.3 +0.9**
comp=Z,4.3nm,0.5s,baz=259,slow=3.0,SNR=9.6
HILR LR LR 06 50 48.8
comp=Z,4μm,18.7s,baz=60,slow=39
comp=Z,4.3nm,0.5s
J59A Piesco 65.50 307 IAmb IAmb 06 19 07.2
comp=Z,48nm,1.3s
HIA Hailar 65.66 45 IAmb IAmb 06 19 22.1
comp=Z,52nm,1.1s
HIA Hailar 65.66 45 P **P 06 19 06.8 +1.3**
HHC Hu-ho-hao-te 65.77 56 *e*P **P 06 19 06.8 +0.3**
HHC sP sP 06 19 14.0 -1.0
HHC S **S 06 27 47.5 -4.5**
HHC pmax pmax
comp=Z,43nm,1.1s
HHC pmax pmax
comp=Z,270nm,4.9s
HHC LR LR
comp=Z,2μm,13.8s
HHC LR LR
comp=Z,4μm,13.0s
HHC LR LR
comp=Z,5μm,13.8s
SKOMA Sekoma 65.87 176 *i*P **P 06 19 08.0 +0.9**
TNCH TengChong 65.92 77 P **P 06 19 07.5 -0.3**
FCC Fort Churchill 65.95 328 IAmb IAmb 06 19 17.4
comp=Z,52nm,1.0s
WSPT Westport, CT 66.09 304 IAMs_20 IAMs_20 06 49 19.6
comp=Z,3μm,19.0s
C36M Paulatuk 66.19 347 P **P 06 19 08.5 0.0**
baz=29,SNR=31
CD2 Chengdu 66.26 69 ⇑P **P 06 19 09.5 -0.2**
CD2 pmax pmax
comp=Z,120nm,1.1s
CD2 pmax pmax
comp=Z,450nm,3.7s
CD2 LR LR
comp=Z,2μm,14.6s
CD2 LR LR
comp=Z,2μm,14.0s
CD2 LR LR
comp=Z,2μm,18.4s
J57A Williamstown 66.42 308 IAmb IAmb 06 19 14.1
comp=Z,36nm,1.2s
J57A IAMs_20 IAMs_20 06 48 14.3
comp=Z,3μm,19.0s
LBTB Lobatse 66.48 174 LR LR 06 50 36.9
comp=Z,3μm,19.9s,baz=354,slow=38
LBTB Lobatse 66.48 174 IAmb IAmb 06 19 15.5
comp=Z,25nm,0.8s
PAL Palisades 66.54 305 IAmb IAmb 06 19 13.3
comp=Z,59nm,1.4s
PAL IAMs_20 IAMs_20 06 48 46.7
comp=Z,3μm,19.0s
L59A Walton 66.55 306 IAMs_20 IAMs_20 06 50 23.9
comp=Z,2μm,18.0s
ZEA Zeya 66.67 38 *e*P **P 06 19 12.7 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA MLR MLR
comp=E,1μm,12.0s
ZEA MLR MLR
comp=N,800nm,15.0s
ZEA MLR MLR
comp=Z,3μm,13.0s
CPNY Central Park 66.70 304 IAmb IAmb 06 19 14.6
comp=Z,78nm,1.4s
PECO Prince Edward 66.70 309 IAmb IAmb 06 19 14.8
comp=Z,55nm,1.3s
DELO Deloro Mine 66.72 309 IAmb IAmb 06 19 14.9
comp=Z,65nm,1.5s
XLT XiLinHaoTe 66.75 51 *e*P **P 06 19 13.0 +0.3**
XLT pP pP 06 19 16.8 -2.1
XLT sP sP 06 19 22.3 +1.1
XLT S **S 06 28 00.5 -3.2**
XLT pmax pmax
comp=Z,28nm,1.1s
XLT LR LR
comp=Z,4μm,18.0s
XLT LR LR
comp=Z,6μm,19.0s
BINY Binghamton 67.12 307 IAmb IAmb 06 19 17.6
comp=Z,66nm,1.4s
BINY IAMs_20 IAMs_20 06 50 32.8
comp=Z,2μm,19.0s
K57A Scipio Center 67.12 307 IAMs_20 IAMs_20 06 49 02.0
comp=Z,3μm,18.0s
MAKGR Makgori 67.22 175 *i*P **P 06 19 16.1 +0.4**
A21K Barrow 67.38 359 P **P 06 19 17.0 +0.9**
baz=3.2
PZH PanZhiHua 67.39 74 P **P 06 19 16.0 -1.1**
PZH S **S 06 28 07.0 -5.1**
PZH pmax pmax
comp=Z,50nm,1.2s
PZH pmax pmax
comp=Z,260nm,5.8s
PZH LR LR
comp=Z,890nm,16.3s
PZH LR LR
comp=Z,870nm,17.3s
PZH LR LR
comp=Z,1μm,15.1s
SADO Sadowa 67.45 310 LR LR 06 49 51.0
comp=Z,1μm,18.2s,baz=79,slow=37
J55A Hilton 67.58 308 IAmb IAmb 06 19 20.2
comp=Z,47nm,1.2s
J55A IAMs_20 IAMs_20 06 51 27.0
comp=Z,2μm,18.0s
A22K Sinclair Lake 67.67 358 P **P 06 19 18.7 +0.8**
baz=4.5
P61A Hammonton 67.87 304 IAMs_20 IAMs_20 06 50 30.7
comp=Z,3μm,18.0s
BILL Bilibino 67.89 13 P **P 06 19 18.1 -1.2**
BILL IAmb IAmb 06 19 36.2
comp=Z,83nm,1.7s
BILL Bilibino 67.89 13 IAMs_20 IAMs_20 06 49 59.1
comp=Z,2μm,22.0s
BILL Bilibino 67.89 13*d i*P **P 06 19 19.2 -0.2**
BILL pmax pmax
comp=Z,26nm,1.3s
MMNY Mt. Morris Dam 67.95 308 IAmb IAmb 06 19 23.8
comp=Z,60nm,1.2s
XAN Xi'an 67.99 64 ⇑P **P 06 19 20.5 -0.1**
XAN pP pP 06 19 24.5 -2.4
XAN pmax pmax
comp=Z,140nm,1.2s
XAN LR LR
comp=Z,2μm,19.2s
XAN LR LR
comp=Z,2μm,19.2s
XAN LR LR
comp=Z,2μm,16.5s
VOI Vohitsoka 68.03 153 P **P 06 19 21.8 +0.9**
VOI Vohitsoka 68.03 153 P **P 06 19 20.7 -0.2**
L56A Greenwood 68.10 307 IAmb IAmb 06 19 24.8
comp=Z,66nm,1.3s
PSUB Penn St. - Bra 68.13 304 IAmb IAmb 06 19 23.4
comp=Z,77nm,1.4s
TIY Taiyuan 68.14 59 P **P 06 19 22.0 +0.5**
TIY S **S 06 28 19.5 -1.1**
TIY pmax pmax
comp=Z,38nm,0.5s
TIY pmax pmax
comp=Z,250nm,4.3s
TIY LR LR
comp=Z,2μm,15.1s
TIY LR LR
comp=Z,2μm,15.1s
TIY LR LR
comp=Z,3μm,15.1s
C26K Camden Bay 68.25 354 P **P 06 19 22.6 +1.0**
baz=13,SNR=33
D28M Stokes Point 68.26 352 P **P 06 19 22.4 +0.8**
baz=18
B22K Teshekpuk Lake 68.29 357 P **P 06 19 22.6 +0.8**
baz=5.8
N58A Sunbury 68.36 306 IAMs_20 IAMs_20 06 49 18.8
comp=Z,2μm,20.0s
C27K Jago River 68.44 354 P **P 06 19 23.6 +0.8**
baz=14,SNR=39
A19K Wainwright 68.54 0 P **P 06 19 24.3 +0.9**
baz=360
D27M Malcolm River 68.56 353 P **P 06 19 24.4 +0.7**
baz=16
INK Inuvik 68.60 350 IAmb IAmb 06 19 34.6
comp=Z,48nm,1.2s
INK Inuvik 68.60 350 P **P 06 19 23.1 -0.7**
baz=22,SNR=20
MVL Millersville 68.64 305 IAmb IAmb 06 19 27.1
comp=Z,52nm,1.4s
C23K Itkillik River 68.68 356 P **P 06 19 25.2 +1.0**
baz=8.0
C24K Franklin Bluff 68.69 356 P **P 06 19 25.1 +0.8**
baz=9.5
B20K Meade River 68.71 359 P **P 06 19 24.9 +0.4**
baz=2.8,SNR=6.3
PAGS Pennsylvania G 68.73 305 IAmb IAmb 06 19 29.1
comp=Z,58nm,1.5s
KMI Kunming 68.94 75 ⇑P **P 06 19 26.0 -0.9**
KMI pP pP 06 19 29.5 -3.7
KMI pmax pmax
comp=Z,39nm,1.1s
KMI LR LR
comp=Z,850nm,16.8s
KMI LR LR
comp=Z,690nm,15.0s
KMI LR LR
comp=Z,2μm,19.8s
D25K Kavik River 68.94 355 IAmb IAmb 06 19 27.8
comp=Z,50nm,1.2s
D25K IAMs_20 IAMs_20 06 49 18.9
comp=Z,2μm,22.0s
D25K Kavik River 68.94 355 P **P 06 19 26.5 +0.6**
baz=11,SNR=24
HEH HeiHe 68.97 41 *e*P **P 06 19 26.5 +0.1**
HEH pP **pP 06 19 30.3 -2.4**
HEH S **S 06 28 29.0 -0.9**
HEH pmax pmax
comp=Z,62nm,1.3s
HEH pmax pmax
comp=Z,630nm,8.7s
HEH LR LR
comp=Z,2μm,18.3s
HEH LR LR
comp=Z,6μm,15.2s
HEH LR LR
comp=Z,8μm,14.4s
R61A Willards 69.01 303 IAMs_20 IAMs_20 06 51 40.9
comp=Z,2μm,18.0s
E28M Babbage River 69.04 352 IAmb IAmb 06 19 37.2
comp=Z,47nm,1.2s
E28M Babbage River 69.04 352 P **P 06 19 27.2 +0.6**
baz=17
B21K Ikpikpuk River 69.04 358 IAmb IAmb 06 19 37.4
comp=Z,42nm,1.1s
B21K Ikpikpuk River 69.04 358 P **P 06 19 27.3 +0.8**
baz=4.8
E29M Blow River 69.06 351 P **P 06 19 27.4 +0.7**
baz=18,SNR=55
RCBR Riachuelo 69.08 241 P **P 06 19 25.9 -1.7**
RCBR IAmb IAmb 06 19 39.1
comp=Z,27nm,0.9s
RCBR Riachuelo 69.08 241 P **P 06 19 25.9 -1.7**
RCBR pmax pmax
comp=Z,27nm,0.9s
RCBR Riachuelo 69.08 241 *e*P **P 06 19 29.3 +1.7**
BJI Beijing 69.09 55 P **P 06 19 27.5 +0.1**
BJI PcP **PcP 06 19 52.5 +1.2**
BJI S **S 06 28 33.5 +1.8**
BJI pmax pmax
comp=Z,11nm,1.4s
BJI LR LR
comp=Z,2μm,18.1s
BJI LR LR
comp=Z,1μm,19.0s
BJI LR LR
comp=Z,3μm,19.8s
BJT Baijiatuau 69.10 55 P **P 06 19 28.4 +1.0**
SSPA Standing Stone 69.20 306 P **P 06 19 28.9 +0.9**
SSPA IAmb IAmb 06 19 31.6
comp=Z,53nm,1.1s
SEY Seymchan 69.25 21 LR LR 06 54 27.0
comp=Z,2μm,19.1s,baz=327,slow=40
SEY Seymchan 69.25 21*ce*P **P 06 19 27.9 0.0**
SEY pmax pmax
comp=Z,27nm,1.3s
D24K Happy Valley 69.26 356 IAmb IAmb 06 19 38.7
comp=Z,42nm,1.1s
D24K Happy Valley 69.26 356 P **P 06 19 28.6 +0.7**
baz=9.4,SNR=13
B18K Kokolik River 69.38 1 P **P 06 19 29.6 +0.9**
baz=359,SNR=7.9
F31M Tsiigehtchic 69.44 349 P **P 06 19 29.0 0.0**
baz=21,SNR=45

C21K	**Knifeblade Rid**		69.51	358	P		P		06 19 30.4	+0.9
	baz=4.6									
D23K	**Nanushuk River**		69.55	356	P		P		06 19 30.8	+1.1
	baz=7.9									
ERPA	**Erie**		69.55	308	IAMs_20		IAMs_20		06 49 59.1	
	comp=Z,3µm,20.0s									
F30M	**Barrier River**		69.55	350	P		P		06 19 29.7	-0.1
	baz=20,SNR=7.2									
S61A	**Accomac**		69.61	303	IAMs_20		IAMs_20		06 51 03.9	
	comp=Z,2µm,20.0s									
C19K	**Lookout Ridge**		69.64	360	IAmb		IAmb		06 19 42.7	
	comp=Z,83nm,1.4s									
C19K					IAMs_20		IAMs_20		06 50 27.8	
	comp=Z,2µm,20.0s									
C19K	**Lookout Ridge**		69.64	360	P		P		06 19 31.3	+0.9
	baz=0.8									
E27K	**Coleen River**		69.65	353	P		P		06 19 30.9	+0.5
	baz=15,SNR=34									
D22K	**Ayikyak River**		69.72	357	P		P		06 19 31.5	+0.7
	baz=6.3									
PAOC	**Oil Creek Stat**		69.73	308	IAmb		IAmb		06 19 33.7	
	comp=Z,52nm,1.1s									
HNS	**HongShan**		69.77	58	⇑P		P		06 19 31.8	+0.2
HNS					S		S		06 28 43.8	+4.1
HNS					pmax		pmax			
	comp=Z,25nm,1.6s									
HNS					LR		LR			
	comp=Z,3µm,18.1s									
HNS					LR		LR			
	comp=Z,1µm,21.1s									
HNS					LR		LR			
	comp=Z,2µm,18.4s									
TOLK	**Toolik Lake Re**		69.81	356	IAmb		IAmb		06 19 43.8	
	comp=Z,35nm,1.1s									
TOLK	**Toolik Lake Re**		69.81	356	P		P		06 19 32.3	+0.9
	baz=8.8,SNR=11									
YKAW1	**Yellowknife Wh**		69.92	339	IAmb		IAmb		06 19 42.3	
	comp=Z,65nm,1.1s									
YKA	**Yellowknife Ar**		69.95	339	P		P		06 19 32.3	0.0
	comp=Z,19nm,0.9s,baz=28,slow=6.1,SNR=53									
	comp=Z,19nm,0.9s									
YKA	**Yellowknife Ar**		69.95	339	P		P		06 19 31.9	-0.4
YKA	**Yellowknife Ar**		69.95	339	*c* *i*P		P		06 19 32.2	0.0
YKA					pmax		pmax			
	comp=Z,20nm,0.9s									
P57A	**Homestead Farm**		69.97	305	IAmb		IAmb		06 19 35.4	
	comp=Z,55nm,1.3s									
CHTO	**Chiang Mai**		69.98	82	P		P		06 19 32.3	-0.8
CHTO					P		P		06 19 32.3	-0.8
CHTO	**Chiang Mai**		69.98	82	P		P		06 19 30.9	-2.3
CHTO					IAmb		IAmb		06 19 33.1	
	comp=Z,35nm,1.1s									
CHTO	**Chiang Mai**		69.98	82	P		P		06 19 31.7	-1.5
CHTO	**Chiang Mai**		69.98	82	P		P		06 19 30.9	-2.3
CHTO					pmax		pmax			
	comp=Z,35nm,1.2s									
D20K	**Etivluk River**		70.00	358	IAmb		IAmb		06 19 34.5	
	comp=Z,62nm,1.1s									
D20K	**Etivluk River**		70.00	358	P		P		06 19 33.1	+0.6
	baz=3.2									
F28M	**Old Crow**		70.03	352	IAmb		IAmb		06 19 42.7	
	comp=Z,81nm,1.6s									
F28M	**Old Crow**		70.03	352	P		P		06 19 32.9	+0.2
	baz=16,SNR=18									
BOSA	**Boshof**		70.03	175	P		P		06 19 34.1	+0.9
	comp=Z,17nm,0.6s,baz=358,slow=6.3,SNR=37									
BOSA					LR		LR		06 53 12.5	
	comp=Z,3µm,18.2s,baz=6.5,slow=38									
	comp=Z,17nm,0.6s									
BOSA	**Boshof**		70.03	175	IAmb		IAmb		06 19 35.5	
	comp=Z,85nm,1.6s									
LYN	**LuoYang**		70.04	61	⇑P		P		06 19 33.0	-0.3
LYN					pP		pP		06 19 37.5	-2.1
LYN					sP		sP		06 19 41.5	-0.4
LYN					pmax		pmax			
	comp=Z,43nm,1.3s									
LYN					pmax		pmax			
	comp=Z,660nm,7.9s									
LYN					LR		LR			
	comp=Z,2µm,18.2s									
LYN					LR		LR			
	comp=Z,2µm,13.7s									
LYN					LR		LR			
	comp=Z,3µm,15.1s									
E25K	**Arctic Village**		70.06	354	IAmb		IAmb		06 19 44.3	
	comp=Z,41nm,1.2s									
E25K					IAMs_20		IAMs_20		06 50 20.6	
	comp=Z,2µm,22.0s									
E25K	**Arctic Village**		70.06	354	P		P		06 19 33.6	+0.7
	baz=12,SNR=15									
C18K	**Utukok River**		70.11	0	IAmb		IAmb		06 19 35.2	
	comp=Z,68nm,1.1s									
C18K	**Utukok River**		70.11	0	P		P		06 19 33.7	+0.4
	baz=360									
CMAR	**Chiang Mai Arr**		70.20	83	P		P		06 19 33.5	-1.1
	comp=Z,3.2nm,0.3s,baz=306,slow=7.2,SNR=45									
CMAR					LR		LR		06 57 24.3	
	comp=Z,490nm,18.7s,baz=310,slow=42									
	comp=Z,3.2nm,0.3s									
CMAR	**Chiang Mai Arr**		70.20	83	P		P		06 19 33.2	-1.3
CMAR	**Chiang Mai Arr**		70.20	83	*i* P		P		06 19 33.4	-1.1
CMAR					pmax		pmax			
	comp=Z,12nm,1.0s									
G30M	**tAoh Zraii Nji**		70.20	350	P		P		06 19 33.6	-0.2
	baz=19,SNR=6.4									
E21K	**Killik River**		70.20	357	IAmb		IAmb		06 19 44.6	
	comp=Z,34nm,1.0s									
E21K	**Killik River**		70.20	357	P		P		06 19 33.8	0.0
	baz=5.3									
D19K	**Kuna River**		70.25	359	P		P		06 19 34.5	+0.5
	baz=2.0									
C17K	**DeLong Mountai**		70.26	1	P		P		06 19 35.0	+0.8
	baz=358									
E24K	**Your Creek**		70.31	355	IAmb		IAmb		06 19 44.9	
	comp=Z,43nm,1.2s									
E24K	**Your Creek**		70.31	355	P		P		06 19 34.7	+0.2
	baz=9.6									
CBN	**Corbin Frederi**		70.36	304	IAmb		IAmb		06 19 38.7	
	comp=Z,63nm,1.1s									
CBN					IAMs_20		IAMs_20		06 52 14.7	
	comp=Z,3µm,19.0s									
F26K	**Sheenjek River**		70.36	353	IAmb		IAmb		06 19 46.4	
	comp=Z,67nm,1.3s									
F26K	**Sheenjek River**		70.36	353	P		P		06 19 35.5	+0.7
	baz=13,SNR=24									
E23K	**Chandalar**		70.39	356	P		P		06 19 35.6	+0.6
	baz=8.7									
C16K	**Lisburne Hills**		70.42	2	IAMs_20		IAMs_20		06 51 08.4	
	comp=Z,1µm,19.0s									
C16K	**Lisburne Hills**		70.42	2	P		P		06 19 35.5	+0.5
	baz=356									
E22K	**Anaktuvuk Pass**		70.43	357	P		P		06 19 35.5	+0.4
	baz=7.0,SNR=17									
E20K	**Nigu River**		70.45	358	P		P		06 19 35.9	+0.6
	baz=3.5									
GLMI	**Grayling**		70.49	313	IAMs_20		IAMs_20		06 49 53.0	
	comp=Z,2µm,21.0s									
G29M	**Pine Creek**		70.49	351	P		P		06 19 35.7	+0.1
	baz=18,SNR=27									
F25K	**Christian Rive**		70.58	354	IAMs_20		IAMs_20		06 50 37.4	
	comp=Z,2µm,22.0s									
F25K	**Christian Rive**		70.58	354	P		P		06 19 36.9	+0.7
	baz=12,SNR=10									
ENH	**Enshi**		70.61	67	IAMs_20		IAMs_20		06 56 39.7	
	comp=Z,1µm,18.0s									
ENH	**Enshi**		70.61	67	P		P		06 19 36.3	-0.6
BMAR	**Burnt Mountain**		70.66	354	P		P		06 19 37.4	+0.8
K50A	**Casco**		70.67	310	IAMs_20		IAMs_20		06 49 05.7	
	comp=Z,3µm,21.0s									
RDOG	**Red Dog Mine**		70.69	1	IAmb		IAmb		06 19 53.9	
	comp=Z,33nm,1.0s									
RDOG					IAMs_20		IAMs_20		06 56 07.4	
	comp=Z,1µm,18.0s									
RDOG	**Red Dog Mine**		70.69	1	P		P		06 19 37.2	+0.5
	baz=358									
M52A	**Chesterland**		70.71	309	IAMs_20		IAMs_20		06 50 44.8	
	comp=Z,2µm,19.0s									
F24K	**Squaw Lake**		70.82	355	P		P		06 19 38.5	+0.9
	baz=10.0									
R58B	**Mineral**		70.82	304	IAmb		IAmb		06 19 41.4	
	comp=Z,29nm,0.9s									
EPYK	**Eagle Plains**		70.85	350	IAmb		IAmb		06 19 47.0	
	comp=Z,23nm,0.8s									
EPYK	**Eagle Plains**		70.85	350	P		P		06 19 37.7	0.0
	baz=19,SNR=9.0									
N53A	**Lisbon**		70.86	308	IAMs_20		IAMs_20		06 50 31.8	
	comp=Z,3µm,20.0s									
GYA	**Guiyang**		70.95	71	⇓P		P		06 19 38.8	-0.3
GYA					S		S		06 28 50.8	-3.2
GYA					pmax		pmax			
	comp=Z,44nm,1.3s									
GYA					pmax		pmax			
	comp=Z,190nm,3.1s									
GYA					LR		LR			
	comp=Z,300nm,4.4s									
GYA					LR		LR			
	comp=Z,220nm,3.8s									
GYA					LR		LR			
	comp=Z,130nm,5.0s									
Q56A	**Snyder Ridge,**		70.96	305	IAMs_20		IAMs_20		06 51 14.6	
	comp=Z,1µm,19.0s									
O54A	**Avella**		70.97	307	IAmb		IAmb		06 19 42.5	
	comp=Z,51nm,1.0s									
MCWV	**Mont Chateau**		70.98	306	IAMs_20		IAMs_20		06 51 23.1	
	comp=Z,2µm,19.0s									
G27K	**Doyon Strip**		70.99	352	IAmb		IAmb		06 19 50.6	
	comp=Z,95nm,1.6s									
G27K	**Doyon Strip**		70.99	352	P		P		06 19 39.5	+0.9
	baz=15									
D17K	**Noatak River**		71.04	1	P		P		06 19 39.3	+0.5
	baz=358,SNR=15									
H31M	**Peel River**		71.06	349	IAmb		IAmb		06 20 09.8	
	comp=Z,48nm,1.1s									
H31M					IAMs_20		IAMs_20		06 56 07.8	
	comp=Z,2µm,18.0s									
H31M	**Peel River**		71.06	349	P		P		06 19 39.0	-0.1
	baz=20,SNR=7.0									
G26K	**Porcupine Rive**		71.06	353	P		P		06 19 40.2	+1.3
	baz=13,SNR=33									
F22K	**John River**		71.07	357	P		P		06 19 40.1	+1.0
	baz=6.6									
H29M	**Whitestone**		71.20	351	P		P		06 19 39.9	+0.1
	baz=17									
T59A	**Double "B" Far**		71.23	303	IAmb		IAmb		06 19 42.6	
	comp=Z,49nm,1.3s									
T59A					IAMs_20		IAMs_20		06 51 07.7	
	comp=Z,2µm,20.0s									
COLD	**Coldfoot**		71.25	356	P		P		06 19 40.8	+0.7
	baz=8.2,SNR=26									
E19K	**Redstone River**		71.28	359	P		P		06 19 41.0	+0.7
	baz=2.6									
V61A	**Roper**		71.33	301	IAMs_20		IAMs_20		06 53 19.6	
	comp=Z,2µm,19.0s									
E18K	**Tukpahlearik C**		71.34	0	IAmb		IAmb		06 19 53.1	
	comp=Z,32nm,0.8s									
E18K					IAMs_20		IAMs_20		06 51 35.6	
	comp=Z,1µm,20.0s									
E18K	**Tukpahlearik C**		71.34	0	P		P		06 19 40.9	+0.3
	baz=360									
F21K	**Alatna River**		71.41	357	P		P		06 19 42.2	+1.1
	baz=5.6,SNR=33									
G25K	**Bearman Lake**		71.44	354	P		P		06 19 42.6	+1.4
	baz=11									
WRGLY	**Wrigley**		71.46	343	P		P		06 19 42.2	+0.8
	baz=28,SNR=19									
MA2	**Magadan**		71.51	24	LR		LR		06 55 07.4	
	comp=Z,5µm,18.6s,baz=324,slow=39									
MA2	**Magadan**		71.51	24	P		P		06 19 42.2	+0.4
MA2	**Magadan**		71.51	24	P		P		06 19 43.8	+2.0
MA2	**Magadan**		71.51	24	*ce*P		P		06 19 41.9	+0.1
MA2					pmax		pmax			
	comp=Z,149nm,1.7s									
MA2					MLR		MLR			
	comp=Z,5µm,18.0s									
H27K	**Steamboat Moun**		71.54	352	IAmb		IAmb		06 19 44.2	
	comp=Z,48nm,1.1s									
H27K	**Steamboat Moun**		71.54	352	P		P		06 19 43.0	+1.1
	baz=15,SNR=27									
AAM	**Ann Arbor**		71.56	310	IAmb		IAmb		06 19 45.1	
	comp=Z,60nm,1.2s									
G24K	**Hadweenzic Riv**		71.60	355	IAmb		IAmb		06 19 54.7	
	comp=Z,40nm,1.1s									
G24K	**Hadweenzic Riv**		71.60	355	P		P		06 19 43.3	+1.0
	baz=10,SNR=15									
G22K	**Bettles**		71.62	356	P		P		06 19 42.9	+0.6
	baz=7.2									
F20K	**Avaraart Lake**		71.65	358	IAmb		IAmb		06 19 54.7	
	comp=Z,33nm,1.0s									
F20K	**Avaraart Lake**		71.65	358	P		P		06 19 43.3	+0.8
	baz=3.8									
E17K	**Hotham Inlet**		71.67	1	P		P		06 19 42.9	+0.2
	baz=359,SNR=6.2									
N51A	**Ashland**		71.70	309	IAMs_20		IAMs_20		06 51 34.9	
	comp=Z,2µm,20.0s									
G23K	**Bananza Creek**		71.75	356	IAmb		IAmb		06 19 55.4	
	comp=Z,43nm,1.1s									
G23K	**Bananza Creek**		71.75	356	P		P		06 19 43.8	+0.5
	baz=8.3,SNR=18									
M50A	**Fremont**		71.78	309	IAmb		IAmb		06 19 45.6	
	comp=Z,78nm,1.4s									
M50A					IAMs_20		IAMs_20		06 52 32.1	
	comp=Z,2µm,18.0s									
F42A	**Maple Grove Fa**		71.78	315	IAMs_20		IAMs_20		06 49 30.0	
	comp=Z,2µm,22.0s									
FFC	**Flin Flon**		71.88	329	P		P		06 19 44.1	0.0
FFC	**Flin Flon**		71.88	329	P		P		06 19 44.1	0.0
FFC					pmax		pmax			
	comp=Z,31nm,1.1s									
FFC					MLR		MLR			
	comp=Z,3µm,19.0s									
I45A	**Fountain**		71.89	313	IAMs_20		IAMs_20		06 52 08.9	
	comp=Z,2µm,18.0s									
O52A	**Adamsville**		71.89	308	IAMs_20		IAMs_20		06 51 23.3	
	comp=Z,3µm,18.0s									
I30M	**Mount Dempster**		71.89	350	P		P		06 19 44.3	+0.1
	baz=19,SNR=22									
F19K	**Shaleruckik Mo**		71.91	359	IAmb		IAmb		06 19 54.1	
	comp=Z,38nm,0.9s									
F19K	**Shaleruckik Mo**		71.91	359	P		P		06 19 44.1	+0.1
	baz=2.2									
BNX	**BinXian**		71.91	45	⇓P		P		06 19 44.5	0.0
BNX					pmax		pmax			
	comp=Z,35nm,1.5s									
EPLO	**Experimental L**		71.94	321	IAmb		IAmb		06 19 57.3	
	comp=Z,32nm,1.0s									
Q54A	**Coxs Mills**		72.00	306	IAmb		IAmb		06 19 48.3	
	comp=Z,54nm,1.1s									
R55A	**Marlinton**		72.01	305	IAmb		IAmb		06 19 47.6	
	comp=Z,64nm,1.2s									
TIA	**Tal'an**		72.03	57	P		P		06 19 44.3	-1.1
TIA					pmax		pmax			
	comp=Z,21nm,1.4s									
TIA					LR		LR			
	comp=Z,1µm,14.6s									
TIA					LR		LR			
	comp=Z,2µm,18.3s									
TIA					LR		LR			
	comp=Z,2µm,19.6s									
G21K	**Allakaket**		72.11	357	IAmb		IAmb		06 19 56.7	
	comp=Z,82nm,1.2s									
G21K	**Allakaket**		72.11	357	P		P		06 19 46.2	+0.8
	baz=5.6									
I28M	**Miner Creek**		72.12	351	IAmb		IAmb		06 19 55.7	
	comp=Z,34nm,0.9s									
I28M	**Miner Creek**		72.12	351	P		P		06 19 45.7	+0.2
	baz=16									
CN2	**Changchun**		72.13	47	P		P		06 19 45.8	0.0
CN2					S		S		06 29 06.5	-0.5
CN2					pmax		pmax			
	comp=Z,40nm,0.8s									
CN2					LR		LR			
	comp=Z,2µm,17.0s									
CN2					LR		LR			
	comp=Z,2µm,17.0s									
CN2					LR		LR			
	comp=Z,4µm,17.0s									
I27K	**Kandik River**		72.16	352	IAmb		IAmb		06 19 56.3	
	comp=Z,59nm,1.2s									
I27K	**Kandik River**		72.16	352	P		P		06 19 46.5	+0.8
	baz=15,SNR=14									
F18K	**Selawik**		72.16	360	P		P		06 19 45.9	+0.3
	baz=0.7,SNR=9.1									
T57A	**Hurt**		72.28	304	IAmb		IAmb		06 19 49.2	
	comp=Z,38nm,1.2s									
T57A					IAMs_20		IAMs_20		06 53 56.4	
	comp=Z,2µm,18.0s									
F17K	**Baldwin Pennin**		72.32	0	IAmb		IAmb		06 19 58.8	
	comp=Z,31nm,0.8s									
F17K	**Baldwin Pennin**		72.32	0	P		P		06 19 46.6	+0.1
	baz=360									
SNY	**Shenyang**		72.36	50	⇑P		P		06 19 46.5	-0.7
SNY					S		S		06 29 03.0	-6.6
SNY					pmax		pmax			
	comp=Z,17nm,1.2s									
SNY					pmax		pmax			
	comp=Z,190nm,3.7s									
SNY					LR		LR			
	comp=Z,2µm,17.9s									
SNY					LR		LR			
	comp=Z,4µm,18.6s									
SNY					LR		LR			
	comp=Z,5µm,18.4s									
H43A	**Windswept, Lux**		72.44	314	IAMs_20		IAMs_20		06 53 01.4	
	comp=Z,2µm,18.0s									
H24K	**Noodor Dome**		72.48	355	IAmb		IAmb		06 19 58.9	
	comp=Z,51nm,1.2s									
H24K	**Noodor Dome**		72.48	355	P		P		06 19 48.4	+0.7
	baz=9.9									
ACSO	**Alum Creek Sta**		72.49	308	IAmb		IAmb		06 19 51.2	
	comp=Z,74nm,1.2s									
ACSO					IAMs_20		IAMs_20		06 52 49.0	
	comp=Z,2µm,19.0s									
J30M	**Hart River**		72.50	349	P		P		06 19 48.6	+0.7
	baz=19,SNR=38									
ULM	**Lac du Bonnet**		72.53	323	P		P		06 19 48.0	0.0
	comp=Z,50nm,1.1s,baz=40,slow=5.9,SNR=18									
ULM					LR		LR		06 52 46.6	
	comp=Z,2µm,18.6s,baz=50,slow=37									
	comp=Z,50nm,1.1s									
ULM	**Lac du Bonnet**		72.53	323	IAmb		IAmb		06 19 49.5	
	comp=Z,83nm,1.2s									
G19K	**Purcell Mounta**		72.59	359	IAmb		IAmb		06 19 59.6	
	comp=Z,45nm,1.1s									
G19K	**Purcell Mounta**		72.59	359	P		P		06 19 49.0	+0.8
	baz=2.7,SNR=14									
H23K	**Yukon River**		72.61	355	IAmb		IAmb		06 19 59.6	
	comp=Z,63nm,1.0s									
H23K	**Yukon River**		72.61	355	P		P		06 19 49.5	+1.2
	baz=8.6									
I26K	**Coal Creek Min**		72.61	352	IAmb		IAmb		06 19 59.7	
	comp=Z,49nm,1.3s									
I26K	**Coal Creek Min**		72.61	352	P		P		06 19 49.2	+0.9
	baz=14,SNR=14									
PRP	**Porcupine Dome**		72.62	354	IAmb		IAmb		06 20 00.7	
	comp=Z,63nm,1.4s									
PRP	**Porcupine Dome**		72.62	354	P		P		06 19 49.4	+0.9
	baz=12,SNR=20									
H22K	**Ishtalitna Cre**		72.64	356	P		P		06 19 50.2	+1.7
	baz=7.2,SNR=26									
IMAR	**Indian Mountai**		72.66	357	P		P		06 19 49.3	+0.7
N49A	**Columbus Grove**		72.75	310	IAmb		IAmb		06 19 52.6	
	comp=Z,59nm,1.0s									
N49A					IAMs_20		IAMs_20		06 51 45.7	
	comp=Z,2µm,19.0s									
GRNR	**Gornyy**		72.84	36	⇑ *i* P		P		06 19 49.7	-0.2
GRNR					pmax		pmax			
	comp=Z,20nm,1.1s									
GRNR					MLR		MLR			
	comp=E,2µm,15.0s									
GRNR					MLR		MLR			
	comp=N,1µm,16.0s									
GRNR					MLR		MLR			
	comp=Z,2µm,14.0s									
G18K	**Tagagawik**		72.86	359	IAmb		IAmb		06 20 01.6	
	comp=Z,89nm,1.3s									
G18K	**Tagagawik**		72.86	359	P		P		06 19 50.5	+0.7
	baz=1.5									
BLA	**Blacksburg**		72.87	305	IAMs_20		IAMs_20		06 53 16.0	
	comp=Z,2µm,18.0s									
Q52A	**Bidwell**		72.88	307	IAmb		IAmb		06 19 52.2	
	comp=Z,67nm,1.1s									
W59A	**Clinton**		72.91	302	IAmb		IAmb		06 19 53.0	
	comp=Z,77nm,1.5s									
H21K	**Melozitna Rive**		72.94	357	P		P		06 19 51.7	+1.4
	baz=6.1,SNR=46									
V58A	**Windy Hill, Pi**		72.94	303	IAMs_20		IAMs_20		06 52 18.2	
	comp=Z,2µm,19.0s									
CBE	**Ff, Capester**		72.96	277	IAMs_20		IAMs_20		06 47 08.6	
	comp=Z,1µm,20.0s									
F15K	**North Star Dit**		73.01	2	P		P		06 19 51.2	+0.5
	baz=357									
S54A	**Dingess, Beckl**		73.04	306	IAMs_20		IAMs_20		06 52 58.6	
	comp=Z,2µm,19.0s									
TNA	**Tin City**		73.05	3	P		P		06 19 50.3	-0.6
	baz=354									
DL2	**Dalian**		73.10	53	P		P		06 19 55.3	+3.6
DL2					S		SKiKP		06 29 22.8	0.0
DL2					pmax		pmax			
	comp=Z,45nm,0.8s									
DL2					pmax		pmax			
	comp=Z,580nm,5.2s									
DL2					LR		LR			
	comp=Z,2µm,18.2s									
DL2					LR		LR			
	comp=Z,3µm,18.3s									
DL2					LR		LR			
	comp=Z,5µm,18.8s									
POKR	**Poker Flat Res**		73.16	354	P		P		06 19 52.2	+0.5
	baz=10,SNR=16									
H20K	**Anotleneega Mo**		73.19	358	P		P		06 19 52.7	+0.9
	baz=4.5									
G40A	**Rib Lake**		73.19	316	IAmb		IAmb		06 20 09.8	
	comp=Z,27nm,0.8s									
G40A					IAMs_20		IAMs_20		06 53 18.3	
	comp=Z,2µm,18.0s									
H19K	**Roundabout Mou**		73.19	358	IAmb		IAmb		06 20 02.6	
	comp=Z,46nm,1.1s									
H19K	**Roundabout Mou**		73.19	358	P		P		06 19 52.5	+0.7
	baz=3.2									
L46A	**Eue Claire**		73.24	312	IAmb		IAmb		06 19 54.9	
	comp=Z,47nm,1.1s									
I23K	**Minto, Yukon-K**		73.27	355	IAmb		IAmb		06 20 04.3	
	comp=Z,68nm,1.2s									
I23K	**Minto, Yukon-K**		73.27	355	P		P		06 19 53.0	+0.8
	baz=8.8,SNR=19									
G17K	**Kiwalik Mounta**		73.27	0	P		P		06 19 52.5	+0.3
	baz=360									
MDP	**Montagnes des**		73.30	262	LR		LR		06 48 34.3	
	comp=Z,823nm,19.9s,baz=40,slow=33									
O49A	**Covington**		73.31	309	IAMs_20		IAMs_20		06 52 04.6	
	comp=Z,2µm,19.0s	

		baz=1.7					
N47A	Urbana	comp=Z,46nm,1.0s	73.64	310	IAmb	IAmb	06 19 57.4
G15K	Niukluk	baz=357	73.74	2	P	P	06 19 55.3 +0.4
K27K	Chicken	comp=Z,78nm,1.1s	73.74	352	IAmb	IAmb	06 20 08.1
K27K	Chicken	baz=14	73.74	352	P	P	06 19 56.2 +1.2
O48B	Farmland	comp=Z,46nm,1.0s	73.74	310	IAmb	IAmb	06 19 58.0
O48B		comp=Z,2µm,18.0s			IAMs_20	IAMs_20	06 55 09.0
WHN	Wuhan		73.75	64	P	P	06 19 55.8 +0.2
WHN					S	S	06 29 27.0 +1.2
WHN		comp=Z,130nm,1.3s			pmax	pmax	
WHN		comp=Z,3µm,13.2s			LR	LR	
WHN		comp=Z,4µm,14.7s			LR	LR	
WHN		comp=Z,6µm,15.9s			LR	LR	
NEA2	Nenana	comp=Z,42nm,1.1s	73.80	355	IAmb	IAmb	06 20 05.6
NEA2	Nenana	baz=9.0,SNR=13	73.80	355	P	P	06 19 55.6 +0.3
MDJ	Mudanjiang		73.81	44	P	P	06 19 56.0 +0.2
MDJ		comp=Z,16nm,2.1s			pmax	pmax	
HDA	Harding Lake	comp=Z,57nm,0.9s	73.83	354	IAmb	IAmb	06 20 05.5
HDA	Harding Lake	baz=11,SNR=28	73.83	354	P	P	06 19 55.6 0.0
H17K	Granite Mounta	baz=0.5	73.83	360	P	P	06 19 55.9 +0.4
WRH	Wood River Hil	comp=Z,72nm,1.2s	73.85	354	IAmb	IAmb	06 20 06.4
X58A	Rowland	comp=Z,52nm,1.3s	73.87	302	IAmb	IAmb	06 19 58.6
I20K	Naaghedeneel	baz=4.8	73.87	357	P	P	06 19 56.7 +1.0
AGMN	Agassiz Nation	comp=Z,2µm,22.0s	73.90	321	IAMs_20	IAMs_20	06 51 39.1
W57A	Gilead	comp=Z,1µm,20.0s	73.91	303	IAMs_20	IAMs_20	06 52 56.6
K43A	Burlington	comp=Z,80nm,1.1s	73.91	313	IAmb	IAmb	06 19 59.6
K43A		comp=Z,2µm,20.0s			IAMs_20	IAMs_20	06 51 57.5
GCSA	Galena City Sc	baz=2.9,SNR=5.3	73.99	358	P	P	06 19 57.2 +0.8
SCRK	Sand Creek	comp=Z,98nm,1.9s	73.99	353	IAmb	IAmb	06 19 58.8
SCRK	Sand Creek	baz=13,SNR=13	73.99	353	P	P	06 19 57.4 +0.8
L44A	Lake County Fo	comp=Z,84nm,1.3s	74.03	312	IAmb	IAmb	06 19 58.8
L44A		comp=Z,3µm,20.0s			IAMs_20	IAMs_20	06 52 01.7
H16K	Elim	baz=359,SNR=5.5	74.13	1	P	P	06 19 57.8 +0.5
ANM	Nome	baz=356	74.14	2	P	P	06 19 57.5 +0.2
L29M	L29M	baz=17,SNR=8.2	74.15	350	P	P	06 19 58.3 +0.8
U54A	Nelsons Funny	comp=Z,77nm,1.2s	74.17	305	IAmb	IAmb	06 19 60.0
V55A	Taylorsville	comp=Z,47nm,1.1s	74.22	304	IAmb	IAmb	06 20 01.8
V55A		comp=Z,1µm,18.0s			IAMs_20	IAMs_20	06 55 08.0
HQIL	Hanson Quary C	comp=Z,44nm,1.0s	74.25	312	IAmb	IAmb	06 20 01.3
CNSH	ChangSha		74.27	66	P	P	06 19 57.8 -0.9
CNSH					S	S	06 29 30.3 -1.3
CNSH		comp=Z,61nm,1.1s			pmax	pmax	
CNSH		comp=Z,810nm,16.5s			LR	LR	
CNSH		comp=Z,1µm,15.0s			LR	LR	
CNSH		comp=Z,1µm,17.0s			LR	LR	
GULI	GuiLin		74.29	70	P	P	06 20 00.3 +1.4
GULI		comp=Z,36nm,1.7s			pmax	pmax	
RIDG	Independent Ri	baz=12,SNR=26	74.30	353	P	P	06 19 59.2 +0.8
K24K	Donnelly Dome	comp=Z,31nm,0.8s	74.33	353	IAmb	IAmb	06 20 02.3
K24K	Donnelly Dome	baz=12,SNR=6.3	74.33	353	P	P	06 19 58.9 +0.4
KOTAN	Kotaneelee Air	baz=28,SNR=12	74.33	342	P	P	06 19 59.7 +1.2
I40A	Norwalk	comp=Z,2µm,18.0s	74.34	315	IAMs_20	IAMs_20	06 54 21.8
BPAW	Bear Paw Mtn.	comp=Z,53nm,1.2s	74.41	356	IAmb	IAmb	06 20 09.4
BPAW	Bear Paw Mtn.	baz=7.5,SNR=15	74.41	356	P	P	06 19 58.8 -0.1
P48A	Milroy	comp=Z,49nm,1.2s	74.42	309	IAmb	IAmb	06 20 00.5
P48A		comp=Z,2µm,19.0s			IAMs_20	IAMs_20	06 52 48.0
M31M	Drury Creek, Y	comp=Z,71nm,1.2s	74.46	348	IAmb	IAmb	06 20 12.6
M31M	Drury Creek, Y	baz=20,SNR=15	74.46	348	P	P	06 20 00.6 +1.3
M30M	Minto, Yukon	baz=18,SNR=5.5	74.47	349	P	P	06 19 59.9 +0.5
J20K	Nowinta River	comp=Z,63nm,1.5s	74.48	357	IAmb	IAmb	06 20 11.4
J20K	Nowinta River	baz=5.0,SNR=10	74.48	357	P	P	06 19 59.9 +0.5
Y58A	Scranton	comp=Z,83nm,1.4s	74.49	302	IAmb	IAmb	06 20 02.8
Y58A		comp=Z,2µm,18.0s			IAMs_20	IAMs_20	06 55 12.2
BIRD	Birdtown, Kers	comp=Z,46nm,1.2s	74.53	303	IAmb	IAmb	06 20 02.2
M44A	Midewin, Midew	comp=Z,77nm,1.4s	74.63	312	IAmb	IAmb	06 20 02.2
MCK	McKinley	baz=9.0,SNR=21	74.64	355	P	P	06 20 00.4 +0.1
BCAR	Beaver Creek A		74.64	351	P	P	06 20 01.1 +0.7
L27K	Beaver Creek,	comp=Z,87nm,1.4s	74.65	351	IAmb	IAmb	06 20 12.8
L27K	Beaver Creek,	baz=14,SNR=26	74.65	351	P	P	06 20 01.4 +1.0
CHUM	Lake Minchumin	baz=6.4,SNR=15	74.69	356	P	P	06 20 01.0 +0.4
J19K	Poorman	comp=Z,86nm,1.4s	74.71	358	IAmb	IAmb	06 20 13.0
J19K	Poorman	baz=3.9,SNR=17	74.71	358	P	P	06 20 01.5 +0.9
KMSC	Kings Mountain	comp=Z,45nm,1.2s	74.75	303	IAmb	IAmb	06 20 03.5
KMSC		comp=Z,2µm,20.0s			IAMs_20	IAMs_20	06 52 23.1
SFIN	Lafayette	comp=Z,33nm,0.9s	74.78	311	IAmb	IAmb	06 20 04.1
JFWS	Jewell Farm	comp=Z,2µm,22.0s	74.81	314	IAMs_20	IAMs_20	06 51 21.3
JFWS	Jewell Farm	comp=Z,54nm,1.4s	74.81	314	IAmb	IAmb	06 20 03.1
M29M	Somme Creek	comp=Z,53nm,0.9s	74.83	350	IAmb	IAmb	06 20 12.7
M29M	Somme Creek	baz=17,SNR=27	74.83	350	P	P	06 20 02.8 +1.2
L26K	Log Cabin Wild	comp=Z,39nm,1.0s	74.86	352	IAmb	IAmb	06 20 14.5
L26K	Log Cabin Wild	baz=13,SNR=20	74.86	352	P	P	06 20 02.5 +1.0
Y57A	Sumter	comp=Z,76nm,1.2s	74.88	302	IAmb	IAmb	06 20 04.3
I17K	Unalakleet	baz=360	74.89	0	P	P	06 20 03.0 +1.3
MENT	Mentasta		74.98	352	P	P	06 20 04.3 +2.0
TRF	Thorofare Moun	baz=8.0,SNR=7.8	75.01	355	P	P	06 20 02.8 +0.1
TMAB	Tom-Au,PA,Br		75.03	253	eP	P	06 20 05.3 +2.1
R49A	Shelbyville	comp=Z,62nm,1.3s	75.04	308	IAmb	IAmb	06 20 05.3
R49A		comp=Z,2µm,19.0s			IAMs_20	IAMs_20	06 53 12.5
SJG	San Juan	comp=Z,258nm,21.5s,baz=62,slow=32	75.04	281	LR	LR	06 48 12.2
L42A	Oliver, Polo	comp=Z,40nm,0.9s	75.12	313	IAmb	IAmb	06 20 20.9
L42A		comp=Z,2µm,18.0s			IAMs_20	IAMs_20	06 54 15.3
PAX	Paxson	baz=12,SNR=7.7	75.12	353	P	P	06 20 03.1 0.0
BVCY	Beaver Creek	baz=15,SNR=15	75.17	351	P	P	06 20 04.4 +1.0
DHY	Denali Highway	baz=10,SNR=36	75.18	354	P	P	06 20 04.0 +0.4
TZTN	Tazewell	comp=Z,2µm,18.0s	75.21	306	IAMs_20	IAMs_20	06 53 46.1
N32M	Quiet Lake	comp=Z,50nm,0.9s	75.23	347	IAmb	IAmb	06 20 15.3
N32M	Quiet Lake	baz=21	75.23	347	P	P	06 20 04.4 +0.7
BLO	Bloomington	comp=Z,57nm,1.0s	75.25	309	IAmb	IAmb	06 20 05.9
JSC	Jenkinsville	comp=Z,48nm,1.3s	75.26	303	IAmb	IAmb	06 20 07.1
PAULI	Pauline	comp=Z,52nm,1.2s	75.26	303	IAmb	IAmb	06 20 06.4
J18K	Innoko River	baz=3.0	75.27	358	P	P	06 20 04.6 +0.7
K20K	Telida	comp=Z,45nm,1.1s	75.30	357	IAmb	IAmb	06 20 15.9
K20K	Telida	baz=5.0	75.30	357	P	P	06 20 04.5 +0.4
NHSC	New Hope	comp=Z,2µm,19.0s	75.33	301	IAMs_20	IAMs_20	06 55 39.4
V53A	Saluda	comp=Z,2µm,18.0s	75.33	305	IAMs_20	IAMs_20	06 55 09.3
M27K	Edge Creek, AK	comp=Z,61nm,1.2s	75.34	351	IAmb	IAmb	06 20 17.3
M27K	Edge Creek, AK	baz=12,SNR=12	75.34	351	P	P	06 20 05.5 +1.0
P46A	Rosedale	comp=Z,42nm,1.1s	75.34	310	IAmb	IAmb	06 20 06.8
USRK	Ussuriysk Ar.	comp=Z,7.6nm,0.7s,baz=302,slow=3.6,SNR=12 comp=Z,7.6nm,0.7s	75.35	43	P	P	06 20 04.3 -0.4
N31M	Braeburn, Yuko	comp=Z,56nm,1.1s	75.36	348	IAmb	IAmb	06 20 15.5
N31M	Braeburn, Yuko	baz=19,SNR=9.9	75.36	348	P	P	06 20 04.7 +0.3
J17K	VABM Dome	comp=Z,55nm,1.1s	75.38	359	IAmb	IAmb	06 20 06.6
J17K	VABM Dome	baz=1.2	75.38	359	P	P	06 20 05.4 +0.9
WTLY	Watson Lake, Y	baz=24	75.38	344	P	P	06 20 05.7 +1.0
M26K	Nabesna, AK	comp=Z,37nm,1.1s	75.43	352	IAmb	IAmb	06 20 07.1
M26K	Nabesna, AK	baz=14,SNR=12	75.43	352	P	P	06 20 05.9 +1.0
TYV	Tymovskoe		75.44	33	eP	P	06 20 11.5 +6.4
TYV		comp=Z,35nm,1.7s			pmax	pmax	
TYV		comp=Z,1µm,5.6s			pmax	pmax	
TYV		comp=Z,2µm,15.0s			MLR	MLR	
LIRD	Liard River Hi	baz=26,SNR=7	75.45	343	P	P	06 20 06.2 +1.2
J16K	Anvik River	comp=Z,100nm,1.6s	75.49	0	IAmb	IAmb	06 20 16.4
J16K	Anvik River	baz=360	75.49	0	P	P	06 20 05.9 +0.7
WAT1	Susitna Watana	baz=9.3	75.51	354	P	P	06 20 04.9 -0.4
N30M	Aishikik Lake	comp=Z,70nm,1.4s	75.58	349	IAmb	IAmb	06 20 17.2
N30M	Aishikik Lake	baz=18,SNR=7.3	75.58	349	P	P	06 20 06.4 +0.5
HARP	HAARP	baz=12	75.65	353	P	P	06 20 06.8 +0.7
PPLA	Purkeypile	comp=Z,37nm,0.9s	75.67	356	IAmb	IAmb	06 20 21.4
PPLA	Purkeypile	baz=6.5,SNR=7.2	75.67	356	P	P	06 20 06.4 0.0
T50A	Nancy	comp=Z,45nm,1.2s	75.68	307	IAmb	IAmb	06 20 08.7
WAT6	Susitna Watana	baz=9.9,SNR=13	75.69	354	P	P	06 20 06.7 +0.1
YUK3	Moose Creek	baz=15,SNR=19	75.74	350	P	P	06 20 07.5 +0.6
WCI	Wyandotte Cave	comp=Z,41nm,0.9s	75.74	309	P	P	06 20 06.6 -0.5
WCI		comp=Z,41nm,1.0s			IAmb	IAmb	06 20 10.1
WCI		comp=Z,2µm,18.0s			pmax	pmax	
TOAD	Toad River Com	baz=27,SNR=14	75.75	342	P	P	06 20 07.7 +0.9
NJ2	Nanjing		75.77	60	↓P	P	06 20 07.3 0.0
NJ2					sP	sP	06 20 16.5 +0.6
NJ2		comp=Z,24nm,1.2s			pmax	pmax	
NJ2		comp=Z,1µm,18.3s			LR	LR	
NJ2		comp=Z,1µm,16.9s			LR	LR	
NJ2		comp=Z,1µm,18.7s			LR	LR	
CRPR	Cabo Rojo, PR	comp=Z,55nm,1.1s	75.81	282	IAmb	IAmb	06 20 11.4
F33A	5 Mile Ranch,	comp=Z,81nm,1.5s	75.86	320	IAmb	IAmb	06 20 09.1
YUK4	Talbot Arm	baz=17,SNR=7.9	75.91	349	P	P	06 20 08.3 +0.4
L40A	Anamosa	comp=Z,50nm,1.1s	75.92	314	IAmb	IAmb	06 20 25.2
TKL	Tuckaleechee C	comp=Z,2µm,18.3s,baz=64,slow=37	75.93	305	LR	LR	06 55 23.8
MDND	Maddock	comp=Z,84nm,1.3s	75.96	323	IAmb	IAmb	06 20 11.7
MDND		comp=Z,2µm,18.0s			IAMs_20	IAMs_20	06 54 36.5
WHY	Whitehorse	baz=20	76.00	347	P	P	06 20 08.4 +0.1
J14K	Nanvaranak Lak	comp=Z,2µm,18.0s	76.00	1	IAMs_20	IAMs_20	06 59 36.9
M24K	Tolsona, Glenn	comp=Z,76nm,1.1s	76.03	353	IAmb	IAmb	06 20 34.6
M24K	Tolsona, Glenn	baz=11	76.03	353	P	P	06 20 08.1 -0.3
K17K	Iditarod	baz=8.9,SNR=7.8	76.05	359	P	P	06 20 08.8 +0.5
CUT	Chulitna	comp=Z,80nm,1.3s	76.05	355	IAmb	IAmb	06 20 19.4
CUT	Chulitna	baz=7.9	76.05	355	P	P	06 20 08.0 -0.4
P33M	Teslin, Yukon	comp=Z,52nm,1.3s	76.06	346	IAmb	IAmb	06 20 20.1
P33M	Teslin, Yukon	baz=21,SNR=7.6	76.06	346	P	P	06 20 09.2 +0.6
O30N	Mendenhall	comp=Z,42nm,1.2s	76.08	348	IAmb	IAmb	06 20 19.8
O30N	Mendenhall	baz=19,SNR=8.0	76.08	348	P	P	06 20 09.2 +0.6
YUK8	Steele Glacier	baz=16	76.12	350	P	P	06 20 08.6 -0.6
L20K	Farewell, AK	comp=Z,47nm,1.3s	76.17	357	IAmb	IAmb	06 20 23.0
L20K	Farewell, AK	baz=5.2	76.17	357	P	P	06 20 09.0 -0.1
HYT	Haines Junctio	comp=Z,35nm,1.0s	76.25	349	IAmb	IAmb	06 20 20.6
HYT	Haines Junctio	baz=18,SNR=12	76.25	349	P	P	06 20 10.7 +1.0
YUK6	Outpost Mounta	baz=17,SNR=14	76.26	349	P	P	06 20 10.9 +1.0
N25K	Chitina, Valde	comp=Z,47nm,1.2s	76.37	352	IAmb	IAmb	06 20 22.6
N25K	Chitina, Valde	baz=12,SNR=8.4	76.37	352	P	P	06 20 10.6 +0.3
W52A	Murphy	comp=Z,2µm,18.0s	76.40	305	IAMs_20	IAMs_20	06 55 42.5
SCM	Sheep Creek Mo	baz=10,SNR=9.0	76.40	354	P	P	06 20 11.1 +0.6
MCARA	McCarthy VSAT	comp=Z,37nm,1.0s	76.42	351	IAmb	IAmb	06 20 22.7
MCARA	McCarthy VSAT	baz=13,SNR=5.3	76.42	351	P	P	06 20 11.1 +0.6
OLIL	Olney	comp=Z,55nm,1.0s	76.45	310	IAmb	IAmb	06 20 13.7
M23K	Glacier View	baz=9.9,SNR=9.9	76.47	354	P	P	06 20 11.2 +0.3
R33M	Jennings River	baz=22	76.48	345	P	P	06 20 12.8 +1.8
K15K	Wolf Creek Mou	baz=359	76.48	1	P	P	06 20 11.7 +0.8
L19K	White Mountain	baz=4.4,SNR=17	76.50	357	P	P	06 20 11.8 +0.8
SML	Sawmill	comp=Z,48nm,1.0s	76.51	354	IAmb	IAmb	06 20 15.9
SML	Sawmill	baz=9.4,SNR=10	76.51	354	P	P	06 20 11.3 +0.3
L18K	Granite Mounta	comp=Z,66nm,1.2s	76.52	358	IAmb	IAmb	06 20 13.4
L18K	Granite Mounta	baz=3.0,SNR=11	76.52	358	P	P	06 20 11.7 +0.7
CPCT	Cooper Cave	comp=Z,40nm,1.2s	76.53	305	IAmb	IAmb	06 20 13.7
SKT	Skwentna	comp=Z,52nm,1.1s	76.55	356	IAmb	IAmb	06 20 22.4
SKT	Skwentna	baz=7.0,SNR=11	76.55	356	P	P	06 20 10.8 -0.5
U49A	Red Boiling Sp	comp=Z,53nm,1.0s	76.58	307	IAmb	IAmb	06 20 14.9
GHO	Glory Hole Cre	comp=Z,45nm,0.9s	76.59	354	IAmb	IAmb	06 20 22.2
257A	Skidaway Islan	comp=Z,2µm,18.0s	76.61	301	IAMs_20	IAMs_20	06 57 08.3
KLU	Klutina	comp=Z,36nm,1.1s	76.61	353	IAmb	IAmb	06 20 22.1
KLU	Klutina	baz=11,SNR=7.6	76.61	353	P	P	06 20 12.1 +0.4
CTG	Chitna Glacier	baz=15,SNR=5.3	76.63	351	P	P	06 20 12.7 +0.7
L17K	Donlin	baz=1.8	76.63	359	P	P	06 20 12.5 +0.8
P43A	Skaggs, Pawnee	comp=Z,37nm,1.1s	76.64	311	IAmb	IAmb	06 20 13.8
P43A		comp=Z,3µm,20.0s			IAMs_20	IAMs_20	06 53 23.9
N41A	Harden Midland	comp=Z,61nm,1.2s	76.66	313	IAmb	IAmb	06 20 13.4
N41A		comp=Z,2µm,20.0s			IAMs_20	IAMs_20	06 53 52.1
O28M	Mount Upton	comp=Z,31nm,0.9s	76.67	350	IAmb	IAmb	06 20 23.6
O28M	Mount Upton	baz=16	76.67	350	P	P	06 20 12.8 +0.5
M22K	Willow	baz=8.0,SNR=7.2	76.69	355	P	P	06 20 11.9 0.0
LOGN	Logan Glacier	comp=Z,91nm,1.4s	76.73	350	IAmb	IAmb	06 20 23.9
M20K	Styx River	baz=5.7	76.73	356	P	P	06 20 12.2 -0.1
M19K	Big River Lodg	baz=4.8	76.76	357	P	P	06 20 12.6 +0.2
PMR	Palmer	comp=Z,53nm,1.0s	76.78	354	IAmb	IAmb	06 20 23.1
PMR	Palmer		76.78	354	P	P	06 20 13.0 +0.5
PMR	Palmer	baz=8.8,SNR=7.2	76.78	354	P	P	06 20 12.8 +0.3
K13K	Kusilvak Mount	baz=357	76.80	2	P	P	06 20 12.6 0.0
P32M	Atlin	comp=Z,37nm,1.1s	76.81	346	IAmb	IAmb	06 20 23.5
P32M	Atlin	baz=20	76.81	346	P	P	06 20 12.6 -0.1
P30M	Million Dollar	baz=18	76.84	348	P	P	06 20 14.0 +1.0
Q44A	Meyer Farm, Va	comp=Z,46nm,1.0s	76.86	311	IAmb	IAmb	06 20 16.1
O29M	Mount Kennedy	comp=Z,32nm,0.9s	76.91	349	IAmb	IAmb	06 20 30.8
O29M	Mount Kennedy	baz=17	76.91	349	P	P	06 20 14.0 +0.6
KNK	Knik Glacier	comp=Z,77nm,1.2s	76.91	354	IAmb	IAmb	06 20 15.0
KNK	Knik Glacier	baz=9.3,SNR=7.6	76.91	354	P	P	06 20 13.5 +0.2
BMRM	Bremner River	comp=Z,52nm,1.1s	77.00	352	IAmb	IAmb	06 20 36.7
BMRM	Bremner River	baz=12,SNR=7.1	77.00	352	P	P	06 20 14.0 +0.2
TGL	Tana Glacier	comp=Z,35nm,1.0s	77.01	351	IAmb	IAmb	06 20 33.9
SUA	Susitna One	baz=7.5,SNR=8.9	77.02	355	P	P	06 20 14.4 +0.4
CRQE	Cirque	baz=13,SNR=11	77.05	351	P	P	06 20 14.6 +0.4
L16K	Owhat River	baz=0.8	77.07	360	P	P	06 20 14.8 +0.7
SCIA	State Center	comp=Z,2µm,20.0s	77.09	315	IAMs_20	IAMs_20	06 52 31.6
L15K	Ungalak Mounta	baz=359	77.10	0	P	P	06 20 15.1 +0.8
ISLE	Juniper Island		77.11	351	P	P	06 20 15.2 +0.6
TABL	Table Mountain	comp=Z,58nm,1.1s	77.12	350	IAmb	IAmb	06 20 40.3
Q32M	Nakina River	comp=Z,65nm,1.2s	77.13	345	IAmb	IAmb	06 20 26.4
Q32M		comp=Z,2µm,20.0s			IAMs_20	IAMs_20	06 57 39.4
Q32M	Nakina River	baz=21	77.13	345	P	P	06 20 16.3 +1.5
W50A	Signal Mountai	comp=Z,61nm,1.1s	77.17	306	IAmb	IAmb	06 20 17.4
W50A		comp=Z,2µm,20.0s			IAMs_20	IAMs_20	06 53 34.1
DLBC	Dease Lake	comp=Z,1µm,19.9s,baz=353,slow=38	77.18	344	LR	LR	06 56 29.9
DLBC	Dease Lake	baz=23	77.18	344	P	P	06 20 16.2 +1.3
GOGA	Godfrey	comp=Z,44nm,1.2s	77.22	303	IAmb	IAmb	06 20 18.8
M18K	Stony River	baz=3.6	77.22	358	P	P	06 20 15.5 +0.5
Y52A	Lilburn	comp=Z,82nm,1.3s	77.29	304	IAmb	IAmb	06 20 18.0
Y52A		comp=Z,1µm,19.0s			IAMs_20	IAMs_20	06 54 53.3
WAX	Waxell Ridge	comp=Z,87nm,1.2s	77.31	351	IAmb	IAmb	06 20 29.5
X51A	Calhoun	comp=Z,2µm,18.0s	77.32	305	IAMs_20	IAMs_20	06 56 03.9
RC01	Rabbit Creek A	baz=8.3,SNR=13	77.32	355	P	P	06 20 15.8 +0.2
GLI	Glacier Island	baz=10	77.32	353	P	P	06 20 15.9 +0.3
PINM	Pinnacle	baz=16	77.34	350	P	P	06 20 16.1 +0.3
M17K	Holitna River	comp=Z,58nm,1.0s	77.36	359	IAmb	IAmb	06 20 27.0
M17K	Holitna River	baz=2.4	77.36	359	P	P	06 20 16.8 +1.0
N20K	Mount Spurr	baz=6.4,SNR=9.7	77.36	356	P	P	06 20 15.3 -0.6
SPCR	Spurr Chakacha	baz=6.4,SNR=7.0	77.36	356	P	P	06 20 15.5 -0.5
PLBC	Pleasant Camp	baz=18	77.38	348	P	P	06 20 16.2 +0.2
E28A	Huff	comp=Z,1µm,19.0s	77.41	322	IAMs_20	IAMs_20	06 55 10.7
P29M	Windy Craggy	comp=Z,43nm,0.9s	77.43	348	IAmb	IAmb	06 20 27.6
P29M	Windy Craggy	baz=17	77.43	348	P	P	06 20 17.1 +0.9
L14K	Kuka Creek	baz=358	77.43	1	P	P	06 20 16.4 +0.3
PWL	Port Wells	comp=Z,57nm,1.1s	77.45	354	IAmb	IAmb	06 20 20.8
PWL	Port Wells	baz=9.4	77.45	354	P	P	06 20 16.7 +0.4
MESA	MESA	baz=14	77.47	351	P	P	06 20 16.8 0.0
DGMT	Dagmar	comp=Z,2µm,20.0s	77.52	325	IAMs_20	IAMs_20	06 54 55.6
154A	Montrose	comp=Z,1µm,20.0s	77.52	302	IAMs_20	IAMs_20	06 55 08.3
EYAK	Cordova Ski Ar	comp=Z,2µm,21.0s	77.53	353	IAMs_20	IAMs_20	06 55 10.9
EYAK	Cordova Ski Ar	baz=11	77.53	353	P	P	06 20 17.3 +0.6
ECSD	EROS Data Cent	comp=Z,41nm,1.3s	77.54	318	IAmb	IAmb	06 20 18.9
PNL	Peninsula		77.63	349	P	P	06 20 19.1 +1.7
PNL	Peninsula	baz=16	77.63	349	P	P	06 20 17.4 0.0
KS19	Wonju Array Si		77.71	51	IAmb	IAmb	06 20 29.0

comp=Z,42nm,1.1s
V48A Smith Brothers 77.72 307 IAmb IAmb 06 20 19.9
comp=Z,58nm,1.1s
SLM Saint Louis 77.74 311 IAmb IAmb 06 20 20.0
comp=Z,88nm,1.3s
M16K Timber Creek 77.76 359 IAmb IAmb 06 20 29.2
comp=Z,65nm,1.1s
M16K Timber Creek 77.76 359 P P 06 20 18.7 +0.6
baz=1.2
KSAR Wonju Array Be 77.76 51 P P 06 20 18.1 -0.3
KSAR Wonju Array Be 77.76 51 P P 06 20 18.1 -0.3
KSRS Korea Array 77.77 51 P P 06 20 18.4 -0.1
comp=Z,8.0nm,0.9s,baz=316,slow=5.3,SNR=20
KSRS PP PP 06 23 12.7 -0.8
comp=Z,2.1nm,0.8s,baz=309,slow=7.2,SNR=4.1
KSRS LR LR 06 58 15.2
comp=Z,2330µm,18.8s,baz=325,slow=38
comp=Z,8.0nm,0.9s
SIUC Southern Illin 77.79 310 IAmb IAmb 06 20 21.4
comp=Z,60nm,1.1s
S44A Carbondale 77.83 310 IAmb IAmb 06 20 21.5
comp=Z,62nm,1.2s
N19K Bonanza Creek 77.86 357 IAmb IAmb 06 20 29.9
comp=Z,53nm,1.3s
N19K Bonanza Creek 77.86 357 P P 06 20 19.1 +0.4
baz=4.7
QIZ Qiongzhong 77.86 75 P P 06 20 19.5 +0.2
QIZ PP PP 06 23 14.3 -0.6
QIZ S S 06 30 14.0 +2.5
QIZ LR LR
comp=Z,790nm,14.7s
QIZ LR LR
comp=Z,1µm,16.8s
QIZ LR LR
comp=Z,1µm,16.7s
S34M Telegraph Cree 77.89 344 IAmb IAmb 06 20 31.2
comp=Z,50nm,1.2s
S34M Telegraph Cree 77.89 344 P P 06 20 19.6 +0.8
baz=22
N38A Joes South For 77.89 314 IAmb IAmb 06 20 36.4
comp=Z,37nm,0.9s
SSE Sheshan 77.90 59 P P 06 20 19.3 0.0
SSE S S 06 30 14.0 +2.4
SSE pmax pmax
comp=Z,16nm,0.8s
SSE pmax pmax
comp=Z,280nm,4.1s
SSE LR LR
comp=Z,530nm,14.8s
SSE LR LR
comp=Z,560nm,14.8s
SLKM Skilak Lake 77.93 355 IAmb IAmb 06 20 30.4
comp=Z,88nm,1.4s
T45A Paducah 77.93 309 IAMs_20 IAMs_20 06 56 23.2
comp=Z,2µm,18.0s
M14K Bethel 78.03 1 P P 06 20 20.1 +0.6
baz=359
N18K Kilae Creek 78.04 358 P P 06 20 20.4 +0.8
baz=3.6
WVT Waverly 78.06 308 P P 06 20 20.0 -0.2
WVT IAmb IAmb 06 20 21.2
comp=Z,51nm,1.3s
WVT Waverly 78.06 308 P P 06 20 20.0 -0.2
WVT pmax pmax
comp=Z,51nm,1.3s
WVT MLR MLR
comp=Z,3µm,19.0s
456A Hilliard 78.07 300 IAmb IAmb 06 20 22.8
comp=Z,87nm,1.4s
456A IAMs_20 IAMs_20 06 57 52.0
comp=Z,2µm,18.0s
M15K Kasigluk River 78.09 0 P P 06 20 20.6 +0.7
baz=360
P40A Paris 78.13 313 IAMs_20 IAMs_20 06 54 39.1
comp=Z,2µm,20.0s
JIS Juneau Island 78.16 346 P P 06 20 22.3 +2.0
SUSD Miller 78.17 320 IAMs_20 IAMs_20 06 55 24.0
comp=Z,2µm,20.0s
RED Redoubt Volcan 78.17 356 IAmb IAmb 06 20 30.6
comp=Z,42nm,1.0s
R32K Eaglecrest 78.19 346 P P 06 20 21.1 +0.6
baz=20
P23K Montague Islan 78.22 353 P P 06 20 20.9 +0.3
baz=10.0
N17K Nushagak Hills 78.23 358 P P 06 20 21.4 +0.8
baz=2.6
SEW Seward 78.28 354 P P 06 20 21.1 +0.3
baz=8.5
FVM French Village 78.30 311 IAmb IAmb 06 20 23.1
comp=Z,50nm,1.2s
N16K Nishlik Lake 78.31 359 P P 06 20 22.2 +1.1
baz=1.4,SNR=5.5
CGM3 Cape Girardeau 78.33 310 IAmb IAmb 06 20 23.7
comp=Z,73nm,1.3s
O19K Port Alsworth 78.47 357 IAmb IAmb 06 20 32.4
comp=Z,44nm,1.1s
O19K Port Alsworth 78.47 357 P P 06 20 22.0 0.0
baz=4.8,SNR=6.7
YSS Yuzhno-Sakhali 78.47 36 P P 06 20 22.5 +0.3
YSS IAMs_20 IAMs_20 06 57 33.3
comp=Z,3µm,21.0s
YSS Yuzhno-Sakhali 78.47 36 P P 06 20 23.0 +0.8
YSS Yuzhno-Sakhali 78.47 36 eP P 06 20 22.4 +0.2
YSS eS S 06 30 16.1 -1.1
YSS pmax pmax
comp=Z,800nm,3.7s
YSS pmax pmax
comp=N,500nm,4.8s
YSS pmax pmax
comp=E,200nm,3.2s
YSS pmax pmax
comp=Z,50nm,0.8s
YSS MLR MLR
comp=Z,4µm,15.0s
YSS MLR MLR
comp=N,3µm,16.0s
YSS MLR MLR
comp=E,3µm,17.0s
152A Waverly Hall 78.50 303 IAmb IAmb 06 20 25.8
comp=Z,44nm,1.1s
152A IAMs_20 IAMs_20 06 57 08.2
comp=Z,1µm,18.0s
O20K Slope Mountain 78.50 356 P P 06 20 22.1 -0.2
baz=6.1
CMC01 Camacan, BA 78.56 238 eP P 06 20 25.4 +2.3
T35M Bob Quinn 78.57 344 P P 06 20 23.2 +0.6
baz=23
TPTI 78.61 96 P P 06 20 22.5 -1.0
comp=Z,25nm,1.5s
N15K Kwethluk River 78.62 360 IAmb IAmb 06 20 25.0
comp=Z,67nm,1.2s
N15K Kwethluk River 78.62 360 P P 06 20 23.2 +0.4
baz=0.4
ILSW Iliamna Southw 78.63 356 IAmb IAmb 06 20 50.2
comp=Z,46nm,1.3s
Q23K Middleton Isla 78.69 353 P P 06 20 23.8 +0.7
baz=11
L34A Svendsen Farm, 78.70 317 IAmb IAmb 06 20 34.6
comp=Z,38nm,0.6s
L34A IAMs_20 IAMs_20 06 52 55.1
comp=Z,1µm,22.0s
CCM Cathedral Cave 78.71 311 P P 06 20 23.7 0.0
CCM Cathedral Cave 78.71 311 P P 06 20 23.7 0.0
CCM pmax pmax
comp=Z,36nm,1.2s
CCM MLR MLR
comp=Z,3µm,20.0s
BRLK Bradley Lake 78.72 355 IAmb IAmb 06 20 24.8
comp=Z,65nm,1.1s
BRSE Bradley Lake S 78.73 355 P P 06 20 23.7 +0.2
baz=7.5
X48A Hartselle 78.73 306 IAmb IAmb 06 20 25.6
comp=Z,83nm,1.1s
Y49A Blount Mountai 78.75 305 IAmb IAmb 06 20 25.9
comp=Z,44nm,1.3s
Y49A IAMs_20 IAMs_20 06 56 56.7
comp=Z,2µm,19.0s
S31K Pelican 78.78 347 P P 06 20 23.3 -0.4
baz=18
PARMO Parma 78.82 309 IAmb IAmb 06 20 25.8
comp=Z,85nm,1.2s
O18K Koktuh Hills 78.84 357 P P 06 20 24.4 +0.3
baz=4.1,SNR=11
P38A Dawn 78.88 314 IAmb IAmb 06 20 26.2
comp=Z,54nm,1.1s
P38A IAMs_20 IAMs_20 06 55 21.8
comp=Z,1µm,20.0s
KCSI Kotacane, Aceh 78.88 95 P P 06 20 23.1 -1.9
comp=Z,308nmcomp=Z,17nm,1.1s
PRPB Paraupebas 78.89 251 eP P 06 20 26.9 +1.9
S32K Killisnoo 78.96 346 IAmb IAmb 06 20 47.3
comp=Z,89nm,1.6s
S32K Killisnoo 78.96 346 P P 06 20 25.3 +0.6
baz=20
CNPM China Poot 78.98 355 IAmb IAmb 06 20 26.4
comp=Z,45nm,1.1s
O17K Koliganek Bris 78.98 358 P P 06 20 25.3 +0.5
baz=2.7,SNR=6.3
PLAL Pickwick Lake 78.99 307 IAmb IAmb 06 20 26.5
comp=Z,68nm,1.2s
PLAL IAMs_20 IAMs_20 06 56 21.1
comp=Z,2µm,20.0s
PEA0B Petropavlovsk- 79.03 24 eP P 06 20 25.3 +0.1
PETK Petropavlovsk- 79.03 24 P P 06 20 24.3 -0.9
comp=Z,15nm,1.1s,baz=38,slow=5.8,SNR=5.0
PETK LR LR 07 00 12.2
comp=Z,5µm,18.4s,baz=329,slow=39
comp=Z,15nm,1.1s
N35A Tabor 79.12 316 IAMs_20 IAMs_20 06 53 58.2
comp=Z,2µm,22.0s
R40A Maddies Statio 79.12 312 IAmb IAmb 06 20 27.7
comp=Z,54nm,1.3s
R40A IAMs_20 IAMs_20 06 55 09.4
comp=Z,2µm,20.0s
PBMO Poplar Bluff 79.14 310 IAmb IAmb 06 20 27.9
comp=Z,65nm,1.4s
O16K Kokwok River B 79.18 359 IAmb IAmb 06 20 27.9
comp=Z,42nm,1.1s
O16K IAMs_20 IAMs_20 07 01 22.8
comp=Z,1µm,18.0s
O16K Kokwok River B 79.18 359 P P 06 20 26.1 +0.2
baz=1.9
MAL2 Monte Alegre, 79.20 258 IAmb IAmb 06 20 30.9
comp=Z,62nm,1.1s
SMTB Santa Maria do 79.21 248 eP P 06 20 28.1 +1.4
656A Willston 79.30 300 IAmb IAmb 06 20 29.5
comp=Z,87nm,1.4s
656A IAMs_20 IAMs_20 06 56 17.5
comp=Z,1µm,18.0s
352A Blakely 79.42 303 IAMs_20 IAMs_20 06 56 42.1
comp=Z,1µm,19.0s
WRAK Wrangell Islan 79.52 345 IAmb IAmb 06 20 39.2
comp=Z,40nm,1.0s
O14K Tigyukauivet M 79.54 0 P P 06 20 28.1 +0.3
baz=360
O15K Ungalikthiuk R 79.61 360 P P 06 20 28.7 +0.5
baz=0.6
GUA01 Guaratinga, BA 79.66 237 eP P 06 20 30.7 +1.7
LRAL Lakeview Retre 79.66 305 IAmb IAmb 06 20 32.2
comp=Z,54nm,0.9s
K30B Basset 79.81 319 IAMs_20 IAMs_20 06 55 46.3
comp=Z,1µm,20.0s
KULM Kulim 79.88 92 P P 06 20 29.5 -0.9
SDBA SAO DESIDERIO 79.90 244 eP P 06 20 31.5 +1.1
MGMO Mountain Grove 79.92 311 IAmb IAmb 06 20 32.7
comp=Z,63nm,1.3s
250A Grady 79.93 304 IAmb IAmb 06 20 33.1
comp=Z,109nm,1.3s
Q20K Shuyak Island 79.96 356 P P 06 20 30.2 +0.1
baz=6.2,SNR=5.2
OXF Oxford 80.11 308 IAmb IAmb 06 20 34.8
comp=Z,72nm,1.1s
Z47A Carrollton 80.21 306 IAMs_20 IAMs_20 06 55 35.4
comp=Z,2µm,20.0s
PSI Prapat 80.22 95 P P 06 20 31.0 -1.4
comp=Z,32nm,1.1s,baz=283,slow=5.9,SNR=21
PSI LR LR 06 58 07.9
comp=Z,317nm,21.8s,baz=306,slow=37
PSI Prapat 80.22 95 P P 06 20 31.1 -1.3
RPSI Rantau Prapat 80.29 95 IAmb IAmb 06 20 32.3
comp=Z,77nm,1.3s
Q17K Contact Creek 80.46 358 P P 06 20 31.6 -1.4
baz=3.6,SNR=6.1
451A Vernon 80.53 303 IAMs_20 IAMs_20 06 57 26.9
comp=Z,1µm,19.0s
ASAJ Asahikawa 80.58 38 P P 06 20 33.1 -0.7
comp=Z,10nm,0.8s,baz=338,slow=2.5,SNR=4.1
ASAJ LR LR 07 00 39.5
comp=Z,2µm,19.0s,baz=334,slow=39
comp=Z,10nm,0.8s
JKA Kamikawa-asahi 80.59 38 IAmb IAmb 06 20 46.1
comp=Z,61nm,1.3s
SKR Severo-Kuril's 80.61 26 eP P 06 20 24.6 -9.1
SKR eS S 06 30 36.4 -3.2
SKR pmax pmax
comp=Z,500nm,2.8s
SKR MLR MLR
comp=Z,3µm,20.0s
IPM Ipoh 80.69 92 IAmb IAmb 06 20 34.3
comp=Z,47nm,1.2s
IPM Ipoh 80.69 92 P P 06 20 33.6 -1.2
FCAR Ozark Folk Cen 80.73 310 IAmb IAmb 06 20 36.7
comp=Z,56nm,1.3s
KDAK Kodiak Island 80.79 356 LR LR 06 57 12.3
comp=Z,753nm,21.6s,baz=2.8,slow=36
KDAK Kodiak Island 80.79 356 P P 06 20 35.4 +0.8
KDAK Kodiak Island 80.79 356 P P 06 20 35.4 +0.8
KDAK pmax pmax
comp=Z,228nm,1.6s
RSSD Black Hills 80.80 323 P P 06 20 35.4 +0.1
RSSD Black Hills 80.80 323 P P 06 20 35.4 +0.1
RSSD pmax pmax
RSSD comp=Z,27nm,1.2s
RSSD MLR MLR
comp=Z,800nm,18.0s
KSU1 Kansas State U 80.91 315 IAmb IAmb 06 20 37.3
comp=Z,90nm,1.1s
BOAV Boa Vista 80.96 265 eP P 06 20 37.8 +1.5
BRAL Brewton 80.97 304 IAmb IAmb 06 20 57.6
comp=Z,56nm,1.1s
146A Union 81.19 306 IAmb IAmb 06 20 39.0
comp=Z,134nm,1.8s
WHAR Wooly Hollow 81.25 310 IAmb IAmb 06 20 39.5
comp=Z,78nm,1.2s
CHIV Chivirico 81.29 289 IAmb IAmb 06 20 40.7
comp=Z,63nm,1.4s
OHAK Old Harbor 81.39 356 IAmb IAmb 06 20 51.5
comp=Z,129nm,1.7s
OHAK Old Harbor 81.39 356 P P 06 20 39.3 +1.5
OHAK Old Harbor 81.39 356 P P 06 20 38.1 +0.3
baz=5.5
JANB Januaria 81.43 241 eP P 06 20 40.1 +1.5
HHAR Hobbs 81.49 311 IAmb IAmb 06 20 40.4
comp=Z,44nm,1.3s
U38A Gravette 81.62 312 IAmb IAmb 06 20 41.2
comp=Z,63nm,1.3s
ITTB Itaituba 81.93 257 eP P 06 20 42.4 +1.1
BSFB Barra de Sao F 81.99 236 eP P 06 20 42.4 +0.9
SII Sitkinak Islan 82.10 356 P P 06 20 41.5 -0.1
baz=4.8
SJMB Sao Joao De Ma 82.11 237 eP P 06 20 43.5 +1.4
RLO Rose Lookout 82.18 312 IAmb IAmb 06 20 44.1
comp=Z,36nm,1.0s
LLLB Lilooet 82.19 336 IAmb IAmb 06 20 54.4
comp=Z,42nm,1.3s
OGNE Ogallala 82.30 319 IAmb IAmb 06 20 44.6
comp=Z,40nm,1.0s
OGNE IAMs_20 IAMs_20 06 56 00.2
comp=Z,1µm,21.0s
RLMT Red Lodge 82.30 326 IAmb IAmb 06 20 45.9
comp=Z,61nm,1.4s
RLMT IAMs_20 IAMs_20 06 57 48.1
comp=Z,2µm,21.0s
VBMS Vicksburg 82.37 307 IAmb IAmb 06 20 58.2
comp=Z,60nm,1.1s
VBMS IAMs_20 IAMs_20 06 59 07.6
comp=Z,2µm,18.0s
T35A Sooner Cattle 82.45 313 IAMs_20 IAMs_20 06 57 31.5
comp=Z,1µm,21.0s
ERM Erimo 82.47 39 IAMs_20 IAMs_20 07 00 02.4
comp=Z,2µm,21.0s
BBB Bella Bella 82.49 341 LR LR 07 00 32.2
comp=Z,1µm,18.4s,baz=28,slow=38
R32A Long Quarter, 82.52 316 IAmb IAmb 06 20 46.0
comp=Z,80nm,1.2s
R32A IAMs_20 IAMs_20 06 56 15.1
comp=Z,2µm,21.0s
JNU Nakatsue 82.52 52 LR LR 07 01 07.0
comp=Z,3µm,18.2s,baz=320,slow=38
MIAR Mount Ida 82.52 310 IAmb IAmb 06 20 46.6
comp=Z,54nm,1.1s
143A Socs Landing, 82.56 307 IAmb IAmb 06 20 46.5
comp=Z,67nm,1.1s
NEW Newport 82.69 332 LR LR 07 00 09.8
comp=Z,3µm,18.7s,baz=30,slow=38
MSO Missoula 82.75 330 IAMs_20 IAMs_20 06 58 51.0
comp=Z,2µm,19.0s
CBKS Cedar Bluff 82.75 317 IAMs_20 IAMs_20 06 56 15.4
comp=Z,2µm,21.0s
TUL3 Leonard 82.79 312 IAmb IAmb 06 20 47.5
comp=Z,53nm,1.1s
TUL3 IAMs_20 IAMs_20 06 57 33.5
comp=Z,2µm,20.0s
WLAR White Oak Lake 82.87 309 IAmb IAmb 06 20 48.5
comp=Z,51nm,1.3s
BOZ Bozeman (W) 82.88 328 IAmb IAmb 06 20 48.6
comp=Z,42nm,1.2s
BOZ IAMs_20 IAMs_20 06 57 11.3
comp=Z,1µm,20.0s
CHIR Chirikof Islan 82.89 357 P P 06 20 45.9 +0.2
baz=3.7
OK051 E0350 and S346 82.93 313 IAMs_20 IAMs_20 07 03 19.1
comp=Z,2µm,18.0s
YMP Mirror Lake Pl 82.98 326 IAmb IAmb 06 20 60.0
comp=Z,70nm,1.2s
Z41A Richland Creek 82.99 309 IAmb IAmb 06 20 49.1
comp=Z,32nm,0.9s
KAN08 Anthony NE Sta 83.01 314 IAmb IAmb 06 20 48.9
comp=Z,45nm,1.2s
OK048 Pawnee Station 83.05 313 IAMs_20 IAMs_20 06 58 01.4
comp=Z,1µm,20.0s
K22A Casper 83.08 323 IAMs_20 IAMs_20 06 58 33.9
comp=Z,1µm,20.0s
YULB Yu-li 83.09 65 IAMs_20 IAMs_20 07 03 09.1
comp=Z,2µm,20.0s
YNR Norris Junctio 83.21 327 IAmb IAmb 06 21 03.5
comp=Z,33nm,1.3s
LKWY Lake 83.22 326 IAmb IAmb 06 20 52.4
comp=Z,46nm,1.1s
YHL Hebgen Lake 83.31 327 IAmb IAmb 06 20 51.5
comp=Z,41nm,1.1s
DIAM Diamantina, MG 83.38 239 eP P 06 20 49.7 +0.8
YHB Horse Butte 83.40 327 IAmb IAmb 06 20 52.6
comp=Z,56nm,1.2s
PPI Padang Panjang 83.47 96 P P 06 20 46.9 -2.4
comp=Z,18nm,1.2s
NPGB Novo Progresso 83.47 255 eP P 06 20 50.4 +1.0
SHEM Shemya Is, Ala 83.54 15 LR LR 07 02 58.8
comp=Z,951nm,18.6s,baz=318,slow=39
CBB Campbell River 83.72 338 IAmb IAmb 06 20 52.5
comp=Z,56nm,1.2s
OK029 Liberty Lake 83.79 313 IAMs_20 IAMs_20 06 58 23.9
comp=Z,2µm,19.0s
PDSI Padang 83.82 97 P P 06 20 49.7 -1.5
comp=Z,31nm,1.0s
PDSI pP PcP 06 20 54.0 -1.2
comp=Z,31nm,1.0s
SNDB Serra Nova Dou 83.97 248 eP P 06 20 52.5 +0.6
SOR Soroa 84.01 295 IAmb IAmb 06 20 54.6
comp=Z,32nm,1.3s
MOOW Moose Ponds 84.03 326 IAmb IAmb 06 20 55.0
comp=Z,36nm,1.3s
MOOW IAMs_20 IAMs_20 06 59 47.9
comp=Z,2µm,20.0s
LOHW Long Hollow 84.08 326 IAmb IAmb 06 20 55.1
comp=Z,32nm,1.4s
LOHW IAMs_20 IAMs_20 06 57 35.3
comp=Z,2µm,20.0s
MJAR Matsushiro Arr 84.16 45 P P 06 20 52.4 -0.3
comp=Z,15nm,1.0s,baz=316,slow=5.3,SNR=10.0
MJAR LR LR 07 01 57.0
comp=Z,2µm,18.3s,baz=328,slow=38
comp=Z,15nm,1.0s
MJAR Matsushiro Arr 84.16 45 P P 06 20 52.6 0.0
MJAR IAmb IAmb 06 20 53.7
comp=Z,30nm,1.2s
MJAR Matsushiro Arr 84.16 45 P P 06 20 52.6 0.0
MJAR pmax pmax
comp=Z,30nm,1.3s
FXWY Fox Creek 84.24 326 IAmb IAmb 06 20 56.2
comp=Z,57nm,1.4s
FXWY IAMs_20 IAMs_20 06 58 50.4
comp=Z,2µm,21.0s
SNOW Snow King Moun 84.27 326 IAmb IAmb 06 20 57.3
comp=Z,25nm,0.9s
SNOW IAMs_20 IAMs_20 06 57 21.3
comp=Z,2µm,21.0s
SDV Santo Domingo 84.29 277 LR LR 06 54 07.9
comp=Z,701nm,20.7s,baz=53,slow=33
SDV Santo Domingo 84.29 277 P P 06 20 54.3 +0.5
SDV Santo Domingo 84.29 277 eP P 06 20 53.9 +0.1
BDFB Brasilia 84.31 243 LR LR 06 56 01.0
comp=Z,745nm,21.6s,baz=128,slow=34
BDFB Brasilia 84.31 243 IAmb IAmb 06 21 04.1
comp=Z,36nm,1.1s
BW06 Boulder Array 84.33 325 IAmb IAmb 06 20 55.1
comp=Z,48nm,1.4s
BW06 IAMs_20 IAMs_20 06 59 32.8
comp=Z,2µm,19.0s
PD31 Pinedale Array 84.33 325 IAmb IAmb 06 20 55.1
comp=Z,44nm,1.3s
PDAR Pinedale Array 84.33 325 P P 06 20 53.6 0.0
comp=Z,9.0nm,0.6s,baz=51,slow=4.5,SNR=58
comp=Z,9.0nm,0.6s
D08A Wollman Farm, 84.35 333 IAmb IAmb 06 21 05.9
comp=Z,28nm,1.1s
INU Inuyama 84.40 47 IAMs_20 IAMs_20 07 01 28.4
comp=Z,1µm,18.0s
BCYI Bear Canyon 84.65 328 IAmb IAmb 06 21 00.0
comp=Z,34nm,1.3s
F10A Beach Ranch, E 84.69 331 IAmb IAmb 06 20 56.7
comp=Z,33nm,1.1s
MACA Manacapuru-AM 84.76 261 IAmb IAmb 06 21 10.6
comp=Z,35nm,0.9s
MACA Manacapuru-AM 84.76 261 eP P 06 20 57.4 +1.5
ISCO Idaho Springs 84.91 321 IAmb IAmb 06 20 59.2
comp=Z,34nm,1.5s
LOOK Love County 84.97 312 IAmb IAmb 06 21 06.7
comp=Z,49nm,1.0s
PLID Pearl Lake 84.99 330 IAMs_20 IAMs_20 07 01 25.3
comp=Z,2µm,19.0s
E07A Sunnyside 85.10 333 IAmb IAmb 06 21 09.4
comp=Z,34nm,1.2s
NATX Nacogdoches 85.16 309 IAmb IAmb 06 21 00.6
comp=Z,67nm,1.3s
NATX IAMs_20 IAMs_20 06 58 05.4
comp=Z,2µm,21.0s
YPT Yellepit 85.24 332 IAmb IAmb 06 21 00.0
comp=Z,60nm,1.2s
WMOK Wichita Mounta 85.30 313 IAMs_20 IAMs_20 07 00 32.9
comp=Z,1µm,18.0s
WMOK Wichita Mounta 85.30 313 IAmb IAmb 06 21 00.9
comp=Z,49nm,1.1s
JOW Kunigami 85.34 58 LR LR 07 02 56.6
comp=Z,2µm,20.5s,baz=312,slow=38
PMNB Patos De Minas 85.35 240 eP P 06 20 59.9 +1.1
Z35A Perchaven, San 85.50 311 IAmb IAmb 06 21 01.5
comp=Z,57nm,1.1s
Z35A IAMs_20 IAMs_20 06 59 20.2
comp=Z,2µm,19.0s
HLID Hailey 85.67 328 IAMs_20 IAMs_20 06 59 53.3
comp=Z,2µm,20.0s
BMO Blue Mountains 85.68 331 IAmb IAmb 06 21 02.2
comp=Z,77nm,1.4s
SMWD Samnorwood 85.81 314 IAmb IAmb 06 21 03.5
comp=Z,43nm,1.3s
O20A White River Ci 85.86 323 IAmb IAmb 06 22 02.8
comp=Z,56nm,1.8s
O20A IAMs_20 IAMs_20 07 01 34.6
comp=Z,2µm,20.0s
FW06 Azle 85.93 311 IAmb IAmb 06 21 03.9
comp=Z,63nm,1.4s
IPMB Ipameri, GO 86.11 242 eP P 06 21 03.9 +1.3
MFID Camas Ranch 86.35 329 IAmb IAmb 06 21 14.7
comp=Z,55nm,1.1s
CLDB Colider 86.39 252 eP P 06 21 05.4 +1.4
TCUT Toone Canyon 86.47 325 IAmb IAmb 06 21 09.2
comp=Z,52nm,1.7s
G06A Carlson Farm, 86.52 333 IAmb IAmb 06 21 15.8
comp=Z,40nm,1.2s
WHTX Lake Whitney, 86.60 311 IAmb IAmb 06 21 07.1
comp=Z,57nm,1.2s
WHTX IAMs_20 IAMs_20 06 59 46.5
comp=Z,2µm,19.0s
AMTX Amarillo 86.75 315 IAMs_20 IAMs_20 07 02 00.2
comp=Z,1µm,18.0s
HOOD Mount Hood Mea 86.79 334 IAmb IAmb 06 21 16.7
comp=Z,49nm,1.3s
ARAG Araguaiana, MT 86.93 246 eP P 06 21 08.3 +1.7
APMT Aspermont 87.09 313 IAmb IAmb 06 21 09.6
comp=Z,61nm,1.6s
S22A 4UR Ranch, Cre 87.11 320 IAMs_20 IAMs_20 07 02 09.7
comp=Z,2µm,19.0s

I07A Izee 87.14 332 IAmb IAmb 06 21 10.0
comp=Z,43nm,1.4s
HKT Hockley 87.17 308 P **P** **06 21 08.3 +0.7**
HKT IAmb IAmb 06 21 10.6
comp=Z,36nm,1.2s
HKT Hockley 87.17 308 P **P** **06 21 08.3 +0.7**
HKT pmax pmax
comp=Z,36nm,1.3s
HKT MLR MLR
comp=Z,2µm,20.0s
BGU Big Grassy Mou 87.31 326 IAmb IAmb 06 21 19.3
comp=Z,27nm,1.2s
PDRB Porto dos Gac 87.56 252 *e*P **P** **06 21 11.2 +1.5**
PV04 Paradox Valley 87.57 322 IAmb IAmb 06 21 15.6
comp=Z,68nm,1.7s
PV23 Carpenter Ridg 87.57 322 IAmb IAmb 06 21 10.7
comp=Z,28nm,1.0s
PV12 Saucer Basin, 87.59 322 IAmb IAmb 06 21 10.8
comp=Z,48nm,1.3s
JHJ Hachijo jima 2 87.59 47 LR LR 07 03 43.1
comp=Z,1µm,19.0s,baz=34,slow=38
PV11 David Mesa, Pa 87.63 322 IAmb IAmb 06 21 11.6
comp=Z,52nm,1.3s
PV20 West Nyswonger 87.64 322 IAmb IAmb 06 21 22.7
comp=Z,30nm,1.0s
PV16 Nyswonger Mesa 87.64 322 IAmb IAmb 06 21 11.7
comp=Z,29nm,1.2s
PV10 Paradox Valley 87.65 322 IAmb IAmb 06 21 12.1
comp=Z,39nm,1.0s
PV03 Paradox Valley 87.66 322 IAmb IAmb 06 21 13.6
comp=Z,26nm,1.2s
PV18 Skein Mesa, Pa 87.69 322 IAmb IAmb 06 21 26.3
comp=Z,28nm,1.0s
DUG Dugway, Tooele 87.83 325 IAMs_20 IAMs_20 07 01 48.5
comp=Z,2µm,20.0s
PINE Pine Mountain 87.89 333 IAmb IAmb 06 21 14.2
comp=Z,42nm,1.3s
TEFE Tefe 87.93 264 *e*P **P** **06 21 12.3 +0.8**
WIFE Three Sisters- 87.96 333 IAmb IAmb 06 21 25.1
comp=Z,35nm,1.2s
MSTX Muleshoe 88.03 315 IAMs_20 IAMs_20 07 04 02.0
comp=Z,2µm,18.0s
WVOR Wild Horse Val 88.25 330 IAMs_20 IAMs_20 07 01 20.5
comp=Z,2µm,21.0s
MVCO Mesa Verde 88.34 321 IAMs_20 IAMs_20 07 00 39.2
comp=Z,2µm,21.0s
ELK Elko 88.38 327 LR LR 07 01 23.6
comp=Z,2µm,21.4s,baz=38,slow=36
ELK Elko 88.38 327 IAMs_20 IAMs_20 07 00 28.9
comp=Z,2µm,20.0s
J05D Fort Rock, OR 88.44 332 IAmb IAmb 06 21 25.4
comp=Z,26nm,1.0s
BB19B Bebedouro 88.52 240 *e*P **P** **06 21 15.8 +1.7**
K05A Summer Lake 88.81 332 IAmb IAmb 06 21 27.3
comp=Z,34nm,1.1s
MDSI Maura Dua 88.95 97 P **P** **06 21 14.3 -2.0**
comp=Z,1µmcomp=Z,39nm,1.4s
TCRU Three Creeks R 88.99 324 IAmb IAmb 06 21 19.9
comp=Z,34nm,1.0s
JCT Junction City 89.06 311 IAmb IAmb 06 21 18.4
comp=Z,25nm,1.2s
JCT IAMs_20 IAMs_20 07 01 39.6
comp=Z,2µm,19.0s
TGY Tagaytay City 89.09 72 LR LR 07 06 34.1
comp=Z,940nm,20.9s,baz=282,slow=39
735A Kenedy 89.13 309 IAMs_20 IAMs_20 07 03 11.6
comp=Z,2µm,19.0s
ANMO Albuquerque 89.15 318 P **P** **06 21 16.6 -0.7**
ANMO Albuquerque 89.15 318 *ce*P **P** **06 21 16.1 -1.2**
ANMO pmax pmax
comp=Z,8.0nm,1.3s
ANMO MLR MLR
comp=Z,2µm,17.0s
TASM ASL Pad, Albuq 89.16 318 IAmb IAmb 06 21 20.4
comp=Z,15nm,1.5s
TASM ASL Pad, Albuq 89.16 318 IAmb IAmb 06 21 19.7
comp=Z,15nm,1.5s
LWLI Liwa 89.21 97 P **P** **06 21 15.7 -2.0**
ODSA Odessa 89.33 314 IAmb IAmb 06 21 21.4
comp=Z,27nm,1.2s
MTPU Mount Pierson 89.34 324 IAmb IAmb 06 21 29.6
comp=Z,31nm,1.2s
OZNA Ozona 89.47 312 IAmb IAmb 06 21 28.4
comp=Z,27nm,1.0s
SPR3 Spring Creek 3 89.47 326 IAmb IAmb 06 21 22.4
comp=Z,57nm,1.4s
HNDO Hondo 89.48 310 IAmb IAmb 06 21 23.1
comp=Z,36nm,1.5s
KLSI 89.50 97 P **P** **06 21 17.9 -1.0**
comp=Z,30nm,1.5s
PSUT Pine Spring 89.66 325 IAmb IAmb 06 21 21.9
comp=Z,30nm,1.2s
ROSC El Rosal 89.70 276 P **P** **06 21 21.1 +0.7**
comp=Z,4.8nm,0.4s,baz=11,slow=5.2,SNR=4.3
ROSC LR LR 06 57 53.7
comp=Z,563nm,20.9s,baz=42,slow=33
comp=Z,4.8nm,0.4s
KLI Kotabumi 89.70 97 P **P** **06 21 18.0 -1.9**
SALV Santo Antonio 89.75 248 *e*P **P** **06 21 21.8 +1.8**
C2SB Chapadao do Su 89.77 245 *e*P **P** **06 21 22.2 +2.2**
KASI Kota Agung 89.87 97 P **P** **06 21 20.3 -0.3**
YBH Yreka Blue Hor 90.32 333 LR LR 07 05 18.6
comp=Z,157nm,18.2s,baz=39,slow=38
BLSI Bandar Lampung 90.33 97 P **P** **06 21 20.4 -2.4**
PP1B Ponte de Pedra 90.36 247 *e*P **P** **06 21 24.9 +2.2**
TPI Tanjungpandan 90.41 93 P **P** **06 21 23.2 0.0**
comp=Z,30nm,1.0s
833A Chaparral WMA, 90.45 309 IAmb IAmb 06 21 26.2
comp=Z,56nm,1.6s
M03C McCloud 90.52 332 IAmb IAmb 06 21 34.9
comp=Z,42nm,1.1s
PECS Pecos 90.62 314 IAmb IAmb 06 21 27.6
comp=Z,54nm,1.3s
SAND Sanderson 90.76 312 IAmb IAmb 06 21 27.1
comp=Z,44nm,1.4s
PAHR Pah Rah Range 90.90 330 IAmb IAmb 06 21 36.6
comp=Z,28nm,1.2s
VILB Vilhena 90.96 254 *e*P **P** **06 21 27.9 +2.2**
WUAZ Wupatki 91.06 322 IAmb IAmb 06 21 37.9
comp=Z,24nm,1.1s
WUAZ IAMs_20 IAMs_20 07 04 01.0
comp=Z,1µm,20.0s
PRN Pahroc Range 91.12 325 IAmb IAmb 06 21 38.7
comp=Z,22nm,1.2s
MNTX Cornudas Mount 91.17 316 IAmb IAmb 06 21 27.9
comp=Z,28nm,1.4s
MNTX IAMs_20 IAMs_20 07 04 17.1
comp=Z,1µm,18.0s
ALPN Alpine 91.27 314 IAmb IAmb 06 21 30.7
comp=Z,35nm,1.1s
O03E Paynes Creek 91.28 331 IAmb IAmb 06 21 46.2
comp=Z,38nm,1.4s
SIUN Universidad Ur 91.39 290 IAmb IAmb 06 21 31.5
comp=Z,20nm,1.1s
KHBM Hayfork Bally 91.45 333 IAmb IAmb 06 21 33.4
comp=Z,36nm,1.2s
SBJI Serang 91.48 97 P **P** **06 21 26.1 -2.0**
MPK Martis Peak 91.50 330 IAmb IAmb 06 21 31.4
comp=Z,48nm,1.3s
NVAR Mina Array Bea 91.58 328 P **P** **06 21 28.8 +0.2**
comp=Z,1.3nm,0.7s,baz=27,slow=4.9,SNR=8.7
NVAR PKKPbc **PKKPbc** **06 38 47.5 +0.5**
comp=Z,1.4nm,1.1s,baz=180,slow=1.5,SNR=3.6
NVAR LR LR 07 05 54.3
comp=Z,1µm,18.2s,baz=38,slow=38
comp=Z,1.3nm,0.7s
NVAR Mina Array Bea 91.58 328 P **P** **06 21 29.1 +0.5**
EPT El Paso 91.69 316 IAMs_20 IAMs_20 07 04 27.1
comp=Z,2µm,18.0s
LHV Little Huntoon 91.81 328 IAmb IAmb 06 21 32.9
comp=Z,33nm,1.2s
ORV Oroville 91.82 331 IAmb IAmb 06 21 40.5
comp=Z,26nm,1.4s
ORV IAMs_20 IAMs_20 07 04 01.9
comp=Z,2µm,19.0s
PTLB Pontes e Lacer 91.87 251 IAmb IAmb 06 21 33.0
comp=Z,32nm,1.4s
PTLB Pontes e Lacer 91.87 251 *e*P **P** **06 21 30.5 +0.7**
WAKR Walker 91.96 329 IAmb IAmb 06 22 01.2
comp=Z,29nm,1.5s
TPNV Topopah Spring 92.01 326 IAMs_20 IAMs_20 07 04 45.2
comp=Z,1µm,18.0s
TX31 Lajitas Ar. Si 92.09 313 IAmb IAmb 06 21 33.3
comp=Z,42nm,1.2s
TXAR Lajitas Array 92.09 313 P **P** **06 21 31.7 +0.7**
comp=Z,12nm,1.0s,baz=66,slow=4.3,SNR=70
comp=Z,12nm,1.0s
ESPN Las Esperanzas 92.09 288 IAmb IAmb 06 21 33.2
comp=Z,52nm,1.5s
SUTB Sutter Butte 92.21 331 IAMs_20 IAMs_20 07 04 13.3
comp=Z,1µm,22.0s
DSP Deep Springs 92.36 327 IAmb IAmb 06 21 34.7
comp=Z,27nm,1.6s
V12A Nelson 92.45 324 IAmb IAmb 06 21 34.9
comp=Z,37nm,1.5s
WELL Weller Preserv 92.51 330 IAMs_20 IAMs_20 07 04 33.2
comp=Z,2µm,18.0s
FURC Furnace Creek, 92.68 326 IAmb IAmb 06 21 47.1
comp=Z,35nm,1.4s
FURC IAMs_20 IAMs_20 07 04 22.8
comp=Z,2µm,22.0s
PETF Flores 92.71 295 IAmb IAmb 06 21 34.9
comp=Z,16nm,1.1s
TIN Tinemaha, Big 92.74 327 IAMs_20 IAMs_20 07 04 04.4
comp=Z,2µm,20.0s
FLOC Florencia 92.84 275 IAmb IAmb 06 21 51.2
comp=Z,30nm,1.3s
MYLDM Lahad Datu 93.29 80 IAMs_20 IAMs_20 07 10 55.3
comp=Z,1µm,20.0s
TUC Tucson 93.41 320 P **P** **06 21 37.7 +0.8**
TUC IAmb IAmb 06 21 39.3
comp=Z,22nm,1.5s
TUC Tucson 93.41 320 P **P** **06 21 37.7 +0.8**
TUC pmax pmax
comp=Z,22nm,1.5s
TUC MLR MLR
comp=Z,2µm,18.0s
JCJ Chichijima 93.53 49 LR LR 07 08 35.4
comp=Z,1µm,18.2s,baz=334,slow=39
DANC Danby, Needles 93.60 324 IAMs_20 IAMs_20 07 01 33.2
comp=Z,2µm,22.0s
SIV San Ignacio 93.61 252 P **P** **06 21 38.9 +1.0**
comp=Z,8.1nm,1.2s,baz=94,slow=6.6
comp=Z,8.1nm,1.2s
WSHM Spangler Hills 93.69 326 IAMs_20 IAMs_20 07 06 02.4
comp=Z,1µm,18.0s
IRM Iron Mountain 93.90 324 IAmb IAmb 06 21 41.5
comp=Z,30nm,1.6s
IRM IAMs_20 IAMs_20 07 07 55.2
comp=Z,2µm,19.0s
BLYC Blythe 93.96 323 IAmb IAmb 06 21 41.7
comp=Z,29nm,1.6s
JRSC Jasper Ridge 93.99 330 IAMs_20 IAMs_20 07 02 16.3
comp=Z,2µm,22.0s
ISA Isabella, Lake 94.04 327 IAMs_20 IAMs_20 07 05 39.7
comp=Z,2µm,21.0s
MTO3 Montecristo 94.13 293 IAmb IAmb 06 21 42.5
comp=Z,23nm,1.3s
VES Vestal, Richgr 94.13 327 IAMs_20 IAMs_20 07 06 34.2
comp=Z,1µm,20.0s
BC3 Big Chuckawall 94.46 324 IAMs_20 IAMs_20 07 06 42.0
comp=Z,1µm,20.0s
GLA Glamis 94.69 323 IAMs_20 IAMs_20 07 06 00.1
comp=Z,2µm,19.0s
PFO Pinyon Flats O 94.94 324 LR LR 07 07 19.8
comp=Z,1µm,18.5s,baz=32,slow=37
PFO Pinyon Flats O 94.94 324 P **P** **06 21 44.2 +0.2**
PFO Pinyon Flats O 94.94 324 P **P** **06 21 44.2 +0.2**
PFO pmax pmax
comp=Z,10.0nm,1.0s
OTAV Otavalo 95.82 275 P **P** **06 21 48.8 +0.1**
OTAV IAmb IAmb 06 21 52.2
comp=Z,19nm,1.3s
OTAV Otavalo 95.82 275 P **P** **06 21 48.8 +0.1**
OTAV pmax pmax
comp=Z,19nm,1.3s
OTAV Otavalo 95.82 275 *e*P **P** **06 21 49.0 +0.3**
BAR Barrett 95.83 324 IAmb IAmb 06 21 50.0
comp=Z,18nm,1.2s
CPE Camp Elliot 95.84 324 IAMs_20 IAMs_20 07 07 56.5
comp=Z,1µm,20.0s
CMIG Matias Romero 95.94 299 LR LR 07 05 29.9
comp=Z,870nm,19.2s,baz=24,slow=36
DAV Davao City (W) 97.19 74 LR LR 07 12 30.5
comp=Z,921nm,19.5s,baz=342,slow=40
MPSI Mapaga 97.54 83 P **P** **06 21 54.7 -1.2**
CPUP Villa Florida 97.96 242 LR LR 07 08 35.9
comp=Z,615nm,18.6s,baz=276,slow=37
LPAZ La Paz 98.90 256 P **P** **06 22 02.5 -0.2**
comp=Z,0.3nm,0.5s,baz=0.0,slow=8.1,SNR=1.4
LPAZ LR LR 07 07 30.4
comp=Z,377nm,18.6s,baz=48,slow=36
comp=Z,0.3nm,0.5s
LPIG La Paz 99.83 315 LR LR 07 08 39.0
comp=Z,1µm,20.0s,baz=36,slow=36
PB16 IPOC Station P 101.22 256 IAMs_20 IAMs_20 07 13 25.3
comp=Z,913nm,20.0s
PB08 IPOC Station P 102.12 254 IAMs_20 IAMs_20 07 11 18.1
comp=Z,792nm,20.0s
TRQA Tornquist 108.56 235 IAMs_20 IAMs_20 07 11 22.7
comp=Z,1µm,20.0s
NVL N'lazarevskaya 112.16 183 *i* PKIKP **PKiKP** **06 26 59.7 +4.1**
NVL *e* 06 27 44.1
NVL *e*PPP PPP 06 30 05.8
NVL *e*SS SS 06 43 24.4 +6.0
NVL *e*SSS SSS 06 47 34.8
NVL pmax pmax
comp=Z,8.0nm,0.6s
NVL MLR MLR
comp=Z,1µm,19.0s
FITZ Fitzroy Crossi 113.72 94 PKiKP **PKiKP** **06 26 59.1 -1.1**
comp=Z,3.7nm,0.9s,baz=271,slow=5.4,SNR=5.2
SNAA Sanae 114.05 188 PKP PKPdf 06 26 59.3 0.0
comp=Z,1.6nm,1.1s,baz=243,slow=2.3,SNR=3.2
SNAA Sanae 114.05 188 IAMs_20 IAMs_20 07 20 19.1
comp=Z,938nm,18.0s
PLCA Paso Flores 115.49 237 PKP **PKiKP** **06 27 03.4 +0.4**
comp=Z,1.9nm,1.0s,baz=24,slow=5.8,SNR=3.5
WRA Warramunga Arr 121.36 90 PKP **PKPdf** **06 27 13.8 -1.1**
comp=Z,3.3nm,0.9s,baz=326,slow=2.0,SNR=14
WRA PP PP 06 28 37.2 -9.1
comp=Z,2.4nm,0.9s,baz=313,slow=6.1,SNR=5.6
WRA PKKPab **PKKPab** **06 37 16.6 +0.4**
comp=Z,0.5nm,0.7s,baz=120,slow=3.7,SNR=4.9
ASAR Alice Springs 123.22 93 PKP **PKPdf** **06 27 17.6 -0.8**
comp=Z,6.4nm,0.6s,baz=310,slow=1.5,SNR=49
ASAR PP **PP** **06 29 00.0 +1.0**
comp=Z,1.5nm,0.9s,baz=306,slow=6.0,SNR=4.3
ASAR PKKPbc **PKKPab** **06 37 08.7 +0.6**
comp=Z,0.2nm,0.7s,baz=107,slow=4.0,SNR=2.7
BELA Belgrano 2 123.58 192 **PKPdf** **06 27 17.4 -0.1**
COEN Coen 124.20 78 **PKPdf** **06 27 18.6 -1.9**
CTAO Charters Tower 130.35 81 **PKiKP** **06 27 32.8 -0.1**
CTAO Charters Tower 130.35 81 PKiKP **PKiKP** **06 27 32.8 -0.1**
QSPA South Pole Qui 131.42 180 PKP **PKiKP** **06 27 35.0 +1.4**
comp=Z,6.5nm,0.9s,baz=272,slow=0.7,SNR=11
QSPA SKPbc **SKPab** **06 30 59.9 +2.7**
comp=Z,5.7nm,1.1s,baz=259,slow=6.7,SNR=6.4
QSPA South Pole Qui 131.42 180 **PKiKP** **06 27 36.0 +2.3**
STKA Stephens Creek 133.34 98 PKP **PKPdf** **06 27 37.0 -0.4**
comp=Z,4.1nm,0.7s,baz=14,slow=6.1,SNR=4.8
RTZ Ruatahuna 162.51 88 **PKPab** **06 29 09.8 -1.3**

*IDC **26** 06:09:09.6±0.8, 34.00N×133.11E, h0km, mb4.1/10, mbtmp4.1/16, MLM3.7/5, Error ellipse: s-maj=17.1km s-min=14.6km az=124.0*
*NIED **26** 06:09:11.0, 34.05N×133.07E, h16km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr-0.54; Mθθ4.02; Mφφ-3.48; Mrθ0.57; Mθφ-3.31; Mφr2.75; Fault plane solution: M0 5.71000×10^15^ NP1: φs249.00000°, δ68.00000°, λ-164.00000°. NP2: φs153.00000°, δ75.00000°, λ-23.00000°.*
*JMA **26** 06:09:11.0±0.0, 34.05N±0.0, 133.1E±0.0, h16km, MD4.6/20, MW4.5/20, HIUCHINADA SETONAIKAI*
JMA Felt IV J1 at HIUCHINADA SETONAIKAI .
*NEIC **26** 06:09:13.3±1.9, 33.97N±0.07×133.16E±0.06, h20km±5km, mb4.6/22, Error ellipse: s-maj=9.8km s-min=6.9km az=161.0*
ISC 26 06:09:11.3±1.1, 34.04N±0.03×133.08E±0.03, h7km±8km, n98, σ1.8 11/64, mb4.5/21, 3D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JET	**Tanbara**	**0.27**	**185**	*e*P		**Pg**	**06 09 16.8**	**+0.3**
JET				*e*S		**Sg**	**06 09 20.8**	**+0.8**
JET	**Tanbara**	**0.27**	**185**	A		A	06 09 16.8	
	comp=N,76nm,0.3s,comp=E,139nm,0.3s							
JJG	**Jouge**	**0.60**	**6**	*i* P		**Pg**	**06 09 22.6**	**-0.3**
JJG	**Jouge**	**0.60**	**6**	A		A	06 09 22.6	
	comp=N,32nm,0.7s,comp=E,25nm,3.0s							
JKHR	**Kochiharuno**	**0.64**	**146**	A		A	06 09 23.4	
	comp=N,63nm,0.5s,comp=E,150nm,0.5s							
JNA	**Nagahama**	**0.69**	**226**	*i* P		**Pg**	**06 09 24.1**	**-0.6**
JNA				*e*S		**Sg**	**06 09 33.4**	**-0.3**
JNA	**Nagahama**	**0.69**	**226**	A		A	06 09 24.1	
	comp=N,11nm,1.3s,comp=E,13nm,3.6s							
JKU	**Kubokawa**	**0.73**	**181**	P		**Pg**	**06 09 25.2**	**-0.2**
JKU	**Kubokawa**	**0.73**	**181**	A		A	06 09 25.2	
	comp=N,15nm,1.3s,comp=E,39nm,1.4s							
JMN	**Monobe**	**0.74**	**115**			**Pg**	**06 09 25.3**	**-0.2**
JMN					Sg	**Sb**	**06 09 34.9**	**-1.9**
JMN	**Monobe**	**0.74**	**115**	⇓*i* P		**Pg**	**06 09 25.4**	**-0.2**
JMN	**Monobe**	**0.74**	**115**	A		A	06 09 25.4	
	comp=N,51nm,1.2s,comp=E,46nm,1.0s							
JJS	**Sakaide**	**0.78**	**65**	*i* P		**Pg**	**06 09 25.4**	**-0.9**
JJS				*e*S		**Sg**	**06 09 35.8**	**-0.7**
JJS	**Sakaide**	**0.78**	**65**	A		A	06 09 25.4	
	comp=N,42nm,0.7s,comp=E,35nm,0.6s							
JHT	**Toyohira**	**0.82**	**319**	⇓*i* P		**Pg**	**06 09 26.1**	**-0.9**
JHT				⇓*e*S		**Sg**	**06 09 37.2**	**-0.6**
JHT	**Toyohira**	**0.82**	**319**	A		A	06 09 26.1	
	comp=N,25nm,1.4s,comp=E,31nm,1.1s							
JMAF	**Mimaanabuki**	**0.89**	**90**	A		A	06 09 27.9	
	comp=N,20nm,2.0s,comp=E,14nm,0.7s							
UWA2	**Uwa jima 2**	**0.91**	**205**	P		**Pg**	**06 09 28.3**	**-0.4**
UWA2	**Uwa jima 2**	**0.91**	**205**	A		A	06 09 28.3	
	comp=N,11nm,3.5s,comp=E,12nm,6.0s							
JHIK	**Hikimi**	**1.07**	**297**	A		A	06 09 30.6	
	comp=N,17nm,0.6s,comp=E,16nm,1.1s							
JGT2	**ShimaneMisato**	**1.12**	**335**	A		A	06 09 31.5	
	comp=N,15nm,1.1s,comp=E,34nm,1.8s							
JTO	**Tosashimizu**	**1.20**	**191**	A		A	06 09 32.9	
	comp=N,19nm,1.4s,comp=E,11nm,4.8s							
JKI	**Kunimi**	**1.32**	**252**	A		A	06 09 34.6	
	comp=N,38nm,0.7s,comp=E,34nm,1.3s							
JNM	**Ikuma**	**1.45**	**359**	A		A	06 09 36.8	
	comp=N,51nm,1.0s,comp=E,38nm,2.0s							
JISK	**Izumosakaura**	**1.47**	**353**	A		A	06 09 37.0	
	comp=N,51nm,0.9s,comp=E,37nm,1.6s							
JUS	**Usuki**	**1.48**	**229**	A		A	06 09 37.1	
	comp=N,16nm,2.7s,comp=E,20nm,1.9s							
JBEP	**Beppuamama**	**1.56**	**244**	A		A	06 09 38.4	
	comp=N,33nm,4.8s,comp=E,41nm,0.6s							
JAWN	**Awajishima-nag**	**1.58**	**73**	A		A	06 09 38.8	
	comp=N,38nm,1.2s,comp=E,12nm,0.8s							
JSKE	**Saikikamae**	**1.58**	**219**	A		A	06 09 38.8	
	comp=N,11nm,1.6s,comp=E,18nm,1.8s							
JTY	**Toyota**	**1.68**	**278**	A		A	06 09 40.2	
	comp=N,7.0nm,5.9s,comp=E,16nm,1.1s							
JKS	**Kasai**	**1.73**	**57**	A		A	06 09 41.2	
	comp=N,22nm,1.2s,comp=E,11nm,1.6s							
JHGM	**Hagimishima**	**1.76**	**295**	A		A	06 09 41.2	
	comp=N,16nm,0.6s,comp=E,13nm,1.9s							
JMIK	**Miki**	**1.80**	**64**	A		A	06 09 42.2	
	comp=N,31nm,0.9s,comp=E,21nm,0.6s							
JWM	**Minabe**	**1.91**	**95**	A		A	06 09 43.7	
	comp=N,14nm,0.9s,comp=E,9.0nm,1.5s							
JKIT	**Kitakata**	**1.96**	**224**	A		A	06 09 44.2	
	comp=N,6.0nm,4.3s,comp=E,8.0nm,7.3s							
JKSM	**Kasumi**	**2.02**	**40**	A		A	06 09 45.2	
	comp=N,10.0nm,2.0s,comp=E,10.0nm,8.1s							
JNU	**Nakatsue**	**2.05**	**244**	Pn		**Pn**	**06 09 46.2**	**-0.1**
	comp=E,101nm,0.3s,baz=55,slow=4.2,SNR=173							
JNU					Sn	**Sn**	**06 10 12.8**	**+0.7**
	comp=E,54nm,0.3s,baz=69,slow=21,SNR=7.5 comp=E,394nm,0.3s							
JNU	**Nakatsue**	**2.05**	**244**			**Pn**	**06 09 45.9**	**-0.3**
JNU	**Nakatsue**	**2.05**	**244**	A		A	06 09 45.5	
	comp=N,7.0nm,6.2s,comp=E,8.0nm,2.6s							
JTNC	**Tanabenakahech**	**2.12**	**95**	A		A	06 09 46.8	
	comp=N,11nm,2.3s,comp=E,13nm,1.0s							
JTSN	**Tsuno**	**2.23**	**217**	A		A	06 09 48.0	
	comp=N,6.0nm,2.9s,comp=E,8.0nm,2.2s							
JWT	**Wachi**	**2.28**	**57**	A		A	06 09 49.0	
	comp=N,13nm,7.4s,comp=E,8.0nm,6.2s							
JKY	**Yasaka**	**2.30**	**46**	A		A	06 09 49.2	
	comp=N,14nm,4.0s,comp=E,12nm,1.0s							
JWKM	**Wakayamakushim**	**2.31**	**104**	A		A	06 09 49.5	
	comp=N,9.0nm,2.6s,comp=E,14nm,1.7s							
JFI	**Itaya**	**2.32**	**255**	A		A	06 09 49.5	
	comp=N,8.0nm,4.7s,comp=E,4.0nm,4.8s							
JNTK	**Naratenkawa**	**2.34**	**84**	A		A	06 09 50.0	
	comp=N,13nm,5.4s,comp=E,9.0nm,2.7s							
JTA	**Tamana**	**2.38**	**244**	A		A	06 09 50.4	
	comp=N,5.0nm,1.7s,comp=E,5.0nm,1.3s							
JNKG	**Nichinankitago**	**2.77**	**212**	A		A	06 09 56.0	
	comp=N,9.0nm,3.0s,comp=E,8.0nm,4.3s							
JFM	**Mihama**	**2.81**	**57**	A		A	06 09 56.8	
	comp=N,8.0nm,0.8s,comp=E,6.0nm,1.4s							
INU	**Inuyama**	**3.50**	**67**	Pn		**Pn**	**06 10 05.9**	**-0.2**
JGF	**Kuroka**	**3.85**	**65**	Pn		**Pn**	**06 10 09.7**	**-1.2**
JSG	**Sagara**	**4.27**	**80**	Pn		Pn	06 10 11.3	-5.4
MAJO	**Matsushiro**	**4.88**	**58**			**Pn**	**06 10 25.8**	**+0.6**
MJB9	**Matsu-Tunnel**	**4.88**	**58**	Pn		**Pn**	**06 10 26.4**	**+1.3**
MJAR	**Matsushiro Arr**	**4.88**	**58**	Pn		**Pn**	**06 10 26.4**	**+1.2**
	comp=E,0.7nm,0.3s,baz=239,slow=13,SNR=15							
MJAR					Lg	Lg	06 11 43.2	
	comp=E,1.3nm,0.3s,baz=233,slow=30,SNR=9.0 comp=E,7.7nm,0.4s							
KSRS	**Korea Array**	**5.40**	**311**	Pn		**Pn**	**06 10 33.5**	**+1.3**
	comp=E,1.7nm,0.3s,baz=124,slow=14,SNR=13							
KSRS					Sn	**Sn**	**06 11 35.0**	**+0.5**
	comp=E,6.3nm,0.3s,baz=128,slow=25,SNR=6.2 comp=E,4.1nm,0.4s							
KSAR	**Wonju Array Be**	**5.41**	**310**	Pn		**Pn**	**06 10 33.1**	**+0.7**
KS19	**Wonju Array Si**	**5.46**	**311**	Pn		**Pn**	**06 10 33.2**	**+0.1**
JSD	**Sado**	**5.79**	**45**	Pn		**Pn**	**06 10 37.7**	**+0.1**
JTM	**Tenmabayashi**	**9.26**	**41**	Pn		**Pn**	**06 11 29.5**	**+4.4**
USRK	**Ussuriysk Ar.**	**10.18**	**356**	Pn		**Pn**	**06 11 39.1**	**+1.4**
	comp=E,0.5nm,0.3s,baz=180,slow=13,SNR=13 comp=E,6.8nm,0.7s							
ASAJ	**Asahikawa**	**12.47**	**33**	Pn		**Pn**	**06 12 10.6**	**+1.4**
	comp=E,0.6nm,0.3s,baz=211,slow=19,SNR=1.8 comp=E,6.1nm,0.8s							
JKA	**Kamikawa-asahi**	**12.48**	**33**			**Pn**	**06 12 10.6**	**+1.4**
BJT	**Baijiatuau**	**14.75**	**299**			**P**	**06 12 48.2**	**+1.7**
HILR	**Hailar Array B**	**18.36**	**332**	P		**P**	**06 13 27.2**	**+0.7**
	comp=E,0.7nm,0.4s,baz=118,slow=15,SNR=2.6							
ULN	**Ulaanbaatar**	**23.88**	**313**			**P**	**06 14 27.8**	**+2.3**
LZDM	**Lanzhou Array**	**24.11**	**283**	P		**P**	**06 14 27.1**	**-0.9**
	comp=E,1.2nm,0.3s,baz=101,slow=15,SNR=1.7 comp=E,1.2nm,0.3s							
SONM	**Songino Array**	**24.26**	**313**	P		**P**	**06 14 29.3**	**+0.2**
	comp=E,3.9nm,0.9s,baz=129,slow=9.6,SNR=11 comp=E,3.9nm,0.9s							
K17K	**Iditarod**	**50.65**	**34**	P		**P**	**06 18 11.5**	**+0.7**
K17K					IAmb	IAmb	06 18 25.6	
	comp=Z,10nm,1.1s							
N17K	**Nushagak Hills**	**51.20**	**37**	P		**P**	**06 18 16.1**	**+1.1**
N17K					IAmb	IAmb	06 18 19.2	
	comp=Z,11nm,1.2s							
H19K	**Roundabout Mou**	**51.52**	**30**	P		**P**	**06 18 17.1**	**-0.2**
H19K					IAmb	IAmb	06 18 40.9	
	comp=Z,7.1nm,1.0s							
J19K	**Poorman**	**51.87**	**32**	P		**P**	**06 18 20.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**52.33**	**189**	P		**P**	**06 18 23.0**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=20,slow=6.9,SNR=7.5 comp=Z,2.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**52.33**	**189**	P		**P**	**06 18 23.1**	**-0.8**
J20K	**Nowinta River**	**52.51**	**32**	P		**P**	**06 18 24.9**	**+0.2**
J20K					IAmb	IAmb	06 18 29.4	
	comp=Z,8.3nm,1.2s							
D22K	**Ayikyak River**	**53.05**	**26**	P		**P**	**06 18 28.9**	**+0.2**
D22K					IAmb	IAmb	06 18 39.0	
	comp=Z,9.8nm,1.2s							
WRA	**Warramunga Arr**	**53.70**	**179**	P		**P**	**06 18 32.3**	**-1.6**
	comp=Z,1.9nm,1.1s,baz=351,slow=7.2,SNR=5.5 comp=Z,1.9nm,1.1s							
WRA	**Warramunga Arr**	**53.70**	**179**	IAmb		IAmb	06 18 34.1	
	comp=Z,0.4nm,1.1s							
KTH	**Kantishna Hill**	**53.97**	**32**	P		**P**	**06 18 35.9**	**+0.3**
KTH					IAmb	IAmb	06 18 37.2	
	comp=Z,7.8nm,1.2s							
L22K	**Petersville**	**54.14**	**34**	P		**P**	**06 18 36.5**	**-0.3**
L22K					IAmb	IAmb	06 18 48.9	
	comp=Z,6.6nm,1.2s							
H23K	**Yukon River**	**54.37**	**30**	P		**P**	**06 18 39.0**	**+0.5**
H23K					IAmb	IAmb	06 18 45.7	
	comp=Z,4.8nm,0.9s							
AB31	**Akbulak array**	**54.63**	**310**	P		**P

SCRK	**Sand Creek**	**56.97**	**31**	P	**P**	06 18 56.7	**-0.5**
SCRK				IAmb	IAmb	06 19 08.5	
	comp=Z,7.9nm,1.2s						
D27M	**Malcolm River**	**57.22**	**25**	P	**P**	**06 18 59.3**	**+0.5**
ASAR	**Alice Springs**	**57.40**	**179**	P	**P**	**06 19 00.3**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=11,slow=14,SNR=4.5						
	comp=Z,0.6nm,1.0s						
I28M	**Miner Creek**	**58.37**	**29**	P	**P**	**06 19 07.9**	**+0.9**
I28M				IAmb	IAmb	06 19 23.3	
	comp=Z,5.8nm,1.1s						
KBZ	**Khabaz**	**67.54**	**308**	P	**P**	**06 20 10.1**	**+1.9**
	comp=Z,5.3nm,0.8s,baz=38,slow=4.8,SNR=3.5						
	comp=Z,5.3nm,0.8s						
FINES	**FINESS Array B**	**68.16**	**330**	P	**P**	**06 20 09.7**	**-2.1**
	comp=Z,4.2nm,0.9s,baz=50,slow=10,SNR=3.3						
	comp=Z,4.2nm,0.9s						
AKASG	**Malin Array Be**	**72.32**	**320**	P	**P**	**06 20 36.2**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=54,slow=6.3,SNR=4.3						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**72.32**	**320**	IAmb	IAmb	06 20 43.3	
	comp=Z,5.9nm,1.3s						
ILON	**Igloolik, Nuna**	**73.75**	**12**	P	**P**	**06 20 45.0**	**-0.7**
BRTR	**Keskin Array B**	**75.54**	**308**	P	**P**	**06 20 55.8**	**-1.0**
	comp=Z,4.0nm,1.1s,baz=94,slow=3.7,SNR=5.7						
	comp=Z,4.0nm,1.1s						
BURAR	**Bucovina Array**	**76.23**	**318**	P	**P**	**06 21 00.4**	**-0.1**
CLL	**Collm**	**80.06**	**327**	*e*P	**P**	**06 21 23.0**	**+1.5**

DJA 26 06:15:25.6±0.2, 8°S±4°×11°7E±°, h10km, M3.9/12**, mb4.2**/2**, MLv3.7**/12**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**0.49**	**140**	P	Pb	06 15 36.0	-0.4
TWSI				S	Sb	06 15 43.2	-0.5
PLAI	**Plampang**	**1.29**	**111**	P	Pn	06 15 49.7	0.0
PLAI				S	Sb	06 16 06.7	+0.1
SRBI	**Singaraja**	**1.36**	**281**	P	Pn	06 15 50.0	-0.7
SRBI				S	Sb	06 16 08.3	-0.4
DNP	**Denpasar**	**1.37**	**257**	P	Pn	06 15 50.9	+0.1
IGBI	**Denpasar**	**1.47**	**252**	P	Pn	06 15 51.8	-0.4
JAGI	**Jajag, Banyuwa**	**2.38**	**267**	P	Pn	06 16 04.0	-0.8
WBSI	**Waikabubak, Su**	**3.07**	**115**	P	Pn	06 16 13.7	-0.6
BSSI	**Bau Bau, Buton**	**4.48**	**61**	P	Pn	06 16 33.2	-0.4
BKSI	**Bulukumba**	**4.65**	**50**	P	Pn	06 16 35.5	-0.4
EDFI	**Ende, Flores**	**5.09**	**95**	P	Pn	06 16 42.8	+0.7
	0.1nm15nm,0.7s						
PCJI	**Pacitan**	**5.33**	**271**	P	Pn	06 16 45.0	-0.3

*IDC **26** 06:20:08.5±2.4, 41°.12N×19°.13E, h0km, mb3.8/8, mbtmp3.9/12, ML3.5/3, Error ellipse: s-maj=37.9km s-min=17.4km az=21.0*
*SKO **26** 06:20:15.4, 41°.52N×19°.42E, h0km, ML3.7*
*PRU **26** 06:20:15.3, 41°.33N×19°.30E, h10km*
*NAO **26** 06:20:15.7, 41°.64N×18°.87E, h10km, MB3.9*
*TIR **26** 06:20:16.4, 41°.58N×19°.69E, h25km±5km, Ml3.9/3*
*RHSSO **26** 06:20:16.3±0.9, 41°.47N×19°.28E, h11km±4km, ML3.9/6*
*THE **26** 06:20:16.4, 41°.N±18°×1°9E±2°.1, h89km±32km, M3.7/8, MLh3.7/8*

ISC 26 06:20:15.8±0.8, 41°.53N±0°.03×19°.45E±0°.03, h21km±3km, n97, σ1s78/129, mb4.1/5, 17C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.36**	**121**	Pg	Pb	06 20 22.1	-1.3
TIR				S	**Sb**	**06 20 26.3**	**-2.4**
TIR				AML	AML	06 20 26.4	
	65nm,0.4s						
TIR	**Tirane**	**0.36**	**121**	*i* Pg	Pb	06 20 22.2	-1.3
TIR				*i* Sg	**Sb**	**06 20 27.4**	**-1.3**
SDA	**Shkodra**	**0.52**	**4**	Pg	**Pb**	**06 20 25.9**	**-0.4**
SDA				Sg	**Sb**	**06 20 33.5**	**0.0**
PHP	**Peshkopia**	**0.76**	**78**	Pg	Pn	06 20 28.0	-3.3
PHP				S	Sb	06 20 35.5	-4.8
PHP				AML	AML	06 20 44.1	
	22nm,0.6s						
PHP	**Peshkopia**	**0.76**	**78**	P	Pn	06 20 27.8	-3.6
PDG	**Podgorica**	**0.91**	**351**	Pg	**Pn**	**06 20 33.8**	**+0.5**
PDG				Sg	**Sn**	**06 20 47.6**	**+1.8**
PDG				AML	AML	06 20 52.3	
	35µm,0.2s						
PDG	**Podgorica**	**0.91**	**351**	⇑P	**Pn**	**06 20 33.8**	**+0.5**
PDG				⇓S	**Sb**	**06 20 45.4**	**+0.8**
VLO	**Vlora**	**1.06**	**178**	P	**Pn**	**06 20 36.1**	**+0.6**
OHR	**Ohrid**	**1.10**	**112**	*i* Pg	**Pn**	**06 20 35.7**	**-0.3**
OHR				*i* Sg	**Sn**	**06 20 50.5**	**-0.1**
OHR				*e*Lg	Lg	06 20 52.1	
	comp=N,2µm,0.8s						
OHR				*e*Lg	Lg	06 20 54.3	
	comp=E,180nm,0.0s						
KBN	**Korca**	**1.36**	**132**	P	**Pn**	**06 20 41.1**	**+1.5**
KBN				S	**Sn**	**06 20 59.8**	**+2.8**
TREB	**Trebinje**	**1.44**	**326**	⇑*i* Pg	**Pn**	**06 20 41.6**	**+0.9**
TREB				*e*Sg	**Sb**	**06 21 01.4**	**+1.6**
SKO	**Skopje**	**1.55**	**73**	*i* Pg	**Pn**	**06 20 43.8**	**+1.6**
SKO				*i* Sg	**Sn**	**06 21 05.8**	**+4.1**
NEST	**Nestorio**	**1.65**	**132**	P	**Pn**	**06 20 45.5**	**+1.9**
NEST				S	**Sn**	**06 21 07.0**	**+2.9**
KLINJ	**Klinje**	**1.76**	**339**	*e*Pn	**Pn**	**06 20 46.9**	**+1.8**
KLINJ				*e*Sn	**Sb**	**06 21 10.1**	**+1.0**
NOCI	**Noci**	**1.95**	**248**	Pn	**Pb**	**06 20 52.4**	**+1.7**
RUDO	**Rudo**	**2.09**	**358**	*e*Pn	**Pn**	**06 20 51.9**	**+2.3**
RUDO				*e*Sn	**Sb**	**06 21 18.8**	**+0.4**
KZN	**Kozani**	**2.14**	**124**	P	**Pn**	**06 20 52.4**	**+2.0**
KZN				S	**Sn**	**06 21 18.8**	**+2.5**
JAN	**Janina**	**2.15**	**150**	P	**Pb**	**06 20 56.1**	**+1.9**
MATE	**Matera**	**2.26**	**248**	⇑P	**Pb**	**06 20 57.8**	**+2.0**
GRG	**Griva**	**2.30**	**104**	P	**Pn**	**06 20 53.3**	**+0.8**
KNT	**Kendrikon**	**2.62**	**97**	P	**Pn**	**06 20 58.2**	**+1.3**
KNT	**Kendrikon**	**2.62**	**97**	*i* Pn	**Pn**	**06 20 58.4**	**+1.5**
BOVS	**Bovan**	**2.68**	**38**	⇓P	**Pn**	**06 20 59.3**	**+1.6**
KKB	**Krupnik**	**2.77**	**82**	P	**Pn**	**06 21 00.6**	**+1.6**
KKB	**Krupnik**	**2.77**	**82**	P	**Pn**	**06 21 00.8**	**+1.8**
KKB	**Krupnik**	**2.77**	**82**	*i* Pn	**Pn**	**06 21 00.8**	**+1.8**
SGRT	**San Giovanni R**	**2.79**	**276**	P	**Pb**	**06 21 04.1**	**-0.9**
THE	**Thessaloniki**	**2.80**	**108**	*i* Pn	**Pn**	**06 21 00.2**	**+0.8**
TSLK	**Tsoukalades, L**	**2.86**	**161**	P	**Pn**	**06 21 00.4**	**+0.2**
LKD2	**Lefkada island**	**2.89**	**161**	P	**Pn**	**06 21 00.5**	**-0.1**
NYDR	**Nydri-Lefkada**	**2.97**	**161**	P	**Pn**	**06 21 01.6**	**-0.1**
VTS	**Vitosha**	**3.02**	**68**	P	**Pn**	**06 21 03.6**	**+1.1**
SOH	**Sokhos**	**3.03**	**102**	*i* Pn	**Pn**	**06 21 03.4**	**+0.9**
PLNA	**Plana**	**3.11**	**71**	P	**Pn**	**06 21 05.1**	**+1.4**
BLSH	**Balsha**	**3.14**	**64**	P	**Pn**	**06 21 07.1**	**+3.0**
SRS	**Serrai**	**3.15**	**96**	P	**Pn**	**06 21 04.6**	**+0.5**
SRS	**Serrai**	**3.15**	**96**	*i* Pn	**Pn**	**06 21 04.9**	**+0.8**
FSK	**Fiskardo**	**3.19**	**164**	P	**Pn**	**06 21 03.5**	**-1.2**
MMB	**Musomishta**	**3.23**	**88**	P	**Pn**	**06 21 07.6**	**+2.3**
MMB	**Musomishta**	**3.23**	**88**	*i* Pn	**Pn**	**06 21 07.6**	**+2.3**
BLY	**Banja Luka**	**3.62**	**333**	⇑*i* Pn	**Pn**	**06 21 12.1**	**+1.5**
BLY				*e*Sn	**Sn**	**06 21 53.8**	**+1.2**
MDVR	**Moldovita**	**3.65**	**26**	⇑P	**Pn**	**06 21 12.1**	**+1.0**
MPEP	**Malo Peshtene**	**3.66**	**59**	P	**Pn**	**06 21 12.8**	**+1.6**
HERR	**Herculane**	**3.99**	**32**	⇑P	**Pn**	**06 21 17.1**	**+1.4**
SRE	**Strehaia**	**4.16**	**40**	⇓P	**Pn**	**06 21 20.8**	**+2.6**
PLVB	**Pleven**	**4.25**	**62**	⇑P	**Pn**	**06 21 21.2**	**+1.9**
BZS	**Buzias**	**4.38**	**20**	⇓P	**Pn**	**06 21 22.0**	**+1.0**
GZR	**Gura Zlata**	**4.55**	**31**	⇑P	**Pn**	**06 21 26.0**	**+2.5**
AQU	**L'Aquila**	**4.59**	**282**	⇑*i* Pn	**Pn**	**06 21 23.8**	**-0.2**
AQU				*e*Sn	**Sn**	**06 22 14.4**	**-2.2**
MORH	**Mrgy, Hungar**	**4.72**	**353**	*e*Pn	**Pn**	**06 21 27.0**	**+1.3**
MORH				*e*Sn	**Sn**	**06 22 20.9**	**+1.2**
MORH	**Mrgy, Hungar**	**4.72**	**353**	⇑P	**Pn**	**06 21 28.4**	**+2.7**
SIRR	**Siria**	**5.00**	**18**	⇑P	**Pn**	**06 21 31.4**	**+1.8**
BEHE	**Becsehely**	**5.30**	**340**	*e*Pn	**Pn**	**06 21 35.5**	**+1.8**
BEHE				*e*Sn	**Sn**	**06 22 34.4**	**+0.3**
ARR	**Arges**	**5.38**	**43**	⇑P	**Pn**	**06 21 37.9**	**+3.0**
MTUR	**Matau**	**5.51**	**46**	⇑P	**Pn**	**06 21 39.1**	**+2.4**
VOIR		**5.64**	**44**	⇓P	**Pn**	**06 21 40.5**	**+2.1**
DRGR		**5.76**	**23**	⇑P	**Pn**	**06 21 41.6**	**+1.6**
SOKA	**Soboth**	**6.05**	**330**	*i* Pn	**Pn**	**06 21 44.9**	**+0.9**
	comp=E,3.6nm,0.3s						
SOKA				*i* Sn	**Sn**	**06 22 50.6**	**-2.0**
	comp=E,12nm,1.1s						
MLR	**Muntele Rosu**	**6.16**	**48**	Pn	**Pn**	**06 21 48.9**	**+3.3**
	comp=E,3.4nm,0.3s,baz=181,slow=3.3,SNR=19						
MLR				Sn	**Sn**	**06 22 55.2**	**-0.2**
	comp=E,0.6nm,0.3s,baz=112,slow=19,SNR=1.9						
	comp=E,18nm,0.5s						
MLR	**Muntele Rosu**	**6.16**	**48**	⇓P	**Pn**	**06 21 48.8**	**+3.2**
DOPR	**Dopca**	**6.17**	**42**	⇓P	**Pn**	**06 21 48.3**	**+2.6**
ISR	**Istrita**	**6.29**	**53**	⇓P	**Pn**	**06 21 50.4**	**+3.1**
NEHR	**Nehoiu**	**6.32**	**50**	⇑P	**Pn**	**06 21 50.5**	**+2.7**
ARSA	**Arzberg**	**6.37**	**335**	*i* Pn	**Pn**	**06 21 50.0**	**+1.5**
	comp=E,4.5nm,0.4s						
ARSA				*i* Sn	**Sn**	**06 22 59.5**	**-1.0**
	comp=E,6.0nm,0.5s						
PSZ	**Piszkesteto**	**6.39**	**3**	⇑P	**Pn**	**06 21 50.4**	**+1.6**
RONA	**Rosalia, Austr**	**6.56**	**341**	*i* Pn	**Pn**	**06 21 52.6**	**+1.5**
	comp=E,2.0nm,0.3s						
MYKA	**Terra Mystica**	**6.59**	**323**	*i* Pn	**Pn**	**06 21 53.0**	**+1.5**
	comp=E,4.9nm,0.5s						
MYKA				*i* Sn	**Sn**	**06 23 05.8**	**-0.2**
	comp=E,6.8nm,0.6s						
PLOR	**Plostina**	**6.77**	**48**	⇓P	**Pn**	**06 21 56.2**	**+2.2**
VRI	**Vrincioaia**	**6.82**	**48**	⇑P	**Pn**	**06 21 56.9**	**+2.3**
CONA	**Conrad Observa**	**6.89**	**339**	*i* Pn	**Pn**	**06 21 58.5**	**+2.9**
	comp=E,2.0nm,0.3s						
CONA				*i* Sn	**Sn**	**06 23 12.7**	**-0.6**
	comp=E,3.5nm,0.4s						
KECS	**Kecovo**	**6.99**	**6**	*e*PN	**Pn**	**06 21 58.2**	**+1.3**
KECS				*e*SN	**Sn**	**06 23 13.6**	**-2.1**
MODS	**Modra-Piesok**	**7.01**	**348**	*e*PN	**Pn**	**06 22 01.1**	**+3.9**
MODS				*e*SN	**Sn**	**06 23 15.0**	**-1.3**
KBA	**Koelnbreinsper**	**7.07**	**324**	*i* Pn	**Pn**	**06 21 59.2**	**+1.1**
	comp=E,5.7nm,0.5s						
KBA				*e*Sn	**Sn**	**06 23 17.3**	**-0.5**
	comp=E,4.5nm,0.4s						
ABTA	**Abfaltersbach**	**7.22**	**319**	*i* Pn	**Pn**	**06 22 00.7**	**+0.6**
	comp=E,2.5nm,0.3s						
ABTA				*i* Sn	**Sn**	**06 23 20.0**	**-1.4**
	comp=E,17nm,0.6s						
IDI	**Anoyia**	**7.55**	**144**	Sn	Sn	06 23 22.6	-7.1
	comp=E,1.9nm,0.3s,baz=270,slow=22,SNR=7.2						
LESA	**Schwarzleotal**	**7.62**	**323**	*i* Pn	**Pn**	**06 22 06.4**	**+0.7**
	comp=E,4.5nm,0.3s						
LESA				*i* Sn	**Sn**	**06 23 29.4**	**-2.1**
	comp=E,7.9nm,0.4s						
STHS	**Stebnicka Huta**	**7.99**	**8**	*e*PN	**Pn**	**06 22 14.3**	**+3.7**
STHS				*e*SN	**Sn**	**06 23 39.9**	**-0.3**
WTTA	**Wattenberg**	**8.01**	**318**	*e*Pn	**Pn**	**06 22 14.1**	**+3.1**
	comp=E,3.6nm,0.4s						
WTTA				*i* Sn	**Sn**	**06 23 39.8**	**-1.1**
	comp=E,12nm,0.6s						
WATA	**Walderalm**	**8.09**	**319**	*i* Pn	**Pn**	**06 22 14.8**	**+2.7**
	comp=E,9.0nm,0.4s						
WATA				*e*Sn	**Sn**	**06 23 40.3**	**-2.6**
	comp=E,15nm,0.7s						
SQTA	**Sankt Quirin**	**8.19**	**317**	*i* Pn	**Pn**	**06 22 14.4**	**+0.8**
	comp=E,5.9nm,0.4s						
SQTA				*e*Sn	**Sn**	**06 23 44.3**	**-1.2**
	comp=E,14nm,0.4s						
FETA	**Feichten**	**8.32**	**314**	*e*Pn	**Pn**	**06 22 17.2**	**+1.9**
	comp=E,5.3nm,0.8s						
FETA				*i* Sn	**Sn**	**06 23 49.6**	**+1.0**
	comp=E,3.0nm,0.7s						
MOTA	**Moosalm**	**8.33**	**317**	*i* Pn	**Pn**	**06 22 15.1**	**-0.3**
	comp=E,2.4nm,0.4s						
MOTA				*e*Sn	**Sn**	**06 23 48.9**	**0.0**
	comp=E,15nm,0.5s						
GERES	**GERESS Array B**	**8.36**	**333**	Pn	**Pn**	**06 22 16.5**	**+0.7**
	baz=153,slow=13,SNR=7.0						
GERES				Sn	**Sn**	**06 23 46.4**	**-3.2**
	comp=E,0.1nm,0.3s,baz=144,slow=22,SNR=2.3						
	comp=E,2.1nm,0.7s						
KHC	**Kasperske Hory**	**8.65**	**333**	*e*PN	**Pn**	**06 22 20.7**	**+1.0**
KHC				*e*SN	**Sn**	**06 23 56.1**	**-0.4**
DAVOX	**Davos/Dischmat**	**8.65**	**311**	Pn	**Pn**	**06 22 19.4**	**-0.5**
	comp=E,1.4nm,0.3s,baz=131,slow=12,SNR=6.6						
DAVOX				Sn	**Sn**	**06 23 54.0**	**-2.8**
	comp=E,0.7nm,0.3s,baz=171,slow=19,SNR=2.3						
DAVA	**Damuels**	**8.94**	**313**	*i* Pn	**Pn**	**06 22 25.6**	**+1.8**
	comp=E,3.7nm,0.3s						
DAVA				*e*Sn	**Sn**	**06 24 04.0**	**+0.1**
	comp=E,5.4nm,0.4s						
AKASG	**Malin Array Be**	**11.39**	**33**	Pn	**Pn**	**06 22 59.0**	**+1.8**
	comp=E,1.5nm,0.7s,baz=222,slow=14,SNR=4.7						
HFS	**Hagfors**	**18.96**	**351**	P	**P**	**06 24 33.6**	**-1.8**
	comp=E,0.3nm,0.3s,baz=159,slow=8.7,SNR=7.7						
	comp=E,4.1nm,0.6s						
NB2	**NORSAR Subarra**	**20.17**	**348**	P	**P**	**06 24 48.2**	**-0.5**
	comp=Z,5.5nm,0.8s,baz=150,slow=10						
NOA	**NORSAR Array B**	**20.17**	**348**	P	**P**	**06 24 47.1**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=166,slow=11,SNR=4.5						
	comp=Z,1.1nm,0.7s						
EKA	**Eskdalemuir Ar**	**20.26**	**321**	P	**P**	**06 24 48.2**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=113,slow=9.4,SNR=8.7						
	comp=Z,0.5nm,0.4s						
FINES	**FINESS Array B**	**20.34**	**9**	P	**P**	**06 24 49.3**	**-1.1**
	comp=Z,5.8nm,0.6s,baz=180,slow=9.5,SNR=25						
	comp=Z,5.8nm,0.6s						
BVAR	**Borovoye Array**	**35.69**	**54**	P	**P**	**06 27 12.4**	**0.0**
	comp=Z,1.4nm,0.6s,baz=262,slow=3.0,SNR=8.7						
	comp=Z,1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**40.98**	**56**	P	**P**	**06 27 55.6**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=287,slow=9.5,SNR=5.3						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**44.13**	**51**	P	**P**	**06 28 21.7**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=277,slow=8.4,SNR=15						
	comp=Z,4.1nm,0.6s						
MKAR	**Makanchi Array**	**44.32**	**61**	P	**P**	**06 28 23.6**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=282,slow=7.6,SNR=23						
	comp=Z,2.7nm,0.6s						
SONM	**Songino Array**	**59.00**	**52**	P	**P**	**06 30 13.2**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=290,slow=11,SNR=4.5						
	comp=Z,0.8nm,0.8s						

DJA 26 06:37:12.7±0.7, 7°S±4°×13°0E±°, h220km±16km, M4.2/8**, mB4.5/1, mb4.2/3, MLv4.2/8, Mw(mB)3.7/1, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.07**	**125**	P	Pn	06 37 52.4	-1.0
BNDI	**Bandanaira**	**2.27**	**8**	P	Pn	06 37 55.6	+0.1
MSAI	**Masohi**	**3.48**	**349**	P	Pn	06 38 09.9	+0.8
FAKI	**Fak Fak**	**4.67**	**35**	P	Pn	06 38 22.2	-1.3
SOEI	**Soe**	**6.04**	**240**	P	Pn	06 38 41.0	+0.1
	0.1nm30nm,0.8s						
SWI	**Sorong**	**6.12**	**16**	P	Pn	06 38 41.5	-0.3
BATI	**Baumata**	**6.77**	**240**	P	Pn	06 38 50.0	-0.2

*IDC **26** 06:43:55.9±3.2, 41°.26N×19°.02E, h0km, mb4.0/7, mbtmp4.0/8, ML3.9/1, MS3.5/1, Error ellipse: s-maj=62.2km s-min=47.6km az=128.0*
*PRU **26** 06:43:58.8, 41°.40N×20°.43E, h10km*
*SKO **26** 06:44:01.4, 41°.42N×19°.38E, h0km, ML3.6*
*PDG **26** 06:44:02.8±0.6, 41°.39N×19°.56E, h14km±1km, MD3.9/10, ML3.8/13, Error ellipse: s-maj=1.6km s-min=2.8km az=0.0*
*BEO **26** 06:44:03.8±0.6, 41°.41N×19°.66E, h20km±4km, ML3.5/15*
*TIR **26** 06:44:03.9, 41°.50N×19°.64E, h29km±2km, Ml3.7/7*
*RHSSO **26** 06:44:04.4±1.0, 41°.45N×19°.44E, h9km±4km, ML3.9/4*

ISC 26 06:44:02.4±0.9, 41°.41N±0°.02×19°.55E±0°.02, h18km±5km, n102, σ1s61/150, mb4.2/6, 24C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.24**	**105**	Pg	**Pg**	**06 44 08.0**	**-0.1**
TIR				AML	AML	06 44 11.4	
	61nm,0.6s						
TIR				Sg	**Sg**	**06 44 11.6**	**-0.3**
TIR	**Tirane**	**0.24**	**105**	*i* Pg	**Pg**	**06 44 07.9**	**-0.1**
TIR				*i* Sg	**Sb**	**06 44 12.4**	**+0.3**
ULC	**Ulcinj**	**0.60**	**337**	⇓*i* Pg	**Pg**	**06 44 13.3**	**-1.0**
ULC				*i* Sg	**Sb**	**06 44 23.2**	**+0.8**
SDA	**Shkodra**	**0.64**	**357**	Pg	**Pg**	**06 44 14.8**	**-0.3**
SDA				Sg	**Sb**	**06 44 24.1**	**+0.4**
PHP	**Peshkopia**	**0.72**	**68**	Pg	**Pg**	**06 44 15.2**	**-1.3**
PHP				Sg	**Sb**	**06 44 26.4**	**+0.3**
PHP				AML	AML	06 44 29.3	
	12nm,0.4s						
DRME	**Dracevica, Mon**	**0.82**	**341**	*e*Pg	**Pg**	**06 44 18.9**	**+0.5**
DRME				*e*Sg	**Sn**	**06 44 31.7**	**+0.9**
DRME	**Dracevica, Mon**	**0.82**	**341**	⇑*i* Pg	**Pb**	**06 44 17.7**	**-0.5**
DRME				*i* Sg	**Sn**	**06 44 31.4**	**+0.6**
VLO	**Vlora**	**0.94**	**183**	Pg	**Pg**	**06 44 20.8**	**0.0**
VLO				Sg	**Sn**	**06 44 36.9**	**+3.1**
VLO				AML	AML	06 44 44.8	
	8.1nm,0.4s						
OHR	**Ohrid**	**0.99**	**107**	⇑*i* Pg	**Pb**	**06 44 21.0**	**0.0**
OHR				*i* Sg	**Sn**	**06 44 38.0**	**+3.0**
OHR				*e*Lg	Lg	06 44 39.8	
	comp=N,1µm,0.5s						
OHR				*e*Lg	Lg	06 44 40.0	
	comp=E,780nm,0.4s						
BUM	**Brajici-Budva**	**1.01**	**331**	⇑*i* Pg	**Pb**	**06 44 21.7**	**+0.2**
BUM				*i* Sg	**Sn**	**06 44 37.0**	**+1.3**
PDG	**Podgorica**	**1.04**	**348**	Pg	**Pn**	**06 44 22.4**	**+0.3**
PDG				Sg	**Sn**	**06 44 37.6**	**+1.4**
PDG				AML	AML	06 44 39.7	
	comp=E,47µm,0.2s						
PDG	**Podgorica**	**1.04**	**348**	⇑P	**Pg**	**06 44 22.8**	**+0.2**
PDG				⇓S	**Sn**	**06 44 38.6**	**+2.4**
PDG	**Podgorica**	**1.04**	**348**	*e*Pg	**Pn**	**06 44 22.4**	**+0.3**
PDG				*e*Sg	**Sn**	**06 44 38.0**	**+1.8**
PDG	**Podgorica**	**1.04**	**348**	⇓*i* Pg	**Pg**	**06 44 22.7**	**+0.1**
PDG				*i* Sg	**Sn**	**06 44 38.2**	**+2.0**
PVY	**Plav**	**1.22**	**14**	⇑*i* Pg	**Pn**	**06 44 24.5**	**-0.2**
PVY				*i* Sg	**Sg**	**06 44 42.8**	**+0.8**
KBN	**Korca**	**1.22**	**130**	Pg	**Pg**	**06 44 26.1**	**+0.1**
KBN				AML	AML	06 44 51.8	
	comp=E,6.4nm,0.7s						
CEME	**Cevo**	**1.23**	**338**	⇓*i* Pg	**Pn**	**06 44 25.0**	**+0.2**
CEME				*i* Sg	**Sg**	**06 44 43.2**	**+1.0**
HCY	**Herceg Novi**	**1.30**	**323**	⇑*i* Pg	**Pg**	**06 44 27.1**	**-0.4**
HCY				*i* Sg	**Sg**	**06 44 45.7**	**+1.2**
NKME	**Niksic**	**1.42**	**342**	⇓*i* Pg	**Pb**	**06 44 28.8**	**+0.3**
NKME				*i* Sg	**Sg**	**06 44 47.8**	**-0.7**
KOME	**Kolasin**	**1.44**	**359**	*e*Pg	**Pg**	**06 44 30.0**	**-0.1**
KOME				*e*Sg	**Sg**	**06 44 50.2**	**+1.3**
KOME	**Kolasin**	**1.44**	**359**	⇓*i* Pg	**Pg**	**06 44 30.7**	**+0.6**
KOME				*i* Sg	**Sg**	**06 44 49.7**	**+0.8**
IVA	**Berane**	**1.48**	**10**	⇑*i* Pg	**Pg**	**06 44 29.3**	**-0.2**
IVA				*i* Sg	**Sg**	**06 44 51.1**	**+0.9**
NEST	**Nestorio**	**1.51**	**131**	Pg	**Pg**	**06 44 31.5**	**-0.1**
NEST				Sg	**Sg**	**06 44 52.5**	**+1.3**
NEST				AML	AML	06 44 58.2	
	comp=E,3.1nm,0.5s						
SKO	**Skopje**	**1.52**	**68**	*i* Pg	**Pg**	**06 44 31.3**	**-0.4**
SKO				*i* Sg	**Sg**	**06 44 52.4**	**+0.9**
TREB	**Trebinje**	**1.58**	**326**	*e*Pg	**Pb**	**06 44 31.4**	**+0.3**
TREB				*e*Sg	**Sb**	**06 44 52.0**	**+1.2**
BRY	**Bratogost**	**1.67**	**333**	⇓*i* Pn	**Pb**	**06 44 32.8**	**+0.1**
BRY				*i* Sn	**Sg**	**06 44 55.8**	**-0.4**
UPM	**Unac-Piva**	**1.85**	**345**	⇓*i* Pn	**Pb**	**06 44 35.9**	**0.0**
UPM				*i* Sn	**Sg**	**06 45 00.9**	**-1.2**
SJES	**Sjenica**	**1.87**	**9**	*e*Pn	**Pb**	**06 44 36.4**	**+0.2**
SJES				*e*Sn	**Sb**	**06 44 59.7**	**+0.4**
KLINJ	**Klinje**	**1.90**	**338**	*e*Pn	**Pb**	**06 44 36.2**	**-0.4**
KLINJ				*e*Sn	**Sb**	**06 44 59.2**	**-0.7**
PLE	**Pljevlja**	**1.92**	**356**	⇑*i* Pn	**Pb**	**06 44 36.5**	**-0.5**
PLE				*i* Sn	**Sb**	**06 45 01.8**	**+1.2**
IGT	**Igoumenitsa**	**1.97**	**162**	Pn	**Pg**	**06 44 40.3**	**0.0**
NOCI	**Noci**	**1.98**	**252**	Pn	**Pn**	**06 44 34.4**	**-0.7**
SELS	**Selova**	**2.15**	**32**	*e*Pn	**Pn**	**06 44 39.0**	**+1.6**
SELS				*e*Sn	**Sn**	**06 45 02.9**	**-0.7**
IVAS	**Ivanjica**	**2.21**	**11**	*e*Pn	**Pn**	**06 44 39.4**	**+1.2**
RUDO	**Rudo**	**2.21**	**357**	*e*Pn	**Pb**	**06 44 41.4**	**-0.4**
RUDO				*e*Sn	**Sb**	**06 45 07.4**	**-1.4**
MATE	**Matera**	**2.28**	**251**	⇓P	**Pn**	**06 44 40.9**	**+1.7**
GOCS	**Kraljevo Serbi**

comp=E,2.9nm,0.6s
SONM Songino Array 59.01 52 P P 06 54 00.6 -0.4
comp=E,0.6nm,0.6s,baz=316,slow=8.1,SNR=4.6
comp=E,0.6nm,0.6s

*TIR **26** 06:54:20.3, 41°.44N ± 19°.54E, h2km ± 1km, Ml3.3/7*
*BEO **26** 06:54:21.8 ± 0.9, 41°.43N ± 19°.68E, h6km ± 4km, ML3.2/15*
*PDG **26** 06:54:23.2 ± 0.6, 41°.47N ± 19°.47E, h20km ± 1km, MD3.3/2, ML3.2/11, Error ellipse: s-maj=2.9km s-min=5.0km az=0.0*

ISC 26 06:54:21.6 ± 1.1, 41°.44N ± 0°.03 × 19°.57E ± 0°.03, h8km ± 9km, n55, σ0s 67/76, 14C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.24**	**112**	Pg	**Pg**	**06 54 26.8**	**+0.5**
TIR				Sg	**Sg**	**06 54 29.6**	**+0.1**
TIR				AML	AML	06 54 31.4	
	13nm,0.2s						
ULC	**Ulcinj**	**0.58**	**335**	⇑*i*Pg	**Pg**	**06 54 31.4**	**-1.3**
ULC				*i* Sg	**Sg**	**06 54 40.8**	**+0.5**
SDA	**Shkodra**	**0.61**	**355**	Pg	**Pg**	**06 54 32.7**	**-0.7**
SDA				Sg	**Sg**	**06 54 41.8**	**+0.4**
SDA				AML	AML	06 54 45.3	
	22µm,0.2s						
PHP	**Peshkopia**	**0.70**	**69**	Pg	**Pg**	**06 54 34.2**	**-0.8**
PHP				Sg	**Sb**	**06 54 45.4**	**-0.5**
PHP				AML	AML	06 54 48.5	
	5.8nm,0.3s						
DRME	**Dracevica, Mon**	**0.80**	**339**	*e*Pg	**Pg**	**06 54 37.4**	**+0.5**
DRME	**Dracevica, Mon**	**0.80**	**339**	⇑*i*Pg	**Pg**	**06 54 36.8**	**-0.1**
DRME				*i* Sg	**Sb**	**06 54 48.5**	**-0.3**
BUM	**Brajici-Budva**	**1.00**	**330**	⇓*i*Pg	**Pg**	**06 54 39.9**	**-0.8**
BUM				*i* Sg	**Sb**	**06 54 54.8**	**+0.3**
PDG	**Podgorica**	**1.02**	**347**	Pg	**Pg**	**06 54 40.5**	**-0.5**
PDG				Sg	**Sb**	**06 54 55.7**	**+0.7**
PDG				AML	AML	06 54 59.0	
	15µm,0.2s						
PDG	**Podgorica**	**1.02**	**347**	⇑P	**Pg**	**06 54 41.1**	**0.0**
PDG				⇑S	**Sg**	**06 54 54.5**	**+0.2**
PDG	**Podgorica**	**1.02**	**347**	*e*Pg	**Pg**	**06 54 41.0**	**0.0**
PDG				*e*Sg	**Sn**	**06 54 57.3**	**+0.7**
PDG	**Podgorica**	**1.02**	**347**	⇓*i*Pg	**Pg**	**06 54 39.5**	**-1.6**
PDG				*i* Sg	**Sb**	**06 54 55.9**	**+0.9**
PVY	**Plav**	**1.19**	**14**	*e*Pg	**Pg**	**06 54 44.1**	**-0.3**
CEME	**Cevo**	**1.21**	**336**	⇓*i*Pg	**Pg**	**06 54 44.6**	**-0.1**
CEME				*i* Sg	**Sb**	**06 55 01.1**	**+0.5**
KBN	**Korca**	**1.23**	**131**	Pg	**Pb**	**06 54 44.3**	**-0.8**
KBN				Sg	**Sn**	**06 55 02.1**	**+0.1**
KBN				AML	AML	06 55 08.2	
	1.6nm,1.1s						
HCY	**Herceg Novi**	**1.29**	**322**	⇑*i*Pg	**Pn**	**06 54 45.5**	**-0.4**
HCY				*i* Sg	**Sb**	**06 55 02.7**	**-0.1**
NKME	**Niksic**	**1.40**	**341**	⇑*i*Pg	**Pn**	**06 54 47.5**	**0.0**
NKME				*i* Sg	**Sn**	**06 55 06.6**	**+0.3**
KOME	**Kolasin**	**1.41**	**358**	*e*Pg	**Pb**	**06 54 48.5**	**+0.3**
KOME	**Kolasin**	**1.41**	**358**	⇓*i*Pg	**Pb**	**06 54 48.1**	**-0.1**
KOME				*i* Sg	**Sg**	**06 55 07.8**	**+0.9**
BEY	**Berane**	**1.45**	**9**	*e*Pg	**Pn**	**06 54 47.7**	**-0.5**
IVA	**Berane**	**1.45**	**9**	⇓*i*Pg	**Pn**	**06 54 46.3**	**-1.9**
IVA				*i* Sg	**Sn**	**06 55 06.8**	**-0.7**
NEST	**Nestorio**	**1.52**	**132**	Pn	**Pg**	**06 54 50.4**	**-0.3**
NEST				AML	AML	06 55 17.9	
	1.1nm,0.7s						
TREB	**Trebinje**	**1.57**	**325**	*e*Pg	**Pn**	**06 54 49.9**	**+0.2**
TREB				*e*Sg	**Sb**	**06 55 11.4**	**+0.6**
BRY	**Bratogost**	**1.65**	**333**	⇓*i*Pn	**Pn**	**06 54 50.4**	**-0.6**
BRY				*i* Sn	**Sn**	**06 55 12.2**	**-0.3**
UPM	**Unac-Piva**	**1.83**	**345**	⇓*i*Pn	**Pn**	**06 54 54.1**	**+0.6**
UPM				*i* Sn	**Sn**	**06 55 17.1**	**+0.1**
SJES	**Sjenica**	**1.84**	**9**	*e*Pg	**Pg**	**06 54 56.4**	**-0.5**
SJES				*e*Sg	**Sg**	**06 55 21.3**	**+0.5**
PLE	**Pljevlja**	**1.89**	**356**	*e*Pg	**Pb**	**06 54 55.7**	**-0.8**
NOCI	**Noci**	**2.00**	**252**	Pn	**Pn**	**06 54 56.2**	**+0.5**
NOCI				AML	AML	06 55 35.4	
	1.4nm,0.4s						
SELS	**Selova**	**2.12**	**32**	*e*Pg	**Pn**	**06 54 57.6**	**+0.3**
SELS				*e*Sg	**Sb**	**06 55 26.3**	**-0.4**
IVAS	**Ivanjica**	**2.18**	**11**	*e*Pn	**Pn**	**06 54 58.1**	**-0.1**
RUDO	**Rudo**	**2.18**	**356**	*e*Pn	**Pb**	**06 55 01.5**	**+0.2**
MATE	**Matera**	**2.31**	**251**	⇓P	**Pn**	**06 54 59.4**	**-0.5**
GOCS	**Kraljevo Serbi**	**2.33**	**24**	*e*Pn	**Pn**	**06 55 00.2**	**-0.1**
BBLS	**Lazi&#263i**	**2.43**	**357**	*e*Pn	**Pn**	**06 55 01.8**	**+0.2**
GRUS	**Gruza**	**2.59**	**19**	*e*Pn	**Pn**	**06 55 03.5**	**-0.3**
DIVS	**Divibare**	**2.67**	**7**	*e*Pn	**Pn**	**06 55 05.0**	**0.0**
BOVS	**Bovan**	**2.70**	**35**	⇑P	**Pn**	**06 55 05.9**	**+0.6**
BOVS	**Bovan**	**2.70**	**35**	*e*Pn	**Pn**	**06 55 05.5**	**+0.2**
TRUS	**Trudelj**	**2.85**	**12**	*e*Pn	**Pn**	**06 55 07.7**	**+0.3**
ZAPS	**Zavoj**	**2.92**	**50**	*e*Pn	**Pn**	**06 55 08.9**	**+0.6**
VTS	**Vitosha**	**2.97**	**65**	*e*Pn	**Pn**	**06 55 09.9**	**+0.7**
ZAGS	**Zajecar**	**3.08**	**39**	*e*Pn	**Pn**	**06 55 10.5**	**0.0**
TEKS	**Tekeris**	**3.11**	**359**	*e*Pn	**Pn**	**06 55 10.7**	**-0.2**
BLKB	**Belogradchik**	**3.17**	**45**	*e*Pn	**Pn**	**06 55 10.1**	**-1.7**
BORS2	**Bor- Borsko je**	**3.20**	**33**	*e*Pn	**Pn**	**06 55 10.9**	**-1.3**
MDVR	**Moldovita**	**3.69**	**24**	⇑P	**Pn**	**06 55 18.7**	**-0.3**
HERR	**Herculane**	**4.02**	**30**	⇓P	**Pn**	**06 55 23.6**	**+0.2**
BZS	**Buzias**	**4.43**	**19**	⇓P	**Pn**	**06 55 28.8**	**-0.3**
GZR	**Gura Zlata**	**4.59**	**30**	⇓P	**Pn**	**06 55 31.0**	**-0.4**
LOT	**Lotru**	**5.04**	**36**	⇑P	**Pn**	**06 55 36.8**	**-0.8**
SIRR	**Siria**	**5.06**	**17**	⇑P	**Pn**	**06 55 38.5**	**+0.8**
ARR	**Arges**	**5.39**	**42**	⇓P	**Pn**	**06 55 43.2**	**+0.9**
VOIR		**5.64**	**43**	⇑P	**Pn**	**06 55 46.9**	**+1.1**
DRGR		**5.81**	**22**	⇑P	**Pn**	**06 55 49.0**	**+0.9**
MARR	**Marisel-Cluj**	**5.83**	**25**	⇑P	**Pn**	**06 55 49.1**	**+0.7**
MLR	**Muntele Rosu**	**6.16**	**47**	⇑P	**Pn**	**06 55 54.3**	**+1.4**

*NNC **26** 06:56:08.8 ± 1.3, 51°.87N × 74°.30E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=55.5km s-min=8.4km az=26.0, Suspected Mining explosion.*
*IDC **26** 06:56:11.0 ± 1.0, 51°.98N × 74°.29E, h0km, mbtmp2.6/3, ML2.2/3, Error ellipse: s-maj=32.4km s-min=8.2km az=25.0*

ISC 26 06:56:10.3 ± 1.3, 51°.9N ± 0°.1 × 74°.25E ± 0°.07, h0km, n9, σ1s 12/10, 4C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BVA0	**Borovoye Array**	**2.63**	**298**	⇓Pg	**Pb**	**06 56 57.6**	**-0.7**
	3.6nm,0.7s,baz=216,slow=38,SNR=11						
BVA0				⇓Lg	Lg	06 57 31.7	
	5.4nm,0.6s,baz=109,slow=25,SNR=15						
BVAR	**Borovoye Array**	**2.63**	**298**	Pg	**Pb**	**06 56 57.8**	**-0.5**
	0.1nm,0.3s,baz=108,slow=17,SNR=8.9						
BVAR				Lg	Lg	06 57 32.2	
	0.5nm,0.3s,baz=114,slow=28,SNR=28						
KURBB	**Kurchatov Arra**	**2.96**	**113**	Pn	**Pn**	**06 56 59.1**	**+0.5**
	0.1nm,0.3s,baz=300,slow=14,SNR=7.8						
KURBB				Pg	**Pb**	**06 57 03.3**	**-0.6**
	0.1nm,0.3s,baz=302,slow=17,SNR=8.0						
KURBB				Lg	Lg	06 57 42.1	
	0.2nm,0.3s,baz=301,slow=32,SNR=10						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**2.96**	**113**	⇑Pg	**Pb**	**06 57 03.5**	**-0.4**
	2.2nm,0.5s,baz=340,slow=14						
KURBB				⇑Lg	Lg	06 57 41.0	
	29nm,0.8s,baz=331,slow=37						
KURK	**Kurchatov**	**2.98**	**111**	⇓Pg	**Pb**	**06 57 03.1**	**-1.0**
	0.2nm,0.3s						
KURK				⇑Lg	Lg	06 57 40.2	
	5.8nm,0.7s						
ZALV	**Zalesovo Beam**	**6.72**	**68**	Pn	**Pn**	**06 57 51.4**	**+1.2**
	0.3nm,0.3s,baz=262,slow=16,SNR=4.5						
ZALV				Sn	**Sn**	**06 59 06.8**	**-0.6**
	0.1nm,0.3s,baz=262,slow=19,SNR=2.2						
	1.3nm,0.6s						
I46RU	**ZALESOVO INFRA**	**6.73**	**68**	I	I	07 32 10.0	
	baz=256,slow=281,SNR=1.8						
MK31	**Makanchi Array**	**7.30**	**131**	⇓Sn	**Sn**	**06 59 20.6**	**-1.1**
	0.5nm,0.6s						
MK31				⇑Lg	Lg	06 59 56.2	
	0.8nm,0.6s,baz=326,slow=26,SNR=3.6						
MKAR	**Makanchi Array**	**7.30**	**131**	Pn	**Pn**	**06 57 59.9**	**+1.7**
	0.1nm,0.3s,baz=315,slow=16,SNR=1.7						
MKAR				Lg	Lg	06 59 57.6	
	0.1nm,0.3s,baz=318,slow=27,SNR=6.7						
	0.2nm,0.7s						

*IDC **26** 06:57:33.7 ± 6.8, 41°.91N × 19°.90E, h0km, mb3.9/5, mbtmp3.8/8, ML2.8/3, Error ellipse: s-maj=123.9km s-min=23.2km az=29.0*

*PDG **26** 06:57:34.7 ± 0.3, 41°.62N × 19°.56E, h17km ± 1km, MD3.4/9, ML3.4/13, Error ellipse: s-maj=1.4km s-min=1.6km az=0.0*
*PRU **26** 06:57:34.1, 41°.26N × 19°.18E, h10km*
*VIE **26** 06:57:38.1 ± 1.4, 41°.80N × 19°.18E, h10km, mb3.2/6, ms3.7/4, Error ellipse: s-maj=36.1km s-min=9.6km az=44.0 31 km SSE of Shkoder*

ISC 26 06:57:32.4 ± 1.5, 41°.53N ± 0°.05 × 19°.48E ± 0°.04, h14km ± 9km, n45, σ1s 56/62, mb3.9/5, 23C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.47**	**338**	⇑*i*Pg	**Pg**	**06 57 40.8**	**-0.9**
ULC				*i* Sg	**Sb**	**06 57 48.4**	**-0.9**
DRME	**Dracevica, Mon**	**0.69**	**341**	⇓*i*Pg	**Pb**	**06 57 46.3**	**0.0**
DRME				*i* Sg	**Sb**	**06 57 55.6**	**-0.1**
BUM	**Brajici-Budva**	**0.89**	**331**	⇑*i*Pg	**Pn**	**06 57 50.0**	**-0.5**
BUM				*i* Sg	**Sn**	**06 58 04.0**	**+0.7**
PDG	**Podgorica**	**0.92**	**349**	⇑P	**Pg**	**06 57 48.6**	**-1.5**
PDG				⇑S	**Sb**	**06 58 02.5**	**+0.3**
PDG	**Podgorica**	**0.92**	**349**	⇓*i*Pg	**Pg**	**06 57 48.9**	**-1.2**
PDG				*i* Sg	**Sb**	**06 58 02.3**	**+0.2**
CEME	**Cevo**	**1.10**	**338**	⇑*i*Pg	**Pn**	**06 57 55.2**	**+1.7**
CEME				*i* Sg	**Sn**	**06 58 10.5**	**+2.0**
PVY	**Plav**	**1.12**	**18**	⇓*i*Pg	**Pg**	**06 57 52.9**	**-1.1**
PVY				*i* Sg	**Sb**	**06 58 08.4**	**+0.2**
HCY	**Herceg Novi**	**1.18**	**322**	⇓*i*Pg	**Pg**	**06 57 55.2**	**+0.2**
HCY				*i* Sg	**Sn**	**06 58 12.6**	**+2.3**
NKME	**Niksic**	**1.30**	**343**	⇓*i*Pg	**Pg**	**06 57 57.2**	**-0.2**
NKME				*i* Sg	**Sg**	**06 58 15.8**	**+1.5**
KOME	**Kolasin**	**1.32**	**1**	⇑*i*Pg	**Pn**	**06 57 56.5**	**0.0**
KOME				*i* Sg	**Sb**	**06 58 15.5**	**+0.5**
IVA	**Berane**	**1.38**	**13**	⇑*i*Pg	**Pn**	**06 57 57.4**	**+0.1**
IVA				*i* Sg	**Sg**	**06 58 16.9**	**+0.1**
BRY	**Bratogost**	**1.54**	**333**	⇓*i*Pg	**Pb**	**06 58 00.7**	**-0.1**
BRY				*i* Sg	**Sg**	**06 58 21.9**	**-0.1**
UPM	**Unac-Piva**	**1.73**	**346**	⇑*i*Pn	**Pb**	**06 58 03.6**	**-0.4**
UPM				*i* Sn	**Sb**	**06 58 26.2**	**+0.6**
PLE	**Pljevlja**	**1.80**	**358**	⇑*i*Pn	**Pb**	**06 58 04.5**	**-0.7**
PLE				*i* Sn	**Sb**	**06 58 27.6**	**-0.1**
MATE	**Matera**	**2.27**	**248**	⇓P	**Pg**	**06 58 15.9**	**-0.1**
BOVS	**Bovan**	**2.67**	**37**	⇑P	**Pn**	**06 58 16.6**	**+1.6**
BLY	**Banja Luka**	**3.63**	**333**	⇑P	**Pb**	**06 58 37.6**	**+1.3**
MDVR	**Moldovita**	**3.64**	**26**	⇑P	**Pn**	**06 58 29.7**	**+1.4**
HERR	**Herculane**	**3.98**	**32**	⇑P	**Pn**	**06 58 34.3**	**+1.4**
PLVB	**Pleven**	**4.23**	**62**	⇑P	**Pg**	**06 58 53.3**	**-0.1**
BZS	**Buzias**	**4.37**	**20**	⇑P	**Pn**	**06 58 40.2**	**+1.8**
GZR	**Gura Zlata**	**4.55**	**31**	⇑P	**Pn**	**06 58 42.7**	**+1.8**
MORH	**Mrgy, Hungar**	**4.72**	**353**	⇑P	**Pn**	**06 58 46.9**	**+3.7**
SIRR	**Siria**	**4.99**	**18**	⇓P	**Pn**	**06 58 49.0**	**+2.1**
LOT	**Lotru**	**5.01**	**37**	⇑P	**Pn**	**06 58 49.0**	**+1.8**
ARR	**Arges**	**5.37**	**43**	⇑P	**Pn**	**06 58 55.1**	**+3.1**
VOIR		**5.63**	**44**	⇑P	**Pn**	**06 58 58.7**	**+3.0**
DRGR		**5.75**	**23**	⇑P	**Pn**	**06 58 59.0**	**+1.6**
MARR	**Marisel-Cluj**	**5.77**	**26**	⇑P	**Pn**	**06 59 01.2**	**+3.5**
OBKA	**Obir**	**6.12**	**326**	*e*Pn	**Pn**	**06 59 02.4**	**-0.1**
	2.1nm,0.3s						
MLR	**Muntele Rosu**	**6.14**	**48**	⇑P	**Pn**	**06 59 05.9**	**+3.0**
ARSA	**Arzberg**	**6.38**	**335**	*i* Pn	**Pn**	**06 59 08.9**	**+2.9**
	3.7nm,0.4s						
LESA	**Schwarzleotal**	**7.64**	**323**	*i* Pn	**Pn**	**06 59 24.1**	**+0.8**
	3.2nm,0.5s						
LESA				*i* Sn	**Sn**	**07 00 47.2**	**-2.5**
	2.6nm,0.3s						
WTTA	**Wattenberg**	**8.02**	**318**	*i* Pn	**Pn**	**06 59 30.0**	**+1.3**
	5.5nm,0.6s						
WTTA				*i* Sn	**Sn**	**07 00 58.6**	**-0.7**
	7.5nm,0.4s						
FETA	**Feichten**	**8.34**	**314**	*e*Pn	**Pn**	**06 59 35.3**	**+2.3**
	4.0nm,0.7s						
FETA				*i* Sn	**Sn**	**07 01 04.8**	**-2.1**
	1.6nm,0.4s						
MOTA	**Moosalm**	**8.35**	**317**	*i* Sn	**Sn**	**07 01 07.5**	**+0.3**
	9.2nm,0.6s						
GERES	**GERESS Array B**	**8.38**	**333**	Pn	**Pn**	**06 59 35.0**	**+1.6**
	baz=134,slow=18,SNR=1.5						
	0.3nm,0.3s						
KHC	**Kasperske Hory**	**8.66**	**333**	*e*SN	**Sn**	**07 01 15.5**	**+0.8**
HFS	**Hagfors**	**18.97**	**351**	P	**P**	**07 01 52.4**	**-0.7**
	0.2nm,0.3s,baz=174,slow=14,SNR=4.8						
	1.9nm,0.8s						
FINES	**FINESS Array B**	**20.34**	**9**	P	**P**	**07 02 06.9**	**-1.1**
	0.3nm,0.3s,baz=188,slow=9.8,SNR=9.0						
	1.6nm,0.4s						
BELG	**Belogornoye**	**21.93**	**51**	P	**P**	**07 02 22.6**	**-2.5**
	7.4nm,0.8s,baz=265,slow=4.5,SNR=5.5						
	7.4nm,0.8s						
BVAR	**Borovoye Array**	**35.67**	**54**	P	**P**	**07 04 29.8**	**-0.1**
	1.5nm,0.6s,baz=266,slow=6.7,SNR=5.0						
	1.5nm,0.8s						
KURBB	**Kurchatov Arra**	**40.96**	**56**	P	**P**	**07 05 14.1**	**-0.3**
	0.2nm,0.6s,baz=293,slow=9.6,SNR=3.0						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**44.12**	**51**	P	**P**	**07 05 39.4**	**-0.6**
	2.2nm,0.4s,baz=284,slow=8.5,SNR=11						
	2.2nm,0.4s						
MKAR	**Makanchi Array**	**44.30**	**61**	P	**P**	**07 05 41.0**	**-0.7**
	1.1nm,0.6s,baz=278,slow=7.3,SNR=8.6						
	1.1nm,0.6s						

*REN **26** 06:59:51.5 ± 2.1, 39°.54N ± 0°.03 × 116°.62W ± 0°.02, h0km, ML2.5/5, ML2.6/48(NEIC), Error ellipse: s-maj=3.9km s-min=2.5km az=164.0*

NEIC 26 06:59:50.8 ± 2.2, 39°.51N ± 0°.03 × 116°.53W ± 0°.03, h4km ± 5km, Error ellipse: s-maj=3.8km s-min=2.8km az=163.0, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Q09A	**Carvers**	**0.84**	**217**		Pg	07 00 07.4	+0.4
Q09A					Sb	07 00 19.2	-0.6
Q09A	**Carvers**	**0.84**	**217**	IAML		07 00 24.2	
	comp=E,275nm,0.3s						
R11B	**Troy Canyon, C**	**1.38**	**147**		Pn	07 00 16.8	-0.2
R11B					Sg	07 00 34.3	-0.7
R11B	**Troy Canyon, C**	**1.38**	**147**	IAML		07 00 38.0	
	comp=E,106nm,0.2s						
ELK	**Elko**	**1.58**	**38**		Pn	07 00 19.5	-0.4
ELK					Sb	07 00 41.2	0.0
NV11	**Mina Array Sit**	**1.66**	**230**		Pn	07 00 20.9	0.0
NV11					Sg	07 00 44.5	+0.4
NVAR	**Mina Array Bea**	**1.75**	**233**		Pn	07 00 22.4	+0.3
NV09	**Mina Array Sit**	**1.77**	**233**		Pn	07 00 22.4	+0.1
NV08	**Mina Array Sit**	**1.78**	**232**		Pn	07 00 22.5	0.0
RYN	**Ryan**	**1.78**	**241**		Pn	07 00 22.2	-0.3
RYN					Sg	07 00 47.7	-0.3
SPR3	**Spring Creek 3**	**1.79**	**106**		Pn	07 00 23.1	+0.4
SPR3					Sg	07 00 48.3	+0.2
SPR3	**Spring Creek 3**	**1.79**	**106**	IAML		07 00 49.8	
	comp=E,50nm,0.5s						
SPR3				IAML		07 00 50.1	
	comp=N,50nm,0.4s						
S11A	**Rachel**	**1.96**	**161**		Pb	07 00 27.2	0.0
S11A	**Rachel**	**1.96**	**161**		Sg	07 00 54.7	+0.8
LHV	**Little Huntoon**	**1.99**	**231**		Pb	07 00 27.7	+0.2
LHV					Sb	07 00 53.3	+0.7
LHV	**Little Huntoon**	**1.99**	**231**	IAML		07 00 57.1	
	comp=N,61nm,0.3s						
LHV				IAML		07 01 05.5	
	comp=E,60nm,0.7s						
PAHR	**Pah Rah Range**	**2.21**	**276**		Pb	07 00 30.8	-0.6
PSUT	**Pine Spring**	**2.30**	**114**		Pb	07 00 31.6	-1.5
PSUT	**Pine Spring**	**2.30**	**114**	IAML		07 01 04.7	
	comp=E,40nm,0.3s						
PRN	**Pahroc Range**	**2.40**	**151**		Pn	07 00 32.0	+1.0
PNTR	**Pine Nut**	**2.42**	**261**		Pb	07 00 34.4	-0.6
PNTR	**Pine Nut**	**2.42**	**261**	IAML		07 01 09.6	
	comp=N,37nm,0.9s						
DSP	**Deep Springs**	**2.42**	**208**		Pb	07 00 34.0	-0.8
WAKR	**Walker**	**2.48**	**247**		Pn	07 00 32.8	+0.7
WAKR	**Walker**	**2.48**	**247**	IAML		07 01 10.3	
	comp=N,24nm,0.4s						
WAKR				IAML		07 01 11.3	
	comp=E,37nm,0.3s						
TPNV	**Topopah Spring**	**2.57**	**175**	IAML		07 01 14.7	
	comp=E,29nm,0.4s						
TPNV				IAML		07 01 23.4	
	comp=E,26nm,0.5s						
WCT	**Wildcat Mounta**	**2.71**	**182**		Pn	07 00 37.5	+2.2
WCT	**Wildcat Mounta**	**2.71**	**182**	IAML		07 01 18.5	
	comp=E,21nm,0.4s						
MPK	**Martis Peak**	**2.72**	**267**	Pn	Pn	07 00 35.8	+0.3
MPK				IAML		07 00 57.1	
	comp=E,19nm,4.1s						
MPK				IAML		07 02 13.1	
	comp=N,22nm,4.5s						
NSP	**Numbskull Pass**	**2.79**	**175**		Pn	07 00 37.4	+1.0
MCY	**Mercury**	**2.88**	**171**		Pn	07 00 38.9	+1.3
DUG	**Dugway, Tooele**	**2.94**	**75**		Pn	07 00 39.1	+0.5
DUG				IAML		07 01 25.1	
	comp=N,14nm,0.8s						
DUG				IAML		07 01 25.3	
	comp=N,18nm,0.5s						
BGU	**Big Grassy Mou**	**3.03**	**61**		Pn	07 00 40.2	+0.5
BGU				IAML		07 01 18.9	
	comp=E,12nm,1.1s						
AMDNV	**Amargosa**	**3.06**	**176**		Pn	07 00 42.1	+2.1

*GCMT **26** 07:07:18.0 ± 0.4, 37°.35S ± 0°.02 × 94°.76W ± 0°.03, h17km ± 2km, MW5.0/73, Moment Tensor Solution. s10,c11; s73,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.99±.25; $M_{\theta\theta}$-0.05±.20; $M_{\phi\phi}$ 1.04±.20; $M_{r\theta}$-0.11±.48; $M_{r\phi}$-3.19±.14; $M_{\theta\phi}$-2.03±.62; Best double couple: M_o3.88300×10^{16} NP1: ϕs 97.00000°, δ55.00000°, λ-169.00000°. NP2: ϕs 0.00000°, δ81.00000°, λ-35.00000°. Principal axes: T 4.1800, Plg17.0000°, Azm53.0000°; N -0.5960, Plg54.0000°, Azm168.0000°; P -3.5860, Plg31.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 26 07:07:14.0 ± 1.5, 37°.05S × 94°.98W, h0km, mb3.6/5, mbtmp3.6/5, MS4.1/11 Error ellipse: s-maj=57.2km s-min=33.5km az=70.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**13.48**	**81**	T	T	07 24 20.2	
	baz=250,slow=74						
H03S1	**Juan Fernandez**	**13.49**	**81**	T	T	07 24 09.4	
	baz=250,slow=74						
H03S3	**Juan Fernandez**	**13.49**	**81**	T	T	07 24 16.0	
	baz=250,slow=74						
H03N2	**Juan Fernandez**	**13.60**	**79**	T	T	07 24 22.1	
	baz=249,slow=71						
H03N3	**Juan Fernandez**	**13.60**	**79**	T	T	07 24 24.3	
	baz=249,slow=71						
H03N1	**Juan Fernandez**	**13.62**	**79**	T	T	07 24 23.3	
	baz=249,slow=71						
RPN	**Rapa Nui**	**15.66**	**305**	LR	LR	07 15 02.3	
	comp=Z,325nm,20.4s,baz=100,slow=30						
NNA	**Nana**	**29.81**	**38**	LR	LR	07 22 08.6	
	comp=Z,499nm,20.4s,baz=174,slow=30						
LPAZ	**La Paz**	**31.49**	**56**	P	P	07 13 38.2	-0.1
	1.2nm,0.9s,baz=230,slow=7.5,SNR=2.6						
LPAZ				LR	LR	07 23 17.9	
	comp=Z,299nm,20.2s,baz=220,slow=31						
	1.2nm,0.9s						
ATAH	**Atahualpa**	**33.40**	**31**	LR	LR	07 24 10.2	
	comp=Z,560nm,19.7s,baz=193,slow=30						
CPUP	**Villa Florida**	**33.58**	**82**	LR	LR	07 24 32.1	
	comp=Z,87nm,18.9s,baz=294,slow=31						
ROSC	**El Rosal**	**45.92**	**29**	LR	LR	07 32 58.5	
	comp=Z,330nm,19.6s,baz=246,slow=34						
JTS	**Las Juntas de**	**48.03**	**13**	LR	LR	07 31 12.2	
	comp=Z,252nm,18.4s,baz=264,slow=30						
SDV	**Santo Domingo**	**51.09**	**32**	LR	LR	07 35 52.1	
	comp=Z,271nm,20.7s,baz=197,slow=34						
SNAA	**Sanae**	**55.97**	**158**	P	P	07 16 53.6	0.0
	0.5nm,0.9s,baz=212,slow=9.5,SNR=1.7						
	0.5nm,0.9s						
MDP	**Montagnes des**	**57.59**	**53**	LR	LR	07 39 27.5	
	comp=Z,211nm,20.4s,baz=218,slow=34						
SJG	**San Juan**	**61.24**	**32**	LR	LR	07 43 58.1	
	comp=Z,85nm,18.1s,baz=284,slow=36						
TXAR	**Lajitas Array**	**66.54**	**352**	P	P	07 18 06.4	+0.7
	0.2nm,0.6s,baz=176,slow=7.5,SNR=3.6						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**78.13**	**341**	P	P	07 19 14.6	-0.3
	0.5nm,0.8s,baz=152,slow=1.9,SNR=4.0						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**80.55**	**349**	P	P	07 19 27.9	-0.2
	0.4n

MZWR	**Madinat Zayed**	**3.94**	**169**	P		**Pn**	**07 11 54.4**	**+3.0**	
MZWR				S		**Sn**	**07 12 41.1**	**+3.4**	
HATD	**Hatta, Dubai**	**3.96**	**135**	P		**Pn**	**07 11 53.5**	**+1.9**	
HATD				S		**Sn**	**07 12 40.2**	**+2.2**	
HATD	**Hatta, Dubai**	**3.96**	**135**	*i* P		**Pn**	**07 11 53.5**	**+1.9**	
	SNR=10								
IMEH	**Mehriz**	**3.98**	**20**	Pn		**Pn**	**07 11 54.2**	**+2.2**	
ASHO	**Ashiyiah**	**4.01**	**137**	P		**Pn**	**07 11 54.3**	**+1.9**	
ASHO				P		Pb	07 11 54.5	-7.1	
ASHO				S		**Sn**	**07 12 41.1**	**+1.6**	
ASHO	**Ashiyiah**	**4.01**	**137**	*i* P		**Pn**	**07 11 54.2**	**+1.9**	
	SNR=21								
KRBR	**Kerman**	**4.01**	**54**	Pn		**Pn**	**07 11 55.6**	**+3.0**	
KRBR	**Kerman**	**4.01**	**54**	*e*Pn		**Pn**	**07 11 55.8**	**+3.2**	
KRBR				IAML			07 12 59.8		
	comp=Z,180nm,1.0s								
KHGB	**Koh Gabri**	**4.06**	**47**	Pn		**Pn**	**07 11 54.7**	**+1.5**	
IRAM	**Rameshеh**	**4.18**	**352**	Pn		**Pn**	**07 11 56.7**	**+1.8**	
ALNE	**Al Ain**	**4.33**	**145**	P		**Pn**	**07 11 59.3**	**+2.5**	
ZRDN	**Zarand Kerman**	**4.51**	**42**	Pn		**Pn**	**07 12 00.7**	**+1.4**	
IBAF	**Bafgh**	**4.51**	**29**	Pn		**Pn**	**07 12 00.8**	**+1.6**	
CHMN	**Cheshme madani**	**4.53**	**60**	Pn		**Pn**	**07 12 01.6**	**+1.8**	
MZR	**Muzera**	**4.64**	**175**	P		**Pn**	**07 12 02.4**	**+1.4**	
MZR	**Muzera**	**4.64**	**175**	P		**Pn**	**07 12 03.0**	**+2.0**	
SOHO	**SOHO**	**4.71**	**137**	P		**Pn**	**07 12 04.0**	**+2.1**	
SOHO	**SOHO**	**4.71**	**137**	*i* P		**Pn**	**07 12 03.2**	**+1.3**	
	SNR=8.1								
ICHK	**Chekchek**	**4.73**	**14**	Pn		**Pn**	**07 12 04.0**	**+1.6**	
YZKH	**Yazd**	**4.92**	**16**	*e*Pn		**Pn**	**07 12 06.2**	**+1.4**	
YZKH				IAML			07 13 38.8		
	comp=Z,47nm,1.0s								
KBAM	**BAM**	**5.00**	**71**	Pn		**Pn**	**07 12 07.8**	**+1.8**	
NASN	**Na'in**	**5.14**	**358**	*e*Pn		**Pn**	**07 12 09.0**	**+0.9**	
NASN				IAML			07 13 48.5		
	comp=Z,45nm,1.0s								
UMZA	**Um Al Zommool**	**5.28**	**158**	P		**Pn**	**07 12 12.4**	**+2.7**	
UMZA				S		**Sn**	**07 13 08.8**	**-1.8**	
ARQ	**Araqi**	**5.33**	**143**	P		**Pn**	**07 12 12.8**	**+2.4**	
ANAR	**Anarak**	**5.56**	**6**	Pn		**Pn**	**07 12 14.8**	**+1.2**	
HOQ	**Hoqain**	**5.59**	**135**	P		**Pn**	**07 12 16.5**	**+2.4**	
HOQ				S		**Sn**	**07 13 18.2**	**-0.3**	
GTMR	**Gotvand**	**5.88**	**326**	*e*Pn		**Pn**	**07 12 18.7**	**+0.6**	
GTMR				IAML			07 14 36.7		
	comp=Z,56nm,1.0s								
BIDO	**Bidbid**	**6.17**	**131**	P		**Pn**	**07 12 23.8**	**+1.8**	
BIDO				S		**Sn**	**07 13 30.9**	**-1.7**	
BSY	**Bisya**	**6.17**	**141**	P		**Pn**	**07 12 24.2**	**+2.2**	
BSY				S		**Sn**	**07 13 32.9**	**+0.2**	
TPRV	**Parvadeh(Tabas**	**6.22**	**30**	Pn		**Pn**	**07 12 24.6**	**+1.8**	
SMDO	**Samad**	**6.44**	**134**	P		**Pn**	**07 12 27.6**	**+1.8**	
SMDO				S		**Sn**	**07 13 41.1**	**+1.7**	
WSAR	**Wadi Sarin**	**6.70**	**130**	P		**Pn**	**07 12 30.0**	**+0.8**	
WSAR				S		**Sn**	**07 13 44.3**	**-1.3**	
BSRN	**Basiran**	**6.82**	**49**	*e*Pn		**Pn**	**07 12 31.1**	**0.0**	
BSRN				IAML			07 14 56.8		
	comp=Z,16nm,1.0s								
TKDS	**Koohdasht(Taba**	**6.91**	**30**	Pn		**Pn**	**07 12 32.7**	**+0.5**	
TABS	**Tabas**	**6.94**	**29**	*e*Pn		**Pn**	**07 12 32.8**	**+0.2**	
TABS				IAML			07 14 58.0		
	comp=Z,19nm,1.0s								
JMDO	**Jabal Madar**	**6.98**	**138**	P		**Pn**	**07 12 35.0**	**+1.9**	
TNSJ	**Nastanj**	**7.01**	**25**	Pn		**Pn**	**07 12 34.2**	**+0.6**	
WBK	**Wadi Bani Khal**	**7.36**	**132**	P		**Pn**	**07 12 39.5**	**+1.2**	
WBK				S		**Sn**	**07 14 02.1**	**+0.2**	
RAYN	**Ar Rayn**	**7.94**	**241**	P		**Pn**	**07 12 47.9**	**+1.5**	
RAYN	**Ar Rayn**	**7.94**	**241**			**Pn**	**07 12 47.7**	**+1.3**	
RAYN	**Ar Rayn**	**7.94**	**241**	*i* P		**Pn**	**07 12 46.8**	**+0.5**	
	SNR=11								
JLN	**Jalan Bani Buh**	**7.97**	**132**	P		**Pn**	**07 12 46.8**	**+0.1**	
DAMV	**Damavand**	**8.01**	**354**	*e*Pn		**Pn**	**07 12 47.7**	**+0.2**	
DAMV				IAML			07 13 54.2		
	comp=Z,5.6nm,1.0s								
MHTO	**MHTO**	**8.01**	**145**	P		**Pn**	**07 12 48.6**	**+1.3**	
SRVN	**Saravan**	**8.32**	**90**	*e*Pn		**Pn**	**07 12 52.7**	**+1.1**	
SRVN				IAML_BB			07 13 50.8		
	comp=Z,300nm,1.0s								
DQM	**DQM**	**8.72**	**151**	P		**Pn**	**07 12 58.3**	**+1.3**	
DOK	**Doka**	**9.04**	**173**	P		**Pn**	**07 13 02.0**	**+0.6**	
	SNR=13								
WHFO	**Wadi Hawf**	**9.71**	**176**	P		**Pn**	**07 13 11.3**	**+0.7**	
	SNR=7.1								
SHAO	**Shalim**	**9.87**	**165**	P		**Pn**	**07 13 13.0**	**+0.1**	
DMTO	**DMTO**	**10.04**	**169**	P		**Pn**	**07 13 14.9**	**-0.2**	
	SNR=7.6								
ABTO	**Aybut**	**10.25**	**179**	P		**Pn**	**07 13 19.5**	**+1.5**	
GAZ	**Gaziantep**	**16.37**	**309**			**P**	**07 14 43.2**	**-0.5**	
GAZ				IAmb		IAmb	07 14 46.9		
	comp=Z,21nm,1.2s								
ARPR	**Arapgir-MALATY**	**16.74**	**317**	P		**P**	**07 14 47.8**	**0.0**	
CHGR	**Chuyangaron**	**17.38**	**47**			**Pn**	**07 14 52.4**	**-1.1**	
CHGR				IAmb		IAmb	07 14 56.4		
	comp=Z,22nm,0.8s								
KBZ	**Khabaz**	**18.01**	**336**	P		**Pn**	**07 14 59.5**	**-1.6**	
	comp=Z,0.1nm,0.3s,baz=151,slow=16,SNR=1.8								
	comp=Z,2.3nm,1.1s								
GAR	**Garm**	**18.32**	**47**	P		**P**	**07 15 04.4**	**-0.8**	
GAR				IAmb		IAmb	07 15 07.8		
	comp=Z,29nm,0.9s								
NIL	**Nilore**	**18.39**	**66**			**P**	**07 15 06.9**	**+0.9**	
DRK	**Karamyk**	**19.55**	**48**	P		**Pn**	**07 15 20.3**	**+0.1**	
DRK				IAmb		IAmb	07 15 22.1		
	comp=Z,15nm,0.9s								
BR131	**Keskin Array S**	**20.09**	**312**	P		Pn	07 15 26.4	-0.1	
BRTR	**Keskin Array B**	**20.09**	**312**	P		**P**	**07 15 21.5**	**-3.1**	
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=4.5								
	comp=Z,0.4nm,0.4s								
BRTR	**Keskin Array B**	**20.09**	**312**			Pn	07 15 26.9	+0.5	
KK31	**Karatay Array**	**20.93**	**38**			**P**	**07 15 33.5**	**-0.2**	
KK31				IAmb		IAmb	07 15 37.5		
	comp=Z,9.5nm,0.8s								
KKAR	**Karatay Array**	**20.93**	**38**			**P**	**07 15 33.8**	**+0.2**	
ARSB	**Arslanbob**	**21.30**	**45**			**P**	**07 15 38.2**	**+0.5**	
ARSB				IAmb		IAmb	07 15 39.5		
	comp=Z,27nm,0.9s								
AB31	**Akbulak array**	**22.22**	**12**			**P**	**07 15 48.6**	**+1.2**	
ABKAR	**Akbulak array**	**22.22**	**12**			**P**	**07 15 48.6**	**+1.2**	
AAK	**Ala-Archa**	**22.97**	**44**			**P**	**07 15 53.9**	**-1.7**	
AAK				IAmb		IAmb	07 16 06.0		
	comp=Z,6.0nm,0.8s								
AKTO	**Aktyubinsk**	**23.07**	**8**	P		**P**	**07 15 54.6**	**-1.7**	
	comp=Z,1.0nm,0.4s,baz=169,slow=11,SNR=9.3								
	comp=Z,1.0nm,0.4s								
BOOM	**Boomskoye usch**	**23.79**	**46**			**P**	**07 16 04.9**	**+1.1**	
BOOM				IAmb		IAmb	07 16 06.9		
	comp=Z,9.5nm,0.9s								
BVAR	**Borovoye Array**	**28.44**	**22**	P		**P**	**07 16 43.8**	**-1.8**	
	comp=Z,0.5nm,0.4s,baz=216,slow=12,SNR=5.8								
	comp=Z,0.5nm,0.4s								
ARTI	**Arti**	**28.98**	**6**	LR		LR	07 31 11.5		
	comp=Z,157nm,18.6s,baz=67,slow=42								
AKASG	**Malin Array Be**	**29.27**	**328**	P		**P**	**07 16 52.4**	**-0.6**	
	comp=Z,0.5nm,0.4s,baz=135,slow=9.0,SNR=2.9								
	comp=Z,0.5nm,0.4s								
AKASG	**Malin Array Be**	**29.27**	**328**	IAmb		IAmb	07 16 57.4		
	comp=Z,2.7nm,1.1s								
MAKZ	**Makanchi**	**29.69**	**42**	P		**P**	**07 16 58.2**	**+1.4**	
MAKZ				IAmb		IAmb	07 16 59.0		
	comp=Z,2.4nm,0.6s								
MKAR	**Makanchi Array**	**29.87**	**42**	P		**P**	**07 16 59.1**	**+0.7**	
	comp=Z,1.0nm,0.5s,baz=233,slow=9.1,SNR=9.3								
	comp=Z,1.0nm,0.5s								
MKAR	**Makanchi Array**	**29.87**	**42**	P		**P**	**07 16 59.8**	**+1.4**	
TIP	**Timpagrande**	**32.19**	**300**	P		**P**	**07 17 20.6**	**+1.6**	
LANS	**Liptovska Anna**	**33.54**	**319**	*e*P		**P**	**07 17 33.5**	**+2.8**	
ZAA0	**Zalesovo Array**	**35.11**	**33**	P		**P**	**07 17 44.4**	**+0.2**	
ZAA0				IAmb		IAmb	07 17 46.0		
	comp=Z,2.1nm,0.6s								
ZALV	**Zalesovo Beam**	**35.11**	**33**	P		**P**	**07 17 44.4**	**+0.2**	
	comp=Z,1.4nm,0.4s,baz=228,slow=11,SNR=7.5								
	comp=Z,1.4nm,0.4s								
ZALV	**Zalesovo Beam**	**35.11**	**33**	P		**P**	**07 17 43.2**	**-0.9**	
FIA1	**FINESS Array S**	**38.30**	**339**	P		**P**	**07 18 11.3**	**+0.1**	
FIA1				IAmb		IAmb	07 18 12.1		
	comp=Z,17nm,1.0s								
FINES	**FINESS Array B**	**38.30**	**339**	P		**P**	**07 18 11.0**	**-0.2**	
	comp=Z,2.1nm,0.5s,baz=146,slow=9.8,SNR=7.3								
	comp=Z,2.1nm,0.5s								
FINES	**FINESS Array B**	**38.30**	**339**	P		**P**	**07 18 11.4**	**+0.3**	
HFS	**Hagfors**	**42.01**	**332**	P		**P**	**07 18 41.1**	**-0.9**	
	comp=Z,1.4nm,0.6s,baz=115,slow=6.7,SNR=4.9								
	comp=Z,1.4nm,0.6s								
NC405	**NORSAR Array S**	**43.36**	**332**	P		**P**	**07 18 54.2**	**+1.2**	
NC405				IAmb		IAmb	07 19 21.5		
	comp=Z,11nm,1.2s								
NOA	**NORSAR Array B**	**43.53**	**332**	P		**P**	**07 18 52.9**	**-1.5**	
	comp=Z,0.6nm,0.6s,baz=118,slow=8.4,SNR=3.8								
	comp=Z,0.6nm,0.6s								
ARCES	**ARCESS Array B**	**44.87**	**347**	P		**P**	**07 19 03.7**	**-1.2**	
	comp=Z,2.0nm,0.9s,baz=157,slow=6.6,SNR=4.2								
	comp=Z,2.0nm,0.9s								
SONM	**Songino Array**	**45.75**	**49**	P		**P**	**07 19 13.8**	**+1.3**	
	comp=Z,1.3nm,0.5s,baz=259,slow=8.3,SNR=7.2								
	comp=Z,1.3nm,0.5s								
EKA	**Eskdalemuir Ar**	**48.63**	**321**	P		**P**	**07 19 34.5**	**-0.1**	
	comp=Z,0.7nm,0.4s,baz=100,slow=7.9,SNR=9.0								
	comp=Z,0.7nm,0.4s								
GRTLG	**Ghanzi**	**57.62**	**216**	P		**P**	**07 20 42.3**	**+1.0**	
DBIC	**Dimbokro**	**58.56**	**260**	P		**P**	**07 20 45.5**	**-2.4**	
	comp=Z,3.7nm,0.9s,baz=58,slow=6.9,SNR=4.1								
	comp=Z,3.7nm,0.9s								
KSRS	**Korea Array**	**62.39**	**60**	P		**P**	**07 21 12.9**	**-1.0**	
	comp=Z,0.7nm,0.4s,baz=280,slow=6.8,SNR=2.0								
	comp=Z,0.7nm,0.4s								
FITZ	**Fitzroy Crossi**	**83.70**	**114**	P		**P**	**07 23 20.9**	**+0.7**	
BMAR	**Burnt Mountain**	**84.30**	**7**	P		**P**	**07 23 24.3**	**+1.7**	
ILAR	**Eielson Array**	**86.58**	**8**	P		**P**	**07 23 33.1**	**-0.8**	
	comp=Z,0.3nm,0.9s,baz=328,slow=5.7,SNR=2.4								
	comp=Z,0.3nm,0.9s								
ILAR	**Eielson Array**	**86.58**	**8**	P		**P**	**07 23 35.7**	**+1.8**	
I30M	**Mount Dempster**	**87.15**	**4**	P		**P**	**07 23 37.4**	**+0.5**	
I30M				IAmb		IAmb	07 24 10.3		
	comp=Z,3.2nm,1.4s								
WRA	**Warramunga Arr**	**91.74**	**112**	P		**P**	**07 23 58.9**	**-0.2**	
	comp=Z,0.4nm,0.6s,baz=311,slow=4.2,SNR=6.2								
	comp=Z,0.4nm,0.6s								
ASAR	**Alice Springs**	**93.17**	**115**	P		**P**	**07 24 05.8**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=302,slow=5.5,SNR=5.9								
	comp=Z,0.4nm,0.7s								

NAO ***26*** *07:12:04.1,38˚.84N×19˚.32E,h10km,MB3.5*
IDC ***26*** *07:12:27.9±1.6,41˚.38N×19˚.26E,h0km,mb4.1/9, mbtmp4.0/15,ML1.8/2,MS3.3/1,Error ellipse: s-maj=25.1km s-min=15.4km az=25.0*
PRU ***26*** *07:12:29.6,41˚.28N×19˚.70E,h1km,M4.5*
NEIC ***26*** *07:12:31.8±2.5,41˚.53N±0˚.03×19˚.44E±0˚.07,h10km±1km, mb4.5/5,Error ellipse: s-maj=9.4km s-min=3.7km az=250.0*
ROM ***26*** *07:12:31.9±0.1,41˚.532N±0˚.010×19˚.490E±0˚.008,h20km, ML3.8/90,Error ellipse: s-maj=1.1km s-min=0.7km az=5.0*
SKO ***26*** *07:12:32.2,41˚.58N×19˚.43E,h5km,ML3.8*
BEO ***26*** *07:12:32.4±0.6,41˚.48N×19˚.57E,h11km±2km,ML3.7/16*
RHSSO ***26*** *07:12:32.7±0.9,41˚.49N×19˚.52E,h8km±4km,ML4.0/4*
TIR ***26*** *07:12:32.8,41˚.61N×19˚.52E,h36km±2km,Ml4.0/7*
THE ***26*** *07:12:33.8,42˚.N±8˚×1˚.9E±˚,h91km±22km,M3.7/25, MLh3.7/25*

ISC 26 07:12:32.2±0.9, 41˚.52N±0˚.02×19˚.48E±0˚.02, h18km±4km, n187,σ1°66/244, mb4.5/9, 17C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.34**	**120**	Pg	**Pg**	**Pg**	**07 12 39.3**	**-0.1**
TIR				Sg	**Sg**	**Sg**	**07 12 43.6**	**-0.6**
TIR				AML	AML	AML	07 12 44.6	
	59nm,0.5s							
TIR	**Tirane**	**0.34**	**120**	*i* Pg	**Pg**	**Pg**	**07 12 39.2**	**-0.1**
TIR				*i* Sg	**Sb**	**Sb**	**07 12 45.0**	**+0.3**
TIR	**Tirane**	**0.34**	**120**	P	**Pg**	**Pg**	**07 12 39.2**	**-0.1**
TIR				S	**Sb**	**Sb**	**07 12 44.6**	**-0.1**
SDA	**Shkodra**	**0.54**	**2**	Pg	**Pg**	**Pg**	**07 12 42.3**	**-0.6**
SDA				Sg	**Sb**	**Sb**	**07 12 50.2**	**-0.2**
DRME	**Dracevica, Mon**	**0.70**	**342**	*e*Pg	**Pg**	**Pg**	**07 12 45.4**	**-0.7**
DRME				*e*Sg	**Sn**	**Sn**	**07 12 57.8**	**+0.1**
PHP	**Peshkopia**	**0.74**	**77**	Pg	**Pg**	**Pg**	**07 12 45.4**	**-1.3**
PHP				Sg	**Sg**	**Sg**	**07 12 56.3**	**-0.3**
PHP				AML	AML	AML	07 13 01.1	
	43nm,0.5s							
PHP	**Peshkopia**	**0.74**	**77**	P	**Pg**	**Pg**	**07 12 45.4**	**-1.3**
PDG	**Podgorica**	**0.93**	**350**	Pg	**Pg**	**Pg**	**07 12 49.5**	**-0.8**
PDG				Sg	**Sb**	**Sb**	**07 13 02.3**	**+0.5**
PDG	**Podgorica**	**0.93**	**350**			**Pg**	**07 12 49.4**	**-0.9**
PDG	**Podgorica**	**0.93**	**350**	⇓P		**Pb**	**07 12 50.4**	**+0.6**
PDG				⇓S		**Sn**	**07 13 05.0**	**+1.7**
PDG	**Podgorica**	**0.93**	**350**	*e*Pg		**Pg**	**07 12 49.2**	**-1.1**
PDG				*e*Sg		**Sn**	**07 13 04.9**	**+1.7**
PDG	**Podgorica**	**0.93**	**350**	P		**Pg**	**07 12 49.0**	**-1.3**
VLO	**Vlora**	**1.05**	**179**	Pg		**Pn**	**07 12 54.0**	**+2.0**
VLO				Sg		**Sn**	**07 13 08.6**	**+2.5**
VLO				AML		AML	07 13 18.7	
	21nm,0.5s							
VLO	**Vlora**	**1.05**	**179**	P		**Pn**	**07 12 53.9**	**+2.0**
VLO	**Vlora**	**1.05**	**179**	P		**Pg**	**07 12 51.5**	**-1.0**
OHR	**Ohrid**	**1.07**	**112**	*i* Pg		**Pg**	**07 12 52.5**	**-0.6**
OHR				*i* Sg		**Sn**	**07 13 09.8**	**+2.8**
OHR				*e*Lg		Lg	07 13 11.1	
	comp=N,0.0nm,0.5s							
OHR				*e*Lg		Lg	07 13 12.3	
	comp=E,2μm,0.8s							
KBN	**Korca**	**1.33**	**132**	Pg		**Pg**	**07 12 58.4**	**+0.5**
KBN				Sg		**Sg**	**07 13 16.4**	**+1.0**
KBN				AML		AML	07 13 20.6	
	comp=E,7.7nm,0.7s							
KBN	**Korca**	**1.33**	**132**	P		**Pg**	**07 12 58.0**	**0.0**
KBN				S		**Sg**	**07 13 17.9**	**+2.6**
KBN	**Korca**	**1.33**	**132**	P		**Pn**	**07 12 56.1**	**+0.1**
KOME	**Kolasin**	**1.33**	**1**	*e*Pg		**Pn**	**07 12 56.8**	**+0.8**
KOME				*e*Sg		**Sg**	**07 13 17.5**	**+2.1**
TREB	**Trebinje**	**1.46**	**325**	*e*Pg		**Pb**	**07 12 59.8**	**+0.9**
TREB				*e*Sg		**Sg**	**07 13 20.0**	**+0.5**
SKO	**Skopje**	**1.54**	**72**	*i* Pg		**Pb**	**07 13 00.8**	**+0.7**
SKO				*i* Sg		**Sg**	**07 13 21.0**	**-0.8**
MESG	**Mesagne**	**1.54**	**234**	P		**Pn**	**07 12 59.3**	**+0.6**
NEST	**Nestorio**	**1.62**	**132**	Pn		**Pg**	**07 13 02.8**	**-0.6**
NEST				AML		AML	07 13 33.9	
	comp=E,5.0nm,0.7s							
NEST	**Nestorio**	**1.62**	**132**	P		**Pb**	**07 13 02.5**	**+0.9**
NEST				S		**Sg**	**07 13 24.7**	**+0.2**
KLINJ	**Klinje**	**1.78**	**338**	*e*Pn		**Pb**	**07 13 04.0**	**-0.3**
KLINJ				*e*Sn		**Sb**	**07 13 27.6**	**+1.2**
SJES	**Sjenica**	**1.78**	**12**	*e*Pg		**Pb**	**07 13 05.2**	**+0.8**
SJES				*e*Sg		**Sg**	**07 13 28.3**	**-1.4**
KEK	**Kerkira**	**1.82**	**172**			**Pg**	**07 13 08.7**	**+1.5**
KEK	**Kerkira**	**1.82**	**172**	P		**Pg**	**07 13 07.8**	**+0.7**
KEK				AML		AML		
	comp=E,1100μm,0.5s							
KEK				AML		AML		
	comp=N,1050μm,0.7s							
STON	**Ston**	**1.89**	**316**	*e*Pn		**Pb**	**07 13 07.2**	**+1.0**
STON				*e*Sn		**Sb**	**07 13 30.6**	**+1.1**
TAR1	**Taranto**	**1.93**	**240**	P		**Pn**	**07 13 04.5**	**+0.4**
TAR1				AML		AML		
	comp=N,1410μm,0.8s							
TAR1				AML		AML		
	comp=E,1052μm,0.7s							
TAR1				AML		AML		
	comp=N,1410μm,1.2s							
NOCI	**Noci**	**1.96**	**249**	Pn		**Pn**	**07 13 05.9**	**+1.4**
NOCI				Sn		**Sn**	**07 13 27.8**	**-1.0**
NOCI				AML		AML	07 13 44.1	
	comp=N,4.8nm,0.4s							
NOCI	**Noci**	**1.96**	**249**	P		**Pn**	**07 13 05.3**	**+0.7**
NOCI				S		**Sn**	**07 13 28.8**	**+0.1**
NOCI				AML		AML		
	comp=E,506μm,0.5s							
NOCI				AML		AML		
	comp=N,678μm,0.6s							
NOCI				AML		AML		
	comp=E,1590μm,0.4s							
NOCI				AML		AML		
	comp=N,1240μm,1.2s							
NOCI				AML		AML		
	comp=N,1310μm,1.0s							
NOCI				AML		AML		
	comp=N,1310μm,1.0s							
IGT	**Igoumenitsa**	**2.09**	**162**	Pn		**Pn**	**07 13 08.4**	**+2.2**
IGT	**Igoumenitsa**	**2.09**	**162**	P		**Pn**	**07 13 07.7**	**+1.4**
SELS	**Selova**	**2.09**	**35**	*e*Pn		**Pn**	**07 13 08.0**	**+1.6**
SELS				*e*Sn		**Sb**	**07 13 34.7**	**-0.6**
RUDO	**Rudo**	**2.10**	**358**	*e*Pn		**Pn**	**07 13 08.5**	**+2.0**
RUDO				*e*Sn		**Sb**	**07 13 34.9**	**-0.7**
LFKM	**Lefkimmi**	**2.12**	**168**	P		**Pn**	**07 13 08.4**	**+1.7**
KZN	**Kozani**	**2.12**	**124**	P		**Pn**	**07 13 08.8**	**+2.0**
KZN				S		**Sn**	**07 13 34.9**	**+2.3**
IVAS	**Ivanjica**	**2.12**	**13**	*e*Pn		**Pn**	**07 13 07.9**	**+1.1**
IVAS				*e*Sn		**Sn**	**07 13 35.0**	**+2.3**
LTRZ	**Laterza**	**2.21**	**246**	P		**Pn**	**07 13 08.2**	**+0.3**
LTRZ				AML		AML		
	comp=E,367μm,0.8s							
LTRZ				AML		AML		
	comp=N,324μm,1.0s							
LTRZ				AML		AML		
	comp=E,882μm,0.8s							
LTRZ				AML		AML		
	comp=N,942μm,0.9s							
LTRZ				AML		AML		
	comp=E,882μm,1.2s							
AMUR	**Altamura**	**2.25**	**255**	P		**Pn**	**07 13 08.9**	**+0.3**
AMUR				AML		AML		
	comp=E,423μm,0.6s							
AMUR				AML		AML		
	comp=N,247μm,0.7s							
MATE	**Matera**	**2.27**	**248**	⇓P		**Pn**	**07 13 09.3**	**+0.5**
GRG	**Griva**	**2.27**	**103**	P		**Pn**	**07 13 10.6**	**+1.7**
GRG				S		**Sn**	**07 13 38.7**	**+2.2**
GOCS	**Kraljevo Serbi**	**2.29**	**26**	*e*Pn		**Pn**	**07 13 10.8**	**+1.6**
GOCS				*e*Sn		**Sn**	**07 13 39.6**	**+2.6**
VAY	**Valandovo**	**2.33**	**94**	*i* Pn		**Pn**	**07 13 11.5**	**+1.8**
VAY				*e*Sn		**Sb**	**07 13 41.2**	**-1.0**
VAY				*e*Lg		Lg	07 13 41.5	
	comp=N,385nm,0.8s							
VAY				*e*Lg		Lg	07 13 42.4	
	comp=E,319nm,0.8s							
PRMD	**Pramanda**	**2.34**	**148**	P		**Pb**	**07 13 12.9**	**-0.9**
BBLS	**Lazi&#263i**	**2.35**	**359**	*e*Pn		**Pn**	**07 13 12.0**	**+2.0**
BBLS				*e*Sn		**Sn**	**07 13 41.0**	**+2.6**
GRUS	**Gruza**	**2.54**	**21**	*e*Pn		**Pn**	**07 13 14.1**	**+1.6**
GRUS				*e*Sn		**Sn**	**07 13 46.1**	**+3.1**
TETR	**Tetrakomo, Epi**	**2.57**	**147**	P		**Pn**	**07 13 15.7**	**+2.7**
KNT	**Kendrikon**	**2.60**	**97**	P		**Pn**	**07 13 14.6**	**+1.3**
KNT				S		**Sn**	**07 13 44.3**	**-0.2**
KNT	**Kendrikon**	**2.60**	**97**	*i* Pn		**Pn**	**07 13 15.1**	**+1.7**
DIVS	**Divibare**	**2.61**	**8**	*e*Pn		**Pn**	**07 13 14.4**	**+0.9**
DIVS				*e*Sn		**Sn**	**07 13 46.5**	**+1.7**
BOVS	**Bovan**	**2.68**	**37**	⇓P		**Pn**	**07 13 15.8**	**+1.4**
BOVS	**Bovan**	**2.68**	**37**	*e*Pn		**Pn**	**07 13 15.6**	**+1.1**
BOVS				*e*Sn		**Sn**	**07 13 48.2**	**+1.7**
LIT	**Litokhoron**	**2.69**	**121**			**Pn**	**07 13 16.8**	**+2.2**
PALZ	**Palazzo San Ge**	**2.71**	**259**	P		**Pn**	**07 13 15.8**	**+0.9**
PALZ				AML		AML		
	comp=E,1820μm,0.7s							
PALZ				AML		AML		
	comp=N,2005μm,0.8s							
PALZ				AML		AML		
	comp=N,2005μm,1.2s							
PALZ				AML		AML		
	comp=E,1820μm,1.3s							
THL	**Klokotos Trika**	**2.75**	**134**	P		**Pn**	**07 13 17.2**	**+1.9**
THL				S		**Sn**	**07 13 50.3**	**+2.3**
KKB	**Krupnik**	**2.75**	**82**	P		**Pn**	**07 13 17.8**	**+2.3**
KKB	**Krupnik**	**2.75**	**82**	*i* Pn		**Pn**	**07 13 17.9**	**+2.4**
ACER	**Acerenza**	**2.77**	**256**			**Pn**	**07 13 17.0**	**+1.3**
TYRN	**Tyrnavos**	**2.77**	**130**	P		**Pn**	**07 13 17.7**	**+2.1**
THE	**Thessaloniki**	**2.78**	**107**	P		**Pn**	**07 13 17.1**	**+1.3**
THE	**Thessaloniki**	**2.78**	**107**	*i* Pn		**Pn**	**07 13 17.3**	**+1.5**
TRUS	**Trudelj**	**2.79**	**14**	*e*Pn		**Pn**	**07 13 17.2**	**+1.2**
**SGR

RONA	**Rosalia, Austr**	**6.59**	**341**	*e*Pn		**Pn**	**07 14 08.4**	**+0.3**
	comp=E,0.8nm,0.3s								
MYKA	**Terra Mystica**	**6.62**	**323**	*i* Pn		**Pn**	**07 14 08.7**	**+0.1**
	comp=E,3.3nm,0.5s								
PLOR	**Plostina**	**6.77**	**48**	⇑P		**Pn**	**07 14 13.5**	**+2.9**
VRI	**Vrincioaia**	**6.82**	**48**	⇑P		**Pn**	**07 14 14.6**	**+3.3**
CONA	**Conrad Observa**	**6.91**	**339**	*e*Pn		**Pn**	**07 14 15.3**	**+2.7**
	comp=E,0.4nm,0.2s								
KECS	**Kecovo**	**7.00**	**6**	*e*PN		**Pn**	**07 14 17.7**	**+3.9**
KECS				*e*SN		**Sn**	**07 15 31.9**	**-1.0**
MODS	**Modra-Piesok**	**7.03**	**348**	*e*PN		Pn	07 14 21.1	+6.9
KBA	**Koelnbreinsper**	**7.09**	**324**	*e*Pn		**Pn**	**07 14 15.9**	**+0.8**
	comp=E,1.9nm,0.3s								
CTI	**Castel Tesino**	**7.25**	**311**			**Pn**	**07 14 17.6**	**+0.3**
MOA	**Molln**	**7.34**	**331**	*e*Pn		**Pn**	**07 14 19.9**	**+1.5**
	comp=E,1.2nm,0.3s								
MOA				*e*Sn		**Sn**	**07 15 43.2**	**+2.0**
	comp=E,3.3nm,0.4s								
BUR08	**Bucovina Ar. S**	**7.36**	**32**			**Pn**	**07 14 21.6**	**+2.8**
IDI	**Anoyia**	**7.53**	**144**	Pn		**Pn**	**07 14 20.6**	**-0.5**
	comp=E,0.3nm,0.3s,baz=298,slow=10,SNR=2.5								
IDI				Sn		**Sn**	**07 15 39.6**	**-6.4**
	comp=E,1.8nm,0.3s,baz=144,slow=22,SNR=5.9								
	comp=E,12nm,1.0s								
TLCR		**7.73**	**59**	⇑P		**Pn**	**07 14 26.9**	**+3.1**
STHS	**Stebnicka Huta**	**8.00**	**8**	*e*PN		**Pn**	**07 14 31.0**	**+3.5**
STHS				*e*SN		**Sn**	**07 15 58.3**	**+0.9**
WTTA	**Wattenberg**	**8.03**	**318**	*e*Pn		**Pn**	**07 14 28.1**	**+0.1**
	comp=E,1.0nm,0.2s								
FETA	**Feichten**	**8.35**	**314**	*e*Pn		**Pn**	**07 14 32.7**	**+0.3**
	comp=E,0.6nm,0.4s								
FETA				*e*Sn		**Sn**	**07 16 04.3**	**-1.9**
	comp=E,3.0nm,0.6s								
MOTA	**Moosalm**	**8.36**	**317**	*e*Pn		**Pn**	**07 14 33.9**	**+1.4**
	comp=E,2.0nm,0.3s								
MOTA				*e*Sn		**Sn**	**07 16 06.0**	**-0.4**
	comp=E,2.6nm,0.3s								
GERES	**GERESS Array B**	**8.38**	**333**	Pn		**Pn**	**07 14 32.5**	**-0.3**
	baz=148,slow=13,SNR=5.0								
	comp=E,1.0nm,0.6s								
KHC	**Kasperske Hory**	**8.67**	**333**	*e*PN		**Pn**	**07 14 39.5**	**+2.8**
KHC				*e*SN		**Sn**	**07 16 16.0**	**+2.0**
DAVOX	**Davos/Dischmat**	**8.68**	**311**	Pn		**Pn**	**07 14 35.0**	**-2.0**
	comp=E,1.3nm,0.4s,baz=143,slow=10,SNR=1.2								
DAVOX				Sn		**Sn**	**07 16 11.9**	**-2.4**
	comp=E,1.2nm,0.3s,baz=312,slow=20,SNR=1.8								
AKASG	**Malin Array Be**	**11.40**	**33**	Pn		**Pn**	**07 15 15.2**	**+1.2**
	comp=E,0.2nm,0.3s,baz=225,slow=12,SNR=4.9								
HFS	**Hagfors**	**18.98**	**351**	P		**P**	**07 16 53.3**	**+0.9**
	comp=E,1.6nm,0.6s,baz=151,slow=10,SNR=6.6								
NB2	**NORSAR Subarra**	**20.19**	**348**	P		**P**	**07 17 05.7**	**0.0**
	comp=Z,2.2nm,1.1s,baz=164,slow=10								
NOA	**NORSAR Array B**	**20.19**	**348**	P		**P**	**07 17 05.9**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=152,slow=10,SNR=4.1								
NOA				LR		LR	07 25 37.2		
	comp=Z,74nm,18.1s,baz=30,slow=39								
EKA	**Eskdalemuir Ar**	**20.29**	**321**	P		**P**	**07 17 06.8**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=112,slow=9.0,SNR=4.8								
	comp=Z,2.3nm,0.9s								
FINES	**FINESS Array B**	**20.35**	**9**	P		**P**	**07 17 06.5**	**-0.9**
	comp=Z,5.8nm,0.6s,baz=176,slow=9.6,SNR=37								
	comp=Z,5.8nm,0.6s								
FINES	**FINESS Array B**	**20.35**	**9**	P		**P**	**07 17 06.7**	**-0.7**
FIA1	**FINESS Array S**	**20.36**	**9**	P		**P**	**07 17 07.2**	**-0.1**
FIA1				IAmb		IAmb	07 17 07.4		
	comp=Z,20nm,0.9s								
BELG	**Belogornoye**	**21.94**	**51**	P		**P**	**07 17 24.6**	**+0.2**
	comp=Z,13nm,0.6s,baz=199,slow=3.0,SNR=5.8								
	comp=Z,13nm,0.6s								
ARCES	**ARCESS Array B**	**28.26**	**4**	P		**P**	**07 18 22.1**	**-1.9**
	comp=Z,2.5nm,1.0s,baz=196,slow=8.6,SNR=6.3								
	comp=Z,2.5nm,1.0s								
ARTI	**Arti**	**29.10**	**46**	P		**P**	**07 18 30.6**	**-0.9**
BVAR	**Borovoye Array**	**35.68**	**53**	P		**P**	**07 19 29.0**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=260,slow=4.4,SNR=6.8								
	comp=Z,1.9nm,0.7s								
KURBB	**Kurchatov Arra**	**40.97**	**56**	P		**P**	**07 20 13.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=280,slow=6.2,SNR=1.9								
	comp=Z,0.3nm,0.4s								
KURK	**Kurchatov**	**41.01**	**56**	P		**P**	**07 20 13.5**	**-0.5**
ZAA0	**Zalesovo Array**	**44.12**	**50**	P		**P**	**07 20 39.2**	**0.0**
ZAA0				IAmb		IAmb	07 20 39.3		
	comp=Z,5.2nm,0.5s								
ZALV	**Zalesovo Beam**	**44.12**	**50**	P		**P**	**07 20 39.0**	**-0.3**
	comp=Z,4.0nm,0.4s,baz=286,slow=7.7,SNR=22								
	comp=Z,4.0nm,0.4s								
ZALV	**Zalesovo Beam**	**44.12**	**50**			**P**	**07 20 39.2**	**0.0**
MKAR	**Makanchi Array**	**44.31**	**61**	P		**P**	**07 20 41.0**	**+0.1**
	comp=Z,2.8nm,0.4s,baz=280,slow=7.6,SNR=25								
	comp=Z,2.8nm,0.4s								
MKAR	**Makanchi Array**	**44.31**	**61**	P		**P**	**07 20 41.0**	**+0.1**
EVN	**Everest**	**55.67**	**81**	P		**P**	**07 22 07.2**	**-1.0**
EVN				IAmb		IAmb	07 22 08.3		
	comp=Z,3.2nm,0.6s								
SONM	**Songino Array**	**58.99**	**52**	P		**P**	**07 22 30.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=303,slow=9.5,SNR=4.0								
	comp=Z,0.7nm,0.8s								
ASAR	**Alice Springs**	**123.25**	**93**	PKP		**PKPdf**	**07 31 26.9**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=294,slow=0.9,SNR=2.1								

NNC ***26*** *07:17:53.1±2.1,41.86N×79.29E,h0km,mb2.8,mpv2.7, Error ellipse: s-maj=14.4km s-min=8.4km az=155.0*
SOME ***26*** *07:17:54.7,41.95N×79.23E,h15km*
KRNET ***26*** *07:17:55.2±0.1,41.85N×79.20E,h19km,mb2.4*
ISC 26 07:17:53.0±1.9**,41.81N**±0.06**×79.26E**±0.05**,h9**km±11km, **n31,σ1§36/52,14C-4D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
PRZ	**Przheval'sk**	**0.93**	**317**	⇑*i*P		**Pg**	**07 18 11.8**	**+0.9**
PRZ				⇑*i*S		**Sb**	**07 18 24.1**	**+0.2**
TARG	**Taragay, Kyrgy**	**1.09**	**266**	⇑*i*P		**Pn**	**07 18 15.0**	**+0.2**
TARG				⇑*i*S		**Sg**	**07 18 29.5**	**+1.3**
UZB	**Uzynbulak**	**1.35**	**353**	P		**Pn**	**07 18 16.6**	**-1.5**
	3.2nm,0.3s							
UZB				S		**Sb**	**07 18 35.0**	**-0.9**
	4.2nm,0.4s							
UZB	**Uzynbulak**	**1.35**	**353**	*e*P		**Pn**	**07 18 18.0**	**-0.1**
	2.0nm,0.2s							
UZB				*e*S		**Sb**	**07 18 35.0**	**-0.9**
	4.2nm,0.4s							
SHLS	**Shalkode**	**1.35**	**6**	P		**Pb**	**07 18 18.4**	**-0.2**
	15nm,0.2s							
SHLS				S		**Sg**	**07 18 37.4**	**+0.8**
	17nm,0.4s							
SHLS	**Shalkode**	**1.35**	**6**	*e*P		**Pg**	**07 18 18.9**	**-0.1**
	15nm,0.2s							
SHLS				*e*S		**Sg**	**07 18 36.5**	**-0.2**
	17nm,0.4s							
SATY	**Saty**	**1.40**	**333**	P		**Pn**	**07 18 18.3**	**-0.5**
	1.3nm,0.2s							
SATY				S		**Sb**	**07 18 37.7**	**+0.3**
	9.7nm,0.2s							
PDGK	**Podgornoye**	**1.53**	**6**	⇑P		**Pg**	**07 18 23.7**	**+1.4**
	1.1nm,0.4s							
PDGK				⇑S		**Sg**	**07 18 45.4**	**+3.2**
	6.5nm,0.3s							
KDJ	**Kajisay**	**1.58**	**282**	⇑*i*P		**Pb**	**07 18 23.2**	**+0.7**
KDJ				⇑*i*S		**Sb**	**07 18 43.6**	**+0.9**
KTMS	**Ketmen**	**1.82**	**26**	P		**Pn**	**07 18 24.0**	**-0.7**
	0.7nm,0.2s							
KTMS				S		**Sn**	**07 18 47.5**	**-0.5**
	1.0nm,0.2s							
TNSS	**Tian-Shan**	**2.11**	**306**	Pg		**Pb**	**07 18 32.0**	**+0.4**
	1.3nm,0.3s							
TNSS				Lg		Lg	07 19 01.0	
	2.5nm,0.5s							
TNSS	**Tian-Shan**	**2.11**	**306**	*e*P		**Pg**	**07 18 33.3**	**-0.1**
	1.3nm,0.3s							
TNSS				*e*S		**Sg**	**07 19 01.0**	**+0.3**
	2.5nm,0.5s							
MDOK	**Medeo**	**2.12**	**310**	Pg		**Pb**	**07 18 31.8**	**+0.1**
	1.3nm,0.6s							
MDOK				Lg		Lg	07 19 00.7	
	11nm,0.6s							
KOTS	**Kotyrbulak**	**2.13**	**313**	Pg		**Pb**	**07 18 31.9**	**0.0**
	3.6nm,0.6s							
KOTS				Lg		Lg	07 19 01.0	
	12nm,0.4s							
KOTS	**Kotyrbulak**	**2.13**	**313**	*e*P		**Pg**	**07 18 33.2**	**-0.7**
	5.3nm,0.2s							
KOTS				*e*S		**Sg**	**07 19 01.0**	**-0.5**
	12nm,0.4s							
ULHL	**Ulahol**	**2.29**	**282**	⇑*i*P		**Pb**	**07 18 34.5**	**-0.1**
ULHL				⇑*i*S		**Sb**	**07 19 03.0**	**-0.1**
BLB	**Baldybastay**	**2.36**	**346**	Pg		**Pb**	**07 18 35.1**	**-0.6**
	7.1nm,0.3s							
BLB				Lg		Lg	07 19 06.6	
	17nm,0.5s							
MTBS	**Maitube**	**2.48**	**303**	Pg		**Pb**	**07 18 38.2**	**+0.5**
	2.3nm,0.6s							
MTBS				Lg		Lg	07 19 11.8	
	2.5nm,0.5s							
MTBS	**Maitube**	**2.48**	**303**	*e*P		**Pg**	**07 18 39.7**	**-0.7**
	1.5nm,0.3s							
MTBS				*e*S		**Sg**	**07 19 11.5**	**-0.9**
	2.5nm,0.5s							
KNOS	**Konyrlen**	**2.55**	**359**	Pg		**Pb**	**07 18 38.0**	**-1.0**
	0.5nm,0.1s							
KNOS				Lg		Lg	07 19 11.8	
	3.4nm,0.4s							
BOOM	**Boomskoye usch**	**2.56**	**287**	⇑*i*P		**Pb**	**07 18 38.1**	**-1.1**
BOOM				⇑*i*S		**Sb**	**07 19 09.5**	**-1.3**
KTBS	**Karatobe**	**2.69**	**316**	Pg		**Pb**	**07 18 41.4**	**+0.2**
	1.0nm,0.6s							
KTBS				Lg		Lg	07 19 17.8	
	0.3nm,0.6s							
KST	**Kastek**	**2.73**	**298**	Pg		**Pb**	**07 18 43.0**	**+0.9**
KST				Lg		Lg	07 19 20.1	
	6.0nm,1.1s							
KST	**Kastek**	**2.73**	**298**	*e*P		**Pg**	**07 18 44.5**	**-0.9**
	2.0nm,0.4s							
KST				*e*S		**Sg**	**07 19 20.1**	**-0.6**
	5.7nm,0.5s							
JNKS	**Jany-Kuch**	**2.81**	**256**	⇓*i*P		**Pb**	**07 18 42.0**	**-1.5**
JNKS				⇓*i*S		**Sb**	**07 19 16.1**	**-2.1**
TKM2	**Tokmak 2**	**2.93**	**293**	⇑*i*P		**Pb**	**07 18 43.3**	**-2.2**
TKM2				⇑*i*S		**Sb**	**07 19 18.5**	**-3.1**
DGS	**Degeres**	**2.95**	**300**	Pg		**Pb**	**07 18 46.0**	**+0.2**
	0.9nm,0.5s							
DGS				Lg		Lg	07 19 25.6	
	4.7nm,0.8s							
DGS	**Degeres**	**2.95**	**300**	*e*P		**Pb**	**07 18 47.3**	**+1.5**
	1.6nm,0.4s							
DGS				*e*S		**Sg**	**07 19 25.6**	**-2.1**
	4.7nm,0.8s							
KRBS	**Karabastau**	**3.24**	**307**	Pg		**Pb**	**07 18 51.4**	**+0.6**
	0.4nm,0.3s							
KRBS				Lg		Lg	07 19 34.9	
	1.6nm,0.6s							
KRBS	**Karabastau**	**3.24**	**307**	*e*P		**Pb**	**07 18 52.6**	**+1.8**
KRBS				*e*S		**Sg**	**07 19 34.9**	**-2.3**
UCH	**Uchtor**	**3.56**	**278**	⇓*i*P		**Pn**	**07 18 52.3**	**+3.5**
UCH				⇓*i*S		**Sn**	**07 19 34.1**	**+2.9**

NAO ***26*** *07:26:48.9,40.29N×18.83E,h10km,MB4.0*
IDC ***26*** *07:26:59.8±0.5,41.58N×19.52E,h0km,mb4.4/23, mbtmp4.4/40,ML4.0/15,MS4.0/37,Error ellipse: s-maj=9.0km s-min=8.3km az=173.0*
MOS ***26*** *07:27:00.3±1.1,41.52N×19.46E,h16km,mb5.1/13,Error ellipse: s-maj=5.8km s-min=3.4km az=72.4*
BEO ***26*** *07:27:01.9±0.6,41.44N×19.55E,h12km±3km,ML4.4/14*
RHSSO ***26*** *07:27:02.6±0.9,41.52N×19.46E,h7km±4km,ML4.7/5*
THE ***26*** *07:27:02.6,42.8N×1.9E±1.1,h10km,M4.2/45,mb5.0/2, MLh4.2/45*
NEIC ***26*** *07:27:02.1±2.6,41.50N±0.05×19.47E±0.04,h10km±1km, mb4.9/34,Error ellipse: s-maj=10.1km s-min=3.1km az=151.0*
ROM ***26*** *07:27:02.2±0.1,41.509N±0.007×19.46E±0.01, h18km±2km,ML4.8/218,Error ellipse: s-maj=1.1km s-min=0.7km az=67.0*
MCSM ***26*** *07:27:02.3±0.4,41.4N±4.9×1.9E±.1,h11km±3km,mb4.8, mB5.2,MLv4.9,Mw(mB)4.6*
SKO ***26*** *07:27:02.5,41.65N×19.48E,h0km,ML4.4*
MED_RC ***26*** *07:27:02.0±0.4,41.53N×19.40E,h25km±1km,MW4.6/21, Moment Tensor Solution.Mantle waves: s21,c30; Duration: 1§0 Moment tensor: Scale 10^16Nm; Mrr0.43±.12; Mθθ0.41±.07; Mϕϕ-0.84±.07; Mrθ0.54±.11; Mθϕ0.31±.05; Mϕr-0.51±.09; Best double couple: M0 1.08000×10^16 NP1:ϕs25.00000°,δ37.00000°, λ155.00000°. NP2:ϕs135.00000°,δ75.00000°,λ56.00000°. Principal axes: T 0.9800, Plg48.0000°, Azm9.0000°; N 0.2000, Plg33.0000°, Azm145.0000°; P -1.1800, Plg22.0000°, Azm251.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
TIR ***26*** *07:27:03.2,41.57N×19.57E,h24km±64km,Ml4.6/3*
PRU ***26*** *07:27:03.7,41.39N×19.26E,h10km,M4.9*
PDG ***26*** *07:27:03.1±0.5,41.54N×19.52E,h14km±1km,MD4.3/10, ML4.3/9,Error ellipse: s-maj=1.8km s-min=2.6km az=0.0*
ISC 26 07:27:03.1±0.4**,41.55N**±0.02**×19.53E**±0.02**,h20**km±2km, **n595,σ1§52/635,mb4.8/49,MS4.1/32,48C-45D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
TIR	**Tirane**	**0.32**	**128**	Pg		**Pb**	**07 27 09.2**	**-0.9**
TIR				Sg		**Sb**	**07 27 13.6**	**-1.4**
TIR				AML	AML		07 27 14.8	
	350nm,0.4s							
TIR				AML	AML		07 27 15.0	
	216nm,0.5s							
TIR	**Tirane**	**0.32**	**128**	*i* Pg		**Pb**	**07 27 09.3**	**-0.9**
TIR				*i* Sg		**Sb**	**07 27 15.1**	**+0.1**
TIR	**Tirane**	**0.32**	**128**	⇓P		**Pb**	**07 27 09.1**	**-1.1**
TIR				S		**Sb**	**07 27 14.8**	**-0.1**
TIR				AML	AML			
TIR				AML	AML			
TIR				AML	AML			
ULC	**Ulcinj**	**0.47**	**333**	⇑*i*Pg		**Pb**	**07 27 11.3**	**-1.3**
ULC				*i* Sg		**Sb**	**07 27 18.4**	**-0.7**
SDA	**Shkodra**	**0.51**	**358**	Pg		**Pb**	**07 27 12.0**	**-1.3**
SDA				Sg		**Sb**	**07 27 21.1**	**+0.8**
DRME	**Dracevica, Mon**	**0.69**	**338**	*e*Pg		**Pb**	**07 27 15.6**	**-0.9**
DRME				*e*Sg		**Sn**	**07 27 28.5**	**+0.7**
DRME	**Dracevica, Mon**	**0.69**	**338**	⇑*i*Pg		**Pb**	**07 27 15.1**	**-1.4**
DRME				*i* Sg		**Sn**	**07 27 26.8**	**-1.0**
PHP	**Peshkopia**	**0.70**	**78**	Pg		**Pb**	**07 27 15.8**	**-0.9**
PHP				Sg		**Sb**	**07 27 26.0**	**+0.1**
PHP				AML	AML		07 27 34.1	
	136nm,0.6s							
PHP	**Peshkopia**	**0.70**	**78**	P		**Pb**	**07 27 15.4**	**-1.3**
PHP				S		**Sn**	**07 27 27.7**	**-0.5**
BUM	**Brajici-Budva**	**0.89**	**328**	⇓*i*Pg		**Pb**	**07 27 19.0**	**-0.9**
BUM				*i* Sg		**Sn**	**07 27 33.9**	**+1.1**
PDG	**Podgorica**	**0.91**	**347**	Pg		**Pb**	**07 27 18.9**	**-1.3**
PDG				Sg		**Sn**	**07 27 33.9**	**+0.8**
PDG	**Podgorica**	**0.91**	**347**			**Pb**	**07 27 18.8**	**-1.3**
PDG	**Podgorica**	**0.91**	**347**	⇓P		**Pb**	**07 27 19.8**	**-0.3**
PDG				⇑S		**Sn**	**07 27 34.1**	**+1.0**
PDG	**Podgorica**	**0.91**	**347**	*e*Pg		**Pb**	**07 27 18.9**	**-1.3**
PDG				*e*Sg		**Sn**	**07 27 34.1**	**+1.0**
PDG	**Podgorica**	**0.91**	**347**	P		**Pb**	**07 27 18.5**	**-1.6**
PDG				S		**Sn**	**07 27 32.8**	**-0.4**
PDG				AML	AML			
	comp=N,13500μm,0.4s							
PDG				AML	AML			
	comp=E,16300μm,0.5s							
PDG				AML	AML			
	comp=N,13650μm,0.4s							
PDG				AML	AML			
	comp=E,16400μm,0.5s							
PDG	**Podgorica**	**0.91**	**347**	⇓*i*Pg		**Pb**	**07 27 18.8**	**-1.3**
PDG				*i* Sg		**Sn**	**07 27 33.2**	**+0.1**
OHR	**Ohrid**	**1.05**	**114**	*i* Pg		**Pb**	**07 27 22.6**	**-0.1**
OHR				*i* Sg		**Sn**	**07 27 40.1**	**+3.3**
OHR				*e*Lg		Lg	07 27 40.5	
	comp=N,11μm,0.4s							
OHR				*e*Lg		Lg	07 27 42.3	
	comp=E,12μm,0.6s							
VLO	**Vlora**	**1.08**	**181**	P		**Pb**	**07 27 24.4**	**+1.4**
VLO				S		**Sn**	**07 27 41.3**	**+4.0**
PVY	**Plav**	**1.10**	**17**	⇑*i*Pg		**Pn**	**07 27 21.6**	**-1.8**
PVY				*i* Sg		**Sn**	**07 27 39.0**	**+1.0**
CEME	**Cevo**	**1.10**	**336**	⇑*i*Pg		**Pn**	**07 27 23.0**	**-0.4**
CEME				*i* Sg		**Sn**	**07 27 39.3**	**+1.3**
HCY	**Herceg Novi**	**1.18**	**320**	⇓*i*Pg		**Pb**	**07 27 24.9**	**0.0**
HCY				*i* Sg		**Sn**	**07 27 43.1**	**+3.1**
NKME	**Niksic**	**1.29**	**341**	⇑*i*Pg		**Pb**	**07 27 26.5**	**-0.2**
NKME				*i* Sg		**Sb**	**07 27 46.0**	**+3.1**
KOME	**Kolasin**	**1.30**	**360**	*e*Pg		**Pb**	**07 27 26.9**	**-0.1**
KOME				*e*Sg		**Sb**	**07 27 47.1**	**+3.8**
KOME	**Kolasin**	**1.30**	**360**	⇓*i*Pg		**Pb**	**07 27 26.8**	**-0.2**
KOME				*i* Sg		**Sb**	**07 27 46.4**	**+3.1**
KBN	**Korca**	**1.33**	**134**	P		**Pb**	**07 27 27.5**	**+0.2**
KBN	**Korca**	**1.33**	**134**	P		**Pb**	**07 27 27.1**	**-0.2**
IVA	**Berane**	**1.35**	**12**	⇓*i*Pg		**Pn**	**07 27 26.9**	**0.0**
IVA				*i* Sg		**Sb**	**07 27 48.1**	**+3.4**
TREB	**Trebinje**	**1.46**	**324**	⇑*i*Pg		**Pn**	**07 27 28.3**	**0.0**
TREB				*e*Sg		**Sb**	**07 27 49.0**	**+1.3**
SKO	**Skopje**	**1.49**	**73**	*i* Pg		**Pb**	**07 27 30.2**	**0.0**
SKO				*i* Sg		**Sb**	**07 27 48.6**	**-0.1**
BRY	**Bratogost**	**1.54**	**332**	⇓*i*Pg		**Pb**	**07 27 30.4**	**-0.6**
BRY				*i* Sg		**Sb**	**07 27 52.7**	**+2.6**
NEST	**Nestorio**	**1.62**	**134**	P		**Pb**	**07 27 32.3**	**0.0**
UPM	**Unac-Piva**	**1.72**	**345**	⇑*i*Pn		**Pn**	**07 27 32.9**	**+0.9**
UPM				*i* Sn		**Sb**	**07 27 56.7**	**+1.4**
SJES	**Sjenica**	**1.75**	**11**	*e*Pn		**Pb**	**07 27 34.7**	**+0.2**
SJES				*e*Sn		**Sb**	**07 27 58.6**	**+2.6**
KLINJ	**Klinje**	**1.77**	**337**	*e*Pn		**Pb**	**07 27 33.9**	**-0.9**
KLINJ				*e*Sn		**Sb**	**07 27 56.7**	**+0.1**
PLE	**Pljevlja**	**1.79**	**357**	⇓*i*Pn		**Pb**	**07 27 35.0**	**-0.2**
PLE				*i* Sn		**Sb**	**07 27 58.3**	**+1.1**
PENT	**Pentalofos**	**1.82**	**137**	P		**Pb**	**07 27 35.5**	**-0.3**
KEK	**Kerkira**	**1.84**	**173**	P		**Pb**	**07 27 38.2**	**+2.1**
KEK	**Kerkira**	**1.84**	**173**			**Pb**	**07 27 37.5**	**+1.4**
KEK	**Kerkira**	**1.84**	**173**	P		**Pb**	**07 27 38.5**	**+2.3**
STON	**Ston**	**1.90**	**315**	*e*Pn		**Pb**	**07 27 36.1**	**-0.9**
STON				*e*Sn		**Sb**	**07 27 59.3**	**-0.9**
STON	**Ston**	**1.90**	**315**	P		**Pn**	**07 27 34.3**	**+0.1**
STON				S		**Sn**	**07 27 57.9**	**+0.4**
STON				AML	AML			
	comp=E,6030μm,1.2s							
STON				AML	AML			
	comp=E,6030μm,0.8s							
STON				AML	AML			
	comp=N,4985μm,1.2s							
TAR1	**Taranto**	**1.98**	**240**	P		**Pn**	**07 27 34.1**	**-1.3**
TAR1				S		**Sn**	**07 27 57.8**	**-1.7**
TAR1				AML	AML			
	comp=E,11445μm,1.2s							
TAR1				AML	AML			
	comp=N,11950μm,0.7s							
TAR1				AML	AML			
	comp=N,11950μm,1.3s							
TAR1				AML	AML			
	comp=E,11445μm,0.8s							
NOCI	**Noci**	**2.01**	**249**	Pn		**Pn**	**07 27 34.9**	**-0.9**
NOCI	**Noci**	**2.01**	**249**	⇓P		**Pn**	**07 27 34.8**	**-1.0**
NOCI				S		**Sn**	**07 27 58.8**	**-1.5**
NOCI				AML	AML			
	comp=E,8615μm,0.8s							
NOCI				AML	AML			
	comp=N,8490μm,0.6s							
NOCI				AML	AML			
	comp=E,8615μm,1.2s							
SELS	**Selova**	**2.05**	**35**	*e*Pn		**Pn**	**07 27 37.7**	**+1.3**
SELS				*e*Sn		**Sb**	**07 28 04.2**	**-0.4**
RUDO	**Rudo**	**2.07**	**357**	⇑*i*Pn		**Pn**	**07 27 38.3**	**+1.5**
RUDO				*e*Sn		**Sb**	**07 28 04.7**	**-0.7**
IVAS	**Ivanjica**	**2.08**	**13**	*e*Pn		**Pn**	**07 27 38.3**	**+1.4**
IVAS				*e*Sn		**Sb**	**07 28 05.4**	**-0.2**
IGT	**Igoumenitsa**	**2.10**	**163**	P		**Pn**	**07 27 38.0**	**+0.8**
KZN	**Kozani**	**2.10**	**125**	P		**Pn**	**07 27 38.9**	**+1.7**
GOCS	**Kraljevo Serbi**	**2.25**	**26**	*e*Pn		**Pn**	**07 27 40.6**	**+1.4**
GOCS				*e*Sn		**Sb**	**07 28 10.0**	**-0.5**
LTRZ	**Laterza**	**2.25**	**246**	P		**Pn**	**07 27 37.9**	**-1.3**
LTRZ				S		**Sn**	**07 28 04.1**	**-2.3**
LTRZ				AML	AML			
	comp=E,10290μm,0.7s							
LTRZ				AML	AML			
	comp=N,6755μm,1.1s							
LTRZ				AML	AML			
	comp=E,10290μm,1.3s							
LTRZ				AML	AML			
	comp=N,6755μm,0.9s							
AMUR	**Altamura**	**2.29**	**255**	P		**Pn**	**07 27 38.8**	**-1.0**
AMUR				AML	AML			
	comp=E,5550μm,0.9s							
AMUR				AML	AML			
	comp=E,5550μm,1.1s							
AMUR				AML	AML			
	comp=N,4450μm,1.0s							
VAY	**Valandovo**	**2.30**	**95**	*i* Pn		**Pn**	**07 27 41.5**	**+1.6**
VAY				*i* Sn		**Sb**	**07 28 11.1**	**-0.8**
VAY				*e*Lg		Lg	07 28 12.5	
	comp=N,1μm,0.7s							
VAY				*e*Lg		Lg	07 28 12.9	
	comp=E,2μm,0.8s							
MATE	**Matera**	**2.31**	**248**	⇑P		**Pn**	**07 27 39.5**	**-0.5**
MATE	**Matera**	**2.31**	**248**	P		**Pn**	**07 27 38.9**	**-1.1**
MATE				AML	AML			
	comp=E,5015μm,1.0s			

ZAPS	**Zavoj**	**2.88**	**52**	*e*Pn	**Pn**	**07 27 49.7**	**+1.9**
ZAPS				*e*Sn	**Sn**	**07 28 23.4**	**+1.6**
LKD2	**Lefkada island**	**2.89**	**162**	P	**Pn**	**07 27 48.0**	**0.0**
AMPL	**Ampelaki**	**2.92**	**153**	P	**Pn**	**07 27 49.5**	**+1.1**
SCHR	**S. Chirico Rap**	**2.94**	**244**	P	**Pn**	**07 27 47.9**	**-0.9**
SCHR				AML	AML		
	comp=E,2900µm,1.0s						
SCHR				AML	AML		
	comp=N,2415µm,1.0s						
SCHR				AML	AML		
	comp=N,2415µm,1.0s						
SCHR				AML	AML		
	comp=E,2900µm,1.0s						
VTS	**Vitosha**	**2.96**	**68**	P	**Pn**	**07 27 50.7**	**+1.6**
NYDR	**Nydri-Lefkada**	**2.97**	**162**	P	**Pn**	**07 27 48.8**	**-0.2**
SOH	**Sokhos**	**2.98**	**103**	P	**Pn**	**07 27 50.1**	**+0.9**
SOH	**Sokhos**	**2.98**	**103**	*i* Pn	**Pn**	**07 27 50.4**	**+1.1**
LADO	**San Nicola del**	**2.98**	**222**	P	**Pn**	**07 27 48.1**	**-1.1**
LADO				AML	AML		
	comp=E,209µm,0.5s						
LADO				AML	AML		
	comp=N,138µm,0.5s						
SVIS	**Svilajnac**	**2.99**	**24**	*e*Pn	**Pn**	**07 27 51.6**	**+2.3**
TEKS	**Tekeris**	**3.00**	**0**	*e*Pn	**Pn**	**07 27 50.0**	**+0.5**
VULT	**Monte Vulture**	**3.01**	**260**	P	**Pn**	**07 27 49.1**	**-0.6**
VULT				AML	AML		
	comp=E,6375µm,0.8s						
VULT				AML	AML		
	comp=N,8375µm,0.8s						
VULT				AML	AML		
	comp=N,8255µm,0.8s						
VULT				AML	AML		
	comp=E,6495µm,0.8s						
ZAGS	**Zajecar**	**3.02**	**40**	*e*Pn	**Pn**	**07 27 51.1**	**+1.4**
ZAGS				*e*Sn	**Sn**	**07 28 28.1**	**+2.8**
EVGI	**Lefkada island**	**3.05**	**163**	P	**Pn**	**07 27 49.7**	**-0.4**
MCEL	**Monticello**	**3.07**	**248**	P	**Pn**	**07 27 50.5**	**-0.1**
MCEL				AML	AML		
	comp=E,4235µm,1.0s						
MCEL				AML	AML		
	comp=N,4455µm,0.8s						
MCEL				AML	AML		
	comp=E,4265µm,1.0s						
MCEL				AML	AML		
	comp=N,4525µm,0.8s						
MCEL				AML	AML		
	comp=N,4525µm,1.2s						
MCEL				AML	AML		
	comp=N,4455µm,1.2s						
SIRI	**Monte Sirino -**	**3.09**	**245**	P	**Pn**	**07 27 50.2**	**-0.6**
SIRI				AML	AML		
	comp=E,2440µm,1.4s						
SIRI				AML	AML		
	comp=N,3000µm,1.1s						
SIRI				AML	AML		
	comp=E,2470µm,1.4s						
SIRI				AML	AML		
	comp=N,3025µm,1.1s						
SIRI				AML	AML		
	comp=N,3025µm,0.9s						
SIRI				AML	AML		
	comp=N,3000µm,0.9s						
SRS	**Serrai**	**3.09**	**97**	P	**Pn**	**07 27 52.1**	**+1.3**
SRS	**Serrai**	**3.09**	**97**	*i* Pn	**Pn**	**07 27 52.0**	**+1.3**
BLKB	**Belogradchik**	**3.12**	**47**	⇑S	**Sb**	**07 28 32.9**	**-2.5**
BORS2	**Bor- Borsko je**	**3.13**	**35**	*e*Pn	**Pn**	**07 27 51.1**	**-0.2**
BORS2				*e*Sn	**Sn**	**07 28 28.0**	**-0.2**
CELI	**Celico**	**3.14**	**228**	P	**Pn**	**07 27 50.2**	**-1.3**
CELI				AML	AML		
	comp=E,1670µm,1.3s						
CELI				AML	AML		
	comp=N,1108µm,1.0s						
CELI				AML	AML		
	comp=N,2730µm,1.0s						
CELI				AML	AML		
	comp=E,4070µm,1.3s						
CELI				AML	AML		
	comp=N,2730µm,1.0s						
CELI				AML	AML		
	comp=N,1108µm,1.0s						
EVR	**Evrytania**	**3.15**	**146**	P	**Pn**	**07 27 53.4**	**+1.7**
MMN	**Mormanno**	**3.15**	**240**	P	**Pn**	**07 27 51.4**	**-0.2**
MMN				AML	AML		
	comp=E,2065µm,1.1s						
MMN				AML	AML		
	comp=N,2235µm,0.7s						
MMN				AML	AML		
	comp=E,2065µm,0.9s						
SGTA	**Sant Agata di**	**3.16**	**264**	P	**Pn**	**07 27 51.2**	**-0.5**
SGTA				AML	AML		
	comp=E,4230µm,0.6s						
SGTA				AML	AML		
	comp=N,2445µm,0.7s						
SGTA				AML	AML		
	comp=N,2385µm,1.1s						
SGTA				AML	AML		
	comp=E,4105µm,0.6s						
SLCN	**Sala Consilina**	**3.17**	**250**	P	**Pn**	**07 27 51.4**	**-0.5**
SLCN				AML	AML		
	comp=E,4165µm,1.3s						
SLCN				AML	AML		
	comp=N,4840µm,1.0s						
SLCN				AML	AML		
	comp=E,4445µm,1.3s						
SLCN				AML	AML		
	comp=N,5250µm,1.0s						
SLCN				AML	AML		
	comp=E,4165µm,0.7s						
SLCN				AML	AML		
	comp=E,4445µm,0.7s						
SLCN				AML	AML		
	comp=N,4840µm,1.0s						
SLCN				AML	AML		
	comp=N,5250µm,1.0s						
MMB	**Musomishta**	**3.17**	**89**	P	**Pn**	**07 27 53.5**	**+1.6**
MMB	**Musomishta**	**3.17**	**89**	*i* Pn	**Pn**	**07 27 53.6**	**+1.8**
TIP	**Timpagrande**	**3.17**	**223**		**Pn**	**07 27 51.2**	**-0.7**
TIP	**Timpagrande**	**3.17**	**223**	⇑P	**Pn**	**07 27 51.0**	**-0.9**
TIP	**Timpagrande**	**3.17**	**223**	⇓P	**Pn**	**07 27 50.7**	**-1.2**
TIP				AML	AML		
	comp=E,1600µm,1.2s						
TIP				AML	AML		
	comp=N,1170µm,1.2s						
TIP				AML	AML		
	comp=E,1545µm,1.2s						
TIP				AML	AML		
	comp=N,1135µm,1.2s						
TIP				AML	AML		
	comp=N,1135µm,0.8s						
TIP				AML	AML		
	comp=N,1170µm,0.8s						
TIP				AML	AML		
	comp=E,1545µm,0.8s						
TIP				AML	AML		
	comp=E,1600µm,0.8s						
TIP	**Timpagrande**	**3.17**	**223**	P	**Pn**	**07 27 51.0**	**-0.9**
FSK	**Fiskardo**	**3.19**	**165**	P	**Pn**	**07 27 51.3**	**-0.7**
CUC	**Castrocucco**	**3.22**	**242**		**Pn**	**07 27 52.2**	**-0.3**
CUC	**Castrocucco**	**3.22**	**242**	P	**Pn**	**07 27 52.1**	**-0.4**
MAKR	**Makrakomi, Fth**	**3.22**	**141**	P	**Pn**	**07 27 54.0**	**+1.5**
AVAS	**Avala Beograd**	**3.23**	**13**	*e*Pn	**Pn**	**07 27 53.2**	**+0.6**
KUBS	**Kucevo**	**3.27**	**28**	*e*Pn	**Pn**	**07 27 52.7**	**-0.5**
KUBS				*e*Sn	**Sn**	**07 28 32.0**	**+0.5**
CAFE	**Carife**	**3.27**	**262**	P	**Pn**	**07 27 52.8**	**-0.5**
CAFE				AML	AML		
	comp=N,2265µm,1.6s						
CAFE				AML	AML		
	comp=E,3675µm,1.0s						
CAFE				AML	AML		
	comp=N,2385µm,1.6s						
CAFE				AML	AML		
	comp=E,3620µm,1.0s						
CAFE				AML	AML		
	comp=N,2385µm,0.4s						
CAFE				AML	AML		
	comp=N,2265µm,0.4s						
MELA	**Melanico ??? S**	**3.30**	**274**	⇓P	**Pn**	**07 27 53.1**	**-0.5**
MELA				AML	AML		
	comp=N,6530µm,0.9s						
MELA				AML	AML		
	comp=N,6530µm,1.1s						
MELA				AML	AML		
	comp=E,5610µm,0.7s						
MELA				AML	AML		
	comp=E,5730µm,0.7s						
MELA				AML	AML		
	comp=N,6700µm,1.0s						
PVO	**Paravola**	**3.30**	**152**	P	**Pn**	**07 27 54.8**	**+1.2**
AGG	**Agios Georgios**	**3.31**	**139**	P	**Pn**	**07 27 55.0**	**+1.2**
SNAL	**S. Angelo Dei**	**3.31**	**261**	P	**Pn**	**07 27 52.8**	**-1.1**
SNAL				AML	AML		
	comp=E,3990µm,1.3s						
SNAL				AML	AML		
	comp=N,5905µm,1.2s						
SNAL				AML	AML		
	comp=E,4410µm,1.3s						
SNAL				AML	AML		
	comp=N,6200µm,1.1s						
SNAL				AML	AML		
	comp=E,4410µm,0.7s						
SNAL				AML	AML		
	comp=E,3990µm,0.7s						
SPS2	**Spezzano della**	**3.31**	**228**	P	**Pn**	**07 27 53.0**	**-0.8**
SPS2				AML	AML		
	comp=E,642µm,1.1s						
SPS2				AML	AML		
	comp=N,856µm,0.9s						
SPS2				AML	AML		
	comp=N,856µm,1.1s						
MGR	**Morigerati**	**3.33**	**246**	P	**Pn**	**07 27 54.2**	**+0.2**
CDRU	**Civita di Ruta**	**3.36**	**253**	P	**Pn**	**07 27 53.5**	**-1.1**
CDRU				AML	AML		
	comp=E,1150µm,1.3s						
CDRU				AML	AML		
	comp=N,1365µm,0.9s						
CDRU				AML	AML		
	comp=E,1150µm,0.7s						
DMLN	**Damoulianata-K**	**3.37**	**169**	P	**Pn**	**07 27 53.5**	**-1.0**
MCRV	**Calabrutti - M**	**3.38**	**258**	P	**Pn**	**07 27 53.5**	**-1.3**
MCRV				AML	AML		
	comp=E,2490µm,0.6s						
MCRV				AML	AML		
	comp=E,2490µm,1.4s						
MCRV				AML	AML		
	comp=N,2325µm,0.7s						
CET2	**Cetraro**	**3.39**	**235**	P	**Pn**	**07 27 54.0**	**-0.8**
CET2				AML	AML		
	comp=E,4135µm,0.8s						
CET2				AML	AML		
	comp=N,4515µm,0.9s						
CET2				AML	AML		
	comp=E,4135µm,1.2s						
CAR1	**CAROLEI**	**3.41**	**229**	P	**Pn**	**07 27 54.3**	**-0.9**
CAR1				AML	AML		
	comp=E,2505µm,0.9s						
CAR1				AML	AML		
	comp=N,3405µm,0.8s						
CAR1				AML	AML		
	comp=E,2830µm,0.9s						
CAR1				AML	AML		
	comp=N,2770µm,0.8s						
CAR1				AML	AML		
	comp=E,2830µm,1.1s						
CAR1				AML	AML		
	comp=E,2505µm,1.1s						
CMPR	**Campora**	**3.43**	**250**	P	**Pn**	**07 27 54.5**	**-0.9**
CMPR				AML	AML		
	comp=E,1535µm,1.1s						
CMPR				AML	AML		
	comp=N,1400µm,1.5s						
CMPR				AML	AML		
	comp=E,1535µm,0.9s						
GATE	**Gambatesa**	**3.46**	**271**	P	**Pn**	**07 27 56.1**	**+0.2**
GATE				AML	AML		
	comp=E,2025µm,1.1s						
GATE				AML	AML		
	comp=N,1890µm,1.3s						
GATE				AML	AML		
	comp=E,2065µm,1.1s						
GATE				AML	AML		
	comp=E,2025µm,0.9s						
GATE				AML	AML		
	comp=E,2065µm,0.9s						
GATE				AML	AML		
	comp=N,1915µm,1.3s						
VLS	**Valsamata**	**3.46**	**166**	P	**Pn**	**07 27 55.0**	**-0.9**
VLS	**Valsamata**	**3.46**	**166**	P	**Pn**	**07 27 55.1**	**-0.8**
VLS				AML	AML		
	comp=E,1695µm,0.2s						
VLS				AML	AML		
	comp=N,1590µm,0.5s						
CIGN	**Sant'Elia a Pi**	**3.47**	**273**	⇓P	**Pn**	**07 27 55.7**	**-0.2**
CIGN				AML	AML		
	comp=E,1770µm,0.8s						
CIGN				AML	AML		
	comp=N,1415µm,0.9s						
CIGN				AML	AML		
	comp=E,1770µm,1.2s						
MTMR	**Montemarano**	**3.47**	**261**	P	**Pn**	**07 27 55.2**	**-0.7**
MTMR				AML	AML		
	comp=E,1590µm,0.7s						
MTMR				AML	AML		
	comp=N,1895µm,1.0s						
MTMR				AML	AML		
	comp=E,1590µm,1.3s						
MTMR				AML	AML		
	comp=N,1895µm,1.0s						
BULG	**Bulgheria - Ca**	**3.47**	**246**	P	**Pn**	**07 27 55.9**	**-0.2**
BULG				AML	AML		
	comp=E,3165µm,0.8s						
BULG				AML	AML		
	comp=E,3240µm,0.8s						
BULG				AML	AML		
	comp=N,4595µm,1.2s						
BULG				AML	AML		
	comp=N,4465µm,1.2s						
ANX	**Ano Chora**	**3.48**	**147**	P	**Pn**	**07 27 57.9**	**+1.7**
OUR	**Ouranopolis**	**3.59**	**108**	P	**Pn**	**07 27 58.6**	**+1.1**
RTZL	**Ratzakli, Kefa**	**3.60**	**164**	P	**Pn**	**07 27 57.5**	**-0.2**
MDVR	**Moldovita**	**3.61**	**26**	⇓P	**Pn**	**07 27 59.0**	**+1.2**
EFP	**Efpalio**	**3.61**	**149**	P	**Pn**	**07 27 59.5**	**+1.7**
GRI	**Girifalco**	**3.61**	**222**	P	**Pn**	**07 27 56.2**	**-1.7**
GRI				AML	AML		
	comp=E,1195µm,0.7s						
GRI				AML	AML		
	comp=N,972µm,1.2s						
FRGS	**Fruska Gora**	**3.62**	**3**	*e*Pn	**Pn**	**07 27 58.5**	**+0.5**
SACR	**S. Croce Del S**	**3.62**	**269**	P	**Pn**	**07 27 57.9**	**-0.3**
SACR				AML	AML		
	comp=E,1385µm,1.4s						
SACR				AML	AML		
	comp=N,1560µm,1.0s						
SACR				AML	AML		
	comp=E,1415µm,1.3s						
SACR				AML	AML		
	comp=N,1510µm,1.0s						
SACR				AML	AML		
	comp=N,1510µm,1.0s						
SACR				AML	AML		
	comp=N,1560µm,1.0s						
BLY	**Banja Luka**	**3.63**	**333**	*e*Pn	**Pn**	**07 27 59.8**	**+1.7**
BLY				*e*Sn	**Sn**	**07 28 41.3**	**+1.0**
BLY	**Banja Luka**	**3.63**	**333**	⇑P	**Pn**	**07 27 59.2**	**+1.1**
BLY	**Banja Luka**	**3.63**	**333**	*e*Pn	**Pn**	**07 28 00.0**	**+1.9**
BLY	**Banja Luka**	**3.63**	**333**	P	**Pn**	**07 27 59.6**	**+1.5**
BLY				AML	AML		
	comp=N,2490µm,1.0s						
BLY				AML	AML		
	comp=E,2260µm,0.8s						
BLY				AML	AML		
	comp=N,2380µm,1.0s						
BLY				AML	AML		
	comp=E,2250µm,0.8s						
BLY				AML	AML		
	comp=N,2380µm,1.0s						
AXS	**Araxos**	**3.64**	**156**	P	**Pn**	**07 27 58.7**	**+0.4**
FRES	**Fresagrandinar**	**3.66**	**278**	P	**Pn**	**07 27 58.4**	**-0.1**
FRES				AML	AML		
	comp=N,1715µm,0.7s						
FRES				AML	AML		
	comp=E,2615µm,0.8s						
FRES				AML	AML		
	comp=N,1715µm,1.3s						
AXAR	**Agios Charalam**	**3.67**	**138**	P	**Pn**	**07 27 59.9**	**+1.2**
BSSO	**Busso**	**3.70**	**272**	P	**Pn**	**07 27 57.2**	**-2.0**
BSSO				AML	AML		
	comp=E,474µm,1.0s						
BSSO				AML	AML		
	comp=N,568µm,0.8s						
VITU	**Vitulano (BN)**	**3.70**	**266**	P	**Pn**	**07 27 59.1**	**0.0**
VITU				AML	AML		
	comp=E,747µm,0.5s						
VITU				AML	AML		
	comp=E,2220µm,0.6s						
VITU				AML	AML		
	comp=N,2500µm,0.6s						
VITU				AML	AML		
	comp=N,2500µm,1.4s						
VITU				AML	AML		
	comp=N,2475µm,0.8s						
PUNG	**Punghina**	**3.70**	**41**	⇓P	**Pn**	**07 28 00.8**	**+1.7**
PAOL	**Paolisi**	**3.77**	**264**		**Pn**	**07 28 00.2**	**+0.1**
PAOL	**Paolisi**	**3.77**	**264**	P	**Pn**	**07 28 00.2**	**+0.1**
PAOL				AML	AML		
	comp=E,2055µm,1.4s						
PAOL				AML	AML		
	comp=N,2020µm,1.0s						
PAOL				AML	AML		
	comp=N,2120µm,1.0s						
PAOL				AML	AML		
	comp=E,2185µm,1.4s						
PAOL				AML	AML		
	comp=N,2120µm,1.0s						
PAOL				AML	AML		
	comp=N,2020µm,1.0s						
VRSS	**Vrsac**	**3.81**	**20**	*e*Pn	**Pn**	**07 28 01.4**	**+0.8**
VRSS				*e*Sn	**Sn**	**07 28 44.6**	**-0.1**
DJES	**Djerdap**	**3.81**	**34**	⇑P	**Pn**	**07 28 02.3**	**+1.7**
PLAC	**Placanica**	**3.90**	**218**	P	**Pn**	**07 28 00.3**	**-1.6**
PLAC				AML	AML		
	comp=E,722µm,0.9s						
PLAC				AML	AML		
	comp=N,880µm,0.7s						
PLAC				AML	AML		
	comp=E,842µm,0.7s						
PLAC				AML	AML		
	comp=N,722µm,0.9s						
RZN	**Rozhen**	**3.91**	**86**	P	**Pn**	**07 28 04.1**	**+1.9**
VBKN	**Vesuvio Bunker**	**3.91**	**261**	P	**Pn**	**07 28 02.1**	**0.0**
VBKN				AML	AML		
	comp=E,3565µm,1.0s						
VBKN				AML	AML		
	comp=N,3700µm,1.2s						
VBKN				AML	AML		
	comp=N,3700µm,0.8s						
VTIR	**Vesuvio Tirone**	**3.92**	**261**	P	**Pn**	**07 28 01.7**	**-0.4**
VTIR				AML	AML		
	comp=E,938µm,0.6s						
VTIR				AML	AML		
	comp=N,986µm,0.9s						
VTIR				AML	AML		
	comp=E,938µm,1.4s						
HERR	**Herculane**	**3.95**	**31**	⇑P	**Pn**	**07 28 03.8**	**+1.3**
DRO	**Drossia**	**3.96**	**154**	P	**Pn**	**07 28 03.4**	**+0.6**
LPEL	**Lama dei Pelig**	**4.03**	**279**	P	**Pn**	**07 28 03.6**	**0.0**
LPEL				AML	AML		
	comp=N,1054µm,1.1s						
LPEL				AML	AML		
	comp=E,1635µm,0.7s						
LPEL				AML	AML		
	comp=N,1023µm,1.1s						
LPEL				AML	AML		
	comp=N,1023µm,0.9s						
LPEL				AML	AML		
	comp=N,1054µm,0.9s						
LPEL				AML	AML		
	comp=E,1605µm,0.7s						
KLV	**Kalavryta, Ach**	**4.04**	**149**	P	**Pn**	**07 28 04.7**	**+0.8**
JOPP	**Joppolo**	**4.05**	**225**	P	**Pn**	**07 28 02.5**	**-1.5**
JOPP				AML	AML		
	comp=N,661µm,0.9s						
JOPP				AML	AML		
	comp=N,661µm,1.1s						
JOPP				AML	AML		
	comp=E,529µm,0.9s						
SRE	**Strehaia**	**4.12**	**40**	⇓P	**Pn**	**07 28 07.3**	**+2.4**
SRE	**Strehaia**	**4.12**	**40**	P	**Pn**	**07 28 07.2**	**+2.4**
CPOZ	**Campi Flegrei,**	**4.14**	**262**	P	**Pn**	**07 28 05.6**	**+0.4**
CPOZ				AML	AML		
	comp=E,5170µm,0.8s						
CPOZ				AML	AML		
	comp=N,3135µm,1.1s						
PLVB	**Pleven**	**4.19**	**62**	⇑P	**Pn**	**07 28 08.2**	**+2.4**
MODR	**Mondragone**	**4.27**	**266**	P	**Pn**	**07 28 06.3**	**-0.6**
MODR				AML	AML		
	comp=E,760µm,0.8s						
MODR				AML	AML		
	comp=N,746µm,0.8s						
MODR				AML	AML		
	comp=N,746µm,1.2s						
MODR				AML	AML		
	comp=E,760µm,1.2s						
MCI	**Monte Cassino**	**4.29**	**271**	P	**Pn**	**07 28 06.8**	**-0.3**
MCI				AML	AML		
	comp=E,1910µm,0.6s						
MCI				AML	AML		
	comp=N,960µm,1.0s						
MCI				AML	AML		
	comp=E,1910µm,1.4s						
CEL	**Celeste**	**4.31**	**222**		**Pn**	**07 28 06.4**	**-1.2**
CEL	**Celeste**	**4.31**	**222**	P	**Pn**	**07 28 05.9**	**-1.6**
CEL				AML	AML		
	comp=E,624µm,1.5s						
CEL				AML	AML		
	comp=N,697µm,1.0s						
CEL				AML	AML		
	comp=E,617µm,1.5s						
CEL				AML	AML		
	comp=N,682µm,1.0s						
CEL				AML	AML		
	comp=N,682µm,1.0s						
CEL				AML	AML		
	comp=N,697µm,1.0s						
CEL				AML	AML		
	comp=E,617µm,0.5s						
CEL				AML	AML		
	comp=E,624µm,0.5s						
CEL	**Celeste**	**4.31**	**222**	P	**Pn**	**07 28 05.7**	**-1.8**
VCEL	**Villa Celiera**	**4.32**	**283**	P	**Pn**	**07 28 07.8**	**+0.1**
BZS	**Buzias**	**4.34**	**20**	⇓P	**Pn**	**07 28 08.9**	**+1.0**
BZS	**Buzias**	**4.34**	**20**	P	**Pn**	**07 28 08.5**	**+0.6**
T0110	**Collepietro**	**4.34**	**281**	P	**Pn**	**07 28 07.9**	**-0.1**
SOI	**Samo**	**4.38**	**219**	P	**Pn**	**07 28 06.6**	**-1.9**
SOI				AML	AML		
	comp=E,553µm,1.5s						
SOI				AML	AML		
	comp=N,604µm,0.7s						
VVLD	**Villa Vallelon**	**4.43**	**276**	⇓P	**Pn**	**07 28 08.9**	**-0.3**
VVLD				AML	AML		
	comp=E,776µm,0.7s						
VVLD				AML	AML		
	comp=N,994µm,0.9s						
VVLD				AML	AML		
	comp=E,769µm,1.6s						
VVLD				AML	AML		
	comp=N,1044µm,0.9s						
VVLD				AML	AML		
	comp=E,769µm,0.4s						
VVLD				AML	AML		
	comp=N,1044µm,1.1s						
VVLD				AML	AML		
	comp=N,994µm,1.1s						
LRP	**Arpino**	**4.45**	**273**	P	**Pn**	**07 28 09.7**	**+0.2**
LRP				AML	AML		
	comp=E,756µm,0.6s						
LRP				AML	AML		
	comp=N,914µm,0.5s						
FAGN	**Fagnano**	**4.49**	**281**	P	**Pn**	**07 28 09.2**	**-0.8**
GZR	**Gura Zlata**	**4.51**	**31**	⇓P	**Pn**	**07 28 11.8**	**+1.5**
GZR	**Gura Zlata**	**4.51**	**31**	P	**Pn**	**07 28 11.8**	**+1.5**
GIGS	**Gran Sasso**	**4.53**	**283**	P	**Pn**	**07 28 09.9**	**-0.7**
GIGS				AML	AML		
	comp=E,294µm,1.2s						
GIGS				AML	AML		
	comp=N,396µm,0.9s						
GIGS				AML	AML		
	comp=E,294µm,0.8s						
TERO	**Teramo**	**4.54**	**286**	P	**Pn**	**07 28 10.5**	**-0.1**
TERO				AML	AML		
	comp=E,566µm,1.6s						
TERO				AML	AML		
	comp=N,766µm,0.8s						
TERO				AML	AML		
	comp=E,566µm,0.4s						
TERO				AML	AML		
	comp=N,766µm,1.2s						
RDO	**Rodhopi**	**4.54**	**93**	P	**Pn**	**07 28 11.7**	**+1.0**
RDO	**Rodhopi**	**4.54**	**93**		**Pn**	**07 28 12.3**	**+1.6**

OFFI	**Offida**	**4.55**	**290**	P		**Pn**	**07 28**	**11.8**	**+1.0**
OFFI				AML		AML			
	comp=N,3675µm,0.8s								
OFFI				AML		AML			
	comp=E,2150µm,0.6s								
OFFI				AML		AML			
	comp=N,3675µm,1.2s								
PTQR	**Pietraquaria**	**4.60**	**278**	P		**Pn**	**07 28**	**11.7**	**+0.1**
PTQR				AML		AML			
	comp=E,506µm,0.9s								
PTQR				AML		AML			
	comp=N,364µm,0.8s								
PTQR				AML		AML			
	comp=E,506µm,1.1s								
PTQR				AML		AML			
	comp=N,364µm,1.2s								
SURR	**Surduc**	**4.61**	**23**	⇑P		**Pn**	**07 28**	**12.9**	**+1.3**
AQU	**L'Aquila**	**4.64**	**282**	⇑*i* Pn		**Pn**	**07 28**	**12.2**	**+0.2**
AQU				*e*Sn		**Sn**	**07 29**	**04.4**	**-0.9**
AQU	**L'Aquila**	**4.64**	**282**	P		**Pn**	**07 28**	**12.2**	**+0.2**
MNTT	**Montottone**	**4.65**	**291**	P		**Pn**	**07 28**	**12.5**	**+0.3**
MNTT				AML		AML			
	comp=E,4425µm,0.7s								
MNTT				AML		AML			
	comp=N,2955µm,0.7s								
MNTT				AML		AML			
	comp=N,2955µm,1.3s								
CAMP	**Campotosto**	**4.66**	**284**			**Pn**	**07 28**	**12.4**	**0.0**
VENT	**Ventotene**	**4.67**	**263**	P		**Pn**	**07 28**	**11.0**	**-1.4**
VENT				AML		AML			
	comp=N,369µm,1.0s								
VENT				AML		AML			
	comp=N,369µm,1.0s								
VENT				AML		AML			
	comp=E,579µm,1.0s								
SMTH	**Samothraki Isl**	**4.67**	**101**	P		**Pn**	**07 28**	**13.2**	**+0.8**
LLI	**Lipari**	**4.69**	**230**	AML		AML			
	comp=N,9415µm,0.6s								
LLI				AML		AML			
	comp=E,8130µm,0.6s								
GIUL	**Giuliano Di Ro**	**4.71**	**272**	P		**Pn**	**07 28**	**12.4**	**-0.6**
GIUL				AML		AML			
	comp=E,424µm,0.8s								
GIUL				AML		AML			
	comp=N,698µm,0.9s								
MORH	**Mrgy, Hungar**	**4.71**	**353**	*e*Pn		**Pn**	**07 28**	**13.5**	**+0.5**
MORH				*e*Sn		**Sn**	**07 29**	**07.7**	**+0.8**
MORH	**Mrgy, Hungar**	**4.71**	**353**	⇑P		**Pn**	**07 28**	**13.5**	**+0.5**
VPL	**Vulcano Piano**	**4.71**	**229**	P		**Pn**	**07 28**	**10.8**	**-2.2**
MF5	**Montefalcone A**	**4.72**	**290**	P		**Pn**	**07 28**	**13.3**	**0.0**
MF5				AML		AML			
	comp=E,1160µm,0.6s								
MF5				AML		AML			
	comp=N,1785µm,0.6s								
MF5				AML		AML			
	comp=N,1785µm,1.4s								
SMA1	**SAN MARTINO**	**4.73**	**285**	P		**Pn**	**07 28**	**13.1**	**-0.3**
SMA1				AML		AML			
	comp=E,1290µm,0.8s								
SMA1				AML		AML			
	comp=N,1360µm,1.0s								
SMA1				AML		AML			
	comp=N,1360µm,1.0s								
SMA1				AML		AML			
	comp=E,1290µm,1.2s								
ITM	**Ithomi**	**4.74**	**156**	P		**Pn**	**07 28**	**13.4**	**0.0**
ITM	**Ithomi**	**4.74**	**156**			**Pn**	**07 28**	**14.1**	**+0.7**
ITM	**Ithomi**	**4.74**	**156**	P		**Pn**	**07 28**	**13.7**	**+0.2**
ITM				AML		AML			
	comp=E,67µm,0.4s								
ITM				AML		AML			
	comp=N,92µm,1.4s								
ITM				AML		AML			
	comp=N,92µm,0.6s								
MMO1	**Montemonaco**	**4.80**	**288**	⇓P		**Pn**	**07 28**	**14.3**	**0.0**
SAP2	**Sant'Angelo in**	**4.80**	**291**	AML		AML			
	comp=E,838µm,1.0s								
SAP2				AML		AML			
	comp=N,4470µm,0.6s								
GUMA	**Gualdo di Mace**	**4.83**	**290**			**Pn**	**07 28**	**14.9**	**+0.2**
GUMA	**Gualdo di Mace**	**4.83**	**290**	P		**Pn**	**07 28**	**14.5**	**-0.2**
GUMA				AML		AML			
	comp=N,1705µm,0.8s								
GUMA				AML		AML			
	comp=N,1705µm,1.2s								
GUMA				AML		AML			
	comp=E,1865µm,0.6s								
FIAM	**Fiamignano**	**4.84**	**281**	P		**Pn**	**07 28**	**15.2**	**+0.5**
FIAM				AML		AML			
	comp=N,626µm,0.6s								
FIAM				AML		AML			
	comp=E,549µm,0.7s								
FIAM				AML		AML			
	comp=N,626µm,1.4s								
AIO	**Antillo**	**4.87**	**224**	P		**Pn**	**07 28**	**13.4**	**-1.8**
MC2	**Monte Cornacci**	**4.90**	**288**	⇓P		**Pn**	**07 28**	**15.8**	**+0.1**
CERT	**Cerreto**	**4.91**	**277**	P		**Pn**	**07 28**	**15.6**	**-0.2**
CERT				AML		AML			
	comp=E,733µm,0.6s								
CERT				AML		AML			
	comp=N,496µm,0.6s								
ELND	**Elena**	**4.91**	**72**	⇑P		**Pn**	**07 28**	**17.5**	**+1.7**
COPA	**Copaceanca**	**4.92**	**56**	⇓P		**Pn**	**07 28**	**18.5**	**+2.7**
NRCA	**Norcia**	**4.93**	**287**			**Pn**	**07 28**	**16.4**	**+0.3**
NRCA	**Norcia**	**4.93**	**287**	⇓P		**Pn**	**07 28**	**16.1**	**0.0**
NRCA				AML		AML			
	comp=E,908µm,0.6s								
NRCA				AML		AML			
	comp=E,960µm,0.7s								
NRCA				AML		AML			
	comp=N,1090µm,0.7s								
NRCA				AML		AML			
	comp=N,1070µm,0.7s								
CSP1	**Cessapalombo**	**4.93**	**290**	P		**Pn**	**07 28**	**15.5**	**-0.7**
CSP1				AML		AML			
	comp=N,1202µm,1.0s								
CSP1				AML		AML			
	comp=E,771µm,1.2s								
LNSS	**Leonessa**	**4.94**	**284**	⇓P		**Pn**	**07 28**	**16.5**	**+0.3**
LNSS				AML		AML			
	comp=E,1124µm,0.6s								
LNSS				AML		AML			
	comp=N,1630µm,1.0s								
LNSS				AML		AML			
	comp=E,1145µm,0.6s								
LNSS				AML		AML			
	comp=N,1540µm,1.0s								
LNSS				AML		AML			
	comp=E,1145µm,1.4s								
LNSS				AML		AML			
	comp=E,1124µm,1.4s								
VLY	**Voula,Athens**	**4.95**	**137**	P		**Pn**	**07 28**	**17.0**	**+0.8**
PYL	**PYLOS**	**4.95**	**159**	P		**Pn**	**07 28**	**15.9**	**-0.4**
SIRR	**Siria**	**4.96**	**17**	⇑P		**Pn**	**07 28**	**18.0**	**+1.5**
HUMR	**Humele**	**4.99**	**51**	⇓P		**Pn**	**07 28**	**19.3**	**+2.5**
FDMO	**Fiordimonte**	**5.00**	**289**			**Pn**	**07 28**	**16.9**	**-0.2**
FDMO	**Fiordimonte**	**5.00**	**289**	P		**Pn**	**07 28**	**16.8**	**-0.2**
FDMO				AML		AML			
	comp=E,1155µm,0.8s								
FDMO				AML		AML			
	comp=N,622µm,0.8s								
FDMO				AML		AML			
	comp=E,1155µm,1.2s								
BOJS	**Bojanci**	**5.03**	**323**	*i* Pn		**Pn**	**07 28**	**17.7**	**+0.4**
BOJS	**Bojanci**	**5.03**	**323**	P		**Pn**	**07 28**	**17.6**	**+0.2**
EL6	**Elcito**	**5.08**	**293**	P		**Pn**	**07 28**	**17.3**	**-0.7**
SZH	**Strazhitsa**	**5.08**	**68**	P		**Pn**	**07 28**	**20.3**	**+2.3**
	comp=E,1.0nmcomp=E,265nm,0.9s								
CESI	**CESI - Serrava**	**5.12**	**289**	P		**Pn**	**07 28**	**18.6**	**-0.1**
CESI				AML		AML			
	comp=E,1160µm,0.9s								
CESI				AML		AML			
	comp=E,1120µm,0.9s								
CESI				AML		AML			
	comp=N,1305µm,0.9s								
CESI				AML		AML			
	comp=N,1290µm,0.9s								
SNTG	**Esanatoglia**	**5.17**	**291**	P		**Pn**	**07 28**	**18.4**	**-0.8**
SNTG				AML		AML			
	comp=E,652µm,0.7s								
SNTG				AML		AML			
	comp=N,794µm,0.9s								
SNTG				AML		AML			
	comp=N,718µm,0.8s								
SNTG				AML		AML			
	comp=E,611µm,0.7s								

ARVD	**Arcevia**	**5.24**	**294**	P		**Pn**	**07 28**	**18.8**	**-1.5**
CESX	**Cesi**	**5.28**	**284**			**Pn**	**07 28**	**21.0**	**+0.2**
BEHE	**Becsehely**	**5.31**	**339**			**Pn**	**07 28**	**20.8**	**-0.3**
BEHE	**Becsehely**	**5.31**	**339**	*e*Pn		**Pn**	**07 28**	**21.5**	**+0.4**
BEHE				*e*Sn		**Sn**	**07 29**	**21.4**	**-0.2**
ESML	**S. M. di Licod**	**5.32**	**224**	P		**Pn**	**07 28**	**20.2**	**-1.1**
ESML				AML		AML			
	comp=E,648µm,1.6s								
ESML				AML		AML			
	comp=N,598µm,1.0s								
ESML				AML		AML			
	comp=E,648µm,0.4s								
ARR	**Arges**	**5.33**	**43**	⇑P		**Pn**	**07 28**	**23.6**	**+2.1**
SSFR	**Montelago di S**	**5.33**	**293**	P		**Pn**	**07 28**	**20.9**	**-0.6**
SSFR				AML		AML			
	comp=E,789µm,1.1s								
SSFR				AML		AML			
	comp=N,662µm,0.7s								
SSFR				AML		AML			
	comp=E,742µm,1.2s								
SSFR				AML		AML			
	comp=N,574µm,0.8s								
SSFR				AML		AML			
	comp=E,742µm,0.8s								
SSFR				AML		AML			
	comp=E,789µm,0.9s								
SSFR				AML		AML			
	comp=N,662µm,1.3s								
ATCC	**AVT- Casa Cast**	**5.36**	**290**	P		**Pn**	**07 28**	**21.8**	**-0.1**
TNR	**Turnu Rosu**	**5.36**	**38**	⇑P		**Pn**	**07 28**	**25.0**	**+3.0**
TNR	**Turnu Rosu**	**5.36**	**38**	P		**Pn**	**07 28**	**24.9**	**+3.0**
SIGR	**SIGRI**	**5.37**	**114**	P		**Pn**	**07 28**	**26.2**	**+4.2**
BRJN	**Brijuni**	**5.39**	**310**	P		**Pn**	**07 28**	**23.0**	**+0.7**
FRON	**Frontone**	**5.40**	**294**	P		**Pn**	**07 28**	**21.8**	**-0.7**
FRON				AML		AML			
	comp=E,558µm,0.7s								
FRON				AML		AML			
	comp=N,900µm,0.8s								
FRON				AML		AML			
	comp=N,900µm,1.2s								
FRON				AML		AML			
	comp=E,558µm,1.3s								
MPAG	**Monte Paganucc**	**5.41**	**295**	P		**Pn**	**07 28**	**21.9**	**-0.8**
HAGA	**Augusta**	**5.44**	**220**	P		**Pn**	**07 28**	**19.2**	**-3.7**
KOGS	**Kog**	**5.44**	**335**	P		**Pn**	**07 28**	**24.0**	**+1.0**
EZN	**Ezine**	**5.45**	**106**	⇑P		**Pn**	**07 28**	**24.8**	**+1.6**
EZN	**Ezine**	**5.45**	**106**	P		**Pn**	**07 28**	**24.7**	**+1.6**
ATFO	**Monte Foce - G**	**5.46**	**292**	P		**Pn**	**07 28**	**22.9**	**-0.3**
MTUR	**Matau**	**5.46**	**46**	⇓P		**Pn**	**07 28**	**25.9**	**+2.5**
MTUR	**Matau**	**5.46**	**46**	P		**Pn**	**07 28**	**25.8**	**+2.5**
MURB	**Monte Urbino**	**5.46**	**291**			**Pn**	**07 28**	**23.7**	**+0.4**
MURB	**Monte Urbino**	**5.46**	**291**	⇓P		**Pn**	**07 28**	**23.4**	**0.0**
HLNI	**Lentini**	**5.53**	**222**	P		**Pn**	**07 28**	**21.3**	**-2.9**
NARO	**Abbazia di Nar**	**5.53**	**294**	P		**Pn**	**07 28**	**23.4**	**-0.8**
ATTE	**AVT- Monte Tez**	**5.56**	**290**	P		**Pn**	**07 28**	**24.8**	**0.0**
ATVO	**AVT- Monte Val**	**5.58**	**292**	P		**Pn**	**07 28**	**24.7**	**-0.2**
SSY	**Sortino**	**5.58**	**220**	P		**Pn**	**07 28**	**21.5**	**-3.5**
VOIR		**5.59**	**44**	⇓P		**Pn**	**07 28**	**27.3**	**+2.2**
VOIR		**5.59**	**44**	P		**Pn**	**07 28**	**27.3**	**+2.2**
VOIR		**5.59**	**44**	P		**Pn**	**07 28**	**27.2**	**+2.1**
	comp=E,0.4nmcomp=E,826nmcomp=E,66nm,0.6s								
PE3	**Peglio**	**5.61**	**295**	P		**Pn**	**07 28**	**25.0**	**-0.4**
ATMI	**Monte Miggiano**	**5.66**	**291**	P		**Pn**	**07 28**	**26.8**	**+0.7**
VAE	**Valguarnera**	**5.67**	**226**	Pn		**Pn**	**07 28**	**26.2**	**+0.1**
	comp=E,10nm,0.4s,baz=11,slow=8.5,SNR=6.0								
VAE				Sn		**Sn**	**07 29**	**33.5**	**+2.8**
	comp=E,2.9nm,0.3s,baz=288,slow=8.6,SNR=3.5								
VAE				LR		LR	07 31	12.6	
	comp=E,853nm,18.3s,baz=331,slow=44								
DRGR		**5.72**	**23**	⇑P		**Pn**	**07 28**	**28.0**	**+1.1**
DRGR		**5.72**	**23**	P		**Pn**	**07 28**	**28.3**	**+1.4**
GBAS	**Gorenja Brezov**	**5.73**	**322**	*i* Pn		**Pn**	**07 28**	**27.1**	**+0.1**
LJU	**Ljubljana**	**5.77**	**323**	P		**Pn**	**07 28**	**28.2**	**+0.7**
PARC	**Parchiule**	**5.77**	**294**	P		**Pn**	**07 28**	**27.8**	**+0.2**
SULR		**5.84**	**55**	⇓P		**Pn**	**07 28**	**31.3**	**+2.9**
RAFF	**Raffo Rosso**	**5.88**	**224**			**Pn**	**07 28**	**27.3**	**-1.8**
TRI	**Trieste**	**5.90**	**317**			**Pn**	**07 28**	**29.7**	**+0.4**
TRI	**Trieste**	**5.90**	**317**	P		**Pn**	**07 28**	**29.7**	**+0.4**
CHOS	**Chios island**	**5.93**	**120**	P		**Pn**	**07 28**	**31.1**	**+1.4**
HPAC	**Pachino**	**5.94**	**217**	P		**Pn**	**07 28**	**27.1**	**-2.7**
CJR	**Cluj-Napoca**	**5.94**	**28**	⇓P		**Pn**	**07 28**	**31.4**	**+1.5**
CJR	**Cluj-Napoca**	**5.94**	**28**	P		**Pn**	**07 28**	**31.3**	**+1.5**
CRE	**Caprese Michel**	**5.96**	**293**	P		**Pn**	**07 28**	**30.3**	**0.0**
SOKA	**Soboth**	**6.06**	**329**	*e*Sn		**Sn**	**07 29**	**37.6**	**-2.8**
	comp=E,63nm,0.8s								
VOJS	**Vojsko**	**6.06**	**320**	*i* Pn		**Pn**	**07 28**	**32.0**	**+0.4**
VOJS				*e*Sn		**Sn**	**07 29**	**39.5**	**-0.9**
MLR	**Muntele Rosu**	**6.11**	**48**	Pn		**Pn**	**07 28**	**34.3**	**+2.0**
	comp=E,6.8nm,0.3s,baz=256,slow=7.4,SNR=60								
MLR				Sn		**Sn**	**07 29**	**42.3**	**+0.7**
	comp=E,3.6nm,0.3s,baz=173,slow=9.5,SNR=3.5								
MLR				Lg		Lg	07 30	14.8	
	baz=354,slow=8.9								
MLR				LR		LR	07 31	24.2	
	comp=E,1µm,19.9s,baz=225,slow=43								
	comp=E,48nm,0.6s								
MLR	**Muntele Rosu**	**6.11**	**48**			**Pn**	**07 28**	**34.7**	**+2.4**
MLR	**Muntele Rosu**	**6.11**	**48**	⇓P		**Pn**	**07 28**	**35.2**	**+2.9**
MLR	**Muntele Rosu**	**6.11**	**48**	P		**Pn**	**07 28**	**34.9**	**+2.6**
	comp=E,0.5nmcomp=E,963nmcomp=E,89nm,0.7s								
CICN	**Ciocanesti**	**6.12**	**62**	⇑P		**Pn**	**07 28**	**35.5**	**+3.2**
DOPR	**Dopca**	**6.13**	**42**	⇓P		**Pn**	**07 28**	**35.1**	**+2.7**
ASQU	**Asqua**	**6.13**	**294**	P		**Pn**	**07 28**	**32.7**	**+0.2**
ISR	**Istrita**	**6.24**	**53**	⇑P		**Pn**	**07 28**	**37.3**	**+3.3**
ISR	**Istrita**	**6.24**	**53**	P		**Pn**	**07 28**	**37.3**	**+3.3**
ISR	**Istrita**	**6.24**	**53**	P		**Pn**	**07 28**	**36.6**	**+2.6**
	comp=E,0.7nmcomp=E,177nm,0.6s								
NEHR	**Nehoiu**	**6.27**	**50**	⇑P		**Pn**	**07 28**	**37.8**	**+3.4**
PSZ	**Piszkesteto**	**6.38**	**2**			**Pn**	**07 28**	**37.0**	**+1.1**
PSZ	**Piszkesteto**	**6.38**	**2**	*e*P		**Pn**	**07 28**	**37.8**	**+1.9**
PSZ	**Piszkesteto**	**6.38**	**2**	P		**Pn**	**07 28**	**37.0**	**+1.1**
ARSA	**Arzberg**	**6.38**	**335**			**Pn**	**07 28**	**37.1**	**+1.1**
ARSA	**Arzberg**	**6.38**	**335**	P		**Pn**	**07 28**	**37.0**	**+1.1**
CSNT	**Castellina Chi**	**6.38**	**290**	P		**Pn**	**07 28**	**34.8**	**-1.1**
OZUR		**6.42**	**43**	⇑P		**Pn**	**07 28**	**38.9**	**+2.5**
APE	**Apeiranthos**	**6.46**	**132**	⇓P		**Pn**	**07 28**	**37.8**	**+0.8**
APE	**Apeiranthos**	**6.46**	**132**	*i* P		**Pn**	**07 28**	**37.0**	**0.0**
COVR	**Voineasa-Covas**	**6.47**	**46**	⇑P		**Pn**	**07 28**	**40.6**	**+3.4**
TURR	**Turia**	**6.51**	**44**	⇑P		**Pn**	**07 28**	**40.2**	**+2.5**
CASP	**Castiglione de**	**6.55**	**284**			**Pn**	**07 28**	**37.8**	**-0.5**
RONA	**Rosalia, Austr**	**6.57**	**341**	*e*Pn		**Pn**	**07 28**	**39.1**	**+0.6**
	comp=E,3.7nm,0.5s								
RONA	**Rosalia, Austr**	**6.57**	**341**	*e*Sn		**Sn**	**07 29**	**53.8**	**+1.0**
	comp=E,11nm,0.4s								
BISRR	**Bisoca**	**6.58**	**50**	⇑P		**Pn**	**07 28**	**41.7**	**+3.1**
BISRR	**Bisoca**	**6.58**	**50**	P		**Pn**	**07 28**	**40.6**	**+2.0**
	comp=E,1.1nmcomp=E,4µmcomp=E,277nm,0.7s								
BAND	**Balkesir-Ban**	**6.60**	**98**	⇓P		**Pn**	**07 28**	**41.0**	**+2.1**
ICOR	**Ion Corvin**	**6.60**	**64**	⇓P		**Pn**	**07 28**	**41.8**	**+2.9**
MYKA	**Terra Mystica**	**6.61**	**322**	*e*Pn		**Pn**	**07 28**	**38.6**	**-0.6**
	comp=E,3.7nm,0.3s								
MYKA	**Terra Mystica**	**6.61**	**322**	*e*Sn		**Sn**	**07 29**	**54.0**	**0.0**
	comp=E,16nm,0.6s								
BALB	**Balikesir**	**6.64**	**104**			**Pn**	**07 28**	**41.2**	**+1.8**
PLOR	**Plostina**	**6.72**	**48**	⇑P		**Pn**	**07 28**	**43.4**	**+2.8**
PLOR	**Plostina**	**6.72**	**48**	P		**Pn**	**07 28**	**43.4**	**+2.8**
VRI	**Vrincioaia**	**6.77**	**48**	⇓P		**Pn**	**07 28**	**44.3**	**+2.9**
VRI	**Vrincioaia**	**6.77**	**48**	P		**Pn**	**07 28**	**44.2**	**+2.9**
VRI	**Vrincioaia**	**6.77**	**48**	P		**Pn**	**07 28**	**43.9**	**+2.6**
	comp=E,0.3nmcomp=E,885nmcomp=E,86nm,0.8s								
ZCCA	**Zocca**	**6.87**	**297**			**Pn**	**07 28**	**44.1**	**+1.4**
ZCCA	**Zocca**	**6.87**	**297**	P		**Pn**	**07 28**	**43.8**	**+1.1**
ONER	**Baraj Valea Uz**	**6.89**	**44**	⇑P		**Pn**	**07 28**	**46.0**	**+3.1**
CONA	**Conrad Observa**	**6.89**	**339**	*e*Pn		**Pn**	**07 28**	**43.4**	**+0.4**
	comp=E,4.1nm,0.5s								
KECS	**Kecovo**	**6.97**	**5**	*e*P		**Pn**	**07 28**	**46.3**	**+2.3**
KECS				*e*			07 30	01.7	
KECS	**Kecovo**	**6.97**	**5**	*e*PN		**Pn**	**07 28**	**46.3**	**+2.3**
KECS				*e*SN		**Sn**	**07 30**	**01.7**	**-0.9**
MODS	**Modra-Piesok**	**7.01**	**348**	*e*P		**Pn**	**07 28**	**46.8**	**+2.2**
MODS				*e*			07 30	02.2	
MODS	**Modra-Piesok**	**7.01**	**348**	*e*PN		**Pn**	**07 28**	**46.8**	**+2.2**
MODS				*e*SN		**Sn**	**07 30**	**02.2**	**-1.4**
BERU	**Beregovo**	**7.04**	**17**	P		**Pn**	**07 28**	**46.4**	**+1.4**
TIRR	**Tirgusor**	**7.13**	**63**			**Pn**	**07 28**	**48.2**	**+2.0**
TIRR	**Tirgusor**	**7.13**	**63**	P		**Pn**	**07 28**	**48.2**	**+2.0**
TESR	**Tescani**	**7.14**	**44**	⇓P		**Pn**	**07 28**	**49.2**	**+2.9**
TESR	**Tescani**	**7.14**	**44**	P		**Pn**	**07 28**	**48.7**	**+2.4**
	comp=E,0.3nmcomp=E,37nm,0.8s								
BRIU	**Brid**	**7.23**	**19**	P		**Pn**	**07 28**	**49.9**	**+2.4**
ABTA	**Abfaltersbach**	**7.24**	**318**	*e*Sn		**Sn**	**07 30**	**07.9**	**-1.5**
	comp=E,110nm,1.1s								
CFR	**Carcaliu**	**7.25**	**57**	⇑P		**Pn**	**07 28**	**49.8**	**+2.0**

CFR	**Carcaliu**	**7.25**	**57**	P		**Pn**	**07 28**	**49.8**	**+2.0**
CTI	**Castel Tesino**	**7.26**	**311**			**Pn**	**07 28**	**47.8**	**-0.2**
CTI	**Castel Tesino**	**7.26**	**311**	P		**Pn**	**07 28**	**47.8**	**-0.2**
MUKU	**Mukachevo**	**7.26**	**17**	P		**Pn**	**07 28**	**50.3**	**+2.4**
GHRR		**7.27**	**49**	P		**Pn**	**07 28**	**50.9**	**+2.8**
TPGR	**Topolog**	**7.29**	**60**	⇓P		**Pn**	**07 28**	**50.6**	**+2.1**
BURAR	**Bucovina Array**	**7.30**	**32**			**Pn**	**07 28**	**51.7**	**+3.1**
BURAR	**Bucovina Array**	**7.30**	**32**	⇓P		**Pn**	**07 28**	**51.5**	**+2.8**
BURAR	**Bucovina Array**	**7.30**	**32**	P		**Pn**	**07 28**	**51.4**	**+2.8**
BUR08	**Bucovina Ar. S**	**7.32**	**32**			**Pn**	**07 28**	**51.6**	**+2.7**
JAVC	**Velka Javorina**	**7.43**	**350**	*e*PN		**Pn**	**07 28**	**52.2**	**+1.9**
PANI	**Panarotta**	**7.44**	**310**	P		**Pn**	**07 28**	**49.9**	**-0.8**
IDI	**Anoyia**	**7.53**	**144**	Pn		**Pn**	**07 28**	**51.4**	**-0.4**
	comp=E,4.9nm,0.3s,baz=320,slow=5.4,SNR=17								
IDI				Sn		**Sn**	**07 30**	**12.1**	**-4.6**
	comp=E,6.1nm,0.3s,baz=295,slow=22,SNR=7.4								
MANT	**Manisa**	**7.57**	**111**			**Pn**	**07 28**	**55.1**	**+2.6**
VARA	**Varagna**	**7.58**	**307**	P		**Pn**	**07 28**	**51.6**	**-0.8**
LANS	**Liptovska Anna**	**7.60**	**360**	*e*P		Pn	07 28	59.6	+6.9
LANS	**Liptovska Anna**	**7.60**	**360**	*e*PN		Pn	07 28	59.6	+6.9
LUSI	**Trento, Gardas**	**7.62**	**308**	P		**Pn**	**07 28**	**51.8**	**-1.1**
LESA	**Schwarzleotal**	**7.65**	**323**	*e*Sn		**Sn**	**07 30**	**18.1**	**-1.3**
	comp=E,26nm,0.7s								
TLCR		**7.68**	**59**	⇑P		**Pn**	**07 28**	**56.8**	**+3.1**
TLCR		**7.68**	**59**	P		**Pn**	**07 28**	**56.8**	**+3.1**
OZOL	**Ozolo**	**7.80**	**311**	P		**Pn**	**07 28**	**54.7**	**-0.8**
KSV	**Kosov**	**7.83**	**28**	P		**Pn**	**07 28**	**58.4**	**+2.7**
KRUC	**Moravsky**	**7.83**	**345**	*e*PN		**Pn**	**07 28**	**58.1**	**+2.3**
NIE	**Niedzica**	**7.89**	**4**	*e*P		**Pn**	**07 28**	**59.7**	**+3.1**
NIE	**Niedzica**	**7.89**	**4**	P		**Pn**	**07 28**	**59.2**	**+2.5**
	comp=E,23nm,0.8s								
MAUC	**Maruska**	**7.91**	**352**	*e*PN		**Pn**	**07 28**	**59.3**	**+2.4**
STHS	**Stebnicka Huta**	**7.96**	**8**	*e*P		**Pn**	**07 28**	**59.4**	**+1.8**
STHS				*e*			07 30	30.4	
STHS	**Stebnicka Huta**	**7.96**	**8**	*e*PN		**Pn**	**07 28**	**59.4**	**+1.8**
STHS				*e*SN		**Sn**	**07 30**	**30.4**	**+3.4**
CARE	**Lago del Cares**	**8.02**	**310**	P		**Pn**	**07 28**	**58.0**	**-0.7**
VRAC	**Vranov**	**8.03**	**346**	Pn		**Pn**	**07 28**	**57.3**	**-1.2**
	comp=E,0.3nm,0.3s,baz=151,slow=11,SNR=4.2								
VRAC				Sn		**Sn**	**07 30**	**28.1**	**-0.6**
	comp=E,0.5nm,0.3s,baz=207,slow=16,SNR=1.4								
VRAC				Lg		Lg	07 31	14.7	
	comp=E,0.5nm,0.3s,baz=166,slow=7.3,SNR=3.5								
	comp=E,2.7nm,0.5s								
VRAC	**Vranov**	**8.03**	**346**	*e*PN		**Pn**	**07 28**	**59.8**	**+1.3**
WTTA	**Wattenberg**	**8.03**	**318**	*e*Sn		**Sn**	**07 30**	**29.0**	**0.0**
	comp=E,71nm,0.5s								
WTTA	**Wattenberg**	**8.03**	**318**	P		**Pn**	**07 29**	**00.0**	**+1.3**
WATA	**Walderalm**	**8.11**	**318**	*e*Pn		**Pn**	**07 28**	**59.2**	**-0.5**
	comp=E,12nm,0.3s								
WATA	**Walderalm**	**8.11**	**318**	*e*Sn		**Sn**	**07 30**	**29.8**	**-1.1**
	comp=E,61nm,0.9s								
CKRC	**Cesky Krumlov**	**8.15**	**335**	*e*P		**Pn**	**07 29**	**01.7**	**+1.5**
CKRC				MLR		MLR			
	comp=Z,900nm,16.4s								
CKRC	**Cesky Krumlov**	**8.15**	**335**	*e*PN		**Pn**	**07 29**	**01.7**	**+1.5**
CKRC				AMS		AMS	07 32	20.0	
	comp=Z,900nm,16.4s								
SQTA	**Sankt Quirin**	**8.22**	**316**	*e*Pn		**Pn**	**07 29**	**02.1**	**+0.8**
	comp=Z,7.6nm,0.4s								
SQTA	**Sankt Quirin**	**8.22**

comp=N,500nm,20.0s
CLL AMS AMS 07 33 00.0
comp=E,1μm,19.7s
CLL AMS AMS 07 33 00.0
CLL AMS AMS 07 34 00.0
comp=Z,500nm,19.0s
BR131 Keskin Array S 10.88 95 *i* P **Pn 07 29 39.2 +1.4**
BRTR Keskin Array B 10.88 95 Pn **Pn 07 29 37.9 +0.1**
comp=Z,0.3nm,0.3s,baz=276,slow=14,SNR=5.0
BRTR LR LR 07 34 43.9
comp=Z,992nm,18.8s,baz=290,slow=43
comp=Z,1.0nm,0.6s
ECH Echery 11.01 311 Pn 07 29 39.1 -0.3
ECH Echery 11.01 311 P **Pn 07 29 39.1 -0.3**
AK07 Malin Array Si 11.23 33 P **Pn 07 29 44.3 +2.0**
AK14 Malin Array Si 11.25 33 P **Pn 07 29 44.6 +2.0**
AK06 Malin Array Si 11.25 33 P **Pn 07 29 44.6 +2.0**
AK17 Malin Array Si 11.27 33 P **Pn 07 29 44.9 +2.0**
AK12 Malin Array Si 11.28 33 P **Pn 07 29 45.0 +2.0**
AK16 Malin Array Si 11.28 33 P **Pn 07 29 45.0 +2.0**
AK05 Malin Array Si 11.28 33 P **Pn 07 29 45.0 +2.0**
AK19 Malin Array Si 11.28 32 P **Pn 07 29 45.0 +2.0**
AK10 Malin Array Si 11.29 33 P **Pn 07 29 45.1 +2.0**
AK20 Malin Array Si 11.30 32 P **Pn 07 29 45.2 +1.9**
AK18 Malin Array Si 11.30 33 P **Pn 07 29 45.3 +2.0**
AK02 Malin Array Si 11.31 33 P **Pn 07 29 45.4 +2.0**
AK09 Malin Array Si 11.31 33 P **Pn 07 29 45.4 +2.0**
AK11 Malin Array Si 11.31 33 P **Pn 07 29 45.4 +2.0**
AK08 Malin Array Si 11.31 33 P **Pn 07 29 45.4 +1.9**
AK21 Malin Array Si 11.34 32 P **Pn 07 29 45.8 +2.0**
AK22 Malin Array Si 11.34 32 P **Pn 07 29 45.7 +1.9**
AK01 Malin Array Si 11.34 33 P **Pn 07 29 45.8 +2.0**
KIEV Kiev 11.34 33 Pn 07 29 45.4 +1.6
KIEV Kiev 11.34 33 P **Pn 07 29 45.4 +1.6**
KIEV Kiev 11.34 33 P **Pn 07 29 45.5 +1.7**
comp=Z,88nm,1.2s
AK04 Malin Array Si 11.35 33 P **Pn 07 29 45.9 +2.0**
AKASG Malin Array Be 11.35 33 Pn **Pn 07 29 43.2 -0.8**
comp=Z,0.8nm,0.3s,baz=222,slow=13,SNR=25
AKASG LR LR 07 34 54.0
comp=Z,375nm,18.2s,baz=204,slow=42
comp=Z,7.3nm,0.8s
AKBB Malin Array Si 11.35 33 Pn 07 29 45.7 +1.7
AKBB Malin Array Si 11.35 33 *ce*P **Pn 07 29 44.8 +0.8**
AKBB Malin Array Si 11.35 33 P **Pn 07 29 46.0 +2.0**
AK03 Malin Array Si 11.37 33 P **Pn 07 29 46.2 +2.0**
MNK Minsk 14.10 20 *i* P **Pn 07 30 22.7 +1.2**
comp=E,47nm,1.0s
MNK *i* P **Pn 07 30 22.7 +1.2**
comp=N,24nm,0.8s
MNK *i* P **Pn 07 30 22.7 +1.2**
comp=Z,32nm,1.1s,baz=207
MNK *i* PP **PnPn 07 30 30.0 +0.6**
MNK *i* PPP PPP 07 30 37.7
MNK *i* S **Sn 07 32 58.2 +1.0**
MNK *i* SS **SnSn 07 33 13.3 +3.6**
MNK *i* SSS SSS 07 33 24.7
MNK *i* LQ LQ 07 34 28.9
MNK *i* LR LR 07 35 32.7
MNK *i* LRM MLR 07 36 22.9
comp=Z,911nm,16.2s
MNK *i* LRM MLR 07 36 29.5
comp=E,859nm,17.6s
MNK *i* LRM MLR 07 36 29.9
comp=N,333nm,17.5s
MNK Minsk 14.10 20 *i* P **Pn 07 30 21.2 -0.3**
MNK *i* S **Sn 07 32 56.0 -1.3**
MNK pmax pmax
comp=Z,32nm,1.1s
MNK MLR MLR
comp=Z,839nm,15.0s
MNK MLR MLR
comp=E,767nm,16.0s
MNK MLR MLR
comp=N,525nm,16.0s
NACGM Naroch 14.20 17 *e*P **Pn 07 30 25.4 +2.5**
comp=Z,11nm,0.7s,baz=203
PABE Paberze 14.27 10 Pn 07 30 25.2 +1.4
PABE Paberze 14.27 10 *e*P **P 07 30 30.6 -0.3**
MMAI Mount Meron Ar 15.22 119 Pn **Pn 07 30 36.3 -0.6**
comp=Z,2.2nm,0.3s,baz=319,slow=11,SNR=8.5
comp=Z,9.1nm,0.5s
KOPT Kop Dagi 15.96 89 Pn 07 30 47.5 +0.9
VSR Storozhevoye 16.60 48 *e*P **Pn 07 30 53.3 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.9s
ASF Jabal al Asfar 16.73 118 Pn **Pn 07 30 55.4 -1.0**
comp=Z,0.6nm,0.3s,baz=323,slow=10,SNR=2.2
comp=Z,1.5nm,0.4s
VORR Voronezh 16.84 46 *e*P **Pn 07 30 54.5 -3.0**
VORR pmax pmax
comp=Z,20nm,1.0s
MARD Mardin 16.95 97 P **P 07 31 02.6 +1.7**
SHA1 Shidzhatmaz 17.15 75 *i* P **Pn 07 31 02.3 +0.6**
KIV Kislovodsk 17.17 74 *e*P **P 07 31 02.7 -0.6**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,86nm,14.0s
LPSR Galich'ya Gora 17.17 43 *e*P **Pn 07 30 59.3 -2.3**
LPSR pmax pmax
comp=Z,30nm,1.0s
EIL Elat 17.23 129 P **Pn 07 31 02.9 +0.4**
comp=Z,0.3nm,0.3s,baz=318,slow=16,SNR=2.0
EIL S Sn 07 34 00.1 -13
comp=Z,2.6nm,0.4s,baz=17,slow=19,SNR=1.9
comp=Z,5.4nm,0.5s
KBZ Khabaz 17.33 75 P **Pn 07 31 04.2 +0.7**
comp=Z,0.4nm,0.3s,baz=299,slow=9.1,SNR=9.7
comp=Z,4.8nm,0.7s
KBZ Khabaz 17.33 75 *ce*P **P 07 31 05.2 +0.3**
GOF Gofitskoye 17.46 71 *ce*P **Pn 07 31 03.0 -2.3**
VSU Vasula 17.54 13 *e*P **Pn 07 31 06.0 -0.1**
VSU Vasula 17.54 13 *ce*P **Pn 07 31 05.2 -0.9**
VSU pmax pmax
comp=Z,63nm,0.8s
OBN Obninsk 17.61 34 P **Pn 07 31 07.3 +0.2**
comp=Z,7.8nm,0.3s,baz=158,slow=7.4,SNR=10
OBN LR LR 07 38 23.3
comp=Z,496nm,18.9s,baz=119,slow=39
comp=Z,27nm,0.4s
OBN Obninsk 17.61 34 IAmb IAmb 07 31 08.1
comp=Z,92nm,0.4s
OBN Obninsk 17.61 34 *de*P **Pn 07 31 07.1 0.0**
OBN pmax pmax
comp=Z,92nm,1.7s
OBN MLR MLR
comp=Z,422nm,17.0s
ESDC Sonseca Array 17.92 272 P **P 07 31 12.0 +0.4**
comp=Z,0.1nm,0.3s,baz=73,slow=11,SNR=11
ESDC LR LR 07 38 33.6
comp=Z,255nm,18.1s,baz=82,slow=39
comp=Z,4.2nm,1.1s
VRH Novokhopyorsk 18.04 50 *e*P **Pn 07 31 11.4 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.9s
ARBE Arbavere 18.36 11 *e*P **P 07 31 15.7 -0.4**
MOS Moscow 18.48 34 *e*P **P 07 31 14.8 -2.7**
MOS pmax pmax
comp=Z,56nm,0.9s
AAL Aland 18.66 1 *e*P **P 07 31 18.5 -0.9**
MEF Metsahovi 18.94 8 *e*P **P 07 31 21.7 -0.7**
HFS Hagfors 18.96 351 P **P 07 31 22.1 -0.6**
comp=Z,0.9nm,0.3s,baz=171,slow=12,SNR=19
comp=Z,13nm,0.9s
GNI Garni 19.11 86 P **Pn 07 31 26.3 +0.7**
comp=Z,2.8nm,0.3s,baz=294,slow=9.3,SNR=7.0
GNI LR LR 07 40 09.1
comp=Z,176nm,19.0s,baz=296,slow=41
comp=Z,13nm,0.4s
GNI Garni 19.11 86 P **Pn 07 31 26.4 +0.7**
GNI IAmb IAmb 07 31 38.4
comp=Z,148nm,1.9s
GNI Garni 19.11 86 *ce*P **Pn 07 31 26.7 +1.0**
GNI pmax pmax
comp=Z,19nm,0.6s
GNI Garni 19.11 86 P **Pn 07 31 25.6 -0.1**
comp=Z,31nm,0.6s
RAF Rauma 19.55 3 *e*P **P 07 31 27.9 -1.3**
PBRG Braganca 19.60 280 *e*P **Pn 07 31 31.4 0.0**
NC602 NORSAR Array S 19.83 348 P **P 07 31 31.2 -1.0**
MVO Moncorvo 19.91 278 *e*P **Pn 07 31 34.9 -0.3**
MVO eLR LR 07 39 57.5
MVO *i* IAMs_20 IAMs_20 07 40 34.9
comp=Z,321nm,18.0s

NC405 NORSAR Array S 20.16 349 P **P 07 31 35.2 -0.8**
NB2 NORSAR Subarra 20.17 348 P **P 07 31 35.1 -0.9**
comp=Z,9.2nm,1.1s,baz=164,slow=11
NOA NORSAR Array B 20.17 348 P **P 07 31 35.0 -0.9**
comp=Z,3.1nm,0.9s,baz=151,slow=9.7,SNR=12
comp=Z,3.1nm,0.9s
EKA Eskdalemuir Ar 20.29 321 P **P 07 31 37.4 +0.1**
comp=Z,2.7nm,0.5s,baz=113,slow=9.5,SNR=14
comp=Z,2.7nm,0.5s
FINES FINESS Array B 20.32 9 P **P 07 31 36.4 -1.1**
comp=Z,28nm,0.6s,baz=173,slow=9.7,SNR=99
FINES LR LR 07 39 13.6
comp=Z,133nm,21.2s,baz=210,slow=36
comp=Z,28nm,0.6s
FINES FINESS Array B 20.32 9 P **P 07 31 36.3 -1.3**
FINES FINESS Array B 20.32 9 P **P 07 31 36.3 -1.3**
FIA1 FINESS Array S 20.32 9 P **P 07 31 36.3 -1.3**
FIA1 IAmb IAmb 07 31 38.0
comp=Z,89nm,0.7s
NC303 NORSAR Array S 20.32 349 P **P 07 31 37.4 -0.2**
NC303 IAmb IAmb 07 31 46.0
comp=Z,52nm,1.4s
MTE Manteigas 20.45 276 *e*LR LR 07 40 04.1
MTE *i* IAMs_20 IAMs_20 07 41 21.9
comp=Z,242nm,16.0s
NC204 NORSAR Array S 20.46 348 P **P 07 31 39.8 +0.6**
PMRV Marv??o 20.55 273 *e*P Pn 07 31 42.9 +0.3
PMRV *e*LR LR 07 40 27.8
PMRV *i* IAMs_20 IAMs_20 07 41 48.5
comp=Z,300nm,18.0s
PBAR Barrancos 20.64 269 *e*P **P 07 31 42.3 +1.1**
PBAR *i* IAmb IAmb 07 31 49.8
comp=Z,66nm,1.4s
PESTR Estremoz 20.85 272 *e*P **P 07 31 44.5 +1.0**
PESTR *i* IAmb IAmb 07 31 48.4
comp=Z,35nm,1.2s
KEF Keuruu 20.90 7 *e*P **P 07 31 42.9 -0.9**
MDT Midelt 21.06 253 P **P 07 31 45.3 -0.6**
comp=Z,11nm,1.1s,baz=62,slow=13,SNR=9.0
MDT LR LR 07 39 17.3
comp=Z,202nm,19.6s,baz=62,slow=35
comp=Z,11nm,1.1s
AKT Akhty 21.09 81 *e*P **P 07 31 44.4 -1.8**
AKT *e* 07 32 03.7
AKT pmax pmax
comp=Z,24nm,1.0s
AKT MLR MLR
comp=Z,445nm,19.0s
MD01 Midelt array s 21.14 254 P **P 07 31 44.7 -2.2**
MD31 MD31 21.14 254 P **P 07 31 46.4 -0.4**
PARRA Arraiolos 21.20 272 *e*P P 07 31 47.7 -7.7
PARRA *i* IAmb IAmb 07 31 51.9
comp=Z,34nm,1.3s
EVO Evora 21.26 271 *e*P **P 07 31 48.7 +0.7**
PBEJ Beja 21.30 270 *e*P **P 07 31 47.9 -0.5**
PVAQ Vaqueiros 21.39 268 *e*P **P 07 31 49.3 -0.1**
PVAQ *i* IAmb IAmb 07 32 17.7
comp=Z,47nm,1.7s
PCVE Castro Verde 21.56 269 *e*P **P 07 31 52.2 +1.1**
PCVE *i* IAmb IAmb 07 32 04.9
comp=Z,55nm,2.2s
PBDV Barranco-do-Ve 21.61 268 *e*P **P 07 31 53.3 +1.6**
PBDV *i* IAmb IAmb 07 31 57.5
comp=Z,64nm,1.5s
VAF Ylistaro 21.61 4 *e*P **P 07 31 50.5 -0.9**
MESJ Messejana 21.63 269 *e*P **P 07 31 53.1 +1.2**
BELG Belogornoye 21.89 51 P **P 07 31 53.9 -0.7**
comp=Z,79nm,0.8s,baz=300,slow=0.5,SNR=31
BELG LR LR 07 42 34.7
comp=Z,596nm,19.6s,baz=277,slow=43
comp=Z,79nm,0.8s
BELG Belogornoye 21.89 51 *i* P **P 07 31 53.9 -0.7**
BELG pmax pmax
comp=Z,20nm,1.0s
TAM Tamanrasset 22.09 216 P **P 07 31 57.3 +0.2**
TAM Tamanrasset 22.09 216 P **P 07 31 57.3 +0.2**
TAM pmax pmax
comp=Z,74nm,0.2s
JOF Joensuu 22.52 14 *e*P **P 07 31 59.5 -1.7**
KLMR Klimovskoe 22.86 26 *e*P **P 07 32 02.9 -1.9**
KLMR pmax pmax
comp=Z,117nm,1.2s
KIRV Kirov 25.35 38 P **P 07 32 27.3 -1.1**
comp=Z,22nm,0.5s,baz=256,slow=7.9,SNR=13
KIRV LR LR 07 42 55.2
comp=Z,514nm,18.8s,baz=237,slow=38
comp=Z,22nm,0.5s
KIRV Kirov 25.35 38 *ce*P **P 07 32 27.8 -0.6**
APA Apatity 27.15 12 ‖ *e*P **P 07 32 44.9 +0.3**
APA MLR MLR
comp=Z,567nm,14.2s
AKTO Aktyubinsk 27.91 58 P **P 07 32 50.9 -0.7**
comp=Z,2.4nm,0.4s,baz=261,slow=7.0,SNR=9.7
AKTO LR LR 07 46 12.9
comp=Z,348nm,18.8s,baz=246,slow=41
comp=Z,2.4nm,0.4s
ARCES ARCESS Array B 28.23 4 P **P 07 32 52.5 -1.7**
comp=Z,2.3nm,0.7s,baz=188,slow=7.4,SNR=11
comp=Z,2.3nm,0.7s
ARCES ARCESS Array B 28.23 4 P **P 07 32 54.1 -0.1**
ARCES IAmb IAmb 07 32 57.5
comp=Z,87nm,1.9s
ARCES ARCESS Array B 28.23 4 P **P 07 32 54.1 -0.1**
ARCES pmax pmax
comp=Z,87nm,1.9s
ARTI Arti 29.05 46 P **P 07 33 00.3 -1.3**
comp=Z,32nm,0.6s,baz=252,slow=5.1,SNR=52
ARTI LR LR 07 45 42.8
comp=Z,539nm,19.0s,baz=241,slow=39
ARTI Arti 29.05 46 P **P 07 33 00.7 -1.0**
ARTI Arti 29.05 46 *ce*P **P 07 33 00.2 -1.5**
ARTI pmax pmax
comp=Z,38nm,0.7s
ABKAR Akbulak array 29.12 61 P **P 07 33 01.6 -0.8**
SVE Sverdlovsk 30.36 46 *e*P **P 07 33 12.4 -0.9**
SVE pmax pmax
comp=Z,33nm,0.7s
SVE MLR MLR
comp=Z,575nm,15.0s
BORK Borovoye 35.59 53 P **P 07 33 59.1 +0.2**
BORK Borovoye 35.59 53 *ce*P **P 07 33 59.0 +0.1**
BORK pmax pmax
comp=Z,23nm,0.6s
BVAR Borovoye Array 35.63 54 P **P 07 33 59.4 0.0**
comp=Z,16nm,0.7s,baz=276,slow=6.1,SNR=83
BVAR LR LR 07 49 23.9
comp=Z,173nm,18.8s,baz=267,slow=38
comp=Z,16nm,0.7s
KKAR Karatay Array 37.26 70 P **P 07 34 13.8 +0.5**
KKAR Karatay Array 37.26 70 P **P 07 34 13.8 +0.5**
AAK Ala-Archa 40.19 69 LR LR 07 53 32.3
comp=Z,134nm,20.6s,baz=358,slow=40
AAK Ala-Archa 40.19 69 *ce*P **P 07 34 39.2 +1.1**
AAK pmax pmax
comp=Z,10.0nm,1.7s
KURBB Kurchatov Arra 40.92 56 P **P 07 34 43.4 -0.5**
comp=Z,1.7nm,0.5s,baz=289,slow=9.9,SNR=21
KURBB LR LR 07 55 05.3
comp=Z,262nm,18.1s,baz=179,slow=41
comp=Z,1.7nm,0.5s
DBIC Dimbokro 40.94 219 P **P 07 34 44.2 -0.1**
comp=Z,2.2nm,0.7s,baz=54,slow=5.6,SNR=4.5
DBIC ScP **ScP 07 40 24.9 -8.0**
comp=Z,3.8nm,1.1s,baz=126,slow=4.2,SNR=3.7
comp=Z,2.2nm,0.7s
DBIC Dimbokro 40.94 219 IAmb IAmb 07 34 52.9
comp=Z,16nm,1.3s
KURK Kurchatov 40.96 56 P **P 07 34 43.8 -0.4**
KURK Kurchatov 40.96 56 *ce*P **P 07 34 44.4 +0.2**
KURK pmax pmax
comp=Z,14nm,1.7s
KSH Kashi 42.30 73 P **P 07 34 54.3 -1.1**
KSH pmax pmax
comp=Z,5.0nm,0.6s
MAKZ Makanchi 44.06 61 P **P 07 35 09.2 -0.2**
MAKZ IAmb IAmb 07 35 10.3
comp=Z,13nm,1.1s
MAKZ Makanchi 44.06 61 P **P 07 35 09.2 -0.2**
MAKZ pmax pmax
comp=Z,13nm,1.1s
ZAA0 Zalesovo Array 44.08 51 IAmb IAmb 07 35 10.1
comp=Z,24nm,0.8s
ZALV Zalesovo Beam 44.08 51 P **P 07 35 08.8 -0.6**
comp=Z,15nm,0.5s,baz=279,slow=8.5,SNR=88
ZALV LR LR 07 55 46.2
comp=Z,505nm,18.8s,baz=288,slow=39
comp=Z,15nm,0.5s
ZALV Zalesovo Beam 44.08 51 P **P 07 35 09.2 -0.2**
MK31 Makanchi Array 44.27 61 P **P 07 35 10.8 -0.3**
MK31 IAmb IAmb 07 35 11.9
comp=Z,10nm,0.8s
MK31 Makanchi Array 44.27 61 *ce*P **P 07 35 10.9 -0.2**
MKAR Makanchi Array 44.27 61 P **P 07 35 10.5 -0.6**
comp=Z,18nm,0.7s,baz=281,slow=7.9,SNR=139
MKAR LR LR 07 56 41.7
comp=Z,216nm,18.4s,baz=324,slow=40
comp=Z,18nm,0.7s
MKAR Makanchi Array 44.27 61 P **P 07 35 10.9 -0.2**
MKAR Makanchi Array 44.27 61 P **P 07 35 10.9 -0.2**
DGZ Jazzator, Alta 46.70 56 *e*P **P 07 35 29.7 -0.8**
DGZ pmax pmax
comp=Z,12nm,0.7s
WMQ Urumqi 48.86 63 *e*P **P 07 35 50.0 +2.8**
WMQ LR LR
comp=E,360nm,20.3s
WMQ LR LR
comp=Z,170nm,21.7s
EVN Everest 55.63 81 P **P 07 36 37.1 -1.3**
EVN IAmb IAmb 07 36 38.7
comp=Z,17nm,0.7s
SONM Songino Array 58.95 52 P **P 07 37 00.2 -0.8**
comp=Z,3.7nm,0.9s,baz=289,slow=8.8,SNR=16
comp=Z,3.7nm,0.9s
ULN Ulaanbaatar 59.32 51 *i* P **P 07 37 03.1 -0.4**
ULN pmax pmax
comp=Z,8.0nm,1.4s
YAK Yakutsk 62.56 30 LR LR 08 07 18.3
comp=Z,222nm,19.1s,baz=293,slow=39
LZDM Lanzhou Array 63.38 65 P **P 07 37 31.2 -0.1**
comp=Z,2.6nm,0.4s,baz=336,slow=3.3,SNR=5.1
comp=Z,2.6nm,0.4s
LZH Lanzhou 63.41 64 *e*P **P 07 37 31.8 +0.4**
LZH sP sP 07 37 41.5 +1.0
LZH pmax pmax
comp=Z,22nm,1.2s
LZH LR LR
comp=N,200nm,15.1s
LZH LR LR
comp=E,250nm,14.8s
LZH LR LR
comp=Z,140nm,14.4s
HHC Hu-ho-hao-te 65.78 56 *e*P **P 07 37 47.3 +0.6**
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,170nm,5.0s
SADO Sadowa 67.47 310 LR LR 08 06 54.9
comp=Z,76nm,18.8s,baz=78,slow=36
XAN Xi'an 67.99 64 ⇑P **P 07 38 01.5 +0.6**
XAN sP sP 07 38 08.8 -1.1
XAN pmax pmax
comp=Z,19nm,0.9s
C27K Jago River 68.46 354 IAmb IAmb 07 38 10.4
comp=Z,15nm,1.6s
E29M Blow River 69.09 351 IAmb IAmb 07 38 16.7
comp=Z,17nm,1.5s
SEY Seymchan 69.27 21 LR LR 08 11 20.0
comp=Z,184nm,20.4s,baz=324,slow=38
F31M Tsiigehtchic 69.46 349 P **P 07 38 09.1 -0.2**
F31M IAmb IAmb 07 38 18.0
comp=Z,25nm,1.6s
YKA Yellowknife Ar 69.97 339 P **P 07 38 11.6 -0.9**
comp=Z,1.6nm,0.9s,baz=40,slow=6.2,SNR=4.7
comp=Z,1.6nm,0.9s
BOSA Boshof 70.01 175 P **P 07 38 13.8 +0.5**
comp=Z,3.2nm,0.6s,baz=5.3,slow=5.7,SNR=7.2
comp=Z,3.2nm,0.6s
CMAR Chiang Mai Arr 70.20 83 P **P 07 38 13.7 -1.0**
comp=Z,2.6nm,0.7s,baz=312,slow=7.8,SNR=9.4
comp=Z,2.6nm,0.7s
MA2 Magadan 71.52 24 LR LR 08 13 50.2
comp=Z,294nm,18.4s,baz=327,slow=39
I30M Mount Dempster 71.91 350 IAmb IAmb 07 38 33.9
comp=Z,12nm,1.2s
J30M Hart River 72.52 349 IAmb IAmb 07 38 38.2
comp=Z,5.4nm,0.9s
ULM Lac du Bonnet 72.55 323 P **P 07 38 28.3 -0.1**
comp=Z,1.5nm,0.4s,baz=83,slow=6.2,SNR=3.2
comp=Z,1.5nm,0.4s
H23K Yukon River 72.63 355 P **P 07 38 30.1 +1.5**
H23K IAmb IAmb 07 38 39.7
comp=Z,23nm,1.7s
IMAR Indian Mountai 72.68 357 P **P 07 38 30.0 +1.1**
ILAR Eielson Array 73.48 354 P **P 07 38 33.5 -0.2**
comp=Z,0.5nm,0.7s,baz=4.2,slow=3.6,SNR=7.7
comp=Z,0.5nm,0.7s
SJG San Juan 75.05 281 LR LR 08 08 07.9
comp=Z,56nm,20.1s,baz=11,slow=33
PETK Petropavlovsk- 79.05 24 LR LR 08 18 54.8
comp=Z,243nm,18.7s,baz=326,slow=39
ASAJ Asahikawa 80.60 38 LR LR 08 19 48.4
comp=Z,92nm,19.6s,baz=322,slow=39
BBB Bella Bella 82.51 341 LR LR 08 18 52.5
comp=Z,97nm,18.3s,baz=264,slow=38
JNU Nakatsue 82.53 52 LR LR 08 19 19.6
comp=Z,92nm,18.8s,baz=337,slow=38
YNE Yellowstone No 82.72 327 P **P 07 39 26.6 +1.0**
YNE IAmb IAmb 07 39 29.7
comp=Z,18nm,1.7s
MJAR Matsushiro Arr 84.17 45 LR LR 08 20 30.6
comp=Z,130nm,18.1s,baz=45,slow=38
BDFB Brasilia 84.30 243 P **P 07 39 35.5 +1.7**
comp=Z,1.9nm,0.6s
comp=Z,1.9nm,0.6s
PDAR Pinedale Array 84.34 325 P **P 07 39 34.5 +0.6**
comp=Z,0.5nm,0.6s,baz=56,slow=7.9,SNR=4.7
PDAR LR LR 08 18 10.2
comp=Z,50nm,18.1s,baz=332,slow=36
comp=Z,0.5nm,0.6s
ANMO Albuquerque 89.17 318 LR LR 08 20 34.0
comp=Z,134nm,18.8s,baz=2.0,slow=36
TXAR Lajitas Array 92.11 313 P **P 07 40 11.8 +0.5**
comp=Z,0.9nm,0.9s,baz=49,slow=3.8,SNR=3.5
comp=Z,0.9nm,0.9s
CMIG Matias Romero 95.95 299 LR LR 08 24 25.1
comp=Z,56nm,19.1s,baz=350,slow=36
DAV Davao City (W) 97.19 74 LR LR 08 31 22.6
comp=Z,74nm,18.3s,baz=166,slow=40
CPUP Villa Florida 97.95 242 LR LR 08 27 11.4
comp=Z,32nm,18.7s,baz=20,slow=37
LPAZ La Paz 98.90 256 LR LR 08 26 06.0
comp=Z,34nm,18.8s,baz=19,slow=36
ASAR Alice Springs 123.22 93 PKP **PKPdf 07 45 57.0 -1.5**
comp=Z,0.9nm,0.7s,baz=310,slow=1.5,SNR=13

IDC ***26*** *07:27:32.7±0.4,53.˚26N×172.˚73E,h0km,mb4.4/35, mbtmp4.4/37,ML3.5/2,MS3.8/2, Error ellipse: s-maj=12.8km s-min=9.6km az=11.0*
NEIC ***26*** *07:27:38.4±1.4,53.˚22N±0.˚09×172.˚62E±0.˚09,h36km±5km, mb4.6/192, Error ellipse: s-maj=13.6km s-min=7.0km az=191.0*
ISC 26 07:27:37.0±0.4,**53.˚23N**±0.˚08×**172.˚65E**±0.˚05,**h28**km,**n184,** σ1§**00**/114,**mb4.6**/115,**MS4.0**/3,**2D,Near Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**1.01**	**119**	Pn	**Pn**	**07 27 53.2**	**-2.0**
	148nm,0.3s,baz=18,slow=2.2,SNR=44						
SHEM				LR	LR	07 28 05.1	
	comp=Z,230nm,19.2s,baz=304,slow=33						
SHEM				Sn	**Sn**	**07 28 08.6**	**0.0**
	366nm,0.3s,baz=260,slow=16,SNR=9.0						
SHEM	**Shemya Is, Ala**	**1.01**	**119**	Pn	**Pn**	**07 27 55.2**	**-0.1**
SMY	**Shemya**	**1.01**	**119**		**Pn**	**07 27 54.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**8.98**	**275**	Pn	**Pn**	**07 29 46.0**	**+1.3**
PETK	**Petropavlovsk-**	**8.98**	**275**	Pn	**Pn**	**07 29 45.2**	**+0.4**
	1.1nm,0.3s,baz=91,slow=20,SNR=17						
PETK				Sn	**Sn**	**07 31 22.6**	**-2.3**
	0.9nm,0.3s,baz=287,slow=6.0,SNR=4.6						
	3.1nm,0.5s						
SEY	**Seymchan**	**14.40**	**320**	Pn	**Pn**	**07 30 57.0**	**-1.7**
	0.5nm,0.3s,baz=233,slow=20,SNR=4.8						
	1.4nm,0.3s						
K15K	**Wolf Creek Mou**	**16.39**	**46**		**Pn**	**07 31 26.7**	**+1.9**
K15K				IAmb	IAmb	07 31 41.9	
	comp=Z,72nm,1.4s						
J17K	**VABM Dome**	**17.84**	**44**		**P**	**07 31 45.2**	**+1.8**
K17K	**Iditarod**	**17.94**	**47**		**P**	**07 31 45.7**	**+1.2**
K17K				IAmb	IAmb	07 31 59.4	
	comp=Z,40nm,1.0s						
ACHA	**Angle Creek He**	**18.60**	**62**	P	**P**	**07 31 52.5**	**+0.6**
G18K	**Tagagawik**	**19.06**	**37**	P	**Pn**	**07 31 58.3**	**+0.6**

OHAK Old Harbor 19.71 65 P 07 32 05.1 +1.2
OHAK IAmb IAmb 07 32 14.0
comp=Z,39nm,1.1s
H19K Roundabout Mou 19.72 39 Pn 07 32 07.3 +1.7
L20K Farewell, AK 19.85 49 P **Pn 07 32 07.5 +0.3**
L20K IAmb IAmb 07 32 19.5
comp=Z,20nm,0.9s
K20K Telida 19.97 46 P **P 07 32 07.2 +0.4**
KDAK Kodiak Island 20.06 63 P **P 07 32 07.3 -0.4**
comp=Z,6.7nm,0.6s,baz=292,slow=7.3,SNR=8.9
comp=Z,6.7nm,0.6s
KDAK Kodiak Island 20.06 63 IAmb IAmb 07 32 09.9
comp=Z,42nm,1.2s
J20K Nowinta River 20.17 44 P 07 32 10.3 +1.4
E19K Redstone River 20.31 34 P **P 07 32 10.9 +0.5**
SPU Mount Spurr 20.48 53 P **P 07 32 13.8 +1.4**
SPU IAmb IAmb 07 32 29.3
comp=Z,19nm,0.8s
D19K Kuna River 20.57 31 IAmb IAmb 07 32 27.9
comp=Z,26nm,0.9s
STLK Strandline Lak 20.63 52 P **P 07 32 14.9 +0.9**
STLK IAmb IAmb 07 32 29.4
comp=Z,27nm,0.7s
F20K Avaraart Lake 20.64 36 P **P 07 32 15.8 +1.9**
SKT Skwentna 20.84 51 IAmb IAmb 07 32 31.2
comp=Z,32nm,0.9s
IMAR Indian Mountai 20.93 39 P **P 07 32 17.7 +0.7**
SUA Susitna One 21.14 53 P **P 07 32 19.6 0.0**
SUA IAmb IAmb 07 32 32.5
comp=Z,29nm,0.8s
H21K Melozitna Rive 21.18 41 IAmb IAmb 07 32 34.1
comp=Z,18nm,0.8s
L22K Petersville 21.27 50 IAmb IAmb 07 32 34.1
comp=Z,16nm,0.8s
KTH Kantishna Hill 21.39 47 IAmb IAmb 07 32 36.2
comp=Z,23nm,1.0s
BPAW Bear Paw Mtn. 21.48 45 P 07 32 24.1 +1.0
BPAW IAmb IAmb 07 32 39.4
comp=Z,28nm,1.3s
TRF Thorofare Moun 21.65 47 P **P 07 32 25.9 +0.8**
TRF IAmb IAmb 07 32 38.2
comp=Z,52nm,1.5s
JKA Kamikawa-asahi 21.69 257 P **P 07 32 25.1 -0.4**
JKA Kamikawa-asahi 21.69 257 IAmb IAmb 07 32 56.8
comp=Z,47nm,1.5s
ASAJ Asahikawa 21.70 257 P **P 07 32 25.1 -0.4**
comp=Z,8.8nm,0.8s,baz=66,slow=9.6,SNR=5.8
comp=Z,8.8nm,0.8s
H22K Ishtalitna Cre 21.81 40 P **P 07 32 27.0 +0.4**
KNK Knik Glacier 22.23 53 P **P 07 32 31.4 +0.3**
B21K Ikpikpuk River 22.24 30 P 07 32 32.8 +1.7
B21K IAmb IAmb 07 32 44.0
comp=Z,30nm,0.9s
RND Reindeer 22.28 48 P **P 07 32 32.6 +0.9**
RND IAmb IAmb 07 32 43.2
comp=Z,20nm,1.2s
MCK McKinley 22.30 47 P 07 32 32.7 +0.9
MCK IAmb IAmb 07 32 43.8
comp=Z,38nm,0.9s
I23K Minto, Yukon-K 22.41 43 P **P 07 32 34.6 +1.6**
I23K IAmb IAmb 07 32 46.9
comp=Z,28nm,1.5s
D22K Ayikyak River 22.49 33 IAmb IAmb 07 32 46.0
comp=Z,21nm,1.2s
G23K Bananza Creek 22.59 39 P **P 07 32 35.8 +0.9**
WRH Wood River Hil 22.80 45 IAmb IAmb 07 32 48.5
comp=Z,30nm,1.3s
COLA College 22.98 44 P **P 07 32 39.8 +0.9**
COLA IAmb IAmb 07 32 51.2
comp=Z,32nm,1.0s
H24K Noodor Dome 23.18 42 P **P 07 32 41.9 +0.8**
H24K IAmb IAmb 07 32 58.1
comp=Z,15nm,1.0s
POKR Poker Plat Res 23.20 44 IAmb IAmb 07 32 52.8
comp=Z,18nm,0.7s
IL31 23.36 45 P **P 07 32 42.7 -0.1**
IL31 IAmb IAmb 07 32 54.0
comp=Z,23nm,1.2s
ILAR Eielson Array 23.36 45 P **P 07 32 42.2 -0.6**
comp=Z,2.5nm,0.7s,baz=254,slow=8.9,SNR=31
comp=Z,2.5nm,0.7s
ILAR Eielson Array 23.36 45 P **P 07 32 43.5 +0.7**
KLU Kluina 23.45 53 IAmb IAmb 07 32 55.4
comp=Z,24nm,0.7s
C23K Itkillik River 23.57 31 IAmb IAmb 07 32 57.9
comp=Z,17nm,0.9s
K24K Donnelly Dome 23.70 47 IAmb IAmb 07 32 57.0
comp=Z,30nm,1.0s
PAX Paxson 23.75 49 P 07 32 47.6 +0.9
PAX IAmb IAmb 07 32 58.2
comp=Z,33nm,1.2s
RIDG Independent Ri 24.10 47 IAmb IAmb 07 33 00.2
comp=Z,18nm,1.1s
C24K Franklin Bluff 24.13 32 IAmb IAmb 07 33 00.5
comp=Z,13nm,0.7s
FYU Fort Yukon 24.39 41 IAmb IAmb 07 33 15.3
comp=Z,40nm,1.4s
DOT Dot Lake 24.44 48 P **P 07 32 52.6 -0.4**
DOT IAmb IAmb 07 33 04.1
comp=Z,22nm,1.3s
SCRK Sand Creek 24.50 47 IAmb IAmb 07 33 04.3
comp=Z,15nm,0.8s
MENT Mentasta 24.55 49 IAmb IAmb 07 33 07.1
comp=Z,12nm,0.8s
J26L Joseph Creek 24.74 46 IAmb IAmb 07 33 07.0
comp=Z,12nm,0.8s
BMAR Burnt Mountain 24.84 39 P 07 32 57.7 +1.1
G26K Porcupine Rive 25.04 40 IAmb IAmb 07 33 11.9
comp=Z,18nm,0.9s
K27K Chicken 25.35 47 IAmb IAmb 07 33 15.1
comp=Z,15nm,1.1s
L27K Beaver Creek, 25.41 49 IAmb IAmb 07 33 14.7
comp=Z,13nm,0.8s
BCAR Beaver Creek A 25.43 49 P **P 07 33 03.8 +1.7**
CTGM Chitina Glacie 25.68 54 IAmb IAmb 07 33 17.5
comp=Z,29nm,1.1s
DAWY Dawson 26.53 47 IAmb IAmb 07 33 23.9
comp=Z,14nm,1.2s
G29M Pine Creek 27.27 41 IAmb IAmb 07 33 30.7
comp=Z,24nm,1.2s
K29M Barlow Dome 27.35 47 IAmb IAmb 07 33 31.1
comp=Z,16nm,0.8s
EPYK Eagle Plains 27.75 42 IAmb IAmb 07 33 33.6
comp=Z,7.9nm,0.8s
HEH HeiHe 27.81 282 *e*P **P 07 33 23.0 -0.5**
HEH pmax pmax
comp=Z,16nm,0.9s
USRK Ussuriysk Ar. 27.97 268 P **P 07 33 24.3 -0.7**
comp=Z,1.5nm,0.5s,baz=55,slow=11,SNR=2.3
comp=Z,1.5nm,0.5s
F30M Barrier River 28.20 39 IAmb IAmb 07 33 38.1
comp=Z,8.4nm,0.9s
BNX BinXian 29.90 274 ⇓P **P 07 33 42.5 +0.4**
BNX pmax pmax
comp=Z,19nm,0.7s
C36M Paulatuk 32.54 36 IAmb IAmb 07 34 16.4
comp=Z,12nm,0.8s
H11N2 WAKE ISLAND Hy 33.73 190 T T 08 09 33.8
baz=6.2,slow=76,SNR=228
H11N3 WAKE ISLAND Hy 33.74 190 T T 08 09 34.7
baz=6.2,slow=76,SNR=236
H11N1 WAKE ISLAND Hy 33.75 190 T T 08 09 35.2
baz=6.2,slow=76,SNR=266
KSRS Korea Array 34.53 261 P **P 07 34 24.9 +2.3**
comp=Z,2.5nm,0.7s,baz=43,slow=7.9,SNR=7.3
comp=Z,2.5nm,0.7s
H11S1 WAKE ISLAND Hy 34.96 190 T T 08 11 06.3
baz=5.9,slow=76,SNR=298
H11S3 WAKE ISLAND Hy 34.97 190 T T 08 11 07.4
baz=5.9,slow=76,SNR=159
H11S2 WAKE ISLAND Hy 34.98 190 T T 08 11 08.3
baz=5.9,slow=76,SNR=119
YKA Yellowknife Ar 37.77 46 P **P 07 34 50.4 +0.3**
comp=Z,2.3nm,0.8s,baz=292,slow=8.7,SNR=7.4
comp=Z,2.3nm,0.8s
YKAW1 Yellowknife Wh 37.82 46 IAmb IAmb 07 35 01.9
comp=Z,9.9nm,0.8s
SONM Songino Array 41.09 290 P **P 07 35 19.3 +1.1**
comp=Z,2.6nm,0.5s,baz=61,slow=8.1,SNR=11
comp=Z,2.6nm,0.5s
B08A Colville Reser 41.80 68 P **P 07 35 24.1 +0.3**
B08A IAmb IAmb 07 35 34.9
comp=Z,7.7nm,0.8s
HHC Hu-ho-hao-te 42.17 278 *e*P **P 07 35 26.5 -0.5**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,200nm,4.0s
HNS HongShan 42.49 272 ⇓P **P 07 35 31.5 +2.0**
HNS pmax pmax
comp=Z,12nm,1.0s
WIFE Three Sisters- 42.84 75 P 07 35 33.5 +0.9
WIFE IAmb IAmb 07 35 43.6
comp=Z,16nm,0.9s
NEW Newport 43.08 67 P **P 07 35 34.2 -0.1**
NEW IAmb IAmb 07 35 45.1
comp=Z,9.3nm,0.8s
BPMT Black Pine Rid 46.18 67 P **P 07 35 59.2 -0.1**
LYMT Lyon Mountain 46.50 66 P **P 07 36 02.0 +0.3**
HRY Holter Researc 46.90 66 P **P 07 36 05.3 +0.6**
PNTR Pine Nut 47.24 79 P **P 07 36 08.1 +0.5**
HLID Hailey 47.39 71 IAmb IAmb 07 36 19.6
comp=Z,4.8nm,1.0s
BCYI Bear Canyon 47.50 69 P **P 07 36 09.5 0.0**
BCYI IAmb IAmb 07 36 20.1
comp=Z,4.9nm,0.7s
SPITS Spitsbergen Ar 48.06 354 P **P 07 36 12.8 -0.4**
comp=Z,8.1nm,0.5s,baz=50,slow=7.8,SNR=23
comp=Z,8.1nm,0.5s
YHL Hebgen Lake 48.40 67 P 07 36 16.9 +0.2
NVAR Mina Array Bea 48.44 79 P **P 07 36 17.1 +0.2**
comp=Z,1.1nm,0.6s,baz=301,slow=8.0,SNR=7.3
comp=Z,1.1nm,0.6s
YHH Holmes Hill 48.63 67 P **P 07 36 18.6 +0.2**
ZALV Zalesovo Beam 48.85 308 P **P 07 36 19.1 -0.5**
comp=Z,0.8nm,0.4s,baz=50,slow=7.7,SNR=1.1
comp=Z,0.8nm,0.4s
YNE Yellowstone No 48.96 67 IAmb IAmb 07 36 31.6
comp=Z,5.6nm,0.7s
RLMT Red Lodge 49.29 66 IAmb IAmb 07 36 35.2
comp=Z,8.9nm,0.8s
LZH Lanzhou 49.86 279 *e*P **P 07 36 29.3 +1.6**
LZH pP sP 07 36 37.8 -0.8
LZH pmax pmax
comp=Z,39nm,1.3s
LZDM Lanzhou Array 50.03 279 P **P 07 36 29.7 +0.5**
comp=Z,1.9nm,0.4s,baz=90,slow=4.4,SNR=3.5
comp=Z,1.9nm,0.4s
R11B Troy Canyon, C 50.09 77 P 07 36 29.4 0.0
DUG Dugway, Tooele 50.47 73 IAmb IAmb 07 36 43.6
comp=Z,7.0nm,1.0s
TPNV Topopah Spring 50.64 79 IAmb IAmb 07 36 44.6
comp=Z,6.7nm,0.9s
BW06 Boulder Array 50.64 69 IAmb IAmb 07 36 44.4
comp=Z,6.2nm,0.8s
PD31 Pinedale Array 50.64 69 P **P 07 36 33.6 -0.1**
PD31 IAmb IAmb 07 36 44.4
comp=Z,6.3nm,0.8s
PDAR Pinedale Array 50.64 69 P **P 07 36 33.4 -0.2**
comp=Z,1.4nm,0.7s,baz=300,slow=4.0,SNR=14
comp=Z,1.4nm,0.7s
PDAR Pinedale Array 50.64 69 P 07 36 33.9 +0.3
PSUT Pine Spring 50.97 75 IAmb IAmb 07 36 47.1
comp=Z,6.0nm,1.0s
PRN Pahroc Range 51.03 77 IAmb IAmb 07 36 37.7
comp=Z,5.2nm,1.0s
RSSD Black Hills 52.79 64 P 07 36 49.9 +0.3
ULM Lac du Bonnet 52.94 54 P **P 07 36 49.0 -1.3**
comp=Z,2.3nm,0.5s,baz=337,slow=7.7,SNR=1.5
comp=Z,2.3nm,0.5s
ULM Lac du Bonnet 52.94 54 IAmb IAmb 07 36 56.7
comp=Z,8.8nm,1.0s
U15A North Rim 53.31 76 IAmb IAmb 07 36 55.6
comp=Z,4.3nm,0.9s
KURK Kurchatov 53.84 308 P 07 36 56.8 -0.2
WMQ Urumqi 53.87 297 *e*P **P 07 37 00.0 +2.6**
WMQ LR LR
comp=Z,170nm,21.7s
KURBB Kurchatov Arra 53.95 308 P **P 07 36 57.4 -0.4**
comp=Z,8.9nm,0.8s,baz=49,slow=7.1,SNR=35
comp=Z,8.9nm,0.8s
PV03 Paradox Valley 54.05 72 IAmb IAmb 07 37 09.9
comp=Z,8.4nm,1.0s
MKAR Makanchi Array 54.69 303 P **P 07 37 02.5 -0.8**
comp=Z,1.6nm,0.3s,baz=52,slow=6.2,SNR=16
comp=Z,1.6nm,0.3s
ARCES ARCESS Array B 55.22 347 P **P 07 37 06.0 -0.8**
comp=Z,3.6nm,0.7s,baz=33,slow=6.7,SNR=12
comp=Z,3.6nm,0.7s
ARCES ARCESS Array B 55.22 347 IAmb IAmb 07 37 09.9
comp=Z,11nm,1.1s
S22A 4UR Ranch, Cre 55.56 71 IAmb IAmb 07 37 22.1
comp=Z,2.2nm,1.0s
BVAR Borovoye Array 55.96 315 P **P 07 37 12.0 -0.3**
comp=Z,3.4nm,0.6s,baz=53,slow=7.3,SNR=9.2
comp=Z,3.4nm,0.6s
TASM ASL Pad, Albuq 57.74 74 IAmb IAmb 07 37 37.0
comp=Z,4.1nm,0.9s
TASM ASL Pad, Albuq 57.74 74 IAmb IAmb 07 37 37.0
comp=Z,3.8nm,0.9s
ANMO Albuquerque 57.74 74 P 07 37 25.7 +0.3
ANMO IAmb IAmb 07 37 36.9
comp=Z,3.9nm,0.9s
ABQ Albuquerque 57.74 74 IAmb IAmb 07 37 37.0
comp=Z,4.8nm,1.1s
ARTI Arti 58.22 323 P **P 07 37 27.8 -0.3**
comp=Z,2.7nm,0.4s,baz=48,slow=6.3,SNR=5.0
comp=Z,2.7nm,0.4s
ARTI Arti 58.22 323 IAmb IAmb 07 37 28.5
comp=Z,8.9nm,0.4s
KIRV Kirov 59.46 329 P **P 07 37 36.8 0.0**
comp=Z,11nm,0.5s,baz=68,slow=5.4,SNR=1.4
comp=Z,11nm,0.5s
BOOM Boomskoye usch 60.93 303 IAmb IAmb 07 37 48.7
comp=Z,6.5nm,1.0s
AAK Ala-Archa 61.55 304 P 07 37 51.3 -0.2
AAK IAmb IAmb 07 37 52.7
comp=Z,9.5nm,1.1s
VHRN Van Horn 61.60 76 IAmb IAmb 07 38 03.4
comp=Z,4.7nm,0.9s
SCHQ Schefferville 61.63 34 P **P 07 37 51.5 -0.2**
comp=Z,12nm,0.8s,baz=326,slow=7.1,SNR=7.8
comp=Z,12nm,0.8s
WMOK Wichita Mounta 62.25 68 IAmb IAmb 07 38 07.4
comp=Z,6.2nm,1.0s
FINES FINESS Array B 62.63 343 P **P 07 37 57.7 -0.5**
comp=Z,3.3nm,0.7s,baz=30,slow=9.4,SNR=10
comp=Z,3.3nm,0.7s
AKTO Aktyubinsk 62.99 319 P **P 07 38 00.8 -0.1**
comp=Z,3.7nm,0.7s,baz=48,slow=4.6,SNR=8.6
comp=Z,3.7nm,0.7s
KSH Kashi 63.10 301 P **P 07 38 06.0 +4.1**
KSH pmax pmax
comp=Z,10.0nm,0.7s
KK31 Karatay Array 63.16 307 IAmb IAmb 07 38 02.9
comp=Z,6.4nm,0.8s
KKAR Karatay Array 63.16 307 P 07 38 01.9 -0.2
TX31 Lajitas Ar. Si 63.44 76 IAmb IAmb 07 38 05.3
comp=Z,6.4nm,0.7s
TXAR Lajitas Array 63.44 76 P 07 38 04.4 +0.2
comp=Z,4.7nm,0.6s,baz=302,slow=5.2,SNR=51
comp=Z,4.7nm,0.6s
BRDY Brady 64.68 71 IAmb IAmb 07 38 23.3
comp=Z,6.4nm,1.1s
NB2 NORSAR Subarra 65.12 350 P **P 07 38 14.1 -0.6**
comp=Z,1.2nm,0.5s,baz=12,slow=6.5
NOA NORSAR Array B 65.12 350 P **P 07 38 14.2 -0.5**
comp=Z,2.9nm,0.7s,baz=12,slow=6.5,SNR=8.1
comp=Z,2.9nm,0.7s
BELG Belogornoye 65.16 326 P **P 07 38 15.6 +0.6**
comp=Z,9.9nm,0.6s,baz=25,slow=3.5,SNR=4.4
comp=Z,9.9nm,0.6s
MIAR Mount Ida 65.27 65 IAmb IAmb 07 38 26.8
comp=Z,6.9nm,1.1s
CMAR Chiang Mai Arr 65.69 269 P **P 07 38 20.2 +1.3**
comp=Z,2.9nm,0.6s,baz=18,slow=7.2,SNR=11
comp=Z,2.9nm,0.6s
CMAR Chiang Mai Arr 65.69 269 P P 07 38 20.2 +5.5
HFS Hagfors 65.73 349 P **P 07 38 17.8 -0.8**
comp=Z,3.4nm,0.5s,baz=45,slow=3.1,SNR=25
comp=Z,3.4nm,0.5s
O52A Adamsville 67.08 53 P **P 07 38 26.8 -0.8**
WVT Waverly 67.14 60 P 07 38 27.9 -0.1
WVT IAmb IAmb 07 38 38.7
comp=Z,7.9nm,0.9s
L56A Greenwood 67.50 49 P **P 07 38 30.1 -0.1**
U49A Red Boiling Sp 67.90 58 IAmb IAmb 07 38 43.5
comp=Z,5.9nm,0.7s
S51A Beattyville 68.14 56 IAmb IAmb 07 38 44.8
comp=Z,6.4nm,0.6s
W50A Signal Mountai 69.16 59 IAmb IAmb 07 38 51.2
comp=Z,9.2nm,0.9s
W52A Murphy 69.95 58 IAmb IAmb 07 38 56.2
comp=Z,6.5nm,0.8s
LRAL Lakeview Retre 69.95 62 IAmb IAmb 07 38 56.0
comp=Z,5.1nm,0.8s
KBL Kabul 70.47 302 P 07 38 48.3 -0.7
BG3 Lake Jocassee 70.53 57 IAmb IAmb 07 39 00.1
comp=Z,7.9nm,1.0s
T57A Hurt 70.78 54 IAmb IAmb 07 39 01.1
comp=Z,6.0nm,0.6s
Y52A Lilburn 70.84 59 P **P 07 38 50.6 -0.4**
Y52A IAmb IAmb 07 39 01.6
comp=Z,8.8nm,0.9s
HODGE Hodges 71.47 58 IAmb IAmb 07 38 55.3
comp=Z,7.7nm,0.7s
EKA Eskdalemuir Ar 71.75 357 P **P 07 38 56.2 +0.1**
comp=Z,2.4nm,0.5s,baz=0.6,slow=5.1,SNR=10.0
comp=Z,2.4nm,0.5s
AKASG Malin Array Be 71.96 337 P **P 07 38 57.0 -0.4**
comp=Z,1.9nm,0.5s,baz=25,slow=6.0,SNR=7.9
comp=Z,1.9nm,0.5s
KBZ Khabaz 74.23 325 P **P 07 39 12.1 +1.1**
comp=Z,4.7nm,0.8s,baz=31,slow=3.3,SNR=6.3
comp=Z,4.7nm,0.8s
WRA Warramunga Arr 80.04 216 P **P 07 39 44.5 +0.7**
comp=Z,2.6nm,0.8s,baz=30,slow=6.2,SNR=16
comp=Z,2.6nm,0.8s
WRA Warramunga Arr 80.04 216 IAmb IAmb 07 39 45.2
comp=Z,0.2nm,0.9s
BRTR Keskin Array B 80.87 329 P **P 07 39 48.1 -0.2**
comp=Z,1.6nm,0.7s,baz=64,slow=2.4,SNR=6.1
comp=Z,1.6nm,0.7s
ASAR Alice Springs 83.63 215 P **P 07 40 03.8 +1.2**
comp=Z,2.1nm,0.7s,baz=17,slow=5.3,SNR=20
comp=Z,2.1nm,0.7s
ESDC Sonseca Array 87.43 357 P **P 07 40 20.4 -1.1**
comp=Z,1.1nm,0.8s,baz=356,slow=6.5,SNR=5.8
comp=Z,1.1nm,0.8s
STKA Stephens Creek 88.95 206 P **P 07 40 27.8 -0.8**
comp=Z,3.3nm,0.8s,baz=324,slow=6.6,SNR=6.9
comp=Z,3.3nm,0.8s
JTS Las Juntas de 89.16 74 LR LR 08 19 25.4
comp=Z,49nm,21.8s,baz=300,slow=35
EIL Elat 89.62 324 LR LR 08 25 10.9
comp=Z,48nm,18.4s,baz=102,slow=39
PLCA Paso Flores 136.50 100 PKP **PKPdf 07 46 54.8 -0.9**
comp=Z,1.9nm,0.9s,baz=243,slow=2.3,SNR=3.6
QSPA South Pole Qui 142.98 180 PKP **PKPdf 07 47 05.7 -0.8**
comp=Z,2.3nm,0.6s,baz=207,slow=0.7,SNR=12
QSPA South Pole Qui 142.98 180 PKPdf 07 47 06.3 -0.2
MAW Mawson 144.69 219 PKP **PKPdf 07 47 09.0 -0.3**
comp=Z,15nm,0.9s,baz=108,slow=5.6,SNR=16
BOSA Boshof 145.69 303 PKPbc **PKPdf 07 47 12.0 -0.5**
comp=Z,1.1nm,0.6s,baz=37,slow=5.1,SNR=1.5
SNAA Sanae 161.38 184 PKPab **PKPab 07 48 16.8 -1.0**
comp=Z,0.9nm,0.8s,baz=208,slow=8.5,SNR=9.5

*IDC **26** 07:27:43.1±0.9, 31.56S×177.94W, h0km, mb4.1/6, mbtmp4.1/8, ML4.1/2, Error ellipse: s-maj=30.5km s-min=19.7km az=100.0*
*NEIC **26** 07:27:44.9±2.1, 31.40S±0.04×177.89W±0.05, h10km±1km, mb4.4/13, Error ellipse: s-maj=8.2km s-min=5.4km az=117.0*
ISC 26 07:27:48.1±0.8, 31°52S±0.08×178°0W±0.2, h35km, n44, σ1s10/34, mb4.3/14, 3C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.26**	**2**	Pn	**Pn**	**07 28 23.2**	**+0.3**
	132nm,0.3s,baz=69,slow=9.5,SNR=7.6						
RAO				Sn	**Sn**	**07 28 50.4**	**+0.8**
	118nm,0.3s,baz=80,slow=21,SNR=3.9						
	288nm,0.3s						
RAO	**Raoul Island**	**2.26**	**2**	Pn	**Pn**	**07 28 19.2**	**-3.7**
MXZ	**Matakaoa Point**	**6.75**	**206**	Pn	Pn	07 29 19.1	-5.5
URZ	**Urewera**	**7.82**	**209**	Pn	**Pn**	**07 29 36.8**	**-2.5**
	1.2nm,0.3s,baz=245,slow=3.7,SNR=17						
	3.3nm,0.3s						
RTZ	**Ruatahuna**	**8.18**	**209**		Pn	07 29 37.4	-6.9
NNZ	**Nelson**	**11.90**	**213**	Pn	Pn	07 30 27.5	-7.6
THZ	**Tophouse**	**12.54**	**213**	Pn	Pn	07 30 36.2	-7.9
CTAO	**Charters Tower**	**33.97**	**281**	P	**P**	**07 34 29.6**	**+1.1**
CTAO				IAmb	IAmb	07 34 32.1	
	comp=Z,5.3nm,0.9s						
STKA	**Stephens Creek**	**34.22**	**259**	P	**P**	**07 34 31.9**	**+1.4**
	comp=Z,1.5nm,0.8s,baz=85,slow=9.0,SNR=3.3						
	comp=Z,1.5nm,0.8s						
INKA	**Innaminka**	**35.89**	**265**	P	**P**	**07 34 44.9**	**0.0**
BBOO	**Buckleboo**	**38.66**	**256**	P	**P**	**07 35 08.2**	**-0.1**
PMG	**Port Moresby**	**39.08**	**297**	P	**P**	**07 35 11.5**	**-0.4**
PMG				IAmb	IAmb	07 35 42.9	
	comp=Z,8.2nm,0.9s						
COEN	**Coen**	**39.57**	**287**	P	**P**	**07 35 16.6**	**+0.5**
COEN				IAmb	IAmb	07 35 17.9	
	comp=Z,5.6nm,1.1s						
AS31	**Alice Springs**	**43.04**	**268**		**P**	**07 35 45.1**	**+0.5**
ASAR	**Alice Springs**	**43.04**	**268**	P	**P**	**07 35 45.0**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=107,slow=7.3,SNR=22						
	comp=Z,1.0nm,0.4s						
WR8	**Warramunga Arr**	**43.99**	**273**	P	**P**	**07 35 52.3**	**+0.1**
WR8				IAmb	IAmb	07 36 08.8	
	comp=Z,3.3nm,0.8s						
WRAB	**Tennant Creek**	**44.12**	**273**	P	**P**	**07 35 53.9**	**+0.6**
WRAB				IAmb	IAmb	07 36 09.4	
	comp=Z,4.4nm,0.7s						
WRA	**Warramunga Arr**	**44.13**	**273**	P	**P**	**07 35 54.0**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=113,slow=8.0,SNR=31						
	comp=Z,1.4nm,0.3s						
WB0	**Warramunga Arr**	**44.16**	**274**	P	**P**	**07 35 53.8**	**+0.2**
KNRA	**Kununurra**	**50.78**	**275**	P	**P**	**07 36 44.5**	**-0.5**
KNRA				IAmb	IAmb	07 36 56.6	
	comp=Z,7.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.34**	**271**	P	**P**	**07 36 56.6**	**-0.1**
QSPA	**South Pole Qui**	**58.60**	**180**	P	**P**	**07 37 41.8**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=25,slow=5.0,SNR=2.4						
	comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**58.60**	**180**	P	**P**	**07 37 44.0**	**+2.8**
TROLL	**Troll, Antarti**	**76.76**	**180**	⇑P	**P**	**07 39 35.4**	**-0.2**
	comp=Z,40nm,0.5s						
SNAA	**Sanae**	**77.04**	**178**	P	**P**	**07 39 37.3**	**+0.2**
	comp=Z,2.0nm,1.2s,baz=198,slow=9.3,SNR=6.1						
	comp=Z,2.0nm,1.2s						
SNAA	**Sanae**	**77.04**	**178**	IAmb	IAmb	07 39 46.9	
	comp=Z,5.6nm,1.2s						
VNA3	**Neumayer Olymp**	**77.20**	**176**	⇑P	**P**	**07 39 37.1**	**-0.8**
	comp=Z,5.2nm,0.8s						
VNA2	**Neumayer--Watz**	**77.63**	**177**	⇑P	**P**	**07 39 39.8**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=179,slow=4.0						
H03S2	**Juan Fernandez**	**79.87**	**123**	T	T	09 08 49.8	
	baz=236,slow=74,SNR=3.8						
H03S1	**Juan Fernandez**	**79.88**	**123**	T	T	09 08 59.5	
	baz=236,slow=74,SNR=4.1						
H03S3	**Juan Fernandez**	**79.89**	**123**	T	T	09 08 49.3	
	baz=236,slow=74,SNR=3.3						
H03N3	**Juan Fernandez**	**80.07**	**123**	T	T	09 09 05.2	
	baz=242,slow=74						
H03N2	**Juan Fernandez**	**80.07**	**123**	T	T	09 09 02.3	
	baz=242						
H03N1	**Juan Fernandez**	**80.08**	**123**	T	T	09 09 02.2	
	baz=242,slow=74						
PETK	**Petropavlovsk-**	**86.89**	**346**	P	**P**	**07 40 28.2**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=178,slow=6.6,SNR=1.8						
	comp=Z,4.2nm,0.9s						
KURK	**Kurchatov**	**121.80**	**313**		**PKiKP**	**07 46 38.5**	**+0.4**
KURBB	**Kurchatov Arra**	**121.84**	**313**	PKP	**PKiKP**	**07 46 38.5**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=113,slow=1.8,SNR=5.4						
BVAR	**Borovoye Array**	**127.18**	**315**	PKP	**PKiKP**	**07 46 49.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=98,slow=0.8,SNR=5.0						
FINES	**FINESS Array B**	**146.18**	**339**	PKPbc	**PKPab**	**07 47 24.8**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=55,slow=3.7,SNR=15						
FINES	**FINESS Array B**	**146.18**	**339**		**PKPbc**	**07 47 23.9**	**+0.1**
HFS	**Hagfors**	**150.33**	**348**	PKPbc	**PKPbc**	**07 47 35.2**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=90,slow=1.5,SNR=5.1						
MMAI	**Mount Meron Ar**	**151.76**	**282**	PKPbc	**PKiKP**	**07 47 40.8**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=45,slow=3.1,SNR=2.2						
AKASG	**Malin Array Be**	**152.16**	**321**	PKPbc	**PKiKP**	**07 47 39.8**	**0.0**
	comp=Z,0.5nm,0.4s,baz=54,slow=1.8,SNR=4.2						
BRTR	**Keskin Array B**	**153.09**	**297**	PKPbc	**PKPbc**	**07 47 42.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=141,slow=5.2,SNR=4.3						

*ISK **26** 07:31:50.1, 37.64N×35.67E, h5km, ML3.5/35*
*AFAD **26** 07:31:51.2, 37.62N×35.63E, h7km±2km, MW3.6*
ISC 26 07:31:51.3±1.2, 37.63N±0.02×35.66E±0.02, h1km±11km, n44, σ0.971/58, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.20**	**139**	Pg	**Pg**	**07 31 55.3**	**+0.1**
KOZT				Sg	**Sg**	**07 31 58.1**	**+0.3**

AKO	**Adana**	**0.24**	**225**	SPECP			07 31 56.0		
AKO				P		**Pg**	**07 31 56.1**	**+0.1**	
AKO				S		**Sg**	**07 31 59.8**	**+0.7**	
SAIM	**ADANA**	**0.48**	**44**	SPECP			07 32 00.0		
SAIM				P		**Pg**	**07 32 01.0**	**+0.4**	
SAIM				S		**Sb**	**07 32 08.4**	**-1.8**	
CMRD	**Camardi-Nigde**	**0.53**	**273**	Pg		**Pg**	**07 32 01.1**	**-0.4**	
KARA	**Karaisali**	**0.61**	**232**	Pg		**Pg**	**07 32 02.8**	**-0.2**	
CEYT	**Ceyhan**	**0.63**	**174**	Pg		**Pg**	**07 32 03.7**	**+0.4**	
CEYT				Sg		**Sb**	**07 32 13.6**	**-0.7**	
GULE	**Gulek**	**0.79**	**244**	SPECP			07 32 06.0		
GULE				P		**Pg**	**07 32 06.6**	**+0.2**	
GULE				S		**Sb**	**07 32 18.5**	**-0.6**	
NIDE	**Nigde/Merkez-G**	**0.79**	**298**	SPECP			07 32 06.0		
NIDE				P		**Pg**	**07 32 06.2**	**-0.3**	
NIDE				S		**Sg**	**07 32 17.3**	**+0.6**	
YURE	**YUREGIR**	**0.81**	**182**	SPECP			07 32 06.0		
YURE				P		**Pg**	**07 32 06.8**	**0.0**	
YURE				S		**Sn**	**07 32 21.9**	**-0.6**	
KAMA	**Osmaniye**	**0.92**	**119**	SPECP			07 32 09.0		
KAMA				P		**Pg**	**07 32 09.4**	**+0.5**	
KAMA				S		**Sb**	**07 32 22.9**	**0.0**	
NIG	**Nigde**	**0.96**	**300**	Pg		**Pg**	**07 32 09.6**	**-0.1**	
NIG				Sg		**Sb**	**07 32 23.9**	**-0.3**	
KMRS	**Kahramanmaras**	**0.99**	**97**	Pg		**Pg**	**07 32 10.0**	**-0.4**	
KMRS				Sg		**Sb**	**07 32 24.9**	**-0.1**	
HASA	**Hatay-Hassa-Ha**	**1.10**	**143**	SPECP			07 32 11.0		
HASA				P		**Pg**	**07 32 11.6**	**-0.9**	
HASA				S		**Sb**	**07 32 28.2**	**+0.1**	
MERS	**Mersin**	**1.19**	**230**	Pn		**Pg**	**07 32 13.1**	**-1.0**	
GUNE	**Kayseri**	**1.27**	**359**	SPECP			07 32 15.0		
GUNE				P		**Pg**	**07 32 15.6**	**0.0**	
GUNE				S		**Sn**	**07 32 35.4**	**+1.3**	
GAZ	**Gaziantep**	**1.32**	**110**	Pn		**Pg**	**07 32 16.4**	**-0.2**	
GAZ				Sn		**Sn**	**07 32 35.6**	**+0.4**	
TAHT	**Tahtakopru-Hat**	**1.32**	**161**	Pn		**Pn**	**07 32 15.7**	**-1.3**	
GULA	**Gulagac**	**1.33**	**303**	Pn		**Pg**	**07 32 14.4**	**-2.4**	
ASUZ	**Hatay-Arsuz**	**1.34**	**176**	SPECP			07 32 15.0		
ASUZ				P		**Pn**	**07 32 15.9**	**-1.3**	
ASUZ				S		**Sg**	**07 32 34.6**	**+0.1**	
YESY	**Yesilyurt**	**1.53**	**276**	Pn		**Pn**	**07 32 19.6**	**-0.3**	
KIZK	**Mersin**	**1.67**	**227**	Pn		**Pn**	**07 32 21.9**	**+0.2**	
SULT	**Sultanhani-AKS**	**1.79**	**289**	Pn		**Pn**	**07 32 23.4**	**0.0**	
SILI	**Silifke-Mersin**	**1.88**	**228**	Pn		**Pn**	**07 32 24.9**	**+0.3**	
KEBE	**Keben-Mersin**	**1.96**	**233**	Pn		**Pn**	**07 32 26.2**	**+0.5**	
KRMN	**Karaman**	**1.96**	**257**	Pn		**Pn**	**07 32 26.0**	**+0.2**	
KARG	**Kargicak-Mersi**	**2.12**	**228**	Pn		**Pn**	**07 32 28.4**	**+0.5**	
TEVE	**Tevekalti-Mers**	**2.14**	**237**	Pn		**Pn**	**07 32 28.7**	**+0.5**	
YESI	**Yesilovacik-Me**	**2.16**	**229**	Pn		**Pn**	**07 32 28.9**	**+0.4**	
TISA	**Tisan-Mersin**	**2.16**	**228**	Pn		**Pn**	**07 32 28.9**	**+0.4**	
TEPK	**Tepekoy-MERSIN**	**2.20**	**231**	Pn		**Pn**	**07 32 29.4**	**+0.3**	
AKK1	**Akkuyu-Mersin**	**2.26**	**229**	Pn		**Pn**	**07 32 30.6**	**+0.8**	
OREN	**Orenkoy-Mersin**	**2.27**	**232**	Pn		**Pn**	**07 32 30.3**	**+0.4**	
BERE	**Bereket-Mersin**	**2.33**	**237**	Pn		**Pn**	**07 32 31.5**	**+0.5**	
CHBY	**Cihanbeyli**	**2.38**	**294**	Pn		**Pn**	**07 32 31.9**	**+0.3**	
URFA	**Urfa**	**2.52**	**93**	Pn		**Pn**	**07 32 34.1**	**+0.6**	
TEKE	**Tekeli-Mersin**	**2.53**	**235**	Pn		**Pn**	**07 32 33.9**	**+0.4**	
HDMB	**Hadim**	**2.62**	**256**	Pn		**Pn**	**07 32 35.8**	**+0.8**	
KONT	**Konya--Tatoy**	**2.63**	**278**	Pn		**Pn**	**07 32 35.5**	**+0.5**	
LADK	**Ladik-KONYA**	**2.67**	**283**	Pn		**Pn**	**07 32 36.3**	**+0.8**	
LFK	**Lefkose**	**2.91**	**217**	Pn		**Pn**	**07 32 39.3**	**+0.5**	
SVRC	**Sivrice-ELAZID**	**2.98**	**74**	Pn		**Pn**	**07 32 39.3**	**-0.5**	
GAZI	**Gazipasa**	**3.02**	**243**	Pn		**Pn**	**07 32 41.5**	**+1.2**	
SEYD	**Seydisehir-KON**	**3.05**	**267**	Pn		**Pn**	**07 32 41.6**	**+0.8**	
CSS	**Mathiatis**	**3.26**	**216**	Pn		**Pn**	**07 32 44.4**	**+0.7**	

AFAD ***26*** *07:35:12.4, 37.75N×27.11E, h5km±3km, ML2.0*
ISK 26 07:35:12.9, 37.77N×27.20E, h6km, ML1.9/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
GCAM	**G?zelcaml?**	**0.08**	**159**	P	Pg	Pg	07 35 15.1	+0.4
GCAM				*i* IAML			07 35 17.0	
	comp=N,636nm,0.2s							
GCAM				*i* IAML			07 35 17.0	
	comp=E,815nm,0.1s							
GCAM				S		Sg	07 35 17.0	+1.1
GCAM	**G?zelcaml?**	**0.08**	**159**	Pg		Pg	07 35 14.9	+0.2
GCAM				Sg		Sg	07 35 16.8	+0.9
DDIM	**Aydin, Didim**	**0.32**	**174**	P		Pg	07 35 18.8	-0.3
DDIM				S		Sg	07 35 23.8	+0.5
DDIM				*i* IAML			07 35 24.0	
	comp=N,183nm,0.2s							
AYDB	**Zeytinkoy-Aydi**	**0.57**	**72**	Pg		Pg	07 35 24.5	+0.5
AYDB				Sg		Sb	07 35 33.0	-1.0
BLCB	**Balcova**	**0.62**	**349**	Pg		Pg	07 35 25.5	+0.6
MLSB	**Milas**	**0.66**	**136**	Pg		Pg	07 35 24.9	-0.7
BODT	**Bodrum**	**0.72**	**173**	Pg		Pg	07 35 27.2	+0.5
BODT				Sg		Sb	07 35 38.1	+0.2
ZEYE	**Izmir, Urla-Ze**	**0.72**	**310**	P		Pg	07 35 25.5	-1.2
ZEYE				*i* IAML			07 35 35.0	
	comp=N,83nm,0.2s							
ZEYE				S		Sg	07 35 35.7	-0.3
BDRM	**Kayabasi**	**0.73**	**164**	P		Pg	07 35 25.0	-2.0
BDRM				S		Sg	07 35 36.0	-0.5
URLA	**Izmir**	**0.75**	**321**	P		Pg	07 35 27.7	+0.3
URLA				S		Sb	07 35 39.8	+0.7
URLA				*i* IAML			07 35 40.0	
	comp=E,127nm,0.7s							
URLA				*i* IAML			07 35 41.0	
	comp=N,106nm,0.9s							
URLA	**Izmir**	**0.75**	**321**	Pg		Pg	07 35 27.7	+0.3
URLA				Sg		Sb	07 35 38.9	-0.2
ODEM	**Odemis-Izmir**	**0.85**	**54**	Pg		Pg	07 35 29.5	+0.2
NAZL	**Nazilli-Aydin**	**0.89**	**77**	Pg		Pg	07 35 30.3	+0.4
ESEN	**Aydn-Nazilli**	**0.91**	**88**	P		Pn	07 35 32.0	-0.3
ESEN				S		Sn	07 35 45.9	+0.1
DAT	**Datca**	**1.09**	**164**	P		Pg	07 35 33.8	+0.1
DAT				S		Sn	07 35 50.0	-0.2
DAT				*i* IAML			07 35 55.0	
	comp=N,36nm,0.9s							
DAT				*i* IAML			07 36 08.0	
	comp=E,31nm,2.2s							
CHOS	**Chios island**	**1.09**	**304**	Pn		Pb	07 35 34.2	0.0
GORD	**Gordes-Manisa**	**1.37**	**34**	Pn		Pg	07 35 39.4	+0.2
KULA	**Kula-Manisa**	**1.37**	**57**	Pn		Pg	07 35 39.4	+0.2
SOMA	**Soma-Manisa**	**1.41**	**11**	Pn		Pb	07 35 39.4	-0.2
APE	**Apeiranthos**	**1.50**	**243**	Pn		Pb	07 35 40.9	-0.4

THE ***26*** *07:36:10.6, 42°N±12°×1°9E±1°9, h11km, M3.7/24, MLh3.7/24*
SKO ***26*** *07:36:12.0, 41°.43N×19°.35E, h4km, ML3.8*
TIR ***26*** *07:36:13.2, 41°.45N×19°.55E, h19km±1km, Ml4.2/4*
RHSSO ***26*** *07:36:13.9±0.9, 41°.32N×19°.23E, h9km±4km, ML4.1/4*
NEIC ***26*** *07:36:13.1±2.7, 41°.48N±0°.04×19°.48E±0°.07, h10km±1km, mb4.3/5, Error ellipse: s-maj=9.4km s-min=7.2km az=247.0*
PDG ***26*** *07:36:14.1±0.6, 41°.45N×19°.60E, h8km±1km, MD3.9/11, ML3.9/13, Error ellipse: s-maj=2.2km s-min=2.9km az=0.0*
IDC ***26*** *07:36:14.9±2.3, 41°.38N×19°.36E, h39km±17km, mb3.9/11, mbtmp4.0/16, ML3.0/3, MS3.3/1, Error ellipse: s-maj=21.9km s-min=12.8km az=21.0*
BEO ***26*** *07:36:14.3±0.6, 41°.39N×19°.58E, h17km±3km, ML3.9/16*
PRU ***26*** *07:36:14.6, 41°.24N×19°.26E, h10km, M4.3*
ISC 26 07:36:11.6±1.0, 41°.45N±0°.02×19°.40E±0°.02, h11km±7km, n192, σ2s24/244, mb4.2/11, 29C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
TIR	**Tirane**	**0.36**	**106**	Pg		**Pg**	**07 36 19.3**	**+0.5**
TIR				Sg		**Sg**	**07 36 23.2**	**-0.5**
TIR				AML	AML		07 36 23.8	
	73nm,0.3s							
TIR	**Tirane**	**0.36**	**106**	⇓*i* Pg		**Pg**	**07 36 19.4**	**+0.5**
TIR				*i* Sg		**Sg**	**07 36 24.5**	**+0.8**
ULC	**Ulcinj**	**0.53**	**347**	⇓*i* Pg		**Pn**	**07 36 24.6**	**-0.5**
ULC				*i* Sg		**Sb**	**07 36 33.6**	**+3.0**
SDA	**Shkodra**	**0.61**	**7**	Pg		**Pn**	**07 36 25.3**	**-0.9**
SDA				Sg		**Sn**	**07 36 33.8**	**-2.2**
SDA				AML	AML		07 36 36.6	
	74μm,0.3s							
DRME	**Dracevica, Mon**	**0.75**	**348**	*e*Pg		**Pn**	**07 36 29.2**	**+1.0**
DRME				*e*Sg		**Sn**	**07 36 43.1**	**+3.4**
DRME	**Dracevica, Mon**	**0.75**	**348**	⇑*i* Pg		**Pn**	**07 36 29.4**	**+1.2**
DRME				*i* Sg		**Sn**	**07 36 41.2**	**+1.5**
PHP	**Peshkopia**	**0.82**	**73**	P		**Pg**	**07 36 27.0**	**-0.4**
PHP				Sg		**Sg**	**07 36 36.6**	**-1.4**
PHP				AML	AML		07 36 41.0	
	32nm,0.6s							
PHP	**Peshkopia**	**0.82**	**73**	P		**Pg**	**07 36 27.2**	**-0.1**
PHP				S		**Sg**	**07 36 37.5**	**-0.5**
BUM	**Brajici-Budva**	**0.93**	**336**	⇑*i* Pg		**Pn**	**07 36 30.6**	**-0.1**
BUM				*i* Sg		**Sn**	**07 36 46.1**	**+2.0**
VLO	**Vlora**	**0.98**	**176**	Pg		**Pn**	**07 36 33.6**	**+2.3**
VLO				Sg		**Sb**	**07 36 44.6**	**+1.0**
VLO				AML	AML		07 36 53.3	
	34nm,0.5s							
VLO	**Vlora**	**0.98**	**176**	P		**Pn**	**07 36 33.6**	**+2.3**
PDG	**Podgorica**	**0.99**	**354**	P		**Pn**	**07 36 31.6**	**+0.2**
PDG	**Podgorica**	**0.99**	**354**	⇓		**Pn**	**07 36 33.5**	**+2.1**
PDG				⇑S		**Sn**	**07 36 47.1**	**+1.8**
PDG	**Podgorica**	**0.99**	**354**	*e*Pg		**Pn**	**07 36 32.7**	**+1.3**
PDG				*e*Sg		**Sn**	**07 36 48.6**	**+3.2**
PDG	**Podgorica**	**0.99**	**354**	⇓*i* Pg		**Pn**	**07 36 31.3**	**-0.1**
PDG				*i* Sg		**Sn**	**07 36 48.3**	**+2.9**
OHR	**Ohrid**	**1.11**	**107**	*i* Pg		**Pg**	**07 36 33.1**	**+0.2**
OHR				*i* Sg		**Sb**	**07 36 48.9**	**+1.7**
OHR				*e*Lg	Lg		07 36 50.2	
	comp=N,3μm,0.6s							
OHR				*e*Lg	Lg		07 36 52.2	
	comp=E,1μm,0.5s							
CEME	**Cevo**	**1.15**	**342**	⇑*i* Pg		**Pn**	**07 36 35.5**	**+1.7**
CEME				*i* Sg		**Sn**	**07 36 53.4**	**+3.8**
HCY	**Herceg Novi**	**1.21**	**326**	⇑*i* Pg		Pn	07 36 38.2	+3.8
HCY				*i* Sg		**Sn**	**07 36 56.7**	**+5.9**
PVY	**Plav**	**1.22**	**20**	⇑*i* Pg		**Pn**	**07 36 34.8**	**+0.1**
PVY				*i* Sg		**Sn**	**07 36 52.4**	**+1.1**
KBN	**Korca**	**1.33**	**128**	Pg		**Pn**	**07 36 37.2**	**+0.9**
KBN				Sg		**Sg**	**07 36 53.8**	**-0.8**
KBN	**Korca**	**1.33**	**128**	P		**Pb**	**07 36 37.9**	**+1.2**
NKME	**Niksic**	**1.36**	**346**	⇓*i* Pg		**Pn**	**07 36 39.1**	**+2.5**
NKME				*i* Sg		**Sn**	**07 36 59.7**	**+5.1**
KOME	**Kolasin**	**1.40**	**3**	*e*Pg		**Pb**	**07 36 40.5**	**+2.6**
KOME				*e*Sg		**Sn**	**07 37 01.2**	**+5.4**
KOME	**Kolasin**	**1.40**	**3**	⇑*i* Pg		**Pb**	**07 36 41.1**	**+3.2**
KOME				*i* Sg		**Sn**	**07 37 00.6**	**+4.8**
IVA	**Berane**	**1.47**	**14**	⇑*i* Pg		**Pb**	**07 36 39.7**	**+0.7**
IVA				*i* Sg		**Sn**	**07 37 01.4**	**+4.0**
TREB	**Trebinje**	**1.49**	**329**	⇑*i* Pn		**Pb**	**07 36 40.8**	**+1.5**
TREB				*e*Sg		**Sn**	**07 37 02.9**	**+5.1**
BRY	**Bratogost**	**1.59**	**336**	⇑*i* Pn		**Pg**	**07 36 43.0**	**+0.9**
BRY				*i* Sn		**Sg**	**07 37 07.0**	**+4.3**
SKO	**Skopje**	**1.61**	**70**	*i* Pg		**Pg**	**07 36 42.2**	**-0.4**
SKO				*i* Sg		**Sg**	**07 37 04.2**	**+0.7**
NEST	**Nestorio**	**1.62**	**129**	P		**Pg**	**07 36 42.8**	**+0.1**
KEK	**Kerkira**	**1.76**	**170**	P		**Pg**	**07 36 47.5**	**+2.1**
KEK	**Kerkira**	**1.76**	**170**			**Pg**	**07 36 47.2**	**+1.9**
UPM	**Unac-Piva**	**1.79**	**348**	⇑*i* Pn		**Pg**	**07 36 46.5**	**+0.5**
UPM				*i* Sn		**Sg**	**07 37 12.0**	**+2.8**
PENT	**Pentalofos**	**1.82**	**133**	P		**Pb**	**07 36 45.3**	**+0.3**
KLINJ	**Klinje**	**1.82**	**341**	*e*Pn		**Pg**	**07 36 46.9**	**+0.3**
KLINJ				*e*Sn		**Sg**	**07 37 11.0**	**+0.8**
SJES	**Sjenica**	**1.86**	**13**	*e*Pn		**Pg**	**07 36 47.3**	**0.0**
SJES				*e*Sn		**Sb**	**07 37 07.8**	**-1.2**
PLE	**Pljevlja**	**1.88**	**360**	⇑*i* Pn		**Pg**	**07 36 47.5**	**-0.2**
PLE				*i* Sn		**Sg**	**07 37 13.0**	**+1.0**
STON	**Ston**	**1.90**	**319**	*e*Pn		**Pg**	**07 36 49.7**	**+1.6**
STON				*e*Sn		**Sg**	**07 37 15.0**	**+1.5**
IGT	**Igoumenitsa**	**2.04**	**159**	P		**Pn**	**07 36 46.7**	**+0.7**
KZN	**Kozani**	**2.13**	**122**	P		**Pn**	**07 36 49.3**	**+2.1**
RUDO	**Rudo**	**2.17**	**359**	*e*Pn		**Pg**	**07 36 51.8**	**-1.4**
RUDO				*e*Sn		**Sg**	**07 37 19.6**	**-1.7**
SELS	**Selova**	**2.18**	**35**	*e*Pn		**Pb**	**07 36 50.0**	**-1.1**
SELS				*e*Sn		**Sn**	**07 37 14.8**	**-0.1**
MATE	**Matera**	**2.19**	**249**	⇑P		**Pb**	**07 36 50.4**	**-0.8**
IVAS	**Ivanjica**	**2.20**	**14**	*e*Pn		**Pb**	**07 36 50.3**	**-1.1**
IVAS				*e*Sn		**Sg**	**07 37 19.4**	**-2.8**
PRMD	**Pramanda**	**2.31**	**145**	P		**Pb**	**07 36 52.5**	**-0.8**
GOCS	**Kraljevo Serbi**	**2.38**	**27**	*e*Pn		**Pb**	**07 36 52.8**	**-1.7**
GOCS				*e*Sn		**Sb**	**07 37 22.6**	**-1.3**
VAY	**Valandovo**	**2.39**	**92**	*i* Pn		**Pn**	**07 36 52.2**	**+1.5**
VAY				*i* Sn		**Sn**	**07 37 20.0**	**+0.1**
VAY				*e*Lg	Lg		07 37 20.8	
	comp=N,213nm,0.8s							
VAY				*e*Lg	Lg		07 37 21.0	
	comp=E,242nm,0.9s							
BBLS	**Lazi&#263i**	**2.42**	**0**	*e*Pn		**Pb**	**07 36 54.4**	**-0.7**
BBLS				*e*Sn		**Sb**	**07 37 24.3**	**-0.7**
TETR	**Tetrakomo, Epi**	**2.54**	**145**	P		**Pn**	**07 36 55.8**	**+2.9**
GRUS	**Gruza**	**2.62**	**21**	*e*Pn		**Pb**	**07 36 56.4**	**-2.2**
KNT	**Kendrikon**	**2.65**	**95**	P		**Pn**	**07 36 55.6**	**+1.3**
KNT	**Kendrikon**	**2.65**	**95**	*i* Pn		**Pn**	**07 36 55.6**	**+1.3**
DIVS	**Divibare**	**2.68**	**9**	*e*Pn		**Pb**	**07 36 57.3**	**-2.4**
DIVS				*e*Sn		**Sb**	**07 37 30.5**	**-2.2**
ACER	**Acerenza**	**2.69**	**257**			**Pb**	**07 36 57.4**	**-2.4**
LIT	**Litokhoron**	**2.71**	**119**			**Pn**	**07 36 56.9**	**+1.8**
THL	**Klokotos Trika**	**2.74**	**133**	P		**Pn**	**07 36 57.5**	**+2.0**
SGRT	**San Giovanni R**	**2.76**	**278**			**Pb**	**07 36 58.1**	**-2.9**
TYRN	**Tyrnavos**	**2.77**	**128**	P		**Pn**	**07 36 57.5**	**+1.6**
BOVS	**Bovan**	**2.77**	**37**	⇑P		**Pn**	**07 36 58.0**	**+2.0**
BOVS	**Bovan**	**2.77**	**37**	*e*Pn		**Pn**	**07 36 57.8**	**+1.9**
BOVS				*e*Sn		**Sn**	**07 37 29.7**	**+0.3**
TSLK	**Tsoukalades, L**	**2.79**	**159**	P		**Pn**	**07 36 57.3**	**+1.1**
THE	**Thessaloniki**	**2.82**	**106**	P		**Pn**	**07 36 57.6**	**+1.0**
THE	**Thessaloniki**	**2.82**	**106**	*i* Pn		**Pn**	**07 36 57.5**	**+1.0**
KKB	**Krupnik**	**2.82**	**81**	P		**Pn**	**07 36 58.3**	**+1.6**
KKB	**Krupnik**	**2.82**	**81**	P		**Pn**	**07 36 58.1**	**+1.4**
KKB	**Krupnik**	**2.82**	**81**	*i* Pn		**Pn**	**07 36 58.6**	**+2.0**
LKD2	**Lefkada island**	**2.83**	**160**	P		**Pn**	**07 36 57.7**	**+1.0**
TRUS	**Trudelj**	**2.87**	**15**	*e*Pn		**Pb**	**07 36 59.7**	**-3.1**
AMPL	**Ampelaki**	**2.88**	**151**	P		**Pn**	**07 36 59.4**	**+2.0**
NYDR	**Nydri-Lefkada**	**2.91**	**160**	P		**Pn**	**07 36 58.7**	**+0.9**
HORT	**Hortiatis**	**2.92**	**106**	P		**Pn**	**07 36 58.8**	**+0.6**
EVGI	**Lefkada island**	**2.98**	**161**	P		**Pn**	**07 36 59.5**	**+0.6**
ZAPS	**Zavoj**	**3.01**	**52**	*e*Pn		**Pn**	**07 37 01.6**	**+2.3**
ZAPS				*e*Sn		**Sn**	**07 37 36.6**	**+1.2**
TIP	**Timpagrande**	**3.04**	**223**			**Pn**	**07 37 01.3**	**+1.6**
TIP	**Timpagrande**	**3.04**	**223**	⇑P		**Pn**	**07 37 01.3**	**+1.6**
SOH	**Sokhos**	**3.05**	**101**	P		**Pn**	**07 37 01.3**	**+1.4**
VTS	**Vitosha**	**3.09**	**66**	P		**Pn**	**07 37 01.9**	**+1.5**
VTS	**Vitosha**	**3.09**	**66**	P		**Pn**	**07 37 02.1**	**+1.7**
CUC	**Castrocucco**	**3.09**	**243**			**Pb**	**07 37 03.0**	**-3.5**
TEKS	**Tekeris**	**3.10**	**2**	*e*Pn		**Pb**	**07 37 02.7**	**-4.1**
TEKS				*e*Sn		**Sb**	**07 37 42.1**	**-2.5**
FSK	**Fiskardo**	**3.12**	**163**	P		**Pn**	**07 37 00.6**	**-0.1**
EVR	**Evrytania**	**3.13**	**143**	P		**Pn**	**07 37 04.5**	**+3.5**
ZAGS	**Zajecar**	**3.15**	**41**	*e*Pn		**Pn**	**07 37 03.5**	**+2.3**
ZAGS				*e*Sn		**Sn**	**07 37 41.3**	**+2.5**
PLNA	**Plana**	**3.17**	**70**	P		**Pn**	**07 37 04.2**	**+2.6**
SRS	**Serrai**	**3.18**	**95**	P		**Pn**	**07 37 02.7**	**+1.2**
SRS	**Serrai**	**3.18**	**95**	*i* Pn		**Pn**	**07 37 02.9**	**+1.3**
BLSH	**Balsha**	**3.21**	**63**	P		**Pn**	**07 37 04.1**	**+2.1**
BORS2	**Bor- Borsko je**	**3.27**	**35**	*e*Pn		**Pn**	**07 37 03.4**	**+0.6**
BORS2				*e*Sn		**Sn**	**07 37 40.6**	**-1.1**
MMB	**Musomishta**	**3.27**	**87**	P		**Pn**	**07 37 04.3**	**+1.5**
MMB	**Musomishta**	**3.27**	**87**	P		**Pn**	**07 37 05.0**	**+2.2**
DMLN	**Damoulianata-K**	**3.29**	**167**	P		**Pn**	**07 37 03.1**	**0.0**
AVAS	**Avala Beograd**	**3.35**	**14**	*e*Pn		**Pn**	**07 37 05.7**	**+1.8**
VLS	**Valsamata**	**3.39**	**164**	P		**Pn**	**07 37 04.5**	**0.0**
KUBS	**Kucevo**	**3.40**	**29**	*e*Pn		**Pn**	**07 37 05.2**	**+0.6**
KUBS				*e*Sn		**Sn**	**07 37 43.9**	**-1.0**
OUR	**Ouranopolis**	**3.65**	**106**	P		**Pn**	**07 37 09.0**	**+1.0**
PAOL	**Paolisi**	**3.67**	**265**			**Pn**	**07 37 11.9**	**-4.6**
BLY	**Banja Luka**	**3.67**	**335**	*e*Pn		**Pb**	**07 37 12.1**	**-4.5**
BLY				*e*Sn		**Sb**	**07 37 55.1**	**-6.0**
BLY	**Banja Luka**	**3.67**	**335**	*e*Pn		**Pb**	**07 37 14.2**	**-2.4**
FRGS	**Fruska Gora**	**3.72**	**4**	*e*Pn		**Pn**	**07 37 11.0**	**+2.0**
MDVR	**Moldovita**	**3.74**	**26**	⇓P		**Pn**	**07 37 11.2**	**+2.0**
KAVA	**Kavala**	**3.88**	**95**	P		**Pn**	**07 37 12.4**	**+1.1**
DRO	**Drossia**	**3.92**	**152**	P		**Pn**	**07 37 12.9**	**+1.1**
VRSS	**Vrsac**	**3.93**	**20**	*e*Pn		**Pn**	**07 37 13.1**	**+1.2**
VRSS				*e*Sn		**Sn**	**07 37 57.7**	**-0.3**
KLV	**Kalavryta, Ach**	**4.01**	**147**	P		**Pn**	**07 37 15.0**	**+2.0**
RZN	**Rozhen**	**4.01**	**85**	P		**Pn**	**07 37 15.5**	**+2.3**
HERR	**Herculane**	**4.08**	**32**	⇑P		**Pn**	**07 37 15.9**	**+2.0**
CEL	**Celeste**	**4.17**	**221**			**Pn**	**07 37 16.1**	**+0.8**
SRE	**Strehaia**	**4.25**	**40**	⇑P		**Pn**	**07 37 18.4**	**+2.1**
PLVB	**Pleven**	**4.32**	**62**	⇓P		**Pn**	**07 37 19.7**	**+2.5**
BZS	**Buzias**	**4.47**	**20**	⇑P		**Pn**	**07 37 21.3**	**+2.1**
AQU	**L'Aquila**	**4.57**	**283**	*e*Pn		**Pn**	**07 37 21.9**	**+1.2**
AQU				*e*Sn		**Sn**	**07 38 11.9**	**-1.9**
CAMP	**Campotosto**	**4.59**	**286**			**Pn**	**07 37 24.2**	**+3.0**
RDO	**Rodhopi**	**4.63**	**92**			**Pn**	**07 37 22.7**	**+1.2**
GZR	**Gura Zlata**	**4.65**	**31**	⇑P		**Pn**	**07 37 24.7**	**+2.9**
ITM	**Ithomi**	**4.69**	**155**	Pn		**Pn**	**07 37 23.9**	**+1.5**
SURR	**Surduc**	**4.74**	**24**	⇓P		**Pn**	**07 37 24.5**	**+1.5**
GUMA	**Gualdo di Mace**	**4.78**	**292**			**Pn**	**07 37 26.2**	**+2.6**
MORH	**Mrgy, Hungar**	**4.80**	**354**	*e*Pn		**Pn**	**07 37 27.5**	**+3.8**
MORH				*e*Sn		**Sn**	**07 38 23.0**	**+3.7**
NRCA	**Norcia**	**4.87**	**289**			**Pn**	**07 37 28.0**	**+3.0**
FDMO	**Fiordimonte**	**4.95**	**291**			**Pn**	**07 37 28.4**	**+2.5**
ELND	**Elena**	**5.03**	**71**	⇑P		**Pn**	**07 37 29.4**	**+2.4**
SIRR	**Siria**	**5.09**	**18**	⇑P		**Pn**	**07 37 29.7**	**+1.9**
CESX	**Cesi**	**5.21**	**285**			**Pn**	**07 37 32.6**	**+3.1**
BEHE	**Becsehely**	**5.37**	**340**	*e*Pn		**Pn**	**07 37 34.6**	**+3.0**
BEHE				*e*Sn		**Sn**	**07 38 35.3**	**+2.0**
MURB	**Monte Urbino**	**5.41**	**292**			**Pn**	**07 37 35.5**	**+3.3**
ARR	**Arges**	**5.46**	**42**	⇑P		**Pn**	**07 37 36.2**	**+3.2**
EZN	**Ezine**	**5.51**	**105**	⇑P		**Pn**	**07 37 35.4**	**+1.8**
MTUR	**Matau**	**5.59**	**46**	⇓P		**Pn**	**07 37 37.5**	**+2.6**
VOIR		**5.73**	**44**	⇓P		**Pn**	**07 37 39.5**	**+2.9**
DRGR		**5.85**	**23**	⇓P		**Pn**	**07 37 40.1**	**+1.8**
MARR	**Marisel-Cluj**	**5.87**	**26**	⇑P		**Pn**	**07 37 43.0**	**+4.3**
SOKA	**Soboth**	**6.10**	**330**	*e*Pn		**Pn**	**07 37 44.3**	**+2.6**
	comp=E,1.0nm,0.2s							
OBKA	**Obir**	**6.15**	**327**	*e*Pn		**Pn**	**07 37 46.0**	**+3.5**
	comp=E,2.2nm,0.4s							
OBKA				*e*Sn		**Sn**	**07 38 55.2**	**+2.4**
	comp=E,8.6nm,0.3s							
SABO	**M.te Sabotino**	**6.18**	**319**			**Pn**	**07 37 45.1**	**+2.3**
MLR	**Muntele Rosu**	**6.24**	**47**	Pn		**Pn**	**07 37 46.9**	**+3.1**
	comp=E,5.5nm,0.3s,baz=258,slow=5.7,SNR=

HUEH	**Huehuetenango**	**0.56**	**231**	*i*	S		**Sg**	**07 37 34.4**	**+0.8**
HUEH	**Huehuetenango**	**0.56**	**231**		S		**Sb**	**07 37 35.0**	**-0.3**
APG	**El Apazote**	**0.87**	**140**	*eP*			**Pg**	**07 37 31.3**	**-0.6**
SOKI	**Kika Raxquin**	**0.91**	**202**	*eP*			**Pg**	**07 37 33.0**	**+0.3**
QUEO	**Labor Ovalle**	**0.91**	**210**	*i*	P		**Pg**	**07 37 33.1**	**+0.3**
QUEO					*eP*		**Pg**	**07 37 33.1**	**+0.3**
CCIG	**Comitan**	**1.21**	**300**	*eP*			**Pb**	**07 37 38.0**	**-0.2**
CCIG	**Comitan**	**1.21**	**300**		P		**Pg**	**07 37 39.0**	**+0.6**
STG8	**El Palmar, Qui**	**1.25**	**194**	*eP*			**Pn**	**07 37 35.0**	**-3.8**
STG2	**El Palmar, Qui**	**1.27**	**195**	*eP*			**Pn**	**07 37 35.6**	**-3.4**
SMCA	**Catarina**	**1.28**	**231**	*i*	P		**Pn**	**07 37 39.4**	**+0.3**
RTAL	**Retalhuleu**	**1.30**	**209**		P		**Pg**	**07 37 40.9**	**+0.8**
RTAL	**Retalhuleu**	**1.30**	**209**		S		**Sg**	**07 37 59.1**	**+2.1**
PETF	**Flores**	**1.68**	**42**	*eP*			**Pn**	**07 37 44.0**	**-0.5**
PETF					*eS*		**Sn**	**07 38 05.6**	**-0.5**
PETF	**Flores**	**1.68**	**42**		S		**Sn**	**07 38 07.2**	**+1.1**
PETF	**Flores**	**1.68**	**42**		P		**Pn**	**07 37 44.5**	**-0.1**
JUAM	**Asuncion Mita**	**1.86**	**136**	*eP*			**Pn**	**07 37 48.7**	**+1.7**
ZAFR2	**Estanzuela, Za**	**1.97**	**123**	*i*	P		**Pn**	**07 37 44.7**	**-3.8**
ESQI	**Esquipulas**	**1.98**	**124**		P		**Pb**	**07 37 51.3**	**-0.1**
ESQI	**Esquipulas**	**1.98**	**124**		S		**Sg**	**07 38 19.0**	**+0.1**
SLOZ	**Alcaldia de Sa**	**2.04**	**143**		P		**Pn**	**07 37 50.3**	**+0.8**
SLOZ	**Alcaldia de Sa**	**2.04**	**143**		S		**Sg**	**07 38 20.2**	**-0.5**
MTO3	**Montecristo**	**2.06**	**128**		S		**Sb**	**07 38 20.8**	**+2.2**
MTO3	**Montecristo**	**2.06**	**128**		P		**Pn**	**07 37 52.1**	**+2.1**
FAME	**Alcaldia de Sa**	**2.07**	**151**		P		**Pb**	**07 37 53.4**	**+0.6**
FAME	**Alcaldia de Sa**	**2.07**	**151**		S		**Sg**	**07 38 21.4**	**-0.4**
NUBE	**Las Nubes**	**2.14**	**145**		P		**Pb**	**07 37 54.7**	**+0.6**
NUBE	**Las Nubes**	**2.14**	**145**		S		**Sg**	**07 38 23.4**	**-0.7**
TGIG		**2.28**	**299**	*eP*			**Pn**	**07 37 53.9**	**+1.1**
TGIG					*eS*		**Sb**	**07 38 23.0**	**-1.6**
SCIG	**Sabancuy**	**3.28**	**358**	*i*	P		**Pn**	**07 38 05.6**	**-1.0**
SCIG					*eS*		**Sn**	**07 38 44.1**	**-1.6**
SCIG	**Sabancuy**	**3.28**	**358**		P		**Pn**	**07 38 05.8**	**-0.7**
SCIG	**Sabancuy**	**3.28**	**358**		S		**Sn**	**07 38 45.5**	**-0.2**

*IDC **26** 07:40:50.6±1.6,41°.34N×19°.36E,h0km,mb3.8/8, mbtmp3.9/12,ML2.5/3,Error ellipse: s-maj=28.5km s-min=18.1km az=33.0*
*NAO **26** 07:40:51.2,41°.19N×18°.73E,h10km,MB3.3*
*PDG **26** 07:40:55.5±0.3,41°.54N×19°.61E,h10km±1km, MD3.5/7, ML3.4/13,Error ellipse: s-maj=1.5km s-min=1.7km az=0.0*
*BEO **26** 07:40:56.3±0.9,41°.58N×19°.67E,h8km±3km,ML3.3/10*
ISC 26 07:40:53.0±1.3,41°.45N±0°.04×19°.61E±0°.03,h9km±8km, n87,σ1s77/106,mb4.0/5,16C-15D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ULC	**Ulcinj**	**0.58**	**332**	⇓*i*Pg		**Pg**	**07 41 03.8**	**-0.4**
ULC				*i* Sg		**Sg**	**07 41 11.5**	**-0.3**
DRME	**Dracevica, Mon**	**0.80**	**337**	*e*Pg		**Pb**	**07 41 09.3**	**+0.3**
DRME	**Dracevica, Mon**	**0.80**	**337**	⇑*i*Pg		**Pg**	**07 41 07.2**	**-1.4**
DRME				*i* Sg		**Sn**	**07 41 21.1**	**-1.3**
BUM	**Brajici-Budva**	**1.00**	**328**	⇓*i*Pg		**Pg**	**07 41 12.2**	**-0.1**
BUM				*i* Sg		**Sb**	**07 41 25.8**	**0.0**
PDG	**Podgorica**	**1.01**	**345**	⇓P		**Pg**	**07 41 12.4**	**0.0**
PDG				⇓S		**Sb**	**07 41 25.3**	**-0.8**
PDG	**Podgorica**	**1.01**	**345**	*e*Pg		**Pb**	**07 41 12.6**	**-0.1**
PDG	**Podgorica**	**1.01**	**345**	⇑*i*Pg		**Pg**	**07 41 11.4**	**-1.1**
PDG				*i* Sg		**Sn**	**07 41 27.3**	**-0.3**
PVY	**Plav**	**1.17**	**13**	*e*Pg		**Pg**	**07 41 15.4**	**-0.1**
PVY	**Plav**	**1.17**	**13**	⇓*i*Pg		**Pg**	**07 41 14.5**	**-1.0**
PVY				*i* Sg		**Sn**	**07 41 31.3**	**-0.5**
CEME	**Cevo**	**1.21**	**335**	⇓*i*Pg		**Pb**	**07 41 15.8**	**-0.3**
CEME				*i* Sg		**Sn**	**07 41 32.9**	**+0.3**
HCY	**Herceg Novi**	**1.29**	**320**	⇓*i*Pg		**Pn**	**07 41 17.5**	**+0.3**
HCY				*i* Sg		**Sn**	**07 41 36.0**	**+1.3**
KOME	**Kolasin**	**1.40**	**357**	*e*Pg		**Pg**	**07 41 19.6**	**-0.2**
KOME	**Kolasin**	**1.40**	**357**	⇓*i*Pg		**Pb**	**07 41 19.1**	**-0.2**
KOME				*i* Sg		**Sg**	**07 41 38.2**	**+0.2**
NKME	**Niksic**	**1.40**	**340**	⇓*i*Pg		**Pg**	**07 41 19.0**	**+0.3**
NKME				*i* Sg		**Sg**	**07 41 38.3**	**+0.2**
BEY	**Berane**	**1.43**	**8**	*e*Pg		**Pg**	**07 41 20.3**	**-0.2**
IVA	**Berane**	**1.43**	**8**	⇑*i*Pg		**Pn**	**07 41 19.0**	**-0.2**
IVA				*i* Sg		**Sg**	**07 41 39.6**	**+0.5**
TREB	**Trebinje**	**1.57**	**324**	*e*Pg		**Pn**	**07 41 21.8**	**+0.8**
TREB				*e*Sg		**Sg**	**07 41 43.4**	**-0.2**
BRY	**Bratogost**	**1.65**	**332**	⇑*i*Pn		**Pb**	**07 41 23.4**	**-0.3**
BRY				*i* Sn		**Sg**	**07 41 46.5**	**+0.4**
UPM	**Unac-Piva**	**1.82**	**344**	⇑*i*Pn		**Pb**	**07 41 26.0**	**-0.6**
UPM				*i* Sn		**Sg**	**07 41 51.1**	**-0.6**
SJES	**Sjenica**	**1.83**	**8**	*e*Pg		**Pg**	**07 41 27.6**	**-0.5**
SJES				*e*Sg		**Sg**	**07 41 51.6**	**-0.1**
PLE	**Pljevlja**	**1.88**	**355**	*e*Pg		**Pg**	**07 41 28.6**	**-0.5**
PLE	**Pljevlja**	**1.88**	**355**	⇑*i*Pn		**Pb**	**07 41 27.8**	**+0.2**
PLE				*i* Sn		**Sb**	**07 41 51.4**	**+0.2**
STON	**Ston**	**2.00**	**316**	*e*Pn		**Pb**	**07 41 29.5**	**-0.1**
STON				*e*Sn		**Sb**	**07 41 53.3**	**+0.7**
SELS	**Selova**	**2.09**	**32**	*e*Pg		**Pb**	**07 41 30.4**	**-0.7**
SELS				*e*Sg		**Sb**	**07 41 57.1**	**0.0**
IVAS	**Ivanjica**	**2.16**	**11**	*e*Pn		**Pn**	**07 41 30.7**	**+1.5**
RUDO	**Rudo**	**2.17**	**355**	*e*Pn		**Pb**	**07 41 31.5**	**-0.9**
GOCS	**Kraljevo Serbi**	**2.31**	**24**	*e*Pn		**Pn**	**07 41 32.9**	**+1.7**
MATE	**Matera**	**2.34**	**251**	⇓P		**Pg**	**07 41 38.5**	**+0.7**
BBLS	**Lazi&#263i**	**2.42**	**357**	*e*Pn		**Pn**	**07 41 34.6**	**+1.9**
GRUS	**Gruza**	**2.57**	**18**	*e*Pn		**Pn**	**07 41 36.3**	**+1.6**
DIVS	**Divibare**	**2.66**	**6**	*e*Pn		**Pn**	**07 41 36.9**	**+0.8**
KKB	**Krupnik**	**2.67**	**80**	P		**Pb**	**07 41 40.0**	**-1.0**
KKB	**Krupnik**	**2.67**	**80**	P		**Pb**	**07 41 39.9**	**-1.0**
BOVS	**Bovan**	**2.67**	**35**	⇑P		**Pn**	**07 41 38.4**	**+2.2**
BOVS	**Bovan**	**2.67**	**35**	*e*Pn		**Pn**	**07 41 37.7**	**+1.5**
TRUS	**Trudelj**	**2.83**	**12**	*e*Pn		**Pn**	**07 41 39.8**	**+1.5**
ZAPS	**Zavoj**	**2.89**	**50**	*e*Pn		**Pn**	**07 41 41.8**	**+2.6**
VTS	**Vitosha**	**2.94**	**66**	P		**Pn**	**07 41 43.3**	**+3.3**
VTS	**Vitosha**	**2.94**	**66**	P		**Pb**	**07 41 43.9**	**-1.8**
VTS	**Vitosha**	**2.94**	**66**	*e*Pn		**Pn**	**07 41 43.1**	**+3.1**
PLNA	**Plana**	**3.02**	**69**	P		**Pb**	**07 41 45.2**	**-1.9**
PLNA	**Plana**	**3.02**	**69**	P		**Pb**	**07 41 45.0**	**-2.1**
ZAGS	**Zajecar**	**3.05**	**39**	*e*Pn		**Pn**	**07 41 43.5**	**+2.1**
BLSH	**Balsha**	**3.07**	**62**	P		**Pb**	**07 41 47.7**	**-0.1**
BLSH	**Balsha**	**3.07**	**62**	P		**Pb**	**07 41 45.8**	**-2.0**
TEKS	**Tekeris**	**3.09**	**359**	*e*Pn		**Pn**	**07 41 42.1**	**+0.1**
MMB	**Musomishta**	**3.11**	**87**	P		Pn	07 41 35.4	-6.9
MMB	**Musomishta**	**3.11**	**87**	P		**Pb**	**07 41 47.0**	**-1.5**
BLKB	**Belogradchik**	**3.14**	**45**	*e*Pn		**Pn**	**07 41 45.7**	**+3.1**
BORS2	**Bor- Borsko je**	**3.18**	**33**	*e*Pn		**Pn**	**07 41 43.9**	**+0.8**
KUBS	**Kucevo**	**3.32**	**26**	*e*Pn		**Pn**	**07 41 45.4**	**+0.3**
MPEP	**Malo Peshtene**	**3.60**	**57**	P		**Pn**	**07 41 52.1**	**+3.1**
MPEP	**Malo Peshtene**	**3.60**	**57**	P		**Pn**	**07 41 52.2**	**+3.2**
MDVR	**Moldovita**	**3.67**	**24**	⇓P		**Pn**	**07 41 51.6**	**+1.7**
FRGS	**Fruska Gora**	**3.71**	**2**	*e*Pn		**Pn**	**07 41 51.6**	**+1.2**
VRSS	**Vrsac**	**3.88**	**18**	*e*Pn		**Pn**	**07 41 54.3**	**+1.6**
HERR	**Herculane**	**3.99**	**30**	⇓P		**Pn**	**07 41 56.3**	**+2.0**
SRH	**Strehaia**	**4.15**	**38**	⇑P		**Pn**	**07 41 59.5**	**+3.0**
BZS	**Buzias**	**4.41**	**19**	⇑P		**Pn**	**07 42 01.4**	**+1.4**
GZR	**Gura Zlata**	**4.56**	**29**	⇑P		**Pn**	**07 42 04.4**	**+2.2**
ELND	**Elena**	**4.88**	**70**	⇑P		**Pn**	**07 42 10.6**	**+4.0**
LOT	**Lotru**	**5.01**	**36**	⇓P		**Pn**	**07 42 12.0**	**+3.5**
ARR	**Arges**	**5.36**	**41**	⇑P		**Pn**	**07 42 16.0**	**+2.9**
VOIR		**5.62**	**43**	⇓P		**Pn**	**07 42 19.9**	**+3.2**
DRGR		**5.78**	**22**	⇓P		**Pn**	**07 42 21.7**	**+2.7**
MLR	**Muntele Rosu**	**6.13**	**47**	Pn		**Pn**	**07 42 27.7**	**+4.0**
	15nm,0.7s,baz=210,slow=5.8,SNR=11							
MLR					Sn		**Sn**	**07 43 33.3**	**-0.6**
	0.5nm,0.3s,baz=226,slow=18,SNR=1.4							
MLR	**Muntele Rosu**	**6.13**	**47**	⇑P		**Pn**	**07 42 27.0**	**+3.3**
DOPR	**Dopca**	**6.16**	**41**	⇑P		**Pn**	**07 42 27.9**	**+3.8**
SOKA	**Soboth**	**6.17**	**329**	*e*Pn		**Pn**	**07 42 24.9**	**+0.6**
	5.7nm,0.6s							
ARSA	**Arzberg**	**6.49**	**335**	*e*Pn		**Pn**	**07 42 29.0**	**+0.3**
	0.7nm,0.2s							
PLOR	**Plostina**	**6.74**	**47**	⇑P		**Pn**	**07 42 35.7**	**+3.7**
VRI	**Vrincioaia**	**6.79**	**47**	⇑P		**Pn**	**07 42 36.6**	**+3.9**
KECS	**Kecovo**	**7.06**	**5**	*e*PN		**Pn**	**07 42 40.7**	**+4.3**
KECS				*e*SN		**Sn**	**07 43 52.2**	**-4.5**
MODS	**Modra-Piesok**	**7.11**	**347**	*e*PN		Pn	07 42 43.1	+5.9
IDI	**Anoyia**	**7.42**	**144**	Pn		**Pn**	**07 42 41.1**	**-0.4**
	0.4nm,0.3s,baz=175,slow=6.8,SNR=2.5							
IDI					Sn		**Sn**	**07 44 02.9**	**-2.9**
	1.2nm,0.3s,baz=32,slow=20,SNR=1.7 14nm,1.1s							
GERES	**GERESS Array B**	**8.48**	**333**	Pn		**Pn**	**07 42 56.3**	**+0.2**
	baz=152,slow=14,SNR=3.4 1.1nm,0.7s							
HFS	**Hagfors**	**19.06**	**351**	P		**P**	**07 45 15.1**	**-0.2**
	0.2nm,0.3s,baz=153,slow=12,SNR=4.8 2.5nm,0.6s							
NB2	**NORSAR Subarra**	**20.27**	**348**	P		**P**	**07 45 27.8**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=164,slow=11							
NOA	**NORSAR Array B**	**20.27**	**348**	P		**P**	**07 45 28.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=157,slow=10,SNR=4.6 comp=Z,0.5nm,0.6s							
EKA	**Eskdalemuir Ar**	**20.40**	**321**	P		**P**	**07 45 30.1**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=116,slow=9.5,SNR=5.6 comp=Z,1.7nm,0.7s							
FINES	**FINESS Array B**	**20.40**	**9**	P		**P**	**07 45 29.7**	**-0.2**
	comp=Z,4.2nm,0.6s,baz=189,slow=8.7,SNR=19 comp=Z,4.2nm,0.6s							
BVAR	**Borovoye Array**	**35.64**	**53**	P		**P**	**07 47 52.1**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=278,slow=7.4,SNR=6.6 comp=Z,1.3nm,0.6s							
KURBB	**Kurchatov Arra**	**40.92**	**56**	P		**P**	**07 48 35.9**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=283,slow=9.5,SNR=3.6 comp=Z,0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**44.09**	**50**	P		**P**	**07 49 01.4**	**+0.3**
	comp=Z,2.8nm,0.4s,baz=277,slow=8.4,SNR=15 comp=Z,2.8nm,0.4s							
MKAR	**Makanchi Array**	**44.26**	**61**	P		**P**	**07 49 03.4**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=283,slow=7.5,SNR=20 comp=Z,1.7nm,0.5s							
SONM	**Songino Array**	**58.95**	**52**	P		**P**	**07 50 53.1**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=292,slow=6.1,SNR=3.8 comp=Z,0.8nm,0.8s							
ASAR	**Alice Springs**	**123.15**	**94**	PKP		**PKPdf**	**07 59 49.0**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=324,slow=2.3,SNR=4.0							

PDG 26 07:41:59.2±0.5,41°.50N×19°.67E,h9km±11km,MD3.2/2, ML3.1/5,7C-14D,Error ellipse: s-maj=3.6km s-min=4.6km az=0.0,Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ULC	**Ulcinj**	**0.56**	**325**	⇓*i*Pg		**Pg**	**07 42 08.1**	**-2.0**
ULC				*i* Sg		**Sg**	**07 42 15.5**	**-2.0**
ULC	**Ulcinj**	**0.56**	**325**	⇓*i*Pg		**Pg**	**07 42 08.1**	**-2.0**
ULC				*i* Sg		**Sg**	**07 42 15.4**	**-2.1**
DRME	**Dracevica, Mon**	**0.78**	**332**	⇑*i*Pg		**Pg**	**07 42 12.0**	**-2.2**
DRME				*i* Sg		**Sg**	**07 42 24.9**	**+0.6**
DRME	**Dracevica, Mon**	**0.78**	**332**	⇓*i*Pg		**Pg**	**07 42 12.9**	**-1.3**
DRME				*i* Sg		**Sb**	**07 42 26.5**	**+1.0**
PDG	**Podgorica**	**0.98**	**342**	⇓*i*Pg		**Pg**	**07 42 16.2**	**-1.8**
PDG				*i* Sg		**Sb**	**07 42 31.3**	**-0.1**
PDG	**Podgorica**	**0.98**	**342**	⇑*i*Pg		**Pg**	**07 42 16.0**	**-2.0**
PDG				*i* Sg		**Sn**	**07 42 33.2**	**+0.1**
BUM	**Brajici-Budva**	**0.99**	**324**	⇓*i*Pg		**Pg**	**07 42 16.9**	**-1.3**
BUM				*i* Sg		**Sb**	**07 42 31.4**	**-0.3**
BUM	**Brajici-Budva**	**0.99**	**324**	⇓*i*Pg		**Pg**	**07 42 16.9**	**-1.3**
BUM				*i* Sg		**Sn**	**07 42 32.9**	**-0.5**
PVY	**Plav**	**1.11**	**11**	⇑*i*Pg		**Pn**	**07 42 23.8**	**+2.7**
PVY				*i* Sg		**Sn**	**07 42 40.6**	**+4.0**
CEME	**Cevo**	**1.19**	**332**	⇓*i*Pg		**Pb**	**07 42 20.9**	**-1.0**
CEME				*i* Sg		**Sn**	**07 42 38.1**	**-0.2**
CEME	**Cevo**	**1.19**	**332**	⇓*i*Pg		**Pb**	**07 42 20.9**	**-1.0**
CEME				*i* Sg		**Sn**	**07 42 38.1**	**-0.2**
HCY	**Herceg Novi**	**1.29**	**318**	⇓*i*Pg		**Pn**	**07 42 22.4**	**-1.0**
HCY				*i* Sg		**Sn**	**07 42 41.6**	**+0.8**
HCY	**Herceg Novi**	**1.29**	**318**	⇑*i*Pg		**Pn**	**07 42 21.4**	**-2.0**
HCY				*i* Sg		**Sn**	**07 42 41.5**	**+0.7**
KOME	**Kolasin**	**1.35**	**355**	⇓*i*Pg		**Pn**	**07 42 23.6**	**-0.8**
KOME				*i* Sg		**Sg**	**07 42 45.0**	**+2.2**
KOME	**Kolasin**	**1.35**	**355**	⇓*i*Pg		**Pg**	**07 42 26.2**	**+1.0**
KOME				*i* Sg		**Sg**	**07 42 45.6**	**+2.8**
NKME	**Niksic**	**1.37**	**337**	⇓*i*Pg		**Pn**	**07 42 23.3**	**-1.3**
NKME				*i* Sg		**Sg**	**07 42 44.0**	**+0.6**
NKME	**Niksic**	**1.37**	**337**	⇓*i*Pg		**Pn**	**07 42 24.5**	**-0.1**
NKME				*i* Sg		**Sg**	**07 42 44.0**	**+0.6**
IVA	**Berane**	**1.38**	**7**	⇓*i*Pg		**Pn**	**07 42 24.7**	**0.0**
IVA				*i* Sg		**Sg**	**07 42 48.6**	**+5.0**
BRY	**Bratogost**	**1.63**	**329**	⇑*i*Pg		**Pb**	**07 42 29.3**	**-0.3**
BRY				*i* Sg		**Sg**	**07 42 51.3**	**-0.5**
UPM	**Unac-Piva**	**1.79**	**342**	⇑*i*Pn		**Pn**	**07 42 31.3**	**+0.8**
UPM				*i* Sn		**Sb**	**07 42 55.9**	**+0.9**
PLE	**Pljevlja**	**1.84**	**354**	⇑*i*Pn		**Pg**	**07 42 34.4**	**-0.1**
PLE				*i* Sn		**Sg**	**07 42 57.7**	**-0.7**

*RSNC **26** 07:46:08.7±0.0,10°.N±2°.×7°.3W±°,h13km±4km,M1.9,ML1.9 FUNV **26** 07:46:09.5,9°.57N×72°.53W,h8km,MW3.0*
ISC 26 07:46:08.5±1.2,9°.58N±0°.03×72°.50W±0°.04,h24km±13km, n10,σ1s04/20,Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MCQV	**Machiques**	**0.47**	**356**	*e*P		**Pb**	**07 46 18.0**	**-0.2**
MCQV				*e*S		**Sb**	**07 46 25.9**	**+1.0**
CRJC	**Cerrejon, Guaj**	**1.48**	**345**	P		**Pn**	**07 46 33.3**	**-0.5**
CRJC				S		**Sn**	**07 46 51.4**	**-1.1**
OCAC	**Ocana**	**1.56**	**211**	P		**Pn**	**07 46 34.3**	**-0.6**
OCAC				S		**Sn**	**07 46 55.0**	**+0.6**
CAPV	**Capacho**	**1.71**	**174**	*e*P		**Pb**	**07 46 39.5**	**0.0**
CAPV				*e*S		**Sb**	**07 47 01.4**	**+0.5**
ARGC	**Ariguani, Magd**	**1.74**	**279**	P		**Pn**	**07 46 36.7**	**-0.6**
ARGC				S		**Sn**	**07 46 57.4**	**-1.4**
SOCV	**Socops**	**2.07**	**128**	*e*P		**Pb**	**07 46 44.5**	**-1.0**
SOCV				*e*S		**Sb**	**07 47 10.0**	**-0.9**
URIC	**Uribia, Colomb**	**2.17**	**13**	P		**Pn**	**07 46 42.5**	**-0.7**
URIC				S		**Sn**	**07 47 11.1**	**+1.8**
SJCC	**San Jacinto, C**	**2.66**	**277**	P		**Pn**	**07 46 50.2**	**+0.2**
SJCC				S		**Sn**	**07 47 23.2**	**+1.7**
PTBC	**PUERTO BERRIO,**	**3.58**	**213**	P		**Pn**	**07 47 03.5**	**+0.8**
PTBC				S		**Sn**	**07 47 44.3**	**-0.1**
BENV	**Beln**	**4.85**	**85**	*e*P		**Pn**	**07 47 21.6**	**+1.5**
BENV				*e*S		**Sn**	**07 48 15.0**	**-0.6**

*ASRS **26** 08:06:26.0±1.6,53°.76N×91°.08E,h0km,M2.9,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 26 08:06:33.7±3.9,53°.55N×90°.84E,h0km,mbtmp2.8/3, ML2.2/2,Error ellipse: s-maj=35.3km s-min=25.4km az=31.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.60**	**279**	Pn		Pn	08 07 31.4	+0.8
	0.4nm,0.3s,baz=93,slow=15,SNR=7.6							
ZALV					Sn	Sn	08 08 14.3	+0.5
	0.2nm,0.3s,baz=104,slow=24,SNR=5.5							
ZALV					Lg	Lg	08 08 26.8	
	0.8nm,0.3s,baz=95,slow=27,SNR=10 0.7nm,0.3s							
KURBB	**Kurchatov Arra**	**8.13**	**254**	Pn		Pn	08 08 31.7	-1.1
	0.3nm,0.3s,baz=65,slow=9.6,SNR=1.8							
KURBB					Sn	Sn	08 10 05.2	-0.1
	0.1nm,0.3s,baz=67,slow=24,SNR=6.8							
KURBB					Lg	Lg	08 10 48.9	
	0.1nm,0.3s,baz=70,slow=32,SNR=7.4							
MKAR	**Makanchi Array**	**8.70**	**222**	Pn		Pn	08 08 42.0	+1.2
	0.1nm,0.3s,baz=39,slow=9.4,SNR=1.6							
MKAR					Lg	Lg	08 11 08.8	
	baz=32,slow=33 0.1nm,0.4s							
SONM	**Songino Array**	**11.39**	**114**	Lg		Lg	08 12 32.1	
	baz=290,slow=27							
I34MN	**SONGINO INFRAS**	**11.42**	**114**	I		I	09 11 10.0	
	baz=314,slow=329,SNR=1.2							

IDC 26 08:08:20.7±227.0,56°.88N×42°.05E,h0km,Error ellipse: s-maj=92.8km s-min=59.2km az=90.0,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**2.57**	**269**	I		I	08 21 25.0	
	0.2nm,1.4s,baz=84,slow=330,SNR=9.5							
I31KZ	**AKTYUBINSK INF**	**11.47**	**118**	I		I	09 16 50.0	
	baz=318,slow=322,SNR=1.6							
I37NO	**I37NO**	**16.06**	**329**	I		I	09 54 00.0	
	baz=123,slow=334,SNR=0.6							
I46RU	**ZALESOVO INFRA**	**24.16**	**79**	I		I	10 36 00.0	
	baz=292,slow=334,SNR=2.1							
I34MN	**SONGINO INFRAS**	**38.97**	**75**	I		I	12 08 40.0	
	baz=302,slow=333,SNR=0.6							

*UPA **26** 08:13:08.6±1.8,9°.18N×77°.77W,h42km±20km,MD3.5 CATAC **26** 08:13:08.7±0.2,9°.N±5°.×7°.8W±°,h46km±8km,M3.7/15, mb3.7/3,mB4.7/1,MLv3.8/15,Mw(mB)4.0/1,Error ellipse: s-maj=10.4km s-min=2.7km az=6.8,confirmed UCR **26** 08:13:08.7±1.4,9°.10N×77°.85W,h71km±58km,MW3.6*

*RSNC **26** 08:13:09.5±0.0,9°.N±1°.×7°.8W±°,h58km±3km,M3.2,mb4.0, mB5.1,ML2.9,Mw(mB)4.4*
ISC 26 08:13:09.5±0.8,9°.06N±0°.03×77°.82W±0°.02,h53km±13km, n86,σ1s57/148,3C,Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TOTI	**Torti**	**0.51**	**256**	*e*P		**Pn**	**08 13 20.4**	**-0.6**
UPD2	**Meteti**	**0.54**	**201**	*e*P		**Pn**	**08 13 20.6**	**-0.9**
CAP2	**Capurgana**	**0.60**	**132**	*e*P		**Pn**	**08 13 21.8**	**-0.4**
CAP2				*e*S		**Sn**	**08 13 32.4**	**+0.9**
CAP2	**Capurgana**	**0.60**	**132**	P		**Pn**	**08 13 21.8**	**-0.4**
CAP2				S		**Sn**	**08 13 31.8**	**+0.3**
CAPC	**Capurgana**	**0.62**	**132**	P		**Pn**	**08 13 21.7**	**-0.7**
CAPC				S		**Sn**	**08 13 31.8**	**0.0**
LCBC	**Los crdobas,**	**1.44**	**98**	P		**Pn**	**08 13 34.1**	**+0.8**
LCBC				P		**P**	**08 13 34.3**	**+1.0**
LCBC				P		**P**	**08 13 34.3**	**+1.0**
LCBC				S		**Sn**	**08 13 54.0**	**+2.8**
LCBC	**Los crdobas,**	**1.44**	**98**	P		**Pn**	**08 13 33.9**	**+0.6**
LCBC				S		**Sn**	**08 13 50.9**	**-0.3**
CAZU	**Cerro Azul, Pa**	**1.58**	**277**	⇑*e*P		**Pn**	**08 13 34.3**	**-1.0**
CAZU				*e*S		**Sn**	**08 13 54.8**	**0.0**
UPA	**Univ. de Panam**	**1.70**	**268**	*e*P		**Pn**	**08 13 36.2**	**-0.6**
FLAM	**Flamenco Islan**	**1.71**	**265**	*e*P		**Pn**	**08 13 36.2**	**-0.7**
FLAM				*e*S		**Sn**	**08 13 56.4**	**-1.2**
TABO3	**Taboga, Panama**	**1.74**	**261**	*e*P		**Pn**	**08 13 37.1**	**-0.2**
ARRA3	**Arraijan, Pana**	**1.82**	**267**	*e*P		**Pn**	**08 13 37.9**	**-0.5**
ARRA3				*e*S		**Sn**	**08 14 00.1**	**-0.3**
GAMB1	**Gamboa**	**1.87**	**272**	*e*P		**Pn**	**08 13 38.5**	**-0.7**
GAMB1				*e*S		**Sn**	**08 14 02.4**	**+0.7**
FRIJ	**El Hiral**	**1.89**	**275**	*e*P		**Pn**	**08 13 39.3**	**-0.1**
PTAC	**Punta Ardita,**	**1.90**	**180**	*e*P		**Pn**	**08 13 38.4**	**-1.1**
PTAC	**Punta Ardita,**	**1.90**	**180**	P		**Pn**	**08 13 38.2**	**-1.3**
PTAC				S		**Sn**	**08 14 00.6**	**-1.7**
CHOR3	**La Chorrera**	**1.93**	**265**	*e*P		**Pn**	**08 13 40.8**	**+0.8**
CHOR3

JAMC				S		Sn	08 15 39.6	-1.8
	5.3nm,1.2s							
CHIC	Chingaza	5.98	137	P		Pn	08 14 37.0	+1.1
CHIC				S		Sn	08 15 42.3	-1.0
PRAC	Prado	6.05	151	P		Pn	08 14 38.5	+1.9
URIC	Uribia, Colomb	6.30	65	P		Pn	08 14 39.9	0.0
	26nm,1.4s							
URIC				S		Sn	08 15 48.3	-2.3
	26nm,1.4s							
POPC	Popayan, Colom	6.57	170	P		Pn	08 14 43.2	-0.7
	2.9nm,0.9s							
POPC				S		Sn	08 15 56.6	-1.0
	2.9nm,0.9s							
BBAC	Balboa, Cauca	7.01	175	P		Pn	08 14 49.7	-0.2
BBAC				S		Sn	08 16 06.6	-1.8
ESPN	Las Esperanzas	7.10	297	P		Pn	08 14 49.5	-1.3
ESPN				S		Sn	08 16 00.6	-10
SDV	Santo Domingo	7.10	91	P		Pn	08 14 49.7	-1.3
	14nm,0.6s							
SDV				S		Sn	08 16 06.1	-4.3
	14nm,0.6s							
JTS	Las Juntas de	7.14	280	P		Pn	08 14 50.6	-0.9
JTS				S		Sn	08 16 09.3	-2.0
RCC	Rio Carpintero	11.06	10	*e*P		Pn	08 15 46.2	+1.1
GTBY	Guantanamo Bay	11.12	13	*e*P		Pn	08 15 47.3	+1.5
QMBU	Quimbuelo	11.45	14	*e*P		Pn	08 15 51.6	+1.1
PINC	Pinares de May	11.53	10	*e*P		Pn	08 15 52.7	+1.3
MASC	Masc	11.58	17	*e*P		Pn	08 15 53.4	+1.3

IDC 26 08:15:24.4±7.6, 22°29N×144°18E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=315.4km s-min=24.8km az=77.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.43	96	T	T	08 43 49.8	
	baz=283,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	21.44	96	T	T	08 43 49.5	
	baz=283,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	21.45	96	T	T	08 43 52.1	
	baz=283,slow=75,SNR=9.1						
WRA	Warramunga Arr	43.06	194	P	P	08 23 25.6	-0.6
	0.4nm,0.6s,baz=16,slow=8.6,SNR=5.7						
	0.4nm,0.6s						
ASAR	Alice Springs	46.77	193	P	P	08 23 56.0	+0.4
	0.3nm,0.8s,baz=14,slow=13,SNR=4.6						
	0.3nm,0.8s						
ZALV	Zalesovo Beam	54.32	321	P	P	08 24 52.3	-0.2
	0.4nm,0.5s,baz=95,slow=7.3,SNR=2.8						
	0.4nm,0.5s						
MKAR	Makanchi Array	54.98	312	P	P	08 24 58.1	+0.7
	0.2nm,0.5s,baz=108,slow=8.2,SNR=2.4						
	0.2nm,0.5s						
BVAR	Borovoye Array	62.82	319	P	P	08 25 51.3	-0.5
	1.3nm,0.6s,baz=100,slow=6.0,SNR=5.9						
	1.3nm,0.6s						

CATAC 26 08:15:33.1±0.6, 11°N±3°×87°W±°, h28km±6km, M3.2/19, MLv3.2/19, 10C-4D, Error ellipse: s-maj=7.2km s-min=4.1km az=28.2, confirmed, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.89	24	⇓P	Pn	08 15 49.1	-0.7
NANN	Nandasmo	1.00	55	S	Sb	08 16 06.4	+1.7
NANN	Nandasmo	1.00	55	⇑P	Pb	08 15 52.0	+0.1
UNAN	Cigeo UNAN	1.01	42	⇑P	Pb	08 15 51.7	-0.2
UNAN				S	Sb	08 16 04.9	+0.1
APQ2	Apoyeque	1.04	37	P	Pn	08 15 50.8	-1.0
APQ2				S	Sn	08 16 04.6	-0.9
MGAN	Managua	1.05	42	S	Sb	08 16 06.4	+0.4
MGAN	Managua	1.05	42	⇑P	Pn	08 15 51.7	-0.3
WILN	Americas 2	1.10	44	⇓P	Pn	08 15 52.5	-0.1
WILN				S	Sb	08 16 07.5	+0.1
MOMN	Momotombo	1.12	22	⇑P	Pn	08 15 52.5	-0.5
CNGA	AI SSO del Vol	1.15	13	⇑P	Pn	08 15 53.2	-0.3
CNGN	Cerro Negro	1.16	13	S	Sb	08 16 09.2	-0.1
CNGN	Cerro Negro	1.16	13	⇑P	Pn	08 15 53.3	-0.3
MOM2	El Cardon	1.17	24	⇑P	Pn	08 15 53.5	-0.1
MOM2				S	Sb	08 16 09.3	-0.1
MOM3	MOM3	1.22	21	P	Pn	08 15 54.2	-0.1
MOM3				S	Sb	08 16 10.7	-0.2
PKGN	Cerro Pekin	1.30	359	P	Pn	08 15 55.1	-0.3
PKGN				S	Sn	08 16 12.2	+0.3
BOAB	BOACO BROADBAN	1.67	49	S	Sn	08 16 12.4	-0.2
BOAB	BOACO BROADBAN	1.67	49	⇑P	Pn	08 15 59.8	-0.6
CSGN	Cosiguina Volc	1.71	340	P	Pn	08 16 00.9	-0.2
CSGN				S	Sn	08 16 23.2	+1.1
LIMN	Finca el Limon	1.79	19	⇓P	Pn	08 16 01.9	-0.3
LIMN				S	Sn	08 16 24.5	+0.4
MATN	Matagalpa	1.86	33	S	Sn	08 16 25.3	-0.6
MATN	Matagalpa	1.86	33	⇑P	Pn	08 16 01.8	-1.4
CNCH	Conchagua	2.08	336	S	Sn	08 16 32.4	+0.9
LCND	La Caada	2.14	335	P	Pn	08 16 06.7	-0.2
RCON	San Juan de Ri	2.25	20	P	Pn	08 16 08.8	+0.1
RCPN	Sur Rio San Ju	2.31	21	P	Pn	08 16 10.0	+0.5
RCVN	Varillal2	2.33	19	⇑P	Pn	08 16 10.0	+0.3
YUSH	Yuscaran	2.58	3	⇓P	Pn	08 16 13.6	+0.5

*PDG **26** 08:19:02.3±0.4, 41°.56N×19°.59E, h12km±1km, MD2.9/1, ML2.9/12, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0*
*SKO **26** 08:19:05.1, 41°.61N×19°.40E, h0km, ML3.2*
*TIR **26** 08:19:05.1, 41°.67N×19°.54E, h8km±3km, Ml3.3/3*
*IDC **26** 08:20:02.5±42.0, 45°.67N×27°.86E, h0km, mb3.8/2, mbtmp3.8/3, ML2.9/1, MS3.1/1, Error ellipse: s-maj=758.1km s-min=40.5km az=48.0*

ISC 26 08:19:03.9±1.1, 41°67N±0°.02×19°46E±0°.03, h7km±8km, n42, σ1§16/65, 10C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.34	331	⇑*i*Pg	Pg	08 19 10.2	-0.4
ULC				*i* Sg	Sb	08 19 17.4	-0.6
SDA	Shkodra	0.39	4	P	Pg	08 19 12.2	+0.7
SDA				S	Sb	08 19 18.5	-0.8
TIR	Tirane	0.44	136	P	Pg	08 19 12.3	0.0
TIR				Sg	Sg	08 19 15.9	-2.2
TIR				AML	AML	08 19 17.6	
	14nm,0.2s						
TIR	Tirane	0.44	136	*i* Pg	Pg	08 19 12.4	0.0
TIR				*i* Sg	Sg	08 19 18.3	+0.2
DRME	Dracevica, Mon	0.56	338	⇑*i*Pg	Pg	08 19 14.9	+0.2
DRME				*i* Sg	Sb	08 19 25.0	+0.7
PHP	Peshkopia	0.73	88	Pg	Pg	08 19 16.8	-1.1
PHP				Sg	Sg	08 19 27.3	-0.1
PHP				AML	AML	08 19 31.8	
	5.8nm,0.6s						
BUM	Brajici-Budva	0.77	326	⇓*i*Pg	Pg	08 19 18.1	-0.5
BUM				*i* Sg	Sn	08 19 31.7	-1.3
PDG	Podgorica	0.78	349	⇑P	Pg	08 19 18.6	-0.3
PDG				⇓S	Sn	08 19 32.8	-0.5
PDG	Podgorica	0.78	349	⇓*i*Pg	Pg	08 19 17.4	-1.5
PDG				*i* Sg	Sn	08 19 32.3	-1.0
CEME	Cevo	0.97	335	⇓*i*Pg	Pb	08 19 22.8	-0.3
CEME				*i* Sg	Sn	08 19 39.0	+0.9
PVY	Plav	1.00	21	⇑*i*Pg	Pg	08 19 21.5	-1.6
PVY				*i* Sg	Sb	08 19 37.7	+0.8
HCY	Herceg Novi	1.06	318	⇑*i*Pg	Pb	08 19 24.7	0.0
HCY				*i* Sg	Sn	08 19 42.2	+1.9
OHR	Ohrid	1.15	118	*i* Pg	Pg	08 19 25.6	-0.3
OHR				*i* Sg	Sn	08 19 43.2	+0.8
OHR				*e*Lg	Lg	08 19 44.8	
	comp=N,395nm,0.6s						
OHR				*e*Lg	Lg	08 19 45.8	
	comp=E,660nm,0.6s						
NKME	Niksic	1.17	341	⇓*i*Pg	Pg	08 19 25.4	-0.9
NKME				*i* Sg	Sn	08 19 44.9	+2.0
KOME	Kolasin	1.19	2	⇓*i*Pg	Pb	08 19 26.8	0.0
KOME				*i* Sg	Sn	08 19 45.8	+2.4
VLO	Vlora	1.20	179	Pg	Pn	08 19 27.6	+0.6
VLO				Sg	Sn	08 19 43.9	+0.4
VLO				AML	AML	08 19 51.1	
	comp=E,12nm,0.5s						
IVA	Berane	1.25	15	⇓*i*Pg	Pg	08 19 25.6	-2.2
IVA				*i* Sg	Sn	08 19 45.6	+0.6
BRY	Bratogost	1.41	331	⇑*i*Pg	Pn	08 19 30.2	0.0
BRY				*i* Sg	Sg	08 19 52.4	+3.0
KBN	Korca	1.44	136	P	Pg	08 19 31.9	+0.3
KBN				Sn	Sg	08 19 51.6	+1.4
SKO	Skopje	1.51	78	*i* Pg	Pg	08 19 34.2	+1.4
SKO				*i* Sg	Sg	08 19 54.0	+1.6
UPM	Unac-Piva	1.59	345	⇑*i*Pn	Pn	08 19 32.5	-0.2
UPM				*i* Sn	Sg	08 19 56.4	+1.3
PLE	Pljevlja	1.67	358	⇓*i*Pn	Pn	08 19 33.3	-0.3
PLE				*i* Sn	Sg	08 19 57.9	+0.5
NEST	Nestorio	1.73	136	P	Pn	08 19 34.5	0.0
NEST				S	Sb	08 19 57.6	-0.5
KZN	Kozani	2.21	127	P	Pn	08 19 41.7	+0.7
IGT	Igoumenitsa	2.23	162	P	Pn	08 19 40.9	-0.4
MATE	Matera	2.32	245	⇓P	Pn	08 19 42.7	+0.2
VAY	Valandovo	2.36	97	*i* Pn	Pn	08 19 44.3	+1.3
VAY				*i* Sn	Sn	08 20 12.7	+0.5
VAY				*e*Lg	Lg	08 20 12.9	
	comp=N,87nm,0.8s						
VAY				*e*Lg	Lg	08 20 13.8	
	comp=E,205nm,1.1s						
BOVS	Bovan	2.57	39	⇓P	Pn	08 19 45.2	-0.8
KNT	Kendrikon	2.63	100	*i* Pn	Pn	08 19 48.4	+1.6
KKB	Krupnik	2.75	85	*i* Pn	Pn	08 19 47.8	-0.6
THL	Klokotos Trika	2.86	136	P	Pn	08 19 50.7	+0.9
TSLK	Tsoukalades, L	2.98	162	P	Pn	08 19 50.8	-0.7
LKD2	Lefkada island	3.01	162	P	Pn	08 19 48.3	-3.8
TIP	Timpagrande	3.23	221	⇓P	Pn	08 19 54.7	-0.3
BZS	Buzias	4.25	21	⇓P	Pn	08 20 08.6	-0.4
LOT	Lotru	4.91	38	⇑P	Pn	08 20 17.4	-0.8
VOIR		5.54	45	⇑P	Pn	08 20 26.5	-0.3
MLR	Muntele Rosu	6.06	49	⇑P	Pn	08 20 32.3	-1.8
FINES	FINESS Array B	20.21	9	Pn	P	08 23 38.9	-0.1
	comp=E,0.1nm,0.3s,baz=173,slow=13,SNR=5.3						
	comp=E,1.5nm,0.6s						
ARTI	Arti	29.00	46	LR	LR	08 33 19.8	
	comp=E,51nm,18.7s,baz=256,slow=37						
ZALV	Zalesovo Beam	44.04	51	P	P	08 27 11.5	-0.4
	comp=E,1.4nm,0.6s,baz=279,slow=9.7,SNR=6.0						
	comp=E,1.4nm,0.6s						
MKAR	Makanchi Array	44.25	61	P	P	08 27 13.6	-0.2
	comp=E,0.7nm,0.7s,baz=289,slow=7.0,SNR=4.8						
	comp=E,0.7nm,0.7s						

IDC 26 08:19:55.5±4.7, 6°13S×148°94E, h112km±46km, mb3.3/2, mbtmp3.8/4, Error ellipse: s-maj=116.5km s-min=32.9km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.71	208	P	Pn	08 20 51.8	+0.8
	11nm,0.3s,baz=16,slow=7.4,SNR=5.7						
PMG				S	Sn	08 21 33.7	-0.1
	48nm,0.4s,baz=75,slow=16,SNR=8.7						
WRA	Warramunga Arr	19.75	225	P	P	08 24 17.0	+0.3
	2.0nm,0.4s,baz=48,slow=11,SNR=16						
ASAR	Alice Springs	22.66	218	P	P	08 24 48.0	+0.5
	1.2nm,0.5s,baz=54,slow=8.8,SNR=30						
	1.2nm,0.5s						
ILAR	Eielson Array	84.84	23	P	P	08 32 17.1	-0.3
	0.4nm,0.8s,baz=258,slow=5.6,SNR=4.9						
	0.4nm,0.8s						

*NEIC **26** 08:37:28.2±2.1, 50°.85N±0°.04×179°.29W±0°.07, h10km±1km, mb4.2/37, ML4.0/14, ML3.5(AEIC), Error ellipse: s-maj=8.3km s-min=6.5km az=123.0*
*AEIC **26** 08:37:30.9±2.1, 50°.92N±0°.05×179°.19W±0°.07, h13km±4km, Error ellipse: s-maj=7.3km s-min=5.5km az=142.0*
*IDC **26** 08:37:35.8±3.5, 51°.43N×179°.04W, h52km±28km, mb3.7/13, mbtmp4.0/16, ML3.7/3, Error ellipse: s-maj=41.9km s-min=15.9km az=0.0*

ISC 26 08:37:29.9±2.0, 50°9N±0°.1×179°32W±0°.03, h25km±11km, n118, σ1§20/116, mb4.1/23, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.72	26		Pb	08 37 43.6	-0.2
GAKI					Sb	08 37 53.1	-0.2
GASW	Gareloi Southw	0.92	18		Pb	08 37 47.4	+0.3
GASW					Sb	08 38 00.8	+1.8
GALAA	Gareloi Lava P	0.92	22		Pb	08 37 47.6	+0.4
GALAA					Sb	08 37 58.9	-0.2
GANO	Gareloi North	0.97	19		Pb	08 37 48.1	+0.1
GANO					Sb	08 38 00.3	-0.1
GANE	Gareloi Northe	0.97	20		Pb	08 37 48.1	0.0
GANE					Sb	08 38 01.0	+0.5
AMKA	Amchitka	0.99	299		Pb	08 37 49.4	+1.1
AMKA	Amchitka	0.99	299		Sb	08 38 02.8	+1.9
CESW	Semis' Southwe	1.21	325		Pb	08 37 53.6	+1.3
CERB	Semis' Cerberu	1.22	328		Pb	08 37 52.6	+1.8
TASE	Tanaga Southea	1.23	40		Pb	08 37 52.7	+0.3
TAFL	Tanaga Flats	1.23	46		Pn	08 37 51.7	+0.2
TAFL					Sb	08 38 08.6	+0.6
CEPE	Semis' Perret	1.24	329		Pb	08 37 53.4	+0.8
TANO	Tanaga North	1.26	36		Pb	08 37 52.8	-0.1
TAFP	Tanaga Falls P	1.30	40		Pn	08 37 53.0	+0.5
TAFP					Sb	08 38 11.1	+1.2
TAPA	Tanaga Point A	1.31	46		Sb	08 38 10.2	0.0
KIWB	Kanaga Island	1.66	54		Pn	08 37 57.7	+0.4
KIWB				IAML		08 38 25.8	
	comp=N,2μm,0.5s						
KIWB				IAML		08 38 25.8	
	comp=E,2μm,0.7s						
KIKV	Kanaga Island	1.66	53		Sn	08 38 18.6	+0.7
LSSE	Little Sitkin	1.67	309		Pb	08 38 00.3	+0.3
KINC	Kanaga Island	1.71	52		Sb	08 38 20.9	-0.9
LSNW	Little Sitkin	1.72	309		Pb	08 38 00.5	-0.3
ADK	Adak	1.92	58		Pn	08 38 01.6	+0.7
ADK				IAML		08 38 28.9	
	comp=E,1μm,0.4s						
ADK				IAML		08 38 30.8	
	comp=E,1μm,0.6s						
ADK	Adak	1.92	58		Sn	08 38 24.4	+0.2
ADAG	Mount Adagdak	2.01	57		Pn	08 38 03.7	+1.5
ADAG					Sb	08 38 28.3	-2.0
ETKA	Kagalaska Isla	2.06	61		Pn	08 38 03.7	+0.8
GSCK	Great Sitkin C	2.26	60		Sn	08 38 34.2	+1.5
GSTD	Great Sitkin T	2.29	59		Pn	08 38 07.3	+1.1
GSTD					Sn	08 38 35.2	+1.6
GSTR	Great Sitkin T	2.36	59	Pn	Pn	08 38 05.6	-1.4
GSIG	Igitkin Island	2.38	62		Pn	08 38 08.5	+1.1
ATKA	Atka Island	3.45	66		Pn	08 38 22.4	+0.4
ATKA				IAML		08 39 16.8	
	comp=N,270nm,0.6s						
ATKA				IAML		08 39 17.3	
	comp=E,196nm,0.5s						
SHEM	Shemya Is, Ala	4.47	297	P	Pn	08 38 41.0	+5.0
	comp=E,24nm,0.3s,baz=62,slow=3.2,SNR=11						
SHEM				S	Sb	08 39 37.6	-3.4
	comp=E,142nm,1.1s,baz=286,slow=15,SNR=1.6						
	comp=E,56nm,0.4s						
SHEM	Shemya Is, Ala	4.47	297		Pn	08 38 34.4	-1.6
SHEM				IAML		08 39 52.2	
	comp=E,107nm,1.2s						
SMY	Shemya	4.47	297	Pn	Pn	08 38 35.0	-1.0
SMY				IAML		08 39 57.0	
	comp=N,160nm,1.0s						
SDPT	Sand Point	12.15	61	Pn	Pn	08 40 17.9	-3.3
CNBA	Chernabura Isl	12.54	64	Pn	Pn	08 40 23.6	-2.9
N15K	Kwethluk River	14.24	42	P	P	08 40 57.3	+0.5
PETK	Petropavlovsk-	14.31	288	P	P	08 40 56.0	-1.6
	comp=N,0.2nm,0.3s,baz=100,slow=14,SNR=4.6						
	comp=N,4.4nm,1.0s						
O16K	Kokwok River B	14.84	46	Pn	Pn	08 40 58.2	+0.4
PLK4	Peulik 4	14.96	54	Pn	Pn	08 40 58.2	-1.3
KDAK	Kodiak Island	16.96	56	P	Pn	08 41 21.7	-3.4
	comp=N,0.5nm,0.3s,baz=156,slow=1.3,SNR=20						
KDAK				S	Sn	08 44 26.9	-5.7
	comp=N,5.8nm,1.0s,baz=214,slow=18,SNR=1.4						
	comp=N,2.6nm,0.3s						
SKT	Skwentna	18.77	43		Pn	08 41 47.9	+0.5
SKT				IAmb	IAmb	08 42 12.9	
	comp=Z,8.3nm,0.8s						
SLKM	Skilak Lake	18.84	48	P	Pn	08 41 48.6	+0.2
SUA	Susitna One	18.92	45		Pn	08 41 49.6	+0.2
SUA				IAmb	IAmb	08 42 10.7	
	comp=Z,13nm,1.1s						
SEW	Seward	19.10	50	P	P	08 41 50.2	-0.2
L22K	Petersville	19.32	42		P	08 41 53.3	+0.5
CUT	Chulitna	19.48	43	P	P	08 41 54.7	+0.1
KTH	Kantishna Hill	19.69	39	P	Pn	08 41 58.0	-0.5
KTH				IAmb	IAmb	08 41 58.5	
	comp=Z,11nm,0.8s						
BPAW	Bear Paw Mtn.	19.92	38		Pn	08 42 00.3	-0.9
IMAR	Indian Mountai	19.95	31	P	Pn	08 42 00.7	-0.8
F20K	Avaraart Lake	20.02	27	P	Pn	08 42 01.2	-1.0
F20K				IAmb	IAmb	08 42 08.8	
	comp=Z,12nm,1.4s						
I21K	Tanana	20.09	34	P	Pn	08 42 02.6	-0.6
I21K				IAmb	IAmb	08 42 03.9	
	comp=Z,8.0nm,0.9s						
RND	Reindeer	20.47	41	P	P	08 42 05.2	-0.3
RND				IAmb	IAmb	08 42 32.1	
	comp=Z,11nm,1.4s						
SCM	Sheep Creek Mo	20.58	46	P	P	08 42 05.4	-1.3
F21K	Alatna River	20.80	29	P	P	08 42 09.7	+0.8
D20K	Etivluk River	20.95	23	IAmb	IAmb	08 42 29.3	
	comp=Z,15nm,1.2s						
DHY	Denali Highway	20.97	42	P	P	08 42 10.8	-0.1
DHY				IAmb	IAmb	08 42 15.7	
	comp=Z,8.0nm,0.7s						
WRH	Wood River Hil	21.22	38	P	P	08 42 14.1	+0.7
CCB	Clear Creek Bu	21.40	38	P	P	08 42 15.4	0.0
G23K	Bananza Creek	21.60	32	P	P	08 42 17.9	+0.4
HDA	Harding Lake	21.64	39	P	P	08 42 17.8	-0.2
IL31		21.82	38	P	P	08 42 19.3	-0.4
ILAR	Eielson Array	21.82	38	P	P	08 42 17.4	-2.5
	comp=Z,0.5nm,0.4s,baz=232,slow=8.2,SNR=16						
	comp=Z,0.5nm,0.4s						
ILAR	Eielson Array	21.82	38	P	P	08 42 20.4	+0.6
GLB	Gilahina Butte	22.11	48	P	P	08 42 22.5	-0.6
GLB				IAmb	IAmb	08 42 56.7	
	comp=Z,11nm,1.3s						
VRDI	Verde Repeater	22.23	49	P	P	08 42 24.7	+0.1
VRDI				IAmb	IAmb	08 43 01.2	
	comp=Z,11nm,1.4s						
RIDG	Independent Ri	22.27	42	P	P	08 42 24.1	-0.6
RIDG				IAmb	IAmb	08 42 25.0	
	comp=Z,15nm,1.5s						
G24K	Hadweenzic Riv	22.46	33	P	P	08 42 27.4	+0.6
G24K				IAmb	IAmb	08 42 28.5	
	comp=Z,10.0nm,1.1s						
DOT	Dot Lake	22.57	42	P	P	08 42 27.4	-0.5
DOT				IAmb	IAmb	08 42 28.8	
	comp=Z,7.0nm,0.9s						
F24K	Squaw Lake	22.74	31	P	P	08 42 30.1	+0.3
F24K				IAmb	IAmb	08 42 31.7	
	comp=Z,12nm,1.2s						
J26L	Joseph Creek	23.05	40	P	P	08 42 32.0	-1.0
G26K	Porcupine Rive	23.88	34	P	P	08 42 41.1	+0.1
G26K				IAmb	IAmb	08 42 43.2	
	comp=Z,8.8nm,1.3s						
D25K	Kavik River	24.17	28	P	P	08 42 43.8	0.0
D25K				IAmb	IAmb	08 42 45.2	
	comp=Z,5.9nm,0.9s						
I30M	Mount Dempster	26.20	41	IAmb	IAmb	08 43 09.8	
	comp=Z,7.6nm,1.5s						
H11N2	WAKE ISLAND Hy	32.97	204	T	T	09 19 18.6	
	baz=17,slow=76,SNR=6.5						
H11N3	WAKE ISLAND Hy	32.98	204	T	T	09 19 19.8	
	baz=17,slow=76,SNR=6.0						
H11N1	WAKE ISLAND Hy	32.99	204	T	T	09 19 22.4	
	baz=17,slow=76,SNR=5.0						
H11S1	WAKE ISLAND Hy	34.19	204	T	T	09 20 52.5	
	baz=18						
H11S2	WAKE ISLAND Hy	34.20	204	T	T	09 20 55.1	
	baz=18						
H11S3	WAKE ISLAND Hy	34.20	204	T	T	09 21 02.2	
	baz=18						
BCYI	Bear Canyon	43.59	72	P	P	08 45 33.2	+1.3
BCYI				IAmb	IAmb	08 45 34.7	
	comp=Z,4.7nm,1.2s						
SONM	Songino Array	46.56	297	P	P	08 45 57.0	+1.6
	comp=Z,0.6nm,0.6s,baz=46,slow=6.4,SNR=3.6						
	comp=Z,0.6nm,0.6s						
PD31	Pinedale Array	46.77	72	P	P	08 45 58.4	+1.2
PD31				IAmb	IAmb	08 45 59.8	
	comp=Z,3.4nm,1.1s						
PDAR	Pinedale Array	46.77	72	P	P	08 45 58.0	+0.8
	comp=Z,1.5nm,0.9s,baz=314,slow=2.5,SNR=12						
	comp=Z,1.5nm,0.9s						
PDAR	Pinedale Array	46.77	72	P	P	08 45 59.2	+2.0
PV11	David Mesa, Pa	49.87	76	P	P	08 46 23.7	+2.6
SPITS	Spitsbergen Ar	50.82	356	P	P	08 46 26.8	-0.8
	comp=Z,2.6nm,0.5s,baz=32,slow=8.5,SNR=10						
	comp=Z,2.6nm,0.5s						
ARCES	ARCESS Array B	58.50	350	P	P	08 47 22.6	-0.7
	comp=Z,3.3nm,0.8s,baz=18,slow=6.5,SNR=5.1						
	comp=Z,3.3nm,0.8s						
TXAR	Lajitas Array	59.05	81	P	P	08 47 28.2	+0.4
	comp=Z,0.3nm,0.8s,baz=315,slow=7.3,SNR=5.2						
	comp=Z,0.3nm,0.8s						
KURK	Kurchatov	59.11	314	P	P	08 47 29.6	+1.8
KURK	Kurchatov	59.11	314	IAmb	IAmb	08 47 29.9	
	comp=Z,3.9nm,1.2s						
KURBB	Kurchatov Arra	59.21	314	P	P	08 47 29.6	+1.1
	comp=Z,2.3nm,0.5s,baz=43,slow=6.7,SNR=10						
	comp=Z,2.3nm,0.5s						
MKAR	Makanchi Array	60.07	308	P	P	08 47 35.3	+0.8
	comp=Z,0.9nm,0.4s,baz=48,slow=5.8,SNR=5.3						
	comp=Z,0.9nm,0.4s						
BVAR	Borovoye Array	61.03	320	P	P	08 47 41.3	+0.3
	comp=Z,0.6nm,0.4s,baz=38,slow=7.3,SNR=3.5						
BVAR				PcP	PcP	08 48 25.6	+1.7
	comp=Z,0.7nm,0.4s,baz=26,slow=3.7,SNR=2.1						
	comp=Z,0.6nm,0.4s						
FINES	FINESS Array B	66.17	347	P	P	08 48 14.0	-0.7
	comp=Z,1.2nm,0.6s,baz=19,slow=6.5,SNR=6.7						
	comp=Z,1.2nm,0.6s						
NOA	NORSAR Array B	68.08	354	P	P	08 48 26.7	-0.2
	comp=Z,0.4nm,0.5s,baz=337,slow=4.3,SNR=1.8						
	comp=Z,0.4nm,0.5s						
HFS	Hagfors

WRA				Sn	Sn	08 47 37.3	-3.9	
	0.1nm,0.3s,baz=332,slow=25,SNR=4.6							
	0.8nm,0.7s							
ASAR	Alice Springs	19.45	167	P	Pn	08 45 28.8	+2.1	
	0.6nm,0.3s,baz=347,slow=10,SNR=42							
ASAR				S	Sn	08 49 00.6	-4.3	
	0.1nm,0.4s,baz=334,slow=40,SNR=1.5							
ASAR				PcP	PcP	08 49 47.2	+0.4	
	0.3nm,0.4s,baz=350,slow=2.2,SNR=4.3							
	3.1nm,0.6s							
MKAR	Makanchi Array	65.91	327	P	P	08 51 44.8	0.0	
	0.4nm,0.4s,baz=119,slow=7.2,SNR=6.4							
	0.4nm,0.4s							
ZALV	Zalesovo Beam	69.18	334	P	P	08 52 03.5	-1.7	
	0.3nm,0.2s,baz=126,slow=5.8,SNR=1.3							
	0.3nm,0.2s							
KURBB	Kurchatov Arra	70.17	328	P	P	08 52 10.5	-0.9	
	0.5nm,0.2s,baz=128,slow=5.4,SNR=4.2							
	0.5nm,0.2s							

*SJA **26** 08:48:25.4±0.7,35˚.48S×72˚.94W,h5km,ML3.6,MW3.4*
*GUC **26** 08:48:31.8±0.7,35˚.48S×72˚.77W,h15km±8km,ML3.5*

ISC 26 08:48:30.1±1.4,**35˚.50S**±0˚.03×**72˚.79W**±0˚.06,**h13**km±10km,
n41,σ1**9**44/71,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Hualane**	**0.85**	**56**	*e*P	**Pb**	**08 48 46.5**	**-0.3**
GO05				*i* S	**Sg**	**08 48 57.5**	**-0.3**
GO05				IAML		08 49 01.0	
	comp=N,3μm,0.3s						
GO05	**Hualane**	**0.85**	**56**	*e*P	**Pb**	**08 48 46.5**	**-0.3**
GO05				*e*S	**Sg**	**08 48 58.2**	**+0.4**
GO05				IAML		08 48 59.4	
	comp=Z,1μm,0.2s						
ML02	**Panimavida**	**1.15**	**104**	*e*P	**Pn**	**08 48 51.4**	**-0.5**
ML02				*i* S	**Sb**	**08 49 05.6**	**-1.0**
ML02				IAML		08 49 14.6	
	comp=E,4μm,0.8s						
ML02	**Panimavida**	**1.15**	**104**	*e*P	**Pn**	**08 48 52.0**	**+0.1**
ML02				*e*S	**Sg**	**08 49 08.1**	**+1.0**
ML02				IAML		08 49 16.1	
	comp=Z,2μm,0.6s						
BO03	**Pichilemu**	**1.21**	**34**	*e*P	**Pn**	**08 48 51.6**	**-1.1**
BO03				*i* S	**Sb**	**08 49 07.0**	**-1.4**
BO03				IAML		08 49 10.1	
	comp=N,1μm,0.5s						
BI05	**Punta Hualpn**	**1.29**	**195**	*e*P	**Pg**	**08 48 55.9**	**+0.9**
BI02	**San Fabin de**	**1.69**	**134**	*e*P	**Pn**	**08 49 00.2**	**+0.7**
BI02				*i* S	**Sn**	**08 49 21.2**	**+0.2**
BI02				IAML		08 49 26.7	
	comp=E,835nm,0.4s						
BI02	**San Fabin de**	**1.69**	**134**	*e*P	**Pn**	**08 48 59.6**	**+0.1**
BI02				IAML		08 49 27.2	
	comp=Z,583nm,0.6s						
BO01	**Tunca**	**1.78**	**52**	*e*P	**Pn**	**08 49 00.8**	**+0.2**
BO01				*i* S	**Sn**	**08 49 23.2**	**+0.1**
BO01				IAML		08 49 31.1	
	comp=E,546nm,0.5s						
BO01	**Tunca**	**1.78**	**52**	*e*P	**Pn**	**08 49 00.8**	**+0.2**
BO01				*e*S	**Sg**	**08 49 27.4**	**0.0**
BO01				IAML		08 49 31.1	
	comp=Z,479nm,0.5s						
BO02	**Sierra Bellavi**	**1.79**	**67**	*e*P	**Pn**	**08 49 00.7**	**-0.1**
BO02				*i* S	**Sn**	**08 49 23.7**	**+0.3**
BO02	**Sierra Bellavi**	**1.79**	**67**	*e*P	**Pn**	**08 49 01.0**	**+0.2**
BO02				*e*S	**Sg**	**08 49 27.1**	**-0.6**
BO02				IAML		08 49 27.6	
	comp=Z,1μm,0.4s						
MT01	**Popeta**	**2.06**	**38**	*e*P	**Pn**	**08 49 05.2**	**+0.7**
MT01				*i* S	**Sn**	**08 49 29.2**	**-0.9**
MT01				IAML		08 49 40.2	
	comp=E,445nm,0.6s						
MT01	**Popeta**	**2.06**	**38**	*e*P	**Pn**	**08 49 04.2**	**-0.3**
MT01				*e*S	**Sn**	**08 49 30.8**	**+0.7**
MT01				IAML		08 49 42.2	
	comp=Z,299nm,0.8s						
VA05	**Santo Domingo**	**2.07**	**28**	*e*P	**Pb**	**08 49 06.9**	**-0.8**
VA05				*e*S	**Sg**	**08 49 35.0**	**-1.8**
MT09	**Talagante**	**2.27**	**41**	*e*P	**Pn**	**08 49 08.5**	**+1.0**
MT09				*e*S	**Sb**	**08 49 39.3**	**+0.2**
BO04	**La Punta**	**2.34**	**51**	*e*P	**Pb**	**08 49 10.3**	**-1.9**
BO04				*i* S	**Sb**	**08 49 40.0**	**-1.0**
BO04				IAML		08 49 46.5	
	comp=E,680nm,0.3s						
MT12	**Pirque**	**2.55**	**47**	*e*P	**Pb**	**08 49 15.2**	**-0.6**
MT02	**Curacav**	**2.62**	**32**	*e*P	**Pn**	**08 49 11.7**	**-0.4**
MT02	**Curacav**	**2.62**	**32**	*e*P	**Pn**	**08 49 11.7**	**-0.4**
MT02				*e*S	**Sn**	**08 49 40.9**	**-2.9**
MT02				IAML		08 49 55.0	
	comp=Z,128nm,0.4s						
VA01	**Torpederas**	**2.64**	**21**	*e*S	**Sg**	**08 49 59.1**	**+4.1**
VA01				IAML		08 50 00.9	
	comp=Z,120nm,0.9s						
LMEL	**Las Melosas**	**2.69**	**53**	*e*P	**Pb**	**08 49 15.8**	**-2.5**
LMEL				*i* S	**Sn**	**08 49 47.5**	**+1.7**
LMEL				IAML		08 49 57.9	
	comp=E,323nm,0.6s						
LMEL	**Las Melosas**	**2.69**	**53**	*e*P	**Pn**	**08 49 14.5**	**+1.2**
LMEL				*e*S	**Sn**	**08 49 47.7**	**+1.9**
LMEL				IAML		08 49 56.2	
	comp=Z,268nm,0.6s						
MT05	**Renca**	**2.70**	**39**	*e*P	**Pb**	**08 49 17.4**	**-0.9**
MT05				*e*S	**Sb**	**08 49 49.8**	**-1.5**
MT05				IAML		08 50 01.6	
	comp=Z,271nm,0.4s						
MT13	**San Alfonso**	**2.70**	**50**	*e*P	**Pb**	**08 49 17.6**	**-0.8**
MT13	**San Alfonso**	**2.70**	**50**	*e*P	**Pn**	**08 49 12.5**	**-0.9**
MT13				*e*P	**Pb**	**08 49 17.4**	**-1.0**
MT13				*e*S	**Sb**	**08 49 53.1**	**+1.6**
MT13				IAML		08 49 55.3	
	comp=Z,260nm,0.3s						
MT03	**Universidad Ad**	**2.74**	**44**	*e*P	**Pb**	**08 49 18.2**	**-1.0**
MT03	**Universidad Ad**	**2.74**	**44**	*e*P	**Pn**	**08 49 12.9**	**-1.0**
MT03				*e*S	**Sn**	**08 49 49.4**	**+2.4**
MT03				IAML		08 49 59.7	
	comp=Z,281nm,0.3s						
CANA	**Caviahue**	**2.76**	**150**	*e*P	**Pn**	**08 49 14.4**	**+0.1**
CANA				*e*S	**Sb**	**08 49 51.7**	**-1.6**
EDS3	**Malargue**	**2.77**	**97**	*e*P	**Pn**	**08 49 14.8**	**+0.4**
ROC1	**El Roble**	**2.91**	**31**	*e*P	**Pn**	**08 49 16.4**	**0.0**
ROC1				*e*S	**Sg**	**08 50 04.1**	**+0.4**
PEL	**Peldehue**	**2.92**	**37**	*e*P	**Pn**	**08 49 17.9**	**+1.5**
PEL				*e*S	**Sb**	**08 49 56.3**	**-1.5**
PEL				IAML		08 50 08.8	
	comp=Z,181nm,0.4s						
MT04	**Ro Olivares**	**3.02**	**47**	*e*P	**Pn**	**08 49 17.6**	**-0.3**
MT04				*e*S	**Sn**	**08 49 57.5**	**+3.3**
MT04				IAML		08 50 15.0	
	comp=Z,92nm,0.8s						
VA06	**Catapilco**	**3.18**	**23**	*e*P	**Pn**	**08 49 19.7**	**-0.2**
VA03	**San Esteban**	**3.30**	**35**	*e*P	**Pn**	**08 49 22.3**	**+0.7**
VA03	**San Esteban**	**3.30**	**35**	*e*P	**Pn**	**08 49 22.2**	**+0.6**
VA03				*e*S	**Sg**	**08 50 13.3**	**-2.8**
VA03				IAML		08 50 15.9	
	comp=Z,151nm,1.1s						
RFA	**San Rafael**	**3.61**	**80**	*e*P	**Pn**	**08 49 28.0**	**+2.1**
RFA				*e*S	**Sg**	**08 50 23.5**	**-2.7**
RFA				IAML		08 50 33.2	
	comp=Z,69nm,0.8s						
CO04	**Los Peladeros**	**3.76**	**24**	*e*P	**Pn**	**08 49 27.6**	**-0.5**
CO02	**Combarbal**	**4.54**	**20**	*e*P	**Pn**	**08 49 38.1**	**-0.5**
CO02				IAML		08 51 05.2	
	comp=Z,58nm,0.9s						
RTLS	**Leoncito**	**4.70**	**39**	*e*P	**Pn**	**08 49 42.2**	**+1.2**
RTLS				*e*S	**Sb**	**08 50 54.0**	**+4.8**
RTLS				IAML		08 51 04.1	
	comp=Z,83nm,0.9s						
CO03	**El Pedregal**	**4.97**	**21**	*e*P	**Pn**	**08 49 44.6**	**+0.1**
CO03				*e*S	**Sn**	**08 50 41.4**	**-0.5**
CO03				IAML		08 51 13.0	
	comp=Z,46nm,0.6s						

*CATAC **26** 08:50:33.2±0.8,13˚N±4˚×9˚.0W±˚,h4km±4km,M3.2/15,*
MLv3.2/15,Error ellipse: s-maj=8.6km s-min=4.2km
az=29.6,confirmed
*SNET **26** 08:50:34.0±0.9,12˚.81N×90˚.29W,h14km±6km,ML3.2*
*GCG **26** 08:50:35.2±0.5,12˚.95N×90˚.30W,h0km±10km,MD3.8*

ISC 26 08:50:33.6±2.5,**12˚.80N**±0˚.09×**90˚.39W**±0˚.09,**h24**km,**n58**,
σ**0**5**77**/62,**1C**,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAME	**Alcaldia de Sa**	**1.10**	**19**	P	**Pn**	**08 50 53.6**	**0.0**
FAME	**Alcaldia de Sa**	**1.10**	**19**	S	**Sn**	**08 51 08.8**	**+0.7**
LALI	**Alcalda de L**	**1.25**	**56**	S	**Sn**	**08 51 10.8**	**-0.9**
NUBE	**Las Nubes**	**1.25**	**28**	*e*P	**Pn**	**08 50 56.0**	**+0.2**
NUBE				*e*S	**Sb**	**08 51 12.4**	**0.0**
NUBE	**Las Nubes**	**1.25**	**28**	*e*P	**Pn**	**08 50 56.0**	**+0.2**
NUBE				*e*S	**Sb**	**08 51 12.6**	**+0.2**
NUBE	**Las Nubes**	**1.25**	**28**	P	**Pn**	**08 50 55.8**	**+0.1**
JAYA	**Jayaque - finc**	**1.25**	**47**	*e*P	**Pn**	**08 50 56.0**	**+0.2**
JAYA	**Jayaque - finc**	**1.25**	**47**	*e*P	**Pn**	**08 50 55.9**	**+0.2**
JAYA	**Jayaque - finc**	**1.25**	**47**	P	**Pn**	**08 50 56.0**	**+0.2**
JAYA	**Jayaque - finc**	**1.25**	**47**	S	**Sb**	**08 51 12.6**	**+0.1**
CEVE	**Cerro Verde**	**1.27**	**36**	*e*P	**Pb**	**08 50 56.6**	**-0.3**
CEVE	**Cerro Verde**	**1.27**	**36**	P	**Pb**	**08 50 56.7**	**-0.3**
CEVE	**Cerro Verde**	**1.27**	**36**	S	**Sb**	**08 51 13.1**	**+0.1**
SBLS	**San Blas**	**1.28**	**36**	*e*P	**Pn**	**08 50 56.5**	**+0.3**
SNJE	**San Jose**	**1.31**	**36**	*e*P	**Pb**	**08 50 57.1**	**-0.6**
RTR	**El Retiro**	**1.31**	**33**	⇑*e*P	**Pb**	**08 50 57.3**	**-0.4**
LOAL	**Lomas de Alarc**	**1.34**	**26**	*e*P	**Pb**	**08 50 57.6**	**-0.3**
LOAL	**Lomas de Alarc**	**1.34**	**26**	P	**Pb**	**08 50 57.7**	**-0.3**
LOAL	**Lomas de Alarc**	**1.34**	**26**	S	**Sb**	**08 51 15.3**	**+0.6**
PMON	**Piamonte**	**1.39**	**49**	*e*P	**Pb**	**08 50 58.2**	**-0.7**
PMON	**Piamonte**	**1.39**	**49**	P	**Pb**	**08 50 58.5**	**-0.5**
PMON	**Piamonte**	**1.39**	**49**	S	**Sb**	**08 51 16.7**	**+0.3**
BOQS	**Boqueron**	**1.43**	**49**	*e*P	**Pb**	**08 50 59.1**	**-0.6**
PANCS	**Alcalda de**	**1.43**	**55**	S	**Sb**	**08 51 16.4**	**-1.2**
UNIC	**Universidad Ca**	**1.44**	**35**	P	**Pb**	**08 50 58.9**	**-0.8**
UNIC	**Universidad Ca**	**1.44**	**35**	S	**Sb**	**08 51 18.4**	**+0.8**
LOMA	**Loma Larga**	**1.46**	**54**	*e*P	**Pn**	**08 50 58.3**	**-0.2**
LOMA	**Loma Larga**	**1.46**	**54**	P	**Pn**	**08 50 58.5**	**0.0**
LOMA	**Loma Larga**	**1.46**	**54**	S	**Sb**	**08 51 17.7**	**-0.7**
RBDL	**Robledal**	**1.48**	**28**	*e*P	**Pb**	**08 50 59.8**	**-0.7**
QUEZ	**Alcaldia de Qu**	**1.50**	**46**	*e*P	**Pb**	**08 50 59.9**	**-0.9**
LFRS	**El Faro**	**1.54**	**57**	*e*P	**Pn**	**08 51 00.0**	**+0.5**
LFU	**La Fuente**	**1.56**	**53**	*e*P	**Pn**	**08 51 00.5**	**+0.5**
JUAM	**Asuncion Mita**	**1.67**	**23**	*e*P	**Pb**	**08 51 02.7**	**-1.0**
JUAM				*e*S	**Sb**	**08 51 24.1**	**-0.3**
PAVA	**Las Pavas**	**1.69**	**57**	*e*P	**Pn**	**08 51 02.6**	**+1.0**
PAVA	**Las Pavas**	**1.69**	**57**	P	**Pn**	**08 51 02.7**	**+1.0**
PAVA	**Las Pavas**	**1.69**	**57**	S	**Sb**	**08 51 23.6**	**-1.2**
TECO	**Alcaldia de Te**	**1.73**	**65**	S	**Sn**	**08 51 24.0**	**+0.4**
UESV	**Universidad de**	**1.77**	**62**	P	**Pn**	**08 51 03.2**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.85**	**61**	*e*P	**Pn**	**08 51 04.5**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.85**	**61**	P	**Pn**	**08 51 04.7**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.85**	**61**	S	**Sb**	**08 51 28.7**	**-1.0**
MTO3	**Montecristo**	**1.88**	**32**	*e*P	**Pb**	**08 51 06.1**	**-1.4**
MTO3	**Montecristo**	**1.88**	**32**	*e*P	**Pn**	**08 51 05.6**	**+1.1**
MTO3	**Montecristo**	**1.88**	**32**	P	**Pn**	**08 51 05.6**	**+1.1**
MTO3	**Montecristo**	**1.88**	**32**	S	**Sb**	**08 51 30.1**	**-0.6**
LLGN	**La Laguna**	**1.96**	**46**	S	**Sb**	**08 51 31.8**	**-0.8**
ESQI	**Esquipulas**	**2.03**	**30**	*e*P	**Pn**	**08 51 07.7**	**+1.3**
ESQI	**Esquipulas**	**2.03**	**30**	P	**Pn**	**08 51 07.8**	**+1.4**
ESQI	**Esquipulas**	**2.03**	**30**	S	**Sb**	**08 51 34.3**	**-0.5**
BLLM	**Bellamira**	**2.19**	**73**	*e*P	**Pn**	**08 51 09.5**	**+0.9**
APG	**El Apazote**	**2.20**	**358**	*e*P	**Pb**	**08 51 11.6**	**-1.2**
LCND	**La Caada**	**2.49**	**78**	P	**Pn**	**08 51 13.6**	**+0.9**
LCND	**La Caada**	**2.49**	**78**	S	**Sn**	**08 51 43.7**	**+1.3**
CNCH	**Conchagua**	**2.54**	**79**	P	**Pn**	**08 51 13.7**	**+0.3**
CNCH	**Conchagua**	**2.54**	**79**	S	**Sn**	**08 51 44.6**	**+1.0**
CSGN	**Cosiguina Volc**	**2.77**	**86**	P	**Pn**	**08 51 17.6**	**+1.0**
CSGN				S	**Sn**	**08 51 50.8**	**+1.5**
POLN	**Al Sur del Vol**	**3.50**	**92**	P	**Pn**	**08 51 25.8**	**-0.7**

*TIR **26** 09:13:17.1,41˚.51N×19˚.68E,h2km,Ml3.6/2*
*PDG **26** 09:13:17.1±0.3,41˚.43N×19˚.60E,h8km,MD3.4/4,*
ML3.4/13,Error ellipse: s-maj=1.0km s-min=1.5km az=0.0
*IDC **26** 09:13:25.7±9.7,41˚.73N×19˚.74E,h91km±62km,mb3.4/3,*
mbtmp3.8/4,ML3.5/1,Error ellipse: s-maj=77.3km
s-min=54.3km az=16.0

ISC 26 09:13:16.7±1.0,**41˚.45N**±0˚.03×**19˚.58E**±0˚.03,**h16**km±7km,
n39,σ1**9**32/59,**12C-19D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**114**	P	**Pg**	**09 13 21.9**	**0.0**
TIR				Sg	**Sg**	**09 13 25.3**	**-0.3**
TIR				AML	AML	09 13 25.7	
	49nm,0.3s						
ULC	**Ulcinj**	**0.58**	**334**	⇑*i*Pg	**Pg**	**09 13 27.3**	**-0.8**
ULC				*i* Sg	**Sb**	**09 13 36.8**	**+0.3**
SDA	**Shkodra**	**0.61**	**354**	Pg	**Pg**	**09 13 27.9**	**-0.8**
SDA				S	**Sb**	**09 13 37.1**	**-0.3**
PHP	**Peshkopia**	**0.69**	**69**	P	**Pg**	**09 13 28.9**	**-1.3**
PHP				Sg	**Sg**	**09 13 39.2**	**-0.2**
PHP				AML	AML	09 13 42.4	
	13nm,0.5s						
DRME	**Dracevica, Mon**	**0.80**	**338**	⇑*i*Pg	**Pg**	**09 13 31.1**	**-1.2**
DRME				*i* Sg	**Sb**	**09 13 43.6**	**+0.8**
BUM	**Brajici-Budva**	**1.00**	**329**	⇑*i*Pg	**Pg**	**09 13 35.2**	**-0.8**
BUM				*i* Sg	**Sn**	**09 13 50.3**	**+0.3**
PDG	**Podgorica**	**1.01**	**346**	⇑P	**Pg**	**09 13 36.0**	**-0.3**
PDG				⇓S	**Sn**	**09 13 50.9**	**+0.7**
PDG	**Podgorica**	**1.01**	**346**	⇑*i*Pg	**Pb**	**09 13 35.5**	**-0.4**
PDG				*i* Sg	**Sn**	**09 13 51.3**	**+1.1**
PVY	**Plav**	**1.18**	**14**	⇓*i*Pg	**Pb**	**09 13 37.2**	**-1.7**
PVY				*i* Sg	**Sn**	**09 13 56.0**	**+1.4**
CEME	**Cevo**	**1.21**	**336**	⇑*i*Pg	**Pn**	**09 13 39.0**	**0.0**
CEME				*i* Sg	**Sn**	**09 13 57.3**	**+2.2**
KBN	**Korca**	**1.23**	**132**	P	**Pg**	**09 13 40.6**	**+0.2**
KBN				S	**Sg**	**09 13 58.4**	**+2.0**
HCY	**Herceg Novi**	**1.29**	**321**	⇓*i*Pg	**Pg**	**09 13 40.8**	**-0.7**
HCY				*i* Sg	**Sg**	**09 14 00.2**	**+1.8**
NKME	**Niksic**	**1.40**	**341**	⇓*i*Pg	**Pn**	**09 13 42.0**	**+0.3**
NKME				*i* Sg	**Sg**	**09 14 03.6**	**+1.6**
KOME	**Kolasin**	**1.41**	**358**	⇓*i*Pg	**Pg**	**09 13 43.4**	**-0.4**
KOME				*i* Sg	**Sg**	**09 14 03.9**	**+1.8**
IVA	**Berane**	**1.44**	**9**	⇓*i*Pg	**Pn**	**09 13 42.8**	**+0.5**
IVA				*i* Sg	**Sg**	**09 14 04.9**	**+1.6**
BRY	**Bratogost**	**1.65**	**332**	⇓*i*Pn	**Pb**	**09 13 46.7**	**-0.1**
BRY				*i* Sn	**Sg**	**09 14 10.7**	**+0.8**
UPM	**Unac-Piva**	**1.83**	**344**	⇓*i*Pn	**Pb**	**09 13 49.6**	**-0.3**
UPM				*i* Sn	**Sg**	**09 14 15.5**	**-0.1**
PLE	**Pljevlja**	**1.89**	**356**	⇓*i*Pn	**Pb**	**09 13 50.7**	**-0.2**
PLE				*i* Sn	**Sg**	**09 14 16.5**	**-1.0**
MATE	**Matera**	**2.32**	**251**	⇑P	**Pn**	**09 13 54.9**	**+0.7**
BOVS	**Bovan**	**2.69**	**35**	⇑P	**Pn**	**09 14 01.1**	**+1.7**
TIP	**Timpagrande**	**3.13**	**225**	⇑P	**Pn**	**09 14 05.0**	**-0.5**
MDVR	**Moldovita**	**3.68**	**24**	⇑P	**Pn**	**09 14 13.7**	**+0.7**
HERR	**Herculane**	**4.01**	**30**	⇓P	**Pn**	**09 14 19.2**	**+1.7**
SRE	**Strehaia**	**4.17**	**38**	⇓P	**Pn**	**09 14 21.2**	**+1.5**
BZS	**Buzias**	**4.42**	**19**	⇓P	**Pn**	**09 14 24.1**	**+0.9**
GZR	**Gura Zlata**	**4.58**	**29**	⇓P	**Pn**	**09 14 26.9**	**+1.5**
ELND	**Elena**	**4.91**	**70**	⇑P	**Pn**	**09 14 30.9**	**+1.1**
LOT	**Lotru**	**5.03**	**36**	⇓P	**Pn**	**09 14 32.5**	**+0.8**
SIRR	**Siria**	**5.05**	**17**	⇓P	**Pn**	**09 14 33.2**	**+1.4**
ARR	**Arges**	**5.38**	**41**	⇑P	**Pn**	**09 14 38.1**	**+1.7**
VOIR		**5.64**	**43**	⇓P	**Pn**	**09 14 41.5**	**+1.6**
DRGR		**5.80**	**22**	⇓P	**Pn**	**09 14 44.1**	**+2.0**
MLR	**Muntele Rosu**	**6.15**	**47**	P	**Pn**	**09 14 50.2**	**+3.2**
	0.8nm,0.3s,baz=161,slow=5.7,SNR=6.5						
MLR				S	**Sn**	**09 15 56.5**	**-0.5**
	5.7nm,0.7s,baz=148,slow=23,SNR=3.5						
	5.6nm,0.6s						
MLR	**Muntele Rosu**	**6.15**	**47**	⇓P	**Pn**	**09 14 49.0**	**+2.0**
VRI	**Vrincioaia**	**6.81**	**47**	⇓P	**Pn**	**09 14 57.5**	**+1.5**
KECS	**Kecovo**	**7.07**	**5**	*e*PN	**Pn**	**09 15 02.8**	**+3.3**
KECS				*e*SN	**Sn**	**09 16 19.6**	**+0.2**
FINES	**FINESS Array B**	**20.41**	**9**	P	**P**	**09 17 51.7**	**-1.1**
	1.6nm,0.5s,baz=186,slow=9.2,SNR=7.2						
	1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**44.11**	**50**	P	**P**	**09 21 22.7**	**-1.3**
	1.5nm,0.6s,baz=285,slow=8.2,SNR=7.3						
	1.5nm,0.6s						
MKAR	**Makanchi Array**	**44.28**	**61**	P	**P**	**09 21 23.7**	**-1.8**
	0.6nm,0.6s,baz=282,slow=7.2,SNR=6.4						
	0.6nm,0.6s						

*IDC **26** 09:18:17.1±11.0,17˚.32S×178˚.17W,h402km±112km,*
mb3.4/6,mbtmp4.1/6,Error ellipse: s-maj=46.3km
s-min=36.7km az=75.0

ISC 26 09:18:17.0±1.4,**17˚.3S**±0˚.3×**178˚.2W**±0˚.3,**h400**km,**n6**,
σ0**9**63/8,**mb3.6**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.11**	**241**	P	**P**	**09 25 07.4**	**-0.5**
	2.6nm,0.5s,baz=92,slow=9.8,SNR=7.9						
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**44.96**	**259**	P	**P**	**09 25 54.2**	**-0.4**
	0.6nm,0.3s,baz=95,slow=7.6,SNR=24						
WRA				PcP	PcP	09 27 27.4	-0.7
	0.2nm,0.3s,baz=89,slow=3.3,SNR=4.8						
	0.6nm,0.3s						
ASAR	**Alice Springs**	**45.17**	**254**	P	**P**	**09 25 56.3**	**+0.1**
	5.3nm,0.4s,baz=90,slow=8.3,SNR=128						
ASAR				PcP	PcP	09 27 28.2	-0.6
	0.4nm,0.5s,baz=105,slow=3.7,SNR=4.5						
	5.3nm,0.4s						
FITZ	**Fitzroy Crossi**	**53.34**	**260**	P	**P**	**09 26 58.2**	**+0.9**
	1.1nm,0.5s,baz=82,slow=5.0,SNR=7.0						
	1.1nm,0.5s						
QSPA	**South Pole Qui**	**72.76**	**180**	P	**P**	**09 29 03.0**	**+0.2**
	1.4nm,0.6s,baz=63,slow=4.2,SNR=4.6						
	1.4nm,0.6s						
ILAR	**Eielson Array**	**85.24**	**13**	P	**P**	**09 30 09.3**	**0.0**
	0.2nm,0.4s,baz=225,slow=5.1,SNR=4.8						
	0.2nm,0.4s						

*NAO **26** 09:19:23.7,43˚.22N×17˚.96E,h10km,MB4.8*
*IDC **26** 09:19:23.6±0.4,43˚.22N×17˚.97E,h0km,mb4.9/35,*
mbtmp4.9/48,ML4.7/12,MS4.8/80,Error ellipse:
s-maj=7.9km s-min=6.9km az=25.0
*PRU **26** 09:19:24.9,43˚.01N×18˚.23E,h10km,M5.3*
*BJI **26** 09:19:24.4,43˚.89N×17˚.68E,h11km,mB5.2/16,mb5.0/60,*
Ms5.4/50,Ms7 5.1/50
*BGS **26** 09:19:24.3±1.8,43˚.24N×18˚.27E,h10km,mb5.2*
*MOS **26** 09:19:24.5±0.9,43˚.22N×18˚.01E,h16km,mb5.3/38,*
MS4.8/25,Error ellipse: s-maj=4.0km s-min=2.7km
az=74.2
*ROM **26** 09:19:25.9,43˚.16N×17˚.98E,h10km,mb5.3/52,*
Mwp5.3/31,Error ellipse: s-maj=1.7km s-min=1.5km
az=198.0
*NEIC **26** 09:19:25.9±1.8,43˚.22N±0˚.05×17˚.91E±0˚.07,h10km±1km,*
mb5.3/661,Mww5.3/29,Error ellipse: s-maj=8.5km
s-min=8.3km az=262.0
*MCSM **26** 09:19:25.8±0.4,43˚.N±3˚×1˚8E±˚,h10km±3km,mb5.5,*
mB5.7,MLv5.8,Mw(mB)5.2
*BEO **26** 09:19:26.7±0.2,43˚.24N×17˚.97E,h12km±2km,ML5.5/22*
*NEIC **26** 09:19:26.2,43˚.25N×17˚.93E,h26km*
*NEIC **26** 09:19:26.2,43˚.15N×18˚.07E,h26km,Moment Tensor*
Solution. Duration: 2s2 Moment tensor: Scale 10^17Nm;
Mrr0.09; Mθθ-0.29; Mφφ0.21; Mrθ-0.26; Mθφ 1.06; Mφr-0.13;
Fault plane solution: M0 1.12000×10^17 NP1:
φs172.56000°,δ75.74000°,λ173.84000°. NP2:
φs264.09000°,δ84.03000°,λ14.34000°. Principal axes: T
1.1086, Plg14.0000°, Azm129.0000°; N 0.0319,
Plg74.0000°, Azm286.0000°; P -1.1405, Plg6.0000°,
Azm38.0000°;
*RHSSO **26** 09:19:26.6±0.3,43˚.20N×18˚.01E,h10km,ML5.5/6*
*MED_RC **26** 09:19:26.0±0.2,43˚.21N×18˚.13E,h32km,MW5.4/76,*
Moment Tensor Solution. Body waves: s2,c2;Mantle
waves: s76,c183; Duration: 1s8 Moment tensor: Scale
10^17Nm; Mrr0.15±.04; Mθθ-0.36±.03; Mφφ0.21±.03;
Mrθ-0.50±.03; Mθφ 1.71±.02; Mφr0.03±.03; Best double
couple: M0 1.80000×10^17 NP1:φs175.00000°,δ74.00000°,
λ-180.00000°. NP2:φs85.00000°,δ90.00000°,
λ-16.00000°. Principal axes: T 1.7200, Plg11.0000°,
Azm132.0000°; N 0.1700, Plg74.0000°, Azm265.0000°; P
-1.8900, Plg11.0000°, Azm39.0000°; nsta1 refers to body
waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=35s.
*PDG **26** 09:19:26.1±0.1,43˚.23N×17˚.94E,h11km±1km,ML5.5/13*
Error ellipse: s-maj=0.5km s-min=0.4km az=90.0
*BGR **26** 09:19:27.5±0.9,43˚.18N×18˚.01E,h10km,ML5.3,Error*
ellipse: s-maj=17.8km s-min=6.7km az=11.0
*GCMT **26** 09:19:28.8±0.1,43˚.15N±0˚.01×17˚.99E±0˚.01,h28km,*
MW5.4/139,Moment Tensor Solution. s103,c172;
*s139,c256; Duration: 1s2 Moment tensor: Scale 10^17

IVAS eSn Sb 09 20 16.9 +1.0
BLY Banja Luka 1.65 339 ⇑*i* Pn Pn 09 19 55.7 +0.9
BLY eSn Sb 09 20 17.8 +0.5
BLY Banja Luka 1.65 339 *e* Pn Pb 09 19 56.6 -0.3
BLY eSn Sb 09 20 18.2 +0.9
DIVS Divibare 1.69 58 *e* Pn Pn 09 19 56.0 +0.7
TEKS Tekeris 1.73 39 *e* Pn Pn 09 19 56.0 +0.1
TEKS eSn Sn 09 20 17.6 +0.4
ZIRJ Zirje 1.78 285 *i* Pn Pb 09 20 00.2 +1.0
ZIRJ Sn Sb 09 20 23.9 +2.8
MORI Morici 1.80 292 *e* Pn Pb 09 20 00.4 +0.9
MORI Sn Sb 09 20 25.0 +3.4
TRUS Trudelj 2.01 59 *e* Pn Pn 09 20 00.4 +0.7
GRUS Gruza 2.08 70 *e* Pn Pn 09 20 01.5 +0.9
GRUS eSn Sn 09 20 27.3 +1.5
UDBI Udbina 2.09 310 *i* Pn Pb 09 20 04.4 -0.1
UDBI Sn Sb 09 20 31.6 +1.5
GOCS Kraljevo Serbi 2.11 79 *e* Pn Pn 09 20 02.1 +0.9
GOCS eSn Sn 09 20 27.7 +0.9
SGRT San Giovanni R 2.22 230 Pn 09 19 57.6 -5.1
SELS Selova 2.27 89 *e* Pn Pn 09 20 04.8 +1.5
SELS eSn Sb 09 20 34.3 -0.8
DUGI Dugi Otok 2.29 291 *e* Pn Pb 09 20 07.0 -0.7
DUGI Sn Sb 09 20 35.6 0.0
AVAS Avala Beograd 2.34 50 *e* Pn Pn 09 20 04.2 0.0
FRGS Fruska Gora 2.34 33 *e* Pn Pn 09 20 03.9 -0.3
PHP Peshkopia 2.35 130 P Pb 09 20 07.0 -2.0
PHP S Sb 09 20 45.2 +7.6
BEO Beograd 2.39 47 *e* Pn Pn 09 20 04.4 -0.4
BEO eSn Sn 09 20 34.2 +0.8
PLIT Plitvice 2.40 315 *e* Pn Pb 09 20 08.0 -1.7
PLIT Sn Sb 09 20 38.8 0.0
VIRC Vir 2.40 298 *e* Pn Pb 09 20 08.4 -1.3
VIRC Sn Sb 09 20 39.0 +0.1
MRVN Minervino Murg 2.54 213 ⇑P Pn 09 20 03.4 -3.5
SVIS Svilajnac 2.55 64 *e* Pn Pn 09 20 08.2 +1.1
MOSL Moslavina 2.57 340 *e* Pn Pn 09 20 09.7 +2.3
NVLJ Novalja 2.65 302 *e* Pn Pn 09 20 11.0 +2.6
NVLJ Sn Sb 09 20 44.2 -1.6
BOVS Bovan 2.72 80 ⇓P Pn 09 20 10.3 +0.8
BOVS Bovan 2.72 80 *e* Pn Pn 09 20 10.4 +0.9
BOVS eSn Sn 09 20 44.1 +2.4
MATE Matera 2.74 201 ⇑P Pn 09 20 10.2 +0.5
MATE Matera 2.74 201 ⇑P Pn 09 20 08.0 -1.7
SKO Skopje 2.81 115 *i* Pn Pn 09 20 13.5 +2.8
ACER Acerenza 2.87 213 Pn 09 20 10.3 -1.2
KOVH Kovagotottos 2.88 1 ⇓P Pn 09 20 11.1 -0.6
KUBS Kucevo 2.91 64 *e* Pn Pn 09 20 11.0 -1.1
OHR Ohrid 2.95 134 *i* Pn Pb 09 20 16.3 -2.7
OHR *i* Sn Sb 09 20 53.0 -1.6
VLO Vlora 2.95 158 P Pb 09 20 13.5 +0.9
VLO S Sn 09 20 48.0 +0.6
ZAG Zagreb 2.99 332 *e* Pn Pn 09 20 15.9 +2.7
ZAG Sn Sb 09 20 53.0 -2.8
OZLJ Ozalj 3.02 324 *e* Pn Pn 09 20 16.2 +2.6
BOJS Bojanci 3.03 320 *i* Pn Pn 09 20 15.3 +1.5
BOJS eSn Sb 09 20 53.5 -3.4
BORS2 Bor- Borsko je 3.04 72 *e* Pn Pn 09 20 13.3 -0.5
MORH Mrgy, Hungar 3.04 8 *e* Pn Pn 09 20 14.3 +0.5
MORH eSn Sn 09 20 51.4 +2.0
MORH Mrgy, Hungar 3.04 8 ⇓P Pn 09 20 13.2 -0.6
MORH Mrgy, Hungar 3.04 8 *e* Pn Pn 09 20 13.7 0.0
MORH Mrgy, Hungar 3.04 8 P Pn 09 20 13.8 0.0
VRSS Vrsac 3.05 50 *e* Pn Pn 09 20 14.0 0.0
PTJ Puntijarka 3.07 332 *e* Pn Pn 09 20 16.7 +2.3
MDVR Moldovita 3.10 58 ⇑P Pn 09 20 14.9 +0.2
MDVR Moldovita 3.10 58 *e* Pn Pn 09 20 15.4 +0.4
BANR Banloc 3.12 45 ⇑P Pn 09 20 15.4 +0.5
KALN Kalnik 3.13 340 *e* Pn Pn 09 20 17.6 +2.6
SUBS Subotica 3.13 21 *e* Pn Pn 09 20 15.5 +0.5
ZAGS Zajecar 3.13 77 *e* Pn Pn 09 20 16.0 +1.0
ZAGS eSn Sn 09 20 52.3 +0.7
CRES Cresnjevec Ost 3.19 326 *i* Pn Pn 09 20 16.9 +1.0
LOBO Lobor 3.26 335 *e* Pn Pn 09 20 18.9 +2.1
RIY Rijeka 3.30 311 *e* Pn Pn 09 20 20.8 +3.3
RIY Sn Sb 09 21 01.2 -3.5
RIY Rijeka 3.30 311 *e* Pn Pn 09 20 18.8 +1.4
RIY eSn Sn 09 20 56.8 +0.8
KBN Korca 3.31 140 P Pn 09 20 19.4 +1.8
PAOL Paolisi 3.36 231 Pn 09 20 18.2 -0.2
ZAPS Zavoj 3.38 87 *e* Pn Pn 09 20 20.1 +1.6
ZAPS eSn Sn 09 20 58.7 +0.9
BEHE Becsehely 3.38 345 Pn 09 20 19.4 +1.0
BEHE Becsehely 3.38 345 ⇑*i* Pn Pn 09 20 19.3 +0.8
BEHE eSn Sn 09 20 59.2 +1.4
TIM Timisoara 3.41 41 ⇑P Pn 09 20 19.0 0.0
TIM Timisoara 3.41 41 P Pn 09 20 18.9 0.0
BLKB Belogradchik 3.42 81 *e* Pn Pn 09 20 20.7 +1.6
TRAN Tran 3.42 95 P Pn 09 20 20.8 +1.7
TRAN S Sn 09 21 02.0 +3.0
GUMA Gualdo di Mace 3.43 269 Pn 09 20 18.7 -0.5
CAMP Campotosto 3.45 260 Pn 09 20 19.4 -0.2
AQU L'Aquila 3.50 257 P Pn 09 20 20.9 +0.6
AQU L'Aquila 3.50 257 *e* Pn Pn 09 20 20.7 +0.5
AQU eSn Sn 09 21 01.5 +0.5
AQU L'Aquila 3.50 257 ⇑P Pn 09 20 20.6 +0.3
AQU L'Aquila 3.50 257 P Pn 09 20 20.4 +0.2
BZS Buzias 3.53 46 ⇑P Pn 09 20 20.8 +0.2
BZS Buzias 3.53 46 P Pn 09 20 20.7 +0.2
BZS Buzias 3.53 46 ⇓P Pn 09 20 19.9 -0.7
DJES Djerdap 3.56 64 ⇑P Pn 09 20 21.5 +0.4
DJES Djerdap 3.56 64 *e* Pn Pn 09 20 21.5 +0.4
DJES eSn Sn 09 21 03.3 +0.8
HERR Herculane 3.59 61 ⇑P Pn 09 20 22.3 +1.0
NEST Nestorio 3.60 140 P Pn 09 20 23.6 +2.0
CUC Castrocucco 3.61 208 Pn 09 20 21.1 -0.7
CUC Castrocucco 3.61 208 ⇑P Pn 09 20 20.7 -1.0
FDMO Fiordimonte 3.61 269 Pn 09 20 21.8 0.0
NRCA Norcia 3.61 266 Pn 09 20 22.1 +0.3
RMGR Halanga-Turnu 3.68 65 ⇑P Pn 09 20 24.3 +1.7
GROS Grobnik 3.71 332 *i* Pn Pn 09 20 23.2 +0.1
PUNG Punghina 3.72 72 *e* Pn Pn 09 20 24.3 +1.1
KEK Kerkira 3.74 158 P Pb 09 20 28.1 -4.5
KEK Kerkira 3.74 158 Pn 09 20 27.8 +4.3
VAY Valandovo 3.87 118 *i* Pn Pn 09 20 27.5 +2.3
VAY *i* Sn Sn 09 21 13.5 +3.5
BLSH Balsha 3.88 93 P Pn 09 20 27.3 +1.9
VTS Vitosha 3.88 97 P Pn 09 20 26.8 +1.3
VTS Vitosha 3.88 97 ⇓*i* P Pn 09 20 27.1 +1.6
VTS S Sn 09 21 10.6 +0.2
VTS Vitosha 3.88 97 *e* Pn Pn 09 20 27.1 +1.6
TRI Trieste 3.94 311 Pn 09 20 26.8 +0.6
TRI Trieste 3.94 311 P Pn 09 20 26.8 +0.6
BAIL Bailesti 3.95 76 ⇓P Pn 09 20 27.5 +1.1
SOF Sofia 3.97 96 P Pn 09 20 28.9 +2.3
SIRR Siria 4.01 39 ⇑P Pn 09 20 27.1 -0.1
SIRR Siria 4.01 39 *e* Pn Pn 09 20 26.8 -0.4
MURB Monte Urbino 4.01 273 Pn 09 20 28.0 +0.7
KKB Krupnik 4.02 108 P Pn 09 20 29.4 +2.1
KKB S Sn 09 21 13.5 -0.2
KKB Krupnik 4.02 108 ⇑*i* P Pn 09 20 29.8 +2.5
KKB S Sn 09 21 16.1 +2.4
CESX Cesi 4.04 263 Pn 09 20 28.0 +0.5
KZN Kozani 4.04 135 P Pn 09 20 29.1 +1.5
KZN S Sn 09 21 10.7 -3.6
PLNA Plana 4.04 99 P Pn 09 20 29.8 +2.0
GZR Gura Zlata 4.05 56 ⇓P Pn 09 20 28.3 +0.4
GZR Gura Zlata 4.05 56 P Pn 09 20 28.3 +0.4
LFKM Lefkimmi 4.06 157 P Pn 09 20 28.3 +0.4
SOKA Soboth 4.06 330 Pn 09 20 28.7 +0.7
SOKA Sn 09 21 15.3 +0.4
SOKA Soboth 4.06 330 *i* Pn Pn 09 20 28.7 +0.7
583nm,0.3s,SNR=251
SOKA *e* Sn Sn 09 21 15.3 +0.4
927nm,0.7s
IGT Igoumenitsa 4.07 154 P Pn 09 20 28.0 0.0
VOJS Vojsko 4.08 315 ⇑*i* Pn Pn 09 20 29.3 +1.0
VOJS *i* Sn Sn 09 21 20.5 +5.2
VOJS IAML 09 21 43.7
comp=Z,15µm,1.1s
OBKA Obir 4.12 324 Pn 09 20 29.5 +0.7
OBKA Obir 4.12 324 *e* Pn Pn 09 20 29.5 +0.7
comp=Z,278nm,0.9s,SNR=145
TIP Timpagrande 4.14 194 Pn 09 20 28.5 -0.5
TIP Timpagrande 4.14 194 ⇓P Pn 09 20 30.2 +1.2
TIP Timpagrande 4.14 194 ⇓P Pn 09 20 27.7 -1.3
TIP Timpagrande 4.14 194 P Pn 09 20 28.2 -0.8
JAN Janina 4.14 148 P Pn 09 20 30.1 +1.1
KNT Kendrikon 4.17 118 P Pn 09 20 30.7 +1.4
MPEP Malo Peshtene 4.18 86 P Pn 09 20 31.3 +1.8

SABO M.te Sabotino 4.20 313 Pn 09 20 30.2 +0.4
CRAR CRAIOVA 4.34 73 ⇓P Pn 09 20 32.6 +0.9
CRAR CRAIOVA 4.34 73 P Pn 09 20 32.5 +0.9
MGAB Montegabbione 4.34 268 ⇑P Pn 09 20 31.6 -0.1
PRMD Pramanda 4.35 147 P Pn 09 20 33.2 +1.4
BSZH Besenyszg 4.39 20 ⇑P Pn 09 20 33.1 +0.8
DEV Deva 4.40 51 ⇑P Pn 09 20 33.0 +0.5
DEV Deva 4.40 51 P Pn 09 20 33.0 +0.5
ARSA Arzberg 4.41 337 Pn 09 20 32.9 +0.2
ARSA Sn 09 21 26.7 +3.4
comp=Z,968nm,0.4s,SNR=456
ARSA *e* Sn Sn 09 21 26.7 +3.4
comp=Z,394nm,0.4s
ARSA Arzberg 4.41 337 *e* Pn Pn 09 20 33.7 +1.0
THE Thessaloniki 4.50 123 P Pn 09 20 35.2 +1.3
THE S Sn 09 21 21.5 -4.0
MMB Musomishta 4.56 109 P Pn 09 20 37.3 +2.5
MMB Musomishta 4.56 109 ⇑*i* P Pn 09 20 37.3 +2.5
MMB S Sn 09 21 26.7 -0.4
LIT Litokhoron 4.57 131 P Pn 09 20 36.0 +1.1
LIT Litokhoron 4.57 131 Pn 09 20 36.5 +1.7
LIT Litokhoron 4.57 131 P Pn 09 20 36.6 +1.7
LIT Litokhoron 4.57 131 ⇑P Pn 09 20 36.0 +1.1
TETR Tetrakomo, Epi 4.58 146 P Pn 09 20 36.6 +1.5
PGB Panagyurishte 4.58 97 *i* P Pn 09 20 37.7 +2.7
PGB S Sn 09 21 28.9 +1.4
HORT Hortiatis 4.61 123 P Pn 09 20 36.9 +1.5
SRO Srobarova 4.61 3 *e* P Pn 09 20 36.8 +1.4
SRO *e* 09 21 33.5
SRO pmax pmax
comp=N,5µm,0.9s
SRO Srobarova 4.61 3 *e* PN Pn 09 20 36.8 +1.4
SRO *e* SN Sn 09 21 33.5 +5.4
SRO *e* LG Lg 09 22 01.9
MYKA Terra Mystica 4.62 319 Pn 09 20 36.7 +1.1
MYKA Sn 09 21 29.7 +1.1
MYKA Terra Mystica 4.62 319 *i* Pn Pn 09 20 36.7 +1.1
comp=N,97nm,0.4s,SNR=92
MYKA *e* Sn Sn 09 21 29.7 +1.1
comp=N,477nm,0.6s
SOH Sokhos 4.64 119 P Pn 09 20 37.5 +1.7
SRS Serrai 4.64 115 P Pn 09 20 38.0 +2.1
RONA Rosalia, Austr 4.65 346 Pn 09 20 35.9 -0.1
RONA Sn 09 21 30.3 +1.0
RONA Rosalia, Austr 4.65 346 *e* Pn Pn 09 20 35.9 -0.1
comp=N,224nm,0.4s,SNR=148
RONA *e* Sn Sn 09 21 30.3 +1.0
comp=N,567nm,0.6s
LOT Lotru 4.70 60 ⇑P Pn 09 20 38.0 +1.3
VLAD Vladila 4.71 78 ⇑P Pn 09 20 37.6 +0.9
BORR Bors 4.71 33 ⇑P Pn 09 20 37.5 +0.8
TYRN Tyrnavos 4.72 136 P Pn 09 20 37.9 +1.0
THL Klokotos Trika 4.72 139 P Pn 09 20 37.9 +0.9
TSLK Tsoukalades, L 4.81 155 P Pn 09 20 38.0 -0.2
PLVB Pleven 4.83 86 ⇓P Pn 09 20 39.6 +1.3
LKD2 Lefkada island 4.85 155 P Pn 09 20 38.7 0.0
DRGR 4.89 41 ⇑P Pn 09 20 39.4 0.0
DRGR 4.89 41 P Pn 09 20 39.3 0.0
PSZ Piszkesteto 4.89 15 Pn 09 20 39.3 0.0
PSZ Piszkesteto 4.89 15 *e* P Pn 09 20 40.1 +0.8
PSZ Piszkesteto 4.89 15 P Pn 09 20 38.6 -0.7
PSZ Piszkesteto 4.89 15 ⇑P Pn 09 20 37.2 -2.1
NYDR Nydri-Lefkada 4.93 155 P Pn 09 20 38.6 -1.2
CONA Conrad Observa 4.96 343 *e* Pn Pn 09 20 40.8 +0.5
comp=N,77nm,0.3s,SNR=54
CONA *e* Sn Sn 09 21 37.2 +0.4
comp=N,723nm,0.6s
PLD Plovdiv 5.08 100 P Pn 09 20 44.2 +2.4
PLD Plovdiv 5.08 100 *e* Pn Pn 09 20 44.2 +2.4
KBA Koelnbreinsper 5.09 321 Pn 09 20 43.1 +1.0
KBA Sn 09 21 43.4 +3.1
KBA Koelnbreinsper 5.09 321 *i* Pn Pn 09 20 43.1 +1.0
comp=N,529nm,0.6s,SNR=232
KBA *e* Sn Sn 09 21 43.4 +3.1
comp=N,747nm,0.6s
KBA Koelnbreinsper 5.09 321 ⇑P Pn 09 20 43.5 +1.3
TNR Turnu Rosu 5.10 59 ⇑P Pn 09 20 44.2 +2.0
TNR Turnu Rosu 5.10 59 P Pn 09 20 44.2 +2.0
EVR Evrytania 5.16 145 P Pn 09 20 44.6 +1.6
MODS Modra-Piesok 5.19 355 *e* P Pn 09 20 43.1 -0.3
MODS *e* 09 21 43.7
MODS pmax pmax
comp=N,6µm,1.4s
MODS Modra-Piesok 5.19 355 *e* PN Pn 09 20 43.1 -0.3
MODS *e* SN Sn 09 21 43.7 +1.2
MODS *e* LG Lg 09 22 31.3
RZN Rozhen 5.20 105 ⇑*i* P Pn 09 20 46.2 +2.5
RZN S Sn 09 21 43.4 +0.4
CEL Celeste 5.20 199 Pn 09 20 41.6 -2.0
CEL Celeste 5.20 199 ⇑P Pn 09 20 41.6 -2.0
ARR Arges 5.22 63 ⇓P Pn 09 20 45.4 +1.6
MAKR Makrakomi, Fth 5.22 142 P Pn 09 20 45.2 +1.4
PVL Pavlikeni 5.24 89 *i* P Pn 09 20 46.8 +2.8
MESR Meseseni 5.26 40 ⇓P Pn 09 20 45.7 +1.3
ABTA Abfaltersbach 5.27 314 Pn 09 20 44.5 0.0
ABTA Sn 09 21 47.7 +3.1
ABTA Abfaltersbach 5.27 314 *i* Pn Pn 09 20 44.5 0.0
comp=N,88nm,0.4s,SNR=310
ABTA *e* Sn Sn 09 21 47.7 +3.1
comp=N,2µm,0.8s
DMLN Damoulianata-K 5.28 159 P Pn 09 20 43.2 -1.5
CJR Cluj-Napoca 5.29 47 ⇓P Pn 09 20 44.9 +0.1
CJR Cluj-Napoca 5.29 47 P Pn 09 20 44.8 +0.1
CBBR Cluj-Babes-Bol 5.30 46 ⇑P Pn 09 20 45.2 +0.3
AGG Agios Georgios 5.30 141 P Pn 09 20 45.7 +0.7
AGG Agios Georgios 5.30 141 ⇓P Pn 09 20 44.3 -0.7
PVO Paravola 5.30 149 P Pn 09 20 44.9 0.0
COPA Copaceanca 5.30 78 ⇑P Pn 09 20 45.8 +0.8
OUR Ouranopolis 5.31 121 P Pn 09 20 47.0 +2.0
KAVA Kavala 5.32 112 P Pn 09 20 47.2 +2.1
SMOL Smolenice 5.32 356 *e* P Pn 09 20 45.7 +0.5
MOA Molln 5.33 332 Pn 09 20 46.5 +1.1
MOA Sn 09 21 47.5 +1.4
MOA Molln 5.33 332 *i* Pn Pn 09 20 46.5 +1.1
comp=N,246nm,0.4s,SNR=101
MOA *e* Sn Sn 09 21 47.5 +1.4
comp=N,1µm,0.8s
ZIMR 5.37 83 ⇓P Pn 09 20 47.5 +1.7
ZIMR 5.37 83 P Pn 09 20 47.5 +1.7
VLS Valsamata 5.39 158 P Pn 09 20 44.5 -1.7
MDB Medias 5.40 55 ⇓P Pn 09 20 47.5 +1.1
MDB Medias 5.40 55 P Pn 09 20 47.4 +1.1
BIOA Bad Ischl, Aus 5.44 327 Pn 09 20 48.7 +1.9
BIOA Sn 09 21 51.6 +3.0
BIOA Bad Ischl, Aus 5.44 327 *i* Pn Pn 09 20 48.7 +1.9
comp=N,306nm,0.3s,SNR=186
BIOA *e* Sn Sn 09 21 51.6 +3.0
comp=N,865nm,0.5s
MTUR Matau 5.45 66 ⇓P Pn 09 20 48.6 +1.5
MTUR Matau 5.45 66 P Pn 09 20 48.5 +1.5
CEI Carei 5.46 33 ⇓P Pn 09 20 47.7 +0.7
CEI Carei 5.46 33 P Pn 09 20 47.7 +0.7
VOIR 5.52 64 ⇓P Pn 09 20 49.9 +1.9
VOIR 5.52 64 P Pn 09 20 49.8 +1.9
VOIR 5.52 64 P Pn 09 20 49.2 +1.3
comp=N,5.7nmcomp=N,8µmcomp=N,824nm,0.6s
NEO Neokhori 5.53 133 P Pn 09 20 48.4 +0.3
comp=N,7.0nmcomp=N,2µm,0.6s
KECS Kecovo 5.55 17 *e* P Pn 09 20 48.9 +0.6
KECS *e* 09 21 48.3
KECS pmax pmax
comp=N,957nm,0.9s
KECS Kecovo 5.55 17 *e* PN Pn 09 20 48.9 +0.6
KECS *e* SN Sn 09 21 48.3 -3.0
KECS *e* LG Lg 09 22 36.5
VLC Villacollemand 5.61 282 P Pn 09 20 48.8 -0.4
VLC Villacollemand 5.61 282 ⇓P Pn 09 20 48.9 -0.4
EFP Efpalio 5.62 147 P Pn 09 20 49.5 +0.3
comp=N,7.0nmcomp=N,2µm,0.7s
KDZ Kurdzhali 5.65 104 P Pn 09 20 51.6 +1.9
comp=N,6.1nmcomp=N,12µmcomp=N,1µm,0.6s
KDZ Kurdzhali 5.65 104 P Pn 09 20 52.2 +2.5
LESA Schwarzleotal 5.65 320 Pn 09 20 51.1 +1.3
LESA Sn 09 21 55.9 +2.0
LESA Schwarzleotal 5.65 320 *i* Pn Pn 09 20 51.1 +1.3
comp=N,154nm,0.3s,SNR=300
LESA *e* Sn Sn 09 21 55.9 +2.0
comp=N,541nm,0.5s
JAVC Velka Javorina 5.66 358 *e* PN Pn 09 20 50.4 +0.6
JAVC Velka Javorina 5.66 358 *e* Pn Pn 09 20 51.3 +1.4
AXAR Agios Charalam 5.66 140 P Pn 09 20 50.4 +0.5

comp=N,8.2nmcomp=N,2µm,0.6s
SERG Sergoula 5.69 146 P Pn 09 20 50.7 +0.4
comp=N,6.1nmcomp=N,9µmcomp=N,2µm,0.7s
TGMR Targu Mures 5.69 52 ⇓P Pn 09 20 52.2 +1.9
DIM Dimitrovgrad 5.70 99 ⇑P Pn 09 20 52.2 +1.9
ORTH Orthonies,Zaky 5.73 158 P Pn 09 20 49.9 -0.9
comp=N,7.0nmcomp=N,500nm,0.5s
ELND Elena 5.76 90 ⇑P Pn 09 20 53.3 +2.0
RLS Riolos of Patr 5.78 152 P Pn 09 20 51.0 -0.5
SZH Strazhitsa 5.82 87 P Pn 09 20 52.8 +0.8
SZH Strazhitsa 5.82 87 P Pn 09 20 53.5 +1.5
CIOR Ciorogarla 5.82 75 ⇑P Pn 09 20 54.1 +2.1
RJOB Jochberg 5.83 323 *e* Pn Pn 09 20 54.2 +2.0
SGRR Singureni 5.86 77 ⇓P Pn 09 20 53.6 +1.1
ATAL Atalanti 5.89 138 P Pn 09 20 53.2 +0.2
LKR Lokris 5.91 139 P Pn 09 20 53.4 0.0
comp=N,2.4nmcomp=N,1µm,0.5s
DOPR Dopca 5.94 60 ⇑P Pn 09 20 55.0 +1.3
RDO Rodhopi 5.96 108 P Pn 09 20 56.0 +2.1
comp=N,7.9nmcomp=N,16µmcomp=N,865nm,0.5s
RDO Rodhopi 5.96 108 Pn 09 20 56.4 +2.5
RDO Rodhopi 5.96 108 ⇓P Pn 09 20 56.1 +2.2
KRUC Moravsky 5.96 350 *e* PN Pn 09 20 53.9 -0.1
KRUC eSN Sn 09 22 02.4 +0.9
KRUC Moravsky 5.96 350 *e* Pn Pn 09 20 55.2 +1.2
BERU Beregovo 5.98 31 P Pn 09 20 54.3 +0.1
AOS Alonnisos 5.99 130 P Pn 09 20 54.3 0.0
comp=N,11µmcomp=N,745nm,0.6s
PLAR PLOIESTI 6.02 71 ⇓P Pn 09 20 56.7 +2.0
LANS Liptovska Anna 6.03 9 *e* P Pn 09 20 56.2 +1.3
LANS Liptovska Anna 6.03 9 *e* PN Pn 09 20 56.2 +1.3
KLV Kalavryta, Ach 6.04 147 P Pn 09 20 55.2 0.0
comp=N,4.5nmcomp=N,14µmcomp=N,1µm,0.9s
WTTA Wattenberg 6.06 314 Pn 09 20 56.3 +0.8
WTTA Sn 09 22 06.5 +2.3
WTTA Wattenberg 6.06 314 *e* Pn Pn 09 20 56.3 +0.8
comp=N,424nm,0.5s,SNR=354
WTTA *e* Sn Sn 09 22 06.4 +2.3
comp=N,899nm,0.5s
KORU Korolevo 6.11 34 P Pn 09 20 56.3 +0.3
MLR Muntele Rosu 6.13 65 Pn Pn 09 20 58.2 +1.8
comp=N,18nm,0.3s,baz=228,slow=3.8,SNR=83
MLR Sn Sn 09 22 05.8 +0.1
comp=N,34nm,0.3s,baz=278,slow=13,SNR=4.5
MLR LR LR 09 23 56.7
comp=N,15µm,20.7s,baz=254,slow=44
comp=N,347nm,0.7s
MLR Muntele Rosu 6.13 65 ⇑P Pn 09 20 58.1 +1.8
MLR Muntele Rosu 6.13 65 *e* Pn Pn 09 20 58.3 +1.9
MLR Muntele Rosu 6.13 65 P Pn 09 20 57.6 +1.2
comp=N,14nmcomp=N,10µmcomp=N,505nm,0.8s
SULR 6.13 73 ⇓P Pn 09 20 57.4 +1.2
WATA Walderalm 6.14 314 Pn 09 20 57.8 +1.2
WATA Sn 09 22 08.4 +2.4
WATA Walderalm 6.14 314 *e* Pn Pn 09 20 57.8 +1.2
comp=N,722nm,0.5s,SNR=327
WATA *e* Sn Sn 09 22 08.4 +2.4
comp=N,668nm,0.5s
MAUC Maruska 6.16 359 *e* PN Pn 09 20 57.6 +0.9
BOSR Bodos 6.16 60 ⇑P Pn 09 20 57.9 +1.2
CKRC Cesky Krumlov 6.17 337 *e* P Pn 09 20 59.3 +2.4
CKRC MLR MLR
comp=Z,10µm,14.2s
CKRC Cesky Krumlov 6.17 337 *e* PN Pn 09 20 59.3 +2.4
CKRC AMS AMS 09 23 30.0
comp=Z,10µm,14.2s
CKRC Cesky Krumlov 6.17 337 *e* Pn Pn 09 20 59.1 +2.2
MUKU Mukachevo 6.18 30 P Pn 09 20 57.4 +0.5
VRAC Vranov 6.18 351 Pn Pn 09 20 57.4 +0.4
comp=Z,13nm,0.3s,baz=177,slow=14,SNR=56
VRAC Sn Sn 09 22 04.2 -2.7
comp=Z,14nm,0.3s,baz=129,slow=9.5,SNR=4.2
VRAC LR LR 09 23 21.8
comp=Z,10µm,18.3s,baz=192,slow=39
comp=Z,58nm,0.5s
VRAC Vranov 6.18 351 ⇑P Pn 09 20 57.4 +0.4
VRAC Vranov 6.18 351 *e* PN Pn 09 20 57.0 0.0
VRAC eSN Sn 09 22 08.6 +1.7
VRAC Vranov 6.18 351 *e* Pn Pn 09 20 58.0 +1.0
RAZG Razgrad 6.20 84 ⇓P Pn 09 20 58.3 +1.1
BRIU Brid 6.21 33 P Pn 09 20 57.8 +0.5
GUR Goura 6.21 147 P Pn 09 20 56.3 -1.3
comp=Z,7.5nmcomp=Z,2µm,0.8s
SMTH Samothraki Isl 6.24 113 P Pn 09 20 59.1 +1.2
OZUR 6.25 60 ⇑P Pn 09 20 59.5 +1.6
SQTA Sankt Quirin 6.26 312 Pn 09 20 59.7 +1.5
SQTA Sn 09 22 11.2 +2.2
SQTA Sankt Quirin 6.26 312 *i* Pn Pn 09 20 59.7 +1.5
comp=Z,55nm,0.2s,SNR=166
SQTA *e* Sn Sn 09 22 11.2 +2.2
comp=Z,813nm,0.5s
LOZB Loznitsa 6.26 86 ⇑P Pn 09 20 59.2 +1.1
JMB Yambol 6.30 94 P Pn 09 21 00.2 +1.6
LIA Limnos Island 6.31 119 P Pn 09 20 59.7 +0.9
comp=Z,790nm,0.5s
TREC Trest 6.33 345 *e* P Pn 09 21 01.5 +2.4
TREC *e* 09 22 14.0
TREC Trest 6.33 345 *e* PN Pn 09 21 01.5 +2.4
TREC *e* SN Sn 09 22 14.0 +3.3
TREC Trest 6.33 345 *e* Pn Pn 09 21 00.7 +1.6
NEHR Nehoiu 6.34 67 ⇓P Pn 09 21 00.8 +1.6
VAE Valguarnera 6.35 207 Pn Pn 09 21 02.4 +3.0
comp=Z,12nm,0.3s,baz=105,slow=3.7,SNR=25
VAE LR LR 09 23 48.3
comp=Z,15µm,19.5s,baz=46,slow=42
BOB Bobbio (Coli) 6.37 287 ⇑P Pn 09 21 00.2 +0.5
TURR Turia 6.38 61 ⇓P Pn 09 21 01.5 +1.8
GEC2 GERESS Array S 6.38 333 Pn 09 21 01.4 +1.5
GEC2 GERESS Array S 6.38 333 *e* Pn Pn 09 21 01.2 +1.3
GERES GERESS Array B 6.38 333 Pn Pn 09 21 01.0 +1.1
comp=Z,5.3nm,0.3s,baz=152,slow=14,SNR=216
GERES Sn Sn 09 22 11.1 -1.0
comp=Z,19nm,0.3s,baz=160,slow=24,SNR=11
comp=Z,114nm,0.5s
MOTA Moosalm 6.39 313 Pn 09 21 01.1 +1.1
MOTA Sn 09 22 15.4 +3.1
MOTA Moosalm 6.39 313 *e* Pn Pn 09 21 01.2 +1.1
comp=Z,1µm,0.6s,SNR=464
MOTA *e* Sn Sn 09 22 15.5 +3.1
comp=Z,705nm,0.6s
MOTA Moosalm 6.39 313 P Pn 09 21 01.2 +1.1
MOTA 09 22 15.5
NIE Niedzica 6.41 13 *e* P Pn 09 21 01.5 +1.3
NIE *e* S Sb 09 23 03.5 +29
NIE *e* L L 09 23 45.4
comp=Z,9µm,18.9s
NIE Niedzica 6.41 13 P Pn 09 21 00.9 +0.8
comp=Z,1.2nmcomp=Z,2µmcomp=Z,243nm,0.9s
FETA Feichten 6.41 309 Pn 09 21 00.8 +0.5
FETA Sn 09 22 16.4 +3.6
FETA Feichten 6.41 309 *e* Pn Pn 09 21 00.8 +0.5
comp=Z,307nm,0.6s,SNR=204
FETA *e* Sn Sn 09 22 16.4 +3.6
comp=Z,638nm,0.7s
COVR Voineasa-Covas 6.42 63 ⇓P Pn 09 21 01.8 +1.5
ISR Istrita 6.42 70 ⇑P Pn 09 21 02.0 +1.6
ISR Istrita 6.42 70 P Pn 09 21 01.9 +1.6
ISR Istrita 6.42 70 P Pn 09 21 00.8 +0.4
comp=Z,8.6nmcomp=Z,13µmcomp=Z,1µm,0.9s
KYMI Kymi, Euboea I 6.49 133 P Pn 09 21 01.6 +0.4
comp=Z,1.3nmcomp=Z,904nm,0.5s
LEHL Lehliu 6.49 76 ⇓P Pn 09 21 02.6 +1.4
MEZ Mezhgor'ye 6.55 34 P Pn 09 21 02.8 +0.8
ENEZ Enez 6.55 109 P Pn 09 21 04.3 +2.2
STFN Stefani 6.55 138 P Pn 09 21 02.4 +0.3
comp=Z,4.9nmcomp=Z,1µm,0.6s
SKY Skiros Island 6.57 129 P Pn 09 21 03.1 +0.8
MORC Moravsky Berou 6.58 357 Pn 09 21 04.1 +1.6
MORC Moravsky Berou 6.58 357 ⇑P Pn 09 21 03.1 +0.6
MORC Moravsky Berou 6.58 357 *e* PG Pn 09 20 52.2 -10
MORC Moravsky Berou 6.58 357 *e* PN Pn 09 21 02.5 0.0
MORC Moravsky Berou 6.58 357 P Pn 09 21 03.0 +0.6
MORC Moravsky Berou 6.58 357 ⇑P Pn 09 21 01.8 -0.7
MORC Moravsky Berou 6.58 357 *e* Pn Pn 09 21 03.1 +0.6
CAVK Edirne/Enez-Ca 6.58 110 ⇑P Pn 09 21 04.9 +2.5
STHS Stebnicka Huta 6.60 19 *e* P Pn 09 21 02.8 +0.1
STHS *e* 09 22 14.6
STHS MLR MLR
comp=Z,600nm,1.1s
STHS Stebnicka Huta 6.60 19 *e* PN Pn 09 21 02.8 +0.1
STHS *e* SN Sn 09 22 14.6 -2.6
STHS *e* LG Lg 09 23 16.9
CICN Ciocanesti 6.61 78 ⇑P Pn 09 21 03.9 +1.1
MAGU Magoula 6.61 139 P Pn 09 21 02.9 0.0

GADA Gvkgeada 6.62 114 P Pn 09 21 05.3 +2.2
comp=Z,745nm,0.8s
OKC Ostrava-Krasne 6.63 1 *e*P Pn 09 21 04.4 +1.3
OKC Ostrava-Krasne 6.63 1 *e*PN Pn 09 21 04.4 +1.3
OKC Ostrava-Krasne 6.63 1 *e*Pn Pn 09 21 04.2 +1.1
BISRR Bisoca 6.65 66 ⇓P Pn 09 21 05.6 +2.0
BISRR Bisoca 6.65 66 P Pn 09 21 05.1 +1.5
comp=Z,15nmcomp=Z,20μmcomp=Z,2μm,0.7s
PGF Pioggiola 6.66 267 ⇑P Pn 09 21 03.3 -0.3
RETA Reutte 6.66 312 Pn 09 21 04.6 +0.9
RETA Sn 09 22 21.7 +2.8
RETA Reutte 6.66 312 *i* Pn Pn 09 21 04.6 +0.9
comp=Z,114nm,0.4s,SNR=50
RETA *e*Sn **Sn** 09 22 21.7 +2.8
comp=Z,435nm,0.6s
KHC Kasperske Hory 6.67 334 *ce*P Pn 09 21 04.6 +0.8
KHC pmax pmax
comp=Z,269nm,0.8s
KHC Kasperske Hory 6.67 334 *e*PN Pn 09 21 05.6 +1.8
KHC *e*SN **Sn** 09 22 19.8 +0.7
KHC AMS AMS 09 24 00.0
comp=Z,11μm,9.1s
KHC Kasperske Hory 6.67 334 ⇑P Pn 09 21 04.8 +1.0
KHC Kasperske Hory 6.67 334 *e*Pn Pn 09 21 05.4 +1.6
KHC Kasperske Hory 6.67 334 P Pn 09 21 05.2 +1.4
comp=Z,4.0nmcomp=Z,4μmcomp=Z,519nm,0.8s
PGOR Pogoanele 6.68 72 ⇓P Pn 09 21 05.5 +1.7
PLOR Plostina 6.71 64 ⇓P Pn 09 21 05.4 +1.0
PLOR Plostina 6.71 64 P Pn 09 21 05.3 +1.0
BURAR Bucovina Array 6.71 47 Pn 09 21 05.9 +1.5
BURAR Bucovina Array 6.71 47 ⇑P Pn 09 21 05.6 +1.2
BURAR Bucovina Array 6.71 47 P Pn 09 21 05.6 +1.2
VLX Vlachokerasia 6.72 149 P Pn 09 21 04.8 +0.3
BUR08 Bucovina Ar. S 6.72 46 Pn 09 21 06.0 +1.5
ITM Ithomi 6.72 152 Pn 09 21 04.7 +0.2
ITM Ithomi 6.72 152 ⇑P Pn 09 21 03.6 -0.9
STEB Steborice 6.73 359 *e*PN Pn 09 21 05.7 +1.2
STEB *e*SN **Sn** 09 22 22.3 +1.9
ONER Baraj Valea Uz 6.73 59 ⇓P Pn 09 21 06.4 +1.8
VRI Vrincioaia 6.77 64 ⇓P Pn 09 21 05.7 +0.6
VRI Vrincioaia 6.77 64 P Pn 09 21 05.7 +0.6
VRI Vrincioaia 6.77 64 P Pn 09 21 05.9 +0.8
comp=Z,5.0nmcomp=Z,5μmcomp=Z,344nm,0.7s
DAVOX Davos/Dischmat 6.78 305 Pn Pn 09 21 06.4 +1.0
comp=Z,29nm,0.3s,baz=128,slow=12,SNR=72
DAVOX Sn **Sn** 09 22 19.3 -2.7
comp=Z,55nm,0.3s,baz=341,slow=5.9,SNR=3.5
DAVOX LR LR 09 24 09.8
comp=Z,8μm,18.0s,baz=127,slow=42
GRER 6.79 68 ⇑P Pn 09 21 07.4 +2.1
FUR Furstenfeldbru 6.84 319 *e*Pn Pn 09 21 06.7 +0.6
RAC Raciborz 6.88 1 *e*PN Pn 09 21 12.1 +5.6
RAC Raciborz 6.88 1 *e*SG Sb 09 23 13.4 +26
RAC AMS AMS 09 24 06.0
comp=Z,10.0nm,15.7s
RAC Raciborz 6.88 1 *e*P Pn 09 21 12.1 +5.6
RAC MLR MLR
comp=Z,10μm,15.7s
KRLC Kraliky 6.92 353 *e*P Pn 09 21 08.9 +1.7
KRLC Kraliky 6.92 353 *e*PN Pn 09 21 08.9 +1.7
WET Wettzell 6.92 331 *e*Pn Pn 09 21 08.4 +1.2
TESR Tescani 6.97 59 ⇑P Pn 09 21 09.2 +1.4
TESR Tescani 6.97 59 P Pn 09 21 09.2 +1.4
comp=Z,3.7nmcomp=Z,3μmcomp=Z,198nm,0.9s
TUE Stuetta 6.97 301 ⇑P Pn 09 21 08.4 +0.4
TUE Stuetta 6.97 301 P Pn 09 21 08.7 +0.7
comp=Z,17nmcomp=Z,39μmcomp=Z,5μm,0.9s
DAVA Damuels 7.04 308 Pn 09 21 10.5 +1.6
DAVA Sn 09 22 30.7 +2.4
DAVA Damuels 7.04 308 *i* Pn Pn 09 21 10.5 +1.6
comp=Z,83nm,0.4s,SNR=49
DAVA *e*Sn **Sn** 09 22 30.7 +2.4
comp=Z,1μm,0.6s
DAVA Damuels 7.04 308 ⇓P Pn 09 21 10.4 +1.4
PANC Panciu 7.05 65 ⇓P Pn 09 21 10.6 +1.7
SHIU Shidnytsya 7.07 30 P Pn 09 21 11.0 +1.9
EZN Ezine 7.09 116 ⇓P Pn 09 21 11.8 +2.3
EZN Ezine 7.09 116 P Pn 09 21 11.8 +2.3
KSV Kosov 7.10 42 P Pn 09 21 10.3 +0.7
OJC Ojcow 7.12 9 *e*P Pn 09 21 10.5 +0.6
OJC *e*S Sb 09 23 06.3 +12
OJC *e*L L 09 24 19.9
comp=Z,15μm,16.6s
OJC Ojcow 7.12 9 Pn 09 21 10.3 +0.5
OJC Ojcow 7.12 9 P Pn 09 21 10.4 +0.6
OJC Ojcow 7.12 9 ⇑P Pn 09 21 10.5 +0.6
OJC Ojcow 7.12 9 *e*Pn Pn 09 21 10.3 +0.5
OJC Ojcow 7.12 9 P Pn 09 21 10.2 +0.4
comp=Z,1.2nmcomp=Z,2μmcomp=Z,180nm,0.8s
STNU Starunia 7.12 37 P Pn 09 21 11.7 +1.9
UBR Ueberruh 7.13 312 *e*Pn Pn 09 21 10.7 +0.5
ICOR Ion Corvin 7.16 79 ⇓P Pn 09 21 11.5 +1.2
PRU Pruhonice 7.19 342 *e*P Pn 09 21 12.7 +1.9
PRU MLR MLR
comp=Z,12μm,5.7s
PRU Pruhonice 7.19 342 *e*PN Pn 09 21 12.7 +1.9
PRU AMS AMS 09 23 50.0
comp=Z,12μm,5.7s
PRU Pruhonice 7.19 342 *e*Pn Pn 09 21 13.3 +2.5
KWP Kalwaria Pacla 7.19 25 *e*P Pn 09 21 13.3 +2.4
KWP *e*L L 09 23 56.8
comp=Z,14μm,19.3s
KWP Kalwaria Pacla 7.19 25 ⇓P Pn 09 21 12.7 +1.8
KWP Kalwaria Pacla 7.19 25 P Pn 09 21 12.4 +1.5
comp=Z,1.8nmcomp=Z,4μmcomp=Z,279nm,0.9s
PHSR Pinarhisar 7.21 99 ⇑P Pn 09 21 13.1 +2.0
DPC Dobruska-Polom 7.24 351 *e*P Pn 09 21 12.3 +0.8
DPC MLR MLR
comp=Z,12μm,11.8s
DPC Dobruska-Polom 7.24 351 *e*PN Pn 09 21 12.3 +0.8
DPC AMS AMS 09 23 50.0
comp=Z,12μm,11.8s
DPC Dobruska-Polom 7.24 351 *e*Pn Pn 09 21 12.3 +0.8
DPC Dobruska-Polom 7.24 351 P Pn 09 21 12.5 +1.0
comp=Z,1.2nmcomp=Z,2μmcomp=Z,157nm,0.8s
PRA Prague 7.29 342 *e*P Pn 09 21 15.1 +2.9
PRA Prague 7.29 342 *e*PN Pn 09 21 15.1 +2.9
CVDA Cernavoda 7.34 78 ⇓P Pn 09 21 14.5 +1.6
TLBR Topalu 7.37 76 ⇑P Pn 09 21 15.0 +1.7
UPC Upice 7.43 350 *e*P Pn 09 21 15.8 +1.7
UPC MLR MLR
comp=Z,15μm,8.7s
UPC Upice 7.43 350 *e*PN Pn 09 21 15.8 +1.7
UPC AMS AMS 09 24 00.0
comp=Z,15μm,8.7s
NEGRR Negrea 7.44 68 ⇑P Pn 09 21 15.8 +1.6
OSTC Ostas 7.45 351 *e*P Pn 09 21 15.8 +1.4
OSTC MLR MLR
comp=Z,14μm,11.2s
OSTC Ostas 7.45 351 *e*PN Pn 09 21 15.8 +1.4
OSTC AMS AMS 09 24 00.0
comp=Z,14μm,11.2s
MONC Moncucco Torin 7.49 288 ⇓P Pn 09 21 14.6 -0.4
CHVC Chvalec 7.50 350 *e*P Pn 09 21 16.3 +1.2
CHVC MLR MLR
comp=Z,14μm,9.1s
CHVC Chvalec 7.50 350 *e*PN Pn 09 21 16.3 +1.2
CHVC AMS AMS 09 24 00.0
comp=Z,14μm,9.1s
CFR Carcaliu 7.54 71 ⇑P Pn 09 21 16.3 +0.7
CFR Carcaliu 7.54 71 P Pn 09 21 16.2 +0.7
TIRR Tirgusor 7.62 77 Pn 09 21 17.9 +1.2
TIRR Tirgusor 7.62 77 ⇑P Pn 09 21 17.2 +0.5
TIRR Tirgusor 7.62 77 P Pn 09 21 17.2 +0.5
TIRR Tirgusor 7.62 77 ⇓P Pn 09 21 17.6 +0.8
TIRR Tirgusor 7.62 77 *e*Pn Pn 09 21 17.6 +0.8
TIRR Tirgusor 7.62 77 P Pn 09 21 17.5 +0.8
comp=Z,2.8nmcomp=Z,4μmcomp=Z,278nm,0.8s
GIUM Giurgiulesti 7.65 69 ⇑P Pn 09 21 18.3 +1.2
VLDR Vladesti 7.66 66 ⇓P Pn 09 21 18.1 +0.9
TPGR Topolog 7.68 74 ⇑P Pn 09 21 18.2 +0.7
ROTZ Rotzenmuhle 7.68 331 *e*Pn Pn 09 21 18.2 +0.6
KSP Ksiaz 7.73 352 *e*P Pn 09 21 19.9 +1.7
KSP *e*L L 09 23 56.6
comp=Z,8μm,17.1s
KSP Ksiaz 7.73 352 ⇑P Pn 09 21 20.1 +2.0
KSP Ksiaz 7.73 352 P Pn 09 21 18.3 +0.1
comp=Z,1.3nmcomp=Z,2μmcomp=Z,104nm,0.8s
VASR Vaslui 7.74 60 ⇓P Pn 09 21 20.0 +1.6
CTYL Yalikoy Yolu 7.81 99 ⇓P Pn 09 21 21.8 +2.5
RICC Richard 7.81 341 *e*PN Pn 09 21 21.9 +2.6
MANZ Manzenberg 7.90 331 *e*Pn Pn 09 21 21.0 +0.3
KMPD K-Podol'skiy 7.96 45 P Pb 09 21 22.0 -22
KMPD P Pn 09 21 21.7 +0.4
TLCR 8.01 72 ⇓P Pn 09 21 23.3 +1.3
TLCR 8.01 72 P Pn 09 21 23.3 +1.3
HSKC Hora Svate Kat 8.04 339 *e*PN Pn 09 21 24.4 +1.9
BAND Balkesir-Ban 8.06 107 ⇑P Pn 09 21 25.4 +2.7
TANN Tannenbergstha 8.15 334 *e*Pn Pn 09 21 24.5 +0.5
BRG Berggiesshubel 8.15 342 *e*Pn Pn 09 21 24.8 +0.8
BALB Balikesir 8.22 112 Pn 09 21 28.1 +3.1
STU Stuttgart 8.28 315 *e*P Pn 09 21 26.0 +0.2
STU Stuttgart 8.28 315 ⇑P Pn 09 21 26.1 +0.2
STU Stuttgart 8.28 315 *e*Pn Pn 09 21 25.7 -0.2
PLN Plauen 8.31 333 *e*Pn Pn 09 21 26.6 +0.5
BNI Bardonecchia 8.36 287 ⇓P Pn 09 21 24.8 -2.3
APE Apeiranthos 8.41 134 *i* P Pn 09 21 27.3 -0.3
KLYT Kilyos 8.41 100 ⇓P Pn 09 21 29.5 +1.9
BFO Black Forest 8.49 310 Pn 09 21 27.9 -0.8
BFO Black Forest 8.49 310 *i* P Pn 09 21 26.7 -1.9
BFO Black Forest 8.49 310 ⇓P Pn 09 21 27.8 -0.8
BFO Black Forest 8.49 310 *e*Pn Pn 09 21 28.3 -0.3
MILM Milestii Mici 8.49 60 ⇑P Pn 09 21 29.2 +0.5
MILM Milestii Mici 8.49 60 *d* P Pn 09 21 28.3 -0.4
MILM *e*S **Sn** 09 23 03.0 -0.7
MILM pmax pmax
comp=Z,600nm,1.7s
MILM MLR MLR
comp=Z,8μm,9.5s
MILM MLR MLR
comp=N,9μm,9.0s
MILM MLR MLR
comp=E,11μm,12.5s
MILM Milestii Mici 8.49 60 ⇓ *i* P Pn 09 21 28.3 -0.4
comp=E,600nm,1.7s
MILM *e*S **Sn** 09 23 03.0 -0.7
MILM *e*L L 09 25 02.0
MILM LRM MLR 09 25 48.0
comp=E,8μm,9.5s
KIS Kishinev 8.53 60 *e*P Pn 09 21 28.0 -1.1
KIS *e*S **Sn** 09 23 03.0 -1.6
KIS pmax pmax
comp=Z,500nm,2.0s
KIS MLR MLR
comp=Z,4μm,12.5s
KIS MLR MLR
comp=E,4μm,8.4s
KIS Kishinev 8.53 60 *e*P Pn 09 21 28.0 -1.1
comp=E,500nm,2.0s
KIS *e*S **Sn** 09 23 03.0 -1.6
KIS *e*L L 09 24 13.0
KIS LRM MLR 09 25 13.0
comp=E,4μm,8.4s
MOX Moxa 8.63 332 *e*Pn Pn 09 21 31.3 +0.7
SORM Soroca 8.75 52 ⇓P Pn 09 21 32.8 +0.5
SORM Soroca 8.75 52 P Pn 09 21 32.7 +0.5
CLL Collm 8.79 339 *e*P Pn 09 21 36.0 +3.3
CLL Collm 8.79 339 *e*Pn Pn 09 21 36.0 +3.3
CLL *ex* x 09 22 20.0
CLL *e*Sn Sn 09 22 53.0 -18
CLL *ex* x 09 23 14.0
CLL *e*Sb 09 23 39.0
CLL AMS AMS 09 24 00.0
CLL *e*Sg 09 24 04.0
CLL AMS AMS 09 24 24.0
comp=N,12μm,21.6s
CLL AMS AMS 09 24 24.0
comp=E,22μm,21.6s
BEL Belsk 8.83 11 *e*P Pn 09 21 36.1 +2.8
BEL *e*S 09 24 31.7
BEL *e*L L 09 25 18.6
comp=E,17μm,15.6s
ECH Echery 9.09 307 ⇑P Pn 09 21 35.8 -1.2
R9F13 Warsaw-Wawer 9.26 12 *e*P Pn 09 21 41.8 +2.7
R9F13 *i* S Sn 09 23 20.9 -1.6
MANT Manisa 9.27 117 Pn 09 21 42.8 +3.2
LUBAR Lubar, Ukraine 9.48 42 P Pn 09 21 43.9 +1.6
IDI Anoyia 9.54 144 P Pn 09 21 39.7 -3.4
IDI S Sn 09 23 21.7 -7.8
IDI Anoyia 9.54 144 Pn Pn 09 21 40.5 -2.6
comp=E,82nm,0.5s,baz=319,slow=14,SNR=76
IDI Sn **Sn** 09 23 24.4 -5.1
comp=E,57nm,0.3s,baz=264,slow=12,SNR=7.8
IDI LR LR 09 26 49.3
comp=E,4μm,19.5s,baz=322,slow=47
TNS Taunus Mts 9.61 320 *e*Pn Pn 09 21 44.5 +0.6
RNPP5 Staryi Chortor 9.64 31 P Pn 09 21 46.3 +1.9
RNPP8 Varash 9.71 30 P Pn 09 21 46.8 +1.4
RNPP9 Sopachiv 9.79 30 P Pn 09 21 47.7 +1.3
SAHE Sakarya_HENDEK 9.84 99 ⇑P Pn 09 21 48.9 +1.7
SSB Saint Sauveur 9.89 287 ⇑P Pn 09 21 45.4 -2.5
GTTG Gottingen 9.96 330 *e*Pn Pn 09 21 50.5 +1.7
KEST Kesra 10.03 225 Pn Pn 09 21 51.5 +1.6
comp=E,12nm,0.3s,baz=21,slow=5.2,SNR=51
KEST LR LR 09 25 59.4
comp=E,4μm,20.6s,baz=60,slow=40
KEST Kesra 10.03 225 Pn 09 21 52.4 +2.6
KASTN Kahler Asten 10.32 324 *e*Pn Pn 09 21 54.4 +0.7
KARP Karpathos 10.42 134 *e*P Pn 09 21 55.0 -0.2
KARP Karpathos 10.42 134 ⇑P Pn 09 21 54.9 -0.3
KARP Karpathos 10.42 134 P Pn 09 21 55.2 0.0
comp=E,7μmcomp=E,621nm,1.2s
WLF Walferdange 10.42 312 P Pn 09 21 56.3 +1.2
WLF Walferdange 10.42 312 *d*P Pn 09 21 57.1 +2.1
WLF Walferdange 10.42 312 ⇑P Pn 09 21 57.4 +2.3
ARG Arkhangelos 10.46 129 Pn 09 21 57.9 +2.3
ARG Arkhangelos 10.46 129 P Pn 09 21 57.9 +2.3
AK13 Malin Array Si 10.57 42 P Pn 09 21 58.3 +1.2
AK07 Malin Array Si 10.60 42 P Pn 09 21 58.1 +0.6
AK14 Malin Array Si 10.61 42 P Pn 09 21 58.2 +0.6
AK17 Malin Array Si 10.62 41 P Pn 09 21 58.3 +0.6
AK19 Malin Array Si 10.62 41 P Pn 09 21 58.4 +0.6
AK06 Malin Array Si 10.62 42 P Pn 09 21 58.5 +0.7
AK16 Malin Array Si 10.63 42 P Pn 09 21 58.6 +0.7
AK20 Malin Array Si 10.63 41 P Pn 09 21 58.6 +0.7
AK12 Malin Array Si 10.64 42 P Pn 09 21 58.7 +0.7
AK05 Malin Array Si 10.64 42 P Pn 09 21 58.8 +0.7
AK18 Malin Array Si 10.64 41 P Pn 09 21 58.8 +0.7
AK10 Malin Array Si 10.65 42 P Pn 09 21 59.0 +0.7
AK15 Malin Array Si 10.65 42 P Pn 09 21 59.0 +0.7
KIEV Kiev 10.70 42 Pn 09 21 59.1 +0.3
KIEV Kiev 10.70 42 ⇓P Pn 09 22 00.1 +1.3
KIEV Kiev 10.70 42 *i* P Pn 09 22 00.9 +2.1
SNR=7.9
KIEV Kiev 10.70 42 P Pn 09 21 59.1 +0.3
KIEV Kiev 10.70 42 ⇑P Pn 09 21 59.5 +0.7
AKASG Malin Array Be 10.71 42 Pn Pn 09 21 59.6 +0.6
comp=E,4.1nm,0.3s,baz=237,slow=13,SNR=36
AKASG Sn **Sn** 09 23 55.1 -2.9
comp=E,3.2nm,0.3s,baz=226,slow=24,SNR=2.0
AKASG LR LR 09 26 49.4
comp=E,7μm,19.0s,baz=232,slow=42
comp=E,33nm,0.8s
AKASG Malin Array Be 10.71 42 Pn 09 21 59.7 +0.7
AKASG Malin Array Be 10.71 42 *i* P Pn 09 21 59.0 0.0
AKASG pmax pmax
comp=Z,46nm,0.8s
AKBB Malin Array Si 10.71 42 *ce*P Pn 09 21 59.3 +0.3
MAHO Mahon 10.82 257 P Pn 09 22 04.3 +3.7
BHOU Houvegnez 10.89 315 *d*P Pn 09 22 05.0 +3.4
BHOU *d*S Sn 09 24 02.4 -0.3
ISP Isparta 10.93 115 *e*P Pn 09 22 05.7 +3.4
ISP Isparta 10.93 115 *ce*P Pn 09 22 04.8 +2.6
ISP pmax pmax
comp=Z,43nm,0.6s
BTNL Ternell 10.97 316 *d*P Pn 09 22 04.0 +1.4
BTNL *d*PP **PbPb** 09 22 37.5 -1.3
MEM Membach 11.04 316 *d*P Pn 09 22 03.9 +0.3
MEM *d*P 09 22 05.4
CIDE Kastamonu/Cide 11.10 92 ⇓P Pn 09 22 06.2 +1.9
EJON La Jonquera 11.14 271 P Pn 09 22 06.2 +1.3
RETH Rethem/Aller, 11.15 332 *e*Pn Pn 09 22 07.2 +2.2
RCHB Rochefort 11.19 313 *d*P Pn 09 22 05.9 +0.3
BSTI Sart Tilman 11.26 315 *d*P Pn 09 22 09.0 +2.5
BCLA Clavier 11.30 314 *d*P Pn 09 22 06.8 -0.3
BCLA *d*S Sn 09 24 13.9 +1.4
AKAS Kas 11.32 124 Pn 09 22 08.7 +1.2
BEBN Eben Emael 11.33 316 *d*P Pn 09 22 09.8 +2.4
BEBN *d*S Sn 09 24 12.7 -0.5
SUW Suwalki 11.34 16 *e*P Pn 09 22 08.6 +1.0
SUW *e*L L 09 26 59.8
comp=Z,12μm,16.8s
SUW Suwalki 11.34 16 *e*P Pn 09 22 09.7 +2.1
SUW Suwalki 11.34 16 ⇓P Pn 09 22 08.4 +0.9
BGES Gesves 11.39 314 *d*P Pn 09 22 08.0 -0.4
BGES *d*S Sn 09 24 11.2 -3.7
IBBN Ibbenburen 11.41 326 ⇑P Pn 09 22 11.2 +2.6
IBBN Ibbenburen 11.41 326 *e*Pn Pn 09 22 11.0 +2.3
DOU Dourbes 11.50 311 *d*P Pn 09 22 10.8 +0.9
BMRD Maredsous 11.52 313 *d*P Pn 09 22 10.6 +0.5
MTLF Montolieu 11.52 276 ⇓P Pn 09 22 10.1 -0.1
ANTO Ankara 11.57 102 P Pn 09 22 11.7 +0.7
ANTO Ankara 11.57 102 Pn 09 22 12.1 +1.1
ANTO Ankara 11.57 102 ⇑P Pn 09 22 11.9 +1.0
ANTO Ankara 11.57 102 P Pn 09 22 11.9 +1.0
BZK Bozkurt 11.86 91 ⇓P Pn 09 22 16.9 +2.2
BZK Bozkurt 11.86 91 ⇓P Pn 09 22 17.3 +2.6
ILGA Ilgaz 11.86 95 Pn 09 22 19.4 +4.4
ETOS Mallorca 11.91 258 P Pn 09 22 15.5 0.0
UCC Uccle 12.01 314 *d*P Pn 09 22 15.8 -0.9
CLF Chambon-Foret 12.03 299 Pn 09 22 18.1 +1.0
CLF Chambon-Foret 12.03 299 ⇓P Pn 09 22 19.1 +2.0
BR131 Keskin Array S 12.23 101 *i* P Pn 09 22 23.1 +3.1
BRTR Keskin Array B 12.23 101 Pn Pn 09 22 22.2 +2.3
comp=Z,1.4nm,0.3s,baz=285,slow=12,SNR=62
BRTR LR LR 09 26 52.4
comp=Z,5μm,18.9s,baz=297,slow=37
BRTR ScP **ScP** **09 31 33.4 -0.1**
comp=Z,1.6nm,0.9s,baz=176,slow=3.7,SNR=4.0
comp=Z,16nm,0.7s
BRTR Keskin Array B 12.23 101 Pn 09 22 23.4 +3.4
CEST Esterri de Car 12.31 273 Pn 09 22 22.8 +1.7
KIRS Kirsehir-Merke 12.65 103 ⇓P Pn 09 22 27.6 +1.9
PABE Paberze 12.90 15 Pn 09 22 29.7 +0.9
PABE Paberze 12.90 15 *e*P Pn 09 22 31.1 +2.2
MNK Minsk 13.02 26 *i* P Pn 09 22 28.4 -2.1
comp=E,340nm,1.0s
MNK *i* P Pn 09 22 28.4 -2.1
comp=N,88nm,0.9s
MNK *i* P Pn 09 22 28.4 -2.1
comp=Z,300nm,0.9s,baz=214
MNK *i* PP **PnPn** 09 22 37.4 -0.9
MNK *i* PPP PPP 09 22 46.1
MNK *i* S Sn 09 24 52.9 -1.7
MNK *i* SS **SnSn** 09 25 05.9 -0.8
MNK *i* SSS SSS 09 25 21.1
MNK *i* LQ LQ 09 26 15.3
MNK *i* LRM MLR 09 27 56.6
comp=N,4μm,15.5s
MNK *i* LRM MLR 09 28 25.4
comp=Z,8μm,14.1s
MNK *i* LRM MLR 09 28 28.2
comp=E,7μm,14.9s
MNK Minsk 13.02 26 *i* P Pn 09 22 28.4 -2.1
MNK *i* S Sn 09 24 52.8 -1.7
MNK pmax pmax
comp=N,88nm,0.9s
MNK pmax pmax
comp=E,340nm,1.0s
MNK pmax pmax
comp=Z,300nm,0.9s
MNK MLR MLR
comp=N,4μm,15.0s
MNK MLR MLR
comp=Z,8μm,14.0s
MNK MLR MLR
comp=E,7μm,15.0s
NACGM Naroch 13.03 23 ⇓ *i* P Pn 09 22 30.9 +0.3
comp=Z,144nm,0.9s,baz=210
EIBI Ibiza 13.24 257 P Pn 09 22 37.8 +4.1
IIGN Ignalina 13.27 21 *e*P Pn 09 22 30.2 -3.8
BJUU Bjuv 13.27 348 *i* P P 09 22 45.2 +1.7
MFF Saint Martin d 13.31 291 ⇓P Pn 09 22 33.7 -0.9
VSVD Vaisvydziai 13.34 15 *e*P Pn 09 22 36.4 +1.5
ISAL Salakas 13.44 20 *e*P Pn 09 22 37.7 +1.5
DEL Delary 13.54 350 *i* P P 09 22 45.8 -0.7
ANN Anapa 14.07 77 *e*P Pn 09 22 41.8 -3.1
ANN *e*S **Sn** 09 25 18.7 -1.5
ANN pmax pmax
comp=Z,165nm,1.1s
ANN MLR MLR
comp=N,3μm,14.0s
ANN MLR MLR
comp=Z,5μm,13.0s
ANN MLR MLR
comp=E,1μm,9.0s
MUD Monsted U'grnd 14.42 340 *i* P P 09 22 57.2 +1.0
SLIT Slitere, Latvi 14.69 9 *e*P P 09 22 58.7 -0.6
SLIT Slitere, Latvi 14.69 9 ⇓P Pn 09 22 51.4 -1.9
ECHE Chera 14.70 262 P Pn 09 22 53.9 +0.3
BORU Boraas 14.82 349 *i* P P 09 23 03.1 +2.4
TJOU Tjoern 15.37 347 *i* P P 09 23 09.4 +2.5
ETOB Tobarra 15.47 259 P P 09 23 06.6 -1.6
CART Cartagena 15.53 255 P Pn 09 23 05.7 +1.1
EMUR La Murta 15.58 256 P P 09 23 07.7 -1.7
SOC Sochi 15.78 81 *e*P Pn 09 23 07.7 -0.1
SOC *e* 09 26 03.9
SOC pmax pmax
comp=Z,153nm,1.0s
SOC MLR MLR
comp=Z,2μm,16.0s
VSLR Vesyoloye 16.02 82 *i* P Pn 09 23 10.9 0.0
CWF Charnwood Fore 16.02 313 *e*P Pn 09 23 11.1 +0.2
VSU Vasula 16.21 17 *e*P P 09 23 16.9 +0.8
VSU Vasula 16.21 17 *ce*P Pn 09 23 12.5 -0.7
VSU pmax pmax
comp=Z,959nm,1.3s
VSU Vasula 16.21 17 ⇓P Pn 09 23 10.9 -2.3
ERBR Yeremizino-Bor 16.23 73 *e*P Pn 09 23 12.5 -1.0
ERBR *e*S **Sn** 09 26 14.8 +2.0
ERBR pmax pmax
comp=Z,141nm,1.3s
ERBR MLR MLR
comp=Z,7μm,16.0s
ERBR MLR MLR
comp=N,6μm,11.0s
ERBR MLR MLR
comp=E,11μm,12.0s
STRU Stroemstad 16.40 347 *i* P P 09 23 17.6 -0.6
LABN Labinsk 16.42 77 *e*P Pn 09 23 16.0 0.0
LABN *e*S **Sn** 09 26 20.1 +2.7
LABN pmax pmax
comp=Z,99nm,1.0s
LABN MLR MLR
comp=E,4μm,13.0s
LABN MLR MLR
comp=Z,3μm,17.0s
LABN MLR MLR
comp=N,4μm,17.0s
BEIL Beino 16.56 115 *e*P Pn 09 23 17.9 0.0
HWQ Hawqa 16.56 117 *e*P Pn 09 23 18.5 +0.5
LBWR Ladybower, Pea 16.57 315 *e*P Pn 09 23 18.4 +0.6
LBWR IAmb IAmb 09 23 21.4
comp=Z,83nm,1.0s
VORR Voronezh 16.60 52 *e*P Pn 09 23 17.4 -0.8
VORR pmax pmax
comp=Z,536nm,0.7s
BHL Bhannes 16.61 118 *e*P Pn 09 23 19.5 +1.0
MCH1 Michaelchurch 16.63 309 *e*P Pn 09 23 19.2 +0.6
MCH1 IAmb IAmb 09 23 21.6
comp=Z,102nm,1.2s
MCH1 Michaelchurch 16.63 309 ⇓P P 09 23 20.0 -0.9
ENIJ Nijar 16.66 255 P P 09 23 21.0 -0.4
LPSR Galich'ya Gora 16.82 49 *d* P Pn 09 23 19.4 -1.6
LPSR pmax pmax
comp=Z,349nm,1.6s
ESDC Sonseca Array 16.84 265 Pn P 09 23 22.7 -0.8
comp=Z,0.2nm,0.3s,baz=64,slow=12,SNR=20
ESDC LR LR 09 29 35.0
comp=Z,2μm,20.4s,baz=78,slow=36
ESDC Sonseca Array 16.84 265 P P 09 23 22.6 -0.9
QRWL Qaraoun 16.85 119 *e*P Pn 09 23 21.5 -0.1
FKH Fakeheh 16.89 116 *e*P Pn 09 23 22.0 -0.1
OBN Obninsk 16.94 39 Pn Pn 09 23 20.0 -2.4
comp=Z,6.6nm,0.3s,baz=166,slow=3.7,SNR=50
OBN LR LR 09 30 18.9
comp=Z,5μm,19.8s,baz=170,slow=39
OBN Obninsk 16.94 39 *e*P Pn 09 23 23.0 +0.6
OBN Obninsk 16.94 39 *de*P Pn 09 23 20.0 -2.4
OBN *e*S **S** 09 26 36.9 -2.7
OBN pmax pmax
comp=Z,171nm,1.0s
OBN MLR MLR
comp=Z,5μm,17.0s
OBN Obninsk 16.94 39 ⇓P Pn 09 23 20.3 -2.1
ARBE Arbavere 16.97 14 *e*P P 09 23 25.0 +0.4
MMAI Mount Meron Ar 17.02 121 P Pn 09 23 22.4 -1.4
comp=Z,3.0nm,0.3s,baz=317,slow=11,SNR=24
comp=Z,27nm,0.5s

AAL Aland 17.04 3 eP Pn 09 23 21.4 -2.2
GEM Giv'at Ha'Em 17.06 120 ⇓p P 09 23 25.2 -0.5
FOEL Foel Wylfa 17.11 312 eP Pn 09 23 24.4 -0.3
FOEL IAmb IAmb 09 23 26.2
comp=Z,25nm,0.9s
HFS Hagfors 17.15 353 P Pn 09 23 25.2 +0.1
comp=Z,8.1nm,0.3s,baz=159,slow=13,SNR=158
HFS LR LR 09 29 49.5
comp=Z,2μm,19.9s,baz=176,slow=36
comp=Z,58nm,0.6s
PAB San Pablo 17.17 265 P P 09 23 26.9 -0.1
PAB San Pablo 17.17 265 P P 09 23 26.9 -0.1
PAB pmax pmax
comp=Z,23nm,1.1s
KONO Kongsberg 17.25 345 Pn 09 23 25.7 -0.6
KONO Kongsberg 17.25 345 eP Pn 09 23 25.9 -0.4
KONO Kongsberg 17.25 345 ceP Pn 09 23 25.2 -1.2
KONO pmax pmax
comp=Z,77nm,1.3s
KONO Kongsberg 17.25 345 ⇑P Pn 09 23 26.2 -0.2
OSL Oslo 17.34 348 eP Pn 09 23 25.8 -1.5
EQTA Presa de Quent 17.43 257 P Pn 09 23 29.1 +0.2
EDMD Edmundbyers 17.45 319 eP Pn 09 23 28.3 -0.5
EDMD IAmb IAmb 09 23 32.0
comp=Z,28nm,0.7s
MEF Metsahovi 17.47 11 eP Pn 09 23 28.5 -0.5
SALP Salfit 17.54 124 ⇑P Pn 09 23 28.6 -1.5
ELGU Los Guajares, 17.72 256 P P 09 23 33.4 +0.3
EALB Alboran 17.75 253 P P 09 23 35.5 +2.1
MOS Moscow 17.80 38 eP Pn 09 23 28.8 -4.3
MOS eS Sn 09 26 51.5 +0.9
MOS pmax pmax
comp=Z,2μm,1.0s
MOS pmax pmax
comp=N,251nm,0.9s
MOS pmax pmax
comp=E,894nm,1.0s
MOS pmax pmax
comp=Z,2μm,0.9s
MOS pmax pmax
comp=N,300nm,0.9s
MOS pmax pmax
comp=E,900nm,0.9s
MOS smax smax
comp=N,3μm,4.0s
MOS smax smax
comp=E,2μm,3.6s
MOS MLR MLR
comp=E,4μm,9.0s
MOS MLR MLR
comp=Z,4μm,9.0s
BALJ Balqa 17.80 123 P P 09 23 33.7 -0.2
BALJ IAmb IAmb 09 23 43.9
comp=Z,183nm,1.0s
EADA Adamuz 17.84 261 P Pn 09 23 33.9 +0.1
KIV Kislovodsk 17.88 79 P Pn 09 23 34.1 -0.2
KIV P Pn 09 23 34.1 -0.2
KIV Kislovodsk 17.88 79 P P 09 23 34.8 -0.1
KIV Kislovodsk 17.88 79 i P P 09 23 34.9 +0.1
SNR=9.0
KIV Kislovodsk 17.88 79 eP Pn 09 23 33.9 -0.4
KIV eS Sn 09 26 54.7 +1.8
KIV pmax pmax
comp=Z,58nm,1.0s
KIV MLR MLR
comp=Z,2μm,14.0s
SHA1 Shidzhatmaz 17.88 80 i P Pn 09 23 34.4 -0.1
KVAR Kislovodsk Arr 17.88 79 LR LR 09 31 26.5
comp=Z,3μm,18.2s,baz=54,slow=40
VRH Novokhopyorsk 17.93 55d i P Pn 09 23 33.8 -0.9
VRH pmax pmax
comp=Z,361nm,1.1s
EGOR Sierra Gorda, 17.95 258 P P 09 23 35.8 0.0
NC602 NORSAR Array S 17.98 350 eP Pn 09 23 33.9 -1.5
RAF Rauma 17.98 6 eP P 09 23 35.7 -0.1
GOF Gofitskoye 18.04 75 ceP Pn 09 23 36.1 -0.2
GOF eS Sn 09 26 53.9 -2.9
KBZ Khabaz 18.05 80 P P 09 23 36.9 +0.3
comp=Z,1.3nm,0.3s,baz=284,slow=9.6,SNR=23
KBZ LR LR 09 32 00.2
comp=Z,3μm,20.6s,baz=272,slow=42
comp=Z,14nm,0.8s
KBZ Khabaz 18.05 80 ceP P 09 23 37.6 +0.9
MSBI Mazada 18.17 125 ⇑P Pn 09 23 36.4 -1.4
NAO01 NORSAR Array S 18.18 349 IAmb IAmb 09 23 47.4
comp=Z,130nm,0.8s
PUL Pulkovo 18.22 20 ceP P 09 23 38.7 +0.4
PUL pmax pmax
comp=Z,421nm,1.0s
PBRG Braganca 18.29 274 eP P 09 23 39.9 +0.5
PBRG i IAmb IAmb 09 23 49.6
comp=Z,86nm,2.7s
EKA Eskdalemuir Ar 18.30 319 P Pn 09 23 38.4 -0.9
baz=116,slow=10
comp=Z,39nm,0.8s
GHAJ Ghor Haditha 18.30 125 IAmb IAmb 09 23 50.3
comp=Z,226nm,1.2s
ESK Eskdalemuir 18.31 319 P Pn 09 23 38.7 -0.7
ESK Eskdalemuir 18.31 319 eP P 09 23 39.4 0.0
ESK IAmb IAmb 09 23 42.6
comp=Z,38nm,0.8s
ESK Eskdalemuir 18.31 319 ⇑P P 09 23 39.5 0.0
NB2 NORSAR Subarra 18.32 349 P P 09 23 37.9 -1.6
comp=Z,42nm,0.7s,baz=164,slow=11
NOA NORSAR Array B 18.32 349 P P 09 23 38.0 -1.6
comp=Z,0.4nm,0.3s,baz=165,slow=11,SNR=53
NOA LR LR 09 30 33.4
comp=Z,1μm,20.6s,baz=170,slow=37
comp=Z,14nm,0.7s
NBO00 NORSAR Array S 18.37 349 P P 09 23 40.0 -0.1
NBO00 IAmb IAmb 09 23 49.3
comp=Z,180nm,0.8s
SKAR Skarslia 18.46 345 eP P 09 23 40.8 -0.2
NC303 NORSAR Array S 18.48 350 P P 09 23 40.7 -0.5
ASF Jabal al Asfar 18.52 120 P Pn 09 23 42.6 +0.3
comp=Z,1.9nm,0.3s,baz=295,slow=5.6,SNR=22
comp=Z,21nm,0.7s
MVO Moncorvo 18.66 272 eP Pn 09 23 45.5 +1.6
MVO i IAmb IAmb 09 23 55.4
comp=Z,115nm,1.0s
MVO eS S 09 27 17.3 +2.9
MVO eLR LR 09 29 52.5
MVO i IAMs_20 IAMs_20 09 31 26.5
comp=Z,3μm,18.0s
GURO Guroymak-BITLI 18.73 96 IAmb IAmb 09 23 57.2
comp=Z,128nm,0.8s
GAL1 Galloway 18.82 316 eP P 09 23 45.2 +0.2
GAL1 IAmb IAmb 09 23 47.3
comp=Z,31nm,0.8s
BER Bergen 18.84 340 eP Pn 09 23 46.3 +0.5
FINES FINESS Array B 18.89 12 P P 09 23 45.5 -0.2
comp=Z,12nm,0.3s,baz=187,slow=6.2,SNR=133
FINES LR LR 09 31 18.2
comp=Z,3μm,19.5s,baz=200,slow=38
comp=Z,114nm,0.8s
FINES FINESS Array B 18.89 12 P P 09 23 44.6 -1.0
FINES FINESS Array B 18.89 12 P P 09 23 44.7 -1.0
FIA1 FINESS Array S 18.89 12 P P 09 23 44.4 -1.3
IWEX Carrickbyrne, 18.93 308 P Pn 09 23 47.1 +0.1
ASK Askoy 18.96 340 eP Pn 09 23 46.9 -0.4
DSB Dublin 19.01 310 P Pn 09 23 49.2 +1.3
EIL Elat 19.14 129 P P 09 23 46.2 -2.5
comp=Z,59nm,0.6s,baz=335,slow=15,SNR=24
EIL S Sn 09 27 10.9 -13
comp=Z,17nm,0.4s,baz=294,slow=9.0,SNR=6.8
EIL LR LR 09 32 48.3
comp=Z,907nm,20.7s,baz=317,slow=42
POLO Lamas de Olo 19.16 273 eP P 09 23 49.3 +0.3
POLO i IAmb IAmb 09 24 01.2
comp=Z,53nm,1.1s
MTE Manteigas 19.24 270 eP Pn 09 23 50.3 -0.5
MTE i IAmb IAmb 09 24 19.9
comp=Z,91nm,2.9s
MTE eS S 09 27 30.7 +4.5
MTE eLR LR 09 30 38.1
MTE i IAMs_20 IAMs_20 09 33 05.5
comp=Z,1μm,16.0s
MTE Manteigas 19.24 270 eP Pn 09 23 50.4 -0.5
MTE Manteigas 19.24 270 ⇑P Pn 09 23 50.4 -0.5
PCAB Cabril 19.25 274 eP Pn 09 23 50.6 -0.4
PCAB i IAmb IAmb 09 24 22.8
comp=Z,130nm,1.6s
ILTH Belurgan, Co L 19.30 313 P Pn 09 23 51.0 -0.3
INVG Invergeldie, C 19.32 321 eP P 09 23 50.6 +0.2
INVG IAmb IAmb 09 23 53.2
comp=Z,82nm,0.8s
HYA Hoyanger 19.33 343 eP Pn 09 23 51.2 -0.5
PCBR Castelo Branco 19.36 269 eP Pn 09 23 51.9 -0.3
PCBR i IAmb IAmb 09 24 12.4
comp=Z,62nm,1.6s
PVIS Viseu 19.41 271 eP Pn 09 23 52.5 -0.4
KEF Keuruu 19.42 10 eP Pn 09 23 52.1 -0.6
PMRV Marv??o 19.43 267 eP Pn 09 23 54.0 +0.9
PMRV i IAmb IAmb 09 25 08.0
comp=Z,62nm,1.5s
PMRV eS Sn 09 27 40.6 +10
PMRV eLR LR 09 30 22.2
PMRV i IAMs_20 IAMs_20 09 31 19.5
comp=Z,1μm,20.0s
SUE Sulen 19.57 341 eP P 09 23 53.8 +0.7
DOMB Dombas 19.59 347 eP Pn 09 23 55.2 +0.3
PBAR Barrancos 19.62 264 eP P 09 23 53.2 -0.7
PBAR i IAmb IAmb 09 24 07.1
comp=Z,65nm,1.7s
CLGH Cloghs, Cushen 19.64 316 eP P 09 23 54.3 +0.3
CLGH IAmb IAmb 09 23 56.5
comp=Z,94nm,1.0s
MCD Coleburn Disti 19.64 324 eP P 09 23 54.3 +0.3
MCD IAmb IAmb 09 23 56.7
comp=Z,65nm,0.8s
SFS San Fernando 19.74 258 P Pn 09 23 56.1 -0.7
PESTR Estremoz 19.77 266 P P 09 23 55.5 0.0
PESTR Estremoz 19.77 266 eP Pn 09 23 56.7 -0.4
PESTR i IAmb IAmb 09 24 04.9
comp=Z,92nm,1.0s
PESTR Estremoz 19.77 266 ⇓P Pn 09 23 56.8 -0.4
LAWE Loch Awe, Argy 19.86 319 eP P 09 23 56.6 +0.3
LAWE IAmb IAmb 09 24 04.2
comp=Z,66nm,0.9s
PSARD Sardoal 19.93 269 eP P 09 23 57.4 +0.1
PSARD i IAmb IAmb 09 24 08.1
comp=Z,126nm,1.2s
FOO Floro 19.97 342 eP Pn 09 23 58.6 -0.7
PCAS Casmilo, Conde 20.04 270 eP P 09 23 58.2 -0.2
PCAS i IAmb IAmb 09 24 32.7
comp=Z,141nm,1.6s
VAF Ylistaro 20.05 6 eP P 09 23 58.8 +0.5
AKN Aaknes 20.09 345 eP Pn 09 23 59.8 -0.9
PARRA Arraiolos 20.11 266 eP P 09 23 57.6 -10
PARRA i IAmb IAmb 09 24 04.0
comp=Z,72nm,2.0s
GNI Garni 20.16 90 P Pn 09 24 01.9 -0.1
comp=Z,129nm,0.7s,baz=328,slow=2.9,SNR=56
GNI S S 09 27 43.5 -1.9
comp=Z,4.1nm,0.4s,baz=78,slow=23,SNR=1.2
GNI LR LR 09 32 31.8
comp=Z,2μm,21.1s,baz=286,slow=39
comp=Z,129nm,0.7s
GNI Garni 20.16 90 P Pn 09 24 01.6 -0.4
GNI P Pn 09 24 01.6 -0.4
GNI Garni 20.16 90 P Pn 09 24 02.0 0.0
GNI IAmb IAmb 09 24 12.9
comp=Z,212nm,0.9s
GNI Garni 20.16 90 P Pn 09 24 02.3 +0.4
GNI Garni 20.16 90 ⇑p Pn 09 24 02.1 +0.1
EVO Evora 20.20 265 P P 09 23 59.6 -0.6
EVO Evora 20.20 265 eP Pn 09 24 02.1 -0.1
EVO i IAmb IAmb 09 24 13.7
comp=Z,82nm,1.2s
PBEJ Beja 20.28 264 eP Pn 09 24 02.3 -0.9
PBEJ i IAmb IAmb 09 24 40.1
comp=Z,48nm,1.4s
MOL Molde 20.34 346 eP P 09 24 02.1 +0.5
IDGL Inch Island, C 20.36 315 P P 09 24 01.4 -0.3
IDGL Inch Island, C 20.36 315 eP P 09 24 01.8 0.0
IDGL IAmb IAmb 09 24 03.5
comp=Z,180nm,0.9s
PVAQ Vaqueiros 20.42 262 IAmb IAmb 09 24 12.8
comp=Z,180nm,1.1s
PVAQ Vaqueiros 20.42 262 eP P 09 24 01.4 -1.2
PVAQ i IAmb IAmb 09 24 11.9
comp=Z,124nm,1.0s
PVAQ eS Sn 09 27 58.5 +4.2
PVAQ eLR LR 09 30 35.9
PVAQ i IAMs_20 IAMs_20 09 32 29.9
comp=Z,3μm,18.0s
PVAQ Vaqueiros 20.42 262 ⇑P P 09 24 01.4 -1.2
PSBE So Bento 20.43 269 eP Pn 09 24 03.8 -1.1
PSBE i IAmb IAmb 09 24 17.2
comp=Z,130nm,2.2s
MOE Montemor 20.45 266 eP Pn 09 24 04.3 -0.8
MOE i IAmb IAmb 09 24 14.9
comp=Z,88nm,1.1s
BIGH Upper Bighouse 20.48 326 eP P 09 24 03.2 +0.1
BIGH IAmb IAmb 09 24 04.8
comp=Z,60nm,0.8s
IFR Ifrane 20.51 250 P P 09 24 04.3 +0.5
KPL Plockton 20.56 322 eP P 09 24 03.3 -0.6
KPL IAmb IAmb 09 24 05.4
comp=Z,79nm,0.8s
PCVE Castro Verde 20.56 263 eP P 09 24 04.1 -0.1
PCVE i IAmb IAmb 09 24 13.3
comp=Z,70nm,1.3s
MDT Midelt 20.57 247 P P 09 24 03.6 -0.7
comp=Z,4.4nm,0.6s,baz=62,slow=11,SNR=11
MDT S S 09 27 47.0 -6.3
comp=Z,2.1nm,0.4s,baz=202,slow=23,SNR=0.6
MDT LR LR 09 31 30.2
comp=Z,2μm,19.3s,baz=55,slow=35
comp=Z,4.4nm,0.6s
LRW Lerwick 20.57 332 eP P 09 24 04.8 +0.7
LRW IAmb IAmb 09 24 07.9
comp=Z,130nm,1.0s
LRW Lerwick 20.57 332 ⇑P P 09 24 04.7 +0.7
MESJ Messejana 20.61 264 eP P 09 24 04.3 -0.4
MESJ eS S 09 27 55.4 +1.4
MESJ IAMs_20 IAMs_20 09 33 22.2
comp=Z,2μm,15.3s
MESJ Messejana 20.61 264 P P 09 24 03.6 -1.1
MESJ Messejana 20.61 264 eP P 09 24 04.1 -0.6
MESJ i IAmb IAmb 09 24 50.4
comp=Z,38nm,2.0s
MESJ Messejana 20.61 264 eP P 09 24 04.3 -0.4
MESJ eS S 09 27 55.4 +1.4
MD01 Midelt array s 20.64 248 P P 09 24 04.6 -0.6
MD31 MD31 20.64 248 P P 09 24 04.9 -0.2
MD31 IAmb IAmb 09 24 15.1
comp=Z,170nm,1.6s
PBDV Barranco-do-Ve 20.64 262 eP P 09 24 04.6 -0.5
PBDV i IAmb IAmb 09 24 23.0
comp=Z,80nm,1.5s
IGLA Glengowla, Co 20.76 309 P P 09 24 06.1 0.0
IGLA Glengowla, Co 20.76 309 eP P 09 24 06.5 +0.4
IGLA IAmb IAmb 09 24 07.2
comp=Z,80nm,1.0s
LINV Loch Inver, As 20.82 324 eP P 09 24 05.5 -1.2
LINV IAmb IAmb 09 24 11.5
comp=Z,85nm,1.0s
VAL Valentia 20.86 305 P P 09 24 02.0 -5.2
VAL Valentia 20.86 305 P P 09 24 06.6 -0.6
MORF Marmelete 21.14 263 eS S 09 28 05.9 +1.3
MORF IAMs_20 IAMs_20 09 33 33.3
comp=E,4μm,14.6s
MORF Marmelete 21.14 263 eP P 09 24 10.2 -0.3
MORF i IAmb IAmb 09 24 22.1
comp=E,85nm,1.8s
JOF Joensuu 21.21 17 eP P 09 24 11.3 +0.4
PFVI Vila Bisbo 21.34 263 eP P 09 24 12.6 0.0
MAK Makhachkala 21.49 80 eP P 09 24 12.3 -1.8
MAK eS S 09 28 10.8 -0.5
MAK pmax pmax
comp=Z,342nm,1.5s
MAK MLR MLR
comp=Z,5μm,14.0s
LEWI Lewis, Hebride 21.55 323 eP P 09 24 14.3 -0.2
LEWI IAmb IAmb 09 24 17.3
comp=Z,72nm,0.8s
NSS Namsos 21.64 353 eP P 09 24 16.0 +0.5
BELG Belogornoye 21.77 55 P P 09 24 16.8 -0.3
comp=Z,436nm,0.9s,baz=68,slow=3.2,SNR=55
BELG LR LR 09 33 46.1
comp=Z,4μm,20.4s,baz=262,slow=40
comp=Z,436nm,0.9s
BELG Belogornoye 21.77 55 d i P P 09 24 16.2 -0.8
BELG pmax pmax
comp=Z,82nm,0.9s
KLMR Klimovskoe 21.89 29 c i P P 09 24 16.1 -2.1
KLMR S S 09 28 19.2 +0.5
KLMR pmax pmax
comp=Z,373nm,1.2s
KLMR MLR MLR
comp=Z,13μm,12.0s
AKT Akhty 21.98 84 eP P 09 24 20.5 +1.0
AKT e 09 24 42.7
AKT ePPP PPP 09 24 50.3
AKT eS S 09 28 24.9 +3.8
AKT eSS SnSn 09 28 57.6 +11
AKT pmax pmax
comp=Z,177nm,0.8s
AKT MLR MLR
comp=Z,2μm,18.0s
AVE Averroes 22.21 252 P P 09 24 21.1 -0.8
TAM Tamanrasset 22.85 211 P P 09 24 28.3 -0.6
TAM Tamanrasset 22.85 211 P P 09 24 28.3 -0.6
TAM pmax pmax
comp=Z,54nm,0.9s
MOR8 Moi Rana 23.10 356 eP P 09 24 32.3 +1.3
LEIR Leirfjorden 23.11 355 eP P 09 24 31.3 +0.3
RAUS Rausandaksla 23.38 356 eP P 09 24 34.1 +0.3
TIO Tiouine 23.50 247 P P 09 24 36.0 +0.5
VAGH Vaagaholmen 23.71 355 eP P 09 24 37.8 +0.8
FAUS Fauske 24.27 357 eP P 09 24 42.1 -0.1
KIRV Kirov 24.77 41 P P 09 24 45.9 -0.9
comp=Z,42nm,0.5s,baz=90,slow=1.3,SNR=10
KIRV LR LR 09 35 12.1
comp=Z,4μm,21.0s,baz=257,slow=38
comp=Z,42nm,0.5s
KIRV Kirov 24.77 41 i P P 09 24 45.8 -1.0
STEI Steigen 24.82 358 eP P 09 24 47.9 +0.7
LOF Lofoten 25.09 356 eP P 09 24 49.7 +0.1
APA Apatity 25.77 14 ⇓i P P 09 24 57.3 +1.4
APA i 09 25 29.4
APA i S S 09 29 22.0 -1.4
APA MLR MLR
comp=Z,6μm,15.6s
KTK1 Kautokeino 26.01 4 eP P 09 24 57.7 -0.3
LVZ Lovozero 26.29 14 P P 09 25 00.5 0.0
LVZ IAmb IAmb 09 25 17.1
comp=Z,66nm,0.9s
LVZ Lovozero 26.29 14 P P 09 25 00.5 0.0
LVZ pmax pmax
comp=Z,66nm,0.9s
JETT Jettan, Norway 26.44 2 eP P 09 25 01.1 -0.8
TRO Tromso 26.49 1 eP P 09 25 02.5 +0.2
ARA0 ARCESS Array S 26.67 6 eP P 09 25 03.4 -0.6
ARCES ARCESS Array B 26.67 6 P P 09 25 03.6 -0.3
comp=Z,7.5nm,0.6s,baz=185,slow=8.7,SNR=56
ARCES LR LR 09 36 33.7
comp=Z,5μm,19.9s,baz=192,slow=39
comp=Z,7.5nm,0.6s
ARCES ARCESS Array B 26.67 6 P P 09 25 03.0 -1.0
ARCES ARCESS Array B 26.67 6 P P 09 25 03.0 -1.0
ARCES pmax pmax
comp=Z,38nm,1.1s
KEV Kevo 27.01 7 ⇑P P 09 25 06.6 -0.4
AKTO Aktyubinsk 28.04 61 P P 09 25 16.8 +0.4
comp=Z,3.7nm,0.3s,baz=247,slow=5.5,SNR=7.3
comp=Z,3.7nm,0.3s
ARTI Arti 28.74 49 P P 09 25 21.6 -1.0
comp=Z,19nm,0.3s,baz=252,slow=6.8,SNR=35
ARTI LR LR 09 37 49.9
comp=Z,4μm,18.4s,baz=260,slow=38
comp=Z,19nm,0.3s
ARTI Arti 28.74 49 P P 09 25 21.9 -0.7
ARTI Arti 28.74 49 i P P 09 25 21.5 -1.1
ARTI pmax pmax
comp=Z,52nm,0.9s
ARTI MLR MLR
comp=Z,5μm,16.0s
ARTI Arti 28.74 49 ⇑P P 09 25 21.6 -1.1
AB31 Akbulak array 29.33 63 P P 09 25 28.3 +0.4
AB31 Akbulak array 29.33 63 P P 09 25 27.4 -0.5
ABKAR Akbulak array 29.33 63 P P 09 25 28.2 +0.3
RAYN Ar Rayn 29.99 122 P P 09 25 34.1 +0.1
RAYN Ar Rayn 29.99 122 P P 09 25 33.5 -0.6
RAYN Ar Rayn 29.99 122 i P P 09 25 34.1 +0.1
SNR=6.7
RAYN Ar Rayn 29.99 122 P P 09 25 33.5 -0.6
RAYN pmax pmax
comp=Z,13nm,1.0s
RAYN Ar Rayn 29.99 122 ⇑P P 09 25 35.2 +1.1
SVE Sverdlovsk 30.04 48 eP P 09 25 34.5 +0.4
SVE eS S 09 30 30.8 -0.1
SVE pmax pmax
comp=Z,73nm,1.1s
SVE MLR MLR
comp=Z,6μm,15.0s
JMIC Jan Mayen 30.80 343 LR LR 09 37 46.0
comp=Z,571nm,18.5s,baz=144,slow=36
BORG Borgarnes 30.82 328 LR LR 09 39 49.3
comp=Z,2μm,18.1s,baz=130,slow=40
TRNA Turayna 32.84 113 P P 09 25 58.1 -0.9
TORD Torodi Ar. Bea 33.10 210 P P 09 26 01.1 -0.4
comp=Z,5.4nm,0.7s,baz=24,slow=11,SNR=2.8
TORD LR LR 09 41 43.5
comp=Z,2μm,18.7s,baz=32,slow=40
comp=Z,5.4nm,0.7s
TORD Torodi Ar. Bea 33.10 210 P P 09 26 01.0 -0.4
JRN Qarnain Island 33.81 111 P P 09 26 06.8 -0.7
SCO Scoresbysund 33.81 337 i P P 09 26 07.5 +0.4
SCO IAmb IAmb 09 26 15.5
comp=Z,20nm,1.0s
SPITS Spitsbergen Ar 35.09 359 P P 09 26 17.4 -0.6
comp=Z,13nm,1.0s,baz=154,slow=12,SNR=11
SPITS LR LR 09 42 39.9
comp=Z,1μm,18.1s,baz=171,slow=40
comp=Z,13nm,1.0s
SHME Shamm 35.38 106 P P 09 26 19.9 -1.1
SHME P P 09 26 19.9 -1.1
SHME Shamm 35.38 106 i P P 09 26 21.0 -0.1
SNR=9.2
BORK Borovoye 35.53 55 P P 09 26 22.4 +0.3
BORK Borovoye 35.53 55 ceP P 09 26 22.7 +0.6
BORK pmax pmax
comp=Z,50nm,0.8s
BORK Borovoye 35.53 55 ⇑P P 09 26 22.7 +0.6
BANOM Banah 35.57 106 P P 09 26 21.7 -1.1
BANOM P P 09 26 21.7 -1.1
BANOM Banah 35.57 106 i P P 09 26 23.0 +0.3
SNR=18
BVA0 Borovoye Array 35.58 55 P P 09 26 22.8 +0.3
BVAR Borovoye Array 35.58 55 P P 09 26 23.1 +0.6
comp=Z,30nm,0.8s,baz=274,slow=7.0,SNR=46
comp=Z,30nm,0.8s
DBG Daneborg 35.63 343 i P P 09 26 23.5 +0.8
DBG IAmb IAmb 09 26 26.7
comp=Z,4.1nm,1.0s
NAZ Nazwa, Dubai 35.71 108 P P 09 26 24.1 +0.1
NAZ P P 09 26 24.1 +0.1
ASUD Al Ashush, Dub 35.72 109 P P 09 26 23.8 -0.2
ASUD Al Ashush, Dub 35.72 109 P P 09 26 23.6 -0.4
MASF Masafi 35.81 107 P P 09 26 24.6 -0.3
MASF P P 09 26 24.6 -0.3
FAQ Al Faqa, Dubai 35.82 109 P P 09 26 24.5 -0.4
MSFE Esma-Masafi 35.82 107 P P 09 26 24.5 -0.5
MDH Madha 35.96 107 P P 09 26 25.1 -1.0
MDH P P 09 26 25.1 -1.0
MDH Madha 35.96 107 i P P 09 26 26.0 0.0
SNR=7.9
UOSS Minazif 36.12 108 P P 09 26 27.1 -0.4
UOSS P P 09 26 27.1 -0.4
UOSS Minazif 36.12 108 P P 09 26 25.7 -1.7
UOSS IAmb IAmb 09 26 35.8
comp=Z,36nm,0.8s
UOSS Minazif 36.12 108 ⇑P P 09 26 26.2 -1.2
HATD Hatta, Dubai 36.14 108 P P 09 26 26.7 -1.0
SNR=10
HATD P P 09 26 26.7 -1.0
SNR=10
HATD Hatta, Dubai 36.14 108 i P P 09 26 26.8 -0.9
SNR=14
ASHO Ashiyiah 36.18 108 P P 09 26 26.9 -1.2
ASHO P P 09 26 26.9 -1.2
ASHO Ashiyiah 36.18 108 i P P 09 26 26.6 -1.4
SNR=24
ALNE Al Ain 36.38 109 P P 09 26 29.1 -0.6
SNR=11
ALNE P P 09 26 29.1 -0.6
SNR=11
SOHO SOHO 36.87 109 P P 09 26 33.1 -0.7
SOHO P P 09 26 33.1 -0.7
SOHO SOHO 36.87 109 i P P 09 26 32.7 -1.1
SNR=10
BRLS Borolday 37.32 72 eP P 09 26 37.5 -0.1
BRLS Borolday 37.32 72 eP P 09 26 37.5 -0.1

ARQ	**Araqi**	**37.38**	**110**	P		**P**	**09 26 37.9**	**-0.3**
ARQ				P		**P**	**09 26 37.9**	**-0.3**
CHM	**Chimkent**	**37.39**	**73**	*e*P		**P**	**09 26 38.5**	**+0.4**
CHM	**Chimkent**	**37.39**	**73**	*e*P		**P**	**09 26 38.5**	**+0.4**
BRZS	**Berezniki**	**37.44**	**60**	*e*P		**P**	**09 26 38.6**	**+0.2**
BRZS	**Berezniki**	**37.44**	**60**	*e*P		**P**	**09 26 38.6**	**+0.2**
HOQ	**Hoqain**	**37.77**	**108**	P		**P**	**09 26 41.3**	**-0.2**
HOQ				P		**P**	**09 26 41.3**	**-0.2**
KK31	**Karatay Array**	**37.77**	**72**	P		**P**	**09 26 41.9**	**+0.6**
KKAR	**Karatay Array**	**37.77**	**72**	P		**P**	**09 26 42.2**	**+0.9**
KKAR	**Karatay Array**	**37.77**	**72**	P		**P**	**09 26 42.2**	**+0.9**
ATD	**Arta Tunnel**	**38.20**	**138**	P		**P**	**09 26 47.2**	**+1.9**
ATD	**Arta Tunnel**	**38.20**	**138**	IAmb	IAmb		09 26 58.0	
comp=Z,62nm,1.2s								
BSY	**Bisya**	**38.24**	**110**	P		**P**	**09 26 44.8**	**-0.7**
BIDO	**Bidbid**	**38.37**	**108**	P		**P**	**09 26 46.8**	**+0.2**
SMDO	**Samad**	**38.62**	**108**	P		**P**	**09 26 48.9**	**+0.1**
SMDO				P		**P**	**09 26 48.9**	**+0.1**
WSAR	**Wadi Sarin**	**38.91**	**108**	P		**P**	**09 26 51.0**	**-0.1**
DOK	**Doka**	**39.05**	**117**	P		**P**	**09 26 51.1**	**-1.1**
DOK				P		**P**	**09 26 51.1**	**-1.1**
JMDO	**Jabal Madar**	**39.11**	**109**	P		**P**	**09 26 52.6**	**-0.2**
WHFO	**Wadi Hawf**	**39.33**	**119**	P		**P**	**09 26 53.3**	**-1.3**
SNR=7.0								
NGCH	**Negor - Chabah**	**39.34**	**103**	P		**P**	**09 26 55.0**	**+0.4**
ABTO	**Aybut**	**39.44**	**120**	P		**P**	**09 26 54.8**	**-0.9**
SUMG	**Summit**	**39.45**	**337**	P		**P**	**09 26 54.6**	**-0.9**
SUMG	**Summit**	**39.45**	**337**	P		**P**	**09 26 55.2**	**-0.3**
SUMG	**Summit**	**39.45**	**337**	*i* P		**P**	**09 26 55.0**	**-0.5**
SUMG				IAmb	IAmb		09 26 56.7	
comp=Z,11nm,0.9s								
WBK	**Wadi Bani Khal**	**39.55**	**108**	P		**P**	**09 26 57.4**	**+0.9**
RBK	**Rabkut**	**39.91**	**119**	P		**P**	**09 27 00.3**	**+0.7**
MHTO	**MHTO**	**39.95**	**111**	P		**P**	**09 26 59.9**	**+0.2**
MHTO				P		**P**	**09 26 59.9**	**+0.2**
ARSB	**Arslanbob**	**40.10**	**73**	IAmb	IAmb		09 27 22.1	
comp=Z,63nm,1.1s								
JLN	**Jalan Bani Buh**	**40.16**	**108**	P		**P**	**09 27 01.9**	**+0.4**
DMTO	**DMTO**	**40.23**	**118**	P		**P**	**09 27 00.3**	**-1.8**
NOR	**Nord**	**40.25**	**353**	⇓P		**P**	**09 27 00.8**	**-0.8**
NOR	**Nord**	**40.25**	**353**	*i* P		**P**	**09 27 01.3**	**-0.3**
NOR				IAmb	IAmb		09 27 02.4	
comp=Z,8.8nm,0.7s								
DQM	**DQM**	**40.38**	**112**	P		**P**	**09 27 01.0**	**-2.3**
SHAO	**Shalim**	**40.45**	**116**	P		**P**	**09 27 03.8**	**-0.2**
SGDS	**Sogindy**	**40.49**	**69**	*e*P		**P**	**09 27 04.5**	**+0.3**
AAK	**Ala-Archa**	**40.68**	**71**	P		**P**	**09 27 06.3**	**+0.5**
comp=Z,6.1nm,0.6s,baz=235,slow=3.6,SNR=19								
AAK				LR	LR		09 47 30.5	
comp=Z,829nm,21.0s,baz=301,slow=41								
comp=Z,6.1nm,0.6s								
AAK	**Ala-Archa**	**40.68**	**71**	P		**P**	**09 27 05.9**	**+0.1**
AAK	**Ala-Archa**	**40.68**	**71**	P		**P**	**09 27 06.5**	**+0.7**
AAK				IAmb	IAmb		09 27 22.1	
comp=Z,161nm,2.0s								
AAK	**Ala-Archa**	**40.68**	**71**	*i* P		**P**	**09 27 07.5**	**+1.7**
SNR=11								
AAK	**Ala-Archa**	**40.68**	**71**	*ce*P		**P**	**09 27 07.0**	**+1.2**
AAK				pmax	pmax			
comp=Z,19nm,1.7s								
AAK				MLR	MLR			
comp=Z,2μm,16.0s								
AAK	**Ala-Archa**	**40.68**	**71**	⇑P		**P**	**09 27 07.8**	**+1.9**
NRS	**Narsarsuaq**	**40.96**	**319**	*i* P		**P**	**09 27 07.4**	**-0.3**
NRS				IAmb	IAmb		09 27 10.5	
comp=Z,15nm,0.7s								
KURBB	**Kurchatov Arra**	**40.96**	**58**	P		**P**	**09 27 07.5**	**-0.4**
comp=Z,2.8nm,0.5s,baz=287,slow=9.6,SNR=21								
KURBB				LR	LR		09 47 43.2	
comp=Z,825nm,18.7s,baz=313,slow=42								
comp=Z,2.8nm,0.5s								
KURK	**Kurchatov**	**41.00**	**58**	P		**P**	**09 27 08.2**	**+0.1**
KURK	**Kurchatov**	**41.00**	**58**	P		**P**	**09 27 08.4**	**+0.3**
KURK	**Kurchatov**	**41.00**	**58**	*ce*P		**P**	**09 27 09.6**	**+1.5**
KURK				pmax	pmax			
comp=Z,14nm,0.8s								
DBIC	**Dimbokro**	**41.59**	**216**	P		**P**	**09 27 12.5**	**-0.8**
comp=Z,18nm,0.6s,baz=48,slow=8.5,SNR=18								
DBIC				LR	LR		09 46 38.3	
comp=Z,901nm,19.6s,baz=46,slow=39								
comp=Z,18nm,0.6s								
DBIC	**Dimbokro**	**41.59**	**216**	P		**P**	**09 27 12.7**	**-0.7**
DBIC	**Dimbokro**	**41.59**	**216**	⇓P		**P**	**09 27 12.9**	**-0.4**
MDOK	**Medeo**	**42.24**	**69**	*e*P		**P**	**09 27 18.9**	**+0.2**
MDOK	**Medeo**	**42.24**	**69**	*e*P		**P**	**09 27 18.8**	**+0.2**
IVI	**Ivigtut**	**42.28**	**319**	IAmb	IAmb		09 27 19.6	
comp=Z,23nm,0.9s								
IVI	**Ivigtut**	**42.28**	**319**	*i* P		**P**	**09 27 16.9**	**-1.5**
IVI				IAmb	IAmb		09 27 19.4	
comp=Z,23nm,0.9s								
LODK	**Lodwar**	**42.51**	**154**	P		**P**	**09 27 22.9**	**+2.0**
SNR=11								
LODK	**Lodwar**	**42.51**	**154**	P		**P**	**09 27 22.5**	**+1.5**
TDK	**Taldyqorghan**	**42.52**	**66**	*e*P		**P**	**09 27 21.0**	**+0.3**
TDK	**Taldyqorghan**	**42.52**	**66**	*e*P		**P**	**09 27 21.0**	**+0.3**
KSH	**Kashi**	**42.91**	**74**	P		**P**	**09 27 25.0**	**+0.9**
KSH				sP	pP		09 27 31.0	-0.4
KSH				S	**S**		**09 33 45.5**	**-2.1**
KSH				pmax	pmax			
comp=Z,21nm,0.9s								
KSH				LR	LR			
comp=Z,2μm,15.8s								
KSH				LR	LR			
comp=Z,990nm,15.3s								
KSH				LR	LR			
comp=Z,1μm,15.4s								
SFJD	**Kangerlussuaq**	**42.95**	**328**	LR	LR		09 45 40.8	
comp=Z,1μm,18.8s,baz=86,slow=37								
SFJD	**Kangerlussuaq**	**42.95**	**328**	*i* P		**P**	**09 27 22.5**	**-1.3**
SATY	**Saty**	**43.21**	**69**	*e*P		**P**	**09 27 26.4**	**0.0**
SATY	**Saty**	**43.21**	**69**	*e*P		**P**	**09 27 26.4**	**0.0**
UZB	**Uzynbulak**	**43.59**	**68**	*e*P		**P**	**09 27 29.5**	**-0.1**
UZB	**Uzynbulak**	**43.59**	**68**	*e*P		**P**	**09 27 29.5**	**-0.1**
NEEM	**North Greenlan**	**43.71**	**343**	⇑P		**P**	**09 27 29.9**	**-0.3**
NEEM	**North Greenlan**	**43.71**	**343**	*i* P		**P**	**09 27 29.6**	**-0.7**
NEEM				IAmb	IAmb		09 27 31.3	
comp=Z,13nm,0.9s								
ZALV	**Zalesovo Beam**	**43.90**	**52**	P		**P**	**09 27 31.0**	**-0.7**
comp=Z,25nm,0.6s,baz=284,slow=8.5,SNR=81								
ZALV				LR	LR		09 47 31.5	
comp=Z,3μm,18.7s,baz=282,slow=38								
comp=Z,25nm,0.6s								
ZALV	**Zalesovo Beam**	**43.90**	**52**	P		**P**	**09 27 31.8**	**+0.1**
ZALV	**Zalesovo Beam**	**43.90**	**52**	*i* P		**P**	**09 27 31.5**	**-0.2**
ZALV				pmax	pmax			
comp=Z,25nm,0.6s								
MAKZ	**Makanchi**	**44.25**	**62**	P		**P**	**09 27 34.8**	**+0.1**
MAKZ	**Makanchi**	**44.25**	**62**	P		**P**	**09 27 34.8**	**+0.1**
MAKZ				pmax	pmax			
comp=Z,8.0nm,1.0s								
MAKZ	**Makanchi**	**44.25**	**62**	⇓P		**P**	**09 27 35.5**	**+0.8**
MK31	**Makanchi Array**	**44.46**	**62**	P		**P**	**09 27 35.5**	**-0.9**
MK31	**Makanchi Array**	**44.46**	**62**	P		**P**	**09 27 35.6**	**-0.7**
MKAR	**Makanchi Array**	**44.46**	**62**	P		**P**	**09 27 35.8**	**-0.6**
comp=Z,7.2nm,0.6s,baz=287,slow=7.3,SNR=48								
MKAR				LR	LR		09 47 19.8	
comp=Z,1μm,18.5s,baz=278,slow=38								
comp=Z,7.2nm,0.6s								
MBAR	**Mbarara**	**45.09**	**162**	LR	LR		09 49 57.6	
comp=Z,946nm,18.3s,baz=352,slow=41								
MBAR	**Mbarara**	**45.09**	**162**	P		**P**	**09 27 42.9**	**+1.2**
MBAR				P		**P**	**09 27 42.9**	**+1.2**
MBAR	**Mbarara**	**45.09**	**162**	P		**P**	**09 27 40.2**	**-1.5**
MBAR	**Mbarara**	**45.09**	**162**	P		**P**	**09 27 40.3**	**-1.5**
MBAR				pmax	pmax			
comp=Z,10.0nm,0.9s								
ZSN	**Zaisan**	**45.88**	**60**	*e*P		**P**	**09 27 47.9**	**+0.3**
ZSN	**Zaisan**	**45.88**	**60**	*e*P		**P**	**09 27 47.8**	**+0.2**
DGZ	**Jazzator, Alta**	**46.70**	**57**	*i* P		**P**	**09 27 55.2**	**+1.0**
DGZ				pmax	pmax			
comp=Z,8.0nm,0.5s								
KMBO	**Kilima Mbogo**	**47.40**	**153**	P		**P**	**09 28 01.4**	**+1.4**
comp=Z,2.4nm,0.5s,baz=10,slow=5.9,SNR=5.3								
KMBO				LR	LR		09 50 25.3	
comp=Z,546nm,19.6s,baz=350,slow=39								
comp=Z,2.4nm,0.5s								
KMBO	**Kilima Mbogo**	**47.40**	**153**	*i* P		**P**	**09 28 00.3**	**+0.3**
KMBO				pmax	pmax			
comp=Z,2.0nm,0.3s								
TULEG	**Thule**	**47.73**	**342**	P		**P**	**09 28 01.6**	**0.0**
TULEG	**Thule**	**47.73**	**342**	*i* P		**P**	**09 28 01.3**	**-0.3**
TULEG				IAmb	IAmb		09 28 02.1	
comp=Z,19nm,0.8s								
KIBK	**Kibwezi**	**48.80**	**153**	P		**P**	**09 28 06.7**	**-3.9**
KIBK	**Kibwezi**	**48.80**	**153**	P		**P**	**09 28 12.6**	**+2.0**
KIBK	**Kibwezi**	**48.80**	**153**	P		**P**	**09 28 11.8**	**+1.1**
WMQ	**Urumqi**	**49.12**	**64**	*e*P		**P**	**09 28 15.0**	**+2.1**
WMQ				sP	sP		09 28 23.3	+0.2
WMQ				S	**S**		**09 35 19.5**	**+2.9**
WMQ				sS	pS		09 35 26.5	+1.1
WMQ				pmax	pmax			
comp=Z,10.0nm,0.7s								
WMQ				LR	LR			
comp=Z,2μm,21.5s								
WMQ				LR	LR			
comp=Z,2μm,15.5s								
WMQ				LR	LR			
comp=Z,1μm,23.8s								
DRLN	**Deer Lake**	**50.57**	**305**	⇓P		**P**	**09 28 22.4**	**-1.3**
FRB	**Frobisher Bay**	**50.91**	**325**	LR	LR		09 50 35.0	
comp=Z,958nm,19.6s,baz=74,slow=37								
KNGR	**Kungurtug, Tuv**	**52.36**	**52**	*i* P		**P**	**09 28 37.9**	**+0.6**
KNGR				pmax	pmax			
comp=Z,39nm,1.5s								
SCHQ	**Schefferville**	**53.53**	**314**	P		**P**	**09 28 44.6**	**-1.1**
comp=Z,17nm,0.6s,baz=64,slow=5.8,SNR=22								
SCHQ				LR	LR		09 51 07.9	
comp=Z,644nm,19.1s,baz=68,slow=36								
comp=Z,17nm,0.6s								
MOY	**Mondy**	**53.88**	**50**	*e*P		**P**	**09 28 50.1**	**+1.7**
MOY				pmax	pmax			
comp=Z,19nm,1.8s								
RES	**Resolute Bay**	**54.41**	**342**	P		**P**	**09 28 50.9**	**-0.8**
comp=Z,6.8nm,0.8s,baz=19,slow=11,SNR=10.0								
RES				LR	LR		09 50 41.8	
comp=Z,392nm,21.9s,baz=57,slow=34								
comp=Z,6.8nm,0.8s								
RES	**Resolute Bay**	**54.41**	**342**	⇓P		**P**	**09 28 52.2**	**+0.5**
TLY	**Talaya**	**55.35**	**49**	P		**P**	**09 29 00.7**	**+1.7**
TLY	**Talaya**	**55.35**	**49**	P		**P**	**09 29 00.3**	**+1.4**
TLY				IAmb	IAmb		09 29 10.1	
comp=Z,21nm,0.8s								
TLY	**Talaya**	**55.35**	**49**	*ce*P		**P**	**09 28 58.9**	**-0.1**
TLY				pmax	pmax			
comp=Z,38nm,1.7s								
TIXI	**Tiksi**	**55.62**	**21**	P		**P**	**09 29 00.9**	**+0.4**
TIXI	**Tiksi**	**55.62**	**21**	*ce*P		**P**	**09 29 00.8**	**+0.3**
TIXI				pmax	pmax			
comp=Z,7.0nm,0.7s								
TIXI	**Tiksi**	**55.62**	**21**	⇓P		**P**	**09 29 00.6**	**+0.1**
ZAK	**Zakamensk**	**55.76**	**51**	*e*P		P	09 29 07.2	+5.2
ZAK				pmax	pmax			
comp=Z,22nm,1.7s								
EVN	**Everest**	**56.49**	**82**	P		**P**	**09 29 08.5**	**+0.3**
EVN				IAmb	IAmb		09 29 18.8	
comp=Z,22nm,0.7s								
HYBB	**Hyderabad (bro**	**56.88**	**97**	*e*P		**P**	**09 29 11.3**	**+1.0**
GGN	**Saint George**	**58.12**	**304**	IAmb	IAmb		09 29 28.2	
comp=Z,40nm,0.8s								
D62A	**Allapoint, All**	**58.42**	**307**	IAmb	IAmb		09 29 31.0	
comp=Z,43nm,0.9s								
LSA	**Lhasa**	**58.61**	**77**	P		**P**	**09 29 19.3**	**-3.6**
LSA				S	**S**		**09 37 17.5**	**-8.7**
LSA				LR	LR			
comp=N,500nm,16.9s								
LSA				LR	LR			
comp=E,510nm,18.4s								
SONM	**Songino Array**	**58.80**	**52**	P		**P**	**09 29 23.5**	**-0.1**
comp=E,7.7nm,0.6s,baz=289,slow=8.6,SNR=30								
comp=E,7.7nm,0.6s								
LMQ	**La Malbaie**	**58.92**	**308**	IAmb	IAmb		09 29 34.2	
comp=Z,32nm,1.1s								
E62A	**Clayton Lake**	**58.94**	**306**	IAmb	IAmb		09 29 34.5	
comp=Z,23nm,0.8s								
ULN	**Ulaanbaatar**	**59.16**	**52**	P		**P**	**09 29 26.1**	**0.0**
ULN				P		**P**	**09 29 26.1**	**0.0**
ULN	**Ulaanbaatar**	**59.16**	**52**	*i* P		**P**	**09 29 26.6**	**+0.5**
ULN				pmax	pmax			
comp=Z,16nm,1.3s								
GTA	**Gaotai**	**59.19**	**63**	*e*P		**P**	**09 29 26.5**	**+0.1**
GTA				pP	pP		09 29 32.3	-1.7
GTA				pmax	pmax			
comp=Z,6.0nm,0.9s								
GTA				LR	LR			
comp=Z,2μm,21.5s								
GTA				LR	LR			
comp=Z,920nm,19.9s								
GTA				LR	LR			
comp=Z,890nm,19.9s								
LDAQ	**Lac Daran**	**59.23**	**309**	P		**P**	**09 29 26.1**	**-0.4**
LDAQ				IAmb	IAmb		09 29 35.9	
comp=Z,19nm,1.0s								
PKME	**Peaks-Kenny Pk**	**59.52**	**305**	IAmb	IAmb		09 29 38.7	
comp=Z,29nm,0.8s								
PKME	**Peaks-Kenny Pk**	**59.52**	**305**	⇓P		**P**	**09 29 29.1**	**+0.7**
WVL	**Waterville**	**60.11**	**305**	IAmb	IAmb		09 29 42.5	
comp=Z,23nm,0.9s								
G62A	**West of Eustis**	**60.28**	**306**	IAmb	IAmb		09 29 44.3	
comp=Z,27nm,1.0s								
SHL	**Shillong**	**61.56**	**81**	IAmb	IAmb		09 29 48.2	
comp=Z,28nm,0.9s								
LBNH	**Lisbon**	**61.65**	**305**	⇓P		**P**	**09 29 44.3**	**+1.3**
YAK	**Yakutsk**	**61.68**	**30**	LR	LR		09 59 38.6	
comp=Z,3μm,18.9s,baz=308,slow=39								
YAK	**Yakutsk**	**61.68**	**30**	*e*P		**P**	**09 29 41.3**	**-1.5**
YAK				*e**PP		**sP**	**09 29 52.4**	**-1.0**
YAK				*e*			09 30 20.9	
YAK				*e*			09 31 57.3	
YAK				*e*S		**S**	**09 38 02.3**	**-1.4**
YAK				*e**SS		**sS**	**09 38 18.2**	**+2.1**
YAK				*e*SS		**SS**	**09 42 04.8**	**+0.4**
YAK				pmax	pmax			
comp=Z,37nm,1.0s								
YAK				pmax	pmax			
comp=N,5.0nm,1.2s								
YAK				pmax	pmax			
comp=E,6.0nm,1.3s								
YAK				pmax	pmax			
comp=Z,399nm,4.2s								
YAK				pmax	pmax			
comp=N,327nm,4.0s								
YAK				pmax	pmax			
comp=E,247nm,4.8s								
YAK				smax	smax			
comp=N,389nm,3.3s								
YAK				smax	smax			
comp=E,429nm,4.3s								
YAK				MLR	MLR			
comp=Z,2μm,24.0s								
YAK				MLR	MLR			
comp=N,696nm,20.0s								
YAK				MLR	MLR			
comp=E,3μm,24.0s								
TRQ	**Mont Tremblant**	**62.08**	**308**	IAmb	IAmb		09 29 56.6	
comp=Z,18nm,0.9s								
HNH	**Hanover**	**62.16**	**305**	IAmb	IAmb		09 29 57.4	
comp=Z,29nm,0.9s								
A36M	**Sachs Harbour**	**62.22**	**348**	P		**P**	**09 29 46.0**	**-0.4**
baz=30								
BCX	**Boston College**	**62.26**	**303**	IAmb	IAmb		09 29 57.6	
comp=Z,35nm,1.0s								
FRNY	**Flat Rock**	**62.30**	**307**	IAmb	IAmb		09 29 57.9	
comp=Z,14nm,0.8s								
M65A	**Busby, Falmout**	**62.37**	**302**	P		**P**	**09 29 47.3**	**-0.5**
baz=56								
HRV	**Adam Dziewonsk**	**62.40**	**303**	P		**P**	**09 29 48.0**	**0.0**
HRV				IAmb	IAmb		09 29 58.9	
comp=Z,29nm,0.8s								
HRV	**Adam Dziewonsk**	**62.40**	**303**	P		**P**	**09 29 48.0**	**0.0**
HRV				pmax	pmax			
comp=Z,29nm,0.9s								
K62A	**Royalston**	**62.72**	**304**	IAmb	IAmb		09 30 01.3	
comp=Z,30nm,0.9s								
LONY	**Lake Ozonia**	**63.01**	**307**	IAmb	IAmb		09 30 02.5	
comp=Z,26nm,1.1s								
L61B	**Northampton**	**63.12**	**304**	IAmb	IAmb		09 30 03.8	
comp=Z,30nm,0.8s								
BRDH	**Bariadhala**	**63.14**	**83**	LR	LR		10 05 16.9	
comp=Z,430nm,18.2s,baz=315,slow=44								
SBV	**Sambava**	**63.51**	**145**	P		**P**	**09 29 56.6**	**+1.1**
TRY	**Troy**	**63.55**	**305**	IAmb	IAmb		09 30 07.3	
comp=Z,27nm,0.9s								
J59A	**Piesco**	**63.62**	**306**	IAmb	IAmb		09 30 07.1	
comp=Z,31nm,0.9s								
LZDM	**Lanzhou Array**	**63.67**	**65**	P		**P**	**09 29 57.5**	**+0.5**
comp=Z,1.8nm,0.4s,baz=284,slow=12,SNR=3.9								
LZDM				LR	LR		10 00 06.9	
comp=Z,706nm,19.6s,baz=0.0,slow=38								
comp=Z,1.8nm,0.4s								
LZH	**Lanzhou**	**63.70**	**64**	*e*P		**P**	**09 29 59.0**	**+2.1**
LZH				sP	sP		09 30 06.8	-0.5
LZH				S	**S**		**09 38 32.8**	**+2.7**
LZH				pmax	pmax			
comp=Z,20nm,1.3s								
LZH				LR	LR			
comp=Z,1μm,15.8s								
LZH				LR	LR			
comp=Z,900nm,15.1s								
LZH				LR	LR			
comp=Z,1μm,15.1s								
FCC	**Fort Churchill**	**63.97**	**327**	IAmb	IAmb		09 30 06.0	
comp=Z,19nm,0.7s								
MATP	**Matopo**	**64.05**	**169**	LR	LR		09 59 55.8	
comp=Z,630nm,20.1s,baz=356,slow=38								
GRTLG	**Ghanzi**	**64.32**	**177**	IAmb	IAmb		09 30 13.1	
comp=Z,48nm,1.4s								
C36M	**Paulatuk**	**64.33**	**346**	P		**P**	**09 30 00.2**	**-0.1**
baz=30,SNR=23								
MALK	**Mahakanadarawa**	**64.36**	**103**	P		**P**	**09 29 58.2**	**-3.1**
KAAM	**Kaadhehdhoo**	**64.83**	**115**	P		**P**	**09 30 04.5**	**+0.1**
BTO	**Baotou**	**64.99**	**57**	*e*P		**P**	**09 30 05.0**	**-0.3**
BTO				sP	**pP**		**09 30 11.8**	**-1.1**
BTO				S	**S**		**09 38 46.3**	**+0.5**
BTO				pmax	pmax			
comp=Z,19nm,0.5s								
BTO				pmax	pmax			
comp=Z,200nm,4.7s								
BTO				LR	LR			
comp=Z,3μm,12.7s								
BTO				LR	LR			
comp=Z,2μm,17.8s								
BTO				LR	LR			
comp=Z,950nm,12.3s								
HILR	**Hailar Array B**	**65.11**	**45**	P		**P**	**09 30 06.8**	**+0.9**
comp=Z,1.6nm,0.5s,baz=297,slow=4.3,SNR=4.6								
comp=Z,1.6nm,0.5s								
K57A	**Scipio Center**	**65.25**	**306**	IAmb	IAmb		09 30 17.9	
comp=Z,28nm,0.9s								
PALK	**Pallekele**	**65.25**	**104**	LR	LR		10 00 30.4	
comp=Z,458nm,20.8s,baz=324,slow=38								
PALK	**Pallekele**	**65.25**	**104**	P		**P**	**09 30 06.5**	**-0.7**
PALK				P		**P**	**09 30 06.5**	**-0.7**
SADO	**Sadowa**	**65.55**	**309**	LR	LR		09 58 06.8	
comp=Z,577nm,18.5s,baz=79,slow=36								
HHC	**Hu-ho-hao-te**	**65.78**	**56**	*e*P		**P**	**09 30 11.8**	**+1.4**
HHC				pmax	pmax			
comp=Z,12nm,0.6s								
HHC				pmax	pmax			
comp=Z,74nm,4.7s								
A22K	**Sinclair Lake**	**65.99**	**357**	P		**P**	**09 30 10.9**	**-0.1**
baz=5.6								
ZEA	**Zeya**	**66.06**	**38**	*e*P		P	09 30 17.0	+5.1
ZEA				pmax	pmax			
comp=Z,10.0nm,1.2s								
ZEA				MLR	MLR			
comp=E,500nm,10.0s								
ZEA				MLR	MLR			
comp=N,600nm,12.0s								
ZEA				MLR	MLR			
comp=Z,2μm,16.0s								
L56A	**Greenwood**	**66.22**	**306**	IAmb	IAmb		09 30 24.0	
comp=Z,27nm,0.9s								
D28M	**Stokes Point**	**66.47**	**351**	P		**P**	**09 30 13.8**	**-0.4**
baz=18								
C26K	**Camden Bay**	**66.50**	**354**	P		**P**	**09 30 14.2**	**-0.2**
baz=14								
BILL	**Bilibino**	**66.53**	**12**	*i* P		**P**	**09 30 14.0**	**-0.6**
BILL				pmax	pmax			
comp=Z,21nm,1.3s								
B22K	**Teshekpuk Lake**	**66.59**	**357**	IAmb	IAmb		09 30 26.2	
comp=Z,29nm,1.1s								
B22K	**Teshekpuk Lake**	**66.59**	**357**	P		**P**	**09 30 14.6**	**-0.4**
baz=6.8								
C27K	**Jago River**	**66.68**	**353**	P		**P**	**09 30 15.3**	**-0.2**
baz=14,SNR=33								
CD2	**Chengdu**	**66.71**	**69**	P		**P**	**09 30 18.5**	**+2.1**
CD2				pmax	pmax			
comp=Z,30nm,0.4s								
CD2				LR	LR			
comp=Z,640nm,12.1s								
CD2				LR	LR			
comp=Z,510nm,13.3s								
CD2				LR	LR			
comp=Z,760nm,15.9s								
INK	**Inuvik**	**66.78**	**349**	LR	LR		10 00 35.0	
comp=Z,273nm,20.0s,baz=30,slow=37								
INK	**Inuvik**	**66.78**	**349**	IAmb	IAmb		09 30 25.9	
comp=Z,18nm,1.0s								
INK	**Inuvik**	**66.78**	**349**	P		**P**	**09 30 15.1**	**-1.0**
baz=22,SNR=12								
D27M	**Malcolm River**	**66.79**	**352**	IAmb	IAmb		09 30 27.4	
comp=Z,19nm,0.9s								
D27M	**Malcolm River**	**66.79**	**352**	P		**P**	**09 30 16.0**	**-0.4**
baz=17,SNR=14								
MVL	**Millersville**	**66.79**	**304**	IAmb	IAmb		09 30 28.2	
comp=Z,28nm,0.8s								
PAGS	**Pennsylvania G**	**66.88**	**304**	IAmb	IAmb		09 30 27.7	
comp=Z,29nm,0.8s								
A19K	**Wainwright**	**66.90**	**360**	P		**P**	**09 30 16.7**	**-0.2**
baz=0.8								
C23K	**Itkillik River**	**66.96**	**356**	P		**P**	**09 30 17.4**	**0.0**
baz=9.1,SNR=16								
C24K	**Franklin Bluff**	**66.96**	**355**	P		**P**	**09 30 17.4**	**+0.1**
baz=11								
B20K	**Meade River**	**67.04**	**358**	P		**P**	**09 30 18.0**	**+0.1**
baz=3.9								
OPO	**Ambohidratompo**	**67.07**	**150**	LR	LR

comp=Z,15nm,0.9s
TOLK Toolik Lake Re 68.09 355 P **P** 09 30 24.4 -0.1
baz=9.8,SNR=7.4
SEY Seymchan 68.11 21 LR LR 10 04 10.6
comp=Z,2µm,18.4s,baz=325,slow=39
SEY Seymchan 68.11 21 *i* P **P** **09 30 23.4 -1.3**
SEY pmax pmax
comp=Z,18nm,0.9s
P57A Homestead Farm 68.12 304 IAmb IAmb 09 30 36.2
comp=Z,29nm,0.9s
TIY Taiyuan 68.23 58 P **P** **09 30 30.0 +4.0**
TIY S **S** **09 39 27.0 +1.9**
TIY pmax pmax
comp=Z,230nm,5.1s
TIY LR LR
comp=Z,700nm,13.1s
TIY LR LR
comp=Z,1µm,16.5s
TIY LR LR
comp=Z,1µm,17.9s
F28M Old Crow 68.24 351 IAmb IAmb 09 30 26.6
comp=Z,17nm,0.8s
F28M Old Crow 68.24 351 P **P** **09 30 24.9 -0.5**
baz=17,SNR=11
LBTB Lobatse 68.24 173 LR LR 10 01 58.3
comp=Z,1µm,22.0s,baz=356,slow=37
LBTB Lobatse 68.24 173 P **P** **09 30 26.8 +0.8**
LBTB IAmb IAmb 09 30 37.7
comp=Z,30nm,0.9s
LBTB Lobatse 68.24 173 P **P** **09 30 26.8 +0.8**
LBTB pmax pmax
comp=Z,30nm,0.9s
XAN Xi'an 68.25 63 ⇓P **P** **09 30 27.5 +1.4**
XAN pP pP 09 30 31.5 -2.3
XAN pmax pmax
comp=Z,19nm,0.6s
XAN LR LR
comp=Z,1µm,17.9s
XAN LR LR
comp=Z,610nm,23.4s
XAN LR LR
comp=Z,1µm,15.1s
E25K Arctic Village 68.31 353 P **P** **09 30 25.2 -0.7**
baz=13
D20K Etivluk River 68.33 358 IAmb IAmb 09 30 34.3
comp=Z,16nm,0.8s
D20K Etivluk River 68.33 358 P **P** **09 30 25.1 -0.9**
baz=4.3,SNR=6.3
G30M tAoh Zraii Nji 68.39 349 IAmb IAmb 09 30 43.1
comp=Z,20nm,0.8s
G30M tAoh Zraii Nji 68.39 349 P **P** **09 30 26.3 -0.2**
baz=20
HEH HeiHe 68.45 41 *e*P **P** **09 30 26.5 -0.6**
HEH pmax pmax
comp=Z,16nm,0.9s
HEH LR LR
comp=Z,1µm,13.0s
HEH LR LR
comp=Z,1µm,13.7s
HEH LR LR
comp=Z,2µm,13.1s
PAMR Moraine State 68.46 306 IAmb IAmb 09 30 38.2
comp=Z,26nm,0.9s
C18K Utukok River 68.46 360 P **P** **09 30 26.8 -0.1**
baz=0.7
E21K Killik River 68.51 357 P **P** **09 30 26.6 -0.6**
baz=6.3
E24K Your Creek 68.58 355 IAmb IAmb 09 30 38.8
comp=Z,18nm,0.8s
E24K Your Creek 68.58 355 P **P** **09 30 26.9 -0.7**
baz=11
D19K Kuna River 68.58 358 IAmb IAmb 09 30 38.8
comp=Z,32nm,1.1s
D19K Kuna River 68.58 358 P **P** **09 30 26.9 -0.7**
baz=3.1
F26K Sheenjek River 68.60 353 IAmb IAmb 09 30 29.8
comp=Z,20nm,0.7s
F26K Sheenjek River 68.60 353 P **P** **09 30 27.0 -0.8**
baz=14
C17K DeLong Mountai 68.64 0 P **P** **09 30 27.3 -0.6**
baz=359
E23K Chandalar 68.67 355 IAmb IAmb 09 30 43.2
comp=Z,27nm,0.9s
E23K Chandalar 68.67 355 P **P** **09 30 27.7 -0.5**
baz=9.7
G29M Pine Creek 68.69 350 P **P** **09 30 27.7 -0.6**
baz=19
E22K Anaktuvuk Pass 68.72 356 P **P** **09 30 28.3 -0.2**
baz=8.0
E20K Nigu River 68.77 358 P **P** **09 30 28.8 -0.1**
baz=4.6
C16K Lisburne Hills 68.81 1 P **P** **09 30 28.9 -0.1**
baz=357
F25K Christian Rive 68.83 353 P **P** **09 30 28.8 -0.4**
baz=13
BMAR Burnt Mountain 68.90 353 P **P** **09 30 30.5 +0.9**
RCBR Riachuelo 68.92 240 P **P** **09 30 30.9 +0.4**
RCBR IAmb IAmb 09 30 43.6
comp=Z,20nm,0.8s
RCBR Riachuelo 68.92 240 P **P** **09 30 30.9 +0.4**
RCBR pmax pmax
comp=Z,20nm,0.9s
RCBR Riachuelo 68.92 240 *e*P **P** **09 30 32.1 +1.6**
EPYK Eagle Plains 69.03 349 IAmb IAmb 09 30 31.2
comp=Z,17nm,0.8s
EPYK Eagle Plains 69.03 349 P **P** **09 30 30.0 -0.5**
baz=20,SNR=11
RDOG Red Dog Mine 69.06 0 P **P** **09 30 29.9 -0.6**
baz=359
F24K Squaw Lake 69.08 354 IAmb IAmb 09 30 42.3
comp=Z,22nm,0.8s
F24K Squaw Lake 69.08 354 P **P** **09 30 30.9 +0.2**
baz=11
G27K Doyon Strip 69.21 352 IAmb IAmb 09 30 43.1
comp=Z,17nm,0.9s
G27K Doyon Strip 69.21 352 P **P** **09 30 31.4 -0.1**
baz=16
H31M Peel River 69.23 348 IAmb IAmb 09 31 02.8
comp=Z,28nm,1.1s
H31M Peel River 69.23 348 P **P** **09 30 31.3 -0.4**
baz=21
G26K Porcupine Rive 69.29 352 P **P** **09 30 32.3 +0.3**
baz=14
F22K John River 69.36 356 P **P** **09 30 32.8 +0.3**
baz=7.7
H29M Whitestone 69.39 350 P **P** **09 30 32.5 -0.2**
baz=18
T59A Double "B" Far 69.41 302 IAmb IAmb 09 30 43.8
comp=Z,21nm,0.9s
D17K Noatak River 69.42 0 P **P** **09 30 32.9 +0.2**
baz=359
COLD Coldfoot 69.53 355 IAmb IAmb 09 30 44.9
comp=Z,32nm,1.0s
COLD Coldfoot 69.53 355 P **P** **09 30 33.7 +0.3**
baz=9.2,SNR=18
WRGLY Wrigley 69.56 342 P **P** **09 30 33.9 +0.2**
baz=29
E19K Redstone River 69.60 358 P **P** **09 30 34.1 +0.2**
baz=3.7
G25K Bearman Lake 69.68 353 P **P** **09 30 34.8 +0.5**
baz=12
E18K Tukpahlearik C 69.69 359 IAmb IAmb 09 30 46.0
comp=Z,28nm,0.8s
E18K Tukpahlearik C 69.69 359 P **P** **09 30 34.6 +0.2**
baz=1.1,SNR=5.7
F21K Alatna River 69.71 356 P **P** **09 30 34.8 +0.3**
baz=6.7,SNR=22
H27K Steamboat Moun 69.76 351 IAmb IAmb 09 30 46.3
comp=Z,24nm,0.9s
H27K Steamboat Moun 69.76 351 P **P** **09 30 34.9 0.0**
baz=16
S57A Dark Hollow, R 69.78 303 IAmb IAmb 09 30 45.5
comp=Z,32nm,1.4s
HNS HongShan 69.83 57 ⇓P **P** **09 30 39.0 +3.2**
HNS SS SS 09 44 11.0 -1.1
HNS pmax pmax
comp=Z,7.0nm,0.7s
HNS LR LR
comp=Z,2µm,20.0s
HNS LR LR
comp=Z,1µm,20.6s
HNS LR LR
comp=Z,980nm,16.9s
G24K Hadweenzic Riv 69.86 354 P **P** **09 30 35.6 +0.1**
baz=11
FFC Flin Flon 69.90 328 P **P** **09 30 35.9 -0.1**
FFC IAmb IAmb 09 30 47.1
comp=Z,44nm,1.4s
FFC Flin Flon 69.90 328 P **P** **09 30 35.9 -0.1**
FFC pmax pmax
comp=Z,44nm,1.5s
G22K Bettles 69.91 356 P **P** **09 30 35.8 0.0**
baz=8.2,SNR=7.8
EPLO Experimental L 69.96 320 IAmb IAmb 09 30 37.7
comp=Z,23nm,0.7s
F20K Avaraart Lake 69.97 357 P **P** **09 30 36.3 +0.2**
baz=4.9
VOI Vohitsoka 70.00 152 P **P** **09 30 37.9 +1.0**
VOI Vohitsoka 70.00 152 P **P** **09 30 37.8 +0.8**
VOI IAmb IAmb 09 31 02.1
comp=Z,42nm,1.5s
G23K Bananza Creek 70.03 355 P **P** **09 30 36.8 +0.2**
baz=9.3
E17K Hotham Inlet 70.04 360 P **P** **09 30 37.0 +0.5**
baz=0.2
EYMN Ely 70.07 318 IAmb IAmb 09 30 46.6
comp=Z,41nm,1.1s
I30M Mount Dempster 70.07 349 P **P** **09 30 36.9 -0.1**
baz=20
Q54A Coxs Mills 70.14 305 IAmb IAmb 09 30 48.3
comp=Z,36nm,1.0s
R55A Marlinton 70.15 304 IAmb IAmb 09 30 48.9
comp=Z,33nm,0.9s
LYN LuoYang 70.23 61 P **P** **09 30 41.8 +3.5**
LYN pmax pmax
comp=Z,12nm,0.7s
LYN LR LR
comp=Z,1µm,15.5s
LYN LR LR
comp=Z,830nm,12.7s
LYN LR LR
comp=Z,2µm,17.6s
F19K Shaleruckik Mo 70.24 358 IAmb IAmb 09 30 39.1
comp=Z,23nm,0.8s
F19K Shaleruckik Mo 70.24 358 P **P** **09 30 37.7 -0.1**
baz=3.3,SNR=14
I28M Miner Creek 70.33 350 IAmb IAmb 09 30 49.4
comp=Z,25nm,0.8s
I28M Miner Creek 70.33 350 P **P** **09 30 38.4 -0.2**
baz=17
I27K Kandik River 70.37 351 IAmb IAmb 09 31 00.2
comp=Z,26nm,1.0s
I27K Kandik River 70.37 351 P **P** **09 30 38.8 0.0**
baz=16
G21K Allakaket 70.41 356 P **P** **09 30 39.2 +0.3**
baz=6.6,SNR=19
T57A Hurt 70.44 303 IAmb IAmb 09 30 50.5
comp=Z,24nm,0.9s
MA2 Magadan 70.45 23 LR LR 10 05 31.3
comp=Z,1µm,18.5s,baz=331,slow=39
F18K Selawik 70.51 359 P **P** **09 30 39.8 +0.4**
baz=1.9,SNR=5.1
ULM Lac du Bonnet 70.55 322 P **P** **09 30 39.1 -0.9**
comp=Z,28nm,0.8s,baz=44,slow=6.3,SNR=23
ULM LR LR 10 02 39.0
comp=Z,441nm,19.2s,baz=39,slow=37
comp=Z,28nm,0.8s
ULM Lac du Bonnet 70.55 322 IAmb IAmb 09 30 41.1
comp=Z,26nm,0.8s
ACSO Alum Creek Sta 70.60 307 IAmb IAmb 09 30 51.5
comp=Z,30nm,0.9s
J30M Hart River 70.68 349 P **P** **09 30 40.7 0.0**
baz=20
F17K Baldwin Pennin 70.68 360 P **P** **09 30 40.8 +0.3**
baz=0.6
H24K Noodor Dome 70.74 354 P **P** **09 30 41.0 +0.1**
baz=11
I26K Coal Creek Min 70.83 352 IAmb IAmb 09 30 43.2
comp=Z,14nm,0.7s
I26K Coal Creek Min 70.83 352 P **P** **09 30 41.5 +0.1**
baz=14
N49A Columbus Grove 70.85 308 IAmb IAmb 09 30 52.4
comp=Z,40nm,1.0s
PRP Porcupine Dome 70.86 353 P **P** **09 30 41.9 +0.2**
baz=13,SNR=6.9
CHTO Chiang Mai 70.86 82 P **P** **09 30 42.3 -0.1**
CHTO P **P** **09 30 42.3 -0.1**
CHTO Chiang Mai 70.86 82 P **P** **09 30 41.9 -0.5**
CHTO IAmb IAmb 09 30 48.7
comp=Z,30nm,0.8s
CHTO Chiang Mai 70.86 82 P **P** **09 30 41.9 -0.5**
CHTO pmax pmax
comp=Z,30nm,0.8s
H23K Yukon River 70.87 355 IAmb IAmb 09 30 53.3
comp=Z,29nm,0.8s
H23K Yukon River 70.87 355 P **P** **09 30 42.1 +0.4**
baz=9.6
G19K Purcell Mounta 70.92 358 IAmb IAmb 09 30 51.0
comp=Z,47nm,1.4s
G19K Purcell Mounta 70.92 358 P **P** **09 30 42.2 +0.2**
baz=3.8
H22K Ishtalitna Cre 70.92 355 P **P** **09 30 41.8 -0.3**
baz=8.2
IMAR Indian Mountai 70.95 356 P **P** **09 30 42.5 +0.3**
ENH Enshi 70.98 66 IAmb IAmb 09 30 53.4
comp=Z,24nm,0.7s
CM31 Chiang Mai Arr 71.09 82 P **P** **09 30 43.8 0.0**
CM31 P **P** **09 30 43.8 0.0**
CM31 Chiang Mai Arr 71.09 82 IAmb IAmb 09 30 50.2
comp=Z,32nm,0.8s
CMAR Chiang Mai Arr 71.09 82 P **P** **09 30 43.7 -0.1**
comp=Z,14nm,0.6s,baz=305,slow=7.3,SNR=70
CMAR LR LR 10 08 20.7
comp=Z,318nm,18.1s,baz=305,slow=41
comp=Z,14nm,0.6s
CMAR Chiang Mai Arr 71.09 82 P **P** **09 30 43.4 -0.4**
CMAR Chiang Mai Arr 71.09 82 *i* P **P** **09 30 43.7 -0.1**
CMAR pmax pmax
comp=Z,15nm,0.6s
S54A Dingess, Beckl 71.19 304 IAmb IAmb 09 30 54.5
comp=Z,23nm,0.9s
G18K Tagagawik 71.20 359 IAmb IAmb 09 30 52.4
comp=Z,33nm,1.1s
G18K Tagagawik 71.20 359 P **P** **09 30 44.1 +0.3**
baz=2.6
H21K Melozitna Rive 71.23 356 P **P** **09 30 44.2 +0.3**
baz=7.1
G40A Rib Lake 71.24 315 IAmb IAmb 09 30 46.2
comp=Z,25nm,0.9s
F15K North Star Dit 71.40 1 P **P** **09 30 45.2 +0.3**
baz=358
POKR Poker Plat Res 71.41 354 IAmb IAmb 09 30 56.7
comp=Z,25nm,0.9s
POKR Poker Plat Res 71.41 354 P **P** **09 30 45.3 +0.2**
baz=11,SNR=6.3
TNA Tin City 71.47 3 P **P** **09 30 45.6 +0.3**
baz=356
GYA Guiyang 71.47 71 ⇑P **P** **09 30 47.8 +1.7**
GYA pmax pmax
comp=Z,18nm,0.8s
H20K Knotleneega Mo 71.49 357 P **P** **09 30 45.6 +0.1**
baz=5.5
I42A Draeger Farm, 71.49 313 IAmb IAmb 09 30 47.5
comp=Z,15nm,0.7s
H19K Roundabout Mou 71.51 358 P **P** **09 30 45.4 -0.2**
baz=4.3
BNX BinXian 71.52 44 ⇓P **P** **09 30 46.5 +0.6**
BNX pmax pmax
comp=Z,12nm,0.6s
I23K Minto, Yukon-K 71.53 354 IAmb IAmb 09 30 56.9
comp=Z,20nm,1.0s
I23K Minto, Yukon-K 71.53 354 P **P** **09 30 46.0 +0.4**
baz=9.7,SNR=8.2
MAYO Mayo, Yukon 71.54 348 P **P** **09 30 46.0 +0.2**
baz=20,SNR=10
K29M Barlow Dome 71.54 349 P **P** **09 30 45.8 -0.1**
baz=19
U56A King 71.56 303 IAmb IAmb 09 30 57.3
comp=Z,23nm,1.0s
DAWY Dawson 71.58 350 P **P** **09 30 46.0 -0.1**
baz=17,SNR=33
F14K Arctic Creek 71.60 2 P **P** **09 30 46.0 -0.1**
baz=357
G17K Kiwalik Mounta 71.62 359 P **P** **09 30 46.0 -0.3**
baz=1.1
J26L Joseph Creek 71.66 352 IAmb IAmb 09 30 57.4
comp=Z,27nm,0.7s
J26L Joseph Creek 71.66 352 P **P** **09 30 46.5 -0.1**
baz=14
I21K Tanana 71.67 356 IAmb IAmb 09 30 59.9
comp=Z,27nm,0.8s
I21K Tanana 71.67 356 P **P** **09 30 46.6 +0.2**
baz=7.7,SNR=15
COLA College 71.69 354 P **P** **09 30 47.2 +0.6**
COLA IAmb IAmb 09 30 55.1
comp=Z,18nm,0.8s
COLA College 71.69 354 *i* P **P** **09 30 45.8 -0.8**
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 71.69 354 P **P** **09 30 46.6 0.0**
baz=11
ILAR Eielson Array 71.71 353 P **P** **09 30 47.0 +0.3**
comp=Z,6.9nm,0.7s,baz=2.8,slow=6.0,SNR=88
comp=Z,6.9nm,0.7s
ILAR Eielson Array 71.71 353 P **P** **09 30 46.8 +0.1**
J25K Salcha River, 71.73 353 P **P** **09 30 46.8 -0.2**
baz=13
G16K Koyuk River 71.73 0 P **P** **09 30 46.6 -0.2**
baz=360
N47A Urbana 71.74 309 IAmb IAmb 09 30 57.4
comp=Z,31nm,0.8s
BOSA Boshof 71.78 173 P **P** **09 30 47.7 +0.1**
comp=Z,10.0nm,0.5s,baz=355,slow=6.4,SNR=40
BOSA LR LR 10 04 05.2
comp=Z,1µm,21.7s,baz=358,slow=37
comp=Z,10.0nm,0.5s
BOSA Boshof 71.78 173 IAmb IAmb 09 30 58.8
comp=Z,19nm,0.9s
CN2 Changchun 71.82 47 P **P** **09 30 49.0 +1.2**
CN2 pP pP 09 30 53.3 -2.3
CN2 S **S** **09 40 06.0 -0.9**
CN2 SS **SS** **09 44 42.8 +0.6**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,2µm,16.0s
CN2 LR LR
comp=Z,1µm,16.0s
O48B Farmland 71.84 308 IAmb IAmb 09 30 58.0
comp=Z,35nm,1.0s
H18K Honhosa River 71.94 358 P **P** **09 30 48.0 -0.2**
baz=2.8
K27K Chicken 71.95 351 IAmb IAmb 09 30 59.8
comp=Z,25nm,0.9s
K27K Chicken 71.95 351 P **P** **09 30 48.0 -0.2**
baz=15
NEA2 Nenana 72.06 354 IAmb IAmb 09 30 57.2
comp=Z,18nm,0.8s
NEA2 Nenana 72.06 354 P **P** **09 30 48.6 -0.3**
baz=9.9,SNR=16
HDA Harding Lake 72.07 353 IAmb IAmb 09 30 50.5
comp=Z,31nm,0.7s
HDA Harding Lake 72.07 353 P **P** **09 30 48.9 -0.1**
baz=12,SNR=28
TIA Tai'an 72.08 57 P **P** 09 30 54.8 +5.3
TIA pmax pmax
comp=Z,10.0nm,0.9s
TIA LR LR
comp=Z,310nm,13.9s
TIA LR LR
comp=Z,840nm,15.9s
TIA LR LR
comp=Z,900nm,15.3s
WRH Wood River Hil 72.10 354 IAmb IAmb 09 30 59.7
comp=Z,21nm,0.9s
G15K Niukluk 72.12 1 P **P** **09 30 49.1 -0.2**
baz=358
SNY Shenyang 72.14 49 ⇑P **P** **09 30 50.8 +1.1**
SNY pmax pmax
comp=Z,11nm,0.8s
SNY pmax pmax
comp=Z,160nm,6.1s
SNY LR LR
comp=Z,740nm,17.2s
SNY LR LR
comp=Z,2µm,14.6s
SNY LR LR
comp=Z,2µm,16.2s
I20K Naaghedeneel 72.17 357 P **P** **09 30 49.5 0.0**
baz=5.8
H17K Granite Mounta 72.18 359 P **P** **09 30 49.5 -0.1**
baz=1.6
SCRK Sand Creek 72.21 352 P **P** **09 30 49.9 0.0**
baz=14,SNR=9.3
GCSA Galena City Sc 72.31 358 P **P** **09 30 50.2 -0.2**
baz=4.0
L29M L29M 72.33 349 IAmb IAmb 09 31 01.7
comp=Z,32nm,1.1s
L29M L29M 72.33 349 P **P** **09 30 50.4 -0.2**
baz=18
V55A Taylorsville 72.39 303 IAmb IAmb 09 31 02.3
comp=Z,30nm,0.8s
I40A Norwalk 72.40 314 IAmb IAmb 09 31 01.9
comp=Z,21nm,0.9s
KOTAN Kotaneelee Air 72.42 341 P **P** **09 30 51.1 -0.1**
baz=28
MDP Montagnes des 72.45 260 LR LR 09 58 51.8
comp=Z,394nm,20.5s,baz=54,slow=33
H16K Elim 72.49 0 P **P** **09 30 51.5 0.0**
baz=360
RIDG Independent Ri 72.53 352 P **P** **09 30 51.6 -0.2**
baz=13,SNR=13
ANM Nome 72.53 2 P **P** **09 30 51.4 -0.3**
baz=357
DOT Dot Lake 72.54 352 IAmb IAmb 09 31 00.9
comp=Z,22nm,0.8s
K24K Donnelly Dome 72.56 353 IAmb IAmb 09 30 59.9
comp=Z,23nm,0.7s
K24K Donnelly Dome 72.56 353 P **P** **09 30 51.6 -0.4**
baz=12,SNR=8.9
SPMN Marine on St. 72.60 316 IAmb IAmb 09 31 01.0
comp=Z,21nm,1.0s
M31M Drury Creek, Y 72.61 347 IAmb IAmb 09 31 03.9
comp=Z,23nm,0.9s
M31M Drury Creek, Y 72.61 347 P **P** **09 30 51.9 -0.4**
baz=21,SNR=9.3
M30M Minto, Yukon 72.64 348 IAmb IAmb 09 31 25.8
comp=Z,46nm,1.9s
M30M Minto, Yukon 72.64 348 P **P** **09 30 52.4 0.0**
baz=19
S51A Beattyville 72.66 305 IAmb IAmb 09 31 04.0
comp=Z,18nm,0.9s
R50A Paris 72.67 306 IAmb IAmb 09 31 03.2
comp=Z,22nm,0.9s
BPAW Bear Paw Mtn. 72.68 355 IAmb IAmb 09 31 00.6
comp=Z,18nm,0.8s
BPAW Bear Paw Mtn. 72.68 355 P **P** **09 30 52.5 -0.1**
baz=8.4,SNR=10
M44A Midewin, Midew 72.71 311 IAmb IAmb 09 31 03.6
comp=Z,27nm,1.0s
J20K Nowinta River 72.78 356 P **P** **09 30 53.4 +0.2**
baz=6.0
BCAR Beaver Creek A 72.85 351 P **P** **09 30 54.3 +0.6**
L27K Beaver Creek, 72.86 351 IAmb IAmb 09 31 05.2
comp=Z,22nm,0.8s
L27K Beaver Creek, 72.86 351 P **P** **09 30 53.9 +0.2**
baz=15,SNR=16
SFIN Lafayette 72.86 309 IAmb IAmb 09 31 03.6
comp=Z,36nm,1.0s
JFWS Jewell Farm 72.87 313 IAmb IAmb 09 31 04.3
comp=Z,22nm,0.8s
MCK McKinley 72.90 354 IAmb IAmb 09 31 04.5
comp=Z,36nm,0.9s
MCK McKinley 72.90 354 P **P** **09 30 53.5 -0.4**
baz=10.0,SNR=8.8
KMSC Kings Mountain 72.93 302 IAmb IAmb 09 31 05.3
comp=Z,21nm,0.8s
CHUM Lake Minchumin 72.98 356 P **P** **09 30 54.3 0.0**
baz=7.4
M29M Somme Creek 73.01 349 P **P** **09 30 55.3 +0.6**
baz=18
J19K Poorman 73.02 357 P **P** **09 30 55.3 +0.6**
baz=4.9
L26K Log Cabin Wild 73.07 351 IAmb IAmb 09 30 57.2
comp=Z,28nm,0.8s
L26K Log Cabin Wild 73.07 351 P **P** **09 30 55.5 +0.6**
baz=14,SNR=20
Y57A Sumter 73.08 301 IAmb IAmb 09 31 06.2
comp=Z,23nm,0.7s
GAMB Gambell 73.08 4 P **P** **09 30 55.1 +0.1**
baz=353
R49A Shelbyville 73.16 307 IAmb IAmb 09 31 06.1
comp=Z,26nm,1.1s
MENT Mentasta 73.19 351 IAmb IAmb 09 30 58.7
comp=Z,16nm,0.7s
I17K Unalakleet 73.24 359 P **P** **09 30 56.2 +0.3**
baz=1.0
TRF Thorofare Moun 73.28 355 P **P** **09 30 56.3 -0.1**
baz=8.9
PAX Paxson 73.35 352 P **P** **09 30 56.8 +0.1**
baz=13,SNR=6.9
BLO Bloomington 73.35 308 IAmb IAmb 09 31 07.3

	comp=Z,37nm,0.8s							
TZTN	**Tazewell**	73.36	305	IAmb	IAmb	09 31 07.8		
	comp=Z,33nm,1.1s							
BVCY	**Beaver Creek**	73.36	350	P	**P**	**09 30 57.1**	**+0.4**	
	baz=16,SNR=8.7							
N32M	**Quiet Lake**	73.37	346	IAmb	IAmb	09 30 58.9		
	comp=Z,40nm,0.8s							
N32M	**Quiet Lake**	73.37	346	P	**P**	**09 30 57.1**	**+0.3**	
	baz=22							
DHY	**Denali Highway**	73.42	353	P	**P**	**09 30 57.1**	**-0.1**	
	baz=11,SNR=20							
PAULI	**Pauline**	73.44	302	IAmb	IAmb	09 31 08.3		
	comp=Z,23nm,0.8s							
P46A	**Rosedale**	73.44	309	IAmb	IAmb	09 31 07.0		
	comp=Z,32nm,1.1s							
WTLY	**Watson Lake, Y**	73.50	343	P	**P**	**09 30 58.1**	**+0.5**	
	baz=25,SNR=17							
N31M	**Braeburn, Yuko**	73.52	347	IAmb	IAmb	09 31 08.4		
	comp=Z,46nm,0.9s							
N31M	**Braeburn, Yuko**	73.52	347	P	**P**	**09 30 58.0**	**+0.4**	
	baz=20,SNR=9.5							
LIRD	**Liard River Hi**	73.54	342	P	**P**	**09 30 58.3**	**+0.5**	
	baz=26							
M27K	**Edge Creek, AK**	73.55	350	IAmb	IAmb	09 31 10.9		
	comp=Z,25nm,1.0s							
M27K	**Edge Creek, AK**	73.55	350	P	**P**	**09 30 58.2**	**+0.3**	
	baz=15							
J18K	**Innoko River**	73.59	358	P	**P**	**09 30 58.0**	**0.0**	
	baz=4.0							
K20K	**Telida**	73.59	356	IAmb	IAmb	09 31 09.6		
	comp=Z,29nm,1.1s							
K20K	**Telida**	73.59	356	P	**P**	**09 30 58.5**	**+0.5**	
	baz=6.0,SNR=5.9							
M26K	**Nabesna, AK**	73.64	351	IAmb	IAmb	09 31 10.3		
	comp=Z,27nm,1.0s							
M26K	**Nabesna, AK**	73.64	351	P	**P**	**09 30 58.5**	**+0.2**	
	baz=14							
J17K	**VABM Dome**	73.72	359	P	**P**	**09 30 58.7**	**0.0**	
	baz=2.2							
N30M	**Aishikik Lake**	73.75	348	IAmb	IAmb	09 31 10.8		
	comp=Z,20nm,0.9s							
N30M	**Aishikik Lake**	73.75	348	P	**P**	**09 30 58.8**	**-0.2**	
	baz=19							
I37A	**Lemond, Waseca**	73.75	316	IAmb	IAmb	09 31 00.8		
	comp=Z,30nm,0.8s							
WAT1	**Susitna Watana**	73.76	354	P	**P**	**09 30 58.7**	**-0.4**	
	baz=10							
T50A	**Nancy**	73.81	306	IAmb	IAmb	09 31 10.2		
	comp=Z,20nm,0.9s							
TOAD	**Toad River Com**	73.84	341	P	**P**	**09 30 59.8**	**+0.2**	
	baz=27,SNR=16							
J16K	**Anvik River**	73.85	359	IAmb	IAmb	09 31 08.2		
	comp=Z,31nm,1.0s							
J16K	**Anvik River**	73.85	359	P	**P**	**09 30 59.8**	**+0.3**	
	baz=1.1							
WCI	**Wyandotte Cave**	73.85	307	P	**P**	**09 30 59.6**	**-0.4**	
WCI				IAmb	IAmb	09 31 10.3		
	comp=Z,38nm,0.9s							
WCI	**Wyandotte Cave**	73.85	307	P	**P**	**09 30 59.6**	**-0.4**	
WCI				pmax	pmax			
	comp=Z,38nm,0.9s							
HARP	**HAARP**	73.87	352	P	**P**	**09 30 59.7**	**0.0**	
	baz=13							
F33A	**5 Mile Ranch,**	73.89	318	IAmb	IAmb	09 31 01.3		
	comp=Z,21nm,0.9s							
YUK3	**Moose Creek**	73.93	350	P	**P**	**09 31 00.3**	**0.0**	
	baz=16,SNR=14							
WAT6	**Susitna Watana**	73.94	353	P	**P**	**09 31 00.1**	**-0.2**	
	baz=11,SNR=10							
PPLA	**Purkeypile**	73.95	355	IAmb	IAmb	09 31 09.8		
	comp=Z,24nm,0.8s							
PPLA	**Purkeypile**	73.95	355	P	**P**	**09 31 00.2**	**-0.1**	
	baz=7.5,SNR=6.2							
TKL	**Tuckaleechee C**	74.08	304	LR	LR	10 03 44.7		
	comp=Z,250nm,18.2s,baz=56,slow=36							
YUK4	**Talbot Arm**	74.09	349	P	**P**	**09 31 00.6**	**-0.6**	
	baz=18,SNR=10.0							
WHY	**Whitehorse**	74.14	347	IAmb	IAmb	09 31 12.6		
	comp=Z,45nm,1.1s							
WHY	**Whitehorse**	74.14	347	P	**P**	**09 31 01.2**	**-0.2**	
	baz=20,SNR=5.1							
P33M	**Teslin, Yukon**	74.20	345	IAmb	IAmb	09 31 12.9		
	comp=Z,30nm,1.1s							
P33M	**Teslin, Yukon**	74.20	345	P	**P**	**09 31 01.5**	**-0.2**	
	baz=22							
O30N	**Mendenhall**	74.24	347	IAmb	IAmb	09 31 12.7		
	comp=Z,23nm,0.9s							
O30N	**Mendenhall**	74.24	347	P	**P**	**09 31 01.8**	**-0.1**	
	baz=19,SNR=11							
M24K	**Tolsona, Glenn**	74.26	352	P	**P**	**09 31 02.2**	**+0.2**	
	baz=12							
YUK8	**Steele Glacier**	74.31	349	P	**P**	**09 31 02.2**	**-0.3**	
	baz=17							
CUT	**Chulitna**	74.31	354	P	**P**	**09 31 02.3**	**+0.1**	
	baz=8.9							
K17K	**Iditarod**	74.38	358	P	**P**	**09 31 03.0**	**+0.4**	
	baz=2.8							
HYT	**Haines Junctio**	74.41	348	IAmb	IAmb	09 31 14.3		
	comp=Z,22nm,0.9s							
HYT	**Haines Junctio**	74.41	348	P	**P**	**09 31 02.9**	**-0.1**	
	baz=18,SNR=8.1							
YUK6	**Outpost Mounta**	74.43	348	P	**P**	**09 31 04.0**	**+0.8**	
	baz=18,SNR=8.2							
L20K	**Farewell, AK**	74.46	356	P	**P**	**09 31 03.3**	**+0.1**	
	baz=6.2							
OLIL	**Olney**	74.55	309	IAmb	IAmb	09 31 14.1		
	comp=Z,40nm,1.0s							
N25K	**Chitina, Valde**	74.59	351	P	**P**	**09 31 04.2**	**+0.3**	
	baz=13							
R33M	**Jennings River**	74.60	344	IAmb	IAmb	09 31 16.9		
	comp=Z,56nm,1.1s							
R33M	**Jennings River**	74.60	344	P	**P**	**09 31 04.5**	**+0.4**	
	baz=23							
MCARA	**McCarthy VSAT**	74.63	351	IAmb	IAmb	09 31 07.0		
	comp=Z,20nm,0.9s							
MCARA	**McCarthy VSAT**	74.63	351	P	**P**	**09 31 04.3**	**+0.2**	
	baz=14							
SCM	**Sheep Creek Mo**	74.64	353	IAmb	IAmb	09 31 13.4		
	comp=Z,38nm,0.8s							
SCM	**Sheep Creek Mo**	74.64	353	P	**P**	**09 31 04.6**	**+0.4**	
	baz=11,SNR=6.0							
U49A	**Red Boiling Sp**	74.71	306	IAmb	IAmb	09 31 15.4		
	comp=Z,30nm,0.9s							
M23K	**Glacier View**	74.72	353	P	**P**	**09 31 05.0**	**+0.4**	
	baz=11,SNR=5.8							
N41A	**Harden Midland**	74.72	312	IAmb	IAmb	09 31 15.0		
	comp=Z,50nm,1.0s							
P43A	**Skaggs, Pawne**	74.73	310	IAmb	IAmb	09 31 15.2		
	comp=Z,39nm,0.9s							
SML	**Sawmill**	74.75	353	IAmb	IAmb	09 31 13.7		
	comp=Z,30nm,0.9s							
SML	**Sawmill**	74.75	353	P	**P**	**09 31 05.0**	**+0.1**	
	baz=10,SNR=5.8							
L19K	**White Mountain**	74.80	357	IAmb	IAmb	09 31 14.0		
	comp=Z,22nm,0.8s							
L19K	**White Mountain**	74.80	357	P	**P**	**09 31 05.0**	**-0.1**	
	baz=5.4							
SKT	**Skwentna**	74.82	355	IAmb	IAmb	09 32 36.4		
	comp=Z,21nm,0.5s							
SKT	**Skwentna**	74.82	355	P	**P**	**09 31 04.7**	**-0.5**	
	baz=7.9,SNR=6.2							
CTG	**Chitna Glacier**	74.83	350	P	**P**	**09 31 05.3**	**-0.2**	
	baz=16							
L18K	**Granite Mounta**	74.83	357	IAmb	IAmb	09 31 17.3		
	comp=Z,34nm,1.1s							
L18K	**Granite Mounta**	74.83	357	P	**P**	**09 31 05.5**	**+0.3**	
	baz=4.0							
GHO	**Glory Hole Cre**	74.84	354	IAmb	IAmb	09 31 25.6		
	comp=Z,24nm,0.9s							
KLU	**Klutina**	74.84	352	IAmb	IAmb	09 31 16.2		
	comp=Z,19nm,0.8s							
KLU	**Klutina**	74.84	352	P	**P**	**09 31 05.3**	**-0.1**	
	baz=12							
K15K	**Wolf Creek Mou**	74.85	360	P	**P**	**09 31 05.5**	**+0.1**	
	baz=0.4							
O28M	**Mount Upton**	74.86	349	IAmb	IAmb	09 31 16.9		
	comp=Z,25nm,0.8s							
O28M	**Mount Upton**	74.86	349	P	**P**	**09 31 05.6**	**-0.2**	
	baz=16							
USRK	**Ussuriysk Ar.**	74.91	43	P	**P**	**09 31 05.4**	**-0.6**	
	comp=Z,4.0nm,0.7s,baz=310,slow=3.3,SNR=5.4							
	comp=Z,4.0nm,0.7s							
LOGN	**Logan Glacier**	74.92	350	IAmb	IAmb	09 31 17.2		
	comp=Z,36nm,0.9s							
P32M	**Atlin**	74.94	346	IAmb	IAmb	09 31 17.0		
	comp=Z,24nm,1.1s							
P32M	**Atlin**	74.94	346	P	**P**	**09 31 06.1**	**+0.1**	
	baz=21							
M22K	**Willow**	74.95	354	P	**P**	**09 31 05.8**	**0.0**	
	baz=9.0							
Q44A	**Meyer Farm, Va**	74.95	309	IAmb	IAmb	09 31 16.6		
	comp=Z,31nm,0.9s							
L17K	**Donlin**	74.97	358	P	**P**	**09 31 05.9**	**-0.1**	
	baz=2.8							
P30M	**Million Dollar**	75.00	347	P	**P**	**09 31 06.5**	**+0.2**	
	baz=19							
M20K	**Styx River**	75.02	356	P	**P**	**09 31 06.4**	**-0.1**	
	baz=6.7							
PMR	**Palmer**	75.03	354	P	**P**	**09 31 06.4**	**0.0**	
	baz=9.7							
M19K	**Big River Lodg**	75.06	356	IAmb	IAmb	09 31 18.2		
	comp=Z,23nm,1.0s							
M19K	**Big River Lodg**	75.06	356	P	**P**	**09 31 06.7**	**+0.1**	
	baz=5.8							
O29M	**Mount Kennedy**	75.08	348	P	**P**	**09 31 06.9**	**+0.1**	
	baz=18							
SCIA	**State Center**	75.15	314	IAmb	IAmb	09 31 17.5		
	comp=Z,20nm,0.8s							
KNK	**Knik Glacier**	75.15	353	IAmb	IAmb	09 31 18.1		
	comp=Z,31nm,1.1s							
KNK	**Knik Glacier**	75.15	353	P	**P**	**09 31 07.3**	**+0.1**	
	baz=10							
K13K	**Kusilvak Mount**	75.19	1	P	**P**	**09 31 07.5**	**+0.2**	
	baz=358							
BMRM	**Bremner River**	75.22	351	IAmb	IAmb	09 31 25.0		
	comp=Z,46nm,1.2s							
BMRM	**Bremner River**	75.22	351	P	**P**	**09 31 07.8**	**+0.2**	
	baz=13							
CRQE	**Cirque**	75.25	351	P	**P**	**09 31 07.7**	**-0.1**	
	baz=14							
Q32M	**Nakina River**	75.26	345	IAmb	IAmb	09 31 20.4		
	comp=Z,45nm,1.3s							
Q32M	**Nakina River**	75.26	345	P	**P**	**09 31 08.2**	**+0.2**	
	baz=22							
SUR	**Sutherland**	75.27	178	P	**P**	**09 31 09.7**	**+1.5**	
SUA	**Susitna One**	75.28	354	IAmb	IAmb	09 31 16.5		
	comp=Z,34nm,0.8s							
SUA	**Susitna One**	75.28	354	P	**P**	**09 31 08.3**	**+0.3**	
	baz=8.5,SNR=8.6							
DLBC	**Dease Lake**	75.29	343	P	**P**	**09 31 08.4**	**+0.4**	
	baz=24							
ISLE	**Juniper Island**	75.30	350	IAmb	IAmb	09 31 19.2		
	comp=Z,37nm,0.9s							
W50A	**Signal Mountai**	75.32	305	IAmb	IAmb	09 31 19.3		
	comp=Z,40nm,0.9s							
CLTN	**Cedars of Leba**	75.32	306	IAmb	IAmb	09 31 18.9		
	comp=Z,26nm,0.8s							
SKAG	**Skagway**	75.35	346	P	**P**	**09 31 08.2**	**0.0**	
	baz=20							
L16K	**Owhat River**	75.41	359	P	**P**	**09 31 08.7**	**+0.1**	
	baz=1.9							
Y52A	**Lilburn**	75.46	303	IAmb	IAmb	09 31 20.0		
	comp=Z,36nm,0.8s							
YAH	**Yahtse**	75.46	350	IAmb	IAmb	09 31 20.6		
	comp=Z,45nm,0.9s							
L15K	**Ungalak Mounta**	75.47	360	P	**P**	**09 31 09.0**	**+0.1**	
	baz=0.4							
X51A	**Calhoun**	75.47	304	IAmb	IAmb	09 31 20.0		
	comp=Z,28nm,0.8s							
PINM	**Pinnacle**	75.52	349	P	**P**	**09 31 09.6**	**+0.3**	
	baz=16							
PLBC	**Pleasant Camp**	75.53	347	P	**P**	**09 31 09.5**	**+0.2**	
	baz=19							
M18K	**Stony River**	75.53	357	P	**P**	**09 31 09.6**	**+0.3**	
	baz=4.7							
GLI	**Glacier Island**	75.56	353	P	**P**	**09 31 09.4**	**0.0**	
	baz=11							
ECSD	**EROS Data Cent**	75.58	317	IAmb	IAmb	09 31 11.7		
	comp=Z,27nm,0.8s							
RC01	**Rabbit Creek A**	75.58	354	P	**P**	**09 31 09.6**	**+0.1**	
	baz=9.2,SNR=9.0							
P29M	**Windy Craggy**	75.59	348	P	**P**	**09 31 09.9**	**+0.2**	
	baz=18							
N20K	**Mount Spurr**	75.64	355	P	**P**	**09 31 10.0**	**-0.1**	
	baz=7.4							
SPCR	**Spurr Chakacha**	75.64	355	P	**P**	**09 31 09.8**	**-0.2**	
	baz=7.4							
MESA	**MESA**	75.67	350	P	**P**	**09 31 09.5**	**-0.8**	
	baz=15							
M17K	**Holitna River**	75.68	358	IAmb	IAmb	09 31 12.5		
	comp=Z,32nm,0.8s							
M17K	**Holitna River**	75.68	358	P	**P**	**09 31 09.2**	**-0.9**	
	baz=3.5							
PWL	**Port Wells**	75.69	353	P	**P**	**09 31 09.5**	**-0.7**	
	baz=10							
154A	**Montrose**	75.70	301	IAmb	IAmb	09 31 21.6		
	comp=Z,36nm,1.0s							
EYAK	**Cordova Ski Ar**	75.75	352	P	**P**	**09 31 10.1**	**-0.4**	
	baz=12							
L14K	**Kuk Creek**	75.80	0	P	**P**	**09 31 09.9**	**-0.9**	
	baz=360							
PNL	**Peninsula**	75.81	348	P	**P**	**09 31 10.1**	**-0.8**	
	baz=17							
V48A	**Smith Brothers**	75.85	306	IAmb	IAmb	09 31 21.9		
	comp=Z,34nm,0.9s							
BGLC	**Bering Glacier**	75.89	350	P	**P**	**09 31 11.5**	**+0.2**	
	baz=14							
SIUC	**Southern Illin**	75.89	309	IAmb	IAmb	09 31 21.9		
	comp=Z,32nm,0.9s							
NJ2	**Nanjing**	75.90	59	*e*P	**P**	**09 31 13.0**	**+1.1**	
NJ2				pmax	pmax			
	comp=Z,14nm,0.6s							
S44A	**Carbondale**	75.92	309	IAmb	IAmb	09 31 22.1		
	comp=Z,33nm,1.0s							
N38A	**Joes South For**	75.95	313	IAmb	IAmb	09 31 12.9		
	comp=Z,26nm,0.7s							
S34M	**Telegraph Cree**	76.00	344	IAmb	IAmb	09 31 24.7		
	comp=Z,47nm,1.1s							
S34M	**Telegraph Cree**	76.00	344	P	**P**	**09 31 12.3**	**+0.2**	
	baz=23,SNR=6.5							
M16K	**Timber Creek**	76.09	358	P	**P**	**09 31 12.1**	**-0.4**	
	baz=2.3							
BESE	**Bessie Mountai**	76.10	346	IAmb	IAmb	09 31 15.1		
	comp=Z,26nm,0.8s							
N19K	**Bonanza Creek**	76.15	356	P	**P**	**09 31 12.5**	**-0.5**	
	baz=5.7							
O22K	**Cooper Landing**	76.18	354	P	**P**	**09 31 12.3**	**-0.6**	
	baz=9.2							
WVT	**Waverly**	76.18	307	P	**P**	**09 31 12.7**	**-0.7**	
WVT				IAmb	IAmb	09 31 23.2		
	comp=Z,31nm,0.9s							
WVT	**Waverly**	76.18	307	P	**P**	**09 31 12.7**	**-0.7**	
WVT				pmax	pmax			
	comp=Z,31nm,0.9s							
SLKM	**Skilak Lake**	76.19	354	IAmb	IAmb	09 31 14.2		
	comp=Z,21nm,1.0s							
P40A	**Paris**	76.20	312	IAmb	IAmb	09 31 23.8		
	comp=Z,24nm,0.9s							
KAIM	**Kayak Island**	76.21	351	P	**P**	**09 31 12.9**	**-0.2**	
	baz=13							
R32K	**Eaglecrest**	76.33	345	IAmb	IAmb	09 31 25.8		
	comp=Z,27nm,1.0s							
R32K	**Eaglecrest**	76.33	345	P	**P**	**09 31 13.9**	**+0.1**	
	baz=20							
N18K	**Kilae Creek**	76.35	357	P	**P**	**09 31 14.1**	**+0.1**	
	baz=4.6							
FVM	**French Village**	76.39	310	IAmb	IAmb	09 31 24.9		
	comp=Z,27nm,0.8s							
M14K	**Bethel**	76.39	360	P	**P**	**09 31 14.1**	**-0.1**	
	baz=0.1							
R31K	**City Hall, Gus**	76.41	346	P	**P**	**09 31 13.8**	**-0.5**	
	baz=19							
CGM3	**Cape Girardeau**	76.43	309	IAmb	IAmb	09 31 24.9		
	comp=Z,38nm,1.1s							
M15K	**Kasigluk River**	76.45	359	P	**P**	**09 31 14.3**	**-0.2**	
	baz=1.0							
RED	**Redoubt Volcan**	76.45	355	IAmb	IAmb	09 31 24.9		
	comp=Z,24nm,1.0s							
P23K	**Montague Islan**	76.45	353	P	**P**	**09 31 14.3**	**-0.2**	
	baz=11							
SEW	**Seward**	76.53	354	P	**P**	**09 31 15.1**	**+0.2**	
	baz=9.4							
N17K	**Nushagak Hills**	76.55	358	P	**P**	**09 31 15.3**	**+0.3**	
	baz=3.6							
N16K	**Nishlik Lake**	76.64	358	P	**P**	**09 31 15.5**	**-0.1**	
	baz=2.5							
152A	**Waverly Hall**	76.67	302	IAmb	IAmb	09 31 27.0		
	comp=Z,27nm,0.9s							
T35M	**Bob Quinn**	76.68	343	P	**P**	**09 31 16.0**	**+0.1**	
	baz=23,SNR=5.1							
M11K	**Mekoryuk**	76.70	2	P	**P**	**09 31 15.8**	**-0.1**	
	baz=357							
M13K	**Dall Lake**	76.73	1	P	**P**	**09 31 16.1**	**0.0**	
	baz=359							
O19K	**Port Alsworth**	76.76	356	IAmb	IAmb	09 31 27.0		
	comp=Z,24nm,1.0s							
O19K	**Port Alsworth**	76.76	356	P	**P**	**09 31 16.6**	**+0.3**	
	baz=5.8							
SDDR	**Presa de Saban**	76.76	284	IAmb	IAmb	09 31 30.0		
	comp=Z,39nm,1.0s							
O20K	**Slope Mountain**	76.78	355	P	**P**	**09 31 16.6**	**+0.1**	
	baz=7.0							
CCM	**Cathedral Cave**	76.80	310	P	**P**	**09 31 16.4**	**-0.5**	
CCM				IAmb	IAmb	09 31 18.3		
	comp=Z,28nm,0.8s							
CCM	**Cathedral Cave**	76.80	310	P	**P**	**09 31 16.4**	**-0.5**	
CCM				pmax	pmax			
	comp=Z,29nm,0.8s							
TIGA	**Tifton**	76.80	301	IAmb	IAmb	09 31 27.8		
	comp=Z,38nm,0.9s							
Y49A	**Blount Mountai**	76.89	304	IAmb	IAmb	09 31 28.2		
	comp=Z,26nm,0.9s							
Q23K	**Middleton Isla**	76.91	352	P	**P**	**09 31 15.8**	**-1.3**	
	baz=12							
S31K	**Pelican**	76.93	346	P	**P**	**09 31 16.3**	**-0.9**	
	baz=19							
N15K	**Kwethluk River**	76.97	359	P	**P**	**09 31 16.5**	**-1.0**	
	baz=1.5							
BRLK	**Bradley Lake**	76.98	354	IAmb	IAmb	09 31 25.8		
	comp=Z,21nm,0.8s							
BRSE	**Bradley Lake S**	76.99	354	P	**P**	**09 31 16.6**	**-1.0**	
	baz=8.4							
S32K	**Killisnoo**	77.09	345	P	**P**	**09 31 17.7**	**-0.5**	
	baz=20							
HOM	**Homer**	77.14	355	P	**P**	**09 31 18.0**	**-0.4**	
	baz=7.8							
O18K	**Koktuh Hills**	77.14	356	IAmb	IAmb	09 31 29.9		
	comp=Z,56nm,1.2s							
O18K	**Koktuh Hills**	77.14	356	P	**P**	**09 31 18.0**	**-0.5**	
	baz=5.1							
N35A	**Tabor**	77.17	315	IAmb	IAmb	09 31 21.8		
	comp=Z,31nm,1.0s							
R40A	**Maddies Statio**	77.20	311	IAmb	IAmb	09 31 20.5		
	comp=Z,20nm,0.8s							
N14K	**Kuskokwak Cree**	77.23	360	P	**P**	**09 31 18.3**	**-0.5**	
	baz=0.3							
PBMO	**Poplar Bluff**	77.23	309	IAmb	IAmb	09 31 29.8		
	comp=Z,24nm,0.9s							
P19K	**Oil Pt**	77.24	355	P	**P**	**09 31 18.3**	**-0.8**	
	baz=6.6							
O17K	**Koliganek Bris**	77.30	357	P	**P**	**09 31 18.7**	**-0.6**	
	baz=3.7							
O16K	**Kokwok River B**	77.51	358	IAmb	IAmb	09 31 28.8		
	comp=Z,19nm,0.8s							
O16K	**Kokwok River B**	77.51	358	P	**P**	**09 31 20.0**	**-0.5**	
	baz=3.0							
KSAR	**Wonju Array Be**	77.57	50	P	**P**	**09 31 21.1**	**-0.1**	
KSAR	**Wonju Array Be**	77.57	50	P	**P**	**09 31 21.1**	**-0.1**	
KSRS	**Korea Array**	77.58	50	P	**P**	**09 31 20.9**	**-0.4**	
	comp=Z,5.3nm,0.7s,baz=317,slow=5.0,SNR=18							
	comp=Z,5.3nm,0.7s							
P18K	**Big Mountain,**	77.61	356	P	**P**	**09 31 20.5**	**-0.6**	
	baz=5.1							
352A	**Blakely**	77.61	302	IAmb	IAmb	09 31 32.5		
	comp=Z,28nm,0.9s							
U35K	**Hyder**	77.61	342	P	**P**	**09 31 20.9**	**-0.2**	
	baz=23							
SIT	**Sitka**	77.62	345	P	**P**	**09 31 20.8**	**-0.3**	
	baz=20							
WRAK	**Wrangell Islan**	77.64	344	IAmb	IAmb	09 31 33.1		
	comp=Z,45nm,1.1s							
WRAK	**Wrangell Islan**	77.64	344	P	**P**	**09 31 20.7**	**-0.6**	
	baz=22							
YSS	**Yuzhno-Sakhali**	77.78	35	P	**P**	**09 31 22.2**	**0.0**	
YSS	**Yuzhno-Sakhali**	77.78	35	*e*P	**P**	**09 31 22.2**	**0.0**	
YSS				pmax	pmax			
	comp=Z,60nm,0.9s							
YSS				pmax	pmax			
	comp=Z,400nm,3.4s							
YSS				MLR	MLR			
	comp=Z,2µm,15.0s							
YSS				MLR	MLR			
	comp=N,1µm,14.0s							
YSS				MLR	MLR			
	comp=E,1µm,15.0s							
P17K	**Kvichak River**	77.85	357	P	**P**	**09 31 21.7**	**-0.7**	
	baz=4.2							
O14K	**Tigyukauivet M**	77.90	360	P	**P**	**09 31 21.9**	**-0.8**	
	baz=0.6							
O15K	**Ungalikthiuk R**	77.96	359	P	**P**	**09 31 22.1**	**-0.9**	
	baz=1.6							
PETK	**Petropavlovsk-**	77.98	24	P	**P**	**09 31 24.2**	**+1.0**	
	comp=E,13nm,0.9s,baz=348,slow=2.1,SNR=7.0							
PETK				LR	LR	10 10 28.1		
	comp=E,2µm,18.3s,baz=325,slow=39							
	comp=E,13nm,0.9s							
Q19K	**Cape Douglas,**	77.99	356	P	**P**	**09 31 22.6**	**-0.7**	
	baz=6.2							
MGMO	**Mountain Grove**	78.01	310	IAmb	IAmb	09 31 40.4		
	comp=Z,22nm,1.1s							
P16K	**Nushagak River**	78.07	358	P	**P**	**09 31 23.1**	**-0.5**	
	baz=3.0							
U33K	**Whale Pass**	78.08	344	P	**P**	**09 31 23.1**	**-0.6**	
	baz=21							
LCAR	**Lake Charles**	78.15	309	IAmb	IAmb	09 31 35.1		
	comp=Z,23nm,1.0s							
Q20K	**Shuyak Island**	78.23	355	P	**P**	**09 31 24.1**	**-0.4**	
	baz=7.2							
Q18K	**Katmai Hardscr**	78.34	356	P	**P**	**09 31 24.7**	**-0.6**	
	baz=5.2							
Z47A	**Carrollton**	78.35	305	IAmb	IAmb	09 31 35.5		
	comp=Z,27nm,0.9s							
Q16K	**King Salmon**	78.38	357	P	**P**	**09 31 25.2**	**-0.1**	
	baz=4.0							
V35K	**Ketchikan**	78.50	343	P	**P**	**09 31 25.7**	**-0.3**	
	baz=22							
QIZ	**Qiongzhong**	78.52	75	P	**P**	**09 31 27.0**	**+0.2**	
QIZ				S	**S**	**09 41 23.8**	**+1.8**	
QIZ				LR	LR			
	comp=Z,530nm,15.7s							
QIZ				LR	LR			
	comp=Z,750nm,13.9s							
QIZ				LR	LR			
	comp=Z,600nm,13.7s							
MLSI	**Meulaboh, Aceh**	78.63	95	P	**P**	**09 31 26.9**	**-0.5**	
CRAG	**Craig**	78.69	344	P	**P**	**09 31 26.8**	**-0.2**	
	baz=21							
Q17K	**Contact Creek**	78.76

LLLB	**Lillooet** comp=Z,47nm,1.4s	**80.24**	**335**	IAmb	IAmb	09 31 48.0
RLO	**Rose Lookout** comp=Z,39nm,1.0s	**80.25**	**311**	IAmb	IAmb	09 31 46.6
P08K	**Saint George I** baz=354	**80.35**	**4**	P	**P**	**09 31 35.2 -0.9**
SII	**Sitkinak Islan** baz=5.8	**80.38**	**356**	P	**P**	**09 31 35.2 -1.1**
R32A	**Long Quarter,** comp=Z,31nm,0.8s	**80.56**	**315**	IAmb	IAmb	09 31 39.2
BBB	**Bella Bella** comp=Z,304nm,21.2s,baz=30,slow=36	**80.57**	**340**	LR	LR	10 07 39.2
MIAR	**Mount Ida** comp=Z,40nm,0.9s	**80.62**	**309**	IAmb	IAmb	09 31 49.3
YNE	**Yellowstone No** comp=Z,34nm,0.8s	**80.71**	**326**	IAmb	IAmb	09 31 40.9
NEW	**Newport** comp=Z,423nm,18.6s,baz=30,slow=37	**80.72**	**331**	LR	LR	10 09 01.7
CBKS	**Cedar Bluff** comp=Z,37nm,0.8s	**80.80**	**316**	IAmb	IAmb	09 31 49.5
WLAR	**White Oak Lake** comp=Z,37nm,1.0s	**80.97**	**308**	IAmb	IAmb	09 31 51.2
YMP	**Mirror Lake Pl** comp=Z,33nm,0.9s	**80.99**	**325**	IAmb	IAmb	09 31 52.8
KAN01	**Argonia South** comp=Z,41nm,1.0s	**81.01**	**313**	IAmb	IAmb	09 31 51.2
K22A	**Casper** comp=Z,31nm,0.8s	**81.10**	**322**	IAmb	IAmb	09 31 42.1
RUSJ	**Misakicho**	**81.11**	**35**	P	P	09 31 48.1 +7.7
CHIR	**Chirikof Islan** baz=4.7	**81.19**	**356**	P	**P**	**09 31 39.7 -1.0**
ITTB	**Itaituba**	**81.23**	**256**	*e*P	**P**	**09 31 42.9 +1.4**
LKWY	**Lake** comp=Z,35nm,0.9s	**81.24**	**325**	IAmb	IAmb	09 31 45.9
JANB	**Januaria**	**81.26**	**240**	*e*P	**P**	**09 31 42.9 +1.3**
YHL	**Hebgen Lake** comp=Z,26nm,0.9s	**81.33**	**326**	IAmb	IAmb	09 31 45.5
YUK	**Yuzh-Kuril'sk** YUK comp=Z,45nm,0.2s	**81.43**	**35**	P pmax	P pmax	09 31 48.1 +6.0
S12K	**Black Hills** baz=360	**81.46**	**0**	P	**P**	**09 31 41.4 -0.7**
PSI	**Prapat** comp=Z,240nm,21.7s,baz=309,slow=38	**81.46**	**94**	LR	LR	10 11 39.9
DLMT	**Dillon** comp=Z,36nm,1.1s	**81.47**	**327**	IAmb	IAmb	09 31 54.0
C09A	**Chrisman Ranch** comp=Z,46nm,1.0s	**81.52**	**332**	IAmb	IAmb	09 31 53.6
CROK	**Carrier** comp=Z,31nm,1.0s	**81.61**	**313**	IAmb	IAmb	09 31 46.0
YPP	**Pitchstone Pla** comp=Z,25nm,1.1s	**81.64**	**326**	IAmb	IAmb	09 31 56.8
CBB	**Campbell River** comp=Z,24nm,1.1s	**81.78**	**337**	IAmb	IAmb	09 31 56.5
SDPT	**Sand Point** baz=1.1	**81.81**	**359**	P	**P**	**09 31 43.4 -0.5**
OK029	**Liberty Lake** comp=Z,31nm,0.9s	**81.86**	**312**	IAmb	IAmb	09 31 46.8
NMR	**Nemuro--Hokkai**	**81.91**	**36**	*e*P	P	09 31 38.3 -6.4
LOHW	**Long Hollow** comp=Z,40nm,1.8s	**82.10**	**325**	IAmb	IAmb	09 31 58.1
SJMB	**Sao Joao De Ma**	**82.10**	**235**	*e*P	**P**	**09 31 48.7 +2.8**
SHEM	**Shemya Is, Ala** comp=Z,353nm,20.3s,baz=286,slow=39	**82.24**	**14**	LR	LR	10 12 49.8
SNOW	**Snow King Moun** comp=Z,30nm,1.4s	**82.28**	**325**	IAmb	IAmb	09 31 59.6
CHNA	**Chernabura Isl** baz=1.8	**82.31**	**359**	P	**P**	**09 31 46.1 -0.4**
PDAR	**Pinedale Array** comp=Z,11nm,0.8s,baz=60,slow=3.9,SNR=79	**82.34**	**324**	P	**P**	**09 31 47.0 -0.3**
PDAR	comp=Z,375nm,21.3s,baz=22,slow=35			LR	LR	10 07 29.0
Z38A	**Mt. Pleasant** comp=Z,39nm,0.9s	**82.36**	**309**	IAmb	IAmb	09 31 58.9
JNU	**Nakatsue** comp=Z,794nm,18.2s,baz=316,slow=38	**82.38**	**51**	LR	LR	10 11 43.1
PGC	**Sidney** comp=Z,23nm,0.9s	**82.45**	**335**	IAmb	IAmb	09 31 57.7
ELIS	**Ellis County** comp=Z,24nm,0.8s	**82.71**	**314**	IAmb	IAmb	09 32 00.6
F10A	**Beach Ranch, E** comp=Z,13nm,0.7s	**82.71**	**330**	IAmb	IAmb	09 31 58.0
NPGB	**Novo Progresso**	**82.85**	**253**	*e*P	**P**	**09 31 52.4 +2.5**
WAH2	**Wahluke Slope** comp=Z,38nm,1.3s	**82.86**	**332**	IAmb	IAmb	09 32 01.6
ISCO	**Idaho Springs** comp=Z,21nm,0.9s	**82.93**	**320**	IAmb	IAmb	09 32 00.4
SDV	**Santo Domingo** comp=Z,194nm,20.6s,baz=51,slow=33	**83.01**	**276**	LR	LR	10 04 53.5
SDV	**Santo Domingo**	**83.01**	**276**	P	**P**	**09 31 50.8 -0.3**
SDV	**Santo Domingo**	**83.01**	**276**	*e*P	**P**	**09 31 52.1 +1.1**
HAYD	**Hayden** comp=Z,18nm,0.8s	**83.13**	**321**	IAmb	IAmb	09 32 04.0
HAWA	**Hanford** comp=Z,30nm,1.1s	**83.17**	**332**	IAmb	IAmb	09 32 03.2
LNOR	**Lincton Mounta** comp=Z,30nm,1.7s	**83.18**	**331**	IAmb	IAmb	09 32 01.6
YPT	**Yellepit** comp=Z,35nm,1.2s	**83.27**	**331**	IAmb	IAmb	09 32 02.8
NATX	**Nacogdoches** comp=Z,21nm,0.8s	**83.27**	**308**	IAmb	IAmb	09 31 55.4
WMOK	**Wichita Mounta** comp=Z,16nm,0.9s	**83.37**	**312**	IAmb	IAmb	09 31 54.8
SNDB	**Serra Nova Dou**	**83.56**	**247**	*e*P	**P**	**09 31 55.8 +2.3**
MJAR	**Matsushiro Arr** comp=Z,979nm,19.0s,baz=339,slow=38	**83.78**	**44**	LR	LR	10 12 38.4
SMWD	**Samnorwood** comp=Z,26nm,1.2s	**83.87**	**313**	IAmb	IAmb	09 32 03.9
O20A	**White River Ci** comp=Z,20nm,0.9s	**83.89**	**322**	IAmb	IAmb	09 32 07.0
WTFS	**Witchita Falls** comp=Z,20nm,0.9s	**83.92**	**311**	IAmb	IAmb	09 31 58.4
MACA	**Manacapuru-AM**	**83.93**	**260**	*e*P	**P**	**09 31 57.6 +2.0**
NIKH	**Nikolski High** baz=355	**84.01**	**4**	P	**P**	**09 31 55.0 -0.4**
FW06	**Azle** comp=Z,16nm,0.8s	**84.02**	**310**	IAmb	IAmb	09 32 07.1
BDFB	**Brasilia** comp=Z,4.4nm,0.7s	**84.07**	**242**	P	**P**	**09 31 57.6 +1.4**
BDFB	comp=Z,242nm,19.4s,baz=128,slow=36			LR	LR	10 09 29.9
RTBA	**Rita Blanca** comp=Z,31nm,1.1s	**84.15**	**316**	IAmb	IAmb	09 32 05.4
HWUT	**Hardware Ranch** comp=Z,22nm,0.8s	**84.15**	**324**	IAmb	IAmb	09 32 08.8
T25A	**Trinidad** comp=Z,27nm,1.1s	**84.44**	**317**	IAmb	IAmb	09 32 13.3
TCUT	**Toone Canyon** comp=Z,36nm,1.4s	**84.48**	**324**	IAmb	IAmb	09 32 10.4
HVU	**Hansel Valley** comp=Z,16nm,1.0s	**84.51**	**325**	IAmb	IAmb	09 32 10.2
PLPT	**Palo Pinto** comp=Z,28nm,0.8s	**84.56**	**311**	IAmb	IAmb	09 32 09.9
WHTX	**Lake Whitney,** comp=Z,38nm,1.6s	**84.69**	**310**	IAmb	IAmb	09 32 10.6
CTU	**Camp Tracy** comp=Z,21nm,1.4s	**84.98**	**324**	IAmb	IAmb	09 32 12.1
I07A	**Izee** comp=Z,56nm,1.8s	**85.16**	**331**	IAmb	IAmb	09 32 14.3
HKT	**Hockley** HKT comp=Z,16nm,0.9s	**85.28**	**307**	*i* P pmax	**P** pmax	**09 32 03.1 +1.0**
BGU	**Big Grassy Mou** comp=Z,26nm,1.5s	**85.33**	**325**	IAmb	IAmb	09 32 11.4
DKNS	**Dickens** comp=Z,32nm,1.7s	**85.33**	**313**	IAmb	IAmb	09 32 14.1
JOW	**Kunigami** comp=Z,453nm,18.6s,baz=306,slow=40	**85.41**	**57**	LR	LR	10 16 22.5
ABTX	**Abilene, Hawle** comp=Z,29nm,1.0s	**85.43**	**311**	IAmb	IAmb	09 32 14.4
H04A	**Detroit Lake** comp=Z,14nm,0.8s	**85.56**	**333**	IAmb	IAmb	09 32 13.6
PV04	**Paradox Valley** comp=Z,21nm,1.3s	**85.59**	**321**	IAmb	IAmb	09 32 18.7
PV23	**Carpenter Ridg** comp=Z,20nm,0.8s	**85.59**	**321**	IAmb	IAmb	09 32 17.3
PV12	**Saucer Basin,** comp=Z,32nm,1.2s	**85.61**	**321**	IAmb	IAmb	09 32 49.3
PV11	**David Mesa, Pa** comp=Z,14nm,0.9s	**85.66**	**321**	IAmb	IAmb	09 33 00.7
PV02	**Paradox Valley** comp=Z,33nm,1.4s	**85.67**	**321**	IAmb	IAmb	09 32 17.8
435B	**Jarrell** comp=Z,30nm,0.9s	**85.67**	**309**	IAmb	IAmb	09 32 06.7
PV10	**Paradox Valley** comp=Z,18nm,0.9s	**85.67**	**321**	IAmb	IAmb	09 32 09.2
PV18	**Skein Mesa, Pa** comp=Z,21nm,1.1s	**85.71**	**321**	IAmb	IAmb	09 32 14.5
CLDB	**Colider**	**85.85**	**251**	*e*P	**P**	**09 32 06.3 +1.2**
PINE	**Pine Mountain** comp=Z,24nm,1.2s	**85.92**	**332**	IAmb	IAmb	09 32 19.1
J05D	**Fort Rock, OR** comp=Z,20nm,0.9s	**86.47**	**331**	IAmb	IAmb	09 32 21.1
EF04	**Eagle Ford 04** comp=Z,24nm,0.9s	**86.96**	**308**	IAmb	IAmb	09 32 22.4
PDRB	**Porto dos Gac**	**87.02**	**251**	*e*P	**P**	**09 32 11.8 +0.9**
TEFE	**Tefe**	**87.03**	**262**	*e*P	**P**	**09 32 11.7 +0.7**
ANMO	**Albuquerque**	**87.19**	**317**	P	**P**	**09 32 11.8 0.0**
ANMO ANMO	**Albuquerque** comp=Z,15nm,2.5s	**87.19**	**317**	*i* P pmax	**P** pmax	**09 32 10.6 -1.2**
TASM	**ASL Pad, Albuq** comp=Z,4.7nm,0.9s	**87.19**	**317**	IAmb	IAmb	09 32 14.2
JHJ	**Hachijo jima 2** comp=Z,600nm,18.6s,baz=349,slow=38	**87.25**	**46**	LR	LR	10 15 18.2
BBOR	**Butler Butte** comp=Z,15nm,0.9s	**87.32**	**332**	IAmb	IAmb	09 32 22.3
SPR3	**Spring Creek 3** comp=Z,11nm,0.8s	**87.49**	**325**	IAmb	IAmb	09 32 15.8
HNDO	**Hondo** comp=Z,26nm,1.3s	**87.58**	**309**	IAmb	IAmb	09 32 25.4
PSUT	**Pine Spring** comp=Z,18nm,0.9s	**87.68**	**324**	IAmb	IAmb	09 32 16.9
YBH	**Yreka Blue Hor** comp=Z,27nm,19.7s,baz=41,slow=38	**88.35**	**332**	LR	LR	10 14 42.5
DRIO	**Del Rio** comp=Z,15nm,0.8s	**88.41**	**310**	IAmb	IAmb	09 32 19.4
ROSC	**El Rosal** comp=Z,564nm,20.6s,baz=56,slow=34	**88.42**	**275**	LR	LR	10 09 14.3
M03C	**McCloud** comp=Z,28nm,1.1s	**88.55**	**331**	IAmb	IAmb	09 32 30.2
833A	**Chaparral WMA,** comp=Z,24nm,1.1s	**88.55**	**308**	IAmb	IAmb	09 32 29.7
PECS	**Pecos** comp=Z,16nm,1.0s	**88.68**	**313**	IAmb	IAmb	09 32 28.4
HATC	**Hat Creek Radi** comp=Z,20nm,0.8s	**88.72**	**330**	IAmb	IAmb	09 32 23.1
PAHR	**Pah Rah Range** comp=Z,12nm,0.9s	**88.92**	**329**	IAmb	IAmb	09 32 22.7
WUAZ	**Wupatki** comp=Z,15nm,0.9s	**89.08**	**321**	IAmb	IAmb	09 32 33.1
HBVL	**Hebbronville** comp=Z,18nm,1.0s	**89.08**	**307**	IAmb	IAmb	09 32 25.0
PRN	**Paloc Range** comp=Z,18nm,1.0s	**89.13**	**324**	IAmb	IAmb	09 32 32.4
MNTX	**Cornudas Mount** comp=Z,12nm,0.8s	**89.22**	**315**	IAmb	IAmb	09 32 22.6
ALPN	**Alpine** comp=Z,13nm,0.8s	**89.33**	**313**	IAmb	IAmb	09 32 23.8
KHBM	**Hayfork Bally** comp=Z,21nm,1.1s	**89.48**	**332**	IAmb	IAmb	09 32 34.4
NVAR	**Mina Array Bea** comp=Z,3.8nm,0.7s,baz=43,slow=4.5,SNR=24	**89.60**	**327**	P	**P**	**09 32 23.3 +0.1**
NVAR	comp=Z,778nm,20.8s,baz=30,slow=35			LR	LR	10 12 06.2
TGY	**Tagaytay City** comp=Z,3.8nm,0.7s	**89.62**	**71**	LR	LR	10 16 31.1
EPT	**El Paso** comp=Z,176nm,20.0s,baz=22,slow=38	**89.74**	**315**	IAmb	IAmb	09 32 26.2
SIUN	**Universidad Ur** comp=Z,14nm,0.9s	**89.80**	**289**	IAmb	IAmb	09 32 34.8
LHV	**Little Huntoon** comp=Z,19nm,1.2s	**89.83**	**327**	IAmb	IAmb	09 32 36.9
PP1B	**Ponte de Pedra** comp=Z,20nm,1.2s	**90.00**	**246**	*e*P	**P**	**09 32 26.7 +1.8**
TX31	**Lajitas Ar. Si** comp=Z,22nm,1.1s	**90.16**	**312**	IAmb	IAmb	09 32 38.7
TXAR	**Lajitas Array** comp=Z,13nm,0.8s,baz=63,slow=4.2,SNR=93	**90.16**	**312**	P	**P**	**09 32 26.2 +0.4**
TXAR	comp=Z,404nm,19.8s,baz=43,slow=36			LR	LR	10 12 40.9
MDSI	**Maura Dua** comp=Z,21nm,0.8s	**90.24**	**96**	P	**P**	**09 32 25.2 -1.0**
VILB	**Vilhena**	**90.36**	**253**	*e*P	**P**	**09 32 29.7 +3.0**
DSP	**Deep Springs** comp=Z,18nm,1.1s	**90.38**	**326**	IAmb	IAmb	09 32 39.5
GRAC	**Grapevine Rang** comp=Z,24nm,1.2s	**90.45**	**326**	IAmb	IAmb	09 32 40.3
V12A	**Nelson** comp=Z,13nm,0.9s	**90.47**	**323**	IAmb	IAmb	09 32 29.6
FRTB	**Fartura**	**90.72**	**238**	*e*P	**P**	**09 32 29.5 +1.3**
GWY	**Greenwater Val** comp=Z,25nm,1.2s	**90.85**	**325**	IAmb	IAmb	09 32 41.8
PTLB	**Pontes e Lacer** comp=Z,10nm,0.9s	**91.36**	**250**	IAmb	IAmb	09 32 50.0
PTLB	**Pontes e Lacer**	**91.36**	**250**	*e*P	**P**	**09 32 31.8 +0.5**
TUC	**Tucson**	**91.44**	**319**	P	**P**	**09 32 31.7 0.0**
TUC TUC	**Tucson** comp=Z,9.0nm,1.1s	**91.44**	**319**	P pmax	**P** pmax	**09 32 31.7 0.0**
DANC	**Danby, Needles** comp=Z,16nm,1.1s	**91.61**	**323**	IAmb	IAmb	09 32 45.5
JTS	**Las Juntas de** comp=Z,222nm,21.0s,baz=44,slow=32	**92.31**	**286**	LR	LR	10 08 32.3
PFO	**Pinyon Flats O** comp=Z,532nm,18.4s,baz=26,slow=36	**92.96**	**323**	LR	LR	10 15 16.9
SIV	**San Ignacio** comp=Z,1.6nm,0.6s,baz=67,slow=6.9,SNR=12	**93.08**	**251**	P	**P**	**09 32 39.4 +0.1**
SIV	comp=Z,244nm,18.1s,baz=111,slow=36			LR	LR	10 14 25.5
JCJ	**Chichijima** comp=Z,213nm,18.4s,baz=26,slow=37	**93.27**	**48**	LR	LR	10 17 34.7
CMIG	**Matias Romero** comp=Z,182nm,21.9s,baz=47,slow=33	**94.18**	**298**	LR	LR	10 11 06.6
CNJI	**Cibinong**	**94.30**	**96**	P	**P**	**09 32 42.8 -2.1**
OTAV	**Otavalo**	**94.56**	**275**	*e*P	**P**	**09 32 47.6 +0.8**
CPUP	**Villa Florida** comp=Z,198nm,18.7s,baz=269,slow=36	**97.76**	**241**	LR	LR	10 17 57.6
DAV	**Davao City (W)** comp=Z,349nm,21.1s,baz=338,slow=39	**97.79**	**73**	LR	LR	10 23 07.6
LPIG	**La Paz** comp=Z,360nm,20.2s,baz=32,slow=36	**97.89**	**314**	LR	LR	10 17 49.8
LPAZ	**La Paso**	**98.22**	**255**	*e*P	**P**	**09 33 03.0 -0.4**
ATAH	**Atahualpa** comp=Z,183nm,20.2s,baz=32,slow=35	**99.51**	**269**	LR	LR	10 17 30.2
NVL	**N'lazarevskaya**	**113.75**	**182**	*i* PKIKP	**PKiKP**	**09 37 58.7 -3.7**
NVL				*e*SS	SS	09 54 41.2 -1.8
NVL				*e*SSS	SSS	09 58 54.7
NVL	comp=Z,11nm,0.8s			pmax	pmax	
NVL	comp=Z,776nm,24.0s			MLR	MLR	
WRA	**Warramunga Arr** comp=Z,2.1nm,0.6s,baz=316,slow=2.0,SNR=16	**122.43**	**88**	PKP	**PKiKP**	**09 38 21.1 +0.2**
WRA	**Warramunga Arr**	**122.43**	**88**		**PKPdf**	**09 38 19.7 -1.0**
WRAB	**Tennant Creek**	**122.44**	**87**		**PKiKP**	**09 38 21.7 +0.8**
WRAB	**Tennant Creek**	**122.44**	**87**	PKIKP	**PKiKP**	**09 38 21.7 +0.8**
ASAR	**Alice Springs** comp=Z,3.3nm,0.8s,baz=329,slow=1.6,SNR=30	**122.40**	**91**	PKP	**PKPdf**	**09 38 23.1 -1.3**
ASAR	**Alice Springs**	**122.40**	**91**		**PKPdf**	**09 38 23.4 -1.0**
ASAR	**Alice Springs**	**122.40**	**91**	PKIKP	**PKPdf**	**09 38 23.5 -1.0**
CASY	**Casey**	**129.56**	**148**	PKPdf	**PKiKP**	**09 38 34.5 +0.9**
CTAO	**Charters Tower**	**131.17**	**79**	PKPdf	**PKiKP**	**09 38 38.5 +0.2**
CTAO	**Charters Tower**	**131.17**	**79**	PKIKP	**PKiKP**	**09 38 38.5 +0.2**
QSPA	**South Pole Qui** comp=Z,0.9nm,0.7s,baz=260,slow=1.3,SNR=5.1	**133.06**	**180**	PKP	**PKPdf**	**09 38 39.5 0.0**
QSPA	**South Pole Qui**	**133.06**	**180**	PKPdf	**PKiKP**	**09 38 41.4 +0.6**
STKA	**Stephens Creek** comp=Z,1.7nm,0.6s,baz=193,slow=0.9,SNR=4.7	**134.63**	**95**	PKP	**PKPdf**	**09 38 43.4 -0.1**
VNDA	**Vanda** comp=Z,1.7nm,1.0s,baz=338,slow=7.9,SNR=3.3	**142.59**	**168**	PKP	**PKPdf**	**09 38 57.4 +0.6**

IDC ***26*** *09:29:07.1±0.7,33.10N×141.81E,h0km,mb4.2/22, mbtmp4.2/25,ML3.8/2,Error ellipse: s-maj=17.2km s-min=14.5km az=16.0*

NEIC ***26*** *09:29:08.8±1.2,33.11N±0.08×141.93E±0.10,h10km±1km, mb4.7/16,Error ellipse: s-maj=18.4km s-min=5.0km az=134.0*

NIED ***26*** *09:29:08.6,33.17N×141.89E,h12km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.27; Mθθ-0.23; Mϕϕ-2.04; Mrθ-1.56; Mθϕ0.10; Mϕr1.10; Fault plane solution: M₀2.81000×10¹⁵ NP1: ϕs191.00000°,δ32.00000°,λ128.00000°. NP2: ϕs329.00000°,δ65.00000°,λ69.00000°.*

JMA ***26*** *09:29:08.6±0.7,33°N±1'×14'2E±', h12km,MV4.1/29,E OFF HACHIJOJIMA ISLAND*

ISC 26 09:29:08.4±0.6,33°18N±0'.05×141°92E±0'.06,h10km,n86, σ1°28/90,mb4.5/30,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.67**	**332**	P	**Pb**	**09 29 38.4**	**-0.5**
BSO1				*e*S	**Sg**	**09 30 01.1**	**-0.9**
JHJ2	**Mitsune**	**1.76**	**268**	P	**Pg**	**09 29 41.6**	**-0.7**
JHJ2	**Mitsune**	**1.76**	**268**	*e*P	**Pb**	**09 29 39.8**	**-1.0**
JHCJ	**Hachijojimakas**	**1.78**	**267**	*e*P	**Pn**	**09 29 39.0**	**-0.3**
JHJ	**Hachijo jima 2** 115nm,0.3s,baz=348,slow=22,SNR=9.9	**1.79**	**269**	Pn	**Pn**	**09 29 38.2**	**-1.2**
JHJ	146nm,0.3s,baz=236,slow=23,SNR=8.8			Sn	**Sn**	**09 30 00.9**	**-1.3**
JAOM	**Aogashimamukai**	**1.95**	**249**	*e*P	**Pn**	**09 29 41.8**	**+0.2**
BSO3	**Boso 3**	**2.00**	**325**	P	**Pn**	**09 29 42.9**	**+0.9**
JMKN	**Mikurajimanish**	**2.07**	**291**	*e*P	**Pn**	**09 29 44.2**	**+1.0**
JMYK	**Miyake Tsubota**	**2.16**	**295**	*e*P	**Pn**	**09 29 45.0**	**+0.5**
JOD2	**Odawara 2**	**3.13**	**312**	P	**Pn**	**09 29 58.0**	**+0.1**
JOD2				*e*S	**Sn**	**09 30 34.1**	**-1.3**
JYN	**Shimob**	**3.62**	**311**	P	**Pn**	**09 30 05.8**	**+1.1**
JYN				*e*S	**Sn**	**09 30 48.5**	**+0.9**
JRY	**Ryogami san**	**3.77**	**320**	P	**Pn**	**09 30 07.3**	**+0.6**
JRY				*e*S	**Sn**	**09 30 51.9**	**+0.8**
JAG	**Ashikaga**	**3.82**	**329**	P	**Pn**	**09 30 08.1**	**+0.7**
JAG				*e*S	**Sn**	**09 30 52.4**	**+0.1**
JGF	**Kuroka**	**4.48**	**304**	Pn	**Pn**	**09 30 18.8**	**+2.4**
JGF	**Kuroka**	**4.48**	**304**	P	**Pn**	**09 30 18.8**	**+2.4**
MJAR	**Matsushiro Arr** 1.6nm,0.3s,baz=139,slow=12,SNR=74	**4.53**	**319**	Pn	**Pn**	**09 30 18.5**	**+1.4**
MJAR	1.0nm,0.3s,baz=124,slow=24,SNR=8.9			Sn	**Sn**	**09 31 10.4**	**+0.5**
	14nm,0.4s						
MJAR	**Matsushiro Arr**	**4.53**	**319**		**Pn**	**09 30 18.8**	**+1.6**
MAJO	**Matsushiro**	**4.54**	**319**		**Pn**	**09 30 18.9**	**+1.7**
MAJO	**Matsushiro**	**4.54**	**319**	P	**Pn**	**09 30 19.2**	**+2.0**
MAJO	**Matsushiro**	**4.54**	**319**	S	**Sn**	**09 31 11.1**	**+1.1**
MAT	**Matsushiro**	**4.54**	**319**	P	**Pn**	**09 30 18.8**	**+1.6**
MJB9	**Matsu-Tunnel**	**4.54**	**319**		**Pn**	**09 30 20.0**	**+2.7**
JOTO	**OTAMA OYAMA**	**4.56**	**344**	P	**Pn**	**09 30 18.4**	**+0.9**
JOTO				S	**Sn**	**09 31 09.1**	**-1.5**
INU	**Inuyama**	**4.60**	**299**	Pn	**Pn**	**09 30 18.4**	**+0.4**
INU	**Inuyama**	**4.60**	**299**	P	**Pn**	**09 30 20.6**	**+2.6**
JNS	**Sasagawa**	**5.09**	**336**	P	**Pn**	**09 30 26.1**	**+1.3**
JSD	**Sado**	**5.69**	**329**		**Pn**	**09 30 33.8**	**+0.8**
JSD	**Sado**	**5.69**	**329**	P	**Pn**	**09 30 33.8**	**+0.8**
JMK	**Ichinoseki**	**5.79**	**355**	P	**Pn**	**09 30 34.3**	**-0.1**
JMK				S	**Sn**	**09 31 36.9**	**-3.9**
JCJ	**Chichijima** 20nm,0.3s,baz=281,slow=23,SNR=14	**6.07**	**178**	Pn	Pn	09 30 25.8	-12
JCJ	30nm,0.3s,baz=92,slow=23,SNR=7.2			Sn	Sn	09 31 30.4	-17
JMN	**Monobe**	**6.74**	**277**	P	**Pn**	**09 30 51.0**	**+3.5**
JTM	**Tenmabayashi**	**7.62**	**355**	Pn	**Pn**	**09 30 60.0**	**+0.4**
JKA	**Kamikawa-asahi**	**10.94**	**3**	Pn	**Pn**	**09 31 46.3**	**+1.4**
ASAJ	**Asahikawa** 1.3nm,0.3s,baz=226,slow=12,SNR=6.3	**10.94**	**3**	Pn	**Pn**	**09 31 44.6**	**-0.3**
ASAJ	0.5nm,0.3s,baz=346,slow=18,SNR=5.1			Sn	**Sn**	**09 33 42.4**	**-4.9**
	3.3nm,0.3s						
USRK	**Ussuriysk Ar.** 3.2nm,0.9s,baz=133,slow=10,SNR=2.2	**13.45**	**328**	Pn	**Pn**	**09 32 18.7**	**-0.6**
HILR	**Hailar Array B** 1.9nm,0.5s,baz=131,slow=11,SNR=4.3 1.9nm,0.5s	**23.20**	**321**	P	**P**	**09 34 14.2**	**-1.2**
H11N2	**WAKE ISLAND Hy** baz=307	**25.99**	**115**	T	T	10 01 54.7	
H11N1	**WAKE ISLAND Hy** baz=307	**25.99**	**115**	T	T	10 01 59.2	
H11N3	**WAKE ISLAND Hy** baz=307	**26.00**	**115**	T	T	10 01 56.1	
ENH	**Enshi**	**27.68**	**273**		**P**	**09 34 55.0**	**-1.7**
ENH	comp=Z,34nm,1.3s			IAmb	IAmb	09 34 56.3	
SONM	**Songino Array** comp=Z,2.5nm,0.6s,baz=116,slow=8.8,SNR=8.7	**30.42**	**309**	P	**P**	**09 35 20.5**	**-0.5**
	comp=Z,2.5nm,0.6s						
MKAR	**Makanchi Array** comp=Z,4.1nm,0.8s,baz=88,slow=9.1,SNR=20	**46.60**	**305**	P	**P**	**09 37 36.8**	**+0.2**
	comp=Z,4.1nm,0.8s						
MAKZ	**Makanchi**	**46.81**	**305**		**P**	**09 37 38.5**	**+0.3**
MAKZ	comp=Z,4.4nm,0.8s			IAmb	IAmb	09 37 45.9	
MTN	**Manton Dam**	**46.91**	**194**	P	**P**	**09 37 39.0**	**-0.2**
MTN	comp=Z,7.4nm,0.8s			IAmb	IAmb	09 37 39.4	
KURK	**Kurchatov**	**48.70**	**311**		**P**	**09 37 52.8**	**0.0**
KURK	comp=Z,8.3nm,0.8s			IAmb	IAmb	09 37 53.8	
KURBB	**Kurchatov Arra** comp=Z,5.3nm,0.8s,baz=85,slow=7.4,SNR=29	**48.76**	**311**	P	**P**	**09 37 53.2**	**-0.1**
	comp=Z,5.3nm,0.8s						
KNRA	**Kununurra**	**50.18**	**197**	P	**P**	**09 38 04.1**	**-0.2**
KNRA	comp=Z,7.4nm,0.9s			IAmb	IAmb	09 38 15.2	
TARG	**Taragay, Kyrgy**	**50.56**	**299**	P	**P**	**09 38 08.9**	**+1.2**
ILAR	**Eielson Array** comp=Z,1.0nm,0.9s,baz=268,slow=6.2,SNR=7.5	**52.56**	**31**	P	**P**	**09 38 23.0**	**+1.2**
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**52.56**	**31**	P	**P**	**09 38 22.3**	**+0.6**
AAK	**Ala-Archa** comp=Z,2.1nm,0.9s,baz=74,slow=9.0,SNR=2.8	**52.76**	**301**	P	**P**	**09 38 23.7**	**-0.1**
	comp=Z,2.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.31**	**199**		**P**	**09 38 27.4**	**-0.3**
WRA	**Warramunga Arr** comp=Z,8.8nm,0.7s,baz=7.4,slow=7.4,SNR=5.4	**53.31**	**189**	P	**P**	**09 38 27.1**	**-0.7**
	comp=Z,8.8nm,0.7s						
WRA	**Warramunga Arr**	**53.31**	**189**	PKIKP	**P**	**09 38 27.1**	**-0.7**
BVAR	**Borovoye Array** comp=Z,4.6nm,0.9s,baz=81,slow=9.2,SNR=10	**53.52**	**315**	P	**P**	**09 38 28.4**	**-0.6**
	comp=Z,4.6nm,0.9s						
BMAR	**Burnt Mountain**	**53.53**	**27**	P	**P**	**09 38 30.5**	**+1.5**
BORK	**Borovoye**	**53.56**	**315**	P	**P**	**09 38 29.3**	**0.0**
KKAR	**Karatay Array**	**55.48**	**303**		**P**	**09 38 43.6**	**+0.2**
GAR	**Garm** comp=Z,8.1nm,0.8s	**56.80**	**298**	IAmb	IAmb	09 38 56.1	
ASAR	**Alice Springs** comp=Z,2.2nm,0.8s,baz=3.9,slow=7.6,SNR=13	**57.04**	**189**	P	**P**	**09 38 53.8**	**-0.9**
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**57.04**	**189**	P	**P**	**09 38 53.0**	**-1.7**
INK	**Inuvik** comp=Z,1.1nm,0.8s,baz=282,slow=7.7,SNR=5.1	**57.64**	**26**	P	**P**	**09 38 59.1**	**+0.8**
	comp=Z,1.1nm,0.8s						
ARTI	**Arti** comp=Z,4.8nm

	comp=Z,1.3nm,0.6s,baz=48,slow=4.3,SNR=6.3							
	comp=Z,1.3nm,0.6s							
AKASG	**Malin Array Be**	**77.61**	**323**	P		**P**	**09 41 05.0**	**+0.3**
ELK	**Elko**	**77.73**	**49**	P		**P**	**09 41 07.2**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=298,slow=7.2,SNR=4.3							
	comp=Z,0.6nm,0.6s							
HFS	**Hagfors**	**77.77**	**336**	P		**P**	**09 41 06.1**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=96,slow=3.0,SNR=7.3							
	comp=Z,1.8nm,0.5s							
NB2	**NORSAR Subarra**	**77.90**	**338**	P		**P**	**09 41 07.1**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=39,slow=5.9							
NOA	**NORSAR Array B**	**77.90**	**338**	P		**P**	**09 41 06.8**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=40,slow=5.7,SNR=8.0							
	comp=Z,3.1nm,0.9s							
PDAR	**Pinedale Array**	**80.08**	**45**	P		**P**	**09 41 19.9**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=318,slow=2.0,SNR=3.5							
	comp=Z,0.3nm,0.6s							
BRTR	**Keskin Array B**	**81.73**	**312**	P		**P**	**09 41 28.5**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=111,slow=3.8,SNR=11							
	comp=Z,2.8nm,0.8s							
BRTR	**Keskin Array B**	**81.73**	**312**	P		**P**	**09 41 27.9**	**+0.4**
RAYN	**Ar Rayn**	**82.52**	**293**			**P**	**09 41 31.5**	**-0.3**
RAYN				IAmb		IAmb	09 41 33.1	
	comp=Z,4.5nm,0.9s							
CLL	**Collm**	**84.64**	**331**	*i* P		**P**	**09 41 42.5**	**+0.3**
LPAZ	**La Paz**	**148.10**	**66**	PKPbc		**PKPbc**	**09 48 55.4**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=338,slow=4.1,SNR=12							

DJA 26 09:31:42.5±0.3, 9°S±3°×10°9E±°, h10km, M4.0/1Ø, mB5.0/3, mb4.3/6, MLv3.9/1Ø, Mw(mB)4.4/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPJI	**Karang Pucung**	**1.30**	**9**	P	Pb	09 32 07.0	-0.1
YOGI	**Yogyakarta**	**1.75**	**63**	P	Pn	09 32 12.6	-0.3
YOGI				S	Sn	09 32 32.9	-2.4
UGM	**Wanagama**	**1.91**	**68**	P	Pn	09 32 14.9	-0.3
CNJI	**Cibinong**	**2.06**	**310**	P	Pn	09 32 17.3	+0.1
CNJI				S	Sn	09 32 40.0	-2.9
SMRI	**Semarang**	**2.31**	**47**	P	Pn	09 32 20.7	0.0
PCJI	**Pacitan**	**2.46**	**80**	P	Pn	09 32 22.7	0.0
PCJI				S	Sn	09 32 50.3	-2.5
GRJI	**Gresik**	**4.09**	**66**	P	Pn	09 32 45.4	+0.3
JAGI	**Jajag, Banyuwa**	**5.37**	**89**	P	Pn	09 33 02.7	0.0
	0.2nm995nm22nm,0.6s						
IGBI	**Denpasar**	**6.34**	**92**	P	Pn	09 33 16.4	+0.2
	55nm,1.3s						
SRBI	**Singaraja**	**6.44**	**86**	P	Pn	09 33 17.7	+0.3
TWSI	**Taliwang, Sumb**	**8.06**	**91**	P	Pn	09 33 39.8	+0.1
	1µm19nm,1.3s						
PLAI	**Plampang**	**8.95**	**92**	P	Pn	09 33 50.7	-1.2
	22nm,1.3s						

*IDC **26** 09:31:42.3±0.4, 28.°46S×71.°27W, h0km, mb4.8/17, mbtmp4.6/20, ML4.1/4, MS3.8/10, Error ellipse: s-maj=20.7km s-min=12.6km az=75.0*
*SJA **26** 09:31:44.7±0.7, 28.°43S×71.°56W, h37km±2km, ML4.9, MW4.9*
*NEIC **26** 09:31:46.7±1.6, 28.°51S±0.°03×71.°46W±0.°06, h23km±1km, mb5.0/212, Mwww4.7/10, Mwr4.6(GUC), Mww4.7(GUC), Error ellipse: s-maj=7.2km s-min=4.1km az=81.0*
*GUC **26** 09:31:47.4±0.8, 28.°53S×71.°35W, h41km±2km, ML4.8*
*NEIC **26** 09:31:48.3, 28.°60S×71.°76W, h26km, Moment Tensor Solution. Duration: 1s2 Moment tensor: Scale 10¹⁶Nm; Mrr1.25; Mθθ0.50; Mϕϕ-1.74; Mrθ-0.14; Mθϕ-0.24; Mϕr-0.20; Fault plane solution: M₀1.59000×10¹⁶ NP1: ϕs357.22000°, δ41.61000°, λ77.29000°. NP2: ϕs194.01000°, δ49.62000°, λ101.06000°. Principal axes: T 1.2815, Plg81.0000°, Azm161.0000°; N 0.5035, Plg8.0000°, Azm7.0000°; P -1.7850, Plg4.0000°, Azm276.0000°;*
*NEIC **26** 09:31:48.3, 28.°50S×71.°42W, h26km*
*VAO **26** 09:31:52.4±0.7, 28.°26S×70.°99W, h52km±6km, mb4.3*

ISC 26 09:31:44.2±1.0, 28.°47S±0.°02×71.°59W±0.°04, h15km±6km, n303, σ1§86/252, mb5.0/106, MS3.9/6, 10C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.53**	**59**		**Pn**	**09 31 57.4**	**+0.3**
AC04				Sg	**Sn**	**09 32 04.1**	**-1.7**
AC04	**Llanos de Chal**	**0.53**	**59**	||*iP*	**Pn**	**09 31 57.2**	**0.0**
AC04				*i* S	**Sn**	**09 32 04.0**	**-1.7**
AC04				IAML		09 32 04.8	
	comp=N,344µm,0.4s						
AC04	**Llanos de Chal**	**0.53**	**59**	*e*P	**Pn**	**09 31 57.0**	**-0.2**
AC04				*e*S	**Sn**	**09 32 04.1**	**-1.7**
AC04				IAML		09 32 05.0	
	comp=Z,168µm,0.8s						
LCO	**Las Campanas**	**0.94**	**125**		**Pn**	**09 32 03.2**	**0.0**
LCO				Sg	**Sb**	**09 32 13.9**	**-0.9**
LCO	**Las Campanas**	**0.94**	**125**	*e*P	**Pb**	**09 32 02.1**	**-0.3**
LCO				*i* S	**Sb**	**09 32 13.7**	**-1.2**
LCO	**Las Campanas**	**0.94**	**125**	*e*P	**Pg**	**09 32 02.6**	**0.0**
LCO				IAML		09 32 22.7	
	comp=Z,42µm,0.9s						
AC05	**El Transito**	**1.21**	**108**		**Pb**	**09 32 06.9**	**-0.1**
AC05	**El Transito**	**1.21**	**108**	*e*P	**Pb**	**09 32 06.8**	**-0.1**
AC05				*i* S	**Sb**	**09 32 19.8**	**-2.6**
AC05				IAML		09 32 22.0	
	comp=E,20µm,0.5s						
AC05	**El Transito**	**1.21**	**108**	*e*P	**Pb**	**09 32 06.6**	**-0.3**
AC05				*e*S	**Sb**	**09 32 21.9**	**-0.5**
AC05				IAML		09 32 24.7	
	comp=Z,9µm,1.4s						
GO03	**Copiapo**	**1.48**	**54**		**Pb**	**09 32 11.3**	**-0.2**
GO03				Sn	**Sb**	**09 32 28.9**	**-1.3**
GO03	**Copiapo**	**1.48**	**54**	||*iP*	**Pb**	**09 32 11.3**	**-0.2**
GO03				*i* S	**Sb**	**09 32 28.8**	**-1.3**
GO03				IAML		09 32 29.6	
	comp=N,24µm,0.5s						
GO03	**Copiapo**	**1.48**	**54**	*e*P	**Pb**	**09 32 10.9**	**-0.6**
GO03				*e*S	**Sn**	**09 32 28.6**	**-0.9**
GO03				IAML		09 32 30.9	
	comp=Z,13µm,0.7s						
AC06	**Mina Casimiro**	**1.56**	**45**		**Pg**	**09 32 12.8**	**-1.4**
AC06	**Mina Casimiro**	**1.56**	**45**	||*iP*	**Pg**	**09 32 12.8**	**-1.4**
AC06				*e*S	**Sb**	**09 32 31.5**	**-0.8**
AC06				IAML		09 32 35.4	
	comp=E,9µm,0.5s						
GO04	**Tololo Observa**	**1.83**	**158**		**Pn**	**09 32 16.4**	**+1.1**
GO04	**Tololo Observa**	**1.83**	**158**	‖*eP*	**Pn**	**09 32 16.1**	**+0.8**
GO04				*e*S	**Sn**	**09 32 37.8**	**-0.5**
GO04	**Tololo Observa**	**1.83**	**158**	*e*P	**Pn**	**09 32 16.4**	**+1.1**
GO04				IAML		09 32 45.1	
	comp=Z,25µm,0.6s						
CO01	**Juntas del Tor**	**1.99**	**139**		**Pb**	**09 32 19.0**	**-1.3**
CO01	**Juntas del Tor**	**1.99**	**139**	*i* P	**Pb**	**09 32 18.9**	**-1.3**
CO01				*e*S	**Sn**	**09 32 41.6**	**-0.6**
CO01				IAML		09 32 43.8	
	comp=N,13µm,0.6s						
CO01	**Juntas del Tor**	**1.99**	**139**	*e*P	**Pn**	**09 32 18.6**	**+1.1**
CO01				*e*S	**Sn**	**09 32 43.5**	**+1.2**
CO01				IAML		09 32 46.6	
	comp=Z,6µm,1.4s						
CO06	**Fray Jorge**	**2.19**	**181**		**Pn**	**09 32 20.7**	**+0.6**
CO06	**Fray Jorge**	**2.19**	**181**	‖*iP*	**Pn**	**09 32 20.6**	**+0.6**
AC01	**Pan de Azucar**	**2.48**	**21**		**Pn**	**09 32 24.6**	**+0.6**
AC01	**Pan de Azucar**	**2.48**	**21**	*e*P	**Pn**	**09 32 24.5**	**+0.4**
AC01				IAML		09 33 14.2	
	comp=E,3µm,0.6s						
AC01	**Pan de Azucar**	**2.48**	**21**	*e*P	**Pn**	**09 32 24.2**	**+0.2**
AC01				*e*S	**Sg**	**09 33 10.4**	**+6.5**
CO03	**El Pedregal**	**2.48**	**162**		**Pn**	**09 32 25.3**	**+1.1**
CO03	**El Pedregal**	**2.48**	**162**	‖*eP*	**Pn**	**09 32 25.1**	**+0.9**
CO03				IAML		09 33 04.1	
	comp=E,5µm,0.6s						
CO03	**El Pedregal**	**2.48**	**162**	*e*P	**Pn**	**09 32 25.2**	**+1.1**
CO03				*e*S	**Sn**	**09 32 52.0**	**-2.3**
CO03				*e*S	**Sb**	**09 32 55.3**	**-3.7**
CO03				IAML		09 33 08.3	
	comp=Z,4µm,0.5s						
AROD	**Rodeo**	**2.50**	**133**	*e*P	**Pb**	**09 32 27.4**	**-1.6**
AC02	**Maricunga**	**2.72**	**54**		**Pn**	**09 32 29.7**	**+1.8**
AC02	**Maricunga**	**2.72**	**54**	‖*eP*	**Pn**	**09 32 29.6**	**+1.8**
AC02				*i* S	**Sn**	**09 33 00.8**	**0.0**
AC02				IAML		09 33 14.7	
	comp=E,11µm,0.8s						
AC02	**Maricunga**	**2.72**	**54**	*e*P	**Pn**	**09 32 29.6**	**+1.8**
AC02				*e*S	**Sn**	**09 33 01.8**	**+1.1**
AC02				IAML		09 33 15.3	
	comp=Z,5µm,0.6s						
ACDV	**Cuesta del Vie**	**2.74**	**129**	*e*P	**Pb**	**09 32 31.8**	**-1.2**
ACDV				IAML		09 33 17.6	
	comp=Z,3µm,0.6s						
CO02	**Combarbal**	**2.77**	**170**		**Pn**	**09 32 29.0**	**+0.8**
CO02	**Combarbal**	**2.77**	**170**	*e*P	**Pn**	**09 32 28.9**	**+0.8**
CO02				IAML		09 33 16.9	
CO02	**Combarbal**	**2.77**	**170**	*e*P	**Pn**	**09 32 28.5**	**+0.3**
CO02				*e*S	**Sb**	**09 33 08.4**	**+1.2**
CO02				IAML		09 33 15.7	
	comp=Z,6µm,0.4s						
AGUA	**GUANDACOL**	**2.90**	**111**	*e*P	**Pb**	**09 32 34.0**	**-1.6**
AGUA				*e*S	**Sb**	**09 33 09.9**	**-1.0**
AGUA				IAML		09 33 28.9	
	comp=Z,4µm,1.1s						
VCA	**Vinchina**	**2.98**	**96**	‖*eP*	**Pb**	**09 32 34.7**	**-2.5**
VCA	**Vinchina**	**2.98**	**96**	*e*P	**Pb**	**09 32 34.8**	**-2.5**
VCA				IAML		09 33 27.6	
	comp=Z,6µm,0.9s						
ACCO	**Cerro Coronel**	**3.04**	**134**	*e*P	**Pn**	**09 32 35.1**	**+3.0**
ACCO				*e*S	**Sb**	**09 33 13.2**	**-2.2**
CO04	**Los Peladeros**	**3.60**	**172**	‖*iP*	**Pn**	**09 32 40.8**	**+1.1**
CO04				IAML		09 33 44.7	
	comp=N,3µm,0.1s						
GO02	**Mina Guanaco**	**3.75**	**29**		**Pn**	**09 32 42.7**	**+0.9**
GO02	**Mina Guanaco**	**3.75**	**29**	*e*P	**Pn**	**09 32 42.3**	**+0.5**
GO02	**Mina Guanaco**	**3.75**	**29**	*e*P	**Pn**	**09 32 42.8**	**+1.0**
GO02				IAML		09 33 57.9	
	comp=Z,2µm,0.8s						
RTLS	**Leoncito**	**3.86**	**150**	*e*P	**Pn**	**09 32 47.3**	**+3.9**
RTLS				IAML		09 33 50.8	
	comp=Z,7µm,0.9s						
RTLL	**Cerro Villicun**	**3.92**	**137**	*e*P	**Pn**	**09 32 46.9**	**+2.9**
RTLL				*e*S	**Sn**	**09 33 32.4**	**+2.6**
RTLL				IAML		09 33 50.3	
	comp=Z,2µm,0.9s						
ZON	**Zonda**	**3.97**	**141**		**Pn**	**09 32 44.7**	**+0.2**
PB14	**IPOC Station P**	**3.98**	**16**		**Pn**	**09 32 44.8**	**-0.2**
PB14	**IPOC Station P**	**3.98**	**16**	*e*P	**Pn**	**09 32 44.5**	**-0.5**
PB14	**IPOC Station P**	**3.98**	**16**	*e*P	**Pn**	**09 32 44.4**	**-0.5**
PB14				IAML		09 33 57.2	
	comp=Z,910nm,0.6s						
VA06	**Catapilco**	**4.08**	**177**		**Pn**	**09 32 46.6**	**+0.5**
ACLC	**CERRO LA CRUZ**	**4.17**	**104**	*e*P	**Pn**	**09 32 49.4**	**+1.9**
ACLC				IAML		09 34 04.5	
	comp=Z,736nm,0.7s						
CFA	**Cononel Fontan**	**4.26**	**138**	Pn	**Pn**	**09 32 51.2**	**+2.6**
	comp=Z,29nm,0.3s,baz=324,slow=13,SNR=174						
CFA				Sn	**Sn**	**09 33 38.5**	**+0.4**
	comp=Z,70nm,0.3s,baz=54,slow=22,SNR=11						
CFA				LR	LR	09 34 43.3	
	comp=Z,930nm,20.6s,baz=318,slow=44						
CFA	**Coronel Fontan**	**4.26**	**138**	*e*P	**Pn**	**09 32 51.0**	**+2.4**
CFA				*e*S	**Sn**	**09 33 39.9**	**+1.8**
VA03	**San Esteban**	**4.37**	**168**		**Pn**	**09 32 51.7**	**+1.6**
VA03	**San Esteban**	**4.37**	**168**	‖*eP*	**Pn**	**09 32 51.6**	**+1.6**
VA03	**San Esteban**	**4.37**	**168**	*e*P	**Pn**	**09 32 52.0**	**+1.8**
VA03				IAML		09 34 11.1	
	comp=Z,2µm,0.7s						
PEL	**Peldehue**	**4.72**	**171**		**Pn**	**09 32 55.8**	**+0.9**
ASAL	**Salagasta**	**4.74**	**151**	*e*P	**Pn**	**09 32 58.7**	**+3.5**
MT02	**Curacav**	**4.79**	**175**		**Pn**	**09 32 56.4**	**+0.6**
MT02	**Curacav**	**4.79**	**175**	*e*P	**Pn**	**09 32 55.9**	**+0.2**
MT02				*e*S	**Sb**	**09 34 08.8**	**+3.6**
MT02				IAML		09 34 21.9	
	comp=Z,872nm,0.7s						
APLL	**PUNTA DE LOS L**	**4.81**	**115**	*e*P	**Pn**	**09 32 57.9**	**+1.8**
APLL				IAML		09 34 29.2	
	comp=Z,570nm,1.1s						
ARCO	**CERRO ARCO**	**4.92**	**153**	*e*P	**Pn**	**09 33 01.8**	**+4.1**
ARCO				*e*S	**Sb**	**09 34 02.7**	**-6.4**
ARCO				IAML		09 34 20.7	
	comp=Z,2µm,1.8s						
MT05	**Renca**	**4.96**	**172**	*e*P	**Pn**	**09 33 01.9**	**+3.8**
MT05				IAML		09 34 28.0	
	comp=Z,1µm,0.7s						
MT04	**Ro Olivares**	**5.07**	**166**	*e*S	**Sn**	**09 34 05.0**	**+6.7**
MT04				IAML		09 34 41.7	
	comp=Z,524nm,0.8s						
CYA	**Choya**	**5.09**	**91**	‖*eP*	**Pn**	**09 33 01.1**	**+1.1**
AAGR	**Agrelo**	**5.17**	**153**	*e*P	**Pn**	**09 33 05.1**	**+3.9**
MT09	**Talagante**	**5.31**	**175**	Pn	**Pn**	**09 33 03.9**	**+0.8**
MT01	**Popeta**	**5.38**	**177**	Pn	**Pn**	**09 33 04.4**	**+0.4**
AF01	**San Pedro de A**	**6.30**	**30**		**Pn**	**09 33 17.7**	**+0.8**
BO02	**Sierra Bellavi**	**6.34**	**174**		**Pn**	**09 33 17.8**	**+0.7**
SLA	**San Lorenzo**	**6.60**	**57**	*e*P	**Pn**	**09 33 23.1**	**+2.2**
TCA	**Tanti**	**6.71**	**117**	‖*eP*	**Pn**	**09 33 22.1**	**-0.2**
PB01	**IPOC Station P**	**7.64**	**15**		**Pn**	**09 33 33.3**	**-1.8**
H03N1	**Juan Fernandez**	**8.00**	**230**	Pn	**Pn**	**09 33 39.4**	**-0.2**
	baz=109,slow=17						
H03N1				Sn	**Sn**	**09 35 04.2**	**-5.6**
	baz=91,slow=74						
H03N1				T	T	09 42 01.6	
	baz=58,slow=72,SNR=1225						
H03N2	**Juan Fernandez**	**8.02**	**230**	Pn	**Pn**	**09 33 39.4**	**-0.4**
	baz=109,slow=17						
H03N2				Sn	**Sn**	**09 35 04.1**	**-6.0**
	baz=91,slow=74						
H03N2				T	T	09 42 04.3	
	baz=58,slow=72,SNR=1448						
H03N3	**Juan Fernandez**	**8.02**	**230**	Pn	**Pn**	**09 33 39.8**	**-0.2**
	baz=109,slow=17						
H03N3				Sn	**Sn**	**09 35 03.8**	**-6.4**
	baz=91,slow=74						
H03N3				T	T	09 41 59.4	
	baz=58,slow=72,SNR=1134						
VA04	**Juan Fernndez**	**8.07**	**229**		**Pn**	**09 33 40.3**	**-0.5**
H03S3	**Juan Fernandez**	**8.23**	**228**	Pn	**Pn**	**09 33 41.6**	**-1.3**
	baz=227,slow=79						
H03S3				Sn	**Sn**	**09 35 09.4**	**-6.1**
	baz=83,slow=75						
H03S1	**Juan Fernandez**	**8.24**	**228**	Pn	**Pn**	**09 33 42.2**	**-0.7**
	baz=227,slow=79						
H03S1				Sn	**Sn**	**09 35 08.2**	**-7.4**
	baz=83,slow=75						
H03S2	**Juan Fernandez**	**8.25**	**228**	Pn	**Pn**	**09 33 42.6**	**-0.5**
	baz=227,slow=79						
H03S2				Sn	**Sn**	**09 35 09.6**	**-6.3**
	baz=83,slow=75						
PLCA	**Paso Flores**	**12.26**	**176**	Pn	**Pn**	**09 34 39.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=0.2,slow=13,SNR=5.8						
PLCA				Sn	Sn	09 37 06.9	+12
	comp=Z,0.2nm,0.3s,baz=329,slow=8.6,SNR=3.0						
PLCA				LR	LR	09 39 48.7	
	comp=Z,532nm,19.1s,baz=352,slow=40						
	comp=Z,2.5nm,0.9s						
PLCA	**Paso Flores**	**12.26**	**176**		**Pn**	**09 34 39.3**	**+1.0**
PLCA	**Paso Flores**	**12.26**	**176**	*e*P	**P**	**09 34 47.6**	**-3.0**
PSAL	**Palomas, Salto**	**12.42**	**105**	*e*P	**Pn**	**09 34 41.2**	**+0.8**
TRQA	**Tornquist**	**12.48**	**142**		**Pn**	**09 34 40.3**	**-0.9**
TRQA	**Tornquist**	**12.48**	**142**	*e*P	Pn	09 34 46.3	+5.0
LPAZ	**La Paz**	**12.54**	**15**	Pn	**Pn**	**09 34 41.5**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=188,slow=6.5,SNR=30						
LPAZ				LR	LR	09 39 45.9	
	comp=Z,476nm,21.8s,baz=174,slow=39						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**12.54**	**15**		**Pn**	**09 34 42.0**	**-0.7**
LPAZ	**La Paz**	**12.54**	**15**	*e*P	**Pn**	**09 34 41.6**	**-1.1**
CPUP	**Villa Florida**	**12.85**	**84**	Pn	**Pn**	**09 34 43.0**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=110,slow=11,SNR=6.4						
CPUP				Sn	Sn	09 37 18.6	+10
	comp=Z,0.1nm,0.3s,baz=23,slow=17,SNR=1.0						
CPUP				LR	LR	09 40 10.7	
	comp=Z,276nm,18.6s,baz=118,slow=40						
CPUP	**Villa Florida**	**12.85**	**84**		**Pn**	**09 34 46.1**	**-0.2**
CPUP	**Villa Florida**	**12.85**	**84**	*e*P	**Pn**	**09 34 45.3**	**-1.0**
MURT	**Porto Murtinho**	**14.36**	**65**	*e*P	**Pn**	**09 35 05.6**	**-1.5**
BDQN	**Bodoquena, MS**	**15.69**	**63**	*e*P	**Pn**	**09 35 23.5**	**-1.2**
SIV	**San Ignacio**	**15.77**	**40**	Pn	**Pn**	**09 35 19.4**	**-6.5**
	comp=Z,0.1nm,0.3s,baz=235,slow=8.5,SNR=11						
PLTB	**Pedras Altas**	**15.90**	**106**	Pn	**Pn**	**09 35 24.7**	**-2.8**
PLTB	**Pedras Altas**	**15.90**	**106**	*e*P	**Pn**	**09 35 27.1**	**-0.4**
CPSB	**Cacapava Do Su**	**15.93**	**101**	*e*P	**Pn**	**09 35 27.1**	**-0.8**
AMBA	**Amambai (Brazi**	**15.94**	**73**	*e*P	**Pn**	**09 35 25.4**	**-2.7**
AQDB	**Aquidauana**	**16.50**	**65**		**Pn**	**09 35 34.0**	**-1.2**
AQDB	**Aquidauana**	**16.50**	**65**	*e*P	**Pn**	**09 35 33.8**	**-1.3**
NNA	**Nana**	**17.12**	**342**	P	**Pn**	**09 35 43.2**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=176,slow=13,SNR=1.5						
	comp=Z,3.8nm,0.3s						
ITAB	**Concordia**	**17.25**	**90**	P	**P**	**09 35 45.6**	**-0.5**
ITAB				IAmb	IAmb	09 35 46.7	
	comp=Z,155nm,1.4s						
ITAB	**Concordia**	**17.25**	**90**	*e*P	**Pn**	**09 35 42.9**	**-1.8**
PTLB	**Pontes e Lacer**	**17.34**	**44**	P	**Pn**	**09 35 45.6**	**-0.1**
PTLB	**Pontes e Lacer**	**17.34**	**44**	*e*P	**Pn**	**09 35 45.5**	**-0.3**
PTGB	**Pitanga**	**17.86**	**82**	*e*P	**Pn**	**09 35 50.4**	**-1.8**
CNLB	**Canela**	**18.18**	**98**	*e*P	**Pn**	**09 35 55.2**	**-0.9**
VILB	**Vilhena**	**18.74**	**37**	P	**Pn**	**09 36 03.0**	**0.0**
PP1B	**Ponte de Pedra**	**18.78**	**58**	*e*P	**P**	**09 36 01.5**	**-1.5**
SALV	**Santo Antonio**	**19.29**	**53**	*e*P	**P**	**09 36 07.3**	**-1.3**
FRTB	**Fartura**	**20.45**	**81**	*e*P	**P**	**09 36 20.1**	**-1.2**
ITRB	**Iturama**	**21.23**	**70**	*e*P	**P**	**09 36 28.3**	**-1.4**
PDRB	**Porto dos Gac**	**21.78**	**43**	*e*P	**P**	**09 36 34.3**	**-1.3**
PET01	**Itanhaem-SP**	**22.16**	**85**	*e*P	**P**	**09 36 37.8**	**-1.9**
BB19B	**Bebedouro**	**22.18**	**76**	*e*P	**P**	**09 36 37.7**	**-2.2**
ATAH	**Atahualpa**	**22.18**	**342**	LR	LR	09 43 45.5	
	comp=Z,97nm,21.7s,baz=223,slow=32						
SPB	**Sao Paulo**	**22.23**	**83**	P	**P**	**09 36 39.9**	**-0.5**
ARAG	**Araguaiana, MT**	**22.26**	**59**	*e*P	**P**	**09 36 38.6**	**-2.1**
VAO	**Valinhos**	**22.82**	**82**	P	**P**	**09 36 45.2**	**-1.6**
VAO				IAmb	IAmb	09 36 57.2	
	comp=Z,60nm,1.0s						
VAO	**Valinhos**	**22.82**	**82**	*e*P	**P**	**09 36 44.3**	**-2.4**
CLDB	**Colider**	**22.92**	**43**	*e*P	**P**	**09 36 46.0**	**-1.8**
IPMB	**Ipameri, GO**	**23.84**	**69**	*e*P	**P**	**09 36 54.2**	**-2.8**
SNDB	**Serra Nova Dou**	**25.07**	**53**	*e*P	**P**	**09 37 06.5**	**-1.7**
BDFB	**Brasilia**	**25.25**	**65**	P	**P**	**09 37 08.0**	**-2.0**
	comp=Z,16nm,0.7s						
BDFB				LR	LR	09 48 04.4	
	comp=Z,365nm,21.0s,baz=308,slow=39						
	comp=Z,16nm,0.7s						
BDFB	**Brasilia**	**25.25**	**65**	P	**P**	**09 37 08.8**	**-1.1**
BDFB				IAmb	IAmb	09 37 20.0	
	comp=Z,19nm,0.7s						
TEFE	**Tefe**	**25.70**	**16**	*e*P	**P**	**09 37 15.8**	**+2.0**
NPGB	**Novo Progresso**	**26.26**	**39**	*e*P	**P**	**09 37 19.4**	**+0.4**
USHA	**Ushuaia**	**26.44**	**176**	P	**P**	**09 37 20.2**	**0.0**
	comp=Z,19nm,0.5s,baz=324,slow=3.9,SNR=5.8						
	comp=Z,19nm,0.5s						
MACA	**Manacapuru-AM**	**27.23**	**24**	*e*P	**P**	**09 37 27.6**	**-0.2**
ITTB	**Itaituba**	**28.32**	**35**	*e*P	**P**	**09 37 37.1**	**-0.4**
JANB	**Januaria**	**28.55**	**68**	*e*P	**P**	**09 37 38.1**	**-1.6**
SDBA	**SAO DESIDERIO**	**29.57**	**63**	*e*P	**P**	**09 37 47.5**	**-1.2**
SMTB	**Santa Maria do**	**29.84**	**54**	*e*P	**P**	**09 37 50.5**	**-0.6**
GUA01	**Guaratinga, BA**	**31.55**	**75**	*e*P	**P**	**09 38 05.3**	**-0.8**
RPN	**Rapa Nui**	**33.33**	**263**	LR	LR	09 48 11.4	
	comp=Z,243nm,20.3s,baz=64,slow=29						
RUSC	**La Rusia**	**34.20**	**357**	P	**P**	**09 38 31.1**	**+1.4**
PMSA	**Palmer Station**	**36.63**	**175**	LR	LR	09 53 56.6	
	comp=Z,250nm,18.3s,baz=290,slow=36						
SDV	**Santo Domingo**	**37.15**	**2**	P	**P**	**09 38 54.4**	**-0.4**
SDV	**Santo Domingo**	**37.15**	**2**	*e*P	**P**	**09 38 54.8**	**0.0**
DR12	**Loma Pena Alta**	**47.03**	**3**	P	**P**	**09 40 14.9**	**-0.3**
PETF	**Flores**	**48.47**	**336**	IAmb	IAmb	09 40 29.3	
	comp=Z,14nm,0.8s						
TEIG	**Tepich**	**51.03**	**340**		**P**	**09 40 47.5**	**+1.7**
SOR	**Soroa**	**52.14**	**347**	P	**P**	**09 40 54.5**	**+0.5**
SOR				IAmb	IAmb	09 40 56.0	
	comp=Z,12nm,0.8s						
BELA	**Belgrano 2**	**52.25**	**171**	P	**P**	**09 40 55.0**	**+0.8**
TLIG	**Tlapa**	**52.58**	**327**	IAmb	IAmb	09 41 02.5	
	comp=Z,14nm,1.1s						
VNA3	**Neumayer Olymp**	**54.35**	**159**	‖P	**P**	**09 41 09.5**	**-0.3**
	comp=Z,14nm,0.6s						
VNA2	**Neumayer--Watz**	**54.98**	**159**	‖P	**P**	**09 41 14.1**	**-0.3**
	comp=Z,25nm,0.5s,baz=279,slow=6.7						
SNAA	**Sanae**	**56.57**	**159**	‖P	**P**	**09 41 25.6**	**-0.3**
	comp=Z,396nm,0.5s						
SNAA	**Sanae**	**56.57**	**159**	P	**P**	**09 41 25.1**	**-0.7**
	comp=Z,17nm,0.5s,baz=284,slow=8.5,SNR=42						
	comp=Z,17nm,0.5s						
SNAA	**Sanae**	**56.57**	**159**		**P**	**09 41 25.5**

SADO	**Sadowa**	**73.22**	**354**	P		**P**		**09 43 14.8**	**+0.5**
	comp=Z,13nm,0.9s,baz=188,slow=7.0,SNR=5.5								
	comp=Z,13nm,0.9s								
PV01	**Paradox Valley**	**74.76**	**331**	IAmb		IAmb		09 43 27.6	
	comp=Z,18nm,1.4s								
PV02	**Paradox Valley**	**74.89**	**330**	IAmb		IAmb		09 43 28.2	
	comp=Z,25nm,1.3s								
PV18	**Skein Mesa, Pa**	**75.00**	**330**	IAmb		IAmb		09 43 27.9	
	comp=Z,12nm,0.9s								
DANC	**Danby, Needles**	**75.19**	**324**	IAmb		IAmb		09 43 30.0	
	comp=Z,14nm,1.0s								
ECSD	**EROS Data Cent**	**75.43**	**342**	IAmb		IAmb		09 43 29.4	
	comp=Z,19nm,0.8s								
KNB	**Kanab**	**75.78**	**327**	IAmb		IAmb		09 43 33.9	
	comp=Z,17nm,1.2s								
SPMN	**Marine on St.**	**75.85**	**345**	IAmb		IAmb		09 43 31.1	
	comp=Z,15nm,1.0s								
HAYD	**Hayden**	**76.22**	**333**	IAmb		IAmb		09 43 36.1	
	comp=Z,10nm,1.1s								
O20A	**White River Ci**	**76.29**	**332**	IAmb		IAmb		09 43 36.0	
	comp=Z,17nm,0.8s								
Q16A	**Castle Valley**	**76.55**	**329**	IAmb		IAmb		09 43 37.7	
	comp=Z,9.3nm,0.9s								
P18A	**Preston Nutter**	**76.72**	**330**	IAmb		IAmb		09 43 38.7	
	comp=Z,15nm,1.0s								
SUSD	**Miller**	**76.76**	**340**	IAmb		IAmb		09 43 36.8	
	comp=Z,18nm,0.9s								
PRN	**Pahroc Range**	**77.18**	**326**	IAmb		IAmb		09 43 41.6	
	comp=Z,12nm,1.1s								
TPNV	**Topopah Spring**	**77.42**	**325**	IAmb		IAmb		09 44 14.0	
	comp=Z,17nm,1.2s								
WCT	**Wildcat Mounta**	**77.49**	**324**	IAmb		IAmb		09 43 43.4	
	comp=Z,12nm,1.2s								
MPU	**Maple Canyon**	**77.65**	**330**	IAmb		IAmb		09 43 43.6	
	comp=Z,14nm,1.1s								
BSUT	**Blindstream Ca**	**77.70**	**330**	IAmb		IAmb		09 43 44.2	
	comp=Z,13nm,0.9s								
K22A	**Casper**	**77.74**	**334**	IAmb		IAmb		09 43 43.9	
	comp=Z,18nm,0.9s								
GRAC	**Grapevine Rang**	**78.03**	**324**	IAmb		IAmb		09 44 10.1	
	comp=Z,16nm,1.0s								
RSSD	**Black Hills**	**78.11**	**337**			**P**		**09 43 44.2**	**+1.6**
RSSD				IAmb		IAmb		09 43 45.4	
	comp=Z,15nm,1.2s								
DUG	**Dugway, Tooele**	**78.33**	**329**	IAmb		IAmb		09 43 47.4	
	comp=Z,14nm,1.1s								
MAW	**Mawson**	**78.36**	**164**	P		**P**		**09 43 43.6**	**+0.1**
	comp=Z,8.7nm,0.6s,baz=188,slow=7.2,SNR=15								
	comp=Z,8.7nm,0.6s								
TCUT	**Toone Canyon**	**78.45**	**330**	IAmb		IAmb		09 43 48.8	
	comp=Z,12nm,0.9s								
HWUT	**Hardware Ranch**	**78.92**	**331**	IAmb		IAmb		09 43 50.0	
	comp=Z,20nm,0.8s								
PDAR	**Pinedale Array**	**79.04**	**333**	P		**P**		**09 43 49.3**	**+1.5**
	comp=Z,4.3nm,0.9s,baz=134,slow=5.2,SNR=19								
	comp=Z,4.3nm,0.9s								
AGMN	**Agassiz Nation**	**79.47**	**344**	IAmb		IAmb		09 43 51.6	
	comp=Z,12nm,0.9s								
HVU	**Hansel Valley**	**79.59**	**330**	IAmb		IAmb		09 43 53.5	
	comp=Z,14nm,1.0s								
NVAR	**Mina Array Bea**	**79.60**	**324**	P		**P**		**09 43 53.5**	**+2.5**
	comp=Z,1.4nm,0.7s,baz=154,slow=5.5,SNR=7.2								
	comp=Z,1.4nm,0.7s								
NVAR	**Mina Array Bea**	**79.60**	**324**	P		**P**		**09 43 51.6**	**+0.7**
ELK	**Elko**	**79.89**	**328**	P		**P**		**09 43 54.0**	**+1.5**
	comp=Z,5.8nm,0.9s,baz=126,slow=3.0,SNR=17								
	comp=Z,5.8nm,0.9s								
SNOW	**Snow King Moun**	**80.10**	**332**	IAmb		IAmb		09 43 56.6	
	comp=Z,12nm,1.1s								
LOHW	**Long Hollow**	**80.16**	**332**	IAmb		IAmb		09 43 56.9	
	comp=Z,18nm,1.4s								
TSUM	**Tsumeb**	**80.38**	**107**	P		**P**		**09 43 55.6**	**0.0**
TSUM				IAmb		IAmb		09 44 07.0	
	comp=Z,15nm,1.1s								
RLMT	**Red Lodge**	**80.89**	**334**	IAmb		IAmb		09 44 00.2	
	comp=Z,7.7nm,0.8s								
YMP	**Mirror Lake Pl**	**80.92**	**333**	IAmb		IAmb		09 44 16.2	
	comp=Z,14nm,1.2s								
YNE	**Yellowstone No**	**81.08**	**333**	IAmb		IAmb		09 44 01.1	
	comp=Z,8.1nm,0.8s								
PAHR	**Pah Rah Range**	**81.12**	**325**	IAmb		IAmb		09 44 02.7	
	comp=Z,12nm,1.2s								
YMR	**Madison River**	**81.18**	**333**	IAmb		IAmb		09 44 02.9	
	comp=Z,22nm,0.9s								
ULM	**Lac du Bonnet**	**81.28**	**345**	P		**P**		**09 44 00.3**	**+0.9**
	comp=Z,15nm,0.9s,baz=154,slow=4.7,SNR=8.0								
	comp=Z,15nm,0.9s								
HLID	**Hailey**	**81.74**	**330**	IAmb		IAmb		09 44 05.7	
	comp=Z,12nm,1.1s								
TORD	**Torodi Ar. Bea**	**81.98**	**70**	P		**P**		**09 44 03.1**	**-0.8**
	comp=Z,13nm,0.9s,baz=268,slow=3.2,SNR=4.4								
	comp=Z,13nm,0.9s								
ORV	**Oroville**	**82.10**	**323**	IAmb		IAmb		09 44 07.6	
	comp=Z,17nm,1.2s								
MFID	**Camas Ranch**	**82.25**	**329**	IAmb		IAmb		09 44 08.0	
	comp=Z,13nm,1.4s								
BOSA	**Boshof**	**82.31**	**118**	P		**P**		**09 44 04.8**	**-1.0**
	comp=Z,6.6nm,0.7s,baz=252,slow=3.1,SNR=17								
	comp=Z,6.6nm,0.7s								
DLMT	**Dillon**	**82.42**	**332**	IAmb		IAmb		09 44 08.8	
	comp=Z,10nm,1.1s								
GRTLG	**Ghanzi**	**82.44**	**110**	P		**P**		**09 44 06.0**	**-0.5**
GRTLG				IAmb		IAmb		09 44 06.2	
	comp=Z,6.6nm,0.7s								
EGMT	**Eagleton**	**83.50**	**335**	IAmb		IAmb		09 44 13.2	
	comp=Z,7.2nm,0.8s								
PLID	**Pearl Lake**	**83.64**	**330**	IAmb		IAmb		09 44 14.8	
	comp=Z,12nm,0.9s								
K05A	**Summer Lake**	**84.12**	**326**	IAmb		IAmb		09 44 18.0	
	comp=Z,15nm,1.1s								
LBTB	**Lobatse**	**84.29**	**115**			**P**		**09 44 15.3**	**-0.7**
LBTB				IAmb		IAmb		09 44 15.8	
	comp=Z,8.0nm,0.7s								
YBH	**Yreka Blue Hor**	**84.31**	**324**	P		**P**		**09 44 15.3**	**-0.2**
	comp=Z,0.2nm,0.9s,baz=68,slow=2.3,SNR=4.1								
I07A	**Izee**	**84.47**	**327**	IAmb		IAmb		09 44 19.3	
	comp=Z,7.4nm,1.0s								
J05D	**Fort Rock, OR**	**84.71**	**326**	IAmb		IAmb		09 44 20.7	
	comp=Z,9.8nm,1.1s								
F10A	**Beach Ranch, E**	**84.87**	**330**	IAmb		IAmb		09 44 30.5	
	comp=Z,5.7nm,0.9s								
CASY	**Casey**	**85.54**	**181**			**P**		**09 44 22.5**	**+1.2**
HAWA	**Hanford**	**86.22**	**329**	IAmb		IAmb		09 44 27.6	
	comp=Z,8.7nm,0.9s								
D08A	**Wollman Farm,**	**86.45**	**330**	IAmb		IAmb		09 44 27.8	
	comp=Z,9.4nm,1.0s								
E07A	**Sunnyside**	**86.50**	**329**	IAmb		IAmb		09 44 28.3	
	comp=Z,11nm,1.1s								
NEW	**Newport**	**86.61**	**331**	P		**P**		**09 44 26.9**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=111,slow=8.6,SNR=2.4								
	comp=Z,1.3nm,0.6s								
C09A	**Chrisman Ranch**	**86.74**	**331**	IAmb		IAmb		09 44 29.6	
	comp=Z,8.9nm,0.7s								
MDT	**Midelt**	**88.05**	**51**	LR		LR		10 22 57.3	
	comp=Z,108nm,20.0s,baz=92,slow=35								
RPZ	**Rata Peaks**	**88.09**	**220**			**P**		**09 44 35.9**	**+1.7**
SFJD	**Kangerlussuaq**	**96.49**	**8**	LR		LR		10 27 29.1	
	comp=Z,43nm,21.4s,baz=76,slow=35								
YKA	**Yellowknife Ar**	**96.96**	**341**	P		**P**		**09 45 14.9**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=158,slow=3.9,SNR=3.5								
	comp=Z,1.0nm,0.7s								
YKA	**Yellowknife Ar**	**96.96**	**341**	P		**P**		**09 45 15.4**	**+1.0**
AKASG	**Malin Array Be**	**118.10**	**45**	PKP		**PKPdf**		**09 50 29.0**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=272,slow=2.4,SNR=4.1								
BRTR	**Keskin Array B**	**118.70**	**58**	PKP		**PKPdf**		**09 50 31.4**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=231,slow=0.9,SNR=4.4								
ASAR	**Alice Springs**	**122.64**	**208**	PKP		**PKPdf**		**09 50 39.3**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=143,slow=2.0,SNR=26								
ASAR	**Alice Springs**	**122.64**	**208**			**PKPdf**		**09 50 39.2**	**-0.7**
WRA	**Warramunga Arr**	**125.74**	**210**	PKP		**PKPdf**		**09 50 45.7**	**-0.2**
	comp=Z,8.0nm,0.7s,baz=164,slow=1.6,SNR=87								
WRAB	**Tennant Creek**	**125.74**	**210**			**PKPdf**		**09 50 45.9**	**-0.1**
PSA00	**Pilbara Seismi**	**129.04**	**194**			**PKPdf**		**09 50 52.0**	**-0.2**
ARTI	**Arti**	**135.13**	**37**	PKP		**PKPdf**		**09 51 02.5**	**0.0**
	comp=Z,3.0nm,0.6s,baz=254,slow=8.5,SNR=5.8								
ARTI	**Arti**	**135.13**	**37**			**PKPdf**		**09 51 03.1**	**+0.6**
AKTO	**Aktyubinsk**	**136.35**	**46**	PKP		**PKPdf**		**09 51 05.0**	**0.0**
	comp=Z,2.7nm,0.9s,baz=305,slow=2.7,SNR=2.8								
AB31	**Akbulak array**	**137.79**	**47**			**PKPdf**		**09 51 07.8**	**+0.2**
ABKAR	**Akbulak array**	**137.79**	**47**			**PKPdf**		**09 51 08.2**	**+0.6**
BVAR	**Borovoye Array**	**142.84**	**38**	PKhKP		PKPpre		09 51 12.7	
	comp=Z,1.2nm,0.6s,baz=22,slow=0.8,SNR=4.5								
KKAR	**Karatay Array**	**146.28**	**54**			**PKPbc**		**09 51 23.7**	**-0.4**
KURBB	**Kurchatov Arra**	**148.41**	**37**	PKP		**PKPdf**		**09 51 27.5**	**+1.3**
	comp=Z,12nm,0.6s,baz=302,slow=3.2,SNR=39								
KURBB				PKPbc		**PKPbc**		**09 51 30.2**	**+0.5**
	comp=Z,6.5nm,0.6s,baz=303,slow=3.2,SNR=6.7								
EKS2	**Erkin-Say**	**148.71**	**54**	P		**PKPdf**		**09 51 28.8**	**+1.6**
	SNR=11								
USP	**Ospenovka**	**149.05**	**52**	P		**PKiKP**		**09 51 32.3**	**-0.7**
	SNR=6.7								
AAK	**Ala-Archa**	**149.22**	**54**	P		**PKiKP**		**09 51 33.5**	**-0.1**
	SNR=10								
ZALV	**Zalesovo Beam**	**149.25**	**28**	PKP		**PKPdf**		**09 51 27.9**	**+0.4**
	comp=Z,36nm,0.6s,baz=306,slow=3.3,SNR=57								
ZALV				PKPbc		**pPKPdf**		**09 51 32.2**	**+0.5**
	comp=Z,36nm,0.6s,baz=308,slow=3.4,SNR=42								
ZALV	**Zalesovo Beam**	**149.25**	**28**	PKPdf		**PKPdf**		**09 51 28.4**	**+0.9**
CHMS	**Chumysh**	**149.30**	**53**	P		**PKiKP**		**09 51 33.2**	**-0.3**
	SNR=5.6								
UCH	**Uchtor**	**149.35**	**54**	P		**PKiKP**		**09 51 33.8**	**-0.4**
	SNR=35								
NIL	**Nilore**	**149.54**	**71**			**PKPbc**		**09 51 33.1**	**-0.1**
KBK	**Karagaybulak**	**149.54**	**53**	P		**PKiKP**		**09 51 34.0**	**-0.2**
	SNR=8.1								
TKM2	**Tokmak 2**	**149.92**	**53**	P		**PKiKP**		**09 51 34.6**	**-0.4**
	SNR=12								
TOLI2	**Tolitoli**	**150.33**	**206**			**PKPbc**		**09 51 35.2**	**-0.5**
HYBB	**Hyderabad (bro**	**150.46**	**105**	*e*PKPbc		**PKPbc**		**09 51 35.8**	**-0.1**
ULHL	**Ulahol**	**150.58**	**54**	P		**PKiKP**		**09 51 36.7**	**+0.3**
	SNR=10								
MAKZ	**Makanchi**	**152.40**	**41**			**PKPbc**		**09 51 39.5**	**0.0**
MKAR	**Makanchi Array**	**152.59**	**41**	PKP		**PKPdf**		**09 51 32.9**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=274,slow=1.9,SNR=6.7								
MKAR				PKPbc		**PKPbc**		**09 51 39.9**	**0.0**
	comp=Z,13nm,0.7s,baz=326,slow=2.0,SNR=60								
MJAR	**Matsushiro Arr**	**153.69**	**295**	PKP		**PKPdf**		**09 51 35.5**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=102,slow=2.6,SNR=4.2								
SONM	**Songino Array**	**160.61**	**4**	PKP		**PKPdf**		**09 51 43.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=158,slow=1.6,SNR=5.2								
SONM				PKPab		**PKPab**		**09 52 24.8**	**0.0**
	comp=Z,1.6nm,0.9s,baz=320,slow=2.8,SNR=4.8								
CMAR	**Chiang Mai Arr**	**166.78**	**137**	PKP		**PKPdf**		**09 51 48.9**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=52,slow=1.7,SNR=4.9								
HHC	**Hu-ho-hao-te**	**167.39**	**349**	*e*P		**PKPdf**		**09 51 47.3**	**-2.5**
HHC				pmax		pmax			
	comp=Z,10.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,110nm,4.9s								
BTO	**Baotou**	**167.82**	**354**	*e*PKPbc		**PKPdf**		**09 51 49.0**	**-1.1**
BTO				PKPab		**PKPab**		**09 52 57.3**	**+0.6**
BTO				SKS		**SKSdf**		**09 58 54.5**	**+1.1**
NJ2	**Nanjing**	**170.29**	**294**	*e*P		**PKPdf**		**09 51 52.5**	**+0.8**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s								

NDI ***26*** *09:36:10.9±3.5, 19°.00N×94°.65E, h80km, ML4.2, MW4.1*
IDC ***26*** *09:36:10.6±1.5, 19°.30N×95°.01E, h61km±12km, mb4.1/22, mbtmp4.4/26, MS3.4/2, Error ellipse: s-maj=17.3km s-min=8.3km az=40.0*
NEIC ***26*** *09:36:12.9±1.0, 19°.3N±0°.1×95°.02E±0°.07, h76km±6km, mb4.7/48, Error ellipse: s-maj=16.1km s-min=7.8km az=201.0*
BKK ***26*** *09:36:14.7±0.9, 19°.N±3°×9°5E±°, h23km±9km, M4.7/17, mB5.2/9, mb5.0/8, Mjma4.3/17, ML5.1/14, MLv4.9/15, Mw(mB)4.6/9*

ISC 26 09:36:09.2±0.5, 19°.17N±0°.05×94°.80E±0°.05, h50km, n92, σ1°82/84, mb4.6/47, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**3.71**	**333**	*e*P			Pn	09 37 08.0	+3.9
SAIH				*e*S			**Sn**	**09 37 46.5**	**-0.2**
SAIH				IAML				09 38 01.4	
	comp=N,434nm,0.5s								
SAIH				IAML				09 38 05.0	
	comp=E,424nm,0.6s								
CHTO	**Chiang Mai**	**3.94**	**95**				**Pn**	**09 37 08.1**	**+0.9**
CHTO	**Chiang Mai**	**3.94**	**95**	P			Pn	**09 37 08.1**	**+0.9**
CHTO				S			**Sn**	**09 37 48.8**	**-3.3**
CM31	**Chiang Mai Arr**	**3.99**	**100**				**Pn**	**09 37 08.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**3.99**	**100**	P			**Pn**	**09 37 08.7**	**+0.8**
	comp=E,42nm,0.3s,baz=275,slow=14,SNR=166								
CMAR				S			**Sn**	**09 37 50.3**	**-3.1**
	comp=E,72nm,0.4s,baz=286,slow=24,SNR=7.1								
BRDH	**Bariadhala**	**4.57**	**320**	P			Pn	09 37 19.8	+4.0
	comp=E,138nm,0.3s,baz=241,slow=23,SNR=1.5								
BRDH				S			**Sn**	**09 38 08.7**	**+1.1**
	comp=E,98nm,0.3s,baz=346,slow=22,SNR=4.4								
BRDH				LR			LR	09 39 35.6	
	comp=E,351nm,22.0s,baz=158,slow=44								
LAMP	**Lampang**	**4.62**	**97**	P			**Pn**	**09 37 17.7**	**+1.2**
BELO	**BELONIA**	**5.12**	**323**	*e*P			Pn	09 37 27.2	+3.8
BELO				*e*S			**Sn**	**09 38 22.2**	**+1.0**
UTTA	**Uttaradit**	**5.64**	**104**	P			**Pn**	**09 37 31.3**	**+0.8**
	comp=E,3.2nmcomp=E,1.8nmcomp=E,0.7nmcomp=E,7μm								
	comp=E,171nm,0.5s								
KHLT	**Khaolaem Dam**	**5.66**	**140**	P			**Pn**	**09 37 31.8**	**+0.9**
IMP	**Imphal**	**5.69**	**352**	*e*P			Pn	09 37 35.1	+3.9
IMP				IAmb		IAmb		09 37 37.4	
	comp=Z,241nm,0.4s								
UTHA	**Uthaitani**	**5.71**	**128**	P			**Pn**	**09 37 32.6**	**+1.1**
	comp=Z,1.9nmcomp=Z,0.5nmcomp=Z,2μmcomp=Z,87nm,0.5s								
KOHI	**KOHIMA**	**6.55**	**355**	*e*P			Pn	09 37 46.7	+3.6
KOHI				*e*S			**Sn**	**09 38 57.0**	**+0.5**
KOHI				IAML				09 39 01.5	
	comp=N,194nm,0.7s								
KOHI				IAML				09 39 02.0	
	comp=E,187nm,0.5s								
SHL	**Shillong**	**6.91**	**338**				**Pn**	**09 37 49.2**	**+1.1**
SHL	**Shillong**	**6.91**	**338**	*e*P			**Pn**	**09 37 47.5**	**-0.6**
SHL				*e*S			**Sn**	**09 39 02.0**	**-3.5**
SHL				IAML				09 39 05.5	
	comp=E,600nm,0.2s								
SHL				IAML				09 39 07.8	
	comp=N,559nm,0.4s								
MOKO	**MOKOCHONG**	**7.12**	**358**	*e*P			**Pn**	**09 37 54.2**	**+3.3**
MOKO				*e*S			**Sn**	**09 39 12.1**	**+1.6**
MOKO				IAML				09 39 20.0	
	comp=N,183nm,0.7s								
MOKO				IAML				09 39 21.5	
	comp=E,165nm,0.7s								
TEZP	**TEZPUR**	**7.63**	**346**	*e*P			**Pn**	**09 37 59.4**	**+1.6**
TEZP				*e*S			**Sn**	**09 39 18.4**	**-4.6**
DHUB	**DHUBRI**	**8.13**	**328**	*e*S			**Sn**	**09 39 31.0**	**-4.2**
PANO	**Nakornpanom**	**9.54**	**101**	P			**Pn**	**09 38 25.7**	**+1.7**
EVN	**Everest**	**11.40**	**322**				**Pn**	**09 38 50.7**	**+0.7**
HYBB	**Hyderabad (bro**	**15.53**	**266**	*e*P			**P**	**09 39 52.6**	**+4.1**
PALK	**Pallekele**	**18.10**	**231**	P			**Pn**	**09 40 21.2**	**+4.0**
	comp=E,12nm,1.1s,baz=30,slow=8.1,SNR=1.5								
PALK				S			**Sn**	**09 43 29.0**	**-9.5**
	comp=E,15nm,1.1s,baz=337,slow=23,SNR=6.4								
LZDM	**Lanzhou Array**	**18.47**	**23**	P			**Pn**	**09 40 21.2**	**-0.6**
	comp=E,1.3nm,0.3s,baz=180,slow=5.5,SNR=3.9								
NJ2	**Nanjing**	**25.13**	**55**	*e*P			**P**	**09 41 29.3**	**-0.3**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.6s								
WUS	**Wushi**	**25.68**	**332**				**P**	**09 41 35.1**	**+0.4**
HHC	**Hu-ho-hao-te**	**25.94**	**30**	*e*P			**P**	**09 41 38.0**	**+1.0**
HHC				pmax		pmax			
	comp=Z,14nm,0.6s								
HHC				pmax		pmax			
	comp=Z,120nm,5.0s								
TARG	**Taragay, Kyrgy**	**26.74**	**331**				**P**	**09 41 45.8**	**+1.3**
AAK	**Ala-Archa**	**29.02**	**328**	P			**P**	**09 42 06.4**	**+1.8**
	comp=Z,2.1nm,0.6s,baz=161,slow=8.4,SNR=6.5								
	comp=Z,2.1nm,0.6s								
AAK	**Ala-Archa**	**29.02**	**328**	P			**P**	**09 42 06.6**	**+2.0**
MKAR	**Makanchi Array**	**29.40**	**342**	P			**P**	**09 42 08.1**	**+0.3**
	comp=Z,5.2nm,0.6s,baz=152,slow=9.3,SNR=41								
	comp=Z,5.2nm,0.6s								
MKAR	**Makanchi Array**	**29.40**	**342**	P			**P**	**09 42 08.2**	**+0.4**
SONM	**Songino Array**	**30.11**	**16**	P			**P**	**09 42 13.6**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=201,slow=9.8,SNR=12								
SONM				ScP			**ScP**	**09 48 50.9**	**-2.1**
	comp=Z,1.7nm,0.6s,baz=203,slow=2.6,SNR=8.3								
	comp=Z,1.5nm,0.4s								
DAV	**Davao City (W)**	**32.23**	**108**	LR		LR		09 56 26.6	
	comp=Z,86nm,19.5s,baz=292,slow=38								
KURBB	**Kurchatov Arra**	**33.94**	**341**	P			**P**	**09 42 47.7**	**+0.1**
	comp=Z,6.7nm,0.6s,baz=152,slow=8.3,SNR=35								
KURBB				ScP			**ScP**	**09 49 04.6**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=140,slow=2.7,SNR=5.8								
	comp=Z,6.7nm,0.6s								
KURK	**Kurchatov**	**33.99**	**342**				**P**	**09 42 48.2**	**+0.2**
KURK				IAmb		IAmb		09 42 48.9	
	comp=Z,8.3nm,0.7s								
ZAA0	**Zalesovo Array**	**35.55**	**350**				**P**	**09 43 01.8**	**+0.4**
ZALV	**Zalesovo Beam**	**35.55**	**350**	P			**P**	**09 43 01.4**	**0.0**
	comp=Z,6.2nm,0.6s,baz=168,slow=9.3,SNR=25								
	comp=Z,6.2nm,0.6s								
ZALV	**Zalesovo Beam**	**35.55**	**350**				**P**	**09 43 01.6**	**+0.2**
BVAR	**Borovoye Array**	**38.73**	**336**	P			**P**	**09 43 28.1**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=140,slow=11,SNR=3.7								
	comp=Z,1.4nm,0.7s								
USRK	**Ussuriysk Ar.**	**39.79**	**43**	P			**P**	**09 43 35.5**	**-1.8**
	comp=Z,1.0nm,0.4s,baz=259,slow=6.4,SNR=4.6								
	comp=Z,1.0nm,0.4s								
AB31	**Akbulak array**	**40.99**	**325**				**P**	**09 43 48.2**	**+1.1**
ABKAR	**Akbulak array**	**40.99**	**325**	P			**P**	**09 43 48.2**	**+1.0**
AKTO	**Aktyubinsk**	**42.69**	**326**	P			**P**	**09 44 01.6**	**+0.6**
	comp=Z,3.1nm,0.5s,baz=113,slow=8.8,SNR=14								
	comp=Z,3.1nm,0.5s								
RAYN	**Ar Rayn**	**45.95**	**284**				**P**	**09 44 28.6**	**+1.1**
ARTI	**Arti**	**46.02**	**333**	P			**P**	**09 44 27.3**	**-0.3**
	comp=Z,2.7nm,0.6s,baz=108,slow=5.2,SNR=3.8								
	comp=Z,2.7nm,0.6s								
KNRA	**Kununurra**	**48.13**	**134**	P			**P**	**09 44 43.7**	**-0.8**
KNRA				IAmb		IAmb		09 45 25.8	
	comp=Z,12nm,1.4s								
WB0	**Warramunga Arr**	**54.81**	**133**	P			**P**	**09 45 34.1**	**-0.3**
WB0				IAmb		IAmb		09 45 52.5	
	comp=Z,3.9nm,0.8s								
WRA	**Warramunga Arr**	**54.90**	**133**	P			**P**	**09 45 34.7**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=320,slow=7.4,SNR=59								
WRA				PcP			**PcP**	**09 46 36.0**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=320,slow=3.6,SNR=9.3								
	comp=Z,2.4nm,0.5s								
WRA	**Warramunga Arr**	**54.90**	**133**	P			**P**	**09 45 34.6**	**-0.5**
WRAB	**Tennant Creek**	**54.90**	**133**	P			**P**	**09 45 34.8**	**-0.3**
WRAB				IAmb		IAmb		09 45 53.3	
	comp=Z,6.1nm,1.0s								
TIXI	**Tiksi**	**56.10**	**12**	P			**P**	**09 45 41.2**	**-1.8**
ASAR	**Alice Springs**	**57.16**	**137**	P			**P**	**09 45 51.4**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=316,slow=7.1,SNR=18								
	comp=Z,1.7nm,0.6s								
FINES	**FINESS Array B**	**63.19**	**330**	P			**P**	**09 46 32.0**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=93,slow=7.6,SNR=8.5								
	comp=Z,4.0nm,0.8s								
FINES	**FINESS Array B**	**63.19**	**330**	P			**P**	**09 46 32.6**	**+0.7**
CTAO	**Charters Tower**	**63.76**	**125**	P			**P**	**09 46 35.1**	**-1.2**
CTAO				IAmb		IAmb		09 46 38.2	
	comp=Z,9.8nm,1.3s								
ARCES	**ARCESS Array B**	**64.97**	**339**	P			**P**	**09 46 43.5**	**0.0**
	comp=Z,2.4nm,0.5s,baz=82,slow=8.0,SNR=24								
	comp=Z,2.4nm,0.5s								
STKA	**Stephens Creek**	**67.73**	**138**	P			**P**	**09 47 01.8**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=338,slow=11,SNR=2.3								
	comp=Z,1.6nm,0.7s								
HFS	**Hagfors**	**69.16**	**328**	P			**P**	**09 47 10.1**	**-0.1**
	comp=Z,3.6nm,0.5s,baz=108,slow=4.8,SNR=13								
	comp=Z,3.6nm,0.5s								
GERES	**GERESS Array B**	**70.02**	**316**	P			**P**	**09 47 16.5**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=47,slow=4.2,SNR=5.2								
	comp=Z,1.0nm,0.6s								
NB2	**NORSAR Subarra**	**70.33**	**329**	P			**P**	**09 47 17.4**	**-0.1**

KTH **Kantishna Hill** 0.67 343 Pn 09 38 53.1 +0.3
KTH IAML 09 39 06.6
comp=N,3μm,1.0s
KTH **Kantishna Hill** 0.67 343 Sn 09 39 05.0 -0.3
WAT7 **Susitna Watana** 0.76 96 Pn 09 38 53.8 +0.1
WAT7 Sn 09 39 06.7 -0.2
PPLA **Purkeypile** 0.78 269 Pn 09 38 54.4 +0.5
PPLA Sn Sn 09 39 07.5 +0.2
PPLA IAML 09 39 08.1
comp=E,4μm,1.3s
PPLA IAML 09 39 09.0
comp=N,6μm,1.0s
PPLA **Purkeypile** 0.78 269 P Pn 09 38 54.3 +0.5
baz=87,SNR=301
RND **Reindeer** 0.89 56 Pn 09 38 55.3 +0.4
RND IAML 09 39 09.9
comp=E,4μm,0.8s
RND IAML 09 39 10.1
comp=N,3μm,0.6s
WAT1 **Susitna Watana** 0.89 95 Pn 09 38 55.1 +0.1
WAT1 Sn 09 39 09.1 -0.1
WAT1 **Susitna Watana** 0.89 95 P Pn 09 38 55.0 +0.1
baz=277
SKT **Skwentna** 1.06 208 Pn 09 38 56.6 -0.1
SKT IAML 09 39 13.0
comp=E,3μm,1.0s
SKT IAML 09 39 15.9
comp=N,3μm,0.4s
SKT **Skwentna** 1.06 208 Sn 09 39 11.6 -0.8
SKT **Skwentna** 1.06 208 P Pn 09 38 56.7 -0.1
baz=26,SNR=314
MCK **McKinley** 1.08 40 Pn 09 38 57.5 +0.5
MCK **McKinley** 1.08 40 P Pn 09 38 57.4 +0.5
baz=222,SNR=185
M22K **Willow** 1.18 171 Pn 09 38 58.1 0.0
M22K **Willow** 1.18 171 P Pn 09 38 58.1 0.0
baz=351,SNR=163
BPAW **Bear Paw Mtn.** 1.21 350 Pn 09 38 58.5 +0.1
BPAW **Bear Paw Mtn.** 1.21 350 P Pn 09 38 58.5 +0.1
baz=170,SNR=236
CHUM **Lake Minchumin** 1.27 320 Pn 09 38 59.5 +0.4
CHUM Sn 09 39 16.0 -0.6
CHUM **Lake Minchumin** 1.27 320 P Pn 09 38 59.5 +0.4
baz=139,SNR=364
WAT6 **Susitna Watana** 1.31 104 Pn 09 38 59.8 -0.1
WAT6 Sn 09 39 17.6 -0.3
WAT6 **Susitna Watana** 1.31 104 P Pn 09 38 59.7 -0.1
baz=286,SNR=349
BWN **Browne** 1.34 20 Pn 09 39 00.7 +0.8
BWN IAML 09 39 19.6
comp=E,2μm,0.8s
BWN IAML 09 39 23.8
comp=N,2μm,0.7s
BWN **Browne** 1.34 20 Sn 09 39 18.6 +0.5
GHO **Glory Hole Cre** 1.36 147 Pn 09 39 01.2 +0.8
GHO **Glory Hole Cre** 1.36 147 Sn 09 39 19.9 +1.1
DHY **Denali Highway** 1.43 82 Pn 09 39 01.4 +0.2
DHY IAML 09 39 21.9
comp=E,4μm,0.8s
DHY IAML 09 39 22.1
comp=N,3μm,0.7s
DHY **Denali Highway** 1.43 82 Sn 09 39 20.6 +0.2
DHY **Denali Highway** 1.43 82 P Pn 09 39 01.4 +0.2
baz=265,SNR=225
SUA **Susitna One** 1.47 185 Pn 09 39 02.0 +0.4
SUA IAML 09 39 24.1
comp=E,2μm,0.7s
SUA IAML 09 39 26.8
comp=N,2μm,0.6s
SUA **Susitna One** 1.47 185 P Pn 09 39 02.1 +0.4
baz=4.2,SNR=804
PMR **Palmer** 1.48 154 Pn 09 39 02.0 +0.3
PMR IAML 09 39 25.5
comp=E,3μm,0.6s
PMR IAML 09 39 25.7
comp=N,3μm,0.7s
PMR **Palmer** 1.48 154 P Pn 09 39 01.9 +0.3
PMR **Palmer** 1.48 154 S Sn 09 39 22.2 +1.1
PMR **Palmer** 1.48 154 P Pn 09 39 01.9 +0.3
baz=335,SNR=474
SML **Sawmill** 1.50 137 Pn 09 39 02.7 +0.6
SML IAML 09 39 26.8
comp=N,5μm,0.4s
SML **Sawmill** 1.50 137 P Pn 09 39 02.6 +0.6
baz=319,SNR=193
STLK **Strandline Lak** 1.56 204 Pn 09 39 03.0 +0.2
STLK IAML 09 39 26.7
comp=N,2μm,0.4s
STLK IAML 09 39 27.2
comp=E,4μm,0.6s
STLK **Strandline Lak** 1.56 204 Sn 09 39 22.5 -0.5
M20K **Styx River** 1.61 231 Pn 09 39 03.3 -0.1
M20K **Styx River** 1.61 231 IAML 09 39 24.5
comp=E,3μm,0.3s
M20K IAML 09 39 28.8
comp=N,2μm,0.6s
M20K **Styx River** 1.61 231 P Pn 09 39 03.4 -0.1
baz=48
L20K **Farewell, AK** 1.62 256 Pn 09 39 03.4 -0.2
L20K IAML 09 39 25.0
comp=E,2μm,1.0s
L20K IAML 09 39 25.5
comp=N,2μm,0.8s
L20K **Farewell, AK** 1.62 256 P Pn 09 39 03.3 -0.2
baz=72,SNR=95
K20K **Telida** 1.68 287 Sn 09 39 24.7 -1.1
K20K **Telida** 1.68 287 Pn 09 39 04.5 +0.2
K20K IAML 09 39 25.8
comp=E,2μm,0.8s
K20K **Telida** 1.68 287 P Pn 09 39 04.5 +0.2
baz=104,SNR=248
M23K **Glacier View** 1.71 130 P Pn 09 39 04.9 +0.2
baz=312,SNR=194
FIS **Fire Island** 1.79 176 Pn 09 39 07.2 +1.6
FIS **Fire Island** 1.79 176 IAML 09 39 35.5
comp=N,4μm,1.1s
KNK **Knik Glacier** 1.79 147 Pn 09 39 06.0 +0.3
KNK **Knik Glacier** 1.79 147 P Pn 09 39 05.9 +0.3
baz=328,SNR=348
NEA2 **Nenana** 1.79 20 Pn 09 39 05.8 +0.2
NEA2 IAML 09 39 28.5
comp=N,1μm,0.8s
NEA2 IAML 09 39 31.1
comp=E,856nm,0.8s
NEA2 **Nenana** 1.79 20 Sn 09 39 27.1 -1.2
NEA2 **Nenana** 1.79 20 P Pn 09 39 05.9 +0.2
baz=202,SNR=150
SCM **Sheep Creek Mo** 1.83 125 IAML 09 39 32.2
comp=E,4μm,0.6s
SCM IAML 09 39 40.9
comp=N,4μm,0.6s
SCM **Sheep Creek Mo** 1.83 125 P Pn 09 39 06.5 +0.3
baz=308,SNR=113
RC01 **Rabbit Creek A** 1.87 169 Pn 09 39 07.3 +0.7
RC01 IAML 09 39 37.2
comp=N,2μm,0.6s
RC01 IAML 09 39 40.3
comp=E,1μm,0.6s
RC01 **Rabbit Creek A** 1.87 169 P Pn 09 39 06.4 -0.2
baz=349,SNR=225
SPU **Mount Spurr** 1.89 204 Pn 09 39 07.1 +0.1
SPCR **Spurr Chakacha** 1.91 206 P Pn 09 39 07.3 +0.1
baz=24,SNR=106
N20K **Mount Spurr** 1.91 206 P Pn 09 39 07.3 +0.1
baz=24,SNR=124
J20K **Nowinta River** 2.07 309 Pn 09 39 09.3 +0.2
J20K **Nowinta River** 2.07 309 IAML 09 39 34.8
comp=E,738nm,0.8s
J20K **Nowinta River** 2.07 309 P Pn 09 39 09.5 +0.3
baz=126,SNR=263
M19K **Big River Lodg** 2.08 242 Pn 09 39 09.0 -0.4
M19K IAML 09 39 40.1
comp=N,814nm,0.6s
M19K **Big River Lodg** 2.08 242 P Pn 09 39 09.0 -0.4
baz=59
L19K **White Mountain** 2.15 252 Pn 09 39 10.2 -0.2
L19K **White Mountain** 2.15 252 IAML 09 39 37.3
comp=E,898nm,1.0s
L19K **White Mountain** 2.15 252 P Pn 09 39 10.1 -0.2
baz=68,SNR=152
M24K **Tolsona, Glenn** 2.16 110 P Pn 09 39 11.6 +1.1
baz=294,SNR=513
HDA **Harding Lake** 2.18 45 Pn 09 39 10.9 +0.3
HDA IAML 09 39 37.8
comp=E,1μm,0.4s
HDA IAML 09 39 45.1
comp=N,1μm,0.8s
HDA **Harding Lake** 2.18 45 P Pn 09 39 10.9 +0.3
baz=228,SNR=268
CAPN **Captain Cook N** 2.18 189 Pn 09 39 13.5 +2.8
CAPN **Captain Cook N** 2.18 189 P Pn 09 39 13.7 +3.0
baz=7.7,SNR=16
COLA **College** 2.28 30 Pn 09 39 12.3 +0.4
COLA IAML 09 39 41.1
comp=N,971nm,0.8s
COLA IAML 09 39 44.8
comp=N,2μm,0.6s
COLA **College** 2.28 30 P Pn 09 39 12.4 +0.4
COLA **College** 2.28 30 P Pn 09 39 12.3 +0.4
baz=212
I23K **Minto, Yukon-K** 2.29 12 P Pn 09 39 12.6 +0.5
baz=193,SNR=142
PAX **Paxson** 2.30 86 IAML 09 39 47.8
comp=E,1μm,0.6s
PAX IAML 09 39 48.0
comp=N,1μm,0.7s
PAX **Paxson** 2.30 86 P Pn 09 39 13.3 +1.0
baz=271,SNR=679
K24K **Donnelly Dome** 2.30 65 Pn 09 39 13.2 +0.9
K24K **Donnelly Dome** 2.30 65 P Pn 09 39 13.2 +0.9
baz=250,SNR=106
PWL **Port Wells** 2.31 153 Pn 09 39 12.2 -0.1
PWL **Port Wells** 2.31 153 P Pn 09 39 12.3 -0.1
baz=334,SNR=28
I21K **Tanana** 2.36 345 Pn 09 39 13.5 +0.4
I21K **Tanana** 2.36 345 P Pn 09 39 13.6 +0.6
baz=163,SNR=396
SLKM **Skilak Lake** 2.42 177 IAML 09 39 54.9
comp=E,1μm,0.7s
SLKM IAML 09 39 55.5
comp=N,761nm,0.6s
ILAR **Eielson Array** 2.45 39 P Pn 09 39 14.2 -0.1
comp=N,70nm,0.4s,baz=221,slow=14,SNR=1221
ILAR S Sn 09 39 42.5 -1.1
comp=N,96nm,0.6s,baz=223,slow=17,SNR=8.9
ILAR **Eielson Array** 2.45 39 Pn 09 39 14.4 +0.1
O22K **Cooper Landing** 2.47 171 Pn 09 39 15.4 +0.9
O22K **Cooper Landing** 2.47 171 P Pn 09 39 14.8 +0.3
baz=352,SNR=76
HARP **HAARP** 2.52 100 P Pn 09 39 16.4 +1.3
baz=284,SNR=414
J19K **Poorman** 2.54 297 Pn 09 39 15.6 +0.2
J19K **Poorman** 2.54 297 IAML 09 39 47.0
comp=E,463nm,1.1s
J19K IAML 09 39 47.1
comp=N,469nm,0.9s
J19K **Poorman** 2.54 297 P Pn 09 39 15.7 +0.2
baz=113,SNR=165
DFR **Drift River** 2.56 205 Pn 09 39 16.0 +0.3
KLU **Klutina** 2.58 122 Pn 09 39 15.6 -0.4
KLU IAML 09 39 55.5
comp=N,2μm,0.4s
KLU IAML 09 39 56.7
comp=E,2μm,0.5s
KLU **Klutina** 2.58 122 P Pn 09 39 15.6 -0.4
baz=306,SNR=83
I20K **Naaghedeneel** 2.58 319 Pn 09 39 16.4 +0.5
I20K **Naaghedeneel** 2.58 319 IAML 09 39 47.6
comp=N,743nm,1.1s
I20K IAML 09 40 10.4
comp=E,1μm,1.4s
I20K **Naaghedeneel** 2.58 319 P Pn 09 39 16.5 +0.5
baz=135,SNR=15
RDJH **Redoubt Jerge** 2.58 206 Pn 09 39 16.8 +0.7
POKR **Poker Plat Res** 2.58 30 IAML 09 39 49.7
comp=N,482nm,0.7s
POKR **Poker Plat Res** 2.58 30 P Pn 09 39 16.4 +0.5
baz=213,SNR=50
GLI **Glacier Island** 2.60 140 Pn 09 39 16.0 -0.2
GLI **Glacier Island** 2.60 140 P Pn 09 39 15.9 -0.4
baz=323,SNR=16
NCT **North Crescent** 2.63 207 Pn 09 39 17.0 +0.2
RIDG **Independent Ri** 2.68 70 Pn 09 39 18.0 +0.7
RIDG IAML 09 39 54.8
comp=E,1μm,0.9s
RIDG IAML 09 40 07.7
comp=N,951nm,1.0s
RIDG **Independent Ri** 2.68 70 P Pn 09 39 18.0 +0.7
baz=255,SNR=246
RDWB **Redoubt West** 2.68 206 Pn 09 39 18.1 +0.6
RED **Redoubt Volcan** 2.73 204 Pn 09 39 18.9 +0.8
RED IAML 09 39 54.0
comp=N,457nm,0.8s
RED IAML 09 39 56.0
comp=E,714nm,0.9s
N19K **Bonanza Creek** 2.84 224 IAML 09 39 54.9
comp=N,603nm,0.9s
N19K IAML 09 39 56.4
comp=E,404nm,0.6s
N19K **Bonanza Creek** 2.84 224 P Pn 09 39 19.9 +0.4
baz=40,SNR=69
J25K **Salcha River,** 2.84 51 Pn 09 39 19.7 +0.3
J25K **Salcha River,** 2.84 51 IAML 09 39 57.0
comp=E,581nm,0.5s
J25K IAML 09 39 59.1
comp=N,711nm,0.7s
J25K **Salcha River,** 2.84 51 P Pn 09 39 19.8 +0.3
baz=236,SNR=118
DIV **Divide** 2.86 127 Pn 09 39 18.9 -0.8
SEW **Seward** 2.87 170 IAML 09 40 08.2
comp=N,710nm,0.8s
SEW IAML 09 40 10.5
comp=E,627nm,0.7s
SEW **Seward** 2.87 170 P Pn 09 39 20.3 +0.6
baz=350,SNR=27
J18K **Innoko River** 2.87 284 Pn 09 39 19.9 +0.1
J18K **Innoko River** 2.87 284 P Pn 09 39 20.0 +0.1
baz=98
M18K **Stony River** 2.88 243 Pn 09 39 19.6 -0.3
M18K **Stony River** 2.88 243 P Pn 09 39 19.7 -0.3
baz=58,SNR=57
FID **Port Fidalgo** 2.89 137 Pn 09 39 19.4 -0.7
FID **Port Fidalgo** 2.89 137 IAML 09 40 08.1
comp=N,2μm,1.1s
H21K **Melozitna Rive** 2.93 341 P Pn 09 39 20.9 +0.3
baz=159,SNR=126
H23K **Yukon River** 2.95 8 Pn 09 39 21.3 +0.5
H23K **Yukon River** 2.95 8 P Pn 09 39 21.3 +0.5
baz=189
L18K **Granite Mounta** 2.95 259 Pn 09 39 20.9 0.0
L18K **Granite Mounta** 2.95 259 IAML 09 40 10.8
comp=N,335nm,1.1s
L18K **Granite Mounta** 2.95 259 P Pn 09 39 20.8 0.0
baz=73,SNR=34
DOT **Dot Lake** 3.00 73 IAML 09 40 01.7
comp=E,1μm,0.8s
DOT IAML 09 40 05.7
comp=N,797nm,0.8s
H22K **Ishtalitna Cre** 3.01 353 Pn 09 39 22.3 +0.5
H22K **Ishtalitna Cre** 3.01 353 P Pn 09 39 22.2 +0.5
baz=172,SNR=68
O20K **Slope Mountain** 3.03 201 Pn 09 39 23.3 +1.3
O20K **Slope Mountain** 3.03 201 P Pn 09 39 22.8 +0.8
baz=19,SNR=17
N25K **Chitina, Valde** 3.06 113 Pn 09 39 22.4 0.0
N25K IAML 09 40 08.1
comp=E,684nm,0.5s
N25K IAML 09 40 10.6
comp=N,955nm,0.6s
N25K **Chitina, Valde** 3.06 113 P Pn 09 39 22.3 0.0
baz=298,SNR=147
MENT **Mentasta** 3.10 87 Pn 09 39 23.7 +0.8
MENT **Mentasta** 3.10 87 IAML 09 40 08.7
comp=E,1μm,0.7s
MENT IAML 09 40 10.1
comp=N,1μm,0.8s
MENT **Mentasta** 3.10 87 P Pn 09 39 23.9 +1.0
MENT **Mentasta** 3.10 87 S Sn 09 39 59.9 +0.9
SCRK **Sand Creek** 3.11 67 IAML 09 40 03.6
comp=E,584nm,0.9s
SCRK IAML 09 40 04.2
comp=N,596nm,0.9s
SCRK **Sand Creek** 3.11 67 P Pn 09 39 23.2 +0.2
baz=253,SNR=281
H24K **Noodor Dome** 3.14 20 P Pn 09 39 23.7 +0.3
baz=202,SNR=51
IVE **Iliamna Volcan** 3.15 204 Pn 09 39 24.5 +0.8
HIN **Hinchinbrook I** 3.17 141 Pn 09 39 23.3 -0.5
BRLK **Bradley Lake** 3.17 184 IAML 09 40 12.1
comp=E,800nm,0.6s
BRSE **Bradley Lake S** 3.19 182 P Pn 09 39 24.6 +0.4
baz=1.9,SNR=40
ILSW **Iliamna Southw** 3.21 205 Pn 09 39 25.6 +1.1
ILSW **Iliamna Southw** 3.21 205 IAML 09 40 10.8
comp=E,316nm,0.7s
H20K **Anotleneega Mo** 3.22 325 Pn 09 39 24.7 +0.3
H20K **Anotleneega Mo** 3.22 325 P Pn 09 39 24.8 +0.3
baz=142,SNR=41
ILS **Iliamna Low So** 3.22 204 Pn 09 39 25.7 +1.1
L26K **Log Cabin Wild** 3.26 85 IAML 09 40 15.2
comp=E,1μm,0.6s
L26K **Log Cabin Wild** 3.26 85 P Pn 09 39 26.1 +1.0
baz=271,SNR=374
EYAK **Cordova Ski Ar** 3.28 134 IAML 09 40 20.3
comp=N,964nm,0.9s
EYAK IAML 09 40 20.8
comp=E,846nm,0.8s
EYAK **Cordova Ski Ar** 3.28 134 P Pn 09 39 25.2 0.0
EYAK **Cordova Ski Ar** 3.28 134 S Sn 09 40 03.4 +0.1
EYAK **Cordova Ski Ar** 3.28 134 P Pn 09 39 25.2 0.0
baz=318,SNR=9.5
P23K **Montague Islan** 3.28 152 Pn 09 39 24.8 -0.6
P23K **Montague Islan** 3.29 152 P Pn 09 39 24.8 -0.6
baz=334,SNR=12
O19K **Port Alsworth** 3.29 216 Pn 09 39 26.2 +0.9
O19K **Port Alsworth** 3.29 216 IAML 09 40 04.4
comp=N,518nm,0.6s
O19K IAML 09 40 05.8
comp=E,786nm,0.5s
O19K **Port Alsworth** 3.29 216 P Pn 09 39 26.3 +0.9
baz=32,SNR=51
HOM **Homer** 3.32 190 Pn 09 39 27.1 +1.3
HOM **Homer** 3.32 190 P Pn 09 39 27.1 +1.3
baz=9.0
GCSA **Galena City Sc** 3.37 306 P Pn 09 39 27.0 +0.5
baz=120,SNR=34
IMAR **Indian Mountai** 3.38 337 Pn 09 39 26.9 +0.3
PRP **Porcupine Dome** 3.39 38 Pn 09 39 27.1 +0.2
PRP IAML 09 40 12.5
comp=N,318nm,0.6s
PRP IAML 09 40 12.8
comp=E,269nm,0.6s
PRP **Porcupine Dome** 3.39 38 P Pn 09 39 26.9 0.0
baz=222,SNR=96
BMRM **Bremner River** 3.40 123 Pn 09 39 26.3 -0.7
BMRM **Bremner River** 3.40 123 P Pn 09 39 26.3 -0.7
baz=308,SNR=21
N18K **Kilae Creek** 3.41 231 Pn 09 39 27.2 +0.2
N18K **Kilae Creek** 3.41 231 IAML 09 40 07.1
comp=N,309nm,1.0s
N18K IAML 09 40 07.1
comp=E,570nm,0.8s
N18K **Kilae Creek** 3.41 231 P Pn 09 39 27.2 +0.2
baz=46,SNR=45
CNPM **China Poot** 3.42 186 IAML 09 40 20.1
comp=N,913nm,0.5s
GLB **Gilahina Butte** 3.47 112 IAML 09 40 22.2
comp=E,565nm,0.6s
GLB IAML 09 40 24.3
comp=N,796nm,0.9s
J26L **Joseph Creek** 3.47 60 IAML 09 40 13.0
comp=N,973nm,0.7s
J26L IAML 09 40 16.1
comp=E,929nm,0.7s
J26L **Joseph Creek** 3.47 60 P Pn 09 39 28.4 +0.6
baz=246,SNR=396
M26K **Nabesna, AK** 3.50 95 IAML 09 40 26.8
comp=N,525nm,0.6s
M26K IAML 09 40 27.6
comp=E,375nm,0.5s
M26K **Nabesna, AK** 3.50 95 P Pn 09 39 28.5 +0.3
baz=282,SNR=50
P19K **Oil Pt** 3.54 203 Pn 09 39 29.6 +0.9
P19K **Oil Pt** 3.54 203 P Pn 09 39 29.8 +1.0
baz=21,SNR=11
K17K **Iditarod** 3.59 270 Pn 09 39 29.6 +0.2
K17K **Iditarod** 3.59 270 IAML 09 40 10.2
comp=E,245nm,0.8s
K17K IAML 09 40 37.1
comp=N,265nm,1.0s
K17K **Iditarod** 3.59 270 P Pn 09 39 29.7 +0.3
baz=83
M17K **Holitna River** 3.60 248 Pn 09 39 29.1 -0.5
M17K IAML 09 40 29.3
comp=E,471nm,1.0s
M17K IAML 09 40 35.0
comp=N,606nm,1.1s
M17K **Holitna River** 3.60 248 P Pn 09 39 29.0 -0.5
baz=62,SNR=9.0
H19K **Roundabout Mou** 3.69 318 Pn 09 39 30.9 +0.1
H19K **Roundabout Mou** 3.69 318 P Pn 09 39 31.0 +0.3
baz=133,SNR=21
L17K **Donlin** 3.70 261 Pn 09 39 30.9 -0.1
L17K **Donlin** 3.70 261 P Pn 09 39 30.9 -0.1
baz=74,SNR=43
VRDI **Verde Repeater** 3.72 114 Pn 09 39 31.1 -0.3
VRDI **Verde Repeater** 3.72 114 IAML 09 40 27.9
comp=E,509nm,0.9s
VRDI IAML 09 40 28.2
comp=N,716nm,1.2s
RAGM **Ragged Mountai** 3.76 130 Pn 09 39 31.8 0.0
G23K **Bananza Creek** 3.81 3 Pn 09 39 33.2 +0.8
G23K **Bananza Creek** 3.81 3 P Pn 09 39 33.3 +0.8
baz=183,SNR=350
O18K **Koktuh Hills** 3.82 219 IAML 09 40 40.0
comp=E,190nm,1.2s
O18K IAML 09 40 45.2
comp=N,195nm,0.9s
O18K **Koktuh Hills** 3.82 219 P Pn 09 39 33.2 +0.6
baz=34,SNR=16
AU22 **Augustine Moun** 3.82 203 Pn 09 39 33.7 +1.2
MCARA **McCarthy VSAT** 3.83 110 IAML 09 40 44.9
comp=N,752nm,0.9s
MCARA **McCarthy VSAT** 3.83 110 P Pn 09 39 32.9 +0.3
baz=297,SNR=51
G21K **Allakaket** 3.84 342 Pn 09 39 33.2 +0.5
G21K **Allakaket** 3.84 342 P Pn 09 39 33.3 +0.6
baz=159,SNR=24
AUCH **Augustine Cone** 3.84 203 Pn 09 39 33.9 +0.9
J17K **VABM Dome** 3.92 281 Pn 09 39 34.0 0.0
J17K IAML 09 40 18.2
comp=E,142nm,0.8s
J17K IAML 09 40 49.4
comp=N,188nm,1.1s
J17K **VABM Dome** 3.92 281 P Pn 09 39 33.9 0.0
baz=93,SNR=36
K27K **Chicken** 3.94 70 Pn 09 39 35.0 +0.9
K27K **Chicken** 3.94 70 IAML 09 40 23.3
comp=E,600nm,0.8s
K27K IAML 09 40 23.3
comp=N,635nm,1.0s
K27K **Chicken** 3.94 70 P Pn 09 39 34.6 +0.5
baz=257
HMT **Hamilton** 3.94 128 Pn 09 39 33.6 -0.6
L27K **Beaver Creek,** 3.96 84 Pn 09 39 34.5 +0.1
L27K **Beaver Creek,** 3.96 84 IAML 09 40 39.0
comp=N,180nm,0.9s
L27K IAML 09 40 43.5
comp=E,162nm,1.1s
L27K **Beaver Creek,** 3.96 84 P Pn 09 39 34.6 +0.1
baz=272
BCAR **Beaver Creek A** 3.98 84 Pn 09 39 34.8 +0.1
N17K **Nushagak Hills** 3.99 236 Pn 09 39 35.1 +0.3
N17K **Nushagak Hills** 3.99 236 IAML 09 40 36.5
comp=N,236nm,0.9s
N17K IAML 09 40 37.9
comp=E,246nm,0.9s
N17K **Nushagak Hills** 3.99 236 P Pn 09 39 34.9 +0.1
baz=50,SNR=34
G24K **Hadweenzic Riv** 4.01 17 Pn 09 39 35.7 +0.6
G24K **Hadweenzic Riv** 4.01 17 P Pn 09 39 35.4 +0.3
baz=200,SNR=66
I26K **Coal Creek Min** 4.01 50 Pn 09 39 35.5 +0.3
I26K **Coal Creek Min** 4.01 50 IAML 09 40 28.3
comp=N,492nm,0.7s
I26K **Coal Creek Min** 4.01 50 P Pn 09 39 35.4 +0.3
baz=237
M27K **Edge Creek, AK** 4.02 94 Pn 09 39 36.3 +1.0
M27K **Edge Creek, AK** 4.02 94 IAML 09 40 44.6
comp=N,371nm,1.0s
M27K IAML 09 40 45.7
comp=E,263nm,0.8s
M27K **Edge Creek, AK** 4.02 94 P Pn 09 39 36.2 +0.9
baz=282,SNR=77
Q23K **Middleton Isla** 4.04 148 P Pn 09 39 36.2 +0.7
baz=332
G22K **Bettles** 4.04 354 Pn 09 39 36.2 +0.7
G22K **Bettles** 4.04 354 P Pn 09 39 36.1 +0.6
baz=174,SNR=52
CRQM **Cirque** 4.11 119 Pn 09 39 36.1 -0.5

BERG Berg Lake 4.11 125 Pn 09 39 36.1 -0.4
NICHA Nichawak Mount 4.12 128 Pn 09 39 36.0 -0.6
H18K Honhosa River 4.12 306 Pn 09 39 36.9 +0.3
H18K Honhosa River 4.12 306 P Pn 09 39 37.1 +0.5
baz=119,SNR=15
CRQE Cirque 4.13 118 P Pn 09 39 36.3 -0.5
baz=305,SNR=13
KAIM Kayak Island 4.18 133 Pn 09 39 36.4 -1.1
KAIM Kayak Island 4.18 133 IAML 09 41 09.4
comp=E,467nm,1.0s
KAIM Kayak Island 4.18 133 P Pn 09 39 36.5 -1.0
baz=318
P18K Big Mountain, 4.22 215 Pn 09 39 39.0 +1.1
P18K Big Mountain, 4.22 215 P Pn 09 39 38.6 +0.7
baz=31,SNR=15
TGL Tana Glacier 4.23 117 Pn 09 39 37.3 -0.9
KHIT Khitrov Hills 4.25 123 Pn 09 39 37.6 -0.9
Q19K Cape Douglas, 4.29 202 Pn 09 39 40.0 +1.0
Q19K Cape Douglas, 4.29 202 P Pn 09 39 40.0 +1.0
baz=20,SNR=23
G25K Bearman Lake 4.29 24 P Pn 09 39 39.5 +0.7
baz=208,SNR=71
FYU Fort Yukon 4.30 29 Pn 09 39 39.5 +0.6
FYU Fort Yukon 4.30 29 IAML 09 40 52.2
comp=E,128nm,1.2s
FYU IAML 09 40 53.8
comp=N,150nm,1.5s
SUCK Suckling Hills 4.30 129 Pn 09 39 38.3 -0.7
G19K Purcell Mounta 4.31 322 P Pn 09 39 39.3 +0.2
baz=136,SNR=6.0
COLD Coldfoot 4.33 1 P Pn 09 39 40.2 +0.8
baz=182,SNR=117
L16K Owhat River 4.36 258 Pn 09 39 39.8 -0.1
L16K IAML 09 40 50.8
comp=N,106nm,0.9s
L16K IAML 09 41 02.1
comp=E,137nm,1.2s
L16K Owhat River 4.36 258 P Pn 09 39 39.7 -0.1
baz=70,SNR=16
WAX Waxell Ridge 4.40 121 Pn 09 39 39.9 -0.6
SYI Shuyak Island 4.42 193 Pn 09 39 41.1 +0.4
Q20K Shuyak Island 4.42 193 P Pn 09 39 41.2 +0.5
baz=11,SNR=11
M16K Timber Creek 4.42 248 Pn 09 39 40.4 -0.3
M16K Timber Creek 4.42 248 IAML 09 41 04.4
comp=N,116nm,0.7s
M16K IAML 09 41 11.9
comp=E,100nm,0.8s
M16K Timber Creek 4.42 248 P Pn 09 39 40.6 -0.2
baz=61
BGLC Bering Glacier 4.45 126 Pn 09 39 41.5 +0.5
BVCY Beaver Creek 4.47 92 P Pn 09 39 41.9 +0.5
baz=281,SNR=148
O17K Koliganek Bris 4.48 228 P Pn 09 39 41.8 +0.4
baz=42,SNR=25
F21K Alatna River 4.50 345 Pn 09 39 42.2 +0.5
F21K Alatna River 4.50 345 P Pn 09 39 42.6 +0.8
baz=162,SNR=21
ISLE Juniper Island 4.52 117 Pn 09 39 41.1 -1.0
BARN Barnard Glacie 4.56 110 IAML 09 40 57.9
comp=N,274nm,0.5s
J16K Anvik River 4.61 279 Pn 09 39 43.1 0.0
J16K Anvik River 4.61 279 P Pn 09 39 43.3 +0.1
baz=90,SNR=20
H17K Granite Mounta 4.62 300 Pn 09 39 44.1 +0.8
H17K Granite Mounta 4.62 300 IAML 09 40 34.7
comp=N,116nm,1.3s
H17K IAML 09 40 37.5
comp=E,137nm,0.6s
H17K Granite Mounta 4.62 300 P Pn 09 39 44.2 +0.8
baz=112,SNR=27
G18K Tagagawik 4.63 314 Pn 09 39 44.0 +0.5
G18K Tagagawik 4.63 314 IAML 09 40 35.4
comp=N,120nm,0.8s
G18K IAML 09 40 37.5
comp=E,116nm,0.8s
G18K Tagagawik 4.63 314 P Pn 09 39 43.9 +0.4
baz=126,SNR=16
N16K Nishlik Lake 4.64 242 Pn 09 39 43.2 -0.4
N16K Nishlik Lake 4.64 242 P Pn 09 39 43.1 -0.6
baz=54,SNR=9.6
F22K John River 4.66 352 Pn 09 39 44.6 +0.7
F22K John River 4.66 352 P Pn 09 39 44.5 +0.6
baz=171,SNR=10
BAGL Bagley Icefiel 4.68 118 Pn 09 39 43.3 -0.8
GRNC Granite Creek 4.69 114 IAML 09 40 54.4
comp=E,274nm,0.8s
I17K Unalakleet 4.69 286 Pn 09 39 45.0 +0.8
I17K IAML 09 40 36.6
comp=N,135nm,0.7s
I17K IAML 09 40 38.2
comp=E,192nm,0.9s
I17K Unalakleet 4.69 286 P Pn 09 39 45.0 +0.8
baz=97,SNR=19
F20K Avaraart Lake 4.70 334 Pn 09 39 45.3 +0.8
F20K Avaraart Lake 4.70 334 P Pn 09 39 45.1 +0.7
baz=150,SNR=36
I27K Kandik River 4.71 51 IAML 09 40 41.8
comp=N,244nm,1.1s
I27K IAML 09 40 57.0
comp=E,214nm,1.1s
I27K Kandik River 4.71 51 P Pn 09 39 45.3 +0.7
baz=239,SNR=59
P17K Kvichak River 4.72 220 Pn 09 39 45.6 +0.9
P17K Kvichak River 4.72 220 P Pn 09 39 46.0 +1.3
baz=35,SNR=8.6
CTG Chitna Glacier 4.75 110 P Pn 09 39 45.2 0.0
baz=298,SNR=18
F24K Squaw Lake 4.75 12 Pn 09 39 45.7 +0.6
F24K Squaw Lake 4.75 12 P Pn 09 39 45.5 +0.4
baz=195,SNR=15
CTGM Chitina Glacie 4.75 110 Pn 09 39 45.4 +0.1
CTGM Chitina Glacie 4.75 110 IAML 09 41 01.8
comp=E,158nm,0.7s
YUK3 Moose Creek 4.81 99 P Pn 09 39 46.7 +0.5
baz=288,SNR=80
KAHC Katmai Hardscr 4.82 209 Pn 09 39 47.2 +1.0
Q18K Katmai Hardscr 4.82 209 P Pn 09 39 47.5 +1.2
baz=25,SNR=24
YAH Yahtse 4.89 118 Pn 09 39 46.5 -0.8
MESA MESA 4.92 120 Pn 09 39 47.1 -0.6
MESA MESA 4.92 120 P Pn 09 39 47.5 -0.1
baz=308
G26K Porcupine Rive 4.95 32 Pn 09 39 47.7 -0.1
G26K Porcupine Rive 4.95 32 IAML 09 40 49.6
comp=N,225nm,1.2s
G26K IAML 09 40 51.6
comp=E,115nm,1.1s
G26K Porcupine Rive 4.95 32 P Pn 09 39 48.7 +1.0
baz=218,SNR=15
LOGN Logan Glacier 4.96 111 Pn 09 39 47.9 -0.2
LOGN Logan Glacier 4.96 111 IAML 09 41 06.3
comp=E,223nm,0.8s
LOGN IAML 09 41 17.3
comp=N,179nm,1.0s
O16K Kokwok River B 4.96 231 Pn 09 39 48.0 +0.1
O16K Kokwok River B 4.96 231 IAML 09 40 56.2
comp=E,115nm,1.3s
O16K IAML 09 40 57.5
comp=N,109nm,1.2s
O16K Kokwok River B 4.96 231 P Pn 09 39 48.0 +0.1
baz=44,SNR=5.5
F19K Shaleruckik Mo 5.00 325 P Pn 09 39 48.8 +0.2
baz=138
H27K Steamboat Moun 5.09 45 Pn 09 39 49.8 0.0
H27K Steamboat Moun 5.09 45 IAML 09 40 54.5
comp=N,106nm,1.1s
H27K IAML 09 41 05.9
comp=E,110nm,1.1s
H27K Steamboat Moun 5.09 45 P Pn 09 39 51.0 +1.2
baz=234,SNR=55
RKAV Rock Avalanche 5.09 117 Pn 09 39 49.5 -0.5
TABL Table Mountain 5.10 115 Pn 09 39 49.1 -1.0
DAWY Dawson 5.11 72 IAML 09 41 06.9
comp=N,181nm,0.8s
DAWY IAML 09 41 08.2
comp=E,276nm,0.8s
DAWY Dawson 5.11 72 P Pn 09 39 50.2 +0.2
baz=262,SNR=111
F25K Christian Rive 5.12 21 Pn 09 39 50.6 +0.5
F25K Christian Rive 5.12 21 P Pn 09 39 50.3 +0.2
baz=206,SNR=41
G17K Kiwalik Mounta 5.14 305 Pn 09 39 51.4 +1.0
G17K Kiwalik Mounta 5.14 305 P Pn 09 39 50.5 +0.2
baz=116,SNR=5.5
K15K Wolf Creek Mou 5.14 268 Pn 09 39 50.5 +0.2
baz=78,SNR=7.4
KAKN Katmai Knife C 5.15 208 Pn 09 39 51.1 +0.4
BMAR Burnt Mountain 5.17 26 Pn 09 39 51.3 +0.5
E23K Chandalar 5.17 4 Pn 09 39 51.9 +0.9
E23K Chandalar 5.17 4 P Pn 09 39 52.3 +1.4
baz=185,SNR=25
Q16K King Salmon 5.22 218 Pn 09 39 52.1 +0.7
Q16K King Salmon 5.22 218 P Pn 09 39 52.8 +1.4
baz=33
KABU Katmai Buttres 5.23 209 Pn 09 39 52.8 +1.2
E24K Your Creek 5.25 8 Pn 09 39 52.4 +0.5
E24K Your Creek 5.25 8 P Pn 09 39 52.5 +0.7
baz=190,SNR=41
KDAK Kodiak Island 5.26 192 P Pn 09 39 50.4 -1.6
comp=E,17nm,0.3s,baz=35,slow=5.7,SNR=235
KDAK S Sn 09 40 47.6 -3.6
comp=E,76nm,0.5s,baz=42,slow=17,SNR=15
KDAK LR LR 09 41 38.1
comp=E,50nm,19.8s,baz=339,slow=35
KDAK Kodiak Island 5.26 192 Pn 09 39 50.4 -1.6
KDAK Kodiak Island 5.26 192 P Pn 09 39 51.2 -0.8
baz=10
I28M Miner Creek 5.26 57 Pn 09 39 52.8 +0.7
I28M Miner Creek 5.26 57 IAML 09 40 56.8
comp=N,144nm,0.9s
I28M IAML 09 40 57.2
comp=E,231nm,0.7s
I28M Miner Creek 5.26 57 P Pn 09 39 53.6 +1.5
baz=246,SNR=49
E22K Anaktuvuk Pass 5.27 355 Pn 09 39 53.4 +1.3
E22K Anaktuvuk Pass 5.27 355 P Pn 09 39 52.9 +0.8
baz=174
L15K Ungalak Mounta 5.28 261 P Pn 09 39 52.1 -0.2
baz=72
YUK8 Steele Glacier 5.30 103 P Pn 09 39 53.0 +0.1
baz=293,SNR=27
MGLS Mageik Landsli 5.32 208 Pn 09 39 53.7 +0.8
M15K Kasigluk River 5.33 250 P Pn 09 39 53.1 +0.2
baz=61
CHX Chex Hills 5.33 118 Pn 09 39 53.1 +0.1
O28M Mount Upton 5.33 109 Pn 09 39 53.5 +0.2
O28M Mount Upton 5.33 109 IAML 09 41 22.4
comp=N,247nm,0.7s
O28M IAML 09 41 26.9
comp=E,113nm,1.2s
O28M Mount Upton 5.33 109 P Pn 09 39 53.3 0.0
baz=298,SNR=16
ANCK Angle Creek 5.34 210 Pn 09 39 54.3 +1.1
P16K Nushagak River 5.34 226 P Pn 09 39 54.0 +0.9
baz=40
N15K Kwethluk River 5.36 243 Pn 09 39 53.3 0.0
N15K Kwethluk River 5.36 243 IAML 09 41 30.4
comp=E,205nm,0.7s
N15K IAML 09 41 34.0
comp=N,152nm,0.8s
N15K Kwethluk River 5.36 243 P Pn 09 39 53.7 +0.3
baz=55
E19K Redstone River 5.37 331 Pn 09 39 53.9 +0.5
E19K Redstone River 5.37 331 P Pn 09 39 53.9 +0.5
baz=145
CNTC Contact Creek 5.37 212 Pn 09 39 54.8 +1.1
Q17K Contact Creek 5.37 212 P Pn 09 39 54.5 +0.8
baz=27,SNR=12
F18K Selawik 5.38 317 P Pn 09 39 54.6 +1.0
baz=129
G27K Doyon Strip 5.42 40 Pn 09 39 54.0 -0.2
G27K Doyon Strip 5.42 40 P Pn 09 39 54.4 +0.1
baz=228,SNR=40
SAMH Samovar Hills 5.42 117 Pn 09 39 54.5 +0.2
F26K Sheenjek River 5.48 26 Pn 09 39 55.3 +0.3
F26K Sheenjek River 5.48 26 P Pn 09 39 55.5 +0.5
baz=212,SNR=20
H16K Elim 5.49 294 Pn 09 39 55.3 +0.3
H16K Elim 5.49 294 P Pn 09 39 56.3 +1.2
baz=103
M29M Somme Creek 5.56 90 Pn 09 39 56.9 +0.6
M29M Somme Creek 5.56 90 P Pn 09 39 56.6 +0.4
baz=280,SNR=56
E25K Arctic Village 5.61 19 Pn 09 39 57.0 +0.2
E25K Arctic Village 5.61 19 P Pn 09 39 57.6 +0.8
baz=204,SNR=25
L29M L29M 5.63 83 Pn 09 39 57.0 -0.1
L29M L29M 5.63 83 P Pn 09 39 57.3 +0.2
baz=274,SNR=34
PCA Pinnacle 5.66 115 Pn 09 39 57.1 -0.4
PINM Pinnacle 5.66 115 P Pn 09 39 57.4 -0.2
baz=304,SNR=8.6
R18K Karluk 5.72 202 P Pn 09 39 57.7 -0.6
baz=18
E21K Killik River 5.73 347 P Pn 09 40 00.2 +1.8
baz=164,SNR=6.0
G16K Koyuk River 5.75 301 Pn 09 39 59.3 +0.6
G16K Koyuk River 5.75 301 P Pn 09 39 59.7 +1.0
baz=110
TOLK Toolik Lake Re 5.76 3 P Pn 09 40 00.5 +1.7
baz=184,SNR=19
YUK4 Talbot Arm 5.78 101 P Pn 09 39 59.3 +0.1
baz=290,SNR=9.9
F17K Baldwin Pennin 5.81 312 P Pn 09 40 00.9 +1.5
baz=122
M14K Bethel 5.85 253 P Pn 09 40 01.4 +1.4
baz=63
E20K Nigu River 5.86 339 Pn 09 40 01.6 +1.5
E20K Nigu River 5.86 339 P Pn 09 40 01.4 +1.3
baz=154,SNR=14
O15K Ungalikthiuk R 5.88 235 Pn 09 40 01.1 +0.6
O15K Ungalikthiuk R 5.88 235 P Pn 09 40 01.1 +0.6
baz=46
OHAK Old Harbor 5.88 195 Pn 09 39 58.9 -1.7
OHAK Old Harbor 5.88 195 P Pn 09 39 58.8 -1.7
OHAK Old Harbor 5.88 195 P Pn 09 39 59.1 -1.4
baz=12
K29M Barlow Dome 5.91 75 Pn 09 40 01.1 +0.1
K29M Barlow Dome 5.91 75 P Pn 09 40 00.9 0.0
baz=267,SNR=35
PLK2 Peulik 2 5.92 212 Pn 09 40 02.5 +1.4
L14K Kuka Creek 5.93 260 Pn 09 40 01.7 +0.6
L14K Kuka Creek 5.93 260 P Pn 09 40 01.7 +0.6
baz=69
J14K Nanvaranak Lak 5.99 274 P Pn 09 40 04.0 +2.1
baz=82
PLK4 Peulik 4 6.05 211 Pn 09 40 04.0 +1.1
R17L Mt. Peulik Vol 6.05 211 P Pn 09 40 04.0 +1.2
baz=26
D22K Ayikyak River 6.05 352 Pn 09 40 04.5 +1.7
D22K Ayikyak River 6.05 352 P Pn 09 40 04.4 +1.7
baz=171,SNR=7.3
YUK6 Outpost Mounta 6.06 104 Pn 09 40 02.9 -0.2
YUK6 Outpost Mounta 6.06 104 P Pn 09 40 03.1 0.0
baz=294,SNR=8.5
D23K Nanushuk River 6.07 359 Pn 09 40 05.1 +2.0
D23K Nanushuk River 6.07 359 P Pn 09 40 05.0 +2.0
baz=179,SNR=17
H29M Whitestone 6.18 52 Pn 09 40 05.1 +0.6
H29M Whitestone 6.18 52 P Pn 09 40 05.0 +0.6
baz=243,SNR=10
E18K Tukpahlearik C 6.20 321 Pn 09 40 06.7 +1.9
E18K Tukpahlearik C 6.20 321 P Pn 09 40 06.4 +1.6
baz=132,SNR=5.8
O29M Mount Kennedy 6.26 109 Pn 09 40 05.1 -0.7
O29M Mount Kennedy 6.26 109 P Pn 09 40 05.0 -0.8
baz=300
PNL Peninsula 6.26 116 Pn 09 40 05.1 -0.6
PNL Peninsula 6.26 116 P Pn 09 40 05.7 +0.1
PNL Peninsula 6.26 116 P Pn 09 40 05.6 -0.1
baz=306
D24K Happy Valley 6.30 5 P Pn 09 40 07.5 +1.5
baz=187
M30M Minto, Yukon 6.30 87 Pn 09 40 06.6 +0.3
M30M Minto, Yukon 6.30 87 P Pn 09 40 06.4 +0.1
baz=279,SNR=28
D20K Etivluk River 6.33 339 Pn 09 40 07.3 +0.6
D20K Etivluk River 6.33 339 P Pn 09 40 07.8 +1.1
baz=154
YUK7 Dusty Glacier 6.34 107 Pn 09 40 07.0 +0.1
E17K Hotham Inlet 6.36 316 Pn 09 40 07.1 +0.2
E17K Hotham Inlet 6.36 316 P Pn 09 40 07.6 +0.7
baz=126
O14K Tigyukauivet M 6.39 240 Pn 09 40 07.4 +0.1
D19K Kuna River 6.42 334 P Pn 09 40 08.9 +1.2
baz=147
N30M Aishikik Lake 6.44 97 Pn 09 40 08.2 0.0
N30M Aishikik Lake 6.44 97 P Pn 09 40 08.2 0.0
baz=289,SNR=15
E27K Coleen River 6.44 31 Pn 09 40 08.6 +0.6
baz=219,SNR=11
F28M Old Crow 6.48 39 Pn 09 40 09.2 +0.6
F28M Old Crow 6.48 39 P Pn 09 40 09.5 +0.9
baz=228,SNR=30
HYT Haines Junctio 6.49 103 P Pn 09 40 08.7 -0.2
baz=294,SNR=13
J30M Hart River 6.50 69 P Pn 09 40 09.7 +0.7
baz=262,SNR=25
C21K Knifeblade Rid 6.50 346 Pn 09 40 10.0 +1.1
C21K Knifeblade Rid 6.50 346 P Pn 09 40 10.4 +1.6
baz=162
I30M Mount Dempster 6.61 63 P Pn 09 40 10.8 +0.4
baz=256,SNR=15
M13K Dall Lake 6.62 253 P Pn 09 40 10.4 0.0
baz=62
MAYO Mayo, Yukon 6.62 78 P Pn 09 40 10.6 +0.1
baz=271
G29M Pine Creek 6.64 47 P Pn 09 40 11.4 +0.6
baz=239,SNR=8.1
D25K Kavik River 6.64 13 Pn 09 40 12.2 +1.4
D25K Kavik River 6.64 13 P Pn 09 40 12.0 +1.2
baz=197,SNR=27
SII Sitkinak Islan 6.65 198 Pn 09 40 09.8 -1.1
SII Sitkinak Islan 6.65 198 P Pn 09 40 09.9 -1.0
SII Sitkinak Islan 6.65 198 P Pn 09 40 10.1 -0.8
baz=15
F15K North Star Dit 6.76 301 P Pn 09 40 13.3 +1.0
baz=108
EPYK Eagle Plains 6.85 54 Pn 09 40 14.4 +0.8
EPYK Eagle Plains 6.85 54 P Pn 09 40 14.4 +0.8
baz=246,SNR=32
C24K Franklin Bluff 6.87 5 Pn 09 40 14.7 +0.9
C24K Franklin Bluff 6.87 5 P Pn 09 40 15.6 +1.8
baz=187
B21K Ikpikpuk River 6.93 348 Pn 09 40 15.7 +1.0
B21K Ikpikpuk River 6.93 348 P Pn 09 40 15.8 +1.1
baz=164,SNR=11
C23K Itkillik River 6.95 360 Pn 09 40 16.4 +1.5
C23K Itkillik River 6.95 360 P Pn 09 40 16.8 +1.9
baz=180
P29M Windy Craggy 6.97 112 Pn 09 40 15.5 +0.1
P29M Windy Craggy 6.97 112 P Pn 09 40 15.8 +0.5
baz=304,SNR=9.0
N31M Braeburn, Yuko 7.03 95 Pn 09 40 16.6 +0.5
N31M Braeburn, Yuko 7.03 95 P Pn 09 40 16.5 +0.4
baz=288,SNR=9.3
P30M Million Dollar 7.05 107 Pn 09 40 16.4 0.0
P30M Million Dollar 7.05 107 P Pn 09 40 16.3 -0.2
baz=299
O30N Mendenhall 7.15 101 P Pn 09 40 17.0 -0.7
baz=294,SNR=5.5
C18K Utukok River 7.23 327 Pn 09 40 19.4 +0.6
C18K Utukok River 7.23 327 P Pn 09 40 19.4 +0.6
baz=138
E28M Babbage River 7.26 33 Pn 09 40 19.8 +0.6
E28M Babbage River 7.26 33 P Pn 09 40 19.7 +0.6
baz=224
C27K Jago River 7.26 19 Pn 09 40 20.7 +1.5
C27K Jago River 7.26 19 P Pn 09 40 21.0 +1.8
baz=205,SNR=44
RDOG Red Dog Mine 7.29 320 P Pn 09 40 20.4 +0.9
baz=129
G30M tAoh Zraii Nji 7.29 50 Pn 09 40 20.3 +0.7
G30M tAoh Zraii Nji 7.29 50 P Pn 09 40 19.8 +0.1
baz=243,SNR=21
C26K Camden Bay 7.37 15 Pn 09 40 22.6 +1.9
C26K Camden Bay 7.37 15 P Pn 09 40 22.4 +1.8
baz=200,SNR=28
D27M Malcolm River 7.43 27 Pn 09 40 22.5 +1.0
D27M Malcolm River 7.43 27 P Pn 09 40 22.5 +1.0
baz=251,SNR=16
M31M Drury Creek, Y 7.47 88 P Pn 09 40 22.7 +0.5
baz=283,SNR=7.8
B22K Teshekpuk Lake 7.54 352 Pn 09 40 23.8 +0.8
B22K Teshekpuk Lake 7.54 352 P Pn 09 40 23.9 +1.0
baz=170
E29M Blow River 7.55 38 Pn 09 40 24.1 +1.0
E29M Blow River 7.55 38 P Pn 09 40 23.9 +0.7
baz=229,SNR=16
H31M Peel River 7.57 60 Pn 09 40 24.9 +1.4
H31M Peel River 7.57 60 P Pn 09 40 23.9 +0.4
baz=255
B20K Meade River 7.60 342 P Pn 09 40 24.6 +0.9
baz=156
PLBC Pleasant Camp 7.65 111 P Pn 09 40 24.1 -0.4
baz=303
WHY Whitehorse 7.74 100 P Pn 09 40 24.7 -1.1
baz=294
F30M Barrier River 7.75 46 Pn 09 40 26.8 +1.0
F30M Barrier River 7.75 46 P Pn 09 40 26.2 +0.5
baz=240
B18K Kokolik River 7.92 330 P Pn 09 40 29.3 +1.3
baz=139
D28M Stokes Point 7.99 31 P Pn 09 40 29.1 0.0
baz=222,SNR=23
SKAG Skagway 8.10 109 P Pn 09 40 30.8 +0.2
SKAG Skagway 8.10 109 S Sn 09 42 00.0 -0.3
SKAG Skagway 8.10 109 P Pn 09 40 29.9 -0.7
baz=302
A22K Sinclair Lake 8.30 350 Pn 09 40 33.0 -0.3
A22K Sinclair Lake 8.30 350 P Pn 09 40 33.0 -0.3
baz=162
F31M Tsiigehtchic 8.36 50 P Pn 09 40 33.6 -0.5
baz=245,SNR=6.0
P32M Atlin 8.74 105 P Pn 09 40 38.2 -1.2
baz=300
A21K Barrow 8.77 347 Pn 09 40 39.4 -0.2
BESE Bessie Mountai 8.80 113 Pn 09 40 39.1 -1.1
INK Inuvik 8.83 45 P Pn 09 40 40.2 -0.3
comp=N,24nm,0.8s,baz=238,slow=17,SNR=60
INK S Sn 09 42 14.8 -3.3
comp=N,7.0nm,0.7s,baz=238,slow=18,SNR=4.2
INK Inuvik 8.83 45 Pn 09 40 41.5 +1.0
INK Inuvik 8.83 45 P Pn 09 40 41.4 +0.9
baz=240,SNR=24
R32K Eaglecrest 9.12 113 P Pn 09 40 43.5 -1.0
baz=307
SDPT Sand Point 9.15 219 P Pn 09 40 46.0 +1.1
SDPT Sand Point 9.15 219 S Sn 09 42 25.2 -0.8
JIS Juneau Island 9.18 113 Pn 09 40 44.4 -0.8
JIS Juneau Island 9.18 113 P Pn 09 40 44.3 -0.9
SIT Sitka 9.59 121 P Pn 09 40 50.4 -0.5
SIT Sitka 9.59 121 P Pn 09 40 49.6 -1.3
baz=314
Q32M Nakina River 9.70 106 Pn 09 40 51.9 -0.7
Q32M Nakina River 9.70 106 P Pn 09 40 51.6 -1.0
baz=302
R33M Jennings River 10.06 102 P Pn 09 40 56.7 -0.7
baz=299
FALS False Pass 10.47 225 P Pn 09 41 04.1 +1.2
baz=34
WTLY Watson Lake, Y 10.72 95 P Pn 09 41 06.4 +0.2
baz=295,SNR=6.4
S34M Telegraph Cree 10.78 109 Pn 09 41 07.3 +0.2
S34M Telegraph Cree 10.78 109 P Pn 09 41 06.7 -0.4
baz=306
DLBC Dease Lake 10.97 105 P Pn 09 41 08.9 -0.8
comp=N,3.0nm,0.6s,baz=262,slow=9.3,SNR=14
DLBC S Sn 09 43 07.0 -3.3
comp=N,2.3nm,0.7s,baz=102,slow=22,SNR=1.5
DLBC Dease Lake 10.97 105 P Pn 09 41 09.4 -0.3
baz=303
U33K Whale Pass 11.12 120 P Pn 09 41 11.4 -0.2
baz=315
WRAK Wrangell Islan 11.22 117 P Pn 09 41 12.6 -0.4
baz=313
WRGLY Wrigley 12.22 77 P Pn 09 41 25.8 -0.5
baz=281
LIRD Liard River Hi 12.25 96 P Pn 09 41 27.0 +0.1
baz=297
KOTAN Kotaneelee Air 12.88 91 P Pn 09 41 34.7 -0.4
baz=294,SNR=5.9
TOAD Toad River Com 12.91 97 P Pn 09 41 35.4 -0.2
baz=299
A36M Sachs Harbour 13.15 36 Pn 09 41 37.6 -0.9
A36M Sachs Harbour 13.15 36 P Pn 09 41 37.1 -1.4
baz=239,SNR=10.0
YKA Yellowknife Ar 16.34 75 P Pn 09 42 18.3 -0.9
comp=N,1.1nm,0.6s,baz=286,slow=12,SNR=15
RES Resolute Bay 22.20 35 P P 09 43 23.8 0.0
comp=N,2.0nm,0.5s,baz=258,slow=11,SNR=12
comp=N,2.0nm,0.5s
NVAR Mina Array Bea 31.29 126 P P 09 44 48.4 +1.6
comp=N,0.6nm,0.5s,baz=333,slow=12,SNR=2.7
comp=N,0.6nm,0.5s

FRB	**Frobisher Bay**	**34.42**	**51**	P		**P**	**09 45 14.7**	**+1.1**
	comp=N,11nm,0.8s,baz=278,slow=7.2,SNR=3.1							
	comp=N,11nm,0.8s							
PV17	**East Wray Mesa**	**35.10**	**115**	P		**P**	**09 45 19.3**	**-0.6**
PV17				IAmb		IAmb	09 45 23.9	
	comp=Z,8.7nm,0.5s							
SPITS	**Spitsbergen Ar**	**38.91**	**4**	P		**P**	**09 45 51.3**	**-0.2**
	comp=Z,15nm,1.0s,baz=60,slow=4.9,SNR=6.9							
	comp=Z,15nm,1.0s							
SCHQ	**Schefferville**	**41.02**	**61**	P		**P**	**09 46 09.9**	**+0.7**
	comp=Z,3.7nm,0.6s,baz=313,slow=7.1,SNR=6.8							
	comp=Z,3.7nm,0.6s							
MGMO	**Mountain Grove**	**43.34**	**98**			**P**	**09 46 28.7**	**+0.4**
MGMO				IAmb		IAmb	09 46 29.2	
	comp=Z,3.7nm,0.8s							
TXAR	**Lajitas Array**	**45.02**	**116**	P		**P**	**09 46 43.8**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=332,slow=6.6,SNR=8.8							
	comp=Z,0.6nm,0.6s							
HILR	**Hailar Array B**	**47.47**	**298**	P		**P**	**09 47 01.2**	**+0.6**
	comp=Z,2.8nm,0.4s,baz=36,slow=7.8,SNR=6.7							
	comp=Z,2.8nm,0.4s							
KEV	**Kevo**	**47.59**	**1**	P		**P**	**09 47 01.9**	**+0.6**
KEV				IAmb		IAmb	09 47 45.2	
	comp=Z,41nm,1.4s							
ARCES	**ARCESS Array B**	**47.80**	**2**	P		**P**	**09 47 03.4**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=26,slow=5.8,SNR=8.1							
	comp=Z,2.5nm,0.8s							
KSRS	**Korea Array**	**53.72**	**282**	P		**P**	**09 47 48.0**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=28,slow=6.0,SNR=5.3							
	comp=Z,1.8nm,0.8s							
SONM	**Songino Array**	**54.05**	**306**	P		**P**	**09 47 50.2**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=25,slow=8.4,SNR=9.1							
	comp=Z,1.7nm,0.7s							
NB2	**NORSAR Subarra**	**55.58**	**11**	P		**P**	**09 48 01.2**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=351,slow=7.4							
NOA	**NORSAR Array B**	**55.58**	**11**	P		**P**	**09 48 01.5**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=350,slow=7.2,SNR=5.6							
	comp=Z,1.3nm,0.7s							
ZALV	**Zalesovo Beam**	**55.72**	**324**	P		**P**	**09 48 01.4**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=28,slow=6.4,SNR=11							
	comp=Z,2.5nm,0.5s							
FIA1	**FINESS Array S**	**55.93**	**2**	P		**P**	**09 48 04.1**	**+0.8**
FINES	**FINESS Array B**	**55.93**	**2**	P		**P**	**09 48 03.2**	**0.0**
	comp=Z,2.6nm,0.7s,baz=352,slow=12,SNR=6.5							
	comp=Z,2.6nm,0.7s							
FINES	**FINESS Array B**	**55.93**	**2**	P		**P**	**09 48 04.0**	**+0.7**
HHC	**Hu-ho-hao-te**	**57.91**	**298**	*e*P		**P**	**09 48 19.5**	**+1.8**
HHC				pmax		pmax		
	comp=Z,14nm,0.7s							
HHC				pmax		pmax		
	comp=Z,70nm,4.7s							
ARTI	**Arti**	**58.93**	**342**	P		**P**	**09 48 24.2**	**-0.2**
	comp=Z,15nm,0.6s,baz=16,slow=4.2,SNR=24							
	comp=Z,15nm,0.6s							
ARTI	**Arti**	**58.93**	**342**			**P**	**09 48 24.4**	**0.0**
EKA	**Eskdalemuir Ar**	**59.37**	**21**	P		**P**	**09 48 27.5**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=335,slow=5.1,SNR=4.2							
	comp=Z,0.7nm,0.4s							
BVAR	**Borovoye Array**	**60.03**	**333**	P		**P**	**09 48 31.4**	**-0.7**
	comp=Z,4.6nm,0.5s,baz=42,slow=7.7,SNR=24							
	comp=Z,4.6nm,0.5s							
KURK	**Kurchatov**	**60.27**	**326**			**P**	**09 48 33.7**	**0.0**
KURK				IAmb		IAmb	09 48 34.1	
	comp=Z,1.6nm,0.6s							
KURBB	**Kurchatov Arra**	**60.38**	**326**	P		**P**	**09 48 33.7**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=28,slow=7.3,SNR=10							
	comp=Z,1.6nm,0.5s							
MKAR	**Makanchi Array**	**62.88**	**322**	P		**P**	**09 48 48.9**	**-2.5**
	comp=Z,1.9nm,0.5s,baz=46,slow=4.3,SNR=24							
	comp=Z,1.9nm,0.5s							
MKAR	**Makanchi Array**	**62.88**	**322**	P		**P**	**09 48 49.1**	**-2.3**
AKTO	**Aktyubinsk**	**64.76**	**340**	P		**P**	**09 49 02.4**	**-1.2**
	comp=Z,5.2nm,0.5s,baz=6.0,slow=6.0,SNR=17							
	comp=Z,5.2nm,0.5s							
AB31	**Akbulak array**	**65.60**	**339**	P		**P**	**09 49 08.9**	**-0.1**
AB31				IAmb		IAmb	09 49 10.4	
	comp=Z,5.3nm,0.7s							
ABKAR	**Akbulak array**	**65.60**	**339**	P		**P**	**09 49 08.7**	**-0.3**
AKASG	**Malin Array Be**	**66.72**	**0**	P		**P**	**09 49 14.8**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=2.3,slow=6.3,SNR=4.8							
	comp=Z,1.4nm,0.5s							
AAK	**Ala-Archa**	**68.83**	**326**	P		**P**	**09 49 29.1**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=29,slow=9.0,SNR=4.4							
	comp=Z,2.5nm,0.7s							
KK31	**Karatay Array**	**69.37**	**329**	P		**P**	**09 49 32.7**	**-0.1**
KKAR	**Karatay Array**	**69.37**	**329**	P		**P**	**09 49 32.6**	**-0.3**
KSH	**Kashi**	**71.36**	**324**	P		**P**	**09 49 47.5**	**+2.3**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.7s							
ESDC	**Sonseca Array**	**74.29**	**26**	P		**P**	**09 50 01.4**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=344,slow=3.2,SNR=4.6							
	comp=Z,1.4nm,0.9s							
PZH	**PanZhiHua**	**74.37**	**298**	P		**P**	**09 50 04.8**	**+1.7**
BRTR	**Keskin Array B**	**77.65**	**357**	P		**P**	**09 50 21.3**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=22,slow=5.0,SNR=2.9							
	comp=Z,0.8nm,0.7s							

*BEO **26** 09:40:19.4±0.3, 43°.23N×18°.08E, h11km±2km, ML3.3/11*
*PRU **26** 09:40:19.9, 43°.22N×18°.55E, h10km*
*RHSSO **26** 09:40:20.6±0.3, 43°.15N×18°.19E, h8km, ML3.4/6*
*PDG **26** 09:40:20.5±0.2, 43°.15N×18°.12E, h8km±1km, MD3.5/11, ML3.5/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

ISC 26 09:40:19.1±1.1, **43°.21N**±0°.02×**18°.18E**±0°.02, **h5**km±9km, **n79**,σ1°**s20**/117, **18C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KLINJ	**Klinje**	**0.30**	**98**	⇑*i*Pg		**Pb**	**09 40 26.4**	**-0.7**
KLINJ				*e*Sg		**Sb**	**09 40 31.6**	**-0.8**
BRY	**Bratogost**	**0.41**	**140**	⇑*i*Pg		**Pg**	**09 40 27.3**	**+0.3**
BRY				*i* Sg		**Sb**	**09 40 34.1**	**-1.4**
STON	**Ston**	**0.49**	**226**	*e*Pg		**Pg**	**09 40 27.4**	**-1.1**
STON				*e*Sg		**Sg**	**09 40 34.9**	**0.0**
TREB	**Trebinje**	**0.51**	**166**	⇑*i*Pg		**Pg**	**09 40 28.5**	**-0.4**
TREB				*e*Sg		**Sg**	**09 40 36.4**	**+0.9**
TREB	**Trebinje**	**0.51**	**166**	*e*Pg		**Pg**	**09 40 28.8**	**-0.1**
UPM	**Unac-Piva**	**0.53**	**91**	⇓*i*Pg		**Pb**	**09 40 30.4**	**-0.6**
UPM				*i* Sg		**Sb**	**09 40 39.4**	**+0.3**
NKME	**Niksic**	**0.72**	**128**	⇓*i*Pg		**Pg**	**09 40 33.0**	**+0.1**
NKME				*i* Sg		**Sb**	**09 40 45.1**	**+0.7**
HCY	**Herceg Novi**	**0.80**	**163**	⇑*i*Pg		**Pg**	**09 40 33.9**	**-0.5**
HCY				*i* Sg		**Sb**	**09 40 46.8**	**+0.2**
CEME	**Cevo**	**0.86**	**141**	⇑*i*Pg		**Pg**	**09 40 34.7**	**-0.9**
CEME				*i* Sg		**Sb**	**09 40 49.2**	**+0.8**
PLE	**Pljevlja**	**0.89**	**82**	⇑*i*Pg		**Pb**	**09 40 37.1**	**-0.1**
PLE				*i* Sg		**Sn**	**09 40 51.8**	**0.0**
RUDO	**Rudo**	**0.96**	**64**	⇑*i*Pg		**Pg**	**09 40 37.7**	**+0.3**
RUDO				*e*Sg		**Sb**	**09 40 51.5**	**+0.3**
RUDO	**Rudo**	**0.96**	**64**	*e*Pg		**Pg**	**09 40 37.8**	**+0.3**
KOME	**Kolasin**	**1.04**	**110**	*e*Pg		**Pb**	**09 40 39.5**	**-0.2**
KOME				*e*Sg		**Sn**	**09 40 56.0**	**+0.4**
KOME	**Kolasin**	**1.04**	**110**	⇓*i*Pg		**Pb**	**09 40 39.6**	**-0.1**
KOME				*i* Sg		**Sn**	**09 40 56.3**	**+0.7**
BUM	**Brajici-Budva**	**1.05**	**150**	⇓*i*Pg		**Pg**	**09 40 38.8**	**-0.5**
BUM				*i* Sg		**Sn**	**09 40 55.1**	**-0.6**
BBLS	**Lazi&#263i**	**1.10**	**53**	*e*Pg		**Pn**	**09 40 41.2**	**-0.2**
BBLS				*e*Sg		**Sn**	**09 40 56.5**	**-0.6**
PDG	**Podgorica**	**1.11**	**134**	⇓P		**Pg**	**09 40 40.2**	**-0.2**
PDG				⇑S		**Sn**	**09 40 56.6**	**-0.5**
PDG	**Podgorica**	**1.11**	**134**	*e*Pg		**Pg**	**09 40 39.6**	**-0.8**
PDG				*e*Sg		**Sn**	**09 40 56.6**	**-0.5**
PDG	**Podgorica**	**1.11**	**134**	⇑*i*Pg		**Pg**	**09 40 39.4**	**-1.0**
PDG				*i* Sg		**Sn**	**09 40 57.2**	**+0.1**
DRME	**Dracevica, Mon**	**1.26**	**144**	*e*Pg		**Pg**	**09 40 42.6**	**-0.7**
DRME				*e*Sg		**Sn**	**09 41 03.0**	**+2.1**
DRME	**Dracevica, Mon**	**1.26**	**144**	⇓*i*Pg		**Pg**	**09 40 42.9**	**-0.4**
DRME				*i* Sg		**Sn**	**09 41 03.0**	**+2.1**
BEY	**Berane**	**1.30**	**105**	*e*Pg		**Pb**	**09 40 44.2**	**+0.1**
IVA	**Berane**	**1.30**	**105**	⇓*i*Pg		**Pb**	**09 40 44.2**	**+0.1**
IVA				*i* Sg		**Sn**	**09 41 03.2**	**+1.3**
SJES	**Sjenica**	**1.31**	**87**	*e*Pg		**Pb**	**09 40 45.1**	**+0.8**
SJES				*e*Sg		**Sn**	**09 41 03.6**	**+1.4**
PVY	**Plav**	**1.45**	**115**	*e*Pg		**Pg**	**09 40 46.7**	**-0.1**
PVY	**Plav**	**1.45**	**115**	⇑*i*Pg		**Pg**	**09 40 46.6**	**-0.2**
PVY				*i* Sg		**Sg**	**09 41 08.9**	**+3.4**
ULC	**Ulcinj**	**1.47**	**147**	⇓*i*Pg		**Pn**	**09 40 46.0**	**-0.4**
ULC				*i* Sg		**Sg**	**09 41 06.5**	**0.0**
IVAS	**Ivanjica**	**1.48**	**75**	*e*Pn		**Pn**	**09 40 46.7**	**+0.1**
IVAS				*e*Sn		**Sg**	**09 41 07.5**	**+0.7**
DIVS	**Divibare**	**1.58**	**55**	*e*Sn		Sn	09 40 48.2	-21
DIVS	**Divibare**	**1.58**	**55**	*e*Pn		**Sn**	**09 41 09.3**	**+0.4**
TEKS	**Tekeris**	**1.66**	**36**	*e*Pn		**Pn**	**09 40 48.3**	**-0.6**
TEKS				*e*Sn		**Sn**	**09 41 09.5**	**-1.1**
BLY	**Banja Luka**	**1.70**	**335**	⇑*i*Pn		**Pb**	**09 40 51.1**	**+0.3**
BLY				*e*Sn		**Sg**	**09 41 14.1**	**+0.5**
BLY	**Banja Luka**	**1.70**	**335**	⇑P		**Pb**	**09 40 51.2**	**+0.4**
BLY	**Banja Luka**	**1.70**	**335**	*e*Pn		**Pn**	**09 40 50.1**	**+0.7**
BLY				*e*Sn		**Sb**	**09 41 12.4**	**-0.1**
TRUS	**Trudelj**	**1.91**	**57**	*e*Pn		**Pn**	**09 40 52.4**	**+0.1**
GRUS	**Gruza**	**1.96**	**69**	*e*Pn		**Pn**	**09 40 53.5**	**+0.4**
GOCS	**Kraljevo Serbi**	**1.99**	**79**	*e*Pn		**Pn**	**09 40 54.1**	**+0.5**
GOCS				*e*Sn		**Sn**	**09 41 18.4**	**-0.6**
SELS	**Selova**	**2.15**	**89**	*e*Pn		**Pn**	**09 40 56.5**	**+0.8**
SELS				*e*Sn		**Sn**	**09 41 23.8**	**+1.1**
AVAS	**Avala Beograd**	**2.25**	**48**	*e*Pn		**Pn**	**09 40 56.4**	**-0.6**
FRGS	**Fruska Gora**	**2.27**	**31**	*e*Pn		**Pn**	**09 40 56.5**	**-0.9**
FRGS				*e*Sn		**Sn**	**09 41 24.8**	**-1.0**
BOVS	**Bovan**	**2.60**	**79**	⇓P		**Pn**	**09 41 01.6**	**-0.3**
BOVS	**Bovan**	**2.60**	**79**	*e*Pn		**Pn**	**09 41 03.1**	**+1.2**
MATE	**Matera**	**2.79**	**204**	⇑P		**Pb**	**09 41 07.8**	**-1.6**
BORS2	**Bor- Borsko je**	**2.92**	**71**	*e*Pn		**Pn**	**09 41 05.1**	**-1.2**
VRSS	**Vrsac**	**2.96**	**49**	*e*Sn		**Pn**	**09 41 07.1**	**+0.3**
VRSS	**Vrsac**	**2.96**	**49**	*e*Pn		**Sn**	**09 41 43.2**	**+0.4**
ZAGS	**Zajecar**	**3.01**	**77**	*e*Pn		**Pn**	**09 41 08.4**	**+0.9**
MORH	**Mrgy, Hungar**	**3.02**	**6**	*e*Pn		**Pn**	**09 41 09.7**	**+2.1**
MORH				*e*Sn		**Sn**	**09 41 46.8**	**+2.6**
MORH	**Mrgy, Hungar**	**3.02**	**6**	⇑P		**Pn**	**09 41 07.5**	**-0.1**
MORH	**Mrgy, Hungar**	**3.02**	**6**	*e*Pn		**Pn**	**09 41 07.1**	**-0.5**
BOSS	**Bosilegrad**	**3.24**	**101**	*e*Pn		**Pn**	**09 41 11.9**	**+1.2**
ZAPS	**Zavoj**	**3.25**	**87**	*e*Sn		**Pn**	**09 41 11.9**	**+1.0**
ZAPS	**Zavoj**	**3.25**	**87**	*e*Pn		**Sn**	**09 41 50.4**	**+0.4**
ZAPS				*e*Sn		**Sb**	**09 41 51.2**	**-6.2**
BLKB	**Belogradchik**	**3.30**	**81**	*e*Pn		**Pn**	**09 41 13.1**	**+1.6**
BEHE	**Becsehely**	**3.41**	**343**	⇑*i*Pn		**Pn**	**09 41 14.6**	**+1.6**
BEHE				*e*Sn		**Sn**	**09 41 55.5**	**+1.7**
BZS	**Buzias**	**3.44**	**44**	⇓P		**Pn**	**09 41 13.2**	**-0.2**
HERR	**Herculane**	**3.48**	**60**	⇑P		**Pn**	**09 41 14.1**	**+0.1**
AQU	**L'Aquila**	**3.62**	**258**	*e*Pn		**Pn**	**09 41 17.0**	**+1.1**
AQU				*e*Sn		**Sn**	**09 41 59.0**	**-0.1**
SIRR	**Siria**	**3.93**	**38**	⇑P		**Pn**	**09 41 19.6**	**-0.6**
SOKA	**Soboth**	**4.12**	**328**	*e*Pn		**Pn**	**09 41 23.5**	**+0.6**
	11nm,0.4s,SNR=5.4							
SOKA				*e*Sn		**Sn**	**09 42 11.8**	**+0.3**
	6.4nm,0.4s							
TIP	**Timpagrande**	**4.17**	**195**	⇓P		**Pn**	**09 41 26.4**	**+2.9**
OBKA	**Obir**	**4.19**	**323**	*e*Pn		**Pn**	**09 41 23.8**	**+0.1**
	0.5nm,0.2s							
ARSA	**Arzberg**	**4.45**	**336**	*e*Pn		**Pn**	**09 41 27.3**	**0.0**
	4.9nm,0.4s,SNR=6.6							
RONA	**Rosalia, Austr**	**4.68**	**344**	*e*Pn		**Pn**	**09 41 30.5**	**0.0**
	1.9nm,0.7s							
CONA	**Conrad Observa**	**4.99**	**342**	*e*Pn		**Sn**	**09 41 36.2**	**+1.4**
	1.3nm,0.5s							
ARR	**Arges**	**5.11**	**63**	⇑P		**Pn**	**09 41 36.4**	**0.0**
KBA	**Koelnbreinsper**	**5.16**	**320**	*e*Pn		**Pn**	**09 41 38.3**	**+1.0**
	2.7nm,0.4s							
MODS	**Modra-Piesok**	**5.20**	**353**	*e*PN		**Pn**	**09 41 41.1**	**+3.5**
MODS				*e*SN		**Sn**	**09 42 36.3**	**-1.7**
MOA	**Molln**	**5.39**	**331**	*e*Pn		**Pn**	**09 41 41.3**	**+1.1**
	3.2nm,0.4s							
MOA				*e*Sn		**Sn**	**09 42 43.3**	**+0.6**
	6.3nm,0.5s							
VOIR		**5.41**	**63**	⇓P		**Pn**	**09 41 40.2**	**-0.3**
KECS	**Kecovo**	**5.51**	**16**	*e*SN		**Sn**	**09 42 43.9**	**-1.7**
LESA	**Schwarzleotal**	**5.73**	**319**	*e*Pn		**Pn**	**09 41 46.2**	**+1.3**
	3.4nm,0.5s							
WTTA	**Wattenberg**	**6.14**	**314**	*e*Pn		**Pn**	**09 41 51.9**	**+1.1**
	4.8nm,0.4s							
CKRC	**Cesky Krumlov**	**6.22**	**336**	*e*SN		**Sn**	**09 43 02.4**	**-0.7**
WATA	**Walderalm**	**6.22**	**314**	*e*Pn		**Pn**	**09 41 53.3**	**+1.6**
	3.3nm,0.3s							
MOTA	**Moosalm**	**6.48**	**312**	*e*Pn		**Pn**	**09 41 57.0**	**+1.7**
	7.8nm,0.6s							
MOTA				*e*Sn		**Sn**	**09 43 10.4**	**+0.7**
	13nm,0.9s							
FETA	**Feichten**	**6.50**	**308**	*e*Pn		**Pn**	**09 41 56.0**	**+0.4**
	1.0nm,0.5s							
KHC	**Kasperske Hory**	**6.73**	**333**	*e*PN		**Pn**	**09 42 00.2**	**+1.6**
KHC				*e*SN		**Sn**	**09 43 14.3**	**-1.3**
CLL	**Collm**	**8.83**	**338**	*e*Sg		**Sg**	**09 45 01.0**	**-1.3**

*IDC **26** 09:47:41.3±38.0, 41°.88N×19°.86E, h0km, mb4.0/3, mbtmp3.9/4, ML3.1/1, Error ellipse: s-maj=687.6km s-min=68.2km az=50.0*
*TIR **26** 09:47:41.8, 41°.58N×19°.65E, h18km±1km, Ml2.8/3*
*PDG **26** 09:47:44.1±0.3, 41°.70N×19°.38E, h13km, MD3.2/4, ML3.1/13, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*

ISC 26 09:47:41.7±1.1, **41°.54N**±0°.02×**19°.52E**±0°.03, **h19**km±3km, **n39**,σ1°**41**/56, **mb3.9**/3, **13C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**126**	AML		AML	09 47 35.3	
	3.3nm,1.0s							
TIR				Pg		Pb	09 47 36.6	-12
TIR				*i* Sg		**Sg**	**09 47 52.6**	**-0.8**
ULC	**Ulcinj**	**0.47**	**334**	*e*Pg		**Pb**	**09 47 49.7**	**-1.7**
ULC				*i* Sg		**Sg**	**09 47 54.7**	**-3.1**
SDA	**Shkodra**	**0.51**	**358**	P		**Pb**	**09 47 51.3**	**-0.8**
SDA				S		**Sb**	**09 47 59.0**	**0.0**
SDA				AML		AML	09 48 00.8	
	55µm,0.2s							
DRME	**Dracevica, Mon**	**0.69**	**339**	⇑*i*Pg		**Pb**	**09 47 53.9**	**-1.2**
DRME				*i* Sg		**Sb**	**09 48 01.9**	**-2.4**
PHP	**Peshkopia**	**0.71**	**78**	Pg		**Pb**	**09 47 51.9**	**-3.5**
PHP				Sg		**Sb**	**09 48 02.5**	**-2.2**
PHP				AML		AML	09 48 09.2	
	2.4nm,0.2s							
BUM	**Brajici-Budva**	**0.89**	**329**	⇓*i*Pg		**Pb**	**09 47 57.7**	**-0.9**
BUM				*i* Sg		**Sb**	**09 48 09.4**	**-0.7**
PDG	**Podgorica**	**0.91**	**348**	⇓P		**Pb**	**09 47 59.0**	**+0.2**
PDG				⇓S		**Sg**	**09 48 11.7**	**+0.2**
PDG	**Podgorica**	**0.91**	**348**	⇑*i*Pg		**Pb**	**09 47 57.9**	**-1.0**
PDG				*i* Sg		**Sb**	**09 48 10.4**	**-0.2**
VLO	**Vlora**	**1.07**	**181**	Pg		**Pg**	**09 48 03.5**	**+1.1**
VLO				Sg		**Sg**	**09 48 17.6**	**+1.1**
CEME	**Cevo**	**1.10**	**336**	⇓*i*Pg		**Pn**	**09 48 00.9**	**-1.2**
CEME				*i* Sg		**Sb**	**09 48 15.4**	**-0.8**
PVY	**Plav**	**1.10**	**17**	⇑*i*Pg		**Pg**	**09 48 02.8**	**-0.3**
PVY				*i* Sg		**Sg**	**09 48 18.9**	**+1.2**
HCY	**Herceg Novi**	**1.19**	**320**	⇓*i*Pg		**Pn**	**09 48 02.9**	**-0.3**
HCY				*i* Sg		**Sb**	**09 48 18.6**	**+0.1**
NKME	**Niksic**	**1.30**	**341**	⇓*i*Pg		**Pn**	**09 48 04.8**	**0.0**
NKME				*i* Sg		**Sb**	**09 48 22.1**	**+0.3**
KOME	**Kolasin**	**1.31**	**360**	⇓*i*Pg		**Pb**	**09 48 06.2**	**+0.5**
KOME				*i* Sg		**Sg**	**09 48 24.1**	**-0.1**
KBN	**Korca**	**1.32**	**133**	Pn		**Pb**	**09 48 05.9**	**0.0**
KBN				S		**Sb**	**09 48 22.4**	**-0.1**
IVA	**Berane**	**1.36**	**12**	⇑*i*Pg		**Pb**	**09 48 06.7**	**+0.1**
IVA				*i* Sg		**Sg**	**09 48 26.0**	**+0.2**
BRY	**Bratogost**	**1.54**	**332**	⇓*i*Pg		**Pn**	**09 48 08.7**	**+0.4**
BRY				*i* Sg		**Sb**	**09 48 30.3**	**+1.3**
UPM	**Unac-Piva**	**1.72**	**345**	⇓*i*Pg		**Pb**	**09 48 12.0**	**-0.8**
UPM				*i* Sg		**Sb**	**09 48 34.8**	**+0.6**
PLE	**Pljevlja**	**1.79**	**357**	⇓*i*Pn		**Pb**	**09 48 13.7**	**-0.3**
PLE				*i* Sn		**Sb**	**09 48 37.2**	**+1.1**
MATE	**Matera**	**2.31**	**248**	⇓P		**Pb**	**09 48 23.6**	**+1.0**
BOVS	**Bovan**	**2.65**	**37**	⇓P		**Pg**	**09 48 33.0**	**+0.6**
BLKB	**Belogradchik**	**3.12**	**47**	⇑S		**Sn**	**09 49 08.8**	**+2.1**
TIP	**Timpagrande**	**3.16**	**223**	⇑P		**Pn**	**09 48 29.0**	**-1.5**
MDVR	**Moldovita**	**3.62**	**26**	⇑P		**Pn**	**09 48 37.4**	**+0.7**
BLY	**Banja Luka**	**3.63**	**333**	⇓P		**Pb**	**09 48 47.7**	**+2.4**
HERR	**Herculane**	**3.96**	**31**	⇑P		**Pn**	**09 48 42.4**	**+1.1**
SRE	**Strehaia**	**4.13**	**40**	⇑P		**Pn**	**09 48 44.9**	**+1.3**
BZS	**Buzias**	**4.35**	**20**	⇑P		**Pn**	**09 48 47.1**	**+0.3**
GZR	**Gura Zlata**	**4.52**	**31**	⇑P		Pn	09 48 34.0	-15
MORH	**Mrgy, Hungar**	**4.72**	**353**	⇓P		**Pn**	**09 48 54.3**	**+2.6**
ELND	**Elena**	**4.92**	**71**	⇓P		**Pn**	**09 48 56.5**	**+1.9**
SIRR	**Siria**	**4.97**	**17**	⇑P		**Pn**	**09 48 55.7**	**+0.4**
LOT	**Lotru**	**4.98**	**37**	⇑P		**Pn**	**09 48 57.2**	**+1.7**
ARR	**Arges**	**5.34**	**42**	⇓P		**Pn**	**09 49 02.9**	**+2.6**
VOIR		**5.60**	**44**	⇓P		**Pn**	**09 49 07.0**	**+3.1**
FINES	**FINESS Array B**	**20.33**	**9**	P		**P**	**09 52 14.6**	**-1.7**
	0.2nm,0.3s,baz=178,slow=9.5,SNR=5.0							
	2.0nm,0.7s							
BVAR	**Borovoye Array**	**35.64**	**54**	P		**P**	**09 54 37.5**	**-0.6**
	1.0nm,0.6s,baz=286,slow=7.3,SNR=4.4							
	1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**44.09**	**51**	P		**P**	**09 55 46.9**	**-1.3**
	1.7nm,0.3s,baz=299,slow=6.5,SNR=4.7							
	1.7nm,0.3s							
MKAR	**Makanchi Array**	**44.27**	**61**	P		**P**	**09 55 49.3**	**-0.6**
	0.5nm,0.4s,baz=288,slow=7.1,SNR=5.6							
	0.5nm,0.4s							

JMA 26 09:59:58.0±0.2, **38°.1N**±0°.8×**14°.5E**±°, **h46**km, **MV3.7**/31, **FAR E OFF NORTH HONSHU, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.42**	**276**	P		Pn	10 00 36.2	+1.1
JIKH				S		Sn	10 01 04.5	+1.0
OFUJ	**Ofunato**	**2.45**	**294**	*i* P		Pn	10 00 36.8	+1.4
JKMT	**Kesennumamotoy**	**2.50**	**287**	P		Pn	10 00 37.4	+1.3
JKMT				S		Sn	10 01 07.0	+1.5
JIO	**Ouri**	**2.53**	**279**	P		Pn	10 00 37.8	+1.3
JIO				S		Sn	10 01 07.8	+1.7
JMK	**Ichinoseki**	**2.73**	**289**	P		Pn	10 00 40.7	+1.4
JMK				S		Sn	10 01 12.9	+1.8
JOM	**Ohasama**	**2.88**	**299**	P		Pn	10 00 43.2	+1.9
JANG	**Nango**	**3.26**	**315**	P		Pn	10 00 47.7	+1.1
JANG				*e*S		Sn	10 01 24.9	+0.7
JOTO	**OTAMA OYAMA**	**3.37**	**262**	P		Pn	10 00 50.1	+2.1
JOTO				S		Sn	10 01 28.8	+2.0
JYK	**Kaneyama**	**3.37**	**285**	P		Pn	10 00 50.4	+2.3
JOT	**Ohata**	**4.24**	**322**	S		Sn	10 01 48.1	0.0
BSO1	**Boso 1**	**4.48**	**221**	*e*P		Pn	10 01 02.7	-0.1
JCH	**Churui**	**4.60**	**349**	S		Sn	10 01 55.0	-2.0
JRY	**Ryogami san**	**4.96**	**247**	P		Pn	10 01 10.9	+1.0
JRY				S		Sn	10 02 04.7	-1.3
JOD2	**Odawara 2**	**5.21**	**239**	S		Sn	10 02 09.5	-2.7
NEM2	**Nemuro 2**	**5.34**	**10**	P		Pn	10 01 12.7	-2.3
NEM2				S		Sn	10 02 09.4	-5.8
JTKR	**Abashiri--Toko**	**5.88**	**356**	P		Pn	10 01 22.5	0.0
JTKR				*e*S		Sn	10 02 25.1	-3.5

*HEL **26

CEME				*i* Sg	**Sb**	**10 08 35.4**	**+0.2**
PLE	**Pljevlja**	**0.97**	**83**	⇑*i* Pg	**Pb**	**10 08 23.7**	**-0.2**
PLE				*i* Sg	**Sn**	**10 08 39.8**	**+1.1**
RUDO	**Rudo**	**1.03**	**66**	⇑*i* Pg	**Pg**	**10 08 23.6**	**-1.0**
RUDO				*e*Sg	**Sg**	**10 08 37.8**	**-0.1**
BUM	**Brajici-Budva**	**1.10**	**146**	⇓*i* Pg	**Pg**	**10 08 23.6**	**-2.3**
BUM				*i* Sg	**Sb**	**10 08 40.9**	**+0.5**
KOME	**Kolasin**	**1.12**	**108**	*e*Pg	**Pg**	**10 08 26.1**	**-0.2**
KOME				*e*Sg	**Sn**	**10 08 42.7**	**+0.3**
KOME	**Kolasin**	**1.12**	**108**	⇑*i* Pg	**Pg**	**10 08 26.0**	**-0.3**
KOME				*i* Sg	**Sn**	**10 08 42.5**	**+0.1**
BBLS	**Lazi&#263i**	**1.17**	**56**	*e*Pg	**Pb**	**10 08 27.1**	**-0.1**
BBLS				*e*Sg	**Sn**	**10 08 44.0**	**+0.4**
PDG	**Podgorica**	**1.17**	**132**	⇓P	**Pb**	**10 08 26.7**	**-0.6**
PDG				⇑S	**Sb**	**10 08 42.6**	**0.0**
PDG	**Podgorica**	**1.17**	**132**	*e*Pg	**Pb**	**10 08 26.1**	**-1.1**
PDG				*e*Sg	**Sn**	**10 08 44.6**	**+1.1**
PDG	**Podgorica**	**1.17**	**132**	⇑*i* Pg	**Pb**	**10 08 25.8**	**-1.4**
PDG				*i* Sg	**Sn**	**10 08 44.4**	**+0.9**
HVAR	**Hvar**	**1.19**	**269**	*e*Pg	**Pb**	**10 08 26.7**	**-0.8**
HVAR				Sg	**Sn**	**10 08 44.8**	**+0.9**
DRME	**Dracevica, Mon**	**1.31**	**141**	*e*Pg	**Pn**	**10 08 29.1**	**-0.3**
DRME				*e*Sg	**Sn**	**10 08 47.7**	**+0.6**
DRME	**Dracevica, Mon**	**1.31**	**141**	⇑*i* Pg	**Pn**	**10 08 28.7**	**-0.7**
DRME				*i* Sg	**Sn**	**10 08 48.9**	**+1.8**
IVA	**Berane**	**1.38**	**104**	⇓*i* Pg	**Pn**	**10 08 29.8**	**-0.6**
IVA				*i* Sg	**Sg**	**10 08 51.9**	**+2.7**
SJES	**Sjenica**	**1.39**	**87**	*e*Pg	**Pg**	**10 08 31.4**	**-0.1**
SJES				*e*Sg	**Sg**	**10 08 50.7**	**+1.1**
PVY	**Plav**	**1.52**	**113**	⇓*i* Pg	**Pb**	**10 08 33.0**	**-0.3**
PVY				*i* Sg	**Sg**	**10 08 56.8**	**+3.1**
ULC	**Ulcinj**	**1.52**	**145**	⇓*i* Pg	**Pn**	**10 08 31.8**	**-0.5**
ULC				*i* Sg	**Sg**	**10 08 54.8**	**+1.5**
IVAS	**Ivanjica**	**1.56**	**76**	*e*Pg	**Pb**	**10 08 34.0**	**+0.1**
IVAS				*e*Sg	**Sb**	**10 08 53.9**	**+0.1**
DIVS	**Divibare**	**1.65**	**57**	*e*Pn	**Pn**	**10 08 33.9**	**-0.2**
DIVS				*e*Sn	**Sb**	**10 08 55.9**	**-0.5**
BLY	**Banja Luka**	**1.66**	**338**	*e*Pn	**Pb**	**10 08 35.0**	**-0.6**
BLY				*e*Sn	**Sb**	**10 08 56.6**	**-0.1**
BLY	**Banja Luka**	**1.66**	**338**	⇓P	**Pg**	**10 08 36.4**	**-0.2**
BLY				⇑S	**Sg**	**10 09 00.4**	**+2.2**
BLY	**Banja Luka**	**1.66**	**338**	*e*Pn	**Pn**	**10 08 34.8**	**+0.6**
BLY				*e*Sg	**Sb**	**10 08 56.8**	**+0.1**
TEKS	**Tekeris**	**1.70**	**38**	*e*Pn	**Pn**	**10 08 33.8**	**-0.9**
TEKS				*e*Sn	**Sn**	**10 08 55.6**	**-1.0**
TRUS	**Trudelj**	**1.97**	**58**	*e*Pn	**Pn**	**10 08 38.1**	**-0.3**
TRUS				*e*Sn	**Sn**	**10 09 03.4**	**+0.1**
GRUS	**Gruza**	**2.04**	**70**	*e*Pn	**Pn**	**10 08 39.5**	**+0.2**
GRUS				*e*Sn	**Sn**	**10 09 04.9**	**0.0**
GOCS	**Kraljevo Serbi**	**2.07**	**79**	*e*Pn	**Pn**	**10 08 40.5**	**+0.6**
GOCS				*e*Sn	**Sn**	**10 09 06.5**	**+0.6**
SELS	**Selova**	**2.23**	**89**	*e*Pn	**Pn**	**10 08 42.5**	**+0.5**
SELS				*e*Sn	**Sn**	**10 09 09.1**	**-0.6**
FRGS	**Fruska Gora**	**2.31**	**32**	*e*Pn	**Pn**	**10 08 42.0**	**-1.1**
MATE	**Matera**	**2.76**	**202**	⇓P	**Pb**	**10 08 54.2**	**-0.1**
MORH	**Mrgy, Hungar**	**3.03**	**8**	*e*Pn	**Pn**	**10 08 54.5**	**+1.6**
MORH				*e*Sn	**Sn**	**10 09 30.3**	**+1.0**
MORH	**Mrgy, Hungar**	**3.03**	**8**	⇑P	**Pn**	**10 08 52.2**	**-0.7**
BEHE	**Becsehely**	**3.38**	**345**	*e*Sn	**Sn**	**10 09 39.1**	**+1.0**
BZS	**Buzias**	**3.50**	**45**	⇑P	**Pn**	**10 08 57.9**	**-1.5**
SOKA	**Soboth**	**4.08**	**329**	*e*Pn	**Pn**	**10 09 09.1**	**+1.6**
	4.0nm,0.2s,SNR=4.9						
SOKA				*e*Sn	**Sn**	**10 09 54.1**	**-1.3**
	5.1nm,0.5s						
OBKA	**Obir**	**4.14**	**324**	*e*Pn	**Pn**	**10 09 09.3**	**+1.0**
	0.5nm,0.2s						
TIP	**Timpagrande**	**4.15**	**194**	⇑P	**Pn**	**10 09 12.9**	**+4.4**
ARSA	**Arzberg**	**4.42**	**337**	*e*Pn	**Pn**	**10 09 13.7**	**+1.6**
	6.3nm,0.3s,SNR=4.2						
ARSA				*e*Sn	**Sn**	**10 10 03.2**	**-0.5**
	2.5nm,0.4s						
RONA	**Rosalia, Austr**	**4.66**	**345**	*e*Pn	**Pn**	**10 09 17.1**	**+1.8**
	0.4nm,0.2s						
RONA				*e*Sn	**Sn**	**10 10 09.1**	**-0.4**
	2.1nm,0.3s						
CONA	**Conrad Observa**	**4.96**	**343**	*e*Sn	**Sn**	**10 10 15.2**	**-1.9**
	2.7nm,0.3s						
KBA	**Koelnbreinsper**	**5.11**	**321**	*i* Pn	**Pn**	**10 09 22.5**	**+0.8**
	1.6nm,0.3s						
KBA				*e*Sn	**Sn**	**10 10 20.4**	**-0.5**
	5.7nm,0.6s						
MODS	**Modra-Piesok**	**5.19**	**354**	*e*PN	**Pn**	**10 09 22.9**	**+0.2**
MODS				*e*SN	**Sn**	**10 10 19.6**	**-3.0**
MOA	**Molln**	**5.35**	**331**	*i* Pn	**Pn**	**10 09 26.0**	**+1.1**
	2.1nm,0.2s,SNR=4.8						
MOA				*e*Sn	**Sn**	**10 10 26.7**	**+0.1**
	5.3nm,0.5s						
KECS	**Kecovo**	**5.53**	**17**	*e*SN	**Sn**	**10 10 29.1**	**-2.0**
LESA	**Schwarzleotal**	**5.67**	**320**	*e*Pn	**Pn**	**10 09 30.0**	**+0.6**
	4.3nm,0.4s						
LESA				*e*Sn	**Sn**	**10 10 36.2**	**+1.6**
	4.7nm,0.6s						
WTTA	**Wattenberg**	**6.08**	**314**	*e*Pn	**Pn**	**10 09 35.4**	**+0.3**
	5.9nm,0.4s						
MLR	**Muntele Rosu**	**6.09**	**65**	⇓P	**Pn**	**10 09 32.8**	**-2.3**
CKRC	**Cesky Krumlov**	**6.19**	**336**	*e*SN	**Sn**	**10 10 44.6**	**-2.6**
MOTA	**Moosalm**	**6.42**	**312**	*e*Pn	**Pn**	**10 09 41.4**	**+1.8**
	1.3nm,0.3s						
FETA	**Feichten**	**6.44**	**309**	*e*Pn	**Pn**	**10 09 41.7**	**+1.7**
	0.4nm,0.2s						
KHC	**Kasperske Hory**	**6.69**	**334**	*e*PN	**Pn**	**10 09 44.7**	**+1.5**
KHC				*e*SN	**Sn**	**10 10 57.4**	**-2.2**

SKO ***26*** *10:09:22.1,41˚.56N×19˚.36E,h0km,ML3.2*
TIR ***26*** *10:09:24.5,41˚.54N×19˚.57E,h15km±1km,Ml3.6/6*
PDG ***26*** *10:09:24.8±0.6,41˚.54N×19˚.51E,h7km±2km,MD3.5/9,*
ML3.5/13,Error ellipse: s-maj=2.3km s-min=2.9km az=0.0
BEO ***26*** *10:09:25.1±0.6,41˚.55N×19˚.65E,h9km±3km,ML3.3/11*
ISC 26 10:09:23.9±1.0,**41˚54N**±0˚.02×**19˚53E**±0˚.02,**h10**km±8km,
n61,σ0**98**/105**,12C-14D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**126**	Pg	**Pg**	**10 09 29.7**	**-0.5**
TIR				S	**Sg**	**10 09 35.2**	**+0.7**
TIR				AML	AML	10 09 35.4	
	23nm,0.3s						
TIR	**Tirane**	**0.32**	**126**	⇑*i* Pg	**Pg**	**10 09 29.8**	**-0.5**
TIR				*i* Sg	**Sg**	**10 09 35.4**	**+0.9**
ULC	**Ulcinj**	**0.48**	**334**	⇑*i* Pg	**Pg**	**10 09 32.6**	**-0.7**
ULC				*i* Sg	**Sg**	**10 09 38.2**	**-0.7**
SDA	**Shkodra**	**0.52**	**358**	P	**Pg**	**10 09 33.6**	**-0.4**
SDA				Sg	**Sb**	**10 09 42.4**	**-0.3**
SDA				AML	AML	10 09 44.3	
	54µm,0.2s						
DRME	**Dracevica, Mon**	**0.70**	**339**	*e*Pg	**Pg**	**10 09 37.5**	**0.0**
DRME				*e*Sg	**Sb**	**10 09 48.5**	**+0.5**
DRME	**Dracevica, Mon**	**0.70**	**339**	⇓*i* Pg	**Pg**	**10 09 36.7**	**-0.8**
DRME				*i* Sg	**Sb**	**10 09 49.3**	**+1.3**
PHP	**Peshkopia**	**0.70**	**77**	P	**Pg**	**10 09 37.7**	**+0.2**
PHP				S	**Sg**	**10 09 47.1**	**+0.4**
PHP				AML	AML	10 09 52.5	
	8.9nm,0.4s						
BUM	**Brajici-Budva**	**0.90**	**328**	⇑*i* Pg	**Pg**	**10 09 40.5**	**-0.8**
BUM				*i* Sg	**Sn**	**10 09 55.9**	**0.0**
PDG	**Podgorica**	**0.92**	**347**	⇓P	**Pg**	**10 09 40.8**	**-0.8**
PDG				⇑S	**Sb**	**10 09 54.4**	**+0.2**
PDG	**Podgorica**	**0.92**	**347**	*e*Pg	**Pg**	**10 09 41.1**	**-0.5**
PDG				*e*Sg	**Sn**	**10 09 55.4**	**-0.8**
PDG	**Podgorica**	**0.92**	**347**	⇓*i* Pg	**Pg**	**10 09 39.5**	**-2.1**
PDG				*i* Sg	**Sb**	**10 09 53.9**	**-0.3**
OHR	**Ohrid**	**1.05**	**113**	*i* Pg	**Pg**	**10 09 42.5**	**-1.6**
OHR				*i* Sg	**Sn**	**10 10 00.4**	**+0.9**
OHR				*e*Lg	Lg	10 10 01.6	
	comp=N,643nm,0.7s						
OHR				*e*Lg	Lg	10 10 01.7	
	comp=E,647nm,0.5s						
VLO	**Vlora**	**1.07**	**181**	Pg	**Pn**	**10 09 45.4**	**+0.4**
VLO				S	**Sn**	**10 10 00.7**	**+0.9**
VLO				AML	AML	10 10 05.1	
	comp=E,9.8nm,0.3s						
PVY	**Plav**	**1.11**	**17**	⇑*i* Pg	**Pg**	**10 09 43.9**	**-1.3**
PVY				*i* Sg	**Sn**	**10 10 00.4**	**-0.7**
CEME	**Cevo**	**1.11**	**336**	⇑*i* Pg	**Pg**	**10 09 44.9**	**-0.3**
CEME				*i* Sg	**Sb**	**10 10 00.2**	**+0.4**
HCY	**Herceg Novi**	**1.19**	**320**	⇓*i* Pg	**Pg**	**10 09 47.2**	**+0.3**
HCY				*i* Sg	**Sn**	**10 10 03.3**	**+0.3**
NKME	**Niksic**	**1.30**	**341**	⇓*i* Pg	**Pn**	**10 09 48.0**	**-0.3**
NKME				*i* Sg	**Sg**	**10 10 07.3**	**+1.4**
KOME	**Kolasin**	**1.31**	**360**	*e*Pg	**Pg**	**10 09 49.9**	**+0.7**
KOME				*e*Sg	**Sn**	**10 10 06.1**	**-0.1**
KOME	**Kolasin**	**1.31**	**360**	⇓*i* Pg	**Pg**	**10 09 49.4**	**+0.2**
KOME				*i* Sg	**Sg**	**10 10 08.2**	**+2.0**
KBN	**Korca**	**1.32**	**133**	P	**Pb**	**10 09 48.8**	**0.0**
KBN				Sn	**Sn**	**10 10 06.2**	**0.0**
KBN				AML	AML	10 10 09.9	
	comp=E,5.0nm,0.5s						
IVA	**Berane**	**1.36**	**11**	⇑*i* Pg	**Pn**	**10 09 48.4**	**-0.8**
IVA				*i* Sg	**Sg**	**10 10 10.0**	**+2.2**
SKO	**Skopje**	**1.50**	**72**	*i* Pg	**Pb**	**10 09 51.7**	**-0.2**
SKO				*i* Sg	**Sg**	**10 10 12.7**	**+0.6**
BRY	**Bratogost**	**1.55**	**332**	⇓*i* Pg	**Pn**	**10 09 52.3**	**+0.5**
BRY				*i* Sg	**Sg**	**10 10 14.8**	**+1.0**
UPM	**Unac-Piva**	**1.73**	**345**	⇑*i* Pn	**Pb**	**10 09 55.3**	**-0.6**
UPM				*i* Sn	**Sg**	**10 10 20.0**	**+0.5**
SJES	**Sjenica**	**1.76**	**11**	*e*Pg	**Pb**	**10 09 56.3**	**0.0**
SJES				*e*Sg	**Sg**	**10 10 19.6**	**-0.8**
PLE	**Pljevlja**	**1.80**	**357**	⇓*i* Pn	**Pb**	**10 09 56.8**	**-0.2**
PLE				*i* Sn	**Sg**	**10 10 21.6**	**-0.1**
SELS	**Selova**	**2.06**	**35**	*e*Pn	**Pn**	**10 09 59.2**	**+0.6**
SELS				*e*Sn	**Sn**	**10 10 25.1**	**+0.8**
IVAS	**Ivanjica**	**2.09**	**13**	*e*Pn	**Pn**	**10 09 59.6**	**+0.4**
IVAS				*e*Sn	**Sb**	**10 10 27.4**	**-0.7**
GOCS	**Kraljevo Serbi**	**2.26**	**26**	*e*Pn	**Pn**	**10 10 01.9**	**+0.4**
GOCS				*e*Sn	**Sn**	**10 10 30.1**	**+0.7**
VAY	**Valandovo**	**2.30**	**94**	*i* Pn	**Pn**	**10 10 02.1**	**+0.2**
VAY				*i* Sn	**Sn**	**10 10 30.6**	**+0.3**
VAY				*e*Lg	Lg	10 10 31.1	
	comp=N,44nm,0.6s						
VAY				*e*Lg	Lg	10 10 32.0	
	comp=E,98nm,0.6s						
BBLS	**Lazi&#263i**	**2.33**	**358**	*e*Pn	**Pb**	**10 10 04.7**	**-1.4**
BBLS				*e*Sn	**Sb**	**10 10 33.7**	**-1.3**
BOSS	**Bosilegrad**	**2.40**	**65**	*e*Pn	**Pn**	**10 10 03.7**	**+0.3**
BOSS				*e*Sn	**Sn**	**10 10 31.4**	**-1.5**
GRUS	**Gruza**	**2.51**	**20**	*e*Pn	**Pn**	**10 10 05.2**	**+0.4**
GRUS				*e*Sn	**Sn**	**10 10 35.3**	**-0.2**
KNT	**Kendrikon**	**2.56**	**97**	*i* Pn	**Pn**	**10 10 05.8**	**+0.2**
DIVS	**Divibare**	**2.58**	**7**	*e*Pn	**Pn**	**10 10 05.9**	**0.0**
DIVS				*e*Sn	**Sn**	**10 10 37.7**	**+0.2**
RICI	**Ricice**	**2.64**	**319**	Sn	**Sn**	**10 10 40.5**	**+1.8**
BOVS	**Bovan**	**2.64**	**37**	⇑P	**Pn**	**10 10 06.9**	**+0.2**
BOVS	**Bovan**	**2.64**	**37**	*e*Pn	**Pn**	**10 10 07.4**	**+0.7**
BOVS				*e*Sn	**Sn**	**10 10 38.3**	**-0.5**
KKB	**Krupnik**	**2.71**	**82**	*i* Pn	**Pn**	**10 10 08.2**	**+0.5**
THE	**Thessaloniki**	**2.75**	**108**	*i* Pn	**Pn**	**10 10 07.7**	**+0.4**
SOH	**Sokhos**	**2.98**	**103**	*i* Pn	**Pn**	**10 10 11.2**	**0.0**
TEKS	**Tekeris**	**3.01**	**0**	*e*Pn	**Pn**	**10 10 13.1**	**+1.3**
TEKS				*e*Sn	**Sn**	**10 10 46.6**	**-1.3**
ZAGS	**Zajecar**	**3.03**	**40**	*e*Pn	**Pn**	**10 10 13.2**	**+1.3**
ZAGS				*e*Sn	**Sn**	**10 10 48.0**	**-0.2**
SRS	**Serrai**	**3.09**	**96**	*i* Pn	**Pn**	**10 10 12.7**	**-0.1**
BORS2	**Bor- Borsko je**	**3.14**	**35**	*e*Pn	**Pn**	**10 10 12.6**	**-1.0**
BORS2				*e*Sn	**Sn**	**10 10 48.6**	**-2.5**
TIP	**Timpagrande**	**3.17**	**223**	⇑P	**Pn**	**10 10 12.0**	**-1.9**
MMB	**Musomishta**	**3.17**	**88**	*i* Pn	**Pn**	**10 10 14.5**	**+0.5**
ZIRJ	**Zirje**	**3.56**	**308**	*e*Pn	**Pn**	**10 10 19.6**	**+0.3**
ZIRJ				Sn	**Sn**	**10 11 00.7**	**-0.8**
MDVR	**Moldovita**	**3.62**	**26**	⇓P	**Pn**	**10 10 20.1**	**0.0**
MORI	**Morici**	**3.65**	**311**	*e*Pn	**Pn**	**10 10 21.3**	**+0.8**
MORI				Sn	**Sn**	**10 11 03.7**	**0.0**
HERR	**Herculane**	**3.95**	**31**	⇓P	**Pn**	**10 10 25.3**	**+0.6**
DUGI	**Dugi Otok**	**4.11**	**308**	*e*Pn	**Pn**	**10 10 28.2**	**+1.5**
DUGI				Sn	**Sn**	**10 11 14.2**	**-0.6**
SRE	**Strehaia**	**4.12**	**40**	⇓P	**Pn**	**10 10 28.6**	**+1.5**
VIRC	**Vir**	**4.29**	**311**	*e*Pn	**Pn**	**10 10 29.6**	**+0.3**
VIRC				Sn	**Sn**	**10 11 18.1**	**-1.2**
BZS	**Buzias**	**4.35**	**20**	⇓P	**Pn**	**10 10 30.0**	**-0.1**
NVLJ	**Novalja**	**4.56**	**313**	*e*Pn	**Pn**	**10 10 33.0**	**0.0**
NVLJ				Sn	**Sn**	**10 11 24.5**	**-1.5**
SIRR	**Siria**	**4.97**	**17**	⇑P	**Pn**	**10 10 38.1**	**-0.6**
ARR	**Arges**	**5.34**	**42**	⇓P	**Pn**	**10 10 45.4**	**+1.6**
VOIR		**5.60**	**44**	⇑P	**Pn**	**10 10 49.0**	**+1.6**
MLR	**Muntele Rosu**	**6.12**	**48**	⇓P	**Pn**	**10 10 56.2**	**+1.7**
KECS	**Kecovo**	**6.98**	**5**	*e*PN	**Pn**	**10 11 09.9**	**+3.7**
KECS				*e*SN	**Sn**	**10 12 26.2**	**+0.5**

JMA ***26*** *10:33:12.4±0.2,24˚N±2˚×122˚.7E±0˚.7,h80km±1km,*
MV2.4/12,NW OFF ISHIGAKIJIMA IS
TAP ***26*** *10:33:12.2,24˚.45N×122˚.72E,h83km,ML3.2,B*
ISC 26 10:33:12.7±1.4,**24˚40N**±0˚.03×**122˚71E**±0˚.03,**h77**km±8km,
n100,σ0**90**/174**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.22**	**76**	P	**Pn**	**10 33 24.5**	**+0.2**
JYNG				S	**Sn**	**10 33 33.3**	**+0.6**
YOJ	**Yonaguni jima**	**0.28**	**77**	P	Pn	10 33 16.9	-7.6
YOJ	**Yonaguni jima**	**0.28**	**77**	P	**Pn**	**10 33 24.9**	**+0.3**
YOJ				S	**Sn**	**10 33 33.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.28**	**77**	*e*P	**Pn**	**10 33 24.7**	**+0.2**
YOJ				S	**Sn**	**10 33 33.7**	**+0.4**
ESAO	**Su ao**	**0.81**	**283**	*e*P	**Pn**	**10 33 29.4**	**+0.3**
ESAO				S	**Sn**	**10 33 41.4**	**-0.4**
TWC	**Suao**	**0.81**	**285**	P	**Pn**	**10 33 29.2**	**-0.2**
TWC				S	**Sn**	**10 33 41.1**	**-0.7**
EWUT	**Wuta**	**0.85**	**273**	*e*P	**Pn**	**10 33 30.1**	**+0.2**
ENA	**Nanau**	**0.89**	**272**	P	**Pn**	**10 33 30.6**	**+0.4**
ENA				*e*S	**Sn**	**10 33 43.8**	**+0.4**
EAHA	**Aohua**	**0.89**	**266**	S	**Sn**	**10 33 44.2**	**+0.8**
IRIF	**Iriomote-Funau**	**0.93**	**94**	P	**Pn**	**10 33 30.7**	**0.0**
IRIF				S	**Sn**	**10 33 44.3**	**+0.2**
NDS	**Dongshan**	**0.94**	**285**	*i* P	**Pn**	**10 33 31.0**	**+0.1**
NDS				*e*S	**Sn**	**10 33 44.5**	**+0.1**
TIPB	**Shuangxi**	**0.99**	**305**	*i* P	**Pn**	**10 33 31.1**	**-0.4**
TIPB				*e*S	**Sn**	**10 33 44.3**	**-1.2**
TWE	**Neicheng**	**1.01**	**289**	P	**Pn**	**10 33 31.7**	**0.0**
TWE				*e*S	**Sn**	**10 33 45.5**	**-0.3**
SXI1	**Grass Mountain**	**1.03**	**312**	P	**Pn**	**10 33 31.7**	**-0.3**
SXI1				*e*S	**Sn**	**10 33 45.8**	**-0.7**
NACB	**Ninganchiao**	**1.04**	**258**	P	**Pn**	**10 33 31.5**	**-0.6**
NACB	**Ninganchiao**	**1.04**	**258**	P	**Pn**	**10 33 31.8**	**-0.3**
NACB				S	**Sn**	**10 33 45.6**	**-1.1**
HATJ	**Hateruma jima**	**1.05**	**109**	*e*P	**Pn**	**10 33 33.3**	**+1.1**
HATJ				*e*S	**Sn**	**10 33 47.9**	**+1.1**
TWD	**Chiawan**	**1.07**	**253**	*e*P	**Pn**	**10 33 32.1**	**-0.3**
TWD				S	**Sn**	**10 33 46.8**	**-0.4**
ENTT	**Nioudou**	**1.07**	**283**	P	**Pn**	**10 33 32.9**	**+0.4**
ENTT				*e*S	**Sn**	**10 33 48.2**	**+0.9**
NWF	**Wu-fen Shan**	**1.08**	**308**	*e*P	**Pn**	**10 33 32.6**	**-0.1**
NWF				*e*S	**Sn**	**10 33 46.7**	**-0.9**
WFSB	**Wu-fen Shan**	**1.08**	**308**	*e*P	**Pn**	**10 33 32.6**	**0.0**
WFSB				S	**Sn**	**10 33 46.9**	**-0.6**
FUSB	**Fushanzhiwuyua**	**1.09**	**290**	P	**Pn**	**10 33 32.7**	**0.0**
LATG	**Datong**	**1.09**	**277**	P	**Pn**	**10 33 33.0**	**+0.2**
LATG				*e*S	**Sn**	**10 33 48.1**	**+0.3**
HWA	**Hwalien**	**1.10**	**248**	*e*P	**Pn**	**10 33 32.7**	**0.0**
TNOU	**National Taiwa**	**1.14**	**311**	*e*P	**Pn**	**10 33 33.2**	**0.0**
ETLH	**Xiulin Townshi**	**1.14**	**261**	*e*P	**Pn**	**10 33 33.2**	**-0.2**
ETLH				*e*S	**Sn**	**10 33 48.4**	**-0.5**
TEYL	**Yanliau Villag**	**1.15**	**243**	*e*P	**Pn**	**10 33 33.5**	**+0.1**
TEYL				*e*S	**Sn**	**10 33 47.7**	**-1.2**
NWLT	**Wulai**	**1.17**	**289**	P	**Pn**	**10 33 33.8**	**+0.1**
NWLT				*e*S	**Sn**	**10 33 48.9**	**-0.5**
TWA	**Mucha**	**1.18**	**300**	*e*P	**Pn**	**10 33 33.4**	**-0.5**
TWA				*e*S	**Sn**	**10 33 48.4**	**-1.2**
JKRS	**Kuro-shima**	**1.19**	**97**	*e*P	**Pn**	**10 33 34.3**	**+0.3**
JKRS				S	**Sn**	**10 33 50.9**	**+1.0**
ETM	**Tongmen**	**1.20**	**249**	P	**Pn**	**10 33 33.7**	**-0.3**
ETM				*e*S	**Sn**	**10 33 49.3**	**-0.7**
NNSB	**Datong**	**1.21**	**272**	*e*P	**Pn**	**10 33 34.3**	**0.0**
NNSB				S	**Sn**	**10 33 50.4**	**-0.2**
SHUL	**Shoufeng**	**1.22**	**240**	*e*P	**Pn**	**10 33 34.1**	**-0.1**
SHUL				*e*S	**Sn**	**10 33 50.8**	**+0.4**
NHY	**Taipei**	**1.22**	**302**	P	**Pn**	**10 33 34.4**	**0.0**
NNS	**Nan Shan**	**1.22**	**272**	*e*P	**Pn**	**10 33 36.4**	**+1.9**
NNS				*e*S	**Sn**	**10 33 50.7**	**-0.1**
YHNB	**Yeheng**	**1.25**	**283**	P	**Pn**	**10 33 35.2**	**+0.5**
YHNB	**Yeheng**	**1.25**	**283**	P	**Pn**	**10 33 35.0**	**+0.2**
YHNB				*e*S	**Sn**	**10 33 51.2**	**-0.1**
NSK	**Sanguang**	**1.27**	**283**	*e*P	**Pn**	**10 33 35.3**	**+0.3**
NSK				S	**Sn**	**10 33 51.5**	**-0.1**
YM01	**YM01**	**1.28**	**306**	P	**Pn**	**10 33 34.8**	**-0.3**
YM01				*e*S	**Sn**	**10 33 50.9**	**-1.0**
YM08	**YM08**	**1.29**	**308**	*e*P	**Pn**	**10 33 34.9**	**-0.3**
YM08				*e*S	**Sn**	**10 33 50.7**	**-1.4**
JIJ	**Ishigaki jima**	**1.30**	**91**	P	**Pn**	**10 33 35.1**	**-0.2**
JIJ				S	**Sn**	**10 33 51.7**	**-0.7**
ZUZH	**Zhuzihu**	**1.31**	**306**	P	**Pn**	**10 33 35.1**	**-0.3**
ZUZH				*e*S	**Sn**	**10 33 51.1**	**-1.4**
ESL	**Shilin**	**1.31**	**244**	P	**Pn**	**10 33 35.1**	**-0.3**
WHF	**Hehuan Shan**	**1.35**	**259**	*e*P	**Pn**	**10 33 36.3**	**0.0**
WHF				S	**Sn**	**10 33 53.8**	**-0.2**
FUSS	**Fushou**	**1.35**	**264**	*e*P	**Pn**	**10 33 36.6**	**+0.4**
FUSS				*e*S	**Sn**	**10 33 53.0**	**-0.8**
TWS1	**Kuangyinshan**	**1.37**	**301**	P	**Pn**	**10 33 36.0**	**-0.2**
TWS1				*e*S	**Sn**	**10 33 52.9**	**-1.0**
NTST	**Danshui**	**1.38**	**304**	*e*P	**Pn**	**10 33 36.4**	**0.0**
NTST				*e*S	**Sn**	**10 33 53.6**	**-0.6**
EGFH	**Guangfu**	**1.38**	**239**	*e*P	**Pn**	**10 33 36.2**	**-0.2**
EGFH				*e*S	**Sn**	**10 33 53.8**	**-0.5**
WARBT	**Fenglin Townsh**	**1.39**	**241**	*e*P	**Pn**	**10 33 36.0**	**-0.5**
WARBT				*e*S	**Sn**	**10 33 53.8**	**-0.7**
TWT	**Tachien**	**1.41**	**264**	*e*S	**Sn**	**10 33 55.0**	**-0.1**
TDCB	**Techi**	**1.43**	**264**	P	**Pn**	**10 33 37.7**	**+0.6**
TDCB				S	**Sn**	**10 33 55.3**	**-0.2**
KSHI	**Guanxi Townshi**	**1.45**	**285**	*e*S	**Sn**	**10 33 56.8**	**+1.0**
JISG	**Ishigakijimahi**	**1.47**	**82**	P	**Pn**	**10 33 37.2**	**-0.2**
JISG				S	**Sn**	**10 33 55.4**	**-0.8**
NFF	**Wufeng Townshi**	**1.47**	**279**	*e*P	**Pn**	**10 33 38.0**	**+0.4**
NFF				*e*S	**Sn**	**10 33 56.4**	**0.0**
OWD	**Renai**	**1.47**	**253**	*e*P	**Pn**	**10 33 37.6**	**-0.1**
OWD				*e*S	**Sn**	**10 33 55.8**	**-0.8**
HGSD	**Ruisui**	**1.48**	**233**	P	**Pn**	**10 33 37.5**	**-0.3**
HGSD				*e*S	**Sn**	**10 33 56.2**	**-0.4**
NCU	**National Centr**	**1.50**	**293**	*e*P	**Pn**	**10 33 38.4**	**+0.4**
WUSB	**Renai**	**1.51**	**255**	*e*P	**Pn**	**10 33 38.5**	**+0.3**
WUSB				*e*S	**Sn**	**10 33 57.0**	**-0.5**
EHYH	**Wanrong**	**1.54**	**235**	*e*P	**Pn**	**10 33 38.3**	**-0.1**
EHYH				*e*S	**Sn**	**10 33 57.1**	**-0.8**
EHY	**Hungye**	**1.55**	**235**	*e*P	**Pn**	**10 33 38.3**	**-0.3**
EHY				*e*S	**Sn**	**10 33 57.5**	**-1.1**
LIOB	**Emei**	**1.57**	**279**	*e*P	**Pn**	**10 33 39.3**	**+0.5**
LIOB

TECO	**Alcaldia de Te**	**1.07**	**333**	S	**Sn**	**10 47 22.3**	**-0.3**
PQSS	**Presa 15 de Se**	**1.07**	**345**	S	**Sn**	**10 47 23.4**	**+0.8**
PQSS	**Presa 15 de Se**	**1.07**	**345**	P	**Pn**	**10 47 08.9**	**-0.1**
UESV	**Universidad de**	**1.16**	**335**	S	**Sn**	**10 47 24.9**	**+0.1**
UESV	**Universidad de**	**1.16**	**335**	P	**Pn**	**10 47 09.9**	**-0.3**
SCLA	**Alcaldia de Sa**	**1.20**	**338**	⇓*e*P	**Pn**	**10 47 10.6**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.20**	**338**	P	**Pn**	**10 47 10.9**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.20**	**338**	S	**Sn**	**10 47 26.8**	**+1.0**
CRIN	**San Cristobal**	**1.20**	**84**	P	**Pn**	**10 47 11.3**	**+0.6**
CRIN	**San Cristobal**	**1.20**	**84**	S	**Sn**	**10 47 26.5**	**+0.5**
PKGN	**Cerro Pekin**	**1.27**	**86**	P	**Pn**	**10 47 11.6**	**0.0**
PKGN				S	**Sn**	**10 47 28.1**	**+0.6**
LFRS	**El Faro**	**1.29**	**324**	*e*P	**Pn**	**10 47 11.4**	**-0.6**
PAVA	**Las Pavas**	**1.30**	**330**	S	**Sn**	**10 47 29.0**	**+0.7**
PAVA	**Las Pavas**	**1.30**	**330**	P	**Pn**	**10 47 12.1**	**0.0**
LOMA	**Loma Larga**	**1.37**	**321**	*e*P	**Pn**	**10 47 12.4**	**-0.7**
LOMA	**Loma Larga**	**1.37**	**321**	S	**Sn**	**10 47 30.5**	**+0.4**
PMON	**Piamonte**	**1.51**	**318**	S	**Sn**	**10 47 34.1**	**+0.5**
PMON	**Piamonte**	**1.51**	**318**	P	**Pn**	**10 47 15.2**	**+0.1**
CNGA	**Al SSO del Vol**	**1.54**	**93**	P	**Pn**	**10 47 15.6**	**+0.2**
CNGA				S	**Sn**	**10 47 34.1**	**-0.1**
CNGN	**Cerro Negro**	**1.54**	**93**	S	**Sn**	**10 47 34.7**	**+0.4**
CNGN	**Cerro Negro**	**1.54**	**93**	P	**Pn**	**10 47 15.0**	**-0.5**
JAYA	**Jayaque - finc**	**1.56**	**313**	*e*P	**Pn**	**10 47 15.6**	**-0.2**
JAYA	**Jayaque - finc**	**1.56**	**313**	P	**Pn**	**10 47 16.3**	**+0.5**
JAYA	**Jayaque - finc**	**1.56**	**313**	S	**Sn**	**10 47 34.7**	**-0.3**
COPN	**Copaltepe**	**1.69**	**103**	P	**Pn**	**10 47 17.1**	**-0.4**
LLGN	**La Laguna**	**1.70**	**338**	S	**Sn**	**10 47 38.2**	**-0.1**
LLGN	**La Laguna**	**1.70**	**338**	P	**Pn**	**10 47 17.7**	**+0.1**
MOMN	**Momotombo**	**1.71**	**96**	P	**Pn**	**10 47 17.5**	**-0.2**
MOMN				S	**Sn**	**10 47 37.9**	**-0.4**
MOM3	**MOM3**	**1.72**	**92**	P	**Pn**	**10 47 17.7**	**-0.1**
MOM3				S	**Sn**	**10 47 38.1**	**-0.4**
MOM2	**El Cardon**	**1.76**	**95**	S	**Sn**	**10 47 39.7**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.76**	**34**	P	**Pn**	**10 47 18.4**	**-0.1**
LIMN	**Finca el Limon**	**1.92**	**75**	P	**Pn**	**10 47 20.4**	**-0.3**
LIMN				S	**Sn**	**10 47 43.5**	**-0.2**
YUSH	**Yuscaran**	**1.95**	**46**	S	**Sn**	**10 47 44.8**	**+0.4**
YUSH	**Yuscaran**	**1.95**	**46**	P	**Pn**	**10 47 20.8**	**-0.2**
NUBE	**Las Nubes**	**1.97**	**312**	*e*P	**Pn**	**10 47 21.2**	**-0.1**
NUBE	**Las Nubes**	**1.97**	**312**	S	**Sn**	**10 47 44.8**	**-0.1**
NUBE	**Las Nubes**	**1.97**	**312**	P	**Pn**	**10 47 21.3**	**0.0**
UNAN	**Cigeo UNAN**	**2.02**	**103**	P	**Pn**	**10 47 22.1**	**+0.3**
UNAN				S	**Sn**	**10 47 45.8**	**-0.1**
MGAN	**Managua**	**2.03**	**102**	P	**Pn**	**10 47 22.2**	**+0.2**
MGAN	**Managua**	**2.03**	**102**	S	**Sn**	**10 47 46.0**	**-0.2**
WILN	**Americas 2**	**2.08**	**101**	S	**Sn**	**10 47 47.5**	**0.0**
MTO3	**Montecristo**	**2.09**	**330**	P	**Pn**	**10 47 23.2**	**+0.1**
FAME	**Alcaldia de Sa**	**2.11**	**307**	S	**Sn**	**10 47 48.5**	**+0.3**
FAME	**Alcaldia de Sa**	**2.11**	**307**	P	**Pn**	**10 47 23.1**	**0.0**
MAS3	**Al N del Volca**	**2.13**	**105**	P	**Pn**	**10 47 23.3**	**-0.1**
MAS3				S	**Sn**	**10 47 48.2**	**-0.4**
NANN	**Nandasmo**	**2.20**	**107**	S	**Sn**	**10 47 51.3**	**+0.8**
RCON	**San Juan de Ri**	**2.25**	**66**	P	**Pn**	**10 47 25.5**	**+0.3**
RCVN	**Varillal2**	**2.26**	**64**	P	**Pn**	**10 47 25.2**	**-0.1**
RCVN	**Varillal2**	**2.26**	**64**	S	**Sn**	**10 47 52.1**	**0.0**
MATN	**Matagalpa**	**2.32**	**81**	P	**Pn**	**10 47 25.0**	**-1.1**
MATN	**Matagalpa**	**2.32**	**81**	S	**Sn**	**10 47 52.9**	**-0.6**
BOAB	**BOACO BROADBAN**	**2.55**	**93**	P	**Pn**	**10 47 29.1**	**-0.2**
BOAB	**BOACO BROADBAN**	**2.55**	**93**	S	**Sn**	**10 47 59.7**	**+0.6**

STR 26 10:48:07.6±0.3,46°N±2°×±°, h0km, MLv1.6/11, LOCSAT earthModelID auvergne_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSB	**Saint Sauveur**	**0.41**	**154**	Pg	Pg	10 48 14.7	-0.6
PLDF	**La Plantade**	**0.57**	**305**	Pg	Pg	10 48 17.4	-1.1
LBL	**Lubilhac**	**0.84**	**241**	Pg	Pg	10 48 23.9	+0.1
LBL				Sg	Sg	10 48 35.3	+0.7
AGO	**Saint Agoulin**	**0.91**	**297**	Pg	Pg	10 48 24.4	-0.5
AGO				Sg	Sg	10 48 37.3	+0.6
OG35	**Corcelles**	**0.98**	**66**	Pg	Pg	10 48 25.5	-0.9
OG35				Sg	Sg	10 48 39.3	+0.3
OGSM	**Saint Maurice**	**0.99**	**92**	Pg	Pg	10 48 26.1	-0.4
OGSM				Sg	Sg	10 48 39.9	+0.7
OGMY	**Moye**	**1.14**	**78**	Pg	Pg	10 48 28.2	-1.3
OGMY				Sg	Sg	10 48 44.2	0.0

WEL 26 10:52:08.9±0.5,33°S±5°×18°0W±1°2, h12km, M4.3/10, mB4.7/6, ML3.9/7, MLv4.5/10, Mw(mB)4.0/6, Error ellipse: s-maj=16.2km s-min=4.0km az=109.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.19**	**23**	P	Pn	10 53 12.4	-0.1
GLKZ				S	Sn	10 54 01.1	-0.4
MXZ	**Matakaoa Point**	**4.68**	**199**	P	Pn	10 53 20.0	+0.8
MXZ				S	Sn	10 54 15.3	+1.8
WMGZ	**Waiomatatini S**	**4.89**	**197**	P	Pn	10 53 23.1	+0.9
WMGZ				S	Sn	10 54 21.5	+2.8
HAZ	**Te Kaha**	**5.01**	**202**	P	Pn	10 53 24.7	+0.9
HAZ				S	Sn	10 54 23.1	+1.5
PUZ	**Puketiti**	**5.17**	**197**	P	Pn	10 53 27.9	+1.8
PUZ				S	Sn	10 54 27.1	+1.4
RUGZ	**Raukumara Rang**	**5.23**	**202**	P	Pn	10 53 27.1	0.0
RUGZ				S	Sn	10 54 28.6	+1.2
TWGZ	**Tauwhareparae**	**5.34**	**199**	P	Pn	10 53 32.0	+3.6
TWGZ				S	Sn	10 54 31.9	+2.0
WCZ	**Waipu Caves**	**5.57**	**238**	P	Pn	10 53 31.5	-0.1
MWZ	**Matawai**	**5.62**	**202**	P	Pn	10 53 31.5	-0.8
MWZ				S	Sn	10 54 35.8	-0.9
MARZ	**Manawahe**	**5.62**	**210**	P	Pn	10 53 34.5	+2.2
TKGZ	**Te Karaka**	**5.62**	**199**	P	Pn	10 53 32.3	0.0
TKGZ				S	Sn	10 54 36.8	0.0
URZ	**Urewera**	**5.69**	**205**	P	Pn	10 53 32.2	-1.0
URZ				S	Sn	10 54 37.1	-1.3
OUZ	**Omahuta**	**5.84**	**247**	P	Pn	10 53 34.6	-0.7
RIGZ	**Rimuhau**	**5.89**	**199**	P	Pn	10 53 35.7	-0.3
RIGZ				S	Sn	10 54 42.8	-0.8
TOZ	**Tahuroa Road**	**5.97**	**218**	P	Pn	10 53 38.9	+1.9
MUGZ	**Murupara**	**6.01**	**207**	P	Pn	10 53 37.8	+0.2
MUGZ				S	Sn	10 54 45.5	-0.8
RTZ	**Ruatahuna**	**6.05**	**205**	P	Pn	10 53 37.5	-0.8
SNGZ	**Shannon Statio**	**6.09**	**201**	P	Pn	10 53 39.6	+0.9
SNGZ				S	Sn	10 54 47.5	-0.8
KNZ	**Kokohu**	**6.21**	**198**	P	Pn	10 53 39.5	-0.9
TLZ	**Tolley Road**	**6.41**	**215**	P	Pn	10 53 44.3	+1.1
BKZ	**Black Stump Fm**	**6.72**	**205**	P	Pn	10 53 46.0	-1.4
HUZ	**Hauiti**	**6.89**	**217**	P	Pn	10 53 51.0	+1.3
NGZ	**Ngauruhoe**	**7.08**	**210**	P	Pn	10 53 51.4	-1.0
PWZ	**Pawanui**	**7.38**	**200**	P	Pn	10 53 54.5	-1.9
PXZ	**Pawanui**	**7.38**	**200**	P	Pn	10 53 53.4	-3.1
VRZ	**Vera Road**	**7.41**	**215**	P	Pn	10 53 55.1	-1.8
TSZ	**Takapari Road**	**7.70**	**205**	P	Pn	10 53 56.4	-4.4
WAZ	**Wanganui**	**7.82**	**211**	P	Pn	10 53 58.9	-3.6
BFZ	**Birch Farm**	**8.16**	**202**	P	Pn	10 54 02.7	-4.5

*IDC **26** 10:59:30.9±2.1,3°21S×127°18E, h0km, mb3.3/2, mbtmp3.5/3, ML3.8/1, MS3.0/1, Error ellipse: s-maj=146.2km s-min=28.3km az=66.0*
*DJA **26** 10:59:30.0±0.3,3°S±4°×12°7E±°, h10km, M3.9/9, mB4.8/1, mb4.4/2, MLv3.7/9, Mw(mB)4.1/1*
ISC 26 10:59:31.5±1.2,2°9S±0°1×126°8E±0°1, h41km, n10, σ1°83/9, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.48**	**144**	P	**Pn**	**10 59 40.8**	**-1.2**
SANI	**Sanana**	**1.15**	**314**	P	**Pn**	**10 59 49.8**	**-1.3**
SANI				S	**Sn**	**11 00 04.2**	**-1.5**
AAI	**Ambon**	**1.60**	**121**	P	**Pn**	**10 59 58.6**	**+1.3**
MSAI	**Masohi**	**2.16**	**103**	P	**Pn**	**11 00 06.3**	**+1.3**
LUWI	**Luwuk**	**4.43**	**294**	P	**Pn**	**11 00 36.9**	**+0.7**
APSI	**Ampana**	**5.52**	**290**	P	**Pn**	**11 00 54.4**	**+3.3**
BATI	**Baumata** comp=Z,106nm,20.6s,baz=23,slow=40	**7.95**	**203**	LR	LR	11 04 43.6	
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=336,slow=12,SNR=13 0.6nm,0.4s	**18.51**	**157**	P	**Pn**	**11 03 44.5**	**-0.4**
ASAR	**Alice Springs** 0.3nm,0.3s,baz=341,slow=11,SNR=9.0 0.3nm,0.3s	**21.80**	**162**	P	**P**	**11 04 19.7**	**-0.4**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=119,slow=5.6,SNR=2.9 0.3nm,0.5s	**63.04**	**327**	P	P	11 10 02.9	+8.4

*RHSSO **26** 11:03:46.1±0.4,43°.16N×18°.08E, h7km, ML2.8/4*
*BEO **26** 11:03:46.1±0.3,43°.22N×18°.03E, h4km±3km, ML2.5/11*
*PDG **26** 11:03:46.4±0.1,43°.15N×18°.02E, h12km, MD2.8/1, ML2.7/9, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
ISC 26 11:03:45.5±1.2,43°.21N±0°.02×18°.06E±0°.03, h2km±10km, n37, σ0°96/64, 4C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.39**	**96**	*e*Pg	**Pg**	**11 03 53.0**	**0.0**
KLINJ				*e*Sg	**Sg**	**11 03 59.2**	**+1.1**
STON	**Ston**	**0.43**	**218**	*e*Pg	**Pg**	**11 03 53.0**	**-0.7**
STON				*e*Sg	**Sg**	**11 03 59.8**	**+0.6**
BRY	**Bratogost**	**0.47**	**131**	⇑*i*Pg	**Pg**	**11 03 54.0**	**-0.5**
BRY				*e*Sg	**Sg**	**11 04 02.0**	**+1.4**
TREB	**Trebinje**	**0.54**	**156**	⇑*i*Pg	**Pg**	**11 03 54.9**	**-0.9**
TREB				*e*Sg	**Sg**	**11 04 02.8**	**0.0**
NKME	**Niksic**	**0.79**	**124**	*e*Pg	**Pg**	**11 03 59.7**	**-1.0**
NKME				*e*Sg	**Sg**	**11 04 12.0**	**+1.0**
HCY	**Herceg Novi**	**0.83**	**157**	⇓*i*Pg	**Pg**	**11 04 00.2**	**-1.2**
HCY				*e*Sg	**Sg**	**11 04 12.8**	**+0.7**
CEME	**Cevo**	**0.92**	**136**	⇓*i*Pg	**Pg**	**11 04 02.0**	**-1.1**
CEME				*e*Sg	**Sb**	**11 04 16.1**	**-0.7**
PLE	**Pljevlja**	**0.98**	**83**	⇑*i*Pg	**Pg**	**11 04 04.3**	**0.0**
PLE				*e*Sg	**Sb**	**11 04 18.4**	**-0.3**
RUDO	**Rudo**	**1.04**	**66**	*e*Pg	**Pg**	**11 04 04.3**	**-1.2**
RUDO				*e*Sg	**Sg**	**11 04 19.3**	**+0.3**
BUM	**Brajici-Budva**	**1.10**	**146**	⇓*i*Pg	**Pg**	**11 04 05.3**	**-1.3**
BUM				*e*Sg	**Sb**	**11 04 22.4**	**+0.4**
KOME	**Kolasin**	**1.13**	**108**	*e*Pg	**Pg**	**11 04 07.4**	**+0.3**
KOME				*e*Sg	**Sb**	**11 04 23.1**	**+0.2**
KOME	**Kolasin**	**1.13**	**108**	⇓*i*Pg	**Pg**	**11 04 06.5**	**-0.6**
KOME				*e*Sg	**Sn**	**11 04 23.7**	**-0.8**
PDG	**Podgorica**	**1.18**	**131**	*e*Pg	**Pg**	**11 04 06.9**	**-1.2**
PDG				*e*Sg	**Sb**	**11 04 24.6**	**+0.4**
PDG	**Podgorica**	**1.18**	**131**	⇑*i*Pg	**Pg**	**11 04 07.0**	**-1.1**
PDG				*e*Sg	**Sb**	**11 04 24.7**	**+0.5**
BBLS	**Lazi&#263i**	**1.18**	**56**	*e*Pg	**Pg**	**11 04 07.3**	**-0.8**
BBLS				*e*Sg	**Sb**	**11 04 24.8**	**+0.4**
DRME	**Dracevica, Mon**	**1.32**	**140**	*e*Pg	**Pg**	**11 04 10.1**	**-0.7**
DRME				*e*Sg	**Sn**	**11 04 30.6**	**+1.6**
DRME	**Dracevica, Mon**	**1.32**	**140**	*e*Pg	**Pg**	**11 04 09.6**	**-1.2**
DRME				*e*Sg	**Sn**	**11 04 29.6**	**+0.6**
IVA	**Berane**	**1.39**	**103**	*e*Pg	**Pn**	**11 04 10.4**	**-1.6**
IVA				*e*Sg	**Sg**	**11 04 33.0**	**+2.1**
SJES	**Sjenica**	**1.40**	**87**	*e*Pg	**Sn**	**11 04 11.8**	**-0.4**
SJES				*e*Sg	**Sn**	**11 04 31.2**	**-0.1**
ULC	**Ulcinj**	**1.52**	**144**	⇓*i*Pg	**Pn**	**11 04 13.4**	**-0.3**
ULC				*e*Sg	**Sg**	**11 04 35.3**	**+0.9**
PVY	**Plav**	**1.53**	**113**	⇓*i*Pg	**Pn**	**11 04 14.0**	**+0.1**
PVY				*e*Sg	**Sg**	**11 04 36.9**	**+2.3**
IVAS	**Ivanjica**	**1.57**	**76**	*e*Pg	**Pn**	**11 04 14.9**	**+0.4**
IVAS				*e*Sg	**Sg**	**11 04 36.0**	**0.0**
BLY	**Banja Luka**	**1.66**	**338**	*e*Pn	**Pn**	**11 04 16.3**	**+0.7**
BLY				*e*Sn	**Sb**	**11 04 38.6**	**+0.4**
BLY	**Banja Luka**	**1.66**	**338**	*e*Pn	**Pb**	**11 04 16.7**	**-0.1**
BLY				*e*Sn	**Sg**	**11 04 39.1**	**+0.2**
DIVS	**Divibare**	**1.66**	**57**	*e*Pg	**Pn**	**11 04 14.4**	**-1.3**
DIVS				*e*Sg	**Sg**	**11 04 39.6**	**+0.7**
TEKS	**Tekeris**	**1.71**	**38**	*e*Pn	**Pb**	**11 04 18.1**	**+0.4**
TRUS	**Trudelj**	**1.98**	**58**	*e*Pn	**Pn**	**11 04 18.4**	**-1.6**
TRUS				*e*Sn	**Sn**	**11 04 45.4**	**0.0**
GRUS	**Gruza**	**2.05**	**70**	*e*Pn	**Pb**	**11 04 22.5**	**0.9**
GRUS				*e*Sn	**Sn**	**11 04 46.4**	**-0.7**
GOCS	**Kraljevo Serbi**	**2.08**	**79**	*e*Pn	**Pn**	**11 04 21.6**	**+0.1**
SELS	**Selova**	**2.24**	**89**	*e*Pn	**Pn**	**11 04 23.8**	**+0.2**
MORH	**Mrgy, Hungar**	**3.03**	**8**	*e*Pn	**Pn**	**11 04 35.1**	**+0.6**
MORH				*e*Sn	**Sn**	**11 05 11.9**	**+0.6**
SOKA	**Soboth** comp=Z,4.0nm,0.4s	**4.08**	**329**	*e*Pn	**Pn**	**11 04 49.3**	**+0.4**
SOKA	**Soboth** comp=E,0.4nm,0.2s	**4.08**	**329**	*e*Sn	**Sn**	**11 05 34.4**	**-2.8**
ARSA	**Arzberg** comp=Z,1.5nm,0.3s	**4.42**	**337**	*e*Pn	**Pn**	**11 04 54.3**	**+0.8**
KBA	**Koelnbreinsper** comp=Z,0.5nm,0.3s	**5.11**	**321**	*e*Pn	**Pn**	**11 05 04.3**	**+1.2**
KBA	**Koelnbreinsper** comp=E,0.4nm,0.2s	**5.11**	**321**	*e*Sn	Sn	11 05 53.3	-9.4
LESA	**Schwarzleotal** comp=Z,1.1nm,0.3s	**5.67**	**320**	*e*Pn	**Pn**	**11 05 11.6**	**+0.8**

*BJI **26** 11:05:49.7, 18°.92N×94°.68E, h47km, mB5.6/53, mb5.4/85, Ms4.9/79, Ms7 4.7/80*
*BGR **26** 11:05:49.3, 18°.56N×95°.54E, h33km, mb5.1, Ms4.5*
*MOS **26** 11:05:55.8±1.0, 19°.35N×95°.03E, h66km, mb5.7/53, MS4.4/13, Error ellipse: s-maj=6.3km s-min=3.7km az=119.0*
*BKK **26** 11:05:56.2±0.2, 19°N±2°×9°5E±°, h15km, MS.4/30, mB5.9/18, mb5.8/19, Mjma5.5/30, ML6.3/25, MLv5.8/11, Mw(mB)5.5/18, MwMwp4.2/9, Mwp4.7/9*
*IDC **26** 11:05:57.9±0.8, 19°.34N×95°.03E, h72km±6km, mb5.1/36, mbtmp5.4/41, MS4.4/73, Error ellipse: s-maj=9.8km s-min=5.9km az=45.0*
*NEIC **26** 11:05:57.5, 19°.23N×94°.94E, h70km*
*DJA **26** 11:05:57.7±0.4, 19°N±2°×9°5E±°, h68km±3km, M5.4/119, mb5.7/119, mB5.8/80, MLv6.8/5, Mw5.5/68, Mw(mB)5.4/80, MwMwp4.9/13, Mwp5.2/13*
*NEIC **26** 11:05:57.6±1.9, 19°.23N±0°.06×94°.94E±0°.06, h61km±4km, mb5.9/415, Mww5.3/21, Error ellipse: s-maj=9.1km s-min=8.2km az=46.0*
*NEIC **26** 11:05:57.5, 19°.63N×94°.41E, h70km, Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17 Nm; Mrr0.04; Mθθ0.37; Mϕϕ -0.41; Mrθ0.49; Mrϕ -0.76; Mθr-0.64; Fault plane solution: M0 1.18000×10^17 NP1:ϕs70.86000°, δ51.06000°, λ171.67000°. NP2:ϕs166.12000°, δ83.53000°, λ39.24000°. Principal axes: T 1.2994, Plg32.0000°, Azm36.0000°; N -0.3038, Plg50.0000°, Azm174.0000°; P -0.9956, Plg21.0000°, Azm292.0000°;*
*GCMT **26** 11:05:57.6±0.1, 19°.26N±0°.01×94°.93E±0°.01, h78km±1km, MW5.4/132, Moment Tensor Solution. s121,c208; s132,c253; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr0.61±.02; Mθθ0.48±.02; Mϕϕ-1.09±.02; Mrθ0.40±.02; Mθϕ-0.93±.02; Mϕr-0.96±.02; Best double couple: M0 1.68100×10^17 NP1:ϕs64.00000°, δ46.00000°, λ160.00000°. NP2:ϕs168.00000°, δ76.00000°, λ45.00000°. Principal axes: T 1.6080, Plg42.0000°, Azm36.0000°; N 0.1420, Plg43.0000°, Azm182.0000°; P -1.7530, Plg18.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NDI **26** 11:05:59.0±3.8, 19°.16N×94°.74E, h70km, mb5.7, ML5.3, MW5.1*
ISC 26 11:05:56.5±0.2, 19°.26N±0°.02×94°.86E±0°.02, h62km±1km, h62km:pP-P, n1421, σ1°51/1409, mb5.7/389, 53C-23D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHMT	**Maesarieng**	**3.10**	**110**	P	**Pn**	**11 06 43.2**	**+0.2**
SAIH	**SAIHA**	**3.67**	**332**	*e*P	**Pn**	**11 06 54.0**	**+3.2**
SAIH				*e*S	**Sn**	**11 07 34.0**	**+1.0**
SAIH	comp=N,14μm,0.5s			IAML		11 07 49.9	
SAIH	comp=E,16μm,1.0s			IAML		11 07 51.7	
CHTO	**Chiang Mai**	**3.89**	**96**	P	**Pn**	**11 06 54.2**	**+0.4**
CHTO				S	**Sn**	**11 07 35.9**	**-2.4**
CHTO	**Chiang Mai**	**3.89**	**96**		**Pn**	**11 06 54.2**	**+0.4**
CHTO	**Chiang Mai**	**3.89**	**96**	P	**Pn**	**11 06 54.2**	**+0.4**
CHTO	**Chiang Mai**	**3.89**	**96**	P	**Pn**	**11 06 54.2**	**+0.4**
CHTO	**Chiang Mai**	**3.89**	**96**	P	**Pn**	**11 06 54.2**	**+0.4**
CM31	**Chiang Mai Arr** SNR=718	**3.94**	**101**	P	**Pn**	**11 06 54.7**	**+0.1**
CM31				S	**Sn**	**11 07 37.5**	**-2.1**
CM31	**Chiang Mai Arr**	**3.94**	**101**		**Pn**	**11 06 55.1**	**+0.5**
CMAR	**Chiang Mai Arr** comp=E,915nm,0.8s,baz=276,slow=14,SNR=2481	**3.94**	**101**	P	**Pn**	**11 06 54.8**	**+0.2**
CMAR				S	**Sn**	**11 07 36.3**	**-3.4**
CMAR	comp=E,1μm,0.6s,baz=291,slow=14,SNR=3.5			LR	LR	11 09 00.0	
CMAR	**Chiang Mai Arr** comp=E,6μm,18.4s,baz=280,slow=48	**3.94**	**101**		**Pn**	**11 06 55.0**	**+0.4**
BRDH	**Bariadhala** comp=E,1μm,0.3s,baz=98,slow=7.8,SNR=61	**4.54**	**319**	P	**Pn**	**11 07 05.5**	**+2.8**
BRDH				S	**Sn**	**11 07 55.1**	**+0.8**
BRDH	comp=E,3μm,0.3s,baz=176,slow=21,SNR=6.2			LR	LR	11 09 24.8	
LAMP	**Lampang** comp=E,8μm,21.5s,baz=135,slow=45	**4.57**	**98**	P	**Pn**	**11 07 03.5**	**+0.3**
BELO	**BELONIA**	**5.09**	**322**	*e*P	**Pn**	**11 07 13.3**	**+3.0**
BELO				*e*S	**Sn**	**11 08 07.0**	**-0.8**
CRAI	**Chiangrai**	**5.28**	**79**	Pn	**Pn**	**11 07 14.0**	**+1.1**
UTTA	**Uttaradit** comp=E,23nmcomp=E,9.5nmcomp=E,696nmcomp=E,20μm comp=E,1μm,0.7s	**5.61**	**105**	P	**Pn**	**11 07 17.8**	**+0.5**
IMP	**Imphal**	**5.61**	**351**	*e*P	**Pn**	**11 07 21.4**	**+3.9**
IMP				*e*S	**Sn**	**11 08 20.5**	**-0.2**
IMP	comp=E,4μm,1.3s			IAML		11 08 43.0	
KHLT	**Khaolaem Dam** comp=E,5.5nmcomp=E,8.5nmcomp=E,8μmcomp=E,502nm,0.8s	**5.69**	**141**	P	**Pn**	**11 07 17.8**	**-0.7**
AGT	**Agartala**	**5.70**	**325**	*e*P	**Pn**	**11 07 21.2**	**+2.5**
AGT				*e*S	**Sn**	**11 08 22.7**	**-0.1**
AGT	comp=E,12μm,0.5s			IAML		11 08 25.7	
AGT	comp=N,11μm,0.6s			IAML		11 08 26.7	
UTHA	**Uthaitani** comp=N,5.0nmcomp=N,3.5nmcomp=N,11μmcomp=N,553nm,0.7s	**5.71**	**129**	P	**Pn**	**11 07 18.6**	**-0.2**
SILR	**SILCHAR**	**5.82**	**341**	*e*P	**Pn**	**11 07 23.4**	**+3.1**
SILR				*e*S	**Sn**	**11 08 24.8**	**-0.9**
SILR	comp=E,3μm,0.5s			IAML		11 08 36.3	
SILR	comp=N,3μm,0.7s			IAML		11 08 38.7	
DGPR	**DIGLIPUR**	**6.32**	**197**	*e*P	**Pn**	**11 07 26.2**	**-0.9**
DGPR				*e*S	**Sn**	**11 08 32.0**	**-6.0**
DGPR	comp=N,3μm,0.6s			IAML		11 08 42.0	
DGPR	comp=E,3μm,0.2s			IAML		11 08 42.1	
KOHI	**KOHIMA**	**6.47**	**354**	*e*P	**Pn**	**11 07 32.2**	**+2.9**
KOHI				*e*S	**Sn**	**11 08 43.2**	**+1.3**
KOHI	comp=N,5μm,0.6s			IAML		11 08 47.1	
KOHI	comp=E,5μm,0.6s			IAML		11 08 47.6	
TNCH	**TengChong**	**6.67**	**30**	P	**Pn**	**11 07 35.5**	**+3.4**
TNCH				S	**Sn**	**11 08 55.3**	**+8.5**
TNCH	comp=E,1μm,0.9s			pmax	pmax		
TNCH	comp=E,7μm,15.7s			LR	LR		
SHL	**Shillong** SNR=294	**6.86**	**337**	P	**Pn**	**11 07 35.1**	**+0.4**
SHL	**Shillong**	**6.86**	**337**		**Pn**	**11 07 35.0**	**+0.4**
SHL	**Shillong**	**6.86**	**337**	*e*P	**Pn**	**11 07 35.2**	**+0.4**
SHL				*e*S	**Sn**	**11 08 47.3**	**-4.1**
SHL	comp=N,2μm,0.4s			IAML		11 08 54.1	
SHL	comp=E,3μm,0.7s			IAML		11 08 57.2	
SHL	**Shillong**	**6.86**	**337**	P	**Pn**	**11 07 35.0**	**+0.4**
MOKO	**MOKOCHONG**	**7.04**	**357**	*e*P	**Pn**	**11 07 39.9**	**+2.8**
MOKO				*e*S	**Sn**	**11 08 57.4**	**+1.6**
MOKO	comp=E,3μm,0.8s			IAML		11 09 04.8	
MOKO	comp=N,3μm,0.4s			IAML		11 09 05.5	
JORH	**JORHAT**	**7.47**	**356**	*e*P	**Pn**	**11 07 44.6**	**+1.8**
JORH				*e*S	**Sn**	**11 09 05.0**	**-1.2**
JORH	comp=N,2μm,0.5s			IAML		11 09 14.6	
JORH	comp=E,3μm,0.3s			IAML		11 09 22.3	
TEZP	**TEZPUR**	**7.57**	**346**	*e*P	**Pn**	**11 07 44.5**	**+0.3**
TEZP				*e*S	**Sn**	**11 09 03.5**	**-5.1**
PBA	**Port Blair**	**7.83**	**195**	P	**Pn**	**11 07 48.3**	**+0.6**
PBA				S	**Sn**	**11 09 17.3**	**+2.3**
PBA	**Port Blair**	**7.83**	**195**		**Pn**	**11 07 47.9**	**+0.2**
PBA	**Port Blair**	**7.83**	**195**	*e*P	**Pn**	**11 07 47.6**	**-0.2**
ITAN	**ITANAGAR**	**7.92**	**353**	*e*P	**Pn**	**11 07 51.4**	**+2.4**
ITAN				*e*S	**Sn**	**11 09 15.6**	**-1.7**
ITAN	comp=N,4μm,0.6s			IAML		11 09 23.9	
ITAN	comp=E,3μm,0.3s			IAML		11 09 27.2	
LKP	**Lekhapani**	**8.09**	**6**	*e*P	**Pn**	**11 07 52.6**	**+1.2**
LKP				*e*S	**Sn**	**11 09 18.5**	**-2.8**
LKP	comp=E,1μm,0.5s			IAML		11 09 27.4	
LKP	comp=N,1μm,0.6

	comp=E,240nm,1.4s								
GYA						pmax	pmax		
	comp=E,2µm,7.0s								
GYA						LR	LR		
	comp=E,3µm,5.4s								
GYA						LR	LR		
	comp=E,5µm,10.4s								
GYA						LR	LR		
	comp=E,6µm,13.6s								
ALBI	**Allahabad**	**13.50**	**299**	*eP*		**Pn**		**11 09 04.5**	**-0.7**
ALBI						IAmb	IAmb	11 09 07.9	
	comp=Z,356nm,0.5s								
VJD	**Vijayawada**	**13.80**	**261**	*eP*		**Pn**		**11 09 10.4**	**+1.2**
CD2	**Chengdu**	**14.12**	**33**	⇑P		**Pn**		**11 09 14.0**	**+0.5**
CD2				S		**Sn**		**11 11 49.8**	**+1.1**
CD2				pmax		pmax			
	comp=Z,340nm,0.8s								
CD2				LR		LR			
	comp=Z,4µm,7.6s								
CD2				LR		LR			
	comp=Z,5µm,8.3s								
CD2				LR		LR			
	comp=Z,5µm,14.0s								
QIZ	**Qiongzhong**	**14.16**	**88**			**Pn**		**11 09 13.7**	**-0.4**
QIZ	**Qiongzhong**	**14.16**	**88**	P		**Pn**		**11 09 15.0**	**+1.0**
QIZ				S		**Sn**		**11 11 48.3**	**-1.4**
QIZ				pmax		pmax			
	comp=Z,55nm,1.0s								
QIZ				pmax		pmax			
	comp=Z,630nm,4.2s								
QIZ				LR		LR			
	comp=Z,3µm,13.9s								
QIZ				LR		LR			
	comp=Z,2µm,17.5s								
QIZ				LR		LR			
	comp=Z,3µm,26.4s								
QIZ	**Qiongzhong**	**14.16**	**88**	P		**Pn**		**11 09 14.7**	**+0.7**
NGP	**Nagpur**	**14.96**	**280**	*eP*		**Pn**		**11 09 23.9**	**-0.6**
NGP				IAmb		IAmb		11 09 32.3	
	comp=Z,159nm,0.5s								
MLSI	**Meulaboh, Aceh**	**14.97**	**174**	P		**P**		**11 09 27.7**	**-1.1**
	comp=Z,4µmcomp=Z,514nm,1.0s								
KULM	**Kulim**	**14.98**	**157**			**Pn**		**11 09 25.0**	**+0.2**
KULM	**Kulim**	**14.98**	**157**	P		**Pn**		**11 09 26.6**	**+1.8**
DLV	**Lat**	**15.00**	**117**			**Pn**		**11 09 24.3**	**-0.8**
DLV	**Lat**	**15.00**	**117**	P		**Pn**		**11 09 25.6**	**+0.5**
GULI	**GuiLin**	**15.55**	**64**	P		**P**		**11 09 34.0**	**-1.2**
GULI				S		**Sn**		**11 12 27.5**	**+4.1**
GULI				pmax		pmax			
	comp=Z,270nm,1.0s								
GULI				LR		LR			
	comp=Z,2µm,6.0s								
GULI				LR		LR			
	comp=Z,2µm,6.0s								
GULI				LR		LR			
	comp=Z,3µm,13.5s								
HYBB	**Hyderabad (bro**	**15.59**	**266**	*eP*		**P**		**11 09 37.6**	**+1.9**
HYBB				IVmB_BB				11 09 38.9	
	comp=Z,4µm,0.8s								
HYBB				*ep*	P	**pP**		**11 09 50.5**	**+1.6**
HYBB				*es*	P	**sP**		**11 09 58.4**	**+1.6**
HYBB				*eS*		S		**11 12 39.6**	**+2.8**
HYBB				IVMs_BB		IVMs_BB		11 14 39.7	
	comp=Z,868nm,26.4s								
IPM	**Ipoh**	**15.87**	**157**			**Pn**		**11 09 34.6**	**-1.5**
IPM	**Ipoh**	**15.87**	**157**	P		**P**		**11 09 37.9**	**-0.9**
KCSI	**Kotacane, Aceh**	**15.89**	**169**	P		**Pn**		**11 09 37.7**	**+1.3**
TPTI		**16.06**	**172**	P		**P**		**11 09 40.4**	**-0.4**
TSI	**Tuntungan**	**16.07**	**167**	P		**P**		**11 09 40.5**	**-0.5**
	comp=Z,3µmcomp=Z,590nm,1.2s								
LGTI	**Lohaghat**	**16.73**	**310**	*eP*		**P**		**11 09 47.6**	**-0.6**
LGTI				IAmb		IAmb		11 09 53.6	
	comp=Z,558nm,0.4s								
BHPL	**Bhopal**	**16.73**	**287**	*eP*		**Pn**		**11 09 47.5**	**+0.5**
BHPL				IAmb		IAmb		11 09 52.7	
	comp=Z,857nm,1.1s								
BHPL				*eS*		**Sn**		**11 12 50.9**	**-1.2**
SNSI	**Sinabang, Aceh**	**16.80**	**175**	P		**P**		**11 09 49.2**	**+0.1**
	comp=Z,248nm,1.0s								
PTH	**Pithoragarh**	**16.80**	**310**	*eP*		**Pn**		**11 09 47.4**	**-0.6**
PTH				IAmb		IAmb		11 09 54.4	
	comp=Z,907nm,0.7s								
PSI	**Prapat**	**16.83**	**166**	P		**P**		**11 09 50.7**	**+1.2**
	comp=Z,71nm,0.8s,baz=322,slow=9.7,SNR=30								
PSI				LR		LR		11 16 55.8	
	comp=Z,1µm,19.4s,baz=330,slow=39								
PSI				ScP		**ScP**		**11 18 01.8**	**-1.0**
	comp=Z,8.9nm,0.4s,baz=262,slow=7.1,SNR=6.7								
PSI	**Prapat**	**16.83**	**166**	P		**P**		**11 09 51.1**	**+1.6**
AKL	**Akola**	**16.84**	**278**	*eP*		**Pn**		**11 09 47.4**	**-0.9**
AKL				IAmb		IAmb		11 09 53.6	
	comp=Z,311nm,1.1s								
NRDN	**NARMADA NAGAR**	**16.88**	**285**	*eP*		**P**		**11 09 50.7**	**+0.8**
NRDN				IAmb		IAmb		11 10 01.0	
	comp=Z,251nm,1.0s								
GOMU	**GeErMu**	**16.88**	**360**	P		**Pn**		**11 09 47.5**	**-1.5**
GOMU				S		**Sn**		**11 12 55.8**	**-0.2**
GOMU				pmax		pmax			
	comp=Z,49nm,0.7s								
GOMU				LR		LR			
	comp=Z,760nm,8.6s								
GOMU				LR		LR			
	comp=Z,610nm,8.5s								
GOMU				LR		LR			
	comp=Z,890nm,8.9s								
RPSI	**Rantau Prapat**	**16.93**	**166**	P		**P**		**11 09 50.2**	**-0.3**
ENH	**Enshi**	**17.21**	**48**	P		**Pn**		**11 09 51.6**	**-1.1**
ENH	**Enshi**	**17.21**	**48**	P		**Pn**		**11 09 51.4**	**-1.4**
GZH	**Guangzhou**	**17.65**	**74**	P		**P**		**11 10 01.8**	**+3.4**
GZH				PP		**sP**		**11 10 20.0**	**+0.5**
GZH				S		**S**		**11 13 23.8**	**+5.6**
GZH				pmax		pmax			
	comp=Z,3µm,4.0s								
GZH				LR		LR			
	comp=Z,6µm,5.4s								
GZH				LR		LR			
	comp=Z,1µm,5.8s								
GZH				LR		LR			
	comp=Z,2µm,17.6s								
SALM	**Salem**	**17.74**	**247**	*eP*		**P**		**11 10 00.3**	**+0.8**
SALM				IAmb		IAmb		11 10 04.8	
	comp=Z,172nm,0.8s								
UGON	**Onchagaon**	**17.93**	**303**	*eP*		**P**		**11 10 00.1**	**-1.4**
UGON				IAmb		IAmb		11 10 05.4	
	comp=Z,949nm,0.8s								
GSI	**Gunungsitoli**	**18.04**	**171**	P		**P**		**11 10 02.7**	**0.0**
GSI	**Gunungsitoli**	**18.04**	**171**	P		**P**		**11 10 02.7**	**0.0**
GSI	**Gunungsitoli**	**18.04**	**171**	P		**Pn**		**11 10 03.9**	**+0.9**
	comp=Z,5µmcomp=Z,98nm,0.8s								
PALK	**Pallekele**	**18.20**	**231**	P		**Pn**		**11 10 05.1**	**+0.2**
	comp=Z,46nm,0.9s,baz=42,slow=11,SNR=11								
PALK				S		Sn		11 13 09.0	-19
	comp=Z,65nm,0.8s,baz=328,slow=16,SNR=11								
PALK				LR		LR		11 17 53.0	
	comp=Z,1µm,18.1s,baz=48,slow=39								
PALK	**Pallekele**	**18.20**	**231**	P		**Pn**		**11 10 06.4**	**+1.4**
PALK				S		**S**		**11 13 30.2**	**+0.8**
PALK	**Pallekele**	**18.20**	**231**	P		**Pn**		**11 10 05.9**	**+0.9**
PALK	**Pallekele**	**18.20**	**231**	P		**Pn**		**11 10 05.9**	**+0.9**
PALK				pmax		pmax			
	comp=Z,67nm,0.8s								
MERT	**Meerut**	**18.37**	**305**	*eP*		**P**		**11 10 06.5**	**+0.3**
LZDM	**Lanzhou Array**	**18.37**	**23**	P		**P**		**11 10 05.7**	**-0.9**
	comp=Z,35nm,0.6s,baz=201,slow=12,SNR=28								
LZDM				ScP		**ScP**		**11 18 04.2**	**-1.7**
	comp=Z,1.6nm,0.4s,baz=208,slow=5.9,SNR=6.6								
LZH	**Lanzhou**	**18.54**	**23**	⇑P		**Pn**		**11 10 09.3**	**+0.2**
LZH				sP		sP		11 10 27.0	-2.4
LZH				S		**Sn**		**11 13 31.0**	**-4.8**
LZH				SS		**SnSn**		**11 14 02.5**	**+12**
LZH				ScP		**ScP**		**11 18 05.5**	**-0.6**
LZH				ScS		**ScS**		**11 21 46.5**	**-0.8**
LZH				pmax		pmax			
	comp=Z,230nm,1.3s								
LZH				pmax		pmax			
	comp=Z,2µm,4.1s								
LZH				LR		LR			
	comp=Z,3µm,13.4s								
LZH				LR		LR			
	comp=Z,960nm,12.7s								
LZH				LR		LR			
	comp=Z,5µm,13.7s								
AYAN	**Aya Nagar**	**18.62**	**303**	*eP*		**Pn**		**11 10 09.6**	**-0.4**
AYAN				IAmb		IAmb		11 10 15.1	
	comp=Z,321nm,1.0s								
NDI	**New Delhi**	**18.64**	**304**	*eP*		**P**		**11 10 09.2**	**-0.1**
NDI				IAmb		IAmb		11 10 15.1	
	comp=Z,253nm,1.0s								
NPLP	**NPLP New Delhi**	**18.66**	**303**	*eP*		**Pn**		**11 10 10.0**	**-0.4**
NPLP				IAmb		IAmb		11 10 13.2	
	comp=Z,146nm,0.7s								
CNSH	**ChangSha**	**18.76**	**58**	P		**P**		**11 10 10.8**	**+0.2**
CNSH				S		**S**		**11 13 38.5**	**-2.3**
CNSH				pmax		pmax			
	comp=Z,620nm,0.8s								
CNSH				LR		LR			
	comp=Z,3µm,4.7s								
CNSH				LR		LR			
	comp=Z,2µm,7.3s								
CNSH				LR		LR			
	comp=Z,3µm,16.0s								
DDI	**Dehra Dun**	**18.80**	**309**	*eP*		**Pn**		**11 10 13.7**	**+1.6**
MNSI	**Mandailing Nat**	**18.92**	**165**	P		**Pn**		**11 10 13.0**	**-0.6**
	comp=Z,90nm,0.7s								
KUDL	**Kundal**	**18.99**	**301**	*eP*		**P**		**11 10 13.4**	**+0.3**
KUDL				IAmb		IAmb		11 10 17.3	
	comp=Z,299nm,0.8s								
KOD	**Kodaikanal**	**19.05**	**244**	*eP*		**Pn**		**11 10 16.4**	**+0.9**
KOD				IAmb		IAmb		11 10 23.9	
	comp=Z,173nm,0.8s								
XAN	**Xi'an**	**19.33**	**38**	⇑P		**P**		**11 10 16.0**	**-0.8**
XAN				pP		pP		11 10 25.5	-4.5
XAN				sP		sP		11 10 32.5	-5.4
XAN				S		**S**		**11 13 50.5**	**-1.8**
XAN				pmax		pmax			
	comp=Z,190nm,1.2s								
XAN				pmax		pmax			
	comp=Z,2µm,6.5s								
XAN				LR		LR			
	comp=Z,2µm,12.4s								
XAN				LR		LR			
	comp=Z,1µm,13.1s								
XAN				LR		LR			
	comp=Z,2µm,17.9s								
MYKOM	**Kota Tinggi**	**19.46**	**152**	P		**P**		**11 10 18.4**	**0.0**
MYKOM	**Kota Tinggi**	**19.46**	**152**	P		**Pn**		**11 10 19.3**	**-0.7**
KAD	**Karad**	**19.73**	**268**	*eP*		**Pn**		**11 10 23.7**	**+0.4**
KAD				IAmb		IAmb		11 10 26.8	
	comp=Z,515nm,1.4s								
BTDF	**Bukit Timah Da**	**19.81**	**153**	P		**Pn**		**11 10 23.2**	**-1.0**
SMLA	**Simla**	**19.87**	**310**	*eP*		**Pn**		**11 10 24.8**	**0.0**
POO	**Poona**	**19.90**	**271**	*eP*		**Pn**		**11 10 25.6**	**+0.3**
POO				IAmb		IAmb		11 10 31.0	
	comp=Z,156nm,0.8s								
AJM	**Ajmer**	**19.96**	**295**	*eP*		**Pn**		**11 10 26.6**	**+0.7**
AJM				IAmb		IAmb		11 10 28.9	
	comp=Z,692nm,1.2s								
MNGI	**Mangalore**	**20.24**	**255**	*eP*		Pn		11 10 29.7	+0.5
UDPR	**Udaipur**	**20.32**	**289**	*eP*		Pn		11 10 30.2	+0.1
UDPR				IAmb		IAmb		11 10 31.7	
	comp=Z,608nm,0.9s								
PPI	**Padang Panjang**	**20.33**	**164**	P		Pn		11 10 30.1	-0.2
	comp=Z,2µmcomp=Z,87nm,0.9s								
TRD	**Trivandrum**	**20.38**	**241**	*eP*		Pn		11 10 30.3	-0.6
GOA	**Goa**	**20.42**	**263**	*eP*		Pn		11 10 31.4	+0.1
GTA	**Gaotai**	**20.54**	**11**	⇑P		**P**		**11 10 30.8**	**+0.8**
GTA				pP		pP		11 10 40.0	-3.4
GTA				S		**S**		**11 14 11.3**	**-5.1**
GTA				PcP		**PcP**		**11 14 40.5**	**+1.3**
GTA				SS		**SnSn**		**11 14 51.5**	**+12**
GTA				ScP		**ScP**		**11 18 09.8**	**-0.8**
GTA				PcS		**PcS**		**11 18 17.8**	**+0.7**
GTA				ScS		**ScS**		**11 21 51.3**	**-2.5**
GTA				pmax		pmax			
	comp=Z,270nm,1.1s								
GTA				pmax		pmax			
	comp=Z,1µm,10.8s								
GTA				LR		LR			
	comp=Z,470nm,10.4s								
GTA				LR		LR			
	comp=Z,290nm,10.4s								
GTA				LR		LR			
	comp=Z,470nm,12.7s								
TPRI	**Tanjung Pinang**	**20.54**	**151**	P		Pn		11 10 32.8	+0.1
	comp=Z,2µmcomp=Z,132nm,0.6s								
BHK	**Bhakra**	**20.57**	**310**	*eP*		**P**		**11 10 29.7**	**-0.6**
BHK				IAmb		IAmb		11 10 37.0	
	comp=Z,1µm,0.9s								
PDSI	**Padang**	**20.78**	**164**	P		**P**		**11 10 34.0**	**+1.3**
	comp=Z,1µmcomp=Z,102nm,0.8s								
WHN	**Wuhan**	**20.91**	**54**	⇑*iP*		**P**		**11 10 33.5**	**-0.5**
WHN				pP		**pP**		**11 10 46.8**	**-0.6**
WHN				sP		**sP**		**11 10 54.0**	**-1.2**
WHN				S		**S**		**11 14 27.3**	**+3.6**
WHN				SS		**SnSn**		**11 14 55.8**	**+7.3**
WHN				pmax		pmax			
	comp=Z,280nm,0.7s								
WHN				LR		LR			
	comp=Z,6µm,5.6s								
WHN				LR		LR			
	comp=Z,3µm,6.4s								
WHN				LR		LR			
	comp=Z,7µm,18.0s								
DHRM	**DHARAMSHALA**	**21.10**	**311**	*eP*		**P**		**11 10 37.5**	**+1.3**
TLWR	**Talawar**	**21.19**	**310**	*eP*		**P**		**11 10 38.4**	**+1.5**
TLWR				IAmb		IAmb		11 10 44.0	
	comp=Z,523nm,0.9s								
TSSA	**Tissa**	**21.53**	**313**	*eP*		**P**		**11 10 41.1**	**+0.3**
TSSA				IAmb		IAmb		11 11 03.4	
	comp=Z,290nm,0.9s								
BKNR	**BIKANER**	**21.59**	**298**	*eP*		**P**		**11 10 43.4**	**+2.1**
ALCI	**Alchi Leh**	**21.66**	**317**	*eP*		**P**		**11 10 43.7**	**+1.4**
ALCI				IAmb		IAmb		11 11 09.4	
	comp=Z,396nm,1.5s								
ALCI				*eS*		**S**		**11 14 39.8**	**+0.7**
DSRI	**Dabo**	**21.81**	**153**	P		**P**		**11 10 46.4**	**+2.8**
	comp=Z,2µmcomp=Z,199nm,1.1s								
LYN	**LuoYang**	**21.82**	**42**	⇑P		**P**		**11 10 43.5**	**-0.2**
LYN				sP		pP		11 11 00.5	+3.3
LYN				S		**S**		**11 14 41.0**	**-0.6**
LYN				sS		Sn		11 14 58.0	+3.6
LYN				pmax		pmax			
	comp=Z,350nm,0.6s								
LYN				pmax		pmax			
	comp=Z,2µm,7.0s								
LYN				LR		LR			
	comp=Z,3µm,12.7s								
LYN				LR		LR			
	comp=Z,1µm,15.0s								
LYN				LR		LR			
	comp=Z,4µm,20.1s								
PPSI	**Pulau Pagai**	**22.46**	**166**	P		**P**		**11 10 53.0**	**+2.4**
	comp=Z,4µmcomp=Z,292nm,0.7s								
JMBI	**JAMBI**	**22.48**	**156**	P		**P**		**11 10 52.2**	**+1.3**
	comp=Z,465nm,1.0s								
QZH	**Quanzhou**	**22.69**	**71**	*eP*		**P**		**11 10 52.5**	**-0.6**
QZH				pP		**pP**		**11 11 08.0**	**+1.4**
QZH				S		**S**		**11 15 00.5**	**+3.5**
QZH				LR		LR			
	comp=Z,2µm,14.4s								
MASI	**Maura Aman, Be**	**23.41**	**161**	P		P		11 11 15.4	+15
BHUJ	**Bhuj**	**23.82**	**284**	*eP*		**P**		**11 11 06.7**	**+2.8**
SBUM	**Sibu**	**23.82**	**132**	P		**P**		**11 11 04.3**	**+0.3**
SBUM	**Sibu**	**23.82**	**132**	P		**P**		**11 11 04.1**	**+0.1**
TIY	**Taiyuan**	**23.94**	**36**	P		**P**		**11 11 04.5**	**-0.5**
TIY				S		**S**		**11 15 20.0**	**+2.7**
TIY				pmax		pmax			
	comp=Z,220nm,0.9s								
TIY				LR		LR			
	comp=Z,1µm,24.0s								
TIY				LR		LR			
	comp=Z,1µm,15.1s								
TIY				LR		LR			
	comp=Z,2µm,23.4s								
PPBI	**Pangkal Pinang**	**23.99**	**151**	P		**P**		**11 11 06.6**	**+1.0**
KSI	**Kapahiang**	**24.00**	**161**	P		**P**		**11 11 08.0**	**+2.3**
	comp=Z,99nm,0.6s								
NIL	**Nilore**	**24.01**	**311**	P		**P**		**11 11 06.8**	**+1.1**
NIL	**Nilore**	**24.01**	**311**	P		**P**		**11 11 06.7**	**+1.1**
NIL				IAmb		IAmb		11 11 25.7	
	comp=Z,359nm,1.1s								
NIL	**Nilore**	**24.01**	**311**	P		**P**		**11 11 06.7**	**+1.1**
NIL				pmax		pmax			
	comp=Z,359nm,1.1s								
TPUB	**Ta-pu**	**24.33**	**76**	IAmb		IAmb		11 11 29.3	
	comp=Z,312nm,1.3s								
TPUB	**Ta-pu**	**24.33**	**76**	P		**P**		**11 11 08.9**	**+0.2**
HMDM	**Hanimaadhoo**	**24.46**	**242**	P		**P**		**11 11 12.5**	**+2.7**
SSLB	**Suanglung**	**24.67**	**75**	P		**P**		**11 11 12.2**	**+0.4**
SSLB	**Suanglung**	**24.67**	**75**	P		**P**		**11 11 11.8**	**0.0**
TWGBT	**Beinan**	**24.71**	**77**	P		**P**		**11 11 13.3**	**+1.2**
BTO	**Baotou**	**24.93**	**28**	*eP*		**P**		**11 11 13.8**	**-0.3**
BTO				sP		**pP**		**11 11 31.0**	**+1.9**
BTO				PP		**PnPn**		**11 11 52.5**	**+2.5**
BTO				S		**S**		**11 15 33.8**	**+0.6**
BTO				pmax		pmax			
	comp=Z,190nm,0.8s								
BTO				pmax		pmax			
	comp=Z,2µm,6.0s								
BTO				LR		LR			
	comp=Z,2µm,7.7s								
BTO				LR		LR			
	comp=Z,1µm,9.2s								
BTO				LR		LR			
	comp=Z,3µm,15.3s								
YULB	**Yu-li**	**24.95**	**76**	P		**P**		**11 11 14.7**	**+0.3**
YULB	**Yu-li**	**24.95**	**76**	P		**P**		**11 11 14.6**	**+0.3**
NJ2	**Nanjing**	**25.03**	**55**	*eP*		**P**		**11 11 13.8**	**-1.1**
NJ2				pP		**pP**		**11 11 31.3**	**+1.4**
NJ2				sP		**sP**		**11 11 36.3**	**-1.0**
NJ2				pmax		pmax			
	comp=Z,29nm,0.8s								
NJ2				pmax		pmax			
	comp=Z,710nm,4.4s								
NJ2				LR		LR			
	comp=Z,1µm,18.9s								
NJ2				LR		LR			
	comp=Z,2µm,19.4s								
NJ2				LR		LR			
	comp=Z,1µm,13.1s								
HNS	**HongShan**	**25.05**	**40**	⇑P		**P**		**11 11 14.5**	**-0.5**
HNS				PcP		**PcP**		**11 14 48.8**	**+0.5**
HNS				*eS*		**S**		**11 15 42.0**	**+7.1**
HNS				sS		**sS**		**11 15 59.5**	**-1.1**
HNS				ScP		**ScP**		**11 18 20.3**	**-1.9**
HNS				pmax		pmax			
	comp=Z,110nm,1.0s								
HNS				pmax		pmax			
	comp=Z,1µm,4.9s								
HNS				LR		LR			
	comp=Z,1µm,15.0s								
HNS				LR		LR			
	comp=Z,1µm,15.7s								
HNS				LR		LR			
	comp=Z,2µm,16.2s								
WMQ	**Urumqi**	**25.22**	**348**	⇑P		**P**		**11 11 18.0**	**+1.4**
WMQ				S		**S**		**11 15 36.5**	**-1.2**
WMQ				ScP		**ScP**		**11 18 22.8**	**+0.1**
WMQ				ScS		**ScS**		**11 22 11.0**	**-0.3**
WMQ				pmax		pmax			
	comp=Z,76nm,0.9s								
WMQ				pmax		pmax			
	comp=Z,720nm,3.6s								
WMQ				LR		LR			
	comp=Z,720nm,15.1s								
WMQ				LR		LR			
	comp=Z,1µm,17.3s								
WMQ				LR		LR			
	comp=Z,2µm,24.1s								
TPI	**Tanjungpandan**	**25.23**	**149**	P		**P**		**11 11 17.1**	**+0.3**
	comp=Z,1µmcomp=Z,58nm,1.0s								
NACB	**Ninganchiao**	**25.29**	**74**	P		**P**		**11 11 17.9**	**+0.5**
MDSI	**Maura Dua**	**25.31**	**158**	P		**P**		**11 11 15.3**	**-2.2**
	comp=Z,58nm,0.9s								
TGY	**Tagaytay City**	**25.48**	**98**	LR		LR		11 21 45.3	
	comp=Z,742nm,20.3s,baz=296,slow=37								
WUS	**Wushi**	**25.63**	**332**	IAmb		IAmb		11 11 49.8	
	comp=Z,255nm,0.8s								
KLSI		**25.70**	**157**	P		**P**		**11 11 20.0**	**-1.1**
	comp=Z,938nmcomp=Z,72nm,0.9s								
LWLI	**Liwa**	**25.76**	**159**	P		**P**		**11 11 20.1**	**-1.7**
	comp=Z,130nm,0.8s								
HHC	**Hu-ho-hao-te**	**25.84**	**30**	*eP*		**P**		**11 11 22.5**	**+0.3**
HHC				S		**S**		**11 15 45.5**	**-2.1**
HHC				sS		sS		11 16 07.5	-5.9
HHC				pmax		pmax			
	comp=Z,68nm,1.0s								
HHC				pmax		pmax			
	comp=Z,770nm,5.3s								
HHC				LR		LR			
	comp=Z,1µm,13.0s								
HHC				LR		LR			
	comp=Z,800nm,14.5s								
HHC				LR		LR			
	comp=Z,920nm,13.8s								
TIA	**Tai'an**	**25.86**	**45**	P		**P**		**11 11 21.3**	**-1.0**
TIA				pmax		pmax			
	comp=Z,100nm,0.7s								
TIA				pmax		pmax			
	comp=Z,570nm,4.7s								
TIA				LR		LR			
	comp=Z,1µm,22.0s								
TIA				LR		LR			
	comp=Z,2µm,17.5s								
TIA				LR		LR			
	comp=Z,3µm,24.1s								
KSH	**Kashi**	**25.95**	**325**	P		**P**		**11 11 24.0**	**+0.7**
KSH				S		**S**		**11 15 45.5**	**-3.9**
KSH				pmax		pmax			
	comp=Z,62nm,0.7s								
KSH				LR		LR			
	comp=Z,940nm,15.8s								
KSH				LR		LR			
	comp=Z,1µm,15.8s								
KSH				LR		LR			
	comp=Z,2µm,20.6s								
SSE	**Sheshan**	**26.51**	**58**	P		**P**		**11 11 27.3**	**-1.0**
SSE				S		**S**		**11 15 58.0**	**-0.1**
SSE				pmax		pmax			
	comp=Z,32nm,0.7s								
SSE				pmax		pmax			
	comp=Z,230nm,4.2s								
SSE				LR		LR			
	comp=Z,430nm,12.5s								
SSE				LR		LR			
	comp=Z,710nm,12.7s								
TARG	**Taragay, Kyrgy**	**26.69**	**331**	IAmb		IAmb		11 11 57.0	
	comp=Z,190nm,1.2s								
MYLDM	**Lahad Datu**	**26.95**	**118**	P		**P**		**11 11 33.5**	**+1.1**
MYLDM				IAmb		IAmb		11 12 05.6	
	comp=Z,237nm,1.3s								
MYLDM	**Lahad Datu**	**26.95**	**118**	P		**P**		**11 11 32.8**	**+0.4**
SHLS	**Shalkode**	**27.14**	**335**	*eP*		**P**		**11 11 33.0**	**-1.0**
	comp=Z,52nm,0.8s								
SHLS				*eS*		**S**		**11 16 07.0**	**-1.1**
SHLS	**Shalkode**	**27.14**	**335**	*eP*		**P**		**11 11 32.9**	**-1.0**
SHLS				*eS*		**S**		**11 16 06.9**	**-1.1**
SHLS				pmax		pmax			
	comp=Z,52nm,0.8s								
UZB	**Uzynbulak**	**27.31**	**334**	*eP*		**P**		**11 11 36.1**	**+0.5**
UZB	**Uzynbulak**	**27.31**	**334**	*eP*		**P**		**11 11 36.0**	**+0.5**
SATY	**Saty**	**27.49**	**333**	*eP*		**P**		**11 11 37.8**	**+0.7**
SATY				*eS*		**S**		**11 16 15.0**	**+1.3**
SATY	**Saty**	**27.49**	**333**	*eP*		**P**		**11 11 37.8**	**+0.7**
SATY				*eS*		**S

SNR=35
UCH Uchtor 28.67 327 P **P** **11 11 49.5 +1.5**
SNR=40
ARXS Arharly 28.68 334 P **P** **11 11 48.2 +0.6**
KBK Karagaybulak 28.77 329 P **P** **11 11 50.9 +2.3**
SNR=14
GAR Garm 28.95 318 IAmb IAmb 11 12 28.2
comp=Z,164nm,1.0s
AAK Ala-Archa 28.98 328 LR LR 11 25 32.9
comp=Z,349nm,20.2s,baz=139,slow=40
AAK Ala-Archa 28.98 328 P **P** **11 11 52.1 +1.7**
AAK S **S** **11 16 39.1 +2.0**
AAK Ala-Archa 28.98 328 P **P** **11 11 52.2 +1.7**
AAK Ala-Archa 28.98 328 P **P** **11 11 52.5 +2.1**
SNR=59
AAK Ala-Archa 28.98 328 *i* P **P** **11 11 52.2 +1.7**
SNR=67
AAK Ala-Archa 28.98 328 *ce* P **P** **11 11 52.6 +2.1**
AAK pmax pmax
comp=Z,69nm,0.8s
FRU1 Bishkek 29.04 328 P **P** **11 11 53.4 +2.5**
FRU1 Bishkek 29.04 328 P **P** **11 11 53.4 +2.5**
FRU1 pmax pmax
comp=Z,100nm,1.1s
TDK Taldyqorghan 29.09 336 *e* P **P** **11 11 52.0 +0.8**
TDK Taldyqorghan 29.09 336 *e* P **P** **11 11 52.0 +0.8**
CHMS Chumysh 29.12 329 P **P** **11 11 54.3 +2.8**
SNR=7.2
MK31 Makanchi Array 29.34 342 *ce* P **P** **11 11 53.8 +0.4**
MKAR Makanchi Array 29.34 342 P **P** **11 11 54.0 +0.6**
comp=Z,125nm,0.8s,baz=152,slow=9.4,SNR=605
MKAR S **S** **11 16 40.0 -2.5**
comp=Z,2.6nm,0.9s,baz=158,slow=13,SNR=1.9
MKAR ScP **ScP** **11 18 34.9 -0.2**
comp=Z,27nm,0.8s,baz=134,slow=3.5,SNR=17
MKAR ScS **ScS** **11 22 30.3 +0.9**
comp=Z,3.6nm,1.1s,baz=125,slow=6.4,SNR=4.4
MKAR LR LR 11 24 28.0
comp=Z,541nm,18.4s,baz=154,slow=38
MKAR P3KPbc 11 43 58.5
comp=Z,0.9nm,0.8s,baz=347,slow=4.4,SNR=7.7
comp=Z,125nm,0.8s
MKAR Makanchi Array 29.34 342 P **P** **11 11 53.9 +0.6**
EKS2 Erkin-Say 29.36 327 P **P** **11 11 55.9 +2.1**
SNR=40
USP Ospenovka 29.44 329 P **P** **11 11 56.0 +1.6**
SNR=32
MAKZ Makanchi 29.45 342 P **P** **11 11 54.9 +0.6**
MAKZ Makanchi 29.45 342 P **P** **11 11 54.9 +0.6**
MAKZ pmax pmax
comp=Z,77nm,1.0s
CHGR Chuyangaron 29.49 316 IAmb IAmb 11 12 35.0
comp=Z,111nm,0.8s
SGDS Sogindy 29.52 329 *e* P **P** **11 11 55.8 +0.7**
BKB Balikpapan 29.73 131 P **P** **11 11 58.3 +1.2**
BKB Balikpapan 29.73 131 P **P** **11 11 58.1 +1.0**
KPJI Karang Pucung 29.84 151 P **P** **11 11 59.0 +1.0**
comp=Z,133nm,0.9s
BBKI Banjar Baru 29.93 137 P **P** **11 11 59.9 +1.0**
comp=Z,353nm,0.9s
SONM Songino Array 30.02 16 P **P** **11 11 59.8 +0.4**
comp=Z,148nm,0.9s,baz=204,slow=9.7,SNR=438
SONM PcP **PcP** **11 15 01.1 +0.8**
comp=Z,9.3nm,0.7s,baz=196,slow=2.8,SNR=4.4
SONM ScP **ScP** **11 18 36.0 -1.4**
comp=Z,34nm,0.7s,baz=200,slow=3.4,SNR=46
SONM LR LR 11 26 09.4
comp=Z,2μm,21.7s,baz=202,slow=40
comp=Z,148nm,0.9s
ULN Ulaanbaatar 30.21 16 P **P** **11 12 01.3 +0.1**
ULN S **S** **11 16 55.5 -0.9**
ULN Ulaanbaatar 30.21 16 P **P** **11 12 01.5 +0.2**
ULN IAmb IAmb 11 12 02.8
comp=Z,166nm,0.9s
ULN Ulaanbaatar 30.21 16 *ce* P **P** **11 12 01.4 +0.1**
ULN pmax pmax
comp=Z,198nm,1.0s
ULN Ulaanbaatar 30.21 16 P **P** **11 12 01.6 +0.3**
ULN pP **pP** **11 12 14.4 -2.1**
ULN PcP **PcP** **11 15 01.9 +1.0**
SMRI Semarang 30.31 148 IAmb IAmb 11 12 05.8
comp=Z,338nm,0.8s
SMRI Semarang 30.31 148 P **P** **11 12 04.0 +1.7**
SMRI Semarang 30.31 148 P **P** **11 12 05.1 +2.8**
DL2 Dalian 30.32 44 P **P** **11 12 01.8 -0.4**
DL2 S **S** **11 16 59.0 +1.0**
DL2 pmax pmax
comp=Z,110nm,0.8s
DL2 pmax pmax
comp=Z,850nm,8.3s
DL2 LR LR
comp=Z,1μm,19.0s
DL2 LR LR
comp=Z,2μm,19.3s
DL2 LR LR
comp=Z,2μm,19.3s
XLT XiLinHaoTe 30.33 31 *e* P **P** **11 12 02.3 0.0**
XLT sP pP 11 12 18.5 +1.0
XLT PcP **PcP** **11 15 01.5 +0.3**
XLT S **S** **11 17 00.3 +2.1**
XLT ScP **ScP** **11 18 37.0 -1.4**
XLT pmax pmax
comp=Z,49nm,1.0s
XLT pmax pmax
comp=Z,330nm,4.0s
XLT LR LR
comp=Z,670nm,15.5s
XLT LR LR
comp=Z,910nm,13.8s
DZA Taraz 30.81 325 *e* P **P** **11 12 07.3 +0.9**
DZA Taraz 30.81 325 *e* P **P** **11 12 07.3 +0.9**
MPSI Mapaga 30.92 125 P **P** **11 12 08.0 +0.3**
comp=Z,528nmcomp=Z,59nm,1.0s
DGZ Jazzator, Alta 30.95 351 *i* P **P** **11 12 08.8 +1.0**
DGZ pmax pmax
comp=Z,23nm,0.6s
NGJI Ngawi 31.10 147 P **P** **11 12 12.7 +3.5**
comp=Z,628nmcomp=Z,42nm,0.9s
TOLI2 Tolitoli 31.14 122 P **P** **11 12 09.6 -0.1**
TOLI2 Tolitoli 31.14 122 P **P** **11 12 09.9 +0.3**
KK31 Karatay Array 31.40 325 *i* P **P** **11 12 13.3 +1.7**
KKAR Karatay Array 31.40 325 P **P** **11 12 11.0 -0.6**
KKAR Karatay Array 31.40 325 P **P** **11 12 11.0 -0.6**
CHM Chimkent 31.40 323 *e* P **P** **11 12 12.6 +0.9**
CHM Chimkent 31.40 323 *e* P **P** **11 12 12.5 +0.9**
JOW Kunigami 31.59 70 LR LR 11 25 58.9
comp=Z,702nm,20.9s,baz=300,slow=38
JOW Kunigami 31.59 70 P **P** **11 12 13.2 -0.3**
JOW IAmb IAmb 11 12 32.5
comp=Z,238nm,1.3s
JOW Kunigami 31.59 70 P **P** **11 12 13.7 +0.2**
BRLS Boroldoy 31.72 324 *e* P **P** **11 12 14.7 +0.2**
BRLS Boroldoy 31.72 324 *e* P **P** **11 12 14.7 +0.2**
NGCH Negor - Chabah 31.73 287 P **P** **11 12 17.3 +2.5**
SNR=5.0
ZAK Zakamensk 31.77 10 *e* P **P** **11 12 14.9 0.0**
ZAK pmax pmax
comp=Z,69nm,1.4s
KMMI Kalianget 32.21 142 P **P** **11 12 20.7 +1.7**
MRSI Marisa 32.45 122 P **P** **11 12 22.3 +1.2**
comp=Z,144nm,1.1s
BLJI Banyuglugur 32.57 144 P **P** **11 12 23.5 +1.4**
comp=Z,124nm,0.7s
MOY Mondy 32.70 7 *e* P **P** **11 12 23.2 +0.1**
MOY pmax pmax
comp=Z,76nm,2.5s
ABJI Asem Bagus 32.97 143 P **P** **11 12 27.3 +1.7**
comp=Z,100nm,0.9s
APSI Ampana 33.06 124 P **P** **11 12 28.8 +2.3**
comp=Z,2μmcomp=Z,202nm,1.1s
TTSI Tana Toraja 33.07 129 P **P** **11 12 27.5 +1.0**
comp=Z,1μmcomp=Z,161nm,0.9s
TLY Talaya 33.09 10 P **P** **11 12 27.1 +0.8**
TLY S **S** **11 17 41.0 +0.1**
TLY Talaya 33.09 10 P **P** **11 12 27.6 +1.2**
TLY Talaya 33.09 10 *c i* P **P** **11 12 27.1 +0.8**
TLY pmax pmax
comp=Z,74nm,1.3s
TLY Talaya 33.09 10 P **P** **11 12 27.5 +1.2**
TLY pP **pP** **11 12 40.8 -0.9**
TLY PcP **PcP** **11 15 09.6 +1.1**
SNY Shenyang 33.17 41 ⇑P **P** **11 12 26.0 -1.1**
SNY sP **pP** **11 12 45.3 +2.9**
SNY pmax pmax
comp=Z,62nm,1.1s
SNY pmax pmax
comp=Z,310nm,4.4s
SNY LR LR
comp=Z,630nm,19.8s
SNY LR LR
comp=Z,600nm,21.2s
SNY LR LR
comp=Z,940nm,21.6s
TJN Taejon 33.22 52 IAmb IAmb 11 12 28.0
comp=Z,424nm,1.5s
TJN Taejon 33.22 52 P **P** **11 12 25.8 -1.8**
TJN Taejon 33.22 52 *i* P **P** **11 12 25.3 -2.3**
JLN Jalan Bani Buh 33.24 281 P **P** **11 12 31.2 +3.2**
SNR=10
JAGI Jajag, Banyuwa 33.47 144 IAmb IAmb 11 12 30.3
comp=Z,56nm,0.7s
JAGI Jajag, Banyuwa 33.47 144 P **P** **11 12 29.4 -0.6**
JAGI Jajag, Banyuwa 33.47 144 P **P** **11 12 29.9 -0.1**
comp=Z,80nm,0.7s
WBK Wadi Bani Khal 33.64 282 P **P** **11 12 34.8 +3.3**
SNR=5.3
SPSI Sidrap Palu 33.66 131 P **P** **11 12 32.7 +1.1**
comp=Z,3μmcomp=Z,207nm,0.8s
SGSI Sangihe 33.70 113 P P 11 12 26.9 -5.2
IRK Irkutsk 33.74 10 *e* P **P** **11 12 32.4 +0.5**
IRK pmax pmax
comp=Z,207nm,2.0s
SRBI Singaraja 33.77 142 P **P** **11 12 34.3 +1.7**
comp=Z,2μmcomp=Z,184nm,1.1s
KURBB Kurchatov Arra 33.88 341 P **P** **11 12 33.6 +0.5**
comp=Z,138nm,0.7s,baz=151,slow=8.4,SNR=424
KURBB PcP **PcP** **11 15 11.3 +0.7**
comp=Z,9.0nm,0.6s,baz=161,slow=2.4,SNR=6.7
KURBB S **S** **11 17 51.1 -2.0**
comp=Z,1.8nm,0.3s,baz=154,slow=16,SNR=6.9
KURBB ScP **ScP** **11 18 49.7 -0.5**
comp=Z,40nm,0.9s,baz=159,slow=3.0,SNR=34
KURBB P3KPbc 11 43 39.4
comp=Z,0.7nm,0.8s,baz=329,slow=4.8,SNR=6.3
comp=Z,138nm,0.7s
KURK Kurchatov 33.94 341 P **P** **11 12 34.7 +1.0**
KURK S **S** **11 17 51.6 -2.3**
KURK Kurchatov 33.94 341 P **P** **11 12 34.5 +0.8**
KURK IAmb IAmb 11 12 35.0
comp=Z,153nm,0.7s
KURK Kurchatov 33.94 341 P **P** **11 12 33.7 +0.1**
KURK 11 15 11.4
KURK S **S** **11 17 51.1 -2.8**
KURK Kurchatov 33.94 341 P **P** **11 12 34.1 +0.4**
KURK pP **pP** **11 12 46.9 -2.1**
WSAR Wadi Sarin 33.95 283 P **P** **11 12 36.9 +2.8**
SNR=8.0
LUWI Luwuk 34.02 123 P **P** **11 12 35.2 +0.4**
LUWI Luwuk 34.02 123 P **P** **11 12 35.0 +0.2**
KSRS Korea Array 34.04 51 P **P** **11 12 32.6 -2.2**
comp=Z,3.5nm,0.7s,baz=244,slow=9.5,SNR=17
KSRS PP **PP** **11 13 53.0 +0.1**
comp=Z,9.0nm,0.8s,baz=243,slow=10,SNR=8.4
KSRS PcP **PcP** **11 15 10.8 -0.5**
comp=Z,4.8nm,0.7s,baz=261,slow=3.0,SNR=9.3
KSRS ScP **ScP** **11 18 48.7 -2.3**
comp=Z,5.8nm,1.0s,baz=229,slow=3.5,SNR=7.6
KSRS LR LR 11 28 17.9
comp=Z,909μm,18.2s,baz=240,slow=40
KMSI Cibinong 34.05 120 P **P** **11 12 36.9 +1.9**
BNSI Bone 34.20 131 P **P** **11 12 36.8 +0.4**
comp=Z,952nmcomp=Z,106nm,0.9s
KAPI Kappang 34.38 132 LR LR 11 28 10.4
comp=Z,444nm,19.4s,baz=288,slow=39
KAPI Kappang 34.38 132 P **P** **11 12 37.9 0.0**
KAPI Kappang 34.38 132 P **P** **11 12 38.1 +0.2**
KAPI IAmb IAmb 11 12 39.2
comp=Z,190nm,1.1s
KAPI Kappang 34.38 132 P **P** **11 12 38.3 +0.4**
KAPI Kappang 34.38 132 *c i* P **P** **11 12 37.9 0.0**
KAPI pmax pmax
comp=Z,223nm,1.1s
KAPI Kappang 34.38 132 P **P** **11 12 37.9 0.0**
KAPI pP **pP** **11 12 51.6 -1.6**
KAPI PcP **PcP** **11 15 12.8 +0.1**
BIDO Bidbid 34.41 284 P **P** **11 12 41.2 +3.0**
SNR=20
JMDO Jabal Madar 34.45 282 P **P** **11 12 41.6 +3.1**
SNR=10
SMDO Samad 34.48 283 P **P** **11 12 42.0 +3.1**
SNR=24
MHTO MHTO 34.64 279 P **P** **11 12 42.7 +2.6**
SNR=20
MHTO S **S** **11 18 08.4 +2.9**
BKSI Bulukumba 34.86 132 P **P** **11 12 41.8 -0.2**
comp=Z,767nmcomp=Z,108nm,0.9s
JNU Nakatsue 34.96 59 LR LR 11 28 16.4
comp=Z,894nm,19.2s,baz=268,slow=38
DQM DQM 35.12 277 P **P** **11 12 47.4 +3.0**
SNR=8.1
HOQ Hoqain 35.16 284 P **P** **11 12 47.8 +3.2**
SNR=40
HOQ S **S** **11 18 17.2 +3.7**
BSY Bisya 35.27 282 P **P** **11 12 48.7 +3.1**
SNR=15
TWSI Taliwang, Sumb 35.28 140 P **P** **11 12 47.2 +1.6**
comp=Z,59nm,0.8s
BRZS Berezniki 35.40 335 *e* P **P** **11 12 47.0 +0.7**
BRZS Berezniki 35.40 335 *e* P **P** **11 12 47.0 +0.7**
CN2 Changchun 35.41 39 P **P** **11 12 45.3 -1.2**
CN2 pP pP 11 12 57.5 -4.4
CN2 PcP **PcP** **11 15 14.8 -0.4**
CN2 S **S** **11 18 15.0 -1.9**
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 LR LR
comp=Z,610nm,17.0s
CN2 LR LR
comp=Z,660nm,17.0s
CN2 LR LR
comp=Z,670nm,14.0s
ZAA0 Zalesovo Array 35.48 350 IAmb IAmb 11 12 51.7
comp=Z,61nm,0.7s
ZALV Zalesovo Beam 35.48 350 P **P** **11 12 47.2 +0.3**
comp=Z,39nm,0.3s,baz=167,slow=9.0,SNR=295
ZALV PcP **PcP** **11 15 14.7 -0.5**
comp=Z,8.6nm,0.7s,baz=173,slow=5.3,SNR=2.2
ZALV S **S** **11 18 16.0 -1.6**
comp=Z,5.9nm,0.8s,baz=172,slow=13,SNR=4.2
ZALV ScP **ScP** **11 18 55.0 -0.8**
comp=Z,14nm,0.9s,baz=180,slow=1.5,SNR=7.7
ZALV ScS **ScS** **11 22 56.1 -4.1**
comp=Z,6.7nm,0.7s,baz=207,slow=11,SNR=16
ZALV LR LR 11 27 36.4
comp=Z,204nm,20.8s,baz=166,slow=37
comp=Z,39nm,0.3s
ZALV Zalesovo Beam 35.48 350 *i* P **P** **11 12 47.2 +0.3**
ZALV pmax pmax
comp=Z,38nm,0.3s
BSSI Bau Bau, Buton 35.70 133 P **P** **11 12 48.2 -1.0**
comp=Z,745nmcomp=Z,72nm,0.6s
SOHO SOHO 35.87 285 P **P** **11 12 53.6 +3.0**
SOHO SOHO 35.87 285 *i* P **P** **11 12 52.9 +2.2**
SNR=28
ARQ Araqi 35.88 283 P **P** **11 12 54.5 +3.7**
SNR=17
ARQ S **S** **11 18 28.9 +4.3**
PLAI Plampang 35.90 139 P **P** **11 12 49.8 -1.2**
PLAI Plampang 35.90 139 P **P** **11 12 52.5 +1.5**
HIA Hailar 35.99 28 IAmb IAmb 11 12 52.6
comp=Z,123nm,1.5s
HIA Hailar 35.99 28 P **P** **11 12 51.2 -0.2**
MDH Madha 36.10 287 P **P** **11 12 54.3 +1.7**
SNR=8.8
MDH Madha 36.10 287 *i* P **P** **11 12 54.3 +1.7**
SNR=20
BANOM Banah 36.12 288 P **P** **11 12 55.8 +3.0**
BANOM Banah 36.12 288 *i* P **P** **11 12 56.0 +3.1**
SNR=8.8
UOSS Minazif 36.18 286 P **P** **11 12 55.3 +2.0**
UOSS Minazif 36.18 286 P **P** **11 12 54.0 +0.7**
UOSS Minazif 36.18 286 P **P** **11 12 55.0 +1.7**
HILR Hailar Array B 36.21 28 P **P** **11 12 53.4 +0.1**
comp=Z,14nm,0.4s,baz=216,slow=9.6,SNR=58
HILR PcP **PcP** **11 15 17.8 +0.3**
comp=Z,19nm,0.6s,baz=192,slow=2.4,SNR=9.2
HILR ScP **ScP** **11 18 57.6 -1.1**
comp=Z,21nm,0.6s,baz=197,slow=4.2,SNR=22
HILR LR LR 11 28 58.7
comp=Z,609nm,20.3s,baz=145,slow=38
comp=Z,14nm,0.4s
MSFE Esma-Masafi 36.23 287 *i* P **P** **11 12 57.0 +3.2**
SNR=13
HATD Hatta, Dubai 36.24 286 P **P** **11 12 57.3 +3.5**
SNR=21
HATD Hatta, Dubai 36.24 286 *i* P **P** **11 12 57.1 +3.2**
SNR=31
SHME Shamm 36.27 288 P **P** **11 12 56.8 +2.7**
ASHO Ashiyiah 36.30 286 P **P** **11 12 57.9 +3.4**
SNR=42
ASHO S **S** **11 18 33.8 +2.7**
ASHO Ashiyiah 36.30 286 *i* P **P** **11 12 57.9 +3.4**
SNR=6.3
ALNE Al Ain 36.58 285 S **S** **11 18 39.3 +4.0**
ALNE Al Ain 36.58 285 *i* P **P** **11 12 60.0 +3.2**
SNR=13
NAZ Nazwa, Dubai 36.67 286 P **P** **11 13 00.4 +2.9**
SNR=6.6
NAZ Nazwa, Dubai 36.67 286 *i* P **P** **11 13 00.2 +2.6**
SNR=11
FAQ Al Faqa, Dubai 36.73 286 P **P** **11 13 00.8 +2.7**
SNR=8.5
FAQ Al Faqa, Dubai 36.73 286 *i* P **P** **11 13 00.7 +2.7**
SNR=16
TNTI Ternate 36.77 116 P **P** **11 12 57.3 -1.2**
TNTI Ternate 36.77 116 P **P** **11 12 58.1 -0.3**
TNTI Ternate 36.77 116 P **P** **11 12 57.8 -0.6**
comp=Z,1μcomp=Z,21nm,0.5s
ASUD Al Ashush, Dub 36.97 286 P **P** **11 13 03.2 +3.2**
SNR=13
ASUD Al Ashush, Dub 36.97 286 *i* P **P** **11 13 03.2 +3.2**
SNR=16
SHAO Shalim 37.15 275 P **P** **11 13 03.9 +2.3**
SNR=5.3
SHAO Shalim 37.15 275 *i* P **P** **11 13 04.2 +2.5**
SNR=7.9
UMZA Um Al Zommool 37.15 282 P **P** **11 13 04.1 +2.4**
UMZA S **S** **11 18 45.4 +1.4**
SANI Sanana 37.20 121 P **P** **11 13 00.1 -1.9**
SANI Sanana 37.20 121 P **P** **11 12 59.9 -2.1**
AJN Ajban 37.28 285 P **P** **11 13 05.4 +2.7**
SNR=12
AJN S **S** **11 18 47.6 +1.8**
AJN Ajban 37.28 285 *i* P **P** **11 13 05.2 +2.5**
SNR=14
WBSI Waikabubak, Su 37.54 138 P **P** **11 13 03.9 -1.0**
comp=Z,1μcomp=Z,101nm,0.8s
JMN Monobe 37.54 59 IAmb IAmb 11 13 25.2
comp=Z,122nm,1.3s
JMN Monobe 37.54 59 P **P** **11 13 05.1 +0.2**
BNX BinXian 37.65 38 ⇑P **P** **11 13 04.5 -1.0**
BNX pmax pmax
comp=Z,69nm,1.0s
DMTO DMTO 37.83 274 P **P** **11 13 10.0 +2.5**
DMTO S **S** **11 18 57.4 +3.0**
WSI Waingapu 38.14 137 P **P** **11 13 08.3 -1.7**
MZWR Madinat Zayed 38.30 284 P **P** **11 13 13.4 +2.1**
MZWR S **S** **11 19 01.9 +0.6**
MDJ Mudanjiang 38.38 41 P **P** **11 13 10.0 -1.7**
MDJ pmax pmax
comp=Z,52nm,1.7s
MDJ Mudanjiang 38.38 41 P **P** **11 13 11.2 -0.5**
EDFI Ende, Flores 38.39 134 P **P** **11 13 09.6 -2.6**
comp=Z,610nmcomp=Z,74nm,0.8s
RBK Rabkut 38.56 274 P **P** **11 13 15.9 +2.3**
SNR=8.7
RBK S **S** **11 19 07.9 +2.4**
MMRI Maumere 38.68 133 IAmb IAmb 11 13 33.8
comp=Z,92nm,0.9s
MMRI Maumere 38.68 133 P **P** **11 13 13.4 -1.1**
MMRI Maumere 38.68 133 P **P** **11 13 13.7 -0.8**
comp=Z,3μmcomp=Z,112nm,1.0s
BVA0 Borovoye Array 38.68 336 P **P** **11 13 14.0 -0.1**
BVAR Borovoye Array 38.68 336 P **P** **11 13 14.4 +0.3**
comp=Z,25nm,0.8s,baz=138,slow=9.0,SNR=80
BVAR S **S** **11 19 04.4 -2.0**
comp=Z,24nm,0.8s,baz=134,slow=6.4,SNR=19
BVAR LR LR 11 30 47.3
comp=Z,440nm,20.4s,baz=142,slow=38
BVAR P3KPbc 11 43 18.4
comp=Z,1.7nm,0.6s,baz=311,slow=5.4,SNR=9.9
comp=Z,25nm,0.8s
MZR Muzera 38.69 283 P **P** **11 13 16.5 +1.9**
SNR=17
MZR S **S** **11 19 07.3 0.0**
MZR Muzera 38.69 283 *i* P **P** **11 13 16.3 +1.7**
SNR=10.0
BORK Borovoye 38.72 336 P **P** **11 13 14.9 +0.4**
BORK Borovoye 38.72 336 *ce* P **P** **11 13 14.6 +0.1**
BORK pmax pmax
comp=Z,52nm,1.0s
BORK Borovoye 38.72 336 P **P** **11 13 14.8 +0.4**
BASI Baing, Sumba 38.73 137 P **P** **11 13 13.9 -1.0**
comp=Z,3μmcomp=Z,343nm,0.9s
NLAI Namlea 38.79 122 P **P** **11 13 16.0 +0.5**
comp=Z,835nmcomp=Z,77nm,0.8s
VLA Vladivostok 39.15 44 *i* P **P** **11 13 16.3 -1.8**
VLA pmax pmax
comp=Z,211nm,1.5s
GHWR Ruwais 39.21 285 P **P** **11 13 20.8 +1.9**
GHWR S **S** **11 19 16.4 +1.3**
JRN Qarnain Island 39.22 286 P **P** **11 13 20.5 +1.5**
SNR=10
JRN S **S** **11 19 15.2 0.0**
ABTO Aybut 39.44 274 P **P** **11 13 22.6 +1.6**
USRK Ussuriysk Ar. 39.69 43 P **P** **11 13 21.2 -1.4**
comp=Z,21nm,0.6s,baz=255,slow=6.3,SNR=43
USRK PcP **PcP** **11 15 27.1 -1.2**
comp=Z,6.6nm,0.6s,baz=238,slow=2.0,SNR=5.3
USRK ScP **ScP** **11 19 09.2 -2.7**
comp=Z,3.4nm,0.7s,baz=214,slow=0.8,SNR=5.6
comp=Z,21nm,0.6s
AAI Ambon 39.93 121 P **P** **11 13 25.1 +0.1**
comp=Z,5μmcomp=Z,308nm,0.8s
SLWR Sila 40.29 285 P **P** **11 13 28.5 +0.6**
SLWR S **S** **11 19 31.0 -0.2**
HEH HeiHe 40.31 32 *e* P **P** **11 13 27.0 -0.7**
HEH PcP **PcP** **11 15 29.5 -0.7**
HEH ScP **ScP** **11 19 11.8 -2.4**
HEH pmax pmax
comp=Z,75nm,1.3s
MSAI Masohi 40.33 120 P **P** **11 13 28.8 +0.5**
INU Inuyama 40.42 58 P **P** **11 13 27.9 -0.9**
TRNA Turayna 40.71 286 P **P** **11 13 33.3 +1.9**
SNR=22
TRNA S **S** **11 19 38.1 +0.7**
BATI Baumata 40.78 133 P **P** **11 13 30.9 -1.1**
comp=Z,1μmcomp=Z,130nm,0.6s
SOEI Soe 40.88 132 P **P** **11 13 31.2 -1.7**
SOEI Soe 40.88 132 P **P** **11 13 31.1 -1.8**
SHMA Al-Shehemyia 40.92 287 P **P** **11 13 35.0 +1.9**
SNR=18
SHMA S **S** **11 19 40.5 -0.1**
SWI Sorong 40.94 115 P **P** **11 13 33.1 -0.2**
comp=Z,112nm,1.0s
AB31 Akbulak array 40.96 325 P **P** **11 13 34.5 +1.4**
AB31 Akbulak array 40.96 325 *e* P **P** **11 13 34.3 +1.3**
ABKAR Akbulak array 40.96 325 P **P** **11 13 34.3 +1.2**
SMRA Abu-Samra 41.06 286 P **P** **11 13 36.1 +1.9**
SNR=26
SMRA S **S** **11 19 42.9 +0.2**
MAJO Matsushiro 41.61 56 P **P** **11 13 37.4 -1.3**
MAJO Matsushiro 41.61 56 *i* P **P** **11 13 35.9 -2.8**
MAJO pmax pmax
comp=Z,21nm,1.3s
MJAR Matsushiro Arr 41.62 56 P **P** **11 13 37.2 -1.5**
comp=Z,4.5nm,0.6s,baz=261,slow=9.1,SNR=14
MJAR PcP **PcP** **11 15 34.7 -0.1**
comp=Z,9.3nm,0.8s,baz=240,slow=2.5,SNR=9.4
MJAR ScP **ScP** **11 19 18.2 -1.5**
comp=Z,16nm,0.9s,baz=239,slow=2.9,SNR=21
MJAR LR LR 11 33 04.7
comp=Z,630nm,18.0s,baz=250,slow=39
comp=Z,4.5nm,0.6s
MJAR Matsushiro Arr 41.62 56 P **P** **11 13 37.9 -0.7**
MJAR **ScP** **11 19 17.7 -2.0**
BNDI Bandanaira 41.80 121 P **P** **11 13 39.5 -0.9**
BNDI Bandanaira 41.80 121 P **P** **11 13 39.0 -1.4**
JHJ Hachijo jima 2 42.30 62 LR LR 11 32 29.3
comp=Z,500nm,19.1s,baz=296,slow=38
ZEA Zeya 42.47 28 *e* P **P** **11 13 45.0 -0.3**
ZEA *e* 11 15 25.5
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=N,10.0nm,1.1s

ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA MLR MLR
comp=E,200nm,17.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
AKTO Aktyubinsk 42.65 326 LR LR 11 35 47.5
comp=Z,726nm,19.0s,baz=136,slow=42
FAKI Fak Fak 42.85 117 P **P 11 13 48.2 -0.8**
FAKI IAmb IAmb 11 13 49.2
comp=Z,140nm,1.1s
FAKI Fak Fak 42.85 117 P **P 11 13 48.1 -0.8**
FAKI Fak Fak 42.85 117 P **P 11 13 47.9 -1.1**
comp=Z,1μmcomp=Z,151nm,1.1s
JTM Tenmabayashi 44.78 51 P **P 11 14 03.2 -0.9**
SAUI Saumlaki 44.96 124 P **P 11 14 05.5 -0.4**
SAUI IAmb IAmb 11 14 06.2
comp=Z,145nm,0.6s
SAUI Saumlaki 44.96 124 P **P 11 14 05.9 +0.1**
SVE Sverdlovsk 45.31 334*d* iP **P 11 14 09.1 +1.0**
SVE *e*S **S 11 20 42.8 -1.2**
SVE pmax pmax
comp=Z,117nm,0.7s
GRNR Gornyy 45.40 36⇑ *i*P **P 11 14 08.3 -0.6**
GRNR pmax pmax
comp=E,20nm,0.9s
GRNR pmax pmax
comp=Z,40nm,0.8s
GRNR MLR MLR
comp=E,350nm,13.0s
GRNR MLR MLR
comp=N,340nm,16.0s
GRNR MLR MLR
comp=Z,490nm,18.0s
AKT Akhty 45.63 310 *e*P **P 11 14 11.6 +0.6**
AKT *e**PP **pP 11 14 26.4 -0.5**
AKT *e**SP **sP 11 14 33.0 -1.1**
AKT *e* 11 15 48.9
AKT pmax pmax
comp=Z,90nm,1.2s
GIRL Giralia 45.74 155 P **P 11 14 11.9 +0.1**
comp=Z,104nm,0.9s
GIRL Giralia 45.74 155 IAmb IAmb 11 14 13.9
comp=Z,88nm,0.9s
ARTI Arti 45.98 333 LR LR 11 35 44.3
comp=Z,532nm,18.6s,baz=134,slow=39
ARTI Arti 45.98 333 P **P 11 14 13.6 +0.2**
ARTI IAmb IAmb 11 14 14.5
comp=Z,77nm,0.4s
ARTI Arti 45.98 333*c i*P **P 11 14 13.5 +0.2**
ARTI *PP **pP 11 14 29.9 +0.6**
ARTI 11 15 46.6
ARTI 11 16 04.1
ARTI S **S 11 20 55.3 +1.6**
ARTI 11 24 01.1
ARTI pmax pmax
comp=Z,72nm,1.3s
ARTI MLR MLR
comp=Z,488nm,20.0s
ARTI Arti 45.98 333 P **P 11 14 13.6 +0.2**
RAYN Ar Rayn 45.98 284 P **P 11 14 15.3 +1.3**
RAYN S **S 11 20 55.4 +0.6**
RAYN Ar Rayn 45.98 284 P **P 11 14 15.2 +1.3**
RAYN IAmb IAmb 11 14 16.2
comp=Z,72nm,0.9s
RAYN Ar Rayn 45.98 284 *i*P **P 11 14 15.3 +1.3**
SNR=10
RAYN Ar Rayn 45.98 284 P **P 11 14 15.2 +1.3**
RAYN pmax pmax
comp=Z,72nm,0.9s
RAYN Ar Rayn 45.98 284 P **P 11 14 15.1 +1.1**
MAK Makhachkala 46.18 312 *e*P **P 11 14 11.9 -3.2**
MAK *e**PP **pP 11 14 28.9 -2.1**
MAK *e**SP **sP 11 14 36.6 -1.6**
MAK *e*S **S 11 20 53.3 -3.6**
MAK *e**SS **sS 11 21 23.4 -0.4**
MAK pmax pmax
comp=Z,331nm,1.2s
MAK MLR MLR
comp=Z,636nm,16.0s
ERM Erimo 46.61 50 P **P 11 14 19.5 +1.0**
ERM Erimo 46.61 50 P **P 11 14 19.5 +1.0**
ERM pmax pmax
comp=Z,61nm,1.1s
ASAJ Asahikawa 46.76 47 LR LR 11 35 03.1
comp=Z,422nm,21.9s,baz=261,slow=38
MBWA Marble Bar 46.97 148 P **P 11 14 21.7 +0.2**
MBWA Marble Bar 46.97 148 P **P 11 14 21.7 +0.2**
PSAC1 Pilbara Seismi 47.32 148 P **P 11 14 23.6 -0.6**
comp=Z,103nm,0.9s
PSA00 Pilbara Seismi 47.37 148 P **P 11 14 23.8 -0.8**
comp=Z,99nm,1.0s
PSA00 Pilbara Seismi 47.37 148 P **P 11 14 24.7 +0.1**
PSA00 Pilbara Seismi 47.37 148 IAmb IAmb 11 14 25.4
comp=Z,74nm,0.8s
PSA00 Pilbara Seismi 47.37 148 P **P 11 14 24.7 +0.1**
AUDHS Darwin High Sc 47.41 129 P **P 11 14 24.3 -0.7**
DRS Darwin Rock St 47.45 129 P **P 11 14 24.8 -0.6**
GNI Garni 47.56 307 LR LR 11 38 48.7
comp=Z,203nm,20.8s,baz=88,slow=41
GNI Garni 47.56 307 P **P 11 14 28.6 +2.4**
GNI S **S 11 21 18.9 +1.9**
GNI Garni 47.56 307 P **P 11 14 29.1 +2.9**
GNI Garni 47.56 307 P **P 11 14 28.6 +2.4**
GNI Garni 47.56 307*ce*P **P 11 14 27.4 +1.2**
GNI pmax pmax
comp=Z,58nm,1.7s
YSS Yuzhno-Sakhali 47.72 43 P **P 11 14 26.9 -0.3**
YSS Yuzhno-Sakhali 47.72 43 P **P 11 14 26.8 -0.3**
YSS Yuzhno-Sakhali 47.72 43⇑ *e*P **P 11 14 26.8 -0.3**
YSS *e* 11 15 53.9
YSS *e* 11 16 25.4
YSS *e*S **S 11 21 19.2 +0.5**
YSS pmax pmax
comp=Z,40nm,1.1s
YSS pmax pmax
comp=Z,300nm,4.8s
YSS MLR MLR
comp=Z,600nm,18.0s
YSS MLR MLR
comp=E,900nm,17.0s
YSS Yuzhno-Sakhali 47.72 43 P **P 11 14 26.8 -0.3**
FITZ Fitzroy Crossi 47.87 139 ScP **ScP 11 19 43.9 -1.6**
comp=E,6.6nm,0.7s,baz=264,slow=0.7,SNR=5.5
FITZ Fitzroy Crossi 47.87 139 P **P 11 14 28.4 -0.1**
MTN Manton Dam 47.90 129 IAmb IAmb 11 14 28.6
comp=Z,45nm,0.8s
UGL Uglegorsk 48.01 40 *e*P **P 11 14 28.9 -0.3**
UGL pmax pmax
comp=Z,200nm,1.0s
KNRA Kununurra 48.14 134 IAmb IAmb 11 14 31.3
comp=Z,141nm,1.1s
GUMO Guam 48.17 89 LR LR 11 34 43.9
comp=Z,248nm,20.3s,baz=300,slow=36
TYV Tymovskoe 49.02 38 *e*P **P 11 14 37.4 +0.4**
TYV *e*S **S 11 21 36.5 -0.5**
TYV pmax pmax
comp=Z,700nm,3.7s
TYV pmax pmax
comp=Z,39nm,1.2s
TYV smax smax
comp=N,1μm,5.5s
TYV smax smax
comp=E,800nm,5.5s
YAK Yakutsk 49.10 21 LR LR 11 37 05.5
comp=E,593nm,21.0s,baz=234,slow=38
YAK Yakutsk 49.10 21 P **P 11 14 36.7 -0.8**
YAK Yakutsk 49.10 21*c i*P **P 11 14 36.6 -0.8**
YAK *e**PP **pP 11 14 50.0 -3.5**
YAK *e* 11 15 59.3
YAK *e* 11 16 30.5
YAK *e*PPP PPP 11 17 21.5
YAK *e*S **S 11 21 37.3 -0.4**
YAK *e**SS **sS 11 22 04.0 -0.9**
YAK *e* 11 24 16.4
YAK *e*SSS SSS 11 26 30.3
YAK pmax pmax
comp=Z,250nm,0.9s
YAK pmax pmax
comp=N,49nm,1.0s
YAK pmax pmax
comp=E,53nm,1.4s
YAK pmax pmax
comp=Z,415nm,4.7s
YAK pmax pmax
comp=N,245nm,3.7s
YAK pmax pmax
comp=E,422nm,4.6s
YAK smax smax
comp=N,379nm,5.7s
YAK smax smax
comp=E,181nm,4.0s
YAK Yakutsk 49.10 21 P **P 11 14 36.6 -0.8**
YAK pP **pP 11 14 50.6 -2.9**
YAK PcP **PcP 11 15 59.4 -0.7**
BELG Belogornoye 49.30 324 LR LR 11 40 35.6
comp=E,711nm,18.1s,baz=101,slow=42
BELG Belogornoye 49.30 324 *i*P **P 11 14 39.3 +0.2**
BELG pmax pmax
comp=Z,7.0nm,0.8s
NEUR Neytrino 49.67 311 *i*P **P 11 14 43.3 +1.0**
NEUR pmax pmax
comp=Z,53nm,1.2s
SHA1 Shidzhatmaz 49.80 311 *i*P **P 11 14 45.0 +1.6**
GOF Gofitskoye 49.82 313*ce*P **P 11 14 45.1 +1.9**
KIV Kislovodsk 49.82 312 P **P 11 14 45.5 +2.1**
KIV S **S 11 21 50.4 +1.7**
KIV Kislovodsk 49.82 312 P **P 11 14 45.6 +2.1**
KIV IAmb IAmb 11 15 06.0
comp=Z,112nm,1.1s
KIV Kislovodsk 49.82 312 ⇓P **P 11 14 45.0 +1.6**
KIV Kislovodsk 49.82 312 *i*P **P 11 14 45.0 +1.6**
SNR=8.8
KIV Kislovodsk 49.82 312 *e*P **P 11 14 43.5 +0.1**
KIV *e*S **S 11 21 49.9 +1.3**
KIV pmax pmax
comp=Z,14nm,2.8s
KIV pmax pmax
comp=Z,68nm,1.0s
KIV MLR MLR
comp=Z,149nm,16.0s
KIV Kislovodsk 49.82 312 P **P 11 14 44.7 +1.3**
comp=Z,718nmcomp=Z,71nm,1.0s
JAY Jayapura 49.97 111 P **P**
comp=Z,24nm,0.8s,baz=300,slow=9.5,SNR=3.9
JAY LR LR 11 34 55.6
comp=Z,236nm,21.8s,baz=312,slow=35
comp=Z,24nm,0.8s
BATM Batumi 50.09 309⇑ P **P 11 14 47.3 +1.9**
BATM Batumi 50.09 309 P **P 11 14 47.2 +1.9**
MARD Mardin 50.23 303 IAmb IAmb 11 14 49.4
comp=Z,42nm,0.7s
ATD Arta Tunnel 50.58 269 LR LR 11 35 01.1
comp=Z,7.7nm,22.0s,baz=86,slow=34
MEEK Meekatharra 51.11 152 P **P 11 14 53.2 +0.1**
KIRV Kirov 51.22 331 LR LR 11 39 06.3
comp=Z,676nm,22.0s,baz=128,slow=39
KIRV Kirov 51.22 331*ce*P **P 11 14 54.0 +0.5**
LABN Labinsk 51.34 312 *e*P **P 11 14 53.4 -1.3**
LABN *e**PP **pP 11 15 09.6 -1.3**
LABN *e*S **S 11 22 09.6 +0.1**
LABN pmax pmax
comp=Z,27nm,0.6s
ERBR Yeremizino-Bor 51.73 313 *e*P **P 11 14 54.9 -2.7**
ERBR *e**PP **pP 11 15 11.2 -2.6**
ERBR *e*S **S 11 22 13.0 -1.7**
ERBR pmax pmax
comp=Z,29nm,0.5s
SOC Sochi 51.86 311 *e*P **P 11 15 01.2 +2.6**
SOC *e*PPP PPP 11 17 58.4
SOC *e*S **S 11 22 11.0 -5.7**
SOC *e*SSS SSS 11 27 32.7
MORW Morawa 52.21 156 IAmb IAmb 11 15 03.0
comp=Z,74nm,0.8s
MORW Morawa 52.21 156 P **P 11 15 01.8 +0.5**
VRH Novokhopyorsk 52.31 321 *e*P **P 11 15 01.2 -0.6**
VRH pmax pmax
comp=Z,20nm,0.9s
GAZ Gaziantep 53.06 302 IAmb IAmb 11 15 10.2
comp=Z,52nm,1.0s
ASF Jabal al Asfar 53.22 296 LR LR 11 42 35.6
comp=Z,261nm,18.4s,baz=97,slow=41
ANN Anapa 53.68 312 *e*P **P 11 15 10.5 -1.5**
ANN *e**PP **pP 11 15 26.3 -2.0**
ANN *e*S **S 11 22 41.5 +0.2**
ANN pmax pmax
comp=Z,67nm,1.1s
VORD Divnogorie 53.72 320 *e*P **P 11 15 11.3 -0.9**
VORD pmax pmax
comp=Z,10.0nm,1.0s
BLDU Ballidu 53.85 157 P **P 11 15 13.3 0.0**
VSR Storozhevoye 53.86 320 *e*P **P 11 15 11.3 -1.9**
VSR pmax pmax
comp=Z,9.0nm,1.1s
VORR Voronezh 53.96 321 *e*P **P 11 15 14.1 +0.2**
VORR pmax pmax
comp=Z,89nm,0.4s
BALJ Balqa 54.29 296 IAmb IAmb 11 15 43.5
comp=Z,71nm,1.1s
LPSR Galich'ya Gora 54.37 322 *e*P **P 11 15 16.6 -0.3**
LPSR pmax pmax
comp=Z,25nm,0.6s
MMAI Mount Meron Ar 54.47 297 P **P 11 15 19.1 +1.1**
comp=Z,13nm,0.8s,baz=97,slow=7.0,SNR=13
MMAI LR LR 11 43 04.4
comp=Z,257nm,19.4s,baz=84,slow=41
comp=Z,13nm,0.8s
WB0 Warramunga Arr 54.83 133 IAmb IAmb 11 15 21.1
comp=Z,127nm,0.8s
MUN Mundaring 54.90 158 P **P 11 15 21.3 +0.4**
WRA Warramunga Arr 54.91 133 P **P 11 15 20.3 -0.9**
comp=Z,110nm,0.7s,baz=322,slow=7.4,SNR=549
WRA ScP **ScP 11 20 13.6 -2.3**
comp=Z,2.0nm,0.7s,baz=315,slow=4.7,SNR=4.6
WRA S **S 11 22 54.7 -3.8**
comp=Z,1.2nm,0.9s,baz=319,slow=13,SNR=5.3
WRA PKP2bc **P'P'bc 11 45 44.1 +1.5**
comp=Z,1.8nm,1.2s,baz=134,slow=2.2,SNR=5.1
WRA P4KPbc 11 52 40.5
comp=Z,1.5nm,0.7s,baz=317,slow=4.5,SNR=14
comp=Z,110nm,0.7s
WRAB Tennant Creek 54.91 133 P **P 11 15 20.9 -0.3**
WRAB IAmb IAmb 11 15 21.9
comp=Z,153nm,0.8s
WRAB Tennant Creek 54.91 133 P **P 11 15 20.7 -0.5**
WRAB Tennant Creek 54.91 133*ce*P **P 11 15 20.7 -0.5**
WRAB pmax pmax
comp=Z,225nm,1.0s
WRAB Tennant Creek 54.91 133 P **P 11 15 20.8 -0.4**
WRAB PcP **PcP 11 16 22.3 -0.3**
EIL Elat 54.99 293 LR LR 11 43 01.2
comp=Z,525nm,20.2s,baz=160,slow=40
WR8 Warramunga Arr 55.03 133 IAmb IAmb 11 15 22.6
comp=Z,144nm,0.8s
KLBR Kellerberrin 55.12 156 P **P 11 15 22.6 +0.1**
KIRS Kirsehir-Merke 55.74 305⇑ P **P 11 15 28.0 +0.8**
BZK Bozkurt 55.84 308⇑ P **P 11 15 29.5 +1.9**
MOS Moscow 55.98 325 *e*P **P 11 15 26.7 -1.7**
MOS *e**PP **pP 11 15 42.3 -2.5**
MOS *e* 11 16 31.4
MOS *e* 11 17 32.0
MOS *e*PPP PPP 11 18 47.0
MOS *e*S **S 11 23 07.6 -4.2**
MOS *e* 11 25 11.2
MOS pmax pmax
comp=Z,53nm,1.0s
BR104 Keskin Array S 55.98 305 P **P 11 15 29.4 +0.5**
comp=Z,158nmcomp=Z,21nm,1.0s
BR131 Keskin Array S 55.98 305 P **P 11 15 30.0 +1.0**
SNR=6.4
BR131 Keskin Array S 55.98 305 *i*P **P 11 15 29.0 +0.1**
BRTR Keskin Array B 55.98 305 P **P 11 15 29.4 +0.5**
comp=Z,13nm,0.8s,baz=114,slow=8.5,SNR=49
BRTR ScP **ScP 11 20 19.1 -1.6**
comp=Z,2.1nm,0.8s,baz=131,slow=5.7,SNR=4.5
BRTR PKKP **PKKPdf 11 37 02.1 -4.9**
comp=Z,0.9nm,0.3s,baz=216,slow=8.8,SNR=8.0
BRTR LR LR 11 44 25.4
comp=Z,358nm,21.7s,baz=97,slow=41
comp=Z,13nm,0.8s
ILGA Ilgaz 55.99 307 IAmb IAmb 11 15 31.7
comp=Z,74nm,1.0s
BR105 Keskin Array S 56.00 305 P **P 11 15 29.3 +0.2**
comp=Z,168nmcomp=Z,23nm,1.1s
BR106 Keskin Array S 56.00 305 P **P 11 15 29.3 +0.3**
comp=Z,136nmcomp=Z,16nm,1.0s
TIXI Tiksi 56.01 12 LR LR 11 42 12.7
comp=Z,522nm,21.3s,baz=200,slow=39
TIXI Tiksi 56.01 12 P **P 11 15 27.4 -1.0**
TIXI Tiksi 56.01 12*ce*P **P 11 15 27.1 -1.3**
TIXI pmax pmax
comp=Z,395nm,1.3s
TIXI Tiksi 56.01 12 P **P 11 15 27.2 -1.1**
TIXI pP **pP 11 15 41.5 -3.2**
SIM Simferopol' 56.04 312 *e*P **P 11 15 29.9 +0.9**
SIM *e*S **S 11 23 15.2 +2.2**
SIM pmax pmax
comp=Z,31nm,1.0s
SIM smax smax
comp=N,230nm,3.7s
NWAO Narrogin (SRO) 56.12 157 LR LR 11 41 08.8
comp=N,142nm,20.0s,baz=310,slow=38
NWAO Narrogin (SRO) 56.12 157 P **P 11 15 29.8 +0.2**
NWAO Narrogin (SRO) 56.12 157 P **P 11 15 29.9 +0.2**
NWAO IAmb IAmb 11 15 30.7
comp=Z,64nm,0.8s
NWAO Narrogin (SRO) 56.12 157 P **P 11 15 29.9 +0.2**
NWAO Narrogin (SRO) 56.12 157 P **P 11 15 29.9 +0.2**
NWAO pmax pmax
comp=Z,64nm,0.8s
OBN Obninsk 56.39 324 LR LR 11 44 06.5
comp=Z,474nm,20.8s,baz=64,slow=41
OBN Obninsk 56.39 324*de*P **P 11 15 32.1 +0.8**
OBN *e**PP **pP 11 15 48.2 +0.5**
OBN *e**SP **sP 11 15 56.9 +2.2**
OBN *e* 11 16 27.6
OBN *e* 11 17 38.8
OBN *e*PPP PPP 11 18 55.3
OBN *e*S **S 11 23 17.6 +0.4**
OBN *e*SS **SS 11 27 09.8 +5.0**
OBN pmax pmax
comp=Z,94nm,1.7s
OBN MLR MLR
comp=Z,561nm,26.0s
MA2 Magadan 56.52 30 LR LR 11 41 57.5
comp=Z,331nm,18.8s,baz=254,slow=38
MA2 Magadan 56.52 30 P **P 11 15 31.2 -0.9**
MA2 Magadan 56.52 30 P **P 11 15 31.3 -0.9**
MA2 Magadan 56.52 30*ce*P **P 11 15 31.8 -0.4**
MA2 pmax pmax
comp=Z,209nm,1.3s
MA2 Magadan 56.52 30 P **P 11 15 31.2 -0.9**
comp=Z,190nm,1.1s
MA2 Magadan 56.52 30 P **P 11 15 31.0 -1.2**
MA2 PcP **PcP 11 16 28.6 +0.4**
ANTO Ankara 56.64 306 P **P 11 15 34.6 +1.1**
ANTO Ankara 56.64 306⇑ P **P 11 15 34.3 +0.7**
ANTO Ankara 56.64 306 P **P 11 15 34.6 +1.1**
ANTO pmax pmax
comp=Z,41nm,0.9s
ANTO Ankara 56.64 306 P **P 11 15 34.1 +0.6**
comp=Z,23nm,0.9s
KLMR Klimovskoe 56.71 331 *e*P **P 11 15 30.2 -3.3**
KLMR *e**PP **pP 11 15 47.1 -2.8**
KLMR *e* 11 17 36.1
KLMR pmax pmax
comp=Z,91nm,1.4s
KLMR MLR MLR
comp=Z,543nm,16.0s
ASAR Alice Springs 57.18 137 P **P 11 15 37.4 0.0**
comp=Z,64nm,0.8s,baz=318,slow=7.2,SNR=144
ASAR PcP **PcP 11 16 31.4 0.0**
comp=Z,31nm,0.8s,baz=316,slow=4.2,SNR=11
ASAR S **S 11 23 27.1 -1.6**
comp=Z,1.0nm,1.0s,baz=305,slow=12,SNR=4.0
ASAR ScS **ScS 11 25 18.2 -3.4**
comp=Z,2.0nm,0.9s,baz=305,slow=7.8,SNR=9.4
ASAR LR LR 11 44 43.4
comp=Z,157nm,18.4s,baz=298,slow=41
ASAR PKPPKP **P'P'df 11 45 26.8 +1.9**
comp=Z,0.9nm,1.1s,baz=122,slow=3.2,SNR=4.0
ASAR P4KPbc 11 52 51.4
comp=Z,0.9nm,0.7s,baz=314,slow=4.7,SNR=19
comp=Z,64nm,0.8s
ASAR Alice Springs 57.18 137 P **P 11 15 37.2 -0.2**
AUALC St Philip's Co 57.19 137 P **P 11 15 37.3 -0.2**
COEN Coen 57.90 121 IAmb IAmb 11 15 43.2
comp=Z,84nm,0.8s
COEN Coen 57.90 121 P **P 11 15 42.0 -0.6**
ISP Isparta 58.39 303 *e*P **P 11 15 45.7 -0.2**
ISP pmax pmax
comp=Z,32nm,0.8s
SEY Seymchan 58.43 27 LR LR 11 43 27.1
comp=Z,708nm,19.8s,baz=253,slow=39
SEY Seymchan 58.43 27*ce*P **P 11 15 44.8 -0.8**
SEY pmax pmax
comp=Z,56nm,1.3s
PETK Petropavlovsk- 58.56 39 P **P 11 15 45.4 -1.3**
comp=Z,26nm,1.0s,baz=222,slow=2.0,SNR=7.1
PETK LR LR 11 42 48.9
comp=Z,766nm,21.9s,baz=239,slow=38
comp=Z,26nm,1.0s
PMG Port Moresby 58.88 114 P **P 11 15 49.0 -0.4**
comp=Z,64nm,1.0s,baz=322,slow=3.7,SNR=19
PMG LR LR 11 42 59.7
comp=Z,89nm,22.0s,baz=302,slow=38
comp=Z,64nm,1.0s
PMG Port Moresby 58.88 114 P **P 11 15 49.5 +0.2**
PMG IAmb IAmb 11 15 50.6
comp=Z,106nm,1.2s
PMG Port Moresby 58.88 114 P **P 11 15 49.6 +0.2**
PMG Port Moresby 58.88 114*ce*P **P 11 15 49.8 +0.4**
PMG pmax pmax
comp=Z,82nm,1.0s
QIS Mount Isa 59.04 130 P **P 11 15 50.5 0.0**
KIBK Kibwezi 59.78 255 P **P 11 15 56.2 +0.4**
KIBK Kibwezi 59.78 255 P **P 11 15 56.2 +0.4**
MILM Milestii Mici 59.90 314*d i*P **P 11 15 56.9 +0.9**
MILM Milestii Mici 59.90 314⇓ *i*P **P 11 15 56.9 +0.9**
MILM *e*L L 11 41 29.0
MILM LRM MLR 11 46 29.0
comp=Z,300nm,21.0s
AK09 Malin Array Si 59.90 318 P **P 11 15 56.1 +0.2**
AK10 Malin Array Si 59.92 318 P **P 11 15 56.2 +0.1**
AK08 Malin Array Si 59.92 318 P **P 11 15 56.2 +0.1**
AK07 Malin Array Si 59.94 318 P **P 11 15 56.4 +0.2**
AKASG Malin Array Be 59.95 318 P **P 11 15 56.1 -0.2**
comp=Z,3.7nm,0.4s,baz=85,slow=6.4,SNR=34
AKASG LR LR 11 48 23.8
comp=Z,220nm,18.6s,baz=94,slow=42
comp=Z,3.7nm,0.4s
AKASG Malin Array Be 59.95 318 *i*P **P 11 15 56.7 +0.4**
AKASG pmax pmax
comp=Z,8.0nm,0.6s
AKBB Malin Array Si 59.95 318*ce*P **P 11 15 55.9 -0.4**
AKBB pmax pmax
comp=Z,11nm,0.6s
AKBB Malin Array Si 59.95 318 P **P 11 15 56.6 +0.3**
AK03 Malin Array Si 59.95 318 P **P 11 15 56.5 +0.2**
AK05 Malin Array Si 59.95 318 P **P 11 15 56.5 +0.2**
AK06 Malin Array Si 59.95 318 P **P 11 15 56.5 +0.2**
AK01 Malin Array Si 59.95 318 P **P 11 15 56.6 +0.3**
AK02 Malin Array Si 59.95 318 P **P 11 15 56.6 +0.3**
KIEV Kiev 59.96 318 P **P 11 15 57.0 +0.7**
KIEV Kiev 59.96 318⇑ P **P 11 15 56.7 +0.3**
KIEV Kiev 59.96 318 *i*P **P 11 15 56.4 +0.1**
SNR=11
KIEV Kiev 59.96 318 P **P 11 15 57.0 +0.7**
KIEV pmax pmax
comp=Z,15nm,0.9s
KIEV Kiev 59.96 318 P **P 11 15 56.6 +0.3**
comp=Z,79nm,0.6s
KIEV Kiev 59.96 318 P **P 11 15 56.3 0.0**
AK11 Malin Array Si 59.98 318 P **P 11 15 56.7 +0.2**
OPO Ambohidratompo 60.02 234 LR LR 11 39 16.8
comp=Z,359nm,18.5s,baz=185,slow=33
KMBO Kilima Mbogo 60.03 257 P **P 11 15 57.8 +0.1**
comp=Z,7.7nm,0.8s,baz=63,slow=9.0,SNR=18
KMBO LR LR 11 40 14.9
comp=Z,221nm,20.8s,baz=90,slow=34
comp=Z,7.7nm,0.8s
LODK Lodwar 60.13 263 P **P 11 15 58.9 +0.7**
BANB Balkesir-Ban 60.25 306⇓ P **P 11 16 00.0 +1.5**
ABPO Ambohimpanom 60.26 234 P **P 11 15 59.1 +0.1**
ABPO Ambohimpanom 60.26 234 P **P 11 15 59.1 +0.1**
ABPO pmax pmax
comp=Z,16nm,0.9s
CFR Carcaliu 60.28 312⇑ P **P 11 15 59.4 +0.8**
CFR Carcaliu 60.28 312 P **P 11 15 59.4 +0.8**
SORM Soroca 60.29 315⇓ P **P 11 15 59.1 +0.5**
SORM Soroca 60.29 315 P **P 11 15 59.1 +0.5**
BALB Balikesir 60.43 305 IAmb IAmb 11 16 02.2
comp=Z,52nm,1.2s
PHSR Pinarhisar 60.67 307⇑ P **P 11 16 02.8 +1.4**
LUBAR Lubar, Ukraine 60.81 317 P **P 11 16 02.4 +0.2**

JOF **Joensuu** 61.05 332 *eP* **P** **11 16 04.2 +0.7**
MTSU **Mount Surprise** 61.15 124 P **P** **11 16 05.2 +0.3**
KARP **Karpathos** 61.18 301 *eP* **P** **11 16 05.8 +0.8**
MNK **Minsk** 61.20 322 *i* P **P** **11 16 04.7 0.0**
MNK *i* *PP **pP** **11 16 19.2 -2.1**
MNK *i* 11 18 21.2
MNK *i* PPP PPP 11 19 46.3
MNK *i* S **S** **11 24 20.7 +1.0**
MNK *i* SS **SS** **11 28 23.3 +2.9**
MNK pmax pmax
comp=E,34nm,0.8s
MNK pmax pmax
comp=N,31nm,0.9s
MNK pmax pmax
comp=Z,20nm,0.6s
MNK MLR MLR
comp=N,539nm,23.0s
MNK MLR MLR
comp=Z,621nm,24.0s
MNK MLR MLR
comp=E,396nm,22.0s
LVZ **Lovozero** 61.25 338 P **P** **11 16 04.6 -0.3**
LVZ lAmb lAmb 11 16 05.7
comp=Z,68nm,1.0s
LVZ **Lovozero** 61.25 338 *ceP* **P** **11 16 05.1 +0.2**
LVZ pmax pmax
comp=Z,72nm,1.0s
LVZ **Lovozero** 61.25 338 P **P** **11 16 04.8 -0.1**
comp=Z,86nm,0.9s
VRI **Vrincioaia** 61.29 312 ⇑P **P** **11 16 07.5 +1.9**
VRI **Vrincioaia** 61.29 312 P **P** **11 16 07.5 +1.9**
VRI **Vrincioaia** 61.29 312 P **P** **11 16 07.0 +1.4**
comp=Z,2umcomp=Z,82nm,1.1s
PLOR **Plostina** 61.35 312 ⇑P **P** **11 16 07.4 +1.5**
PLOR **Plostina** 61.35 312 P **P** **11 16 07.4 +1.5**
TESR **Tescani** 61.37 313 ⇓P **P** **11 16 07.5 +1.4**
TESR **Tescani** 61.37 313 P **P** **11 16 07.6 +1.6**
comp=Z,655nmcomp=Z,44nm,1.2s
ISR **Istrita** 61.41 311 ⇑P **P** **11 16 07.9 +1.5**
ISR **Istrita** 61.41 311 P **P** **11 16 07.9 +1.5**
ISR **Istrita** 61.41 311 P **P** **11 16 07.9 +1.5**
ONER **Baraj Valea Uz** 61.54 313 ⇓P **P** **11 16 09.3 +2.1**
KMPD **K-Podol'skiy** 61.57 315 P **P** **11 16 07.9 +0.5**
KMPD P **P** **11 16 08.1 +0.7**
APA **Apatity** 61.58 337 ⇓*i*P **P** **11 16 05.3 -1.8**
APA *i* 11 16 47.0
APA *e* 11 18 24.7
APA *i* S **S** **11 24 19.6 -4.5**
APA *i* SS **SS** **11 28 23.0 -2.8**
NEHR **Nehoiu** 61.59 312 ⇑P **P** **11 16 09.0 +1.4**
HORU **Horodok** 61.63 316 P **P** **11 16 08.2 +0.5**
BIZ **Bicaz** 61.75 314 ⇓P **P** **11 16 09.2 +0.5**
MLR **Muntele Rosu** 61.83 312 LR LR 11 49 46.5
comp=Z,208nm,20.9s,baz=82,slow=42
MLR **Muntele Rosu** 61.83 312 lAmb lAmb 11 16 35.7
comp=Z,91nm,1.1s
MLR **Muntele Rosu** 61.83 312 ⇑P **P** **11 16 11.1 +1.7**
MLR **Muntele Rosu** 61.83 312 P **P** **11 16 11.0 +1.7**
OZUR 61.95 313 ⇓P **P** **11 16 11.6 +1.5**
RNPP5 **Staryi Chortor** 62.10 318 P **P** **11 16 11.5 +0.7**
RNPP9 **Sopachiv** 62.10 319 P **P** **11 16 11.6 +0.7**
RNPP8 **Varash** 62.12 319 P **P** **11 16 11.7 +0.7**
DOPR **Dopca** 62.23 312 ⇑P **P** **11 16 13.8 +1.9**
VSU **Vasula** 62.36 327 *eP* **P** **11 16 12.1 -0.4**
VSU **Vasula** 62.36 327 *i* P **P** **11 16 11.5 -1.0**
VSU pmax pmax
comp=Z,33nm,0.7s
BURAR **Bucovina Array** 62.37 314 P **P** **11 16 13.9 +1.0**
BURAR **Bucovina Array** 62.37 314 ⇑P **P** **11 16 14.6 +1.7**
BURAR **Bucovina Array** 62.37 314 P **P** **11 16 14.6 +1.7**
VOIR 62.46 312 ⇑P **P** **11 16 14.6 +1.1**
VOIR 62.46 312 P **P** **11 16 14.6 +1.1**
ARR **Arges** 62.76 312 ⇓P **P** **11 16 16.3 +0.9**
ARBE **Arbavere** 62.89 328 *eP* **P** **11 16 16.7 +0.8**
IDI **Anoyia** 63.05 300 lAmb lAmb 11 16 19.6
comp=Z,51nm,0.9s
FIA1 **FINESS Array S** 63.14 330 lAmb lAmb 11 16 18.5
comp=Z,76nm,0.7s
FINES **FINESS Array B** 63.14 330 P **P** **11 16 17.9 +0.3**
comp=Z,24nm,0.6s,baz=101,slow=6.4,SNR=116
FINES LR LR 11 47 58.8
comp=Z,780nm,21.9s,baz=106,slow=40
comp=Z,24nm,0.6s
FINES **FINESS Array B** 63.14 330 P **P** **11 16 17.7 +0.2**
FINES **FINESS Array B** 63.14 330 *i* P **P** **11 16 17.8 +0.2**
FINES pmax pmax
comp=Z,24nm,0.6s
LOT **Lotru** 63.36 312 ⇓P **P** **11 16 21.6 +2.1**
PABE **Paberze** 63.54 323 lAmb lAmb 11 16 22.1
comp=Z,88nm,0.7s
PABE **Paberze** 63.54 323 *eP* **P** **11 16 21.1 +0.8**
TV1H **Townsville Har** 63.72 124 P **P** **11 16 22.3 +0.3**
CTA **Charters Tower** 63.76 125 P **P** **11 16 22.5 +0.2**
CTAO **Charters Tower** 63.76 125 P **P** **11 16 22.5 +0.2**
CTAO lAmb lAmb 11 16 23.5
comp=Z,63nm,0.8s
CTAO **Charters Tower** 63.76 125 P **P** **11 16 22.5 +0.2**
CTAO **Charters Tower** 63.76 125 P **P** **11 16 22.5 +0.2**
CTAO pmax pmax
comp=Z,63nm,0.8s
CTAO **Charters Tower** 63.76 125 P **P** **11 16 22.4 +0.2**
VADS **Vadso** 63.77 340 *eP* **P** **11 16 22.0 +0.4**
MEF **Metsahovi** 63.79 328 *eP* **P** **11 16 22.3 +0.5**
KEF **Keuruu** 63.82 331 *eP* **P** **11 16 22.7 +0.7**
SUW **Suwalki** 63.91 321 *eP* **P** **11 16 23.5 +0.8**
KWP **Kalwaria Pacla** 64.07 317 *eP* **P** **11 16 24.9 +1.0**
DRGR 64.08 313 ⇓P **P** **11 16 26.1 +2.0**
DRGR 64.08 313 P **P** **11 16 26.1 +2.0**
HERR **Herculane** 64.34 311 ⇑P **P** **11 16 27.8 +2.0**
KEV **Kevo** 64.45 339 P **P** **11 16 26.5 +0.4**
KEV lAmb lAmb 11 16 27.5
comp=Z,66nm,1.0s
KEV **Kevo** 64.45 339 P **P** **11 16 26.5 +0.4**
KEV pmax pmax
comp=Z,66nm,1.0s
SIRR **Siria** 64.82 313 ⇑P **P** **11 16 30.4 +1.5**
MDVR **Moldovita** 64.84 311 ⇑P **P** **11 16 30.5 +1.4**
BOVS **Bovan** 64.90 310 ⇓P **P** **11 16 30.6 +1.1**
ARA0 **ARCESS Array S** 64.91 339 *eP* **P** **11 16 29.4 +0.3**
ARCES **ARCESS Array B** 64.91 339 P **P** **11 16 29.6 +0.5**
comp=Z,42nm,0.6s,baz=90,slow=7.3,SNR=256
ARCES LR LR 11 49 51.1
comp=Z,439nm,22.0s,baz=110,slow=41
comp=Z,42nm,0.6s
ARCES **ARCESS Array B** 64.91 339 P **P** **11 16 29.8 +0.7**
ARCES lAmb lAmb 11 16 30.2
comp=Z,43nm,0.7s
ARCES **ARCESS Array B** 64.91 339 P **P** **11 16 29.8 +0.7**
ARCES pmax pmax
comp=Z,43nm,0.7s
VAF **Ylistaro** 64.95 331 *eP* **P** **11 16 30.2 +0.8**
STHS **Stebnicka Huta** 65.02 316 *eP* **P** **11 16 30.6 +0.4**
STHS *e* 11 16 44.3
STHS **Stebnicka Huta** 65.02 316 *eP* **P** **11 16 30.6 +0.4**
STHS *e* 11 16 44.3
BBOO **Buckleboo** 65.05 142 lAmb lAmb 11 16 31.3
comp=Z,77nm,0.8s
BBOO **Buckleboo** 65.05 142 P **P** **11 16 30.5 0.0**
RAF **Rauma** 65.16 329 *eP* **P** **11 16 31.2 +0.4**
ITM **Ithomi** 65.25 303 lAmb lAmb 11 16 47.9
comp=Z,98nm,1.2s
BILL **Bilibino** 65.35 23 P **P** **11 16 30.9 -1.0**
BILL lAmb lAmb 11 16 32.1
comp=Z,222nm,1.5s
KTK1 **Kautokeino** 65.60 338 *eP* **P** **11 16 34.0 +0.4**
NIE **Niedzica** 65.64 316 *eP* **P** **11 16 35.9 +1.6**
HAMF **Hammerfest** 65.75 340 *eP* **P** **11 16 35.1 +0.6**
MBAR **Mbarara** 65.87 260 LR LR 11 44 07.1
comp=Z,158nm,21.1s,baz=74,slow=35
MBAR **Mbarara** 65.87 260 P **P** **11 16 37.6 +1.2**
MBAR **Mbarara** 65.87 260 *i* P **P** **11 16 36.9 +0.5**
MBAR pmax pmax
comp=Z,31nm,0.9s
MBAR **Mbarara** 65.87 260 P **P** **11 16 36.9 +0.5**
AUCAS **Cummins Area S** 65.91 144 P **P** **11 16 36.3 +0.3**
OJC **Ojcow** 65.94 317 *eP* **P** **11 16 36.9 +0.8**
WHYH **Whyalla** 66.09 141 P **P** **11 16 37.9 +0.7**
QLP **Quilpie** 66.11 132 P **P** **11 16 38.3 +0.8**
LANS **Liptovska Anna** 66.19 316 *eP* **P** **11 16 40.1 +2.3**
LANS *e* 11 16 53.8
LANS **Liptovska Anna** 66.19 316 *eP* **P** **11 16 40.1 +2.3**
LANS *e* 11 16 53.8
JETT **Jettan, Norway** 66.68 338 *eP* **P** **11 16 41.1 +0.6**

HOPEN **Hopen** 66.73 346 *eP* **P** **11 16 41.4 +0.7**
AUJCS **Jamestown Cent** 66.82 141 P **P** **11 16 42.3 +0.4**
HTT **Hallett** 67.17 141 P **P** **11 16 44.2 0.0**
TRO **Tromso** 67.20 338 *eP* **P** **11 16 44.0 +0.2**
MAUC **Maruska** 67.26 316 *eP* **P** **11 16 46.2 +1.7**
JAVC **Velka Javorina** 67.39 316 *eP* **P** **11 16 47.8 +2.4**
MORC **Moravsky Berou** 67.42 317 *eP* **P** **11 16 46.2 +0.6**
MODS **Modra-Piesok** 67.68 315 *eP* **P** **11 16 49.1 +1.9**
MODS *e* 11 17 10.4
MODS **Modra-Piesok** 67.68 315 *eP* **P** **11 16 49.1 +1.9**
MODS *e* 11 17 10.4
STKA **Stephens Creek** 67.75 138 P **P** **11 16 47.9 +0.1**
comp=Z,52nm,0.7s,baz=317,slow=7.0,SNR=86
comp=Z,52nm,0.7s
STKA **Stephens Creek** 67.75 138 P **P** **11 16 48.0 +0.2**
KRLC **Kraliky** 67.89 317 *eP* **P** **11 16 49.9 +1.4**
KRLC **Kraliky** 67.89 317 *eP* **P** **11 16 49.9 +1.4**
AUMAR **Marden Senior** 68.03 142 P **P** **11 16 49.9 +0.4**
VRAC **Vranov** 68.06 316 LR LR 11 53 36.1
comp=Z,163nm,18.7s,baz=106,slow=42
VRAC **Vranov** 68.06 316 *eP* **P** **11 16 50.8 +1.2**
KSP **Ksiaz** 68.15 318 *eP* **P** **11 16 51.3 +1.3**
DPC **Dobruska-Polom** 68.16 317 *eP* **P** **11 16 52.0 +1.7**
DPC *eS* **S** **11 25 43.9 -1.8**
DPC **Dobruska-Polom** 68.16 317 *eP* **P** **11 16 52.0 +1.7**
DPC *eS* **S** **11 25 43.9 -1.8**
KRUC **Moravsky** 68.21 316 *eP* **P** **11 16 51.3 +0.8**
OSTC **Ostas** 68.22 318 *eP* **P** **11 16 52.0 +1.4**
OSTC **Ostas** 68.22 318 *eP* **P** **11 16 52.0 +1.4**
CHVC **Chvalec** 68.32 318 *eP* **P** **11 16 52.5 +1.3**
CHVC **Chvalec** 68.32 318 *eP* **P** **11 16 52.5 +1.3**
UPC **Upice** 68.35 318 *eP* **P** **11 16 53.1 +1.7**
UPC **Upice** 68.35 318 *eP* **P** **11 16 53.1 +1.7**
FAUS **Fauske** 68.38 336 *eP* **P** **11 16 51.2 0.0**
RONA **Rosalia, Austr** 68.39 315 *eP* **P** **11 16 51.8 +0.1**
comp=Z,1.0nm,0.4s
STEI **Steigen** 68.42 336 *eP* **P** **11 16 51.2 -0.2**
AUMBR **Murray Bridge** 68.58 142 P **P** **11 16 53.3 +0.4**
CONA **Conrad Observa** 68.67 315 *eP* **P** **11 16 54.0 +0.5**
comp=Z,0.6nm,0.2s
MOR8 **Moi Rana** 68.69 335 *eP* **P** **11 16 52.7 -0.5**
RAUS **Rausandaksla** 68.86 335 *eP* **P** **11 16 54.3 +0.1**
AUNRC **North Rockhamp** 68.87 126 P **P** **11 16 54.8 -0.1**
SPA0 **Spitsbergen Ar** 68.92 347 *eP* **P** **11 16 54.3 -0.2**
SPITS **Spitsbergen Ar** 68.92 347 P **P** **11 16 54.8 +0.3**
comp=Z,16nm,0.6s,baz=110,slow=9.9,SNR=73
SPITS PcP **sP** **11 17 17.6 -0.7**
comp=Z,11nm,0.6s,baz=83,slow=6.8,SNR=5.4
SPITS LR LR 11 53 20.4
comp=Z,206nm,19.5s,baz=96,slow=41
comp=Z,16nm,0.6s
TIP **Timpagrande** 69.05 305 ⇑P **P** **11 16 56.8 +0.8**
LOF **Lofoten** 69.06 337 *eP* **P** **11 16 55.0 -0.5**
HFS **Hagfors** 69.12 328 P **P** **11 16 56.4 +0.4**
comp=Z,31nm,0.5s,baz=104,slow=6.3,SNR=135
HFS PcP **sP** **11 17 20.1 +0.3**
comp=Z,16nm,0.6s,baz=58,slow=5.6,SNR=5.5
HFS LR LR 11 51 27.4
comp=Z,338nm,20.1s,baz=94,slow=40
comp=Z,31nm,0.5s
VAGH **Vaagaholmen** 69.16 335 *eP* **P** **11 16 56.0 -0.1**
LEIR **Leirfinn** 69.23 334 *eP* **P** **11 16 56.6 +0.1**
PRU **Pruhonice** 69.33 317 *eP* **P** **11 16 58.7 +1.2**
PRU *eS* **S** **11 25 58.9 -0.6**
PRU MLR MLR
comp=Z,300nm,16.7s
PRU **Pruhonice** 69.33 317 *eP* **P** **11 16 58.7 +1.2**
PRU *eS* **S** **11 25 58.9 -0.6**
PRU AMS AMS 11 53 30.0
comp=Z,300nm,16.7s
SOKA **Soboth** 69.36 314 *eP* **P** **11 16 58.7 +1.0**
comp=Z,2.9nm,0.6s
PRA **Prague** 69.40 317 *eS* **S** **11 25 57.9 -2.3**
LUNU **Lund** 69.52 323 *i* P **P** **11 16 59.3 +0.8**
CKRC **Cesky Krumlov** 69.61 316 *eP* **P** **11 17 00.7 +1.5**
CKRC *eS* **S** **11 26 00.7 -2.1**
CKRC **Cesky Krumlov** 69.61 316 *eP* **P** **11 17 00.7 +1.5**
CKRC *eS* **S** **11 26 00.7 -2.1**
TATA **Tatamba Isabel** 69.61 107 P **P** **11 16 59.8 +0.1**
BRG **Berggiesshubel** 69.63 318 *eP* **P** **11 17 00.4 +1.2**
comp=Z,18nm,0.7s,baz=82,slow=6.0
OBKA **Obir** 69.71 313 *eP* **P** **11 17 00.8 +0.8**
comp=Z,0.8nm,0.2s
MOA **Molln** 69.74 315 *eP* **P** **11 17 00.5 +0.4**
comp=Z,2.3nm,0.3s
BORU **Boraas** 69.74 325 *i* P **P** **11 17 00.1 +0.3**
NSS **Namsos** 69.75 333 *eP* **P** **11 16 59.6 -0.1**
FABU **Falkenberg** 69.82 325 *i* P **P** **11 17 00.6 +0.4**
HSKC **Hora Svate Kat** 69.98 318 *eP* **P** **11 17 02.5 +1.0**
HSKC AMS AMS 11 54 50.0
comp=Z,300nm,18.1s
GEC2 **GERESS Array S** 70.00 316 *eP* **P** **11 17 02.7 +1.0**
comp=Z,13nm,0.6s,baz=82,slow=6.0
GERES **GERESS Array B** 70.00 316 P **P** **11 17 02.8 +1.0**
comp=Z,10nm,0.6s,baz=76,slow=7.0,SNR=52
GERES PKP2bc **P'P'bc** **11 45 03.1 -3.8**
comp=Z,0.3nm,0.4s,baz=305,slow=4.7,SNR=3.5
GERES LR LR 11 50 52.5
comp=Z,169nm,20.0s,baz=86,slow=38
comp=Z,10nm,0.6s
NC405 **NORSAR Array S** 70.04 329 lAmb lAmb 11 17 03.3
comp=Z,185nm,1.6s
KHC **Kasperske Hory** 70.05 316 *ceP* **P** **11 17 03.9 +1.9**
KHC pmax pmax
comp=Z,13nm,2.5s
KHC **Kasperske Hory** 70.05 316 *eP* **P** **11 17 03.1 +1.1**
KHC *eS* **S** **11 26 04.5 -3.5**
KHC AMS AMS 11 48 10.0
comp=Z,400nm,23.2s
NC602 **NORSAR Array S** 70.15 329 *eP* **P** **11 17 02.1 -0.1**
HNR **Honiara** 70.16 108 P **P** **11 17 02.3 -0.8**
comp=Z,66nm,0.7s,baz=205,slow=7.4,SNR=6.7
HNR LR LR 11 44 34.9
comp=Z,110nm,21.7s,baz=250,slow=33
comp=Z,66nm,0.7s
HNR **Honiara** 70.16 108 P **P** **11 17 02.3 -0.8**
HNR lAmb lAmb 11 17 03.1
comp=Z,140nm,1.2s
HNR **Honiara** 70.16 108 P **P** **11 17 02.7 -0.4**
CLL **Collm** 70.17 319 *eP* **P** **11 17 03.0 +0.4**
CLL *e*PP **pP** **11 17 16.0 -3.5**
CLL *eS* **S** **11 26 08.0 -1.3**
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL **Collm** 70.17 319 *eP* **P** **11 17 03.2 +0.6**
comp=Z,6.2nm,0.7s,baz=82,slow=6.0
CMSA **Cobar Meteorol** 70.19 135 P **P** **11 17 03.4 +0.5**
ONAU **Onsala** 70.22 325 *i* P **P** **11 17 02.8 +0.1**
NB201 **NORSAR Array S** 70.25 329 lAmb lAmb 11 17 04.3
comp=Z,93nm,1.4s
NB2 **NORSAR Subarra** 70.29 329 P **P** **11 17 03.0 -0.2**
comp=Z,25nm,0.6s,baz=85,slow=6.5
NOA **NORSAR Array B** 70.29 329 P **P** **11 17 03.1 -0.1**
comp=Z,16nm,0.5s,baz=86,slow=6.1,SNR=151
NOA LR LR 11 50 25.6
comp=Z,463nm,20.6s,baz=95,slow=38
comp=Z,16nm,0.5s
TJOU **Tjoern** 70.32 326 *i* P **P** **11 17 04.0 +0.7**
EIDS **Eidsvold** 70.39 127 lAmb lAmb 11 17 05.8
comp=Z,85nm,1.0s
EIDS **Eidsvold** 70.39 127 P **P** **11 17 04.8 +0.5**
KBA **Koelnbreinsper** 70.46 314 *eP* **P** **11 17 04.9 +0.2**
comp=Z,4.1nm,0.8s
AULRC **Lightning Ridg** 70.46 132 P **P** **11 17 05.0 +0.4**
STRU **Stroemstad** 70.47 327 *i* P **P** **11 17 04.6 +0.4**
NC204 **NORSAR Array S** 70.49 329 lAmb lAmb 11 17 06.4
comp=Z,55nm,0.5s
WET **Wettzell** 70.50 316 *eP* **P** **11 17 05.8 +1.1**
comp=Z,8.2nm,0.8s,baz=82,slow=6.0
OSL **Oslo** 70.62 328 *eP* **P** **11 17 05.9 +0.8**
PLN **Plauen** 70.80 318 *eP* **P** **11 17 07.3 +0.8**
comp=Z,3.6nm,0.7s,baz=82,slow=6.0
LESA **Schwarzleotal** 70.86 315 *eP* **P** **11 17 07.0 0.0**
comp=Z,16nm,0.7s,SNR=18
ROTZ **Rotzenmuhle** 70.86 317 *eP* **P** **11 17 08.3 +1.4**
comp=Z,4.5nm,0.7s,baz=82,slow=6.0
MANZ **Manzenberg** 70.90 317 *eP* **P** **11 17 08.4 +1.3**
comp=Z,8.4nm,1.5s,baz=82,slow=6.0
GORT1 **Trebel** 71.02 321 *eP* **P** **11 17 08.0 +0.4**
comp=Z,93nm,1.5s,baz=82,slow=6.0
MOX **Moxa** 71.12 318 *eL* L 11 53 06.3
comp=Z,263nm,21.5s
VAE **Valguarnera** 71.14 304 LR LR 11 52 54.4
comp=Z,121nm,19.0s,baz=106,slow=40
FLTG **Flechtingen** 71.14 320 *eP* **P** **11 17 08.7 +0.2**

comp=Z,10nm,0.6s,baz=82,slow=6.0
FDMO **Fiordimonte** 71.22 310 lAmb lAmb 11 17 11.5
comp=Z,89nm,1.3s
KONO **Kongsberg** 71.22 328 *eP* **P** **11 17 09.2 +0.4**
KONO **Kongsberg** 71.22 328 *ceP* **P** **11 17 10.1 +1.3**
KONO pmax pmax
comp=Z,34nm,1.7s
DOMB **Dombas** 71.23 330 *eP* **P** **11 17 09.2 +0.3**
BSEG **Bad Segeberg** 71.49 322 *eP* **P** **11 17 11.8 +1.3**
comp=Z,9.0nm,0.7s,baz=82,slow=6.0
WTTA **Wattenberg** 71.58 315 *eP* **P** **11 17 12.0 +0.5**
comp=Z,8.5nm,0.4s
SSRD **Sdr. Stenderup** 71.69 323 *i* P **P** **11 17 11.2 -0.4**
SSRD lAmb lAmb 11 17 12.6
comp=Z,201nm,1.3s
CLZ **Clausthal** 71.74 319 *eP* **P** **11 17 13.3 +1.1**
comp=Z,18nm,0.8s,baz=82,slow=6.0
SKAR **Skarslia** 71.74 329 *eP* **P** **11 17 13.1 +1.0**
MUD **Monsted U'grnd** 71.82 324 *i* P **P** **11 17 13.7 +1.3**
MUD lAmb lAmb 11 17 14.5
comp=Z,23nm,0.8s
MOL **Molde** 71.88 331 *eP* **P** **11 17 13.5 +0.8**
SQTA **Sankt Quirin** 71.88 315 *i* P **P** **11 17 13.0 -0.2**
comp=Z,13nm,0.6s,SNR=5.9
MOTA **Moosalm** 71.93 315 *eP* **P** **11 17 14.1 +0.5**
comp=Z,8.1nm,0.6s,SNR=7.1
GTTG **Gottingen** 72.03 319 *eP* **P** **11 17 14.9 +1.0**
comp=Z,16nm,0.8s,baz=82,slow=6.0
RETA **Reutte** 72.14 315 *i* P **P** **11 17 15.0 +0.4**
comp=Z,14nm,0.6s
AKN **Aaknes** 72.18 330 *eP* **P** **11 17 15.8 +1.2**
FETA **Feichten** 72.23 314 *i* P **P** **11 17 15.6 +0.2**
comp=Z,4.2nm,0.6s,SNR=5.1
TW1H **Toowoomba 1 Ha** 72.26 128 P **P** **11 17 17.1 +1.5**
UBR **Ueberruh** 72.54 315 *eP* **P** **11 17 17.3 +0.3**
comp=Z,17nm,0.7s,baz=82,slow=6.0
AUDCS **Dubbo College** 72.59 134 P **P** **11 17 18.0 +0.6**
SNART **Snartemo** 72.61 326 *i* P **P** **11 17 18.2 +1.1**
AUBSH **Beerwah State** 72.61 127 P **P** **11 17 18.2 +0.6**
ODD1 **Odda** 72.67 328 *eP* **P** **11 17 18.2 +0.7**
DAVA **Damuels** 72.76 315 *eP* **P** **11 17 19.1 +0.6**
comp=Z,9.1nm,0.6s
DAVOX **Davos/Dischmat** 72.85 314 LR LR 11 56 39.6
comp=Z,167nm,19.5s,baz=80,slow=42
BRAT **Ballarat** 72.96 141 P **P** **11 17 20.6 +1.2**
AUMTC **Mt Clear Colle** 72.97 141 P **P** **11 17 20.6 +1.1**
AUWSH **Wavell State H** 72.97 128 P **P** **11 17 20.1 +0.4**
SUE **Sulen** 73.41 329 *eP* **P** **11 17 22.2 +0.4**
KMY **Karmoy** 73.48 328 *eP* **P** **11 17 22.9 +0.7**
ARMA **Armidale** 73.61 131 lAmb lAmb 11 17 26.5
comp=Z,71nm,1.1s
ARMA **Armidale** 73.61 131 P **P** **11 17 25.4 +1.8**
NOR **Nord** 74.14 352 *i* P **P** **11 17 25.7 -0.1**
NOR lAmb lAmb 11 17 26.8
comp=Z,103nm,1.0s
GAMB **Gambell** 74.42 27 P **P** **11 17 27.6 -0.1**
baz=282
BTNL **Ternell** 74.58 319 *dP* **P** **11 17 30.9 +2.0**
MEM **Membach** 74.65 319 *dP* **P** **11 17 31.3 +2.0**
AUMTS **Mt Stromlo** 74.70 137 P **P** **11 17 30.2 +0.5**
CAN **Canberra** 74.70 137 P **P** **11 17 30.2 +0.5**
WLF **Walferdange** 74.75 318 *dP* **P** **11 17 31.1 +1.2**
SYDH **Sydney Hard Ro** 74.92 134 P **P** **11 17 32.3 +1.3**
CNB **Canberra Magne** 74.93 136 P **P** **11 17 31.4 +0.3**
BCLA **Clavier** 75.13 319 *dP* **P** **11 17 34.0 +1.9**
KEST **Kesra** 75.48 303 P **P** **11 17 35.0 +0.6**
comp=Z,28nm,1.0s,baz=26,slow=2.4,SNR=13
comp=Z,28nm,1.0s
BMRD **Maredsous** 75.49 319 *dP* **P** **11 17 35.0 +0.9**
TNA **Tin City** 75.60 25 P **P** **11 17 34.2 -0.2**
baz=284
DOU **Dourbes** 75.64 318 *dP* **P** **11 17 36.1 +1.1**
MILA **Mila** 75.85 138 P **P** **11 17 36.9 +0.6**
C16K **Lisburne Hills** 75.85 22 P **P** **11 17 35.7 -0.2**
baz=286,SNR=6.8
MATP **Matopo** 76.02 242 LR LR 11 48 16.2
comp=Z,372nm,19.6s,baz=62,slow=33
JMIC **Jan Mayen** 76.22 341 LR LR 11 57 49.5
comp=Z,125nm,18.9s,baz=91,slow=41
F14K **Arctic Creek** 76.26 25 P **P** **11 17 38.6 +0.4**
baz=286,SNR=12
C17K **DeLong Mountai** 76.56 22 P **P** **11 17 40.0 +0.1**
baz=288
SPIA **Saint Paul Isl** 76.64 34 P **P** **11 17 40.4 0.0**
baz=285
A19K **Wainwright** 76.70 20 P **P** **11 17 41.4 +0.8**
baz=290
POGA **Pongola** 76.72 235 P **P** **11 17 42.2 +0.8**
POGA lAmb lAmb 11 17 43.5
comp=Z,101nm,0.8s
B18K **Kokolik River** 76.75 21 P **P** **11 17 41.6 +0.7**
baz=289
RDOG **Red Dog Mine** 76.79 22 lAmb lAmb 11 17 42.2
comp=Z,173nm,1.6s
RDOG **Red Dog Mine** 76.79 22 P **P** **11 17 41.2 0.0**
baz=288
D17K **Noatak River** 76.84 23 P **P** **11 17 41.8 +0.4**
baz=288,SNR=34
F15K **North Star Dit** 76.86 25 lAmb lAmb 11 17 42.9
comp=Z,331nm,1.3s
F15K **North Star Dit** 76.86 25 P **P** **11 17 41.8 +0.2**
baz=287
ANM **Nome** 76.91 26 P **P** **11 17 42.2 +0.3**
baz=287
P08K **Saint George I** 77.16 34 P **P** **11 17 43.4 0.0**
baz=285
C18K **Utukok River** 77.19 21 lAmb lAmb 11 17 44.8
comp=Z,115nm,0.9s
C18K **Utukok River** 77.19 21 P **P** **11 17 43.8 +0.3**
baz=290
BROLN **Tlhalogang** 77.30 242 *i* P **P** **11 17 44.7 -0.2**
G15K **Niukluk** 77.33 25 P **P** **11 17 44.1 -0.1**
baz=288
E17K **Hotham Inlet** 77.50 23 P **P** **11 17 45.8 +0.6**
baz=290,SNR=57
C19K **Lookout Ridge** 77.58 21 lAmb lAmb 11 17 47.5
comp=Z,101nm,0.8s
C19K **Lookout Ridge** 77.58 21 P **P** **11 17 46.5 +0.9**
baz=291
A21K **Barrow** 77.67 18 P **P** **11 17 46.6 +0.6**
baz=293
KSANE **Kasane** 77.72 246 *i* P **P** **11 17 47.5 +0.1**
M11K **Mekoryuk** 77.78 30 P **P** **11 17 47.3 +0.5**
baz=287
E18K **Tukpahlearik C** 77.83 22 P **P** **11 17 47.6 +0.6**
baz=291,SNR=34
ALE **Alert** 77.84 357 P **P** **11 17 47.5 +0.6**
MREMI **Moremi** 77.86 241 *i* P **P** **11 17 48.5 +0.5**
G16K **Koyuk River** 77.87 25 P **P** **11 17 47.6 +0.3**
baz=290
F17K **Baldwin Pennin** 77.94 24 P **P** **11 17 48.3 +0.7**
baz=290
B20K **Meade River** 78.02 20 lAmb lAmb 11 17 49.8
comp=Z,224nm,1.2s
B20K **Meade River** 78.02 20 P **P** **11 17 48.4 +0.5**
baz=293
K13K **Kusilvak Mount** 78.02 28 lAmb lAmb 11 17 48.9
comp=Z,147nm,0.7s
K13K **Kusilvak Mount** 78.02 28 P **P** **11 17 48.4 +0.2**
baz=288
DBG **Daneborg** 78.09 345 *i* P **P** **11 17 48.5 +0.2**
DBG lAmb lAmb 11 17 49.2
comp=Z,34nm,0.9s
H16K **Elim** 78.17 25 P **P** **11 17 49.0 +0.1**
baz=290,SNR=17
MCD **Coleburn Disti** 78.21 327 *eP* **P** **11 17 50.4 +1.1**
MCD lAmb lAmb 11 17 51.3
comp=Z,38nm,0.7s
A22K **Sinclair Lake** 78.28 18 P **P** **11 17 50.1 +0.7**
baz=295
D19K **Kuna River** 78.30 21 lAmb lAmb 11 17 51.2
comp=Z,191nm,0.8s
D19K **Kuna River** 78.30 21 P **P** **11 17 50.1 +0.5**
baz=293,SNR=37
EDMD **Edmundbyers** 78.32 324 *eP* **P** **11 17 50.9 +1.0**
EDMD lAmb lAmb 11 17 51.7
comp=Z,19nm,0.7s
TAU **Tasmania Unive** 78.43 144 P **P** **11 17 51.7 +1.1**
F18K **Selawik** 78.48 23 P **P** **11 17 51.0 +0.5**
baz=292,SNR=40
G17K **Kiwalik Mounta** 78.50 24 P **P** **11 17 51.0 +0.3**
baz=291,SNR=17
NIKH **Nikolski High** 78.55 38 P **P** **11 17 51.4 +0.2**
baz=287
EDI **Edinburgh** 78.67 325 *eP* **P** **11 17 52.7 +0.9**
EDI lAmb lAmb 11 17 55.2

comp=Z,22nm,0.7s
D20K Etivluk River 78.72 21 P P 11 17 52.4 +0.5
baz=294
EKA Eskdalemuir Ar 78.83 325 P P 11 17 53.7 +1.0
comp=Z,9.7nm,0.5s,baz=83,slow=5.9,SNR=61
comp=Z,9.7nm,0.5s
ESK Eskdalemuir 78.86 325 eP P 11 17 53.9 +1.0
ESK IAmb IAmb 11 17 54.8
comp=Z,16nm,0.7s
INVG Invergeldie, C 78.97 326 eP P 11 17 55.1 +1.6
INVG IAmb IAmb 11 17 58.9
comp=Z,6.4nm,0.6s
B21K Ikpikpuk River 78.99 20 IAmb IAmb 11 17 55.2
comp=Z,236nm,1.0s
B21K Ikpikpuk River 78.99 20 P P 11 17 54.1 +0.8
baz=296
H17K Granite Mounta 79.00 25 P P 11 17 54.1 +0.6
baz=292,SNR=53
E19K Redstone River 79.02 22 IAmb IAmb 11 17 54.9
comp=Z,154nm,0.8s
E19K Redstone River 79.02 22 P P 11 17 53.8 +0.3
baz=294
KESW Keswick, Cumbr 79.03 324 eP P 11 17 54.9 +1.1
KESW IAmb IAmb 11 17 56.9
comp=Z,18nm,0.7s
B22K Teshekpuk Lake 79.04 19 P P 11 17 54.1 +0.5
baz=297
E20K Nigu River 79.05 21 P P 11 17 54.2 +0.4
baz=294
I17K Unalakleet 79.07 26 IAmb IAmb 11 17 55.4
comp=Z,134nm,0.9s
I17K Unalakleet 79.07 26 P P 11 17 54.5 +0.7
baz=291,SNR=16
SANVU Saraoutou 79.07 111 P P 11 17 55.7 +1.1
SANVU IAmb IAmb 11 17 56.8
comp=Z,128nm,0.9s
SANVU Saraoutou 79.07 111 P P 11 17 55.8 +1.1
F19K Shaleruckik Mo 79.08 23 IAmb IAmb 11 17 54.8
comp=Z,151nm,0.9s
F19K Shaleruckik Mo 79.08 23 P P 11 17 53.7 -0.2
baz=293,SNR=32
L14K Kuka Creek 79.11 29 P P 11 17 54.5 +0.5
baz=290
M13K Dall Lake 79.12 30 P P 11 17 54.9 +0.7
baz=290
G18K Tagagawik 79.12 24 IAmb IAmb 11 17 55.0
comp=Z,171nm,1.6s
G18K Tagagawik 79.12 24 P P 11 17 53.9 -0.2
baz=293
C21K Knifeblade Rid 79.14 20 P P 11 17 55.0 +0.8
baz=296
K15K Wolf Creek Mou 79.29 28 IAmb IAmb 11 17 56.8
comp=Z,203nm,0.9s
K15K Wolf Creek Mou 79.29 28 P P 11 17 55.8 +0.7
baz=291
J16K Anvik River 79.33 26 P P 11 17 55.9 +0.6
baz=291
SLIND Selinda 79.50 246 i P P 11 17 58.2 +1.1
H18K Honhosa River 79.52 24 IAmb IAmb 11 17 57.5
comp=Z,218nm,0.8s
H18K Honhosa River 79.52 24 P P 11 17 56.5 +0.1
baz=293
LPHEP Lephephe 79.52 241 i P P 11 17 57.7 +0.5
L15K Ungalak Mounta 79.53 28 P P 11 17 56.5 +0.2
baz=291,SNR=27
HLM1 Long Mynd 79.53 322 eP P 11 17 57.3 +0.6
HLM1 IAmb IAmb 11 17 58.6
comp=Z,9.0nm,0.8s
LHI Lord Howe Isla 79.59 129 P P 11 17 53.3 -3.9
G19K Purcell Mounta 79.61 23 IAmb IAmb 11 17 58.0
comp=Z,176nm,0.9s
G19K Purcell Mounta 79.61 23 P P 11 17 57.0 +0.2
baz=294
M14K Bethel 79.64 29 P P 11 17 57.3 +0.3
baz=291,SNR=16
E21K Killik River 79.72 21 P P 11 17 57.6 +0.2
baz=296
F20K Avaraart Lake 79.72 22 IAmb IAmb 11 17 58.6
comp=Z,153nm,0.8s
F20K Avaraart Lake 79.72 22 P P 11 17 57.7 +0.4
baz=295
LAWE Loch Awe, Argy 79.74 326 eP P 11 17 58.8 +1.1
LAWE IAmb IAmb 11 17 59.8
comp=Z,16nm,0.6s
GAL1 Galloway 79.83 325 eP P 11 17 59.3 +1.2
GAL1 IAmb IAmb 11 18 00.3
comp=Z,14nm,0.7s
J17K VABM Dome 79.92 26 IAmb IAmb 11 18 00.0
comp=Z,184nm,0.8s
J17K VABM Dome 79.92 26 P P 11 17 59.0 +0.5
baz=293,SNR=32
D22K Ayikyak River 79.94 20 P P 11 17 59.3 +0.8
baz=298
N14K Kuskokwak Cree 80.07 30 P P 11 17 59.7 +0.4
baz=291
H19K Roundabout Mou 80.10 24 IAmb IAmb 11 18 01.2
comp=Z,242nm,0.9s
H19K Roundabout Mou 80.10 24 P P 11 18 00.0 +0.6
baz=295,SNR=55
C23K Itkillik River 80.13 19 P P 11 18 00.3 +0.8
baz=299
M15K Kasigluk River 80.25 29 P P 11 18 00.5 +0.2
baz=292,SNR=36
GCSA Galena City Sc 80.26 24 P P 11 18 00.8 +0.5
baz=294,SNR=53
L16K Owhat River 80.40 28 IAmb IAmb 11 18 02.5
comp=Z,99nm,0.8s
L16K Owhat River 80.40 28 P P 11 18 01.5 +0.4
baz=293,SNR=20
F21K Alatna River 80.43 22 P P 11 18 01.5 +0.3
baz=297
LBTB Lobatse 80.47 239 LR LR 11 50 26.8
comp=Z,248nm,18.4s,baz=64,slow=33
LBTB Lobatse 80.47 239 P P 11 18 02.3 +0.1
LBTB Lobatse 80.47 239 P P 11 18 02.3 +0.1
LBTB pmax pmax
comp=Z,55nm,0.9s
LBTB Lobatse 80.47 239 P P 11 18 03.1 +0.9
SCO Scoresbysund 80.47 342 i P P 11 18 02.5 +1.2
SCO IAmb IAmb 11 18 05.0
comp=Z,28nm,1.1s
O14K Tigyukauivet M 80.51 30 P P 11 18 01.8 0.0
baz=292
K17K Iditarod 80.51 27 P P 11 18 02.3 +0.6
baz=294
D23K Nanushuk River 80.53 19 P P 11 18 02.8 +1.0
baz=299
E22K Anaktuvuk Pass 80.57 20 IAmb IAmb 11 18 03.5
comp=Z,172nm,0.8s
E22K Anaktuvuk Pass 80.57 20 P P 11 18 02.5 +0.5
baz=298
H20K Anotleneega Mo 80.71 23 P P 11 18 03.2 +0.4
baz=296
N15K Kwethluk River 80.72 29 P P 11 18 03.3 +0.4
baz=292
F22K John River 80.75 21 P P 11 18 03.7 +0.7
baz=298
L17K Donlin 80.75 27 P P 11 18 03.7 +0.7
baz=294,SNR=23
G21K Allakaket 80.75 22 IAmb IAmb 11 18 04.2
comp=Z,259nm,0.9s
G21K Allakaket 80.75 22 P P 11 18 03.1 +0.2
baz=297
C24K Franklin Bluff 80.76 18 P P 11 18 03.5 +0.6
baz=301
J18K Innoko River 80.86 26 IAmb IAmb 11 18 04.8
comp=Z,204nm,1.0s
J18K Innoko River 80.86 26 P P 11 18 03.8 +0.2
baz=295
M16K Timber Creek 80.90 28 IAmb IAmb 11 18 05.3
comp=Z,212nm,1.0s
M16K Timber Creek 80.90 28 P P 11 18 04.2 +0.4
baz=293
IMAR Indian Mountai 80.91 23 P P 11 18 03.9 +0.1
D24K Happy Valley 81.02 19 IAmb IAmb 11 18 06.1
comp=Z,218nm,0.8s
D24K Happy Valley 81.02 19 P P 11 18 05.0 +0.7
baz=301,SNR=99
TOLK Toolik Lake Re 81.05 20 IAmb IAmb 11 18 06.3
comp=Z,265nm,0.9s
TOLK Toolik Lake Re 81.05 20 P P 11 18 05.3 +0.8
baz=300,SNR=101
J19K Poorman 81.08 25 IAmb IAmb 11 18 06.4
comp=Z,247nm,1.0s
J19K Poorman 81.08 25 P P 11 18 05.4 +0.7
baz=296,SNR=67
I20K Naaghedeneel 81.17 24 P P 11 18 06.1 +1.0
baz=296,SNR=21

N16K Nishlik Lake 81.21 29 P P 11 18 06.0 +0.6
baz=293,SNR=44
O15K Ungalikthiuk R 81.23 30 IAmb IAmb 11 18 06.6
comp=Z,204nm,1.1s
O15K Ungalikthiuk R 81.23 30 P P 11 18 05.5 0.0
baz=293
G22K Bettles 81.26 21 P P 11 18 05.8 +0.2
baz=299
E23K Chandalar 81.33 20 IAmb IAmb 11 18 07.9
comp=Z,131nm,0.7s
E23K Chandalar 81.33 20 P P 11 18 06.8 +0.7
baz=300,SNR=98
XAUDM Khaudum 81.34 247 i P P 11 18 07.7 +0.8
H21K Melozitna Rive 81.40 23 P P 11 18 07.2 +0.8
baz=298
L18K Granite Mounta 81.40 27 IAmb IAmb 11 18 08.0
comp=Z,172nm,1.1s
L18K Granite Mounta 81.40 27 P P 11 18 06.9 +0.5
baz=295
S12K Black Hills 81.42 34 P P 11 18 06.7 +0.1
baz=291
M17K Holitna River 81.42 28 P P 11 18 07.5 +0.9
baz=294
NEEM North Greenlan 81.45 353 i P P 11 18 07.1 +0.3
NEEM IAmb IAmb 11 18 08.2
comp=Z,132nm,0.9s
MAKGR Makgori 81.46 239 i P P 11 18 07.6 0.0
COLD Coldfoot 81.55 21 IAmb IAmb 11 18 08.3
comp=Z,90nm,0.9s
COLD Coldfoot 81.55 21 P P 11 18 07.8 +0.7
baz=300,SNR=48
J20K Nowinta River 81.58 24 IAmb IAmb 11 18 09.1
comp=Z,285nm,1.5s
J20K Nowinta River 81.58 24 P P 11 18 08.1 +0.8
baz=297,SNR=41
SKOMA Sekoma 81.61 240 i P P 11 18 08.9 +0.6
D25K Kavik River 81.67 18 P P 11 18 08.6 +0.8
baz=303
E24K Your Creek 81.68 20 P P 11 18 08.7 +0.8
baz=301
C26K Camden Bay 81.76 18 P P 11 18 09.4 +1.2
baz=304,SNR=113
H22K Ishtalitna Cre 81.81 22 P P 11 18 09.5 +1.0
baz=299,SNR=188
O16K Kokwok River B 81.87 29 IAmb IAmb 11 18 10.3
comp=Z,193nm,1.4s
O16K Kokwok River B 81.87 29 P P 11 18 09.1 +0.1
baz=294
G23K Bananza Creek 81.88 21 IAmb IAmb 11 18 10.7
comp=Z,217nm,0.9s
G23K Bananza Creek 81.88 21 P P 11 18 09.6 +0.7
baz=300
QNGWA Qangwa 81.88 246 i P P 11 18 10.5 +0.7
N17K Nushagak Hills 81.90 28 IAmb IAmb 11 18 10.9
comp=Z,291nm,1.3s
N17K Nushagak Hills 81.90 28 P P 11 18 09.8 +0.7
baz=295
I21K Tanana 81.93 23 IAmb IAmb 11 18 11.2
comp=Z,287nm,1.1s
I21K Tanana 81.93 23 P P 11 18 10.1 +0.9
baz=299,SNR=91
K20K Telida 81.98 25 IAmb IAmb 11 18 11.3
comp=Z,178nm,0.9s
K20K Telida 81.98 25 P P 11 18 10.4 +0.8
baz=297,SNR=69
M18K Stony River 82.09 27 P P 11 18 10.6 +0.5
baz=296
P16K Nushagak River 82.15 30 IAmb IAmb 11 18 11.3
comp=Z,152nm,1.1s
P16K Nushagak River 82.15 30 P P 11 18 10.3 -0.1
baz=294
TAM Tamanrasset 82.17 291 IAmb IAmb 11 20 46.1
comp=Z,54nm,0.3s
F24K Squaw Lake 82.17 20 IAmb IAmb 11 18 12.3
comp=Z,171nm,0.8s
F24K Squaw Lake 82.17 20 P P 11 18 11.2 +0.8
baz=302,SNR=110
L19K White Mountain 82.19 26 IAmb IAmb 11 18 12.4
comp=Z,218nm,1.1s
L19K White Mountain 82.19 26 P P 11 18 11.2 +0.6
baz=296,SNR=43
O17K Koliganek Bris 82.26 29 P P 11 18 11.1 +0.1
baz=295,SNR=18
C27K Jago River 82.27 18 IAmb IAmb 11 18 13.1
comp=Z,238nm,1.2s
C27K Jago River 82.27 18 P P 11 18 11.9 +1.0
baz=306
BOSA Boshof 82.34 236 P P 11 18 12.9 +0.9
comp=Z,62nm,0.7s,baz=69,slow=3.9,SNR=128
BOSA LR LR 11 53 24.3
comp=Z,179nm,18.2s,baz=53,slow=34
comp=Z,62nm,0.7s
BOSA Bosof 82.34 236 IAmb IAmb 11 18 13.9
comp=Z,74nm,0.8s
BOSA Boshof 82.34 236 P P 11 18 13.0 +0.9
BOSA Boshof 82.34 236 P P 11 18 13.0 +0.9
BOSA PcP PcP 11 18 17.4 +0.2
KGCAE Kacgae 82.34 243 IAmb IAmb 11 18 14.4
comp=Z,95nm,0.9s
KGCAE Kacgae 82.34 243 i P P 11 18 12.9 +0.7
SDPT Sand Point 82.39 34 IAmb IAmb 11 18 11.4
comp=Z,134nm,0.8s
SDPT Sand Point 82.39 34 P P 11 18 09.9 -1.8
baz=293
N18K Kilae Creek 82.41 28 IAmb IAmb 11 18 13.3
comp=Z,205nm,1.5s
N18K Kilae Creek 82.41 28 P P 11 18 12.2 +0.4
baz=296,SNR=16
CHUM Lake Minchumin 82.43 24 P P 11 18 12.8 +1.0
baz=298,SNR=10
L20K Farewell, AK 82.46 26 IAmb IAmb 11 18 13.7
comp=Z,187nm,1.1s
L20K Farewell, AK 82.46 26 P P 11 18 12.7 +0.6
baz=297
H23K Yukon River 82.49 22 IAmb IAmb 11 18 14.2
comp=Z,190nm,0.8s
H23K Yukon River 82.49 22 P P 11 18 13.1 +0.9
baz=301
GRTLG Ghanzi 82.57 244 i P P 11 18 14.1 +0.7
E25K Arctic Village 82.58 19 IAmb IAmb 11 18 15.2
comp=Z,200nm,1.2s
E25K Arctic Village 82.58 19 P P 11 18 13.2 +0.6
baz=304,SNR=108
G24K Hadweenzic Riv 82.75 21 IAmb IAmb 11 18 15.4
comp=Z,199nm,0.9s
G24K Hadweenzic Riv 82.75 21 P P 11 18 14.2 +0.8
baz=302
P17K Kvichak River 82.81 29 P P 11 18 14.2 +0.4
baz=296,SNR=28
BPAW Bear Paw Mtn. 82.83 24 P P 11 18 14.3 +0.3
baz=300,SNR=110
F25K Christian Rive 82.85 20 P P 11 18 15.4 +1.4
baz=304
PHPEN Phepeng 82.90 240 i P P 11 18 15.5 +0.5
I23K Minto, Yukon-K 82.91 23 IAmb IAmb 11 18 15.9
comp=Z,336nm,1.4s
I23K Minto, Yukon-K 82.91 23 P P 11 18 14.8 +0.6
baz=301,SNR=96
Q16K King Salmon 82.93 30 P P 11 18 14.1 -0.4
baz=295,SNR=22
PPLA Purkeypile 82.95 25 P P 11 18 15.0 +0.2
baz=299,SNR=22
CART Cartagena 82.97 307 IAmb IAmb 11 18 18.1
comp=Z,40nm,0.6s
N19K Bonanza Creek 82.97 28 IAmb IAmb 11 18 16.3
comp=Z,165nm,0.8s
N19K Bonanza Creek 82.97 28 P P 11 18 15.3 +0.5
baz=297,SNR=36
M20K Styx River 83.05 26 P P 11 18 15.7 +0.5
baz=298
CHNA Chernabura Isl 83.06 34 P P 11 18 13.9 -1.3
CHNA Chernabura Isl 83.06 34 P P 11 18 13.8 -1.5
baz=294
CNBA Chernabura Isl 83.06 34 IAmb IAmb 11 18 16.0
comp=Z,109nm,0.7s
H24K Noodor Dome 83.07 22 IAmb IAmb 11 18 17.0
comp=Z,190nm,1.0s
H24K Noodor Dome 83.07 22 P P 11 18 15.9 +0.7
baz=302,SNR=109
O18K Koktuh Hills 83.08 29 P P 11 18 15.7 +0.4
baz=296,SNR=30
G25K Bearman Lake 83.17 20 P P 11 18 16.8 +1.2
baz=304
SUMG Summit 83.26 347 IAmb IAmb 11 18 17.8
comp=Z,88nm,0.6s
SUMG Summit 83.26 347 i P P 11 18 16.4 -0.1
SUMG IAmb IAmb 11 18 17.3
comp=Z,91nm,0.7s

F26K Sheenjek River 83.27 19 P P 11 18 17.2 +1.0
baz=305
BORG Borgarnes 83.27 337 LR LR 11 58 36.5
comp=Z,210nm,21.3s,baz=66,slow=38
D27M Malcolm River 83.28 17 IAmb IAmb 11 18 18.2
comp=Z,285nm,1.4s
D27M Malcolm River 83.28 17 P P 11 18 17.2 +1.0
baz=308
P18K Big Mountain, 83.28 29 IAmb IAmb 11 18 16.9
comp=Z,76nm,0.8s
P18K Big Mountain, 83.28 29 P P 11 18 15.8 -0.5
baz=296,SNR=14
BMAR Burnt Mountain 83.28 20 P P 11 18 17.3 +1.1
NEA2 Nenana 83.30 23 IAmb IAmb 11 18 16.9
comp=Z,143nm,0.8s
NEA2 Nenana 83.30 23 P P 11 18 16.4 +0.1
baz=301,SNR=112
O19K Port Alsworth 83.33 28 IAmb IAmb 11 18 17.5
comp=Z,210nm,1.0s
O19K Port Alsworth 83.33 28 P P 11 18 16.5 0.0
baz=297,SNR=34
TRF Thorofare Moun 83.43 24 IAmb IAmb 11 18 20.7
comp=Z,172nm,1.3s
TRF Thorofare Moun 83.43 24 P P 11 18 16.7 -0.5
baz=300,SNR=39
Q17K Contact Creek 83.48 30 P P 11 18 15.9 -1.5
baz=296
R17L Mt. Peulik Vol 83.53 31 P P 11 18 16.2 -1.4
baz=296
PLK4 Peulik 4 83.53 31 IAmb IAmb 11 18 17.9
comp=Z,45nm,0.8s
COLA College 83.60 22 P P 11 18 17.7 -0.1
COLA College 83.60 22 P P 11 18 17.5 -0.3
COLA College 83.60 22 i P P 11 18 17.1 -0.7
COLA pmax pmax
comp=Z,256nm,1.7s
COLA College 83.60 22 P P 11 18 17.7 -0.1
baz=302
GRHM Grahamstown, E 83.61 232 IAmb IAmb 11 18 20.7
comp=Z,48nm,0.8s
POKR Poker Flat Res 83.62 22 P P 11 18 18.3 +0.3
baz=303,SNR=140
SKT Skwentna 83.67 26 P P 11 18 17.8 -0.5
baz=299,SNR=63
Q18K Katmai Hardscr 83.72 30 P P 11 18 17.3 -1.4
baz=297,SNR=29
WRH Wood River Hil 83.73 23 IAmb IAmb 11 18 20.5
comp=Z,59nm,0.8s
CCB Clear Creek Bu 83.74 23 IAmb IAmb 11 18 18.9
comp=Z,77nm,0.9s
E27K Coleen River 83.75 18 IAmb IAmb 11 18 20.3
comp=Z,242nm,1.4s
E27K Coleen River 83.75 18 P P 11 18 19.2 +0.6
baz=308
ACHA Angle Creek He 83.77 30 IAmb IAmb 11 18 18.4
comp=Z,72nm,0.8s
N20K Mount Spurr 83.77 27 P P 11 18 18.6 -0.3
baz=299,SNR=20
SPCR Spurr Chakacha 83.77 27 P P 11 18 18.6 -0.3
baz=299,SNR=16
EDA Edea 83.78 272 P P 11 18 20.4 +0.7
EDA Edea 83.78 272 P P 11 18 20.3 +0.6
STLK Strandline Lak 83.78 26 IAmb IAmb 11 18 19.3
comp=Z,46nm,0.8s
MCK McKinley 83.80 24 P P 11 18 19.0 +0.1
baz=301,SNR=89
G26K Porcupine Rive 83.81 20 P P 11 18 20.1 +1.2
baz=306
D28M Stokes Point 83.84 17 P P 11 18 20.0 +1.1
baz=310
SPU Mount Spurr 83.84 27 IAmb IAmb 11 18 19.8
comp=Z,79nm,1.0s
RED Redoubt Volcan 83.90 27 IAmb IAmb 11 18 19.7
comp=Z,61nm,0.7s
TULEG Thule 83.90 356 IAmb IAmb 11 18 20.1
comp=Z,88nm,0.8s
TULEG Thule 83.90 356 i P P 11 18 18.8 -0.4
TULEG IAmb IAmb 11 18 19.8
comp=Z,82nm,0.8s
ILSW Iliamna Southw 83.95 28 IAmb IAmb 11 18 19.8
comp=Z,118nm,1.2s
CUT Chulitna 83.97 25 P P 11 18 19.4 -0.3
baz=300,SNR=7.2
IL31 84.00 22 IAmb IAmb 11 18 20.9
comp=Z,153nm,0.9s
ILAR Eielson Array 84.00 22 P P 11 18 18.8 -1.1
comp=Z,82nm,0.8s,baz=300,slow=4.5,SNR=589
ILAR PP PP 11 21 25.1 -8.7
comp=Z,5.3nm,1.0s,baz=293,slow=7.5,SNR=4.3
ILAR LR LR 12 00 43.9
comp=Z,373nm,19.1s,baz=286,slow=39
comp=Z,82nm,0.8s
ILAR Eielson Array 84.00 22 P P 11 18 19.1 -0.8
PRP Porcupine Dome 84.06 21 P P 11 18 21.0 +0.6
baz=304,SNR=360
P19K Oil Pt 84.06 28 IAmb IAmb 11 18 20.9
comp=Z,147nm,0.8s
P19K Oil Pt 84.06 28 P P 11 18 19.3 -1.1
baz=298,SNR=11
E28M Babbage River 84.08 17 IAmb IAmb 11 18 22.1
comp=Z,251nm,1.4s
E28M Babbage River 84.08 17 P P 11 18 21.0 +0.7
baz=309
O20K Slope Mountain 84.13 28 P P 11 18 19.7 -1.0
baz=299
HDA Harding Lake 84.18 23 IAmb IAmb 11 18 20.7
comp=Z,114nm,0.8s
HDA Harding Lake 84.18 23 P P 11 18 19.7 -1.1
baz=303,SNR=62
Q19K Cape Douglas, 84.22 29 IAmb IAmb 11 18 20.6
comp=Z,232nm,1.4s
Q19K Cape Douglas, 84.22 29 P P 11 18 19.3 -1.8
baz=298,SNR=6.2
SUA Susitna One 84.25 26 IAmb IAmb 11 18 22.0
comp=Z,154nm,0.9s
SUA Susitna One 84.25 26 P P 11 18 20.8 -0.6
baz=300,SNR=26
M22K Willow 84.36 26 P P 11 18 21.3 -0.4
baz=301,SNR=50
WAT1 Susitna Watana 84.43 24 P P 11 18 21.3 -0.9
baz=302
CAPN Captain Cook N 84.43 27 P P 11 18 21.0 -1.1
baz=300
ESDC Sonseca Array 84.46 310 P P 11 18 23.5 +0.7
comp=Z,7.4nm,0.7s,baz=54,slow=4.9,SNR=46
ESDC LR LR 12 04 12.8
comp=Z,52nm,19.6s,baz=57,slow=41
comp=Z,7.4nm,0.7s
ESDC Sonseca Array 84.46 310 P P 11 18 23.5 +0.7
R18K Karluk 84.47 30 IAmb IAmb 11 18 21.8
comp=Z,90nm,0.7s
R18K Karluk 84.47 30 P P 11 18 20.9 -1.5
baz=297
G27K Doyon Strip 84.57 19 IAmb IAmb 11 18 24.4
comp=Z,128nm,1.4s
G27K Doyon Strip 84.57 19 P P 11 18 23.3 +0.4
baz=308
F28M Old Crow 84.61 18 IAmb IAmb 11 18 24.4
comp=Z,113nm,1.1s
F28M Old Crow 84.61 18 P P 11 18 23.4 +0.4
baz=309,SNR=66
J25K Salcha River, 84.63 22 IAmb IAmb 11 18 23.4
comp=Z,151nm,0.8s
J25K Salcha River, 84.63 22 P P 11 18 22.5 -0.7
baz=304
E29M Blow River 84.68 17 P P 11 18 23.8 +0.6
baz=311
CHIR Chirikof Islan 84.69 32 P P 11 18 23.5 0.0
CHIR Chirikof Islan 84.69 32 P P 11 18 23.1 -0.5
baz=297
KULLO Kullorsuaq 84.69 353 i P P 11 18 23.4 +0.2
KULLO IAmb IAmb 11 18 23.8
comp=Z,91nm,0.7s
DHY Denali Highway 84.75 24 IAmb IAmb 11 18 24.6
comp=Z,338nm,1.9s
DHY Denali Highway 84.75 24 P P 11 18 23.5 -0.4
baz=303,SNR=26
HOM Homer 84.77 28 P P 11 18 23.7 -0.2
baz=300
GHO Glory Hole Cre 84.84 25 IAmb IAmb 11 18 25.6
comp=Z,339nm,1.8s
PMR Palmer 84.85 26 IAmb IAmb 11 18 24.9
comp=Z,157nm,1.2s
PMR Palmer 84.85 26 P P 11 18 23.8 -0.4
PMR Palmer 84.85 26 P P 11 18 23.9 -0.3
baz=302,SNR=36
RC01 Rabbit Creek A 84.86 26 IAmb IAmb 11 18 24.9
comp=Z,176nm,0.9s

RC01	Rabbit Creek A	84.86	26	P		P		11 18 23.9	-0.4
	baz=301,SNR=35								
TSUM	Tsumeb	84.87	248	LR		LR		11 54 38.3	
	comp=Z,596nm,18.8s,baz=146,slow=34								
TSUM	Tsumeb	84.87	248	P		P		11 18 26.5	+1.3
WAT6	Susitna Watana	84.88	24	P		P		11 18 24.2	-0.3
	baz=303,SNR=84								
K24K	Donnelly Dome	84.94	23	P		P		11 18 24.4	-0.3
	baz=304,SNR=199								
Q20K	Shuyak Island	84.94	29	P		P		11 18 23.8	-0.9
	baz=299								
SLKM	Skilak Lake	84.96	27	IAmb		IAmb		11 18 24.7	
	comp=Z,219nm,1.4s								
H27K	Steamboat Moun	84.97	20	IAmb		IAmb		11 18 27.2	
	comp=Z,112nm,0.8s								
H27K	Steamboat Moun	84.97	20	P		P		11 18 25.5	+0.6
	baz=308								
I26K	Coal Creek Min	84.99	21	IAmb		IAmb		11 18 26.5	
	comp=Z,200nm,1.1s								
I26K	Coal Creek Min	84.99	21	P		P		11 18 25.4	+0.5
	baz=306,SNR=93								
CNPM	China Poot	85.01	28	IAmb		IAmb		11 18 25.3	
	comp=Z,89nm,0.8s								
A36M	Sachs Harbour	85.02	12	P		P		11 18 25.2	+0.3
	baz=322,SNR=365								
SML	Sawmill	85.06	25	P		P		11 18 25.5	+0.1
	baz=302,SNR=59								
SII	Sitkinak Islan	85.07	31	IAmb		IAmb		11 18 25.6	
	comp=Z,104nm,0.7s								
SII	Sitkinak Islan	85.07	31	P		P		11 18 25.4	-0.1
SII	Sitkinak Islan	85.07	31	P		P		11 18 24.9	-0.5
	baz=298								
BRSE	Bradley Lake S	85.12	28	P		P		11 18 24.9	-0.8
	baz=300,SNR=27								
O22K	Cooper Landing	85.18	27	P		P		11 18 25.3	-0.6
	baz=301,SNR=13								
OHAK	Old Harbor	85.19	30	IAmb		IAmb		11 18 26.4	
	comp=Z,285nm,1.4s								
OHAK	Old Harbor	85.19	30	P		P		11 18 25.5	-0.5
OHAK	Old Harbor	85.19	30	P		P		11 18 25.6	-0.5
	baz=298								
KNK	Knik Glacier	85.22	26	P		P		11 18 26.2	+0.1
	baz=302,SNR=42								
KDAK	Kodiak Island	85.26	30	P		P		11 18 25.8	-0.5
	comp=Z,86nm,0.6s,baz=278,slow=3.4,SNR=104								
KDAK				LR		LR		11 59 43.8	
	comp=Z,276nm,19.0s,baz=292,slow=38								
	comp=Z,86nm,0.6s								
KDAK	Kodiak Island	85.26	30	P		P		11 18 25.9	-0.5
KDAK				IAmb		IAmb		11 18 26.8	
	comp=Z,114nm,0.8s								
KDAK	Kodiak Island	85.26	30	P		P		11 18 25.9	-0.5
KDAK				pmax		pmax			
	comp=Z,114nm,0.8s								
KDAK	Kodiak Island	85.26	30	P		P		11 18 25.8	-0.5
	baz=299								
KDAK	Kodiak Island	85.26	30	P		P		11 18 25.8	-0.5
M23K	Glacier View	85.31	25	P		P		11 18 26.6	+0.1
	baz=303,SNR=58								
RIDG	Independent Ri	85.32	23	P		P		11 18 26.4	-0.3
	baz=305,SNR=128								
I27K	Kandik River	85.33	20	IAmb		IAmb		11 18 28.8	
	comp=Z,214nm,1.2s								
I27K	Kandik River	85.33	20	P		P		11 18 27.6	+1.0
	baz=308,SNR=84								
J26L	Joseph Creek	85.33	22	P		P		11 18 26.9	+0.1
	baz=306								
SCM	Sheep Creek Mo	85.45	25	IAmb		IAmb		11 18 29.4	
	comp=Z,183nm,1.0s								
SCM	Sheep Creek Mo	85.45	25	P		P		11 18 27.6	+0.3
	baz=303,SNR=24								
SCRK	Sand Creek	85.49	22	P		P		11 18 27.7	+0.2
	baz=306,SNR=164								
SEW	Seward	85.49	27	IAmb		IAmb		11 18 27.9	
	comp=Z,150nm,1.3s								
SEW	Seward	85.49	27	P		P		11 18 26.8	-0.6
	baz=301,SNR=12								
PAX	Paxson	85.53	23	IAmb		IAmb		11 18 29.1	
	comp=Z,150nm,1.2s								
PAX	Paxson	85.53	23	P		P		11 18 27.9	+0.1
	baz=304,SNR=62								
PWL	Port Wells	85.56	26	P		P		11 18 28.0	+0.1
	baz=302,SNR=28								
G29M	Pine Creek	85.62	18	P		P		11 18 28.2	+0.2
	baz=311								
DOT	Dot Lake	85.66	23	IAmb		IAmb		11 18 29.1	
	comp=Z,111nm,0.9s								
PBRG	Braganca	85.66	313	*e*P		P		11 18 31.6	+2.8
M24K	Tolsona, Glenn	85.75	24	P		P		11 18 29.8	+1.0
	baz=304,SNR=57								
F30M	Barrier River	85.80	17	IAmb		IAmb		11 18 30.4	
	comp=Z,205nm,1.3s								
F30M	Barrier River	85.80	17	P		P		11 18 29.1	+0.3
	baz=313,SNR=48								
INK	Inuvik	85.93	16	P		P		11 18 29.0	-0.5
	comp=Z,70nm,0.5s,baz=338,slow=4.8,SNR=849								
INK				LR		LR		12 03 10.9	
	comp=Z,200nm,19.9s,baz=324,slow=40								
	comp=Z,70nm,0.5s								
INK	Inuvik	85.93	16	P		P		11 18 29.0	-0.5
INK	Inuvik	85.93	16	P		P		11 18 29.4	0.0
	baz=315,SNR=145								
H29M	Whitestone	85.97	19	P		P		11 18 29.9	+0.1
	baz=311								
I28M	Miner Creek	85.97	20	IAmb		IAmb		11 18 31.2	
	comp=Z,232nm,1.5s								
I28M	Miner Creek	85.97	20	P		P		11 18 30.1	+0.2
	baz=309,SNR=89								
HARP	HAARP	85.98	24	P		P		11 18 30.6	+0.7
	baz=305,SNR=46								
GLI	Glacier Island	86.06	26	IAmb		IAmb		11 18 31.2	
	comp=Z,71nm,0.8s								
GLI	Glacier Island	86.06	26	P		P		11 18 30.3	0.0
	baz=303,SNR=5.8								
RES	Resolute Bay	86.07	3	LR		LR		12 01 27.1	
	comp=Z,83nm,19.1s,baz=14,slow=39								
RES	Resolute Bay	86.07	3	IAmb		IAmb		11 18 31.8	
	comp=Z,81nm,0.9s								
CASY	Casey	86.09	174	P		P		11 18 30.2	+0.2
G30M	tAoh Zraii Nji	86.10	18	P		P		11 18 30.1	-0.4
	baz=312,SNR=140								
MVO	Moncorvo	86.10	312	*e*P		P		11 18 32.4	+1.3
K27K	Chicken	86.14	22	P		P		11 18 31.5	+0.9
	baz=307								
KLU	Klutina	86.19	25	P		P		11 18 31.7	+0.7
	baz=304,SNR=68								
MENT	Mentasta	86.20	23	P		P		11 18 31.6	+0.6
L26K	Log Cabin Wild	86.29	23	P		P		11 18 32.3	+0.9
	baz=306,SNR=74								
EPYK	Eagle Plains	86.37	18	IAmb		IAmb		11 18 32.4	
	comp=Z,255nm,1.5s								
EPYK	Eagle Plains	86.37	18	P		P		11 18 31.3	-0.5
	baz=312,SNR=47								
P23K	Montague Islan	86.42	26	IAmb		IAmb		11 18 32.9	
	comp=Z,143nm,0.8s								
P23K	Montague Islan	86.42	26	P		P		11 18 32.3	+0.2
	baz=303,SNR=9.7								
F31M	Tsiigehtchic	86.48	17	P		P		11 18 32.0	-0.1
	baz=315,SNR=55								
POLO	Lamas de Olo	86.56	313	*e*P		P		11 18 34.7	+1.5
WIN	Windhoek	86.56	245	IAmb		IAmb		11 18 36.2	
	comp=Z,58nm,0.8s								
N25K	Chitina, Valde	86.65	24	P		P		11 18 34.3	+1.0
	baz=305,SNR=121								
MTE	Manteigas	86.75	312	*e*P		P		11 18 35.5	+1.3
M26K	Nabesna, AK	86.79	23	P		P		11 18 34.8	+0.8
	baz=307,SNR=120								
EYAK	Cordova Ski Ar	86.80	26	P		P		11 18 34.7	+0.9
EYAK	Cordova Ski Ar	86.80	26	P		P		11 18 34.7	+0.9
	baz=304,SNR=18								
L27K	Beaver Creek,	86.82	22	IAmb		IAmb		11 18 36.4	
	comp=Z,169nm,1.3s								
L27K	Beaver Creek,	86.82	22	P		P		11 18 35.1	+1.1
	baz=308								
BCAR	Beaver Creek A	86.83	22	P		P		11 18 34.9	+0.8
PVIS	Viseu	86.88	312	*e*P		P		11 18 36.8	+2.0
PCBR	Castelo Branco	86.92	311	*e*P		P		11 18 36.4	+1.5
PMRV	Marv??o	87.02	311	*e*P		P		11 18 36.9	+1.5
BMRM	Bremner River	87.02	25	P		P		11 18 35.8	+0.7
	baz=305,SNR=128								
DAWY	Dawson	87.04	21	IAmb		IAmb		11 18 36.3	
	comp=Z,75nm,1.1s								
DAWY	Dawson	87.04	21	P		P		11 18 35.2	+0.1
	baz=310,SNR=38								
M27K	Edge Creek, AK	87.23	23	P		P		11 18 37.3	+1.1
	baz=308,SNR=66								
PBAR	Barrancos	87.24	309	*e*P		P		11 18 38.3	+1.8
I30M	Mount Dempster	87.25	19	P		P		11 18 36.0	-0.2
	baz=312,SNR=101								
PESTR	Estremoz	87.37	310	*e*P		P		11 18 38.8	+1.7
C36M	Paulatuk	87.38	13	P		P		11 18 36.0	-0.5
	baz=324,SNR=52								
MCARA	McCarthy VSAT	87.39	24	P		P		11 18 38.0	+1.2
	baz=307,SNR=63								
H31M	Peel River	87.46	18	P		P		11 18 36.9	-0.1
	baz=314								
PSARD	Sardoal	87.50	311	*e*P		P		11 18 39.6	+1.8
BVCY	Beaver Creek	87.57	23	P		P		11 18 38.8	+1.1
	baz=309,SNR=40								
KAIM	Kayak Island	87.70	26	P		P		11 18 39.4	+1.1
	baz=306,SNR=12								
J30M	Hart River	87.70	20	IAmb		IAmb		11 18 39.8	
	comp=Z,69nm,1.1s								
J30M	Hart River	87.70	20	P		P		11 18 38.6	+0.2
	baz=312,SNR=33								
PARRA	Arraiolos	87.72	310	*e*P		P		11 18 40.2	+1.4
CRQE	Cirque	87.74	25	P		P		11 18 39.4	+0.8
	baz=307,SNR=26								
PMTG	Montargil	87.75	311	*e*P		P		11 18 40.0	+1.0
K29M	Barlow Dome	87.81	21	IAmb		IAmb		11 18 40.5	
	comp=Z,119nm,1.1s								
K29M	Barlow Dome	87.81	21	P		P		11 18 39.2	+0.4
	baz=312								
PBEJ	Beja	87.90	310	*e*P		P		11 18 42.2	+2.5
PVAQ	Vaqueiros	88.03	309	IAmb		IAmb		11 19 05.6	
	comp=Z,84nm,1.3s								
PVAQ	Vaqueiros	88.03	309	*e*P		P		11 18 42.3	+2.0
BGLC	Bering Glacier	88.05	25	P		P		11 18 41.4	+1.6
	baz=307								
MOE	Montemor	88.06	310	*e*P		P		11 18 43.1	+2.7
L29M	L29M	88.09	21	IAmb		IAmb		11 18 42.2	
	comp=Z,148nm,1.1s								
L29M	L29M	88.09	21	P		P		11 18 40.9	+0.8
	baz=311								
BARN	Barnard Glacie	88.11	24	IAmb		IAmb		11 18 42.7	
	comp=Z,110nm,0.9s								
YUK3	Moose Creek	88.12	23	P		P		11 18 41.2	+0.7
	baz=309,SNR=16								
POIN	Pond Inlet	88.15	358	IAmb		IAmb		11 18 41.6	
	comp=Z,41nm,0.8s								
PCVE	Castro Verde	88.18	309	*e*P		P		11 18 42.9	+1.9
PBDV	Barranco-do-Ve	88.25	309	*e*P		P		11 18 43.9	+2.5
CTG	Chitna Glacier	88.29	24	P		P		11 18 42.5	+1.3
	baz=308,SNR=32								
M29M	Somme Creek	88.41	22	IAmb		IAmb		11 18 43.9	
	comp=Z,99nm,0.8s								
M29M	Somme Creek	88.41	22	P		P		11 18 42.9	+1.1
	baz=311,SNR=60								
LOGN	Logan Glacier	88.51	24	IAmb		IAmb		11 18 44.5	
	comp=Z,189nm,1.4s								
MAYO	Mayo, Yukon	88.51	20	P		P		11 18 42.7	+0.7
	baz=313,SNR=27								
MESA	MESA	88.54	25	P		P		11 18 43.9	+1.4
	baz=308,SNR=8.2								
TORD	Torodi Ar. Bea	88.67	283	P		P		11 18 44.6	+0.9
	comp=Z,18nm,0.9s,baz=69,slow=6.3,SNR=10								
TORD				PP		PP		11 22 13.0	-0.1
	comp=Z,5.6nm,0.8s,baz=52,slow=9.7,SNR=5.5								
TORD				LR		LR		12 02 44.0	
	comp=Z,101nm,20.4s,baz=71,slow=38								
	comp=Z,18nm,0.9s								
TORD	Torodi Ar. Bea	88.67	283	P		P		11 18 44.6	+0.9
YUK8	Steele Glacier	88.69	23	P		P		11 18 44.1	+0.9
	baz=310,SNR=13								
TABL	Table Mountain	88.70	24	IAmb		IAmb		11 18 45.1	
	comp=Z,62nm,1.1s								
PTEO	Sao Teotonio	88.71	309	*e*P		P		11 18 45.7	+2.2
MORF	Marmelete	88.75	309	*e*P		P		11 18 46.8	+3.0
O28M	Mount Upton	88.85	24	IAmb		IAmb		11 18 45.6	
	comp=Z,25nm,0.7s								
O28M	Mount Upton	88.85	24	P		P		11 18 45.1	+1.0
	baz=309,SNR=5.6								
GDH	Godhavn	88.88	349	*i* P		P		11 18 42.2	-1.5
GDH				IAmb		IAmb		11 18 47.3	
	comp=Z,52nm,0.9s								
M30M	Minto, Yukon	88.90	21	IAmb		IAmb		11 18 45.8	
	comp=Z,84nm,0.7s								
M30M	Minto, Yukon	88.90	21	P		P		11 18 44.6	+0.7
	baz=312,SNR=76								
PFVI	Vila Bisbo	88.95	309	*e*P		P		11 18 46.9	+2.2
YUK4	Talbot Arm	89.06	23	P		P		11 18 45.6	+0.6
	baz=311,SNR=13								
PINM	Pinnacle	89.26	24	P		P		11 18 46.7	+0.9
	baz=309								
YUK6	Outpost Mounta	89.43	23	P		P		11 18 47.8	+1.1
	baz=311,SNR=17								
N30M	Aishikik Lake	89.55	22	P		P		11 18 48.2	+1.2
	baz=312,SNR=27								
MSVF	Nonsavu	89.57	109	P		P		11 18 49.4	+1.5
MSVF				IAmb		IAmb		11 18 50.4	
	comp=Z,66nm,0.9s								
MSVF	Nonsavu	89.57	109	P		P		11 18 49.4	+1.5
MSVF	Nonsavu	89.57	109	*i* P		P		11 18 48.5	+0.6
MSVF				pmax		pmax			
	comp=Z,87nm,1.0s								
MAW	Mawson	89.75	192	LR		LR		11 51 38.3	
	comp=Z,92nm,21.8s,baz=38,slow=30								
O29M	Mount Kennedy	89.77	24	IAmb		IAmb		11 18 49.4	
	comp=Z,26nm,0.7s								
O29M	Mount Kennedy	89.77	24	P		P		11 18 48.8	+0.7
	baz=311								
HYT	Haines Junctio	89.82	23	IAmb		IAmb		11 18 50.4	
	comp=Z,53nm,1.0s								
HYT	Haines Junctio	89.82	23	P		P		11 18 49.3	+0.8
	baz=312,SNR=15								
PNL	Peninsula	89.86	24	P		P		11 18 49.8	+1.3
	baz=310								
M31M	Drury Creek, Y	89.97	21	IAmb		IAmb		11 18 50.6	
	comp=Z,116nm,1.4s								
M31M	Drury Creek, Y	89.97	21	P		P		11 18 49.5	+0.5
	baz=314,SNR=24								
N31M	Braeburn, Yuko	89.99	22	P		P		11 18 50.0	+0.9
	baz=313,SNR=46								
SFJD	Kangerlussuaq	90.26	347	LR		LR		12 04 24.5	
	comp=Z,439nm,21.7s,baz=32,slow=39								
SFJD	Kangerlussuaq	90.26	347	P		P		11 18 50.6	+0.5
SFJD				IAmb		IAmb		11 19 10.4	
	comp=Z,104nm,1.1s								
SFJD	Kangerlussuaq	90.26	347	P		P		11 18 50.6	+0.5
SFJD				pmax		pmax			
	comp=Z,104nm,1.1s								
SFJD	Kangerlussuaq	90.26	347	*i* P		P		11 18 50.3	+0.1
SFJD				IAmb		IAmb		11 18 51.2	
	comp=Z,53nm,0.8s								
O30N	Mendenhall	90.37	22	P		P		11 18 52.0	+1.1
	baz=313,SNR=41								
P30M	Million Dollar	90.49	23	P		P		11 18 52.2	+0.7
	baz=312								
P29M	Windy Craggy	90.53	24	IAmb		IAmb		11 18 53.4	
	comp=Z,40nm,0.7s								
P29M	Windy Craggy	90.53	24	P		P		11 18 52.5	+0.9
	baz=311,SNR=7.6								
DGTI	Dogotuki	90.59	107	P		P		11 18 54.0	+1.4
WHY	Whitehorse	90.88	22	P		P		11 18 53.9	+0.6
	baz=314,SNR=16								
TAVE	Taveuni	91.05	107	P		P		11 18 55.1	+0.4
N32M	Quiet Lake	91.16	21	P		P		11 18 55.1	+0.5
	baz=315								
PLBC	Pleasant Camp	91.17	23	P		P		11 18 55.3	+0.8
	baz=312,SNR=7.5								
SKAG	Skagway	91.55	23	IAmb		IAmb		11 18 58.5	
	comp=Z,51nm,1.0s								
SKAG	Skagway	91.55	23	P		P		11 18 57.0	+0.7
SKAG	Skagway	91.55	23	P		P		11 18 57.1	+0.9
	baz=313,SNR=10								
ILON	Igloolik, Nuna	91.59	359	IAmb		IAmb		11 18 56.8	
	comp=Z,51nm,0.7s								
P33M	Teslin, Yukon	91.92	22	IAmb		IAmb		11 18 59.8	
	comp=Z,59nm,1.1s								
P33M	Teslin, Yukon	91.92	22	P		P		11 18 58.6	+0.5
	baz=316,SNR=8.3								
P32M	Atlin	92.05	22	IAmb		IAmb		11 19 00.7	
	comp=Z,57nm,0.8s								
P32M	Atlin	92.05	22	P		P		11 18 59.7	+1.0
	baz=315,SNR=15								
OUZ	Omahuta	92.12	127	P		P		11 19 01.0	+1.7
JCZ	Jackson Bay	92.22	136	P		P		11 19 00.9	+1.3
S31K	Pelican	92.23	25	P		P		11 19 00.5	+1.1
	baz=313								
BESE	Bessie Mountai	92.34	24	IAmb		IAmb		11 19 02.3	
	comp=Z,94nm,1.2s								
WHZ	Wether Hill Ro	92.44	138	P		P		11 19 00.3	-0.3
WRGLY	Wrigley	92.49	16	IAmb		IAmb		11 19 03.0	
	comp=Z,116nm,1.6s								
WRGLY	Wrigley	92.49	16	P		P		11 19 01.1	+0.6
	baz=324,SNR=13								
R32K	Eaglecrest	92.68	24	IAmb		IAmb		11 19 03.8	
	comp=Z,42nm,0.9s								
R32K	Eaglecrest	92.68	24	P		P		11 19 02.7	+1.1
	baz=314,SNR=7.9								
JIS	Juneau Island	92.73	24	P		P		11 19 02.7	+1.0
NUUK	Nuuk	92.91	346	*i* P		P		11 19 02.7	+0.3
NUUK				IAmb		IAmb		11 19 02.9	
	comp=Z,25nm,0.9s								
WCZ	Waipu Caves	92.96	127	P		P		11 19 05.1	+2.0
Q32M	Nakina River	93.02	22	IAmb		IAmb		11 19 05.5	
	comp=Z,33nm,1.1s								
Q32M	Nakina River	93.02	22	P		P		11 19 04.2	+0.8
	baz=316,SNR=5.7								
R33M	Jennings River	93.16	22	IAmb		IAmb		11 19 06.2	
	comp=Z,89nm,1.1s								
R33M	Jennings River	93.16	22	P		P		11 19 05.1	+1.1
	baz=317,SNR=30								
SIT	Sitka	93.21	25	P		P		11 19 04.8	+0.9
	baz=313								
S32K	Killisnoo	93.22	24	P		P		11 19 04.5	+0.5
	baz=314								
DSZ	Denniston Nort	93.31	133	IAmb		IAmb		11 19 07.7	
	comp=Z,39nm,0.9s								
DSZ	Denniston Nort	93.31	133	P		P		11 19 06.1	+1.4
WTLY	Watson Lake, Y	93.36	20	IAmb		IAmb		11 19 06.0	
	comp=Z,60nm,1.1s								
WTLY	Watson Lake, Y	93.36	20	P		P		11 19 04.9	+0.2
	baz=319,SNR=22								
QRZ	Quartz Range	93.46	132	IAmb		IAmb		11 19 07.3	
	comp=Z,39nm,0.9s								
QRZ	Quartz Range	93.46	132	P		P		11 19 05.7	+0.3
RPZ	Rata Peaks	93.57	135	LR		LR		12 04 59.0	
	comp=Z,92nm,19.5s,baz=286,slow=38								
RPZ	Rata Peaks	93.57	135	P		P		11 19 06.1	+0.3
TMZ	Timaru	93.80	136	P		P		11 19 05.4	-1.5
THZ	Tophouse	94.08	133	P		P		11 19 07.8	-0.5
S34M	Telegraph Cree	94.19	23	IAmb		IAmb		11 19 10.9	
	comp=Z,46nm,0.9s								
S34M	Telegraph Cree	94.19	23	P		P		11 19 09.8	+1.3
	baz=317,SNR=13								
DLBC	Dease Lake	94.20	22	P		P		11 19 09.2	+0.5
	comp=Z,13nm,1.0s,baz=299,slow=3.7,SNR=13								
DLBC				LR		LR		12 05 23.6	
	comp=Z,355nm,19.2s,baz=271,slow=38								
	comp=Z,13nm,1.0s								
DLBC	Dease Lake	94.20	22	P		P		11 19 09.6	+1.0
	baz=318,SNR=7.8								
NNZ	Nelson	94.20	132	P		P		11 19 07.6	-1.1
HIZ	Hauiti	94.27	129	IAmb		IAmb		11 19 11.0	
	comp=Z,46nm,1.0s								
HIZ	Hauiti	94.27	129	P		P		11 19 07.5	-1.7
KUZ	Kuaotunu	94.28	127	P		P		11 19 09.8	+0.6
VRZ	Vera Road	94.42	130	P		P		11 19 10.0	+0.2
TOZ	Tahuroa Road	94.47	128	IAmb		IAmb		11 19 12.0	
	comp=Z,31nm,1.1s								
TOZ	Tahuroa Road	94.47	128	P		P		11 19 11.1	+1.1
GVZ	Greta Valley S	94.62	134	P		P		11 19 11.2	+0.6
MQZ	McQueen's Vall	94.64	135	P		P		11 19 10.9	+0.3
TLZ	Tolley Road	94.71	129	P		P		11 19 12.1	+0.9
U33K	Whale Pass	94.74	25	P		P		11 19 11.6	+0.6
	baz=315								
KHZ	Kahutara	94.76	133	P		P		11 19 10.9	-0.3
LIRD	Liard River Hi	94.77	20	P		P		11 19 11.7	+0.6
	baz=322,SNR=5.8								
WAZ	Wanganui	94.81	130	P		P		11 19 11.8	+0.2
WRAK	Wrangell Islan	94.83	24	P		P		11 19 11.9	+0.4
	baz=316								
KOTAN	Kotaneelee Air	94.83	18	P		P		11 19 12.1	+0.7
	baz=323,SNR=6.2								
TCW	Tory Channel	94.83	132	P		P		11 19 10.6	-1.0
TWVZ	Taurewa	94.90	130	P		P		11 19 12.0	-0.1
WTVZ	West Tongariro	95.02	130	P		P		11 19 12.7	0.0
NGZ	Ngauruhoe	95.05	130	P		P		11 19 12.8	-0.1
SNVZ	South Ngauruho	95.08	130	P		P		11 19 13.1	0.0
YKAW3	Yellowknife Wh	95.19	13	IAmb		IAmb		11 19 13.8	
	comp=Z,70nm,1.6s								
CRAG	Craig	95.20	25	P		P		11 19 13.3	+0.1
	baz=315								
T35M	Bob Quinn	95.20	23	IAmb		IAmb		11 19 15.4	
	comp=Z,51nm,1.4s								
T35M	Bob Quinn	95.20	23	P		P		11 19 14.4	+1.2
	baz=318,SNR=7.8								
YKA	Yellowknife Ar	95.25	13	P		P		11 19 12.8	-0.4
	comp=Z,9.9nm,0.7s,baz=328,slow=4.6,SNR=42								
YKA				PP		PP		11 23 01.6	-1.6
	comp=Z,4.8nm,0.8s,baz=335,slow=7.9,SNR=6.0								
YKA				LR		LR		12 08 15.2	
	comp=Z,85nm,18.4s,baz=298,slow=39								
	comp=Z,9.9nm,0.7s								
YKA	Yellowknife Ar	95.25	13	P		P		11 19 12.4	-0.8
YKAW1	Yellowknife Wh	95.29	13	IAmb		IAmb		11 19 14.3	
	comp=Z,55nm,1.3s								
TOAD	Toad River Com	95.49	20	P		P		11 19 14.7	+0.2
	baz=322,SNR=24								
MRZ	Mangatainoka R	95.56	131	IAmb		IAmb		11 19 15.1	
	comp=Z,29nm,0.7s								
MRZ	Mangatainoka R	95.56	131	P		P		11 19 14

T50A	**Nancy**	**124.03**	**360**			**PKPdf**	**11 24 47.8**	**-0.5**
WVT	**Waverly**	**124.86**	**3**			**PKPdf**	**11 24 49.5**	**-0.4**
WVT	**Waverly**	**124.86**	**3**	PKIKP		**PKPdf**	**11 24 49.5**	**-0.4**
TXAR	**Lajitas Array**	**128.49**	**21**	PKP		**PKPdf**	**11 24 57.1**	**0.0**
	comp=Z,11nm,0.5s,baz=126,slow=0.3,SNR=79							
TXAR				SKPbc	SKiKP		11 28 09.8	-19
	comp=Z,1.7nm,0.9s,baz=30,slow=4.5,SNR=4.8							
HKT	**Hockley**	**130.01**	**12**			**PKiKP**	**11 25 00.6**	**0.0**
HKT	**Hockley**	**130.01**	**12**	PKIKP		**PKiKP**	**11 25 00.6**	**0.0**
TEIG	**Tepich**	**140.64**	**5**		PKPpre		11 25 11.8	
SMTB	**Santa Maria do**	**142.22**	**281**	*eP*		**PKPdf**	**11 25 24.3**	**+1.4**
CMIG	**Matias Romero**	**142.63**	**15**	PKhKP	PKPpre		11 25 16.9	
	comp=Z,7.1nm,0.5s,baz=354,slow=3.1,SNR=16							
CMIG				SKPbc		**SKPbc**	**11 28 54.5**	**-1.8**
	comp=Z,5.9nm,0.8s,baz=341,slow=3.9,SNR=7.1							
PRPB	**Parauapebas**	**143.27**	**286**	*eP*		**PKPdf**	**11 25 25.9**	**+1.2**
IPMB	**Ipameri, GO**	**145.02**	**266**	*eP*		**PKPdf**	**11 25 27.9**	**+0.2**
BB19B	**Bebedouro**	**145.63**	**261**	*eP*		**PKPab**	**11 25 30.9**	**+1.5**
SNDB	**Serra Nova Dou**	**146.66**	**277**	*eP*		**PKPbc**	**11 25 31.7**	**-0.5**
FRTB	**Fartura**	**146.66**	**257**	*eP*		**PKPdf**	**11 25 30.9**	**+0.6**
BOAV	**Boa Vista**	**147.62**	**309**			**PKPdf**	**11 25 33.3**	**+1.1**
BOAV	**Boa Vista**	**147.62**	**309**	*eP*		**PKPdf**	**11 25 32.5**	**+0.3**
ITTB	**Itaituba**	**147.72**	**294**	*eP*		**PKPdf**	**11 25 32.9**	**+0.6**
ARAG	**Araguaiana, MT**	**148.05**	**271**	*eP*		**PKPbc**	**11 25 35.0**	**-1.0**
BOAB	**BOACO BROADBAND**	**148.49**	**1**			**PKPbc**	**11 25 37.1**	**-0.1**
SDV	**Santo Domingo**	**148.59**	**332**			**PKPdf**	**11 25 34.2**	**+0.2**
SDV	**Santo Domingo**	**148.59**	**332**	*eP*		**PKPdf**	**11 25 33.8**	**-0.3**
NPGB	**Novo Progresso**	**148.63**	**289**	*eP*		**PKPdf**	**11 25 33.8**	**-0.1**
C2SB	**Chapadao do Su**	**149.48**	**266**	*eP*		**PKPdf**	**11 25 36.2**	**+1.2**
AY03	**Cochrane**	**150.25**	**197**			**PKPab**	**11 25 46.9**	**+0.1**
CLDB	**Colider**	**150.50**	**282**	*eP*		**PKPdf**	**11 25 37.3**	**+0.5**
JTS	**Las Juntas de**	**150.64**	**360**			**PKPbc**	**11 25 41.3**	**-1.2**
JTS	**Las Juntas de**	**150.64**	**360**	PKIKP		**PKPbc**	**11 25 41.3**	**-1.2**
HDC	**Heredia**	**150.91**	**358**	*eP*		**PKPdf**	**11 25 37.9**	**+0.3**
MACA	**Manacapuru-AM**	**151.24**	**301**	*eP*		**PKPdf**	**11 25 38.9**	**+0.9**
PP1B	**Ponte de Pedra**	**151.26**	**268**	*eP*		**PKPdf**	**11 25 38.3**	**+0.5**
PDRB	**Porto dos Gac**	**151.61**	**281**	*eP*		**PKPdf**	**11 25 39.0**	**+0.6**
SALV	**Santo Antonio**	**151.75**	**272**	*eP*		**PKPdf**	**11 25 39.5**	**+0.9**
BRU2	**Volcan**	**152.03**	**355**			**PKPbc**	**11 25 45.0**	**-0.9**
AQDB	**Aquidauana**	**152.30**	**262**			**PKPbc**	**11 25 46.1**	**-0.1**
AQDB	**Aquidauana**	**152.30**	**262**	*eP*		**PKPdf**	**11 25 40.6**	**+1.3**
CPUP	**Villa Florida**	**153.45**	**249**	PKP		**PKPdf**	**11 25 41.5**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=339,slow=5.9,SNR=3.9							
CPUP				PKPbc		**PKPbc**	**11 25 48.3**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=323,slow=3.3,SNR=12							
CPUP				PKPab		**PKPab**	**11 26 01.9**	**+0.9**
	comp=Z,5.1nm,0.9s,baz=318,slow=4.6,SNR=10.0							
ROSC	**El Rosal**	**153.79**	**335**	PKP		**PKPdf**	**11 25 43.1**	**+0.9**
	comp=Z,28nm,0.9s,baz=107,slow=2.4,SNR=12							
ROSC				PKPbc		**PKiKP**	**11 25 50.5**	**+0.3**
	comp=Z,18nm,0.5s,baz=150,slow=14,SNR=8.5							
ROSC				PKPab		**PKPab**	**11 26 04.2**	**+1.1**
	comp=Z,37nm,0.6s,baz=263,slow=3.8,SNR=7.1							
TEFE	**Tefe**	**154.58**	**305**	*eP*		**PKPdf**	**11 25 42.6**	**-0.2**
PTLB	**Pontes e Lacer**	**154.91**	**275**	*eP*		**PKPdf**	**11 25 42.6**	**-0.5**
PLCA	**Paso Flores**	**155.21**	**207**	PKP		**PKPdf**	**11 25 43.9**	**+0.9**
	comp=Z,4.8nm,1.1s,baz=213,slow=7.0,SNR=4.0							
LR03	**Panguipulli**	**156.89**	**206**			**PKPab**	**11 26 13.7**	**-1.4**
OTAV	**Otavalo**	**159.55**	**341**	*eP*		**PKPdf**	**11 25 50.3**	**+0.5**
LPAZ	**La Paz**	**163.54**	**278**	PKP		**PKPdf**	**11 25 53.3**	**-0.7**
	comp=Z,4.9nm,1.0s,baz=37,slow=3.5,SNR=8.8							
LPAZ				PKPab		**PKPab**	**11 26 44.7**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=98,slow=3.3,SNR=6.3							
LPAZ	**La Paz**	**163.54**	**278**	*eP*		**PKPdf**	**11 25 53.9**	**0.0**

DNK 26 11:23:59.2±12.0, **57.96**N×**13.76**E, **h0**km, **ML1.1**(UPP), **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FKPU	**Falk**	**0.20**	**355**	P	Pg	11 24 02.9	-0.3
	baz=280						
FKPU				S	Sg	11 24 05.6	-0.2
BORU	**Boraas**	**0.62**	**239**	P	Pb	11 24 12.6	-0.3
BORU				S	Sb	11 24 22.6	+0.5
GNOU	**Gnosjoe**	**0.67**	**180**	P	Pb	11 24 12.9	-0.8
EKSU	**Eksjoe**	**0.91**	**114**	P	Pg	11 24 15.6	-1.1
EKSU				S	Sg	11 24 26.9	-1.5
LNKU	**Linkoeping**	**0.97**	**73**	P	Pg	11 24 15.4	-2.3
LNKU				S	Sg	11 24 27.7	-2.5
NASU	**Vaermlandsnaes**	**1.02**	**343**	P	Pg	11 24 17.6	-1.2
VANU	**Vaenersborg**	**1.04**	**302**	P	Pg	11 24 19.5	+0.4
ASKU	**Askersund**	**1.10**	**30**	P	Pg	11 24 18.2	-2.0
FABU	**Falkenberg**	**1.11**	**211**	P	Pb	11 24 21.4	+0.2
VXJU	**Vaexsjoe**	**1.22**	**148**	P	Pg	11 24 21.8	-0.7
OSKU	**Oskarshamn**	**1.47**	**120**	P	Pn	11 24 25.7	-1.3
VSTU	**Vaestervik**	**1.52**	**100**	P	Pn	11 24 25.8	-1.8

DNK 26 11:24:15.5±0.8, **56.58**N×**14.28**E, **h0**km, **ML1.0**(UPP), **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEL	**Delary**	**0.26**	**244**	*i* P	Pg	11 24 20.4	+0.1
DEL				*i* S	Sg	11 24 23.7	+0.1
DEL	**Delary**	**0.26**	**244**	P	Pg	11 24 20.1	-0.3
	baz=66						
DEL				S	Sg	11 24 23.7	0.0
VXJU	**Vaexsjoe**	**0.49**	**47**	P	Pg	11 24 24.6	-0.4
VXJU				S	Sg	11 24 31.4	0.0
GNOU	**Gnosjoe**	**0.77**	**338**	P	Pg	11 24 29.0	-1.2
BJUU	**Bjuv**	**0.87**	**234**	*i* S	Sg	11 24 42.1	-1.2
BJUU	**Bjuv**	**0.87**	**234**	P	Pg	11 24 31.5	-0.6
FABU	**Falkenberg**	**0.96**	**297**	P	Pg	11 24 32.4	-1.4
LUNU	**Lund**	**1.06**	**206**	*i* P	Pb	11 24 36.6	-0.2
LUNU				*i* S	Sb	11 24 52.0	+0.9
LUNU	**Lund**	**1.06**	**206**	P	Pg	11 24 35.4	-0.4
OSKU	**Oskarshamn**	**1.17**	**58**	P	Pg	11 24 36.9	-1.0
BSD	**Bornholm Skovb**	**1.52**	**166**	*i* P	Pn	11 24 43.6	-0.2
BSD				*i* S	Sn	11 25 04.3	+0.1
BSD				IAML		11 25 36.7	
	comp=Z,13nm,0.9s						
ONAU	**Onsala**	**1.53**	**303**	*i* P	Pn	11 24 40.5	-3.5
ONAU				*i* S	Sb	11 25 01.8	-2.8

*IDC **26** 11:27:50.1±6.9, 6.18S×154.72E, h63km±57km, mb3.3/7, mbtmp3.7/8, ML2.3/1, Error ellipse: s-maj=46.5km s-min=28.4km az=91.0*
ISC 26 11:27:54.4±1.3, **6.2S**±0.2×**154.6E**±0.2, **h100**km, **n8,** σ1=**78**/8, **mb3.5**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.02**	**246**	P	**Pn**	**11 29 47.7**	**-0.4**
	2.1nm,0.3s,baz=45,slow=9.6,SNR=5.9						
	10nm,0.6s						
WRA	**Warramunga Arr**	**23.95**	**233**	P	**P**	**11 32 58.4**	**-1.1**
	1.0nm,0.7s,baz=57,slow=9.5,SNR=9.8						
	1.0nm,0.7s						
ASAR	**Alice Springs**	**26.41**	**227**	P	**P**	**11 33 20.2**	**-1.6**
	0.3nm,0.5s,baz=58,slow=9.0,SNR=6.4						
	0.3nm,0.5s						
CMAR	**Chiang Mai Arr**	**60.08**	**295**	P	**P**	**11 37 53.9**	**+2.3**
	1.5nm,0.7s,baz=125,slow=5.5,SNR=9.0						
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**82.54**	**319**	P	**P**	**11 40 06.6**	**+0.3**
	0.3nm,0.4s,baz=91,slow=7.5,SNR=4.8						
	0.3nm,0.4s						
ILAR	**Eielson Array**	**82.79**	**22**	P	**P**	**11 40 05.8**	**-1.3**
	0.1nm,0.5s,baz=258,slow=5.6,SNR=4.3						
	0.1nm,0.5s						
QSPA	**South Pole Qui**	**83.77**	**180**	P	**P**	**11 40 14.0**	**+1.6**
	0.8nm,0.9s,baz=112,slow=0.5,SNR=7.7						
	0.8nm,0.9s						
KURBB	**Kurchatov Arra**	**85.99**	**322**	P	**P**	**11 40 22.1**	**-1.4**
	0.3nm,0.6s,baz=101,slow=4.6,SNR=2.2						
	0.3nm,0.6s						

*IDC **26** 11:34:60.0±0.8, 13.27N×144.24E, h135km±10km, mb3.2/8, mbtmp3.6/8, Error ellipse: s-maj=34.3km s-min=18.3km az=92.0*
ISC 26 11:35:01.0±0.9, **13.3N**±0.2×**144.4E**±0.2, **h150**km, **n9,** σ1=**45**/10, **mb3.4**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.57**	**56**	P	**Pn**	**11 35 21.9**	**-0.8**
	164nm,0.4s,baz=196,slow=5.1,SNR=11						
GUMO				S	**Sn**	**11 35 37.5**	**-1.8**
	955nm,0.3s,baz=11,slow=22,SNR=9.8						

WRA	**Warramunga Arr**	**34.45**	**197**	P		**P**	**11 41 33.9**	**-0.6**
	0.5nm,0.8s,baz=21,slow=9.8,SNR=7.2							
	0.5nm,0.8s							
ASAR	**Alice Springs**	**38.11**	**196**	P		**P**	**11 42 05.8**	**+0.2**
	0.2nm,0.8s,baz=22,slow=13,SNR=4.5							
	0.2nm,0.8s							
SONM	**Songino Array**	**46.73**	**325**	P		**P**	**11 43 15.4**	**+0.3**
	0.3nm,0.5s,baz=148,slow=8.5,SNR=2.5							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**61.40**	**316**	P		**P**	**11 45 02.0**	**+0.6**
	0.2nm,0.4s,baz=90,slow=8.8,SNR=7.2							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**64.57**	**320**	P		**P**	**11 45 22.1**	**-0.1**
	0.4nm,0.4s,baz=106,slow=7.1,SNR=5.4							
	0.4nm,0.4s							
ILAR	**Eielson Array**	**69.06**	**25**	P		**P**	**11 45 50.1**	**-0.2**
	0.2nm,0.6s,baz=251,slow=5.9,SNR=4.1							
	0.2nm,0.6s							
BVAR	**Borovoye Array**	**69.89**	**322**	P		**P**	**11 45 54.2**	**-1.4**
	0.4nm,0.3s,baz=92,slow=8.8,SNR=4.3							
	0.4nm,0.3s							
NVAR	**Mina Array Bea**	**87.49**	**51**	P		**P**	**11 47 35.1**	**+2.8**
	0.5nm,0.6s,baz=273,slow=5.8,SNR=3.8							
	0.5nm,0.6s							

*IDC **26** 11:52:45.8±2.3, 41.69N×19.55E, h0km, mb3.6/5, mbtmp3.6/8, ML3.5/2, Error ellipse: s-maj=34.4km s-min=20.5km az=6.0*
*THE **26** 11:52:47.9, 42.7N×79.1°9E±3.6, h63km±32km, M3.4/7, MLh3.4/7*
*TIR **26** 11:52:49.3, 41.56N×19.65E, h2km±2km, Ml3.2/3*
ISC 26 11:52:47.4±1.2, **41.51N**±0.03×**19.44E**±0.04, **h12**km±9km, **n50,** σ1=**85**/53, **mb3.8**/4, **12C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.36**	**117**	Pg	**Pg**	**11 52 54.5**	**0.0**
TIR				Sg	**Sg**	**11 52 58.7**	**-0.6**
TIR				AML	AML	11 52 60.0	
	17nm,0.2s						
SDA	**Shkodra**	**0.54**	**4**	Pg	**Pg**	**11 52 58.4**	**+0.5**
SDA				Sg	**Sb**	**11 53 07.8**	**+1.3**
PHP	**Peshkopia**	**0.77**	**77**	P	**Pg**	**11 53 00.7**	**-1.5**
PHP				Sg	**Sg**	**11 53 10.5**	**-1.8**
PHP				AML	AML	11 53 16.7	
	8.1nm,0.7s						
PDG	**Podgorica**	**0.93**	**351**	Pg	**Pn**	**11 53 06.4**	**+0.2**
PDG				Sg	**Sn**	**11 53 21.1**	**+1.6**
PDG	**Podgorica**	**0.93**	**351**	↑P	**Pn**	**11 53 06.6**	**+0.4**
VLO	**Vlora**	**1.04**	**178**	P	**Pn**	**11 53 09.9**	**+2.1**
VLO				S	**Sn**	**11 53 26.2**	**+4.0**
KBN	**Korca**	**1.35**	**131**	P	**Pg**	**11 53 14.2**	**+1.0**
MATE	**Matera**	**2.24**	**248**	↑P	**Pg**	**11 53 59.9**	**-0.3**
BOVS	**Bovan**	**2.70**	**37**	↑P	**Pn**	**11 53 32.2**	**+1.6**
THL	**Klokotos Trika**	**2.76**	**134**	P	**Pn**	**11 53 32.3**	**+0.9**
TYRN	**Tyrnavos**	**2.78**	**129**	P	**Pn**	**11 53 33.4**	**+1.7**
TSLK	**Tsoukalades, L**	**2.84**	**160**	P	**Pn**	**11 53 33.1**	**+0.6**
LKD2	**Lefkada island**	**2.87**	**161**	P	**Pn**	**11 53 33.3**	**+0.3**
HORT	**Hortiatis**	**2.91**	**107**	P	**Pn**	**11 53 33.9**	**+0.4**
AMPL	**Ampelaki**	**2.92**	**152**	P	**Pn**	**11 53 34.4**	**+0.8**
NYDR	**Nydri-Lefkada**	**2.96**	**161**	P	**Pn**	**11 53 34.2**	**+0.1**
TIP	**Timpagrande**	**3.10**	**222**	⇓P	**Pn**	**11 53 36.6**	**+0.4**
EVR	**Evrytania**	**3.16**	**144**	P	**Pn**	**11 53 38.7**	**+1.7**
PVO	**Paravola**	**3.30**	**150**	P	**Pn**	**11 53 39.7**	**+0.8**
AGG	**Agios Georgios**	**3.33**	**137**	P	**Pn**	**11 53 39.8**	**+0.5**
VLS	**Valsamata**	**3.44**	**165**	P	**Pn**	**11 53 39.9**	**-0.9**
BLY	**Banja Luka**	**3.63**	**334**	⇓P	**Pn**	**11 53 45.3**	**+1.9**
HERR	**Herculane**	**4.01**	**32**	↑P	**Pn**	**11 53 51.7**	**+3.1**
KLV	**Kalavryta, Ach**	**4.04**	**148**	P	**Pn**	**11 53 50.4**	**+1.3**
SRE	**Strehaia**	**4.18**	**40**	⇓P	**Pn**	**11 53 53.4**	**+2.4**
PLVB	**Pleven**	**4.27**	**62**	↑P	**Pn**	**11 53 53.7**	**+1.6**
BZS	**Buzias**	**4.40**	**20**	↑P	**Pn**	**11 53 55.9**	**+2.0**
GZR	**Gura Zlata**	**4.58**	**31**	↑P	**Pn**	**11 53 59.6**	**+3.2**
SIRR	**Siria**	**5.02**	**18**	⇓P	**Pn**	**11 54 04.1**	**+1.7**
LOT	**Lotru**	**5.04**	**37**	↑P	**Pn**	**11 54 05.2**	**+2.3**
ARR	**Arges**	**5.40**	**43**	↑P	**Pn**	**11 54 09.1**	**+1.4**
VOIR		**5.66**	**44**	↑P	**Pn**	**11 54 14.3**	**+3.0**
OBKA	**Obir**	**6.12**	**326**	*e*Pn	**Pb**	**11 54 36.1**	**+2.2**
	comp=Z,3.2nm,0.3s						
OBKA	**Obir**	**6.12**	**326**	*e*Sn	**Sb**	**11 55 43.4**	**-3.6**
	comp=E,8.8nm,0.4s						
MLR	**Muntele Rosu**	**6.18**	**48**	Pn	**Pn**	**11 54 18.0**	**-0.5**
	1.5nm,0.3s,baz=163,slow=12,SNR=5.6						
MLR				Sn	**Sn**	**11 55 26.2**	**-2.9**
	baz=258,slow=19						
	3.6nm,0.6s						
MLR	**Muntele Rosu**	**6.18**	**48**	⇓P	**Pn**	**11 54 21.6**	**+3.1**
ARSA	**Arzberg**	**6.39**	**335**	*e*Pn	**Pb**	**11 54 38.9**	**+0.4**
	comp=Z,2.1nm,0.3s						
PLOR	**Plostina**	**6.79**	**48**	↑P	**Pn**	**11 54 29.2**	**+2.4**
VRI	**Vrincioaia**	**6.84**	**48**	↑P	**Pn**	**11 54 30.3**	**+2.8**
CONA	**Conrad Observa**	**6.90**	**340**	*e*Pn	**Pb**	**11 54 49.8**	**+2.5**
	comp=Z,4.0nm,0.6s						
KECS	**Kecovo**	**7.01**	**6**	*e*PN	Pn	11 54 37.1	+7.3
KECS				*e*		11 54 50.6	
KECS	**Kecovo**	**7.01**	**6**	*e*SN	Sn	11 55 59.7	+10
LESA	**Schwarzleotal**	**7.64**	**323**	*e*Sn	Sb	11 56 19.6	-11
	comp=N,5.3nm,0.5s						
GERES	**GERESS Array B**	**8.38**	**333**	Pn	**Pn**	**11 54 47.8**	**-0.8**
	1.2nm,0.9s,baz=152,slow=14,SNR=2.7						
HFS	**Hagfors**	**18.98**	**351**	P	**P**	**11 57 06.7**	**-1.7**
	0.1nm,0.3s,baz=140,slow=7.0,SNR=2.0						
	1.4nm,0.6s						
FINES	**FINESS Array B**	**20.36**	**9**	P	**P**	**11 57 22.6**	**-0.9**
	1.4nm,0.6s,baz=171,slow=13,SNR=6.4						
	1.4nm,0.6s						
BVAR	**Borovoye Array**	**35.71**	**53**	P	**P**	**11 59 44.9**	**-0.6**
	0.6nm,0.5s,baz=284,slow=5.8,SNR=4.5						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**41.00**	**56**	P	**P**	**12 00 28.1**	**-1.8**
	0.1nm,0.4s,baz=270,slow=9.9,SNR=1.9						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**44.15**	**50**	P	**P**	**12 00 54.2**	**-1.3**
	0.8nm,0.5s,baz=281,slow=9.3,SNR=7.0						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**44.34**	**61**	P	**P**	**12 00 56.1**	**-1.1**
	1.0nm,0.6s,baz=280,slow=7.6,SNR=11						
	1.0nm,0.6s						

PDG 26 11:53:09.0±1.2, **41.61N**×**19.37E**, **h12**km±4km, **MD3.5**/10, **ML3.5**/12, **9C-3D, Error ellipse: s-maj=4.0km s-min=5.8km az=0.0, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.37**	**346**	⇓*i*Pg	Pg	11 53 14.7	-1.7
ULC				*e*Sg	Sg	11 53 21.4	+0.1
BUM	**Brajici-Budva**	**0.78**	**333**	⇑*i*Pg	Pg	11 53 21.4	-2.6
BUM				*e*Sg	Sn	11 53 37.6	+0.1
PDG	**Podgorica**	**0.82**	**354**	⇓*i*Pg	Pg	11 53 21.9	-3.1
PDG				*e*Sg	Sb	11 53 37.3	+0.9
CEME	**Cevo**	**0.99**	**341**	⇑*i*Pg	Pg	11 53 26.8	-1.4
CEME				*e*Sg	Sn	11 53 42.9	0.0
HCY	**Herceg Novi**	**1.06**	**322**	⇑*i*Pg	Pb	11 53 28.0	-1.3
HCY				*e*Sg	Sn	11 53 44.8	+0.3
PVY	**Plav**	**1.08**	**24**	⇑*i*Pg	Pb	11 53 28.1	-1.6
PVY				*e*Sg	Sn	11 53 45.4	+0.3
NKME	**Niksic**	**1.20**	**345**	⇓*i*Pg	Pn	11 53 31.4	-0.3
NKME				*e*Sg	Sg	11 53 47.7	+0.1
KOME	**Kolasin**	**1.25**	**5**	⇑*i*Pg	Pn	11 53 30.8	-1.6
KOME				*e*Sg	Sg	11 53 49.4	+0.2
IVA	**Berane**	**1.32**	**17**	⇑*i*Pg	Pn	11 53 32.5	-0.9
IVA				*e*Sg	Sb	11 53 50.7	-0.1
BRY	**Bratogost**	**1.43**	**335**	⇑*i*Pg	Pn	11 53 33.4	-1.6
BRY				*e*Sg	Sb	11 53 54.5	+0.5
UPM	**Unac-Piva**	**1.63**	**348**	⇑*i*Pn	Pn	11 53 38.3	+0.6
UPM				*e*Sn	Sg	11 54 01.1	-0.4
PLE	**Pljevlja**	**1.72**	**1**	⇑*i*Pn	Pg	11 53 43.3	+1.3
PLE				*e*Sn	Sb	11 54 02.0	-0.3

*RHSSO **26** 11:58:26.7±0.4, 43.12N×18.09E, h7km, ML3.4/3*
*BEO **26** 11:58:26.7±0.3, 43.15N×18.03E, h16km±2km, ML3.2/15*
*PDG **26** 11:58:27.4±0.1, 43.10N×18.07E, h0km±11km, MD3.6/9, ML3.5/13, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
ISC 26 11:58:26.3±1.0, **43.14N**±0.02×**18.09E**±0.02, **h10**km±8km, **n49,** σ1=**20**/93, **5C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.37**	**85**	*e*Pg	**Pg**	**11 58 33.6**	**0.0**
KLINJ				*e*Sg	**Sg**	**11 58 39.7**	**+1.2**

STON	**Ston**	**0.39**	**227**	*e*Pg		**Pg**	**11 58 34.0**	**0.0**
STON				Sg		**Sg**	**11 58 39.6**	**+0.5**
STON	**Ston**	**0.39**	**227**	*e*Pg		**Pg**	**11 58 33.7**	**-0.2**
STON				*e*Sg		**Sg**	**11 58 39.5**	**+0.5**
BRY	**Bratogost**	**0.41**	**125**	⇑*i*Pg		**Pg**	**11 58 34.1**	**-0.3**
BRY				*e*Sg		**Sg**	**11 58 40.3**	**+0.5**
TREB	**Trebinje**	**0.47**	**155**	⇓*i*Pg		**Pg**	**11 58 34.7**	**-0.7**
TREB				*e*Sg		**Sg**	**11 58 42.2**	**+0.7**
DBRK	**Dubrovnik**	**0.47**	**174**	*i* Pg		**Pg**	**11 58 35.5**	**0.0**
DBRK				Sg		**Sg**	**11 58 41.6**	**-0.1**
UPM	**Unac-Piva**	**0.60**	**84**	⇑*i*Pg		**Pg**	**11 58 37.7**	**-0.3**
UPM				*e*Sg		**Sb**	**11 58 47.3**	**-0.4**
NKME	**Niksic**	**0.74**	**120**	⇑*i*Pg		**Pg**	**11 58 39.7**	**-0.8**
NKME				*e*Sg		**Sb**	**11 58 51.3**	**-0.1**
HCY	**Herceg Novi**	**0.75**	**156**	*e*Pg		**Pg**	**11 58 40.0**	**-0.8**
HCY				*i* Sg		**Sb**	**11 58 52.0**	**+0.1**
MAKA	**Makarska**	**0.79**	**281**	*e*Pg		**Pg**	**11 58 40.6**	**-1.0**
MAKA				Sg		**Sb**	**11 58 53.7**	**+0.7**
CEME	**Cevo**	**0.85**	**134**	*e*Pg		**Pg**	**11 58 41.9**	**-0.8**
CEME				*e*Sg		**Sb**	**11 58 54.8**	**+0.1**
PLE	**Pljevlja**	**0.97**	**78**	⇓*i*Pg		**Pg**	**11 58 44.8**	**-0.2**
PLE				*e*Sg		**Sn**	**11 59 00.0**	**-0.1**
BUM	**Brajici-Budva**	**1.03**	**144**	*e*Pg		**Pg**	**11 58 45.4**	**-0.7**
BUM				*i* Sg		**Sn**	**11 59 00.9**	**-0.5**
RUDO	**Rudo**	**1.05**	**62**	⇓*i*Pg		**Pg**	**11 58 45.3**	**-1.2**
RUDO				*e*Sg		**Sg**	**11 59 00.0**	**-0.2**
KOME	**Kolasin**	**1.09**	**105**	*e*Pg		**Pg**	**11 58 46.7**	**-0.5**
KOME				*e*Sg		**Sn**	**11 59 04.9**	**+2.0**
KOME	**Kolasin**	**1.09**	**105**	⇓*i*Pg		**Pg**	**11 58 46.8**	**-0.4**
KOME				*e*Sg		**Sn**	**11 59 03.7**	**+0.8**
PDG	**Podgorica**	**1.12**	**129**	*e*Pg		**Pb**	**11 58 46.4**	**-1.3**
PDG				*e*Sg		**Sn**	**11 59 04.3**	**+0.9**
PDG	**Podgorica**	**1.12**	**129**	⇓*i*Pg		**Pb**	**11 58 46.3**	**-1.4**
PDG				*e*Sg		**Sn**	**11 59 04.0**	**+0.6**
HVAR	**Hvar**	**1.20**	**272**	*e*Pg		**Pb**	**11 58 48.8**	**-0.3**
HVAR				Sg		**Sn**	**11 59 06.1**	**+0.7**
BBLS	**Lazi&#263i**	**1.21**	**52**	*e*Pg		**Pb**	**11 58 49.0**	**-0.3**
BBLS				*e*Sg		**Sn**	**11 59 06.3**	**+0.6**
DRME	**Dracevica, Mon**	**1.25**	**139**	*e*Pg		**Pn**	**11 58 49.9**	**+0.1**
DRME				*e*Sg		**Sn**	**11 59 08.4**	**+1.7**
DRME	**Dracevica, Mon**	**1.25**	**139**	⇓*i*Pg		**Pn**	**11 58 49.7**	**-0.1**
DRME				*e*Sg		**Sn**	**11 59 07.9**	**+1.2**
IVA	**Berane**	**1.35**	**101**	⇓*i*Pg		**Pn**	**11 58 51.3**	**-0.1**
IVA				*e*Sg		**Sg**	**11 59 12.2**	**+2.4**
SJES	**Sjenica**	**1.39**	**84**	*e*Pg		**Pb**	**11 58 52.2**	**-0.2**
SJES				*e*Sg		**Sb**	**11 59 12.1**	**+1.2**
ULC	**Ulcinj**	**1.45**	**143**	⇑*i*Pg		**Pn**	**11 58 52.7**	**0.0**
ULC				*e*Sg		**Sg**	**11 59 13.9**	**+0.8**
PVY	**Plav**	**1.48**	**111**	*e*Pg

PMON	**Piamonte**	**1.12 320**	P	**Pn**	**12 03 18.9 +0.7**		
PMON	**Piamonte**	**1.12 320**	S	**Sn**	**12 03 34.6 +1.4**		
JAYA	**Jayaque - finc**	**1.16 314**	*e*P	**Pn**	**12 03 18.8 -0.1**		
JAYA	**Jayaque - finc**	**1.16 314**	*i* P	**Pn**	**12 03 18.7 -0.1**		
JAYA			*e*S	**Sn**	**12 03 32.3 -2.1**		
JAYA	**Jayaque - finc**	**1.16 314**	P	**Pn**	**12 03 18.8 -0.1**		
JAYA	**Jayaque - finc**	**1.16 314**	S	**Sn**	**12 03 34.8 +0.4**		
LLGN	**La Laguna**	**1.35 345**	P	**Pn**	**12 03 21.7 +0.5**		
LLGN	**La Laguna**	**1.35 345**	S	**Sn**	**12 03 39.4 +0.8**		
CEVE	**Cerro Verde**	**1.41 314**	P	**Pn**	**12 03 23.0 +0.9**		
CEVE	**Cerro Verde**	**1.41 314**	S	**Sn**	**12 03 41.5 +1.4**		
SBLS	**San Blas**	**1.41 314**	*e*P	**Pn**	**12 03 22.9 +0.7**		
SBLS			*e*S	**Sn**	**12 03 41.2 +0.9**		
SNJE	**San Jose**	**1.42 316**	*e*P	**Pn**	**12 03 22.8 +0.5**		
UNIC	**Universidad Ca**	**1.47 320**	P	**Pn**	**12 03 23.4 +0.6**		
UNIC	**Universidad Ca**	**1.47 320**	S	**Sn**	**12 03 42.0 +0.8**		
CRIN	**San Cristobal**	**1.50 95**	P	**Pn**	**12 03 24.2 +1.0**		
CRIN	**San Cristobal**	**1.50 95**	*e*P	**Pn**	**12 03 24.1 +0.9**		
CRIN			*e*S	**Sn**	**12 03 43.3 +1.2**		
NUBE	**Las Nubes**	**1.57 312**	*i* P	**Pn**	**12 03 24.6 +0.5**		
NUBE			*e*S	**Sn**	**12 03 44.2 +0.4**		
NUBE	**Las Nubes**	**1.57 312**	P	**Pn**	**12 03 24.6 +0.5**		
LOAL	**Lomas de Alarc**	**1.63 315**	P	**Pn**	**12 03 26.1 +1.2**		
LOAL	**Lomas de Alarc**	**1.63 315**	S	**Sn**	**12 03 46.5 +1.3**		
SLOZ	**Alcaldia de Sa**	**1.65 315**	S	**Sn**	**12 03 45.3 -0.4**		
FAME	**Alcaldia de Sa**	**1.71 306**	P	**Pn**	**12 03 26.7 +0.8**		
FAME	**Alcaldia de Sa**	**1.71 306**	S	**Sn**	**12 03 47.2 +0.3**		
MTO3	**Montecristo**	**1.72 334**	*i* P	**Pn**	**12 03 26.8 +0.6**		
MTO3	**Montecristo**	**1.72 334**	P	**Pn**	**12 03 26.8 +0.6**		
MTO3	**Montecristo**	**1.72 334**	S	**Sn**	**12 03 48.1 +0.6**		
POLN	**Al Sur del Vol**	**1.74 96**	P	**Pn**	**12 03 25.3 -1.0**		
POLN			S	**Sn**	**12 03 46.5 -1.2**		
TGUH	**Tegucigalpa,Un**	**1.75 47**	P	**Pn**	**12 03 27.5 +0.9**		
TGUH			S	**Sn**	**12 03 49.0 +0.8**		
ESQI	**Esquipulas**	**1.85 337**	P	**Pn**	**12 03 29.0 +1.0**		
ESQI	**Esquipulas**	**1.85 337**	S	**Sn**	**12 03 52.0 +1.4**		
CNGA	**Al SSO del Vol**	**1.87 101**	P	**Pn**	**12 03 28.5 +0.4**		
CNGA			S	**Sn**	**12 03 51.4 +0.5**		
CNGN	**Cerro Negro**	**1.87 100**	P	**Pn**	**12 03 28.5 +0.4**		
CNGN	**Cerro Negro**	**1.87 100**	*e*P	**Pn**	**12 03 28.1 0.0**		
CNGN			*e*S	**Sn**	**12 03 51.4 +0.5**		
YUSH	**Yuscaran**	**2.02 57**	P	**Pn**	**12 03 30.6 +0.5**		
YUSH	**Yuscaran**	**2.02 57**	S	**Sn**	**12 03 55.2 +0.7**		
MOMN	**Momotombo**	**2.04 102**	P	**Pn**	**12 03 30.8 +0.4**		
MOMN			S	**Sn**	**12 03 54.7 -0.3**		
MOM3	**MOM3**	**2.04 99**	P	**Pn**	**12 03 30.9 +0.5**		
MOM3			S	**Sn**	**12 03 55.4 +0.5**		
COPN	**Copaltepe**	**2.06 109**	P	**Pn**	**12 03 30.7 +0.2**		
COPN	**Copaltepe**	**2.06 109**	*e*P	**Pn**	**12 03 30.4 -0.1**		
MOM2	**El Cardon**	**2.09 101**	P	**Pn**	**12 03 31.7 +0.7**		
MOM2			S	**Sn**	**12 03 56.7 +0.7**		
LIMN	**Finca el Limon**	**2.17 84**	P	**Pn**	**12 03 32.4 +0.2**		
LIMN			S	**Sn**	**12 03 59.0 +0.8**		
APYN	**Apoyeque**	**2.27 105**	S	**Sn**	**12 04 00.2 -0.1**		
ABCN	**Banco Central**	**2.33 108**	P	**Pn**	**12 03 34.7 +0.4**		
ALLN	**Telcor Managua**	**2.36 107**	P	**Pn**	**12 03 35.1 +0.5**		
UNAN	**Cigeo UNAN**	**2.38 108**	P	**Pn**	**12 03 35.1 +0.2**		
UNAN			S	**Sn**	**12 04 02.4 -0.6**		
MGAN	**Managua**	**2.39 107**	S	**Sn**	**12 04 02.9 -0.3**		
MGAN	**Managua**	**2.39 107**	P	**Pn**	**12 03 35.1 +0.1**		
WILN	**Americas 2**	**2.44 106**	S	**Sn**	**12 04 04.5 0.0**		
RCVN	**Varillal2**	**2.44 72**	P	**Pn**	**12 03 36.5 +0.7**		
RCVN	**Varillal2**	**2.44 72**	S	**Sn**	**12 04 05.6 +0.9**		
RCON	**San Juan de Ri**	**2.45 75**	P	**Pn**	**12 03 36.7 +0.7**		
RCON	**San Juan de Ri**	**2.45 75**	S	**Sn**	**12 04 06.3 +1.4**		
MAS3	**Al N del Volca**	**2.49 109**	P	**Pn**	**12 03 36.7 +0.2**		
MAS3			S	**Sn**	**12 04 05.1 -0.7**		
NANN	**Nandasmo**	**2.57 110**	S	**Sn**	**12 04 08.4 +0.7**		
MATN	**Matagalpa**	**2.59 88**	P	**Pn**	**12 03 37.0 -0.9**		
MATN	**Matagalpa**	**2.59 88**	S	**Sn**	**12 04 08.6 +0.2**		
APG	**El Apazote**	**2.82 320**	LR	LR	12 05 14.4		
	comp=Z,4.9nm,18.9s,baz=27,slow=40						
APG	**El Apazote**	**2.82 320**	*e*P	**Pn**	**12 03 42.4 +1.3**		
BOAB	**BOACO BROADBAN**	**2.88 98**	P	**Pn**	**12 03 41.8 +0.1**		
STG8	**El Palmar, Qui**	**3.13 301**	*e*P	Pn	12 03 51.4 +6.1		
STG8			*e*S	Sn	12 04 31.0 +9.4		
CARN	**Rivas**	**3.42 119**	S	**Sn**	**12 04 27.1 -1.3**		
ELI1	**Hacienda Flor**	**3.69 126**	S	**Sn**	**12 04 34.7 -0.3**		
LAPC	**Finca la Perla**	**3.71 123**	*e*P	**Pn**	**12 03 54.6 +1.5**		
VRLE	**La Escondida,**	**3.76 123**	*e*P	**Pn**	**12 03 54.7 +0.9**		
SAJU	**San Juanillo,**	**3.94 134**	⇑*i*P	**Pn**	**12 03 57.2 +0.9**		
COLC	**Colonia**	**3.96 123**	*e*P	**Pn**	**12 03 58.9 +2.4**		
CUI	**Cuipilapa**	**3.99 123**	*e*P	**Pn**	**12 03 58.4 +1.5**		
JUD3	**Juan Diaz 3**	**4.00 131**	*e*P	**Pn**	**12 03 58.2 +1.1**		
JTS	**Las Juntas de**	**4.37 125**	*e*P	**Pn**	**12 04 03.4 +1.2**		
VARE2	**V. Arenal**	**4.47 122**	*e*P	**Pn**	**12 04 07.4 +4.0**		
VACR	**Volcan Arenal**	**4.50 121**	*e*P	Pn	12 04 14.4 +11		
PIEC	**Cerro El Cedra**	**5.55 125**	*e*P	**Pn**	**12 04 20.8 +2.2**		
BUS1	**Rivas**	**5.76 124**	⇓*i*P	**Pn**	**12 04 23.9 +2.4**		
BUS1			*e*S	**Sn**	**12 05 25.3 -1.3**		
PIRO	**Carate, Puerto**	**6.79 130**	*e*P	**Pn**	**12 04 37.8 +2.6**		
TXAR	**Lajitas Array**	**21.57 322**	P	**P**	**12 07 43.0 +0.9**		
	0.9nm,0.8s,baz=132,slow=9.1,SNR=8.8						
	0.9nm,0.8s						
PDAR	**Pinedale Array**	**34.91 333**	P	**P**	**12 09 41.5 -1.8**		
	0.2nm,0.7s,baz=137,slow=9.3,SNR=2.4						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**65.21 336**	P	**P**	**12 13 29.0 -2.8**		
	0.3nm,1.0s,baz=109,slow=9.6,SNR=4.7						
	0.3nm,1.0s						
WRA	**Warramunga Arr**	**138.31 254**	PKP	**PKPdf**	**12 22 17.8 +1.5**		
	0.2nm,0.5s,baz=88,slow=2.2,SNR=6.8						
ASAR	**Alice Springs**	**138.38 249**	PKP	**PKPdf**	**12 22 17.5 +1.1**		
	0.2nm,0.8s,baz=84,slow=2.4,SNR=2.0						
FITZ	**Fitzroy Crossi**	**146.64 257**	PKPbc	**PKPbc**	**12 22 33.2 +0.5**		
	0.6nm,0.3s,baz=129,slow=6.5,SNR=1.9						

PDG 26 12:09:47.6±0.4, 41°.64N×19°.42E, h8km±1km, ML2.8/12, 7C-9D, Error ellipse: s-maj=2.1km s-min=2.3km az=0.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.35**	**338**	⇓*i*Pg	Pg	12 09 53.3	-1.3
ULC				*e*Sg	Sg	12 09 59.7	+0.4
DRME	**Dracevica, Mon**	**0.58**	**342**	⇑*i*Pg	Pg	12 09 57.3	-1.5
DRME				*i* Sg	Sg	12 10 06.1	-0.3
BUM	**Brajici-Budva**	**0.77**	**330**	⇓*i*Pg	Pg	12 10 01.1	-1.4
BUM				*e*Sg	Sb	12 10 15.0	+1.0
PDG	**Podgorica**	**0.80**	**351**	⇓P	Pg	12 10 01.5	-1.6
PDG	**Podgorica**	**0.80**	**351**	⇓*i*Pg	Pg	12 10 01.3	-1.8
PDG				*e*Sg	Sb	12 10 15.3	+0.5
CEME	**Cevo**	**0.98**	**338**	⇑*i*Pg	Pg	12 10 04.9	-1.6
CEME				*e*Sg	Sn	12 10 21.3	-0.7
PVY	**Plav**	**1.04**	**23**	*e*Pg	Pg	12 10 06.0	-1.6
PVY				*i* Sg	Sb	12 10 21.6	-0.2
HCY	**Herceg Novi**	**1.06**	**320**	⇑*i*Pg	Pg	12 10 06.7	-1.4
HCY				*e*Sg	Sn	12 10 23.9	+0.1
NKME	**Niksic**	**1.18**	**343**	*e*Pg	Pg	12 10 08.9	-1.4
NKME				*i* Sg	Sb	12 10 26.2	+0.4
KOME	**Kolasin**	**1.22**	**3**	⇑*i*Pg	Pb	12 10 10.0	-0.9
KOME				*e*Sg	Sn	12 10 29.0	+1.3
IVA	**Berane**	**1.28**	**16**	⇑*i*Pg	Pn	12 10 08.7	-3.2
IVA				*e*Sg	Sn	12 10 30.3	+0.9
BRY	**Bratogost**	**1.43**	**333**	*e*Pg	Pn	12 10 13.5	-0.4
BRY				*e*Sg	Sg	12 10 34.5	+1.1
UPM	**Unac-Piva**	**1.61**	**347**	⇑*i*Pn	Pn	12 10 16.2	-0.3
UPM				*e*Sn	Sg	12 10 39.9	+0.4
PLE	**Pljevlja**	**1.69**	**359**	⇓*i*Pn	Pn	12 10 17.4	-0.2
PLE				*e*Sn	Sg	12 10 41.7	-0.4
MATE	**Matera**	**2.27**	**245**	⇓P	Pb	12 10 28.2	-0.6
BOVS	**Bovan**	**2.62**	**39**	⇓P	Pn	12 10 28.6	-1.5
TIP	**Timpagrande**	**3.19**	**221**	⇓P	Pn	12 10 34.2	-3.9
MDVR	**Moldovita**	**3.56**	**27**	⇓P	Pn	12 10 40.9	-2.3
BZS	**Buzias**	**4.29**	**21**	⇑P	Pn	12 10 51.2	-1.9

*IDC **26** 12:14:09.2±1.0, 41°.23N×19°.45E, h0km, mb4.1/14, mbtmp4.1/21, ML4.1/5, MS3.6/25, Error ellipse: s-maj=17.3km s-min=12.8km az=3.0*
*NAO **26** 12:14:10.5, 40°.73N×17°.44E, h10km, MB3.6*
*MOS **26** 12:14:10.2±0.9, 41°.37N×19°.31E, h11km, mb4.7/13, Error ellipse: s-maj=8.0km s-min=4.5km az=64.5*
*SKO **26** 12:14:12.6, 41°.47N×19°.34E, h12km, ML4.0*
*BEO **26** 12:14:13.9±0.6, 41°.37N×19°.48E, h16km±3km, ML4.0/6*
*NEIC **26** 12:14:13.3±1.7, 41°.48N±0°.04×19°.45E±0°.05, h10km±1km, mb4.4/22, Error ellipse: s-maj=8.6km s-min=4.5km az=218.0*

*ROM **26** 12:14:13.2±0.1, 41°.404N±0°.008×19°.470E±0°.007, h10km, ML4.2/150, Error ellipse: s-maj=0.9km s-min=0.6km az=18.0*
*PDG **26** 12:14:13.0±0.4, 41°.34N×19°.51E, h11km±1km, MD4.1/13, ML4.0/13, Error ellipse: s-maj=1.3km s-min=2.6km az=0.0*
*RHSSO **26** 12:14:14.8±0.9, 41°.42N×19°.42E, h7km±4km, ML4.2/6*
*THE **26** 12:14:14.2, 42°N±8°×1°9E±°, h7km±17km, M3.8/16, MLh3.8/16*
*TIR **26** 12:14:14.4, 41°.48N×19°.58E, h10km±1km, Ml4.0/2*
*PRU **26** 12:14:15.9, 41°.01N×18°.59E, h10km, M4.4*
ISC 26 12:14:13.6±0.8, 41°.44N±0°.02×19°.50E±0°.02, h19km±2km, n381, σ1°83/440, mb4.5/29, MS3.6/20, 38C-21D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**108**	P	**Pg**	**12 14 19.6**	**-0.5**
TIR				Sg	**Sg**	**12 14 23.7**	**-0.7**
TIR				AML	AML	12 14 24.0	
	59nm,0.6s						
TIR	**Tirane**	**0.29**	**108**	⇓P	**Pg**	**12 14 19.5**	**-0.6**
TIR				S	**Sb**	**12 14 24.6**	**+0.2**
TIR				AML	AML		
	comp=E,52600μm,0.8s						
TIR				AML	AML		
	comp=N,60650μm,1.0s						
TIR				AML	AML		
	comp=E,52600μm,1.2s						
ULC	**Ulcinj**	**0.56**	**340**	⇓*i*Pg	**Pg**	**12 14 24.6**	**-0.3**
ULC				*e*Sg	**Sn**	**12 14 35.5**	**0.0**
SDA	**Shkodra**	**0.62**	**360**	Pg	**Pg**	**12 14 25.6**	**-0.3**
SDA				S	**Sb**	**12 14 35.6**	**+1.7**
PHP	**Peshkopia**	**0.75**	**70**	Pg	**Pb**	**12 14 27.2**	**-0.8**
PHP				Sg	**Sb**	**12 14 37.1**	**-0.8**
PHP				AML	AML	12 14 41.5	
	comp=E,49nm,0.5s						
PHP	**Peshkopia**	**0.75**	**70**	P	**Pb**	**12 14 27.8**	**-0.3**
PHP				S	**Sn**	**12 14 39.8**	**-0.2**
DRME	**Dracevica, Mon**	**0.79**	**343**	*e*Pg	**Pg**	**12 14 29.0**	**-0.1**
DRME				*e*Sg	**Sn**	**12 14 42.5**	**+1.5**
DRME	**Dracevica, Mon**	**0.79**	**343**	⇓*i*Pg	**Pb**	**12 14 28.5**	**-0.2**
DRME				*e*Sg	**Sn**	**12 14 43.6**	**+2.6**
VLO	**Vlora**	**0.97**	**180**	P	**Pn**	**12 14 34.3**	**+2.2**
VLO				Sg	**Sn**	**12 14 47.5**	**+2.2**
VLO	**Vlora**	**0.97**	**180**	P	**Pn**	**12 14 34.5**	**+2.4**
VLO				S	**Sn**	**12 14 50.6**	**+5.3**
VLO	**Vlora**	**0.97**	**180**	P	**Pn**	**12 14 33.9**	**+1.8**
BUM	**Brajici-Budva**	**0.98**	**332**	*e*Pg	**Pb**	**12 14 32.0**	**0.0**
BUM				*e*Sg	**Sn**	**12 14 49.7**	**+3.9**
PDG	**Podgorica**	**1.01**	**350**	P	**Pg**	**12 14 33.2**	**-0.1**
PDG				S	**Sn**	**12 14 47.9**	**+1.5**
PDG	**Podgorica**	**1.01**	**350**	Pn	**Pb**	**12 14 32.2**	**-0.3**
PDG	**Podgorica**	**1.01**	**350**	⇑P	**Pg**	**12 14 34.2**	**+0.9**
PDG				⇓S	**Sn**	**12 14 50.3**	**+3.9**
PDG	**Podgorica**	**1.01**	**350**	*e*Pg	**Pg**	**12 14 33.3**	**0.0**
PDG				*e*Sg	**Sn**	**12 14 48.8**	**+2.3**
PDG	**Podgorica**	**1.01**	**350**	P	**Pn**	**12 14 32.7**	**0.0**
PDG				S	**Sn**	**12 14 47.7**	**+1.3**
PDG				AML	AML		
	comp=E,11100μm,0.7s						
PDG				AML	AML		
	comp=E,11150μm,0.7s						
PDG				AML	AML		
	comp=N,8385μm,0.9s						
PDG				AML	AML		
	comp=N,8375μm,0.9s						
PDG	**Podgorica**	**1.01**	**350**	⇑*i*Pg	**Pb**	**12 14 32.4**	**-0.1**
PDG				*e*Sg	**Sn**	**12 14 49.9**	**+3.4**
OHR	**Ohrid**	**1.03**	**108**	*i* Pg	**Pb**	**12 14 32.9**	**0.0**
OHR				*i* Sg	**Sn**	**12 14 49.8**	**+2.8**
OHR				*e*Lg	Lg	12 14 51.0	
	comp=N,6μm,0.8s						
OHR				*e*Lg	Lg	12 14 51.7	
	comp=E,5μm,1.3s						
CEME	**Cevo**	**1.19**	**339**	⇑*i*Pg	**Pb**	**12 14 35.9**	**+0.2**
PVY	**Plav**	**1.21**	**16**	*e*Pg	**Pn**	**12 14 35.3**	**-0.3**
PVY				*e*Sg	**Sg**	**12 14 55.4**	**+2.5**
HCY	**Herceg Novi**	**1.26**	**324**	⇑*i*Pg	**Pg**	**12 14 37.9**	**-0.1**
HCY				*i* Sg	**Sg**	**12 14 56.8**	**+2.3**
KBN	**Korca**	**1.27**	**129**	Pg	**Pg**	**12 14 39.0**	**+0.8**
KBN				S	**Sg**	**12 14 55.8**	**+1.1**
KBN	**Korca**	**1.27**	**129**	P	**Pg**	**12 14 38.9**	**+0.8**
KBN				S	**Sg**	**12 14 59.0**	**+4.3**
KBN	**Korca**	**1.27**	**129**	P	**Pg**	**12 14 37.6**	**-0.5**
KBN				S	**Sg**	**12 14 54.7**	**0.0**
NKME	**Niksic**	**1.39**	**343**	⇓*i*Pg	**Pb**	**12 14 39.3**	**+0.2**
NKME				*e*Sg	**Sg**	**12 15 00.1**	**+1.4**
KOME	**Kolasin**	**1.41**	**0**	*e*Pg	**Pg**	**12 14 40.9**	**0.0**
KOME				*e*Sg	**Sg**	**12 15 01.5**	**+2.1**
KOME	**Kolasin**	**1.41**	**0**	*e*Pg	**Pg**	**12 14 40.4**	**-0.5**
KOME				*e*Sg	**Sg**	**12 15 01.6**	**+2.1**
IVA	**Berane**	**1.46**	**11**	⇑*i*Pg	**Pb**	**12 14 40.1**	**-0.2**
IVA				*e*Sg	**Sg**	**12 15 02.9**	**+1.9**
MESG	**Mesagne**	**1.51**	**236**	P	**Pn**	**12 14 39.5**	**-0.1**
MESG				S	**Sg**	**12 15 01.2**	**-1.2**
TREB	**Trebinje**	**1.54**	**327**	*e*Pg	**Pb**	**12 14 41.8**	**+0.2**
TREB				*e*Sg	**Sg**	**12 15 03.0**	**-0.5**
SKO	**Skopje**	**1.55**	**69**	*i* Pg	**Pb**	**12 14 42.2**	**+0.6**
SKO				*i* Sg	**Sg**	**12 15 04.7**	**+1.1**
NEST	**Nestorio**	**1.55**	**131**	P	**Pg**	**12 14 43.4**	**-0.2**
NEST				S	**Sg**	**12 15 05.8**	**+2.0**
BRY	**Bratogost**	**1.63**	**334**	*e*Pn	**Pb**	**12 14 43.7**	**+0.5**
BRY				*i* Sn	**Sg**	**12 15 06.3**	**0.0**
KEK	**Kerkira**	**1.73**	**172**	P	**Pg**	**12 14 46.5**	**-0.5**
KEK				S	**Sg**	**12 15 10.7**	**+1.1**
KEK	**Kerkira**	**1.73**	**172**	Pn	**Pg**	**12 14 48.7**	**+1.6**
KEK	**Kerkira**	**1.73**	**172**	P	**Pg**	**12 14 48.4**	**+1.3**
PENT	**Pentalofos**	**1.75**	**134**	P	**Pg**	**12 14 46.5**	**-0.9**
PENT				S	**Sg**	**12 15 10.8**	**+0.5**
UPM	**Unac-Piva**	**1.82**	**346**	⇑*i*Pn	**Pb**	**12 14 46.8**	**+0.3**
UPM				*e*Sn	**Sg**	**12 15 12.6**	**+0.2**
SJES	**Sjenica**	**1.86**	**11**	*e*Pg	**Pb**	**12 14 47.9**	**+0.9**
SJES				*e*Sg	**Sg**	**12 15 14.0**	**+0.4**
KLINJ	**Klinje**	**1.86**	**339**	*e*Pn	**Pb**	**12 14 46.9**	**-0.2**
KLINJ				*e*Sn	**Sb**	**12 15 10.0**	**0.0**
PLE	**Pljevlja**	**1.90**	**357**	⇑*i*Pn	**Pb**	**12 14 48.1**	**+0.4**
PLE				*e*Sn	**Sg**	**12 15 14.1**	**-0.7**
NOCI	**Noci**	**1.95**	**251**	P	**Pn**	**12 14 46.4**	**+0.7**
NOCI				AML	AML		
	comp=N,1950μm,0.8s						
NOCI				AML	AML		
	comp=E,1390μm,1.2s						
NOCI				AML	AML		
	comp=N,1950μm,1.2s						
STON	**Ston**	**1.96**	**318**	*e*Pn	**Pn**	**12 14 47.1**	**+1.2**
STON				*e*Sn	**Sb**	**12 15 12.2**	**-0.6**
STON	**Ston**	**1.96**	**318**	P	**Pb**	**12 14 47.3**	**-1.4**
STON				S	**Sb**	**12 15 11.7**	**-1.1**
STON				AML	AML		
	comp=N,2370μm,1.2s						
STON				AML	AML		
	comp=N,2370μm,0.8s						
STON				AML	AML		
	comp=E,1730μm,0.9s						
IGT	**Igoumenitsa**	**2.00**	**161**	P	**Pb**	**12 14 48.8**	**-0.6**
IGT				S	**Sg**	**12 15 16.8**	**-1.4**
JAN	**Janina**	**2.05**	**150**	P	**Pb**	**12 14 50.8**	**+0.5**
JAN				S	**Sg**	**12 15 17.9**	**-1.8**
KZN	**Kozani**	**2.06**	**123**	P	**Pb**	**12 14 50.6**	**+0.2**
KZN				S	**Sb**	**12 15 17.4**	**+1.8**
SELS	**Selova**	**2.15**	**33**	*e*Pn	**Pb**	**12 14 50.5**	**-1.4**
SELS				*e*Sn	**Sb**	**12 15 18.4**	**+0.2**
RUDO	**Rudo**	**2.18**	**357**	*e*Pn	**Pb**	**12 14 51.4**	**-1.1**
RUDO				*e*Sn	**Sb**	**12 15 19.3**	**+0.1**
IVAS	**Ivanjica**	**2.19**	**12**	*e*Pn	**Pn**	**12 14 50.7**	**+1.6**
LTRZ	**Laterza**	**2.19**	**249**	P	**Pn**	**12 14 49.2**	**+0.1**
LTRZ				AML	AML		
	comp=E,1045μm,0.8s						
LTRZ				AML	AML		
	comp=N,1028μm,1.0s						
LTRZ				AML	AML		
	comp=E,942μm,0.7s						
LTRZ				AML	AML		
	comp=N,1765μm,0.9s						
LTRZ				AML	AML		
	comp=N,1028μm,1.0s						
LTRZ				AML	AML		
	comp=N,1765μm,1.1s						
LTRZ				AML	AML		
	comp=E,942μm,1.3s						
LTRZ				AML	AML		
	comp=E,1045μm,1.2s						
AMUR	**Altamura**	**2.25**	**257**	P	**Pn**	**12 14 50.1**	**+0.2**
AMUR				AML	AML		
	comp=E,918μm,0.9s						
AMUR				AML	AML		
	comp=N,796μm,0.9s						
AMUR				AML	AML		
	comp=E,918μm,1.1s						
MATE	**Matera**	**2.26**	**251**	⇑P	**Pn**	**12 14 50.6**	**+0.7**
PRMD	**Pramanda**	**2.26**	**147**	P	**Pb**	**12 14 53.7**	**-0.1**
PRMD				S	**Sb**	**12 15 23.1**	**+1.7**
VAY	**Valandovo**	**2.31**	**92**	*i* Pn	**Pn**	**12 14 52.4**	**+1.8**
VAY				*i* Sn	**Sn**	**12 15 20.5**	**+1.9**
VAY				*e*Lg	Lg	12 15 21.5	
	comp=N,394nm,0.8s						
VAY				*e*Lg	Lg	12 15 21.6	
	comp=E,450nm,0.9s						
GOCS	**Kraljevo Serbi**	**2.35**	**25**	*e*Pn	**Pn**	**12 14 53.4**	**+2.0**
GOCS				*e*Sn	**Sb**	**12 15 23.5**	**-0.7**
BBLS	**Lazi&#263i**	**2.43**	**358**	*e*Pn	**Pn**	**12 14 54.5**	**+2.1**
BBLS				*e*Sn	**Sn**	**12 15 23.5**	**+1.9**
BOSS	**Bosilegrad**	**2.46**	**63**	*e*Pn	**Pn**	**12 14 54.4**	**+1.7**
BOSS				*e*Sn	**Sb**	**12 15 25.7**	**-1.5**
MIGL	**Miglionico**	**2.46**	**251**	P	**Pn**	**12 14 54.1**	**+1.3**
MIGL				AML	AML		
	comp=E,4015μm,1.3s						
MIGL				AML	AML		
	comp=N,4330μm,0.9s						
MIGL				AML	AML		
	comp=E,4015μm,0.7s						
TETR	**Tetrakomo, Epi**	**2.49**	**146**	P	**Pb**	**12 14 56.0**	**-1.8**
TETR				S	**Sb**	**12 15 29.3**	**+1.2**
KNT	**Kendrikon**	**2.57**	**95**	P	**Pn**	**12 14 56.5**	**+2.3**
KNT				S	**Sb**	**12 15 28.8**	**-1.6**
KNT	**Kendrikon**	**2.57**	**95**	*i* Pn	**Pn**	**12 14 56.0**	**+1.7**
GRUS	**Gruza**	**2.61**	**20**	*e*Pn	**Pn**	**12 14 56.9**	**+2.1**
LIT	**Litokhoron**	**2.63**	**119**	P	**Pb**	**12 14 58.1**	**-2.1**
LIT				S	**Sb**	**12 15 32.5**	**+0.5**
LIT	**Litokhoron**	**2.63**	**119**		**Pn**	**12 14 56.9**	**+1.8**
LIT	**Litokhoron**	**2.63**	**119**	P	**Pn**	**12 14 56.9**	**+1.8**
THL	**Klokotos Trika**	**2.68**	**133**	P	**Pn**	**12 14 58.3**	**+2.6**
THL				S	**Sb**	**12 15 32.8**	**-0.6**
DIVS	**Divibare**	**2.69**	**8**	*e*Pn	**Pn**	**12 14 57.6**	**+1.7**
TYRN	**Tyrnavos**	**2.70**	**129**	P	**Pb**	**12 14 59.0**	**-2.3**
TYRN				S	**Sb**	**12 15 34.2**	**+0.2**
MSAG	**Monte S. Angel**	**2.71**	**277**	P	**Pn**	**12 14 56.6**	**+0.4**
MSAG				AML	AML		
	comp=E,986μm,1.6s						
MSAG				AML	AML		
	comp=E,406μm,1.6s						
MSAG				AML	AML		
	comp=N,786μm,0.6s						
MSAG				AML	AML		
	comp=N,1900μm,0.6s						
MSAG				AML	AML		
	comp=E,406μm,0.4s						
MSAG				AML	AML		
	comp=E,986μm,0.4s						
BOVS	**Bovan**	**2.73**	**36**	⇓P	**Pn**	**12 14 58.3**	**+1.8**
BOVS	**Bovan**	**2.73**	**36**	*e*Pn	**Pn**	**12 14 57.9**	**+1.4**
BOVS				*e*Sn	**Sn**	**12 15 30.9**	**+1.9**
THE	**Thessaloniki**	**2.74**	**106**	P	**Pn**	**12 14 58.0**	**+1.5**
THE				S	**Sb**	**12 15 33.8**	**-1.3**
THE	**Thessaloniki**	**2.74**	**106**	*i* Pn	**Pn**	**12 14 58.0**	**+1.5**
KKB	**Krupnik**	**2.75**	**80**	*i* Pn	**Pn**	**12 14 58.6**	**+2.0**
ACER	**Acerenza**	**2.77**	**258**		**Pn**	**12 14 57.8**	**+0.8**
ACER	**Acerenza**	**2.77**	**258**	P	**Pn**	**12 14 58.2**	**+1.2**
ACER				AML	AML		
	comp=E,1425μm,0.9s						
ACER				AML	AML		
	comp=E,1400μm,0.9s						
ACER				AML	AML		
	comp=N,1720μm,0.8s						
ACER				AML	AML		
	comp=E,1425μm,1.1s						
ACER				AML	AML		
	comp=N,1765μm,0.8s						
SGRT	**San Giovanni R**	**2.84**	**278**		**Pn**	**12 14 58.6**	**+0.6**
SGRT	**San Giovanni

SLCN AML AML
comp=N,636µm,0.5s
ZAGS Zajecar 3.12 39 *e*Pn **Pn** 12 15 03.7 +2.0
CUC Castrocucco 3.15 244 **Pn** 12 15 03.3 +1.1
CUC Castrocucco 3.15 244 P **Pn** 12 15 02.4 +0.2
CUC AML AML
comp=N,577µm,0.9s
CUC AML AML
comp=N,586µm,0.9s
CUC AML AML
comp=E,680µm,1.0s
CUC AML AML
comp=E,694µm,1.0s
CUC AML AML
comp=N,586µm,1.1s
CUC AML AML
comp=N,577µm,1.1s
MMB Musomishta 3.19 87 *i* Pn **Pn** 12 15 04.9 +2.1
BORS2 Bor- Borsko je 3.24 34 *e*Pn **Pn** 12 15 03.8 +0.4
BORS2 *e*Sn **Sn** 12 15 42.6 +1.2
MGR Morigerati 3.27 248 P **Pn** 12 15 05.2 +1.4
MGR AML AML
comp=N,379µm,1.0s
MGR AML AML
comp=E,378µm,1.3s
MELA Melanico ??? S 3.29 276 P **Pn** 12 15 04.4 +0.3
MELA AML AML
comp=N,1040µm,1.2s
MELA AML AML
comp=E,1048µm,0.9s
MELA AML AML
comp=N,1040µm,0.8s
MELA AML AML
comp=N,1072µm,0.7s
MELA AML AML
comp=E,999µm,0.8s
CET2 Cetraro 3.31 236 P **Pn** 12 15 05.2 +0.8
CET2 AML AML
comp=E,678µm,0.7s
CET2 AML AML
comp=N,744µm,0.8s
CDRU Civita di Ruta 3.32 255 P **Pn** 12 15 05.4 +0.8
CDRU AML AML
comp=E,238µm,1.6s
CDRU AML AML
comp=N,176µm,0.7s
CDRU AML AML
comp=E,238µm,0.4s
CAR1 CAROLEI 3.33 230 P **Pn** 12 15 05.7 +1.0
CAR1 AML AML
comp=E,650µm,1.1s
CAR1 AML AML
comp=N,425µm,0.9s
CAR1 AML AML
comp=E,650µm,0.9s
AVAS Avala Beograd 3.34 12 *e*Pn **Pn** 12 15 06.2 +1.4
AVAS *e*Sn **Sn** 12 15 47.3 +3.3
VLS Valsamata 3.36 165 P **Pn** 12 15 05.0 -0.1
VLS AML AML
comp=E,288µm,1.6s
VLS AML AML
comp=E,288µm,0.4s
VLS AML AML
comp=N,374µm,0.7s
CMPR Campora 3.37 252 P **Pn** 12 15 06.3 +1.0
CMPR AML AML
comp=E,236µm,1.0s
CMPR AML AML
comp=N,266µm,1.0s
CMPR AML AML
comp=N,266µm,1.0s
KUBS Kucevo 3.38 27 *e*Pn **Pn** 12 15 05.4 +0.1
KUBS *e*Sn **Sn** 12 15 44.7 -0.1
BULG Bulgheria - Ca 3.41 248 P **Pn** 12 15 06.9 +1.0
BULG AML AML
comp=N,459µm,1.6s
BULG AML AML
comp=E,341µm,0.8s
BULG AML AML
comp=N,466µm,1.6s
BULG AML AML
comp=E,349µm,0.8s
BULG AML AML
comp=N,466µm,0.4s
BULG AML AML
comp=N,459µm,0.4s
MRB1 Monte Rocchett 3.43 266 P **Pn** 12 15 07.3 +1.3
MRB1 AML AML
comp=E,682µm,1.0s
MRB1 AML AML
comp=E,702µm,1.0s
MRB1 AML AML
comp=N,696µm,0.6s
MRB1 AML AML
comp=N,719µm,0.6s
MTMR Montemarano 3.44 263 P **Pn** 12 15 06.8 +0.6
MTMR AML AML
comp=E,246µm,0.6s
MTMR AML AML
comp=N,344µm,0.7s
MTMR AML AML
comp=N,344µm,1.3s
FRES Fresagrandinar 3.66 280 P **Pn** 12 15 10.7 +1.5
FRES AML AML
comp=N,496µm,0.7s
FRES AML AML
comp=N,496µm,1.3s
FRES AML AML
comp=E,504µm,0.7s
VITU Vitulano (BN) 3.68 268 P **Pn** 12 15 11.2 +1.6
VITU AML AML
comp=E,503µm,0.7s
VITU AML AML
comp=N,438µm,0.4s
BSSO Busso 3.69 273 P **Pn** 12 15 11.5 +1.8
BSSO AML AML
comp=E,125µm,0.6s
BSSO AML AML
comp=N,119µm,0.7s
MDVR Moldovita 3.71 25 ⇓P **Pn** 12 15 11.7 +1.7
BLY Banja Luka 3.72 334 *e*Pn **Pn** 12 15 12.6 +2.5
BLY *e*Sn **Sn** 12 15 55.9 +2.6
BLY Banja Luka 3.72 334 ⇓P **Pn** 12 15 12.5 +2.5
BLY Banja Luka 3.72 334 *e*Pn **Pn** 12 15 12.6 +2.5
FRGS Fruska Gora 3.73 3 *e*Pn **Pn** 12 15 11.2 +1.1
PAOL Paolisi 3.74 265 **Pn** 12 15 12.0 +1.6
PUNG Punghina 3.80 40 ⇑P **Pn** 12 15 13.0 +1.9
PLAC Placanica 3.80 219 P **Pn** 12 15 10.8 -0.4
PLAC AML AML
comp=E,136µm,0.8s
PLAC AML AML
comp=N,228µm,1.3s
DJES Djerdap 3.91 33 ⇓P **Pn** 12 15 14.7 +2.0
VRSS Vrsac 3.92 19 *e*Pn **Pn** 12 15 13.8 +1.0
VRSS *e*Sn **Sn** 12 15 59.0 +0.8
KLV Kalavryta, Ach 3.96 148 P **Pn** 12 15 15.6 +2.2
KLV AML AML
comp=E,170µm,1.5s
KLV AML AML
comp=N,177µm,1.0s
KLV AML AML
comp=E,170µm,0.5s
KLV AML AML
comp=N,177µm,1.0s
JOPP Joppolo 3.96 226 P **Pn** 12 15 13.3 -0.1
JOPP AML AML
comp=E,141µm,0.7s
JOPP AML AML
comp=N,105µm,0.7s
VAGA Valle Agricola 3.96 271 P **Pn** 12 15 15.0 +1.6
VAGA AML AML
comp=N,472µm,0.7s
VAGA AML AML
comp=E,365µm,0.8s
VAGA AML AML
comp=N,472µm,1.3s
RNI2 Rionero Sannit 4.02 276 P **Pn** 12 15 15.8 +1.5
RNI2 AML AML
comp=E,341µm,1.1s
RNI2 AML AML
comp=N,356µm,1.1s
RNI2 AML AML
comp=N,353µm,1.1s
RNI2 AML AML
comp=E,356µm,0.9s
RNI2 AML AML
comp=N,353µm,0.9s
RNI2 AML AML
comp=N,356µm,0.9s
LPEL Lama dei Pelig 4.03 280 P **Pn** 12 15 15.6 +1.3
LPEL AML AML
comp=N,352µm,1.2s
LPEL AML AML
comp=E,368µm,1.1s
LPEL AML AML
comp=N,323µm,1.2s
LPEL AML AML
comp=E,363µm,1.2s
LPEL AML AML
comp=N,323µm,0.8s
LPEL AML AML
comp=N,352µm,0.8s
LPEL AML AML
comp=E,368µm,0.9s
HERR Herculane 4.05 31 ⇑P **Pn** 12 15 16.4 +1.8
CERA Filignano 4.12 274 P **Pn** 12 15 17.7 +2.1
CERA AML AML
comp=E,498µm,0.9s
CERA AML AML
comp=N,504µm,0.8s
CERA AML AML
comp=N,504µm,1.2s
CERA AML AML
comp=E,498µm,1.1s
SRE Strehaia 4.21 39 ⇑P **Pn** 12 15 18.9 +2.0
SRE Strehaia 4.21 39 P **Pn** 12 15 18.8 +2.0
CEL Celeste 4.22 222 **Pn** 12 15 17.1 +0.2
CEL Celeste 4.22 222 P **Pn** 12 15 16.4 -0.5
MODR Mondragone 4.25 268 P **Pn** 12 15 18.0 +0.7
MODR AML AML
comp=E,130µm,0.8s
MODR AML AML
comp=N,181µm,1.3s
PLVB Pleven 4.26 61 ⇑P **Pn** 12 15 19.9 +2.4
VCEL Villa Celiera 4.33 285 P **Pn** 12 15 19.8 +1.3
VCEL AML AML
comp=E,452µm,1.1s
VCEL AML AML
comp=N,450µm,0.8s
T0110 Collepietro 4.35 282 P **Pn** 12 15 19.9 +1.2
T0110 AML AML
comp=E,442µm,1.0s
T0110 AML AML
comp=N,376µm,1.0s
MSRU Castanea 4.41 225 P **Pn** 12 15 18.4 -1.1
MSRU AML AML
comp=E,220µm,1.3s
MSRU AML AML
comp=N,165µm,1.2s
MSRU AML AML
comp=N,165µm,0.8s
LRP Arpino 4.45 275 P **Pn** 12 15 21.4 +1.4
LRP AML AML
comp=E,164µm,0.7s
LRP AML AML
comp=N,163µm,0.7s
BZS Buzias 4.45 19 ⇓P **Pn** 12 15 21.4 +1.3
BZS Buzias 4.45 19 P **Pn** 12 15 21.4 +1.3
FAGN Fagnano 4.50 283 P **Pn** 12 15 22.0 +1.2
FAGN AML AML
comp=N,436µm,1.5s
FAGN AML AML
comp=E,710µm,1.6s
FAGN AML AML
comp=N,436µm,0.5s
TERO Teramo 4.55 287 P **Pn** 12 15 22.4 +0.9
TERO AML AML
comp=N,256µm,1.5s
TERO AML AML
comp=E,182µm,0.8s
RDO Rodhopi 4.56 92 **Pn** 12 15 23.4 +1.9
OFFI Offida 4.57 291 P **Pn** 12 15 23.8 +2.0
OFFI AML AML
comp=E,523µm,0.6s
OFFI AML AML
comp=N,998µm,0.8s
OFFI AML AML
comp=N,998µm,1.2s
GZR Gura Zlata 4.62 30 ⇑P **Pn** 12 15 24.2 +1.8
GZR Gura Zlata 4.62 30 P **Pn** 12 15 24.2 +1.8
AQU L'Aquila 4.64 283 *e*Pn **Pn** 12 15 24.2 +1.4
AQU *e*Sn **Sn** 12 16 16.2 0.0
ITM Ithomi 4.65 155 Pn **Pn** 12 15 24.1 +1.3
CAMP Campotosto 4.67 286 **Pn** 12 15 24.1 +0.9
MNTT Montottone 4.68 292 P **Pn** 12 15 25.2 +1.9
MNTT AML AML
comp=E,872µm,0.8s
MNTT AML AML
comp=N,774µm,0.4s
GIUL Giuliano Di Ro 4.69 274 P **Pn** 12 15 24.8 +1.3
GIUL AML AML
comp=E,116µm,0.7s
GIUL AML AML
comp=N,119µm,0.8s
SURR Surduc 4.72 23 ⇑P **Pn** 12 15 25.6 +1.9
SMA1 SAN MARTINO 4.75 287 P **Pn** 12 15 24.9 +0.7
MF5 Montefalcone A 4.75 291 P **Pn** 12 15 25.8 +1.6
MF5 AML AML
comp=E,330µm,0.9s
MF5 AML AML
comp=N,466µm,0.5s
MF5 AML AML
comp=N,466µm,1.5s
MF5 AML AML
comp=E,330µm,1.1s
RM33 Pellescritta (4.81 285 P **Pn** 12 15 26.5 +1.4
RM33 AML AML
comp=E,431µm,0.9s
RM33 AML AML
comp=N,362µm,1.2s
RM33 AML AML
comp=E,383µm,0.8s
RM33 AML AML
comp=N,322µm,0.5s
RM33 AML AML
comp=N,362µm,0.8s
RM33 AML AML
comp=E,383µm,1.2s
RM33 AML AML
comp=E,431µm,1.1s
MMO1 Montemonaco 4.82 290 P **Pn** 12 15 26.2 +1.1
MORH Mrgy, Hungar 4.82 353 *e*Pn **Pn** 12 15 27.3 +2.2
MORH *e*Sn **Sn** 12 16 21.9 +1.6
MORH Mrgy, Hungar 4.82 353 ⇑P **Pn** 12 15 26.4 +1.3
FIAM Fiamignano 4.84 282 P **Pn** 12 15 27.6 +2.0
GUMA Gualdo di Mace 4.86 292 **Pn** 12 15 26.6 +0.9
CERT Cerreto 4.91 278 P **Pn** 12 15 27.4 +1.0
CERT AML AML
comp=E,200µm,0.6s
CERT AML AML
comp=N,105µm,0.9s
MC2 Monte Cornacci 4.92 290 P **Pn** 12 15 27.8 +1.1
NRCA Norcia 4.95 289 **Pn** 12 15 28.5 +1.5
NRCA Norcia 4.95 289 P **Pn** 12 15 28.1 +1.1
NRCA AML AML
comp=E,280µm,0.8s
NRCA AML AML
comp=N,382µm,0.7s
NRCA AML AML
comp=E,280µm,1.2s
LNSS Leonessa 4.95 286 P **Pn** 12 15 28.5 +1.4
CSP1 Cessapalombo 4.96 292 P **Pn** 12 15 28.0 +0.8
CSP1 AML AML
comp=E,206µm,1.6s
CSP1 AML AML
comp=N,226µm,0.5s
CSP1 AML AML
comp=E,206µm,0.4s
ELND Elena 4.96 70 ⇓P **Pn** 12 15 29.7 +2.6
FDMO Fiordimonte 5.02 291 **Pn** 12 15 29.0 +1.0
FDMO Fiordimonte 5.02 291 ⇓P **Pn** 12 15 29.0 +1.0
FDMO AML AML
comp=E,217µm,0.7s
FDMO AML AML
comp=N,184µm,0.9s
FDMO AML AML
comp=N,184µm,1.1s
LOT Lotru 5.07 36 ⇑P **Pn** 12 15 30.9 +2.2
SIRR Siria 5.08 17 ⇓P **Pn** 12 15 31.6 +2.9
BOJS Bojanci 5.11 324 P **Pn** 12 15 30.1 +1.0
BOJS AML AML
comp=E,538µm,0.7s
BOJS AML AML
comp=N,467µm,1.5s
BOJS AML AML
comp=E,538µm,1.3s
CESI CESI - Serrava 5.14 290 P **Pn** 12 15 30.7 +1.0
CESI AML AML
comp=E,197µm,0.9s
CESI AML AML
comp=E,197µm,1.1s
CESI AML AML
comp=N,301µm,0.6s
SNTG Esanatoglia 5.19 293 P **Pn** 12 15 30.9 +0.6
SNTG AML AML
comp=E,110µm,1.0s
SNTG AML AML
comp=N,227µm,0.7s
SNTG AML AML
comp=E,110µm,1.0s
ARVD Arcevia 5.27 295 P **Pn** 12 15 31.9 +0.5
COR1 Corinaldo 5.28 297 P **Pn** 12 15 32.7 +1.2
CESX Cesi 5.29 285 **Pn** 12 15 33.2 +1.6
CESX Cesi 5.29 285 P **Pn** 12 15 32.4 +0.8
SSFR Montelago di S 5.36 294 P **Pn** 12 15 33.4 +0.8
SSFR AML AML
comp=E,374µm,0.2s
SSFR AML AML
comp=N,440µm,1.1s
SSFR AML AML
comp=N,350µm,0.2s
SSFR AML AML
comp=N,440µm,0.9s
SSFR AML AML
comp=E,372µm,0.2s
SSFR AML AML
comp=E,374µm,1.8s
ATCC AVT- Casa Cast 5.38 291 P **Pn** 12 15 33.8 +0.9
BEHE Becsehely 5.40 340 *e*Pn **Pn** 12 15 35.2 +2.0
BEHE *e*Sn **Sn** 12 16 35.6 +0.8
ARR Arges 5.42 42 ⇑P **Pn** 12 15 36.3 +2.9
FRON Frontone 5.43 295 P **Pn** 12 15 34.1 +0.6
HLNI Lentini 5.43 223 P **Pn** 12 15 32.1 -1.4
EZN Ezine 5.43 105 ⇑P **Pn** 12 15 35.7 +2.1
EZN Ezine 5.43 105 P **Pn** 12 15 35.6 +2.1
MPAG Monte Paganucc 5.44 296 P **Pn** 12 15 34.4 +0.6
ATFO Monte Foce - G 5.48 293 P **Pn** 12 15 35.0 +0.7
MURB Monte Urbino 5.48 292 **Pn** 12 15 35.9 +1.6
MURB Monte Urbino 5.48 292 P **Pn** 12 15 35.7 +1.4
MTUR Matau 5.55 45 ⇑P **Pn** 12 15 38.5 +3.2
MTUR Matau 5.55 45 P **Pn** 12 15 38.4 +3.2
NARO Abbazia di Nar 5.56 295 P **Pn** 12 15 36.0 +0.7
ATTE AVT- Monte Tez 5.58 291 P **Pn** 12 15 36.9 +1.2
ATVO AVT- Monte Val 5.60 293 P **Pn** 12 15 36.8 +0.9
ATPI Pietralunga - 5.63 293 P **Pn** 12 15 37.3 +1.0
TOLF Tolfa 5.65 279 P **Pn** 12 15 37.4 +0.9
VOIR 5.68 43 ⇑P **Pn** 12 15 39.7 +2.6
VOIR 5.68 43 P **Pn** 12 15 39.7 +2.6
ATMI Monte Miggiano 5.68 292 P **Pn** 12 15 39.5 +2.5
MGAB Montegabbione 5.69 287 P **Pn** 12 15 38.3 +1.2
BADI Badiali 5.75 294 P **Pn** 12 15 39.6 +1.6
PARC Parchiule 5.80 295 P **Pn** 12 15 39.7 +1.0
DRGR 5.83 22 P **Pn** 12 15 40.6 +1.5
DRGR 5.83 22 P **Pn** 12 15 40.5 +1.5
LJU Ljubljana 5.85 324 P **Pn** 12 15 40.6 +1.4
TRI Trieste 5.97 318 P **Pn** 12 15 40.6 -0.2
CRE Caprese Michel 5.99 294 P **Pn** 12 15 42.6 +1.3
CJR Cluj-Napoca 6.04 28 P **Pn** 12 15 43.2 +1.2
CJR Cluj-Napoca 6.04 28 P **Pn** 12 15 43.2 +1.2
SOKA Soboth 6.15 330 *i* Pn **Pn** 12 15 44.9 +1.5
comp=E,1.8nm,0.2s
MLR Muntele Rosu 6.20 47 Pn **Pn** 12 15 47.3 +3.1
comp=E,5.9nm,0.3s,baz=192,slow=14,SNR=40
MLR Sn **Sn** 12 16 58.3 +3.8
comp=E,2.5nm,0.3s,baz=288,slow=20,SNR=5.9
MLR LR LR 12 18 38.3
comp=E,311nm,20.6s,baz=204,slow=42
comp=E,34nm,0.6s
MLR Muntele Rosu 6.20 47 **Pn** 12 15 47.5 +3.4
MLR Muntele Rosu 6.20 47 ⇓P **Pn** 12 15 47.5 +3.4
OBKA Obir 6.20 327 *e*Pn **Pn** 12 15 45.6 +1.4
comp=E,3.4nm,0.2s,SNR=4.8
DOPR Dopca 6.22 41 ⇑P **Pn** 12 15 46.7 +2.3
SABO M.te Sabotino 6.24 319 **Pn** 12 15 45.4 +0.8
SABO M.te Sabotino 6.24 319 P **Pn** 12 15 45.2 +0.5
ISR Istrita 6.32 52 ⇓P **Pn** 12 15 49.1 +3.3
ISR Istrita 6.32 52 P **Pn** 12 15 49.1 +3.3
NEHR Nehoiu 6.35 49 ⇑P **Pn** 12 15 49.6 +3.4
DRE Drenchia 6.36 320 P **Pn** 12 15 46.6 +0.4
APE Apeiranthos 6.39 131 *i* P **Pn** 12 15 47.7 +0.9
ARSA Arzberg 6.47 335 Pn **Pn** 12 15 51.2 +3.3
ARSA Arzberg 6.47 335 *e*Pn **Pn** 12 15 50.3 +2.4
comp=E,1.5nm,0.3s
PSZ Piszkesteto 6.49 2 **Pn** 12 15 49.2 +1.2
PSZ Piszkesteto 6.49 2 ⇑P **Pn** 12 15 49.6 +1.5
PSZ Piszkesteto 6.49 2 P **Pn** 12 15 49.3 +1.2
TURR Turia 6.60 43 ⇓P **Pn** 12 15 52.2 +2.6
BAND Balkesir-Ban 6.60 97 ⇑P **Pn** 12 15 52.4 +2.8
RONA Rosalia, Austr 6.67 341 *e*Pn **Pn** 12 15 53.0 +2.5
comp=E,0.5nm,0.2s
MYKA Terra Mystica 6.69 323 *e*Pn **Pn** 12 15 52.6 +1.7
comp=E,0.7nm,0.2s
PLOR Plostina 6.81 47 ⇑P **Pn** 12 15 55.6 +3.2
PLOR Plostina 6.81 47 P **Pn** 12 15 55.6 +3.2
VRI Vrincioaia 6.86 47 ⇑P **Pn** 12 15 56.3 +3.1
VRI Vrincioaia 6.86 47 P **Pn** 12 15 56.2 +3.1
STAL STALIGIAL 6.88 317 **Pn** 12 15 54.3 +0.9
ONER Baraj Valea Uz 6.98 43 ⇑P **Pn** 12 15 58.3 +3.5
CONA Conrad Observa 6.99 339 *e*Pn **Pn** 12 15 57.5 +2.5
comp=E,0.4nm,0.2s
MODS Modra-Piesok 7.12 348 *e*P Pn 12 16 02.4 +5.7
MODS *e* 12 17 24.9
MODS Modra-Piesok 7.12 348 *e*PN Pn 12 16 02.4 +5.7
MODS *e*PG **Pb** 12 16 21.0 +4.5
MODS *e*SN **Sn** 12 17 24.9 +8.0
MODS *e*SG **Sg** 12 17 53.6 -8.2
KBA Koelnbreinsper 7.17 324 *e*Pn **Pn** 12 15 59.8 +2.3
comp=E,1.3nm,0.4s
TESR Tescani 7.23 43 ⇑P **Pn** 12 16 01.4 +3.2
ABTA Abfaltersbach 7.31 319 *e*Pn **Pn** 12 16 01.9 +2.5
comp=E,1.9nm,0.2s
CFR Carcaliu 7.32 56 ⇓P **Pn** 12 16 01.5 +2.0
CFR Carcaliu 7.32 56 P **Pn** 12 16 01.5 +2.0
TPGR Topolog 7.36 59 ⇓P **Pn** 12 16 02.4 +2.3
BURAR Bucovina Array 7.40 32 **Pn** 12 16 03.6 +3.0
BURAR Bucovina Array 7.40 32 ⇓P **Pn** 12 16 04.2 +3.5
BURAR Bucovina Array 7.40 32 P **Pn** 12 16 04.1 +3.5
MOA Molln 7.42 332 *e*Pn **Pn** 12 16 03.4 +2.6
comp=E,1.6nm,0.2s
BUR08 Bucovina Ar. S 7.42 31 **Pn** 12 16 03.9 +3.0
IDI Anoyia 7.45 144 Pn **Pn** 12 16 00.4 -1.0
baz=324,slow=14
IDI Sn **Sn** 12 17 19.8 -5.6
comp=E,2.2nm,0.3s,baz=325,slow=4.2,SNR=5.7
BIOA Bad Ischl, Aus 7.53 328 *e*Pn **Pn** 12 16 04.8 +2.5
comp=E,2.6nm,0.2s
MANT Manisa 7.55 110 **Pn** 12 16 06.4 +3.6
LANS Liptovska Anna 7.71 360 *e*PG Pb 12 16 35.6 +8.9
LANS *e*SN Sn 12 17 16.2 -16
LESA Schwarzleotal 7.72 323 *e*Pn **Pn** 12 16 06.1 +1.0
comp=E,0.8nm,0.2s
TLCR 7.76 58 ⇑P **Pn** 12 16 08.4 +3.0
TLCR 7.76 58 P **Pn** 12 16 08.4 +3.0
MSSA Maissana 7.88 295 Pn **Pn** 12 16 07.7 +0.5
STHS Stebnicka Huta 8.07 8 *e*P **Pn** 12 16 13.4 +3.6
STHS Stebnicka Huta 8.07 8 *e*PN **Pn** 12 16 13.4 +3.6
STHS *e*SN Sn 12 17 20.8 -20
WTTA Wattenberg 8.10 319 *e*Pn **Pn** 12 16 11.8 +1.4
comp=E,3.0nm,0.2s,SNR=6.6
WTTA Wattenberg 8.10 319 P **Pn** 12 16 12.0 +1.6
VRAC Vranov 8.13 346 Pn **Pn** 12 16 13.3 +2.7
comp=E,1.6nm,0.3s,baz=192,slow=14,SNR=1.0
VRAC Sn **Sn** 12 17 45.9 +3.9
comp=E,0.7nm,0.3s,baz=98,slow=15,SNR=1.7
WATA Walderalm 8.18 319 *e*Pn **Pn** 12 16 13.1 +1.7
comp=E,1.3nm,0.2s,SNR=5.4
SQTA Sankt Quirin 8.29 317 *e*Pn **Pn** 12 16 14.3 +1.4
comp=E,3.3nm,0.2s
FETA Feichten 8.41 315 *e*Pn **Pn** 12 16 16.0 +1.4
comp=E,0.6nm,0.3s
MOTA Moosalm 8.43 317 *e*Pn **Pn** 12 16 16.5 +1.7
comp=E,1.6nm,0.2s
FUORN Ofenpass-Fuorn 8.43 311 Pn **Pn** 12 16 16.3 +1.3
GERES GERESS Array B 8.46 333 Pn **Pn** 12 16 16.5 +1.3
comp=E,0.7nm,0.4s,baz=149,slow=14,SNR=5.7

GERES Sn **Sn** **12 17 50.9 +0.6**
baz=150,slow=18,SNR=1.2
DAVOX Davos/Dischmat 8.74 311 Pn **Pn** **12 16 19.6 +0.5**
comp=E,1.7nm,0.3s,baz=161,slow=18,SNR=6.9
DAVOX Sn **Sn** **12 17 55.6 -1.6**
comp=E,1.6nm,0.3s,baz=162,slow=20,SNR=5.3
comp=E,2.0nm,0.2s
KHC Kasperske Hory 8.75 334 *ce*P **Pn** **12 16 16.3 -2.8**
KHC pmax pmax
comp=Z,14nm,2.5s
KHC Kasperske Hory 8.75 334 *e*PN **Pn** **12 16 22.9 +3.8**
KHC *e*SN **Sn** **12 17 57.6 +0.4**
KRLC Kraliky 8.85 349 *e*SN **Sn** **12 18 06.3 +6.8**
KEST Kesra 9.78 238 LR LR 12 21 20.3
comp=Z,333nm,19.3s,baz=59,slow=45
SENIN Lac Senin/Sane 10.09 303 Pn **Pn** **12 16 37.4 -0.2**
BFO Black Forest 10.50 315 Pn **Pn** **12 16 43.2 +0.1**
BFO Black Forest 10.50 315 P **Pn** **12 16 43.2 +0.1**
CLL Collm 10.84 338 *e*P Pn 12 16 55.0 +7.3
BRTR Keskin Array B 10.89 94 LR LR 12 21 55.1
comp=Z,269nm,18.2s,baz=280,slow=43
AKASG Malin Array Be 11.46 33 Pn **Pn** **12 16 55.8 -0.2**
comp=Z,0.4nm,0.3s,baz=222,slow=12,SNR=5.2
AKASG LR LR 12 22 00.1
comp=Z,189nm,18.6s,baz=227,slow=40
comp=Z,0.7nm,0.6s
AKBB Malin Array Si 11.46 33 *i*P **Pn** **12 16 56.1 0.0**
MNK Minsk 14.21 20 *i*P **Pn** **12 17 29.1 -4.6**
baz=207
MNK *i*PP **P** **12 17 37.0 -3.9**
MNK *i*PPP PPP 12 17 44.8
MNK *i*S **Sn** **12 20 06.6 -4.1**
MNK *i*SS **SnSn** **12 20 20.0 -3.2**
MNK *i*SSS SSS 12 20 32.2
MNK *i*LQ LQ 12 21 48.6
MNK *i*LR LR 12 22 39.9
MNK *i*LRM MLR 12 23 27.1
comp=E,408nm,18.6s
MNK *i*LRM MLR 12 23 27.1
comp=N,425nm,28.1s
MNK *i*LRM MLR 12 23 38.6
comp=Z,281nm,16.9s
MNK Minsk 14.21 20 *i*P **Pn** **12 17 29.1 -4.6**
MNK *i*S **Sn** **12 20 06.6 -4.1**
MNK MLR MLR
comp=E,408nm,19.0s
MNK MLR MLR
comp=N,425nm,28.0s
MNK MLR MLR
comp=Z,281nm,17.0s
NACGM Naroch 14.31 17 *e*P **Pn** **12 17 37.0 +2.0**
comp=Z,7.0nm,1.0s,baz=203
PABE Paberze 14.38 10 Pn **Pn** **12 17 38.9 +2.9**
KOPT Kop Dagi 15.98 88 Pn **Pn** **12 17 58.0 +0.4**
SHA1 Shidzhatmaz 17.20 75 *i*P **P** **12 18 14.7 +0.3**
KIV Kislovodsk 17.22 74 *e*P **Pn** **12 18 13.2 +0.2**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,24nm,14.0s
NEUR Neytrino 17.24 76 P **P** **12 18 16.0 +1.2**
VSU Vasula 17.65 13 *ce*P **P** **12 18 19.1 +0.1**
VSU pmax pmax
comp=Z,32nm,0.6s
OBN Obninsk 17.72 34 **P** **12 18 19.9 +0.2**
OBN Obninsk 17.72 34 *ce*P **P** **12 18 19.8 0.0**
OBN pmax pmax
comp=Z,50nm,1.7s
OBN MLR MLR
comp=Z,115nm,16.0s
ESDC Sonseca Array 17.91 272 LR LR 12 25 27.5
comp=Z,69nm,18.2s,baz=117,slow=38
MOS Moscow 18.58 34 *e*P **P** **12 18 29.0 -0.3**
MOS pmax pmax
comp=Z,31nm,0.8s
HFS Hagfors 19.06 351 P **P** **12 18 33.6 -1.0**
comp=Z,0.2nm,0.3s,baz=166,slow=13,SNR=4.7
comp=Z,2.7nm,0.6s
GNI Garni 19.14 85 P **P** **12 18 34.7 -1.1**
comp=Z,1.3nm,0.3s,baz=309,slow=13,SNR=3.9
comp=Z,6.0nm,0.4s
GNI Garni 19.14 85 P **Pn** **12 18 37.6 +0.9**
GNI lAmb lAmb 12 18 38.1
comp=Z,15nm,1.0s
GNI Garni 19.14 85 *ce*P **Pn** **12 18 38.0 +1.3**
GNI pmax pmax
comp=Z,23nm,1.7s
NB2 NORSAR Subarra 20.27 348 P Pn 12 18 50.2 +0.3
comp=Z,3.0nm,0.9s,baz=166,slow=11
NOA NORSAR Array B 20.27 348 P **P** **12 18 47.1 -0.8**
comp=Z,0.8nm,0.8s,baz=158,slow=9.4,SNR=4.5
NOA LR LR 12 28 02.9
comp=Z,112nm,18.3s,baz=165,slow=41
comp=Z,0.8nm,0.8s
EKA Eskdalemuir Ar 20.36 321 P **P** **12 18 48.5 -0.3**
comp=Z,0.6nm,0.5s,baz=126,slow=9.9,SNR=4.7
comp=Z,0.6nm,0.5s
FINES FINESS Array B 20.43 9 P **P** **12 18 48.8 -0.6**
comp=Z,9.0nm,0.8s,baz=188,slow=9.9,SNR=17
FINES LR LR 12 27 48.5
comp=Z,195nm,18.2s,baz=181,slow=40
comp=Z,9.0nm,0.8s
FINES FINESS Array B 20.43 9 P **P** **12 18 49.9 +0.4**
FINES FINESS Array B 20.43 9 P **P** **12 18 49.9 +0.4**
FIA1 FINESS Array S 20.43 9 P **P** **12 18 49.1 -0.4**
FIA1 lAmb lAmb 12 18 50.3
comp=Z,23nm,0.8s
MDT Midelt 21.01 254 P **P** **12 18 55.1 -1.0**
comp=Z,1.1nm,0.4s,baz=72,slow=12,SNR=2.2
comp=Z,1.1nm,0.4s
MD01 Midelt array s 21.09 254 P **P** **12 18 57.3 +0.2**
MD31 MD31 21.09 254 P **P** **12 18 55.7 -1.3**
BELG Belogornoye 21.97 51 P **P** **12 19 06.1 0.0**
comp=Z,35nm,0.9s,baz=205,slow=1.9,SNR=6.7
comp=Z,35nm,0.9s
BELG Belogornoye 21.97 51 *i*P **P** **12 19 06.1 0.0**
BELG pmax pmax
comp=Z,8.0nm,1.0s
KLMR Klimovskoe 22.97 25 *e*P **P** **12 19 14.9 -1.7**
KLMR pmax pmax
comp=Z,52nm,1.7s
KIRV Kirov 25.45 37 LR LR 12 30 19.1
comp=Z,144nm,18.5s,baz=259,slow=38
AKTO Aktyubinsk 27.98 58 LR LR 12 32 58.6
comp=Z,84nm,19.3s,baz=40,slow=40
ARTI Arti 29.14 46 P **P** **12 20 12.6 -0.6**
comp=Z,11nm,0.8s,baz=250,slow=6.4,SNR=13
ARTI LR LR 12 32 56.5
comp=Z,170nm,18.6s,baz=240,slow=38
comp=Z,11nm,0.8s
ARTI Arti 29.14 46 P **P** **12 20 12.5 -0.6**
ARTI Arti 29.14 46 *d*P **P** **12 20 12.7 -0.4**
ARTI S **S** **12 25 05.5 +1.4**
ARTI pmax pmax
comp=Z,11nm,0.8s
AB31 Akbulak array 29.19 61 P **P** **12 20 13.8 +0.2**
ABKAR Akbulak array 29.19 61 P **P** **12 20 13.8 +0.1**
SVE Sverdlovsk 30.45 46 *e*P **P** **12 20 25.1 +0.3**
SVE pmax pmax
comp=Z,14nm,0.8s
BORG Borgarnes 32.90 329 LR LR 12 36 48.7
comp=Z,54nm,18.6s,baz=291,slow=41
BORK Borovoye 35.67 53 P **P** **12 21 11.2 +0.9**
BORK lAmb lAmb 12 21 12.1
comp=Z,5.8nm,0.8s
BORK Borovoye 35.67 53 *ce*P **P** **12 21 11.0 +0.7**
BORK pmax pmax
comp=Z,8.0nm,0.8s
BVAR Borovoye Array 35.71 53 P **P** **12 21 10.9 +0.2**
comp=Z,5.1nm,0.8s,baz=282,slow=6.6,SNR=27
comp=Z,5.1nm,0.8s
GAR Garm 38.43 76 P **P** **12 21 34.2 +0.2**
GAR lAmb lAmb 12 21 35.6
comp=Z,14nm,1.5s
GAR PcP **PcP** **12 23 45.4 -1.8**
ARSB Arslanbob 39.58 72 P **P** **12 21 43.6 -0.1**
ARSB lAmb lAmb 12 22 15.8
comp=Z,3.7nm,0.5s
ARSB Arslanbob 39.58 72 P **P** **12 21 43.7 -0.1**
ARSB pmax pmax
comp=Z,4.0nm,0.5s
AAK Ala-Archa 40.25 69 LR LR 12 40 57.2
comp=Z,26nm,21.9s,baz=304,slow=40
AAK Ala-Archa 40.25 69 P **P** **12 21 49.6 +0.3**
AAK Ala-Archa 40.25 69 P **P** **12 21 49.6 +0.3**
AAK pmax pmax
comp=Z,2.0nm,0.9s
DBIC Dimbokro 40.85 219 P **P** **12 21 54.2 0.0**
DBIC Dimbokro 40.85 219 P **P** **12 21 54.2 0.0**
DBIC pmax pmax
comp=Z,5.0nm,1.1s
KURBB Kurchatov Arra 41.00 56 P **P** **12 21 54.3 -0.9**
comp=Z,0.6nm,0.5s,baz=284,slow=8.6,SNR=7.3
KURBB LR LR 12 42 19.5
comp=Z,81nm,18.7s,baz=156,slow=41
comp=Z,0.6nm,0.5s
KURK Kurchatov 41.04 56 P **P** **12 21 55.8 +0.3**
KURK lAmb lAmb 12 21 56.2
comp=Z,7.1nm,1.3s
KURK Kurchatov 41.04 56 *ce*P **P** **12 21 56.1 +0.6**
KURK pmax pmax
comp=Z,5.0nm,1.3s
NIL Nilore 42.74 82 P **P** **12 22 10.4 +0.8**
NIL lAmb lAmb 12 22 11.1
comp=Z,10nm,1.1s
NIL Nilore 42.74 82 P **P** **12 22 10.4 +0.8**
NIL pmax pmax
comp=Z,10.0nm,1.2s
MBAR Mbarara 43.07 163 LR LR 12 42 55.6
comp=Z,58nm,18.3s,baz=346,slow=40
MAKZ Makanchi 44.12 61 P **P** **12 22 20.9 +0.2**
MAKZ lAmb lAmb 12 22 21.7
comp=Z,5.6nm,1.0s
MAKZ Makanchi 44.12 61 P **P** **12 22 20.9 +0.2**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
ZAA0 Zalesovo Array 44.16 50 P **P** **12 22 20.9 +0.1**
ZAA0 lAmb lAmb 12 22 21.6
comp=Z,7.7nm,0.8s
ZALV Zalesovo Beam 44.16 50 P **P** **12 22 20.6 -0.2**
comp=Z,7.1nm,0.6s,baz=279,slow=8.5,SNR=34
ZALV LR LR 12 43 00.0
comp=Z,128nm,18.1s,baz=304,slow=39
comp=Z,7.1nm,0.6s
ZALV Zalesovo Beam 44.16 50 P **P** **12 22 20.9 +0.1**
MK31 Makanchi Array 44.34 61 *ce*P **P** **12 22 22.5 +0.2**
MKAR Makanchi Array 44.34 61 P **P** **12 22 22.2 -0.1**
comp=Z,7.7nm,0.6s,baz=285,slow=7.3,SNR=83
MKAR LR LR 12 43 12.6
comp=Z,71nm,18.7s,baz=275,slow=39
comp=Z,7.7nm,0.6s
MKAR Makanchi Array 44.34 61 P **P** **12 22 22.6 +0.3**
SFJD Kangerlussuaq 45.03 329 LR LR 12 43 57.0
comp=Z,54nm,18.7s,baz=131,slow=40
DGZ Jazzator, Alta 46.78 56 *i*P **P** **12 22 41.7 -0.1**
DGZ pmax pmax
comp=Z,6.0nm,0.9s
FRB Frobisher Bay 53.00 326 LR LR 12 48 47.2
comp=Z,42nm,18.1s,baz=100,slow=39
TLY Talaya 55.69 49 P **P** **12 23 49.7 +1.2**
TLY lAmb lAmb 12 23 50.5
comp=Z,4.3nm,0.9s
TLY Talaya 55.69 49 *ce*P **P** **12 23 50.5 +2.1**
TLY pmax pmax
comp=Z,9.0nm,1.7s
TIXI Tiksi 56.88 21 LR LR 12 51 41.9
comp=Z,87nm,18.6s,baz=43,slow=40
GTA Gaotai 59.01 63 *e*P **P** **12 24 11.8 -0.4**
GTA pP pP 12 24 14.8 -3.5
GTA pmax pmax
comp=Z,6.0nm,0.8s
SONM Songino Array 59.03 52 P **P** **12 24 12.4 +0.2**
comp=Z,3.1nm,0.9s,baz=290,slow=8.4,SNR=13
SONM LR LR 12 52 25.9
comp=Z,83nm,18.8s,baz=82,slow=39
comp=Z,3.1nm,0.9s
ULN Ulaanbaatar 59.40 51 *ce*P **P** **12 24 16.5 +1.7**
ULN pmax pmax
comp=Z,5.0nm,1.7s
YAK Yakutsk 62.67 30 LR LR 12 54 33.1
comp=Z,62nm,18.7s,baz=292,slow=39
LZDM Lanzhou Array 63.44 64 P **P** **12 24 42.0 -0.5**
comp=Z,1.4nm,0.4s,baz=296,slow=7.3,SNR=2.1
comp=Z,1.4nm,0.4s
LZH Lanzhou 63.47 64 *e*P **P** **12 24 42.0 -0.5**
LZH sP sP 12 24 50.5 -0.5
LZH pmax pmax
comp=Z,14nm,1.3s
HHC Hu-ho-hao-te 65.86 56 *e*P **P** **12 24 58.5 +0.6**
HHC pmax pmax
comp=Z,14nm,0.6s
HHC pmax pmax
comp=Z,97nm,5.4s
PZH PanZhiHua 67.44 74 P **P** **12 25 10.5 +2.2**
C23K Itkillik River 68.81 356 P **P** **12 25 16.3 +0.3**
CM31 Chiang Mai Arr 70.23 83 P **P** **12 25 24.3 -1.3**
CM31 lAmb lAmb 12 26 05.5
comp=Z,2.8nm,0.9s
CMAR Chiang Mai Arr 70.23 83 P **P** **12 25 23.6 -2.0**
comp=Z,0.4nm,0.5s,baz=310,slow=6.3,SNR=5.3
comp=Z,0.4nm,0.5s
CMAR Chiang Mai Arr 70.23 83 P **P** **12 25 24.4 -1.2**
CMAR Chiang Mai Arr 70.23 83 *i*P **P** **12 25 23.5 -2.0**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
BMAR Burnt Mountain 70.79 354 P **P** **12 25 29.5 +1.2**
ILAR Eielson Array 73.59 354 P **P** **12 25 48.8 +3.8**
comp=Z,0.4nm,0.7s,baz=12,slow=7.5,SNR=5.7
BWN Browne 74.37 355 P **P** **12 25 49.6 0.0**
ASAJ Asahikawa 80.70 38 LR LR 13 06 53.8
comp=Z,45nm,18.3s,baz=278,slow=39
MJAR Matsushiro Arr 84.26 45 LR LR 13 07 27.3
comp=Z,25nm,18.6s,baz=288,slow=38
PDAR Pinedale Array 84.43 325 P **P** **12 26 44.4 -0.7**
comp=Z,0.3nm,0.7s,baz=23,slow=5.5,SNR=1.9
comp=Z,0.3nm,0.7s
ANMO Albuquerque 89.24 318 LR LR 13 06 00.7
comp=Z,30nm,20.0s,baz=108,slow=35
NVAR Mina Array Bea 91.69 328 LR LR 13 12 49.9
comp=Z,60nm,19.9s,baz=93,slow=38
ASAR Alice Springs 123.23 93 PKP **PKPdf** **12 33 07.7 -1.6**
comp=Z,0.5nm,0.9s,baz=304,slow=1.7,SNR=5.1

IDC ***26*** *12:17:54.3±2.1, 1.°05N×125.°15E, h0km, mb3.3/3, mbtmp3.3/3, MS2.8/2, Error ellipse: s-maj=208.5km s-min=28.0km az=64.0*
DJA 26 12:17:56.9±1.8, 2.°N±7.°×12.°6E±.°, h13km±20km, M3.1/7, MLv3.1/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**128**	P	Pn	12 18 20.1	-0.4
GTOI	**Gorontalo**	**3.48**	**255**	P	Pn	12 18 52.0	+1.3
WRA	**Warramunga Arr**	**22.77**	**160**	P	P	12 22 57.5	-1.8
	0.4nm,0.5s,baz=335,slow=11,SNR=8.4						
	0.4nm,0.5s						
JOW	**Kunigami**	**25.18**	**4**	LR	LR	12 34 34.5	
	comp=Z,14nm,19.2s,baz=324,slow=39						
ASAR	**Alice Springs**	**26.14**	**164**	P	P	12 23 29.5	-1.5
	0.2nm,0.5s,baz=341,slow=9.3,SNR=6.9						
	0.2nm,0.5s						
MJAR	**Matsushiro Arr**	**36.48**	**16**	LR	LR	12 43 14.2	
	comp=Z,15nm,18.9s,baz=331,slow=41						
MKAR	**Makanchi Array**	**59.12**	**326**	P	P	12 27 55.1	-2.1
	1.0nm,1.1s,baz=133,slow=7.3,SNR=2.7						
	1.0nm,1.1s						

NEIC ***26*** *12:23:28.8±1.4, 20.°49S±0.°07×67.°40W±0.°10, h194km±4km, mb4.6/28, Error ellipse: s-maj=13.4km s-min=9.4km az=77.0*
SCB ***26*** *12:23:28.6±1.4, 20.°62S×67.°39W, h198km±11km, MB5.0, ML4.8/3, Error ellipse: s-maj=4.3km s-min=3.5km az=0.0*
VAO ***26*** *12:23:29.9±0.5, 20.°41S×67.°23W, h210km±4km, mb4.5*
IDC ***26*** *12:23:30.1±1.2, 20.°36S×67.°17W, h208km±9km, mb4.1/13, mbtmp4.6/18, Error ellipse: s-maj=14.1km s-min=10.4km az=63.0*
SJA ***26*** *12:23:30.1±0.6, 20.°60S×67.°67W, h208km±6km, ML4.5, MW4.2*
ISC 26 12:23:28.3±0.6, 20.°50S±0.°04×67.°37W±0.°04, h196km±5km, n188, σ1$36/201, mb4.4/26, 4C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.71**	**282**		**Pn**	**12 24 05.4**	**+1.3**
PB08				Sn	**Sn**	**12 24 32.9**	**+1.2**
PB08	**IPOC Station P**	**1.71**	**282**	Pg	**Pn**	**12 24 05.6**	**+1.5**
PB08	**IPOC Station P**	**1.71**	**282**	*i*P	**Pn**	**12 24 05.4**	**+1.3**
PB08				*i*S	**Sn**	**12 24 30.9**	**-0.8**
PB08				IAML		12 24 34.1	

comp=Z,794nm,0.5s
MOCB Mochara 1.78 115 Pg **Pn** **12 24 06.4 +1.6**
MOCB Sg **Sn** **12 24 33.3 +0.3**
MOCB lAML 12 24 35.4
comp=Z,1μm,0.4s
GO01 Chusmiza 1.91 295 **Pn** **12 24 07.4 +1.3**
GO01 Sn **Sn** **12 24 36.5 +1.1**
GO01 Chusmiza 1.91 295 Pg **Pn** **12 24 07.5 +1.4**
GO01 Chusmiza 1.91 295 *i*P **Pn** **12 24 07.3 +1.3**
GO01 lAML 12 24 41.5
comp=Z,598nm,0.8s
SOEO Opoqueri 1.98 346 Pg **Pn** **12 24 09.1 +2.2**
PB01 IPOC Station P 2.06 254 **Pn** **12 24 07.4 +0.2**
PB01 IPOC Station P 2.06 254 Pg **Pn** **12 24 07.6 +0.4**
PB01 Sg **Sn** **12 24 36.8 -0.7**
PB01 lAML 12 24 37.8
comp=Z,3μm,0.2s
PB01 IPOC Station P 2.06 254 *i*P **Pn** **12 24 06.9 -0.3**
PB01 *i*S **Sn** **12 24 35.0 -2.4**
PB01 lAML 12 24 38.2
comp=Z,1μm,0.2s
PB09 IPOC Station P 2.18 233 **Pn** **12 24 09.5 +1.0**
PB09 IPOC Station P 2.18 233 Pg **Pn** **12 24 09.4 +0.8**
PB09 IPOC Station P 2.18 233 *i*P **Pn** **12 24 08.4 -0.2**
PB09 *i*S **Sn** **12 24 37.3 -2.6**
PB09 lAML 12 24 41.6
comp=Z,1μm,0.3s
PB11 IPOC Station P 2.27 288 **Pn** **12 24 10.2 +0.6**
PB11 IPOC Station P 2.27 288 Pg **Pn** **12 24 10.1 +0.5**
PB11 IPOC Station P 2.27 288 *i*P **Pn** **12 24 10.2 +0.6**
PB11 *i*S **Sn** **12 24 39.8 -1.8**
PB11 lAML 12 24 44.3
comp=Z,1μm,0.8s
HMBC Humberstone 2.38 275 **Pn** **12 24 10.6 -0.1**
PB02 IPOC Station P 2.50 250 **Pn** **12 24 12.0 -0.1**
PB02 IPOC Station P 2.50 250 Pg **Pn** **12 24 12.3 +0.2**
PB02 Sg **Sn** **12 24 44.7 -1.5**
PB02 lAML 12 24 45.4
comp=Z,12μm,0.3s
PB02 IPOC Station P 2.50 250 *i*P **Pn** **12 24 11.8 -0.2**
PB02 *i*S **Sn** **12 24 42.4 -3.8**
PB02 lAML 12 24 50.3
comp=Z,10μm,0.3s
AF01 San Pedro de A 2.56 197 **Pn** **12 24 14.6 +1.7**
AF01 San Pedro de A 2.56 197 lAML 12 25 16.1
comp=Z,739nm,0.6s
TA02 Huaiquique 2.60 274 *i*P **Pn** **12 24 13.7 +0.6**
TA02 lAML 12 24 48.8
comp=Z,2μm,0.6s
PATCX Punta Patache 2.63 262 **Pn** **12 24 13.5 0.0**
PATCX Punta Patache 2.63 262 *i*P **Pn** **12 24 13.5 0.0**
PATCX lAML 12 24 51.5
comp=Z,2μm,0.4s
TA01 Diego Aracena 2.64 268 **Pn** **12 24 13.2 -0.3**
TA01 Diego Aracena 2.64 268 *i*P **Pn** **12 24 13.3 -0.3**
TA01 lAML 12 24 49.1
comp=Z,917nm,0.3s
PB07 IPOC Station P 2.65 242 **Pn** **12 24 13.8 0.0**
PB07 IPOC Station P 2.65 242 *i*P **Pn** **12 24 14.0 +0.2**
PB07 *i*S **Sn** **12 24 45.8 -3.6**
PB07 lAML 12 24 49.6
comp=Z,5μm,0.4s
AOVT TarijaAcel 2.69 113 Pg **Pn** **12 24 15.2 +0.9**
PB03 IPOC Station P 2.71 235 **Pn** **12 24 14.6 +0.1**
PB03 IPOC Station P 2.71 235 *i*P **Pn** **12 24 14.2 -0.3**
PB03 lAML 12 24 51.8
comp=Z,3μm,0.2s
PSGCX Pisagua 2.74 289 Pn **Pn** **12 24 14.8 0.0**
SOET ToroToro 2.79 32 Pg **Pn** **12 24 17.2 +1.6**
PB16 IPOC Station P 2.95 316 **Pn** **12 24 20.0 +2.2**
PB16 IPOC Station P 2.95 316 Pg **Pn** **12 24 19.8 +2.0**
PB16 IPOC Station P 2.95 316 *i*P **Pn** **12 24 19.4 +1.6**
PB16 lAML 12 25 04.1
comp=Z,251nm,0.5s
PB06 IPOC Station P 3.01 223 **Pn** **12 24 18.0 -0.1**
PB06 IPOC Station P 3.01 223 Pg **Pn** **12 24 18.6 +0.6**
PB06 IPOC Station P 3.01 223 *i*P **Pn** **12 24 17.9 -0.1**
PB06 *i*S **Sn** **12 24 53.3 -3.6**
PB06 lAML 12 24 56.3
comp=Z,1μm,0.3s
AOEA Aiquile 3.06 42 Pg **Pn** **12 24 20.1 +1.3**
PB12 IPOC Station P 3.36 303 **Pn** **12 24 21.9 -0.2**
PB12 IPOC Station P 3.36 303 *i*P **Pn** **12 24 22.0 -0.2**
PB12 *i*S **Sn** **12 25 02.4 -2.0**
PB12 lAML 12 25 05.9
comp=Z,501nm,0.5s
AP01 Chacalluta 3.52 306 Pn **Pn** **12 24 24.0 0.0**
AP01 Chacalluta 3.52 306 lAML 12 25 10.9
comp=Z,815nm,0.2s
PB05 IPOC Station P 3.53 228 **Pn** **12 24 23.8 -0.4**
PB05 IPOC Station P 3.53 228 *i*P **Pn** **12 24 23.9 -0.3**
PB05 lAML 12 25 08.1
comp=Z,972nm,0.4s
BBOJ La Paz, Jacaqu 3.59 347 Pg **Pn** **12 24 28.0 +2.6**
BBOE La Paz, Chanca 3.71 351 Pg **Pn** **12 24 29.7 +2.7**
BBOD La Paz, Gloria 4.01 343 Pg **Pn** **12 24 33.6 +2.9**
LPAZ La Paz 4.25 350 P **Pn** **12 24 36.1 +2.3**
comp=Z,15nm,0.4s,baz=169,slow=9.6,SNR=148
LPAZ S **Sn** **12 25 25.3 +0.3**
comp=Z,18nm,0.6s,baz=198,slow=3.2,SNR=3.7
LPAZ La Paz 4.25 350 Pg **Pn** **12 24 36.0 +2.3**
LPAZ La Paz 4.25 350 *e*P **Pn** **12 24 35.9 +2.2**
BBOB La Paz, Bander 4.39 350 Pg **Pn** **12 24 37.4 +2.0**
PB14 IPOC Station P 4.98 214 **Pn** **12 24 41.9 -0.7**
PB14 IPOC Station P 4.98 214 Pg **Pn** **12 24 41.4 -1.2**
GO02 Mina Guanaco 5.08 203 **Pn** **12 24 43.0 -0.9**
GO02 Mina Guanaco 5.08 203 Pg **Pn** **12 24 42.9 -1.0**
AC01 Pan de Azucar 6.36 207 **Pn** **12 24 58.1 -2.1**
AC02 Maricunga 6.51 194 Pn **Pn** **12 25 02.9 +0.3**
SIV San Ignacio 7.47 54 P **Pn** **12 25 13.7 -1.0**
comp=Z,113nm,0.5s,baz=244,slow=11,SNR=302
SIV S **Sn** **12 26 35.3 -4.0**
comp=Z,11nm,0.8s,baz=268,slow=18,SNR=3.6
GO03 Copiapo 7.54 200 **Pn** **12 25 13.2 -2.4**
AC05 El Transito 8.71 197 Pn **Pn** **12 25 29.0 -2.0**
LCO Las Campanas 9.00 199 Pn **Pn** **12 25 31.8 -3.0**
MURT Porto Murtinho 9.18 99 *e*P **Pn** **12 25 35.2 -1.8**
PTLB Pontes e Lacer 9.30 59 **Pn** **12 25 37.9 -0.7**
PTLB Pontes e Lacer 9.30 59 *e*P **Pn** **12 25 37.9 -0.7**
BDQN Bodoquena, MS 9.95 92 *e*P **Pn** **12 25 44.6 -2.4**
VILB Vilhena 10.16 44 **Pn** **12 25 51.2 +1.3**
VILB Vilhena 10.16 44 *e*P **Pn** **12 25 50.2 +0.3**
CPUP Villa Florida 10.89 124 P **Pn** **12 25 59.7 +0.6**
comp=Z,3.1nm,0.4s,baz=165,slow=14,SNR=24
CPUP Villa Florida 10.89 124 **Pn** **12 26 00.6 +1.5**
CPUP Villa Florida 10.89 124 *e*P **Pn** **12 25 58.7 -0.4**
AQDB Aquidauana 10.93 92 *e*P **Pn** **12 26 00.3 +0.5**
CFA Coronel Fontan 11.09 184 P **Pn** **12 26 00.7 -1.0**
comp=Z,1.3nm,0.3s,baz=18,slow=20,SNR=6.2
CFA S Sn 12 27 53.7 -12
comp=Z,2.0nm,0.3s,baz=102,slow=9.3,SNR=6.7
AMBA Amambai (Brazi 11.75 104 *e*P **Pn** **12 26 10.8 +0.6**
SALV Santo Antonio 11.99 70 *e*P **Pn** **12 26 12.8 -0.6**
PP1B Ponte de Pedra 12.15 78 *e*P **Pn** **12 26 15.3 0.0**
NNA Nana 12.42 311 P **P** **12 26 25.1 +2.1**
comp=Z,28nm,0.8s,baz=171,slow=13,SNR=8.2
PDRB Porto dos Gac 13.50 51 *e*P **Pn** **12 26 31.1 -1.2**
PSAL Palomas, Salto 13.71 142 *e*P **Pn** **12 26 35.7 +0.8**
CLDB Colider 14.67 51 *e*P **Pn** **12 26 47.2 +0.3**
PTGB Pitanga 14.74 109 *e*P **P** **12 26 49.0 +0.2**
ITAB Concordia 15.46 119 P **P** **12 26 57.6 +1.0**
ITAB lAmb lAmb 12 26 58.4
comp=Z,29nm,0.9s
ITAB Concordia 15.46 119 *e*P **Pn** **12 26 56.8 +0.5**
ARAG Araguaiana, MT 15.53 75 *e*P **Pn** **12 26 57.3 0.0**
CPSB Cacapava Do Su 15.97 131 *e*P **P** **12 27 01.4 -0.8**
ITRB Iturama 15.99 90 *e*P **P** **12 27 02.8 +0.2**
PLTB Pedras Altas 16.67 135 P **P** **12 27 10.4 +0.5**
PLTB lAmb lAmb 12 27 44.6
comp=Z,26nm,1.3s
PLTB Pedras Altas 16.67 135 *e*P **P** **12 27 09.7 -0.2**
FRTB Fartura 16.76 103 *e*P **P** **12 27 11.4 +0.4**
ATAH Atahualpa 17.05 320 P **Pn** **12 27 16.4 +0.5**
comp=Z,4.9nm,0.5s,baz=112,slow=5.4,SNR=2.9
TEFE Tefe 17.09 9 *e*P **P** **12 27 14.6 -0.1**
CNLB Canela 17.35 124 *e*P **P** **12 27 17.7 +0.3**
SNDB Serra Nova Dou 17.59 64 *e*P **P** **12 27 19.9 -0.3**
BB19B Bebedouro 17.63 95 *e*P **P** **12 27 20.5 0.0**
NPGB Novo Progresso 17.72 43 *e*P **P** **12 27 20.6 -1.0**
TRQA Tornquist 18.11 166 P **P** **12 27 25.7 +0.1**
TRQA lAmb lAmb 12 27 32.9
comp=Z,35nm,1.4s
IPMB Ipameri, GO 18.26 85 *e*P **P** **12 27 27.3 -0.2**

MACA	**Manacapuru-AM**	**18.42**	**22**			**P**		**12 27 28.3**	**-0.8**
MACA	**Manacapuru-AM**	**18.42**	**22**	*e*P		**P**		**12 27 28.0**	**-1.1**
RCLB	**Rio Claro- Sao**	**18.56**	**99**	*e*P		**P**		**12 27 29.7**	**-0.9**
SPB	**Sao Paulo**	**18.73**	**103**	*e*P		**P**		**12 27 31.6**	**-0.8**
PET01	**Itanhaem-SP**	**18.95**	**105**	*e*P		**P**		**12 27 35.0**	**+0.2**
BDFB	**Brasilia**	**19.02**	**78**	P		**P**		**12 27 35.0**	**-0.7**
	comp=Z,11nm,0.5s,baz=308,slow=8.6								
BDFB	**Brasilia**	**19.02**	**78**	P		**P**		**12 27 35.8**	**+0.1**
BDFB				IAmb		IAmb		12 27 36.1	
	comp=Z,13nm,0.7s								
VAO	**Valinhos**	**19.11**	**101**			**P**		**12 27 35.7**	**-0.9**
VAO	**Valinhos**	**19.11**	**101**	*e*P		**P**		**12 27 35.7**	**-0.9**
ITTB	**Itaituba**	**19.62**	**37**	*e*P		**P**		**12 27 40.9**	**-1.2**
PMNB	**Patos De Minas**	**19.82**	**88**	*e*P		**P**		**12 27 43.4**	**-0.9**
PLCA	**Paso Flores**	**20.35**	**187**	P		**P**		**12 27 52.2**	**+2.4**
	comp=Z,3.7nm,0.6s,baz=8.2,slow=9.1,SNR=6.6								
	comp=Z,3.7nm,0.6s								
PLCA	**Paso Flores**	**20.35**	**187**	*e*P		**P**		**12 27 51.8**	**+2.0**
PARB	**Paraibuna**	**20.37**	**102**	*e*P		**P**		**12 27 48.5**	**-1.6**
BSCB	**Bom Sucesso**	**21.13**	**95**	*e*P		**P**		**12 27 57.5**	**-0.7**
PRPB	**Parauapebas**	**22.20**	**53**	*e*P		**P**		**12 28 07.3**	**-1.6**
SMTB	**Santa Maria do**	**22.32**	**62**	*e*P		**P**		**12 28 09.2**	**-1.0**
VAS01	**Vassouras-RJ**	**22.34**	**99**	*e*P		**P**		**12 28 09.6**	**-0.7**
MAL2	**Monte Alegre,**	**22.43**	**37**			**P**		**12 28 10.3**	**-0.8**
DIAM	**Diamantina, MG**	**22.45**	**88**	*e*P		**P**		**12 28 09.8**	**-1.7**
JANB	**Januaria**	**22.60**	**80**	*e*P		**P**		**12 28 11.5**	**-1.2**
SDBA	**SAO DESIDERIO**	**22.97**	**73**	*e*P		**P**		**12 28 14.6**	**-1.5**
BOAV	**Boa Vista**	**23.72**	**17**	P		**P**		**12 28 22.2**	**-0.5**
BOAV				IAmb		IAmb		12 28 23.8	
	comp=Z,8.0nm,0.7s								
BOAV	**Boa Vista**	**23.72**	**17**	*e*P		**P**		**12 28 21.9**	**-0.8**
CAM01	**Campos-RJ**	**24.00**	**98**	*e*P		**P**		**12 28 24.4**	**-0.9**
SJMB	**Sao Joao De Ma**	**24.72**	**90**	*e*P		**P**		**12 28 30.5**	**-1.3**
BSFB	**Barra de Sao F**	**25.02**	**91**	*e*P		**P**		**12 28 33.6**	**-1.0**
EFI	**East Falkland**	**31.96**	**169**	P		**P**		**12 29 36.1**	**+0.4**
RCBR	**Riachuelo**	**33.83**	**69**			**P**		**12 29 52.0**	**-0.5**
RCBR				IAmb		IAmb		12 29 53.8	
	comp=Z,19nm,0.8s								
RCBR	**Riachuelo**	**33.83**	**69**	*e*P		**P**		**12 29 51.8**	**-0.6**
CRPR	**Cabo Rojo, PR**	**38.27**	**0**	P		**P**		**12 30 29.5**	**-0.3**
CRPR				IAmb		IAmb		12 30 30.9	
	comp=Z,20nm,0.8s								
DR12	**Loma Pena Alta**	**39.09**	**357**	P		**P**		**12 30 35.0**	**-1.7**
SWET	**Sewanee**	**58.14**	**342**	P		**P**		**12 33 01.1**	**-0.5**
WVT	**Waverly**	**59.56**	**341**	P		**P**		**12 33 10.3**	**-0.9**
T47A	**Sharon Grove**	**60.13**	**342**	IAmb		IAmb		12 33 30.6	
	comp=Z,28nm,1.5s								
VNA3	**Neumayer Olymp**	**60.56**	**162**	⇑P		**P**		**12 33 18.2**	**+0.5**
	comp=Z,4.5nm,0.8s								
TXAR	**Lajitas Array**	**60.66**	**324**	P		**P**		**12 33 19.4**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=144,slow=6.2,SNR=3.0								
VNA1	**Neumayer--Stat**	**60.75**	**161**	⇑P		**P**		**12 33 20.0**	**+1.1**
	comp=Z,7.6nm,1.0s								
WCI	**Wyandotte Cave**	**61.06**	**343**	P		**P**		**12 33 20.7**	**-0.7**
WCI				IAmb		IAmb		12 33 20.9	
	comp=Z,11nm,0.6s								
VNA2	**Neumayer--Watz**	**61.12**	**161**	⇑P		**P**		**12 33 22.2**	**+0.7**
	comp=Z,5.8nm,0.6s,baz=278,slow=6.6								
S44A	**Carbondale**	**61.44**	**340**	P		**P**		**12 33 23.5**	**-0.5**
S44A				IAmb		IAmb		12 33 23.5	
	comp=Z,5.8nm,0.5s								
FVM	**French Village**	**62.08**	**339**	P		**P**		**12 33 28.1**	**-0.1**
CCM	**Cathedral Cave**	**62.42**	**339**			**P**		**12 33 30.2**	**-0.2**
CCM				IAmb		IAmb		12 33 30.6	
	comp=Z,6.7nm,0.6s								
SNAA	**Sanae**	**62.76**	**161**	P		**P**		**12 33 32.9**	**+0.5**
	comp=Z,3.8nm,0.6s,baz=274,slow=7.6,SNR=18								
	comp=Z,3.8nm,0.6s								
SNAA	**Sanae**	**62.76**	**161**			**P**		**12 33 32.9**	**+0.5**
R40A	**Maddies Statio**	**62.98**	**338**	IAmb		IAmb		12 33 34.2	
	comp=Z,5.8nm,0.6s								
TROLL	**Troll, Antarti**	**64.47**	**161**	⇑P		**P**		**12 33 44.4**	**+0.7**
	comp=Z,322nm,0.6s								
DBIC	**Dimbokro**	**67.06**	**73**	P		**P**		**12 33 59.5**	**-1.5**
	comp=Z,16nm,0.7s,baz=261,slow=7.2,SNR=15								
	comp=Z,16nm,0.7s								
DBIC	**Dimbokro**	**67.06**	**73**	P		**P**		**12 34 00.1**	**-0.9**
QSPA	**South Pole Qui**	**69.69**	**180**	P		**P**		**12 34 20.8**	**+4.2**
	comp=Z,3.4nm,0.5s,baz=164,slow=3.1,SNR=51								
QSPA	**South Pole Qui**	**69.69**	**180**			**P**		**12 34 21.1**	**+4.5**
E28A	**Huff**	**73.24**	**337**	IAmb		IAmb		12 34 42.4	
	comp=Z,7.8nm,0.7s								
PDAR	**Pinedale Array**	**73.98**	**329**	P		**P**		**12 34 42.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=126,slow=4.9,SNR=5.0								
ULM	**Lac du Bonnet**	**74.81**	**341**	P		**P**		**12 34 46.1**	**-0.8**
	comp=Z,3.6nm,0.5s,baz=153,slow=2.3,SNR=4.1								
	comp=Z,3.6nm,0.5s								
TORD	**Torodi Ar. Bea**	**75.66**	**70**	P		**P**		**12 34 51.2**	**-1.3**
	comp=Z,30nm,0.9s,baz=279,slow=3.7,SNR=4.4								
	comp=Z,30nm,0.9s								
VNDA	**Vanda**	**78.08**	**190**	P		**P**		**12 35 07.2**	**+2.3**
	comp=Z,1.3nm,0.8s,baz=135,slow=2.9,SNR=1.9								
	comp=Z,1.3nm,0.8s								
VNDA	**Vanda**	**78.08**	**190**	P		**P**		**12 35 07.3**	**+2.3**
TSUM	**Tsumeb**	**78.94**	**106**	P		**P**		**12 35 11.1**	**+0.2**
	comp=Z,10nm,0.7s,baz=253,slow=6.5,SNR=19								
	comp=Z,10nm,0.7s								
TSUM	**Tsumeb**	**78.94**	**106**	P		**P**		**12 35 11.4**	**+0.5**
TSUM				IAmb		IAmb		12 35 12.2	
	comp=Z,13nm,0.8s								
MD01	**Midelt array s**	**79.92**	**49**	P		**P**		**12 35 16.6**	**+0.7**
MDT	**Midelt**	**80.00**	**49**	P		**P**		**12 35 15.9**	**-0.3**
	comp=Z,5.2nm,0.8s,baz=238,slow=6.8,SNR=6.5								
	comp=Z,5.2nm,0.8s								
BOSA	**Boshof**	**82.64**	**118**	P		**P**		**12 35 30.1**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=237,slow=3.8,SNR=6.5								
	comp=Z,4.4nm,0.8s								
TAM	**Tamanrasset**	**83.08**	**63**	P		**P**		**12 35 33.0**	**+0.4**
ESDC	**Sonseca Array**	**84.11**	**44**	P		**P**		**12 35 37.1**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=237,slow=5.1,SNR=8.7								
	comp=Z,2.5nm,1.0s								
LBTB	**Lobatse**	**84.12**	**114**	P		**P**		**12 35 38.4**	**+0.5**
MAW	**Mawson**	**84.87**	**163**	P		**P**		**12 35 41.5**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=209,slow=13,SNR=1.5								
	comp=Z,1.4nm,0.5s								
YKA	**Yellowknife Ar**	**90.73**	**340**	P		**P**		**12 36 08.8**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=142,slow=4.0,SNR=8.1								
	comp=Z,2.2nm,0.8s								
KEST	**Kesra**	**91.55**	**52**	P		**P**		**12 36 13.7**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=264,slow=9.3,SNR=3.7								
	comp=Z,2.5nm,0.6s								
AB31	**Akbulak array**	**129.44**	**42**	PKPdf		**PKiKP**		**12 42 14.8**	**+0.5**
ABKAR	**Akbulak array**	**129.44**	**42**	PKPdf		**PKiKP**		**12 42 14.5**	**+0.3**
ASAR	**Alice Springs**	**131.46**	**206**	PKP		**PKPdf**		**12 42 18.4**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=149,slow=2.0,SNR=28								
ASAR				SKPbc		**SKPbc**		**12 45 23.8**	**-1.4**
	comp=Z,1.9nm,1.0s,baz=149,slow=3.9,SNR=9.5								
ASAR	**Alice Springs**	**131.46**	**206**	PKPdf		**PKPdf**		**12 42 18.5**	**+0.2**
WR8	**Warramunga Arr**	**134.45**	**209**	PKPdf		**PKPdf**		**12 42 24.4**	**+0.5**
WRA	**Warramunga Arr**	**134.54**	**209**	PKP		**PKPdf**		**12 42 24.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=145,slow=1.8,SNR=21								
WRA				SKPbc		**SKPbc**		**12 45 34.5**	**-1.3**
	comp=Z,2.5nm,1.1s,baz=150,slow=3.0,SNR=8.2								
WRA	**Warramunga Arr**	**134.54**	**209**	PKPdf		**PKPdf**		**12 42 24.6**	**+0.5**
ZAA0	**Zalesovo Array**	**140.43**	**26**	PKPdf		**PKPdf**		**12 42 34.5**	**+0.6**
ZALV	**Zalesovo Beam**	**140.43**	**26**	PKhKP		PKPpre		12 42 28.1	
	comp=Z,2.1nm,0.6s,baz=326,slow=3.4,SNR=4.6								
ZALV				PKP		**PKPdf**		**12 42 33.7**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=290,slow=2.0,SNR=9.8								
ZALV	**Zalesovo Beam**	**140.43**	**26**	PKPdf		**PKPdf**		**12 42 34.6**	**+0.7**
MAKZ	**Makanchi**	**143.79**	**36**	PKPdf		PKPbc		12 42 38.7	+0.4
MKAR	**Makanchi Array**	**143.98**	**36**	PKP		PKPbc		12 42 38.9	0.0
	comp=Z,3.1nm,0.7s,baz=315,slow=3.0,SNR=26								
MKAR	**Makanchi Array**	**143.98**	**36**	PKPdf		PKPbc		12 42 39.5	+0.7
HILR	**Hailar Array B**	**150.45**	**351**	PKP		**PKPdf**		**12 42 51.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=354,slow=1.5,SNR=1.8								
HILR				PKPbc		**PKPbc**		**12 42 55.9**	**-0.7**
	comp=Z,3.0nm,0.4s,baz=351,slow=1.5,SNR=7.5								
USRK	**Ussuriysk Ar.**	**151.40**	**330**	PKPbc		PKPbc		**12 42 58.5**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=63,slow=3.3,SNR=4.1								
SONM	**Songino Array**	**152.26**	**9**	PKP		**PKPdf**		**12 42 55.2**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=3.8,slow=4.3,SNR=2.7								
SONM				PKPbc		**PKiKP**		**12 43 01.5**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=328,slow=2.2,SNR=12								
SONM				PKPab		**PKPab**		**12 43 10.4**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=353,slow=2.9,SNR=3.7								
HHC	**Hu-ho-hao-te**	**159.69**	**2**	*e*P		**PKPdf**		**12 42 59.3**	**-4.7**
CMAR	**Chiang Mai Arr**	**166.93**	**97**	PKP		**PKPdf**		**12 43 08.5**	**-2.8**
	comp=Z,1.0nm,0.3s,baz=268,slow=2.8,SNR=4.1								
CMAR				PKPab		**PKPab**		**12 44 16.0**	**0.0**
	comp=Z,0.7nm,0.3s,baz=255,slow=3.8,SNR=4.8								
NJ2	**Nanjing**	**167.22**	**335**	*e*P		**PKPdf**		**12 43 11.0**	**-0.1**
NJ2				pmax		pmax			
	comp=Z,5.0nm,0.7s								
PZH	**PanZhiHua**	**168.36**	**57**	PKP		**PKPdf**		**12 43 10.8**	**-1.5**

UPP ***26*** *12:29:16.0±0.1, 59.47N×14.89E, h0km, ML2.5, Suspected explosion*

DNK 26 12:29:16.3±2.7, 59.48N×14.88E, h0km, ML2.5(UPP), **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASKU	**Askersund**	**0.59**	**183**	P	Pg	12 29 27.0	-0.6
ASKU				S	Sg	12 29 34.6	-0.5
ASKU	**Askersund**	**0.59**	**183**	P	Pg	12 29 27.0	-0.6
ASKU				S	Sg	12 29 34.6	-0.5
ESKU	**Eskilstuna**	**0.81**	**107**	P	Pg	12 29 31.2	-0.7
ESKU				S	Sg	12 29 42.0	-0.4
ESKU	**Eskilstuna**	**0.81**	**107**	P	Pg	12 29 31.2	-0.7
ESKU				S	Sg	12 29 42.0	-0.4
UDD	**Uddeholm**	**0.89**	**314**	P	Pg	12 29 32.8	-0.5
UDD				S	Sg	12 29 44.7	-0.1
UDD	**Uddeholm**	**0.89**	**314**	P	Pg	12 29 32.8	-0.5
UDD				S	Sg	12 29 44.7	-0.1
NASU	**Vaermlandsnaes**	**1.03**	**238**	P	Pg	12 29 35.4	-0.7
NASU	**Vaermlandsnaes**	**1.03**	**238**	P	Pg	12 29 35.4	-0.7
FALU	**Falun**	**1.12**	**25**	P	Pg	12 29 37.4	-0.5
FALU	**Falun**	**1.12**	**25**	P	Pg	12 29 37.4	-0.5
BACU	**Backbrunna**	**1.19**	**71**	P	Pg	12 29 38.0	-1.1
BACU	**Backbrunna**	**1.19**	**71**	P	Pg	12 29 38.0	-1.1
FINU	**Finntorp**	**1.23**	**267**	P	Pg	12 29 38.8	-1.0
FINU	**Finntorp**	**1.23**	**267**	P	Pg	12 29 38.8	-1.0
LNKU	**Linkoeping**	**1.30**	**165**	P	Pg	12 29 39.9	-1.3
LNKU	**Linkoeping**	**1.30**	**165**	P	Pg	12 29 39.9	-1.3
FIBU	**Brunna**	**1.32**	**70**	P	Pg	12 29 40.5	-1.1
	baz=275						
FIBU	**Brunna**	**1.32**	**70**	P	Pg	12 29 40.5	-1.1
	baz=275						
VIKU	**Vikbolandet**	**1.36**	**135**	P	Pg	12 29 40.8	-1.5
VIKU	**Vikbolandet**	**1.36**	**135**	P	Pg	12 29 40.8	-1.5
OSTU	**Oestervaala**	**1.36**	**56**	P	Pg	12 29 41.3	-1.1
OSTU	**Oestervaala**	**1.36**	**56**	P	Pg	12 29 41.3	-1.1

IDC 26 12:29:23.0±26.0, 19.65S×178.74W, h602km±250km, mb2.7/3, mbtmp3.6/3, Error ellipse: s-maj=317.7km s-min=56.4km az=132.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.03**	**261**	P	P	12 36 39.0	-0.1
	0.3nm,0.3s,baz=96,slow=8.2,SNR=14						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**44.04**	**256**	P	P	12 36 39.0	-0.1
	0.9nm,0.6s,baz=94,slow=7.6,SNR=24						
ASAR				PcP	PcP	12 38 10.7	-0.3
	0.1nm,0.6s,baz=95,slow=4.1,SNR=1.1						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**87.65**	**13**	P	P	12 41 07.8	-0.1
	0.2nm,0.9s,baz=212,slow=6.4,SNR=1.6						
	0.2nm,0.9s						

DNK 26 12:30:00.1±1.7, 59.00N×12.89E, h0km, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STRU	**Stroemstad**	**0.89**	**273**	*i* P	Pg	12 30 16.2	-0.9
TJOU	**Tjoern**	**1.18**	**215**	*i* P	Pg	12 30 21.5	-1.1
BORU	**Boraas**	**1.37**	**183**	*i* P	Pg	12 30 23.2	-3.1
ONAU	**Onsala**	**1.69**	**198**	*i* P	Pb	12 30 31.4	-0.5
FABU	**Falkenberg**	**2.00**	**183**	*i* P	Pn	12 30 35.6	+0.5
DEL	**Delary**	**2.59**	**168**	*i* P	Pn	12 30 43.7	+0.5

RHSSO ***26*** *12:33:11.4±0.5, 43.21N×18.08E, h8km, ML2.5/3*
PDG ***26*** *12:33:13.1±0.4, 43.08N×18.17E, h1km±11km, ML2.4/13, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0*

ISC 26 12:33:11.0±1.0, 43.20N±0.03×18.08E±0.02, h8km±10km, n23, σ0.85/46, 5C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.37**	**95**	*e*Pg	**Pg**	**12 33 18.6**	**+0.3**
KLINJ				*e*Sg	**Sg**	**12 33 24.0**	**+0.8**
STON	**Ston**	**0.43**	**220**	*e*Pg	**Pg**	**12 33 19.1**	**-0.3**
STON				*e*Sg	**Sg**	**12 33 26.4**	**+1.3**
BRY	**Bratogost**	**0.45**	**132**	⇓*i*Pg	**Pg**	**12 33 19.4**	**-0.4**
BRY				*i* Sg	**Sg**	**12 33 24.3**	**-1.4**
TREB	**Trebinje**	**0.52**	**158**	⇑*i*Pg	**Pg**	**12 33 20.9**	**-0.2**
TREB				*e*Sg	**Sg**	**12 33 29.3**	**+1.3**
DBRK	**Dubrovnik**	**0.54**	**175**	*i* Pg	**Pg**	**12 33 21.8**	**+0.5**
DBRK				Sg	**Sb**	**12 33 31.0**	**+0.6**
UPM	**Unac-Piva**	**0.60**	**90**	⇓*i*Pg	**Pg**	**12 33 22.8**	**+0.1**
UPM				*i* Sg	**Sb**	**12 33 33.3**	**+0.8**
NKME	**Niksic**	**0.77**	**124**	*e*Pg	**Pg**	**12 33 25.3**	**-0.6**
NKME				*i* Sg	**Sg**	**12 33 35.4**	**-0.5**
HCY	**Herceg Novi**	**0.81**	**158**	*e*Pg	**Pg**	**12 33 25.7**	**-0.9**
HCY				*i* Sg	**Sg**	**12 33 36.3**	**-0.9**
CEME	**Cevo**	**0.90**	**137**	*e*Pg	**Pg**	**12 33 27.2**	**-1.1**
CEME				*i* Sg	**Sg**	**12 33 39.2**	**-0.7**
PLE	**Pljevlja**	**0.96**	**82**	⇑*i*Pg	**Pb**	**12 33 29.8**	**-0.2**
PLE				*i* Sg	**Sn**	**12 33 45.0**	**+0.2**
RUDO	**Rudo**	**1.03**	**66**	*e*Pg	**Pg**	**12 33 29.9**	**-0.8**
RUDO				*e*Sg	**Sg**	**12 33 43.3**	**-0.7**
BUM	**Brajici-Budva**	**1.08**	**146**	*e*Pg	**Pg**	**12 33 30.1**	**-1.6**
BUM				*i* Sg	**Sg**	**12 33 45.9**	**+0.1**
KOME	**Kolasin**	**1.11**	**108**	*e*Pg	**Pb**	**12 33 32.6**	**+0.2**
KOME				*e*Sg	**Sn**	**12 33 48.5**	**+0.2**
PDG	**Podgorica**	**1.16**	**131**	⇑*i*Pg	**Pg**	**12 33 31.8**	**-1.4**
PDG				*i* Sg	**Sb**	**12 33 49.3**	**+1.0**
HVAR	**Hvar**	**1.20**	**269**	*e*Pg	**Pg**	**12 33 32.8**	**-1.1**
HVAR				Sg	**Sg**	**12 33 49.5**	**+0.1**
DRME	**Dracevica, Mon**	**1.30**	**141**	*e*Pg	**Pn**	**12 33 34.4**	**-1.0**
DRME				*i* Sg	**Sb**	**12 33 52.0**	**-0.4**
IVA	**Berane**	**1.37**	**103**	⇑*i*Pg	**Pn**	**12 33 36.2**	**-0.2**
IVA				*i* Sg	**Sg**	**12 33 56.7**	**+1.7**
KIJV	**Kijevo**	**1.46**	**304**	*e*Pn	**Pb**	**12 33 38.6**	**+0.2**
KIJV				Sn	**Sg**	**12 33 58.6**	**+0.7**
PVY	**Plav**	**1.51**	**113**	⇑*i*Pg	**Pn**	**12 33 38.6**	**+0.2**
PVY				*i* Sg	**Sg**	**12 34 01.2**	**+1.8**
ULC	**Ulcinj**	**1.51**	**145**	*e*Pg	**Pn**	**12 33 39.0**	**+0.7**
ULC				*i* Sg	**Sg**	**12 33 59.9**	**+0.5**
BLY	**Banja Luka**	**1.68**	**338**	*e*Pn	**Pn**	**12 33 40.5**	**-0.1**
BLY				*e*Sn	**Sb**	**12 34 02.8**	**-0.5**
ZIRJ	**Zirje**	**1.83**	**285**	*e*Pn	**Pn**	**12 33 43.3**	**+0.6**
ZIRJ				Sn	**Sb**	**12 34 08.0**	**+0.2**
MORI	**Morici**	**1.85**	**292**	*i* Pn	**Pb**	**12 33 44.5**	**-0.6**
MORI				Sn	**Sb**	**12 34 09.1**	**+0.8**

SDD ***26*** *12:57:14.7±1.8, 18.45N×76.75W, h12km±999km, MD3.6, ML3.0, MW3.1*
NEIC ***26*** *12:57:14.3±0.3, 18.19N±0.10×76.75W±0.01, h10km±2km, ML3.1/6, Error ellipse: s-maj=16.5km s-min=3.1km az=179.0*
JSN ***26*** *12:57:16.1±0.3, 18.04N×76.82W, h22km±1km, MD3.4*
SSNC ***26*** *12:57:16.1±1.7, 18.10N×76.79W, h25km±11km, MD3.9, ML4.0*

ISC 26 12:57:13.9±1.1, 18.24N±0.06×76.68W±0.04, h24km±11km, n27, σ1.91/45, 1C-2D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**0.18**	**196**	⇓*i*P	**Pb**	**12 57 20.1**	**+0.8**
STH	**Stony Hill**	**0.21**	**217**	⇓*i*P	**Pb**	**12 57 19.6**	**-0.1**
HOJ	**Hope**	**0.25**	**196**	*i* P	**Pb**	**12 57 20.0**	**-0.2**
MTDJ	**Mount Denham**	**0.81**	**269**	*e*Pg	**Pb**	**12 57 28.7**	**-0.8**
MTDJ				*e*Sg	**Sb**	**12 57 38.6**	**-1.6**
MTDJ				IAML		12 57 43.4	
	comp=N,3μm,0.1s						
MTDJ	**Mount Denham**	**0.81**	**269**	Pg	**Pb**	**12 57 28.7**	**-0.8**
MTDJ				Sg	**Sb**	**12 57 38.5**	**-1.6**
MTDJ				IAML		12 57 41.0	
	comp=N,2μm,0.3s						
MTDJ	**Mount Denham**	**0.81**	**269**	⇑*i*P	**Pb**	**12 57 28.7**	**-0.8**
MTDJ				*i* S	**Sb**	**12 57 38.6**	**-1.6**
MTDJ	**Mount Denham**	**0.81**	**269**	*e*P	**Pb**	**12 57 28.6**	**-0.8**
MTDJ				*e*S	**Sb**	**12 57 38.3**	**-1.9**
MTDJ				IAML		12 57 41.1	
	comp=N,2μm,0.4s						
MTDJ				IAML		12 57 43.4	
	comp=N,3μm,0.2s						
CHIV	**Chivirico**	**1.74**	**8**	Pn	**Pb**	**12 57 45.4**	**+0.2**
CHIV				Sn	**Sb**	**12 58 08.1**	**+1.4**
CHIV	**Chivirico**	**1.74**	**8**	*e*P	**Pb**	**12 57 45.4**	**+0.2**
CHIV				*e*S	**Sb**	**12 58 06.6**	**-0.1**
LMGC	**Las Mercedes**	**1.84**	**350**	*e*P	**Pb**	**12 57 45.8**	**-1.1**
LMGC				*e*S	**Sb**	**12 58 07.0**	**-2.4**
MARVS	**Santiago de Cu**	**1.90**	**23**	*e*P	**Pb**	**12 57 48.2**	**+0.3**
MARVS				*e*S	**Sb**	**12 58 09.2**	**-1.9**
MARVS				*e*Sg	**Sn**	**12 58 11.5**	**+3.6**
RCC	**Rio Carpintero**	**1.97**	**28**	*e*P	**Pb**	**12 57 49.6**	**+0.4**
RCC				*e*S	**Sb**	**12 58 12.3**	**-1.0**
RCC				*e*Sg	**Sn**	**12 58 13.8**	**+4.0**
GTBY	**Guantanamo Bay**	**2.23**	**41**	*e*Pg	**Pb**	**12 57 52.5**	**-1.1**
GTBY				*e*Sg	**Sn**	**12 58 17.4**	**+1.1**
GTBY				IAML		12 58 25.3	
	comp=N,96nm,0.5s						
GTBY	**Guantanamo Bay**	**2.23**	**41**	Pn	**Pb**	**12 57 52.5**	**-1.1**
GTBY				Sn	**Sb**	**12 58 21.3**	**+0.4**
GTBY				IAML		12 58 25.3	
	comp=N,112nm,0.6s						
GTBY				IAML		12 58 25.5	
	comp=N,97nm,0.3s						
GTBY	**Guantanamo Bay**	**2.23**	**41**	*e*P	**Pb**	**12 57 53.7**	**0.0**
PINC	**Pinares de May**	**2.38**	**20**	*e*P	**Pb**	**12 57 54.9**	**-1.3**
QMBU	**Quimbuelo**	**2.62**	**42**	*e*P	**Pb**	**12 57 58.7**	**-1.6**
QMBU				*e*S	**Sn**	**12 58 25.6**	**-0.4**
HLGC	**Holguin**	**2.70**	**12**	*e*P	**Pb**	**12 58 00.5**	**-1.0**
NMDO	**Nuevo Mundo**	**2.80**	**34**	*e*Pg	**Pb**	**12 58 01.6**	**-1.8**
NMDO				*e*Sg	**Sb**	**12 58 34.9**	**-2.4**
NMDO				IAML		12 58 39.6	
	comp=N,44nm,0.5s						
NMDO	**Nuevo Mundo**	**2.80**	**34**	Pn	**Pb**	**12 58 01.2**	**-2.2**
NMDO				Sn	**Sn**	**12 58 30.3**	**-0.1**
NMDO	**Nuevo Mundo**	**2.80**	**34**	*e*P	**Pb**	**12 58 01.6**	**-1.8**
NMDO				*e*S	**Sn**	**12 58 30.2**	**-0.1**
MOAC	**Moa**	**2.90**	**34**	*e*P	**Pb**	**12 58 02.8**	**-2.2**
MASC	**Masc**	**3.00**	**50**	*e*Pg	**Pb**	**12 58 04.4**	**-2.4**
MASC				*e*Sg	**Sb**	**12 58 42.0**	**-1.0**
MASC				IAML		12 58 48.6	
	comp=N,20nm,1.6s						
MASC	**Masc**	**3.00**	**50**	*e*P	**Pb**	**12 58 04.2**	**-2.6**
CCCC	**Cccc**	**3.12**	**341**	*e*P	**Pn**	**12 58 03.4**	**+1.8**
CBCY	**The Bluff, Cay**	**3.27**	**298**	*e*P	**Pn**	**12 58 03.9**	**+0.2**
SOR	**Soroa**	**7.46**	**308**	Pn	**Pn**	**12 59 02.5**	**+1.2**

**IDC 26 13:00:37.7±245.0, 56.14N×39.01E, h0km, Error ellipse: s-maj=96.7km s-min=30.4km

OHR *i* Sg **Sn** **13 05 38.5 +3.5**
OHR *e*Lg Lg 13 05 39.6
comp=N,29µm,0.8s
OHR *e*Lg Lg 13 05 41.5
comp=E,22µm,0.6s
CEME Cevo 1.07 333 ⇑ *i*Pg **Pb** **13 05 21.6 +0.2**
CEME *i* Sg **Sn** **13 05 37.8 +2.2**
VLO Vlora 1.13 183 Pg **Pb** **13 05 23.3 +0.9**
VLO Sg **Sn** **13 05 39.5 +2.5**
VLO AML AML 13 05 43.2
comp=E,270nm,0.5s
VLO Vlora 1.13 183 P **Pb** **13 05 23.5 +1.2**
VLO S **Sn** **13 05 43.0 +6.0**
VLO Vlora 1.13 183 P **Pn** **13 05 20.5 -1.7**
VLO S **Sb** **13 05 34.4 -2.2**
VLO AML AML
VLO AML AML
VLO AML AML
HCY Herceg Novi 1.17 317 ⇑ *i*Pg **Pb** **13 05 23.8 +0.7**
HCY *i* Sg **Sn** **13 05 41.1 +3.1**
KOME Kolasin 1.25 358 *e*Pg **Pn** **13 05 24.2 +0.2**
KOME *e*Sg **Sb** **13 05 43.2 +2.9**
KOME Kolasin 1.25 358 ⇓ *i*Pg **Pb** **13 05 24.8 +0.2**
KOME *i* Sg **Sb** **13 05 44.3 +4.0**
NKME Niksic 1.26 339 ⇑ *i*Pg **Pb** **13 05 24.8 +0.2**
NKME *i* Sg **Sb** **13 05 44.6 +4.3**
BEY Berane 1.30 11 *e*Pg **Pn** **13 05 24.9 +0.3**
BEY *e*Sg **Sb** **13 05 42.4 +0.8**
IVA Berane 1.30 11 ⇑ *i*Pg **Pn** **13 05 25.2 +0.6**
IVA *i* Sg **Sb** **13 05 46.0 +4.4**
KBN Korca 1.34 136 Pg **Pb** **13 05 27.3 +1.3**
KBN Sg **Sb** **13 05 47.1 +4.3**
KBN Korca 1.34 136 P **Pb** **13 05 27.5 +1.5**
KBN S **Sb** **13 05 48.6 +5.8**
TREB Trebinje 1.44 321 ⇓ *i*Pg **Pb** **13 05 27.3 -0.4**
TREB *e*Sg **Sb** **13 05 47.0 +1.4**
SKO Skopje 1.45 74 *i*Pg **Pb** **13 05 27.7 -0.1**
SKO *i* Sg **Sb** **13 05 50.5 +4.6**
BRY Bratogost 1.51 330 ⇓ *i*Pg **Pb** **13 05 29.0 0.0**
BRY *i* Sg **Sb** **13 05 50.6 +2.8**
NEST Nestorio 1.63 136 P **Pb** **13 05 31.8 +0.8**
NEST S **Sb** **13 05 55.6 +4.6**
MESG Mesagne 1.64 233 P **Pn** **13 05 28.3 -0.9**
UPM Unac-Piva 1.68 343 ⇑ *i*Pn **Pb** **13 05 32.0 +0.1**
UPM *i* Sn **Sb** **13 05 54.2 +1.6**
SJES Sjenica 1.69 10 *e*Pg **Pb** **13 05 32.9 +0.9**
SJES *e*Sg **Sb** **13 05 55.5 +2.6**
KLINJ Klinje 1.73 335 ⇑ *i*Pn **Pb** **13 05 32.1 -0.6**
KLINJ *e*Sn **Sb** **13 05 54.8 +0.7**
PLE Pljevlja 1.74 356 *e*Pg **Pb** **13 05 33.9 +1.1**
PLE *e*Sg **Sb** **13 05 57.9 +3.6**
PLE Pljevlja 1.74 356 ⇑ *i*Pn **Pb** **13 05 32.8 0.0**
PLE *i* Sn **Sb** **13 05 55.3 +1.0**
PENT Pentalofos 1.84 139 P **Pb** **13 05 35.1 +0.6**
PENT S **Sb** **13 06 01.3 +4.2**
STON Ston 1.88 313 P **Pn** **13 05 32.7 +0.1**
STON AML AML
comp=E,9875µm,1.0s
STON AML AML
comp=N,9710µm,0.4s
KEK Kerkira 1.89 175 P **Pb** **13 05 36.6 +1.2**
KEK S **Sb** **13 06 02.3 +3.8**
KEK Kerkira 1.89 175 Pg **Pb** **13 05 36.8 +1.4**
SELS Selova 1.99 35 *e*Pg **Pb** **13 05 36.2 -0.8**
SELS *e*Sn **Sb** **13 06 02.6 +1.3**
IVAS Ivanjica 2.02 12 *e*Pn **Pn** **13 05 36.3 +1.7**
IVAS *e*Sn **Sb** **13 06 03.3 +0.8**
RUDO Rudo 2.02 356 *e*Pn **Pn** **13 05 36.2 +1.7**
RUDO *e*Sn **Sb** **13 06 02.4 0.0**
TAR1 Taranto 2.03 239 P **Pn** **13 05 33.3 -1.3**
TAR1 AML AML
comp=E,14600µm,1.0s
TAR1 AML AML
comp=N,14700µm,0.7s
TAR1 AML AML
comp=E,14600µm,1.0s
NOCI Noci 2.06 248 P **Pn** **13 05 34.1 -0.8**
NOCI AML AML
comp=N,10285µm,0.9s
NOCI AML AML
comp=N,10285µm,1.1s
NOCI AML AML
comp=E,10800µm,0.4s
KZN Kozani 2.11 127 P **Pb** **13 05 38.3 -0.8**
KZN S **Sb** **13 06 07.7 +2.9**
IGT Igoumenitsa 2.14 164 P **Pb** **13 05 37.6 -2.0**
IGT S **Sb** **13 06 08.6 +2.8**
JAN Janina 2.17 153 P **Pb** **13 05 38.4 -1.8**
JAN S **Sb** **13 06 08.6 +2.0**
LFKM Lefkimmi 2.18 170 P **Pb** **13 05 38.3 -2.0**
LFKM S **Sb** **13 06 10.0 +3.2**
GOCS Kraljevo Serbi 2.19 26 *e*Pn **Pn** **13 05 39.0 +2.2**
GOCS *e*Sn **Sb** **13 06 08.1 +0.9**
BBLS Lazi&#263i 2.27 357 *e*Pn **Pb** **13 05 40.3 -1.6**
BBLS *e*Sn **Sb** **13 06 10.3 +0.7**
VAY Valandovo 2.27 96 *i* Pn **Pb** **13 05 40.2 -1.7**
VAY *i* Sn **Sb** **13 06 08.6 -0.9**
VAY *e*Lg Lg 13 06 12.7
comp=E,4µm,0.8s
VAY *e*Lg Lg 13 06 14.9
comp=N,6µm,0.8s
LTRZ Laterza 2.30 245 ⇓P **Pn** **13 05 37.4 -0.9**
LTRZ AML AML
comp=E,7025µm,0.8s
LTRZ AML AML
comp=N,7840µm,1.2s
LTRZ AML AML
comp=N,7840µm,0.8s
AMUR Altamura 2.34 254 ⇓P **Pn** **13 05 38.2 -0.6**
AMUR AML AML
comp=E,7885µm,0.7s
AMUR AML AML
comp=E,7885µm,1.3s
AMUR AML AML
comp=N,4250µm,0.6s
BOSS Bosilegrad 2.35 67 *e*Pg **Pn** **13 05 40.9 +2.0**
BOSS *e*Sn **Sn** **13 06 08.5 +1.4**
MATE Matera 2.36 247 P **Pn** **13 05 38.1 -1.0**
MATE AML AML
comp=N,6915µm,1.1s
MATE AML AML
comp=N,6915µm,0.9s
MATE AML AML
comp=E,6895µm,0.7s
PRMD Pramanda 2.37 150 P **Pb** **13 05 41.9 -1.7**
PRMD S **Sb** **13 06 14.4 +2.0**
GRUS Gruza 2.44 20 *e*Pn **Pn** **13 05 42.5 +2.3**
DIVS Divibare 2.52 7 *e*Pn **Pn** **13 05 42.9 +1.5**
DIVS *e*Sn **Sb** **13 06 17.7 +1.0**
KNT Kendrikon 2.54 99 P **Pn** **13 05 43.3 +1.7**
KNT S **Sb** **13 06 17.7 +0.4**
KNT Kendrikon 2.54 99 *i* Pn **Pn** **13 05 43.5 +1.9**
MIGL Miglionico 2.56 248 P **Pn** **13 05 41.2 -0.7**
MIGL AML AML
comp=N,34750µm,0.9s
MIGL AML AML
comp=E,31650µm,1.1s
MIGL AML AML
comp=N,34750µm,1.1s
BOVS Bovan 2.58 37 ⇑P **Pn** **13 05 43.9 +1.9**
BOVS Bovan 2.58 37 *e*Pn **Pn** **13 05 43.7 +1.6**
BOVS *e*Sn **Sn** **13 06 14.4 +1.7**
CRAC Craco 2.67 244 P **Pn** **13 05 42.5 -0.9**
CRAC AML AML
comp=E,18950µm,1.1s
CRAC AML AML
comp=N,12275µm,1.2s
CRAC AML AML
comp=E,18950µm,0.9s
CRAC AML AML
comp=N,12275µm,0.8s
LIT Litokhoron 2.67 123 P **Pn** **13 05 45.1 +1.7**
LIT S **Sb** **13 06 21.8 +0.7**
LIT Litokhoron 2.67 123 P **Pn** **13 05 44.7 +1.3**
LIT Litokhoron 2.67 123 P **Pn** **13 05 44.7 +1.3**
KKB Krupnik 2.68 84 P **Pn** **13 05 45.7 +2.2**
KKB S **Sn** **13 06 15.0 -0.3**
KKB Krupnik 2.68 84 *i* Pn **Pn** **13 05 45.6 +2.2**
TRUS Trudelj 2.70 13 *e*Pn **Pn** **13 05 45.7 +2.0**
THE Thessaloniki 2.74 109 P **Pn** **13 05 45.8 +1.5**
THE Thessaloniki 2.74 109 *i* Pn **Pn** **13 05 45.9 +1.5**
THL Klokotos Trika 2.75 137 P **Pn** **13 05 46.4 +1.9**

TYRN Tyrnavos 2.77 132 P **Pn** **13 05 47.0 +2.4**
TYRN S **Sb** **13 06 24.4 +0.7**
ZAPS Zavoj 2.82 53 *e*Pn **Pn** **13 05 47.7 +2.2**
ACER Acerenza 2.85 255 **Pn** **13 05 45.8 -0.1**
SGRT San Giovanni R 2.87 274 **Pn** **13 05 45.6 -0.5**
VTS Vitosha 2.91 68 P **Pn** **13 05 48.9 +2.1**
VTS S **Sn** **13 06 21.6 +0.3**
SVIS Svilajnac 2.93 24 *e*Pn **Pn** **13 05 49.3 +2.4**
TEKS Tekeris 2.95 359 *e*Pn **Pn** **13 05 48.3 +1.1**
TEKS *e*Sn **Sb** **13 06 27.0 -2.1**
SOH Sokhos 2.96 104 *i* Pn **Pn** **13 05 49.5 +2.1**
ZAGS Zajecar 2.96 41 *e*Pn **Pn** **13 05 49.5 +2.2**
ZAGS *e*Sn **Sn** **13 06 25.9 +3.7**
PLNA Plana 3.00 72 P **Pn** **13 05 50.6 +2.5**
PLNA S **Sn** **13 06 23.3 -0.2**
SOF Sofia 3.03 68 P **Pn** **13 05 51.3 +3.0**
BLSH Balsha 3.03 64 P **Pn** **13 05 51.0 +2.6**
BLSH S **Sn** **13 06 25.0 +1.0**
SRS Serrai 3.07 98 *i* Pn **Pn** **13 05 51.0 +2.2**
BORS2 Bor- Borsko je 3.08 35 *e*Pn **Pn** **13 05 49.7 +0.8**
MMB Musomishta 3.14 90 P **Pn** **13 05 52.1 +2.3**
MMB S **Sn** **13 06 26.0 -0.7**
MMB Musomishta 3.14 90 *i* Pn **Pn** **13 05 52.4 +2.5**
AVAS Avala Beograd 3.17 12 *e*Pn **Pn** **13 05 51.8 +1.5**
AVAS *e*Sn **Sn** **13 06 29.6 +2.1**
KUBS Kucevo 3.21 28 *e*Pn **Pn** **13 05 51.1 +0.3**
KUBS *e*Sn **Sn** **13 06 29.5 +1.1**
TIP Timpagrande 3.23 223 **Pn** **13 05 50.3 -0.9**
TIP Timpagrande 3.23 223 ⇓P **Pn** **13 05 50.0 -1.1**
TIP Timpagrande 3.23 223 P **Pn** **13 05 50.3 -0.9**
CUC Castrocucco 3.27 242 **Pn** **13 05 51.4 -0.2**
MDVR Moldovita 3.55 26 ⇑P **Pn** **13 05 57.1 +1.6**
FRGS Fruska Gora 3.56 3 *e*Pn **Pn** **13 05 56.7 +1.0**
BLY Banja Luka 3.60 332 ⇑ *i*Pn **Pn** **13 05 57.6 +1.5**
BLY *e*Sn **Sn** **13 06 40.4 +2.4**
PUNG Punghina 3.64 42 ⇑P **Pn** **13 05 58.8 +2.1**
VRSS Vrsac 3.75 19 *e*Pn **Pn** **13 05 59.3 +1.1**
DJES Djerdap 3.75 34 ⇓P **Pn** **13 06 00.2 +2.0**
DJES Djerdap 3.75 34 *e*Pn **Pn** **13 05 59.9 +1.7**
DJES *e*Sn **Sn** **13 06 43.6 +1.8**
PAOL Paolisi 3.81 263 **Pn** **13 05 59.6 +0.5**
HERR Herculane 3.89 31 ⇑P **Pn** **13 06 02.0 +1.9**
SRE Strehaia 4.06 40 ⇓P **Pn** **13 06 04.8 +2.4**
SRE Strehaia 4.06 40 P **Pn** **13 06 04.8 +2.4**
PLVB Pleven 4.14 63 ⇑P **Pn** **13 06 06.2 +2.7**
VLAD Vladila 4.29 54 ⇓P **Pn** **13 06 08.9 +3.3**
CEL Celeste 4.37 221 **Pn** **13 06 05.6 -1.2**
CEL Celeste 4.37 221 P **Pn** **13 06 05.5 -1.2**
GZR Gura Zlata 4.46 31 ⇓P **Pn** **13 06 10.0 +2.0**
GZR Gura Zlata 4.46 31 P **Pn** **13 06 09.9 +2.0**
RDO Rodhopi 4.51 94 **Pn** **13 06 10.9 +2.2**
AQU L'Aquila 4.66 281 *e*Pn **Pn** **13 06 11.1 +0.3**
AQU *e*Sn **Sn** **13 07 03.9 -0.3**
AQU L'Aquila 4.66 281 P **Pn** **13 06 11.0 +0.3**
MORH Mrgy, Hungar 4.67 352 *e*Pn **Pn** **13 06 12.9 +2.2**
MORH *e*Sn **Sn** **13 07 05.6 +1.4**
MORH Mrgy, Hungar 4.67 352 P **Pn** **13 06 12.4 +1.7**
CAMP Campotosto 4.68 284 **Pn** **13 06 11.4 +0.3**
ITM Ithomi 4.77 157 **Pn** **13 06 13.0 +0.7**
GUMA Gualdo di Mace 4.85 290 **Pn** **13 06 13.6 +0.3**
COPA Copaceanca 4.87 57 ⇑P **Pn** **13 06 16.7 +3.2**
ELND Elena 4.87 72 ⇑P **Pn** **13 06 16.3 +2.8**
SIRR Siria 4.91 17 ⇑P **Pn** **13 06 16.4 +2.2**
LOT Lotru 4.91 37 ⇓P **Pn** **13 06 16.2 +1.9**
HUMR Humele 4.93 52 ⇓P **Pn** **13 06 17.0 +2.6**
NRCA Norcia 4.95 287 **Pn** **13 06 15.2 +0.5**
BOJS Bojanci 5.01 323 *i* Pn **Pn** **13 06 16.5 +1.0**
BOJS IAML 13 07 45.7
comp=Z,1µm,1.3s
FDMO Fiordimonte 5.02 289 **Pn** **13 06 15.9 +0.2**
STFAR Stefanesti-Arg 5.12 49 ⇑P **Pn** **13 06 20.6 +3.6**
CRES Cresnjevec Ost 5.17 326 ⇓ *i*Pn **Pn** **13 06 18.6 +0.9**
ARR Arges 5.27 43 ⇓P **Pn** **13 06 22.2 +3.1**
BEHE Becsehely 5.27 338 **Pn** **13 06 19.9 +0.8**
BEHE Becsehely 5.27 338 ⇑ *i*Pn **Pn** **13 06 20.5 +1.4**
BEHE *e*Sn **Sn** **13 07 20.1 +0.9**
CESX Cesi 5.30 283 **Pn** **13 06 19.7 +0.3**
TNR Turnu Rosu 5.30 39 ⇓P **Pn** **13 06 22.6 +3.0**
TNR Turnu Rosu 5.30 39 P **Pn** **13 06 22.5 +3.0**
SGRR Singureni 5.39 59 ⇓P **Pn** **13 06 24.1 +3.5**
MTUR Matau 5.40 46 ⇑P **Pn** **13 06 24.1 +3.1**
MTUR Matau 5.40 46 P **Pn** **13 06 24.1 +3.1**
EZN Ezine 5.43 107 ⇑P **Pn** **13 06 24.3 +3.0**
EZN Ezine 5.43 107 P **Pn** **13 06 24.3 +3.0**
RAZG Razgrad 5.49 67 ⇓P **Pn** **13 06 24.4 +2.3**
VOIR 5.53 44 ⇑P **Pn** **13 06 25.9 +3.1**
VOIR 5.53 44 P **Pn** **13 06 25.8 +3.1**
VOIR 5.53 44 P **Pn** **13 06 25.4 +2.6**
comp=Z,0.8nmcomp=Z,2µmcomp=Z,124nm,0.5s
DRGR 5.66 22 ⇓P **Pn** **13 06 26.2 +1.7**
DRGR 5.66 22 P **Pn** **13 06 26.2 +1.7**
GROS Grobnik 5.68 330 *i* Pn **Pn** **13 06 25.2 +0.5**
GBAS Gorenja Brezov 5.71 321 *i* Pn **Pn** **13 06 25.6 +0.5**
GBAS *e*Sn **Sn** **13 07 29.1 -0.9**
GBAS *e* 13 08 08.2
GBAS IAML 13 08 40.7
comp=Z,2µm,2.8s
VAE Valguarnera 5.73 226 Pn **Pn** **13 06 24.1 -1.3**
comp=Z,12nm,0.4s,baz=58,slow=6.6,SNR=9.4
VAE LR LR 13 09 13.0
comp=Z,885nm,18.7s,baz=3.5,slow=45
SULR 5.78 56 ⇑P **Pn** **13 06 29.5 +3.4**
TRI Trieste 5.88 316 **Pn** **13 06 26.4 -1.1**
TRI Trieste 5.88 316 P **Pn** **13 06 26.4 -1.1**
CBBR Cluj-Babes-Bol 5.91 28 ⇓P **Pn** **13 06 31.4 +3.5**
RAFF Raffo Rosso 5.94 224 **Pn** **13 06 27.1 -1.3**
SOKA Soboth 6.04 329 *e*Pn **Pn** **13 06 30.4 +0.7**
comp=Z,11nm,0.2s,SNR=46
LEHL Lehliu 6.04 59 ⇑P **Pn** **13 06 33.6 +3.9**
VOJS Vojsko 6.05 319 ⇓ *i*Pn **Pn** **13 06 30.0 +0.2**
MLR Muntele Rosu 6.05 48 Pn **Pn** **13 06 32.6 +2.7**
comp=Z,100nm,0.5s,baz=186,slow=9.2,SNR=100
MLR Sn **Sn** **13 07 36.8 -1.8**
baz=246,slow=13
MLR Lg Lg 13 08 13.2
comp=Z,1.8nm,0.3s,baz=287,slow=19,SNR=1.2
MLR LR LR 13 09 21.4
comp=Z,2µm,19.9s,baz=209,slow=43
MLR Muntele Rosu 6.05 48 ⇑P **Pn** **13 06 33.1 +3.2**
MLR Muntele Rosu 6.05 48 P **Pn** **13 06 33.1 +3.2**
MLR Muntele Rosu 6.05 48 P **Pn** **13 06 32.6 +2.7**
comp=Z,0.8nmcomp=Z,1µmcomp=Z,145nm,0.6s
DOPR Dopca 6.07 42 ⇓P **Pn** **13 06 33.5 +3.5**
OBKA Obir 6.10 325 *i* Pn **Pn** **13 06 31.5 +1.0**
comp=Z,29nm,0.2s,SNR=19
ISR Istrita 6.18 53 ⇑P **Pn** **13 06 34.7 +3.0**
ISR Istrita 6.18 53 P **Pn** **13 06 34.7 +3.0**
ISR Istrita 6.18 53 P **Pn** **13 06 34.6 +2.9**
comp=Z,1.6nmcomp=Z,3µmcomp=Z,281nm,0.8s
NEHR Nehoiu 6.21 50 ⇑P **Pn** **13 06 35.4 +3.4**
PSZ Piszkesteto 6.33 2 ⇓P **Pn** **13 06 33.4 -0.2**
PSZ Piszkesteto 6.33 2 ⇑P **Pn** **13 06 35.1 +1.4**
PSZ Piszkesteto 6.33 2 *e*P **Pn** **13 06 35.5 +1.9**
PSZ Piszkesteto 6.33 2 P **Pn** **13 06 35.0 +1.4**
ARSA Arzberg 6.35 334 **Pn** **13 06 32.9 -1.0**
ARSA Arzberg 6.35 334 *e*Pn **Pn** **13 06 35.2 +1.2**
comp=Z,17nm,0.5s,SNR=18
OZUR 6.36 43 ⇑P **Pn** **13 06 37.3 +3.2**
COVR Voineasa-Covas 6.41 46 ⇑P **Pn** **13 06 38.8 +4.0**
APE Apeiranthos 6.46 132 *i* P **Pn** **13 06 36.1 +0.6**
BISRR Bisoca 6.52 50 P **Pn** **13 06 39.2 +2.9**
comp=Z,2.1nmcomp=Z,4µmcomp=Z,382nm,0.8s
RONA Rosalia, Austr 6.53 340 *e*Pn **Pn** **13 06 38.1 +1.7**
comp=Z,2.4nm,0.2s,SNR=7.9
ICOR Ion Corvin 6.55 65 ⇓P **Pn** **13 06 39.7 +3.0**
BAND Balkesir-Ban 6.57 98 ⇑P **Pn** **13 06 39.9 +2.9**
MYKA Terra Mystica 6.59 322 *i* Pn **Pn** **13 06 37.7 +0.4**
comp=Z,25nm,0.5s,SNR=16
MYKA *e*Sn **Sn** **13 07 49.8 -2.1**
comp=Z,40nm,0.8s
PLOR Plostina 6.66 48 ⇓P **Pn** **13 06 41.7 +3.4**
PLOR Plostina 6.66 48 P **Pn** **13 06 41.6 +3.4**
VRI Vrincioaia 6.71 48 ⇑P **Pn** **13 06 42.0 +3.1**
VRI Vrincioaia 6.71 48 P **Pn** **13 06 42.0 +3.1**
VRI Vrincioaia 6.71 48 P **Pn** **13 06 42.4 +3.5**
comp=Z,0.6nmcomp=Z,2µmcomp=Z,148nm,0.6s
ONER Baraj Valea Uz 6.83 44 ⇑P **Pn** **13 06 43.7 +3.2**
CONA Conrad Observa 6.86 339 *i* Pn **Pn** **13 06 41.9 +0.9**
comp=Z,0.5nm,0.2s
KECS Kecovo 6.92 5 *e*P **Pn** **13 06 44.4 +2.7**
KECS Kecovo 6.92 5 *e*PN **Pn** **13 06 44.4 +2.7**

KECS *e*PG **Pb** **13 07 02.4 +1.4**
KECS *e*SN Sn 13 07 39.5 -20
MODS Modra-Piesok 6.97 347 *e*P **Pn** **13 06 46.5 +4.1**
MODS Modra-Piesok 6.97 347 *e*PN **Pn** **13 06 46.5 +4.1**
MODS *e*PG Pb 13 07 15.7 +14
MODS *e*SN Sn 13 07 42.9 -18
MODS *e*SG Sb 13 08 34.5 +10
BERU Beregovo 6.99 17 P **Pn** **13 06 44.6 +2.0**
KBA Koelnbreinsper 7.07 323 *i* Pn **Pn** **13 06 44.5 +0.6**
comp=Z,24nm,0.4s,SNR=26
TESR Tescani 7.08 44 ⇑P **Pn** **13 06 46.9 +3.0**
TESR Tescani 7.08 44 P **Pn** **13 06 47.0 +3.0**
comp=Z,0.4nmcomp=Z,664nmcomp=Z,48nm,0.9s
TIRR Tirgusor 7.08 63 **Pn** **13 06 44.4 +0.5**
TIRR Tirgusor 7.08 63 ⇓P **Pn** **13 06 46.6 +2.7**
TIRR Tirgusor 7.08 63 P **Pn** **13 06 46.6 +2.7**
BRIU Brid 7.17 19 P **Pn** **13 06 48.0 +2.9**
CFR Carcaliu 7.19 57 ⇑P **Pn** **13 06 48.6 +3.2**
CFR Carcaliu 7.19 57 P **Pn** **13 06 48.6 +3.2**
MUKU Mukachevo 7.20 17 P **Pn** **13 06 48.4 +2.8**
GHRR 7.21 49 P **Pn** **13 06 48.9 +3.2**
ABTA Abfaltersbach 7.23 318 *i* Pn **Pn** **13 06 46.1 +0.1**
comp=Z,6.4nm,0.2s,SNR=13
ABTA *e*Sn **Sn** **13 08 07.4 0.0**
comp=Z,100nm,0.6s
TPGR Topolog 7.24 60 ⇓P **Pn** **13 06 49.5 +3.4**
BURAR Bucovina Array 7.24 32 **Pn** **13 06 46.5 +0.3**
BURAR Bucovina Array 7.24 32 ⇓P **Pn** **13 06 50.0 +3.7**
BURAR Bucovina Array 7.24 32 P **Pn** **13 06 49.9 +3.7**
MOA Molln 7.30 331 *i* Pn **Pn** **13 06 48.8 +1.8**
comp=Z,17nm,0.4s,SNR=22
SCTR Scanteiesti 7.34 53 ⇓P **Pn** **13 06 50.7 +3.2**
JAVC Velka Javorina 7.38 350 *e*PN **Pn** **13 06 51.9 +3.7**
BIOA Bad Ischl, Aus 7.42 327 *i* Pn **Pn** **13 06 49.5 +1.0**
comp=Z,14nm,0.3s,SNR=26
MEZ Mezhgor'ye 7.46 21 P **Pn** **13 06 52.1 +3.0**
LANS Liptovska Anna 7.55 359 *e*P Pn 13 06 56.8 +6.3
LANS Liptovska Anna 7.55 359 *e*PN Pn 13 06 56.8 +6.3
LANS *e*PG Pb 13 07 24.7 +13
LANS *e*SN Sn 13 07 59.0 -16
IDI Anoyia 7.56 145 Pn **Pn** **13 06 48.3 -2.3**
comp=Z,10.0nm,0.3s,baz=331,slow=13,SNR=21
IDI Sn **Sn** **13 08 08.4 -7.2**
comp=Z,8.6nm,0.3s,baz=327,slow=17,SNR=3.6
IDI Anoyia 7.56 145 **Pn** **13 06 49.7 -0.8**
MANT Manisa 7.56 111 **Pn** **13 06 51.7 +0.9**
LESA Schwarzleotal 7.63 322 *i* Pn **Pn** **13 06 52.3 +0.8**
comp=Z,12nm,0.2s,SNR=31
LESA *e*Sn **Sn** **13 08 15.0 -2.3**
comp=Z,30nm,0.5s
TLCR 7.63 59 ⇓P **Pn** **13 06 55.3 +3.9**
TLCR 7.63 59 P **Pn** **13 06 55.3 +3.9**
KSV Kosov 7.76 28 P **Pn** **13 06 57.0 +3.7**
KRUC Moravsky 7.79 344 *e*PN **Pn** **13 06 56.9 +3.2**
NIE Niedzica 7.84 4 *e*P **Pn** **13 06 58.1 +3.7**
NIE Niedzica 7.84 4 P **Pn** **13 06 57.6 +3.2**
comp=Z,0.1nmcomp=Z,330nmcomp=Z,31nm,1.4s
MAUC Maruska 7.87 352 *e*PN **Pn** **13 06 59.3 +4.6**
STHS Stebnicka Huta 7.91 8 *e*P **Pn** **13 06 58.7 +3.4**
STHS Stebnicka Huta 7.91 8 *e*PN **Pn** **13 06 58.6 +3.3**
STHS *e*PG **Pb** **13 07 19.4 +1.5**
VRAC Vranov 7.99 346 Pn **Pn** **13 06 58.7 +2.3**
comp=Z,0.4nm,0.3s,baz=180,slow=12,SNR=4.7
VRAC Lg Lg 13 09 08.0
comp=Z,1.0nm,0.3s,baz=165,slow=12,SNR=3.6
VRAC LR LR 13 10 21.3
comp=Z,905nm,18.2s,baz=168,slow=40
comp=Z,4.4nm,0.6s
VRAC Vranov 7.99 346 *e*PN **Pn** **13 06 59.8 +3.4**
WTTA Wattenberg 8.02 318 *e*Pn **Pn** **13 06 57.2 +0.3**
comp=Z,4.6nm,0.3s,SNR=12
SHIU Shidnytsya 8.08 18 P **Pn** **13 07 01.5 +3.9**
WATA Walderalm 8.10 318 *e*Pn **Pn** **13 06 58.6 +0.6**
comp=Z,54nm,0.4s,SNR=19
CKRC Cesky Krumlov 8.12 335 *e*P **Pn** **13 06 59.9 +1.7**
CKRC Cesky Krumlov 8.12 335 *e*PN **Pn** **13 06 59.9 +1.7**
SQTA Sankt Quirin 8.21 316 *e*Pn **Pn** **13 07 00.6 +1.1**
comp=Z,16nm,0.3s,SNR=17
OKC Ostrava-Krasne 8.30 354 AMS AMS 13 10 50.0
comp=Z,3µm,9.7s
MORC Moravsky Berou 8.30 351 *e*PN Pn 13 07 05.8 +5.1
KWP Kalwaria Pacla 8.33 14 *e*P **Pn** **13 07 05.8 +4.7**
FETA Feichten 8.34 314 *i* Pn **Pn** **13 07 01.6 +0.3**
comp=Z,7.2nm,0.4s,SNR=12
MOTA Moosalm 8.34 316 *e*Pn **Pn** **13 07 02.0 +0.6**
comp=Z,17nm,0.3s,SNR=16
MOTA *e*Sn **Sn** **13 08 35.1 +0.1**
comp=Z,107nm,0.8s
GERES GERESS Array B 8.35 332 Pn **Pn** **13 07 01.4 +0.1**
comp=Z,0.4nm,0.3s,baz=143,slow=14,SNR=74
GERES Sn **Sn** **13 08 34.4 -0.5**
comp=Z,0.9nm,0.3s,baz=148,slow=24,SNR=8.8
GERES Lg Lg 13 09 32.2
baz=158,slow=29
GERES LR LR 13 10 56.0
comp=Z,894nm,19.7s,baz=144,slow=43
comp=Z,13nm,0.6s
BORA Eskisehir 8.44 98 **Pn** **13 07 03.0 +0.3**
KARP Karpathos 8.47 133 *e*P **Pn** **13 07 03.8 +0.7**
KMPD K-Podol'skiy 8.50 33 P **Pn** **13 07 06.4 +3.0**
KMPD P **Pn** **13 07 06.4 +3.0**
MILM Milestii Mici 8.50 48 *d* /P **Pn** **13 07 05.0 +1.6**
MILM pmax pmax
comp=Z,40nm,1.2s
MILM MLR MLR
comp=Z,3µm,16.5s
MILM Milestii Mici 8.50 48 ⇓ *i*P **Pn** **13 07 05.0 +1.6**
comp=Z,40nm,1.2s
MILM *e*L L 13 09 20.0
MILM LRM MLR 13 11 08.0
comp=Z,3µm,16.5s
SAHE Sakarya_HENDEK 8.54 91 ⇑P **Pn** **13 07 07.4 +3.4**
RETA Reutte 8.61 316 *e*Pn **Pn** **13 07 05.4 +0.4**
comp=Z,5.7nm,0.3s
RETA *e*Sn **Sn** **13 08 39.5 -2.0**
comp=Z,28nm,0.5s
OJC Ojcow 8.63 1 *e*P **Pn** **13 07 09.0 +3.9**
OJC Ojcow 8.63 1 **Pn** **13 07 07.9 +2.8**
OJC Ojcow 8.63 1 P **Pn** **13 07 07.9 +2.8**
OJC Ojcow 8.63 1 P **Pn** **13 07 08.0 +2.9**
comp=Z,16nm,0.7s
KHC Kasperske Hory 8.63 333 **Pn** **13 07 04.7 -0.6**
KHC Kasperske Hory 8.63 333 *ce*P **Pn** **13 07 05.1 -0.1**
KHC pmax pmax
comp=Z,38nm,1.0s
KHC Kasperske Hory 8.63 333 *e*PN **Pn** **13 07 06.0 +0.8**
KHC *e*SN **Sn** **13 08 41.1 -0.8**
KHC AMS AMS 13 10 40.0
comp=Z,1µm,16.6s
KHC Kasperske Hory 8.63 333 P **Pn** **13 07 06.2 +1.0**
DAVOX Davos/Dischmat 8.68 310 Pn **Pn** **13 07 06.6 +0.6**
comp=Z,4.4nm,0.3s,baz=120,slow=16,SNR=21
DAVOX Sn **Sn** **13 08 43.2 0.0**
comp=Z,5.2nm,0.3s,baz=162,slow=20,SNR=3.4
DAVOX Lg Lg 13 09 31.0
baz=162,slow=20
DAVOX LR LR 13 11 18.4
comp=Z,461nm,20.2s,baz=114,slow=44
comp=Z,11nm,0.3s
KRLC Kraliky 8.70 348 *e*P **Pn** **13 07 08.9 +2.7**
KRLC MLR MLR
comp=Z,3µm,11.5s
KRLC Kraliky 8.70 348 *e*PN **Pn** **13 07 08.9 +2.7**
KRLC AMS AMS 13 11 00.0
comp=Z,3µm,11.5s
TUE Stuetta 8.83 307 P **Pn** **13 07 09.1 +1.0**
comp=Z,161nm,0.6s
SORM Soroca 9.03 41 ⇓P **Pn** **13 07 14.1 +3.4**
SORM Soroca 9.03 41 P **Pn** **13 07 14.0 +3.4**
DPC Dobruska-Polom 9.04 347 *e*P **Pn** **13 07 14.2 +3.4**
DPC MLR MLR
comp=Z,3µm,12.5s
DPC Dobruska-Polom 9.04 347 *e*PN **Pn** **13 07 14.2 +3.4**
DPC AMS AMS 13 11 20.0
comp=Z,3µm,12.5s
PRU Pruhonice 9.10 339 *e*P **Pn** **13 07 14.7 +3.2**
PRU MLR MLR
comp=Z,1µm,16.3s
PRU Pruhonice 9.10 339 *e*PN **Pn** **13 07 14.7 +3.2**
PRU AMS AMS 13 10 50.0
comp=Z,1µm,16.3s
PRA Prague 9.20 339 *e*P **Pn** **13 07 16.6 +3.7**
PRA Prague 9.20 339 *e*PN **Pn** **13 07 16.6 +3.7**
ISP Isparta 9.24 110 *ce*P **Pn** **13 07 16.3 +2.6**

ISP pmax pmax
comp=Z,17nm,0.6s
UPC Upice 9.25 346 AMS AMS 13 11 30.0
comp=Z,3µm,10.5s
OSTC Ostas 9.26 347 AMS AMS 13 11 20.0
comp=Z,3µm,13.2s
CHVC Chvalec 9.32 346 AMS AMS 13 11 30.0
comp=Z,3µm,12.4s
KEST Kesra 9.90 237 Pn **Pn** **13 07 23.1 +0.4**
comp=Z,0.6nm,0.3s,baz=47,slow=18,SNR=13
KEST LR LR 13 12 29.7
comp=Z,2µm,18.4s,baz=53,slow=46
comp=Z,18nm,0.8s
LUBAR Lubar, Ukraine 10.10 32 P **Pn** **13 07 28.0 +2.8**
BFO Black Forest 10.42 314 **Pn** **13 07 29.0 -0.8**
BFO Black Forest 10.42 314 P **Pn** **13 07 29.0 -0.8**
RNPP5 Staryi Chortor 10.57 22 P **Pn** **13 07 34.4 +2.7**
RNPP8 Varash 10.66 22 P **Pn** **13 07 35.6 +2.7**
CLL Collm 10.71 337 *e*P **Pn** **13 07 36.0 +2.3**
CLL Collm 10.71 337 P **Pn** **13 07 35.4 +1.7**
comp=Z,11nm,1.2s
CLL Collm 10.71 337 *e*Pn **Pn** **13 07 36.0 +2.3**
CLL *ex* x 13 07 46.0
CLL *e*Pg 13 08 23.0
CLL *e*Sn Sn 13 09 18.0 -15
CLL *ex* x 13 09 43.0
CLL *e*Sb 13 09 58.0
CLL *ex* x 13 10 20.0
CLL *e*Sg 13 10 41.0
CLL AMS AMS 13 11 00.0
comp=N,700nm,18.5s
CLL AMS AMS 13 11 00.0
comp=E,1µm,19.4s
CLL AMS AMS 13 11 00.0
RNPP9 Sopachiv 10.74 22 P **Pn** **13 07 36.7 +2.7**
BR131 Keskin Array S 10.85 95 *i* P **Pn** **13 07 38.4 +2.6**
BRTR Keskin Array B 10.85 95 Pn **Pn** **13 07 36.2 +0.4**
comp=E,0.3nm,0.3s,baz=292,slow=15,SNR=10
BRTR Sn **Sn** **13 09 34.1 -2.6**
comp=E,0.3nm,0.3s,baz=268,slow=20,SNR=1.3
BRTR Lg Lg 13 10 50.4
baz=267,slow=28
BRTR LR LR 13 12 41.4
comp=E,1µm,19.1s,baz=286,slow=43
comp=E,2.2nm,0.6s
ECH Echery 11.00 311 **Pn** **13 07 37.3 -0.4**
ECH Echery 11.00 311 P **Pn** **13 07 37.3 -0.4**
SIM Simferopol' 11.12 68 *e*P **Pn** **13 07 42.0 +2.7**
SIM *e* 13 09 53.0
SIM pmax pmax
comp=Z,38nm,1.0s
SIM smax smax
comp=Z,100nm,9.7s
SIM MLR MLR
comp=Z,960nm,16.0s
AK07 Malin Array Si 11.17 33 P **Pn** **13 07 42.8 +2.9**
AK14 Malin Array Si 11.19 33 P **Pn** **13 07 43.1 +2.9**
AK06 Malin Array Si 11.19 33 P **Pn** **13 07 43.1 +2.8**
AK17 Malin Array Si 11.21 33 P **Pn** **13 07 43.3 +2.8**
AK12 Malin Array Si 11.22 33 P **Pn** **13 07 43.5 +2.9**
AK16 Malin Array Si 11.22 33 P **Pn** **13 07 43.5 +2.9**
AK05 Malin Array Si 11.22 33 P **Pn** **13 07 43.5 +2.9**
AK19 Malin Array Si 11.22 32 P **Pn** **13 07 43.4 +2.8**
AK10 Malin Array Si 11.23 33 P **Pn** **13 07 43.4 +2.7**
AK20 Malin Array Si 11.24 32 P **Pn** **13 07 43.6 +2.7**
AK18 Malin Array Si 11.25 33 P **Pn** **13 07 43.7 +2.7**
AK15 Malin Array Si 11.25 33 P **Pn** **13 07 43.7 +2.7**
AK02 Malin Array Si 11.25 33 P **Pn** **13 07 43.8 +2.8**
AK09 Malin Array Si 11.25 33 P **Pn** **13 07 43.8 +2.8**
AK11 Malin Array Si 11.25 33 P **Pn** **13 07 43.8 +2.8**
KIEV Kiev 11.28 33 **Pn** **13 07 42.1 +0.7**
KIEV Kiev 11.28 33 P **Pn** **13 07 42.1 +0.7**
AKASG Malin Array Be 11.29 33 Pn **Pn** **13 07 42.3 +0.7**
comp=Z,1.2nm,0.3s,baz=222,slow=12,SNR=20
AKASG Lg Lg 13 11 00.4
comp=Z,0.8nm,0.3s,baz=220,slow=27,SNR=2.0
AKASG LR LR 13 12 52.0
comp=Z,421nm,19.7s,baz=212,slow=42
comp=Z,4.7nm,0.6s
AKBB Malin Array Si 11.29 33 **Pn** **13 07 42.4 +0.8**
AKBB Malin Array Si 11.29 33 *i* P **Pn** **13 07 44.5 +2.9**
AKBB pmax pmax
comp=Z,18nm,0.9s
SSB Saint Sauveur 11.53 294 **Pn** **13 07 44.1 -0.8**
SSB Saint Sauveur 11.53 294 P **Pn** **13 07 44.1 -0.8**
ANN Anapa 13.42 70 *e*P **Pn** **13 08 09.1 -1.6**
ANN *e*S **Sn** **13 10 39.6 +0.5**
ANN pmax pmax
comp=Z,121nm,1.2s
ANN MLR MLR
comp=Z,681nm,16.0s
ANN MLR MLR
comp=E,526nm,16.0s
MNK Minsk 14.04 20 *i* P **Pn** **13 08 18.6 -0.6**
comp=E,37nm,1.0s
MNK *i* P **Pn** **13 08 18.6 -0.6**
comp=N,29nm,0.8s
MNK *i* P **Pn** **13 08 18.6 -0.6**
comp=Z,23nm,0.9s,baz=207
MNK *i* PP **P** **13 08 26.7 -0.1**
MNK *i* PPP PPP 13 08 33.9
MNK *i* S **Sn** **13 10 53.3 -0.9**
MNK *i* SS **SnSn** **13 11 08.3 +1.7**
MNK *i* SSS SSS 13 11 20.9
MNK *i* LQ LQ 13 12 27.6
MNK *i* LR LR 13 13 27.6
MNK *i* LRM MLR 13 14 14.3
comp=E,1µm,16.3s
MNK *i* LRM MLR 13 14 14.3
comp=N,493nm,16.8s
MNK *i* LRM MLR 13 14 20.8
comp=Z,1µm,15.6s
MNK Minsk 14.04 20 *i* P **Pn** **13 08 18.5 -0.6**
MNK *i* S **Sn** **13 10 53.3 -0.9**
MNK pmax pmax
comp=N,29nm,0.8s
MNK pmax pmax
comp=E,37nm,1.0s
MNK pmax pmax
comp=Z,23nm,0.9s
MNK MLR MLR
comp=E,1µm,16.0s
MNK MLR MLR
comp=N,493nm,17.0s
MNK MLR MLR
comp=Z,1µm,16.0s
NACGM Naroch 14.14 17 *e*P **P** **13 08 26.9 -1.1**
comp=N,68nm,1.2s
PABE Paberze 14.22 10 **Pn** **13 08 22.3 +0.8**
PABE Paberze 14.22 10 *e*P **P** **13 08 25.9 -2.8**
SOC Sochi 14.97 76 *e*P **Pn** **13 08 32.1 +0.2**
SOC *e* 13 11 22.6
SOC pmax pmax
comp=Z,30nm,0.7s
SOC MLR MLR
comp=Z,218nm,16.0s
MMAI Mount Meron Ar 15.22 119 Pn **Pn** **13 08 33.8 -1.5**
comp=Z,1.4nm,0.3s,baz=316,slow=10.0,SNR=4.3
MMAI Sn **Sn** **13 11 15.9 -7.3**
comp=Z,3.2nm,0.3s,baz=311,slow=26,SNR=4.4
MMAI LR LR 13 15 42.1
comp=Z,319nm,18.7s,baz=304,slow=42
comp=Z,2.7nm,0.4s
KOPT Kop Dagi 15.93 89 **P** **13 08 48.8 +0.7**
KOPT IAmb IAmb 13 08 59.7
comp=Z,72nm,1.2s
BALJ Balqa 15.97 121 **Pn** **13 08 46.3 +1.4**
GHAJ Ghor Haditha 16.44 124 **Pn** **13 08 52.2 +1.2**
GHAJ IAmb IAmb 13 08 54.8
comp=Z,29nm,0.5s
VORD Divnogorie 16.50 49 *e*P **Pn** **13 08 51.0 -0.6**
VORD pmax pmax
comp=Z,30nm,1.0s
VSR Storozhevoye 16.54 48 *e*P **Pn** **13 08 52.0 -0.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
ASF Jabal al Asfar 16.73 119 Pn **Pn** **13 08 55.3 +0.6**
comp=Z,0.4nm,0.3s,baz=318,slow=2.0,SNR=3.8
ASF Sn **Sn** **13 12 00.2 +0.3**
comp=Z,0.4nm,0.3s,baz=288,slow=20,SNR=1.7
comp=Z,2.6nm,0.4s
VORR Voronezh 16.79 46 *e*P **Pn** **13 08 56.3 +1.1**
VORR pmax pmax
comp=Z,73nm,0.4s
MARD Mardin 16.92 98 Pn **Pn** **13 08 57.1 0.0**

SHA1 Shidzhatmaz 17.11 75 *i* P **P** **13 09 03.4 +2.2**
LPSR Galich'ya Gora 17.11 43 *e*P **Pn** **13 09 00.3 +1.0**
LPSR pmax pmax
comp=Z,57nm,0.9s
KIV Kislovodsk 17.13 74 *e*P **P** **13 09 00.9 -0.3**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,97nm,14.0s
KVAR Kislovodsk Arr 17.13 74 LR LR 13 17 58.1
comp=Z,157nm,18.5s,baz=132,slow=45
NEUR Neytrino 17.15 77 *i* P **P** **13 09 01.9 +0.3**
EIL Elat 17.23 129 P **Pn** **13 08 58.2 -2.7**
comp=Z,1.3nm,0.3s,baz=320,slow=17,SNR=5.0
EIL S Sn 13 12 00.0 -12
comp=Z,12nm,0.5s,baz=320,slow=17,SNR=5.6
comp=Z,14nm,0.7s
VSU Vasula 17.48 13 *e*P **P** **13 09 05.1 +0.2**
VSU Vasula 17.48 13 *ce*P **Pn** **13 09 04.6 +0.8**
VSU pmax pmax
comp=Z,159nm,1.7s
OBN Obninsk 17.55 34 P **Pn** **13 09 03.0 -1.8**
comp=Z,5.8nm,0.3s,baz=258,slow=9.3,SNR=11
OBN LR LR 13 16 20.5
comp=Z,785nm,18.2s,baz=120,slow=39
comp=Z,18nm,0.4s
OBN Obninsk 17.55 34 P **P** **13 09 05.9 +0.2**
OBN Obninsk 17.55 34 *de*P **Pn** **13 09 05.5 +0.8**
OBN pmax pmax
comp=Z,38nm,1.1s
OBN MLR MLR
comp=Z,689nm,17.0s
ESDC Sonseca Array 17.95 272 P **Pn** **13 09 09.0 -0.9**
comp=Z,0.2nm,0.3s,baz=78,slow=12,SNR=12
ESDC LR LR 13 16 59.2
comp=Z,334nm,18.2s,baz=84,slow=40
comp=Z,6.2nm,1.1s
VRH Novokhopyorsk 17.98 50 *e*P **Pn** **13 09 09.9 -0.2**
VRH pmax pmax
comp=Z,10.0nm,1.0s
ARBE Arbavere 18.30 10 *e*P **Pn** **13 09 14.8 +0.9**
MOS Moscow 18.42 34 *e*P **P** **13 09 14.2 -1.1**
MOS *e*S **Sn** **13 12 41.3 +0.9**
MOS pmax pmax
comp=Z,118nm,1.2s
MOS pmax pmax
comp=N,31nm,0.6s
MOS MLR MLR
comp=Z,600nm,14.0s
AAL Aland 18.61 1 *e*P **P** **13 09 17.2 -0.1**
MEF Metsahovi 18.88 7 *e*P **Pn** **13 09 20.9 0.0**
HFS Hagfors 18.91 351 P **P** **13 09 20.1 -0.5**
comp=Z,1.6nm,0.3s,baz=165,slow=12,SNR=20
HFS LR LR 13 16 48.9
comp=Z,325nm,20.8s,baz=170,slow=38
comp=Z,14nm,0.8s
GNI Garni 19.08 86 P **Pn** **13 09 23.6 -0.1**
comp=Z,1.2nm,0.3s,baz=295,slow=5.5,SNR=9.2
GNI LR LR 13 17 28.6
comp=Z,197nm,19.3s,baz=283,slow=39
comp=Z,23nm,0.6s
GNI Garni 19.08 86 P **Pn** **13 09 23.6 -0.1**
GNI Garni 19.08 86 *ce*P **Pn** **13 09 24.9 +1.2**
GNI pmax pmax
comp=Z,71nm,1.7s
RAF Rauma 19.50 3 *e*P **P** **13 09 27.3 +0.3**
PBRG Braganca 19.63 279 *e*P **Pn** **13 09 29.8 -0.4**
PBRG *i* IAmb IAmb 13 09 36.4
comp=Z,58nm,2.0s
NC602 NORSAR Array S 19.79 348 P **P** **13 09 30.2 +0.1**
MVO Moncorvo 19.94 278 *e*P **Pn** **13 09 33.9 0.0**
MVO *i* IAmb IAmb 13 10 15.3
comp=Z,44nm,1.5s
NC405 NORSAR Array S 20.12 349 P **P** **13 09 34.1 +0.2**
NB2 NORSAR Subarra 20.13 348 P **P** **13 09 33.8 -0.1**
comp=Z,1.7nm,0.6s,baz=165,slow=12
NOA NORSAR Array B 20.13 348 P **P** **13 09 33.9 0.0**
comp=Z,2.4nm,0.8s,baz=160,slow=10,SNR=11
NOA LR LR 13 18 37.0
comp=Z,450nm,18.9s,baz=170,slow=41
comp=Z,2.4nm,0.8s
NBO00 NORSAR Array S 20.19 348 P **P** **13 09 34.9 +0.4**
FINES FINESS Array B 20.26 9 P **P** **13 09 34.8 -0.6**
comp=Z,17nm,0.7s,baz=182,slow=11,SNR=58
comp=Z,17nm,0.7s
FINES FINESS Array B 20.26 9 **P** **13 09 34.9 -0.4**
FIA1 FINESS Array S 20.27 9 **P** **13 09 35.5 +0.1**
EKA Eskdalemuir Ar 20.27 320 P **P** **13 09 35.1 -0.4**
comp=Z,8.1nm,0.6s,baz=112,slow=9.7,SNR=25
comp=Z,8.1nm,0.6s
NC303 NORSAR Array S 20.28 349 P **P** **13 09 35.9 +0.3**
ESK Eskdalemuir 20.28 320 **P** **13 09 36.2 +0.6**
ESK IAmb IAmb 13 09 43.7
comp=Z,45nm,1.1s
ESK Eskdalemuir 20.28 320 P **P** **13 09 36.2 +0.6**
ESK pmax pmax
comp=Z,45nm,1.1s
MTE Manteigas 20.47 276 *e*P **P** **13 09 38.0 +0.1**
MTE *i* IAmb IAmb 13 09 40.4
comp=Z,62nm,2.4s
POLO Lamas de Olo 20.47 279 *e*P Pn 13 09 41.6 +1.4
POLO *i* IAmb IAmb 13 09 56.7
comp=Z,38nm,1.9s
PMRV Marv??o 20.59 273 *e*P Pn 13 09 41.4 0.0
PMRV *i* IAmb IAmb 13 09 49.4
comp=Z,39nm,1.7s
PVIS Viseu 20.67 277 *e*P **P** **13 09 40.6 +0.5**
PBAR Barrancos 20.67 269 *e*P Pn 13 09 41.3 -1.1
PBAR *i* IAmb IAmb 13 09 44.6
comp=Z,85nm,1.3s
MAK Makhachkala 20.68 77 *d* iP **P** **13 09 37.4 -2.7**
MAK *e*S **S** **13 13 29.0 -1.1**
MAK pmax pmax
comp=Z,364nm,1.2s
MAK MLR MLR
comp=Z,563nm,11.0s
KEF Keuruu 20.85 7 *e*P **P** **13 09 41.3 -0.3**
PESTR Estremoz 20.88 272 *e*P Pn 13 09 46.1 +1.3
PESTR *i* IAmb IAmb 13 09 46.9
comp=Z,41nm,1.0s
AKT Akhty 21.05 81 *e*P **P** **13 09 46.6 +2.4**
MDT Midelt 21.11 253 P **P** **13 09 44.1 -0.7**
comp=Z,15nm,0.9s,baz=61,slow=8.2,SNR=21
MDT LR LR 13 17 48.3
comp=Z,237nm,20.4s,baz=66,slow=37
comp=Z,15nm,0.9s
PSARD Sardoal 21.12 274 *e*P **P** **13 09 46.5 +1.6**
PSARD *i* IAmb IAmb 13 10 03.1
comp=Z,53nm,1.6s
MD01 Midelt array s 21.19 254 **P** **13 09 44.8 -1.0**
MD31 MD31 21.19 254 P **P** **13 09 44.8 -0.9**
PARRA Arraiolos 21.23 272 *e*P **P** **13 09 49.4 -4.7**
PARRA *i* IAmb IAmb 13 09 50.8
comp=Z,48nm,1.5s
PCAS Casmilo, Conde 21.26 275 *e*P **P** **13 09 49.3 +3.0**
PCAS *i* IAmb IAmb 13 09 50.8
comp=Z,79nm,1.4s
EVO Evora 21.30 271 *e*P **P** **13 09 49.5 +2.8**
EVO *i* IAmb IAmb 13 09 50.9
comp=Z,41nm,1.1s
PMTG Montargil 21.30 272 *e*P **P** **13 09 49.2 +2.4**
PMTG *i* IAmb IAmb 13 09 51.3
comp=Z,59nm,1.4s
PBEJ Beja 21.34 269 *e*P **P** **13 09 48.5 +1.2**
PBEJ *i* IAmb IAmb 13 09 52.0
comp=Z,39nm,1.6s
PVAQ Vaqueiros 21.43 268 P **P** **13 09 47.0 -1.2**
PVAQ IAmb IAmb 13 10 03.1
comp=Z,59nm,1.1s
PVAQ Vaqueiros 21.43 268 *e*P **P** **13 09 48.7 +0.6**
PVAQ *i* IAmb IAmb 13 10 04.7
comp=Z,61nm,1.5s
VAF Ylistaro 21.56 4 *e*P **P** **13 09 49.8 +0.5**
PCVE Castro Verde 21.59 269 *e*P **P** **13 09 51.2 +1.2**
PCVE *i* IAmb IAmb 13 10 17.7
comp=Z,56nm,1.8s
PBDV Barranco-do-Ve 21.64 267 *e*P **P** **13 09 52.1 +1.6**
PBDV *i* IAmb IAmb 13 10 00.5
comp=Z,70nm,1.5s
BELG Belogornoye 21.83 51 P **P** **13 09 52.9 +0.5**
comp=Z,158nm,0.9s,baz=215,slow=1.9,SNR=39
BELG LR LR 13 20 14.3
comp=Z,425nm,21.4s,baz=277,slow=42
comp=Z,158nm,0.9s
BELG Belogornoye 21.83 51 *i* P **P** **13 09 51.9 -0.4**
BELG pmax pmax
comp=Z,33nm,0.9s
TAM Tamanrasset 22.14 216 **P** **13 09 55.9 -0.2**
TAM IAmb IAmb 13 09 58.3
comp=Z,45nm,0.8s
TAM Tamanrasset 22.14 216 P **P** **13 09 55.9 -0.2**
TAM pmax pmax
comp=Z,45nm,0.8s
MORF Marmelete 22.16 268 *e*P **P** **13 10 00.5 +4.4**
MORF *i* IAmb IAmb 13 10 11.4
comp=Z,74nm,1.7s
KLMR Klimovskoe 22.80 26 *e*P **P** **13 10 00.5 -2.1**
KLMR *e* 13 13 51.6
KLMR pmax pmax
comp=Z,81nm,1.2s
KLMR MLR MLR
comp=Z,800nm,12.0s
KIRV Kirov 25.29 38 LR LR 13 20 53.1
comp=Z,718nm,19.6s,baz=236,slow=38
KIRV Kirov 25.29 38 *ce*P **P** **13 10 25.7 -0.5**
APA Apatity 27.10 12 *e*P **P** **13 10 43.8 +1.3**
APA MLR MLR
comp=Z,976nm,12.9s
AKTO Aktyubinsk 27.86 58 LR LR 13 24 09.7
comp=Z,464nm,19.1s,baz=249,slow=41
ARCES ARCESS Array B 28.18 4 P **P** **13 10 51.2 -1.0**
comp=Z,12nm,1.2s,baz=186,slow=8.3,SNR=10
ARCES LR LR 13 21 45.9
comp=Z,115nm,19.6s,baz=192,slow=36
comp=Z,12nm,1.2s
ARCES ARCESS Array B 28.18 4 IAmb IAmb 13 10 56.7
comp=Z,17nm,1.4s
ARTI Arti 28.99 46 LR LR 13 23 39.7
comp=Z,794nm,18.3s,baz=254,slow=39
ARTI Arti 28.99 46 P **P** **13 10 58.8 -0.8**
ARTI Arti 28.99 46 *ce*P **P** **13 10 59.0 -0.5**
ARTI pmax pmax
comp=Z,37nm,0.7s
ABKAR Akbulak array 29.07 61 **P** **13 10 59.7 -0.6**
SVE Sverdlovsk 30.31 46 *e*P **P** **13 11 11.3 +0.1**
SVE pmax pmax
comp=Z,44nm,0.9s
SVE MLR MLR
comp=Z,1µm,15.0s
TORD Torodi Ar. Bea 32.34 214 P **P** **13 11 28.0 -1.5**
comp=Z,5.8nm,0.3s,baz=28,slow=12,SNR=1.9
comp=Z,5.8nm,0.3s
BORG Borgarnes 32.79 329 LR LR 13 26 57.1
comp=Z,173nm,18.0s,baz=134,slow=40
HRA Herat 34.12 88 P **P** **13 11 45.6 +0.5**
BORK Borovoye 35.54 54 P **P** **13 11 57.4 +0.5**
BORK Borovoye 35.54 54 *ce*P **P** **13 11 57.6 +0.7**
BORK pmax pmax
comp=Z,50nm,1.7s
BVAR Borovoye Array 35.58 54 P **P** **13 11 57.4 +0.2**
comp=Z,15nm,0.8s,baz=274,slow=8.5,SNR=48
BVAR LR LR 13 28 32.6
comp=Z,213nm,21.6s,baz=266,slow=40
comp=Z,15nm,0.8s
SPITS Spitsbergen Ar 36.72 359 P **P** **13 12 06.6 -0.1**
comp=Z,4.8nm,0.8s,baz=162,slow=29,SNR=1.2
SPITS LR LR 13 29 19.9
comp=Z,353nm,18.2s,baz=174,slow=40
comp=Z,4.8nm,0.8s
KK31 Karatay Array 37.21 70 P **P** **13 12 11.5 +0.2**
KK31 Karatay Array 37.21 70 P **P** **13 12 11.5 +0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 37.21 70 **P** **13 12 10.8 -0.5**
KKAR Karatay Array 37.21 70 P **P** **13 12 10.8 -0.5**
CHGR Chuyangaron 37.62 78 IAmb IAmb 13 12 34.7
comp=Z,16nm,1.0s
AAK Ala-Archa 40.15 70 LR LR 13 32 02.9
comp=Z,171nm,19.0s,baz=302,slow=40
AAK Ala-Archa 40.15 70 P **P** **13 12 36.7 +0.6**
AAK Ala-Archa 40.15 70 *ce*P **P** **13 12 37.4 +1.3**
AAK pmax pmax
comp=Z,15nm,1.7s
FRU1 Bishkek 40.19 69 P **P** **13 12 37.5 +1.1**
FRU1 IAmb IAmb 13 12 38.0
comp=Z,18nm,0.5s
FRU1 Bishkek 40.19 69 P **P** **13 12 37.5 +1.1**
FRU1 pmax pmax
comp=Z,18nm,0.5s
LODK Lodwar 40.56 155 **P** **13 12 40.5 +0.8**
KURBB Kurchatov Arra 40.87 57 P **P** **13 12 41.5 -0.3**
comp=Z,2.4nm,0.5s,baz=286,slow=8.8,SNR=20
KURBB PP **PP** **13 14 11.2 -4.8**
comp=Z,1.0nm,0.3s,baz=282,slow=11,SNR=4.6
KURBB LR LR 13 33 03.1
comp=Z,306nm,18.8s,baz=168,slow=41
comp=Z,2.4nm,0.5s
KURK Kurchatov 40.91 56 **P** **13 12 42.3 +0.2**
KURK Kurchatov 40.91 56 *ce*P **P** **13 12 42.6 +0.5**
KURK pmax pmax
comp=Z,18nm,1.7s
DBIC Dimbokro 41.00 219 P **P** **13 12 42.3 -0.9**
comp=Z,14nm,0.9s,baz=49,slow=11,SNR=13
DBIC LR LR 13 33 04.0
comp=Z,132nm,19.4s,baz=48,slow=41
comp=Z,14nm,0.9s
DBIC Dimbokro 41.00 219 **P** **13 12 42.9 -0.3**
DBIC IAmb IAmb 13 12 43.8
comp=Z,12nm,0.8s
DBIC Dimbokro 41.00 219 P **P** **13 12 42.9 -0.3**
DBIC pmax pmax
comp=Z,12nm,0.8s
KSH Kashi 42.25 73 P **P** **13 12 52.0 -1.4**
KSH pP pP 13 12 56.5 -3.5
KSH pmax pmax
comp=Z,4.0nm,1.5s
KSH LR LR
comp=Z,220nm,14.4s
KSH LR LR
comp=Z,300nm,17.3s
KSH LR LR
comp=Z,200nm,14.4s
NIL Nilore 42.67 83 **P** **13 12 56.8 +0.1**
NIL IAmb IAmb 13 12 57.8
comp=Z,24nm,1.2s
NIL Nilore 42.67 83 P **P** **13 12 56.8 +0.1**
NIL pmax pmax
comp=Z,24nm,1.3s
MBAR Mbarara 43.21 164 LR LR 13 32 33.8
comp=Z,155nm,20.2s,baz=346,slow=38
MBAR Mbarara 43.21 164 P **P** **13 13 01.9 +0.5**
MBAR Mbarara 43.21 164 P **P** **13 13 01.9 +0.5**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
MAKZ Makanchi 44.00 61 **P** **13 13 06.9 -0.5**
MAKZ IAmb IAmb 13 13 08.6
comp=Z,10.0nm,0.8s
MAKZ Makanchi 44.00 61 P **P** **13 13 06.9 -0.5**
MAKZ pmax pmax
comp=Z,10.0nm,0.9s
ZALV Zalesovo Beam 44.02 51 P **P** **13 13 07.2 -0.2**
comp=Z,30nm,0.7s,baz=283,slow=8.4,SNR=135
ZALV LR LR 13 33 43.6
comp=Z,703nm,18.7s,baz=276,slow=39
comp=Z,30nm,0.7s
MKAR Makanchi Array 44.21 61 P **P** **13 13 09.3 +0.3**
comp=Z,14nm,0.6s,baz=279,slow=7.4,SNR=126
MKAR LR LR 13 33 45.9
comp=Z,267nm,18.7s,baz=274,slow=39
comp=Z,14nm,0.6s
MKAR Makanchi Array 44.21 61 **P** **13 13 09.0 -0.1**
KMBO Kilima Mbogo 45.45 155 P **P** **13 13 17.9 -1.5**
comp=Z,1.6nm,0.4s,baz=356,slow=9.0,SNR=4.9
comp=Z,1.6nm,0.4s
DGZ Jazzator, Alta 46.65 56 *i* P **P** **13 13 28.7 +0.3**
DGZ pmax pmax
comp=Z,13nm,0.8s
KIBK Kibwezi 46.84 154 P **P** **13 13 31.1 +0.8**
WMQ Urumqi 48.81 63 *e*P **P** **13 13 46.8 +1.6**
WMQ sP sP 13 13 54.3 -0.1
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ LR LR
comp=Z,310nm,21.9s
WMQ LR LR
comp=Z,430nm,16.1s
WMQ LR LR
comp=Z,170nm,21.9s
SCHQ Schefferville 55.48 316 P **P** **13 14 33.4 -1.1**
comp=Z,3.7nm,0.8s,baz=61,slow=13,SNR=1.9
comp=Z,3.7nm,0.8s
TLY Talaya 55.55 49 **P** **13 14 36.8 +1.7**
TLY Talaya 55.55 49 *i* P **P** **13 14 35.5 +0.4**

TLY					pmax	pmax				
	comp=Z,36nm,0.9s									
EVN	**Everest**	**55.59**	**81**			**P**	**P**	**13 14 35.8**	**-0.7**	
ZAK	**Zakamensk**	**55.90**	**50**	*eP*		**P**	**P**	**13 14 36.2**	**-1.5**	
ZAK					pmax	pmax				
	comp=Z,12nm,1.5s									
TIXI	**Tiksi**	**56.71**	**21**		LR	LR		13 42 15.5		
	comp=Z,394nm,19.2s,baz=11,slow=39									
TIXI	**Tiksi**	**56.71**	**21**		P	**P**		**13 14 43.2**	**+0.1**	
TIXI	**Tiksi**	**56.71**	**21**		P	**P**		**13 14 43.2**	**+0.1**	
TIXI					pmax	pmax				
	comp=Z,8.0nm,1.4s									
LSA	**Lhasa**	**57.84**	**77**		IAmb	IAmb		13 14 52.7		
	comp=Z,8.0nm,0.7s									
SONM	**Songino Array**	**58.89**	**52**		P	**P**		**13 14 59.2**	**+0.2**	
	comp=Z,11nm,0.9s,baz=294,slow=7.7,SNR=57									
SONM					LR	LR		13 42 49.2		
	comp=Z,462nm,20.7s,baz=306,slow=38									
	comp=Z,11nm,0.9s									
GTA	**Gaotai**	**58.89**	**63**		P	**P**		**13 14 58.8**	**-0.3**	
GTA					pP	pP		13 15 02.8	-3.0	
GTA					pmax	pmax				
	comp=Z,18nm,1.0s									
GTA					LR	LR				
	comp=Z,130nm,15.1s									
GTA					LR	LR				
	comp=Z,210nm,16.7s									
GTA					LR	LR				
	comp=Z,250nm,17.5s									
ULN	**Ulaanbaatar**	**59.26**	**52**	*i* P		**P**		**13 15 01.9**	**+0.4**	
ULN					pmax	pmax				
	comp=Z,13nm,1.0s									
SHL	**Shillong**	**60.68**	**81**		P	**P**		**13 15 09.7**	**-1.9**	
SHL	**Shillong**	**60.68**	**81**		P	**P**		**13 15 09.7**	**-1.9**	
SHL					pmax	pmax				
	comp=Z,15nm,1.0s									
BRDH	**Bariadhala**	**62.18**	**84**		LR	LR		13 47 39.8		
	comp=Z,52nm,18.8s,baz=206,slow=41									
YAK	**Yakutsk**	**62.51**	**30**		LR	LR		13 45 15.6		
	comp=Z,344nm,19.1s,baz=290,slow=39									
YAK	**Yakutsk**	**62.51**	**30**	*i* P		**P**		**13 15 23.5**	**+0.4**	
YAK					pmax	pmax				
	comp=Z,10.0nm,0.9s									
LZDM	**Lanzhou Array**	**63.33**	**65**		P	**P**		**13 15 29.4**	**-0.1**	
	comp=Z,6.7nm,0.6s,baz=300,slow=15,SNR=7.5									
	comp=Z,6.7nm,0.6s									
LZH	**Lanzhou**	**63.36**	**64**	*eP*		**P**		**13 15 30.0**	**+0.6**	
LZH					sP	sP		13 15 38.0	-0.8	
LZH					pmax	pmax				
	comp=Z,36nm,1.2s									
LZH					LR	LR				
	comp=Z,240nm,14.8s									
LZH					LR	LR				
	comp=Z,170nm,13.7s									
LZH					LR	LR				
	comp=Z,240nm,14.4s									
PALK	**Pallekele**	**63.74**	**104**		LR	LR		13 48 01.5		
	comp=Z,46nm,18.5s,baz=303,slow=40									
A36M	**Sachs Harbour**	**64.03**	**348**		P	**P**		**13 15 33.3**	**+0.2**	
A36M					IAmb	IAmb		13 15 34.4		
	comp=Z,8.0nm,0.8s									
HILR	**Hailar Array B**	**65.44**	**45**		P	**P**		**13 15 43.3**	**+0.6**	
	comp=Z,3.8nm,0.8s,baz=325,slow=1.8,SNR=3.2									
	comp=Z,3.8nm,0.8s									
HHC	**Hu-ho-hao-te**	**65.72**	**56**	*eP*		**P**		**13 15 45.3**	**+0.5**	
HHC					pmax	pmax				
	comp=Z,13nm,0.6s									
HHC					pmax	pmax				
	comp=Z,120nm,4.7s									
CD2	**Chengdu**	**66.21**	**69**		P	**P**		**13 15 48.0**	**0.0**	
CD2					pmax	pmax				
	comp=Z,50nm,0.9s									
LBTB	**Lobatse**	**66.51**	**174**			**P**		**13 15 50.7**	**+1.0**	
LBTB	**Lobatse**	**66.51**	**174**		P	**P**		**13 15 50.7**	**+1.0**	
LBTB					pmax	pmax				
	comp=Z,10.0nm,0.7s									
PZH	**PanZhiHua**	**67.35**	**74**		P	**P**		**13 15 56.5**	**+1.1**	
XAN	**Xi'an**	**67.94**	**64**	⇓P		**P**		**13 15 59.3**	**+0.4**	
XAN					pmax	pmax				
	comp=Z,36nm,1.0s									
C27K	**Jago River**	**68.41**	**354**		IAmb	IAmb		13 16 03.5		
	comp=Z,10nm,1.1s									
D27M	**Malcolm River**	**68.54**	**353**		IAmb	IAmb		13 16 03.8		
	comp=Z,4.8nm,1.0s									
D25K	**Kavik River**	**68.91**	**355**		IAmb	IAmb		13 16 05.9		
	comp=Z,5.4nm,1.1s									
HEH	**HeiHe**	**68.92**	**41**	*eP*		**P**		**13 16 05.0**	**+0.3**	
HEH					pmax	pmax				
	comp=Z,15nm,1.1s									
E28M	**Babbage River**	**69.01**	**352**		IAmb	IAmb		13 16 15.2		
	comp=Z,7.6nm,1.2s									
SEY	**Seymchan**	**69.21**	**21**		LR	LR		13 50 10.5		
	comp=Z,188nm,18.3s,baz=336,slow=39									
PSDB	**Penn State Uni**	**69.43**	**307**		P	**P**		**13 16 09.2**	**+1.1**	
D23K	**Nanushuk River**	**69.52**	**356**		IAmb	IAmb		13 16 45.5		
	comp=Z,6.5nm,1.1s									
E27K	**Coleen River**	**69.63**	**353**		IAmb	IAmb		13 16 19.8		
	comp=Z,15nm,1.4s									
YKA	**Yellowknife Ar**	**69.93**	**339**		P	**P**		**13 16 10.7**	**0.0**	
	comp=Z,1.4nm,0.8s,baz=33,slow=6.1,SNR=5.0									
	comp=Z,1.4nm,0.8s									
CHTO	**Chiang Mai**	**69.94**	**82**			**P**		**13 16 10.2**	**-1.3**	
CHTO					IAmb	IAmb		13 16 11.0		
	comp=Z,8.7nm,0.9s									
CHTO	**Chiang Mai**	**69.94**	**82**		P	**P**		**13 16 10.2**	**-1.3**	
CHTO					pmax	pmax				
	comp=Z,9.0nm,0.9s									
LYN	**LuoYang**	**70.00**	**61**		P	**P**		**13 16 12.0**	**+0.4**	
LYN					pmax	pmax				
	comp=Z,14nm,0.5s									
BOSA	**Boshof**	**70.06**	**175**		P	**P**		**13 16 12.6**	**+0.6**	
	comp=Z,13nm,0.7s,baz=356,slow=7.9,SNR=28									
	comp=Z,13nm,0.7s									
BOSA	**Boshof**	**70.06**	**175**		P	**P**		**13 16 12.5**	**+0.6**	
BOSA	**Boshof**	**70.06**	**175**		P	**P**		**13 16 12.5**	**+0.6**	
BOSA					pmax	pmax				
	comp=Z,14nm,0.8s									
CM31	**Chiang Mai Arr**	**70.16**	**83**		P	**P**		**13 16 11.7**	**-1.1**	
CM31					IAmb	IAmb		13 16 12.4		
	comp=Z,8.9nm,0.9s									
CMAR	**Chiang Mai Arr**	**70.16**	**83**		P	**P**		**13 16 11.3**	**-1.5**	
	comp=Z,4.0nm,0.8s,baz=308,slow=6.6,SNR=29									
CMAR					LR	LR		13 53 21.7		
	comp=Z,31nm,18.6s,baz=325,slow=41									
	comp=Z,4.0nm,0.8s									
CMAR	**Chiang Mai Arr**	**70.16**	**83**			**P**		**13 16 11.5**	**-1.3**	
CMAR	**Chiang Mai Arr**	**70.16**	**83**		P	**P**		**13 16 11.5**	**-1.3**	
G29M	**Pine Creek**	**70.47**	**351**		IAmb	IAmb		13 16 15.1		
	comp=Z,13nm,1.0s									
ENH	**Enshi**	**70.57**	**67**		P	**P**		**13 16 14.4**	**-0.9**	
BMAR	**Burnt Mountain**	**70.64**	**354**		P	**P**		**13 16 15.1**	**+0.1**	
F24K	**Squaw Lake**	**70.79**	**355**		IAmb	IAmb		13 16 18.2		
	comp=Z,8.0nm,1.1s									
G26K	**Porcupine Rive**	**71.03**	**353**		IAmb	IAmb		13 16 19.7		
	comp=Z,7.1nm,0.9s									
H29M	**Whitestone**	**71.17**	**351**		IAmb	IAmb		13 16 19.7		
	comp=Z,4.8nm,0.8s									
F21K	**Alatna River**	**71.38**	**357**		IAmb	IAmb		13 16 21.6		
	comp=Z,12nm,1.1s									
MA2	**Magadan**	**71.47**	**24**		LR	LR		13 51 38.5		
	comp=Z,365nm,18.8s,baz=305,slow=39									
H27K	**Steamboat Moun**	**71.52**	**352**		IAmb	IAmb		13 16 22.0		
	comp=Z,9.9nm,1.2s									
BNX	**BinXian**	**71.87**	**45**	⇓P		**P**		**13 16 22.8**	**0.0**	
BNX					pmax	pmax				
	comp=Z,10.0nm,0.9s									
I30M	**Mount Dempster**	**71.87**	**350**		IAmb	IAmb		13 16 23.7		
	comp=Z,6.7nm,0.9s									
CN2	**Changchun**	**72.09**	**47**		P	**P**		**13 16 24.3**	**+0.2**	
CN2					pmax	pmax				
	comp=Z,20nm,1.0s									
I28M	**Miner Creek**	**72.10**	**351**		IAmb	IAmb		13 16 25.1		
	comp=Z,5.6nm,0.9s									
J30M	**Hart River**	**72.48**	**349**		IAmb	IAmb		13 16 28.0		
	comp=Z,10.0nm,0.9s									
ULM	**Lac du Bonnet**	**72.53**	**323**		P	**P**		**13 16 27.5**	**+0.9**	
	comp=Z,3.6nm,0.6s,baz=45,slow=5.7,SNR=3.7									
	comp=Z,3.6nm,0.6s									
ULM	**Lac du Bonnet**	**72.53**	**323**		IAmb	IAmb		13 16 34.7		
	comp=Z,9.6nm,1.0s									
IMAR	**Indian Mountai**	**72.63**	**357**		P	**P**		**13 16 28.2**	**+1.2**	
Q52A	**Bidwell**	**72.89**	**307**		P	**P**		**13 16 29.4**	**+0.4**	
TNA	**Tin City**	**73.02**	**3**		P	**P**		**13 16 30.0**	**+0.8**	
K29M	**Barlow Dome**	**73.34**	**350**		IAmb	IAmb		13 16 33.2		
	comp=Z,15nm,1.4s									
MDP	**Montagnes des**	**73.34**	**262**		LR	LR		13 45 08.6		
	comp=Z,61nm,18.4s,baz=97,slow=33									
DAWY	**Dawson**	**73.37**	**351**		IAmb	IAmb		13 16 33.1		
	comp=Z,7.0nm,0.9s									
COLA	**College**	**73.41**	**354**	*i* P		**P**		**13 16 31.8**	**+0.2**	
COLA					pmax	pmax				
	comp=Z,28nm,3.3s									
J26L	**Joseph Creek**	**73.41**	**352**		IAmb	IAmb		13 16 37.3		
	comp=Z,8.2nm,1.2s									
ILAR	**Eielson Array**	**73.44**	**354**		P	**P**		**13 16 32.3**	**+0.5**	
	comp=Z,1.7nm,1.0s,baz=8.9,slow=6.9,SNR=17									
ILAR					LR	LR		13 49 17.9		
	comp=Z,59nm,20.8s,baz=40,slow=36									
	comp=Z,1.7nm,1.0s									
ILAR	**Eielson Array**	**73.44**	**354**		P	**P**		**13 16 33.1**	**+1.3**	
ILAR	**Eielson Array**	**73.44**	**354**		P	**P**		**13 16 33.1**	**+1.3**	
U54A	**Nelsons Funny**	**74.18**	**305**		IAmb	IAmb		13 16 38.5		
	comp=Z,8.1nm,0.8s									
V55A	**Taylorsville**	**74.24**	**304**		IAmb	IAmb		13 16 39.1		
	comp=Z,6.8nm,0.8s									
DOT	**Dot Lake**	**74.29**	**352**		P	**P**		**13 16 38.1**	**+1.2**	
MCK	**McKinley**	**74.62**	**355**		P	**P**		**13 16 38.9**	**+0.1**	
MCK					IAmb	IAmb		13 16 40.4		
	comp=Z,16nm,1.2s									
MCK	**McKinley**	**74.62**	**355**		P	**P**		**13 16 38.9**	**+0.1**	
MCK					pmax	pmax				
	comp=Z,16nm,1.2s									
M29M	**Somme Creek**	**74.81**	**350**		IAmb	IAmb		13 16 47.6		
	comp=Z,12nm,1.2s									
SJG	**San Juan**	**75.07**	**281**		LR	LR		13 45 15.7		
	comp=Z,26nm,20.7s,baz=134,slow=32									
NJ2	**Nanjing**	**75.73**	**60**	*eP*		**P**		**13 16 45.5**	**-0.1**	
NJ2					pmax	pmax				
	comp=Z,11nm,0.7s									
R33M	**Jennings River**	**76.46**	**345**		IAmb	IAmb		13 16 58.5		
	comp=Z,19nm,1.4s									
U49A	**Red Boiling Sp**	**76.59**	**307**		IAmb	IAmb		13 16 59.3		
	comp=Z,12nm,1.4s									
W50A	**Signal Mountai**	**77.19**	**306**		IAmb	IAmb		13 17 02.1		
	comp=Z,9.3nm,0.9s									
CLTN	**Cedars of Leba**	**77.20**	**307**		IAmb	IAmb		13 17 01.9		
	comp=Z,12nm,1.5s									
Y52A	**Lilburn**	**77.31**	**304**		IAmb	IAmb		13 16 56.0		
	comp=Z,8.7nm,0.8s									
KSAR	**Wonju Array Be**	**77.71**	**51**		P	**P**		**13 16 56.7**	**-0.1**	
KSAR	**Wonju Array Be**	**77.71**	**51**		P	**P**		**13 16 56.7**	**-0.1**	
KSRS	**Korea Array**	**77.73**	**51**		P	**P**		**13 16 56.0**	**-0.8**	
	comp=Z,2.9nm,0.8s,baz=314,slow=5.1,SNR=7.7									
	comp=Z,2.9nm,0.8s									
V48A	**Smith Brothers**	**77.73**	**307**		IAmb	IAmb		13 16 58.4		
	comp=Z,8.5nm,1.0s									
X48A	**Hartselle**	**78.74**	**306**		IAmb	IAmb		13 17 04.1		
	comp=Z,10.0nm,0.9s									
LRAL	**Lakeview Retre**	**79.68**	**305**		IAmb	IAmb		13 17 09.5		
	comp=Z,7.8nm,0.8s									
EGMT	**Eagleton**	**80.15**	**328**		P	**P**		**13 17 10.9**	**+0.9**	
PSI	**Prapat**	**80.18**	**95**		P	**P**		**13 17 09.5**	**-1.3**	
PSI					pmax	pmax				
	comp=Z,7.0nm,0.9s									
RPSI	**Rantau Prapat**	**80.25**	**95**		P	**P**		**13 17 09.5**	**-1.5**	
ASAJ	**Asahikawa**	**80.54**	**38**		LR	LR		13 57 19.2		
	comp=Z,185nm,18.6s,baz=338,slow=39									
JNU	**Nakatsue**	**82.47**	**52**		LR	LR		13 59 30.0		
	comp=Z,197nm,18.5s,baz=308,slow=40									
MIAR	**Mount Ida**	**82.53**	**310**		IAmb	IAmb		13 17 31.3		
	comp=Z,9.2nm,1.1s									
YNE	**Yellowstone No**	**82.69**	**327**		IAmb	IAmb		13 17 26.3		
	comp=Z,16nm,1.3s									
YMR	**Madison River**	**83.36**	**327**		IAmb	IAmb		13 17 37.1		
	comp=Z,14nm,1.4s									
DLMT	**Dillon**	**83.45**	**328**		IAmb	IAmb		13 17 30.6		
	comp=Z,11nm,1.4s									
SHEM	**Shemya Is, Ala**	**83.50**	**15**		LR	LR		13 59 38.8		
	comp=Z,59nm,19.2s,baz=284,slow=39									
YPP	**Pitchstone Pla**	**83.62**	**327**		IAmb	IAmb		13 17 39.6		
	comp=Z,15nm,1.4s									
MOOW	**Moose Ponds**	**84.03**	**326**		IAmb	IAmb		13 17 49.5		
	comp=Z,7.2nm,1.4s									
MJAR	**Matsushiro Arr**	**84.11**	**45**		P	**P**		**13 17 31.4**	**+0.4**	
	comp=Z,3.2nm,0.8s,baz=312,slow=4.3,SNR=5.4									
MJAR					LR	LR		13 58 37.2		
	comp=Z,174nm,18.4s,baz=325,slow=38									
	comp=Z,3.2nm,0.8s									
MJAR	**Matsushiro Arr**	**84.11**	**45**		IAmb	IAmb		13 17 32.2		
	comp=Z,2.5nm,0.8s									
FXWY	**Fox Creek**	**84.23**	**326**		IAmb	IAmb		13 17 34.7		
	comp=Z,8.4nm,1.5s									
PD31	**Pinedale Array**	**84.32**	**325**		IAmb	IAmb		13 17 33.4		
	comp=Z,9.1nm,1.4s									
PDAR	**Pinedale Array**	**84.32**	**325**		P	**P**		**13 17 31.9**	**-0.4**	
	comp=Z,1.1nm,0.8s,baz=38,slow=6.5,SNR=9.6									
	comp=Z,1.1nm,0.8s									
SDV	**Santo Domingo**	**84.33**	**277**		P	**P**		**13 17 32.3**	**-0.3**	
BDFB	**Brasilia**	**84.36**	**244**		P	**P**		**13 17 34.1**	**+1.6**	
	comp=Z,10nm,0.8s,baz=128,slow=2.4									
	comp=Z,10nm,0.8s									
BDFB	**Brasilia**	**84.36**	**244**		IAmb	IAmb		13 17 34.9		
	comp=Z,18nm,1.0s									
BCYI	**Bear Canyon**	**84.64**	**328**		IAmb	IAmb		13 17 42.4		
	comp=Z,9.7nm,1.5s									
JOW	**Kunigami**	**85.30**	**58**		LR	LR		14 00 09.9		
	comp=Z,123nm,18.8s,baz=142,slow=39									
WMOK	**Wichita Mounta**	**85.31**	**313**		IAmb	IAmb		13 17 45.7		
	comp=Z,8.6nm,1.3s									
BMO	**Blue Mountains**	**85.67**	**331**		IAmb	IAmb		13 17 49.5		
	comp=Z,12nm,1.5s									
DRIO	**Del Rio**	**90.33**	**311**		P	**P**		**13 18 01.9**	**+0.7**	
DRIO					IAmb	IAmb		13 18 10.1		
	comp=Z,11nm,1.2s									
PECS	**Pecos**	**90.62**	**314**		IAmb	IAmb		13 18 11.0		
	comp=Z,11nm,1.5s									
TX31	**Lajitas Ar. Si**	**92.10**	**313**		P	**P**		**13 18 08.8**	**-0.8**	
TX31					IAmb	IAmb		13 18 11.2		
	comp=Z,6.1nm,1.2s									
TXAR	**Lajitas Array**	**92.10**	**313**		P	**P**		**13 18 10.3**	**+0.8**	
	comp=Z,1.1nm,0.8s,baz=39,slow=5.0,SNR=10									
TXAR					LR	LR		14 00 06.7		
	comp=Z,71nm,20.9s,baz=44,slow=36									
	comp=Z,1.1nm,0.8s									
TXAR	**Lajitas Array**	**92.10**	**313**		P	**P**		**13 18 08.8**	**-0.8**	
HERN	**Volcan Telica**	**93.63**	**290**		IAmb	IAmb		13 18 20.5		
	comp=Z,33nm,0.7s									
CPUP	**Villa Florida**	**98.00**	**242**		LR	LR		14 05 10.8		
	comp=Z,49nm,18.7s,baz=221,slow=37									
NVL	**N'lazarevskaya**	**112.19**	**183**	*i* PKIKP		**PKiKP**		**13 23 38.0**	**+3.8**	
NVL					*e*			13 24 19.9		
NVL					*e*PPP	PPP		13 26 42.0		
NVL					*e*SS	SS		13 40 02.5	+5.3	
NVL					*e*SSS	SSS		13 44 13.0		
NVL					pmax	pmax				
	comp=Z,16nm,1.4s									
WRA	**Warramunga Arr**	**121.33**	**90**	PKP		**PKPdf**		**13 23 52.3**	**-1.0**	
	comp=Z,0.2nm,0.7s,baz=312,slow=2.7,SNR=6.1									
AS31	**Alice Springs**	**123.19**	**93**	PKPdf		**PKPdf**		**13 23 55.9**	**-1.0**	
ASAR	**Alice Springs**	**123.19**	**93**	PKP		**PKPdf**		**13 23 55.2**	**-1.7**	
	comp=Z,1.7nm,0.7s,baz=307,slow=1.9,SNR=32									
ASAR				PP		**PP**		**13 25 31.7**	**-5.7**	
	comp=Z,0.7nm,1.0s,baz=310,slow=6.1,SNR=4.3									
ASAR	**Alice Springs**	**123.19**	**93**	PKPdf		**PKPdf**		**13 23 56.0**	**-0.9**	
ASAR	**Alice Springs**	**123.19**	**93**	PKIKP		**PKPdf**		**13 23 56.0**	**-0.9**	
QSPA	**South Pole Qui**	**131.45**	**180**	PKP		**PKiKP**		**13 24 13.3**	**+1.0**	
	comp=Z,2.5nm,1.0s,baz=210,slow=2.0,SNR=12									

*IDC **26** 13:14:51.3±0.5, 8.7°N×39.7°E×84W, h0^km, mb4.1/24, mbtmp4.1/24, MS3.8/43, Error ellipse: s-maj=17.4km s-min=13.0km az=134.0*

*NEIC **26** 13:14:53.4±2.1, 8.7°N±0.7°×39.7°E±0.9, h10^km±1^km, mb4.9/78, Error ellipse: s-maj=16.1km s-min=15.2km az=129.0*

*GCMT **26** 13:14:57.4±0.3, 8.8°N±0.02°×39.85°E±0.02, h14^km±1^km, MW4.9/91, Moment Tensor Solution. s20,c21; s91,c123; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.85±.13; Mθθ=0.34±.11; Mφφ=0.51±.10; Mrθ=-0.46±.23; Mθφ=-2.39±.11; Mφr=0.51±.21; Best double couple: M=2.45300×10^16^ NP1:φs=271.00000°, δ=82.00000°, λ=174.00000°. NP2: φs=1.00000°, δ=84.00000°, λ=8.00000°. Principal axes: T 2.9410, Plg10.0000°, Azm226.0000°; N -0.9760, Plg80.0000°, Azm39.0000°; P -1.9650, Plg1.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 13:14:52.8±0.4, 8.79°N±0.06°×39.86°W±0.06, h10^km, n160, σ1§14/112, mb4.8/54, MS3.9/42, 1C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDP	**Montagnes des**	**13.20**	**255**	Pn		**Pn**	**13 17 57.8**	**-2.8**
	2.4nm,0.3s,baz=72,slow=15,SNR=19							
MDP				Sn		Sn	13 20 13.3	-14
	1.8nm,0.3s,baz=137,slow=19,SNR=5.1							
MDP				LR		LR	13 22 19.4	
	comp=Z,393nm,20.7s,baz=88,slow=34							
TMAB	**Tom-Au,PA,Br**	**13.80**	**217**	*eP*		**Pn**	**13 18 07.8**	**-0.8**
RCBR	**Riachuelo**	**15.05**	**165**	Pn		**Pn**	**13 18 26.1**	**+0.3**
RCBR	**Riachuelo**	**15.05**	**165**	*eP*		**Pn**	**13 18 26.8**	**+1.0**
MAL2	**Monte Alegre,**	**17.86**	**234**	Pn		**Pn**	**13 19 01.0**	**-0.7**
PRPB	**Paraupebas**	**17.87**	**214**	*eP*		**Pn**	**13 19 00.7**	**-1.2**
SMTB	**Santa Maria do**	**19.15**	**204**	*eP*		**P**	**13 19 16.5**	**0.0**
BBGH	**Gun Hill**	**19.81**	**284**	P		**Pn**	**13 19 26.2**	**+0.9**
ITTB	**Itaituba**	**20.53**	**231**	*eP*		**P**	**13 19 31.4**	**-0.2**
BOAV	**Boa Vista**	**21.51**	**254**			**P**	**13 19 42.1**	**-0.1**
BOAV					IAmb	IAmb	13 19 47.5	
	comp=Z,50nm,0.9s							
BOAV	**Boa Vista**	**21.51**	**254**	*eP*		**P**	**13 19 42.2**	**0.0**
SDBA	**SAO DESIDERIO**	**21.65**	**193**	*eP*		**P**	**13 19 44.1**	**+0.4**
NPGB	**Novo Progresso**	**22.05**	**225**	*eP*		**P**	**13 19 47.6**	**-0.4**
GDU01	**Guandu, BA**	**22.37**	**179**	*eP*		**P**	**13 19 53.4**	**+2.0**
SNDB	**Serra Nova Dou**	**23.55**	**209**	*eP*		**P**	**13 20 04.2**	**+0.6**
MACA	**Manacapuru-AM**	**23.91**	**241**	P		**P**	**13 20 08.1**	**+0.9**
MACA					IAmb	IAmb	13 20 14.9	
	comp=Z,22nm,0.9s							
MACA	**Manacapuru-AM**	**23.91**	**241**	*eP*		**P**	**13 20 07.7**	**+0.5**
CMC01	**Camacan, BA**	**24.00**	**179**	*eP*		**P**	**13 20 10.2**	**+2.2**
JANB	**Januaria**	**24.10**	**191**	*eP*		**P**	**13 20 08.1**	**-0.8**
CLDB	**Colider**	**25.16**	**219**	*eP*		**P**	**13 20 19.2**	**+0.7**
GUA01	**Guaratinga, BA**	**25.21**	**180**	*eP*		**P**	**13 20 21.0**	**+2.0**
BDFB	**Brasilia**	**25.58**	**198**	P		**P**	**13 20 22.5**	**0.0**
	comp=Z,23nm,1.2s,baz=315,slow=1.4							
BDFB				LR		LR	13 30 08.6	
	comp=Z,298nm,18.2s,baz=308,slow=36							
	comp=Z,23nm,1.2s							
BDFB	**Brasilia**	**25.58**	**198**			**P**	**13 20 22.4**	**0.0**
BDFB					IAmb	IAmb	13 20 25.4	
	comp=Z,18nm,1.0s							
PDRB	**Porto dos Gac**	**26.31**	**220**	*eP*		**P**	**13 20 29.2**	**+0.2**
ABR01	**Abrolhos, BA**	**26.61**	**178**	*eP*		**P**	**13 20 32.3**	**+0.7**
ARAG	**Araguaiana, MT**	**27.07**	**206**	*eP*		**P**	**13 20 36.2**	**+0.4**
SJG	**San Juan**	**27.16**	**293**	LR		LR	13 29 05.3	
	comp=Z,146nm,21.8s,baz=106,slow=31							
DIAM	**Diamantina, MG**	**27.18**	**188**	*eP*		**P**	**13 20 37.5**	**+0.6**
OBIP	**Obispado Ponce**	**27.56**	**292**	P		**P**	**13 20 42.4**	**+2.1**
TEFE	**Tefe**	**27.56**	**245**	*eP*		**P**	**13 20 41.5**	**+1.2**
SALV	**Santo Antonio**	**29.12**	**213**	*eP*		**P**	**13 20 54.7**	**+0.6**
PP1B	**Ponte de Pedra**	**30.13**	**209**	*eP*		**P**	**13 21 04.5**	**+1.4**
H10N3	**ASCENSION HYDR**	**30.19**	**122**	T		T	13 52 44.3	
	baz=302,slow=75,SNR=750							
H10N2	**ASCENSION HYDR**	**30.20**	**122**	T		T	13 52 44.7	
	baz=302,slow=75,SNR=460							
H10N1	**ASCENSION HYDR**	**30.21**	**122**	T		T	13 52 42.9	
	baz=302,slow=75,SNR=557							
SDV	**Santo Domingo**	**30.40**	**273**	LR		LR	13 32 54.0	
	comp=Z,92nm,19.2s,baz=66,slow=36							
SDV	**Santo Domingo**	**30.40**	**273**	*eP*		**P**	**13 21 06.3**	**+0.5**
H10S3	**ASCENSION HYDR**	**30.67**	**124**	T		T	13 53 20.7	
	baz=299,slow=74,SNR=330							
H10S2	**ASCENSION HYDR**	**30.69**	**124**	T		T	13 53 22.2	
	baz=281,slow=74,SNR=400							
PTLB	**Pontes e Lacer**	**30.74**	**219**			**P**	**13 21 08.7**	**+0.2**
PTLB	**Pontes e Lacer**	**30.74**	**219**	*eP*		**P**	**13 21 09.0**	**+0.5**
**DU

comp=Z,18nm,1.4s
CCM Cathedral Cave 54.53 311 P P 13 24 22.3 +1.1
CCM IAmb IAmb 13 25 16.3
comp=Z,13nm,1.5s
MGMO Mountain Grove 55.03 309 P P 13 24 25.1 +0.2
P40A Paris 55.60 312 P 13 24 28.9 -0.1
P40A IAmb IAmb 13 24 37.7
comp=Z,7.5nm,0.8s
VAE Valguarnera 56.55 51 LR LR 13 48 15.5
comp=Z,136nm,20.0s,baz=309,slow=36
DAVOX Davos/Dischmat 56.68 39 LR LR 13 44 45.3
comp=Z,153nm,22.0s,baz=251,slow=32
PLCA Paso Flores 56.82 208 P P 13 24 37.2 -0.4
comp=Z,4.1nm,0.8s,baz=41,slow=7.2,SNR=6.4
PLCA LR LR 13 49 49.6
comp=Z,230nm,19.1s,baz=46,slow=37
comp=Z,4.1nm,0.8s
BORG Borgarnes 57.37 9 LR LR 13 43 18.9
comp=Z,96nm,21.2s,baz=170,slow=30
BRDY Brady 59.16 301 P P 13 24 54.1 -0.2
GERES GERESS Array B 59.88 38 LR LR 13 47 14.9
comp=Z,52nm,21.1s,baz=247,slow=32
ECSD EROS Data Cent 60.17 316 P P 13 25 00.8 -0.2
ECSD IAmb IAmb 13 25 11.0
comp=Z,6.7nm,1.1s
SAND Sanderson 61.66 299 P 13 25 11.3 -0.2
SAND IAmb IAmb 13 25 21.7
comp=Z,5.5nm,1.0s
VRAC Vranov 61.82 38 LR LR 13 49 31.3
comp=Z,56nm,20.0s,baz=242,slow=34
ULM Lac du Bonnet 61.89 323 P P 13 25 11.9 -0.7
comp=Z,3.7nm,0.5s,baz=116,slow=7.5,SNR=3.5
comp=Z,3.7nm,0.5s
ULM Lac du Bonnet 61.89 323 IAmb IAmb 13 25 21.7
comp=Z,9.4nm,0.8s
SUSD Miller 61.99 316 P P 13 25 13.1 -0.2
TXAR Lajitas Array 62.94 298 P P 13 25 20.0 0.0
comp=Z,0.4nm,0.6s,baz=96,slow=5.9,SNR=5.8
comp=Z,0.4nm,0.6s
TXAR Lajitas Array 62.94 298 P P 13 25 19.5 -0.5
TX31 Lajitas Ar. Si 62.94 298 P P 13 25 19.1 -0.9
TX31 IAmb IAmb 13 25 30.7
comp=Z,18nm,1.9s
SUMG Summit 63.74 0 P P 13 25 25.6 +0.7
SUMG IAmb IAmb 13 25 36.0
comp=Z,9.7nm,0.9s
SUMG Summit 63.74 0 *i* P **P 13 25 25.0 +0.1**
GDL2 Guadalupe Moun 63.81 301 P P 13 25 26.1 +0.3
NOA NORSAR Array B 64.22 25 P P 13 25 28.9 +1.0
comp=Z,0.2nm,0.5s,baz=233,slow=6.7,SNR=1.5
NOA LR LR 13 48 16.3
comp=Z,72nm,21.3s,baz=235,slow=31
comp=Z,0.2nm,0.5s
IDI Anoyia 64.39 55 LR LR 13 52 01.6
comp=Z,103nm,21.9s,baz=297,slow=35
HFS Hagfors 64.83 26 P P 13 25 32.1 +0.3
comp=Z,1.2nm,0.6s,baz=249,slow=10,SNR=1.4
HFS LR LR 13 50 15.6
comp=Z,64nm,19.2s,baz=242,slow=33
comp=Z,1.2nm,0.6s
JMIC Jan Mayen 65.16 11 LR LR 13 45 22.1
comp=Z,21nm,20.9s,baz=202,slow=28
ISCO Idaho Springs 65.82 310 P 13 25 39.5 +0.5
DBG Daneborg 66.45 6 *i* P **P 13 25 43.1 +1.1**
S22A 4UR Ranch, Cre 66.48 307 IAmb IAmb 13 25 54.5
comp=Z,12nm,1.5s
BUR08 Bucovina Ar. S 66.82 42 P P 13 25 43.4 -1.6
BUR08 IAmb IAmb 13 25 46.7
comp=Z,18nm,1.9s
MLR Muntele Rosu 66.87 44 P P 13 25 43.2 -2.2
NEEM North Greenlan 68.88 357 *i* P **P 13 25 57.2 -0.5**
RDMU Red Mountain 68.93 310 IAmb IAmb 13 26 08.4
comp=Z,5.6nm,1.0s
PDAR Pinedale Array 69.19 312 P P 13 25 59.2 -1.0
comp=Z,0.4nm,0.7s,baz=96,slow=3.1,SNR=3.7
comp=Z,0.4nm,0.7s
AKASG Malin Array Be 70.03 39 P P 13 26 05.2 +0.3
comp=Z,0.2nm,0.3s,baz=261,slow=5.5,SNR=1.1
AKASG LR LR 13 53 41.9
comp=Z,78nm,21.9s,baz=278,slow=33
comp=Z,0.2nm,0.3s
LOHW Long Hollow 70.05 313 P 13 26 05.6 +0.1
LOHW IAmb IAmb 13 27 45.8
comp=Z,15nm,1.9s
YMR Madison River 70.44 314 IAmb IAmb 13 26 19.1
comp=Z,15nm,1.0s
HWUT Hardware Ranch 70.54 311 P 13 26 08.3 -0.2
HWUT IAmb IAmb 13 26 18.2
comp=Z,11nm,1.1s
YHB Horse Butte 70.61 314 IAmb IAmb 13 26 19.5
comp=Z,17nm,1.1s
FINES FINESS Array B 70.92 28 P P 13 26 08.4 -1.7
comp=Z,1.5nm,0.7s,baz=263,slow=8.3,SNR=1.9
FINES LR LR 13 51 33.0
comp=Z,68nm,21.7s,baz=242,slow=31
comp=Z,1.5nm,0.7s
BGU Big Grassy Mou 71.58 310 IAmb IAmb 13 26 25.0
comp=Z,14nm,1.1s
DLMT Dillon 71.67 315 IAmb IAmb 13 26 26.4
comp=Z,10nm,1.0s
BRTR Keskin Array B 71.75 51 P P 13 26 15.8 0.0
comp=Z,1.3nm,0.9s,baz=261,slow=6.6,SNR=4.6
BRTR LR LR 13 59 00.7
comp=Z,27nm,19.8s,baz=268,slow=37
comp=Z,1.3nm,0.9s
EIL Elat 72.53 62 LR LR 13 59 41.4
comp=Z,84nm,19.3s,baz=348,slow=37
HLID Hailey 72.80 313 P 13 26 21.8 -0.3
MMAI Mount Meron Ar 72.93 58 LR LR 13 58 40.7
comp=Z,40nm,21.7s,baz=276,slow=36
BOSA Boshof 72.95 123 P P 13 26 22.0 -1.0
comp=Z,3.3nm,0.8s,baz=302,slow=6.7,SNR=5.0
comp=Z,3.3nm,0.8s
ARCES ARCESS Array B 73.32 19 P P 13 26 23.7 -0.7
comp=Z,3.3nm,1.0s,baz=255,slow=5.5,SNR=3.9
ARCES LR LR 13 53 15.4
comp=Z,31nm,20.3s,baz=255,slow=31
comp=Z,3.3nm,1.0s
ARCES ARCESS Array B 73.32 19 IAmb IAmb 13 26 30.6
comp=Z,136nm,2.0s
ASF Jabal al Asfar 74.19 59 LR LR 13 59 42.7
comp=Z,38nm,20.6s,baz=293,slow=36
NEW Newport 75.01 318 LR LR 13 57 23.7
comp=Z,142nm,19.0s,baz=66,slow=34
OBN Obninsk 75.08 35 LR LR 13 56 46.8
comp=Z,88nm,21.7s,baz=156,slow=34
YKA Yellowknife Ar 75.21 332 P P 13 26 34.8 -0.7
comp=Z,0.6nm,0.7s,baz=102,slow=4.9,SNR=7.6
comp=Z,0.6nm,0.7s
NVAR Mina Array Bea 75.55 307 P P 13 26 39.9 +1.7
comp=Z,0.2nm,0.6s,baz=86,slow=8.1,SNR=4.1
comp=Z,0.2nm,0.6s
A36M Sachs Harbour 80.27 342 P 13 27 04.0 +0.5
A36M IAmb IAmb 13 27 14.3
comp=Z,7.8nm,0.8s
GNI Garni 80.28 51 LR LR 14 03 28.2
comp=Z,36nm,20.5s,baz=282,slow=36
KIRV Kirov 82.19 32 LR LR 13 59 54.4
comp=Z,94nm,21.7s,baz=292,slow=33
DLBC Dease Lake 82.67 328 LR LR 14 01 09.7
comp=Z,54nm,19.1s,baz=44,slow=34
INK Inuvik 83.25 338 P 13 27 18.9 -0.4
INK IAmb IAmb 13 27 30.3
comp=Z,18nm,1.4s
F31M Tsiigehtchic 83.44 337 IAmb IAmb 13 27 30.6
comp=Z,11nm,0.9s
SNAA Sanae 83.94 169 P P 13 27 22.9 +0.1
comp=Z,1.0nm,1.0s,baz=304,slow=6.2,SNR=9.2
comp=Z,1.0nm,1.0s
SNAA Sanae 83.94 169 IAmb IAmb 13 27 37.6
comp=Z,12nm,1.8s
K29M Barlow Dome 85.54 334 IAmb IAmb 13 27 42.3
comp=Z,10nm,1.1s
D27M Malcolm River 85.75 339 IAmb IAmb 13 27 43.7
comp=Z,7.5nm,1.1s
E27K Coleen River 86.23 338 P 13 27 35.0 +0.6
E27K IAmb IAmb 13 27 45.5
comp=Z,14nm,0.9s
C27K Jago River 86.59 340 IAmb IAmb 13 27 47.7
comp=Z,14nm,1.0s
H27K Steamboat Moun 86.69 337 IAmb IAmb 13 27 48.0
comp=Z,8.0nm,0.9s
ARTI Arti 87.29 33 LR LR 14 06 47.1
comp=Z,90nm,18.3s,baz=276,slow=36
AKTO Aktyubinsk 88.28 39 LR LR 14 05 53.8
comp=Z,66nm,20.4s,baz=270,slow=35
ILAR Eielson Array 89.24 336 P P 13 27 49.3 +0.4
comp=Z,0.8nm,0.9s,baz=71,slow=3.6,SNR=8.3
comp=Z,0.8nm,0.9s
SYO Syowa Base 94.39 159⇑ *e*P **P 13 28 10.8 -1.7**
BVAR Borovoye Array 94.91 35 LR LR 14 10 19.7
comp=Z,59nm,19.2s,baz=283,slow=35

IDC ***26*** *13:25:06.8±2.3, 1°.59N×126°.18E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=261.1km s-min=22.4km az=66.0*
DJA ***26*** *13:25:12.1±0.3, 1°.1N±3°×12°.6E±°, h10km, M3.3/8, MLv3.3/8*
ISC 26 13:25:13.8±1.2,1°.5N±0°.1×126°.23E±0°.08,h54km,n8,
σ1§04/8,mb3.3/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**122**	P		**P**	**Pn**	**13 25 36.4**	**+0.3**
KMSI	**Cibinong**	**2.42**	**248**	P		**P**	**Pn**	**13 25 50.7**	**-0.3**
GTOI	**Gorontalo**	**3.33**	**256**	P		**P**	**Pn**	**13 26 04.2**	**+0.8**
SANI	**Sanana**	**3.51**	**184**	P		**P**	**Pn**	**13 26 05.5**	**-0.4**
WRA	**Warramunga Arr**	**22.72**	**160**	P		**P**	**P**	**13 30 11.4**	**0.0**
	0.4nm,0.4s,baz=338,slow=10,SNR=16								
	0.4nm,0.4s								
ASAR	**Alice Springs**	**26.08**	**164**	P		**P**	**P**	**13 30 43.7**	**+1.1**
	0.2nm,0.4s,baz=344,slow=11,SNR=18								
	0.2nm,0.4s								
MKAR	**Makanchi Array**	**59.13**	**326**	P		**P**	**P**	**13 35 07.3**	**-1.7**
	0.3nm,0.8s,baz=129,slow=7.7,SNR=1.7								
	0.3nm,0.8s								
KURBB	**Kurchatov Arra**	**63.37**	**328**	P		**P**	**P**	**13 35 38.1**	**+0.6**
	0.2nm,0.4s,baz=120,slow=6.5,SNR=1.5								
	0.2nm,0.4s								

THE ***26*** *13:31:20.1, 42°.1N±12°×2°.0E±°, h27km±17km, M2.9/7, MLh2.9/7*
BEO ***26*** *13:31:21.3±0.6, 41°.58N×19°.77E, h6km±2km, ML2.7/13*
TIR ***26*** *13:31:22.0, 41°.61N×19°.65E, h6km±2km, Ml2.7/3*
ISC 26 13:31:21.1±1.1,41°.62N±0°.02×19°.56E±0°.03,h6km±9km,
n45,σ1§03/74,7C-6D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**139**	Pg		**Pg**	**Pg**	**13 31 27.7**	**-0.2**
TIR				S		**Sg**	**Sg**	**13 31 32.6**	**0.0**
TIR				AML		AML	AML	13 31 32.7	
	3.8nm,0.6s								
SDA	**Shkodra**	**0.44**	**354**	P		**Pg**	**Pg**	**13 31 29.9**	**+0.3**
SDA				S		**Sb**	**Sb**	**13 31 37.7**	**-0.4**
DRME	**Dracevica, Mon**	**0.64**	**334**	*e*Pg		**Pg**	**Sb**	**13 31 33.8**	**+0.5**
DRME				*e*Sg		**Sb**	**Sb**	**13 31 44.4**	**+0.6**
PHP	**Peshkopia**	**0.66**	**84**	Pg		**Pg**	**Pg**	**13 31 33.4**	**-0.5**
PHP				Sg		**Sg**	**Sg**	**13 31 41.1**	**-1.5**
PHP				AML		AML	AML	13 31 46.8	
	2.2nm,0.4s								
PHP	**Peshkopia**	**0.66**	**84**	P		**Pg**	**Pg**	**13 31 33.2**	**-0.7**
PHP				S		**Sb**	**Sb**	**13 31 44.1**	**-0.5**
PDG	**Podgorica**	**0.85**	**345**	⇑P		**Pb**	**Pb**	**13 31 38.6**	**+0.4**
PDG				⇑S		**Sn**	**Sn**	**13 31 53.9**	**+1.5**
PDG	**Podgorica**	**0.85**	**345**	*e*Pg		**Pg**	**Pg**	**13 31 37.4**	**+0.1**
PDG				*e*Sg		**Sn**	**Sn**	**13 31 52.9**	**+0.6**
PVY	**Plav**	**1.02**	**17**	*e*Pg		**Pg**	**Pg**	**13 31 39.9**	**-0.8**
KOME	**Kolasin**	**1.23**	**358**	*e*Pg		**Pg**	**Pg**	**13 31 44.8**	**0.0**
KOME				*e*Sg		**Sn**	**Sn**	**13 32 03.1**	**+1.0**
BEY	**Berane**	**1.28**	**11**	*e*Pg		**Pn**	**Pn**	**13 31 44.4**	**-1.3**
BEY				*e*Sg		**Sn**	**Sn**	**13 32 04.1**	**+0.9**
KBN	**Korca**	**1.36**	**136**	P		**Pb**	**Pb**	**13 31 47.0**	**+0.1**
KBN				Sg		**Sn**	**Sn**	**13 32 05.1**	**0.0**
KBN				AML		AML	AML	13 32 10.7	
	0.5nm,0.5s								
KBN	**Korca**	**1.36**	**136**	P		**Pb**	**Pb**	**13 31 47.0**	**+0.1**
KBN				S		**Sn**	**Sn**	**13 32 07.4**	**+2.4**
NEST	**Nestorio**	**1.65**	**136**	P		**Pb**	**Pb**	**13 31 51.4**	**-0.5**
NEST				S		**Sg**	**Sg**	**13 32 14.8**	**+0.9**
SJES	**Sjenica**	**1.67**	**10**	*e*Pg		**Pb**	**Pb**	**13 31 52.3**	**-0.1**
SJES				*e*Sg		**Sg**	**Sg**	**13 32 15.4**	**+0.5**
PLE	**Pljevlja**	**1.72**	**356**	*e*Pg		**Pb**	**Pb**	**13 31 53.7**	**+0.5**
PLE				*e*Sg		**Sg**	**Sg**	**13 32 16.1**	**-0.2**
PENT	**Pentalofos**	**1.85**	**139**	P		**Pn**	**Pn**	**13 31 54.4**	**+0.8**
PENT				S		**Sg**	**Sg**	**13 32 20.8**	**+0.1**
KEK	**Kerkira**	**1.91**	**174**	P		**Pb**	**Pb**	**13 31 56.3**	**-0.1**
KEK				S		**Sg**	**Sg**	**13 32 24.9**	**+2.6**
SELS	**Selova**	**1.98**	**35**	*e*Pg		**Pn**	**Pn**	**13 31 55.6**	**+0.4**
SELS				*e*Sg		**Sn**	**Sn**	**13 32 20.6**	**+0.3**
IVAS	**Ivanjica**	**2.01**	**12**	*e*Pn		**Pn**	**Pn**	**13 31 55.9**	**+0.3**
IVAS				*e*Sn		**Sn**	**Sn**	**13 32 20.3**	**-0.8**
KZN	**Kozani**	**2.12**	**127**	P		**Pn**	**Pn**	**13 31 58.0**	**+0.7**
KZN				S		**Sn**	**Sn**	**13 32 25.2**	**+1.3**
IGT	**Igoumenitsa**	**2.16**	**164**	P		**Pb**	**Pb**	**13 31 59.3**	**-1.3**
IGT				S		**Sg**	**Sg**	**13 32 30.7**	**+0.2**
GOCS	**Kraljevo Serbi**	**2.17**	**26**	*e*Pn		**Pn**	**Pn**	**13 31 58.1**	**+0.1**
GOCS				*e*Sn		**Sn**	**Sn**	**13 32 25.5**	**+0.2**
BBLS	**Lazi&#263i**	**2.25**	**357**	*e*Pn		**Pn**	**Pn**	**13 32 00.4**	**+1.4**
BBLS				*e*Sn		**Sn**	**Sn**	**13 32 26.8**	**-0.4**
BOSS	**Bosilegrad**	**2.35**	**67**	*e*Pg		**Pn**	**Pn**	**13 32 00.7**	**+0.5**
BOSS				*e*Sg		**Sn**	**Sn**	**13 32 29.5**	**+0.1**
MATE	**Matera**	**2.36**	**247**	⇑P		**Pn**	**Pn**	**13 31 57.9**	**-2.5**
GRUS	**Gruza**	**2.43**	**20**	*e*Pn		**Pn**	**Pn**	**13 32 01.9**	**+0.6**
GRUS				*e*Sn		**Sn**	**Sn**	**13 32 31.4**	**0.0**
DIVS	**Divibare**	**2.50**	**7**	*e*Pn		**Pn**	**Pn**	**13 32 01.5**	**-0.9**
DIVS				*e*Sn		**Sn**	**Sn**	**13 32 32.2**	**-1.2**
BOVS	**Bovan**	**2.57**	**37**	⇑P		**Pn**	**Pn**	**13 32 03.4**	**+0.1**
BOVS	**Bovan**	**2.57**	**37**	*e*Pn		**Pn**	**Pn**	**13 32 03.3**	**+0.1**
BOVS				*e*Sn		**Sn**	**Sn**	**13 32 33.9**	**-0.9**
TRUS	**Trudelj**	**2.68**	**13**	*e*Pn		**Pn**	**Pn**	**13 32 06.7**	**+1.9**
ZAPS	**Zavoj**	**2.81**	**53**	*e*Pn		**Pn**	**Pn**	**13 32 06.6**	**-0.1**
ZAPS				*e*Sn		**Sn**	**Sn**	**13 32 39.4**	**-1.6**
TEKS	**Tekeris**	**2.93**	**360**	*e*Pn		**Pn**	**Pn**	**13 32 08.0**	**-0.3**
ZAGS	**Zajecar**	**2.95**	**41**	*e*Pn		**Pn**	**Pn**	**13 32 09.1**	**+0.6**
ZAGS				*e*Sn		**Sn**	**Sn**	**13 32 43.3**	**-1.0**
KUBS	**Kucevo**	**3.20**	**28**	*e*Pn		**Pn**	**Pn**	**13 32 10.5**	**-1.4**
KUBS				*e*Sn		**Sn**	**Sn**	**13 32 48.3**	**-2.1**
TIP	**Timpagrande**	**3.24**	**222**	⇑P		**Pn**	**Pn**	**13 32 09.9**	**-2.7**
MDVR	**Moldovita**	**3.54**	**26**	⇓P		**Pn**	**Pn**	**13 32 16.8**	**+0.2**
VRSS	**Vrsac**	**3.73**	**20**	*e*Pn		**Pn**	**Pn**	**13 32 17.2**	**-2.1**
HERR	**Herculane**	**3.88**	**32**	⇑P		**Pn**	**Pn**	**13 32 21.6**	**+0.4**
BZS	**Buzias**	**4.27**	**20**	⇑P		**Pn**	**Pn**	**13 32 26.9**	**+0.3**
GZR	**Gura Zlata**	**4.44**	**31**	⇓P		**Pn**	**Pn**	**13 32 30.3**	**+1.2**
ARR	**Arges**	**5.26**	**43**	⇓P		**Pn**	**Pn**	**13 32 41.8**	**+1.5**
VOIR		**5.53**	**44**	⇓P		**Pn**	**Pn**	**13 32 44.9**	**+1.0**
MLR	**Muntele Rosu**	**6.04**	**48**	⇓P		**Pn**	**Pn**	**13 32 51.1**	**-0.1**
VRI	**Vrincioaia**	**6.71**	**48**	⇓P		**Pn**	**Pn**	**13 33 01.0**	**+0.9**
MODS	**Modra-Piesok**	**6.95**	**347**	*e*PG		**Pg**	**Pg**	**13 33 34.5**	**+0.4**

IDC ***26*** *13:40:27.7±3.8, 40°.46N×122°.56E, h0km, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=40.5km s-min=20.2km az=58.0*
KEA ***26*** *13:40:28.1, 40°.33N×122°.69E, h3km, ML3.2/2*
ISC 26 13:40:29.3±2.2,40°.4N±0°.1×122°.6E±0°.2,h10km,n5,
σ1§42/7,Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PYS	**Pyongsong**	**2.74**	**114**	Sg		**Sg**	**Sg**	**13 41 58.6**	**+1.3**
PYS				AML		AML	AML		
	comp=N,370nm,0.5s								
PYS				AML		AML	AML		
	comp=E,350nm,0.3s								
PYS				AML		AML	AML		
	comp=Z,116nm,0.2s								
PYAG	**Pyongyang**	**2.77**	**118**	Pg		**Pg**	**Pg**	**13 41 20.6**	**-1.7**
PYAG				Sg		**Sg**	**Sg**	**13 41 58.8**	**+0.6**
PYAG				AML		AML	AML		
	comp=N,98nm,0.5s								
PYAG				AML		AML	AML		
	comp=E,116nm,0.4s								
PYAG				AML		AML	AML		
	comp=Z,50nm,0.1s								
KSRS	**Korea Array**	**5.07**	**124**	Pn		**Pn**	**Pn**	**13 41 45.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=310,slow=14,SNR=7.0								
KSRS				Sn		**Sn**	**Sn**	**13 42 45.4**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=304,slow=23,SNR=4.4								
KSRS				Lg		Lg	Lg	13 43 11.0	
	comp=Z,3.0nm,0.3s,baz=308,slow=29,SNR=13								
	comp=Z,1.5nm,0.5s								
USRK	**Ussuriysk Ar.**	**7.90**	**58**	Pn		**Pn**	**Pn**	**13 42 23.5**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=251,slow=18,SNR=1.7								
USRK				Lg		Lg	Lg	13 44 40.4	
	comp=Z,0.5nm,0.3s,baz=251,slow=26,SNR=5.1								
	comp=Z,1.1nm,0.6s								
HILR	**Hailar Array B**	**9.37**	**348**	Pn		**Pn**	**Pn**	**13 42 45.1**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=170,slow=19,SNR=1.6								
HILR				Lg		Lg	Lg	13 45 20.7	
	baz=161,slow=24								

WEL ***26*** *13:49:03.3±0.6, 32°.5S×4°.17°.8W±1°.0, h12km, M5.0/7, mB5.0/4, ML5.0/6, MLv5.2/7, Mw(mB)4.3/4, Error ellipse: s-maj=14.2km s-min=3.8km az=106.3, confirmed*
IDC ***26*** *13:49:03.4±0.5, 31°.35S×178°.09W, h0km, mb4.4/12, mbtmp4.4/13, ML4.9/1, MS4.1.3/9, Error ellipse: s-maj=21.9km s-min=16.9km az=102.0*
NEIC ***26*** *13:49:05, 31°.54S×177°.93W, h22km*
NEIC ***26*** *13:49:05, 31°.74S×177°.58W, h22km, Moment Tensor Solution. Duration: 1§2 Moment tensor: Scale 10^{16}Nm; M_{rr}1.92; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$-1.71; $M_{r\theta}$0.10; $M_{\theta\phi}$-0.86; $M_{\phi r}$0.67; Fault plane solution: $M_0$2.13000×10^{16} NP1: ϕ_s210.34000°, δ36.27000°, λ99.33000°. NP2:ϕ_s18.81000°, δ54.28000°, λ83.21000°. Principal axes: T 2.0442, Plg79.0000°, Azm262.0000°; N 0.1583, Plg6.0000°, Azm23.0000°; P -2.2024, Plg9.0000°, Azm114.0000°;*
MOS ***26*** *13:49:05.7±1.1, 31°.39S×178°.15W, h23km, mb5.2/11 Error ellipse: s-maj=14.3km s-min=10.3km az=88.1*
NEIC ***26*** *13:49:05.1±1.6, 31°.49S±0°.02×178°.0W±0°.1, h10km±1km, mb5.2/34, Mww4.8/8, Error ellipse: s-maj=21.3km s-min=3.5km az=91.0*
GCMT ***26*** *13:49:07.0±0.3, 31°.70S±0°.03×177°.74W±0°.03, h23km, MW4.9/79, Moment Tensor Solution. s42,c49; s79,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.08±.18; $M_{\theta\theta}$-0.68±.11; $M_{\phi\phi}$-2.40±.13; $M_{r\theta}$0.76±.18; $M_{\theta\phi}$-0.87±.07; $M_{\phi r}$1.21±.16; Best double couple: $M_0$3.25000×10^{16} NP1:ϕ_s199.00000°, δ32.00000°, λ84.00000°. NP2: ϕ_s26.00000°, δ58.00000°, λ94.00000°. Principal axes: T 3.4170, Plg77.0000°, Azm308.0000°; N -0.3290, Plg3.0000°, Azm204.0000°; P -3.0830, Plg13.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NOU ***26*** *13:49:17.7, 32°.77S×177°.97W, h47km, mb4.8/17, South of Kermadec Islands*
ISC 26 13:49:07.2±0.3,31°.79S±0°.03×177°.86W±0°.05,h35km,
n290,σ2§06/250,mb5.0/63,MS4.1/39,14C-3D,Kermadec
Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.52**	**359**	P		**P**	**Pn**	**13 49 43.2**	**-2.4**
RAO	**Raoul Island**	**2.53**	**359**	Pn		**Pn**	**Pn**	**13 49 41.6**	**-4.1**
	413nm,0.3s,baz=142,slow=19,SNR=27								
RAO				Sn		**Sn**	**Sn**	**13 50 13.5**	**-2.0**
	366nm,0.3s,baz=233,slow=20,SNR=5.4								
	1um,0.2s								
RAO	**Raoul Island**	**2.53**	**359**				**Pn**	**13 49 42.0**	**-3.8**
RAO	**Raoul Island**	**2.53**	**359**	P			**Pn**	**13 49 42.0**	**-3.8**
RAO								13 50 13.5	
RIZ	**Raoul Island**	**2.54**	**359**	P		**P**	**Pn**	**13 49 42.7**	**-3.2**
RIZ				S		**S**	**Sn**	**13 50 15.8**	**+0.2**
MXZ	**Matakaoa Point**	**6.57**	**208**	Pn		Pn	Pn	13 50 37.5	-3.7
MXZ	**Matakaoa Point**	**6.57**	**208**	P		**P**	**Pn**	**13 50 39.6**	**-1.6**
MXZ	**Matakaoa Point**	**6.57**	**208**	P		**P**	**Pn**	**13 50 39.4**	**-1.8**
MXZ				S		**S**	**Sn**	**13 51 53.3**	**-1.5**
WMGZ	**Waiomatatini S**	**6.75**	**206**	P		**P**	**Pn**	**13 50 41.7**	**-2.0**
WMGZ				S		**S**	**Sn**	**13 51 59.8**	**+0.4**
PKGZ	**Pakihiroa**	**6.92**	**208**	P		**P**	**Pn**	**13 50 47.9**	**+1.8**
PKGZ				S		**S**	**Sn**	**13 52 03.0**	**-0.6**
HAZ	**Te Kaha**	**6.95**	**210**	P		**P**	**Pn**	**13 50 44.6**	**-1.9**
HAZ				S		**S**	**Sn**	**13 52 03.9**	**-0.2**
PUZ	**Puketiti**	**7.03**	**206**	P		**P**	**Pn**	**13 50 45.2**	**-2.4**
PUZ				S		**S**	**Sn**	**13 52 04.6**	**-1.7**
RUGZ	**Raukumara Rang**	**7.17**	**210**	P		**P**	**Pn**	**13 50 47.4**	**-2.2**
RUGZ				S		**S**	**Sn**	**13 52 07.6**	**-2.2**
TWGZ	**Tauwhareparae**	**7.23**	**207**	P		**P**	**Pn**	**13 50 47.9**	**-2.5**
TWGZ				S		**S**	**Sn**	**13 52 10.1**	**-1.1**
KUZ	**Kuaotunu**	**7.26**	**225**	P		**P**	**Pn**	**13 50 51.2**	**+0.5**
KUZ	**Kuaotunu**	**7.26**	**225**	P		**P**	**Pn**	**13 50 52.0**	**+1.3**
MYRZ	**Mayor Island**	**7.33**	**220**	P		**P**	**Pn**	**13 50 55.9**	**+4.2**
WHRZ	**Whale Island**	**7.39**	**214**	P		**P**	Pn	13 50 59.8	+7.2
TKGZ	**Te Karaka**	**7.51**	**207**	P		**P**	**Pn**	**13 50 52.5**	**-1.6**
TKGZ				S		**S**	**Sn**	**13 52 15.8**	**-2.1**
MWZ	**Matawai**	**7.54**	**209**	P		**P**	**Pn**	**13 50 51.7**	**-3.0**
MWZ				S		**S**	**Sn**	**13 52 16.3**	**-2.6**
OPRZ	**Ohinepanea**	**7.58**	**216**	P		**P**	**Pn**	**13 50 54.3**	**-0.9**
OPRZ				S		**S**	**Sn**	**13 52 20.9**	**+1.0**
MARZ	**Manawahe**	**7.64**	**215**	P		**P**	**Pn**	**13 50 56.8**	**+0.9**
TGRZ	**Tauranga**	**7.65**	**218**	P		**P**	**Pn**	**13 50 55.0**	**-1.1**
TGRZ				S		**S**	**Sn**	**13 52 19.0**	**-2.4**
WIAZ	**Waiheke Island**	**7.65**	**227**	P		**P**	**Pn**	**13 51 00.4**	**+4.3**
URZ	**Urewera**	**7.66**	**211**	Pn		**Pn**	**Pn**	**13 50 52.7**	**-3.5**
	1.4nm,0.3s,baz=67,slow=5.4,SNR=20								
URZ				Sn		**Sn**	**Sn**	**13 52 18.7**	**-3.0**
	23nm,0.3s,baz=66,slow=20,SNR=13								
URZ	**Urewera**	**7.66**	**211**	P		**P**	**Pn**	**13 50 54.6**	**-1.6**
URZ	**Urewera**	**7.66**	**211**	P		**P**	**Pn**	**13 50 52.9**	**-3.3**
URZ				S		**S**	**Sn**	**13 52 18.4**	**-3.3**
WCZ	**Waipu Caves**	**7.69**	**235**	P		**P**	**Pn**	**13 51 00.6**	**+3.9**
RAGZ	**Rawiri**	**7.73**	**209**	P		**P**	**Pn**	**13 50 57.7**	**+0.5**
RAGZ				S		**S**	**Sn**	**13 52 20.9**	**-2.7**
RIGZ	**Rimuhau**	**7.77**	**206**	P		**P**	**Pn**	**13 50 55.8**	**-2.0**
RIGZ				S		**S**	**Sn**	**13 52 22.6**	**-2.0**
OMRZ	**Omania**	**7.88**	**215**	P		Pn	Pn	13 51 06.7	+7.4
KMRZ	**Kaimai**	**7.90**	**218**	P		**P**	**Pn**	**13 50 59.4**	**-0.2**
OUZ	**Omahuta**	**7.91**	**242**	P		**P**	**Pn**	**13 51 04.3**	**+4.7**
OUZ	**Omahuta**	**7.91**	**242**	P		**P**	**

KHZ **Kahutara** **12.62 210** P Pn 13 52 00.1 -4.0
GVZ **Greta Valley S** **13.29 210** Pn **Pn** **13 52 09.9 -3.4**
LTZ **Lake Taylor** **13.48 213** P **Pn** **13 52 12.9 -3.0**
INZ **Inchbonnie** **13.83 215** P **Pn** **13 52 17.8 -2.8**
MSVF **Nonsavu** **14.48 344** *i* P Pn 13 52 22.8 -6.9
RPZ **Rata Peaks** **14.77 213** Pn Pn 13 52 29.3 -4.1
3.0nm,0.3s,baz=43,slow=18,SNR=5.8
RPZ Sn Sn 13 54 59.5 -16
3.6nm,0.3s,baz=27,slow=17,SNR=6.2
RPZ **Rata Peaks** **14.77 213** Sn 13 55 02.6 -13
RPZ **Rata Peaks** **14.77 213** P **Pn** **13 52 33.3 -0.1**
LBZ **Lake Benmore** **15.68 213** P **P** **13 52 49.7 +0.6**
PINNC **Pines Island,** **15.94 301** P P 13 53 03.8 +12
ODZ **Otahua Downs** **15.98 211** Pn **Pn** **13 52 45.9 -3.3**
ODZ **Otahua Downs** **15.98 211** P **Pn** **13 52 45.8 -3.5**
ODZ **Otahua Downs** **15.98 211** P **Pn** **13 52 46.0 -3.3**
JCZ **Jackson Bay** **16.14 217** P **Pn** **13 52 51.0 -0.4**
DZM **Mont Dzumac** **17.00 301** Pn **Pn** **13 53 01.3 -1.1**
0.3nm,0.3s,baz=122,slow=19,SNR=5.9
DZM LR LR 13 58 30.7
comp=Z,2µm,18.6s,baz=196,slow=34
SYZ **Scrubby Hill** **17.81 211** P **P** **13 53 12.3 -0.3**
SYZ **Scrubby Hill** **17.81 211** P **P** **13 53 15.1 +2.5**
AFI **Afiamalu** **18.65 19** **P** **13 53 19.9 -2.2**
AFI IAmb IAmb 13 53 23.4
comp=Z,116nm,1.1s
AFI **Afiamalu** **18.65 19** P **P** **13 53 19.9 -2.2**
AFI pmax pmax
comp=Z,116nm,1.1s
RAR **Rarotonga** **19.29 61** LR LR 13 59 02.7
comp=Z,229nm,20.7s,baz=220,slow=31
LHI **Lord Howe Isla** **19.65 265** P **Pn** **13 53 35.5 +1.0**
comp=Z,80nm,1.2s
ARMA **Armidale** **26.12 265** P **P** **13 54 40.1 +2.0**
comp=Z,32nm,1.7s
ARMA **Armidale** **26.12 265** **P** **13 54 38.8 +0.7**
ARMA IAmb IAmb 13 54 46.1
comp=Z,54nm,1.4s
MGCD **Mangrove Creek** **26.17 259** P **P** **13 54 39.8 +1.5**
comp=Z,56nm,0.8s
CNB **Canberra Magne** **27.47 254** P **P** **13 54 51.7 +1.5**
comp=Z,27nm,1.4s
MILA **Mila** **27.63 250** P **P** **13 54 52.7 +1.2**
comp=Z,17nm,1.4s
CAN **Canberra** **27.77 254** P **P** **13 54 53.9 +1.1**
CAN IAmb IAmb 13 54 55.7
comp=Z,42nm,1.2s
CAN **Canberra** **27.77 254** P **P** **13 54 53.9 +1.1**
CAN pmax pmax
comp=Z,42nm,1.2s
EIDS **Eidsvold** **27.95 275** P **P** **13 54 55.8 +1.3**
comp=Z,21nm,1.2s
EIDS **Eidsvold** **27.95 275** **P** **13 54 55.2 +0.7**
YNG **Young** **28.32 256** P **P** **13 54 59.1 +1.4**
PPT **Papeete** **29.23 68** LR LR 14 03 29.1
comp=Z,163nm,20.5s,baz=226,slow=30
HNR **Honiara** **30.31 312** LR LR 14 05 54.6
comp=Z,386nm,19.5s,baz=181,slow=34
TOO **Toolangi** **30.55 249** P **P** **13 55 18.8 +1.4**
comp=Z,11nm,2.4s
TOO **Toolangi** **30.55 249** P **P** **13 55 18.2 +0.8**
TOO IAmb IAmb 13 56 00.9
comp=Z,28nm,1.6s
TOO **Toolangi** **30.55 249** P **P** **13 55 18.2 +0.8**
TOO pmax pmax
comp=Z,28nm,1.6s
CMSA **Cobar Meteorol** **30.93 261** P **P** **13 55 22.5 +1.7**
comp=Z,35nm,0.8s
QLP **Quilpie** **33.38 269** P **P** **13 55 43.2 +0.8**
comp=Z,48nm,1.3s
ARPS **Mount Arapiles** **33.49 250** P **P** **13 55 44.2 +0.9**
comp=Z,23nm,0.9s
CTA **Charters Tower** **34.16 281** LR LR 14 09 08.2
comp=Z,13nm,18.0s,baz=99,slow=36
CTAO **Charters Tower** **34.16 281** **P** **13 55 50.2 +1.0**
CTAO IAmb IAmb 13 56 05.8
comp=Z,46nm,0.9s
CTAO **Charters Tower** **34.16 281** P **P** **13 55 50.2 +1.0**
CTAO pmax pmax
comp=Z,46nm,0.9s
STKA **Stephens Creek** **34.31 259** P **P** **13 55 51.4 +1.1**
comp=Z,124nm,1.1s
STKA **Stephens Creek** **34.31 259** P **P** **13 55 51.2 +0.8**
comp=Z,4.3nm,0.6s,baz=102,slow=12,SNR=12
STKA LR LR 14 08 21.6
comp=Z,461nm,20.5s,baz=77,slow=34
comp=Z,4.3nm,0.6s
STKA **Stephens Creek** **34.31 259** IAmb IAmb 13 55 58.6
comp=Z,71nm,0.8s
INKA **Innaminka** **36.01 266** P **P** **13 56 05.4 +0.4**
INKA IAmb IAmb 13 56 13.7
comp=Z,22nm,0.8s
HTT **Hallett** **36.25 256** P **P** **13 56 07.8 +0.6**
comp=Z,8.8nm,1.0s
MTSU **Mount Surprise** **36.70 283** P **P** **13 56 12.4 +1.4**
comp=Z,25nm,0.8s
BBOO **Buckleboo** **38.73 256** P **P** **13 56 27.6 -0.4**
comp=Z,23nm,2.1s
BBOO **Buckleboo** **38.73 256** P **P** **13 56 27.7 -0.4**
BBOO IAmb IAmb 13 56 44.6
comp=Z,116nm,1.9s
PMG **Port Moresby** **39.33 297** LR LR 14 11 40.2
comp=Z,181nm,18.1s,baz=148,slow=35
QIS **Mount Isa** **39.56 276** P **P** **13 56 36.0 +0.9**
comp=Z,15nm,2.4s
COEN **Coen** **39.78 287** P **P** **13 56 38.2 +1.2**
comp=Z,22nm,0.8s
COEN **Coen** **39.78 287** P **P** **13 56 37.3 +0.3**
AS31 **Alice Springs** **43.17 268** P **P** **13 57 04.1 -0.7**
ASAR **Alice Springs** **43.17 268** P **P** **13 57 04.3 -0.5**
comp=Z,13nm,0.9s,baz=112,slow=8.2,SNR=122
ASAR ScP **ScP** **14 02 45.4 +2.8**
comp=Z,1.1nm,0.9s,baz=107,slow=4.1,SNR=4.3
ASAR LR LR 14 14 56.2
comp=Z,157nm,19.1s,baz=116,slow=36
comp=Z,13nm,0.9s
ASAR **Alice Springs** **43.17 268** P **P** **13 57 04.0 -0.8**
WR0 **Warramunga Arr** **44.11 274** P **P** **13 57 11.9 -0.4**
WR8 **Warramunga Arr** **44.14 274** P **P** **13 57 11.9 -0.7**
WR8 IAmb IAmb 13 57 26.9
comp=Z,33nm,0.8s
WRAB **Tennant Creek** **44.28 274** P **P** **13 57 12.7 -1.0**
WRAB IAmb IAmb 13 57 27.9
comp=Z,35nm,0.7s
WRAB **Tennant Creek** **44.28 274** *ce*P **P** **13 57 12.8 -1.0**
WRAB pmax pmax
comp=Z,25nm,1.3s
WRA **Warramunga Arr** **44.29 273** P **P** **13 57 13.1 -0.6**
comp=Z,111nm,0.5s,baz=115,slow=8.0,SNR=126
WRA ScP **ScP** **14 02 50.9 +3.8**
comp=Z,1.1nm,0.7s,baz=111,slow=4.0,SNR=6.6
WRA LR LR 14 14 45.1
comp=Z,447nm,18.1s,baz=102,slow=35
comp=Z,111nm,0.5s
WRA **Warramunga Arr** **44.29 273** P **P** **13 57 13.1 -0.6**
WB0 **Warramunga Arr** **44.32 274** **P** **13 57 13.7 -0.3**
WB0 IAmb IAmb 13 57 30.9
comp=Z,38nm,0.6s
FORT **Forrest** **45.82 256** P **P** **13 57 24.8 -1.0**
comp=Z,16nm,1.6s
FORT **Forrest** **45.82 256** IAmb IAmb 13 57 55.2
comp=Z,13nm,0.9s
VNDA **Vanda** **46.73 186** P **P** **13 57 36.7 +4.4**
comp=Z,1.2nm,0.9s,baz=18,slow=6.4,SNR=9.0
VNDA LR LR 14 13 32.9
comp=Z,97nm,21.3s,baz=24,slow=31
comp=Z,1.2nm,0.9s
WRKA **Warakurna** **47.44 264** P **P** **13 57 37.3 -1.4**
comp=Z,16nm,1.0s
JAY **Jayapura** **48.65 298** LR LR 14 16 42.7
comp=Z,167nm,20.2s,baz=200,slow=34
JAY **Jayapura** **48.65 298** P **P** **13 57 47.3 -0.7**
comp=Z,26nm,1.0s
KDU **Kakadu** **49.29 281** P **P** **13 57 52.5 -0.4**
comp=Z,8.2nm,1.3s
MTN **Manton Dam** **50.33 280** P **P** **13 58 00.5 -0.3**
comp=Z,24nm,0.8s
MTN **Manton Dam** **50.33 280** P **P** **13 58 00.5 -0.3**
MTN IAmb IAmb 13 58 14.5
comp=Z,16nm,0.7s
KNRA **Kununurra** **50.94 275** P **P** **13 58 05.8 +0.3**
comp=Z,22nm,1.0s
KNRA **Kununurra** **50.94 275** IAmb IAmb 13 58 18.4
comp=Z,16nm,0.8s
FITZ **Fitzroy Crossi** **52.49 271** P **P** **13 58 16.2 -0.8**
comp=Z,4.3nm,1.0s
FITZ **Fitzroy Crossi** **52.49 271** LR LR 14 19 54.0
comp=Z,571nm,19.3s,baz=134,slow=35
CASY **Casey** **53.97 208** P **P** **13 58 27.6 +0.4**
CASY IAmb IAmb 13 58 35.9
comp=Z,49nm,1.0s
KLBR **Kellerberrin** **54.02 252** P **P** **13 58 28.5 +0.3**
comp=Z,41nm,0.9s
BNDI **Bandanaira** **55.88 288** P **P** **13 58 40.3 -1.4**
SOEI **Soe** **57.68 279** IAmb IAmb 13 59 12.0
comp=Z,60nm,1.4s
SOEI **Soe** **57.68 279** P **P** **13 58 54.6 -0.1**
comp=Z,37nm,1.2s
BATI **Baumata** **57.96 278** LR LR 14 24 13.4
comp=Z,447nm,18.8s,baz=129,slow=37
QSPA **South Pole Qui** **58.32 180** P P 13 59 04.6 +6.1
comp=Z,14nm,1.0s,baz=30,slow=3.6,SNR=30
QSPA LR LR 14 23 09.4
comp=Z,285nm,18.1s,baz=42,slow=35
comp=Z,14nm,1.0s
QSPA **South Pole Qui** **58.32 180** P **P** **13 59 02.1 +3.6**
NLAI **Namlea** **58.90 287** P **P** **13 59 01.5 -1.5**
comp=Z,11nm,1.5s
RPN **Rapa Nui** **58.96 105** LR LR 14 18 14.3
comp=Z,107nm,20.0s,baz=56,slow=30
MMRI **Maumere** **59.97 279** P **P** **13 59 10.0 -0.5**
MMRI **Maumere** **59.97 279** P **P** **13 59 09.3 -1.1**
comp=Z,44nm,1.1s
EDFI **Ende, Flores** **60.37 278** P **P** **13 59 11.0 -2.3**
comp=Z,9.9nm,1.3s
SANI **Sanana** **60.49 287** P **P** **13 59 11.6 -2.3**
comp=Z,6.6nm,0.8s
BKSI **Bulukumba** **63.50 281** P **P** **13 59 32.4 -1.8**
comp=Z,11nm,1.1s
KAPI **Kappang** **63.98 281** LR LR 14 26 13.7
comp=Z,242nm,21.1s,baz=116,slow=35
BNSI **Bone** **64.02 282** P **P** **13 59 35.9 -1.7**
comp=Z,18nm,1.3s
MPSI **Mapaga** **66.83 286** P **P** **13 59 54.0 -1.8**
comp=Z,9.3nm,0.8s
SMAI **San Martin Ant** **68.10 158** P **P** **14 00 04.7 +1.7**
SMAI IAmb IAmb 14 00 10.7
comp=Z,38nm,1.5s
PMSA **Palmer Station** **70.95 155** LR LR 14 31 42.3
comp=Z,160nm,18.0s,baz=238,slow=36
MAW **Mawson** **71.05 201** P **P** **14 00 25.6 +4.5**
comp=Z,6.2nm,0.9s,baz=133,slow=8.1,SNR=5.1
MAW LR LR 14 32 57.2
comp=Z,183nm,18.1s,baz=105,slow=37
comp=Z,6.2nm,0.9s
SBUM **Sibu** **74.35 283** P **P** **14 00 42.0 +0.3**
JHJ **Hachijo jima 2** **75.94 324** LR LR 14 28 16.4
comp=Z,100nm,20.2s,baz=294,slow=31
TROLL **Troll, Antarti** **76.48 180** ⇑P **P** **14 00 54.8 +1.7**
comp=Z,445nm,0.5s
SNAA **Sanae** **76.77 178** ⇑P P 14 01 03.9 +9.2
comp=Z,329nm,0.8s
SNAA **Sanae** **76.77 178** P **P** **14 00 56.0 +1.3**
comp=Z,2.1nm,0.7s,baz=166,slow=8.3,SNR=7.3
SNAA LR LR 14 34 29.3
comp=Z,188nm,18.1s,baz=190,slow=35
SNAA **Sanae** **76.77 178** P **P** **14 00 55.2 +0.6**
SNAA IAmb IAmb 14 01 06.4
comp=Z,19nm,1.0s
SNAA **Sanae** **76.77 178** P **P** **14 00 56.7 +2.0**
SNAA pmax pmax
comp=Z,18nm,0.9s
VNA3 **Neumayer Olymp** **76.91 176** ⇑P **P** **14 00 56.5 +1.1**
comp=Z,22nm,0.7s
VNA2 **Neumayer--Watz** **77.35 177** ⇑P **P** **14 00 59.8 +1.9**
comp=Z,18nm,0.6s,baz=186,slow=3.1
MDSI **Maura Dua** **77.42 273** P **P** **14 00 56.7 -2.5**
NVL **N'lazarevskaya** **77.50 183** *e*P **P** **14 01 02.1 +3.4**
NVL *e* 14 03 56.9
NVL *e*PPP PPP 14 05 44.3
NVL *e*S **S** **14 10 54.5 +7.7**
NVL *e*SS **SS** **14 15 55.0 +10**
NVL *e*SSS SSS 14 19 19.1
NVL pmax pmax
comp=Z,10.0nm,0.7s
NVL MLR MLR
comp=Z,840nm,22.0s
VNA1 **Neumayer--Stat** **77.58 176** ⇑P **P** **14 00 60.0 +0.9**
comp=Z,26nm,1.2s
JOW **Kunigami** **77.69 312** LR LR 14 30 55.3
comp=Z,95nm,20.4s,baz=63,slow=32
MJAR **Matsushiro Arr** **79.45 325** LR LR 14 31 06.6
comp=Z,55nm,19.8s,baz=136,slow=32
MAJO **Matsushiro** **79.45 325** *i* P **P** **14 01 07.2 -2.7**
MAJO pmax pmax
comp=Z,23nm,1.5s
H03S2 **Juan Fernandez** **79.60 123** T T 15 30 13.1
baz=236,slow=74,SNR=18
H03S1 **Juan Fernandez** **79.61 123** T T 15 30 09.4
baz=236,slow=74,SNR=22
H03S3 **Juan Fernandez** **79.62 123** T T 15 30 08.4
baz=236,slow=74,SNR=19
H03N3 **Juan Fernandez** **79.80 123** T T 15 30 23.6
baz=240,slow=72,SNR=19
H03N2 **Juan Fernandez** **79.80 123** T T 15 30 22.3
baz=240,slow=72,SNR=13
H03N1 **Juan Fernandez** **79.81 123** T T 15 30 22.9
baz=240,slow=72,SNR=34
JNU **Nakatsue** **80.67 318** LR LR 14 31 27.5
comp=Z,90nm,19.8s,baz=108,slow=32
YHNB **Yeheng** **80.75 306** P **P** **14 01 18.3 +1.1**
AIS **Amsterdam Isla** **81.36 231** P **P** **14 01 21.9 +1.6**
PLCA **Paso Flores** **81.47 133** P **P** **14 01 23.8 +2.8**
comp=Z,2.6nm,0.8s,baz=263,slow=8.1,SNR=4.5
PLCA LR LR 14 29 27.5
comp=Z,96nm,18.9s,baz=236,slow=30
comp=Z,2.6nm,0.8s
PLCA **Paso Flores** **81.47 133** IAmb IAmb 14 02 17.2
comp=Z,46nm,1.9s
ASAJ **Asahikawa** **83.73 333** LR LR 14 34 14.6
comp=Z,106nm,18.4s,baz=167,slow=33
LPIG **La Paz** **85.17 58** LR LR 14 33 17.3
comp=Z,114nm,18.3s,baz=236,slow=31
KSRS **Korea Array** **85.48 320** P **P** **14 01 40.6 -0.7**
comp=Z,1.0nm,0.8s,baz=144,slow=2.7,SNR=2.4
comp=Z,1.0nm,0.8s
PSI **Prapat** **85.70 276** LR LR 14 40 55.5
comp=Z,196nm,19.7s,baz=159,slow=36
GSI **Gunungsitoli** **86.06 274** P **P** **14 01 45.2 +0.5**
SFX **San Felipe** **86.40 50** P **P** **14 01 47.1 +1.2**
PFO **Pinyon Flats O** **87.06 47** LR LR 14 40 06.5
comp=Z,170nm,18.2s,baz=238,slow=35
PEA0B **Petropavlovsk-** **87.19 346** P **P** **14 01 49.8 +0.5**
PEA0B **Petropavlovsk-** **87.19 346** P **P** **14 01 49.8 +0.5**
PEA0B pmax pmax
comp=Z,298nm,2.0s
PETK **Petropavlovsk-** **87.19 346** P **P** **14 01 49.9 +0.7**
comp=Z,9.4nm,0.8s,baz=162,slow=4.9,SNR=5.7
comp=Z,9.4nm,0.8s
PETK **Petropavlovsk-** **87.19 346** P **P** **14 01 49.6 +0.3**
NJ2 **Nanjing** **87.24 311** *e*P **P** **14 01 52.3 +2.3**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NVAR **Mina Array Bea** **89.18 43** P **P** **14 02 00.2 +0.8**
comp=Z,0.7nm,0.7s,baz=233,slow=4.8,SNR=5.9
NVAR LR LR 14 37 17.1
comp=Z,151nm,18.0s,baz=224,slow=32
comp=Z,0.7nm,0.7s
WHN **Wuhan** **89.28 307** P **P** **14 01 59.3 -0.4**
CN2 **Changchun** **91.32 323** P **P** **14 02 09.0 +0.1**
CN2 pmax pmax
comp=Z,20nm,1.1s
BNX **BinXian** **91.72 325** ⇓P **P** **14 02 10.5 -0.2**
BNX pmax pmax
comp=Z,11nm,1.0s
GYA **Guiyang** **92.34 300** ⇓P **P** **14 02 15.3 +1.0**
GYA pmax pmax
comp=Z,8.0nm,0.9s
TXAR **Lajitas Array** **93.04 57** P **P** **14 02 18.1 +0.8**
comp=Z,0.7nm,1.0s,baz=250,slow=4.6,SNR=4.1
TXAR LR LR 14 42 25.5
comp=Z,58nm,18.1s,baz=248,slow=34
comp=Z,0.7nm,1.0s
CMIG **Matias Romero** **93.07 72** LR LR 14 34 19.2
comp=Z,29nm,19.5s,baz=222,slow=29
ATAH **Atahualpa** **94.26 101** LR **LR** 14 39 01.7
comp=Z,30nm,18.4s,baz=236,slow=32
ANMO **Albuquerque** **94.35 51** LR LR 14 38 35.8
comp=Z,71nm,18.5s,baz=264,slow=32
MA2 **Magadan** **94.66 345** LR LR 14 37 15.7
comp=Z,63nm,21.9s,baz=132,slow=31
PZH **PanZhiHua** **96.05 297** P **P** **14 02 33.5 +2.2**
NEW **Newport** **96.43 36** LR LR 14 38 39.3
comp=Z,96nm,20.3s,baz=214,slow=31
PDAR **Pinedale Array** **97.06 44** LR LR 14 42 11.5
comp=Z,72nm,18.2s,baz=223,slow=33
HHC **Hu-ho-hao-te** **97.28 314** *e*P Pdif 14 02 39.0 +2.4
HHC pmax pmax
comp=Z,23nm,0.6s
HHC pmax pmax
comp=Z,96nm,5.2s
SEY **Seymchan** **97.36 347** *i* P **P** **14 02 34.8 -1.3**
SEY pmax pmax
comp=Z,8.0nm,1.1s
LPAZ **La Paz** **97.47 114** LR LR 14 40 07.7
comp=Z,36nm,19.0s,baz=251,slow=31
JTS **Las Juntas de** **97.79 83** LR LR 14 37 05.9
comp=Z,41nm,20.3s,baz=328,slow=29
BTO **Baotou** **98.10 313** *e*P Pdif 14 02 42.8 +2.6
BTO pmax pmax
comp=Z,7.0nm,0.5s
BTO pmax pmax
comp=Z,170nm,4.5s
DLBC **Dease Lake** **98.35 23** LR LR 14 43 42.5
comp=Z,47nm,18.2s,baz=254,slow=34
CPUP **Villa Florida** **99.03 128** LR LR 14 43 26.2
comp=Z,11nm,18.4s,baz=43,slow=33
ILAR **Eielson Array** **99.25 13** P **Pdif** **14 02 44.8 +0.2**
comp=Z,0.3nm,0.8s,baz=213,slow=4.9,SNR=2.2
comp=Z,0.3nm,0.8s
WMQ **Urumqi** **114.17 308** *e*PKP **PKiKP** **14 07 43.8 +1.1**
MK31 **Makanchi Array** **118.75 309** *c i*PKiKP **PKiKP** **14 07 52.2 +0.8**
MKAR **Makanchi Array** **118.75 309** PKP **PKPdf** **14 07 51.1 -0.3**
comp=Z,2.2nm,0.9s,baz=104,slow=1.0,SNR=12
ZALV **Zalesovo Beam** **119.15 318** PKP **PKPdf** **14 07 51.5 -0.3**
comp=Z,0.6nm,0.5s,baz=132,slow=2.1,SNR=4.7
KSH **Kashi** **121.04 300** PKP **PKiKP** **14 07 57.8 +1.5**
KURK **Kurchatov** **122.09 313** *ce*PKiKP **PKiKP** **14 07 58.1 +0.3**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURBB **Kurchatov Arra** **122.13 313** PKP **PKiKP** **14 07 57.8 0.0**
comp=Z,3.3nm,0.6s,baz=111,slow=1.9,SNR=23
KBK **Karagaybulak** **122.66 303** P **PKiKP** **14 07 59.8 +0.4**
SNR=5.4
UCH **Uchtor** **122.86 303** P **PKiKP** **14 08 01.2 +1.0**
SNR=12
CHMS **Chumysh** **122.89 304** P **PKiKP** **14 07 59.8 +0.1**
SNR=5.5
AAK **Ala-Archa** **122.98 303** *ce*PKiKP **PKiKP** **14 08 00.5 +0.5**
AAK pmax pmax
comp=Z,6.0nm,1.3s
USP **Ospenovka** **123.13 304** P **PKiKP** **14 08 00.6 +0.4**
SNR=5.4
EKS2 **Erkin-Say** **123.50 303** P **PKiKP** **14 08 01.8 +0.8**
SNR=7.3
BVAR **Borovoye Array** **127.48 315** PKP **PKiKP** **14 08 08.4 0.0**
comp=Z,3.3nm,0.6s,baz=110,slow=1.7,SNR=23
BORK **Borovoye** **127.52 315** *ce*PKiKP **PKiKP** **14 08 08.9 +0.4**
BORK pmax pmax
comp=Z,17nm,1.7s
SPITS **Spitsbergen Ar** **133.09 356** PKP **PKiKP** **14 08 20.4 +1.3**
comp=Z,8.2nm,1.0s,baz=64,slow=5.0,SNR=1.4
ARTI **Arti** **134.34 320** *i* PKiKP **PKiKP** **14 08 22.2 +0.1**
ARTI 14 10 55.0
ARTI SS SS 14 28 43.0 +2.2
ARCES **ARCESS Array B** **139.97 347** PKhKP PKPpre 14 08 25.0
comp=Z,1.1nm,0.6s,baz=44,slow=2.1,SNR=7.0
ARCES **ARCESS Array B** **139.97 347** PKHKP PKPpre 14 08 25.0
VRH **Novokhopyorsk** **145.13 315** *e*PKiKP **PKPdf** **14 08 40.5 +0.1**
VRH pmax pmax
comp=Z,10.0nm,0.4s
MOS **Moscow** **145.54 325** *i* PKiKP **PKPdf** **14 08 40.6 -0.4**
MOS *e* 14 08 52.2
MOS pmax pmax
comp=Z,106nm,1.2s
GOF **Gofitskoye** **145.69 305** *ce*PKiKP **PKPab** **14 08 42.3 -0.1**
KIV **Kislovodsk** **146.09 303** *i* PKiKP **PKPdf** **14 08 42.1 -0.4**
KIV pmax pmax
comp=Z,13nm,1.0s
LPSR **Galich'ya Gora** **146.25 319** *e*PKP2 **PKPbc** **14 08 43.4 -0.1**
LPSR pmax pmax
comp=Z,138nm,0.9s
PUL **Pulkovo** **146.30 334** *ce*PKiKP **PKPdf** **14 08 41.4 -0.8**
PUL pmax pmax
comp=Z,150nm,0.7s
OBN **Obninsk** **146.37 324** PKPdf **PKPbc** **14 08 43.9 +0.2**
OBN **Obninsk** **146.37 324** *ce*PKP2 **PKPbc** **14 08 43.8 +0.1**
OBN *e*PPP PPP 14 15 24.8
OBN pmax pmax
comp=Z,200nm,1.7s
VORR **Voronezh** **146.44 317** *e*PKiKP **PKPdf** **14 08 40.7 -2.0**
VORR pmax pmax
comp=Z,80nm,0.9s
FIA1 **FINESS Array S** **146.49 339** **PKPbc** **14 08 44.0 +0.1**
FINES **FINESS Array B** **146.49 339** PKPbc **PKPbc** **14 08 43.9 0.0**
comp=Z,13nm,0.5s,baz=45,slow=4.3,SNR=44
VSR **Storozhevoye** **146.63 316** *e*PKiKP **PKPdf** **14 08 42.1 -0.9**
VSR pmax pmax
comp=Z,60nm,1.0s
VORD **Divnogorie** **146.65 316** *e*PKiKP **PKPdf** **14 08 42.9 -0.1**
VORD pmax pmax
comp=Z,60nm,1.0s
VSU **Vasula** **148.54 335** *ce*PKHKP PKPpre 14 08 44.4
VSU pmax pmax
comp=Z,64nm,1.0s
NB2 **NORSAR Subarra** **150.14 351** PKP **PKPbc** **14 08 53.5 -0.1**
comp=Z,25nm,1.2s,baz=21,slow=4.3
NOA **NORSAR Array B** **150.14 351** PKPbc **PKiKP** **14 08 54.2 -0.2**
comp=Z,8.9nm,1.0s,baz=18,slow=2.7,SNR=12
NOA PKPab **PKPab** **14 09 00.1 +0.4**
comp=Z,8.6nm,1.0s,baz=18,slow=2.7,SNR=16
HFS **Hagfors** **150.63 348** PKPbc **PKiKP** **14 08 55.3 -0.1**
comp=Z,6.5nm,0.8s,baz=73,slow=4.8,SNR=10
HFS PKPab **PKPab** **14 09 01.1 -0.6**
comp=Z,7.3nm,0.5s,baz=64,slow=3.4,SNR=12
MNK **Minsk** **150.84 329** *i* PKiKP **PKPbc** **14 08 54.3 -1.1**
MNK *i* 14 12 30.1
MNK *i* PPP PPP 14 15 52.7
MNK *i* 14 15 55.7
MNK *i* SS SS 14 31 52.1 +1.1
MNK *i* SSS SSS 14 37 34.7
MNK pmax pmax
comp=E,13nm,0.9s
MNK pmax pmax
comp=N,13nm,1.0s
MMAI **Mount Meron Ar** **151.95 281** PKPbc **PKiKP** **14 09 00.3 +1.2**
comp=N,21nm,0.6s,baz=80,slow=3.2,SNR=31
AKASG **Malin Array Be** **152.47 321** PKPbc **PKPbc** **14 08 59.2 0.0**
comp=N,17nm,1.0s,baz=54,slow=3.0,SNR=34
BRTR **Keskin Array B** **153.34 296** PKPbc **PKPbc** **14 09 01.9 0.0**
comp=N,14nm,1.0s,baz=127,slow=3.8,SNR=33
BRTR PKPab **PKPab** **14 09 13.4 -0.6**
comp=N,2.4nm,0.7s,baz=66,slow=3.6,SNR=5.2
CLL **Collm** **158.92 341** *e*PKiKP **PKPdf** **14 09 01.0 +0.1**
CLL *i* 14 09 37.1
CLL pmax pmax
comp=Z,14nm,1.1s
CLL **Collm** **158.92 341** *e*PKPdf **PKPdf** **14 09 01.0 +0.1**
CLL *i* PKPab **PKPab** **14 09 37.1 0.0**
comp=Z,14nm,1.1s
CLL *ex* x 14 09 50.0
JAVC **Velka Javorina** **159.31 330** *e*PKP **PKPab** **14 09 39.2 +0.1**
VRAC **Vranov** **159.41 332** *e*PKP **PKPab** **14 09 38.3 -1.1**
KRUC **Moravsky** **159.68 332** *e*PKP **PKPab** **14 09 40.0 -0.6**
GERES **GERESS Array B** **160.86 336** PKPab **PKPab** **14 09 44.8 -1.0**
comp=Z,0.8nm,0.7s,baz=40,slow=3.2,SNR=4.5
BMRD **Maredsous** **161.40 355** *d*PKP **PKPab** **14 09 48.3 +0.3**

IDC ***26*** *13:51:33.6±3.4, 41.56N×19.47E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=76.9km s-min=58.1km az=94.0*
SKO ***26*** *13:51:36.0, 41.60N×19.34E, h0km, ML3.2*
THE ***26*** *13:51:35.2, 42°N±13"×1°9E±", h0km±19km, M3.2/6, MLh3.2/6*
TIR ***26*** *13:51:37.4, 41.63N×19.53E, h11km±5km, Ml3.2/4*
PDG ***26*** *13:51:37.1±0.3, 41.61N×19.58E, h1km±1km, MD3.4/5, ML3.4/13, Error ellipse: s-maj=1.3km s-min=1.5km az=0.0*
BEO ***26*** *13:51:38.3±0.6, 41.62N×19.57E, h14km±2km, ML3.0/14*
ISC 26 13:51:37.0±1.0, 41.63N±0.02×19.51E±0.02, h12km±7km, n81, σ1.934/129, mb3.5/3, 12C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.39**	**329**	‖	*i*Pg	**Pb**		**13 51 45.3**	**-0.5**
ULC					*e*Sg	**Sb**		**13 51 52.4**	**+0.6**
TIR	**Tirane**	**0.39**	**136**		Pg	**Pg**		**13 51 44.0**	**-0.8**

TIR					Sg	Sg	13 51 49.3	-0.7
TIR					AML	AML	13 51 50.4	
	6.8nm,0.4s							
TIR	**Tirane**	**0.39**	**136**	*i*Pg	**Pg**		**13 51 44.1**	**-0.6**
TIR				*i* Sg	**Sg**		**13 51 50.3**	**+0.3**
SDA	**Shkodra**	**0.42**	**359**	P	**Pb**		**13 51 45.9**	**-0.5**
SDA				Sg	**Sb**		**13 51 52.4**	**-0.3**
DRME	**Dracevica, Mon**	**0.60**	**337**	*e*Pg	**Pb**		**13 51 48.9**	**-0.6**
DRME				*e*Sg	**Sn**		**13 52 00.9**	**-0.3**
DRME	**Dracevica, Mon**	**0.60**	**337**	⇓*i*Pg	**Pb**		**13 51 49.0**	**-0.6**
DRME				*e*Sg	**Sn**		**13 51 59.6**	**-1.6**
PHP	**Peshkopia**	**0.70**	**85**	P	**Pg**		**13 51 49.9**	**-0.7**
PHP				Sg	**Sg**		**13 52 00.7**	**+0.8**
PHP				AML	AML		13 52 04.0	
	5.9nm,0.5s							
PHP	**Peshkopia**	**0.70**	**85**	P	**Pg**		**13 51 49.6**	**-1.0**
PHP				S	**Sb**		**13 52 00.8**	**-0.1**
BUM	**Brajici-Budva**	**0.81**	**326**	*e*Pg	**Pb**		**13 51 52.5**	**-0.6**
BUM				*i* Sg	**Sn**		**13 52 06.5**	**+0.2**
PDG	**Podgorica**	**0.82**	**347**	⇑P	**Pb**		**13 51 52.7**	**-0.5**
PDG				⇓S	**Sn**		**13 52 05.9**	**-0.5**
PDG	**Podgorica**	**0.82**	**347**	*e*Pg	**Pg**		**13 51 52.5**	**-0.3**
PDG				*e*Sg	**Sn**		**13 52 07.3**	**+0.8**
PDG	**Podgorica**	**0.82**	**347**	⇓*i*Pg	**Pg**		**13 51 52.4**	**-0.4**
PDG				*e*Sg	**Sn**		**13 52 06.4**	**-0.1**
CEME	**Cevo**	**1.01**	**335**	⇓*i*Pg	**Pb**		**13 51 56.2**	**-0.4**
CEME				*i* Sg	**Sn**		**13 52 13.1**	**+1.7**
PVY	**Plav**	**1.02**	**19**	*e*Pg	**Pg**		**13 51 55.6**	**-1.1**
PVY				*e*Sg	**Sn**		**13 52 11.9**	**+0.3**
PVY	**Plav**	**1.02**	**19**	⇓*i*Pg	**Pg**		**13 51 55.7**	**-0.9**
PVY				*e*Sg	**Sn**		**13 52 12.2**	**+0.6**
OHR	**Ohrid**	**1.10**	**118**	*i* Pg	**Pg**		**13 51 57.4**	**-0.8**
OHR				*i* Sg	**Sn**		**13 52 15.2**	**+1.6**
OHR				*e*Lg	Lg		13 52 16.7	
	comp=N,461nm,0.7s							
OHR				*e*Lg	Lg		13 52 17.4	
	comp=E,333nm,0.6s							
HCY	**Herceg Novi**	**1.11**	**318**	*e*Pg	**Pn**		**13 51 59.7**	**+1.3**
HCY				*i* Sg	**Sn**		**13 52 17.1**	**+3.4**
VLO	**Vlora**	**1.16**	**180**	Pg	**Pg**		**13 51 59.5**	**+0.1**
VLO				Sg	**Sg**		**13 52 14.5**	**+0.1**
VLO				AML	AML		13 52 23.2	
	comp=E,5.6nm,0.3s							
VLO	**Vlora**	**1.16**	**180**	P	**Pg**		**13 51 59.3**	**-0.1**
VLO				S	**Sn**		**13 52 18.7**	**+3.9**
NKME	**Niksic**	**1.21**	**340**	⇓*i*Pg	**Pg**		**13 51 59.6**	**-0.6**
NKME				*e*Sg	**Sn**		**13 52 19.4**	**+3.3**
KOME	**Kolasin**	**1.22**	**0**	*e*Pg	**Pg**		**13 52 00.0**	**-0.4**
KOME				*e*Sg	**Sn**		**13 52 17.9**	**+1.4**
KOME	**Kolasin**	**1.22**	**0**	⇑*i*Pg	**Pg**		**13 52 00.0**	**-0.4**
KOME				*e*Sg	**Sn**		**13 52 18.9**	**+2.4**
BEY	**Berane**	**1.27**	**13**	*e*Pg	**Pb**		**13 52 00.8**	**-0.2**
BEY				*e*Sg	**Sn**		**13 52 19.6**	**+1.8**
IVA	**Berane**	**1.27**	**13**	*e*Pg	**Pn**		**13 52 00.6**	**-0.1**
IVA				*i* Sg	**Sn**		**13 52 20.7**	**+2.9**
KBN	**Korca**	**1.40**	**136**	P	**Pb**		**13 52 03.4**	**+0.3**
KBN				Sg	**Sg**		**13 52 22.8**	**+0.8**
KBN	**Korca**	**1.40**	**136**	P	**Pg**		**13 52 03.1**	**0.0**
KBN				S	**Sg**		**13 52 24.9**	**+2.9**
BRY	**Bratogost**	**1.46**	**331**	⇑*i*Pg	**Pn**		**13 52 02.4**	**-0.9**
BRY				*i* Sg	**Sg**		**13 52 28.1**	**+4.1**
SKO	**Skopje**	**1.48**	**76**	*i* Pg	**Pb**		**13 52 05.1**	**+0.5**
SKO				*i* Sg	**Sg**		**13 52 26.4**	**+1.6**
UPM	**Unac-Piva**	**1.63**	**344**	*e*Pn	**Pg**		**13 52 07.4**	**-0.9**
UPM				*i* Sn	**Sg**		**13 52 31.2**	**+1.7**
SJES	**Sjenica**	**1.66**	**12**	*e*Pg	**Pg**		**13 52 08.6**	**-0.3**
SJES				*e*Sg	**Sg**		**13 52 30.2**	**-0.4**
NEST	**Nestorio**	**1.69**	**136**	P	**Pb**		**13 52 07.6**	**-0.5**
NEST				S	**Sg**		**13 52 32.1**	**+0.9**
PLE	**Pljevlja**	**1.70**	**357**	*e*Pg	**Pg**		**13 52 09.5**	**-0.1**
PLE				*e*Sg	**Sg**		**13 52 30.9**	**-0.8**
PLE	**Pljevlja**	**1.70**	**357**	⇓*i*Pn	**Pg**		**13 52 09.6**	**-0.1**
PLE				*e*Sn	**Sg**		**13 52 34.5**	**+2.8**
PENT	**Pentalofos**	**1.89**	**139**	P	**Pb**		**13 52 10.8**	**-0.8**
PENT				S	**Sg**		**13 52 38.1**	**+0.2**
KEK	**Kerkira**	**1.93**	**173**	P	**Pb**		**13 52 11.3**	**-0.9**
KEK				S	**Sg**		**13 52 38.5**	**+0.5**
SELS	**Selova**	**1.98**	**36**	*e*Pn	**Pn**		**13 52 11.6**	**+1.1**
SELS				*e*Sn	**Sn**		**13 52 35.9**	**+0.6**
IVAS	**Ivanjica**	**2.00**	**14**	*e*Pn	**Pb**		**13 52 12.1**	**-1.3**
IVAS				*e*Sn	**Sb**		**13 52 38.8**	**+0.5**
GOCS	**Kraljevo Serbi**	**2.18**	**27**	*e*Pn	**Pn**		**13 52 14.5**	**+1.3**
GOCS				*e*Sn	**Sn**		**13 52 40.1**	**0.0**
IGT	**Igoumenitsa**	**2.19**	**163**	P	**Pn**		**13 52 13.5**	**+0.2**
IGT				S	**Sb**		**13 52 44.6**	**+0.9**
BBLS	**Lazi&#263i**	**2.23**	**358**	*e*Pn	**Pb**		**13 52 16.4**	**-1.0**
BBLS				*e*Sn	**Sn**		**13 52 42.5**	**+1.0**
VAY	**Valandovo**	**2.32**	**97**	*i* Pn	**Pn**		**13 52 16.2**	**+1.2**
VAY				*i* Sn	**Sn**		**13 52 44.6**	**+1.0**
VAY				*e*Lg	Lg		13 52 44.8	
	comp=N,74nm,0.7s							
VAY				*e*Lg	Lg		13 52 45.7	
	comp=E,119nm,0.8s							
MATE	**Matera**	**2.33**	**246**	⇓P	**Pn**		**13 52 14.3**	**-0.9**
BOSS	**Bosilegrad**	**2.38**	**68**	*e*Pn	**Pn**		**13 52 16.4**	**+0.6**
BOSS				*e*Sn	**Sn**		**13 52 45.3**	**+0.4**
GRUS	**Gruza**	**2.42**	**21**	*e*Pn	**Pn**		**13 52 18.1**	**+1.6**
DIVS	**Divibare**	**2.49**	**8**	*e*Pn	**Pn**		**13 52 18.4**	**+0.9**
BOVS	**Bovan**	**2.58**	**38**	⇑P	**Pn**		**13 52 19.8**	**+1.3**
BOVS	**Bovan**	**2.58**	**38**	*e*Pn	**Pn**		**13 52 20.0**	**+1.4**
BOVS				*e*Sn	**Sn**		**13 52 50.5**	**+0.7**
KNT	**Kendrikon**	**2.59**	**99**	*i* Pn	**Pn**		**13 52 19.3**	**+0.5**
TRUS	**Trudelj**	**2.67**	**14**	*e*Pn	**Pn**		**13 52 21.1**	**+1.2**
KKB	**Krupnik**	**2.72**	**84**	*i* Pn	**Pn**		**13 52 21.9**	**+1.4**
THE	**Thessaloniki**	**2.80**	**110**	*i* Pn	**Pn**		**13 52 22.7**	**+1.1**
ZAPS	**Zavoj**	**2.84**	**54**	*e*Pn	**Pn**		**13 52 23.6**	**+1.4**
ZAPS				*e*Sn	**Sn**		**13 52 57.0**	**+0.7**
TEKS	**Tekeris**	**2.92**	**0**	*e*Pn	**Pn**		**13 52 25.9**	**+0.7**
ZAGS	**Zajecar**	**2.96**	**42**	*e*Pn	**Pn**		**13 52 25.6**	**+1.7**
ZAGS				*e*Sn	**Sn**		**13 52 58.2**	**-1.2**
SOH	**Sokhos**	**3.01**	**104**	*i* Pn	**Pn**		**13 52 25.5**	**+0.9**
BORS2	**Bor- Borsko je**	**3.07**	**36**	*e*Pn	**Pn**		**13 52 25.4**	**0.0**
BORS2				*e*Sn	**Sn**		**13 53 01.9**	**-0.2**
SRS	**Serrai**	**3.12**	**98**	*i* Pn	**Pn**		**13 52 25.8**	**-0.3**
MMB	**Musomishta**	**3.18**	**90**	*i* Pn	**Pn**		**13 52 28.5**	**+1.6**
KUBS	**Kucevo**	**3.20**	**29**	*e*Pn	**Pn**		**13 52 26.1**	**-1.1**
KUBS				*e*Sn	**Sn**		**13 53 03.7**	**-1.6**
TIP	**Timpagrande**	**3.23**	**221**	⇑P	**Pn**		**13 52 26.1**	**-1.5**
FRGS	**Fruska Gora**	**3.53**	**3**	*e*Pn	**Pn**		**13 52 32.6**	**+0.9**
MDVR	**Moldovita**	**3.54**	**26**	⇑P	**Pn**		**13 52 33.1**	**+1.3**
VRSS	**Vrsac**	**3.73**	**20**	*e*Pn	**Pn**		**13 52 36.0**	**+1.6**
VRSS				*e*Sn	**Sn**		**13 53 17.2**	**-1.1**
HERR	**Herculane**	**3.88**	**32**	⇑P	**Pn**		**13 52 37.9**	**+1.4**
BZS	**Buzias**	**4.27**	**20**	⇑P	**Pn**		**13 52 43.1**	**+1.4**
GZR	**Gura Zlata**	**4.45**	**31**	⇓P	**Pn**		**13 52 46.4**	**+2.0**
MORH	**Mrgy, Hungar**	**4.62**	**353**	⇓P	**Pn**		**13 52 47.4**	**+0.8**
ELND	**Elena**	**4.90**	**73**	⇓P	**Pn**		**13 52 51.6**	**+1.2**
ARR	**Arges**	**5.28**	**43**	⇓P	**Pn**		**13 52 57.8**	**+2.1**
VOIR		**5.54**	**45**	⇑P	**Pn**		**13 53 01.5**	**+2.2**
DRGR		**5.65**	**23**	⇑P	**Pn**		**13 53 03.0**	**+2.2**
OBKA	**Obir**	**6.04**	**325**	*e*Pn	**Pn**		**13 53 06.7**	**+0.4**
	comp=E,1.5nm,0.2s							
MLR	**Muntele Rosu**	**6.06**	**48**	⇑P	**Pn**		**13 53 08.9**	**+2.4**
VRI	**Vrincioaia**	**6.72**	**49**	⇑P	**Pn**		**13 53 17.8**	**+2.3**
KBA	**Koelnbreinsper**	**7.01**	**323**	*e*Pn	**Pn**		**13 53 21.3**	**+1.7**
	comp=E,1.2nm,0.3s							
STHS	**Stebnicka Huta**	**7.88**	**8**	*e*PN	**Pn**		**13 53 33.9**	**+2.5**
FINES	**FINESS Array B**	**20.24**	**9**	P	**P**		**13 56 10.7**	**-1.1**
	comp=E,0.7nm,0.5s,baz=187,slow=9.8,SNR=5.2							
	comp=E,0.7nm,0.5s							
BVAR	**Borovoye Array**	**35.59**	**54**	P	**P**		**13 58 34.2**	**0.0**
	comp=E,0.3nm,0.4s,baz=278,slow=10.0,SNR=2.8							
	comp=E,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**44.03**	**51**	P	**P**		**13 59 43.0**	**-1.3**
	comp=E,0.9nm,0.3s,baz=278,slow=7.4,SNR=6.7							
	comp=E,0.9nm,0.3s							
MKAR	**Makanchi Array**	**44.24**	**61**	P	**P**		**13 59 44.3**	**-1.8**
	comp=E,0.2nm,0.4s,baz=283,slow=7.5,SNR=7.1							
	comp=E,0.2nm,0.4s							
ASAR	**Alice Springs**	**123.24**	**93**	PKP	**PKPdf**		**14 10 32.5**	**-1.5**
	comp=E,0.3nm,0.9s,baz=282,slow=4.4,SNR=1.8							

*RHSSO **26** 14:01:00.2±0.5, 43.18N×18.02E, h8km, ML2.8/4*
*BEO **26** 14:01:01.0±0.3, 43.20N×18.04E, h0km, ML2.4/11*
*PDG **26** 14:01:01.4±0.2, 43.14N×18.00E, h12km, MD2.8/2, ML2.7/10, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
ISC 26 14:01:00.1±1.1, 43.19N±0.02×18.04E±0.02, h8km±9km, n44, σ0.90/85, 5C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KLINJ	**Klinje**	**0.40**	**92**	*e*Pg	**Pg**		**14 01 08.0**	**+0.1**
KLINJ				*e*Sg	**Sb**		**14 01 15.0**	**-0.7**
STON	**Ston**	**0.40**	**219**	*i* Pg	**Pg**		**14 01 07.9**	**0.0**
STON				Sg	**Sb**		**14 01 14.6**	**-1.1**
STON	**Ston**	**0.40**	**219**	*e*Pg	**Pg**		**14 01 08.0**	**0.0**
STON				*e*Sg	**Sb**		**14 01 14.7**	**-1.1**
BRY	**Bratogost**	**0.46**	**128**	⇑*i*Pg	**Pg**		**14 01 08.9**	**-0.2**
BRY				*e*Sg	**Sb**		**14 01 16.1**	**-1.5**
TREB	**Trebinje**	**0.52**	**154**	*e*Pg	**Pg**		**14 01 09.8**	**-0.4**
TREB				*e*Sg	**Sb**		**14 01 17.9**	**-1.2**
TREB	**Trebinje**	**0.52**	**154**	*e*Pg	**Pg**		**14 01 10.0**	**-0.2**
TREB				*e*Sg	**Sb**		**14 01 18.0**	**-1.2**
DBRK	**Dubrovnik**	**0.52**	**172**	*i* Pg	**Pb**		**14 01 10.4**	**-1.1**
DBRK				Sg	**Sb**		**14 01 19.0**	**-0.2**
UPM	**Unac-Piva**	**0.63**	**88**	⇑*i*Pg	**Pg**		**14 01 12.2**	**-0.1**
UPM				*e*Sg	**Sb**		**14 01 22.8**	**+0.3**
MAKA	**Makarska**	**0.75**	**278**	*i* Pg	**Pg**		**14 01 14.0**	**-0.6**
MAKA				Sg	**Sb**		**14 01 26.3**	**+0.4**
HCY	**Herceg Novi**	**0.81**	**156**	*e*Pg	**Pg**		**14 01 15.2**	**-0.5**
HCY				*e*Sg	**Sb**		**14 01 27.2**	**-0.3**
CEME	**Cevo**	**0.91**	**135**	*e*Pg	**Pg**		**14 01 16.8**	**-0.7**
CEME				*e*Sg	**Sb**		**14 01 30.9**	**+0.5**
PLE	**Pljevlja**	**0.99**	**81**	*e*Pg	**Pb**		**14 01 19.6**	**0.0**
PLE				*e*Sg	**Sn**		**14 01 33.8**	**-0.9**
PLE	**Pljevlja**	**0.99**	**81**	⇑*i*Pg	**Pb**		**14 01 19.7**	**+0.1**
PLE				*e*Sg	**Sn**		**14 01 34.5**	**-0.2**
RUDO	**Rudo**	**1.06**	**66**	⇑*i*Pg	**Pg**		**14 01 19.3**	**-1.1**
RUDO				*e*Sg	**Sg**		**14 01 33.9**	**-0.3**
RUDO	**Rudo**	**1.06**	**66**	*e*Pg	**Pg**		**14 01 19.3**	**-1.1**
RUDO				*e*Sg	**Sg**		**14 01 33.7**	**-0.5**
RUDO				*e*Sg	**Sb**		**14 01 34.1**	**-0.6**
BUM	**Brajici-Budva**	**1.09**	**144**	*e*Pg	**Pb**		**14 01 20.6**	**-0.5**
BUM				*e*Sg	**Sn**		**14 01 37.1**	**+0.2**
KOME	**Kolasin**	**1.13**	**107**	*e*Pg	**Pg**		**14 01 21.4**	**-0.4**
KOME	**Kolasin**	**1.13**	**107**	*e*Pg	**Pg**		**14 01 21.4**	**-0.4**
KOME				*i* Sg	**Sn**		**14 01 39.0**	**+0.9**
HVAR	**Hvar**	**1.17**	**270**	*e*Pg	**Pb**		**14 01 22.2**	**-0.2**
HVAR				Sg	**Sn**		**14 01 39.9**	**+1.1**
PDG	**Podgorica**	**1.17**	**130**	*e*Pg	**Pg**		**14 01 21.3**	**-1.2**
PDG				*e*Sg	**Sn**		**14 01 39.9**	**+1.0**
PDG	**Podgorica**	**1.17**	**130**	⇓*i*Pg	**Pg**		**14 01 21.8**	**-0.7**
PDG				*e*Sg	**Sn**		**14 01 39.6**	**+0.7**
BBLS	**Lazi&#263i**	**1.20**	**55**	*e*Pg	**Pg**		**14 01 22.7**	**-0.4**
BBLS				*e*Sg	**Sb**		**14 01 39.2**	**+0.4**
DRME	**Dracevica, Mon**	**1.31**	**140**	*e*Pg	**Pg**		**14 01 24.9**	**-0.3**
DRME				*e*Sg	**Sn**		**14 01 42.8**	**+0.5**
DRME	**Dracevica, Mon**	**1.31**	**140**	*e*Pg	**Pb**		**14 01 24.4**	**-0.5**
DRME				*e*Sg	**Sn**		**14 01 44.3**	**+2.0**
BEY	**Berane**	**1.39**	**102**	*e*Pg	**Pb**		**14 01 25.7**	**-0.2**
IVA	**Berane**	**1.39**	**102**	⇑*i*Pg	**Pb**		**14 01 26.0**	**-0.4**
SJES	**Sjenica**	**1.41**	**86**	*e*Pg	**Pb**		**14 01 26.6**	**-0.2**
SJES				*e*Sg	**Sg**		**14 01 45.6**	**+0.1**
KIJV	**Kijevo**	**1.44**	**305**	*e*Pn	**Pn**		**14 01 26.6**	**0.0**
KIJV				Sn	**Sg**		**14 01 48.4**	**+1.9**
ULC	**Ulcinj**	**1.51**	**144**	⇓*i*Pg	**Pb**		**14 01 27.8**	**-0.6**
ULC				*e*Sg	**Sg**		**14 01 49.5**	**+0.8**
PVY	**Plav**	**1.53**	**112**	*e*Pg	**Pg**		**14 01 28.7**	**-0.7**
PVY				*e*Sg	**Sg**		**14 01 51.0**	**+1.8**
PVY	**Plav**	**1.53**	**112**	*e*Pg	**Pg**		**14 01 29.2**	**-0.2**
PVY				*e*Sg	**Sg**		**14 01 51.4**	**+2.2**
IVAS	**Ivanjica**	**1.59**	**75**	*e*Pg	**Pg**		**14 01 30.1**	**-0.4**
IVAS				*e*Sg	**Sb**		**14 01 50.0**	**+0.1**
BLY	**Banja Luka**	**1.68**	**339**	*e*Pn	**Pn**		**14 01 29.6**	**-0.2**
BLY				*e*Sn	**Sn**		**14 01 51.4**	**-0.1**
BLY	**Banja Luka**	**1.68**	**339**	*e*Pn	**Pg**		**14 01 34.0**	**-0.3**
BLY				*e*Sg	**Sg**		**14 01 55.9**	**+1.8**
DIVS	**Divibare**	**1.68**	**57**	*e*Pn	**Pb**		**14 01 30.6**	**-0.7**
DIVS				*e*Sn	**Sg**		**14 01 54.7**	**+0.5**
TEKS	**Tekeris**	**1.73**	**38**	*e*Pg	**Pb**		**14 01 32.0**	**-0.2**
TEKS				*e*Sn	**Sb**		**14 01 53.8**	**-0.3**
ZIRJ	**Zirje**	**1.81**	**286**	*i* Pn	**Pb**		**14 01 32.3**	**-1.1**
ZIRJ				Sn	**Sb**		**14 01 56.8**	**+0.6**
MORI	**Morici**	**1.83**	**293**	*i* Pn	**Pb**		**14 01 33.2**	**-0.6**
MORI				Sn	**Sg**		**14 01 58.0**	**-0.8**
GRUS	**Gruza**	**2.07**	**69**	*e*Pn	**Pn**		**14 01 35.0**	**-0.1**
GRUS				*e*Sn	**Sb**		**14 02 04.5**	**+0.8**
GOCS	**Kraljevo Serbi**	**2.10**	**79**	*e*Pn	**Pn**		**14 01 36.4**	**+0.8**
GOCS				*e*Sn	**Sb**		**14 02 05.3**	**+0.6**
DUGI	**Dugi Otok**	**2.31**	**291**	*e*Pn	**Pb**		**14 01 40.4**	**-1.6**
DUGI				Sn	**Sb**		**14 02 10.1**	**-0.7**
VIRC	**Vir**	**2.43**	**298**	*e*Pn	**Pn**		**14 01 41.8**	**+1.7**
VIRC				Sn	**Sb**		**14 02 12.2**	**-1.9**
BOVS	**Bovan**	**2.71**	**79**	*e*Pn	**Pn**		**14 01 49.4**	**-2.3**
MORH	**Mrgy, Hungar**	**3.06**	**8**	*e*Pn	**Pn**		**14 01 49.4**	**+0.7**
MORH				*e*Sn	**Sn**		**14 02 26.0**	**+0.6**

*AEIC **26** 14:01:14.7±1.8, 54.76N±0.03×163.73W±0.02, h6km±1km, Error ellipse: s-maj=4.0km s-min=1.4km az=170.0*
NEIC 26 14:01:15.4±2.2, 54.72N±0.03×163.67W±0.02, h5km±2km, ML2.8/12, **ML2.5**(AEIC), **Error ellipse: s-maj=4.5km s-min=3.0km az=354.0, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ISNN	**Isanotski Nort**	**0.13**	**331**			Pg	14 01 17.1	-1.0
ISNN						Sg	14 01 19.8	-0.1
SSLS	**Shishaldin Sou**	**0.19**	**268**			Pg	14 01 19.2	0.0
SSLS						Sg	14 01 23.2	+1.5
FALS	**False Pass**	**0.20**	**46**			Pg	14 01 19.4	0.0
FALS						Sg	14 01 23.7	+1.6
SSLN	**Shishaldin Nor**	**0.21**	**297**			Pg	14 01 20.1	+0.5
SSLN	**Shishaldin Nor**	**0.21**	**297**			Sg	14 01 22.9	+0.6
SSBA	**Shishaldin**	**0.27**	**282**			Sg	14 01 25.1	+0.9
DT1	**Dutton Round H**	**0.89**	**64**			Pg	14 01 31.5	-1.1
DT1						Sb	14 01 44.9	-0.7
DOL	**Dolgoi Island**	**1.13**	**67**			Pg	14 01 36.2	-0.8
PN7A	**Pavlof North-7**	**1.20**	**53**			Pg	14 01 37.6	-0.8
PS4A	**Pavlof South-4**	**1.22**	**58**			Pg	14 01 38.3	-0.5
S12K	**Black Hills**	**1.35**	**42**	Pn	Pn		14 01 40.7	-0.2
S12K				IAML			14 02 00.6	
	comp=N,183nm,0.7s							
S12K				IAML			14 02 02.3	
	comp=E,149nm,0.7s							
AKUT	**Akutan**	**1.36**	**245**		Pn		14 01 40.4	-0.6
AKUT				IAML			14 02 03.9	
	comp=E,132nm,0.9s							
AKMO	**Akutan Morgan**	**1.50**	**246**		Pn		14 01 41.4	-1.6
UNV	**Unalaska Valle**	**1.88**	**243**	Pn	Pn		14 01 48.1	-0.1
UNV				IAML			14 02 21.3	
	comp=N,53nm,1.0s							
UNV				IAML			14 02 24.0	
	comp=E,68nm,1.0s							
SDPT	**Sand Point**	**1.94**	**70**	Pn	Pn		14 01 49.8	+0.7
SDPT				IAML			14 02 20.8	
	comp=E,83nm,1.0s							
MGOD	**Makushin Gods**	**2.09**	**245**		Pn		14 01 50.9	-0.3
CNBA	**Chernabura Isl**	**2.37**	**86**	Pn	Pn		14 01 55.8	+1.0

IDC 26 14:01:46.1±7.7, 7.69S×128.34E, h250km±94km, mb2.8/1, **mbtmp3.1**/3, **Error ellipse: s-maj=286.1km s-min=33.3km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.50**	**155**	P	Pn		14 04 48.3	+0.1
	0.3nm,0.7s,baz=333,slow=14,SNR=9.4							
WRA				S	S		14 07 14.5	-3.6
	0.7nm,0.5s,baz=324,slow=24,SNR=6.9							
ASAR	**Alice Springs**	**16.76**	**162**	P	Pn		14 05 26.3	-0.9
	0.2nm,0.9s,baz=346,slow=11,SNR=1.6							
ASAR				S	S		14 08 26.4	-1.2
	0.2nm,0.7s,baz=313,slow=16,SNR=1.8							
MKAR	**Makanchi Array**	**67.91**	**328**	P	P		14 12 17.8	-0.1
	0.3nm,0.7s,baz=116,slow=6.6,SNR=2.3							
	0.3nm,0.7s							

*NEIC **26** 14:11:53.0±1.7, 41.68N±0.04×19.64E±0.08, h10km±1km, mb4.4/12, Error ellipse: s-maj=10.1km s-min=5.3km az=247.0*
*TIR **26** 14:11:54.5, 41.60N×19.60E, h8km±1km, Ml3.3/5*
*BEO **26** 14:11:56.2±0.6, 41.63N×19.66E, h9km±2km, ML2.9/12*
*PDG **26** 14:11:56.5±0.2, 41.64N×19.57E, h8km±1km, MD3.1/4, ML3.0/12, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*
*IDC **26** 14:11:59.5±6.5, 42.33N×20.48E, h0km, mb3.9/2, mbtmp3.7/5, ML3.1/3, MS3.2/2, Error ellipse:*

s-maj=125.7km s-min=21.1km az=26.0
ISC 26 14:11:53.8±0.9, 41.65N±0.02×19.64E±0.02, h16km±7km, n95, σ1.82/132, mb4.2/4, 14C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**150**		Pg	**Pg**	**14 12 00.9**	**-0.1**
TIR					AML	AML	14 12 05.7	
	6.4nm,0.3s							
TIR					S	**Sg**	**14 12 05.8**	**0.0**
SDA	**Shkodra**	**0.42**	**346**		Pg	**Pn**	**14 12 03.4**	**-1.8**
SDA					S	**Sb**	**14 12 10.4**	**+1.5**
SDA					AML	AML	14 12 13.5	
	29µm,0.1s							
ULC	**Ulcinj**	**0.43**	**318**	⇓*i*Pg		**Pb**	**14 12 02.9**	**-0.2**
ULC				*i* Sg		**Sb**	**14 12 09.5**	**+0.1**
PHP	**Peshkopia**	**0.60**	**86**	P		**Pg**	**14 12 07.2**	**-0.6**
PHP				Sg		**Sb**	**14 12 15.7**	**+1.4**
PHP				AML		AML	14 12 24.8	
	6.6nm,0.7s							
DRME	**Dracevica, Mon**	**0.64**	**328**	*e*Pg		**Pn**	**14 12 07.0**	**-1.3**
DRME				*e*Sg		**Sn**	**14 12 19.2**	**+1.1**
DRME	**Dracevica, Mon**	**0.64**	**328**	⇓*i*Pg		**Pn**	**14 12 06.9**	**-1.3**
PDG	**Podgorica**	**0.83**	**340**	Pg		**Pg**	**14 12 08.5**	**-1.6**
PDG	**Podgorica**	**0.83**	**340**	⇑P		**Pn**	**14 12 11.7**	**+0.7**
PDG				⇑S		**Sn**	**14 12 25.8**	**+3.0**
PDG	**Podgorica**	**0.83**	**340**	*e*Pg		**Pn**	**14 12 10.2**	**-0.7**
PDG				*e*Sg		**Sn**	**14 12 25.1**	**+2.2**
PDG	**Podgorica**	**0.83**	**340**	⇓*i*Pg		**Pn**	**14 12 11.2**	**+0.3**
PDG				*e*Sg		**Sn**	**14 12 23.4**	**+0.5**
BUM	**Brajici-Budva**	**0.86**	**320**	*e*Pg		**Pn**	**14 12 11.2**	**-0.1**
BUM				*e*Sg		**Sn**	**14 12 23.6**	**0.0**
PVY	**Plav**	**0.98**	**14**	*e*Pg		**Pn**	**14 12 13.6**	**+0.6**
PVY				*e*Sg		**Sn**	**14 12 28.9**	**+2.3**
PVY	**Plav**	**0.98**	**14**	⇑*i*Pg		**Pn**	**14 12 13.7**	**+0.7**
PVY				*e*Sg		**Sn**	**14 12 29.0**	**+2.3**
CEME	**Cevo**	**1.05**	**330**	*e*Pg		**Pn**	**14 12 14.6**	**+0.7**
CEME				*e*Sg		**Sn**	**14 12 30.1**	**+1.8**
HCY	**Herceg Novi**	**1.17**	**314**	⇑*i*Pg		**Pn**	**14 12 16.9**	**+1.4**
HCY				*e*Sg		**Sn**	**14 12 33.9**	**+2.7**
VLO	**Vlora**	**1.18**	**185**	P		**Pg**	**14 12 17.1**	**+0.5**
VLO				Sg		**Sb**	**14 12 31.5**	**+0.7**

G65A	**Princeton**	**60.39**	**306**	P	**P**	**14 22 02.2**	**+0.1**
LBTB	**Lobatse**	**66.55**	**174**	LR	LR	14 55 05.3	
	comp=Z,69nm,18.5s,baz=155,slow=38						
H27K	**Steamboat Moun**	**71.48**	**352**	P	**P**	**14 23 12.3**	**-0.9**
H27K				IAmb	IAmb	14 23 24.1	
	comp=Z,4.5nm,1.4s						
I23K	**Minto, Yukon-K**	**73.20**	**355**	P	**P**	**14 23 23.4**	**+0.1**
KNK	**Knik Glacier**	**76.84**	**354**	P	**P**	**14 23 43.4**	**-1.1**
Q32M	**Nakina River**	**77.08**	**346**	P	**P**	**14 23 45.9**	**-0.2**

*AZER **26** 14:14:19.5,38°.81N×48°.55E,h18km,ml2.8*
*TEH **26** 14:14:21.1,38°.72N×48°.47E,h24km±34km*
ISC 26 14:14:21.7±1.1,38°.77N±0°.03×48°.51E±0°.03,h21km±2km,
n32,σ1°08/55,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
LRK	**Lerik**	**0.19**	**226**	P		**Pb**	**14 14 27.2**	**-0.4**
LRK				S		**Sb**	**14 14 32.3**	**+0.6**
LKRN	**Lenkeran, Azer**	**0.22**	**107**	P		**Pb**	**14 14 26.3**	**-1.1**
LKRN				S		**Sb**	**14 14 30.9**	**-0.7**
YRD	**Yardimli**	**0.25**	**304**	P		**Pb**	**14 14 27.5**	**-0.5**
YRD				S		**Sb**	**14 14 32.8**	**+0.4**
ASTR	**Astara**	**0.31**	**134**	P		**Pb**	**14 14 27.7**	**-0.7**
ASTR				S		**Sb**	**14 14 33.0**	**0.0**
GAS1	**Astara - Iran**	**0.47**	**146**	Pg		**Pb**	**14 14 30.3**	**-0.8**
GLBA	**Clilabad**	**0.48**	**349**	P		**Pb**	**14 14 30.2**	**-1.1**
GLBA				S		**Sb**	**14 14 37.6**	**-0.2**
GRMI	**Germi**	**0.48**	**274**	Pg		**Pb**	**14 14 30.9**	**-0.6**
SAAT	**Saatly**	**1.09**	**356**	P		**Pb**	**14 14 41.9**	**+0.2**
SAAT				S		**Sn**	**14 14 56.6**	**+0.5**
QRD	**Qoradiz**	**1.15**	**307**	P		**Pn**	**14 14 41.4**	**-1.2**
QRD				S		**Sb**	**14 14 57.1**	**-0.3**
ISRB	**Sarab**	**1.16**	**215**	Pg		**Pn**	**14 14 42.5**	**-0.3**
BLQ	**Beylaqan**	**1.20**	**322**	P		**Pn**	**14 14 41.9**	**-1.4**
BLQ				S		**Sn**	**14 14 58.7**	**-0.3**
IHRS	**Heris**	**1.24**	**249**	Pg		**Pn**	**14 14 43.6**	**-0.4**
ZRD	**Zardab**	**1.63**	**337**	Pn		**Pn**	**14 14 49.2**	**+0.1**
ZRD				Sn		**Sb**	**14 15 12.6**	**+1.3**
AGDM	**Agdam**	**1.72**	**321**	Pn		**Pn**	**14 14 50.5**	**+0.1**
AGDM				Sn		**Sb**	**14 15 12.8**	**-1.0**
IHSH	**Hashtrud**	**1.77**	**214**	Pg		**Pn**	**14 14 51.5**	**+0.2**
GBS	**Qobustan**	**1.79**	**11**	Pn		**Pn**	**14 14 51.0**	**-0.5**
GBS				Sg		**Sb**	**14 15 16.3**	**+0.5**
BRDA	**Brd**	**1.81**	**326**	Pn		**Pn**	**14 14 51.9**	**+0.3**
BRDA				Sn		**Sb**	**14 15 16.8**	**+0.5**
ITBZ	**Tabriz**	**1.93**	**255**	Pn		**Pn**	**14 14 53.5**	**0.0**
ORD	**Ordubad**	**1.97**	**275**	Pn		**Pn**	**14 14 54.7**	**+0.7**
ORD				Sn		**Sb**	**14 15 20.8**	**-0.2**
PQL	**Pirkuli**	**2.01**	**2**	Pn		**Pn**	**14 14 53.9**	**-0.7**
PQL				Sn		**Sb**	**14 15 21.5**	**-0.8**
ZNJK	**Zanjan**	**2.10**	**176**	Pn		**Pn**	**14 14 55.9**	**-0.1**
ATGJ	**Aliaghaj**	**2.11**	**9**	Pg		**Pn**	**14 14 57.5**	**+1.6**
ATGJ				Sg		**Sb**	**14 15 26.7**	**+1.6**
QBL	**Gabala**	**2.23**	**347**	Pg		**Pn**	**14 14 58.9**	**+1.4**
QBL				Sg		**Sb**	**14 15 28.4**	**-0.1**
SIZA	**Siyzn**	**2.32**	**7**	Pg		**Sn**	**14 14 59.6**	**+0.9**
SIZA				Sg		**Sb**	**14 15 33.1**	**+2.0**
ISHB	**Shabestar**	**2.32**	**259**	Pn		**Pn**	**14 14 58.8**	**-0.1**
NAX	**Nakhchivan**	**2.38**	**281**	Pg		**Pb**	**14 15 02.4**	**-1.5**
NAX				Sg		**Sb**	**14 15 34.2**	**+1.3**
SBZ	**Shahbuz**	**2.38**	**286**	Pg		**Pn**	**14 15 01.6**	**+2.0**
SBZ				Sg		**Sb**	**14 15 34.3**	**+1.4**
XNQ	**Khinaliq**	**2.41**	**353**	Pn		**Pn**	**14 14 59.5**	**-0.6**
XNQ				Sn		**Sb**	**14 15 31.4**	**-2.5**
GANJ	**Ganja**	**2.52**	**319**	Pn		**Pb**	**14 15 03.8**	**-2.4**
GANJ				Sn		**Sn**	**14 15 31.4**	**-0.2**
SEKA	**Sheki**	**2.63**	**338**	Pn		**Pn**	**14 15 03.2**	**+0.1**
SEKA				Sn		**Sn**	**14 15 35.8**	**+1.4**
GDB	**GEDABAY**	**2.88**	**313**	Pn		**Pn**	**14 15 06.7**	**+0.2**
GDB				Sn		**Sn**	**14 15 41.1**	**+0.4**
HYR	**Heyderabad**	**2.99**	**290**	Sn		**Sn**	**14 15 46.1**	**+2.8**

IDC 26 14:15:07.8±1.0,29°.06S×178°.49W,h0km,mb3.7/4,
mbtmp3.7/4,MS3.2/2,Error ellipse: s-maj=39.4km
s-min=12.9km az=15.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
RAO	**Raoul Island**	**0.54**	**111**	Pn		Pn	14 15 22.6	-0.1
	1μm,0.3s,baz=187,slow=2.5,SNR=40							
RAO				Sn		Sn	14 15 32.9	+0.5
	765nm,0.3s,baz=128,slow=20,SNR=11							
URZ	**Urewera**	**9.88**	**201**	Pn		Pn	14 17 25.3	-5.8
	0.2nm,0.3s,baz=345,slow=12,SNR=1.9							
URZ				Sn		Sn	14 19 05.3	-17
	0.1nm,0.3s,baz=270,slow=20,SNR=1.5							
URZ				LR		LR	14 21 02.4	
	comp=Z,114nm,21.8s,baz=22,slow=36							
PPT	**Papeete**	**28.83**	**73**	LR		LR	14 29 51.9	
	comp=Z,57nm,18.9s,baz=270,slow=31							
ASAR	**Alice Springs**	**42.77**	**266**	P		P	14 23 06.7	-0.6
	0.5nm,0.7s,baz=101,slow=7.9,SNR=8.7							
	0.5nm,0.7s							
WRA	**Warramunga Arr**	**43.63**	**271**	P		P	14 23 14.2	0.0
	0.7nm,0.6s,baz=109,slow=8.0,SNR=12							
	0.7nm,0.6s							
QSPA	**South Pole Qui**	**61.05**	**180**	P		P	14 25 23.3	+0.2
	1.0nm,0.8s,baz=104,slow=0.6,SNR=12							
	1.0nm,0.8s							
NVAR	**Mina Array Bea**	**87.55**	**43**	P		P	14 27 59.2	+1.3
	0.7nm,0.9s,baz=245,slow=2.9,SNR=3.0							
	0.7nm,0.9s							
FINES	**FINESS Array B**	**143.74**	**340**	PKP		PKPdf	14 34 45.1	+1.1
	2.2nm,0.9s,baz=22,slow=4.5,SNR=4.2							
AKASG	**Malin Array Be**	**149.97**	**324**	PKPbc		PKPbc	14 34 58.2	-1.6
	0.3nm,0.3s,baz=69,slow=1.6,SNR=1.7							

*THE **26** 14:24:08.0,42°.N±13°.×2°.0E±1°.0,h0km±18km,M2.8/5,*
MLh2.8/5
*TIR **26** 14:24:07.4,41°.63N×19°.56E,h2km±3km,ML3.1/5*
*PDG **26** 14:24:07.1±0.4,41°.52N×19°.58E,h8km±1km,MD3.1/4,*
ML3.0/13,Error ellipse: s-maj=1.4km s-min=1.8km az=0.0
*BEO **26** 14:24:08.5±0.5,41°.60N×19°.62E,h11km±2km,ML2.7/4*
ISC 26 14:24:08.0±1.0,41°.61N±0°.02×19°.55E±0°.03,h8km±9km,
n62,σ1°05/107,11C-9D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
TIR	**Tirane**	**0.36**	**138**	Pg		**Pg**	**14 24 14.7**	**-0.4**
TIR				Sg		**Sg**	**14 24 20.0**	**+0.3**
TIR				AML		AML	14 24 21.1	
	3.8nm,0.2s							
ULC	**Ulcinj**	**0.42**	**327**	⇓	*i*Pg	**Pg**	**14 24 16.0**	**-0.1**
ULC					*e*Sg	**Sb**	**14 24 22.8**	**-1.3**
SDA	**Shkodra**	**0.44**	**355**	P		**Pg**	**14 24 16.5**	**-0.1**
SDA				Sg		**Sg**	**14 24 22.9**	**+0.6**
SDA				AML		AML	14 24 27.4	
	20μm,0.1s							
DRME	**Dracevica, Mon**	**0.63**	**335**	*e*Pg		**Pg**	**14 24 19.9**	**-0.3**
DRME				*e*Sg		**Sn**	**14 24 32.6**	**-0.9**
DRME	**Dracevica, Mon**	**0.63**	**335**	*e*Pg		**Pg**	**14 24 19.4**	**-0.8**
DRME				*e*Sg		**Sb**	**14 24 30.3**	**0.0**
PHP	**Peshkopia**	**0.67**	**84**	Pg		**Pg**	**14 24 20.4**	**-0.7**
PHP				S		**Sg**	**14 24 30.6**	**+0.8**
PHP				AML		AML	14 24 34.5	
	3.8nm,0.5s							
PHP	**Peshkopia**	**0.67**	**84**	P		**Pg**	**14 24 20.3**	**-0.7**
PHP				S		**Sg**	**14 24 30.3**	**+0.5**
BUM	**Brajici-Budva**	**0.84**	**325**	⇓	*i*Pg	**Pg**	**14 24 24.0**	**-0.2**
BUM					*e*Sg	**Sb**	**14 24 37.3**	**+1.0**
PDG	**Podgorica**	**0.84**	**345**	P		**Pg**	**14 24 23.4**	**-0.9**
PDG				Sg		**Sn**	**14 24 38.7**	**0.0**
PDG				AML		AML	14 24 42.8	
	6μm,0.2s							
PDG	**Podgorica**	**0.84**	**345**	⇓	P	**Pg**	**14 24 23.2**	**-1.0**
PDG				⇓	S	**Sb**	**14 24 36.9**	**+0.6**
PDG	**Podgorica**	**0.84**	**345**	*e*Pg		**Pg**	**14 24 23.1**	**-1.1**
PDG				*e*Sg		**Sb**	**14 24 36.9**	**+0.6**
PDG	**Podgorica**	**0.84**	**345**	⇑	*i*Pg	**Pg**	**14 24 23.2**	**-1.0**
PDG				*e*Sg		**Sn**	**14 24 38.2**	**-0.5**
PVY	**Plav**	**1.03**	**17**	*e*Pg		**Pg**	**14 24 26.3**	**-1.4**
PVY				*e*Sg		**Sb**	**14 24 42.5**	**+0.8**
PVY	**Plav**	**1.03**	**17**	*e*Pg		**Pg**	**14 24 26.1**	**-1.6**
PVY				*i*Sg		**Sn**	**14 24 43.4**	**0.0**
CEME	**Cevo**	**1.04**	**334**	*e*Pg		**Pg**	**14 24 27.1**	**-0.9**
CEME				*e*Sg		**Sn**	**14 24 44.2**	**+0.5**
HCY	**Herceg Novi**	**1.14**	**317**	*e*Pg		**Pg**	**14 24 29.1**	**-0.9**
HCY				*e*Sg		**Sn**	**14 24 47.0**	**+0.9**
VLO	**Vlora**	**1.15**	**182**	Pg		**Pn**	**14 24 31.1**	**+0.9**
VLO				Sg		**Sn**	**14 24 46.3**	**+0.2**
VLO	**Vlora**	**1.15**	**182**	P		**Pg**	**14 24 29.4**	**-0.6**
VLO				S		**Sb**	**14 24 45.1**	**+0.1**
NKME	**Niksic**	**1.23**	**339**	⇑	*i*Pg	**Pg**	**14 24 31.5**	**-0.2**
NKME					*e*Sg	**Sn**	**14 24 50.3**	**+1.9**
KOME	**Kolasin**	**1.24**	**359**	*e*Pg		**Pb**	**14 24 30.8**	**-0.8**
KOME	**Kolasin**	**1.24**	**359**	*e*Pg		**Pb**	**14 24 30.4**	**-1.2**
KOME				*i*	Sg	**Sn**	**14 24 51.0**	**+2.5**
BEY	**Berane**	**1.28**	**11**	*e*Pg		**Pn**	**14 24 31.0**	**-1.3**
BEY				*e*Sg		**Sb**	**14 24 48.9**	**-0.2**
IVA	**Berane**	**1.28**	**11**	⇑	*i*Pg	**Pn**	**14 24 31.4**	**-0.9**
IVA				*e*Sg		**Sn**	**14 24 52.8**	**+3.1**
KBN	**Korca**	**1.36**	**136**	P		**Pb**	**14 24 33.9**	**+0.1**
KBN				Sg		**Sg**	**14 24 53.5**	**+1.6**
KBN				AML		AML	14 24 54.7	
	0.9nm,0.8s							
KBN	**Korca**	**1.36**	**136**	P		**Pn**	**14 24 32.5**	**-0.8**
KBN				S		**Sg**	**14 24 52.6**	**+0.8**
BRY	**Bratogost**	**1.49**	**330**	⇓	*i*Pn	**Pb**	**14 24 35.5**	**-0.4**
BRY					*e*Sn	**Sg**	**14 24 58.9**	**+3.0**
NEST	**Nestorio**	**1.65**	**136**	P		**Pn**	**14 24 37.5**	**+0.2**
NEST				S		**Sn**	**14 24 59.3**	**+0.5**
UPM	**Unac-Piva**	**1.66**	**344**	*e*Pn		**Pb**	**14 24 38.6**	**-0.3**
UPM				*i*	Sn	**Sg**	**14 25 02.4**	**+1.1**
SJES	**Sjenica**	**1.68**	**11**	*e*Pg		**Pb**	**14 24 39.3**	**+0.2**
SJES				*e*Sg		**Sg**	**14 25 02.2**	**+0.3**
PLE	**Pljevlja**	**1.72**	**356**	*e*Pg		**Pg**	**14 24 40.3**	**-0.7**
PLE				*e*Sg		**Sg**	**14 25 03.0**	**-0.3**
PLE	**Pljevlja**	**1.72**	**356**	*e*Pn		**Pg**	**14 24 39.2**	**+0.7**
PLE				*i*	Sn	**Sg**	**14 25 04.8**	**+1.5**
PENT	**Pentalofos**	**1.86**	**139**	P		**Pn**	**14 24 41.0**	**+0.8**
PENT				S		**Sb**	**14 25 05.4**	**-0.3**
KEK	**Kerkira**	**1.91**	**174**	P		**Pb**	**14 24 42.8**	**-0.3**
KEK				S		**Sb**	**14 25 06.1**	**-0.8**
SELS	**Selova**	**1.98**	**35**	*e*Pn		**Pn**	**14 24 42.5**	**+0.7**
SELS				*e*Sn		**Sn**	**14 25 07.3**	**+0.5**
IVAS	**Ivanjica**	**2.01**	**13**	*e*Pn		**Pn**	**14 24 42.4**	**+0.1**
IVAS				*e*Sn		**Sn**	**14 25 08.5**	**+0.9**
IGT	**Igoumenitsa**	**2.16**	**164**	P		**Pn**	**14 24 43.5**	**-0.8**
IGT				S		**Sn**	**14 25 12.8**	**+1.5**
GOCS	**Kraljevo Serbi**	**2.18**	**26**	*e*Pn		**Pn**	**14 24 44.8**	**+0.2**
GOCS				*e*Sn		**Sn**	**14 25 12.4**	**+0.6**
BBLS	**Lazi&#263i**	**2.25**	**357**	*e*Pn		**Pb**	**14 24 47.2**	**-1.7**
BBLS				*e*Sn		**Sn**	**14 25 14.6**	**+1.0**
MATE	**Matera**	**2.35**	**247**	⇑P		**Pn**	**14 24 45.3**	**-1.6**
BOSS	**Bosilegrad**	**2.36**	**67**	*e*Pn		**Pn**	**14 24 47.2**	**+0.3**
BOSS				*e*Sn		**Sn**	**14 25 15.6**	**-0.4**
GRUS	**Gruza**	**2.43**	**20**	*e*Pn		**Pn**	**14 24 48.6**	**+0.7**
GRUS				*e*Sn		**Sn**	**14 25 15.8**	**-2.0**
DIVS	**Divibare**	**2.50**	**7**	*e*Pn		**Pn**	**14 24 49.3**	**+0.3**
DIVS				*e*Sn		**Sn**	**14 25 21.6**	**+1.8**
BOVS	**Bovan**	**2.57**	**38**	⇓P		**Pn**	**14 24 50.4**	**+0.5**
BOVS	**Bovan**	**2.57**	**38**	*e*Pn		**Pn**	**14 24 50.4**	**+0.5**
BOVS				*e*Sn		**Sn**	**14 25 21.0**	**-0.3**
TRUS	**Trudelj**	**2.68**	**13**	*e*Pn		**Pn**	**14 24 51.9**	**+0.5**
ZAPS	**Zavoj**	**2.82**	**53**	*e*Pn		**Pn**	**14 24 54.0**	**+0.6**
ZAPS				*e*Sn		**Sn**	**14 25 26.5**	**-1.1**
TEKS	**Tekeris**	**2.93**	**360**	*e*Pn		**Pn**	**14 24 55.1**	**+0.2**
ZAGS	**Zajecar**	**2.96**	**41**	*e*Pn		**Pn**	**14 24 56.0**	**+0.8**
ZAGS				*e*Sn		**Sn**	**14 25 28.9**	**-1.9**
BORS2	**Bor- Borsko je**	**3.07**	**35**	*e*Pn		**Pn**	**14 24 55.5**	**-1.3**
BORS2				*e*Sn		**Sn**	**14 25 32.3**	**-1.3**
KUBS	**Kucevo**	**3.20**	**28**	*e*Pn		**Pn**	**14 24 57.5**	**-1.1**
KUBS				*e*Sn		**Sn**	**14 25 35.3**	**-1.6**
TIP	**Timpagrande**	**3.23**	**222**	⇑P		**Pn**	**14 24 57.0**	**-2.1**
MDVR	**Moldovita**	**3.54**	**26**	⇓P		**Pn**	**14 25 03.5**	**+0.3**
FRGS	**Fruska Gora**	**3.55**	**3**	*e*Pn		**Pn**	**14 25 02.4**	**-0.9**
VRSS	**Vrsac**	**3.74**	**20**	*e*Pn		**Pn**	**14 25 05.6**	**-0.3**
HERR	**Herculane**	**3.88**	**32**	⇓P		**Pn**	**14 25 08.7**	**+0.8**
BZS	**Buzias**	**4.27**	**20**	⇑P		**Pn**	**14 25 14.1**	**+0.8**
GZR	**Gura Zlata**	**4.45**	**31**	⇑P		**Pn**	**14 25 16.9**	**+1.2**
SIRR	**Siria**	**4.90**	**17**	⇓P		**Pn**	**14 25 22.6**	**+0.8**
ARR	**Arges**	**5.27**	**43**	⇑P		**Pn**	**14 25 28.1**	**+1.1**
VOIR		**5.53**	**44**	⇑P		**Pn**	**14 25 32.0**	**+1.4**
MLR	**Muntele Rosu**	**6.05**	**48**	⇑P		**Pn**	**14 25 39.4**	**+1.6**
VRI	**Vrincioaia**	**6.71**	**48**	⇑P		**Pn**	**14 25 48.2**	**+1.4**

*NEIC **26** 14:24:29.9±1.2, 17°.8S±0°.1×178°.3W±0°.1,h585km±7km,*
mb4.4/80,Error ellipse: s-maj=15.7km s-min=14.6km
az=168.0
*IDC **26** 14:24:32.3±2.3, 17°.58S×178°.58W,h599km±26km,*
mb3.5/14,mbtmp4.4/14,Error ellipse: s-maj=18.5km
s-min=10.6km az=148.0
*NOU **26** 14:24:37.9, 18°.09S×179°.07W,h627km,mb4.4/30,Fiji*
Islands Region
ISC 26 14:24:31.3±0.5,17°.84S±0°.07×178°.39W±0°.08,h600km,
n162,σ0°89/164,mb4.4/61,5C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
MSVF	**Nonsavu**	**3.39**	**271**			**P**	**14 25 52.7**	**-0.3**
AFI	**Afiamalu**	**7.46**	**59**			P	14 26 21.4	-4.4
NIUE	**Niue**	**8.12**	**100**	P		P	14 26 29.1	-2.7
FUNA	**Funafuti**	**9.55**	**345**	P		**P**	**14 26 43.2**	**-2.5**
MARNC	**Mare, Loyalty**	**13.30**	**252**	P		**P**	**14 27 21.9**	**-1.3**
MARNC	**Mare, Loyalty**	**13.30**	**252**	P		**P**	**14 27 22.1**	**-1.1**
SANVU	**Saraoutou**	**14.01**	**278**	P		**P**	**14 27 31.6**	**+1.2**
PINNC	**Pines Island,**	**14.12**	**248**	P		**P**	**14 27 30.2**	**-1.1**
PINNC	**Pines Island,**	**14.12**	**248**	P		**P**	**14 27 30.7**	**-0.6**
DZM	**Mont Dzumac**	**14.87**	**251**	P		**P**	**14 27 37.5**	**-0.9**
	baz=65,slow=0.9							
OUZ	**Omahuta**	**18.73**	**201**	P		**P**	**14 28 15.4**	**+2.0**
URZ	**Urewera**	**20.73**	**190**	P		**P**	**14 28 29.4**	**-2.0**
	6.9nm,1.2s,baz=33,slow=6.8,SNR=3.0							
URZ				S		**S**	**14 31 40.5**	**-4.5**
	4.6nm,0.8s,baz=12,slow=14,SNR=2.7							
TATA	**Tatamba Isabel**	**23.20**	**291**	P		**P**	**14 28 55.1**	**+1.3**
QRZ	**Quartz Range**	**24.21**	**197**	P		**P**	**14 29 02.4**	**0.0**
QRZ	**Quartz Range**	**24.21**	**197**	P		**P**	**14 29 04.1**	**+1.7**
THZ	**Tophouse**	**24.99**	**196**	P		**P**	**14 29 09.2**	**-0.1**
GVZ	**Greta Valley S**	**26.09**	**194**	P		**P**	**14 29 18.3**	**-0.6**
MLZ	**Mavora Lakes**	**29.67**	**199**	P		**P**	**14 29 50.3**	**+0.3**
ARMA	**Armidale**	**29.99**	**240**	P		**P**	**14 29 53.4**	**+0.2**
ARMA				IAmb		IAmb	14 30 31.6	
	comp=Z,31nm,1.4s							
CTAO	**Charters Tower**	**33.48**	**260**	P		**P**	**14 30 22.5**	**-0.2**
CTAO				IAmb		IAmb	14 30 23.0	
	comp=Z,7.9nm,0.8s							
CAN	**Canberra**	**33.76**	**232**	P		**P**	**14 30 25.4**	**+0.4**
CAN	**Canberra**	**33.76**	**232**	P		**P**	**14 30 25.4**	**+0.4**
PMG	**Port Moresby**	**34.47**	**279**			**P**	**14 30 31.4**	**+0.4**
CMSA	**Cobar Meteorol**	**35.20**	**240**	P		**P**	**14 30 37.1**	**+0.2**
MTSU	**Mount Surprise**	**35.43**	**264**	P		**P**	**14 30 39.0**	**0.0**
QLP	**Quilpie**	**35.58**	**249**	P		**P**	**14 30 39.9**	**-0.2**
COEN	**Coen**	**37.12**	**270**			**P**	**14 30 53.4**	**+0.5**
COEN	**Coen**	**37.12**	**270**	P		**P**	**14 30 53.5**	**+0.6**
TOO	**Toolangi**	**37.23**	**231**	P		**P**	**14 30 54.1**	**+0.7**
TOO				IAmb		IAmb	14 30 55.1	
	comp=Z,10.0nm,0.9s							
STKA	**Stephens Creek**	**38.68**	**241**	P		**P**	**14 31 05.8**	**+0.6**
	comp=Z,16nm,0.7s,baz=94,slow=8.0,SNR=31							
	comp=Z,16nm,0.7s							
STKA	**Stephens Creek**	**38.68**	**241**	P		**P**	**14 31 05.9**	**+0.6**
INKA	**Innaminka**	**38.79**	**248**			**P**	**14 31 07.1**	**+0.9**
INKA				IAmb		IAmb	14 31 08.1	
	comp=Z,6.2nm,0.7s							
QIS	**Mount Isa**	**39.69**	**259**	P		**P**	**14 31 13.1**	**-0.4**
HTT	**Hallett**	**41.20**	**239**	P		**P**	**14 31 25.9**	**+0.5**
PTPS	**Port Pirie**	**41.91**	**240**	P		**P**	**14 31 30.0**	**-0.9**
BBOO	**Buckleboo**	**43.46**	**241**	P		**P**	**14 31 43.1**	**+0.2**
BBOO	**Buckleboo**	**43.46**	**241**	P		**P**	**14 31 43.0**	**0.0**
WR8	**Warramunga Arr**	**44.51**	**259**			**P**	**14 31 50.5**	**-0.8**
WR8				IAmb		IAmb	14 31 52.8	
	comp=Z,10nm,1.1s							
WB0	**Warramunga Arr**	**44.63**	**260**			**P**	**14 31 51.2**	**-0.9**
WRAB	**Tennant Creek**	**44.65**	**259**	P		**P**	**14 31 51.6**	**-0.8**
WRA	**Warramunga Arr**	**44.66**	**259**	P		**P**	**14 31 51.9**	**-0.6**
	comp=Z,11nm,0.7s,baz=93,slow=7.2,SNR=88							
WRA				PcP		**PcP**	**14 33 22.1**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=95,slow=3.2,SNR=6.6							
WRA				S		**S**	**14 37 45.9**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=99,slow=14,SNR=3.2							
	comp=Z,11nm,0.7s							
WRA	**Warramunga Arr**	**44.66**	**259**			**P**	**14 31 51.3**	**-1.1**
AS31	**Alice Springs**	**44.83**	**254**			**P**	**14 31 53.6**	**-0.1**
ASAR	**Alice Springs**	**44.83**	**254**	P		**P**	**14 31 53.6**	**0.0**
	comp=Z,67nm,0.6s,baz=87,slow=8.4,SNR=618							
ASAR				PcP		**PcP**	**14 33 22.4**	**0.0**
	comp=Z,4.1nm,0.7s,baz=95,slow=3.4,SNR=7.7							
ASAR				S		**S**	**14 37 47.9**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=95,slow=13,SNR=12							
ASAR	**Alice Springs**	**44.83**	**254**	P		**P**	**14 31 53.5**	**-0.2**
MTN	**Manton Dam**	**48.82**	**268**			**P**	**14 32 23.1**	**-0.6**
MTN				IAmb		IAmb	14 32 24.1	
	comp=Z,13nm,0.8s							
FORT	**Forrest**	**50.05**	**245**			**P**	**14 32 31.9**	**-0.6**
FORT				IAmb		IAmb	14 32 32.6	
	comp=Z,17nm,0.6s							
KNRA	**Kununurra**	**50.52**	**264**	P		**P**	**14 32 35.6**	**-0.5**
KNRA				IAmb		IAmb	14 32 36.2	
	comp=Z,10nm,0.7s							
FAKI	**Fak Fak**	**50.58**	**281**	P		**P**	**14 32 36.5**	**0.0**
FAKI				IAmb		IAmb	14 32 37.3	
	comp=Z,22nm,1.3s							
FAKI	**Fak Fak**	**50.58**	**281**	P		**P**	**14 32 36.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**53.06**	**260**	P		**P**	**14 32 54.4**	**+0.1**
PSA00	**Pilbara Seismi**	**57.95**	**255**	P		**P**	**14 33 27.4**	**-0.6**
PSA00	**Pilbara Seismi**	**57.95**	**255**	P		**P**	**14 33 27.6**	**-0.4**
MBWA	**Marble Bar**	**58.11**	**256**	P		**P**	**14 33 28.6**	**-0.5**
MEEK	**Meekatharra**	**58.48**	**249**	P		**P**	**14 33 31.2**	**-0.3**
KLBR	**Kellerberrin**	**58.88**	**243**	P		**P**	**14 33 33.8**	**-0.3**
NWAO	**Narrogin (SRO)**	**59.26**	**242**	P		**P**	**14 33 36.8**	**+0.2**
NWAO				IAmb		IAmb	14 33 46.4	
	comp=Z,24nm,1.2s							
BLDU	**Ballidu**	**59.83**	**245**	P		**P**	**14 33 40.0**	**-0.4**
LUWI	**Luwuk**	**60.11**	**279**	P		**P**	**14 33 43.8**	**+1.3**
VNDA	**Vanda**	**60.52**	**185**	P		**P**	**14 33 44.2**	**+0.1**
MORW	**Morawa**	**60.53**	**246**	P		**P**	**14 33 44.5**	**-0.6**
MORW				IAmb		IAmb	14 33 50.0	
	comp=Z,32nm,1.4s							
MORW	**Morawa**	**60.53**	**246**	P		**P**	**14 33 44.3**	**-0.8**
PLAI	**Plampang**	**62.51**	**269**	P		**P**	**14 33 58.4**	**+0.2**
TOLI2	**Tolitoli**	**62.72**	**281**	P		**P**	**14 33 59.9**	**+0.3**
TOLI2	**Tolitoli**	**62.72**	**281**	P		**P**	**14 34 01.6**	**+2.1**
GIRL	**Giralia**	**62.93**	**253**	P		**P**	**14 34 01.5**	**+0.7**
JAGI	**Jajag, Banyuwa**	**66.06**	**268**	P		**P**	**14 34 19.5**	**-1.1**
JGF	**Kuroka**	**67.69**	**322**	P		**P**	**14 34 30.3**	**+0.1**
JGF				IAmb		IAmb	14 35 05.3	
	comp=Z,25nm,1.4s							
MJAR	**Matsushiro Arr**	**67.86**	**323**	P		**P**	**14 34 30.5**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=150,slow=5.6,SNR=8.8							
	comp=Z,2.6nm,0.5s							
MJAR	**Matsushiro Arr**	**67.86**	**323**	P		**P**	**14 34 30.3**	**-0.8**
MAJO	**Matsushiro**	**67.86**	**323**	P		**P**	**14 34 30.4**	**-0.7**
MAJO				IAmb		IAmb	14 34 46.5	
	comp=Z,20nm,1.5s							
UGM	**Wanagama**	**69.67**	**268**	P

	comp=Z,1.0nm,0.6s,baz=218,slow=4.2,SNR=12							
	comp=Z,1.0nm,0.6s							
COLD	**Coldfoot**	**87.34**	**11**	P		**P**	**14 36 14.6**	**-0.4**
COLD				IAmb		IAmb	14 36 16.2	
	comp=Z,5.9nm,1.2s							
G24K	**Hadweenzic Riv**	**87.38**	**12**	P		**P**	**14 36 14.4**	**-0.8**
E22K	**Anaktuvuk Pass**	**87.89**	**10**	P		**P**	**14 36 17.2**	**-0.4**
E22K				IAmb		IAmb	14 36 29.2	
	comp=Z,13nm,1.5s							
H27K	**Steamboat Moun**	**88.25**	**14**	P		**P**	**14 36 19.2**	**-0.1**
D23K	**Nanushuk River**	**88.82**	**10**	P		**P**	**14 36 21.9**	**0.0**
D23K				IAmb		IAmb	14 36 39.3	
	comp=Z,6.3nm,1.4s							
CMAR	**Chiang Mai Arr**	**88.88**	**290**	P		**P**	**14 36 24.1**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=108,slow=3.1,SNR=16							
	comp=Z,2.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**88.88**	**290**	P		**P**	**14 36 23.3**	**0.0**
PZH	**PanZhiHua**	**89.14**	**298**	P		**P**	**14 36 25.8**	**+1.3**
G30M	**tAoh Zraii Nji**	**90.13**	**15**	P		**P**	**14 36 27.3**	**-0.8**
G30M				IAmb		IAmb	14 36 28.3	
	comp=Z,6.0nm,0.9s							
TROLL	**Troll, Antarti**	**90.38**	**180**	⇑P		**P**	**14 36 28.9**	**-0.5**
	comp=Z,250nm,0.8s							
BRDY	**Brady**	**90.41**	**57**	P		**P**	**14 36 29.0**	**-1.2**
C27K	**Jago River**	**90.62**	**11**	P		**P**	**14 36 29.8**	**-0.4**
C27K				IAmb		IAmb	14 36 33.3	
	comp=Z,3.6nm,1.1s							
VNA3	**Neumayer Olymp**	**90.81**	**176**	⇑P		**P**	**14 36 31.2**	**0.0**
	comp=Z,4.6nm,0.5s							
F31M	**Tsilgehtchic**	**91.11**	**16**	P		**P**	**14 36 32.3**	**-0.2**
F31M				IAmb		IAmb	14 36 32.7	
	comp=Z,5.8nm,0.8s							
VNA2	**Neumayer--Watz**	**91.25**	**177**	⇑P		**P**	**14 36 33.8**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=181,slow=3.2							
VNA1	**Neumayer--Stat**	**91.48**	**177**	⇑P		**P**	**14 36 34.6**	**+0.4**
	comp=Z,6.2nm,0.9s							
INK	**Inuvik**	**91.81**	**15**	P		**P**	**14 36 35.0**	**-0.6**
INK				IAmb		IAmb	14 36 35.3	
	comp=Z,2.7nm,0.9s							
SONM	**Songino Array**	**93.51**	**319**	P		**P**	**14 36 43.8**	**-0.3**
	comp=Z,5.5nm,0.7s,baz=134,slow=8.3,SNR=3.1							
	comp=Z,0.5nm,0.7s							
BVAR	**Borovoye Array**	**116.80**	**321**	PKP		**PKPdf**	**14 42 07.7**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=131,slow=1.8,SNR=14							
ARCES	**ARCESS Array B**	**126.25**	**350**	PKP		**PKPdf**	**14 42 25.2**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=29,slow=2.8,SNR=7.6							
FINES	**FINESS Array B**	**133.12**	**344**	PKP		**PKPdf**	**14 42 38.3**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=82,slow=3.1,SNR=4.6							
HFS	**Hagfors**	**136.86**	**351**	PKhKP		PKPpre	14 42 36.1	
	comp=Z,2.7nm,0.9s,baz=85,slow=8.8,SNR=4.6							
BRTR	**Keskin Array B**	**144.75**	**315**	PKP		**PKPdf**	**14 43 01.6**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=116,slow=3.4,SNR=22							
DPC	**Dobruska-Polom**	**145.48**	**343**	*e*PKP		**PKPbc**	**14 43 04.1**	**+0.6**
KRLC	**Kraliky**	**145.60**	**343**	*e*PKP		**PKPbc**	**14 43 04.3**	**+0.5**
PVCC	**Panska Ves**	**145.77**	**345**	*e*PKP		**PKPbc**	**14 43 05.1**	**+0.9**
MMAI	**Mount Meron Ar**	**146.12**	**303**	PKPbc		**PKPbc**	**14 43 06.5**	**+0.7**
	comp=Z,5.0nm,0.4s,baz=65,slow=4.8,SNR=14							
KHC	**Kasperske Hory**	**147.31**	**345**	*e*PKP		**PKPbc**	**14 43 08.9**	**+0.4**
CKRC	**Cesky Krumlov**	**147.42**	**344**	*e*PKP		**PKPbc**	**14 43 09.0**	**+0.3**
GERES	**GERESS Array B**	**147.55**	**345**	PKPbc		**PKPbc**	**14 43 09.1**	**-0.1**
	comp=Z,3.6nm,0.5s,baz=24,slow=3.6,SNR=25							
CONA	**Conrad Observa**	**147.80**	**342**	*i* PKiKP		**PKPbc**	**14 43 10.3**	**+0.5**
	comp=Z,3.6nm,0.5s							
RONA	**Rosalia, Austr**	**147.87**	**341**	*e*PKiKP		**PKPbc**	**14 43 10.3**	**+0.3**
	comp=Z,4.1nm,0.6s							
LESA	**Schwarzleotal**	**149.12**	**345**	*i* PKiKP		**PKPbc**	**14 43 13.3**	**+0.2**
	comp=Z,3.4nm,0.4s							
KBA	**Koelnbreinsper**	**149.28**	**344**	*i* PKP		**PKPbc**	**14 43 13.1**	**-0.5**
	comp=Z,1.9nm,0.4s							
WTTA	**Wattenberg**	**149.51**	**346**	*e*PKiKP		**PKPbc**	**14 43 14.1**	**-0.1**
	comp=Z,6.9nm,0.4s							
MYKA	**Terra Mystica**	**149.61**	**344**	*i* PKP		**PKPbc**	**14 43 13.3**	**-0.9**
	comp=Z,3.8nm,0.4s							
FETA	**Feichten**	**149.94**	**348**	*i* PKiKP		**PKPbc**	**14 43 15.1**	**0.0**
	comp=Z,4.1nm,0.7s							

WEL 26 14:35:10.5±0.9, 36°S±9°×17°9W±°, h12km, M3.7/9, ML3.6/15, MLv3.7/9, Error ellipse: s-maj=14.3km s-min=6.9km az=137.4, confirmed, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.03**	**228**	P	Pn	14 35 55.8	-2.5
MXZ				S	Sn	14 36 34.4	-0.1
WMGZ	**Waiomatatini S**	**3.15**	**223**	P	Pn	14 36 00.5	+0.7
WMGZ				S	Sn	14 36 39.1	+1.8
PKGZ	**Pakihiroa**	**3.37**	**226**	P	Pn	14 36 03.8	+0.9
PKGZ				S	Sn	14 36 44.0	+1.2
PUZ	**Puketiti**	**3.41**	**222**	P	Pn	14 36 03.5	-0.1
PUZ				S	Sn	14 36 44.7	+0.8
HAZ	**Te Kaha**	**3.48**	**230**	P	Pn	14 36 05.0	+0.6
HAZ				S	Sn	14 36 47.9	+2.4
TWGZ	**Tauwhareparae**	**3.64**	**223**	P	Pn	14 36 07.7	+1.0
TWGZ				S	Sn	14 36 51.6	+2.0
RUGZ	**Raukumara Rang**	**3.67**	**228**	P	Pn	14 36 07.9	+0.7
RUGZ				S	Sn	14 36 52.4	+1.9
CNGZ	**Carnagh Statio**	**3.75**	**218**	P	Pn	14 36 08.7	+0.6
TKGZ	**Te Karaka**	**3.90**	**221**	P	Pn	14 36 10.8	+0.6
TKGZ				S	Sn	14 36 56.5	+0.6
MWZ	**Matawai**	**4.01**	**225**	P	Pn	14 36 12.1	+0.4
MWZ				S	Sn	14 36 58.8	+0.2
RIGZ	**Rimuhau**	**4.14**	**219**	P	Pn	14 36 13.4	-0.2
RIGZ				S	Sn	14 37 02.8	+0.8
URZ	**Urewera**	**4.21**	**229**	P	Pn	14 36 14.2	-0.2
URZ				S	Sn	14 37 04.3	+0.9
PRGZ	**Paritu Road**	**4.25**	**217**	P	Pn	14 36 15.1	+0.1
KNZ	**Kokohu**	**4.43**	**217**	P	Pn	14 36 16.5	-0.9
RTZ	**Ruatahuna**	**4.51**	**226**	P	Pn	14 36 18.7	0.0
RTZ				S	Sn	14 37 13.0	+1.8
BKZ	**Black Stump Fm**	**5.16**	**224**	P	Pn	14 36 26.4	-1.2
BKZ				S	Sn	14 37 26.5	-0.7
MCHZ	**McNeill Hill**	**5.25**	**221**	P	Pn	14 36 28.5	-0.2
MCHZ				S	Sn	14 37 29.4	+0.3
KAHZ	**Kahuranaki**	**5.42**	**217**	P	Pn	14 36 29.6	-1.5
KAHZ				S	Sn	14 37 32.2	-1.1
TSZ	**Takapari Road**	**6.08**	**221**	P	Pn	14 36 37.8	-2.4
OUZ	**Omahuta**	**6.16**	**271**	P	Pn	14 36 40.7	-0.5
CTZ	**Chatham Island**	**8.36**	**169**	P	Pn	14 37 12.1	+0.7

*IDC **26** 14:44:57.8±5.5, 36°.06N×71°.00E, h93km±45km, mb3.5/10, mbtmp3.9/15, Error ellipse: s-maj=38.2km s-min=18.5km az=33.0*
*NEIC **26** 14:44:58.9±1.7, 36°.12N±0°.06×70°.88E±0°.08, h106km±8km, mb4.3/17, Error ellipse: s-maj=10.0km s-min=8.3km az=107.0*
*NNC **26** 14:45:01.1±3.0, 36°.31N×70°.76E, h94km±53km, mb3.6, mpv4.0, Error ellipse: s-maj=31.9km s-min=23.1km az=120.0*

ISC 26 14:44:57.6±0.6, 35°.99N±0°.05×70°.95E±0°.06, h102km, n73, σ1§65/80, mb4.0/17, 4C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.13**	**228**		**Pn**	**14 45 34.7**	**+2.5**
NIL	**Nilore**	**3.01**	**140**	Pn	**Pn**	**14 45 45.8**	**+2.2**
CHGR	**Chuyangaron**	**3.02**	**332**		**Pn**	**14 45 42.6**	**-1.1**
GAR	**Garm**	**3.04**	**351**		**Pn**	**14 45 43.3**	**-0.8**
DRK	**Karamyk**	**3.54**	**11**		**Pn**	**14 45 51.5**	**+0.5**
JMU	**Jammu**	**4.62**	**134**	*e*S	**Sn**	**14 46 57.2**	**-0.5**
KSH	**Kashi**	**5.31**	**47**	Pn	Pn	14 46 08.8	-5.8
KSH				Sn	Sn	14 47 02.3	-12
KSH				smax	smax		
	comp=N,140nm,0.8s						
KSH				smax	smax		
	comp=E,76nm,0.6s						
TSSA	**Tissa**	**5.33**	**125**	*e*P	**Pn**	**14 46 15.0**	**0.0**
TSSA				*e*S	**Sn**	**14 47 12.9**	**-2.3**
TSSA				IAML		14 47 15.9	
	comp=N,116nm,0.4s						
TSSA				IAML		14 47 20.2	
	comp=E,155nm,0.2s						
ALCI	**Alchi Leh**	**5.41**	**107**	*e*P	**Pn**	**14 46 14.8**	**-1.4**
ALCI				*e*S	**Sn**	**14 47 15.7**	**-1.7**
ARSB	**Arslanbob**	**5.55**	**16**		**Pn**	**14 46 17.4**	**-0.6**
DHRM	**DHARAMSHALA**	**5.80**	**129**	*e*P	**Pn**	**14 46 21.9**	**+0.5**
DHRM				*e*S	**Sn**	**14 47 24.7**	**-1.9**
DHRM				IAML		14 47 27.9	
	comp=N,119nm,0.2s						
DHRM				IAML		14 47 28.2	
	comp=E,155nm,0.5s						
BHK	**Bhakra**	**6.45**	**134**	*e*P	**Pn**	**14 46 32.9**	**+2.9**
BHK				*e*S	**Sn**	**14 47 45.2**	**+3.1**
UCH	**Uchtor**	**6.81**	**23**	P	**Pn**	**14 46 35.7**	**+0.4**
	SNR=12						
EKS2	**Erkin-Say**	**7.01**	**17**	P	**Pn**	**14 46 38.1**	**+0.4**
	SNR=11						
SMLA	**Simla**	**7.10**	**131**	*e*P	**Pn**	**14 46 38.7**	**-0.1**
SMLA				*e*S	**Sn**	**14 47 55.2**	**-2.9**
SMLA				IAML		14 47 58.0	
	comp=E,165nm,0.7s						
KK31	**Karatay Array**	**7.11**	**357**		**Pn**	**14 46 38.2**	**-0.7**
KK31	**Karatay Array**	**7.11**	**357**	P	**Pn**	**14 46 37.8**	**-1.1**
	comp=E,8.8nm,0.4s,baz=185,slow=18,SNR=84						
KK31				⇑S	**Sn**	**14 47 54.6**	**-3.5**
	comp=E,4.8nm,0.4s,baz=196,slow=28,SNR=9.3						
KKAR	**Karatay Array**	**7.11**	**357**		**Pn**	**14 46 38.1**	**-0.8**
AAK	**Ala-Archa**	**7.18**	**21**	P	**Pn**	**14 46 40.4**	**+0.3**
	comp=E,9.7nm,0.3s,baz=185,slow=6.2,SNR=75						
AAK				S	**Sn**	**14 47 57.6**	**-2.4**
	comp=E,6.4nm,0.6s,baz=146,slow=22,SNR=6.5						
AAK	**Ala-Archa**	**7.18**	**21**	P	**Pn**	**14 46 40.7**	**+0.6**
	SNR=22						
AAK	**Ala-Archa**	**7.18**	**21**	⇑P	**Pn**	**14 46 40.5**	**+0.5**
	comp=E,2.0nm,0.4s						
AAK				⇑S	**Sn**	**14 47 58.2**	**-1.8**
	comp=E,6.6nm,0.8s						
HRA	**Herat**	**7.31**	**260**	Pn	**Pn**	**14 46 43.5**	**+1.6**
KBK	**Karagaybulak**	**7.34**	**24**	P	Pn	14 46 48.0	+5.8
	SNR=9.0						
FRU1	**Bishkek**	**7.38**	**22**		**Pn**	**14 46 42.8**	**+0.1**
BOOM	**Boomskoye usch**	**7.55**	**29**	Pn	**Pn**	**14 46 45.6**	**+0.5**
CHMS	**Chumysh**	**7.59**	**22**	P	**Pn**	**14 46 46.1**	**+0.6**
	SNR=6.4						
USP	**Ospenovka**	**7.76**	**20**	P	**Pn**	**14 46 48.5**	**+0.7**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.79**	**26**	P	**Pn**	**14 46 49.2**	**+0.7**
	SNR=20						
KDJ	**Kajisay**	**7.81**	**36**	Pn	**Pn**	**14 46 49.3**	**+0.7**
TARG	**Taragay, Kyrgy**	**7.83**	**41**	Pn	**Pn**	**14 46 49.5**	**+0.4**
KUDL	**Kundal**	**9.13**	**148**	*e*P	**Pn**	**14 47 05.2**	**-1.2**
KUDL				*e*S	**Sn**	**14 48 39.4**	**-7.9**
KUDL				IAML		14 48 46.1	
	comp=N,82nm,0.6s						
KUDL				IAML		14 48 46.7	
	comp=E,95nm,0.4s						
MAKZ	**Makanchi**	**13.59**	**34**	Pn	**Pn**	**14 48 07.3**	**+1.2**
MK31	**Makanchi Array**	**13.72**	**35**	P	**P**	**14 48 14.3**	**+1.3**
	comp=E,0.3nm,0.4s,baz=214,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**13.72**	**35**	P	**Pn**	**14 48 07.1**	**-0.7**
	comp=E,0.5nm,0.8s,baz=204,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**13.72**	**35**	Pn	**Pn**	**14 48 09.1**	**+1.3**
WMQ	**Urumqi**	**15.02**	**54**	*e*P	**Pn**	**14 48 26.3**	**+1.8**
AB31	**Akbulak array**	**15.51**	**332**		**Pn**	**14 48 28.1**	**-2.4**
AB31				IAmb	IAmb	14 48 30.5	
	comp=Z,8.9nm,0.6s						
AB31	**Akbulak array**	**15.51**	**332**	P	**Pn**	**14 48 28.5**	**-2.0**
	comp=Z,2.2nm,0.3s,baz=143,slow=12,SNR=181						
ABKAR	**Akbulak array**	**15.51**	**332**	Pn	**Pn**	**14 48 28.6**	**-1.8**
KURBB	**Kurchatov Arra**	**15.61**	**18**	P	**Pn**	**14 48 30.1**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=207,slow=10,SNR=18						
EVN	**Everest**	**15.65**	**116**	Pn	**Pn**	**14 48 30.3**	**-2.8**
KURK	**Kurchatov**	**15.72**	**18**	Pn	**Pn**	**14 48 33.0**	**-0.1**
BVAR	**Borovoye Array**	**17.03**	**359**	P	**Pn**	**14 48 48.4**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=164,slow=10,SNR=10						
AKTO	**Aktyubinsk**	**17.20**	**331**	P	**P**	**14 48 51.1**	**-0.3**
	comp=Z,11nm,0.8s,baz=148,slow=11,SNR=23						
AKTO				S	Sn	14 51 51.5	-11
	comp=Z,1.1nm,0.6s,baz=240,slow=20,SNR=2.5						
AKTO	**Aktyubinsk**	**17.20**	**331**	⇑P	**P**	**14 48 51.9**	**+0.5**
	comp=Z,8.4nm,0.8s						
ZAA0	**Zalesovo Array**	**20.39**	**24**	P	**P**	**14 49 26.2**	**+0.1**
ZAA0				IAmb	IAmb	14 49 27.8	
	comp=Z,5.1nm,0.8s						
ZALV	**Zalesovo Beam**	**20.39**	**24**	P	**P**	**14 49 26.6**	**+0.5**
	comp=Z,5.0nm,0.6s,baz=222,slow=10,SNR=27						
	comp=Z,5.0nm,0.6s						
ZALV	**Zalesovo Beam**	**20.39**	**24**	P	**P**	**14 49 26.1**	**0.0**
ARTI	**Arti**	**22.11**	**341**	P	**P**	**14 49 45.6**	**+1.3**
	comp=Z,1.6nm,0.4s,baz=139,slow=6.7,SNR=4.1						
	comp=Z,1.6nm,0.4s						
PZH	**PanZhiHua**	**27.88**	**101**	P	**P**	**14 50 40.3**	**+2.3**
SONM	**Songino Array**	**28.66**	**55**	P	**P**	**14 50 46.3**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=271,slow=9.7,SNR=2.4						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**29.55**	**289**	P	**P**	**14 50 51.0**	**-1.8**
HHC	**Hu-ho-hao-te**	**31.98**	**69**	*e*P	**P**	**14 51 15.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,91nm,4.4s						
FINES	**FINESS Array B**	**37.88**	**326**	P	**P**	**14 52 05.5**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=121,slow=14,SNR=2.1						
	comp=Z,1.8nm,0.9s						
ARCES	**ARCESS Array B**	**41.60**	**338**	P	**P**	**14 52 36.4**	**+1.4**
	comp=Z,2.5nm,0.9s,baz=119,slow=8.4,SNR=4.2						
	comp=Z,2.5nm,0.9s						
HFS	**Hagfors**	**43.44**	**322**	P	**P**	**14 52 49.7**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=76,slow=12,SNR=5.5						
	comp=Z,1.8nm,0.7s						
NB2	**NORSAR Subarra**	**44.76**	**323**	P	**P**	**14 53 01.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.76**	**323**	P	**P**	**14 53 01.4**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=98,slow=7.8,SNR=4.6						
	comp=Z,0.5nm,0.5s						
NBO00	**NORSAR Array S**	**44.97**	**323**	P	**P**	**14 53 00.9**	**-1.4**
NBO00				IAmb	IAmb	14 53 20.4	
	comp=Z,11nm,1.2s						
NC204	**NORSAR Array S**	**45.00**	**324**	P	**P**	**14 53 01.9**	**-0.6**
NC204				IAmb	IAmb	14 53 16.3	
	comp=Z,13nm,1.2s						
JMZ	**Minamidaito 2**	**51.98**	**83**	P	**P**	**14 53 56.4**	**-0.1**
JSG	**Sagara**	**53.84**	**70**	P	**P**	**14 54 10.2**	**+0.1**
TOLK	**Toolik Lake Re**	**71.42**	**15**	P	**P**	**14 56 07.4**	**+1.0**
TOLK				IAmb	IAmb	14 56 47.4	
	comp=Z,10nm,1.3s						
F24K	**Squaw Lake**	**72.71**	**15**	P	**P**	**14 56 13.3**	**-0.8**
F24K				IAmb	IAmb	14 56 49.1	
	comp=Z,2.8nm,1.4s						
I21K	**Tanana**	**73.75**	**17**	P	**P**	**14 56 19.1**	**-1.1**
I21K				IAmb	IAmb	14 56 38.3	
	comp=Z,9.9nm,1.4s						
ILAR	**Eielson Array**	**75.28**	**16**	P	**P**	**14 56 29.4**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=327,slow=4.4,SNR=6.3						
	comp=Z,0.6nm,0.9s						
ILAR	**Eielson Array**	**75.28**	**16**	P	**P**	**14 56 29.2**	**+0.2**
J25K	**Salcha River,**	**75.74**	**15**	P	**P**	**14 56 31.9**	**+0.1**
J25K				IAmb	IAmb	14 57 04.8	
	comp=Z,4.9nm,1.5s						
YKU2	**Yakutat**	**81.52**	**15**	P	**P**	**14 57 03.7**	**+0.3**
WRA	**Warramunga Arr**	**81.76**	**122**	P	**P**	**14 57 06.2**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=325,slow=4.9,SNR=11						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**81.76**	**122**	P	**P**	**14 57 06.3**	**+1.0**
WR8	**Warramunga Arr**	**81.88**	**122**	P	**P**	**14 57 06.9**	**+1.0**
WR8				IAmb	IAmb	14 57 15.9	
	comp=Z,8.3nm,1.4s						
ASAR	**Alice Springs**	**84.00**	**125**	P	**P**	**14 57 17.9**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=312,slow=4.4,SNR=16						
	comp=Z,0.4nm,0.7s						

IDC 26 14:56:34.7±14.0, 5°.64N×125°.05E, h152km±131km, mb3.1/3, mbtmp3.5/3, Error ellipse: s-maj=229.0km s-min=25.6km az=63.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.01**	**160**	P	P	15 02 02.2	-0.5
	0.1nm,0.3s,baz=342,slow=9.2,SNR=1.9						
	0.1nm,0.3s						
ASAR	**Alice Springs**	**30.38**	**164**	P	P	15 02 32.8	+0.2
	0.6nm,0.4s,baz=340,slow=7.3,SNR=37						
ASAR				PcP	PcP	15 05 28.6	-0.3
	0.2nm,0.5s,baz=347,slow=2.8,SNR=1.9						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**55.05**	**325**	P	P	15 05 50.6	-0.1
	0.3nm,0.6s,baz=115,slow=7.0,SNR=5.2						
	0.3nm,0.6s						

*THE **26** 15:03:12.4, 42°N±7°×2°0E±°, h56km±17km, M2.8/5, MLh2.8/5*
*TIR **26** 15:03:14.2, 41°.50N×19°.62E, h7km±12km, Ml3.0/2*
*PDG **26** 15:03:16.8±0.3, 41°.54N×19°.51E, h5km±2km, MD3.3/3, ML3.0/12, Error ellipse: s-maj=1.7km s-min=1.8km az=0.0*
ISC 26 15:03:13.3±1.4, 41°.59N±0°.03×19°.71E±0°.04, h6km±10km, n22, σ1§55/31, 3C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.27**	**154**	Pg	**Pg**	**15 03 18.5**	**0.0**
TIR				AML	AML	15 03 22.4	
	20nm,0.2s						
TIR				Sg	**Sg**	**15 03 22.8**	**+0.8**
SDA	**Shkodra**	**0.49**	**341**	Pg	**Pn**	**15 03 25.1**	**-1.8**
SDA				S	**Sb**	**15 03 33.8**	**+2.0**
ULC	**Ulcinj**	**0.51**	**317**	*e*Pg	**Pn**	**15 03 24.0**	**-3.2**
ULC				*e*Sg	**Sb**	**15 03 30.9**	**-1.6**
PHP	**Peshkopia**	**0.56**	**80**	Pg	**Pn**	**15 03 26.2**	**-1.6**
PHP				Sg	**Sn**	**15 03 35.8**	**-1.5**
PHP				AML	AML	15 03 39.4	
	2.3nm,0.3s						
PHP	**Peshkopia**	**0.56**	**80**	P	**Pn**	**15 03 25.9**	**-1.9**
PHP				S	**Sn**	**15 03 36.9**	**-0.5**
DRME	**Dracevica, Mon**	**0.72**	**327**	*e*Pg	**Pn**	**15 03 29.0**	**-1.0**
PDG	**Podgorica**	**0.91**	**338**	*e*Pg	**Pn**	**15 03 32.4**	**-0.2**
PDG				*e*Sg	**Sn**	**15 03 47.5**	**+1.5**
BUM	**Brajici-Budva**	**0.94**	**320**	*e*Pg	**Pn**	**15 03 32.6**	**-0.5**
BUM				*e*Sg	**Sn**	**15 03 45.5**	**-1.4**
PVY	**Plav**	**1.02**	**10**	⇓*i*Pg	Pn	15 03 36.3	+2.0
PVY				*i* Sg	**Sn**	**15 03 51.8**	**+2.7**
CEME	**Cevo**	**1.13**	**329**	⇑*i*Pg	Pn	15 03 36.3	+0.6
CEME				*e*Sg	**Sn**	**15 03 52.3**	**+0.8**
VLO	**Vlora**	**1.13**	**188**	P	**Pg**	**15 03 34.0**	**-0.9**
VLO				S	**Sb**	**15 03 50.8**	**+0.7**
HCY	**Herceg Novi**	**1.25**	**314**	⇑*i*Pg	Pn	15 03 38.0	+0.7
HCY				*e*Sg	**Sn**	**15 03 55.8**	**+1.3**
KBN	**Korca**	**1.26**	**139**	P	**Pn**	**15 03 36.3**	**-1.2**
KBN				S	**Sg**	**15 03 55.3**	**+1.6**
KOME	**Kolasin**	**1.27**	**353**	⇓*i*Pg	Pn	15 03 40.5	+2.8
KOME				*e*Sg	Sn	15 04 00.2	+5.1
IVA	**Berane**	**1.29**	**6**	⇑*i*Pg	Pn	15 03 40.9	+2.9
IVA				*e*Sg	Sn	15 04 01.1	+5.5
NKME	**Niksic**	**1.31**	**335**	*e*Pg	Pn	15 03 39.2	+1.1
NKME				*i* Sg	**Sn**	**15 03 59.0**	**+3.1**
NEST	**Nestorio**	**1.55**	**139**	P	**Pn**	**15 03 40.8**	**-0.6**
NEST				S	**Sn**	**15 04 02.5**	**+0.6**
BRY	**Bratogost**	**1.58**	**327**	⇓*i*Pg	Pg	15 03 43.6	0.0
BRY				*e*Sg	Sg	15 04 07.1	+3.1
UPM	**Unac-Piva**	**1.72**	**340**	⇓*i*Pn	Pg	15 03 48.9	+2.5
UPM				*e*Sn	Sg	15 04 12.2	+3.5
PENT	**Pentalofos**	**1.76**	**142**	P	**Pn**	**15 03 43.8**	**-0.6**
PENT				S	**Sn**	**15 04 08.6**	**+1.4**
KEK	**Kerkira**	**1.87**	**178**	P	**Pn**	**15 03 45.1**	**-0.7**
KEK				S	**Sn**	**15 04 09.6**	**-0.2**
IGT	**Igoumenitsa**	**2.10**	**167**	P	**Pn**	**15 03 48.2**	**-0.9**
IGT				S	**Sn**	**15 04 16.5**	**+1.0**

*NOU **26** 15:09:38.6, 18°.02S×177°.13W, h629km, MLv4.2/9, Fiji Islands Region*
*IDC **26** 15:09:48.7±4.6, 17°.63S×178°.54W, h558km±53km, mb3.5/9, mbtmp4.5/10, Error ellipse: s-maj=26.1km s-min=19.7km az=129.0*
*NEIC **26** 15:09:49.0±1.5, 17°.9S±0°.1×178°.5W±0°.1, h562km±8km, mb4.4/59, Error ellipse: s-maj=17.4km s-min=14.5km az=172.0*
ISC 26 15:09:49.9±0.5, 17°.91S±0°.09×178°.47W±0°.09, h579km, n88, σ0§94/90, mb4.3/37, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.46**	**225**	P	**P**	**15 10 55.7**	**-2.4**
DGTI	**Dogotuki**	**2.34**	**313**	P	**P**	**15 11 02.7**	**-1.2**
MSVF	**Nonsavu**	**3.32**	**273**		**P**	**15 11 08.9**	**-0.4**
MSVF	**Nonsavu**	**3.32**	**273**	P	**P**	**15 11 09.3**	**0.0**
NIUE	**Niue**	**8.19**	**99**	P	**P**	**15 11 28.8**	**-22**
MARNC	**Mare, Loyalty**	**13.20**	**252**	P	**P**	**15 12 38.8**	**-2.0**
MARNC	**Mare, Loyalty**	**13.20**	**252**	P	**P**	**15 12 41.5**	**+0.7**
SANVU	**Saraoutou**	**13.94**	**278**	P	**P**	**15 12 48.9**	**+0.4**
**P

TPUB	Ta-pu	72.21	302	P		P	15 20 17.0	-0.4	
OHAK	Old Harbor	77.75	14	P		P	15 20 47.6	+0.2	
OHAK				IAmb		IAmb	15 21 30.7		
	comp=Z,17nm,1.3s								
KDAK	Kodiak Island	78.42	14	P		P	15 20 51.3	+0.3	
WAKR	Walker	78.77	43	P		P	15 20 54.3	+0.7	
DSP	Deep Springs	79.12	45	P		P	15 20 56.0	+0.8	
SYI	Shuyak Island	79.21	14	P		P	15 20 55.7	+0.5	
NVAR	Mina Array Bea	79.47	44	P		P	15 20 57.8	+0.4	
	comp=Z,1.5nm,0.7s,baz=226,slow=8.1,SNR=8.1								
	comp=Z,1.5nm,0.7s								
NVAR	Mina Array Bea	79.47	44	P		P	15 20 57.5	+0.1	
O18K	Koktuh Hills	79.77	12	P		P	15 20 58.2	0.0	
K05A	Summer Lake	80.24	39	P		P	15 21 01.9	+0.7	
K05A				IAmb		IAmb	15 21 07.5		
	comp=Z,12nm,1.4s								
ILSW	Iliamna Southw	80.30	13	P		P	15 21 00.5	-0.5	
ILSW				IAmb		IAmb	15 21 00.8		
	comp=Z,12nm,1.1s								
M17K	Holitna River	80.81	10	P		P	15 21 04.4	+0.8	
WVOR	Wild Horse Val	81.45	40	P		P	15 21 07.7	+0.3	
L18K	Granite Mounta	81.71	10	P		P	15 21 08.8	+0.7	
L18K				IAmb		IAmb	15 21 36.4		
	comp=Z,12nm,1.4s								
J16K	Anvik River	82.13	8	P		P	15 21 11.2	+1.0	
J16K				IAmb		IAmb	15 21 47.9		
	comp=Z,28nm,1.4s								
U15A	North Rim	82.57	48	P		P	15 21 14.2	+0.8	
G08A	Pilot Rock	82.85	38	P		P	15 21 15.3	+0.9	
SCM	Sheep Creek Mo	83.25	14	P		P	15 21 15.9	0.0	
DHY	Denali Highway	84.32	14	P		P	15 21 20.9	-0.4	
DHY				IAmb		IAmb	15 22 00.3		
	comp=Z,13nm,1.4s								
PV14	Lion Creek, Pa	85.77	48	P		P	15 21 29.8	+0.7	
PV14				IAmb		IAmb	15 21 31.1		
	comp=Z,6.9nm,0.7s								
ILAR	Eielson Array	85.91	13	P		P	15 21 27.9	-0.8	
	comp=Z,0.6nm,0.4s,baz=221,slow=5.2,SNR=24								
	comp=Z,0.6nm,0.4s								
ILAR	Eielson Array	85.91	13	P		P	15 21 28.2	-0.6	
TXAR	Lajitas Array	86.05	58	P		P	15 21 29.6	-0.7	
	comp=Z,1.8nm,0.8s,baz=232,slow=7.6,SNR=12								
	comp=Z,1.8nm,0.8s								
J25K	Salcha River,	86.10	14	P		P	15 21 29.5	-0.2	
J26L	Joseph Creek	86.42	14	P		P	15 21 31.7	+0.4	
J26L				IAmb		IAmb	15 21 43.5		
	comp=Z,6.9nm,1.4s								
DAWY	Dawson	87.11	16	P		P	15 21 34.7	+0.2	
DAWY				IAmb		IAmb	15 21 57.7		
	comp=Z,7.1nm,1.5s								
BW06	Boulder Array	87.40	43	P		P	15 21 36.6	0.0	
PD31	Pinedale Array	87.40	43	P		P	15 21 36.5	-0.1	
PDAR	Pinedale Array	87.40	43	P		P	15 21 36.5	-0.1	
	comp=Z,0.7nm,0.6s,baz=221,slow=3.2,SNR=9.5								
	comp=Z,0.7nm,0.6s								
PDAR	Pinedale Array	87.40	43	P		P	15 21 36.4	-0.2	
E22K	Anaktuvuk Pass	87.98	10	P		P	15 21 38.5	0.0	
E22K				IAmb		IAmb	15 22 15.6		
	comp=Z,13nm,1.5s								
F24K	Squaw Lake	88.11	11	P		P	15 21 39.3	+0.2	
F24K				IAmb		IAmb	15 22 02.7		
	comp=Z,6.4nm,1.4s								
H27K	Steamboat Moun	88.34	14	P		P	15 21 40.8	+0.6	
D22K	Ayikyak River	88.52	9	P		P	15 21 41.3	+0.3	
BMAR	Burnt Mountain	88.68	12	P		P	15 21 42.3	+0.6	
C27K	Jago River	90.71	12	P		P	15 21 51.0	-0.1	
C27K				IAmb		IAmb	15 22 01.0		
	comp=Z,5.7nm,1.5s								
INK	Inuvik	91.91	15	P		P	15 21 56.2	-0.3	
INK				IAmb		IAmb	15 22 09.2		
	comp=Z,6.0nm,1.5s								
BRTR	Keskin Array B	144.74	315	PKP		PKPdf	15 28 22.0	+0.2	
	comp=Z,0.4nm,0.5s,baz=113,slow=3.3,SNR=2.2								
GERES	GERESS Array B	147.60	345	PKPbc		PKPbc	15 28 29.6	-0.3	
	comp=Z,0.5nm,0.5s,baz=5.7,slow=1.0,SNR=1.7								

IDC ***26*** *15:11:13.6±2.0,5°.47S×151°.81E,h0km,mb3.7/5, mbtmp3.8/6,ML1.5/1,MS4.2/31,Error ellipse: s-maj=81.4km s-min=22.3km az=123.0*

GCMT ***26*** *15:11:29.0±0.2,6°.22S±0°.01×152°.24E±0°.01,h14km, MW5.1/120,Moment Tensor Solution. s71,c101; s120,c193; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.60±.14; Mθθ-3.41±.09; Mϕϕ-1.19±.09; Mrθ3.40±.22; Mθϕ-0.99±.06; Mrϕ1.75±.21; Best double couple: Mw5.67300×10¹⁶ NP1:ϕs251.00000°,δ24.00000°, λ96.00000°. NP2:ϕs65.00000°,δ66.00000°,λ87.00000°. Principal axes: T 6.0880, Plg69.0000°, Azm330.0000°; N -0.8300, Plg2.0000°, Azm66.0000°; P -5.2580, Plg21.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 26 15:11:17.7±2.1,5°.8S×0°.4×152°.2E×0°.4,h36km,n36, σ0:98/7,mb3.7/5,MS4.3/31,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.18	234	Pn	Pn	15 12 46.3	-0.3
	0.8nm,0.3s,baz=88,slow=8.7,SNR=6.3						
PMG				Sn	Sn	15 13 57.2	+1.1
	1.5nm,0.3s,baz=333,slow=16,SNR=5.6						
	13nm,0.7s						
CTA	Charters Tower	15.38	202	LR	LR	15 20 58.2	
	comp=Z,45nm,18.5s,baz=20,slow=38						
WRA	Warramunga Arr	22.38	229	P	P	15 16 12.4	-0.6
	0.9nm,0.7s,baz=52,slow=10,SNR=6.9						
	0.9nm,0.7s						
ASAR	Alice Springs	25.05	223	P	P	15 16 38.2	-0.6
	2.7nm,0.9s,baz=57,slow=8.5,SNR=20						
	2.7nm,0.9s						
STKA	Stephens Creek	27.82	200	LR	LR	15 29 08.8	
	comp=Z,957nm,18.2s,baz=19,slow=38						
FITZ	Fitzroy Crossi	28.70	242	LR	LR	15 29 49.0	
	comp=Z,1µm,18.3s,baz=68,slow=39						
DAV	Davao City (W)	29.48	295	LR	LR	15 27 03.7	
	comp=Z,427nm,21.1s,baz=115,slow=33						
KAPI	Kappang	32.33	270	LR	LR	15 32 37.8	
	comp=Z,271nm,20.2s,baz=94,slow=40						
TGY	Tagaytay City	36.78	303	LR	LR	15 32 12.0	
	comp=Z,276nm,20.4s,baz=117,slow=35						
URZ	Urewera	39.46	149	LR	LR	15 33 50.0	
	comp=Z,893nm,18.9s,baz=334,slow=34						
JOW	Kunigami	39.84	326	LR	LR	15 34 14.3	
	comp=Z,531nm,18.3s,baz=152,slow=35						
MJAR	Matsushiro Arr	44.08	344	LR	LR	15 37 48.3	
	comp=Z,342nm,18.3s,baz=166,slow=36						
RAR	Rarotonga	48.93	113	LR	LR	15 40 04.5	
	comp=Z,136nm,19.2s,baz=255,slow=35						
PSI	Prapat	53.90	278	LR	LR	15 48 35.0	
	comp=Z,106nm,18.1s,baz=119,slow=42						
CMAR	Chiang Mai Arr	57.77	296	LR	LR	15 47 03.9	
	comp=Z,111nm,18.1s,baz=120,slow=38						
PETK	Petropavlovsk-	58.83	4	LR	LR	15 47 36.0	
	comp=Z,100nm,18.1s,baz=185,slow=37						
SHEM	Shemya Is, Ala	61.16	15	LR	LR	15 45 34.7	
	comp=Z,299nm,19.6s,baz=232,slow=34						
MA2	Magadan	65.14	359	LR	LR	15 53 20.8	
	comp=Z,148nm,18.1s,baz=156,slow=39						
BRDH	Bariadhala	65.59	298	LR	LR	15 51 45.5	
	comp=Z,92nm,18.7s,baz=158,slow=37						
SEY	Seymchan	68.50	0	LR	LR	15 52 15.2	
	comp=Z,71nm,19.0s,baz=322,slow=36						
VNDA	Vanda	71.89	178	LR	LR	15 52 05.4	
	comp=Z,166nm,19.9s,baz=358,slow=34						
PALK	Pallekele	72.52	279	LR	LR	15 57 45.1	
	comp=Z,90nm,19.8s,baz=108,slow=39						
KDAK	Kodiak Island	77.29	27	LR	LR	15 53 10.6	
	comp=Z,148nm,20.4s,baz=232,slow=33						
TIXI	Tiksi	78.77	353	LR	LR	16 01 28.2	
	comp=Z,80nm,18.0s,baz=202,slow=38						
MKAR	Makanchi Array	80.67	319	LR	LR	15 59 48.5	
	comp=Z,130nm,18.9s,baz=120,slow=36						
ZALV	Zalesovo Beam	81.63	327	P	P	15 23 31.4	-0.5
	0.4nm,0.5s,baz=101,slow=7.5,SNR=2.7						
ZALV				LR	LR	15 59 55.0	
	comp=Z,169nm,19.7s,baz=115,slow=36						
	0.4nm,0.5s						
ILAR	Eielson Array	83.26	22	P	P	15 23 41.4	+1.1
	0.6nm,0.8s,baz=261,slow=5.9,SNR=5.6						
	0.6nm,0.8s						
KURBB	Kurchatov Array	84.20	322	LR	LR	16 02 50.0	
	comp=Z,149nm,18.3s,baz=172,slow=37						
MAW	Mawson	84.46	203	LR	LR	15 59 57.8	
	comp=Z,168nm,19.6s,baz=86,slow=35						
AAK	Ala-Archa	84.91	314	LR	LR	16 02 43.5	
	comp=Z,91nm,20.4s,baz=108,slow=37						
BVAR	Borovoye Array	89.66	323	P	P	15 24 11.3	-0.6
	0.4nm,0.7s,baz=98,slow=6.0,SNR=2.2						
BVAR				LR	LR	16 06 55.5	
	comp=Z,113nm,18.1s,baz=92,slow=38						
	0.4nm,0.7s						
YBH	Yreka Blue Hor	90.12	48	LR	LR	16 01 31.1	
	comp=Z,50nm,18.5s,baz=250,slow=33						
PFO	Pinyon Flats O	94.25	57	LR	LR	16 04 02.5	
	comp=Z,325nm,18.0s,baz=251,slow=34						
ARTI	Arti	96.89	326	LR	LR	16 10 06.2	
	comp=Z,256nm,19.7s,baz=94,slow=37						
AKTO	Aktyubinsk	97.08	320	LR	LR	16 10 11.1	
	comp=Z,162nm,18.9s,baz=67,slow=37						
LPIG	La Paz	99.14	67	LR	LR	16 07 15.9	
	comp=Z,256nm,18.0s,baz=265,slow=34						

IDC ***26*** *15:11:51.7±2.1,41°.40N×19°.32E,h0km,mb3.7/5, mbtmp3.8/10,ML3.0/3,MS4.2/1,Error ellipse: s-maj=32.9km s-min=18.3km az=28.0*

PRU ***26*** *15:11:51.3,41°.23N×19°.86E,h10km,M4.2*

SKO ***26*** *15:11:53.8,41°.61N×19°.32E,h0km,ML3.4*

BEO ***26*** *15:11:53.9±0.8,41°.41N×19°.53E,h5km±4km,ML3.1/7*

PDG ***26*** *15:11:55.6±0.4,41°.49N×19°.49E,h11km±1km,MD3.6/9, ML3.5/13,Error ellipse: s-maj=1.0km s-min=2.1km az=0.0*

TIR ***26*** *15:11:55.5,41°.64N×19°.38E,h44km±3km,Ml3.6/7*

NEIC ***26*** *15:11:56.2±1.6,41°.61N±0°.03×19°.46E±0°.07,h10km±1km, mb4.2/5,Error ellipse: s-maj=9.3km s-min=5.1km az=259.0*

THE ***26*** *15:11:56.2,42°.N±5°.×2°.0E±°,h6km,M3.3/5,MLh3.3/5*

RHSSO ***26*** *15:11:56.5±1.0,41°.59N×19°.56E,h7km,ML3.5/4*

ISC 26 15:11:55.9±0.9,41°.57N±0°.02×19°.51E±0°.02,h14km±7km, n142,σ1°.40/193,mb3.8/5,18C-15D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.35	130	Pg	Pg	15 12 02.8	-0.1
TIR				Sg	Sg	15 12 05.8	-2.0
TIR				AML	AML	15 12 07.6	
	28nm,0.3s						
TIR				AML	AML	15 12 09.0	
	12nm,0.3s						
TIR	Tirane	0.35	130	⇓*i*Pg	Pg	15 12 02.8	-0.1
TIR				*i* Sg	Sb	15 12 08.7	-0.5
ULC	Ulcinj	0.44	333	⇑*i*Pg	Pg	15 12 04.6	-0.1
ULC				*e*Sg	Sb	15 12 12.2	+0.2
SDA	Shkodra	0.48	359	Pg	Pg	15 12 05.0	-0.4
SDA				Sg	Sb	15 12 13.6	+0.6
DRME	Dracevica, Mon	0.66	338	*e*Pg	Pb	15 12 08.8	-0.5
DRME	Dracevica, Mon	0.66	338	⇑*i*Pg	Pg	15 12 08.6	-0.2
DRME				*i* Sg	Sb	15 12 19.2	+0.9
PHP	Peshkopia	0.71	80	Pg	Pg	15 12 08.5	-1.1
PHP				Sg	Sg	15 12 18.8	-0.2
PHP				AML	AML	15 12 27.9	
	8.8nm,0.8s						
PHP	Peshkopia	0.71	80	P	Pg	15 12 08.5	-1.1
PHP				S	Sg	15 12 18.1	-0.9
BUM	Brajici-Budva	0.86	328	*e*Pg	Pb	15 12 12.4	-0.3
BUM				*i* Sg	Sn	15 12 25.5	-0.7
PDG	Podgorica	0.88	348	Pg	Pg	15 12 11.2	-1.8
PDG				Sg	Sg	15 12 22.8	-1.6
PDG	Podgorica	0.88	348	Pg	Pg	15 12 12.3	-0.6
PDG	Podgorica	0.88	348	⇓P	Pg	15 12 12.6	-0.3
PDG				⇑S	Sn	15 12 26.8	+0.4
PDG	Podgorica	0.88	348	*e*Pg	Pg	15 12 12.7	-0.3
PDG				*e*Sg	Sn	15 12 28.1	+1.7
PDG	Podgorica	0.88	348	⇓*i*Pg	Pg	15 12 12.7	-0.3
PDG				*e*Sg	Sn	15 12 26.3	-0.1
CEME	Cevo	1.07	336	⇓*i*Pg	Pg	15 12 16.1	-0.5
CEME				*i* Sg	Sn	15 12 32.6	+1.3
OHR	Ohrid	1.07	115	*i* Pg	Pb	15 12 15.4	-0.9
OHR				*i* Sg	Sn	15 12 33.3	+2.0
OHR				*e*Lg	Lg	15 12 34.6	
	comp=N,565nm,0.4s						
OHR				*e*Lg	Lg	15 12 36.1	
	comp=E,878nm,0.6s						
PVY	Plav	1.07	18	*e*Pg	Pb	15 12 15.0	-1.4
PVY				*e*Sg	Sn	15 12 33.9	+2.4
PVY	Plav	1.07	18	⇑*i*Pg	Pb	15 12 15.0	-1.4
PVY				*i* Sg	Sn	15 12 32.9	+1.4
VLO	Vlora	1.10	181	Pg	Pn	15 12 17.6	+0.7
VLO				Sg	Sn	15 12 31.9	0.0
VLO				AML	AML	15 12 41.3	
	comp=E,8.5nm,0.4s						
VLO				AML	AML	15 12 44.9	
	comp=E,8.3nm,0.4s						
VLO	Vlora	1.10	181	P	Pn	15 12 20.4	+3.5
VLO				S	Sn	15 12 38.1	+6.2
HCY	Herceg Novi	1.16	319	⇑*i*Pg	Pg	15 12 18.9	+0.7
HCY				*e*Sg	Sn	15 12 35.7	+2.3
NKME	Niksic	1.27	341	*e*Pg	Pb	15 12 19.6	0.0
NKME				*e*Sg	Sg	15 12 38.3	+1.6
KOME	Kolasin	1.28	0	*e*Pg	Pg	15 12 20.3	-0.2
KOME				*e*Sg	Sg	15 12 39.8	+2.6
KOME	Kolasin	1.28	0	⇑*i*Pg	Pg	15 12 20.0	-0.5
KOME				*i* Sg	Sg	15 12 40.0	+2.8
BEY	Berane	1.33	12	*e*Pg	Pn	15 12 20.2	0.0
BEY				*e*Sg	Sg	15 12 40.4	+1.6
IVA	Berane	1.33	12	⇑*i*Pg	Pn	15 12 20.0	-0.2
IVA				*e*Sg	Sg	15 12 41.7	+2.9
KBN	Korca	1.35	134	Pg	Pg	15 12 22.0	+0.1
KBN				Sg	Sg	15 12 39.6	+0.1
KBN				AML	AML	15 12 51.6	
	comp=E,2.3nm,0.7s						
KBN	Korca	1.35	134	P	Pg	15 12 22.2	+0.3
KBN				S	Sg	15 12 43.2	+3.7
TREB	Trebinje	1.43	323	⇑*i*Pg	Pb	15 12 22.3	-0.1
TREB				*e*Sg	Sg	15 12 42.1	0.0
SKO	Skopje	1.50	74	*i* Pg	Pn	15 12 22.9	+0.5
SKO				*i* Sg	Sg	15 12 45.2	+1.0
BRY	Bratogost	1.51	332	*e*Pn	Pb	15 12 23.8	-0.1
BRY				*i* Sn	Sg	15 12 46.0	+1.3
NEST	Nestorio	1.64	134	Pn	Pb	15 12 26.4	+0.4
NEST				Sn	Sg	15 12 49.4	+0.7
NEST				AML	AML	15 12 52.3	
	comp=E,0.8nm,0.7s						
NEST				AML	AML	15 12 53.2	
	comp=E,1.5nm,0.5s						
NEST	Nestorio	1.64	134	P	Pb	15 12 26.3	+0.4
NEST				S	Sg	15 12 51.1	+2.4
UPM	Unac-Piva	1.69	345	*e*Pn	Pb	15 12 27.2	+0.3
UPM				*i* Sn	Sg	15 12 50.3	-0.1
SJES	Sjenica	1.72	11	*e*Pn	Pb	15 12 27.4	0.0
SJES				*e*Sn	Sg	15 12 51.1	-0.3
KLINJ	Klinje	1.74	337	*e*Pn	Pb	15 12 26.8	-0.9
KLINJ				*e*Sn	Sb	15 12 49.1	-0.3
PLE	Pljevlja	1.76	357	*e*Pg	Pg	15 12 28.7	-1.0
PLE				*e*Sg	Sg	15 12 53.4	+0.8
PLE	Pljevlja	1.76	357	*e*Pn	Pg	15 12 28.6	-1.1
PLE				*i* Sn	Sg	15 12 53.3	+0.7
PENT	Pentalofos	1.85	138	P	Pb	15 12 29.4	-0.1
PENT				S	Sg	15 12 56.0	+0.7
KEK	Kerkira	1.87	173	P	Pg	15 12 32.5	+0.7
KEK				S	Sg	15 12 59.5	+3.4
KEK	Kerkira	1.87	173	Pg	Pg	15 12 31.7	-0.1
NOCI	Noci	2.01	248	Pn	Pb	15 12 29.1	-0.3
NOCI				Sn	Sn	15 12 52.6	-1.7
NOCI				AML	AML	15 13 08.6	
	comp=E,2.3nm,0.6s						
NOCI				AML	AML	15 13 08.7	
	comp=E,1.8nm,0.3s						
SELS	Selova	2.03	35	*e*Pn	Pn	15 12 30.8	+1.0
RUDO	Rudo	2.05	357	*e*Pn	Pb	15 12 31.4	-1.5
RUDO				*e*Sn	Sn	15 12 56.7	+1.4
IVAS	Ivanjica	2.06	13	*e*Pn	Pn	15 12 31.1	+0.9
IGT	Igoumenitsa	2.13	163	Pn	Pn	15 12 32.3	+1.2
IGT				Sn	Sn	15 12 58.4	+1.1
IGT	Igoumenitsa	2.13	163	P	Pb	15 12 34.5	+0.2
IGT				S	Sg	15 13 04.8	+0.3
GOCS	Kraljevo Serbi	2.23	26	*e*Pn	Pb	15 12 33.6	+1.1
BBLS	Lazi&#263i	2.29	358	*e*Pn	Pb	15 12 35.3	-1.8
MATE	Matera	2.31	247	⇑P	Pn	15 12 33.3	-0.3
VAY	Valandovo	2.31	95	*i* Pn	Pn	15 12 34.7	+1.1
VAY				*i* Sn	Sb	15 13 04.9	-0.9
VAY				*e*Lg	Lg	15 13 10.4	
	comp=N,120nm,0.8s						
VAY				*e*Lg	Lg	15 13 13.0	
	comp=E,109nm,0.8s						
BOSS	Bosilegrad	2.40	66	*e*Pn	Pn	15 12 35.3	+0.5
GRUS	Gruza	2.48	21	*e*Pn	Pn	15 12 37.2	+1.3
KNT	Kendrikon	2.58	98	*i* Pn	Pn	15 12 38.2	+0.9
BOVS	Bovan	2.62	37	⇑P	Pn	15 12 38.8	+0.9
BOVS	Bovan	2.62	37	*e*Pn	Pn	15 12 38.4	+0.6
LIT	Litokhoron	2.69	122		Pn	15 12 39.8	+0.9
KKB	Krupnik	2.72	83	*i* Pn	Pn	15 12 40.7	+1.5
TRUS	Trudelj	2.73	14	*e*Pn	Pn	15 12 40.5	+1.2
THE	Thessaloniki	2.77	109	*i* Pn	Pn	15 12 40.8	+0.9
ACER	Acerenza	2.81	255		Pn	15 12 40.1	-0.3
SGRT	San Giovanni R	2.83	275	Pn	Pn	15 12 40.3	-0.5
SGRT	San Giovanni R	2.83	275		Pn	15 12 40.3	-0.5
ZAPS	Zavoj	2.87	53	*e*Pn	Pn	15 12 42.4	+1.1
TEKS	Tekeris	2.98	0	*e*Pn	Pn	15 12 43.1	+0.4
SOH	Sokhos	3.00	103	*i* Pn	Pn	15 12 44.6	+1.6
ZAGS	Zajecar	3.01	41	*e*Pn	Pn	15 12 44.2	+1.1
SRS	Serrai	3.11	97	*i* Pn	Pn	15 12 45.7	+1.2
BORS2	Bor- Borsko je	3.12	35	*e*Pn	Pn	15 12 44.3	-0.4
MMB	Musomishta	3.18	89	*i* Pn	Pn	15 12 47.0	+1.4
TIP	Timpagrande	3.18	222		Pn	15 12 45.1	-0.5
TIP	Timpagrande	3.18	222	⇑P	Pn	15 12 45.0	-0.7
CUC	Castrocucco	3.22	242	Pn	Pn	15 12 46.4	+0.3
CUC	Castrocucco	3.22	242		Pn	15 12 45.6	-0.5
KUBS	Kucevo	3.25	28	*e*Pn	Pn	15 12 45.9	-0.6
MDVR	Moldovita	3.59	26	⇓P	Pn	15 12 52.1	+0.9
FRGS	Fruska Gora	3.59	3	*e*Pn	Pn	15 12 51.6	+0.4
BLY	Banja Luka	3.60	333	*e*Pn	Pn	15 12 52.8	+1.5
BLY				*e*Sn	Sn	15 13 35.3	+1.6
BLY	Banja Luka	3.60	333	⇓P	Pn	15 12 52.3	+1.0
VRSS	Vrsac	3.79	20	*e*Pn	Pn	15 12 53.7	-0.2
HERR	Herculane	3.93	32	⇓P	Pn	15 12 57.0	+1.2
SRE	Strehaia	4.11	40	⇓P	Pn	15 13 00.2	+2.0
CEL	Celeste	4.32	221	Pn	Pn	15 13 00.3	-1.0
BZS	Buzias	4.32	20	⇑P	Pn	15 13 02.0	+0.8
GZR	Gura Zlata	4.50	31	⇓P	Pn	15 13 05.4	+1.7
RDO	Rodhopi	4.55	93		Pn	15 13 05.5	+1.1
SURR	Surduc	4.59	24	⇑P	Pn	15 13 06.2	+1.3
CAMP	Campotosto	4.64	284		Pn	15 13 06.3	+0.6
MORH	Mrgy, Hungar	4.68	353	*e*Pn	Pn	15 13 06.9	+0.7
MORH				*e*Sn	Sn	15 14 00.0	-0.3
MORH	Mrgy, Hungar	4.68	353	⇑P	Pn	15 13 07.2	+1.0
NRCA	Norcia	4.92	287		Pn	15 13 09.5	+0.1
SIRR	Siria	4.94	18	⇓P	Pn	15 13 10.8	+1.0
LOT	Lotru	4.96	37	⇓P	Pn	15 13 11.4	+1.3
FDMO	Fiordimonte	4.98	289		Pn	15 13 10.5	+0.2
CESX	Cesi	5.26	284		Pn	15 13 14.2	0.0
BEHE	Becsehely	5.28	339	*e*Pn	Pn	15 13 14.9	+0.6
BEHE				*e*Sn	Sn	15 14 14.5	-0.5
ARR	Arges	5.32	43	⇑P	Pn	15 13 16.8	+1.8
MURB	Monte Urbino	5.44	290		Pn	15 13 17.2	+0.6
MTUR	Matau	5.45	46	⇑P	Pn	15 13 19.6	+2.8
VOIR		5.58	44	⇓P	Pn	15 13 20.6	+2.1
MARR	Marisel-Cluj	5.72	26	⇓P	Pn	15 13 22.8	+2.2
SOKA	Soboth	6.04	329	*e*Pn	Pn	15 13 25.0	+0.2
	comp=E,1.2nm,0.2s,SNR=6.4						
OBKA	Obir	6.09	326	*i* Pn	Pn	15 13 26.1	+0.5
	comp=E,4.0nm,0.4s,SNR=4.9						
MLR	Muntele Rosu	6.10	48	Pn	Pn	15 13 28.7	+2.9
	comp=E,9.7nm,0.5s,baz=209,slow=2.3,SNR=17						
MLR				Sn	Sn	15 14 37.8	+2.4
	comp=E,0.3nm,0.3s,baz=122,slow=15,SNR=3.2						
MLR	Muntele Rosu	6.10	48		Pn	15 13 27.7	+2.0
MLR	Muntele Rosu	6.10	48	⇓P	Pn	15 13 27.8	+2.1
DOPR	Dopca	6.12	42	⇓P	Pn	15 13 27.9	+2.0
SABO	M.te Sabotino	6.14	318		Pn	15 13 26.0	-0.2
PSZ	Piszkesteto	6.35	2		Pn	15 13 29.0	-0.2
PSZ	Piszkesteto	6.35	2	⇑P	Pn	15 13 31.0	+1.9
ARSA	Arzberg	6.36	335	Pn	Pn	15 13 29.6	+0.5
ARSA	Arzberg	6.36	335	*e*Pn	Pn	15 13 29.6	+0.5
	comp=E,1.0nm,0.2s						
PLOR	Plostina	6.71	48	⇑P	Pn	15 13 36.4	+2.3
ZCCA	Zocca	6.85	297	Pn	Pn	15 13 36.5	+0.5
KBA	Koelnbreinsper	7.06	323	*e*Pn	Pn	15 13 39.4	+0.4
	comp=E,1.1nm,0.3s						
MOA	Molln	7.30	331	*e*Pn	Pn	15 13 43.0	+0.8
	comp=E,1.1nm,0.2s						
IDI	Anoyia	7.56	144	Pn	Pn	15 13 43.3	-2.5
	comp=E,3.9nm,0.8s,baz=319,slow=11,SNR=1.2						
IDI				Sn	Sn	15 15 05.5	-5.8
	comp=E,0.4nm,0.3s,baz=162,slow=16,SNR=1.8						
IDI				LR	LR	15 16 54.0	
	comp=E,111nm,21.4s,baz=119,slow=40						

RIM						Sg	15 35 53.3	-2.6	
PUH	**Pauahi**	**0.63**	**25**	Pg		Pg	15 35 45.5	-2.0	
PUH				IAML			15 35 53.8		
	comp=N,383nm,2.0s								
PUH	**Pauahi**	**0.63**	**25**			Sg	15 35 53.4	-2.5	
WRMHI	**West Rim**	**0.64**	**17**			Pg	15 35 45.6	-2.0	
WRMHI						Pn	15 35 53.7	+4.0	
KKO	**Keanakako'i**	**0.64**	**20**			Pg	15 35 45.7	-1.9	
KKO						Pn	15 35 53.4	+3.7	
OBL	**Observatory Le**	**0.65**	**18**			Pg	15 35 45.8	-2.0	
OBL						Pn	15 35 54.1	+4.2	
UWE	**Uwekahuna**	**0.65**	**17**			Pn	15 35 54.0	+4.1	
UWE	**Uwekahuna**	**0.65**	**17**	Pg		Pg	15 35 45.8	-2.0	
UWE				IAML			15 35 53.5		
	comp=E,704nm,2.1s								
UWE				IAML			15 35 57.6		
	comp=N,660nm,0.6s								
BYL	**Byron's Ledge**	**0.65**	**20**	Pg		Pg	15 35 45.8	-2.1	
BYL				IAML			15 35 56.4		
	comp=E,471nm,0.5s								
BYL	**Byron's Ledge**	**0.65**	**20**			Sg	15 35 54.0	-2.5	
KNHH	**Kane Nui o Ham**	**0.66**	**28**	Pg		Pg	15 35 45.9	-2.0	
UWB	**Uwekahuna Bluf**	**0.66**	**18**			Pg	15 35 45.8	-2.2	
UWB						Pn	15 35 53.8	+3.8	
HATHI	**Halema'uma'u T**	**0.66**	**19**			Pn	15 35 54.0	+4.0	
HATHI	**Halema'uma'u T**	**0.66**	**19**	Pg		Pg	15 35 45.9	-2.1	
HATHI	**Halema'uma'u T**	**0.66**	**19**	IAML			15 35 55.2		
	comp=E,412nm,0.3s								
HATHI				IAML			15 36 09.7		
	comp=N,417nm,0.7s								
SBLHI	**Steaming Bluff**	**0.67**	**19**			Pg	15 35 45.9	-2.2	
SBLHI						Pn	15 35 53.9	+3.9	
MWH	**Mokuaweoweo**	**0.69**	**352**			Sg	15 35 54.9	-3.1	
MWH	**Mokuaweoweo**	**0.69**	**352**	Pg		Pg	15 35 46.5	-2.3	
MWH				IAML			15 35 55.3		
	comp=N,519nm,0.3s								
MWH				IAML			15 35 56.6		
	comp=E,768nm,1.0s								
JCUZ	**Jacuzzi**	**0.69**	**32**			Pg	15 35 46.6	-2.1	
NPOC	**North of Pu'u**	**0.70**	**31**			Pg	15 35 46.4	-2.3	
NPOC						Pn	15 35 55.2	+4.7	
MLH	**Mauna Loa**	**0.70**	**8**	Pg		Pg	15 35 46.7	-2.1	
MLH				IAML			15 35 56.1		
	comp=N,524nm,0.1s								
MLH				IAML			15 36 00.2		
	comp=E,365nm,0.3s								
MLH	**Mauna Loa**	**0.70**	**8**			Sg	15 35 55.2	-3.0	
MLOA	**Mauna Loa Obse**	**0.74**	**354**			Pg	15 35 47.2	-2.4	
MLOA	**Mauna Loa Obse**	**0.74**	**354**	IAML			15 35 56.1		
	comp=E,1μm,0.3s								
MLOA				IAML			15 35 56.3		
	comp=N,1μm,0.3s								
ALEP	**Alea Permanent**	**0.76**	**349**			Pg	15 35 47.2	-2.6	
HMH	**Humu'ula Sheep**	**0.80**	**1**			Pg	15 35 48.3	-2.4	
HMH						Sg	15 35 57.9	-3.5	
HMH	**Humu'ula Sheep**	**0.80**	**1**	IAML			15 35 58.5		
	comp=E,531nm,0.3s								
KHLU	**Kahalu`u**	**0.88**	**335**			Pb	15 35 48.7	-3.4	
KHLU	**Kahalu`u**	**0.88**	**335**	IAML			15 35 58.7		
	comp=E,317nm,0.3s								
KHLU				IAML			15 36 04.8		
	comp=N,355nm,0.2s								
POHA	**Pohakuloa**	**0.96**	**358**			Pb	15 35 50.5	-3.1	
POHA	**Pohakuloa**	**0.96**	**358**	IAML			15 35 57.6		
	comp=N,174nm,3.8s								
POHA				IAML			15 36 13.9		
	comp=N,185nm,1.8s								

IDC 26 15:46:16.3±2.6, 6°88S×132°28E, h0km, mb3.4/1, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=112.9km s-min=27.5km az=75.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.14**	**171**	Pn	Pn	15 49 24.7	+0.3
	0.2nm,0.3s,baz=352,slow=13,SNR=5.9						
WRA				Sn	Sn	15 51 52.8	+1.4
	0.2nm,0.3s,baz=357,slow=23,SNR=3.0						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**16.76**	**175**	Pn	Pn	15 50 12.7	0.0
	0.2nm,0.3s,baz=355,slow=14,SNR=22						
ASAR				Sn	Sn	15 53 19.9	+0.2
	baz=359,slow=29						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**69.38**	**326**	P	P	15 57 26.1	0.0
	0.3nm,0.7s,baz=111,slow=8.2,SNR=2.1						
	0.3nm,0.7s						

RHSSO 26 15:57:41.4±0.5, 43°31N×18°01E, h7km, ML2.5/3, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.44**	**108**	*e*Pg	Pg	15 57 50.1	+0.1
KLINJ				*e*Sg	Sg	15 57 56.5	+0.7
STON	**Ston**	**0.49**	**208**	*i* Pg	Pg	15 57 50.8	-0.1
STON				Sg	Sg	15 57 58.5	+1.2
TREB	**Trebinje**	**0.64**	**157**	⇑*i*Pg	Pg	15 57 52.8	-0.9
TREB				*e*Sg	Sg	15 58 02.3	+0.3
DBRK	**Dubrovnik**	**0.65**	**171**	*i* Pg	Pg	15 57 53.6	-0.2
DBRK				Sg	Sb	15 58 03.7	-0.5
MAKA	**Makarska**	**0.72**	**269**	*e*Pg	Pg	15 57 55.5	+0.2
MAKA				Sg	Sb	15 58 06.9	+0.4
RUDO	**Rudo**	**1.04**	**72**	⇑*i*Pg	Pg	15 57 59.8	-1.5
RUDO				*e*Sg	Sg	15 58 14.0	-0.8
HVAR	**Hvar**	**1.15**	**264**	*e*Pg	Pb	15 58 03.6	0.0
HVAR				Sg	Sn	15 58 21.0	+1.1
KIJV	**Kijevo**	**1.36**	**301**	*e*Pn	Pg	15 58 08.2	+0.8
KIJV				Sn	Sn	15 58 29.4	+4.4
BLY	**Banja Luka**	**1.56**	**338**	⇑*i*Pn	Pb	15 58 10.3	-0.3
BLY				*e*Sn	Sn	15 58 29.5	-0.5
ZIRJ	**Zirje**	**1.76**	**282**	*e*Pn	Pb	15 58 13.5	-0.4
ZIRJ				Sn	Sg	15 58 38.4	+0.5
MORI	**Morici**	**1.77**	**289**	*e*Pn	Pb	15 58 14.5	+0.5
MORI				Sn	Sg	15 58 39.2	+1.1
DUGI	**Dugi Otok**	**2.25**	**289**	*e*Pn	Pb	15 58 21.5	-0.8
DUGI				Sn	Sb	15 58 51.0	+0.7
VIRC	**Vir**	**2.36**	**296**	*e*Pn	Pb	15 58 22.9	-1.2
VIRC				Sn	Sb	15 58 53.6	+0.2

*NEIC **26** 15:58:25.3±1.3, 16°41N±0°03×98°91W±0°03, h21km±5km, mb4.4/11, Md4.4/126(MEX), Error ellipse: s-maj=5.3km s-min=2.6km az=47.0*
*MEX **26** 15:58:26.6±0.8, 16°42N×98°91W, h4km±4km, MD4.4*
ISC 26 15:58:23.5±1.1, 16°46N±0°03×98°96W±0°02, h13km±8km, n131, σ1°77/241, mb4.5/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.32**	**330**		**Pn**	**15 58 33.4**	**-0.5**
CRIG					**Sn**	**15 58 38.8**	**-1.8**
CRIG	**Cruz Grande**	**0.32**	**330**	*i* P	**Pn**	**15 58 33.4**	**-0.5**
CRIG				*e*S	**Sn**	**15 58 38.8**	**-1.8**
PNIG	**Pinotepa**	**0.80**	**95**		**Pb**	**15 58 39.6**	**+0.2**
PNIG					**Sg**	**15 58 49.7**	**0.0**
PNIG	**Pinotepa**	**0.80**	**95**	*e*P	**Pb**	**15 58 39.6**	**+0.2**
PNIG				*i* S	**Sg**	**15 58 49.7**	**0.0**
MGIG	**Malinaltepec**	**0.83**	**22**		**Pn**	**15 58 41.8**	**+0.6**
MGIG					**Sn**	**15 58 53.2**	**-0.2**
MGIG	**Malinaltepec**	**0.83**	**22**	*e*P	**Pn**	**15 58 41.8**	**+0.6**
MGIG				*e*S	**Sn**	**15 58 53.2**	**-0.2**
DAIG	**Los Arroyos**	**0.86**	**310**		**Pn**	**15 58 42.3**	**+0.8**
DAIG					**Sn**	**15 58 54.2**	**+0.2**
DAIG	**Los Arroyos**	**0.86**	**310**	*e*P	**Pn**	**15 58 42.3**	**+0.8**
DAIG				*e*S	**Sn**	**15 58 54.2**	**+0.2**
VNTA	**La Mica**	**0.94**	**299**		**Pn**	**15 58 44.1**	**+1.7**
VNTA					**Sn**	**15 58 56.2**	**+0.4**
VNTA	**La Mica**	**0.94**	**299**	*e*P	**Pn**	**15 58 44.1**	**+1.7**
VNTA				*i* S	**Sn**	**15 58 56.2**	**+0.4**
TLIG	**Tlapa**	**1.16**	**19**		**Pg**	**15 58 47.2**	**+1.2**
TLIG	**Tlapa**	**1.16**	**19**		**Sn**	**15 59 02.3**	**+0.8**
TLIG	**Tlapa**	**1.16**	**19**	*e*P	**Pg**	**15 58 47.2**	**+1.2**
TLIG				*e*S	**Sg**	**15 59 01.3**	**+0.2**
CAIG	**El Cayaco**	**1.38**	**295**		**Pg**	**15 58 50.3**	**+0.2**
CAIG					**Sg**	**15 59 08.5**	**+0.5**
CAIG	**El Cayaco**	**1.38**	**295**	*e*P	**Pg**	**15 58 50.3**	**+0.2**
CAIG				*e*S	**Sg**	**15 59 08.5**	**+0.5**
TXIG	**Tlaxiaco**	**1.39**	**55**		**Pb**	**15 58 49.6**	**0.0**
TXIG					**Sn**	**15 59 06.0**	**-1.4**
TXIG	**Tlaxiaco**	**1.39**	**55**	*e*P	**Pb**	**15 58 49.6**	**0.0**
TXIG				*e*S	**Sn**	**15 59 06.0**	**-1.4**
YOIG	**Yosondua**	**1.41**	**74**		**Pn**	**15 58 49.6**	**+0.3**
YOIG					**Sn**	**15 59 07.1**	**-0.9**
YOIG	**Yosondua**	**1.41**	**74**	*e*P	**Pn**	**15 58 49.6**	**+0.3**
YOIG				*e*S	**Sn**	**15 59 07.1**	**-0.9**
MEIG	**Mezcala**	**1.59**	**337**		**Pg**	**15 58 54.0**	**-0.1**
MEIG					**Sb**	**15 59 13.2**	**+0.3**
MEIG	**Mezcala**	**1.59**	**337**	*e*P	**Pg**	**15 58 54.0**	**-0.1**
MEIG				*e*S	**Sb**	**15 59 13.2**	**+0.3**
ATYC	**Atoyac**	**1.60**	**298**		**Pg**	**15 58 55.0**	**+0.9**
ATYC					**Sg**	**15 59 15.2**	**+0.2**
ATYC	**Atoyac**	**1.60**	**298**	*e*P	**Pg**	**15 58 55.0**	**+0.9**
ATYC				*e*S	**Sg**	**15 59 15.2**	**+0.2**
FTIG	**Fresnillo de T**	**1.65**	**29**		**Pb**	**15 58 53.7**	**-0.1**
FTIG					**Sn**	**15 59 12.2**	**-1.3**
FTIG	**Fresnillo de T**	**1.65**	**29**	*e*P	**Pb**	**15 58 53.7**	**-0.1**
FTIG				*e*S	**Sn**	**15 59 12.2**	**-1.3**
HLIG	**Huajuapan de L**	**1.76**	**39**		**Pb**	**15 58 55.2**	**-0.6**
HLIG					**Sb**	**15 59 17.6**	**-0.3**
HLIG	**Huajuapan de L**	**1.76**	**39**	*e*P	**Pb**	**15 58 55.2**	**-0.6**
HLIG				*e*S	**Sb**	**15 59 17.6**	**-0.3**
PEIG	**Puerto Escondi**	**1.80**	**104**		**Pn**	**15 58 53.7**	**-0.7**
PEIG					**Sn**	**15 59 18.0**	**+0.8**
PEIG	**Puerto Escondi**	**1.80**	**104**	*e*P	**Pn**	**15 58 53.7**	**-0.7**
PEIG				*e*S	**Sn**	**15 59 18.0**	**+0.8**
OXIG	**Oaxaca**	**2.22**	**74**		**Pn**	**15 59 01.4**	**+1.0**
OXIG					**Sn**	**15 59 24.4**	**-3.4**
VHO	**Vista Hermosa**	**2.22**	**74**	*e*P	**Pn**	**15 59 01.4**	**+1.0**
VHO				*e*S	**Sn**	**15 59 24.4**	**-3.4**
OXBJ	**Oaxaca**	**2.23**	**74**		**Pb**	**15 59 04.6**	**+0.8**
OXBJ					**Sb**	**15 59 32.1**	**+0.7**
OXBJ	**Oaxaca**	**2.23**	**74**	*e*P	**Pb**	**15 59 04.6**	**+0.8**
OXBJ				*e*S	**Sb**	**15 59 32.1**	**+0.7**
ARIG	**Puente Sto Nin**	**2.24**	**324**		**Pb**	**15 59 04.7**	**+0.7**
ARIG					**Sb**	**15 59 30.8**	**-0.9**
ARIG	**Puente Sto Nin**	**2.24**	**324**	*e*P	**Pb**	**15 59 04.7**	**+0.7**
ARIG				*e*S	**Sb**	**15 59 30.8**	**-0.9**
OXLC	**Oaxaca**	**2.25**	**74**		**Pn**	**15 59 01.1**	**+0.4**
OXLC					**Sn**	**15 59 28.4**	**0.0**
OXLC	**Oaxaca**	**2.25**	**74**	*e*P	**Pn**	**15 59 01.1**	**+0.4**
OXLC				*e*S	**Sn**	**15 59 28.4**	**0.0**
YAIG	**Yautepec**	**2.39**	**358**		**Pb**	**15 59 06.3**	**-0.3**
YAIG					**Sn**	**15 59 28.4**	**-3.6**
YAIG	**Yautepec**	**2.39**	**358**	*e*P	**Pb**	**15 59 06.3**	**-0.3**
YAIG				*e*S	**Sn**	**15 59 28.4**	**-3.6**
TOIG	**Toxpalan**	**2.44**	**48**		**Pn**	**15 59 05.1**	**+1.9**
TOIG					**Sn**	**15 59 30.5**	**-2.5**
TOIG	**Toxpalan**	**2.44**	**48**	*e*P	**Pn**	**15 59 05.1**	**+1.9**
TOIG				*e*S	**Sn**	**15 59 30.5**	**-2.5**
PPCL	**Tochimilco**	**2.46**	**8**	*e*P	**Pb**	**15 59 08.8**	**+0.9**
PPCL				*e*S	**Sn**	**15 59 32.9**	**-0.9**
TPIG	**Tehuac#an**	**2.48**	**38**		**Pn**	**15 59 05.5**	**+1.7**
TPIG					**Sn**	**15 59 32.1**	**-1.9**
TPIG	**Tehuac#an**	**2.48**	**38**	*e*P	**Pn**	**15 59 05.5**	**+1.7**
TPIG				*e*S	**Sn**	**15 59 32.1**	**-1.9**
PPPT	**Popocatepetl**	**2.52**	**7**	*e*P	**Pb**	**15 59 10.0**	**+0.9**
PPPT				*e*S	**Sb**	**15 59 39.2**	**-1.1**
MAVM	**Malinalco, Edo**	**2.54**	**349**		**Pb**	**15 59 10.7**	**+1.6**
MAVM					**Sn**	**15 59 34.5**	**-1.0**
MAVM	**Malinalco, Edo**	**2.54**	**349**	*e*P	**Pb**	**15 59 10.7**	**+1.6**
MAVM				*i* S	**Sn**	**15 59 34.5**	**-1.0**
PBXN	**Popocatepetl**	**2.55**	**6**	*e*P	**Pb**	**15 59 10.9**	**+1.3**
PBXN				*i* S	**Sn**	**15 59 36.4**	**0.0**
PPIG	**Popocatepetl**	**2.61**	**7**		**Pb**	**15 59 10.7**	**+0.1**
PPIG					**Sn**	**15 59 37.2**	**-0.7**
PPM	**Popocatepetl**	**2.61**	**7**	*e*P	**Pb**	**15 59 10.7**	**+0.1**
PPM				*e*S	**Sn**	**15 59 37.2**	**-0.7**
PPSX	**Xalitzintla**	**2.65**	**9**	*e*P	**Pb**	**15 59 12.2**	**+1.1**
PPSX				*e*S	**Sb**	**15 59 41.8**	**-1.9**
ZIIG	**Zihuatanejo**	**2.65**	**296**		**Pb**	**15 59 08.9**	**-2.0**
ZIIG					**Sn**	**15 59 34.5**	**-3.6**
ZIIG	**Zihuatanejo**	**2.65**	**296**	*e*P	**Pb**	**15 59 08.9**	**-2.0**
ZIIG				*e*S	**Sn**	**15 59 34.5**	**-3.6**
AMVM	**AMECAMECA**	**2.66**	**4**		**Pb**	**15 59 10.1**	**-1.3**
AMVM					**Sn**	**15 59 37.9**	**-1.0**
AMVM	**AMECAMECA**	**2.66**	**4**	*e*P	**Pb**	**15 59 10.1**	**-1.3**
AMVM				*i* S	**Sn**	**15 59 37.9**	**-1.0**
PHPU	**Puebla**	**2.68**	**16**		**Pb**	**15 59 10.1**	**-1.5**
PHPU					**Sn**	**15 59 36.3**	**-2.9**
PHPU	**Puebla**	**2.68**	**16**	*e*P	**Pb**	**15 59 10.1**	**-1.5**
PHPU				*e*S	**Sn**	**15 59 36.3**	**-2.9**
MPVM	**San Francisco**	**2.73**	**359**		**Pb**	**15 59 12.2**	**-0.2**
MPVM					**Sn**	**15 59 41.3**	**+1.0**
MPVM	**San Francisco**	**2.73**	**359**	*e*P	**Pb**	**15 59 12.2**	**-0.2**
MPVM				*e*S	**Sn**	**15 59 41.3**	**+1.0**
TLVM	**San Miguel Top**	**2.74**	**356**		**Pb**	**15 59 12.2**	**-0.5**
TLVM					**Sn**	**15 59 40.7**	**-0.2**
TLVM	**San Miguel Top**	**2.74**	**356**	*e*P	**Pb**	**15 59 12.2**	**-0.5**
TLVM				*e*S	**Sn**	**15 59 40.7**	**-0.2**
XCVM	**Xochimilco**	**2.78**	**357**		**Pb**	**15 59 13.6**	**+0.2**
XCVM					**Sn**	**15 59 42.6**	**+0.9**
XCVM	**Xochimilco**	**2.78**	**357**	*e*P	**Pb**	**15 59 13.6**	**+0.2**
XCVM				*e*S	**Sn**	**15 59 42.6**	**+0.9**
AOVM	**Tlapan**	**2.81**	**353**		**Pb**	**15 59 14.0**	**0.0**
AOVM					**Sn**	**15 59 38.3**	**-4.5**
AOVM	**Tlapan**	**2.81**	**353**	*e*P	**Pb**	**15 59 14.0**	**0.0**
AOVM				*e*S	**Sn**	**15 59 38.3**	**-4.5**
HUIG	**Huatulco**	**2.83**	**104**		**Pn**	**15 59 08.3**	**-0.2**
HUIG					**Sn**	**15 59 37.5**	**-5.0**
HUIG	**Huatulco**	**2.83**	**104**	*e*P	**Pn**	**15 59 08.3**	**-0.2**
HUIG				*e*S	**Sn**	**15 59 37.5**	**-5.0**
THVM	**De Xico**	**2.84**	**360**		**Pb**	**15 59 13.9**	**-0.3**
THVM					**Sn**	**15 59 42.6**	**-0.5**
THVM	**De Xico**	**2.84**	**360**	*e*P	**Pb**	**15 59 13.9**	**-0.3**
THVM				*e*S	**Sn**	**15 59 42.6**	**-0.5**
INVM	**La Marquesa**	**2.85**	**352**		**Pb**	**15 59 14.0**	**-0.4**
INVM					**Sn**	**15 59 43.2**	**-0.3**
INVM	**La Marquesa**	**2.85**	**352**	*e*P	**Pb**	**15 59 14.0**	**-0.4**
INVM				*e*S	**Sn**	**15 59 43.2**	**-0.3**
UNM	**Universidad Na**	**2.86**	**356**	*e*P	**Pn**	**15 59 11.3**	**+2.1**
UNM				*e*S	**Sn**	**15 59 40.0**	**-3.7**
CUP5	**Mexico City**	**2.86**	**356**		**Pb**	**15 59 15.9**	**+1.2**
CUP5					**Sb**	**15 59 48.5**	**-1.3**
CUP5	**Mexico City**	**2.86**	**356**	*e*P	**Pb**	**15 59 15.9**	**+1.2**
CUP5				*i* S	**Sb**	**15 59 48.5**	**-1.3**
TOVM	**TOLUCA**	**2.89**	**346**		**Pb**	**15 59 16.2**	**+1.0**
TOVM					**Sn**	**15 59 42.3**	**-2.2**
TOVM	**TOLUCA**	**2.89**	**346**	*e*P	**Pb**	**15 59 16.2**	**+1.0**
TOVM				*e*S	**Sn**	**15 59 42.3**	**-2.2**
MHVM	**Bosque de Chap**	**2.94**	**355**		**Pb**	**15 59 14.8**	**-1.2**
MHVM					**Sn**	**15 59 46.4**	**+0.7**
MHVM	**Bosque de Chap**	**2.94**	**355**	*e*P	**Pb**	**15 59 14.8**	**-1.2**
MHVM				*e*S	**Sn**	**15 59 46.4**	**+0.7**
PBVM	**Pinon**	**2.97**	**358**		**Pb**	**15 59 15.1**	**-1.3**
PBVM					**Sn**	**15 59 44.6**	**-1.3**
PBVM	**Pinon**	**2.97**	**358**	*e*P	**Pb**	**15 59 15.1**	**-1.3**
PBVM				*e*S	**Sn**	**15 59 44.6**	**-1.3**
APVM	**Azcapotzalco**	**3.02**	**356**		**Pb**	**15 59 17.2**	**-0.2**
APVM					**Sn**	**15 59 47.0**	**-0.6**
APVM	**Azcapotzalco**	**3.02**	**356**	*i* P	**Pb**	**15 59 17.2**	**-0.2**
APVM				*e*S	**Sn**	**15 59 47.0**	**-0.6**
AZVM	**Cuida Lopez Ma**	**3.12**	**354**		**Pb**	**15 59 19.3**	**+0.1**
AZVM					**Sn**	**15 59 51.5**	**+1.2**
AZVM	**Cuida Lopez Ma**	**3.12**	**354**	*e*P	**Pb**	**15 59 19.3**	**+0.1**
AZVM				*e*S	**Sn**	**15 59 51.5**	**+1.2**
NEUV	**Arroyo Zacate**	**3.27**	**67**		**Pn**	**15 59 15.6**	**+1.1**
NEUV					**Sn**	**15 59 51.3**	**-2.0**
NEUV	**Arroyo Zacate**	**3.27**	**67**	*i* P	**Pn**	**15 59 15.6**	**+1.1**
NEUV				*e*S	**Sn**	**15 59 51.3**	**-2.0**
VTVM	**Tizayuca**	**3.30**	**3**		**Pb**	**15 59 22.9**	**+0.7**
VTVM					**Sn**	**15 59 55.5**	**+1.0**
VTVM	**Tizayuca**	**3.30**	**3**	*e*P	**Pb**	**15 59 22.9**	**+0.7**
VTVM				*i* S	**Sn**	**15 59 55.5**	**+1.0**
ZUVM	**ZUMPANGO**	**3.35**	**358**		**Pb**	**15 59 21.6**	**-1.4**
ZUVM					**Sn**	**15 59 57.9**	**+2.1**
ZUVM	**ZUMPANGO**	**3.35**	**358**	*i* P	**Pb**	**15 59 21.6**	**-1.4**
ZUVM				*e*S	**Sn**	**15 59 57.9**	**+2.1**
ATVM	**ATLACOMULCO**	**3.39**	**346**		**Pn**	**15 59 18.3**	**+1.8**
ATVM					**Sn**	**15 59 55.9**	**-0.9**
ATVM	**ATLACOMULCO**	**3.39**	**346**	*e*P	**Pn**	**15 59 18.3**	**+1.8**
ATVM				*e*S	**Sn**	**15 59 55.9**	**-0.9**
JAUV	**Jalcomulco**	**3.55**	**35**		**Pn**	**15 59 18.9**	**+0.5**
JAUV					**Sn**	**16 00 03.2**	**+2.8**
JAUV	**Jalcomulco**	**3.55**	**35**	*e*P	**Pn**	**15 59 18.9**	**+0.5**
JAUV				*e*S	**Sn**	**16 00 03.2**	**+2.8**
ACIG	**Acambay**	**3.61**	**346**		**Pn**	**15 59 22.1**	**+2.6**
ACIG					**Sn**	**16 00 01.1**	**-0.9**
ACIG	**Acambay**	**3.61**	**346**	*e*P	**Pn**	**15 59 22.1**	**+2.6**
ACIG				*e*S	**Sn**	**16 00 01.1**	**-0.9**
DHIG	**Demacu**	**3.82**	**359**		**Pb**	**15 59 30.4**	**-0.7**
DHIG					**Sb**	**16 00 12.4**	**-5.0**
DEIG	**Demacu**	**3.82**	**359**	*e*P	**Pb**	**15 59 30.4**	**-0.7**
DEIG				*e*S	**Sb**	**16 00 12.4**	**-5.0**
MOIG	**Morelia**	**3.84**	**327**		**Pn**	**15 59 23.9**	**+1.2**
MOIG	**Morelia**	**3.84**	**327**		**Sn**	**16 00 10.0**	**+2.2**
MOIG	**Morelia**	**3.84**	**327**	*e*P	**Pb**	**15 59 29.0**	**-2.4**
MOIG				*e*S	**Sn**	**16 00 10.0**	**+2.2**
CXUV	**Coxquihui**	**3.92**	**19**		**Pb**	**15 59 28.3**	**-4.2**
CXUV					**Sn**	**16 00 11.8**	**+2.4**
CXUV	**Coxquihui**	**3.92**	**19**	*e*P	**Pb**	**15 59 28.3**	**-4.2**
CXUV				*e*S	**Sn**	**16 00 11.8**	**+2.4**
CMIG	**Matias Romero**	**3.96**	**80**		**Pn**	**15 59 24.1**	**0.0**
CMIG					**Sn**	**16 00 13.2**	**+2.8**
LVIG	**Laguna Verde**	**4.05**	**36**		**Pn**	**15 59 23.1**	**-2.1**
LVIG					**Sn**	**16 00 15.4**	**+2.8**
LVIG	**Laguna Verde**	**4.05**	**36**	*e*P	**Pn**	**15 59 23.1**	**-2.1**
LVIG				*e*S	**Sn**	**16 00 15.4**	**+2.8**
JRQG	**Juriquilla Cam**	**4.45**	**342**		**Pg**	**15 59 51.8**	**+2.9**
MMIG	**Aquila**	**4.56**	**294**		**Pn**	**15 59 34.2**	**+1.8**
MMIG					**Sn**	**16 00 25.9**	**+0.5**
MMIG	**Aquila**	**4.56**	**294**	*e*P	**Pn**	**15 59 34.2**	**+1.8**
MMIG				*e*S	**Sn**	**16 00 25.9**	**+0.5**
UXUV	**UXUV**	**4.69**	**79**		**Pn**	**15 59 33.9**	**-0.2**
UXUV					**Sn**	**16 00 31.9**	**+3.5**
UXUV	**UXUV**	**4.69**	**79**	*e*P	**Pn**	**15 59 33.9**	**-0.2**
UXUV				*e*S	**Sn**	**16 00 31.9**	**+3.5**
CTUV	**Llano Grande**	**5.02**	**6**		**Pb**	**15 59 47.8**	**-3.6**
CTUV					**Sn**	**16 00 42.4**	**+5.8**
CTUV	**Llano Grande**	**5.02**	**6**	*e*P	**Pb**	**15 59 47.8**	**-3.6**
CTUV				*e*S	**Sn**	**16 00 42.4**	**+5.8**
RPIG	**Rio Verde**	**5.48**	**350**		**Pg**	**16 00 04.6**	**-4.0**
RPIG					**Sn**	**16 00 48.1**	**-0.1**
RPIG	**Rio Verde**	**5.48**	**350**	*e*	**Pg**	**16 00 04.6**	**-4.0**
RPIG				*e*S	**Sn**	**16 00 48.1**	**-0.1**
TGIG		**5.61**	**86**		Pn	15 59 53.5	+6.7
TGIG					**Sn**	**16 00 53.0**	**+1.8**
TGIG		**5.61**	**86**	*e*P	Pn	15 59 53.5	+6.7
TGIG				*e*S	**Sn**	**16 00 53.0**	**+1.8**
CCIG	**Comitan**	**6.55**	**91**	Pn	**Pn**	**16 00 00.5**	**+0.6**
HERN	**Volcan Telica**	**12.35**	**106**	Pn	**Pn**	**16 01 19.2**	**-0.1**
SAND	**Sanderson**	**13.74**	**348**	Pn	**Pn**	**16 01 38.8**	**+0.5**
SOR	**Soroa**	**16.29**	**65**	Pn	**Pn**	**16 02 12.1**	**-0.1**
BRU2	**Volcan**	**17.60**	**114**	P	**Pn**	**16 02 29.2**	**+0.3**
BRU2				IAmb	IAmb	16 02 29.7	
	comp=Z,16nm,0.5s						
T25A	**Trinidad**	**21.16**	**348**	P	**P**	**16 03 08.8**	**0.0**
T25A				IAmb	IAmb	16 03 32.4	
	comp=Z,8.7nm,0.9s						
WVT	**Waverly**	**21.95**	**25**	P	**P**	**16 03 17.2**	**+0.1**
CPCT	**Cooper Cave**	**22.89**	**32**		**P**	**16 03 27.4**	**+0.3**
YPT	**Yellepit**	**33.90**	**335**	P	**P**	**16 05 06.2**	**0.0**
YPT				IAmb	IAmb	16 05 47.6	
	comp=Z,4.8nm,0.9s						
COR	**Corvallis**	**34.75**	**329**	P	**P**	**16 05 14.1**	**+0.6**
O30N	**Mendenhall**	**51.62**	**338**	P	**P**	**16 07 31.0**	**+1.2**
O30N				IAmb	IAmb	16 08 07.2	
	comp=Z,10nm,1.4s						

BLY					*e*Sn		Sn	15 59 38.1	-25
BLY	**Banja Luka**	**3.54**	**334**	⇓	P		**Pn**	**15 59 18.9**	**-2.8**
MDVR	**Moldovita**	**3.63**	**27**	⇑	P		**Pn**	**15 59 24.4**	**+1.4**
MDVR				⇓	S		**Sn**	**16 00 05.8**	**+0.2**
VRSS	**Vrsac**	**3.81**	**21**	*e*Pn			**Pn**	**15 59 25.4**	**-0.1**
HERR	**Herculane**	**3.98**	**33**	⇓	P		**Pn**	**15 59 29.3**	**+1.6**
BZS	**Buzias**	**4.35**	**21**	⇓	P		**Pn**	**15 59 33.9**	**+1.0**
GZR	**Gura Zlata**	**4.54**	**32**	⇑	P		**Pn**	**15 59 36.8**	**+1.2**
SURR	**Surduc**	**4.62**	**25**	⇑	P		**Pn**	**15 59 36.6**	**0.0**
SURR				⇑	S		**Sn**	**16 00 28.8**	**-1.2**
MORH	**Mrgy, Hungar**	**4.66**	**354**	*e*Pn			**Pn**	**15 59 35.8**	**-1.2**
MORH				*e*Sn			Sn	16 00 11.7	-19
SIRR	**Siria**	**4.97**	**19**	⇑	P		**Pn**	**15 59 41.6**	**+0.2**
ARR	**Arges**	**5.38**	**44**	⇓	P		**Pn**	**15 59 48.6**	**+1.5**
ARR				⇑	S		**Sn**	**16 00 49.1**	**+0.2**
VOIR		**5.65**	**45**	⇑	P		**Pn**	**15 59 52.8**	**+2.0**
SOKA	**Soboth**	**5.97**	**330**	*e*Pn			Pn	15 59 49.6	-5.6
	comp=E,1.3nm,0.3s								
OBKA	**Obir**	**6.02**	**326**	*e*Pn			Pn	15 59 50.6	-5.2
	comp=E,0.5nm,0.2s								
MLR	**Muntele Rosu**	**6.17**	**49**	⇑	P		**Pn**	**16 00 00.3**	**+2.2**
DOPR	**Dopca**	**6.18**	**43**	⇓	P		**Pn**	**16 00 00.6**	**+2.5**
ARSA	**Arzberg**	**6.29**	**335**	*e*Pn			Pn	15 59 54.5	-5.0
	comp=E,1.6nm,0.4s								
OZUR		**6.47**	**44**	⇓	P		**Pn**	**16 00 03.5**	**+1.4**
PLOR	**Plostina**	**6.79**	**49**	⇓	P		**Pn**	**16 00 09.0**	**+2.7**
VRI	**Vrincioaia**	**6.84**	**49**	⇑	P		**Pn**	**16 00 09.3**	**+2.3**
ABTA	**Abfaltersbach**	**7.13**	**319**	*e*Pn			Pn	16 00 07.4	-3.7
	comp=E,0.8nm,0.2s								
BIOA	**Bad Ischl, Aus**	**7.34**	**328**	*e*Pn			Pn	16 00 10.1	-3.8
	comp=E,2.4nm,0.2s								
LESA	**Schwarzleotal**	**7.54**	**323**	*e*Pn			Pn	16 00 12.8	-3.9
	comp=E,1.8nm,0.2s								
GERES	**GERESS Array B**	**8.28**	**333**		Pn		Pn	16 00 20.2	-6.7
	baz=183,slow=14,SNR=1.8								
	comp=E,0.2nm,0.3s								
FINES	**FINESS Array B**	**20.30**	**9**		P		**P**	**16 03 01.4**	**-0.9**
	comp=E,3.0nm,0.9s,baz=185,slow=9.2,SNR=6.2								
	comp=E,3.0nm,0.9s								
ZALV	**Zalesovo Beam**	**44.15**	**51**		P		**P**	**16 06 34.4**	**-0.6**
	comp=E,1.1nm,0.4s,baz=282,slow=8.9,SNR=5.3								
	comp=E,1.1nm,0.4s								
MKAR	**Makanchi Array**	**44.35**	**61**		P		**P**	**16 06 35.9**	**-0.9**
	comp=E,0.6nm,0.7s,baz=280,slow=7.0,SNR=5.2								
	comp=E,0.6nm,0.7s								

*IDC **26** 15:59:20.9±3.0,41°.31N×19°.64E,h0km,mb3.8/4,*
mbtmp3.7/5,ML1.7/1,Error ellipse: s-maj=63.2km
s-min=26.3km az=39.0
*TIR **26** 15:59:25.3,41°.47N×19°.69E,h10km±3km,Md2.9/6,Ml3.5/8*
*BEO **26** 15:59:26.1±0.6,41°.44N×19°.79E,h3km±3km,ML3.1/6*
*PDG **26** 15:59:26.6±0.2,41°.46N×19°.63E,h14km,MD3.5/4,*
ML3.4/13,Error ellipse: s-maj=0.8km s-min=1.0km az=0.0
ISC 26 15:59:25.3±0.9,41°.46N±0°.02×19.70E±0°.03,h16km±6km,
n44,σ1s14/75,mb3.8/3,7C-6D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.17**	**132**	Pg		**Pb**	**15 59 29.9**	**-0.1**
TIR				Sg		**Sg**	**15 59 32.1**	**-0.3**
TIR				AML		AML	15 59 33.7	
	47nm,0.2s							
PHP	**Peshkopia**	**0.60**	**68**	Pg		**Pb**	**15 59 37.1**	**-0.3**
PHP				Sg		**Sn**	**15 59 48.1**	**-0.5**
PHP				AML		AML	15 59 52.0	
	8.8nm,0.5s							
PHP				AMd			16 00 28.0	
ULC	**Ulcinj**	**0.61**	**326**	⇑ *i* Pg		**Pg**	**15 59 36.2**	**-1.1**
ULC				*i* Sg		**Sg**	**15 59 44.8**	**-0.7**
SDA	**Shkodra**	**0.61**	**346**	Pg		**Pg**	**15 59 36.3**	**-1.1**
SDA				Sg		**Sb**	**15 59 46.7**	**+0.8**
SDA				AML		AML	15 59 53.1	
	42µm,0.2s							
SDA				AMd			16 00 33.7	
DRME	**Dracevica, Mon**	**0.82**	**332**	*e*Pg		**Pg**	**15 59 41.6**	**+0.3**
DRME				*e*Sg		**Sn**	**15 59 53.5**	**-0.5**
DRME	**Dracevica, Mon**	**0.82**	**332**	⇑ *i* Pg		**Pb**	**15 59 40.9**	**-0.3**
DRME				*i* Sg		**Sb**	**15 59 53.3**	**+1.3**
VLO	**Vlora**	**1.00**	**189**	Pg		**Pb**	**15 59 44.0**	**-0.2**
VLO				Sg		**Sn**	**15 59 59.4**	**+1.1**
VLO				AML		AML	16 00 04.9	
	10.0nm,0.3s							
VLO				AMd			16 00 47.7	
PDG	**Podgorica**	**1.03**	**341**	*e*Pg		**Pb**	**15 59 44.6**	**0.0**
PDG				*e*Sg		**Sn**	**15 59 59.9**	**+0.9**
PDG	**Podgorica**	**1.03**	**341**	⇑ *i* Pg		**Pb**	**15 59 43.8**	**-0.8**
PDG				*i* Sg		**Sn**	**15 59 59.7**	**+0.7**
BUM	**Brajici-Budva**	**1.03**	**325**	⇑ *i* Pg		**Pb**	**15 59 45.2**	**+0.4**
BUM				*i* Sg		**Sg**	**15 59 59.1**	**+0.2**
PVY	**Plav**	**1.15**	**10**	*e*Pg		**Pg**	**15 59 48.6**	**+1.0**
PVY				*e*Sg		**Sg**	**16 00 04.5**	**+1.9**
PVY	**Plav**	**1.15**	**10**	⇑ *i* Pg		**Pg**	**15 59 47.2**	**-0.4**
PVY				*i* Sg		**Sg**	**16 00 04.6**	**+1.9**
KBN	**Korca**	**1.17**	**135**	Pn		**Pg**	**15 59 47.5**	**-0.4**
KBN				Sn		**Sg**	**16 00 07.2**	**+3.9**
KBN				AMd			16 00 50.4	
CEME	**Cevo**	**1.23**	**332**	⇓ *i* Pg		**Pb**	**15 59 48.3**	**+0.1**
CEME				*i* Sg		**Sg**	**16 00 06.3**	**+1.1**
HCY	**Herceg Novi**	**1.34**	**318**	⇓ *i* Pg		**Pb**	**15 59 49.9**	**0.0**
HCY				*i* Sg		**Sg**	**16 00 09.0**	**+0.5**
KOME	**Kolasin**	**1.40**	**354**	*e*Pg		**Pg**	**15 59 52.7**	**+0.5**
KOME				*e*Sg		**Sg**	**16 00 09.9**	**-0.6**
KOME	**Kolasin**	**1.40**	**354**	⇑ *i* Pg		**Pg**	**15 59 52.1**	**-0.1**
KOME				*i* Sg		**Sg**	**16 00 12.2**	**+1.7**
BEY	**Berane**	**1.42**	**6**	*e*Pg		**Pb**	**15 59 51.7**	**+0.3**
BEY				*e*Sg		**Sg**	**16 00 11.9**	**+0.8**
IVA	**Berane**	**1.42**	**6**	⇓ *i* Pg		**Pb**	**15 59 51.6**	**+0.2**
IVA				*i* Sg		**Sg**	**16 00 13.1**	**+2.0**
NKME	**Niksic**	**1.42**	**337**	⇓ *i* Pg		**Pb**	**15 59 51.4**	**0.0**
NKME				*i* Sg		**Sg**	**16 00 12.4**	**+1.2**
NEST	**Nestorio**	**1.46**	**135**	Pg		**Pg**	**15 59 53.5**	**0.0**
NEST				Sn		**Sg**	**16 00 11.8**	**-0.6**
NEST				AML		AML	16 00 22.2	
	1.5nm,0.6s							
NEST				AMd			16 00 57.7	
BRY	**Bratogost**	**1.68**	**329**	⇓ *i* Pn		**Pb**	**15 59 55.3**	**-0.6**
BRY				*i* Sn		**Sg**	**16 00 18.9**	**-0.6**
SJES	**Sjenica**	**1.81**	**6**	*e*Pg		**Pb**	**15 59 58.8**	**+0.7**
SJES				*e*Sg		**Sg**	**16 00 23.2**	**-0.5**
UPM	**Unac-Piva**	**1.84**	**342**	⇑ *i* Pn		**Pb**	**15 59 58.4**	**-0.2**
UPM				*i* Sn		**Sb**	**16 00 23.1**	**+1.6**
PLE	**Pljevlja**	**1.88**	**353**	*e*Pg		**Pg**	**16 00 01.0**	**-0.5**
PLE				*e*Sg		**Sg**	**16 00 26.1**	**+0.1**
PLE	**Pljevlja**	**1.88**	**353**	⇓ *i* Pn		**Pb**	**15 59 58.8**	**-0.6**
PLE				*i* Sn		**Sb**	**16 00 24.1**	**+1.4**
SELS	**Selova**	**2.05**	**30**	*e*Pn		**Pn**	**16 00 00.3**	**+1.2**
SELS				*e*Sn		**Sb**	**16 00 27.5**	**+0.2**
NOCI	**Noci**	**2.10**	**252**	P		**Pb**	**16 00 03.7**	**+0.7**
NOCI				AML		AML	16 00 36.6	
	1.5nm,0.3s							
IVAS	**Ivanjica**	**2.14**	**9**	*e*Pn		**Pb**	**16 00 02.6**	**-1.1**
IVAS				*e*Sn		**Sb**	**16 00 30.1**	**0.0**
GOCS	**Kraljevo Serbi**	**2.27**	**22**	*e*Sn		**Sb**	**16 00 32.8**	**-1.1**
BOSS	**Bosilegrad**	**2.32**	**63**	*e*Pn		**Pb**	**16 00 05.4**	**-1.3**
BBLS	**Lazi&#263i**	**2.42**	**355**	*e*Pn		**Pb**	**16 00 08.3**	**-0.1**
BBLS				*e*Sn		**Sb**	**16 00 38.3**	**+0.4**
BOVS	**Bovan**	**2.63**	**34**	*e*Pn		**Pn**	**16 00 09.3**	**+2.3**
BOVS				*e*Sn		**Sn**	**16 00 40.0**	**+1.4**
TRUS	**Trudelj**	**2.81**	**10**	*e*Pn		**Pb**	**16 00 13.4**	**-1.7**
ZAGS	**Zajecar**	**3.00**	**38**	*e*Pn		**Pb**	**16 00 12.9**	**+0.7**
ZAGS	**Zajecar**	**3.00**	**38**	*e*Pn		**Pn**	**16 00 14.0**	**+1.8**
ZAGS				*e*Sn		**Sn**	**16 00 50.9**	**+3.1**
BORS2	**Bor- Borsko je**	**3.13**	**32**	*e*Pn		**Pn**	**16 00 14.8**	**+0.8**
KUBS	**Kucevo**	**3.29**	**25**	*e*Pn		**Pn**	**16 00 16.3**	**+0.2**
GERES	**GERESS Array B**	**8.51**	**332**		Pn		**Pn**	**16 01 28.9**	**+1.0**
	baz=175,slow=16,SNR=1.8								
	0.3nm,0.4s								
FINES	**FINESS Array B**	**20.38**	**9**		P		**P**	**16 03 59.2**	**-1.8**
	2.3nm,0.6s,baz=187,slow=9.9,SNR=13								
	2.3nm,0.6s								
ZALV	**Zalesovo Beam**	**44.03**	**50**		P		**P**	**16 07 31.2**	**-0.6**
	1.8nm,0.6s,baz=283,slow=9.1,SNR=7.9								
	1.8nm,0.6s								
MKAR	**Makanchi Array**	**44.19**	**61**		P		**P**	**16 07 32.6**	**-0.7**
	1.0nm,0.7s,baz=272,slow=7.8,SNR=7.2								
	1.0nm,0.7s								
SONM	**Songino Array**	**58.90**	**52**		P		**P**	**16 09 22.7**	**-0.6**
	0.4nm,0.7s,baz=310,slow=11,SNR=3.8								
	0.4nm,0.7s								
ASAR	**Alice Springs**	**123.08**	**94**	PKP		**PKPdf**	**16 18 18.9**	**-2.2**
	0.3nm,0.6s,baz=286,slow=1.6,SNR=2.6								

*IDC **26** 16:22:50.4±1.7,1°.47N×126°.21E,h0km,mb3.5/4,*
mbtmp3.5/5,ML3.5/1,Error ellipse: s-maj=123.9km
s-min=21.0km az=68.0
*DJA **26** 16:22:54.3±0.3,1°.1E±3°×12°.6E±°,h10km,M3.9/10,mb4.5/1,*
MLv3.5/10
ISC 26 16:22:55.8±1.2,1°.5N±0°.1×126°.28E±0°.08,h35km,n11,
σ0s82/11,mb3.5/4,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.28**	**122**	P		**Pn**	**16 23 17.8**	**+0.6**
KMSI	**Cibinong**	**2.46**	**249**	P		**Pn**	**16 23 33.1**	**-0.3**
GTOI	**Gorontalo**	**3.37**	**256**	P		**Pn**	**16 23 47.7**	**+1.3**
SANI	**Sanana**	**3.49**	**185**	P		**Pn**	**16 23 48.0**	**+0.4**
LUWI	**Luwuk**	**4.29**	**235**	P		**Pn**	**16 23 59.4**	**+0.8**
APSI	**Ampana**	**5.19**	**243**	P		**Pn**	**16 24 10.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.43**	**182**	P		**P**	**16 27 19.0**	**-0.3**
	0.1nm,0.3s,baz=5.7,slow=10,SNR=1.5							
	0.6nm,0.5s							
WRA	**Warramunga Arr**	**22.68**	**160**	P		**P**	**16 27 54.2**	**-0.2**
	0.8nm,0.4s,baz=338,slow=11,SNR=9.4							
	0.8nm,0.4s							
ASAR	**Alice Springs**	**26.04**	**164**	P		**P**	**16 28 25.9**	**-0.2**
	0.5nm,0.4s,baz=344,slow=9.4,SNR=22							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**59.17**	**326**	P		**P**	**16 32 52.6**	**-0.7**
	0.3nm,0.7s,baz=119,slow=8.4,SNR=4.3							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**63.41**	**328**	P		**P**	**16 33 21.8**	**-0.1**
	0.3nm,0.7s,baz=120,slow=6.9,SNR=2.4							
	0.3nm,0.7s							

*THE **26** 16:30:20.2,42°.N19°×2°.0E±1°.9,h30km±21km,M2.8/5,*
MLh2.8/5
*IDC **26** 16:30:20.1±5.0,42°.00N×19°.55E,h0km,mb3.6/2,*
mbtmp3.7/5,ML3.2/3,Error ellipse: s-maj=93.9km
s-min=22.6km az=26.0
*BEO **26** 16:30:23.8±0.6,41°.71N×19°.66E,h3km±2km,ML2.8/10*
ISC 26 16:30:21.3±1.1,41°.64N±0°.03×19°.39E±0°.04,h20km±4km,
n55,σ1s38/75,5C-7D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRME	**Dracevica, Mon**	**0.57**	**344**	*e*Pg		**Pg**	**16 30 33.6**	**+0.8**
DRME				*e*Sg		**Sn**	**16 30 44.0**	**+0.8**
PHP	**Peshkopia**	**0.79**	**86**	P		**Pb**	**16 30 33.9**	**-2.5**
PHP				S		**Sb**	**16 30 44.9**	**-1.8**
PDG	**Podgorica**	**0.80**	**353**	*e*Pg		**Pn**	**16 30 38.9**	**+1.4**
PDG				*e*Sg		**Sn**	**16 30 49.8**	**+1.0**
PDG	**Podgorica**	**0.80**	**353**	⇓ P		**Pb**	**16 30 36.8**	**+0.3**
PVY	**Plav**	**1.05**	**24**	*e*Pg		**Pb**	**16 30 40.0**	**-0.8**
PVY				*e*Sg		**Sb**	**16 30 51.1**	**-3.1**
KOME	**Kolasin**	**1.22**	**4**	*e*Pg		**Pn**	**16 30 43.1**	**-0.2**
BEY	**Berane**	**1.29**	**17**	*e*Pg		**Pn**	**16 30 43.6**	**-0.7**
BEY				*e*Sg		**Sg**	**16 31 02.8**	**-0.3**
KBN	**Korca**	**1.46**	**133**	P		**Pn**	**16 30 47.0**	**+0.3**
KBN				S		**Sg**	**16 31 08.8**	**+0.2**
SJES	**Sjenica**	**1.68**	**15**	*e*Pg		**Pg**	**16 30 53.4**	**-0.3**
SJES				*e*Sg		**Sb**	**16 31 13.7**	**+1.3**
PLE	**Pljevlja**	**1.69**	**360**	*e*Pg		**Pg**	**16 30 54.7**	**+0.8**
PLE				*e*Sg		**Sb**	**16 31 14.0**	**+1.2**
NEST	**Nestorio**	**1.75**	**134**	P		**Pn**	**16 30 51.4**	**+0.8**
NEST				S		**Sb**	**16 31 15.7**	**+1.3**
KEK	**Kerkira**	**1.95**	**171**	P		**Pb**	**16 30 57.3**	**+1.2**
KEK				S		**Sg**	**16 31 23.3**	**-0.7**
PENT	**Pentalofos**	**1.96**	**137**	P		**Pn**	**16 30 55.1**	**+1.6**
PENT				S		**Sg**	**16 31 23.4**	**-0.9**
IVAS	**Ivanjica**	**2.02**	**16**	*e*Pn		**Pb**	**16 30 57.0**	**-0.4**
IVAS				*e*Sn		**Sb**	**16 31 22.3**	**+0.2**
SELS	**Selova**	**2.03**	**38**	*e*Pn		**Pb**	**16 30 56.5**	**-1.1**
SELS				*e*Sn		**Sb**	**16 31 22.5**	**0.0**
GOCS	**Kraljevo Serbi**	**2.21**	**29**	*e*Pn		**Pb**	**16 30 59.5**	**-1.2**
GOCS				*e*Sn		**Sn**	**16 31 25.5**	**+1.6**
IGT	**Igoumenitsa**	**2.22**	**161**	P		**Pb**	**16 30 60.0**	**-0.8**
BBLS	**Lazi&#263i**	**2.23**	**0**	*e*Pg		**Pg**	**16 31 03.8**	**-0.3**
GRUS	**Gruza**	**2.45**	**23**	*e*Pn		**Pn**	**16 31 02.5**	**+2.3**
GRUS				*e*Sn		**Sn**	**16 31 31.7**	**+2.1**
BOVS	**Bovan**	**2.63**	**40**	*e*Pn		**Pn**	**16 31 04.4**	**+1.8**
BOVS				*e*Sn		**Sn**	**16 31 35.1**	**+1.2**
BOVS	**Bovan**	**2.63**	**40**	⇓ P		**Pn**	**16 31 04.2**	**+1.6**
TRUS	**Trudelj**	**2.69**	**16**	*e*Pn		**Pb**	**16 31 07.9**	**-0.9**
TRUS				*e*Sn		**Sb**	**16 31 39.1**	**-2.3**
ZAPS	**Zavoj**	**2.90**	**55**	*e*Pn		**Pn**	**16 31 08.3**	**+1.8**
ZAPS				*e*Sn		**Sn**	**16 31 43.5**	**+2.7**
TEKS	**Tekeris**	**2.91**	**2**	*e*Pn		**Pb**	**16 31 11.9**	**-0.7**
TEKS				*e*Sn		**Sn**	**16 31 43.5**	**+2.5**
ZAGS	**Zajecar**	**3.02**	**43**	*e*Pn		**Pn**	**16 31 09.9**	**+1.9**
BORS2	**Bor- Borsko je**	**3.12**	**37**	*e*Pn		**Pn**	**16 31 09.6**	**+0.2**
TIP	**Timpagrande**	**3.17**	**220**	⇓ P		**Pn**	**16 31 10.0**	**-0.2**
KUBS	**Kucevo**	**3.24**	**30**	*e*Pn		**Pn**	**16 31 11.3**	**+0.3**
BLY	**Banja Luka**	**3.50**	**333**	⇑ P		**Pn**	**16 31 14.7**	**+0.1**
FRGS	**Fruska Gora**	**3.53**	**5**	*e*Pn		**Pn**	**16 31 17.6**	**+2.5**
FRGS				*e*Sn		**Sn**	**16 31 58.5**	**+2.2**
MDVR	**Moldovita**	**3.57**	**28**	⇑ P		**Pn**	**16 31 17.4**	**+1.8**
VRSS	**Vrsac**	**3.76**	**21**	*e*Pn		**Pn**	**16 31 20.2**	**+2.0**
HERR	**Herculane**	**3.92**	**33**	⇑ P		**Pn**	**16 31 22.2**	**+1.8**
BZS	**Buzias**	**4.29**	**21**	⇓ P		**Pn**	**16 31 27.6**	**+2.0**
GZR	**Gura Zlata**	**4.49**	**32**	⇓ P		**Pn**	**16 31 29.6**	**+1.3**
MORH	**Mrgy, Hungar**	**4.61**	**354**	⇓ P		**Pn**	**16 31 30.3**	**+0.4**
SIRR	**Siria**	**4.91**	**19**	⇓ P		**Pn**	**16 31 35.3**	**+1.9**
VOIR		**5.60**	**45**	⇑ P		**Pn**	**16 31 45.6**	**+2.1**
OBKA	**Obir**	**5.99**	**326**	*e*Pn		**Pn**	**16 31 48.3**	**-0.6**
	3.4nm,0.2s,SNR=6.9							
ARSA	**Arzberg**	**6.26**	**335**	*e*Pn		**Pn**	**16 31 51.6**	**-0.9**
	3.9nm,0.4s,SNR=15							
PSZ	**Piszkesteto**	**6.29**	**3**	⇑ P		**Pn**	**16 31 53.7**	**+0.7**
MYKA	**Terra Mystica**	**6.48**	**322**	*i* Pn		**Pn**	**16 31 55.1**	**-0.6**
	3.9nm,0.3s,SNR=5.2							
MODS	**Modra-Piesok**	**6.90**	**348**	*e*PN		**Pn**	**16 32 01.0**	**-0.3**
ABTA	**Abfaltersbach**	**7.11**	**318**	*i* Pn		**Pn**	**16 32 03.2**	**-1.1**
	1.9nm,0.2s,SNR=6.0							
BIOA	**Bad Ischl, Aus**	**7.31**	**328**	*e*Pn		**Pn**	**16 32 06.2**	**-0.8**
	5.8nm,0.4s,SNR=6.1							
WATA	**Walderalm**	**7.98**	**318**	*e*Pn		**Pn**	**16 32 16.5**	**+0.3**
	5.4nm,0.2s							
SQTA	**Sankt Quirin**	**8.09**	**316**	*e*Pn		**Pn**	**16 32 17.3**	**-0.4**
	5.8nm,0.2s,SNR=5.5							
FETA	**Feichten**	**8.21**	**314**	*e*Pn		**Pn**	**16 32 19.3**	**-0.2**
	1.1nm,0.4s							
MOTA	**Moosalm**	**8.22**	**317**	*e*Pn		**Pn**	**16 32 18.9**	**-0.7**
	5.5nm,0.5s,SNR=8.9							
GERES	**GERESS Array B**	**8.25**	**333**		Pn		**Pn**	**16 32 18.2**	**-1.7**
	0.1nm,0.3s,baz=148,slow=14,SNR=17								
	1.5nm,0.4s								
DAVOX	**Davos/Dischmat**	**8.55**	**310**		Pn		**Pn**	**16 32 23.9**	**-0.2**
	1.1nm,0.3s,baz=126,slow=19,SNR=8.8								
	3.4nm,0.3s								
DAVA	**Damuels**	**8.84**	**313**	*e*Pn		**Pn**	**16 32 29.5**	**+1.5**
	0.9nm,0.2s								
FINES	**FINESS Array B**	**20.25**	**9**		P		**P**	**16 34 54.4**	**-0.7**
	0.1nm,0.3s,baz=188,slow=12,SNR=5.5								
	3.6nm,1.0s								
ZALV	**Zalesovo Beam**	**44.10**	**51**		P		**P**	**16 38 26.7**	**-1.2**
	0.5nm,0.4s,baz=292,slow=8.9,SNR=2.6								
	0.5nm,0.4s								
MKAR	**Makanchi Array**	**44.31**	**61**		P		**P**	**16 38 29.0**	**-0.8**
	0.2nm,0.4s,baz=281,slow=7.4,SNR=4.4								
	0.2nm,0.4s								

*RHSSO **26** 16:30:43.4±0.3,43°.20N×18°.10E,h8km,ML3.4/6*
*PRU **26** 16:30:48.2,43°.30N×17°.79E,h10km*
PDG 26 16:30:43.4±0.2,43°.19N×18°.03E,h22km,MD3.5/8,
ML3.4/13,7C-7D,Error ellipse: s-maj=0.7km
s-min=0.5km az=90.0,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STON	**Ston**	**0.40**	**217**	*i* Pg		Pb	16 30 51.3	-0.4
STON				Sg		Sb	16 30 58.5	+1.1
KLINJ	**Klinje**	**0.41**	**93**	*e*Pg		Pb	16 30 50.6	-1.3
KLINJ				*e*Sg		Sb	16 30 56.4	-1.3
BRY	**Bratogost**	**0.47**	**128**	⇑ *i* Pg		Pb	16 30 51.7	-1.4
BRY				*i* Sg		Sb	16 30 59.5	-0.2
DBRK	**Dubrovnik**	**0.53**	**171**	*e*Pg		Pb	16 30 53.9	-0.2
DBRK				Sg		Sb	16 31 02.5	+1.2
TREB	**Trebinje**	**0.53**	**154**	⇑ *i* Pg		Pb	16 30 52.7	-1.4
TREB				*e*Sg		Sb	16 31 00.8	-0.5
UPM	**Unac-Piva**	**0.64**	**89**	⇓ *i* Pg		Pb	16 30 54.6	-1.5
UPM				*i* Sg		Sb	16 31 05.2	+0.5
MAKA	**Makarska**	**0.74**	**278**	*i* Pg		Pb	16 30 57.0	-0.6
MAKA				Sg		Sn	16 31 09.7	+0.5
NKME	**Niksic**	**0.80**	**122**	⇓ *i* Pg		Pb	16 30 57.5	-1.1
NKME				*i* Sg		Sn	16 31 10.2	-0.5
HCY	**Herceg Novi**	**0.82**	**155**	⇑ *i* Pg		Pb	16 30 58.2	-0.7
HCY				*i* Sg		Sn	16 31 10.7	-0.4
CEME	**Cevo**	**0.92**	**134**	⇓ *i* Pg		Pb	16 30 59.5	-1.2
CEME				*i* Sg		Sn	16 31 14.0	+0.4
PLE	**Pljevlja**	**1.00**	**82**	⇓ *i* Pg		Pb	16 31 01.7	-0.4
PLE				*i* Sg		Sn	16 31 16.7	+0.9
RUDO	**Rudo**	**1.07**	**66**	*e*Pg		Pn	16 31 01.0	-2.1
RUDO				*e*Sg		Sb	16 31 15.7	-0.9
BUM	**Brajici-Budva**	**1.10**	**144**	⇑ *i* Pg		Pn	16 31 02.4	-1.1
BUM				*i* Sg		Sn	16 31 19.6	+1.6
KOME	**Kolasin**	**1.14**	**107**	⇓ *i* Pg		Pn	16 31 03.9	-0.3
KOME				*i* Sg		Sn	16 31 21.5	+2.3
HVAR	**Hvar**	**1.16**	**270**	*e*Pg		Pb	16 31 05.2	+0.6
HVAR				Sg		Sn	16 31 23.3	+3.9
PDG	**Podgorica**	**1.18**	**130**	⇑ *i* Pg		Pn	16 31 04.2	-0.4
PDG				*i* Sg		Sn	16 31 22.5	+2.5
DRME	**Dracevica, Mon**	**1.32**	**139**	⇑ *i* Pg		Pb	16 31 07.2	-0.2
DRME				*i* Sg		Sb	16 31 26.8	+2.9
IVA	**Berane**	**1.40**	**103**	⇓ *i* Pg		Pb	16 31 08.5	-0.5
IVA				*i* Sg		Sb	16 31 28.8	+2.4
KIJV	**Kijevo**	**1.43**	**305**	*e*Pn		Pb	16 31 10.0	+0.7
KIJV				Sn		Sb	16 31 31.9	+4.7
ULC	**Ulcinj**	**1.52**	**143**	⇓ *i* Pg		Pn	16 31 10.0	+0.7
ULC				*i* Sg		Sb	16 31 31.5	+1.7
PVY	**Plav**	**1.54**	**112**	⇑ *i* Pg		Pn	16 31 10.4	+0.7
PVY				*i* Sg		Sb	16 31 32.1	+1.7
BLY	**Banja Luka**	**1.67**	**339**	*e*Pn		Pb	16 31 13.1	-0.3
BLY				*e*Sn		Sb	16 31 35.1	+1.1
ZIRJ	**Zirje**	**1.80**	**286**	*i* Pn		Pb	16 31 15.7	+0.1
ZIRJ				Sn		Sb	16 31 40.1	+2.5
MORI	**Morici**	**1.82**	**293**	*i* Pn		Pb	16 31 16.3	+0.4
MORI				Sn		Sb	16 31 41.2	+3.0
DUGI	**Dugi Otok**	**2.30**	**291**	*e*Pn		Pb	16 31 22.5	-1.7
DUGI				Sn		Sb	16 31 52.4	+0.2
VIRC	**Vir**	**2.42**	**298**	*e*Pn		Pb

KOME	**Kolasin**	**1.33**	**360**	*e*Pg		**Pg**		**16 35 04.3**	**-0.3**
KOME				*e*Sg		**Sg**		**16 35 22.6**	**+0.6**
KOME	**Kolasin**	**1.33**	**360**	⇑*i*Pg		**Pb**		**16 35 03.9**	**0.0**
KOME				*i* Sg		**Sg**		**16 35 23.5**	**+1.5**
BEY	**Berane**	**1.38**	**11**	*e*Pg		**Pb**		**16 35 04.5**	**-0.3**
BEY				*e*Sg		**Sg**		**16 35 25.1**	**+1.5**
IVA	**Berane**	**1.38**	**11**	⇓*i*Pg		**Pb**		**16 35 04.4**	**-0.3**
IVA				*i* Sg		**Sg**		**16 35 24.6**	**+1.0**
SKO	**Skopje**	**1.50**	**72**	*i* Pg		**Pb**		**16 35 07.2**	**+0.5**
SKO				*i* Sg		**Sg**		**16 35 28.9**	**+1.6**
BRY	**Bratogost**	**1.57**	**332**	⇑*i*Pg		**Pb**		**16 35 08.0**	**+0.1**
BRY				*i* Sg		**Sg**		**16 35 31.8**	**+2.3**
NEST	**Nestorio**	**1.59**	**133**	Pg		**Pb**		**16 35 08.5**	**+0.2**
NEST				Sg		**Sg**		**16 35 30.3**	**+0.1**
NEST				AML		AML		16 35 35.9	
	comp=N,2.0nm,1.0s								
NEST				AMd				16 36 16.1	
NEST	**Nestorio**	**1.59**	**133**	P		**Pb**		**16 35 08.9**	**+0.6**
NEST				S		**Sg**		**16 35 31.1**	**+0.9**
UPM	**Unac-Piva**	**1.75**	**345**	⇑*i*Pn		**Pg**		**16 35 11.8**	**-0.7**
UPM				*i* Sn		**Sg**		**16 35 36.8**	**+1.5**
SJES	**Sjenica**	**1.78**	**11**	*e*Pg		**Pb**		**16 35 12.0**	**+0.6**
SJES				*e*Sg		**Sg**		**16 35 35.9**	**-0.2**
PENT	**Pentalofos**	**1.80**	**137**	P		**Pb**		**16 35 11.9**	**+0.2**
PENT				S		**Sg**		**16 35 36.3**	**-0.4**
KEK	**Kerkira**	**1.81**	**173**	Pn		**Pb**		**16 35 13.1**	**+1.2**
KEK	**Kerkira**	**1.81**	**173**	P		**Pg**		**16 35 13.4**	**-0.2**
KEK				S		**Sg**		**16 35 38.1**	**+0.9**
PLE	**Pljevlja**	**1.82**	**357**	*e*Pg		**Pg**		**16 35 13.1**	**-0.7**
PLE				*e*Sg		**Sg**		**16 35 38.0**	**+0.6**
PLE	**Pljevlja**	**1.82**	**357**	⇓*i*Pn		**Pb**		**16 35 12.3**	**+0.2**
PLE				*i* Sn		**Sg**		**16 35 37.5**	**+0.1**
NOCI	**Noci**	**2.00**	**250**	Pn		**Pn**		**16 35 11.8**	**-0.5**
NOCI				Sn		**Sg**		**16 35 42.3**	**-0.8**
NOCI				AML		AML		16 35 51.4	
	comp=N,1.3nm,0.3s								
IGT	**Igoumenitsa**	**2.07**	**162**	Pn		**Pn**		**16 35 15.0**	**+1.6**
IGT				Sn		**Sn**		**16 35 39.7**	**+0.6**
IGT				AMd				16 36 32.0	
IGT	**Igoumenitsa**	**2.07**	**162**	P		**Pn**		**16 35 14.0**	**+0.6**
IGT				S		**Sg**		**16 35 44.8**	**-0.7**
SELS	**Selova**	**2.07**	**34**	*e*Pn		**Pn**		**16 35 14.6**	**+1.2**
SELS				*e*Sn		**Sn**		**16 35 40.6**	**+1.5**
KZN	**Kozani**	**2.08**	**125**	P		**Pn**		**16 35 15.0**	**+1.4**
KZN				S		**Sb**		**16 35 44.0**	**+1.6**
IVAS	**Ivanjica**	**2.11**	**12**	*e*Pn		**Pn**		**16 35 14.4**	**+1.4**
IVAS				*e*Sn		**Sb**		**16 35 43.2**	**0.0**
GOCS	**Kraljevo Serbi**	**2.28**	**25**	*e*Pn		**Pn**		**16 35 17.5**	**+1.2**
GOCS				*e*Sn		**Sb**		**16 35 46.8**	**-1.2**
VAY	**Valandovo**	**2.30**	**94**	*i* Pn		**Pn**		**16 35 17.8**	**+1.3**
VAY				*i* Sn		**Sb**		**16 35 47.2**	**-1.3**
VAY				*e*Lg		Lg		16 35 47.5	
	comp=N,91nm,0.7s								
VAY				*e*Lg		Lg		16 35 48.2	
	comp=E,69nm,0.7s								
MATE	**Matera**	**2.30**	**249**	⇓P		**Pn**		**16 35 16.4**	**-0.1**
BBLS	**Lazi&#263i**	**2.35**	**358**	*e*Pn		**Pb**		**16 35 20.2**	**-1.0**
BBLS				*e*Sn		**Sb**		**16 35 48.2**	**-2.0**
BOSS	**Bosilegrad**	**2.41**	**65**	*e*Pn		**Pn**		**16 35 19.1**	**+1.1**
BOSS				*e*Sn		**Sn**		**16 35 49.3**	**+1.9**
GRUS	**Gruza**	**2.53**	**20**	*e*Pn		**Pn**		**16 35 21.0**	**+1.3**
GRUS				*e*Sn		**Sb**		**16 35 53.4**	**-1.8**
BOVS	**Bovan**	**2.66**	**36**	⇑P		**Pn**		**16 35 23.0**	**+1.5**
BOVS	**Bovan**	**2.66**	**36**	*e*Pn		**Pn**		**16 35 22.6**	**+1.1**
BOVS				*e*Sn		**Sn**		**16 35 53.8**	**+0.2**
KKB	**Krupnik**	**2.72**	**82**	*i* Pn		**Pn**		**16 35 23.4**	**+1.1**
THE	**Thessaloniki**	**2.75**	**108**	*i* Pn		**Pn**		**16 35 23.2**	**+0.6**
TRUS	**Trudelj**	**2.78**	**13**	*e*Pn		**Pn**		**16 35 25.1**	**+1.9**
ZAPS	**Zavoj**	**2.90**	**52**	*e*Pn		**Pn**		**16 35 26.6**	**+1.8**
ZAPS				*e*Sn		**Sn**		**16 36 02.2**	**+2.8**
SOH	**Sokhos**	**2.97**	**102**	*i* Pn		**Pn**		**16 35 27.0**	**+1.2**
TEKS	**Tekeris**	**3.03**	**0**	*e*Pn		**Pn**		**16 35 27.2**	**+0.6**
TEKS				*e*Sn		**Sn**		**16 36 02.2**	**-0.6**
ZAGS	**Zajecar**	**3.04**	**40**	*e*Pn		**Pn**		**16 35 28.3**	**+1.6**
ZAGS				*e*Sn		**Sn**		**16 36 04.5**	**+1.5**
SRS	**Serrai**	**3.09**	**96**	*i* Pn		**Pn**		**16 35 28.4**	**+1.1**
TIP	**Timpagrande**	**3.15**	**223**	⇑P		**Pn**		**16 35 27.9**	**-0.9**
BORS2	**Bor- Borsko je**	**3.16**	**35**	*e*Pn		**Pn**		**16 35 27.9**	**-0.5**
BORS2				*e*Sn		**Sn**		**16 36 05.5**	**-0.4**
AVAS	**Avala Beograd**	**3.26**	**12**	*e*Pn		**Pn**		**16 35 30.8**	**+1.1**
AVAS				*e*Sn		**Sn**		**16 36 08.2**	**-0.2**
KUBS	**Kucevo**	**3.30**	**28**	*e*Pn		**Pn**		**16 35 30.2**	**0.0**
KUBS				*e*Sn		**Sn**		**16 36 09.8**	**+0.5**
MDVR	**Moldovita**	**3.64**	**25**	⇓P		**Pn**		**16 35 35.8**	**+0.9**
FRGS	**Fruska Gora**	**3.65**	**3**	*e*Pn		**Pn**		**16 35 33.7**	**-1.4**
VRSS	**Vrsac**	**3.84**	**19**	*e*Pn		**Pn**		**16 35 39.2**	**+1.5**
VRSS				*e*Sn		**Sn**		**16 36 22.0**	**-0.6**
HERR	**Herculane**	**3.97**	**31**	⇓P		**Pn**		**16 35 40.6**	**+1.1**
SRE	**Strehaia**	**4.14**	**39**	⇑P		**Pn**		**16 35 43.9**	**+2.1**
BZS	**Buzias**	**4.37**	**20**	⇓P		**Pn**		**16 35 46.2**	**+1.2**
GZR	**Gura Zlata**	**4.54**	**30**	⇓P		**Pn**		**16 35 49.0**	**+1.6**
MORH	**Mrgy, Hungar**	**4.74**	**353**	⇑P		**Pn**		**16 35 51.0**	**+1.0**
ELND	**Elena**	**4.92**	**71**	⇑P		**Pn**		**16 35 54.1**	**+1.5**
SIRR	**Siria**	**5.00**	**17**	⇓P		**Pn**		**16 35 55.4**	**+1.8**
ARR	**Arges**	**5.35**	**42**	⇓P		**Pn**		**16 36 00.4**	**+1.9**
VOP		**5.61**	**44**	⇓P		**Pn**		**16 36 04.3**	**+2.2**
DRGR		**5.75**	**22**	⇓P		**Pn**		**16 36 05.7**	**+1.7**
MLR	**Muntele Rosu**	**6.13**	**47**	Pn		**Pn**		**16 36 11.2**	**+1.9**
	comp=E,0.8nm,0.3s,baz=261,slow=12,SNR=4.1								
MLR				Sn		**Sn**		**16 37 19.9**	**+0.7**
	comp=E,0.3nm,0.3s,baz=181,slow=20,SNR=1.8								
	comp=E,2.8nm,0.5s								
MLR	**Muntele Rosu**	**6.13**	**47**	⇑P		**Pn**		**16 36 11.1**	**+1.9**
MODS	**Modra-Piesok**	**7.04**	**348**	*e*PN		**Pn**		**16 36 22.0**	**+0.3**
MODS				*e*PG		Pb		16 36 47.1	+6.1
MODS				*e*SN		Sn		16 37 26.8	-15
IDI	**Anoyia**	**7.51**	**144**	Pn		**Pn**		16 36 23.5	-4.6
	comp=E,9.7nm,0.9s,baz=286,slow=18,SNR=2.4								
IDI				Sn		**Sn**		**16 37 44.8**	**-8.3**
	comp=E,1.1nm,0.3s,baz=182,slow=4.5,SNR=6.6								
STHS	**Stebnicka Huta**	**8.00**	**8**	*e*SN		Sn		16 37 52.2	-13
STHS				*e*SG		**Sg**		**16 38 59.2**	**+3.9**
GERES	**GERESS Array B**	**8.40**	**333**	Pn		**Pn**		**16 36 42.0**	**+1.5**
	baz=152,slow=14,SNR=1.7								
	comp=E,0.2nm,0.4s								
DAVOX	**Davos/Dischmat**	**8.70**	**310**	Pn		**Pn**		**16 36 44.0**	**-0.6**
	baz=135,slow=20,SNR=1.5								
	comp=E,1.2nm,0.7s								
AKASG	**Malin Array Be**	**11.38**	**33**	Pn		**Pn**		**16 37 19.3**	**-1.7**
	comp=E,0.1nm,0.3s,baz=225,slow=13,SNR=1.5								
	comp=E,0.1nm,0.3s								
HFS	**Hagfors**	**18.99**	**351**	P		**Pn**		**16 39 00.9**	**+0.2**
	comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=1.8								
	comp=E,0.9nm,0.6s								
FINES	**FINESS Array B**	**20.35**	**9**	P		**P**		**16 39 12.7**	**-2.0**
	comp=E,0.9nm,0.4s,baz=192,slow=9.4,SNR=9.4								
	comp=E,0.9nm,0.4s								
ARCES	**ARCESS Array B**	**28.26**	**4**	LR		LR		16 53 05.3	
	comp=E,46nm,18.3s,baz=42,slow=39								
BVAR	**Borovoye Array**	**35.65**	**53**	P		**P**		**16 41 36.6**	**+0.2**
	comp=E,0.6nm,0.7s,baz=277,slow=11,SNR=4.2								
	comp=E,0.6nm,0.7s								
ZALV	**Zalesovo Beam**	**44.10**	**51**	P		**P**		**16 42 44.9**	**-1.6**
	comp=E,0.8nm,0.4s,baz=278,slow=8.3,SNR=6.1								
	comp=E,0.8nm,0.4s								
MKAR	**Makanchi Array**	**44.28**	**61**	P		**P**		**16 42 47.0**	**-1.1**
	comp=E,0.9nm,0.6s,baz=280,slow=8.1,SNR=14								
	comp=E,0.9nm,0.6s								

*IDC **26** 16:43:56.1±4.3,4.°13S×152.°40E,h189^{km}±35^{km},mb3.7/10, mbtmp4.3/12,Error ellipse: s-maj=39.7km s-min=16.7km az=91.0*
*NEIC **26** 16:43:58.7±1.6,4.°0S±0.°1×152.°2E±0.°1,h210^{km}±6^{km}, mb4.7/19,Error ellipse: s-maj=18.8km s-min=15.2km az=96.0*
*DJA **26** 16:44:08.3±1.9,4.°S±9.°×15.°2E±1.°5,h260^{km}±9^{km},M4.6/24, mb4.5/24,mB5.1/4,MLv4.6/1,Mw(mB)4.5/4*

ISC 26 16:43:58.6±1.0,**4.°14S**±0.°07×**152.°16E**±0.°09,**h211**^{km}±9^{km}, **n67,σ1°9 41/68,mb4.5/29,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.05**	**176**		**Pn**	**16 44 26.3**	**+0.2**
MANU	**Manus Island**	**5.22**	**293**		**Pn**	**16 45 15.8**	**-0.4**
PMG	**Port Moresby**	**7.21**	**223**	P	**Pn**	**16 45 42.1**	**+0.4**
	8.0nm,0.5s,baz=34,slow=12,SNR=9.6						
PMG				S	**S**	**16 47 02.5**	**-1.2**
	70nm,0.8s,baz=212,slow=7.7,SNR=7.8						
PMG	**Port Moresby**	**7.21**	**223**	Pn	**Pn**	**16 45 43.9**	**+2.2**
PMG	**Port Moresby**	**7.21**	**223**	P	**Pn**	**16 45 44.4**	**+2.7**
PMG	**Port Moresby**	**7.21**	**223**	P	**Pn**	**16 45 43.9**	**+2.2**
TATA	**Tatamba Isabel**	**8.69**	**119**	P	Pn	16 46 06.1	+5.3
NGOA	**Tingoa Renbel**	**10.74**	**134**	P	**P**	**16 46 32.3**	**-1.4**
JAY	**Jayapura**	**11.55**	**278**	P	**Pn**	**16 46 37.2**	**-0.5**
	35nm,0.9s,baz=311,slow=5.0,SNR=3.8						
JAY	**Jayapura**	**11.55**	**278**	P	**Pn**	**16 46 37.2**	**-0.5**
	58nm,0.8s						
GENI	**Genyem**	**12.07**	**277**	P	**Pn**	**16 46 46.2**	**+2.0**
	41nm,0.6s						
COEN	**Coen**	**13.18**	**222**	Pn	**P**	**16 46 59.8**	**-0.9**
COEN	**Coen**	**13.18**	**222**	P	**P**	**16 47 00.3**	**-0.4**
MTSU	**Mount Surprise**	**15.88**	**208**	P	**Pn**	**16 47 34.1**	**+2.9**
CTA	**Charters Tower**	**16.86**	**199**	P	**Pn**	**16 47 45.4**	**+2.6**
CTAO	**Charters Tower**	**16.86**	**199**		**Pn**	**16 47 43.6**	**+0.8**
CTAO				IAmb	IAmb	16 47 46.9	
	comp=Z,19nm,1.1s						
CTAO	**Charters Tower**	**16.86**	**199**	P	**Pn**	**16 47 45.3**	**+2.5**
RKPI	**Ransiki, Papua**	**18.15**	**278**	P	**Pn**	**16 47 57.1**	**-0.9**
	comp=Z,10μmcomp=Z,111nm,0.8s						
KMPI	**Kaimana, Papua**	**18.42**	**271**	P	**P**	**16 47 59.3**	**+0.8**
FAKI	**Fak Fak**	**19.91**	**273**	P	**P**	**16 48 13.9**	**-0.6**
FAKI				IAmb	IAmb	16 48 15.5	
	comp=Z,21nm,0.8s						
FAKI	**Fak Fak**	**19.91**	**273**	P	**P**	**16 48 14.8**	**+0.3**
FAKI	**Fak Fak**	**19.91**	**273**	P	**P**	**16 48 14.3**	**-0.2**
	comp=Z,32nm,0.9s						
QIS	**Mount Isa**	**20.39**	**216**	P	**P**	**16 48 20.8**	**+1.3**
SWI	**Sorong**	**21.13**	**278**	P	**P**	**16 48 28.2**	**+0.8**
	comp=Z,2μmcomp=Z,106nm,0.8s						
BNDI	**Bandanaira**	**22.20**	**268**	P	**P**	**16 48 36.9**	**-1.1**
	comp=Z,24nm,1.5s						
MTN	**Manton Dam**	**22.50**	**246**		**P**	**16 48 40.5**	**-0.3**
MTN				IAmb	IAmb	16 48 42.3	
	comp=Z,11nm,0.5s						
WB0	**Warramunga Arr**	**23.27**	**227**		**P**	**16 48 48.3**	**+0.7**
WR8	**Warramunga Arr**	**23.31**	**226**		**P**	**16 48 48.7**	**+0.7**
WRAB	**Tennant Creek**	**23.40**	**226**	P	**P**	**16 48 49.9**	**+1.1**
WRA	**Warramunga Arr**	**23.42**	**226**	P	**P**	**16 48 49.6**	**+0.6**
	comp=Z,110nm,0.5s,baz=49,slow=9.5,SNR=625						
WRA				PcP	**PcP**	**16 52 30.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=45,slow=2.1,SNR=2.4						
WRA				S	**S**	**16 52 43.5**	**-3.0**
	comp=Z,1.1nm,0.8s,baz=52,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**23.42**	**226**		**P**	**16 48 49.3**	**+0.3**
WRA				IAmb	IAmb	16 48 50.6	
	comp=Z,17nm,0.5s						
KNRA	**Kununurra**	**25.70**	**242**	P	**P**	**16 49 09.5**	**-0.2**
KNRA				IAmb	IAmb	16 49 10.8	
	comp=Z,15nm,1.2s						
INKA	**Innaminka**	**25.87**	**204**		**P**	**16 49 11.9**	**+0.9**
AS31	**Alice Springs**	**26.21**	**221**		**P**	**16 49 14.7**	**+0.4**
AS31				IAmb	IAmb	16 49 16.4	
	comp=Z,5.3nm,0.5s						
SANI	**Sanana**	**26.21**	**274**	P	**P**	**16 49 14.7**	**+0.3**
	comp=Z,20nm,0.7s						
ASAR	**Alice Springs**	**26.22**	**221**	P	**P**	**16 49 14.7**	**+0.4**
	comp=Z,6.0nm,0.4s,baz=49,slow=8.7,SNR=414						
ASAR				S	**S**	**16 53 27.6**	**-3.2**
	comp=Z,0.3nm,0.7s,baz=46,slow=15,SNR=3.0						
	comp=Z,6.0nm,0.4s						
ASAR	**Alice Springs**	**26.22**	**221**		**P**	**16 49 14.4**	**+0.1**
STKA	**Stephens Creek**	**29.32**	**199**	P	**P**	**16 49 42.4**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=359,slow=8.4,SNR=5.5						
	comp=Z,2.9nm,0.6s						
STKA	**Stephens Creek**	**29.32**	**199**	IAmb	IAmb	16 49 42.8	
	comp=Z,23nm,1.0s						
FITZ	**Fitzroy Crossi**	**29.42**	**240**	P	**P**	**16 49 41.7**	**-1.1**
LUWI	**Luwuk**	**29.52**	**275**	P	**P**	**16 49 41.2**	**-2.5**
BBOO	**Buckleboo**	**32.25**	**206**	P	**P**	**16 50 07.9**	**+0.4**
BBOO				IAmb	IAmb	16 50 08.9	
	comp=Z,35nm,1.3s						
MPSI	**Mapaga**	**32.54**	**277**	P	**P**	**16 50 10.1**	**-0.1**
	comp=Z,17nm,0.7s						
WBSI	**Waikabubak, Su**	**32.97**	**259**	P	**P**	**16 50 11.4**	**-2.6**
	comp=Z,21nm,0.9s						
PLAI	**Plampang**	**34.47**	**260**	P	**P**	**16 50 24.5**	**-2.3**
	comp=Z,14nm,0.6s						
FORT	**Forrest**	**34.90**	**218**	P	**P**	**16 50 30.6**	**+0.3**
FORT				IAmb	IAmb	16 50 31.4	
	comp=Z,18nm,0.8s						
MBWA	**Marble Bar**	**35.75**	**239**	P	**P**	**16 50 36.8**	**-0.9**
MBWA				IAmb	IAmb	16 50 54.4	
	comp=Z,23nm,1.2s						
PSA00	**Pilbara Seismi**	**35.82**	**238**	P	**P**	**16 50 37.3**	**-1.0**
MORW	**Morawa**	**42.27**	**230**	P	**P**	**16 51 31.3**	**-0.3**
MORW				IAmb	IAmb	16 51 57.4	
	comp=Z,30nm,1.4s						
NJ2	**Nanjing**	**47.94**	**321**	*e*P	**P**	**16 52 14.0**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.42**	**342**	P	**P**	**16 52 42.7**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=141,slow=7.4,SNR=3.9						
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**57.02**	**295**	P	**P**	**16 53 24.9**	**+1.9**
	comp=Z,3.5nm,0.7s,baz=118,slow=5.4,SNR=33						
	comp=Z,3.5nm,0.7s						
PZH	**PanZhiHua**	**57.48**	**305**	P	**P**	**16 53 25.5**	**-0.7**
HHC	**Hu-ho-hao-te**	**58.14**	**324**	*e*P	**P**	**16 53 30.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
LZH	**Lanzhou**	**60.32**	**316**	*e*P	**P**	**16 53 47.0**	**+1.4**
LZH				pP	pwP	16 54 42.5	+6.5
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
GTA	**Gaotai**	**64.74**	**317**	*e*P	**P**	**16 54 17.0**	**+2.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	**Songino Array**	**65.43**	**328**	P	**P**	**16 54 20.6**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=135,slow=5.2,SNR=5.5						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**79.41**	**319**	P	**P**	**16 55 42.2**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=100,slow=6.3,SNR=16						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**79.41**	**319**	P	**P**	**16 55 42.1**	**+0.6**
IMAR	**Indian Mountai**	**79.98**	**20**	P	**P**	16 55 38.5	-5.5
ZALV	**Zalesovo Beam**	**80.25**	**326**	P	**P**	**16 55 45.6**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=114,slow=6.3,SNR=9.2						
	comp=Z,1.6nm,0.5s						
ILAR	**Eielson Array**	**81.80**	**22**	P	**P**	**16 55 52.8**	**-0.9**
	comp=Z,0.4nm,0.9s,baz=264,slow=6.2,SNR=2.4						
	comp=Z,0.4nm,0.9s						
KSH	**Kashi**	**82.03**	**311**	P	**P**	**16 55 58.3**	**+2.7**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURBB	**Kurchatov Arra**	**82.89**	**322**	P	**P**	**16 55 59.4**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=107,slow=4.2,SNR=7.1						
	comp=Z,1.3nm,0.8s						
BVAR	**Borovoye Array**	**88.34**	**323**	P	**P**	**16 56 26.3**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=99,slow=6.0,SNR=20						
	comp=Z,3.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.49**	**289**	PKPbc	**PKPbc**	**17 03 24.0**	**0.0**
	comp=Z,1.3nm,0.6s,baz=78,slow=1.6,SNR=10						
TORD	**Torodi Ar. Bea**	**149.49**	**289**		**PKPbc**	**17 03 24.2**	**+0.2**

*PDG **26** 16:54:40.8±0.1,43.°26N×17.°93E,h13^{km},ML2.5/13,Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*RHSSO **26** 16:54:41.8±0.5,43.°25N×18.°05E,h7^{km},ML2.4/3*
*BEO **26** 16:54:42.4±0.4,43.°27N×18.°05E,h6^{km}±3^{km},ML1.8/9*

ISC 26 16:54:41.7±1.0,**43.°26N**±0.°02×**18.°05E**±0.°02,**h8**^{km}±9^{km}, **n41,σ0°83/81,8C-7D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.40**	**103**	*e*Pg	**Pg**	**16 54 49.4**	**-0.2**
KLINJ				*e*Sg	**Sg**	**16 54 55.6**	**+0.7**
STON	**Ston**	**0.47**	**213**	*i* Pg	**Pg**	**16 54 50.2**	**-0.6**
STON				Sg	**Sg**	**16 54 57.8**	**+0.9**
STON	**Ston**	**0.47**	**213**	*e*Pg	**Pg**	**16 54 50.2**	**-0.6**
STON				*e*Sg	**Sg**	**16 54 57.7**	**+0.9**
BRY	**Bratogost**	**0.51**	**135**	⇑*i*Pg	**Pg**	**16 54 51.1**	**-0.5**
BRY				*i* Sg	**Sg**	**16 54 59.5**	**+1.2**
TREB	**Trebinje**	**0.59**	**158**	⇑*i*Pg	**Pg**	**16 54 52.0**	**-1.1**
TREB				*e*Sg	**Sg**	**16 55 01.6**	**+0.8**
TREB	**Trebinje**	**0.59**	**158**	*e*Pg	**Pg**	**16 54 52.8**	**-0.3**
TREB				*e*Sg	**Sg**	**16 55 01.6**	**+0.8**
DBRK	**Dubrovnik**	**0.60**	**173**	*e*Pg	**Pg**	**16 54 52.9**	**-0.4**
DBRK				Sg	**Sb**	**16 55 02.7**	**-0.4**
UPM	**Unac-Piva**	**0.63**	**95**	⇑*i*Pg	**Pg**	**16 54 53.7**	**-0.2**
UPM				*i* Sg	**Sb**	**16 55 04.3**	**+0.1**
MAKA	**Makarska**	**0.75**	**272**	*e*Pg	**Pg**	**16 54 55.0**	**-1.2**
MAKA				Sg	**Sb**	**16 55 06.9**	**-0.6**
NKME	**Niksic**	**0.83**	**126**	⇓*i*Pg	**Pg**	**16 54 56.6**	**-1.0**
NKME				*i* Sg	**Sb**	**16 55 10.6**	**+0.8**
HCY	**Herceg Novi**	**0.88**	**158**	⇓*i*Pg	**Pg**	**16 54 57.0**	**-1.6**
HCY				*i* Sg	**Sb**	**16 55 11.3**	**+0.1**
CEME	**Cevo**	**0.96**	**138**	⇓*i*Pg	**Pg**	**16 54 59.0**	**-1.1**
CEME				*i* Sg	**Sb**	**16 55 14.3**	**+0.7**
PLE	**Pljevlja**	**0.98**	**86**	*e*Pg	**Pg**	**16 55 00.1**	**-0.5**
PLE				*e*Sg	**Sb**	**16 55 15.0**	**+0.8**
PLE	**Pljevlja**	**0.98**	**86**	⇑*i*Pg	**Pg**	**16 54 59.7**	**-0.9**
PLE				*i* Sg	**Sn**	**16 55 15.9**	**-0.2**
RUDO	**Rudo**	**1.03**	**69**	⇑*i*Pg	**Pg**	**16 55 00.5**	**-0.9**
RUDO				*e*Sg	**Sg**	**16 55 14.3**	**-0.4**
RUDO	**Rudo**	**1.03**	**69**	*e*Pg	**Pg**	**16 55 01.0**	**-0.4**
RUDO				*e*Sg	**Sg**	**16 55 13.9**	**-0.8**
RUDO				*e*Sg	**Sb**	**16 55 14.1**	**-1.3**
BUM	**Brajici-Budva**	**1.15**	**147**	⇑*i*Pg	**Pg**	**16 55 01.9**	**-1.8**
BUM				*i* Sg	**Sn**	**16 55 20.2**	**+0.1**
KOME	**Kolasin**	**1.15**	**110**	*e*Pg	**Pg**	**16 55 03.1**	**-0.7**
KOME				*e*Sg	**Sb**	**16 55 19.9**	**+0.8**
KOME	**Kolasin**	**1.15**	**110**	⇑*i*Pg	**Pg**	**16 55 02.9**	**-0.9**
KOME				*i* Sg	**Sn**	**16 55 21.0**	**+0.7**
BBLS	**Lazi&#263i**	**1.16**	**58**	*e*Pg	**Pb**	**16 55 04.2**	**+0.2**
BBLS				*e*Sg	**Sg**	**16 55 19.0**	**+0.1**
HVAR	**Hvar**	**1.17**	**266**	*e*Pg	**Pg**	**16 55 03.6**	**-0.6**
HVAR				Sg	**Sn**	**16 55 20.8**	**+0.1**
PDG	**Podgorica**	**1.22**	**133**	*e*Pg	**Pn**	**16 55 05.6**	**+0.5**
PDG				*e*Sg	**Sn**	**16 55 22.7**	**+1.0**
PDG	**Podgorica**	**1.22**	**133**	⇓*i*Pg	**Pb**	**16 55 02.9**	**-2.1**
PDG				*i* Sg	**Sn**	**16 55 22.2**	**+0.5**
DRME	**Dracevica, Mon**	**1.36**	**142**	*e*Pg	**Pn**	**16 55 07.1**	**0.0**
DRME				*e*Sg	**Sg**	**16 55 25.8**	**+0.3**
DRME	**Dracevica, Mon**	**1.36**	**142**	⇓*i*Pg	**Pn**	**16 55 06.7**	**-0.4**
DRME				*i* Sg	**Sg**	**16 55 27.3**	**+1.8**
KUJV	**Kijevo**	**1.41**	**302**	*e*Pn	**Pn**	**16 55 07.1**	**-0.6**
KUJV				Sn	**Sg**	**16 55 28.3**	**+1.4**
SJES	**Sjenica**	**1.41**	**89**	*e*Pg	**Pb**	**16 55 08.6**	**+0.3**
BEY	**Berane**	**1.41**	**105**	*e*Pg	**Pn**	**16 55 07.3**	**-0.5**
BEY				*e*Sg	**Sb**	**16 55 26.7**	**+0.2**
IVA	**Berane**	**1.41**	**105**	⇓*i*Pg	**Pn**	**16 55 07.3**	**-0.5**
IVA				*i* Sg	**S

VA03 IAML 17 02 12.6
comp=Z,2µm,0.2s
ACLC CERRO LA CRUZ 2.37 39 eP Pn 17 01 42.5 +0.6
ACLC IAML 17 02 41.5
comp=Z,1µm,0.4s
MT04 Ro Olivares 2.45 210⇑ iP Pn 17 01 44.8 +1.8
MT04 iS Sn 17 02 15.2 +2.5
MT04 Ro Olivares 2.45 210 eP Pn 17 01 44.8 +1.8
MT04 eS Sn 17 02 13.5 +0.8
PEL Peldehue 2.52 222 Pn 17 01 44.0 +0.3
PEL Sn Sn 17 02 14.8 +0.7
PEL Peldehue 2.52 222 eP Pn 17 01 44.0 +0.3
PEL IAML 17 02 17.2
comp=E,2µm,0.3s
PEL Peldehue 2.52 222 eP Pn 17 01 44.5 +0.8
PEL eS Sn 17 02 16.2 +2.0
PEL IAML 17 02 20.1
comp=Z,1µm,0.3s
MT10 Hacienda Santa 2.54 218⇑ iP Pn 17 01 45.4 +1.4
MT10 iS Sn 17 02 16.2 +1.6
MT10 IAML 17 02 24.5
comp=E,4µm,0.3s
VA06 Catapilco 2.58 240 Pn 17 01 43.7 -0.7
VCA Vinchina 2.58 9⇑ iP Pn 17 01 45.7 +1.1
VCA eS Sn 17 02 16.9 +1.3
VCA IAML 17 02 25.4
comp=E,3µm,0.4s
VCA Vinchina 2.58 9 eP Pn 17 01 45.9 +1.3
VCA eS Sn 17 02 17.5 +1.8
VCA IAML 17 02 19.3
comp=Z,2µm,0.3s
ROCH El Roble 2.61 229⇑ eP Pn 17 01 45.1 +0.1
ROCH IAML 17 02 21.5
comp=E,2µm,0.1s
ROC1 El Roble 2.61 229 eP Pn 17 01 45.1 0.0
ROC1 eS Sn 17 02 17.6 +1.1
MT14 Cerro Cal¡n 2.63 217⇑ eP Pn 17 01 46.5 +1.3
MT14 IAML 17 02 21.5
comp=E,8µm,1.0s
CO06 Fray Jorge 2.63 283 Pn 17 01 44.1 -1.0
CO06 Fray Jorge 2.63 283⇑ iP Pn 17 01 44.1 -1.0
MT16 CCHEN 2.65 216 Pn 17 01 46.1 +0.6
MT16 Sn Sn 17 02 17.2 0.0
MT03 Universidad Ad 2.70 215 Pn 17 01 46.8 +0.7
MT03 Sn Sn 17 02 18.0 -0.3
MT03 Universidad Ad 2.70 215⇑ eP Pn 17 01 47.3 +1.2
MT03 eS Sn 17 02 20.2 +1.8
MT03 IAML 17 02 22.4
comp=E,5µm,0.8s
MT03 Universidad Ad 2.70 215 eP Pn 17 01 47.7 +1.6
MT03 eS Sn 17 02 16.9 -1.5
MT05 Renca 2.74 220 Pn 17 01 46.7 +0.2
MT05 Renca 2.74 220 eP Pn 17 01 47.5 +1.0
MT05 eS Sn 17 02 21.6 +2.4
MT05 IAML 17 02 24.2
comp=Z,1µm,0.2s
MRA San Martin 2.74 115 eP Pn 17 01 47.5 +0.8
MRA eS Sn 17 02 19.8 +0.4
MRA IAML 17 02 21.4
comp=Z,2µm,0.3s
MT15 Las Vizcachas 2.78 214 eP Pn 17 01 48.4 +1.3
MT15 IAML 17 02 26.2
comp=N,2µm,0.4s
MT13 San Alfonso 2.81 209 Pn 17 01 47.6 0.0
MT13 San Alfonso 2.81 209 eP Pn 17 01 48.7 +1.2
MT13 San Alfonso 2.81 209 eP Pn 17 01 49.1 +1.6
MT13 eS Sn 17 02 20.6 -0.3
AC05 El Transito 2.82 330 Pn 17 01 48.8 +0.9
AC05 El Transito 2.82 330⇑ iP Pn 17 01 49.1 +1.4
AC05 IAML 17 02 27.8
comp=E,1µm,0.3s
AC05 El Transito 2.82 330 eP Pn 17 01 49.2 +1.4
AC05 eS Sn 17 02 23.4 +2.1
LMEL Las Melosas 2.86 207 Pn 17 01 48.2 -0.1
LMEL Las Melosas 2.86 207⇑ eP Pn 17 01 49.5 +1.2
LMEL Las Melosas 2.86 207 eP Pn 17 01 49.8 +1.4
LMEL eS Sn 17 02 33.6 +11
MT02 Curacav 2.88 226 Pn 17 01 48.2 -0.2
MT02 Curacav 2.88 226 eP Pn 17 01 48.1 -0.3
MT02 Curacav 2.88 226 eP Pn 17 01 48.2 -0.2
MT02 eS Sn 17 02 22.4 0.0
MT02 IAML 17 02 25.1
comp=Z,664nm,0.7s
LCO Las Campanas 2.88 322 Pn 17 01 48.8 +0.1
LCO Las Campanas 2.88 322⇑ eP Pn 17 01 49.0 +0.3
LCO Las Campanas 2.88 322 eP Pn 17 01 49.1 +0.4
LCO eS Sn 17 02 24.1 +1.1
AANI Anillaco 2.89 31 eP Pn 17 01 37.0 -12
AANI eS Sn 17 02 23.6 +0.7
VA01 Torpederas 3.07 235 Pn 17 01 49.5 -1.4
VA01 Torpederas 3.07 235 eP Pn 17 01 49.8 -1.1
VA01 Torpederas 3.07 235 eP Pn 17 01 51.0 +0.2
VA01 eS Sn 17 02 14.8 -12
BO04 La Punta 3.15 211 Pn 17 01 52.4 +0.3
BO04 La Punta 3.15 211⇑ eP Pn 17 01 52.8 +0.8
BO04 IAML 17 02 33.6
comp=N,1µm,0.3s
MT09 Talagante 3.17 218 Pn 17 01 52.0 -0.3
TINO Tinogasta 3.35 17 eP Pn 17 01 56.1 +1.2
TINO eS Sn 17 02 24.4 -10
MT01 Popeta 3.37 220 Pn 17 01 54.0 -1.0
MT01 Popeta 3.37 220⇑ eP Pn 17 01 54.0 -1.0
MT01 Popeta 3.37 220 eP Pn 17 01 54.0 -1.0
MT01 eS Sn 17 02 34.2 0.0
VA05 Santo Domingo 3.44 226 Pn 17 01 54.4 -1.4
VA05 Santo Domingo 3.44 226 eP Pn 17 01 54.3 -1.5
VA05 IAML 17 02 45.9
comp=E,1µm,0.3s
RFA San Rafael 3.47 177 eP Pn 17 01 56.4 0.0
RFA eS Sn 17 02 46.2 +9.5
RFA IAML 17 02 58.4
comp=Z,812nm,0.8s
TCA Tanti 3.47 92 eP Pn 17 01 56.9 +0.5
TCA eS Sn 17 02 22.0 -15
TCA IAML 17 02 36.9
comp=Z,800nm,0.8s
BO01 Tunca 3.71 213 Pn 17 01 58.1 -1.3
BO01 Tunca 3.71 213⇑ eP Pn 17 01 58.6 -0.8
BO01 Tunca 3.71 213 eP Pn 17 01 58.7 -0.7
BO01 eS Sn 17 02 42.8 +0.6
BO01 IAML 17 02 46.6
comp=Z,333nm,0.2s
AC04 Llanos de Chal 3.73 325 Pn 17 01 59.0 -0.7
AC04 Llanos de Chal 3.73 325 eP Pn 17 01 59.1 -0.7
AC04 Llanos de Chal 3.73 325 eP Pn 17 01 59.7 0.0
AC04 IAML 17 02 50.2
comp=Z,513nm,0.9s
CYA Choya 3.77 42⇑ eP Pn 17 01 59.8 -0.5
CYA Choya 3.77 42 eP Pn 17 01 59.9 -0.5
CYA eS Sn 17 02 44.0 +0.1
BO02 Sierra Bellavi 3.92 207⇑ eP Pn 17 02 02.7 +0.3
BO02 Sierra Bellavi 3.92 207 eP Pn 17 02 02.9 +0.5
BO02 eS Sn 17 02 51.1 +3.6
BO02 IAML 17 02 55.6
comp=Z,438nm,0.1s
GO03 Copiapo 3.94 339 Pn 17 02 02.5 -0.1
GO03 Copiapo 3.94 339⇑ eP Pn 17 02 02.5 -0.1
GO03 Copiapo 3.94 339 eP Pn 17 02 02.9 +0.3
GO03 eS Sn 17 02 48.8 +0.9
GO03 IAML 17 02 50.8
comp=Z,408nm,0.3s
AC06 Mina Casimiro 4.19 339⇑ eP Pn 17 02 05.5 -0.5
BO03 Pichilemu 4.24 220⇑ eP Pn 17 02 03.9 -2.6
AC02 Maricunga 4.46 355 Pn 17 02 10.9 +0.8
AC02 Maricunga 4.46 355 eP Pn 17 02 10.7 +0.6
AC02 eS Sn 17 03 04.8 +3.6
EDS3 Malargue 4.51 188 eP Pn 17 02 10.8 +0.4
EDS3 eS Sn 17 02 49.8 -12
ML02 Panimavida 5.02 207 eP Pn 17 02 15.3 -1.8
ML02 IAML 17 03 16.3
comp=Z,216nm,0.7s
AC01 Pan de Azucar 5.40 341 Pn 17 02 21.4 -1.0
BI02 San Fabin de 5.78 201 Pn Pn 17 02 26.1 -1.4
TRQA Tornquist 8.70 143 Pn 17 03 06.1 -1.0
PB09 IPOC Station P 9.47 357 Pn Pn 17 03 15.2 -2.6
PLCA Paso Flores 9.54 189 P Pn 17 03 17.6 -0.9
comp=Z,3.7nm,0.3s,baz=349,slow=11,SNR=26
PLCA Paso Flores 9.54 189 Pn 17 03 16.5 -2.1
CPUP Villa Florida 11.09 66 P Pn 17 03 38.3 -1.3
comp=Z,0.6nm,0.4s,baz=45,slow=3.3,SNR=4.9
PB11 IPOC Station P 11.52 355 Pn 17 03 39.6 -5.9
PLTB Pedras Altas 12.85 96 Pn Pn 17 03 60.0 -2.9

PB18 Visviri 13.66 357 Pn Pn 17 04 13.7 -0.4
COYC Coyhaique 14.51 190 P 17 04 28.0 +0.1
LPAZ La Paz 14.95 2 P Pn 17 04 29.0 -1.6
comp=Z,12nm,0.8s,baz=166,slow=6.8,SNR=42
LPAZ La Paz 14.95 2 Pn 17 04 28.9 -1.6
SIV San Ignacio 16.73 26 P Pn 17 04 52.3 +0.1
comp=Z,7.2nm,0.6s,baz=274,slow=8.7
PTLB Pontes e Lacer 18.01 31 P 17 05 06.2 -0.6
VILB Vilhena 19.85 25 P 17 05 27.4 +0.6
VILB IAmb IAmb 17 06 06.2
comp=Z,15nm,0.7s
MG05 Puerto Natales 20.57 187 P P 17 05 34.7 +0.5
MG05 IAmb IAmb 17 06 11.6
comp=Z,29nm,1.1s
EFI East Falkland 21.81 162 P P 17 05 46.6 -1.0
OTAV Otavalo 32.71 342 P P 17 07 25.7 -1.5
OTAV IAmb IAmb 17 07 42.6
comp=Z,5.9nm,1.2s
PMSA Palmer Station 33.62 176 P P 17 07 33.8 -0.3
BOAV Boa Vista 34.38 14 P P 17 07 41.1 -0.1
BOAV IAmb IAmb 17 07 50.9
comp=Z,7.8nm,1.5s
RUSC La Rusia 37.22 353 P 17 08 06.1 +0.1
BELA Belgrano 2 49.07 171 P P 17 09 40.4 +0.3
VNA3 Neumayer Olymp 50.82 159 ⇑P P 17 09 53.5 +0.1
comp=Z,5.9nm,0.6s
SNAA Sanae 53.04 159 ⇑P P 17 10 10.3 +0.3
comp=Z,32nm,0.3s
SNAA Sanae 53.04 159 P P 17 10 10.4 +0.5
comp=Z,2.8nm,0.7s,baz=275,slow=7.6,SNR=15
SNAA pP pP 17 10 34.7 -0.6
comp=Z,1.4nm,0.5s,baz=280,slow=8.7,SNR=2.5
comp=Z,2.8nm,0.7s
SNAA Sanae 53.04 159 P P 17 10 10.1 +0.2
SNAA IAmb IAmb 17 10 11.4
comp=Z,6.2nm,1.0s
TEIG Tepich 54.58 337 P P 17 10 21.9 +0.3
TROLL Troll, Antarti 54.75 159 ⇑P P 17 10 22.7 +0.3
comp=Z,272nm,0.7s
UNM Universidad Na 58.24 326 P P 17 10 47.8 -0.2
QSPA South Pole Qui 58.94 180 P P 17 10 56.3 +4.2
comp=Z,4.6nm,0.7s,baz=166,slow=4.9,SNR=19
QSPA South Pole Qui 58.94 180 P P 17 10 56.5 +4.4
HBVL Hebbronville 64.72 330 P P 17 11 32.5 +1.4
HBVL IAmb IAmb 17 11 33.2
comp=Z,6.3nm,0.7s
833A Chaparral WMA, 66.13 330 P 17 11 40.4 +0.3
W50A Signal Mountai 67.97 345 P P 17 11 51.7 -0.1
W50A IAmb IAmb 17 11 52.3
comp=Z,5.1nm,0.8s
TKL Tuckaleechee C 68.10 347 P P 17 11 51.8 -0.7
comp=Z,1.9nm,0.6s,baz=150,slow=3.7,SNR=3.6
comp=Z,1.9nm,0.6s
BRDY Brady 68.57 332 P 17 11 55.9 +0.4
BRDY IAmb IAmb 17 11 56.4
comp=Z,4.9nm,0.7s
SAND Sanderson 68.72 329 P 17 11 56.9 +0.4
SAND IAmb IAmb 17 11 58.4
comp=Z,7.1nm,0.8s
TXAR Lajitas Array 68.88 328 P P 17 11 57.9 +0.3
comp=Z,2.1nm,0.7s,baz=147,slow=8.0,SNR=13
comp=Z,2.1nm,0.7s
TX31 Lajitas Ar. Si 68.88 328 P 17 11 58.3 +0.7
TX31 IAmb IAmb 17 11 59.3
comp=Z,3.4nm,0.8s
OZNA Ozona 69.12 330 P 17 11 59.6 +0.6
WVT Waverly 69.44 344 P 17 12 00.0 -0.8
WVT IAmb IAmb 17 12 01.1
comp=Z,9.0nm,0.7s
MIAR Mount Ida 69.57 338 P P 17 12 01.7 +0.1
ALPN Alpine 69.75 328 P P 17 12 03.5 +0.5
ALPN IAmb IAmb 17 12 04.1
comp=Z,4.6nm,0.7s
MNHN Monahans 70.19 329 P P 17 12 06.1 +0.5
LCAR Lake Charles 70.26 341 P P 17 12 06.1 +0.3
FCAR Ozark Folk Cen 70.37 340 P P 17 12 06.7 +0.2
FCAR IAmb IAmb 17 12 07.0
comp=Z,3.2nm,0.6s
VHRN Van Horn 70.72 327 P P 17 12 09.1 +0.3
PBMO Poplar Bluff 70.72 342 P P 17 12 08.7 +0.1
PBMO IAmb IAmb 17 12 09.5
comp=Z,13nm,1.0s
ODSA Odessa 70.76 330 P P 17 12 09.2 +0.1
S44A Carbondale 71.28 343 P P 17 12 11.6 -0.3
S44A IAmb IAmb 17 12 11.8
comp=Z,6.1nm,0.5s
MGMO Mountain Grove 71.59 340 P P 17 12 13.9 0.0
MGMO IAmb IAmb 17 12 15.3
comp=Z,4.7nm,1.0s
DBIC Dimbokro 71.59 70 P P 17 12 14.8 +0.4
comp=Z,5.6nm,0.7s,baz=266,slow=6.2,SNR=5.9
DBIC pP pP 17 12 40.4 -0.8
comp=Z,6.0nm,0.7s,baz=275,slow=5.1,SNR=5.0
comp=Z,5.6nm,0.7s
DBIC Dimbokro 71.59 70 P P 17 12 14.3 0.0
DBIC IAmb IAmb 17 12 42.1
comp=Z,6.6nm,0.8s
R40A Maddies Statio 72.65 341 P P 17 12 19.9 -0.1
P40A Paris 73.74 341 P 17 12 26.6 +0.1
P40A IAmb IAmb 17 12 27.2
comp=Z,7.8nm,0.7s
ANMO Albuquerque 74.88 329 P P 17 12 34.6 +1.2
MAW Mawson 74.93 163 P P 17 12 33.2 +0.1
comp=Z,1.7nm,0.4s,baz=239,slow=6.9,SNR=2.3
comp=Z,1.7nm,0.4s
PKME Peaks-Kenny Pk 76.20 360 P P 17 12 41.0 +0.6
F64A Sherman 76.79 0 P P 17 12 44.4 +0.6
F64A IAmb IAmb 17 12 48.2
comp=Z,13nm,1.2s
E62A Clayton Lake 77.56 359 P P 17 12 48.7 +0.6
E62A IAmb IAmb 17 12 49.6
comp=Z,10nm,0.9s
PV18 Skein Mesa, Pa 78.71 329 P P 17 12 55.7 +0.7
PV18 IAmb IAmb 17 12 56.7
comp=Z,4.9nm,0.7s
BOSA Boshof 78.76 117 P P 17 12 55.7 +0.1
comp=Z,2.0nm,0.7s,baz=232,slow=6.1,SNR=4.7
BOSA pP pP 17 13 22.3 -0.5
comp=Z,3.0nm,0.7s,baz=202,slow=2.3,SNR=3.1
comp=Z,2.0nm,0.7s
BOSA Boshof 78.76 117 P P 17 12 54.5 -1.0
BOSA IAmb IAmb 17 13 04.7
comp=Z,13nm,1.5s
ECSD EROS Data Cent 78.93 340 P P 17 12 55.9 +0.1
ECSD IAmb IAmb 17 12 56.5
comp=Z,8.0nm,0.9s
MTPU Mount Pierson 80.05 326 P 17 13 01.6 -0.7
P18A Preston Nutter 80.44 329 P P 17 13 05.1 +0.7
P18A IAmb IAmb 17 13 06.4
comp=Z,5.4nm,0.8s
TORD Torodi Ar. Bea 80.58 68 P P 17 13 05.4 +0.1
comp=Z,7.5nm,0.7s,baz=263,slow=8.3,SNR=35
TORD pP pP 17 13 31.7 -1.0
comp=Z,2.1nm,0.8s,baz=301,slow=4.4,SNR=2.8
comp=Z,7.5nm,0.7s
TORD Torodi Ar. Bea 80.58 68 P P 17 13 05.4 +0.1
TORD IAmb IAmb 17 13 06.3
comp=Z,5.6nm,0.8s
LBTB Lobatse 80.81 114 P P 17 13 06.2 -0.5
LBTB IAmb IAmb 17 13 07.4
comp=Z,6.6nm,1.1s
PRN Pahroc Range 80.94 324 IAmb IAmb 17 13 09.4
comp=Z,6.7nm,1.1s
TPNV Topopah Spring 81.19 323 IAmb IAmb 17 13 10.7
comp=Z,15nm,1.4s
R11B Troy Canyon, C 81.94 325 P P 17 13 13.2 +1.0
GMN Gold Mountain 81.98 323 P P 17 13 13.5 +1.0
HWUT Hardware Ranch 82.63 329 P P 17 13 16.3 +0.5
HWUT IAmb IAmb 17 13 18.0
comp=Z,2.5nm,0.6s
PD31 Pinedale Array 82.72 331 P P 17 13 16.7 +0.5
PDAR Pinedale Array 82.72 331 P P 17 13 16.1 -0.1
comp=Z,1.6nm,0.8s,baz=128,slow=7.3,SNR=8.5
comp=Z,1.6nm,0.8s
PDAR Pinedale Array 82.72 331 P P 17 13 16.5 +0.3
NVAR Mina Array Bea 83.38 323 P P 17 13 20.2 +0.5
comp=Z,1.7nm,0.8s,baz=161,slow=6.4,SNR=8.4
comp=Z,1.7nm,0.8s
ELK Elko 83.63 326 P P 17 13 21.4 +0.5
MOOW Moose Ponds 84.02 331 P P 17 13 22.9 0.0
RLMT Red Lodge 84.55 332 P P 17 13 26.2 +0.7
YHH Holmes Hill 84.91 331 P P 17 13 28.4 +1.0
YHL Hebgen Lake 85.10 331 P P 17 13 29.7 +1.3
YHL IAmb IAmb 17 13 43.0
comp=Z,4.7nm,1.3s
HLID Hailey 85.46 329 P 17 13 31.0 +1.0
HLID IAmb IAmb 17 13 31.5
comp=Z,2.8nm,0.8s
BCYI Bear Canyon 85.61 330 IAmb IAmb 17 13 32.9
comp=Z,3.8nm,1.0s
MCMT McKenzie Canyo 85.78 330 P P 17 13 32.5 +0.8
SCHQ Schefferville 85.79 1 P P 17 13 30.4 -0.7
comp=Z,5.2nm,0.9s,baz=169,slow=5.2,SNR=2.5
comp=Z,5.2nm,0.9s
SCHQ Schefferville 85.79 1 IAmb IAmb 17 13 37.7
comp=Z,221nm,1.3s
CRZF Crozet Islands 85.83 143 P P 17 13 32.4 +0.5
LRM Limekiln Ridge 86.41 331 P P 17 13 35.4 +0.6
PLID Pearl Lake 87.36 329 P 17 13 39.8 +0.4
PLID IAmb IAmb 17 13 40.8
comp=Z,5.1nm,0.8s
OVMT Ovando 87.63 331 P P 17 13 40.7 +0.2
K05A Summer Lake 87.89 324 P P 17 13 42.7 +0.8
YBH Yreka Blue Hor 88.09 323 P P 17 13 42.3 -0.4
comp=Z,0.2nm,0.6s,baz=79,slow=1.3,SNR=4.9
YBH Yreka Blue Hor 88.09 323 IAmb IAmb 17 14 05.7
comp=Z,9.1nm,1.4s
JTMT Jette 88.70 331 P P 17 13 46.7 +1.2
K02D Willamette Mer 89.27 323 P P 17 13 49.4 +1.2
FCC Fort Churchill 92.19 347 P P 17 14 01.6 +0.3
ASAR Alice Springs 121.23 204 PKP **PKPdf 17 19 44.1 -1.2**
comp=Z,0.6nm,0.5s,baz=136,slow=1.7,SNR=24
ASAR pPKP **pPKPdf 17 20 13.0 -1.4**
comp=Z,0.1nm,0.4s,baz=131,slow=1.7,SNR=1.2
WRA Warramunga Arr 124.48 206 PKP **PKPdf 17 19 50.5 -1.1**
comp=Z,1.8nm,0.6s,baz=166,slow=1.7,SNR=34
WRA pPKP **pPKPdf 17 20 18.9 -1.8**
comp=Z,0.3nm,0.3s,baz=166,slow=1.6,SNR=2.9
BVAR Borovoye Array 143.36 42 PKP PKPbc 17 20 23.2 +0.1
comp=Z,0.4nm,0.3s,baz=45,slow=0.6,SNR=6.5
KURBB Kurchatov Arra 148.95 42 PKPbc **PKPbc 17 20 38.3 -1.0**
comp=Z,0.6nm,0.3s,baz=302,slow=3.1,SNR=4.5
KURBB pPKPbc **pPKPdf 17 21 06.1 +1.8**
comp=Z,2.2nm,0.8s,baz=299,slow=3.2,SNR=4.2
KURK Kurchatov 148.96 42 PKPbc 17 20 38.9 -0.4
ZALV Zalesovo Beam 150.42 32 PKPbc **PKPbc 17 20 42.8 +0.1**
comp=Z,8.8nm,0.4s,baz=308,slow=3.2,SNR=52
ZALV pPKPbc **pPKPdf 17 21 09.9 +3.4**
comp=Z,7.4nm,0.7s,baz=309,slow=3.0,SNR=8.1
ZALV Zalesovo Beam 150.42 32 PKPbc 17 20 41.9 -0.8
MKAR Makanchi Array 152.84 47 PKPbc **PKPbc 17 20 48.4 -0.2**
comp=Z,3.3nm,0.7s,baz=308,slow=2.5,SNR=26
MKAR PKPab **PKPab 17 21 00.1 +0.1**
comp=Z,3.4nm,0.6s,baz=291,slow=4.1,SNR=17
MKAR pPKPbc **pPKPbc 17 21 16.2 -1.5**
comp=Z,3.0nm,0.7s,baz=303,slow=2.0,SNR=8.2
MKAR Makanchi Array 152.84 47 PKPdf **PKPdf 17 20 39.4 -1.9**
MKAR **PKPbc 17 20 47.5 -1.1**
MKAR **PKPab 17 20 59.5 -0.5**
MJAR Matsushiro Arr 157.14 291 PKPab **PKPab 17 21 18.9 +0.2**
comp=Z,1.9nm,0.8s,baz=104,slow=2.7,SNR=5.5
SONM Songino Array 163.05 12 PKPab **PKPab 17 21 44.1 0.0**
comp=Z,0.9nm,0.6s,baz=5.2,slow=3.2,SNR=6.4

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*IDC **26** 17:06:00.6±0.8, 41°.54N×19°.63E, h0km, mb3.8/14, mbtmp3.9/24, ML3.7/8, MS3.2/8, Error ellipse: s-maj=12.3km s-min=9.7km az=40.0*
*PDG **26** 17:06:00.7±0.3, 41°.33N×19°.70E, h8km±1km, MD4.0/13, ML4.0/13, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
*THE **26** 17:06:01.5, 42°.N±5°×1°.9E±°, h12km, M3.9/10, MLh3.9/10*
*ROM **26** 17:06:01.9±0.1, 41°.478N±0°.005×19°.780E±0°.008, h30km, ML4.0/178, Error ellipse: s-maj=0.8km s-min=0.5km az=237.0*
*SKO **26** 17:06:01.8, 41°.48N×19°.48E, h2km, ML3.8*
*TIR **26** 17:06:02.5, 41°.57N×19°.59E, h40km±4km, Ml4.1/7*
*BEO **26** 17:06:02.8±0.5, 41°.46N×19°.79E, h0km, ML3.8/19*
*NEIC **26** 17:06:02.2±2.3, 41°.49N±0°.04×19°.57E±0°.07, h10km±1km, mb4.4/21, Error ellipse: s-maj=8.6km s-min=6.7km az=268.0*
*PRU **26** 17:06:02.4, 41°.08N×19°.16E, h10km, M4.4*
*RHSSO **26** 17:06:03.3±0.9, 41°.40N×19°.40E, h8km±4km, ML4.2/5*
*NAO **26** 17:06:03.4, 41°.71N×19°.32E, h10km, MB3.5*

ISC 26 17:06:02.7±0.8, 41°.50N±0°.01×19°.62E±0°.02, h17km±5km, n303, σ1°.975/395, mb4.1/15, MS3.3/3, 40C-25D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.24**	**129**	Pg	**Pg**	**17 06 07.8**	**-0.4**
TIR				Sg	**Sg**	**17 06 11.9**	**0.0**
TIR				AML	AML	17 06 11.9	
	181nm,0.4s						
TIR	**Tirane**	**0.24**	**129**	⇑*i*Pg	**Pg**	**17 06 07.8**	**-0.4**
TIR				*i* Sg	**Sg**	**17 06 12.0**	**+0.1**
TIR	**Tirane**	**0.24**	**129**	P	**Pg**	**17 06 07.8**	**-0.4**
TIR				S	**Sg**	**17 06 12.0**	**+0.1**
TIR				AML	AML		
TIR				AML	AML		
ULC	**Ulcinj**	**0.54**	**329**	⇓*i*Pg	**Pb**	**17 06 13.5**	**-0.3**
ULC				*i* Sg	**Sn**	**17 06 23.5**	**-0.9**
SDA	**Shkodra**	**0.56**	**351**	Pg	**Pb**	**17 06 13.7**	**-0.4**
SDA				Sg	**Sb**	**17 06 22.0**	**+0.2**
PHP	**Peshkopia**	**0.65**	**73**	Pg	**Pg**	**17 06 14.4**	**-1.1**
PHP				Sg	**Sg**	**17 06 24.3**	**+0.2**
PHP				AML	AML	17 06 29.2	
	31nm,0.5s						
PHP	**Peshkopia**	**0.65**	**73**	P	**Pg**	**17 06 14.6**	**-0.9**
PHP				S	**Sb**	**17 06 25.8**	**+1.6**
DRME	**Dracevica, Mon**	**0.76**	**335**	*e*Pg	**Pb**	**17 06 17.4**	**-0.1**
DRME				*e*Sg	**Sn**	**17 06 31.5**	**+1.8**
DRME	**Dracevica, Mon**	**0.76**	**335**	⇓*i*Pg	**Pb**	**17 06 17.1**	**-0.4**
DRME				*i* Sg	**Sn**	**17 06 31.6**	**+1.8**
BUM	**Brajici-Budva**	**0.97**	**326**	⇑*i*Pg	**Pn**	**17 06 21.8**	**+0.2**
BUM				*i* Sg	**Sn**	**17 06 38.3**	**+3.4**
PDG	**Podgorica**	**0.97**	**344**	Pg	**Pg**	**17 06 20.9**	**-0.7**
PDG				Sg	**Sb**	**17 06 33.2**	**-0.3**
PDG	**Podgorica**	**0.97**	**344**		**Pg**	**17 06 20.8**	**-0.7**
PDG				Sn	**Sn**	**17 06 34.1**	**-0.7**
PDG	**Podgorica**	**0.97**	**344**	⇓P	**Pn**	**17 06 21.9**	**+0.4**
PDG				⇑S	**Sn**	**17 06 36.5**	**+1.7**
PDG	**Podgorica**	**0.97**	**344**	*e*Pg	**Pg**	**17 06 20.8**	**-0.7**
PDG				*e*Sg	**Sn**	**17 06 37.5**	**+2.6**
PDG	**Podgorica**	**0.97**	**344**	P	**Pb**	**17 06 20.7**	**-0.3**
PDG				S	**Sn**	**17 06 35.1**	**+0.2**
PDG				AML	AML		
	comp=E,5675µm,1.1s						
PDG				AML	AML		
	comp=N,6425µm,0.7s						
PDG				AML	AML		
	comp=E,5735µm,1.1s						
PDG				AML	AML		
	comp=N,6345µm,0.7s						
PDG	**Podgorica**	**0.97**	**344**	⇑*i*Pg	**Pb**	**17 06 20.6**	**-0.4**
PDG				*i* Sg	**Sn**	**17 06 38.5**	**+3.6**
OHR	**Ohrid**	**0.97**	**113**	*i* Pg	**Pb**	**17 06 20.7**	**-0.4**
OHR				*i* Sg	**Sn**	**17 06 35.7**	**+0.7**
OHR				*e*Lg	Lg	17 06 36.6	
	comp=N,2µm,0.6s						
OHR				*e*Lg	Lg	17 06 38.5	
	comp=E,4µm,0.6s						
VLO	**Vlora**	**1.03**	**185**	Pg	**Pg**	**17 06 23.4**	**+0.7**
VLO				Sg	**Sn**	**17 06 38.1**	**+1.7**
VLO				AML	AML	17 06 49.9	
	comp=E,33nm,0.5s						
VLO	**Vlora**	**1.03**	**185**	P	**Pg**	**17 06 23.9**	**+1.2**
VLO				S	**Sn**	**17 06 41.2**	**+4.8**
VLO	**Vlora**	**1.03**	**185**	P	**Pb**	**17 06 21.6**	**-0.5**
VLO				AML	AML		
	comp=E,10850µm,0.5s						
VLO				AML	AML		
	comp=N,16550µm,0.5s						
VLO				AML	AML		
	comp=E,10850µm,1.5s						
PVY	**Plav**	**1.12**	**13**	*e*Pg	**Pb**	**17 06 23.5**	**-0.3**
PVY				*e*Sg	**Sn**	**17 06 40.0**	**+1.1**
PVY	**Plav**	**1.12**	**13**	⇓*i*Pg	**Pb**	**17 06 23.1**	**-0.7**
PVY				*i* Sg	**Sn**	**17 06 42.7**	**+3.8**
CEME	**Cevo**	**1.17**	**334**	⇑*i*Pg	**Pg**	**17 06 24.9**	**-0.5**
CEME				*i* Sg	**Sg**	**17 06 45.0**	**+4.3**
KBN	**Korca**	**1.24**	**134**	Pg	**Pb**	**17 06 26.1**	**+0.3**
KBN				Sg	**Sg**	**17 06 45.7**	**+2.7**
KBN				AML	AML	17 06 48.5	
	comp=E,9.8nm,1.1s						
KBN	**Korca**	**1.24**	**134**	P	**Pg**	**17 06 27.0**	**+0.3**
KBN				S	**Sg**	**17 06 48.2**	**+5.1**
HCY	**Herceg Novi**	**1.27**	**319**	⇓*i*Pg	**Pg**	**17 06 26.4**	**-0.8**
HCY				*i* Sg	**Sg**	**17 06 47.3**	**+3.6**
KOME	**Kolasin**	**1.35**	**357**	*e*Pg	**Pg**	**17 06 28.2**	**-0.6**

KOME eSg Sg 17 06 46.6 +0.1
KOME Kolasin 1.35 357 ⇓iPg Pb 17 06 27.8 +0.1
KOME iSg Sg 17 06 50.3 +3.8
NKME Niksic 1.36 339 ⇑iPg Pg 17 06 28.7 -0.3
NKME iSg Sg 17 06 50.8 +4.1
BEY Berane 1.39 8 ePg Pb 17 06 28.3 +0.1
BEY eSg Sg 17 06 46.4 -1.2
IVA Berane 1.39 8 ⇓iPg Pb 17 06 28.1 -0.1
IVA iSg Sg 17 06 51.4 +3.8
SKO Skopje 1.44 70 iPg Pb 17 06 29.4 +0.3
SKO iSg Sg 17 06 50.9 +1.6
NEST Nestorio 1.53 135 Pn Pb 17 06 30.8 +0.1
NEST Sn Sg 17 06 51.9 -0.3
NEST AML AML 17 07 01.7
comp=E,7.0nm,0.6s
NEST Nestorio 1.53 135 P Pg 17 06 31.5 -0.7
NEST S Sg 17 06 54.8 +2.6
TREB Trebinje 1.54 323 ⇑iPg Pb 17 06 30.8 0.0
TREB eSg Sg 17 06 51.5 -0.9
BRY Bratogost 1.61 331 ⇓iPn Pg 17 06 32.5 -1.3
BRY iSn Sg 17 06 57.6 +2.7
MESG Mesagne 1.62 236 P Pn 17 06 29.4 -1.0
PENT Pentalofos 1.74 138 P Pb 17 06 34.7 +0.4
PENT S Sg 17 07 00.1 +1.3
SJES Sjenica 1.78 8 ePg Pb 17 06 35.6 +0.6
SJES eSg Sg 17 06 59.2 -0.9
UPM Unac-Piva 1.78 343 ⇑iPn Pb 17 06 35.2 +0.2
UPM iSn Sg 17 07 01.2 +1.0
KEK Kerkira 1.79 176 P Pb 17 06 35.4 +0.4
KEK S Sg 17 07 00.2 -0.1
KLINJ Klinje 1.84 336 ePn Pb 17 06 35.9 0.0
KLINJ eSn Sb 17 06 59.2 +0.6
PLE Pljevlja 1.84 355 ePg Pg 17 06 37.1 -1.0
PLE eSg Sg 17 07 01.9 -0.1
PLE Pljevlja 1.84 355 ⇑iPn Pg 17 06 37.0 -1.1
PLE iSn Sg 17 07 03.1 +1.1
STON Ston 1.98 315 P Pn 17 06 35.4 +0.1
STON AML AML
comp=E,1570µm,1.6s
STON AML AML
comp=N,1580µm,0.4s
STON AML AML
comp=E,1570µm,0.4s
TAR1 Taranto 2.02 242 P Pn 17 06 35.7 -0.2
TAR1 AML AML
comp=E,2145µm,0.6s
TAR1 AML AML
comp=N,1700µm,0.7s
TAR1 AML AML
comp=N,1700µm,1.3s
KZN Kozani 2.02 125 P Pb 17 06 38.9 -0.1
KZN S Sg 17 07 07.0 -0.8
IGT Igoumenitsa 2.04 164 Pn Pb 17 06 38.4 -0.8
IGT Sg Sb 17 07 04.2 -0.1
IGT Igoumenitsa 2.04 164 P Pb 17 06 38.1 -1.2
IGT S Sg 17 07 07.5 -0.8
SELS Selova 2.05 32 ePn Pb 17 06 38.4 -1.1
SELS eSn Sb 17 07 05.3 +0.7
NOCI Noci 2.06 251 Pn Pn 17 06 36.6 +0.1
NOCI Noci 2.06 251 P Pn 17 06 36.3 -0.2
NOCI AML AML
comp=N,2245µm,0.3s
NOCI AML AML
comp=E,1835µm,0.3s
JAN Janina 2.07 153 P Pb 17 06 39.0 -0.8
JAN S Sg 17 07 08.4 -0.9
IVAS Ivanjica 2.11 11 ePn Pb 17 06 39.3 -1.3
IVAS eSn Sb 17 07 07.6 +1.0
RUDO Rudo 2.12 355 ⇑iPn Pb 17 06 40.6 -0.2
RUDO eSn Sb 17 07 07.7 +0.8
VAY Valandovo 2.23 94 iPn Pn 17 06 40.6 +1.8
VAY iSn Sb 17 07 08.7 -1.1
VAY eLg Lg 17 07 08.9
comp=N,478nm,0.9s
VAY eLg Lg 17 07 09.7
comp=E,396nm,0.8s
GOCS Kraljevo Serbi 2.26 24 ePn Pb 17 06 41.3 -1.8
GOCS eSn Sn 17 07 08.7 +1.8
PRMD Pramanda 2.27 150 P Pb 17 06 42.2 -1.0
PRMD S Sb 17 07 12.0 +1.0
LTRZ Laterza 2.30 248 P Pn 17 06 39.6 -0.2
LTRZ AML AML
comp=E,1240µm,1.3s
LTRZ AML AML
comp=E,1255µm,1.4s
LTRZ AML AML
comp=N,1455µm,0.3s
LTRZ AML AML
comp=N,122µm,0.9s
AMUR Altamura 2.35 256 P Pn 17 06 40.7 +0.1
AMUR AML AML
comp=E,1340µm,0.5s
AMUR AML AML
comp=N,1285µm,0.5s
AMUR AML AML
comp=E,1340µm,1.5s
BOSS Bosilegrad 2.35 64 ePn Pn 17 06 42.4 +1.8
BOSS eSn Sn 17 07 11.3 +2.2
MATE Matera 2.36 250 ⇑P Pn 17 06 41.0 +0.4
BBLS Lazi&#263i 2.37 356 ePn Pb 17 06 43.6 -1.4
BBLS eSn Sb 17 07 15.7 +1.7
KNT Kendrikon 2.49 97 P Pn 17 06 43.9 +1.4
KNT S Sb 17 07 15.9 -1.5
KNT Kendrikon 2.49 97 iPn Pn 17 06 44.1 +1.6
GRUS Gruza 2.52 18 ePn Pn 17 06 45.0 +2.1
GRUS eSn Sb 17 07 17.8 -0.4
MIGL Miglionico 2.56 251 P Pn 17 06 43.7 +0.2
MIGL AML AML
comp=E,3815µm,0.5s
MIGL AML AML
comp=N,3895µm,0.6s
MIGL AML AML
comp=E,3815µm,1.5s
LIT Litokhoron 2.59 122 Pn 17 06 45.1 +1.3
TRAN Tran 2.62 58 P Pn 17 06 46.6 +2.3
BOVS Bovan 2.63 35 ⇑P Pn 17 06 46.4 +2.1
BOVS Bovan 2.63 35 ePn Pn 17 06 46.5 +2.1
BOVS eSn Sn 17 07 17.3 +1.4
KKB Krupnik 2.65 81 ⇑iP Pn 17 06 46.7 +2.0
KKB S Sn 17 07 18.4 +2.0
KKB Krupnik 2.65 81 iPn Pn 17 06 46.6 +2.0
THE Thessaloniki 2.67 108 iPn Pn 17 06 46.5 +1.6
TRUS Trudelj 2.78 12 ePn Pn 17 06 48.6 +2.1
TRUS eSn Sb 17 07 25.1 -0.7
MSAG Monte S. Angel 2.79 276 P Pn 17 06 46.8 +0.2
MSAG AML AML
comp=N,1275µm,0.5s
MSAG AML AML
comp=N,534µm,0.5s
MSAG AML AML
comp=E,266µm,0.7s
MSAG AML AML
comp=E,646µm,0.7s
ZAPS Zavoj 2.85 51 ePn Pn 17 06 49.7 +2.2
ZAPS eSn Sn 17 07 22.3 +0.9
PTRP Pietrapertosa 2.86 251 P Pn 17 06 48.1 +0.4
PTRP AML AML
comp=E,1350µm,0.5s
PTRP AML AML
comp=N,1345µm,0.9s
PTRP AML AML
comp=E,1350µm,1.5s
ACER Acerenza 2.87 257 Pn 17 06 47.6 -0.1
ACER Acerenza 2.87 257 P Pn 17 06 48.1 +0.4
ACER AML AML
comp=N,1520µm,0.9s
ACER AML AML
comp=N,1560µm,0.9s
ACER AML AML
comp=E,1580µm,0.5s
ACER AML AML
comp=E,1670µm,0.5s
ACER AML AML
comp=N,1560µm,1.1s
ACER AML AML
comp=N,1520µm,1.1s
SOH Sokhos 2.90 102 iPn Pn 17 06 50.2 +2.0
SGRT San Giovanni R 2.92 276 Pn Pn 17 06 48.8 +0.5
SGRT San Giovanni R 2.92 276 Pn 17 06 48.2 -0.1
SGRT Sn Sn 17 07 20.8 -2.2
SGRT San Giovanni R 2.92 276 P Pn 17 06 48.7 +0.3
SGRT AML AML
comp=E,558µm,0.8s
SGRT AML AML
comp=N,586µm,0.8s
VTS Vitosha 2.92 66 ⇑iP Pn 17 06 50.4 +2.0
VTS S Sn 17 07 24.3 +1.2
SALB San Lorenzo Be 2.97 238 P Pn 17 06 48.7 -0.5
SALB AML AML
comp=N,652µm,1.1s
SALB AML AML
comp=N,652µm,0.9s
SALB AML AML
comp=E,1400µm,0.3s
SCHR S. Chirico Rap 2.98 245 P Pn 17 06 49.6 +0.3
SCHR AML AML
comp=E,414µm,0.8s
SCHR AML AML
comp=N,486µm,0.8s
PLNA Plana 3.00 70 P Pn 17 06 52.3 +2.7
SVIS Svilajnac 3.00 22 ePn Pn 17 06 52.0 +2.5
SVIS eSn Sb 17 07 30.8 -1.3
ZAGS Zajecar 3.01 39 ePn Pn 17 06 52.0 +2.4
ZAGS eSn Sn 17 07 27.8 +2.6
SRS Serrai 3.02 96 iPn Pn 17 06 51.4 +1.7
BLSH Balsha 3.04 62 P Pn 17 06 53.3 +3.2
TEKS Tekeris 3.05 359 ePn Pn 17 06 51.6 +1.4
TEKS eSn Sb 17 07 31.8 -1.6
APRC Apricena 3.06 276 P Pn 17 06 50.6 +0.2
TDS Terranova Siba 3.10 235 P Pn 17 06 50.8 -0.1
TDS AML AML
comp=E,158µm,0.8s
TDS AML AML
comp=N,178µm,0.8s
TDS AML AML
comp=N,178µm,1.2s
TDS AML AML
comp=E,158µm,1.2s
MMB Musomishta 3.10 88 S Sn 17 07 28.9 +1.3
MMB P Pn 17 06 52.8 +1.9
MMB Musomishta 3.10 88 iPn Pn 17 06 53.0 +2.1
MCEL Monticello 3.12 249 P Pn 17 06 51.5 +0.4
MCEL AML AML
comp=N,641µm,0.8s
MCEL AML AML
comp=N,665µm,0.7s
MCEL AML AML
comp=E,590µm,1.1s
MCEL AML AML
comp=E,583µm,1.1s
MCEL AML AML
comp=N,665µm,1.3s
SIRI Monte Sirino - 3.13 246 P Pn 17 06 51.5 +0.1
SIRI AML AML
comp=E,674µm,0.3s
SIRI AML AML
comp=E,654µm,0.3s
SIRI AML AML
comp=N,606µm,0.4s
SIRI AML AML
comp=N,591µm,0.4s
BORS2 Bor- Borsko je 3.13 33 ePn Pn 17 06 51.9 +0.6
BORS2 eSn Sn 17 07 29.1 +0.8
CELI Celico 3.16 230 P Pn 17 06 51.3 -0.5
CELI AML AML
comp=E,684µm,0.5s
CELI AML AML
comp=N,683µm,0.8s
CELI AML AML
comp=N,683µm,1.2s
CELI AML AML
comp=E,684µm,1.5s
TIP Timpagrande 3.19 224 Pn 17 06 51.9 -0.2
TIP Timpagrande 3.19 224 ⇑P Pn 17 06 51.9 -0.2
TIP Timpagrande 3.19 224 P Pn 17 06 51.9 -0.2
TIP AML AML
comp=E,216µm,1.5s
TIP AML AML
comp=E,200µm,1.5s
TIP AML AML
comp=N,199µm,0.7s
TIP AML AML
comp=E,216µm,0.5s
TIP AML AML
comp=E,200µm,0.5s
TIP AML AML
comp=N,200µm,0.6s
MMN Mormanno 3.19 241 P Pn 17 06 52.5 +0.5
MMN AML AML
comp=E,915µm,0.3s
MMN AML AML
comp=N,1700µm,1.0s
MMN AML AML
comp=N,1700µm,1.0s
SLCN Sala Consilina 3.21 251 P Pn 17 06 52.8 +0.3
SLCN AML AML
comp=E,824µm,0.4s
SLCN AML AML
comp=N,667µm,0.8s
SLCN AML AML
comp=E,866µm,0.4s
SLCN AML AML
comp=N,667µm,1.2s
SLCN AML AML
comp=N,666µm,0.6s
CUC Castrocucco 3.26 244 Pn Pn 17 06 53.2 +0.2
CUC Castrocucco 3.26 244 Pn 17 06 53.0 0.0
CUC Castrocucco 3.26 244 P Pn 17 06 53.5 +0.4
CUC AML AML
comp=E,1210µm,0.5s
CUC AML AML
comp=N,900µm,0.4s
CUC AML AML
comp=N,862µm,0.4s
CUC AML AML
comp=E,1195µm,0.5s
AVAS Avala Beograd 3.26 11 ePn Pn 17 06 54.6 +1.5
AVAS eSn Sn 17 07 33.8 +2.3
KUBS Kucevo 3.28 27 ePn Pn 17 06 54.0 +0.7
KUBS eSn Sn 17 07 31.8 -0.1
CAFE Carife 3.34 263 P Pn 17 06 54.4 +0.2
CAFE AML AML
comp=E,482µm,1.2s
CAFE AML AML
comp=N,440µm,0.6s
CAFE AML AML
comp=E,496µm,1.2s
CAFE AML AML
comp=E,482µm,0.8s
CAFE AML AML
comp=E,496µm,0.8s
CAFE AML AML
comp=N,440µm,1.4s
CAFE AML AML
comp=N,434µm,0.7s
MGR Morigerati 3.37 248 P Pn 17 06 54.9 +0.4
MGR AML AML
comp=E,521µm,0.9s
MGR AML AML
comp=N,937µm,0.3s
MGR AML AML
comp=E,391µm,1.1s
MGR AML AML
comp=N,744µm,0.3s
MGR AML AML
comp=E,521µm,1.1s
MELA Melanico ??? S 3.37 275 P Pn 17 06 54.7 +0.2
MELA AML AML
comp=E,986µm,0.7s
MELA AML AML
comp=N,1135µm,0.3s
MELA AML AML
comp=N,1120µm,0.3s
MELA AML AML
comp=E,872µm,1.6s
MELA AML AML
comp=E,986µm,1.3s
SNAL S. Angelo Dei 3.38 262 P Pn 17 06 54.7 +0.1
SNAL AML AML
comp=E,534µm,1.1s
SNAL AML AML
comp=E,555µm,1.1s
SNAL AML AML
comp=N,974µm,0.9s
SNAL AML AML
comp=N,962µm,0.9s
SNAL AML AML
comp=E,555µm,0.9s
SNAL AML AML
comp=E,534µm,0.9s
VLS Valsamata 3.40 167 P Pn 17 06 52.6 -2.4
VLS AML AML
comp=E,319µm,0.5s
VLS AML AML
comp=N,430µm,0.5s
VLS AML AML
comp=E,319µm,1.5s
CET2 Cetraro 3.42 236 P Pn 17 06 55.3 +0.1
CET2 AML AML
comp=E,987µm,0.7s
CET2 AML AML
comp=N,1390µm,0.9s
CET2 AML AML
comp=N,1390µm,1.1s
MCRV Calabrutti - M 3.44 259 P Pn 17 06 55.7 +0.2
MCRV AML AML
comp=E,454µm,0.4s
MCRV AML AML
comp=N,465µm,0.5s
MRB1 Monte Rocchett 3.52 265 P Pn 17 06 56.8 +0.2
MRB1 AML AML
comp=E,597µm,0.7s
MRB1 AML AML
comp=N,716µm,0.5s
MRB1 AML AML
comp=E,582µm,0.7s
MRB1 AML AML
comp=N,676µm,1.3s
MRB1 AML AML
comp=N,676µm,0.7s
MRB1 AML AML
comp=E,582µm,1.3s
MRB1 AML AML
comp=E,597µm,1.3s
GATE Gambatesa 3.54 272 P Pn 17 06 57.2 +0.4
GATE AML AML
comp=E,424µm,1.5s
GATE AML AML
comp=E,374µm,1.5s
GATE AML AML
comp=N,480µm,1.6s
GATE AML AML
comp=E,374µm,0.5s
GATE AML AML
comp=E,424µm,0.5s
GATE AML AML
comp=N,545µm,1.6s
CIGN Sant'Elia a Pi 3.54 274 P Pn 17 06 57.5 +0.6
CIGN AML AML
comp=E,247µm,0.7s
CIGN AML AML
comp=N,226µm,0.6s
CIGN AML AML
comp=E,247µm,1.3s
PGB Panagyurishte 3.54 72 P Pn 17 06 59.7 +2.8
VALD Valchedram 3.57 51 P Pn 17 06 59.9 +2.7
MPEP Malo Peshtene 3.57 57 P Pn 17 07 00.0 +2.7
MDVR Moldovita 3.62 24 ⇑P Pn 17 06 59.8 +1.7
FRGS Fruska Gora 3.66 2 ePn Pn 17 06 59.5 +1.0
FRGS eSn Sn 17 07 44.2 +2.9
PUNG Punghina 3.69 40 ⇓P Pn 17 07 01.2 +2.2
BLY Banja Luka 3.70 332 ⇑iPn Pn 17 07 01.2 +2.1
BLY eSn Sn 17 07 43.8 +1.5
BLY Banja Luka 3.70 332 ⇑P Pn 17 07 01.2 +2.1
DJES Djerdap 3.81 33 ⇑P Pn 17 07 02.6 +2.0
DJES Djerdap 3.81 33 ePn Pn 17 07 00.9 +0.3
VRSS Vrsac 3.83 18 ePn Pn 17 07 01.7 +0.8
VRSS eSn Sn 17 07 44.0 -1.5
RZN Rozhen 3.84 85 P Pn 17 07 03.4 +2.2
RZN S Sn 17 07 47.2 +1.1
RMGR Halanga-Turnu 3.88 34 ⇑P Pn 17 07 04.8 +3.2
PLD Plovdiv 3.89 79 P Pn 17 07 04.0 +2.4
PLAC Placanica 3.90 220 P Pn 17 07 01.3 -0.7
PLAC AML AML
comp=N,267µm,0.6s
PLAC AML AML
comp=E,270µm,0.6s
PLAC AML AML
comp=N,278µm,0.6s
PLAC AML AML
comp=N,267µm,1.4s
PLAC AML AML
comp=E,262µm,0.7s
PLAC AML AML
comp=E,270µm,1.4s
HERR Herculane 3.95 30 ⇓P Pn 17 07 04.6 +2.1
BANR Banloc 4.04 15 ⇑P Pn 17 07 05.5 +1.9
SRE Strehaia 4.11 39 ⇑P Pn 17 07 07.1 +2.4
PLVB Pleven 4.16 61 ⇑P Pn 17 07 08.1 +2.8
VLAD Vladila 4.32 53 ⇑P Pn 17 07 10.2 +2.7
CEL Celeste 4.32 223 Pn 17 07 06.8 -0.9
BZS Buzias 4.37 19 ⇓P Pn 17 07 10.0 +1.8
PVL Pavlikeni 4.43 67 P Pn 17 07 11.9 +2.8
RDO Rodhopi 4.47 93 Pn 17 07 11.2 +1.5
GZR Gura Zlata 4.52 30 ⇓P Pn 17 07 13.2 +2.8
SURR Surduc 4.63 22 ⇓P Pn 17 07 13.0 +1.2
ITM Ithomi 4.67 157 Pn 17 07 12.9 +0.5
AQU L'Aquila 4.71 282 ePn Pn 17 07 12.2 -0.9
AQU eSn Sn 17 08 04.5 -2.9
CAMP Campotosto 4.74 285 Pn 17 07 14.7 +1.3
MORH Mrgy, Hungar 4.77 352 ePn Pn 17 07 15.4 +1.7
MORH eSn Sn 17 08 10.7 +2.2
MORH Mrgy, Hungar 4.77 352 ⇓P Pn 17 07 15.3 +1.7
ELND Elena 4.86 71 ⇑P Pn 17 07 17.4 +2.4
GUMA Gualdo di Mace 4.92 291 Pn 17 07 16.6 +0.8
HUMR Humele 4.96 51 ⇑P Pn 17 07 19.3 +2.9
LOT Lotru 4.97 36 ⇑P Pn 17 07 19.4 +2.8
SIRR Siria 4.99 17 ⇑P Pn 17 07 18.7 +1.9
NRCA Norcia 5.01 288 Pn 17 07 18.3 +1.1
SZH Strazhitsa 5.03 67 P Pn 17 07 20.2 +2.9
FDMO Fiordimonte 5.08 290 Pn 17 07 19.4 +1.3
BOJS Bojanci 5.11 323 iPn Pn 17 07 19.9 +1.5
CRES Cresnjevec Ost 5.27 326 iPn Pn 17 07 22.0 +1.3
ARR Arges 5.32 42 ⇑P Pn 17 07 24.4 +3.0
CESX Cesi 5.36 284 Pn 17 07 23.2 +1.3
BEHE Becsehely 5.38 339 Pn 17 07 24.1 +2.0
BEHE Becsehely 5.38 339 ePn Pn 17 07 23.9 +1.8
BEHE eSn Sn 17 08 24.7 +1.2
SGRR Singureni 5.41 58 ⇓P Pn 17 07 25.1 +2.6
MTUR Matau 5.44 45 ⇓P Pn 17 07 26.3 +3.2
MURB Monte Urbino 5.54 291 Pn 17 07 25.7 +1.3
VOIR 5.58 43 ⇓P Pn 17 07 28.1 +3.2
VAE Valguarnera 5.69 227 Pn Pn 17 07 29.4 +3.0
comp=E,6.7nm,0.6s,baz=74,slow=8.4,SNR=4.1
VAE Sn Sn 17 08 37.9 +6.5
comp=E,1.6nm,0.3s,baz=97,slow=17,SNR=1.9
DRGR 5.74 22 ⇑P Pn 17 07 28.9 +1.8
BORR Bors 5.80 15 ⇑P Pn 17 07 30.9 +3.0
GBAS Gorenja Brezov 5.81 322 iPn Pn 17 07 29.0 +1.0
RAFF Raffo Rosso 5.90 225 Pn 17 07 27.3 -2.1
CJR Cluj-Napoca 5.95 27 ⇓P Pn 17 07 33.6 +3.6
TRI Trieste 5.98 317 Pn 17 07 29.8 -0.6
MLR Muntele Rosu 6.09 47 Pn Pn 17 07 35.0 +3.0
comp=E,4.5nm,0.3s,baz=155,slow=8.4,SNR=38
MLR Sn Sn 17 08 39.3 -2.0
comp=E,2.0nm,0.3s,baz=183,slow=21,SNR=4.2
comp=E,23nm,0.6s
MLR Muntele Rosu 6.09 47 Pn 17 07 35.4 +3.4
MLR Muntele Rosu 6.09 47 ⇑P Pn 17 07 35.7 +3.7
DOPR Dopca 6.12 41 ⇑P Pn 17 07 35.5 +3.2
SOKA Soboth 6.14 329 ePn Pn 17 07 33.7 +1.0
comp=E,13nm,0.6s,SNR=12
OBKA Obir 6.20 326 ePn Pn 17 07 35.0 +1.5
comp=E,5.2nm,0.2s
OBKA eSn Sn 17 08 45.7 +1.7
comp=E,44nm,0.6s
ISR Istrita 6.21 52 ⇓P Pn 17 07 37.2 +3.6
NEHR Nehoiu 6.25 49 ⇑P Pn 17 07 37.6 +3.5
SABO M.te Sabotino 6.25 318 Pn 17 07 34.4 +0.3
SRO Srobarova 6.38 352 ePN Pn 17 07 41.2 +5.3
SRO eSG Sg 17 09 23.7 -3.7
OZUR 6.40 42 ⇑P Pn 17 07 39.2 +3.0
PSZ Piszkesteto 6.42 2 Pn 17 07 38.1 +1.6
PSZ Piszkesteto 6.42 2 ⇓P Pn 17 07 38.3 +1.8
ARSA Arzberg 6.45 334 Pn 17 07 37.8 +0.8
ARSA Arzberg 6.45 334 ePn Pn 17 07 38.6 +1.6
comp=E,6.9nm,0.4s,SNR=9.2
COVR Voineasa-Covas 6.46 45 ⇑P Pn 17 07 40.4 +3.5
TURR Turia 6.49 43 ⇓P Pn 17 07 40.5 +3.1
OSSC Osservatorio P 6.51 291 Pn 17 07 38.0 +0.4
BISRR Bisoca 6.55 49 ⇑P Pn 17 07 42.2 +3.9
BALB Balikesir 6.56 104 Pn Pn 17 07 38.2 -0.2
CASP Castiglione de 6.63 284 Pn Pn 17 07 38.6 -0.7

RONA	**Rosalia, Austr**	**6.64**	**340**	*e*Pn		**Pn**	**17 07 41.0**	**+1.6**
	comp=E,2.3nm,0.3s								
MYKA	**Terra Mystica**	**6.70**	**322**	*e*Pn		**Pn**	**17 07 40.7**	**+0.5**
	comp=E,3.5nm,0.4s								
MYKA				*e*Sn		**Sn**	**17 08 57.1**	**+1.0**
	comp=E,14nm,0.5s								
PLOR	**Plostina**	**6.70**	**47**	⇓P		**Pn**	**17 07 43.3**	**+3.0**
VRI	**Vrincioaia**	**6.75**	**47**	⇓P		**Pn**	**17 07 44.0**	**+3.0**
ONER	**Baraj Valea Uz**	**6.88**	**43**	⇑P		**Pn**	**17 07 46.1**	**+3.4**
STAL	**STALIGIAL**	**6.89**	**316**			**Pn**	**17 07 42.9**	**0.0**
TEOL	**Teolo**	**6.95**	**306**			**Pn**	**17 07 43.9**	**+0.2**
ZCCA	**Zocca**	**6.95**	**297**			**Pn**	**17 07 43.6**	**-0.2**
CONA	**Conrad Observa**	**6.96**	**339**	*e*Pn		**Pn**	**17 07 45.2**	**+1.2**
	comp=E,0.5nm,0.3s								
KECS	**Kecovo**	**7.01**	**5**	*e*PN		**Pn**	**17 07 48.1**	**+3.6**
MODS	**Modra-Piesok**	**7.07**	**347**	*e*PN		**Pn**	**17 07 48.1**	**+2.7**
MODS				*e*PG		Pg	17 08 31.5	+13
MODS				*e*SN		Sn	17 08 48.8	-17
TIRR	**Tirgusor**	**7.09**	**62**	Pn		**Pn**	**17 07 46.2**	**+0.6**
KBA	**Koelnbreinsper**	**7.17**	**323**	*e*Pn		**Pn**	**17 07 47.9**	**+1.1**
	comp=E,4.5nm,0.3s,SNR=16								
CFR	**Carcaliu**	**7.22**	**57**	⇓P		**Pn**	**17 07 49.9**	**+2.6**
TPGR	**Topolog**	**7.25**	**60**	⇓P		**Pn**	**17 07 50.6**	**+2.7**
BURAR	**Bucovina Array**	**7.30**	**31**			**Pn**	**17 07 50.8**	**+2.2**
BURAR	**Bucovina Array**	**7.30**	**31**	⇑P		**Pn**	**17 07 52.4**	**+3.8**
BUR08	**Bucovina Ar. S**	**7.32**	**31**			**Pn**	**17 07 51.0**	**+2.1**
ABTA	**Abfaltersbach**	**7.32**	**318**	*i* Pn		**Pn**	**17 07 49.1**	**+0.2**
	comp=E,4.8nm,0.2s,SNR=12								
ABTA				*e*Sn		**Sn**	**17 09 11.7**	**+0.1**
	comp=E,42nm,0.7s								
CTI	**Castel Tesino**	**7.34**	**311**			**Pn**	**17 07 48.1**	**-1.0**
MOA	**Molln**	**7.41**	**331**	*i* Pn		**Pn**	**17 07 52.3**	**+2.4**
	comp=E,1.9nm,0.2s,SNR=7.0								
IDI	**Anoyia**	**7.45**	**145**	Pn		**Pn**	**17 07 49.2**	**-1.6**
	comp=E,8.4nm,0.9s,baz=301,slow=13,SNR=8.2								
IDI				Sn		**Sn**	**17 09 10.2**	**-4.7**
	comp=E,1.7nm,0.3s,baz=84,slow=21,SNR=1.7								
IDI	**Anoyia**	**7.45**	**145**	Pn		**Pn**	**17 07 48.5**	**-2.2**
JAVC	**Velka Javorina**	**7.49**	**350**	*e*PN		**Pn**	**17 07 54.6**	**+3.5**
MANT	**Manisa**	**7.49**	**111**	Pn		**Pn**	**17 07 52.5**	**+1.1**
BIOA	**Bad Ischl, Aus**	**7.52**	**327**	*e*Pn		**Pn**	**17 07 53.3**	**+1.8**
	comp=E,8.5nm,0.4s,SNR=8.9								
PRMA	**PARMA**	**7.55**	**299**	Pn		**Pn**	**17 07 50.8**	**-1.1**
TLCR		**7.65**	**58**	⇑P		**Pn**	**17 07 56.6**	**+3.3**
LESA	**Schwarzleotal**	**7.73**	**322**	*i* Pn		**Pn**	**17 07 55.5**	**+1.1**
	comp=E,8.3nm,0.5s,SNR=6.7								
LESA				*e*Sn		**Sn**	**17 09 20.5**	**-1.0**
	comp=E,9.8nm,0.7s								
KRUC	**Moravsky**	**7.90**	**344**	*e*PN		**Pn**	**17 07 59.1**	**+2.4**
MSSA	**Maissana**	**7.93**	**294**	Pn		**Pn**	**17 07 57.5**	**+0.2**
MAUC	**Maruska**	**7.97**	**352**	*e*SN		**Sn**	**17 09 32.9**	**+5.6**
STHS	**Stebnicka Huta**	**8.00**	**8**	*e*PN		**Pn**	**17 07 59.9**	**+1.8**
STHS				*e*PG			17 08 31.3	
STHS				*e*SN		Sn	17 09 16.6	-12
VRAC	**Vranov**	**8.09**	**346**	Pn		**Pn**	**17 08 00.1**	**+0.7**
	comp=E,0.3nm,0.3s,baz=211,slow=12,SNR=3.7								
VRAC				Sn		**Sn**	**17 09 31.8**	**+1.4**
	comp=E,0.5nm,0.3s,baz=175,slow=14,SNR=1.4								
VRAC				LR		LR	17 11 35.4		
	comp=E,115nm,20.8s,baz=168,slow=42								
	comp=E,2.6nm,0.5s								
WTTA	**Wattenberg**	**8.11**	**318**	*i* Pn		**Pn**	**17 08 00.6**	**+0.7**
	comp=E,8.1nm,0.3s,SNR=7.3								
WTTA				*e*Sn		**Sn**	**17 09 32.2**	**+1.1**
	comp=E,39nm,0.5s								
WATA	**Walderalm**	**8.19**	**318**	*i* Pn		**Pn**	**17 08 03.1**	**+2.3**
	comp=E,13nm,0.3s,SNR=14								
WATA				*e*Sn		**Sn**	**17 09 33.1**	**+0.1**
	comp=E,34nm,0.8s								
CKRC	**Cesky Krumlov**	**8.22**	**335**	*e*PN		**Pn**	**17 08 03.1**	**+1.9**
SQTA	**Sankt Quirin**	**8.30**	**316**	*i* Pn		**Pn**	**17 08 04.2**	**+1.8**
	comp=E,11nm,0.4s,SNR=13								
SQTA				*e*Sn		**Sn**	**17 09 34.9**	**-0.9**
	comp=E,13nm,0.5s								
KARP	**Karpathos**	**8.38**	**133**	Pn		**Pn**	**17 08 03.7**	**+0.3**
BORA	**Eskisehir**	**8.39**	**98**	Pn		**Pn**	**17 08 04.9**	**+1.3**
FETA	**Feichten**	**8.43**	**314**	*e*Pn		**Pn**	**17 08 05.3**	**+1.1**
	comp=E,3.8nm,0.5s,SNR=8.1								
FETA				Sn		**Sn**	**17 09 37.7**	**-1.3**
	comp=E,5.1nm,0.4s								
MOTA	**Moosalm**	**8.44**	**317**	*e*Pn		**Pn**	**17 08 04.9**	**+0.7**
	comp=E,7.4nm,0.4s,SNR=9.8								
MOTA				*e*Sn		**Sn**	**17 09 38.6**	**-0.5**
	comp=E,38nm,0.6s								
GEC2	**GERESS Array S**	**8.45**	**332**			**Pn**	**17 08 04.9**	**+0.6**
GERES	**GERESS Array B**	**8.45**	**332**	Pn		**Pn**	**17 08 05.5**	**+1.2**
	comp=E,0.1nm,0.3s,baz=154,slow=13,SNR=22								
GERES				Sn		**Sn**	**17 09 37.6**	**-1.7**
	comp=E,0.2nm,0.3s,baz=152,slow=23,SNR=5.6								
GERES				LR		LR	17 12 01.6		
	comp=E,208nm,19.1s,baz=152,slow=43								
	comp=E,2.1nm,0.4s								
FUORN	**Ofenpass-Fuorn**	**8.46**	**310**			**Pn**	**17 08 05.5**	**+0.9**
OJC	**Ojcow**	**8.72**	**1**	Pn		**Pn**	**17 08 08.1**	**+0.1**
KHC	**Kasperske Hory**	**8.73**	**333**			**Pn**	**17 08 08.9**	**+0.7**
KHC	**Kasperske Hory**	**8.73**	**333**	*e*PN		**Pn**	**17 08 09.3**	**+1.1**
KHC				*e*SN		**Sn**	**17 09 47.0**	**+0.8**
DAVOX	**Davos/Dischmat**	**8.77**	**310**	Pn		**Pn**	**17 08 10.2**	**+1.4**
	comp=E,2.6nm,0.3s,baz=126,slow=15,SNR=24								
DAVOX				Sn		**Sn**	**17 09 44.4**	**-2.8**
	comp=E,2.0nm,0.3s,baz=327,slow=20,SNR=4.0								
DAVOX				LR		LR	17 12 37.3		
	comp=E,80nm,19.6s,baz=142,slow=45								
	comp=E,8.8nm,0.4s								
TUE	**Stuetta**	**8.91**	**307**			**Pn**	**17 08 11.4**	**+0.5**
DAVA	**Damuels**	**9.05**	**313**	*e*Pn		**Pn**	**17 08 14.2**	**+1.4**
	comp=E,7.5nm,0.4s,SNR=8.7								
DAVA				*e*Sn		**Sn**	**17 09 52.7**	**-1.6**
	comp=E,14nm,0.6s								
KEST	**Kesra**	**9.88**	**238**	Pn		**Pn**	**17 08 27.5**	**+3.5**
	comp=E,0.2nm,0.3s,baz=133,slow=7.2,SNR=3.5								
KEST	**Kesra**	**9.88**	**238**	Pn		**Pn**	**17 08 22.4**	**-1.6**
BNI	**Bardonecchia**	**10.08**	**295**	Pn		**Pn**	**17 08 25.6**	**-1.1**
SENIN	**Lac Senin/Sane**	**10.13**	**303**			**Pn**	**17 08 26.9**	**-0.5**
BFO	**Black Forest**	**10.52**	**314**			**Pn**	**17 08 31.7**	**-0.9**
BRTR	**Keskin Array B**	**10.81**	**95**	Pn		**Pn**	**17 08 38.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=285,slow=16,SNR=1.3								
	comp=E,0.3nm,0.6s								
ECH	**Echery**	**11.10**	**311**	Pn		**Pn**	**17 08 38.8**	**-1.7**
AKASG	**Malin Array Be**	**11.36**	**33**	Pn		**Pn**	**17 08 42.7**	**-1.3**
	comp=E,0.3nm,0.3s,baz=222,slow=13,SNR=4.5								
AKASG				LR		LR	17 13 46.7		
	comp=E,75nm,20.5s,baz=210,slow=41								
	comp=E,0.3nm,0.3s								
SSB	**Saint Sauveur**	**11.60**	**294**	Pn		**Pn**	**17 08 44.9**	**-2.6**
NACGM	**Naroch**	**14.23**	**17**	*e*P		**Pn**	**17 09 24.1**	**+0.9**
	comp=E,12nm,0.8s,baz=203								
PABE	**Paberze**	**14.30**	**10**			**P**	**17 09 31.8**	**+0.4**
MMAI	**Mount Meron Ar**	**15.14**	**119**	Pn		**Pn**	**17 09 36.0**	**+0.3**
	comp=E,1.4nm,0.3s,baz=302,slow=9.6,SNR=6.5								
	comp=E,0.4nm,0.2s								
HFS	**Hagfors**	**19.02**	**351**	P		**P**	**17 10 23.1**	**-0.3**
	comp=E,0.5nm,0.3s,baz=156,slow=11,SNR=17								
HFS				LR		LR	17 17 52.2		
	comp=E,72nm,18.6s,baz=197,slow=38								
	comp=E,3.8nm,0.6s								
NC602	**NORSAR Array S**	**19.89**	**348**	P		**P**	**17 10 33.0**	**+0.1**
NC602				IAmb		IAmb	17 11 00.4		
	comp=E,14nm,1.4s								
NC405	**NORSAR Array S**	**20.22**	**349**	P		**P**	**17 10 36.8**	**+0.2**
NB201	**NORSAR Array S**	**20.23**	**348**	P		**P**	**17 10 36.2**	**-0.4**
NB201				IAmb		IAmb	17 10 53.7		
	comp=E,31nm,1.4s								
NB2	**NORSAR Subarra**	**20.23**	**348**	P		**P**	**17 10 35.9**	**-0.8**
	comp=E,3.1nm,1.1s,baz=167,slow=11								
NOA	**NORSAR Array B**	**20.23**	**348**	P		**P**	**17 10 36.3**	**-0.4**
	comp=E,1.1nm,0.8s,baz=154,slow=10,SNR=8.1								
NOA				LR		LR	17 19 42.5		
	comp=E,64nm,18.9s,baz=170,slow=41								
	comp=E,1.1nm,0.8s								
FINES	**FINESS Array B**	**20.35**	**9**	P		**P**	**17 10 37.4**	**-0.6**
	comp=E,5.2nm,0.4s,baz=185,slow=9.4,SNR=59								
FINES				LR		LR	17 19 35.0		
	comp=E,131nm,18.1s,baz=225,slow=40								
	comp=E,2.2nm,0.4s								
FINES	**FINESS Array B**	**20.35**	**9**			**P**	**17 10 36.8**	**-1.2**
FIA1	**FINESS Array S**	**20.36**	**9**	P		**P**	**17 10 36.9**	**-1.1**
EKA	**Eskdalemuir Ar**	**20.37**	**321**	P		**P**	**17 10 38.4**	**+0.2**
	comp=E,0.5nm,0.4s,baz=111,slow=9.7,SNR=6.2								
	comp=E,0.5nm,0.4s								
ESK	**Eskdalemuir**	**20.38**	**320**	P		**P**	**17 10 38.2**	**-0.1**
ESK				IAmb		IAmb	17 10 56.9		
	comp=E,30nm,1.4s								
NC303	**NORSAR Array S**	**20.38**	**349**	P		**P**	**17 10 38.0**	**-0.3**
NC303				IAmb		IAmb	17 10 50.2		
	comp=E,32nm,1.5s								
EKB	**Eskdalemuir**	**20.38**	**321**	P		**P**	**17 10 37.2**	**-1.2**
NC204	**NORSAR Array S**	**20.52**	**348**	P		**P**	**17 10 39.6**	**-0.3**
NC204				IAmb		IAmb	17 10 41.2		
	comp=E,13nm,1.1s								
MDT	**Midelt**	**21.11**	**254**	P		**P**	**17 10 47.5**	**+0.9**
	comp=E,2.0nm,0.6s,baz=87,slow=12,SNR=4.2								
	comp=E,2.0nm,0.6s								
BELG	**Belogornoye**	**21.87**	**51**	P		**P**	**17 10 54.6**	**+0.3**
	comp=E,14nm,0.9s,baz=220,slow=4.8,SNR=7.1								
	comp=E,14nm,0.9s								
ARCES	**ARCESS Array B**	**28.27**	**4**	P		**P**	**17 11 53.3**	**-1.4**
	comp=E,1.0nm,0.4s,baz=195,slow=8.8,SNR=12								
ARCES				LR		LR	17 24 12.9		
	comp=E,88nm,18.7s,baz=142,slow=39								
	comp=E,1.0nm,0.4s								
ARCES	**ARCESS Array B**	**28.27**	**4**	P		**P**	**17 11 52.9**	**-1.8**
AB31	**Akbulak array**	**29.09**	**61**	P		**P**	**17 12 01.0**	**-1.1**
ABKAR	**Akbulak array**	**29.09**	**61**	P		**P**	**17 12 00.5**	**-1.6**
TORD	**Torodi Ar. Bea**	**32.28**	**214**	P		**P**	**17 12 31.6**	**+1.0**
	comp=E,0.9nm,0.8s,baz=33,slow=11,SNR=5.7								
	comp=E,0.9nm,0.8s								
BORK	**Borovoye**	**35.56**	**53**	P		**P**	**17 12 57.8**	**-1.0**
BORK				IAmb		IAmb	17 13 01.0		
	comp=E,1.8nm,0.6s								
BVAR	**Borovoye Array**	**35.61**	**53**	P		**P**	**17 12 58.9**	**-0.2**
	comp=E,1.3nm,0.7s,baz=294,slow=6.7,SNR=5.1								
	comp=E,1.3nm,0.7s								
KURBB	**Kurchatov Arra**	**40.89**	**56**	P		**P**	**17 13 44.5**	**+0.8**
	comp=E,0.2nm,0.3s,baz=290,slow=9.8,SNR=2.2								
	comp=E,0.2nm,0.3s								
KURK	**Kurchatov**	**40.93**	**56**	P		**P**	**17 13 44.5**	**+0.5**
KURK	**Kurchatov**	**40.93**	**56**	IAmb		IAmb	17 13 52.7		
	comp=E,1.9nm,1.1s								
MAKZ	**Makanchi**	**44.02**	**61**	P		**P**	**17 14 08.9**	**-0.3**
ZAA0	**Zalesovo Array**	**44.05**	**51**	P		**P**	**17 14 09.4**	**0.0**
ZALV	**Zalesovo Beam**	**44.05**	**51**	P		**P**	**17 14 09.2**	**-0.1**
	comp=E,5.0nm,0.4s,baz=281,slow=8.5,SNR=14								
	comp=E,2.5nm,0.4s								
ZALV	**Zalesovo Beam**	**44.05**	**51**	P		**P**	**17 14 08.9**	**-0.4**
MKAR	**Makanchi Array**	**44.23**	**61**	P		**P**	**17 14 10.9**	**+0.1**
	comp=E,0.7nm,0.3s,baz=279,slow=7.6,SNR=22								
	comp=E,0.7nm,0.3s								
MKAR	**Makanchi Array**	**44.23**	**61**	P		**P**	**17 14 10.1**	**-0.7**
SCHQ	**Schefferville**	**55.58**	**316**	P		**P**	**17 15 38.3**	**+1.3**
	comp=E,2.1nm,0.6s,baz=82,slow=15,SNR=1.3								
	comp=E,2.1nm,0.6s								
SONM	**Songino Array**	**58.92**	**52**	P		**P**	**17 16 00.6**	**-0.2**
	comp=E,1.1nm,0.8s,baz=286,slow=7.2,SNR=7.0								
	comp=E,1.1nm,0.8s								
YAK	**Yakutsk**	**62.57**	**30**	P		**P**	**17 16 25.7**	**+0.4**
C27K	**Jago River**	**68.51**	**354**	P		**P**	**17 17 03.4**	**-0.2**
F31M	**Tsiigehtchic**	**69.52**	**349**	P		**P**	**17 17 09.3**	**-0.4**
F31M				IAmb		IAmb	17 17 16.7		
	comp=E,2.9nm,0.7s								
D23K	**Nanushuk River**	**69.62**	**356**	P		**P**	**17 17 10.4**	**0.0**
D23K				IAmb		IAmb	17 17 19.1		
	comp=E,1.3nm,0.8s								
CMAR	**Chiang Mai Arr**	**70.14**	**83**	P		**P**	**17 17 13.2**	**-1.2**
	comp=E,2.0nm,0.4s,baz=308,slow=6.5,SNR=2.2								
	comp=E,2.0nm,0.4s								
BMAR	**Burnt Mountain**	**70.74**	**354**	P		**P**	**17 17 17.1**	**-0.3**
H29M	**Whitestone**	**71.28**	**351**	P		**P**	**17 17 20.4**	**-0.3**
H29M				IAmb		IAmb	17 17 33.0		
	comp=E,4.9nm,1.2s								
J30M	**Hart River**	**72.58**	**349**	P		**P**	**17 17 29.5**	**+0.9**
J30M				IAmb		IAmb	17 18 00.5		
	comp=E,6.6nm,1.5s								

PRU ***26*** *17:09:50.4, 41.°11N×20.°03E, h10km, M4.4*
IDC ***26*** *17:09:54.1±1.6, 41.°56N×19.°42E, h0km, mb3.7/9, mbtmp3.8/13, ML2.8/2, Error ellipse: s-maj=23.1km s-min=14.2km az=29.0*
NEIC ***26*** *17:09:56.0±2.5, 41.°50N±0.°03×19.°49E±0.°06, h10km±1km, mb4.4/6, Error ellipse: s-maj=8.2km s-min=5.7km az=261.0*
TIR ***26*** *17:09:56.8, 41.°62N×19.°61E, h30km±2km, Md3.1/10, Ml3.4/7*
THE ***26*** *17:09:57.7, 42.°N±5.°×2.°0E±.°, h10km, M3.2/8, MLh3.2/8*
PDG ***26*** *17:09:58.9±0.3, 41.°62N×19.°61E, h11km±1km, MD3.4/9, ML3.3/12, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*

ISC 26 17:09:56.5±0.9, 41.°56N±0.°02×19.°52E±0.°02, h16km±7km, n133, σ1§60/173, mb4.1/8, 25C-15D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
TIR	**Tirane**	**0.33**	**129**	Pg		**Pg**	**17 10 03.5**	**0.0**
TIR				Sg		**Sg**	**17 10 07.4**	**-0.8**
TIR				AML		AML	17 10 08.9	
	17nm,0.4s							
ULC	**Ulcinj**	**0.46**	**333**	⇓*i*Pg		**Pb**	**17 10 06.0**	**-0.2**
ULC				*i* Sg		**Sb**	**17 10 12.4**	**-0.4**
SDA	**Shkodra**	**0.50**	**358**	Pg		**Pb**	**17 10 06.4**	**-0.4**
SDA				Sg		**Sb**	**17 10 13.7**	**-0.2**
SDA				AMd			17 11 05.9	
DRME	**Dracevica, Mon**	**0.68**	**338**	⇑*i*Pg		**Pb**	**17 10 10.0**	**0.0**
DRME				*i* Sg		**Sb**	**17 10 19.9**	**+0.7**
PHP	**Peshkopia**	**0.70**	**79**	Pg		**Pg**	**17 10 08.6**	**-1.7**
PHP				Sg		**Sg**	**17 10 17.8**	**-1.8**
PHP				AML		AML	17 10 28.0	
	8.4nm,0.7s							
PHP				AMd			17 10 58.5	
PHP	**Peshkopia**	**0.70**	**79**	P		**Pg**	**17 10 09.8**	**-0.4**
PHP				S		**Sb**	**17 10 20.9**	**+1.1**
BUM	**Brajici-Budva**	**0.88**	**328**	⇓*i*Pg		**Pn**	**17 10 14.5**	**+0.2**
BUM				*i* Sg		**Sn**	**17 10 26.9**	**+0.1**
PDG	**Podgorica**	**0.90**	**347**	Pg		**Pb**	**17 10 13.7**	**0.0**
PDG				Sg		**Sn**	**17 10 29.0**	**+2.0**
PDG				AMd			17 11 21.0	
PDG	**Podgorica**	**0.90**	**347**			**Pb**	**17 10 13.8**	**0.0**
PDG				Sn		**Sn**	**17 10 29.2**	**+2.1**
PDG	**Podgorica**	**0.90**	**347**	⇑*i*Pg		**Pn**	**17 10 13.8**	**-0.6**
PDG				*i* Sg		**Sn**	**17 10 27.0**	**0.0**
VLO	**Vlora**	**1.09**	**181**	Pg		**Pg**	**17 10 18.2**	**+0.7**
VLO				Sg		**Sn**	**17 10 32.8**	**+1.1**
VLO				AML		AML	17 10 39.3	
	12nm,0.5s							
VLO				AMd			17 11 33.8	
VLO	**Vlora**	**1.09**	**181**	P		**Pg**	**17 10 18.7**	**+1.1**
VLO				S		**Sn**	**17 10 36.6**	**+4.9**
CEME	**Cevo**	**1.09**	**336**	⇓*i*Pg		**Pn**	**17 10 17.8**	**+0.6**
CEME				*i* Sg		**Sn**	**17 10 34.1**	**+2.2**
PVY	**Plav**	**1.09**	**17**	⇑*i*Pg		**Pb**	**17 10 16.5**	**-0.5**
PVY				*i* Sg		**Sn**	**17 10 32.2**	**+0.2**
HCY	**Herceg Novi**	**1.18**	**320**	⇓*i*Pg		**Pg**	**17 10 20.0**	**+0.8**
HCY				*i* Sg		**Sn**	**17 10 37.2**	**+3.2**
NKME	**Niksic**	**1.28**	**341**	⇓*i*Pg		**Pg**	**17 10 21.5**	**+0.2**
NKME				*i* Sg		**Sg**	**17 10 39.9**	**+1.9**
KOME	**Kolasin**	**1.29**	**360**	⇑*i*Pg		**Pg**	**17 10 20.7**	**-0.8**
KOME				*i* Sg		**Sg**	**17 10 39.6**	**+1.2**
KBN	**Korca**	**1.33**	**134**	Pg		**Pb**	**17 10 21.4**	**+0.2**
KBN				Sg		**Sg**	**17 10 39.8**	**+0.1**
KBN				AML		AML	17 10 54.0	
	2.2nm,0.8s							
KBN				AMd			17 11 35.5	
KBN	**Korca**	**1.33**	**134**	P		**Pg**	**17 10 22.7**	**+0.4**
KBN				S		**Sg**	**17 10 42.1**	**+2.4**
IVA	**Berane**	**1.34**	**12**	⇓*i*Pg		**Pb**	**17 10 21.4**	**0.0**
IVA				*i* Sg		**Sg**	**17 10 42.0**	**+2.0**
BRY	**Bratogost**	**1.53**	**332**	⇑*i*Pg		**Pg**	**17 10 25.7**	**-0.3**
BRY				*i* Sg		**Sg**	**17 10 48.3**	**+2.4**
NEST	**Nestorio**	**1.62**	**134**	Pn		**Pg**	**17 10 27.3**	**-0.5**
NEST				AMd			17 11 51.0	
NEST	**Nestorio**	**1.62**	**134**	P		**Pg**	**17 10 27.5**	**-0.3**
NEST				S		**Sg**	**17 10 49.3**	**+0.4**
UPM	**Unac-Piva**	**1.71**	**345**	⇑*i*Pn		**Pg**	**17 10 28.4**	**-1.0**
UPM				*i* Sn		**Sg**	**17 10 52.7**	**+1.1**
PLE	**Pljevlja**	**1.78**	**357**	⇓*i*Pn		**Pg**	**17 10 29.8**	**-0.9**
PLE				*i* Sn		**Sg**	**17 10 53.9**	**+0.1**
PENT	**Pentalofos**	**1.83**	**137**	P		**Pb**	**17 10 30.4**	**+0.7**
PENT				S		**Sg**	**17 10 55.7**	**+0.2**
KEK	**Kerkira**	**1.85**	**173**	Pn		**Pg**	**17 10 33.5**	**+1.4**
KEK				Sn		**Sg**	**17 10 55.8**	**-0.3**
KEK				AML		AML	17 11 03.8	
	3µm,0.3s							
KEK				AMd			17 12 04.3	
KEK	**Kerkira**	**1.85**	**173**	P		**Pg**	**17 10 30.9**	**-1.2**
KEK				S		**Sg**	**17 10 56.2**	**0.0**
NOCI	**Noci**	**2.01**	**248**	Pn		**Pb**	**17 10 31.0**	**-1.7**
NOCI				Sn		**Sg**	**17 11 00.2**	**-1.0**
NOCI				AML		AML	17 11 09.8	
	4.0nm,0.5s							
NOCI				AMd			17 11 56.0	
KZN	**Kozani**	**2.11**	**125**	P		**Pb**	**17 10 34.0**	**-0.5**
KZN				S		**Sb**	**17 11 01.5**	**+1.0**
IGT	**Igoumenitsa**	**2.11**	**163**	Pg		**Pb**	**17 10 33.7**	**-0.7**
IGT				Sg		**Sb**	**17 11 01.4**	**+1.0**
IGT				AMd			17 12 04.3	
IGT	**Igoumenitsa**	**2.11**	**163**	P		**Pb**	**17 10 33.3**	**-1.2**
IGT				S		**Sb**	**17 11 02.2**	**+1.7**
KNT	**Kendrikon**	**2.57**	**98**	P		**Pn**	**17 10 39.5**	**+2.0**
KNT				S		**Sb**	**17 11 11.6**	**-2.0**
BOVS	**Bovan**	**2.63**	**37**	⇓P		**Pn**	**17 10 40.2**	**+1.9**
LIT	**Litokhoron**	**2.68**	**122**			**Pn**	**17 10 40.3**	**+1.3**
SGRT	**San Giovanni R**	**2.84**	**275**	Pn		**Pn**	**17 10 40.6**	**-0.6**
TIP	**Timpagrande**	**3.18**	**223**			**Pn**	**17 10 46.0**	**+0.1**
TIP				Sn		**Sn**	**17 11 22.4**	**-1.0**
TIP	**Timpagrande**	**3.18**	**223**	⇑P		**Pn**	**17 10 46.3**	**+0.4**
CUC	**Castrocucco**	**3.22**	**242**			**Pn**	**17 10 47.4**	**+0.9**
MDVR	**Moldovita**	**3.60**	**26**	⇑P		**Pn**	**17 10 53.1**	**+1.4**
HERR	**Herculane**	**3.94**	**32**	⇓P		**Pn**	**17 10 58.4**	**+2.1**
SRE	**Strehaia**	**4.11**	**40**	⇑P		**Pn**	**17 11 01.0**	**+2.4**
CEL	**Celeste**	**4.32**	**221**	Pn		**Pn**	**17 11 01.2**	**-0.3**
CEL				Sn		**Sn**	**17 11 48.4**	**-3.1**
BZS	**Buzias**	**4.33**	**20**	⇓P		**Pn**	**17 11 03.1**	**+1.4**
GZR	**Gura Zlata**	**4.51**	**31**	⇓P		**Pn**	**17 11 06.7**	**+2.5**
RDO	**Rodhopi**	**4.55**	**93**	Pn		**Pn**	**17 11 05.5**	**+0.9**
RDO				Sn		**Sn**	**17 11 56.6**	**-0.5**
CAMP	**Campotosto**	**4.66**	**284**			**Pn**	**17 11 07.5**	**+1.2**
MORH	**Mrgy, Hungar**	**4.70**	**353**	⇑P		**Pn**	**17 11 08.4**	**+1.7**
ITM	**Ithomi**	**4.75**	**156**	Pn		**Pn**	**17 11 08.1**	**+0.6**
GUMA	**Gualdo di Mace**	**4.83**	**290**	Pn		**Pn**	**17 11 07.9**	**-0.6**
ELND	**Elena**	**4.91**	**72**	⇑P		**Pn**	**17 11 12.7**	**+3.0**
NRCA	**Norcia**	**4.93**	**287**	Pn		**Pn**	**17 11 11.6**	**+1.6**
SIRR	**Siria**	**4.96**	**17**	⇑P		**Pn**	**17 11 19.4**	**+1.6**
LOT	**Lotru**	**4.97**	**37**	⇑P		**Pn**	**17 11 13.0**	**+2.5**
HUMR	**Humele**	**4.98**	**52**	⇑P		**Pn**	**17 11 13.0**	**+2.4**
FDMO	**Fiordimonte**	**5.00**	**289**			**Pn**	**17 11 12.2**	**+1.3**
CESX	**Cesi**	**5.27**	**284**			**Pn**	**17 11 15.9**	**+1.3**
BEHE	**Becsehely**	**5.30**	**339**	Pn		**Pn**	**17 11 17.0**	**+2.1**
ARR	**Arges**	**5.32**	**43**	⇓P		**Pn**	**17 11 18.1**	**+2.8**
MTUR	**Matau**	**5.45**	**46**	⇑P		**Pn**	**17 11 19.6**	**+2.4**
MURB	**Monte Urbino**	**5.45**	**

NEIC ***26*** *17:16:59.3±1.4, 18°.1S±0°.2×178°.4W±0°.2, h541km±18km, mb4.2/20, Error ellipse: s-maj=38.5km s-min=25.6km az=220.0*

IDC ***26*** *17:17:11.4±11.0, 18°.14S×179°.13W, h653km±106km, mb3.1/5, mbtmp4.2/5, Error ellipse: s-maj=106.2km s-min=32.1km az=49.0*

ISC 26 17:17:01.1±2.4, 18°.1S±0°.2×178°.7W±0°.3, h550km, n27, σ1§07/27, mb4.2/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.15**	**276**	P	**P**	**17 18 16.7**	**-0.5**
QRZ	**Quartz Range**	**23.88**	**197**	P	**P**	**17 21 30.4**	**-1.3**
NNZ	**Nelson**	**24.02**	**195**	P	**P**	**17 21 32.4**	**-0.6**
DSZ	**Denniston Nort**	**24.93**	**197**	P	**P**	**17 21 39.7**	**-1.4**
LBZ	**Lake Benmore**	**27.82**	**197**	P	**P**	**17 22 03.9**	**-2.6**
ARMA	**Armidale**	**29.63**	**240**	P	**P**	**17 22 23.9**	**+1.4**
CTAO	**Charters Tower**	**33.18**	**261**	P	**P**	**17 22 52.5**	**-0.3**
CTAO				IAmb	IAmb	17 23 15.2	
	comp=Z,13nm,1.5s						
PMG	**Port Moresby**	**34.26**	**280**	P	**P**	**17 23 02.9**	**+1.0**
	comp=Z,6.4nm,0.8s,baz=24,slow=12,SNR=2.5						
	comp=Z,6.4nm,0.8s						
TOO	**Toolangi**	**36.86**	**231**	P	**P**	**17 23 24.5**	**+1.3**
COEN	**Coen**	**36.87**	**271**	P	**P**	**17 23 22.5**	**-1.1**
COEN				IAmb	IAmb	17 23 27.2	
	comp=Z,9.5nm,1.2s						
STKA	**Stephens Creek**	**38.32**	**241**	P	**P**	**17 23 35.8**	**+0.6**
	comp=Z,2.5nm,0.5s,baz=96,slow=10,SNR=5.0						
	comp=Z,2.5nm,0.5s						
STKA	**Stephens Creek**	**38.32**	**241**	IAmb	IAmb	17 24 04.5	
	comp=Z,4.3nm,0.9s						
INKA	**Innaminka**	**38.45**	**248**	P	**P**	**17 23 37.7**	**+1.4**
BBOO	**Buckleboo**	**43.10**	**241**	P	**P**	**17 24 13.8**	**+0.6**
WR8	**Warramunga Arr**	**44.21**	**260**	P	**P**	**17 24 21.8**	**-0.2**
WB0	**Warramunga Arr**	**44.33**	**260**	P	**P**	**17 24 22.9**	**0.0**
WB0				IAmb	IAmb	17 24 48.3	
	comp=Z,7.2nm,1.3s						
WRA	**Warramunga Arr**	**44.36**	**260**	P	**P**	**17 24 23.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=96,slow=7.0,SNR=10						
WRA				PcP	**PcP**	**17 25 54.1**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=96,slow=3.0,SNR=2.1						
	comp=Z,0.5nm,0.6s						
AS31	**Alice Springs**	**44.50**	**254**	P	**P**	**17 24 25.1**	**+0.8**
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**17 24 25.1**	**+0.8**
	comp=Z,5.3nm,0.6s,baz=88,slow=8.3,SNR=158						
ASAR				PcP	**PcP**	**17 25 54.5**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=94,slow=3.6,SNR=4.1						
	comp=Z,5.3nm,0.6s						
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**17 24 24.4**	**+0.1**
MTN	**Manton Dam**	**48.55**	**269**	P	**P**	**17 24 54.7**	**-0.2**
MTN				IAmb	IAmb	17 24 55.2	
	comp=Z,7.5nm,1.1s						
FORT	**Forrest**	**49.70**	**245**	P	**P**	**17 25 03.2**	**0.0**
FORT				IAmb	IAmb	17 25 39.1	
	comp=Z,8.8nm,1.1s						
KNRA	**Kununurra**	**50.23**	**264**	P	**P**	**17 25 07.2**	**0.0**
KNRA				IAmb	IAmb	17 25 29.4	
	comp=Z,13nm,1.3s						
TNTI	**Ternate**	**56.27**	**284**	P	**P**	**17 25 50.5**	**+0.3**
TNTI				IAmb	IAmb	17 26 31.6	
	comp=Z,23nm,1.4s						
GIRL	**Giralia**	**62.61**	**253**	P	**P**	**17 26 31.7**	**-0.6**
QSPA	**South Pole Qui**	**71.95**	**180**	P	**P**	**17 27 30.8**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=78,slow=5.0,SNR=14						
	comp=Z,1.2nm,0.6s						
QSPA	**South Pole Qui**	**71.95**	**180**	IAmb	IAmb	17 27 34.9	
	comp=Z,2.6nm,1.1s						

GII ***26*** *17:19:08.0±0.0, 41°.51N×19°.36E, h5km, confirmed*

NAO ***26*** *17:19:10.5, 40°.89N×18°.69E, h33km, MB3.8*

IDC ***26*** *17:19:11.8±0.5, 41°.52N×19°.42E, h0km, mb4.3/23, mbtmp4.3/35, ML3.7/8, MS3.8/51, Error ellipse: s-maj=10.3km s-min=8.9km az=38.0*

MOS ***26*** *17:19:12.0±1.1, 41°.43N×19°.32E, h18km, mb4.9/15, Error ellipse: s-maj=5.4km s-min=3.3km az=67.8*

PRU ***26*** *17:19:12.6, 41°.06N×18°.96E, h10km, M4.7*

NEIC ***26*** *17:19:13.8±1.8, 41°.54N±0°.04×19°.48E±0°.07, h10km±1km, mb4.7/57, Error ellipse: s-maj=8.7km s-min=7.5km az=258.0*

SKO ***26*** *17:19:13.6, 41°.63N×19°.35E, h0km, ML4.6*

RHSSO ***26*** *17:19:14.9±0.9, 41°.51N×19°.48E, h6km±4km, ML4.7/5*

THE ***26*** *17:19:14.3, 42°.N±8°×1°.9E±°, h23km±18km, M4.5/10, MLh4.5/10*

TIR ***26*** *17:19:14.8, 41°.62N×19°.40E, h45km±2km, Ml4.9/6*

MED_RC ***26*** *17:19:14.0±0.4, 41°.54N×19°.45E, h10km, MW4.5/23, Moment Tensor Solution.Mantle waves: s23,c29; Duration: 1§1 Moment tensor: Scale 10^15Nm; Mrr1.08±.32; Mθθ1.28±.32; Mϕϕ-2.36±.21; Mrθ3.32±.80; Mθϕ0.90±.27; Mϕr-7.46±.58; Best double couple: M₀8.39000×10^15 NP1:ϕs17.00000°, δ8.00000°, λ131.00000°. NP2:ϕs155.00000°, δ84.00000°, λ85.00000°. Principal axes: T 7.7100, Plg51.0000°, Azm59.0000°; N 1.3500, Plg5.0000°, Azm156.0000°; P -9.0600, Plg39.0000°, Azm250.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ROM ***26*** *17:19:14.8±0.1, 41°.520N±0°.004×19°.477E±0°.007, h21km, ML4.6/296 Error ellipse: s-maj=0.5km s-min=0.4km az=240.0*

PDG ***26*** *17:19:14.8±0.6, 41°.48N×19°.42E, h15km±1km, MD4.5/12, ML4.4/12, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*

BEO ***26*** *17:19:15.6±0.5, 41°.51N×19°.53E, h11km±2km, ML4.3/15*

MCSM ***26*** *17:19:15.2±0.6, 41°.N±3°×1°.9E±°, h10km±4km, mb4.8, mB5.2, MLv4.8, Mw(mB)4.6*

ISC 26 17:19:15.4±0.3, 41°.58N±0°.02×19°.58E±0°.02, h22km±3km, n683, σ2§26/739, mb4.7/61, MS3.9/44, 78C-44D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**137**	Pg	**Pb**	**17 19 22.1**	**-0.3**
TIR				Sg	**Sb**	**17 19 26.4**	**-0.8**
TIR				AML	AML	17 19 27.1	
	371nm,0.3s						
TIR				AML	AML	17 19 27.3	
	406nm,0.4s						
TIR	**Tirane**	**0.32**	**137**	⇓*i*Pg	**Pb**	**17 19 22.1**	**-0.3**
TIR				*i* Sg	**Sb**	**17 19 28.1**	**+0.9**
TIR	**Tirane**	**0.32**	**137**	P	**Pb**	**17 19 22.1**	**-0.3**
TIR				S	**Sb**	**17 19 27.8**	**+0.6**
TIR				AML	AML		
TIR				AML	AML		
ULC	**Ulcinj**	**0.46**	**327**	⇑*i*Pg	**Pb**	**17 19 24.3**	**-0.5**
ULC				*i* Sg	**Sb**	**17 19 31.2**	**0.0**
SDA	**Shkodra**	**0.48**	**353**	Pg	**Pb**	**17 19 25.0**	**-0.1**
SDA				Sg	**Sn**	**17 19 33.5**	**-1.1**
PHP	**Peshkopia**	**0.66**	**80**	Pg	**Pb**	**17 19 28.4**	**+0.1**
PHP				Sg	**Sn**	**17 19 38.9**	**-0.3**
PHP				AML	AML	17 19 44.2	
	161nm,0.8s						
PHP	**Peshkopia**	**0.66**	**80**	P	**Pn**	**17 19 29.2**	**-0.2**
PHP				S	**Sn**	**17 19 41.2**	**+2.0**
DRME	**Dracevica, Mon**	**0.68**	**334**	*e*Pg	**Pb**	**17 19 28.5**	**0.0**
DRME	**Dracevica, Mon**	**0.68**	**334**	⇓*i*Pg	**Pb**	**17 19 28.0**	**-0.5**
DRME				*i* Sg	**Sn**	**17 19 38.5**	**-1.1**
BUM	**Brajici-Budva**	**0.88**	**325**	⇑*i*Pg	**Pb**	**17 19 31.8**	**-0.3**
BUM				*i* Sg	**Sn**	**17 19 44.8**	**0.0**
PDG	**Podgorica**	**0.89**	**344**	Pg	**Pb**	**17 19 31.9**	**-0.1**
PDG				Sg	**Sn**	**17 19 46.5**	**+1.8**
PDG	**Podgorica**	**0.89**	**344**		**Pb**	**17 19 31.4**	**-0.6**
PDG	**Podgorica**	**0.89**	**344**	⇓P	**Pb**	**17 19 32.0**	**-0.1**
PDG				⇓S	**Sn**	**17 19 46.6**	**+2.0**
PDG	**Podgorica**	**0.89**	**344**	*e*Pg	**Pb**	**17 19 32.2**	**+0.1**
PDG				*e*Sg	**Sn**	**17 19 47.7**	**+3.0**
PDG	**Podgorica**	**0.89**	**344**	P	**Pb**	**17 19 31.7**	**-0.3**
PDG				S	**Sn**	**17 19 45.0**	**+0.3**
PDG				AML	AML		
	comp=E,19750μm,0.5s						
PDG				AML	AML		
	comp=N,20150μm,1.3s						
PDG				AML	AML		
	comp=E,20050μm,0.5s						
PDG				AML	AML		
	comp=N,20350μm,1.3s						
PDG				AML	AML		
	comp=N,20350μm,0.7s						
PDG				AML	AML		
	comp=N,20150μm,0.7s						
PDG	**Podgorica**	**0.89**	**344**	⇓*i*Pg	**Pb**	**17 19 31.7**	**-0.3**
PDG				*i* Sg	**Sn**	**17 19 46.2**	**+1.5**
OHR	**Ohrid**	**1.03**	**116**	*i* Pg	**Pb**	**17 19 35.4**	**+0.8**
OHR				*i* Sg	**Sn**	**17 19 53.3**	**+4.9**
OHR				*e*Lg	Lg	17 19 53.5	
	comp=N,12μm,0.5s						
OHR				*e*Lg	Lg	17 19 54.6	
	comp=E,8μm,0.4s						
PVY	**Plav**	**1.05**	**16**	*e*Pg	**Pb**	**17 19 35.3**	**+0.2**
PVY				*e*Sg	**Sn**	**17 19 52.9**	**+3.8**
PVY	**Plav**	**1.05**	**16**	⇓*i*Pg	**Pn**	**17 19 34.8**	**-0.2**
PVY				*i* Sg	**Sn**	**17 19 53.9**	**+4.8**
CEME	**Cevo**	**1.08**	**333**	⇓*i*Pg	**Pb**	**17 19 35.5**	**0.0**
CEME				*i* Sg	**Sn**	**17 19 53.3**	**+3.5**
VLO	**Vlora**	**1.11**	**183**	Pg	**Pb**	**17 19 36.5**	**+0.6**
VLO				Sg	**Sn**	**17 19 50.9**	**+0.7**
VLO				AML	AML	17 19 58.0	
	comp=E,111nm,0.7s						
VLO	**Vlora**	**1.11**	**183**	P	**Pb**	**17 19 38.2**	**+2.3**
VLO				S	**Sn**	**17 19 58.2**	**+8.0**
VLO	**Vlora**	**1.11**	**183**	P	**Pn**	**17 19 34.3**	**-1.3**
VLO				S	**Sb**	**17 19 48.6**	**-1.3**
VLO				AML	AML		
	comp=E,42650μm,0.5s						
VLO				AML	AML		
	comp=N,36100μm,0.7s						
HCY	**Herceg Novi**	**1.19**	**317**	⇑*i*Pg	**Pb**	**17 19 37.7**	**+0.5**
HCY				*i* Sg	**Sn**	**17 19 54.2**	**+2.1**
KOME	**Kolasin**	**1.27**	**358**	*e*Pg	**Pb**	**17 19 39.6**	**+0.9**
KOME				*e*Sg	**Sb**	**17 19 57.7**	**+3.0**
KOME	**Kolasin**	**1.27**	**358**	⇓*i*Pg	**Pb**	**17 19 39.1**	**+0.4**
KOME				*i* Sg	**Sb**	**17 20 00.2**	**+5.5**
NKME	**Niksic**	**1.27**	**339**	⇑*i*Pg	**Pb**	**17 19 39.1**	**+0.3**
NKME				*i* Sg	**Sb**	**17 19 58.9**	**+4.2**
BEY	**Berane**	**1.31**	**10**	*e*Pg	**Pb**	**17 19 40.1**	**+0.7**
BEY				*e*Sg	**Sb**	**17 20 00.6**	**+4.7**
IVA	**Berane**	**1.31**	**10**	⇓*i*Pg	**Pb**	**17 19 39.9**	**+0.5**
IVA				*i* Sg	**Sb**	**17 20 01.7**	**+5.8**
KBN	**Korca**	**1.32**	**136**	Pg	**Pb**	**17 19 40.1**	**+0.6**
KBN				Sg	**Sb**	**17 19 58.6**	**+2.6**
KBN	**Korca**	**1.32**	**136**	P	**Pb**	**17 19 40.9**	**+1.3**
KBN				S	**Sb**	**17 20 02.3**	**+6.2**
KBN	**Korca**	**1.32**	**136**	P	**Pb**	**17 19 39.4**	**-0.2**
KBN				S	**Sb**	**17 19 56.1**	**0.0**
SKO	**Skopje**	**1.45**	**74**	*i* Pg	**Pb**	**17 19 42.6**	**+0.9**
SKO				*i* Sg	**Sb**	**17 20 03.7**	**+4.1**
TREB	**Trebinje**	**1.46**	**322**	⇑*i*Pg	**Pb**	**17 19 41.2**	**-0.6**
TREB				*e*Sg	**Sb**	**17 20 01.6**	**+1.7**
BRY	**Bratogost**	**1.53**	**330**	⇓*i*Pg	**Pb**	**17 19 43.5**	**+0.3**
BRY				*i* Sg	**Sb**	**17 20 05.7**	**+3.5**
NEST	**Nestorio**	**1.61**	**136**	Pn	**Pb**	**17 19 45.6**	**+1.1**
NEST				Sn	**Sb**	**17 20 07.8**	**+3.4**
NEST				AML	AML	17 20 14.8	
	comp=N,20nm,1.0s						
NEST	**Nestorio**	**1.61**	**136**	P	**Pb**	**17 19 46.1**	**+1.6**
NEST				S	**Sb**	**17 20 09.9**	**+5.5**
MESG	**Mesagne**	**1.64**	**233**	P	**Pn**	**17 19 41.7**	**-1.1**
MESG				AML	AML		
	comp=E,23950μm,0.7s						
MESG				AML	AML		
	comp=N,21700μm,0.6s						
MESG				AML	AML		
	comp=E,23950μm,1.3s						
MESG				AML	AML		
	comp=N,21700μm,1.4s						
UPM	**Unac-Piva**	**1.70**	**343**	⇓*i*Pn	**Pb**	**17 19 46.3**	**+0.2**
UPM				*i* Sn	**Sb**	**17 20 09.9**	**+2.9**
SJES	**Sjenica**	**1.71**	**10**	*e*Pg	**Pb**	**17 19 47.7**	**+1.5**
SJES				*e*Sg	**Sb**	**17 20 11.7**	**+4.5**
KLINJ	**Klinje**	**1.75**	**336**	⇑*i*Pn	**Pb**	**17 19 46.0**	**-0.9**
KLINJ				*e*Sn	**Sb**	**17 20 09.6**	**+1.1**
PLE	**Pljevlja**	**1.76**	**356**	*e*Pg	**Pb**	**17 19 48.6**	**+1.6**
PLE				*e*Sg	**Sb**	**17 20 11.8**	**+3.2**
PLE	**Pljevlja**	**1.76**	**356**	⇓*i*Pn	**Pb**	**17 19 47.3**	**+0.3**
PLE				*i* Sn	**Sb**	**17 20 12.5**	**+3.9**
PENT	**Pentalofos**	**1.82**	**139**	P	**Pb**	**17 19 49.0**	**+0.9**
PENT				S	**Sb**	**17 20 15.3**	**+4.9**
KEK	**Kerkira**	**1.87**	**175**	P	**Pb**	**17 19 50.3**	**+1.4**
KEK				S	**Sb**	**17 20 16.5**	**+4.7**
KEK	**Kerkira**	**1.87**	**175**		**Pb**	**17 19 50.3**	**+1.4**
STON	**Ston**	**1.90**	**313**	P	**Pn**	**17 19 46.8**	**+0.3**
STON				AML	AML		
	comp=E,5155μm,0.4s						
STON				AML	AML		
	comp=N,5405μm,0.4s						
STON				AML	AML		
	comp=E,5155μm,1.6s						
STON				AML	AML		
	comp=N,5405μm,1.6s						
SELS	**Selova**	**2.00**	**34**	*e*Pn	**Pb**	**17 19 51.0**	**-0.1**
SELS				*e*Sn	**Sb**	**17 20 18.1**	**+2.6**
TAR1	**Taranto**	**2.03**	**240**	P	**Pn**	**17 19 46.9**	**-1.3**
TAR1				AML	AML		
	comp=N,11050μm,0.5s						
TAR1				AML	AML		
	comp=E,9470μm,0.5s						
IVAS	**Ivanjica**	**2.04**	**12**	*e*Pn	**Pb**	**17 19 51.1**	**-0.7**
IVAS				*e*Sn	**Sb**	**17 20 17.5**	**+0.7**
RUDO	**Rudo**	**2.04**	**356**	*e*Pn	**Pb**	**17 19 50.8**	**-1.0**
RUDO				*e*Sn	**Sb**	**17 20 16.8**	**0.0**
NOCI	**Noci**	**2.05**	**248**	Pn	**Pn**	**17 19 47.7**	**-0.9**
NOCI				AML	AML	17 20 29.9	
	comp=E,34nm,0.4s						
NOCI	**Noci**	**2.05**	**248**	P	**Pn**	**17 19 47.4**	**-1.2**
NOCI				AML	AML		
	comp=E,9355μm,0.5s						
NOCI				AML	AML		
	comp=N,11175μm,0.4s						
KZN	**Kozani**	**2.09**	**127**	P	**Pb**	**17 19 51.8**	**-0.8**
KZN				S	**Sb**	**17 20 22.0**	**+3.7**
IGT	**Igoumenitsa**	**2.12**	**164**	Pg	**Pn**	**17 19 51.0**	**+1.5**
IGT	**Igoumenitsa**	**2.12**	**164**	P	**Pb**	**17 19 52.4**	**-0.8**
IGT				S	**Sb**	**17 20 23.4**	**+4.4**
JAN	**Janina**	**2.15**	**153**	P	**Pb**	**17 19 52.7**	**-0.9**
JAN				S	**Sb**	**17 20 23.3**	**+3.4**
GOCS	**Kraljevo Serbi**	**2.20**	**25**	*e*Pn	**Pb**	**17 19 54.0**	**-0.6**
GOCS				*e*Sn	**Sb**	**17 20 22.5**	**+1.0**
VAY	**Valandovo**	**2.27**	**96**	*i* Pn	**Pb**	**17 19 54.2**	**-1.3**
VAY				*i* Sn	**Sb**	**17 20 23.2**	**+0.1**
VAY				*e*Lg	Lg	17 20 23.4	
	comp=N,1μm,0.8s						
VAY				*e*Lg	Lg	17 20 25.3	
	comp=E,2μm,0.9s						
BBLS	**Lazi&#263i**	**2.29**	**357**	*e*Pn	**Pb**	**17 19 55.2**	**-0.9**
BBLS				*e*Sn	**Sb**	**17 20 24.6**	**+0.6**
LTRZ	**Laterza**	**2.30**	**246**	P	**Pn**	**17 19 50.5**	**-1.6**
LTRZ				AML	AML		
	comp=E,6695μm,0.9s						
LTRZ				AML	AML		
	comp=N,6195μm,1.3s						
LTRZ				AML	AML		
	comp=E,6325μm,0.7s						
LTRZ				AML	AML		
	comp=N,208μm,0.3s						
LTRZ				AML	AML		
	comp=N,6195μm,0.7s						
LTRZ				AML	AML		
	comp=E,6695μm,1.1s						
AMUR	**Altamura**	**2.34**	**254**	⇓P	**Pn**	**17 19 51.8**	**-0.8**
AMUR				AML	AML		
	comp=E,5870μm,0.7s						
AMUR				AML	AML		
	comp=N,4510μm,0.8s						
AMUR				AML	AML		
	comp=N,4510μm,1.2s						
BOSS	**Bosilegrad**	**2.35**	**66**	*e*Pn	**Pb**	**17 19 55.6**	**-1.4**
BOSS				*e*Sn	**Sb**	**17 20 24.9**	**-0.7**
PRMD	**Pramanda**	**2.35**	**150**	P	**Pb**	**17 19 55.6**	**-1.5**
PRMD				S	**Sb**	**17 20 28.9**	**+3.2**
MATE	**Matera**	**2.36**	**248**	⇓P	**Pn**	**17 19 51.7**	**-1.1**
MATE	**Matera**	**2.36**	**248**	P	**Pn**	**17 19 51.3**	**-1.5**
MATE				AML	AML		
	comp=E,6080μm,0.6s						
MATE				AML	AML		
	comp=N,5180μm,0.5s						
MATE				AML	AML		
	comp=E,6080μm,1.4s						
GRUS	**Gruza**	**2.46**	**20**	*e*Pn	**Pb**	**17 19 56.8**	**-2.1**
KNT	**Kendrikon**	**2.54**	**98**	P	**Pn**	**17 19 57.4**	**+2.1**
KNT				S	**Sn**	**17 20 28.2**	**+2.8**
KNT	**Kendrikon**	**2.54**	**98**	*i* Pn	**Pn**	**17 19 57.8**	**+2.6**
MIGL	**Miglionico**	**2.56**	**249**	P	**Pn**	**17 19 54.4**	**-1.2**
MIGL				AML	AML		
	comp=E,22200μm,0.7s						
MIGL				AML	AML		
	comp=N,24650μm,0.7s						
BOVS	**Bovan**	**2.59**	**37**	⇑P	**Pb**	**17 19 58.8**	**-2.3**
BOVS	**Bovan**	**2.59**	**37**	*e*Pn	**Pb**	**17 19 58.8**	**-2.3**
BOVS				*e*Sn	**Sb**	**17 20 30.1**	**-2.3**
TRAN	**Tran**	**2.61**	**60**	P	**Pb**	**17 19 59.4**	**-2.0**
LIT	**Litokhoron**	**2.66**	**123**		**Pn**	**17 19 58.4**	**+1.4**
LIT	**Litokhoron**	**2.66**	**123**	P	**Pn**	**17 19 58.4**	**+1.4**
CRAC	**Cracо**	**2.67**	**244**	P	**Pn**	**17 19 56.1**	**-0.9**
CRAC				AML	AML		
	comp=E,8875μm,0.7s						
CRAC				AML	AML		
	comp=N,13000μm,0.7s						
CRAC				AML	AML		
	comp=E,8875μm,1.3s						
KKB	**Krupnik**	**2.67**	**83**	⇑*i*P	**Pb**	**17 20 00.2**	**-2.3**
KKB	**Krupnik**	**2.67**	**83**	*i* Pn	**Pb**	**17 20 00.4**	**-2.2**
TRUS	**Trudelj**	**2.71**	**13**	*e*Pn	**Pb**	**17 20 00.5**	**-2.7**
THE	**Thessaloniki**	**2.73**	**109**	*i* Pn	**Pn**	**17 20 00.0**	**+2.1**
THL	**Klokotos Trika**	**2.74**	**136**	P	**Pn**	**17 19 59.0**	**+1.0**
MSAG	**Monte S. Angel**	**2.75**	**274**	⇓P	**Pn**	**17 19 57.5**	**-0.7**
MSAG				AML	AML		
	comp=E,1905μm,0.7s						
MSAG				AML	AML		
	comp=N,2735μm,0.8s						
MSAG				AML	AML		
	comp=N,6495μm,0.8s						
MSAG				AML	AML		
	comp=E,4855μm,0.7s						
PALZ	**Palazzo San Ge**	**2.80**	**258**	P	**Pn**	**17 19 58.0**	**-0.9**
PALZ				AML	AML		
	comp=E,14800μm,1.0s						
PALZ				AML	AML		
	comp=N,15950μm,0.9s						
PALZ				AML	AML		
	comp=E,14800μm,1.0s						
PALZ				AML	AML		
	comp=N,15950μm,1.1s						
ORI	**Oriolo Calabro**	**2.81**	**239**	P	**Pn**	**17 19 57.7**	**-1.4**
ORI				AML	AML		
	comp=E,7960μm,0.6s						
ORI				AML	AML		
	comp=N,8480μm,0.5s						
ZAPS	**Zavoj**	**2.83**	**52**	*e*Pn	**Pb**	**17 20 02.7**	**-2.5**
ZAPS				*e*Sn	**Sb**	**17 20 36.3**	**-3.1**
ACER	**Acerenza**	**2.85**	**255**		**Pn**	**17 19 58.8**	**-0.8**
ACER	**Acerenza**	**2.85**	**255**	P	**Pn**	**17 19 58.8**	**-0.8**
ACER				AML	AML		
	comp=E,9920μm,0.6s						
ACER				AML	AML		
	comp=N,11220μm,0.8s						
ACER				AML	AML		
	comp=N,10755μm,0.8s						
ACER				AML	AML		
	comp=E,9620μm,0.6s						
CAPA	**Cerignola FG**	**2.86**	**263**	P	**Pn**	**17 19 58.6**	**-1.1**
CAPA				AML	AML		
	comp=E,6320μm,1.1s						
CAPA				AML	AML		
	comp=N,5960μm,0.9s						
CAPA				AML	AML		
	comp=E,12700μm,0.9s						
CAPA				AML	AML		
	comp=N,7925μm,0.8s						
CAPA				AML	AML		
	comp=N,5960μm,1.1s						
CAPA				AML	AML		
	comp=N,7925μm,1.2s						
CAPA				AML	AML		
	comp=E,12700μm,1.1s						
PTRP	**Pietrapertosa**	**2.86**	**250**	P	**Pn**	**17 19 58.9**	**-0.9**
PTRP				AML	AML		
	comp=E,8565μm,0.8s						
PTRP				AML	AML		
	comp=N,10070μm,0.8s						
PTRP				AML	AML		
	comp=E,8565μm,1.2s						
SGRT	**San Giovanni R**	**2.88**	**275**	Pn	**Pn**	**17 19 59.4**	**-0.6**
SGRT	**San Giovanni R**	**2.88**	**275**		**Pn**	**17 19 58.6**	**-1.3**
SGRT	**San Giovanni R**	**2.88**	**275**	P	**Pn**	**17 19 59.1**	**-0.9**
SGRT				AML	AML		
	comp=E,4265μm,0.7s						
SGRT				AML	AML		
	comp=N,2690μm,0.6s						
VTS	**Vitosha**	**2.92**	**68**	⇑*i*P	**Pn**	**17 20 03.7**	**+3.1**
SVIS	**Svilajnac**	**2.94**	**24**	*e*Pn	**Pb**	**17 20 04.2**	**-2.9**
SOH	**Sokhos**	**2.95**	**104**	*i* Pn	**Pn**	**17 20 03.4**	**+2.5**
TEKS	**Tekeris**	**2.97**	**359**	*e*Pn	**Pn**	**17 20 03.3**	**+2.1**
ZAGS	**Zajecar**	**2.97**	**40**	*e*Pn	**Pn**	**17 20 04.4**	**+3.2**
ZAGS				*e*Sn	**Sb**	**17 20 40.8**	**-2.6**
SALB	**San Lorenzo Be**	**2.98**	**236**	⇓P	**Pn**	**17 20 00.0**	**-1.5**
SALB				AML	AML		
	comp=E,3040μm,0.8s						
SALB				AML	AML		
	comp=N,2730μm,0.5s						
SCHR	**S. Chirico Rap**	**2.99**	**244**	P	**Pn**	**17 20 00.5**	**-1.1**
SCHR				AML	AML		
	comp=N,2210μm,0.6s						
SCHR				AML	AML		
	comp=E,2150μm,1.2s						
PLNA	**Plana**	**3.00**	**71**	⇑*i*P	**Pb**	**17 20 05.3**	**-3.0**
SOF	**Sofia**	**3.03**	**67**	P	**Pb**	**17 20 05.9**	**-2.7**
LADO	**San Nicola del**	**3.03**	**222**	P	**Pn**	**17 20 00.8**	**-1.2**
LADO				AML	AML		
	comp=N,191μm,0.5s						
LADO				AML	AML		
	comp=E,286μm,0.7s						
BLSH	**Balsha**	**3.03**	**64**	P	**Pb**	**17 20 05.6**	**-3.1**
VULT	**Monte Vulture**	**3.05**	**260**	P	**Pn**	**17 20 01.6**	**-0.8**
VULT				AML	AML		
	comp=N,7550μm,0.7s						
VULT				AML	AML		
	comp=N,7695μm,0.7s						
VULT				AML	AML		
	comp=N,5450μm,0.9s						
VULT				AML	AML		
	comp=E,5325μm,0.9s						
SRS	**Serrai**	**3.06**	**97**	*i* Pn	**Pn**	**17 20 05.2**	**+2.7**
BORS2	**Bor- Borsko je**	**3.09**	**35**	*e*Pn	**Pn**	**17 20 04.3**	**+1.5**
BORS2				*e*Sn	**Sn**	**17 20 41.9**	**+2.8**
MCEL	**Monticello**	**3.12**	**248**	P	**Pn**	**17 20 01.8**	**-1.5**
MCEL				AML	AML		
	comp=E,3425μm,0.9s						
MCEL				AML	AML		
	comp=N,4315μm,0.7s						
MCEL				AML	AML		
	comp=E,3470μm,0.9s						
MCEL				AML	AML		
	comp=N,4375μm,0.7s						
MMB	**Musomishta**	**3.13**	**89**	P	**Pn**	**17 20 06.3**	**+2.8**
MMB	**Mus

MMN					AML	AML					
	comp=E,3300µm,1.5s										
SLCN	**Sala Consilina**	**3.21**	**250**		P	**Pn**	**17 20 03.8**	**-0.8**			
SLCN					AML	AML					
	comp=E,5635µm,0.6s										
SLCN					AML	AML					
	comp=N,4275µm,0.8s										
SLCN					AML	AML					
	comp=E,6000µm,0.6s										
SLCN					AML	AML					
	comp=N,4745µm,0.7s										
CLT3	**Calitri**	**3.22**	**259**		P	**Pn**	**17 20 04.2**	**-0.4**			
CLT3					AML	AML					
	comp=E,8690µm,0.8s										
CLT3					AML	AML					
	comp=N,6090µm,0.9s										
CLT3	**Calitri**	**3.22**	**259**		AML	AML					
	comp=E,9410µm,0.8s										
CLT3					AML	AML					
	comp=N,6700µm,0.8s										
TIP	**Timpagrande**	**3.22**	**223**			**Pn**	**17 20 03.2**	**-1.5**			
TIP	**Timpagrande**	**3.22**	**223**	⇓	P	**Pn**	**17 20 03.6**	**-1.2**			
TIP	**Timpagrande**	**3.22**	**223**		P	**Pn**	**17 20 03.3**	**-1.5**			
TIP					AML	AML					
	comp=E,1540µm,1.0s										
TIP					AML	AML					
	comp=E,1525µm,0.9s										
TIP					AML	AML					
	comp=N,1180µm,1.4s										
TIP					AML	AML					
	comp=E,1525µm,1.1s										
TIP					AML	AML					
	comp=E,1540µm,1.0s										
TIP					AML	AML					
	comp=N,1180µm,0.6s										
TIP					AML	AML					
	comp=N,1174µm,0.8s										
TIP	**Timpagrande**	**3.22**	**223**		P	**Pn**	**17 20 03.7**	**-1.0**			
KUBS	**Kucevo**	**3.22**	**28**	*e*	Pn	**Pn**	**17 20 06.2**	**+1.5**			
KUBS				*e*	Sn	**Sn**	**17 20 44.0**	**+1.6**			
CUC	**Castrocucco**	**3.26**	**242**		Pn	**Pn**	**17 20 05.1**	**-0.2**			
CUC	**Castrocucco**	**3.26**	**242**			**Pn**	**17 20 04.5**	**-0.8**			
CUC	**Castrocucco**	**3.26**	**242**		P	**Pn**	**17 20 04.6**	**-0.8**			
CUC					AML	AML					
	comp=N,2290µm,0.7s										
CUC					AML	AML					
	comp=N,2320µm,0.7s										
CUC					AML	AML					
	comp=N,2320µm,1.3s										
CUC					AML	AML					
	comp=N,2290µm,1.3s										
CUC					AML	AML					
	comp=E,2910µm,0.6s										
CUC					AML	AML					
	comp=E,2990µm,0.6s										
SPS2	**Spezzano della**	**3.36**	**228**		P	**Pn**	**17 20 05.5**	**-1.2**			
SPS2					AML	AML					
	comp=E,982µm,0.4s										
SPS2					AML	AML					
	comp=N,890µm,0.5s										
MGR	**Morigerati**	**3.37**	**246**		P	**Pn**	**17 20 05.5**	**-1.3**			
MGR					AML	AML					
	comp=E,2470µm,0.8s										
MGR					AML	AML					
	comp=N,2210µm,1.0s										
MGR					AML	AML					
	comp=E,2285µm,0.8s										
MGR					AML	AML					
	comp=N,2765µm,0.9s										
CET2	**Cetraro**	**3.44**	**235**		P	**Pn**	**17 20 06.8**	**-0.9**			
CET2					AML	AML					
	comp=E,3035µm,0.8s										
CET2					AML	AML					
	comp=N,6970µm,0.8s										
CET2					AML	AML					
	comp=N,6970µm,1.2s										
CAR1	**CAROLEI**	**3.46**	**229**	⇑	P	**Pn**	**17 20 07.2**	**-0.8**			
CAR1					AML	AML					
	comp=E,3020µm,0.8s										
CAR1					AML	AML					
	comp=N,3620µm,0.6s										
CAR1					AML	AML					
	comp=N,3305µm,0.5s										
CAR1					AML	AML					
	comp=E,3510µm,0.7s										
VLS	**Valsamata**	**3.48**	**167**		P	**Pn**	**17 20 07.8**	**-0.5**			
VLS					AML	AML					
	comp=E,2100µm,0.4s										
VLS					AML	AML					
	comp=N,3355µm,0.3s										
VLS					AML	AML					
	comp=N,3355µm,1.7s										
VALD	**Valchedram**	**3.54**	**52**		P	**Pn**	**17 20 12.4**	**+3.3**			
PGB	**Panagyurishte**	**3.55**	**73**	⇑	*i*P	**Pn**	**17 20 13.0**	**+3.8**			
MPEP	**Malo Peshtene**	**3.56**	**59**	⇑	*i*P	**Pn**	**17 20 12.7**	**+3.4**			
MDVR	**Moldovita**	**3.56**	**25**	⇓	P	**Pn**	**17 20 12.3**	**+2.9**			
FRGS	**Fruska Gora**	**3.58**	**3**	*e*	Pn	**Pn**	**17 20 11.4**	**+1.8**			
BLY	**Banja Luka**	**3.62**	**332**	*e*	Pn	**Pn**	**17 20 12.2**	**+2.1**			
BLY				*e*	Sn	**Sn**	**17 20 54.5**	**+2.3**			
BLY	**Banja Luka**	**3.62**	**332**	⇑	P	**Pn**	**17 20 11.7**	**+1.6**			
PUNG	**Punghina**	**3.66**	**41**	⇑	P	**Pn**	**17 20 13.6**	**+3.0**			
BAIL	**Bailesti**	**3.69**	**47**	⇓	P	**Pn**	**17 20 14.2**	**+3.1**			
DJES	**Djerdap**	**3.76**	**34**	⇓	P	**Pn**	**17 20 15.0**	**+2.8**			
DJES	**Djerdap**	**3.76**	**34**	*e*	Pn	**Pn**	**17 20 14.9**	**+2.8**			
DJES				*e*	Sn	**Sn**	**17 20 56.3**	**+0.6**			
VRSS	**Vrsac**	**3.77**	**19**	*e*	Pn	**Pn**	**17 20 14.1**	**+2.0**			
RMGR	**Halanga-Turnu**	**3.83**	**35**	⇑	P	**Pn**	**17 20 17.0**	**+3.9**			
RZN	**Rozhen**	**3.87**	**87**	⇑	*i*P	**Pn**	**17 20 16.9**	**+3.1**			
HERR	**Herculane**	**3.90**	**31**	⇑	P	**Pn**	**17 20 16.9**	**+3.0**			
PLD	**Plovdiv**	**3.90**	**80**		P	**Pn**	**17 20 17.4**	**+3.4**			
BANR	**Banloc**	**3.97**	**16**	⇑	P	**Pn**	**17 20 17.4**	**+2.5**			
KLV	**Kalavryta, Ach**	**4.05**	**150**		P	**Pn**	**17 20 17.1**	**+1.0**			
KLV					AML	AML					
	comp=E,414µm,1.2s										
KLV					AML	AML					
	comp=N,428µm,0.9s										
KLV					AML	AML					
	comp=E,414µm,0.8s										
SRE	**Strehaia**	**4.07**	**40**	⇑	P	**Pn**	**17 20 19.6**	**+3.2**			
SRE	**Strehaia**	**4.07**	**40**		P	**Pn**	**17 20 19.5**	**+3.2**			
PLVB	**Pleven**	**4.15**	**62**	⇓	P	**Pn**	**17 20 20.5**	**+3.2**			
VLAD	**Vladila**	**4.30**	**54**	⇑	P	**Pn**	**17 20 23.5**	**+4.1**			
BZS	**Buzias**	**4.30**	**19**	⇑	P	**Pn**	**17 20 22.2**	**+2.7**			
BZS	**Buzias**	**4.30**	**19**		P	**Pn**	**17 20 21.5**	**+2.0**			
KDZ	**Kurdzhali**	**4.32**	**87**	*e*	P	**Pn**	**17 20 23.6**	**+3.8**			
CEL	**Celeste**	**4.36**	**222**			**Pn**	**17 20 18.6**	**-1.7**			
CEL	**Celeste**	**4.36**	**222**		P	**Pn**	**17 20 18.8**	**-1.5**			
PVL	**Pavlikeni**	**4.43**	**68**	⇑	*i*P	**Pn**	**17 20 24.6**	**+3.4**			
GZR	**Gura Zlata**	**4.47**	**30**	⇑	P	**Pn**	**17 20 24.8**	**+2.9**			
GZR	**Gura Zlata**	**4.47**	**30**		P	**Pn**	**17 20 24.3**	**+2.4**			
RDO	**Rodhopi**	**4.51**	**94**			**Pn**	**17 20 24.5**	**+2.2**			
DIM	**Dimitrovgrad**	**4.51**	**82**		P	**Pn**	**17 20 25.6**	**+3.5**			
AQU	**L'Aquila**	**4.67**	**282**	*e*	Pn	**Pn**	**17 20 24.5**	**-0.1**			
AQU				*e*	Sn	**Sn**	**17 21 17.2**	**-0.9**			
AQU	**L'Aquila**	**4.67**	**282**		P	**Pn**	**17 20 24.8**	**+0.2**			
MORH	**Mrgy, Hungar**	**4.68**	**352**	*i*	Pn	**Pn**	**17 20 25.8**	**+1.1**			
MORH					eSn	**Sn**	**17 21 20.6**	**+2.2**			
MORH	**Mrgy, Hungar**	**4.68**	**352**	⇓	P	**Pn**	**17 20 26.1**	**+1.4**			
MORH	**Mrgy, Hungar**	**4.68**	**352**		P	**Pn**	**17 20 26.3**	**+1.6**			
CAMP	**Campotosto**	**4.69**	**284**			**Pn**	**17 20 24.6**	**-0.3**			
ITM	**Ithomi**	**4.75**	**157**			**Pn**	**17 20 26.2**	**+0.5**			
GUMA	**Gualdo di Mace**	**4.86**	**290**			**Pn**	**17 20 27.1**	**-0.1**			
ELND	**Elena**	**4.87**	**72**	⇑	P	**Pn**	**17 20 30.6**	**+3.4**			
COPA	**Copaceanca**	**4.87**	**56**	⇑	P	**Pn**	**17 20 30.5**	**+3.2**			
SIRR	**Siria**	**4.92**	**17**	⇓	P	**Pn**	**17 20 30.7**	**+2.6**			
LOT	**Lotru**	**4.93**	**37**	⇑	P	**Pn**	**17 20 31.1**	**+2.9**			
DEV	**Deva**	**4.93**	**28**	⇑	P	**Pn**	**17 20 30.9**	**+2.7**			
DEV	**Deva**	**4.93**	**28**		P	**Pn**	**17 20 30.8**	**+2.7**			
HUMR	**Humele**	**4.94**	**52**	⇑	P	**Pn**	**17 20 31.6**	**+3.4**			
NRCA	**Norcia**	**4.96**	**287**			**Pn**	**17 20 28.6**	**-0.1**			
BOJS	**Bojanci**	**5.03**	**323**	⇓	*i*Pn	**Pn**	**17 20 30.5**	**+1.0**			
BOJS					eSn	**Sn**	**17 21 26.7**	**-0.1**			
BOJS				*e*			17 21 59.5				
FDMO	**Fiordimonte**	**5.03**	**289**			**Pn**	**17 20 29.2**	**-0.3**			
SZH	**Strazhitsa**	**5.03**	**68**		P	**Pn**	**17 20 33.6**	**+4.1**			
STFAR	**Stefanesti-Arg**	**5.12**	**48**	⇓	P	**Pn**	**17 20 35.0**	**+4.2**			
CRES	**Cresnjevec Ost**	**5.19**	**326**	⇓	*i*Pn	**Pn**	**17 20 32.6**	**+0.9**			
JMB	**Yambol**	**5.26**	**78**		P	**Pn**	**17 20 35.9**	**+3.3**			
ARR	**Arges**	**5.28**	**42**	⇓	P	**Pn**	**17 20 36.6**	**+3.6**			
BEHE	**Becsehely**	**5.29**	**339**			**Pn**	**17 20 34.1**	**+1.0**			
BEHE	**Becsehely**	**5.29**	**339**	⇑	*i*Pn	**Pn**	**17 20 35.3**	**+2.2**			
BEHE					eSn	**Sn**	**17 21 34.2**	**+0.9**			
CESX	**Cesi**	**5.31**	**284**			**Pn**	**17 20 32.5**	**-0.8**			
TNR	**Turnu Rosu**	**5.31**	**38**	⇑	P	**Pn**	**17 20 37.5**	**+4.1**			
TNR	**Turnu Rosu**	**5.31**	**38**		P	**Pn**	**17 20 37.4**	**+4.1**			
SGRR	**Singureni**	**5.39**	**59**	⇑	P	**Pn**	**17 20 38.7**	**+4.3**			
MTUR	**Matau**	**5.41**	**46**	⇑	P	**Pn**	**17 20 38.4**	**+3.6**			
MTUR	**Matau**	**5.41**	**46**		P	**Pn**	**17 20 38.4**	**+3.6**			
EZN	**Ezine**	**5.42**	**107**	⇑	P	**Pn**	**17 20 37.8**	**+2.9**			
EZN	**Ezine**	**5.42**	**107**		P	**Pn**	**17 20 37.7**	**+2.9**			
CIOR	**Ciorogarla**	**5.44**	**56**	⇑	P	**Pn**	**17 20 39.6**	**+4.5**			
MURB	**Monte Urbino**	**5.48**	**290**			**Pn**	**17 20 35.7**	**-0.1**			
LOZB	**Loznitsa**	**5.49**	**69**	⇑	P	**Pn**	**17 20 39.4**	**+3.6**			
RAZG	**Razgrad**	**5.49**	**66**	⇓	P	**Pn**	**17 20 39.5**	**+3.7**			
VOIR		**5.54**	**44**	⇑	P	**Pn**	**17 20 40.1**	**+3.4**			
VOIR		**5.54**	**44**		P	**Pn**	**17 20 40.0**	**+3.4**			
VOIR		**5.54**	**44**		P	**Pn**	**17 20 39.9**	**+3.3**			
	comp=E,0.5nmcomp=E,1µmcomp=E,104nm,0.6s										
DRGR		**5.68**	**22**	⇑	P	**Pn**	**17 20 41.0**	**+2.5**			
DRGR		**5.68**	**22**		P	**Pn**	**17 20 41.0**	**+2.5**			
VAE	**Valguarnera**	**5.72**	**226**		Pn	**Pn**	**17 20 37.8**	**-1.2**			
	comp=E,10nm,0.4s,baz=340,slow=4.5,SNR=9.8										
VAE					Sn	**Sn**	**17 21 45.4**	**+1.5**			
	comp=E,4.6nm,0.3s,baz=310,slow=4.3,SNR=5.2										
VAE					LR	LR	17 23 31.3				
	comp=E,672nm,20.9s,baz=334,slow=46										
GBAS	**Gorenja Brezov**	**5.72**	**321**	*i*	Pn	**Pn**	**17 20 39.7**	**+0.7**			
MDB	**Medias**	**5.73**	**36**	⇓	P	**Pn**	**17 20 42.9**	**+3.8**			
MDB	**Medias**	**5.73**	**36**		P	**Pn**	**17 20 42.9**	**+3.8**			
BORR	**Bors**	**5.73**	**15**	⇓	P	**Pn**	**17 20 42.0**	**+2.9**			
LJU	**Ljubljana**	**5.77**	**322**	*i*	Pn	**Pn**	**17 20 40.3**	**+0.6**			
SULR		**5.79**	**55**	⇓	P	**Pn**	**17 20 44.1**	**+4.3**			
CJR	**Cluj-Napoca**	**5.89**	**28**	⇑	P	**Pn**	**17 20 45.2**	**+3.7**			
CJR	**Cluj-Napoca**	**5.89**	**28**		P	**Pn**	**17 20 45.1**	**+3.7**			
TRI	**Trieste**	**5.90**	**316**			**Pn**	**17 20 39.6**	**-1.9**			
TRI	**Trieste**	**5.90**	**316**		P	**Pn**	**17 20 39.6**	**-1.9**			
RAFF	**Raffo Rosso**	**5.93**	**225**			**Pn**	**17 20 39.2**	**-2.8**			
PHSR	**Pinarhisar**	**5.96**	**87**	⇑	P	**Pn**	**17 20 45.8**	**+3.6**			
LTVH	**Ltavrtes, Hu**	**6.04**	**15**	⇓	P	**Pn**	**17 20 47.1**	**+3.8**			
SOKA	**Soboth**	**6.06**	**329**	*e*	Pn	**Pn**	**17 20 44.0**	**+0.3**			
	comp=E,20nm,0.4s,SNR=16										
SOKA				*e*	Sn	**Sn**	**17 21 50.8**	**-1.5**			
	comp=E,43nm,0.6s										
MLR	**Muntele Rosu**	**6.06**	**48**		Pn	**Pn**	**17 20 47.8**	**+4.0**			
	comp=E,15nm,0.3s,baz=158,slow=10,SNR=70										
MLR					Sn	**Sn**	**17 21 58.3**	**+5.9**			
	comp=E,3.4nm,0.3s,baz=350,slow=23,SNR=3.6										
MLR	**Muntele Rosu**	**6.06**	**48**			**Pn**	**17 20 47.1**	**+3.4**			
MLR	**Muntele Rosu**	**6.06**	**48**	⇑	P	**Pn**	**17 20 47.7**	**+4.0**			
MLR	**Muntele Rosu**	**6.06**	**48**		P	**Pn**	**17 20 47.1**	**+3.4**			
MLR	**Muntele Rosu**	**6.06**	**48**		P	**Pn**	**17 20 47.7**	**+4.0**			
	comp=E,0.7nmcomp=E,158nm,0.6s										
VOJS	**Vojsko**	**6.06**	**319**	*i*	Pn	**Pn**	**17 20 44.0**	**+0.2**			
CICN	**Ciocanesti**	**6.07**	**62**	⇓	P	**Pn**	**17 20 47.5**	**+3.8**			
DOPR	**Dopca**	**6.08**	**42**	⇓	P	**Pn**	**17 20 48.1**	**+4.2**			
OBKA	**Obir**	**6.12**	**325**	*e*	Pn	**Pn**	**17 20 45.5**	**+1.0**			
	comp=E,16nm,0.3s,SNR=12										
SABO	**M.te Sabotino**	**6.17**	**318**			**Pn**	**17 20 44.9**	**-0.3**			
ISR	**Istrita**	**6.19**	**53**	⇑	P	**Pn**	**17 20 50.0**	**+4.5**			
ISR	**Istrita**	**6.19**	**53**		P	**Pn**	**17 20 50.0**	**+4.5**			
ISR	**Istrita**	**6.19**	**53**		P	**Pn**	**17 20 49.2**	**+3.7**			
	comp=E,0.9nmcomp=E,3µmcomp=E,239nm,0.6s										
NEHR	**Nehoiu**	**6.22**	**50**	⇓	P	**Pn**	**17 20 49.8**	**+4.0**			
SRO	**Srobarova**	**6.30**	**352**	*e*	P	Pn	17 20 54.2	+7.3			
SRO	**Srobarova**	**6.30**	**352**	*e*	PN	Pn	17 20 54.2	+7.3			
SRO				*e*	PG	Pb	17 21 15.4	+11			
SRO				*e*	SN	Sn	17 21 42.3	-16			
SRO				*e*	SG	Sb	17 22 36.4	+17			
PSZ	**Piszkesteto**	**6.34**	**2**			**Pn**	**17 20 48.8**	**+1.2**			
PSZ	**Piszkesteto**	**6.34**	**2**	⇑	P	**Pn**	**17 20 49.6**	**+2.0**			
PSZ	**Piszkesteto**	**6.34**	**2**	*e*	P	**Pn**	**17 20 50.5**	**+2.9**			
PSZ	**Piszkesteto**	**6.34**	**2**		P	**Pn**	**17 20 48.8**	**+1.2**			
PGOR	**Pogoanele**	**6.35**	**56**	⇓	P	**Pn**	**17 20 51.8**	**+4.2**			
OZUR		**6.37**	**43**	⇓	P	**Pn**	**17 20 51.6**	**+3.7**			
ARSA	**Arzberg**	**6.37**	**334**			**Pn**	**17 20 48.2**	**+0.3**			
ARSA	**Arzberg**	**6.37**	**334**	*e*	Pn	**Pn**	**17 20 49.1**	**+1.2**			
	comp=E,9.5nm,0.4s,SNR=10.0										
COVR	**Voineasa-Covas**	**6.42**	**46**	⇑	P	**Pn**	**17 20 52.9**	**+4.2**			
AMRR	**Amara**	**6.44**	**59**	⇑	P	**Pn**	**17 20 52.9**	**+4.0**			
AMRR	**Amara**	**6.44**	**59**		P	**Pn**	**17 20 52.8**	**+4.0**			
APE	**Apeiranthos**	**6.45**	**132**	⇑	P	**Pn**	**17 20 50.6**	**+1.6**			
APE	**Apeiranthos**	**6.45**	**132**	*i*	P	**Pn**	**17 20 49.9**	**+0.9**			
OSSC	**Osservatorio P**	**6.45**	**290**			**Pn**	**17 20 48.3**	**-0.7**			
BISRR	**Bisoca**	**6.53**	**50**	⇑	P	**Pn**	**17 20 54.3**	**+4.1**			
BISRR	**Bisoca**	**6.53**	**50**		P	**Pn**	**17 20 54.2**	**+4.1**			
	comp=E,1.3nmcomp=E,4µmcomp=E,398nm,0.7s										
RONA	**Rosalia, Austr**	**6.55**	**340**	*e*	Pn	**Pn**	**17 20 51.8**	**+1.4**			
	comp=E,4.3nm,0.4s										
RONA				*e*	Sn	**Sn**	**17 22 04.5**	**+0.1**			
	comp=E,19nm,0.5s										
ICOR	**Ion Corvin**	**6.56**	**64**	⇑	P	**Pn**	**17 20 54.5**	**+4.0**			
BAND	**Balkesir-Ban**	**6.57**	**98**	⇑	P	**Pn**	**17 20 53.6**	**+3.0**			
CASP	**Castiglione de**	**6.58**	**284**			**Pn**	**17 20 49.6**	**-1.2**			
GRER		**6.59**	**52**	⇑	P	**Pn**	**17 20 55.5**	**+4.6**			
BALB	**Balikesir**	**6.61**	**104**			**Pn**	**17 20 52.1**	**+1.0**			
MYKA	**Terra Mystica**	**6.61**	**322**	*e*	Pn	**Pn**	**17 20 51.5**	**+0.2**			
	comp=E,7.9nm,0.5s,SNR=8.2										
PSN	**Preselentsi**	**6.64**	**69**		P	**Pn**	**17 20 55.9**	**+4.3**			
PLOR	**Plostina**	**6.67**	**48**	⇑	P	**Pn**	**17 20 55.8**	**+3.8**			
PLOR	**Plostina**	**6.67**	**48**		P	**Pn**	**17 20 55.8**	**+3.8**			
VRI	**Vrincioaia**	**6.72**	**48**	⇑	P	**Pn**	**17 20 56.6**	**+3.8**			
VRI	**Vrincioaia**	**6.72**	**48**		P	**Pn**	**17 20 56.5**	**+3.8**			
VRI	**Vrincioaia**	**6.72**	**48**		P	**Pn**	**17 20 56.7**	**+3.9**			
	comp=E,0.5nmcomp=E,1µmcomp=E,147nm,0.6s										
CVDA	**Cernavoda**	**6.79**	**63**	⇑	P	**Pn**	**17 20 58.0**	**+4.4**			
ONER	**Baraj Valea Uz**	**6.84**	**44**	⇑	P	**Pn**	**17 20 58.5**	**+4.1**			
ODBI	**Odobesti**	**6.85**	**50**	⇑	P	**Pn**	**17 20 58.8**	**+4.3**			
TLBR	**Topalu**	**6.88**	**62**	⇑	P	**Pn**	**17 20 59.0**	**+4.2**			
CONA	**Conrad Observa**	**6.88**	**339**	*e*	Pn	**Pn**	**17 20 56.3**	**+1.4**			
	comp=E,3.1nm,0.5s,SNR=6.0										
TEOL	**Teolo**	**6.88**	**306**			**Pn**	**17 20 53.9**	**-1.0**			
ZCCA	**Zocca**	**6.89**	**297**			**Pn**	**17 20 54.3**	**-0.8**			
KECS	**Kecovo**	**6.94**	**5**	*e*	PN	**Pn**	**17 20 58.8**	**+3.2**			
KECS				*e*	PG	Pb	17 21 24.2	+9.1			
KECS				*e*	SN	Sn	17 22 01.1	-13			
KECS				*e*	SG	Sb	17 22 55.7	+18			
PANC	**Panciu**	**6.96**	**49**	⇑	P	**Pn**	**17 21 00.2**	**+4.2**			
MODS	**Modra-Piesok**	**6.99**	**347**	*e*	P	**Pn**	**17 21 00.9**	**+4.5**			
MODS	**Modra-Piesok**	**6.99**	**347**	*e*	PN	**Pn**	**17 21 00.9**	**+4.5**			
MODS				*e*	PG	Pb	17 21 30.1	+14			
MODS				*e*	SN	Sn	17 21 56.8	-18			
MODS				*e*	SG	Sb	17 22 55.4	+16			
BERU	**Beregovo**	**7.00**	**17**		P	**Pn**	**17 20 59.3**	**+2.8**			
KORU	**Korolevo**	**7.05**	**20**		P	**Pn**	**17 20 59.9**	**+2.7**			
KBA	**Koelnbreinsper**	**7.08**	**323**	*i*	Pn	**Pn**	**17 20 58.5**	**+0.6**			
	comp=E,4.8nm,0.4s,SNR=12										
TIRR	**Tirgusor**	**7.09**	**63**			**Pn**	**17 21 00.7**	**+3.0**			
TIRR	**Tirgusor**	**7.09**	**63**	⇑	P	**Pn**	**17 21 01.0**	**+3.3**			
TIRR	**Tirgusor**	**7.09**	**63**		P	**Pn**	**17 21 00.7**	**+3.0**			
TIRR	**Tirgusor**	**7.09**	**63**		P	**Pn**	**17 21 01.0**	**+3.3**			
	comp=E,0.6nmcomp=E,144nm,0.7s										
TESR	**Tescani**	**7.09**	**44**	⇑	P	**Pn**	**17 21 01.5**	**+3.7**			
TESR	**Tescani**	**7.09**	**44**		P	**Pn**	**17 21 00.9**	**+3.1**			
	comp=E,0.2nmcomp=E,55nm,0.7s										
BRIU	**Brid**	**7.19**	**19**		P	**Pn**	**17 21 01.8**	**+2.7**			
CFR	**Carcaliu**	**7.20**	**57**	⇑	P	**Pn**	**17 21 02.7**	**+3.5**			
CFR	**Carcaliu**	**7.20**	**57**		P	**Pn**	**17 21 02.7**	**+3.5**			
MUKU	**Mukachevo**	**7.22**	**17**		P	**Pn**	**17 21 02.2**	**+2.7**			
GHRR		**7.22**	**49**	⇓	P	**Pn**	**17 21 04.0**	**+4.5**			
GHRR		**7.22**	**49**		P	**Pn**	**17 21 02.8**	**+3.2**			
TPGR	**Topolog**	**7.24**	**60**	⇑	P	**Pn**	**17 21 03.3**	**+3.4**			
ABTA	**Abfaltersbach**	**7.24**	**318**	*i*	Pn	**Pn**	**17 20 59.8**	**-0.1**			
	comp=E,8.5nm,0.4s,SNR=10										
BURAR	**Bucovina Array**	**7.25**	**32**			**Pn**	**17 21 03.8**	**+3.7**			
BURAR	**Bucovina Array**	**7.25**	**32**	⇑	P	**Pn**	**17 21 04.1**	**+3.9**			
BURAR	**Bucovina Array**	**7.25**	**32**		P	**Pn**	**17 21 04.0**	**+3.9**			
CTI	**Castel Tesino**	**7.27**	**311**			**Pn**	**17 20 59.4**	**-0.9**			
CTI	**Castel Tesino**	**7.27**	**311**		P	**Pn**	**17 20 59.4**	**-0.9**			
BUR08	**Bucovina Ar. S**	**7.27**	**32**			**Pn**	**17 21 04.2**	**+3.9**			
MOA	**Molln**	**7.32**	**331**	*e*	Pn	**Pn**	**17 21 03.1**	**+2.1**			
	comp=E,3.8nm,0.2s,SNR=9.2										
SCTR	**Scanteiesti**	**7.35**	**53**	⇓	P	**Pn**	**17 21 05.2**	**+3.8**			
JAVC	**Velka Javorina**	**7.40**	**350**	*e*	PN	**Pn**	**17 21 01.9**	**-0.2**			
BIOA	**Bad Ischl, Aus**	**7.43**	**327**	*i*	Pn	**Pn**	**17 21 03.9**	**+1.4**			
	comp=E,8.9nm,0.4s,SNR=14										
MEZ	**Mezhgor'ye**	**7.47**	**21**		P	**Pn**	**17 21 06.1**	**+3.0**			
VLDR	**Vladesti**	**7.49**	**52**	⇑	P	**Pn**	**17 21 06.9**	**+3.6**			
IDI	**Anoyia**	**7.54**	**145**		Pn	**Pn**	**17 21 02.6**	**-1.4**			
	comp=E,6.4nm,0.4s,baz=322,slow=11,SNR=16										
IDI					Sn	**Sn**	**17 22 24.1**	**-4.7**			
	comp=E,7.3nm,0.3s,baz=235,slow=4.8,SNR=6.5										
IDI	**Anoyia**	**7.54**	**145**		Pn	**Pn**	**17 21 03.9**	**-0.1**			
MANT	**Manisa**	**7.55**	**111**			**Pn**	**17 21 07.0**	**+2.7**			
LANS	**Liptovska Anna**	**7.57**	**359**	*e*	PN	Pn	17 21 09.7	+5.3			
LANS				*e*	PG	Pb	17 21 37.4	+11			
LANS				*e*	SN	Sn	17 22 12.6	-17			
TLCR		**7.63**	**59**	⇑	P	**Pn**	**17 21 09.5**	**+4.3**			
TLCR		**7.63**	**59**		P	**Pn**	**17 21 09.5**	**+4.3**			
LESA	**Schwarzleotal**	**7.64**	**322**	*i*	Pn	**Pn**	**17 21 06.1**	**+0.7**			
	comp=E,15nm,0.4s,SNR=27										
KSV	**Kosov**	**7.78**	**28**		P	**Pn**	**17 21 09.6**	**+2.4**			
KRUC	**Moravsky**	**7.81**	**344**	*e*	PN	**Pn**	**17 21 07.1**	**-0.6**			
KRUC				*e*	SN	**Sn**	**17 22 35.1**	**-0.3**			
NIE	**Niedzica**	**7.86**	**3**	*e*	P	**Pn**	**17 21 12.8**	**+4.5**			
NIE	**Niedzica**	**7.86**	**3**		P	**Pn**	**17 21 12.0**	**+3.7**			
	comp=E,0.1nmcomp=E,26nm,0.9s										
MSSA	**Maissana**	**7.87**	**294**			**Pn**

comp=Z,742nm,18.3s,baz=288,slow=42
comp=Z,1.4nm,0.5s
BRTR Keskin Array B 10.85 95 P **Pn** **17 21 52.0 +2.6**
ECH Echery 11.02 311 **Pn** **17 21 51.4 -0.3**
ECH Echery 11.02 311 P **Pn** **17 21 51.4 -0.3**
AK13 Malin Array Si 11.17 33 P **Pn** **17 21 56.6 +3.0**
AK07 Malin Array Si 11.18 33 P **Pn** **17 21 56.7 +2.9**
AK14 Malin Array Si 11.20 33 P **Pn** **17 21 57.0 +2.9**
AK06 Malin Array Si 11.21 33 P **Pn** **17 21 57.1 +3.0**
AK17 Malin Array Si 11.23 33 P **Pn** **17 21 57.3 +2.9**
AK12 Malin Array Si 11.23 33 P **Pn** **17 21 57.4 +2.9**
AK16 Malin Array Si 11.23 33 P **Pn** **17 21 57.4 +2.9**
AK05 Malin Array Si 11.23 33 P **Pn** **17 21 57.4 +2.9**
AK19 Malin Array Si 11.24 32 P **Pn** **17 21 57.4 +2.9**
AK10 Malin Array Si 11.24 33 P **Pn** **17 21 57.5 +2.9**
KIEV Kiev 11.29 33 **Pn** **17 21 57.7 +2.4**
KIEV Kiev 11.29 33 ⇑P **Pn** **17 21 59.0 +3.7**
KIEV Kiev 11.29 33 P **Pn** **17 21 58.3 +2.9**
KIEV Kiev 11.29 33 P **Pn** **17 21 57.7 +2.4**
AKASG Malin Array Be 11.31 33 Pn **Pn** **17 21 58.4 +2.9**
comp=Z,1.5nm,0.3s,baz=222,slow=13,SNR=27
AKASG LR LR 17 27 07.2
comp=Z,277nm,18.2s,baz=210,slow=42
AKASG Malin Array Be 11.31 33 **Pn** **17 21 56.9 +1.4**
AKASG Malin Array Be 11.31 33 *i* P **Pn** **17 21 58.9 +3.4**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 11.31 33 **Pn** **17 21 56.8 +1.3**
AKBB Malin Array Si 11.31 33 *ce*P **Pn** **17 21 58.0 +2.5**
AK03 Malin Array Si 11.32 33 P **Pn** **17 21 58.7 +3.0**
SSB Saint Sauveur 11.54 294 **Pn** **17 21 55.7 -3.1**
SSB Saint Sauveur 11.54 294 P **Pn** **17 21 55.7 -3.1**
SUW Suwalki 12.67 10 *e*P **Pn** **17 22 18.9 +4.7**
ANN Anapa 13.42 70 *e*P **Pn** **17 22 23.5 -0.9**
ANN *e*S **Sn** **17 24 54.3 +1.5**
ANN pmax pmax
comp=Z,54nm,1.0s
MNK Minsk 14.06 20 *i* P **Pn** **17 22 33.7 +0.6**
comp=Z,17nm,0.8s,baz=206
MNK *i* P **P** **17 22 36.8 -3.9**
comp=E,26nm,0.8s
MNK *i* P **P** **17 22 36.8 -3.9**
comp=N,4.0nm,0.6s
MNK *i* PP **PnPn** **17 22 41.1 +0.1**
MNK *i* PPP PPP 17 22 48.9
MNK *i* S **Sn** **17 25 10.4 +2.0**
MNK *i* SS **S** **17 25 26.7 -2.6**
MNK *i* SSS SSS 17 25 39.7
MNK *i* LQ LQ 17 26 44.6
MNK *i* LR LR 17 27 44.8
MNK *i* LRM MLR 17 28 33.1
comp=E,559nm,17.5s
MNK *i* LRM MLR 17 28 37.2
comp=Z,629nm,17.1s
MNK *i* LRM MLR 17 28 58.3
comp=N,277nm,18.4s
MNK Minsk 14.06 20 *i* P **Pn** **17 22 33.6 +0.6**
MNK *i* S **Sn** **17 25 10.3 +2.0**
MNK pmax pmax
comp=Z,17nm,0.8s
MNK pmax pmax
comp=N,4.0nm,0.6s
MNK pmax pmax
comp=E,26nm,0.8s
MNK MLR MLR
comp=E,559nm,18.0s
MNK MLR MLR
comp=Z,629nm,17.0s
MNK MLR MLR
comp=N,277nm,18.0s
NACGM Naroch 14.16 17 *e*P **Pn** **17 22 34.5 0.0**
comp=Z,18nm,0.8s,baz=203
PABE Paberze 14.23 10 **Pn** **17 22 35.8 +0.3**
PABE Paberze 14.23 10 *e*P **P** **17 22 43.3 +0.7**
GAZ Gaziantep 14.33 102 **Pn** **17 22 37.7 +0.7**
ISAL Salakas 14.65 15 *e*P **P** **17 22 48.9 +1.7**
SOC Sochi 14.97 76 *e*P **Pn** **17 22 45.8 +0.2**
SOC *e* 17 25 34.4
SOC pmax pmax
comp=Z,15nm,0.6s
MMC7 Mount Meron ar 15.19 119 P **Pn** **17 22 45.1 -3.6**
MMA0B Mount Meron ar 15.20 119 P **Pn** **17 22 45.3 -3.5**
MMAI Mount Meron Ar 15.20 119 Pn **Pn** **17 22 47.8 -1.0**
comp=Z,0.7nm,0.3s,baz=297,slow=13,SNR=7.4
MMAI LR LR 17 29 48.4
comp=Z,270nm,19.4s,baz=300,slow=42
comp=Z,6.7nm,0.8s
GEM Giv'at Ha'Em 15.26 118 P **Pn** **17 22 45.7 -3.6**
KSHT Keshet 15.49 118 P **Pn** **17 22 48.6 -4.0**
HMDT Nahal Hemdat 15.77 121 P **Pn** **17 22 51.5 -4.6**
KOPT Kop Dagi 15.92 89 **P** **17 23 02.0 +0.2**
KZIT Kziot 15.99 127 P **Pn** **17 22 54.8 -4.1**
DSI Dead Sea 16.13 123 P **Pn** **17 22 56.5 -4.2**
MSBI Mazada 16.29 124 P **Pn** **17 22 58.5 -4.2**
GHAJ Ghor Haditha 16.43 124 P **Pn** **17 23 00.3 -4.2**
VORD Divnogorie 16.51 49 *e*P **Pn** **17 23 05.0 -0.4**
VORD pmax pmax
comp=Z,20nm,0.9s
VORD MLR MLR
comp=Z,150nm,8.0s
VSR Storozhevoye 16.55 48 *e*P **Pn** **17 23 04.9 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR MLR MLR
comp=Z,960nm,16.0s
ASF Jabal al Asfar 16.71 119 Pn **P** **17 23 10.9 +0.5**
comp=Z,0.3nm,0.3s,baz=289,slow=8.9,SNR=4.6
ASF LR LR 17 30 47.5
comp=Z,193nm,20.9s,baz=298,slow=41
PRNI Paran 16.75 127 P **Pn** **17 23 04.7 -3.9**
KRMI Paran Flat 16.75 128 P **Pn** **17 23 04.7 -4.0**
VORR Voronezh 16.79 46 *e*P **Pn** **17 23 07.2 -1.8**
VORR pmax pmax
comp=Z,20nm,0.9s
VORR MLR MLR
comp=Z,500nm,10.0s
MARD Mardin 16.91 98 **P** **17 23 12.9 +0.3**
HRFI Mount Harif 17.00 128 P **Pn** **17 23 07.4 -4.4**
MBRI Mt Berech 17.10 129 P **Pn** **17 23 08.9 -4.2**
SHA1 Shidzhatmaz 17.11 75 *i* P **P** **17 23 16.3 +1.5**
LPSR Galich'ya Gora 17.12 43 *e*P **Pn** **17 23 11.7 -1.4**
LPSR pmax pmax
comp=Z,47nm,0.8s
KIV Kislovodsk 17.13 74 P **Pn** **17 23 13.7 +0.4**
KIV Kislovodsk 17.13 74 *e*P **Pn** **17 23 13.0 -0.3**
KIV pmax pmax
comp=Z,10.0nm,0.9s
KIV MLR MLR
comp=Z,64nm,14.0s
KVAR Kislovodsk Arr 17.13 74 P **P** **17 23 15.4 +0.4**
baz=283,slow=19
comp=Z,2.1nm,0.4s
NEUR Neytrino 17.15 77 *i* P **P** **17 23 17.5 +2.2**
EIL Elat 17.21 129 P **Pn** **17 23 13.9 -0.6**
comp=Z,0.5nm,0.3s,baz=325,slow=18,SNR=4.1
EIL S Sn 17 26 13.7 -12
comp=Z,3.7nm,0.4s,baz=43,slow=14,SNR=4.1
comp=Z,9.7nm,0.7s
EIL Elat 17.21 129 P **Pn** **17 23 10.0 -4.4**
GOF Gofitskoye 17.41 71 *ce*P **P** **17 23 17.6 -0.4**
VSU Vasula 17.50 13 *e*P **P** **17 23 18.9 +0.1**
VSU Vasula 17.50 13 *ce*P **P** **17 23 19.1 +0.3**
VSU pmax pmax
comp=Z,77nm,0.8s
OBN Obninsk 17.57 34 P **Pn** **17 23 18.0 -0.6**
comp=Z,31nm,0.4s,baz=177,slow=8.8,SNR=8.8
OBN Obninsk 17.57 34 IAmb IAmb 17 23 21.4
comp=Z,115nm,0.4s
OBN Obninsk 17.57 34 *de*P **P** **17 23 20.1 +0.6**
OBN pmax pmax
comp=Z,92nm,1.7s
OBN MLR MLR
comp=Z,265nm,17.0s
OBN Obninsk 17.57 34 P **Pn** **17 23 19.1 +0.5**
OBN pP **pP** **17 23 24.3 -1.4**
ESDC Sonseca Array 17.96 272 P **Pn** **17 23 21.7 -2.0**
comp=Z,0.1nm,0.3s,baz=71,slow=12,SNR=10
ESDC LR LR 17 30 46.2
comp=Z,191nm,18.2s,baz=96,slow=39
comp=Z,2.7nm,0.9s
VRH Novokhopyorsk 17.99 50 *e*P **P** **17 23 25.1 +0.8**
VRH pmax pmax
comp=Z,20nm,0.9s
VRH MLR MLR
comp=Z,450nm,12.0s

ARBE Arbavere 18.32 10 *e*P **Pn** **17 23 28.6 +0.8**
AAL Aland 18.63 1 *e*P **Pn** **17 23 31.9 +0.3**
MEF Metsahovi 18.90 7 *e*P **Pn** **17 23 34.6 -0.3**
HFS Hagfors 18.93 351 P **P** **17 23 34.0 -0.5**
comp=Z,1.3nm,0.3s,baz=163,slow=11,SNR=29
HFS LR LR 17 31 14.8
comp=Z,100nm,19.0s,baz=179,slow=38
comp=Z,9.9nm,0.6s
GNI Garni 19.07 86 P **Pn** **17 23 38.2 +0.9**
comp=Z,21nm,0.6s,baz=315,slow=4.2,SNR=14
GNI LR LR 17 32 13.9
comp=Z,65nm,18.2s,baz=284,slow=41
GNI Garni 19.07 86 P **P** **17 23 36.1 -0.4**
GNI S **S** **17 27 15.1 +3.5**
GNI Garni 19.07 86 P **P** **17 23 36.7 +0.2**
GNI IAmb IAmb 17 23 40.3
comp=Z,23nm,0.6s
GNI Garni 19.07 86 P **Pn** **17 23 38.5 +1.1**
RAF Rauma 19.52 3 *e*P **P** **17 23 41.0 +0.1**
NC602 NORSAR Array S 19.80 348 P **P** **17 23 43.9 -0.2**
NAO01 NORSAR Array S 20.01 348 P **P** **17 23 45.6 -0.7**
NC405 NORSAR Array S 20.14 349 **P** **17 23 47.3 -0.5**
NC405 IAmb IAmb 17 23 58.7
comp=Z,42nm,1.4s
NB2 NORSAR Subarra 20.14 348 P **P** **17 23 47.4 -0.5**
comp=Z,2.9nm,0.5s,baz=164,slow=11
NOA NORSAR Array B 20.14 348 P **P** **17 23 46.5 -1.3**
comp=Z,1.5nm,0.7s,baz=154,slow=10,SNR=18
NOA LR LR 17 32 51.9
comp=Z,136nm,19.2s,baz=165,slow=41
comp=Z,1.5nm,0.7s
FINES FINESS Array B 20.28 9 P **P** **17 23 49.1 -0.2**
comp=Z,30nm,0.6s,baz=171,slow=11,SNR=130
FINES PcP **PcP** **17 28 01.6 -0.4**
comp=Z,1.0nm,0.5s,baz=186,slow=4.2,SNR=1.6
FINES LR LR 17 31 36.8
comp=Z,86nm,19.5s,baz=198,slow=37
comp=Z,30nm,0.6s
FINES FINESS Array B 20.28 9 **P** **17 23 48.9 -0.3**
FINES FINESS Array B 20.28 9 *i* P **P** **17 23 49.0 -0.2**
FINES pmax pmax
comp=Z,31nm,0.6s
FIA1 FINESS Array S 20.28 9 **P** **17 23 49.3 0.0**
EKA Eskdalemuir Ar 20.29 320 P **P** **17 23 49.9 +0.5**
comp=Z,1.9nm,0.4s,baz=113,slow=9.0,SNR=16
comp=Z,1.9nm,0.4s
NC303 NORSAR Array S 20.30 349 P **P** **17 23 49.4 -0.1**
NC303 IAmb IAmb 17 24 12.3
comp=Z,46nm,1.4s
NC204 NORSAR Array S 20.44 348 **P** **17 23 51.1 +0.1**
NC204 IAmb IAmb 17 24 19.2
comp=Z,35nm,1.4s
MTE Manteigas 20.48 276 *e*LR LR 17 31 51.7
PBAR Barrancos 20.68 269 *e*P Pn 17 23 54.9 -1.3
PBAR *i* IAmb IAmb 17 23 58.1
comp=Z,54nm,1.4s
MAK Makhachkala 20.68 77 *c i* P **P** **17 23 50.8 -2.9**
MAK *e*S **S** **17 27 40.4 -3.3**
MAK pmax pmax
comp=Z,465nm,1.2s
MAK MLR MLR
comp=Z,146nm,12.0s
KEF Keuruu 20.86 7 *e*P **P** **17 23 55.7 +0.2**
PESTR Estremoz 20.89 272 *e*P Pn 17 23 59.2 +0.5
PESTR *i* IAmb IAmb 17 24 00.9
comp=Z,57nm,1.9s
AKT Akhty 21.05 81 *e*P **P** **17 23 59.9 +2.0**
AKT *e*PPP PPP 17 24 26.7
AKT pmax pmax
comp=Z,18nm,0.6s
MDT Midelt 21.11 253 P **P** **17 23 57.7 -0.9**
comp=Z,7.3nm,0.9s,baz=75,slow=10,SNR=10
MDT LR LR 17 31 29.3
comp=Z,159nm,19.9s,baz=50,slow=35
comp=Z,7.3nm,0.9s
MD01 Midelt array s 21.19 254 **P** **17 23 58.5 -1.0**
MD31 MD31 21.19 254 P **P** **17 23 58.0 -1.4**
EVO Evora 21.30 271 *e*P **P** **17 24 01.6 +1.1**
PMTG Montargil 21.31 272 *e*P **P** **17 24 00.6 +0.1**
PMTG *i* IAmb IAmb 17 24 30.4
comp=Z,60nm,1.6s
PVAQ Vaqueiros 21.43 268 *e*P **P** **17 24 03.2 +1.3**
PVAQ *i* IAmb IAmb 17 24 09.4
comp=Z,65nm,1.7s
VAF Ylistaro 21.58 4 *e*P **P** **17 24 03.8 +0.6**
PCVE Castro Verde 21.60 269 *e*P **P** **17 24 04.6 +0.9**
PBDV Barranco-do-Ve 21.65 268 *e*P **P** **17 24 05.9 +1.6**
MESJ Messejana 21.67 269 *e*P **P** **17 24 06.0 +1.6**
BELG Belogornoye 21.84 51 P **P** **17 24 06.8 +0.7**
comp=Z,87nm,0.8s,baz=350,slow=0.9,SNR=22
comp=Z,87nm,0.8s
BELG Belogornoye 21.84 51 *i* P **P** **17 24 06.8 +0.7**
BELG pmax pmax
comp=Z,17nm,0.8s
TAM Tamanrasset 22.13 216 **P** **17 24 09.8 +0.1**
TAM IAmb IAmb 17 24 19.6
comp=Z,22nm,0.8s
TAM Tamanrasset 22.13 216 P **P** **17 24 09.8 +0.1**
TAM pmax pmax
comp=Z,22nm,0.8s
JOF Joensuu 22.48 14 *e*P **P** **17 24 14.8 +1.9**
KLMR Klimovskoe 22.82 26 *e*P **P** **17 24 15.6 -0.9**
KLMR pmax pmax
comp=Z,89nm,1.2s
KLMR MLR MLR
comp=Z,491nm,14.0s
KIRV Kirov 25.30 38 LR LR 17 35 19.0
comp=Z,291nm,19.1s,baz=245,slow=38
KIRV Kirov 25.30 38 *ce*P **P** **17 24 40.1 +0.1**
APA Apatity 27.11 12 *e*P **P** **17 24 59.6 +3.3**
APA MLR MLR
comp=Z,667nm,18.5s
AKTO Aktyubinsk 27.86 58 LR LR 17 38 25.9
comp=Z,248nm,18.7s,baz=312,slow=41
RAYN Ar Rayn 28.15 122 P **P** **17 25 04.9 -1.2**
ARCES ARCESS Array B 28.19 4 P **P** **17 25 04.8 -1.2**
comp=Z,2.8nm,0.7s,baz=195,slow=9.9,SNR=15
ARCES LR LR 17 38 12.9
comp=Z,108nm,18.5s,baz=173,slow=40
comp=Z,2.8nm,0.7s
ARCES ARCESS Array B 28.19 4 IAmb IAmb 17 25 34.6
comp=Z,14nm,1.4s
ARTI Arti 29.00 46 LR LR 17 37 56.2
comp=Z,357nm,18.6s,baz=254,slow=39
ARTI Arti 29.00 46 **P** **17 25 13.0 -0.3**
ARTI Arti 29.00 46 *c i* P **P** **17 25 13.2 -0.1**
ARTI 17 26 03.8
ARTI S **S** **17 30 06.7 +3.7**
ARTI SS **SnSn** **17 31 29.6 +3.0**
ARTI pmax pmax
comp=Z,42nm,0.6s
ARTI MLR MLR
comp=Z,363nm,15.0s
AB31 Akbulak array 29.07 61 **P** **17 25 14.3 +0.3**
ABKAR Akbulak array 29.07 61 **P** **17 25 14.2 +0.2**
SHMA Al-Shehemyia 30.25 111 P **P** **17 25 23.6 -1.0**
SNR=7.9
SHMA Al-Shehemyia 30.25 111 P **P** **17 25 25.0 +0.4**
SNR=7.9
SVE Sverdlovsk 30.32 46 *de*P **P** **17 25 25.8 +0.9**
SVE pmax pmax
comp=Z,47nm,0.7s
SVE MLR MLR
comp=Z,536nm,16.0s
TORD Torodi Ar. Bea 32.33 214 P **P** **17 25 41.4 -1.6**
comp=Z,1.3nm,0.7s,baz=22,slow=11,SNR=7.8
comp=Z,1.3nm,0.7s
TORD Torodi Ar. Bea 32.33 214 IAmb IAmb 17 25 51.8
comp=Z,6.6nm,1.2s
BORG Borgarnes 32.81 329 LR LR 17 41 35.2
comp=Z,124nm,18.3s,baz=136,slow=41
UMQ Umm Al-Quwin 33.78 107 P **P** **17 25 54.6 -1.0**
UMQ Umm Al-Quwin 33.78 107 P **P** **17 25 56.6 +1.0**
SHME Shamm 33.81 106 P **P** **17 25 54.8 -1.1**
SHME P **P** **17 25 54.8 -1.1**
MZR Muzera 33.83 113 P **P** **17 25 55.0 -1.2**
MZR Muzera 33.83 113 P **P** 17 25 50.4 -5.7
BANOM Banah 34.00 106 P **P** **17 25 56.7 -0.9**
BANOM P **P** **17 25 56.7 -0.9**
BANOM Banah 34.00 106 *i* P **P** **17 25 57.0 -0.7**
SNR=6.0
ASUD Al Ashush, Dub 34.10 108 P **P** **17 25 57.9 -0.5**
NAZ Nazwa, Dubai 34.11 108 P **P** **17 25 57.3 -1.2**
NAZ S **S** **17 31 22.5 -0.8**
NAZ Nazwa, Dubai 34.11 108 P **P** **17 25 57.1 -1.4**

NAZ Nazwa, Dubai 34.11 108 *i* P **P** **17 25 57.5 -1.0**
SNR=7.5
HRA Herat 34.12 88 P **P** **17 25 58.6 -0.1**
FAQ Al Faqa, Dubai 34.21 108 P **P** **17 25 58.1 -1.2**
FAQ S **S** **17 31 23.9 -1.0**
FAQ Al Faqa, Dubai 34.21 108 P **P** **17 25 58.1 -1.2**
MASF Masafi 34.23 107 P **P** **17 25 58.4 -1.3**
MASF S **S** **17 31 24.3 -1.0**
MASF Masafi 34.23 107 P **P** **17 25 58.9 -0.7**
MSFE Esma-Masafi 34.24 107 P **P** **17 25 58.6 -1.1**
MDH Madha 34.38 107 P **P** **17 25 59.6 -1.2**
MDH S **S** **17 31 26.9 -0.6**
MDH Madha 34.38 107 P **P** **17 25 59.6 -1.2**
MDH Madha 34.38 107 P **P** **17 25 59.4 -1.4**
UOSS Minazif 34.52 107 P **P** **17 26 01.1 -1.1**
UOSS Minazif 34.52 107 P **P** **17 26 01.2 -0.9**
HATD Hatta, Dubai 34.55 107 P **P** **17 26 01.4 -0.9**
HATD P **P** **17 26 01.4 -0.9**
HATD Hatta, Dubai 34.55 107 P **P** **17 26 01.0 -1.4**
ASHO Ashiyiah 34.58 108 P **P** **17 26 01.5 -1.1**
SNR=9.6
ASHO Ashiyiah 34.58 108 *i* P **P** **17 26 01.4 -1.2**
SNR=9.3
ALNE Al Ain 34.75 109 P **P** **17 26 03.0 -1.1**
ALNE S **S** **17 31 31.7 -1.5**
ALNE Al Ain 34.75 109 *i* P **P** **17 26 02.8 -1.3**
SNR=8.5
SOHO SOHO 35.26 108 P **P** **17 26 07.2 -1.2**
SOHO P **P** **17 26 07.2 -1.2**
SOHO SOHO 35.26 108 P **P** **17 26 07.0 -1.5**
SOHO SOHO 35.26 108 *i* P **P** **17 26 07.3 -1.2**
SNR=5.9
BORK Borovoye 35.54 54 P **P** **17 26 11.5 +0.9**
BORK Borovoye 35.54 54 *ce*P **P** **17 26 12.0 +1.4**
BORK pmax pmax
comp=Z,26nm,0.6s
BVAR Borovoye Array 35.59 54 P **P** **17 26 12.2 +1.2**
comp=Z,19nm,0.7s,baz=275,slow=6.3,SNR=124
BVAR LR LR 17 41 35.5
comp=Z,94nm,19.4s,baz=270,slow=38
comp=Z,19nm,0.7s
ARQ Araqi 35.75 109 P **P** **17 26 11.5 -1.2**
ARQ P **P** **17 26 11.5 -1.2**
ARQ Araqi 35.75 109 P **P** **17 26 11.7 -1.0**
HOQ Hoqain 36.16 108 P **P** **17 26 14.8 -1.4**
HOQ P **P** **17 26 14.8 -1.4**
HOQ Hoqain 36.16 108 P **P** **17 26 14.0 -2.2**
BSY Bisya 36.61 109 P **P** **17 26 18.7 -1.4**
BSY Bisya 36.61 109 P **P** **17 26 16.8 -3.3**
SPITS Spitsbergen Ar 36.74 359 P **P** **17 26 20.6 0.0**
comp=Z,6.3nm,0.9s,baz=156,slow=11,SNR=4.0
comp=Z,6.3nm,0.9s
BIDO Bidbid 36.78 107 P **P** **17 26 20.1 -1.4**
BIDO Bidbid 36.78 107 P **P** **17 26 20.5 -1.0**
SMDO Samad 37.01 108 P **P** **17 26 22.1 -1.5**
SMDO P **P** **17 26 22.1 -1.5**
SMDO Samad 37.01 108 P **P** **17 26 21.8 -1.8**
KKAR Karatay Array 37.21 70 **P** **17 26 24.7 -0.3**
KKAR Karatay Array 37.21 70 P **P** **17 26 24.7 -0.3**
DOK Doka 37.27 117 P **P** **17 26 24.3 -1.4**
DOK Doka 37.27 117 P **P** **17 26 24.3 -1.4**
WSAR Wadi Sarin 37.32 107 P **P** **17 26 24.7 -1.4**
WSAR Wadi Sarin 37.32 107 P **P** **17 26 25.1 -0.9**
WHFO Wadi Hawf 37.53 119 P **P** **17 26 26.7 -1.3**
SNR=5.6
WHFO Wadi Hawf 37.53 119 P **P** **17 26 26.9 -1.1**
SNR=5.6
CHGR Chuyangaron 37.61 78 IAmb IAmb 17 26 29.4
comp=Z,14nm,1.1s
NGCH Negor - Chabah 37.86 102 P **P** **17 26 29.3 -1.3**
MHTO MHTO 38.29 111 P **P** **17 26 33.1 -1.2**
MHTO MHTO 38.29 111 P **P** **17 26 32.0 -2.3**
GAR Garm 38.34 77 IAmb IAmb 17 26 40.6
comp=Z,10nm,1.0s
DMTO DMTO 38.46 117 P **P** **17 26 34.3 -1.4**
JLN Jalan Bani Buh 38.56 108 P **P** **17 26 35.3 -1.3**
JLN Jalan Bani Buh 38.56 108 P **P** **17 26 35.8 -0.7**
AAK Ala-Archa 40.15 69 LR LR 17 46 28.3
comp=Z,99nm,18.2s,baz=314,slow=41
AAK Ala-Archa 40.15 69 P **P** **17 26 51.2 +1.4**
AAK Ala-Archa 40.15 69 **P** **17 26 50.7 +0.9**
AAK Ala-Archa 40.15 69 *i* P **P** **17 26 50.8 +0.9**
SNR=6.0
AAK Ala-Archa 40.15 69 P **P** **17 26 50.7 +0.9**
AAK pmax pmax
comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra 40.88 57 P **P** **17 26 56.0 +0.5**
comp=Z,2.0nm,0.5s,baz=289,slow=10,SNR=25
KURBB PP **PP** **17 28 30.4 +0.7**
comp=Z,2.0nm,0.7s,baz=287,slow=11,SNR=5.2
KURBB LR LR 17 47 19.7
comp=Z,144nm,19.3s,baz=184,slow=41
comp=Z,2.0nm,0.5s
KURK Kurchatov 40.91 56 P **P** **17 26 56.5 +0.7**
KURK Kurchatov 40.91 56 **P** **17 26 56.0 +0.2**
KURK Kurchatov 40.91 56 *ce*P **P** **17 26 56.5 +0.7**
KURK pmax pmax
comp=Z,6.0nm,0.8s
DBIC Dimbokro 40.99 219 P **P** **17 26 55.6 -1.1**
comp=Z,2.4nm,0.5s,baz=24,slow=9.1,SNR=4.1
comp=Z,2.4nm,0.5s
DBIC Dimbokro 40.99 219 IAmb IAmb 17 27 04.4
comp=Z,10nm,0.9s
KDJ Kajisay 42.19 69 P **P** **17 27 07.4 +0.7**
KDJ IAmb IAmb 17 27 09.1
comp=Z,5.3nm,0.5s
KDJ Kajisay 42.19 69 P **P** **17 27 07.4 +0.7**
KDJ pmax pmax
comp=Z,5.0nm,0.5s
KSH Kashi 42.25 73 P **P** **17 27 06.5 -0.6**
MBAR Mbarara 43.19 164 LR LR 17 46 47.9
comp=Z,82nm,20.9s,baz=332,slow=38
MAKZ Makanchi 44.01 61 **P** **17 27 21.8 +0.7**
MAKZ IAmb IAmb 17 27 22.9
comp=Z,17nm,1.1s
MAKZ Makanchi 44.01 61 P **P** **17 27 21.8 +0.7**
MAKZ pmax pmax
comp=Z,17nm,1.1s
ZAA0 Zalesovo Array 44.03 51 **P** **17 27 21.5 +0.4**
ZALV Zalesovo Beam 44.03 51 P **P** **17 27 21.8 +0.7**
comp=Z,21nm,0.4s,baz=282,slow=8.3,SNR=151
ZALV LR LR 17 47 59.9
comp=Z,318nm,18.7s,baz=276,slow=39
ZALV Zalesovo Beam 44.03 51 **P** **17 27 21.4 +0.3**
MK31 Makanchi Array 44.22 61 *ce*P **P** **17 27 23.6 +0.8**
MKAR Makanchi Array 44.22 61 P **P** **17 27 23.6 +0.8**
comp=Z,29nm,0.7s,baz=281,slow=7.7,SNR=305
MKAR PcP **PcP** **17 29 06.7 -0.4**
comp=Z,0.8nm,0.6s,baz=271,slow=3.5,SNR=2.1
MKAR LR LR 17 48 55.4
comp=Z,155nm,19.0s,baz=256,slow=40
comp=Z,29nm,0.7s
MKAR Makanchi Array 44.22 61 **P** **17 27 23.4 +0.6**
SFJD Kangerlussuaq 44.94 328 LR LR 17 48 55.7
comp=Z,135nm,18.9s,baz=104,slow=40
DGZ Jazzator, Alta 46.65 56 *i* P **P** **17 27 43.4 +1.2**
DGZ pmax pmax
comp=Z,13nm,0.7s
WMQ Urumqi 48.81 63 *e*P **P** **17 28 00.5 +1.6**
WMQ pP pP 17 28 04.8 -1.0
WMQ pmax pmax
comp=Z,17nm,0.7s
SCHQ Schefferville 55.50 316 P **P** **17 28 47.1 -1.3**
comp=Z,4.4nm,0.9s,baz=69,slow=8.6,SNR=1.9
SCHQ LR LR 17 51 34.5
comp=Z,65nm,20.0s,baz=94,slow=35
comp=Z,4.4nm,0.9s
TLY Talaya 55.55 49 P **P** **17 28 50.9 +2.1**
TLY P **P** **17 28 50.9 +2.1**
TLY Talaya 55.55 49 *i* P **P** **17 28 49.1 +0.3**
TLY pmax pmax
comp=Z,12nm,1.0s
EVN Everest 55.59 81 **P** **17 28 49.3 -0.9**
ZAK Zakamensk 55.91 50 *e*P **P** **17 28 51.4 -0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.7s
TIXI Tiksi 56.73 21 LR LR 17 56 49.8
comp=Z,157nm,18.2s,baz=306,slow=40
TIXI Tiksi 56.73 21 *i* P **P** **17 28 58.2 +1.4**
TIXI pmax pmax
comp=Z,8.0nm,1.5s
LSA Lhasa 57.84 77 P **P** **17 29 06.2 +0.2**
LSA P **P** **17 29 06.2 +0.2**
LSA Lhasa 57.84 77 IAmb IAmb 17 29 06.8

comp=Z,9.4nm,0.7s
LSA Lhasa 57.84 77 P **P 17 29 01.5 -4.4**
LSA Lhasa 57.84 77 P **P 17 29 06.1 +0.2**
GTA Gaotai 58.90 63 P **P 17 29 13.0 +0.2**
GTA pP pP 17 29 17.3 -2.4
GTA ScP ScP 17 33 41.3 -20
GTA pmax pmax
comp=Z,15nm,0.7s
SONM Songino Array 58.90 52 P **P 17 29 13.4 +0.8**
comp=Z,3.7nm,0.7s,baz=286,slow=7.7,SNR=21
SONM LR LR 17 57 15.2
comp=Z,220nm,18.9s,baz=326,slow=39
comp=Z,3.7nm,0.7s
ULN Ulaanbaatar 59.27 52 P **P 17 29 16.5 +1.3**
SHL Shillong 60.68 81 P **P 17 29 23.9 -1.4**
SHL Shillong 60.68 81 **P 17 29 23.5 -1.7**
SHL Shillong 60.68 81 P **P 17 29 23.5 -1.7**
SHL pmax pmax
comp=Z,11nm,0.9s
YAK Yakutsk 62.52 30 LR LR 17 59 41.7
comp=Z,155nm,19.3s,baz=289,slow=39
YAK Yakutsk 62.52 30 P **P 17 29 36.6 -0.2**
YAK IAmb IAmb 17 29 37.4
comp=Z,5.9nm,0.6s
YAK Yakutsk 62.52 30 *i* P **P 17 29 36.7 -0.2**
YAK pmax pmax
comp=Z,21nm,1.7s
LZDM Lanzhou Array 63.33 65 P **P 17 29 44.2 +1.1**
comp=Z,7.0nm,0.6s,baz=288,slow=6.1,SNR=4.4
comp=Z,7.0nm,0.6s
LZH Lanzhou 63.36 64 *e*P **P 17 29 44.5 +1.4**
LZH sP pP 17 29 51.5 +1.4
LZH pmax pmax
comp=Z,38nm,1.3s
PALK Pallekele 63.73 104 P **P 17 29 45.4 -0.2**
A36M Sachs Harbour 64.05 349 **P 17 29 47.1 +0.3**
A36M IAmb IAmb 17 29 55.9
comp=Z,5.4nm,0.8s
OPO Ambohidratompo 65.08 151 LR LR 17 58 27.2
comp=Z,23nm,21.5s,baz=191,slow=36
HHC Hu-ho-hao-te 65.73 56 *e*P **P 17 29 58.0 -0.5**
HHC pmax pmax
comp=Z,10.0nm,0.6s
HHC pmax pmax
comp=Z,160nm,5.3s
LBTB Lobatse 66.49 174 LR LR 18 00 10.0
comp=Z,71nm,19.9s,baz=2.0,slow=37
PZH PanZhiHua 67.35 74 P **P 17 30 10.8 +1.7**
XAN Xi'an 67.94 64 ⇑P **P 17 30 13.0 +0.4**
XAN pmax pmax
comp=Z,20nm,1.0s
E29M Blow River 69.06 351 IAmb IAmb 17 30 27.2
comp=Z,7.4nm,1.0s
SEY Seymchan 69.23 21 LR LR 18 06 36.9
comp=Z,97nm,18.0s,baz=334,slow=41
F31M Tsiigehtchic 69.43 349 **P 17 30 21.4 +0.2**
F31M IAmb IAmb 17 30 27.1
comp=Z,7.2nm,0.7s
CHTO Chiang Mai 69.94 82 P **P 17 30 24.7 -0.4**
CHTO Chiang Mai 69.94 82 **P 17 30 24.0 -1.1**
CHTO Chiang Mai 69.94 82 P **P 17 30 24.0 -1.1**
CHTO pmax pmax
comp=Z,15nm,1.2s
YKA Yellowknife Ar 69.95 339 P **P 17 30 25.8 +1.3**
comp=Z,1.1nm,0.8s,baz=27,slow=5.1,SNR=4.2
comp=Z,1.1nm,0.8s
BOSA Boshof 70.04 175 P **P 17 30 26.4 +0.9**
comp=Z,2.8nm,0.6s,baz=2.1,slow=7.1,SNR=12
comp=Z,2.8nm,0.6s
BOSA Boshof 70.04 175 IAmb IAmb 17 30 41.6
comp=Z,11nm,1.4s
CMAR Chiang Mai Arr 70.16 83 P **P 17 30 25.4 -1.0**
comp=Z,3.1nm,0.7s,baz=307,slow=7.9,SNR=24
comp=Z,3.1nm,0.7s
ENH Enshi 70.57 67 P **P 17 30 28.6 -0.3**
H29M Whitestone 71.19 351 IAmb IAmb 17 30 51.6
comp=Z,3.2nm,0.7s
MA2 Magadan 71.48 24 LR LR 18 06 03.9
comp=Z,142nm,18.4s,baz=326,slow=39
I30M Mount Dempster 71.89 350 IAmb IAmb 17 30 44.5
comp=Z,4.5nm,0.8s
J30M Hart River 72.50 349 IAmb IAmb 17 30 48.6
comp=Z,8.1nm,1.1s
MDP Montagnes des 73.34 262 LR LR 18 01 43.5
comp=Z,37nm,18.0s,baz=92,slow=35
DAWY Dawson 73.39 351 P **P 17 30 46.3 +1.0**
DAWY IAmb IAmb 17 30 58.3
comp=Z,6.0nm,1.0s
J26L Joseph Creek 73.43 352 IAmb IAmb 17 31 23.1
comp=Z,7.8nm,1.4s
IL31 73.46 354 P **P 17 30 45.8 +0.3**
IL31 IAmb IAmb 17 30 51.3
comp=Z,5.2nm,1.2s
ILAR Eielson Array 73.46 354 P **P 17 30 46.5 +0.9**
comp=Z,0.6nm,0.7s,baz=9.1,slow=3.6,SNR=11
comp=Z,0.6nm,0.7s
ILAR Eielson Array 73.46 354 P **P 17 30 46.2 +0.6**
SUR Sutherland 73.60 179 P **P 17 30 48.1 +1.2**
HDA Harding Lake 73.82 354 P **P 17 30 47.8 0.0**
HDA IAmb IAmb 17 31 08.8
comp=Z,3.7nm,0.8s
SJG San Juan 75.08 281 LR LR 17 59 04.9
comp=Z,18nm,21.3s,baz=140,slow=32
DHY Denali Highway 75.17 354 IAmb IAmb 17 31 00.0
comp=Z,9.2nm,1.1s
NJ2 Nanjing 75.73 60 *e*P **P 17 30 59.3 0.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
TKL Tuckaleechee C 75.96 305 LR LR 18 06 31.4
comp=Z,80nm,18.3s,baz=66,slow=37
KSRS Korea Array 77.74 51 P **P 17 31 10.7 +0.2**
comp=Z,1.1nm,0.6s,baz=305,slow=5.3,SNR=5.7
comp=Z,1.1nm,0.6s
JNU Nakatsue 82.48 52 LR LR 18 12 04.8
comp=Z,110nm,18.4s,baz=306,slow=38
BBB Bella Bella 82.50 341 LR LR 18 08 19.2
comp=Z,25nm,19.9s,baz=68,slow=36
NEW Newport 82.70 332 LR LR 18 12 09.5
comp=Z,61nm,18.6s,baz=38,slow=38
YNE Yellowstone No 82.71 327 IAmb IAmb 17 31 46.9
comp=Z,7.8nm,1.2s
MJAR Matsushiro Arr 84.12 45 P **P 17 31 44.2 -0.5**
comp=Z,1.3nm,0.7s,baz=321,slow=5.8,SNR=4.6
MJAR LR LR 18 12 53.9
comp=Z,68nm,19.1s,baz=306,slow=38
comp=Z,1.3nm,0.7s
SDV Santo Domingo 84.33 277 LR LR 18 04 20.3
comp=Z,40nm,20.6s,baz=17,slow=32
PDAR Pinedale Array 84.34 325 P **P 17 31 44.4 -1.6**
comp=Z,0.5nm,0.6s,baz=62,slow=7.2,SNR=5.7
PDAR LR LR 18 12 01.2
comp=Z,40nm,18.8s,baz=24,slow=38
comp=Z,0.5nm,0.6s
BDFB Brasilia 84.35 244 LR LR 18 06 14.5
comp=Z,52nm,21.8s,baz=128,slow=34
JOW Kunigami 85.30 58 LR LR 18 13 29.5
comp=Z,141nm,19.5s,baz=348,slow=38
ANMO Albuquerque 89.17 318 LR LR 18 12 46.4
comp=Z,55nm,19.4s,baz=37,slow=36
YBH Yreka Blue Hor 90.33 333 LR LR 18 17 30.3
comp=Z,6.0nm,18.6s,baz=332,slow=39
NVAR Mina Array Bea 91.59 328 LR LR 18 17 05.0
comp=Z,87nm,21.7s,baz=72,slow=38
TXAR Lajitas Array 92.11 313 P **P 17 32 23.4 +0.1**
comp=Z,0.7nm,0.8s,baz=92,slow=3.8,SNR=4.3
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 92.11 313 P **P 17 32 22.0 -1.3**
TXAR Lajitas Array 92.11 313 P **P 17 32 22.0 -1.3**
CPUP Villa Florida 98.00 242 LR LR 18 19 13.7
comp=Z,26nm,18.5s,baz=216,slow=37
LPAZ La Paz 98.94 256 LR LR 18 18 37.2
comp=Z,24nm,18.1s,baz=56,slow=36
NVL N'lazarevskaya 112.17 183 *i* PKIKP **PKiKP 17 37 50.2 +2.4**
NVL *e* 17 38 33.5
NVL *e*PPP PPP 17 40 57.5
NVL *e*SS SS 17 54 14.5 +3.9
NVL *e*SSS SSS 17 58 24.8
NVL pmax pmax
comp=Z,9.0nm,1.0s
NVL MLR MLR
comp=Z,607nm,22.0s
ASAR Alice Springs 123.18 93 PKP **PKPdf 17 38 09.7 -0.8**
comp=Z,1.0nm,0.5s,baz=314,slow=2.2,SNR=5.3
DZM Mont Dzumac 146.08 65 PKPbc **PKPab 17 38 54.4 -0.1**
comp=Z,3.8nm,0.6s,baz=263,slow=14,SNR=7.3

NEIC ***26*** *17:24:36.9±1.7, 10.24S±0.05×113.78E±0.05, h10km±1km, mb4.6/38, Error ellipse: s-maj=10.2km s-min=5.6km az=225.0*
DJA ***26*** *17:24:41.4±0.4, 10.5S±2.1×11.4E±.1, h26km±4km, M4.6/33, mb4.7/33, mB5.1/12, MLv4.8/25, Mw(mB)4.5/12*
IDC ***26*** *17:24:45.9±4.4, 9.95S±113.92E, h72km±39km, mb4.1/17, mbtmp4.5/19, ML4.2/2, MS3.5/11, Error ellipse: s-maj=30.5km s-min=13.2km az=68.0*
ISC 26 17:24:40.4±0.5, 10.28S±0.05×113.70E±0.04, h38km±1km, n144, σ1.9±88/146, mb4.6/43, MS3.6/9, 2C-2D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.85**	**14**			**Pn**	**17 25 09.4**	**-0.2**
JAGI					Sn	**Sn**	**17 25 29.8**	**-2.0**
JAGI	**Jajag, Banyuwa**	**1.85**	**14**	P		**Pn**	**17 25 10.5**	**+0.9**
JAGI	**Jajag, Banyuwa**	**1.85**	**14**	P		**Pn**	**17 25 10.0**	**+0.4**
JAGI				S		**Sn**	**17 25 30.8**	**-0.9**
IGBI	**Denpasar**	**2.03**	**45**	P		**Pn**	**17 25 13.4**	**+1.3**
IGBI				S		**Sn**	**17 25 35.2**	**-1.0**
DNP	**Denpasar**	**2.18**	**43**	P		**Pn**	**17 25 16.4**	**+2.3**
DNP				S		**Sn**	**17 25 40.8**	**+1.0**
BLJI	**Banyuglugur**	**2.52**	**358**	P		**Pn**	**17 25 20.8**	**+2.0**
ABJI	**Asem Bagus**	**2.52**	**12**	P		**Pn**	**17 25 21.5**	**+2.7**
ABJI				S		**Sn**	**17 25 49.6**	**+1.3**
SRBI	**Singaraja**	**2.64**	**35**	P		**Pn**	**17 25 22.3**	**+1.8**
SRBI				S		**Sn**	**17 25 51.9**	**+0.7**
KMMI	**Kalianget**	**3.22**	**5**	P		**Pn**	**17 25 30.7**	**+2.3**
KMMI				S		**Sn**	**17 26 07.7**	**+2.2**
PCJI	**Pacitan**	**3.24**	**309**	P		**Pn**	**17 25 29.7**	**+1.0**
PCJI				S		**Sn**	**17 26 03.9**	**-2.2**
TWSI	**Taliwang, Sumb**	**3.49**	**64**	P		**Pn**	**17 25 33.7**	**+1.6**
GRJI	**Gresik**	**3.55**	**340**	P		**Pn**	**17 25 34.1**	**+1.1**
GRJI				S		**Sn**	**17 26 14.5**	**+0.7**
NGJI	**Ngawi**	**3.64**	**322**	P		**Pn**	**17 25 37.3**	**+3.0**
TBJI	**Tambak Boyo**	**3.90**	**332**	S		**Sn**	**17 26 23.2**	**+0.9**
UGM	**Wanagama**	**3.92**	**307**			**Pn**	**17 25 39.6**	**+1.5**
UGM					Sn	**Sn**	**17 26 21.7**	**-1.2**
UGM	**Wanagama**	**3.92**	**307**	P		**Pn**	**17 25 40.3**	**+2.1**
UGM	**Wanagama**	**3.92**	**307**	P		**Pn**	**17 25 40.0**	**+1.8**
UGM				S		**Sn**	**17 26 22.1**	**-0.9**
YOGI	**Yogyakarta**	**4.16**	**306**	P		**Pn**	**17 25 43.3**	**+1.9**
PLAI	**Plampang**	**4.27**	**71**	P		**Pn**	**17 25 44.7**	**+1.8**
PLAI	**Plampang**	**4.27**	**71**	P		**Pn**	**17 25 44.6**	**+1.7**
PLAI				S		**Sn**	**17 26 30.3**	**-1.1**
SMRI	**Semarang**	**4.55**	**315**	Pn		**Pn**	**17 25 49.5**	**+2.8**
SMRI	**Semarang**	**4.55**	**315**	P		**Pn**	**17 25 49.5**	**+2.8**
KPJI	**Karang Pucung** 0.7nm85nm,0.6s	**5.55**	**301**	P		**Pn**	**17 26 03.3**	**+2.8**
WBSI	**Waikabubak, Su** 1µm80nm,0.9s	**5.64**	**84**	P		**Pn**	**17 26 01.0**	**-0.8**
WSI	**Waingapu** 3µm102nm,0.9s	**6.52**	**85**	P		**Pn**	**17 26 16.6**	**+2.7**
BBJI	**Bungbulang**	**6.60**	**295**	P		**Pn**	**17 26 17.2**	**+2.2**
BASI	**Baing, Sumba** 1µm104nm,0.9s	**6.77**	**90**	P		**Pn**	**17 26 20.6**	**+3.4**
CNJI	**Cibinong** 0.3nm1µm37nm,0.6s	**7.13**	**294**	P		**Pn**	**17 26 24.0**	**+1.7**
BSSI	**Bau Bau, Buton** 0.4nm668nm33nm,0.5s	**7.87**	**59**	P		**Pn**	**17 26 33.9**	**+1.5**
XMI	**Christmas Isla**	**7.89**	**268**	P		**Pn**	**17 26 33.6**	**+1.0**
KAPI	**Kappang** 1.5nm,0.3s,baz=170,slow=12,SNR=1.7	**7.95**	**49**	P		**Pn**	**17 26 34.4**	**+0.9**
KAPI				S		**Sn**	**17 27 58.0**	**-4.3**
KAPI	22nm,0.6s,baz=33,slow=24,SNR=8.9			LR		LR	17 30 09.7	
	comp=Z,446nm,20.1s,baz=220,slow=43 4.0nm,0.3s							
KAPI	**Kappang**	**7.95**	**49**	Pn		**Pn**	**17 26 31.6**	**-1.9**
EDFI	**Ende, Flores** 22nm,0.6s	**8.02**	**80**	P		**Pn**	**17 26 36.6**	**+2.0**
BKSI	**Bulukumba** 24nm,0.9s	**8.04**	**53**	P		**Pn**	**17 26 36.0**	**+1.3**
MMRI	**Maumere**	**8.57**	**80**			Pn	17 26 39.5	-2.6
MMRI	**Maumere**	**8.57**	**80**	P		**Pn**	**17 26 44.5**	**+2.4**
MMRI	**Maumere** 812nm60nm,0.9s	**8.57**	**80**	P		**Pn**	**17 26 43.9**	**+1.8**
BNSI	**Bone** 24nm,0.9s	**8.62**	**48**	P		**Pn**	**17 26 46.0**	**+3.3**
TTSI	**Tana Toraja**	**9.40**	**41**	P		**Pn**	**17 26 57.8**	**+4.3**
BATI	**Baumata** 5.8nm,0.3s,baz=268,slow=5.4,SNR=12	**9.80**	**90**	P		**Pn**	**17 27 00.5**	**+1.6**
BATI				S		**Sn**	**17 28 41.5**	**-6.4**
	34nm,0.5s,baz=14,slow=22,SNR=9.7 29nm,0.4s							
BATI	**Baumata** 40nm,0.7s	**9.80**	**90**	P		**Pn**	**17 27 01.4**	**+2.5**
KASI	**Kota Agung** 31nm,0.8s	**10.27**	**297**	P		**Pn**	**17 27 06.7**	**+1.4**
SOEI	**Soe**	**10.42**	**88**			**Pn**	**17 27 05.2**	**-2.2**
SOEI	**Soe** 27nm,0.9s	**10.42**	**88**	P		**Pn**	**17 27 09.8**	**+2.4**
MDSI	**Maura Dua** 17nm,0.8s	**11.06**	**301**	P		**Pn**	**17 27 17.8**	**+1.7**
PMBI	**Palembang**	**11.49**	**309**	Pn		**Pn**	**17 27 22.6**	**+0.6**
MBWA	**Marble Bar**	**12.27**	**153**			Pn	17 27 31.7	-1.0
GIRL	**Giralia**	**12.31**	**178**			**Pn**	**17 27 33.7**	**+0.6**
PSA00	**Pilbara Seismi**	**12.69**	**153**			Pn	17 27 37.2	-1.2
MASI	**Maura Aman, Be** 38nm,1.0s	**13.41**	**301**	P		**Pn**	**17 27 48.4**	**+0.1**
MRSI	**Marisa** 25nm,1.0s	**13.46**	**38**	P		**Pn**	**17 27 51.6**	**+2.6**
FITZ	**Fitzroy Crossi** 3.2nm,0.5s,baz=313,slow=7.1,SNR=20	**13.94**	**125**	P		**Pn**	**17 27 54.5**	**-0.9**
FITZ	19nm,0.7s,baz=196,slow=18,SNR=11			S		Sn	17 30 17.0	-12
FITZ	**Fitzroy Crossi**	**13.94**	**125**	Pn		Pn	17 27 53.4	-2.0
FITZ						Sn	17 30 19.6	-9.3
GTOI	**Gorontalo** 36nm,0.9s	**14.26**	**41**	P		**Pn**	**17 28 01.7**	**+1.9**
KRJI	**Kerinci** 74nm,1.1s	**14.63**	**303**	P		**Pn**	**17 28 06.4**	**+1.4**
SANI	**Sanana**	**14.69**	**57**	P		**Pn**	**17 28 06.4**	**+0.8**
MYKOM	**Kota Tinggi**	**15.49**	**320**	Pn		**Pn**	**17 28 14.7**	**-1.5**
PPSI	**Pulau Pagai** 81nm,1.0s	**15.51**	**298**	P		**Pn**	**17 28 14.9**	**-1.6**
KNRA	**Kununurra**	**15.62**	**112**			**Pn**	**17 28 16.1**	**-1.8**
BKNI	**Bangkinang**	**16.42**	**309**			**Pn**	**17 28 29.7**	**+1.5**
BNDI	**Bandanaira**	**17.05**	**72**	P		**P**	**17 28 39.2**	**+1.7**
MTN	**Manton Dam**	**17.27**	**100**			**Pn**	**17 28 35.8**	**-2.9**
SAUI	**Saumlaki**	**17.52**	**84**	P		**Pn**	**17 28 43.4**	**+1.4**
MORW	**Morawa**	**18.82**	**174**	P		**P**	**17 28 54.9**	**-2.1**
IPM	**Ipoh**	**19.35**	**319**			**P**	**17 29 00.5**	**-2.4**
PSI	**Prapat**	**19.63**	**311**	LR		LR	17 36 31.3	
	comp=Z,103nm,18.6s,baz=136,slow=36							
GSI	**Gunungsitoli**	**19.75**	**305**	P		**P**	**17 29 04.8**	**-2.5**
GSI					IAmb	IAmb	17 29 43.6	
	comp=Z,41nm,1.4s							
FAKI	**Fak Fak**	**19.81**	**70**	P		**P**	**17 29 05.1**	**-2.8**
FAKI					IAmb	IAmb	17 29 09.6	
	comp=Z,24nm,1.1s							
FAKI	**Fak Fak**	**19.81**	**70**	P		**P**	**17 29 07.6**	**-0.3**
	comp=Z,17nm,0.8s							
KULM	**Kulim**	**20.20**	**319**	P		**P**	**17 29 10.8**	**-1.4**
KULM					IAmb	IAmb	17 29 26.1	
	comp=Z,26nm,1.3s							
DAV	**Davao City (W)**	**20.90**	**35**	LR		LR	17 38 32.3	
	comp=Z,74nm,21.3s,baz=204,slow=40							
WB0	**Warramunga Arr**	**22.07**	**118**			**P**	**17 29 31.1**	**-1.3**
WRA	**Warramunga Arr**	**22.09**	**118**	P		**P**	**17 29 35.0**	**+2.4**
	comp=Z,2.5nm,0.6s,baz=294,slow=11,SNR=20							
WRA				S		**S**	**17 33 28.6**	**-5.6**
	comp=Z,1.2nm,0.8s,baz=287,slow=23,SNR=4.6 comp=Z,1.5nm,0.6s							
WR8	**Warramunga Arr**	**22.24**	**118**			**P**	**17 29 34.0**	**-0.1**
AS31	**Alice Springs**	**23.42**	**127**			**P**	**17 29 46.5**	**+0.1**
ASAR	**Alice Springs**	**23.42**	**127**	P		**P**	**17 29 49.2**	**+2.9**
	comp=Z,3.9nm,1.0s,baz=302,slow=9.6,SNR=36							
ASAR				PcP		**PcP**	**17 33 33.0**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=314,slow=3.0,SNR=4.1							
ASAR				S		**S**	**17 34 02.6**	**+5.5**
	comp=Z,3.1nm,0.8s,baz=306,slow=24,SNR=8.2 comp=Z,3.9nm,1.0s							
ASAR	**Alice Springs**	**23.42**	**127**	P		**P**	**17 29 46.4**	**+0.1**
COEN	**Coen**	**29.04**	**100**	P		**P**	**17 30 35.8**	**-1.5**
COEN					IAmb	IAmb	17 31 19.6	
	comp=Z,16nm,1.4s							
BBOO	**Buckleboo**	**30.45**	**141**	P		**P**	**17 30 49.0**	**-0.5**
BBOO					IAmb	IAmb	17 31 28.5	
	comp=Z,18nm,1.2s							
CM31	**Chiang Mai Arr**	**32.05**	**333**	P		**P**	**17 31 03.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**32.05**	**333**	P		**P**	**17 31 05.0**	**+1.1**
	comp=Z,11nm,0.9s,baz=166,slow=8.1,SNR=58							
CMAR				PcP		**PcP**	**17 33 55.0**	**+2.0**
	comp=Z,1.0nm,0.6s,baz=185,slow=3.8,SNR=4.5							
CMAR				LR		LR	17 46 13.6	
	comp=Z,49nm,18.4s,baz=145,slow=40 comp=Z,11nm,0.9s							
CMAR	**Chiang Mai Arr**	**32.05**	**333**			**P**	**17 31 02.9**	**-0.9**
CHTO	**Chiang Mai**	**32.37**	**333**			**P**	**17 31 06.1**	**-0.4**
CHTO					IAmb	IAmb	17 31 08.8	
	comp=Z,15nm,1.1s							
CTAO	**Charters Tower**	**32.84**	**111**	P		**P**	**17 31 10.9**	**+0.2**
CTAO					IAmb	IAmb	17 31 48.2	
	comp=Z,5.4nm,1.1s							
PMG	**Port Moresby**	**32.97**	**91**	LR		LR	17 46 02.8	
	comp=Z,97nm,21.2s,baz=206,slow=39							
STKA	**Stephens Creek**	**33.57**	**134**	P		**P**	**17 31 20.5**	**+3.5**
	comp=Z,5.4nm,0.7s,baz=305,slow=9.5,SNR=9.9 comp=Z,5.4nm,0.7s							
KMI	**Kunming**	**36.77**	**343**	P		**P**	**17 31 47.0**	**+2.2**
KMI				pmax		pmax		
	comp=Z,33nm,0.9s							
PALK	**Pallekele**	**37.20**	**297**	P		**P**	**17 31 49.0**	**+0.6**
TNCH	**TengChong**	**38.09**	**337**	⇑P		**P**	**17 31 57.5**	**+1.6**
TNCH				pmax		pmax		
	comp=Z,39nm,1.3s							
PZH	**PanZhiHua**	**38.36**	**343**	P		**P**	**17 32 01.8**	**+3.6**
ENH	**Enshi**	**40.52**	**354**			**P**	**17 32 15.5**	**-0.5**
ENH					IAmb	IAmb	17 32 17.1	
	comp=Z,23nm,0.8s							
H08S2	**Diego Garcia H** baz=96,slow=75	**40.77**	**270**	T		T	18 15 26.8	
H08S3	**Diego Garcia H** baz=96,slow=75	**40.78**	**270**	T		T	18 15 30.2	
H08S1	**Diego Carcia H** baz=96,slow=75	**40.79**	**270**	T		T	18 15 31.1	
CD2	**Chengdu**	**42.05**	**347**	P		**P**	**17 32 29.0**	**+0.4**
CD2				pmax		pmax		
	comp=Z,80nm,1.0s							
NJ2	**Nanjing**	**42.38**	**6**	*e*P		**P**	**17 32 34.0**	**+2.9**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.6s							
XAN	**Xi'an**	**44.30**	**354**	⇑P		**P**	**17 32 46.5**	**-0.2**
XAN				pmax		pmax		
	comp=Z,20nm,1.6s							
LSA	**Lhasa**	**45.30**	**332**	P		**P**	**17 32 52.5**	**-2.7**
LSA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
EVN	**Everest**	**46.07**	**326**			**P**	**17 33 00.9**	**-0.6**
EVN					IAmb	IAmb	17 33 06.0	
	comp=Z,8.4nm,0.9s							
LZDM	**Lanzhou Array**	**46.94**	**349**	P		**P**	**17 33 08.9**	**+1.0**
	comp=Z,7.7nm,0.4s,baz=163,slow=12,SNR=1.7 comp=Z,2.7nm,0.4s							
LZH	**Lanzhou**	**47.04**	**349**	*e*P		**P**	**17 33 09.5**	**+1.0**
LZH				pP		pP	17 33 13.8	-4.9
LZH				sP		pwP	17 33 16.0	-6.1
LZH				pmax		pmax		
	comp=Z,21nm,1.3s							
HNS	**HongShan**	**47.43**	**1**	⇓P		**P**	**17 33 10.8**	**-0.5**
HNS				pmax		pmax		
	comp=Z,8.0nm,1.1s							
JMN	**Monobe**	**47.78**	**23**	P		**P**	**17 33 13.6**	**-0.6**
KSAR	**Wonju Array Be**	**49.30**	**15**	P		**P**	**17 33 25.0**	**-0.7**
KSRS	**Korea Array**	**49.32**	**15**	P		**P**	**17 33 25.6**	**-0.2**
	comp=Z,5.9nm,1.0s,baz=198,slow=7.0,SNR=12 comp=Z,5.9nm,1.0s							
HHC	**Hu-ho-hao-te**	**50.91**	**358**	*e*P		**P**	**17 33 40.5**	**+2.5**
HHC				pmax		pmax		
	comp=Z,12nm,0.6s							
HHC				pmax		pmax		
	comp=Z,170nm,4.2s							
MJAR	**Matsushiro Arr**	**51.97**	**25**	P		**P**	**17 33 43.4**	**-2.5**
	comp=Z,6.7nm,0.9s,baz=197,slow=7.3,SNR=16 comp=Z,6.7nm,0.9s							
MJB9	**Matsu-Tunnel**	**51.97**	**25**	P		**P**	**17 33 45.4**	**-0.5**
MJB9					IAmb	IAmb	17 33 47.1	
	comp=Z,8.0nm,0.9s							
USRK	**Ussuriysk Ar.**	**56.70**	**16**	P		**P**	**17 34 19.6**	**-0.5**
	comp=Z,15nm,0.9s,baz=198,slow=4.9,SNR=12 comp=Z,15nm,0.9s							
BNX	**BinXian**	**57.10**	**11**	⇓P		**P**	**17 34 21.8**	**-1.2**
BNX				pmax		pmax		
	comp=Z,13nm,1.7s							
PYZ	**Puysegur Point**	**57.37**	**139**	P		**P**	**17 34 25.6**	**+0.6**
ULN	**Ulaanbaatar**	**58.18**	**355**			**P**	**17 34 30.0**	**-0.7**
ULN					IAmb	IAmb	17 34 32.7	
	comp=Z,3.4nm,0.8s							
SONM	**Songino Array**	**58.22**	**354**	P		**P**	**17 34 31.0**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=178,slow=8.7,SNR=22 comp=Z,3.5nm,0.7s							
HILR	**Hailar Array B**	**59.81**	**5**	P		**P**	**17 34 41.4**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=184,slow=10,SNR=4.1 comp=Z,2.3nm,0.7s							
JKA	**Kamikawa-asahi**	**60.16**	**24**	P		**P**	**17 34 43.6**	**-0.6**
HEH	**HeiHe**	**61.45**	**10**	*e*P		**P**	**17 34 52.0**	**-0.9**
HEH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
MKAR	**Makanchi Array**	**63.37**	**336**	P		**P**	**17 35 06.0**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=147,slow=7.3,SNR=26 comp=Z,4.4nm,0.8s							
MKAR	**Makanchi Array**	**63.37**	**336**			**P**	**17 35 05.6**	**-0.2**
MAKZ	**Makanchi**	**63.50**	**336**	P		**P**	**17 35 06.6**	**-0.1**
MAKZ					IAmb	IAmb	17 35 27.0	
	comp=Z,3.1nm,1.1s							
ARSB	**Arslanbob**	**63.56**	**327**			**P**	**17 35 07.5**	**0.0**
AAK	**Ala-Archa**	**63.70**	**329**			**P**	**17 35 08.9**	**+0.6**
AAK					IAmb	IAmb	17 35 10.2	
	comp=Z,4.6nm,1.1s							
MAW	**Mawson**	**66.30**	**199**	LR		LR	17 57 54.8	
	comp=Z,37nm,20.3s,baz=40,slow=30							
KURBB	**Kurchatov Arra**	**67.93**	**337**	P		**P**	**17 35 34.8**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=154,slow=5.5,SNR=12 comp=Z,0.9nm,0.3s							
KURK	**Kurchatov**	**67.97**	**337**			**P**	**17 35 34.4**	**-1.0**
KURK					IAmb	IAmb	17 35 36.7	
	comp=Z,3.4nm,0.8s							
ZAA0	**Zalesovo Array**	**68.51**	**342**			**P**	**17 35 38.3**	**-0.4**
ZAA0					IAmb	IAmb	17 35 38.6	
	comp=Z,3.1nm,0.7s							
ZALV	**Zalesovo Beam**	**68.51**	**342**	P		**P**	**17 35 38.3**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=144,slow=3.7,SNR=16 comp=Z,3.5nm,0.8s							
BVAR	**Borovoye Array**	**73.06**	**334**	P		**P**	**17 36 06.7**	**+0.2**
	comp=Z,4.7nm,0.7s,baz=140,slow=8.2,SNR=28 comp=Z,4.7nm,0.7s							
BORK	**Borovoye**	**73.11**	**334**	P		**P**	**17 36 06.3**	**-0.4**
BORK					IAmb	IAmb	17 36 08.0	
	comp=Z,3.8nm,0.8s							
YAK	**Yakutsk**	**73.16**	**8**			**P**	**17 36 06.2**	**-0.6**
PETK	**Petropavlovsk-**	**73.42**	**26**	P		**P**	**17 36 08.1**	**-0.5**
AB31	**Akbulak array**	**75.68**	**327**			**P**	**17 36 21.5**	**-0.3**
AB31					IAmb	IAmb	17 36 23.5	
	comp=Z,9.2nm,0.9s							
ABKAR	**Akbulak array**	**75.68**	**327**			**P**	**17 36 22.1**	**+0.3**
QSPA	**South Pole Qui**	**79.73**	**180**	LR		LR	18 10 04.9	
	comp=Z,32nm,19.7s,baz=227,slow=34							
ARTI	**Arti**	**80.55**	**332**	LR		LR	18 17 11.0	
	comp

s-min=2.5km az=162.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTC	**Hot Caves**	**0.04**	**75**		Pn	17 27 46.4	+0.4
HLP	**Hilina Pali**	**0.14**	**61**		Pn	17 27 46.7	+0.3
HLP					Sn	17 27 51.2	-0.2
HLP	**Hilina Pali**	**0.14**	**61**	IAML		17 27 51.4	
	comp=N,537nm,0.7s						
HLP				IAML		17 27 54.0	
	comp=E,525nm,0.3s						
AIN	**Ainahou**	**0.14**	**352**		Pn	17 27 47.1	+0.5
AIN					Sn	17 27 51.8	+0.1
AIN	**Ainahou**	**0.14**	**352**	IAML		17 27 52.0	
	comp=E,2μm,0.3s						
AIN				IAML		17 27 52.1	
	comp=N,2μm,0.4s						
KHU	**Kahuku**	**0.17**	**276**		Pn	17 27 47.0	+0.1
KHU					Sn	17 27 51.7	-0.4
HPO	**Honuapo**	**0.18**	**219**		Pn	17 27 47.3	+0.7
HPO					Sn	17 27 51.3	-0.3
SDHHI	**Sand Hill**	**0.21**	**40**		Pn	17 27 47.1	+0.1
SDHHI					Sn	17 27 52.1	-0.2
WRMHI	**West Rim**	**0.22**	**36**		Pn	17 27 47.1	0.0
WRMHI					Sn	17 27 52.5	0.0
RIM	**Rim**	**0.23**	**42**		Pn	17 27 47.2	0.0
RIM					Sn	17 27 52.3	-0.3
KKO	**Keanakako'i**	**0.23**	**43**		Pn	17 27 47.3	+0.1
KKO					Sn	17 27 52.6	-0.1
UWE	**Uwekahuna**	**0.23**	**35**		Pn	17 27 47.1	-0.1
UWE				IAML		17 28 01.5	
	comp=N,479nm,1.9s						
UWE				IAML		17 28 02.3	
	comp=E,389nm,1.7s						
UWE	**Uwekahuna**	**0.23**	**35**		Sn	17 27 52.5	-0.2
OBL	**Observatory Le**	**0.24**	**37**		Pn	17 27 47.2	0.0
OBL					Sn	17 27 52.5	-0.2
UWB	**Uwekahuna Bluf**	**0.25**	**37**		Pn	17 27 47.2	-0.1
BYL	**Byron's Ledge**	**0.25**	**42**		Pn	17 27 47.1	-0.2
PUH	**Pauahi**	**0.25**	**55**		Pn	17 27 47.3	-0.1
PUH	**Pauahi**	**0.25**	**55**		Sn	17 27 52.0	-1.0
PUH				IAML		17 27 52.5	
	comp=E,217nm,0.3s						
PUH				IAML		17 27 52.7	
	comp=N,228nm,1.1s						
SBLHI	**Steaming Bluff**	**0.25**	**39**		Pn	17 27 47.3	-0.1
HATHI	**Halema'uma'u T**	**0.26**	**40**		Pn	17 27 47.3	-0.1
HATHI	**Halema'uma'u T**	**0.26**	**40**	IAML		17 27 55.7	
	comp=N,209nm,2.2s						
HATHI				IAML		17 27 56.0	
	comp=E,260nm,2.1s						
MLH	**Mauna Loa**	**0.27**	**10**		Pn	17 27 48.0	+0.3
MLH					Sn	17 27 53.3	-0.2
MLH	**Mauna Loa**	**0.27**	**10**	IAML		17 27 53.6	
	comp=E,471nm,0.4s						
MLH				IAML		17 27 53.6	
	comp=N,493nm,0.5s						
RSD	**Rainshed**	**0.28**	**32**	Pn	Pn	17 27 47.6	-0.1
KNHH	**Kane Nui o Ham**	**0.29**	**59**		Pn	17 27 47.7	0.0
MWH	**Mokuaweoweo**	**0.30**	**329**		Pn	17 27 48.3	0.0
MWH					Sn	17 27 53.9	-0.5
MWH	**Mokuaweoweo**	**0.30**	**329**	IAML		17 27 54.3	
	comp=N,1μm,0.3s						
MWH				IAML		17 27 56.5	
	comp=E,468nm,0.4s						
STCH	**Steam Cracks**	**0.33**	**62**	Pn	Pn	17 27 48.0	-0.1
STCH				IAML		17 27 54.2	
	comp=N,271nm,0.2s						
MLOA	**Mauna Loa Obse**	**0.33**	**337**		Pn	17 27 48.7	+0.1
MLOA					Sn	17 27 54.5	-0.5
MLOA	**Mauna Loa Obse**	**0.33**	**337**	IAML		17 27 54.6	
	comp=E,682nm,0.3s						
MLOA				IAML		17 27 54.8	
	comp=N,474nm,0.2s						
NPOC	**North of Pu'u**	**0.35**	**62**		Pn	17 27 48.2	-0.1
NPOC					Sn	17 27 54.1	-0.5
JCUZ	**Jacuzzi**	**0.35**	**64**		Pn	17 27 48.3	-0.1
JCUZ					Sn	17 27 54.1	-0.6
ALEP	**Alea Permanent**	**0.37**	**328**		Pn	17 27 48.8	-0.1
ALEP					Sn	17 27 54.7	-0.9
HMH	**Humu'ula Sheep**	**0.38**	**353**		Pn	17 27 49.4	+0.5
HMH					Sn	17 27 55.8	+0.2
HMH	**Humu'ula Sheep**	**0.38**	**353**	IAML		17 27 56.1	
	comp=N,916nm,0.2s						
HMH				IAML		17 27 56.2	
	comp=E,1μm,0.4s						
POHA	**Pohakuloa**	**0.54**	**350**		Sn	17 27 58.1	-0.9
POHA	**Pohakuloa**	**0.54**	**350**		Pn	17 27 50.8	-0.1
POHA				IAML		17 28 04.5	
	comp=E,210nm,0.4s						
POHA				IAML		17 28 04.7	
	comp=E,276nm,0.6s						
KHLU	**Kahalu`u**	**0.56**	**310**		Pn	17 27 51.0	0.0
KHLU					Sn	17 27 58.6	-0.8
KHLU	**Kahalu`u**	**0.56**	**310**	IAML		17 27 58.9	
	comp=E,380nm,0.2s						
KHLU				IAML		17 27 59.0	
	comp=N,581nm,0.1s						
HUH	**Hualalai**	**0.59**	**320**		Pn	17 27 51.8	+0.1
HUH				IAML		17 28 09.7	
	comp=E,426nm,0.4s						
HPAH	**Hawaii Preparat**	**0.84**	**343**	Pn	Pn	17 27 53.7	-1.0
HPAH				IAML		17 28 05.2	
	comp=E,293nm,0.3s						
MHA	**Mahukona**	**1.05**	**335**	Pn	Pn	17 27 57.7	+0.1
KPA	**Kalaupapa**	**2.44**	**324**	Pn	Pn	17 28 15.9	-0.7

*ISN **26** 17:30:38.7±1.0, 36.°94N×45.°25E, h6km±101km, ML3.0*
*AFAD **26** 17:30:38.0, 36.°89N×44.°85E, h4km±12km, ML2.7*
*TEH **26** 17:30:38.7, 37.°00N×45.°30E, h6km*

ISC 26 17:30:34.3±1.2, 36.°82N±0.°03×45.°13E±0.°03, h18km±9km, n29, σ1°62/36, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.47**	**96**	Pg	**Pn**	**17 30 46.1**	**-0.2**
YOVA	**Hakkari_Yksek**	**1.02**	**319**	P	**Pn**	**17 30 54.4**	**+0.4**
YOVA				S	**Sn**	**17 31 08.5**	**+0.5**
YOVA				*i* IAML		17 31 14.0	
	comp=N,151nm,0.5s						
YOVA				*i* IAML		17 31 14.0	
	comp=E,142nm,0.7s						
IAZR	**Azarshahr**	**1.09**	**38**	Pg	**Pb**	**17 30 55.4**	**+0.4**
IAZR				Sg	**Sb**	**17 31 07.7**	**-1.3**
HAKT	**HAKKARI**	**1.36**	**303**	P	**Pg**	**17 31 00.8**	**+0.3**
HAKT				S	**Sg**	**17 31 20.4**	**+2.1**
HAKT				*i* IAML		17 31 25.0	
	comp=N,280nm,0.5s						
HAKT				*i* IAML		17 31 26.0	
	comp=E,137nm,0.2s						
IKRK	**Kirkuk**	**1.55**	**205**	*e*Pn	Pg	17 31 12.0	+7.8
IKRK				*e*Sn	Sg	17 31 35.5	+11
IKRK				AML	AML	17 31 38.2	
	comp=E,179nm,0.9s						
IKRK				AML	AML	17 31 43.5	
	comp=N,94nm,0.9s						
IHSH	**Hashtrud**	**1.77**	**73**	Pg	**Pg**	**17 31 08.1**	**-0.4**
IMRD	**Marand**	**1.95**	**13**	Pg	**Pg**	**17 31 11.0**	**-0.8**
OZAP	**Van, Ozalp-Mer**	**2.05**	**334**	P	**Pg**	**17 31 14.9**	**+1.1**
IHRS	**Heris**	**2.13**	**45**	Pn	**Pb**	**17 31 14.0**	**+1.4**
TVAN	**Van**	**2.19**	**322**	P	**Pg**	**17 31 17.1**	**+0.8**
ISRB	**Sarab**	**2.26**	**63**	Pn	**Pb**	**17 31 15.9**	**+1.1**
SIRN	**Sırnak**	**2.27**	**288**	P	**Pg**	**17 31 17.3**	**-0.7**
SIRN				S	**Sb**	**17 31 44.3**	**+1.6**
SIRN				*i* IAML		17 31 56.0	
	comp=N,108nm,0.6s						
IDHR	**Dehrash**	**2.35**	**154**	Pn	**Pg**	**17 31 21.4**	**+2.0**
PERV	**Siirt/Pervari-**	**2.35**	**299**	P	**Pg**	**17 31 18.5**	**-0.9**
PERV				S	**Sg**	**17 31 48.3**	**-1.7**
PERV				*i* IAML		17 31 56.0	
	comp=N,99nm,0.8s						
MAKU	**Maku**	**2.56**	**352**	Pn	**Pb**	**17 31 20.5**	**+0.6**
IGHG	**Ghaleghazi**	**2.75**	**154**	Pn	**Pg**	**17 31 27.0**	**0.0**
ADCV	**BITLIS_Adilcev**	**2.75**	**317**	P	**Pb**	**17 31 24.4**	**+1.3**
GLG1	**Gilan-e-Gharb**	**2.77**	**167**	Pn	**Pg**	**17 31 27.5**	**0.0**
SRTM	**Siirt_Merkez**	**2.81**	**296**	P	**Pg**	**17 31 27.4**	**-0.9**
SNQR	**Sonqor, Kerman**	**2.82**	**133**	Pn	**Pg**	**17 31 27.2**	**-1.2**
GRMI	**Germi**	**2.96**	**47**	Pn	**Pb**	**17 31 25.3**	**-1.2**
MIDY	**Mardin/Midyat-**	**3.04**	**282**	P	**Pb**	**17 31 28.7**	**+0.7**
DORK	**Agr/Tutak/Do**	**3.17**	**325**	P	**Pb**	**17 31 28.8**	**-1.4**
KOTA	**Agri, Merkez-K**	**3.34**	**334**	P	**Pb**	**17 31 33.1**	**-0.1**
MUSM	**Mu-Merkez**	**3.44**	**305**	P	**Pb**	**17 31 33.0**	**-1.8**
MARD	**Mardin**	**3.52**	**279**	P	**Pb**	**17 31 33.5**	**-2.7**
BHD	**Baghdad**	**3.59**	**190**	*e*Pn	**Pb**	**17 31 39.0**	**+1.7**
BHD				*e*Sn	**Sb**	**17 32 23.5**	**+2.9**
BHD				AML	AML	17 32 30.7	
	comp=E,343nm,0.1s						
IBDR	**Badra**	**3.76**	**170**	*e*Pn	**Pb**	**17 31 41.0**	**+0.9**
IBDR				*e*Sn	**Sb**	**17 32 27.0**	**+1.7**
IBDR				AML	AML	17 32 47.6	
	comp=E,29nm,0.3s						
IBDR				AML	AML	17 32 51.6	
	comp=N,21nm,0.3s						
RAFI	**Al-Rafai**	**5.15**	**171**	*e*Pn	**Pb**	**17 32 01.0**	**-2.8**
RAFI				*e*Sn	**Sb**	**17 33 01.0**	**-4.3**

IDC 26 17:31:16.2±3.3, 32.°01S×177.°88W, h0km, mb3.5/2, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=79.0km s-min=37.9km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.46**	**212**	Pn	Pn	17 33 06.3	+0.1
	0.2nm,0.3s,baz=305,slow=1.7,SNR=2.2						
URZ				Sn	Sn	17 34 32.2	+0.7
	1.2nm,0.3s,baz=106,slow=22,SNR=6.4						
	4.0nm,0.8s						
ASAR	**Alice Springs**	**43.15**	**269**	P	P	17 39 18.6	-0.2
	0.3nm,0.4s,baz=104,slow=7.1,SNR=5.3						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**44.28**	**274**	P	P	17 39 27.9	0.0
	0.3nm,0.4s,baz=115,slow=7.9,SNR=3.0						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**146.69**	**339**	PKPbc	PKPdf	17 50 58.3	+0.8
	0.7nm,0.6s,baz=46,slow=4.0,SNR=4.6						

IDC 26 17:33:30.8±3.2, 31.°94S×177.°94W, h0km, mb3.7/2, mbtmp3.7/3, ML3.1/1, MS3.4/2, Error ellipse: s-maj=74.1km s-min=37.3km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.50**	**211**	Pn	Pn	17 35 21.3	-0.1
	0.3nm,0.3s,baz=297,slow=14,SNR=0.9						
URZ				Sn	Sn	17 36 46.8	-0.3
	1.3nm,0.3s,baz=205,slow=17,SNR=6.9						
	2.2nm,0.4s						
DZM	**Mont Dzumac**	**17.02**	**301**	LR	LR	17 43 01.2	
	comp=Z,111nm,19.6s,baz=149,slow=34						
ASAR	**Alice Springs**	**43.10**	**269**	P	P	17 41 33.0	0.0
	0.5nm,0.5s,baz=107,slow=7.3,SNR=12						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**44.22**	**274**	P	P	17 41 42.0	-0.1
	0.6nm,0.4s,baz=113,slow=7.9,SNR=5.0						
	0.6nm,0.4s						
KDAK	**Kodiak Island**	**91.89**	**13**	LR	LR	18 18 44.6	
	comp=Z,27nm,21.5s,baz=343,slow=30						
FINES	**FINESS Array B**	**146.60**	**339**	PKPbc	PKPdf	17 53 12.6	+0.6
	2.5nm,1.0s,baz=50,slow=3.0,SNR=5.0						

IDC 26 17:36:54.6±3.0, 31.°93S×178.°03W, h0km, mb3.7/2, mbtmp3.7/3, ML2.7/1, Error ellipse: s-maj=71.3km s-min=36.8km az=116.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.46**	**211**	Pn	Pn	17 38 45.0	+0.3
	0.1nm,0.3s,baz=18,slow=6.4,SNR=1.2						
URZ				Sn	Sn	17 40 09.3	-0.7
	1.3nm,0.3s,baz=218,slow=22,SNR=6.2						
	1.8nm,0.4s						
ASAR	**Alice Springs**	**43.02**	**269**	P	P	17 44 56.8	+0.7
	0.6nm,0.4s,baz=106,slow=7.0,SNR=17						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**44.15**	**274**	P	P	17 45 04.2	-1.0
	0.4nm,0.3s,baz=114,slow=8.2,SNR=5.7						
	0.4nm,0.3s						
FINES	**FINESS Array B**	**146.56**	**339**	PKPbc	PKPdf	17 56 36.3	+0.6
	0.9nm,0.5s,baz=54,slow=2.6,SNR=7.0						

IDC 26 17:53:23.7±2.8, 32.°04S×177.°64W, h0km, mb3.6/2, mbtmp3.6/3, ML3.0/1, Error ellipse: s-maj=71.7km s-min=37.1km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.55**	**213**	Pn	Pn	17 55 15.7	+0.6
	0.2nm,0.3s,baz=355,slow=11,SNR=1.5						
URZ				Sn	Sn	17 56 41.8	+0.5
	1.3nm,0.3s,baz=219,slow=20,SNR=7.4						
	1.0nm,0.3s						
ASAR	**Alice Springs**	**43.35**	**268**	P	P	18 01 28.2	+0.3
	0.4nm,0.5s,baz=107,slow=7.5,SNR=12						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**44.48**	**274**	P	P	18 01 36.9	-0.2
	0.5nm,0.4s,baz=114,slow=7.9,SNR=5.9						
WRA				PcP	PcP	18 03 18.5	-2.1
	0.2nm,0.5s,baz=131,slow=3.8,SNR=1.3						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**146.78**	**339**	PKPbc	PKPbc	18 13 07.0	0.0
	5.2nm,1.1s,baz=63,slow=5.1,SNR=5.0						

*IDC **26** 17:57:57.6±2.7, 22.°96N×11.°65W, h0km, mb3.8/4, mbtmp3.7/7, ML3.6/3, Error ellipse: s-maj=89.9km s-min=27.4km az=86.0*

ISC 26 17:57:59.6±1.7, 22.°94N±0.°08×11.°4W±0.°3, h10km, n10, σ0°75/11, mb3.8/4, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**11.54**	**30**	Pn	**Pn**	**18 00 44.0**	**-0.5**
	0.2nm,0.3s,baz=202,slow=3.8,SNR=1.8						
MDT				Sn	**Sn**	**18 02 52.9**	**-0.6**
	0.1nm,0.3s,baz=328,slow=9.5,SNR=1.4						
MDT				Lg	Lg	18 04 01.8	
	0.1nm,0.3s,baz=318,slow=16,SNR=1.5						
	0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**15.82**	**126**	Pn	**Pn**	**18 01 43.5**	**+1.0**
	0.3nm,0.3s,baz=325,slow=13,SNR=7.4						
	0.5nm,0.4s						
DBIC	**Dimbokro**	**17.37**	**158**	P	**P**	**18 02 03.4**	**-0.2**
	0.2nm,0.3s,baz=341,slow=5.1,SNR=1.7						
DBIC				S	**Sn**	**18 05 14.7**	**-1.0**
	1.5nm,0.7s,baz=228,slow=14,SNR=1.8						
DBIC				Lg	Lg	18 07 08.5	
	0.1nm,0.3s,baz=255,slow=16,SNR=1.8						
	2.1nm,0.7s						
I48TN	**KESRA INFRASON**	**22.11**	**50**	I	I	20 15 10.0	
	baz=244,slow=303,SNR=3.4						
GERES	**GERESS Array B**	**32.62**	**31**	P	**P**	**18 04 32.5**	**+1.0**
	0.4nm,0.4s,baz=223,slow=4.7,SNR=5.0						
	0.4nm,0.4s						
HFS	**Hagfors**	**41.13**	**19**	P	**P**	**18 05 43.2**	**-0.4**
	1.3nm,0.5s,baz=206,slow=9.6,SNR=6.9						
	1.3nm,0.6s						
FINES	**FINESS Array B**	**46.27**	**24**	P	**P**	**18 06 25.1**	**+0.1**
	0.8nm,0.6s,baz=238,slow=8.0,SNR=4.8						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**76.08**	**45**	P	**P**	**18 09 48.0**	**+0.4**
	0.4nm,0.5s,baz=282,slow=6.2,SNR=8.4						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**148.04**	**91**	PKPbc	**PKPbc**	**18 17 45.7**	**-0.5**
	0.3nm,0.6s,baz=298,slow=1.9,SNR=2.5						
ASAR	**Alice Springs**	**148.20**	**98**	PKPbc	**PKPbc**	**18 17 46.0**	**-0.6**
	0.4nm,0.6s,baz=295,slow=2.5,SNR=7.1						

*IDC **26** 18:15:05.5±1.9, 41.°37N×19.°21E, h0km, mb3.9/7, mbtmp3.8/12, ML3.0/4, MS2.7/3, Error ellipse: s-maj=35.5km s-min=17.3km az=37.0*
*SKO **26** 18:15:09.3, 41.°62N×19.°35E, h2km, ML3.5*
*TIR **26** 18:15:09.3, 41.°72N×19.°49E, h39km±4km, Ml3.6/7*
*PDG **26** 18:15:09.0±0.3, 41.°52N×19.°46E, h10km±1km, MD3.3/3, ML3.2/12, Error ellipse: s-maj=1.0km s-min=1.7km az=0.0*
*ATH **26** 18:15:09.2, 41.°69N×19.°54E, h16km±3km, ML3.4/6, Manual Solution by M.Charalampakis First location: 2019/11/26 18:31:25, This location: 2020/11/16 08:02:15 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 3 km; Longitude uncertainty: 2 km*
*THE **26** 18:15:10.9, 42.°N±10.°×1.°9E±.°, h15km±17km, M3.4/7, MLh3.4/7*
*RHSSO **26** 18:15:10.2±1.0, 41.°58N×19.°52E, h8km±4km, ML3.5/5*
*BEO **26** 18:15:11.3±0.6, 41.°69N×19.°45E, h1km±3km, ML3.2/6*
*VIE **26** 18:15:14.1, 41.°07N×17.°42E, h164km, mb3.6/5 47 km E of Bari*

ISC 26 18:15:09.6±1.0, 41.°64N±0.°02×19.°48E±0.°02, h9km±8km, n121, σ1°29/168, mb3.9/5, 15C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.37**	**331**	⇑*i*Pg	**Pg**	**18 15 16.2**	**-0.7**
ULC				*i* Sg	**Sb**	**18 15 24.2**	**-0.1**
TIR	**Tirane**	**0.41**	**135**	Pg	**Pg**	**18 15 17.8**	**+0.3**
TIR				Sg	**Sg**	**18 15 21.1**	**-1.8**
TIR				AML	AML	18 15 23.3	
	18nm,0.2s						
TIR				AML	AML	18 15 23.6	
	16nm,0.2s						
TIR	**Tirane**	**0.41**	**135**	⇓*i*Pg	**Pg**	**18 15 17.9**	**+0.3**
TIR				*i* Sg	**Sg**	**18 15 24.1**	**+1.2**
SDA	**Shkodra**	**0.41**	**2**	Pg	**Pg**	**18 15 17.3**	**-0.3**
SDA				Sg	**Sb**	**18 15 24.9**	**-0.6**
DRME	**Dracevica, Mon**	**0.59**	**338**	*e*Pg	**Pg**	**18 15 20.6**	**-0.4**
DRME	**Dracevica, Mon**	**0.59**	**338**	⇓*i*Pg	**Pg**	**18 15 21.0**	**0.0**
DRME				*i* Sg	**Sn**	**18 15 32.9**	**-1.1**
PHP	**Peshkopia**	**0.72**	**86**	Pg	**Pg**	**18 15 22.6**	**-0.9**
PHP				Sg	**Sg**	**18 15 32.6**	**-0.2**
PHP				AML	AML	18 15 43.2	
	7.6nm,0.6s						
PHP	**Peshkopia**	**0.72**	**86**	P	**Pb**	**18 15 24.2**	**-0.2**
PHP				S	**Sb**	**18 15 35.4**	**+1.1**
BUM	**Brajici-Budva**	**0.79**	**327**	⇓*i*Pg	**Pg**	**18 15 24.5**	**-0.4**
BUM				*i* Sg	**Sn**	**18 15 38.4**	**-0.7**
PDG	**Podgorica**	**0.81**	**348**	Pg	**Pg**	**18 15 24.3**	**-0.9**
PDG				Sg	**Sn**	**18 15 39.0**	**-0.4**
PDG	**Podgorica**	**0.81**	**348**	⇑P	**Pg**	**18 15 24.5**	**-0.6**
PDG				⇑S	**Sb**	**18 15 37.9**	**+1.0**
PDG	**Podgorica**	**0.81**	**348**	*e*Pg	**Pg**	**18 15 24.1**	**-1.1**
PDG	**Podgorica**	**0.81**	**348**	P	**Pg**	**18 15 24.1**	**-1.1**
PDG	**Podgorica**	**0.81**	**348**	⇑*i*Pg	**Pg**	**18 15 23.9**	**-1.3**
PDG				*i* Sg	**Sn**	**18 15 39.4**	**0.0**
CEME	**Cevo**	**1.00**	**335**	⇓*i*Pg	**Pb**	**18 15 28.9**	**-0.3**
CEME				*i* Sg	**Sn**	**18 15 45.3**	**+1.1**
PVY	**Plav**	**1.02**	**20**	*e*Pg	**Pb**	**18 15 29.5**	**0.0**
PVY	**Plav**	**1.02**	**20**	⇑*i*Pg	**Pb**	**18 15 29.3**	**-0.2**
PVY				*i* Sg	**Sn**	**18 15 46.6**	**+1.8**
HCY	**Herceg Novi**	**1.09**	**318**	⇑*i*Pg	**Pg**	**18 15 29.8**	**-0.8**
HCY				*i* Sg	**Sn**	**18 15 47.9**	**+1.5**
OHR	**Ohrid**	**1.12**	**118**	*i* Pg	**Pg**	**18 15 29.7**	**-1.4**
OHR				*i* Sg	**Sn**	**18 15 48.3**	**+1.1**
OHR				*e*Lg	Lg	18 15 49.6	
	comp=N,987nm,0.8s						
OHR				*e*Lg	Lg	18 15 49.7	
	comp=E,887nm,0.5s						
VLO	**Vlora**	**1.17**	**179**	Pn	**Pn**	**18 15 32.3**	**+0.2**
VLO				Sn	**Sb**	**18 15 47.9**	**+0.7**
VLO				AML	AML	18 15 59.6	
	comp=E,17nm,0.6s						
VLO	**Vlora**	**1.17**	**179**	P	**Pn**	**18 15 33.1**	**+1.0**
VLO				S	**Sn**	**18 15 50.2**	**+2.0**
KOME	**Kolasin**	**1.21**	**1**	*e*Pg	**Pn**	**18 15 33.0**	**+0.1**
KOME	**Kolasin**	**1.21**	**1**	⇓*i*Pg	**Pn**	**18 15 32.7**	**-0.2**
KOME				*i* Sg	**Sn**	**18 15 52.7**	**+3.2**
BEY	**Berane**	**1.27**	**14**	*e*Pg	**Pn**	**18 15 32.5**	**-1.1**
IVA	**Berane**	**1.27**	**14**	⇓*i*Pg	**Pn**	**18 15 31.9**	**-1.8**
IVA				*i* Sg	**Sn**	**18 15 54.7**	**+3.8**
TREB	**Trebinje**	**1.37**	**322**	*e*Pg	**Pg**	**18 15 35.8**	**0.0**
TREB				*e*Sg	**Sg**	**18 15 55.5**	**+1.9**
TREB	**Trebinje**	**1.37**	**322**	*e*Pn	**Pb**	**18 15 35.2**	**-0.2**
KBN	**Korca**	**1.41**	**135**	Pg	**Pb**	**18 15 36.1**	**-0.1**
KBN				Sg	**Sg**	**18 15 55.3**	**+0.2**
KBN	**Korca**	**1.41**	**135**	P	**Pb**	**18 15 36.5**	**+0.3**
KBN				S	**Sg**	**18 15 55.8**	**+0.7**
BRY	**Bratogost**	**1.44**	**331**	⇑*i*Pg	**Pn**	**18 15 36.0**	**-0.1**
BRY				*i* Sg	**Sg**	**18 15 59.0**	**+3.0**
LMS2	**Laimos Florina**	**1.49**	**122**	P	**Pn**	**18 15 35.1**	**-1.5**
SKO	**Skopje**	**1.50**	**77**	*i* Pg	**Pg**	**18 15 38.5**	**+0.1**
SKO				*i* Sg	**Sg**	**18 15 59.5**	**+1.7**
MESG	**Mesagne**	**1.62**	**230**	P	**Pn**	**18 15 37.6**	**-0.7**
UPM	**Unac-Piva**	**1.62**	**345**	⇓*i*Pn	**Pb**	**18 15 39.8**	**0.0**
UPM				*i* Sn	**Sg**	**18 16 04.1**	**+2.4**
SJES	**Sjenica**	**1.66**	**12**	*e*Pn	**Pb**	**18 15 40.6**	**+0.1**
KLINJ	**Klinje**	**1.67**	**337**	*e*Pn	**Pb**	**18 15 40.8**	**+0.2**
KLINJ				*e*Sn	**Sg**	**18 16 03.7**	**+0.5**
PLE	**Pljevlja**	**1.69**	**358**	⇑*i*Pn	**Pb**	**18 15 40.4**	**-0.6**
PLE				*i* Sn	**Sg**	**18 16 06.1**	**+2.1**
NEST	**Nestorio**	**1.70**	**135**	Pn	**Pb**	**18 15 41.1**	**0.0**
NEST				Sn	**Sb**	**18 16 02.5**	**-0.2**
NEST				AML	AML	18 16 16.6	
	comp=E,1.4nm,0.6s						
NEST	**Nestorio**	**1.70**	**135**	P	**Pn**	**18 15 40.1**	**+0.5**
NEST				S	**Sb**	**18 16 03.5**	**+0.8**
NEST	**Nestorio**	**1.70**	**135**	P	**Pn**	**18 15 38.8**	**-0.8**
STON	**Ston**	**1.81**	**314**	*e*Pn	**Pb**	**18 15 42.2**	**-0.7**
PENT	**Pentalofos**	**1.91**	**138**	P	**Pb**	**18 15 44.0**	**-0.7**
PENT				S	**Sn**	**18 16 07.9**	**+1.2**
PENT	**Pentalofos**	**1.91**	**138**	P	**Pn**	**18 15 42.4**	**-0.1**
KEK	**Kerkira**	**1.94**	**173**	P	**Pb**	**18 15 45.0**	**0.0**
KEK				S	**Sb**	**18 16 10.3**	**+0.9**
RUDO	**Rudo**	**1.98**	**358**	*e*Pn	**Pb**	**18 15 44.6**	**-1.2**
RUDO				*e*Sn	**Sb**	**18 16 10.8**	**+0.2**
RUDO	**Rudo**	**1.98**	**358**	*e*Pn	**Pb**	**18 15 44.8**	**+0.2**
SELS	**Selova**	**

HERR	**Herculane**	**3.89**	**32**	⇑P		**Pn**	**18 16 10.7**	**+1.2**
PLD	**Plovdiv**	**3.96**	**81**	*e*Pn		**Pn**	**18 16 12.9**	**+2.3**
PLD				*e*Sn		**Sn**	**18 16 58.3**	**+1.1**
GZR	**Gura Zlata**	**4.45**	**31**	⇑P		**Pn**	**18 16 18.0**	**+0.6**
AQU	**L'Aquila**	**4.59**	**281**	*e*Pn		**Pn**	**18 16 20.3**	**+1.1**
AQU				*e*Sn		**Sn**	**18 17 12.3**	**-0.3**
MORH	**Mrgy, Hungar**	**4.62**	**353**	*e*Pn		**Pn**	**18 16 19.9**	**+0.4**
MORH				*e*Sn		**Sn**	**18 17 13.9**	**+0.7**
MORH	**Mrgy, Hungar**	**4.62**	**353**	⇑P		**Pn**	**18 16 20.6**	**+1.0**
MORH	**Mrgy, Hungar**	**4.62**	**353**	*e*Pn		**Pn**	**18 16 22.9**	**+3.4**
SIRR	**Siria**	**4.89**	**18**	*e*Pn		**Pn**	**18 16 23.1**	**-0.2**
SIRR				*e*Sn		**Sn**	**18 17 19.8**	**-0.2**
ELND	**Elena**	**4.92**	**73**	⇑P		**Pn**	**18 16 24.1**	**+0.4**
LOT	**Lotru**	**4.92**	**38**	⇓P		**Pn**	**18 16 25.0**	**+1.2**
ARR	**Arges**	**5.29**	**43**	⇑P		**Pn**	**18 16 29.5**	**+0.7**
CEY	**Cerknica**	**5.50**	**320**	*e*Pn		**Pn**	**18 16 34.2**	**+2.5**
SKDS	**Skadanscina**	**5.57**	**316**	*e*Pn		**Pn**	**18 16 34.0**	**+1.3**
SKDS				*e*Sn		**Sn**	**18 17 36.2**	**-0.6**
SOKA	**Soboth**	**5.97**	**329**	*e*Pn		**Pn**	**18 16 40.1**	**+1.9**
	comp=N,2.5nm,0.5s							
MLR	**Muntele Rosu**	**6.07**	**48**	Sn		**Sn**	**18 17 52.1**	**+2.8**
	comp=N,0.1nm,0.3s,baz=201,slow=22,SNR=1.2							
MLR				LR		LR	18 19 27.9	
	comp=N,49nm,19.2s,baz=156,slow=41							
KBA	**Koelnbreinsper**	**6.99**	**323**	*e*Pn		**Pn**	**18 16 52.4**	**0.0**
	comp=N,1.2nm,0.5s							
LANS	**Liptovska Anna**	**7.51**	**360**	*e*PN		**Pn**	**18 17 00.5**	**+1.2**
IDI	**Anoyia**	**7.63**	**144**	Pn		Pn	18 16 56.1	-4.9
	comp=N,16nm,1.1s,baz=334,slow=11,SNR=6.8							
IDI				Sn		Sn	18 18 17.1	-10
	comp=N,0.2nm,0.3s,baz=294,slow=18,SNR=1.4							
STHS	**Stebnicka Huta**	**7.88**	**8**	*e*PN		**Pn**	**18 17 03.0**	**-1.3**
STHS				*e*PG		**Pg**	**18 17 41.7**	**+1.4**
STHS				*e*SN		Sn	18 18 13.8	-20
VRAC	**Vranov**	**7.93**	**346**	LR		LR	18 20 38.8	
	comp=N,55nm,19.1s,baz=74,slow=41							
GERES	**GERESS Array B**	**8.28**	**332**	Pn		**Pn**	**18 17 09.8**	**-0.1**
	baz=145,slow=12,SNR=5.2							
	comp=N,0.6nm,0.6s							
DAVOX	**Davos/Dischmat**	**8.60**	**310**	Pn		**Pn**	**18 17 12.5**	**-1.8**
	comp=N,0.2nm,0.3s,baz=156,slow=20,SNR=1.4							
	comp=N,0.8nm,0.5s							
AKASG	**Malin Array Be**	**11.29**	**33**	Pn		**Pn**	**18 17 52.6**	**+1.6**
	comp=N,0.6nm,0.3s,baz=221,slow=14,SNR=2.2							
AKASG				LR		LR	18 22 32.6	
	comp=N,44nm,18.7s,baz=164,slow=38							
	comp=N,0.4nm,0.4s							
MMAI	**Mount Meron Ar**	**15.29**	**119**	Pn		**Pn**	**18 18 44.8**	**-1.0**
	comp=N,0.4nm,0.3s,baz=312,slow=11,SNR=1.5							
	comp=N,0.8nm,0.5s							
EKA	**Eskdalemuir Ar**	**20.20**	**320**	P		**P**	**18 19 44.1**	**-0.3**
	comp=N,2.6nm,0.9s,baz=123,slow=10,SNR=3.7							
	comp=N,2.6nm,0.9s							
FINES	**FINESS Array B**	**20.23**	**9**	P		**P**	**18 19 44.4**	**-0.3**
	comp=N,3.3nm,0.6s,baz=197,slow=8.5,SNR=15							
	comp=N,3.3nm,0.6s							
BVAR	**Borovoye Array**	**35.61**	**54**	P		**P**	**18 22 08.0**	**+0.7**
	comp=N,1.2nm,0.6s,baz=276,slow=7.3,SNR=10.0							
	comp=N,1.2nm,0.6s							
KURBB	**Kurchatov Array**	**40.90**	**57**	P		**P**	**18 22 51.3**	**-0.6**
	comp=N,0.5nm,0.2s,baz=291,slow=10,SNR=1.5							
	comp=N,0.5nm,0.2s							
ZALV	**Zalesovo Beam**	**44.05**	**51**	P		**P**	**18 23 17.0**	**-0.5**
	comp=N,3.6nm,0.6s,baz=282,slow=8.8,SNR=18							
	comp=N,3.6nm,0.6s							
MKAR	**Makanchi Array**	**44.25**	**61**	P		**P**	**18 23 19.1**	**-0.2**
	comp=N,1.5nm,0.6s,baz=280,slow=7.8,SNR=18							
	comp=N,1.5nm,0.6s							
SONM	**Songino Array**	**58.91**	**52**	P		**P**	**18 25 08.0**	**-1.0**
	comp=N,0.5nm,0.6s,baz=280,slow=7.7,SNR=4.3							
	comp=N,0.5nm,0.6s							

IDC 26 18:15:16.2±2.2, 0°34'N×126°46'E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=201.6km s-min=27.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.58**	**159**	P	P	18 20 06.7	-1.1
	0.2nm,0.5s,baz=338,slow=11,SNR=2.2						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**24.93**	**164**	P	P	18 20 42.0	+0.7
	0.3nm,0.5s,baz=350,slow=8.2,SNR=5.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**60.19**	**327**	P	P	18 25 25.9	-0.1
	0.3nm,0.7s,baz=137,slow=7.2,SNR=4.5						
	0.3nm,0.7s						

IDC 26 18:23:38.8±3.9, 47°50'N×92°84'W, h0km, mbtmp2.9/2, ML0.7/1, Error ellipse: s-maj=40.0km s-min=17.2km az=84.0, Minnesota

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULM	**Lac du Bonnet**	**3.40**	**325**	Pn	Pn	18 24 31.2	-1.9
	0.1nm,0.3s,baz=148,slow=10,SNR=1.1						
ULM				Sn	Sn	18 25 10.1	-4.1
	0.4nm,0.3s,baz=195,slow=19,SNR=3.0						
ULM				Lg	Lg	18 25 25.1	
	6.9nm,0.3s,baz=33,slow=11,SNR=22						
	3.0nm,0.8s						
I10CA	**LAC DU BONNET**	**3.42**	**323**	I	I	18 46 30.0	
	baz=148,slow=330,SNR=1.8						
PDAR	**Pinedale Array**	**12.71**	**254**	Pn	Pn	18 26 39.4	-1.6
	0.3nm,0.7s,baz=69,slow=12,SNR=1.3						
PDAR				Lg	Lg	18 30 10.8	
	0.1nm,0.3s,baz=64,slow=32,SNR=2.2						

*NNC **26** 18:28:27.2±9.7, 36°.99N×70°.51E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=108.9km s-min=61.3km az=144.0*

ISC 26 18:28:24.1±3.8, 36°.5N±0°.2×70°.5E±0°.2, h50km, n9, σ1§38/11, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UCH	**Uchtor**	**6.51**	**28**	P	**Pn**	**18 29 58.8**	**+1.2**
	SNR=14						
KK31	**Karatay Array**	**6.57**	**0**	⇑P	**Pn**	**18 30 00.3**	**+2.1**
	2.5nm,0.3s,baz=167,slow=11,SNR=103						
KK31				⇓S	**Sn**	**18 31 11.5**	**-0.2**
	4.6nm,0.5s,baz=222,slow=28,SNR=3.5						
EKS2	**Erkin-Say**	**6.64**	**22**	P	**Pn**	**18 30 00.8**	**+1.5**
	SNR=20						
AAK	**Ala-Archa**	**6.86**	**26**	P	**Pn**	**18 30 03.2**	**+1.1**
	SNR=11						
AAK	**Ala-Archa**	**6.86**	**26**	⇑P	**Pn**	**18 30 03.1**	**+0.9**
	0.9nm,0.4s						
AAK				⇑S	**Sn**	**18 31 17.9**	**-1.1**
	2.7nm,0.7s						
KBK	**Karagaybulak**	**7.04**	**28**	P	**Pn**	**18 30 05.6**	**+0.9**
	SNR=6.6						
CHMS	**Chumysh**	**7.26**	**26**	P	**Pn**	**18 30 08.6**	**+0.9**
	SNR=5.0						
TKM2	**Tokmak 2**	**7.52**	**30**	P	**Pn**	**18 30 11.7**	**+0.4**
	SNR=15						
AB31	**Akbulak array**	**14.85**	**332**	⇓P	**Pn**	**18 31 49.4**	**-1.5**
	0.6nm,0.7s,baz=148,slow=13,SNR=8.2						

*IDC **26** 18:28:39.1±0.7, 2°.32S×140°.23E, h0km, mb3.6/10, mbtmp3.7/12, ML4.1/2, MS3.1/3, Error ellipse: s-maj=19.7km s-min=7.4km az=24.0*

*DJA **26** 18:28:40.8±0.6, 2°.5±7°×14°.0E±°, h14km±4km, M4.0/7, mb4.0/7, MLv3.9/5*

*NEIC **26** 18:28:41.0±1.4, 2°.35S±0°.09×140°.32E±0°.05, h18km±4km, mb4.1/15, Error ellipse: s-maj=14.1km s-min=6.5km az=200.0*

ISC 26 18:28:41.5±0.5, 2°.43S±0°.06×140°.34E±0°.04, h24km, n56, σ1§23/52, mb3.8/14, MS3.2/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.24**	**226**	P	**Pb**	**18 28 48.4**	**+0.8**
JAY	**Jayapura**	**0.38**	**103**	Pg	**Pb**	**18 28 49.7**	**0.0**
	326nm,0.3s,baz=249,slow=12,SNR=1135						
JAY				Lg	Lg	18 28 55.5	
	713nm,0.3s,baz=18,slow=20,SNR=21						
JAY	**Jayapura**	**0.38**	**103**	P	**Pb**	**18 28 49.7**	**0.0**
JAY				S	**Sb**	**18 28 56.4**	**+1.1**
WAMI	**Wamena**	**2.18**	**228**	P	**Pb**	**18 29 19.8**	**-0.5**
SRPI	**Serui, Papua**	**4.13**	**278**	P	**Pn**	**18 29 42.6**	**-0.6**
BAKI	**Biak**	**4.41**	**286**	P	**Pn**	**18 29 47.4**	**+0.5**
MANU	**Manus Island**	**7.03**	**87**	Pn	**Pn**	**18 30 20.2**	**-2.9**
FAKI	**Fak Fak**	**8.10**	**266**	Pn	**Pn**	**18 30 36.8**	**-0.9**
FAKI	**Fak Fak**	**8.10**	**266**	P	**Pn**	**18 30 38.4**	**+0.7**
	12nm,1.1s						
SAUI	**Saumlaki**	**10.56**	**238**	Pn	**Pn**	**18 31 10.7**	**-0.8**
COEN	**Coen**	**11.79**	**166**	Pn	**Pn**	**18 31 30.2**	**+1.8**
TNTI	**Ternate**	**13.35**	**284**	Pn	**Pn**	**18 31 52.1**	**+2.3**
MTN	**Manton Dam**	**13.79**	**221**	Pn	**Pn**	**18 31 55.2**	**-0.5**
KNRA	**Kununurra**	**17.42**	**220**	P	**Pn**	**18 32 43.7**	**+0.6**
KNRA				IAmb	IAmb	18 32 52.1	
	comp=Z,5.5nm,0.8s						
SOEI	**Soe**	**17.55**	**245**		**P**	**18 32 46.4**	**+0.5**
SOEI				IAmb	IAmb	18 33 05.5	
	comp=Z,53nm,1.5s						
SOEI	**Soe**	**17.55**	**245**	P	**P**	**18 32 46.2**	**+0.3**
WB0	**Warramunga Arr**	**18.19**	**198**	P	**Pn**	**18 32 52.1**	**-0.5**
BATI	**Baumata**	**18.28**	**244**	P	**Pn**	**18 32 54.6**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=114,slow=12,SNR=5.7						
	comp=Z,3.7nm,0.5s						
WR8	**Warramunga Arr**	**18.33**	**198**	P	**P**	**18 32 54.2**	**-0.1**
WR8				IAmb	IAmb	18 32 58.9	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**18.37**	**198**	P	**P**	**18 32 55.7**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=20,slow=12,SNR=22						
WRA				S	**Sn**	**18 36 16.8**	**-2.7**
	comp=Z,0.2nm,0.5s,baz=44,slow=32,SNR=1.7						
	comp=Z,2.4nm,0.6s						
TOLI2	**Tolitoli**	**19.87**	**280**	P	**P**	**18 33 09.1**	**-2.1**
TOLI2				IAmb	IAmb	18 33 31.3	
	comp=Z,5.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.22**	**222**	P	**P**	**18 33 26.1**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=18,slow=9.2,SNR=8.4						
FITZ				S	**S**	**18 37 18.0**	**-2.8**
	comp=Z,1.4nm,0.9s,baz=18,slow=20,SNR=1.7						
	comp=Z,1.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.22**	**222**	P	**P**	**18 33 25.5**	**-0.3**
AS31	**Alice Springs**	**22.01**	**196**		**P**	**18 33 34.4**	**+0.1**
ASAR	**Alice Springs**	**22.01**	**196**	P	**P**	**18 33 35.1**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=26,slow=11,SNR=42						
ASAR				S	**S**	**18 37 36.5**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=14,slow=26,SNR=4.1						
ASAR				LR	LR	18 43 29.4	
	comp=Z,27nm,19.5s,baz=359,slow=40						
	comp=Z,2.1nm,0.6s						
ASAR	**Alice Springs**	**22.01**	**196**	P	**P**	**18 33 34.7**	**+0.4**
STKA	**Stephens Creek**	**29.32**	**178**	P	**P**	**18 34 41.9**	**-0.5**
STKA				IAmb	IAmb	18 34 56.4	
	comp=Z,3.9nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**33.24**	**50**	T	T	19 10 22.2	
	baz=231,slow=75						
H11S2	**WAKE ISLAND Hy**	**33.25**	**50**	T	T	19 10 19.1	
	baz=231						
H11S1	**WAKE ISLAND Hy**	**33.26**	**50**	T	T	19 10 25.2	
	baz=231,slow=75						
H11N1	**WAKE ISLAND Hy**	**34.12**	**49**	T	T	19 11 32.6	
	baz=229						
H11N2	**WAKE ISLAND Hy**	**34.13**	**49**	T	T	19 11 32.7	
	baz=229						
H11N3	**WAKE ISLAND Hy**	**34.13**	**49**	T	T	19 11 26.5	
	baz=229						
GSI	**Gunungsitoli**	**42.91**	**275**	P	**P**	**18 36 37.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**45.72**	**299**	P	**P**	**18 37 01.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=110,slow=7.5,SNR=5.7						
	comp=Z,0.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**45.72**	**299**	P	**P**	**18 37 00.4**	**-0.8**
SONM	**Songino Array**	**58.17**	**334**	P	**P**	**18 38 34.6**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=147,slow=7.5,SNR=1.9						
	comp=Z,0.2nm,0.6s						
YAK	**Yakutsk**	**64.80**	**354**	LR	LR	19 06 47.3	
	comp=Z,15nm,18.1s,baz=323,slow=35						
SEY	**Seymchan**	**65.82**	**6**	LR	LR	19 05 52.2	
	comp=Z,30nm,20.6s,baz=319,slow=34						
MKAR	**Makanchi Array**	**70.57**	**322**	P	**P**	**18 39 55.5**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=120,slow=7.2,SNR=5.6						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**70.57**	**322**	P	**P**	**18 39 54.2**	**-0.6**
MAKZ	**Makanchi**	**70.77**	**322**	P	**P**	**18 39 55.7**	**-0.3**
MAKZ				IAmb	IAmb	18 39 58.6	
	comp=Z,2.6nm,0.9s						
ZAA0	**Zalesovo Array**	**72.52**	**329**	P	**P**	**18 40 05.9**	**-0.4**
ZAA0				IAmb	IAmb	18 40 27.2	
	comp=Z,2.3nm,1.1s						
ZALV	**Zalesovo Beam**	**72.52**	**329**	P	**P**	**18 40 08.2**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=96,slow=4.3,SNR=2.2						
	comp=Z,0.3nm,0.3s						
ZALV	**Zalesovo Beam**	**72.52**	**329**	P	**P**	**18 40 05.8**	**-0.5**
KURK	**Kurchatov**	**74.43**	**324**	P	**P**	**18 40 17.1**	**-0.5**
KURK				IAmb	IAmb	18 40 19.7	
	comp=Z,2.9nm,1.2s						
KURBB	**Kurchatov Array**	**74.44**	**324**	P	**P**	**18 40 17.5**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=120,slow=5.3,SNR=1.3						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	**75.92**	**175**	P	**P**	**18 40 26.8**	**+1.0**
N18K	**Kilae Creek**	**79.59**	**27**	P	**P**	**18 40 45.8**	**-0.7**
BVAR	**Borovoye Array**	**80.02**	**325**	P	**P**	**18 40 48.4**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=102,slow=6.2,SNR=4.0						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**84.91**	**24**	P	**P**	**18 41 14.0**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=259,slow=5.3,SNR=2.2						
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**84.91**	**24**	P	**P**	**18 41 13.8**	**-0.5**
QSPA	**South Pole Qui**	**87.52**	**180**	P	**P**	**18 41 30.9**	**+3.6**
	comp=Z,0.6nm,0.7s,baz=263,slow=2.0,SNR=3.5						
	comp=Z,0.6nm,0.7s						
QSPA	**South Pole Qui**	**87.52**	**180**	P	**P**	**18 41 29.2**	**+1.9**
DBIC	**Dimbokro**	**145.06**	**278**	PKP	**PKPab**	**18 48 17.8**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=127,slow=3.9,SNR=4.8						
DBIC	**Dimbokro**	**145.06**	**278**		**PKPbc**	**18 48 16.6**	**-0.9**

*TIR **26** 18:37:07.9, 41°.66N×19°.58E, h25km±2km, Md2.6/4, Ml3.1/6*
*BEO **26** 18:37:08.6±0.5, 41°.56N×19°.57E, h8km±2km, ML2.8/8*
*PDG **26** 18:37:10.7±0.3, 41°.68N×19°.54E, h13km±1km, ML2.7/13, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*

ISC 26 18:37:08.0±1.1, 41°.60N±0°.02×19°.54E±0°.03, h6km±9km, n61, σ1§02/99, 19C-15D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**135**	Pg	**Pg**	**18 37 15.0**	**+0.3**
TIR				Sg	**Sg**	**18 37 17.1**	**-2.3**
TIR				AML	AML	18 37 20.4	
	8.9nm,0.2s						
ULC	**Ulcinj**	**0.43**	**329**	⇑*i*Pg	**Pg**	**18 37 16.4**	**0.0**
ULC				*i* Sg	**Sg**	**18 37 22.4**	**+0.4**
SDA	**Shkodra**	**0.46**	**356**	Pg	**Pg**	**18 37 16.5**	**-0.3**
SDA				Sg	**Sg**	**18 37 22.6**	**-0.3**
SDA				AML	AML	18 37 27.3	
	6μm,0.1s						
SDA				AMd		18 38 03.1	
DRME	**Dracevica, Mon**	**0.65**	**336**	*e*Pg	**Pg**	**18 37 20.5**	**0.0**
DRME	**Dracevica, Mon**	**0.65**	**336**	⇑*i*Pg	**Pg**	**18 37 20.3**	**-0.2**
DRME				*i* Sg	**Sg**	**18 37 29.3**	**+0.3**
PHP	**Peshkopia**	**0.68**	**82**	Pg	**Pg**	**18 37 20.5**	**-0.7**
PHP				Sg	**Sg**	**18 37 29.8**	**-0.2**
PHP				AML	AML	18 37 34.5	
	2.2nm,0.3s						
PHP				AMd		18 37 60.0	
BUM	**Brajici-Budva**	**0.85**	**326**	⇓*i*Pg	**Pb**	**18 37 24.9**	**-0.4**
BUM				*i* Sg	**Sg**	**18 37 36.0**	**+0.4**
PDG	**Podgorica**	**0.86**	**346**	*e*Pg	**Pg**	**18 37 24.8**	**+0.2**
PDG				*e*Sg	**Sn**	**18 37 38.7**	**-0.8**
PDG	**Podgorica**	**0.86**	**346**	⇓*i*Pg	**Pg**	**18 37 24.5**	**-0.1**
PDG				*i* Sg	**Sg**	**18 37 36.2**	**+0.4**
PVY	**Plav**	**1.05**	**17**	*e*Pg	**Pg**	**18 37 27.3**	**-0.8**
PVY	**Plav**	**1.05**	**17**	⇓*i*Pg	**Pg**	**18 37 27.8**	**-0.3**
PVY				*i* Sg	**Sb**	**18 37 42.1**	**-0.5**
CEME	**Cevo**	**1.06**	**334**	⇑*i*Pg	**Pn**	**18 37 29.4**	**0.0**
CEME				*i* Sg	**Sb**	**18 37 43.0**	**+0.1**
VLO	**Vlora**	**1.12**	**182**	Pg	**Pn**	**18 37 30.6**	**+0.4**
VLO				Sg	**Sb**	**18 37 45.7**	**+1.0**
VLO				AML	AML	18 37 52.7	
	3.0nm,0.4s						
HCY	**Herceg Novi**	**1.16**	**318**	⇓*i*Pg	**Pg**	**18 37 30.3**	**+0.1**
HCY				*i* Sg	**Sn**	**18 37 47.1**	**+0.3**
NKME	**Niksic**	**1.25**	**340**	⇓*i*Pg	**Pg**	**18 37 31.6**	**-0.4**
NKME				*i* Sg	**Sn**	**18 37 49.1**	**-0.1**
KOME	**Kolasin**	**1.25**	**359**	*e*Pg	**Pg**	**18 37 31.4**	**-0.7**
KOME	**Kolasin**	**1.25**	**359**	⇑*i*Pg	**Pg**	**18 37 31.2**	**-0.9**
KOME				*i* Sg	**Sn**	**18 37 49.2**	**-0.2**
BEY	**Berane**	**1.30**	**12**	*e*Pg	**Pn**	**18 37 32.3**	**-0.5**
IVA	**Berane**	**1.30**	**12**	⇓*i*Pg	**Pn**	**18 37 31.8**	**-1.0**
IVA				*i* Sg	**Sn**	**18 37 51.3**	**+0.7**
TREB	**Trebinje**	**1.43**	**322**	*e*Pg	**Pn**	**18 37 34.4**	**-0.1**
TREB				*e*Sg	**Sg**	**18 37 54.8**	**+0.9**
BRY	**Bratogost**	**1.50**	**331**	⇓*i*Pg	**Pn**	**18 37 36.0**	**+0.4**
BRY				*i* Sg	**Sg**	**18 37 57.7**	**+1.4**
NEST	**Nestorio**	**1.64**	**135**	Pn	**Pb**	**18 37 38.5**	**-0.2**
UPM	**Unac-Piva**	**1.68**	**344**	⇑*i*Pn	**Pb**	**18 37 39.3**	**0.0**
UPM				*i* Sn	**Sg**	**18 38 01.7**	**-0.2**
SJES	**Sjenica**	**1.70**	**11**	*e*Pn	**Pb**	**18 37 39.9**	**+0.2**
SJES				*e*Sg	**Sg**	**18 38 04.2**	**+1.7**
PLE	**Pljevlja**	**1.74**	**356**	⇑*i*Pn	**Pb**	**18 37 40.5**	**+0.1**
PLE				*i* Sn	**Sb**	**18 38 02.6**	**+0.1**
STON	**Ston**	**1.87**	**314**	*e*Pn	**Pb**	**18 37 42.5**	**0.0**
STON				*e*Sn	**Sb**	**18 38 06.4**	**+0.3**
SELS	**Selova**	**2.00**	**35**	*e*Pn	**Pn**	**18 37 43.3**	**+0.9**
SELS				*e*Sn	**Sb**	**18 38 09.7**	**-0.3**
IVAS	**Ivanjica**	**2.03**	**13**	*e*Pn	**Pn**	**18 37 43.2**	**+0.4**
IVAS				*e*Sn	**Sb**	**18 38 10.5**	**-0.4**
NOCI	**Noci**	**2.03**	**248**	Pn	**Pb**	**18 37 44.6**	**-0.8**
IGT	**Igoumenitsa**	**2.15**	**163**	Pg	**Pn**	**18 37 44.9**	**+0.5**
GOCS	**Kraljevo Serbi**	**2.20**	**26**	*e*Pn	**Pn**	**18 37 45.8**	**+0.7**
GOCS				*e*Sn	**Sb**	**18 38 14.4**	**-1.4**
BBLS	**Lazi&#263i**	**2.27**	**358**	*e*Pn	**Pn**	**18 37 47.2**	**+1.1**
BOSS	**Bosilegrad**	**2.37**	**67**	*e*Pn	**Pn**	**18 37 48.2**	**+0.8**
GRUS	**Gruza**	**2.45**	**20**	*e*Pn	**Pn**	**18 37 49.4**	**+0.9**
BOVS	**Bovan**	**2.59**	**37**	⇑P	**Pn**	**18 37 50.9**	**+0.4**
BOVS	**Bovan**	**2.59**	**37**	*e*Pn	**Pn**	**18 37 50.8**	**+0.4**
BOVS				*e*Sn	**Sn**	**18 38 21.5**	**-0.7**
ZAPS	**Zavoj**	**2.84**	**53**	*e*Pn	**Pn**	**18 37 54.8**	**+0.9**
VTS	**Vitosha**	**2.93**	**68**	*e*Pn	**Pn**	**18 37 56.0**	**+0.7**
VTS				*e*Sn	**Sn**	**18 38 30.3**	**-0.6**
TEKS	**Tekeris**	**2.95**	**360**	*e*Pn	**Pn**	**18 37 56.0**	**+0.6**
ZAGS	**Zajecar**	**2.98**	**41**	*e*Pn	**Pn**	**18 37 56.6**	**+0.9**
ZAGS				*e*Sn	**Sn**	**18 38 33.3**	**+1.6**
BLKB	**Belogradchik**	**3.08**	**48**	*e*Pn	**Pn**	**18 37 58.5**	**+1.4**
BLKB				*e*Sn	**Sn**	**18 38 34.9**	**+0.7**
BORS2	**Bor- Borsko je**	**3.09**	**35**	*e*Pn	**Pn**	**18 37 56.8**	**-0.5**
BORS2				*e*Sn	**Sn**	**18 38 33.5**	**-1.0**
KUBS	**Kucevo**	**3.22**	**28**	*e*Pn	**Pn**	**18 37 58.3**	**-0.8**
KUBS				*e*Sn	**Sn**	**18 38 36.2**	**-1.6**
MDVR	**Moldovita**	**3.56**	**26**	⇑P	**Pn**	**18 38 04.2**	**+0.4**
MDVR				⇑S	**Sn**	**18 38 44.0**	**-2.2**
MDVR	**Moldovita**	**3.56**	**26**	*e*Pn	**Pn**	**18 38 04.1**	**+0.3**
MDVR				*e*Sn	**Sn**	**18 38 45.4**	**-0.8**
HERR	**Herculane**	**3.90**	**32**	⇓P	**Pn**	**18 38 08.8**	**+0.4**
SRE	**Strehaia**	**4.07**	**40**	⇓P	**Pn**	**18 38 12.3**	**+1.5**
BZS	**Buzias**	**4.29**	**20**	⇓P	**Pn**	**18 38 14.1**	**+0.3**
BZS				⇑S	**Sn**	**18 39 02.1**	**-2.0**
GZR	**Gura Zlata**	**4.47**	**31**	⇓P	**Pn**	**18 38 16.9**	**+0.6**
GZR				⇑S	**Sn**	**18 39 10.1**	**+1.5**
SURR	**Surduc**	**4.56**	**23**	⇑P	**Pn**	**18 38 17.2**	**-0.2**
SURR				⇑S	**Sn**	**18 39 09.1**	**-1.6**
SIRR	**Siria**	**4.92**	**17**	⇑P	**Pn**	**18 38 22.9**	**+0.5**
SIRR				⇓S	**Sn**	**18 39 17.4**	**-2.2**
SIRR	**Siria**	**4.92**	**17**	*e*Pn	**Pn**	**18 38 23.4**	**+1.0**
SIRR				*e*Sn	**Sn**	**18 39 17.7**	**-1.8**
LOT	**Lotru**	**4.93**	**37**	⇓P	**Pn**	**18 38 23.1**	**+0.5**
LOT				⇓S	**Sn**	**18 39 19.9**	**-0.1**
BOJS	**Bojanci**	**5.00**	**323**	*e*Pn	**Pn**	**18 38 23.3**	**-0.2**
ARR	**Arges**	**5.29**	**43**	⇑P	**Pn**	**18 38 28.4**	**+0.9**
VOIR		**5.55**	**44**	⇑P	**Pn**	**18 38 33.0**	**+1.8**
CEY	**Cerknica**	**5.56**	**320**	*e*Pn	**Pn**	**18 38 31

CNJI	**Cibinong**	**16.91**	**265**	P	**P**	**18 48 36.7**	**-0.8**
	comp=Z,20nm,1.3s							
WR8	**Warramunga Arr**	**17.01**	**145**		**P**	**18 48 39.0**	**+0.7**
WR8				IAmb	IAmb	18 48 40.0		
	comp=Z,9.6nm,0.7s							
WR8				S	**S**	**18 51 21.4**	**-4.0**
AS31	**Alice Springs**	**19.77**	**153**	P	**P**	**18 49 04.5**	**+1.1**
ASAR	**Alice Springs**	**19.77**	**153**	P	**P**	**18 49 04.6**	**+1.2**
	comp=Z,1.7nm,0.3s,baz=331,slow=8.8,SNR=58							
ASAR				S	**S**	**18 52 08.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=344,slow=20,SNR=6.2							
ASAR				PcP	**PcP**	**18 52 50.9**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=352,slow=3.0,SNR=2.2							
ASAR				ScP	**ScP**	**18 55 28.5**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=348,slow=2.1,SNR=2.5							
ASAR	**Alice Springs**	**19.77**	**153**	P	**P**	**18 49 04.3**	**+0.9**
COEN	**Coen**	**20.28**	**114**	P	**P**	**18 49 07.0**	**-1.0**
COEN				IAmb	IAmb	18 49 30.2		
	comp=Z,21nm,1.5s							
FORT	**Forrest**	**24.75**	**172**	P	**P**	**18 49 48.4**	**+0.8**
FORT				IAmb	IAmb	18 50 08.8		
	comp=Z,14nm,1.4s							
NWAO	**Narrogin (SRO)**	**27.38**	**193**	P	**P**	**18 50 11.3**	**+0.8**
BBOO	**Buckleboo**	**28.74**	**159**	P	**P**	**18 50 23.0**	**+0.7**
STKA	**Stephens Creek**	**30.34**	**150**	P	**P**	**18 50 37.4**	**+1.3**
	comp=Z,3.2nm,0.4s,baz=332,slow=5.8,SNR=19							
	comp=Z,3.2nm,0.4s							
CMAR	**Chiang Mai Arr**	**34.87**	**315**	P	**P**	**18 51 15.0**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=123,slow=7.8,SNR=1.2							
	comp=Z,0.2nm,0.4s							
TOO	**Toolangi**	**36.81**	**151**	P	**P**	**18 51 30.5**	**+0.4**
TOO				IAmb	IAmb	18 51 34.6		
	comp=Z,8.3nm,1.3s							
CAN	**Canberra**	**36.95**	**145**	P	**P**	**18 51 32.5**	**+1.3**
MJAR	**Matsushiro Arr**	**44.50**	**16**	P	**P**	**18 52 30.0**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=186,slow=9.8,SNR=4.7							
	comp=Z,0.5nm,0.5s							
MJAR	**Matsushiro Arr**	**44.50**	**16**	IAmb	IAmb	18 52 50.9		
	comp=Z,3.8nm,1.4s							
SONM	**Songino Array**	**56.01**	**346**	P	**P**	**18 53 53.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=132,slow=6.4,SNR=1.4							
	comp=Z,0.2nm,0.5s							
BKZ	**Black Stump Fm**	**57.37**	**133**	P	**P**	**18 54 04.5**	**+1.0**
BKZ				IAmb	IAmb	18 54 32.6		
	comp=Z,20nm,1.5s							
MKAR	**Makanchi Array**	**64.45**	**329**	P	**P**	**18 54 49.9**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=123,slow=7.3,SNR=19							
	comp=Z,0.7nm,0.4s							
MAKZ	**Makanchi**	**64.62**	**329**	P	**P**	**18 54 51.1**	**+0.5**
ARSB	**Arslanbob**	**66.45**	**320**	P	**P**	**18 55 01.8**	**-0.4**
ARSB				IAmb	IAmb	18 55 18.6		
	comp=Z,4.1nm,1.3s							
ZALV	**Zalesovo Beam**	**68.37**	**336**	P	**P**	**18 55 15.2**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=99,slow=8.9,SNR=1.8							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**68.37**	**336**	P	**P**	**18 55 14.7**	**+1.3**
KURBB	**Kurchatov Arra**	**68.85**	**331**	P	**P**	**18 55 15.8**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=133,slow=4.9,SNR=2.6							
	comp=Z,0.3nm,0.7s							
KURK	**Kurchatov**	**68.87**	**331**	P	**P**	**18 55 16.7**	**+0.2**
VNDA	**Vanda**	**74.01**	**172**	P	**P**	**18 55 45.6**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=339,slow=4.9,SNR=2.0							
	comp=Z,1.0nm,0.9s							
VNDA	**Vanda**	**74.01**	**172**	P	**P**	**18 55 46.5**	**+0.6**
VNDA				IAmb	IAmb	18 56 00.9		
	comp=Z,7.5nm,1.5s							
BVAR	**Borovoye Array**	**74.33**	**330**	P	**P**	**18 55 48.0**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=115,slow=6.8,SNR=2.1							
	comp=Z,0.3nm,0.5s							

IDC 26 18:49:16.0±4.8, 6°08S×147°68E, h127^{km}±62^{km}, mb3.2/3, mbtmp3.6/5, Error ellipse: s-maj=104.9km s-min=38.7km az=115.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.35**	**189**	P	Pn	18 50 05.5	-1.5
	13nm,0.6s,baz=13,slow=19,SNR=6.4						
PMG				S	Sn	18 50 47.7	+1.1
	24nm,0.4s,baz=342,slow=20,SNR=14						
WRA	**Warramunga Arr**	**18.93**	**222**	P	P	18 53 27.6	+0.5
	2.1nm,0.5s,baz=48,slow=11,SNR=17						
ASAR	**Alice Springs**	**21.95**	**216**	P	P	18 53 59.5	-0.1
	0.9nm,0.6s,baz=50,slow=9.3,SNR=22						
	0.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.61**	**239**	P	P	18 54 23.9	-0.8
	2.5nm,0.9s,baz=49,slow=7.8,SNR=7.7						
	2.5nm,0.9s						
MKAR	**Makanchi Array**	**77.99**	**320**	P	P	19 01 01.1	+0.7
	0.3nm,0.8s,baz=94,slow=7.3,SNR=2.3						
	0.3nm,0.8s						

*IDC **26** 18:50:51.5±1.7, 41°.56N×19°.44E, h0^{km}, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=71.8km s-min=28.6km az=126.0*
*PDG **26** 18:50:54.7±0.3, 41°.38N×19°.49E, h18^{km}, ML2.9/13, Error ellipse: s-maj=1.1km s-min=1.3km az=0.0*
*TIR **26** 18:50:54.1, 41°.45N×19°.55E, h26^{km}, Md2.8/8, Ml2.9/7*
ISC 26 18:50:53.3±1.1, 41°.40N±0°.02×19°.51E±0°.03, h9^{km}±8^{km}, n38, σ1°06/61, 15C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**101**	Pg	**Pb**	**18 51 00.1**	**-0.2**
TIR				Sg	**Sg**	**18 51 02.4**	**0.0**
TIR				AML	AML	18 51 04.1	
	11nm,0.4s						
ULC	**Ulcinj**	**0.60**	**340**	⇓*i*Pg	**Pb**	**18 51 05.3**	**-0.6**
ULC				*i* Sg	**Sb**	**18 51 15.2**	**+0.7**
SDA	**Shkodra**	**0.65**	**359**	Pg	**Pg**	**18 51 05.8**	**-0.1**
SDA				Sg	**Sb**	**18 51 15.0**	**-1.0**
SDA				AMd		18 51 55.1	
PHP	**Peshkopia**	**0.75**	**67**	Pg	**Pg**	**18 51 07.5**	**-0.3**
PHP				Sg	**Sg**	**18 51 17.8**	**+0.1**
PHP				AML	AML	18 51 22.2	
	2.2nm,0.6s						
PHP				AMd		18 51 57.7	
DRME	**Dracevica, Mon**	**0.82**	**343**	⇑*i*Pg	**Pb**	**18 51 09.8**	**0.0**
DRME				*i* Sg	**Sn**	**18 51 22.6**	**-0.7**
VLO	**Vlora**	**0.93**	**181**	Pg	**Pn**	**18 51 12.2**	**-0.3**
VLO				Sg	**Sn**	**18 51 25.5**	**-0.4**
VLO				AML	AML	18 51 37.0	
	4.1nm,0.3s						
VLO				AMd		18 52 10.2	
BUM	**Brajici-Budva**	**1.01**	**333**	⇓*i*Pg	**Pn**	**18 51 13.7**	**0.0**
BUM				*i* Sg	**Sn**	**18 51 28.9**	**+0.8**
PDG	**Podgorica**	**1.05**	**350**	Pn	**Pg**	**18 51 13.3**	**-0.2**
PDG				AMd		18 52 07.6	
PDG	**Podgorica**	**1.05**	**350**	⇑P	**Pn**	**18 51 13.7**	**-0.4**
PDG				⇑S	**Sn**	**18 51 30.3**	**+1.5**
PDG	**Podgorica**	**1.05**	**350**	*i*Pg	**Pn**	**18 51 13.9**	**-0.2**
PDG				*i* Sg	**Sn**	**18 51 30.3**	**+1.5**
CEME	**Cevo**	**1.23**	**339**	⇑*i*Pg	**Pg**	**18 51 17.3**	**+0.4**
CEME				*i* Sg	**Sn**	**18 51 35.9**	**+2.5**
KBN	**Korca**	**1.24**	**128**	Pg	**Pg**	**18 51 17.2**	**+0.2**
KBN				Sg	**Sn**	**18 51 34.1**	**+0.5**
KBN				AMd		18 52 14.0	
PVY	**Plav**	**1.24**	**15**	⇑*i*Pg	**Pg**	**18 51 17.4**	**+0.3**
PVY				*i* Sg	**Sn**	**18 51 36.2**	**+2.4**
HCY	**Herceg Novi**	**1.29**	**324**	⇓*i*Pg	**Pg**	**18 51 18.0**	**-0.1**
HCY				*i* Sg	**Sn**	**18 51 37.3**	**+2.4**
NKME	**Niksic**	**1.43**	**343**	⇓*i*Pg	**Pb**	**18 51 19.9**	**-0.2**
NKME				*i* Sg	**Sg**	**18 51 40.7**	**+1.4**
KOME	**Kolasin**	**1.45**	**0**	⇓*i*Pg	**Pg**	**18 51 21.0**	**-0.1**
KOME				*i* Sg	**Sg**	**18 51 41.7**	**+1.8**
IVA	**Berane**	**1.50**	**11**	⇓*i*Pg	**Pb**	**18 51 21.5**	**+0.2**
IVA				*i* Sg	**Sg**	**18 51 42.9**	**+1.4**
NEST	**Nestorio**	**1.52**	**130**	Pn	**Pg**	**18 51 22.8**	**+0.3**
NEST				Sn	**Sg**	**18 51 43.5**	**+1.2**
NEST				AML	AML	18 51 50.3	
	0.5nm,0.7s						
NEST				AMd		18 52 38.6	
BRY	**Bratogost**	**1.67**	**335**	⇑*i*Pn	**Pn**	**18 51 23.2**	**+0.4**
BRY				*i* Sn	**Sg**	**18 51 46.8**	**-0.1**
UPM	**Unac-Piva**	**1.86**	**346**	⇑*i*Pn	**Pb**	**18 51 26.4**	**-1.1**
UPM				*i* Sn	**Sg**	**18 51 51.7**	**-1.3**
PLE	**Pljevlja**	**1.93**	**357**	⇑*i*Pn	**Pb**	**18 51 27.5**	**-1.2**
PLE				*i* Sn	**Sb**	**18 51 53.4**	**+0.5**
NOCI	**Noci**	**1.95**	**253**	Pn	**Pn**	**18 51 24.5**	**-2.0**
NOCI				Sn	**Sg**	**18 51 55.7**	**-0.2**
NOCI				AML	AML	18 52 08.4	
	0.5nm,0.3s						
NOCI				AMd		18 53 02.0	
IGT	**Igoumenitsa**	**1.97**	**161**	Pn	**Pb**	**18 51 29.8**	**+0.5**
IGT				Sn	**Sn**	**18 51 51.5**	**0.0**
IGT				AML	AML	18 52 05.0	
	0.2nm,0.4s						
IGT				AMd		18 52 56.7	
MATE	**Matera**	**2.25**	**251**	⇑P	**Pn**	**18 51 31.9**	**+1.2**
BOVS	**Bovan**	**2.76**	**35**	⇓P	**Pn**	**18 51 37.3**	**-0.3**
TIP	**Timpagrande**	**3.06**	**224**	⇑P	**Pn**	**18 51 42.6**	**+0.8**
MDVR	**Moldovita**	**3.74**	**25**	⇓P	**Pn**	**18 51 51.8**	**+0.5**
HERR	**Herculane**	**4.08**	**30**	⇑P	**Pn**	**18 51 56.6**	**+0.8**
BZS	**Buzias**	**4.48**	**19**	⇑P	**Pn**	**18 52 02.2**	**+0.8**
GZR	**Gura Zlata**	**4.65**	**30**	⇓P	**Pn**	**18 52 04.1**	**+0.5**
SURR	**Surduc**	**4.75**	**23**	⇑P	**Pn**	**18 52 05.4**	**+0.4**
SIRR	**Siria**	**5.11**	**17**	⇓P	**Pn**	**18 52 10.5**	**+0.5**
VOIR		**5.70**	**43**	⇑P	**Pn**	**18 52 18.7**	**+0.6**
STHS	**Stebnicka Huta**	**8.11**	**8**	*e*PN	Pn	18 52 41.5	-10
STHS				*e*PG	**Pg**	**18 53 28.5**	**0.0**
STHS				*e*SG	**Sg**	**18 55 10.2**	**-3.2**
FINES	**FINESS Array B**	**20.46**	**9**	P	**P**	**18 55 28.9**	**-2.0**
	0.5nm,0.4s,baz=190,slow=9.7,SNR=4.6						
	0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**32.16**	**214**	P	**P**	**18 57 21.8**	**+0.5**
	0.3nm,0.8s,baz=28,slow=12,SNR=1.4						
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**44.18**	**50**	P	**P**	**18 59 01.2**	**-0.9**
	0.2nm,0.3s,baz=290,slow=8.9,SNR=2.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**44.35**	**61**	P	**P**	**18 59 03.1**	**-0.5**
	0.4nm,0.6s,baz=277,slow=8.1,SNR=6.8						
	0.4nm,0.6s						

*JSO **26** 18:53:14.6±0.6, 30°.N±3°.×3°.5E±°., h19^{km}±4^{km}, M1.7/9, Md2.5/9, ML1.6/9, MLv1.7/9, MLv1.7/9*
*SGS **26** 18:53:15.2, 29°.76N×35°.01E, h17^{km}, Ml1.0*
ISC 26 18:53:14.8±1.0, 29°.73N±0°.03×34°.99E±0°.10, h26^{km}±7^{km}, n15, σ0°42/17, Egypt

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**0.05**	**96**	P	**Pb**	**18 53 19.2**	**-0.1**
MBRI	**Mt Berech**	**0.09**	**312**	P	**Pb**	**18 53 19.7**	**+0.1**
MBRI				S	**Sb**	**18 53 23.0**	**+0.1**
HRFI	**Mount Harif**	**0.30**	**7**	P	**Pb**	**18 53 22.0**	**0.0**
HQLS		**0.44**	**172**	P	**Pb**	**18 53 24.0**	**-0.1**
HQLS		**0.44**	**172**	S	**Sb**	**18 53 30.7**	**+0.4**
KRMI	**Paran Flat**	**0.45**	**329**	P	**Pb**	**18 53 24.5**	**+0.2**
KRMI				S	**Sb**	**18 53 31.4**	**+0.7**
JMOS	**Jabal al Moall**	**0.57**	**170**	S	**Sb**	**18 53 34.5**	**+0.5**
JMOS	**Jabal al Moall**	**0.57**	**170**	P	**Pb**	**18 53 26.3**	**+0.1**
PRNI	**Paran**	**0.62**	**1**	P	**Pn**	**18 53 27.3**	**-0.7**
PRNI				S	**Sn**	**18 53 36.6**	**-0.5**
HAQS	**Haql**	**0.68**	**185**	P	Pn	18 53 40.0	+11
HSNJ	**Maan**	**0.80**	**49**	P	**Pn**	**18 53 30.4**	**-0.1**
ZFRI	**Zfri**	**0.83**	**11**	P	**Pb**	**18 53 31.3**	**+0.6**
JLOS		**1.09**	**156**	P	**Pn**	**18 53 34.3**	**-0.2**
BDAS	**Al Bad`**	**1.30**	**176**	P	**Pn**	**18 53 37.2**	**-0.2**
AYUS	**`Aynunah**	**1.56**	**171**	P	**Pb**	**18 53 43.2**	**+0.3**

*IDC **26** 19:32:24.1±4.0, 21°.19S×67°.29W, h157^{km}±57^{km}, mb3.6/1, mbtmp3.9/3, Error ellipse: s-maj=97.6km s-min=24.3km az=101.0*
*SCB **26** 19:32:27.6±1.4, 21°.12S×67°.58W, h169^{km}±12^{km}, ML3.3/3, Error ellipse: s-maj=4.8km s-min=3.6km az=0.0*
ISC 26 19:32:26.3±1.1, 21°.11S±0°.05×67°.58W±0°.05, h183^{km}, n21, σ1°30/25, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**1.69**	**246**	Pg	**Pn**	**19 33 02.2**	**+1.6**
PB01	**IPOC Station P**	**1.78**	**272**	Pg	**Pn**	**19 33 02.4**	**+1.0**
PB01				Sg	**Sn**	**19 33 28.3**	**-0.3**
PB01				IAML		19 33 30.8	
	83nm,0.3s						
MOCB	**Mochara**	**1.82**	**95**	Pg	**Pn**	**19 33 03.3**	**+1.1**
MOCB				Sg	**Sn**	**19 33 29.4**	**-0.5**
MOCB				IAML		19 33 31.4	
	190nm,1.5s						
GO01	**Chusmiza**	**2.08**	**313**	Pg	**Pn**	**19 33 05.8**	**+0.8**
PB02	**IPOC Station P**	**2.17**	**264**	Pg	**Pn**	**19 33 06.5**	**+0.9**
PB02				Sg	**Sn**	**19 33 35.5**	**-0.5**
PB02				IAML		19 33 36.1	
	291nm,0.4s						
YJA	**Yavi**	**2.20**	**119**	Pg	**Pn**	**19 33 07.8**	**+1.6**
PB11	**IPOC Station P**	**2.36**	**304**	Pg	**Pn**	**19 33 08.3**	**+0.5**
PB06	**IPOC Station P**	**2.44**	**229**	Pg	**Pn**	**19 33 09.8**	**+1.2**
SOEO	**Opoqueri**	**2.55**	**353**	Pg	**Pn**	**19 33 11.9**	**+1.6**
SOET	**ToroToro**	**3.41**	**30**	Pg	**Pn**	**19 33 20.8**	**+0.2**
BBOJ	**La Paz, Jacaqu**	**4.15**	**352**	Pg	**Pn**	**19 33 32.2**	**+2.2**
BBOE	**La Paz, Chanca**	**4.29**	**355**	Pg	**Pn**	**19 33 34.0**	**+2.2**
PB14	**IPOC Station P**	**4.36**	**216**	Pg	**Pn**	**19 33 33.5**	**+1.1**
GO02	**Mina Guanaco**	**4.44**	**204**	Pg	**Pn**	**19 33 34.1**	**+0.7**
BBOD	**La Paz, Gloria**	**4.55**	**348**	Pg	**Pn**	**19 33 37.1**	**+2.0**
LPAZ	**La Paz**	**4.82**	**354**	P	**Pn**	**19 33 39.4**	**+0.7**
	13nm,0.5s,baz=165,slow=7.7,SNR=49						
LPAZ				S	**Sn**	**19 34 33.8**	**-1.7**
	1.5nm,0.5s,baz=258,slow=20,SNR=1.2						
LPAZ	**La Paz**	**4.82**	**354**	Pg	**Pn**	**19 33 39.9**	**+1.2**
BBOB	**La Paz, Bander**	**4.97**	**354**	Pg	**Pn**	**19 33 41.3**	**+0.8**
PLCA	**Paso Flores**	**19.73**	**187**	P	**P**	**19 36 40.5**	**-1.4**
	1.0nm,0.5s,baz=342,slow=9.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**76.06**	**70**	P	**P**	**19 43 53.4**	**-0.7**
	0.5nm,0.3s,baz=250,slow=7.5,SNR=11						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**144.59**	**37**	PKP	**PKPdf**	**19 51 41.6**	**+0.6**
	1.2nm,0.6s,baz=318,slow=3.6,SNR=13						

*OSUNB **26** 19:42:07.0±0.4, 0°.87N×59°.79W, h0^{km}, mR3.4/4, Error ellipse: s-maj=2.6km s-min=3.0km az=0.0*
*VAO **26** 19:42:08.4, 0°.88N×59°.84W, h0^{km}±12^{km}, mbR3.8*
ISC 26 19:42:07.4±1.2, 0°.89N±0°.05×59°.78W±0°.06, h10^{km}, n10, σ2°47/19, Brazil

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOAV	**Boa Vista**	**1.67**	**334**	P	**Pn**	**19 42 37.8**	**+1.1**
BOAV				S	**Sn**	**19 42 58.4**	**+0.2**
BOAV	**Boa Vista**	**1.67**	**334**	*e*P	**Pn**	**19 42 37.8**	**+1.1**
BOAV				*e*S	**Sn**	**19 42 58.5**	**+0.3**
MACA	**Manacapuru-AM**	**4.12**	**193**	P	**Pn**	**19 43 12.1**	**+1.6**
MACA				S	**Sn**	**19 44 02.2**	**+3.4**
MACA	**Manacapuru-AM**	**4.12**	**193**	*e*P	**Pn**	**19 43 12.1**	**+1.6**
MACA				*e*S	**Sn**	**19 44 00.3**	**+1.4**
MAL2	**Monte Alegre,**	**6.30**	**117**	P	**Pn**	**19 43 43.3**	**+2.8**
MAL2				S	**Sn**	**19 44 53.4**	**+0.8**
TEFE	**Tefe**	**6.53**	**228**	S	**Sn**	**19 44 57.6**	**-0.5**
TEFE	**Tefe**	**6.53**	**228**	*e*P	**Pn**	**19 43 42.7**	**-0.9**
TEFE				*e*S	**Sn**	**19 44 58.0**	**-0.1**
ITTB	**Itaituba**	**6.61**	**142**	P	**Pn**	**19 43 46.6**	**+2.0**
ITTB				S	**Sn**	**19 44 59.4**	**-0.7**
ITTB	**Itaituba**	**6.61**	**142**	*e*P	**Pn**	**19 43 46.3**	**+1.7**
ITTB				*e*S	**Sn**	**19 44 57.5**	**-2.6**
NPGB	**Novo Progresso**	**9.04**	**151**	*e*P	**Pn**	**19 44 18.6**	**+0.5**
NPGB				*e*S	**Sn**	**19 45 52.7**	**-7.3**

*PRU **26** 19:44:10.8, 41°.61N×20°.16E, h10^{km}*
*RHSSO **26** 19:44:10.3±0.9, 41°.34N×19°.37E, h7^{km}±4^{km}, ML3.6/5*
*SKO **26** 19:44:12.2, 41°.54N×19°.42E, h6^{km}, ML3.7*
*THE **26** 19:44:12.0, 42°N±5°×19°E±°, h11^{km}, M3.6/11, MLh3.6/11*
*TIR **26** 19:44:12.7, 41°.60N×19°.62E, h22^{km}±3^{km}, Md3.1/9, Ml3.8/7*
*PDG **26** 19:44:12.7±0.3, 41°.51N×19°.48E, h11^{km}±1^{km}, MD3.2/4, ML3.1/13, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
*BEO **26** 19:44:13.1±0.5, 41°.55N×19°.52E, h8^{km}±2^{km}, ML3.3/11*
*IDC **26** 19:44:16.3±1.9, 41°.67N×19°.41E, h58^{km}±18^{km}, mb3.5/12, mbtmp3.7/22, ML3.6/8, MS3.0/5, Error ellipse: s-maj=16.6km s-min=12.8km az=174.0*
ISC 26 19:44:11.7±0.9, 41°.56N±0°.02×19°.47E±0°.02, h17^{km}±6^{km}, n145, σ1°84/200, mb4.1/8, MS2.8/3, 24C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.36**	**125**	Pg	**Pg**	**19 44 18.6**	**-0.7**
TIR				Sg	**Sg**	**19 44 21.8**	**-2.6**
TIR				AML	AML	19 44 23.8	
	53nm,0.5s						
TIR	**Tirane**	**0.36**	**125**	⇓*i*Pg	**Pg**	**19 44 18.9**	**-0.3**
TIR				*i* Sg	**Sg**	**19 44 24.6**	**+0.3**
ULC	**Ulcinj**	**0.44**	**338**	⇑*i*Pg	**Pb**	**19 44 21.2**	**+0.1**
ULC				*i* Sg	**Sb**	**19 44 28.4**	**+0.9**
SDA	**Shkodra**	**0.50**	**2**	Pg	**Pb**	**19 44 21.8**	**-0.2**
SDA				Sg	**Sb**	**19 44 29.9**	**+0.9**
SDA				AMd		19 45 14.7	
DRME	**Dracevica, Mon**	**0.67**	**341**	*e*Pg	**Pb**	**19 44 25.5**	**+0.5**
DRME	**Dracevica, Mon**	**0.67**	**341**	⇑*i*Pg	**Pb**	**19 44 25.4**	**+0.5**
DRME				*i* Sg	**Sn**	**19 44 35.8**	**-0.7**
PHP	**Peshkopia**	**0.74**	**80**	Pg	**Pg**	**19 44 25.0**	**-1.2**
PHP				Sg	**Sg**	**19 44 33.5**	**-2.5**
PHP				AML	AML	19 44 43.1	
	20nm,0.7s						
PHP				AMd		19 45 10.9	
BUM	**Brajici-Budva**	**0.86**	**330**	⇑*i*Pg	**Pn**	**19 44 29.1**	**0.0**
BUM				*i* Sg	**Sn**	**19 44 42.6**	**+1.2**
PDG	**Podgorica**	**0.89**	**350**	Pn	**Pb**	**19 44 28.9**	**+0.2**
PDG				Sn	**Sn**	**19 44 41.8**	**-0.2**
PDG				AMd		19 45 50.1	
PDG	**Podgorica**	**0.89**	**350**	⇓P	**Pn**	**19 44 29.2**	**-0.3**
PDG				⇓S	**Sn**	**19 44 42.1**	**+0.2**
PDG	**Podgorica**	**0.89**	**350**	*e*Pg	**Pn**	**19 44 29.3**	**-0.2**
PDG	**Podgorica**	**0.89**	**350**	⇑*i*Pg	**Pn**	**19 44 29.1**	**-0.3**
PDG				*i* Sg	**Sn**	**19 44 43.5**	**+1.5**
CEME	**Cevo**	**1.07**	**338**	⇓*i*Pg	**Pn**	**19 44 32.6**	**+0.5**
CEME				*i* Sg	**Sn**	**19 44 49.7**	**+3.1**
VLO	**Vlora**	**1.09**	**179**	Pg	**Pg**	**19 44 33.6**	**+0.9**
VLO				Sg	**Sn**	**19 44 48.8**	**+2.0**
VLO				AML	AML	19 44 58.8	
	17nm,0.4s						
VLO				AMd		19 45 39.6	
VLO	**Vlora**	**1.09**	**179**	P	**Pg**	**19 44 33.9**	**+1.2**
VLO				S	**Sn**	**19 44 51.2**	**+4.4**
OHR	**Ohrid**	**1.09**	**113**	*i* Pg	**Pb**	**19 44 32.2**	**-0.1**
OHR				*i* Sg	**Sn**	**19 44 49.1**	**+1.9**
OHR				*e*Lg	Lg	19 44 49.8	
	comp=N,1μm,0.6s						
OHR				*e*Lg	Lg	19 44 51.1	
	comp=E,3μm,1.0s						
PVY	**Plav**	**1.10**	**19**	*e*Pg	**Pg**	**19 44 33.1**	**+0.1**
PVY	**Plav**	**1.10**	**19**	⇑*i*Pg	**Pg**	**19 44 32.8**	**-0.2**
PVY				*i* Sg	**Sn**	**19 44 50.0**	**+2.6**
HCY	**Herceg Novi**	**1.15**	**321**	⇓*i*Pg	**Pg**	**19 44 33.6**	**-0.3**
HCY				*i* Sg	**Sn**	**19 44 52.3**	**+3.9**
NKME	**Niksic**	**1.27**	**343**	⇓*i*Pg	**Pg**	**19 44 36.5**	**+0.3**
NKME				*i* Sg	**Sg**	**19 44 55.8**	**+3.0**
KOME	**Kolasin**	**1.29**	**1**	*e*Pg	**Pg**	**19 44 37.0**	**+0.3**
KOME	**Kolasin**	**1.29**	**1**	⇓*i*Pg	**Pg**	**19 44 36.9**	**+0.2**
KOME				*i* Sg	**Sg**	**19 44 57.1**	**+3.5**
BEY	**Berane**	**1.35**	**13**	*e*Pg	**Pg**	**19 44 37.6**	**-0.2**
IVA	**Berane**	**1.35**	**13**	⇓*i*Pg	**Pb**	**19 44 37.1**	**+0.4**
IVA				*i* Sg	**Sg**	**19 44 58.3**	**+2.8**
KBN	**Korca**	**1.36**	**133**	Pg	**Pn**	**19 44 36.9**	**+0.8**
KBN				Sg	**Sn**	**19 44 54.6**	**+0.8**
KBN				AML	AML	19 45 00.3	
	comp=E,5.2nm,0.5s						
KBN				AMd		19 45 42.0	
KBN	**Korca**	**1.36**	**133**	P	**Pg**	**19 44 38.3**	**+0.3**
KBN				S	**Sg**	**19 44 58.3**	**+2.6**
TREB	**Trebinje**	**1.43**	**325**	⇑*i*Pg	**Pg**	**19 44 38.5**	**-0.7**
TREB				*e*Sg	**Sg**	**19 44 59.8**	**+2.0**
TREB	**Trebinje**	**1.43**	**325**	*e*Pg	**Pg**	**19 44 38.8**	**-0.4**
TREB				*e*Sg	**Sg**	**19 44 59.6**	**+1.8**
BRY	**Bratogost**	**1.51**	**333**	⇓*i*Pg	**Pg**	**19 44 40.4**	**-0.4**
BRY				*i* Sg	**Sg**	**19 45 03.2**	**+2.6**
SKO	**Skopje**	**1.53**	**74**	*i* Pg	**Pg**	**19 44 41.2**	**0.0**
SKO				*i* Sg	**Sg**	**19 45 02.2**	**+1.1**
NEST	**Nestorio**	**1.65**	**133**	Pn	**Pb**	**19 44 42.4**	**+0.7**
NEST				Sn	**Sg**	**19 45 05.4**	**+0.5**
NEST				AML	AML	19 45 09.

SIRR	Siria	4.97	18	⇑P		Pn	19 45 28.2	+2.6
SIRR	Siria	4.97	18	*e*Pn		Pn	19 45 28.2	+2.6
SIRR				*e*Sn		Sn	19 46 22.4	-0.2
LOT	Lotru	4.99	37	⇑P		Pn	19 45 28.0	+2.1
BOJS	Bojanci	5.00	324	*e*Pn		Pn	19 45 28.4	+2.5
BEHE	Becsehely	5.28	339	*e*Pn		Pn	19 45 31.3	+1.4
BEHE				*e*Sn		Sn	19 46 32.9	+2.6
ARR	Arges	5.35	43	⇑P		Pn	19 45 33.9	+3.0
CEY	Cerknica	5.55	321	*e*Pn		Pn	19 45 35.3	+1.7
VOIR		5.61	44	⇓P		Pn	19 45 37.8	+3.3
VAE	Valguarnera	5.64	225	P		Pn	19 45 40.2	+5.3
	comp=E,4.2nm,0.3s,baz=0.0,slow=4.0,SNR=2.1							
DRGR		5.73	23	⇓P		Pn	19 45 38.2	+2.1
SOKA	Soboth	6.03	330	*e*Pn		Pn	19 45 41.3	+1.1
	comp=E,3.0nm,0.6s							
OBKA	Obir	6.09	326	*e*Pn		Pn	19 45 43.2	+2.1
	comp=E,0.8nm,0.2s							
MLR	Muntele Rosu	6.13	48	P		Pn	19 45 43.8	+2.2
	comp=E,1.2nm,0.3s,baz=146,slow=8.1,SNR=20							
MLR				S		Sn	19 46 52.7	+1.3
	comp=E,3.4nm,0.7s,baz=301,slow=20,SNR=1.0							
	comp=E,7.8nm,0.6s							
MLR	Muntele Rosu	6.13	48	⇓P		Pn	19 45 45.1	+3.5
DOPR	Dopca	6.15	42	⇑P		Pn	19 45 45.0	+3.2
ISR	Istrita	6.27	53	⇑P		Pn	19 45 46.6	+3.2
NEHR	Nehoiu	6.29	50	⇓P		Pn	19 45 46.5	+2.8
ARSA	Arzberg	6.36	335	*e*Pn		Pn	19 45 46.6	+2.0
	comp=E,2.2nm,0.5s							
TURR	Turia	6.53	44	⇓P		Pn	19 45 49.9	+2.9
RONA	Rosalia, Austr	6.55	341	*e*Pn		Pn	19 45 49.3	+2.1
	comp=E,1.0nm,0.3s							
PLOR	Plostina	6.75	48	⇑P		Pn	19 45 53.1	+3.1
VRI	Vrincioaia	6.80	48	⇓P		Pn	19 45 54.5	+3.8
CONA	Conrad Observa	6.87	339	*e*Pn		Pn	19 45 53.4	+1.7
	comp=E,0.8nm,0.4s							
KECS	Kecovo	6.96	6	*e*PN		Pn	19 45 47.5	-5.4
MODS	Modra-Piesok	6.99	348	*e*PN		Pn	19 45 44.2	-9.1
MODS				*e*PG		Pg	19 46 19.7	-5.8
MODS				*e*SN		Sn	19 46 56.6	-16
MODS				*e*SG		**Sg**	**19 47 49.2**	**-6.7**
KBA	Koelnbreinsper	7.05	324	*e*Pn		**Pn**	**19 45 55.3**	**+1.0**
	comp=E,2.5nm,0.9s							
ABTA	Abfaltersbach	7.21	318	*e*Pn		**Pn**	**19 45 56.9**	**+0.5**
	comp=E,1.2nm,0.7s							
CFR	Carcaliu	7.28	57	⇑P		**Pn**	**19 46 00.2**	**+3.0**
BURAR	Bucovina Array	7.31	32	⇑P		**Pn**	**19 46 01.1**	**+3.2**
BIOA	Bad Ischl, Aus	7.41	328	*e*Pn		**Pn**	**19 46 00.2**	**+1.1**
	comp=E,0.5nm,0.3s							
IDI	Anoyia	7.56	144	P		Pn	19 45 58.4	-2.9
	comp=E,4.1nm,0.8s,baz=315,slow=8.6,SNR=0.8							
IDI				S		Sn	19 47 17.6	-9.1
	comp=E,5.7nm,0.3s,baz=313,slow=17,SNR=7.9							
LESA	Schwarzleotal	7.61	323	*i* Pn		**Pn**	**19 46 03.3**	**+1.3**
	comp=E,2.4nm,0.4s							
STHS	Stebnicka Huta	7.96	8	*e*PN		Pn	19 45 56.7	-10
STHS				*e*PG			19 46 47.6	
STHS				*e*SN		Sn	19 47 11.5	-25
WTTA	Wattenberg	8.00	318	*e*Pn		**Pn**	**19 46 09.6**	**+2.3**
	comp=E,4.3nm,0.6s							
GERES	GERESS Array B	8.35	333	P		**Pn**	**19 46 12.3**	**+0.3**
	comp=E,0.9nm,0.7s,baz=152,slow=12,SNR=6.9							
GERES				S		**Sn**	**19 47 44.8**	**-1.1**
	comp=E,0.8nm,0.6s,baz=153,slow=27,SNR=1.3							
KHC	Kasperske Hory	8.63	333	*e*PN		**Pn**	**19 46 17.1**	**+1.2**
KHC				*e*SN		**Sn**	**19 47 52.6**	**-0.2**
DAVOX	Davos/Dischmat	8.64	310	P		**Pn**	**19 46 17.6**	**+1.5**
	comp=E,0.5nm,0.3s,baz=168,slow=20,SNR=6.2							
DAVOX				S		**Sn**	**19 47 50.9**	**-2.5**
	comp=E,3.1nm,0.8s,baz=154,slow=22,SNR=2.0							
	comp=E,1.7nm,0.7s							
BRTR	Keskin Array B	10.92	95	P		**Pn**	**19 46 49.2**	**+1.8**
	comp=E,0.1nm,0.3s,baz=268,slow=12,SNR=1.7							
BRTR				LR		LR	19 51 53.4	
	comp=E,79nm,18.6s,baz=271,slow=42							
	comp=E,0.2nm,0.3s							
AKASG	Malin Array Be	11.37	33	P		**Pn**	**19 46 54.1**	**+0.9**
	comp=E,0.4nm,0.3s,baz=220,slow=14,SNR=2.0							
	comp=E,0.3nm,0.2s							
MMAI	Mount Meron Ar	15.26	119	P		**P**	**19 47 50.8**	**-0.5**
	comp=E,1.0nm,0.3s,baz=326,slow=10.0,SNR=5.4							
	comp=E,2.1nm,0.6s							
ESDC	Sonseca Array	17.88	272	P		**Pn**	**19 48 19.0**	**-0.7**
	comp=E,0.1nm,0.3s,baz=69,slow=12,SNR=2.5							
ESDC				LR		LR	19 55 05.1	
	comp=E,36nm,18.3s,baz=336,slow=36							
	comp=E,0.9nm,0.9s							
HFS	Hagfors	18.94	351	P		**Pn**	**19 48 32.9**	**+0.5**
	comp=E,0.1nm,0.3s,baz=167,slow=20,SNR=2.2							
	comp=E,2.0nm,0.7s							
GNI	Garni	19.15	86	P		**Pn**	**19 48 35.7**	**+0.5**
	comp=E,0.4nm,0.3s,baz=347,slow=9.2,SNR=1.5							
	comp=E,2.7nm,0.5s							
NOA	NORSAR Array B	20.15	348	P		**P**	**19 48 45.2**	**+0.2**
	comp=E,0.9nm,0.9s,baz=179,slow=9.8,SNR=1.9							
	comp=E,0.9nm,0.9s							
EKA	Eskdalemuir Ar	20.25	321	P		**P**	**19 48 45.0**	**-1.1**
	comp=E,1.1nm,0.8s,baz=124,slow=9.9,SNR=3.8							
	comp=E,1.1nm,0.8s							
FINES	FINESS Array B	20.32	9	P		**P**	**19 48 46.6**	**-0.1**
	comp=E,3.3nm,0.6s,baz=184,slow=9.2,SNR=11							
FINES				LR		LR	19 56 53.0	
	comp=E,28nm,18.0s,baz=306,slow=37							
	comp=E,3.3nm,0.6s							
BELG	Belogornoye	21.92	51	P		**P**	**19 49 03.8**	**-0.2**
	comp=E,15nm,0.9s,baz=158,slow=2.0,SNR=4.2							
	comp=E,15nm,0.9s							
KIRV	Kirov	25.37	38	LR		LR	19 59 54.8	
	comp=E,31nm,19.8s,baz=184,slow=37							
ARTI	Arti	29.07	46	LR		LR	20 02 32.1	
	comp=E,38nm,18.2s,baz=248,slow=38							
TORD	Torodi Ar. Bea	32.27	214	P		**P**	**19 50 40.1**	**+0.6**
	comp=E,0.2nm,0.5s,baz=15,slow=12,SNR=2.8							
	comp=E,0.2nm,0.5s							
BVAR	Borovoye Array	35.66	54	P		**P**	**19 51 07.3**	**-1.4**
	comp=E,1.4nm,0.6s,baz=273,slow=5.6,SNR=9.8							
	comp=E,1.4nm,0.6s							
KURBB	Kurchatov Arra	40.95	56	P		**P**	**19 51 52.4**	**-0.8**
	comp=E,0.2nm,0.5s,baz=285,slow=9.5,SNR=2.1							
	comp=E,0.2nm,0.5s							
ZALV	Zalesovo Beam	44.10	51	P		**P**	**19 52 18.5**	**-0.3**
	comp=E,2.8nm,0.6s,baz=275,slow=8.9,SNR=15							
	comp=E,2.8nm,0.6s							
MKAR	Makanchi Array	44.30	61	P		**P**	**19 52 20.2**	**-0.3**
	comp=E,2.0nm,0.6s,baz=280,slow=7.9,SNR=27							
	comp=E,2.0nm,0.6s							
SONM	Songino Array	58.97	52	P		**P**	**19 54 09.7**	**-0.6**
	comp=E,0.4nm,0.6s,baz=294,slow=7.3,SNR=2.2							
	comp=E,0.4nm,0.6s							
LZDM	Lanzhou Array	63.41	65	P		**P**	**19 54 40.6**	**-0.2**
	comp=E,1.5nm,0.3s,baz=310,slow=7.4,SNR=2.2							
	comp=E,1.5nm,0.3s							
CMAR	Chiang Mai Ar	70.24	83	P		**P**	**19 55 22.4**	**-1.7**
	comp=E,0.3nm,0.6s,baz=322,slow=9.0,SNR=4.1							
	comp=E,0.3nm,0.6s							
ASAR	Alice Springs	123.26	93	PKP		**PKPdf**	**20 03 06.0**	**-1.8**
	comp=E,0.2nm,0.7s,baz=290,slow=2.3,SNR=1.6							

*NEIC **26** 19:49:12.4±2.0, 43.˚61N±0.˚02×105.˚31W±0.˚08, h0km±1km, ML3.2/50, Error ellipse: s-maj=10.1km s-min=3.4km az=263.0*
*IDC **26** 19:49:14.6±1.4, 43.˚85N×105.˚53W, h0km, mb2.9/1, mbtmp3.2/5, ML3.0/4, MS2.7/3, Error ellipse: s-maj=28.7km s-min=9.2km az=147.0*
ISC 26 19:49:13.4±1.6, 43.42N±0.06×105.9W±0.1, h0km, n70, σ1§92/57, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
K22A	Casper	0.90	211			Pn	19 49 38.5	+5.2
RSSD	Black Hills	1.52	62	Pg		Pn	19 49 32.2	-10
RSSD				IAML			19 49 55.2	
	637nm,0.6s							
PD31	Pinedale Array	2.76	258			**Pg**	**19 50 06.9**	**+0.6**
PDAR	Pinedale Array	2.76	258	Pn		**Pg**	**19 50 08.0**	**+1.7**
	2.0nm,0.3s,baz=73,slow=16,SNR=42							
PDAR				Pg		Pb	19 50 14.3	+11
	7.6nm,0.3s,baz=74,slow=16,SNR=34							
PDAR				Lg		Lg	19 50 52.7	
	8.0nm,0.3s,baz=70,slow=32,SNR=7.3							
PDAR				LR		LR	19 51 49.6	
	comp=Z,80nm,18.4s,baz=42,slow=49							
	4.1nm,0.3s							
PDAR	Pinedale Array	2.76	258			**Pg**	**19 50 07.1**	**+0.9**
BW06	Boulder Array	2.76	258			**Pg**	**19 50 05.9**	**-0.4**
RLMT	Red Lodge	2.96	306			**Pb**	**19 50 06.7**	**-0.4**
RLMT				IAML			19 51 07.6	
	53nm,0.4s							
RLMT				IAML			19 51 18.0	
	45nm,0.7s							
HAYD	Hayden	3.07	200			**Pb**	**19 50 09.3**	**+0.3**
HAYD				IAML			19 51 12.1	
	comp=N,76nm,0.9s							
HAYD				IAML			19 52 07.0	
	comp=E,67nm,1.8s							
YMP	Mirror Lake Pl	3.34	295			**Pb**	**19 50 13.5**	**-0.1**
YNE	Yellowstone No	3.35	300			**Pb**	**19 50 12.7**	**-1.2**
YNE				IAML			19 51 28.1	
	comp=N,62nm,0.8s							
YNE				IAML			19 51 30.8	
	comp=E,64nm,0.8s							
LOHW	Long Hollow	3.43	275			**Pb**	**19 50 14.6**	**-0.6**
LOHW				IAML			19 51 30.1	
	comp=E,29nm,1.1s							
LKWY	Lake	3.44	291			**Pb**	**19 50 13.6**	**-1.8**
LKWY				IAML			19 50 37.4	
	comp=E,45nm,0.8s							
H17A	Grant Village	3.52	288			**Pb**	**19 50 13.4**	**-3.2**
H17A				IAML			19 50 44.9	
	comp=E,30nm,1.4s							
H17A				IAML			19 51 30.1	
	comp=N,39nm,2.1s							
MOOW	Moose Ponds	3.54	277			**Pb**	**19 50 16.5**	**-0.4**
SNOW	Snow King Moun	3.54	272			**Pb**	**19 50 16.5**	**-0.5**
SNOW				IAML			19 51 50.0	
	comp=N,62nm,1.1s							
FLWY	Flagg Ranch	3.54	282			**Pb**	**19 50 15.2**	**-1.8**
YPP	Pitchstone Pla	3.65	285			**Pb**	**19 50 18.4**	**-0.5**
YPP				IAML			19 51 42.5	
	comp=N,25nm,1.2s							
YNR	Norris Junctio	3.68	292			**Pb**	**19 50 18.1**	**-1.3**
YNR				IAML			19 51 38.6	
	comp=N,24nm,1.1s							
YNR				IAML			19 51 51.6	
	comp=E,23nm,2.9s							
YFT	Old Faithful	3.71	288	Pn		**Pb**	**19 50 19.1**	**-0.9**
YFT				IAML			19 50 48.4	
	comp=E,29nm,0.7s							
YFT				IAML			19 51 48.3	
	comp=N,28nm,1.2s							
FXWY	Fox Creek	3.73	275			**Pb**	**19 50 20.6**	**+0.2**
YHH	Holmes Hill	3.82	293			**Pb**	**19 50 20.7**	**-1.1**
YMR	Madison River	3.86	291			**Pb**	**19 50 21.8**	**-0.7**
YMR				IAML			19 52 09.5	
	comp=N,47nm,1.0s							
YMR				IAML			19 52 12.4	
	comp=E,39nm,1.1s							
RDMU	Red Mountain	3.95	225			**Pb**	**19 50 22.0**	**-1.9**
RDMU				IAML			19 51 56.2	
	comp=N,35nm,1.3s							
YHB	Horse Butte	4.04	291			**Pb**	**19 50 23.0**	**-2.5**
YHB				IAML			19 51 54.0	
	comp=E,19nm,0.6s							
YHL	Hebgen Lake	4.06	292			**Pb**	**19 50 21.3**	**-4.6**
YHL				IAML			19 52 05.2	
	comp=N,40nm,1.4s							
QLMT	Earthquake Lak	4.22	291			**Pb**	**19 50 24.2**	**-4.5**
Q24A	Divide	4.49	173			**Pn**	**19 50 21.3**	**-1.6**
Q24A				IAML			19 52 59.2	
	comp=N,19nm,3.3s							
HWUT	Hardware Ranch	4.56	249			**Pb**	**19 50 32.2**	**-2.2**
BOZ	Bozeman (W)	4.64	300			**Pn**	**19 50 29.0**	**+4.2**
BOZ				IAML			19 52 03.5	
	comp=N,18nm,0.9s							
BOZ				IAML			19 52 09.5	
	comp=N,16nm,1.1s							
DLMT	Dillon	5.18	294			Pb	19 50 38.9	-6.0
MCMT	McKenzie Canyo	5.20	288			**Pn**	**19 50 33.4**	**+0.8**
HVU	Hansel Valley	5.33	254			**Pn**	**19 50 38.4**	**+4.0**
EGMT	Eagleton	5.34	331			**Pn**	**19 50 36.8**	**+2.4**
HRY	Holter Researc	5.34	310			**Pn**	**19 50 34.2**	**-0.1**
PV22	Blue Mesa, Par	5.35	205			**Pn**	**19 50 35.5**	**+0.9**
P17A	Butcher Ranch,	5.36	224			**Pn**	**19 50 37.4**	**+2.6**
PV21	Cone Mtn., Par	5.38	207			**Pn**	**19 50 36.1**	**+1.0**
PV07	Paradox Valley	5.39	204			**Pn**	**19 50 37.0**	**+1.7**
PV15	Paradox Valley	5.44	202			**Pn**	**19 50 36.1**	**+0.2**
PV23	Carpenter Ridg	5.49	206			**Pn**	**19 50 38.3**	**+1.6**
BCYI	Bear Canyon	5.50	282			**Pn**	**19 50 40.2**	**+3.4**
PV04	Paradox Valley	5.51	205			**Pn**	**19 50 39.1**	**+2.2**
SRU	San Rafael Swe	5.54	221			**Pn**	**19 50 36.5**	**-0.8**
PV12	Saucer Basin,	5.55	204			**Pn**	**19 50 40.3**	**+2.8**
PV11	David Mesa, Pa	5.59	205			**Pn**	**19 50 39.9**	**+1.9**
PV16	Nyswonger Mesa	5.59	205			**Pn**	**19 50 36.0**	**-2.0**
PV03	Paradox Valley	5.62	204			**Pn**	**19 50 36.7**	**-1.7**
PV18	Skein Mesa, Pa	5.65	205			**Pn**	**19 50 38.5**	**-0.2**
PV01	Paradox Valley	5.66	202			**Pn**	**19 50 38.8**	**-0.1**
SDCO	Great Sand Dun	5.68	177			**Pn**	**19 50 37.0**	**-2.3**
PV13	Radium Mtn., P	5.70	204			**Pn**	**19 50 39.8**	**+0.2**
TMUT	Trail Mountain	5.74	226			**Pn**	**19 50 42.3**	**+2.2**
LYMT	Lyon Mountain	5.74	310			**Pn**	**19 50 41.6**	**+1.5**
PV05	Paradox Valley	5.86	206			**Pn**	**19 50 40.6**	**-1.1**
Q16A	Castle Valley	6.00	223			**Pn**	**19 50 43.4**	**-0.3**
OVMT	Ovando	6.20	308			**Pn**	**19 50 44.0**	**-2.2**
HLID	Hailey	6.20	274			**Pn**	**19 50 47.5**	**+1.2**
T25A	Trinidad	6.38	169			Pn	19 50 43.2	-5.5
MVCO	Mesa Verde	6.51	199			**Pn**	**19 50 50.1**	**-0.6**
CBKS	Cedar Bluff	6.54	133			Pn	19 50 41.2	-10
ECSD	EROS Data Cent	6.75	84			Pn	19 50 42.2	-11
MTPU	Mount Pierson	7.18	224			**Pn**	**19 51 01.1**	**+1.1**
ELK	Elko	7.44	252	Pn		Pb	19 51 13.6	-10
	comp=N,0.1nm,0.3s,baz=55,slow=21,SNR=1.6							
ELK				Lg		Lg	19 53 21.7	
	comp=N,0.1nm,0.3s,baz=18,slow=19,SNR=2.2							
ELK				LR		LR	19 54 35.0	
	comp=N,81nm,20.6s,baz=78,slow=41							
	comp=N,0.4nm,0.4s							
NEW	Newport	9.21	306	Lg		Lg	19 54 00.3	
	comp=N,0.2nm,0.3s,baz=96,slow=16,SNR=1.5							
NEW				LR		LR	19 55 09.1	
	comp=N,42nm,18.8s,baz=124,slow=39							
I10CA	LAC DU BONNET	9.58	41	I		I	20 44 20.0	
	comp=N,0.1nm,1.5s,baz=222,slow=271,SNR=2.7							
ULM	Lac du Bonnet	9.68	42	Pn		Pn	19 51 26.2	-7.7
	comp=N,0.5nm,0.3s,baz=236,slow=13,SNR=1.5							
ULM				Lg		Lg	19 53 58.2	
	comp=N,0.6nm,0.3s,baz=246,slow=10.0,SNR=4.6							
	comp=N,1.4nm,0.4s							
NVAR	Mina Array Bea	10.62	246	Pn		Pn	19 51 57.5	+10
	baz=48,slow=27,SNR=2.4							
	comp=N,0.5nm,0.5s							
TXAR	Lajitas Array	14.17	172	Pg		P	19 53 41.7	+59
	comp=N,0.1nm,0.3s,baz=16,slow=14,SNR=5.2							
TXAR				Lg		Lg	19 56 43.2	
	baz=20,slow=24,SNR=2.5							
TKL	Tuckaleechee C	18.71	107	Lg		Lg	19 58 45.3	
	comp=N,0.2nm,0.3s,baz=233,slow=12,SNR=3.1							
ILAR	Eielson Array	31.29	327	P		**P**	**19 55 34.1**	**-0.6**
	comp=N,0.1nm,0.6s,baz=116,slow=8.1,SNR=4.2							
	comp=N,0.1nm,0.6s							

*ATH **26** 19:53:17.6, 37.˚74N×27.˚19E, h2km±1km, ML2.9/6, Manual Solution by A.Papageorgiou First location: 2019/11/26 19:54:44, This location: 2020/07/22 13:46:05 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **26** 19:53:18.7, 38.˚N±1.˚×27.˚7E±.˚, h15km±2km, M2.9/7, MLh2.9/7*
*ISK **26** 19:53:18.0, 37.˚77N×27.˚12E, h4km, ML3.1/20*
*AFAD **26** 19:53:18.3, 37.˚74N×27.˚12E, h10km±1km, ML3.1*
ISC 26 19:53:18.3±0.8, 37.75N±0.02×27.12E±0.02, h12km±5km, n54, σ0§67/77, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GCAM	G?zelcaml?	0.10	119	P		**Pg**	**19 53 21.2**	**+0.1**
GCAM				*i* IAML			19 53 23.0	
	comp=E,2μm,0.3s							
GCAM				*i* IAML			19 53 23.0	
	comp=N,1μm,0.4s							
GCAM				S		**Sg**	**19 53 23.1**	**0.0**
GCAM	G?zelcaml?	0.10	119	Pg		**Pg**	**19 53 20.9**	**-0.2**
GCAM				Sg		**Sg**	**19 53 23.1**	**0.0**
KUSD	Kusadasi-Aydin	0.17	49	Pg		**Pg**	**19 53 22.2**	**0.0**
KUSD				Sg		**Sg**	**19 53 24.6**	**-0.3**
SMG	Samos	0.23	260	P		**Pg**	**19 53 23.2**	**0.0**
SMG				S		**Sg**	**19 53 27.6**	**+1.1**
SMG	Samos	0.23	260	P		**Pg**	**19 53 23.1**	**-0.1**
SMG				S		**Sg**	**19 53 26.5**	**0.0**
DDIM	Aydin, Didim	0.31	162	P		**Pg**	**19 53 25.0**	**+0.5**
DDIM				S		**Sg**	**19 53 29.2**	**+0.5**
DDIM				*i* IAML			19 53 30.0	
	comp=N,5μm,0.3s							
DDIM				*i* IAML			19 53 30.0	
	comp=E,1μm,0.4s							
KRL1	Karlovasi Samo	0.33	278	P		**Pg**	**19 53 25.1**	**+0.1**
KRL1				S		**Sg**	**19 53 30.1**	**+0.6**
GMLD	Gumuldur	0.37	333	Pg		**Pg**	**19 53 25.7**	**+0.1**
DIDI	Didim-Aydin	0.38	166	Pg		**Pg**	**19 53 26.3**	**+0.4**
DIDI				Sg		**Sb**	**19 53 32.8**	**-0.1**
YKAV	Yalikavak-Bodr	0.64	169	Pg		**Pg**	**19 53 30.6**	**0.0**
AYDB	Zeytinkoy-Aydi	0.64	72	Pg		**Pg**	**19 53 30.7**	**-0.1**
AYDB				Sg		**Sb**	**19 53 40.4**	**0.0**
BLCB	Balcova	0.64	354	Pg		**Pg**	**19 53 30.5**	**-0.2**
BLCB	Balcova	0.64	354	P		**Pg**	**19 53 30.8**	**0.0**
BLCB				S		**Sb**	**19 53 40.9**	**+0.7**
ZEYE	Izmir, Urla-Ze	0.69	315	P		**Pg**	**19 53 31.4**	**-0.3**
BODT	Bodrum	0.70	168	P		**Pb**	**19 53 32.3**	**-0.1**
BODT				S		**Sb**	**19 53 42.8**	**+0.8**
BDRM	Kayabasi	0.73	159	P		**Pg**	**19 53 32.2**	**-0.2**
URLA	Izmir	0.74	326	P		**Pb**	**19 53 32.9**	**-0.2**
URLA	Izmir	0.74	326	Pg		**Pg**	**19 53 32.5**	**-0.1**
IZMR	zmir-demi	0.76	59	P		**Pg**	**19 53 32.8**	**-0.2**
IZMR				S		**Sg**	**19 53 41.2**	**-1.8**
KLNA	Kalymnos	0.80	189	P		**Pg**	**19 53 33.1**	**-0.6**
KLNA				S		**Sg**	**19 53 43.7**	**-0.5**
CESE	eme	0.87	312	Pg		**Pg**	**19 53 35.1**	**0.0**
ODEM	Odemis-Izmir	0.92	55	Pg		**Pg**	**19 53 35.8**	**-0.2**
NAZL	Nazilli-Aydin	0.95	77	Pg		**Pb**	**19 53 36.8**	**+0.1**
ESEN	Aydn-Nazilli	0.97	87	P		**Pg**	**19 53 37.0**	**0.0**
KARB	zmir-Karabur	1.07	329	P		**Pn**	**19 53 39.1**	**0.0**
MULA	Mugla, Merkez-	1.07	117	P		**Pn**	**19 53 40.0**	**+0.8**
DATC	Datca-Mugla	1.08	156	Pn		**Pn**	**19 53 39.7**	**+0.5**
DAT	Datca	1.08	160	P		**Pb**	**19 53 34.9**	**-4.1**
KIRA	zmir-Kiraz	1.10	66	P		**Pb**	**19 53 39.5**	**+0.1**
YER	Yerkesik	1.11	123	P		**Pb**	**19 53 39.0**	**-0.5**
YER				S		**Sg**	**19 53 54.0**	**0.0**
EAG2	Marmaro, Chios	1.13	315	P		**Pg**	**19 53 40.3**	**+0.3**
EAG2				S		**Sg**	**19 53 54.9**	**+0.2**
GOMA	Golmarmara-Man	1.14	33	Pn		**Pn**	**19 53 40.2**	**+0.1**
ZEDA	zmir-Bergama	1.22	358	P		**Pg**	**19 53 41.5**	**-0.2**
AKHS	Akhisar	1.25	25	P		**Pg**	**19 53 42.8**	**+0.4**
TURN	Turunc	1.32	137	P		**Pb**	**19 53 42.9**	**-0.1**
TURN	Turunc	1.32	137	Pn		**Pg**	**19 53 44.1**	**+0.4**
DKL	Dikili	1.33	353	Pn		**Pg**	**19 53 43.8**	**-0.1**
ASTA	Astypalaia	1.35	207	P		**Pb**	**19 53 43.3**	**-0.2**
ASTA				S		**Sg**	**19 54 02.6**	**+0.9**
MANT	Manisa	1.35	56	P		**Pg**	**19 53 44.4**	**+0.1**
GORD	Gordes-Manisa	1.42	35	Pn		**Pb**	**19 53 45.2**	**+0.4**
KULA	Kula-Manisa	1.43	57	Pn		**Pb**	**19 53 45.4**	**+0.4**
APE	Apeiranthos	1.44	242	Pn		**Pg**	**19 53 45.7**	**-0.2**
APE	Apeiranthos	1.44	242	P		**Pn**	**19 53 43.5**	**-0.7**
APE				S		**Sn**	**19 54 03.1**	**+0.1**
APE	Apeiranthos	1.44	242	P		**Pn**	**19 53 44.1**	**-0.1**
APE				S		**Sg**	**19 54 06.0**	**+1.4**
SOMA	Soma-Manisa	1.44	13	Pn		**Pb**	**19 53 45.5**	**+0.4**
TAVA	DENIZLI_Tavas	1.45	101	P		**Pb**	**19 53 45.5**	**+0.3**
DNIZ	Denizli-Tavas-	1.52	94	P		**Pb**	**19 53 47.0**	**+0.5**
DALY	Dalyan (Mula)	1.54	127	Pn		**Pb**	**19 53 47.0**	**+0.4**
NAX1	Naxos Island	1.54	246	P		**Pb**	**19 53 46.6**	**-0.1**
NAX1				S		**Sg**	**19 54 08.7**	**+1.0**
DNZT	Denizli-Tavas-	1.58	107	P		**Pb**	**19 53 48.0**	**+0.4**
PRK	Paraskevi	1.64	336	P		**Pn**	**19 53 46.0**	**-1.0**
PRK				S		**Sn**	**19 54 07.9**	**0.0**
PRK	Paraskevi	1.64	336	P		**Pb**	**19 53 48.4**	**0.0**
PRK				S		**Sg**	**19 54 10.6**	**-0.4**
SIGR	SIGRI	1.77	326	P		**Pn**	**19 53 48.3**	**-0.4**
SIGR				S		**Sb**	**19 54 12.0**	**-0.7**
SIGR	SIGRI	1.77	326	P		**Pb**	**19

comp=Z,0.2nm,0.3s,baz=355,slow=11,SNR=27
comp=Z,3.9nm,0.8s

WRA	**Warramunga Arr**	**19.33**	**177**		**P**	**20 05 16.3**	**-3.9**
AS31	**Alice Springs**	**23.01**	**179**		**P**	**20 05 59.0**	**-0.9**
AS31				IAmb	IAmb	20 06 29.4	

comp=Z,1.7nm,0.8s

ASAR	**Alice Springs**	**23.02**	**179**	P	**P**	**20 06 01.1**	**+1.2**
ASAR				S	**S**	**20 10 13.1**	**+4.1**

comp=Z,6.2nm,0.9s,baz=5.8,slow=8.8,SNR=41
comp=Z,0.9nm,1.0s,baz=357,slow=25,SNR=3.5

ASAR				LR	LR	20 15 13.1	

comp=Z,56nm,20.5s,baz=18,slow=37
comp=Z,6.2nm,0.9s

ASAR	**Alice Springs**	**23.02**	**179**		**P**	**20 05 58.4**	**-1.5**
JOW	**Kunigami**	**27.64**	**350**	LR	LR	20 16 19.8	

comp=Z,39nm,20.4s,baz=190,slow=34

JOW	**Kunigami**	**27.64**	**350**	P	**P**	**20 06 42.5**	**+0.1**
STKA	**Stephens Creek**	**32.13**	**167**	P	**P**	**20 07 23.3**	**+1.1**

comp=Z,1.9nm,0.8s,baz=308,slow=7.7,SNR=3.6
comp=Z,1.9nm,0.8s

STKA	**Stephens Creek**	**32.13**	**167**	P	**P**	**20 07 21.6**	**-0.6**
JNU	**Nakatsue**	**33.55**	**356**	LR	LR	20 22 02.3	

comp=Z,26nm,19.5s,baz=309,slow=38

JMN	**Monobe**	**34.07**	**1**	P	**P**	**20 07 37.9**	**-1.2**
MJAR	**Matsushiro Arr**	**37.14**	**6**	P	**P**	**20 08 04.7**	**-0.7**

comp=Z,4.5nm,1.3s,baz=172,slow=7.2,SNR=2.1
comp=Z,4.5nm,1.3s

CMAR	**Chiang Mai Arr**	**38.78**	**301**	P	**P**	**20 08 20.4**	**+0.9**

comp=Z,0.5nm,0.7s,baz=98,slow=7.7,SNR=1.5
comp=Z,0.5nm,0.7s

CMAR	**Chiang Mai Arr**	**38.78**	**301**	P	**P**	**20 08 19.8**	**+0.3**
EVN	**Everest**	**52.88**	**306**	P	**P**	**20 10 10.6**	**-0.9**
EVN				IAmb	IAmb	20 10 13.2	

comp=Z,2.4nm,0.7s

PETK	**Petropavlovsk-**	**57.15**	**17**	LR	LR	20 34 54.7	

comp=Z,20nm,20.0s,baz=83,slow=36

MKAR	**Makanchi Array**	**64.88**	**324**	P	**P**	**20 11 35.4**	**+1.6**

comp=Z,0.5nm,0.6s,baz=113,slow=8.2,SNR=4.9
comp=Z,0.5nm,0.6s

MKAR	**Makanchi Array**	**64.88**	**324**	P	**P**	**20 11 34.6**	**+0.8**
MAKZ	**Makanchi**	**65.07**	**324**	P	**P**	**20 11 34.9**	**-0.1**
ZALV	**Zalesovo Beam**	**67.44**	**331**	P	**P**	**20 11 50.3**	**+0.2**

comp=Z,0.2nm,0.3s,baz=122,slow=7.1,SNR=1.8
comp=Z,0.2nm,0.3s

KURK	**Kurchatov**	**68.93**	**326**	P	**P**	**20 11 59.0**	**-0.5**
KURK	**Kurchatov**	**68.93**	**326**	IAmb	IAmb	20 12 13.0	

comp=Z,3nm,1.0s

KURBB	**Kurchatov Arra**	**68.94**	**326**	P	**P**	**20 11 59.0**	**-0.5**

comp=Z,0.8nm,0.7s,baz=126,slow=5.8,SNR=5.7
comp=Z,0.8nm,0.7s

KK31	**Karatay Array**	**70.89**	**316**	P	**P**	**20 12 12.1**	**+0.4**
KK31				IAmb	IAmb	20 12 14.5	

comp=Z,1.0nm,0.8s

KKAR	**Karatay Array**	**70.89**	**316**	P	**P**	**20 12 12.2**	**+0.5**
BVAR	**Borovoye Array**	**74.53**	**326**	P	**P**	**20 12 33.9**	**+0.8**

comp=Z,0.3nm,0.5s,baz=126,slow=9.1,SNR=2.2
comp=Z,0.3nm,0.5s

AB31	**Akbulak array**	**79.66**	**320**	P	**P**	**20 13 01.4**	**-0.6**
AB31				IAmb	IAmb	20 13 11.9	

comp=Z,1.5nm,0.9s

ABKAR	**Akbulak array**	**79.66**	**320**	P	**P**	**20 13 01.5**	**-0.5**
ILAR	**Eielson Array**	**86.07**	**25**	P	**P**	**20 13 37.3**	**+2.4**

comp=Z,0.2nm,0.5s,baz=256,slow=5.7,SNR=1.7
comp=Z,0.2nm,0.5s

*IDC **26** 20:03:24.2±0.8, 37˚.86N×29˚.64E, h0km, mb3.9/7, mbtmp3.9/16, ML3.4/7, MS2.9/13, Error ellipse: s-maj=15.9km s-min=13.2km az=164.0*
*AFAD **26** 20:03:24.6, 37˚.84N×29˚.64E, h7km±3km, MW4.0*
*ISK **26** 20:03:24.0, 37˚.85N×29˚.64E, h6km, ML3.8/27*
*GII **26** 20:03:25.0±0.0, 37˚.816N±0˚.002×29˚.644E±0˚.001, h10km, Mws4.5, confirmed*

ISC 26 20:03:24.9±1.0, 37˚.84N±0˚.02×29˚.64E±0˚.02, h8km±7km, n143, σ0§65/150, mb3.8/6, MS2.9/7, 12C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASM	**Basmaki-Afyon**	**0.33**	**76**	Pg	**Pg**	**20 03 30.5**	**-0.9**
BASM				Sg	**Sg**	**20 03 36.0**	**+0.2**
BRDR	**BURDUR-Merkez**	**0.36**	**113**	P	**Pg**	**20 03 31.8**	**-0.2**
BRDR				S	**Sg**	**20 03 37.1**	**+0.4**
BRDR				*i* IAML		20 03 42.0	

comp=E,5µm,0.4s

APMY	**Acipayam-Deniz**	**0.46**	**217**	Pg	**Pg**	**20 03 33.3**	**-0.4**
APMY				Sg	**Sg**	**20 03 40.5**	**+0.8**
KHL	**Karahalli**	**0.49**	**349**	Pg	**Pg**	**20 03 33.9**	**-0.5**
KHL				Sg	**Sg**	**20 03 41.4**	**+0.5**
PASA	**Karahalli, USA**	**0.52**	**346**	P	**Pg**	**20 03 34.8**	**-0.2**
DNIZ	**Denizli-Tavas-**	**0.53**	**246**	P	**Pg**	**20 03 34.7**	**-0.4**
KZIL	**AFYON_Kizioren**	**0.57**	**43**	P	**Pg**	**20 03 35.4**	**-0.5**
KZIL				S	**Sb**	**20 03 45.8**	**+0.2**
KZIL				*i* IAML		20 03 49.0	

comp=E,3µm,0.3s

GOLH	**Golhisar**	**0.61**	**186**	SPECP		20 03 36.0	
GOLH				P	**Pg**	**20 03 36.2**	**-0.3**
GOLH				S	**Sg**	**20 03 45.2**	**+0.7**
GOLH				*i* IAML		20 03 55.0	

comp=E,5µm,0.5s

GOLH				*i* IAML		20 03 56.0	

comp=N,3µm,0.6s

TAVA	**DENIZLI_Tavas**	**0.69**	**237**	SPECP		20 03 39.0	
TAVA				P	**Pb**	**20 03 39.0**	**-0.2**
ISP	**Isparta**	**0.70**	**91**	Pg	**Pg**	**20 03 37.4**	**-0.9**
ISP				Sg	**Sb**	**20 03 48.1**	**-1.0**
ISP	**Isparta**	**0.70**	**91**	P	**Pg**	**20 03 37.4**	**-0.9**
ISP				S	**Sb**	**20 03 48.9**	**-0.2**
DNZT	**Denizli-Tavas-**	**0.75**	**221**	SPECP		20 03 39.0	
DNZT				P	**Pb**	**20 03 39.8**	**-0.4**
CAEL	**Denizli, Camel**	**0.76**	**200**	SPECP		20 03 40.0	
CAEL				P	**Pb**	**20 03 40.3**	**-0.1**
AFYN	**Afyon-Dinar-K**	**0.80**	**57**	SPECP		20 03 40.0	
AFYN				P	**Pg**	**20 03 40.3**	**0.0**
BCK	**Bucak**	**0.84**	**117**	Pg	**Pg**	**20 03 40.6**	**-0.4**
BCK				Sg	**Sb**	**20 03 53.2**	**-0.1**
BNAZ	**Uak-Banaz**	**0.86**	**12**	SPECP		20 03 40.0	
BNAZ				P	**Pg**	**20 03 40.9**	**-0.5**
BUCA	**Burdur, Bucak-**	**0.89**	**125**	P	**Pb**	**20 03 42.4**	**-0.2**
BUCA				S	**Sn**	**20 03 56.2**	**-0.7**
BAGO	**Egridir - ISPA**	**0.92**	**80**	SPECP		20 03 43.0	
BAGO				P	**Pb**	**20 03 43.3**	**+0.2**
CAME	**Cameli-Denizli**	**0.94**	**197**	Pg	**Pg**	**20 03 42.6**	**-0.2**
KNIK	**Mula-Seydike**	**0.99**	**183**	SPECP		20 03 44.0	
KNIK				P	**Pb**	**20 03 44.5**	**+0.1**
USAK	**Uak-Merkez**	**1.00**	**331**	SPECP		20 03 44.0	
USAK				P	**Pb**	**20 03 44.1**	**-0.4**
KORT	**Korkueli**	**1.01**	**146**	Pg	**Pg**	**20 03 43.8**	**-0.5**
SHUT	**Suhut-Afyon**	**1.01**	**45**	Pg	**Pg**	**20 03 43.7**	**-0.6**
KULA	**Kula-Manisa**	**1.03**	**311**	Pg	**Pg**	**20 03 44.1**	**-0.5**
ESEN	**Aydn-Nazilli**	**1.03**	**268**	SPECP		20 03 44.0	
ESEN				P	**Pg**	**20 03 44.0**	**-0.5**
KIRA	**zmir-Kiraz**	**1.04**	**290**	P	**Pg**	**20 03 44.4**	**-0.5**
MANT	**Manisa**	**1.07**	**308**	SPECP		20 03 46.0	
MANT				P	**Pn**	**20 03 46.5**	**+0.1**
NAZL	**Nazilli-Aydin**	**1.08**	**277**	Pg	**Pg**	**20 03 45.1**	**-0.4**
ELL	**Elmali**	**1.11**	**169**	Pn	**Pg**	**20 03 45.8**	**-0.4**
SABU	**Mula-Dalaman**	**1.15**	**208**	SPECP		20 03 47.0	
SABU				P	**Pn**	**20 03 47.5**	**+0.2**
SDAG	**Sultandagi-AFY**	**1.17**	**59**	Pn	**Pg**	**20 03 46.7**	**-0.6**
MULA	**Mugla, Merkez-**	**1.20**	**241**	SPECP		20 03 48.0	
MULA				P	**Pn**	**20 03 48.3**	**+0.2**
GEDZ	**Gediz**	**1.22**	**351**	Pn	**Pg**	**20 03 47.5**	**-0.7**
SHAP	**Saphane-Kutahy**	**1.23**	**344**	Pn	**Pg**	**20 03 47.8**	**-0.6**
ANTB	**Antalya**	**1.24**	**139**	Pn	**Pb**	**20 03 48.2**	**-0.3**
GDZ	**Gediz**	**1.25**	**354**	SPECP		20 03 48.0	
GDZ				P	**Pn**	**20 03 48.8**	**-0.1**
DALY	**Dalyan (Mula)**	**1.29**	**218**	Pn	**Pb**	**20 03 49.2**	**-0.2**
YER	**Yerkesik**	**1.29**	**237**	Pn	**Pn**	**20 03 49.1**	**-0.2**
ODEM	**Odemis-Izmir**	**1.31**	**290**	Pn	**Pb**	**20 03 49.6**	**-0.2**
SIMA	**Simav-Kutahya**	**1.34**	**338**	Pn	**Pb**	**20 03 50.0**	**-0.4**
SMAA	**Simav-Kutahya**	**1.36**	**338**	Pn	**Pb**	**20 03 50.4**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**1.39**	**275**	Pn	**Pn**	**20 03 50.1**	**-0.6**
DEMI	**Demirci**	**1.40**	**329**	SPECP		20 03 51.0	
DEMI				P	**Pg**	**20 03 51.3**	**-0.5**
KEMT	**Kemer-ANTALYA**	**1.43**	**149**	Pn	**Pb**	**20 03 51.6**	**-0.2**
BLVD	**Bolvadin-AFYON**	**1.49**	**50**	Pn	**Pn**	**20 03 51.2**	**-0.8**
EMET	**Ktahya-Emet**	**1.55**	**351**	SPECP		20 03 54.0	
EMET				P	**Pg**	**20 03 54.5**	**-0.2**
GORD	**Gordes-Manisa**	**1.57**	**313**	Pn	**Pn**	**20 03 53.1**	**0.0**
AKAS	**Kas**	**1.60**	**181**	Pn	**Pn**	**20 03 54.1**	**+0.4**
TVSB	**Tavsanli**	**1.61**	**355**	Pn	**Pn**	**20 03 53.4**	**-0.4**
SEYD	**Seydisehir-KON**	**1.80**	**103**	Pn	**Pn**	**20 03 56.4**	**+0.1**
CIFT	**Cifteler, Eski**	**1.88**	**36**	Pn	**Pn**	**20 03 56.9**	**-0.5**

KIZT	**Kizilcal**	**2.04**	**59**	Pn	**Pn**	**20 03 58.4**	**-1.3**
BAND	**Balkesir-Ban**	**2.78**	**335**	⇑P	**Pn**	**20 04 10.4**	**+0.6**
ANTO	**Ankara**	**3.19**	**50**	⇑P	**Pn**	**20 04 15.8**	**+0.5**
EZN	**Ezine**	**3.26**	**308**	⇑P	**Pn**	**20 04 16.5**	**+0.2**
APE	**Apeiranthos**	**3.36**	**258**	⇑P	**Pn**	**20 04 17.7**	**0.0**
APE	**Apeiranthos**	**3.36**	**258**	P	**Pn**	**20 04 17.2**	**-0.6**
KLYT	**Kilyos**	**3.44**	**352**	⇑P	**Pn**	**20 04 19.6**	**+0.8**
BRTR	**Keskin Array B**	**3.65**	**58**	Pn	**Pn**	**20 04 22.2**	**+0.5**

1.9nm,0.3s,baz=238,slow=15,SNR=35

BRTR				Sn	**Sn**	**20 05 06.0**	**+1.0**

1.5nm,0.3s,baz=238,slow=23,SNR=6.8

BRTR				LR	LR	20 06 14.3	

comp=Z,350nm,18.6s,baz=261,slow=47
5.1nm,0.4s

CAVK	**Edirne/Enez-Ca**	**3.92**	**318**	⇓P	**Pn**	**20 04 26.2**	**+0.8**
CSS	**Mathiatis**	**4.13**	**133**	P	**Pn**	**20 04 28.4**	**+0.1**
IDI	**Anoyia**	**4.60**	**238**	Pn	**Pn**	**20 04 36.0**	**+1.2**

9.7nm,0.3s,baz=48,slow=14,SNR=21

IDI				Sn	**Sn**	**20 05 30.2**	**+1.9**

2.2nm,0.3s,baz=0.0,slow=16,SNR=3.8

ELND	**Elena**	**5.84**	**332**	⇑P	**Pn**	**20 04 52.2**	**+0.5**
HNTI	**Hanita**	**6.55**	**135**	P	**Pn**	**20 05 01.4**	**-0.1**
HNTI	**Hanita**	**6.55**	**135**	S	**Sn**	**20 06 16.3**	**-0.1**
TIRR	**Tirgusor**	**6.68**	**352**	⇓P	**Pn**	**20 05 03.6**	**+0.4**
MMC7	**Mount Meron ar**	**6.72**	**134**	P	**Pn**	**20 05 03.9**	**+0.1**
MMA0B	**Mount Meron ar**	**6.73**	**134**	P	**Pn**	**20 05 03.7**	**-0.4**
MMA0B	**Mount Meron ar**	**6.73**	**134**	S	**Sn**	**20 06 20.6**	**-0.3**
MMAI	**Mount Meron Ar**	**6.73**	**134**	Pn	**Pn**	**20 05 04.5**	**+0.4**

3.3nm,0.3s,baz=330,slow=13,SNR=27

MMAI				Sn	**Sn**	**20 06 20.4**	**-0.5**

0.8nm,0.3s,baz=310,slow=27,SNR=1.0

PLVB	**Pleven**	**6.73**	**327**	⇑P	**Pn**	**20 05 04.8**	**+0.9**
GEM	**Giv'at Ha'Em**	**6.74**	**131**	P	**Pn**	**20 05 04.2**	**+0.1**
GEM	**Giv'at Ha'Em**	**6.74**	**131**	S	**Sn**	**20 06 20.9**	**-0.2**
NATI	**Neve Ativ**	**6.75**	**131**	P	**Pn**	**20 05 04.7**	**+0.5**
NATI	**Neve Ativ**	**6.75**	**131**	S	**Sn**	**20 06 21.1**	**-0.1**
OFRI	**`Ofer**	**6.80**	**138**	P	**Pn**	**20 05 05.1**	**+0.2**
OFRI	**`Ofer**	**6.80**	**138**	S	**Sn**	**20 06 21.6**	**-0.9**
BLGI	**Bet Lehem HaGe**	**6.82**	**137**	P	**Pn**	**20 05 05.5**	**+0.2**
BLGI	**Bet Lehem HaGe**	**6.82**	**137**	S	**Sn**	**20 06 22.6**	**-0.4**
KSHT	**Keshet**	**6.99**	**132**	P	**Pn**	**20 05 07.8**	**+0.2**
KSHT	**Keshet**	**6.99**	**132**	S	**Sn**	**20 06 27.2**	**-0.1**
TPGR	**Topolog**	**7.07**	**353**	⇓P	**Pn**	**20 05 09.1**	**+0.5**
SLTI	**Sal'it**	**7.13**	**140**	P	**Pn**	**20 05 08.8**	**-0.6**
SLTI	**Sal'it**	**7.13**	**140**	S	**Sn**	**20 06 30.1**	**-0.6**
MMLI	**Mount Malkishu**	**7.17**	**137**	P	**Pn**	**20 05 10.1**	**0.0**
MMLI	**Mount Malkishu**	**7.17**	**137**	S	**Sn**	**20 06 31.6**	**-0.2**
SALP	**Salfit**	**7.34**	**140**	P	**Pn**	**20 05 12.1**	**-0.3**
SALP	**Salfit**	**7.34**	**140**	S	**Sn**	**20 06 35.9**	**0.0**
HMDT	**Nahal Hemdat**	**7.37**	**137**	P	**Pn**	**20 05 12.9**	**+0.1**
HMDT	**Nahal Hemdat**	**7.37**	**137**	S	**Sn**	**20 06 35.9**	**-0.7**
CFR	**Carcaliu**	**7.42**	**352**	⇑P	**Pn**	**20 05 14.7**	**+1.3**
ULAP	**Al Uja**	**7.57**	**139**	P	**Pn**	**20 05 14.9**	**-0.6**
AMAZ	**Amatzia**	**7.64**	**144**	P	**Pn**	**20 05 16.9**	**+0.3**
AMAZ	**Amatzia**	**7.64**	**144**	S	**Sn**	**20 06 43.6**	**+0.2**
DSI	**Dead Sea**	**7.84**	**141**	P	**Pn**	**20 05 18.8**	**-0.4**
DSI	**Dead Sea**	**7.84**	**141**	S	**Sn**	**20 06 47.4**	**-0.7**
YTIR	**Yattir**	**7.88**	**143**	P	**Pn**	**20 05 20.0**	**+0.2**
YTIR	**Yattir**	**7.88**	**143**	S	**Sn**	**20 06 49.0**	**-0.3**
SCTR	**Scanteiesti**	**7.92**	**352**	⇓P	**Pn**	**20 05 21.8**	**+1.5**
KZIT	**Kziot**	**7.95**	**149**	P	**Pn**	**20 05 20.5**	**-0.2**
KZIT	**Kziot**	**7.95**	**149**	S	**Sn**	**20 06 50.8**	**-0.2**
MSBI	**Mazada**	**8.04**	**142**	P	**Pn**	**20 05 22.1**	**+0.2**
MLR	**Muntele Rosu**	**8.13**	**341**	Pn	**Pn**	**20 05 25.1**	**+1.9**

0.4nm,0.3s,baz=179,slow=8.6,SNR=5.4
1.8nm,0.5s

MLR	**Muntele Rosu**	**8.13**	**341**	⇓P	**Pn**	**20 05 23.9**	**+0.6**
GHAJ	**Ghor Haditha**	**8.14**	**141**	P	**Pn**	**20 05 23.9**	**+0.5**
GHAJ	**Ghor Haditha**	**8.14**	**141**	S	**Sn**	**20 06 54.8**	**-0.8**
ASF	**Jabal al Asfar**	**8.21**	**131**	Pn	**Pn**	**20 05 26.0**	**+1.7**

1.0nm,0.3s,baz=300,slow=15,SNR=8.8

ASF				Sn	**Sn**	**20 06 58.8**	**+1.5**

0.1nm,0.3s,baz=294,slow=22,SNR=1.3
1.3nm,0.2s

VRI	**Vrincioaia**	**8.31**	**346**	⇓P	**Pn**	**20 05 26.3**	**+0.7**
VOIR		**8.33**	**337**	⇑P	**Pn**	**20 05 26.3**	**+0.3**
BOVS	**Bovan**	**8.35**	**316**	⇓P	**Pn**	**20 05 27.6**	**+1.3**
RMNI	**Mount Ramon**	**8.38**	**148**	P	**Pn**	**20 05 26.9**	**+0.3**
RMNI	**Mount Ramon**	**8.38**	**148**	S	**Sn**	**20 07 00.1**	**-1.0**
TURR	**Turia**	**8.64**	**343**	⇑P	**Pn**	**20 05 31.7**	**+1.5**
PRNI	**Paran**	**8.69**	**148**	P	**Pn**	**20 05 30.8**	**-0.2**
PRNI	**Paran**	**8.69**	**148**	S	**Sn**	**20 07 08.6**	**-0.5**
DOPR	**Dopca**	**8.72**	**340**	⇓P	**Pn**	**20 05 32.6**	**+1.3**
KRMI	**Paran Flat**	**8.78**	**150**	P	**Pn**	**20 05 32.0**	**-0.1**
HERR	**Herculane**	**8.88**	**325**	⇓P	**Pn**	**20 05 33.8**	**+0.2**
GZR	**Gura Zlata**	**9.13**	**328**	⇑P	**Pn**	**20 05 37.9**	**+1.0**
MBRI	**Mt Berech**	**9.14**	**150**	P	**Pn**	**20 05 36.6**	**-0.5**
MBRI	**Mt Berech**	**9.14**	**150**	S	**Sn**	**20 07 20.1**	**-0.2**
EIL	**Elat**	**9.27**	**150**	Pn	**Pn**	**20 05 40.0**	**+1.2**

1.0nm,0.3s,baz=346,slow=17,SNR=6.8

EIL				Sn	**Sn**	**20 07 21.8**	**-1.5**

0.4nm,0.3s,baz=355,slow=12,SNR=2.1

EIL				LR	LR	20 11 10.6	

comp=Z,38nm,18.7s,baz=188,slow=50
5.1nm,0.7s

EIL	**Elat**	**9.27**	**150**	P	**Pn**	**20 05 38.7**	**-0.1**
EIL	**Elat**	**9.27**	**150**	S	**Sn**	**20 07 23.0**	**-0.3**
BZS	**Buzias**	**9.81**	**325**	⇑P	**Pn**	**20 05 46.4**	**+0.2**
GNI	**Garni**	**11.97**	**74**	LR	LR	20 11 30.9	

comp=Z,83nm,18.0s,baz=272,slow=41

AKASG	**Malin Array Be**	**12.86**	**359**	LR	LR	20 11 22.7	

comp=Z,26nm,21.0s,baz=172,slow=37

VRAC	**Vranoy**	**14.84**	**325**	LR	LR	20 12 49.9	

comp=Z,43nm,18.5s,baz=185,slow=38

GERES	**GERESS Array B**	**15.95**	**319**	Pn	**P**	**20 07 11.8**	**-1.5**

baz=121,slow=12,SNR=7.6
0.9nm,0.8s

KEST	**Kesra**	**16.40**	**269**	Pn	**P**	**20 07 17.2**	**-1.1**

0.1nm,0.3s,baz=350,slow=9.8,SNR=4.8
8.7nm,1.0s

DAVOX	**Davos/Dischmat**	**17.10**	**308**	LR	LR	20 13 41.5	

comp=Z,55nm,18.2s,baz=104,slow=36

BELG	**Belogornoye**	**19.23**	**35**	P	**Pn**	**20 07 50.5**	**+0.3**

0.1nm,0.3s,baz=157,slow=3.0,SNR=3.5
7.5nm,1.0s

FINES	**FINESS Array B**	**23.73**	**356**	P	**P**	**20 08 37.6**	**+0.4**

7.0nm,1.2s,baz=211,slow=7.8,SNR=2.2
7.0nm,1.2s

AKTO	**Aktyubinsk**	**23.78**	**49**	LR	LR	20 21 15.8	

comp=Z,34nm,19.2s,baz=60,slow=45

HFS	**Hagfors**	**24.51**	**341**	P	**P**	**20 08 43.8**	**-0.7**

4.2nm,0.8s,baz=178,slow=10,SNR=4.4

HFS				LR	LR	20 20 26.8	

comp=Z,33nm,18.2s,baz=238,slow=42
4.2nm,0.8s

NOA	**NORSAR Array B**	**25.94**	**339**	LR	LR	20 19 47.0	

comp=Z,13nm,18.3s,baz=300,slow=38

ESDC	**Sonseca Array**	**26.19**	**285**	P	**P**	**20 08 59.6**	**-0.3**

2.1nm,0.9s,baz=74,slow=9.9,SNR=7.7
2.1nm,0.9s

ARTI	**Arti**	**26.65**	**37**	LR	LR	20 22 32.7	

comp=Z,28nm,20.6s,baz=216,slow=43

BVAR	**Borovoye Array**	**31.88**	**48**	LR	LR	20 25 49.9	

comp=Z,32nm,21.6s,baz=262,slow=42

TORD	**Torodi Ar. Bea**	**34.98**	**233**	P	**P**	**20 10 17.6**	**-0.1**

2.2nm,0.9s,baz=40,slow=11,SNR=14
2.2nm,0.9s

KURBB	**Kurchatov Arra**	**36.63**	**54**	P	**P**	**20 10 32.2**	**+0.7**

0.9nm,0.7s,baz=279,slow=8.7,SNR=7.1
0.9nm,0.7s

MKAR	**Makanchi Array**	**39.29**	**60**	P	**P**	**20 10 55.0**	**+0.8**

1.1nm,0.7s,baz=281,slow=7.8,SNR=9.4

MKAR				LR	LR	20 29 04.7	

comp=Z,20nm,18.6s,baz=277,slow=39
1.1nm,0.7s

ZALV	**Zalesovo Beam**	**40.54**	**48**	P	**P**	**20 11 04.6**	**+0.3**

0.4nm,0.3s,baz=275,slow=8.8,SNR=4.1

ZALV				LR	LR	20 31 56.5	

comp=Z,19nm,18.1s,baz=246,slow=42
0.4nm,0.3s

IDC 26 20:09:24.4±2.1, 31˚.39S×178˚.42W, h0km, mb3.5/3, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=51.9km s-min=41.3km az=62.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.78**	**207**	Pn	Pn	20 11 16.9	-1.9

0.2nm,0.3s,baz=339,slow=14,SNR=2.2

URZ				Sn	Sn	20 12 38.0	-10

0.4nm,0.3s,baz=33,slow=17,SNR=5.6
3.5nm,0.7s

ASAR	**Alice Springs**	**42.70**	**268**	P	P	20 17 23.9	+0.4

0.2nm,0.2s,baz=103,slow=7.5,SNR=5.2
0.2nm,0.4s

WRA	**Warramunga Arr**	**43.78**	**273**	P	**P**	**20 17 32.0**	**-0.2**

0.5nm,0.8s,baz=114,slow=8.0,SNR=1.8
0.5nm,0.8s

SNAA	**Sanae**	**77.18**	**179**	P	**P**	**20 21 20.3**	**+0.6**

1.1nm,1.1s,baz=180,slow=5.1,SNR=1.5
1.1nm,1.1s

FINES	**FINESS Array B**	**145.94**	**339**	PKPbc	PKPdf	**20 29 03.7**	**-0.9**

5.8nm,1.1s,baz=46,slow=6.0,SNR=3.6

*IDC **26** 20:11:34.1±5.4, 20˚.46S×178˚.64W, h555km±58km, mb3.2/8, mbtmp4.2/9, Error ellipse: s-maj=33.8km s-min=21.2km az=59.0*
*NEIC **26** 20:11:34.1±2.0, 20˚.6S±0˚.1×178˚.5W±0˚.1, h561km±8km, mb4.2/27, Error ellipse: s-maj=18.1km s-min=14.0km az=185.0*

ISC 26 20:11:36.1±0.7, 20˚.6S±0˚.1×178˚.6W±0˚.1, h587km, n47, σ1§20/46, mb4.1/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.23**	**311**	P	**P**	**20 13 02.4**	**-0.1**
NIUE	**Niue**	**8.33**	**81**	P	P	20 13 33.6	-4.5
MARNC	**Mare, Loyalty**	**12.49**	**264**	P	**P**	**20 14 17.9**	**-1.9**
PINNC	**Pines Island,**	**13.11**	**259**	P	**P**	**20 14 24.5**	**-1.6**
DZM	**Mont Dzumac**	**13.99**	**261**	P	**P**	**20 14 34.2**	**-1.0**

8.5nm,0.5s,baz=104,slow=18,SNR=8.0

TOZ	**Tahuroa Road**	**17.84**	**195**	P	**P**	**20 15 10.6**	**+0.1**
URZ	**

KHEZ	Kahui Hut	0.70	324	P		Pn	20 16 56.3	+0.6
KHEZ	Kahui Hut	0.70	324	P		Sn	20 17 12.0	-0.7
KHEZ	Kahui Hut	0.70	324	P		Pn	20 16 56.5	+0.8
DREZ	Durham Road	0.73	339	P		Pn	20 16 56.6	+0.9
VRZ	Vera Road	0.76	13	P		Pn	20 16 56.6	+0.7
VRZ				S		Sn	20 17 12.2	-1.1
NBEZ	Newall Road No	0.79	319	P		Pn	20 16 57.2	+1.1
NBEZ				S		Sn	20 17 13.4	-0.2
PKE	Pukeiti	0.80	327	P		Pn	20 16 57.0	+0.7
PKVZ	Pokaka	0.85	47	P		Pn	20 16 57.3	+0.6
MTVZ	Mangateitei	0.86	56	P		Pn	20 16 57.5	+0.7
TRVZ	Turoa	0.96	54	P		Pn	20 16 58.3	+0.6
MAVZ	Matarangi	0.99	53	P		Pn	20 16 59.1	+1.0
FWVZ	Far West T-bar	0.99	52	P		Pn	20 16 58.6	+0.6
WHVZ	Whangaehu Hut	1.00	55	P		Pn	20 16 58.7	+0.6
COVZ	Chateau Observ	1.02	50	P		Pn	20 16 58.8	+0.7
COVZ				S		Sn	20 17 14.9	-2.2
KIW	Kapiti Island	1.03	164	P		Pn	20 16 59.1	+1.0
MOVZ	Moawhango	1.04	64	P		Pn	20 16 58.6	+0.4
MOVZ				S		Sn	20 17 14.6	-2.7
DUWZ	D'Urville Isla	1.05	207	P		Pn	20 16 59.3	+1.0
TUVZ	Tukino	1.05	56	P		Pn	20 16 59.3	+0.9
TWVZ	Taurewa	1.05	41	P		Pn	20 16 58.8	+0.4
OGWZ	Otaki Gorge	1.06	153	P		Pn	20 16 59.5	+1.1
NGZ	Ngauruhoe	1.07	50	P		Pn	20 16 59.3	+0.6
POWZ	Post Office Ro	1.08	120	P		Pn	20 16 59.4	+1.0
SNVZ	South Ngauruho	1.09	52	P		Pn	20 16 59.7	+0.9
WTVZ	West Tongariro	1.10	48	P		Pn	20 16 59.6	+0.7
NNVZ	North Ngauruho	1.11	49	P		Pn	20 16 59.7	+0.7
TSZ	Takapari Road	1.11	100	P		Pn	20 16 59.6	+0.8
OTVZ	Oturere	1.12	51	P		Pn	20 16 59.8	+0.7
MRZ	Mangatainoka R	1.12	135	P		Pn	20 16 59.8	+0.9
KRVZ	Karewarewa	1.15	48	P		Pn	20 17 00.0	+0.7
ETVZ	East Tongariro	1.16	52	P		Pn	20 17 00.3	+0.9
NTVZ	North Tongarir	1.17	49	P		Pn	20 17 00.4	+0.9
TMVZ	Te Maari	1.17	51	P		Pn	20 17 00.5	+1.0
KATZ	Kakaramea	1.26	45	P		Pn	20 17 01.2	+0.9
HOWZ	Holdsworth Sta	1.27	144	P		Pn	20 17 01.2	+0.9
PNHZ	Pukenui	1.28	93	P		Pn	20 17 01.5	+1.1
PRWZ	Pori Road	1.29	123	P		Pn	20 17 01.7	+1.2
CAW	Cannon Point	1.30	162	P		Pn	20 17 01.8	+1.2
DVHZ	Dannevirke	1.32	110	P		Pn	20 17 01.6	+0.8
TCW	Tory Channel	1.36	188	P		Pn	20 17 02.6	+1.4
TIWZ	Tintock	1.37	132	P		Pn	20 17 02.4	+1.1
HIZ	Hauiti	1.37	10	P		Pn	20 17 01.8	+0.4
HIZ	Hauiti	1.37	10	S		Sn	20 17 22.1	-0.7
HIZ	Hauiti	1.37	10	P		Pn	20 17 02.0	+0.6
RATZ	Rangitukua	1.38	44	P		Pn	20 17 02.4	+0.9
WEL	Wellington	1.43	173	P		Pn	20 17 02.9	+1.1
KRHZ	Kereru	1.43	82	P		Pn	20 17 02.9	+1.0
SNZO	South Karori	1.45	175	P		Pn	20 17 03.0	+1.0
SNZO	South Karori	1.45	175	P		Sn	20 17 22.3	-1.9
WPHZ	Waipukurau	1.47	98	P		Pn	20 17 03.5	+1.1
WATZ	Wairara	1.48	39	P		Pn	20 17 03.7	+1.2
MTW	Mount Morrison	1.48	151	P		Pn	20 17 03.3	+0.9
KWHZ	Kaweka Forest	1.52	74	P		Pn	20 17 04.2	+1.3
BFZ	Birch Farm	1.54	123	P		Pn	20 17 04.0	+1.0
BHW	Baring Head	1.56	171	P		Pn	20 17 04.2	+1.0
ANWZ	Angora Road	1.60	112	P		Pn	20 17 04.9	+1.2
TMWZ	Te Maipa	1.61	141	P		Pn	20 17 04.9	+1.0
NNZ	Nelson	1.61	213	P		Pn	20 17 05.0	+1.2
TUWZ	Tuamarina	1.63	196	P		Pn	20 17 06.0	+2.0
MSWZ	Moikau Station	1.64	161	P		Pn	20 17 05.1	+1.0
PRHZ	Porangahau	1.66	105	P		Pn	20 17 05.4	+1.1
PAWZ	Paruwai Farm	1.66	156	P		Pn	20 17 05.3	+1.0
BKZ	Black Stump Fm	1.66	66	P		Pn	20 17 04.8	+0.3
BKZ	Black Stump Fm	1.66	66	S		Sn	20 17 26.9	-1.5
BKZ	Black Stump Fm	1.66	66	P		Pn	20 17 05.0	+0.5
TKNZ	Takaka Hill	1.68	225	P		Pn	20 17 05.5	+0.9
MCHZ	McNeill Hill	1.72	76	P		Pn	20 17 06.5	+1.5
TLZ	Tolley Road	1.72	27	P		Pn	20 17 05.8	+0.7
TRWZ	Traveller	1.76	151	P		Pn	20 17 06.5	+1.0
PLWZ	Palliser	1.79	163	P		Pn	20 17 06.6	+0.8
PXZ	Pawanui	1.79	96	P		Pn	20 17 09.8	+4.0
KAHZ	Kahuranaki	1.80	88	P		Pn	20 17 08.5	+2.5
QRZ	Quartz Range	1.81	237	P		Pn	20 17 06.5	+0.5
QRZ	Quartz Range	1.81	237	P		Pn	20 17 06.6	+0.6
WPRZ	Whakapapatarin	1.84	44	P		Pn	20 17 07.1	+0.7
BSWZ	Blackbirch Sta	1.91	195	P		Pn	20 17 08.7	+1.5
NMHZ	Naumai	1.92	67	P		Pn	20 17 10.6	+3.3
CKHZ	Cape Kidnapper	1.97	85	P		Pn	20 17 11.2	+3.4
ARHZ	Aropaoanui	1.99	73	P		Pn	20 17 10.0	+1.9
MRNZ	Matariki Terra	2.05	221	P		Pn	20 17 09.9	+1.1
MTHZ	Maungataniwha	2.05	61	P		Pn	20 17 09.3	+0.4
NGRZ	Ngongotaha	2.18	37	P		Pn	20 17 15.0	+5.1
RAHZ	Arahi	2.19	65	P		Pn	20 17 12.0	+1.6
TOZ	Tahuroa Road	2.26	20	P		Pn	20 17 11.8	+0.5
THZ	Tophouse	2.26	213	P		Pn	20 17 12.6	+1.2
RTZ	Ruatahuna	2.27	57	P		Pn	20 17 11.7	+0.2
SNGZ	Shannon Statio	2.43	64	P		Pn	20 17 15.0	+1.7
URZ	Urewera	2.56	52	P		Pn	20 17 14.9	-0.1
URZ	Urewera	2.56	52	P		Pn	20 17 14.9	-0.1
KHZ	Kahutara	2.66	196	P		Pn	20 17 17.3	+1.2
KHZ	Kahutara	2.66	196	P		Pn	20 17 17.5	+1.4
MWZ	Matawai	2.78	58	P		Pn	20 17 18.3	+0.5
AWAZ	Awhitu Peninsu	2.80	2	P		Pn	20 17 19.2	+1.3
DSZ	Denniston Nort	2.80	227	P		Pn	20 17 18.6	+0.7
MKAZ	Moumakai	2.80	10	P		Pn	20 17 18.9	+0.9
MYRZ	Mayor Island	2.91	28	P		Pn	20 17 20.8	+1.5
RUGZ	Raukumara Rang	3.10	53	P		Pn	20 17 21.3	-0.6
WIAZ	Waiheke Island	3.10	9	P		Pn	20 17 23.1	+1.3
TWGZ	Tauwhareparae	3.17	59	P		Pn	20 17 23.5	+0.9
CNGZ	Carnagh Statio	3.17	65	P		Pn	20 17 23.5	+0.9
HAZ	Te Kaha	3.29	51	P		Pn	20 17 23.6	-0.6
GVZ	Greta Valley S	3.30	200	P		Pn	20 17 25.0	+0.8
LTZ	Lake Taylor	3.38	210	P		Pn	20 17 25.8	+0.5
PKGZ	Pakihiroa	3.41	55	P		Pn	20 17 25.7	0.0
AMCZ	Amberley	3.60	203	P		Pn	20 17 28.8	+0.7
WMGZ	Waiomatatini S	3.65	57	P		Pn	20 17 28.7	-0.2
MXZ	Matakaoa Point	3.74	53	P		Pn	20 17 30.9	+0.9
MXZ	Matakaoa Point	3.74	53	P		Pn	20 17 30.1	+0.1
OXZ	Oxford	3.93	208	P		Pn	20 17 32.0	-0.4
OKCZ	Okains Bay	4.01	196	P		Pn	20 17 33.7	+0.2
MQZ	McQueen's Vall	4.09	200	P		Pn	20 17 34.0	-0.5
AKCZ	Akaroa Harbour	4.18	196	P		Pn	20 17 35.5	-0.3
MHCZ	Mount Hutt	4.29	210	P		Pn	20 17 37.5	+0.4
RPZ	Rata Peaks	4.64	213	P		Pn	20 17 42.7	+0.8
OUZ	Omahuta	4.70	351	P		Pn	20 17 45.3	+2.7
OUZ	Omahuta	4.70	351	P		Pn	20 17 44.9	+2.3
TMZ	Timaru	5.22	209	P		Pn	20 17 49.6	+0.1
ODZ	Otahua Downs	5.92	208	P		Pn	20 17 59.1	+0.3
ODZ	Otahua Downs	5.92	208	P		Pn	20 17 58.9	+0.1

*IDC **26** 20:20:37.8±3.1, 22°.70S×65°.83W, h228km±52km, mb3.2/1, mbtmp3.5/3, Error ellipse: s-maj=91.4km s-min=20.8km az=88.0*
*SJA **26** 20:20:39.6±0.8, 22°.70S×66°.08W, h269km±5km, ML3.8, MW3.7*

ISC 26 20:20:39.6±1.0, **22°.73S**±0°.06×**66°.14W**±0°.06, **h251**km, **n21**, σ1§**64**/36, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YJA	Yavi	0.80	47	eP		Pn	20 21 16.7	+2.4
YJA				eS		S	20 21 43.5	+1.9
HJA	Humahuaca	0.82	125	eP		Pn	20 21 16.9	+2.6
SALTA		1.50	187	eP		Pn	20 21 14.4	-4.1
SALTA				eP			20 21 21.1	
PB09	IPOC Station P	3.02	287	eP		Pn	20 21 34.9	+2.4
PB09				eS		S	20 22 14.9	+0.5
PB09				IAML			20 22 18.9	
	comp=Z,102nm,0.2s							
PB06	IPOC Station P	3.17	270	eP		Pn	20 21 35.8	+1.6
PB06				eS		S	20 22 18.2	+0.9
PB06				IAML			20 22 25.2	
	comp=Z,91nm,0.2s							
FSA	Cafayete	3.37	178	eP		Pn	20 21 38.1	+1.8
FSA				eP			20 21 38.4	
PB03	IPOC Station P	3.41	281	eP		Pn	20 21 38.4	+1.6
PB03				eS		S	20 22 22.2	+0.1
PB03				IAML			20 22 23.0	
	comp=Z,231nm,0.2s							
PB01	IPOC Station P	3.53	298	eP		Pn	20 21 39.9	+1.8
PB01				eS		S	20 22 24.6	+0.1
PB01				IAML			20 22 26.3	
	comp=Z,137nm,0.2s							
PB07	IPOC Station P	3.61	285	eP		Pn	20 21 40.6	+1.5
PB07				eP			20 21 40.7	
PB07				eS		S	20 22 26.1	-0.2
PB07				IAML			20 22 26.4	
	comp=Z,160nm,0.2s							
PB05	IPOC Station P	3.75	267	eP		Pn	20 21 41.4	+0.7
PB05				eS		S	20 22 29.1	0.0
PB05				IAML			20 22 32.0	
	comp=Z,61nm,0.3s							
PB08	IPOC Station P	3.81	312	eP		Pn	20 21 43.6	+2.0
PB08				eS		S	20 22 31.8	+1.0
PB08				IAML			20 22 35.6	
	comp=Z,42nm,0.1s							
GO02	Mina Guanaco	3.98	232	eP		Pn	20 21 45.0	+1.6
GO02				eS		S	20 22 35.1	+1.0
GO02				IAML			20 22 37.2	
	comp=Z,61nm,0.1s							
GO01	Chusmiza	4.17	316	eP		Pn	20 21 48.0	+2.0
GO01				eS		S	20 22 38.4	-0.2
GO01				eS		S	20 22 40.6	+2.0
GO01				IAML			20 23 06.6	
	comp=Z,52nm,0.2s							
PATCX	Punta Patache	4.18	296	eP		Pn	20 21 47.0	+1.2
PATCX				eS		S	20 22 37.2	-1.0
PATCX				IAML			20 22 39.7	
	comp=Z,89nm,0.3s							
TA01	Diego Aracena	4.33	299	eP		Pn	20 21 48.9	+1.5
TA01				eS		S	20 22 39.5	-1.8
TA01				IAML			20 22 40.7	
	comp=Z,79nm,0.3s							
TA01				IAML			20 22 40.8	
	comp=Z,76nm,0.4s							
PB14	IPOC Station P	4.34	243	eP		Pn	20 21 48.7	+1.0
PB14				eS		S	20 22 40.6	-1.3
PB14				IAML			20 22 44.1	
	comp=Z,52nm,0.2s							
PB11	IPOC Station P	4.41	311	eP		Pn	20 21 48.9	+0.3
PB11				eS		S	20 22 41.5	-1.8
PB11				IAML			20 22 43.8	
	comp=Z,69nm,0.2s							
LPAZ	La Paz	6.68	343	P		Pn	20 22 17.2	+0.3
	comp=Z,1.9nm,0.4s,baz=160,slow=8.7,SNR=5.8							
LPAZ				S		S	20 23 32.2	-2.6
	comp=Z,1.4nm,0.7s,baz=251,slow=18,SNR=3.9							
CFA	Coronel Fontan	9.04	191	P		Pn	20 22 45.0	-1.0
	comp=Z,0.4nm,0.3s,baz=15,slow=12,SNR=17							
CFA				S		S	20 24 19.0	-9.2
	comp=Z,1.9nm,0.3s,baz=288,slow=20,SNR=12							
TORD	Torodi Ar. Bea	75.38	69	P		P	20 31 55.1	-1.0
	comp=Z,0.3nm,0.3s,baz=237,slow=7.0,SNR=9.6							
	comp=Z,0.3nm,0.3s							
MKAR	Makanchi Array	145.05	39	PKP		PKPab	20 39 47.1	-0.1
	comp=Z,0.4nm,0.9s,baz=318,slow=2.3,SNR=2.3							

IDC 26 20:25:38.1±11.0, **8°.84S**×**129°.75E, h136**km±129km, **mb3.3/1, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=81.8km s-min=42.1km az=17.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BATI	Baumata	6.16	257	S		Sn	20 28 14.6	-1.6
	8.7nm,0.3s,baz=104,slow=16,SNR=2.1							
FITZ	Fitzroy Crossi	10.03	203	P		Pn	20 27 59.1	+0.4
	0.3nm,0.3s,baz=30,slow=13,SNR=17							
FITZ				S		Sn	20 29 49.3	-0.4
	4.1nm,0.3s,baz=16,slow=16,SNR=11							
	0.6nm,0.3s							
WRA	Warramunga Arr	11.89	159	P		Pn	20 28 22.7	-0.8
	0.3nm,0.3s,baz=334,slow=14,SNR=6.2							
WRA				S		Sn	20 30 34.3	-0.5
	2.5nm,0.6s,baz=340,slow=22,SNR=12							
	0.4nm,0.4s							
ASAR	Alice Springs	15.27	165	P		P	20 29 08.3	0.0
	0.1nm,0.3s,baz=345,slow=12,SNR=4.3							
ASAR				S		Sn	20 31 58.0	+1.9
	0.4nm,0.5s,baz=344,slow=24,SNR=4.8							
	0.1nm,0.3s							
MKAR	Makanchi Array	69.63	327	P		P	20 36 32.7	0.0
	0.3nm,0.4s,baz=116,slow=7.5,SNR=9.4							
	0.3nm,0.4s							

*NEIC **26** 20:29:35.5±2.2, 17°.4S±0°.2×178°.7W±0°.1, h566km±9km, mb4.3/17, Error ellipse: s-maj=30.2km s-min=9.9km az=151.0*
*IDC **26** 20:29:43.2±9.0, 17°.71S×179°.01W, h667km±124km, mb3.0/6, mbtmp4.0/7, Error ellipse: s-maj=91.6km s-min=43.7km az=162.0*

ISC 26 20:29:34.5±0.7, **17°.4S**±0°.2×**178°.8W**±0°.1, **h550**km, **n30**, σ1§**19**/28, **mb4.2**/15, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	Nonsavu	3.07	263	P		P	20 30 52.2	+2.1
AFI	Afiamalu	7.56	64	P		P	20 31 28.3	+0.1
DZM	Mont Dzumac	14.69	249	P		P	20 32 42.9	+1.9
	6.0nm,0.8s,baz=94,slow=19							
RTZ	Ruatahuna	21.46	189	P		P	20 33 44.3	+0.6
RTZ				IAmb		IAmb	20 34 11.4	
	comp=Z,25nm,1.5s							
ARMA	Armidale	29.92	239	P		P	20 34 57.0	-1.5
COEN	Coen	36.78	270	P		P	20 35 56.9	+0.6
COEN				IAmb		IAmb	20 36 37.4	
	comp=Z,13nm,1.1s							
TOO	Toolangi	37.24	230	P		P	20 35 58.9	-0.9
TOO				IAmb		IAmb	20 36 12.5	
	comp=Z,9.4nm,1.2s							
STKA	Stephens Creek	38.59	241	P		P	20 36 09.8	-1.1
	comp=Z,1.6nm,0.5s,baz=100,slow=11,SNR=7.0							
	comp=Z,1.6nm,0.5s							
STKA	Stephens Creek	38.59	241	IAmb		IAmb	20 36 10.4	
	comp=Z,68nm,1.5s							
INKA	Innaminka	38.64	247	P		P	20 36 11.2	-0.1
MGBR	Mount Gambier	40.95	232	P		P	20 36 30.1	+0.5
BBOO	Buckleboo	43.37	240	P		P	20 36 47.4	-1.4
BBOO				IAmb		IAmb	20 36 52.9	
	comp=Z,34nm,1.4s							
WB0	Warramunga Arr	44.37	259	P		P	20 36 55.4	-1.3
WB0				IAmb		IAmb	20 37 01.2	
	comp=Z,6.3nm,1.4s							
WRA	Warramunga Arr	44.41	259	P		P	20 36 55.7	-1.3
	comp=Z,0.9nm,0.6s,baz=94,slow=6.9,SNR=14							
	comp=Z,0.9nm,0.6s							
WRA	Warramunga Arr	44.41	259	IAmb		IAmb	20 36 58.9	
	comp=Z,0.2nm,1.2s							
AS31	Alice Springs	44.62	254	P		P	20 36 57.5	-1.1
AS31				IAmb		IAmb	20 36 58.2	
	comp=Z,3.3nm,0.6s							
ASAR	Alice Springs	44.62	254	P		P	20 36 57.8	-0.9
	comp=Z,12nm,0.5s,baz=89,slow=8.2,SNR=177							
	comp=Z,12nm,0.5s							
ASAR	Alice Springs	44.62	254	P		P	20 36 57.0	-1.6
FORT	Forrest	49.93	244	P		P	20 37 36.5	-1.8
FORT				IAmb		IAmb	20 37 37.6	
	comp=Z,15nm,1.3s							
KNRA	Kununurra	50.22	264	P		P	20 37 40.3	-0.3
KNRA				IAmb		IAmb	20 37 44.2	
	comp=Z,12nm,1.4s							
FITZ	Fitzroy Crossi	52.79	260	P		P	20 37 59.1	-0.1
MORW	Morawa	60.39	246	P		P	20 38 50.7	-0.6
MORW				IAmb		IAmb	20 39 28.7	
	comp=Z,16nm,1.2s							
S12K	Black Hills	74.18	10	P		P	20 40 12.4	-2.6
L20K	Farewell, AK	82.00	11	P		P	20 40 57.7	+0.8
ILAR	Eielson Array	85.47	13	P		P	20 41 13.4	-0.6
	comp=Z,1.0nm,0.4s,baz=207,slow=4.8,SNR=4.4							
	comp=Z,1.0nm,0.4s							
ILAR	Eielson Array	85.47	13	P		P	20 41 14.1	+0.1
TXAR	Lajitas Array	86.00	58	P		P	20 41 17.7	+0.2
	comp=Z,0.8nm,0.8s,baz=275,slow=5.9,SNR=3.5							
	comp=Z,0.8nm,0.8s							
PDAR	Pinedale Array	87.21	44	P		P	20 41 23.1	+0.1
	comp=Z,0.2nm,0.6s,baz=232,slow=5.6,SNR=2.0							
	comp=Z,0.2nm,0.6s							
GERES	GERESS Array B	147.05	345	PKPbc		PKPdf	20 48 12.6	-0.3
	comp=Z,0.3nm,0.3s,baz=55,slow=5.2,SNR=2.4							
ESDC	Sonseca Array	157.35	10	PKPab		PKPab	20 49 04.0	+1.0
	comp=Z,0.5nm,0.5s,baz=338,slow=4.5,SNR=2.8							

*NEIC **26** 20:35:51.4±0.6, 18°.19N±0°.07×67°.11W±0°.06, h30km±11km, ML3.2/16, Md3.0/12(RSPR), Error ellipse: s-maj=10.9km s-min=6.8km az=206.0*
*RSPR **26** 20:35:52.3, 18°.20N×67°.11W, h25km, MD3.0/12*
*SDD **26** 20:35:53.1±1.9, 18°.21N×67°.10W, h15km±13km, MD3.5, ML3.0, MW3.0*

ISC 26 20:35:51.4±0.9, **18°.20N**±0°.03×**67°.10W**±0°.02, **h28**km±4km,
n54, σ0§**42**/64, **25C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LSP	Las Mesas	0.03	143			Pb	20 35 56.4	+0.2
LSP						Sb	20 35 59.8	+0.4
LSP	Las Mesas	0.03	143	eP		Pb	20 35 56.4	+0.2
LSP	Las Mesas	0.03	143	eS		Sb	20 35 59.8	+0.4
PRSN	Puerto Rico Se	0.04	296			Pb	20 35 56.2	0.0
PRSN						Sb	20 35 59.3	-0.1
PRSN	Puerto Rico Se	0.04	296	IAML			20 36 00.2	
	11μm,0.3s							
PRSN				IAML			20 36 00.4	
	11μm,0.2s							
PRSN	Puerto Rico Se	0.04	296	eP		Pb	20 35 56.2	0.0
PRSN	Puerto Rico Se	0.04	296	eS		Sb	20 35 59.3	-0.1
CRPR	Cabo Rojo, PR	0.19	182	eP		Pb	20 35 57.4	+0.1
CRPR				eSg		Sb	20 36 01.4	+0.1
CRPR				IAML			20 36 03.2	
	comp=N,7μm,0.3s							
CRPR	Cabo Rojo, PR	0.19	182			Pb	20 35 57.4	+0.1
CRPR	Cabo Rojo, PR	0.19	182			Sb	20 36 01.3	0.0
CRPR	Cabo Rojo, PR	0.19	182	eP		Pb	20 35 57.4	+0.1
CRPR	Cabo Rojo, PR	0.19	182	eS		Sb	20 36 01.4	+0.1
MLPR	Magueyes Islan	0.23	166	eP		Pb	20 35 57.9	+0.1
MLPR				eSg		Sb	20 36 02.6	+0.5
MLPR				IAML			20 36 02.6	
	comp=N,2μm,0.2s							
MLPR	Magueyes Islan	0.23	166	eP		Pb	20 35 58.0	+0.1
MLPR	Magueyes Islan	0.23	166	eS		Sb	20 36 02.3	+0.2
AGPR	Aguadilla, PR	0.27	358	ePg		Pb	20 35 58.3	0.0
AGPR				eSg		Sb	20 36 03.0	+0.1
AGPR				IAML			20 36 03.5	
	comp=N,5μm,0.3s							
AGPR	Aguadilla, PR	0.27	358	eP		Pb	20 35 58.5	+0.2
AGPR	Aguadilla, PR	0.27	358	eS		Sb	20 36 03.4	+0.5
GBPR	Guanica, Bosqu	0.31	136			Pb	20 35 59.2	+0.4
GBPR	Guanica, Bosqu	0.31	136	eP		Pb	20 35 59.2	+0.4
AOPR	Arecibo Observ	0.36	66	ePg		Pb	20 35 59.6	0.0
AOPR				eSg		Sb	20 36 05.3	+0.1
AOPR				IAML			20 36 05.6	
	comp=N,2μm,0.2s							
AOPR	Arecibo Observ	0.36	66			Pb	20 35 59.6	0.0
AOPR				IAML			20 36 05.5	
	comp=N,2μm,0.2s							
AOPR				IAML			20 36 05.6	
	comp=E,3μm,0.3s							
AOPR	Arecibo Observ	0.36	66			Sb	20 36 05.3	+0.1
AOPR	Arecibo Observ	0.36	66	eP		Pb	20 35 59.7	0.0
AOPR	Arecibo Observ	0.36	66	eS		Sb	20 36 05.3	+0.1
IDE	Isla Desecheo	0.40	298			Pb	20 36 00.1	-0.1
IDE						Sb	20 36 06.1	-0.1
IDE	Isla Desecheo	0.40	298	eP		Pb	20 36 00.1	-0.1
IDE	Isla Desecheo	0.40	298	eS		Sb	20 36 06.1	-0.1
OBIP	Obispado Ponce	0.50	108			Pb	20 36 01.7	0.0
OBIP						Sb	20 36 08.5	-0.2
OBIP	Obispado Ponce	0.50	108	IAML			20 36 10.4	
	comp=N,465nm,0.2s							
OBIP				IAML			20 36 10.9	
	comp=E,426nm,0.1s							
OBIP	Obispado Ponce	0.50	108	eP		Pb	20 36 01.7	0.0
OBIP	Obispado Ponce	0.50	108	eS		Sb	20 36 08.5	-0.2
EMPR	Esperanza - Ma	0.61	63			Pb	20 36 03.9	+0.3
EMPR						Sn	20 36 13.1	-0.1
EMPR	Esperanza - Ma	0.61	63	IAML			20 36 16.2	
	comp=E,1μm,0.4s							
EMPR				IAML			20 36 16.4	
	comp=E,1μm,0.4s							
EMPR	Esperanza - Ma	0.61	63	eP		Pb	20 36 03.9	+0.3
EMPR	Esperanza - Ma	0.61	63	eS		Sn	20 36 13.1	-0.1
ECPR	Experimental S	0.71	80	eP		Pb	20 36 05.2	-0.1
ECPR	Experimental S	0.71	80	eS		Sb	20 36 15.2	+0.4
SJG	San Juan	0.91	95	ePg		Pn	20 36 08.1	-0.3
SJG				eSg		Sb	20 36 20.1	-0.3
SJG	San Juan	0.91	95			Pn	20 36 08.1	-0.3
SJG				IAML			20 36 24.8	
	comp=E,458nm,0.2s							
SJG				IAML			20 36 25.4	
	comp=E,516nm,0.4s							
SJG	San Juan	0.91	95	eP		Pb	20 36 09.0	+0.4
SJG	San Juan	0.91	95	eS		Sn	20 36 20.3	-0.1
GCPR	Guaynabo City	0.97	83			Pn	20 36 09.2	0.0
GCPR					

EHRZ	**Djelida**	**0.89**	**216**	P		**Pg**	**21 17 28.7**	**-0.9**
ADJB	**Djebel Djouab**	**0.94**	**144**	P		**Pg**	**21 17 30.1**	**-0.4**
EDDR	**Deurdeur**	**1.01**	**206**	P		**Pg**	**21 17 30.8**	**-1.2**
EBNH	**Beni Haoua**	**1.04**	**248**	P		**Pb**	**21 17 33.2**	**+0.8**
AKET	**Djebel Ketaf**	**1.26**	**134**	P		**Pn**	**21 17 36.0**	**+0.1**
ABRIN	**Birine**	**1.33**	**167**	P		**Pn**	**21 17 37.0**	**+0.2**
EBGR	**Bougara**	**1.51**	**206**	P		**Pb**	**21 17 41.2**	**+0.8**
AFDJ	**Sidi Ladjel**	**1.52**	**186**	P		**Pn**	**21 17 40.7**	**+1.2**
CTCHA	**Tamokra**	**1.60**	**107**	P		**Pn**	**21 17 40.9**	**+0.4**
EANR	**'Ain N'Sour**	**1.65**	**235**	P		**Pg**	**21 17 47.1**	**+3.0**
EKMS	**Oued Kramis**	**1.81**	**251**	P		Pg	21 17 52.7	+5.6
ABSD	**Ouled Sidi Bra**	**1.89**	**141**	P		**Pb**	**21 17 47.1**	**+0.3**
CAZD	**Ain Tagrout**	**2.07**	**110**	P		**Pb**	**21 17 52.0**	**+2.0**
EZEK	**Zmalet El Emir**	**2.08**	**190**	P		**Pg**	**21 17 52.4**	**+0.1**
EADEB	**Ain Deheb**	**2.28**	**206**	P		**Pn**	**21 17 52.8**	**+2.9**
EIBI	**Ibiza**	**2.38**	**332**	Pn		**Pn**	**21 17 52.5**	**+1.2**
EIBI				Sn		**Sn**	**21 18 19.9**	**-0.5**
EIBI	**Ibiza**	**2.38**	**332**	Pn		**Pn**	**21 17 52.2**	**+0.9**
EIBI				⇑*i*Vmb_VC			21 17 53.1	
	360nm,SNR=1.1							
EIBI				Sn		**Sn**	**21 18 19.5**	**-1.0**
DFRA	**Djebel Bou Aff**	**2.53**	**98**	P		**Pg**	**21 18 02.9**	**+1.9**
AFRS	**Ain Fares**	**2.59**	**147**	P		**Pb**	**21 17 59.8**	**+1.0**
CJSR	**Ain Djasser**	**2.78**	**111**	P		**Pg**	**21 18 05.8**	**+0.1**
ETOS	**Mallorca**	**2.84**	**1**	Pn		**Pn**	**21 17 58.0**	**+0.3**
ETOS				Sn		**Sn**	**21 18 28.9**	**-2.9**
ETOS	**Mallorca**	**2.84**	**1**	Pn		**Pn**	**21 17 58.2**	**+0.6**
ETOS				⇑*i*Vmb_VC			21 17 59.1	
	195nm,SNR=0.5							
ETOS				Sn		**Sn**	**21 18 30.2**	**-1.7**
EBEN2	**Beniarda presa**	**2.92**	**308**	Pn		**Pn**	**21 17 58.9**	**+0.2**
EBEN2				⇑*i*Vmb_VC			21 18 00.3	
	644nm,SNR=1.4							
EBEN2				Sn		**Sn**	**21 18 32.1**	**-1.6**
EASA	**Ain Sidi Ali**	**2.93**	**200**	P		**Pg**	**21 18 08.2**	**-0.5**
CART	**Cartagena**	**3.07**	**284**	Pn		**Pn**	**21 18 00.8**	**+0.1**
CART				Sn		**Sn**	**21 18 34.3**	**-3.1**
EMUR	**La Murta**	**3.31**	**287**	Pn		**Pn**	**21 18 04.8**	**+0.6**
EMUR				Sn		**Sn**	**21 18 42.0**	**-1.5**
EMUR	**La Murta**	**3.31**	**287**	Pn		**Pn**	**21 18 05.0**	**+0.9**
EMUR				⇑*i*Vmb_VC			21 18 05.3	
	88nm,SNR=0.9							
EMUR				Sn		**Sn**	**21 18 42.2**	**-1.3**
CTGD	**Timgad**	**3.35**	**113**	P		Pg	21 18 22.2	+5.6
ETOB	**Tobarra**	**3.82**	**298**	Pn		**Pn**	**21 18 12.3**	**+1.2**
ETOB				Sn		**Sn**	**21 18 53.8**	**-2.3**
ETOB	**Tobarra**	**3.82**	**298**	Pn		**Pn**	**21 18 12.7**	**+1.6**
ETOB				⇑*i*Vmb_VC			21 18 13.6	
	153nm,SNR=1.0							
ETOB				Sn		**Sn**	**21 18 54.0**	**-2.0**
EVIV	**Cofrentes, Val**	**3.85**	**309**	Pn		**Pn**	**21 18 13.5**	**+1.9**
EVIV				⇑*i*Vmb_VC			21 18 15.1	
	414nm,SNR=3.0							
EVIV				Sn		**Sn**	**21 18 54.4**	**-2.4**
EMOS	**Mosqueruela**	**4.27**	**325**	Pn		**Pn**	**21 18 18.7**	**+1.3**
EMOS				⇑*i*Vmb_VC			21 18 19.6	
	146nm,SNR=1.0							
EMOS				Sn		**Sn**	**21 19 05.0**	**-2.2**
EPOB	**Poblet**	**4.62**	**344**	Pn		**Pn**	**21 18 23.7**	**+1.7**
EPOB				⇑*i*Vmb_VC			21 18 25.3	
	74nm,SNR=1.0							
EPOB				Sn		**Sn**	**21 19 12.6**	**-3.0**
EQES	**Quesada**	**4.73**	**282**	Pn		**Pn**	**21 18 25.3**	**+1.6**
EQES				⇑*i*Vmb_VC			21 18 27.7	
	119nm,SNR=1.4							
EQES				Sn		**Sn**	**21 19 16.9**	**-1.6**
PSIM	**Granatula de C**	**5.49**	**292**	Pn		**Pn**	**21 18 36.0**	**+1.9**
PSIM				Sn		**Sn**	**21 19 34.7**	**-2.5**
PAB	**San Pablo**	**6.18**	**297**	Pn		**Pn**	**21 18 44.2**	**+0.7**
PAB				⇑*i*Vmb_VC			21 18 47.7	
	80nm,SNR=0.7							
PAB				Sn		**Sn**	**21 19 50.8**	**-3.4**
ECAB	**El Cabril**	**6.60**	**283**	Pn		**Pn**	**21 18 50.6**	**+1.2**
ECAB				⇑*i*Vmb_VC			21 18 53.0	
	79nm,SNR=0.6							
ECAB				Sn		**Sn**	**21 20 01.4**	**-3.1**

*PDG **26** 21:35:17.3±0.3, 41°.48N×19°.61E, h17km, MD3.1/3, ML3.0/13, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*
*SKO **26** 21:35:18.1, 41°.60N×19°.42E, h4km, ML2.9*
*BEO **26** 21:35:18.9±1.0, 41°.59N×19°.59E, h3km±4km, ML2.9/17*
*TIR **26** 21:35:18.6, 41°.69N×19°.57E, h35km±3km, Ml3.2/4*
*IDC **26** 21:35:18.2±8.1, 41°.84N×19°.85E, h0km, mb3.6/2, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=151.0km s-min=27.9km az=29.0*

ISC 26 21:35:18.3±1.0, **41°.61N**±0°.02×**19°.52E**±0°.02, **h9**km±8km, **n79**,σ**1°24**/109, **16C-15D, Alboania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.37**	**134**	⇓Pg	**Pg**	**21 35 25.4**	**-0.1**
TIR				Sg	**Sg**	**21 35 30.7**	**+0.3**
TIR				AML	AML	21 35 31.4	
	6.8nm,0.4s						
TIR	**Tirane**	**0.37**	**134**	*i* Pg	**Pg**	**21 35 25.4**	**-0.1**
TIR				*i* Sg	**Sg**	**21 35 31.8**	**+1.4**
ULC	**Ulcinj**	**0.41**	**330**	⇑*i*Pg	**Pg**	**21 35 26.6**	**+0.2**
ULC				*i* Sg	**Sb**	**21 35 35.5**	**+1.3**
SDA	**Shkodra**	**0.45**	**358**	⇓Pg	**Pb**	**21 35 27.4**	**-1.0**
SDA				Sg	**Sb**	**21 35 33.8**	**-1.3**
DRME	**Dracevica, Mon**	**0.63**	**337**	*e*Pg	**Pb**	**21 35 30.7**	**-0.8**
DRME	**Dracevica, Mon**	**0.63**	**337**	⇓*i*Pg	**Pb**	**21 35 30.6**	**-0.9**
DRME				*i* Sg	**Sn**	**21 35 42.7**	**-1.0**
PHP	**Peshkopia**	**0.70**	**83**	⇑Pg	**Pg**	**21 35 31.0**	**-0.8**
PHP				Sg	**Sb**	**21 35 41.4**	**-1.0**
PHP				AML	AML	21 35 48.5	
	0.8nm,1.1s						
BUM	**Brajici-Budva**	**0.84**	**326**	⇑*i*Pg	**Pb**	**21 35 35.1**	**+0.1**
BUM				*i* Sg	**Sn**	**21 35 49.5**	**+0.7**
PDG	**Podgorica**	**0.85**	**347**	*e*Pg	**Pb**	**21 35 34.8**	**-0.4**
PDG	**Podgorica**	**0.85**	**347**	⇑*i*Pg	**Pb**	**21 35 34.6**	**-0.6**
PDG				*i* Sg	**Sn**	**21 35 49.9**	**+1.0**
CEME	**Cevo**	**1.04**	**335**	⇑*i*Pg	**Pn**	**21 35 38.9**	**-0.2**
CEME				*i* Sg	**Sn**	**21 35 56.1**	**+2.2**
PVY	**Plav**	**1.04**	**18**	*e*Pg	**Pg**	**21 35 37.4**	**-0.9**
PVY	**Plav**	**1.04**	**18**	⇓*i*Pg	**Pg**	**21 35 37.0**	**-1.3**
PVY				*i* Sg	**Sn**	**21 35 55.2**	**+1.2**
OHR	**Ohrid**	**1.08**	**117**	*i* Pg	**Pg**	**21 35 38.3**	**-0.8**
OHR				*i* Sg	**Sn**	**21 35 55.5**	**+0.7**
OHR				*e*Lg	Lg	21 35 56.6	
	comp=N,217nm,0.4s						
OHR				*e*Lg	Lg	21 35 58.8	
	comp=E,256nm,0.5s						
HCY	**Herceg Novi**	**1.14**	**318**	⇓*i*Pg	**Pn**	**21 35 40.8**	**+0.4**
HCY				*i* Sg	**Sn**	**21 35 59.1**	**+3.0**
VLO	**Vlora**	**1.14**	**181**	⇓Pg	**Pn**	**21 35 40.8**	**+0.5**
VLO				Sg	**Sn**	**21 35 57.2**	**+1.2**
VLO				AML	AML	21 36 07.5	
	comp=E,4.0nm,0.6s						
NKME	**Niksic**	**1.23**	**340**	⇓*i*Pg	**Pn**	**21 35 42.0**	**+0.2**
NKME				*i* Sg	**Sn**	**21 36 01.7**	**+3.1**
KOME	**Kolasin**	**1.24**	**360**	*e*Pg	**Pn**	**21 35 41.8**	**-0.2**
KOME	**Kolasin**	**1.24**	**360**	⇑*i*Pg	**Pn**	**21 35 41.9**	**-0.1**
KOME				*i* Sg	**Sn**	**21 36 02.2**	**+3.3**
BEY	**Berane**	**1.30**	**12**	*e*Pg	**Pb**	**21 35 42.4**	**-0.5**
IVA	**Berane**	**1.30**	**12**	⇑*i*Pg	**Pn**	**21 35 42.3**	**-0.4**
IVA				*i* Sg	**Sn**	**21 36 03.1**	**+2.9**
KBN	**Korca**	**1.37**	**135**	P	**Pb**	**21 35 44.1**	**0.0**
KBN				S	**Sg**	**21 36 02.7**	**+0.2**
TREB	**Trebinje**	**1.41**	**322**	*e*Pg	**Pb**	**21 35 44.6**	**-0.2**
SKO	**Skopje**	**1.48**	**75**	*i* Pg	**Pg**	**21 35 46.5**	**-0.3**
SKO				*i* Sg	**Sg**	**21 36 06.8**	**+0.8**
BRY	**Bratogost**	**1.48**	**331**	⇑*i*Pn	**Pb**	**21 35 46.0**	**-0.2**
BRY				*i* Sn	**Sg**	**21 36 08.0**	**+1.9**
UPM	**Unac-Piva**	**1.66**	**344**	⇑*i*Pn	**Pn**	**21 35 48.0**	**+0.2**
UPM				*i* Sn	**Sg**	**21 36 12.2**	**+0.5**
SJES	**Sjenica**	**1.69**	**11**	*e*Pg	**Pg**	**21 35 50.7**	**0.0**
SJES				*e*Sg	**Sg**	**21 36 14.4**	**+1.8**
PLE	**Pljevlja**	**1.73**	**357**	*e*Pg	**Pg**	**21 35 50.8**	**-0.6**
PLE	**Pljevlja**	**1.73**	**357**	⇓*i*Pn	**Pn**	**21 35 48.7**	**+0.1**
PLE				*i* Sn	**Sg**	**21 36 14.1**	**+0.3**
STON	**Ston**	**1.85**	**314**	*e*Pn	**Pb**	**21 35 52.5**	**+0.2**
SELS	**Selova**	**2.00**	**36**	*e*Pg	**Pb**	**21 35 53.6**	**-1.3**
SELS				*e*Sg	**Sb**	**21 36 19.9**	**0.0**
RUDO	**Rudo**	**2.02**	**357**	*e*Pn	**Pn**	**21 35 52.6**	**+0.1**
NOCI	**Noci**	**2.02**	**247**	Pn	**Pn**	**21 35 51.5**	**-1.0**
NOCI				Sn	**Sb**	**21 36 21.4**	**+0.9**
NOCI				AML	AML	21 36 26.9	
	comp=E,0.5nm,0.3s						
IVAS	**Ivanjica**	**2.02**	**13**	*e*Pn	**Pb**	**21 35 53.8**	**-1.5**
IGT	**Igoumenitsa**	**2.16**	**163**	Pn	**Pb**	**21 35 57.4**	**-0.2**
IGT				Sn	**Sb**	**21 36 25.2**	**+0.7**
GOCS	**Kraljevo Serbi**	**2.20**	**27**	*e*Pn	**Pb**	**21 35 56.5**	**-1.8**
BBLS	**Lazi&#263i**	**2.26**	**358**	*e*Pn	**Pb**	**21 35 57.6**	**-1.7**
VAY	**Valandovo**	**2.31**	**96**	*i* Pn	**Pn**	**21 35 57.3**	**+0.8**
VAY				*i* Sn	**Sn**	**21 36 26.6**	**+1.6**
VAY				*e*Lg	Lg	21 36 27.5	
	comp=N,33nm,0.6s						
VAY				*e*Lg	Lg	21 36 27.9	
	comp=E,44nm,0.7s						
MATE	**Matera**	**2.33**	**247**	⇓P	**Pn**	**21 35 56.2**	**-0.6**
BOSS	**Bosilegrad**	**2.38**	**67**	*e*Pn	**Pn**	**21 35 58.5**	**+1.0**
GRUS	**Gruza**	**2.45**	**21**	*e*Pn	**Pn**	**21 35 59.8**	**+1.4**
KNT	**Kendrikon**	**2.58**	**99**	*i* Pn	**Pn**	**21 36 01.1**	**+0.9**
BOVS	**Bovan**	**2.59**	**38**	⇑P	**Pn**	**21 36 01.4**	**+0.9**
BOVS	**Bovan**	**2.59**	**38**	*e*Pn	**Pn**	**21 36 01.3**	**+0.9**
TRUS	**Trudelj**	**2.70**	**14**	*e*Pn	**Pb**	**21 36 06.9**	**+0.2**
KKB	**Krupnik**	**2.71**	**84**	*i* Pn	**Pn**	**21 36 03.5**	**+1.4**
ZAPS	**Zavoj**	**2.85**	**53**	*e*Pn	**Pn**	**21 36 05.0**	**+1.1**
TEKS	**Tekeris**	**2.94**	**0**	*e*Pn	**Pn**	**21 36 05.5**	**+0.3**
VTS	**Vitosha**	**2.94**	**69**	*e*Pn	**Pn**	**21 36 06.5**	**+1.1**
ZAGS	**Zajecar**	**2.98**	**41**	*e*Pn	**Pn**	**21 36 07.0**	**+1.3**
BLKB	**Belogradchik**	**3.08**	**48**	⇓S	**Sn**	**21 36 46.4**	**+2.3**
BLKB	**Belogradchik**	**3.08**	**48**	*e*Pn	**Pn**	**21 36 08.6**	**+1.4**
BORS2	**Bor- Borsko je**	**3.09**	**36**	*e*Pn	**Pn**	**21 36 07.0**	**-0.3**
SRS	**Serrai**	**3.10**	**98**	*i* Pn	**Pn**	**21 36 07.9**	**+0.5**
MMB	**Musomishta**	**3.17**	**90**	*i* Pn	**Pn**	**21 36 09.7**	**+1.2**
KUBS	**Kucevo**	**3.22**	**29**	*e*Pn	**Pn**	**21 36 08.7**	**-0.3**
FRGS	**Fruska Gora**	**3.56**	**3**	*e*Pn	**Pn**	**21 36 14.2**	**+0.5**
HERR	**Herculane**	**3.90**	**32**	⇓P	**Pn**	**21 36 19.6**	**+1.2**
SURR	**Surduc**	**4.56**	**24**	⇑P	**Pn**	**21 36 27.4**	**+0.1**
SURR				⇑S	**Sn**	**21 37 19.8**	**-0.6**
MORH	**Mrgy, Hungar**	**4.65**	**352**	⇑P	**Pn**	**21 36 28.2**	**-0.5**
MORH	**Mrgy, Hungar**	**4.65**	**352**	*e*Pn	**Pn**	**21 36 30.7**	**+2.0**
SIRR	**Siria**	**4.91**	**18**	*e*Pn	**Pn**	**21 36 33.4**	**+1.1**
BOJS	**Bojanci**	**4.98**	**323**	*e*Pn	**Pn**	**21 36 33.8**	**+0.6**
ARR	**Arges**	**5.29**	**43**	⇓P	**Pn**	**21 36 39.4**	**+1.9**
ARR				⇑S	**Sn**	**21 37 41.2**	**+2.6**
CEY	**Cerknica**	**5.54**	**320**	*e*Pn	**Pn**	**21 36 41.4**	**+0.5**
SOKA	**Soboth**	**6.01**	**329**	*e*Pn	**Pn**	**21 36 46.9**	**-0.5**
	comp=E,0.5nm,0.3s						
OBKA	**Obir**	**6.07**	**326**	*e*Pn	**Pn**	**21 36 48.1**	**-0.1**
	comp=E,1.1nm,0.2s						
MLR	**Muntele Rosu**	**6.07**	**48**	⇓P	**Pn**	**21 36 50.8**	**+2.5**
MLR				⇓S	**Sn**	**21 37 59.8**	**+1.8**
NEHR	**Nehoiu**	**6.23**	**50**	⇑P	**Pn**	**21 36 52.9**	**+2.4**
PLOR	**Plostina**	**6.69**	**48**	⇓P	**Pn**	**21 36 58.0**	**+1.4**
VRI	**Vrincioaia**	**6.74**	**48**	⇑P	**Pn**	**21 37 00.2**	**+2.8**
MODS	**Modra-Piesok**	**6.95**	**348**	*e*PN	Pn	21 36 53.9	-6.4
MODS				*e*PG	**Pg**	**21 37 30.9**	**-0.4**
MODS				*e*SN	Sn	21 38 04.0	-15
MODS				*e*SG	**Sg**	**21 39 00.8**	**-0.5**
KBA	**Koelnbreinsper**	**7.04**	**323**	*e*Pn	**Pn**	**21 37 02.1**	**+0.5**
	comp=E,0.4nm,0.3s						
BIOA	**Bad Ischl, Aus**	**7.39**	**327**	*e*Pn	**Pn**	**21 37 06.0**	**-0.3**
	comp=E,0.8nm,0.3s						
LESA	**Schwarzleotal**	**7.60**	**322**	*e*Pn	**Pn**	**21 37 09.2**	**0.0**
	comp=E,0.4nm,0.2s						
GERES	**GERESS Array B**	**8.32**	**332**	Pn	**Pn**	**21 37 20.2**	**+1.1**
	baz=151,slow=13,SNR=3.7						
	comp=E,0.3nm,0.3s						
FINES	**FINESS Array B**	**20.26**	**9**	P	**P**	**21 39 51.9**	**-1.9**
	comp=E,0.1nm,0.3s,baz=189,slow=9.6,SNR=6.6						
	comp=E,1.7nm,0.8s						
ZALV	**Zalesvo Beam**	**44.05**	**51**	P	**P**	**21 43 24.6**	**-1.5**
	comp=E,0.6nm,0.3s,baz=278,slow=7.6,SNR=4.6						
	comp=E,0.6nm,0.3s						
MKAR	**Makanchi Array**	**44.24**	**61**	P	**P**	**21 43 26.4**	**-1.4**
	comp=E,0.2nm,0.5s,baz=296,slow=6.6,SNR=2.2						
	comp=E,0.2nm,0.5s						

*IDC **26** 21:45:34.7±3.6, 9°.34S×117°.10E, h0km, mb3.3/2, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=264.3km s-min=29.5km az=49.0*
*DJA **26** 21:45:45.1±0.3, 10°.5±4°×11°.7E±°, h48km±20km, M4.0/20, mB5.2/1, mb4.2/7, MLv3.9/20, Mw(mB)4.5/1*

ISC 26 21:45:43.8±0.9, **9°.74S**±0°.08×**117°.36E**±0°.04, **h81**km±13km, **n22**,σ**1°78**/32, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.00**	**24**	P	**Pn**	**21 46 02.7**	**-0.2**
PLAI				S	**Sn**	**21 46 15.4**	**-1.8**
TWSI	**Taliwang, Sumb**	**1.10**	**335**	P	**Pn**	**21 46 04.5**	**+0.3**
TWSI				S	**Sn**	**21 46 18.4**	**-1.0**
WBSI	**Waikabubak, Su**	**2.01**	**87**	P	**Pn**	**21 46 16.1**	**+0.2**
WBSI				S	**Sn**	**21 46 40.8**	**+0.5**
IGBI	**Denpasar**	**2.37**	**293**	P	**Pn**	**21 46 21.7**	**+1.0**
IGBI				S	**Sn**	**21 46 48.9**	**0.0**
DNP	**Denpasar**	**2.37**	**296**	P	**Pn**	**21 46 22.3**	**+1.6**
DNP				S	**Sn**	**21 46 50.7**	**+1.7**
SRBI	**Singaraja**	**2.68**	**308**	P	**Pn**	**21 46 26.0**	**+1.0**
SRBI				S	**Sn**	**21 46 56.3**	**-0.2**
WSI	**Waingapu**	**2.90**	**89**	P	**Pn**	**21 46 28.6**	**+0.8**
WSI				S	**Sn**	**21 47 03.0**	**+1.3**
BASI	**Baing, Sumba**	**3.21**	**99**	P	**Pn**	**21 46 33.3**	**+1.3**
BASI				S	**Sn**	**21 47 10.6**	**+1.4**
JAGI	**Jajag, Banyuwa**	**3.41**	**291**	P	**Pn**	**21 46 34.8**	**0.0**
JAGI				S	**Sn**	**21 47 13.8**	**-0.4**
ABJI	**Asem Bagus**	**3.64**	**302**	P	**Pn**	**21 46 39.0**	**+1.0**
EDFI	**Ende, Flores**	**4.39**	**77**	P	**Pn**	**21 46 49.0**	**+0.8**
BSSI	**Bau Bau, Buton**	**4.73**	**41**	P	**Pn**	**21 46 53.2**	**+0.4**
MMRI	**Maumere**	**4.94**	**78**	P	**Pn**	**21 46 56.3**	**+0.7**
BKSI	**Bulukumba**	**5.17**	**32**	P	**Pn**	**21 47 00.3**	**+1.5**
	0.1nm21nm,0.6s						
BNSI	**Bone**	**5.96**	**27**	P	**Pn**	**21 47 11.5**	**+1.9**
	0.1nm16nm,0.7s						
BATI	**Baumata**	**6.23**	**95**	P	**Pn**	**21 47 13.6**	**+0.4**
	0.1nm18nm,0.5s						
PCJI	**Pacitan**	**6.30**	**284**	P	**Pn**	**21 47 15.0**	**+0.8**
	14nm,0.8s						
SOEI	**Soe**	**6.81**	**91**	P	**Pn**	**21 47 22.9**	**+1.6**
	0.1nm14nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.56**	**137**	Sn	**Sn**	**21 50 28.4**	**-4.7**
	0.1nm,0.3s,baz=53,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**19.27**	**124**	P	**Pn**	**21 50 05.1**	**+1.1**
	0.1nm,0.3s,baz=294,slow=13,SNR=3.0						
WRA				S	**S**	**21 53 33.0**	**-3.4**
	0.2nm,0.4s,baz=270,slow=20,SNR=1.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**21.01**	**133**	P	**P**	**21 50 25.6**	**+4.5**
	0.6nm,0.6s,baz=309,slow=8.7,SNR=14						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**64.39**	**334**	P	**P**	**21 56 09.5**	**-1.8**
	0.2nm,0.4s,baz=146,slow=6.7,SNR=2.1						
	0.2nm,0.4s						

*IDC **26** 21:51:29.5±2.0, 2°.59S×129°.85E, h0km, mb3.8/3, mbtmp3.8/5, ML3.8/2, Error ellipse: s-maj=121.7km s-min=22.7km az=74.0*

ISC 26 21:51:43.2±4.5, **3°.8S**±0°.3×**128°.9E**±0°.3, **h32**km, **n5**, σ**0°68**/5, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.56**	**192**	Pn	**P**	**21 55 13.5**	**+0.3**
	0.3nm,0.3s,baz=20,slow=12,SNR=6.4						
FITZ				Sn	**S**	**21 58 05.8**	**-0.3**
	0.1nm,0.3s,baz=30,slow=16,SNR=1.7						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**16.89**	**162**	P	**Pn**	**21 55 36.8**	**-0.5**
	0.3nm,0.3s,baz=348,slow=12,SNR=5.6						
WRA				S	**Sn**	**21 58 44.1**	**0.0**
	0.1nm,0.3s,baz=29,slow=22,SNR=1.2						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**20.32**	**167**	P	Pn	21 56 19.1	0.0
	4.4nm,0.5s,baz=349,slow=10,SNR=49						
ASAR				S	**S**	**22 00 03.9**	**+0.7**
	0.7nm,0.9s,baz=346,slow=19,SNR=6.2						
	4.4nm,0.5s						
MKAR	**Makanchi Array**	**64.98**	**327**	P	P	22 02 08.3	-12
	0.3nm,0.5s,baz=113,slow=8.3,SNR=5.4						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**69.24**	**328**	P	P	22 02 35.0	-12
	1.2nm,0.7s,baz=132,slow=5.5,SNR=7.8						
	1.2nm,0.7s						

*TIR **26** 22:00:18.5, 41°.54N×19°.44E, h24km±8km, Ml2.8/2*
*BEO **26** 22:00:19.9±0.9, 41°.53N×19°.61E, h3km±4km, ML2.6/9*
*PDG **26** 22:00:19.1±0.2, 41°.50N×19°.54E, h15km, ML2.7/13, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*

ISC 26 22:00:19.9±1.1, **41°.57N**±0°.03×**19°.52E**±0°.03, **h8**km±9km, **n63**,σ**1°04**/94, **19C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**130**	Pg	**Pb**	**22 00 27.2**	**-1.0**
TIR				Sg	**Sg**	**22 00 31.9**	**+0.7**
TIR				AML	AML	22 00 32.5	
	4.5nm,0.2s						
ULC	**Ulcinj**	**0.44**	**333**	⇓*i*Pg	**Pg**	**22 00 28.4**	**-0.1**
ULC				*i* Sg	**Sb**	**22 00 35.8**	**-1.0**
SDA	**Shkodra**	**0.48**	**358**	Pg	**Pg**	**22 00 28.9**	**-0.3**
SDA				Sg	**Sg**	**22 00 36.2**	**+0.6**
DRME	**Dracevica, Mon**	**0.67**	**338**	*e*Pg	**Pg**	**22 00 32.7**	**0.0**
DRME	**Dracevica, Mon**	**0.67**	**338**	⇑*i*Pg	**Pg**	**22 00 32.3**	**-0.4**
DRME				*i* Sg	**Sb**	**22 00 43.4**	**+0.3**
PHP	**Peshkopia**	**0.70**	**80**	Pg	**Pg**	**22 00 32.9**	**-0.5**
PHP				Sg	**Sb**	**22 00 43.9**	**-0.3**
PHP				AML	AML	22 00 47.6	
	1.3nm,0.5s						
BUM	**Brajici-Budva**	**0.87**	**328**	⇑*i*Pg	**Pg**	**22 00 36.0**	**-0.6**
BUM				*i* Sg	**Sb**	**22 00 50.0**	**+1.0**
PDG	**Podgorica**	**0.88**	**347**	Pg	**Pg**	**22 00 36.3**	**-0.6**
PDG				Sg	**Sn**	**22 00 52.3**	**+0.8**
PDG	**Podgorica**	**0.88**	**347**	⇓P	**Pg**	**22 00 36.8**	**0.0**
PDG				⇑S	**Sg**	**22 00 45.1**	**-3.3**
PDG	**Podgorica**	**0.88**	**347**	*e*Pg	**Pg**	**22 00 35.9**	**-1.0**
PDG				*e*Sg	**Sn**	**22 00 51.7**	**+0.2**
PDG	**Podgorica**	**0.88**	**347**	⇓*i*Pg	**Pg**	**22 00 36.1**	**-0.8**
PDG				*i* Sg	**Sn**	**22 00 50.7**	**-0.8**
CEME	**Cevo**	**1.07**	**336**	⇓*i*Pg	**Pg**	**22 00 40.6**	**+0.1**
CEME				*i* Sg	**Sn**	**22 00 57.2**	**+0.8**
PVY	**Plav**	**1.08**	**18**	*e*Pg	**Pg**	**22 00 39.7**	**-0.9**
PVY	**Plav**	**1.08**	**18**	⇑*i*Pg	**Pg**	**22 00 39.2**	**-1.4**
PVY				*i* Sg	**Sn**	**22 00 57.0**	**+0.5**
HCY	**Herceg Novi**	**1.16**	**319**	⇓*i*Pg	**Pb**	**22 00 41.8**	**-0.4**
HCY				*i* Sg	**Sn**	**22 00 59.7**	**+1.2**
NKME	**Niksic**	**1.27**	**341**	⇑*i*Pg	**Pn**	**22 00 43.9**	**0.0**
NKME				*i* Sg	**Sn**	**22 01 02.8**	**+1.7**
KOME	**Kolasin**	**1.28**	**360**	*e*Pg	**Pn**	**22 00 43.8**	**-0.3**
KOME	**Kolasin**	**1.28**	**360**	⇓*i*Pg	**Pn**	**22 00 43.3**	**-0.8**
KOME				*i* Sg	**Sn**	**22 01 03.4**	**+1.9**
BEY	**Berane**	**1.33**	**12**	*e*Pg	**Pn**	**22 00 44.1**	**-0.7**
IVA	**Berane**	**1.33**	**12**	⇓*i*Pg	**Pn**	**22 00 43.9**	**-0.9**
IVA				*i* Sg	**Sg**	**22 01 05.2**	**+2.5**
TREB	**Trebinje**	**1.44**	**323**	*e*Pg	**Pb**	**22 00 47.0**	**+0.1**
TREB				*e*Sg	**Sg**	**22 01 07.4**	**+1.3**
BRY	**Bratogost**	**1.52**	**332**	⇓*i*Pn	**Pn**	**22 00 47.3**	**-0.1**
B

	comp=E,183nm,0.2s							
SDH	**Striped Hills**	**1.09**	**194**			Pg	22 20 39.6	-0.1
SGV	**South Grapevin**	**1.10**	**229**			Pg	22 20 39.2	-0.5
AMDNV	**Amargosa**	**1.27**	**190**			Pb	22 20 42.6	0.0
GRAC	**Grapevine Rang**	**1.30**	**237**			Pb	22 20 43.2	0.0
GRAC	**Grapevine Rang**	**1.30**	**237**		IAML		22 21 10.1	
	comp=E,274nm,0.3s							
SHPR	**Sheep Range**	**1.37**	**150**			Pn	22 20 43.4	-0.6
LCH	**Last Change Ra**	**1.39**	**251**			Pn	22 20 44.4	+0.2
FURC	**Furnace Creek,**	**1.42**	**209**			Pb	22 20 45.0	-0.1
Q09A	**Carvers**	**1.46**	**321**			Pn	22 20 44.5	-0.7
DSP	**Deep Springs**	**1.60**	**259**			Pn	22 20 46.5	-0.4
DSP					IAML		22 21 11.5	
	comp=N,146nm,0.8s							
DSP					IAML		22 21 12.4	
	comp=E,150nm,0.5s							
GWY	**Greenwater Val**	**1.61**	**200**			Pn	22 20 47.8	+0.6
GWY					IAML		22 21 19.8	
	comp=E,189nm,0.5s							
GWY					IAML		22 21 21.1	
	comp=N,200nm,0.5s							
SHOC	**Shoshone, Teco**	**1.82**	**187**			Pb	22 20 51.3	-0.6
SPR3	**Spring Creek 3**	**1.84**	**45**			Pn	22 20 48.1	-2.4
NV11	**Mina Array Sit**	**1.85**	**294**			Pn	22 20 49.7	-0.8
QSM	**Queen of Sheba**	**1.87**	**202**			Pn	22 20 51.0	+0.4
QSM					IAML		22 21 19.8	
	comp=N,123nm,0.5s							
QSM					IAML		22 21 20.1	
	comp=E,75nm,0.5s							
PSUT	**Pine Spring**	**1.88**	**63**			Pn	22 20 49.7	-1.4
PSUT					IAML		22 21 17.1	
	comp=N,168nm,0.8s							
NVAR	**Mina Array Bea**	**1.96**	**292**	Pn		Pn	22 20 51.7	-0.4
NV08	**Mina Array Sit**	**1.96**	**292**			Pb	22 20 53.4	-1.1
NV09	**Mina Array Sit**	**1.98**	**292**			Pb	22 20 53.8	-1.0
MPMC	**Manual Prospec**	**2.03**	**216**			Pn	22 20 53.0	-0.1
MPMC					IAML		22 21 25.4	
	comp=N,75nm,0.6s							
MPMC					IAML		22 21 26.2	
	comp=E,54nm,0.6s							
CCUT	**Cedar City**	**2.10**	**93**	Pn	Pn	Pn	22 20 53.4	-0.6
CCUT					IAML		22 21 25.5	
	comp=N,66nm,0.7s							
CCUT					IAML		22 21 29.3	
	comp=E,90nm,0.5s							
V12A	**Nelson**	**2.18**	**155**			Pn	22 20 54.7	-0.4
V12A					IAML		22 21 31.2	
	comp=E,78nm,0.5s							
V12A					IAML		22 21 31.2	
	comp=N,55nm,0.5s							
RYN	**Ryan**	**2.19**	**296**			Pn	22 20 54.3	-0.9
RYN					IAML		22 21 28.6	
	comp=N,91nm,0.4s							
RYN					IAML		22 21 28.9	
	comp=E,120nm,0.6s							
JRC2	**Joshua Ridge**	**2.25**	**221**			Pb	22 20 59.8	+0.4
LCMT	**Little Creek M**	**2.30**	**107**			Pn	22 20 56.8	+0.1
SZCU	**Shurtz Canyon**	**2.31**	**92**			Pn	22 20 56.7	-0.3
SZCU					IAML		22 21 35.6	
	comp=N,101nm,0.3s							
SZCU					IAML		22 21 37.8	
	comp=E,98nm,0.3s							
WSHM	**Spangler Hills**	**2.42**	**210**			Pn	22 20 57.9	-0.4
CCCA	**Chr Cany lake**	**2.44**	**207**			Pn	22 20 58.7	+0.2
CCCA					IAML		22 21 39.3	
	comp=E,64nm,0.5s							
CCCA					IAML		22 21 43.3	
	comp=N,67nm,0.7s							
KNB	**Kanab**	**2.62**	**104**			Pn	22 21 01.7	+0.5
KNB					IAML		22 21 45.7	
	comp=N,31nm,1.4s							
ELK	**Elko**	**3.09**	**11**			Pn	22 21 07.5	-0.2
W13A	**Hualapai Mount**	**3.11**	**146**			Pn	22 21 07.6	-0.3
U15A	**North Rim**	**3.23**	**112**			Pn	22 21 09.8	+0.2
U15A					IAML		22 22 03.0	
	comp=E,26nm,0.7s							
U15A					IAML		22 22 03.8	
	comp=N,33nm,0.8s							
PAHR	**Pah Rah Range**	**3.32**	**308**			Pn	22 21 11.3	+0.6
PAHR					IAML		22 22 37.1	
	comp=E,17nm,5.0s							

*IDC **26** 22:32:23.9±1.3, 1.°55N×126.°88E, h0km, mb3.5/6, mbtmp3.5/6, MS2.6/1, Error ellipse: s-maj=148.8km s-min=18.4km az=67.0*
*DJA **26** 22:32:25.7±0.5, 2.°N±4.°×12.°9E±.°, h10km, M3.9/8, mb3.9/4, MLv3.8/8*
ISC 26 22:32:24.5±0.9, 2.°26N±0.°09×128.°80E±0.°10, h10km, n10, σ1s75/11, mb3.5/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.06**	**224**	P	**Pn**	**22 33 00.1**	**+0.9**
TNTI				S	**Sb**	**22 33 26.2**	**-1.4**
SGSI	**Sangihe**	**3.56**	**294**	P	**Pn**	**22 33 20.3**	**+0.5**
GTOI	**Gorontalo**	**6.00**	**254**	P	**Pn**	**22 33 56.2**	**+2.7**
	0.1nm14nm,0.8s						
FAKI	**Fak Fak**	**6.20**	**146**	P	**Pn**	**22 33 56.9**	**+0.8**
	0.1nm7.1nm,1.0s						
WRA	**Warramunga Arr**	**22.73**	**166**	P	**P**	**22 37 26.3**	**-0.5**
	0.4nm,0.5s,baz=339,slow=10,SNR=7.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**26.25**	**169**	P	**P**	**22 37 59.7**	**-0.3**
	0.2nm,0.3s,baz=346,slow=8.3,SNR=5.0						
ASAR				LR	LR	22 48 30.3	
	comp=Z,13nm,18.3s,baz=276,slow=37						
	0.2nm,0.3s						
STKA	**Stephens Creek**	**36.06**	**161**	P	**P**	**22 39 25.7**	**-0.7**
	1.8nm,0.6s,baz=334,slow=12,SNR=4.7						
	1.8nm,0.6s						
SONM	**Songino Array**	**49.35**	**340**	P	**P**	**22 41 16.0**	**+1.8**
	0.5nm,0.7s,baz=157,slow=9.4,SNR=2.7						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**59.93**	**325**	P	**P**	**22 42 28.9**	**-2.1**
	0.3nm,0.8s,baz=128,slow=7.6,SNR=6.4						
	0.3nm,0.8s						
KURBB	**Kurchatov Arra**	**64.08**	**327**	P	**P**	**22 42 56.4**	**-2.3**
	0.1nm,0.3s,baz=138,slow=5.5,SNR=5.5						
	0.1nm,0.3s						

*NEIC **26** 22:32:44.4±1.3, 19.°45N±0.°05×67.°22W±0.°05, h10km±2km, ML2.4/14, Md3.1/10(RSPR), Error ellipse: s-maj=8.6km s-min=6.8km az=45.0*
*SDD **26** 22:32:46.1±1.9, 19.°59N×67.°12W, h44km±999km, MD3.6, ML2.3, MW2.8*
*RSPR **26** 22:32:47.9, 19.°45N×67.°24W, h9km±4km, MD3.1/10*
ISC 26 22:32:45.3±1.8, 19.°47N±0.°10×67.°23W±0.°04, h19km±4km, n44, σ0s58/54, 14C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.00**	**174**	⇑*e*P g	**Pb**	**22 33 03.5**	**-0.5**
AGPR				⇑*e*S g	**Sb**	**22 33 16.8**	**0.0**
AGPR				IAML		22 33 17.7	
	comp=N,155nm,0.2s						
AGPR	**Aguadilla, PR**	**1.00**	**174**	P g	**Pb**	**22 33 03.5**	**-0.5**
AGPR				IAML		22 33 17.4	
	comp=N,179nm,0.5s						
AGPR	**Aguadilla, PR**	**1.00**	**174**	⇑*e*P	**Pb**	**22 33 03.7**	**-0.3**
AGPR	**Aguadilla, PR**	**1.00**	**174**	*e*S	**Sb**	**22 33 16.9**	**0.0**
IDE	**Isla Desecheo**	**1.10**	**192**		**Pb**	**22 33 05.5**	**-0.2**
IDE					**Sb**	**22 33 20.4**	**+0.8**
IDE	**Isla Desecheo**	**1.10**	**192**	⇓*e*P	**Pb**	**22 33 05.5**	**-0.2**
IDE	**Isla Desecheo**	**1.10**	**192**	*e*S	**Sb**	**22 33 20.4**	**+0.8**
EMPR	**Esperanza - Ma**	**1.18**	**146**		**Pg**	**22 33 08.1**	**-0.2**
EMPR					**Sb**	**22 33 21.5**	**-0.6**
EMPR	**Esperanza - Ma**	**1.18**	**146**	IAML		22 33 36.8	
	comp=N,111nm,1.7s						
EMPR				IAML		22 33 37.0	
	comp=N,118nm,2.2s						
EMPR	**Esperanza - Ma**	**1.18**	**146**	⇑*e*P	**Pg**	**22 33 08.1**	**-0.2**
EMPR	**Esperanza - Ma**	**1.18**	**146**	*e*S	**Sb**	**22 33 21.5**	**-0.6**
AOPR	**Arecibo Observ**	**1.20**	**158**	⇑*e*P g	**Pn**	**22 33 06.5**	**-0.7**
AOPR				⇑*e*S g	**Sn**	**22 33 23.5**	**+0.6**
AOPR				IAML		22 33 31.6	
	comp=N,52nm,0.2s						
AOPR	**Arecibo Observ**	**1.20**	**158**		**Pn**	**22 33 06.0**	**-1.2**
AOPR					**Sb**	**22 33 22.0**	**-0.6**
AOPR				IAML		22 33 23.8	
	comp=E,122nm,0.4s						
AOPR				IAML		22 33 29.6	
	comp=N,78nm,0.3s						
AOPR	**Arecibo Observ**	**1.20**	**158**	⇑*e*P	**Pn**	**22 33 07.2**	**+0.1**
AOPR	**Arecibo Observ**	**1.20**	**158**	*e*S	**Sb**	**22 33 22.4**	**-0.2**
LSP	**Las Mesas**	**1.29**	**174**		**Pn**	**22 33 08.2**	**-0.2**
LSP					**Sb**	**22 33 25.6**	**+0.4**
LSP	**Las Mesas**	**1.29**	**174**	⇓*e*P	**Pn**	**22 33 08.2**	**-0.2**
LSP	**Las Mesas**	**1.29**	**174**	*e*S	**Sb**	**22 33 25.6**	**+0.4**
UUPR	**Utuado, UPR, P**	**1.30**	**158**		**Pn**	**22 33 09.0**	**+0.5**
UUPR					**Sb**	**22 33 24.7**	**-0.7**
UUPR	**Utuado, UPR, P**	**1.30**	**158**	⇓*e*P	**Pn**	**22 33 09.0**	**+0.5**
UUPR	**Utuado, UPR, P**	**1.30**	**158**	*e*S	**Sb**	**22 33 24.7**	**-0.7**
ECPR	**Experimental S**	**1.40**	**144**	⇓*e*P	**Pb**	**22 33 11.1**	**+0.2**
ECPR	**Experimental S**	**1.40**	**144**	*e*S	**Sn**	**22 33 27.7**	**-0.3**
PCDR	**Punta Cana, DR**	**1.44**	**229**	⇑*e*P g	**Pn**	**22 33 10.9**	**+0.5**
PCDR				*e*S g	**Sn**	**22 33 29.9**	**+1.1**
PCDR				IAML		22 33 34.8	
	comp=N,84nm,2.1s						
CRPR	**Cabo Rojo, PR**	**1.46**	**176**	⇑*e*P g	**Pn**	**22 33 10.7**	**+0.1**
CRPR				⇑*e*S g	**Sn**	**22 33 29.1**	**-0.1**
CRPR				IAML		22 33 36.6	
	comp=N,41nm,1.1s						
CRPR	**Cabo Rojo, PR**	**1.46**	**176**		**Pn**	**22 33 10.6**	**0.0**
CRPR					**Sn**	**22 33 28.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.46**	**176**	IAML		22 33 37.2	
	comp=N,35nm,0.9s						
CRPR				IAML		22 33 39.0	
	comp=N,45nm,1.7s						
CRPR	**Cabo Rojo, PR**	**1.46**	**176**	⇓*e*P	**Pn**	**22 33 10.8**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.46**	**176**	*e*S	**Sn**	**22 33 29.4**	**+0.2**
MLPR	**Magueyes Islan**	**1.50**	**173**	*e*P g	**Pn**	**22 33 11.0**	**-0.2**
MLPR				IAML		22 33 36.6	
	comp=N,9.9nm,0.8s						
MLPR	**Magueyes Islan**	**1.50**	**173**	⇑*e*P	**Pn**	**22 33 11.3**	**+0.1**
MLPR	**Magueyes Islan**	**1.50**	**173**	*e*S	**Sn**	**22 33 30.5**	**+0.3**
OBIP	**Obispado Ponce**	**1.53**	**157**		**Pn**	**22 33 11.8**	**+0.2**
OBIP					**Sn**	**22 33 30.7**	**-0.4**
OBIP	**Obispado Ponce**	**1.53**	**157**	⇓*e*P	**Pn**	**22 33 12.0**	**+0.4**
OBIP	**Obispado Ponce**	**1.53**	**157**	*e*S	**Sn**	**22 33 31.0**	**-0.1**
MIDR	**Miches**	**1.79**	**255**	⇑*e*P g	**Pn**	**22 33 14.1**	**-1.1**
MIDR				⇑*e*S g	**Sn**	**22 33 37.3**	**0.0**
MIDR				IAML		22 33 49.7	
	comp=N,20nm,1.9s						
MIDR	**Miches**	**1.79**	**255**	⇓*e*P	**Pn**	**22 33 15.5**	**+0.3**
MIDR	**Miches**	**1.79**	**255**	*e*S	**Sn**	**22 33 35.8**	**-1.6**
HUMP	**Col San Antoni**	**1.85**	**135**		**Pn**	**22 33 17.2**	**+1.1**
HUMP	**Col San Antoni**	**1.85**	**135**	IAML		22 33 46.4	
	comp=N,22nm,0.2s						
HUMP	**Col San Antoni**	**1.85**	**135**	⇓*e*P	**Pn**	**22 33 17.1**	**+1.0**
HUMP	**Col San Antoni**	**1.85**	**135**	*e*S	**Sn**	**22 33 39.6**	**+0.5**
DR12	**Loma Pena Alta**	**2.14**	**252**	Pn	**Pn**	**22 33 20.9**	**+0.7**
HATOM	**Hato Mayor del**	**2.14**	**252**	⇓*e*P g	**Pn**	**22 33 21.0**	**+0.9**
HATOM				⇑*e*S g	**Sn**	**22 33 46.1**	**-0.1**
HATOM				IAML		22 33 54.1	
	comp=N,19nm,1.9s						

*NEIC **26** 22:36:46.8±1.2, 37.°76N±0.°02×115.°99W±0.°03, h12km±12km, Error ellipse: s-maj=3.7km s-min=2.8km az=130.0*
REN 26 22:36:47.5±2.2, 37.°73N±0.°02×116.°03W±0.°02, h8km±5km, ML2.8/4, ML2.7/60(NEIC), Error ellipse: s-maj=3.3km s-min=2.2km az=159.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S11A	**Rachel**	**0.24**	**112**		Pg	22 36 52.4	+0.1
S11A				Sg	Sg	22 36 56.0	+0.5
S11A				IAML		22 36 56.4	
	comp=E,2µm,0.7s						
R11B	**Troy Canyon, C**	**0.71**	**29**		Pg	22 37 00.1	-1.1
R11B				IAML		22 37 09.1	
	comp=E,226nm,0.4s						
R11B				IAML		22 37 09.8	
	comp=N,209nm,0.2s						
R11B	**Troy Canyon, C**	**0.71**	**29**		Sg	22 37 09.1	-1.3
TPNV	**Topopah Spring**	**0.80**	**193**		Pg	22 37 02.7	-0.2
TPNV				IAML		22 37 17.7	
	comp=N,304nm,0.4s						
TPNV				IAML		22 37 19.0	
	comp=N,295nm,0.4s						
PRN	**Pahroc Range**	**0.84**	**112**		Pg	22 37 03.3	-0.4
PRN					Sb	22 37 15.8	-0.2
PRN	**Pahroc Range**	**0.84**	**112**	IAML		22 37 21.1	
	comp=E,418nm,0.5s						
NSP	**Numbskull Pass**	**1.01**	**188**		Pg	22 37 06.9	-0.1
WCT	**Wildcat Mounta**	**1.05**	**207**		Pg	22 37 07.6	-0.1
WCT				IAML		22 37 25.1	
	comp=E,163nm,0.2s						
MCY	**Mercury**	**1.07**	**177**		Pg	22 37 08.2	+0.1
MCY					Sg	22 37 20.8	-1.1
GMN	**Gold Mountain**	**1.07**	**247**		Pg	22 37 07.9	-0.2
GMN				IAML		22 37 26.1	
	comp=N,180nm,0.5s						
GMN	**Gold Mountain**	**1.07**	**247**		Sg	22 37 22.2	+0.3
SGV	**South Grapevin**	**1.10**	**227**		Pg	22 37 08.6	0.0
SGV					Sb	22 37 23.9	+0.4
SDH	**Striped Hills**	**1.11**	**193**		Pb	22 37 09.1	0.0
AMDNV	**Amargosa**	**1.29**	**189**		Pb	22 37 12.1	0.0
GRAC	**Grapevine Rang**	**1.29**	**236**		Pg	22 37 12.5	+0.2
GRAC	**Grapevine Rang**	**1.29**	**236**	IAML		22 37 40.5	
	comp=E,156nm,0.3s						
LCH	**Last Change Ra**	**1.38**	**249**		Pg	22 37 14.0	0.0
SHPR	**Sheep Range**	**1.41**	**150**		Pn	22 37 12.9	-0.7
FURC	**Furnace Creek,**	**1.43**	**208**		Pb	22 37 14.6	+0.2
DSP	**Deep Springs**	**1.59**	**257**		Pn	22 37 15.9	0.0
DSP				IAML		22 37 41.6	
	comp=N,66nm,0.7s						
DSP				IAML		22 37 42.0	
	comp=E,77nm,0.4s						
GWY	**Greenwater Val**	**1.63**	**199**		Pb	22 37 17.4	-0.5
GWY				IAML		22 37 47.2	
	comp=E,98nm,0.5s						
GWY				IAML		22 37 50.6	
	comp=N,106nm,0.5s						
NV11	**Mina Array Sit**	**1.82**	**293**		Pn	22 37 18.9	-0.4
SPR3	**Spring Creek 3**	**1.84**	**46**		Pn	22 37 17.6	-2.2
SPR3				IAML		22 37 43.4	
	comp=E,56nm,0.3s						
SHOC	**Shoshone, Teco**	**1.84**	**186**		Pb	22 37 21.0	-0.4
QSM	**Queen of Sheba**	**1.89**	**201**		Pb	22 37 21.7	-0.5
QSM				IAML		22 37 49.3	
	comp=N,66nm,0.3s						
QSM				IAML		22 37 49.6	
	comp=E,41nm,0.5s						
PSUT	**Pine Spring**	**1.89**	**64**		Pn	22 37 19.0	-1.4
PSUT				IAML		22 37 46.5	
	comp=N,110nm,0.8s						
PSUT				IAML		22 37 46.9	
	comp=E,107nm,0.4s						
LHV	**Little Huntoon**	**2.02**	**286**		Pn	22 37 22.6	+0.7
LHV				IAML		22 37 55.9	
	comp=E,104nm,0.5s						
LHV				IAML		22 37 59.4	
	comp=N,82nm,1.0s						
CCUT	**Cedar City**	**2.12**	**94**		Pn	22 37 22.7	-0.8
CCUT				IAML		22 37 57.0	
	comp=N,40nm,0.5s						
CCUT				IAML		22 37 58.6	
	comp=E,52nm,0.4s						
RYN	**Ryan**	**2.16**	**295**		Pn	22 37 23.6	-0.4
RYN				IAML		22 37 58.1	
	comp=N,57nm,0.3s						
RYN				IAML		22 37 58.4	
	comp=E,69nm,0.5s						
V12A	**Nelson**	**2.21**	**154**		Pn	22 37 24.3	-0.4
V12A				IAML		22 38 00.5	
	comp=E,43nm,0.5s						
V12A				IAML		22 38 00.8	
	comp=N,32nm,0.5s						
LCMT	**Little Creek M**	**2.33**	**107**		Pn	22 37 25.6	-0.8
WSHM	**Spangler Hills**	**2.43**	**209**		Pn	22 37 28.2	+0.5
MTPU	**Mount Pierson**	**3.06**	**83**		Pn	22 37 35.7	-0.8
ELK	**Elko**	**3.07**	**11**		Pn	22 37 35.4	-1.2
W13A	**Hualapai Mount**	**3.15**	**146**		Pn	22 37 37.0	-0.6
NEE2	**Needles Airpor**	**3.17**	**159**		Pn	22 37 37.4	-0.3
U15A	**North Rim**	**3.26**	**112**		Pn	22 37 39.1	-0.1
IRM	**Iron Mountain**	**3.64**	**168**		Pn	22 37 44.5	+0.2

*GUC **26** 22:43:23.4±0.6, 24.°24S×67.°21W, h204km±8km, ML4.5*
*SJA **26** 22:43:23.7±0.8, 24.°23S×67.°18W, h198km±4km, ML4.2, MW4.0*
*NEIC **26** 22:43:24.7±2.2, 24.°24S±0.°07×67.°0W±0.°1, h165km±8km, mb4.4/7, Mwr4.3(GUC), Error ellipse: s-maj=18.5km s-min=9.7km az=102.0*
*IDC **26** 22:43:24.0±1.8, 24.°09S×66.°99W, h160km±17km, mb3.6/7, mbtmp4.0/12, Error ellipse: s-maj=22.2km s-min=13.3km az=83.0*
*VAO **26** 22:43:25.4±0.7, 24.°12S×67.°17W, h191km±7km, mb4.3*
ISC 26 22:43:25.0±0.6, 24.°22S±0.°04×67.°20W±0.°04, h182km±6km, n134, σ1s28/158, mb3.9/6, 13C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA			**0.79**	**90** ⇓*e*P	**Pn**	**22 43 52.5**	**+0.5**
SALTA			**0.79**	**90** *e*P	**Pn**	**22 43 52.5**	**+0.5**
SALTA				*e*S	**Sn**	**22 44 14.3**	**+1.5**
AF01	**San Pedro de A**	**1.55**	**324**	Pn	**Pn**	**22 43 59.4**	**+1.5**
AF01				Sn	**Sn**	**22 44 25.6**	**+2.2**
AF01	**San Pedro de A**	**1.55**	**324**	*e*P	**Pn**	**22 43 59.4**	**+1.5**
AF01				*e*S	**Sn**	**22 44 26.4**	**+3.0**
AF01	**San Pedro de A**	**1.55**	**324**	*e*P	**Pn**	**22 43 59.4**	**+1.5**
AF01				*e*S	**Sn**	**22 44 24.6**	**+1.2**
AF01				IAML		22 44 44.9	
	comp=Z,732nm,0.6s						
SLA	**San Lorenzo**	**1.62**	**108** ⇓*e*P		**Pn**	**22 43 59.3**	**+0.8**
SLA	**San Lorenzo**	**1.62**	**108** *e*P		**Pn**	**22 43 59.2**	**+0.8**
SLA				*e*S	**Sn**	**22 44 24.8**	**+0.4**
HJA	**Humahuaca**	**1.93**	**59** *e*P		**Pn**	**22 44 02.3**	**+0.5**
FSA	**Cafayete**	**2.18**	**150** *e*P		**Pn**	**22 44 04.7**	**+0.3**
FSA				*e*S	**Sn**	**22 44 33.6**	**-1.5**
GO02	**Mina Guanaco**	**2.37**	**246**		**Pn**	**22 44 07.5**	**+0.9**
GO02				Sn	**Sn**	**22 44 39.5**	**+0.7**
GO02	**Mina Guanaco**	**2.37**	**246** ⇑*i*P		**Pn**	**22 44 07.4**	**+0.9**
GO02				IAML		22 44 40.0	
	comp=E,2µm,0.5s						
GO02	**Mina Guanaco**	**2.37**	**246** *e*P		**Pn**	**22 44 07.4**	**+0.9**
GO02				*e*S	**Sn**	**22 44 39.2**	**+0.4**
GO02				IAML		22 44 41.4	
	comp=Z,1µm,0.1s						
YJA	**Yavi**	**2.56**	**38** *e*P		**Pn**	**22 44 10.2**	**+1.2**
YJA	**Yavi**	**2.56**	**38** *e*P		**Pn**	**22 44 09.5**	**+0.6**
YJA				*e*S	**Sn**	**22 44 42.1**	**-1.0**
PB06	**IPOC Station P**	**2.65**	**304**		**Pn**	**22 44 10.6**	**+1.0**
PB06	**IPOC Station P**	**2.65**	**304** ⇑*i*P		**Pn**	**22 44 10.7**	**+1.0**
PB06				IAML		22 44 46.5	
	comp=N,2µm,0.3s						
PB06	**IPOC Station P**	**2.65**	**304**	*e*P	**Pn**	**22 44 10.8**	**+1.0**
PB06				*e*S	**Sn**	**22 44 44.2**	**-0.2**
PB06				IAML		22 44 47.1	
	comp=Z,1µm,0.2s						
PB14	**IPOC Station P**	**2.95**	**262**		**Pn**	**22 44 13.6**	**+0.2**
PB14	**IPOC Station P**	**2.95**	**262** ⇑*i*P		**Pn**	**22 44 13.8**	**+0.4**
PB14				IAML		22 44 54.6	
	comp=E,325nm,0.4s						
PB14	**IPOC Station P**	**2.95**	**262** *e*P		**Pn**	**22 44 13.8**	**+0.4**
PB14				*e*S	**Sn**	**22 44 50.2**	**-0.8**
PB14				IAML		22 44 52.2	
	comp=Z,257nm,0.2s						
AHML	**Horco Molle**	**3.06**	**147** *e*P		Pn	22 44 08.0	-6.4
PB09	**IPOC Station P**	**3.06**	**322**		**Pn**	**22 44 15.8**	**+1.2**
PB09	**IPOC Station P**	**3.06**	**322** ⇑*i*P		**Pn**	**22 44 15.8**	**+1.2**
PB09				IAML		22 44 54.9	
	comp=N,545nm,0.6s						
PB09	**IPOC Station P**	**3.06**	**322** *e*P		**Pn**	**22 44 16.2**	**+1.6**
PB09				*e*S	**Sn**	**22 44 54.2**	**+0.9**
PB09				IAML		22 44 59.5	
	comp=Z,419nm,0.4s						
PB05	**IPOC Station P**	**3.07**	**296**		**Pn**	**22 44 15.1**	**+0.4**
PB05	**IPOC Station P**	**3.07**	**296** ⇑*i*P		**Pn**	**22 44 15.2**	**+0.4**
PB05				IAML		22 44 55.7	
	comp=N,736nm,0.3s						
PB05	**IPOC Station P**	**3.07**	**296** *e*P		**Pn**	**22 44 15.1**	**+0.4**
PB05				*e*S	**Sn**	**22 44 53.1**	**-0.3**
PB05				IAML		22 44 55.1	
	comp=Z,468nm,0.3s						
AC02	**Maricunga**	**3.13**	**213**		**Pn**	**22 44 16.5**	**+0.8**
AC02	**Maricunga**	**3.13**	**213** ⇑*i*P		**Pn**	**22 44 16.6**	**+0.8**
AC02	**Maricunga**	**3.13**	**213** *e*P		**Pn**	**22 44 16.6**	**+0.8**
AC02				*e*S	**Sn**	**22 44 54.7**	**-0.7**
PB03	**IPOC Station P**	**3.19**	**312**		**Pn**	**22 44 16.6**	**+0.3**
PB03	**IPOC Station P**	**3.19**	**312** ⇑*i*P		**Pn**	**22 44 16.8**	**+0.6**
PB03	**IPOC Station P**	**3.19**	**312** *e*P		**Pn**	**22 44 16.8**	**+0.6**
PB03				*e*S	**Sn**	**22 44 55.6**	**-0.6**
PB03				IAML		22 44 57.9	
	comp=Z,1µm,0.1s						
PB07	**IPOC Station P**	**3.51**	**315**		**Pn**	**22 44 20.3**	**+0.2**
PB07	**IPOC Station P**	**3.51**	**315** ⇑*i*P		**Pn**	**22 44 20.5**	**+0.4**
PB07	**IPOC Station P**	**3.51**	**315** *e*P		**Pn**	**22 44 20.5**	**+0.4**
PB07				*e*S	**Sn**	**22 45 02.1**	**-1.1**
PB07				IAML		22 45 03.5	
	comp=Z,568nm,0.2s						
AC01	**Pan de Azucar**	**3.62**	**237**		**Pn**	**22 44 20.7**	**-0.6**
AC01	**Pan de Azucar**	**3.62**	**237** ⇑*i*P		**Pn**	**22 44 20.8**	**-0.6**
AC01	**Pan de Azucar**	**3.62**	**237** *e*P		**Pn**	**22 44 20.9**	**-0.5**
AC01				*e*S	**Sn**	**22 45 03.8**	**-1.8**
AC01				IAML		22 45 07.2	
	comp=Z,226nm,0.4s						
PB01	**IPOC Station P**	**3.80**	**326**		**Pn**	**22 44 23.5**	**-0.3**
PB01	**IPOC Station P**	**3.80**	**326** ⇑*i*P		**Pn**	**22 44 23.7**	**-0.1**
PB01	**IPOC Station P**	**3.80**	**326** *e*P		**Pn**	**22 44 23.7**	**-0.1**
PB01				*e*S	**Sn**	**22 45 09.3**	**-0.4**
PB01				IAML		22 45 13.6	
	comp=Z,246nm,0.4s		

CPUP	**Villa Florida**	**9.18**	**105**	P		**Pn**	**22 45 31.9**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=156,slow=9.3,SNR=3.4							
CPUP	**Villa Florida**	**9.18**	**105**			**Pn**	**22 45 32.9**	**-0.8**
CPUP	**Villa Florida**	**9.18**	**105**	*e*P		**Pn**	**22 45 35.1**	**+1.3**
MURT	**Porto Murtinho**	**9.20**	**76**	*e*P		**Pn**	**22 45 33.4**	**-0.6**
SIV	**San Ignacio**	**10.01**	**36**	S		Sn	22 47 21.2	-15
	baz=276,slow=9.2							
BDQN	**Bodoquena, MS**	**10.38**	**71**	*e*P		**Pn**	**22 45 47.1**	**-2.4**
PSAL	**Palomas, Salto**	**10.91**	**131**	*e*P		**Pn**	**22 45 55.3**	**-0.9**
BO02	**Sierra Bellavi**	**10.98**	**196**	Pn		**Pn**	**22 45 56.0**	**-0.6**
CPSB	**Cacapava Do Su**	**13.69**	**120**	*e*P		**P**	**22 46 34.0**	**-0.5**
PTGB	**Pitanga**	**13.79**	**95**	*e*P		**P**	**22 46 34.2**	**-1.5**
ITAB	**Concordia**	**13.91**	**106**	Pn		**Pn**	**22 46 32.9**	**-1.6**
ITAB	**Concordia**	**13.91**	**106**	*e*P		**Pn**	**22 46 35.0**	**+0.5**
PLTB	**Pedras Altas**	**14.16**	**125**	Pn		**Pn**	**22 46 35.3**	**-2.3**
TRQA	**Tornquist**	**14.49**	**163**	Pn		**Pn**	**22 46 39.9**	**-1.7**
PDRB	**Porto dos Gac**	**16.01**	**40**	*e*P		**P**	**22 46 58.8**	**-1.5**
FRTB	**Fartura**	**16.17**	**90**	*e*P		**P**	**22 47 01.6**	**-0.5**
ITRB	**Iturama**	**16.26**	**77**	*e*P		**P**	**22 47 02.4**	**-0.6**
PLCA	**Paso Flores**	**16.70**	**189**	P		**Pn**	**22 47 09.2**	**+0.7**
	comp=Z,2.6nm,0.9s,baz=348,slow=12,SNR=3.1							
PLCA	**Paso Flores**	**16.70**	**189**			**P**	**22 47 07.8**	**0.0**
PLCA				IAmb		IAmb	22 47 18.0	
	comp=Z,3.5nm,0.8s							
PLCA	**Paso Flores**	**16.70**	**189**	*e*P		**Pn**	**22 47 08.3**	**-0.3**
ARAG	**Araguaiana, MT**	**16.75**	**62**	*e*P		**P**	**22 47 07.5**	**-0.9**
CLDB	**Colider**	**17.14**	**41**	*e*P		**P**	**22 47 11.7**	**-1.1**
VAO	**Valinhos**	**18.59**	**90**	P		**P**	**22 47 26.4**	**-2.2**
VAO	**Valinhos**	**18.59**	**90**	*e*P		**P**	**22 47 27.4**	**-1.1**
IPMB	**Ipameri, GO**	**18.77**	**74**	*e*P		**P**	**22 47 30.0**	**-0.5**
LL02	**Futaleuf**	**19.30**	**190**	P		**P**	**22 47 37.2**	**+1.2**
LL02				IAmb		IAmb	22 47 40.8	
	comp=Z,28nm,0.8s							
SNDB	**Serra Nova Dou**	**19.39**	**54**	*e*P		**P**	**22 47 36.0**	**-1.2**
PARB	**Paraibuna**	**19.77**	**92**	*e*P		**P**	**22 47 41.9**	**+0.6**
BDFB	**Brasilia**	**19.94**	**68**	P		**P**	**22 47 41.7**	**-1.5**
	comp=Z,16nm,0.8s,baz=308,slow=5.6							
BDFB	**Brasilia**	**19.94**	**68**	P			**22 47 42.0**	**-1.2**
BDFB				IAmb		IAmb	22 47 43.7	
	comp=Z,25nm,1.0s							
PMNB	**Patos De Minas**	**20.14**	**78**	*e*P		**P**	**22 47 44.2**	**-1.1**
NPGB	**Novo Progresso**	**20.51**	**36**	*e*P		**P**	**22 47 47.7**	**-1.5**
BSCB	**Bom Sucesso**	**20.95**	**86**	*e*P		**P**	**22 47 53.4**	**-0.6**
ITTB	**Itaituba**	**22.62**	**31**	*e*P		**P**	**22 48 09.0**	**-1.6**
JANB	**Januaria**	**23.38**	**71**	*e*P		**P**	**22 48 16.1**	**-1.4**
SDBA	**SAO DESIDERIO**	**24.17**	**65**	*e*P		**P**	**22 48 23.3**	**-1.4**
SMTB	**Santa Maria do**	**24.17**	**54**	*e*P		**P**	**22 48 24.1**	**-0.6**
SNAA	**Sanae**	**59.20**	**161**	P		**P**	**22 53 07.5**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=275,slow=9.6,SNR=15							
	comp=Z,1.1nm,0.6s							
SNAA	**Sanae**	**59.20**	**161**	P		**P**	**22 53 07.0**	**+0.5**
QSPA	**South Pole Qui**	**65.98**	**180**	P		**P**	**22 53 55.6**	**+4.0**
	comp=Z,2.3nm,0.6s,baz=167,slow=2.8,SNR=9.0							
	comp=Z,2.3nm,0.6s							
QSPA	**South Pole Qui**	**65.98**	**180**	P		**P**	**22 53 55.6**	**+4.0**
QSPA				IAmb		IAmb	22 53 57.4	
	comp=Z,2.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.82**	**69**	P		**P**	**22 54 57.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=246,slow=5.0,SNR=5.8							
	comp=Z,0.4nm,0.6s							
PDAR	**Pinedale Array**	**77.24**	**329**	P		**P**	**22 55 00.9**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=150,slow=7.4,SNR=3.6							
	comp=Z,0.3nm,0.6s							
NVAR	**Mina Array Bea**	**78.60**	**321**	P		**P**	**22 55 09.0**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=135,slow=6.3,SNR=1.5							
	comp=Z,0.3nm,0.3s							
BOSA	**Boshof**	**80.80**	**117**	P		**P**	**22 55 19.4**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=129,slow=19,SNR=2.8							
	comp=Z,3.1nm,1.0s							
BOSA	**Boshof**	**80.80**	**117**	P		**P**	**22 55 19.0**	**+0.1**
BOSA				IAmb		IAmb	22 55 23.1	
	comp=Z,12nm,1.4s							
YKA	**Yellowknife Ar**	**94.27**	**340**	P		**P**	**22 56 24.0**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=162,slow=8.8,SNR=2.6							
	comp=Z,0.6nm,0.6s							
ASAR	**Alice Springs**	**128.18**	**205**	PKP		**PKiKP**	**23 02 11.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=130,slow=1.9,SNR=10							
ASAR	**Alice Springs**	**128.18**	**205**			**PKiKP**	**23 02 10.9**	**0.0**
WRA	**Warramunga Arr**	**131.34**	**207**	PKP		**PKiKP**	**23 02 18.1**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=168,slow=1.7,SNR=9.4							
WB0	**Warramunga Arr**	**131.48**	**208**	PKPdf		**PKiKP**	**23 02 17.0**	**-0.5**
ZALV	**Zalesovo Beam**	**143.68**	**28**	PKP		**PKPdf**	**23 02 37.1**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=311,slow=4.0,SNR=7.0							
ZALV	**Zalesovo Beam**	**143.68**	**28**			**PKPdf**	**23 02 37.4**	**-0.4**
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc		**PKPbc**	**23 02 45.3**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=300,slow=3.6,SNR=15							
MKAR	**Makanchi Array**	**146.81**	**40**			**PKPdf**	**23 02 44.0**	**+0.5**

SKHL ***26*** *22:45:32.8±0.4, 43.°00N×145.°40E, h40km±5km, mb4.2/3*
JMA ***26*** *22:45:32.2±0.1, 43.°0N±0.°5×145.°4E±0.°5, h46km, MV3.3/35, OFF NEMURO PENINSULA*
JMA Felt I J1 at OFF NEMURO PENINSULA .

ISC 26 22:45:33.1±1.6, **43.°00N**±0.°08×**145.°38E**±0.°05, **h44**km, **n14**, σ1§**32**/24, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.18**	**297**	S	**Sn**	**22 45 45.9**	**0.0**
AKK	**Akkeshi**	**0.39**	**272**	*e*P	**Pn**	**22 45 42.3**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.45**	**35**	*i* P	**Pn**	**22 45 42.6**	**-0.8**
NMR				*e*S	**Sn**	**22 45 49.6**	**-1.0**
NEM2	**Nemuro 2**	**0.45**	**37**	*i* P	**Pn**	**22 45 42.7**	**-0.8**
NEM2				S	**Sn**	**22 45 49.6**	**-1.1**
JAK	**Akkeshi**	**0.50**	**269**	*i* P	**Pn**	**22 45 43.6**	**-0.4**
JAK				S	**Sn**	**22 45 52.0**	**+0.3**
GLVR	**Golovnino**	**0.74**	**8**	*e*P	**Pn**	**22 45 46.8**	**-0.4**
GLVR				AMB	AMB	22 45 47.2	
	210nm,0.2s						
GLVR				*e*S	**Sn**	**22 45 57.3**	**-0.1**
GLVR				A	A	22 45 57.8	
	430nm,0.3s						
GLVR				A	A	22 45 57.8	
	710nm,0.3s						
JNK	**Nakash**	**0.75**	**321**	*i* P	**Pn**	**22 45 47.1**	**-0.3**
JNK				S	**Sn**	**22 45 57.5**	**-0.2**
JNSB	**Nemuroshibetsu**	**0.82**	**341**	P	**Pn**	**22 45 48.7**	**-0.2**
JNSB				S	**Sn**	**22 45 59.7**	**+0.5**
JRA	**Rausu**	**0.95**	**349**	*i* P	**Pn**	**22 45 50.0**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**1.09**	**19**	*e*P	**Pn**	**22 45 51.2**	**-0.8**
YUK				AMB	AMB	22 45 51.6	
	250nm,0.6s						
YUK				*i* S	**Sn**	**22 46 05.3**	**-0.6**
YUK				A	A	22 46 06.6	
	280nm,0.2s						
YUK				A	A	22 46 06.6	
	310nm,0.2s						
JOB	**Onbets**	**1.14**	**265**	*i* P	**Pn**	**22 45 52.1**	**-0.5**
JOB				S	**Sn**	**22 46 06.9**	**-0.1**
JAR	**Ashorobuto**	**1.21**	**285**	*i* P	**Pn**	**22 45 53.6**	**0.0**
JAR				S	**Sn**	**22 46 09.6**	**+0.7**
SHO	**Shikotan**	**1.37**	**50**	*e*P	**Pn**	**22 45 54.9**	**-0.9**
SHO				AMB	AMB	22 45 56.9	
	30nm,0.3s						
SHO				*i* S	**Sn**	**22 46 18.1**	**+5.4**
SHO				A	A	22 46 19.6	
	110nm,0.3s						
SHO				A	A	22 46 19.6	
	160nm,0.3s						
JTKR	**Abashiri--Toko**	**1.44**	**313**	P	**Pn**	**22 45 57.4**	**+0.6**

PRU ***26*** *22:46:49.3, 40.°74N×20.°00E, h10km*
IDC ***26*** *22:46:56.0±1.8, 41.°58N×19.°51E, h0km, mb3.5/5, mbtmp3.5/8, ML2.9/2, MS2.9/3, Error ellipse: s-maj=24.8km s-min=19.7km az=12.0*
THE ***26*** *22:46:57.7, 42.°N±5.°×1.°9E±.°, h10km, M3.2/17, MLh3.2/17*
SKO ***26*** *22:46:57.8, 41.°51N×19.°41E, h9km, ML3.1*
TIR ***26*** *22:46:58.8, 41.°58N×19.°52E, h34km±2km, Ml3.7/5*
BEO ***26*** *22:46:58.6±0.5, 41.°47N×19.°53E, h10km±2km, ML3.2/6*
PDG ***26*** *22:47:00.8±0.3, 41.°63N×19.°55E, h11km±1km, MD3.3/6, ML3.2/13, Error ellipse: s-maj=1.0km s-min=1.3km az=0.0*
RHSSO ***26*** *22:47:01.7±0.9, 41.°70N×19.°57E, h7km±4km, ML3.4/5*

ISC 26 22:46:58.5±0.9, **41.°54N**±0.°02×**19.°53E**±0.°02, **h14**km±7km, **n144**, σ1§**36**/211, **mb3.5**/4, **29C-23D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**127**	§Pg	**Pg**	**22 47 04.4**	**-0.7**
TIR				AML	AML	22 47 09.6	
	41nm,0.3s						
TIR				Sg	**Sg**	**22 47 09.7**	**+0.2**
TIR	**Tirane**	**0.32**	**127**	*i* Pg	**Pg**	**22 47 04.3**	**-0.7**
TIR				*i* Sg	**Sg**	**22 47 10.1**	**+0.7**
ULC	**Ulcinj**	**0.47**	**334**	⇑*i* Pg	**Pg**	**22 47 07.3**	**-0.6**
ULC				*i* Sg	**Sg**	**22 47 13.7**	**-0.6**
SDA	**Shkodra**	**0.51**	**358**	§Pg	**Pg**	**22 47 08.5**	**-0.1**
SDA				Sg	**Sb**	**22 47 16.9**	**+0.3**
DRME	**Dracevica, Mon**	**0.70**	**339**	*e*Pg	**Pg**	**22 47 11.5**	**-0.6**
DRME	**Dracevica, Mon**	**0.70**	**339**	§*i*Pg	**Pg**	**22 47 11.3**	**-0.8**
DRME				*i* Sg	**Sg**	**22 47 21.3**	**+0.1**
PHP	**Peshkopia**	**0.70**	**78**	§Pg	**Pg**	**22 47 11.8**	**-0.4**
PHP				Sg	**Sb**	**22 47 22.4**	**+0.4**
PHP				AML	AML	22 47 24.4	
	5.4nm,0.2s						
PHP	**Peshkopia**	**0.70**	**78**	P	**Pg**	**22 47 11.2**	**-0.9**
PHP				S	**Sb**	**22 47 22.5**	**+0.4**
BUM	**Brajici-Budva**	**0.90**	**328**	⇑*i* Pg	**Pg**	**22 47 15.3**	**-0.5**
BUM				*i* Sg	**Sb**	**22 47 28.5**	**+0.8**
PDG	**Podgorica**	**0.91**	**347**	⇑Pn	**Pg**	**22 47 15.7**	**-0.5**
PDG				Sn	**Sn**	**22 47 29.3**	**-0.6**
PDG	**Podgorica**	**0.91**	**347**	*e*Pg	**Pg**	**22 47 15.6**	**-0.5**
PDG				*e*Sg	**Sn**	**22 47 31.7**	**+1.8**
PDG	**Podgorica**	**0.91**	**347**	§*i*Pg	**Pg**	**22 47 15.3**	**-0.9**
PDG				*i* Sg	**Sb**	**22 47 28.3**	**+0.1**
OHR	**Ohrid**	**1.05**	**114**	*i* Pg	**Pb**	**22 47 18.6**	**+0.1**
OHR				*i* Sg	**Sn**	**22 47 35.4**	**+2.0**
OHR				*e*Lg	Lg	22 47 38.5	
	comp=N,574nm,0.6s						
OHR				*e*Lg	Lg	22 47 38.7	
	comp=E,631nm,0.8s						
VLO	**Vlora**	**1.07**	**181**	⇑Pg	**Pn**	**22 47 19.6**	**+0.5**
VLO				Sg	**Sn**	**22 47 34.4**	**+0.7**
VLO				AML	AML	22 47 39.6	
	comp=E,7.9nm,0.3s						
VLO	**Vlora**	**1.07**	**181**	P	**Pn**	**22 47 19.6**	**+0.5**
VLO				S	**Sn**	**22 47 37.3**	**+3.6**
PVY	**Plav**	**1.10**	**17**	*e*Pg	**Pb**	**22 47 18.8**	**-0.7**
PVY	**Plav**	**1.10**	**17**	§*i*Pg	**Pb**	**22 47 18.6**	**-0.9**
PVY				*i* Sg	**Sn**	**22 47 34.6**	**-0.2**
CEME	**Cevo**	**1.10**	**336**	§*i*Pg	**Pg**	**22 47 19.9**	**+0.1**
CEME				*i* Sg	**Sn**	**22 47 35.1**	**+0.3**
HCY	**Herceg Novi**	**1.19**	**320**	⇑*i*Pg	**Pn**	**22 47 21.1**	**+0.3**
HCY				*i* Sg	**Sn**	**22 47 38.2**	**+1.4**
NKME	**Niksic**	**1.30**	**341**	§*i*Pg	**Pn**	**22 47 22.8**	**+0.5**
NKME				*i* Sg	**Sg**	**22 47 40.1**	**+3.3**
KOME	**Kolasin**	**1.31**	**360**	*e*Pg	**Pb**	**22 47 23.1**	**+0.1**
KOME	**Kolasin**	**1.31**	**360**	⇑*i*Pg	**Pb**	**22 47 22.4**	**-0.1**
KOME				*i* Sg	**Sg**	**22 47 41.2**	**+0.4**
KBN	**Korca**	**1.32**	**133**	P	**Pb**	**22 47 23.3**	**+0.2**
KBN				Sg	**Sg**	**22 47 41.7**	**+0.6**
KBN	**Korca**	**1.32**	**133**	P	**Pg**	**22 47 24.1**	**+0.2**
KBN				S	**Sg**	**22 47 44.4**	**+3.3**
BEY	**Berane**	**1.36**	**11**	*e*Pg	**Pn**	**22 47 23.6**	**+0.4**
IVA	**Berane**	**1.36**	**11**	§*i*Pg	**Pn**	**22 47 22.9**	**-0.3**
IVA				*i* Sg	**Sg**	**22 47 42.8**	**+0.4**
TREB	**Trebinje**	**1.47**	**324**	*e*Pg	**Pb**	**22 47 25.8**	**+0.2**
TREB				*e*Sg	**Sb**	**22 47 45.0**	**+0.9**
TREB	**Trebinje**	**1.47**	**324**	*e*Pg	**Pb**	**22 47 26.3**	**+0.7**
TREB				*e*Sg	**Sg**	**22 47 47.5**	**+1.7**
SKO	**Skopje**	**1.50**	**73**	*i* Pg	**Pb**	**22 47 26.5**	**+0.4**
BRY	**Bratogost**	**1.55**	**332**	§*i*Pg	**Pb**	**22 47 27.1**	**+0.1**
BRY				*i* Sg	**Sg**	**22 47 47.1**	**+0.8**
NEST	**Nestorio**	**1.61**	**134**	§Pn	**Pb**	**22 47 27.7**	**-0.3**
NEST				Sn	**Sg**	**22 47 50.9**	**+0.6**
NEST				AML	AML	22 47 53.8	
	comp=E,2.2nm,0.5s						
NEST	**Nestorio**	**1.61**	**134**	P	**Pb**	**22 47 27.7**	**-0.3**
NEST				S	**Sg**	**22 47 52.0**	**+1.7**
UPM	**Unac-Piva**	**1.73**	**345**	§*i*Pn	**Pb**	**22 47 30.2**	**+0.1**
UPM				*i* Sn	**Sg**	**22 47 53.8**	**-0.3**
SJES	**Sjenica**	**1.75**	**11**	*e*Pg	**Pb**	**22 47 30.7**	**+0.2**
KLINJ	**Klinje**	**1.77**	**337**	*e*Pn	**Pb**	**22 47 30.7**	**-0.2**
KLINJ				*e*Sn	**Sn**	**22 47 52.2**	**+0.9**
PLE	**Pljevlja**	**1.79**	**357**	*e*Pn	**Pb**	**22 47 31.7**	**+0.5**
PLE	**Pljevlja**	**1.79**	**357**	§*i*Pn	**Pb**	**22 47 31.4**	**+0.2**
PLE				*i* Sn	**Sg**	**22 47 55.5**	**-0.7**
PENT	**Pentalofos**	**1.81**	**137**	P	**Pn**	**22 47 30.6**	**+1.1**
PENT				S	**Sb**	**22 47 55.3**	**+1.1**
STON	**Ston**	**1.90**	**315**	*e*Pn	**Pb**	**22 47 33.5**	**+0.5**
NOCI	**Noci**	**2.00**	**249**	Pn	**Pn**	**22 47 30.2**	**-1.8**
NOCI				Sn	**Sb**	**22 47 59.6**	**0.0**
NOCI				AML	AML	22 48 07.6	
	comp=E,1.4nm,0.4s						
SELS	**Selova**	**2.05**	**35**	*e*Pn	**Pn**	**22 47 33.8**	**+1.2**
SELS				*e*Sn	**Sb**	**22 48 00.6**	**-0.4**
RUDO	**Rudo**	**2.08**	**357**	*e*Pn	**Pn**	**22 47 34.7**	**+1.7**
RUDO				*e*Sn	**Sn**	**22 47 58.9**	**+0.1**
RUDO	**Rudo**	**2.08**	**357**	*e*Pn	**Pb**	**22 47 35.9**	**-0.2**
IVAS	**Ivanjica**	**2.09**	**13**	*e*Pn	**Pn**	**22 47 34.7**	**+1.5**
IGT	**Igoumenitsa**	**2.10**	**163**	⇑Pn	**Pn**	**22 47 33.2**	**-0.1**
IGT				Sn	**Sn**	**22 47 58.4**	**-0.7**
IGT	**Igoumenitsa**	**2.10**	**163**	P	**Pn**	**22 47 32.9**	**-0.3**
IGT				S	**Sb**	**22 48 03.5**	**+1.3**
KZN	**Kozani**	**2.10**	**125**	P	**Pn**	**22 47 34.6**	**+1.2**
KZN				S	**Sb**	**22 48 01.8**	**-0.5**
JAN	**Janina**	**2.13**	**151**	P	**Pn**	**22 47 35.5**	**+1.8**
JAN				S	**Sb**	**22 48 03.0**	**-0.3**
GOCS	**Kraljevo Serbi**	**2.25**	**26**	*e*Pn	**Pn**	**22 47 36.5**	**+1.0**
GOCS				*e*Sn	**Sb**	**22 48 06.5**	**-0.4**
VAY	**Valandovo**	**2.30**	**94**	*i* Pn	**Pn**	**22 47 37.3**	**+1.3**
VAY				*i* Sn	**Sn**	**22 48 05.2**	**+1.1**
VAY				*e*Lg	Lg	22 48 05.8	
	comp=N,67nm,0.8s						
VAY				*e*Lg	Lg	22 48 08.9	
	comp=E,44nm,0.5s						
BBLS	**Lazi&#263i**	**2.33**	**358**	*e*Pn	**Pb**	**22 47 39.0**	**-1.3**
PRMD	**Pramanda**	**2.34**	**149**	P	**Pn**	**22 47 38.1**	**+1.5**
PRMD				S	**Sb**	**22 48 10.1**	**+0.9**
BOSS	**Bosilegrad**	**2.40**	**66**	*e*Pn	**Pn**	**22 47 38.0**	**+0.6**
BOSS				*e*Sn	**Sn**	**22 48 07.5**	**+0.9**
GRUS	**Gruza**	**2.51**	**20**	*e*Pn	**Pn**	**22 47 40.2**	**+1.3**
KNT	**Kendrikon**	**2.57**	**97**	P	**Pn**	**22 47 40.4**	**+0.7**
KNT				S	**Sb**	**22 48 14.0**	**-1.7**
KNT	**Kendrikon**	**2.57**	**97**	*i* Pn	**Pn**	**22 47 40.5**	**+0.8**
BOVS	**Bovan**	**2.64**	**37**	⇑P	**Pn**	**22 47 41.8**	**+1.1**
BOVS				⇑S	**Sn**	**22 48 11.1**	**-1.5**
BOVS	**Bovan**	**2.64**	**37**	*e*Pn	**Pn**	**22 47 41.3**	**+0.6**
BOVS				*e*Sn	**Sn**	**22 48 13.5**	**+0.9**
TRAN	**Tran**	**2.66**	**60**	P	**Pn**	**22 47 42.3**	**+1.3**
KKB	**Krupnik**	**2.71**	**82**	P	**Pn**	**22 47 42.9**	**+1.2**
KKB				S	**Sn**	**22 48 15.6**	**+1.2**
KKB	**Krupnik**	**2.71**	**82**	P	**Pn**	**22 47 42.8**	**+1.1**
KKB	**Krupnik**	**2.71**	**82**	*i* Pn	**Pn**	**22 47 43.1**	**+1.4**
THL	**Klokotos Trika**	**2.73**	**135**	P	**Pn**	**22 47 42.3**	**+0.3**
THE	**Thessaloniki**	**2.75**	**108**	P	**Pn**	**22 47 42.4**	**+0.2**
THE	**Thessaloniki**	**2.75**	**108**	*i* Pn	**Pn**	**22 47 42.4**	**+0.2**
TYRN	**Tyrnavos**	**2.75**	**131**	P	**Pn**	**22 47 43.8**	**+1.6**
TRUS	**Trudelj**	**2.76**	**13**	*e*Pn	**Pn**	**22 47 45.1**	**+2.8**
SGRT	**San Giovanni R**	**2.84**	**276**	Pn	**Pn**	**22 47 42.4**	**-1.1**
TSLK	**Tsoukalades, L**	**2.84**	**162**	P	**Pn**	**22 47 42.6**	**-0.9**
HORT	**Hortiatis**	**2.86**	**108**	P	**Pn**	**22 47 43.7**	**-0.1**
LKD2	**Lefkada island**	**2.88**	**162**	P	**Pn**	**22 47 43.0**	**-1.0**
ZAPS	**Zavoj**	**2.88**	**52**	*e*Pn	**Pn**	**22 47 45.3**	**+1.3**
ZAPS				*e*Sn	**Sn**	**22 48 19.6**	**+1.1**
AMPL	**Ampelaki**	**2.92**	**153**	P	**Pn**	**22 47 44.5**	**+0.1**
VTS	**Vitosha**	**2.96**	**67**	P	**Pn**	**22 47 46.3**	**+1.1**
VTS	**Vitosha**	**2.96**	**67**	P	**Pn**	**22 47 46.1**	**+0.8**
VTS	**Vitosha**	**2.96**	**67**	*e*Pn	**Pn**	**22 47 46.0**	**+0.8**
VTS				*e*Sn	**Sn**	**22 48 21.5**	**+0.8**
TEKS	**Tekeris**	**3.01**	**0**	*e*Pn	**Pn**	**22 47 47.4**	**+1.6**
ZAGS	**Zajecar**	**3.02**	**40**	*e*Pn	**Pn**	**22 47 48.1**	**+2.1**
ZAGS				*e*Sn	**Sn**	**22 48 23.1**	**+1.9**
PLNA	**Plana**	**3.05**	**71**	P	**Pn**	**22 47 48.3**	**+1.8**
SRS	**Serrai**	**3.09**	**96**	*i* Pn	**Pn**	**22 47 47.7**	**+0.8**
BLKB	**Belogradchik**	**3.12**	**47**	⇑P	**Pn**	**22 47 49.0**	**+1.6**
BLKB				§S	**Sn**	**22 48 23.8**	**-0.7**
BLKB	**Belogradchik**	**3.12**	**47**	*e*Pn	**Pn**	**22 47 49.3**	**+2.0**
BLKB				*e*Sn	**Sn**	**22 48 25.4**	**+0.9**
BORS2	**Bor- Borsko je**	**3.14**	**35**	*e*Pn	**Pn**	**22 47 47.8**	**+0.2**
MMB	**Musomishta**	**3.17**	**88**	P	**Pn**	**22 47 49.7**	**+1.7**
MMB	**Musomishta**	**3.17**	**88**	*i* Pn	**Pn**	**22 47 49.6**	**+1.7**
KUBS	**Kucevo**	**3.28**	**28**	*e*Pn	**Pn**	**22 47 48.9**	**-0.5**
VALD	**Valchedram**	**3.60**	**52**	P	**Pn**	**22 47 55.2**	**+1.4**
EFP	**Efpalio**	**3.60**	**149**	P	**Pn**	**22 47 55.3**	**+1.4**
MPEP	**Malo Peshtene**	**3.61**	**58**	P	**Pn**	**22 47 56.4**	**+2.4**
MDVR	**Moldovita**	**3.62**	**26**	⇑Pn	**Pn**	**22 47 54.8**	**+0.6**
MDVR				§S	**Sn**	**22 48 36.3**	**-0.3**
MDVR	**Moldovita**	**3.62**	**26**	*e*Pn	**Pn**	**22 47 54.5**	**+0.4**
FRGS	**Fruska Gora**	**3.62**	**3**	*e*Pn	**Pn**	**22 47 54.0**	**-0.2**
BLY	**Banja Luka**	**3.64**	**333**	*e*Pn	**Pn**	**22 47 56.2**	**+1.8**
BLY				*e*Sn	**Sn**	**22 48 37.7**	**+0.6**
VRSS	**Vrsac**	**3.81**	**20**	*e*Pn	**Pn**	**22 47 57.9**	**+1.1**
PLD	**Plovdiv**	**3.95**	**79**	*e*Pn	**Pn**	**22 48 00.1**	**+1.5**
PLD				*e*Sn	**Sn**	**22 48 45.1**	**+0.3**
HERR	**Herculane**	**3.95**	**31**	⇑P	**Pn**	**22 47 59.6**	**+0.9**
HERR				⇑S	**Sn**	**22 48 43.9**	**-0.9**
BZS	**Buzias**	**4.35**	**20**	⇑P	**Pn**	**22 48 05.3**	**+1.1**
BZS				⇑S	**Sn**	**22 48 53.3**	**-1.3**
GZR	**Gura Zlata**	**4.52**	**30**	§P	**Pn**	**22 48 08.1**	**+1.5**
GZR				⇑S	**Sn**	**22 48 58.3**	**-0.7**
SURR	**Surduc**	**4.62**	**23**	⇑P	**Pn**	**22 48 08.9**	**+1.1**
SURR				§S	**Sn**	**22 48 60.0**	**-1.2**
AQU	**L'Aquila**	**4.64**	**282**	*e*Pn	**Pn**	**22 48 12.3**	**+4.1**
AQU				*e*Sn	**Sn**	**22 49 04.2**	**+2.3**
MORH	**Mrgy, Hungar**	**4.72**	**353**	*e*Pn	**Pn**	**22 48 10.3**	**+1.1**
MORH				*e*Sn	**Sn**	**22 49 03.0**	**-0.7**
MORH	**Mrgy, Hungar**	**4.72**	**353**	⇑P	**Pn**	**22 48 10.6**	**+1.4**
MORH	**Mrgy, Hungar**	**4.72**	**353**	*e*Pn	**Pn**	**22 48 11.2**	**+2.0**
ELND	**Elena**	**4.91**	**71**	§P	**Pn**	**22 48 13.7**	**+1.7**
SIRR	**Siria**	**4.97**	**17**	⇑P	**Pn**	**22 48 13.6**	**+0.9**
SIRR				§S	**Sn**	**22 49 08.6**	**-1.4**
SIRR	**Siria**	**4.97**	**17**	*e*Pn	**Pn**	**22 48 13.8**	**+1.1**
SIRR				*e*Sn	**Sn**	**22 49 10.6**	**+0.6**
LOT	**Lotru**	**4.98**	**37**	§P	**Pn**	**22 48 14.0**	**+1.1**
LOT				§S	**Sn**	**22 49 09.9**	**-0.4**
HUMR	**Humele**	**4.99**	**51**	§P	**Pn**	**22 48 14.1**	**+1.1**
HUMR				§S	**Sn**	**22 49 10.4**	**-0.1**
BOJS	**Bojanci**	**5.04**	**323**	*e*Pn	**Pn**	**22 48 14.8**	**+1.2**
BEHE	**Becsehely**	**5.31**	**339**	*e*Pn	**Pn**	**22 48 19.7**	**+2.3**
BEHE				*e*Sn	**Sn**	**22 49 18.1**	**-0.3**
ARR	**Arges**	**5.33**	**42**	⇑P	**Pn**	**22 48 19.6**	**+1.8**
ARR				⇑S	**Sn**	**22 49 19.5**	**+0.4**
CEY	**Cerknica**	**5.60**	**320**	*e*Pn	**Pn**	**22 48 21.1**	**-0.2**
VOIR		**5.60**	**44**	⇑P	**Pn**	**22 48 23.5**	**+2.1**
VOIR				⇑S	**Sn**	**22 49 24.6**	**-1.0**
SKDS	**Skadanscina**	**5.67**	**317**	*e*Pn	**Pn**	**22

VTS				*e*Sn		**Sn**	**22 52 00.6**	**+0.7**
TEKS	**Tekeris**	**3.04**	**0**	*e*Pn		**Pn**	**22 51 25.2**	**+0.5**
ZAGS	**Zajecar**	**3.06**	**40**	*e*Pn		**Pn**	**22 51 25.8**	**+0.9**
ZAGS				*e*Sn		**Sn**	**22 52 02.2**	**+0.9**
BLKB	**Belogradchik**	**3.15**	**47**	*e*Pn		**Pn**	**22 51 28.0**	**+1.7**
KUBS	**Kucevo**	**3.31**	**28**	*e*Sn		**Sn**	**22 52 06.4**	**-1.2**
PLD	**Plovdiv**	**3.97**	**79**	*e*Pn		**Pn**	**22 51 38.7**	**+1.3**
SIRR	**Siria**	**5.00**	**17**	*e*Pn		**Pn**	**22 51 53.2**	**+1.5**
SIRR				*e*Sn		**Sn**	**22 52 46.9**	**-2.5**
BOJS	**Bojanci**	**5.05**	**324**	*e*Pn		**Pn**	**22 51 52.9**	**+0.5**
CEY	**Cerknica**	**5.61**	**321**	*e*Pn		**Pn**	**22 52 00.7**	**+0.7**
MLR	**Muntele Rosu** 0.5nm,0.3s,baz=180,slow=11,SNR=11	**6.14**	**47**	Pn		**Pn**	**22 52 10.3**	**+2.8**
MLR				Sn		**Sn**	**22 53 22.9**	**+5.2**
FINES	**FINESS Array B** 0.2nm,0.3s,baz=230,slow=16,SNR=1.3 1.1nm,0.3s	**20.36**	**9**	P		**P**	**22 55 11.2**	**-1.7**
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=289,slow=9.0,SNR=2.4 0.4nm,0.5s	**44.11**	**50**	P		**P**	**22 58 42.4**	**-2.3**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=283,slow=8.1,SNR=4.7 0.3nm,0.5s	**44.30**	**61**	P		**P**	**22 58 45.0**	**-1.3**

IDC 26 23:24:03.9±2.1, 4°42S×152°43E, h0km, mb3.6/3, mbtmp3.6/3, MS3.1/2, Error ellipse: s-maj=148.1km s-min=28.0km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,0.4s,baz=52,slow=9.8,SNR=10 0.7nm,0.4s	**23.42**	**227**	P	P	23 29 16.4	+1.5
ASAR	**Alice Springs** 0.1nm,0.3s,baz=44,slow=8.8,SNR=2.4 0.1nm,0.3s	**26.18**	**221**	P	P	23 29 39.1	-1.3
STKA	**Stephens Creek** comp=Z,41nm,21.7s,baz=19,slow=34	**29.15**	**199**	LR	LR	23 40 23.5	
TIXI	**Tiksi** comp=Z,15nm,21.6s,baz=198,slow=32	**77.47**	**353**	LR	LR	00 05 40.1	
ILAR	**Eielson Array** 0.8nm,0.5s,baz=246,slow=5.3,SNR=8.8 0.8nm,0.5s	**81.95**	**22**	P	P	23 36 25.4	+0.2
TORD	**Torodi Ar. Bea** 0.8nm,0.8s,baz=60,slow=3.4,SNR=4.8	**149.84**	**289**	PKPbc	PKPbc	23 43 56.2	-1.0

PDG ***26*** *23:34:12.0±0.2, 43°27N×17°99E, h9km±1km, ML2.6/13, Error ellipse: s-maj=0.7km s-min=0.5km az=90.0*
RHSSO ***26*** *23:34:13.3±0.5, 43°15N×18°01E, h6km, ML2.5/3*
ISC 26 23:34:13.0±1.2, 43°18N±0°03×18°03E±0°02, h5km±10km, n25, σ1§14/49, 7C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.40**	**218**	*i* Pg	**Pg**	**23 34 20.2**	**-0.4**
STON				Sg	**Sb**	**23 34 27.0**	**-1.9**
KLINJ	**Klinje**	**0.41**	**92**	*e*Pg	**Pg**	**23 34 20.9**	**0.0**
KLINJ				*e*Sg	**Sg**	**23 34 27.5**	**+1.3**
BRY	**Bratogost**	**0.47**	**127**	⇓*i*Pg	**Pg**	**23 34 21.8**	**-0.2**
BRY				*i* Sg	**Sb**	**23 34 29.9**	**-1.3**
DBRK	**Dubrovnik**	**0.52**	**171**	*i* Pg	**Pg**	**23 34 23.0**	**0.0**
DBRK				Sg	**Sb**	**23 34 31.8**	**-0.8**
TREB	**Trebinje**	**0.52**	**153**	⇑*i*Pg	**Pg**	**23 34 22.4**	**-0.7**
TREB				*e*Sg	**Sg**	**23 34 30.4**	**+0.6**
UPM	**Unac-Piva**	**0.64**	**88**	⇓*i*Pg	**Pg**	**23 34 24.1**	**-1.2**
UPM				*i* Sg	**Sg**	**23 34 34.2**	**+0.5**
MAKA	**Makarska**	**0.75**	**278**	*i* Pg	**Pg**	**23 34 25.8**	**-1.6**
MAKA				Sg	**Sg**	**23 34 37.7**	**+0.6**
NKME	**Niksic**	**0.80**	**121**	⇑*i*Pg	**Pg**	**23 34 27.6**	**-0.7**
NKME				*i* Sg	**Sb**	**23 34 40.8**	**+0.3**
HCY	**Herceg Novi**	**0.81**	**155**	⇓*i*Pg	**Pg**	**23 34 27.7**	**-0.9**
HCY				*i* Sg	**Sb**	**23 34 41.1**	**+0.2**
CEME	**Cevo**	**0.91**	**134**	⇓*i*Pg	**Pg**	**23 34 29.5**	**-1.0**
CEME				*i* Sg	**Sb**	**23 34 44.9**	**+1.0**
PLE	**Pljevlja**	**1.00**	**81**	⇑*i*Pg	**Pg**	**23 34 30.0**	**-2.3**
PLE				*i* Sg	**Sg**	**23 34 46.7**	**+1.4**
BUM	**Brajici-Budva**	**1.09**	**144**	⇓*i*Pg	**Pg**	**23 34 32.9**	**-1.0**
BUM				*i* Sg	**Sn**	**23 34 51.1**	**+0.6**
KOME	**Kolasin**	**1.14**	**106**	⇓*i*Pg	**Pg**	**23 34 32.9**	**-2.0**
KOME				*i* Sg	**Sn**	**23 34 51.8**	**0.0**
HVAR	**Hvar**	**1.16**	**270**	Sg	**Sn**	**23 34 51.3**	**-0.8**
PDG	**Podgorica**	**1.17**	**129**	⇓*i*Pg	**Pg**	**23 34 34.2**	**-1.3**
PDG				*i* Sg	**Sn**	**23 34 53.6**	**+1.1**
DRME	**Dracevica, Mon**	**1.31**	**139**	⇑*i*Pg	**Pn**	**23 34 37.1**	**-0.9**
DRME				*i* Sg	**Sn**	**23 34 58.3**	**+2.4**
IVA	**Berane**	**1.40**	**102**	⇓*i*Pg	**Pn**	**23 34 37.7**	**-1.7**
IVA				*i* Sg	**Sg**	**23 35 00.5**	**+2.5**
KIJV	**Kijevo**	**1.44**	**305**	*e*Pn	**Pn**	**23 34 39.6**	**-0.2**
KIJV				Sn	**Sg**	**23 35 00.8**	**+1.6**
ULC	**Ulcinj**	**1.51**	**143**	⇑*i*Pn	**Pn**	**23 34 41.0**	**+0.1**
ULC				*i* Sn	**Sg**	**23 35 02.4**	**+0.8**
PVY	**Plav**	**1.53**	**112**	⇑*i*Pn	**Pn**	**23 34 39.9**	**-1.4**
PVY				*i* Sn	**Sg**	**23 35 03.7**	**+1.4**
BLY	**Banja Luka**	**1.68**	**339**	⇑*i*Pn	**Pn**	**23 34 43.5**	**+0.4**
BLY				*e*Sn	**Sn**	**23 35 05.6**	**+0.5**
ZIRJ	**Zirje**	**1.80**	**286**	*e*Pn	**Pn**	**23 34 44.5**	**-0.3**
ZIRJ				Sn	**Sb**	**23 35 08.9**	**-0.6**
MORI	**Morici**	**1.82**	**293**	*e*Pn	**Pn**	**23 34 45.2**	**+0.2**
MORI				Sn	**Sb**	**23 35 10.0**	**0.0**
DUGI	**Dugi Otok**	**2.31**	**292**	*e*Pn	**Pn**	**23 34 52.7**	**+0.9**
DUGI				Sn	**Sn**	**23 35 21.6**	**+1.1**
MORH	**Mrgy, Hungar**	**3.06**	**8**	*e*Sn	**Pn**	**23 35 02.6**	**+0.5**
MORH				*e*Sn	**Sn**	**23 35 39.8**	**+0.6**

NEIC ***26*** *23:39:06.0±1.5, 8°8S±0°1×121°54E±0°08, h115km±6km, mb4.1/11, Error ellipse: s-maj=15.1km s-min=11.3km az=176.0*
IDC ***26*** *23:39:07.5±1.7, 8°92S×121°64E, h138km±14km, mb3.4/4, mbtmp4.0/9, MS2.3/1, Error ellipse: s-maj=56.3km s-min=9.3km az=54.0*
DJA ***26*** *23:39:07.5±0.3, 9°S±3°×12°2E±°, h104km±5km, M4.3/20, mB5.1/3, mb4.5/6, MLv4.2/20, Mw(mB)4.4/3, MwMwp4.7/1, Mwp5.0/1*
ISC 26 23:39:05.9±0.7, 8°94S±0°05×121°65E±0°04, h117km±6km, n48, σ2§15/58, mb4.0/7, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.20**	**12**	P	**Pn**	**23 39 22.7**	**+0.4**
MMRI	**Maumere**	**0.66**	**62**		**Pn**	**23 39 25.1**	**+0.5**
MMRI				Sn	**Sn**	**23 39 38.3**	**-0.3**
MMRI	**Maumere**	**0.66**	**62**	P	**Pn**	**23 39 25.4**	**+0.8**
MMRI	**Maumere**	**0.66**	**62**	P	**Pn**	**23 39 25.2**	**+0.6**
MMRI				S	**Sn**	**23 39 38.8**	**+0.1**
WSI	**Waingapu**	**1.52**	**241**	P	**Pn**	**23 39 35.1**	**+1.8**
WSI				S	**Sn**	**23 39 55.9**	**+1.8**
BASI	**Baing, Sumba**	**1.65**	**220**	P	**Pn**	**23 39 36.5**	**+1.6**
BASI				S	**Sn**	**23 39 58.7**	**+1.7**
WBSI	**Waikabubak, Su**	**2.33**	**253**	P	**Pn**	**23 39 45.3**	**+1.8**
BATI	**Baumata** 148nm,0.3s,baz=0.0,slow=8.1,SNR=23	**2.35**	**122**	P	**Pn**	**23 39 45.9**	**+2.2**
BATI				S	**Sn**	**23 40 16.9**	**+4.3**
	106nm,0.3s,baz=255,slow=22,SNR=5.9						
BATI	**Baumata**	**2.35**	**122**	P	**Pn**	**23 39 46.0**	**+2.3**
SOEI	**Soe**	**2.71**	**108**	Pn	**Pn**	**23 39 50.1**	**+1.8**
SOEI	**Soe**	**2.71**	**108**	P	**Pn**	**23 39 50.4**	**+2.1**
SOEI	**Soe**	**2.71**	**108**	P	**Pn**	**23 39 50.5**	**+2.1**
BSSI	**Bau Bau, Buton**	**3.01**	**337**	P	**Pn**	**23 39 52.6**	**+0.4**
PLAI	**Plampang**	**3.83**	**271**	P	**Pn**	**23 40 05.8**	**+2.7**
PLAI	**Plampang**	**3.83**	**271**	P	**Pn**	**23 40 05.3**	**+2.2**
BKSI	**Bulukumba**	**3.90**	**337**	P	**Pn**	**23 40 04.7**	**+0.6**
KAPI	**Kappang** 57nm,0.6s,baz=160,slow=11,SNR=36	**4.33**	**334**	P	**Pn**	**23 40 11.4**	**+1.6**
KAPI				S	**Sn**	**23 41 04.1**	**+4.6**
	13nm,0.6s,baz=63,slow=23,SNR=1.5						
KAPI				LR	LR	23 41 58.7	
	comp=Z,36nm,18.1s,baz=179,slow=40						
KAPI	**Kappang**	**4.33**	**334**	P	**Pn**	**23 40 12.4**	**+2.5**
TWSI	**Taliwang, Sumb**	**4.71**	**272**	P	**Pn**	**23 40 16.8**	**+1.8**
SRBI	**Singaraja** 0.2nm41nm,0.8s	**6.42**	**277**	P	**Pn**	**23 40 38.2**	**+0.2**
IGBI	**Denpasar**	**6.43**	**271**	P	**Pn**	**23 40 38.3**	**+0.2**
JAGI	**Jajag, Banyuwa**	**7.43**	**273**	Pn	**Pn**	**23 40 49.2**	**-2.5**
JAGI				Sn	**Sn**	**23 42 08.7**	**-5.7**
JAGI	**Jajag, Banyuwa**	**7.43**	**273**	P	**Pn**	**23 40 49.2**	**-2.5**
KNRA	**Kununurra**	**9.65**	**135**	Pn	**Pn**	**23 41 20.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**9.89**	**157**	P	**Pn**	**23 41 25.8**	**+0.8**
	9.0nm,0.5s,baz=354,slow=11,SNR=45						
FITZ				S	**Sn**	**23 43 09.5**	**-4.7**
	30nm,0.7s,baz=45,slow=20,SNR=12						
FITZ	**Fitzroy Crossi**	**9.89**	**157**	Pn	**Pn**	**23 41 25.5**	**+0.5**
MTN	**Manton Dam**	**10.09**	**113**	Pn	**Pn**	**23 41 26.2**	**-1.4**
UGM	**Wanagama**	**11.05**	**274**	Pn	**Pn**	**23 41 39.5**	**-1.3**
PSA00	**Pilbara Seismi**	**12.68**	**188**	Pn	**Pn**	**23 42 02.8**	**+0.7**
GIRL	**Giralia**	**15.37**	**207**	Pn	**Pn**	**23 42 37.8**	**+1.3**
GIRL				IAmb	IAmb	23 42 43.6	
	comp=Z,25nm,1.1s						
WB0	**Warramunga Arr**	**16.36**	**132**	Pn	**Pn**	**23 42 47.6**	**-1.3**
WB0				IAmb	IAmb	23 43 00.1	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**16.44**	**133**	P	**Pn**	**23 42 49.1**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=305,slow=14,SNR=36						
WRA				S	Sn	23 45 38.6	-14
	comp=Z,2.9nm,0.6s,baz=305,slow=22,SNR=8.5						
WRA	**Warramunga Arr**	**16.44**	**133**	Pn	**Pn**	**23 42 48.7**	**-1.1**
WR8	**Warramunga Arr**	**16.56**	**133**	Pn	**Pn**	**23 42 50.2**	**-1.1**
WR8				IAmb	IAmb	23 42 52.5	
	comp=Z,5.6nm,0.6s						
WR0	**Warramunga Arr**	**16.59**	**133**		**Pn**	**23 42 50.8**	**-0.9**
WR0				IAmb	IAmb	23 42 57.3	
	comp=Z,6.1nm,0.6s						
AS31	**Alice Springs**	**18.76**	**143**		**Pn**	**23 43 18.7**	**+0.9**
ASAR	**Alice Springs**	**18.76**	**143**	P	**Pn**	**23 43 17.9**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=318,slow=12,SNR=33						
ASAR				S	**S**	**23 46 38.3**	**-5.2**
	comp=Z,1.5nm,0.7s,baz=326,slow=28,SNR=8.5						
ASAR				ScP	**ScP**	**23 51 03.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=329,slow=2.4,SNR=8.0						
ASAR	**Alice Springs**	**18.76**	**143**	P	**Pn**	**23 43 19.4**	**+1.7**
COEN	**Coen**	**21.67**	**105**	P	**P**	**23 43 48.5**	**+1.0**
COEN				IAmb	IAmb	23 43 50.5	
	comp=Z,7.3nm,0.5s						
BBOO	**Buckleboo**	**27.24**	**153**	P	**P**	**23 44 40.5**	**+1.5**
BBOO				IAmb	IAmb	23 44 53.8	
	comp=Z,6.1nm,1.1s						
STKA	**Stephens Creek**	**29.39**	**144**	P	**P**	**23 44 58.9**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=313,slow=9.6,SNR=5.7						
	comp=Z,2.0nm,0.5s						
STKA	**Stephens Creek**	**29.39**	**144**	P	**P**	**23 44 59.6**	**+1.4**
SONM	**Songino Array**	**58.12**	**348**	P	**P**	**23 48 46.0**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=152,slow=6.5,SNR=2.6						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**65.63**	**331**	P	**P**	**23 49 35.8**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=126,slow=8.1,SNR=11						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**65.63**	**331**	P	**P**	**23 49 35.6**	**-1.9**
ZALV	**Zalesovo Beam**	**69.95**	**338**	P	**P**	**23 50 02.4**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=123,slow=4.3,SNR=2.4						
	comp=Z,0.3nm,0.3s						
VNDA	**Vanda**	**71.65**	**171**	P	**P**	**23 50 17.1**	**+2.8**
SNAA	**Sanae**	**91.75**	**195**	P	**P**	**23 52 02.9**	**+2.8**
SNAA				IAmb	IAmb	23 52 28.8	
	comp=Z,1.1nm,1.1s						

IDC 26 23:47:37.3±1.5, 27°03N×141°97E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=13.7km s-min=9.3km az=69.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima** baz=288,slow=20	**0.20**	**69**	Pn	Pg	23 47 46.7	+5.5
JCJ				Sn	Sg	23 47 55.2	+11
	422nm,0.3s,baz=247,slow=22,SNR=19						
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=9.3,slow=8.1,SNR=2.1 0.3nm,0.5s	**47.27**	**190**	P	P	23 56 13.4	+0.9
ILAR	**Eielson Array** 0.5nm,0.9s,baz=274,slow=5.3,SNR=4.1 0.5nm,0.9s	**57.86**	**29**	P	P	23 57 31.1	+0.5
YKA	**Yellowknife Ar** 0.7nm,0.8s,baz=299,slow=6.6,SNR=4.1 0.7nm,0.8s	**72.29**	**28**	P	P	23 59 05.3	+0.9

IDC ***26*** *23:54:16.4±1.4, 13°26N×91°53W, h0km, mb3.8/4, mbtmp3.8/8, ML3.6/4, MS3.6/5, Error ellipse: s-maj=25.5km s-min=17.5km az=30.0*
GCG ***26*** *23:54:18.6±1.7, 13°32N×91°63W, h32km, MD4.6, ML4.2*
NEIC ***26*** *23:54:18.8±2.2, 13°38N±0°08×91°49W±0°08, h10km±2km, mb4.3/34, Error ellipse: s-maj=15.3km s-min=9.5km az=222.0*
CATAC ***26*** *23:54:20.3±0.8, 13°N±4°×9°1W±°, h3km±4km, M4.1/26, mb4.2/1, MLv4.1/26, Error ellipse: s-maj=8.7km s-min=2.5km az=26.6, confirmed*
SNET ***26*** *23:54:21.4±2.7, 13°53N×91°53W, h35km, ML4.0*
ISC 26 23:54:20.5±0.7, 13°37N±0°06×91°51W±0°05, h28km, n136, σ1§55/137, mb4.2/15, MS3.5/5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG8	**El Palmar, Qui**	**1.08**	**8**	*e*P	**Pb**	**23 54 42.1**	**+1.3**
STG8				IAML		23 55 12.9	
	comp=N,2μm,0.4s						
RTAL	**Retalhuleu**	**1.16**	**351**	Pn	**Pn**	**23 54 39.4**	**-1.5**
RTAL	**Retalhuleu**	**1.16**	**351**	P	**Pn**	**23 54 39.9**	**-1.1**
ESSG	**Sabana Grande**	**1.20**	**33**	*e*P	**Pn**	**23 54 40.7**	**-0.9**
FG16	**Alotenango, Sa**	**1.32**	**47**	*i* P	**Pn**	**23 54 41.5**	**-1.8**
PCG5	**San Vicente Pa**	**1.38**	**53**	*e*P	**Pn**	**23 54 42.3**	**-1.8**
SOKI	**Kika Raxquin**	**1.44**	**4**	*e*P	**Pn**	**23 54 44.1**	**-1.1**
SOKI				IAML		23 55 21.6	
	comp=N,3μm,0.8s						
FAME	**Alcaldia de Sa**	**1.52**	**72**	P	**Pn**	**23 54 45.3**	**-0.7**
FAME	**Alcaldia de Sa**	**1.52**	**72**	S	**Sn**	**23 55 05.0**	**+0.1**
NUBE	**Las Nubes**	**1.76**	**72**	*e*P	**Pn**	**23 54 48.5**	**-0.8**
NUBE	**Las Nubes**	**1.76**	**72**	*e*P	**Pn**	**23 54 48.8**	**-0.5**
NUBE	**Las Nubes**	**1.76**	**72**	P	**Pn**	**23 54 49.7**	**+0.4**
NUBE	**Las Nubes**	**1.76**	**72**	S	**Sn**	**23 55 12.1**	**+1.2**
LOAL	**Lomas de Alarc**	**1.79**	**69**	S	**Sn**	**23 55 12.9**	**+1.4**
LOAL	**Lomas de Alarc**	**1.79**	**69**	P	**Pn**	**23 54 50.2**	**+0.6**
SLOZ	**Alcaldia de Sa**	**1.80**	**69**	*e*P	**Pn**	**23 54 46.9**	**-2.8**
SLOZ	**Alcaldia de Sa**	**1.80**	**69**	S	**Sn**	**23 55 11.3**	**-0.4**
SLOZ	**Alcaldia de Sa**	**1.80**	**69**	P	**Pn**	**23 54 50.1**	**+0.4**
CEVE	**Cerro Verde**	**1.89**	**76**	P	**Pn**	**23 54 52.1**	**+1.0**
CEVE	**Cerro Verde**	**1.89**	**76**	S	**Sn**	**23 55 15.8**	**+1.7**
SBLS	**San Blas**	**1.89**	**76**	*e*P	**Pn**	**23 54 51.8**	**+0.7**
APG	**El Apazote**	**1.91**	**32**	Pn	**Pn**	**23 54 52.9**	**+1.4**
	comp=N,5.0nm,0.3s,baz=202,slow=15,SNR=87						
APG				Sn	**Sb**	**23 55 19.6**	**+1.1**
	comp=N,4.8nm,0.3s,baz=224,slow=18,SNR=7.7						
	comp=N,23nm,0.4s						
APG	**El Apazote**	**1.91**	**32**	*i* P	**Pn**	**23 54 52.5**	**+1.1**
RBDL	**Robledal**	**1.92**	**67**	*i* P	**Pn**	**23 54 51.6**	**+0.1**
HUEH	**Huehuetenango**	**1.94**	**0**		**Pn**	**23 54 50.9**	**-0.8**
HUEH	**Huehuetenango**	**1.94**	**0**	*e*P	**Pn**	**23 54 53.3**	**+1.6**
HUEH	**Huehuetenango**	**1.94**	**0**	P	**Pn**	**23 54 52.5**	**+0.7**
QUIS	**Sacapulas**	**1.95**	**12**	*e*P	**Pn**	**23 54 53.1**	**+1.2**
QUIS				IAML		23 55 26.0	
	comp=E,2μm,0.5s						
JAYA	**Jayaque - finc**	**2.02**	**82**	*e*P	**Pn**	**23 54 52.7**	**-0.3**
JAYA				*e*S	**Sn**	**23 55 17.4**	**0.0**
JAYA	**Jayaque - finc**	**2.02**	**82**	*e*P	**Pn**	**23 54 52.6**	**-0.3**
JAYA	**Jayaque - finc**	**2.02**	**82**	P	**Pn**	**23 54 52.6**	**-0.3**
CEDA	**San Andres**	**2.10**	**78**	P	**Pn**	**23 54 55.6**	**+1.8**
LALI	**Alcalda de L**	**2.13**	**87**	P	**Pn**	**23 54 56.4**	**+2.2**
PMON	**Piamonte**	**2.16**	**81**	*e*P	**Pn**	**23 54 55.5**	**+0.8**
PMON	**Piamonte**	**2.16**	**81**	P	**Pn**	**23 54 55.6**	**+0.8**
PMON	**Piamonte**	**2.16**	**81**	S	**Sn**	**23 55 23.2**	**+2.5**
UEES	**Universidad Ev**	**2.23**	**81**	S	**Sn**	**23 55 25.0**	**+2.6**
UEES	**Universidad Ev**	**2.23**	**81**	P	**Pn**	**23 54 57.5**	**+1.7**
LOMA	**Loma Larga**	**2.29**	**83**	*e*P	**Pn**	**23 54 57.0**	**+0.4**
LOMA	**Loma Larga**	**2.29**	**83**	S	**Sn**	**23 55 26.4**	**+2.5**
LOMA	**Loma Larga**	**2.29**	**83**	P	**Pn**	**23 54 57.4**	**+0.8**
MTO3	**Montecristo**	**2.32**	**64**	Pn	**Pn**	**23 54 56.8**	**-0.3**
MTO3	**Montecristo**	**2.32**	**64**	*i* P	**Pn**	**23 54 57.5**	**+0.4**
MTO3	**Montecristo**	**2.32**	**64**	*e*P	**Pn**	**23 54 57.7**	**+0.6**
MTO3	**Montecristo**	**2.32**	**64**	P	**Pn**	**23 54 57.7**	**+0.6**
MTO3	**Montecristo**	**2.32**	**64**	S	**Sn**	**23 55 26.4**	**+1.6**
LFRS	**El Faro**	**2.39**	**84**	*e*P	**Pn**	**23 54 59.0**	**+1.1**
ESQI	**Esquipulas**	**2.41**	**60**	Pn	**Pn**	**23 54 58.3**	**+0.1**
ESQI	**Esquipulas**	**2.41**	**60**	*e*P	**Pn**	**23 54 58.8**	**+0.6**
ESQI				*e*S	**Sn**	**23 55 25.9**	**-1.1**
ESQI	**Esquipulas**	**2.41**	**60**	P	**Pn**	**23 54 60.0**	**+1.8**
ESQI	**Esquipulas**	**2.41**	**60**	S	**Sn**	**23 55 28.3**	**+1.4**
LBRS	**Las Brisas**	**2.42**	**81**	*e*P	**Pn**	**23 54 59.6**	**+1.3**
PAVA	**Las Pavas**	**2.52**	**82**	*e*P	**Pn**	**23 55 00.6**	**+0.8**
PAVA	**Las Pavas**	**2.52**	**82**	S	**Sn**	**23 55 32.2**	**+2.6**
PAVA	**Las Pavas**	**2.52**	**82**	P	**Pn**	**23 55 01.0**	**+1.2**
TECO	**Alcaldia de Te**	**2.66**	**86**	P	**Pn**	**23 55 03.5**	**+2.0**
PQSS	**Presa 15 de Se**	**2.88**	**85**	P	**Pn**	**23 55 06.6**	**+2.1**
TECA	**Tecapa**	**2.93**	**87**	*e*P	**Pn**	**23 55 06.4**	**+1.0**
CCIG	**Comitan**	**2.96**	**348**		**Pn**	**23 55 06.9**	**+1.1**
CCIG	**Comitan**	**2.96**	**348**	P	**Pn**	**23 55 06.8**	**+1.0**
CCIG	**Comitan**	**2.96**	**348**	S	**Sn**	**23 55 42.7**	**+2.3**
PACA	**Pacayal**	**3.10**	**88**	*e*P	**Pn**	**23 55 11.6**	**+3.9**
PACA				*e*S	**Sn**	**23 55 45.8**	**+1.9**
PACA	**Pacayal**	**3.10**	**88**	S	**Sn**	**23 55 46.4**	**+2.4**
PACA	**Pacayal**	**3.10**	**88**	P	**Pn**	**23 55 09.9**	**+2.2**
LCY	**Lacayo**	**3.13**	**89**	*e*P	**Pn**	**23 55 09.6**	**+1.5**
BLLM	**Bellamira**	**3.18**	**88**	*e*P	**Pn**	**23 55 09.4**	**+0.6**
PETF	**Flores**	**3.86**	**24**	Pn	**Pn**	**23 55 18.0**	**-0.1**
CSGN	**Cosiguina Volc**	**3.87**	**95**	P	**Pn**	**23 55 19.5**	**+1.2**
POTN	**Potosi Cosigui**	**3.92**	**95**	P	**Pn**	**23 55 21.3**	**+2.5**
TGUH	**Tegucigalpa,Un**	**4.17**	**80**	Pn	**Pn**	**23 55 22.8**	**+0.3**
TGUH	**Tegucigalpa,Un**	**4.17**	**80**	P	**Pn**	**23 55 23.8**	**+1.3**
TGUH				S	**Sn**	**23 56 12.9**	**+2.5**
YUSH	**Yuscaran**	**4.57**	**82**	P	**Pn**	**23 55 29.8**	**+1.8**
HERN	**Volcan Telica**	**4.62**	**99**	Pn	Pn	23 55 23.0	-5.6
CNGN	**Cerro Negro**	**4.77**	**100**	Pn	**Pn**	**23 55 29.5**	**-1.1**
CNGN	**Cerro Negro**	**4.77**	**100**	P	**Pn**	**23 55 32.1**	**+1.5**
CNGN	**Cerro Negro**	**4.77**	**100**	S	**Sn**	**23 56 28.1**	**+3.1**
CMIG	**Matias Romero** comp=E,1.8nm,0.3s,baz=131,slow=8.2,SNR=13	**4.93**	**319**	Pn	**Pn**	**23 55 32.4**	**-0.3**
CMIG				Sn	**Sn**	**23 56 32.4**	**+3.5**
	comp=E,4.8nm,0.3s,baz=60,slow=21,SNR=5.8						
	comp=E,4.2nm,0.3s						
COPN	**Copaltepe**	**4.94**	**103**	P	**Pn**	**23 55 35.5**	**+2.6**
LIMN	**Finca el Limon**	**5.02**	**93**	P	**Pn**	**23 55 35.9**	**+1.9**
BOAB	**BOACO BROADBAN**	**5.77**	**98**		**Pn**	**23 55 42.9**	**-1.4**
BOAB	**BOACO BROADBAN**	**5.77**	**98**	P	**Pn**	**23 55 45.8**	**+1.5**
JUD3	**Juan Diaz 3**	**6.66**	**118**		**Pn**	**23 55 57.9**	**+1.4**
JTS	**Las Juntas de** comp=E,0.9nm,0.3s,baz=0.0,slow=20,SNR=1.4	**7.11**	**115**	Pn	**Pn**	**23 56 02.8**	**0.0**
JTS				Sn	**Sn**	**23 57 16.7**	**-6.0**
	comp=E,0.4nm,0.3s,baz=285,slow=19,SNR=1.1						
JTS				Lg	Lg	23 57 58.9	
	comp=E,0.2nm,0.3s,baz=252,slow=20,SNR=6.1						
	comp=E,2.7nm,0.3s						
SOCE	**Pocosol**	**7.37**	**113**	Pn	**Pn**	**23 56 05.6**	**-0.7**
TEIG	**Tepich**	**7.49**	**24**	Pn	**Pn**	**23 56 08.8**	**+0.9**
TEIG	comp=E,0.1nm,0.3s,baz=134,slow=23,SNR=7.9			Sn	**Sn**	**23 57 30.8**	**-1.1**
	comp=E,0.1nm,0.3s,baz=128,slow=20,SNR=1.7						
TEIG				Lg	Lg	23 58 18.1	
	comp=E,0.1nm,0.3s,baz=130,slow=24,SNR=3.9						
TEIG	**Tepich**	**7.49**	**24**		**Pn**	**23 56 08.4**	**+0.5**
PIRO	**Carate, Puerto**	**9.42**	**121**		**Pn**	**23 56 36.8**	**+2.3**
ZAIG	**Zacatecas**	**14.06**	**313**	Pn	**Pn**	**23 57 37.9**	**-0.3**
553A	**Crawfordville**	**17.97**	**20**		**P**	**23 58 31.3**	**+2.6**
BRDY	**Brady**	**19.12**	**340**	P	**P**	**23 58 41.6**	**+0.2**
SAND	**Sanderson**	**19.20**	**331**		**P**	**23 58 42.7**	**+0.3**
TXAR	**Lajitas Array** comp=E,0.2nm,0.3s,baz=149,slow=11,

JAYA	Jayaque - finc	1.95	90	*e*P		Pn	00 04 24.1	-1.5
MTO3	Montecristo	2.17	70	*e*P		Pn	00 04 29.2	+0.5

IDC ***27*** *00:06:46.6±37.0, 40°.90N×18°.46E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=671.9km s-min=67.7km az=52.0*
TIR ***27*** *00:06:57.8, 41°.62N×19°.42E, h45km±2km, Ml3.0/6*
SKO ***27*** *00:06:58.9, 41°.50N×19°.47E, h11km, ML2.7*
BEO ***27*** *00:06:59.1±0.5, 41°.57N×19°.53E, h8km±2km, ML2.8/8*
PDG ***27*** *00:07:01.4±0.3, 41°.72N×19°.54E, h11km±1km, MD2.9/2, ML2.8/12, Error ellipse: s-maj=1.7km s-min=1.5km az=90.0*

ISC 27 00:06:57.8±0.9, **41°.56N**±0°.02×**19°.46E**±0°.02, **h13**km±7km, **n91**, σ1**s15**/134, **mb3.5/3**, **15C-26D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.37**	**125**	⇓*i*Pg	**Pg**	**00 07 04.9**	**-0.3**
TIR				AML	AML	00 07 09.8	
	4.4nm,0.2s						
TIR				Sg	**Sg**	**00 07 10.0**	**-0.2**
TIR	**Tirane**	**0.37**	**125**	⇓*i*Pg	**Pg**	**00 07 04.9**	**-0.3**
TIR				*i* Sg	**Sg**	**00 07 10.6**	**+0.4**
ULC	**Ulcinj**	**0.44**	**338**	⇓*i*Pg	**Pg**	**00 07 06.8**	**+0.3**
ULC				*i* Sg	**Sg**	**00 07 12.3**	**-0.1**
SDA	**Shkodra**	**0.49**	**3**	⇓Pg	**Pg**	**00 07 07.5**	**0.0**
SDA				Sg	**Sb**	**00 07 16.1**	**+0.7**
DRME	**Dracevica, Mon**	**0.66**	**342**	*e*Pg	**Pg**	**00 07 10.6**	**-0.1**
DRME	**Dracevica, Mon**	**0.66**	**342**	⇑*i*Pg	**Pg**	**00 07 10.7**	**0.0**
PHP	**Peshkopia**	**0.74**	**80**	⇑Pg	**Pg**	**00 07 11.0**	**-1.3**
PHP				Sg	**Sg**	**00 07 22.1**	**0.0**
PHP				AML	AML	00 07 25.8	
	2.4nm,0.3s						
BUM	**Brajici-Budva**	**0.85**	**330**	⇓*i*Pg	**Pn**	**00 07 15.4**	**-0.2**
BUM				*i* Sg	**Sb**	**00 07 26.4**	**+0.5**
PDG	**Podgorica**	**0.88**	**350**	Pn	**Pg**	**00 07 14.0**	**-0.8**
PDG				Sn	**Sb**	**00 07 26.8**	**+0.1**
PDG	**Podgorica**	**0.88**	**350**	⇓P	**Pg**	**00 07 14.1**	**-0.8**
PDG				⇑S	**Sb**	**00 07 27.7**	**+1.1**
PDG	**Podgorica**	**0.88**	**350**	*e*Pg	**Pg**	**00 07 14.3**	**-0.6**
PDG				*e*Sg	**Sn**	**00 07 29.4**	**+0.8**
PDG	**Podgorica**	**0.88**	**350**	⇑*i*Pg	**Pg**	**00 07 14.1**	**-0.8**
PDG				*i* Sg	**Sg**	**00 07 26.0**	**-0.5**
CEME	**Cevo**	**1.07**	**338**	⇑*i*Pg	**Pb**	**00 07 18.2**	**+0.1**
CEME				*i* Sg	**Sn**	**00 07 33.4**	**+0.2**
VLO	**Vlora**	**1.09**	**179**	⇓Pg	**Pn**	**00 07 20.0**	**+1.3**
VLO				Sg	**Sn**	**00 07 34.1**	**+0.5**
VLO				AML	AML	00 07 42.3	
	2.4nm,0.3s						
PVY	**Plav**	**1.10**	**19**	*e*Pg	**Pb**	**00 07 17.7**	**-1.0**
PVY	**Plav**	**1.10**	**19**	⇑*i*Pg	**Pb**	**00 07 17.5**	**-1.2**
PVY				*i* Sg	**Sb**	**00 07 31.6**	**-1.4**
OHR	**Ohrid**	**1.10**	**114**	*i* Pg	**Pb**	**00 07 18.7**	**0.0**
OHR				*i* Sg	**Sn**	**00 07 34.9**	**+0.9**
OHR				*e*Lg	Lg	00 07 35.8	
	comp=N,138nm,0.8s						
OHR				*e*Lg	Lg	00 07 37.0	
	comp=E,114nm,0.6s						
HCY	**Herceg Novi**	**1.15**	**321**	⇑*i*Pg	**Pg**	**00 07 20.5**	**+0.7**
HCY				*i* Sg	**Sn**	**00 07 37.3**	**+2.3**
NKME	**Niksic**	**1.27**	**343**	⇓*i*Pg	**Pg**	**00 07 22.3**	**+0.1**
NKME				*i* Sg	**Sg**	**00 07 39.7**	**+1.1**
KOME	**Kolasin**	**1.29**	**2**	*e*Pg	**Pn**	**00 07 21.8**	**+0.2**
KOME	**Kolasin**	**1.29**	**2**	⇓*i*Pg	**Pn**	**00 07 21.4**	**-0.2**
KOME				*i* Sg	**Sg**	**00 07 39.7**	**+0.2**
BEY	**Berane**	**1.35**	**14**	*e*Pn	**Pn**	**00 07 22.6**	**+0.1**
IVA	**Berane**	**1.35**	**14**	⇑*i*Pg	**Pn**	**00 07 22.5**	**+0.1**
IVA				*i* Sg	**Sn**	**00 07 40.6**	**+0.4**
KBN	**Korca**	**1.37**	**133**	⇓Pn	**Pb**	**00 07 23.9**	**+0.6**
KBN				Sn	**Sg**	**00 07 41.8**	**-0.2**
TREB	**Trebinje**	**1.42**	**325**	*e*Pn	**Pg**	**00 07 24.7**	**-0.4**
TREB	**Trebinje**	**1.42**	**325**	*e*Pg	**Pb**	**00 07 24.5**	**+0.3**
TREB				*e*Sg	**Sg**	**00 07 45.2**	**+1.6**
BRY	**Bratogost**	**1.51**	**333**	⇓*i*Pg	**Pg**	**00 07 26.3**	**-0.5**
BRY				*i* Sg	**Sg**	**00 07 48.3**	**+1.9**
SKO	**Skopje**	**1.54**	**74**	*i* Pg	**Pg**	**00 07 27.0**	**-0.2**
SKO				*i* Sg	**Sg**	**00 07 47.8**	**+0.5**
NEST	**Nestorio**	**1.66**	**133**	Pn	**Pb**	**00 07 28.2**	**0.0**
NEST				Sn	**Sb**	**00 07 49.5**	**+0.4**
NEST				AML	AML	00 07 52.8	
	comp=E,0.3nm,0.5s						
UPM	**Unac-Piva**	**1.69**	**346**	⇓*i*Pg	**Pb**	**00 07 29.2**	**+0.3**
UPM				*i* Sg	**Sg**	**00 07 51.9**	**-0.5**
KLINJ	**Klinje**	**1.74**	**338**	*e*Pn	**Pg**	**00 07 30.7**	**-0.4**
SJES	**Sjenica**	**1.74**	**12**	*e*Pn	**Pb**	**00 07 30.4**	**+0.7**
SJES				*e*Sg	**Sg**	**00 07 54.5**	**+0.6**
PLE	**Pljevlja**	**1.77**	**358**	*e*Pn	**Pb**	**00 07 30.3**	**+0.1**
PLE	**Pljevlja**	**1.77**	**358**	⇓*i*Pn	**Pb**	**00 07 30.1**	**-0.1**
PLE				*i* Sn	**Sb**	**00 07 53.2**	**+0.9**
STON	**Ston**	**1.85**	**316**	*e*Pn	**Pb**	**00 07 30.8**	**-0.7**
STON				*e*Sn	**Sg**	**00 07 57.5**	**+0.1**
NOCI	**Noci**	**1.97**	**248**	Pn	**Pn**	**00 07 30.8**	**0.0**
NOCI				Sn	**Sn**	**00 07 56.5**	**+1.2**
NOCI				AML	AML	00 08 01.2	
	comp=E,0.7nm,0.4s						
SELS	**Selova**	**2.06**	**36**	*e*Pn	**Pn**	**00 07 33.7**	**+1.5**
SELS				*e*Sn	**Sb**	**00 08 00.2**	**-0.5**
IVAS	**Ivanjica**	**2.08**	**14**	*e*Pn	**Pn**	**00 07 33.8**	**+1.4**
IGT	**Igoumenitsa**	**2.13**	**162**	⇓Pn	**Pn**	**00 07 34.1**	**+1.1**
IGT				Sn	**Sb**	**00 08 02.3**	**-0.2**
GOCS	**Kraljevo Serbi**	**2.26**	**27**	*e*Pn	**Pb**	**00 07 36.9**	**-1.5**
GOCS				*e*Sn	**Sn**	**00 08 04.5**	**+1.9**
MATE	**Matera**	**2.27**	**247**	⇓P	**Pn**	**00 07 35.2**	**+0.2**
BBLS	**Lazi&#263i**	**2.31**	**359**	*e*Pn	**Pb**	**00 07 38.6**	**-0.7**
VAY	**Valandovo**	**2.35**	**95**	*i* Pn	**Pn**	**00 07 37.4**	**+1.4**
VAY				*i* Sn	**Sn**	**00 08 05.0**	**+0.3**
VAY				*e*Lg	Lg	00 08 07.0	
	comp=N,40nm,0.7s						
VAY				*e*Lg	Lg	00 08 07.2	
	comp=E,13nm,0.5s						
BOSS	**Bosilegrad**	**2.44**	**66**	*e*Pn	**Pn**	**00 07 38.4**	**+1.2**
BOSS				*e*Sn	**Sn**	**00 08 07.0**	**+0.1**
GRUS	**Gruza**	**2.50**	**21**	*e*Pn	**Pn**	**00 07 40.5**	**+2.3**
KNT	**Kendrikon**	**2.62**	**98**	*i* Pn	**Pn**	**00 07 40.9**	**+1.2**
BOVS	**Bovan**	**2.66**	**38**	⇑P	**Pn**	**00 07 41.6**	**+1.4**
BOVS	**Bovan**	**2.66**	**38**	*e*Pn	**Pn**	**00 07 41.3**	**+1.1**
BOVS				*e*Sn	**Sn**	**00 08 13.1**	**+0.8**
TRUS	**Trudelj**	**2.75**	**14**	*e*Pn	**Pn**	**00 07 43.9**	**+2.3**
KKB	**Krupnik**	**2.76**	**83**	*i* Pn	**Pn**	**00 07 43.2**	**+1.5**
SGRT	**San Giovanni R**	**2.79**	**275**	Pn	**Pn**	**00 07 42.7**	**+0.5**
SGRT				Sn	**Sn**	**00 08 16.3**	**+0.4**
SGRT				AML	AML	00 08 16.6	
	comp=E,0.1nm,0.2s						
THE	**Thessaloniki**	**2.80**	**108**	*i* Pn	**Pn**	**00 07 42.7**	**+0.5**
ZAPS	**Zavoj**	**2.91**	**53**	*e*Pn	**Pn**	**00 07 45.6**	**+1.9**
ZAPS				*e*Sn	**Sn**	**00 08 19.6**	**+1.0**
TEKS	**Tekeris**	**2.99**	**1**	*e*Pn	**Pn**	**00 07 45.8**	**+0.9**
VTS	**Vitosha**	**3.00**	**68**	*e*Pn	**Pn**	**00 07 46.4**	**+1.3**
VTS				*e*Sn	**Sn**	**00 08 21.9**	**+0.9**
ZAGS	**Zajecar**	**3.04**	**41**	*e*Pn	**Pn**	**00 07 47.0**	**+1.5**
ZAGS				*e*Sn	**Sn**	**00 08 23.6**	**+1.8**
SRS	**Serrai**	**3.14**	**97**	*i* Pn	**Pn**	**00 07 47.8**	**+0.9**
BLKB	**Belogradchik**	**3.14**	**48**	*e*Pn	**Pn**	**00 07 48.8**	**+1.8**
BLKB				*e*Sn	**Sn**	**00 08 25.8**	**+1.4**
TIP	**Timpagrande**	**3.15**	**222**	⇑P	**Pn**	**00 07 46.6**	**-0.5**
BORS2	**Bor- Borsko je**	**3.15**	**36**	*e*Pn	**Pn**	**00 07 47.2**	**+0.1**
BORS2				*e*Sn	**Sn**	**00 08 23.9**	**-0.7**
MMB	**Musomishta**	**3.22**	**89**	*i* Pn	**Pn**	**00 07 49.6**	**+1.6**
KUBS	**Kucevo**	**3.28**	**29**	*e*Sn	**Sn**	**00 08 27.3**	**-0.4**
BLY	**Banja Luka**	**3.60**	**333**	*e*Pn	**Pb**	**00 07 59.9**	**-1.3**
FRGS	**Fruska Gora**	**3.61**	**4**	*e*Pn	**Pn**	**00 07 53.9**	**+0.6**
MDVR	**Moldovita**	**3.62**	**26**	⇓P	**Pn**	**00 07 54.8**	**+1.3**
HERR	**Herculane**	**3.96**	**32**	⇓P	**Pn**	**00 07 59.5**	**+1.3**
PLD	**Plovdiv**	**3.99**	**80**	*e*Pn	**Pn**	**00 08 00.2**	**+1.6**
PLD				*e*Sn	**Sn**	**00 08 45.2**	**0.0**
SRE	**Strehaia**	**4.14**	**40**	⇑P	**Pn**	**00 08 02.9**	**+2.2**
BZS	**Buzias**	**4.35**	**20**	⇑P	**Pn**	**00 08 04.7**	**+1.2**
GZR	**Gura Zlata**	**4.53**	**31**	⇓P	**Pn**	**00 08 08.4**	**+2.3**
AQU	**L'Aquila**	**4.59**	**282**	*e*Pn	**Pn**	**00 08 07.3**	**+0.4**
SURR	**Surduc**	**4.62**	**24**	⇓P	**Pn**	**00 08 07.9**	**+0.7**
MORH	**Mrgy, Hungar**	**4.69**	**353**	*e*Pn	**Pn**	**00 08 08.0**	**-0.2**
MORH	**Mrgy, Hungar**	**4.69**	**353**	⇓P	**Pn**	**00 08 08.3**	**0.0**
MORH	**Mrgy, Hungar**	**4.69**	**353**	*e*Pn	**Pn**	**00 08 09.9**	**+1.7**
SIRR	**Siria**	**4.97**	**18**	⇓P	**Pn**	**00 08 14.0**	**+1.9**
SIRR	**Siria**	**4.97**	**18**	*e*Pn	**Pn**	**00 08 13.9**	**+1.9**
SIRR				*e*Sn	**Sn**	**00 09 07.9**	**-1.4**
BOJS	**Bojanci**	**4.99**	**324**	*e*Pn	**Pn**	**00 08 13.2**	**+0.9**
LOT	**Lotru**	**4.99**	**37**	⇓P	**Pn**	**00 08 13.8**	**+1.3**
ARR	**Arges**	**5.35**	**43**	⇑P	**Pn**	**00 08 19.1**	**+1.7**
CEY	**Cerknica**	**5.55**	**321**	*e*Pn	**Pn**	**00 08 21.3**	**+1.3**
CEY				*e*Sn	**Sn**	**00 09 23.7**	**0.0**
VOIR		**5.62**	**44**	⇑P	**Pn**	**00 08 23.4**	**+2.4**
DRGR		**5.73**	**23**	⇓P	**Pn**	**00 08 24.0**	**+1.5**
MLR	**Muntele Rosu**	**6.13**	**48**	⇓P	**Pn**	**00 08 30.5**	**+2.3**
DOPR	**Dopca**	**6.15**	**42**	⇓P	**Pn**	**00 08 30.4**	**+2.2**
PLOR	**Plostina**	**6.75**	**48**	⇓P	**Pn**	**00 08 39.5**	**+3.1**
VRI	**Vrincioaia**	**6.80**	**48**	⇑P	**Pn**	**00 08 40.2**	**+3.0**
FINES	**FINESS Array B**	**20.31**	**9**	P	**P**	**00 11 32.3**	**-0.9**
	comp=E,2.0nm,0.9s,baz=174,slow=11,SNR=5.4						
	comp=E,2.0nm,0.9s						
BVAR	**Borovoye Array**	**35.66**	**54**	P	**P**	**00 13 54.9**	**-0.5**
	comp=E,0.3nm,0.5s,baz=282,slow=7.0,SNR=2.2						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**44.11**	**51**	P	**P**	**00 15 03.9**	**-1.5**
	comp=E,0.5nm,0.3s,baz=279,slow=7.9,SNR=3.2						
	comp=E,0.5nm,0.3s						
MKAR	**Makanchi Array**	**44.30**	**61**	P	**P**	**00 15 06.0**	**-1.2**
	comp=E,0.3nm,0.4s,baz=283,slow=7.3,SNR=7.3						
	comp=E,0.3nm,0.4s						

NEIC ***27*** *00:13:53.2±2.4, 17°.38N±0°.06×101°.83W±0°.04, h10km±1km, mb4.6/63, Md4.8/57(MEX), Error ellipse: s-maj=9.9km s-min=7.0km az=170.0*
MEX ***27*** *00:13:55.6±2.2, 17°.52N×101°.91W, h12km±29km, MD4.8*
IDC ***27*** *00:13:59.7±7.4, 18°.03N×101°.43W, h34km±53km, mb3.7/6, mbtmp3.7/8, ML3.6/2, MS3.6/30, Error ellipse: s-maj=56.9km s-min=25.6km az=50.0*

ISC 27 00:13:52.3±1.5, **17°.42N**±0°.04×**101°.90W**±0°.03, **h6**km±9km, **n396**, σ1**s75**/413, **mb4.6**/29, **MS3.7**/26, **2D**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.45**	**66**		**Pg**	**00 14 01.1**	**0.0**
ZIIG					**Sg**	**00 14 06.9**	**0.0**
ZIIG	**Zihuatanejo**	**0.45**	**66**	⇓*i*P	**Pg**	**00 14 01.1**	**0.0**
	baz=255,slow=16						
ZIIG				*i* S	**Sg**	**00 14 06.9**	**0.0**
ATYC	**Atoyac**	**1.42**	**98**		**Pn**	**00 14 17.8**	**-0.8**
ATYC					**Sb**	**00 14 35.8**	**-1.7**
ATYC	**Atoyac**	**1.42**	**98**	*e*P	**Pn**	**00 14 17.8**	**-0.8**
ATYC				*e*S	**Sb**	**00 14 35.8**	**-1.7**
CAIG	**El Cayaco**	**1.60**	**103**		**Pn**	**00 14 20.3**	**-0.9**
CAIG					**Sn**	**00 14 39.9**	**-2.4**
CAIG	**El Cayaco**	**1.60**	**103**	*e*P	**Pn**	**00 14 20.3**	**-0.9**
CAIG				*e*S	**Sn**	**00 14 39.9**	**-2.4**
MMIG	**Aquila**	**1.63**	**302**		**Pn**	**00 14 19.3**	**-2.3**
MMIG					**Sn**	**00 14 39.7**	**-3.2**
MMIG	**Aquila**	**1.63**	**302**	⇓*i*P	**Pn**	**00 14 19.3**	**-2.3**
	baz=103,slow=16						
MMIG				*e*S	**Sn**	**00 14 39.7**	**-3.2**
ARIG	**Puente Sto Nin**	**1.71**	**60**		**Pn**	**00 14 21.4**	**-1.3**
ARIG					**Sn**	**00 14 41.0**	**-3.9**
ARIG	**Puente Sto Nin**	**1.71**	**60**	*e*P	**Pn**	**00 14 21.4**	**-1.3**
ARIG				*e*S	**Sn**	**00 14 41.0**	**-3.9**
DAIG	**Los Arroyos**	**2.18**	**100**		**Pn**	**00 14 29.2**	**0.0**
DAIG					**Sn**	**00 14 54.3**	**-2.4**
DAIG	**Los Arroyos**	**2.18**	**100**	*e*P	**Pn**	**00 14 29.2**	**0.0**
DAIG				*i* S	**Sn**	**00 14 54.3**	**-2.4**
MEIG	**Mezcala**	**2.23**	**77**	*e*P	**Pn**	**00 14 29.3**	**-0.6**
MEIG				*e*S	**Sb**	**00 14 58.6**	**-2.4**
MOIG	**Morelia**	**2.34**	**17**	Pn	**Pn**	**00 14 30.9**	**-0.8**
CDAR	**Ciudad de Arme**	**2.51**	**307**	*i* P	**Pn**	**00 14 32.1**	**-1.6**
CDAR				*e*S	**Sn**	**00 15 01.8**	**-3.0**
MNGA	**Volcan de Coli**	**2.61**	**321**	*e*P	**Pn**	**00 14 35.6**	**+0.3**
MNGA				*e*S	**Sn**	**00 15 04.2**	**-3.3**
INCO	**Volcan de Coli**	**2.65**	**323**	*i* P	**Pn**	**00 14 36.3**	**+0.3**
INCO				*e*S	**Sn**	**00 15 05.6**	**-3.0**
SOMAC	**Volcano de Col**	**2.66**	**322**	*e*P	**Pn**	**00 14 36.4**	**+0.2**
SOMAC				*e*S	**Sn**	**00 15 06.4**	**-2.6**
CEGR	**Campo Tres**	**2.70**	**317**	*e*P	**Pn**	**00 14 35.9**	**-0.6**
CEGR				*e*S	**Sn**	**00 15 07.4**	**-2.3**
CRIG	**Cruz Grande**	**2.73**	**104**		**Pn**	**00 14 36.6**	**-0.2**
CRIG					**Sn**	**00 15 08.2**	**-2.0**
CRIG	**Cruz Grande**	**2.73**	**104**	*e*P	**Pn**	**00 14 36.6**	**-0.2**
CRIG				*i* S	**Sn**	**00 15 08.2**	**-2.0**
MAVM	**Malinalco, Edo**	**2.75**	**56**	*e*P	**Pn**	**00 14 39.3**	**+2.1**
MAVM				*e*S	**Sn**	**00 15 07.5**	**-3.4**
TOVM	**TOLUCA**	**2.81**	**48**		**Pn**	**00 14 38.1**	**0.0**
TOVM	**TOLUCA**	**2.81**	**48**	*e*P	**Pn**	**00 14 38.1**	**0.0**
TOVM				*e*S	**Sn**	**00 15 07.9**	**-4.6**
INVM	**La Marquesa**	**3.03**	**52**	*e*P	**Pn**	**00 14 42.6**	**+1.4**
INVM				*e*S	**Sn**	**00 15 16.2**	**-1.8**
ATVM	**ATLACOMULCO**	**3.04**	**40**		**Pn**	**00 14 43.8**	**+2.5**
ATVM	**ATLACOMULCO**	**3.04**	**40**	*e*P	**Pn**	**00 14 41.5**	**+0.2**
ATVM				*e*S	**Sn**	**00 15 19.3**	**+1.1**
YAIG	**Yautepec**	**3.05**	**62**		**Pn**	**00 14 40.2**	**-1.1**
YAIG	**Yautepec**	**3.05**	**62**	*e*P	**Pn**	**00 14 40.2**	**-1.1**
AOVM	**Tlapan**	**3.06**	**53**	*e*P	**Pn**	**00 14 40.3**	**-1.4**
AOVM				*e*S	**Sn**	**00 15 13.6**	**-5.4**
MZVM		**3.08**	**55**		**Pn**	**00 14 44.1**	**+2.5**
MZVM		**3.08**	**55**	*e*P	**Pn**	**00 14 44.1**	**+2.5**
MZVM				*e*S	**Sn**	**00 15 17.7**	**-1.2**
MGIG	**Malinaltepec**	**3.12**	**93**		**Pn**	**00 14 42.5**	**+0.2**
MGIG	**Malinaltepec**	**3.12**	**93**	*e*P	**Pn**	**00 14 42.5**	**+0.2**
MCRU	**Las Cruces**	**3.14**	**53**	*e*P	**Pn**	**00 14 42.4**	**-0.3**
MCRU				*e*S	**Sn**	**00 15 18.0**	**-2.8**
TLVM	**San Miguel Top**	**3.15**	**55**		**Pn**	**00 14 44.3**	**+1.4**
TLVM	**San Miguel Top**	**3.15**	**55**	*e*P	**Pn**	**00 14 44.3**	**+1.4**
TLVM				*e*S	**Sn**	**00 15 18.3**	**-2.8**
TLIG	**Tlapa**	**3.18**	**87**		**Pn**	**00 14 42.6**	**-0.5**
TLIG	**Tlapa**	**3.18**	**87**	*i* P	**Pn**	**00 14 41.6**	**-1.5**
TLIG				*e*S	**Sn**	**00 15 15.2**	**-6.3**
ACIG	**Acambay**	**3.18**	**37**		**Pn**	**00 14 45.2**	**+2.0**
ACIG	**Acambay**	**3.18**	**37**	*e*P	**Pn**	**00 14 45.2**	**+2.0**
ACIG				*e*S	**Sn**	**00 15 24.2**	**+2.6**
HMTT	**Tlapaneco**	**3.21**	**83**	*i* P	Pn	00 14 34.6	-8.8
UNM	**Universidad Na**	**3.21**	**53**		**Pn**	**00 14 44.1**	**+0.6**
UNM	**Universidad Na**	**3.21**	**53**	*i* P	**Pn**	**00 14 44.2**	**+0.6**
XCVM	**Xochimilco**	**3.21**	**55**		**Pn**	**00 14 45.6**	**+2.0**
XCVM	**Xochimilco**	**3.21**	**55**	*e*P	**Pn**	**00 14 43.9**	**+0.3**
XCVM				*e*S	**Sn**	**00 15 22.0**	**-0.3**
MHVM	**Bosque de Chap**	**3.23**	**52**		**Pn**	**00 14 46.0**	**+2.2**
MHVM	**Bosque de Chap**	**3.23**	**52**	*e*P	**Pn**	**00 14 43.9**	**0.0**
MHVM				*e*S	**Sn**	**00 15 19.9**	**-2.9**
COVM	**Coyoacan**	**3.23**	**53**	*e*P	**Pn**	**00 14 46.1**	**+2.2**
COVM				*e*S	**Sn**	**00 15 19.3**	**-3.6**
MPVM	**San Francisco**	**3.26**	**57**		**Pn**	**00 14 46.4**	**+2.1**
MPVM	**San Francisco**	**3.26**	**57**	*e*P	**Pn**	**00 14 46.4**	**+2.1**
MPVM				*e*S	**Sn**	**00 15 22.4**	**-1.3**
APVM	**Azcapotzalco**	**3.28**	**51**		**Pn**	**00 14 45.6**	**+1.1**
APVM	**Azcapotzalco**	**3.28**	**51**	*e*P	**Pn**	**00 14 45.6**	**+1.1**
APVM				*e*S	**Sn**	**00 15 24.4**	**+0.3**
CTVM	**Cuauhtemoc**	**3.28**	**52**	*e*P	**Pn**	**00 14 43.3**	**-0.3**
CTVM				*e*S	**Sn**	**00 15 26.4**	**+2.3**
AZVM	**Cuida Lopez Ma**	**3.28**	**49**	*e*S	**Sn**	**00 15 24.6**	**+0.3**
VRVM	**Mexico City**	**3.31**	**53**	*e*S	**Sn**	**00 15 27.3**	**+2.6**
PBVM	**Pinon**	**3.34**	**53**		**Pn**	**00 14 47.0**	**+1.9**
PBVM	**Pinon**	**3.34**	**53**	*e*P	**Pn**	**00 14 47.0**	**+1.9**
PBVM				*e*S	**Sn**	**00 15 23.6**	**-1.6**
THVM	**De Xico**	**3.35**	**55**	*e*P	**Pn**	**00 14 48.4**	**+2.9**
THVM				*e*S	**Sn**	**00 15 23.0**	**-2.9**
IGIG	**Irapuato, Guan**	**3.36**	**9**		**Pn**	**00 14 46.6**	**+1.0**
IGIG					**Sn**	**00 15 24.1**	**-1.9**
IGIG	**Irapuato, Guan**	**3.36**	**9**	*e*	**Pn**	**00 14 46.6**	**+1.0**
IGIG				*i* S	**Sn**	**00 15 24.1**	**-1.9**
AMVM	**AMECAMECA**	**3.41**	**60**		**Pn**	**00 14 48.0**	**+1.6**
AMVM	**AMECAMECA**	**3.41**	**60**	*e*P	**Pn**	**00 14 48.0**	**+1.6**
AMVM				*e*S	**Sn**	**00 15 28.2**	**+0.8**
PTVM	**Pico Tres Padr**	**3.41**	**50**		**Pn**	**00 14 48.2**	**+1.8**
PTVM	**Pico Tres Padr**	**3.41**	**50**	*e*P	**Pn**	**00 14 48.2**	**+1.8**
PTVM				*e*S	**Sn**	**00 15 25.3**	**-2.0**
TXVM	**Universitario**	**3.46**	**54**	*e*P	**Pn**	**00 14 47.2**	**0.0**
TXVM				*e*S	**Sn**	**00 15 25.7**	**-3.0**
JRQG	**Juriquilla Cam**	**3.54**	**23**		**Pn**	**00 14 50.2**	**+2.1**
JRQG	**Juriquilla Cam**	**3.54**	**23**	*e*P	**Pn**	**00 14 47.2**	**-0.9**
JRQG				*e*S	**Sb**	**00 15 36.5**	**-2.5**
ZUVM	**ZUMPANGO**	**3.59**	**48**	*e*P	**Pn**	**00 14 46.0**	**-2.9**
ZUVM				*e*S	**Sn**	**00 15 28.9**	**-2.8**
FTIG	**Fresnillo de T**	**3.62**	**82**	*e*P	**Pn**	**00 14 49.0**	**-0.1**
FTIG				*e*S	**Sn**	**00 15 32.5**	**+0.2**
CJM	**Chamela**	**3.63**	**305**	*e*P	**Pn**	**00 14 47.5**	**-1.6**
PNIG	**Pinotepa**	**3.75**	**105**	*e*P	**Pn**	**00 14 50.7**	**-0.1**
PNIG				*e*S	**Sb**	**00 15 41.3**	**-3.5**
VTVM	**Tizayuca**	**3.77**	**51**		**Pn**	**00 14 53.0**	**+1.6**
VTVM	**Tizayuca**	**3.77**	**51**	*e*P	**Pn**	**00 14 52.0**	**+0.7**
VTVM				*i* P	Pb	00 14 53.0	-6.6
VTVM				*e*S	**Sn**	**00 15 37.4**	**+1.1**
HLIG	**Huajuapan de L**	**3.92**	**83**		**Pn**	**00 14 52.9**	**-0.5**
HLIG	**Huajuapan de L**	**3.92**	**83**	*e*P	**Pn**	**00 14 52.9**	**-0.5**
DHIG	**Demacu**	**3.94**	**43**		**Pn**	**00 14 52.9**	**-0.8**
DHIG					**Sn**	**00 15 40.4**	**0.0**
DEIG	**Demacu**	**3.94**	**43**	*e*P	**Pn**	**00 14 52.9**	**-0.8**
DEIG				*e*P	Pb	00 14 56.7	-5.7
DEIG				*e*S	**Sn**	**00 15 40.4**	**0.0**
TXIG	**Tlaxiaco**	**3.95**	**92**		**Pn**	**00 14 54.5**	**+0.8**
TXIG	**Tlaxiaco**	**3.95**	**92**	*e*P	**Pn**	**00 14 54.5**	**+0.8**
YOIG	**Yosondua**	**4.20**	**97**		**Pn**	**00 14 58.0**	**+0.8**
YOIG	**Yosondua**	**4.20**	**97**	*i* P	**Pn**	**00 14 58.0**	**+0.8**
ANIG	**Ahuacatlan**	**4.38**	**326**	*e*P	**Pn**	**00 14 58.0**	**-1.6**
ANIG				*e*S	**Sn**	**00 15 49.1**	**-2.0**
AAIG	**Aguscalientes**	**4.55**	**354**		**Pn**	**00 14 59.8**	**-2.2**
AAIG	**Aguscalientes**	**4.55**	**354**	*e*P	**Pn**	**00 14 59.8**	**-2.2**
TOIG	**Toxpalan**	**4.65**	**81**		**Pn**	**00 15 02.4**	**-0.9**
TOIG	**Toxpalan**	**4.65**	**81**	*i* P	**Pn**	**00 15 02.4**	**-0.9**
TOIG				*i* S	**Sn**	**00 15 59.6**	**+1.8**
PEIG	**Puerto Escondi**	**4.77**	**107**	*e*P	**Pn**	**00 15 01.3**	**-3.5**
PEIG				*e*S	**Sn**	**00 16 05.2**	**+4.7**
ZAIG	**Zacatecas**	**5.36**	**353**	Pn	**Pn**	**00 15 12.9**	**-0.3**
NEUV	**Arroyo Zacate**	**5.82**	**86**	*e*P	**Pn**	**00 15 17.9**	**-1.4**
NEUV				*e*S	**Sn**	**00 16 24.1**	**-2.3**
GTIG	**Gomez Farias**	**6.17**	**24**	*e*P	**Pn**	**00 15 28.2**	**+4.0**
CMIG	**Matias Romero**	**6.71**	**92**	Pn	**Pn**	**00 15 32.2**	**+0.7**
	0.8nm,0.3s,baz=273,slow=11,SNR=6.9						
CMIG				Lg	Lg	00 17 16.7	
	3.2nm,0.3s,baz=173,slow=19,SNR=3.9						
CMIG				LR	LR	00

ULM LR LR 00 34 58.9
comp=Z,292nm,18.3s,baz=192,slow=39
comp=Z,2.5nm,0.8s
ATAH Atahualpa 33.69 134 LR LR 00 32 03.4
comp=Z,67nm,18.1s,baz=321,slow=32
SJG San Juan 34.02 83 LR LR 00 36 04.9
comp=Z,46nm,18.2s,baz=264,slow=40
V35K Ketchikan 44.11 336 P **P** **00 22 03.1 +1.8**
baz=137
TOAD Toad River Com 44.77 343 P **P** **00 22 08.3 +1.6**
baz=147
T35M Bob Quinn 44.85 338 P **P** **00 22 09.1 +1.8**
baz=140
WRAK Wrangell Islan 45.19 337 P **P** **00 22 11.5 +1.5**
baz=137
LIRD Liard River Hi 45.49 343 P **P** **00 22 14.4 +2.1**
baz=147
KOTAN Kotaneelee Air 45.56 345 P **P** **00 22 14.8 +2.0**
baz=150
YKA Yellowknife Ar 45.90 352 P **P** **00 22 13.3 -2.2**
comp=Z,0.4nm,0.7s,baz=163,slow=7.3,SNR=5.4
YKA LR LR 00 40 56.2
comp=Z,105nm,19.1s,baz=292,slow=36
comp=Z,0.4nm,0.7s
DLBC Dease Lake 45.90 340 LR LR 00 43 41.0
comp=Z,152nm,19.1s,baz=76,slow=39
DLBC Dease Lake 45.90 340 P **P** **00 22 17.8 +2.1**
baz=141
SIT Sitka 46.80 336 P **P** **00 22 23.6 +1.0**
baz=134
R33M Jennings River 46.95 340 P **P** **00 22 25.4 +1.4**
baz=140
Q32M Nakina River 47.05 339 P **P** **00 22 26.1 +1.2**
baz=139
LPAZ La Paz 47.21 133 LR LR 00 40 30.3
comp=Z,55nm,19.2s,baz=268,slow=34
R32K Eaglecrest 47.35 337 P **P** **00 22 28.0 +1.0**
baz=136
S31K Pelican 47.78 336 P **P** **00 22 31.6 +1.3**
baz=133
TGTN Hyland Airport 47.85 343 P **P** **00 22 32.3 +1.5**
baz=145
P32M Atlin 48.02 339 P **P** **00 22 34.0 +1.8**
baz=137
WRGLY Wrigley 48.13 347 P **P** **00 22 34.8 +1.9**
baz=152
SKAG Skagway 48.49 338 P **P** **00 22 37.3 +1.6**
baz=135
PLBC Pleasant Camp 48.87 337 P **P** **00 22 40.4 +1.7**
baz=134
N32M Quiet Lake 48.98 341 P **P** **00 22 41.4 +1.8**
baz=139
WHY Whitehorse 49.20 339 P **P** **00 22 42.8 +1.5**
baz=137
P29M Windy Craggy 49.49 337 P **P** **00 22 45.0 +1.5**
baz=133
P30M Million Dollar 49.55 338 P **P** **00 22 45.2 +1.3**
baz=134
MDP Montagnes des 49.69 98 LR LR 00 46 52.8
comp=Z,35nm,18.1s,baz=279,slow=40
O30N Mendenhall 49.70 339 P **P** **00 22 46.7 +1.7**
baz=135
N31M Braeburn, Yuko 50.10 340 P **P** **00 22 49.8 +1.6**
baz=136
M31M Drury Creek, Y 50.18 341 P **P** **00 22 50.2 +1.5**
baz=138
HYT Haines Junctio 50.23 338 P **P** **00 22 50.6 +1.4**
baz=134
O29M Mount Kennedy 50.26 337 P **P** **00 22 50.5 +1.1**
baz=132
N30M Aishikik Lake 50.53 339 P **P** **00 22 52.8 +1.5**
baz=134
YUK6 Outpost Mounta 50.62 338 P **P** **00 22 53.4 +1.2**
baz=133
PINM Pinnacle 50.76 336 P **P** **00 22 54.6 +1.5**
baz=130
YUK4 Talbot Arm 50.99 338 P **P** **00 22 56.9 +1.9**
baz=133
O28M Mount Upton 51.17 337 P **P** **00 22 57.9 +1.4**
baz=130
M30M Minto, Yukon 51.22 340 P **P** **00 22 58.2 +1.6**
baz=135
YUK8 Steele Glacier 51.35 338 P **P** **00 22 59.0 +1.2**
baz=131,SNR=6.0
MESA MESA 51.47 336 P **P** **00 22 59.6 +1.0**
baz=128
M29M Somme Creek 51.68 339 P **P** **00 23 01.2 +1.1**
baz=134,SNR=7.0
CTG Chitna Glacier 51.73 337 P **P** **00 23 01.4 +0.9**
baz=129
YUK3 Moose Creek 51.93 338 P **P** **00 23 03.1 +1.1**
baz=131
L29M L29M 52.03 340 P **P** **00 23 03.1 +0.5**
baz=134,SNR=11
CRQE Cirque 52.27 336 P **P** **00 23 05.4 +0.9**
baz=127
KAIM Kayak Island 52.31 335 P **P** **00 23 05.8 +1.2**
baz=125
K29M Barlow Dome 52.36 341 IAmb IAmb 00 23 13.5
comp=Z,18nm,0.9s
K29M Barlow Dome 52.36 341 P **P** **00 23 06.5 +1.4**
baz=135,SNR=9.3
BVCY Beaver Creek 52.49 338 P **P** **00 23 06.7 +0.7**
baz=131
J30M Hart River 52.53 342 P **P** **00 23 06.8 +0.4**
baz=137
MCARA McCarthy VSAT 52.63 337 P **P** **00 23 08.5 +1.5**
baz=128
M27K Edge Creek, AK 52.81 338 P **P** **00 23 09.4 +0.9**
baz=130,SNR=5.3
H31M Peel River 52.90 344 P **P** **00 23 09.8 +0.8**
baz=140
BMRM Bremner River 52.99 336 P **P** **00 23 10.8 +1.1**
baz=126
I30M Mount Dempster 53.02 343 P **P** **00 23 10.7 +0.7**
baz=137
DAWY Dawson 53.11 340 P **P** **00 23 11.8 +1.3**
baz=133,SNR=6.0
BCAR Beaver Creek A 53.24 339 P **P** **00 23 12.7 +1.1**
M26K Nabesna, AK 53.25 338 P **P** **00 23 12.7 +1.1**
baz=128,SNR=7.3
L27K Beaver Creek, 53.25 339 P **P** **00 23 13.3 +1.7**
baz=130
N25K Chitina, Valde 53.36 336 P **P** **00 23 13.6 +1.1**
baz=126
P23K Montague Islan 53.59 334 P **P** **00 23 15.2 +1.0**
baz=122
C36M Paulatuk 53.71 350 P **P** **00 23 16.6 +1.8**
baz=153
KLU Klutina 53.81 336 P **P** **00 23 17.6 +1.7**
baz=125
GLI Glacier Island 53.94 335 P **P** **00 23 18.5 +1.8**
baz=123
K27K Chicken 53.96 339 P **P** **00 23 18.8 +2.0**
baz=130
EPYK Eagle Plains 53.97 343 P **P** **00 23 18.5 +1.7**
baz=138
F31M Tsiigehtchic 54.02 345 P **P** **00 23 18.4 +1.3**
baz=141
HARP HAARP 54.05 337 P **P** **00 23 19.0 +1.6**
baz=126
I28M Miner Creek 54.23 342 P **P** **00 23 20.0 +1.2**
baz=133
M24K Tolsona, Glenn 54.26 336 P **P** **00 23 20.4 +1.4**
baz=125
G30M tAoh Zraii Nji 54.29 344 P **P** **00 23 20.6 +1.4**
baz=138
H29M Whitestone 54.32 343 P **P** **00 23 19.9 +0.6**
baz=136
PWL Port Wells 54.44 334 P **P** **00 23 21.3 +1.0**
baz=122
PAX Paxson 54.50 337 P **P** **00 23 22.1 +1.3**
baz=126,SNR=6.0
SEW Seward 54.53 333 P **P** **00 23 22.4 +1.4**
baz=120
SCM Sheep Creek Mo 54.56 335 P **P** **00 23 23.0 +1.7**
baz=123
SCRK Sand Creek 54.58 339 P **P** **00 23 22.4 +1.0**
baz=128,SNR=5.6
F30M Barrier River 54.66 345 P **P** **00 23 22.7 +0.9**
baz=139
INK Inuvik 54.66 346 P **P** **00 23 23.0 +1.2**
baz=142,SNR=11
G29M Pine Creek 54.72 343 P **P** **00 23 24.0 +1.7**
baz=136,SNR=6.1
RIDG Independent Ri 54.73 338 P **P** **00 23 23.8 +1.4**
baz=127,SNR=7.6
J26L Joseph Creek 54.76 339 P **P** **00 23 23.5 +0.8**
J26L Joseph Creek 54.76 339 P **P** **00 23 24.2 +1.5**
baz=129,SNR=14
KNK Knik Glacier 54.79 335 P **P** **00 23 23.8 +1.0**
baz=122
I27K Kandik River 54.85 341 P **P** **00 23 25.0 +1.7**
baz=132
KDAK Kodiak Island 54.88 330 P **P** **00 23 24.5 +1.0**
baz=115
BRSE Bradley Lake S 54.92 332 P **P** **00 23 24.5 +0.7**
baz=118
SML Sawmill 54.95 335 P **P** **00 23 24.9 +0.8**
baz=122
H03N2 Juan Fernandez 55.12 157 T T 01 23 03.4
baz=334,slow=77,SNR=92
H03N1 Juan Fernandez 55.13 157 T T 01 23 04.5
baz=334,slow=77,SNR=105
WAT6 Susitna Watana 55.13 336 P **P** **00 23 26.4 +0.9**
baz=123
H03N3 Juan Fernandez 55.14 157 T T 01 22 55.9
baz=334,slow=77,SNR=65
I26K Coal Creek Min 55.14 340 P **P** **00 23 26.5 +1.2**
baz=130
Q20K Shuyak Island 55.15 331 P **P** **00 23 26.5 +1.0**
baz=116
PMR Palmer 55.16 335 P **P** **00 23 26.6 +1.2**
baz=121
H27K Steamboat Moun 55.25 342 IAmb IAmb 00 23 34.8
comp=Z,11nm,0.8s
H27K Steamboat Moun 55.25 342 P **P** **00 23 26.6 +0.5**
baz=132,SNR=7.7
DHY Denali Highway 55.27 337 P **P** **00 23 27.4 +0.9**
baz=124
J25K Salcha River, 55.45 339 P **P** **00 23 29.3 +1.6**
baz=127
WAT1 Susitna Watana 55.59 336 P **P** **00 23 30.0 +1.4**
baz=123
M22K Willow 55.65 335 P **P** **00 23 29.9 +0.9**
baz=120
G27K Doyon Strip 55.67 342 P **P** **00 23 30.9 +1.7**
baz=132
F28M Old Crow 55.73 343 P **P** **00 23 30.9 +1.4**
baz=135,SNR=10.0
SUA Susitna One 55.76 334 P **P** **00 23 31.5 +1.5**
baz=120
E29M Blow River 55.77 345 P **P** **00 23 31.5 +1.7**
baz=137
Q19K Cape Douglas, 55.88 331 P **P** **00 23 32.5 +1.7**
baz=115
HDA Harding Lake 55.88 338 P **P** **00 23 32.3 +1.7**
baz=125,SNR=6.1
O20K Slope Mountain 55.91 332 P **P** **00 23 32.6 +1.6**
baz=117
P19K Oil Pt 56.00 331 P **P** **00 23 33.5 +1.9**
baz=116
CUT Chulitna 56.04 335 P **P** **00 23 33.5 +1.7**
baz=121
PRP Porcupine Dome 56.05 340 P **P** **00 23 33.6 +1.5**
baz=127,SNR=11
ILAR Eielson Array 56.07 339 P **P** **00 23 32.0 +0.1**
comp=Z,1.3nm,0.9s,baz=148,slow=5.2,SNR=14
ILAR LR LR 00 50 04.2
comp=Z,131nm,19.0s,baz=132,slow=39
comp=Z,1.3nm,0.9s
ILAR Eielson Array 56.07 339 P **P** **00 23 32.6 +0.7**
MCK McKinley 56.22 337 P **P** **00 23 34.5 +1.4**
baz=123,SNR=5.4
N20K Mount Spurr 56.25 333 P **P** **00 23 34.5 +1.1**
baz=118
SPCR Spurr Chakacha 56.25 333 P **P** **00 23 34.6 +1.2**
baz=118
A36M Sachs Harbour 56.26 351 P **P** **00 23 34.7 +1.5**
baz=153,SNR=11
SKT Skwentna 56.34 334 P **P** **00 23 34.1 +0.1**
SKT IAmb IAmb 00 23 47.3
comp=Z,13nm,1.1s
SKT Skwentna 56.34 334 P **P** **00 23 35.0 +1.1**
baz=119
E28M Babbage River 56.34 344 P **P** **00 23 35.2 +1.2**
baz=136
G26K Porcupine Rive 56.40 342 IAmb IAmb 00 23 42.1
comp=Z,10nm,0.8s
G26K Porcupine Rive 56.40 342 P **P** **00 23 36.0 +1.7**
baz=130,SNR=6.0
Q18K Katmai Hardscr 56.41 330 P **P** **00 23 35.7 +1.0**
baz=114
POKR Poker Plat Res 56.46 339 P **P** **00 23 36.1 +1.3**
baz=125
COLA College 56.46 338 P **P** **00 23 35.6 +0.8**
baz=124
TRF Thorofare Moun 56.58 336 P **P** **00 23 36.2 +0.3**
TRF Thorofare Moun 56.58 336 P **P** **00 23 36.8 +0.9**
baz=121,SNR=8.8
E27K Coleen River 56.60 343 P **P** **00 23 37.4 +1.7**
baz=133
FYU Fort Yukon 56.60 341 P **P** **00 23 35.2 -0.6**
D28M Stokes Point 56.67 345 P **P** **00 23 37.6 +1.4**
baz=137
R17L Mt. Peulik Vol 56.68 328 P **P** **00 23 37.5 +1.0**
baz=112
Q17K Contact Creek 56.68 329 P **P** **00 23 37.6 +1.0**
baz=112
O19K Port Alsworth 56.73 332 P **P** **00 23 37.6 +0.9**
baz=115
NEA2 Nenana 56.74 338 P **P** **00 23 37.8 +1.0**
baz=123
M20K Styx River 56.96 334 P **P** **00 23 39.4 +1.0**
baz=117
F26K Sheenjek River 56.99 342 P **P** **00 23 39.4 +0.8**
baz=130,SNR=9.3
O18K Koktuh Hills 56.99 331 P **P** **00 23 40.0 +1.4**
baz=114
G25K Bearman Lake 57.00 341 P **P** **00 23 40.2 +1.6**
baz=127
H24K Noodor Dome 57.03 339 P **P** **00 23 40.5 +1.6**
baz=125,SNR=8.3
PPLA Purkeypile 57.05 335 P **P** **00 23 40.1 +0.9**
baz=119
N19K Bonanza Creek 57.07 332 P **P** **00 23 40.5 +1.3**
baz=115
I23K Minto, Yukon-K 57.15 338 P **P** **00 23 41.4 +1.7**
baz=123,SNR=5.9
D27M Malcolm River 57.16 344 P **P** **00 23 41.4 +1.6**
baz=134
BPAW Bear Paw Mtn. 57.19 337 P **P** **00 23 41.0 +1.0**
baz=121
F25K Christian Rive 57.37 342 IAmb IAmb 00 23 49.0
comp=Z,9.8nm,0.8s
F25K Christian Rive 57.37 342 P **P** **00 23 42.8 +1.5**
baz=128,SNR=5.7
G24K Hadweenzic Riv 57.40 340 P **P** **00 23 42.8 +1.4**
baz=126,SNR=12
RES Resolute Bay 57.41 2 LR LR 00 50 27.2
comp=Z,104nm,18.6s,baz=28,slow=38
CHNA Chernabura Isl 57.46 325 P **P** **00 23 43.6 +1.6**
baz=107
M19K Big River Lodg 57.50 334 P **P** **00 23 43.8 +1.6**
baz=116
L20K Farewell, AK 57.54 334 P **P** **00 23 44.4 +1.9**
baz=117
CHUM Lake Minchumin 57.58 336 P **P** **00 23 43.7 +1.0**
baz=119
H23K Yukon River 57.59 339 P **P** **00 23 44.5 +1.7**
baz=123
E25K Arctic Village 57.68 342 P **P** **00 23 44.7 +1.3**
baz=129
L19K White Mountain 57.82 334 P **P** **00 23 45.5 +1.0**
baz=116
O17K Koliganek Bris 57.84 331 P **P** **00 23 45.4 +0.8**
baz=112
M18K Stony River 57.94 333 P **P** **00 23 46.8 +1.5**
baz=114
F24K Squaw Lake 58.01 341 P **P** **00 23 47.3 +1.5**
baz=126
K20K Telida 58.02 335 P **P** **00 23 47.7 +1.8**
baz=117
I21K Tanana 58.11 338 P **P** **00 23 48.5 +2.1**
baz=120
C27K Jago River 58.14 344 P **P** **00 23 47.1 +0.5**
C27K IAmb IAmb 00 23 53.7
comp=Z,12nm,0.9s
C27K Jago River 58.14 344 P **P** **00 23 48.0 +1.4**
baz=131
N17K Nushagak Hills 58.16 331 P **P** **00 23 48.5 +1.6**
baz=112
G23K Bananza Creek 58.24 340 P **P** **00 23 49.1 +1.7**
baz=123
O16K Kokwok River B 58.24 330 P **P** **00 23 49.3 +1.9**
baz=111
H22K Ishtalitna Cre 58.26 338 P **P** **00 23 47.1 -0.4**
H22K IAmb IAmb 00 23 54.9
comp=Z,10nm,0.8s
H22K Ishtalitna Cre 58.26 338 P **P** **00 23 48.5 +1.0**
baz=121
J20K Nowinta River 58.43 336 P **P** **00 23 48.2 -0.5**
J20K IAmb IAmb 00 23 56.2
comp=Z,12nm,1.0s
J20K Nowinta River 58.43 336 P **P** **00 23 50.1 +1.4**
baz=118
E24K Your Creek 58.52 341 P **P** **00 23 50.9 +1.6**
baz=126
COLD Coldfoot 58.58 340 P **P** **00 23 51.1 +1.4**
baz=123
L18K Granite Mounta 58.62 333 P **P** **00 23 51.3 +1.3**
baz=114
M17K Holitna River 58.62 332 P **P** **00 23 51.4 +1.4**
baz=113
C26K Camden Bay 58.64 344 P **P** **00 23 51.8 +1.7**
baz=130
H21K Melozitna Rive 58.65 338 P **P** **00 23 51.2 +1.0**
baz=120
D25K Kavik River 58.66 343 P **P** **00 23 52.6 +2.3**
baz=128
E23K Chandalar 58.86 341 P **P** **00 23 53.0 +1.3**
baz=124
O15K Ungalikthiuk R 58.93 329 P **P** **00 23 53.8 +1.6**
baz=109
J19K Poorman 58.93 335 P **P** **00 23 53.8 +1.6**
baz=116
S12K Black Hills 59.06 325 P **P** **00 23 54.7 +1.5**
baz=105
J18K Innoko River 59.14 335 P **P** **00 23 55.3 +1.6**
baz=115
IMAR Indian Mountai 59.15 338 P **P** **00 23 52.2 -1.5**
M16K Timber Creek 59.16 332 P **P** **00 23 55.4 +1.6**
baz=111
TOLK Toolik Lake Re 59.18 342 P **P** **00 23 55.2 +1.3**
baz=125
D24K Happy Valley 59.25 342 P **P** **00 23 54.3 0.0**
D24K Happy Valley 59.25 342 P **P** **00 23 55.5 +1.2**
baz=126
H20K Anotleneega Mo 59.32 337 P **P** **00 23 55.9 +1.0**
baz=118
F22K John River 59.38 340 P **P** **00 23 57.4 +2.2**
baz=121
SFJD Kangerlussuaq 59.45 21 LR LR 00 49 37.3
comp=Z,53nm,19.1s,baz=194,slow=36
K17K Iditarod 59.50 334 P **P** **00 23 58.2 +2.0**
baz=113
C24K Franklin Bluff 59.55 343 P **P** **00 23 55.9 -0.5**
C24K Franklin Bluff 59.55 343 P **P** **00 23 58.1 +1.7**
baz=126
E22K Anaktuvuk Pass 59.59 341 P **P** **00 23 58.0 +1.3**
baz=122
L16K Owhat River 59.64 332 P **P** **00 23 58.4 +1.3**
baz=111
F21K Alatna River 59.66 339 P **P** **00 23 58.3 +1.0**
baz=120,SNR=5.5
D23K Nanushuk River 59.70 342 P **P** **00 23 56.1 -1.3**
D23K Nanushuk River 59.70 342 P **P** **00 23 59.0 +1.6**
baz=124
GCSA Galena City Sc 59.75 336 P **P** **00 23 59.2 +1.4**
baz=115
M15K Kasigluk River 59.84 331 P **P** **00 24 00.5 +2.0**
baz=109
H19K Roundabout Mou 59.92 337 P **P** **00 24 00.8 +1.9**
baz=116
N14K Kuskokwak Cree 60.06 330 P **P** **00 24 00.8 +0.8**
baz=108
J17K VABM Dome 60.09 334 P **P** **00 24 01.8 +1.6**
baz=112
C23K Itkillik River 60.16 343 P **P** **00 23 59.1 -1.5**
C23K Itkillik River 60.16 343 P **P** **00 24 02.8 +2.2**
baz=124
D22K Ayikyak River 60.26 341 P **P** **00 24 03.2 +1.9**
baz=122
F20K Avaraart Lake 60.35 339 P **P** **00 24 03.5 +1.6**
baz=118
G19K Purcell Mounta 60.43 337 P **P** **00 24 04.3 +1.8**
baz=116
M14K Bethel 60.45 331 P **P** **00 24 04.6 +1.9**
baz=108
H18K Honhosa River 60.49 336 P **P** **00 24 04.2 +1.2**
baz=114
J16K Anvik River 60.69 334 P **P** **00 24 05.3 +1.0**
baz=111
K15K Wolf Creek Mou 60.75 332 P **P** **00 24 05.7 +1.0**
baz=109
L14K Kuka Creek 60.97 331 P **P** **00 24 07.4 +1.2**
baz=108
M13K Dall Lake 61.00 330 P **P** **00 24 07.7 +1.3**
baz=106
H17K Granite Mounta 61.01 336 P **P** **00 24 07.8 +1.3**
baz=112
C21K Knifeblade Rid 61.05 341 P **P** **00 24 08.3 +1.6**
baz=120
E19K Redstone River 61.06 339 P **P** **00 24 08.6 +1.9**
baz=116
E20K Nigu River 61.07 340 P **P** **00 24 08.1 +1.2**
baz=118
UNV Unalaska Valle 61.16 322 P **P** **00 24 09.0 +1.4**
baz=100
B21K Ikpikpuk River 61.23 341 P **P** **00 24 09.6 +1.7**
B21K IAmb IAmb 00 24 30.9
comp=Z,15nm,1.3s
B21K Ikpikpuk River 61.23 341 P **P** **00 24 09.4 +1.5**
baz=120
B22K Teshekpuk Lake 61.25 342 P **P** **00 24 09.7 +1.8**
baz=121
CPUP Villa Florida 61.37 134 LR LR 00 50 29.2
comp=Z,8.9nm,19.0s,baz=303,slow=36
RDOG Red Dog Mine 63.28 338 P **P** **00 24 23.1 +1.4**
baz=111
TNA Tin City 64.41 335 P **P** **00 24 30.4 +1.3**
baz=105
GAMB Gambell 65.61 333 P **P** **00 24 38.4 +1.5**
baz=100
BORG Borgarnes 70.37 27 LR LR 00 57 10.1
comp=Z,48nm,19.5s,baz=345,slow=37
SPITS Spitsbergen Ar 78.58 11 LR LR 01 01 51.3
comp=Z,78nm,19.1s,baz=296,slow=37
SEY Seynchan 81.59 334 LR LR 01 04 43.0
comp=Z,47nm,18.7s,baz=318,slow=38
TIXI Tiksi 84.78 346 LR LR 01 09 27.2
comp=Z,24nm,18.1s,baz=190,slow=40
NOA NORSAR Array B 85.55 27 LR LR 01 06 07.8
comp=Z,22nm,19.0s,baz=265,slow=37
ARCES ARCESS Array B 85.72 16 LR LR 01 05 06.8
comp=Z,33nm,18.3s,baz=55,slow=36
YAK Yakutsk 90.99 338 LR LR 01 11 28.6
comp=Z,48nm,18.6s,baz=301,slow=38
NRIK Noril'sk 93.21 357 LR LR 01 10 14.1
comp=Z,44nm,20.6s,baz=30,slow=36
KIRV Kirov 100.67 15 LR LR 01 14 37.8
comp=Z,35nm,20.4s,baz=342,slow=36
WRA Warramunga Arr 126.87 258 PKP **PKiKP** **00 33 01.7 +3.2**
comp=Z,0.6nm,0.9s,baz=91,slow=3.0,SNR=4.5
ASAR Alice Springs 127.65 253 PKP **PKiKP** **00 33 03.6 +3.6**
comp=Z,0.3nm,0.7s,baz=95,slow=3.6,SNR=1.8

NEIC ***27*** *00:18:32.4±1.2,28.7°17N±0.7°04×87.7°87E±0.7°05,h65km±6km, mb4.4/52, Error ellipse: s-maj=8.9km s-min=1.8km az=48.0*
NDI ***27*** *00:18:32.2±2.8,28.2°21N×87.2°79E,h50km,ML4.3,MW4.0*
DMN ***27*** *00:18:33.5±0.0,28.0°09N×87.9°91E,h60km,Ml5.1/9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
IDC ***27*** *00:18:34.1±0.6,28.0°08N×87.7°77E,h85km±5km, mb4.0/19, mbtmp4.3/23,MS3.1/4, Error ellipse: s-maj=20.2km s-min=10.9km az=52.0*
BJI ***27*** *00:18:39.6,28.7°75N×87.9°90E,h130km,mb4.3/16*
ISC 27 00:18:32.5±0.5,28.0°09N±0.0°04×87.8°88E±0.0°03,h80km±4km, n145,σ1s76/187,mb4.4/38,1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
TAPN	**Taplejung**	**0.75**	**192**	Pg	**Pn**		**00 18 49.7**	**+0.6**
	baz=193,slow=0.0							
TAPN				Sg	**Sn**		**00 19 02.2**	**+0.9**
	7μm,0.3s,baz=193,slow=0.0							
TAPN	**Taplejung**	**0.75**	**192**	Pg	**Pn**		**00 18 49.7**	**+0.6**
	baz=189,slow=0.0							
TAPN				Sg	**Sn**		**00 19 01.5**	**+0.2**
	7μm,0.3s,baz=189,slow=0.0							
EVN	**Everest**	**0.95**	**262**		**Pn**		**00 18 51.7**	**0.0**

EVN Sn **Sn** **00 19 05.7 -0.1**
ODAN Odare 1.30 200 Pg **Pn** **00 18 56.5 +0.9**
baz=200,slow=0.0
ODAN Sg **Sn** **00 19 12.8 0.0**
3µm,0.2s,baz=200,slow=0.0
ODAN Odare 1.30 200 Pn **Pn** **00 18 56.4 +0.9**
baz=199,slow=0.0
ODAN Sn **Sn** **00 19 12.6 -0.2**
3µm,0.2s,baz=199,slow=0.0
JIRN Jiri 1.56 254 Pg **Pn** **00 18 59.8 +0.8**
baz=254,slow=0.0
JIRN Sg **Sn** **00 19 19.2 +0.3**
2µm,0.2s,baz=254,slow=0.0
JIRN Jiri 1.56 254 Pn **Pn** **00 18 59.8 +0.8**
baz=256,slow=0.0
JIRN Sg **Sn** **00 19 18.6 -0.3**
2µm,0.2s,baz=256,slow=0.0
RAMN Ramite 1.61 225 Pg **Pn** **00 18 59.8 +0.3**
baz=226,slow=0.0
RAMN Sg **Sn** **00 19 20.2 +0.3**
2µm,0.3s,baz=226,slow=0.0
RAMN Ramite 1.61 225 Pn **Pn** **00 18 59.8 +0.3**
baz=226,slow=0.0
RAMN Sn **Sn** **00 19 18.6 -1.3**
2µm,0.3s,baz=226,slow=0.0
GUN Gumba 1.78 265 Pg **Pn** **00 19 02.9 +1.1**
baz=265,slow=0.0
GUN Sg **Sn** **00 19 24.5 +0.4**
2µm,0.2s,baz=265,slow=0.0
GUN Gumba 1.78 265 Pn **Pn** **00 19 02.9 +1.1**
baz=266,slow=0.0
GUN Sn **Sn** **00 19 23.7 -0.4**
1µm,0.2s,baz=266,slow=0.0
PKI Pulchoki 2.25 257 Pn **Pn** **00 19 08.9 +0.8**
baz=257,slow=0.0
PKI Sn **Sn** **00 19 35.1 -0.1**
baz=257,slow=0.0
PKI Pulchoki 2.25 257 Pn **Pn** **00 19 08.6 +0.5**
baz=258,slow=0.0
PKI Sn **Sn** **00 19 34.8 -0.4**
926nm,0.2s,baz=258,slow=0.0
PKIN Phulchoki 2.26 257 Pn **Pn** **00 19 09.4 +1.2**
baz=258,slow=0.0
PKIN Sn **Sn** **00 19 35.1 -0.3**
1µm,0.2s,baz=258,slow=0.0
PKIN Phulchoki 2.26 257 Pn **Pn** **00 19 08.7 +0.5**
baz=258,slow=0.0
PKIN Sn **Sn** **00 19 34.9 -0.5**
1µm,0.2s,baz=258,slow=0.0
COBR COOCHBEHAR 2.28 141 *e*S **Sn** **00 19 37.1 +1.8**
COBR IAML 00 19 39.0
comp=E,10µm,0.3s
COBR IAML 00 19 40.1
comp=N,7µm,0.2s
KKN Kakani 2.32 263 Pg **Pn** **00 19 10.3 +1.4**
baz=263,slow=0.0
KKN Sg **Sn** **00 19 37.3 +0.5**
comp=N,3µm,0.3s,baz=263,slow=0.0
KKN Kakani 2.32 263 Pn **Pn** **00 19 09.8 +0.9**
baz=264,slow=0.0
KKN Sn **Sn** **00 19 36.8 0.0**
comp=N,3µm,0.3s,baz=264,slow=0.0
DMN Daman 2.50 260 Pn **Pn** **00 19 12.1 +0.7**
baz=260,slow=0.0
DMN Sn **Sn** **00 19 41.5 +0.3**
comp=N,1µm,0.3s,baz=260,slow=0.0
DMN Daman 2.50 260 Pn **Pn** **00 19 11.7 +0.3**
baz=260,slow=0.0
DMN Sn **Sn** **00 19 40.4 -0.8**
comp=N,1µm,0.3s,baz=260,slow=0.0
DHUB DHUBRI 2.79 137 *e*P **Pn** **00 19 16.4 +1.3**
DHUB *e*S **Sn** **00 19 48.5 +0.8**
DHUB IAML 00 19 53.5
comp=N,1µm,0.3s
DHUB IAML 00 19 53.8
comp=E,1µm,0.4s
LSA Lhasa 3.28 60 Pn **Pn** **00 19 22.2 +0.1**
LSA Lhasa 3.28 60 P **Pn** **00 19 18.5 -3.6**
LSA S Sn 00 20 26.0 +26
LSA LR LR
comp=N,210nm,9.6s
LSA LR LR
comp=E,230nm,9.5s
TAWA Tawang 3.56 97 *e*P **Pn** **00 19 27.2 +1.4**
TAWA *e*S **Sn** **00 20 07.6 +0.6**
TAWA IAML 00 20 08.7
comp=E,2µm,0.3s
TAWA IAML 00 20 10.1
comp=N,3µm,0.4s
DANN Dangsing 3.65 275 Pn **Pn** **00 19 25.6 -1.3**
baz=275,slow=0.0
DANN Sn **Sn** **00 20 07.2 -1.8**
comp=N,1µm,0.2s,baz=275,slow=0.0
DANN Dangsing 3.65 275 Pn **Pn** **00 19 25.3 -1.6**
baz=276,slow=0.0
DANN Sn **Sn** **00 20 06.5 -2.5**
comp=N,1µm,0.2s,baz=276,slow=0.0
SHL Shillong 4.37 124 Pn **Pn** **00 19 35.8 -0.9**
SHL Shillong 4.37 124 *e*P **Pn** **00 19 36.4 -0.3**
SHL *e*S **Sn** **00 20 27.1 +0.6**
SHL IAML 00 20 29.6
comp=N,493nm,0.4s
SHL IAML 00 20 29.7
comp=E,339nm,0.2s
TEZP TEZPUR 4.61 107 *e*P **Pn** **00 19 39.3 -0.5**
TEZP *e*S **Sn** **00 20 29.2 -2.9**
TEZP IAML 00 20 31.6
comp=N,939nm,0.1s
TEZP IAML 00 20 33.3
comp=E,994nm,0.1s
BOK Bokaro 4.64 203 *e*P **Pn** **00 19 40.4 +0.2**
BOK *e*S **Sn** **00 20 29.2 -3.7**
BOK IAML 00 20 32.3
comp=N,574nm,0.3s
BOK IAML 00 20 32.6
comp=E,639nm,0.3s
AGT Agartala 5.17 143 *e*P **Pn** **00 19 48.2 +0.8**
AGT *e*S **Sn** **00 20 46.8 +1.1**
AGT IAML 00 20 48.0
comp=E,648nm,0.5s
AGT IAML 00 20 52.7
comp=N,400nm,0.5s
ITAN ITANAGAR 5.27 99 *e*P **Pn** **00 19 48.3 -0.4**
ITAN *e*S **Sn** **00 20 45.8 -2.3**
ITAN IAML 00 20 48.8
comp=E,608nm,0.2s
ITAN IAML 00 20 51.6
comp=N,844nm,0.3s
ZIRO ZIRO 5.32 95 *e*P **Pn** **00 19 49.5 0.0**
ZIRO *e*S **Sn** **00 20 46.6 -2.9**
ZIRO IAML 00 20 50.7
comp=E,3µm,0.3s
ZIRO IAML 00 20 51.3
comp=N,3µm,0.4s
KOHI KOHIMA 6.04 112 *e*P **Pn** **00 19 58.8 -0.6**
KOHI *e*S **Sn** **00 21 03.2 -4.0**
KOHI IAML 00 21 05.9
comp=N,412nm,0.7s
KOHI IAML 00 21 07.0
comp=E,428nm,0.6s
MOKO MOKOCHONG 6.16 105 *e*P **Pn** **00 20 00.3 -0.8**
MOKO *e*S **Sn** **00 21 05.5 -4.8**
MOKO IAML 00 21 09.4
comp=N,1µm,0.4s
MOKO IAML 00 21 12.5
comp=E,650nm,0.3s
IMP Imphal 6.33 119 *e*P **Pn** **00 20 04.7 +1.3**
IMP *e*S **Sn** **00 21 13.2 -1.1**
IMP IAML 00 21 21.1
comp=N,97nm,0.3s
IMP IAML 00 21 22.7
comp=E,63nm,0.5s
BRDH Bariadhala 6.37 147 P **Pn** **00 20 04.4 +0.5**
comp=E,102nm,0.4s,baz=240,slow=19,SNR=4.0
BRDH S **Sn** **00 21 13.1 -2.1**
comp=E,438nm,0.4s,baz=276,slow=22,SNR=6.2
LGTI Lohaghat 6.84 283 *e*P **Pn** **00 20 09.1 -1.1**
LGTI *e*S **Sn** **00 21 23.1 -3.4**
LGTI IAML 00 21 31.4
comp=N,167nm,0.2s
LKP Lekhapani 7.10 94 IAML 00 21 24.8
comp=E,332nm,0.4s
LKP IAML 00 21 28.5
comp=N,382nm,0.3s
LKP *e*S **Sn** **00 21 29.0 -3.9**
SAIH SAIHA 7.24 139 *e*P **Pn** **00 20 16.2 +0.3**
SAIH *e*S **Sn** **00 21 33.9 -2.8**
SAIH IAML 00 21 37.9
comp=E,424nm,0.4s
SAIH IAML 00 21 39.3
comp=N,209nm,0.5s
BLSP Bilaspur 7.90 223 *e*P **Pn** **00 20 24.9 +0.1**
BLSP *e*S **Sn** **00 21 46.8 -5.8**
BLSP IAML 00 21 48.5
comp=N,200nm,0.2s
BLSP IAML 00 21 49.1
comp=E,214nm,0.3s
BWNR Bhubaneshwar 7.99 194 *e*P **Pn** **00 20 26.5 +0.6**
BWNR *e*S **Sn** **00 21 49.8 -4.9**
BWNR IAML 00 21 53.8
comp=E,134nm,0.2s
BWNR IAML 00 21 55.3
comp=N,157nm,0.2s
LDR Lodi Road 9.41 276 *e*S Sn 00 22 19.2 -10
NDI New Delhi 9.41 276 *e*S Sn 00 22 19.0 -11
NDI IAML 00 22 25.0
comp=E,206nm,0.3s
NDI IAML 00 22 25.8
comp=N,112nm,0.2s
RAGD RAYAGADA 9.69 206 *e*P **Pn** **00 20 49.0 -0.2**
RAGD *e*S **Sn** **00 22 30.6 -5.8**
RAGD IAML 00 22 35.6
comp=E,25nm,0.4s
RAGD IAML 00 22 36.2
comp=N,15nm,0.3s
SMLA Simla 9.80 291 *e*P **Pn** **00 20 47.5 -3.1**
SMLA *ex* x 00 22 30.8
SMLA IAML 00 22 35.5
comp=N,174nm,0.4s
SMLA IAML 00 22 38.1
comp=E,138nm,0.1s
KUDL Kundal 10.06 273 *e*P **Pn** **00 20 50.6 -3.5**
KUDL *e*S Sn 00 22 34.4 -11
KUDL IAML 00 22 38.0
comp=E,66nm,0.2s
KUDL IAML 00 22 38.5
comp=N,99nm,0.3s
GUNA GUNA 10.06 252 *e*S Sn 00 22 34.2 -11
BHPL Bhopal 10.60 245 *e*P **Pn** **00 20 58.3 -3.2**
BHPL *e*S Sn 00 22 46.7 -12
BHPL IAML 00 22 52.7
comp=N,71nm,0.3s
BHPL IAML 00 22 53.5
comp=E,74nm,0.4s
ALCI Alchi Leh 11.01 306 *e*P **Pn** **00 21 06.0 -1.4**
TSSA Tissa 11.17 298 *e*P **Pn** **00 21 05.8 -3.7**
TSSA IAML 00 23 08.5
comp=N,74nm,0.3s
TSSA IAML 00 23 12.3
comp=E,88nm,0.3s
CHTO Chiang Mai 13.71 130 P **P** **00 21 50.1 +0.6**
NIL Nilore 13.73 297 Pn **Pn** **00 21 40.4 -3.3**
CMAR Chiang Mai Arr 13.96 131 P **Pn** **00 21 44.5 -2.3**
comp=E,1.3nm,0.3s,baz=311,slow=14,SNR=4.7
CMAR Chiang Mai Arr 13.96 131 Pn **Pn** **00 21 45.5 -1.3**
WUS Wushi 14.88 334 Pn **Pn** **00 21 56.9 -1.9**
KSH Kashi 15.08 322 P **Pn** **00 21 57.5 -3.7**
KSH pmax pmax
comp=E,15nm,0.9s
LZDM Lanzhou Array 15.52 56 P **P** **00 22 09.4 -0.4**
comp=E,1.0nm,0.3s,baz=225,slow=12,SNR=2.1
TARG Taragay Kyrgy 15.90 331 Pn **Pn** **00 22 11.7 -0.2**
PRZ Przheval'sk 16.30 334 Pn **Pn** **00 22 15.1 -1.5**
PRZ IAmb IAmb 00 22 55.2
comp=E,63nm,1.2s
GYA Guiyang 16.78 91 ⇓P **P** **00 22 25.3 +1.7**
GYA S **Sn** **00 25 26.0 -2.7**
GYA pmax pmax
comp=E,9.0nm,0.8s
GYA LR LR
comp=E,280nm,5.2s
GYA LR LR
comp=E,290nm,4.2s
GYA LR LR
comp=E,92nm,4.0s
KBL Kabul 17.32 296 Pn **Pn** **00 22 25.6 -3.8**
KBL IAmb IAmb 00 22 31.4
comp=E,12nm,0.8s
BOOM Boomskoye usch 17.33 329 **Pn** **00 22 28.2 -1.2**
DRK Karamyk 17.51 315 Pn **Pn** **00 22 28.0 -3.8**
AAK Ala-Archa 18.13 327 P **Pn** **00 22 40.3 +1.2**
comp=E,2.1nm,0.5s,baz=164,slow=10,SNR=12
AAK Ala-Archa 18.13 327 **P** **00 22 39.0 +0.6**
GAR Garm 18.21 311 **P** **00 22 35.3 -4.0**
GAR IAmb IAmb 00 22 48.8
comp=E,19nm,1.0s
CHGR Chuyangaron 18.82 309 P **P** **00 22 43.4 -2.6**
CHGR IAmb IAmb 00 22 49.5
comp=E,21nm,0.8s
MKAR Makanchi Array 19.18 348 P **P** **00 22 49.8 +0.1**
comp=E,1.3nm,0.3s,baz=192,slow=10,SNR=44
MKAR LR LR 00 31 47.7
comp=E,37nm,21.7s,baz=160,slow=41
MKAR Makanchi Array 19.18 348 P **P** **00 22 49.2 -0.5**
KK31 Karatay Array 20.53 321 P **P** **00 23 02.8 -1.6**
KKAR Karatay Array 20.53 321 P **P** **00 23 03.5 -0.9**
BTO Baotou 22.06 50 *e*P **P** **00 23 22.5 +1.6**
BTO S **S** **00 27 11.3 -8.3**
BTO pmax pmax
comp=E,12nm,0.5s
BTO LR LR
comp=E,290nm,4.4s
BTO LR LR
comp=E,290nm,4.9s
BTO LR LR
comp=E,120nm,4.5s
HHC Hu-ho-hao-te 23.22 51 *e*P **P** **00 23 32.8 -0.1**
HHC pmax pmax
comp=E,5.0nm,0.8s
KURBB Kurchatov Arra 23.60 345 P **P** **00 23 36.9 +0.9**
comp=E,17nm,0.8s,baz=163,slow=9.1,SNR=65
KURBB ScP **ScP** **00 30 50.0 +0.1**
comp=E,0.3nm,0.8s,baz=163,slow=1.4,SNR=4.1
comp=E,17nm,0.8s
KURK Kurchatov 23.66 345 P **P** **00 23 37.4 +0.7**
KURK IAmb IAmb 00 23 39.1
comp=E,32nm,1.1s
SONM Songino Array 24.41 31 P **P** **00 23 45.3 +1.7**
comp=E,2.9nm,0.4s,baz=220,slow=10,SNR=57
SONM ScP **ScP** **00 30 53.4 +1.0**
comp=E,1.1nm,0.9s,baz=222,slow=3.8,SNR=5.9
comp=E,2.9nm,0.4s
ULN Ulaanbaatar 24.74 32 P **P** **00 23 46.5 -0.1**
ZAA0 Zalesovo Array 25.93 356 P **P** **00 23 57.1 0.0**
ZALV Zalesovo Beam 25.93 356 P **P** **00 23 57.8 +0.6**
comp=E,3.1nm,0.3s,baz=176,slow=9.4,SNR=23
ZALV sP **sP** **00 24 28.7 +1.9**
comp=E,0.9nm,0.5s,baz=180,slow=10,SNR=2.0
ZALV LR LR 00 34 23.7
comp=E,8.1nm,18.9s,baz=2.5,slow=37
comp=E,3.1nm,0.3s
ZALV Zalesovo Beam 25.93 356 P **P** **00 23 57.4 +0.2**
BVAR Borovoye Array 28.08 337 P **P** **00 24 17.4 +0.9**
comp=E,1.7nm,0.4s,baz=140,slow=10,SNR=26
comp=E,1.7nm,0.4s
BORK Borovoye 28.12 337 P **P** **00 24 17.3 +0.6**
AB31 Akbulak array 30.09 322 P **P** **00 24 34.9 +0.7**
ABKAR Akbulak array 30.09 322 P **P** **00 24 35.7 +1.5**
AKTO Aktyubinsk 31.78 323 LR LR 00 40 24.2
comp=E,34nm,19.4s,baz=52,slow=41
ARTI Arti 35.22 332 P **P** **00 25 19.1 +0.2**
BR131 Keskin Array S 45.87 299 P **P** **00 26 48.2 +1.1**
BR131 IAmb IAmb 00 27 20.6
comp=E,8.1nm,1.4s
BRTR Keskin Array B 45.87 299 P **P** **00 26 47.6 +0.6**
comp=E,0.7nm,0.6s,baz=127,slow=8.5,SNR=5.7
comp=E,0.7nm,0.6s
BRTR Keskin Array B 45.87 299 P **P** **00 26 47.5 +0.4**
AKASG Malin Array Be 49.18 314 P **P** **00 27 11.8 -0.5**
comp=E,0.4nm,0.3s,baz=84,slow=7.0,SNR=4.1
comp=E,0.4nm,0.3s
AKBB Malin Array Si 49.18 314 P **P** **00 27 10.9 -1.4**
AKBB IAmb IAmb 00 27 12.5
comp=E,4.1nm,0.8s
KIEV Kiev 49.19 314 P **P** **00 27 11.6 -0.8**
KIEV IAmb IAmb 00 27 12.5
comp=E,3.7nm,0.8s
MLR Muntele Rosu 51.30 307 P **P** **00 27 29.7 +1.1**
MLR IAmb IAmb 00 27 31.4
comp=E,6.7nm,0.9s
BURAR Bucovina Array 51.73 310 P **P** **00 27 32.1 +0.3**
BUR08 Bucovina Ar. S 51.74 310 P **P** **00 27 32.3 +0.4**
BUR08 IAmb IAmb 00 27 38.0
comp=E,5.4nm,1.4s
FIA1 FINESS Array S 52.31 328 P **P** **00 27 36.3 +0.5**
FINES FINESS Array B 52.31 328 P **P** **00 27 36.3 +0.5**
comp=E,2.6nm,0.3s,baz=112,slow=7.8,SNR=47
comp=E,2.6nm,0.3s
PABE Paberze 52.68 320 P **P** **00 27 39.2 +0.6**
ARCES ARCESS Array B 54.37 337 P **P** **00 27 51.6 +0.9**
comp=E,3.1nm,0.3s,baz=106,slow=7.5,SNR=29
comp=E,3.1nm,0.3s
ARCES ARCESS Array B 54.37 337 P **P** **00 27 51.2 +0.5**
HFS Hagfors 58.26 326 P **P** **00 28 19.0 +0.5**
comp=E,5.8nm,0.5s,baz=98,slow=8.5,SNR=28
comp=E,5.8nm,0.5s
FITZ Fitzroy Crossi 58.68 137 P **P** **00 28 23.5 +1.5**
SPITS Spitsbergen Ar 58.93 347 P **P** **00 28 23.8 +0.9**
comp=E,7.6nm,0.9s,baz=108,slow=11,SNR=8.3
comp=E,7.6nm,0.9s
NC405 NORSAR Array S 59.20 327 P **P** **00 28 25.3 +0.2**
GERES GERESS Array B 59.29 312 P **P** **00 28 26.7 +0.7**
comp=E,1.2nm,0.7s,baz=69,slow=7.3,SNR=10
comp=E,1.2nm,0.7s
NB2 NORSAR Subarra 59.45 327 P **P** **00 28 26.7 -0.1**
comp=E,1.0nm,0.4s,baz=84,slow=6.5
NOA NORSAR Array B 59.45 327 P **P** **00 28 26.6 -0.2**
comp=E,1.5nm,0.5s,baz=89,slow=6.7,SNR=12
comp=E,1.5nm,0.5s
NRCA Norcia 60.79 306 P **P** **00 28 37.1 +0.8**
TUE Stuetta 62.62 310 P **P** **00 28 48.2 -0.5**
MORW Morawa 62.90 152 P **P** **00 28 51.2 +0.7**
SENIN Lac Senin/Sane 64.02 311 P **P** **00 28 57.5 -0.5**
SENIN IAmb IAmb 00 29 00.9
comp=E,3.6nm,0.9s
BNI Bardonecchia 64.78 309 P **P** **00 29 02.3 -0.5**
BNI IAmb IAmb 00 29 26.4
comp=E,11nm,1.4s
KEST Kesra 65.47 299 P **P** **00 29 08.5 +1.1**
comp=E,5.5nm,1.0s,baz=126,slow=2.8,SNR=6.3
comp=E,5.5nm,1.0s
WB0 Warramunga Arr 65.47 131 P **P** **00 29 08.9 +1.4**
WB0 IAmb IAmb 00 29 09.8
comp=E,7.4nm,1.1s
WRA Warramunga Arr 65.56 131 P **P** **00 29 09.5 +1.5**
comp=E,1.7nm,0.3s,baz=326,slow=6.6,SNR=80
WRA pP **pP** **00 29 30.6 +0.3**
comp=E,1.3nm,0.5s,baz=317,slow=6.4,SNR=4.7
comp=E,1.7nm,0.3s
WRA Warramunga Arr 65.56 131 P **P** **00 29 08.6 +0.6**
WR8 Warramunga Arr 65.67 131 P **P** **00 29 10.1 +1.3**
WR8 IAmb IAmb 00 29 11.2
comp=E,3.0nm,0.7s
SHEM Shemya Is, Ala 65.97 42 LR LR 01 00 18.6
comp=E,68nm,18.1s,baz=314,slow=38
AS31 Alice Springs 67.94 135 P **P** **00 29 24.5 +1.3**
ASAR Alice Springs 67.94 135 P **P** **00 29 24.9 +1.8**
comp=E,3.5nm,0.6s,baz=319,slow=6.4,SNR=49
ASAR pP **pP** **00 29 46.5 +0.7**
comp=E,1.0nm,0.5s,baz=316,slow=6.3,SNR=4.1
comp=E,3.5nm,0.6s
ASAR Alice Springs 67.94 135 P **P** **00 29 24.8 +1.6**
EKA Eskdalemuir Ar 67.96 322 P **P** **00 29 23.3 +0.5**
comp=E,0.7nm,0.3s,baz=75,slow=6.1,SNR=14
comp=E,0.7nm,0.3s
B21K Ikpikpuk River 72.79 19 P **P** **00 29 53.5 +1.5**
E19K Redstone River 73.21 21 P **P** **00 29 55.7 +1.1**
E19K IAmb IAmb 00 30 25.0
comp=E,15nm,1.5s
C23K Itkillik River 73.78 18 P **P** **00 29 59.5 +1.7**
ESDC Sonseca Array 73.98 307 P **P** **00 29 59.5 -0.1**
comp=E,1.7nm,0.8s,baz=60,slow=6.2,SNR=7.3
comp=E,1.7nm,0.8s
ESDC Sonseca Array 73.98 307 P **P** **00 29 59.8 +0.2**
ESDC IAmb IAmb 00 30 01.2
comp=E,3.0nm,1.1s
C27K Jago River 75.73 16 P **P** **00 30 10.2 +1.2**
C27K IAmb IAmb 00 30 12.0
comp=E,6.8nm,1.0s
BMAR Burnt Mountain 77.04 18 P **P** **00 30 18.7 +2.1**
A36M Sachs Harbour 77.58 10 P **P** **00 30 20.8 +1.3**
F28M Old Crow 78.16 17 P **P** **00 30 23.8 +1.0**
F28M IAmb IAmb 00 30 25.8
comp=E,6.2nm,1.2s
ILAR Eielson Array 78.18 21 P **P** **00 30 23.8 +0.9**
comp=E,0.8nm,0.8s,baz=324,slow=5.3,SNR=4.6
comp=E,0.8nm,0.8s
ILAR Eielson Array 78.18 21 P **P** **00 30 23.6 +0.7**
L22K Petersville 78.36 24 P **P** **00 30 25.2 +1.2**
L22K IAmb IAmb 00 30 26.3
comp=E,11nm,1.2s
F30M Barrier River 79.17 16 P **P** **00 30 29.6 +1.3**
G30M tAoh Zraii Nji 79.56 16 P **P** **00 30 31.4 +0.9**
G30M IAmb IAmb 00 30 33.1
comp=E,5.6nm,1.1s
BRLK Bradley Lake 80.09 26 P **P** **00 30 34.3 +0.8**
TORD Torodi Ar. Bea 80.61 280 P **P** **00 30 36.8 -0.2**
comp=E,0.5nm,0.7s,baz=70,slow=4.8,SNR=4.3
TORD pP **pP** **00 31 00.4 +0.5**
comp=E,0.3nm,0.5s,baz=50,slow=3.8,SNR=1.8
comp=E,0.5nm,0.7s
TORD Torodi Ar. Bea 80.61 280 P **P** **00 30 37.3 +0.3**
TORD IAmb IAmb 00 31 04.7
comp=E,1.7nm,0.6s
DAWY Dawson 80.96 19 P **P** **00 30 39.2 +1.2**
DAWY IAmb IAmb 00 31 18.3
comp=E,3.7nm,1.3s
K29M Barlow Dome 81.67 19 P **P** **00 30 43.4 +1.5**
K29M IAmb IAmb 00 31 07.8
comp=E,4.4nm,1.2s
L29M L29M 82.06 19 P **P** **00 30 45.6 +1.7**
L29M IAmb IAmb 00 30 46.2
comp=E,5.7nm,1.1s
TXAR Lajitas Array 121.84 12 PKP **PKPdf** **00 37 19.1 +1.0**
comp=E,0.1nm,0.4s,baz=341,slow=2.5,SNR=1.8
TXAR pPKP **pPKPdf** **00 37 42.5 +0.5**
comp=E,0.2nm,0.7s,baz=312,slow=1.8,SNR=2.4
TXAR Lajitas Array 121.84 12 PKPdf **PKPdf** **00 37 18.1 0.0**

NEIC ***27*** *00:18:37.8±1.1, 17.7N±0.3×64.24W±0.05, h24km±10km, ML2.5/10, Md3.4/6(RSPR), Error ellipse: s-maj=47.7km s-min=4.0km az=187.0*
RSPR ***27*** *00:18:39.5, 17.52N×64.29W, h17km±5km, MD3.4/6*
ISC 27 00:18:38.0±1.5, **17.6N**±0.2×**64.26W**±0.06, **h25**km±19km, **n25**, σ**0**s**94**/31, **4C-4D**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SABA	**Saba**	**0.97**	**90**		**Pb**	**00 18 55.7**	**-0.4**
SABA					**Sb**	**00 19 08.0**	**-0.5**
SABA				IAML		00 19 13.1	
	comp=N,189nm,0.6s						
SABA	**Saba**	**0.97**	**90**⇑	*e*P	**Pb**	**00 18 56.1**	**-0.1**
SABA	**Saba**	**0.97**	**90**	*e*S	**Sb**	**00 19 08.6**	**+0.1**
SKI	**Saint Kitts**	**1.48**	**101**	*e*P	**Pb**	**00 19 03.0**	**0.0**
SKI				*e*S	**Sb**	**00 19 24.6**	**+1.3**
HUMP	**Col San Antoni**	**1.60**	**289**	Pn	**Pn**	**00 19 05.7**	**+1.0**
HUMP					**Sn**	**00 19 23.7**	**-0.8**
HUMP				IAML		00 19 27.4	
	comp=N,63nm,0.2s						
HUMP				IAML		00 19 27.9	
	comp=E,55nm,0.2s						
HUMP	**Col San Antoni**	**1.60**	**289**⇓	*e*P	**Pn**	**00 19 04.8**	**+0.1**
HUMP	**Col San Antoni**	**1.60**	**289**	*e*S	**Sn**	**00 19 23.9**	**-0.6**
GCPR	**Guaynabo City**	**1.86**	**292**	Sn	**Sn**	**00 19 30.4**	**-0.7**
GCPR	**Guaynabo City**	**1.86**	**292**⇓	*e*P	**Pn**	**00 19 07.6**	**-0.7**
GCPR	**Guaynabo City**	**1.86**	**292**	*e*S	**Sn**	**00 19 30.6**	**-0.5**
SJG	**San Juan**	**1.86**	**285**	Pn	**Pb**	**00 19 11.4**	**0.0**
OBIP	**Obispado Ponce**	**2.27**	**281**	Pn	**Pn**	**00 19 13.8**	**-0.2**
OBIP				IAML		00 19 55.1	
	comp=E,21nm,2.1s						
OBIP				IAML		00 20 16.1	
	comp=N,19nm,2.5s						
UUPR	**Utuado, UPR, P**	**2.42**	**285**		**Pn**	**00 19 15.7**	**-0.4**
UUPR					**Sn**	**00 19 46.8**	**+1.9**
UUPR	**Utuado, UPR, P**	**2.42**	**285**⇑	*e*P	**Pn**	**00 19 15.7**	**-0.4**
UUPR	**Utuado, UPR, P**	**2.42**	**285**	*e*S	**Sn**	**00 19 46.8**	**+1.9**
AOPR	**Arecibo Observ**	**2.48**	**287**⇑	*e*P	**Pn**	**00 19 17.5**	**+0.7**
AOPR	**Arecibo Observ**	**2.48**	**287**	*e*S	**Sn**	**00 19 45.9**	**-0.4**
MLPR	**Magueyes Islan**	**2.68**	**278**⇓	*e*P	**Pn**	**00 19 19.0**	**-0.4**
MLPR	**Magueyes Islan**	**2.68**	**278**	*e*S	**Sn**	**00 19 51.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.74**	**278**	Pn	**Pn**	**00 19 19.9**	**-0.5**
CRPR				Sn	**Sn**	**00 19 50.7**	**-2.0**
CRPR				IAML		00 19 59.8	
	comp=E,27nm,1.9s						
CRPR	**Cabo Rojo, PR**	**2.74**	**278**⇑	*e*P	**Pn**	**00 19 19.8**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.74**	**278**	*e*S	**Sn**	**00 19 51.2**	**-1.5**

LSP	**Las Mesas**	**2.75 282**		**Pn**	**00 19 20.7**	**+0.2**
LSP				**Sn**	**00 19 54.2**	**+1.3**
LSP	**Las Mesas**	**2.75 282**	⇓*eP*	**Pn**	**00 19 20.7**	**+0.2**
LSP	**Las Mesas**	**2.75 282**	*eS*	**Sn**	**00 19 54.2**	**+1.3**

ISK **27** *00:29:02.3, 38°.12N×44°.38E, h22km, ML2.5/7*
AFAD **27** *00:29:05.7, 38°.47N×44°.15E, h6km±1km, ML2.3*
TEH **27** *00:29:08.4, 38°.66N×44°.65E, h10km±6.8km*
ISC 27 00:29:04.9±1.2, **38°.48N**±0°.03×**44°.28E**±0°.03, **h7**km±10km, **n27**,σ1°**13**/37, **Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.29**	**309**	P		**Pg**	**00 29 10.7**	**0.0**
OZAP				S		**Sg**	**00 29 14.0**	**-0.6**
OZAP				*i*	IAML		00 29 15.0	
	comp=N,624nm,0.3s							
OZAP				*i*	IAML		00 29 25.0	
	comp=E,598nm,0.6s							
TVAN	**Van**	**0.69**	**274**	P		**Pg**	**00 29 17.2**	**-1.0**
TVAN				S		**Sg**	**00 29 26.1**	**-1.1**
TVAN				*i*	IAML		00 29 35.0	
	comp=N,172nm,0.6s							
TVAN				*i*	IAML		00 29 39.0	
	comp=E,189nm,1.0s							
VANB	**Van**	**0.71**	**280**	Pg		**Pb**	**00 29 19.8**	**+0.1**
VANB				Sg		**Sb**	**00 29 31.9**	**+2.2**
VMUR	**Van-Muradiye**	**0.75**	**313**	P		**Pg**	**00 29 19.3**	**-0.1**
VMUR				S		**Sb**	**00 29 31.2**	**+0.1**
VMUR				*i*	IAML		00 29 34.0	
	comp=N,110nm,0.7s							
VMUR				*i*	IAML		00 29 34.0	
	comp=E,124nm,0.7s							
YOVA	**Hakkari_Yksek**	**0.89**	**180**	P		**Pb**	**00 29 22.7**	**-0.1**
YOVA				S		**Sn**	**00 29 37.0**	**-0.3**
ERCV	**ERCIS-VAN**	**0.91**	**307**	Pn		**Pn**	**00 29 24.6**	**+0.2**
MAKU	**Maku**	**0.93**	**20**	Pg		**Pg**	**00 29 22.0**	**-0.8**
HAKT	**HAKKARI**	**1.02**	**206**	P		**Pg**	**00 29 24.4**	**-0.2**
HAKT				S		**Sb**	**00 29 39.2**	**+0.3**
HAKT				*i*	IAML		00 29 47.0	
	comp=E,78nm,0.5s							
HAKT				*i*	IAML		00 29 51.0	
	comp=N,74nm,0.4s							
AKDM	**Akdamar-Van**	**1.03**	**262**	Pn		**Pg**	**00 29 23.3**	**-1.4**
AKDM				Sn		**Sg**	**00 29 38.6**	**+0.4**
ISHB	**Shabestar**	**1.07**	**100**	Pg		**Pb**	**00 29 24.9**	**-1.0**
IGDI	**IGDIR**	**1.40**	**354**	P		**Pn**	**00 29 30.5**	**-0.5**
PERV	**Siirt/Pervari-**	**1.47**	**249**	P		**Pn**	**00 29 31.9**	**-0.1**
DORK	**Agr/Tutak/Do**	**1.48**	**308**	P		**Pn**	**00 29 31.7**	**-0.5**
DORK				S		**Sn**	**00 29 50.8**	**-1.2**
DORK				*i*	IAML		00 29 56.0	
	comp=N,36nm,0.6s							
DORK				*i*	IAML		00 30 01.0	
	comp=E,35nm,0.5s							
AGRB	**Hanur-Agry**	**1.49**	**318**	Pn		**Pn**	**00 29 32.5**	**+0.2**
ITBZ	**Tabriz**	**1.49**	**99**	Pg		**Pb**	**00 29 32.3**	**-0.7**
TASB	**TASBURUN-IGDIR**	**1.50**	**359**	Pn		**Pb**	**00 29 33.3**	**+0.1**
TASB				Sn		**Sg**	**00 29 57.1**	**+3.9**
MLAZ	**Malazgirt-MUS**	**1.51**	**297**	Pn		**Pn**	**00 29 32.4**	**-0.1**
MLAZ				Sn		**Sg**	**00 29 54.4**	**+1.1**
IAZR	**Azarshahr**	**1.56**	**120**	Pg		**Pg**	**00 29 36.1**	**+1.3**
KOTA	**Agri, Merkez-K**	**1.56**	**328**	P		**Pn**	**00 29 32.9**	**-0.5**
BLIS	**Bitlis-Merkez**	**1.70**	**269**	P		**Pn**	**00 29 36.2**	**+1.0**
GNI	**Garni**	**1.71**	**12**	Pn		**Pb**	**00 29 36.5**	**-0.2**
GURO	**Guroymak-BITLI**	**1.77**	**273**	Pn		**Pn**	**00 29 34.5**	**-1.6**
SRTM	**Siirt_Merkez**	**1.92**	**256**	P		**Pb**	**00 29 40.3**	**0.0**
IHRS	**Heris**	**2.17**	**93**	Pn		**Pg**	**00 29 45.0**	**-1.6**
MUSM	**Mu-Merkez**	**2.18**	**277**	P		**Pb**	**00 29 44.5**	**-0.4**
EAK	**Akyaka**	**2.27**	**347**	P		**Pg**	**00 29 47.8**	**-0.5**
MIDY	**Mardin/Midyat-**	**2.52**	**246**	P		**Pn**	**00 29 48.3**	**+1.9**

NOU 27 00:40:34.1, 18°.54S×168°.40E, h28km**, MLv4.2**/21,
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RTV	**Rentapao**	**0.74**	**2**	P		Pb	00 40 48.4	-0.1
RTV	**Rentapao**	**0.74**	**2**	S		Sn	00 40 59.3	+0.2
DVP	**Devils Point**	**0.83**	**346**	P		Pb	00 40 50.7	+0.7
DVP	**Devils Point**	**0.83**	**346**	S		Sn	00 41 03.6	+2.2
INH	**Isangel**	**1.30**	**141**	P		Pn	00 40 56.4	0.0
INH	**Isangel**	**1.30**	**141**	S		Sn	00 41 13.4	+0.6
MARNC	**Mare, Loyalty**	**2.95**	**187**	P		Pn	00 41 17.5	-1.6
SANVU	**Saraoutou**	**3.28**	**339**	P		Pn	00 41 22.8	-0.9
YATNC	**Mamie plateau,**	**3.78**	**202**	P		Pn	00 41 30.1	-0.4
OUENC	**Ouen Island, N**	**4.13**	**200**	P		Pn	00 41 36.1	+0.8
OUENC	**Ouen Island, N**	**4.13**	**200**	S		Sn	00 42 23.1	+0.5
PINNC	**Pines Island,**	**4.15**	**192**	P		Pn	00 41 36.5	+0.9
PINNC	**Pines Island,**	**4.15**	**192**	S		Sn	00 42 22.8	-0.4
ONTNC	**Ouen Toro**	**4.17**	**206**	P		Pn	00 41 37.0	+1.1
ONTNC	**Ouen Toro**	**4.17**	**206**	S		Sn	00 42 24.7	+1.0
NGOA	**Tingoa Renbel**	**10.63**	**310**	P		Pn	00 43 05.7	+1.1
DGTI	**Dogotuki**	**11.05**	**80**	P		Pn	00 43 11.4	+1.0

IDC **27** *00:41:15.3±1.9, 41°.57N×19°.36E, h0km, mb3.7/4,*
mbtmp3.6/8, ML2.1/3, Error ellipse: s-maj=24.5km
s-min=15.5km az=30.0
THE **27** *00:41:16.9, 42°.N±6°.×1°.9E±°, h11km, M2.9/21, MLh2.9/21*
TIR **27** *00:41:17.8, 41°.59N×19°.36E, h30km±2km, Ml3.3/5*
SKO **27** *00:41:17.4, 41°.59N×19°.38E, h4km, ML3.1*
PDG **27** *00:41:17.6±0.3, 41°.51N×19°.56E, h10km±1km, MD3.3/5,*
ML3.2/13, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0
BEO **27** *00:41:19.4±0.5, 41°.60N×19°.49E, h10km±2km, ML3.1/8*
ISC 27 00:41:18.4±0.9, **41°.58N**±0°.02×**19°.45E**±0°.02, **h17**km±7km, **n141**,σ1°**52**/210, **mb3.7**/3, **22C-20D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.39**	**126**	⇓*P*		**Pg**	**00 41 25.5**	**-0.9**
TIR				AML		AML	00 41 31.5	
	11nm,0.3s							
TIR				Sg		**Sg**	**00 41 31.7**	**-0.2**
TIR	**Tirane**	**0.39**	**126**	⇓*iPg*		**Pg**	**00 41 25.5**	**-0.9**
TIR				*i* Sg		**Sg**	**00 41 31.7**	**-0.2**
ULC	**Ulcinj**	**0.41**	**339**	⇓*iPg*		**Pg**	**00 41 26.5**	**-0.3**
ULC				*i* Sg		**Sb**	**00 41 33.9**	**+0.7**
SDA	**Shkodra**	**0.47**	**5**	⇑*iPg*		**Pg**	**00 41 27.3**	**-0.6**
SDA				Sg		**Sb**	**00 41 35.6**	**+0.6**
DRME	**Dracevica, Mon**	**0.64**	**342**	*ePg*		**Pb**	**00 41 31.3**	**+0.2**
DRME	**Dracevica, Mon**	**0.64**	**342**	⇓*iPg*		**Pg**	**00 41 30.4**	**-0.6**
DRME				*i* Sg		**Sn**	**00 41 41.6**	**-0.8**
PHP	**Peshkopia**	**0.75**	**82**	Pg		**Pg**	**00 41 31.2**	**-2.0**
PHP				Sg		**Sb**	**00 41 44.4**	**+1.3**
PHP				AML		AML	00 41 48.0	
	4.2nm,0.5s							
BUM	**Brajici-Budva**	**0.83**	**330**	⇓*iPg*		**Pn**	**00 41 34.9**	**-0.5**
BUM				*i* Sg		**Sn**	**00 41 48.5**	**+1.3**
PDG	**Podgorica**	**0.86**	**351**	Pn		**Pg**	**00 41 34.5**	**-0.7**
PDG				Sn		**Sb**	**00 41 46.6**	**+0.5**
PDG	**Podgorica**	**0.86**	**351**	⇓*P*		**Pn**	**00 41 35.3**	**-0.4**
PDG				⇑*S*		**Sn**	**00 41 47.5**	**-0.4**
PDG	**Podgorica**	**0.86**	**351**	*ePg*		**Pg**	**00 41 34.7**	**-0.5**
PDG	**Podgorica**	**0.86**	**351**	⇓*iPg*		**Pg**	**00 41 33.9**	**-1.3**
PDG				*i* Sg		**Sn**	**00 41 49.0**	**+1.1**
CEME	**Cevo**	**1.04**	**338**	⇑*iPg*		**Pg**	**00 41 38.1**	**-0.5**
CEME				*i* Sg		**Sn**	**00 41 55.8**	**+3.3**
PVY	**Plav**	**1.08**	**21**	*ePg*		**Pb**	**00 41 37.4**	**-1.4**
PVY	**Plav**	**1.08**	**21**	⇑*iPg*		**Pb**	**00 41 37.1**	**-1.7**
PVY				*i* Sg		**Sn**	**00 41 54.4**	**+0.8**
VLO	**Vlora**	**1.11**	**178**	⇑*iPg*		**Pg**	**00 41 40.6**	**+0.7**
VLO				Sg		**Sn**	**00 41 53.9**	**-0.1**
VLO				AML		AML	00 42 03.2	
	3.4nm,0.3s							
VLO	**Vlora**	**1.11**	**178**	P		**Pg**	**00 41 40.3**	**+0.4**
VLO				S		**Sn**	**00 41 59.1**	**+5.0**
HCY	**Herceg Novi**	**1.12**	**321**	⇑*iPg*		**Pg**	**00 41 39.4**	**-0.7**
HCY				*i* Sg		**Sn**	**00 41 57.8**	**+3.5**
OHR	**Ohrid**	**1.12**	**114**	*i* Pg		**Pb**	**00 41 38.6**	**-0.8**
OHR				*i* Sg		**Sn**	**00 41 55.6**	**+1.2**
OHR				*e*Lg		Lg	00 41 58.4	
	comp=N,353nm,0.5s							
OHR				*e*Lg		Lg	00 41 59.2	
	comp=E,335nm,0.7s							
NKME	**Niksic**	**1.24**	**343**	⇓*iPg*		**Pb**	**00 41 41.5**	**+0.1**
NKME				*i* Sg		**Sg**	**00 42 01.3**	**+2.7**
KOME	**Kolasin**	**1.27**	**2**	*ePg*		**Pb**	**00 41 41.9**	**0.0**
KOME	**Kolasin**	**1.27**	**2**	⇑*iPg*		**Pn**	**00 41 41.6**	**+0.1**
KOME				*i* Sg		**Sg**	**00 42 02.4**	**+2.8**
BEY	**Berane**	**1.33**	**14**	*ePg*		**Pn**	**00 41 42.1**	**-0.2**
IVA	**Berane**	**1.33**	**14**	⇑*iPg*		**Pn**	**00 41 41.4**	**-0.9**
IVA				*i* Sg		**Sg**	**00 42 03.6**	**+2.1**
KBN	**Korca**	**1.39**	**133**	Pn		**Pg**	**00 41 45.0**	**-0.3**
KBN				Sn		**Sg**	**00 42 03.8**	**+0.4**
KBN	**Korca**	**1.39**	**133**	P		**Pg**	**00 41 44.9**	**-0.4**
KBN				S		**Sg**	**00 42 06.8**	**+3.4**
TREB	**Trebinje**	**1.40**	**325**	*ePn*		**Pb**	**00 41 44.0**	**0.0**
TREB	**Trebinje**	**1.40**	**325**	*ePg*		**Pg**	**00 41 44.8**	**-0.5**
TREB				*e*Sg		**Sg**	**00 42 04.7**	**+1.1**
BRY	**Bratogost**	**1.48**	**333**	⇓*iPn*		**Pb**	**00 41 45.6**	**0.0**
BRY				*i* Sn		**Sg**	**00 42 08.9**	**+2.6**
SKO	**Skopje**	**1.54**	**75**	*i* Pg		**Pn**	**00 41 45.8**	**+0.7**
SKO				*i* Sg		**Sg**	**00 42 07.8**	**-0.4**
UPM	**Unac-Piva**	**1.67**	**346**	⇓*iPn*		**Pb**	**00 41 49.3**	**+0.5**
UPM				*i* Sn		**Sg**	**00 42 13.3**	**+1.0**
NEST	**Nestorio**	**1.68**	**133**	Pn		**Pb**	**00 41 49.1**	**+0.2**
NEST				Sn		**Sg**	**00 42 12.1**	**-0.5**
NEST				AML		AML	00 42 17.5	
	comp=E,0.7nm,0.6s							
NEST	**Nestorio**	**1.68**	**133**	P		**Pb**	**00 41 49.2**	**+0.2**
NEST				S		**Sg**	**00 42 13.7**	**+1.1**
KLINJ	**Klinje**	**1.71**	**338**	*ePn*		**Pb**	**00 41 49.1**	**-0.3**
SJES	**Sjenica**	**1.73**	**13**	*ePn*		**Pb**	**00 41 49.0**	**-0.7**
SJES				*e*Sg		**Sg**	**00 42 14.6**	**+0.6**
PLE	**Pljevlja**	**1.75**	**359**	*ePn*		**Pg**	**00 41 51.1**	**-0.9**
PLE	**Pljevlja**	**1.75**	**359**	⇑*iPn*		**Pb**	**00 41 50.4**	**+0.3**
PLE				*i* Sn		**Sg**	**00 42 14.5**	**-0.3**
STON	**Ston**	**1.83**	**315**	*ePn*		**Pb**	**00 41 51.0**	**-0.4**
STON				*e*Sn		**Sg**	**00 42 15.7**	**-1.6**
NOCI	**Noci**	**1.96**	**247**	Pn		**Pn**	**00 41 51.3**	**+0.4**
NOCI				Sn		**Sb**	**00 42 16.6**	**-1.2**
NOCI				AML		AML	00 42 18.6	
	comp=E,0.7nm,0.2s							
SELS	**Selova**	**2.06**	**37**	*ePn*		**Pn**	**00 41 53.9**	**+1.7**
SELS				*e*Sn		**Sb**	**00 42 20.1**	**-0.4**
IVAS	**Ivanjica**	**2.06**	**14**	*ePn*		**Pn**	**00 41 53.7**	**+1.4**
IGT	**Igoumenitsa**	**2.15**	**161**	⇑*Pn*		**Pn**	**00 41 54.9**	**+1.4**
IGT				Sn		**Sb**	**00 42 24.0**	**+0.7**
IGT	**Igoumenitsa**	**2.15**	**161**	P		**Pn**	**00 41 54.5**	**+1.0**
IGT				S		**Sn**	**00 42 21.4**	**+1.6**
KZN	**Kozani**	**2.17**	**125**	P		**Pb**	**00 41 56.4**	**-0.8**
KZN				S		**Sb**	**00 42 23.3**	**-0.6**
GOCS	**Kraljevo Serbi**	**2.25**	**28**	*ePn*		**Pn**	**00 41 56.6**	**+1.8**
GOCS				*e*Sn		**Sb**	**00 42 24.9**	**-1.1**
MATE	**Matera**	**2.27**	**247**	⇓*P*		**Pn**	**00 41 55.8**	**+0.6**
BBLS	**Lazi&#263i**	**2.29**	**359**	*ePn*		**Pb**	**00 41 57.8**	**-1.4**
VAY	**Valandovo**	**2.36**	**95**	*i* Pn		**Pn**	**00 41 57.6**	**+1.2**
VAY				*i* Sn		**Sn**	**00 42 26.9**	**+1.9**
VAY				*e*Lg		Lg	00 42 27.5	
	comp=N,64nm,0.8s							
VAY				*e*Lg		Lg	00 42 28.0	
	comp=E,62nm,0.8s							
BOSS	**Bosilegrad**	**2.44**	**67**	*ePn*		**Pn**	**00 41 58.7**	**+1.3**
BOSS				*e*Sn		**Sn**	**00 42 28.4**	**+1.5**
GRUS	**Gruza**	**2.49**	**22**	*ePn*		**Pn**	**00 42 00.0**	**+1.9**
KNT	**Kendrikon**	**2.63**	**98**	*i* Pn		**Pn**	**00 42 01.2**	**+1.1**
BOVS	**Bovan**	**2.65**	**38**	⇓*P*		**Pn**	**00 42 01.7**	**+1.5**
BOVS	**Bovan**	**2.65**	**38**	*ePn*		**Pn**	**00 42 01.6**	**+1.3**
BOVS				*e*Sn		**Sn**	**00 42 33.1**	**+1.2**
KKB	**Krupnik**	**2.77**	**83**	P		**Pn**	**00 42 03.3**	**+1.4**
KKB	**Krupnik**	**2.77**	**83**	P		**Pn**	**00 42 03.4**	**+1.4**
KKB	**Krupnik**	**2.77**	**83**	*i* Pn		**Pn**	**00 42 03.5**	**+1.5**
SGRT	**San Giovanni R**	**2.78**	**275**	Pn		**Pn**	**00 42 02.5**	**+0.3**
THL	**Klokotos Trika**	**2.81**	**135**	P		**Pn**	**00 42 03.9**	**+1.5**
THL				S		**Sn**	**00 42 38.0**	**+2.1**
THE	**Thessaloniki**	**2.82**	**108**	P		**Pn**	**00 42 03.6**	**+1.0**
THE				S		**Sn**	**00 42 37.0**	**+0.8**
THE	**Thessaloniki**	**2.82**	**108**	*i* Pn		**Pn**	**00 42 03.8**	**+1.1**
TYRN	**Tyrnavos**	**2.83**	**130**	P		**Pn**	**00 42 04.6**	**+1.9**
TYRN				S		**Sn**	**00 42 38.4**	**+2.0**
TSLK	**Tsoukalades, L**	**2.90**	**161**	P		**Pn**	**00 42 04.3**	**+0.5**
TSLK				S		**Sn**	**00 42 37.5**	**-0.8**
ZAPS	**Zavoj**	**2.91**	**53**	*ePn*		**Pn**	**00 42 05.5**	**+1.6**
ZAPS				*e*Sn		**Sn**	**00 42 39.8**	**+1.4**
LKD2	**Lefkada island**	**2.94**	**161**	P		**Pn**	**00 42 04.3**	**0.0**
LKD2				S		**Sn**	**00 42 38.5**	**-0.7**
TEKS	**Tekeris**	**2.97**	**1**	*ePn*		**Pn**	**00 42 05.7**	**+1.0**
VTS	**Vitosha**	**3.00**	**69**	P		**Pn**	**00 42 06.5**	**+1.2**
VTS				S		**Sn**	**00 42 42.6**	**+1.5**
VTS	**Vitosha**	**3.00**	**69**	P		**Pn**	**00 42 06.8**	**+1.4**
VTS	**Vitosha**	**3.00**	**69**	*ePn*		**Pn**	**00 42 06.7**	**+1.4**
VTS				*e*Sn		**Sn**	**00 42 41.8**	**+0.8**
NYDR	**Nydri-Lefkada**	**3.02**	**161**	P		**Pn**	**00 42 05.0**	**-0.4**
NYDR				S		**Sn**	**00 42 39.6**	**-1.5**
ZAGS	**Zajecar**	**3.03**	**42**	*ePn*		**Pn**	**00 42 07.3**	**+1.7**
ZAGS				*e*Sn		**Sn**	**00 42 43.2**	**+1.7**
EVGI	**Lefkada island**	**3.10**	**162**	P		**Pn**	**00 42 06.3**	**-0.2**
EVGI				S		**Sn**	**00 42 41.4**	**-1.7**
PLNA	**Plana**	**3.10**	**72**	P		**Pn**	**00 42 08.3**	**+1.7**
BLKB	**Belogradchik**	**3.14**	**48**	*ePn*		**Pn**	**00 42 09.4**	**+2.3**
BLKB				*e*Sn		**Sn**	**00 42 45.8**	**+1.6**
BORS2	**Bor- Borsko je**	**3.14**	**36**	*ePn*		**Pn**	**00 42 07.2**	**+0.1**
BORS2				*e*Sn		**Sn**	**00 42 43.9**	**-0.3**
SRS	**Serrai**	**3.16**	**97**	P		**Pn**	**00 42 08.5**	**+1.2**
SRS	**Serrai**	**3.16**	**97**	*i* Pn		**Pn**	**00 42 08.6**	**+1.2**
TIP	**Timpagrande**	**3.16**	**221**	⇑*P*		**Pn**	**00 42 07.4**	**+0.1**
EVR	**Evrytania**	**3.22**	**145**	P		**Pn**	**00 42 10.2**	**+2.0**
MMB	**Musomishta**	**3.23**	**89**	P		**Pn**	**00 42 10.2**	**+1.8**
MMB	**Musomishta**	**3.23**	**89**	P		**Pn**	**00 42 10.3**	**+2.0**
MMB	**Musomishta**	**3.23**	**89**	*i* Pn		**Pn**	**00 42 10.1**	**+1.8**
FSK	**Fiskardo**	**3.23**	**164**	P		**Pn**	**00 42 07.7**	**-0.6**
FSK				S		**Sn**	**00 42 43.9**	**-2.5**
KUBS	**Kucevo**	**3.27**	**29**	*ePn*		**Pn**	**00 42 08.7**	**-0.1**
KUBS				*e*Sn		**Sn**	**00 42 46.6**	**-0.7**
PVO	**Paravola**	**3.36**	**151**	P		**Pn**	**00 42 11.5**	**+1.4**
DMLN	**Damoulianata-K**	**3.41**	**168**	P		**Pn**	**00 42 10.3**	**-0.5**
VLS	**Valsamata**	**3.51**	**165**	P		**Pn**	**00 42 11.3**	**-0.9**
VLS				S		**Sn**	**00 42 50.5**	**-2.8**
BLY	**Banja Luka**	**3.57**	**333**	*ePn*		**Pn**	**00 42 15.2**	**+2.2**
BLY	**Banja Luka**	**3.57**	**333**	⇓*P*		**Pn**	**00 42 14.3**	**+1.3**
BLY	**Banja Luka**	**3.57**	**333**	*ePn*		**Pn**	**00 42 15.1**	**+2.1**
FRGS	**Fruska Gora**	**3.59**	**4**	*ePn*		**Pn**	**00 42 14.2**	**+1.0**
MDVR	**Moldovita**	**3.60**	**27**	⇓*P*		**Pn**	**00 42 14.5**	**+1.0**
MDVR	**Moldovita**	**3.60**	**27**	*ePn*		**Pn**	**00 42 14.4**	**+1.0**
VALD	**Valchedram**	**3.62**	**53**	P		**Pn**	**00 42 15.4**	**+1.8**
MPEP	**Malo Peshtene**	**3.64**	**59**	P		**Pn**	**00 42 16.3**	**+2.4**
HERR	**Herculane**	**3.95**	**32**	⇓*P*		**Pn**	**00 42 19.5**	**+1.4**
PLD	**Plovdiv**	**4.00**	**80**	*ePn*		**Pn**	**00 42 20.6**	**+1.7**
SRE	**Strehaia**	**4.13**	**41**	⇓*P*		**Pn**	**00 42 22.9**	**+2.2**
BZS	**Buzias**	**4.33**	**21**	⇑*P*		**Pn**	**00 42 24.5**	**+1.1**
GZR	**Gura Zlata**	**4.52**	**31**	⇑*P*		**Pn**	**00 42 28.0**	**+2.0**
AQU	**L'Aquila**	**4.57**	**282**	*ePn*		Pn	00 42 19.1	-7.7
SURR	**Surduc**	**4.60**	**24**	⇑*P*		**Pn**	**00 42 28.0**	**+0.9**
MORH	**Mrgy, Hungar**	**4.67**	**353**	*ePn*		**Pn**	**00 42 28.8**	**+0.8**
MORH	**Mrgy, Hungar**	**4.67**	**353**	⇑*P*		**Pn**	**00 42 29.7**	**+1.7**
MORH	**Mrgy, Hungar**	**4.67**	**353**	*ePn*		**Pn**	**00 42 28.8**	**+0.8**
SIRR	**Siria**	**4.95**	**18**	⇓*P*		**Pn**	**00 42 33.8**	**+1.9**
SIRR	**Siria**	**4.95**	**18**	*ePn*		**Pn**	**00 42 33.9**	**+1.9**
SIRR				*e*Sn		**Sn**	**00 42 37.3**	**-1.5**
ELND	**Elena**	**4.96**	**72**	⇑*P*		**Pn**	**00 42 33.7**	**+1.6**
BOJS	**Bojanci**	**4.97**	**324**	*ePn*		**Pn**	**00 42 33.5**	**+1.4**
BOJS				*e*Sn		**Sn**	**00 43 29.5**	**+0.4**
BOJS	**Bojanci**	**4.97**	**324**	*i* Pn		**Pn**	**00 42 33.5**	**+1.4**
BOJS				*i* Sn		**Sn**	**00 43 29.9**	**+0.8**
LOT	**Lotru**	**4.98**	**38**	⇑*P*		**Pn**	**00 42 34.6**	**+2.1**
RIY	**Rijeka**	**5.20**	**318**	*ePn*		**Pn**	**00 42 36.8**	**+1.4**
RIY				*e*Sn		**Sn**	**00 43 36.3**	**+1.4**
ARR	**Arges**	**5.35**	**43**	⇑*P*		**Pn**	**00 42 39.7**	**+2.3**
CEY	**Cerknica**	**5.53**	**320**	*ePn*		**Pn**	**00 42 41.3**	**+1.5**
CEY				*e*Sn		**Sn**	**00 43 43.0**	**0.0**
SKDS	**Skadanscina**	**5.59**	**317**	*ePn*		**Pn**	**00 42 41.3**	**+0.5**
SKDS				*e*Sn		**Sn**	**00 43 43.2**	**-1.4**
VOIR		**5.61**	**45**	⇑*P*		**Pn**	**00 42 43.6**	**+2.5**
LJU	**Ljubljana**	**5.71**	**323**	*ePn*		**Pn**	**00 42 43.4**	**+1.1**
DRGR		**5.71**	**23**	⇓*P*		**Pn**	**00 42 43.7**	**+1.2**
SOKA	**Soboth**	**6.00**	**330**	*ePn*		**Pn**	**00 42 47.4**	**+0.9**
	comp=E,0.4nm,0.2s							
SOKA				*e*Sn		**Sn**	**00 43 51.8**	**-3.1**
	comp=E,0.6nm,0.4s							
OBKA	**Obir**	**6.06**	**326**	*ePn*		**Pn**	**00 42 48.7**	**+1.5**
	comp=E,0.5nm,0.2s							
OBKA				*e*Sn		**Sn**	**00 43 55.1**	**-1.2**
	comp=E,3.8nm,0.7s							
MLR	**Muntele Rosu**	**6.13**	**48**	Pn		**Pn**	**00 42 50.5**	**+2.2**
	comp=E,5.8nm,0.7s,baz=196,slow=7.4,SNR=19							
MLR				Sn		**Sn**	**00 43 59.8**	**+1.8**
	comp=E,0.6nm,0.3s,baz=151,slow=15,SNR=2.1							
MLR	**Muntele Rosu**	**6.13**	**48**	⇑*P*		**Pn**	**00 42 50.6**	**+2.3**
DOPR	**Dopca**	**6.14**	**42**	⇑*P*		**Pn**	**00 42 50.7**	**+2.4**
NEHR	**Nehoiu**	**6.29**	**50**	⇑*P*		**Pn**	**00 42 51.9**	**+1.6**
PLOR	**Plostina**	**6.74**	**48**	⇓*P*		**Pn**	**00 42 59.3**	**+2.7**
VRI	**Vrincioaia**	**6.79**	**48**	⇓*P*		**Pn**	**00 42 59.0**	**+1.7**
MODS	**Modra-Piesok**	**6.96**	**348**	*e*SN		Sn	00 44 00.9	-17
ABTA	**Abfaltersbach**	**7.18**	**318**	*i* Pn		**Pn**	**00 43 03.5**	**+0.9**
	comp=E,0.7nm,0.2s							
ABTA				*e*Sn		**Sn**	**00 44 21.5**	**-2.2**
	comp=E,1.0nm,0.4s							
MOA	**Molln**	**7.27**	**331**	*i* Pn		**Pn**	**00 43 04.5**	**+0.7**
	comp=E,0.1nm,0.1s							
MOA				*e*Sn		**Sn**	**00 44 26.9**	**+1.0**
	comp=E,0.8nm,0.3s							
LESA	**Schwarzleotal**	**7.58**	**323**	*ePn*		**Pn**	**00 43 09.0**	**+0.8**
	comp=E,0.4nm,0.2s							
LESA				*e*Sn		**Sn**	**00 44 30.9**	**-2.8**
	comp=E,2.9nm,1.1s							
IDI	**Anoyia**	**7.60**	**144**	Pn		**Pn**	**00 43 07.7**	**-0.6**
	comp=E,0.2nm,0.3s,baz=307,slow=10,SNR=1.2							
IDI				Sn		**Sn**	**00 44 27.5**	**-6.6**
	comp=E,0.3nm,0.3s,baz=346,slow=22,SNR=1.2							
	comp=E,1.8nm,0.4s							
STHS	**Stebnicka Huta**	**7.94**	**9**	*ePN*		**Pn**	**00 43 08.4**	**-4.5**
WTTA	**Wattenberg**	**7.97**	**318**	*i* Pn		**Pn**	**00 43 14.1**	**+0.6**
	comp=E,0.1nm,0.1s							
WTTA				*e*Sn		**Sn**	**00 44 43.7**	**+0.4**
	comp=E,1.3nm,0.4s							
WATA	**Walderalm**	**8.05**	**318**	*ePn*		**Pn**	**00 43 14.9**	**+0.4**
	comp=E,1.1nm,0.4s							
SQTA	**Sankt Quirin**	**8.16**	**317**	*i* Pn		**Pn**	**00 43 16.4**	**+0.4**
	comp=E,0.5nm,0.2s							
MOTA	**Moosalm**	**8.29**	**317**	*i* Pn		**Pn**	**00 43 18.1**	**+0.2**
	comp=E,0.9nm,0.5s							
MOTA				*e*Sn		**Sn**	**00 44 50.0**	**-1.2**
	comp=E,0.8nm,0.4s							

DRGR		5.70	22	⇑P		Pn	00 48 01.6	+1.8
SOKA	Soboth	6.05	329	*i* Pn		Pn	00 48 05.7	+0.9
	0.4nm,0.3s							
MLR	Muntele Rosu	6.08	48	Pn		Pn	00 48 08.2	+3.0
	2.2nm,0.4s,baz=155,slow=17							
MLR	Muntele Rosu	6.08	48	⇓P		Pn	00 48 07.7	+2.5
OBKA	Obir	6.11	326	*i* Pn		Pn	00 48 06.9	+1.3
	0.2nm,0.1s							
MYKA	Terra Mystica	6.61	322	*i* Pn		Pn	00 48 13.9	+1.5
	0.3nm,0.2s							
PLOR	Plostina	6.69	48	⇓P		Pn	00 48 15.7	+2.2
VRI	Vrincioaia	6.74	48	⇑P		Pn	00 48 16.5	+2.3
KBA	Koelnbreinsper	7.08	323	*i* Pn		Pn	00 48 20.0	+1.0
	0.5nm,0.3s							
ABTA	Abfaltersbach	7.24	318	*i* Pn		Pn	00 48 22.6	+1.6
	1.1nm,0.3s							
BIOA	Bad Ischl, Aus	7.43	327	*e*Pn		Pn	00 48 25.1	+1.5
	0.4nm,0.2s							
IDI	Anoyia	7.54	145	Pn		Pn	00 48 24.2	-1.0
	11nm,1.2s,baz=320,slow=13,SNR=1.7							
IDI				Sn		Sn	00 49 44.5	-5.8
	0.3nm,0.3s,baz=135,slow=6.4,SNR=1.4							
LESA	Schwarzleotal	7.64	322	*i* Pn		Pn	00 48 27.2	+0.6
	0.6nm,0.4s							
WTTA	Wattenberg	8.03	318	*i* Pn		Pn	00 48 32.7	+0.8
	0.4nm,0.2s							
WATA	Walderalm	8.11	318	*i* Pn		Pn	00 48 35.3	+2.2
	0.3nm,0.1s							
SQTA	Sankt Quirin	8.22	316	*i* Pn		Pn	00 48 35.7	+1.2
	0.2nm,0.1s							
MOTA	Moosalm	8.36	317	*i* Pn		Pn	00 48 37.0	+0.6
	0.2nm,0.2s							
GERES	GERESS Array B	8.36	332	Pn		Pn	00 48 37.9	+1.5
	baz=148,slow=14,SNR=4.0							
GERES				Sn		Sn	00 50 07.5	-3.0
	baz=148,slow=23,SNR=4.3							
	0.2nm,0.3s							
FINES	FINESS Array B	20.29	9	P		P	00 51 10.0	-0.7
	2.6nm,1.0s,baz=202,slow=10,SNR=1.8							
	2.6nm,1.0s							
ZALV	Zalesovo Beam	44.05	51	P		P	00 54 41.8	-0.7
	0.4nm,0.5s,baz=297,slow=9.5,SNR=2.2							
	0.4nm,0.5s							
MKAR	Makanchi Array	44.24	61	P		P	00 54 44.1	-0.2
	0.3nm,0.4s,baz=277,slow=9.5,SNR=2.1							
	0.3nm,0.4s							

IDC 27 00:47:32.7±5.0, 41°47′N×19°23′E, h0km, mb3.4/3, mbtmp3.5/4, ML3.5/1, MS2.5/1, Error ellipse: s-maj=74.2km s-min=65.6km az=161.0, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLR	Muntele Rosu	6.33	48	Pn	Pn	00 49 09.2	+1.9
	0.6nm,0.3s,baz=155,slow=17,SNR=6.3						
	3.4nm,0.5s						
AKASG	Malin Array Be	11.54	33	LR	LR	00 54 56.8	
	comp=Z,25nm,21.8s,baz=345,slow=38						
FINES	FINESS Array B	20.43	9	P	P	00 52 11.2	-0.1
	0.6nm,0.5s,baz=183,slow=11,SNR=3.7						
	0.6nm,0.5s						
ZALV	Zalesovo Beam	44.30	50	P	P	00 55 43.7	-0.2
	0.3nm,0.3s,baz=273,slow=10.0,SNR=2.6						
	0.3nm,0.3s						
MKAR	Makanchi Array	44.50	61	P	P	00 55 45.6	-0.1
	0.3nm,0.5s,baz=296,slow=7.0,SNR=1.8						
	0.3nm,0.5s						

ZUR ***27*** *00:52:06.9, 46°47′N×10°75′E, h8km±1km, MLh0.9/6, Error ellipse: s-maj=3051.4km s-min=958.6km az=351.0*

ROM 27 00:52:06.8±0.1, 46°47′N±0°01′×10°72′E±0°01, h11km, ML1.0/15, 3C-5D, Error ellipse: s-maj=1.5km s-min=0.7km az=205.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CARE	Lago del Cares	0.05	200	⇓*e*Pg	Pg	00 52 09.4	+0.1
CARE				*e*Sg	Sg	00 52 10.6	-0.5
CARE	Lago del Cares	0.05	200	⇓P	Pg	00 52 09.4	+0.1
CARE				S	Sg	00 52 10.6	-0.5
CARE				AML	AML		
	comp=N,214μm,0.1s						
CARE				AML	AML		
	comp=E,200μm,0.4s						
CARE				AML	AML		
	comp=E,216μm,0.4s						
CARE				AML	AML		
	comp=N,208μm,0.1s						
A290A	Bolzano, San N	0.13	74	⇑Pg	Pg	00 52 10.2	0.0
A290A				Sg	Sg	00 52 12.0	-0.6
MOSI	Grossmontoni	0.19	322	⇓Pg	Pg	00 52 11.5	+0.5
MOSI				Sg	Sg	00 52 14.4	+0.5
MOSI	Grossmontoni	0.19	322	⇓P	Pg	00 52 11.5	+0.5
MOSI				S	Sg	00 52 14.4	+0.5
MOSI				AML	AML		
	comp=E,70μm,0.2s						
MOSI				AML	AML		
	comp=N,55μm,0.9s						
BRMO	Bormio	0.24	272	⇑Pg	Pg	00 52 12.4	+0.6
BRMO	Bormio	0.24	272	P	Pg	00 52 12.4	+0.6
BRMO				S	Sg	00 52 15.7	+0.5
BRMO				AML	AML		
	comp=E,22μm,1.1s						
BRMO				AML	AML		
	comp=N,17μm,0.7s						
OZOL	Ozolo	0.24	106	*e*Pg	Pg	00 52 12.3	+0.4
OZOL				*e*Sg	Sg	00 52 15.6	+0.3
OZOL	Ozolo	0.24	106	P	Pg	00 52 12.3	+0.4
OZOL				S	Sg	00 52 15.6	+0.3
OZOL				AML	AML		
	comp=E,77μm,0.2s						
OZOL				AML	AML		
	comp=N,64μm,0.3s						
OZOL				AML	AML		
	comp=E,119μm,1.1s						
FUORN	Ofenpass-Fuorn	0.35	296	⇓Pg	Pg	00 52 14.3	+0.4
FUORN				Sg	Sg	00 52 19.2	+0.6
FUORN	Ofenpass-Fuorn	0.35	296	P	Pg	00 52 14.3	+0.4
FUORN				S	Sg	00 52 19.2	+0.6
APPI	Appiano	0.35	88	P	Pg	00 52 14.3	+0.3
APPI				S	Sg	00 52 18.8	+0.2
APPI				AML	AML		
	comp=E,29μm,0.9s						
APPI				AML	AML		
	comp=N,41μm,0.1s						
GAGG	Gaggia	0.42	157	*e*Pg	Pb	00 52 15.8	-0.6
GAGG				*e*Sg	Sb	00 52 21.9	-0.9
GAGG	Gaggia	0.42	157	P	Pb	00 52 15.9	-0.5
GAGG				S	Sb	00 52 21.9	-0.9
SCUC	Scuol-Clozza	0.43	319	Pg	Pg	00 52 16.0	+0.5
MABI	Malga Bissina	0.44	199	Sg	Sg	00 52 22.0	+0.6
MABI	Malga Bissina	0.44	199	P	Pb	00 52 16.3	-0.4
MABI				S	Sg	00 52 22.0	+0.6
MABI				AML	AML		
	comp=E,24μm,0.8s						
MABI				AML	AML		
	comp=N,17μm,0.4s						
BERNI	Berninapass	0.48	263	Pg	Pg	00 52 16.9	+0.5
BERNI	Berninapass	0.48	263	⇑P	Pb	00 52 17.0	-0.5
BERNI				S	Sg	00 52 23.2	+0.4
RONC	Roncone	0.49	188	*e*Pg	Pb	00 52 17.1	-0.6
RONC				*e*Sg	Sg	00 52 24.0	+0.9
RONC	Roncone	0.49	188	P	Pb	00 52 17.3	-0.4
RONC				S	Sg	00 52 23.9	+0.8
FETA	Feichten	0.55	1	Pg	Pg	00 52 17.9	+0.2
FETA				Sg	Sg	00 52 24.7	-0.3
ZIAN	Ziano	0.62	108	P	Pb	00 52 19.3	-0.4
ZIAN				S	Sg	00 52 27.0	+0.1
ROSI	Rosskopf	0.66	46	P	Pb	00 52 20.7	+0.1
ROSI				S	Sb	00 52 29.2	-0.6

THE ***27*** *00:52:40.4, 42°N±7°×1°9E±°, h16km, M2.8/10, MLh2.8/10*
PDG ***27*** *00:52:41.1±0.3, 41°55′N×19°56′E, h8km±1km, ML2.8/13, Error ellipse: s-maj=1.4km s-min=1.8km az=0.0*
IDC ***27*** *00:52:43.7±82.0, 42°10′N×20°30′E, h0km, mb3.8/2, mbtmp3.8/3, ML3.0/1, Error ellipse: s-maj=1496.0km s-min=68.1km az=51.0*

ISC 27 00:52:40.5±1.2, 41°59′N±0°03′×19°45′E±0°04, h12km±9km, n48, σ1s35/66, 18C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	Ulcinj	0.40	338	⇓*i*Pg	Pb	00 52 48.9	-0.8
ULC				*i* Sg	Sb	00 52 57.0	+1.2
DRME	Dracevica, Mon	0.63	342	⇑*i*Pg	Pb	00 52 52.8	-0.7
DRME				*i* Sg	Sn	00 53 03.6	-1.7
PHP	Peshkopia	0.75	83	P	Pg	00 52 53.1	-1.9
BUM	Brajici-Budva	0.82	330	⇓*i*Pg	Pn	00 52 57.4	-0.7
BUM				*i* Sg	Sn	00 53 10.7	+0.5
PDG	Podgorica	0.85	350	⇓P	Pb	00 52 57.0	-0.3
PDG				⇑S	Sn	00 53 09.1	-1.6
PDG	Podgorica	0.85	350	⇓*i*Pg	Pb	00 52 57.0	-0.3
PDG				*i* Sg	Sn	00 53 11.0	+0.2
CEME	Cevo	1.03	338	⇑*i*Pg	Pn	00 53 00.5	-0.5
CEME				*i* Sg	Sn	00 53 17.7	+2.3
PVY	Plav	1.07	21	⇑*i*Pg	Pg	00 52 59.4	-1.8
PVY				*i* Sg	Sn	00 53 16.6	+0.1
HCY	Herceg Novi	1.11	320	⇑*i*Pg	Pn	00 53 02.9	+0.9
HCY				*i* Sg	Sn	00 53 20.8	+3.5
NKME	Niksic	1.23	343	⇑*i*Pg	Pg	00 53 04.3	+0.1
NKME				*i* Sg	Sn	00 53 23.3	+3.0
KOME	Kolasin	1.26	2	⇑*i*Pg	Pg	00 53 04.6	-0.1
KOME				*i* Sg	Sn	00 53 25.2	+4.2
IVA	Berane	1.32	14	⇓*i*Pg	Pb	00 53 04.6	-0.8
IVA				*i* Sg	Sn	00 53 24.9	+2.3
KBN	Korca	1.40	133	P	Pg	00 53 06.8	-0.6
KBN				S	Sg	00 53 27.2	+1.6
BRY	Bratogost	1.47	333	⇓*i*Pg	Pg	00 53 08.4	-0.4
BRY				*i* Sg	Sg	00 53 30.0	+2.0
UPM	Unac-Piva	1.66	346	⇓*i*Pn	Pg	00 53 11.3	-1.1
UPM				*i* Sn	Sg	00 53 35.7	+1.8
NEST	Nestorio	1.69	134	P	Pb	00 53 11.7	+0.1
NEST				S	Sg	00 53 36.1	+1.3
PLE	Pljevlja	1.74	359	⇓*i*Pn	Pg	00 53 13.2	-0.7
PLE				*i* Sn	Sg	00 53 37.5	+1.1
PENT	Pentalofos	1.89	137	P	Pn	00 53 14.7	-0.4
IGT	Igoumenitsa	2.17	162	P	Pn	00 53 16.5	0.0
KZN	Kozani	2.18	125	P	Pn	00 53 17.9	+1.2
KZN				S	Sb	00 53 46.7	-0.3
JAN	Janina	2.21	151	P	Pb	00 53 20.1	-0.4
MATE	Matera	2.28	246	⇓P	Pn	00 53 18.2	+0.2
PRMD	Pramanda	2.41	148	P	Pn	00 53 20.8	+0.9
KNT	Kendrikon	2.63	98	P	Pn	00 53 23.3	+0.4
BOVS	Bovan	2.63	38	⇑P	Pn	00 53 23.4	+0.5
TETR	Tetrakomo, Epi	2.64	148	P	Pn	00 53 24.1	+1.0
KKB	Krupnik	2.77	84	P	Pn	00 53 25.5	+0.8
KKB				S	Sn	00 53 59.2	+1.1
TYRN	Tyrnavos	2.83	131	P	Pn	00 53 27.3	+1.7
TIP	Timpagrande	3.17	221	⇑P	Pn	00 53 29.8	-0.6
BLY	Banja Luka	3.56	333	⇑P	Pn	00 53 35.7	0.0
MDVR	Moldovita	3.59	27	⇑P	Pn	00 53 36.6	+0.5
HERR	Herculane	3.94	32	⇑P	Pn	00 53 41.5	+0.7
BZS	Buzias	4.32	21	⇓P	Pn	00 53 46.3	+0.2
GZR	Gura Zlata	4.50	31	⇑P	Pn	00 53 49.9	+1.3
SURR	Surduc	4.59	24	⇓P	Pn	00 53 50.6	+0.8
MORH	Mrgy, Hungar	4.66	353	⇓P	Pn	00 53 50.5	-0.2
SIRR	Siria	4.94	18	⇓P	Pn	00 53 55.3	+0.7
ELND	Elena	4.95	72	⇑P	Pn	00 53 56.2	+1.5
LOT	Lotru	4.97	38	⇑P	Pn	00 53 56.0	+0.8
VOIR		5.60	45	⇓P	Pn	00 54 05.6	+1.8
DRGR		5.70	23	⇑P	Pn	00 54 06.1	+1.0
MLR	Muntele Rosu	6.12	48	⇑P	Pn	00 54 11.7	+0.8
NEHR	Nehoiu	6.28	50	⇓P	Pn	00 54 14.0	+0.9
PLOR	Plostina	6.73	48	⇑P	Pn	00 54 20.2	+1.0
VRI	Vrincioaia	6.78	49	⇓P	Pn	00 54 21.0	+1.1
FINES	FINESS Array B	20.28	9	P	P	00 57 14.2	-1.7
	0.2nm,0.3s,baz=190,slow=9.7,SNR=8.1						
	3.4nm,0.8s						
ZALV	Zalesovo Beam	44.09	51	P	P	01 00 46.4	-1.9
	0.7nm,0.4s,baz=280,slow=7.7,SNR=6.2						
	0.7nm,0.4s						
MKAR	Makanchi Array	44.29	61	P	P	01 00 48.7	-1.4
	0.8nm,0.7s,baz=284,slow=6.5,SNR=3.9						
	0.8nm,0.7s						

IDC 27 01:19:11.0±3.2, 2°36S×133°40E, h0km, mb3.5/2, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=134.6km s-min=29.2km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	17.39	205	P	Pn	01 23 14.8	-0.5
	0.1nm,0.3s,baz=33,slow=11,SNR=1.6						
	1.4nm,0.9s						
WRA	Warramunga Arr	17.50	177	P	Pn	01 23 16.8	+0.2
	0.2nm,0.3s,baz=358,slow=12,SNR=10.0						
	0.6nm,0.6s						
ASAR	Alice Springs	21.19	179	P	P	01 23 58.4	+0.1
	1.6nm,0.7s,baz=4.9,slow=11,SNR=21						
	1.6nm,0.7s						
MKAR	Makanchi Array	66.34	324	P	P	01 30 01.6	0.0
	0.3nm,0.5s,baz=112,slow=7.8,SNR=2.5						
	0.3nm,0.5s						

IDC ***27*** *01:20:06.8±1.3, 6°62N×126°84E, h0km, mb3.6/5, mbtmp3.6/5, MS2.2/1, Error ellipse: s-maj=35.2km s-min=13.8km az=40.0*

ISC 27 01:20:15.6±1.7, 6°4N±0°3×126°4E±0°5, h68km, n7, σ1s38/7, mb3.4/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.00	309	Pg	Pn	01 20 33.2	-0.8
	165nm,0.3s,baz=53,slow=3.3,SNR=6.2						
DAV				Lg	Lg	01 20 48.9	
	100nm,0.3s,baz=166,slow=22,SNR=11						
FITZ	Fitzroy Crossi	24.39	182	P	P	01 25 29.7	+2.1
	0.7nm,0.3s,baz=6.1,slow=12,SNR=6.2						
	0.7nm,0.3s						
WRA	Warramunga Arr	27.36	164	P	P	01 25 54.3	-0.3
	0.9nm,1.1s,baz=342,slow=9.6,SNR=5.0						
	0.9nm,1.1s						
CMAR	Chiang Mai Arr	29.27	297	LR	LR	01 37 48.0	
	comp=Z,5.0nm,19.9s,baz=5.0,slow=36						
ASAR	Alice Springs	30.81	166	P	P	01 26 24.0	-1.2
	0.3nm,0.4s,baz=345,slow=8.8,SNR=3.5						
ASAR				PcP	PcP	01 29 21.4	+0.2
	0.2nm,0.5s,baz=343,slow=2.3,SNR=1.5						
	0.3nm,0.4s						
MKAR	Makanchi Array	55.15	324	P	P	01 29 41.6	+0.5
	0.5nm,0.6s,baz=119,slow=6.4,SNR=6.7						
	0.5nm,0.6s						
KURBB	Kurchatov Arra	59.29	327	P	P	01 30 11.1	+0.9
	0.1nm,0.3s,baz=128,slow=7.3,SNR=1.9						
	0.1nm,0.3s						

CATAC ***27*** *01:29:44.0±0.6, 16°N±4°×9°5W±°, h110km±8km, M4.9/18, mb4.7/7, mB5.4/8, MLv5.1/18, Mw(mB)4.8/8, Error ellipse: s-maj=9.7km s-min=6.4km az=32.4, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.62; Mθθ2.04; Mϕϕ-0.42; Mrθ0.06; Mϕθ-1.53; Mϕr-2.04; Fault plane solution: M₀3.16405×10¹⁵ NP1:φs83.28931°, δ45.28925°, λ-148.71910°. NP2:φs330.14597°, δ68.34586°, λ-49.19580°. Principal axes: T 3.0046, Plg13.6827°, Azm31.7492°; N 0.2978, Plg37.3988°, Azm132.4761°; P -3.3024, Plg49.3228°, Azm285.2938°; confirmed*

GCG ***27*** *01:29:47.7±1.2, 16°01′N×95°09′W, h40km±234km, MD4.9, ML4.7*

NEIC ***27*** *01:29:48.9±2.4, 15°97′N±0°05′×95°05′W±0°04, h39km±7km, mb4.4/84, Md4.6/16(MEX), Error ellipse: s-maj=7.9km s-min=5.7km az=170.0*

MEX ***27*** *01:29:49.9±0.9, 15°88′N×95°06′W, h39km±49km, MD4.6*

IDC ***27*** *01:29:51.4±2.5, 16°14′N×94°83′W, h58km±15km, mb3.6/10, mbtmp3.9/12, MS3.1/18, Error ellipse: s-maj=34.8km s-min=10.4km az=38.0*

ISC 27 01:29:49.1±0.6, 16°03′N±0°04′×95°11′W±0°03, h43km±5km, n172, σ1s85/162, mb4.3/28, MS3.1/16, 4C, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.99	255		Pn	01 30 06.0	-0.6
HUIG					Sn	01 30 18.8	-0.7
HUIG	Huatulco	0.99	255	*i* P	Pn	01 30 06.0	-0.6
HUIG				*e*S	Sn	01 30 18.8	-0.7
HUIG	Huatulco	0.99	255	*i* P	Pn	01 30 06.0	-0.6
HUIG				*i* S	Sn	01 30 18.2	-1.2
CMIG	Matias Romero	1.08	12	P	Pn	01 30 08.1	+0.4
	899nm,0.3s,baz=196,slow=11,SNR=3774						
CMIG				S	Sn	01 30 22.1	+0.6
	2μm,0.7s,baz=194,slow=19,SNR=8.9						
CMIG	Matias Romero	1.08	12		Pn	01 30 08.2	+0.5
CMIG					Sn	01 30 22.4	+0.9
PANG	Puerto Angel	1.36	255		Pn	01 30 10.3	-1.2
PANG					Sn	01 30 27.1	-1.3
PANG	Puerto Angel	1.36	255	*e*P	Pn	01 30 10.3	-1.2
PANG				*e*S	Sn	01 30 27.1	-1.3
UXUV	UXUV	1.58	36		Pn	01 30 14.9	+0.3
UXUV					Sn	01 30 34.4	+0.6
UXUV	UXUV	1.58	36	*e*P	Pn	01 30 14.9	+0.3
UXUV				*e*S	Sn	01 30 34.4	+0.6
NEUV	Arroyo Zacate	1.80	339		Pn	01 30 18.9	+1.3
NEUV					Sn	01 30 41.2	+2.0
NEUV	Arroyo Zacate	1.80	339	*e*P	Pn	01 30 18.9	+1.3
NEUV				*e*S	Sn	01 30 41.2	+2.0
OXIG	Oaxaca	1.87	304		Pn	01 30 21.1	+2.4
OXIG					Sn	01 30 43.9	+2.6
VHO	Vista Hermosa	1.87	304	*e*P	Pn	01 30 21.1	+2.4
VHO				*e*S	Sn	01 30 43.9	+2.7
PEIG	Puerto Escondi	1.96	269		Pn	01 30 19.5	-0.3
PEIG					Sn	01 30 40.6	-2.6
PEIG	Puerto Escondi	1.96	269	*e*P	Pn	01 30 19.5	-0.3
PEIG				*e*S	Sn	01 30 40.6	-2.6
TGIG		2.05	68	*e*P	Pn	01 30 20.2	-0.9
TGIG				*e*S	Sn	01 30 45.0	-0.5
CCIG	Comitan	2.87	85		Pn	01 30 31.2	-1.3
CCIG				Sn	Sn	01 31 04.2	-1.8
CCIG	Comitan	2.87	85	*e*P	Pn	01 30 31.2	-1.3
CCIG				IAML		01 31 18.8	
	comp=N,3μm,0.4s						
CCIG	Comitan	2.87	85	S	Sn	01 31 10.6	+4.7
CCIG	Comitan	2.87	85	⇑P	Pn	01 30 31.2	-1.3
SMCA	Catarina	3.15	111	*e*P	Pn	01 30 34.8	-1.4
HUEH	Huehuetenango	3.55	101		Pn	01 30 41.4	-0.5
HUEH	Huehuetenango	3.55	101	S	Sn	01 31 25.8	+3.1
HUEH	Huehuetenango	3.55	101	P	Pn	01 30 42.8	+0.9
RTAL	Retalhuleu	3.62	114		Pn	01 30 41.4	-1.3
RTAL	Retalhuleu	3.62	114	⇑P	Pn	01 30 41.4	-1.3
TLIG	Tlapa	3.64	295		Pn	01 30 46.0	+2.9
STG2	El Palmar, Qui	3.94	113	*e*P	Pn	01 30 41.5	-5.7
STG2				*e*S	Sn	01 31 19.3	-13
STG8	El Palmar, Qui	3.96	113	*e*P	Pn	01 30 41.5	-6.0
STG8				*e*S	Sn	01 31 20.3	-12
APG	El Apazote	4.59	102	P	Pn	01 30 55.5	-0.7
	comp=N,1.4nm,0.3s,baz=81,slow=17,SNR=18						
APG				S	Sn	01 31 46.2	-2.3
	comp=N,16nm,0.8s,baz=224,slow=19,SNR=11						
SCIG	Sabancuy	4.75	52	*e*P	Pn	01 30 56.8	-1.3
SCIG				*e*S	Sn	01 31 46.3	-5.7
SCIG	Sabancuy	4.75	52	⇑P	Pn	01 30 57.1	-1.0
SCIG	Sabancuy	4.75	52	S	Sn	01 31 49.4	-2.6
FG16	Alotenango, Sa	4.78	111	*e*P	Pn	01 30 54.0	-4.8
PETF	Flores	5.11	79		Pn	01 31 02.3	-0.8
PETF	Flores	5.11	79	*e*P	Pn	01 31 02.6	-0.5
PETF	Flores	5.11	79	P	Pn	01 31 02.3	-0.8
PETF	Flores	5.11	79	S	Sn	01 32 05.7	+4.8
FAME	Alcaldia de Sa	5.38	113	P	Pn	01 31 06.8	-0.1
SLOZ	Alcaldia de Sa	5.52	110	P	Pn	01 31 08.2	-0.6
LOAL	Lomas de Alarc	5.53	111	P	Pn	01 31 08.9	-0.1
NUBE	Las Nubes	5.57	112	*e*P	Pn	01 31 09.6	0.0
NUBE	Las Nubes	5.57	112	P	Pn	01 31 09.5	0.0
NUBE	Las Nubes	5.57	112	S	Sn	01 32 15.7	+3.2
CEVE	Cerro Verde	5.74	112	P	Pn	01 31 11.5	-0.5
CEVE	Cerro Verde	5.74	112	S	Sn	01 32 20.3	+3.6
ESQI	Esquipulas	5.76	104	Pn	Pn	01 31 12.5	+0.3
ESQI	Esquipulas	5.76	104	S	Sn	01 32 20.9	+3.9
ESQI	Esquipulas	5.76	104	P	Pn	01 31 11.6	-0.5
MTO3	Montecristo	5.78	106		Pn	01 31 11.6	-1.0
MTO3	Montecristo	5.78	106	P	Pn	01 31 12.1	-0.5
MTO3	Montecristo	5.78	106	S	Sn	01 32 21.7	+3.8
CEDA	San Andres	5.95	111	⇑P	Pn	01 31 13.8	-1.0
JAYA	Jayaque - finc	5.96	113	P	Pn	01 31 14.5	-0.5
PMON	Piamonte	6.06	112	P	Pn	01 31 15.2	-1.1
LALI	Alcalda de L	6.15	114	P	Pn	01 31 16.6	-0.7
MOIG	Morelia	6.83	303		Pn	01 31 31.2	+4.3
JRQG	Juriquilla Cam	6.87	313	Pn	Pn	01 31 28.4	+0.8
TEIG	Tepich	7.72	56	P	Pn	01 31 36.4	-2.5
	comp=N,0.3nm,0.5s,baz=307,slow=20,SNR=41						
TEIG				S	Sn	01 32 57.4	-7.8
	comp=N,0.6nm,0.5s,baz=312,slow=24,SNR=9.4						
TGUH	Tegucigalpa,Un	7.82	103	Pn	Pn	01 31 38.2	-2.3
CNGN	Cerro Negro	8.88	112	Pn	Pn	01 31 55.0	+0.1
ZAIG	Zacatecas	9.71	315		Pn	01 32 10.3	+3.8
BOAB	BOACO BROADBAN	9.82	110	Pn	Pn	01 32 08.1	+0.3
JUD3	Juan Diaz 3	10.99	121	Pn	Pn	01 32 24.2	+0.3
JTS	Las Juntas de	11.42	119	LR	LR	01 35 58.3	
	comp=N,40nm,21.9s,baz=284,slow=33						
HBVL	Hebbronville	11.47	344	Pn	Pn	01 32 32.9	+2.6
833A	Chaparral WMA,	12.86	343		Pn	01 32 51.6	+2.4
735A	Kenedy	13.00	349		Pn	01 32 51.9	+0.7
PIRO	Carate, Puerto	13.78	122	Pn	Pn	01 33 04.9	+3.0
MLDN	Muldoon	13.81	353		Pn	01 33 03.1	+0.9
HNDO	Hondo	13.97	345		Pn	01 33 06.4	+1.9
DRIO	Del Rio	14.26	340		Pn	01 33 10.3	+1.9
435B	Jarrell	14.86	352		Pn	01 33 16.9	+0.5
JCT	Junction City	15.01	344		Pn	01 33 20.2	+1.8
JCT				IAmb	IAmb	01 33 29.9	
	comp=Z,22nm,0.7s						
SAND	Sanderson	15.28	336	P	P	01 33 25.5	-0.6
TX31	Lajitas Ar. Si	15.40	331		Pn	01 33 25.6	+2.0
TXAR	Lajitas Array	15.40	331	P	P	01 33 26.3	-1.3
	comp=Z,3.3nm

comp=Z,2.8nm,0.9s,baz=152,slow=13,SNR=10
comp=Z,2.8nm,0.9s
ANMO Albuquerque 21.41 334 P **P** **01 34 34.4 +0.9**
RTBA Rita Blanca 21.43 343 IAmb IAmb 01 34 37.9
comp=Z,20nm,0.8s
TUC Tucson 21.57 322 P **P** **01 34 37.6 +2.4**
TUC IAmb IAmb 01 34 41.3
comp=Z,14nm,1.2s
TKL Tuckaleechee C 22.02 25 P **P** **01 34 38.6 -1.2**
comp=Z,1.0nm,0.5s,baz=199,slow=10.0,SNR=12
TKL LR LR 01 44 39.0
comp=Z,23nm,18.3s,baz=188,slow=41
comp=Z,1.0nm,0.5s
TKL Tuckaleechee C 22.02 25 IAmb IAmb 01 34 45.8
comp=Z,12nm,0.9s
T47A Sharon Grove 22.05 17 IAmb IAmb 01 34 58.9
comp=Z,7.8nm,0.8s
S44A Carbondale 22.19 12 P **P** **01 34 41.9 +0.2**
S44A IAmb IAmb 01 34 50.3
comp=Z,12nm,0.9s
CCM Cathedral Cave 22.20 8 P **P** **01 34 39.5 -2.3**
CCM IAmb IAmb 01 34 42.8
comp=Z,18nm,1.3s
R32A Long Quarter, 22.53 353 IAmb IAmb 01 34 48.0
comp=Z,20nm,0.9s
T25A Trinidad 22.58 340 P **P** **01 34 48.0 +1.9**
T25A IAmb IAmb 01 34 51.8
comp=Z,13nm,1.0s
ROSC El Rosal 23.25 116 LR LR 01 44 01.7
comp=Z,52nm,18.3s,baz=355,slow=37
V55A Taylorsville 23.31 30 IAmb IAmb 01 35 17.9
comp=Z,5.9nm,0.7s
SDCO Great Sand Dun 23.50 339 P **P** **01 34 56.7 +1.2**
113A Mohawk Valley, 23.73 318 P **P** **01 34 58.0 +0.7**
Y14A Wickenburg 24.04 321 P **P** **01 35 01.9 +1.6**
WUAZ Wupatki 24.24 326 P **P** **01 35 04.4 +2.1**
WUAZ IAmb IAmb 01 35 06.8
comp=Z,12nm,1.1s
SDV Santo Domingo 24.92 104 LR LR 01 45 17.1
comp=Z,52nm,21.6s,baz=295,slow=38
PV01 Paradox Valley 25.01 334 P **P** **01 35 10.4 +1.2**
PV01 IAmb IAmb 01 35 16.9
comp=Z,15nm,1.4s
PV23 Carpenter Ridg 25.46 334 P **P** **01 35 14.8 +1.4**
PV23 IAmb IAmb 01 35 24.0
comp=Z,14nm,0.8s
SCIA State Center 25.84 3 P **P** **01 35 14.9 -1.5**
PFO Pinyon Flats O 26.02 316 LR LR 01 45 39.3
comp=Z,94nm,19.6s,baz=74,slow=36
ECSD EROS Data Cent 27.64 358 P **P** **01 35 31.3 -1.4**
SJG San Juan 27.75 82 LR LR 01 47 17.6
comp=Z,17nm,19.7s,baz=274,slow=38
ATAH Atahualpa 28.35 143 LR LR 01 45 52.6
comp=Z,39nm,19.5s,baz=353,slow=34
PDAR Pinedale Array 29.38 338 P **P** **01 35 50.5 +2.1**
comp=Z,0.2nm,0.5s,baz=171,slow=8.5,SNR=3.7
comp=Z,0.2nm,0.5s
ELK Elko 30.18 329 LR LR 01 48 53.5
comp=Z,68nm,21.1s,baz=135,slow=38
NVAR Mina Array Bea 30.22 322 P **P** **01 35 58.7 +2.7**
comp=Z,2.5nm,0.7s,baz=138,slow=8.5,SNR=12
NVAR LR LR 01 49 37.0
comp=Z,66nm,19.2s,baz=86,slow=39
comp=Z,2.5nm,0.7s
NVAR Mina Array Bea 30.22 322 P **P** **01 35 56.4 +0.5**
SADO Sadowa 31.66 22 LR LR 01 51 04.3
comp=Z,28nm,19.2s,baz=230,slow=40
EYMN Ely 31.96 5 P **P** **01 36 08.6 -2.4**
AGMN Agassiz Nation 32.18 359 P **P** **01 36 11.0 -1.9**
LRM Limekiln Ridge 33.06 338 P **P** **01 36 21.9 +1.0**
EPLO Experimental L 33.57 2 P **P** **01 36 23.5 -1.5**
EPLO IAmb IAmb 01 36 43.1
comp=Z,9.3nm,1.0s
ULM Lac du Bonnet 34.14 359 P **P** **01 36 28.2 -1.7**
comp=Z,5.1nm,0.9s,baz=180,slow=7.8,SNR=3.5
comp=Z,5.1nm,0.9s
YBH Yreka Blue Hor 34.93 323 LR LR 01 52 24.0
comp=Z,6.9nm,20.1s,baz=140,slow=39
JTMT Jette 35.36 337 P **P** **01 36 38.7 -1.9**
NEW Newport 36.88 335 LR LR 01 53 46.7
comp=Z,31nm,21.4s,baz=152,slow=39
LON Longmire 37.81 330 P **P** **01 37 03.0 +1.6**
LON IAmb IAmb 01 37 19.2
comp=Z,9.8nm,1.4s
MDP Montagnes des 43.05 100 LR LR 01 56 03.1
comp=Z,24nm,21.1s,baz=248,slow=37
YKA Yellowknife Ar 48.40 348 P **P** **01 38 27.1 +0.5**
comp=Z,0.9nm,0.7s,baz=166,slow=15,SNR=4.3
YKA pP **sP** **01 38 42.3 -1.3**
comp=Z,1.8nm,0.7s,baz=159,slow=6.8,SNR=7.4
comp=Z,0.9nm,0.7s
R32K Eaglecrest 51.27 335 P **P** **01 38 49.1 +0.6**
H03N2 Juan Fernandez 51.56 163 T T 02 35 09.3
baz=336,slow=77
H03N1 Juan Fernandez 51.57 163 T T 02 35 10.9
baz=336,slow=77
H03N3 Juan Fernandez 51.58 163 T T 02 35 07.8
baz=336,slow=77
M29M Somme Creek 55.38 337 P **P** **01 39 18.3 -0.4**
M29M IAmb IAmb 01 39 21.2
comp=Z,5.1nm,1.1s
INK Inuvik 57.66 344 P **P** **01 39 34.3 -0.4**
INK IAmb IAmb 01 39 45.3
comp=Z,6.2nm,1.3s
H29M Whitestone 57.67 341 P **P** **01 39 35.2 +0.3**
H29M IAmb IAmb 01 39 47.7
comp=Z,7.2nm,1.4s
ILAR Eielson Array 59.80 337 P **P** **01 39 49.8 +0.1**
comp=Z,0.5nm,0.6s,baz=126,slow=6.1,SNR=6.1
ILAR pP **sP** **01 40 05.7 -1.3**
comp=Z,1.4nm,1.0s,baz=143,slow=4.1,SNR=3.3
comp=Z,0.5nm,0.6s
BMAR Burnt Mountain 60.37 340 P **P** **01 39 54.1 +0.4**
TRF Thorofare Moun 60.53 335 P **P** **01 39 54.7 -0.2**
C27K Jago River 61.33 343 P **P** **01 40 00.7 +0.7**
C27K IAmb IAmb 01 40 01.0
comp=Z,6.8nm,1.4s
C23K Ikillik River 63.49 341 P **P** **01 40 14.1 -0.3**
BORG Borgarnes 68.71 26 LR LR 02 11 58.3
comp=Z,13nm,18.8s,baz=339,slow=37
EKA Eskdalemuir Ar 78.08 36 P **P** **01 41 42.1 -1.3**
comp=Z,1.2nm,0.5s,baz=274,slow=5.5,SNR=6.3
comp=Z,1.2nm,0.5s
ESDC Sonseca Array 80.81 51 P **P** **01 41 57.8 -0.9**
comp=Z,1.7nm,0.9s,baz=310,slow=5.9,SNR=4.2
comp=Z,1.7nm,0.9s
NOA NORSAR Array B 83.79 28 P **P** **01 42 13.7 -0.1**
comp=Z,0.7nm,0.8s,baz=274,slow=6.3,SNR=3.7
NOA LR LR 02 19 29.9
comp=Z,10.0nm,19.7s,baz=200,slow=36
comp=Z,0.7nm,0.8s
PETK Petropavlovsk- 87.27 325 LR LR 02 23 13.0
comp=Z,19nm,18.6s,baz=242,slow=37
FINES FINESS Array B 89.92 24 LR LR 02 23 27.1
comp=Z,23nm,19.5s,baz=309,slow=36
WRA Warramunga Arr 132.93 258 PKP **PKPdf** **01 48 59.9 -0.7**
comp=Z,0.3nm,0.6s,baz=89,slow=1.9,SNR=2.5
WRA Warramunga Arr 132.93 258 PKPdf **PKPdf** **01 48 56.6 -4.0**
ASAR Alice Springs 133.46 252 PKP **PKPdf** **01 49 00.8 -0.7**
comp=Z,0.4nm,0.8s,baz=141,slow=1.8,SNR=2.9
ASAR Alice Springs 133.46 252 PKPdf **PKPdf** **01 49 01.0 -0.6**
PSA00 Pilbara Seismi 146.50 255 PKPbc **PKPdf** **01 49 25.4 +0.4**

*BEO **27** 01:31:38.7±0.5,43°.21N×18°.00E,h10km±4km, ML2.4/10*
*PDG **27** 01:31:38.0±0.1,43°.22N×18°.05E,h13km, ML2.5/13, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*
*RHSSO **27** 01:31:38.1±0.3,43°.22N×18°.01E,h8km, ML2.7/4*
ISC 27 01:31:38.2±1.1, 43°.20N±0°.02×18°.04E±0°.01, h5km±9km, n49, σ0s89/91, 6C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.40**	**94**	*e*Pg	**Pg**	**01 31 45.8**	**-0.2**
KLINJ				*e*Sg	**Sb**	**01 31 52.7**	**-1.6**
STON	**Ston**	**0.41**	**217**	*i* Pg	**Pg**	**01 31 46.3**	**+0.1**
STON				Sg	**Sg**	**01 31 52.8**	**+1.3**
STON	**Ston**	**0.41**	**217**	*e*Pg	**Pg**	**01 31 46.3**	**+0.1**
STON				*e*Sg	**Sb**	**01 31 53.3**	**-1.2**
BRY	**Bratogost**	**0.47**	**129**	⇓*i*Pg	**Pg**	**01 31 47.1**	**-0.2**
BRY				*i* Sg	**Sg**	**01 31 54.4**	**+0.9**
TREB	**Trebinje**	**0.54**	**155**	⇑*i*Pg	**Pg**	**01 31 48.2**	**-0.2**
TREB				*e*Sg	**Sb**	**01 31 57.0**	**-1.0**
TREB	**Trebinje**	**0.54**	**155**	*e*Pg	**Pg**	**01 31 48.3**	**-0.2**
TREB				*e*Sg	**Sb**	**01 31 57.3**	**-0.7**
DBRK	**Dubrovnik**	**0.54**	**171**	*i* Pg	**Pg**	**01 31 48.6**	**+0.1**
DBRK				Sg	**Sb**	**01 31 57.3**	**-0.8**
UPM	**Unac-Piva**	**0.63**	**89**	⇑*i*Pg	**Pg**	**01 31 49.9**	**-0.5**
UPM				*i* Sg	**Sb**	**01 32 00.1**	**-1.0**
RICI	**Ricice**	**0.72**	**294**	*i* Pg	**Pg**	**01 31 51.5**	**-0.6**
RICI				Sg	**Sg**	**01 32 00.6**	**-0.9**
MAKA	**Makarska**	**0.75**	**277**	*i* Pg	**Pg**	**01 31 51.5**	**-1.1**
MAKA				Sg	**Sg**	**01 32 02.8**	**+0.5**
NKME	**Niksic**	**0.80**	**123**	⇓*i*Pg	**Pg**	**01 31 52.8**	**-0.7**
NKME				*i* Sg	**Sb**	**01 32 05.6**	**-0.1**
HCY	**Herceg Novi**	**0.82**	**156**	⇓*i*Pg	**Pg**	**01 31 53.7**	**-0.3**
HCY				*i* Sg	**Sb**	**01 32 06.8**	**+0.4**
CEME	**Cevo**	**0.92**	**135**	⇑*i*Pg	**Pg**	**01 31 55.1**	**-0.7**
CEME				*i* Sg	**Sb**	**01 32 09.6**	**+0.4**
LSTV	**Lastovo**	**0.95**	**243**	*e*Pg	**Pg**	**01 31 55.2**	**-1.1**
LSTV				Sg	**Sb**	**01 32 09.7**	**-0.2**
PLE	**Pljevlja**	**0.99**	**82**	*e*Pg	**Pg**	**01 31 56.9**	**-0.4**
PLE	**Pljevlja**	**0.99**	**82**	⇓*i*Pg	**Pg**	**01 31 56.9**	**-0.4**
PLE				*i* Sg	**Sb**	**01 32 11.8**	**+0.4**
BUM	**Brajici-Budva**	**1.10**	**145**	⇑*i*Pg	**Pg**	**01 31 58.8**	**-0.5**
BUM				*i* Sg	**Sn**	**01 32 15.8**	**0.0**
KOME	**Kolasin**	**1.14**	**107**	*e*Pg	**Pg**	**01 31 59.3**	**-0.7**
KOME	**Kolasin**	**1.14**	**107**	⇓*i*Pg	**Pg**	**01 31 59.3**	**-0.7**
KOME				*i* Sg	**Sn**	**01 32 16.8**	**-0.1**
HVAR	**Hvar**	**1.16**	**269**	*e*Pg	**Pg**	**01 31 59.3**	**-1.2**
HVAR				Sg	**Sb**	**01 32 16.1**	**0.0**
PDG	**Podgorica**	**1.18**	**130**	*e*Pg	**Pg**	**01 31 59.9**	**-0.9**
PDG				*e*Sg	**Sn**	**01 32 18.2**	**+0.4**
PDG	**Podgorica**	**1.18**	**130**	⇓*i*Pg	**Pg**	**01 31 59.8**	**-1.0**
PDG				*i* Sg	**Sn**	**01 32 18.5**	**+0.7**
BBLS	**Lazi&#263i**	**1.20**	**56**	*e*Pg	**Pg**	**01 32 00.5**	**-0.6**
BBLS				*e*Sg	**Sg**	**01 32 16.5**	**-0.2**
DRME	**Dracevica, Mon**	**1.32**	**140**	*e*Pn	**Pn**	**01 32 02.1**	**-1.2**
DRME	**Dracevica, Mon**	**1.32**	**140**	⇓*i*Pg	**Pg**	**01 32 02.4**	**-2.9**
DRME				*i* Sg	**Sn**	**01 32 23.5**	**+2.3**
BEY	**Berane**	**1.40**	**103**	*e*Pg	**Pn**	**01 32 04.0**	**-0.4**
IVA	**Berane**	**1.40**	**103**	⇑*i*Pg	**Pn**	**01 32 03.9**	**-0.5**
IVA				*i* Sg	**Sn**	**01 32 25.2**	**+1.9**
SJES	**Sjenica**	**1.42**	**87**	*e*Pg	**Pg**	**01 32 05.0**	**-0.3**
SJES				*e*Sg	**Sg**	**01 32 23.9**	**+0.2**
KIJV	**Kijevo**	**1.43**	**305**	*e*Pn	**Pn**	**01 32 04.3**	**-0.6**
KIJV				Sn	**Sg**	**01 32 25.0**	**+0.8**
ULC	**Ulcinj**	**1.52**	**144**	⇓*i*Pg	**Pn**	**01 32 04.9**	**-1.2**
ULC				*i* Sg	**Sg**	**01 32 28.4**	**+1.3**
PVY	**Plav**	**1.54**	**113**	*e*Pg	**Pb**	**01 32 07.0**	**-0.2**
PVY	**Plav**	**1.54**	**113**	⇑*i*Pg	**Pb**	**01 32 06.9**	**-0.3**
PVY				*i* Sg	**Sg**	**01 32 28.6**	**+1.1**
IVAS	**Ivanjica**	**1.59**	**76**	*e*Pg	**Pn**	**01 32 07.1**	**+0.1**
IVAS				*e*Sg	**Sg**	**01 32 31.0**	**+1.8**
BLY	**Banja Luka**	**1.67**	**339**	*e*Pn	**Pn**	**01 32 07.2**	**-0.8**
BLY				*e*Sn	**Sn**	**01 32 28.7**	**-1.1**
TEKS	**Tekeris**	**1.73**	**38**	*e*Pg	**Pb**	**01 32 10.5**	**+0.1**
TEKS				*e*Sg	**Sg**	**01 32 34.2**	**+0.5**
ZIRJ	**Zirje**	**1.80**	**285**	*e*Pn	**Pn**	**01 32 09.7**	**-0.2**
ZIRJ				Sn	**Sb**	**01 32 34.3**	**-0.2**
MORI	**Morici**	**1.82**	**292**	*i* Pn	**Pn**	**01 32 10.7**	**+0.5**
MORI				Sn	**Sb**	**01 32 35.1**	**0.0**
GOCS	**Kraljevo Serbi**	**2.10**	**79**	*e*Pg	**Pb**	**01 32 16.2**	**-0.6**
GOCS				*e*Sg	**Sg**	**01 32 46.2**	**+0.6**
UDBI	**Udbina**	**2.11**	**310**	*i* Pg	**Pb**	**01 32 16.7**	**-0.3**
UDBI				Sn	**Sn**	**01 32 41.8**	**+0.9**
SELS	**Selova**	**2.25**	**88**	*e*Pn	**Pn**	**01 32 16.3**	**+0.2**
DUGI	**Dugi Otok**	**2.31**	**291**	*e*Pn	**Pn**	**01 32 17.3**	**+0.4**
DUGI				Sn	**Sn**	**01 32 47.2**	**+1.6**
PLIT	**Plitvice**	**2.42**	**315**	*e*Pn	**Pn**	**01 32 19.5**	**+1.1**
PLIT				Sn	**Sn**	**01 32 49.1**	**+0.7**
VIRC	**Vir**	**2.42**	**298**	*e*Pg	**Pb**	**01 32 22.5**	**+0.3**
VIRC				Sn	**Sn**	**01 32 49.7**	**+1.3**
MOSL	**Moslavina**	**2.58**	**340**	*e*Pn	**Pn**	**01 32 21.6**	**+0.9**
MOSL				Sn	**Sn**	**01 32 53.7**	**+1.2**
NVLJ	**Novalja**	**2.67**	**302**	*e*Pn	**Pn**	**01 32 22.8**	**+1.1**
NVLJ				Sn	**Sn**	**01 32 56.1**	**+1.8**
RABC	**Rab**	**2.81**	**305**	*i* Pn	**Pn**	**01 32 25.1**	**+1.2**
RABC				Sn	**Sn**	**01 32 59.6**	**+1.5**
MORH	**Mrgy, Hungar**	**3.04**	**8**	*e*Pn	**Pn**	**01 32 26.7**	**-0.3**
MORH				*e*Sn	**Sn**	**01 33 02.4**	**-1.4**
ZAPS	**Zavoj**	**3.36**	**87**	*e*Pn	**Pn**	**01 32 31.9**	**+0.6**
AQU	**L'Aquila**	**3.52**	**258**	*e*Pn	**Pn**	**01 32 32.4**	**-1.1**
AQU				*e*Sn	**Sn**	**01 33 14.0**	**-1.5**

*NEIC **27** 01:37:04.1±2.2, 18°.6N±0°.4×68°.83W±0°.06, h147km±12km, ML2.6/8, Md2.9/14(RSPR), Error ellipse: s-maj=55.1km s-min=7.6km az=183.0*
*RSPR **27** 01:37:07.7, 18°.55N×68°.73W, h129km±3km, MD2.9/14*
SDD 27 01:37:08.5±2.2, 17°.96N×68°.79W, h21km±161km, MD3.2, ML2.4, MW2.7, 15C-10D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**1.00**	**326**	Pn	Pb	01 37 25.4	-1.7
DR12				Sn	Sb	01 37 39.7	-0.2
HATOM	**Hato Mayor del**	**1.00**	**326**	⇑*e*Pg	Pb	01 37 25.6	-1.5
HATOM				⇑*e*Sg	Sb	01 37 39.8	0.0
HATOM				IAML		01 37 43.3	
	comp=N,39nm,0.1s						
MIDR	**Miches**	**1.05**	**347**	⇑*e*Pg	Pb	01 37 25.8	-2.2
MIDR				⇑*e*Sg	Sb	01 37 40.3	-1.0
MIDR				IAML		01 37 41.2	
	comp=N,55nm,0.3s						
MIDR	**Miches**	**1.05**	**347**	⇑*e*P	Pb	01 37 25.9	-2.1
MIDR	**Miches**	**1.05**	**347**	*e*S	Sb	01 37 40.6	-0.6
IDE	**Isla Desecheo**	**1.32**	**71**		Pn	01 37 31.6	-0.2
IDE					Sb	01 37 51.9	+2.7
IDE	**Isla Desecheo**	**1.32**	**71**	⇓*e*P	Pn	01 37 31.6	-0.2
IDE	**Isla Desecheo**	**1.32**	**71**	*e*S	Sb	01 37 51.9	+2.7
SMDR	**Samana, DR**	**1.38**	**344**	⇓*e*P	Pn	01 37 28.9	-3.6
SMDR	**Samana, DR**	**1.38**	**344**	*e*S	Sn	01 37 45.8	-4.3
BANI	**BANI**	**1.55**	**286**	⇑*e*Pg	Pn	01 37 34.2	-0.8
BANI				⇑*e*Sg	Sb	01 37 56.9	+1.1
BANI				IAML		01 38 21.7	
	comp=N,43nm,1.9s						
BANI	**BANI**	**1.55**	**286**	Pn	Pn	01 37 33.7	-1.2
BANI				Sn	Sb	01 37 57.0	+1.2
CRPR	**Cabo Rojo, PR**	**1.60**	**88**	⇑*e*Pg	Pn	01 37 56.4	-0.8
CRPR				⇑*e*Sg	Sb	01 37 58.5	+1.3
CRPR				IAML		01 38 44.0	
	comp=N,34nm,2.3s						
CRPR	**Cabo Rojo, PR**	**1.60**	**88**	Pn	Pn	01 37 35.7	+0.2
CRPR				Sn	Sb	01 37 58.9	+1.7
CRPR				IAML		01 38 45.8	
	comp=N,39nm,2.4s						
CRPR				IAML		01 38 58.6	
	comp=E,31nm,2.9s						
CRPR	**Cabo Rojo, PR**	**1.60**	**88**	⇓*e*P	Pn	01 37 36.2	+0.6
CRPR	**Cabo Rojo, PR**	**1.60**	**88**	*e*S	Sb	01 37 60.0	+2.8
LSP	**Las Mesas**	**1.64**	**82**		Pn	01 37 36.6	+0.5
LSP					Sb	01 37 59.4	+1.1
LSP	**Las Mesas**	**1.64**	**82**	⇑*e*P	Pn	01 37 36.6	+0.5
LSP	**Las Mesas**	**1.64**	**82**	*e*S	Sb	01 37 59.4	+1.1
MLPR	**Magueyes Islan**	**1.67**	**89**	⇓*e*P	Pn	01 37 37.3	+0.9
MLPR	**Magueyes Islan**	**1.67**	**89**	*e*S	Sb	01 38 01.3	+2.4
AGPR	**Aguadilla, PR**	**1.68**	**72**	⇓*e*Pg	Pn	01 37 37.0	+0.4
AGPR				⇓*e*Sg	Sb	01 37 59.6	+0.2
AGPR				IAML		01 38 45.0	
	comp=N,64nm,1.4s						
AGPR	**Aguadilla, PR**	**1.68**	**72**		Pn	01 37 37.4	+0.7
AGPR					Sn	01 37 57.8	+0.3
AGPR	**Aguadilla, PR**	**1.68**	**72**	⇓*e*P	Pn	01 37 37.4	+0.7
AGPR	**Aguadilla, PR**	**1.68**	**72**	*e*S	Sn	01 37 57.8	+0.3
AOPR	**Arecibo Observ**	**1.98**	**78**	⇓*e*Pg	Pb	01 37 42.5	-1.3
AOPR				⇑*e*Sg	Sb	01 38 07.2	-0.8
AOPR				IAML		01 38 10.2	
	comp=N,73nm,0.2s						
AOPR	**Arecibo Observ**	**1.98**	**78**	Pn	Pn	01 37 38.2	-2.6
AOPR				Sn	Sn	01 38 01.4	-3.5
AOPR	**Arecibo Observ**	**1.98**	**78**	⇓*e*P	Pn	01 37 40.6	-0.1
AOPR	**Arecibo Observ**	**1.98**	**78**	*e*S	Sn	01 38 04.9	0.0
UUPR	**Utuado, UPR, P**	**1.99**	**81**		Pn	01 37 39.6	-1.4
UUPR					Sb	01 38 07.2	-1.3
UUPR	**Utuado, UPR, P**	**1.99**	**81**	⇑*e*P	Pn	01 37 39.6	-1.4
UUPR	**Utuado, UPR, P**	**1.99**	**81**	*e*S	Sb	01 38 07.2	-1.3
OBIP	**Obispado Ponce**	**2.08**	**87**	Pn	Pn	01 37 41.9	-0.3
OBIP				Sn	Sn	01 38 06.7	-0.8
OBIP	**Obispado Ponce**	**2.08**	**87**	⇑*e*P	Pn	01 37 42.8	+0.6
OBIP	**Obispado Ponce**	**2.08**	**87**	*e*S	Sb	01 38 09.7	-1.4
EMPR	**Esperanza - Ma**	**2.21**	**76**		Pn	01 37 43.4	-0.6
EMPR					Sn	01 38 08.9	-1.8
EMPR	**Esperanza - Ma**	**2.21**	**76**	⇓*e*P	Pn	01 37 43.4	-0.6
EMPR	**Esperanza - Ma**	**2.21**	**76**	*e*S	Sn	01 38 08.9	-1.8
ECPR	**Experimental S**	**2.34**	**81**	⇓*e*P	Pn	01 37 44.6	-1.1
ECPR	**Experimental S**	**2.34**	**81**	*e*S	Sn	01 38 11.9	-1.9
HUMP	**Col San Antoni**	**2.81**	**86**	Pn	Pn	01 37 49.9	-2.2
HUMP				Sn	Sn	01 38 21.2	-4.1
HUMP				IAML		01 38 29.6	
	comp=N,15nm,0.9s						
HUMP				IAML		01 38 30.9	
	comp=E,15nm,0.2s						
HUMP	**Col San Antoni**	**2.81**	**86**	⇑*e*P	Pn	01 37 49.9	-2.2
HUMP	**Col San Antoni**	**2.81**	**86**	*e*S	Sn	01 38 23.6	-1.8

*CNRM **27** 01:37:18.0, 35°.19N×11°.62W, h78km*
*IGIL **27** 01:37:21.8, 35°.29N×11°.56W, h28km, ML1.6*
*MDD **27** 01:37:21.1±1.1, 35°.29N×11°.57W, h35km±39km, Mb4.2/5, M_mb3.6/5, Error ellipse: s-maj=19.0km s-min=5.4km az=85.0*
*INMG **27** 01:37:22.2±1.1, 35°.29N×11°.56W, h27km±14km, ML2.2, Error ellipse: s-maj=11.3km s-min=4.3km az=79.0, #DIST_RANGE: REGIONAL #IPMA_REGION: Horseshoe-Ampere*
ISC 27 01:37:18.8±1.6, 35°.24N±0°.03×11°.56W±0°.08, h35km, n56, σ1s79/85, 4C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.91**	**49**	Pn	**Pn**	**01 38 04.3**	**+1.7**
PFVI				Sn	**Sn**	**01 38 35.1**	**-1.2**
PFVI	**Vila Bisbo**	**2.91**	**49**	*e*P	**Pn**	**01 38 04.3**	**+1.7**
PFVI				*e*S	**Sn**	**01 38 35.9**	**-0.5**
PFVI				*i* IAML		01 38 50.5	
PFVI	**Vila Bisbo**	**2.91**	**49**	P	**Pn**	**01 38 03.2**	**+0.6**
PFVI	**Vila Bisbo**	**2.91**	**49**	S	**Sn**	**01 38 37.9**	**+1.6**
MORF	**Marmelete**	**3.13**	**48**	*e*P	**Pn**	**01 38 07.4**	**+1.8**
MORF				*e*S	**Sn**	**01 38 40.9**	**-0.8**
MORF				IAML		01 38 42.5	
	comp=N,1.9nm,0.1s						
MORF	**Marmelete**	**3.13**	**48**	*e*P	**Pn**	**01 38 07.5**	**+1.8**
MORF				*e*S	**Sn**	**01 38 41.3**	**-0.5**
MORF				*i* IAML		01 38 44.2	
MORF				*i* IAML		01 38 48.4	
PTEO	**Sao Teotonio**	**3.25**	**44**	*e*S	**Sn**	**01 38 44.5**	**-0.1**
PTEO				*i* IAML		01 38 51.7	
PTEO				*i* IAML		01 38 58.8	
PBDV	**Barranco-do-Ve**	**3.55**	**55**	Pn	**Pn**	**01 38 13.5**	**+2.0**
PBDV				Sn	**Sn**	**01 38 51.0**	**-1.2**
PBDV	**Barranco-do-Ve**	**3.55**	**55**	*e*P	**Pn**	**01 38 13.5**	**+2.0**
PBDV				*e*S	**Sn**	**01 38 51.9**	**-0.3**
PBDV				*i* IAML		01 38 55.5	
PBDV				*i* IAML		01 38 55.8	
PCVE	**Castro Verde**	**3.71**	**49**	Pn	**Pn**	**01 38 15.6**	**+2.0**
PCVE				Sn	**Sn**	**01 38 55.9**	**-0.2**
PCVE	**Castro Verde**	**3.71**	**49**	*e*P	**Pn**	**01 38 15.8**	**+2.2**
PCVE				*e*S	**Sn**	**01 38 55.9**	**-0.2**
PCVE				*i* IAML		01 38 57.3	
PCVE				*i* IAML		01 38 58.6	
PCVE				*i* IAML		01 39 03.7	
MESJ	**Messejana**	**3.74**	**45**	*e*P	**Pn**	**01 38 15.7**	**+1.7**
MESJ				*e*S	**Sn**	**01 38 55.3**	**-1.5**
MESJ	**Messejana**	**3.74**	**45**	*e*P	**Pn**	**01 38 15.7**	**+1.7**
MESJ				*i* IAML		01 38 55.2	
MESJ				*e*S	**Sn**	**01 38 55.9**	**-0.9**
MESJ				*i* IAML		01 39 05.0	
PVAQ	**Vaqueiros**	**3.78**	**54**	*e*P	**Pn**	**01 38 16.6**	**+2.0**
PVAQ				*e*S	**Sn**	**01 38 57.1**	**-0.7**
PVAQ				*i* IAML		01 38 58.0	
PVAQ				*i* IAML		01 38 58.0	
PVAQ				*i* IAML		01 39 00.8	
PVAQ	**Vaqueiros**	**3.78**	**54**	P	**Pn**	**01 38 15.6**	**+1.0**
PVAQ	**Vaqueiros**	**3.78**	**54**	S	**Sn**	**01 38 58.7**	**+0.8**
AVE	**Averroes**	**3.95**	**118**	Pn	**Pn**	**01 38 20.2**	**+3.3**
EGRO	**El Granado**	**4.01**	**54**	Pn	**Pn**	**01 38 20.2**	**+2.5**
EGRO	**El Granado**	**4.01**	**54**	P	**Pn**	**01 38 20.1**	**+2.4**
EGRO				⇑*i*IVmb_VC		01 38 20.9	
	comp=N,249nm,SNR=1.6						
EGRO				S	**Sn**	**01 39 02.7**	**-0.8**
SRHM	**Skhour des Reh**	**4.12**	**131**	P	**Pn**	**01 38 20.5**	**+1.3**
SRHM	**Skhour des Reh**	**4.12**	**131**	S	**Sn**	**01 39 08.4**	**+2.2**
PMAFR	**Mafra**	**4.13**	**26**	*e*P	**Pn**	**01 38 20.4**	**+1.0**
PMAFR				*e*S	**Sn**	**01 39 05.4**	**-1.1**
MOE	**Montemor**	**4.17**	**37**	*e*P	**Pn**	**01 38 21.6**	**+1.8**
MOE				*e*S	**Sn**	**01 39 06.8**	**-0.5**
MOE				*i* IAML		01 39 07.6	
MOE				*i* IAML		01 39 15.3	
EVO	**Evora**	**4.35**	**40**	Pn	**Pn**	**01 38 22.8**	**+0.4**
EVO				Sn	**Sn**	**01 39 09.2**	**-2.5**
EVO	**Evora**	**4.35**	**40**	*e*P	**Pn**	**01 38 24.2**	**+1.8**
EVO				*e*S	**Sn**	**01 39 10.0**	**-1.8**
EVO				*i* IAML		01 39 13.2	
EVO				*i* IAML		01 39 15.0	
EVO				*i* IAML		01 39 26.1	
PARRA	**Arraiolos**	**4.55**	**37**	*e*P	Pn	01 38 26.6	+7.7
PARRA				*e*S	Sn	01 39 15.1	+9.5
PMTG	**Montargil**	**4.66**	**34**	*e*P	**Pn**	**01 38 28.0**	**+1.4**
PMTG				*e*S	**Sn**	**01 39 16.9**	**-2.5**
PMTG				*i* IAML		01 39 17.9	
PMTG				*i* IAML		01 39 22.1	
PBAR	**Barrancos**	**4.67**	**50**	Pn	**Pn**	**01 38 28.3**	**

*DJA **27** 01:38:19.1±0.7,6˚N±6˚×12˚7E±˚, h64km±29km, M4.3/12, mB5.4/2, mb4.3/6, MLv4.3/12, Mw(mB)4.9/2*
*NEIC **27** 01:38:20.0±1.5,5˚.55N±0˚.07×126˚.3E±0˚.1, h44km±9km, mb4.4/11, Error ellipse: s-maj=18.5km s-min=9.4km az=77.0*
ISC 27 01:38:21.4±0.7,**5˚.50N**±0˚.07×**126˚.4E**±0˚.1,**h66**km,**n41**, σ1§**16**/38,**mb4.2**/16,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.76**	**332**	Pn	**Pn**	**01 38 49.4**	**-0.4**
	85nm,0.3s,baz=262,slow=15,SNR=8.8						
DAV				Lg	Lg	01 39 14.8	
	89nm,0.3s,baz=153,slow=16,SNR=6.8						
DAV				LR	LR	01 39 47.3	
	comp=Z,558nm,18.8s,baz=160,slow=49						
DAV	**Davao City (W)**	**1.76**	**332**	Pn	**Pn**	**01 38 47.0**	**-2.8**
SGSI	**Sangihe**	**2.01**	**206**	P	**Pn**	**01 38 52.3**	**-0.8**
TNTI	**Ternate**	**4.80**	**168**	Pn	**Pn**	**01 39 29.4**	**-1.8**
TNTI	**Ternate**	**4.80**	**168**	P	**Pn**	**01 39 29.7**	**-1.5**
GTOI	**Gorontalo**	**5.91**	**215**	P	**Pn**	**01 39 46.9**	**+0.5**
	0.1nm25nm,0.9s						
MRSI	**Marisa**	**6.70**	**222**	P	**Pn**	**01 39 58.5**	**+1.3**
	0.2nm38nm,0.6s						
TOLI2	**Tolitoli**	**7.11**	**232**	Pn	**Pn**	**01 39 59.2**	**-3.7**
LUWI	**Luwuk**	**7.45**	**209**	Pn	**Pn**	**01 40 06.5**	**-1.0**
LUWI	**Luwuk**	**7.45**	**209**	P	**Pn**	**01 40 08.5**	**+1.0**
SANI	**Sanana**	**7.51**	**183**	P	**Pn**	**01 40 06.7**	**-1.7**
	0.1nm14nm,0.6s						
APSI	**Ampana**	**7.95**	**217**	P	**Pn**	**01 40 15.7**	**+1.3**
KAPI	**Kappang**	**12.38**	**213**	LR	LR	01 46 14.6	
	comp=Z,61nm,18.2s,baz=46,slow=42						
KNRA	**Kununurra**	**21.17**	**174**	P	**P**	**01 43 01.9**	**+0.5**
KNRA				IAmb	IAmb	01 43 10.9	
	comp=Z,23nm,1.4s						
FITZ	**Fitzroy Crossi**	**23.46**	**182**	P	**P**	**01 43 25.2**	**0.0**
WB0	**Warramunga Arr**	**26.31**	**163**	P	**P**	**01 43 52.4**	**+1.2**
WB0				IAmb	IAmb	01 44 01.4	
	comp=Z,7.2nm,0.7s						
WRA	**Warramunga Arr**	**26.46**	**163**	P	**P**	**01 43 53.6**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=341,slow=10,SNR=12						
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**26.46**	**163**	P	**P**	**01 43 53.0**	**+0.4**
WR8	**Warramunga Arr**	**26.52**	**163**	P	**P**	**01 43 54.2**	**+1.1**
WR8				IAmb	IAmb	01 44 02.0	
	comp=Z,6.8nm,1.1s						
JNU	**Nakatsue**	**27.79**	**8**	LR	LR	01 58 02.6	
	comp=Z,31nm,18.1s,baz=42,slow=42						
CMAR	**Chiang Mai Arr**	**29.73**	**298**	LR	LR	01 56 44.9	
	comp=Z,27nm,19.1s,baz=90,slow=38						
ASAR	**Alice Springs**	**29.90**	**166**	P	**P**	**01 44 23.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=351,slow=7.7,SNR=7.8						
ASAR				PcP	**PcP**	**01 47 25.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=352,slow=2.6,SNR=4.3						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**45.53**	**341**	P	**P**	**01 46 35.4**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=161,slow=6.1,SNR=2.1						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**55.93**	**325**	P	**P**	**01 47 53.0**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=123,slow=7.4,SNR=14						
	comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**55.93**	**325**	P	**P**	**01 47 52.4**	**-0.4**
MAKZ	**Makanchi**	**56.12**	**325**	P	**P**	**01 47 54.1**	**0.0**
MAKZ				IAmb	IAmb	01 48 03.2	
	comp=Z,6.2nm,1.1s						
ZALV	**Zalesovo Beam**	**58.88**	**333**	P	**P**	**01 48 13.6**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=126,slow=7.5,SNR=4.3						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**58.88**	**333**	P	**P**	**01 48 14.6**	**+1.3**
KURBB	**Kurchatov Arra**	**60.09**	**327**	P	**P**	**01 48 21.4**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=127,slow=6.7,SNR=27						
	comp=Z,1.7nm,0.5s						
KURK	**Kurchatov**	**60.09**	**327**	P	**P**	**01 48 20.7**	**-1.1**
GAR	**Garm**	**60.50**	**312**	P	**P**	**01 48 24.4**	**-0.6**
KKAR	**Karatay Array**	**61.73**	**316**	P	**P**	**01 48 33.1**	**+0.1**
BVAR	**Borovoye Array**	**65.67**	**327**	P	**P**	**01 48 59.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=121,slow=11,SNR=11						
	comp=Z,1.6nm,0.6s						
BORK	**Borovoye**	**65.72**	**327**	P	**P**	**01 48 58.7**	**-0.4**
BORK				IAmb	IAmb	01 49 08.3	
	comp=Z,3.5nm,0.8s						
AB31	**Akbulak array**	**70.59**	**320**	P	**P**	**01 49 29.2**	**-0.5**
AB31				IAmb	IAmb	01 49 55.2	
	comp=Z,3.6nm,1.3s						
ABKAR	**Akbulak array**	**70.59**	**320**	P	**P**	**01 49 29.3**	**-0.3**
L22K	**Petersville**	**81.83**	**28**	P	**P**	**01 50 33.4**	**+0.1**
L22K				IAmb	IAmb	01 51 00.8	
	comp=Z,5.0nm,1.1s						
BMAR	**Burnt Mountain**	**84.58**	**23**	P	**P**	**01 50 48.2**	**+0.9**
ARCES	**ARCESS Array B**	**88.69**	**340**	P	**P**	**01 51 07.5**	**+0.2**
	comp=Z,4.2nm,1.0s,baz=77,slow=4.9,SNR=5.9						
	comp=Z,4.2nm,1.0s						
FINES	**FINESS Array B**	**90.13**	**332**	P	**P**	**01 51 14.3**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=144,slow=6.8,SNR=3.7						
	comp=Z,2.7nm,1.0s						
NOA	**NORSAR Array B**	**97.07**	**334**	LR	LR	02 39 26.2	
	comp=Z,21nm,20.5s,baz=200,slow=38						

*BEO **27** 01:38:49.4±0.3,43˚.28N×18˚.01E, h6km±4km, ML2.2/3*
*PDG **27** 01:38:49.6±0.2,43˚.26N×17˚.99E, h11km±2km, ML2.5/10, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*RHSSO **27** 01:38:49.4±0.3,43˚.23N×18˚.02E, h8km, ML2.4/3*
ISC 27 01:38:49.1±1.1,**43˚.26N**±0˚.02×**18˚.02E**±0˚.02,**h5**km±9km, **n42**,σ0§**97**/75,**4C-7D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.43**	**102**	*e*Pg	**Pg**	**01 38 57.2**	**-0.1**
KLINJ				*e*Sg	**Sg**	**01 39 03.9**	**+1.0**
STON	**Ston**	**0.45**	**211**	*i* Pg	**Pg**	**01 38 57.6**	**-0.1**
STON				Sg	**Sg**	**01 39 04.3**	**+0.8**
STON	**Ston**	**0.45**	**211**	*e*Pg	**Pg**	**01 38 57.5**	**-0.2**
STON				*e*Sg	**Sb**	**01 39 05.3**	**-1.1**
TREB	**Trebinje**	**0.59**	**155**	*e*Pg	**Pg**	**01 38 59.7**	**-0.7**
TREB				*e*Sg	**Sg**	**01 39 08.9**	**+0.7**
TREB	**Trebinje**	**0.59**	**155**	*e*Pg	**Pg**	**01 38 59.8**	**-0.7**
TREB				*e*Sg	**Sg**	**01 39 09.4**	**+1.2**
DBRK	**Dubrovnik**	**0.60**	**171**	*e*Pg	**Pg**	**01 39 00.6**	**+0.1**
DBRK				Sg	**Sg**	**01 39 09.7**	**+1.4**
UPM	**Unac-Piva**	**0.65**	**95**	⇓*i*Pg	**Pg**	**01 39 01.1**	**-0.5**
UPM				*e*Sg	**Sg**	**01 39 11.5**	**+1.4**
RICI	**Ricice**	**0.69**	**290**	*e*Pg	**Pg**	**01 39 01.8**	**-0.5**
RICI				Sg	**Sg**	**01 39 11.4**	**+0.3**
MAKA	**Makarska**	**0.73**	**273**	*i* Pg	**Pg**	**01 39 01.0**	**-2.0**
MAKA				Sg	**Sg**	**01 39 11.9**	**-0.6**
HCY	**Herceg Novi**	**0.88**	**156**	⇓*i*Pg	**Pg**	**01 39 05.3**	**-0.7**
HCY				*i* Sg	**Sb**	**01 39 19.3**	**+0.4**
LSTV	**Lastovo**	**0.96**	**240**	*e*Pg	**Pg**	**01 39 07.6**	**+0.2**
LSTV				Sg	**Sg**	**01 39 20.6**	**+0.8**
CEME	**Cevo**	**0.97**	**137**	⇓*i*Pg	**Pg**	**01 39 06.5**	**-1.2**
CEME				*e*Sg	**Sb**	**01 39 22.3**	**+0.8**
PLE	**Pljevlja**	**1.01**	**85**	*e*Pg	**Pg**	**01 39 07.8**	**-0.6**
PLE	**Pljevlja**	**1.01**	**85**	⇓*i*Pg	**Pg**	**01 39 07.9**	**-0.5**
PLE				*e*Sg	**Sb**	**01 39 22.3**	**-0.3**
BUM	**Brajici-Budva**	**1.16**	**146**	⇓*i*Pg	**Pg**	**01 39 10.4**	**-0.8**
BUM				*e*Sg	**Sn**	**01 39 28.5**	**+0.4**
KOME	**Kolasin**	**1.17**	**110**	*e*Pg	**Pg**	**01 39 10.8**	**-0.7**
KOME	**Kolasin**	**1.17**	**110**	⇓*i*Pg	**Pg**	**01 39 10.6**	**-0.9**
KOME				*e*Sg	**Sn**	**01 39 29.0**	**+0.4**
BBLS	**Lazi&#263i**	**1.18**	**59**	*e*Pg	**Pg**	**01 39 10.8**	**-0.9**
BBLS				*e*Sg	**Sg**	**01 39 27.0**	**0.0**
PDG	**Podgorica**	**1.23**	**132**	*e*Pg	**Pn**	**01 39 11.3**	**-1.6**
PDG				*e*Sg	**Sn**	**01 39 29.7**	**-0.1**
PDG	**Podgorica**	**1.23**	**132**	⇓*i*Pg	**Pn**	**01 39 11.3**	**-1.6**
PDG				*e*Sg	**Sn**	**01 39 30.8**	**+1.0**
DRME	**Dracevica, Mon**	**1.37**	**141**	*e*Pg	**Pn**	**01 39 14.5**	**-0.4**
DRME	**Dracevica, Mon**	**1.37**	**141**	⇑*i*Pg	**Pn**	**01 39 14.4**	**-0.4**
DRME				*e*Sg	**Sg**	**01 39 35.2**	**+2.0**
KIJV	**Kijevo**	**1.39**	**303**	*e*Pn	**Pb**	**01 39 15.4**	**0.0**
KIJV				Sn	**Sg**	**01 39 36.4**	**+2.8**
BEY	**Berane**	**1.43**	**105**	*e*Pg	**Pn**	**01 39 15.4**	**-0.3**
IVA	**Berane**	**1.43**	**105**	⇑*i*Pg	**Pn**	**01 39 15.4**	**-0.3**
IVA				*e*Sg	**Sg**	**01 39 36.1**	**+1.1**
SJES	**Sjenica**	**1.43**	**89**	*e*Pg	**Pn**	**01 39 15.7**	**0.0**
SJES				*e*Sg	**Sn**	**01 39 35.0**	**0.0**
PVY	**Plav**	**1.57**	**114**	*e*Pg	**Pb**	**01 39 18.7**	**0.0**
PVY	**Plav**	**1.57**	**114**	⇑*i*Pn	**Pn**	**01 39 17.9**	**+0.2**
PVY				*e*Sn	**Sg**	**01 39 40.7**	**+1.1**
IVAS	**Ivanjica**	**1.59**	**78**	*e*Pg	**Pn**	**01 39 17.7**	**-0.2**
IVAS				*e*Sg	**Sn**	**01 39 38.6**	**-0.2**
BLY	**Banja Luka**	**1.61**	**338**	⇑*i*Pn	**Pn**	**01 39 18.5**	**+0.4**
BLY				*e*Sn	**Sb**	**01 39 39.7**	**0.0**
BLY	**Banja Luka**	**1.61**	**338**	*e*Pg	**Pb**	**01 39 18.9**	**-0.3**
BLY				*e*Sg	**Sg**	**01 39 40.4**	**-0.3**
TEKS	**Tekeris**	**1.69**	**40**	*e*Pn	**Pn**	**01 39 19.9**	**+0.6**
ZIRJ	**Zirje**	**1.77**	**284**	*e*Pn	**Pn**	**01 39 20.7**	**+0.4**
ZIRJ				Sn	**Sb**	**01 39 44.6**	**+0.2**
MORI	**Morici**	**1.78**	**291**	*i* Pn	**Pn**	**01 39 21.0**	**+0.5**
MORI				Sn	**Sb**	**01 39 45.4**	**+0.6**
GOCS	**Kraljevo Serbi**	**2.10**	**81**	*e*Pn	**Pn**	**01 39 25.2**	**+0.2**
DUGI	**Dugi Otok**	**2.27**	**290**	*i* Pn	**Pb**	**01 39 29.0**	**-1.5**
DUGI				Sn	**Sb**	**01 39 57.6**	**-1.2**
SELS	**Selova**	**2.27**	**90**	*e*Pn	**Pn**	**01 39 26.8**	**-0.4**
VIRC	**Vir**	**2.38**	**297**	*e*Pn	**Pb**	**01 39 30.7**	**-1.6**
VIRC				Sn	**Sn**	**01 39 59.6**	**+1.4**
NVLJ	**Novalja**	**2.62**	**301**	*e*Pn	**Pn**	**01 39 33.8**	**+1.9**
NVLJ				Sn	**Sb**	**01 40 07.1**	**-1.8**
RABC	**Rab**	**2.77**	**304**	*e*Pn	**Pn**	**01 39 35.4**	**+1.4**
RABC				Sn	**Sn**	**01 40 09.9**	**+2.2**
MORH	**Mrgy, Hungar**	**2.99**	**8**	*e*Pn	**Pn**	**01 39 37.1**	**0.0**
MORH				*e*Sn	**Sn**	**01 40 13.8**	**+0.6**
AQU	**L'Aquila**	**3.51**	**257**	*e*Sn	**Sn**	**01 40 25.2**	**-1.0**

IDC 27 01:40:04.8±1.8,**35˚.96N**×**8˚.04E**,**h0**km,**mb3.3**/2, **mbtmp3.3**/3,**ML3.2**/1,**Error ellipse: s-maj=19.6km s-min=14.5km az=9.0**,**Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	**1.05**	**98**	I	I	01 45 30.0	
	baz=279,slow=326,SNR=8.2						
KEST	**Kesra**	**1.08**	**102**	Pg	Pg	01 40 25.6	0.0
	25nm,0.3s,baz=287,slow=6.0,SNR=208						
KEST				Lg	Lg	01 40 40.6	
	31nm,0.3s,baz=356,slow=19,SNR=13						
ESDC	**Sonseca Array**	**10.20**	**295**	Pn	Pn	01 42 32.3	-0.2
	0.1nm,0.3s,baz=101,slow=14,SNR=4.3						
	1.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**23.42**	**196**	P	P	01 45 15.4	-0.2
	0.4nm,0.7s,baz=9.9,slow=9.2,SNR=2.6						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**54.82**	**54**	P	P	01 49 36.8	+0.2
	0.4nm,0.6s,baz=293,slow=6.0,SNR=2.6						
	0.4nm,0.6s						

*DJA **27** 01:54:12.0±0.4,2˚.5±5˚×10˚2E±˚, h195km±5km, M4.0/12, mB4.7/4, mb3.9/4, MLv4.0/12, Mw(mB)3.9/4*
*IDC **27** 01:54:12.1±15.0,2˚.92S×101˚.78E, h216km±148km, mb3.0/5, mbtmp3.6/5, Error ellipse: s-maj=123.2km s-min=20.0km az=56.0*
ISC 27 01:54:11.8±0.8,**2˚.4S**±0˚.1×**102˚.4E**±0˚.1,**h187**km,**n23**, σ1§**26**/18,**mb3.2**/5,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.79**	**192**	P	Pn	01 54 40.6	+1.7
MASI				S	**Sn**	**01 55 01.8**	**+1.9**
KRJI	**Kerinci**	**0.98**	**286**	P	Pn	01 54 42.7	+2.6
KSI	**Kapahiang**	**1.29**	**171**	P	**Pn**	**01 54 44.1**	**+1.5**
KSI				S	**Sn**	**01 55 06.7**	**+0.1**
PDSI	**Padang**	**2.42**	**307**	P	Pn	01 54 50.8	+2.9
PDSI				S	**Sn**	**01 55 27.7**	**+0.9**
PPSI	**Pulau Pagai**	**2.42**	**261**	P	**Pn**	**01 54 55.0**	**+1.0**
PPSI				S	**Sn**	**01 55 26.7**	**-0.1**
MDSI	**Maura Dua**	**2.75**	**140**	P	**Pn**	**01 54 57.5**	**-0.3**
KLSI		**3.28**	**135**	P	**Pn**	**01 55 04.0**	**-0.1**
SISI	**Saibi**	**3.47**	**287**	P	**Pn**	**01 55 06.9**	**+0.5**
GSI	**Gunungsitoli**	**6.05**	**307**	P	**Pn**	**01 55 40.6**	**+1.1**
	4µm18nm,0.7s						
KCSI	**Kotacane, Aceh**	**7.46**	**322**	P	**Pn**	**01 55 58.0**	**0.0**
	0.1nm422nm6.6nm,0.6s						
TPTI		**7.64**	**317**	P	**Pn**	**01 55 59.8**	**-0.6**
WRA	**Warramunga Arr**	**35.75**	**122**	P	**P**	**02 00 51.9**	**-1.1**
	0.3nm,0.4s,baz=298,slow=9.0,SNR=8.1						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**37.11**	**127**	P	**P**	**02 01 04.2**	**-0.4**
	0.9nm,0.5s,baz=300,slow=8.5,SNR=12						
	0.9nm,0.5s						
SONM	**Songino Array**	**50.12**	**4**	P	**P**	**02 02 50.3**	**+2.3**
	0.2nm,0.4s,baz=184,slow=9.3,SNR=1.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.06**	**343**	P	**P**	**02 03 02.4**	**0.0**
	0.2nm,0.4s,baz=151,slow=9.0,SNR=5.6						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**61.37**	**339**	P	**P**	**02 04 06.2**	**-1.6**
	0.2nm,0.4s,baz=134,slow=6.2,SNR=2.0						
	0.2nm,0.4s						
H04N2	**CROZET ISLANDS**	**61.95**	**217**	T	T	03 09 57.0	
	baz=61						
H04N1	**CROZET ISLANDS**	**61.96**	**217**	T	T	03 09 57.5	
	baz=61						
H04N3	**CROZET ISLANDS**	**61.97**	**217**	T	T	03 09 58.3	
	baz=61						
H04S1	**CROZET ISLANDS**	**62.21**	**217**	T	T	03 10 18.5	
	baz=59						
H04S3	**CROZET ISLANDS**	**62.23**	**217**	T	T	03 10 15.5	
	baz=59						
H04S2	**CROZET ISLANDS**	**62.23**	**217**	T	T	03 10 17.3	
	baz=59						
TXAR	**Lajitas Array**	**143.48**	**40**	PKP	**PKPdf**	**02 13 22.7**	**-2.2**
	0.1nm,0.4s,baz=338,slow=3.5,SNR=1.9						

IDC 27 01:59:27.1±8.4,**7˚.01S**×**129˚.66E**,**h130**km±87km,**mb3.3**/1, **mbtmp4.1**/5,**Error ellipse: s-maj=73.0km s-min=27.5km az=37.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.73**	**241**	P	Pn	02 01 05.2	+1.8
	31nm,0.4s,baz=96,slow=1.8,SNR=3.2						
BATI				S	Sn	02 02 18.6	-0.3
	24nm,0.4s,baz=20,slow=23,SNR=1.8						
FITZ	**Fitzroy Crossi**	**11.70**	**199**	P	Pn	02 02 08.6	-1.4
	1.2nm,0.3s,baz=23,slow=11,SNR=14						
FITZ				S	Sn	02 04 09.6	-9.5
	3.4nm,0.3s,baz=62,slow=18,SNR=6.8						
WRA	**Warramunga Arr**	**13.63**	**161**	P	Pn	02 02 34.1	-1.1
	1.0nm,0.5s,baz=344,slow=14,SNR=10						
WRA				S	Sn	02 04 56.2	-10
	0.8nm,0.3s,baz=331,slow=24,SNR=9.8						
ASAR	**Alice Springs**	**17.06**	**167**	P	Pn	02 03 19.3	+1.5
	4.7nm,0.6s,baz=346,slow=10,SNR=46						
ASAR				S	Sn	02 06 20.0	-8.2
	0.5nm,0.5s,baz=344,slow=26,SNR=4.8						
MKAR	**Makanchi Array**	**68.05**	**327**	P	P	02 10 12.4	-0.1
	0.3nm,0.4s,baz=124,slow=7.9,SNR=6.4						
	0.3nm,0.4s						

ASRS 27 02:03:53.7±0.4,**49˚N**±3˚×**9˚9E**±˚,**h9**km,**MLh3.6**/6,**Error ellipse: s-maj=6.3km s-min=2.7km az=11.8**,**confirmed**, **Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.81**	**327**	Pg	Pg	02 04 28.1	-0.4
KNGR				Sg	Sg	02 04 53.0	+1.0
ZAK	**Zakamensk**	**3.02**	**63**	Pg	Pb	02 04 47.5	-0.1
ZAK				Sg	Sg	02 05 28.7	-1.8
TDJR	**Todzha**	**3.81**	**331**	Pg	Pg	02 05 04.9	-1.7
TDJR				Sg	Sg	02 05 53.9	-2.0
TLY	**Talaya**	**3.91**	**47**	Sg	Sg	02 05 57.0	-2.0
KZLR	**Kyzyl**	**3.94**	**313**	Sg	Sg	02 06 02.0	+1.7
ARDR	**Aradan**	**5.00**	**316**	Pg	Pb	02 05 22.4	+1.2
ARDR				Sg	Sg	02 06 31.3	-2.6
ULN	**Ulaanbaatar**	**5.45**	**100**	Pg	Pb	02 05 33.2	+4.2
ULN				Sg	Sg	02 06 45.2	-3.3
TEL	**Teeli**	**6.03**	**292**	Pg	Pg	02 05 44.1	-5.0
TEL				Sg	Sg	02 07 05.6	-1.5
MINR	**Mina**	**6.54**	**335**	Sg	Sg	02 07 24.0	+0.5
VEH	**Verkhnyaya Baz**	**6.90**	**310**	Sg	Sg	02 07 30.9	-4.1
AKAR	**Aktash**	**7.53**	**284**	Sg	Sg	02 07 51.0	-4.1
DGZ	**Jazzator, Alta**	**7.62**	**279**	Sg	Sg	02 07 53.5	-4.6

*THE **27** 02:08:04.9,42˚N±5˚×1˚9E±˚, h11km, M2.7/8, MLh2.7/8*
*PDG **27** 02:08:06.5±0.4,41˚.50N×19˚.50E, h7km±1km, ML2.7/13, Error ellipse: s-maj=1.3km s-min=1.8km az=0.0*
*TIR **27** 02:08:06.0,41˚.58N×19˚.55E, h26km, Md3.1/1, Ml3.0/2*
ISC 27 02:08:06.4±1.0,**41˚.55N**±0˚.02×**19˚.53E**±0˚.03,**h8**km±9km, **n47**,σ1§**19**/73,**10C-17D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**128**	Pg	**Pg**	**02 08 12.0**	**-0.8**
ULC	**Ulcinj**	**0.47**	**333**	⇓*i*Pg	**Pg**	**02 08 15.0**	**-0.5**
ULC				*e*Sg	**Sb**	**02 08 22.8**	**-1.2**
SDA	**Shkodra**	**0.51**	**357**	Pg	**Pg**	**02 08 15.7**	**-0.5**
SDA				Sg	**Sg**	**02 08 23.3**	**+0.5**
SDA				AMd		02 09 24.0	
DRME	**Dracevica, Mon**	**0.69**	**338**	⇑*i*Pg	**Pg**	**02 08 19.0**	**-0.7**
DRME				*e*Sg	**Sb**	**02 08 30.8**	**+0.4**
PHP	**Peshkopia**	**0.70**	**78**	Pg	**Pg**	**02 08 18.8**	**-1.1**
PHP				Sg	**Sg**	**02 08 29.0**	**0.0**
PHP				AML	AML	02 08 37.0	
	1.3nm,0.4s						
PHP	**Peshkopia**	**0.70**	**78**	P	**Pg**	**02 08 18.6**	**-1.3**
BUM	**Brajici-Budva**	**0.89**	**328**	⇓*i*Pg	**Pg**	**02 08 23.3**	**-0.2**
BUM				*e*Sg	**Sn**	**02 08 36.6**	**-1.8**
PDG	**Podgorica**	**0.91**	**347**	Pn	**Pg**	**02 08 22.7**	**-1.1**
PDG				Sn	**Sb**	**02 08 35.8**	**-0.8**
PDG	**Podgorica**	**0.91**	**347**	⇓P	**Pg**	**02 08 23.2**	**-0.7**
PDG				⇓S	**Sb**	**02 08 36.4**	**-0.2**
PDG	**Podgorica**	**0.91**	**347**	⇓*i*Pg	**Pg**	**02 08 23.1**	**-0.7**
PDG				*i* Sg	**Sn**	**02 08 37.8**	**-0.9**
VLO	**Vlora**	**1.08**	**181**	Pg	**Pb**	**02 08 26.4**	**-0.9**
VLO				Sg	**Sb**	**02 08 41.6**	**+0.1**
VLO				AML	AML	02 08 50.3	
	2.7nm,0.3s						
VLO	**Vlora**	**1.08**	**181**	P	**Pg**	**02 08 28.1**	**+1.0**
VLO				S	**Sn**	**02 08 46.4**	**+3.5**
PVY	**Plav**	**1.09**	**17**	⇓*i*Pg	**Pb**	**02 08 26.5**	**-1.2**
PVY				*e*Sg	**Sn**	**02 08 44.6**	**+1.0**
CEME	**Cevo**	**1.10**	**336**	⇓*i*Pg	**Pb**	**02 08 26.6**	**-1.1**
CEME				*i* Sg	**Sn**	**02 08 44.5**	**+0.9**
HCY	**Herceg Novi**	**1.19**	**320**	*e*Pg	**Pn**	**02 08 28.3**	**-1.0**
HCY				*e*Sg	**Sg**	**02 08 46.3**	**+1.7**
NKME	**Niksic**	**1.29**	**341**	⇓*i*Pg	**Pn**	**02 08 29.8**	**-1.0**
NKME				*e*Sg	**Sg**	**02 08 49.0**	**+1.0**
KOME	**Kolasin**	**1.30**	**360**	⇑*i*Pg	**Pb**	**02 08 31.0**	**-0.2**
KOME				*e*Sg	**Sg**	**02 08 50.8**	**+2.5**
KBN	**Korca**	**1.32**	**134**	Pn	**Pn**	**02 08 30.7**	**-0.6**
KBN				Sn	**Sn**	**02 08 48.8**	**-0.3**
KBN	**Korca**	**1.32**	**134**	P	**Pn**	**02 08 30.0**	**-1.3**
KBN				S	**Sg**	**02 08 50.6**	**+1.6**
IVA	**Berane**	**1.35**	**11**	⇓*i*Pg	**Pb**	**02 08 31.3**	**-0.7**
IVA				*e*Sg	**Sg**	**02 08 53.8**	**+3.9**
BRY	**Bratogost**	**1.54**	**332**	⇓*i*Pg	**Pn**	**02 08 34.3**	**0.0**
BRY				*e*Sg	**Sg**	**02 08 58.3**	**+2.3**
NEST	**Nestorio**	**1.61**	**134**	P	**Pb**	**02 08 35.7**	**-0.8**
NEST				S	**Sg**	**02 08 59.0**	**+0.7**
UPM	**Unac-Piva**	**1.72**	**345**	⇓*i*Pn	**Pb**	**02 08 37.4**	**-0.9**
UPM				*e*Sn	**Sg**	**02 09 02.7**	**+1.0**
PLE	**Pljevlja**	**1.79**	**357**	⇑*i*Pn	**Pb**	**02 08 39.6**	**+0.2**
PENT	**Pentalofos**	**1.82**	**137**	P	**Pb**	**02 08 39.1**	**-0.9**
KEK	**Kerkira**	**1.84**	**174**	P	**Pg**	**02 08 41.9**	**+0.2**
KEK				S	**Sg**	**02 09 05.8**	**+0.2**
NOCI	**Noci**	**2.01**	**249**	Pn	**Pb**	**02 08 42.0**	**-1.2**
NOCI				Sn	**Sb**	**02 09 08.3**	**-0.1**
KZN	**Kozani**	**2.10**	**125**	P	**Pn**	**02 08 42.3**	**+0.3**
KZN				S	**Sb**	**02 09 11.2**	**+0.1**
IGT	**Igoumenitsa**	**2.10**	**163**	Pn	**Pn**	**02 08 43.1**	**+1.2**
IGT				Sn	**Sb**	**02 09 10.8**	**-0.3**
IGT	**Igoumenitsa**	**2.10**	**163**	P	**Pn**	**02 08 41.1**	**-0.8**
JAN	**Janina**	**2.14**	**152**	P	**Pn**	**02 08 43.0**	**+0.6**
JAN				S	**Sb**	**02 09 12.8**	**+0.6**
MATE	**Matera**	**2.31**	**248**	⇓P	**Pn**	**02 08 47.0**	**-1.4**
BOVS	**Bovan**	**2.63

ASAR	**Alice Springs**	**50.22**	**254**	P		**P**	**02 36 18.1**	**-0.7**
	comp=Z,20nm,0.7s,baz=89,slow=8.6,SNR=234							
ASAR				S		**S**	**02 43 24.4**	**-5.8**
	comp=Z,0.5nm,0.9s,baz=96,slow=15,SNR=4.4							
ASAR				LR		LR	02 56 47.4	
	comp=Z,60nm,18.3s,baz=102,slow=35							
	comp=Z,20nm,0.7s							
FORT	**Forrest**	**55.12**	**245**	P		**P**	**02 36 54.0**	**-0.9**
KNRA	**Kununurra**	**56.09**	**263**	P		**P**	**02 37 01.6**	**-0.5**
KNRA				IAmb		IAmb	02 37 50.3	
	comp=Z,28nm,1.6s							
RPN	**Rapa Nui**	**58.56**	**111**	LR		LR	02 56 34.1	
	comp=Z,91nm,18.1s,baz=285,slow=30							
FITZ	**Fitzroy Crossi**	**58.58**	**259**	LR		LR	03 02 35.9	
	comp=Z,172nm,18.1s,baz=126,slow=36							
FITZ	**Fitzroy Crossi**	**58.58**	**259**	P		**P**	**02 37 19.3**	**-0.4**
VNDA	**Vanda**	**61.03**	**186**	LR		LR	03 00 45.6	
	comp=Z,43nm,19.6s,baz=11,slow=33							
DAV	**Davao City (W)**	**65.95**	**286**	LR		LR	03 06 47.0	
	comp=Z,45nm,18.1s,baz=176,slow=36							
TOLI2	**Tolitoli**	**68.26**	**279**	P		**P**	**02 38 22.9**	**-0.9**
TOLI2				IAmb		IAmb	02 38 28.0	
	comp=Z,6.6nm,0.8s							
MJAR	**Matsushiro Arr**	**71.38**	**320**	P		**P**	**02 38 43.0**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=144,slow=5.5,SNR=6.3							
MJAR				LR		LR	03 05 45.6	
	comp=Z,45nm,19.2s,baz=144,slow=32							
	comp=Z,2.9nm,0.8s							
MJAR	**Matsushiro Arr**	**71.38**	**320**	P		**P**	**02 38 42.1**	**-0.3**
JAGI	**Jajag, Banyuwa**	**71.67**	**267**	P		**P**	**02 38 43.9**	**-0.8**
QSPA	**South Pole Qui**	**72.19**	**180**	P		P	02 38 53.9	+6.8
	comp=Z,4.1nm,0.7s,baz=20,slow=2.1,SNR=8.8							
JOW	**Kunigami**	**72.64**	**306**	LR		LR	03 06 47.7	
	comp=Z,72nm,18.1s,baz=88,slow=33							
LPIG	**La Paz**	**73.60**	**57**	LR		LR	03 06 37.7	
	comp=Z,102nm,19.4s,baz=247,slow=32							
PFO	**Pinyon Flats O**	**73.97**	**46**	LR		LR	03 05 51.9	
	comp=Z,144nm,20.0s,baz=232,slow=31							
YBH	**Yreka Blue Hor**	**75.05**	**36**	LR		LR	03 07 57.6	
	comp=Z,12nm,19.3s,baz=254,slow=32							
PETK	**Petropavlovsk-**	**75.23**	**342**	P		**P**	**02 39 05.7**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=160,slow=4.9,SNR=1.4							
	comp=Z,2.5nm,0.7s							
NVAR	**Mina Array Bea**	**75.59**	**41**	P		**P**	**02 39 09.8**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=235,slow=8.3,SNR=5.8							
NVAR				LR		LR	03 08 08.2	
	comp=Z,129nm,18.3s,baz=271,slow=32							
	comp=Z,2.1nm,0.8s							
NVAR	**Mina Array Bea**	**75.59**	**41**	P		**P**	**02 39 05.7**	**-1.8**
TPUB	**Ta-pu**	**77.06**	**300**	P		**P**	**02 39 15.9**	**0.0**
KDAK	**Kodiak Island**	**77.16**	**11**	LR		LR	03 05 55.6	
	comp=Z,62nm,19.6s,baz=197,slow=30							
KSRS	**Korea Array**	**78.52**	**316**	P		**P**	**02 39 25.0**	**+1.3**
	comp=Z,5.1nm,1.0s,baz=127,slow=5.9,SNR=7.2							
	comp=Z,5.1nm,1.0s							
KSAR	**Wonju Array Be**	**78.54**	**316**	P		**P**	**02 39 23.2**	**-0.7**
ELK	**Elko**	**78.86**	**41**	LR		LR	03 10 56.6	
	comp=Z,166nm,18.0s,baz=274,slow=33							
SUA	**Susitna One**	**80.95**	**10**	P		**P**	**02 39 35.5**	**-1.0**
TXAR	**Lajitas Array**	**81.27**	**55**	P		**P**	**02 39 41.9**	**+2.9**
	comp=Z,1.1nm,1.0s,baz=212,slow=4.4,SNR=7.4							
	comp=Z,1.1nm,1.0s							
SKT	**Skwentna**	**81.30**	**10**	P		**P**	**02 39 38.6**	**+0.4**
SKT				IAmb		IAmb	02 39 40.0	
	comp=Z,49nm,1.9s							
BELA	**Belgrano 2**	**81.44**	**172**	P		**P**	**02 39 41.6**	**+2.6**
GHO	**Glory Hole Cre**	**81.56**	**11**	P		**P**	**02 39 39.2**	**-0.5**
PMSA	**Palmer Station**	**81.58**	**156**	LR		LR	03 08 48.1	
	comp=Z,96nm,19.5s,baz=261,slow=30							
ANMO	**Albuquerque**	**81.73**	**49**	LR		LR	03 10 38.9	
	comp=Z,94nm,18.2s,baz=272,slow=32							
CRQM	**Cirque**	**81.84**	**14**	P		**P**	**02 39 41.1**	**-0.2**
CRQM				IAmb		IAmb	02 41 39.5	
	comp=Z,47nm,1.7s							
SCM	**Sheep Creek Mo**	**81.92**	**12**	P		**P**	**02 39 42.5**	**+0.9**
SCM				IAmb		IAmb	02 39 46.2	
	comp=Z,37nm,1.3s							
NEW	**Newport**	**82.25**	**34**	LR		LR	03 10 48.1	
	comp=Z,172nm,18.7s,baz=246,slow=32							
N25K	**Chitina, Valde**	**82.27**	**13**	P		**P**	**02 39 43.2**	**-0.2**
N25K				IAmb		IAmb	02 40 10.9	
	comp=Z,14nm,1.4s							
NJ2	**Nanjing**	**82.34**	**307**	*e*P		**P**	**02 39 43.0**	**-1.4**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
TRF	**Thorofare Moun**	**82.89**	**10**	P		**P**	**02 39 46.4**	**-0.3**
RND	**Reindeer**	**83.09**	**10**	P		**P**	**02 39 47.6**	**-0.1**
RND				IAmb		IAmb	02 39 52.4	
	comp=Z,9.4nm,1.0s							
MCK	**McKinley**	**83.38**	**10**	P		**P**	**02 39 49.4**	**+0.3**
MCK				IAmb		IAmb	02 39 53.5	
	comp=Z,17nm,1.0s							
BNX	**BinXian**	**83.41**	**322**	⇓P		**P**	**02 39 48.0**	**-1.6**
BNX				pmax		pmax		
	comp=Z,10.0nm,1.7s							
PDAR	**Pinedale Array**	**83.52**	**41**	P		**P**	**02 39 52.2**	**+1.6**
	comp=Z,1.7nm,0.7s,baz=204,slow=4.0,SNR=16							
PDAR				LR		LR	03 13 29.4	
	comp=Z,62nm,19.8s,baz=272,slow=33							
	comp=Z,1.7nm,0.7s							
PDAR	**Pinedale Array**	**83.52**	**41**	P		**P**	**02 39 51.7**	**+1.1**
CN2	**Changchun**	**83.53**	**320**	*e*P		**P**	**02 39 50.8**	**+0.5**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
DLBC	**Dease Lake**	**83.67**	**21**	LR		LR	03 17 16.4	
	comp=Z,59nm,18.1s,baz=210,slow=36							
CMIG	**Matias Romero**	**83.89**	**70**	LR		LR	03 09 35.5	
	comp=Z,125nm,18.8s,baz=202,slow=30							
WRH	**Wood River Hil**	**84.20**	**10**	P		**P**	**02 39 54.2**	**+1.0**
WRH				IAmb		IAmb	02 39 56.6	
	comp=Z,15nm,1.1s							
CCB	**Clear Creek Bu**	**84.41**	**10**	P		**P**	**02 39 54.4**	**+0.1**
CCB				IAmb		IAmb	02 40 05.9	
	comp=Z,20nm,1.4s							
SCRK	**Sand Creek**	**84.52**	**12**	P		**P**	**02 39 55.4**	**+0.4**
SCRK				IAmb		IAmb	02 40 06.0	
	comp=Z,11nm,1.4s							
ILAR	**Eielson Array**	**84.69**	**11**	P		**P**	**02 39 56.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=228,slow=6.2,SNR=28							
ILAR				LR		LR	03 12 52.1	
	comp=Z,83nm,20.3s,baz=233,slow=32							
	comp=Z,1.5nm,0.8s							
ILAR	**Eielson Array**	**84.69**	**11**			**P**	**02 39 55.1**	**-0.6**
L29M	**L29M**	**85.07**	**15**	P		**P**	**02 39 59.1**	**+1.3**
WHN	**Wuhan**	**85.19**	**304**	P		**P**	**02 39 57.5**	**-1.5**
DAWY	**Dawson**	**85.59**	**14**	P		**P**	**02 40 02.0**	**+1.7**
DAWY				IAmb		IAmb	02 40 12.9	
	comp=Z,11nm,1.1s							
I26K	**Coal Creek Min**	**85.87**	**12**	P		**P**	**02 40 02.8**	**+1.2**
I26K				IAmb		IAmb	02 42 30.9	
	comp=Z,26nm,1.9s							
F21K	**Alatna River**	**86.00**	**7**	P		**P**	**02 40 02.8**	**+0.6**
F21K				IAmb		IAmb	02 40 47.6	
	comp=Z,14nm,1.4s							
PLCA	**Paso Flores**	**87.22**	**132**	LR		LR	03 12 36.9	
	comp=Z,132nm,18.2s,baz=236,slow=31							
H29M	**Whitestone**	**87.65**	**13**	P		**P**	**02 40 11.7**	**+1.4**
HNS	**HongShan**	**87.72**	**310**	⇓P		**P**	**02 40 14.0**	**+2.8**
HNS				pmax		pmax		
	comp=Z,15nm,1.0s							
LYN	**LuoYang**	**88.24**	**307**	P		**P**	**02 40 16.5**	**+2.7**
LYN				pmax		pmax		
	comp=Z,22nm,0.7s							
LYN				pmax		pmax		
	comp=Z,320nm,4.0s							
TROLL	**Troll, Antarti**	**90.29**	**178**	⇑P		**P**	**02 40 26.2**	**+3.2**
	comp=Z,107nm,0.7s							
VNA3	**Neumayer Olymp**	**90.33**	**175**	⇑P		**P**	**02 40 25.9**	**+2.8**
	comp=Z,3.1nm,0.7s							
SNAA	**Sanae**	**90.41**	**177**	⇑P		**P**	**02 40 26.7**	**+3.2**
	comp=Z,35nm,0.8s							
SNAA	**Sanae**	**90.41**	**177**	P		**P**	**02 40 26.4**	**+2.9**
	comp=Z,1.7nm,0.9s,baz=199,slow=4.1,SNR=7.2							
	comp=Z,1.7nm,0.9s							
SNAA	**Sanae**	**90.41**	**177**	P		**P**	**02 40 25.9**	**+2.4**
SNAA				IAmb		IAmb	02 40 48.3	
	comp=Z,9.7nm,1.5s							
JTS	**Las Juntas de**	**90.79**	**80**	LR		LR	03 13 08.8	
	comp=Z,106nm,18.5s,baz=282,slow=30							
VNA2	**Neumayer--Watz**	**90.84**	**175**	⇑P		**P**	**02 40 28.0**	**+2.6**
	comp=Z,2.9nm,0.8s,baz=183,slow=3.8							
VNA1	**Neumayer--Stat**	**91.03**	**175**	⇑P		**P**	**02 40 25.5**	**-0.7**
	comp=Z,6.4nm,1.0s							
HHC	**Hu-ho-hao-te**	**91.33**	**313**	*e*P		**P**	**02 40 27.0**	**-1.3**
HHC				sP		sP	02 40 34.3	+0.1
HHC				pmax		pmax		
	comp=Z,13nm,0.6s							
HHC				pmax		pmax		
	comp=Z,100nm,6.7s							
ATAH	**Atahualpa**	**91.71**	**98**	LR		LR	03 14 05.7	
	comp=Z,85nm,19.1s,baz=325,slow=30							
BTO	**Baotou**	**92.33**	**312**	*e*P		**P**	**02 40 32.8**	**-0.1**
BTO				pmax		pmax		
	comp=Z,14nm,0.5s							
BTO				pmax		pmax		
	comp=Z,220nm,4.9s							
PZH	**PanZhiHua**	**94.15**	**296**	P		**P**	**02 40 40.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**94.21**	**288**	P		**P**	**02 40 42.8**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=104,slow=3.4,SNR=6.1							
CMAR				LR		LR	03 19 26.7	
	comp=Z,41nm,20.8s,baz=100,slow=33							
	comp=Z,0.9nm,0.3s							
CMAR	**Chiang Mai Arr**	**94.21**	**288**	P		**P**	**02 40 41.4**	**-0.5**
ULM	**Lac du Bonnet**	**95.30**	**39**	LR		LR	03 21 20.6	
	comp=Z,151nm,18.1s,baz=210,slow=34							
LPAZ	**La Paz**	**98.15**	**110**	LR		LR	03 16 55.8	
	comp=Z,47nm,18.4s,baz=256,slow=30							
TKL	**Tuckaleechee C**	**99.18**	**56**	LR		LR	03 21 48.8	
	comp=Z,58nm,18.4s,baz=20,slow=33							
WMQ	**Urumqi**	**109.14**	**311**	Pdif		**Pdif**	**02 41 43.8**	**-4.5**
WMQ				PP		**PP**	**02 46 16.5**	**-4.7**
WMQ				AMB		AMB		
	comp=Z,54nm,3.6s							
MKAR	**Makanchi Array**	**113.16**	**314**	PKiKP		**PKiKP**	**02 46 01.4**	**+1.5**
	comp=Z,0.9nm,0.8s,baz=62,slow=3.0,SNR=3.9							
MKAR	**Makanchi Array**	**113.16**	**314**	PKiKP		**PKiKP**	**02 46 00.7**	**+0.8**
KURBB	**Kurchatov Arra**	**115.62**	**318**	PKP		**PKPdf**	**02 46 05.6**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=105,slow=2.3,SNR=4.5							
BVAR	**Borovoye Array**	**120.35**	**321**	PKP		**PKiKP**	**02 46 14.8**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=108,slow=2.3,SNR=6.9							
FINES	**FINESS Array B**	**134.53**	**348**	PKP		**PKPdf**	**02 46 40.2**	**0.0**
	comp=Z,2.3nm,0.9s,baz=42,slow=4.5,SNR=1.9							
KMBO	**Kilima Mbogo**	**145.16**	**240**	PKP		**PKiKP**	**02 47 04.2**	**-0.9**
	comp=Z,5.0nm,1.0s,baz=169,slow=3.9,SNR=12							
SORM	**Soroca**	**145.35**	**335**	⇑P		**PKPdf**	**02 47 00.8**	**+0.6**
KMPD	**K-Podol'skiy**	**145.72**	**337**	PKP		**PKPdf**	**02 47 00.3**	**-0.5**
KMPD				PKP		**PKPdf**	**02 47 00.3**	**-0.5**
KWP	**Kalwaria Pacla**	**146.03**	**342**	*e*PKP		**PKiKP**	**02 47 04.2**	**-1.3**
MILM	**Milestii Mici**	**146.12**	**333**	⇑P		**PKPdf**	**02 46 59.9**	**-1.6**
OJC	**Ojcow**	**146.25**	**346**	*e*PKP		**PKiKP**	**02 47 04.9**	**-1.1**
OJC	**Ojcow**	**146.25**	**346**	PKP		**PKPbc**	**02 47 02.2**	**-0.6**
STNU	**Starunia**	**146.28**	**340**	PKP		**PKPbc**	**02 47 02.3**	**-0.6**
CLL	**Collm**	**146.35**	**354**	PKP		**PKPbc**	**02 47 02.3**	**-0.7**
CLL	**Collm**	**146.35**	**354**	*e*PKPdf		**PKPdf**	**02 47 02.0**	**+0.2**
CLL				*i* PKPbc		**PKPab**	**02 47 04.3**	**+0.5**
	comp=Z,14nm,1.0s							
CLL				*i* (PKiKP)		**sPKPdf**	**02 47 07.7**	**+0.1**
KSP	**Ksiaz**	**146.36**	**350**	*e*PKP		**PKiKP**	**02 47 06.0**	**-0.2**
STHS	**Stebnicka Huta**	**146.63**	**344**	*e*PKP		**PKiKP**	**02 47 07.7**	**+0.9**
OSTC	**Ostas**	**146.65**	**350**	*e*PKP		**PKiKP**	**02 47 06.3**	**-0.5**
UPC	**Upice**	**146.73**	**350**	*e*PKP		**PKiKP**	**02 47 06.6**	**-0.3**
VASR	**Vaslui**	**146.77**	**334**	⇑P		**PKPab**	**02 47 06.0**	**+0.4**
DPC	**Dobruska-Polom**	**146.83**	**350**	*e*PKP		**PKiKP**	**02 47 07.2**	**0.0**
NIE	**Niedzica**	**146.87**	**345**	*e*PKP		**PKiKP**	**02 47 07.3**	**+0.1**
PVCC	**Panska Ves**	**146.93**	**352**	*e*PKP		**PKiKP**	**02 47 07.4**	**+0.1**
STEB	**Steborice**	**146.96**	**348**	*e*PKP		**PKiKP**	**02 47 07.4**	**0.0**
BURAR	**Bucovina Array**	**146.97**	**338**	⇑P		**PKiKP**	**02 47 09.9**	**+2.2**
HSKC	**Hora Svate Kat**	**146.99**	**353**	*e*PKP		**PKiKP**	**02 47 07.0**	**-0.5**
KRLC	**Kraliky**	**147.02**	**349**	*e*PKP		**PKiKP**	**02 47 07.6**	**0.0**
MORC	**Moravsky Berou**	**147.16**	**348**	⇑P		**PKiKP**	**02 47 08.0**	**+0.1**
MORC	**Moravsky Berou**	**147.16**	**348**	*e*PKP		**PKiKP**	**02 47 07.8**	**-0.1**
LANS	**Liptovska Anna**	**147.32**	**345**	*e*PKP		**PKiKP**	**02 47 10.1**	**+1.9**
TESR	**Tescani**	**147.34**	**335**	⇑P		**PKPab**	**02 47 07.9**	**+0.1**
GHRR		**147.40**	**334**	⇓P		**PKiKP**	**02 47 09.3**	**+0.9**
PRU	**Pruhonice**	**147.46**	**352**	*e*PKP		**PKiKP**	**02 47 08.3**	**-0.1**
MAUC	**Maruska**	**147.49**	**347**	*e*PKP		**PKiKP**	**02 47 09.0**	**+0.4**
ONER	**Baraj Valea Uz**	**147.59**	**335**	⇑P		**PKiKP**	**02 47 08.9**	**+0.1**
CFR	**Carcaliu**	**147.78**	**332**	⇑P		**PKPab**	**02 47 09.6**	**0.0**
VRAC	**Vranov**	**147.79**	**349**	*e*PKP		**PKiKP**	**02 47 08.6**	**-0.5**
TPGR	**Topolog**	**147.90**	**331**	⇑P		**PKPab**	**02 47 10.0**	**-0.2**
TURR	**Turia**	**147.97**	**335**	⇑P		**PKPab**	**02 47 09.9**	**-0.5**
JAVC	**Velka Javorina**	**148.00**	**347**	*e*PKP		**PKPab**	**02 47 10.8**	**+0.3**
KRUC	**Moravsky**	**148.06**	**349**	*e*PKP		**PKiKP**	**02 47 09.7**	**0.0**
COVR	**Voineasa-Covas**	**148.07**	**335**	⇓P		**PKiKP**	**02 47 09.5**	**-0.3**
DOPR	**Dopca**	**148.29**	**336**	⇑P		**PKiKP**	**02 47 09.6**	**-0.7**
CJR	**Cluj-Napoca**	**148.31**	**339**	⇓P		**PKiKP**	**02 47 09.7**	**-0.6**
PSZ	**Piszkesteto**	**148.36**	**344**	PKPdf		**PKPdf**	**02 47 03.0**	**-2.3**
KHC	**Kasperske Hory**	**148.43**	**352**	*e*PKP		**PKPab**	**02 47 11.4**	**-0.7**
MARR	**Marisel-Cluj**	**148.51**	**339**	⇑P		**PKPab**	**02 47 15.4**	**+2.7**
DRGR		**148.54**	**340**	⇓P		**PKiKP**	**02 47 11.4**	**+0.5**
MODS	**Modra-Piesok**	**148.55**	**347**	*e*PKP		**PKPab**	**02 47 12.6**	**0.0**
BRTR	**Keskin Array B**	**148.60**	**319**	PKPbc		**PKiKP**	**02 47 11.5**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=93,slow=3.0,SNR=16							
CKRC	**Cesky Krumlov**	**148.63**	**351**	*e*PKP		**PKiKP**	**02 47 11.5**	**+0.6**
GERES	**GERESS Array B**	**148.69**	**352**	PKPbc		**PKiKP**	**02 47 11.9**	**+0.8**
	comp=Z,3.7nm,1.0s,baz=9,slow=3.4,SNR=15							
VOIR		**148.86**	**336**	⇑P		**PKPab**	**02 47 12.7**	**-1.3**
ARR	**Arges**	**149.08**	**336**	⇑P		**PKPab**	**02 47 13.8**	**-1.1**
CONA	**Conrad Observa**	**149.25**	**349**	*e*pPKiKP		**PKiKP**	**02 47 13.4**	**+1.1**
	comp=Z,6.0nm,0.9s							
SIRR	**Siria**	**149.35**	**341**	⇑P		**PKiKP**	**02 47 13.6**	**+1.1**
RONA	**Rosalia, Austr**	**149.39**	**348**	*e*pPKiKP		**PKiKP**	**02 47 14.1**	**+1.6**
	comp=Z,4.1nm,0.8s							
BZS	**Buzias**	**149.94**	**340**	⇓P		**PKiKP**	**02 47 14.8**	**+1.2**
ARSA	**Arzberg**	**149.96**	**349**	*e*pPKiKP		**PKiKP**	**02 47 15.6**	**+1.9**
	comp=Z,0.7nm,0.5s							
LESA	**Schwarzleotal**	**150.22**	**353**	*e*PKP		**PKiKP**	**02 47 16.5**	**+2.2**
	comp=Z,7.7nm,1.3s							
HERR	**Herculane**	**150.31**	**338**	⇓P		**PKiKP**	**02 47 15.7**	**+1.3**
RETA	**Reutte**	**150.34**	**356**	*e*pPKP		**PKiKP**	**02 47 15.0**	**+0.5**
	comp=Z,5.0nm,1.1s							
MOTA	**Moosalm**	**150.45**	**355**	*e*pPKP		**PKiKP**	**02 47 14.8**	**-0.1**
	comp=Z,4.1nm,0.8s							
KBA	**Koelnbreinsper**	**150.47**	**352**	*e*pPKiKP		**PKiKP**	**02 47 16.4**	**+1.4**
	comp=Z,2.0nm,0.8s							
WTTA	**Wettenberg**	**150.49**	**354**	*e*pPKiKP		**PKiKP**	**02 47 16.1**	**+1.1**
	comp=Z,7.3nm,0.7s							
SQTA	**Sankt Quirin**	**150.57**	**355**	*e*pPKiKP		**PKiKP**	**02 47 16.0**	**+0.9**
	comp=Z,4.1nm,0.8s							
DAVA	**Damuels**	**150.59**	**357**	*e*pPKiKP		**PKiKP**	**02 47 16.8**	**+1.6**
	comp=Z,7.4nm,1.1s							
SOKA	**Soboth**	**150.60**	**349**	*e*pPKiKP		**PKiKP**	**02 47 16.0**	**+0.8**
	comp=Z,2.9nm,0.8s							
MDVR	**Moldovita**	**150.64**	**339**	⇓P		**PKPab**	**02 47 24.2**	**+2.9**
MMAI	**Mount Meron Ar**	**150.76**	**306**	PKPbc		**PKiKP**	**02 47 17.5**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=90,slow=3.3,SNR=4.7							
FETA	**Feichten**	**150.81**	**355**	*i* pPKiKP		**PKiKP**	**02 47 17.2**	**+1.6**
	comp=Z,5.1nm,0.9s							
OBKA	**Obir**	**150.85**	**350**	*i* pPKP		**PKiKP**	**02 47 16.3**	**+0.6**
	comp=Z,2.1nm,0.9s							
MYKA	**Terra Mystica**	**150.87**	**351**	*e*pPKiKP		**PKiKP**	**02 47 16.5**	**+0.8**
	comp=Z,1.1nm,0.4s							
ABTA	**Abfaltersbach**	**150.90**	**353**	*e*pPKiKP		**PKiKP**	**02 47 16.7**	**+1.0**
	comp=Z,5.0nm,0.7s							
TORD	**Tordi Ar. Bea**	**172.69**	**129**	PKP		**PKPdf**	**02 47 32.3**	**0.0**
	comp=Z,0.4nm,0.7s,baz=270,slow=0.8,SNR=3.2							
TORD				PKPab		**pPKPab**	**02 49 01.2**	**-1.0**
	comp=Z,1.1nm,1.0s,baz=245,slow=3.7,SNR=4.7							

*SNET **27** 02:32:26.8±0.9, 13°.17N×89°.98W, h36km±244km, ML2.7*
*GCG **27** 02:32:28.1±0.3, 13°.28N×89°.97W, h29km±11km, MD3.5*

ISC 27 02:32:26.2±3.8, **13°.2N**±0°.2×**90.0W**±0°.2, **h29km, n7,**
σ0$52/11, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JAYA	**Jayaque - finc**	**0.71**	**45**	*e*P		**Pb**	**02 32 40.3**	**+0.1**
JAYA				*e*S		**Sn**	**02 32 50.7**	**+0.2**
JAYA				IAML			02 32 52.4	
	comp=Z,332nm,0.2s							
JAYA	**Jayaque - finc**	**0.71**	**45**	*i* P		**Pb**	**02 32 40.3**	**+0.1**
JAYA				*e*S		**Sb**	**02 32 49.6**	**-0.1**
NUBE	**Las Nubes**	**0.77**	**13**	*e*P		**Pn**	**02 32 41.1**	**-0.2**
NUBE				*e*S		**Sn**	**02 32 51.6**	**-0.4**
NUBE	**Las Nubes**	**0.77**	**13**	*e*P		**Pn**	**02 32 41.1**	**-0.2**
NUBE				*e*S		**Sn**	**02 32 51.3**	**-0.7**
LFRS	**El Faro**	**1.00**	**62**	*e*P		**Pn**	**02 32 44.0**	**-0.4**
MTO3	**Montecristo**	**1.38**	**25**	*e*P		**Pn**	**02 32 50.4**	**+0.8**
MTO3	**Montecristo**	**1.38**	**25**	*e*P		**Pn**	**02 32 50.5**	**+0.8**

*SJA **27** 03:01:58.0±0.7, 23°.02S×66°.70W, h245km±8km, ML3.6, MW3.7*
*NEIC **27** 03:01:59.4±1.8, 23°.02S±0°.07×66°.7W±0°.1, h236km±9km, mb4.5/10, Error ellipse: s-maj=14.6km s-min=10.3km az=92.0*
*IDC **27** 03:01:59.3±1.7, 23°.03S×66°.71W, h228km±21km, mb3.1/2, mbtmp3.8/8, Error ellipse: s-maj=30.1km s-min=15.9km az=112.0*

*VAO **27** 03:02:02.0±1.5, 22°.79S×66°.62W, h244km±10km, mb4.0*

ISC 27 03:01:58.7±0.6, **22°.99S**±0°.04×**66°.69W**±0°.05, **h226**km±8km,
n102, σ1$56/128, **mb4.3**/3, **4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.20**	**101**	*e*P		**Pn**	**03 02 34.6**	**+1.6**
HJA				IAML			03 03 04.1	
	comp=Z,33nm,0.8s							
SALTA		**1.27**	**165**	⇓*e*P		**Pn**	**03 02 34.9**	**+1.3**
SALTA		**1.27**	**165**	*e*P		**Pn**	**03 02 34.9**	**+1.3**
SALTA				*e*P			03 02 34.9	
SALTA				*e*P			03 02 35.1	
SALTA				*e*S		**S**	**03 02 57.6**	**-3.3**
SALTA				IAML			03 03 02.5	
	comp=Z,67nm,1.4s							
YJA	**Yavi**	**1.35**	**54**	*e*P		**Pn**	**03 02 35.8**	**+1.6**
YJA	**Yavi**	**1.35**	**54**	*e*P		**Pn**	**03 02 36.1**	**+1.9**
YJA				IAML			03 03 08.9	
	comp=Z,8.6nm,1.6s							
AF01	**San Pedro de A**	**1.37**	**271**			**Pn**	**03 02 35.5**	**+1.4**
AF01				Sn		**S**	**03 03 02.1**	**+0.5**
SLA	**San Lorenzo**	**2.04**	**148**	*e*P		**Pn**	**03 02 41.7**	**+1.9**
SLA	**San Lorenzo**	**2.04**	**148**	*i* P		**Pn**	**03 02 41.2**	**+1.5**
SLA				IAML			03 03 16.7	
	comp=Z,12nm,1.1s							
PB09	**IPOC Station P**	**2.64**	**296**			**Pn**	**03 02 47.6**	**+1.6**
PB09				Sn		**S**	**03 03 22.9**	**0.0**
PB09	**IPOC Station P**	**2.64**	**296**	⇑*e*P		**Pn**	**03 02 47.5**	**+1.6**
PB09				*e*S		**S**	**03 03 22.8**	**0.0**
PB09				IAML			03 03 24.9	
	comp=E,255nm,0.7s							
PB09	**IPOC Station P**	**2.64**	**296**	*e*P		**Pn**	**03 02 47.3**	**+1.4**
PB09				IAML			03 03 28.3	
	comp=Z,137nm,0.5s							
PB06	**IPOC Station P**	**2.67**	**275**			**Pn**	**03 02 47.3**	**+1.0**
PB06	**IPOC Station P**	**2.67**	**275**	⇑*e*P		**Pn**	**03 02 47.1**	**+0.8**
PB06				*e*S		**S**	**03 03 22.6**	**-0.8**
PB06				IAML			03 03 26.2	
	comp=E,315nm,0.2s							
PB06	**IPOC Station P**	**2.67**	**275**	*e*P		**Pn**	**03 02 47.2**	**+1.0**
PB06				*i* S		**S**	**03 03 23.1**	**-0.3**
PB06				IAML			03 03 28.9	
	comp=Z,230nm,0.2s							
PB03	**IPOC Station P**	**2.98**	**288**			**Pn**	**03 02 50.4**	**+0.7**

PDRB	**Porto dos Gac**	**14.77**	**42**	*eP*		**P**		**03 05 17.8**	**+0.3**
TRQA	**Tornquist**	**15.56**	**166**	P		**Pn**		**03 05 26.1**	**-0.4**
TRQA				IAmb		IAmb		03 05 38.5	
	comp=Z,16nm,1.4s								
FRTB	**Fartura**	**15.76**	**95**	*eP*		**Pn**		**03 05 29.7**	**+0.6**
ARAG	**Araguaiana, MT**	**15.79**	**65**	*eP*		**Pn**		**03 05 30.9**	**+1.5**
CLDB	**Colider**	**15.92**	**43**	*eP*		**Pn**		**03 05 31.5**	**+0.5**
LR05	**Currie**	**17.77**	**193**	P		**P**		**03 05 50.7**	**+0.5**
LR05				IAmb		IAmb		03 05 53.3	
	comp=Z,13nm,0.6s								
PLCA	**Paso Flores**	**17.99**	**190**	P		**P**		**03 05 53.9**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=1.3,slow=9.9,SNR=7.0								
PLCA	**Paso Flores**	**17.99**	**190**	P		**P**		**03 05 52.1**	**-0.6**
IPMB	**Ipameri, GO**	**18.01**	**77**	*eP*		**Pn**		**03 05 55.0**	**-0.7**
VAO	**Valinhos**	**18.16**	**94**	P		**P**		**03 05 54.8**	**+0.1**
VAO	**Valinhos**	**18.16**	**94**	*eP*		**Pn**		**03 05 56.0**	**-1.5**
SNDB	**Serra Nova Dou**	**18.30**	**56**	*eP*		**P**		**03 05 57.1**	**+0.9**
BDFB	**Brasilia**	**19.07**	**71**	P		**P**		**03 06 05.9**	**+1.3**
	comp=Z,14nm,0.9s,baz=308,slow=2.4								
BDFB	**Brasilia**	**19.07**	**71**	P		**P**		**03 06 05.3**	**+0.7**
BDFB				IAmb		IAmb		03 06 07.5	
	comp=Z,17nm,1.0s								
NPGB	**Novo Progresso**	**19.24**	**36**	*eP*		**P**		**03 06 05.6**	**-0.7**
TEFE	**Tefe**	**19.46**	**6**	*eP*		**P**		**03 06 09.3**	**+0.6**
MACA	**Manacapuru-AM**	**20.55**	**17**	P		**P**		**03 06 19.8**	**-0.5**
MACA				IAmb		IAmb		03 06 21.9	
	comp=Z,9.5nm,0.6s								
ITTB	**Itaituba**	**21.33**	**31**	*eP*		**P**		**03 06 27.4**	**-1.0**
JANB	**Januaria**	**22.56**	**74**	*eP*		**P**		**03 06 39.0**	**-1.0**
SDBA	**SAO DESIDERIO**	**23.24**	**67**	*eP*		**P**		**03 06 45.9**	**-0.3**
PRPB	**Parauapebas**	**23.32**	**47**	*eP*		**P**		**03 06 47.6**	**+0.7**
MAL2	**Monte Alegre,**	**24.12**	**32**	P		**P**		**03 06 55.5**	**+1.4**
MAL2				IAmb		IAmb		03 07 06.1	
	comp=Z,16nm,0.9s								
BOAV	**Boa Vista**	**25.93**	**14**	P		**P**		**03 07 09.5**	**-0.9**
BOAV				IAmb		IAmb		03 07 10.7	
	comp=Z,9.2nm,1.4s								
SNAA	**Sanae**	**60.21**	**161**	P		**P**		**03 11 41.4**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=307,slow=9.2,SNR=1.6								
	comp=Z,0.3nm,0.6s								
SNAA	**Sanae**	**60.21**	**161**	P		**P**		**03 11 41.9**	**-0.7**
TORD	**Torodi Ar. Bea**	**75.94**	**69**	P		**P**		**03 13 22.1**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=260,slow=5.0,SNR=5.2								
	comp=Z,0.6nm,0.5s								

*NEIC **27** 03:06:02.7±1.9,22.°19S±0.°05×67.°38W±0.°09,h199km±6km, mb4.3/11,Error ellipse: s-maj=13.2km s-min=6.0km az=67.0*
*SCB **27** 03:06:03.9±1.2,22.°15S×67.°32W,h162km±10km,MB5.3, ML3.5/3,Error ellipse: s-maj=4.2km s-min=3.1km az=0.0*
*GUC **27** 03:06:03.2±0.9,22.°11S×67.°60W,h227km±11km,ML3.7*
*IDC **27** 03:06:09.9±6.5,21.°50S×66.°81W,h219km±50km,mb4.0/1, mbtmp4.1/4,Error ellipse: s-maj=71.8km s-min=27.2km az=12.0*

ISC 27 03:06:02.2±0.7,22.°10S±0.°04×67.°31W±0.°04,h192km±7km, n64,σ1°19/80,10C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.18**	**223**	Pn	**Pn**	**03 06 33.5**	**+0.8**
YJA	**Yavi**	**1.66**	**93**	Pg	**Pn**	**03 06 37.4**	**+0.2**
MOCB	**Mochara**	**1.76**	**62**	Pg	**Pn**	**03 06 38.8**	**+0.6**
MOCB				Sg	**Sn**	**03 07 04.8**	**-1.2**
MOCB				IAML		03 07 06.1	
	640nm,0.5s						
PB09	**IPOC Station P**	**1.82**	**279**	Pn	**Pn**	**03 06 39.5**	**+1.1**
PB09				Sn	**Sn**	**03 07 06.8**	**+0.2**
PB09	**IPOC Station P**	**1.82**	**279**	*eP*	**Pn**	**03 06 39.4**	**+0.9**
PB09				*eS*	**Sn**	**03 07 08.5**	**+2.0**
PB09	**IPOC Station P**	**1.82**	**279**	Pg	**Pn**	**03 06 39.0**	**+0.6**
PB06	**IPOC Station P**	**2.18**	**253**	Pn	**Pn**	**03 06 42.4**	**+0.3**
PB06	**IPOC Station P**	**2.18**	**253**	*eP*	**Pn**	**03 06 42.5**	**+0.3**
PB06				*eS*	**Sn**	**03 07 13.5**	**+0.2**
PB06				IAML		03 07 14.7	
	comp=E,286nm,0.1s						
PB06	**IPOC Station P**	**2.18**	**253**	Pg	**Pn**	**03 06 42.5**	**+0.3**
PB03	**IPOC Station P**	**2.27**	**271**	Pn	**Pn**	**03 06 43.5**	**+0.3**
PB03	**IPOC Station P**	**2.27**	**271**	*eP*	**Pn**	**03 06 43.3**	**+0.2**
PB03				*eS*	**Sn**	**03 07 13.8**	**-1.2**
PB03				IAML		03 07 14.5	
	comp=E,257nm,0.2s						
PB01	**IPOC Station P**	**2.29**	**297**	Pn	**Pn**	**03 06 43.9**	**+0.7**
PB01	**IPOC Station P**	**2.29**	**297**	*eP*	**Pn**	**03 06 43.6**	**+0.3**
PB01				*eS*	**Sn**	**03 07 14.4**	**-0.8**
PB01				IAML		03 07 15.8	
	comp=N,287nm,0.8s						
PB01	**IPOC Station P**	**2.29**	**297**	Pg	**Pn**	**03 06 44.0**	**+0.7**
PB01				Sg	**Sn**	**03 07 14.4**	**-0.8**
PB01				IAML		03 07 16.2	
	comp=N,73nm,0.3s						
PB07	**IPOC Station P**	**2.42**	**278**	Pn	**Pn**	**03 06 45.5**	**+0.6**
PB07	**IPOC Station P**	**2.42**	**278**	*eP*	**Pn**	**03 06 45.2**	**+0.3**
PB07				*eS*	**Sn**	**03 07 16.4**	**-1.7**
PB07				IAML		03 07 18.5	
	comp=N,200nm,0.2s						
AOVT	**TarijaAcel**	**2.48**	**77**	Pg	**Pn**	**03 06 46.0**	**+0.4**
PB02	**IPOC Station P**	**2.53**	**287**	Pn	**Pn**	**03 06 46.3**	**+0.2**
PB02	**IPOC Station P**	**2.53**	**287**	*eP*	**Pn**	**03 06 46.2**	**+0.2**
PB02				*eS*	**Sn**	**03 07 18.6**	**-1.5**
PB02				IAML		03 07 20.1	
	comp=E,340nm,0.2s						
PB02	**IPOC Station P**	**2.53**	**287**	Pg	**Pn**	**03 06 46.4**	**+0.4**
PB02				Sg	**Sn**	**03 07 18.4**	**-1.7**
PB02				IAML		03 07 20.1	
	comp=E,170nm,0.3s						
PB08	**IPOC Station P**	**2.60**	**318**	Pn	**Pn**	**03 06 48.6**	**+1.5**
PB08	**IPOC Station P**	**2.60**	**318**	*eP*	**Pn**	**03 06 48.4**	**+1.3**
PB08				*eS*	**Sn**	**03 07 22.5**	**+0.5**
PB08				IAML		03 07 24.4	
	comp=E,85nm,0.2s						
PB08	**IPOC Station P**	**2.60**	**318**	Pg	**Pn**	**03 06 48.6**	**+1.5**
PB05	**IPOC Station P**	**2.78**	**254**	Pn	**Pn**	**03 06 49.2**	**+0.2**
PB05	**IPOC Station P**	**2.78**	**254**	*eP*	**Pn**	**03 06 49.1**	**+0.2**
PB05				*eS*	**Sn**	**03 07 23.4**	**-2.0**
PB05				IAML		03 07 24.3	
	comp=N,122nm,0.2s						
PATCX	**Punta Patache**	**2.94**	**295**	Pn	**Pn**	**03 06 50.8**	**0.0**
PATCX	**Punta Patache**	**2.94**	**295**	*eP*	**Pn**	**03 06 50.7**	**-0.1**
PATCX				*eS*	**Sn**	**03 07 26.8**	**-1.8**
GO01	**Chusmiza**	**2.99**	**323**	Pn	**Pn**	**03 06 52.9**	**+1.1**
GO01	**Chusmiza**	**2.99**	**323**	*eP*	**Pn**	**03 06 52.8**	**+0.9**
GO01				*eS*	**Sn**	**03 07 31.0**	**+0.5**
GO01	**Chusmiza**	**2.99**	**323**	Pg	**Pn**	**03 06 52.7**	**+0.9**
TA01	**Diego Aracena**	**3.08**	**299**	Pn	**Pn**	**03 06 52.1**	**-0.2**
TA01	**Diego Aracena**	**3.08**	**299**	*eP*	**Pn**	**03 06 52.0**	**-0.4**
TA01				*eS*	**Sn**	**03 07 29.1**	**-2.5**
PB11	**IPOC Station P**	**3.20**	**316**	Pn	**Pn**	**03 06 54.0**	**+0.1**
PB11	**IPOC Station P**	**3.20**	**316**	*eP*	**Pn**	**03 06 53.9**	**-0.1**
PB11				*eS*	**Sn**	**03 07 32.8**	**-1.6**
SOEO	**Opoqueri**	**3.56**	**351**	Pg	**Pn**	**03 07 00.6**	**+1.9**
GO02	**Mina Guanaco**	**3.70**	**214**	Pn	**Pn**	**03 07 01.0**	**+0.7**
GO02	**Mina Guanaco**	**3.70**	**214**	Pg	**Pn**	**03 07 01.0**	**+0.7**
PB14	**IPOC Station P**	**3.80**	**228**	Pn	**Pn**	**03 07 01.4**	**-0.1**
PB14	**IPOC Station P**	**3.80**	**228**	Pg	**Pn**	**03 07 02.0**	**+0.5**
SOET	**ToroToro**	**4.20**	**20**	Pg	**Pn**	**03 07 07.6**	**+1.0**
PB16	**IPOC Station P**	**4.27**	**331**		**Pn**	**03 07 08.9**	**+1.2**
PB12	**IPOC Station P**	**4.48**	**320**	Pn	**Pn**	**03 07 08.3**	**-1.5**
PB18	**Visviri**	**4.93**	**335**	Pn	**Pn**	**03 07 16.4**	**+0.4**
AC02	**Maricunga**	**5.00**	**199**	Pn	**Pn**	**03 07 17.1**	**+0.2**
BBOJ	**La Paz, Jacaqu**	**5.16**	**351**	Pg	**Pn**	**03 07 21.6**	**+2.6**
BBOE	**La Paz, Chanca**	**5.29**	**353**	Pg	**Pn**	**03 07 23.6**	**+2.8**
BBOD	**La Paz, Gloria**	**5.56**	**347**	Pg	**Pn**	**03 07 26.3**	**+2.0**
LPAZ	**La Paz**	**5.83**	**352**	P	**Pn**	**03 07 29.3**	**+1.5**
	comp=N,2.0nm,0.4s,baz=160,slow=5.1,SNR=21						
LPAZ				S	**Sn**	**03 08 34.1**	**-1.1**
	comp=N,1.7nm,0.6s,baz=26,slow=1.9,SNR=2.1						
LPAZ	**La Paz**	**5.83**	**352**	Pg	**Pn**	**03 07 29.5**	**+1.7**
BBOB	**La Paz, Bander**	**5.97**	**352**	Pg	**Pn**	**03 07 31.1**	**+1.6**
SIV	**San Ignacio**	**8.46**	**45**	P	**Pn**	**03 07 59.2**	**-2.4**
	comp=N,12nm,0.3s,baz=274,slow=7.9						
SIV				S	Sn	03 09 27.4	-9.2
	baz=90,slow=20						
PLTB	**Pedras Altas**	**15.54**	**131**		**Pn**	**03 09 30.2**	**-1.2**
PLTB				IAmb	IAmb	03 10 00.4	
	comp=Z,18nm,1.3s						
TRQA	**Tornquist**	**16.56**	**165**	P	**P**	**03 09 42.7**	**0.0**
TRQA				IAmb	IAmb	03 10 01.1	
	comp=Z,12nm,1.4s						
VAO	**Valinhos**	**18.81**	**97**	P	**P**	**03 10 08.1**	**+0.5**
VAO				IAmb	IAmb	03 10 09.2	
	comp=Z,10.0nm,0.8s						

BDFB	**Brasilia**	**19.34**	**74**	P		**P**		**03 10 13.7**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=308,slow=3.7								
BDFB	**Brasilia**	**19.34**	**74**	P		**P**		**03 10 13.4**	**+0.1**
BDFB				IAmb		IAmb		03 10 48.7	
	comp=Z,17nm,1.5s								
MACA	**Manacapuru-AM**	**19.89**	**20**	P		**P**		**03 10 19.7**	**+0.6**
MACA				IAmb		IAmb		03 10 55.2	
	comp=Z,14nm,1.0s								
MET	**Memphis--Engin**	**60.82**	**339**	P		**P**		**03 15 55.1**	**+1.0**
SNAA	**Sanae**	**61.23**	**161**	P		**P**		**03 15 57.9**	**+1.4**
SNAA				IAmb		IAmb		03 16 13.3	
	comp=Z,5.6nm,1.5s								
DBIC	**Dimbokro**	**67.48**	**72**	P		**P**		**03 16 36.6**	**-1.3**
TASM	**ASL Pad, Albuq**	**67.82**	**326**	P		**P**		**03 16 37.1**	**-2.7**
QSPA	**South Pole Qui**	**68.10**	**180**	P		**P**		03 16 36.5	-4.7
TORD	**Torodi Ar. Bea**	**76.16**	**69**	P		**P**		**03 17 30.7**	**+1.1**
	comp=Z,2.4nm,0.5s,baz=259,slow=5.1,SNR=38								
	comp=Z,2.4nm,0.5s								
VNDA	**Vanda**	**76.52**	**190**	P		**P**		**03 17 31.4**	**+0.8**
VNDA				IAmb		IAmb		03 17 36.8	
	comp=Z,4.0nm,1.4s								

*IDC **27** 03:21:54.8±1.5,36.°51N×21.°20E,h0km,mb3.5/7, mbtmp3.5/8,ML2.9/1,Error ellipse: s-maj=32.2km s-min=27.4km az=115.0*
*ATH **27** 03:21:59.4,36.°67N×21.°20E,h6km±2km,ML3.1/19, Manual Solution by I.Dede First location: 2019/11/27 03:23:06, This location: 2020/10/26 15:53:52 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*
*THE **27** 03:22:00.1,37.°N±4.°×2.°1E±.°,h0km±7km,M2.9/18, MLh2.9/18*

ISC 27 03:21:58.4±1.8,36.°62N±0.°06×21.°17E±0.°04,h8km±10km, n61,σ1°14/70,mb3.6/6,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTHA	**Methoni**	**0.47**	**65**	P	**Pg**	**03 22 08.4**	**+0.9**
MTHA				S	**Sg**	**03 22 13.5**	**-0.3**
PYL1	**Pylos**	**0.51**	**55**	P	**Pg**	**03 22 08.4**	**+0.1**
PYL1				S	**Sg**	**03 22 14.3**	**-0.8**
PYL	**PYLOS**	**0.53**	**59**	P	**Pg**	**03 22 09.0**	**+0.3**
ITM	**Ithomi**	**0.82**	**47**	P	**Pg**	**03 22 14.1**	**-0.1**
ITM				S	**Sb**	**03 22 26.1**	**-0.2**
ITM	**Ithomi**	**0.82**	**47**	P	**Pg**	**03 22 14.1**	**-0.1**
ITM				S	**Sg**	**03 22 24.3**	**-0.6**
ZARO	**Zacharo**	**0.94**	**24**	P	**Pg**	**03 22 16.5**	**0.0**
AMT	**Artemida-Makis**	**1.00**	**25**	P	**Pg**	**03 22 17.6**	**-0.1**
AMT				S	**Sg**	**03 22 30.6**	**-0.2**
LTHK	**Lithakia**	**1.12**	**346**	P	**Pg**	**03 22 19.8**	**0.0**
LTHK				S	**Sb**	**03 22 35.3**	**+0.7**
LTHK	**Lithakia**	**1.12**	**346**	P	**Pg**	**03 22 20.3**	**+0.5**
VLX	**Vlachokerasia**	**1.22**	**52**	P	**Pg**	**03 22 22.1**	**+0.2**
VLX				S	**Sb**	**03 22 38.4**	**+0.5**
KYPS	**Kipseli, Zakin**	**1.23**	**347**	P	**Pg**	**03 22 22.1**	**+0.2**
CLEM	**Kyllini,Ilia,G**	**1.27**	**359**	P	**Pg**	**03 22 22.8**	**+0.1**
ORTH	**Orthonies,Zaky**	**1.28**	**343**	P	**Pg**	**03 22 23.3**	**+0.3**
LCHA	**Lechaina**	**1.31**	**3**	P	**Pb**	**03 22 24.1**	**+0.8**
DRO	**Drossia**	**1.40**	**18**	P	**Pg**	**03 22 24.4**	**-0.8**
DRO	**Drossia**	**1.40**	**18**	P	**Pg**	**03 22 24.5**	**-0.7**
VLI	**Veliai**	**1.43**	**86**	P	**Pn**	**03 22 25.9**	**+1.3**
VLI				S	**Sn**	**03 22 47.1**	**+3.6**
VLI	**Veliai**	**1.43**	**86**	P	**Pn**	**03 22 25.7**	**+1.1**
RLS	**Riolos of Patr**	**1.45**	**9**	P	**Pn**	**03 22 25.7**	**+0.7**
RLS	**Riolos of Patr**	**1.45**	**9**	P	**Pn**	**03 22 25.4**	**+0.4**
RTZL	**Ratzakli, Kefa**	**1.48**	**348**	P	**Pn**	**03 22 26.3**	**+0.9**
RTZL				S	**Sn**	**03 22 47.0**	**+1.9**
NPS1	**Neapolis Lacon**	**1.53**	**94**	P	**Pn**	**03 22 26.3**	**+0.3**
KTHA	**Kythira Island**	**1.57**	**103**	P	**Pn**	**03 22 27.9**	**+1.2**
AXS	**Araxos**	**1.58**	**6**	P	**Pn**	**03 22 27.9**	**+1.1**
GUR	**Goura**	**1.61**	**35**	P	**Pn**	**03 22 27.9**	**+0.7**
GUR	**Goura**	**1.61**	**35**	P	**Pn**	**03 22 27.5**	**+0.2**
VLS	**Valsamata**	**1.62**	**344**	P	**Pn**	**03 22 28.2**	**+0.9**
VLS				S	**Sn**	**03 22 49.9**	**+1.6**
VLS	**Valsamata**	**1.62**	**344**	P	**Pn**	**03 22 27.7**	**+0.4**
KLV	**Kalavryta, Ach**	**1.62**	**29**	P	**Pn**	**03 22 28.0**	**+0.7**
KLV	**Kalavryta, Ach**	**1.62**	**29**	P	**Pn**	**03 22 28.1**	**+0.7**
DMLN	**Damoulianata-K**	**1.73**	**339**	P	**Pn**	**03 22 29.6**	**+0.8**
DMLN	**Damoulianata-K**	**1.73**	**339**	P	**Pn**	**03 22 30.2**	**+1.3**
ANKY	**Antikythira Is**	**1.88**	**113**	P	**Pn**	**03 22 32.0**	**+1.1**
TRIZ	**Trizonia**	**1.88**	**22**	P	**Pn**	**03 22 32.6**	**+1.8**
FSK	**Fiskardo**	**1.90**	**345**	P	**Pn**	**03 22 32.3**	**+1.2**
SERG	**Sergoula**	**1.92**	**21**	P	**Pb**	**03 22 33.9**	**+0.2**
KALE	**Kalithea**	**1.93**	**23**	P	**Pb**	**03 22 34.2**	**+0.4**
KALE	**Kalithea**	**1.93**	**23**	P	**Pn**	**03 22 33.2**	**+1.6**
LTK	**Loutraki**	**2.00**	**45**	P	**Pn**	**03 22 34.1**	**+1.5**
PVO	**Paravola**	**2.01**	**8**	P	**Pb**	**03 22 35.4**	**+0.2**
MET5	**Makryloggos,Me**	**2.01**	**60**	P	**Pn**	**03 22 34.2**	**+1.5**
NYDR	**Nydri-Lefkada**	**2.12**	**350**	P	**Pb**	**03 22 36.8**	**-0.2**
LKD2	**Lefkada island**	**2.20**	**350**	P	**Pb**	**03 22 38.3**	**-0.1**
TSLK	**Tsoukalades, L**	**2.23**	**350**	P	**Pn**	**03 22 38.2**	**+2.5**
VIL2	**Platees**	**2.30**	**46**	P	**Pn**	**03 22 36.8**	**+0.1**
VLY	**Voula,Athens**	**2.43**	**59**	P	**Pn**	**03 22 38.3**	**-0.1**
AXAR	**Agios Charalam**	**2.44**	**28**	P	**Pn**	**03 22 39.8**	**+1.2**
DION	**Dionisos Attik**	**2.64**	**56**	P	**Pn**	**03 22 41.6**	**+0.3**
KARY	**Karystos**	**2.96**	**61**	P	**Pn**	**03 22 45.9**	**+0.2**
THL	**Klokotos Trika**	**3.01**	**13**	P	**Pn**	**03 22 47.7**	**+1.3**
NEO	**Neokhori**	**3.13**	**31**	P	**Pn**	**03 22 49.4**	**+1.2**
IDI	**Anoyia**	**3.30**	**113**	P	**Pn**	**03 22 51.5**	**+1.1**
KZN	**Kozani**	**3.71**	**7**	P	**Pn**	**03 22 56.9**	**+0.8**
GERES	**GERESS Array B**	**13.38**	**338**	Pn	**Pn**	**03 25 09.5**	**+0.8**
	baz=148,slow=14,SNR=2.2						
	0.2nm,0.4s						
HFS	**Hagfors**	**24.01**	**351**	P	**P**	**03 27 11.9**	**-1.5**
	1.1nm,0.5s,baz=162,slow=12,SNR=7.3						
	1.1nm,0.5s						
FINES	**FINESS Array B**	**25.04**	**6**	P	**P**	**03 27 21.6**	**-1.2**
	1.2nm,0.6s,baz=168,slow=10.0,SNR=7.0						
	1.2nm,0.6s						
NOA	**NORSAR Array B**	**25.24**	**349**	P	**P**	**03 27 22.1**	**-2.6**
	0.9nm,0.9s,baz=160,slow=10,SNR=1.8						
	0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.18**	**222**	P	P	03 27 57.6	-2.9
	0.2nm,1.0s,baz=22,slow=8.5,SNR=1.1						
	0.2nm,1.0s						
KURBB	**Kuatov Arra**	**42.76**	**52**	P	**P**	**03 29 54.4**	**-1.7**
	0.3nm,0.5s,baz=277,slow=8.5,SNR=4.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**45.69**	**57**	P	**P**	**03 30 17.5**	**-2.2**
	0.5nm,0.8s,baz=273,slow=8.9,SNR=1.4						
	0.5nm,0.8s						
ZALV	**Zalesovo Beam**	**46.36**	**47**	P	**P**	**03 30 22.7**	**-2.1**
	0.6nm,0.4s,baz=289,slow=9.0,SNR=2.0						
	0.6nm,0.4s						

*IDC **27** 03:24:22.0±0.9,19.°37N×67.°15W,h0km,mb3.5/5, mbtmp3.8/7,ML2.9/2,MS3.2/4,Error ellipse: s-maj=27.1km s-min=17.7km az=49.0*
*NEIC **27** 03:24:23.9±1.6,19.°42N±0.°02×67.°16W±0.°04,h10km±1km, mb4.3/18,ML3.9/28,Mwr4.1/27,Md4.0/14(RSPR),Error ellipse: s-maj=6.6km s-min=2.9km az=251.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; M_{rr}0.29; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.77; $M_{\phi r}$1.23; Fault plane solution: $M_0$1.57000×10¹⁵ NP1:φ₈85.00000°, δ27.60000°,λ.15.99000°. NP2:φ₈340.75000°,δ82.67000°, λ116.68000°. Principal axes: T 1.4144, Plg46.0000°, Azm278.0000°; N 0.2800, Plg26.0000°, Azm157.0000°; P -1.6944, Plg32.0000°, Azm49.0000°;*
*NEIC **27** 03:24:23.7,19.°44N×67.°16W,h10km*
*SDD **27** 03:24:25.2±1.6,19.°47N×67.°29W,h31km±57km,MD4.0, ML3.6,MW3.9*
*RSPR **27** 03:24:26.1,19.°54N×67.°17W,h28km±27km,MD4.0*

ISC 27 03:24:24.7±1.4,19.°48N±0.°04×67.°18W±0.°03,h24km±12km, n121,σ1°44/141,mb4.2/10,20C-8D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.01**	**176**	*iP*	**Pn**	**03 24 42.7**	**-0.7**
AGPR				*eSg*	**Sn**	**03 24 56.2**	**-0.6**
AGPR				IAML		03 25 01.6	
	comp=N,3μm,0.6s						
AGPR	**Aguadilla, PR**	**1.01**	**176**	Pg	**Pn**	**03 24 42.4**	**-1.0**
AGPR				Sg	**Sn**	**03 24 54.7**	**-2.1**
AGPR				IAML		03 24 56.7	
	comp=N,7μm,0.7s						
AGPR				IAML		03 24 57.0	
	comp=N,4μm,0.6s						

AGPR	**Aguadilla, PR**	**1.01**	**176**	*iP*		**Pn**		**03 24 42.7**	**-0.7**
AGPR	**Aguadilla, PR**	**1.01**	**176**	*eS*		**Sn**		**03 24 56.4**	**-0.5**
IDE	**Isla Desecheo**	**1.12**	**194**			**Pn**		**03 24 44.5**	**-0.4**
IDE						**Sn**		**03 24 59.9**	**+0.2**
IDE	**Isla Desecheo**	**1.12**	**194**	*iP*		**Pn**		**03 24 44.5**	**-0.4**
IDE	**Isla Desecheo**	**1.12**	**194**	*eS*		**Sn**		**03 24 59.9**	**+0.2**
EMPR	**Esperanza - Ma**	**1.17**	**148**			**Pb**		**03 24 46.9**	**+0.6**
EMPR						**Sn**		**03 25 00.5**	**-0.4**
EMPR	**Esperanza - Ma**	**1.17**	**148**	Pg		**Pn**		**03 24 45.0**	**-0.6**
EMPR				Sg		**Sn**		**03 24 59.5**	**-1.4**
EMPR				IAML				03 25 10.1	
	comp=N,3μm,0.8s								
EMPR				IAML				03 25 20.9	
	comp=N,2μm,0.7s								
EMPR	**Esperanza - Ma**	**1.17**	**148**	*iP*		**Pb**		**03 24 46.9**	**+0.6**
EMPR	**Esperanza - Ma**	**1.17**	**148**	*eS*		**Sn**		**03 25 00.5**	**-0.4**
AOPR	**Arecibo Observ**	**1.20**	**160**	*iP*	*eSg*	**Pn**	**Pn**	**03 24 45.6**	**-0.4**
AOPR					*eSg*	**Sb**		**03 25 02.0**	**+0.3**
AOPR				IAML				03 25 07.1	
	comp=N,2μm,0.7s								
AOPR	**Arecibo Observ**	**1.20**	**160**	Pn		**Pn**		**03 24 45.1**	**-0.9**
AOPR				IAML				03 25 08.7	
	comp=N,2μm,0.5s								
AOPR	**Arecibo Observ**	**1.20**	**160**			**Sb**		**03 25 01.6**	**-0.1**
AOPR	**Arecibo Observ**	**1.20**	**160**	*iP*	*eP*	**Pn**		**03 24 45.6**	**-0.4**
AOPR	**Arecibo Observ**	**1.20**	**160**	*eS*		**Sb**		**03 25 01.6**	**-0.1**
PRSN	**Puerto Rico Se**	**1.25**	**178**	Pn		**Pn**		**03 24 46.0**	**-0.8**
PRSN				Sn		**Sn**		**03 25 02.2**	**-0.7**
PRSN	**Puerto Rico Se**	**1.25**	**178**	*eP*		**Pn**		**03 24 46.6**	**-0.2**
PRSN	**Puerto Rico Se**	**1.25**	**178**	*eS*		**Sn**		**03 25 02.6**	**-0.3**
UUPR	**Utuado, UPR, P**	**1.29**	**160**	Pn		**Pn**		**03 24 46.4**	**-1.0**
UUPR				Sn		**Sn**		**03 25 03.2**	**-0.7**
LSP	**Las Mesas**	**1.30**	**176**			**Pn**		**03 24 47.3**	**-0.1**
LSP						**Sn**		**03 25 04.2**	**+0.1**
LSP	**Las Mesas**	**1.30**	**176**	*iP*		**Pn**		**03 24 47.3**	**-0.1**
LSP	**Las Mesas**	**1.30**	**176**	*eS*		**Sn**		**03 25 04.2**	**+0.1**
ECPR	**Experimental S**	**1.39**	**146**	Pn		**Pn**		**03 24 48.1**	**-0.6**
ECPR				Sn		**Sn**		**03 25 04.1**	**-2.2**
ECPR				IAML				03 25 13.1	
	comp=N,2μm,0.2s								
ECPR				IAML				03 25 19.5	
	comp=N,1μm,0.2s								
ECPR	**Experimental S**	**1.39**	**146**	*iP*	*eP*	**Pn**		**03 24 48.8**	**+0.2**
ECPR	**Experimental S**	**1.39**	**146**	*eS*		**Sn**		**03 25 05.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.47**	**177**	*iP*	*ePg*	**Pn**		**03 24 50.0**	**+0.3**
CRPR					*eSg*	**Sn**		**03 25 07.5**	**-0.6**
CRPR				IAML				03 25 15.8	
	comp=N,1μm,0.9s								
CRPR	**Cabo Rojo, PR**	**1.47**	**177**	Pn		**Pn**		**03 24 48.9**	**-0.8**
CRPR				Sn		**Sn**		**03 25 06.9**	**-1.2**
CRPR	**Cabo Rojo, PR**	**1.47**	**177**	IAML				03 25 15.9	
	comp=N,1μm,0.7s								
CRPR				IAML				03 25 16.4	
	comp=N,1μm,0.6s								
CRPR	**Cab

NHSC	New Hope	17.86	322		P	03 28 33.5	+1.3
BOAV	Boa Vista	18.18	158		Pn	03 28 34.9	-0.8
BIRD	Birdtown, Kers	19.15	325		Pn	03 28 47.6	+0.2
JTS	Las Juntas de comp=Z,27nm,18.2s,baz=72,slow=42	19.43	245	LR	LR	03 38 06.4	
FLOC	Florencia	19.62	206		P	03 28 50.7	-1.0
FLOC	comp=Z,21nm,1.2s			IAmb	IAmb	03 29 14.3	
S57A	Dark Hollow, R	20.91	333	P	P	03 29 05.8	+0.3
V53A	Saluda	21.21	323	P	P	03 29 10.4	+1.5
V53A	comp=Z,8.3nm,0.9s			IAmb	IAmb	03 29 23.7	
MTO3	Montecristo	21.80	260	P	P	03 29 15.9	+0.4
MTO3	comp=Z,9.4nm,0.8s			IAmb	IAmb	03 29 24.7	
Q52A	Bidwell	23.40	329	P	P	03 29 32.2	+0.3
Q52A	comp=Z,6.6nm,1.0s			IAmb	IAmb	03 29 57.9	
CCIG	Comitan	23.95	266	P	P	03 29 37.9	+0.3
ATAH	Atahualpa comp=Z,75nm,19.4s,baz=42,slow=40	28.66	204	LR	LR	03 43 21.6	
U38A	Gravette	29.23	311	P	P	03 30 25.5	+0.7
ABTX	Abilene, Hawle	31.83	301	P	P	03 30 48.7	+0.8
TXAR	Lajitas Array comp=Z,0.7nm,0.7s,baz=94,slow=8.8,SNR=4.5	34.52	294	P	P	03 31 12.9	+1.5
VHRN	comp=Z,0.7nm,0.7s Van Horn	35.87	296	P	P	03 31 24.5	+1.4
VHRN	comp=Z,4.1nm,0.8s			IAmb	IAmb	03 31 26.2	
MNTX	Cornudas Mount	36.36	297	P	P	03 31 28.4	+1.3
MNTX	comp=Z,3.4nm,0.8s			IAmb	IAmb	03 31 29.6	
SDCO	Great Sand Dun	37.92	307	P	P	03 31 41.4	+0.7
WUAZ	Wupatki	41.96	302	P	P	03 32 14.8	+0.7
WUAZ	comp=Z,6.0nm,1.1s			IAmb	IAmb	03 32 18.8	
PDAR	Pinedale Array comp=Z,0.2nm,0.5s,baz=140,slow=9.4,SNR=2.7 comp=Z,0.2nm,0.5s	42.48	313	P	P	03 32 20.3	+2.0
PDAR	Pinedale Array	42.48	313	P	P	03 32 18.2	-0.1
ESDC	Sonseca Array comp=Z,1.1nm,0.8s,baz=267,slow=7.2,SNR=4.6 comp=Z,1.1nm,0.8s	57.40	55	P	P	03 34 14.6	+3.0
ESDC	Sonseca Array	57.40	55	P	P	03 34 12.8	+1.3
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.8s,baz=294,slow=6.9,SNR=2.3 comp=Z,0.4nm,0.8s	66.04	84	P	P	03 35 09.4	-0.7
ILAR	Eielson Array comp=Z,0.4nm,0.8s,baz=108,slow=6.5,SNR=5.9	68.18	333	P	P	03 35 24.1	+1.2
ILAR	comp=Z,41nm,18.1s,baz=13,slow=38 comp=Z,0.4nm,0.8s			LR	LR	04 07 52.5	
ILAR	Eielson Array	68.18	333	P	P	03 35 23.2	+0.3
ASAR	Alice Springs comp=Z,0.4nm,0.6s,baz=98,slow=3.7,SNR=6.2	159.96	254	PKPab	PKPab	03 45 02.0	-0.2
ASAR	Alice Springs	159.96	254		PKPab	03 45 01.7	-0.5

GCG 27 03:40:34.9±0.8, 13°.93N×91°.20W, h49km±14km, MD3.8, ML3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	El Palmar, Qui	0.49	343	*e*P	Pn	03 40 50.8	+4.6
STG8	El Palmar, Qui	0.54	345	*e*P	Pn	03 40 51.8	+4.9
STG8	comp=N,702nm,0.1s			IAML		03 41 08.0	
ESSG	Sabana Grande	0.58	39	*e*P	Pn	03 40 47.4	+0.2
FG16	Alotenango, Sa	0.75	63	*e*P	Pn	03 40 48.4	-1.1
FG16	comp=N,13µm,0.2s			IAML		03 41 03.5	
PCG5	San Vicente Pa	0.85	70	*e*P	Pn	03 40 49.4	-1.4
PCG5				*e*S	Sn	03 41 00.0	-2.3
SOKI	Kika Raxquin	0.91	348	*e*P	Pn	03 40 53.0	+1.2
SOKI				*e*S	Sn	03 41 05.9	+1.8
APG	El Apazote	1.29	34	*e*P	Pn	03 40 57.8	+1.0
NUBE	Las Nubes	1.38	91	*e*P	Pn	03 40 57.9	-0.1

*THE **27** 03:44:13.9, 36°N±11°×2°E±°, h24km±14km, M3.1/9, MLh3.1/9*
*ATH **27** 03:44:16.2±0.4, 35°.93N×22°.80E, h26km±3km, MLh3.2/36, Manual Solution by N.Liadopoulou First location: 2019/11/27 03:45:27, This location: 2020/07/03 08:55:29 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 2 km*
*IDC **27** 03:44:25.3±8.4, 36°.55N×23°.02E, h116km±50km, mb3.5/8, mbtmp3.7/10, MS3.2/1, Error ellipse: s-maj=96.0km s-min=22.9km az=20.0*

ISC 27 03:44:15.7±1.1, 35°.91N±0°.05×22°.80E±0°.06, h58km±8km, n87, σ1°s30/93, mb3.7/8, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.41	96	P	Pn	03 44 26.2	-0.4
ANKY				S	Sn	03 44 35.8	+1.4
ANKY	Antikythira Is	0.41	96	P	Pn	03 44 26.3	-0.4
ANKY				S	Sn	03 44 33.7	-0.8
NPS1	Neapolis Lacon	0.64	20	P	Pn	03 44 29.8	+0.7
NPS1				S	Sn	03 44 38.4	-0.3
MNVA	Monemvasia	0.80	14	P	Pn	03 44 31.9	+0.9
MNVA				S	Sn	03 44 42.9	+0.6
VLI	Veliai	0.81	8	P	Pn	03 44 32.3	+1.0
VLI				S	Sn	03 44 46.5	+3.9
VLI	Veliai	0.81	8	P	Pn	03 44 32.4	+1.2
VLI				S	Sn	03 44 42.6	0.0
KNDR	Palaiochora Ch	0.95	135	P	Pn	03 44 34.2	+1.1
CH01	Chania	1.07	111	P	Pn	03 44 35.3	+0.8
CHAN	Chania	1.09	111	P	Pn	03 44 35.8	+1.1
CHAN				S	Sn	03 44 51.8	+2.8
CHAN	Chania	1.09	111	P	Pn	03 44 35.9	+1.1
CHNB	Souda	1.12	112	P	Pn	03 44 36.3	+1.2
MTHA	Methoni	1.26	316	P	Pn	03 44 38.4	+1.2
PYL	PYLOS	1.30	319	P	Pn	03 44 38.2	+0.6
PYL1	Pylos	1.34	319	P	Pn	03 44 39.1	+1.0
ITM	Ithomi	1.45	331	P	Pn	03 44 38.3	-1.4
ITM	Ithomi	1.45	331	P	Pn	03 44 40.4	+0.8
VLX	Vlachokerasia	1.49	347	P	Pn	03 44 41.4	+1.1
GVD	Gavdhos	1.50	135	P	Pn	03 44 41.2	+0.8
MHLO	Agia Marina, M	1.51	59	P	Pn	03 44 41.4	+1.0
YDRA	Hydra	1.53	20	P	Pn	03 44 41.4	+0.7
NPLA	Nafplio	1.65	0	P	Pn	03 44 43.8	+1.4
ARS1	Argos	1.72	358	P	Pn	03 44 44.4	+1.1
MET1	Methana Town,	1.73	16	P	Pn	03 44 44.4	+0.9
MET2	Kameni Chora,	1.75	14	P	Pn	03 44 44.9	+1.2
MET5	Makryloggos,Me	1.76	15	P	Pn	03 44 45.1	+1.1
IDI	Anoyia	1.81	109	P	Pn	03 44 44.7	0.0
IDI	Anoyia	1.81	109	P	Pn	03 44 45.5	+0.8
AMT	Artemida-Makis	1.84	332	P	Pn	03 44 45.9	+1.0
IACM	Heraklion	1.95	107	P	Pn	03 44 47.6	+1.2
GUR	Goura	2.05	350	P	Pn	03 44 49.2	+1.2
GUR	Goura	2.05	350	P	Pn	03 44 49.1	+1.1
VLY	Voula,Athens	2.09	22	P	Pn	03 44 49.1	+0.7
LTK	Loutraki	2.11	4	P	Pn	03 44 49.9	+1.2
LTK	Loutraki	2.11	4	P	Pn	03 44 49.8	+1.2
SAP3	Santorini-Thir	2.13	75	P	Pn	03 44 50.2	+1.4
SNT5	Nea Kammeni, S	2.16	76	P	Pn	03 44 50.5	+1.3
ATH	Athens Observa	2.18	19	P	Pn	03 44 51.4	+1.7
KLV	Kalavryta, Ach	2.19	346	P	Pn	03 44 50.6	+0.8
KLV	Kalavryta, Ach	2.19	346	P	Pn	03 44 50.8	+1.0
ATHU	Athens Univers	2.20	21	P	Pn	03 44 50.5	+0.7
DRO	Drossia	2.21	337	P	Pn	03 44 50.1	0.0
DRO	Drossia	2.21	337	P	Pn	03 44 51.8	+1.7
MAGU	Magoula	2.24	15	P	Pn	03 44 51.5	+1.1
PTL	Penteli	2.30	22	P	Pn	03 44 52.2	+1.0
VIL2	Platees	2.33	9	P	Pn	03 44 51.9	+0.3
STFN	Stefani	2.34	15	P	Pn	03 44 53.6	+1.8
DION	Dionisos Attik	2.34	22	P	Pn	03 44 52.8	+1.0
CLEM	Kyllini,Ilia,G	2.38	326	P	Pn	03 44 53.8	+1.5
LTHK	Lithakia	2.39	319	P	Pn	03 44 53.6	+1.2
RLS	Riolos of Patr	2.39	334	P	Pn	03 44 53.0	+0.6
YRMI	Loutra Irminis	2.47	332	P	Pn	03 44 53.5	-0.1
KYPS	Kipseli, Zakin	2.48	321	P	Pn	03 44 54.7	+1.1
APE	Apeiranthos	2.48	62	P	Pn	03 44 54.7	+0.9
KARY	Karystos	2.49	31	P	Pn	03 44 54.6	+0.8
TRIZ	Trizonia	2.52	347	P	Pn	03 44 54.8	+0.6
KALE	Kalithea	2.53	348	P	Pn	03 44 55.1	+0.7
AXS	Araxos	2.55	334	P	Pn	03 44 55.1	+0.6
SERG	Sergoula	2.56	347	P	Pn	03 44 56.3	+1.4
ORTH	Orthonies,Zaky	2.57	320	P	Pn	03 44 56.2	+1.3
EFP	Efpalio	2.61	344	P	Pn	03 44 56.9	+1.5
LKR	Lokris	2.74	3	P	Pn	03 44 57.8	+0.7
ANX	Ano Chora	2.77	346	P	Pn	03 44 59.3	+1.6
STIA	Sitia Lasithi	2.78	104	P	Pn	03 44 59.9	+2.2
ATAL	Atalanti	2.78	4	P	Pn	03 44 58.6	+0.8
AXAR	Agios Charalam	2.85	358	P	Pn	03 45 00.4	+1.6
VLS	Valsamata	2.87	323	P	Pn	03 44 59.2	+0.2
KYMI	Kymi, Euboea I	2.91	21	P	Pn	03 45 00.6	+1.0
DMLN	Damoulianata-K	3.02	321	P	Pn	03 45 02.6	+1.5
EVR	Evrytania	3.10	346	P	Pn	03 45 03.9	+1.7
FSK	Fiskardo	3.11	326	P	Pn	03 45 03.7	+1.5
AGG	Agios Georgios	3.13	353	P	Pn	03 45 03.7	+1.2
MAKR	Makrakomi, Fth	3.14	350	P	Pn	03 45 04.7	+2.0
NEO	Neokhori	3.41	6	P	Pn	03 45 07.9	+1.6
KARP	Karpathos	3.57	95	P	Pn	03 45 09.2	+0.7
TETR	Tetrakomo, Epi	3.63	341	P	Pn	03 45 09.8	+0.2
THL	Klokotos Trika	3.70	351	P	Pn	03 45 10.6	+0.3
SMG	Samos	3.70	60	P	Pn	03 45 11.3	+0.9
BRTR	Keskin Array B 0.5nm,0.8s,baz=245,slow=13,SNR=2.6	9.38	63	P	Pn	03 46 32.1	+3.8
AKASG	Malin Array Be 0.4nm,0.5s,baz=209,slow=12,SNR=3.5	15.49	15	P	Pn	03 47 48.0	-2.4
HFS	Hagfors 0.7nm,0.5s,baz=158,slow=12,SNR=6.6	24.94	349	P	P	03 49 32.0	-1.3
HFS				LR	LR	04 01 20.0	
FINES	comp=Z,53nm,18.4s,baz=248,slow=42 0.7nm,0.5s FINESS Array B 4.2nm,1.1s,baz=186,slow=9.7,SNR=2.4	25.64	4	P	P	03 49 37.3	-2.2
EKA	4.2nm,1.1s Eskdalemuir Ar 0.7nm,0.5s,baz=126,slow=8.5,SNR=6.8	26.32	326	P	P	03 49 46.3	+0.5
ARCES	0.7nm,0.5s ARCESS Array B 7.3nm,1.1s,baz=187,slow=9.1,SNR=4.1	33.71	2	P	P	03 50 50.5	-0.5
BVAR	7.3nm,1.1s Borovoye Array 0.4nm,0.5s,baz=268,slow=6.9,SNR=2.1	37.24	47	P	P	03 51 21.6	+0.1
KURBB	0.4nm,0.5s Kurchatov Arra 0.6nm,0.6s,baz=280,slow=8.9,SNR=5.8	42.16	52	P	P	03 52 01.6	-0.7
MKAR	0.6nm,0.6s Makanchi Array 0.6nm,0.4s,baz=271,slow=8.0,SNR=12	44.97	57	P	P	03 52 24.5	-0.6
ZALV	0.6nm,0.4s Zalesovo Beam 0.8nm,0.4s,baz=263,slow=8.8,SNR=4.2	45.88	47	P	P	03 52 30.9	-1.1
	0.8nm,0.4s						

*BEO **27** 03:46:44.4±0.3, 43°.24N×18°.00E, h9km±3km, ML2.6/8*
*RHSSO **27** 03:46:45.1±0.4, 43°.18N×18°.08E, h9km, ML2.9/4*
*PDG **27** 03:46:45.0±0.3, 43°.19N×18°.02E, h11km±1km, ML2.6/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*PRU **27** 03:46:49.6, 43°.49N×18°.01E, h10km*

ISC 27 03:46:44.3±1.0, 43°.22N±0°.02×18°.06E±0°.01, h10km±8km, n76, σ1°s38/129, 10C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	Klinje	0.39	97	*e*Pg	Pg	03 46 52.0	0.0
KLINJ				*e*Sg	Sb	03 46 58.4	-1.0
STON	Ston	0.44	217	*e*Pg	Pg	03 46 52.9	+0.1
STON				Sg	Sg	03 46 58.5	-0.2
STON	Ston	0.44	217	*e*Pg	Pg	03 46 52.6	-0.3
STON				*e*Sg	Sb	03 46 59.7	-1.0
BRY	Bratogost	0.47	132	⇑*i*Pg	Pg	03 46 53.2	-0.4
BRY				*i* Sg	Sb	03 47 00.8	-1.1
TREB	Trebinje	0.55	157	⇑*i*Pg	Pg	03 46 54.2	-0.7
TREB				*e*Sg	Sg	03 47 02.5	+0.4
TREB	Trebinje	0.55	157	*e*Pg	Pg	03 46 54.4	-0.5
TREB				*e*Sg	Sb	03 47 03.1	-0.8
DBRK	Dubrovnik	0.55	173	*i* Pg	Pg	03 46 55.1	+0.1
DBRK				Sg	Sb	03 47 03.7	-0.4
UPM	Unac-Piva	0.62	91	⇑*i*Pg	Pg	03 46 56.2	-0.1
UPM				*i* Sg	Sb	03 47 05.9	-0.3
RICI	Ricice	0.73	292	*i* Pg	Pg	03 46 57.9	-0.6
RICI				Sg	Sg	03 47 08.4	+0.4
MAKA	Makarska	0.76	275	*i* Pg	Pg	03 46 58.1	-0.9
MAKA				Sg	Sg	03 47 08.9	-0.1
NKME	Niksic	0.80	124	⇓*i*Pg	Pg	03 46 58.8	-0.9
NKME				*e*Sg	Sb	03 47 11.9	+0.8
HCY	Herceg Novi	0.83	157	*e*Pg	Pg	03 46 59.8	-0.6
HCY				*i* Sg	Sb	03 47 12.8	+0.6
CEME	Cevo	0.92	137	⇓*i*Pg	Pg	03 47 01.1	-1.0
CEME				*e*Sg	Sn	03 47 15.9	-0.9
LSTV	Lastovo	0.97	243	*e*Pg	Pg	03 47 01.6	-1.4
LSTV				Sg	Sb	03 47 16.4	-0.6
PLE	Pljevlja	0.98	83	*e*Pg	Pb	03 47 03.4	0.0
PLE	Pljevlja	0.98	83	⇑*i*Pg	Pb	03 47 03.3	-0.1
PLE				*i* Sg	Sn	03 47 18.3	+0.1
RUDO	Rudo	1.03	67	*e*Pg	Pb	03 47 03.0	-1.4
RUDO				*e*Sg	Sg	03 47 17.8	+0.1
RUDO	Rudo	1.03	67	*e*Pg	Pb	03 47 03.0	-1.4
RUDO				*e*Sg	Sb	03 47 18.2	+0.2
BUM	Brajici-Budva	1.10	146	⇓*i*Pg	Pb	03 47 04.6	-1.0
BUM				*e*Sg	Sn	03 47 22.0	+0.7
KOME	Kolasin	1.13	109	*e*Pg	Pb	03 47 05.6	-0.4
KOME	Kolasin	1.13	109	*e*Pg	Pb	03 47 05.5	-0.5
KOME				*e*Sg	Sn	03 47 22.6	+0.7
BBLS	Lazi&#263i	1.17	56	*e*Pg	Pb	03 47 06.4	-0.3
BBLS				*e*Sg	Sn	03 47 23.5	+0.5
HVAR	Hvar	1.18	269	*e*Pg	Pb	03 47 05.9	-0.9
HVAR				Sg	Sb	03 47 21.3	-0.9
PDG	Podgorica	1.18	131	*e*Pg	Pb	03 47 06.2	-0.6
PDG				*e*Sg	Sn	03 47 24.5	+1.4
PDG	Podgorica	1.18	131	⇓*i*Pg	Pb	03 47 06.1	-0.7
PDG				*i* Sg	Sn	03 47 24.4	+1.4
DRME	Dracevica, Mon	1.32	141	*e*Pg	Pb	03 47 09.2	-0.1
DRME	Dracevica, Mon	1.32	141	⇑*i*Pg	Pn	03 47 08.8	-0.1
DRME				*i* Sg	Sg	03 47 29.3	+2.4
BEY	Berane	1.39	104	*e*Pg	Pb	03 47 10.3	-0.1
IVA	Berane	1.39	104	⇓*i*Pg	Pb	03 47 10.1	-0.3
IVA				*e*Sg	Sg	03 47 30.7	+1.7
SJES	Sjenica	1.40	88	*e*Pg	Pg	03 47 11.0	-0.2
SJES				*e*Sg	Sg	03 47 30.2	+0.9
KIJV	Kijevo	1.44	304	*e*Pn	Pb	03 47 11.2	0.0
KIJV				Sn	Sg	03 47 33.0	+2.5
PVY	Plav	1.53	113	⇓*i*Pg	Pb	03 47 12.8	0.0
PVY				*e*Sg	Sg	03 47 36.4	+2.9
ULC	Ulcinj	1.53	145	⇓*i*Pg	Pb	03 47 12.2	-0.6
ULC				*e*Sg	Sg	03 47 34.2	+0.7
IVAS	Ivanjica	1.57	76	*e*Pg	Sg	03 47 13.1	-0.2
IVAS				*e*Sg	Sg	03 47 35.3	+0.6
BLY	Banja Luka	1.66	338	⇑*i*Pn	Pb	03 47 15.1	+0.2
BLY				*e*Sn	Sb	03 47 36.4	+0.6
BLY	Banja Luka	1.66	338	*e*Pg	Pb	03 47 14.9	0.0
BLY	Banja Luka	1.66	338	*e*Pg	Pg	03 47 15.7	-0.4
BLY				*e*Sg	Sb	03 47 36.3	+0.5
TEKS	Tekeris	1.70	38	*e*Pg	Pn	03 47 13.2	-0.9
ZIRJ	Zirje	1.81	285	*e*Pn	Pn	03 47 16.4	+0.8
ZIRJ				Sn	Sb	03 47 40.8	+0.5
MORI	Morici	1.83	292	*i* Pn	Pb	03 47 17.4	-0.5
MORI				Sn	Sb	03 47 41.8	+1.0
GRUS	Gruza	2.04	70	*e*Pn	Pn	03 47 18.9	+0.1
GOCS	Kraljevo Serbi	2.08	80	*e*Pn	Pn	03 47 19.4	0.0
UDBI	Udbina	2.11	309	*e*Pn	Pb	03 47 22.4	-0.4
UDBI				Sn	Sb	03 47 49.4	+0.3
SELS	Selova	2.24	89	*e*Pn	Pn	03 47 22.1	+0.6
DUGI	Dugi Otok	2.31	291	*e*Pn	Pb	03 47 25.1	-1.1
DUGI				Sn	Sb	03 47 53.6	-1.1
PLIT	Plitvice	2.42	314	*e*Pn	Pb	03 47 26.4	-1.6
PLIT				Sn	Sb	03 47 57.4	-0.4
VIRC	Vir	2.43	297	*i* Pn	Pb	03 47 26.5	-1.6
VIRC				Sn	Sb	03 47 56.7	-1.4
MOSL	Moslavina	2.57	339	*e*Pn	Pn	03 47 27.7	+1.7
MOSL				Sn	Sb	03 48 00.4	-1.8
NVLJ	Novalja	2.67	301	*e*Pn	Pn	03 47 29.4	+2.0
NVLJ				Sn	Sb	03 48 02.2	-2.7
BOVS	Bovan	2.69	80	⇓P	Pn	03 47 29.1	+1.5
BOVS				⇑S	Sn	03 48 00.8	+0.5
RABC	Rab	2.82	304	*e*Pn	Pn	03 47 31.9	+2.4
RABC				Sn	Sb	03 48 07.1	-2.2
MORH	Mrgy, Hungar	3.02	8	*e*Pn	Pn	03 47 33.7	+1.4
MORH				*e*Sn	Sn	03 48 10.2	+1.7
MORH	Mrgy, Hungar	3.02	8	⇓P	Pn	03 47 31.6	-0.6
OZLJ	Ozalj	3.03	323	*e*Pn	Pn	03 47 34.6	+2.2
OZLJ				Sn	Sn	03 48 11.6	+3.0
MDVR	Moldovita	3.06	58	⇑P	Pn	03 47 32.9	0.0
KALN	Kalnik	3.13	339	*i* Pn	Pn	03 47 35.1	+1.3
KALN				Sn	Sb	03 48 15.1	-3.1
LOBO	Lobor	3.26	335	*e*Pn	Pn	03 47 36.9	+1.4
LOBO				Sn	Sb	03 48 18.6	-3.5
ZAPS	Zavoj	3.34	88	*e*Pn	Pn	03 47 37.5	+0.8
BEHE	Becsehely	3.38	345	*e*Pn	Pn	03 47 38.9	+1.8
BEHE				*e*Sn	Sn	03 48 18.3	+1.1
BLKB	Belogradchik	3.39	82	⇓S	Sn	03 48 16.7	-0.9
BZS	Buzias	3.50	46	⇑P	Pn	03 47 38.6	-0.1
BZS				⇑S	Sn	03 48 17.3	-2.9
SIRR	Siria	3.98	39	⇓P	Pn	03 47 44.4	-1.1
GZR	Gura Zlata	4.02	56	⇓P	Pn	03 47 46.0	0.0
SOKA	Soboth 2.3nm,0.4s,SNR=10	4.07	329	*e*Pn	Pn	03 47 47.9	+1.1
SOKA				*e*Sn	Sn	03 48 34.2	-0.3
OBKA	2.0nm,0.4s Obir 0.4nm,0.2s	4.13	324	*e*Pn	Pn	03 47 49.3	+1.7
TIP	Timpagrande	4.16	194	⇓P	Pb	03 47 54.4	-3.2
ARSA	Arzberg 0.7nm,0.3s	4.41	337	*e*Pn	Pn	03 47 51.9	+0.5
KBA	Koelnbreinsper 6.4nm,1.3s	5.10	321	*e*Pn	Pn	03 48 03.4	+2.5
KBA				*e*Sn	Sn	03 49 01.3	+1.3
ABTA	1.9nm,0.6s Abfaltersbach 1.1nm,0.4s	5.28	314	*e*Pn	Pn	03 48 05.0	+1.6
MOA	Molln 1.1nm,0.3s	5.34	331	*e*Pn	Pn	03 48 06.6	+2.4
MOA				*i* Sn	Sn	03 49 06.4	+0.7
BIOA	2.1nm,0.5s Bad Ischl, Aus 2.2nm,0.5s	5.45	327	*e*Pn	Pn	03 48 07.1	+1.5
BIOA				*e*Sn	Sn	03 49 09.2	+0.8
LESA	1.8nm,0.5s Schwarzleotal 2.5nm,0.4s,SNR=8.4	5.66	320	*i* Pn	Pn	03 48 10.6	+2.0
WTTA	Wattenberg 1.0nm,0.2s,SNR=4.3	6.08	314	*i* Pn	Pn	03 48 17.7	+3.3
WATA	Walderalm 0.7nm,0.3s	6.15	314	*e*Pn	Pn	03 48 18.0	+2.7
MOTA	Moosalm 2.0nm,0.7s	6.41	312	*i* Pn	Pn	03 48 20.7	+1.8
KHC	Kasperske Hory	6.68	334	*e*PN	Pn	03 48 24.1	+1.6
KHC				*e*SN	Sn	03 49 34.2	-4.5

*IDC **27** 03:49:11.2±1.0, 1°.39N×99°.00E, h0km, mb4.0/12, mbtmp4.0/13, ML4.7/1, MS3.3/9, Error ellipse: s-maj=46.4km s-min=15.5km az=59.0*
*DJA **27** 03:49:13.7±0.2, 2°N±3°×9°9E±°, h10km, M4.4/16, mb4.9/1, MLv4.2/16*
*NEIC **27** 03:49:14.5±1.4, 1°.64N±0°.04×99°.10E±0°.05, h10km±1km, mb4.4/20, Error ellipse: s-maj=8.3km s-min=6.6km az=71.0*

ISC 27 03:49:13.8±0.4, 1°.58N±0°.03×99°.17E±0°.03, h10km, n73, σ1°s18/65, mb4.3/18, MS3.4/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBSI	Sibolga	0.28	264	P	Pg	03 49 18.3	-1.3
MNSI	Mandailing Nat	0.88	152	P	Pg	03 49 29.2	-1.6
RPSI	Rantau Prapat	1.13	347		Pb	03 49 34.6	-0.9
RPSI				Sg	Sb	03 49 48.0	-2.4
RPSI	Rantau Prapat	1.13	347		Pb	03 49 34.9	-0.6
PSI	Prapat 12nm,0.3s,baz=148,slow=18,SNR=15	1.24	348	P	Pn	03 49 34.9	-2.4
PSI				LR	LR	03 50 20.5	
PSI	comp=Z,423nm,20.1s,baz=210,slow=53 Prapat	1.24	348	P	Pn	03 49 35.9	-1.4
GSI	Gunungsitoli	1.62	260		Pn	03 49 42.1	-0.4
GSI				Sn	Sb	03 50 05.6	+1.3
GSI	Gunungsitoli	1.62	260	P	Pb	03 49 44.0	+0.2
GSI	Gunungsitoli	1.62	260	P	Pn	03 49 41.8	-0.7
BKNI	Bangkinang	2.24	124		Pb	03 49 52.8	-1.7
BKNI	Bangkinang	2.24	124	P	Pn	03 49 50.8	-0.3
PPI	Padang Panjang	2.37	149	P	Pn	03 49 52.9	+0.2
KCSI	Kotacane, Aceh	2.38	324	P	Pb	03 49 56.2	-0.7
TPTI		2.60	310	P	Pn	03 49 57.3	+1.4
PDSI	Padang	2.79	152	P	Pn	03 49 58.8	+0.2
SISI	Saibi	2.89	182	P	Pn	03 50 00.0	+0.1
SNSI	Sinabang, Aceh	2.96	286	P	Pn	03 50 02.0	+1.1
IPM	Ipoh	3.42	33		Pn	03 50 08.2	+0.9
IPM	Ipoh	3.42	33	P	Pn	03 50 08.9	+1.6
MLSI	Meulaboh, Aceh	3.84	314	P	Pn	03 50 13.3	+0.3
KULM	Kulim	3.97	22		Pn	03 50 15.7	+0.9
KULM	Kulim	3.97	22	P	Pn	03 50 15.4	+0.6
MYKOM	Kota Tinggi	4.68	87		Pn	03 50 26.0	+1.4
MYKOM	Kota Tinggi	4.68	87	P	Pn	03 50 26.9	+2.3
MASI	Maura Aman, Be	5.60	147	P	Pn	03 50 36.4	-0.9
SBUM	Sibu	13.07	86		Pn	03 52 22.6	+3.0
CMAR	Chiang Mai Arr 1.1nm,0.3s,baz=183,slow=12,SNR=12	16.77	359	Pn	P	03 53 12.1	+0.8
CMAR				LR	LR	03 59 56.0	
CMAR	comp=Z,66nm,18.3s,baz=180,slow=38 1.6nm,0.3s Chiang Mai Arr	16.77	359		Pn	03 53 10.1	+1.1
PALK	Pallekele comp=Z,42nm,18.2s,baz=98,slow=38

AKTO	**Aktyubinsk**	**59.84**	**331**	LR	LR	04 27 49.2	
	comp=Z,45nm,20.1s,baz=182,slow=39						
NRIK	**Noril'sk**	**68.09**	**356**	P	**P**	**04 00 13.1**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=165,slow=9.4,SNR=2.4						
	comp=Z,1.6nm,0.6s						
NRIK	**Noril'sk**	**68.09**	**356**	IAmb	IAmb	04 00 18.8	
	comp=Z,4.8nm,1.2s						
BR131	**Keskin Array S**	**70.32**	**312**	P	**P**	**04 00 27.6**	**-0.6**
BR131				IAmb	IAmb	04 00 32.2	
	comp=Z,2.3nm,0.9s						
BRTR	**Keskin Array B**	**70.32**	**312**	P	**P**	**04 00 26.4**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=124,slow=5.2,SNR=5.0						
	comp=Z,1.1nm,0.9s						
BRTR	**Keskin Array B**	**70.32**	**312**	P	**P**	**04 00 27.5**	**-0.6**
TIXI	**Tiksi**	**72.48**	**9**	P	**P**	**04 00 39.4**	**-0.9**
TIXI				IAmb	IAmb	04 00 44.5	
	comp=Z,4.5nm,1.1s						
AKASG	**Malin Array Be**	**76.17**	**322**	P	**P**	**04 01 00.8**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=92,slow=4.2,SNR=2.2						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	**76.17**	**322**	IAmb	IAmb	04 01 17.4	
	comp=Z,2.4nm,1.1s						
BURAR	**Bucovina Array**	**78.05**	**318**	P	**P**	**04 01 12.9**	**0.0**
BURAR				IAmb	IAmb	04 01 17.3	
	comp=Z,2.9nm,1.1s						
HFS	**Hagfors**	**86.38**	**330**	P	**P**	**04 01 56.4**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=90,slow=7.4,SNR=2.5						
	comp=Z,2.7nm,0.9s						
CTZ	**Chatham Island**	**86.89**	**134**	P	**P**	**04 02 01.1**	**+2.0**
SBA	**Scott Base**	**86.91**	**169**	P	**P**	**04 01 59.8**	**+1.4**
NOA	**NORSAR Array B**	**87.63**	**331**	LR	LR	04 45 18.7	
	comp=Z,6.8nm,18.1s,baz=10.0,slow=38						
E19K	**Redstone River**	**93.75**	**22**	P	**P**	**04 02 30.8**	**+0.1**
M16K	**Timber Creek**	**94.37**	**29**	P	**P**	**04 02 33.2**	**-0.5**

*UCR **27** 03:52:24.3±0.9, 11°.01N×85°.16W, h203^{km}±4^{km}, MW4.0*
*IDC **27** 03:52:24.4±0.9, 11°.11N×85°.01W, h202^{km}±12^{km}, mb2.8/4, mbtmp3.6/7, Error ellipse: s-maj=37.7km s-min=15.6km az=32.0*
*NEIC **27** 03:52:25.5±0.7, 10°.96N±0°.07×85°.15W±0°.07, h201^{km}±7^{km}, mb4.4/22, Error ellipse: s-maj=10.9km s-min=8.7km az=208.0*
*CATAC **27** 03:52:25.4±0.4, 11°N×3°×8°5W±°, h196^{km}±2^{km}, M3.9/31, MLv3.9/31, Error ellipse: s-maj=8.1km s-min=2.9km az=44.0, confirmed*

ISC 27 03:52:24.5±0.6, **10°.92N**±0°.04×**85°.15W**±0°.04, **h207**^{km}±5^{km}, **n208**, σ0**674**/232, **mb4.4**/17, **74C-8D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UPAL	**Upala**	**0.13**	**99**	S		**S**	**S**	**03 53 12.6**	**+0.2**
UPAL	**Upala**	**0.13**	**99**	⇑P	*e*		**Pn**	**03 52 51.7**	**+0.2**
UPAL	**Upala**	**0.13**	**99**	P	*e*		**Pn**	**03 52 51.7**	**+0.2**
PEJA	**Penjamo Buenos**	**0.17**	**262**	P	*e*		**Pn**	**03 52 51.8**	**+0.2**
MESS	**Mesas**	**0.18**	**195**	P	*e*		**Pn**	**03 52 51.7**	**0.0**
BUAI	**Buenos Aires**	**0.19**	**257**	P	*e*		**Pn**	**03 52 51.7**	**+0.1**
VORI	**VORI**	**0.22**	**243**	P	*e*		**Pn**	**03 52 52.0**	**+0.1**
MOTZ	**Rio Naranjo**	**0.24**	**163**	P	*e*		**Pn**	**03 52 52.1**	**+0.3**
GPS1	**Guardaparques**	**0.25**	**234**	P	*e*		**Pn**	**03 52 51.9**	**+0.1**
VRLE	**La Escondida,**	**0.25**	**239**	P	*e*		**Pn**	**03 52 51.8**	**-0.1**
CUI	**Cuipilapa**	**0.26**	**184**	P	*e*		**Pn**	**03 52 52.0**	**+0.2**
GPS2	**Hotel Rincn d**	**0.26**	**231**	P	*e*		**Pn**	**03 52 51.7**	**-0.1**
TENO	**El Achiote**	**0.27**	**142**	P	*e*		**Pn**	**03 52 52.2**	**+0.4**
LAPC	**Finca la Perla**	**0.32**	**242**	P	*e*		**Pn**	**03 52 51.4**	**-0.4**
TIMP	**Tierras Morena**	**0.36**	**159**	P	*e*		**Pn**	**03 52 52.1**	**+0.1**
QUEB	**Quebradon, Cot**	**0.38**	**140**	P	*e*		**Pn**	**03 52 52.1**	**+0.1**
BAGA	**Bagaces**	**0.40**	**196**	P	*e*		**Pn**	**03 52 52.0**	**-0.1**
CARN	**Rivas**	**0.46**	**306**	⇑P			**Pn**	**03 52 52.3**	**+0.1**
CARN				S			**S**	**03 53 14.1**	**+0.3**
CARN	**Rivas**	**0.46**	**306**	P	*e*		**Pn**	**03 52 52.3**	**+0.1**
TILA	**Tilaran**	**0.48**	**159**	P	*e*		**Pn**	**03 52 52.6**	**+0.2**
ELI1	**Hacienda Flor**	**0.48**	**236**	S			**S**	**03 53 13.9**	**0.0**
ELI1	**Hacienda Flor**	**0.48**	**236**	⇑P			**Pn**	**03 52 52.3**	**0.0**
ELI1	**Hacienda Flor**	**0.48**	**236**	P	*e*		**Pn**	**03 52 51.6**	**-0.7**
CNAS	**Canas**	**0.49**	**174**	P	*e*		**Pn**	**03 52 53.7**	**+1.4**
ALIBA	**Liberia Airpor**	**0.51**	**231**	P	*e*		**Pn**	**03 52 52.4**	**0.0**
CHIK	**Chiripa**	**0.53**	**154**	P	*e*		**Pn**	**03 52 53.2**	**+0.6**
TABAC	**Tabacon**	**0.56**	**138**	P	*e*		**Pn**	**03 52 53.4**	**+0.7**
REZ	**Monterrey de S**	**0.59**	**131**	P	*e*		**Pn**	**03 52 53.4**	**+0.6**
PLVR	**Palo Verde**	**0.60**	**200**	P	*e*		**Pn**	**03 52 53.3**	**+0.3**
CEDE	**Laguna Cedeo**	**0.61**	**135**	P	*e*		**Pn**	**03 52 53.7**	**+0.8**
DELF	**Filadelfia**	**0.61**	**221**	P	*e*		**Pn**	**03 52 53.1**	**+0.3**
DELF				eS			**S**	**03 53 15.4**	**+0.5**
ARE1	**Arenal 1**	**0.62**	**137**	P	*e*		**Pn**	**03 52 53.8**	**+0.9**
VARE2	**V. Arenal**	**0.62**	**137**	P	*e*		**Pn**	**03 52 53.7**	**+0.7**
CASO	**Castillo**	**0.63**	**140**	P	*e*		**Pn**	**03 52 53.6**	**+0.6**
VACR	**Volcan Arenal**	**0.64**	**134**	P	*e*		**Pn**	**03 52 53.7**	**+0.8**
FORC	**Fortuna**	**0.65**	**134**	P	*e*		**Pn**	**03 52 53.8**	**+0.8**
JTS	**Las Juntas de**	**0.65**	**163**	P			**Pn**	**03 52 53.1**	**+0.1**
	1µm,0.3s,baz=6.4,slow=11,SNR=2308								
JTS				LR			LR	03 53 09.2	
	comp=Z,69nm,18.2s,baz=136,slow=55								
JTS				S			**S**	**03 53 14.0**	**-1.3**
	506nm,0.3s,baz=300,slow=20,SNR=19								
JTS	**Las Juntas de**	**0.65**	**163**				**Pn**	**03 52 53.1**	**+0.1**
JTS				Sn			**S**	**03 53 14.5**	**-0.9**
JTS	**Las Juntas de**	**0.65**	**163**	⇑P			**Pn**	**03 52 53.2**	**+0.1**
JTS				S			**S**	**03 53 14.4**	**-0.9**
JTS	**Las Juntas de**	**0.65**	**163**	P	*e*		**Pn**	**03 52 53.2**	**+0.1**
SOCE	**Pocosol**	**0.74**	**136**				**Pn**	**03 52 54.1**	**+0.5**
SOCE				Sn			**S**	**03 53 17.6**	**+1.7**
SOCE	**Pocosol**	**0.74**	**136**	S			**S**	**03 53 15.5**	**-0.5**
SOCE	**Pocosol**	**0.74**	**136**	⇑P			**Pn**	**03 52 54.0**	**+0.5**
SOCE	**Pocosol**	**0.74**	**136**	P	*e*		**Pn**	**03 52 54.0**	**+0.5**
COVE	**Coope Vega, Sa**	**0.76**	**105**	S			**S**	**03 53 15.9**	**0.0**
COVE	**Coope Vega, Sa**	**0.76**	**105**	⇑P			**Pn**	**03 52 53.7**	**+0.2**
SACU	**Santa Cruz**	**0.78**	**213**	*e*P			**Pn**	**03 52 53.7**	**+0.1**
CONN	**Concepcion**	**0.80**	**324**	⇑P			**Pn**	**03 52 54.0**	**+0.3**
CONN				S			**S**	**03 53 16.9**	**+0.4**
MORN	**Al O del Volca**	**0.80**	**322**	⇑P			**Pn**	**03 52 54.0**	**+0.3**
MORN				S			**S**	**03 53 17.2**	**+0.8**
JAPN	**Al SSO del Vol**	**0.80**	**319**	⇑P			**Pn**	**03 52 54.5**	**+0.8**
JAPN	**Al SSO del Vol**	**0.80**	**319**	*e*P			**Pn**	**03 52 54.5**	**+0.8**
JUD3	**Juan Diaz 3**	**0.84**	**207**				**Pn**	**03 52 54.1**	**0.0**
JUD3				Sn			**S**	**03 53 17.1**	**+0.1**
JUD3	**Juan Diaz 3**	**0.84**	**207**	P	*e*		**Pn**	**03 52 54.1**	**0.0**
QUEU	**Ciudad Quesada**	**0.92**	**130**	P	*e*		**Pn**	**03 52 55.1**	**+0.6**
NYURE	**Nandayure**	**0.92**	**187**	P	*e*		**Pn**	**03 52 54.6**	**+0.1**
NYURE				eS			**S**	**03 53 18.2**	**+0.5**
CMARA	**Lajas Hojancha**	**0.93**	**197**	S			**S**	**03 53 17.5**	**-0.5**
CMARA	**Lajas Hojancha**	**0.93**	**197**	⇑P			**Pn**	**03 52 54.7**	**0.0**
CMARA	**Lajas Hojancha**	**0.93**	**197**	P	*e*		**Pn**	**03 52 54.6**	**0.0**
VPL2	**V. Platanar**	**0.97**	**129**	P	*e*		**Pn**	**03 52 55.6**	**+0.7**
ITAL	**Pital**	**0.98**	**118**	*e*P			**Pn**	**03 52 55.1**	**+0.3**
ENAS	**Puntarenas**	**0.98**	**162**	*e*P			**Pn**	**03 52 55.3**	**+0.4**
VPL3	**V. Platanar**	**1.00**	**125**	P	*e*		**Pn**	**03 52 55.6**	**+0.6**
VPL1	**V. Platanar**	**1.01**	**131**	P	*e*		**Pn**	**03 52 55.7**	**+0.4**
ROBF	**Roble, Puntare**	**1.02**	**157**	*e*P			**Pn**	**03 52 55.3**	**+0.2**
ARZA	**Esparza**	**1.03**	**153**	*e*P			**Pn**	**03 52 55.5**	**+0.2**
ZARE	**Zarcero**	**1.04**	**134**	*e*P			**Pn**	**03 52 56.2**	**+0.7**
SRA1	**San Ramn**	**1.06**	**142**	P	*e*		**Pn**	**03 52 55.8**	**+0.3**
RAMO	**San Ramon**	**1.06**	**141**	*e*P			**Pn**	**03 52 55.8**	**+0.3**
ARTO	**Ro Cuarto**	**1.08**	**122**	*e*P			**Pn**	**03 52 55.2**	**-0.3**
PALD	**Palmares**	**1.11**	**141**	P	*e*		**Pn**	**03 52 56.1**	**+0.3**
PAQE	**Paquera**	**1.11**	**169**	*e*P			**Pn**	**03 52 56.0**	**+0.3**
SARCI	**Sarchi**	**1.14**	**136**	P	*e*		**Pn**	**03 52 56.8**	**+0.8**
OROT	**Orotina**	**1.17**	**149**	P	*e*		**Pn**	**03 52 56.6**	**+0.4**
NADN	**Granada**	**1.20**	**314**	P			**Pn**	**03 52 56.9**	**+0.6**
NADN				S			**S**	**03 53 20.4**	**-0.5**
NADN	**Granada**	**1.20**	**314**	*e*P			**Pn**	**03 52 56.9**	**+0.6**
ATEO	**Atenas**	**1.20**	**141**	P	*e*		**Pn**	**03 52 56.9**	**+0.4**
TCS1	**Tacares**	**1.21**	**136**	P			**Pn**	**03 52 56.7**	**+0.2**
TCS1	**Tacares**	**1.21**	**136**	P	*e*		**Pn**	**03 52 57.1**	**+0.6**
CBL1	**Cabuya**	**1.32**	**178**	P	*e*		**Pn**	**03 52 57.6**	**+0.3**
BELE	**Belen**	**1.33**	**135**	P	*e*		**Pn**	**03 52 58.0**	**+0.5**
BELE				eS			**S**	**03 53 23.0**	**+0.1**
PURI	**Puriscal**	**1.34**	**142**	*e*P			**Pn**	**03 52 58.2**	**+0.6**
HEME	**Heredia, Merce**	**1.35**	**133**	*e*P			**Pn**	**03 52 59.2**	**+1.5**
SANTA	**Santa Ana**	**1.36**	**136**	P	*e*		**Pn**	**03 52 58.1**	**+0.3**
HDC	**Heredia**	**1.36**	**132**				**Pn**	**03 52 58.5**	**+0.7**
HDC				Sn			**S**	**03 53 24.6**	**+1.2**
HDC	**Heredia**	**1.36**	**132**	P	*e*		**Pn**	**03 52 58.5**	**+0.7**
BITO	**Garabito Jaco**	**1.39**	**158**	*e*P			**Pn**	**03 52 58.8**	**+0.9**
NANN	**Nandasmo**	**1.39**	**317**	S			**S**	**03 53 24.6**	**+0.9**
NANN	**Nandasmo**	**1.39**	**317**	P			**Pn**	**03 52 59.3**	**+1.4**
TRT2	**Tortugero**	**1.43**	**104**	S			**S**	**03 53 24.8**	**+0.8**
TRT2	**Tortugero**	**1.43**	**104**	⇑P			**Pn**	**03 52 58.8**	**+0.6**
TRT2	**Tortugero**	**1.43**	**104**	P	*e*		**Pn**	**03 52 58.8**	**+0.6**
SABN	**Sabanita**	**1.43**	**316**	P			**Pn**	**03 52 57.8**	**-0.4**
CENT	**San Jose**	**1.44**	**133**	*e*P			**Pn**	**03 53 00.1**	**+1.7**
LUJA	**Lujan**	**1.45**	**133**	⇑P	*e*		**Pn**	**03 52 59.2**	**+0.7**
SJS	**Escuela Geolog**	**1.45**	**132**	*e*P			**Pn**	**03 52 59.3**	**+0.7**
ECI	**Escuela Centro**	**1.45**	**132**	⇑P	*e*		**Pn**	**03 52 59.3**	**+0.7**
SJS3	**Mercedes San J**	**1.45**	**132**	P	*e*		**Pn**	**03 52 59.3**	**+0.8**
AMPA	**Desamparados**	**1.47**	**134**	*e*P			**Pn**	**03 52 59.3**	**+0.6**
ACOS	**Acosta**	**1.48**	**139**	P	*e*		**Pn**	**03 52 59.5**	**+0.7**
CVIMO	**Finca Echandi**	**1.48**	**127**	P	*e*		**Pn**	**03 52 59.4**	**+0.5**
CARI	**Cariari**	**1.49**	**112**	*e*P			**Pn**	**03 52 59.7**	**+1.0**
MAS3	**Al N del Volca**	**1.49**	**318**	P			**Pn**	**03 52 59.4**	**+0.7**
MAS3				S			**S**	**03 53 25.8**	**+0.7**
ESPN	**Las Esperanzas**	**1.52**	**33**				**Pn**	**03 52 59.1**	**+0.3**
ESPN	**Las Esperanzas**	**1.52**	**33**	P			**Pn**	**03 52 59.3**	**+0.4**
ESPN	**Las Esperanzas**	**1.52**	**33**	S			**S**	**03 53 25.8**	**+0.4**
TRIO	**Tres Rios**	**1.52**	**122**	*e*P			**Pn**	**03 52 59.7**	**+0.6**
VICA	**Volcano Irazu**	**1.58**	**126**	*e*P			**Pn**	**03 53 00.2**	**+0.2**
PICV	**PH. Pirrs**	**1.59**	**144**	*e*P			**Pn**	**03 53 00.8**	**+1.1**
WILN	**Americas 2**	**1.60**	**321**	P			**Pn**	**03 52 59.7**	**0.0**
WILN				S			**S**	**03 53 27.6**	**+0.9**
BOAB	**BOACO BROADBAN**	**.60**	**342**				**Pn**	**03 52 59.7**	**0.0**
BOAB	**BOACO BROADBAN**	**.60**	**342**	S			**S**	**03 53 28.7**	**+1.8**
BOAB	**BOACO BROADBAN**	**.60**	**342**	P			**Pn**	**03 52 59.8**	**+0.1**
UNAN	**Cigeo UNAN**	**1.62**	**317**	⇓P			**Pn**	**03 53 00.3**	**+0.4**
RAFA	**San Farael, Vo**	**1.62**	**126**	*e*P			**Pn**	**03 53 01.3**	**+1.1**
USIM	**UNAN**	**1.62**	**317**	Pn			**Pn**	**03 52 60.0**	**+0.1**
VTUN	**Crater Central**	**1.63**	**123**	*e*P			**Pn**	**03 53 01.0**	**+0.6**
MGAN	**Managua**	**1.63**	**319**				**Pn**	**03 52 59.9**	**0.0**
MGAN	**Managua**	**1.63**	**319**	S			**S**	**03 53 28.1**	**+0.9**
MGAN	**Managua**	**1.63**	**319**	P			**Pn**	**03 53 00.2**	**+0.2**
CVTR	**Volcan Turrial**	**1.63**	**123**	P	*e*		**Pn**	**03 53 00.8**	**+0.4**
VTR0	**Volcan Turrial**	**1.63**	**123**	P	*e*		**Pn**	**03 53 00.9**	**+0.5**
CVTQ	**Turrialba Volc**	**1.63**	**124**	*e*P			**Pn**	**03 53 01.1**	**+0.7**
CVTV	**Tajo**	**1.65**	**123**	P	*e*		**Pn**	**03 53 01.2**	**+0.9**
PCAYA	**Pacayas**	**1.65**	**127**	*e*P			**Pn**	**03 53 01.2**	**+0.9**
ABCN	**Banco Central**	**1.65**	**316**	P			**Pn**	**03 53 00.6**	**+0.5**
ABCN	**Banco Central**	**1.65**	**316**	S			**S**	**03 53 29.0**	**+1.4**
REPA	**Paraso**	**1.66**	**131**	*e*P			**Pn**	**03 53 01.2**	**+0.8**
PITB	**Pirrs, San**	**1.67**	**138**	*e*P			**Pn**	**03 53 01.5**	**+1.0**
RAZU	**San Marcos de**	**1.67**	**138**	*e*P			**Pn**	**03 53 01.5**	**+1.0**
ABRB	**Las Abras (San**	**1.67**	**123**	P	*e*		**Pn**	**03 53 01.3**	**+0.7**
VTCV	**VTCV, Calle Va**	**1.68**	**124**	P	*e*		**Pn**	**03 53 01.3**	**+0.7**
APQ2	**Apoyeque**	**1.72**	**318**	P			**Pn**	**03 53 01.3**	**+0.6**
APQ2				S			**S**	**03 53 29.8**	**+1.2**
RESJ	**San Isidro (Tu**	**1.72**	**121**	⇑P	*e*		**Pn**	**03 53 01.6**	**+0.8**
VERB	**Verbena**	**1.73**	**124**	*e*P			**Pn**	**03 53 01.9**	**+0.9**
PIEC	**Cerro El Cedra**	**1.74**	**138**	P	*e*		**Pn**	**03 53 02.0**	**+0.7**
APYN	**Apoyeque**	**1.76**	**318**	P			**Pn**	**03 53 01.9**	**+0.8**
APYN				S			**S**	**03 53 30.7**	**+1.3**
SVQ2	**Quepos**	**1.77**	**147**	*e*P			**Pn**	**03 53 02.8**	**+1.6**
QUEP	**Quepos**	**1.77**	**147**	S			**S**	**03 53 30.0**	**+0.5**
QUEP	**Quepos**	**1.77**	**147**	P			**Pn**	**03 53 00.5**	**-0.7**
LLNJ	**Naranjito**	**1.77**	**144**	*e*P			**Pn**	**03 53 03.0**	**+1.8**
APQ3	**Volcan Apoyequ**	**1.80**	**318**	P			**Pn**	**03 53 02.6**	**+1.1**
APQ3				S			**S**	**03 53 30.8**	**+0.8**
COPN	**Copaltepe**	**1.89**	**312**	⇓P			**Pn**	**03 53 02.7**	**+0.2**
COPN	**Copaltepe**	**1.89**	**312**	⇓eP			**Pn**	**03 53 02.6**	**+0.2**
BUS1	**Rivas**	**1.93**	**134**	⇓eP			**Pn**	**03 53 04.0**	**+0.7**
MOM2	**El Cardon**	**2.00**	**319**	⇓P			**Pn**	**03 53 04.0**	**+0.6**
MOM2				S			**S**	**03 53 35.0**	**+1.5**
MOMN	**Momotombo**	**2.01**	**317**	⇓P			**Pn**	**03 53 04.1**	**+0.4**
MOM3	**MOM3**	**2.08**	**320**	⇓P			**Pn**	**03 53 04.6**	**+0.4**
MOM3				S			**S**	**03 53 36.6**	**+1.7**
ZEDO	**Perez Zeledon**	**2.12**	**137**	*e*P			**Pn**	**03 53 06.5**	**+1.7**
MATN	**Matagalpa**	**2.14**	**339**	S			**S**	**03 53 37.1**	**+0.9**
MATN	**Matagalpa**	**2.14**	**339**	P			**Pn**	**03 53 04.5**	**-0.6**
CNGA	**Al SSO del Vol**	**2.19**	**316**	P			**Pn**	**03 53 06.0**	**+0.5**
CNGA				S			**S**	**03 53 38.2**	**+1.2**
CNGN	**Cerro Negro**	**2.19**	**316**				**Pn**	**03 53 06.7**	**+0.2**
CNGN	**Cerro Negro**	**2.19**	**316**	⇓eP			**Pn**	**03 53 05.8**	**+0.2**
SAJE	**San Jernim**	**2.25**	**134**	⇓eP			**Pn**	**03 53 07.0**	**+0.8**
EDPE	**Pejibaye, P**	**2.34**	**138**	*e*P			**Pn**	**03 53 08.7**	**+1.6**
HERN	**Volcan Telica**	**2.35**	**316**	Pn			**Pn**	**03 53 06.8**	**-0.4**
LAES	**El Progreso Va**	**2.36**	**119**	*e*P			**Pn**	**03 53 07.9**	**+0.6**
DRK0	**Durika**	**2.49**	**131**	P	*e*		**Pn**	**03 53 09.7**	**+0.8**
PKGN	**Cerro Pekin**	**2.50**	**314**	S			**S**	**03 53 44.1**	**+1.2**
CRIN	**San Cristobal**	**2.57**	**314**				**Pn**	**03 53 10.0**	**+0.4**
CRIN	**San Cristobal**	**2.57**	**314**	⇓eP			**Pn**	**03 53 09.9**	**+0.2**
FIMO	**Fila Mora**	**2.61**	**137**	*e*P			**Pn**	**03 53 11.7**	**+1.6**
EDP2	**Potrero Grande**	**2.71**	**134**	*e*P			**Pn**	**03 53 12.5**	**+1.3**
SIUN	**Universidad Ur**	**2.80**	**7**				**Pn**	**03 53 12.2**	**0.0**
EDAD	**Golfito**	**2.98**	**139**	*e*P			**Pn**	**03 53 15.5**	**+1.2**
ALCO	**Alturas Coton,**	**3.00**	**130**	⇓eP			**Pn**	**03 53 15.4**	**+0.7**
PIRO	**Carate, Puerto**	**3.07**	**144**				**Pn**	**03 53 17.1**	**+1.8**
PIRO	**Carate, Puerto**	**3.07**	**144**	⇓eP			**Pn**	**03 53 17.1**	**+1.8**
CSGN	**Cosiguina Volc**	**3.12**	**311**	*e*P			**Pn**	**03 53 16.3**	**+0.3**
BRU2	**Volcan**	**3.21**	**131**				**Pn**	**03 53 17.8**	**+0.6**
BRU2	**Volcan**	**3.21**	**131**	eP			**Pn**	**03 53 18.2**	**+1.0**
DMCAL	**E. de Neily**	**3.22**	**134**	*e*P			**Pn**	**03 53 18.4**	**+1.2**
TGUH	**Tegucigalpa,Un**	**3.75**	**327**				**Pn**	**03 53 24.2**	**+0.6**
PRVC	**Isla de Provid**	**4.43**	**56**	Pn			**Pn**	**03 53 31.9**	**0.0**
MTO3	**Montecristo**	**5.37**	**311**				**Pn**	**03 53 45.0**	**+0.9**
APG	**El Apazote**	**6.58**	**309**	P			**Pn**	**03 54 00.9**	**+1.3**
	1.6nm,0.6s,baz=133,slow=9.9,SNR=16								
APG				S			**S**	**03 55 15.0**	**+0.1**
	0.2nm,0.5s,baz=108,slow=20,SNR=1.2								
CMIG	**Matias Romero**	**11.26**	**304**	P			**Pn**	**03 54 59.5**	**-0.4**
	1.8nm,0.3s,baz=142,slow=12,SNR=15								
CMIG				S			S	03 56 55.7	-9.2
	1.4nm,0.3s,baz=195,slow=20,SNR=5.9								
CAMR	**Camaroca**	**12.60**	**16**				**P**	**03 55 19.5**	**-0.8**
SDV	**Santo Domingo**	**14.44**	**97**	P			**Pn**	**03 55 40.2**	**+0.3**
	9.9nm,0.7s,baz=278,slow=8.8,SNR=12								
SDV	**Santo Domingo**	**14.44**	**97**				**Pn**	**03 55 40.5**	**+0.5**
553A	**Crawfordville**	**19.19**	**2**	P			**P**	**03 56 33.0**	**+0.3**
152A	**Waverly Hall**	**21.65**	**1**	P			**P**	**03 56 59.4**	**+0.7**
152A				IAmb		IAmb	IAmb	03 57 01.5	
	comp=Z,12nm,0.9s								
833A	**Chaparral WMA,**	**21.87**	**324**	P			**P**	**03 57 00.4**	**-0.5**
833A				IAmb		IAmb	IAmb	03 57 02.4	
	comp=Z,6.4nm,0.8s								
LRAL	**Lakeview Retre**	**22.08**	**356**				**P**	**03 57 03.5**	**+0.6**
Z47A	**Carrollton**	**22.34**	**354**	P			**P**	**03 57 05.7**	**+0.5**
GOGA	**Godfrey**	**22.44**	**4**	P			**P**	**03 57 06.4**	**+0.2**
GOGA				IAmb		IAmb	IAmb	03 57 07.3	
	comp=Z,7.0nm,0.7s								
Y52A	**Lilburn**	**22.86**	**2**				**P**	**03 57 10.2**	**+0.2**
Y52A				IAmb		IAmb	IAmb	03 57 12.7	
	comp=Z,12nm,0.7s								
Y49A	**Blount Mountai**	**22.86**	**357**				**P**	**03 57 10.2**	**+0.1**
Y49A				IAmb		IAmb	IAmb	03 57 11.2	
	comp=Z,7.2nm,0.7s								
HODGE	**Hodges**	**23.36**	**6**	P			**P**	**03 57 15.0**	**+0.5**
HODGE				IAmb		IAmb	IAmb	03 57 15.9	
	comp=Z,9.0nm,0.6s								
DRIO	**Del Rio**	**23.40**	**324**				**P**	**03 57 15.8**	**+0.8**
DRIO				IAmb		IAmb	IAmb	03 57 17.5	
	comp=Z,4.4nm,0.6s								
X48A	**Hartselle**	**23.49**	**356**	P			**P**	**03 57 16.1**	**+0.4**
BRDY	**Brady**	**23.99**	**330**	P			**P**	**03 57 21.2**	**+0.9**
BG3	**Lake Jocassee**	**24.05**	**4**				**P**	**03 57 21.4**	**+0.6**
BG3				IAmb		IAmb	IAmb	03 57 24.3	
	comp=Z,7.5nm,0.7s								
W52A	**Murphy**	**24.09**	**2**	P			**P**	**03 57 21.9**	**+0.7**
W52A				IAmb		IAmb	IAmb	03 57 25.1	
	comp=Z,5.9nm,0.9s								
CPCT	**Cooper Cave**	**24.43**	**1**				**P**	**03 57 25.1**	**+0.9**
CPCT				IAmb		IAmb	IAmb	03 57 28.4	
	comp=Z,9.1nm,0.7s								
MIAR	**Mount Ida**	**24.75**	**343**				**P**	**03 57 27.8**	**+0.7**
TXAR	**Lajitas Array**	**25.19**	**319**	P			**P**	**03 57 31.9**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=151,slow=9.5,SNR=4.8								
TXAR				PcP			**PcP**	**04 00 59.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=133,slow=4.3,SNR=4.0								
	comp=Z,0.2nm,0.5s								
LCAR	**Lake Charles**	**25.62**	**349**				**P**	**03 57 34.2**	**-0.7**
LCAR				IAmb		IAmb	IAmb	03 57 35.2	
	comp=Z,6.4nm,0.8s								
CCM	**Cathedral Cave**	**27.57**	**350**	P			**P**	**03 57 51.4**	**-1.0**
CCM				IAmb		IAmb	IAmb	03 57 52.5	
	comp=Z,5.2nm,0.7s								
Q51A	**Peebles**	**28.04**	**3**	P			**P**	**03 57 56.9**	**+0.4**
Y14A	**Wickenburg**	**34.26**	**316**				**P**	**03 58 51.8**	**+0.7**
TCUT	**Toone Canyon**	**37.93**	**327**	P			**P**	**03 59 22.2**	**-0.1**
PDAR	**Pinedale Array**	**38.20**	**331**	P			**P**	**03 59 23.2**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=200,slow=8.0,SNR=2.0								
PDAR				PcP			**PcP**	**04 01 34.6**	**0.0**
	comp=Z,0.2nm,0.5s,baz=106,slow=3.2,SNR=2.2								
	comp=Z,0.2nm,0.6s								
SCHQ	**Schefferville**	**46.14**	**15**	P			**P**	**04 00 26.6**	**-1.5**
	comp=Z,4.0nm,0.4s,baz=215,slow=8.5,SNR=20								
ILAR	**Eielson Array**	**68.33**	**336**	P			**P**	**04 03 02.3**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=116,slow=7.0,SNR=7.8								
	comp=Z,0.2nm,0.6s								
ESDC	**Sonseca Array**	**76.36**	**52**	P			**P**	**04 03 50.4**	**-0.8**
	com

KKB				S		Sn	03 53 57.5	+1.5	
KKB	**Krupnik**	2.73	83	*i* Pn		Pn	03 53 25.1	+1.7	
THL	**Klokotos Trika**	2.78	135	P		Pn	03 53 25.9	+2.0	
THL				S		Sn	03 54 00.1	+3.1	
THE	**Thessaloniki**	2.79	109	*i* Pn		Pn	03 53 25.0	+1.0	
ACER	**Acerenza**	2.79	255			Pn	03 53 23.4	-0.8	
SGRT	**San Giovanni R**	2.82	275	⇓Pn		Pn	03 53 24.8	+0.2	
SGRT	**San Giovanni R**	2.82	275			Pn	03 53 24.6	+0.1	
ZAPS	**Zavoj**	2.88	53	*e*Pn		Pn	03 53 27.0	+1.7	
ZAPS				*e*Sn		Sb	03 54 03.6	-2.4	
TSLK	**Tsoukalades, L**	2.89	162	P		Pn	03 53 25.9	+0.5	
TSLK				S		Sn	03 54 01.5	+1.8	
HORT	**Hortiatis**	2.89	109	P		Pn	03 53 26.8	+1.2	
HORT				S		Sn	03 54 01.4	+1.4	
AMPL	**Ampelaki**	2.96	153	P		Pn	03 53 27.4	+1.0	
VTS	**Vitosha**	2.97	68	*i* P		Pn	03 53 28.4	+1.7	
VTS				S		Sn	03 54 03.7	+1.7	
VTS	**Vitosha**	2.97	68	*e*Pn		Pn	03 53 28.3	+1.6	
VTS				*e*Sn		Sn	03 54 03.6	+1.6	
TEKS	**Tekeris**	2.97	0	*e*Pn		Pn	03 53 28.0	+1.4	
NYDR	**Nydri-Lefkada**	3.00	162	P		Pn	03 53 27.2	+0.1	
ZAGS	**Zajecar**	3.01	41	*e*Pn		Pn	03 53 28.8	+1.7	
PLNA	**Plana**	3.06	72	P		Pn	03 53 30.4	+2.4	
BLSH	**Balsha**	3.09	64	P		Pn	03 53 31.1	+2.8	
BLKB	**Belogradchik**	3.11	48	*e*Pn		Pn	03 53 30.6	+2.0	
BLKB				*e*Sn		Sn	03 54 07.7	+2.3	
SRS	**Serrai**	3.12	97	P		Pn	03 53 30.0	+1.4	
SRS	**Serrai**	3.12	97	*i* Pn		Pn	03 53 30.1	+1.5	
BORS2	**Bor- Borsko je**	3.12	36	*e*Pn		Pn	03 53 28.8	+0.1	
TIP	**Timpagrande**	3.18	222			Pn	03 53 29.0	-0.5	
TIP	**Timpagrande**	3.18	222	⇓P		Pn	03 53 29.2	-0.3	
MMB	**Musomishta**	3.19	89	P		Pn	03 53 31.4	+1.7	
MMB	**Musomishta**	3.19	89	*i* P		Pn	03 53 31.5	+1.8	
MMB				S		Sn	03 54 09.5	+2.2	
MMB	**Musomishta**	3.19	89	*i* Pn		Pn	03 53 31.8	+2.1	
CUC	**Castrocucco**	3.21	242			Pn	03 53 29.8	-0.1	
KUBS	**Kucevo**	3.25	29	*e*Pn		Pn	03 53 30.5	0.0	
KUBS				*e*Sn		Sn	03 54 09.8	+1.0	
FRGS	**Fruska Gora**	3.59	4	*e*Pn		Pn	03 53 35.8	+0.7	
MDVR	**Moldovita**	3.59	26	⇓P		Pn	03 53 36.5	+1.4	
MDVR	**Moldovita**	3.59	26	*e*Pn		Pn	03 53 36.3	+1.1	
MDVR				*e*Sn		Sn	03 54 18.1	+0.9	
BLY	**Banja Luka**	3.59	333	⇑*i* Pn		Pn	03 53 36.9	+1.8	
BLY				*e*Sn		Sn	03 54 19.2	+2.1	
BLY	**Banja Luka**	3.59	333	⇓P		Pn	03 53 36.7	+1.6	
BLY	**Banja Luka**	3.59	333	*e*Pn		Pn	03 53 37.0	+1.8	
VALD	**Valchedram**	3.59	53	P		Pn	03 53 37.0	+1.9	
MPEP	**Malo Peshtene**	3.61	59	P		Pn	03 53 37.3	+1.9	
RZN	**Rozhen**	3.93	87	P		Pn	03 53 42.3	+2.3	
RZN				S		Sn	03 54 27.7	+1.9	
HERR	**Herculane**	3.93	32	⇑P		Pn	03 53 41.4	+1.6	
PLD	**Plovdiv**	3.96	80	P		Pn	03 53 42.2	+2.0	
PLD	**Plovdiv**	3.96	80	*e*Pn		Pn	03 53 42.2	+2.0	
PLD				*e*Sn		Sn	03 54 26.9	+0.6	
SRE	**Strehaia**	4.11	40	⇑P		Pn	03 53 44.1	+1.9	
PLVB	**Pleven**	4.20	63	⇑P		Pn	03 53 46.0	+2.5	
CEL	**Celeste**	4.32	221			Pn	03 53 44.4	-0.7	
BZS	**Buzias**	4.32	20	⇓P		Pn	03 53 46.7	+1.5	
GZR	**Gura Zlata**	4.50	31	⇓P		Pn	03 53 49.9	+2.2	
RDO	**Rodhopi**	4.57	93			Pn	03 53 49.8	+1.3	
SURR	**Surduc**	4.59	24	⇓P		Pn	03 53 50.0	+1.1	
AQU	**L'Aquila**	4.61	282	⇑*i* Pn		Pn	03 53 50.4	+1.2	
AQU				*e*Sn		Sn	03 54 42.3	0.0	
CAMP	**Campotosto**	4.63	284			Pn	03 53 49.7	+0.2	
MORH	**Mrgy, Hungar**	4.68	353	*e*Pn		Pn	03 53 51.8	+1.8	
MORH				*e*Sn		Sn	03 54 45.5	+1.6	
MORH	**Mrgy, Hungar**	4.68	353	⇓P		Pn	03 53 51.0	+1.0	
MORH	**Mrgy, Hungar**	4.68	353	*e*Pn		Pn	03 53 52.6	+2.6	
ITM	**Ithomi**	4.78	156	Pn		Pn	03 53 51.7	+0.3	
NRCA	**Norcia**	4.90	287			Pn	03 53 53.6	+0.4	
ELND	**Elena**	4.92	72	⇓P		Pn	03 53 55.5	+2.1	
SIRR	**Siria**	4.94	18	⇑P		Pn	03 53 54.8	+1.1	
SIRR	**Siria**	4.94	18	*e*Pn		Pn	03 53 55.2	+1.5	
SIRR				*e*Sn		Sn	03 54 50.7	+0.2	
LOT	**Lotru**	4.96	37	⇑P		Pn	03 53 55.6	+1.6	
FDMO	**Fiordimonte**	4.97	289			Pn	03 53 54.6	+0.5	
BOJS	**Bojanci**	4.99	323	*e*Pn		Pn	03 53 55.6	+1.2	
BOJS	**Bojanci**	4.99	323	*i* Pn		Pn	03 53 55.7	+1.4	
BOJS				*i* Sn		Sn	03 54 51.6	-0.1	
RIY	**Rijeka**	5.23	317	*e*Pn		Pn	03 53 59.0	+1.4	
RIY				*e*Sn		Sn	03 54 57.4	0.0	
CESX	**Cesi**	5.25	284			Pn	03 53 57.2	-0.7	
ARR	**Arges**	5.32	43	⇑P		Pn	03 54 01.1	+2.2	
MURB	**Monte Urbino**	5.43	290			Pn	03 54 01.2	+0.8	
MTUR	**Matau**	5.46	46	⇓P		Pn	03 53 03.1	+2.3	
CEY	**Cerknica**	5.55	320	*e*Pn		Pn	03 54 03.5	+1.4	
CEY				*e*Sn		Sn	03 55 05.0	-0.5	
VOIR		5.59	44	⇑P		Pn	03 54 04.8	+2.2	
SKDS	**Skadanscina**	5.62	317	*e*Pn		Pn	03 54 03.0	0.0	
SKDS				*e*Sn		Sn	03 55 05.0	-2.2	
VAE	**Valguarnera**	5.67	225	Pn		Pn	03 54 05.0	+1.2	
	comp=E,0.6nm,0.3s,baz=319,slow=20,SNR=1.9								
	comp=E,4.8nm,0.7s								
DRGR		5.70	23	⇓P		Pn	03 54 05.7	+1.5	
LJU	**Ljubljana**	5.73	323	*e*Pn		Pn	03 54 06.1	+1.6	
TRI	**Trieste**	5.86	317	Pn		Pn	03 54 04.2	-2.1	
RAFF	**Raffo Rosso**	5.89	224	Pn		Pn	03 54 04.8	-2.0	
SOKA	**Soboth**	6.03	329	Pn		Pn	03 54 10.0	+1.3	
	comp=E,4.8nm,0.5s,SNR=9.8								
OBKA	**Obir**	6.08	326	*i* Pn		Pn	03 54 10.9	+1.5	
	comp=E,1.7nm,0.3s,SNR=6.2								
MLR	**Muntele Rosu**	6.11	48	Pn		Pn	03 54 10.2	+0.4	
	comp=E,7.8nm,0.5s,baz=173,slow=5.9,SNR=24								
MLR				Sn		Sn	03 55 20.4	+1.2	
	baz=147,slow=18								
MLR	**Muntele Rosu**	6.11	48			Pn	03 54 10.5	+0.7	
MLR	**Muntele Rosu**	6.11	48	⇑P		Pn	03 54 11.8	+2.1	
DOPR	**Dopca**	6.12	42	⇑P		Pn	03 54 12.1	+2.2	
SABO	**M.te Sabotino**	6.13	318			Pn	03 54 10.6	+0.6	
ARSA	**Arzberg**	6.35	335			Pn	03 53 13.4	+0.4	
PSZ	**Piszkesteto**	6.35	2			Pn	03 54 13.8	+0.7	
PSZ	**Piszkesteto**	6.35	2	⇑P		Pn	03 54 14.8	+1.8	
OSSC	**Osservatorio P**	6.40	290	Pn		Pn	03 54 14.9	+1.2	
TURR	**Turia**	6.50	44	⇓P		Pn	03 54 17.7	+2.6	
PLOR	**Plostina**	6.72	48	⇓P		Pn	03 54 19.9	+1.8	
VRI	**Vrincioaia**	6.77	48	⇓P		Pn	03 54 20.6	+1.8	
STAL	**STALIGIAL**	6.78	316	Pn		Pn	03 54 19.0	+0.1	
TEOL	**Teolo**	6.83	306	Pn		Pn	03 54 19.7	+0.1	
ZCCA	**Zocca**	6.84	297	Pn		Pn	03 54 20.0	+0.3	
MODS	**Modra-Piesok**	6.98	348	*e*PN		Pn	03 54 23.7	+2.1	
MODS				*e*SN		Sn	03 55 24.6	-16	
KBA	**Koelnbreinsper**	7.05	323	*i* Pn		Pn	03 54 23.7	+1.0	
	comp=E,1.1nm,0.3s,SNR=7.3								
CTI	**Castel Tesino**	7.22	311			Pn	03 54 24.5	-0.6	
CFR	**Carcaliu**	7.25	57	⇓P		Pn	03 54 26.0	+0.7	
BURAR	**Bucovina Array**	7.29	32	Pn		Pn	03 54 28.3	+2.4	
TPGR	**Topolog**	7.30	60	⇑P		Pn	03 54 27.7	+1.7	
BUR08	**Bucovina Ar. S**	7.30	32			Pn	03 54 28.2	+2.0	
IDI	**Anoyia**	7.57	144	Pn		Pn	03 54 28.0	-1.8	
	comp=E,0.4nm,0.3s,baz=312,slow=9.1,SNR=2.5								
IDI				Sn		Sn	03 55 49.2	-6.1	
	comp=E,0.6nm,0.3s,baz=241,slow=19,SNR=1.9								
	comp=E,4.6nm,0.8s								
MANT	**Manisa**	7.61	111	Pn		Pn	03 54 32.4	+2.0	
LESA	**Schwarzleotal**	7.61	323	Pn		Pn	03 54 31.5	+1.1	
	comp=E,2.3nm,0.4s,SNR=7.5								
TLCR		7.69	59	⇓P		Pn	03 54 33.6	+2.3	
MSSA	**Maissana**	7.82	294	Pn		Pn	03 54 33.2	0.0	
FUORN	**Ofenpass-Fuorn**	8.34	310	Pn		Pn	03 54 41.8	+1.3	
GEC2	**GERESS Array S**	8.34	333	Pn		Pn	03 54 40.9	+0.5	
GERES	**GERESS Array B**	8.34	333	Pn		Pn	03 54 41.2	+0.8	
	baz=150,slow=13,SNR=8.2								
GERES				Sn		Sn	03 56 11.0	-3.1	
	baz=157,slow=25,SNR=1.2								
	comp=E,0.7nm,0.4s								
KHC	**Kasperske Hory**	8.62	333	Pn		Pn	03 54 45.4	+1.2	
DAVOX	**Davos/Dischmat**	8.65	310	Pn		Pn	03 54 46.3	+1.6	
	comp=E,1.1nm,0.3s,baz=140,slow=17,SNR=6.6								
DAVOX				Sn		Sn	03 56 20.3	-1.5	
	comp=E,0.2nm,0.3s,baz=210,slow=20,SNR=1.4								
TUE	**Stuetta**	8.80	307	Pn		Pn	03 54 47.1	+0.4	
SENIN	**Lac Senin/Sane**	10.01	303	Pn		Pn	03 55 01.2	-2.2	
BFO	**Black Forest**	10.40	314	Pn		Pn	03 55 08.8	+0.3	
BRTR	**Keskin Array B**	10.91	95	LR		LR	03 59 10.0		
	comp=E,33nm,20.8s,baz=220,slow=36								
ESDC	**Sonseca Array**	17.90	272	LR		LR	04 03 46.8		
	comp=E,78nm,18.6s,baz=268,slow=37								
NC602	**NORSAR Array S**	19.80	348	P		Pn	03 57 10.8	-0.3	
NC602				IAmb		IAmb	03 57 12.8		
	comp=Z,22nm,1.2s								
NC405	**NORSAR Array S**	20.13	349	P		P	03 57 13.4	+0.3	
NOA	**NORSAR Array B**	20.14	348	P		P	03 57 12.7	-0.5	
	comp=Z,0.3nm,0.7s,baz=154,slow=10,SNR=3.7								
	comp=Z,0.3nm,0.7s								
EKA	**Eskdalemuir Ar**	20.25	321	P		P	03 57 14.2	-0.2	
	comp=Z,1.1nm,0.6s,baz=113,slow=8.4,SNR=7.5								
	comp=Z,1.1nm,0.6s								
ESK	**Eskdalemuir**	20.26	320	P		P	03 57 14.6	0.0	
NC303	**NORSAR Array S**	20.29	349	P		P	03 57 14.7	-0.2	
FINES	**FINESS Array B**	20.29	9	P		P	03 57 13.5	-1.3	
	comp=Z,2.4nm,0.6s,baz=185,slow=9.2,SNR=15								
	comp=Z,2.4nm,0.6s								
FINES	**FINESS Array B**	20.29	9	P		P	03 57 14.0	-0.9	
FIA1	**FINESS Array S**	20.30	9	P		P	03 57 13.8	-1.0	
FIA1				IAmb		IAmb	03 57 18.1		
	comp=Z,13nm,0.9s								
NC204	**NORSAR Array S**	20.43	348	P		P	03 57 16.2	-0.3	
ARTI	**Arti**	29.05	46	P		P	03 58 38.4	-0.9	
ABKAR	**Akbulak array**	29.13	61	P		P	03 58 41.0	+1.0	
BORK	**Borovoye**	35.59	54	P		P	03 59 37.8	+1.2	
BORK				IAmb		IAmb	03 59 37.9		
	comp=Z,2.2nm,0.5s								
BVAR	**Borovoye Array**	35.63	54	P		P	03 59 36.1	-0.9	
	comp=Z,1.0nm,0.6s,baz=270,slow=7.0,SNR=5.4								
	comp=Z,1.0nm,0.6s								
KURBB	**Kurchatov Arra**	40.93	56	LR		LR	04 19 11.6		
	comp=Z,71nm,18.1s,baz=183,slow=39								
ZAA0	**Zalesovo Array**	44.08	51	P		P	04 00 46.7	-0.3	
ZAA0				IAmb		IAmb	04 00 47.2		
	comp=Z,3.1nm,0.8s								
ZALV	**Zalesovo Beam**	44.08	51	P		P	04 00 46.6	-0.4	
	comp=Z,2.3nm,0.5s,baz=280,slow=8.2,SNR=12								
	comp=Z,2.3nm,0.5s								
ZALV	**Zalesovo Beam**	44.08	51	P		P	04 00 46.9	-0.1	
MK31	**Makanchi Array**	44.27	61	P		P	04 00 48.1	-0.6	
MK31				IAmb		IAmb	04 00 48.3		
	comp=Z,1.1nm,0.9s								
MKAR	**Makanchi Array**	44.27	61	P		P	04 00 48.4	-0.4	
	comp=Z,1.1nm,0.5s,baz=284,slow=7.3,SNR=13								
	comp=Z,1.1nm,0.5s								
MKAR	**Makanchi Array**	44.27	61	P		P	04 00 48.7	-0.1	
SONM	**Songino Array**	58.94	52	P		P	04 02 38.0	-0.5	
	comp=Z,0.6nm,0.7s,baz=313,slow=5.1,SNR=4.3								
	comp=Z,0.6nm,0.7s								
ILAR	**Eielson Array**	73.45	354	P		P	04 04 11.2	+0.1	
	comp=Z,0.1nm,0.7s,baz=7.9,slow=6.8,SNR=2.1								
	comp=Z,0.1nm,0.7s								

*KNET **27** 04:01:31.2±0.5, 42°.28N×74°.91E, h17km±3km, ml2.7, Error ellipse: s-maj=3.5km s-min=2.7km az=9.0*
*SOME **27** 04:01:32.3, 42°.25N×74°.87E, h15km*
*KRNET **27** 04:01:32.2±0.1, 42°.28N×74°.89E, h19km, mb3.4*
*NNC **27** 04:01:33.1±0.7, 42°.33N×74°.88E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=6.5km s-min=2.8km az=1.0*

ISC 27 04:01:32.3±1.0, 42°.27N±0°.02×74°.89E±0°.01, h6km±9km, n70, σ0s90/126, 37C-34D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**0.28**	**261**	P		**Pg**		**04 01 38.2**	**+0.2**
	160nm,0.1s,SNR=1463								
UCH				⇓S		**Sg**		**04 01 42.3**	**+0.5**
	322nm,0.1s								
UCH	**Uchtor**	**0.28**	**261**	⇑*e*P		**Pg**		**04 01 38.3**	**+0.2**
UCH				⇑*e*S		**Sg**		**04 01 42.7**	**+0.9**
KBK	**Karagaybulak**	**0.39**	**6**	⇓P		**Pg**		**04 01 40.0**	**+0.2**
	2μm,0.1s,SNR=84								
KBK				⇑S		**Sg**		**04 01 45.5**	**+0.4**
	2μm,0.1s								
KBK	**Karagaybulak**	**0.39**	**6**	⇑*e*P		**Pg**		**04 01 39.9**	**0.0**
KBK				⇑*e*S		**Sg**		**04 01 45.4**	**+0.4**
AAK	**Ala-Archa**	**0.47**	**321**	⇑P		**Pg**		**04 01 41.6**	**+0.2**
	180nm,0.1s,SNR=774								
AAK				⇑S		**Sg**		**04 01 47.9**	**+0.3**
	268nm,0.2s								
AAK	**Ala-Archa**	**0.47**	**321**	⇓P		**Pg**		**04 01 41.4**	**-0.1**
	635nm,0.4s								
AAK				⇑S		**Sg**		**04 01 47.8**	**+0.3**
	824nm,0.3s								
AAK	**Ala-Archa**	**0.47**	**321**	⇓*e*P		**Pg**		**04 01 41.3**	**-0.1**
AAK				⇓*e*S		**Sg**		**04 01 47.9**	**+0.3**
FRU1	**Bishkek**	**0.57**	**340**	⇓*i*P		**Pg**		**04 01 43.5**	**+0.2**
FRU1				⇓*e*S		**Sg**		**04 01 51.7**	**+0.9**
ARLS	**Aral**	**0.59**	**226**	⇓*e*P		**Pg**		**04 01 43.5**	**-0.2**
ARLS				⇑*e*S		**Sg**		**04 01 51.7**	**+0.3**
CHMS	**Chumysh**	**0.73**	**352**	⇓P		**Pg**		**04 01 46.3**	**-0.1**
	136nm,0.1s,SNR=236								
CHMS				⇑S		**Sg**		**04 01 56.2**	**+0.2**
	239nm,0.2s								
CHMS	**Chumysh**	**0.73**	**352**	⇑*e*P		**Pg**		**04 01 45.9**	**-0.5**
CHMS				⇑*e*S		**Sg**		**04 01 55.8**	**-0.1**
BOOM	**Boomskoye usch**	**0.81**	**74**	⇑*e*P		**Pg**		**04 01 47.4**	**-0.5**
BOOM				⇑*e*S		**Sg**		**04 01 58.4**	**0.0**
TKM2	**Tokmak 2**	**0.83**	**39**	⇓P		**Pg**		**04 01 47.8**	**-0.5**
	49nm,0.1s,SNR=52								
TKM2				⇑S		**Sg**		**04 01 58.7**	**-0.4**
	246nm,0.1s								
TKM2	**Tokmak 2**	**0.83**	**39**	⇑*e*P		**Pg**		**04 01 47.8**	**-0.5**
TKM2				⇑*e*S		**Sg**		**04 01 58.9**	**-0.2**
EKS2	**Erkin-Say**	**0.91**	**296**	⇓P		**Pg**		**04 01 49.6**	**-0.2**
	33nm,0.1s,SNR=176								
EKS2				⇓S		**Sb**		**04 02 02.7**	**-0.3**
	294nm,0.2s								
EKS2	**Erkin-Say**	**0.91**	**296**	⇑*e*P		**Pg**		**04 01 49.1**	**-0.7**
EKS2				⇑*e*S		**Sg**		**04 02 01.5**	**-0.1**
ULHL	**Ulahol**	**1.00**	**91**	⇓P		**Pg**		**04 01 50.1**	**-1.4**
	24nm,0.1s,SNR=6.8								
ULHL				⇓S		**Sg**		**04 02 03.6**	**-1.1**
	63nm,0.1s								
ULHL	**Ulahol**	**1.00**	**91**	⇓*e*P		**Pg**		**04 01 50.8**	**-0.8**
ULHL				⇓*e*S		**Sg**		**04 02 04.4**	**-0.2**
USP	**Ospenovka**	**1.03**	**344**	P		**Pg**		**04 01 51.6**	**-0.6**
	51nm,0.1s,SNR=325								
USP				⇓S		**Sg**		**04 02 05.6**	**0.0**
	68nm,0.1s								
USP	**Ospenovka**	**1.03**	**344**	⇓*e*P		**Pg**		**04 01 51.3**	**-0.9**
USP				⇓*e*S		**Sg**		**04 02 05.1**	**-0.5**
KST	**Kastek**	**1.10**	**45**	P		**Pg**		**04 01 53.0**	**-0.4**
	12nm,0.2s								
KST				S		**Sg**		**04 02 07.5**	**-0.4**
	89nm,0.3s								
KST	**Kastek**	**1.10**	**45**	*e*P		**Pg**		**04 01 53.1**	**-0.4**
KST				*e*S		**Sg**		**04 02 07.5**	**-0.4**
KST	**Kastek**	**1.10**	**45**	*e*P		**Pg**		**04 01 53.0**	**-0.4**
	12nm,0.2s								
KST				*e*S		**Sg**		**04 02 07.5**	**-0.4**
	89nm,0.3s								
DGS	**Degeres**	**1.17**	**34**	P		**Pg**		**04 01 54.0**	**-0.6**
	9.0nm,0.1s								
DGS				S		**Sg**		**04 02 09.6**	**-0.3**
	140nm,0.2s								
DGS	**Degeres**	**1.17**	**34**	*e*P		**Pg**		**04 01 54.1**	**-0.6**
DGS				*e*S		**Sg**		**04 02 09.6**	**-0.3**
DGS	**Degeres**	**1.17**	**34**	*e*P		**Pg**		**04 01 54.0**	**-0.6**
	9.0nm,0.1s								
DGS				*e*S		**Sg**		**04 02 09.6**	**-0.3**
	140nm,0.2s								
SGDS	**Sogindy**	**1.19**	**351**	P		**Pg**		**04 01 54.5**	**-0.7**
	10nm,0.1s								
SGDS				S		**Sg**		**04 02 10.4**	**-0.3**
	72nm,0.1s								
MRKS	**Merke**	**1.32**	**292**	P		**Pn**		**04 01 57.0**	**-0.4**
	28nm,0.2s								
MRKS				S		**Sb**		**04 02 14.8**	**+0.1**
	155nm,0.4s								
MRKS	**Merke**	**1.32**	**292**	*e*P		**Pn**		**04 01 57.0**	**-0.4**
MRKS				*e*S		**Sb**		**04 02 14.8**	**+0.1**
MRKS	**Merke**	**1.32**	**292**	*e*P		**Pn**		**04 01 57.0**	**-0.4**
	28nm,0.2s								
MRKS				*e*S		**Sb**		**04 02 14.8**	**+0.1**
	155nm,0.4s								
JNKS	**Jany-Kuch**	**1.34**	**155**	⇓*e*P		**Pn**		**04 01 57.0**	**-0.8**
JNKS				⇓*e*S		**Sg**		**04 02 14.9**	**-0.6**
MTBS	**Maitube**	**1.42**	**52**	P		**Pn**		**04 01 58.4**	**-0.4**
	13nm,0.2s								
MTBS				S		**Sb**		**04 02 17.2**	**-0.5**
	111nm,0.3s								
MTBS	**Maitube**	**1.42**	**52**	*e*P		**Pn**		**04 01 58.4**	**-0.4**
MTBS				*e*S		**Sb**		**04 02 17.2**	**-0.5**
MTBS	**Maitube**	**1.42**	**52**	*e*P		**Pn**		**04 01 58.4**	**-0.4**
	13nm,0.2s								
MTBS				*e*S		**Sb**		**04 02 17.2**	**-0.5**
	111nm,0.3s								
SALK	**Salom-Alik**	**1.60**	**210**	⇓*e*P		**Pn**		**04 02 01.5**	**+0.1**
SALK				⇓*e*S		**Sb**		**04 02 22.9**	**-0.1**
TNSS	**Tian-Shan**	**1.70**	**63**	P		**Pg**		**04 02 04.1**	**-0.8**
	7.4nm,0.1s								
TNSS				S		**Sg**		**04 02 27.1**	**+0.1**
	8.0nm,0.3s								
TNSS	**Tian-Shan**	**1.70**	**63**	*e*P		**Pg**		**04 02 04.1**	**-0.8**
	7.4nm,0.1s								
TNSS				*e*S		**Sg**		**04 02 27.1**	**+0.1**
	8.0nm,0.3s								
KDJ	**Kajisay**	**1.71**	**94**	⇓*e*P		**Pb**		**04 02 03.5**	**-0.7**
KDJ				⇓*e*S		**Sg**		**04 02 26.2**	**-1.0**
ARSB	**Arslanbob**	**1.71**	**237**	⇑*e*P		**Pb**		**04 02 03.4**	**-0.9**
ARSB				⇑*e*S		**Sb**		**04 02 25.9**	**-0.2**
MNAS	**Manas**	**1.78**	**278**	⇓*e*P		**Pn**		**04 02 04.4**	**+0.6**
MNAS				⇓*e*S		**Sb**		**04 02 27.9**	**-0.2**
KNDC	**Almaty**	**1.80**	**58**	⇓Pg		**Pb**		**04 02 05.6**	**-0.1**
	17nm,0.2s								
KNDC				⇑Lg		Lg		04 02 32.6	
	86nm,0.3s								
MDOK	**Medeo**	**1.82**	**60**	Pg		**Pb**		**04 02 06.2**	**+0.1**
	18nm,0.2s								
MDOK				Lg		Lg		04 02 31.2	
	32nm,0.3s								
KOTS	**Kotyrbulak**	**1.90**	**59**	P		**Pg**		**04 02 08.0**	**-0.7**
	43nm,0.2s								
KOTS				S		**Sg**		**04 02 33.5**	**+0.2**
	302nm,0.3s								
KOTS	**Kotyrbulak**	**1.90**	**59**	*e*P		**Pg**		**04 02 08.0**	**-0.7**
	43nm,0.2s								
KOTS				*e*S		**Sg**		**04 02 33.5**	**+0.2**
	302nm,0.3s								
KUU	**Kurty**	**1.94**	**33**	P		**Pb**		**04 02 07.0**	**-1.0**
	6.1nm,0.0s								
KUU				S		**Sb**		**04 02 32.0**	**-0.5**
	83nm,0.3s								
KUU	**Kurty**	**1.94**	**33**	*e*P		**Pb**		**04 02 07.0**	**-1.0**
	6.1nm,0.0s								
KUU				*e*S		**Sb**		**04 02 32.0**	**-0.5**
	83nm,0.3s								
KTBS	**Karatobe**	**1.95**	**42**	Pg		**Pb**		**04 02 08.3**	**0.0**
	14n

LCBC				S		Sg	04 04 32.1	+0.3
CBOC	**Ciudad Bolivar**	**1.78**	**144**	P		Pn	04 04 06.6	-1.6
CBOC				S		Sn	04 04 26.8	-4.0
HELC	**Santa Helena**	**1.89**	**126**	eP		Pn	04 04 10.6	+0.7
HELC				eS		Sn	04 04 35.2	+1.5
HELC	**Santa Helena**	**1.89**	**126**	P		Pn	04 04 10.5	+0.7
HELC				S		Sn	04 04 35.7	+2.0
HELC	**Santa Helena**	**1.89**	**126**	P		Pn	04 04 10.1	+0.2
HELC				S		Sn	04 04 34.4	+0.6
TOTI	**Torti**	**2.03**	**323**	eP		Pn	04 04 13.2	+1.7
TOTI				eS		Sb	04 04 40.2	+0.7
CNTA3	**Canitas, Panam**	**2.62**	**316**	eP		Pb	04 04 22.8	-1.7
GUY2C	**Guyana, Caldas**	**2.67**	**141**	P		Pn	04 04 21.7	+0.9
GUY2C				S		Sn	04 04 53.8	+0.5
PTBC	**PUERTO BERRIO,**	**2.70**	**106**	P		Pn	04 04 22.2	+1.4
PTBC				S		Sn	04 04 54.8	+1.5
CHOR3	**La Chorrera**	**3.11**	**301**	eP		Pn	04 04 29.3	+3.0
CHOR3				eS		Sn	04 05 05.6	+2.2
SJCC	**San Jacinto, C**	**3.17**	**36**	eP		Pn	04 04 30.0	+2.7
SJCC				eP		Pb	04 04 31.0	-2.9
SJCC				eS		Sn	04 05 05.0	-0.1
SJCC				eS		Sb	04 05 06.1	-6.5
SJCC	**San Jacinto, C**	**3.17**	**36**	P		Pn	04 04 28.0	+0.7
SJCC	**San Jacinto, C**	**3.17**	**36**	P		Pn	04 04 28.8	+1.5
SJCC				S		Sn	04 05 04.1	-1.0
GAMB1	**Gamboa**	**3.18**	**305**	eP		Pn	04 04 27.5	+0.2
GAMB1				eP		Pb	04 04 27.6	-6.3
GAMB1				eS		Sn	04 05 06.2	+1.1
AZU	**Azuero**	**3.22**	**279**	eP		Pn	04 04 28.7	+0.8
ZANG	**Zanguenga, Cho**	**3.22**	**301**	eP		Pn	04 04 29.6	+1.7
FRIJ	**El Hiral**	**3.25**	**306**	eP		Pn	04 04 29.1	+0.8
BCIP	**Isla Barro Col**	**3.31**	**304**			Pb	04 04 34.2	-1.9
BCIP	**Isla Barro Col**	**3.31**	**304**	eP		Pn	04 04 29.9	+0.8
BCIP				eS		Sn	04 05 10.1	+1.7
YOTC	**Yotoco, Valle**	**3.38**	**168**	P		Pn	04 04 27.8	-2.5
YOTC				S		Sn	04 05 04.3	-6.1
CHIT3	**Chitre**	**3.39**	**281**	eP		Pn	04 04 31.0	+0.8
SPBC	**San Pablo de B**	**3.40**	**119**	P		Pn	04 04 33.4	+3.0
SPBC				S		Sb	04 05 18.1	-1.0
ROSC	**El Rosal**	**3.67**	**132**	P		Pn	04 04 37.5	+3.0
ROSC	11nm,0.3s,baz=352,slow=14,SNR=9.7			S		Sn	04 05 21.5	+3.7
	72nm,0.8s,baz=108,slow=20,SNR=6.9							
	24nm,0.3s							
ROSC	**El Rosal**	**3.67**	**132**			Pn	04 04 35.2	+0.8
ROSC						Sn	04 05 15.3	-2.5
CACAO	**El Cacao, Vera**	**3.77**	**271**	eP		Pn	04 04 35.5	+0.1
OCAC	**Ocana**	**3.82**	**76**	P		Pn	04 04 38.2	+1.9
OCAC				S		Sn	04 05 21.4	+0.1
ORTC	**Ortega, Tolima**	**3.83**	**152**	P		Pn	04 04 38.3	+1.9
ORTC				S		Sn	04 05 21.6	+0.2
BARC	**Barichara**	**3.92**	**100**	P		Pn	04 04 40.2	+2.5
BARC				S		Sn	04 05 25.6	+1.9
GMAL	**Guarumal, Vera**	**4.16**	**276**	eP		Pn	04 04 42.7	+1.9
GMAL				eS		Sn	04 05 31.3	+1.9
RUSC	**La Rusia**	**4.20**	**109**			Pn	04 04 43.5	+1.7
RUSC				Sn		Sn	04 05 30.8	-0.2
RUSC	**La Rusia**	**4.20**	**109**	P		Pn	04 04 45.5	+3.7
RUSC				S		Sn	04 05 35.1	+4.2
RUSC	**La Rusia**	**4.20**	**109**	P		Pn	04 04 44.8	+3.0
RUSC				S		Sn	04 05 31.6	+0.6
VILC	**Villavicencio,**	**4.62**	**133**	P		Pn	04 04 51.4	+4.1
SMRC	**Santa Marta, M**	**4.74**	**36**	Pn		Pn	04 04 53.1	+4.2
URMC	**La Uribe, Meta**	**4.84**	**146**	P		Pn	04 04 51.7	+1.4
BBAC	**Balboa, Cauca**	**5.26**	**182**	P		Pn	04 04 57.7	+1.5
	519nm15nm,0.9s							
GARC	**Garzon, Huila**	**5.33**	**163**	P		Pn	04 04 57.1	0.0
CRJC	**Cerrejon, Guaj**	**5.53**	**48**	P		Pn	04 04 59.6	-0.2
FLOC	**Florencia**	**5.86**	**166**			Pn	04 05 05.4	+1.1
FLOC	**Florencia**	**5.86**	**166**	P		Pn	04 05 03.2	-1.1
SDV	**Santo Domingo**	**6.55**	**76**	P		Pn	04 05 15.8	+1.8
	2.6nm,0.3s,baz=231,slow=7.8,SNR=10							
SDV				S		Sn	04 06 27.2	-1.6
	29nm,0.3s,baz=5.8,slow=15,SNR=18							
SDV				LR	LR		04 08 29.4	
	comp=Z,63nm,19.5s,baz=244,slow=44							
	9.0nm,0.4s							
SDV	**Santo Domingo**	**6.55**	**76**			Pn	04 05 15.7	+1.7
OTAV	**Otavalo**	**7.16**	**191**	Pn		Pn	04 05 24.0	+1.5
JTS	**Las Juntas de**	**8.34**	**291**	LR	LR		04 09 22.3	
	comp=Z,34nm,18.9s,baz=52,slow=41							
BOAV	**Boa Vista**	**17.18**	**106**			Pn	04 07 39.1	+1.5
MAL2	**Monte Alegre,**	**24.64**	**111**	P		P	04 08 56.9	-1.4
MAL2				IAmb	IAmb		04 09 18.5	
	comp=Z,17nm,0.9s							
WLAR	**White Oak Lake**	**30.16**	**333**	P		P	04 09 48.6	+1.2
P48A	**Milroy**	**32.88**	**348**	P		P	04 10 12.4	+1.0
P48A				IAmb	IAmb		04 10 17.6	
	comp=Z,8.5nm,1.1s							
MNTX	**Cornudas Mount**	**35.86**	**316**	P		P	04 10 38.7	+1.4
MNTX				IAmb	IAmb		04 11 15.2	
	comp=Z,2.9nm,1.4s							
SADO	**Sadowa**	**37.36**	**358**	P		P	04 10 51.4	+1.5
SADO				IAmb	IAmb		04 11 30.4	
	comp=Z,17nm,1.4s							
ILAR	**Eielson Array**	**74.88**	**335**	P		P	04 15 17.2	-0.6
	comp=Z,0.3nm,0.7s,baz=122,slow=4.0,SNR=6.1							
	comp=Z,0.3nm,0.7s							
ILAR	**Eielson Array**	**74.88**	**335**	P		P	04 15 18.0	+0.2
TORD	**Torodi Ar. Bea**	**77.47**	**78**	P		P	04 15 32.6	-1.0
	comp=Z,3.4nm,1.1s,baz=287,slow=7.3,SNR=1.6							
	comp=Z,3.4nm,1.1s							
SNAA	**Sanae**	**91.98**	**162**	P		P	04 16 45.0	-0.8
SNAA				IAmb	IAmb		04 17 02.0	
	comp=Z,3.2nm,1.4s							
ASAR	**Alice Springs**	**146.14**	**238**	PKPbc		**PKPdf**	04 23 16.7	-0.9
	comp=Z,1.0nm,0.8s,baz=106,slow=3.9,SNR=8.1							
WRA	**Warramunga Arr**	**147.08**	**244**	PKPbc		**PKPdf**	04 23 18.2	-1.1
	comp=Z,0.3nm,0.6s,baz=100,slow=1.9,SNR=4.6							

*IDC **27** 04:06:10.0±3.4, 18°.62S×169°.39E, h241km±29km, mb3.8/5, mbtmp4.3/6, Error ellipse: s-maj=40.7km s-min=26.8km az=156.0*

*NEIC **27** 04:06:10.9±2.0, 18°.69S±0°.08×169°.4E±0°.1, h241km±8km, mb4.4/23, Error ellipse: s-maj=14.5km s-min=11.2km az=105.0*

*NOU **27** 04:06:13.3, 18°.76S×169°.12E, h221km, MLv3.9/7, Vanuatu Islands*

ISC 27 04:06:10.3±0.6, 18°.69S±0°.06×169°.31E±0°.09, h240km, n44, σ1s03/46, mb4.3/15, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INH	**Isangel**	**0.85**	**182**	P	Pn	04 06 44.6	**+1.1**
RTV	**Rentapao**	**1.23**	**317**	P	Pn	04 06 47.1	+1.3
DVP	**Devils Point**	**1.44**	**312**	P	Pn	04 06 48.0	+0.8
MARNC	**Mare, Loyalty**	**3.02**	**203**		Pn	04 07 02.9	+0.4
MARNC					S	04 07 42.5	-1.1
MARNC	**Mare, Loyalty**	**3.02**	**203**	P	Pn	04 07 02.8	+0.4
MARNC	**Mare, Loyalty**	**3.02**	**203**	P	S	04 07 42.2	-1.4
SANVU	**Saraoutou**	**3.81**	**328**		Pn	04 07 11.9	+0.4
PINNC	**Pines Island,**	**4.27**	**204**		Pn	04 07 18.6	+1.7
DZM	**Mont Dzumac**	**4.30**	**218**	P	Pn	04 07 18.3	+0.9
	34nm,0.8s,baz=68,slow=19,SNR=27						
DZM				S	S	04 08 07.8	-2.8
	17nm,0.7s,baz=0.0,slow=20,SNR=3.4						
ONTNC	**Ouen Toro**	**4.48**	**216**		Pn	04 07 19.8	+0.3
MSVF	**Nonsavu**	**8.36**	**85**	Pn	Pn	04 08 08.8	+0.5
EIDS	**Eidsvold**	**18.15**	**245**	P	Pn	04 10 07.4	-0.8
EIDS				IAmb	IAmb	04 10 33.0	
	comp=Z,20nm,1.5s						
BKZ	**Black Stump Fm**	**21.33**	**165**	P	P	04 10 38.9	+0.1
BKZ				IAmb	IAmb	04 10 53.9	
	comp=Z,26nm,1.5s						
CTAO	**Charters Tower**	**21.79**	**263**	P	P	04 10 44.8	+1.4
BFZ	**Birch Farm**	**22.71**	**166**	P	P	04 10 51.1	-0.5
TCW	**Tory Channel**	**22.84**	**170**	P	P	04 10 55.2	+2.5
COEN	**Coen**	**25.51**	**277**	P	P	04 11 18.0	+0.8
COEN				IAmb	IAmb	04 11 39.3	
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**28.20**	**237**	P	P	04 11 42.4	+1.5
	comp=Z,2.8nm,0.7s,baz=79,slow=10,SNR=4.0						
	comp=Z,2.8nm,0.7s						
STKA	**Stephens Creek**	**28.20**	**237**	P	P	04 11 39.8	-1.2
STKA				IAmb	IAmb	04 12 10.1	
	comp=Z,24nm,1.2s						
WR8	**Warramunga Arr**	**32.84**	**262**	P	P	04 12 21.1	-0.7
BBOO	**Buckleboo**	**32.93**	**238**	P	P	04 12 23.6	+1.1
BBOO				IAmb	IAmb	04 12 26.3	
	comp=Z,19nm,1.4s						
WB0	**Warramunga Arr**	**32.95**	**262**	P	P	04 12 22.5	-0.3
WB0				IAmb	IAmb	04 12 23.7	
	comp=Z,6.3nm,1.3s						
WB2	**Warramunga Arr**	**32.98**	**262**	P	P	04 12 22.7	-0.4
WB2				IAmb	IAmb	04 12 51.0	
	comp=Z,6.5nm,1.4s						
WRA	**Warramunga Arr**	**32.99**	**262**	P	P	04 12 22.8	-0.4
	comp=Z,2.1nm,0.6s,baz=96,slow=8.4,SNR=8.2						
	comp=Z,2.1nm,0.6s						
WRA	**Warramunga Arr**	**32.99**	**262**	P	P	04 12 23.0	-0.2
AS31	**Alice Springs**	**33.33**	**255**		P	04 12 26.6	+0.6
ASAR	**Alice Springs**	**33.33**	**255**	P	P	04 12 26.4	+0.4
	comp=Z,12nm,0.5s,baz=83,slow=8.9,SNR=190						
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**33.33**	**255**		P	04 12 26.6	+0.5
MTN	**Manton Dam**	**37.15**	**273**	P	P	04 12 58.7	+0.1
MTN				IAmb	IAmb	04 12 59.9	
	comp=Z,22nm,1.5s						
KNRA	**Kununurra**	**38.80**	**268**	P	P	04 13 12.6	+0.2
KNRA				IAmb	IAmb	04 13 13.6	
	comp=Z,28nm,1.4s						
FAKI	**Fak Fak**	**39.51**	**289**	P	P	04 13 18.4	+0.2
FAKI				IAmb	IAmb	04 13 19.1	
	comp=Z,9.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**41.37**	**264**	P	P	04 13 34.5	+1.1
PSA00	**Pilbara Seismi**	**46.38**	**258**	P	P	04 14 14.0	+0.8
MBWA	**Marble Bar**	**46.53**	**258**	P	P	04 14 15.1	+0.8
MBWA				IAmb	IAmb	04 14 17.4	
	comp=Z,9.8nm,1.1s						
CASY	**Casey**	**60.65**	**203**	P	P	04 15 55.8	0.0
AMKA	**Amchitka**	**70.32**	**7**	P	P	04 16 56.9	-0.7
NIKH	**Nikolski High**	**73.83**	**14**	P	P	04 17 17.8	-0.6
MCARA	**McCarthy VSAT**	**88.39**	**21**	P	P	04 18 33.4	-1.2
MCARA				IAmb	IAmb	04 18 34.4	
	comp=Z,15nm,1.1s						
ILAR	**Eielson Array**	**89.69**	**17**	P	P	04 18 39.8	-0.9
	comp=Z,0.5nm,0.5s,baz=240,slow=5.0,SNR=18						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**89.69**	**17**	P	P	04 18 38.8	-1.9
SNAA	**Sanae**	**89.71**	**182**	P	P	04 18 40.6	-0.4
	comp=Z,1.0nm,0.7s,baz=202,slow=6.3,SNR=8.8						
	comp=Z,1.0nm,0.7s						
SNAA	**Sanae**	**89.71**	**182**	P	P	04 18 40.8	-0.2
SNAA				IAmb	IAmb	04 18 41.2	
	comp=Z,4.3nm,1.5s						
ARCES	**ARCESS Array B**	**124.56**	**345**	PKP	**PKPdf**	04 24 39.9	-0.5
	comp=Z,4.7nm,0.9s,baz=45,slow=1.9,SNR=4.5						
ARCES	**ARCESS Array B**	**124.56**	**345**		**PKPdf**	04 24 40.2	-0.2

*IDC **27** 04:11:49.5±1.0, 33°.02N×92°.40E, h0km, mb3.7/7, mbtmp3.7/9, ML3.1/2, MS2.8/4, Error ellipse: s-maj=39.0km s-min=19.9km az=59.0*

ISC 27 04:11:54.8±1.1, 33°.1N±0°.2×92°.5E±0°.2, h35km, n13, σ0s78/10, mb3.8/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.69**	**333**	Pn	Pn	04 15 32.4	**-0.7**
	0.1nm,0.3s,baz=144,slow=15,SNR=2.3						
MKAR				LR	LR	04 22 03.7	
	comp=Z,41nm,19.1s,baz=110,slow=39						
	0.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.74**	**157**	LR	LR	04 22 55.3	
	comp=Z,7.9nm,19.5s,baz=330,slow=42						
AAK	**Ala-Archa**	**17.03**	**309**	LR	LR	04 23 52.9	
	comp=Z,47nm,19.2s,baz=104,slow=42						
SONM	**Songino Array**	**18.07**	**32**	P	Pn	04 16 02.6	-0.5
	0.1nm,0.3s,baz=215,slow=13,SNR=7.1						
	1.1nm,0.7s						
KURBB	**Kurchatov Arra**	**20.25**	**334**	P	P	04 16 26.8	-0.2
	0.9nm,0.8s,baz=150,slow=10,SNR=6.2						
	0.9nm,0.8s						
ZALV	**Zalesovo Beam**	**21.50**	**348**	P	P	04 16 40.1	-0.3
	1.8nm,0.7s,baz=169,slow=11,SNR=4.7						
	1.8nm,0.7s						
BVAR	**Borovoye Array**	**25.41**	**328**	P	P	04 17 19.8	+1.0
	2.0nm,0.6s,baz=135,slow=11,SNR=8.8						
	2.0nm,0.6s						
AKASG	**Malin Array Be**	**48.68**	**311**	LR	LR	04 45 12.2	
	comp=Z,35nm,18.8s,baz=190,slow=41						
FINES	**FINESS Array B**	**50.30**	**325**	P	P	04 20 48.4	+0.8
	2.7nm,1.0s,baz=111,slow=10,SNR=4.6						
	2.7nm,1.0s						
WRA	**Warramunga Arr**	**66.22**	**137**	P	P	04 22 38.6	-0.7
	0.8nm,0.9s,baz=318,slow=7.6,SNR=2.6						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**68.94**	**139**	P	P	04 22 56.9	+0.4
	0.6nm,0.7s,baz=320,slow=6.6,SNR=4.9						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**72.05**	**23**	P	P	04 23 15.7	+0.8
	0.5nm,0.9s,baz=293,slow=4.8,SNR=4.7						
	0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**83.56**	**281**	P	P	04 24 19.0	-0.8
	6.8nm,0.4s,baz=41,slow=6.0,SNR=7.1						

*AEIC **27** 04:15:33.1±1.6, 54°.0N±0°.1×163°.98W±0°.08, h65km±10km, Error ellipse: s-maj=16.0km s-min=1.1km az=155.0*

NEIC 27 04:15:34.2±1.7, 53°.89N±0°.06×163°.91W±0°.07, h35km±2km, ML2.6/12, MLv2.3(AEIC), Error ellipse: s-maj=11.8km s-min=4.8km az=333.0, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEBT	**Westdahl Beart**	**0.86**	**325**		Pn	04 15 49.2	-0.6
WEBT					Sn	04 16 01.4	+0.2
ISNN	**Isanotski Nort**	**0.95**	**5**		Pn	04 15 50.5	-0.6
ISNN					Sn	04 16 03.6	+0.3
FALS	**False Pass**	**1.01**	**16**		Pn	04 15 50.8	-1.1
FALS					Sn	04 16 04.2	-0.6
AKUT	**Akutan**	**1.13**	**283**		Sn	04 16 08.1	+0.4
AKUT	**Akutan**	**1.13**	**283**		Pn	04 15 52.3	-1.2
AKUT				IAML		04 16 11.9	
	comp=E,66nm,1.1s						
AKLV	**Akutan Long Va**	**1.24**	**284**		Pn	04 15 54.4	-0.6
AKLV					Sn	04 16 10.8	+0.2
AKMO	**Akutan Morgan**	**1.26**	**280**		Pn	04 15 54.0	-1.3
AKMO					Sn	04 16 11.5	+0.6
LVA	**Lava Point**	**1.28**	**283**	Pn	Pn	04 15 56.3	+0.7
LVA				IAML		04 16 26.3	
	comp=E,68nm,0.7s						
LVA				IAML		04 16 34.8	
	comp=N,170nm,1.2s						
UNV	**Unalaska Valle**	**1.54**	**269**		Pn	04 15 58.3	-0.8
UNV					Sn	04 16 18.1	+0.3
DT1	**Dutton Round H**	**1.54**	**37**		Pn	04 15 58.4	-0.9
DT1					Sn	04 16 17.9	-0.1
MNAT	**Makushin Natee**	**1.64**	**271**		Pn	04 15 59.8	-0.8
MNAT					Sn	04 16 21.0	+0.6
MSW	**Makushin Switc**	**1.70**	**272**		Pn	04 16 00.7	-0.7
MSW					Sn	04 16 22.1	+0.1
DOL	**Dolgoi Island**	**1.73**	**43**		Pn	04 16 01.7	-0.1
DOL					Sn	04 16 23.4	+0.7
MGOD	**Makushin Gods**	**1.76**	**268**		Pn	04 16 01.6	-0.6
MGOD					Sn	04 16 23.6	+0.2
S12K	**Black Hills**	**2.11**	**30**	Pn	Pn	04 16 07.0	0.0
S12K				IAML		04 16 35.0	
	comp=E,43nm,1.1s						
SDPT	**Sand Point**	**2.47**	**52**	Pn	Pn	04 16 12.2	+0.2
SDPT				IAML		04 17 03.4	
	comp=E,35nm,1.0s						
SDPT				IAML		04 17 24.5	
	comp=N,21nm,0.8s						

*SJA **27** 04:45:38.5±0.7, 23°.94S×66°.84W, h218km±5km, ML3.9, MW3.8*

*NEIC **27** 04:45:38.9±1.2, 23°.96S±0°.06×66°.72W±0°.10, h194km±7km, mb4.3/6, Error ellipse: s-maj=12.6km s-min=9.1km az=86.0*

*IDC **27** 04:45:38.3±1.7, 23°.90S×66°.69W, h190km±16km, mb3.3/5, mbtmp3.8/10, MS3.1/1, Error ellipse: s-maj=20.7km s-min=13.9km az=77.0*

ISC 27 04:45:38.7±0.7, 23°.96S±0°.04×66°.85W±0°.04, h200km±6km, n77, σ1s53/98, mb3.4/5, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALTA		**0.53**	**120**	eP	Pn	04 46 03.0	**-3.6**
SALTA				eP	Pn	04 46 03.0	-3.6
SALTA				eP		04 46 08.4	
SALTA				eP		04 46 08.7	
SLA	**San Lorenzo**	**1.44**	**122**	eP	Pn	04 46 14.1	+2.0
SLA				eS	S	04 46 40.9	+3.2

HJA	**Humahuaca**	**1.52**	**61**	eP		Pn	04 46 14.5	+1.5
AF01	**San Pedro de A**	**1.58**	**309**			Pn	04 46 14.6	+1.1
AF01					Sn	S	04 46 41.9	+1.8
AF01	**San Pedro de A**	**1.58**	**309**	eP		Pn	04 46 11.6	-1.9
AF01				eS		S	04 46 40.1	+0.1
AF01				IAML			04 46 49.0	
	comp=Z,222nm,0.8s							
YJA	**Yavi**	**2.16**	**35**	eP		Pn	04 46 21.4	+2.0
YJA				eS		S	04 46 53.1	+2.7
FSA	**Cafayete**	**2.28**	**160**	eP		Pn	04 46 21.7	+1.3
FSA				eS		S	04 46 53.7	+1.2
GO02	**Mina Guanaco**	**2.77**	**244**			Pn	04 46 27.4	+1.4
GO02					Sn	S	04 47 04.2	+2.0
GO02	**Mina Guanaco**	**2.77**	**244**	eP		Pn	04 46 27.8	+1.8
GO02				eS		S	04 47 04.0	+1.8
GO02				IAML			04 47 08.4	
	comp=Z,691nm,0.5s							
PB06	**IPOC Station P**	**2.80**	**296**			Pn	04 46 28.0	+1.8
PB06					Sn	S	04 47 03.4	+0.9
PB06	**IPOC Station P**	**2.80**	**296**	eP		Pn	04 46 27.9	+1.7
PB06				eS		S	04 47 03.9	+1.4
PB06				IAML			04 47 08.3	
	comp=Z,210nm,0.1s							
PB09	**IPOC Station P**	**3.08**	**314**			Pn	04 46 30.9	+1.3
PB09					Sn	S	04 47 10.2	+1.6
PB09	**IPOC Station P**	**3.08**	**314**	eP		Pn	04 46 31.2	+1.7
PB09				eS		S	04 47 10.5	+2.0
PB09				IAML			04 47 12.3	
	comp=Z,230nm,0.7s							
AHML	**Horco Molle**	**3.13**	**154**	eP		Pn	04 46 19.8	-10
AHML				eS		S	04 46 58.4	-11
PB05	**IPOC Station P**	**3.27**	**289**			Pn	04 46 32.9	+1.2
PB05	**IPOC Station P**	**3.27**	**289**	eP		Pn	04 46 33.0	+1.2
PB05				eS		S	04 47 13.3	+0.8
PB05				IAML			04 47 19.6	
	comp=Z,94nm,0.4s							
PB03	**IPOC Station P**	**3.28**	**305**			Pn	04 46 32.9	+1.0
PB03	**IPOC Station P**	**3.28**	**305**	eP		Pn	04 46 33.1	+1.2
PB03				eS		S	04 47 13.3	+0.4
PB03				IAML			04 47 14.9	
	comp=Z,277nm,0.1s							
PB14	**IPOC Station P**	**3.31**	**258**			Pn	04 46 33.4	+1.0
PB14	**IPOC Station P**	**3.31**	**258**	eP		Pn	04 46 33.6	+1.2
PB14				eS		S	04 47 14.9	+1.2
PB14				IAML			04 47 16.0	
	comp=Z,178nm,0.5s							
AC02	**Maricunga**	**3.53**	**215**			Pn	04 46 36.7	+1.5
AC02	**Maricunga**	**3.53**	**215**	eP		Pn	04 46 37.0	+1.8
AC02				eS		S	04 47 23.3	+4.5
AC02				IAML			04 47 29.8	
	comp=Z,411nm,0.8s							
PB07	**IPOC Station P**	**3.58**	**308**			Pn	04 46 36.5	+0.9
PB07	**IPOC Station P**	**3.58**	**308**	eP		Pn	04 46 36.4	+0.9
PB07				eS		S	04 47 18.9	-0.3
PB07				IAML			04 47 20.1	
	comp=Z,158nm,0.1s							
PB01	**IPOC Station P**	**3.79**	**319**			Pn	04 46 38.8	+0.8
PB01	**IPOC Station P**	**3.79**	**319**	eP		Pn	04 46 38.9	+0.8
PB01				eS		S	04 47 25.5	+1.5
PB01				IAML			04 47 28.3	
	comp=Z,74nm,0.5s							
PB02	**IPOC Station P**	**3.85**	**312**			Pn	04 46 39.4	+0.6
PB02	**IPOC Station P**	**3.85**	**312**	eP		Pn	04 46 39.7	+0.9
PB02				eS		S	04 47 24.8	-0.5
PB02				IAML			04 47 25.4	
	comp=Z,235nm,0.1s							
AC01	**Pan de Azucar**	**4.04**	**237**			Pn	04 46 41.2	+0.2
AC01	**Pan de Azucar**	**4.04**	**237**	eP		Pn	04 46 41.2	+0.2
AC01				eS		S	04 47 29.1	-0.2
AC01				IAML			04 47 30.6	
	comp=Z,92nm,1.2s							
PB08	**IPOC Station P**	**4.36**	**330**			Pn	04 46 46.6	+1.1
PB08	**IPOC Station P**	**4.36**	**330**	eP		Pn	04 46 46.7	+1.3
PB08				eS		S	04 47 38.1	+0.8
PB08				IAML			04 47 43.7	
	comp=Z,85nm,0.5s							
PATCX	**Punta Patache**	**4.37**	**315**			Pn	04 46 45.3	0.0
PATCX	**Punta Patache**	**4.37**	**315**	eP		Pn	04 46 46.0	+0.7
PATCX				eS		S	04 47 36.3	-0.7
PATCX				IAML			04 47 41.1	
	comp=Z,84nm,0.6s							
CYA	**Choya**	**4.56**	**168**	eP		Pn	04 46 49.3	+1.7
CYA				eS		S	04 47 28.9	-12
TA01	**Diego Aracena**	**4.58**	**317**			Pn	04 46 48.3	+0.5
AC06	**Mina Casimiro**	**4.63**	**222**			Pn	04 46 48.5	+0.1
GO03	**Copiapo**	**4.74**	**219**			Pn	04 46 50.1	+0.3
GO03	**Copiapo**	**4.74**	**219**	eP		Pn	04 46 49.9	+0.1
GO03				eS		S	04 47 45.1	-0.2
GO03				IAML			04 47 50.0	
	comp=Z,67nm,0.7s							
GO01	**Chusmiza**	**4.79**	**332**			Pn	04 46 51.7	+0.7
GO01	**Chusmiza**	**4.79**	**332**	eP		Pn	04 46 51.7	+0.7
GO01				eS		S	04 47 48.5	+1.2
GO01				IAML			04 47 55.2	
	comp=Z,61nm,0.5s							
**PB11

comp=Z,1.3nm,0.6s,baz=291,slow=4.4,SNR=9.0
MKAR Makanchi Array 146.40 40 PKPdf **PKPbc 05 04 55.1 -0.8**

*IDC **27** 05:11:15.9±8.1,41˚.48N×19˚.37E,h0km,mb3.7/4, mbtmp3.6/5,ML2.4/1,Error ellipse: s-maj=157.2km s-min=27.1km az=34.0*
*PDG **27** 05:11:18.5±0.2,41˚.46N×19˚.58E,h11km,MD3.4/5, ML3.3/13,Error ellipse: s-maj=0.6km s-min=1.0km az=0.0*
*SKO **27** 05:11:18.7,41˚.57N×19˚.34E,h3km,ML3.1*
*RHSSO **27** 05:11:18.5±1.1,41˚.44N×19˚.49E,h6km±5km,ML3.3/4*
*TIR **27** 05:11:19.3,41˚.60N×19˚.45E,h24km±2km,Ml3.2/7*
*BEO **27** 05:11:21.1±0.5,41˚.58N×19˚.47E,h13km±2km,ML3.0/10*
ISC 27 05:11:19.6±0.9,41˚.56N±0˚.02×19˚.44E±0˚.02,h15km±7km, n101,σ1§29/154,mb3.8/3,23C-22D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.39**	**123**	⇓Pg	**Pg**	**05 11 26.9**	**-0.5**
TIR				AML	AML	05 11 32.9	
	14nm,0.3s						
TIR				Sg	**Sg**	**05 11 33.0**	**+0.3**
TIR	**Tirane**	**0.39**	**123**	⇓*i*Pg	**Pg**	**05 11 26.9**	**-0.5**
TIR				*i* Sg	**Sb**	**05 11 33.4**	**-0.4**
ULC	**Ulcinj**	**0.43**	**340**	⇓*i*Pg	**Pb**	**05 11 28.3**	**-0.6**
ULC				*i* Sg	**Sb**	**05 11 36.2**	**+1.0**
SDA	**Shkodra**	**0.49**	**5**	⇓Pg	**Pg**	**05 11 29.0**	**-0.5**
SDA				Sg	**Sg**	**05 11 35.1**	**-0.9**
DRME	**Dracevica, Mon**	**0.65**	**343**	*e*Pg	**Pg**	**05 11 32.3**	**-0.2**
DRME	**Dracevica, Mon**	**0.65**	**343**	⇓*i*Pg	**Pg**	**05 11 32.2**	**-0.2**
DRME				*e*Sg	**Sn**	**05 11 44.2**	**-0.2**
PHP	**Peshkopia**	**0.76**	**80**	⇑Pg	**Pg**	**05 11 32.7**	**-1.8**
PHP				Sg	**Sg**	**05 11 44.1**	**-0.4**
PHP				AML	AML	05 11 54.1	
	3.4nm,3.7s						
BUM	**Brajici-Budva**	**0.84**	**331**	⇑*i*Pg	**Pb**	**05 11 36.0**	**0.0**
BUM				*i* Sg	**Sn**	**05 11 50.9**	**+1.7**
PDG	**Podgorica**	**0.88**	**351**	⇑Pn	**Pg**	**05 11 36.0**	**-0.7**
PDG				Sn	**Sb**	**05 11 47.9**	**-0.2**
PDG	**Podgorica**	**0.88**	**351**	⇑P	**Pg**	**05 11 35.8**	**-0.9**
PDG				⇓S	**Sn**	**05 11 49.5**	**-0.5**
PDG	**Podgorica**	**0.88**	**351**	*e*Pg	**Pg**	**05 11 36.0**	**-0.7**
PDG	**Podgorica**	**0.88**	**351**	⇑*i*Pg	**Pg**	**05 11 35.7**	**-1.0**
PDG				*e*Sg	**Sn**	**05 11 51.1**	**+1.2**
CEME	**Cevo**	**1.06**	**339**	⇓*i*Pg	**Pn**	**05 11 39.7**	**-0.3**
CEME				*i* Sg	**Sn**	**05 11 57.7**	**+3.2**
VLO	**Vlora**	**1.09**	**178**	⇑Pg	**Pg**	**05 11 41.9**	**+1.2**
VLO				Sg	**Sn**	**05 11 55.4**	**+0.3**
VLO				AML	AML	05 12 00.9	
	3.0nm,0.4s						
PVY	**Plav**	**1.10**	**20**	*e*Pg	**Pb**	**05 11 39.3**	**-1.2**
PVY	**Plav**	**1.10**	**20**	⇓*i*Pg	**Pb**	**05 11 39.2**	**-1.3**
PVY				*e*Sg	**Sn**	**05 11 56.9**	**+1.2**
OHR	**Ohrid**	**1.12**	**113**	*i* Pg	**Pb**	**05 11 39.6**	**-1.0**
OHR				*i* Sg	**Sn**	**05 11 57.1**	**+1.2**
OHR				*i* Lg	Lg	05 11 59.8	
	comp=N,478nm,0.6s						
OHR				*i* Lg	Lg	05 12 00.1	
	comp=E,246nm,0.5s						
HCY	**Herceg Novi**	**1.13**	**322**	⇑*i*Pg	**Pg**	**05 11 41.9**	**+0.4**
HCY				*i* Sg	**Sn**	**05 12 00.3**	**+4.1**
NKME	**Niksic**	**1.26**	**343**	⇓*i*Pg	**Pg**	**05 11 43.9**	**0.0**
NKME				*e*Sg	**Sg**	**05 12 02.8**	**+2.5**
KOME	**Kolasin**	**1.29**	**2**	*e*Pg	**Pb**	**05 11 44.1**	**-0.4**
KOME	**Kolasin**	**1.29**	**2**	⇓*i*Pg	**Pb**	**05 11 43.4**	**-0.2**
KOME				*e*Sg	**Sg**	**05 12 04.2**	**+2.9**
BEY	**Berane**	**1.35**	**14**	*e*Pg	**Pg**	**05 11 44.9**	**-0.8**
IVA	**Berane**	**1.35**	**14**	⇑*i*Pg	**Pn**	**05 11 43.9**	**-0.1**
IVA				*e*Sg	**Sg**	**05 12 05.9**	**+2.6**
KBN	**Korca**	**1.38**	**132**	⇓Pg	**Pb**	**05 11 45.5**	**+0.2**
KBN				Sg	**Sg**	**05 12 04.7**	**+0.4**
TREB	**Trebinje**	**1.41**	**325**	⇑*i*Pn	**Pg**	**05 11 46.0**	**-0.8**
TREB				*e*Sg	**Sg**	**05 12 06.9**	**+1.8**
TREB	**Trebinje**	**1.41**	**325**	*e*Pg	**Pg**	**05 11 46.5**	**-0.3**
TREB				*e*Sg	**Sg**	**05 12 06.6**	**+1.4**
BRY	**Bratogost**	**1.50**	**334**	⇑*i*Pn	**Pg**	**05 11 47.7**	**-0.7**
BRY				*i* Sn	**Sg**	**05 12 10.4**	**+2.5**
SKO	**Skopje**	**1.55**	**74**	*i* Pg	**Pb**	**05 11 48.1**	**+0.1**
SKO				*i* Sg	**Sg**	**05 12 09.7**	**+0.1**
NEST	**Nestorio**	**1.67**	**133**	⇓Pn	**Pb**	**05 11 50.5**	**+0.4**
NEST				Sn	**Sg**	**05 12 14.5**	**+1.1**
NEST				AML	AML	05 12 17.8	
	comp=E,0.4nm,0.3s						
UPM	**Unac-Piva**	**1.69**	**347**	⇑*i*Pn	**Pb**	**05 11 50.2**	**-0.3**
UPM				*e*Sn	**Sg**	**05 12 15.4**	**+1.4**
KLINJ	**Klinje**	**1.73**	**339**	*e*Pn	**Pb**	**05 11 50.6**	**-0.5**
KLINJ				*e*Sn	**Sg**	**05 12 15.0**	**-0.3**
SJES	**Sjenica**	**1.75**	**13**	*e*Pn	**Pg**	**05 11 52.3**	**-0.9**
SJES				*e*Sg	**Sg**	**05 12 17.1**	**+1.3**
PLE	**Pljevlja**	**1.77**	**359**	*e*Pn	**Pg**	**05 11 52.6**	**-1.0**
PLE	**Pljevlja**	**1.77**	**359**	*e*Pn	**Pb**	**05 11 52.0**	**+0.2**
PLE				*e*Sn	**Sg**	**05 12 16.2**	**-0.4**
STON	**Ston**	**1.84**	**316**	*e*Pn	**Pg**	**05 11 53.7**	**-1.2**
STON				*e*Sn	**Sb**	**05 12 16.1**	**+0.4**
NOCI	**Noci**	**1.95**	**248**	Pn	**Pn**	**05 11 52.6**	**+0.5**
NOCI				Sn	**Sg**	**05 12 20.9**	**-1.5**
NOCI				AML	AML	05 12 26.3	
	comp=E,1.3nm,0.3s						
RUDO	**Rudo**	**2.06**	**359**	⇑*i*Pn	**Pn**	**05 11 54.7**	**+1.1**
RUDO				*e*Sn	**Sb**	**05 12 22.4**	**+0.4**
RUDO	**Rudo**	**2.06**	**359**	*e*Pn	**Pb**	**05 11 55.5**	**-1.2**
SELS	**Selova**	**2.07**	**36**	*e*Pn	**Pb**	**05 11 55.3**	**-1.6**
SELS				*e*Sn	**Sb**	**05 12 21.9**	**-0.6**
IVAS	**Ivanjica**	**2.08**	**14**	*e*Pn	**Pn**	**05 11 55.2**	**+1.2**
IVAS				*e*Sn	**Sb**	**05 12 22.1**	**-0.7**
IGT	**Igoumenitsa**	**2.14**	**161**	⇑Pn	**Pb**	**05 11 56.5**	**-1.5**
IGT				Sn	**Sb**	**05 12 25.6**	**+1.3**
IGT				AML	AML	05 12 28.2	
	comp=E,0.3nm,0.5s						
MATE	**Matera**	**2.26**	**247**	⇓P	**Pn**	**05 11 56.4**	**+0.1**
GOCS	**Kraljevo Serbi**	**2.26**	**27**	*e*Pn	**Pn**	**05 11 57.8**	**+1.2**
GOCS				*e*Sn	**Sn**	**05 12 26.1**	**+1.9**
BBLS	**Lazi&#263i**	**2.30**	**359**	*e*Pn	**Pb**	**05 11 59.1**	**-1.8**
VAY	**Valandovo**	**2.37**	**95**	*i* Pn	**Pn**	**05 11 59.2**	**+1.3**
VAY				*i* Sn	**Sn**	**05 12 28.7**	**+2.1**
VAY				*i* Lg	Lg	05 12 29.1	
	comp=N,25nm,0.6s						
VAY				*i* Lg	Lg	05 12 30.3	
	comp=E,36nm,0.6s						
BOSS	**Bosilegrad**	**2.45**	**67**	*e*Pn	**Pn**	**05 12 00.5**	**+1.4**
BOSS				*e*Sn	**Sn**	**05 12 29.0**	**+0.3**
GRUS	**Gruza**	**2.51**	**22**	*e*Pn	**Pn**	**05 12 01.6**	**+1.8**
KNT	**Kendrikon**	**2.63**	**98**	*i* Pn	**Pn**	**05 12 02.8**	**+1.2**
BOVS	**Bovan**	**2.66**	**38**	⇓P	**Pn**	**05 12 03.0**	**+1.0**
BOVS	**Bovan**	**2.66**	**38**	*e*Pn	**Pn**	**05 12 03.0**	**+1.0**
BOVS				*e*Sn	**Sn**	**05 12 34.5**	**+0.5**
SGRT	**San Giovanni R**	**2.77**	**275**	⇑Pn	**Pn**	**05 12 04.1**	**+0.5**
SGRT				Sn	**Sb**	**05 12 40.8**	**-1.9**
SGRT				AML	AML	05 12 41.6	
	comp=E,0.2nm,0.4s						
KKB	**Krupnik**	**2.78**	**83**	*i* Pn	**Pn**	**05 12 05.1**	**+1.5**
ZAPS	**Zavoj**	**2.92**	**53**	*e*Pn	**Pn**	**05 12 07.0**	**+1.5**
ZAPS				*e*Sn	**Sn**	**05 12 41.9**	**+1.6**
TEKS	**Tekeris**	**2.99**	**1**	*e*Pn	**Pn**	**05 12 07.3**	**+0.9**
VTS	**Vitosha**	**3.02**	**68**	*e*Pn	**Pn**	**05 12 08.1**	**+1.2**
VTS				*e*Sn	**Sn**	**05 12 44.0**	**+1.1**
ZAGS	**Zajecar**	**3.05**	**42**	*e*Pn	**Pn**	**05 12 08.7**	**+1.4**
ZAGS				*e*Sn	**Sn**	**05 12 44.8**	**+1.3**
TIP	**Timpagrande**	**3.14**	**222**	⇑P	**Pn**	**05 12 08.8**	**+0.3**
BLKB	**Belogradchik**	**3.15**	**48**	*e*Pn	**Pn**	**05 12 10.6**	**+1.8**
BLKB				*e*Sn	**Sn**	**05 12 47.8**	**+1.7**
SRS	**Serrai**	**3.16**	**97**	*i* Pn	**Pn**	**05 12 10.0**	**+1.3**
BORS2	**Bor- Borsko je**	**3.16**	**36**	*e*Pn	**Pn**	**05 12 08.8**	**0.0**
BORS2				*e*Sn	**Sn**	**05 12 45.8**	**-0.4**
MMB	**Musomishta**	**3.23**	**89**	*i* Pn	**Pn**	**05 12 11.6**	**+1.8**
KUBS	**Kucevo**	**3.29**	**29**	*e*Pn	**Pn**	**05 12 10.4**	**-0.2**
KUBS				*e*Sn	**Sn**	**05 12 48.5**	**-0.9**
BLY	**Banja Luka**	**3.59**	**333**	*e*Pn	**Pn**	**05 12 16.7**	**+2.0**
BLY				*e*Sn	**Sn**	**05 12 59.5**	**+2.8**
BLY	**Banja Luka**	**3.59**	**333**	⇓P	**Pn**	**05 12 15.9**	**+1.3**
FRGS	**Fruska Gora**	**3.61**	**4**	*e*Pn	**Pn**	**05 12 15.7**	**+0.8**
MDVR	**Moldovita**	**3.62**	**27**	⇓P	**Pn**	**05 12 16.0**	**+0.9**
MDVR	**Moldovita**	**3.62**	**27**	*e*Pn	**Pn**	**05 12 16.1**	**+0.9**
HERR	**Herculane**	**3.97**	**32**	⇓P	**Pn**	**05 12 20.9**	**+1.0**
PLD	**Plovdiv**	**4.01**	**80**	*e*Pn	**Pn**	**05 12 22.2**	**+1.8**
BZS	**Buzias**	**4.35**	**21**	⇑P	**Pn**	**05 12 26.2**	**+1.0**
GZR	**Gura Zlata**	**4.54**	**31**	⇑P	**Pn**	**05 12 29.7**	**+2.0**
AQU	**L'Aquila**	**4.57**	**282**	*e*Pn	**Pn**	**05 12 28.9**	**+0.7**
AQU				*e*Sn	**Sn**	**05 13 21.1**	**0.0**
SURR	**Surduc**	**4.62**	**24**	⇓P	**Pn**	**05 12 29.6**	**+0.7**
MORH	**Mrgy, Hungar**	**4.69**	**353**	*e*Pn	**Pn**	**05 12 31.2**	**+1.5**
MORH				*e*Sn	**Sn**	**05 13 25.8**	**+2.0**
MORH	**Mrgy, Hungar**	**4.69**	**353**	⇓P	**Pn**	**05 12 30.4**	**+0.7**
MORH	**Mrgy, Hungar**	**4.69**	**353**	*e*Pn	**Pn**	**05 12 31.3**	**+1.5**
ELND	**Elena**	**4.97**	**72**	⇓P	**Pn**	**05 12 35.1**	**+1.5**
SIRR	**Siria**	**4.97**	**18**	⇑P	**Pn**	**05 12 34.9**	**+1.3**
SIRR	**Siria**	**4.97**	**18**	*e*Pn	**Pn**	**05 12 35.0**	**+1.3**
SIRR				*e*Sn	**Sn**	**05 13 29.2**	**-1.7**
BOJS	**Bojanci**	**4.98**	**324**	*e*Pn	**Pn**	**05 12 35.2**	**+1.4**
BOJS				*e*Sn	**Sn**	**05 13 29.2**	**-1.8**
LOT	**Lotru**	**5.00**	**38**	⇑P	**Pn**	**05 12 35.6**	**+1.5**
ARR	**Arges**	**5.36**	**43**	⇑P	**Pn**	**05 12 41.0**	**+1.9**
CEY	**Cerknica**	**5.54**	**321**	*e*Pn	**Pn**	**05 12 43.1**	**+1.6**
CEY				*e*Sn	**Sn**	**05 13 45.2**	**+0.4**
SKDS	**Skadanscina**	**5.60**	**317**	*e*Pn	**Pn**	**05 12 43.5**	**+1.1**
SKDS				*e*Sn	**Sn**	**05 13 45.3**	**-1.2**
VOIR		**5.63**	**45**	⇓P	**Pn**	**05 12 44.1**	**+1.3**
DRGR		**5.73**	**23**	⇑P	**Pn**	**05 12 44.9**	**+0.7**
SOKA	**Soboth**	**6.02**	**330**	*e*Pn	**Pn**	**05 12 49.6**	**+1.5**
	comp=E,0.5nm,0.3s						
OBKA	**Obir**	**6.07**	**326**	*e*Pn	**Pn**	**05 12 50.8**	**+1.9**
	comp=E,1.6nm,0.4s						
MLR	**Muntele Rosu**	**6.15**	**48**	⇓P	**Pn**	**05 12 51.3**	**+1.3**
PSZ	**Piszkesteto**	**6.37**	**3**	⇑P	**Pn**	**05 12 54.2**	**+1.3**
VRI	**Vrincioaia**	**6.81**	**48**	⇑P	**Pn**	**05 12 59.7**	**+0.8**
KBA	**Koelnbreinsper**	**7.04**	**324**	*e*Pn	**Pn**	**05 13 03.5**	**+1.3**
	comp=E,0.2nm,0.2s						
ABTA	**Abfaltersbach**	**7.19**	**318**	*i* Pn	**Pn**	**05 13 04.6**	**+0.4**
	comp=E,0.9nm,0.3s						
MOA	**Molln**	**7.29**	**331**	*e*Pn	**Pn**	**05 13 06.2**	**+0.8**
	comp=E,0.2nm,0.2s						
LESA	**Schwarzleotal**	**7.60**	**323**	*e*Pn	**Pn**	**05 13 10.3**	**+0.5**
	comp=E,0.4nm,0.2s						
SQTA	**Sankt Quirin**	**8.17**	**317**	*e*Pn	**Pn**	**05 13 18.3**	**+0.7**
	comp=E,0.8nm,0.3s						
GERES	**GERESS Array B**	**8.33**	**333**	Pn	**Pn**	**05 13 20.1**	**+0.2**
	baz=161,slow=14,SNR=2.6						
GERES				Sn	**Sn**	**05 14 50.3**	**-3.4**
	baz=151,slow=23,SNR=1.8						
	comp=E,0.2nm,0.3s						
FINES	**FINESS Array B**	**20.32**	**9**	P	**P**	**05 15 54.1**	**-0.7**
	comp=E,1.2nm,0.4s,baz=186,slow=9.1,SNR=9.4						
	comp=E,1.2nm,0.4s						
ZALV	**Zalesovo Beam**	**44.12**	**51**	P	**P**	**05 19 26.1**	**-0.9**
	comp=E,0.9nm,0.4s,baz=279,slow=7.9,SNR=7.2						
	comp=E,0.9nm,0.4s						
MKAR	**Makanchi Array**	**44.32**	**61**	P	**P**	**05 19 28.2**	**-0.5**
	comp=E,0.8nm,0.5s,baz=284,slow=8.0,SNR=6.4						
	comp=E,0.8nm,0.5s						
SONM	**Songino Array**	**58.99**	**52**	P	**P**	**05 21 17.8**	**-0.7**
	comp=E,0.2nm,0.4s,baz=311,slow=8.8,SNR=1.9						
	comp=E,0.2nm,0.4s						

*AZER **27** 06:04:29.4,38˚.42N×44˚.56E,h7km,ml2.5*
*AFAD **27** 06:04:30.2,38˚.50N×44˚.53E,h14km±4km,ML2.4*
ISC 27 06:04:32.7±1.5,38˚.44N±0˚.03×44˚.50E±0˚.03,h21km±5km, n18,σ2§08/33,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.46**	**300**	P	**Pb**	**06 04 39.6**	**-2.5**
OZAP				S	**Sb**	**06 04 47.3**	**-1.2**
OZAP				*i* IAML		06 04 52.0	
	comp=E,413nm,1.0s						
TVAN	**Van**	**0.86**	**276**	P	**Pb**	**06 04 47.0**	**-2.1**
TVAN				S	**Sb**	**06 04 59.3**	**-1.0**
TVAN				*i* IAML		06 05 19.0	
	comp=N,192nm,0.6s						
VMUR	**Van-Muradiye**	**0.91**	**307**	P	Pb	06 04 38.6	-11
VMUR				S	**Sb**	**06 04 59.6**	**-2.1**
VMUR				*i* IAML		06 05 11.0	
	comp=N,77nm,0.5s						
NAX	**Nakhchivan**	**1.07**	**46**	P	**Pn**	**06 04 51.9**	**-0.7**
NAX				S	**Sn**	**06 05 07.9**	**+1.1**
HAKT	**HAKKARI**	**1.08**	**216**	P	**Pb**	**06 04 52.0**	**-0.7**
HAKT				S	**Sn**	**06 05 08.9**	**+1.7**
HAKT				*i* IAML		06 05 20.0	
	comp=E,96nm,0.5s						
HAKT	**HAKKARI**	**1.08**	**216**	P	**Pb**	**06 04 51.9**	**-0.8**
HAKT				S	**Sn**	**06 05 09.8**	**+2.5**
SBZ	**Shahbuz**	**1.26**	**40**	P	**Pb**	**06 04 54.9**	**-0.9**
SBZ				S	**Sb**	**06 05 12.9**	**+1.2**
ORD	**Ordubad**	**1.27**	**67**	P	**Pb**	**06 04 55.7**	**-0.2**
ORD				S	**Sb**	**06 05 14.2**	**+2.4**
HYR	**Heyderabad**	**1.31**	**12**	P	**Pb**	**06 04 57.5**	**+0.9**
HYR				S	**Sb**	**06 05 17.4**	**+4.4**
IGDI	**IGDIR**	**1.47**	**347**	P	**Pb**	**06 04 58.0**	**-1.3**
IGDI				S	**Sn**	**06 05 15.3**	**-1.3**
IGDI				*i* IAML		06 05 22.0	
	comp=E,50nm,0.8s						
IGDI	**IGDIR**	**1.47**	**347**	P	**Pb**	**06 04 59.7**	**+0.4**
IGDI				S	**Sb**	**06 05 22.7**	**+5.2**
PERV	**Siirt/Pervari-**	**1.62**	**253**	P	**Pb**	**06 05 03.0**	**+1.1**
PERV				S	**Sb**	**06 05 25.4**	**+3.5**
PERV				*i* IAML		06 05 35.0	
	comp=E,156nm,0.6s						
DORK	**Agr/Tutak/Do**	**1.64**	**306**	P	**Pb**	**06 05 00.9**	**-1.5**
DORK				S	**Sb**	**06 05 22.2**	**-0.5**
DORK				*i* IAML		06 05 32.0	
	comp=N,41nm,0.8s						
KOTA	**Agri, Merkez-K**	**1.69**	**324**	P	**Pb**	**06 05 03.5**	**+0.2**
KOTA				S	**Sb**	**06 05 24.6**	**+0.4**
KOTA				*i* IAML		06 05 28.0	
	comp=E,18nm,0.8s						
SRTM	**Siirt_Merkez**	**2.08**	**258**	P	**Pb**	**06 05 09.0**	**-0.8**
SRTM				S	**Sb**	**06 05 37.0**	**+1.8**
SRTM				*i* IAML		06 05 48.0	
	comp=E,61nm,0.9s						
GDB	**GEDABAY**	**2.48**	**23**	P	**Pb**	**06 05 15.3**	**-1.3**
YRD	**Yardimli**	**2.97**	**80**	P	**Pb**	**06 05 22.5**	**-2.4**
YRD				S	**Sb**	**06 05 58.7**	**-2.1**
LRK	**Lerik**	**3.02**	**85**	P	**Pb**	**06 05 23.4**	**-2.4**

*AEIC **27** 06:06:12.1±1.1,54˚.2N±0˚.1×166˚.0W±0˚.2,h100km±3km, Error ellipse: s-maj=22.6km s-min=2.3km az=140.0*
NEIC 27 06:06:13.3±1.1,54˚.1N±0˚.2×166˚.0W±0˚.2,h98km±3km, ML3.3/14,ML3.1(AEIC),Error ellipse: s-maj=28.7km s-min=5.4km az=148.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVA	**Lava Point**	**0.04**	**311**		Pn	06 06 26.7	-0.2
LVA				IAML		06 06 41.4	
	comp=N,735nm,0.7s						
LVA	**Lava Point**	**0.04**	**311**		Sn	06 06 38.3	+1.2
AKMO	**Akutan Morgan**	**0.05**	**197**		Pn	06 06 26.7	-0.1
AKMO					Sn	06 06 36.9	-0.1
AKRB	**Akutan Reef Bi**	**0.05**	**262**		Pn	06 06 26.5	-0.4
AKRB					Sn	06 06 37.5	+0.5
AKGG	**Akutan Green G**	**0.06**	**357**		Pn	06 06 26.9	-0.1
AKGG					Sn	06 06 37.9	+0.8
AKUT	**Akutan**	**0.13**	**91**		Pn	06 06 26.7	-0.2
AKUT				IAML		06 06 37.7	
	comp=N,834nm,0.5s						
AKUT				IAML		06 06 40.5	
	comp=E,596nm,0.4s						
AKUT	**Akutan**	**0.13**	**91**		Sn	06 06 37.1	-0.1
UNV	**Unalaska Valle**	**0.42**	**227**		Pn	06 06 28.0	-0.3
UNV	**Unalaska Valle**	**0.42**	**227**		Sn	06 06 40.1	+0.7
MSW	**Makushin Switc**	**0.52**	**245**		Pn	06 06 28.6	-0.4
MSW					Sn	06 06 41.5	+0.8
MREP	**Makushin Rep't**	**0.56**	**234**		Pn	06 06 29.1	-0.2
MREP					Sn	06 06 42.1	+0.8
MGOD	**Makushin Gods**	**0.63**	**237**		Pn	06 06 29.6	-0.3
MGOD					Sn	06 06 43.2	+1.0
WEBT	**Westdahl Beart**	**0.85**	**57**		Sn	06 06 46.9	+0.9
SSBA	**Shishaldin**	**1.26**	**59**		Pn	06 06 36.2	-0.3
SSLS	**Shishaldin Sou**	**1.30**	**63**		Pn	06 06 36.8	-0.2
SSLS					Sn	06 06 55.9	+1.0
OKFG	**Magazine Ridge**	**1.35**	**238**		Sn	06 06 56.5	+0.5
OKTU	**Okmok Mt. Tuli**	**1.43**	**239**		Sn	06 06 58.5	+0.7
OKNC	**Okmok New Cone**	**1.44**	**243**		Pn	06 06 38.1	-0.6
OKNC					Sn	06 06 57.6	-0.2
ISNN	**Isanotski Nort**	**1.47**	**61**		Pn	06 06 39.3	+0.4
ISNN					Sn	06 06 59.2	+0.8
FALS	**False Pass**	**1.66**	**63**		Pn	06 06 41.6	+0.2
FALS	**False Pass**	**1.66**	**63**	P	Pn	06 06 41.5	+0.1
NIKH	**Nikolski High**	**2.07**	**237**		Pn	06 06 46.8	+0.2
NIKH				IAML		06 07 15.6	
	comp=E,217nm,0.6s						
NIKH				IAML		06 07 24.2	
	comp=N,344nm,0.6s						
NIKH	**Nikolski High**	**2.07**	**237**		Sn	06 07 12.5	+0.4
NIKH	**Nikolski High**	**2.07**	**237**	P	Pn	06 06 47.1	+0.4
DT1	**Dutton Round H**	**2.36**	**64**		Pn	06 06 50.3	-0.2
DOL	**Dolgoi Island**	**2.60**	**65**		Pn	06 06 54.1	+0.4
CLCO	**Concord Point,**	**2.61**	**240**		Pn	06 06 54.1	+0.4
PS4A	**Pavlof South-4**	**2.68**	**61**		Pn	06 06 55.0	+0.3
S12K	**Black Hills**	**2.76**	**54**		Pn	06 06 55.5	-0.2
S12K	**Black Hills**	**2.76**	**54**	IAML		06 07 44.8	
	comp=N,119nm,1.2s						
S12K				IAML		06 07 47.2	
	comp=E,111nm,1.4s						
PS1A	**Pavlof South-1**	**2.77**	**61**		Pn	06 06 56.4	+0.5
SDPT	**Sand Point**	**3.42**	**67**		Pn	06 07 04.5	+0.1
SDPT	**Sand Point**	**3.42**	**67**	IAML		06 07 52.5	
	comp=E,100nm,1.1s						
ATKA	**Atka Island**	**5.30**	**252**	P	Pn	06 07 29.8	-0.2
N14K	**Kuskokwak Cree**	**6.26**	**20**	Pn	Pn	06 07 42.9	0.0
ADK	**Adak**	**6.84**	**255**	Pn	Pn	06 07 51.6	+0.8
ADK	**Adak**	**6.84**	**255**	P	Pn	06 07 50.5	-0.4
O16K	**Kokwok River B**	**6.97**	**35**	Pn	Pn	06 07 54.0	+1.3
KDAK	**Kodiak Island**	**8.36**	**59**	Pn	Pn	06 08 09.4	-2.1
N19K	**Bonanza Creek**	**9.11**	**38**	Pn	Pn	06 08 22.4	+0.6
STLK	**Strandline Lak**	**10.54**	**40**	Pn	Pn	06 08 42.3	+1.2
SLKM	**Skilak Lake**	**10.63**	**47**	Pn	Pn	06 08 41.1	-1.3

*SDD **27** 06:08:00.8±2.1,19˚.24N×67˚.20W,h20km±102km,MD3.4, ML3.0,MW3.3*
*RSPR **27** 06:08:04.6,19˚.17N×67˚.28W,h20km±11km,MD3.2/12*
NEIC 27 06:08:02.3±1.4,19˚.09N±0˚.03×67˚.23W±0˚.02,h10km±2km, ML2.8/18,Md3.2/12(RSPR),18C-20D,Error ellipse: s-maj=5.1km s-min=3.0km az=163.0,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.63**	**170**	⇑*e*Pg	Pg	06 08 14.9	+0.4
AGPR				⇓*e*Sg	Sn	06 08 25.8	-1.5
AGPR				IAML		06 08 27.1	
	comp=N,418nm,0.2s						
AGPR	**Aguadilla, PR**	**0.63**	**170**		Pb	06 08 16.1	+0.7
AGPR					Sn	06 08 26.1	-1.3
AGPR	**Aguadilla, PR**	**0.63**	**170**	⇓*e*P	Pb	06 08 16.1	+0.7
AGPR	**Aguadilla, PR**	**0.63**	**170**	*e*S	Sn	06 08 26.1	-1.3
IDE	**Isla Desecheo**	**0.74**	**199**		Pg	06 08 16.6	0.0
IDE					Sb	06 08 27.7	+0.3
IDE	**Isla Desecheo**	**0.74**	**199**	⇓*i*P	Pg	06 08 16.6	0.0
IDE	**Isla Desecheo**	**0.74**	**199**	*e*S	Sb	06 08 27.7	+0.3
AOPR	**Arecibo Observ**	**0.86**	**149**	⇓*e*Pg	Pg	06 08 18.4	-0.5
AOPR				⇓*e*Sg	Sb	06 08 31.3	+0.2
AOPR				IAML		06 08 31.9	
	comp=N,434nm,0.6s						
AOPR	**Arecibo Observ**	**0.86**	**149**		Pg	06 08 18.8	-0.1
AOPR					Sb	06 08 32.0	+0.9
AOPR	**Arecibo Observ**	**0.86**	**149**	IAML		06 08 32.1	
	comp=N,487nm,0.6s						
AOPR				IAML		06 08 36.8	
	comp=E,925nm,0.4s						
AOPR	**Arecibo Observ**	**0.86**	**149**	⇓*i*P	Pg	06 08 18.8	-0.1
AOPR	**Arecibo Observ**	**0.86**	**149**

distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALE	**Kalithea**	**0.33**	**283**	P	Pg	06 09 36.6	0.0
KALE				S	Sg	06 09 41.4	0.0
TRIZ	**Trizonia**	**0.38**	**278**	P	Pg	06 09 37.4	0.0
TRIZ				S	Sb	06 09 43.3	0.0
GUR	**Goura**	**0.41**	**203**	P	Pb	06 09 38.9	+0.5
GUR				S	Sb	06 09 44.3	-0.2
KLV	**Kalavryta, Ach**	**0.41**	**229**	P	Pb	06 09 38.4	-0.1
KLV				S	Sg	06 09 44.0	+0.1
LTK	**Loutraki**	**0.44**	**131**	P	Pg	06 09 38.7	+0.1
LTK				S	Sb	06 09 45.5	+0.2
EFP	**Efpalio**	**0.52**	**283**	P	Pb	06 09 40.2	0.0
EFP				S	Sb	06 09 47.4	+0.1
ANX	**Ano Chora**	**0.56**	**299**	P	Pb	06 09 41.2	+0.1
ANX				S	Sb	06 09 49.0	+0.1

*IDC **27** 06:10:28.0±4.1, 41°.58N×19°.56E, h0km, mb3.7/4, mbtmp3.7/5, ML2.6/1, Error ellipse: s-maj=74.1km s-min=19.8km az=36.0*
*SKO **27** 06:10:28.7, 41°.61N×19°.33E, h0km, ML3.2*
*RHSSO **27** 06:10:29.7±1.0, 41°.43N×19°.36E, h7km±4km, ML3.5/4*
*BEO **27** 06:10:30.0±0.6, 41°.47N×19°.54E, h3km±3km, ML3.3/7*
*PDG **27** 06:10:30.3±0.4, 41°.49N×19°.45E, h11km±1km, MD3.4/6, ML3.4/13, Error ellipse: s-maj=0.9km s-min=1.9km az=0.0*
*TIR **27** 06:10:30.5, 41°.61N×19°.49E, h29km±3km, Ml3.4/5*

ISC 27 06:10:30.1±1.0, 41°.54N±0°.02×19°.45E±0°.02, h12km±7km, n87, σ1s13/133, 17C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.37**	**122**	⇓*i*Pg	**Pg**	**06 10 37.3**	**-0.3**
TIR				Sg	**Sg**	**06 10 42.2**	**-0.4**
TIR				AML	AML	06 10 47.3	
	9.2nm,0.6s						
TIR	**Tirane**	**0.37**	**122**	⇓*i*Pg	**Pg**	**06 10 37.3**	**-0.3**
TIR				*i* Sg	**Sg**	**06 10 43.4**	**+0.9**
ULC	**Ulcinj**	**0.45**	**340**	⇓*i*Pg	**Pb**	**06 10 39.2**	**-0.8**
ULC				*e*Sg	**Sb**	**06 10 46.7**	**+0.1**
SDA	**Shkodra**	**0.51**	**4**	⇓Pg	**Pg**	**06 10 39.9**	**-0.3**
SDA				Sg	**Sg**	**06 10 46.7**	**-0.3**
DRME	**Dracevica, Mon**	**0.67**	**343**	*e*Pg	**Pb**	**06 10 43.2**	**-0.6**
DRME	**Dracevica, Mon**	**0.67**	**343**	⇑*i*Pg	**Pg**	**06 10 43.0**	**-0.2**
DRME				*e*Sg	**Sn**	**06 10 54.6**	**-1.3**
PHP	**Peshkopia**	**0.76**	**79**	⇑Pg	**Pg**	**06 10 43.0**	**-1.9**
PHP				Sg	**Sg**	**06 10 54.7**	**-0.1**
PHP				AML	AML	06 11 00.4	
	6.8nm,0.6s						
BUM	**Brajici-Budva**	**0.86**	**332**	*e*Pg	**Pg**	**06 10 46.5**	**-0.3**
BUM				*e*Sg	**Sn**	**06 11 00.8**	**+0.1**
PDG	**Podgorica**	**0.90**	**351**	Pn	**Pb**	**06 10 47.6**	**0.0**
PDG				Sn	**Sb**	**06 10 59.3**	**-0.3**
PDG	**Podgorica**	**0.90**	**351**	⇓P	**Pb**	**06 10 47.8**	**+0.2**
PDG				⇓S	**Sn**	**06 11 01.9**	**+0.5**
PDG	**Podgorica**	**0.90**	**351**	*e*Pg	**Pg**	**06 10 46.6**	**-0.9**
PDG				*e*Sg	**Sn**	**06 11 02.3**	**+0.8**
PDG	**Podgorica**	**0.90**	**351**	⇑*i*Pg	**Pb**	**06 10 47.3**	**-0.3**
PDG				*i* Sg	**Sn**	**06 11 02.2**	**+0.8**
VLO	**Vlora**	**1.07**	**178**	⇑Pg	**Pn**	**06 10 52.1**	**+1.2**
VLO				Sg	**Sn**	**06 11 06.5**	**+0.8**
VLO				AML	AML	06 11 13.4	
	4.4nm,0.4s						
CEME	**Cevo**	**1.08**	**339**	⇑*i*Pg	**Pb**	**06 10 50.3**	**-0.4**
CEME				*e*Sg	**Sn**	**06 11 07.8**	**+1.8**
OHR	**Ohrid**	**1.11**	**112**	*i* Pg	**Pb**	**06 10 50.1**	**-1.1**
OHR				*i* Sg	**Sn**	**06 11 07.9**	**+1.3**
OHR				*e*Lg	Lg	06 11 08.6	
	comp=N,324nm,0.4s						
OHR				*e*Lg	Lg	06 11 09.4	
	comp=E,486nm,0.5s						
PVY	**Plav**	**1.12**	**20**	*e*Pg	**Pb**	**06 10 50.2**	**-1.3**
PVY	**Plav**	**1.12**	**20**	*e*Pg	**Pb**	**06 10 49.8**	**-1.7**
PVY				*i* Sg	**Sn**	**06 11 09.0**	**+1.9**
HCY	**Herceg Novi**	**1.15**	**322**	*e*Pg	**Pg**	**06 10 53.0**	**+0.7**
HCY				*i* Sg	**Sn**	**06 11 10.0**	**+2.4**
NKME	**Niksic**	**1.28**	**343**	*e*Pg	**Pg**	**06 10 54.8**	**+0.1**
NKME				*i* Sg	**Sg**	**06 11 13.8**	**+2.5**
KOME	**Kolasin**	**1.31**	**2**	*e*Pg	**Pg**	**06 10 55.9**	**+0.6**
KOME	**Kolasin**	**1.31**	**2**	⇑*i*Pg	**Pb**	**06 10 54.5**	**-0.2**
KOME				*e*Sg	**Sg**	**06 11 15.5**	**+3.2**
KBN	**Korca**	**1.37**	**132**	⇓Pn	**Pg**	**06 10 57.1**	**+0.7**
KBN				Sn	**Sg**	**06 11 14.7**	**+0.6**
BEY	**Berane**	**1.37**	**14**	*e*Pg	**Pn**	**06 10 55.1**	**0.0**
IVA	**Berane**	**1.37**	**14**	⇑*i*Pg	**Pb**	**06 10 54.9**	**-0.2**
IVA				*e*Sg	**Sg**	**06 11 16.9**	**+2.6**
TREB	**Trebinje**	**1.43**	**326**	*e*Pg	**Pb**	**06 10 56.3**	**-0.4**
TREB				*e*Sg	**Sg**	**06 11 16.8**	**+0.6**
TREB	**Trebinje**	**1.43**	**326**	*e*Pg	**Pg**	**06 10 57.3**	**-0.3**
TREB				*e*Sg	**Sg**	**06 11 18.2**	**+2.0**
BRY	**Bratogost**	**1.52**	**334**	*e*Pg	**Pg**	**06 10 58.5**	**-0.8**
BRY				*i* Sg	**Sg**	**06 11 21.3**	**+2.3**
SKO	**Skopje**	**1.55**	**73**	*i* Pg	**Pb**	**06 10 58.3**	**-0.5**
SKO				*i* Sg	**Sg**	**06 11 19.8**	**-0.3**
NEST	**Nestorio**	**1.66**	**132**	⇓Pn	**Pb**	**06 11 01.0**	**+0.4**
NEST				Sn	**Sg**	**06 11 23.8**	**+0.4**
NEST				AML	AML	06 11 30.1	
	comp=E,0.8nm,0.5s						
UPM	**Unac-Piva**	**1.71**	**347**	⇑*i*Pn	**Pb**	**06 11 01.7**	**+0.2**
UPM				*e*Sn	**Sg**	**06 11 25.3**	**+0.2**
KLNJ	**Klinje**	**1.75**	**339**	*e*Pn	**Pb**	**06 11 01.7**	**-0.4**
KLINJ				*e*Sn	**Sg**	**06 11 25.2**	**-1.1**
SJES	**Sjenica**	**1.76**	**13**	*e*Pn	**Pb**	**06 11 02.7**	**+0.3**
SJES				*e*Sg	**Sg**	**06 11 27.8**	**+1.0**
PLE	**Pljevlja**	**1.79**	**359**	*e*Pn	**Pg**	**06 11 03.6**	**-0.8**
PLE	**Pljevlja**	**1.79**	**359**	⇓*i*Pn	**Pb**	**06 11 02.7**	**-0.1**
PLE				*e*Sn	**Sg**	**06 11 27.3**	**-0.3**
STON	**Ston**	**1.86**	**316**	*e*Pn	**Pg**	**06 11 04.7**	**-1.0**
STON				*e*Sn	**Sg**	**06 11 29.0**	**-0.8**
NOCI	**Noci**	**1.95**	**248**	Pn	**Pn**	**06 11 03.9**	**+0.9**
NOCI				Sn	**Sg**	**06 11 31.8**	**-1.0**
NOCI				AML	AML	06 11 42.0	
	comp=E,1.7nm,0.4s						
RUDO	**Rudo**	**2.08**	**358**	*e*Pn	**Pb**	**06 11 06.8**	**-0.9**
RUDO				*e*Sn	**Sb**	**06 11 33.2**	**-0.2**
RUDO	**Rudo**	**2.08**	**358**	*e*Pn	**Pb**	**06 11 07.0**	**-0.7**
RUDO				*e*Sn	**Sb**	**06 11 34.2**	**+0.8**
SELS	**Selova**	**2.08**	**36**	*e*Pn	**Pn**	**06 11 05.9**	**+1.0**
SELS				*e*Sn	**Sb**	**06 11 32.6**	**-1.1**
IVAS	**Ivanjica**	**2.10**	**14**	*e*Pn	**Pn**	**06 11 06.0**	**+0.9**
IGT	**Igoumenitsa**	**2.12**	**161**	Pn	**Pn**	**06 11 06.9**	**+1.6**
IGT				Sn	**Sb**	**06 11 35.6**	**+1.0**
MATE	**Matera**	**2.26**	**248**	⇓P	**Pn**	**06 11 08.5**	**+1.3**
GOCS	**Kraljevo Serbi**	**2.28**	**27**	*e*Pn	**Pn**	**06 11 08.8**	**+1.2**
GOCS				*e*Sn	**Sb**	**06 11 37.3**	**-2.0**
BBLS	**Lazi&#263i**	**2.32**	**359**	*e*Pn	**Pb**	**06 11 09.9**	**-2.0**
VAY	**Valandovo**	**2.36**	**94**	*i* Pn	**Pn**	**06 11 09.4**	**+0.8**
VAY				*i* Sn	**Sn**	**06 11 38.4**	**+1.0**
VAY				*e*Lg	Lg	06 11 39.2	
	comp=E,93nm,0.8s						
VAY				*e*Lg	Lg	06 11 40.5	
	comp=N,54nm,0.6s						
BOSS	**Bosilegrad**	**2.45**	**66**	*e*Pn	**Pn**	**06 11 10.7**	**+0.8**
BOSS				*e*Sn	**Sn**	**06 11 40.5**	**+0.7**
GRUS	**Gruza**	**2.52**	**21**	*e*Pn	**Pn**	**06 11 12.4**	**+1.5**
KNT	**Kendrikon**	**2.63**	**97**	*i* Pn	**Pn**	**06 11 13.4**	**+1.1**
BOVS	**Bovan**	**2.67**	**38**	⇑P	**Pn**	**06 11 13.7**	**+0.7**
BOVS	**Bovan**	**2.67**	**38**	*e*Pn	**Pn**	**06 11 13.7**	**+0.7**
SGRT	**San Giovanni R**	**2.78**	**276**	Pn	**Pn**	**06 11 15.0**	**+0.5**
THE	**Thessaloniki**	**2.81**	**108**	*i* Pn	**Pn**	**06 11 16.2**	**+1.4**
ZAPS	**Zavoj**	**2.93**	**53**	*e*Pn	**Pn**	**06 11 17.7**	**+1.2**
ZAPS				*e*Sn	**Sn**	**06 11 52.3**	**+0.8**
TEKS	**Tekeris**	**3.01**	**1**	*e*Pn	**Pn**	**06 11 18.1**	**+0.6**
VTS	**Vitosha**	**3.02**	**68**	*e*Pn	**Pn**	**06 11 18.8**	**+1.0**
VTS				*e*Sn	**Sn**	**06 11 53.9**	**0.0**
ZAGS	**Zajecar**	**3.06**	**41**	*e*Pn	**Pn**	**06 11 19.3**	**+1.0**
ZAGS				*e*Sn	**Sn**	**06 11 55.9**	**+1.1**
TIP	**Timpagrande**	**3.13**	**222**	⇑P	**Pn**	**06 11 19.7**	**+0.4**
SRS	**Serrai**	**3.15**	**96**	*i* Pn	**Pn**	**06 11 20.7**	**+1.2**
BLKB	**Belogradchik**	**3.16**	**48**	*e*Pn	**Pn**	**06 11 21.2**	**+1.5**
BLKB				*e*Sn	**Sn**	**06 11 57.7**	**+0.3**
BORS2	**Bor- Borsko je**	**3.17**	**36**	*e*Pn	**Pn**	**06 11 19.3**	**-0.5**
MMB	**Musomishta**	**3.23**	**88**	*i* Pn	**Pn**	**06 11 21.7**	**+1.1**
BLY	**Banja Luka**	**3.61**	**333**	*e*Pn	**Pn**	**06 11 26.7**	**+0.9**
BLY				*e*Sn	**Sn**	**06 12 09.8**	**+1.6**
MDVR	**Moldovita**	**3.64**	**26**	⇓P	**Pn**	**06 11 27.0**	**+0.7**
BZS	**Buzias**	**4.37**	**20**	⇑P	**Pn**	**06 11 36.9**	**+0.7**
GZR	**Gura Zlata**	**4.55**	**31**	⇑P	**Pn**	**06 11 40.2**	**+1.4**
AQU	**L'Aquila**	**4.58**	**282**	*e*Pn	**Pn**	**06 11 38.5**	**-0.7**
AQU				*e*Sn	**Sn**	**06 12 30.1**	**-2.2**
MORH	**Mrgy, Hungar**	**4.71**	**353**	*e*Pn	**Pn**	**06 11 41.4**	**+0.5**
MORH				*e*Sn	**Sn**	**06 12 36.7**	**+1.4**
SIRR	**Siria**	**4.99**	**18**	⇓P	**Pn**	**06 11 45.7**	**+1.0**
BOJS	**Bojanci**	**5.00**	**324**	*e*Pn	**Pn**	**06 11 46.5**	**+1.6**
ARR	**Arges**	**5.37**	**43**	⇑P	**Pn**	**06 11 52.2**	**+2.2**
CEY	**Cerknica**	**5.55**	**321**	*e*Pn	**Pn**	**06 11 54.0**	**+1.5**
SKDS	**Skadanscina**	**5.62**	**317**	*e*Pn	**Pn**	**06 11 54.4**	**+0.9**
VOIR		**5.64**	**44**	⇓P	**Pn**	**06 11 55.7**	**+2.0**
DRGR		**5.75**	**23**	⇑P	**Pn**	**06 11 56.5**	**+1.3**
MARR	**Marisel-Cluj**	**5.77**	**26**	⇑P	**Pn**	**06 11 57.7**	**+2.1**
MLR	**Muntele Rosu**	**6.16**	**48**	⇑P	**Pn**	**06 12 02.7**	**+1.8**
MYKA	**Terra Mystica**	**6.58**	**323**	*e*Pn	**Pn**	**06 12 06.9**	**+0.2**
	comp=N,0.4nm,0.2s						
VRI	**Vrincioaia**	**6.82**	**48**	⇑P	**Pn**	**06 12 11.8**	**+1.9**
KBA	**Koelnbreinsper**	**7.05**	**324**	*e*Pn	**Pn**	**06 12 14.6**	**+1.4**
	comp=N,1.1nm,0.4s						
MOA	**Molln**	**7.30**	**331**	*e*Pn	**Pn**	**06 12 17.2**	**+0.6**
	comp=N,0.6nm,0.3s						
BIOA	**Bad Ischl, Aus**	**7.41**	**328**	*i* Pn	**Pn**	**06 12 18.0**	**0.0**
	comp=N,0.7nm,0.1s						
LESA	**Schwarzleotal**	**7.61**	**323**	*i* Pn	**Pn**	**06 12 20.8**	**-0.1**
	comp=N,0.4nm,0.2s						
GERES	**GERESS Array B**	**8.35**	**333**	Pn	**Pn**	**06 12 31.8**	**+0.8**
	baz=165,slow=12,SNR=3.4						
GERES				Sn	**Sn**	**06 14 05.6**	**+0.5**
	baz=161,slow=22,SNR=1.4						
	comp=N,0.4nm,0.4s						
EKA	**Eskdalemuir Ar**	**20.25**	**321**	P	**P**	**06 15 04.8**	**-0.3**
	comp=N,1.2nm,0.7s,baz=114,slow=8.7,SNR=4.4						
	comp=N,1.2nm,0.7s						
FINES	**FINESS Array B**	**20.33**	**9**	P	**P**	**06 15 04.2**	**-1.6**
	comp=N,3.1nm,0.6s,baz=190,slow=9.6,SNR=11						
	comp=N,3.1nm,0.6s						
BVAR	**Borovoye Array**	**35.69**	**54**	P	**P**	**06 17 27.6**	**-0.4**
	comp=N,0.8nm,0.6s,baz=286,slow=5.2,SNR=4.4						
	comp=N,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**44.13**	**51**	P	**P**	**06 18 36.9**	**-1.1**
	comp=N,1.2nm,0.4s,baz=276,slow=8.0,SNR=8.4						
	comp=N,1.2nm,0.4s						

IDC 27 06:20:41.2±2.1, 1°.69N×126°.47E, h0km, mb3.4/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=125.3km s-min=26.9km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P	P	06 25 12.2	+0.2
	baz=5.6,slow=11,SNR=1.7						
	1.5nm,1.0s						
WRA	**Warramunga Arr**	**22.84**	**161**	P	P	06 25 45.9	-0.3
	1.0nm,0.5s,baz=339,slow=11,SNR=9.1						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**26.22**	**164**	P	P	06 26 18.2	+0.2
	0.3nm,0.4s,baz=345,slow=12,SNR=9.3						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	06 30 43.4	0.0
	0.2nm,0.4s,baz=144,slow=6.5,SNR=1.6						
	0.2nm,0.4s						

*ASRS **27** 06:37:11.6±0.2, 51°.1N×87°.7E±°, h10km, MLh3.0/13, Error ellipse: s-maj=3.2km s-min=2.4km az=76.0, confirmed*
*NNC **27** 06:37:16.9±2.3, 50°.66N×87°.17E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=26.5km s-min=9.1km az=103.0*

ISC 27 06:37:12.2±1.2, 50°.60N±0°.02×87°.50E±0°.03, h0km±11km, n22, σ1s62/34, 8C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.29**	**164**	Pg	**Pg**	**06 37 17.9**	**+0.2**
AKAR				Sg	**Sg**	**06 37 21.4**	**-0.1**
ULGR	**Ulagan, Altay**	**0.30**	**86**	Pg	**Pb**	**06 37 19.9**	**-0.5**
ULGR				Sg	**Sb**	**06 37 24.6**	**-1.2**
DGZ	**Jazzator, Alta**	**0.90**	**183**	Pg	**Pg**	**06 37 28.8**	**-0.7**
DGZ				Sg	**Sg**	**06 37 39.8**	**-1.3**
ELDR	**Elanda**	**1.08**	**305**	Pg	**Pn**	**06 37 33.2**	**-1.4**
ELDR				Sg	**Sn**	**06 37 47.1**	**-3.2**
YALR	**Yailyu, Altay**	**1.17**	**3**	Pg	**Pn**	**06 37 35.7**	**-0.1**
YALR				Sg	**Sn**	**06 37 52.1**	**-0.4**
ARTR	**Artybash**	**1.21**	**354**	Pg	**Pg**	**06 37 36.4**	**+1.1**
ARTR				Sg	**Sn**	**06 37 53.6**	**+0.3**
TEL	**Teeli**	**1.77**	**75**	Pg	**Pg**	**06 37 47.6**	**+1.6**
TEL				Sg	**Sg**	**06 38 10.8**	**+1.9**
TASR	**Tashtagol**	**2.17**	**6**	Pg	**Pg**	**06 37 55.2**	**+1.4**
TASR				Sg	**Sg**	**06 38 25.2**	**+3.2**
ELT	**Eltsovka**	**2.77**	**344**	Pg	**Pb**	**06 38 02.0**	**-0.6**
ELT				Sg	**Sg**	**06 38 40.5**	**-0.8**
KALT2	**Kaltan 2**	**2.81**	**358**	Pg	**Pg**	**06 38 04.8**	**-1.1**
KALT2				Sg	**Sg**	**06 38 43.0**	**+0.7**
MALIN	**Malinovka, Kuz**	**2.83**	**357**	Sg	**Sg**	**06 38 45.5**	**+2.5**
VEH	**Verkhnyaya Baz**	**3.18**	**32**	Pg	**Pg**	**06 38 11.4**	**-1.6**
VEH				Sg	**Sg**	**06 38 54.4**	**+0.1**
DJO	**Djoy, Khakassi**	**3.18**	**45**	Sg	**Sg**	**06 38 54.4**	**0.0**
LUZB	**Luzhba, Kemero**	**3.18**	**15**	Pg	**Pg**	**06 38 11.0**	**-2.1**
LUZB				Sg	**Sg**	**06 38 54.4**	**0.0**
CERR	**Cheremushki**	**3.32**	**46**	Sg	**Sg**	**06 38 59.1**	**+0.3**
ZAA0	**Zalesovo Array**	**3.73**	**335**	⇑Pn	Pb	06 38 13.2	-5.7
	0.1nm,0.3s						
ZAA0				⇓Lg	Lg	06 39 11.9	
	1.0nm,0.3s						
SALR	**Pechorkino, Sa**	**3.98**	**345**	Pg	**Pg**	**06 38 28.5**	**+0.2**
SALR				Sg	**Sg**	**06 39 20.7**	**+0.9**
ARDR	**Aradan**	**4.20**	**60**	Pg	**Pg**	**06 38 32.4**	**-0.1**
ARDR				Sg	**Sg**	**06 39 27.5**	**+0.7**
MK31	**Makanchi Array**	**5.14**	**224**	⇑Pn	Pn	06 38 33.8	+3.5
	1.3nm,0.6s,baz=42,slow=12,SNR=46						
MK31				⇓Sn	**Sn**	**06 39 34.1**	**+3.8**
	1.8nm,0.5s,baz=43,slow=22,SNR=6.2						
MK31				⇑Lg	Lg	06 39 53.9	
	3.1nm,0.6s,baz=44,slow=30,SNR=3.8						
MAKZ	**Makanchi**	**5.27**	**226**	⇓Pn	Pn	06 38 35.6	+3.5
	2.9nm,0.7s						
MAKZ				⇑Sn	**Sn**	**06 39 36.7**	**+3.2**
	3.3nm,0.8s						
MAKZ				⇑Lg	Lg	06 39 59.4	
	12nm,1.1s						
KURK	**Kurchatov**	**5.65**	**275**	⇑Pn	Pn	06 38 42.5	+5.3
	0.6nm,0.7s						
KURK				⇑Lg	Lg	06 40 07.2	
	3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**5.71**	**274**	⇓Pn	**Pn**	**06 38 38.7**	**+0.6**
	2.0nm,0.4s						
KURBB				⇑Lg	Lg	06 40 10.9	
	16nm,0.7s						

RSNC 27 06:56:07.3±0.0, 7°N±1°, 73°W±°, h146km±1km, M2.7, mb3.1, ML2.5, MwMwp4.4, Mwp4.8, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**181**	P	Pn	06 56 26.9	-0.6
BARC				S	Sn	06 56 42.0	-0.8
BRJC	**Barrancabermej**	**0.58**	**285**	P	Pn	06 56 28.5	-0.1
BRJC				S	Sn	06 56 45.8	+1.0
PAMC	**Pamplona, Colo**	**0.70**	**43**	P	Pn	06 56 29.9	-0.1
PAMC				S	Sn	06 56 47.1	-0.1
RUSC	**La Rusia**	**0.93**	**174**	P	Pn	06 56 30.9	-0.8
RUSC				S	Sn	06 56 50.0	-0.2
PTBC	**PUERTO BERRIO,**	**1.30**	**258**	P	Pn	06 56 33.5	-1.0
PTBC				S	Sn	06 56 54.3	-0.9
OCAC	**Ocana**	**1.42**	**354**	P	Pn	06 56 35.1	-0.8
OCAC				S	Sn	06 56 56.8	-0.9
SPBC	**San Pablo de B**	**1.46**	**217**	P	Pn	06 56 35.6	-0.7
SPBC				S	Sn	06 56 57.6	-0.8
CHIC	**Chingaza**	**2.24**	**194**	P	Pn	06 56 45.0	-0.6
CHIC				S	Sn	06 57 14.0	-0.9
ROSC	**El Rosal**	**2.27**	**210**	P	Pn	06 56 46.5	+0.7
ROSC				S	Sn	06 57 17.3	+1.9
HELC	**Santa Helena**	**2.42**	**255**	P	Pn	06 56 47.4	-0.2
HELC				S	Sn	06 57 18.8	+0.3
CVER	**Cruz Verde, Cu**	**2.45**	**201**	P	Pn	06 56 48.0	-0.1
CVER				S	Sn	06 57 20.6	+1.1
UREC	**San Jos de Ur**	**2.51**	**292**	P	Pn	06 56 46.7	-1.7
UREC				S	Sn	06 57 17.9	-2.1
GUY2C	**Guyana, Caldas**	**2.69**	**234**	P	Pn	06 56 50.9	-0.2
GUY2C				S	Sn	06 57 27.6	+2.9
VILC	**Villavicencio,**	**2.74**	**191**	P	Pn	06 56 50.6	-0.8
VILC				S	Sn	06 57 24.3	-1.1
NIZA	**Niza - Manizal**	**2.87**	**233**	P	Pn	06 56 55.8	+2.6
NIZA				S	Sn	06 57 32.2	+3.6
CBOC	**Ciudad Bolivar**	**2.97**	**252**	P	Pn	06 56 54.5	+0.2
CBOC				S	Sn	06 57 31.4	+0.8
DBBC	**Dabeiba**	**3.01**	**274**	P	Pn	06 56 55.7	+0.9
DBBC				S	Sn	06 57 30.1	-1.4
PRAC	**Prado**	**3.52**	**209**	P	Pn	06 57 00.4	-0.9
PRAC				S	Sn	06 57 42.6	-0.6
ORTC	**Ortega, Tolima**	**3.55**	**216**	P	Pn	06 57 01.1	-0.6
ORTC				S	Sn	06 57 44.0	+0.2
SJCC	**San Jacinto, C**	**3.64**	**327**	P	Pn	06 57 00.5	-2.4
SJCC				S	Sn	06 57 43.8	-2.1
URMC	**La Uribe, Meta**	**3.75**	**199**	P	Pn	06 57 03.9	-0.3
URMC				S	Sn	06 57 47.4	-1.0
CRJC	**Cerrejon, Guaj**	**4.18**	**4**	P	Pn	06 57 07.0	-3.0
CRJC				S	Sn	06 57 54.2	-4.5
YOTC	**Yotoco, Valle**	**4.23**	**228**	P	Pn	06 57 09.4	-1.2
MACC	**Macarena, Meta**	**4.69**	**188**	P	Pn	06 57 14.0	-2.6
MACC				S	Sn	06 58 05.2	-5.4
JAMC	**Jamundi, Valle**	**4.99**	**224**	P	Pn	06 57 19.7	-1.1
	5.2nm,1.8s						
GARC	**Garzon, Huila**	**5.15**	**207**	P	Pn	06 57 20.9	-2.0
POPC	**Popayan, Colom**	**5.50**	**219**	P	Pn	06 57 27.1	-0.4
	2µm3.0nm,2.0s						
FLOC	**Florencia**	**5.76**	**205**	P	Pn	06 57 29.1	-1.7

*IDC **27** 07:12:04.6±0.9, 23°.85N×124°.18E, h0km, mb3.7/10, mbtmp3.7/11, ML3.3/1, Error ellipse: s-maj=29.4km s-min=18.4km az=73.0*
*NIED **27** 07:12:08.2±3.0, 23°.86N×124°.37E, h16km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^14 Nm; Mrr3.54; Mθθ3.53; Mϕϕ-7.07; Mrθ-1.28; Mθϕ-3.16; Mϕr-1.05; Fault plane solution: Mo6.58000×10^14 NP1: ϕs334.00000°, δ61.00000°, λ21.00000°. NP2: ϕs234.00000°, δ71.00000°, λ149.00000°.*
*JMA **27** 07:12:08.2±0.3, 23°.9N±0°.9×124°.4E±0°.8, h16km±4km, MV3.7/13, NEAR ISHIGAKIJIMA ISLAND*

ISC 27 07:12:06.9±1.5, 23°.85N±0°.06×124°.30E±0°.03, h14km±9km, n29, σ1s04/41, mb3.7/10, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**0.47**	**326**	P	Pn	**07 12 18.2**	**-0.9**
JKRS				*e*S	**Sb**	**07 12 25.3**	**+1.7**
HATJ	**Hateruma jima**	**0.49**	**294**	P	Pn	**07 12 18.7**	**-0.8**
HATJ				*e*S	**Sb**	**07 12 26.9**	**+2.5**
JIJ	**Ishigaki jima**	**0.53**	**344**	P	**Pb**	**07 12 18.6**	**+0.7**
JIJ				S	**Sb**	**07 12 25.8**	**+0.3**
IRIF	**Iriomote-Funau**	**0.71**	**313**	P	Pn	**07 12 22.4**	**-0.1**
IRIF				*e*S	**Sn**	**07 12 33.0**	**-0.1**
JISG	**Ishigakijimahi**	**0.73**	**1**	P	**Pb**	**07 12 21.6**	**+0.2**
JISG				S	**Sb**	**07 12 31.5**	**+0.3**
JTJ	**Tarama**	**0.87**	**25**	P	**Pb**	**07 12 24.1**	**+0.5**
JTJ				*e*S	**Sb**	**07 12 35.4**	**+0.2**
JIRB	**Irabujima**	**1.26**	**39**	P	**Pg**	**07 12 31.3**	**+0.1**
JIRB				*e*S	**Sb**	**07 12 46.9**	**+0.5**
JMJ2	**Miyako jima3**	**1.29**	**46**	*e*P	**Pg**	**07 12 31.5**	**-0.2**
JMJ2				*e*S	**Sb**	**07 12 48.1**	**+0.7**
YOJ	**Yonaguni jima**	**1.32**	**298**	P	**Pg**	**07 12 32.2**	**-0.1**
YOJ				*e*S	**Sn**	**07 12 50.1**	**+1.8**
JOGS	**Gusukube**	**1.36**	**48**	P	**Pb**	**07 12 32.2**	**+0.2**
JOGS				S	**Sb**	**07 12 50.1**	**+0.9**
JYNG	**Yonagunijimaku**	**1.37**	**296**	P	**Pg**	**07 12 32.8**	**-0.5**
JYNG				*e*S	**Sg**	**07 12 50.6**	**-0.6**
JIKM	**Ikemajima**	**1.37**	**39**

MAHB	**Mahabad**	**2.57**	**2**	Pn	**Pb**	**07 19 41.0**	**-1.8**
IQOM	**Qom**	**4.58**	**80**	Pn	**Pn**	**07 20 07.6**	**+1.5**
IKLH	**Kolahrood**	**5.08**	**98**	Pn	**Pn**	**07 20 13.9**	**+1.1**
KRSH	**Karshahi**	**5.45**	**91**	Pn	**Pn**	**07 20 19.3**	**+1.4**
ISFB	**Sefidab**	**5.52**	**86**	Pn	**Pn**	**07 20 19.3**	**+0.5**
IRAM	**Ramesheh**	**6.19**	**111**	Pn	**Pn**	**07 20 28.8**	**+0.6**

ASRS ***27*** *07:22:44.0±1.2,53.62N×87.99E,h0km,M2.7,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

IDC 27 07:22:41.0±3.9, 53.61N×88.40E, h0km, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=39.6km s-min=24.2km az=83.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.15**	**281**	I	I	07 39 40.0	
	baz=95,slow=322,SNR=0.2						
ZALV	**Zalesovo Beam**	**2.15**	**281**	Pn	Pn	07 23 17.0	-1.1
	0.9nm,0.3s,baz=96,slow=13,SNR=18						
ZALV				Sn	Sn	07 23 44.5	-1.0
	1.9nm,0.3s,baz=102,slow=23,SNR=7.9						
	2.2nm,0.3s						
KURBB	**Kurchatov Arra**	**6.77**	**248**	Pn	Pn	07 24 22.9	+1.4
	baz=61,slow=14,SNR=4.5						
KURBB				Lg	Lg	07 26 16.5	
	baz=61,slow=33,SNR=3.0						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**7.86**	**212**	Pn	Pn	07 24 37.4	+0.8
	baz=28,slow=14,SNR=0.9						
MKAR				Lg	Lg	07 26 48.5	
	baz=31,slow=29,SNR=3.7						
	0.1nm,0.3s						

VIE 27 07:23:08.1±0.2, 47.94N×16.07E, h0km, mb0.1/1, ml0.7/3, Error ellipse: s-maj=1.9km s-min=1.4km az=73.0 4 km SW of Pottenstein Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.14**	**267**	*i* Pg	Pg	07 23 10.3	-0.4
	0.5nm,0.1s						
CONA				*i* Sg	Sg	07 23 12.9	+0.5
	6.9nm,0.1s						
RONA	**Rosalia, Austr**	**0.28**	**146**	*e*Pg	Pg	07 23 13.4	-0.1
	0.6nm,0.1s						
RONA				*e*Sg	Sg	07 23 17.8	+0.7
	0.6nm,0.2s						

NAO ***27*** *07:23:30.3,35.08N×24.47E,h33km,MB5.7*

HLW ***27*** *07:23:36.5,35.83N×23.50E,h30km±26km,Ml6.2*

BJI ***27*** *07:23:38.3,35.73N×22.93E,h77km,mB6.3/66,mb6.0/89, Ms5.6/95,Ms7.5 4/92*

AFAD ***27*** *07:23:40.3,36.03N×23.45E,h6km±5km,MW5.9*

MED_RC ***27*** *07:23:40.0±0.2,35.57N×23.15E,h72km±1km,MW6.0/45, Moment Tensor Solution. Body waves: s31,c35;Mantle waves: s45,c70; Duration: 2s3 Moment tensor: Scale 10¹⁸Nm; Mrr0.54±.02; Mθθ0.23±.02; Mϕϕ-0.77±.02; Mrθ0.48±.02; Mθϕ-1.11±.02; Mϕr-0.31±.02; Best double couple: M₀1.42000×10¹⁸ NP1:ϕs174.00000°,δ66.00000°, λ26.00000°. NP2:ϕs72.00000°,δ66.00000°,λ154.00000°. Principal axes: T 1.3500, Plg35.0000°, Azm33.0000°; N 0.1400, Plg55.0000°, Azm213.0000°; P -1.4900, Plg0.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

GII ***27*** *07:23:40.3±0.0,35.275N±0.006×23.549E±0.002,h60km, Mws6.0,confirmed*

NEIC ***27*** *07:23:41.8,35.69N×23.22E,h64km*

PDG ***27*** *07:23:41.0±0.4,35.83N×23.20E,h67km±11km,MD6.1/13, ML6.0/13,Error ellipse: s-maj=6.3km s-min=7.3km az=0.0*

ISK ***27*** *07:23:41.7,35.75N×23.33E,h53km,ML5.9/70*

THE ***27*** *07:23:41.0,36°N±2°×2°3E±°,h79km±3km, Ml5.8/13, MLh5.8/13*

IDC ***27*** *07:23:41.7±0.8,35.83N×23.22E,h68km±6km, mb5.6/38, mbtmp5.9/46,MS5.2/76,Error ellipse: s-maj=8.8km s-min=6.7km az=37.0*

MOS ***27*** *07:23:41.1±1.1,35.83N×23.24E,h76km,mb6.3/63, MS5.2/20,Error ellipse: s-maj=4.7km s-min=2.5km az=78.4*

ISC-PP ***27*** *07:23:42.0,35.72N×23.23E,h31km,Mwppsm6.1,Moment Tensor Solution. s43 Moment tensor: Scale 10¹⁸Nm; Mrr0.20±.10; Mθθ-0.11±.19; Mϕϕ-0.08±.12; Mrθ0.47±.12; Mθϕ-0.12±.14; Mϕr-0.48±.12; Fault plane solution: M₀1.76000×10¹⁸ NP1:ϕs86.10000°,δ77.80000°, λ134.80000°. NP2:ϕs188.10000°,δ46.10000°,λ17.10000°.*

IPGP ***27*** *07:23:42.0,35.73N×23.27E,h72km,Mw6.0,Fault plane solution: NP1:ϕs65.00000°,δ65.00000°,λ146.00000°. NP2:ϕs171.00000°,δ60.00000°,λ29.00000°.*

NEIC ***27*** *07:23:42.4±2.1,35.72N±0.06×23.23E±0.07,h69km±1km, mb6.1/929,Mwb6.0/192,Mww6.0/37,Error ellipse: s-maj=11.4km s-min=8.6km az=205.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.82; Mθθ0.02; Mϕϕ-0.84; Mrθ0.57; Mθϕ-0.89; Mϕr-0.17; Fault plane solution: M₀1.35000×10¹⁸ NP1:ϕs179.65000°, δ52.76000°,λ38.56000°. NP2:ϕs63.89000°,δ60.25000°, λ135.81000°. Principal axes: T 1.2904, Plg51.0000°, Azm28.0000°; N 0.1188, Plg38.0000°, Azm217.0000°; P -1.4092, Plg4.0000°, Azm123.0000°;*

NEIC ***27*** *07:23:42.1,35.70N×23.24E,h60km*

NEIC ***27*** *07:23:42.1,35.60N×23.12E,h60km,Moment Tensor Solution. Duration: 5s2 Moment tensor: Scale 10¹⁸Nm; Mrr0.98; Mθθ-0.07; Mϕϕ-0.91; Mrθ0.39; Mθϕ-0.98; Mϕr-0.41; Fault plane solution: M₀1.48000×10¹⁸ NP1:ϕs63.37000°, δ51.83000°,λ136.41000°. NP2:ϕs183.85000°,δ57.17000°, λ47.35000°. Principal axes: T 1.3690, Plg55.0000°, Azm37.0000°; N 0.1937, Plg35.0000°, Azm210.0000°; P -1.5627, Plg3.0000°, Azm303.0000°;*

GCMT ***27*** *07:23:42.8±0.1,35.58N±0.01×23.00E±0.01,h76km, MW6.0/148,Moment Tensor Solution. s148,c333; s144,c444; Duration: 2s6 Moment tensor: Scale 10¹⁸ Nm; Mrr0.69±.01; Mθθ0.31±.01; Mϕϕ-1.01±.01; Mrθ0.60±.01; Mθϕ-0.99±.01; Mϕr-0.23±.01; Best double couple: M₀1.47800×10¹⁸ NP1:ϕs171.00000°,δ60.00000°, λ31.00000°. NP2:ϕs65.00000°,δ64.00000°,λ146.00000°. Principal axes: T 1.4140, Plg42.0000°, Azm27.0000°; N 0.1240, Plg48.0000°, Azm211.0000°; P -1.5420, Plg2.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

BGR ***27*** *07:23:42.1±2.7,35.69N×22.88E,h50km Error ellipse: s-maj=83.4km s-min=23.3km az=171.0*

ATH ***27*** *07:23:43.7,35.69N×23.26E,h71km,Mw6.1,Moment Tensor Solution. s8 Moment tensor: Mrr0.20; Mθθ0.40; Mϕϕ-0.60; Mrθ0.44; Mθϕ-1.26; Mϕr-0.44; Fault plane solution: NP1:ϕs76.00000°,δ69.00000°,λ165.00000°. NP2:ϕs172.00000°,δ76.00000°,λ21.00000°.*

ISC 27 07:23:41.6±0.2, 35.78N±0.02×23.27E±0.02, h70km±1km, h70km:pP-P, n2384, σ2.00/2516, mb6.1/660, 188C-113D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.10**	**17**	P	**Pn**	**07 23 52.9**	**+0.9**
ANKY				S	**Sn**	**07 24 02.2**	**+2.8**
ANKY	**Antikythira Is**	**0.10**	**17**	P	**Pn**	**07 23 53.8**	**+1.8**
ANKY				S	**Sn**	**07 24 00.5**	**+1.0**
KTHA	**Kythira Island**	**0.51**	**341**	Pg	**Pn**	**07 23 54.9**	**+0.3**
KTHA	**Kythira Island**	**0.51**	**341**	P	**Pn**	**07 23 56.7**	**+2.1**
KTHA	**Kythira Island**	**0.51**	**341**	P	**Pn**	**07 23 57.2**	**+2.6**
KNDR	**Palaiochora Ch**	**0.61**	**151**	Pg	**Pn**	**07 23 54.9**	**-0.7**
KNDR				Sg	**Sn**	**07 24 03.3**	**-2.6**
KNDR	**Palaiochora Ch**	**0.61**	**151**	P	**Pn**	**07 23 54.6**	**-1.1**
KNDR				S	**Sn**	**07 24 06.1**	**+0.2**
KNDR	**Palaiochora Ch**	**0.61**	**151**	P	**Pn**	**07 23 55.0**	**-0.7**
KNDR				S	**Sn**	**07 24 05.0**	**-0.9**
CH01	**Chania**	**0.67**	**113**	P	**Pn**	**07 23 57.2**	**+1.0**
CH01				S	**Sn**	**07 24 07.6**	**+0.7**
CHAN	**Chania**	**0.68**	**112**	P	**Pn**	**07 23 57.2**	**+0.8**
CHAN				S	**Sn**	**07 24 08.9**	**+1.7**
CHAN	**Chania**	**0.68**	**112**	P	**Pn**	**07 23 57.2**	**+0.8**
CHAN				S	**Sn**	**07 24 07.9**	**+0.7**
CHNB	**Souda**	**0.71**	**114**	P	**Pn**	**07 23 57.7**	**+1.1**
CHNB				S	**Sn**	**07 24 08.7**	**+0.9**
NPS1	**Neapolis Lacon**	**0.75**	**347**	P	**Pn**	**07 23 59.6**	**+2.5**
NPS1				S	**Sn**	**07 24 11.4**	**+2.8**
MNVA	**Monemvasia**	**0.93**	**349**	P	**Pn**	**07 24 01.7**	**+2.4**
MNVA				S	**Sn**	**07 24 14.5**	**+2.2**
VLI	**Veliai**	**0.98**	**344**	P	**Pn**	**07 24 02.0**	**+2.1**
VLI				S	**Sn**	**07 24 17.6**	**+4.2**
VLI	**Veliai**	**0.98**	**344**	P	**Pn**	**07 24 02.6**	**+2.7**
VLI				S	**Sn**	**07 24 15.9**	**+2.4**
GVD	**Gavdhos**	**1.15**	**144**	Pn	**Pn**	**07 24 01.8**	**-0.3**
GVD				Sn	**Sn**	**07 24 16.2**	**-1.1**
GVD	**Gavdhos**	**1.15**	**144**	P	**Pn**	**07 24 01.0**	**-1.1**
GVD	**Gavdhos**	**1.15**	**144**	P	**Pn**	**07 24 01.3**	**-0.7**
GVD				S	**Sn**	**07 24 15.1**	**-2.2**
MHLO	**Agia Marina, M**	**1.29**	**45**	P	**Pn**	**07 24 06.0**	**+2.1**
MHLO				S	**Sn**	**07 24 25.4**	**+4.8**
MHLO	**Agia Marina, M**	**1.29**	**45**	P	**Pn**	**07 24 06.5**	**+2.6**
MHLO				S	**Sn**	**07 24 23.4**	**+2.8**
IDI	**Anoyia**	**1.41**	**110**	P	**Pn**	**07 24 05.8**	**+0.4**
	31μm,0.8s,baz=280,slow=6.4,SNR=1634						
IDI				S	**Sn**	**07 24 24.9**	**+1.4**
	40μm,0.4s,baz=266,slow=21,SNR=23						
IDI				LR	LR	07 24 32.8	
	comp=Z,63μm,21.5s,baz=295,slow=35						
IDI	**Anoyia**	**1.41**	**110**	Pn	**Pn**	**07 24 04.9**	**-0.6**
IDI	**Anoyia**	**1.41**	**110**	P	**Pn**	**07 24 05.9**	**+0.4**
IDI	**Anoyia**	**1.41**	**110**			**07 24 06.3**	**+0.8**
IDI	**Anoyia**	**1.41**	**110**	P	**Pn**	**07 24 06.5**	**+1.0**
IACM	**Heraklion**	**1.54**	**107**	P	**Pn**	**07 24 09.1**	**+1.9**
YDRA	**Hydra**	**1.58**	**6**	P	**Pn**	**07 24 09.8**	**+2.2**
MTHA	**Methoni**	**1.64**	**310**	P	**Pn**	**07 24 09.4**	**+1.0**
PYL	**PYLOS**	**1.66**	**313**	P	**Pn**	**07 24 08.8**	**+0.1**
PYL				S	**Sn**	**07 24 30.8**	**+1.5**
PYL	**PYLOS**	**1.66**	**313**	P	**Pn**	**07 24 09.0**	**+0.2**
PYL1	**Pylos**	**1.70**	**312**	P	**Pn**	**07 24 09.4**	**+0.1**
ITM	**Ithomi**	**1.77**	**323**	P	**Pn**	**07 24 11.5**	**+1.3**
ITM				S	**Sn**	**07 24 34.7**	**+2.9**
ITM	**Ithomi**	**1.77**	**323**		**Pn**	**07 24 11.7**	**+1.5**
ITM	**Ithomi**	**1.77**	**323**	↑P	**Pn**	**07 24 10.2**	**0.0**
ITM	**Ithomi**	**1.77**	**323**	P	**Pn**	**07 24 11.3**	**+1.1**
SAP3	**Santorini-Thir**	**1.81**	**68**	P	**Pn**	**07 24 12.1**	**+1.4**
MET2	**Kameni Chora,**	**1.83**	**2**	P	**Pn**	**07 24 13.4**	**+2.3**
SNT5	**Nea Kammeni, S**	**1.83**	**69**	P	**Pn**	**07 24 12.4**	**+1.3**
MET5	**Makryloggos,Me**	**1.84**	**2**	P	**Pn**	**07 24 14.1**	**+2.9**
MET4	**Agioi Theodoro**	**1.85**	**3**	P	**Pn**	**07 24 14.2**	**+3.0**
THRA	**Thira**	**1.87**	**69**	P	**Pn**	**07 24 13.2**	**+1.7**
THERA	**Ancient Thera,**	**1.88**	**71**	P	**Pn**	**07 24 13.1**	**+1.4**
ARS1	**Argos**	**1.91**	**347**	P	**Pn**	**07 24 14.6**	**+2.6**
LVRA	**Laurium**	**2.03**	**18**	P	**Pn**	**07 24 15.9**	**+2.2**
VLY	**Voula,Athens**	**2.12**	**11**	P	**Pn**	**07 24 17.2**	**+2.3**
ZARO	**Zacharo**	**2.15**	**323**	P	**Pn**	**07 24 16.9**	**+1.7**
NAX1	**Naxos Island**	**2.15**	**51**	P	**Pn**	**07 24 17.1**	**+1.8**
AMT	**Artemida-Makis**	**2.15**	**325**	P	**Pn**	**07 24 17.1**	**+1.7**
ATH	**Athens Observa**	**2.22**	**9**	P	**Pn**	**07 24 18.0**	**+1.8**
ATH	**Athens Observa**	**2.22**	**9**	P	**Pn**	**07 24 18.5**	**+2.2**
NOAC	**Athens-Thissio**	**2.22**	**9**	P	**Pn**	**07 24 18.8**	**+2.5**
ATHU	**Athens Univers**	**2.23**	**11**	P	**Pn**	**07 24 17.7**	**+1.3**
ATHU	**Athens Univers**	**2.23**	**11**	P	**Pn**	**07 24 18.7**	**+2.3**
ATH5	**Athens Parliam**	**2.23**	**10**	P	**Pn**	**07 24 18.2**	**+1.8**
APE	**Apeiranthos**	**2.24**	**54**	P	**Pn**	**07 24 18.0**	**+1.5**
APE				S	**Sn**	**07 24 42.9**	**-0.3**
APE	**Apeiranthos**	**2.24**	**54**	Pn	**Pn**	**07 24 17.4**	**+0.9**
APE	**Apeiranthos**	**2.24**	**54**	P	**Pn**	**07 24 18.0**	**+1.5**
APE	**Apeiranthos**	**2.24**	**54**	↑P	**Pn**	**07 24 19.5**	**+3.0**
APE	**Apeiranthos**	**2.24**	**54**	P	**Pn**	**07 24 18.2**	**+1.6**
APE	**Apeiranthos**	**2.24**	**54**	P	**Pn**	**07 24 17.8**	**+1.3**
LTK	**Loutraki**	**2.26**	**354**	P	**Pn**	**07 24 18.6**	**+1.8**
LTK	**Loutraki**	**2.26**	**354**	P	**Pn**	**07 24 18.6**	**+1.8**
ATHP	**Athens-Neo Psi**	**2.26**	**10**	P	**Pn**	**07 24 19.3**	**+2.5**
KIAA	**Kiato**	**2.27**	**350**	P	**Pn**	**07 24 19.9**	**+3.0**
ELFA	**Athens-Elefsin**	**2.28**	**5**	P	**Pn**	**07 24 19.3**	**+2.3**
GUR	**Goura**	**2.28**	**341**	P	**Pn**	**07 24 20.4**	**+3.2**
MAGU	**Magoula**	**2.31**	**5**	P	**Pn**	**07 24 19.6**	**+2.1**
PTL	**Penteli**	**2.32**	**12**	P	**Pn**	**07 24 19.7**	**+2.1**
ACHAR	**Athens-Acharne**	**2.33**	**9**	P	**Pn**	**07 24 20.1**	**+2.4**
TNSA	**Tinos**	**2.33**	**40**	P	**Pn**	**07 24 19.4**	**+1.7**
DION	**Dionisos Attik**	**2.36**	**13**	P	**Pn**	**07 24 20.6**	**+2.4**
SIT2	**Siteia**	**2.39**	**103**	P	**Pn**	**07 24 20.1**	**+1.6**
STFN	**Stefani**	**2.41**	**5**	P	**Pn**	**07 24 20.6**	**+1.8**
VIL2	**Platees**	**2.43**	**0**	P	**Pn**	**07 24 20.1**	**+0.9**
KLV	**Kalavryta, Ach**	**2.43**	**339**	P	**Pn**	**07 24 21.4**	**+2.1**
KLV1	**Kalavrita**	**2.44**	**338**	P	**Pn**	**07 24 22.6**	**+3.4**
KARY	**Karystos**	**2.44**	**22**	P	**Pn**	**07 24 21.1**	**+1.8**
DRO	**Drossia**	**2.51**	**331**	P	**Pn**	**07 24 22.2**	**+2.1**
ASTA	**Astypalaia**	**2.61**	**72**	P	**Pn**	**07 24 22.3**	**+0.8**
LCHA	**Lechaina**	**2.69**	**324**	P	**Pn**	**07 24 24.5**	**+1.9**
RLS	**Rios of Patr**	**2.70**	**328**	P	**Pn**	**07 24 25.1**	**+2.4**
CLEM	**Kyllini,Ilia,G**	**2.72**	**322**	P	**Pn**	**07 24 24.4**	**+1.4**
LTHK	**Lithakia**	**2.75**	**315**	P	**Pn**	**07 24 22.5**	**-0.8**
PATG	**Patra B**	**2.75**	**334**	P	**Pn**	**07 24 26.2**	**+2.8**
TRIZ	**Trizonia**	**2.76**	**340**	P	**Pn**	**07 24 25.8**	**+2.3**
KALE	**Kalithea**	**2.76**	**341**	P	**Pn**	**07 24 26.4**	**+2.7**
PATC	**Patra C**	**2.77**	**335**	P	**Pn**	**07 24 27.0**	**+3.4**
DLFA	**Delphi**	**2.77**	**347**	P	**Pn**	**07 24 26.8**	**+2.4**
UPR	**University Cam**	**2.77**	**335**	P	**Pn**	**07 24 27.7**	**+4.0**
SERG	**Sergoula**	**2.81**	**340**	P	**Pn**	**07 24 26.5**	**+2.3**
KYPS	**Kipseli, Zakin**	**2.83**	**317**	P	**Pn**	**07 24 25.4**	**+0.9**
AXS	**Araxos**	**2.85**	**328**	P	**Pn**	**07 24 27.1**	**+2.3**
EFP	**Efpalio**	**2.86**	**338**	P	**Pn**	**07 24 28.2**	**+3.2**
LKR	**Lokris**	**2.88**	**356**	P	**Pn**	**07 24 26.8**	**+1.7**
ATAL	**Atalanti**	**2.92**	**356**	P	**Pn**	**07 24 27.4**	**+1.6**
ORTH	**Orthonies,Zaky**	**2.92**	**316**	P	**Pn**	**07 24 26.4**	**+0.5**
KYMI	**Kymi, Euboea I**	**2.93**	**13**	P	**Pn**	**07 24 27.7**	**+1.8**
MSL1	**Messolongi**	**2.98**	**331**	P	**Pn**	**07 24 29.0**	**+2.4**
ANX	**Ano Chora**	**3.01**	**339**	P	**Pn**	**07 24 29.9**	**+2.8**
AXAR	**Agios Charalam**	**3.02**	**351**	P	**Pn**	**07 24 29.6**	**+2.4**
AIDA	**Aidipsos**	**3.08**	**357**	P	**Pn**	**07 24 30.0**	**+2.2**
PVO	**Paravola**	**3.16**	**334**	P	**Pn**	**07 24 32.0**	**+3.0**
KARP	**Karpathos**	**3.18**	**93**	Pn	**Pn**	**07 24 29.3**	**0.0**
KARP				Sn	**Sn**	**07 25 06.1**	**0.0**
KARP	**Karpathos**	**3.18**	**93**		**Pn**	**07 24 29.8**	**+0.5**
KARP	**Karpathos**	**3.18**	**93**	↓P	**Pn**	**07 24 29.1**	**-0.2**
KARP	**Karpathos**	**3.18**	**93**	P	**Pn**	**07 24 30.1**	**+0.8**
LAM2	**Lamia**	**3.19**	**348**	P	**Pn**	**07 24 31.7**	**+2.3**
KLNA	**Kalymnos**	**3.21**	**67**	P	**Pn**	**07 24 31.0**	**+1.3**
VLS	**Valsamata**	**3.22**	**319**	P	**Pn**	**07 24 29.6**	**-0.1**
NISR	**Nisiros**	**3.23**	**74**	P	**Pn**	**07 24 31.3**	**+1.3**
SMHA	**Samh**	**3.24**	**320**	P	**Pn**	**07 24 29.6**	**-0.4**
SKY	**Skiros Island**	**3.26**	**18**	P	**Pn**	**07 24 32.0**	**+1.6**
ARG2	**Argostoli**	**3.27**	**318**	P	**Pn**	**07 24 30.5**	**0.0**
AGG	**Agios Georgios**	**3.33**	**347**	P	**Pn**	**07 24 34.1**	**+2.8**
AGG				S	**Sn**	**07 25 12.8**	**+3.2**
AGG	**Agios Georgios**	**3.33**	**347**	↑P	**Pn**	**07 24 32.7**	**+1.4**
EVR	**Evrytania**	**3.34**	**340**	P	**Pn**	**07 24 33.7**	**+2.1**
MAKR	**Makrakomi, Fth**	**3.36**	**345**	P	**Pn**	**07 24 34.8**	**+3.1**
CHOS	**Chios island**	**3.43**	**40**	Pn	**Pn**	**07 24 34.9**	**+2.1**
FSK	**Fiskardo**	**3.44**	**322**	P	**Pn**	**07 24 33.5**	**+0.7**
SMG	**Samos**	**3.46**	**55**	P	**Pn**	**07 24 34.4**	**+1.3**
YAZI	**Mula-Dat§a-**	**3.50**	**74**	P	**Pn**	**07 24 34.8**	**+1.2**
YAZI				S	**Sn**	**07 25 19.7**	**-0.3**
YKAV	**Yalikavak-Bodr**	**3.50**	**66**	Pn	**Pn**	**07 24 35.6**	**+1.9**
BODT	**Bodrum**	**3.50**	**67**	Pn	**Pn**	**07 24 35.6**	**+1.9**
CESE	**eme**	**3.52**	**43**	Pn	**Pn**	**07 24 35.5**	**+1.6**
NEO	**Neokhori**	**3.52**	**359**	P	**Pn**	**07 24 35.9**	**+1.9**
ZEYE	**Izmir, Urla-Ze**	**3.57**	**46**	P	**Pn**	**07 24 35.6**	**+1.0**
ZEYE				S	**Sn**	**07 25 18.0**	**+2.4**
DIDI	**Didim-Aydin**	**3.58**	**62**	Pn	**Pn**	**07 24 36.2**	**+1.6**
BDRM	**Kayabasi**	**3.61**	**68**	SPECP		07 24 36.0	
BDRM				P	**Pn**	**07 24 36.3**	**+1.2**
DDIM	**Aydin, Didim**	**3.61**	**61**	P	**Pn**	**07 24 37.0**	**+1.9**
DDIM				S	**Sn**	**07 25 18.0**	**+1.4**
DAT	**Datca**	**3.61**	**73**	Pn	**Pn**	**07 24 36.5**	**+1.2**
DATC	**Datca-Mugla**	**3.68**	**73**	Pn	**Pn**	**07 24 37.0**	**+0.9**
URLA	**Izmir**	**3.71**	**45**	P	**Pn**	**07 24 36.3**	**-0.2**
URLA				S	**Sn**	**07 25 20.9**	**+1.9**
URLA	**Izmir**	**3.71**	**45**	Pn	**Pn**	**07 24 38.5**	**+2.0**
GMLD	**Gumuldur**	**3.72**	**51**	Pn	**Pn**	**07 24 37.8**	**+1.2**
GCAM	**G?zelcaml?**	**3.72**	**58**	P	**Pn**	**07 24 37.8**	**+1.1**
GCAM				S	**Sn**	**07 25 15.1**	**-4.2**
GCAM	**G?zelcaml?**	**3.72**	**58**	Pn	**Pn**	**07 24 38.0**	**+1.4**
KARB	**zmir-Karabur**	**3.82**	**40**	P	**Pn**	**07 24 38.5**	**+0.5**
KARB				S	**Sn**	**07 25 25.3**	**+3.5**
KUSD	**Kusadasi-Aydin**	**3.84**	**56**	Pn	**Pn**	**07 24 39.9**	**+1.6**
TETR	**Tetrakomo, Epi**	**3.90**	**337**	P	**Pn**	**07 24 41.4**	**+2.2**
THL	**Klokotos Trika**	**3.91**	**346**	P	**Pn**	**07 24 41.2**	**+2.0**
MLSB	**Milas**	**3.94**	**66**	Pn	**Pn**	**07 24 40.9**	**+1.3**
ARG	**Arkhangelos**	**3.96**	**82**	Pn	**Pn**	**07 24 40.9**	**+0.9**
ARG	**Arkhangelos**	**3.96**	**82**		**Pn**	**07 24 41.2**	**+1.2**
ARG	**Arkhangelos**	**3.96**	**82**	P	**Pn**	**07 24 41.2**	**+1.2**
ARG	**Arkhangelos**	**3.96**	**82**	P	**Pn**	**07 24 41.1**	**+1.1**
BLCB	**Balcova**	**3.99**	**48**	Pn	**Pn**	**07 24 41.8**	**+1.5**
SIGR	**SIGRI**	**4.00**	**30**	Pn	**Pn**	**07 24 43.3**	**+2.9**
TURN	**Turunc**	**4.14**	**75**	P	**Pn**	**07 24 43.6**	**+1.2**
TURN	**Turunc**	**4.14**	**75**	Pn	**Pn**	**07 24 44.7**	**+2.3**
YER	**Yerkesik**	**4.26**	**70**	Pn	**Pn**	**07 24 45.5**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**4.29**	**58**	Pn	**Pn**	**07 24 46.1**	**+1.5**
GPNR	**Gulpinar-Canak**	**4.32**	**31**	Pn	**Pn**	**07 24 46.7**	**+1.9**
MULA	**Mugla, Merkez-**	**4.33**	**69**	P	**Pn**	**07 24 47.3**	**+2.2**
LIT	**Litokhoron**	**4.36**	**352**	P	**Pn**	**07 24 45.8**	**+0.4**
LIT				S	**Sn**	**07 24 46.2**	**+1.3**
LIT	**Litokhoron**	**4.36**	**352**		**Pn**	**07 24 47.2**	**+1.8**
LIT	**Litokhoron**	**4.36**	**352**	P	**Pn**	**07 24 47.2**	**+1.8**
LIT	**Litokhoron**	**4.36**	**352**	↑P	**Pn**	**07 24 46.7**	**+1.3**
KOCA	**Canakkale, Ayv**	**4.36**	**31**	P	**Pn**	**07 24 46.5**	**+1.1**
DKL	**Dikili**	**4.38**	**40**	Pn	**Pn**	**07 24 47.8**	**+2.1**
AYVA	**Ayvalik**	**4.45**	**37**	P	**Pn**	**07 24 45.8**	**-0.8**
DALY	**Dalyan (Mula)**	**4.47**	**75**	Pn	**Pn**	**07 24 49.0**	**+2.1**
SLUM	**Salum**	**4.57**	**159**	P	Pn	07 24 42.9	-5.4
SLUM				S	**Sn**	**07 25 31.9**	**-8.2**
NAZL	**Nazilli-Aydin**	**4.58**	**60**	Pn	**Pn**	**07 24 50.1**	**+1.6**
ODEM	**Odemis-Izmir**	**4.58**	**56**	Pn	**Pn**	**07 24 52.4**	**+3.9**
BOZC	**Bozcaada**	**4.62**	**28**	P	**Pn**	**07 24 48.0**	**-0.9**
BOZC	**Bozcaada**	**4.62**	**28**	Pn	**Pn**	**07 24 50.6**	**+1.7**
EZNE	**Ezine-Canakkal**	**4.67**	**31**	Pn	**Pn**	**07 24 51.8**	**+2.2**
EZN	**Ezine**	**4.71**	**30**	Pn	**Pn**	**07 24 52.1**	**+1.9**
EZN	**Ezine**	**4.71**	**30**	↓P	**Pn**	**07 24 51.9**	**+1.7**
EZN	**Ezine**	**4.71**	**30**	P	**Pn**	**07 24 51.7**	**+1.5**
GOMA	**Golmarmara-Man**	**4.72**	**50**	Pn	**Pn**	**07 24 52.7**	**+2.3**
BAYC	**CANAKKALE_Bayr**	**4.74**	**32**	P	**Pn**	**07 24 50.9**	**+0.4**
AKHS	**Akhisar**	**4.77**	**48**	P	**Pn**	**07 24 50.9**	**0.0**
AKS	**Akhisar**	**4.77**	**48**	Pn	**Pn**	**07 24 54.1**	**+3.2**
KIRA	**zmir-Kiraz**	**4.77**	**58**	P	**Pn**	**07 24 53.8**	**+2.8**
KIRA				S	**Sn**	**07 25 51.6**	**+6.6**
SOMA	**Soma-Manisa**	**4.79**	**44**	Pn	**Pn**	**07 24 54.5**	**+3.3**
BUHA	**Balikesir, Bur**	**4.79**	**38**	P	**Pn**	**07 24 51.7**	**+0.4**
KEK	**Kerkira**	**4.80**	**326**		**Pn**	**07 24 56.0**	**+4.7**
ECEA	**Canakkale, Ece**	**4.84**	**27**	P	**Pn**	**07 24 51.7**	**-0.3**
TAVA	**DENIZLI_Tavas**	**4.84**	**68**	P	**Pn**	**07 24 55.3**	**+3.2**
GOAD	**anakkale-G¶**	**4.85**	**25**	P	**Pn**	**07 24 50.2**	**-1.9**
GOAD				S	**Sn**	**07 25 45.8**	**-1.2**
IZZE	**Mula-Seydike**	**4.87**	**80**	P	**Pn**	**07 24 51.7**	**-0.7**
GADA	**Gvkgeada**	**4.87**	**24**	Pn	**Pn**	**07 24 54.7**	**+2.3**
YAYO	**Edremit-Balk**	**4.88**	**37**	Pn	**Pn**	**07 24 54.6**	**+2.2**
DNIZ	**Denizli-Tavas-**	**4.99**	**67**	P	**Pn**	**07 24 56.0**	**+1.9**
COMU	**Canakkale**	**5.00**	**29**	Pn	**Pn**	**07 24 56.8**	**+2.6**
CAME	**Cameli-Denizli**	**5.01**	**75**	Pn	**Pn**	**07 24 56.6**	**+2.2**
GORD	**Gordes-Manisa**	**5.01**	**50**	Pn	**Pn**	**07 24 56.8**	**+2.5**
MANT	**Manisa**	**5.02**	**56**		**Pn**	**07 24 57.6**	**+3.

comp=Z,5µm,0.8s,baz=111,slow=2.3,SNR=161
VAE S **Sn** **07 26 40.4 -7.1**
comp=Z,5µm,0.8s,baz=238,slow=9.3,SNR=6.0
PDG Podgorica 7.34 336 Pn
PDG Podgorica 7.34 336 ⇑P Pn 07 25 25.2 -0.9
PDG Podgorica 7.34 336 ⇓P Pn 07 25 25.1 -0.9
PDG Podgorica 7.34 336 ⇓*i*Pn Pn 07 25 25.4 -0.7
PDG *i* Sn **Sn 07 26 42.0 -5.8**
BUM Brajici-Budva 7.35 334 ⇓*i*Pn Pn 07 25 25.1 -1.2
BUM *i* Sn **Sn 07 26 42.1 -6.1**
GULT Gulveren 7.37 49 Pn Pn 07 26 29.3 +2.8
ELND Elena 7.42 15 ⇓P Pn 07 25 29.4 +2.2
PVL Pavlikeni 7.48 11 P Pn 07 25 29.7 +1.7
SVRH Sivrihisar-ESK 7.51 58 Pn Pn 07 25 30.7 +2.2
KIZT Kizilcal 7.53 63 Pn Pn 07 25 28.9 +0.1
HDMB Hadim 7.53 78 Pn Pn 07 25 30.5 +1.6
IVA Berane 7.55 341 ⇓*i*Pn Pn 07 25 29.1 0.0
IVA *i* Sn **Sn 07 26 47.1 -6.1**
CEME Cevo 7.56 335 ⇑*i*Pn Pn 07 25 27.7 -1.4
CEME *i* Sn **Sn 07 26 47.1 -6.2**
MPEP Malo Peshtene 7.58 3 P Pn 07 25 31.2 +1.8
KONT Konya--Tatoy 7.60 71 Pn Pn 07 25 31.2 +1.4
HCY Herceg Novi 7.62 332 ⇓*i*Pn Pn 07 25 29.0 -1.0
HCY *i* Sn **Sn 07 26 48.4 -6.4**
ACER Acerenza 7.63 313 Pn Pn 07 25 28.6 -1.4
KOME Kolasin 7.64 339 ⇑*i*Pn Pn 07 25 30.5 +0.2
KOME *i* Sn **Sn 07 26 48.8 -6.5**
LADK Ladik-KONYA 7.67 69 Pn Pn 07 25 32.4 +1.6
PLVB Pleven 7.67 7 ⇑P Pn 07 25 31.8 +1.2
NKME Niksic 7.74 336 ⇓*i*Pn Pn 07 25 30.5 -1.1
NKME *i* Sn **Sn 07 26 51.2 -6.5**
SZH Strazhitsa 7.77 15 P Pn 07 25 33.8 +1.9
SAHE Sakarya_HENDEK 7.83 47 ⇓P Pn 07 25 35.7 +3.0
VALD Valchedram 7.91 1 P Pn 07 25 35.4 +1.6
TREB Trebinje 7.91 333 *e*Pn Pn 07 25 32.5 -1.4
BOVS Bovan 7.94 352 ⇑P Pn 07 25 34.3 0.0
ROIA ROIAK 7.97 22 P Pn 07 25 38.3 +3.6
BRY Bratogost 8.00 334 ⇑*i*Pn Pn 07 25 33.7 -1.6
BRY *i* Sn **Sn 07 26 57.5 -6.8**
LOZB Loznitsa 8.01 18 ⇑P Pn 07 25 36.2 +1.0
ZIMR 8.04 11 ⇓P Pn 07 25 37.5 +2.0
ZIMR 8.04 11 P Pn 07 25 37.0 +1.4
NEF NEVSHA 8.09 21 P Pn 07 25 39.7 +3.3
PLE Pljevlja 8.12 340 ⇓*i*Pn Pn 07 25 36.5 -0.3
PLE *i* Sn **Sn 07 27 00.8 -6.2**
UPM Unac-Piva 8.15 337 ⇓*i*Pn Pn 07 25 36.9 -0.4
UPM *i* Sn **Sn 07 27 01.3 -6.8**
RAZG Razgrad 8.17 17 ⇑P Pn 07 25 38.9 +1.5
KLINJ Klinje 8.22 335 *e*Pn Pn 07 25 37.1 -1.1
BAIL Bailesti 8.23 0 ⇑P Pn 07 25 39.6 +1.3
VLAD Vladila 8.26 6 ⇑P Pn 07 25 39.8 +1.2
CSS Mathiatis 8.26 93 Pn 07 25 36.0 -2.7
CSS Mathiatis 8.26 93 ⇑P Pn 07 25 35.4 -3.3
CSS Mathiatis 8.26 93 P Pn 07 25 34.8 -3.9
RUDO Rudo 8.39 340 *e*Pn Pn 07 25 38.4 -2.0
COPA Copaceanca 8.48 10 ⇑P Pn 07 25 43.0 +1.4
PUNG Punghina 8.50 358 ⇑P Pn 07 25 42.6 +0.7
CRAR CRAIOVA 8.55 3 ⇑P Pn 07 25 43.6 +1.0
CRAR CRAIOVA 8.55 3 P Pn 07 25 43.5 +1.0
ANTO Ankara 8.57 59 P Pn 07 25 46.9 +3.8
ANTO S **Sn 07 27 22.0 +3.8**
ANTO Ankara 8.57 59 Pn Pn 07 25 47.0 +4.0
ANTO Ankara 8.57 59 ⇑P Pn 07 25 46.1 +3.1
ANTO Ankara 8.57 59 P Pn 07 25 46.1 +3.1
SGRR Singureni 8.69 13 ⇑P Pn 07 25 45.5 +1.7
PSN Preselentsi 8.70 24 P Pn 07 25 46.8 +2.1
HMYD Mayadein 8.70 131 P Pn 07 25 40.8 -4.0
BUC1 Bucharest 8.82 13 ⇑P Pn 07 25 48.6 +2.4
BUC1 Bucharest 8.82 13 P Pn 07 25 48.6 +2.4
HUMR Humele 8.84 8 ⇑P Pn 07 25 47.8 +1.2
SRE Strehaia 8.88 360 ⇓P Pn 07 25 48.5 +1.4
SRE Strehaia 8.88 360 P Pn 07 25 48.4 +1.4
CICN Ciocanesti 8.89 18 ⇑P Pn 07 25 49.7 +2.5
DJES Djerdap 8.90 357 ⇑P Pn 07 25 48.0 +0.7
RYAN Fayoum 8.92 136 P Pn 07 25 43.6 -4.2
RYAN S Sn 07 27 14.8 -12
INCR INCERC-Sediu C 8.93 13 ⇑P Pn 07 25 49.8 +2.0
MANR Mangalia 9.01 25 ⇓P Pn 07 25 50.9 +2.0
ICOR Ion Corvin 9.03 21 ⇑P Pn 07 25 51.3 +2.2
MDVR Moldovita 9.07 353 ⇑P Pn 07 25 49.4 -0.4
LEHL Lehliu 9.10 16 ⇑P Pn 07 25 51.3 +1.2
KIRS Kirsehir-Merke 9.11 65 ⇑P Pn 07 25 52.6 +2.3
BRTR Keskin Array B 9.11 61 P Pn 07 25 52.1 +1.7
comp=Z,267nm,0.7s,baz=240,slow=15,SNR=292
BRTR S **Sn 07 27 30.8 -0.6**
comp=Z,134nm,0.9s,baz=235,slow=18,SNR=0.5
BRTR LR LR 07 30 37.7
comp=Z,8µm,19.1s,baz=240,slow=46
BRTR ScP **ScP 07 35 33.2 +0.1**
comp=Z,14nm,0.9s,baz=242,slow=3.2,SNR=7.3
BRTR PKiKP **PKiKP 07 40 06.8 -0.5**
comp=Z,3.3nm,0.8s,baz=228,slow=1.6,SNR=7.7
BRTR Keskin Array B 9.11 61 Pn 07 25 52.9 +2.5
BRTR Keskin Array B 9.11 61 *ce*P Pn 07 25 53.4 +3.0
BRTR pmax pmax
comp=Z,216nm,0.6s
BR131 Keskin Array S 9.11 61 P Pn 07 25 53.6 +3.2
SNR=186
BR131 P **Pn 07 25 53.6 +3.2**
SNR=186
BR131 S **Sn 07 27 35.4 +4.0**
BR131 S **Sn 07 27 35.4 +4.0**
BR131 Keskin Array S 9.11 61 *c*P Pn 07 25 53.2 +2.8
HERR Herculane 9.12 356 ⇑P Pn 07 25 52.0 +1.6
STFAR Stefanesti-Arg 9.17 8 ⇑P Pn 07 25 52.8 +1.7
SULR 9.18 13 ⇑P Pn 07 25 52.8 +1.6
EFOR EFORIE 9.26 25 ⇑P Pn 07 25 54.5 +2.3
KOT Kottamia 9.26 127 P Pn 07 25 48.1 -4.4
KOT S Sn 07 27 23.3 -12
MFTR Murfatlar 9.28 24 ⇑P Pn 07 25 54.5 +2.1
CVDA Cernavoda 9.29 22 ⇑P Pn 07 25 55.3 +2.6
AMRR Amara 9.36 18 ⇑P Pn 07 25 55.4 +1.8
AMRR Amara 9.36 18 P Pn 07 25 55.4 +1.8
PLAR PLOIESTI 9.37 12 ⇓P Pn 07 25 56.2 +2.4
HHAG Hagoal 9.43 126 P Pn 07 25 50.3 -4.4
TLBR Topalu 9.49 21 ⇓P Pn 07 25 57.0 +1.6
TIRR Tirgusor 9.52 23 Pn 07 25 57.0 +1.1
TIRR Tirgusor 9.52 23 ⇑P Pn 07 25 57.0 +1.1
TIRR Tirgusor 9.52 23 P Pn 07 25 57.0 +1.1
TIRR Tirgusor 9.52 23 ⇑P Pn 07 25 56.5 +0.7
TIRR Tirgusor 9.52 23 *e*Pn Pn 07 25 57.1 +1.3
MTUR Matau 9.54 8 ⇓P Pn 07 25 57.3 +1.1
MTUR Matau 9.54 8 P Pn 07 25 57.2 +1.1
PGOR Pogoanele 9.55 16 ⇓P Pn 07 25 58.7 +2.4
GZR Gura Zlata 9.62 358 ⇑P Pn 07 25 58.3 +1.1
GZR Gura Zlata 9.62 358 P Pn 07 25 58.3 +1.1
HFRF Wahat Farafira 9.62 152 P Pn 07 25 52.8 -4.5
ARR Arges 9.64 6 ⇑P Pn 07 25 57.8 +0.3
ISR Istrita 9.66 14 ⇓P Pn 07 26 00.0 +2.2
ISR Istrita 9.66 14 P Pn 07 26 00.0 +2.2
LOT Lotru 9.67 2 ⇑P Pn 07 25 58.8 +0.8
CIDE Kastamonu/Cide 9.70 48 ⇓P Pn 07 26 01.6 +3.3
VOIR 9.75 7 ⇑P Pn 07 26 00.1 +1.0
VOIR 9.75 7 P Pn 07 26 00.0 +1.0
NBNS Bani Suef 9.85 134 P Pn 07 25 56.0 -4.5
TPGR Topolog 9.88 22 ⇓P Pn 07 26 01.7 +0.9
TNR Turnu Rosu 9.90 4 ⇑P Pn 07 26 02.7 +1.7
TNR Turnu Rosu 9.90 4 P Pn 07 26 02.7 +1.7
BZS Buzias 9.91 353 ⇑P Pn 07 26 00.9 -0.3
BZS Buzias 9.91 353 P Pn 07 26 00.8 -0.3
BZS Buzias 9.91 353 ⇑P Pn 07 26 00.1 -1.0
NEHR Nehoiu 9.91 12 ⇓P Pn 07 26 03.1 +1.9
MLR Muntele Rosu 9.92 11 P Pn 07 26 01.9 +0.5
comp=Z,276nm,0.7s,baz=230,slow=4.4,SNR=151
MLR S **Sn 07 27 54.9 +3.9**
comp=Z,94nm,0.7s,baz=337,slow=15,SNR=0.7
MLR LR LR 07 30 10.7
comp=Z,28µm,21.0s,baz=184,slow=39
MLR Muntele Rosu 9.92 11 Pn 07 26 02.6 +1.2
MLR Muntele Rosu 9.92 11 ⇓P Pn 07 26 03.2 +1.8
MLR Muntele Rosu 9.92 11 P Pn 07 26 03.2 +1.8
MLR Muntele Rosu 9.92 11 *e*Pn Pn 07 26 03.0 +1.6
JURR Jurilovca 9.95 24 ⇑P Pn 07 26 03.0 +1.4
SUZ Suez 9.99 124 P Pn 07 25 57.7 -4.7
GRER 10.00 15 ⇑P Pn 07 26 04.8 +2.4
SURR Surduc 10.01 355 ⇓P Pn 07 26 03.1 +0.6
BLY Banja Luka 10.09 334 *e*Pn Pn 07 26 01.9 -1.7
BLY Banja Luka 10.09 334 ⇑P Pn 07 26 01.1 -2.6
BLY Banja Luka 10.09 334 ⇓P Pn 07 26 02.0 -1.7
AQU L'Aquila 10.09 314 *e*Pn Pn 07 26 03.5 -0.3
AQU L'Aquila 10.09 314 ⇓P Pn 07 26 02.8 -0.9

CFR Carcaliu 10.10 20 ⇑P Pn 07 26 04.5 +0.8
CFR Carcaliu 10.10 20 P Pn 07 26 04.5 +0.8
BISRR Bisoca 10.11 14 ⇓P Pn 07 26 06.5 +2.6
ZAF Zafarana 10.16 127 P Pn 07 25 59.9 -4.8
OFRI `Ofer 10.20 105 P Pn 07 25 59.9 -5.3
COVR Voineasa-Covas 10.30 12 ⇑P Pn 07 26 08.0 +1.5
TLCR 10.30 22 ⇑P Pn 07 26 07.8 +1.3
TLCR 10.30 22 P Pn 07 26 07.8 +1.3
DOPR Dopca 10.31 8 ⇑P Pn 07 26 07.6 +0.9
ZNM Zenema 10.31 126 P Pn 07 26 02.5 -4.3
ZNM S Sn 07 27 48.6 -12
SCHL Schela 10.31 18 ⇑P Pn 07 26 08.7 +2.1
BLGI Bet Lehem HaGe 10.32 104 P Pn 07 26 02.0 -4.9
IZVR Izvoarele 10.34 18 ⇑P Pn 07 26 08.9 +2.0
NEGRR Negrea 10.36 18 ⇑P Pn 07 26 08.7 +1.5
TUDR 10.36 17 ⇑P Pn 07 26 09.2 +1.9
TAMRE El Minia 10.37 139 P Pn 07 26 02.8 -4.7
ODBI Odobesti 10.38 15 ⇑P Pn 07 26 09.9 +2.3
PLOR Plostina 10.38 13 ⇑P Pn 07 26 09.5 +1.8
PLOR Plostina 10.38 13 P Pn 07 26 09.5 +1.8
MMC7 Mount Meron ar 10.39 102 P Pn 07 26 03.3 -4.5
SLTI Sal'it 10.39 106 P Pn 07 26 02.5 -5.3
MDB Medias 10.39 4 ⇓P Pn 07 26 09.9 +2.2
MDB Medias 10.39 4 P Pn 07 26 09.9 +2.2
BZK Bozkurt 10.40 50 ⇑P Pn 07 26 10.7 +2.9
MMA0B Mount Meron ar 10.40 102 P Pn 07 26 01.8 -6.1
MMAI Mount Meron Ar 10.40 102 P Pn 07 26 04.5 -3.5
comp=Z,486nm,0.4s,baz=299,slow=10,SNR=131
MMAI S Sn 07 27 51.7 -11
comp=Z,182nm,0.3s,baz=308,slow=21,SNR=11
VRI Vrincioaia 10.41 13 ⇓P Pn 07 26 09.9 +1.9
VRI Vrincioaia 10.41 13 P Pn 07 26 09.9 +1.9
BOSR Bodos 10.45 9 ⇓P Pn 07 26 09.6 +1.1
TATR Tatarca 10.46 19 ⇑P Pn 07 26 10.8 +2.1
TURR Turia 10.48 11 ⇑P Pn 07 26 10.5 +1.6
BNN Bunyan 10.48 69 Pn 07 26 11.6 +2.5
OZUR 10.48 10 ⇑P Pn 07 26 10.3 +1.3
KZIT Kziot 10.50 114 P Pn 07 26 02.8 -6.5
KZIT Kziot 10.50 114 S Sn 07 27 54.3 -11
PANC Panciu 10.51 15 ⇑P Pn 07 26 11.2 +2.0
SCTR Scanteiesti 10.52 18 ⇑P Pn 07 26 11.2 +1.8
COSR Cosmesti PH 10.52 16 ⇓P Pn 07 26 12.0 +2.5
GEM Giv'at Ha'Em 10.55 100 P Pn 07 26 05.2 -4.7
GEM Giv'at Ha'Em 10.55 100 S Sn 07 27 56.4 -10
SIRR Siria 10.55 354 ⇑P Pn 07 26 09.9 -0.1
AMAZ Amatzia 10.59 110 ⇓P Pn 07 26 05.1 -5.4
AMAZ Amatzia 10.59 110 P Pn 07 26 03.0 -7.5
AMAZ Amatzia 10.59 110 S Sn 07 27 57.0 -10
NATI Neve Ativ 10.59 100 P Pn 07 26 06.2 -4.3
MMLI Mount Malkishu 10.61 105 P Pn 07 26 05.5 -5.3
MMLI Mount Malkishu 10.61 105 S Sn 07 27 58.4 -10
VARL Varlezi 10.69 18 ⇑P Pn 07 26 14.4 +2.6
VLDR Vladesti 10.70 18 ⇓P Pn 07 26 14.2 +2.3
GHRR 10.74 16 ⇑P Pn 07 26 14.4 +1.9
TGMR Targu Mures 10.78 5 ⇑P Pn 07 26 14.3 +1.2
ONER Baraj Valea Uz 10.81 12 ⇑P Pn 07 26 14.9 +1.5
YTIR Yattir 10.82 111 P Pn 07 26 05.4 -8.3
DSI Dead Sea 10.93 109 P Pn 07 26 10.5 -4.7
ASUT 10.94 137 P Pn 07 26 11.2 -4.1
BIR Birlad 10.98 16 ⇓P Pn 07 26 17.4 +1.6
BIR Birlad 10.98 16 P Pn 07 26 17.4 +1.6
CBBR Cluj-Babes-Bol 10.98 1 ⇑P Pn 07 26 16.2 +0.4
MORH Mrgy, Hungar 11.00 343 *e*Pn Pn 07 26 13.1 -2.9
GRB Gharib 11.01 130 P Pn 07 26 10.8 -5.5
DRGR 11.01 358 ⇑P Pn 07 26 16.4 0.0
DRGR 11.01 358 P Pn 07 26 16.3 0.0
KOVH Kovagotottos 11.02 341 ⇑P Pn 07 26 13.2 -3.0
TESR Tescani 11.02 12 ⇓P Pn 07 26 18.5 +2.2
MSBI Mazada 11.03 110 P Pn 07 26 09.7 -6.7
KRMI Paran Flat 11.15 117 P Pn 07 26 11.9 -6.4
GHAJ Ghor Haditha 11.19 110 Pn 07 26 15.0 -3.7
GHAJ Ghor Haditha 11.19 110 ⇓P Pn 07 26 14.2 -4.4
GHAJ Ghor Haditha 11.19 110 S Sn 07 28 13.4 -8.6
PRNI Paran 11.23 115 ⇓P Pn 07 26 12.4 -6.9
ZFRI Zfri 11.26 114 P Pn 07 26 12.6 -7.0
KEST Kesra 11.31 274 P Pn 07 26 17.7 -2.8
comp=Z,560nm,0.7s,baz=113,slow=2.4,SNR=146
KEST S Sn 07 28 14.9 -10
comp=Z,160nm,0.7s,baz=127,slow=21,SNR=6.6
KEST LR LR 07 31 01.1
comp=Z,9µm,21.6s,baz=71,slow=39
KEST Kesra 11.31 274 P Pn 07 26 18.4 -2.0
SNR=115
KEST P **Pn 07 26 18.4 -2.0**
SNR=115
KEST S **Sn 07 28 22.1 -3.1**
KEST S **Sn 07 28 22.1 -3.1**
KEST Kesra 11.31 274 Pn 07 26 17.8 -2.7
GAZ Gaziantep 11.31 79 ⇓P Pn 07 26 18.8 -1.7
ARCR ARCALIA 11.33 4 ⇓P Pn 07 26 22.0 +1.5
BORR Boros 11.36 355 ⇑P Pn 07 26 20.3 -0.6
VASR Vaslui 11.38 16 ⇓P Pn 07 26 23.4 +2.3
HRFI Mount Harif 11.42 117 P Pn 07 26 13.6 -8.3
HRFI Mount Harif 11.42 117 S Sn 07 28 18.4 -9.4
BOJS Bojanci 11.46 330 *i* Pn Pn 07 26 20.5 -1.8
BOJS *i* Sn **Sn 07 28 19.9 -8.6**
TR2 Tor 2 11.52 127 P Pn 07 26 18.5 -4.8
EIL Elat 11.57 118 P Pn 07 26 19.9 -3.9
comp=Z,4µm,0.9s,baz=282,slow=2.7,SNR=343
EIL S Sn 07 28 17.4 -14
comp=Z,924nm,0.4s,baz=9.0,slow=12,SNR=8.3
EIL Elat 11.57 118 P Pn 07 26 16.2 -7.6
LTVH Ltavrtes, Hu 11.64 355 ⇑P Pn 07 26 25.5 +0.7
HBST Basata 11.68 121 P Pn 07 26 21.2 -4.2
NUB Nuweiba 11.73 122 P Pn 07 26 21.6 -4.5
BEHE Becsehely 11.75 337 *e*Pn Pn 07 26 24.1 -2.1
PURM Purcari 11.84 23 ⇑P Pn 07 26 27.9 +0.5
IASR Iasi 11.84 14 ⇑P Pn 07 26 28.7 +1.2
ASF Jabal al Asfar 11.87 104 P Pn 07 26 23.9 -4.2
comp=Z,282nm,0.5s,baz=277,slow=5.8,SNR=152
ASF S Sn 07 28 27.7 -11
comp=Z,694nm,0.9s,baz=350,slow=17,SNR=7.5
MILM Milestii Mici 11.88 19 ⇑*i*P Pn 07 26 27.0 -1.0
MILM Milestii Mici 11.88 19 *e*PP Pn 07 26 36.0 +8.0
MILM *e*S **Sn 07 28 35.0 -3.8**
MILM *e*L L 07 29 54.0
MILM LRM MLR 07 31 54.0
comp=Z,17µm,16.0s
CASP Castiglione de 11.88 310 Pn 07 26 27.1 -1.1
HDHB Dhahab 11.90 123 P Pn 07 26 23.6 -4.8
BURAR Bucovina Array 11.92 6 Pn 07 26 29.4 +0.8
BURAR Bucovina Array 11.92 6 ⇑P Pn 07 26 30.3 +1.6
BURAR Bucovina Array 11.92 6 P Pn 07 26 30.3 +1.6
TR1 Tor 1 11.93 128 P Pn 07 26 23.8 -5.0
BUR08 Bucovina Ar. S 11.95 6 Pn 07 26 30.2 +1.2
KIS Kishinev 11.96 19 ⇑*e*P Pn 07 26 29.0 -0.1
KIS *e*S **Sn 07 28 36.0 -4.6**
KIS *e*L L 07 31 03.0
KIS LRM MLR 07 32 25.0
comp=Z,7µm,10.5s
GTR Jabal at Tayr 12.00 147 P Pn 07 26 26.0 -3.7
LJU Ljubljana 12.19 330 *i* Pn Pn 07 26 30.2 -2.1
LJU *e*Sn Sn 07 28 36.1 -10
SIM Simferopol' 12.34 39 *e*P Pn 07 26 35.8 +1.6
SIM *e*S **Sn 07 28 54.4 +4.6**
SIM pmax pmax
comp=Z,1µm,1.5s
SIM smax smax
comp=E,3µm,17.6s
PSZ Piszkesteto 12.39 349 Pn 07 26 32.9 -2.1
PSZ Piszkesteto 12.39 349 ⇑P Pn 07 26 33.7 -1.4
PSZ Piszkesteto 12.39 349 *e*P Pn 07 26 35.3 +0.3
PSZ Piszkesteto 12.39 349 P Pn 07 26 33.6 -1.4
PSZ Piszkesteto 12.39 349 *e*Pn Pn 07 26 33.1 -1.9
SOKA Soboth 12.52 333 *e*Pn Pn 07 26 33.9 -3.0
comp=E,192nm,0.4s,SNR=365
SOKA *e*Sn Sn 07 28 45.1 -9.4
comp=E,3µm,1.6s
OBKA Obir 12.57 331 *e*Pn Pn 07 26 34.6 -2.9
comp=E,125nm,0.2s,SNR=156
OBKA *e*Sn **Sn 07 28 49.9 -5.7**
comp=E,1µm,0.6s
SRO Srobarova 12.58 344 *e*P Pn 07 26 37.7 +0.2
SRO Srobarova 12.58 344 *e*PN Pn 07 26 37.7 +0.2
DRBR Darabani 12.67 10 ⇑P Pn 07 26 40.4 +1.7
CADS Cadrg 12.67 328 *i* Pn Pn 07 26 36.3 -2.6
ABSA Djebel Ababsia 12.79 277 P Pn 07 26 39.6 -1.1
CMAH Djebel Manchou 12.83 278 P Pn 07 26 39.7 -1.4
ARSA Arzberg 12.84 336 *e*Pn Pn 07 26 38.5 -2.6
comp=E,40nm,0.3s,SNR=79
ARSA *e*Sn Sn 07 28 52.6 -10
comp=E,2µm,1.7s
ARSA Arzberg 12.84 336 ⇓P Pn 07 26 38.6 -2.6
KECS Kecovo 12.86 352 *e*P Pn 07 26 40.6 -0.8
KECS Kecovo 12.86 352 *e*PN Pn 07 26 40.6 -0.8
VLC Villacollemand 12.94 314 ⇓P Pn 07 26 41.0 -1.5
PGF Pioggiola 12.96 306 ⇓P Pn 07 26 41.9 -1.0
PTCC Patocco-Chiusa 12.97 328 ⇓P Pn 07 26 40.0 -2.9
RONA Rosalia, Austr 12.99 339 *e*Pn Pn 07 26 40.4 -2.9
comp=E,76nm,0.3s,SNR=66
RONA Sn **Sn 07 28 58.5 -7.4**
comp=E,206nm,0.5s
MYKA Terra Mystica 13.03 329 *e*Pn Pn 07 26 40.9 -2.8
comp=E,17nm,0.2s,SNR=65
MYKA Sn Sn 07 28 57.7 -9.2
comp=E,416nm,0.7s
CAEH `Ain El Ouahch 13.29 279 P Pn 07 26 46.2 -1.0
CONA Conrad Observa 13.33 338 *e*Pn Pn 07 26 44.9 -2.8
comp=E,20nm,0.2s,SNR=46
CONA Sn **Sn 07 29 07.3 -6.8**
comp=E,3µm,2.3s
MODS Modra-Piesok 13.35 342 *e*P Pn 07 26 45.3 -2.6
MODS Modra-Piesok 13.35 342 *e*P Pn 07 26 45.3 -2.6
CKFL Kef-Lekhel 13.40 278 P Pn 07 26 48.3 -0.5
KBA Koelnbreinsper 13.51 330 *e*Pn Pn 07 26 47.7 -2.5
comp=E,993nm,1.7s,SNR=113
KBA Sn **Sn 07 29 10.0 -8.7**
comp=E,2µm,1.9s
KBA Koelnbreinsper 13.51 330 ⇓P Pn 07 26 47.8 -2.5
CASM Ain Smara 13.59 277 P Pn 07 26 50.7 -0.6
ABTA Abfaltersbach 13.61 327 *e*Pn Pn 07 26 49.0 -2.4
comp=E,347nm,0.6s,SNR=158
ABTA *e*Sn **Sn 07 29 12.2 -8.7**
comp=E,1µm,0.9s
LANS Liptovska Anna 13.65 349 *e*P Pn 07 26 54.3 +2.2
LANS Liptovska Anna 13.65 349 *e*P Pn 07 26 54.2 +2.2
CTEI Djebel Teioual 13.67 276 P Pn 07 26 51.7 -0.7
JAVC Velka Javorina 13.71 344 *e*PN Pn 07 26 49.3 -3.4
JAVC Velka Javorina 13.71 344 *e*SN Sn 07 29 18.5 -4.8
JAVC *e*SCS **ScS 07 39 17.9 +1.8**
JAVC Velka Javorina 13.71 344 *e*Pn Pn 07 26 53.3 +0.6
STHS Stebnicka Huta 13.71 354 *e*P Pn 07 26 52.0 -0.8
STHS Stebnicka Huta 13.71 354 *e*P Pn 07 26 52.0 -0.8
MOA Molln 13.79 334 *e*Pn Pn 07 26 51.6 -2.2
comp=E,2µm,2.4s,SNR=194
MOA Sn **Sn 07 29 16.9 -8.3**
comp=E,2µm,1.7s
NIE Niedzica 13.81 352 *e*P Pn 07 26 54.9 +0.9
NIE *e*S **S 07 29 44.9 +1.1**
BOB Bobbio (Coli) 13.84 315 ⇑P Pn 07 26 53.6 -0.9
KWP Kalwaria Pacla 13.85 358 *e*P Pn 07 26 55.5 +0.9
KWP Kalwaria Pacla 13.85 358 ⇑P Pn 07 26 55.5 +0.9
BIOA Bad Ischl, Aus 13.89 332 *e*Pn Pn 07 26 53.9 -1.3
comp=E,1µm,1.6s,SNR=131
BIOA Sn **Sn 07 29 20.4 -7.3**
comp=E,3µm,2.2s
ANN Anapa 14.06 46 *d i*P Pn 07 26 56.7 -0.6
ANN *e*S **Sn 07 29 33.4 +1.7**
ANN pmax pmax
comp=Z,641nm,0.9s
ANN MLR MLR
comp=Z,3µm,11.0s
LESA Schwarzleotal 14.06 329 *e*Pn Pn 07 26 55.4 -2.0
comp=Z,275nm,0.4s,SNR=183
LESA *e*Sn Sn 07 29 23.0 -8.9
comp=Z,932nm,1.0s
MAUC Maruska 14.15 345 *e*P Pn 07 26 58.0 -0.6
MAUC *ex* x 07 27 07.0
KRUC Moravsky 14.21 341 *e*PN Pn 07 26 56.4 -2.8
KRUC Moravsky 14.21 341 *e*SN Sn 07 29 26.3 -8.9
KRUC *e*SCS **ScS 07 39 17.4 +0.2**
KRUC Moravsky 14.21 341 *e*Pn Pn 07 26 59.1 -0.1
RJOB Jochberg 14.26 330 *e*Pn Pn 07 26 58.7 -1.3
VRAC Vranov 14.38 342 P Pn 07 27 00.3 -1.2
comp=Z,46nm,0.8s,baz=168,slow=13,SNR=29
VRAC S Sn 07 29 29.4 -10
comp=Z,101nm,0.5s,baz=99,slow=16,SNR=6.7
VRAC LR LR 07 34 27.6
comp=Z,11µm,20.0s,baz=164,slow=45
VRAC Vranov 14.38 342 ⇑P Pn 07 27 00.1 -1.5
VRAC Vranov 14.38 342 *e*PN Pn 07 26 59.0 -2.5
VRAC Vranov 14.38 342 *e*SN Sn 07 29 33.7 -5.8
VRAC *e*SCS **ScS 07 39 18.4 +0.8**
VRAC Vranov 14.38 342 P Pn 07 27 00.0 -1.5
WTTA Wattenberg 14.39 326 *e*Pn Pn 07 27 00.3 -1.5
comp=Z,3µm,2.0s,SNR=276
WTTA *e*Sn **Sn 07 29 32.2 -7.8**
comp=Z,5µm,1.6s
CKHR Kef el Ahmar 14.40 276 P Pn 07 27 02.8 +0.9
WATA Walderalm 14.47 327 *e*Pn Pn 07 27 01.5 -1.3
comp=Z,5µm,1.9s,SNR=427
WATA *e*Sn Sn 07 29 31.9 -10
comp=Z,4µm,2.1s
SET Setif 14.48 277 P Pn 07 27 04.0 +1.1
OKC Ostrava-Krasne 14.54 347 *e*P P 07 27 06.4 -1.9
OKC *e*S **Sn 07 29 36.8 -6.6**
OKC Ostrava-Krasne 14.54 347 *e*P P 07 27 06.4 -1.9
OKC *ex* x 07 27 10.8
OKC *e*S **Sn 07 29 36.8 -6.6**
SQTA Sankt Quirin 14.55 325 *e*Pn Pn 07 27 02.8 -1.1
comp=Z,3µm,1.4s,SNR=326
SQTA *e*Sn **Sn 07 29 35.9 -8.0**
comp=Z,432nm,0.8s
FUORN Ofenpass-Fuorn 14.58 322 Pn 07 27 04.3 0.0
MORC Moravsky Berou 14.60 345 *e*PN Pn 07 27 02.2 -2.2
MORC Moravsky Berou 14.60 345 *e*SN Sn 07 29 39.2 -5.8
MORC Moravsky Berou 14.60 345 *e*Pn Pn 07 27 03.9 -0.5
CKRC Cesky Krumlov 14.61 336 *e*P Pn 07 27 04.2 -0.3
CKRC *e*S **Sn 07 29 37.1 -7.9**
CKRC Cesky Krumlov 14.61 336 *e*P Pn 07 27 04.2 -0.3
CKRC *ex* x 07 27 12.6
CKRC *e*S **Sn 07 29 37.1 -7.9**
CKRC AMS AMS 07 33 30.0
comp=Z,31µm,30.6s
CKRC Cesky Krumlov 14.61 336 *e*Pn Pn 07 27 03.5 -1.0
FETA Feichten 14.63 324 *e*Pn Pn 07 27 03.8 -1.1
comp=Z,3µm,1.6s,SNR=109
FETA *e*Sn **Sn 07 29 39.5 -6.4**
comp=Z,446nm,1.1s
OJC Ojcow 14.65 351 *e*P Pn 07 27 04.4 -0.6
OJC *e*S **S 07 29 59.1 -2.0**
OJC Ojcow 14.65 351 ⇓P Pn 07 27 04.2 -0.9
OJC Ojcow 14.65 351 *e*Pn Pn 07 27 04.3 -0.8
MOTA Moosalm 14.69 326 *e*Pn Pn 07 27 04.7 -1.0
comp=Z,8µm,1.9s,SNR=368
MOTA *e*Sn Sn 07 29 37.9 -9.4
comp=Z,2µm,1.6s
RAC Raciborz 14.77 347 *e*P Pn 07 27 06.9 +0.4
RAC *e*S **S 07 29 56.8 -6.6**
RAC AMS AMS 07 33 19.0
comp=Z,21nm,27.1s
RAC Raciborz 14.77 347 *e*P Pn 07 27 06.9 +0.4
RAC *e*S **S 07 29 56.8 -6.6**
GEC2 GERESS Array S 14.84 335 *e*Pn Pn 07 27 06.1 -1.4
GERES GERESS Array B 14.84 335 P Pn 07 27 05.4 -2.1
comp=Z,60nm,0.5s,baz=155,slow=14,SNR=147
GERES S Sn 07 29 40.7 -10
comp=Z,64nm,0.4s,baz=153,slow=23,SNR=9.6
GERES PcP **PcP 07 32 14.2 +0.7**
comp=Z,16nm,0.8s,baz=242,slow=2.1,SNR=3.0
GERES LR LR 07 34 11.0
comp=Z,17µm,20.8s,baz=148,slow=43
GERES ScP **ScP 07 35 42.2 +0.9**
comp=Z,6.0nm,0.8s,baz=66,slow=3.3,SNR=4.2
GERES PKiKP **PKiKP 07 40 07.2 -1.4**
comp=Z,0.6nm,0.4s,baz=129,slow=1.4,SNR=4.3
SOC Sochi 14.86 53 *c i*P Pn 07 27 07.7 0.0
SOC *e* 07 29 53.2
SOC pmax pmax
comp=Z,182nm,0.8s
SOC MLR MLR
comp=Z,5µm,14.0s
DAVOX Davos/Dischmat 14.88 322 P Pn 07 27 08.4 +0.2
comp=Z,243nm,0.7s,baz=152,slow=11,SNR=58
DAVOX S **Sn 07 29 43.4 -8.6**
comp=Z,305nm,0.7s,baz=218,slow=22,SNR=6.0
DAVOX LR LR 07 34 11.7
comp=Z,10µm,21.4s,baz=110,slow=42
MONC Moncucco Torin 14.90 313 ⇓P Pn 07 27 07.3 -1.0
**TUE Stuetta 14.95 320

KRLC Kraliky 15.05 344 eP Pn 07 27 12.1 +1.9
KHC Kasperske Hory 15.12 335 deP Pn 07 27 09.4 -1.7
KHC pmax pmax
comp=Z,449nm,2.5s
KHC Kasperske Hory 15.12 335 eP Pn 07 27 09.7 -1.4
KHC eS Sn 07 29 47.3 -10
KHC AMS AMS 07 34 00.0
comp=Z,26µm,24.7s
KHC Kasperske Hory 15.12 335 ⇓P Pn 07 27 09.6 -1.6
KHC Kasperske Hory 15.12 335 ePn Pn 07 27 10.5 -0.6
GURO Guroymak-BITLI 15.22 74 ⇑P Pn 07 27 14.2 +1.7
DAVA Damuels 15.23 323 ePn Pn 07 27 12.0 -0.6
comp=Z,3µm,2.2s,SNR=133
DAVA Sn Sn 07 29 51.8 -8.6
comp=Z,828nm,0.8s
DAVA Damuels 15.23 323 ⇓P Pn 07 27 12.3 -0.4
FUR Furstenfeldbru 15.23 328 ePn Pn 07 27 11.2 -1.3
WET Wettzell 15.38 333 ePn Pn 07 27 13.2 -1.2
UBR Ueberruh 15.40 325 ePn Pn 07 27 15.0 +0.3
DPC Dobruska-Polom 15.41 343 eP Pn 07 27 12.6 -2.2
DPC eS Sn 07 29 58.0 -6.6
DPC MLR MLR
comp=Z,20µm,23.3s
DPC Dobruska-Polom 15.41 343 eP Pn 07 27 12.6 -2.2
DPC ex x 07 27 19.1
DPC eS Sn 07 29 58.0 -6.6
DPC AMS AMS 07 32 50.0
comp=Z,20µm,23.3s
KIEV Kiev 15.52 14 Pn 07 27 15.0 -1.1
KIEV Kiev 15.52 14 i P Pn 07 27 14.1 -2.0
SNR=222
KIEV Kiev 15.52 14 P Pn 07 27 15.0 -1.1
KIEV Kiev 15.52 14 ⇑P Pn 07 27 14.5 -1.6
AKASG Malin Array Be 15.53 14 P Pn 07 27 14.5 -1.7
comp=Z,168nm,0.6s,baz=205,slow=12,SNR=112
AKASG S Sn 07 30 03.5 -3.7
comp=Z,3.1nm,0.3s,baz=201,slow=20,SNR=1.2
AKASG PcP PcP 07 32 14.5 +0.2
comp=Z,24nm,0.7s,baz=253,slow=0.9,SNR=5.7
AKASG LR LR 07 34 33.0
comp=Z,4µm,21.6s,baz=196,slow=42
AKASG ScP ScP 07 35 42.2 -0.1
comp=Z,11nm,0.8s,baz=236,slow=2.0,SNR=13
AKASG PKiKP PKiKP 07 40 07.3 -1.3
comp=Z,2.4nm,0.6s,baz=166,slow=0.3,SNR=6.1
AKASG Malin Array Be 15.53 14 P Pn 07 27 14.4 -1.8
AKASG Malin Array Be 15.53 14 ceP Pn 07 27 13.6 -2.6
AKASG pmax pmax
comp=Z,310nm,0.7s
AKBB Malin Array Si 15.53 14 ceP Pn 07 27 14.5 -1.7
AKBB MLR MLR
comp=Z,9µm,11.0s
PRU Pruhonice 15.56 339 eP Pn 07 27 16.2 -0.5
PRU Pruhonice 15.56 339 eP Pn 07 27 16.2 -0.5
PRU Pruhonice 15.56 339 ePn Pn 07 27 15.8 -0.8
MAHO Mahon 15.56 291 P Pn 07 27 15.9 -0.9
MAHO Mahon 15.56 291 ⇑P Pn 07 27 16.4 -0.3
OSTC Ostas 15.63 343 AMS AMS 07 34 00.0
comp=Z,19µm,19.8s
UPC Upice 15.63 343 eP Pn 07 27 16.5 -1.1
UPC Upice 15.63 343 eP Pn 07 27 16.5 -1.1
UPC ex x 07 27 21.5
BNI Bardonecchia 15.64 311 Pn 07 27 17.1 -0.8
BNI Bardonecchia 15.64 311 P Pn 07 27 17.1 -0.8
BNI Bardonecchia 15.64 311 ⇓P Pn 07 27 17.4 -0.4
PRA Prague 15.67 339 eP Pn 07 27 18.3 +0.3
PRA Prague 15.67 339 eP Pn 07 27 18.3 +0.3
CHVC Chvalec 15.70 343 eP Pn 07 27 19.1 +0.7
CHVC Chvalec 15.70 343 eP Pn 07 27 19.1 +0.7
CHVC ex x 07 27 24.8
KSP Ksiaz 15.88 344 eP Pn 07 27 20.7 0.0
KSP eS S 07 30 25.5 -0.6
KSP Ksiaz 15.88 344 ⇓P Pn 07 27 20.7 0.0
KSP Ksiaz 15.88 344 ePn P 07 27 23.7 +0.6
LABN Labinsk 15.98 51 eP Pn 07 27 22.6 +0.6
LABN eS Sn 07 30 19.7 +1.3
LABN pmax pmax
comp=Z,1µm,1.6s
LABN MLR MLR
comp=Z,7µm,23.0s
PVCC Panska Ves 16.04 340 eP P 07 27 24.9 +0.1
PVCC Panska Ves 16.04 340 eP P 07 27 24.9 +0.1
PVCC Panska Ves 16.04 340 ePn P 07 27 24.8 0.0
ROTZ Rotzenmuhle 16.14 333 ePn Pn 07 27 22.2 -1.8
BEL Belsk 16.15 354 eP Pn 07 27 24.9 +0.8
BEL eS S 07 30 30.7 -1.0
BEL Belsk 16.15 354 ⇑P Pn 07 27 24.0 -0.1
RICC Richard 16.19 339 eP Pn 07 27 24.4 -0.1
MANZ Manzenberg 16.36 334 ePn Pn 07 27 25.6 -1.2
ERBR Yeremizino-Bor 16.36 47 eP Pn 07 27 26.9 +0.1
ERBR i S Sn 07 30 27.7 +0.1
ERBR pmax pmax
comp=Z,2µm,0.7s
ERBR MLR MLR
comp=Z,5µm,21.0s
HSKC Hora Svate Kat 16.44 337 eP P 07 27 28.8 -0.6
R9F13 Warsaw-Wawer 16.51 355 i P P 07 27 29.8 -0.2
R9F13 eS Sn 07 30 33.7 +2.7
BRG Berggiesshubel 16.52 339 ePn P 07 27 30.7 +0.5
TANN Tannenbergstha 16.60 335 ePn Pn 07 27 30.3 +0.6
STU Stuttgart 16.61 326 eP Pn 07 27 29.4 -0.5
STU Stuttgart 16.61 326 ⇓P Pn 07 27 29.1 -0.7
STU Stuttgart 16.61 326 ePn Pn 07 27 30.0 +0.2
BFO Black Forest 16.71 323 P Pn 07 27 31.6 +0.5
BFO Black Forest 16.71 323 P Pn 07 27 31.6 +0.5
BFO Black Forest 16.71 323 ⇓P Pn 07 27 31.1 0.0
BFO Black Forest 16.71 323 ePn P 07 27 31.8 -0.5
PLN Plauen 16.76 335 ePn P 07 27 32.9 +0.1
SHA1 Shidzhatmaz 16.87 56c iP P 07 27 34.1 -0.3
KIV Kislovodsk 16.97 55 P P 07 27 35.6 +0.2
KIV P P 07 27 35.6 +0.2
KIV S Sn 07 30 45.4 +2.9
KIV S Sn 07 30 45.4 +2.9
KIV Kislovodsk 16.97 55 P P 07 27 35.9 +0.5
KIV Kislovodsk 16.97 55 i P P 07 27 36.0 +0.7
SNR=92
KIV Kislovodsk 16.97 55 eP P 07 27 35.2 -0.2
KIV eS Sn 07 30 44.7 +2.2
KIV pmax pmax
comp=Z,843nm,1.0s
KIV MLR MLR
comp=Z,2µm,14.0s
KIV Kislovodsk 16.97 55 ⇑P P 07 27 35.5 +0.2
SSB Saint Sauveur 17.08 309 ⇑P Pn 07 27 34.7 -1.0
MOX Moxa 17.08 334 ePn P 07 27 36.8 +0.4
CLL Collm 17.19 338 i P P 07 27 38.0 +0.5
CLL eS S 07 30 52.0 -0.6
CLL pmax pmax
comp=Z,664nm,1.6s
CLL Collm 17.19 338 ePn P 07 27 38.5 +0.9
CLL Collm 17.19 338 i P P 07 27 38.0 +0.5
comp=Z,664nm,1.6s
CLL i Pmax 07 27 40.5
CLL i x x 07 27 48.1
CLL i pP pP 07 27 52.1 +0.2
CLL i x x 07 27 56.0
CLL esP sP 07 28 00.0 -0.8
CLL eS S 07 30 52.0 -0.6
comp=N,7µm,18.8s
CLL eS S 07 30 52.0 -0.6
comp=E,10µm,22.3s
CLL i sS sS 07 31 08.9 -7.0
CLL eScP ScP 07 35 46.0 +0.5
ECH Echery 17.21 321 ⇑P Pn 07 27 37.2 -0.1
NCK Nalchik 17.43 58c iP P 07 27 41.9 +1.6
GNI Garni 17.48 69 P P 07 27 42.3 +1.2
comp=E,206nm,0.7s,baz=280,slow=2.2,SNR=42
GNI LR LR 07 35 31.5
comp=E,18µm,21.3s,baz=268,slow=41
GNI Garni 17.48 69 P P 07 27 41.5 +0.5
GNI P P 07 27 41.5 +0.5
GNI S S 07 30 57.7 -0.9
GNI S S 07 30 57.7 -0.9
GNI Garni 17.48 69 P P 07 27 42.0 +1.0
GNI Garni 17.48 69 P P 07 27 42.1 +1.0
GNI Garni 17.48 69 ceP P 07 27 42.1 +1.0
GNI pmax pmax
comp=Z,1µm,2.5s
GNI Garni 17.48 69 ⇑P P 07 27 42.1 +1.0
NEUB Neuenburg 17.50 335 ePn P 07 27 43.0 +2.0
GOF Gofitskoye 17.65 52c iP P 07 27 43.6 +0.9
GOF eS S 07 31 00.4 -1.1

UBBA Unterbreizbach 17.82 332 ePn Pn 07 27 47.2 +2.5
MTLF Montolieu 17.88 301 ⇑P P 07 27 44.7 -0.5
GKP Gorka Klasztor 18.00 348 eP Pn 07 27 47.7 +0.9
GKP eS S 07 31 09.0 +0.8
GKP Gorka Klasztor 18.00 348 eP Pn 07 27 48.0 +1.2
GKP Gorka Klasztor 18.00 348 ePn Pn 07 27 47.4 +0.6
TNS Taunus Mts 18.00 328 ePn Pn 07 27 47.9 +0.9
RUE Ruedersdorf 18.01 341 eP Pn 07 27 48.4 +1.5
RUE Ruedersdorf 18.01 341 ⇑P Pn 07 27 47.6 +0.7
RUE Ruedersdorf 18.01 341 i P P 07 27 45.4 -1.2
SUW Suwalki 18.24 360 eP P 07 27 48.7 -0.3
SUW eS Sn 07 31 07.2 -5.4
SUW Suwalki 18.24 360 eP Pn 07 27 49.5 -0.2
SUW Suwalki 18.24 360 ⇑P P 07 27 48.6 -0.5
OJGS Djebel Guires 18.30 276 P P 07 27 50.0 -0.1
OKGL Djebel Kef Gue 18.33 277 P P 07 27 49.0 -1.3
CEST Esterri de Car 18.35 298 P Pn 07 27 51.8 +0.5
LOR Lormes 18.46 314 ⇓P P 07 27 51.3 -0.3
CLZ Clausthal 18.51 334 ePn Pn 07 27 54.1 +1.0
CLZ Clausthal 18.51 334 i P Pn 07 27 54.1 +1.0
OJBR Djebel Berber 18.62 276 P P 07 27 51.0 -2.5
FLTG Flechtingen 18.63 336 ePn Pn 07 27 54.4 0.0
WLF Walferdange 18.67 323 dP Pn 07 27 56.2 +1.3
WLF dS S 07 31 20.4 -1.9
WLF Walferdange 18.67 323 ⇑P Pn 07 27 56.1 +1.3
WLF Walferdange 18.67 323 ePn Pn 07 27 56.5 +1.6
KASTN Kahler Asten 18.75 330 ePn Pn 07 27 56.8 +0.8
MNK Minsk 19.00 8 i P P 07 27 54.5 -2.9
comp=E,1µm,1.1s
MNK i P P 07 27 54.5 -2.9
comp=N,86nm,0.7s
MNK i P P 07 27 54.5 -2.9
comp=Z,793nm,0.8s,baz=192
MNK i pP pP 07 28 08.5 -3.1
MNK i S S 07 31 26.7 -2.5
MNK i sS sS 07 31 44.0 -8.6
MNK i SS SnSn 07 31 44.8 -1.5
MNK i LQ LQ 07 33 41.6
MNK i LR LR 07 35 08.3
MNK i LRM MLR 07 36 30.9
comp=E,7µm,18.8s
MNK i LRM MLR 07 36 30.9
comp=N,6µm,19.5s
MNK i LRM MLR 07 36 30.9
comp=Z,9µm,18.6s
MNK Minsk 19.00 8 i P P 07 27 54.5 -2.9
MNK i S S 07 31 26.7 -2.5
MNK pmax pmax
comp=E,1µm,1.1s
MNK pmax pmax
comp=Z,793nm,0.8s
MNK pmax pmax
comp=N,86nm,0.7s
MNK MLR MLR
comp=Z,9µm,19.0s
MNK MLR MLR
comp=E,7µm,19.0s
MNK MLR MLR
comp=N,6µm,20.0s
ODJA Bouhanifia 19.05 276 P P 07 27 52.0 -6.3
VORD Divnogorie 19.07 32 eP P 07 27 57.5 -0.7
VORD eS S 07 31 26.7 -4.1
VORD pmax pmax
comp=Z,600nm,0.7s
VORD smax smax
comp=N,3µm,8.4s
GORT1 Trebel 19.17 338 ePn Pn 07 28 01.0 +0.2
BHOU Houvegnez 19.20 325 dP Pn 07 28 02.8 +1.5
BHOU dS S 07 31 34.3 +0.8
VSR Storozhevoye 19.20 32 eP P 07 27 58.9 -0.7
VSR eS S 07 31 22.9 -11
VSR pmax pmax
comp=Z,480nm,0.5s
VSR smax smax
comp=E,2µm,5.4s
NACGM Naroch 19.28 6 ⇑iP P 07 27 59.9 -0.6
BTNL Ternell 19.30 325 dP Pn 07 28 02.6 +0.2
BTNL dS S 07 31 25.6 -10
USTO Oran 19.32 277 P Pn 07 28 03.0 +0.2
MEM Membach 19.37 325 dP Pn 07 28 03.8 +0.6
MEM dS S 07 31 37.8 +1.0
BUG Bochum--Univer 19.41 329 ePn Pn 07 28 04.2 +0.5
RCHB Rochefort 19.44 323 dP Pn 07 28 03.4 -0.7
CART Cartagena 19.54 283 P P 07 28 01.5 -1.9
CART S S 07 31 38.7 -1.7
CART Cartagena 19.54 283 ⇓P P 07 28 02.5 -0.9
VORR Voronezh 19.56 31 eP P 07 28 02.7 -0.8
VORR eS S 07 31 35.2 -5.3
VORR pmax pmax
comp=Z,1µm,0.7s
VORR smax smax
comp=E,200nm,3.2s
BSTI Sart Tilman 19.56 325 dP Pn 07 28 06.2 +0.7
BCLA Clavier 19.58 324 dP Pn 07 28 06.0 +0.3
RETH Rethem/Aller, 19.61 334 ePn Pn 07 28 05.9 0.0
BEBN Eben Emael 19.66 325 dP Pn 07 28 07.0 +0.4
BEBN dS S 07 31 36.7 -5.8
BGES Gesves 19.66 324 dP Pn 07 28 06.5 -0.2
BGES dS S 07 31 38.4 -4.1
DOU Dourbes 19.71 322 dP Pn 07 28 06.5 -0.8
PABE Paberze 19.74 1 P P 07 28 05.5 +0.1
PABE Paberze 19.74 1 eP P 07 28 06.3 +0.9
BMRD Maredsous 19.76 323 dP Pn 07 28 07.4 -0.5
BMRD dS S 07 31 42.0 -2.6
CLF Chambon-Foret 19.78 315 IAmb IAmb 07 28 10.8
comp=Z,1µm,1.2s
CLF Chambon-Foret 19.78 315 ⇓P Pn 07 28 07.6 -0.5
IBBN Ibbenburen 19.86 331 ⇑P Pn 07 28 08.9 -0.1
IBBN Ibbenburen 19.86 331 i P P 07 28 07.8 +1.0
ISAL Salakas 19.89 5 eP Pn 07 28 08.8 -0.6
AKT Akhty 19.91 66 eP P 07 28 07.3 -0.3
AKT eS S 07 31 46.0 -1.9
AKT pmax pmax
comp=Z,1µm,1.0s
HAM4 Hamburger Ster 19.93 337 i P P 07 28 06.8 -0.6
RGN Rugen 20.00 343 IAmb IAmb 07 28 11.2
comp=Z,1µm,1.0s
RGN Rugen 20.00 343 ⇑P P 07 28 08.9 +0.6
RGN Rugen 20.00 343 i P P 07 28 07.3 -1.0
MAK Makhachkala 20.02 62c iP Pn 07 28 10.7 -0.3
MAK e*SP sP 07 28 32.1 +0.4
MAK eS Sn 07 31 55.6 -0.2
MAK e*SS sS 07 32 14.5 +0.9
MAK pmax pmax
comp=Z,3µm,0.9s
TAM Tamanrasset 20.13 235 P P 07 28 10.2 0.0
TAM Tamanrasset 20.13 235 P P 07 28 10.2 0.0
TAM pmax pmax
comp=Z,147nm,0.6s
TAM Tamanrasset 20.13 235 ⇓P P 07 28 10.3 +0.1
LPSR Galich'ya Gora 20.15 29c iP P 07 28 08.8 -1.1
LPSR pmax pmax
comp=Z,3µm,0.8s
BSD Bornholm Skovb 20.18 346 i P P 07 28 07.8 -2.4
BSD IAmb IAmb 07 28 11.2
comp=Z,803nm,0.8s
VSVD Vaisvydziai 20.21 1 eP P 07 28 11.1 +0.5
UCC Uccle 20.28 324 P P 07 28 12.1 +0.7
UCC Uccle 20.28 324 dP Pn 07 28 13.2 -0.7
UCC dS S 07 31 54.3 -0.5
UCC Uccle 20.28 324 P P 07 28 12.1 +0.7
UCC pmax pmax
comp=Z,299nm,0.7s
BSEG Bad Segeberg 20.29 338 i P P 07 28 10.2 -1.1
VRH Novokhopyorsk 20.33 35 eP P 07 28 11.3 -0.6
VRH eS S 07 31 53.3 -2.4
VRH pmax pmax
comp=Z,1µm,0.6s
VRH smax smax
comp=N,3µm,7.6s
MFF Saint Martin d 20.60 309 ⇓P P 07 28 15.8 +0.9
SKMB Sankelmark Bun 21.23 337 i P P 07 28 19.5 -1.9
COP Copenhagen 21.25 343 i P P 07 28 21.5 -0.3
COP IAmb IAmb 07 28 40.9
comp=Z,4µm,1.1s
HLG Helgoland 21.30 335 ⇑P P 07 28 22.6 +0.4
HLG Helgoland 21.30 335 i P P 07 28 21.9 -0.3
WMELI Melilla 21.32 276 P P 07 28 21.9 -0.8
WMELI S S 07 32 17.3 +1.6
UCM Universidad Co 21.33 290 P P 07 28 22.2 -0.6
OBN Obninsk 21.40 21 P P 07 28 21.8 -1.5
comp=Z,759nm,0.5s,baz=146,slow=3.6,SNR=55

OBN S S 07 32 11.8 -5.1
comp=Z,138nm,0.7s,baz=148,slow=23,SNR=5.7
OBN LR LR 07 37 27.0
comp=Z,10µm,18.9s,baz=150,slow=39
comp=Z,759nm,0.5s
OBN Obninsk 21.40 21 P P 07 28 24.0 +0.6
OBN Obninsk 21.40 21c iP P 07 28 22.5 -0.8
OBN e 07 28 45.5
OBN i S S 07 32 08.1 -8.7
OBN pmax pmax
comp=Z,8µm,1.8s
OBN MLR MLR
comp=Z,7µm,10.0s
OBN Obninsk 21.40 21 ⇑P P 07 28 21.3 -2.0
EQTA Presa de Quent 21.50 282 P P 07 28 24.2 -0.5
EQTA S S 07 32 19.4 +0.1
ELGU Los Guajares, 21.68 281 P P 07 28 25.8 -0.8
SSRD Sdr. Stenderup 21.82 339 i P P 07 28 26.3 -1.4
SSRD IAmb IAmb 07 28 46.1
comp=Z,2µm,1.6s
ESDC Sonseca Array 21.85 288 P P 07 28 27.2 -1.2
comp=Z,81nm,0.8s,baz=85,slow=10,SNR=174
ESDC PcP PcP 07 32 26.4 +0.8
comp=Z,13nm,0.9s,baz=3.6,slow=2.6,SNR=4.9
ESDC ScP ScP 07 35 56.5 -0.1
comp=Z,3.3nm,0.8s,baz=64,slow=2.2,SNR=5.7
ESDC LR LR 07 38 15.8
comp=Z,2µm,19.1s,baz=79,slow=40
comp=Z,81nm,0.8s
ESDC Sonseca Array 21.85 288 P P 07 28 26.3 -2.1
SLIT Slitere, Latvi 21.87 359 eP P 07 28 27.4 -0.9
SLIT Slitere, Latvi 21.87 359 ⇓P P 07 28 26.6 -1.7
PAB San Pablo 22.15 288 P P 07 28 30.8 -0.8
PAB San Pablo 22.15 288 P P 07 28 30.8 -0.8
PAB pmax pmax
comp=Z,352nm,1.1s
PAB San Pablo 22.15 288 ⇓P P 07 28 31.0 -0.7
MOS Moscow 22.25 22 eP P 07 28 31.9 -0.6
MOS e*PP pP 07 28 46.8 -0.3
MOS e 07 28 56.0
MOS eS S 07 32 29.8 -2.9
MOS eSS SnSn 07 33 02.5 -3.1
MOS pmax pmax
comp=N,1µm,0.7s
MOS pmax pmax
comp=E,906nm,0.7s
MOS pmax pmax
comp=Z,8µm,0.8s
MOS pmax pmax
comp=Z,4µm,0.6s
MOS MLR MLR
comp=Z,7µm,10.0s
MOS MLR MLR
comp=N,6µm,12.0s
EADA Adamuz 22.34 284 P P 07 28 31.5 -2.2
EADA S S 07 32 35.5 +0.8
HMNX Herstmonceux 22.36 320 eP P 07 28 32.7 -0.9
MUD Monsted U'grnd 22.79 340 i P P 07 28 38.0 -0.1
MUD IAmb IAmb 07 28 41.8
comp=Z,2µm,1.4s
RAYN Ar Rayn 22.80 116 P P 07 28 39.7 +1.1
RAYN S S 07 32 44.4 +1.9
RAYN Ar Rayn 22.80 116 P P 07 28 39.0 +0.4
RAYN IAmb IAmb 07 28 47.4
comp=Z,482nm,0.8s
RAYN Ar Rayn 22.80 116 i P P 07 28 39.2 +0.5
SNR=140
RAYN Ar Rayn 22.80 116 P P 07 28 39.0 +0.4
RAYN pmax pmax
comp=Z,482nm,0.8s
RAYN Ar Rayn 22.80 116 ⇓P P 07 28 39.1 +0.4
VSU Vasula 22.81 5 eP P 07 28 36.8 -1.6
VSU Vasula 22.81 5ceP P 07 28 36.3 -2.1
VSU pmax pmax
comp=Z,3µm,1.7s
VSU Vasula 22.81 5 ⇓P P 07 28 36.1 -2.2
I43RU DUBNA INFRASON 22.98 20 P P 07 28 40.0 -0.1
baz=198,slow=10,SNR=3.3
ECAB El Cabril 23.01 284 P P 07 28 39.2 -1.5
MDT Midelt 23.19 271 LR LR 07 40 00.8
comp=Z,9µm,19.7s,baz=90,slow=42
ROSF Rostrenen 23.23 311 ⇓P P 07 28 42.6 0.0
OVD Ostervraa, Den 23.27 342 i P P 07 28 43.0 +0.2
OVD IAmb IAmb 07 29 15.8
comp=Z,2µm,1.3s
GOET G??ttrup 23.27 340 i P P 07 28 43.4 +0.5
GOET IAmb IAmb 07 29 28.4
comp=Z,3µm,1.6s
MD01 Midelt array s 23.30 271 P P 07 28 42.5 -1.1
MD31 MD31 23.30 271 P P 07 28 42.7 -0.8
IFR Ifrane 23.44 273 P P 07 28 44.9 0.0
ESPR Espera 23.45 281 P P 07 28 42.8 -2.0
CNIL Conil 23.67 280 P P 07 28 45.9 -0.9
ARBE Arbavere 23.74 3 eP P 07 28 46.5 -0.6
SFS San Fernando 23.78 280 P P 07 28 46.7 -1.1
SWN1 Swindon 23.84 319 eP P 07 28 48.3 +0.2
BELG Belogornoye 23.95 39 P P 07 28 48.5 -0.7
comp=Z,2µm,0.7s,baz=331,slow=1.3,SNR=360
BELG S S 07 32 58.2 -2.3
comp=Z,84nm,0.8s,baz=302,slow=22,SNR=1.6
BELG LR LR 07 40 10.6
comp=Z,4µm,18.2s,baz=235,slow=41
comp=Z,2µm,0.7s
BELG Belogornoye 23.95 39c iP P 07 28 48.4 -0.7
BELG pmax pmax
comp=Z,867nm,1.6s
EMIN Mina Concepcio 24.02 284 P P 07 28 48.5 -1.4
EMIN S S 07 33 01.4 -0.6
PBRG Braganca 24.08 294 eP P 07 28 50.0 -0.4
PBRG i IAmb IAmb 07 29 14.7
comp=Z,415nm,1.3s
STRD Stroud 24.17 319 eP P 07 28 52.1 +1.0
STRD IAmb IAmb 07 28 53.3
comp=Z,245nm,0.8s
MVO Moncorvo 24.25 292 eP P 07 28 51.6 -0.4
MVO i IAmb IAmb 07 28 57.8
comp=Z,488nm,2.0s
MVO eS S 07 33 10.9 +5.1
CWF Charnwood Fore 24.25 322 eP P 07 28 51.6 -0.2
CWF IAmb IAmb 07 28 54.1
comp=Z,201nm,1.1s
PBAR Barrancos 24.28 285 P P 07 28 51.3 -0.9
PBAR S S 07 33 06.1 -0.1
PBAR Barrancos 24.28 285 eP P 07 28 51.9 -0.3
PBAR i IAmb IAmb 07 29 17.8
comp=Z,605nm,1.7s
OLDB Oldbury-Upon-S 24.32 319 eP P 07 28 53.6 +1.2
PUL Pulkovo 24.45 9 eP P 07 28 54.5 +1.0
PUL Pulkovo 24.45 9ceP P 07 28 53.7 +0.2
PUL pmax pmax
comp=Z,5µm,0.9s
PUL Pulkovo 24.45 9 ⇑P P 07 28 53.8 +0.2
MEF Metsahovi 24.47 1 eP P 07 28 54.0 +0.3
PMRV Marv??o 24.50 288 eP P 07 28 54.1 -0.2
PMRV i IAmb IAmb 07 28 56.6
comp=Z,496nm,2.2s
PMRV eS S 07 33 03.0 -6.8
AAL Aland 24.51 356 eP P 07 28 54.0 -0.1
HOMB Homborsund 24.54 341 eP P 07 28 55.5 +1.1
HOMB IVmB_BB 07 29 21.6
comp=Z,8µm,6.3s
HOMB eS S 07 33 10.5 +0.6
HOMB Homborsund 24.54 341 i P P 07 28 54.8 +0.4
MONM Monmouth 24.55 319 eP P 07 28 55.0 +0.6
MONM IAmb IAmb 07 28 57.6
comp=Z,125nm,1.0s
PCBR Castelo Branco 24.56 289 eP P 07 28 54.6 -0.2
PCBR i IAmb IAmb 07 28 58.3
comp=Z,324nm,1.8s
MTE Manteigas 24.62 290 P P 07 28 55.1 -0.3
MTE Manteigas 24.62 290 eP P 07 28 55.3 -0.1
MTE i IAmb IAmb 07 29 21.7
comp=Z,284nm,1.3s
MTE eS S 07 33 15.8 +4.1
MTE Manteigas 24.62 290 eP P 07 28 55.6 +0.2
MTE Manteigas 24.62 290 ⇓P P 07 28 55.3 -0.1
PESTR Estremoz 24.68 286 eP P 07 28 55.3 -0.6
PESTR i IAmb IAmb 07 29 21.3
comp=Z,435nm,1.5s
PESTR Estremoz 24.68 286 ⇓P P 07 28 55.1 -0.7
EGRO El Granado 24.68 283 P P 07 28 54.4 -1.5
MCH1 Michaelchurch 24.73 319 eP P 07 28 56.7 +0.5
MCH1 IAmb IAmb 07 28 59.4
comp=Z,148nm,1.0s

MCH1 Michaelchurch 24.73 319 ⇓P **P 07 28 56.9 +0.7**
PVRL Vila Real 24.77 292 *e*P **P 07 28 56.6 -0.2**
PVRL *i* IAmb IAmb 07 29 00.6
comp=Z,353nm,1.9s
POLO Lamas de Olo 24.84 292 *e*P **P 07 28 57.8 +0.3**
POLO *i* IAmb IAmb 07 29 01.3
comp=Z,196nm,1.9s
LBWR Ladybower, Pea 24.84 323 *e*P **P 07 28 57.6 +0.4**
LBWR IAmb IAmb 07 28 59.7
comp=Z,248nm,1.0s
PVAQ Vaqueiros 24.88 283 P **P 07 28 56.7 -1.0**
PVAQ Vaqueiros 24.88 283 *e*P **P 07 28 57.1 -0.6**
PVAQ *i* IAmb IAmb 07 29 40.0
comp=Z,467nm,1.5s
PVAQ *e*S **S 07 33 14.0 -1.7**
PVAQ Vaqueiros 24.88 283 ⇑P **P 07 28 57.0 -0.7**
PVIS Viseu 24.89 291 *e*P **P 07 28 57.9 0.0**
STNC Stoke 24.90 322 *e*P **P 07 28 58.3 +0.5**
STNC IAmb IAmb 07 29 01.1
comp=Z,223nm,0.9s
HLM1 Long Mynd 24.94 320 *e*P **P 07 28 58.1 0.0**
HLM1 IAmb IAmb 07 29 00.1
comp=Z,189nm,1.0s
PBEJ Beja 24.94 284 *e*P **P 07 28 58.4 +0.1**
PBEJ *i* IAmb IAmb 07 29 02.2
comp=Z,301nm,2.2s
SNART Snartemo 24.95 340 *e*P **P 07 28 59.4 +1.2**
SNART *e*S **S 07 33 15.5 -1.0**
SNART Snartemo 24.95 340 *i* P **P 07 28 58.0 -0.1**
EVO Evora 25.02 286 P **P 07 28 59.1 0.0**
EVO Evora 25.02 286 *e*P **P 07 28 58.9 -0.2**
EVO *i* IAmb IAmb 07 29 03.0
comp=Z,356nm,1.9s
GDLE Glaisdale, N Y 25.02 326 *e*P **P 07 28 59.1 +0.3**
GDLE IAmb IAmb 07 29 01.6
comp=Z,304nm,1.1s
PARRA Arraiolos 25.03 286 *e*P **P 07 28 58.6 -0.5**
PARRA *i* IAmb IAmb 07 29 01.5
comp=Z,291nm,2.3s
PCAB Cabril 25.03 293 *e*P **P 07 28 59.6 +0.5**
PCAB *i* IAmb IAmb 07 29 03.9
comp=Z,452nm,2.1s
HTL Hartland 25.06 316 *e*P **P 07 29 00.3 +1.1**
HTL IAmb IAmb 07 29 01.9
comp=Z,208nm,1.1s
PBDV Barranco-do-Ve 25.07 283 *e*P **P 07 28 59.4 0.0**
PBDV *i* IAmb IAmb 07 29 27.2
comp=Z,788nm,1.6s
PSARD Sardoal 25.09 288 *e*P **P 07 28 59.1 -0.6**
PSARD *i* IAmb IAmb 07 29 15.1
comp=Z,195nm,2.1s
PCVE Castro Verde 25.11 284 *e*P **P 07 28 59.7 -0.1**
PCVE *i* IAmb IAmb 07 29 27.4
comp=Z,664nm,1.8s
HPK Haverah Park 25.12 324 *e*P **P 07 29 00.1 +0.4**
HPK IAmb IAmb 07 29 02.5
comp=Z,98nm,0.7s
CCA1 Carnmenellis 25.14 314 *e*P **P 07 28 59.7 -0.2**
HFS Hagfors 25.15 349 P **P 07 28 59.6 -0.3**
comp=Z,174nm,0.4s,baz=183,slow=4.7,SNR=342
HFS S **S 07 33 17.2 -2.4**
comp=Z,64nm,0.8s,baz=146,slow=16,SNR=5.6
HFS LR LR 07 41 09.2
comp=Z,4μm,19.6s,baz=172,slow=42
comp=Z,174nm,0.4s
PMTG Montargil 25.16 287 *e*P **P 07 28 59.7 -0.6**
PMTG *i* IAmb IAmb 07 29 04.5
comp=Z,392nm,1.7s
PGAV Gavieira, Arco 25.23 294 *e*P **P 07 29 01.6 +0.6**
PGAV *i* IAmb IAmb 07 29 05.2
comp=Z,402nm,1.8s
PGAV *e*S **S 07 33 22.5 +1.0**
MESJ Messejana 25.24 284 *e*P **P 07 29 00.3 -0.7**
MESJ IAmb IAmb 07 29 03.0
comp=Z,101nm,0.7s
MESJ *e*S **S 07 33 21.6 +0.1**
MESJ Messejana 25.24 284 *e*P **P 07 29 00.9 0.0**
MESJ *i* IAmb IAmb 07 29 28.7
comp=Z,285nm,2.2s
MESJ Messejana 25.24 284 *e*P **P 07 29 00.3 -0.7**
MESJ *e*S **S 07 33 21.6 +0.1**
MESJ Messejana 25.24 284 ⇓P **P 07 29 01.0 0.0**
RAF Rauma 25.29 358 *e*P **P 07 29 01.4 +0.3**
MOE Montemor 25.29 286 *e*P **P 07 29 01.9 +0.4**
MOE *i* IAmb IAmb 07 29 27.6
comp=Z,530nm,2.1s
FOEL Foel Wylfa 25.30 321 *e*P **P 07 29 02.0 +0.6**
FOEL IAmb IAmb 07 29 05.1
comp=Z,338nm,1.0s
AVE Averroes 25.34 273 P **P 07 29 01.4 -0.6**
AVE Averroes 25.34 273 P **P 07 29 01.9 -0.1**
AVE IAmb IAmb 07 29 28.1
comp=Z,577nm,1.1s
AVE Averroes 25.34 273 ⇑P **P 07 29 02.6 +0.6**
PCAS Casmilo, Conde 25.35 289 *e*P **P 07 29 01.6 -0.4**
PCAS *i* IAmb IAmb 07 29 29.2
comp=Z,249nm,1.3s
KONO Kongsberg 25.49 344 P **P 07 29 02.8 -0.3**
KONO IAmb IAmb 07 29 05.9
comp=Z,1μm,1.8s
KONO Kongsberg 25.49 344 *e*P **P 07 29 02.9 -0.1**
KONO IVmB_BB 07 29 30.3
comp=Z,9μm,6.8s
KONO *e*S **S 07 33 25.1 +0.1**
KONO Kongsberg 25.49 344*ce*P **P 07 29 03.5 +0.5**
KONO pmax pmax
comp=Z,684nm,1.7s
KONO Kongsberg 25.49 344 ⇑P **P 07 29 02.8 -0.3**
OSL Oslo 25.51 345 *e*P **P 07 29 04.7 +1.5**
OSL IVmB_BB 07 29 05.7
comp=Z,9μm,2.3s
OSL *e*S **S 07 33 22.9 -2.4**
LLW Llanuwchllyn 25.52 320 *e*P **P 07 29 04.3 +0.9**
PSBE So Bento 25.59 288 *e*P **P 07 29 03.3 -0.8**
PSBE *i* IAmb IAmb 07 29 32.6
comp=Z,596nm,1.8s
MORF Marmelete 25.63 283 *e*P **P 07 29 03.7 -0.9**
MORF IAmb IAmb 07 29 07.8
comp=Z,94nm,1.1s
MORF *e*S **S 07 33 27.7 -0.1**
MORF Marmelete 25.63 283 *e*P **P 07 29 04.4 -0.2**
MORF *i* IAmb IAmb 07 29 31.9
comp=Z,387nm,2.0s
MORF Marmelete 25.63 283 *e*P **P 07 29 03.7 -0.9**
MORF Marmelete 25.63 283 ⇑P **P 07 29 04.7 +0.1**
RSBS Rosebush, Pemb 25.65 318 *e*P **P 07 29 05.4 +0.8**
RSBS IAmb IAmb 07 29 07.3
comp=Z,215nm,1.2s
PTEO Sao Teotonio 25.66 283 *e*P **P 07 29 04.7 -0.1**
PTEO *i* IAmb IAmb 07 29 33.1
comp=Z,1μm,2.0s
SHMA Al-Shehemyia 25.68 105 P **P 07 29 06.7 +1.6**
SNR=52
SHMA S **S 07 33 28.2 -0.4**
FINES FINESS Array B 25.75 3 P **P 07 29 04.7 -0.6**
comp=Z,106nm,0.4s,baz=161,slow=10,SNR=398
FINES PcP **PcP 07 32 33.5 +0.2**
comp=Z,44nm,0.6s,baz=134,slow=4.0,SNR=3.8
FINES S **S 07 33 25.6 -3.5**
comp=Z,25nm,0.8s,baz=169,slow=17,SNR=1.8
FINES ScP **ScP 07 36 06.1 -0.5**
comp=Z,23nm,0.8s,baz=180,slow=1.1,SNR=2.7
FINES PKiKP **PKiKP 07 40 11.8 -1.1**
comp=Z,3.7nm,0.6s,baz=122,slow=6.7,SNR=6.1
FINES LR LR 07 40 45.3
comp=Z,14μm,21.9s,baz=188,slow=40
comp=Z,106nm,0.4s
PFVI Vila Bisbo 25.79 283 IAmb IAmb 07 29 08.4
comp=Z,474nm,0.8s
PFVI Vila Bisbo 25.79 283 *e*P **P 07 29 05.8 -0.2**
PFVI *i* IAmb IAmb 07 29 08.2
comp=Z,302nm,0.8s
EDMD Edmundbyers 25.80 325 *e*P **P 07 29 07.2 +1.3**
EDMD IAmb IAmb 07 29 08.3
comp=Z,255nm,1.3s
TIO Tiouine 25.90 268 P **P 07 29 07.3 +0.1**
LIS Lisbon 25.90 286 *e*P **P 07 29 05.9 -1.1**
LIS IAmb IAmb 07 29 09.2
comp=Z,622nm,1.1s
LIS *e*S **S 07 33 32.0 +0.1**
LIS Lisbon 25.90 286 *e*P **P 07 29 07.8 +0.8**
LIS *i* IAmb IAmb 07 29 32.7
comp=Z,799nm,1.8s
LIS Lisbon 25.90 286 ⇓P **P 07 29 07.9 +1.0**
PMAFR Mafra 25.99 287 *e*P **P 07 29 08.1 +0.3**
PMAFR *i* IAmb IAmb 07 29 36.3
comp=Z,893nm,1.6s
BLS5 Blasjo 26.08 340 *e*P **P 07 29 10.3 +1.9**
BLS5 IVmB_BB 07 29 36.5
comp=Z,7μm,6.9s
BLS5 *e*S **S 07 33 34.6 +0.2**
NC602 NORSAR Array S 26.09 347 *e*P **P 07 29 09.8 +1.4**
SMRA Abu-Samra 26.13 107 P **P 07 29 11.0 +1.8**
SNR=23
SMRA S **S 07 33 34.0 -1.8**
KESW Keswick, Cumbr 26.19 324 *e*P **P 07 29 09.9 +0.5**
KESW IAmb IAmb 07 29 13.8
comp=Z,176nm,1.1s
KMY Karmoy 26.25 339 *e*P **P 07 29 11.4 +1.6**
KMY IVmB_BB 07 29 35.9
comp=Z,3μm,2.9s
KMY *e*S **S 07 33 36.4 -0.5**
NB201 NORSAR Array S 26.42 347 IAmb IAmb 07 29 13.5
comp=Z,547nm,1.4s
NB2 NORSAR Subarra 26.43 347 P **P 07 29 11.6 0.0**
comp=Z,50nm,0.4s,baz=156,slow=9.3
NB2 PCP **PcP 07 32 35.7 +0.7**
comp=Z,21nm,0.7s,baz=132,slow=3.5
NOA NORSAR Array B 26.43 347 P **P 07 29 10.9 -0.6**
comp=Z,19nm,0.3s,baz=149,slow=9.5,SNR=173
NOA PcP **PcP 07 32 35.7 +0.7**
comp=Z,28nm,0.7s,baz=137,slow=2.5,SNR=4.8
NOA S **S 07 33 36.3 -3.6**
comp=Z,14nm,1.1s,baz=156,slow=16,SNR=2.0
comp=Z,19nm,0.3s
KEF Keuruu 26.43 2 *e*P **P 07 29 10.4 -1.1**
TRNA Turayna 26.44 107 P **P 07 29 14.0 +2.0**
SNR=20
TRNA S **S 07 33 39.1 -1.5**
ODD1 Odda 26.45 341 *e*P **P 07 29 14.2 +2.5**
ODD1 IVmB_BB 07 29 40.3
comp=Z,6μm,3.9s
ODD1 *e*S **S 07 33 38.7 -1.6**
NBO00 NORSAR Array S 26.50 346 IAmb IAmb 07 29 14.5
comp=Z,1μm,1.7s
EKA Eskdalemuir Ar 26.65 325 P **P 07 29 13.5 0.0**
comp=Z,38nm,0.3s,baz=124,slow=7.9,SNR=145
EKA PcP **PcP 07 32 36.4 +0.8**
comp=Z,20nm,0.8s,baz=129,slow=2.3,SNR=3.6
EKA S **S 07 33 50.8 +7.4**
comp=Z,3.0nm,0.8s,baz=119,slow=17,SNR=1.5
EKA PKiKP **PKiKP 07 40 14.1 +0.5**
comp=Z,0.9nm,0.7s,baz=96,slow=0.7,SNR=3.8
comp=Z,38nm,0.3s
ESK Eskdalemuir 26.66 325 P **P 07 29 14.4 +0.7**
ESK IAmb IAmb 07 29 44.3
comp=Z,403nm,0.9s
ESK Eskdalemuir 26.66 325 *e*P **P 07 29 14.3 +0.6**
ESK Eskdalemuir 26.66 325 P **P 07 29 14.4 +0.7**
ESK pmax pmax
comp=Z,403nm,1.0s
ESK Eskdalemuir 26.66 325 ⇑P **P 07 29 14.2 +0.6**
EKB Eskdalemuir 26.67 325 IAmb IAmb 07 29 44.3
comp=Z,574nm,1.0s
SKAR Skarslia 26.71 344 *e*P **P 07 29 16.0 +1.9**
SKAR IVmB_BB 07 29 39.7
comp=Z,4μm,5.6s
SKAR *e*S **S 07 33 41.9 -2.5**
IOMK Kirk Michael 26.72 322 *e*P **P 07 29 14.6 +0.5**
NEWG New Galloway 27.03 324 *e*P **P 07 29 17.3 +0.4**
GAL1 Galloway 27.12 323 *e*P **P 07 29 18.3 +0.6**
DSB Dublin 27.14 319 P **P 07 29 18.1 +0.2**
DSB Dublin 27.14 319 ⇓P **P 07 29 19.5 +1.6**
KLMR Klimovskoe 27.17 17*c i*P **P 07 29 16.3 -1.8**
KLMR S **S 07 33 51.6 +0.2**
KLMR pmax pmax
comp=Z,843nm,0.9s
KLMR MLR MLR
comp=Z,7μm,11.0s
BER Bergen 27.20 340 *e*P **P 07 29 17.8 -0.6**
BER IVmB_BB 07 30 07.6
comp=Z,5μm,2.9s
BER Bergen 27.20 340 *i* P **P 07 29 17.9 -0.4**
VAF Ylistaro 27.30 359 *e*P **P 07 29 19.7 +0.5**
ASK Askoy 27.32 340 *e*P **P 07 29 21.3 +1.9**
ASK IVmB_BB 07 29 46.7
comp=Z,4μm,7.4s
ASK *e*S **S 07 33 51.1 -2.6**
DRUM Mains of Drumt 27.33 329 *e*P **P 07 29 20.4 +0.8**
ILTH Belurgan, Co L 27.49 321 P **P 07 29 23.3 +2.2**
PGBU Glenifferbraes 27.54 325 *e*P **P 07 29 22.4 +0.9**
JRN Qarnain Island 27.62 105 P **P 07 29 23.1 +0.6**
JRN P **P 07 29 25.1 +2.6**
SNR=8.7
JRN S **S 07 33 57.1 -2.0**
JOF Joensuu 27.62 8 *e*P **P 07 29 22.3 +0.1**
HYA Hoyanger 27.64 342 *e*P **P 07 29 22.0 -0.3**
HYA IVmB_BB 07 30 34.9
comp=Z,4μm,2.8s
HYA *e*S **S 07 33 56.7 -2.1**
INVG Invergeldie, C 27.71 327 *e*P **P 07 29 23.3 +0.3**
DOMB Dombas 27.77 346 *e*P **P 07 29 25.2 +1.7**
DOMB IVmB_BB 07 29 49.8
comp=Z,3μm,3.7s
DOMB *e*S **S 07 33 58.8 -2.1**
CLGH Cloghs, Cushen 27.92 323 *e*P **P 07 29 24.8 -0.1**
SUE Sulen 27.92 341 *e*P **P 07 29 24.1 -0.6**
SUE IVmB_BB 07 30 19.1
comp=Z,4μm,3.0s
MCD Coleburn Disti 28.08 329 *e*P **P 07 29 26.8 +0.4**
GHWR Ruwais 28.14 107 P **P 07 29 27.9 +0.7**
GHWR S **S 07 34 05.4 -2.0**
LAWE Loch Awe, Argy 28.22 326 *e*P **P 07 29 28.2 +0.7**
FOO Floro 28.30 342 *e*P **P 07 29 28.9 +0.8**
FOO IVmB_BB 07 31 59.7
comp=Z,1μm,1.9s
FOO *e*S **S 07 34 07.0 -2.1**
AKN Aaknes 28.33 344 *e*P **P 07 29 28.8 +0.2**
AKN IVmB_BB 07 29 56.6
comp=Z,4μm,8.5s
AKN *e*S **S 07 34 10.1 +0.3**
MOL Molde 28.56 345 *e*P **P 07 29 30.5 +0.1**
MOL IVmB_BB 07 30 42.6
comp=Z,3μm,3.4s
MOL *e*S **S 07 34 13.7 +0.5**
KIRV Kirov 28.58 29 P **P 07 29 29.7 -1.0**
comp=Z,660nm,0.6s,baz=233,slow=1.2,SNR=164
KIRV LR LR 07 42 43.8
comp=Z,5μm,18.9s,baz=239,slow=40
comp=Z,660nm,0.6s
KIRV Kirov 28.58 29*ce*P **P 07 29 29.8 -0.9**
IDGL Inch Island, C 28.61 322 P **P 07 29 32.3 +1.3**
IDGL Inch Island, C 28.61 322 *e*P **P 07 29 31.4 +0.4**
VAL Valentia 28.74 315 P **P 07 29 30.7 -1.5**
VAL Valentia 28.74 315 P **P 07 29 31.8 -0.4**
VAL Valentia 28.74 315 ⇑P **P 07 29 33.1 +0.9**
IGLA Glengowla, Co 28.82 318 P **P 07 29 33.9 +1.0**
IGLA Glengowla, Co 28.82 318 *e*P **P 07 29 33.6 +0.7**
BIGH Upper Bighouse 28.93 330 *e*P **P 07 29 33.9 +0.1**
KPL Plockton 28.96 327 *e*P **P 07 29 34.3 +0.2**
AKTO Aktyubinsk 28.99 49 LR LR 07 43 49.5
comp=Z,3μm,18.9s,baz=240,slow=42
MZWR Madinat Zayed 29.03 106 P **P 07 29 35.7 +0.6**
MZWR P **P 07 29 35.7 +0.6**
MZWR S **S 07 34 18.7 -2.7**
MZWR S **S 07 34 18.7 -2.7**
LRW Lerwick 29.03 335 *e*P **P 07 29 34.5 -0.2**
LRW IAmb IAmb 07 29 36.3
comp=Z,67nm,0.4s
LRW Lerwick 29.03 335 ⇓P **P 07 29 34.6 -0.1**
MZR Muzera 29.11 108 P **P 07 29 36.5 +0.6**
SNR=18
MZR S **S 07 34 19.5 -3.4**
MZR Muzera 29.11 108 *i* P **P 07 29 36.4 +0.5**
SNR=36
LINV Loch Inver, As 29.24 329 *e*P **P 07 29 37.4 +0.8**
AJN Ajban 29.49 103 P **P 07 29 39.8 +0.6**
SNR=14
AJN S **S 07 34 27.2 -1.5**
AJN Ajban 29.49 103 *i* P **P 07 29 39.9 +0.7**
SNR=12
UMQ Umm Al-Quwin 29.57 101 P **P 07 29 40.5 +0.7**
UMQ S **S 07 34 29.4 -0.4**
NSS Namsos 29.59 350 *e*P **P 07 29 40.1 +0.5**
NSS IVmB_BB 07 29 40.9
comp=Z,6μm,1.9s
SHME Shamm 29.71 100 P **P 07 29 41.6 +0.6**
SHME S **S 07 34 29.1 -2.9**
SHME Shamm 29.71 100 P **P 07 29 41.0 0.0**

ASUD Al Ashush, Dub 29.73 103 P **P 07 29 42.1 +0.8**
SNR=11
ASUD S **S 07 34 32.0 -0.5**
ASUD Al Ashush, Dub 29.73 103 *i* P **P 07 29 42.2 +0.9**
SNR=12
TORD Torodi Ar. Bea 29.75 226 P **P 07 29 40.9 -0.6**
comp=Z,17nm,0.6s,baz=34,slow=12,SNR=11
TORD PcP **PcP 07 32 44.0 +0.1**
comp=Z,11nm,0.8s,baz=29,slow=2.5,SNR=3.2
TORD ScP **ScP 07 36 18.9 -0.8**
comp=Z,4.0nm,0.3s,baz=45,slow=4.6,SNR=2.3
comp=Z,17nm,0.6s
NAZ Nazwa, Dubai 29.82 102 P **P 07 29 42.8 +0.6**
SNR=21
NAZ S **S 07 34 32.4 -1.4**
NAZ Nazwa, Dubai 29.82 102 *i* P **P 07 29 42.7 +0.6**
SNR=108
FAQ Al Faqa, Dubai 29.88 103 P **P 07 29 43.1 +0.4**
SNR=12
FAQ S **S 07 34 32.8 -2.0**
FAQ Al Faqa, Dubai 29.88 103 *i* P **P 07 29 43.0 +0.4**
SNR=13
ABKAR Akbulak array 29.89 52 P **P 07 29 42.2 -0.3**
BANOM Banah 29.89 100 P **P 07 29 42.9 +0.1**
BANOM S **S 07 34 31.8 -3.2**
BANOM Banah 29.89 100 *i* P **P 07 29 42.8 +0.1**
SNR=24
ATD Arta Tunnel 29.95 139 LR LR 07 42 12.1
comp=Z,86nm,21.1s,baz=334,slow=37
ATD Arta Tunnel 29.95 139 P **P 07 29 45.3 +2.0**
SNR=19
ATD S **S 07 34 37.6 +1.5**
ATD Arta Tunnel 29.95 139 P **P 07 29 44.2 +0.8**
ATD IAmb IAmb 07 29 47.6
comp=Z,405nm,1.7s
ATD Arta Tunnel 29.95 139 ⇓P **P 07 29 45.0 +1.7**
MASF Masafi 30.03 101 P **P 07 29 44.4 +0.3**
SNR=12
MASF S **S 07 34 34.5 -2.8**
MSFE Esma-Masafi 30.04 101 *i* P **P 07 29 44.3 +0.3**
SNR=12
MDH Madha 30.18 101 P **P 07 29 45.2 0.0**
SNR=11
MDH S **S 07 34 35.1 -4.4**
MDH Madha 30.18 101 *i* P **P 07 29 45.4 +0.1**
SNR=22
HATD Hatta, Dubai 30.27 102 P **P 07 29 46.4 +0.3**
SNR=24
HATD S **S 07 34 37.7 -3.3**
HATD Hatta, Dubai 30.27 102 *i* P **P 07 29 46.4 +0.3**
SNR=14
UOSS Minazif 30.27 102 P **P 07 29 46.2 0.0**
UOSS S **S 07 34 36.5 -4.5**
UOSS Minazif 30.27 102 P **P 07 29 45.6 -0.5**
UOSS Minazif 30.27 102 ⇓P **P 07 29 46.1 0.0**
ASHO Ashiyiah 30.28 102 P **P 07 29 46.3 +0.1**
SNR=20
ASHO S **S 07 34 38.9 -2.3**
ASHO Ashiyiah 30.28 102 *i* P **P 07 29 46.3 +0.1**
SNR=68
ALNE Al Ain 30.35 104 P **P 07 29 47.3 +0.5**
SNR=29
ALNE S **S 07 34 40.7 -1.5**
ALNE Al Ain 30.35 104 *i* P **P 07 29 47.3 +0.5**
SNR=59
UMZA Um Al Zommool 30.58 106 P **P 07 29 49.4 +0.6**
MOR8 Moi Rana 30.88 353 *e*P **P 07 29 51.8 +0.8**
MOR8 IVmB_BB 07 29 52.8
comp=Z,7μm,2.0s
SOHO SOHO 30.93 103 P **P 07 29 52.2 +0.3**
SOHO S **S 07 34 49.7 -1.5**
SOHO SOHO 30.93 103 *i* P **P 07 29 52.2 +0.3**
SNR=44
LEIR Leirfjorden 30.96 352 *e*P **P 07 29 51.4 -0.2**
LEIR IVmB_BB 07 29 53.2
comp=Z,5μm,1.5s
LEIR *e*S **S 07 34 48.4 -2.4**
RAUS Rausandaksla 31.17 353 *e*P **P 07 29 52.5 -1.1**
RAUS IVmB_BB 07 29 54.5
comp=Z,5μm,2.1s
RAUS *e*S **S 07 34 52.4 -1.8**
ARQ Araqi 31.32 104 P **P 07 29 55.8 +0.5**
SNR=22
ARQ S **S 07 34 56.1 -1.3**
ARTI Arti 31.39 38 P **P 07 29 54.9 -0.7**
ARTI Arti 31.39 38*d i*P **P 07 29 55.1 -0.5**
ARTI *PP **sP 07 30 16.7 -3.6**
ARTI 07 31 03.0
ARTI 07 32 47.9
ARTI S **S 07 34 59.0 +1.2**
ARTI *SS **sS 07 35 25.1 -1.4**
ARTI SS **SnSn 07 36 56.1 +8.0**
ARTI 07 40 21.6
ARTI pmax pmax
comp=Z,1μm,1.2s
ARTI MLR MLR
comp=Z,3μm,16.0s
ARTI Arti 31.39 38 ⇑P **P 07 29 54.7 -0.9**
ARTI Arti 31.39 38 P **P 07 29 54.9 -0.7**
VAGH Vaagaholmen 31.54 352 *e*P **P 07 29 57.4 +0.7**
HOQ Hoqain 31.82 103 P **P 07 29 60.0 +0.2**
SNR=23
HOQ S **S 07 35 02.7 -2.5**
FAUS Fauske 31.98 354 *e*P **P 07 29 59.7 -0.9**
FAUS *e*S **S 07 35 05.2 -1.6**
DOK Doka 32.15 114 P **P 07 30 03.3 +0.6**
SNR=11
DOK S **S 07 35 07.7 -2.6**
BSY Bisya 32.16 104 P **P 07 30 03.1 +0.4**
SNR=12
BSY S **S 07 35 09.3 -1.2**
WHFO Wadi Hawf 32.32 115 P **P 07 30 05.2 +1.0**
SNR=8.5
WHFO S **S 07 35 09.6 -3.5**
ABTO Aybut 32.34 117 P **P 07 30 05.5 +1.1**
SNR=16
ABTO S **S 07 35 11.5 -1.9**
APA Apatity 32.37 7 ⇓*i*P **P 07 30 02.8 -1.2**
APA *i* 07 31 12.1
APA *i* 07 32 49.5
APA *i* S **S 07 35 09.6 -3.1**
APA MLR MLR
comp=Z,9μm,23.6s
BIDO Bidbid 32.50 102 P **P 07 30 06.3 +0.6**
BIDO S **S 07 35 13.8 -1.9**
STEI Steigen 32.52 354 *e*P **P 07 30 04.9 -0.5**
STEI *e*S **S 07 35 12.7 -2.5**
PMPST Porto Santo, M 32.62 277 *e*P **P 07 30 07.2 +0.5**
PMPST *i* IAmb IAmb 07 30 09.0
comp=Z,418nm,1.1s
SMDO Samad 32.67 103 P **P 07 30 07.6 +0.3**
SNR=16
SMDO P **P 07 30 07.6 +0.3**
SNR=16
SMDO S **S 07 35 16.7 -1.8**
SMDO S **S 07 35 16.7 -1.8**
SVE Sverdlovsk 32.71 38*de*P **P 07 30 07.0 -0.1**
SVE *e*S **S 07 35 16.5 -1.8**
SVE pmax pmax
comp=Z,1μm,1.0s
SVE MLR MLR
comp=Z,3μm,13.0s
LVZ Lovozero 32.82 8 P **P 07 30 07.1 -0.9**
LVZ IAmb IAmb 07 30 09.9
comp=Z,229nm,0.7s
LVZ Lovozero 32.82 8 *i* P **P 07 30 08.0 0.0**
LVZ pmax pmax
comp=Z,155nm,0.8s
LVZ MLR MLR
comp=Z,4μm,10.0s
LVZ Lovozero 32.82 8 ⇑P **P 07 30 07.7 -0.3**
LOF Lofoten 32.87 353 *e*P **P 07 30 06.9 -1.5**
LOF IVmB_BB 07 30 09.1
comp=Z,6μm,2.2s
RBK Rabkut 32.91 115 P **P 07 30 10.4 +1.1**
SNR=17
RBK P **P 07 30 10.4 +1.1**
SNR=17
RBK S **S 07 35 19.8 -2.3**
RBK S **S 07 35 19.8 -2.3**
WSAR Wadi Sarin 33.04 102 LR LR 07 48 14.2
comp=Z,11nm,18.0s,baz=324,slow=44
WSAR Wadi Sarin 33.04 102 P **P 07 30 10.5 +0.1**
WSAR S **S 07 35 24.3 +0.1**
JMDO Jabal Madar 33.06 104 P **P 07 30 10.6 0.0**

JMDO P P 07 30 10.6 0.0
JMDO S S 07 35 23.1 -1.5
JMDO S S 07 35 23.1 -1.5
JMDO S S 07 35 24.1 -0.5
JMDO S S 07 35 24.1 -0.5
PMAR Madeira 33.19 277 *e*P P 07 30 13.0 +1.1
PMAR *i* IAmb IAmb 07 30 14.5
comp=Z,532nm,1.9s
KTK1 Kautokeino 33.29 360 *e*P P 07 30 12.7 +0.6
KTK1 IVmB_BB 07 30 12.7
comp=Z,6µm,2.1s
DMTO DMTO 33.32 114 P P 07 30 13.3 +0.5
SNR=6.0
DMTO S S 07 35 26.3 -2.2
PMOZ Porto Moniz, M 33.39 277 *e*P P 07 30 14.9 +1.4
PMOZ *i* IAmb IAmb 07 30 28.6
comp=Z,349nm,1.1s
PMOZ *e*S S 07 35 32.6 +2.9
PMOZ Porto Moniz, M 33.39 277 ⇓P P 07 30 15.2 +1.7
WBK Wadi Bani Khal 33.63 103 P P 07 30 16.6 +1.1
SNR=8.7
WBK S S 07 35 33.1 -0.2
SHAO Shalim 33.63 113 S S 07 35 30.9 -2.6
SHAO Shalim 33.63 113 *i* P P 07 30 16.5 +0.8
SNR=15
MHTO MHTO 33.70 107 P P 07 30 17.0 +0.8
SNR=16
MHTO S S 07 35 32.8 -1.6
ARA0 ARCESS Array S 33.84 1 *e*P P 07 30 17.3 +0.4
ARCES ARCESS Array B 33.84 1 P P 07 30 16.2 -0.6
comp=Z,158nm,0.6s,baz=181,slow=8.6,SNR=436
ARCES PcP PcP 07 32 54.8 +0.7
comp=Z,27nm,0.8s,baz=180,slow=2.3,SNR=2.0
ARCES S S 07 35 20.7 -15
comp=Z,9.7nm,0.7s,baz=168,slow=23,SNR=1.4
ARCES LR LR 07 45 34.6
comp=Z,9µm,19.2s,baz=179,slow=39
comp=Z,158nm,0.6s
ARCES ARCESS Array B 33.84 1 P P 07 30 16.3 -0.6
JETT Jettan, Norway 33.87 358 *e*P P 07 30 16.9 -0.2
DQM DQM 33.96 108 P P 07 30 18.8 +0.4
SNR=5.8
DQM S S 07 35 36.3 -2.1
TRO Tromso 34.00 357 *e*P P 07 30 17.6 -0.6
NGCH Negor - Chabah 34.04 97 P P 07 30 19.1 +0.1
NGCH S S 07 35 40.0 +0.5
EDA Edea 34.07 204 P P 07 30 19.4 0.0
LODK Lodwar 34.08 158 P P 07 30 20.2 +0.6
SNR=50
LODK S S 07 35 41.0 +0.6
LODK Lodwar 34.08 158 P P 07 30 19.9 +0.4
KEV Kevo 34.10 2 P P 07 30 18.5 -0.5
KEV IAmb IAmb 07 30 22.2
comp=Z,311nm,1.1s
KEV Kevo 34.10 2 P P 07 30 18.5 -0.5
KEV pmax pmax
comp=Z,311nm,1.1s
KEV Kevo 34.10 2 ⇑P P 07 30 19.2 +0.1
JLN Jalan Bani Buh 34.21 103 P P 07 30 21.0 +0.4
SNR=13
JLN S S 07 35 42.6 +0.3
JLN S ScP 07 35 42.9 -52
MACI Morro de la Ar 34.37 269 P P 07 30 23.1 +0.9
MACI IAmb IAmb 07 31 04.9
comp=Z,293nm,1.2s
VADS Vadso 34.56 4 *e*P P 07 30 23.3 +0.3
HAMF Hammerfest 34.93 0 *e*P P 07 30 26.5 +0.3
CHM Chimkent 36.22 65 *e*P P 07 30 38.0 +0.3
comp=Z,410nm,1.2s
CHM *e*S S 07 36 14.6 +1.8
CHM Chimkent 36.22 65 *e*P P 07 30 37.9 +0.3
CHM *e*S S 07 36 14.5 +1.8
CHM pmax pmax
comp=Z,410nm,1.2s
BRLS Boroldaу 36.33 64 *e*P P 07 30 37.7 -1.0
BRLS Boroldaу 36.33 64 *e*P P 07 30 37.6 -1.0
KK31 Karatay Array 36.81 64 IAmb IAmb 07 30 45.5
comp=Z,230nm,0.8s
KKAR Karatay Array 36.81 64 P P 07 30 42.9 +0.2
KKAR Karatay Array 36.81 64 P P 07 30 42.9 +0.2
MBAR Mbarara 36.86 167 LR LR 07 47 50.3
comp=Z,8µm,18.8s,baz=352,slow=39
MBAR Mbarara 36.86 167 P P 07 30 43.5 0.0
MBAR S S 07 36 21.2 -2.0
MBAR Mbarara 36.86 167 P P 07 30 43.8 +0.3
MBAR Mbarara 36.86 167 *d* *i*P P 07 30 41.9 -1.6
BORK Borovoye 37.02 47 P P 07 30 44.7 +0.4
BORK IAmb IAmb 07 30 46.7
comp=Z,226nm,0.7s
BORK Borovoye 37.02 47 *ce*P P 07 30 44.3 0.0
BORK pmax pmax
comp=Z,1µm,2.5s
BORK Borovoye 37.02 47 ⇑P P 07 30 44.6 +0.4
BORK Borovoye 37.02 47 P P 07 30 45.0 +0.8
BVAR Borovoye Array 37.05 47 P P 07 30 45.0 +0.4
comp=Z,174nm,0.7s,baz=267,slow=6.0,SNR=435
BVAR ScP ScP 07 36 43.7 -0.9
comp=Z,9.7nm,0.7s,baz=318,slow=3.9,SNR=3.3
BVAR PKiKP PKiKP 07 40 20.9 -0.1
comp=Z,5.1nm,0.8s,baz=261,slow=0.6,SNR=4.7
comp=Z,174nm,0.7s
KBL Kabul 37.19 78 P P 07 30 46.5 +0.3
SNR=69
KBL S S 07 36 27.2 -0.9
KBL Kabul 37.19 78 P P 07 30 47.1 +1.0
KBL IAmb IAmb 07 30 49.4
comp=Z,232nm,1.2s
KBL Kabul 37.19 78 P P 07 30 47.2 +1.0
KBL pmax pmax
comp=Z,232nm,1.3s
KBU Kabul Universi 37.27 78 P P 07 30 43.3 -3.5
DZA Taraz 37.43 64 *e*P P 07 30 48.3 +0.3
comp=Z,95nm,0.8s
DZA Taraz 37.43 64 *e*P P 07 30 48.3 +0.3
DZA pmax pmax
comp=Z,95nm,0.8s
BRZS Berezniki 38.18 52 ⇑*i*P P 07 30 54.5 +0.2
BRZS Berezniki 38.18 52 *c* *i*P P 07 30 54.4 +0.2
DRK Karamyk 38.25 70 IAmb IAmb 07 31 20.4
comp=Z,326nm,1.3s
DBIC Dimbokro 38.78 228 P P 07 30 58.4 -1.1
comp=Z,26nm,0.8s,baz=51,slow=10,SNR=19
DBIC S S 07 36 33.8 -18
comp=Z,7.7nm,0.9s,baz=298,slow=16,SNR=1.3
DBIC LR LR 07 48 27.0
comp=Z,3µm,18.6s,baz=48,slow=38
comp=Z,26nm,0.8s
DBIC Dimbokro 38.78 228 P P 07 30 58.5 -1.1
DBIC Dimbokro 38.78 228 ⇑P P 07 30 58.3 -1.1
BJO1 Bjornoya 38.87 358 *e*P P 07 30 59.1 -0.4
BJO1 Bjornoya 38.87 358 *i*P P 07 30 58.2 -1.3
KMBO Kilima Mbogo 38.96 157 P P 07 31 03.6 +2.3
comp=Z,37nm,0.9s,baz=355,slow=8.4,SNR=42
KMBO PcP PcP 07 33 11.3 +0.7
comp=Z,15nm,0.8s,baz=22,slow=2.2,SNR=5.4
KMBO ScP ScP 07 36 53.5 +0.9
comp=Z,2.0nm,0.3s,baz=11,slow=5.8,SNR=5.9
KMBO LR LR 07 47 19.9
comp=Z,5µm,20.8s,baz=349,slow=36
comp=Z,37nm,0.9s
JMIC Jan Mayen 39.06 344 LR LR 07 47 50.2
comp=Z,2µm,21.4s,baz=130,slow=37
JMIC Jan Mayen 39.06 344 *i*P P 07 31 02.7 +1.5
EKS2 Erkin-Say 39.25 64 P P 07 31 05.0 +1.7
SNR=34
BORG Borgarnes 39.27 332 LR LR 07 48 44.6
comp=Z,4µm,21.2s,baz=124,slow=38
BORG Borgarnes 39.27 332 P P 07 31 06.0 +3.0
BORG IAmb IAmb 07 31 07.7
comp=Z,235nm,1.2s
BORG Borgarnes 39.27 332 P P 07 31 06.0 +3.0
BORG pmax pmax
comp=Z,235nm,1.3s
BORG Borgarnes 39.27 332 ⇑P P 07 31 06.0 +3.0
USP Ospenovka 39.70 63 P P 07 31 06.8 -0.1
SNR=67
SGDS Sogindy 39.77 63 *e*P P 07 31 07.9 +0.3
AAK Ala-Archa 39.77 64 LR LR 07 50 18.8
comp=Z,2µm,19.8s,baz=293,slow=40
AAK Ala-Archa 39.77 64 P P 07 31 08.7 +0.9
AAK P P 07 31 08.7 +0.9
AAK S S 07 37 05.1 -1.7
AAK S S 07 37 05.1 -1.7
AAK Ala-Archa 39.77 64 P P 07 31 08.6 +0.9
AAK IAmb IAmb 07 31 11.2
comp=Z,370nm,1.4s
AAK Ala-Archa 39.77 64 P P 07 31 09.3 +1.6
SNR=9.9
AAK Ala-Archa 39.77 64 *i* P P 07 31 08.4 +0.7
SNR=149
AAK Ala-Archa 39.77 64 *ce*P P 07 31 08.5 +0.7
AAK pmax pmax
comp=Z,204nm,1.0s
AAK Ala-Archa 39.77 64 ⇑P P 07 31 08.5 +0.7
UCH Uchtor 39.84 65 P P 07 31 11.6 +2.9
SNR=30
CHMS Chumysh 39.91 63 P P 07 31 09.4 +0.6
SNR=69
KBK Karagaybulak 40.10 64 P P 07 31 12.0 +1.5
SNR=45
KIBK Kibwezi 40.36 157 P P 07 31 08.9 -3.8
KIBK Kibwezi 40.36 157 P P 07 31 13.7 +1.0
SNR=30
KIBK Kibwezi 40.36 157 P P 07 31 13.9 +1.2
TKM2 Tokmak 2 40.54 63 P P 07 31 14.8 +0.6
SNR=64
NIL Nilore 40.79 78 S S 07 37 22.0 +0.2
NIL Nilore 40.79 78 P P 07 31 17.3 +1.2
NIL Nilore 40.79 78 P P 07 31 17.3 +1.2
NIL pmax pmax
comp=Z,714nm,1.0s
HOPEN Hopen 40.84 1 *e*P P 07 31 16.1 +0.2
KUU Kurty 40.95 62 *e*P P 07 31 17.6 +0.3
comp=Z,501nm,1.7s
KUU *e*S S 07 37 25.9 +1.9
KUU Kurty 40.95 62 *e*P P 07 31 17.6 +0.3
KUU *e*S S 07 37 25.9 +1.9
KUU pmax pmax
comp=Z,501nm,1.7s
ULHL Ulahol 41.11 64 P P 07 31 20.8 +1.9
SNR=14
JASL Jaisalmer 41.29 89 *e*P P 07 31 21.8 +1.5
JASL IAmb IAmb 07 31 23.4
comp=Z,113nm,0.7s
BBTS Babate 41.32 250 LR LR 07 49 44.2
comp=Z,6µm,21.8s,baz=256,slow=38
AAA Alma-Ata 41.45 63 *e*P P 07 31 21.6 +0.1
comp=Z,366nm,2.2s
AAA Alma-Ata 41.45 63 *e*P P 07 31 21.6 +0.1
AAA pmax pmax
comp=Z,366nm,2.2s
HSPB Hornsund (broa 41.47 357 *e*P P 07 31 22.0 +0.9
TNSS Tian-Shan 41.50 63 *e*P P 07 31 22.1 -0.2
TNSS Tian-Shan 41.50 63 *e*P P 07 31 22.1 -0.2
MDOK Medeo 41.56 63 *e*P P 07 31 22.7 +0.3
MDOK *e*S S 07 37 35.1 +1.7
MDOK Medeo 41.56 63 *e*P P 07 31 22.7 +0.3
MDOK *e*S S 07 37 35.0 +1.7
KDJ Kajisay 41.82 64 IAmb IAmb 07 31 28.0
comp=Z,216nm,0.8s
KURBB Kurchatov Arra 41.94 52 P P 07 31 25.1 -0.2
comp=Z,240nm,0.4s,baz=280,slow=8.5,SNR=1172
KURBB ScP ScP 07 37 03.5 -0.1
comp=Z,2.4nm,0.4s,baz=278,slow=4.3,SNR=2.0
KURBB S S 07 37 33.6 -4.9
comp=Z,20nm,1.0s,baz=297,slow=21,SNR=8.3
KURBB LR LR 07 52 39.3
comp=Z,2µm,18.3s,baz=290,slow=41
comp=Z,240nm,0.4s
ARXS Arharly 41.97 61 *i* P P 07 31 25.8 +0.1
KURK Kurchatov 42.00 51 P P 07 31 25.3 -0.4
KURK P P 07 31 25.3 -0.4
KURK S S 07 37 36.9 -2.4
KURK S S 07 37 36.9 -2.4
KURK Kurchatov 42.00 51 P P 07 31 25.5 -0.2
KURK IAmb IAmb 07 31 27.7
comp=Z,292nm,0.8s
KURK Kurchatov 42.00 51 P P 07 31 25.5 -0.2
KURK pmax pmax
comp=Z,292nm,0.8s
KURK Kurchatov 42.00 51 P P 07 31 25.5 -0.2
SCO Scoresbysund 42.21 339 *i* P P 07 31 27.8 +0.7
SCO *i* P P 07 31 28.3 +1.2
SCO IAmb IAmb 07 31 30.9
comp=Z,301nm,1.2s
SCO IAmb IAmb 07 31 31.0
comp=Z,314nm,1.2s
TDK Taldyqorghan 42.27 60 *e*P P 07 31 28.5 +0.4
comp=Z,418nm,1.3s
TDK Taldyqorghan 42.27 60 *e*P P 07 31 28.5 +0.4
TDK pmax pmax
comp=Z,418nm,1.3s
JMU Jammu 42.39 79 *e*P P 07 31 30.4 +1.2
JMU IAmb IAmb 07 31 31.8
comp=Z,166nm,0.8s
SRGN SRI GANGA NAGA 42.54 83 *e*P P 07 31 31.7 +1.3
SRGN IAmb IAmb 07 31 33.1
comp=Z,115nm,0.9s
SATY Saty 42.56 63 *e*P P 07 31 30.7 +0.2
comp=Z,443nm,1.8s
SATY *e*S S 07 37 49.6 +1.5
SATY Saty 42.56 63 *e*P P 07 31 30.7 +0.2
SATY *e*S S 07 37 49.5 +1.5
SATY pmax pmax
comp=Z,443nm,1.8s
SPA0 Spitsbergen Ar 42.61 358 *e*P P 07 31 32.0 +1.7
SPITS Spitsbergen Ar 42.61 358 P P 07 31 31.2 +0.8
comp=Z,76nm,0.4s,baz=155,slow=10,SNR=134
SPITS S S 07 37 44.7 -3.0
comp=Z,22nm,1.0s,baz=142,slow=16,SNR=2.7
SPITS LR LR 07 51 14.2
comp=Z,8µm,22.0s,baz=170,slow=39
comp=Z,76nm,0.4s
PRZ Przheval'sk 42.65 64 IAmb IAmb 07 31 57.2
comp=Z,728nm,1.8s
BKNR BIKANER 42.78 86 *e*P P 07 31 33.8 +1.5
UZB Uzynbulak 42.99 63 ⇑*i*P P 07 31 34.1 +0.1
UZB Uzynbulak 42.99 63 *c* *i*P P 07 31 34.1 +0.1
THN Thein Dam 43.13 79 *e*P P 07 31 36.8 +1.6
THN IAmb IAmb 07 31 38.1
comp=Z,216nm,1.0s
SHLS Shalkode 43.30 62 *e*P P 07 31 39.3 +2.7
SHLS Shalkode 43.30 62 *e*P P 07 31 39.3 +2.7
TSSA Tissa 43.35 78 *e*P P 07 31 38.0 +0.9
TSSA IAmb IAmb 07 31 40.3
comp=Z,194nm,0.9s
TLWR Talawar 43.49 79 *e*P P 07 31 39.2 +1.2
TLWR IAmb IAmb 07 31 40.8
comp=Z,217nm,0.8s
ALCI Alchi Leh 43.73 76 *e*P P 07 31 41.4 +1.0
ALCI IAmb IAmb 07 31 44.1
comp=Z,190nm,0.8s
DBG Daneborg 43.89 344 ⇑P P 07 31 42.1 +1.4
DBG Daneborg 43.89 344 *i*P P 07 31 42.3 +1.6
DBG IAmb IAmb 07 32 18.1
comp=Z,51nm,1.0s
MAKZ Makanchi 44.51 57 P P 07 31 46.0 -0.1
MAKZ IAmb IAmb 07 31 48.7
comp=Z,135nm,0.6s
MAKZ Makanchi 44.51 57 P P 07 31 46.0 -0.1
MAKZ pmax pmax
comp=Z,135nm,0.6s
MAKZ Makanchi 44.51 57 ⇑P P 07 31 45.9 -0.2
MAKZ Makanchi 44.51 57 P P 07 31 46.1 +0.1
AJM Ajmer 44.52 87 *e*P P 07 31 47.8 +1.4
AJM IAmb IAmb 07 31 49.6
comp=Z,228nm,0.5s
UDPR Udaipur 44.59 90 *e*P P 07 31 48.9 +1.9
UDPR IAmb IAmb 07 31 50.6
comp=Z,247nm,1.0s
MK31 Makanchi Array 44.73 57 *ce*P P 07 31 47.7 -0.1
MKAR Makanchi Array 44.73 57 P P 07 31 47.7 -0.1
comp=Z,362nm,0.6s,baz=278,slow=6.7,SNR=1058
MKAR PcP PcP 07 33 30.2 +1.3
comp=Z,48nm,0.8s,baz=275,slow=3.8,SNR=2.0
MKAR ScP ScP 07 37 14.7 -0.3
comp=Z,5.5nm,0.6s,baz=270,slow=3.3,SNR=2.9
MKAR LR LR 07 54 36.9
comp=Z,1µm,19.6s,baz=262,slow=42
comp=Z,362nm,0.6s
MKAR Makanchi Array 44.73 57 *i*P P 07 31 47.7 -0.1
MKAR pmax pmax
comp=Z,361nm,0.6s
JHJR Jhajjar 45.27 83 *e*P P 07 31 53.8 +1.5
JHJR IAmb IAmb 07 31 54.9
comp=Z,172nm,0.6s
KUDL Kundal 45.33 84 *e*P P 07 31 53.9 +1.2
KUDL IAmb IAmb 07 31 56.7
comp=Z,147nm,0.8s
HNLY HANLEY 45.61 77 *e*P P 07 31 56.3 +0.7
HNLY IAmb IAmb 07 31 59.2
comp=Z,174nm,0.8s
NPLP NPLP New Delhi 45.68 83 *e*P P 07 31 56.6 +1.1
NPLP IAmb IAmb 07 31 58.0
comp=Z,293nm,0.7s
ZALV Zalesovo Beam 45.70 47 P P 07 31 54.7 -0.6
comp=Z,357nm,0.5s,baz=270,slow=8.4,SNR=718
ZALV S S 07 38 31.1 -1.9
comp=Z,5.7nm,0.7s,baz=260,slow=13,SNR=5.3
ZALV LR LR 07 54 40.5
comp=Z,1µm,21.6s,baz=266,slow=41
comp=Z,357nm,0.5s
ZALV Zalesovo Beam 45.70 47 P P 07 31 54.9 -0.4
ZALV Zalesovo Beam 45.70 47 *i* P P 07 31 54.7 -0.6
ZALV pmax pmax
comp=Z,359nm,0.5s
NDI New Delhi 45.70 83 *e*P P 07 31 56.8 +1.1
AYAN Aya Nagar 45.71 83 *e*P P 07 31 56.8 +1.0
AYAN IAmb IAmb 07 31 58.0
comp=Z,266nm,0.8s
BISR Bishrakh 45.93 83 *e*P P 07 31 58.8 +1.3
BISR IAmb IAmb 07 32 00.4
comp=Z,207nm,0.6s
MERT Meerut 46.01 82 *e*P P 07 31 59.7 +1.6
ZSN Zaisan 46.37 56 ⇑*i*P P 07 32 01.1 +0.3
comp=Z,400nm,2.3s
ZSN Zaisan 46.37 56 *c* *i*P P 07 32 01.0 +0.3
ZSN pmax pmax
comp=Z,400nm,2.3s
UGON Onchagaon 46.41 83 *e*P P 07 32 03.5 +2.2
SACV Santiago Islan 46.63 256 P P 07 32 03.9 +0.7
SACV IAmb IAmb 07 32 33.8
comp=Z,264nm,1.4s
SACV Santiago Islan 46.63 256 ⇓P P 07 32 04.7 +1.5
TKRD Thakurdwara 46.84 82 *e*P P 07 32 05.6 +0.9
GUNA GUNA 47.50 88 *e*P P 07 32 10.5 +0.6
DGZ Jazzator, Alta 47.72 52 *c* *i*P P 07 32 11.3 -0.1
DGZ pmax pmax
comp=Z,209nm,0.6s
PTH Pithoragarh 47.78 80 *e*P P 07 32 12.5 +0.4
PTH IAmb IAmb 07 32 14.3
comp=Z,103nm,0.5s
LGTI Lohaghat 47.84 81 *e*P P 07 32 12.2 -0.1
LGTI IAmb IAmb 07 32 13.8
comp=Z,206nm,0.8s
SUMG Summit 47.85 339 P P 07 32 11.4 -0.9
SUMG Summit 47.85 339 P P 07 32 13.3 +1.0
SUMG Summit 47.85 339 ⇓P P 07 32 13.7 +1.3
SUMG Summit 47.85 339 *i* P P 07 32 12.5 +0.1
SUMG IAmb IAmb 07 32 44.4
comp=Z,174nm,1.1s
NRIK Noril'sk 47.98 25 LR LR 07 54 50.4
comp=Z,3µm,20.2s,baz=264,slow=39
JHNI Jhansi 48.12 86 *e*P P 07 32 15.5 +0.9
JHNI IAmb IAmb 07 32 16.9
comp=Z,278nm,0.8s
NOR Nord 48.14 353 *i* P P 07 32 13.9 0.0
NOR IAmb IAmb 07 32 16.0
comp=Z,2µm,1.9s
NRDN NARMADA NAGAR 48.25 90 *e*P P 07 32 13.4 -2.2
NRDN IAmb IAmb 07 32 15.3
comp=Z,194nm,0.8s
KAD Karad 48.56 98 *e*P P 07 32 19.4 +1.3
KAD IAmb IAmb 07 32 20.8
comp=Z,186nm,0.6s
WMQ Urumqi 49.03 60 ⇑P P 07 32 22.5 +1.0
WMQ sP sP 07 32 49.5 +2.8
WMQ PcP PcP 07 33 44.0 -0.3
WMQ PP PP 07 34 18.0 +2.7
WMQ S S 07 39 21.3 +0.5
WMQ sS sS 07 39 50.5 -0.3
WMQ ScS ScS 07 42 08.0 +1.1
WMQ pmax pmax
comp=Z,110nm,1.1s
WMQ pmax pmax
comp=Z,3µm,3.8s
WMQ LR LR
comp=Z,4µm,19.3s
WMQ LR LR
comp=Z,2µm,16.5s
WMQ LR LR
comp=Z,3µm,23.8s
AKL Akola 49.10 93 *e*P P 07 32 22.9 +0.8
AKL IAmb IAmb 07 32 23.9
comp=Z,172nm,0.6s
NGP Nagpur 50.53 91 *e*P P 07 32 33.3 +0.2
NGP IAmb IAmb 07 32 35.0
comp=Z,175nm,0.6s
IVI Ivigtut 50.61 324 IAmb IAmb 07 32 36.1
comp=Z,329nm,1.4s
IVI Ivigtut 50.61 324 ⇑P P 07 32 34.4 +1.3
IVI Ivigtut 50.61 324 *i* P P 07 32 33.6 +0.6
IVI IAmb IAmb 07 32 35.6
comp=Z,274nm,1.3s
ALBI Allahabad 50.83 85 *e*P P 07 32 34.6 -0.6
ALBI IAmb IAmb 07 32 36.1
comp=Z,257nm,0.8s
SFJD Kangerlussuaq 51.40 331 LR LR 07 56 19.7
comp=Z,2µm,20.9s,baz=83,slow=38
SFJD Kangerlussuaq 51.40 331 P P 07 32 40.2 +1.3
SFJD IAmb IAmb 07 32 41.6
comp=Z,278nm,1.5s
SFJD Kangerlussuaq 51.40 331 ⇑P P 07 32 39.7 +0.8
SFJD Kangerlussuaq 51.40 331 *i* P P 07 32 37.6 -1.2
SFJD IAmb IAmb 07 32 41.1
comp=Z,313nm,1.6s
MNGI Mangalore 51.51 103 *e*P P 07 32 42.2 +1.8
ILULI Ilulissat 51.55 334 ⇑P P 07 32 40.2 +0.3
ILULI Ilulissat 51.55 334 *i* P P 07 32 40.5 +0.5
ILULI IAmb IAmb 07 33 54.9
comp=Z,110nm,1.0s
SAATT Saattut 51.73 336 *i* P P 07 32 41.0 -0.3
SAATT IAmb IAmb 07 32 43.6
comp=Z,108nm,1.0s
NEEM North Greenlan 51.98 344 *i* P P 07 32 42.4 -1.1
NEEM IAmb IAmb 07 32 45.9
comp=Z,2µm,2.2s
NUUK Nuuk 52.02 328 ⇑P P 07 32 44.5 +1.0
NUUK Nuuk 52.02 328 *i* P P 07 32 42.4 -1.1
NUUK IAmb IAmb 07 32 45.8
comp=Z,371nm,1.8s
HYBB Hyderabad (bro 52.03 95 *e*P P 07 32 44.5 +0.2
HYBB IVmB_BB 07 32 44.7
comp=Z,2µm,3.1s
HYBB *e*pP pP 07 33 02.5 +0.4
HYBB *e*PcP PcP 07 33 56.0 +0.3
HYBB *e*PP PP 07 34 43.6 +0.7
HYBB *e*ScP ScP 07 37 46.7 +0.3
HYBB *e*PcS PcS 07 37 54.5 +0.2
HYBB *e*S S 07 40 03.8 +0.9
HYBB *e*ScS ScS 07 42 28.4 +0.3
HYBB *e*SS SS 07 43 43.8 +3.1
HYBB IVMs_BB IVMs_BB 07 45 32.8
comp=Z,894nm,9.1s
NUUG Nuugaatsiaq 52.24 337 *i* P P 07 32 45.9 +0.8
NUUG IAmb IAmb 07 32 47.0
comp=Z,68nm,1.1s
GDH Godhavn 52.41 334 *i* P P 07 32 45.3 -1.1
GDH IAmb IAmb 07 32 49.0
comp=Z,268nm,1.3s
BLSP Bilaspur 52.57 88 *e*P P 07 32 47.9 -0.4
BLSP IAmb IAmb 07 32 49.5
comp=Z,206nm,1.0s
UPNV Upernavik 53.12 339 *i* P P 07 32 52.0 +0.5
KULLO Kullorsuaq 53.36 341 *i* P P 07 32 52.7 -0.6
KULLO IAmb IAmb 07 32 55.6
comp=Z,196nm,1.1s
GAYA Gaya 53.83 84 *e*P P 07 32 56.6 -0.9
GAYA IAmb IAmb 07 32 58.4
comp=Z,244nm,0.9s
XAUDM Khaudum 54.05 182 *i* P P 07 32 58.6 -0.4
JHSG JHARSUGUGA 54.08 88 *e*P P 07 32 58.7 -0.6
JHSG IAmb IAmb 07 33 04.6
comp=Z,282nm,0.8s
SLIND Selinda 54.10 180 *i* P P 07 32 59.0 -0.4
ALE Alert 54.19 351 P P 07 32 59.9 +0.7
VJD Vijayawada 54.20 95 *e*P P 07 33 01.2 +1.0
KNTI KHUNTI 54.69 85 *e*P P 07 33 03.1 -0.7
KNTI IAmb IAmb 07 33 04.5
comp=Z,255nm,0.6s
SALM Salem 54.94 102 *e*P P 07 33 05.6 +0.1
SALM IAmb IAmb 07 33 07.8
comp=Z,103nm,1.1s
TSUM Tsumeb 54.94 187 LR LR 07 57 59.3
comp=Z,5µm,20.9s,baz=5.5,slow=37

TSUM	**Tsumeb**	**54.94**	**187**		P		**P**	**07 33 04.8**	**-0.7**
	comp=Z,148nm,0.9s									
QNGWA	**Qangwa**	**55.04**	**182**	*i*	P		**P**	**07 33 05.2**	**-1.0**
RAGD	**RAYAGADA**	**55.06**	**90**	*e*	P		**P**	**07 33 06.7**	**+0.2**
RAGD					IAmb	IAmb		07 33 08.3		
	comp=Z,172nm,0.8s									
SBV	**Sambava**	**55.08**	**148**		P		**P**	**07 33 10.0**	**+3.6**
SBV					S		**S**	**07 40 46.4**	**+2.5**
SBV	**Sambava**	**55.08**	**148**	⇑	P		**P**	**07 33 07.4**	**+1.0**
KOD	**Kodaikanal**	**55.19**	**103**	*e*	P		**P**	**07 33 08.2**	**+0.5**
KOD					IAmb	IAmb		07 33 10.3		
	comp=Z,172nm,0.8s									
MOY	**Mondy**	**55.73**	**47**	*e*	P		**P**	**07 33 12.0**	**+1.0**
MOY					pmax	pmax				
	comp=Z,432nm,2.5s									
TULEG	**Thule**	**56.02**	**344**		IAmb	IAmb		07 33 14.9		
	comp=Z,445nm,1.3s									
TULEG	**Thule**	**56.02**	**344**	*i*	P		**P**	**07 33 11.2**	**-1.3**
TULEG					IAmb	IAmb		07 33 14.4		
	comp=Z,474nm,1.3s									
LSA	**Lhasa**	**56.41**	**75**		P		**P**	**07 33 12.8**	**-3.7**
LSA					S		**S**	**07 40 57.0**	**-5.5**
LSA					pmax	pmax				
	comp=Z,260nm,0.7s									
LSA					LR	LR				
	comp=Z,1μm,15.5s									
LSA					LR	LR				
	comp=Z,1μm,16.1s									
LSA					LR	LR				
	comp=Z,3μm,11.3s									
LSA	**Lhasa**	**56.41**	**75**		P		**P**	**07 33 17.6**	**+1.1**
BWNR	**Bhubaneshwar**	**56.45**	**88**	*e*	P		**P**	**07 33 16.5**	**+0.2**
BWNR					IAmb	IAmb		07 33 18.2		
	comp=Z,75nm,0.9s									
GOMU	**GeErMu**	**56.60**	**67**		P		**P**	**07 33 18.8**	**+1.1**
GOMU					S		**S**	**07 41 05.3**	**+0.5**
GOMU					pmax	pmax				
	comp=Z,130nm,0.7s									
GOMU					LR	LR				
	comp=Z,1μm,17.3s									
GOMU					LR	LR				
	comp=Z,810nm,17.6s									
GOMU					LR	LR				
	comp=Z,2μm,18.2s									
BROLN	**Tlhalogang**	**56.70**	**175**	*i*	P		**P**	**07 33 16.5**	**-1.5**
GRTLG	**Ghanzi**	**56.86**	**182**		IAmb	IAmb		07 33 42.7		
	comp=Z,166nm,0.9s									
GRTLG	**Ghanzi**	**56.86**	**182**	*i*	P		**P**	**07 33 18.8**	**-0.4**
DHUB	**DHUBRI**	**57.11**	**80**	*e*	P		**P**	**07 33 20.8**	**-0.2**
TLY	**Talaya**	**57.31**	**47**		P		**P**	**07 33 22.8**	**+0.7**
TLY					S		**S**	**07 41 11.9**	**-1.0**
TLY	**Talaya**	**57.31**	**47**		P		**P**	**07 33 22.7**	**+0.7**
TLY					IAmb	IAmb		07 33 25.2		
	comp=Z,142nm,0.9s									
TLY	**Talaya**	**57.31**	**47**	*ce*	P		**P**	**07 33 22.8**	**+0.7**
TLY					pmax	pmax				
	comp=Z,582nm,2.5s									
TLY	**Talaya**	**57.31**	**47**		P		**P**	**07 33 23.5**	**+1.4**
KHWEE	**KHWEE**	**57.44**	**178**		IAmb	IAmb		07 34 05.8		
	comp=Z,204nm,1.4s									
ZAK	**Zakamensk**	**57.49**	**48**	*e*	P		**P**	**07 33 23.9**	**+0.4**
ZAK					pmax	pmax				
	comp=Z,298nm,1.7s									
IRK	**Irkutsk**	**57.51**	**46**	*e*	P		**P**	**07 33 23.3**	**-0.1**
IRK				*e*	S		**S**	**07 41 14.2**	**-1.3**
IRK					pmax	pmax				
	comp=Z,896nm,2.3s									
TAWA	**Tawang**	**57.89**	**77**	*e*	P		**P**	**07 33 28.0**	**+1.1**
TAWA					IAmb	IAmb		07 33 29.5		
	comp=Z,206nm,0.9s									
MREMI	**Moremi**	**58.16**	**175**	*i*	P		**P**	**07 33 28.1**	**-0.1**
WIN	**Windhoek**	**58.32**	**187**		P		**P**	**07 33 29.4**	**-0.1**
WIN					IAmb	IAmb		07 33 54.7		
	comp=Z,120nm,1.2s									
WIN	**Windhoek**	**58.32**	**187**		P		**P**	**07 33 29.4**	**-0.1**
WIN					pmax	pmax				
	comp=Z,120nm,1.2s									
KGCAE	**Kacgae**	**58.32**	**181**	*i*	P		**P**	**07 33 28.5**	**-0.9**
DRLN	**Deer Lake**	**58.32**	**311**		P		**P**	**07 33 29.7**	**+0.6**
DRLN					IAmb	IAmb		07 33 32.1		
	comp=Z,193nm,0.9s									
SHEL	**Horse Pasture**	**58.33**	**213**		P		**P**	**07 33 29.9**	**+0.4**
SHEL	**Horse Pasture**	**58.33**	**213**		P		**P**	**07 33 29.9**	**+0.4**
SHEL					pmax	pmax				
	comp=Z,275nm,1.2s									
KOOLE	**Kule**	**58.52**	**183**		P		**P**	**07 33 30.6**	**-0.2**
KOOLE	**Kule**	**58.52**	**183**	*i*	P		**P**	**07 33 30.5**	**-0.4**
OPO	**Ambohidratompo**	**58.61**	**153**		LR	LR		07 59 00.7		
	comp=Z,1μm,21.0s,baz=181,slow=36									
OPO	**Ambohidratompo**	**58.61**	**153**		P		**P**	**07 33 33.0**	**+1.4**
FIRM	**Firavahana**	**58.62**	**154**		P		**P**	**07 33 33.1**	**+1.4**
MALK	**Mahakanadarawa**	**58.71**	**103**		P		**P**	**07 33 28.7**	**-3.6**
SHL	**Shillong**	**58.83**	**79**		P		**P**	**07 33 32.0**	**-1.2**
	SNR=121									
LPHEP	**Lephephe**	**58.87**	**177**	*i*	P		**P**	**07 33 32.8**	**-0.4**
DGRM	**Ambatolahisoa**	**58.97**	**154**		P		**P**	**07 33 35.3**	**+1.3**
GTA	**Gaotai**	**59.03**	**61**	⇑	P		**P**	**07 33 34.0**	**-0.4**
GTA					pP	pP		07 33 53.0	+0.7
GTA					S		**S**	**07 41 35.5**	**-0.4**
GTA					sS	sS		07 42 07.0	+0.4
GTA					ScS		**ScS**	**07 43 16.8**	**-1.3**
GTA					SS		**SS**	**07 45 35.3**	**+5.0**
GTA					pmax	pmax				
	comp=Z,210nm,0.8s									
GTA					pmax	pmax				
	comp=Z,3μm,12.0s									
GTA					LR	LR				
	comp=Z,2μm,24.7s									
GTA					LR	LR				
	comp=Z,1μm,23.9s									
GTA					LR	LR				
	comp=Z,3μm,24.1s									
ABPO	**Ambohimpanom**	**59.03**	**153**		P		**P**	**07 33 34.8**	**+0.3**
ABPO	**Ambohimpanom**	**59.03**	**153**		P		**P**	**07 33 34.8**	**+0.3**
ABPO					pmax	pmax				
	comp=Z,34nm,1.0s									
ABPO	**Ambohimpanom**	**59.03**	**153**		P		**P**	**07 33 35.5**	**+1.0**
TEZP	**TEZPUR**	**59.08**	**78**	*e*	P		**P**	**07 33 34.2**	**-0.5**
TEZP					IAmb	IAmb		07 33 35.9		
	comp=Z,103nm,0.5s									
AGT	**Agartala**	**59.11**	**81**	*e*	P		**P**	**07 33 36.0**	**+1.1**
FRB	**Frobisher Bay**	**59.35**	**329**	*i*	P		**P**	**07 33 34.6**	**-1.4**
POIN	**Pond Inlet**	**59.47**	**340**		IAmb	IAmb		07 33 39.8		
	comp=Z,121nm,1.1s									
ZIRO	**ZIRO**	**59.49**	**76**	*e*	P		**P**	**07 33 37.9**	**+0.1**
ZIRO					IAmb	IAmb		07 33 39.1		
	comp=Z,150nm,0.5s									
PALK	**Pallekele**	**59.51**	**104**		LR	LR		08 01 06.4		
	comp=Z,3μm,20.9s,baz=314,slow=38									
PALK	**Pallekele**	**59.51**	**104**		P		**P**	**07 33 37.7**	**-0.2**
PALK					S		**S**	**07 41 39.5**	**-3.0**
PALK					S		S	07 41 39.9	-2.5
PALK	**Pallekele**	**59.51**	**104**		P		**P**	**07 33 38.1**	**+0.2**
PALK	**Pallekele**	**59.51**	**104**		P		**P**	**07 33 38.1**	**+0.2**
PALK					pmax	pmax				
	comp=Z,99nm,1.1s									
ITAN	**ITANAGAR**	**59.57**	**77**	*e*	P		**P**	**07 33 39.0**	**+0.9**
ITAN					IAmb	IAmb		07 33 40.7		
	comp=Z,146nm,0.9s									
BELO	**BELONIA**	**59.57**	**82**	*e*	P		**P**	**07 33 38.8**	**+0.6**
LKGWB	**Lokgwabe**	**59.59**	**182**	*i*	P		**P**	**07 33 37.5**	**-0.8**
ABM	**Ambohimiarambe**	**59.79**	**154**		P		**P**	**07 33 41.4**	**+1.7**
SILR	**SILCHAR**	**59.93**	**80**	*e*	P		**P**	**07 33 41.7**	**+1.0**
SKOMA	**Sekoma**	**59.97**	**179**	*i*	P		**P**	**07 33 39.8**	**-1.0**
BRDH	**Bariadhala**	**60.01**	**82**		LR	LR		08 05 25.4		
	comp=Z,2μm,20.6s,baz=302,slow=42									
JORH	**JORHAT**	**60.17**	**77**	*e*	P		**P**	**07 33 42.6**	**+0.4**
SONM	**Songino Array**	**60.29**	**50**		P		**P**	**07 33 42.9**	**0.0**
	comp=Z,107nm,0.7s,baz=282,slow=8.3,SNR=463									
SONM					ScP		**ScP**	**07 38 23.7**	**+1.2**
	comp=Z,4.5nm,0.7s,baz=266,slow=4.4,SNR=2.5									
SONM					S		**S**	**07 41 51.8**	**0.0**
	comp=Z,1.1nm,0.9s,baz=270,slow=5.8,SNR=1.4									
SONM					LR	LR		08 02 18.3		
	comp=Z,2μm,21.3s,baz=290,slow=38									
SONM					PKP2bc		P'P'bc	08 03 08.3	-10	
	comp=Z,0.2nm,0.3s,baz=173,slow=2.3,SNR=3.6									
	comp=Z,107nm,0.7s									
LBTB	**Lobatse**	**60.50**	**178**		LR	LR		08 02 58.3		
	comp=Z,4μm,18.2s,baz=3.0,slow=39									
LBTB	**Lobatse**	**60.50**	**178**		P		**P**	**07 33 44.6**	**+0.2**
LBTB					IAmb	IAmb		07 34 08.9		
	comp=Z,98nm,0.9s									
LBTB	**Lobatse**	**60.50**	**178**		P		**P**	**07 33 44.6**	**+0.2**
LBTB					pmax	pmax				
	comp=Z,98nm,1.0s									
KOHI	**KOHIMA**	**60.53**	**78**	*e*	P		**P**	**07 33 45.0**	**+0.1**
KOHI					IAmb	IAmb		07 33 46.8		
	comp=Z,184nm,0.9s									
MOKO	**MOKOCHONG**	**60.58**	**77**	*e*	P		**P**	**07 33 45.1**	**-0.1**
MOKO					IAmb	IAmb		07 33 47.2		
	comp=Z,121nm,0.6s									
ULN	**Ulaanbaatar**	**60.69**	**50**		P		**P**	**07 33 45.6**	**-0.1**
ULN					P		**P**	**07 33 45.6**	**-0.1**
ULN					S		**S**	**07 41 54.7**	**-2.3**
ULN					S		**S**	**07 41 54.7**	**-2.3**
ULN	**Ulaanbaatar**	**60.69**	**50**		P		**P**	**07 33 46.2**	**+0.6**
ULN	**Ulaanbaatar**	**60.69**	**50**	*ce*	P		**P**	**07 33 45.7**	**0.0**
ULN					pmax	pmax				
	comp=Z,258nm,0.8s									
IMP	**Imphal**	**60.82**	**79**	*e*	P		**P**	**07 33 47.6**	**+0.8**
IMP					IAmb	IAmb		07 33 49.6		
	comp=Z,137nm,0.8s									
TIXI	**Tiksi**	**61.13**	**20**		LR	LR		08 03 52.6		
	comp=Z,8μm,18.4s,baz=318,slow=40									
TIXI	**Tiksi**	**61.13**	**20**		P		**P**	**07 33 48.4**	**+0.4**
TIXI	**Tiksi**	**61.13**	**20**	*ce*	P		**P**	**07 33 48.2**	**+0.2**
TIXI					pmax	pmax				
	comp=Z,476nm,1.7s									
TIXI	**Tiksi**	**61.13**	**20**		P		**P**	**07 33 48.4**	**+0.4**
LKP	**Lekhapani**	**61.16**	**76**		IAmb	IAmb		07 33 44.1		
	comp=Z,162nm,0.8s									
LKP					*e*P		**P**	**07 33 47.2**	**-1.7**
SAIH	**SAIHA**	**61.18**	**82**	*e*	P		**P**	**07 33 50.3**	**+0.9**
SAIH					IAmb	IAmb		07 33 52.0		
	comp=Z,186nm,0.6s									
KUQ	**Kuujjuuaa**	**61.27**	**323**		P		**P**	**07 33 50.3**	**+1.1**
KUQ					IAmb	IAmb		07 33 52.4		
	comp=Z,150nm,0.9s									
VOI	**Vohitsoka**	**61.54**	**155**		P		**P**	**07 33 52.1**	**+0.5**
VOI	**Vohitsoka**	**61.54**	**155**		P		**P**	**07 33 50.8**	**-0.7**
VOI	**Vohitsoka**	**61.54**	**155**		P		**P**	**07 33 52.0**	**+0.4**
SCHQ	**Schefferville**	**61.71**	**319**		P		**P**	**07 33 52.9**	**+0.6**
	comp=Z,80nm,0.4s,baz=70,slow=5.2,SNR=202									
SCHQ					LR	LR		08 00 34.6		
	comp=Z,1μm,21.6s,baz=64,slow=36									
	comp=Z,80nm,0.4s									
ILON	**Igloolik, Nuna**	**62.02**	**337**		P		**P**	**07 33 54.3**	**+0.3**
GBN	**Guysborough**	**62.28**	**308**		P		**P**	**07 33 56.8**	**+0.7**
RES	**Resolute Bay**	**62.67**	**345**		LR	LR		08 00 55.1		
	comp=Z,2μm,21.9s,baz=55,slow=36									
RES	**Resolute Bay**	**62.67**	**345**		IAmb	IAmb		07 34 00.6		
	comp=Z,434nm,1.9s									
RES	**Resolute Bay**	**62.67**	**345**	*i*	P		**P**	**07 33 58.0**	**-0.3**
CIT	**Chita**	**62.93**	**44**	*e*	P		**P**	**07 34 00.8**	**+0.3**
CIT				*e*				07 34 19.0		
CIT				*e*				07 34 31.8		
CIT				*e*				07 36 19.4		
CIT				*e*				07 37 55.8		
CIT					pmax	pmax				
	comp=Z,678nm,2.9s									
LZDM	**Lanzhou Array**	**63.26**	**64**		P		**P**	**07 34 03.9**	**+0.5**
	comp=Z,194nm,0.6s,baz=292,slow=4.7,SNR=173									
LZDM					S		**S**	**07 42 29.4**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=296,slow=17,SNR=1.4									
LZDM					LR	LR		08 05 44.4		
	comp=Z,1μm,21.4s,baz=305,slow=40									
	comp=Z,194nm,0.6s									
POGA	**Pongola**	**63.29**	**172**		IAmb	IAmb		07 34 23.9		
	comp=Z,187nm,1.4s									
LZH	**Lanzhou**	**63.31**	**63**	⇑	P		**P**	**07 34 04.5**	**+1.1**
LZH					pP	pP		07 34 24.8	+3.2
LZH					sP	PcP		07 34 36.5	-3.5
LZH					PP		**PP**	**07 36 22.5**	**-0.6**
LZH					S		**S**	**07 42 28.3**	**-2.1**
LZH					sS	sS		07 43 00.5	-0.8
LZH					SS		**SS**	**07 46 36.0**	**-1.5**
LZH					pmax	pmax				
	comp=Z,550nm,1.3s									
LZH					pmax	pmax				
	comp=Z,3μm,4.8s									
LZH					LR	LR				
	comp=Z,3μm,18.6s									
LZH					LR	LR				
	comp=Z,3μm,19.6s									
LZH					LR	LR				
	comp=Z,6μm,18.5s									
HAL	**Halifax**	**63.94**	**307**		IAmb	IAmb		07 34 10.9		
	comp=Z,292nm,1.0s									
BOSA	**Boshof**	**64.07**	**178**		P		**P**	**07 34 07.8**	**-0.5**
	comp=Z,21nm,0.8s,baz=2.9,slow=7.3,SNR=32									
BOSA					LR	LR		08 04 25.3		
	comp=Z,3μm,18.6s,baz=1.0,slow=38									
	comp=Z,21nm,0.8s									
ICQ	**Pointe Angela**	**64.12**	**314**		IAmb	IAmb		07 34 11.0		
	comp=Z,189nm,1.0s									
LMN	**Caledonia Moun**	**64.19**	**309**		P		**P**	**07 34 09.6**	**+0.7**
LMN					IAmb	IAmb		07 34 11.6		
	comp=Z,331nm,1.2s									
BATG	**Bathurst New B**	**64.36**	**311**		IAmb	IAmb		07 34 13.0		
	comp=Z,265nm,1.0s									
TNCH	**TengChong**	**64.36**	**77**		P		**P**	**07 34 11.5**	**+1.0**
TNCH					pP	pP		07 34 29.0	+0.3
TNCH					sP	sP		07 34 36.5	0.0
TNCH					S		**S**	**07 42 45.0**	**+1.2**
TNCH					sS	sS		07 43 14.8	+0.2
TNCH					pmax	pmax				
	comp=Z,530nm,0.8s									
TNCH					pmax	pmax				
	comp=Z,3μm,2.9s									
TNCH					LR	LR				
	comp=Z,2μm,30.3s									
TNCH					LR	LR				
	comp=Z,2μm,42.0s									
TNCH					LR	LR				
	comp=Z,3μm,35.0s									
FOMA	**Nahampoana Res**	**64.45**	**156**		P		**P**	**07 34 10.9**	**+0.3**
CD2	**Chengdu**	**65.61**	**69**	⇑	P		**P**	**07 34 19.0**	**+0.6**
CD2					sP	sP		07 34 44.0	-0.4
CD2					PP		**PP**	**07 36 42.8**	**-0.4**
CD2					S		**S**	**07 42 56.3**	**-2.3**
CD2					sS	sS		07 43 30.0	+0.3
CD2					SS		**SS**	**07 47 12.0**	**-1.3**
CD2					pmax	pmax				
	comp=Z,360nm,0.9s									
CD2					pmax	pmax				
	comp=Z,3μm,3.6s									
CD2					LR	LR				
	comp=Z,2μm,23.5s									
CD2					LR	LR				
	comp=Z,2μm,19.7s									
CD2					LR	LR				
	comp=Z,1μm,15.9s									
BTO	**Baotou**	**65.64**	**57**	*e*	P		**P**	**07 34 18.5**	**0.0**
BTO					S		**S**	**07 42 59.3**	**+0.4**
BTO					SS		**SS**	**07 47 09.8**	**-3.7**
BTO					pmax	pmax				
	comp=Z,320nm,0.8s									
BTO					pmax	pmax				
	comp=Z,6μm,6.3s									
BTO					LR	LR				
	comp=Z,3μm,16.7s									
BTO					LR	LR				
	comp=Z,2μm,16.8s									
BTO					LR	LR				
	comp=Z,3μm,19.8s									
GGN	**Saint George**	**65.80**	**309**		IAmb	IAmb		07 34 22.0		
	comp=Z,273nm,1.3s									
YAK	**Yakutsk**	**66.11**	**30**		P		**P**	**07 34 20.0**	**-1.0**
	comp=Z,389nm,0.7s,baz=232,slow=1.1,SNR=67									
YAK					LR	LR		08 06 28.0		
	comp=Z,3μm,18.5s,baz=300,slow=39									
	comp=Z,389nm,0.7s									
YAK	**Yakutsk**	**66.11**	**30**		P		**P**	**07 34 20.6**	**-0.3**
YAK	**Yakutsk**	**66.11**	**30**	*c*	P		**P**	**07 34 20.4**	**-0.6**
YAK					*e**PP		**pP**	**07 34 38.3**	**-0.8**
YAK					*e*			07 34 49.7		
YAK					*e*			07 36 48.3		
YAK					*e*S		**S**	**07 43 09.0**	**+5.4**
YAK					*e**SS		**sS**	**07 43 41.7**	**+7.0**
YAK					*e*			07 44 11.6		
YAK					pmax	pmax				
	comp=Z,383nm,0.9s									
YAK					pmax	pmax				
	comp=N,38nm,1.1s									
YAK					pmax	pmax				
	comp=E,121nm,1.3s									
YAK					pmax	pmax				
	comp=Z,211nm,2.2s									
YAK					pmax	pmax				
	comp=N,154nm,2.3s									
YAK					pmax	pmax				
	comp=E,109nm,1.8s									
YAK					smax	smax				
	comp=N,232nm,2.5s									
YAK					smax	smax				
	comp=E,181nm,3.0s									
YAK					MLR	MLR				
	comp=Z,3μm,17.0s									
YAK					MLR	MLR				
	comp=E,2μm,17.0s									
YAK					MLR	MLR				
	comp=N,2μm,20.0s									
YAK	**Yakutsk**	**66.11**	**30**		P		**P**	**07 34 20.7**	**-0.3**
PZH	**PanZhiHua**	**66.18**	**74**		P		**P**	**07 34 22.0**	**-0.2**
PZH					sP		**sP**	**07 34 47.0**	**-1.2**
PZH					PP		**PP**	**07 36 46.3**	**-2.1**
PZH					S		**S**	**07 43 03.5**	**-2.3**
PZH					ScS		**SKSac**	**07 44 11.0**	**-1.4**
PZH					pmax	pmax				
	comp=N,590nm,0.7s									
PZH					pmax	pmax				
	comp=N,1μm,5.9s									
PZH					LR	LR				
	comp=N,950nm,22.2s									
PZH					LR	LR				
	comp=N,1μm,23.5s									
PZH					LR	LR				
	comp=N,1μm,22.6s									
G65A	**Princeton**	**66.22**	**309**		IAmb	IAmb		07 34 25.1		
	comp=Z,239nm,1.2s									
D62A	**Allapoint, All**	**66.27**	**312**		IAmb	IAmb		07 34 25.6		
	comp=Z,270nm,1.0s									
EMMW	**East Machias**	**66.38**	**309**		IAmb	IAmb		07 34 26.6		
	comp=Z,208nm,0.9s									
F64A	**Sherman**	**66.40**	**310**		IAmb	IAmb		07 34 26.3		
	comp=Z,141nm,0.9s									
HHC	**Hu-ho-hao-te**	**66.58**	**56**	⇑ *i*	P		**P**	**07 34 25.5**	**+1.0**
HHC					sP	PcP		07 34 56.0	+2.6
HHC					S		**S**	**07 43 10.5**	**+0.3**
HHC					sS	sS		07 43 43.3	+2.2
HHC					pmax	pmax				
	comp=Z,390nm,1.0s									
HHC					LR	LR				
	comp=Z,1μm,22.4s									
HHC					LR	LR				
	comp=Z,1μm,15.7s									
HHC					LR	LR				
	comp=Z,880nm,13.5s									
E62A	**Clayton Lake**	**66.77**	**311**		IAmb	IAmb		07 34 28.7		
	comp=Z,229nm,0.9s									
LMQ	**La Malbaie**	**66.82**	**313**		IAmb	IAmb		07 34 28.9		
	comp=Z,184nm,1.1s									
LDAQ	**Lac Daran**	**67.17**	**313**		IAmb	IAmb		07 34 31.3		
	comp=Z,184nm,1.1s									
PKME	**Peaks-Kenny Pk**	**67.27**	**310**		IAmb	IAmb		07 34 32.1		
	comp=Z,188nm,1.1s									
HILR	**Hailar Array B**	**67.55**	**44**		P		**P**	**07 34 31.2**	**+0.8**
	comp=Z,116nm,0.9s,baz=4.7,SNR=64									
	comp=Z,116nm,0.9s									
KMI	**Kunming**	**67.64**	**75**	⇑	P		**P**	**07 34 31.8**	**+0.2**
KMI					pP	pP		07 34 50.5	+0.5
KMI					sP	sP		07 34 57.5	-0.2
KMI					PP		**PP**	**07 36 58.8**	**-2.5**
KMI					S		**S**	**07 43 20.5**	**-3.2**
KMI					sS	sS		07 43 55.0	+0.3
KMI					pmax	pmax				
	comp=Z,310nm,0.8s									
KMI					pmax	pmax				
	comp=Z,2μm,4.5s									
KMI					LR	LR				
	comp=Z,890nm,23.9s									
KMI					LR	LR				
	comp=Z,1μm,29.7s									
KMI					LR	LR				
	comp=Z,3μm,29.2s									
HIA	**Hailar**	**67.69**	**45**		IAmb	IAmb		07 34 34.7		
	comp=Z,287nm,0.9s									
HIA	**Hailar**	**67.69**	**45**		P		**P**	**07 34 32.1**	**+0.8**
SUR	**Sutherland**	**67.84**	**182**		P		**P**	**07 34 32.6**	**+0.2**
CHTO	**Chiang Mai**	**67.84**	**82**		P		**P**	**07 34 32.6**	**-0.1**
CHTO					P		**P**	**07 34 32.6**	**-0.1**
CHTO					S		**S**	**07 43 20.2**	**-5.6**
CHTO					S		**S**	**07 43 20.2**	**-5.6**
CHTO	**Chiang Mai**	**67.84**	**82**		P		**P**	**07 34 32.6**	**-0.1**
CHTO	**Chiang Mai**	**67.84**	**82**		P		**P**	**07 34 32.7**	**0.0**
CHTO	**Chiang Mai**	**67.84**	**82**		P		**P**	**07 34 32.6**	**-0.1**
CHTO					pmax	pmax				
	comp=Z,763nm,1.7s									
CHTO	**Chiang Mai**	**67.84**	**82**		P		**P**	**07 34 32.8**	**0.0**
XAN	**Xi'an**	**67.95**	**63**	⇑	P		**P**	**07 34 33.3**	**+0.1**
XAN					pP	pP		07 34 51.0	-0.5
XAN					PP		**PP**	**07 37 04.5**	**+1.0**
XAN					S		**S**	**07 43 25.8**	**-1.0**
XAN					pmax	pmax				
	comp=Z,200nm,0.8s									
XAN					pmax	pmax				
	comp=Z,3μm,6.9s									
XAN					LR	LR				
	comp=Z,2μm,23.9s									
XAN					LR	LR				
	comp=Z,1μm,22.7s									
XAN					LR	LR				
	comp=Z,3μm,23.2s									
CM31	**Chiang Mai Arr**	**68.03**	**83**		P		**P**	**07 34 33.4**	**-0.5**
	SNR=84									
CM31					P		**P**	**07 34 33.4**	**-0.5**
	SNR=84									
CM31					S		**S**	**07 43 24.8**	**-3.2**
CM31					S		**S**	**07 43 24.8**	**-3.2**
CM31	**Chiang Mai Arr**	**68.03**	**83**		IAmb	IAmb		07 34 36.0		
	comp=Z,289nm,0.9s									
CMAR	**Chiang Mai Arr**	**68.03**	**83**		P		**P**	**07 34 34.0**	**+0.1**
	comp=Z,201nm,0.8s,baz=302,slow=7.8,SNR=550									
CMAR					PP	

ZEA				*e*			07 37 13.2	
ZEA				*e*			07 38 55.0	
ZEA				*e*S		**S**	**07 43 45.6**	**+2.1**
ZEA				*e**SS		**sS**	**07 44 17.2**	**+2.4**
ZEA				*e*			07 44 39.3	
ZEA				pmax	pmax			
	comp=E,300nm,4.6s							
ZEA				pmax	pmax			
	comp=N,300nm,6.2s							
ZEA				pmax	pmax			
	comp=Z,1µm,4.6s							
ZEA				pmax	pmax			
	comp=E,30nm,1.0s							
ZEA				pmax	pmax			
	comp=N,30nm,0.9s							
ZEA				pmax	pmax			
	comp=Z,120nm,1.1s							
ZEA				pmax	pmax			
	comp=E,200nm,5.1s							
ZEA				pmax	pmax			
	comp=Z,600nm,5.2s							
ZEA				smax	smax			
	comp=E,200nm,10.3s							
ZEA				smax	smax			
	comp=N,300nm,12.3s							
ZEA				MLR	MLR			
	comp=E,700nm,16.0s							
ZEA				MLR	MLR			
	comp=Z,1µm,14.0s							
BLKN	**Baker Lake**	**69.47**	**336**	IAmb	IAmb		07 34 44.5	
	comp=Z,173nm,1.1s							
MNTQ	**Montreal, Queb**	**69.81**	**312**	IAmb	IAmb		07 34 48.0	
	comp=Z,312nm,1.2s							
L64A	**Middleborough**	**69.88**	**308**	IAmb	IAmb		07 34 48.5	
	comp=Z,211nm,1.2s							
BCX	**Boston College**	**69.89**	**308**	IAmb	IAmb		07 34 48.6	
	comp=Z,208nm,1.1s							
HNH	**Hanover**	**69.90**	**310**	IAmb	IAmb		07 34 49.1	
	comp=Z,190nm,1.1s							
M65A	**Busby, Falmout**	**69.94**	**307**	P	**P**		**07 34 47.3**	**+2.0**
	baz=60							
M65A				S	**S**		**07 43 51.9**	**+2.0**
	baz=60							
WES	**Weston**	**69.96**	**308**	IAmb	IAmb		07 34 49.5	
	comp=Z,189nm,0.9s							
TRQ	**Mont Tremblant**	**70.00**	**313**	IAmb	IAmb		07 34 49.1	
	comp=Z,206nm,0.9s							
GYA	**Guiyang**	**70.02**	**71**	⇑P	**P**		**07 34 46.5**	**+0.3**
GYA				pP	PcP		07 35 07.0	-1.1
GYA				S	**S**		**07 43 47.5**	**-4.1**
GYA				SKS	**SKSac**		**07 44 35.0**	**-6.5**
GYA				SS	**SS**		**07 48 19.0**	**-2.8**
GYA				pmax	pmax			
	comp=Z,140nm,0.8s							
GYA				pmax	pmax			
	comp=Z,2µm,3.2s							
GYA				LR	LR			
	comp=Z,550nm,10.3s							
GYA				LR	LR			
	comp=Z,1µm,21.6s							
GYA				LR	LR			
	comp=Z,1µm,27.8s							
BJI	**Beijing**	**70.05**	**55**	P	**P**		**07 34 45.3**	**-0.7**
BJI				S	**S**		**07 43 51.5**	**+0.3**
BJI				sS	**sS**		**07 44 21.0**	**-1.4**
BJI				SS	**SS**		**07 48 21.8**	**+0.6**
BJI				pmax	pmax			
	comp=Z,110nm,0.9s							
BJI				pmax	pmax			
	comp=Z,1µm,6.1s							
BJI				LR	LR			
	comp=Z,800nm,23.6s							
BJI				LR	LR			
	comp=Z,780nm,25.9s							
BJI				LR	LR			
	comp=Z,2µm,32.6s							
HRV	**Adam Dziewonsk**	**70.05**	**308**	P	**P**		**07 34 47.5**	**+1.5**
HRV	**Adam Dziewonsk**	**70.05**	**308**	P	**P**		**07 34 47.5**	**+1.5**
HRV				pmax	pmax			
	comp=Z,127nm,1.1s							
BJT	**Baijiatuau**	**70.05**	**55**	IAmb	IAmb		07 34 48.5	
	comp=Z,194nm,1.0s							
BJT	**Baijiatuau**	**70.05**	**55**	P	**P**		**07 34 46.7**	**+0.6**
FRNY	**Flat Rock**	**70.13**	**311**	IAmb	IAmb		07 34 49.7	
	comp=Z,143nm,0.9s							
ENH	**Enshi**	**70.23**	**67**	IAmb	IAmb		07 34 49.4	
	comp=Z,238nm,1.0s							
ENH	**Enshi**	**70.23**	**67**	P	**P**		**07 34 47.7**	**+0.4**
ENH	**Enshi**	**70.23**	**67**	P	**P**		**07 34 47.5**	**+0.2**
LYN	**LuoYang**	**70.25**	**61**	⇑P	**P**		**07 34 48.0**	**+0.6**
LYN				pP	PcP		07 35 08.0	-0.8
LYN				PP	**PP**		**07 37 25.3**	**+2.0**
LYN				S	**S**		**07 43 53.3**	**-0.5**
LYN				sS	SKiKP		07 44 27.0	+1.2
LYN				pmax	pmax			
	comp=Z,290nm,1.1s							
LYN				pmax	pmax			
	comp=Z,3µm,6.6s							
LYN				LR	LR			
	comp=Z,2µm,23.4s							
LYN				LR	LR			
	comp=Z,1µm,24.4s							
LYN				LR	LR			
	comp=Z,4µm,24.7s							
A36M	**Sachs Harbour**	**70.28**	**350**	P	**P**		**07 34 48.5**	**+1.6**
	baz=27							
A36M				S	**S**		**07 43 53.7**	**+0.7**
	baz=27							
HNS	**HongShan**	**70.38**	**58**	⇑P	**P**		**07 34 49.0**	**+0.9**
HNS				sP	**sP**		**07 35 14.3**	**+0.3**
HNS				S	**S**		**07 43 54.5**	**-0.7**
HNS				sS	**sS**		**07 44 30.0**	**+3.6**
HNS				pmax	pmax			
	comp=Z,250nm,1.2s							
HNS				LR	LR			
	comp=Z,2µm,18.8s							
HNS				LR	LR			
	comp=Z,1µm,18.2s							
HNS				LR	LR			
	comp=Z,2µm,23.0s							
K62A	**Royalston**	**70.40**	**309**	IAmb	IAmb		07 34 52.2	
	comp=Z,165nm,1.1s							
BBSR	**BB Station**	**70.45**	**296**	P	**P**		**07 34 50.2**	**+1.6**
VLDQ	**Val d'Or**	**70.69**	**316**	IAmb	IAmb		07 34 54.0	
	comp=Z,242nm,1.0s							
UCCT	**U. Connecticut**	**70.84**	**308**	IAmb	IAmb		07 34 54.7	
	comp=Z,193nm,1.1s							
LONY	**Lake Ozonia**	**70.85**	**312**	IAmb	IAmb		07 34 55.0	
	comp=Z,197nm,1.1s							
M63A	**Gales Ferry**	**70.92**	**308**	IAmb	IAmb		07 34 55.2	
	comp=Z,210nm,1.0s							
NCB	**Newcomb**	**70.97**	**311**	IAmb	IAmb		07 34 55.4	
	comp=Z,284nm,1.8s							
HEH	**HeiHe**	**71.42**	**41**	*e*P	**P**		**07 34 54.0**	**-0.2**
HEH				pP	**PcP**		**07 35 15.0**	**+1.6**
HEH				sP	**sP**		**07 35 22.3**	**+2.1**
HEH				PP	**PP**		**07 37 34.3**	**+1.5**
HEH				S	**S**		**07 44 06.3**	**-0.5**
HEH				pmax	pmax			
	comp=Z,670nm,0.9s							
HEH				pmax	pmax			
	comp=Z,3µm,6.0s							
HEH				LR	LR			
	comp=Z,2µm,12.9s							
HEH				LR	LR			
	comp=Z,2µm,16.2s							
HEH				LR	LR			
	comp=Z,4µm,13.2s							
KSCT	**Kent School, K**	**71.68**	**308**	IAmb	IAmb		07 34 59.6	
	comp=Z,273nm,1.2s							
N62A	**Caumsett State**	**72.08**	**308**	IAmb	IAmb		07 35 01.5	
	comp=Z,150nm,0.9s							
J57A	**Williamstown**	**72.35**	**311**	IAmb	IAmb		07 35 03.6	
	comp=Z,154nm,0.9s							
L59A	**Walton**	**72.42**	**310**	IAmb	IAmb		07 35 04.3	
	comp=Z,228nm,1.1s							
FCC	**Fort Churchill**	**72.42**	**331**	IAmb	IAmb		07 35 03.2	
	comp=Z,369nm,1.5s							
C36M	**Paulatuk**	**72.47**	**348**	IAmb	IAmb		07 35 02.9	
	comp=Z,386nm,1.1s							
C36M	**Paulatuk**	**72.47**	**348**	P	**P**		**07 35 01.2**	**+1.1**
	baz=27							
C36M				S	**S**		**07 44 18.7**	**+0.5**
	baz=27							
CPNY	**Central Park**	**72.48**	**308**	IAmb	IAmb		07 35 04.9	
	comp=Z,271nm,1.5s							
TIA	**Tai'an**	**72.66**	**58**	P	**P**		**07 35 02.0**	**+0.1**
TIA				sP	**sP**		**07 35 29.3**	**+1.3**
TIA				PP	**PP**		**07 37 46.3**	**+2.4**
TIA				S	**S**		**07 44 19.0**	**-2.5**
TIA				sS	**sS**		**07 44 53.8**	**+0.9**
TIA				SS	**SS**		**07 49 05.8**	**+4.3**
TIA				pmax	pmax			
	comp=Z,170nm,0.7s							
TIA				pmax	pmax			
	comp=Z,2µm,3.5s							
TIA				LR	LR			
	comp=Z,540nm,21.3s							
TIA				LR	LR			
	comp=Z,1µm,22.7s							
TIA				LR	LR			
	comp=Z,3µm,24.1s							
PECO	**Prince Edward**	**72.68**	**312**	IAmb	IAmb		07 35 05.5	
	comp=Z,158nm,1.0s							
DELO	**Deloro Mine**	**72.73**	**313**	IAmb	IAmb		07 35 05.8	
	comp=Z,228nm,1.3s							
BILL	**Bilibino**	**72.84**	**14**	P	**P**		**07 35 02.5**	**+0.1**
BILL				IAmb	IAmb		07 35 04.7	
	comp=Z,210nm,1.0s							
BILL	**Bilibino**	**72.84**	**14**	*ce*P	**P**		**07 35 02.7**	**+0.3**
BILL				pmax	pmax			
	comp=Z,136nm,1.0s							
BILL				MLR	MLR			
	comp=Z,2µm,20.0s							
BILL	**Bilibino**	**72.84**	**14**	P	**P**		**07 35 02.5**	**+0.1**
BINY	**Binghamton**	**73.00**	**310**	IAmb	IAmb		07 35 07.6	
	comp=Z,180nm,1.0s							
K57A	**Scipio Center**	**73.04**	**311**	IAmb	IAmb		07 35 07.9	
	comp=Z,382nm,1.4s							
A21K	**Barrow**	**73.20**	**360**	P	**P**		**07 35 06.4**	**+2.0**
	baz=0.1							
KSPA	**Keystone Colle**	**73.21**	**309**	IAmb	IAmb		07 35 08.8	
	comp=Z,171nm,1.0s							
GULI	**GuiLin**	**73.47**	**71**	P	**P**		**07 35 08.0**	**+1.2**
GULI				sP	**sP**		**07 35 33.5**	**+0.6**
GULI				S	**SKiKP**		**07 44 27.8**	**-3.1**
GULI				pmax	pmax			
	comp=Z,140nm,0.9s							
GULI				pmax	pmax			
	comp=Z,2µm,4.9s							
GULI				LR	LR			
	comp=Z,810nm,24.3s							
GULI				LR	LR			
	comp=Z,910nm,19.2s							
GULI				LR	LR			
	comp=Z,2µm,31.9s							
SADO	**Sadowa**	**73.50**	**313**	LR	LR		08 07 06.1	
	comp=Z,1µm,19.3s,baz=78,slow=36							
SADO	**Sadowa**	**73.50**	**313**	IAmb	IAmb		07 35 10.2	
	comp=Z,207nm,1.1s							
A22K	**Sinclair Lake**	**73.52**	**359**	P	**P**		**07 35 08.2**	**+1.9**
	baz=1.5							
J55A	**Hilton**	**73.54**	**312**	IAmb	IAmb		07 35 10.5	
	comp=Z,260nm,1.3s							
SEY	**Seymchan**	**73.57**	**22**	LR	LR		08 11 49.4	
	comp=Z,1µm,18.7s,baz=322,slow=39							
SEY	**Seymchan**	**73.57**	**22**	*ce*P	**P**		**07 35 07.5**	**+0.8**
SEY				pmax	pmax			
	comp=Z,852nm,2.5s							
P61A	**Hammonton**	**73.61**	**307**	IAmb	IAmb		07 35 10.9	
	comp=Z,252nm,1.2s							
WHN	**Wuhan**	**73.68**	**64**	⇑P	**P**		**07 35 08.5**	**+0.6**
WHN				sP	**sP**		**07 35 33.0**	**-1.1**
WHN				S	**SKiKP**		**07 44 31.8**	**+0.8**
WHN				sS	**sS**		**07 45 05.3**	**+0.6**
WHN				pmax	pmax			
	comp=Z,6µm,3.0s							
WHN				LR	LR			
	comp=Z,2µm,12.8s							
WHN				LR	LR			
	comp=Z,2µm,12.2s							
WHN				LR	LR			
	comp=Z,6µm,24.0s							
MLSI	**Meulaboh, Aceh**	**73.84**	**96**	P	**P**		**07 35 07.5**	**-1.6**
	comp=Z,3µmcomp=Z,4µmcomp=Z,296nm,0.7s							
SNY	**Shenyang**	**73.86**	**50**	⇓P	**P**		**07 35 08.8**	**0.0**
SNY				PP	**PP**		**07 37 55.3**	**+1.4**
SNY				S	**SKiKP**		**07 44 32.0**	**+1.0**
SNY				SS	**SS**		**07 49 17.0**	**-2.5**
SNY				pmax	pmax			
	comp=Z,340nm,0.9s							
SNY				LR	LR			
	comp=Z,2µm,16.6s							
SNY				LR	LR			
	comp=Z,1µm,17.3s							
SNY				LR	LR			
	comp=Z,1µm,16.6s							
CNSH	**ChangSha**	**73.88**	**67**	P	**P**		**07 35 08.5**	**-0.7**
CNSH				S	**S**		**07 44 33.5**	**-2.1**
CNSH				pmax	pmax			
	comp=Z,170nm,0.8s							
CNSH				LR	LR			
	comp=Z,1µm,25.6s							
CNSH				LR	LR			
	comp=Z,1µm,19.3s							
CNSH				LR	LR			
	comp=Z,2µm,33.3s							
MMNY	**Mt. Morris Dam**	**73.89**	**311**	IAmb	IAmb		07 35 12.5	
	comp=Z,203nm,1.0s							
PSUB	**Penn St. - Bra**	**73.90**	**308**	IAmb	IAmb		07 35 12.2	
	comp=Z,204nm,1.2s							
CN2	**Changchun**	**73.91**	**47**	⇑P	**P**		**07 35 09.5**	**+0.4**
CN2				*ep*P	pP		07 35 27.5	0.0
CN2				*e*S	**S**		**07 44 34.8**	**-0.6**
CN2				pmax	pmax			
	comp=Z,200nm,0.7s							
CN2				pmax	pmax			
	comp=Z,3µm,5.0s							
CN2				LR	LR			
	comp=Z,700nm,13.0s							
CN2				LR	LR			
	comp=Z,300nm,13.0s							
CN2				LR	LR			
	comp=Z,600nm,15.0s							
BNX	**BinXian**	**73.96**	**45**	⇑P	**P**		**07 35 09.8**	**+0.5**
BNX				pP	**PcP**		**07 35 24.3**	**-0.1**
BNX				PP	**PP**		**07 37 54.5**	**-0.1**
BNX				S	**SKiKP**		**07 44 32.5**	**+1.4**
BNX				sS	**sS**		**07 45 06.5**	**-1.0**
BNX				pmax	pmax			
	comp=Z,620nm,1.3s							
BNX				pmax	pmax			
	comp=Z,4µm,6.8s							
BNX				LR	LR			
	comp=Z,1µm,16.0s							
BNX				LR	LR			
	comp=Z,2µm,17.6s							
BNX				LR	LR			
	comp=Z,2µm,17.5s							
MEDO	**Medina**	**73.99**	**312**	IAmb	IAmb		07 35 13.0	
	comp=Z,195nm,1.0s							
L56A	**Greenwood**	**74.01**	**311**	IAmb	IAmb		07 35 13.3	
	comp=Z,251nm,1.0s							
B22K	**Teshekpuk Lake**	**74.16**	**359**	IAmb	IAmb		07 35 13.8	
	comp=Z,261nm,1.0s							
B22K	**Teshekpuk Lake**	**74.16**	**359**	P	**P**		**07 35 11.9**	**+1.9**
	baz=2.8,SNR=16							
M57A	**Sunshine Farm,**	**74.19**	**310**	IAmb	IAmb		07 35 14.5	
	comp=Z,226nm,1.1s							
N58A	**Sunbury**	**74.20**	**309**	IAmb	IAmb		07 35 14.3	
	comp=Z,230nm,1.2s							
DL2	**Dalian**	**74.23**	**53**	P	**P**		**07 35 10.3**	**-0.7**
DL2				S	**SKiKP**		**07 44 35.0**	**+3.3**
DL2				pmax	pmax			
	comp=Z,230nm,0.7s							
DL2				pmax	pmax			
	comp=Z,2µm,7.4s							
DL2				LR	LR			
	comp=Z,2µm,24.1s							
DL2				LR	LR			
	comp=Z,2µm,24.1s							
DL2				LR	LR			
	comp=Z,3µm,27.0s							
C26K	**Camden Bay**	**74.26**	**356**	P	**P**		**07 35 12.6**	**+2.0**
	baz=10.0,SNR=83							
C26K				S	**S**		**07 44 39.3**	**+0.8**
	baz=10.0							
A19K	**Wainwright**	**74.28**	**2**	P	**P**		**07 35 13.0**	**+2.3**
	baz=356							
D28M	**Stokes Point**	**74.37**	**353**	P	**P**		**07 35 13.4**	**+2.2**
	baz=15,SNR=26							
D28M				S	**S**		**07 44 40.7**	**+1.0**
	baz=15							
MVL	**Millersville**	**74.44**	**308**	IAmb	IAmb		07 35 15.8	
	comp=Z,190nm,1.3s							
C27K	**Jago River**	**74.47**	**355**	IAmb	IAmb		07 35 15.6	
	comp=Z,226nm,1.0s							
C27K	**Jago River**	**74.47**	**355**	P	**P**		**07 35 13.8**	**+1.9**
	baz=11,SNR=134							
C27K				S	**S**		**07 44 42.1**	**+1.2**
	baz=11							
B20K	**Meade River**	**74.52**	**0**	IAmb	IAmb		07 35 15.9	
	comp=Z,334nm,1.1s							
B20K	**Meade River**	**74.52**	**0**	P	**P**		**07 35 13.9**	**+1.7**
	baz=360,SNR=15							
C23K	**Itkillik River**	**74.60**	**358**	P	**P**		**07 35 15.1**	**+2.5**
	baz=5.2							
C23K				S	**S**		**07 44 44.1**	**+1.8**
	baz=5.2							
D27M	**Malcolm River**	**74.64**	**354**	IAmb	IAmb		07 35 16.6	
	comp=Z,199nm,1.0s							
D27M	**Malcolm River**	**74.64**	**354**	P	**P**		**07 35 14.9**	**+1.9**
	baz=13,SNR=64							
D27M				S	**S**		**07 44 42.6**	**-0.4**
	baz=13							
C24K	**Franklin Bluff**	**74.65**	**357**	P	**P**		**07 35 14.7**	**+1.9**
	baz=6.8,SNR=30							
INK	**Inuvik**	**74.78**	**351**	LR	LR		08 10 46.6	
	comp=Z,757nm,21.3s,baz=27,slow=38							
INK	**Inuvik**	**74.78**	**351**	P	**P**		**07 35 14.7**	**+1.0**
	baz=19,SNR=105							
INK				S	**S**		**07 44 42.6**	**-1.7**
	baz=19							
SNSI	**Sinabang, Aceh**	**74.87**	**98**	P	**P**		**07 35 13.8**	**-1.3**
	comp=Z,3µmcomp=Z,3µmcomp=Z,187nm,0.8s							
B21K	**Ikpikpuk River**	**74.90**	**359**	IAmb	IAmb		07 35 18.2	
	comp=Z,287nm,1.0s							
B21K	**Ikpikpuk River**	**74.90**	**359**	P	**P**		**07 35 16.5**	**+2.2**
	baz=1.8							
D25K	**Kavik River**	**74.93**	**356**	IAmb	IAmb		07 35 18.0	
	comp=Z,364nm,1.4s							
D25K	**Kavik River**	**74.93**	**356**	P	**P**		**07 35 16.4**	**+1.8**
	baz=8.7,SNR=92							
D25K				S	**S**		**07 44 47.3**	**+1.2**
	baz=8.7							
SSPA	**Standing Stone**	**75.06**	**309**	P	**P**		**07 35 17.2**	**+1.4**
SSPA				IAmb	IAmb		07 35 19.4	
	comp=Z,187nm,1.1s							
B18K	**Kokolik River**	**75.10**	**2**	P	**P**		**07 35 17.3**	**+1.7**
	baz=356,SNR=31							
E28M	**Babbage River**	**75.14**	**354**	P	**P**		**07 35 17.4**	**+1.6**
	baz=14							
E28M				S	**S**		**07 44 49.1**	**+0.6**
	baz=14							
E29M	**Blow River**	**75.20**	**353**	P	**P**		**07 35 17.4**	**+1.3**
	baz=16,SNR=622							
E29M				S	**S**		**07 44 49.1**	**+0.1**
	baz=16							
D24K	**Happy Valley**	**75.22**	**357**	IAmb	IAmb		07 35 20.0	
	comp=Z,326nm,1.2s							
D24K	**Happy Valley**	**75.22**	**357**	P	**P**		**07 35 18.1**	**+1.9**
	baz=6.6,SNR=39							
D24K				S	**S**		**07 44 50.5**	**+1.3**
	baz=6.6							
S61A	**Accomac**	**75.28**	**306**	IAmb	IAmb		07 35 21.1	
	comp=Z,264nm,1.1s							
C21K	**Knifeblade Rid**	**75.37**	**359**	P	**P**		**07 35 19.1**	**+2.1**
	baz=1.6,SNR=27							
KCSI	**Kotacane, Aceh**	**75.38**	**96**	P	**P**		**07 35 16.3**	**-1.8**
	comp=Z,59nm,0.8s							
C19K	**Lookout Ridge**	**75.41**	**1**	IAmb	IAmb		07 35 21.3	
	comp=Z,514nm,1.6s							
C19K	**Lookout Ridge**	**75.41**	**1**	P	**P**		**07 35 19.6**	**+2.2**
	baz=358,SNR=12							
C19K				S	**S**		**07 44 52.6**	**+1.2**
	baz=358							
D23K	**Nanushuk River**	**75.47**	**358**	IAmb	IAmb		07 35 21.6	
	comp=Z,257nm,0.9s							
D23K	**Nanushuk River**	**75.47**	**358**	P	**P**		**07 35 19.3**	**+1.6**
	baz=5.1,SNR=52							
D23K				S	**S**		**07 44 53.3**	**+1.2**
	baz=5.1							
ERPA	**Erie**	**75.51**	**312**	IAmb	IAmb		07 35 21.8	
	comp=Z,296nm,0.9s							
E46A	**Sault Ste Mari**	**75.53**	**317**	IAmb	IAmb		07 35 21.9	
	comp=Z,202nm,1.0s							
MA2	**Magadan**	**75.58**	**25**	LR	LR		08 12 15.9	
	comp=Z,2µm,18.4s,baz=315,slow=39							
MA2	**Magadan**	**75.58**	**25**	P	**P**		**07 35 19.4**	**+0.9**
MA2	**Magadan**	**75.58**	**25**	P	**P**		**07 35 19.3**	**+0.9**
MA2	**Magadan**	**75.58**	**25**	*ce*P	**P**		**07 35 19.4**	**+0.9**
MA2				pmax	pmax			
	comp=Z,1µm,1.7s							
MA2	**Magadan**	**75.58**	**25**	P	**P**		**07 35 19.4**	**+0.9**
MDP	**Montagnes des**	**75.60**	**266**	LR	LR		08 06 52.7	
	comp=Z,1µm,20.7s,baz=54,slow=34							
D22K	**Ayikyak River**	**75.61**	**358**	IAmb	IAmb		07 35 22.3	
	comp=Z,342nm,1.2s							
D22K	**Ayikyak River**	**75.61**	**358**	P	**P**		**07 35 20.5**	**+2.0**
	baz=3.4							
D22K				S	**S**		**07 44 54.6**	**+0.9**
	baz=3.4							
F31M	**Tsiigehtchic**	**75.63**	**351**	P	**P**		**07 35 19.8**	**+1.3**
	baz=19,SNR=303							
F31M				S	**S**		**07 44 53.2**	**-0.6**
	baz=19							
PAOC	**Oil Creek Stat**	**75.67**	**311**	IAmb	IAmb		07 35 22.9	
	comp=Z,344nm,1.3s							
F30M	**Barrier River**	**75.72**	**352**	P	**P**		**07 35 20.3**	**+1.2**
	baz=17,SNR=54							
F30M				S	**S**		**07 44 55.4**	**+0.7**
	baz=17							
GRNR	**Gornyy**	**75.72**	**37**	⇑*i*P	**P**		**07 35 19.7**	**+0.3**
GRNR				pmax	pmax			
	comp=E,30nm,1.1s							
GRNR				pmax	pmax			
	comp=N,30nm,1.0s							
GRNR				pmax	pmax			
	comp=Z,190nm,0.8s							
GRNR				MLR	MLR			
	comp=N,1µm,15.0s							
GRNR				MLR	MLR			
	comp=E,1µm,15.0s							
GRNR				MLR	MLR			
	comp=Z,2µm,15.0s							
E27K	**Coleen River**	**75.73**	**354**	IAmb	IAmb		07 35 22.6	
	comp=Z,256nm,1.1s							
E27K	**Coleen River**	**75.73**	**354**	P	**P**		**07 35 20.9**	**+1.7**
	baz=13,SNR=139							
E27K				S	**S**		**07 44 56.0**	**+1.0**
	baz=13							
TOLK	**Toolik Lake Re**	**75.76**	**357**	IAmb	IAmb		07 35 23.2	
	comp=Z,253nm,1.1s							
TOLK	**Toolik Lake Re**	**75.76**	**357**	P	**P**		**07 35 21.4**	**+2.0**
	baz=6.0,SNR=50							
TOLK				S	**S**		**07 44 56.4**	**+1.1**
	baz=6.0							
P57A	**Homestead Farm**	**75.79**	**308**	IAmb	IAmb		07 35 23.5	
	comp=Z,175nm,1.2s							
D20K	**Etivluk River**	**75.82**	**360**	IAmb	IAmb		07 35 23.3	
	comp=Z,262nm,0.9s							
D20K	**Etivluk River**	**75.82**	**360**	P	**P**		**07 35 21.5**	**+1.8**
	baz=0.1							
C18K	**Utukok River**	**75.84**	**2**	P	**P**		**07 35 21.5**	**+1.7**
	baz=356							
MDJ	**Mudanjiang**	**75.87**	**45**	IAmb	IAmb		07 35 24.0	
	comp=Z,399nm,1.5s							
MDJ	**Mudanjiang**	**75.87**	**45**	P	**P**		**07 35 18.8**	**-1.6**
MDJ				sP	sP		07 35 45.0	-1.5
MDJ				PP	**PP**		**07 38 10.0**	**-0.8**
MDJ				S	**S**		**07 44 52.5**	**-4.7**
MDJ				ScS	**SKSac**		**07 45 24.0**	**-0.6**
MDJ				pmax	pmax			
	comp=Z,2µm,11.7s							
MDJ				LR	LR			
	comp=Z,1µm,15.1s							
MDJ				LR	LR			
	comp=Z,2µm,17.2s							
MDJ				LR	LR			
	comp=Z,3µm,21.3s							
MDJ	**Mudanjiang**	**75.87**	**45**	P	**P**		**07 35 20.3**	**-0.1**
C17K	**DeLong Mountai**	**75.95**	**2**	P	**P**		**07 35 22.2**	**+1.8**
	baz=355,SNR=44							
TSI	**Tuntungan**	**76.04**	**96**	P	**P**		**07 35 20.9**	**-0.9**
	comp=Z,140nm,0.8s							
D19K	**Kuna River**	**76.04**	**1**	P	**P**		**07 35 22.7**	**+1.8**
	baz=359							
D19K				S	**S**		**07 44 59.3**	**+1.0**
	baz=359							
C16K	**Lisburne Hills**	**76.06**	**3**	IAmb	IAmb		07 35 23.9	
	comp=Z,205nm,0.8s							

C16K	**Lisburne Hills**	**76.06**	**3**	P	**P**	**07 35 21.9**	**+0.9**
	baz=353,SNR=9.4						
C16K				S	**S**	**07 44 59.7**	**+1.2**
	baz=353						
E21K	**Killik River**	**76.08**	**359**	IAmb	IAmb	07 35 24.3	
	comp=Z,158nm,0.8s						
E21K	**Killik River**	**76.08**	**359**	P	**P**	**07 35 22.6**	**+1.4**
	baz=2.3						
E21K				S	**S**	**07 44 59.3**	**+0.5**
	baz=2.3						
E25K	**Arctic Village**	**76.08**	**356**	P	**P**	**07 35 23.2**	**+2.0**
	baz=9.3,SNR=114						
E25K				S	**S**	**07 45 00.9**	**+2.0**
	baz=9.3						
CBN	**Corbin Frederi**	**76.10**	**307**	IAmb	IAmb	07 35 25.0	
	comp=Z,202nm,1.1s						
NJ2	**Nanjing**	**76.10**	**61** ⇑	*i*P	**P**	**07 35 20.0**	**-1.9**
NJ2				pP	**pP**	**07 35 39.5**	**-1.0**
NJ2				sP	**sP**	**07 35 47.8**	**-0.3**
NJ2				S	**S**	**07 44 57.3**	**-2.9**
NJ2				SS	**SS**	**07 49 56.5**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,140nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,2μm,5.2s						
NJ2				LR	LR		
	comp=Z,860nm,18.7s						
NJ2				LR	LR		
	comp=Z,820nm,18.7s						
NJ2				LR	LR		
	comp=Z,1μm,22.5s						
I49A	**Point Hope**	**76.14**	**314**	IAmb	IAmb	07 35 25.2	
	comp=Z,244nm,1.1s						
F28M	**Old Crow**	**76.14**	**353**	IAmb	IAmb	07 35 24.6	
	comp=Z,189nm,0.9s						
F28M	**Old Crow**	**76.14**	**353**	P	**P**	**07 35 22.9**	**+1.3**
	baz=14,SNR=171						
F28M				S	**S**	**07 44 59.7**	**+0.2**
	baz=14						
G31M	**Satah River**	**76.19**	**351**	P	**P**	**07 35 22.6**	**+0.9**
	baz=19,SNR=263						
G31M				S	**S**	**07 44 58.9**	**-1.0**
	baz=19						
PAMR	**Moraine State**	**76.26**	**311**	IAmb	IAmb	07 35 26.1	
	comp=Z,331nm,1.4s						
E24K	**Your Creek**	**76.28**	**357**	IAmb	IAmb	07 35 25.8	
	comp=Z,251nm,1.4s						
E24K	**Your Creek**	**76.28**	**357**	P	**P**	**07 35 24.1**	**+1.7**
	baz=6.9						
E24K				S	**S**	**07 45 02.0**	**+0.9**
	baz=6.9						
E20K	**Nigu River**	**76.28**	**360**	P	**P**	**07 35 23.9**	**+1.6**
	baz=0.5						
E20K				S	**S**	**07 45 02.5**	**+1.4**
	baz=0.5						
YKAW3	**Yellowknife Wh**	**76.33**	**341**	IAmb	IAmb	07 35 25.5	
	comp=Z,228nm,1.1s						
E22K	**Anaktuvuk Pass**	**76.34**	**358**	IAmb	IAmb	07 35 26.1	
	comp=Z,160nm,0.8s						
E22K	**Anaktuvuk Pass**	**76.34**	**358**	P	**P**	**07 35 24.5**	**+1.8**
	baz=4.1,SNR=75						
E22K				S	**S**	**07 45 02.3**	**+0.6**
	baz=4.1						
E23K	**Chandalar**	**76.34**	**357**	P	**P**	**07 35 24.7**	**+2.0**
	baz=6.0,SNR=86						
E23K				S	**S**	**07 45 01.1**	**-0.8**
	baz=6.0						
YKAW1	**Yellowknife Wh**	**76.36**	**341**	IAmb	IAmb	07 35 25.7	
	comp=Z,310nm,1.4s						
TMAB	**Tom-Au,PA,Br**	**76.36**	**257**	*e*P	**P**	**07 35 24.8**	**+1.2**
G30M	**tAoh Zraii Nji**	**76.37**	**352**	IAmb	IAmb	07 35 25.6	
	comp=Z,352nm,1.2s						
G30M	**tAoh Zraii Nji**	**76.37**	**352**	P	**P**	**07 35 23.9**	**+1.0**
	baz=17,SNR=191						
G30M				S	**S**	**07 45 01.5**	**-0.6**
	baz=17						
YKA	**Yellowknife Ar**	**76.38**	**341**	P	**P**	**07 35 23.4**	**+0.6**
	comp=Z,56nm,0.7s,baz=24,slow=5.3,SNR=267						
YKA				S	**S**	**07 45 01.1**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=42,slow=9.4,SNR=1.9						
YKA				LR	LR	08 11 06.4	
	comp=Z,1μm,20.8s,baz=34,slow=37						
	comp=Z,56nm,0.7s						
YKA	**Yellowknife Ar**	**76.38**	**341**	*i* P	**P**	**07 35 23.5**	**+0.6**
YKA				pmax	pmax		
	comp=Z,57nm,0.7s						
RDOG	**Red Dog Mine**	**76.38**	**2**	IAmb	IAmb	07 35 25.9	
	comp=Z,249nm,1.0s						
RDOG	**Red Dog Mine**	**76.38**	**2**	P	**P**	**07 35 24.1**	**+1.2**
	baz=355,SNR=26						
F26K	**Sheenjek River**	**76.41**	**355**	IAmb	IAmb	07 35 27.0	
	comp=Z,262nm,1.2s						
F26K	**Sheenjek River**	**76.41**	**355**	P	**P**	**07 35 25.1**	**+2.1**
	baz=10						
F26K				S	**S**	**07 45 02.5**	**0.0**
	baz=10						
QIZ	**Qiongzhong**	**76.43**	**76**	IAmb	IAmb	07 35 26.7	
	comp=Z,182nm,0.9s						
QIZ	**Qiongzhong**	**76.43**	**76**	P	**P**	**07 35 24.8**	**+0.8**
QIZ				pP	**pP**	**07 35 44.0**	**+1.5**
QIZ				sP	**sP**	**07 35 51.5**	**+1.4**
QIZ				S	**S**	**07 45 04.5**	**+0.4**
QIZ				sS	**sS**	**07 45 37.0**	**+1.3**
QIZ				SS	**SS**	**07 50 03.0**	**+3.3**
QIZ				pmax	pmax		
	comp=Z,230nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,1μm,6.4s						
QIZ				LR	LR		
	comp=Z,890nm,21.1s						
QIZ				LR	LR		
	comp=Z,880nm,19.1s						
QIZ				LR	LR		
	comp=Z,2μm,37.7s						
QIZ	**Qiongzhong**	**76.43**	**76**	P	**P**	**07 35 24.6**	**+0.6**
GSI	**Gunungsitoli**	**76.53**	**98**	P	**P**	**07 35 24.8**	**+0.3**
GSI	**Gunungsitoli**	**76.53**	**98**	P	**P**	**07 35 24.3**	**-0.2**
	comp=Z,140nm,0.8s						
F25K	**Christian Rive**	**76.61**	**356**	P	**P**	**07 35 26.4**	**+2.2**
	baz=9.2						
F25K				S	**S**	**07 45 04.9**	**+0.2**
	baz=9.2						
GLMI	**Grayling**	**76.63**	**316**	IAmb	IAmb	07 35 28.3	
	comp=Z,275nm,1.1s						
G29M	**Pine Creek**	**76.64**	**353**	P	**P**	**07 35 25.3**	**+0.9**
	baz=16,SNR=327						
G29M				S	**S**	**07 45 04.3**	**-0.7**
	baz=16						
M52A	**Chesterland**	**76.68**	**312**	IAmb	IAmb	07 35 28.3	
	comp=Z,204nm,1.0s						
KULM	**Kulim**	**76.69**	**93**	P	**P**	**07 35 25.6**	**+0.1**
BMAR	**Burnt Mountain**	**76.70**	**355**	P	**P**	**07 35 25.1**	**+0.4**
K50A	**Casco**	**76.71**	**313**	IAmb	IAmb	07 35 28.4	
	comp=Z,229nm,1.0s						
GDHS	**Morne Mazeau,**	**76.72**	**281**	IAmb	IAmb	07 35 28.6	
	comp=Z,209nm,1.1s						
D17K	**Noatak River**	**76.73**	**2**	P	**P**	**07 35 26.3**	**+1.5**
	baz=355,SNR=48						
PSI	**Prapat**	**76.73**	**96**	S	**S**	**07 45 03.8**	**-4.0**
	comp=Z,8.7nm,0.9s,baz=284,slow=22,SNR=12						
PSI				LR	LR	08 14 34.1	
	comp=Z,300nm,18.6s,baz=292,slow=40						
PSI	**Prapat**	**76.73**	**96**	P	**P**	**07 35 25.8**	**-0.1**
Q56A	**Snyder Ridge,**	**76.79**	**309**	IAmb	IAmb	07 35 29.0	
	comp=Z,204nm,1.0s						
N53A	**Lisbon**	**76.79**	**311**	IAmb	IAmb	07 35 29.0	
	comp=Z,241nm,1.3s						
RPSI	**Rantau Prapat**	**76.80**	**96**	IAmb	IAmb	07 35 27.8	
	comp=Z,511nm,1.9s						
F24K	**Squaw Lake**	**76.81**	**357**	P	**P**	**07 35 27.4**	**+2.1**
	baz=7.4,SNR=219						
F24K				S	**S**	**07 45 08.6**	**+1.8**
	baz=7.4						
TBO	**Thunder Bay**	**76.84**	**321**	IAmb	IAmb	07 35 29.1	
	comp=Z,258nm,1.2s						
MCWV	**Mont Chateau**	**76.85**	**309**	IAmb	IAmb	07 35 29.5	
	comp=Z,222nm,1.1s						
GZH	**Guangzhou**	**76.94**	**71**	P	**P**	**07 35 26.5**	**-0.3**
GZH				sP	**sP**	**07 35 52.8**	**-0.1**
GZH				S	**S**	**07 45 07.0**	**-2.6**
GZH				pmax	pmax		
	comp=Z,180nm,0.8s						
GZH				pmax	pmax		
	comp=Z,2μm,5.1s						
GZH				LR	LR		
	comp=Z,2μm,19.6s						
GZH				LR	LR		
	comp=Z,2μm,24.9s						
GZH				LR	LR		
	comp=Z,1μm,19.8s						
V61A	**Roper**	**76.95**	**305**	IAmb	IAmb	07 36 04.4	
	comp=Z,298nm,1.7s						
F22K	**John River**	**76.98**	**358**	P	**P**	**07 35 28.4**	**+2.1**
	baz=3.8,SNR=56						
F22K				S	**S**	**07 45 09.8**	**+1.2**
	baz=3.8						
EPYK	**Eagle Plains**	**77.02**	**352**	P	**P**	**07 35 27.1**	**+0.6**
	baz=17,SNR=210						
EPYK				S	**S**	**07 45 08.5**	**-0.7**
	baz=17						
E18K	**Tukpahlearik C**	**77.08**	**2**	P	**P**	**07 35 28.3**	**+1.5**
	baz=357						
E18K				S	**S**	**07 45 10.9**	**+1.2**
	baz=357						
E19K	**Redstone River**	**77.09**	**0**	P	**P**	**07 35 28.6**	**+1.8**
	baz=360						
E19K				S	**S**	**07 45 08.6**	**-1.2**
	baz=360						
G27K	**Doyon Strip**	**77.09**	**354**	IAmb	IAmb	07 35 30.6	
	comp=Z,267nm,1.3s						
G27K	**Doyon Strip**	**77.09**	**354**	P	**P**	**07 35 28.8**	**+1.9**
	baz=12,SNR=169						
G27K				S	**S**	**07 45 10.7**	**+0.8**
	baz=12						
G26K	**Porcupine Rive**	**77.12**	**355**	IAmb	IAmb	07 35 31.2	
	comp=Z,308nm,0.9s						
G26K	**Porcupine Rive**	**77.12**	**355**	P	**P**	**07 35 29.0**	**+2.0**
	baz=11						
G26K				S	**S**	**07 45 12.6**	**+2.6**
	baz=11						
COLD	**Coldfoot**	**77.20**	**357**	IAmb	IAmb	07 35 31.0	
	comp=Z,174nm,0.9s						
COLD	**Coldfoot**	**77.20**	**357**	P	**P**	**07 35 29.1**	**+1.6**
	baz=5.4,SNR=97						
COLD				S	**S**	**07 45 12.3**	**+1.4**
	baz=5.4						
H31M	**Peel River**	**77.27**	**351**	IAmb	IAmb	07 35 30.9	
	comp=Z,194nm,0.9s						
H31M	**Peel River**	**77.27**	**351**	P	**P**	**07 35 29.1**	**+1.2**
	baz=18,SNR=104						
H31M				S	**S**	**07 45 11.7**	**-0.1**
	baz=18						
F21K	**Alatna River**	**77.29**	**359**	IAmb	IAmb	07 35 31.8	
	comp=Z,300nm,1.1s						
F21K	**Alatna River**	**77.29**	**359**	P	**P**	**07 35 29.6**	**+1.5**
	baz=2.7,SNR=129						
F21K				S	**S**	**07 45 13.6**	**+1.6**
	baz=2.7						
H29M	**Whitestone**	**77.35**	**352**	P	**P**	**07 35 29.2**	**+0.9**
	baz=15,SNR=249						
H29M				S	**S**	**07 45 12.6**	**0.0**
	baz=15						
O53A	**New Philadelph**	**77.35**	**311**	IAmb	IAmb	07 35 32.2	
	comp=Z,158nm,1.1s						
E17K	**Hotham Inlet**	**77.39**	**2**	P	**P**	**07 35 29.5**	**+1.0**
	baz=356,SNR=26						
E17K				S	**S**	**07 45 12.9**	**-0.1**
	baz=356						
G25K	**Bearman Lake**	**77.46**	**356**	P	**P**	**07 35 31.3**	**+2.5**
	baz=8.8,SNR=56						
G25K				S	**S**	**07 45 15.8**	**+2.1**
	baz=8.8						
IPM	**Ipoh**	**77.46**	**94**	P	**P**	**07 35 29.6**	**-0.2**
USRK	**Ussuriysk Ar.**	**77.49**	**44**	P	**P**	**07 35 29.3**	**-0.2**
	comp=Z,651nm,0.7s,baz=292,slow=5.2,SNR=545						
	comp=Z,651nm,0.7s						
F20K	**Avaraart Lake**	**77.49**	**360**	IAmb	IAmb	07 35 32.6	
	comp=Z,251nm,1.1s						
F20K	**Avaraart Lake**	**77.49**	**360**	P	**P**	**07 35 30.8**	**+1.7**
	baz=0.8,SNR=75						
F20K				S	**S**	**07 45 14.0**	**-0.1**
	baz=0.8						
G24K	**Hadweenzic Riv**	**77.60**	**356**	P	**P**	**07 35 31.8**	**+2.1**
	baz=7.7						
G24K				S	**S**	**07 45 16.1**	**+0.7**
	baz=7.7						
H27K	**Steamboat Moun**	**77.64**	**354**	P	**P**	**07 35 32.1**	**+2.1**
	baz=13						
H27K				S	**S**	**07 45 17.1**	**+1.2**
	baz=13						
N51A	**Ashland**	**77.67**	**312**	IAmb	IAmb	07 35 33.5	
	comp=Z,207nm,1.2s						
G23K	**Bananza Creek**	**77.71**	**357**	IAmb	IAmb	07 35 34.1	
	comp=Z,230nm,1.1s						
G23K	**Bananza Creek**	**77.71**	**357**	P	**P**	**07 35 32.3**	**+1.9**
	baz=5.6						
G23K				S	**S**	**07 45 16.7**	**+0.1**
	baz=5.6						
F19K	**Shaleruckik Mo**	**77.71**	**0**	IAmb	IAmb	07 35 33.7	
	comp=Z,241nm,0.9s						
F19K	**Shaleruckik Mo**	**77.71**	**0**	P	**P**	**07 35 31.4**	**+1.1**
	baz=359						
F19K				S	**S**	**07 45 16.7**	**+0.3**
	baz=359						
J47A	**Sunmer**	**77.72**	**315**	IAmb	IAmb	07 35 34.0	
	comp=Z,250nm,1.3s						
O52A	**Adamsville**	**77.81**	**311**	IAmb	IAmb	07 35 34.5	
	comp=Z,181nm,1.0s						
WRGLY	**Wrigley**	**77.82**	**345**	P	**P**	**07 35 33.0**	**+2.1**
	baz=27,SNR=96						
WRGLY				S	**S**	**07 45 18.6**	**+0.9**
	baz=27						
R55A	**Marlinton**	**77.82**	**308**	IAmb	IAmb	07 35 35.0	
	comp=Z,213nm,1.1s						
P53A	**Whipple**	**77.91**	**310**	IAmb	IAmb	07 35 35.4	
	comp=Z,259nm,1.2s						
F18K	**Selawik**	**77.92**	**1**	P	**P**	**07 35 32.8**	**+1.3**
	baz=358,SNR=45						
G21K	**Allakaket**	**78.00**	**359**	IAmb	IAmb	07 35 36.1	
	comp=Z,302nm,0.9s						
G21K	**Allakaket**	**78.00**	**359**	P	**P**	**07 35 33.9**	**+1.9**
	baz=2.7						
G21K				S	**S**	**07 45 18.6**	**-1.1**
	baz=2.7						
HKPS	**Hong Kong Po S**	**78.00**	**71**	IAmb	IAmb	07 35 35.4	
	comp=Z,207nm,1.1s						
HKPS	**Hong Kong Po S**	**78.00**	**71**	P	**P**	**07 35 33.8**	**+1.1**
MSHR	**Mys Shultsa**	**78.00**	**46**	*ce*P	**P**	**07 35 32.6**	**+0.2**
MSHR				pmax	pmax		
	comp=Z,100nm,1.3s						
I45A	**Fountain**	**78.03**	**316**	IAmb	IAmb	07 35 36.1	
	comp=Z,306nm,1.0s						
F17K	**Baldwin Pennin**	**78.05**	**2**	IAmb	IAmb	07 35 35.2	
	comp=Z,220nm,0.8s						
F17K	**Baldwin Pennin**	**78.05**	**2**	P	**P**	**07 35 33.4**	**+1.2**
	baz=356						
F17K				S	**S**	**07 45 19.9**	**-0.2**
	baz=356						
I30M	**Mount Dempster**	**78.08**	**351**	P	**P**	**07 35 33.7**	**+1.1**
	baz=17,SNR=128						
I30M				S	**S**	**07 45 20.9**	**0.0**
	baz=17						
VLA	**Vladivostok**	**78.09**	**45**	*e*P	**P**	**07 35 33.0**	**+0.1**
VLA				pmax	pmax		
	comp=Z,597nm,0.9s						
CMC01	**Camacan, BA**	**78.14**	**241**	*e*P	**P**	**07 35 34.9**	**+1.5**
I28M	**Miner Creek**	**78.26**	**353**	P	**P**	**07 35 34.6**	**+1.1**
	baz=14,SNR=148						
I28M				S	**S**	**07 45 22.1**	**-0.6**
	baz=14						
I27K	**Kandik River**	**78.27**	**354**	IAmb	IAmb	07 35 37.0	
	comp=Z,242nm,0.8s						
I27K	**Kandik River**	**78.27**	**354**	P	**P**	**07 35 35.1**	**+1.6**
	baz=12						
I27K				S	**S**	**07 45 22.6**	**0.0**
	baz=12						
INCN	**Inchon**	**78.28**	**52**	P	**P**	**07 35 34.2**	**+0.1**
INCN	**Inchon**	**78.28**	**52**	P	**P**	**07 35 34.8**	**+0.7**
INCN	**Inchon**	**78.28**	**52**	P	**P**	**07 35 34.6**	**+0.6**
INCN	**Inchon**	**78.28**	**52**	P	**P**	**07 35 34.8**	**+0.7**
INCN				pmax	pmax		
	comp=Z,491nm,1.2s						
P52A	**Corning**	**78.29**	**311**	IAmb	IAmb	07 35 36.9	
	comp=Z,180nm,1.1s						
SSE	**Sheshan**	**78.29**	**60**	P	**P**	**07 35 33.8**	**-0.3**
SSE				S	**S**	**07 45 20.8**	**-3.1**
SSE				pmax	pmax		
	comp=Z,65nm,1.4s						
SSE				pmax	pmax		
	comp=Z,870nm,5.4s						
SSE				LR	LR		
	comp=Z,450nm,21.6s						
SSE				LR	LR		
	comp=Z,470nm,18.2s						
EPLO	**Experimental L**	**78.31**	**324**	IAmb	IAmb	07 35 36.7	
	comp=Z,151nm,1.0s						
EYMN	**Ely**	**78.35**	**321**	IAmb	IAmb	07 35 37.2	
	comp=Z,292nm,1.5s						
FFC	**Flin Flon**	**78.35**	**331**	P	**P**	**07 35 35.2**	**+1.1**
FFC				IAmb	IAmb	07 35 37.3	
	comp=Z,261nm,1.2s						
FFC	**Flin Flon**	**78.35**	**331**	P	**P**	**07 35 35.2**	**+1.1**
G19K	**Purcell Mounta**	**78.41**	**0**	IAmb	IAmb	07 35 37.8	
	comp=Z,288nm,0.9s						
G19K	**Purcell Mounta**	**78.41**	**0**	P	**P**	**07 35 36.0**	**+1.8**
	baz=360						
G19K				S	**S**	**07 45 24.4**	**+0.4**
	baz=360						
MNSI	**Mandailing Nat**	**78.44**	**97**	P	**P**	**07 35 34.8**	**-0.4**
	comp=Z,11μmcomp=Z,84nm,0.7s						
ACSO	**Alum Creek Sta**	**78.45**	**311**	IAmb	IAmb	07 35 37.8	
	comp=Z,168nm,1.1s						
H24K	**Noodor Dome**	**78.48**	**356**	P	**P**	**07 35 36.4**	**+1.8**
	baz=7.3,SNR=55						
H24K				S	**S**	**07 45 23.8**	**-1.1**
	baz=7.3						
IMAR	**Indian Mountai**	**78.54**	**359**	P	**P**	**07 35 36.4**	**+1.5**
H22K	**Ishtalitna Cre**	**78.57**	**358**	IAmb	IAmb	07 35 39.4	
	comp=Z,271nm,0.9s						
H22K	**Ishtalitna Cre**	**78.57**	**358**	P	**P**	**07 35 37.3**	**+2.2**
	baz=4.4,SNR=136						
H22K				S	**S**	**07 45 27.4**	**+1.6**
	baz=4.4						
H23K	**Yukon River**	**78.57**	**357**	IAmb	IAmb	07 35 39.3	
	comp=Z,310nm,1.0s						
H23K	**Yukon River**	**78.57**	**357**	P	**P**	**07 35 37.4**	**+2.3**
	baz=6.0						
H23K				S	**S**	**07 45 25.4**	**-0.5**
	baz=6.0						
TNA	**Tin City**	**78.62**	**5**	IAmb	IAmb	07 35 38.1	
	comp=Z,168nm,0.8s						
TNA	**Tin City**	**78.62**	**5**	P	**P**	**07 35 36.3**	**+1.0**
	baz=351						
H43A	**Windswept, Lux**	**78.62**	**317**	IAmb	IAmb	07 35 39.1	
	comp=Z,226nm,1.0s						
TYV	**Tymovskoe**	**78.62**	**34**	*e*P	**P**	**07 35 36.7**	**+1.1**
TYV				*e*S	**S**	**07 45 30.3**	**+3.6**
TYV				pmax	pmax		
	comp=Z,136nm,1.7s						
TYV				smax	smax		
	comp=N,1μm,7.8s						
TYV				smax	smax		
	comp=E,600nm,7.8s						
TYV				MLR	MLR		
	comp=Z,2μm,14.0s						
G18K	**Tagagawik**	**78.64**	**1**	IAmb	IAmb	07 35 38.7	
	comp=Z,242nm,0.8s						
G18K	**Tagagawik**	**78.64**	**1**	P	**P**	**07 35 37.0**	**+1.5**
	baz=358						
G18K				S	**S**	**07 45 26.8**	**+0.2**
	baz=358						
BLA	**Blacksburg**	**78.65**	**308**	IAmb	IAmb	07 35 39.0	
	comp=Z,343nm,2.0s						
F15K	**North Star Dit**	**78.66**	**3**	IAmb	IAmb	07 35 38.6	
	comp=Z,213nm,0.9s						
F15K	**North Star Dit**	**78.66**	**3**	P	**P**	**07 35 36.8**	**+1.3**
	baz=353,SNR=20						
F15K				S	**S**	**07 45 26.1**	**-0.6**
	baz=353						
PRP	**Porcupine Dome**	**78.66**	**355**	IAmb	IAmb	07 35 39.3	
	comp=Z,400nm,1.4s						
PRP	**Porcupine Dome**	**78.66**	**355**	P	**P**	**07 35 37.5**	**+1.7**
	baz=9.3,SNR=71						
PRP				S	**S**	**07 45 27.6**	**+0.6**
	baz=9.3						
I26K	**Coal Creek Min**	**78.69**	**354**	IAmb	IAmb	07 35 39.3	
	comp=Z,262nm,1.0s						
I26K	**Coal Creek Min**	**78.69**	**354**	P	**P**	**07 35 37.5**	**+1.8**
	baz=11,SNR=177						
I26K				S	**S**	**07 45 27.8**	**+0.8**
	baz=11						
J30M	**Hart River**	**78.70**	**351**	P	**P**	**07 35 37.4**	**+1.4**
	baz=17,SNR=313						
J30M				S	**S**	**07 45 28.6**	**+1.2**
	baz=17						
N49A	**Columbus Grove**	**78.75**	**313**	IAmb	IAmb	07 35 39.4	
	comp=Z,238nm,1.3s						
Q52A	**Bidwell**	**78.77**	**310**	IAmb	IAmb	07 35 39.6	
	comp=Z,149nm,1.0s						
F14K	**Arctic Creek**	**78.80**	**4**	P	**P**	**07 35 37.5**	**+1.2**
	baz=352,SNR=14						
H21K	**Melozitna Rive**	**78.85**	**358**	P	**P**	**07 35 39.1**	**+2.4**
	baz=3.2,SNR=170						
H21K				S	**S**	**07 45 30.0**	**+1.2**
	baz=3.2						
S54A	**Dingess, Beckl**	**78.87**	**309**	IAmb	IAmb	07 35 40.0	
	comp=Z,423nm,2.0s						
ULM	**Lac du Bonnet**	**78.93**	**325**	P	**P**	**07 35 37.9**	**+0.5**
	comp=Z,62nm,0.5s,baz=41,slow=5.1,SNR=59						
ULM				LR	LR	08 13 15.8	
	comp=Z,2μm,19.3s,baz=40,slow=38						
	comp=Z,62nm,0.5s						
ULM	**Lac du Bonnet**	**78.93**	**325**	IAmb	IAmb	07 35 39.9	
	comp=Z,220nm,1.0s						
ULM	**Lac du Bonnet**	**78.93**	**325**	*c i*P	**P**	**07 35 36.9**	**-0.4**
G17K	**Kiwalik Mounta**	**79.00**	**2**	P	**P**	**07 35 38.8**	**+1.3**
	baz=357						
G17K				S	**S**	**07 45 30.8**	**+0.4**
	baz=357						
H19K	**Roundabout Mou**	**79.03**	**360**	IAmb	IAmb	07 35 41.2	
	comp=Z,277nm,0.8s						
H19K	**Roundabout Mou**	**79.03**	**360**	P	**P**	**07 35 39.5**	**+2.0**
	baz=0.2,SNR=107						
J29N	**Klondike Camp**	**79.04**	**352**	IAmb	IAmb	07 35 41.5	
	comp=Z,156nm,0.8s						
J29N	**Klondike Camp**	**79.04**	**352**	P	**P**	**07 35 39.8**	**+2.0**
	baz=15,SNR=52						
J29N				S	**S**	**07 45 32.6**	**+1.6**
	baz=15						
H20K	**Anotleneega Mo**	**79.05**	**359**	P	**P**	**07 35 39.7**	**+2.0**
	baz=1.5,SNR=102						
H20K				S	**S**	**07 45 31.8**	**+0.9**
	baz=1.5						
G16K	**Koyuk River**	**79.06**	**2**	IAmb	IAmb	07 35 41.0	
	comp=Z,272nm,1.0s						
G16K	**Koyuk River**	**79.06**	**2**	P	**P**	**07 35 39.3**	**+1.5**
	baz=355						
G16K				S	**S**	**07 45 32.2**	**+1.2**
	baz=355						
KSAR	**Wonju Array Be**	**79.11**	**52**	P	**P**	**07 35 38.4**	**-0.1**
KSAR	**Wonju Array Be**	**79.11**	**52**	P	**P**	**07 35 38.4**	**-0.1**
KSRS	**Korea Array**	**79.12**	**52**	P	**P**	**07 35 38.9**	**+0.2**
	comp=Z,235nm,0.7s,baz=305,slow=4.8,SNR=366						
KSRS				LR	LR	08 16 01.4	
	comp=Z,878μm,18.0s,baz=310,slow=40						
	comp=Z,235nm,0.7s						
GUA01	**Guaratinga, BA**	**79.16**	**241**	*e*P	**P**	**07 35 39.9**	**+0.8**
GUA01				*ep*P	**pP**	**07 35 57.5**	**+0.1**
POKR	**Poker Plat Res**	**79.17**	**356**	IAmb	IAmb	07 35 42.0	
	comp=Z,244nm,1.0s						
POKR	**Poker Plat Res**	**79.17**	**356**	P	**P**	**07 35 40.1**	**+1.7**
	baz=7.7,SNR=58						
POKR				S	**S**	**07 45 33.8**	**+1.6**
	baz=7.7						
SJG	**San Juan**	**79.18**	**284**	LR	LR	08 07 11.7	
	comp=Z,480nm,22.0s,baz=66,slow=33						
SJG	**San Juan**	**79.18**	**284**	P	**P**	**07 35 40.9**	**+1.7**
SJG				IAmb	IAmb	07 36 04.6	
	comp=Z,341nm,1.8s						
SJG	**San Juan**	**79.18**	**284**	P	**P**	**07 35 40.9**	**+1.7**
SJG				pmax	pmax		
	comp=Z,341nm,1.8s						
SJG	**San Juan**	**79.18**	**284**	P	**P**	**07 35 41.2**	**+2.0**
I23K	**Minto, Yukon-K**	**79.24**	**357**	IAmb	IAmb	07 35 42.5	
	comp=Z,214nm,1.1s						
I23K	**Minto, Yukon-K**	**79.24**	**357**	P	**P**	**07 35 40.7**	**+2.0**
	baz=6.1,SNR=67						
I23K

baz=359
G15K Niukluk 79.40 3 P **P** **07 35 40.9 +1.3**
baz=354
G15K S **S** **07 45 36.3 +1.8**
baz=354
Q51A Peebles 79.40 311 IAmb IAmb 07 35 43.0
comp=Z,194nm,1.1s
TJN Taejon 79.41 53 P **P** **07 35 40.6 +0.4**
G40A Rib Lake 79.43 319 IAmb IAmb 07 35 43.3
comp=Z,216nm,1.1s
COLA College 79.44 356 P **P** **07 35 41.1 +1.3**
COLA College 79.44 356 P **P** **07 35 41.3 +1.5**
COLA College 79.44 356 P **P** **07 35 41.1 +1.3**
COLA pmax pmax
comp=Z,127nm,1.0s
COLA College 79.44 356 P **P** **07 35 41.2 +1.3**
baz=7.3
COLA S **S** **07 45 35.8 +0.8**
baz=7.3
ILAR Eielson Array 79.48 356 P **P** **07 35 40.5 +0.3**
comp=Z,58nm,0.7s,baz=348,slow=3.6,SNR=349
ILAR PKKPbc **PKKPbc** **07 54 26.9 -1.5**
comp=Z,4.4nm,0.8s,baz=223,slow=2.8,SNR=28
ILAR PKPPKP **P'P'df** **08 02 29.5 -6.0**
comp=Z,1.5nm,0.8s,baz=237,slow=3.5,SNR=11
ILAR LR LR 08 12 03.2
comp=Z,906nm,22.0s,baz=3.0,slow=36
comp=Z,58nm,0.7s
ILAR Eielson Array 79.48 356 P **P** **07 35 40.8 +0.7**
ILAR Eielson Array 79.48 356 P **P** **07 35 40.8 +0.7**
TEY Ternei 79.51 41⇑ *e*P **P** **07 35 40.8 +0.2**
TEY *e* 07 38 40.2
TEY pmax pmax
comp=N,50nm,0.7s
TEY pmax pmax
comp=E,10.0nm,0.7s
TEY pmax pmax
comp=Z,180nm,0.7s
TEY pmax pmax
comp=N,100nm,3.9s
TEY pmax pmax
comp=Z,200nm,6.6s
J26L Joseph Creek 79.52 354 IAmb IAmb 07 35 43.4
comp=Z,220nm,0.9s
J26L Joseph Creek 79.52 354 P **P** **07 35 41.5 +1.1**
baz=11
J26L S **S** **07 45 35.4 -0.7**
baz=11
J25K Salcha River, 79.54 355 P **P** **07 35 41.8 +1.3**
baz=9.4
J25K S **S** **07 45 35.6 -0.7**
baz=9.4
DAWY Dawson 79.55 352 IAmb IAmb 07 35 43.9
comp=Z,251nm,0.8s
DAWY Dawson 79.55 352 P **P** **07 35 41.9 +1.4**
baz=14,SNR=223
DAWY S **S** **07 45 36.9 +0.6**
baz=14
K29M Barlow Dome 79.55 351 IAmb IAmb 07 35 45.3
comp=Z,138nm,0.8s
K29M Barlow Dome 79.55 351 P **P** **07 35 42.3 +1.7**
baz=16,SNR=168
K29M S **S** **07 45 36.1 -0.4**
baz=16
UGL Uglegorsk 79.58 36 *e*P **P** **07 35 42.1 +1.2**
UGL pmax pmax
comp=Z,2μm,1.4s
UGL pmax pmax
comp=Z,600nm,0.9s
OBIP Obispado Ponce 79.58 285 IAmb IAmb 07 36 08.5
comp=Z,146nm,0.9s
MAYO Mayo, Yukon 79.58 351 P **P** **07 35 42.3 +1.6**
baz=17,SNR=183
MAYO S **S** **07 45 38.6 +2.0**
baz=17
H17K Granite Mounta 79.59 1 IAmb IAmb 07 35 43.7
comp=Z,325nm,1.8s
H17K Granite Mounta 79.59 1 P **P** **07 35 41.8 +1.1**
baz=357
H17K S **S** **07 45 36.3 -0.3**
baz=357
CCB Clear Creek Bu 79.66 356 IAmb IAmb 07 35 44.0
comp=Z,145nm,0.8s
I20K Naaghedeneel 79.74 359 P **P** **07 35 43.3 +1.8**
baz=1.9,SNR=27
ANM Nome 79.76 4 IAmb IAmb 07 35 44.4
comp=Z,194nm,0.9s
ANM Nome 79.76 4 P **P** **07 35 42.3 +0.7**
baz=353,SNR=9.1
NEA2 Nenana 79.78 357 IAmb IAmb 07 35 44.8
comp=Z,298nm,1.2s
NEA2 Nenana 79.78 357 P **P** **07 35 42.9 +1.1**
baz=6.3,SNR=62
NEA2 S **S** **07 45 38.1 -0.5**
baz=6.3
GCSA Galena City Sc 79.81 0 P **P** **07 35 43.6 +1.8**
baz=360,SNR=71
GCSA S **S** **07 45 41.1 +2.3**
baz=360
H16K Elim 79.82 2 P **P** **07 35 43.0 +1.0**
baz=356,SNR=47
H16K S **S** **07 45 39.2 +0.1**
baz=356
PPI Padang Panjang 79.83 98 P **P** **07 35 42.5 -0.3**
comp=Z,3μmcomp=Z,3μmcomp=Z,168nm,0.8s
HDA Harding Lake 79.85 356 IAmb IAmb 07 35 45.5
comp=Z,327nm,1.0s
HDA Harding Lake 79.85 356 P **P** **07 35 43.0 +0.9**
baz=8.1,SNR=174
HDA S **S** **07 45 38.0 -1.4**
baz=8.1
K27K Chicken 79.85 354 IAmb IAmb 07 35 46.6
comp=Z,318nm,0.9s
K27K Chicken 79.85 354 P **P** **07 35 44.1 +2.0**
baz=12
K27K S **S** **07 45 40.9 +1.4**
baz=12
QZH Quanzhou 79.89 67 P **P** **07 35 42.5 -0.5**
QZH S **S** **07 45 36.8 -4.2**
QZH pmax pmax
comp=Z,190nm,1.1s
QZH LR LR
comp=Z,2μm,32.5s
BKNI Bangkinang 79.89 97 P **P** **07 35 40.5 -2.7**
BKNI Bangkinang 79.89 97 P **P** **07 35 43.7 +0.6**
BKNI Bangkinang 79.89 97 P **P** **07 35 41.8 -1.3**
comp=Z,3μmcomp=Z,7μmcomp=Z,243nm,0.9s
SMTB Santa Maria do 79.95 251 *e*P **P** **07 35 44.5 +1.1**
U54A Nelsons Funny 79.96 308 IAmb IAmb 07 35 46.2
comp=Z,170nm,1.0s
CRPR Cabo Rojo, PR 79.99 285 IAmb IAmb 07 36 10.8
comp=Z,132nm,0.9s
KNMB Chin-men Tao 80.01 67 IAmb IAmb 07 35 45.6
comp=Z,159nm,0.9s
PRPB Parauapebas 80.03 255 *e*P **P** **07 35 44.8 +0.9**
K43A Burlington 80.06 316 IAmb IAmb 07 35 47.3
comp=Z,276nm,1.2s
SCRK Sand Creek 80.07 354 P **P** **07 35 45.2 +1.8**
baz=10,SNR=185
SCRK S **S** **07 45 43.1 +1.1**
baz=10
SDBA SAO DESIDERIO 80.15 247 *e*P **P** **07 35 45.0 +0.6**
PDSI Padang 80.15 98 P **P** **07 35 44.5 -0.1**
comp=Z,3μmcomp=Z,6μmcomp=Z,207nm,0.8s
L44A Lake County Fo 80.16 315 IAmb IAmb 07 35 46.9
comp=Z,251nm,1.2s
L29M L29M 80.33 352 IAmb IAmb 07 35 48.5
comp=Z,224nm,0.9s
L29M L29M 80.33 352 P **P** **07 35 46.8 +2.0**
baz=15,SNR=115
L29M S **S** **07 45 45.0 +0.4**
baz=15
BPAW Bear Paw Mtn. 80.36 357 IAmb IAmb 07 35 47.5
comp=Z,224nm,0.8s
BPAW Bear Paw Mtn. 80.36 357 P **P** **07 35 45.6 +0.8**
baz=4.7,SNR=115
BPAW S **S** **07 45 43.8 -0.9**
baz=4.7
J20K Nowinta River 80.36 359 IAmb IAmb 07 35 48.5
comp=Z,220nm,0.8s
J20K Nowinta River 80.36 359 P **P** **07 35 46.7 +1.9**
baz=2.1,SNR=79
J20K S **S** **07 45 46.4 +1.7**
baz=2.1
RIDG Independent Ri 80.37 355 IAmb IAmb 07 35 48.5
comp=Z,322nm,1.0s
RIDG Independent Ri 80.37 355 P **P** **07 35 46.4 +1.4**
baz=9.8,SNR=31
RIDG S **S** **07 45 46.2 +1.2**
baz=9.8
K24K Donnelly Dome 80.37 355 IAmb IAmb 07 35 48.7
comp=Z,247nm,1.0s
K24K Donnelly Dome 80.37 355 P **P** **07 35 46.2 +1.2**
baz=9.0,SNR=66
K24K S **S** **07 45 45.2 +0.2**
baz=9.0
DOT Dot Lake 80.40 354 IAmb IAmb 07 35 48.8
comp=Z,281nm,0.9s
I40A Norwalk 80.56 318 IAmb IAmb 07 35 49.3
comp=Z,162nm,1.0s
J19K Poorman 80.56 360 P **P** **07 35 48.1 +2.1**
baz=0.9
J19K S **S** **07 45 50.1 +3.2**
baz=0.9
CHUM Lake Minchumin 80.61 358 P **P** **07 35 47.9 +1.8**
baz=3.6,SNR=170
CHUM S **S** **07 45 47.5 +0.2**
baz=3.6
I17K Unalakleet 80.62 2 IAmb IAmb 07 35 49.6
comp=Z,187nm,1.0s
I17K Unalakleet 80.62 2 P **P** **07 35 47.9 +1.7**
baz=357,SNR=25
MCK McKinley 80.63 356 IAmb IAmb 07 35 49.1
comp=Z,355nm,1.0s
MCK McKinley 80.63 356 P **P** **07 35 47.4 +1.0**
baz=6.4,SNR=134
M30M Minto, Yukon 80.68 351 P **P** **07 35 48.2 +1.5**
baz=16,SNR=59
M30M S **S** **07 45 49.7 +1.4**
baz=16
M31M Drury Creek, Y 80.71 350 IAmb IAmb 07 35 50.9
comp=Z,274nm,1.0s
M31M Drury Creek, Y 80.71 350 P **P** **07 35 49.2 +2.4**
baz=18,SNR=136
M31M S **S** **07 45 51.4 +2.9**
baz=18
KOTAN Kotaneelee Air 80.72 344 P **P** **07 35 49.2 +2.4**
baz=26,SNR=77
KOTAN S **S** **07 45 51.0 +2.3**
baz=26
M44A Midewin, Midew 80.73 315 IAmb IAmb 07 35 49.9
comp=Z,278nm,1.4s
BCAR Beaver Creek A 80.77 353 P **P** **07 35 48.8 +1.7**
L27K Beaver Creek, 80.78 353 IAmb IAmb 07 35 51.1
comp=Z,266nm,0.9s
L27K Beaver Creek, 80.78 353 P **P** **07 35 49.4 +2.2**
baz=12
L27K S **S** **07 45 51.5 +2.3**
baz=12
SFIN Lafayette 80.83 313 IAmb IAmb 07 35 50.4
comp=Z,195nm,1.2s
SPMN Marine on St. 80.84 320 IAmb IAmb 07 35 50.8
comp=Z,202nm,1.1s
CSU Charleston Sou 80.93 304 IAmb IAmb 07 35 52.7
comp=Z,349nm,1.5s
NHSC New Hope 80.93 304 IAmb IAmb 07 35 52.1
comp=Z,250nm,1.4s
L26K Log Cabin Wild 80.95 354 IAmb IAmb 07 35 51.9
comp=Z,187nm,0.8s
L26K Log Cabin Wild 80.95 354 P **P** **07 35 50.3 +2.2**
baz=11,SNR=29
RND Reindeer 80.95 356 IAmb IAmb 07 35 50.2
comp=Z,183nm,0.8s
TRF Thorofare Moun 80.98 357 IAmb IAmb 07 35 51.1
comp=Z,251nm,0.9s
TRF Thorofare Moun 80.98 357 P **P** **07 35 48.9 +0.5**
baz=5.3,SNR=98
R49A Shelbyville 80.98 311 IAmb IAmb 07 35 51.5
comp=Z,210nm,1.1s
MAL2 Monte Alegre, 81.01 261 IAmb IAmb 07 35 52.7
comp=Z,227nm,0.9s
M29M Somme Creek 81.02 352 P **P** **07 35 50.3 +1.8**
baz=15,SNR=509
M29M S **S** **07 45 53.6 +1.7**
baz=15
MENT Mentasta 81.07 354 IAmb IAmb 07 35 52.5
comp=Z,258nm,1.2s
MENT Mentasta 81.07 354 P **P** **07 35 50.2 +1.5**
J18K Innoko River 81.10 360 IAmb IAmb 07 35 52.5
comp=Z,182nm,0.9s
J18K Innoko River 81.10 360 P **P** **07 35 50.8 +2.0**
baz=0.0
J18K S **S** **07 45 54.5 +2.0**
baz=0.0
GRTK Grand Turk 81.14 290 *e*P **P** **07 35 49.9 +0.2**
GRTK *e*S **S** **07 45 58.3 +4.1**
J17K VABM Dome 81.15 1 IAmb IAmb 07 35 52.5
comp=Z,376nm,1.3s
J17K VABM Dome 81.15 1 P **P** **07 35 50.8 +1.7**
baz=358,SNR=40
PAX Paon 81.18 355 IAmb IAmb 07 35 52.3
comp=Z,405nm,1.8s
PAX Paxson 81.18 355 P **P** **07 35 50.2 +0.8**
baz=9.2,SNR=49
PAX S **S** **07 45 52.9 -0.7**
baz=9.2
K20K Telida 81.18 359 IAmb IAmb 07 35 52.8
comp=Z,361nm,1.2s
K20K Telida 81.18 359 P **P** **07 35 51.1 +1.8**
baz=2.2,SNR=90
K20K S **S** **07 45 54.4 +1.0**
baz=2.2
DHY Denali Highway 81.20 356 P **P** **07 35 50.5 +1.0**
baz=7.7,SNR=420
DHY S **S** **07 45 52.7 -1.2**
baz=7.7
J16K Anvik River 81.23 2 IAmb IAmb 07 35 52.8
comp=Z,396nm,1.4s
J16K Anvik River 81.23 2 P **P** **07 35 51.0 +1.6**
baz=357
J16K S **S** **07 45 52.9 -1.0**
baz=357
BLO Bloomington 81.25 312 IAmb IAmb 07 35 52.9
comp=Z,259nm,1.1s
L42A Oliver, Polo 81.27 316 IAmb IAmb 07 35 53.6
comp=Z,191nm,1.1s
MYKOM Kota Tinggi 81.31 94 IAmb IAmb 07 35 52.8
comp=Z,259nm,1.8s
MYKOM Kota Tinggi 81.31 94 P **P** **07 35 50.8 +0.1**
BVCY Beaver Creek 81.31 353 P **P** **07 35 51.9 +1.9**
baz=13,SNR=161
BVCY S **S** **07 45 56.4 +1.6**
baz=13
YSS Yuzhno-Sakhali 81.38 37 P **P** **07 35 51.6 +1.0**
YSS Yuzhno-Sakhali 81.38 37 P **P** **07 35 51.6 +1.0**
YSS Yuzhno-Sakhali 81.38 37 *e*P **P** **07 35 51.0 +0.4**
YSS *e**PP **pP** **07 36 09.5 +0.2**
YSS *e**SP **sP** **07 36 19.1 +2.3**
YSS *e* 07 39 00.0
YSS *e*SS **S** **07 45 55.8 -0.1**
YSS *e*SS **SS** **07 51 15.0 +2.8**
YSS pmax pmax
comp=Z,4μm,2.5s
YSS pmax pmax
comp=N,1μm,2.4s
YSS pmax pmax
comp=E,1μm,2.5s
YSS pmax pmax
comp=Z,890nm,0.9s
YSS pmax pmax
comp=N,210nm,0.8s
YSS pmax pmax
comp=E,330nm,0.8s
BSFB Barra de Sao F 81.40 240 *e*P **P** **07 35 51.7 +0.7**
JANB Januaria 81.41 245 *e*P **P** **07 35 51.8 +0.6**
RIB01 Linhares ES 81.41 239 *e*P **P** **07 35 52.0 +0.9**
M27K Edge Creek, AK 81.47 353 P **P** **07 35 53.0 +2.0**
baz=12,SNR=145
M27K S **S** **07 45 57.8 +1.1**
baz=12
N32M Quiet Lake 81.50 349 P **P** **07 35 53.2 +2.1**
baz=19
N32M S **S** **07 45 58.7 +1.9**
baz=19
WAT1 Susitna Watana 81.51 356 P **P** **07 35 51.5 +0.4**
baz=6.7
M26K Nabesna, AK 81.54 354 IAmb IAmb 07 35 54.8
comp=Z,258nm,1.2s
M26K Nabesna, AK 81.54 354 P **P** **07 35 53.1 +1.8**
baz=11,SNR=111
M26K S **S** **07 45 59.4 +2.2**
baz=11
SJMB Sao Joao De Ma 81.55 240 *e*P **P** **07 35 52.2 +0.4**
N31M Braeburn, Yuko 81.59 350 IAmb IAmb 07 35 54.6
comp=Z,276nm,1.1s
N31M Braeburn, Yuko 81.59 350 P **P** **07 35 52.9 +1.4**
baz=17,SNR=63
N31M S **S** **07 45 57.7 -0.1**
baz=17
PPLA Purkeypile 81.60 358 P **P** **07 35 52.7 +1.1**
baz=3.7,SNR=127
PPLA S **S** **07 45 58.2 +0.2**
baz=3.7
J14K Nanvaranak Lak 81.66 3 IAmb IAmb 07 35 54.8
comp=Z,212nm,1.1s
J14K Nanvaranak Lak 81.66 3 P **P** **07 35 52.6 +0.9**
baz=354
WCI Wyandotte Cave 81.71 311 P **P** **07 35 53.6 +1.1**
WCI IAmb IAmb 07 35 55.5
comp=Z,262nm,1.1s
WCI Wyandotte Cave 81.71 311 P **P** **07 35 53.6 +1.1**
WCI pmax pmax
comp=Z,262nm,1.2s
WCI Wyandotte Cave 81.71 311 P **P** **07 35 53.6 +1.1**
WAT6 Susitna Watana 81.72 356 P **P** **07 35 53.1 +0.8**
baz=7.4,SNR=96
WAT6 S **S** **07 45 58.5 -0.7**
baz=7.4
HARP HAARP 81.72 355 P **P** **07 35 53.7 +1.6**
baz=9.5,SNR=37
WTLY Watson Lake, Y 81.72 346 IAmb IAmb 07 35 56.3
comp=Z,274nm,0.9s
WTLY Watson Lake, Y 81.72 346 P **P** **07 35 54.0 +1.9**
baz=23,SNR=33
TKL Tuckaleechee C 81.74 308 LR LR 08 13 17.7
comp=Z,740nm,18.6s,baz=62,slow=36
N30M Aishikik Lake 81.80 351 IAmb IAmb 07 35 56.0
comp=Z,164nm,0.8s
N30M Aishikik Lake 81.80 351 P **P** **07 35 54.3 +1.7**
baz=16,SNR=90
N30M S **S** **07 46 01.0 +1.1**
baz=16
LIRD Liard River Hi 81.82 345 P **P** **07 35 54.7 +2.1**
baz=25,SNR=151
LIRD S **S** **07 46 02.5 +2.4**
baz=25
K17K Iditarod 81.84 1 P **P** **07 35 54.3 +1.6**
baz=359
JTU Tsushima 81.85 53 P **P** **07 35 54.4 +1.1**
YUK3 Moose Creek 81.90 352 P **P** **07 35 55.1 +1.8**
baz=13,SNR=295
YUK3 S **S** **07 46 02.8 +1.6**
baz=13
TATO Taipei 82.02 65 P **P** **07 35 55.3 +1.0**
TATO Taipei 82.02 65 P **P** **07 35 55.2 +0.9**
TATO IAmb IAmb 07 35 57.3
comp=Z,405nm,1.4s
CUT Chulitna 82.02 357 P **P** **07 35 54.1 +0.4**
baz=5.3,SNR=43
L20K Farewell, AK 82.06 359 IAmb IAmb 07 35 58.5
comp=Z,142nm,1.0s
L20K Farewell, AK 82.06 359 P **P** **07 35 55.2 +1.3**
baz=2.3
L20K S **S** **07 46 03.2 +0.7**
baz=2.3
M24K Tolsona, Glenn 82.08 355 IAmb IAmb 07 35 57.6
comp=Z,244nm,1.1s
M24K Tolsona, Glenn 82.08 355 P **P** **07 35 55.7 +1.6**
baz=8.6,SNR=28
YUK4 Talbot Arm 82.11 351 P **P** **07 35 55.7 +1.3**
baz=15,SNR=124
YHNB Yeheng 82.11 65 P **P** **07 35 55.6 +0.7**
TOAD Toad River Com 82.14 344 P **P** **07 35 56.4 +2.0**
baz=25,SNR=126
TOAD S **S** **07 46 05.2 +1.8**
baz=25
K15K Wolf Creek Mou 82.19 2 IAmb IAmb 07 35 58.0
comp=Z,196nm,0.8s
K15K Wolf Creek Mou 82.19 2 P **P** **07 35 56.2 +1.7**
baz=356
K15K S **S** **07 46 04.9 +1.1**
baz=356
F33A 5 Mile Ranch, 82.20 322 IAmb IAmb 07 35 57.7
comp=Z,244nm,1.5s
WHY Whitehorse 82.25 349 IAmb IAmb 07 35 58.0
comp=Z,384nm,1.3s
WHY Whitehorse 82.25 349 P **P** **07 35 56.3 +1.2**
baz=18,SNR=64
WHY S **S** **07 46 06.0 +1.3**
baz=18
YUK8 Steele Glacier 82.30 352 P **P** **07 35 56.7 +1.2**
baz=14,SNR=36
YUK8 S **S** **07 46 06.0 +0.5**
baz=14
SSLB Suanglung 82.31 66 P **P** **07 35 56.7 +0.8**
O30N Mendenhall 82.32 350 IAmb IAmb 07 35 58.5
comp=Z,381nm,1.4s
O30N Mendenhall 82.32 350 P **P** **07 35 56.8 +1.5**
baz=17,SNR=78
O30N S **S** **07 46 06.4 +1.1**
baz=17
CPCT Cooper Cave 82.34 308 IAmb IAmb 07 35 59.1
comp=Z,132nm,1.0s
L18K Granite Mounta 82.35 360 IAmb IAmb 07 35 59.1
comp=Z,258nm,1.0s
L18K Granite Mounta 82.35 360 P **P** **07 35 57.1 +1.7**
baz=0.0,SNR=47
L18K S **S** **07 46 06.0 +0.6**
baz=0.0
P33M Teslin, Yukon 82.35 348 IAmb IAmb 07 35 59.0
comp=Z,520nm,1.6s
P33M Teslin, Yukon 82.35 348 P **P** **07 35 57.1 +1.6**
baz=19,SNR=62
P33M S **S** **07 46 06.3 +0.6**
baz=19
TPUB Ta-pu 82.35 67 IAmb IAmb 07 35 59.1
comp=Z,166nm,1.0s
TPUB Ta-pu 82.35 67 P **P** **07 35 56.9 +0.8**
MDND Maddock 82.36 325 IAmb IAmb 07 35 59.1
comp=Z,338nm,1.2s
L19K White Mountain 82.37 359 IAmb IAmb 07 35 59.1
comp=Z,272nm,0.9s
L19K White Mountain 82.37 359 P **P** **07 35 57.3 +1.7**
baz=1.5
L19K S **S** **07 46 06.9 +1.2**
baz=1.5
K13K Kusilvak Mount 82.42 4 IAmb IAmb 07 35 58.6
comp=Z,220nm,0.9s
K13K Kusilvak Mount 82.42 4 P **P** **07 35 56.6 +0.9**
baz=354
K13K S **S** **07 46 06.1 0.0**
baz=354
L17K Donlin 82.42 1 P **P** **07 35 57.4 +1.7**
baz=359
SCM Sheep Creek Mo 82.43 356 P **P** **07 35 57.5 +1.6**
baz=7.7,SNR=63
SCM S **S** **07 46 07.7 +1.3**
baz=7.7
N25K Chitina, Valde 82.46 354 IAmb IAmb 07 35 59.1
comp=Z,180nm,0.8s
N25K Chitina, Valde 82.46 354 P **P** **07 35 57.1 +1.0**
baz=9.9,SNR=90
N25K S **S** **07 46 08.1 +1.4**
baz=9.9
YUK6 Outpost Mounta 82.46 351 P **P** **07 35 58.2 +1.9**
baz=15,SNR=95
YUK6 S **S** **07 46 09.9 +2.9**
baz=15
HYT Haines Junctio 82.46 351 IAmb IAmb 07 36 00.7
comp=Z,312nm,1.0s
HYT Haines Junctio 82.46 351 P **P** **07 35 58.3 +2.1**
baz=16,SNR=134
HYT S **S** **07 46 09.9 +3.1**
baz=16
U49A Red Boiling Sp 82.47 310 IAmb IAmb 07 35 59.6
comp=Z,200nm,1.1s
OLIL Olney 82.47 313 IAmb IAmb 07 35 59.8
comp=Z,309nm,1.4s
SKT Skwentna 82.50 358 P **P** **07 35 56.4 +0.2**
baz=4.3,SNR=236
SKT S **S** **07 46 04.4 -2.5**
baz=4.3
M23K Glacier View 82.50 356 P **P** **07 35 57.5 +1.3**
baz=7.4,SNR=78
M23K S **S** **07 46 07.5 +0.5**
baz=7.4
SML Sawmill 82.52 356 P **P** **07 35 57.6 +1.2**
baz=6.9,SNR=110
SML S **S** **07 46 06.9 -0.4**
baz=6.9
MCARA McCarthy VSAT 82.54 353 IAmb IAmb 07 36 00.8
comp=Z,164nm,0.8s
MCARA McCarthy VSAT 82.54 353 P **P** **07 35 58.1 +1.6**

baz=11,SNR=66
MCARA S **S** **07 46 08.5 +1.1**

baz=11
GLB **Gilahina Butte** **82.56 354** IAmb IAmb 07 35 59.9
comp=Z,298nm,1.6s
NACB **Ninganchiao** **82.56 66** IAmb IAmb 07 36 00.9
comp=Z,120nm,0.8s
NACB **Ninganchiao** **82.56 66** P **P** **07 35 57.9 +0.7**
GHO **Glory Hole Cre** **82.59 356** IAmb IAmb 07 36 00.6
comp=Z,254nm,0.8s
M20K **Styx River** **82.64 358** P **P** **07 35 58.1 +1.1**
baz=3.0
M19K **Big River Lodg** **82.64 359** P **P** **07 35 58.6 +1.6**
baz=1.9
M19K S **S** **07 46 07.6 -0.9**

baz=1.9
M22K **Willow** **82.67 357** P **P** **07 35 58.3 +1.3**
baz=5.4,SNR=21
M22K S **S** **07 46 11.0 +2.4**

baz=5.4
KLU **Klutina** **82.68 355** IAmb IAmb 07 36 00.4
comp=Z,141nm,0.9s
KLU **Klutina** **82.68 355** P **P** **07 35 58.5 +1.3**
baz=8.8,SNR=78
KLU S **S** **07 46 10.5 +1.6**

baz=8.8
SDDR **Presa de Saban** **82.70 288** *e*P **P** **07 35 56.7 -1.4**
USIN **University of** **82.71 312** IAmb IAmb 07 36 00.2
comp=Z,267nm,1.4s
P43A **Skaggs, Pawnee** **82.72 314** IAmb IAmb 07 36 00.7
comp=Z,344nm,1.4s
VRDI **Verde Repeater** **82.73 354** IAmb IAmb 07 36 02.0
comp=Z,418nm,1.6s
PMR **Palmer** **82.78 356** P **P** **07 35 59.1 +1.5**
PMR **Palmer** **82.78 356** P **P** **07 35 58.9 +1.3**
baz=6.2,SNR=58
PMR S **S** **07 46 10.0 +0.3**

baz=6.2
CTG **Chitna Glacier** **82.78 352** P **P** **07 35 59.5 +1.6**
baz=13,SNR=57
CTG S **S** **07 46 11.6 +1.4**

baz=13
CTGM **Chitina Glacie** **82.78 352** IAmb IAmb 07 36 01.4
comp=Z,261nm,1.2s
N41A **Harden Midland** **82.79 316** IAmb IAmb 07 36 01.2
comp=Z,154nm,1.0s
YULB **Yu-li** **82.80 66** IAmb IAmb 07 36 01.4
comp=Z,212nm,1.0s
YULB **Yu-li** **82.80 66** P **P** **07 35 58.9 +0.5**
R33M **Jennings River** **82.80 347** P **P** **07 36 00.6 +2.7**
baz=21,SNR=221
R33M S **S** **07 46 11.7 +1.4**

baz=21
L15K **Ungalak Mounta** **82.81 2** P **P** **07 35 58.9 +1.1**
baz=356
L16K **Owhat River** **82.83 1** IAmb IAmb 07 36 01.4
comp=Z,344nm,1.6s
L16K **Owhat River** **82.83 1** P **P** **07 35 59.4 +1.5**
baz=358,SNR=14
O28M **Mount Upton** **82.85 352** IAmb IAmb 07 36 02.0
comp=Z,182nm,0.9s
O28M **Mount Upton** **82.85 352** P **P** **07 36 00.3 +2.0**
baz=14,SNR=66
O28M S **S** **07 46 11.9 +0.8**

baz=14
LOGN **Logan Glacier** **82.89 352** IAmb IAmb 07 36 02.0
comp=Z,272nm,1.2s
MASI **Maura Aman, Be** **82.90 99** P **P** **07 35 59.5 +0.4**
comp=Z,11μmcomp=Z,400nm,1.3s
Q44A **Meyer Farm, Va** **82.91 313** IAmb IAmb 07 36 01.5
comp=Z,356nm,1.5s
KNK **Knik Glacier** **82.92 356** IAmb IAmb 07 36 01.8
comp=Z,290nm,0.9s
KNK **Knik Glacier** **82.92 356** P **P** **07 36 00.2 +1.7**
baz=6.8,SNR=77
KNK S **S** **07 46 11.5 +0.2**

baz=6.8
TWG **Pinlang** **82.96 67** IAmb IAmb 07 36 02.4
comp=Z,476nm,2.0s
TWGBT **Beinan** **82.97 67** P **P** **07 36 00.5 +1.2**
SUA **Susitna One** **82.98 357** P **P** **07 36 00.1 +1.3**
baz=4.9,SNR=63
SUA S **S** **07 46 11.6 -0.5**

baz=4.9
T47A **Sharon Grove** **82.99 311** IAmb IAmb 07 36 02.0
comp=Z,320nm,1.3s
PEA0B **Petropavlovsk-** **83.04 26** *ce*P **P** **07 35 57.2 -2.0**
PETK **Petropavlovsk-** **83.04 26** P **P** **07 35 58.1 -1.0**
comp=Z,62nm,0.7s,baz=346,slow=1.8,SNR=48
PETK LR LR 08 16 02.3

comp=Z,1μm,22.0s,baz=318,slow=38
comp=Z,62nm,0.7s
DIAM **Diamantina, MG** **83.05 242** *e*P **P** **07 36 00.4 +0.5**
GRNC **Granite Creek** **83.06 353** IAmb IAmb 07 36 02.9
comp=Z,269nm,0.8s
P30M **Million Dollar** **83.07 350** P **P** **07 36 01.4 +2.2**
baz=16
P30M S **S** **07 46 14.6 +1.7**

baz=16
M18K **Stony River** **83.08 360** P **P** **07 36 01.0 +1.8**
baz=0.7,SNR=26
M18K S **S** **07 46 13.9 +1.1**

baz=0.7
P32M **Atlin** **83.09 348** IAmb IAmb 07 36 02.2
comp=Z,168nm,0.8s
P32M **Atlin** **83.09 348** P **P** **07 36 00.5 +1.1**
baz=19,SNR=65
P32M S **S** **07 46 13.2 +0.1**

baz=19
BMRM **Bremner River** **83.09 354** IAmb IAmb 07 36 02.5
comp=Z,231nm,1.0s
BMRM **Bremner River** **83.09 354** P **P** **07 36 00.6 +1.3**
baz=9.9,SNR=51
BMRM S **S** **07 46 13.2 +0.1**

baz=9.9
L14K **Kuka Creek** **83.11 3** IAmb IAmb 07 36 02.4
comp=Z,262nm,1.6s
L14K **Kuka Creek** **83.11 3** P **P** **07 36 00.5 +1.2**
baz=355,SNR=6.9
O29M **Mount Kennedy** **83.11 351** IAmb IAmb 07 36 02.9
comp=Z,273nm,1.2s
O29M **Mount Kennedy** **83.11 351** P **P** **07 36 01.1 +1.6**
baz=15
O29M S **S** **07 46 12.8 -0.7**

baz=15
TGL **Tana Glacier** **83.14 353** IAmb IAmb 07 36 03.0
comp=Z,208nm,1.1s
M17K **Holitna River** **83.17 0** P **P** **07 36 02.0 +2.3**
baz=359
CRQE **Cirque** **83.17 353** P **P** **07 36 01.4 +1.6**
baz=11,SNR=66
CRQE S **S** **07 46 12.8 -1.2**

baz=11
154A **Montrose** **83.18 305** IAmb IAmb 07 36 03.5
comp=Z,141nm,1.0s
DSRI **Dabo** **83.22 95** P **P** **07 35 56.9 -3.8**
comp=Z,3μmcomp=Z,2μmcomp=Z,98nm,1.2s
ISLE **Juniper Island** **83.24 353** IAmb IAmb 07 36 03.5
comp=Z,209nm,1.0s
TABL **Table Mountain** **83.28 352** IAmb IAmb 07 36 03.8
comp=Z,154nm,0.9s
ASAJ **Asahikawa** **83.29 39** LR LR 08 17 27.0
comp=Z,1μm,18.2s,baz=338,slow=39
N20K **Mount Spurr** **83.30 358** P **P** **07 36 01.1 +0.7**
baz=3.7,SNR=50
N20K S **S** **07 46 13.7 -1.5**

baz=3.7
SPCR **Spurr Chakacha** **83.30 358** P **P** **07 36 01.1 +0.7**
baz=3.7,SNR=44
SPCR S **S** **07 46 12.4 -2.8**

baz=3.7
RC01 **Rabbit Creek A** **83.31 357** P **P** **07 36 01.9 +1.5**
baz=5.7,SNR=23
RC01 S **S** **07 46 15.1 -0.1**

baz=5.7
SPU **Mount Spurr** **83.31 358** IAmb IAmb 07 36 03.5
comp=Z,220nm,0.8s
GLI **Glacier Island** **83.37 355** IAmb IAmb 07 36 03.9
comp=Z,230nm,1.0s
GLI **Glacier Island** **83.37 355** P **P** **07 36 02.0 +1.3**
baz=7.9,SNR=22
GLI S **S** **07 46 15.6 -0.1**

baz=7.9
SWET **Sewanee** **83.39 309** IAmb IAmb 07 36 04.0
comp=Z,272nm,1.9s
Q32M **Nakina River** **83.44 348** P **P** **07 36 03.8 +2.5**
baz=20,SNR=95
Q32M S **S** **07 46 16.6 -0.4**

baz=20
PET **Petropavlovsk** **83.44 25** P **P** **07 36 00.3 -0.9**
PET **Petropavlovsk** **83.44 25** *e*P **P** **07 36 00.2 -0.9**
PET *e**PP **pP** **07 36 20.2 +0.1**
PET *e**SP **sP** **07 36 30.8 +3.1**
PET *e* 07 39 11.0
PET *e*S **S** **07 46 14.0 -2.7**
PET *e*PS **PnS** **07 47 18.9 +2.7**
PET pmax pmax
comp=Z,86nm,1.3s
PET pmax pmax
comp=Z,2μm,4.3s
PET pmax pmax
comp=Z,700nm,10.6s
PET pmax pmax
comp=Z,700nm,14.6s
PET MLR MLR
comp=Z,2μm,17.0s
PET MLR MLR
comp=Z,2μm,21.0s
PWL **Port Wells** **83.47 356** IAmb IAmb 07 36 04.3
comp=Z,222nm,0.8s
PWL **Port Wells** **83.47 356** P **P** **07 36 02.5 +1.3**
baz=6.9,SNR=39
PWL S **S** **07 46 15.9 -0.9**

baz=6.9
SKAG **Skagway** **83.47 349** P **P** **07 36 03.5 +2.3**
SKAG **Skagway** **83.47 349** P **P** **07 36 02.8 +1.7**
baz=17,SNR=23
SKAG S **S** **07 46 17.2 +0.4**

baz=17
KSI **Kapahiang** **83.48 99** P **P** **07 36 02.1 0.0**
PINM **Pinnacle** **83.51 352** P **P** **07 36 03.5 +2.0**
baz=13,SNR=55
PINM S **SKSac** **07 46 19.5 +1.8**

baz=13
DLBC **Dease Lake** **83.52 346** LR LR 08 15 40.4
comp=Z,2μm,20.9s,baz=2.5,slow=37
DLBC **Dease Lake** **83.52 346** P **P** **07 36 04.1 +2.5**
baz=22,SNR=38
DLBC S **SKSac** **07 46 19.8 +2.0**

baz=22
M16K **Timber Creek** **83.53 1** IAmb IAmb 07 36 05.3
comp=Z,236nm,0.8s
M16K **Timber Creek** **83.53 1** P **P** **07 36 03.6 +2.1**
baz=358,SNR=33
BOAV **Boa Vista** **83.57 268** *e*P **P** **07 36 03.6 +1.1**
BCPM **Bancas Point** **83.58 351** IAmb IAmb 07 38 28.1
comp=Z,155nm,0.8s
EYAK **Cordova Ski Ar** **83.60 355** IAmb IAmb 07 36 05.6
comp=Z,220nm,1.1s
EYAK **Cordova Ski Ar** **83.60 355** P **P** **07 36 03.7 +1.9**
EYAK **Cordova Ski Ar** **83.60 355** P **P** **07 36 03.8 +1.9**
baz=9.0,SNR=36
EYAK S **SKSac** **07 46 17.1 -0.9**

baz=9.0
V48A **Smith Brothers** **83.61 310** IAmb IAmb 07 36 05.1
comp=Z,273nm,1.7s
MESA **MESA** **83.62 353** IAmb IAmb 07 36 06.0
comp=Z,194nm,1.0s
MESA **MESA** **83.62 353** P **P** **07 36 04.2 +1.9**
baz=12,SNR=17
MESA S **SKSac** **07 46 18.2 -0.4**

baz=12
PLBC **Pleasant Camp** **83.62 350** P **P** **07 36 04.2 +2.2**
baz=16,SNR=40
PLBC S **S** **07 46 20.3 +2.0**

baz=16
ITTB **Itaituba** **83.65 260** *e*P **P** **07 36 03.9 +1.0**
P29M **Windy Craggy** **83.65 350** P **P** **07 36 04.2 +2.0**
baz=15,SNR=75
P29M S **SKSac** **07 46 19.9 +1.4**

baz=15
RAGM **Ragged Mountai** **83.67 354** IAmb IAmb 07 36 05.9
comp=Z,347nm,1.4s
JNU **Nakatsue** **83.68 54** P **P** **07 36 02.5 -0.3**
comp=Z,152nm,0.9s,baz=329,slow=1.5,SNR=40
JNU LR LR 08 18 07.9

comp=Z,973nm,20.6s,baz=312,slow=39
comp=Z,152nm,0.9s
JNU **Nakatsue** **83.68 54** P **P** **07 36 03.3 +0.4**
CAPN **Captain Cook N** **83.69 357** P **P** **07 36 04.4 +2.1**
baz=4.6
SNH **Sunshine Point** **83.71 353** IAmb IAmb 07 36 06.6
comp=Z,275nm,1.0s
M14K **Bethel** **83.72 3** IAmb IAmb 07 36 05.7
comp=Z,211nm,0.8s
M14K **Bethel** **83.72 3** P **P** **07 36 04.2 +1.7**
baz=356,SNR=18
M14K S **SKSac** **07 46 20.3 +1.5**

baz=356
N19K **Bonanza Creek** **83.74 359** P **P** **07 36 04.4 +1.7**
baz=1.8
N19K S **SKSac** **07 46 20.1 +0.9**

baz=1.8
SLM **Saint Louis** **83.80 314** IAmb IAmb 07 36 06.4
comp=Z,334nm,1.4s
HIN **Hinchinbrook I** **83.81 355** IAmb IAmb 07 36 06.4
comp=Z,326nm,1.2s
BGLC **Bering Glacier** **83.81 353** P **P** **07 36 05.5 +2.6**
baz=11
M15K **Kasigluk River** **83.82 2** P **P** **07 36 04.6 +1.6**
baz=357
M15K S **SKSac** **07 46 20.0 +0.6**

baz=357
ECSD **EROS Data Cent** **83.84 321** IAmb IAmb 07 36 06.5
comp=Z,206nm,0.8s
S44A **Carbondale** **83.84 313** IAmb IAmb 07 36 06.2
comp=Z,300nm,1.4s
M11K **Mekoryuk** **83.87 5** P **P** **07 36 05.3 +2.1**
baz=352,SNR=7.3
N18K **Kilae Creek** **83.89 360** P **P** **07 36 05.4 +2.0**
baz=0.7,SNR=41
N18K S **SKSac** **07 46 20.9 +0.9**

baz=0.7
SUCK **Suckling Hills** **83.90 354** IAmb IAmb 07 36 07.5
comp=Z,252nm,1.1s
O22K **Cooper Landing** **83.92 357** P **P** **07 36 04.9 +1.4**
baz=5.7,SNR=16
O22K S **SKSac** **07 46 21.0 +1.0**

baz=5.7
CAM01 **Campos-RJ** **83.97 238** *e*P **P** **07 36 04.7 +0.5**
WVT **Waverly** **83.99 311** P **P** **07 36 04.8 +0.4**
WVT IAmb IAmb 07 36 06.4

comp=Z,410nm,1.9s
WVT **Waverly** **83.99 311** P **P** **07 36 04.8 +0.4**
WVT pmax pmax
comp=Z,410nm,1.9s
M13K **Dall Lake** **84.00 3** P **P** **07 36 05.8 +2.0**
baz=355,SNR=8.9
N17K **Nushagak Hills** **84.04 0** P **P** **07 36 06.0 +1.9**
baz=360
N38A **Joes South For** **84.07 317** IAmb IAmb 07 36 07.6
comp=Z,217nm,1.1s
N16K **Nishlik Lake** **84.08 1** P **P** **07 36 06.5 +2.1**
baz=358,SNR=9.0
N16K S **S** **07 46 23.7 +0.6**

baz=358
RED **Redoubt Volcan** **84.10 358** IAmb IAmb 07 36 06.9
comp=Z,191nm,1.0s
KAIM **Kayak Island** **84.11 354** P **P** **07 36 06.5 +2.1**
baz=10.0,SNR=21
S34M **Telegraph Cree** **84.22 347** P **P** **07 36 07.7 +2.7**
baz=21,SNR=101
S34M S **SKSac** **07 46 22.8 +0.7**

baz=21
TIGA **Tifton** **84.23 305** IAmb IAmb 07 36 08.7
comp=Z,121nm,0.9s
BESE **Bessie Mountai** **84.23 349** IAmb IAmb 07 36 09.4
comp=Z,234nm,1.0s
P23K **Montague Islan** **84.27 355** IAmb IAmb 07 36 08.6
comp=Z,306nm,1.2s
P23K **Montague Islan** **84.27 355** P **P** **07 36 06.6 +1.4**
baz=7.6,SNR=8.2
MASC **Masc** **84.27 291** *e*P **P** **07 36 05.2 -0.7**
MASC *e*S **SKSac** **07 46 25.0 +1.3**
SEW **Seward** **84.28 356** P **P** **07 36 06.4 +1.0**
baz=5.9,SNR=21
SEW S **SKSac** **07 46 23.6 +1.2**

baz=5.9
CGM3 **Cape Girardeau** **84.34 312** IAmb IAmb 07 36 08.8
comp=Z,291nm,1.5s
FVM **French Village** **84.35 313** IAmb IAmb 07 36 09.3
comp=Z,332nm,1.5s
O19K **Port Alsworth** **84.36 359** IAmb IAmb 07 36 08.4
comp=Z,165nm,0.8s
O19K **Port Alsworth** **84.36 359** P **P** **07 36 06.5 +0.8**
baz=2.0,SNR=27
O19K S **SKSac** **07 46 23.0 +0.1**

baz=2.0
N15K **Kwethluk River** **84.36 2** IAmb IAmb 07 36 09.4
comp=Z,165nm,1.1s
N15K **Kwethluk River** **84.36 2** P **P** **07 36 07.7 +1.9**
baz=357
SKR **Severo-Kuril's** **84.42 28** *ce*P **P** **07 36 04.0 -2.2**
O20K **Slope Mountain** **84.43 358** P **P** **07 36 07.0 +0.7**
baz=3.4,SNR=14
O20K S **SKSac** **07 46 24.7 +1.0**

baz=3.4
JIS **Juneau Island** **84.45 348** P **P** **07 36 08.6 +2.4**
R32K **Eaglecrest** **84.47 348** IAmb IAmb 07 36 10.8
comp=Z,226nm,0.8s
R32K **Eaglecrest** **84.47 348** P **P** **07 36 08.9 +2.5**
baz=18,SNR=33
BDFB **Brasilia** **84.52 246** LR LR 08 15 03.8
comp=Z,4μm,18.9s,baz=128,slow=36
R31K **City Hall, Gus** **84.53 349** P **P** **07 36 09.0 +2.4**
baz=17
MOAC **Moa** **84.54 291** *e*P **P** **07 36 05.9 -1.5**
N14K **Kuskokwak Cree** **84.56 3** IAmb IAmb 07 36 09.9
comp=Z,156nm,0.8s
N14K **Kuskokwak Cree** **84.56 3** P **P** **07 36 08.2 +1.5**
baz=356,SNR=6.9
X48A **Hartselle** **84.58 309** IAmb IAmb 07 36 10.1
comp=Z,156nm,1.0s
NMDO **Nuevo Mundo** **84.61 291** *e*P **P** **07 36 05.2 -2.5**
DUB01 **Friburgo-RJ** **84.63 238** *e*P **P** **07 36 08.6 +0.9**
QMBU **Quimbuelo** **84.70 291** *e*P **P** **07 36 05.6 -2.6**
BRSE **Bradley Lake S** **84.70 357** P **P** **07 36 08.9 +1.4**
baz=4.9,SNR=19
BRSE S **S** **07 46 28.9 -0.3**

baz=4.9
O18K **Koktuh Hills** **84.71 359** P **P** **07 36 09.2 +1.6**
baz=1.2,SNR=33
O18K S **S** **07 46 30.0 +0.7**

baz=1.2
SNDB **Serra Nova Dou** **84.73 251** *e*P **P** **07 36 09.5 +1.2**
Q23K **Middleton Isla** **84.75 355** P **P** **07 36 09.6 +1.9**
baz=8.5
CCM **Cathedral Cave** **84.78 314** P **P** **07 36 09.1 +0.8**
CCM IAmb IAmb 07 36 11.3

comp=Z,420nm,1.7s
CCM **Cathedral Cave** **84.78 314** P **P** **07 36 09.1 +0.8**
CCM pmax pmax
comp=Z,420nm,1.7s
CCM **Cathedral Cave** **84.78 314** P **P** **07 36 09.1 +0.8**
JTM **Tenmabayashi** **84.79 42** P **P** **07 36 08.6 +0.3**
656A **Willston** **84.80 303** IAmb IAmb 07 36 11.9
comp=Z,110nm,0.8s
O17K **Koliganek Bris** **84.80 0** P **P** **07 36 09.9 +1.9**
baz=360,SNR=24
O17K S **S** **07 46 34.3 +4.2**

baz=360
DWPF **Disney Wildern** **84.81 301** P **P** **07 36 10.1 +1.5**
DWPF **Disney Wildern** **84.81 301** *e*P **P** **07 36 06.3 -2.3**
HOM **Homer** **84.82 357** P **P** **07 36 09.4 +1.3**
baz=4.1
PLAL **Pickwick Lake** **84.88 310** IAmb IAmb 07 36 11.1
comp=Z,131nm,1.1s
JMJ **Miyako jima 2** **84.90 63** P **P** **07 36 10.4 +1.3**
T35M **Bob Quinn** **84.92 346** IAmb IAmb 07 36 13.0
comp=Z,153nm,0.9s
T35M **Bob Quinn** **84.92 346** P **P** **07 36 11.2 +2.5**
baz=21,SNR=61
T35M S **S** **07 46 35.9 +4.5**

baz=21
NPGB **Novo Progresso** **84.94 258** *e*P **P** **07 36 09.8 +0.4**
O16K **Kokwok River B** **84.97 1** IAmb IAmb 07 36 12.3
comp=Z,164nm,0.8s
O16K **Kokwok River B** **84.97 1** P **P** **07 36 10.4 +1.6**
baz=359,SNR=30
P38A **Dawn** **85.03 316** IAmb IAmb 07 36 12.8
comp=Z,212nm,1.1s
S31K **Pelican** **85.04 349** IAmb IAmb 07 36 13.5
comp=Z,281nm,1.1s
S31K **Pelican** **85.04 349** P **P** **07 36 11.7 +2.5**
baz=17,SNR=30
S31K S **S** **07 46 36.8 +4.3**

baz=17
ERM **Erimo** **85.06 40** P **P** **07 36 11.1 +1.5**
ERM **Erimo** **85.06 40** P **P** **07 36 11.1 +1.5**
ERM **Erimo** **85.06 40** P **P** **07 36 11.1 +1.5**
ERM pmax pmax
comp=Z,413nm,1.0s
JSD **Sado** **85.08 46** IAmb IAmb 07 36 12.0
comp=Z,207nm,0.9s
JSD **Sado** **85.08 46** P **P** **07 36 09.9 +0.1**
GTBY **Guantanamo Bay** **85.08 291** *e*P P 07 36 04.1 -6.0
PBMO **Poplar Bluff** **85.15 312** IAmb IAmb 07 36 13.0
comp=Z,340nm,1.6s
P18K **Big Mountain,** **85.17 359** P **P** **07 36 10.2 +0.3**
baz=1.2,SNR=5.3
PMNB **Patos De Minas** **85.20 243** *e*P **P** **07 36 11.6 +0.9**
HLGC **Holguin** **85.23 292** *e*P **P** **07 36 09.1 -1.8**
JMN **Monobe** **85.23 52** P **P** **07 36 11.3 +0.6**
MDSI **Maura Dua** **85.25 99** P **P** **07 36 09.4 -1.6**
comp=Z,2μmcomp=Z,124nm,0.8s
O14K **Tigyukauivet M** **85.25 2** IAmb IAmb 07 36 13.4
comp=Z,193nm,0.9s
O14K **Tigyukauivet M** **85.25 2** P **P** **07 36 11.4 +1.2**
baz=356,SNR=6.7
S32K **Killisnoo** **85.25 348** IAmb IAmb 07 36 14.4
comp=Z,191nm,1.0s
S32K **Killisnoo** **85.25 348** P **P** **07 36 12.6 +2.3**
baz=18,SNR=24
S32K S **S** **07 46 37.8 +3.3**

baz=18
PINC **Pinares de May** **85.27 292** *e*P **P** **07 36 08.4 -2.6**
O15K **Ungalikthiuk R** **85.36 2** IAmb IAmb 07 36 14.1
comp=Z,168nm,1.1s
O15K **Ungalikthiuk R** **85.36 2** P **P** **07 36 12.4 +1.6**
baz=358,SNR=9.5
P17K **Kvichak River** **85.38 360** P **P** **07 36 12.5 +1.7**
baz=0.2,SNR=22
LRAL **Lakeview Retre** **85.46 308** IAmb IAmb 07 36 14.8
comp=Z,179nm,1.1s
LWLI **Liwa** **85.47 99** P **P** **07 36 10.9 -1.3**
RCC **Rio Carpintero** **85.49 291** *e*P **P** **07 36 09.1 -3.1**
VAS01 **Vassouras-RJ** **85.50 239** *e*P **P** **07 36 13.0 +1.0**
P16K **Nushagak River** **85.54 1** P **P** **07 36 13.7 +2.1**
baz=359,SNR=6.2
SZP **Santa** **85.56 72** P **P** **07 36 13.2 +0.7**
T33K **Petersburg** **85.59 347** P **P** **07 36 14.5 +2.5**
baz=19,SNR=10.0
T33K S **S** **07 46 41.9 +3.9**

baz=19
BSCB **Bom Sucesso** **85.59 240** *e*P **P** **07 36 13.0 +0.4**
Q19K **Cape Douglas,** **85.61 358** P **P** **07 36 15.4 +3.3**
baz=2.5
MARVS **Santiago de Cu** **85.64 291** *e*P **P** **07 36 11.9 -0.9**
SIT **Sitka** **85.77 348** IAmb IAmb 07 36 17.7
comp=Z,189nm,1.0s
SIT **Sitka** **85.77 348** P **P** **07 36 15.5 +2.7**
SIT **Sitka** **85.77 348** P **P** **07 36 15.0 +2.2**
baz=17,SNR=19
SIT S **S** **07 46 43.8 +4.1**

baz=17
JOW **Kunigami** **85.81 60** P **P** **07 36 13.4 -0.2**
comp=Z,271nm,0.7s,baz=292,slow=9.7,SNR=47
JOW LR LR 08 21 20.8

comp=Z,884nm,19.0s,baz=306,slow=40
comp=Z,271nm,0.7s
JOW **Kunigami** **85.81 60** P **P** **07 36 13.8 +0.2**
KLSI **85.81 99** P **P** **07 36 12.2 -1.6**
comp=Z,2μmcomp=Z,116nm,1.1s
WRAK **Wrangell Islan** **85.85 347** IAmb IAmb 07 36 17.3
comp=Z,214nm,0.8s
WRAK **Wrangell Islan** **85.85 347** P **P** **07 36 15.6 +2.3**
baz=20,SNR=33
WRAK S **S** **07 46 44.5 +3.9**

baz=20
U35K **Hyder** **85.87 345** P **P** **07 36 15.2 +1.8**
baz=22,SNR=13
U35K S **S** **07 46 39.9 -0.8**

baz=22
Q20K **Shuyak Island** **85.90 358** P **P** **07 36 14.7 +1.3**
baz=3.5,SNR=18
Q20K S **S** **07 46 40.5 -0.4**

baz=3.5
Q16K **King Salmon** **85.90 360** P **P** **07 36 14.2 +0.8**
baz=0.1,SNR=9.1
Q18K **Katmai Hardscr** **85.92 359** P **P** **07 36 12.7 -1.1**
baz=1.4,SNR=7.0
CHIV **Chivirico** **86.04 292** IAmb IAmb 07 36 18.8
comp=Z,113nm,1.2s

CHIV Chivirico 86.04 292 *e*P P 07 36 09.8 -5.0
CHIV *e*S **SKSac 07 46 35.4 +0.5**
MAJO Matsushiro 86.05 47 P **P 07 36 15.0 +0.3**
MAJO Matsushiro 86.05 47 P **P 07 36 14.8 +0.1**
MAJO Matsushiro 86.05 47 P **P 07 36 15.0 +0.3**
MAJO pmax pmax
comp=Z,899nm,1.6s
MJAR Matsushiro Arr 86.05 47 P **P 07 36 15.0 +0.3**
comp=Z,248nm,0.8s,baz=311,slow=5.2,SNR=252
MJAR LR LR 08 18 49.3
comp=Z,1µm,20.2s,baz=314,slow=38
comp=Z,248nm,0.8s
MJAR Matsushiro Arr 86.05 47 P **P 07 36 14.8 +0.1**
MJAR Matsushiro Arr 86.05 47 P **P 07 36 14.8 +0.1**
MJAR pmax pmax
comp=Z,387nm,1.0s
LCAR Lake Charles 86.06 312 IAmb IAmb 07 36 17.8
comp=Z,351nm,1.6s
INU Inuyama 86.13 49 IAmb IAmb 07 36 17.4
comp=Z,157nm,0.9s
INU Inuyama 86.13 49 P **P 07 36 15.5 +0.4**
INU Inuyama 86.13 49 P **P 07 36 15.4 +0.3**
IPMB Ipameri, GO 86.14 245 *e*P **P 07 36 15.8 +0.5**
JGF Kuroka 86.17 48 IAmb IAmb 07 36 19.4
comp=Z,140nm,1.0s
JGF Kuroka 86.17 48 P **P 07 36 15.8 +0.5**
U33K Whale Pass 86.28 347 IAmb IAmb 07 36 19.4
comp=Z,219nm,1.1s
U33K Whale Pass 86.28 347 P **P 07 36 17.3 +1.9**
baz=19,SNR=19
U33K S **S 07 46 47.1 +2.4**
baz=19
Q17K Contact Creek 86.31 360 P **P 07 36 15.3 -0.4**
baz=0.7
CCCC Cccc 86.33 293 *e*P **P 07 36 13.4 -2.8**
CCCC *e*S **SKSac 07 46 27.8 -8.9**
LMGC Las Mercedes 86.44 292 *e*P **P 07 36 14.8 -1.9**
SPIA Saint Paul Isl 86.70 7 P **P 07 36 18.9 +1.5**
baz=349
KDAK Kodiak Island 86.73 358 LR LR 08 16 03.1
comp=Z,546nm,21.9s,baz=13,slow=36
KDAK Kodiak Island 86.73 358 P **P 07 36 19.0 +1.4**
KDAK Kodiak Island 86.73 358 P **P 07 36 19.0 +1.4**
KDAK pmax pmax
comp=Z,448nm,1.3s
KDAK Kodiak Island 86.73 358 P **P 07 36 19.1 +1.6**
baz=3.4
KDAK S **S 07 46 49.5 +0.5**
baz=3.4
V35K Ketchikan 86.74 346 IAmb IAmb 07 36 21.2
comp=Z,140nm,1.1s
V35K Ketchikan 86.74 346 P **P 07 36 19.3 +1.7**
baz=20,SNR=10
CRAG Craig 86.90 347 P **P 07 36 20.0 +1.6**
CRAG Craig 86.90 347 P **P 07 36 19.9 +1.5**
baz=19
CRAG S **S 07 46 52.9 +2.2**
baz=19
MACA Manacapuru-AM 86.92 264 IAmb IAmb 07 36 22.2
comp=Z,259nm,1.3s
MACA Manacapuru-AM 86.92 264 *e*P **P 07 36 20.5 +1.2**
PLK4 Peulik 4 86.95 360 IAmb IAmb 07 37 26.7
comp=Z,102nm,0.9s
R17L Mt. Peulik Vol 86.95 360 P **P 07 36 18.8 +0.2**
baz=0.3
R16K Pilot Point 87.01 0 P **P 07 36 19.4 +0.5**
baz=359
TPI Tanjungpandan 87.04 95 P **P 07 36 20.0 +0.2**
comp=Z,3µmcomp=Z,2µmcomp=Z,84nm,2.4s
KSU1 Kansas State U 87.11 318 IAmb IAmb 07 36 22.8
comp=Z,170nm,1.0s
RSSD Black Hills 87.20 325 P **P 07 36 21.7 +1.3**
RSSD IAmb IAmb 07 36 23.6
comp=Z,135nm,1.2s
RSSD Black Hills 87.20 325 P **P 07 36 21.7 +1.3**
RSSD pmax pmax
comp=Z,135nm,1.3s
JSG Sagara 87.29 48 P **P 07 36 22.0 +1.3**
OHAK Old Harbor 87.31 358 P **P 07 36 21.7 +1.4**
OHAK Old Harbor 87.31 358 P **P 07 36 21.8 +1.4**
baz=2.8,SNR=35
OHAK S **S 07 46 54.9 +0.3**
baz=2.8
P08K Saint George I 87.34 7 P **P 07 36 22.0 +1.5**
baz=350
ARAG Araguaiana, MT 87.42 249 *e*P **P 07 36 23.1 +1.6**
MGV Manicaragua 87.42 295 *e*P **P 07 36 20.5 -1.0**
URIC Uribia, Colomb 87.46 282 P **P 07 36 18.1 -3.7**
HHAR Hobbs 87.56 314 IAmb IAmb 07 36 24.7
comp=Z,246nm,1.5s
CLDB Colider 87.57 255 *e*P **P 07 36 22.9 +0.6**
UALR University of 87.64 312 IAmb IAmb 07 36 25.2
comp=Z,259nm,1.6s
PARB Paraibuna 87.71 239 *e*P **P 07 36 24.4 +1.6**
U38A Gravette 87.72 314 IAmb IAmb 07 36 25.5
comp=Z,230nm,1.4s
SBUM Sibu 87.73 89 IAmb IAmb 07 36 26.9
comp=Z,98nm,1.0s
SBUM Sibu 87.73 89 P **P 07 36 24.6 +1.4**
SBJI Serang 87.78 99 P **P 07 36 20.5 -2.8**
comp=Z,163nm,0.5s
CAMR Camarioca 87.86 297 *e*P **P 07 36 20.2 -3.4**
CAMR *e*S **SKSac 07 46 38.3 -7.7**
SII Sitkinak Islan 88.00 359 P **P 07 36 25.5 +1.8**
SII Sitkinak Islan 88.00 359 P **P 07 36 25.5 +1.8**
baz=2.1,SNR=8.8
SDV Santo Domingo 88.01 279 LR LR 08 13 53.8
comp=Z,319nm,21.1s,baz=58,slow=34
SDV Santo Domingo 88.01 279 P **P 07 36 25.3 +0.5**
SDV IAmb IAmb 07 36 27.0
comp=Z,87nm,0.9s
SDV Santo Domingo 88.01 279 *e*P **P 07 36 25.6 +0.8**
SDV Santo Domingo 88.01 279 P **P 07 36 25.6 +0.8**
X40A Basin Creek Fa 88.14 312 IAmb IAmb 07 36 27.6
comp=Z,155nm,1.5s
S14K Fog Glacier 88.27 2 P **P 07 36 26.0 +0.9**
baz=358
SHEM Shemya Is, Ala 88.27 17 LR LR 08 19 19.1
comp=Z,1µm,21.6s,baz=306,slow=38
RLO Rose Lookout 88.28 315 IAmb IAmb 07 36 28.0
comp=Z,218nm,1.5s
BB19B Bebedouro 88.32 243 *e*P **P 07 36 27.3 +1.5**
VAO Valinhos 88.44 240 *e*P **P 07 36 27.5 +1.2**
RCLB Rio Claro- Sao 88.47 241 *e*P **P 07 36 27.8 +1.3**
DBJI Dramaga 88.53 99 P **P 07 36 26.1 -0.8**
comp=Z,3µmcomp=Z,198nm,1.2s
MIAR Mount Ida 88.54 313 IAmb IAmb 07 36 30.2
comp=Z,264nm,1.4s
OGNE Ogallala 88.62 322 IAmb IAmb 07 36 29.9
comp=Z,124nm,1.2s
LLLB Lillooet 88.66 339 IAmb IAmb 07 36 29.8
comp=Z,200nm,1.8s
PDRB Porto dos Gac 88.74 255 *e*P **P 07 36 29.1 +1.2**
CHIR Chirikof Islan 88.76 359 P **P 07 36 29.3 +2.0**
baz=0.9
S12K Black Hills 88.77 3 P **P 07 36 27.5 +0.2**
baz=356
ITRB Iturama 88.80 245 *e*P **P 07 36 29.2 +1.2**
BBB Bella Bella 88.90 343 LR LR 08 20 15.4
comp=Z,928nm,18.6s,baz=30,slow=38
DIB Dawson Inlet, 88.92 346 IAmb IAmb 07 36 31.3
comp=Z,80nm,0.9s
BLOK Blackwell 89.11 316 IAmb IAmb 07 36 32.6
comp=Z,200nm,1.3s
SPB Sao Paulo 89.14 240 *e*P **P 07 36 30.4 +0.9**
NEW Newport 89.17 335 LR LR 08 20 37.3
comp=Z,765nm,18.1s,baz=32,slow=38
SDPT Sand Point 89.18 2 P **P 07 36 29.6 +0.4**
SDPT Sand Point 89.18 2 P **P 07 36 29.6 +0.4**
baz=357
CNJI Cibinong 89.27 99 P **P 07 36 28.8 -1.6**
comp=Z,2µmcomp=Z,119nm,1.1s
JHJ Hachijo jima 2 89.32 49 LR LR 08 20 16.9
comp=Z,643nm,21.2s,baz=324,slow=38
BOZ Bozeman (W) 89.34 330 IAmb IAmb 07 36 34.0
comp=Z,177nm,1.4s
YMP Mirror Lake Pl 89.43 329 IAmb IAmb 07 36 37.1
comp=Z,58nm,0.8s
FALS False Pass 89.55 4 P **P 07 36 30.8 -0.2**
baz=355
CROK Carrier 89.72 316 IAmb IAmb 07 36 35.6
comp=Z,138nm,1.0s
CHNA Chernabura Isl 89.72 2 P **P 07 36 33.9 +2.1**
CHNA Chernabura Isl 89.72 2 P **P 07 36 32.8 +1.0**
baz=358
YHL Hebgen Lake 89.77 329 IAmb IAmb 07 36 36.4
comp=Z,95nm,1.1s
BBJI Bungbulang 89.78 99 P **P 07 36 32.3 -0.5**
YMR Madison River 89.83 329 IAmb IAmb 07 36 36.8
comp=Z,112nm,1.1s
B08A Colville Reser 89.84 336 IAmb IAmb 07 36 35.5
comp=Z,103nm,1.4s
YHB Horse Butte 89.86 329 IAmb IAmb 07 36 36.8
comp=Z,98nm,1.1s
DLMT Dillon 89.92 331 IAmb IAmb 07 36 36.5
comp=Z,287nm,1.8s
XMI Christmas Isla 89.97 103 P **P 07 36 36.0 +2.4**
comp=Z,196nm,0.9s
C2SB Chapadao do Su 90.06 247 *e*P **P 07 36 35.2 +1.3**
AKUT Akutan 90.11 5 P **P 07 36 33.5 -0.1**
comp=Z,271nm,1.6s
NOKA Waynoka 90.16 317 IAmb IAmb 07 36 37.8
comp=Z,107nm,0.9s
CBB Campbell River 90.17 340 IAmb IAmb 07 36 37.1
comp=Z,102nm,1.3s
SGC2 Sao Gabriel da 90.29 270 P **P 07 36 34.7 -0.5**
TEFE Tefe 90.33 266 *e*P **P 07 36 36.4 +1.1**
UNV Unalaska Valle 90.34 6 P **P 07 36 34.9 +0.1**
baz=352
KSCO Kaye Shedlock' 90.38 321 IAmb IAmb 07 36 38.4
comp=Z,152nm,1.1s
SALV Santo Antonio 90.50 251 *e*P **P 07 36 37.3 +1.3**
FRTB Fartura 90.50 241 *e*P **P 07 36 37.5 +1.7**
FXWY Fox Creek 90.69 329 IAmb IAmb 07 36 40.4
comp=Z,68nm,1.1s
KPJI Kang Pucung 90.73 98 P **P 07 36 35.7 -1.5**
comp=Z,2µmcomp=Z,2µmcomp=Z,134nm,1.0s
PD31 Pinedale Array 90.76 327 IAmb IAmb 07 36 39.3
comp=Z,77nm,1.2s
PDAR Pinedale Array 90.76 327 P **P 07 36 37.0 -0.3**
comp=Z,14nm,0.7s,baz=63,slow=4.8,SNR=100
PDAR PKKPbc **PKKPbc 07 54 03.4 +1.4**
comp=Z,0.4nm,0.7s,baz=318,slow=0.8,SNR=3.5
PDAR LR LR 08 20 15.6
comp=Z,859nm,18.9s,baz=17,slow=37
comp=Z,14nm,0.7s
ELIS Ellis County 90.84 317 IAmb IAmb 07 36 41.2
comp=Z,128nm,1.0s
PP1B Ponte de Pedra 90.89 249 *e*P **P 07 36 39.3 +1.5**
NIKH Nikolski High 90.99 7 P **P 07 36 38.5 +0.8**
baz=350
X34A Smith Ranch, M 91.00 315 IAmb IAmb 07 36 41.8
comp=Z,124nm,1.2s
SJCC San Jacinto, C 91.05 283 P **P 07 36 35.5 -3.3**
ATKA Atka Island 91.07 11 P **P 07 36 38.7 +0.6**
BCYI Bear Canyon 91.12 330 IAmb IAmb 07 36 42.3
comp=Z,151nm,1.7s
LTY Liberty 91.24 336 IAmb IAmb 07 36 41.5
comp=Z,147nm,1.6s
MYLDM Lahad Datu 91.24 83 P **P 07 36 41.5 +1.9**
WAH2 Wahluke Slope 91.31 335 IAmb IAmb 07 36 42.9
comp=Z,146nm,1.3s
WMOK Wichita Mounta 91.44 316 IAmb IAmb 07 36 44.1
comp=Z,68nm,1.1s
HAYD Haden 91.50 325 IAmb IAmb 07 36 43.7
comp=Z,75nm,1.0s
E07A Sunnyside 91.58 336 IAmb IAmb 07 36 44.2
comp=Z,125nm,1.5s
LNOR Lincton Mounta 91.64 334 IAmb IAmb 07 36 43.4
comp=Z,146nm,2.0s
MXC Moxie City 91.71 336 IAmb IAmb 07 36 44.6
comp=Z,110nm,1.7s
RUSC La Rusia 91.73 278 P **P 07 36 39.2 -3.3**
WTFS Witchita Falls 91.96 315 IAmb IAmb 07 36 45.8
comp=Z,122nm,1.4s
SMWD Samnorwood 92.00 317 IAmb IAmb 07 36 46.6
comp=Z,57nm,0.9s
FW06 Azle 92.00 314 IAmb IAmb 07 36 46.0
comp=Z,128nm,1.5s
NLWA Neilton Lookou 92.12 338 IAmb IAmb 07 36 46.7
comp=Z,96nm,1.1s
BMO Blue Mountains 92.16 333 IAmb IAmb 07 36 45.4
comp=Z,81nm,1.3s
VILB Vilhena 92.26 256 IAmb IAmb 07 37 12.0
comp=Z,59nm,0.8s
VILB Vilhena 92.26 256 *e*P **P 07 36 45.7 +1.4**
O20A White River Ci 92.26 325 IAmb IAmb 07 36 46.5
comp=Z,87nm,1.0s
RTBA Rita Blanca 92.37 319 IAmb IAmb 07 36 46.9
comp=Z,50nm,1.0s
PTBC PUERTO BERRIO, 92.45 280 P **P 07 36 44.0 -1.2**
UREC San Jos de Ur 92.60 281 P **P 07 36 47.5 +1.6**
WHTX Lake Whitney, 92.64 313 IAmb IAmb 07 36 48.8
comp=Z,160nm,1.7s
SPBC San Pablo de B 92.66 279 P **P 07 36 45.2 -1.1**
T25A Trinidad 92.71 321 IAmb IAmb 07 36 49.0
comp=Z,48nm,1.0s
MFID Camas Ranch 92.82 331 IAmb IAmb 07 36 49.7
comp=Z,118nm,1.2s
PTLB Pontes e Lacer 92.89 253 *e*P **P 07 36 48.5 +1.4**
HVU Hansel Valley 92.95 329 IAmb IAmb 07 36 50.0
comp=Z,56nm,0.9s
PCJI Pacitan 93.04 98 P **P 07 36 44.7 -3.1**
comp=Z,2µmcomp=Z,159nm,1.1s
BSUT Blindstream Ca 93.09 327 IAmb IAmb 07 36 50.6
comp=Z,206nm,1.9s
HKT Hockley 93.10 311 P **P 07 36 49.6 +1.7**
HKT IAmb IAmb 07 36 51.4
comp=Z,114nm,1.6s
HKT Hockley 93.10 311 *i* P **P 07 36 47.1 -0.8**
HKT pmax pmax
comp=Z,28nm,1.4s
PTGB Pitanga 93.14 242 *e*P **P 07 36 50.0 +1.9**
G05A Wamic 93.23 336 IAmb IAmb 07 37 34.2
comp=Z,100nm,1.3s
APMT Aspermont 93.23 316 IAmb IAmb 07 36 51.4
comp=Z,65nm,1.2s
AQDB Aquidauana 93.24 247 *e*P **P 07 36 49.7 +1.1**
ROSC El Rosal 93.34 278 P **P 07 36 49.4 -0.4**
comp=Z,15nm,0.9s,baz=59,slow=5.9,SNR=9.3
ROSC LR LR 08 15 44.6
comp=Z,863nm,21.9s,baz=64,slow=34
comp=Z,15nm,0.9s
ROSC El Rosal 93.34 278 IAmb IAmb 07 37 26.7
comp=Z,126nm,1.8s
ABTX Abilene, Hawle 93.47 315 IAmb IAmb 07 36 52.8
comp=Z,185nm,1.7s
HELC Santa Helena 93.51 280 P **P 07 36 47.7 -2.9**
DBBC Dabeiba 93.57 281 P **P 07 36 53.3 +2.8**
P18A Preston Nutter 93.59 326 IAmb IAmb 07 36 52.7
comp=Z,58nm,1.2s
I07A Izee 93.62 334 IAmb IAmb 07 36 53.9
comp=Z,127nm,1.5s
G04A Mulino 93.64 337 IAmb IAmb 07 36 53.1
comp=Z,89nm,1.0s
BGU Big Grassy Mou 93.76 328 IAmb IAmb 07 36 53.9
comp=Z,78nm,1.3s
PV22 Blue Mesa, Par 93.79 324 IAmb IAmb 07 36 53.7
comp=Z,88nm,1.0s
PV15 Paradox Valley 93.80 324 IAmb IAmb 07 36 54.2
comp=Z,73nm,0.8s
PV07 Paradox Valley 93.80 324 IAmb IAmb 07 36 53.8
comp=Z,97nm,0.8s
PV21 Cone Mtn., Par 93.86 324 IAmb IAmb 07 36 54.1
comp=Z,80nm,0.9s
MPU Maple Canyon 93.90 327 IAmb IAmb 07 36 54.3
comp=Z,96nm,1.7s
GUY2C Guyana, Caldas 93.95 279 P **P 07 36 52.6 -0.1**
PV04 Paradox Valley 93.96 324 IAmb IAmb 07 36 54.6
comp=Z,114nm,1.2s
MLDN Muldoon 93.98 311 IAmb IAmb 07 36 55.2
comp=Z,145nm,1.6s
PV01 Paradox Valley 94.00 324 IAmb IAmb 07 36 55.3
comp=Z,56nm,0.9s
H04A Detroit Lake 94.01 336 IAmb IAmb 07 36 54.6
comp=Z,136nm,1.5s
PV11 David Mesa, Pa 94.02 324 IAmb IAmb 07 36 54.9
comp=Z,94nm,0.9s
PV02 Paradox Valley 94.03 324 IAmb IAmb 07 36 54.9
comp=Z,107nm,1.0s
PV16 Nysvonger Mesa 94.03 324 IAmb IAmb 07 36 55.0
comp=Z,82nm,0.9s
PV14 Lion Creek, Pa 94.03 324 IAmb IAmb 07 36 54.9
comp=Z,65nm,0.9s
PV03 Paradox Valley 94.04 324 IAmb IAmb 07 36 54.9
comp=Z,63nm,1.0s
BRDY Brady 94.06 313 IAmb IAmb 07 36 55.5
comp=Z,138nm,1.9s
PV17 East Wray Mesa 94.07 324 IAmb IAmb 07 36 55.1
comp=Z,76nm,1.0s
CBOC Ciudad Bolivar 94.09 280 P **P 07 36 51.7 -1.3**
PV13 Radium Mtn., P 94.10 324 IAmb IAmb 07 36 55.2
comp=Z,55nm,0.9s
PV05 Paradox Valley 94.30 324 IAmb IAmb 07 36 55.6
comp=Z,62nm,0.9s
PINE Pine Mountain 94.38 335 IAmb IAmb 07 36 57.9
comp=Z,165nm,1.6s
PRAC Prado 94.45 278 P **P 07 36 51.3 -3.2**
COR Corvallis 94.46 337 P **P 07 36 55.4 +1.5**
COR Corvallis 94.46 337 P **P 07 36 55.4 +1.5**
COR pmax pmax
comp=Z,589nm,1.9s
MACC Macarena, Meta 94.53 276 P **P 07 36 55.5 +0.7**
Q16A Castle Valley 94.59 326 IAmb IAmb 07 36 57.2
comp=Z,91nm,1.6s
ORTC Ortega, Tolima 94.63 278 P **P 07 36 53.0 -2.3**
SIV San Ignacio 94.72 254 LR LR 08 21 33.5
comp=Z,2µm,18.3s,baz=84,slow=37
ITAB Concordia 94.73 240 *e*P **P 07 36 56.6 +1.4**
ELK Elko 94.84 330 LR LR 08 20 46.8
comp=Z,2µm,21.9s,baz=32,slow=36
I04A Tendick Farm, 94.87 336 IAmb IAmb 07 36 58.4
comp=Z,78nm,1.1s
J05D Fort Rock, OR 94.92 335 IAmb IAmb 07 37 00.1
comp=Z,69nm,1.3s
CNLB Canela 95.12 237 *e*P **P 07 36 58.8 +1.6**
HMU Henry Mountain 95.19 325 IAmb IAmb 07 36 59.7
comp=Z,61nm,1.1s
MPSI Mapaga 95.19 86 P **P 07 36 57.2 -0.6**
K05A Summer Lake 95.30 334 IAmb IAmb 07 37 02.6
comp=Z,94nm,1.4s
TCRU Three Creeks R 95.42 327 IAmb IAmb 07 37 01.9
comp=Z,83nm,1.5s
ANMO Albuquerque 95.45 321 LR LR 08 21 01.6
comp=Z,1µm,21.8s,baz=36,slow=36
ANMO Albuquerque 95.45 321 *e*P **P 07 36 59.6 +0.7**
ANMO Albuquerque 95.45 321 *e*P **P 07 36 59.8 +0.9**
ANMO pmax pmax
comp=Z,20nm,1.5s
TOLI2 Tolitoli 95.46 85 P **P 07 36 58.5 -0.5**
YOTC Yotoco, Valle 95.47 279 P **P 07 36 58.2 -1.0**
OZNA Ozona 95.58 315 IAmb IAmb 07 37 02.5
comp=Z,65nm,1.5s
MTPU Mount Pierson 95.76 326 IAmb IAmb 07 37 03.8
comp=Z,92nm,1.6s
SIUN Universidad Ur 96.18 292 IAmb IAmb 07 37 04.7
comp=Z,13nm,1.1s
PKCU Pink Cliffs 96.31 326 IAmb IAmb 07 37 05.6
comp=Z,68nm,1.4s
FLOC Florencia 96.32 276 P **P 07 36 59.9 -3.1**
DRIO Del Rio 96.38 313 IAmb IAmb 07 37 05.5
comp=Z,63nm,1.5s
PECS Pecos 96.80 317 IAmb IAmb 07 37 07.9
comp=Z,72nm,1.5s
YBH Yreka Blue Hor 96.80 335 LR LR 08 22 46.3
comp=Z,70nm,21.0s,baz=26,slow=37
M03C McCloud 97.01 334 IAmb IAmb 07 37 09.3
comp=Z,66nm,1.2s
ALPN Alpine 97.42 316 IAmb IAmb 07 37 10.7
comp=Z,69nm,1.6s
BEKR Beckworth 97.60 333 IAmb IAmb 07 37 10.4
comp=Z,112nm,1.9s
CPUP Villa Florida 97.91 243 P Pdif 07 37 10.1 +0.3
comp=Z,0.8nm,0.8s,baz=298,slow=6.2,SNR=5.2
CPUP LR LR 08 23 53.8
comp=Z,461nm,19.1s,baz=266,slow=37
CPUP Villa Florida 97.91 243 *e*P Pdif 07 37 11.0 +1.2
NVAR Mina Array Bea 98.05 330 P Pdif 07 37 11.6 +0.9
comp=Z,10.0nm,0.7s,baz=45,slow=4.6,SNR=41
NVAR PKKPbc **PKKPbc 07 53 43.0 +0.1**
comp=Z,2.9nm,0.8s,baz=210,slow=5.6,SNR=11
NVAR LR LR 08 23 08.8
comp=Z,3µm,21.1s,baz=29,slow=36
comp=Z,10.0nm,0.7s
SOCE Pocosol 98.13 289 IAmb IAmb 07 40 45.3
comp=Z,91nm,1.5s
KAPI Kappang 98.17 90 P Pdif 07 37 11.6 +0.3
comp=Z,7.8nm,0.7s,baz=278,slow=9.6,SNR=3.7
KAPI PP **PP 07 41 10.8 -0.7**
comp=Z,42nm,1.2s,baz=277,slow=5.7,SNR=8.2
comp=Z,7.8nm,0.7s
TXAR Lajitas Array 98.22 315 P Pdif 07 37 12.9 +1.4
comp=Z,4.0nm,0.8s,baz=62,slow=4.5,SNR=32
TXAR PP **PP 07 41 08.8 -2.2**
comp=Z,3.2nm,1.0s,baz=52,slow=6.3,SNR=4.3
TXAR PKKPbc **PKKPbc 07 53 41.0 -1.0**
comp=Z,1.5nm,0.8s,baz=202,slow=3.6,SNR=6.9
TXAR LR LR 08 20 14.4
comp=Z,1µm,21.9s,baz=40,slow=35
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 98.22 315 P Pdif 07 37 12.4 +0.9
LHV Little Huntoon 98.28 331 IAmb IAmb 07 37 15.0
comp=Z,39nm,0.9s
WAKR Walker 98.44 331 IAmb IAmb 07 37 14.8
comp=Z,102nm,2.0s
JTS Las Juntas de 98.45 289 LR LR 08 22 01.8
comp=Z,237nm,18.2s,baz=47,slow=36
DUN6 Lazy B Ranch 98.69 321 IAmb IAmb 07 37 16.6
comp=Z,93nm,1.1s
OTAV Otavalo 99.37 277 P **Pdif 07 37 18.9 +1.7**
OTAV Otavalo 99.37 277 P **Pdif 07 37 18.9 +1.7**
OTAV pmax pmax
comp=Z,16nm,1.3s
OTAV Otavalo 99.37 277 *e*P **Pdif 07 37 17.1 -0.1**
APG El Apazote 99.58 296 LR LR 08 19 48.5
comp=Z,18nm,19.0s,baz=59,slow=34
LPAZ La Paz 100.44 257 P **Pdif 07 37 21.6 -0.4**
comp=Z,1.8nm,0.9s,baz=45,slow=2.9,SNR=7.3
LPAZ PP **PP 07 41 28.2 -1.4**
comp=Z,2.1nm,0.8s,baz=77,slow=6.9,SNR=3.7
LPAZ PKKP **PKKPbc 07 53 38.5 +2.1**
comp=Z,1.5nm,0.7s,baz=252,slow=3.2,SNR=5.8
SANI Sanana 101.52 84 PP **PP 07 41 30.0 -6.8**
SYO Syowa Base 105.17 174⇑ *e*Pdiff **Pdif 07 37 43.6 +2.6**
SYO Syowa Base 105.17 174⇑ *e*PP PKiKP 07 42 04.0 +9.2
TROLL Troll, Antarti 108.47 187 ⇑P **Pdif 07 38 02.6 +6.7**
comp=Z,82nm,0.7s
TROLL Troll, Antarti 108.47 187 ⇑P **PKiKP 07 41 59.9 -1.2**
comp=Z,82nm,0.7s
VNA2 Neumayer--Watz 108.64 190 P **Pdif 07 38 05.7 +9.2**
baz=26,slow=6.7
VNA2 Neumayer--Watz 108.64 190 P **PKiKP 07 42 01.6 +0.3**
baz=15,slow=5.2
SNAA Sanae 108.73 188 P **Pdif 07 38 03.6 +6.7**
SNAA Sanae 108.73 188 P **PKiKP 07 42 01.5 0.0**
SNAA Sanae 108.73 188 Pdiff **Pdif 07 38 03.5 +6.6**
comp=Z,0.5nm,0.8s,baz=352,slow=7.1,SNR=3.8
SNAA PP **PP 07 42 30.3 +0.9**
comp=Z,1.7nm,0.8s,baz=342,slow=7.1,SNR=3.8
SNAA PKKPbc **PKKPbc 07 53 10.4 -2.1**
comp=Z,0.8nm,0.5s,baz=188,slow=3.2,SNR=7.6
SNAA PKKP **PKKPab 07 53 22.9 +2.5**
comp=Z,4.7nm,0.8s,baz=208,slow=3.7,SNR=16
VNA3 Neumayer Olymp 109.27 191 P **Pdif 07 38 06.1 +6.8**
VNA3 Neumayer Olymp 109.27 191 P **PKiKP 07 42 02.3 -0.2**
PLCA Paso Flores 114.80 237 PKP **PKiKP 07 42 14.6 +0.6**
comp=Z,7.8nm,0.8s,baz=108,slow=2.0,SNR=16
WRA Warramunga Arr 118.19 95 PKP **PKPdf 07 42 20.6 -0.5**
comp=Z,26nm,0.8s,baz=300,slow=2.1,SNR=84
WRA PP **PP 07 43 37.5 -0.1**
comp=Z,9.5nm,0.9s,baz=308,slow=7.5,SNR=6.7
WRA PKKPbc **PKKPab 07 52 41.9 -0.5**
comp=Z,0.9nm,0.8s,baz=116,slow=3.4,SNR=5.4
WRA PKKP **PKKPdf 07 53 09.0 +1.1**
comp=Z,1.2nm,0.7s,baz=124,slow=3.1,SNR=4.9
WRAB Tennant Creek 118.19 95 P **PKPdf 07 42 20.5 -0.6**
BELA Belgrano 2 118.52 192 **PKPdf 07 42 19.6 -0.4**
ASAR Alice Springs 119.68 99 PKP **PKPdf 07 42 23.2 -0.6**
comp=Z,33nm,0.8s,baz=328,slow=1.4,SNR=168
ASAR PKKPbc **PKKPab 07 52 35.2 -0.4**
comp=Z,1.1nm,0.6s,baz=121,slow=3.7,SNR=14
ASAR Alice Springs 119.68 99 **PKPdf 07 42 23.4 -0.5**
ASAR Alice Springs 119.68 99 PKiKP **PKPdf 07 42 23.4 -0.5**
COEN Coen 122.22 84 P **PKiKP 07 42 29.3 +0.2**
COEN Coen 122.22 84 P **PKiKP 07 42 29.8 +0.7**
QIS Mount Isa 122.77 93 P **PKPdf 07 42 29.7 -0.2**
QIS Mount Isa 122.77 93 P **PKPdf 07 42 29.9 0.0**
SMAI San Martin Ant 122.79 206 **PKiKP 07 42 28.8 +0.2**
PMG Port Moresby 122.81 77 **PKiKP 07 42 30.4 +0.1**
PMG Port Moresby 122.81 77 P **PKiKP 07 42 33.0 +2.7**
PMG Port Moresby 122.81 77 P **PKiKP 07 42 30.9 +0.6**
PMG Port Moresby 122.81 77 *c i* PKiKP **PKiKP 07 42 31.6 +1.3**
PMG pmax pmax
comp=Z,15nm,0.7s
MTSU Mount Surprise 125.37 88 P **PKiKP 07 42 35.8 +0.5**
MTSU Mount Surprise 125.37 88 P **PKiKP 07 42 35.5 +0.2**
BBOO Buckleboo 125.39 108 P **PKiKP 07 42 36.4 +1.5**
BBOO Buckleboo 125.39 108 P **PKiKP 07 42 34.7 -0.2**
QSPA South Pole Qui 125.63 180 PKP **PKiKP 07 42 36.8 +2.5**

comp=Z,42nm,0.9s,baz=265,slow=1.6,SNR=82
QSPA South Pole Qui 125.63 180 PKiKP 07 42 37.2 +2.8
WHYH Whyalla 126.65 107 P **PKiKP 07 42 38.3 +0.9**
WHYH Whyalla 126.65 107 P **PKiKP 07 42 37.4 0.0**
HTT Hallett 127.85 107 P **PKiKP 07 42 39.9 +0.1**
HTT Hallett 127.85 107 P **PKiKP 07 42 39.7 -0.1**
CTA Charters Tower 127.94 89 P **PKiKP 07 42 40.6 +0.2**
CTA Charters Tower 127.94 89 P **PKiKP 07 42 40.8 +0.4**
CTAO Charters Tower 127.94 89 **PKPdf 07 42 39.5 -0.2**
CTAO Charters Tower 127.94 89 P **PKiKP 07 42 40.7 +0.4**
CTAO Charters Tower 127.94 89 P **PKiKP 07 42 40.8 +0.4**
CTAO Charters Tower 127.94 89 PKIKP **PKPdf 07 42 39.5 -0.2**
TV1H Townsville Har 127.97 87 P **PKiKP 07 42 40.8 +0.4**
TV1H Townsville Har 127.97 87 P **PKiKP 07 42 40.9 +0.5**
AUMBR Murray Bridge 128.74 109 P **PKiKP 07 42 42.0 +0.5**
AUMBR Murray Bridge 128.74 109 P **PKiKP 07 42 41.9 +0.5**
QLP Quilpie 129.33 97 P **PKiKP 07 42 43.4 +0.5**
QLP Quilpie 129.33 97 P **PKiKP 07 42 43.3 +0.4**
STKA Stephens Creek 129.36 104 PKP **PKPdf 07 42 42.4 +0.2**
comp=Z,3.5nm,1.0s,baz=305,slow=1.2,SNR=4.5
STKA Stephens Creek 129.36 104 P **PKiKP 07 42 42.6 -0.3**
STKA Stephens Creek 129.36 104 P **PKiKP 07 42 42.9 0.0**
TATA Tatamba Isabel 131.94 66 P **PKiKP 07 42 49.1 +0.5**
CMSA Cobar Meteorol 132.47 102 P **PKiKP 07 42 49.2 +0.1**
CMSA Cobar Meteorol 132.47 102 P **PKiKP 07 42 49.3 +0.1**
HNR Honiara 132.72 67 PKP **PKPdf 07 42 48.1 -0.9**
comp=Z,41nm,0.4s,baz=139,slow=5.1,SNR=1.9
BRAT Ballarat 133.07 111 P **PKiKP 07 42 51.3 +1.2**
BRAT Ballarat 133.07 111 P **PKiKP 07 42 50.7 +0.6**
AULRC Lightning Ridg 133.51 99 P **PKiKP 07 42 52.2 +0.9**
AULRC Lightning Ridg 133.51 99 P **PKiKP 07 42 51.8 +0.5**
VNDA Vanda 134.49 168 PKP **PKPdf 07 42 49.4 -1.1**
comp=Z,2.3nm,0.7s,baz=262,slow=0.9,SNR=8.7
VNDA SKPbc **SKPbc 07 46 13.6 -0.4**
comp=Z,7.5nm,1.0s,baz=270,slow=3.9,SNR=5.4
CAN Canberra 136.33 106 P **PKiKP 07 42 58.4 +1.5**
CAN Canberra 136.33 106 P **PKiKP 07 42 56.7 -0.2**
ARMA Armidale 136.82 98 P **PKiKP 07 42 59.9 +1.8**
ARMA Armidale 136.82 98 P **PKiKP 07 42 58.4 +0.3**
FUNA Funafuti 145.09 45 P **PKiKP 07 43 14.0 -1.4**
FUNA Funafuti 145.09 45 P **PKPdf 07 43 12.9 +1.4**
DZM Mont Dzumac 145.21 77 PKPbc **PKPdf 07 43 11.8 +0.1**
comp=Z,124nm,0.8s,baz=235,slow=1.9,SNR=61
DZM SKPbc **SKiKP 07 46 46.2 +0.6**
comp=Z,15nm,0.9s,baz=54,slow=5.0,SNR=3.3
DZM Mont Dzumac 145.21 77 *e*P **PKPab 07 43 11.5 0.0**
comp=Z,536nm,1.4s
DZM Mont Dzumac 145.21 77 *e*PP **PP 07 46 24.2 -7.3**
comp=Z,417nm,23.9s
DZM Mont Dzumac 145.21 77 *e*SS SS 08 05 16.3 -1.1
comp=Z,2µm,28.9s
DZM Mont Dzumac 145.21 77 *e*LR LR 08 31 00.0
comp=Z,994nm,24.6s
ONTNC Ouen Toro 145.34 77 P **PKPab 07 43 13.2 +1.4**
ONTNC Ouen Toro 145.34 77 P **PKPab 07 43 13.3 +1.4**
YATNC Mamie plateau, 145.56 77 P **PKPab 07 43 14.2 +1.5**
YATNC Mamie plateau, 145.56 77 P **PKPab 07 43 14.0 +1.3**
OUENC Ouen Island, N 145.70 77 P **PKPab 07 43 14.4 +1.2**
INH Isangel 146.04 71 P **PKPab 07 43 15.7 +1.1**
INH Isangel 146.04 71 P **PKPab 07 43 14.6 0.0**
MARNC Mare, Loyalty 146.15 75 P **PKPab 07 43 15.3 +0.4**
TAOE Nuku Hiva Isla 149.22 327 *e*P **PKPbc 07 43 21.2 -1.6**
comp=Z,566nm,1.0s
TAOE Nuku Hiva Isla 149.22 327 *e*PP PP 07 46 47.3 -6.6
comp=Z,199nm,33.6s
TAOE *e*S 07 49 44.3
comp=Z,310nm,24.9s
TAOE Nuku Hiva Isla 149.22 327 *e*SS SS 08 06 01.3 +0.7
comp=Z,2µm,26.3s
TAOE Nuku Hiva Isla 149.22 327 *e*LQ LQ 08 25 39.9
comp=Z,876nm,29.0s
TAOE *e*LR LR 08 32 51.3
comp=Z,3µm,37.9s
TAOE Nuku Hiva Isla 149.22 327 P **PKPbc 07 43 22.6 -0.2**
PYZ Puysegur Point 150.72 122 P **PKiKP 07 43 26.3 +0.3**
DCZ Deep Cove 151.14 121 **PKiKP 07 43 26.7 -0.2**
SYZ Scrubby Hill 152.35 123 P **PKPdf 07 43 24.1 +1.9**
ODZ Otahua Downs 153.64 121 P **PKPdf 07 43 26.6 +2.4**
RPZ Rata Peaks 154.12 118 **PKiKP 07 43 34.9 +1.7**
KHZ Kahutara 156.07 115 P **PKPdf 07 43 30.0 +2.4**
RKT Rikitea 157.30 298 *e*P **PKPdf 07 43 32.5 +2.7**
comp=Z,74nm,0.9s
RKT Rikitea 157.30 298 *e*SS SS 08 07 23.8 -6.4
comp=Z,5µm,31.5s
RKT Rikitea 157.30 298 *e*LR LR 08 36 28.5
comp=Z,5µm,32.2s
PMOR Pomariorio Ree 157.85 337 *e*P **PKPdf 07 43 27.6 -3.0**
comp=Z,166nm,1.4s
URZ Urewera 158.99 105 PKP **PKPdf 07 43 29.9 -1.4**
comp=Z,5.3nm,0.7s,baz=225,slow=4.3,SNR=5.1
URZ PKPab **PKPab 07 44 07.1 -1.1**
comp=Z,66nm,0.8s,baz=288,slow=2.3,SNR=20
PPT Papeete 160.78 339 PKPab **PKPab 07 44 17.9 +1.6**
comp=Z,61nm,1.2s,baz=69,slow=8.6,SNR=4.6
PPT2 Papeete2 160.80 339 *e*P **PKPdf 07 43 37.3 +3.2**
comp=Z,110nm,1.5s
PPT2 Papeete2 160.80 339 *e*PP **PP 07 47 51.5 -6.8**
comp=Z,441nm,27.8s
PPT2 Papeete2 160.80 339 *e*SS SS 08 08 09.9 +4.5
comp=Z,2µm,28.0s
PPT2 Papeete2 160.80 339 *e*LQ LQ 08 31 17.7
comp=Z,1µm,32.8s
PPT2 *e*LR LR 08 38 08.5
comp=Z,2µm,32.5s
PPT2 *e*LR LR 08 38 15.1
comp=Z,3µm,31.2s
TVO Taravao 160.89 338 *e*P **PKPdf 07 43 36.2 +2.0**
comp=Z,70nm,1.4s
TBI Tubuai 166.10 331 *e*PP **PP 07 48 24.2 -2.0**
comp=Z,1µm,36.8s
TBI Tubuai 166.10 331 *e*SS SS 08 09 05.4 +5.2
comp=Z,6µm,31.0s
TBI Tubuai 166.10 331 *e*LQ LQ 08 33 33.5
comp=Z,8µm,45.5s
TBI *e*LR LR 08 40 35.7
comp=Z,2µm,32.2s
TBI *e*LR LR 08 40 44.1
comp=Z,11µm,30.5s

INMG ***27*** *07:34:45.9±1.4,38°.90N×8°.33W,h14km±4km, ML1.3, Error ellipse: s-maj=3.4km s-min=1.6km az=89.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Mora*
MDD ***27*** *07:34:45.7±0.7,38°.88N×8°.32W,h15km,mb_Lg2.3/2, Error ellipse: s-maj=5.0km s-min=3.8km az=6.0*
SFS ***27*** *07:34:45.8,38°.91N×8°.32W,h17km,ML2.6/6,ML1.8/8, MLv1.4/8*
IGIL ***27*** *07:34:46.2,38°.90N×8°.34W,h13km,ML0.8*
ISC 27 07:34:43.6±1.1, 38°.95N±0'.03×8°.44W±0'.03, h22km±3km, n24, σ1°25/44, 2C-1D, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PMTG	**Montargil**	**0.21**	**53**	↑*i*Pg		**Pb**	**07 34 50.1**	**+0.7**
PMTG				*e*Sg		**Sb**	**07 34 53.5**	**0.0**
PMTG				*i* IAML			07 34 53.7	
PMTG				*i* IAML			07 34 53.7	
PARRA	**Arraiolos**	**0.34**	**112**	↓*e*Pg		**Pb**	**07 34 51.0**	**-2.5**
PARRA				*e*Sg		**Sb**	**07 34 55.0**	**-5.1**
PARRA				*i* IAML			07 34 55.2	
PARRA				*i* IAML			07 34 55.3	
PARRA				*i* IAML			07 34 55.3	
MOE	**Montemor**	**0.43**	**171**	*e*Pg		**Pb**	**07 34 53.1**	**+0.6**
MOE				*e*Sg		**Sb**	**07 34 58.4**	**0.0**
MOE				*i* IAML			07 34 58.8	
MOE				*i* IAML			07 34 58.9	
MOE				*i* IAML			07 34 58.9	
EVO	**Evora**	**0.53**	**141**	Pg		**Pb**	**07 34 54.2**	**0.0**
EVO				Sg		**Sb**	**07 35 00.6**	**-0.9**
EVO	**Evora**	**0.53**	**141**	↑*i*Pg		**Pb**	**07 34 54.3**	**0.0**
EVO				*e*Sg		**Sb**	**07 35 00.6**	**-0.9**
EVO				*i* IAML			07 35 00.7	
EVO				*i* IAML			07 35 00.9	
EVO				*i* IAML			07 35 01.5	
PSBE	**So Bento**	**0.63**	**334**	*e*P		**Pn**	**07 34 58.8**	**+1.4**
PSBE				*e*S		**Sn**	**07 35 08.4**	**+1.6**
PSBE				*i* IAML			07 35 09.7	
PMAFR	**Mafra**	**0.66**	**271**	Pg		**Pn**	**07 34 59.2**	**+1.6**
PMAFR				Sg		**Sn**	**07 35 09.6**	**+2.2**
PESTR	**Estremoz**	**0.67**	**96**	Pg		**Pb**	**07 34 56.3**	**-0.3**
PESTR				Sg		**Sb**	**07 35 04.4**	**-1.1**
PESTR	**Estremoz**	**0.67**	**96**	*e*Pg		**Pb**	**07 34 56.5**	**-0.1**
PESTR				*e*Sg		**Sb**	**07 35 04.5**	**-1.1**
PESTR				*i* IAML			07 35 04.7	
PESTR				*i* IAML			07 35 04.7	
PESTR				*i* IAML			07 35 04.8	
PSARD	**Sardoal**	**0.69**	**18**	*e*P		**Pn**	**07 34 58.6**	**+0.5**
PSARD				*e*S		**Sn**	**07 35 08.3**	**+0.1**
PSARD				*i* IAML			07 35 08.7	
PSARD				*i* IAML			07 35 09.4	
PSARD				*i* IAML			07 35 10.6	
PMRV	**Marv??o**	**0.95**	**59**	*e*P		**Pn**	**07 35 02.0**	**+0.4**
PMRV				*e*S		**Sb**	**07 35 13.7**	**+0.2**
PMRV				*i* IAML			07 35 14.3	
PMRV				*i* IAML			07 35 14.4	
PMRV				*i* IAML			07 35 14.5	
MESJ	**Messejana**	**1.12**	**171**	*e*P		**Pb**	**07 35 04.9**	**+0.6**
MESJ				*e*S		**Sb**	**07 35 18.3**	**-0.1**
MESJ				IAML			07 35 18.8	
	comp=E,1.6nm,0.1s							
EBAD	**Badajoz**	**1.13**	**99**	Sg		**Sb**	**07 35 18.0**	**-0.7**
EBAD				Pg		**Pn**	**07 35 04.2**	**+0.1**
EBAD	**Badajoz**	**1.13**	**99**	Pg		**Pn**	**07 35 04.3**	**+0.1**
EBAD				Sg		**Sb**	**07 35 18.0**	**-0.7**
EBAD				*i* IVmb_Lg			07 35 23.0	
PBAR	**Barrancos**	**1.34**	**125**	Pn		**Pb**	**07 35 07.6**	**-0.4**
PBAR				Sn		**Sn**	**07 35 22.7**	**-1.5**
PBAR	**Barrancos**	**1.34**	**125**	*e*P		**Pb**	**07 35 07.9**	**-0.2**
PBAR				*e*S		**Sn**	**07 35 23.9**	**-0.3**
PBAR				*i* IAML			07 35 28.5	
PCVE	**Castro Verde**	**1.35**	**166**	Pn		**Pb**	**07 35 08.4**	**+0.3**
PCVE				Sn		**Sn**	**07 35 24.0**	**-0.3**
PCVE	**Castro Verde**	**1.35**	**166**	*e*P		**Pb**	**07 35 08.5**	**+0.4**
PCVE				*e*S		**Sb**	**07 35 25.2**	**+0.2**
PCVE				*i* IAML			07 35 25.7	
PCVE				*i* IAML			07 35 25.8	
PCVE				*i* IAML			07 35 26.6	
EGRO	**El Granado**	**1.60**	**152**	Sn		**Sn**	**07 35 29.5**	**-1.0**
EGRO	**El Granado**	**1.60**	**152**	Sg		**Sb**	**07 35 32.2**	**+0.1**
PVAQ	**Vaqueiros**	**1.64**	**159**	*e*Sg		**Sb**	**07 35 33.9**	**+0.5**
PVAQ				*i* IAML			07 35 34.5	
PVAQ				*i* IAML			07 35 35.9	
PVAQ				*i* IAML			07 35 36.4	
MORF	**Marmelete**	**1.65**	**186**	*e*Pn		**Pb**	**07 35 14.5**	**+1.2**
MORF				*e*Sg		**Sb**	**07 35 35.5**	**+1.9**
EMIN	**Mina Concepcio**	**1.82**	**130**	Sn		**Sn**	**07 35 35.0**	**-1.1**
EMIN	**Mina Concepcio**	**1.82**	**130**	Pg		**Pb**	**07 35 16.8**	**+0.5**
EMIN				*i* IVmb_Lg			07 35 22.2	
EMIN				Sg		**Sb**	**07 35 38.0**	**-0.6**

ASRS 27 07:59:57.0±0.5, 53°.95N×86°.63E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

ASRS 27 08:00:12.0±0.9, 55°.60N×86°.17E, h0km, M3.0, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

CATAC 27 08:08:04.7±0.7, 9°N±3°×8°4W±°, h7km±3km, M3.1/8, MLv3.1/8, Error ellipse: s-maj=9.0km s-min=4.3km az=39.1, confirmed, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
QUEP	**Quepos**	**0.53**	**4**	S		Sb	08 08 23.3	-0.9
QUEP	**Quepos**	**0.53**	**4**	P		Pg	08 08 15.0	0.0
OCHAL	**Ojochal**	**0.58**	**70**	P		Pg	08 08 16.1	+0.2
OCHAL	**Ojochal**	**0.58**	**70**	Pn		Pn	08 08 25.4	+5.9
OCHAL				S		Sb	08 08 25.5	-0.1
DRK0	**Durika**	**1.01**	**69**	P		Pg	08 08 23.8	-0.3
DRK0	**Durika**	**1.01**	**69**	S		Sb	08 08 38.6	+0.4
TCS1	**Tacares**	**1.14**	**355**	P		Pg	08 08 25.9	-0.7
CDITO	**Canoas**	**1.35**	**104**	P		Pn	08 08 29.6	-0.4
CDITO	**Canoas**	**1.35**	**104**	S		Sb	08 08 47.2	-0.7
JTS	**Las Juntas de**	**1.57**	**332**	P		Pn	08 08 31.4	-1.7
JTS				S		Sg	08 08 54.9	-0.4
COVE	**Coope Vega, Sa**	**1.82**	**354**	P		Pn	08 08 35.7	-0.8

IDC ***27*** *08:17:05.2±0.5,5°.68S×153°.27E, h0km, mb4.4/22, mbtmp4.4/25, ML3.4/3, Error ellipse: s-maj=17.9km s-min=12.9km az=91.0*
NEIC ***27*** *08:17:07.2±2.1,5°.67S±0°.07×153°.34E±0°.07, h10km±1km, mb4.9/56, Error ellipse: s-maj=12.6km s-min=10.6km az=50.0*
DJA ***27*** *08:17:24.8±1.7,6°S±7°×15°4E±°, h193km±16km, M4.5/18, mb4.5/18, mB5.2/4, Mw(mB)4.6/4*
ISC 27 08:17:10.7±0.4, 5°.70S±0°.06×153°.27E±0°.06, h35km, n105, σ1°52/96, mb4.8/58, 2C-1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RABL	**Rabaul**	**1.86**	**324**			**Pn**	**08 17 39.4**	**-0.8**
MANU	**Manus Island**	**6.92**	**301**	Pn		**Pn**	**08 18 48.5**	**-1.2**
PMG	**Port Moresby**	**7.09**	**238**	Pn		**Pn**	**08 18 51.9**	**-0.1**
	5.1nm,0.3s,baz=21,slow=3.7,SNR=15							
PMG				Sn		**Sn**	**08 20 10.8**	**-0.6**
	3.3nm,0.3s,baz=44,slow=21,SNR=6.7							
	45nm,0.7s							
PMG	**Port Moresby**	**7.09**	**238**			**Pn**	**08 18 52.3**	**+0.3**
HNR	**Honiara**	**7.58**	**120**	Pn		**Pn**	**08 18 55.7**	**-3.1**
	3.6nm,0.3s,baz=187,slow=11,SNR=1.2							
	18nm,0.4s							
COEN	**Coen**	**12.89**	**230**	Pn		**Pn**	**08 20 11.4**	**-0.1**
JAY	**Jayapura**	**12.93**	**284**	Pn		**Pn**	**08 20 10.2**	**-1.9**
	0.8nm,0.3s,baz=93,slow=4.1,SNR=3.5							
	29nm,1.0s							
CTAO	**Charters Tower**	**15.84**	**205**			**P**	**08 20 55.1**	**+0.5**
SANVU	**Saraoutou**	**16.76**	**126**	P		**Pn**	**08 21 03.5**	**+0.6**
EIDS	**Eidsvold**	**19.67**	**186**	P		**P**	**08 21 37.4**	**+0.6**
DZM	**Mont Dzumac**	**20.67**	**143**	P		**P**	**08 21 48.7**	**+0.9**
	16nm,1.1s,baz=1.3,slow=16,SNR=3.6							
	16nm,1.1s							
DZM	**Mont Dzumac**	**20.67**	**143**	P		Pn	08 21 50.1	-0.2
DZM				IAmb		IAmb	08 21 57.4	
	comp=Z,106nm,1.8s							
SWI	**Sorong**	**22.49**	**282**	P		**P**	**08 22 10.8**	**+3.5**
	comp=Z,1µmcomp=Z,53nm,0.8s							
MTN	**Manton Dam**	**22.96**	**250**			**P**	**08 22 11.3**	**-1.0**
WB0	**Warramunga Arr**	**23.08**	**231**			**P**	**08 22 11.7**	**-1.8**
WR8	**Warramunga Arr**	**23.10**	**230**	P		**P**	**08 22 12.4**	**-1.4**
WRA	**Warramunga Arr**	**23.22**	**231**	P		**P**	**08 22 13.7**	**-1.2**
	comp=Z,3.0nm,0.7s,baz=53,slow=9.9,SNR=13							
WRA				PcP		**PcP**	**08 26 02.0**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=40,slow=1.6,SNR=6.8							
	comp=Z,3.0nm,0.7s							
WRA	**Warramunga Arr**	**23.22**	**231**			**P**	**08 22 11.0**	**-3.9**
INKA	**Innaminka**	**24.94**	**207**			**P**	**08 22 30.3**	**-0.5**
AS31	**Alice Springs**	**25.82**	**224**			**P**	**08 22 38.2**	**-0.7**
ASAR	**Alice Springs**	**25.82**	**224**	P		**P**	**08 22 37.9**	**-1.0**
	comp=Z,3.5nm,0.8s,baz=55,slow=9.1,SNR=33							
ASAR				PcP		**PcP**	**08 26 08.1**	**0.0**
	comp=Z,2.0nm,0.9s,baz=57,slow=2.6,SNR=5.3							
	comp=Z,3.5nm,0.8s							
ASAR	**Alice Springs**	**25.82**	**224**			**P**	**08 22 37.5**	**-1.4**
KNRA	**Kununurra**	**26.01**	**246**	P		**P**	**08 22 38.7**	**-2.0**
STKA	**Stephens Creek**	**28.24**	**201**	P		**P**	**08 22 59.4**	**-1.1**
	comp=Z,5.7nm,1.0s,baz=346,slow=7.0,SNR=7.8							
	comp=Z,5.7nm,1.0s							
SOEI	**Soe**	**29.01**	**260**	P		**P**	**08 23 08.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**29.65**	**243**			**P**	**08 23 11.7**	**-1.6**
BBOO	**Buckleboo**	**31.38**	**209**	P		**P**	**08 23 27.5**	**-0.9**
MPSI	**Mapaga**	**33.86**	**279**	P		**P**	**08 23 48.9**	**-1.4**
	comp=Z,2µmcomp=Z,7.2nm,0.8s							
FORT	**Forrest**	**34.40**	**220**	P		**P**	**08 23 54.5**	**-0.2**
MBWA	**Marble Bar**	**35.94**	**241**	P		**P**	**08 24 07.8**	**-0.4**
MBWA				IAmb		IAmb	08 24 17.3	
	comp=Z,12nm,0.7s							
TOZ	**Tahuroa Road**	**37.77**	**151**	P		**P**	**08 24 25.6**	**+2.1**
TOZ				IAmb		IAmb	08 24 26.8	
	comp=Z,18nm,1.1s							
RTZ	**Ruatahuna**	**39.19**	**150**			**P**	**08 24 37.2**	**+1.7**
RTZ				IAmb		IAmb	08 24 49.2	
	comp=Z,31nm,1.1s							
BKZ	**Black Stump Fm**	**39.38**	**151**	P		**P**	**08 24 39.2**	**+2.2**
BKZ				IAmb		IAmb	08 25 20.4	
	comp=Z,33nm,1.4s							
TCW	**Tory Channel**	**40.03**	**155**	P		**P**	**08 24 44.4**	**+2.0**
MJAR	**Matsushiro Arr**	**44.33**	**343**	P		**P**	**08 25 17.8**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=180,slow=8.5,SNR=5.0							
MJAR				PcP		**PcP**	**08 27 01.3**	**0.0**
	comp=Z,1.5nm,0.7s,baz=173,slow=4.3,SNR=4.2							
	comp=Z,1.3nm,0.6s							
MJAR	**Matsushiro Arr**	**44.33**	**343**	IAmb		IAmb	08 25 24.1	
	comp=Z,2.8nm,0.9s							
TPI	**Tanjungpandan**	**45.58**	**272**	P		**P**	**08 25 28.4**	**+0.6**
	comp=Z,17nm,1.4s							
KSRS	**Korea Array**	**49.01**	**333**	P		**P**	**08 25 55.3**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=147,slow=8.0,SNR=2.7							
	comp=Z,1.3nm,0.7s							
NJ2	**Nanjing**	**49.84**	**321**	*e*P		**P**	**08 26 01.3**	**+0.8**
NJ2				pmax		pmax		
	comp=Z,20nm,0.8s							
PPI	**Padang Panjang**	**53.03**	**274**	P		**P**	**08 26 22.8**	**-2.0**
USRK	**Ussuriysk Ar.**	**53.25**	**341**	P		**P**	**08 26 25.5**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=109,slow=11,SNR=3.1							
	comp=Z,3.3nm,0.7s							
HNS	**HongShan**	**55.95**	**323**	↑P		**P**	**08 26 45.8**	**+0.3**
HNS				pmax		pmax		
	comp=Z,9.0nm,1.2s							
BNX	**BinXian**	**56.18**	**338**	↑P		**P**	**08 26 46.0**	**-1.0**
BNX				pmax		pmax		
	comp=Z,9.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**58.68**	**296**	P		**P**	**08 27 06.2**	**+0.9**
	comp=Z,7.3nm,0.9s,baz=107,slow=7.0,SNR=21							
	comp=Z,7.3nm,0.9s							
CMAR	**Chiang Mai Ar**	**58.68**	**296**			**P**	**08 27 04.2**	**-1.1**
PETK	**Petropavlovsk-**	**58.71**	**3**	P		**P**	**08 27 04.7**	**0.0**
	comp=Z,4.9nm,0.6s,baz=187,slow=7.4,SNR=13							
	comp=Z,4.9nm,0.6s							
PZH	**PanZhiHua**	**59.27**	**305**	P		**P**	**08 27 10.8**	**+1.5**
CD2	**Chengdu**	**59.68**	**311**	P		**P**	**08 27 14.3**	**+2.3**
CD2				pmax		pmax		
	comp=Z,20nm,0.6s							
XLT	**XiLinHaoTe**	**59.68**	**330**	*e*P		**P**	**08 27 10.5**	**-1.3**
XLT				pP		pP	08 27 23.0	+1.9
XLT				sP		pwP	08 27 28.8	+2.3
XLT				pmax		pmax		
	comp=Z,12nm,1.0s							
HHC	**Hu-ho-hao-te**	**60.05**	**324**	*e*P		**P**	**08 27 16.3**	**+1.9**
HHC				pmax		pmax		
	comp=Z,13nm,0.7s							
BTO	**Baotou**	**60.80**	**323**	*e*P		**P**	**08 27 23.5**	**+4.0**
BTO				PP		PP	08 30 54.5	+81
BTO				S		**S**	**08 35 41.0**	**+6.3**
BTO				pmax		pmax		
	comp=Z,9.0nm,0.7s							
BTO				pmax		pmax		
	comp=Z,430nm,4.1s							
BTO				LR		LR		
	comp=N,170nm,3.7s							
BTO				LR		LR		
	comp=E,440nm,13.9s							
BTO				LR		LR		
	comp=Z,160nm,9.4s							
LZDM	**Lanzhou Array**	**62.23**	**316**	P		**P**	**08 27 29.0**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=142,slow=4.9,SNR=1.6							
	comp=Z,1.1nm,0.3s							
HILR	**Hailar Array B**	**62.27**	**336**	P		**P**	**08 27 28.6**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=137,slow=7.1,SNR=7.2							
	comp=Z,1.0nm,0.4s							
GTA	**Gaotai**	**66.63**	**317**	*e*P		**P**	**08 27 59.3**	**+1.2**
GTA				pP		pP	08 28 03.5	-4.1
GTA				pmax		pmax		
	comp=Z,4.0nm,1.3s							
ULN	**Ulaanbaatar**	**67.00**	**328**	P		**P**	**08 28 00.8**	**+0.5**
ULN				IAmb		IAmb	08 28 01.8	
	comp=Z,7.1nm,1.1s							
SHL	**Shillong**	**67.17**	**301**	P		**P**	**08 28 01.3**	**-0.5**
SHL				IAmb		IAmb	08 28 05.4	
	comp=Z,16nm,1.1s							
SONM	**Songino Array**	**67.33**	**328**	P		**P**	**08 28 02.4**	**0.0**
	comp=Z,1.9nm,0.7s,baz=138,slow=5.4,SNR=15							
SONM				PKP2bc		**P'P'bc**	**08 56 27.8**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=257,slow=2.5,SNR=4.4							
	comp=Z,1.9nm,0.7s							
VNDA	**Vanda**	**71.92**	**178**	P		**P**	**08 28 30.4**	**+0.5**
	comp=Z,3.9nm,1.0s,baz=309,slow=7.9,SNR=6.7							
	comp=Z,3.9nm,1.0s							
VNDA	**Vanda**	**71.92**	**178**	P		**P**	**08 28 30.7**	**+0.8**
VNDA				IAmb		IAmb	08 28 34.6	
	comp=Z,14nm,1.4s							
WMQ	**Urumqi**	**76.72**	**317**	*e*P		**P**	**08 28 59.0**	**+0.4**
WMQ				LR		LR		
	comp=Z,150nm,24.1s							
TIXI	**Tiksi**	**78.85**	**352**			**P**	**08 29 09.1**	**-0.6**
TIXI				IAmb		IAmb	08 29 12.1	
	comp=Z,19nm,1.4s							
E19K	**Redstone River**	**80.90**	**17**	IAmb		IAmb	08 29 33.6	
	comp=Z,18nm,1.2s							
MKAR	**Makanchi Array**	**81.31**	**319**	P		**P**	**08 29 23.2**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=102,slow=6.1,SNR=21							
	comp=Z,4.2nm,0.8s							
MKAR	**Makanchi Array**	**81.31**	**319**			**P**	**08 29 22.7**	**-0.9**
MCK	**McKinley**	**81.51**	**22**			**P**	**08 29 22.7**	**-1.6**
MCK				IAmb		IAmb	08 29 24.8	
	comp=Z,16nm,1.0s							
MAKZ	**Makanchi**	**81.52**	**319**			**P**	**08 29 24.2**	**-0.5**
MAKZ				IAmb		IAmb	08 29 25.8	
	comp=Z,8.6nm,0.9s							
KLU	**Klutina**	**81.59**	**25**	P		**P**	**08 29 24.2**	**-0.6**
KLU				IAmb		IAmb	08 29 26.1	
	comp=Z,10nm,1.0s							
ZAA0	**Zalesovo Array**	**82.16**	**326**	IAmb		IAmb	08 29 27.9	
	comp=Z,7.2nm,0.8s							
ZALV	**Zalesovo Beam**	**82.16**	**326**	P		**P**	**08 29 27.0**	**-0.9**
	comp=Z,8.4nm,0.7s,baz=112,slow=5.6,SNR=31							
	comp=Z,8.4nm,0.7s							
ZALV	**Zalesovo Beam**	**82.16**	**326**			**P**	**08 29 27.3**	**-0.5**
IL31		**82.81**	**22**	IAmb		IAmb	08 30 18.6	
	comp=Z,11nm,1.4s							
ILAR	**Eielson Array**	**82.81**	**22**	P		**P**	**08 29 29.2**	**-1.8**
	comp=Z,2.5nm,0.9s,baz=261,slow=5.4,SNR=19							
	comp=

	comp=Z,0.3nm,0.3s,baz=62,slow=2.2,SNR=1.4							
NOA	**NORSAR Array B**	**117.92**	**340**	PKP		**PKPdf**	**08 35 53.2**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=69,slow=2.8,SNR=3.1							
PLCA	**Paso Flores**	**118.78**	**143**	PKP		**PKiKP**	**08 35 56.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=248,slow=5.4,SNR=3.0							
GERES	**GERESS Array B**	**125.06**	**328**	PKP		**PKPdf**	**08 36 07.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=64,slow=9.1,SNR=5.0							
LPAZ	**La Paz**	**133.58**	**119**	PKP		**PKiKP**	**08 36 26.7**	**+0.1**
	comp=Z,6.0nm,1.0s,baz=256,slow=2.4,SNR=16							
LPAZ	**La Paz**	**133.58**	**119**			**PKiKP**	**08 36 26.9**	**+0.2**
BDFB	**Brasilia**	**150.10**	**135**	PKPbc		**PKiKP**	**08 36 59.8**	**-0.1**
	baz=308,slow=0.2							
TORD	**Torodi Ar. Bea**	**151.02**	**287**	PKPbc		**PKPbc**	**08 37 00.2**	**-0.8**
	comp=Z,22nm,0.7s,baz=55,slow=4.6,SNR=5.3							

*SKO **27** 08:31:32.7,41°.56N×19°.42E, h0km, ML3.2*
*TIR **27** 08:31:32.1,41°.52N×19°.38E, h32km±2km, Ml3.4/7*
*PDG **27** 08:31:32.7±0.2,41°.47N×19°.52E, h13km, MD3.5/8, ML3.4/13, Error ellipse: s-maj=0.6km s-min=1.1km az=0.0*
*BEO **27** 08:31:34.5±0.5,41°.54N×19°.67E, h9km±2km, ML3.2/13*
*IDC **27** 08:31:35.8±2.7,41°.40N×19°.66E, h48km±26km, mb3.6/3, mbtmp3.7/6, ML3.0/2, Error ellipse: s-maj=31.9km s-min=18.5km az=82.0*

ISC 27 08:31:32.9±0.9,**41°.50N**±0°.02×**19°.51E**±0°.02,**h16**km±7km, **n77**,σ1°**65**/123,**10C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.31**	**119**	Pg		**Pg**	**08 31 39.1**	**-0.3**
TIR				Sg		**Sg**	**08 31 42.8**	**-1.0**
TIR				AML		AML	08 31 44.2	
	28nm,0.3s							
TIR				AML		AML	08 31 44.3	
	14nm,0.5s							
TIR	**Tirane**	**0.31**	**119**	*i* Pg		**Pg**	**08 31 39.2**	**-0.3**
TIR				*i* Sg		**Sb**	**08 31 44.5**	**-0.4**
ULC	**Ulcinj**	**0.51**	**337**	⇓*i* Pg		**Pg**	**08 31 42.3**	**-0.7**
ULC				eSg		**Sg**	**08 31 50.3**	**+0.5**
SDA	**Shkodra**	**0.55**	**359**	Pn		**Pg**	**08 31 42.9**	**-1.0**
SDA				Sn		**Sb**	**08 31 52.2**	**+0.4**
SDA				AML		AML	08 31 53.8	
	28μm,0.2s							
SDA				AML		AML	08 31 54.9	
	30μm,0.2s							
PHP	**Peshkopia**	**0.72**	**75**	Pg		**Pg**	**08 31 46.0**	**-1.1**
PHP				Sg		**Sn**	**08 31 58.4**	**-0.9**
PHP				AML		AML	08 32 01.6	
	5.9nm,0.5s							
DRME	**Dracevica, Mon**	**0.73**	**341**	*e*Pg		**Pg**	**08 31 46.3**	**-0.9**
DRME	**Dracevica, Mon**	**0.73**	**341**	⇓*e*Pg		**Pg**	**08 31 46.2**	**-0.9**
DRME				eSg		**Sb**	**08 31 57.9**	**+0.9**
BUM	**Brajici-Budva**	**0.92**	**330**	⇓*i*Pg		**Pb**	**08 31 50.1**	**-0.5**
BUM				*i* Sg		**Sg**	**08 32 04.2**	**+1.2**
PDG	**Podgorica**	**0.95**	**349**	Pg		**Pb**	**08 31 49.5**	**-1.5**
PDG				Sg		**Sb**	**08 32 03.2**	**-0.1**
PDG	**Podgorica**	**0.95**	**349**	⇑P		**Pb**	**08 31 50.9**	**-0.1**
PDG				⇓S		**Sb**	**08 32 03.6**	**+0.3**
PDG	**Podgorica**	**0.95**	**349**	*e*Pg		**Pb**	**08 31 50.7**	**-0.3**
PDG				*e*Sg		**Sn**	**08 32 06.1**	**+1.3**
PDG	**Podgorica**	**0.95**	**349**	⇓*i*Pg		**Pb**	**08 31 50.0**	**-1.0**
PDG				*i* Sg		**Sn**	**08 32 05.6**	**+0.8**
VLO	**Vlora**	**1.03**	**181**	Pn		**Pb**	**08 31 51.3**	**-1.0**
OHR	**Ohrid**	**1.05**	**111**	*i* Pg		**Pb**	**08 31 52.6**	**0.0**
OHR				*i* Sg		**Sn**	**08 32 09.9**	**+2.7**
OHR				*e*Lg		Lg	08 32 10.2	
	comp=N,697nm,0.7s							
OHR				*e*Lg		Lg	08 32 12.4	
	comp=E,880nm,0.6s							
CEME	**Cevo**	**1.14**	**337**	⇓*i*Pg		**Pb**	**08 31 53.7**	**-0.5**
CEME				*i* Sg		**Sn**	**08 32 10.9**	**+1.4**
PVY	**Plav**	**1.14**	**17**	*e*Pg		**Pb**	**08 31 54.1**	**-0.3**
PVY	**Plav**	**1.14**	**17**	⇓*i*Pg		**Pb**	**08 31 53.4**	**-1.0**
PVY				*i* Sg		**Sn**	**08 32 11.5**	**+1.7**
HCY	**Herceg Novi**	**1.21**	**322**	*e*Pg		**Pn**	**08 31 55.1**	**-0.1**
HCY				*i* Sg		**Sg**	**08 32 13.5**	**+1.3**
KBN	**Korca**	**1.30**	**132**	Pg		**Pb**	**08 31 57.5**	**+0.4**
KBN				Sg		**Sg**	**08 32 16.4**	**+1.3**
KBN				AML		AML	08 32 25.5	
	comp=E,2.2nm,0.8s							
NKME	**Niksic**	**1.33**	**342**	⇓*i*Pg		**Pn**	**08 31 56.9**	**0.0**
NKME				*i* Sg		**Sg**	**08 32 16.9**	**+0.9**
KOME	**Kolasin**	**1.35**	**0**	*e*Pg		**Pb**	**08 31 58.2**	**+0.3**
KOME	**Kolasin**	**1.35**	**0**	*e*Pg		**Pn**	**08 31 58.0**	**+0.8**
KOME				*e*Sg		**Sg**	**08 32 18.7**	**+2.1**
IVA	**Berane**	**1.40**	**12**	⇑*i*Pg		**Pn**	**08 31 57.9**	**0.0**
IVA				*i* Sg		**Sg**	**08 32 20.2**	**+2.0**
TREB	**Trebinje**	**1.49**	**325**	*e*Pg		**Pn**	**08 32 00.5**	**+1.4**
SKO	**Skopje**	**1.52**	**71**	*i* Pg		**Pg**	**08 32 01.7**	**-0.4**
SKO				*i* Sg		**Sg**	**08 32 21.6**	**-0.4**
BRY	**Bratogost**	**1.58**	**333**	⇓*i*Pn		**Pn**	**08 32 01.5**	**+1.2**
BRY				*i* Sn		**Sg**	**08 32 23.9**	**+0.1**
NEST	**Nestorio**	**1.59**	**132**	Pn		**Pb**	**08 32 02.8**	**+0.8**
NEST				Sn		**Sg**	**08 32 25.0**	**+0.7**
NEST				AML		AML	08 32 26.6	
	comp=E,1.2nm,0.9s							
UPM	**Unac-Piva**	**1.76**	**345**	⇓*i*Pn		**Pn**	**08 32 04.4**	**+1.5**
UPM				*e*Sn		**Sb**	**08 32 28.6**	**+1.7**
SJES	**Sjenica**	**1.79**	**11**	*e*Pg		**Pb**	**08 32 05.9**	**+0.4**
SJES				*e*Sg		**Sg**	**08 32 30.8**	**+0.1**
PLE	**Pljevlja**	**1.83**	**357**	*e*Pg		**Pb**	**08 32 07.1**	**+1.0**
PLE	**Pljevlja**	**1.83**	**357**	*e*Pn		**Pn**	**08 32 05.0**	**+1.2**
PLE				*e*Sn		**Sb**	**08 32 30.4**	**+1.6**
STON	**Ston**	**1.92**	**316**	*e*Pn		**Pn**	**08 32 07.2**	**+2.3**
STON				*e*Sn		**Sb**	**08 32 33.3**	**+2.0**
NOCI	**Noci**	**1.98**	**250**	Pn		**Pn**	**08 32 05.2**	**-0.5**
NOCI				AML		AML	08 32 43.2	
	comp=E,0.9nm,0.4s							
IGT	**Igoumenitsa**	**2.06**	**162**	Pn		**Pn**	**08 32 08.2**	**+1.3**
IGT	**Igoumenitsa**	**2.06**	**162**	*i* Pn		**Pn**	**08 32 08.0**	**+1.1**
IGT				*i* Sn		**Sb**	**08 32 38.0**	**+2.6**
SELS	**Selova**	**2.09**	**34**	*e*Pg		**Pn**	**08 32 08.6**	**+1.3**
SELS				*e*Sn		**Sn**	**08 32 33.4**	**+0.3**
IVAS	**Ivanjica**	**2.13**	**13**	*e*Pn		**Pn**	**08 32 09.1**	**+1.2**
IVAS				*e*Sn		**Sn**	**08 32 35.4**	**+1.4**
GRG	**Griva**	**2.25**	**103**	*i* Pn		**Pn**	**08 32 10.7**	**+1.3**
GRG				*i* Sn		**Sb**	**08 32 39.5**	**-1.2**
MATE	**Matera**	**2.28**	**249**	⇑P		**Pb**	**08 32 14.4**	**+0.7**
GOCS	**Kraljevo Serbi**	**2.29**	**26**	*e*Pn		**Pn**	**08 32 11.9**	**+1.7**
GOCS				*e*Sn		**Sn**	**08 32 37.7**	**-0.4**
VAY	**Valandovo**	**2.31**	**93**	*i* Pn		**Pn**	**08 32 11.1**	**+0.9**
VAY				*i* Sn		**Sb**	**08 32 41.2**	**-1.2**
VAY				*e*Lg		Lg	08 32 41.8	
	comp=E,90nm,0.8s							
VAY				*e*Lg		Lg	08 32 50.1	
	comp=N,101nm,0.8s							
BBLS	**Lazi&#263i**	**2.37**	**358**	*e*Pn		**Pn**	**08 32 12.4**	**+1.3**
BBLS				*e*Sn		**Sb**	**08 32 43.6**	**-0.6**
BOSS	**Bosilegrad**	**2.43**	**65**	*e*Pn		**Pn**	**08 32 13.3**	**+1.4**
BOSS				*e*Sn		**Sn**	**08 32 40.7**	**-0.6**
GRUS	**Gruza**	**2.55**	**20**	*e*Pn		**Pn**	**08 32 15.6**	**+2.0**
GRUS				*e*Sn		**Sn**	**08 32 45.2**	**+1.0**
KNT	**Kendrikon**	**2.57**	**96**	*i* Pn		**Pn**	**08 32 15.9**	**+2.0**
KNT				*i* Sn		**Sn**	**08 32 46.5**	**+1.6**
BOVS	**Bovan**	**2.68**	**36**	⇑P		**Pn**	**08 32 16.9**	**+1.5**
BOVS	**Bovan**	**2.68**	**36**	*e*Pn		**Pn**	**08 32 17.2**	**+1.8**
BOVS				*e*Sn		**Sn**	**08 32 48.2**	**+0.7**
KKB	**Krupnik**	**2.73**	**82**	*i* Pn		**Pn**	**08 32 17.9**	**+1.8**
THE	**Thessaloniki**	**2.75**	**107**	*i* Pn		**Pn**	**08 32 17.3**	**+1.0**
THE				*i* Sn		**Sn**	**08 32 49.7**	**+0.5**
TRUS	**Trudelj**	**2.80**	**13**	*e*Pn		**Pb**	**08 32 20.4**	**-2.2**
SGRT	**San Giovanni R**	**2.83**	**276**	Pn		**Pn**	**08 32 16.3**	**-1.3**
ZAPS	**Zavoj**	**2.92**	**51**	*e*Pn		**Pn**	**08 32 20.9**	**+2.2**
ZAPS				*e*Sn		**Sn**	**08 32 51.5**	**-1.9**
SOH	**Sokhos**	**2.98**	**102**	*i* Pn		**Pn**	**08 32 19.6**	**0.0**
SOH				*i* Sn		**Sn**	**08 32 55.3**	**+0.3**
VTS	**Vitosha**	**2.99**	**67**	*e*Pn		**Pn**	**08 32 21.4**	**+1.6**
TEKS	**Tekeris**	**3.05**	**0**	*e*Pn		**Pn**	**08 32 23.4**	**+2.9**
ZAGS	**Zajecar**	**3.06**	**40**	*e*Pn		**Pn**	**08 32 22.7**	**+2.1**
ZAGS				*e*Sn		**Sn**	**08 32 58.0**	**+1.1**
SRS	**Serrai**	**3.10**	**96**	*i* Pn		**Pn**	**08 32 22.2**	**+1.1**
BORS2	**Bor- Borsko je**	**3.18**	**35**	*e*Pn		**Pn**	**08 32 23.5**	**+1.2**
BORS2				*e*Sn		**Sn**	**08 32 58.0**	**-1.9**
KUBS	**Kucevo**	**3.32**	**28**	*e*Pn		**Pn**	**08 32 24.0**	**-0.1**
KUBS				*e*Sn		**Sn**	**08 33 01.9**	**-1.3**
MDVR	**Moldovita**	**3.66**	**25**	⇑P		**Pn**	**08 32 30.1**	**+1.2**
BLY	**Banja Luka**	**3.67**	**333**	⇓P		**Pn**	**08 32 30.4**	**+1.4**
HERR	**Herculane**	**3.99**	**31**	⇑P		**Pn**	**08 32 34.9**	**+1.5**
BZS	**Buzias**	**4.39**	**20**	⇑P		**Pn**	**08 32 41.3**	**+2.4**
GZR	**Gura Zlata**	**4.56**	**30**	⇓P		**Pn**	**08 32 44.0**	**+2.7**
SIRR	**Siria**	**5.01**	**17**	⇓P		**Pn**	**08 32 49.1**	**+1.7**
LOT	**Lotru**	**5.02**	**37**	⇑P		**Pn**	**08 32 50.2**	**+2.6**
ARR	**Arges**	**5.37**	**42**	⇓P		**Pn**	**08 32 54.9**	**+2.5**
VOIR		**5.63**	**44**	⇓P		**Pn**	**08 32 58.9**	**+2.8**
MARR	**Marisel-Cluj**	**5.79**	**25**	⇑P		**Pn**	**08 33 01.1**	**+2.9**
MLR	**Muntele Rosu**	**6.15**	**47**	P		**Pn**	**08 33 05.6**	**+2.4**
	comp=N,0.8nm,0.3s,baz=215,slow=2.2,SNR=4.6							
MLR				S		**Sn**	**08 34 12.7**	**-0.5**
	comp=N,6.5nm,0.7s,baz=319,slow=24,SNR=7.4							
MLR	**Muntele Rosu**	**6.15**	**47**	⇑P		**Pn**	**08 33 06.1**	**+3.0**
MODS	**Modra-Piesok**	**7.05**	**348**	*e*PN		Pn	08 33 09.3	-6.2
MODS				*e*PG		**Pg**	**08 33 49.3**	**+1.4**
MODS				*e*SG		**Sg**	**08 35 11.1**	**-8.0**
IDI	**Anoyia**	**7.50**	**144**	P		**Pn**	**08 33 21.4**	**-0.2**
	comp=N,9.1nm,0.9s,baz=112,slow=16,SNR=1.3							
IDI				S		**Sn**	**08 34 42.1**	**-4.3**
	comp=N,7.7nm,0.9s,baz=184,slow=12,SNR=1.9							
GERES	**GERESS Array B**	**8.41**	**333**	P		**Pn**	**08 33 37.1**	**+3.0**
	baz=157,slow=18,SNR=1.6							
	comp=N,0.3nm,0.2s							
FINES	**FINESS Array B**	**20.37**	**9**	P		**P**	**08 36 07.7**	**-0.8**
	comp=N,9.2nm,1.3s,baz=186,slow=12,SNR=5.5							
	comp=N,9.2nm,1.3s							
ZALV	**Zalesovo Beam**	**44.12**	**50**	P		**P**	**08 39 38.0**	**-2.2**
	comp=N,0.6nm,0.5s,baz=282,slow=7.2,SNR=2.5							
	comp=N,0.6nm,0.5s							
MKAR	**Makanchi Array**	**44.30**	**61**	P		**P**	**08 39 41.3**	**-0.5**
	comp=N,1.0nm,0.7s,baz=280,slow=7.0,SNR=4.0							
	comp=N,1.0nm,0.7s							

*JMA **27** 08:40:49.9±0.3,37°.1N×13°.7E±°, h291km±2km, MV2.8/21, ISHIKAWA PREF*
*IDC **27** 08:40:50.0±0.9,36°.87N×136°.67E, h281km±15km, mb3.1/5, mbtmp3.9/6, Error ellipse: s-maj=43.1km s-min=15.6km az=77.0*

ISC 27 08:40:50.2±0.9,**36°.80N**±0°.10×**136°.81E**±0°.10,**h300**km,**n15**, σ1°**68**/19,**mb3.2/5, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MAT	**Matsushiro**	**1.16**	**102**	*e*P		**Pn**	**08 41 30.5**	**-0.9**
MAT				*e*S		**S**	**08 42 02.6**	**-1.6**
MJAR	**Matsushiro Arr**	**1.16**	**102**	P		**Pn**	**08 41 30.7**	**-0.7**
	14nm,0.6s,baz=277,slow=6.7,SNR=48							
MJAR				S		**S**	**08 42 02.1**	**-2.1**
	2.5nm,0.7s,baz=282,slow=17,SNR=4.5							
JYTA	**Yamagatataniai**	**1.20**	**183**	P		**Pn**	**08 41 30.6**	**-1.2**
JSD	**Sado**	**1.70**	**43**	*e*P		**Pn**	**08 41 33.9**	**-0.7**
JSD				S		**S**	**08 42 07.8**	**-2.2**
JRY	**Ryogami san**	**1.86**	**114**	P		**Pn**	**08 41 35.7**	**-0.3**
JWT	**Wachi**	**1.89**	**217**	P		**Pn**	**08 41 35.0**	**-1.3**
JWT				*e*S		**S**	**08 42 09.1**	**-3.7**
JYN	**Shimob**	**1.91**	**132**	P		**Pn**	**08 41 35.7**	**-0.8**
JAG	**Ashikaga**	**2.16**	**99**	P		**Pn**	**08 41 37.3**	**-1.0**
JOD2	**Odawara 2**	**2.40**	**129**	P		**Pn**	**08 41 40.2**	**-0.3**
ASAJ	**Asahikawa**	**8.54**	**29**	P		**Pn**	**08 42 49.0**	**-1.3**
	11nm,0.4s,baz=228,slow=6.9,SNR=24							
KURBB	**Kurchatov Arra**	**43.23**	**308**	P		**P**	**08 48 22.4**	**+0.2**
	0.4nm,0.4s,baz=85,slow=7.4,SNR=5.0							
	0.4nm,0.4s							
BVAR	**Borovoye Array**	**47.99**	**312**	P		**P**	**08 49 00.0**	**+0.8**
	0.5nm,0.4s,baz=75,slow=7.4,SNR=3.3							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**56.48**	**183**	P		**P**	**08 50 03.5**	**+1.8**
	0.7nm,0.4s,baz=359,slow=7.7,SNR=15							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**60.20**	**183**	P		**P**	**08 50 29.6**	**+2.4**
	0.2nm,0.7s,baz=13,slow=14,SNR=5.1							
	0.2nm,0.7s							
FINES	**FINESS Array B**	**67.26**	**331**	P		**P**	**08 51 13.5**	**+1.0**
	3.5nm,1.0s,baz=90,slow=6.9,SNR=2.4							
	3.5nm,1.0s							

*AZER **27** 08:46:25.7,38°.53N×44°.22E, h15km, ml2.8*
*ISK **27** 08:46:25.3,38°.21N×44°.38E, h22km, ML2.8/6*
*AFAD **27** 08:46:25.9,38°.52N×44°.31E, h10km±2km, ML2.6*

ISC 27 08:46:27.2±1.0,**38°.51N**±0°.03×**44°.25E**±0°.02,**h15**km±8km, **n24**,σ1°**69**/42,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OZAP	**Van, Ozalp-Mer**	**0.25**	**307**	P		**Pg**	**08 46 32.1**	**-0.7**
OZAP				S		**Sg**	**08 46 36.5**	**-0.2**
OZAP				*i* IAML			08 46 38.0	
	comp=N,1μm,0.3s							
OZAP				*i* IAML			08 46 42.0	
	comp=E,944nm,0.6s							
TVAN	**Van**	**0.66**	**272**	P		**Pg**	**08 46 39.5**	**-0.7**
TVAN				*i* IAML			08 47 02.0	
	comp=E,307nm,1.0s							
VANB	**Van**	**0.68**	**278**	Pg		**Pn**	**08 46 42.4**	**0.0**
VANB				Sg		**Sn**	**08 46 53.6**	**+0.8**
VMUR	**Van-Muradiye**	**0.71**	**312**	P		**Pn**	**08 46 41.3**	**-1.6**
VMUR				S		**Sn**	**08 46 54.5**	**+0.7**
VMUR				*i* IAML			08 46 56.0	
	comp=E,226nm,0.7s							
AKDM	**Akdamar-Van**	**1.01**	**260**	Pn		**Pb**	**08 46 45.7**	**-0.8**
AKDM				Sn		**Sn**	**08 47 01.3**	**+0.2**
HAKT	**HAKKARI**	**1.04**	**204**	P		**Pb**	**08 46 46.2**	**-0.9**
HAKT				S		**Sn**	**08 47 02.4**	**+0.5**
HAKT				*i* IAML			08 47 05.0	
	comp=N,110nm,0.3s							
HAKT				*i* IAML			08 47 10.0	
	comp=E,137nm,0.5s							
HAKT	**HAKKARI**	**1.04**	**204**	P		**Pn**	**08 46 47.2**	**-0.3**
HAKT				S		**Sn**	**08 47 03.9**	**+2.0**
DYDN	**Diyadin**	**1.12**	**337**	P		**Pb**	**08 46 46.8**	**-1.7**
NAX	**Nakhchivan**	**1.18**	**55**	P		**Pg**	**08 46 51.0**	**+1.0**
NAX				S		**Sn**	**08 47 08.4**	**+3.3**
ADCV	**BITLIS_Adilcev**	**1.23**	**285**	P		**Pg**	**08 46 50.1**	**-0.8**
ADCV				S		**Sg**	**08 47 10.9**	**+3.9**
ADCV				*i* IAML			08 47 12.0	
	comp=N,87nm,0.3s							
ADCV				*i* IAML			08 47 12.0	
	comp=E,62nm,0.5s							
HYR	**Heyderabad**	**1.30**	**21**	P		**Pg**	**08 46 52.6**	**+0.4**
HYR				S		**Sg**	**08 47 10.9**	**+1.8**
SBZ	**Shahbuz**	**1.35**	**49**	P		**Pg**	**08 46 52.0**	**-1.2**
SBZ				S		**Sg**	**08 47 13.2**	**+2.4**
IGDI	**IGDIR**	**1.36**	**355**	P		**Pg**	**08 46 52.3**	**-1.2**
IGDI				S		**Sg**	**08 47 13.6**	**+2.3**
IGDI	**IGDIR**	**1.36**	**355**	P		**Pg**	**08 46 52.9**	**-0.6**
IGDI				S		**Sg**	**08 47 13.6**	**+2.3**
ORD	**Ordubad**	**1.43**	**72**	P		**Pg**	**08 46 54.4**	**-0.4**
ORD				S		**Sg**	**08 47 16.2**	**+2.8**
DORK	**Agr/Tutak/Do**	**1.44**	**308**	P		**Pb**	**08 46 53.4**	**-0.5**
DORK				S		**Sg**	**08 47 14.6**	**+0.8**
DORK				*i* IAML			08 47 18.0	
	comp=N,65nm,0.6s							
AGRB	**Hanur-Agry**	**1.45**	**318**	Pn		**Pg**	**08 46 55.0**	**-0.1**
AGRB				Sn		**Sg**	**08 47 16.7**	**+2.8**
PERV	**Siirt/Pervari-**	**1.46**	**248**	P		**Pb**	**08 46 53.9**	**-0.2**
PERV				*i* IAML			08 47 21.0	
	comp=N,181nm,0.5s							
PERV				*i* IAML			08 47 23.0	
	comp=E,197nm,0.5s							
TASB	**TASBURUN-IGDIR**	**1.47**	**360**	Pn		**Pg**	**08 46 55.6**	**0.0**
TASB				Sn		**Sg**	**08 47 17.7**	**+3.0**
KOTA	**Agri, Merkez-K**	**1.52**	**328**	P		**Pb**	**08 46 53.8**	**-1.5**
GNI	**Garni**	**1.68**	**13**	Pn		**Pg**	**08 46 58.1**	**-1.5**
GURO	**Guroymak-BITLI**	**1.74**	**272**	Pn		**Pn**	**08 46 56.9**	**-0.1**
SRTM	**Siirt_Merkez**	**1.90**	**255**	P		**Pb**	**08 47 01.6**	**-0.1**
SRTM				S		**Sg**	**08 47 29.5**	**+1.1**
SRTM				*i* IAML			08 47 35.0	
	comp=N,95nm,1.0s							
SRTM				*i* IAML			08 47 36.0	
	comp=E,70nm,0.6s							
YRD	**Yardimli**	**3.15**	**81**	P		**Pb**	**08 47 20.6**	**-2.4**
YRD				S		**Sb**	**08 47 58.9**	**-2.5**

*IDC **27** 09:00:04.4±3.6,52°.21N×35°.84E, h0km, mbtmp3.4/3, ML2.5/3, Error ellipse: s-maj=38.0km s-min=14.6km az=120.0*
*IDG **27** 09:00:10.0,52°.30N×35°.42E, h0km, M2.7, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

ISC 27 09:00:11.2±3.4,**52°.6N**±0°.1×**34°.3E**±0°.3,**h0**km,**n4**,σ0°**73**/6, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKASG	**Malin Array Be**	**3.71**	**241**	Pn		**Pn**	**09 01 10.6**	**+0.8**
	0.6nm,0.3s,baz=59,slow=15,SNR=2.0							
AKASG				Pg		**Pg**	**09 01 22.1**	**-0.3**
	0.7nm,0.3s,baz=66,slow=16,SNR=1.4							
AKASG				Sn		**Sb**	**09 02 02.8**	**-0.4**
	2.2nm,0.3s,baz=56,slow=25,SNR=2.2							
AKASG				Lg		Lg	09 02 21.6	
	2.0nm,0.3s,baz=69,slow=30,SNR=4.7							
	0.6nm,0.5s							
I43RU	**DUBNA INFRASON**	**4.44**	**21**	I		I	09 30 20.0	
	0.1nm,0.7s,baz=187,slow=323,SNR=5.4							
FINES	**FINESS Array B**	**9.92**	**336**	Pn		**Pn**	**09 02 34.6**	**-0.3**
	0.1nm,0.3s,baz=151,slow=15,SNR=1.5							
FINES				Sn		**Sn**	**09 04 27.3**	**+0.5**
	0.2nm,0.3s,baz=157,slow=22,SNR=1.7							
	1.6nm,0.8s							
ARCES	**ARCESS Array B**	**17.47**	**350**	P		**Pn**	**09 04 15.4**	**-0.6**
	baz=162,slow=12,SNR=1.8							
	2.0nm,0.8s							

*CATAC **27** 09:04:24.8±1.0,8°.N±5°×8°.3W±°, h9km±2km, M3.0/7, MLv3.0/7, Error ellipse: s-maj=11.1km s-min=5.9km az=158.6, confirmed*
*UPA **27** 09:04:26.4±1.1,8°.29N×82°.97W, h17km±4km, MD3.5, MW3.3*

ISC 27 09:04:26.5±1.2,**8°.29N**±0°.04×**82°.94W**±0°.03,**h16**km±9km, **n30**,σ0°**84**/40,**2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LESP3	**La Esperanza,**	**0.19**	**52**	⇓*e*P		**Pb**	**09 04 31.4**	**-0.2**
LIMO3	**Limones**	**0.20**	**159**	*e*P		**Pb**	**09 04 32.2**	**+0.4**
CDITO	**Canoas**	**0.29**	**13**	P		**Pg**	**09 04 32.8**	**+0.1**
CDITO	**Canoas**	**0.29**	**13**	S		**Sb**	**09 04 38.5**	**+0.6**
PIRO	**Carate, Puerto**	**0.41**	**286**	*e*P		**Pg**	**09 04 34.2**	**-0.6**
PIRO	**Carate, Puerto**	**0.41**	**286**	S		**Sb**	**09 04 42.6**	**+1.2**
PIRO	**Carate, Puerto**	**0.41**	**286**	P		**Pg**	**09 04 34.2**	**-0.6**
PTJ1	**Puerto Jimnez**	**0.43**	**304**	P		**Pb**	**09 04 35.8**	**0.0**
PTJ1	**Puerto Jimnez**	**0.43**	**304**	S		**Sb**	**09 04 44.4**	**+2.3**
BAGA3	**Bagala, Chiriq**	**0.44**	**67**	*e*P		**Pb**	**09 04 36.4**	**+0.5**
DVD	**David**	**0.50**	**73**	*e*P		**Pb**	**09 04 36.8**	**-0.2**
DVD				*e*S		**Sb**	**09 04 45.0**	**+0.9**
MLIR3	**Monte Lirio, C**	**0.51**	**13**	*e*P		**Pb**	**09 04 37.4**	**+0.2**
PEDE3	**Pedregal, Chir**	**0.52**	**80**	*e*P		**Pb**	**09 04 37.0**	**-0.2**
PEDE3				*e*S		**Sb**	**09 04 45.0**	**+0.5**
LOCO3	**Loma Colorada,**	**0.53**	**77**	*e*P		**Pb**	**09 04 37.3**	**-0.1**
LOCO3				*e*S		**Sn**	**09 04 46.3**	**-1.7**
BRU2	**Volcan**	**0.56**	**26**	⇓*e*P		**Pb**	**09 04 37.9**	**-0.1**
BRU2				*e*S		**Sb**	**09 04 47.2**	**+1.4**
BRU2	**Volcan**	**0.56**	**26**	P		**Pb**	**09 04 38.0**	**0.0**
LOMA3	**Las Lomas, Chi**	**0.56**	**75**	*e*P		**Pb**	**09 04 37.9**	**0.0**
PTAR3	**Potrerillos Ar**	**0.59**	**47**	*e*P		**Pb**	**09 04 38.6**	**0.0**
PTAR3				*e*S		**Sb**	**09 04 48.0**	**+1.2**
BC3P	**Paso Ancho**	**0.61**	**32**	*e*P		**Pg**	**09 04 38.7**	**0.0**
BC3P				*e*S		**Sn**	**09 04 49.9**	**-0.6**
BQSF3	**Alto Boquete,**	**0.67**	**48**	*e*P		**Pb**

TIR					Sg	Sg	09 05 37.3	-0.2
TIR					AML	AML	09 05 37.8	
	12nm,0.3s							
TIR	**Tirane**	**0.32**	**127**	*i* Pg	Pg	Pg	09 05 33.8	+0.4
ULC	**Ulcinj**	**0.47**	**334**	ǁ *i* Pg	Pg	Pg	09 05 36.2	-0.1
ULC				*e*Sg	Sg	Sg	09 05 43.3	+0.8
SDA	**Shkodra**	**0.51**	**358**	Pg	Pg	Pg	09 05 36.6	-0.5
SDA				Sg	Sb	Sb	09 05 46.1	0.0
DRME	**Dracevica, Mon**	**0.70**	**339**	*e*Pg	Pg	Pg	09 05 40.2	-0.3
DRME	**Dracevica, Mon**	**0.70**	**339**	ǁ *i* Pg	Pg	Pg	09 05 40.1	-0.4
DRME				*e*Sg	Sg	Sb	09 05 50.5	-0.9
PHP	**Peshkopia**	**0.70**	**78**	Pg	Pg	Pg	09 05 39.5	-1.1
PHP				Sg	Sg	Sg	09 05 50.2	+0.4
PHP				AML	AML		09 05 54.8	
	1.6nm,0.4s							
BUM	**Brajici-Budva**	**0.90**	**328**	⇑ *i* Pg	Pg	Pb	09 05 44.5	-0.6
BUM				*e*Sg	Sg	Sb	09 05 57.6	+0.3
PDG	**Podgorica**	**0.91**	**347**	Pg	Pg	Pg	09 05 43.0	-1.6
PDG				Sg	Sg	Sb	09 05 57.7	0.0
PDG	**Podgorica**	**0.91**	**347**	*e*Pg	Pg	Pg	09 05 44.4	-0.3
PDG				*e*Sg	Sg	Sn	09 05 59.9	+0.1
PDG	**Podgorica**	**0.91**	**347**	⇑ *i* Pg	Pg	Pg	09 05 44.1	-0.6
PDG				*i* Sg	Sg	Sn	09 05 58.8	-1.0
OHR	**Ohrid**	**1.05**	**114**	*i* Pg	Pg	Pg	09 05 47.1	-0.2
OHR				*i* Sg	Sg	Sn	09 06 02.9	-0.3
OHR				*e*Lg	Lg	Lg	09 06 03.6	
	comp=N,222nm,1.0s							
OHR				*e*Lg	Lg	Lg	09 06 05.9	
	comp=E,189nm,0.7s							
PVY	**Plav**	**1.10**	**17**	⇑ *i* Pg	Pg	Pg	09 05 47.5	-0.8
PVY				*i* Sg	Sg	Sb	09 06 03.6	+0.3
CEME	**Cevo**	**1.10**	**336**	⇑ *i* Pg	Pg	Pg	09 05 47.7	-0.6
CEME				*e*Sg	Sg	Sn	09 06 04.2	-0.5
HCY	**Herceg Novi**	**1.19**	**320**	ǁ *i* Pg	Pg	Pb	09 05 49.8	-0.2
HCY				*e*Sg	Sg	Sn	09 06 07.4	+0.7
NKME	**Niksic**	**1.30**	**341**	ǁ *i* Pg	Pg	Pg	09 05 51.2	-0.8
NKME				*e*Sg	Sg	Sn	09 06 10.8	+1.4
KOME	**Kolasin**	**1.31**	**360**	*e*Pg	Pg	Pg	09 05 52.0	-0.3
KOME	**Kolasin**	**1.31**	**360**	*e*Pg	Pn	Pn	09 05 51.6	-0.4
KOME				*e*Sg	Sg	Sn	09 06 10.6	+0.8
BEY	**Berane**	**1.36**	**11**	*e*Pg	Pn	Pg	09 05 52.6	0.0
IVA	**Berane**	**1.36**	**11**	ǁ *i* Pg	Pn	Pn	09 05 51.8	-0.8
IVA				*e*Sg	Sg	Sn	09 06 12.7	+1.7
TREB	**Trebinje**	**1.47**	**324**	*e*Pg	Pb	Pb	09 05 54.5	-0.2
TREB				*e*Sg	Sg	Sg	09 06 15.4	+1.1
SKO	**Skopje**	**1.50**	**73**	*i* Pg	Pn	Pn	09 05 54.6	+0.2
SKO				*i* Sg	Sg	Sg	09 06 16.0	+0.8
BRY	**Bratogost**	**1.55**	**332**	⇑ *i* Pg	Pn	Pn	09 05 55.5	+0.2
BRY				*e*Sg	Sg	Sg	09 06 18.3	+1.4
NEST	**Nestorio**	**1.61**	**134**	Pn	Pn	Pn	09 05 56.5	+0.5
NEST				Sn	Sg	Sg	09 06 18.8	0.0
UPM	**Unac-Piva**	**1.73**	**345**	ǁ *i* Pn	Pb	Pb	09 05 58.9	-0.4
UPM				*e*Sn	Sg	Sg	09 06 22.5	-0.1
SJES	**Sjenica**	**1.75**	**11**	*e*Pg	Pb	Pb	09 05 59.9	+0.2
SJES				*e*Sg	Sg	Sg	09 06 23.0	-0.5
PLE	**Pljevlja**	**1.79**	**357**	⇑ *i* Pn	Pn	Pn	09 05 59.2	+0.6
PLE				*e*Sn	Sg	Sg	09 06 24.3	-0.5
STON	**Ston**	**1.90**	**315**	*e*Pn	Pb	Pb	09 06 01.5	-0.6
STON				*e*Sn	Sg	Sg	09 06 28.1	-0.1
SELS	**Selova**	**2.05**	**35**	*e*Pg	Pn	Pg	09 06 02.2	+0.1
SELS				*e*Sg	Sn	Sn	09 06 29.1	+1.1
IVAS	**Ivanjica**	**2.09**	**13**	*e*Pg	Pn	Pn	09 06 03.5	+0.9
IVAS				*e*Sg	Sb	Sb	09 06 32.4	+0.8
IGT	**Igoumenitsa**	**2.10**	**163**	Pn	Pn	Pn	09 06 02.3	-0.4
IGT	**Igoumenitsa**	**2.10**	**163**	*i* Pn	Pn	Pn	09 06 02.1	-0.5
IGT				*i* Sn	Sb	Sb	09 06 32.4	+0.7
GRG	**Griva**	**2.25**	**104**	*i* Pn	Pn	Pn	09 06 04.3	-0.4
GRG				*i* Sn	Sn	Sn	09 06 33.2	+0.5
GOCS	**Kraljevo Serbi**	**2.25**	**26**	*e*Pn	Pn	Pn	09 06 05.2	+0.3
GOCS				*e*Sn	Sn	Sn	09 06 32.9	-0.2
VAY	**Valandovo**	**2.30**	**94**	*i* Pn	Pn	Pn	09 06 05.4	-0.1
VAY				*i* Sn	Sg	Sg	09 06 42.6	+1.7
VAY				*e*Lg	Lg	Lg	09 06 43.5	
	comp=N,69nm,1.4s							
VAY				*e*Lg	Lg	Lg	09 06 46.3	
	comp=E,13nm,0.6s							
BBLS	**Lazi&#263i**	**2.33**	**358**	*e*Pn	Pn	Pn	09 06 06.4	+0.5
BBLS				*e*Sn	Sn	Sn	09 06 35.8	+1.0
BOSS	**Bosilegrad**	**2.40**	**66**	*e*Pn	Pn	Pn	09 06 06.7	-0.2
KNT	**Kendrikon**	**2.57**	**97**	*i* Pn	Pn	Pn	09 06 07.9	-1.2
KNT				*i* Sn	Sn	Sn	09 06 39.7	-0.9
BOVS	**Bovan**	**2.64**	**37**	*e*Pn	Pn	Pn	09 06 11.3	+1.1
BOVS				*e*Sn	Sn	Sn	09 06 42.6	+0.1
KKB	**Krupnik**	**2.72**	**82**	*i* Pn	Pn	Pn	09 06 12.3	+1.1
ZAPS	**Zavoj**	**2.88**	**52**	*e*Pn	Pn	Pn	09 06 13.7	+0.2
ZAPS				*e*Sn	Sn	Sn	09 06 45.9	-2.5

*IDC **27** 09:25:02.7±2.9, 29.°00S×176.°32W, h74km±22km, mb3.8/7, mbtmp4.2/9, MS2.9/2, Error ellipse: s-maj=31.4km s-min=25.4km az=136.0*
ISC 27 09:24:58.6±0.9, 28.°9S±0.°1×176.°1W±0.°1, h38km, n16, σ1s13/18, mb4.1/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.62**	**257**	P	**Pn**	**09 25 25.7**	**+1.0**
	431nm,0.4s,baz=74,slow=11,SNR=6.6						
RAO				S	**Sn**	**09 25 45.1**	**+0.8**
	1µm,0.3s,baz=80,slow=22,SNR=5.2						
RAO				LR	LR	09 25 53.1	
	comp=Z,344nm,19.0s,baz=74,slow=36						
URZ	**Urewera**	**10.92**	**209**	P	**Pn**	**09 27 31.9**	**-0.3**
	4.1nm,0.6s,baz=85,slow=2.5,SNR=7.0						
URZ				S	**Sn**	**09 29 33.5**	**+0.5**
	10nm,0.5s,baz=138,slow=18,SNR=9.7						
DZM	**Mont Dzumac**	**17.14**	**289**	P	**P**	**09 28 57.8**	**+1.1**
	5.1nm,0.6s,baz=144,slow=17,SNR=5.9						
CTA	**Charters Tower**	**35.23**	**276**	LR	LR	09 44 19.5	
	comp=Z,4.6nm,19.7s,baz=43,slow=33						
STKA	**Stephens Creek**	**36.44**	**255**	P	**P**	**09 31 59.5**	**-0.3**
	2.0nm,0.7s,baz=53,slow=8.4,SNR=4.7						
STKA				LR	LR	09 44 54.0	
	comp=Z,60nm,19.5s,baz=28,slow=33						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**44.86**	**265**	P	**P**	**09 33 07.8**	**-1.7**
	1.2nm,0.8s,baz=96,slow=7.2,SNR=22						
ASAR				PcP	**PcP**	**09 34 51.3**	**+0.4**
	0.4nm,0.7s,baz=131,slow=4.2,SNR=2.8						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**45.72**	**270**	P	**P**	**09 33 13.9**	**-2.4**
	1.0nm,0.4s,baz=107,slow=7.8,SNR=5.9						
	1.0nm,0.4s						
MJAR	**Matsushiro Arr**	**77.97**	**324**	P	**P**	**09 36 51.4**	**-1.5**
	2.1nm,0.7s,baz=150,slow=5.5,SNR=6.6						
	2.1nm,0.7s						
PETK	**Petropavlovsk-**	**84.78**	**345**	P	**P**	**09 37 29.8**	**+1.3**
	5.1nm,1.0s,baz=184,slow=6.8,SNR=1.9						
	5.1nm,1.0s						
NVAR	**Mina Array Bea**	**86.02**	**42**	P	**P**	**09 37 37.1**	**+1.7**
	1.7nm,0.9s,baz=226,slow=8.8,SNR=4.3						
	1.7nm,0.9s						
ILAR	**Eielson Array**	**96.10**	**12**	P	**P**	**09 38 21.2**	**-0.3**
	0.2nm,0.6s,baz=210,slow=6.8,SNR=1.9						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**144.26**	**342**	PKP	**PKPab**	**09 44 27.4**	**-0.3**
	0.6nm,0.4s,baz=54,slow=6.1,SNR=7.5						
NB2	**NORSAR Subarra**	**147.48**	**353**	PKP	**PKPbc**	**09 44 38.2**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=11,slow=3.0						
NOA	**NORSAR Array B**	**147.48**	**353**	PKPbc	**PKPbc**	**09 44 37.9**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=13,slow=4.4,SNR=4.7						
HFS	**Hagfors**	**148.06**	**351**	PKPbc	**PKPbc**	**09 44 39.1**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=2.9,slow=2.9,SNR=4.9						
AKASG	**Malin Array Be**	**151.04**	**326**	PKPbc	**PKPbc**	**09 44 46.7**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=46,slow=3.5,SNR=5.3						

*MEX **27** 09:25:57.2±0.7, 14.°73N×93.°77W, h19km±71km, MD4.1*
*GCG **27** 09:25:58.3±0.3, 15.°68N×92.°34W, h176km±10km, MD4.1*
ISC 27 09:25:58.6±7.2, 14.°8N±0.°2×93.°79W±0.°07, h38km±10km, n8, σ3s38/12, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGIG		**2.12**	**18**	*e*P	**Pn**	**09 26 28.9**	**-2.7**
TGIG				*e*S	**Sn**	**09 26 53.4**	**-3.3**
TGIG		**2.12**	**18**	*e*P	**Pn**	**09 26 28.9**	**-2.7**
TGIG				*e*S	**Sn**	**09 26 53.0**	**-3.7**
CCIG	**Comitan**	**2.21**	**46**	*e*P	**Pn**	**09 26 30.9**	**-2.0**
CCIG				*e*S	**Sn**	**09 26 56.3**	**-2.7**
STG2	**El Palmar, Qui**	**2.36**	**97**	*e*P	Pn	09 26 27.8	-7.2
STG2				*e*S	Sn	09 26 50.8	-12
STG8	**El Palmar, Qui**	**2.38**	**97**	*e*P	Pn	09 26 28.3	-7.1
STG8				*e*S	Sn	09 26 51.5	-12
HUIG	**Huatulco**	**2.46**	**295**	*e*P	**Pn**	**09 26 34.4**	**-1.8**
HUIG				*e*S	**Sn**	**09 27 01.4**	**-3.6**
UXUV	**UXUV**	**2.58**	**352**	*e*P	**Pn**	**09 26 35.9**	**-1.9**
UXUV				*e*S	**Sn**	**09 27 06.8**	**-1.1**
NEUV	**Arroyo Zacate**	**3.52**	**327**	*e*P	**Pn**	**09 26 48.9**	**-1.9**
NEUV				*e*S	**Sn**	**09 27 27.2**	**-4.1**

*SJA **27** 09:28:49.2±0.8, 37.°16S×74.°33W, h10km, ML3.3, MW3.6*
*GUC **27** 09:28:56.6±0.6, 37.°31S×73.°71W, h19km±5km, ML3.6*
ISC 27 09:28:56.0±1.5, 37.°33S±0.°05×73.°79W±0.°08, h10km, n16, σ1s99/26, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	**Isla Mocha**	**1.09**	**184**	*e*P	**Pb**	**09 29 16.1**	**-0.8**
BI04				*e*S	**Sg**	**09 29 30.6**	**-0.5**
BI04				IAML		09 29 37.6	
	comp=E,4µm,0.2s						
BI02	**San Fabin de**	**2.12**	**73**	*e*P	**Pn**	**09 29 31.1**	**-0.5**
BI02				*e*S	**Sn**	**09 29 57.9**	**-0.2**
BI02				IAML		09 30 00.7	
	comp=N,341nm,0.4s						
BI02	**San Fabin de**	**2.12**	**73**	*i* P	**Pn**	**09 29 32.3**	**+0.7**
LC01	**Cunco**	**2.18**	**137**	*e*P	**Pn**	**09 29 32.1**	**-0.3**
LC01				*e*S	**Sn**	**09 30 00.5**	**+1.1**
LC01				IAML		09 30 06.0	
	comp=E,290nm,0.4s						
CANA	**Caviahue**	**2.24**	**105**	*i* P	**Pb**	**09 29 34.9**	**-1.8**
CANA				*e*S	**Sg**	**09 30 09.5**	**+1.4**
CANA				IAML		09 30 11.1	
	comp=Z,78nm,0.6s						
ML02	**Panimavida**	**2.47**	**52**	*e*P	**Pb**	**09 29 39.6**	**-0.9**
ML02				IAML		09 30 16.2	
	comp=N,751nm,0.6s						
LR04	**Corral**	**2.57**	**174**	*e*P	**Pn**	**09 29 36.9**	**-0.8**
LR04				IAML		09 30 24.9	
	comp=N,443nm,0.1s						
LR04	**Corral**	**2.57**	**174**	*i* P	**Pn**	**09 29 36.9**	**-0.8**
LR04				*e*S	**Sn**	**09 30 12.0**	**+3.0**
LR04				IAML		09 30 22.7	
	comp=Z,130nm,0.3s						
LR03	**Panguipulli**	**2.57**	**154**	*e*P	**Pn**	**09 29 38.1**	**+0.4**
LR03				*e*S	**Sb**	**09 30 15.1**	**+1.2**
GO05	**Hualane**	**2.76**	**34**	*e*P	**Pn**	**09 29 40.5**	**+0.1**
GO05				IAML		09 30 32.7	
	comp=E,253nm,0.6s						
GO06	**Curarrehue**	**2.90**	**142**	*e*P	**Pn**	**09 29 42.3**	**-0.1**
GO06				IAML		09 30 27.7	
	comp=E,127nm,0.6s						
GO06	**Curarrehue**	**2.90**	**142**	*i* P	**Pn**	**09 29 42.9**	**+0.5**
GO06				*e*S	**Sb**	**09 30 24.3**	**+0.8**
GO06				IAML		09 30 27.9	
	comp=Z,78nm,0.6s						
LR05	**Currie**	**3.22**	**155**	*e*P	**Pn**	**09 29 47.2**	**+0.5**
LR05				IAML		09 30 39.7	
	comp=E,195nm,0.5s						
EDS3	**Malargue**	**3.86**	**68**	*i* P	**Pn**	**09 29 57.2**	**+1.6**
EDS3				*e*S	**Sb**	**09 30 47.3**	**-3.9**
PLCA	**Paso Flores**	**4.24**	**144**	*i* P	**Pn**	**09 30 02.9**	**+2.2**
PLCA				*e*S	**Sb**	**09 30 57.0**	**-4.9**
RFA	**San Rafael**	**5.01**	**61**	*i* P	**Pn**	**09 30 12.4**	**+1.0**
RFA				*e*S	**Sn**	**09 31 13.9**	**+4.6**
RFA				IAML		09 31 34.7	
	comp=Z,18nm,2.0s						

*IDC **27** 09:33:01.5±1.5, 53.°08N×153.°67E, h486km±21km, mb2.8/3, mbtmp3.7/6, Error ellipse: s-maj=39.5km s-min=32.9km az=33.0*
ISC 27 09:33:01.4±1.3, 53.°1N±0.°3×153.°6E±0.°2, h487km, n6, σ0s70/6, mb3.3/3, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**2.45**	**88**	P	**P**	**09 34 07.6**	**-0.1**
	4.2nm,0.4s,baz=293,slow=1.1,SNR=38						
USRK	**Ussuriysk Ar.**	**16.78**	**247**	P	**P**	**09 36 29.6**	**-0.8**
	4.2nm,0.7s,baz=51,slow=11,SNR=4.2						
MJAR	**Matsushiro Arr**	**19.75**	**219**	P	**P**	**09 36 59.2**	**+0.7**
	2.9nm,0.6s,baz=18,slow=11,SNR=9.3						
MKAR	**Makanchi Array**	**44.60**	**292**	P	**P**	**09 40 29.4**	**+0.3**
	0.1nm,0.5s,baz=46,slow=8.3,SNR=1.6						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**74.61**	**199**	P	**P**	**09 43 49.7**	**-0.4**
	0.6nm,0.5s,baz=14,slow=5.8,SNR=2.9						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**78.32**	**198**	P	**P**	**09 44 10.7**	**+0.3**
	0.7nm,0.6s,baz=11,slow=5.1,SNR=15						
	0.7nm,0.6s						

*ASRS **27** 09:39:57.0±0.6, 54.°62N×83.°70E, h0km, M2.3, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC 27 09:39:59.2±1.6, 54.°64N×83.°79E, h0km, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=14.7km s-min=9.4km az=10.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.92**	**138**	I	I	09 45 20.0	
	baz=316,slow=331,SNR=1.3						
ZALV	**Zalesovo Beam**	**0.92**	**138**	Pg	Pg	09 40 16.4	-0.4
	1.5nm,0.3s,baz=320,slow=18,SNR=17						
ZALV				Lg	Lg	09 40 30.6	
	9.2nm,0.3s,baz=322,slow=28,SNR=29						
KURBB	**Kurchatov Arra**	**5.14**	**221**	Pn	Pn	09 41 17.4	+0.1
	0.1nm,0.3s,baz=41,slow=14,SNR=7.7						
KURBB				Sn	Sn	09 42 15.6	-1.7
	0.1nm,0.3s,baz=22,slow=25,SNR=4.6						
KURBB				Lg	Lg	09 42 44.9	
	0.1nm,0.3s,baz=44,slow=33,SNR=6.4						
	0.7nm,0.5s						
MKAR	**Makanchi Array**	**7.91**	**187**	Pn	Pn	09 41 55.0	-0.5
	0.1nm,0.3s,baz=12,slow=14,SNR=5.7						
MKAR				Lg	Lg	09 44 12.3	
	0.1nm,0.3s,baz=10,slow=26,SNR=5.1						
	0.4nm,0.4s						
BVAR	**Borovoye Array**	**8.09**	**264**	Pn	Pn	09 41 57.4	-0.5
	0.1nm,0.3s,baz=71,slow=14,SNR=6.5						
	1.2nm,0.4s						

*NEIC **27** 09:41:45.4±0.7, 19.°18N±0.°07×64.°34W±0.°04, h35km±2km, ML2.8/14, Md3.5/6(RSPR), Error ellipse: s-maj=14.0km s-min=3.1km az=334.0*
*RSPR **27** 09:41:47.2, 19.°24N×64.°44W, h48km±13km, MD3.5/6*
ISC 27 09:41:45.4±3.0, 19.°2N±0.°2×64.°34W±0.°09, h42km, n28, σ0s50/29, 9C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUMP	**Col San Antoni**	**1.76**	**235**		**Pn**	**09 42 12.6**	**-0.7**
HUMP					**Sn**	**09 42 34.2**	**-0.4**
HUMP				IAML		09 42 42.9	
	comp=N,70nm,0.2s						
HUMP				IAML		09 42 46.8	
	comp=E,75nm,0.2s						
HUMP	**Col San Antoni**	**1.76**	**235**	⇑ *e*P	**Pn**	**09 42 14.0**	**+0.6**
HUMP	**Col San Antoni**	**1.76**	**235**	*e*S	**Sn**	**09 42 34.6**	**+0.1**
GCPR	**Guaynabo City**	**1.86**	**243**	Pn	**Pn**	**09 42 14.1**	**-0.7**
SABA	**Saba**	**1.86**	**146**	Pn	**Pn**	**09 42 14.8**	**0.0**
SABA				IAML		09 42 45.5	
	comp=N,120nm,1.0s						
SJG	**San Juan**	**2.01**	**239**	Pn	**Pn**	**09 42 17.0**	**+0.1**
SJG	**San Juan**	**2.01**	**239**	IAML		09 42 44.0	
	comp=N,42nm,0.6s						
SJG				IAML		09 42 44.8	
	comp=N,60nm,0.7s						
ECPR	**Experimental S**	**2.10**	**246**	⇑ *e*P	**Pn**	**09 42 17.7**	**-0.3**
ECPR	**Experimental S**	**2.10**	**246**	*e*S	**Sn**	**09 42 42.2**	**-0.6**
EMPR	**Esperanza - Ma**	**2.18**	**252**		**Pn**	**09 42 19.0**	**-0.2**
EMPR					**Sn**	**09 42 44.9**	**-0.2**
EMPR	**Esperanza - Ma**	**2.18**	**252**	⇑ *e*P	**Pn**	**09 42 19.0**	**-0.2**
EMPR	**Esperanza - Ma**	**2.18**	**252**	*e*S	**Sn**	**09 42 44.9**	**-0.2**
OBIP	**Obispado Ponce**	**2.42**	**243**		**Pn**	**09 42 21.9**	**-0.6**
OBIP				IAML		09 42 55.6	
	comp=E,38nm,0.7s						
OBIP	**Obispado Ponce**	**2.42**	**243**	⇑ *e*P	**Pn**	**09 42 23.1**	**+0.6**
OBIP	**Obispado Ponce**	**2.42**	**243**	*e*S	**Sn**	**09 42 50.8**	**-0.2**
AOPR	**Arecibo Observ**	**2.43**	**251**		**Pn**	**09 42 22.7**	**+0.1**
AOPR	**Arecibo Observ**	**2.43**	**251**	⇑ *e*P	**Pn**	**09 42 22.9**	**+0.3**
AOPR	**Arecibo Observ**	**2.43**	**251**	*e*S	**Sn**	**09 42 50.7**	**-0.5**
AGPR	**Aguadilla, PR**	**2.71**	**255**	Pn	**Pn**	**09 42 26.2**	**-0.3**
LSP	**Las Mesas**	**2.78**	**250**		**Pn**	**09 42 28.1**	**+0.6**
LSP	**Las Mesas**	**2.78**	**250**	⇑ *e*P	**Pn**	**09 42 28.1**	**+0.6**
MLPR	**Magueyes Islan**	**2.83**	**245**	⇑ *e*P	**Pn**	**09 42 28.7**	**+0.6**
MLPR	**Magueyes Islan**	**2.83**	**245**	*e*S	**Sn**	**09 43 00.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**2.87**	**247**		**Pn**	**09 42 29.2**	**+0.5**
CRPR				IAML		09 43 19.8	
	comp=N,39nm,2.3s						
CRPR				IAML		09 43 20.6	
	comp=E,28nm,1.6s						
CRPR	**Cabo Rojo, PR**	**2.87**	**247**	⇑ *e*P	**Pn**	**09 42 29.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.87**	**247**	*e*S	**Sn**	**09 43 03.2**	**+1.2**
IDE	**Isla Desecheo**	**3.07**	**256**		**Pn**	**09 42 31.5**	**+0.1**
IDE	**Isla Desecheo**	**3.07**	**256**	⇑ *e*P	**Pn**	**09 42 31.5**	**+0.1**

*BGSI **27** 09:43:53.9±0.4, 24.°94S×25.°98E, h46km±8km, ML2.2*
PRE 27 09:43:16.6±1.0, 26.°10S×29.°33E, h0km, ML2.4, Suspected explosion, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRLN	**Carolina, Mapu**	**0.63**	**80**	*e*P	Pg	09 43 28.6	-0.1
CRLN				*e*S	Sg	09 43 37.4	+0.6
CRLN				IAML		09 43 46.9	
	comp=Z,122nm,0.7s						
HRAO	**HartRAO**	**1.50**	**278**	*e*P	Pn	09 43 44.7	-0.2
HRAO				*e*S	Sn	09 44 05.7	+0.5
HRAO				IAML		09 44 05.8	
	comp=Z,36nm,0.5s						
NWCL	**Newcastle**	**1.70**	**163**	*e*P	Pn	09 43 48.0	+0.3
NWCL				*e*S	Sg	09 44 11.3	-0.1
NWCL				IAML		09 44 14.5	
	comp=Z,32nm,0.5s						
PILG	**Pilgrimsrest,**	**1.70**	**47**	*e*P	Pb	09 43 48.8	-0.1
PILG				*e*S	Sg	09 44 11.7	+0.3
PILG				IAML		09 44 15.1	
	comp=Z,57nm,0.5s						
PRYS	**Parys**	**1.95**	**245**	*e*P	Pn	09 43 51.7	+0.6
PRYS				*e*S	Sn	09 44 17.2	+0.8
PRYS				IAML		09 44 17.7	
	comp=Z,64nm,0.7s						
POGA	**Pongola**	**2.46**	**121**	*e*P	Pn	09 43 58.4	+0.4
POGA				*e*S	Sn	09 44 29.3	+0.6
POGA				IAML		09 44 40.9	
	comp=Z,19nm,0.5s						
LEPH	**Lephalale, Lim**	**2.63**	**328**	*e*P	Pn	09 44 01.7	+1.2
LEPH				*e*S	Sn	09 44 33.2	0.0
LEPH				IAML		09 44 36.6	
	comp=Z,27nm,0.5s						
MOPA	**Mopani**	**3.18**	**37**	*e*P	Pn	09 44 09.2	+1.2
MOPA				*e*S	Sn	09 44 46.5	-0.1
MOPA				IAML		09 45 03.0	
	comp=Z,31nm,0.5s						
LBTB	**Lobatse**	**3.54**	**287**	*e*P	Pn	09 44 13.9	+0.9
LBTB				*e*S	Sn	09 44 56.3	+0.6
LBTB				IAML		09 45 04.6	
	comp=Z,19nm,0.6s						
MREMI	**Moremi**	**3.91**	**334**	*i* P	Pg	09 44 34.0	+2.3
MREMI				*i* S	Sn	09 45 04.0	-0.8
MREMI				IAML		09 45 20.5	
	comp=E,55nm,0.4s						
LPHEP	**Lephephe**	**4.17**	**310**	*i* P	Pn	09 44 18.6	-3.0
LPHEP				IAML		09 45 29.1	
	comp=E,11nm,0.8s						
BOSA	**Boshof**	**4.41**	**234**	*e*P	Pn	09 44 26.7	+1.8
BOSA				*e*S	Sn	09 45 17.2	+0.2
BOSA				IAML		09 45 30.8	
	comp=Z,11nm,0.5s						
BROLN	**TIhalogang**	**5.30**	**339**	*i* P	Pb	09 44 51.9	+1.5
BROLN				*i* S	Sn	09 45 34.4	-4.7
BROLN				IAML		09 46 00.7	
	comp=E,16nm,0.7s						
KGCAE	**Kacgae**	**7.25**	**295**	*i* P	Pn	09 44 51.9	-12

HEL 27 09:47:48.6±0.6, 60.°81N×28.°62E, h0km, ML1.1, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.59**	**243**	PG	Pg	09 47 59.7	-0.1
VJF				smax	smax	09 48 07.3	
	comp=Z,2.2nm,0.2s						
VJF				SG	Sg	09 48 07.9	+0.5
RUF	**Ruokolahti**	**0.64**	**14**	PG	Pg	09 48 00.4	-0.5
	baz=192						
RUF				smax	smax	09 48 08.8	
	comp=Z,2.1nm,0.2s						
R

VAF				SG	Sb	09 50 00.6	-0.2
PAJU	**Pajala**	**2.44**	**333**	PG	Pb	09 49 31.1	-1.8
PAJU				SB	Sn	09 50 00.8	+1.0
KLF	**Kolari**	**2.50**	**342**	SB	Sn	09 50 01.2	+0.3
KLF				smax	smax	09 50 01.7	
	comp=Z,0.7nm,0.2s						
UMAU	**Umeaa**	**2.51**	**249**	PG	Pb	09 49 32.7	-1.2
	baz=68						
UMAU				SG	Sb	09 50 04.8	-0.5
KEF	**Keuruu**	**2.77**	**191**	smax	smax	09 50 09.7	
	comp=Z,1.3nm,0.2s						
KEF				SG	Sb	09 50 11.7	-1.2
JOF	**Joensuu**	**3.08**	**127**	SB	Sb	09 50 18.8	-3.0
FIA0	**FINESS Array S**	**3.46**	**179**	SB	Sn	09 50 28.3	+3.6
HEF	**Hetta**	**3.65**	**347**	SG	Sb	09 50 39.8	+1.5
RAJF	**Raja-Jooseppi**	**3.72**	**13**	PB	Pb	09 49 51.0	-3.7

REN ***27*** *09:58:59.8±4.2,39.°88N±0.°01×121.°74W±0.°02,h10km±7km, Error ellipse: s-maj=2.2km s-min=1.5km az=76.0*
NEIC ***27*** *09:58:59.1±1.7,39.°74N±0.°01×121.°80W±0.°03,h32km±7km, Error ellipse: s-maj=3.9km s-min=1.4km az=76.0*

NCEDC 27 09:59:00.0±2.7,39.°75N±0.°02×121.°84W±0.°02,h22km±7km, ML3.0/17, ML2.9/59(NEIC), ML3.1/2(REN), Error ellipse: s-maj=3.2km s-min=0.6km az=209.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGOM	**Van Goodin Ran**	**0.20**	**118**		Pb	09 59 05.7	+0.1
OBHM	**Bloomer Hill**	**0.31**	**108**		Pb	09 59 06.8	-0.3
OBHM					Sb	09 59 12.3	+0.5
ORV	**Oroville**	**0.33**	**126**	Pg	Pb	09 59 06.9	-0.4
ORV				IAML		09 59 12.4	
	comp=N,2μm,0.2s						
ORV				IAML		09 59 13.0	
	comp=E,1μm,0.2s						
ORV	**Oroville**	**0.33**	**126**		Sb	09 59 12.1	-0.1
PAM	**Palermo**	**0.39**	**140**		Pb	09 59 07.9	-0.3
OWYM	**Wyandotte**	**0.41**	**137**		Pb	09 59 08.1	-0.4
OSTM	**Stimpson Lane**	**0.43**	**153**		Pb	09 59 08.5	-0.4
KPK	**Kanaka Peak**	**0.45**	**112**		Pb	09 59 08.8	-0.5
KPK					Sb	09 59 14.8	-0.8
OSUM	**Sutter Buttes**	**0.48**	**181**		Pb	09 59 09.7	-0.1
GCK	**Clark Valley**	**0.50**	**246**		Pn	09 59 11.6	-0.2
SUTB	**Sutter Butte**	**0.52**	**175**	Pg	Pb	09 59 10.1	-0.4
GFC	**Funks Creek**	**0.55**	**219**		Pn	09 59 11.9	-0.5
O03E	**Paynes Creek**	**0.55**	**3**	Pg	Pb	09 59 10.4	-0.6
O03E				IAML		09 59 18.7	
	comp=N,749nm,0.4s						
O03E	**Paynes Creek**	**0.55**	**3**		Sb	09 59 18.4	0.0
SFRE	**Sierra Foothil**	**0.64**	**141**		Pb	09 59 11.4	-1.0
GVV	**Valley View**	**0.64**	**273**		Pb	09 59 12.8	+0.1
GROM	**Round Mountain**	**0.66**	**285**		Pb	09 59 13.0	0.0
LDBM	**Digger Butte**	**0.68**	**4**		Pb	09 59 12.6	-0.7
LRDM	**Redding Ridge**	**0.77**	**22**		Pb	09 59 14.4	-0.4
O02D	**Mt. Diablo Mer**	**0.84**	**301**		Pb	09 59 15.2	-0.8
GHGM	**Hogback Ridge**	**0.98**	**231**		Pb	09 59 18.1	-0.3
MNRC	**McLaughlin Min**	**0.99**	**208**		Pb	09 59 17.7	-0.8
MNRC	**McLaughlin Min**	**0.99**	**208**	Pg	Pb	09 59 17.4	-1.0
MNRC				IAML		09 59 36.1	
	comp=E,134nm,3.0s						
MNRC				IAML		09 59 42.9	
	comp=N,154nm,3.6s						
GRTM	**Round Top Moun**	**1.03**	**219**		Pn	09 59 18.4	-0.8
KRKM	**Rackout Spring**	**1.05**	**260**		Pb	09 59 20.3	+0.7
LSHM	**Sage Hen Hill**	**1.05**	**352**		Pn	09 59 18.3	-1.2
NMTM	**Middletown**	**1.05**	**207**		Pn	09 59 18.2	-1.2
YUBA	**Cisco Grove, Y**	**1.09**	**112**		Pn	09 59 19.1	-1.2
HATC	**Hat Creek Radi**	**1.10**	**15**		Pn	09 59 20.0	-0.3
HATC				IAML		09 59 39.3	
	comp=N,268nm,1.3s						
HATC				IAML		09 59 40.1	
	comp=E,236nm,0.4s						
BEKR	**Beckworth**	**1.15**	**84**		Pn	09 59 19.9	-1.0
BEKR					Sb	09 59 34.5	-1.4
BEKR				IAML		09 59 37.0	
	comp=N,279nm,0.6s						
BEKR				IAML		09 59 37.4	
	comp=E,292nm,0.6s						
DCMP	**DeCamp, Califo**	**1.19**	**257**	Pn	Pn	09 59 21.4	+0.1
GDXM	**Geysers**	**1.20**	**218**	Pn	Pn	09 59 21.4	-0.1
RUSS	**Russell Ranch**	**1.20**	**181**		Pn	09 59 20.2	-1.3
RUSS	**Russell Ranch**	**1.20**	**181**	IAML		09 59 38.0	
	comp=N,250nm,0.3s						
RUSS				IAML		09 59 43.3	
	comp=E,244nm,3.1s						
HOPS	**Hopland Field**	**1.22**	**232**		Pn	09 59 21.5	-0.1
HOPS	**Hopland Field**	**1.22**	**232**		Pn	09 59 21.1	-0.6
HOPS				IAML		09 59 38.1	
	comp=N,96nm,3.0s						
HOPS				IAML		10 00 05.6	
	comp=E,141nm,3.7s						
DONR	**Donner Summit**	**1.24**	**108**		Pn	09 59 21.5	-0.8
DONR					Sn	09 59 36.5	-1.9
NADM	**Allendale**	**1.29**	**184**		Pn	09 59 21.6	-1.1
N02D	**Trinity Center**	**1.39**	**332**		Pn	09 59 23.6	-0.5
N02D				IAML		09 59 49.3	
	comp=N,168nm,0.7s						
N02D				IAML		09 59 50.7	
	comp=E,228nm,0.5s						
OAKV	**Oakville Exper**	**1.39**	**199**		Pn	09 59 22.5	-1.6
MPK	**Martis Peak**	**1.47**	**107**		Pn	09 59 25.8	+0.3
CVS	**Carmenet Viney**	**1.48**	**199**		Pn	09 59 23.8	-1.5
CVS	**Carmenet Viney**	**1.48**	**199**		Pn	09 59 24.0	-1.4
CVS				IAML		09 59 42.7	
	comp=N,77nm,0.8s						
CVS				IAML		09 59 43.4	
	comp=E,148nm,0.5s						
KMRM	**Mail Ridge**	**1.51**	**289**	Pn	Pn	09 59 24.5	-1.3
KMRM				IAML		09 59 39.9	
	comp=E,162nm,4.8s						
KMRM				IAML		09 59 53.9	
	comp=N,175nm,3.3s						
M03C	**McCloud**	**1.54**	**352**		Pn	09 59 26.5	+0.3
WELL	**Weller Preserv**	**1.57**	**146**		Pn	09 59 26.9	+0.3
LBFM	**Black Fox Moun**	**1.60**	**359**		Pn	09 59 27.6	+0.5
SNT	**Sears Point**	**1.64**	**197**		Pn	09 59 25.8	-1.7
CTAM	**Taylor**	**1.73**	**185**		Pn	09 59 27.8	-0.9
LMPM	**Military Pass**	**1.75**	**352**		Pn	09 59 30.1	+0.9
M02C	**Callahan**	**1.81**	**335**	Pn	Pn	09 59 30.0	0.0
PNTR	**Pine Nut**	**1.86**	**110**		Pn	09 59 30.5	-0.2
PAHR	**Pah Rah Range**	**1.90**	**91**		Pn	09 59 30.1	-1.1
PAHR				IAML		09 59 57.5	
	comp=N,63nm,0.6s						
PAHR				IAML		10 00 00.4	
	comp=E,55nm,0.8s						
CYBM	**Yerba Buena Is**	**1.98**	**192**		Pb	09 59 34.6	-0.6
CMB	**Columbia Colle**	**2.06**	**146**	Pn	Pn	09 59 33.7	+0.5
CMB				IAML		10 00 06.2	
	comp=E,76nm,0.6s						
CMB				IAML		10 00 06.8	
	comp=N,79nm,0.7s						
YBH	**Yreka Blue Hor**	**2.09**	**342**		Pn	09 59 33.8	0.0
WAKR	**Walker**	**2.25**	**123**		Pn	09 59 36.5	+0.5
WAKR				IAML		10 00 08.0	
	comp=E,79nm,0.8s						
WAKR				IAML		10 00 08.3	
	comp=N,70nm,0.8s						
JRSC	**Jasper Ridge**	**2.36**	**188**	Pn	Pn	09 59 37.2	-0.3
RYN	**Ryan**	**2.81**	**112**		Pn	09 59 43.6	-0.2
RYN				IAML		10 00 26.9	
	comp=N,38nm,0.5s						
RYN				IAML		10 00 27.1	
	comp=E,34nm,0.3s						
LHV	**Little Huntoon**	**3.00**	**119**	Pn	Pn	09 59 46.3	+0.1
LHV				IAML		10 00 41.4	
	comp=E,45nm,0.8s						
LHV				IAML		10 00 43.6	
	comp=N,39nm,0.6s						
NV09	**Mina Array Sit**	**3.03**	**115**		Pn	09 59 47.0	+0.2
NVAR	**Mina Array Bea**	**3.05**	**114**		Pn	09 59 46.9	-0.2
NV08	**Mina Array Sit**	**3.06**	**115**		Pn	09 59 47.4	+0.3

MOS ***27*** *10:00:38.1±0.8,22.°03S×179.°56W,h554km,mb5.3/19, Error ellipse: s-maj=9.0km s-min=8.7km az=25.3*
NEIC ***27*** *10:00:39.9±1.5,22.°09S±0.°09×179.°47W±0.°09, h564km±5km,mb5.4/609,Mww5.5/15, Error ellipse: s-maj=13.5km s-min=12.4km az=175.0*
BJI ***27*** *10:00:39.0,21.°98S×178.°73W,h588km,mB5.1/14, mb4.9/40*

NEIC ***27*** *10:00:40.3,22.°10S×179.°47W,h570km*
IDC ***27*** *10:00:40.1±0.4,22.°07S×179.°54W,h567km±3km,mb4.5/30, mbtmp5.3/32,Error ellipse: s-maj=9.0km s-min=7.3km az=1.0*
NOU ***27*** *10:00:40.3,22.°18S×179.°45W,h578km,ML5.0/112,South of Fiji Islands*
NEIC ***27*** *10:00:40.3,21.°90S×179.°47W,h570km,Moment Tensor Solution. Duration: 3s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.96; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-0.81; $M_{r\theta}$0.01; $M_{\theta\phi}$-1.19; $M_{\phi r}$-2.02; Fault plane solution: M_o2.50000×10^{17} NP1:φs71.33000°, δ29.43000°,λ152.89000°. NP2:φs185.36000°,δ77.06000°, λ63.34000°. Principal axes: T 2.4542, Plg51.0000°, Azm65.0000°; N 0.0960, Plg26.0000°, Azm192.0000°; P -2.5502, Plg27.0000°, Azm296.0000°;*
GCMT ***27*** *10:00:43.9±0.3,22.°21S±0.°03×179.°37W±0.°03, h592km±2km,MW5.6/99,Moment Tensor Solution. s99,c149; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.41±.06; $M_{\theta\theta}$-0.55±.11; $M_{\phi\phi}$-0.86±.11; $M_{r\theta}$-0.19±.11; $M_{\theta\phi}$-1.73±.10; $M_{\phi r}$-2.42±.10; Best double couple: M_o3.22100×10^{17} NP1:φs76.00000°,δ32.00000°, λ150.00000°. NP2:φs192.00000°,δ75.00000°,λ61.00000°. Principal axes: T 3.1300, Plg52.0000°, Azm68.0000°; N 0.1830, Plg28.0000°, Azm200.0000°; P -3.3120, Plg24.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 27 10:00:40.0±0.3,22.°15S±0.°04×179.°47W±0.°03, h574km±2km,h576km;pP-P,n1345,σ1s35/1247,mb5.3/400, 101C-52D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**3.95**	**9**	P	**P**	**10 02 04.7**	**+1.3**
MSVF	**Nonsavu**	**4.98**	**332**		**P**	**10 02 12.7**	**+1.3**
MSVF	**Nonsavu**	**4.98**	**332**	P	**P**	**10 02 12.6**	**+1.3**
MSVF	**Nonsavu**	**4.98**	**332**	P	**P**	**10 02 12.7**	**+1.3**
TAVE	**Taveuni**	**5.43**	**356**	P	**P**	**10 02 17.4**	**+2.3**
DGTI	**Dogotuki**	**5.87**	**352**	P	**P**	**10 02 20.1**	**+1.2**
RIZ	**Raoul Island**	**7.20**	**169**	P	**P**	**10 02 31.7**	**+1.0**
RIZ				S	**S**	**10 03 59.5**	**-1.9**
RAO	**Raoul Island**	**7.21**	**169**	P	**P**	**10 02 30.8**	**+0.1**
	797nm,0.2s,baz=74,slow=9.6,SNR=18						
RAO				S	**S**	**10 03 59.8**	**-1.7**
	1μm,0.6s,baz=100,slow=23,SNR=8.9						
RAO	**Raoul Island**	**7.21**	**169**	P	**P**	**10 02 30.6**	**-0.2**
RAO	**Raoul Island**	**7.21**	**169**	P	**P**	**10 02 30.9**	**+0.1**
RAO	**Raoul Island**	**7.21**	**169**	S	**S**	**10 04 00.8**	**-0.8**
RAO	**Raoul Island**	**7.21**	**169**	P	**P**	**10 02 30.6**	**-0.2**
GLKZ	**Green Lake**	**7.21**	**169**	P	**P**	**10 02 30.8**	**0.0**
GLKZ				S	**S**	**10 03 58.2**	**-3.6**
NIUE	**Niue**	**9.44**	**73**	P	**P**	**10 02 53.3**	**+0.4**
	comp=Z,3μm,0.9s						
NIUE	**Niue**	**9.44**	**73**		**P**	**10 02 52.9**	**+0.1**
NIUE	**Niue**	**9.44**	**73**	P	**P**	**10 02 52.9**	**+0.1**
NIUE	**Niue**	**9.44**	**73**	P	**P**	**10 02 53.2**	**+0.4**
NIUE				S	**S**	**10 04 47.3**	**+5.6**
INH	**Isangel**	**10.84**	**282**	P	**P**	**10 03 09.0**	**+2.1**
AFI	**Afiamalu**	**10.98**	**43**		**P**	**10 03 06.0**	**-2.4**
AFI	**Afiamalu**	**10.98**	**43**	P	**P**	**10 03 06.1**	**-2.4**
AFI	**Afiamalu**	**10.98**	**43**	P	**P**	**10 03 06.1**	**-2.4**
AFI				S	**S**	**10 05 03.1**	**-7.4**
AFI	**Afiamalu**	**10.98**	**43**	P	**P**	**10 03 06.0**	**-2.4**
MARNC	**Mare, Loyalty**	**11.63**	**271**		**P**	**10 03 15.6**	**+0.6**
MARNC	**Mare, Loyalty**	**11.63**	**271**	P	**P**	**10 03 15.6**	**+0.6**
MARNC	**Mare, Loyalty**	**11.63**	**271**	S	**S**	**10 05 22.1**	**-0.2**
PINNC	**Pines Island,**	**12.12**	**265**		**P**	**10 03 19.3**	**-0.6**
PINNC	**Pines Island,**	**12.12**	**265**	P	**P**	**10 03 20.6**	**+0.7**
RTV	**Rentapao**	**12.18**	**289**	P	**P**	**10 03 21.4**	**+0.8**
DVP	**Devils Point**	**12.42**	**289**	P	**P**	**10 03 24.3**	**+1.3**
YATNC	**Mamie plateau,**	**12.65**	**268**	P	**P**	**10 03 26.2**	**+0.8**
OUENC	**Ouen Island, N**	**12.68**	**266**	P	**P**	**10 03 26.2**	**+0.5**
ONTNC	**Ouen Toro**	**13.04**	**267**		**P**	**10 03 29.3**	**-0.1**
ONTNC	**Ouen Toro**	**13.04**	**267**	P	**P**	**10 03 30.0**	**+0.6**
DZM	**Mont Dzumac**	**13.06**	**268**	P	**P**	**10 03 29.5**	**-0.2**
	comp=Z,49nm,0.5s,baz=118,slow=13,SNR=32						
DZM				S	**S**	**10 05 48.8**	**-0.5**
	comp=Z,25nm,0.8s,baz=183,slow=23,SNR=4.7						
DZM				ScP	**ScP**	**10 10 55.5**	**+2.8**
	comp=Z,52nm,1.1s,baz=27,slow=2.3,SNR=9.8						
DZM	**Mont Dzumac**	**13.06**	**268**	*e*P	**P**	**10 03 29.3**	**-0.4**
	comp=Z,379nm,1.4s						
DZM				*e*S	**S**	**10 05 47.9**	**-1.4**
	comp=Z,202nm,1.6s						
DZM	**Mont Dzumac**	**13.06**	**268**	P	**P**	**10 03 29.1**	**-0.7**
DZM	**Mont Dzumac**	**13.06**	**268**	P	**P**	**10 03 29.7**	**0.0**
NFK	**Norfolk Island**	**13.27**	**236**	P	**P**	**10 03 33.0**	**+1.4**
	comp=Z,327nm,0.9s						
NFK	**Norfolk Island**	**13.27**	**236**	P	**P**	**10 03 33.8**	**+2.1**
FUNA	**Funafuti**	**13.61**	**354**		**P**	**10 03 33.6**	**-1.7**
FUNA	**Funafuti**	**13.61**	**354**	P	**P**	**10 03 34.4**	**-1.0**
SANVU	**Saraoutou**	**14.27**	**296**		**P**	**10 03 40.7**	**-1.2**
SANVU	**Saraoutou**	**14.27**	**296**	P	**P**	**10 03 41.4**	**-0.6**
OUZ	**Omahuta**	**14.37**	**203**	P	**P**	**10 03 44.5**	**+1.9**
OUZ	**Omahuta**	**14.37**	**203**	P	**P**	**10 03 44.4**	**+1.8**
GRZ	**Great Barrier**	**14.72**	**196**	P	**P**	**10 03 46.9**	**+0.8**
WCZ	**Waipu Caves**	**14.76**	**200**	P	**P**	**10 03 48.3**	**+1.8**
KUZ	**Kuaotunu**	**15.13**	**195**	P	**P**	**10 03 50.6**	**+0.6**
KUZ	**Kuaotunu**	**15.13**	**195**	P	**P**	**10 03 50.9**	**+0.8**
KOUNC	**Koumac, New Ca**	**15.22**	**273**	P	**P**	**10 03 52.0**	**+0.8**
MXZ	**Matakaoa Point**	**15.48**	**187**	P	**P**	**10 03 51.7**	**-1.7**
MXZ	**Matakaoa Point**	**15.48**	**187**	P	**P**	**10 03 51.8**	**-1.6**
MXZ				S	**S**	**10 06 26.4**	**-5.1**
WMGZ	**Waiomatatini S**	**15.72**	**186**	P	**P**	**10 03 54.4**	**-1.3**
HAZ	**Te Kaha**	**15.73**	**188**	P	**P**	**10 03 54.4**	**-1.4**
HAZ				S	**S**	**10 06 29.9**	**-5.8**
PKGZ	**Pakihiroa**	**15.80**	**187**	P	**P**	**10 03 56.1**	**-0.5**
PKGZ				S	**S**	**10 06 32.3**	**-4.6**
RUGZ	**Raukumara Rang**	**15.95**	**188**	P	**P**	**10 03 57.0**	**-1.1**
RUGZ				S	**S**	**10 06 31.9**	**-7.7**
TGRZ	**Tauranga**	**15.96**	**192**	P	**P**	**10 03 59.6**	**+1.7**
PUZ	**Puketiti**	**15.99**	**187**	P	**P**	**10 03 57.6**	**-0.7**
PUZ				S	**S**	**10 06 35.5**	**-4.5**
TOZ	**Tahuroa Road**	**16.12**	**195**	P	**P**	**10 04 00.9**	**+1.4**
TWGZ	**Tauwhareparae**	**16.12**	**187**	P	**P**	**10 03 58.4**	**-1.2**
TWGZ				S	**S**	**10 06 35.5**	**-6.6**
KMRZ	**Kaimai**	**16.13**	**193**	P	**P**	**10 04 01.3**	**+1.6**
URZ	**Urewera**	**16.32**	**190**	P	**P**	**10 03 58.3**	**-3.0**
	comp=Z,124nm,0.7s,baz=275,slow=2.7,SNR=107						
URZ				S	**S**	**10 06 37.9**	**-7.4**
	comp=Z,134nm,0.7s,baz=60,slow=24,SNR=16						
URZ				ScP	**ScP**	**10 10 57.4**	**-0.8**
	comp=Z,9.5nm,0.5s,baz=319,slow=5.5,SNR=3.8						
URZ	**Urewera**	**16.32**	**190**	P	**P**	**10 03 58.0**	**-3.3**
MWZ	**Matawai**	**16.33**	**188**	P	**P**	**10 03 59.3**	**-2.2**
MWZ				S	**S**	**10 06 39.8**	**-5.9**
TLZ	**Tolley Road**	**16.68**	**194**	P	**P**	**10 04 05.6**	**+0.9**
RTZ	**Ruatahuna**	**16.69**	**190**	P	**P**	**10 04 03.2**	**-1.5**
RTZ				S	**S**	**10 06 45.7**	**-5.8**
KNZ	**Kokohu**	**16.99**	**188**	P	**P**	**10 04 05.7**	**-1.6**
KNZ				S	**S**	**10 06 52.1**	**-4.1**
HIZ	**Hauiti**	**17.02**	**195**	P	**P**	**10 04 08.8**	**+1.2**
BKZ	**Black Stump Fm**	**17.31**	**191**	P	**P**	**10 04 07.3**	**-3.0**
KHEZ	**Kahui Hut**	**17.97**	**197**	P	**P**	**10 04 17.3**	**+0.9**
RAR	**Rarotonga**	**18.33**	**91**	P	**P**	**10 04 20.7**	**+0.9**
	comp=Z,32nm,0.8s,baz=264,slow=4.2,SNR=8.2						
RAR	**Rarotonga**	**18.33**	**91**	P	**P**	**10 04 20.1**	**+0.3**
RAR	**Rarotonga**	**18.33**	**91**	P	**P**	**10 04 20.7**	**+0.9**
RAR	**Rarotonga**	**18.33**	**91**	P	**P**	**10 04 20.1**	**+0.3**
BFZ	**Birch Farm**	**18.83**	**190**	P	**P**	**10 04 23.6**	**-0.5**
TCW	**Tory Channel**	**19.72**	**194**	P	**P**	**10 04 32.1**	**-0.1**
SNZO	**South Karori**	**19.72**	**193**	P	**P**	**10 04 31.6**	**-0.6**
SNZO	**South Karori**	**19.72**	**193**	P	**P**	**10 04 32.6**	**+0.4**
BHW	**Baring Head**	**19.78**	**193**	P	**P**	**10 04 31.9**	**-0.9**
QRZ	**Quartz Range**	**19.81**	**198**	P	**P**	**10 04 33.6**	**+0.6**
KHZ	**Kahutara**	**21.04**	**195**	P	**P**	**10 04 42.7**	**-1.3**
CTZ	**Chatham Island**	**21.65**	**174**	P	**P**	**10 04 52.8**	**+3.2**
NGOA	**Tingoa Renbel**	**22.22**	**295**	P	**P**	**10 04 55.1**	**+0.1**
RPZ	**Rata Peaks**	**22.89**	**198**	P	**P**	**10 04 59.9**	**-0.8**
HNR	**Honiara**	**23.46**	**299**	P	**P**	**10 05 04.6**	**-1.5**
	comp=Z,67nm,0.5s,baz=169,slow=11,SNR=11						
	comp=Z,67nm,0.5s						
HNR	**Honiara**	**23.46**	**299**	P	**P**	**10 05 05.1**	**-1.0**
SAVO	**Savo Central**	**23.73**	**300**	P	**P**	**10 05 07.2**	**-1.3**
JCZ	**Jackson Bay**	**23.92**	**201**	P	**P**	**10 05 09.9**	**0.0**
TATA	**Tatamba Isabel**	**24.19**	**301**	P	**P**	**10 05 11.6**	**-0.9**
ODZ	**Otahua Downs**	**24.23**	**197**	P	**P**	**10 05 12.4**	**-0.1**
WKZ	**Wanaka**	**24.52**	**200**	P	**P**	**10 05 14.8**	**-0.3**
MLZ	**Mavora Lakes**	**25.29**	**201**	P	**P**	**10 05 22.4**	**+0.5**
WHZ	**Wether Hill Ro**	**25.81**	**200**	P	**P**	**10 05 26.9**	**+0.5**
SYZ	**Scrubby Hill**	**26.02**	**198**	P	**P**	**10 05 28.3**	**0.0**
EIDS	**Eidsvold**	**27.12**	**257**	P	**P**	**10 05 38.5**	**+0.3**
	comp=Z,128nm,1.4s						
EIDS	**Eidsvold**	**27.12**	**257**	P	**P**	**10 05 38.9**	**+0.7**
EIDS	**Eidsvold**	**27.12**	**257**	P	**P**	**10 05 38.8**	**+0.6**
ARMA	**Armidale**	**27.13**	**246**	P	**P**	**10 05 40.0**	**+1.6**
	comp=Z,88nm,1.2s						
ARMA	**Armidale**	**27.13**	**246**	P	**P**	**10 05 40.3**	**+1.8**
ARMA	**Armidale**	**27.13**	**246**	P	**P**	**10 05 40.0**	**+1.6**
TBI	**Tubuai**	**27.68**	**98**	*e*P	**P**	**10 05 45.2**	**+2.1**
	comp=Z,280nm,1.0s						
TBI				*e*S	**S**	**10 09 43.4**	**-2.3**
	comp=Z,3μm,30.0s						
TBI				*es*S	sS	10 12 16.0	-21
	comp=Z,3μm,43.8s						
MGCD	**Mangrove Creek**	**28.20**	**241**	P	**P**	**10 05 49.1**	**+1.5**
	comp=Z,156nm,1.2s						
MGCD	**Mangrove Creek**	**28.20**	**241**	P	**P**	**10 05 47.5**	**0.0**
PAE	**Paea**	**28.43**	**86**	*e*P	**P**	**10 05 50.8**	**+1.1**
	comp=Z,87nm,1.6s						
PAE				*e*pP	**pP**	**10 07 22.8**	**+2.6**
	comp=Z,40nm,1.3s						
PPT2	**Papeete2**	**28.45**	**86**	*e*S	**S**	**10 09 49.4**	**-8.6**
	comp=Z,588nm,27.8s						
PPT2				*es*S	sS	10 12 47.5	-2.6
	comp=Z,2μm,39.8s						
PPT	**Papeete**	**28.45**	**86**	P	**P**	**10 05 51.1**	**+1.1**
	comp=Z,135nm,0.9s,baz=276,slow=18,SNR=13						
	comp=Z,135nm,0.9s						
PPTF	**Pamatai, Papee**	**28.46**	**86**	P	**P**	**10 05 50.4**	**+0.3**
PPTF	**Pamatai, Papee**	**28.46**	**86**	P	**P**	**10 05 49.6**	**-0.5**
SYDH	**Sydney Hard Ro**	**28.64**	**240**	P	**P**	**10 05 52.4**	**+1.0**
TIAR	**Tiarei**	**28.67**	**86**	*e*P	**P**	**10 05 53.2**	**+1.4**
	comp=Z,316nm,0.9s						
TIAR				*e*pP	**pP**	**10 07 22.5**	**0.0**
	comp=Z,128nm,1.2s						
TVO	**Taravao**	**28.70**	**87**	*e*P	**P**	**10 05 53.2**	**+1.0**
	comp=Z,42nm,0.8s						
TVO				*e*pP	**pP**	**10 07 22.3**	**-0.5**
	comp=Z,50nm,1.3s						
RMQ	**Roma**	**29.23**	**255**	P	**P**	**10 05 57.7**	**+1.0**
	comp=Z,61nm,1.5s						
CNB	**Canberra Magne**	**30.18**	**237**	P	**P**	**10 06 05.8**	**+1.1**
	comp=Z,220nm,0.8s						
CNB	**Canberra Magne**	**30.18**	**237**	P	**P**	**10 06 04.7**	**0.0**
CAN	**Canberra**	**30.46**	**238**	P	**P**	**10 06 08.0**	**+0.8**
	comp=Z,128nm,1.2s						
CAN	**Canberra**	**30.46**	**238**	P	**P**	**10 06 07.4**	**+0.3**
CAN	**Canberra**	**30.46**	**238**	P	**P**	**10 06 07.6**	**+0.5**
CAN	**Canberra**	**30.46**	**238**	P	**P**	**10 06 07.4**	**+0.3**
CAN				pmax	pmax		
	comp=Z,341nm,1.7s						
CAN	**Canberra**	**30.46**	**238**	P	**P**	**10 06 08.0**	**+0.8**
YNG	**Young**	**30.66**	**240**	P	**P**	**10 06 09.9**	**+1.0**
	comp=Z,46nm,1.9s						
PMOR	**Pomariorio Ree**	**30.72**	**82**	*e*P	**P**	**10 06 10.6**	**+1.1**
	comp=Z,664nm,1.2s						
VAH	**Vaihoa**	**30.89**	**83**	*e*P	**P**	**10 06 11.6**	**+0.7**
	comp=Z,4.0nm,0.9s						
MILA	**Mila**	**30.89**	**234**	P	**P**	**10 06 11.6**	**+0.8**
	comp=Z,15nm,1.3s						
TV1H	**Townsville Har**	**31.65**	**269**	P	**P**	**10 06 17.8**	**+0.4**
CTA	**Charters Tower**	**32.00**	**267**	P	**P**	**10 06 20.6**	**+0.2**
CTAO	**Charters Tower**	**32.00**	**267**	P	**P**	**10 06 20.9**	**+0.4**
CTAO	**Charters Tower**	**32.00**	**267**	P	**P**	**10 06 20.6**	**+0.2**
CTAO	**Charters Tower**	**32.00**	**267**	P	**P**	**10 06 20.9**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,131nm,0.6s						
CTAO	**Charters Tower**	**32.00**	**267**	P	**P**	**10 06 20.8**	**+0.4**
XMAS	**Kiritimati**	**32.26**	**45**	P	**P**	**10 06 22.6**	**0.0**
CMSA	**Cobar Meteorol**	**32.35**	**246**	P	**P**	**10 06 23.6**	**+0.4**
	comp=Z,153nm,0.9s						
CMSA	**Cobar Meteorol**	**32.35**	**246**	P	**P**	**10 06 23.3**	**+0.1**
QLP	**Quilpie**	**33.29**	**255**	P	**P**	**10 06 31.4**	**+0.3**
	comp=Z,250nm,1.0s						
QLP	**Quilpie**	**33.29**	**255**	P	**P**	**10 06 31.2**	**0.0**
TOO	**Toolangi**	**33.83**	**235**	P	**P**	**10 06 36.1**	**+0.5**
	comp=Z,48nm,0.8s						
TOO	**Toolangi**	**33.83**	**

comp=Z,121nm,1.1s
WB0 Warramunga Arr 43.03 264 P **P** **10 07 49.7 -0.4**
WB0 IAmb IAmb 10 07 50.2
comp=Z,119nm,0.8s
WRAB Tennant Creek 43.03 264 P **P** **10 07 49.9 -0.4**
WRAB IAmb IAmb 10 07 50.8
comp=Z,138nm,1.0s
WRAB Tennant Creek 43.03 264 P **P** **10 07 49.1 -1.1**
WRAB Tennant Creek 43.03 264 *ce*P **P** **10 07 49.4 -0.8**
WRAB pmax pmax
comp=Z,254nm,1.7s
WRAB Tennant Creek 43.03 264 P **P** **10 07 49.5 -0.7**
WRAB ScP **ScP** **10 12 26.0 +1.9**
WRA Warramunga Arr 43.04 264 P **P** **10 07 49.4 -0.9**
comp=Z,80nm,0.8s,baz=98,slow=7.9,SNR=224
WRA PcP **PcP** **10 09 27.3 +0.1**
comp=Z,7.5nm,0.9s,baz=100,slow=4.3,SNR=1.9
WRA PP **PP** **10 09 43.0 0.0**
comp=Z,3.3nm,0.4s,baz=96,slow=8.8,SNR=7.5
WRA ScP **ScP** **10 12 26.4 +2.3**
comp=Z,35nm,1.1s,baz=104,slow=4.2,SNR=28
WRA S **S** **10 13 31.0 -4.3**
comp=Z,3.0nm,0.6s,baz=104,slow=14,SNR=8.5
WRA P3KPbc 10 36 49.9
comp=Z,0.2nm,0.3s,baz=289,slow=3.8,SNR=5.3
comp=Z,80nm,0.8s
JAY Jayapura 43.31 291 P **P** **10 07 52.4 0.0**
comp=Z,109nm,0.6s,baz=140,slow=3.5,SNR=45
comp=Z,109nm,0.6s
JAY Jayapura 43.31 291 P **P** **10 07 52.3 -0.2**
comp=Z,3µmcomp=Z,245nm,1.2s
GENI Genyem 43.74 291 P **P** **10 07 55.7 0.0**
comp=Z,351nm,1.4s
KDU Kakadu 46.65 273 P **P** **10 08 16.9 -1.0**
comp=Z,53nm,1.1s
FORT Forrest 47.40 248 P **P** **10 08 22.6 -0.7**
comp=Z,146nm,0.8s
FORT Forrest 47.40 248 P **P** **10 08 23.2 -0.1**
FORT IAmb IAmb 10 08 24.1
comp=Z,89nm,0.7s
WRKA Warakurna 47.72 256 P **P** **10 08 25.4 -0.5**
comp=Z,126nm,0.8s
POHA Pohakuloa 47.77 31 P **P** **10 08 26.9 +0.5**
MTN Manton Dam 47.84 273 P **P** **10 08 25.5 -1.3**
comp=Z,90nm,0.7s
MTN Manton Dam 47.84 273 P **P** **10 08 26.4 -0.4**
DRS Darwin Rock St 48.19 273 P **P** **10 08 29.4 0.0**
KNRA Kununurra 49.21 268 P **P** **10 08 36.5 -0.4**
comp=Z,193nm,1.3s
KNRA Kununurra 49.21 268 P **P** **10 08 36.9 -0.1**
KNRA IAmb IAmb 10 08 38.4
comp=Z,104nm,0.8s
SAUI Saumlaki 49.36 279 P **P** **10 08 38.6 +0.5**
SAUI Saumlaki 49.36 279 P **P** **10 08 38.6 +0.5**
comp=Z,370nm,1.2s
FAKI Fak Fak 50.57 285 P **P** **10 08 46.6 -0.4**
FAKI IAmb IAmb 10 08 47.8
comp=Z,285nm,1.4s
FAKI Fak Fak 50.57 285 P **P** **10 08 46.9 -0.1**
FAKI Fak Fak 50.57 285 P **P** **10 08 46.4 -0.6**
comp=Z,2µmcomp=Z,158nm,1.3s
FITZ Fitzroy Crossi 51.47 264 P **P** **10 08 53.4 0.0**
FITZ Fitzroy Crossi 51.47 264 P **P** **10 08 53.4 0.0**
comp=Z,27nm,0.3s,baz=99,slow=6.7,SNR=225
comp=Z,27nm,0.3s
FITZ Fitzroy Crossi 51.47 264 P **P** **10 08 53.4 0.0**
BNDI Bandanaira 52.00 282 P **P** **10 08 57.5 +0.2**
BNDI Bandanaira 52.00 282 P **P** **10 08 56.6 -0.7**
SWI Sorong 52.38 287 P **P** **10 08 59.8 -0.2**
KMBL Kambalda 52.65 247 P **P** **10 09 01.0 -0.7**
comp=Z,21nm,1.4s
MSAI Masohi 53.38 283 P **P** **10 09 11.6 +4.5**
AAI Ambon 53.90 282 P **P** **10 09 10.5 -0.3**
comp=Z,4µmcomp=Z,175nm,1.1s
NLAI Namlea 55.08 282 P **P** **10 09 18.7 -0.3**
comp=Z,3µmcomp=Z,179nm,1.3s
SOEI Soe 55.21 273 P **P** **10 09 19.9 -0.2**
SOEI Soe 55.21 273 P **P** **10 09 21.1 +1.0**
BATI Baumata 55.61 273 P **P** **10 09 23.5 +0.7**
comp=Z,124nm,0.6s,baz=164,slow=1.6,SNR=21
comp=Z,124nm,0.6s
BATI Baumata 55.61 273 P **P** **10 09 24.0 +1.2**
comp=Z,2µmcomp=Z,188nm,0.7s
PSAC2 Pilbara Seismi 55.93 258 P **P** **10 09 23.8 -1.1**
comp=Z,135nm,1.2s
PSA00 Pilbara Seismi 55.98 258 P **P** **10 09 25.2 +0.1**
PSA00 Pilbara Seismi 55.98 258 P **P** **10 09 24.7 -0.5**
MEEK Meekatharra 56.10 252 P **P** **10 09 25.4 -0.6**
comp=Z,69nm,0.7s
MEEK Meekatharra 56.10 252 P **P** **10 09 25.2 -0.8**
KLBR Kellerberrin 56.13 246 P **P** **10 09 25.7 -0.4**
comp=Z,167nm,0.7s
KLBR Kellerberrin 56.13 246 P **P** **10 09 25.9 -0.2**
VNDA Vanda 56.15 185 P **P** **10 09 27.4 +2.0**
comp=Z,12nm,0.8s,baz=5.6,slow=8.1,SNR=28
VNDA PcP **PcP** **10 10 15.6 +0.9**
comp=Z,7.5nm,0.9s,baz=13,slow=4.8,SNR=4.7
comp=Z,12nm,0.8s
VNDA Vanda 56.15 185 P **P** **10 09 27.0 +1.6**
VNDA Vanda 56.15 185 P **P** **10 09 27.4 +1.9**
VNDA PcP **PcP** **10 10 15.7 +0.9**
MBWA Marble Bar 56.17 259 P **P** **10 09 25.8 -0.7**
comp=Z,247nm,0.7s
MBWA Marble Bar 56.17 259 P **P** **10 09 25.9 -0.6**
MBWA Marble Bar 56.17 259 P **P** **10 09 25.9 -0.6**
MBWA IAmb IAmb 10 09 27.1
comp=Z,148nm,0.7s
MBWA Marble Bar 56.17 259 P **P** **10 09 25.5 -1.0**
NWAO Narrogin (SRO) 56.42 244 P **P** **10 09 27.9 -0.1**
NWAO Narrogin (SRO) 56.42 244 P **P** **10 09 28.1 +0.1**
comp=Z,20nm,0.6s,baz=105,slow=7.8,SNR=17
comp=Z,20nm,0.6s
NWAO Narrogin (SRO) 56.42 244 P **P** **10 09 25.1 -2.9**
NWAO Narrogin (SRO) 56.42 244 P **P** **10 09 28.5 +0.5**
NWAO Narrogin (SRO) 56.42 244 P **P** **10 09 28.2 +0.2**
NWAO Narrogin (SRO) 56.42 244 P **P** **10 09 28.5 +0.5**
NWAO pmax pmax
comp=Z,140nm,1.9s
SANI Sanana 56.58 283 P **P** **10 09 29.3 -0.1**
SANI Sanana 56.58 283 P **P** **10 09 28.6 -0.8**
comp=Z,2µmcomp=Z,145nm,1.0s
TNTI Ternate 56.59 287 P **P** **10 09 28.9 -0.5**
TNTI IAmb IAmb 10 09 30.6
comp=Z,259nm,1.3s
TNTI Ternate 56.59 287 P **P** **10 09 29.3 -0.1**
comp=Z,2µmcomp=Z,153nm,1.2s
BLDU Ballidu 57.14 247 P **P** **10 09 32.5 -0.5**
comp=Z,49nm,1.0s
BLDU Ballidu 57.14 247 P **P** **10 09 32.7 -0.3**
MUN Mundaring 57.39 245 P **P** **10 09 34.8 +0.1**
comp=Z,69nm,1.5s
MUN Mundaring 57.39 245 P **P** **10 09 35.1 +0.4**
MMRI Maumere 57.47 274 P **P** **10 09 34.9 -0.6**
MMRI IAmb IAmb 10 09 36.3
comp=Z,329nm,1.5s
MMRI Maumere 57.47 274 P **P** **10 09 34.9 -0.6**
comp=Z,3µmcomp=Z,148nm,1.4s
MORW Morawa 57.95 249 P **P** **10 09 38.2 -0.3**
comp=Z,77nm,1.4s
MORW Morawa 57.95 249 P **P** **10 09 38.3 -0.2**
MORW IAmb IAmb 10 09 39.7
comp=Z,375nm,1.9s
BASI Baing, Sumba 58.47 271 P **P** **10 09 42.8 +0.6**
comp=Z,4µmcomp=Z,320nm,1.3s
WSI Waingapu 58.91 272 P **P** **10 09 45.3 +0.1**
KMSI Cibinong 59.52 285 P **P** **10 09 51.5 +2.3**
comp=Z,171nm,1.3s
WBSI Waikabubak, Su 59.76 272 P **P** **10 09 51.3 +0.4**
comp=Z,2µmcomp=Z,95nm,0.7s
LUWI Luwuk 59.92 282 P **P** **10 09 52.1 +0.2**
LUWI IAmb IAmb 10 09 53.4
comp=Z,464nm,1.5s
LUWI Luwuk 59.92 282 P **P** **10 09 52.5 +0.6**
comp=Z,3µmcomp=Z,195nm,1.3s
BSSI Bau Bau, Buton 59.99 276 P **P** **10 09 51.9 -0.5**
comp=Z,1µmcomp=Z,55nm,0.8s
GTOI Gorontalo 60.42 284 P **P** **10 09 55.7 +0.5**
comp=Z,2µmcomp=Z,151nm,1.5s
CCD Concordia, Ant 60.53 194 P **P** **10 09 56.4 +1.0**
BKSI Bulukumba 60.64 277 P **P** **10 09 55.8 -0.8**
comp=Z,76nm,0.6s
GIRL Giralia 60.81 256 P **P** **10 09 58.0 +0.4**
comp=Z,82nm,1.3s
GIRL Giralia 60.81 256 P **P** **10 09 58.5 +0.9**
APSI Ampana 60.99 282 P **P** **10 09 59.9 +1.0**
comp=Z,1µmcomp=Z,92nm,1.8s

KAPI Kappang 61.09 277 P **P** **10 09 59.5 -0.2**
comp=Z,18nm,0.7s,baz=110,slow=3.6,SNR=13
comp=Z,18nm,0.7s
KAPI Kappang 61.09 277 P **P** **10 09 57.5 -2.1**
KAPI Kappang 61.09 277 P **P** **10 09 59.4 -0.2**
DAV Davao City (W) 61.15 292 P **PKiKP** **10 16 51.1 +2.4**
DAV Davao City (W) 61.15 292 P **P** **10 09 59.8 -0.1**
DAV IAmb IAmb 10 10 00.9
comp=Z,151nm,0.7s
MRSI Marisa 61.31 283 P **P** **10 10 00.5 -0.6**
comp=Z,59nm,1.3s
PLAI Plampang 61.54 272 P **P** **10 10 02.0 -0.6**
PLAI Plampang 61.54 272 P **P** **10 10 01.9 -0.6**
comp=Z,3µmcomp=Z,238nm,1.1s
TTSI Tana Toraja 61.79 279 P **P** **10 10 03.6 -0.6**
CASY Casey 61.89 206 P **P** **10 10 04.5 +0.6**
TWSI Taliwang, Sumb 62.40 272 P **P** **10 10 07.8 -0.3**
comp=Z,2µmcomp=Z,160nm,1.3s
TOLI2 Tolitoli 62.63 283 P **P** **10 10 09.0 -0.6**
TOLI2 Tolitoli 62.63 283 P **P** **10 10 09.0 -0.6**
MPSI Mapaga 63.10 282 P **P** **10 10 11.7 -0.9**
comp=Z,4µmcomp=Z,118nm,1.1s
RPN Rapa Nui 63.20 110 P **P** **10 10 15.2 +2.1**
comp=Z,95nm,0.9s,baz=250,slow=3.5,SNR=6.2
comp=Z,95nm,0.9s
RPN Rapa Nui 63.20 110 P **P** **10 10 13.4 +0.3**
RPN IAmb IAmb 10 10 16.1
comp=Z,102nm,0.9s
IGBI Denpasar 63.98 271 P **P** **10 10 18.3 +0.1**
SRBI Singaraja 64.17 272 P **P** **10 10 18.9 -0.5**
comp=Z,2µmcomp=Z,165nm,1.5s
JAGI Jajag, Banyuwa 65.02 271 P **P** **10 10 23.8 -0.9**
JAGI IAmb IAmb 10 10 24.7
comp=Z,288nm,1.5s
JAGI Jajag, Banyuwa 65.02 271 P **P** **10 10 23.9 -0.9**
JAGI Jajag, Banyuwa 65.02 271 P **P** **10 10 23.6 -1.2**
comp=Z,2µmcomp=Z,126nm,1.3s
ABJI Asem Bagus 65.18 272 P **P** **10 10 26.2 +0.4**
comp=Z,2µmcomp=Z,107nm,1.5s
KMMI Kalianget 65.69 272 P **P** **10 10 29.5 +0.5**
comp=Z,2µmcomp=Z,120nm,1.3s
BLJI Banyuglugur 65.79 271 P **P** **10 10 29.6 0.0**
BBKI Banjar Baru 66.21 276 P **P** **10 10 33.1 +0.9**
comp=Z,101nm,1.8s
MYLDM Lahad Datu 66.46 286 P **P** **10 10 33.4 -0.3**
MYLDM IAmb IAmb 10 11 00.5
comp=Z,133nm,1.5s
MYLDM Lahad Datu 66.46 286 P **P** **10 10 34.2 +0.5**
PCJI Pacitan 67.87 270 P **P** **10 10 42.2 -0.2**
QSPA South Pole Qui 67.92 180 P **P** **10 10 46.5 +4.6**
comp=Z,80nm,0.9s,baz=38,slow=2.2,SNR=149
QSPA PKP2bc **P'P'bc** **10 38 56.7 -1.7**
comp=Z,6.4nm,1.0s,baz=221,slow=1.3,SNR=7.9
QSPA South Pole Qui 67.92 180 P **P** **10 10 46.6 +4.6**
QSPA IAmb IAmb 10 10 48.1
comp=Z,97nm,0.9s
QSPA South Pole Qui 67.92 180 P P 10 10 47.5 +5.6
UGM Wanagama 68.58 270 P **P** **10 10 46.5 -0.2**
UGM IAmb IAmb 10 10 47.5
comp=Z,68nm,0.5s
UGM Wanagama 68.58 270 P **P** **10 10 46.6 -0.2**
JOW Kunigami 70.20 311 P **P** **10 10 56.5 +0.5**
JOW Kunigami 70.20 311 P **P** **10 10 56.6 +0.5**
KPJI Karang Pucung 70.26 270 P **P** **10 10 56.3 -0.4**
comp=Z,92nm,0.5s
JGF Kuroka 70.51 324 P **P** **10 10 58.1 +0.4**
MJAR Matsushiro Arr 70.75 325 P **P** **10 10 58.6 -0.5**
comp=Z,14nm,0.9s,baz=157,slow=5.7,SNR=24
comp=Z,14nm,0.9s
MJAR Matsushiro Arr 70.75 325 P **P** **10 10 58.8 -0.3**
MJAR Matsushiro Arr 70.75 325 P **P** **10 10 58.8 -0.3**
MJAR pmax pmax
comp=Z,13nm,0.9s
MAJO Matsushiro 70.75 325 P **P** **10 10 59.1 0.0**
MAJO Matsushiro 70.75 325 P **P** **10 10 59.1 0.0**
MAJO pmax pmax
comp=Z,17nm,0.9s
MJB9 Matsu-Tunnel 70.75 325 P **P** **10 10 59.4 +0.2**
SBUM Sibu 70.95 281 P **P** **10 11 00.6 -0.2**
BBJI Bungbulang 71.40 269 P **P** **10 11 02.7 -0.8**
CNJI Cibinong 71.94 269 P **P** **10 11 06.7 +0.2**
comp=Z,68nm,1.3s
JNU Nakatsue 72.56 318 P **P** **10 11 10.5 +0.8**
DBJI Dramaga 72.56 270 P **P** **10 11 10.6 +0.5**
comp=Z,84nm,0.5s
TPI Tanjungpandan 73.11 274 P **P** **10 11 13.4 +0.1**
comp=Z,817nmcomp=Z,44nm,1.4s
YULB Yu-li 73.28 304 P **P** **10 11 13.7 -0.3**
NACB Ninganchiao 73.49 305 IAmb IAmb 10 11 16.1
comp=Z,136nm,1.4s
NACB Ninganchiao 73.49 305 P **P** **10 11 15.5 +0.3**
KIWB Kanaga Island 73.71 1 P **P** **10 11 15.9 +0.1**
KIWB IAmb IAmb 10 11 17.0
comp=Z,178nm,1.1s
TPUB Ta-pu 73.74 304 P **P** **10 11 15.3 -1.3**
TPUB IAmb IAmb 10 11 17.0
comp=Z,125nm,1.2s
TPUB Ta-pu 73.74 304 P **P** **10 11 15.7 -1.0**
ADK Adak 73.76 2 P **P** **10 11 16.0 0.0**
ADK IAmb IAmb 10 11 16.5
comp=Z,95nm,0.7s
ADK Adak 73.76 2 P **P** **10 11 16.2 +0.2**
ADK Adak 73.76 2 P **P** **10 11 16.0 0.0**
ADK pmax pmax
comp=Z,95nm,0.7s
ADK Adak 73.76 2 P **P** **10 11 16.1 +0.2**
ADK PcP **PcP** **10 11 28.8 +0.8**
SSLB Suanglung 73.76 305 P **P** **10 11 16.0 -0.8**
SSLB IAmb IAmb 10 11 17.0
comp=Z,133nm,1.5s
SSLB Suanglung 73.76 305 P **P** **10 11 16.1 -0.7**
YHNB Yeheng 73.93 306 P **P** **10 11 19.2 +1.4**
ATKA Atka Island 74.18 3 P **P** **10 11 18.5 +0.1**
ATKA Atka Island 74.18 3 P **P** **10 11 18.1 -0.3**
KASI Kota Agung 75.02 270 P **P** **10 11 24.2 +0.2**
comp=Z,50nm,1.2s
KLSI 75.10 271 P **P** **10 11 24.8 +0.3**
NIKH Nikolski High 75.37 7 P **P** **10 11 25.3 +0.2**
NIKH Nikolski High 75.37 7 P **P** **10 11 25.1 0.0**
baz=190
MDSI Maura Dua 75.69 271 P **P** **10 11 26.3 -1.5**
comp=Z,711nmcomp=Z,40nm,1.5s
UNV Unalaska Valle 76.51 8 P **P** **10 11 31.0 -0.3**
baz=192
YSS Yuzhno-Sakhali 76.77 334 *e*P **P** **10 11 34.4 +1.5**
YSS *e*S **S** **10 20 35.7 +1.9**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS pmax pmax
comp=Z,200nm,5.3s
DSRI Dabo 76.82 275 P **P** **10 11 34.8 +0.8**
comp=Z,995nmcomp=Z,36nm,1.5s
AKUT Akutan 76.89 8 P **P** **10 11 33.1 -0.2**
KSRS Korea Array 77.23 320 P **P** **10 11 36.0 +0.4**
comp=Z,5.4nm,0.9s,baz=142,slow=6.5,SNR=9.0
comp=Z,5.4nm,0.9s
PET Petropavlovsk 77.24 347 P **P** **10 11 35.0 -0.3**
PET Petropavlovsk 77.24 347 *e*P **P** **10 11 35.3 0.0**
PET *e*S **S** **10 20 39.4 +0.9**
PET *e*SS **SS** **10 25 52.9 -1.0**
PET pmax pmax
comp=Z,31nm,0.5s
KSAR Wonju Array Be 77.25 320 P **P** **10 11 36.3 +0.6**
KSAR Wonju Array Be 77.25 320 P **P** **10 11 36.3 +0.6**
PEA0B Petropavlovsk- 77.53 346 P **P** **10 11 37.5 +0.6**
PEA0B Petropavlovsk- 77.53 346 *ce*P **P** **10 11 38.1 +1.2**
PETK Petropavlovsk- 77.53 346 P **P** **10 11 36.9 0.0**
comp=Z,36nm,0.7s,baz=91,slow=9.0,SNR=62
PETK pP **pP** **10 13 36.8 +0.3**
comp=Z,8.1nm,1.0s,baz=213,slow=5.1,SNR=1.4
comp=Z,36nm,0.7s
SMAI San Martin Ant 77.56 159 IAmb IAmb 10 11 39.9
comp=Z,118nm,0.9s
FALS False Pass 77.92 9 P **P** **10 11 38.8 -0.1**
baz=195
MASI Maura Aman, Be 77.98 271 P **P** **10 11 41.3 +1.0**
comp=Z,114nm,1.6s
BELA Belgrano 2 78.10 173 P **P** **10 11 40.1 +0.4**
CHNA Chernabura Isl 78.54 12 P **P** **10 11 42.4 +0.2**
baz=199
MSHR Mys Shultsa 78.87 325 *i* P **P** **10 11 44.6 +0.3**
MSHR pmax pmax
comp=Z,17nm,1.1s
SDPT Sand Point 78.88 11 P **P** **10 11 43.8 -0.2**
SDPT Sand Point 78.88 11 P **P** **10 11 44.0 +0.1**

baz=198
P08K Saint George I 78.89 6 P **P** **10 11 44.5 +0.5**
baz=189
SPIA Saint Paul Isl 79.40 5 P **P** **10 11 47.4 +0.7**
baz=189
MAW Mawson 79.55 200 P **P** **10 11 48.5 +1.0**
comp=Z,13nm,0.6s,baz=122,slow=7.0,SNR=19
MAW pP **pP** **10 13 48.6 +0.6**
comp=Z,4.7nm,1.0s,baz=293,slow=3.1,SNR=2.0
comp=Z,13nm,0.6s
USRK Ussuriysk Ar. 79.57 327 P **P** **10 11 48.5 +0.5**
comp=Z,20nm,1.0s,baz=114,slow=4.8,SNR=15
USRK pP **pP** **10 13 48.8 +0.6**
comp=Z,4.8nm,0.9s,baz=177,slow=7.4,SNR=3.6
comp=Z,20nm,1.0s
NJ2 Nanjing 79.89 311 *e*P **P** **10 11 51.3 +1.4**
NJ2 pmax pmax
comp=Z,14nm,0.7s
S14K Fog Glacier 79.93 11 P **P** **10 11 50.2 +0.5**
baz=199
TYV Tymovskoe 80.00 337 *e*P **P** **10 11 49.2 -0.8**
TYV pmax pmax
comp=Z,600nm,3.4s
TYV pmax pmax
comp=Z,26nm,0.9s
CHIR Chirikof Islan 80.27 13 P **P** **10 11 51.8 +0.5**
baz=202
BBGB Big Mountain B 80.31 44 IAmb IAmb 10 11 55.7
comp=Z,209nm,1.5s
PMSA Palmer Station 80.31 157 P **P** **10 11 53.0 +1.4**
MHC Mount Hamilton 80.39 43 IAmb IAmb 10 11 55.7
comp=Z,222nm,1.5s
CBX Cerro Bola 80.83 50 IAmb IAmb 10 11 57.9
comp=Z,97nm,1.0s
VTX Valle De La Tr 80.96 51 IAmb IAmb 10 11 58.7
comp=Z,121nm,1.1s
DPP Dos Picos Cty 81.01 49 IAmb IAmb 10 11 58.3
comp=Z,115nm,1.0s
BAR Barrett 81.03 49 IAmb IAmb 10 11 58.6
comp=Z,216nm,1.9s
MDJ Mudanjiang 81.10 326 P **P** **10 11 57.0 +1.1**
MDJ pP pP 10 13 58.0 +1.2
MDJ S **SKSac** **10 21 22.0 +1.7**
MDJ sS sS 10 25 02.5 +7.6
MDJ SS **SS** **10 26 53.0 +1.7**
MDJ pmax pmax
comp=Z,23nm,1.0s
VES Vestal, Richgr 81.16 46 IAmb IAmb 10 11 58.8
comp=Z,198nm,1.1s
ESJX Sierra Juarez 81.17 50 IAmb IAmb 10 12 00.1
comp=Z,116nm,1.2s
TPO Tropico Hills 81.18 47 IAmb IAmb 10 11 59.5
comp=Z,192nm,1.2s
BFSC Mount Baldy Ra 81.21 48 IAmb IAmb 10 11 59.3
comp=Z,160nm,1.7s
SII Sitkinak Islan 81.26 14 P **P** **10 11 57.2 +0.7**
baz=204
KHMM Horse Mountain 81.29 39 IAmb IAmb 10 12 00.7
comp=Z,154nm,1.0s
SFX San Felipe 81.44 52 IAmb IAmb 10 12 00.7
comp=Z,91nm,1.1s
KHBM Hayfork Bally 81.46 40 IAmb IAmb 10 12 01.3
comp=Z,192nm,1.0s
ISA Isabella, Lake 81.46 46 IAmb IAmb 10 12 00.9
comp=Z,141nm,1.1s
SRIG Santa Rosalia 81.48 56 IAmb IAmb 10 12 01.2
comp=Z,178nm,1.1s
R16K Pilot Point 81.50 12 P **P** **10 11 58.6 +1.0**
baz=200
SLBS Sierra La Lagu 81.52 60 P **P** **10 11 59.1 +0.5**
SLBS IAmb IAmb 10 12 01.9
comp=Z,200nm,1.4s
BORC Borrego Spring 81.53 49 IAmb IAmb 10 12 01.2
comp=Z,108nm,1.1s
YUH Yuha Desert 81.54 50 IAmb IAmb 10 12 01.4
comp=Z,115nm,1.2s
DNR Dunn Ranch,Anz 81.54 49 IAmb IAmb 10 12 01.6
comp=Z,130nm,1.4s
CMB Columbia Colle 81.60 43 IAmb IAmb 10 12 01.2
comp=Z,99nm,0.9s
PFO Pinyon Flats O 81.69 49 P **P** **10 12 00.4 +1.1**
PFO Pinyon Flats O 81.69 49 P **P** **10 12 00.4 +1.1**
PFO pmax pmax
comp=Z,114nm,1.6s
PFO Pinyon Flats O 81.69 49 P **P** **10 12 00.3 +1.0**
R17L Mt. Peulik Vol 81.80 12 P **P** **10 11 59.8 +0.7**
baz=202
KSXB Camp Six Broad 81.81 39 IAmb IAmb 10 12 03.2
comp=Z,183nm,1.1s
ORV Oroville 81.81 41 IAmb IAmb 10 12 02.4
comp=Z,99nm,1.1s
CPBX Cerro Prieto 81.86 50 IAmb IAmb 10 12 03.3
comp=Z,126nm,0.9s
KBO Bosley Butte 81.86 38 IAmb IAmb 10 12 03.6
comp=Z,217nm,1.2s
IPM Ipoh 82.00 278 IAmb IAmb 10 12 02.7
comp=Z,163nm,1.7s
OHAK Old Harbor 82.07 14 P **P** **10 12 01.2 +0.7**
OHAK Old Harbor 82.07 14 P **P** **10 12 01.3 +0.7**
baz=204
WSHM Spangler Hills 82.08 47 IAmb IAmb 10 12 03.8
comp=Z,110nm,1.1s
CCCA Chr Cany lake 82.13 47 IAmb IAmb 10 12 04.3
comp=Z,171nm,1.1s
R18K Karluk 82.13 13 IAmb IAmb 10 12 02.3
comp=Z,131nm,1.2s
R18K Karluk 82.13 13 P **P** **10 12 01.5 +0.8**
baz=203
L02F Cave Junction 82.17 38 IAmb IAmb 10 12 04.9
comp=Z,122nm,1.2s
MDPB Devils Postpil 82.20 44 IAmb IAmb 10 12 04.7
comp=Z,105nm,1.0s
WHN Wuhan 82.33 307 ⇑P **P** **10 12 04.0 +1.5**
BC3 Big Chuckawall 82.41 49 IAmb IAmb 10 12 06.3
comp=Z,328nm,1.8s
TIN Tinemaha, Big 82.42 45 IAmb IAmb 10 12 05.7
comp=Z,168nm,0.9s
YBH Yreka Blue Hor 82.43 39 IAmb IAmb 10 12 06.2
comp=Z,91nm,1.0s
WAKR Walker 82.48 43 IAmb IAmb 10 12 06.3
comp=Z,190nm,1.2s
K02D Willamette Mer 82.48 38 IAmb IAmb 10 12 06.4
comp=Z,164nm,1.2s
O14K Tigyukauivet M 82.48 9 P **P** **10 12 03.4 +0.9**
baz=197
GLA Glamis 82.53 50 IAmb IAmb 10 12 06.9
comp=Z,197nm,1.1s
J01E Myrtle Point 82.63 37 IAmb IAmb 10 12 06.9
comp=Z,81nm,1.0s
O15K Ungalikthiuk R 82.63 10 P **P** **10 12 03.7 +0.4**
baz=198
KULM Kulim 82.66 279 P **P** **10 12 05.6 +1.1**
BEKR Beckworth 82.70 42 IAmb IAmb 10 12 07.0
comp=Z,90nm,1.1s
Q16K King Salmon 82.72 12 P **P** **10 12 04.2 +0.5**
baz=201,SNR=14
PIX Pinacate 82.73 52 IAmb IAmb 10 12 07.3
comp=Z,114nm,1.1s
KDAK Kodiak Island 82.74 14 P **P** **10 12 04.2 +0.3**
KDAK Kodiak Island 82.74 14 P **P** **10 12 04.2 +0.3**
KDAK pmax pmax
comp=Z,64nm,1.1s
KDAK Kodiak Island 82.74 14 P **P** **10 12 04.6 +0.7**
baz=205
DSP Deep Springs 82.77 45 IAmb IAmb 10 12 07.4
comp=Z,109nm,1.1s
CN2 Changchun 82.78 323 ⇓P **P** **10 12 05.5 +1.0**
CN2 *ep*P pP 10 14 06.0 0.0
CN2 *e*S **S** **10 21 39.5 +4.0**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
P16K Nushagak River 82.81 11 P **P** **10 12 04.6 +0.5**
baz=200,SNR=5.5
IRM Iron Mountain 82.90 49 IAmb IAmb 10 12 08.5
comp=Z,176nm,1.3s
LHV Little Huntoon 82.93 44 IAmb IAmb 10 12 08.3
comp=Z,118nm,1.0s
M11K Mekoryuk 82.95 7 P **P** **10 12 06.0 +1.2**
baz=192
GRAC Grapevine Rang 82.95 45 IAmb IAmb 10 12 08.5
comp=Z,196nm,1.1s
L04D Klamath Falls 82.97 39 IAmb IAmb 10 12 08.5
comp=Z,196nm,1.0s
BNX BinXian 83.00 326 ⇓P **P** **10 12 06.0 +0.5**
BNX S **S** **10 21 40.5 +3.0**

BNX				pmax	pmax		
	comp=Z,30nm,0.9s						
BNX				pmax	pmax		
	comp=Z,160nm,3.6s						
DANC	Danby, Needles	83.00	48	IAmb	IAmb	10 12 08.8	
	comp=Z,176nm,1.1s						
Q18K	Katmai Hardscr	83.01	13	P	P	10 12 05.7	+0.3
	baz=203,SNR=16						
N14K	Kuskokwak Cree	83.06	9	P	P	10 12 06.4	+1.0
	baz=197						
SHOC	Shoshone, Teco	83.07	47	IAmb	IAmb	10 12 08.7	
	comp=Z,170nm,1.3s						
BLYC	Blythe	83.12	49	IAmb	IAmb	10 12 09.5	
	comp=Z,114nm,1.1s						
113A	Mohawk Valley,	83.14	51	IAmb	IAmb	10 12 09.6	
	comp=Z,113nm,1.1s						
NVAR	Mina Array Bea	83.16	44	P	P	10 12 07.8	+1.0
	comp=Z,61nm,0.9s,baz=224,slow=8.2,SNR=181						
NVAR				pP	pP	10 14 09.5	+0.9
	comp=Z,1.2nm,0.8s,baz=238,slow=4.4,SNR=1.7						
NVAR				PP	PP	10 15 29.8	+0.6
	comp=Z,4.8nm,1.1s,baz=242,slow=8.0,SNR=2.8						
	comp=Z,61nm,0.9s						
NVAR	Mina Array Bea	83.16	44	P	P	10 12 08.1	+1.3
BBOR	Butler Butte	83.17	38	IAmb	IAmb	10 12 09.4	
	comp=Z,102nm,1.2s						
PAHR	Pah Rah Range	83.22	42	IAmb	IAmb	10 12 09.5	
	comp=Z,110nm,1.1s						
P17K	Kvichak River	83.24	12	P	P	10 12 06.8	+0.4
	baz=201,SNR=20						
NV11	Mina Array Sit	83.26	44	IAmb	IAmb	10 12 09.7	
	comp=Z,112nm,1.1s						
PSI	Prapat	83.28	276	P	P	10 12 07.3	-0.5
	comp=Z,5.8nm,0.6s,baz=36,slow=16,SNR=9.9						
PSI				pP	pP	10 14 09.3	+0.1
	comp=Z,2.9nm,0.4s,baz=153,slow=7.6,SNR=1.4						
	comp=Z,5.8nm,0.6s						
I03D	Drain, OR	83.30	37	IAmb	IAmb	10 12 10.0	
	comp=Z,194nm,1.2s						
M13K	Dall Lake	83.31	8	P	P	10 12 07.5	+0.8
	baz=195						
HSIG		83.31	55	IAmb	IAmb	10 12 10.3	
	comp=Z,118nm,1.1s						
O16K	Kokwok River B	83.32	11	P	P	10 12 06.4	-0.3
	baz=200						
MTPC	Mountain Pass	83.34	48	IAmb	IAmb	10 12 10.5	
	comp=Z,119nm,1.2s						
TIA	Tai'an	83.39	313	P	P	10 12 09.5	+1.8
TIA				pmax	pmax		
	comp=Z,41nm,0.9s						
Q20K	Shuyak Island	83.53	14	P	P	10 12 08.5	+0.7
	baz=205						
SYI	Shuyak Island	83.53	14	IAmb	IAmb	10 12 09.6	
	comp=Z,177nm,1.2s						
N15K	Kwethluk River	83.54	10	P	P	10 12 09.2	+1.4
	baz=198,SNR=26						
K04D	Chiloquin, OR	83.54	39	IAmb	IAmb	10 12 11.3	
	comp=Z,155nm,1.0s						
Q19K	Cape Douglas,	83.55	13	P	P	10 12 08.2	+0.2
	baz=204						
NEE2	Needles Airpor	83.59	49	IAmb	IAmb	10 12 11.7	
	comp=Z,102nm,0.9s						
ESPZ	Base Esperanza	83.64	158	IAmb	IAmb	10 12 10.6	
	comp=Z,175nm,1.2s						
P18K	Big Mountain,	83.66	12	IAmb	IAmb	10 12 08.9	
	comp=Z,59nm,0.8s						
P18K	Big Mountain,	83.66	12	P	P	10 12 08.5	0.0
	baz=202						
O17K	Koliganek Bris	83.66	11	P	P	10 12 08.7	+0.2
	baz=201						
TPNV	Topopah Spring	83.67	46	IAmb	IAmb	10 12 11.9	
	comp=Z,105nm,1.2s						
M14K	Bethel	83.82	9	IAmb	IAmb	10 12 10.8	
	comp=Z,77nm,1.0s						
M14K	Bethel	83.82	9	P	P	10 12 10.1	+0.9
	baz=196,SNR=6.9						
COR	Corvallis	83.88	37	P	P	10 12 11.5	+1.6
COR				IAmb	IAmb	10 12 13.1	
	comp=Z,96nm,0.9s						
COR	Corvallis	83.88	37	P	P	10 12 11.5	+1.6
COR				pmax	pmax		
	comp=Z,96nm,1.0s						
I04A	Tendick Farm,	83.89	38	IAmb	IAmb	10 12 12.5	
	comp=Z,87nm,1.0s						
V12A	Nelson	83.95	48	IAmb	IAmb	10 12 13.4	
	comp=Z,100nm,1.3s						
M15K	Kasigluk River	83.95	9	P	P	10 12 10.7	+0.9
	baz=197						
N16K	Nishlik Lake	84.04	10	P	P	10 12 11.6	+1.3
	baz=199						
O18K	Koktuh Hills	84.09	12	P	P	10 12 10.9	+0.3
O18K	Koktuh Hills	84.09	12	P	P	10 12 10.8	+0.3
	baz=202						
L14K	Kuka Creek	84.30	8	P	P	10 12 12.6	+1.1
	baz=196						
G03D	McMinnville, O	84.30	36	IAmb	IAmb	10 12 15.0	
	comp=Z,192nm,1.3s						
P19K	Oil Pt	84.30	13	P	P	10 12 11.9	+0.2
	baz=204						
N17K	Nushagak Hills	84.36	11	P	P	10 12 12.4	+0.6
	baz=201						
WIFE	Three Sisters-	84.39	38	IAmb	IAmb	10 12 15.5	
	comp=Z,110nm,1.0s						
M16K	Timber Creek	84.53	10	IAmb	IAmb	10 12 16.4	
	comp=Z,124nm,1.2s						
M16K	Timber Creek	84.53	10	P	P	10 12 13.9	+1.3
	baz=199						
H04A	Detroit Lake	84.56	37	IAmb	IAmb	10 12 15.1	
	comp=Z,100nm,1.1s						
O19K	Port Alsworth	84.58	12	P	P	10 12 13.0	+0.1
	baz=203,SNR=40						
F03A	Seaside	84.60	35	IAmb	IAmb	10 12 16.3	
	comp=Z,109nm,1.1s						
CNPM	China Poot	84.62	14	IAmb	IAmb	10 12 14.8	
	comp=Z,135nm,1.0s						
K13K	Kusilvak Mount	84.63	7	P	P	10 12 14.0	+0.8
	baz=194						
HOM	Homer	84.65	14	P	P	10 12 13.8	+0.6
	baz=206						
PRN	Pahroc Range	84.72	46	IAmb	IAmb	10 12 17.4	
	comp=Z,136nm,1.4s						
N18K	Kilae Creek	84.73	11	P	P	10 12 13.5	-0.2
	baz=202						
L15K	Ungalak Mounta	84.78	9	P	P	10 12 14.3	+0.5
	baz=197						
SYO	Syowa Base	84.82	193	⇑/P	P	10 12 14.0	-0.1
SYO	Syowa Base	84.82	193	⇑/PcP	PcP	10 12 16.8	+0.5
O20K	Slope Mountain	84.82	13	P	P	10 12 14.2	0.0
	baz=205						
I05D	Terrebonne, OR	84.83	38	IAmb	IAmb	10 12 17.4	
	comp=Z,186nm,1.4s						
BRLK	Bradley Lake	84.91	14	IAmb	IAmb	10 12 16.1	
	comp=Z,150nm,1.1s						
BRSE	Bradley Lake S	84.93	14	P	P	10 12 15.1	+0.5
	baz=207,SNR=13						
F04D	Rainier, OR	84.99	36	IAmb	IAmb	10 12 18.0	
	comp=Z,124nm,1.0s						
TUC	Tucson	85.07	52	P	P	10 12 18.3	+2.2
TUC				IAmb	IAmb	10 12 19.6	
	comp=Z,116nm,1.1s						
TUC	Tucson	85.07	52	P	P	10 12 18.3	+2.2
TUC				pmax	pmax		
	comp=Z,117nm,1.1s						
TUC	Tucson	85.07	52	P	P	10 12 18.2	+2.0
RED	Redoubt Volcan	85.10	13	IAmb	IAmb	10 12 16.3	
	comp=Z,107nm,1.1s						
L16K	Owhat River	85.10	9	P	P	10 12 16.2	+0.7
	baz=198,SNR=5.7						
N19K	Bonanza Creek	85.12	12	P	P	10 12 15.4	-0.3
	baz=203						
M17K	Holitna River	85.13	10	IAmb	IAmb	10 12 18.2	
	comp=Z,87nm,1.1s						
M17K	Holitna River	85.13	10	P	P	10 12 17.0	+1.4
	baz=200						
WISH	Wishkah	85.24	34	IAmb	IAmb	10 12 19.2	
	comp=Z,106nm,1.1s						
HOOD	Mount Hood Mea	85.26	37	IAmb	IAmb	10 12 19.3	
	comp=Z,132nm,1.3s						
WVOR	Wild Horse Val	85.27	40	IAmb	IAmb	10 12 19.7	
	comp=Z,79nm,1.1s						
DIB	Dawson Inlet,	85.36	26	IAmb	IAmb	10 12 19.1	
	comp=Z,78nm,1.1s						
K15K	Wolf Creek Mou	85.37	8	IAmb	IAmb	10 12 20.2	
	comp=Z,55nm,0.8s						
K15K	Wolf Creek Mou	85.37	8	P	P	10 12 17.8	+1.1
	baz=197,SNR=11						
NLWA	Neilton Lookou	85.37	34	IAmb	IAmb	10 12 20.1	
	comp=Z,72nm,1.0s						
G05A	Wamic	85.39	37	IAmb	IAmb	10 12 19.4	
	comp=Z,112nm,1.3s						
M18K	Stony River	85.50	11	P	P	10 12 18.0	+0.6
	baz=202						
SEW	Seward	85.55	15	IAmb	IAmb	10 12 18.8	
	comp=Z,72nm,1.0s						
SEW	Seward	85.55	15	P	P	10 12 17.5	-0.1
	baz=208,SNR=5.2						
J14K	Nanvaranak Lak	85.55	7	P	P	10 12 18.2	+0.7
	baz=195						
X16A	Lo Mia Camp, P	85.65	50	IAmb	IAmb	10 12 22.1	
	comp=Z,64nm,1.1s						
HNS	HongShan	85.66	313	⇑P	P	10 12 20.5	+1.8
HNS				SKS	SKSac	10 21 48.0	-1.7
HNS				S	ScS	10 22 07.8	-2.2
HNS				pmax	pmax		
	comp=Z,21nm,1.1s						
L17K	Donlin	85.69	10	P	P	10 12 19.3	+1.1
	baz=200						
Q23K	Middleton Isla	85.72	16	P	P	10 12 18.9	+0.5
	baz=210						
I07A	Izee	85.73	39	IAmb	IAmb	10 12 22.0	
	comp=Z,123nm,1.1s						
LYN	LuoYang	85.75	310	P	P	10 12 21.0	+1.8
LYN				SKS	SKSac	10 21 48.8	-1.6
LYN				S	ScS	10 22 08.0	-2.8
LYN				pmax	pmax		
	comp=Z,23nm,0.9s						
G06A	Carlson Farm,	85.77	37	IAmb	IAmb	10 12 21.8	
	comp=Z,134nm,1.2s						
O22K	Cooper Landing	85.82	14	IAmb	IAmb	10 12 24.9	
	comp=Z,97nm,0.8s						
O22K	Cooper Landing	85.82	14	P	P	10 12 18.9	+0.1
	baz=207						
COYC	Coyhaique	85.86	138	IAmb	IAmb	10 12 22.9	
	comp=Z,93nm,0.9s						
N20K	Mount Spurr	85.93	13	P	P	10 12 18.9	-0.6
	baz=205,SNR=18						
SPCR	Spurr Chakacha	85.93	13	P	P	10 12 19.0	-0.5
	baz=205,SNR=14						
CCUT	Cedar City	85.93	47	IAmb	IAmb	10 12 23.3	
	comp=Z,59nm,1.1s						
P23K	Montague Islan	85.95	16	IAmb	IAmb	10 12 21.0	
	comp=Z,84nm,1.0s						
P23K	Montague Islan	85.95	16	P	P	10 12 20.0	+0.5
	baz=210						
HEH	HeiHe	86.00	329	eP	P	10 12 20.8	+0.8
HEH				pmax	pmax		
	comp=Z,21nm,0.9s						
KNB	Kanab	86.02	47	IAmb	IAmb	10 12 23.6	
	comp=Z,94nm,1.2s						
L18K	Granite Mounta	86.03	10	P	P	10 12 20.5	+0.7
	baz=201,SNR=8.4						
TROLL	Troll, Antarti	86.08	181	⇓P	P	10 12 20.0	-0.3
	comp=Z,900nm,0.5s						
U15A	North Rim	86.08	48	IAmb	IAmb	10 12 24.1	
	comp=Z,113nm,1.0s						
BJI	Beijing	86.11	316	P	P	10 12 22.0	+1.2
BJI				PP	PP	10 15 54.8	+2.4
BJI				SKS	SKSac	10 21 50.5	-1.8
BJI				S	ScS	10 22 11.3	-2.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
K17K	Iditarod	86.23	10	P	P	10 12 21.6	+0.7
	baz=200						
WUAZ	Wupatki	86.25	49	IAmb	IAmb	10 12 24.7	
	comp=Z,88nm,1.2s						
GYA	Guiyang	86.29	300	⇑P	P	10 12 23.5	+1.4
GYA				sP	sP	10 15 24.3	+2.0
GYA				SKS	SKSac	10 21 53.5	-0.8
GYA				S	S	10 22 10.8	+0.5
GYA				pmax	pmax		
	comp=Z,22nm,1.4s						
GYA				pmax	pmax		
	comp=Z,460nm,4.6s						
L19K	White Mountain	86.31	11	P	P	10 12 21.9	+0.6
	baz=203						
RC01	Rabbit Creek A	86.36	14	P	P	10 12 21.8	+0.3
	baz=207,SNR=11						
M20K	Styx River	86.36	12	P	P	10 12 21.3	-0.3
	baz=204						
SNAA	Sanae	86.40	179	⇓P	P	10 12 21.1	-0.7
	comp=Z,105nm,0.5s						
SNAA	Sanae	86.40	179	P	P	10 12 21.1	-0.7
	comp=Z,6.8nm,0.8s,baz=180,slow=5.3,SNR=17						
SNAA				pP	pP	10 14 24.3	-0.8
	comp=Z,2.5nm,0.9s,baz=177,slow=4.5,SNR=1.8						
	comp=Z,6.8nm,0.8s						
SNAA	Sanae	86.40	179	P	P	10 12 21.6	-0.1
J16K	Anvik River	86.44	8	IAmb	IAmb	10 12 23.7	
	comp=Z,56nm,1.1s						
J16K	Anvik River	86.44	8	P	P	10 12 22.5	+0.7
	baz=198						
HPIG		86.45	59	IAmb	IAmb	10 12 25.6	
	comp=Z,63nm,1.0s						
SUA	Susitna One	86.47	13	P	P	10 12 22.4	+0.3
SUA				IAmb	IAmb	10 12 23.1	
	comp=Z,120nm,1.0s						
SUA	Susitna One	86.47	13	P	P	10 12 22.0	-0.2
	baz=206,SNR=20						
PWL	Port Wells	86.48	15	P	P	10 12 22.4	+0.4
PWL	Port Wells	86.48	15	P	P	10 12 22.1	+0.1
	baz=209,SNR=21						
HIN	Hinchinbrook I	86.52	16	IAmb	IAmb	10 12 23.7	
	comp=Z,97nm,1.1s						
F07A	Phinny Hill Vi	86.57	37	IAmb	IAmb	10 12 25.5	
	comp=Z,104nm,1.1s						
VNA3	Neumayer Olymp	86.58	177	⇓P	P	10 12 22.1	-0.5
	comp=Z,37nm,1.0s						
KAIM	Kayak Island	86.66	17	P	P	10 12 23.8	+0.9
	baz=212,SNR=7.2						
J17K	VABM Dome	86.76	9	P	P	10 12 24.0	+0.7
	baz=199,SNR=6.1						
L20K	Farewell, AK	86.77	12	IAmb	IAmb	10 12 24.6	
	comp=Z,126nm,1.4s						
L20K	Farewell, AK	86.77	12	P	P	10 12 23.6	+0.2
	baz=204						
SKT	Skwentna	86.77	13	P	P	10 12 22.4	-1.1
	baz=206,SNR=11						
MXC	Moxie City	86.78	36	IAmb	IAmb	10 12 26.4	
	comp=Z,94nm,0.9s						
CRAG	Craig	86.78	24	IAmb	IAmb	10 12 26.5	
	comp=Z,94nm,1.2s						
CRAG	Craig	86.78	24	P	P	10 12 25.4	+1.9
CRAG	Craig	86.78	24	P	P	10 12 25.0	+1.5
	baz=222						
GLI	Glacier Island	86.79	15	P	P	10 12 23.7	+0.3
	baz=210,SNR=23						
FID	Port Fidalgo	86.83	16	IAmb	IAmb	10 12 24.9	
	comp=Z,101nm,1.0s						
EYAK	Cordova Ski Ar	86.84	16	IAmb	IAmb	10 12 25.2	
	comp=Z,107nm,1.1s						
EYAK	Cordova Ski Ar	86.84	16	P	P	10 12 24.2	+0.5
EYAK	Cordova Ski Ar	86.84	16	P	P	10 12 24.1	+0.5
	baz=211,SNR=17						
M22K	Willow	86.87	14	P	P	10 12 23.9	+0.1
	baz=207,SNR=19						
KNK	Knik Glacier	86.94	14	IAmb	IAmb	10 12 25.6	
	comp=Z,112nm,1.0s						
KNK	Knik Glacier	86.94	14	P	P	10 12 24.6	+0.4
	baz=209,SNR=29						
PMR	Palmer	86.94	14	IAmb	IAmb	10 12 25.4	
	comp=Z,111nm,1.1s						
PMR	Palmer	86.94	14	P	P	10 12 24.1	0.0
PMR	Palmer	86.94	14	P	P	10 12 24.2	+0.1
	baz=208,SNR=36						
RAGM	Ragged Mountai	86.98	16	IAmb	IAmb	10 12 26.3	
	comp=Z,108nm,1.2s						
LTY	Liberty	86.98	36	IAmb	IAmb	10 12 27.1	
	comp=Z,90nm,1.0s						
MTPU	Mount Pierson	86.98	47	IAmb	IAmb	10 12 28.9	
	comp=Z,63nm,1.0s						
NVL	N'lazarevskaya	86.99	184	eP	P	10 12 24.7	+0.2
NVL				e		10 15 59.3	
NVL				ePPP	PPP	10 17 58.5	
NVL				eS	SKSac	10 21 56.9	0.0
NVL				eSS	SS	10 28 17.3	+3.1
NVL				eSSS	SSS	10 31 58.2	
NVL				pmax	pmax		
	comp=Z,47nm,0.9s						
I17K	Unalakleet	87.01	8	P	P	10 12 25.0	+0.7
	baz=197						
VNA2	Neumayer--Watz	87.01	177	⇓P	P	10 12 24.4	-0.2
	comp=Z,22nm,1.1s,baz=177,slow=4.1						
MOIG	Morelia	87.02	68	IAmb	IAmb	10 12 28.3	
	comp=Z,96nm,1.0s						
HMT	Hamilton	87.05	17	IAmb	IAmb	10 12 26.5	
	comp=Z,92nm,1.1s						
TCRU	Three Creeks R	87.10	46	IAmb	IAmb	10 12 29.0	
	comp=Z,181nm,2.0s						
LL02	Futaleuf	87.11	136	IAmb	IAmb	10 12 28.7	
	comp=Z,123nm,1.3s						
ANM	Nome	87.12	6	P	P	10 12 26.2	+1.2
	baz=193						
ZAIG	Zacatecas	87.15	64	IAmb	IAmb	10 12 29.8	
	comp=Z,71nm,1.1s						
SIT	Sitka	87.16	22	P	P	10 12 26.3	+1.0
	baz=220						
J18K	Innoko River	87.19	10	P	P	10 12 25.9	+0.6
	baz=201						
W18A	Petrified Fore	87.22	50	IAmb	IAmb	10 12 29.1	
	comp=Z,91nm,1.3s						
VNA1	Neumayer--Stat	87.24	177	⇓P	P	10 12 24.7	-0.9
	comp=Z,46nm,0.9s						
U33K	Whale Pass	87.26	24	P	P	10 12 27.2	+1.4
	baz=222,SNR=7.7						
V35K	Ketchikan	87.26	25	P	P	10 12 27.3	+1.5
	baz=223,SNR=13						
SML	Sawmill	87.31	14	IAmb	IAmb	10 12 39.7	
	comp=Z,52nm,1.1s						
SML	Sawmill	87.31	14	P	P	10 12 26.0	0.0
	baz=209,SNR=10						
DIV	Divide	87.33	16	IAmb	IAmb	10 12 27.6	
	comp=Z,108nm,1.0s						
121A	Cookes Peak, D	87.39	53	IAmb	IAmb	10 12 30.6	
	comp=Z,83nm,1.2s						
CUT	Chulitna	87.42	13	P	P	10 12 26.4	0.0
	baz=207,SNR=36						
L22K	Petersville	87.42	13	IAmb	IAmb	10 12 27.0	
	comp=Z,99nm,1.0s						
M23K	Glacier View	87.44	14	P	P	10 12 26.3	-0.2
	baz=209,SNR=13						
BMO	Blue Mountains	87.45	39	IAmb	IAmb	10 12 29.5	
	comp=Z,82nm,1.2s						
PPLA	Purkeypile	87.47	12	P	P	10 12 25.4	-1.5
	baz=205						
BMRM	Bremner River	87.49	16	P	P	10 12 26.9	+0.1
	baz=212,SNR=30						
H16K	Elim	87.53	7	P	P	10 12 27.1	+0.3
	baz=196,SNR=7.8						
K20K	Telida	87.54	11	IAmb	IAmb	10 12 28.4	
	comp=Z,90nm,1.1s						
K20K	Telida	87.54	11	P	P	10 12 27.2	+0.2
	baz=203						
S31K	Pelican	87.55	21	IAmb	IAmb	10 12 29.7	
	comp=Z,76nm,1.1s						
S31K	Pelican	87.55	21	P	P	10 12 27.2	+0.2
	baz=219,SNR=12						
MESA	MESA	87.55	18	P	P	10 12 28.4	+1.1
	baz=214,SNR=20						
SCM	Sheep Creek Mo	87.57	15	P	P	10 12 27.7	+0.5
	baz=210,SNR=49						
KLU	Klutina	87.61	15	IAmb	IAmb	10 12 28.9	
	comp=Z,50nm,1.0s						
KLU	Klutina	87.61	15	P	P	10 12 27.8	+0.4
	baz=211,SNR=19						
SEY	Seymchan	87.68	348	ceP	P	10 12 27.1	-0.5
SEY				pmax	pmax		
	comp=Z,48nm,1.2s						
G15K	Niukluk	87.68	6	P	P	10 12 27.9	+0.4
	baz=194						
CRQE	Cirque	87.71	17	P	P	10 12 28.7	+0.7
	baz=213,SNR=27						
S32K	Killisnoo	87.74	22	P	P	10 12 29.2	+1.2
	baz=221						
WRAK	Wrangell Islan	87.77	24	IAmb	IAmb	10 12 30.9	
	comp=Z,76nm,0.9s						
WRAK	Wrangell Islan	87.77	24	P	P	10 12 29.7	+1.5
	baz=223,SNR=9.0						
T33K	Petersburg	87.84	24	P	P	10 12 29.7	+1.3
	baz=222						
J19K	Poorman	87.86	10	P	P	10 12 28.9	+0.5
	baz=202						
TNA	Tin City	87.88	5	P	P	10 12 30.6	+2.2
	baz=191						
HMU	Henry Mountain	87.91	48	IAmb	IAmb	10 12 32.0	
	comp=Z,85nm,1.3s						
F14K	Arctic Creek	87.93	5	P	P	10 12 30.5	+1.8
	baz=192						
PCA	Pinnacle	87.97	18	IAmb	IAmb	10 12 30.9	
	comp=Z,77nm,1.0s						
PINM	Pinnacle	87.97	18	P	P	10 12 29.7	+0.5
	baz=216,SNR=9.3						
VRDI	Verde Repeater	88.01	17	IAmb	IAmb	10 12 31.2	
	comp=Z,89nm,1.1s						
BCPM	Bancas Point	88.04	19	IAmb	IAmb	10 12 31.3	
	comp=Z,67nm,1.1s						
N25K	Chitina, Valde	88.04	16	IAmb	IAmb	10 12 31.1	
	comp=Z,89nm,1.0s						
N25K	Chitina, Valde	88.04	16	P	P	10 12 30.1	+0.7
	baz=212,SNR=42						
XAN	Xi'an	88.05	308	⇓P	P	10 12 31.5	+1.4
XAN				SKS	SKSac	10 22 02.0	-2.4
XAN				S	ScS	10 22 29.0	-1.1
XAN				pmax	pmax		
	comp=Z,26nm,1.2s						
R31K	City Hall, Gus	88.06	21	P	P	10 12 30.7	+1.3
	baz=220						
M24K	Tolsona, Glenn	88.08	15	P	P	10 12 30.4	+0.8
	baz=211,SNR=19						
GLB	Gilahina Butte	88.10	16	IAmb	IAmb	10 12 31.3	
	comp=Z,95nm,1.1s						
H17K	Granite Mounta	88.11	8	IAmb	IAmb	10 12 30.9	
	comp=Z,54nm,1.2s						
H17K	Granite Mounta	88.11	8	P	P	10 12 29.9	+0.3
	baz=198						
WAT6	Susitna Watana	88.12	14	P	P	10 12 30.1	+0.2
	baz=209,SNR=38						
WAT1	Susitna Watana	88.16	14	P	P	10 12 29.8	-0.1
	baz=208						
G16K	Koyuk River	88.25	7	IAmb	IAmb	10 12 31.9	
	comp=Z,49nm,1.2s						
G16K	Koyuk River	88.25	7	P	P	10 12 30.6	+0.5
	baz=196						
MCARA	McCarthy VSAT	88.26	17	P	P	10 12 30.9	+0.6
	baz=213,SNR=35						
J20K	Nowinta River	88.28	11	IAmb	IAmb	10 12 31.8	
	comp=Z,79nm,1.2s						
J20K	Nowinta River	88.28	11	P	P	10 12 30.8	+0.5
	baz=203						
U35K	Hyder	88.31	25	P	P	10 12 31.8	+1.1
	baz=225						
F15K	North Star Dit	88.31	6	P	P	10 12 30.6	+0.1
	baz=194						
KTH	Kantishna Hill	88.31	12	IAmb	IAmb	10 12 30.9	
	comp=Z,83nm,1.0s						
CHUM	Lake Minchumin	88.34	12	P	P	10 12 30.1	-0.6
	baz=205,SNR=29						
TRF	Thorofare Moun	88.35	13	P	P	10 12 30.5	-0.4
	baz=207,SNR=54						
P29M	Windy Craggy	88.36	20	IAmb	IAmb	10 12 33.4	
	comp=Z,105nm,1.4s						
P29M	Windy Craggy	88.36	20	P	P	10 12 32.2	+1.3
	baz=218						
GCSA	Galena City Sc	88.37	9	P	P	10 12 31.5	+0.8
	baz=201,SNR=11						
MPU	Maple Canyon	88.37	45	IAmb	IAmb	10 12 34.4	
	comp=Z,78nm,1.2s						
CTG	Chitna Glacier	88.37	18	P	P	10 12 31.9	+0.8
	baz=215,SNR=48						
R32K	Eaglecrest	88.37	22	P	P	10 12 32.0	+1.1
	baz=221						
LR05	Currie	88.38	133	IAmb	IAmb	10 12 34.4	
	comp=Z,65nm,1.1s						
ZEA	Zeya	88.41	332	eP	P	10 12 32.2	+1.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLIG	Tlapa	88.43	70	IAmb	IAmb	10 12 35.6	
	comp=Z,68nm,1.1s						
LR03	Panguipulli	88.43	132	IAmb	IAmb	10 12 34.9	
	comp=Z,77nm,1.1s						
HLID	Hailey	88.47	41	IAmb	IAmb	10 12 34.8	
	comp=Z,79nm,1.1s						
BESE	Bessie Mountai	88.49	22	IAmb	IAmb	10 12 34.1	
	comp=Z,74nm,1.1s						
H18K	Honhosa River	88.53	9	IAmb	IAmb	10 12 32.7	
	comp=Z,48nm,1.3s						
H18K	Honhosa River	88.53	9	P	P	10 12 31.4	-0.1
	baz=200						
O28M	Mount Upton	88.54	18	P	P	10 12 32.7	+0.7
	baz=216						
G17K	Kiwalik Mounta	88.56	8	P	P	10 12 32.0	+0.3
	baz=197						
HARP	HAARP	88.57	15	P	P	10 12 32.5	+0.7
	baz=212,SNR=18						

O29M	**Mount Kennedy**	88.64	19	IAmb	IAmb	10 12 34.6	
	comp=Z,54nm,1.2s						
O29M	**Mount Kennedy**	88.64	19	P	**P**	**10 12 33.4**	**+1.1**
	baz=217,SNR=16						
DHY	**Denali Highway**	88.64	14	IAmb	IAmb	10 12 33.5	
	comp=Z,61nm,1.3s						
DHY	**Denali Highway**	88.64	14	P	**P**	**10 12 32.5**	**+0.2**
	baz=210,SNR=22						
PLBC	**Pleasant Camp**	88.66	20	P	**P**	**10 12 33.7**	**+1.4**
	baz=219,SNR=14						
BPAW	**Bear Paw Mtn.**	88.79	12	P	**P**	**10 12 31.8**	**-1.0**
	baz=206,SNR=9.8						
I20K	**Naaghedeneel**	88.80	10	P	**P**	**10 12 33.6**	**+0.8**
	baz=203,SNR=6.7						
MCK	**McKinley**	88.88	13	P	**P**	**10 12 33.0**	**-0.2**
	baz=208,SNR=34						
KMI	**Kunming**	88.89	298	P	**P**	**10 12 36.8**	**+2.4**
KMI				SKS	**SKSac**	**10 22 11.5**	**+1.5**
KMI				S	**ScS**	**10 22 37.0**	**-0.8**
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
T35M	**Bob Quinn**	88.98	24	P	**P**	**10 12 35.5**	**+1.7**
	baz=225,SNR=7.1						
PAX	**Paxson**	88.99	15	P	**P**	**10 12 33.7**	**-0.2**
	baz=211,SNR=16						
P30M	**Million Dollar**	88.99	20	P	**P**	**10 12 35.5**	**+1.6**
	baz=219						
SKAG	**Skagway**	89.00	21	IAmb	IAmb	10 12 39.0	
	comp=Z,32nm,1.0s						
SKAG	**Skagway**	89.00	21	P	**P**	**10 12 35.2**	**+1.4**
	baz=220,SNR=14						
YUK8	**Steele Glacier**	89.07	18	P	**P**	**10 12 35.5**	**+1.0**
	baz=216,SNR=42						
TXAR	**Lajitas Array**	89.09	58	P	**P**	**10 12 36.6**	**+1.5**
	comp=Z,58nm,1.0s,baz=222,slow=5.0,SNR=184						
TXAR				PKKPbc	**PKKPbc**	**10 30 10.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=46,slow=8.9,SNR=4.9						
	comp=Z,58nm,1.0s						
TXAR	**Lajitas Array**	89.09	58	P	**P**	**10 12 37.0**	**+1.9**
TXAR	**Lajitas Array**	89.09	58	P	**P**	**10 12 37.0**	**+1.9**
P18A	**Preston Nutter**	89.09	46	IAmb	IAmb	10 12 37.7	
	comp=Z,73nm,1.1s						
PV05	**Paradox Valley**	89.11	48	IAmb	IAmb	10 12 37.9	
	comp=Z,60nm,1.1s						
M26K	**Nabesna, AK**	89.12	16	IAmb	IAmb	10 12 36.3	
	comp=Z,69nm,1.2s						
M26K	**Nabesna, AK**	89.12	16	P	**P**	**10 12 34.9**	**+0.5**
	baz=213						
PLCA	**Paso Flores**	89.12	134	P	**P**	**10 12 36.6**	**+1.5**
	comp=Z,20nm,0.9s,baz=221,slow=4.7,SNR=25						
	comp=Z,20nm,0.9s						
PLCA	**Paso Flores**	89.12	134	P	**P**	**10 12 36.6**	**+1.5**
PLCA				IAmb	IAmb	10 12 38.0	
	comp=Z,35nm,1.1s						
PLCA	**Paso Flores**	89.12	134	P	**P**	**10 12 36.7**	**+1.5**
PLCA				pmax	pmax		
	comp=Z,35nm,1.1s						
H19K	**Roundabout Mou**	89.16	9	IAmb	IAmb	10 12 36.1	
	comp=Z,60nm,1.1s						
H19K	**Roundabout Mou**	89.16	9	P	**P**	**10 12 35.0**	**+0.6**
	baz=201						
G18K	**Tagagawik**	89.19	8	P	**P**	**10 12 34.7**	**0.0**
G18K				IAmb	IAmb	10 12 35.8	
	comp=Z,40nm,1.2s						
G18K	**Tagagawik**	89.19	8	P	**P**	**10 12 34.5**	**-0.1**
	baz=199,SNR=7.3						
YUK6	**Outpost Mounta**	89.21	19	P	**P**	**10 12 36.0**	**+0.9**
	baz=218,SNR=6.6						
HWUT	**Hardware Ranch**	89.22	44	IAmb	IAmb	10 12 37.6	
	comp=Z,48nm,0.9s						
HIA	**Hailar**	89.25	325	P	**P**	**10 12 35.2**	**-0.1**
YUK3	**Moose Creek**	89.28	17	P	**P**	**10 12 36.4**	**+1.0**
	baz=216,SNR=68						
PV10	**Paradox Valley**	89.30	48	IAmb	IAmb	10 12 38.0	
	comp=Z,65nm,1.1s						
PV17	**East Wray Mesa**	89.30	48	IAmb	IAmb	10 12 40.8	
	comp=Z,47nm,1.2s						
PV14	**Lion Creek, Pa**	89.31	48	IAmb	IAmb	10 12 38.2	
	comp=Z,50nm,1.1s						
S34M	**Telegraph Cree**	89.32	24	IAmb	IAmb	10 12 38.1	
	comp=Z,68nm,0.9s						
S34M	**Telegraph Cree**	89.32	24	P	**P**	**10 12 36.7**	**+1.4**
	baz=224,SNR=26						
PV18	**Skein Mesa, Pa**	89.32	48	IAmb	IAmb	10 12 38.3	
	comp=Z,82nm,1.2s						
PV13	**Radium Mtn., P**	89.34	48	IAmb	IAmb	10 12 38.4	
	comp=Z,46nm,1.2s						
PV16	**Nyswonger Mesa**	89.35	48	IAmb	IAmb	10 12 38.5	
	comp=Z,62nm,1.4s						
PV23	**Carpenter Ridg**	89.35	48	IAmb	IAmb	10 12 38.6	
	comp=Z,70nm,0.9s						
PV03	**Paradox Valley**	89.37	48	IAmb	IAmb	10 12 38.5	
	comp=Z,44nm,1.2s						
M27K	**Edge Creek, AK**	89.37	17	P	**P**	**10 12 36.7**	**+1.0**
	baz=214						
PV11	**David Mesa, Pa**	89.37	48	IAmb	IAmb	10 12 38.7	
	comp=Z,77nm,1.3s						
HYT	**Haines Junctio**	89.37	19	IAmb	IAmb	10 12 37.9	
	comp=Z,40nm,1.2s						
HYT	**Haines Junctio**	89.37	19	P	**P**	**10 12 36.7**	**+1.0**
	baz=218,SNR=16						
H20K	**Anotleneega Mo**	89.38	10	P	**P**	**10 12 36.1**	**+0.7**
	baz=203,SNR=18						
MENT	**Mentasta**	89.39	15	IAmb	IAmb	10 12 37.3	
	comp=Z,35nm,0.9s						
CMAR	**Chiang Mai Arr**	89.39	290	P	**P**	**10 12 38.0**	**+1.3**
	comp=Z,8.1nm,0.8s,baz=120,slow=3.1,SNR=16						
CMAR				pP	**pP**	**10 14 40.3**	**0.0**
	comp=Z,1.0nm,0.3s,baz=42,slow=54,SNR=2.4						
CMAR				PP	**PP**	**10 16 17.4**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=105,slow=5.2,SNR=4.5						
CMAR				PKKPbc	**PKKPbc**	**10 30 09.5**	**+1.2**
	comp=Z,1.9nm,0.5s,baz=286,slow=5.0,SNR=7.0						
	comp=Z,8.1nm,0.8s						
CMAR	**Chiang Mai Arr**	89.39	290	P	**P**	**10 12 37.2**	**+0.6**
CMAR	**Chiang Mai Arr**	89.39	290	*ce*P	**P**	**10 12 38.7**	**+2.1**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
F17K	**Baldwin Pennin**	89.39	7	IAmb	IAmb	10 12 37.0	
	comp=Z,39nm,0.9s						
F17K	**Baldwin Pennin**	89.39	7	P	**P**	**10 12 36.0**	**+0.6**
	baz=197						
PV04	**Paradox Valley**	89.40	48	IAmb	IAmb	10 12 38.8	
	comp=Z,37nm,1.1s						
HILR	**Hailar Array B**	89.42	325	P	**P**	**10 12 36.5**	**+0.4**
	comp=Z,2.4nm,0.4s,baz=126,slow=5.6,SNR=7.6						
	comp=Z,2.4nm,0.4s						
PV02	**Paradox Valley**	89.42	48	IAmb	IAmb	10 12 38.7	
	comp=Z,79nm,1.2s						
PV21	**Cone Mtn., Par**	89.43	48	IAmb	IAmb	10 12 39.1	
	comp=Z,69nm,1.3s						
YUK4	**Talbot Arm**	89.44	18	P	**P**	**10 12 37.3**	**+1.1**
	baz=217,SNR=12						
BCYI	**Bear Canyon**	89.48	41	IAmb	IAmb	10 12 39.5	
	comp=Z,56nm,1.2s						
TASM	**ASL Pad, Albuq**	89.50	52	IAmb	IAmb	10 12 39.4	
	comp=Z,68nm,1.0s						
TASM	**ASL Pad, Albuq**	89.50	52	IAmb	IAmb	10 12 39.4	
	comp=Z,71nm,1.1s						
TASM	**ASL Pad, Albuq**	89.50	52	IAmb	IAmb	10 12 39.4	
	comp=Z,70nm,1.1s						
ABQ	**Albuquerque**	89.50	52	IAmb	IAmb	10 12 39.4	
	comp=Z,68nm,1.0s						
ANMO	**Albuquerque**	89.50	52	P	**P**	**10 12 37.8**	**+0.8**
ANMO				IAmb	IAmb	10 12 39.4	
	comp=Z,69nm,1.1s						
ANMO	**Albuquerque**	89.50	52	P	**P**	**10 12 37.8**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,69nm,1.1s						
ANMO	**Albuquerque**	89.50	52	P	**P**	**10 12 38.0**	**+1.0**
PV01	**Paradox Valley**	89.50	48	IAmb	IAmb	10 12 39.0	
	comp=Z,34nm,1.0s						
CHTO	**Chiang Mai**	89.53	290	P	**P**	**10 12 37.7**	**+0.4**
CHTO	**Chiang Mai**	89.53	290	P	**P**	**10 12 38.0**	**+0.7**
CHTO				IAmb	IAmb	10 12 40.4	
	comp=Z,84nm,1.6s						
CHTO	**Chiang Mai**	89.53	290	P	**P**	**10 12 38.0**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,84nm,1.6s						
HHC	**Hu-ho-hao-te**	89.53	315	*i*P	**P**	**10 12 39.0**	**+2.1**
HHC				SKS	**SKSac**	**10 22 09.8**	**-3.0**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,6.7s						
PV22	**Blue Mesa, Par**	89.55	48	IAmb	IAmb	10 12 39.4	
	comp=Z,50nm,1.1s						
L26K	**Log Cabin Wild**	89.55	16	IAmb	IAmb	10 12 38.1	
	comp=Z,45nm,1.2s						
L26K	**Log Cabin Wild**	89.55	16	P	**P**	**10 12 36.9**	**+0.6**
	baz=213,SNR=7.1						
ALPN	**Alpine**	89.57	57	IAmb	IAmb	10 12 39.5	
	comp=Z,48nm,0.7s						
I21K	**Tanana**	89.58	11	P	**P**	**10 12 36.4**	**0.0**
	baz=205,SNR=31						
NEA2	**Nenana**	89.61	13	P	**P**	**10 12 35.8**	**-0.8**
	baz=208,SNR=6.6						
K24K	**Donnelly Dome**	89.63	14	P	**P**	**10 12 37.3**	**+0.6**
	baz=211,SNR=13						
P32M	**Atlin**	89.64	21	P	**P**	**10 12 37.8**	**+1.0**
	baz=222,SNR=6.1						
G19K	**Purcell Mounta**	89.65	9	IAmb	IAmb	10 12 38.3	
	comp=Z,59nm,1.1s						
G19K	**Purcell Mounta**	89.65	9	P	**P**	**10 12 37.3**	**+0.6**
	baz=201,SNR=15						
PV15	**Paradox Valley**	89.66	48	IAmb	IAmb	10 12 39.8	
	comp=Z,34nm,1.0s						
Q32M	**Nakina River**	89.67	22	IAmb	IAmb	10 12 39.7	
	comp=Z,34nm,1.1s						
Q32M	**Nakina River**	89.67	22	P	**P**	**10 12 37.3**	**+0.1**
	baz=223						
BVCY	**Beaver Creek**	89.69	17	P	**P**	**10 12 37.8**	**+0.8**
	baz=215,SNR=37						
F18K	**Selawik**	89.73	8	P	**P**	**10 12 37.1**	**0.0**
	baz=198						
O30N	**Mendenhall**	89.77	20	P	**P**	**10 12 38.5**	**+1.0**
	baz=220,SNR=13						
RIDG	**Independent Ri**	89.79	15	IAmb	IAmb	10 12 38.9	
	comp=Z,61nm,1.1s						
RIDG	**Independent Ri**	89.79	15	P	**P**	**10 12 37.7**	**+0.2**
	baz=212,SNR=8.9						
PECS	**Pecos**	89.83	56	IAmb	IAmb	10 12 40.9	
	comp=Z,37nm,1.1s						
H21K	**Melozitna Rive**	89.87	11	IAmb	IAmb	10 12 39.3	
	comp=Z,32nm,1.0s						
H21K	**Melozitna Rive**	89.87	11	P	**P**	**10 12 38.3**	**+0.5**
	baz=205,SNR=13						
HDA	**Harding Lake**	89.90	14	IAmb	IAmb	10 12 39.8	
	comp=Z,35nm,0.8s						
HDA	**Harding Lake**	89.90	14	P	**P**	**10 12 37.8**	**-0.1**
	baz=210,SNR=20						
DOT	**Dot Lake**	89.90	15	IAmb	IAmb	10 12 39.4	
	comp=Z,56nm,1.0s						
E17K	**Hotham Inlet**	89.94	7	P	**P**	**10 12 38.5**	**+0.5**
	baz=196						
L27K	**Beaver Creek,**	89.97	16	P	**P**	**10 12 38.9**	**+0.6**
	baz=214						
BCAR	**Beaver Creek A**	89.98	16	P	**P**	**10 12 38.4**	**+0.1**
N30M	**Aishikik Lake**	90.00	19	P	**P**	**10 12 39.2**	**+0.7**
	baz=219						
RDMU	**Red Mountain**	90.01	46	IAmb	IAmb	10 12 41.4	
	comp=Z,66nm,1.0s						
IMAR	**Indian Mountai**	90.01	10	P	**P**	**10 12 37.9**	**-0.5**
I23K	**Minto, Yukon-K**	90.05	12	P	**P**	**10 12 38.0**	**-0.5**
	baz=208,SNR=12						
WHY	**Whitehorse**	90.06	20	IAmb	IAmb	10 12 41.0	
	comp=Z,44nm,1.0s						
WHY	**Whitehorse**	90.06	20	P	**P**	**10 12 39.9**	**+1.0**
	baz=221,SNR=11						
DLBC	**Dease Lake**	90.10	24	P	**P**	**10 12 40.4**	**+1.4**
	baz=225,SNR=12						
COLA	**College**	90.11	13	P	**P**	**10 12 38.4**	**-0.4**
COLA	**College**	90.11	13	P	**P**	**10 12 38.9**	**+0.1**
COLA	**College**	90.11	13	P	**P**	**10 12 38.4**	**-0.4**
COLA				pmax	pmax		
	comp=Z,128nm,1.3s						
COLA	**College**	90.11	13	P	**P**	**10 12 38.6**	**-0.2**
	baz=209						
SCRK	**Sand Creek**	90.20	15	P	**P**	**10 12 39.3**	**-0.2**
SCRK	**Sand Creek**	90.20	15	P	**P**	**10 12 39.8**	**+0.4**
	baz=212,SNR=20						
F19K	**Shaleruckik Mo**	90.20	8	IAmb	IAmb	10 12 40.5	
	comp=Z,48nm,1.2s						
F19K	**Shaleruckik Mo**	90.20	8	P	**P**	**10 12 39.6**	**+0.4**
	baz=200						
IL31		90.23	13	IAmb	IAmb	10 12 40.2	
	comp=Z,112nm,1.6s						
ILAR	**Eielson Array**	90.23	13	P	**P**	**10 12 38.9**	**-0.6**
	comp=Z,9.7nm,0.7s,baz=223,slow=3.8,SNR=109						
ILAR				pP	**pP**	**10 14 43.5**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=232,slow=5.6,SNR=0.9						
ILAR				PKiKP	**PKiKP**	**10 17 29.8**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=260,slow=2.7,SNR=6.1						
ILAR				PKKP	**PKKPdf**	**10 30 04.0**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=324,slow=2.8,SNR=7.0						
	comp=Z,9.7nm,0.7s						
ILAR	**Eielson Array**	90.23	13	P	**P**	**10 12 38.7**	**-0.7**
PZH	**PanZhiHua**	90.28	298	P	**P**	**10 12 41.8**	**+1.1**
H22K	**Ishtalitna Cre**	90.34	11	IAmb	IAmb	10 12 41.3	
	comp=Z,49nm,1.0s						
H22K	**Ishtalitna Cre**	90.34	11	P	**P**	**10 12 40.2**	**+0.3**
	baz=206,SNR=20						
M29M	**Somme Creek**	90.37	18	IAmb	IAmb	10 12 42.2	
	comp=Z,40nm,1.1s						
M29M	**Somme Creek**	90.37	18	P	**P**	**10 12 41.1**	**+0.8**
	baz=217,SNR=23						
D17K	**Noatak River**	90.41	6	P	**P**	**10 12 41.0**	**+0.8**
	baz=195						
E18K	**Tukpahlearik C**	90.41	7	IAmb	IAmb	10 12 41.8	
	comp=Z,51nm,1.0s						
E18K	**Tukpahlearik C**	90.41	7	P	**P**	**10 12 40.8**	**+0.6**
	baz=197						
P33M	**Teslin, Yukon**	90.41	21	P	**P**	**10 12 41.0**	**+0.6**
	baz=222						
POKR	**Poker Plat Res**	90.41	13	P	**P**	**10 12 39.8**	**-0.5**
	baz=209,SNR=7.4						
N31M	**Braeburn, Yuko**	90.42	19	IAmb	IAmb	10 12 42.4	
	comp=Z,46nm,1.3s						
N31M	**Braeburn, Yuko**	90.42	19	P	**P**	**10 12 41.3**	**+0.9**
	baz=220,SNR=8.3						
J25K	**Salcha River,**	90.42	14	IAmb	IAmb	10 12 41.5	
	comp=Z,62nm,1.5s						
J25K	**Salcha River,**	90.42	14	P	**P**	**10 12 40.5**	**+0.1**
	baz=211,SNR=19						
BTO	**Baotou**	90.44	314	*e*P	**P**	**10 12 43.3**	**+2.2**
BTO				S	**S**	**10 22 42.0**	**-5.7**
BTO				pmax	pmax		
	comp=Z,21nm,0.5s						
BTO				pmax	pmax		
	comp=Z,240nm,6.5s						
R33M	**Jennings River**	90.45	23	IAmb	IAmb	10 12 43.2	
	comp=Z,41nm,1.3s						
R33M	**Jennings River**	90.45	23	P	**P**	**10 12 41.9**	**+1.2**
	baz=224						
DLMT	**Dillon**	90.53	40	IAmb	IAmb	10 12 43.9	
	comp=Z,43nm,1.1s						
S22A	**4UR Ranch, Cre**	90.53	49	IAmb	IAmb	10 12 44.4	
	comp=Z,68nm,1.2s						
BILL	**Bilibino**	90.54	355	P	**P**	**10 12 40.6**	**-0.2**
BILL				IAmb	IAmb	10 12 42.3	
	comp=Z,34nm,1.0s						
BILL	**Bilibino**	90.54	355	*ce*P	**P**	**10 12 41.4**	**+0.6**
BILL				pmax	pmax		
	comp=Z,46nm,1.3s						
G21K	**Allakaket**	90.54	10	IAmb	IAmb	10 12 42.3	
	comp=Z,43nm,0.9s						
G21K	**Allakaket**	90.54	10	P	**P**	**10 12 41.4**	**+0.5**
	baz=204						
BI02	**San Fabin de**	90.56	130	IAmb	IAmb	10 12 44.0	
	comp=Z,27nm,0.9s						
SAND	**Sanderson**	90.57	58	IAmb	IAmb	10 12 44.1	
	comp=Z,42nm,1.0s						
FXWY	**Fox Creek**	90.60	42	IAmb	IAmb	10 12 44.6	
	comp=Z,84nm,1.6s						
H23K	**Yukon River**	90.62	12	P	**P**	**10 12 40.9**	**-0.3**
	baz=208						
O20A	**White River Ci**	90.69	47	IAmb	IAmb	10 12 44.5	
	comp=Z,51nm,0.9s						
F20K	**Avaraat Lake**	90.69	9	IAmb	IAmb	10 12 43.0	
	comp=Z,36nm,1.1s						
F20K	**Avaraart Lake**	90.69	9	P	**P**	**10 12 41.8**	**+0.3**
	baz=202						
K27K	**Chicken**	90.71	16	IAmb	IAmb	10 12 43.7	
	comp=Z,44nm,1.1s						
K27K	**Chicken**	90.71	16	P	**P**	**10 12 42.6**	**+1.0**
	baz=214						
J26L	**Joseph Creek**	90.74	15	P	**P**	**10 12 42.7**	**+0.8**
	baz=213						
C16K	**Lisburne Hills**	90.76	5	P	**P**	**10 12 43.1**	**+1.3**
	baz=193						
RDOG	**Red Dog Mine**	90.77	6	P	**P**	**10 12 42.2**	**+0.4**
	baz=195						
MOOW	**Moose Ponds**	90.83	42	IAmb	IAmb	10 12 45.5	
	comp=Z,42nm,1.5s						
E19K	**Redstone River**	90.86	8	P	**P**	**10 12 42.8**	**+0.5**
	baz=200						
H24K	**Noodor Dome**	90.95	12	P	**P**	**10 12 43.1**	**+0.3**
	baz=209						
M30M	**Minto, Yukon**	90.96	18	IAmb	IAmb	10 12 44.6	
	comp=Z,86nm,1.6s						
M30M	**Minto, Yukon**	90.96	18	P	**P**	**10 12 43.5**	**+0.6**
	baz=219,SNR=28						
L29M	**L29M**	91.00	17	IAmb	IAmb	10 12 45.2	
	comp=Z,49nm,0.9s						
L29M	**L29M**	91.00	17	P	**P**	**10 12 44.1**	**+1.1**
	baz=218,SNR=34						
N32M	**Quiet Lake**	91.02	21	P	**P**	**10 12 43.9**	**+0.7**
	baz=222						
YHB	**Horse Butte**	91.06	41	IAmb	IAmb	10 12 46.4	
	comp=Z,28nm,1.1s						
BW06	**Boulder Array**	91.10	44	IAmb	IAmb	10 12 46.1	
	comp=Z,48nm,1.1s						
PD31	**Pinedale Array**	91.10	44	IAmb	IAmb	10 12 46.1	
	comp=Z,48nm,1.1s						
PDAR	**Pinedale Array**	91.10	44	P	**P**	**10 12 44.7**	**+0.4**
	comp=Z,31nm,1.0s,baz=204,slow=3.3,SNR=104						
PDAR				PP	**PP**	**10 16 30.9**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=248,slow=7.8,SNR=5.3						
PDAR				PKKPbc	**PKKPbc**	**10 30 04.4**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=76,slow=6.3,SNR=4.6						
	comp=Z,31nm,1.0s						
PDAR	**Pinedale Array**	91.10	44	P	**P**	**10 12 44.9**	**+0.6**
YHL	**Hebgen Lake**	91.12	41	IAmb	IAmb	10 12 47.4	
	comp=Z,30nm,0.9s						
YFT	**Old Faithful**	91.13	42	IAmb	IAmb	10 12 48.0	
	comp=Z,28nm,1.1s						
C17K	**DeLong Mountai**	91.15	6	P	**P**	**10 12 43.7**	**+0.1**
	baz=195						
PRP	**Porcupine Dome**	91.16	13	P	**P**	**10 12 43.5**	**-0.4**
	baz=211,SNR=9.3						
F21K	**Alatna River**	91.19	10	IAmb	IAmb	10 12 45.2	
	comp=Z,34nm,1.4s						
F21K	**Alatna River**	91.19	10	P	**P**	**10 12 44.0**	**+0.2**
	baz=204,SNR=8.7						
BOZ	**Bozeman (W)**	91.23	41	IAmb	IAmb	10 12 47.1	
	comp=Z,37nm,1.1s						
G23K	**Bananza Creek**	91.32	11	P	**P**	**10 12 44.8**	**+0.3**
	baz=207,SNR=6.6						
YNR	**Norris Junctio**	91.36	42	IAmb	IAmb	10 12 49.7	
	comp=Z,41nm,1.5s						
M31M	**Drury Creek, Y**	91.39	19	P	**P**	**10 12 45.0**	**+0.1**
	baz=221,SNR=12						
DAWY	**Dawson**	91.42	16	P	**P**	**10 12 45.1**	**+0.1**
DAWY				IAmb	IAmb	10 12 46.6	
	comp=Z,31nm,1.0s						
DAWY	**Dawson**	91.42	16	P	**P**	**10 12 45.6**	**+0.6**
	baz=217,SNR=22						
SDCO	**Great Sand Dun**	91.46	50	IAmb	IAmb	10 12 48.2	
	comp=Z,33nm,0.9s						
I26K	**Coal Creek Min**	91.51	14	IAmb	IAmb	10 12 47.0	
	comp=Z,67nm,1.5s						
I26K	**Coal Creek Min**	91.51	14	P	**P**	**10 12 45.8**	**+0.5**
	baz=213						
C18K	**Utukok River**	91.52	7	P	**P**	**10 12 45.5**	**+0.1**
	baz=197						
HAYD	**Hayden**	91.53	47	IAmb	IAmb	10 12 48.6	
	comp=Z,35nm,1.0s						
F22K	**John River**	91.67	10	P	**P**	**10 12 46.6**	**+0.5**
	baz=205						
YMP	**Mirror Lake Pl**	91.69	42	IAmb	IAmb	10 13 05.2	
	comp=Z,61nm,1.9s						
D19K	**Kuna River**	91.73	8	IAmb	IAmb	10 12 47.7	
	comp=Z,41nm,0.9s						
D19K	**Kuna River**	91.73	8	P	**P**	**10 12 46.7**	**+0.4**
	baz=200						
K29M	**Barlow Dome**	91.75	17	IAmb	IAmb	10 12 48.5	
	comp=Z,34nm,1.1s						
K29M	**Barlow Dome**	91.75	17	P	**P**	**10 12 47.3**	**+0.7**
	baz=218,SNR=27						
COLD	**Coldfoot**	91.75	11	IAmb	IAmb	10 12 48.2	
	comp=Z,30nm,1.1s						
COLD	**Coldfoot**	91.75	11	P	**P**	**10 12 47.0**	**+0.7**
	baz=207,SNR=10						
E20K	**Nigu River**	91.75	8	P	**P**	**10 12 47.0**	**+0.5**
	baz=202						
OZNA	**Ozona**	91.76	57	IAmb	IAmb	10 12 48.7	
	comp=Z,25nm,1.0s						
BO01	**Tunca**	91.77	128	P	**P**	**10 12 46.7**	**-0.7**
MSTX	**Muleshoe**	91.79	54	IAmb	IAmb	10 12 49.4	
	comp=Z,54nm,1.0s						
G24K	**Hadweenzic Riv**	91.79	12	P	**P**	**10 12 47.6**	**+1.0**
	baz=209						
BO02	**Sierra Bellavi**	91.80	129	IAmb	IAmb	10 12 49.6	
	comp=Z,32nm,1.1s						
YNE	**Yellowstone No**	91.92	42	IAmb	IAmb	10 12 50.7	
	comp=Z,28nm,0.9s						
T25A	**Trinidad**	91.97	51	IAmb	IAmb	10 12 50.2	
	comp=Z,38nm,1.0s						
MAYO	**Mayo, Yukon**	92.01	18	P	**P**	**10 12 48.4**	**+0.7**
	baz=220,SNR=12						
J29N	**Klondike Camp**	92.04	17	IAmb	IAmb	10 12 49.4	
	comp=Z,21nm,0.7s						
J29N	**Klondike Camp**	92.04	17	P	**P**	**10 12 48.8**	**+0.9**
	baz=218,SNR=11						
G25K	**Bearman Lake**	92.12	13	P	**P**	**10 12 48.5**	**+0.5**
	baz=211						
I27K	**Kandik River**	92.12	15	P	**P**	**10 12 48.5**	**+0.3**
	baz=215						
D20K	**Etivluk River**	92.12	8	P	**P**	**10 12 48.8**	**+0.6**
	baz=201						
C19K	**Lookout Ridge**	92.13	7	P	**P**	**10 12 48.7**	**+0.6**
	baz=198						
MT09	**Talagante**	92.14	128	P	**P**	**10 12 48.9**	**-0.4**
MT09				IAmb	IAmb	10 12 50.9	
	comp=Z,51nm,1.1s						
B18K	**Kokolik River**	92.14	6	P	**P**	**10 12 48.9**	**+0.8**
	baz=196						
SGCY	**Sterling City**	92.17	56	IAmb	IAmb	10 12 52.2	
	comp=Z,26nm,1.0s						
TOAD	**Toad River Com**	92.21	25

baz=197
G27K **Doyon Strip** 93.11 14 P P 10 12 52.9 +0.3
baz=215
TOLK **Toolik Lake Re** 93.12 11 P P 10 12 53.1 +0.4
baz=208
I30M **Mount Dempster** 93.14 17 IAmb IAmb 10 12 54.2
comp=Z,20nm,0.9s
I30M **Mount Dempster** 93.14 17 P P 10 12 53.2 +0.2
baz=219,SNR=14
YAK **Yakutsk** 93.14 339 P P 10 12 52.8 0.0
YAK **Yakutsk** 93.14 339 *e*P P 10 12 52.7 -0.1
YAK *e**PP pP 10 14 55.5 -1.6
YAK *e* 10 16 45.9
YAK *e*S SKSac 10 22 31.7 +0.2
YAK *e* 10 23 11.8
YAK pmax pmax
comp=Z,35nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,38nm,2.0s
YAK smax smax
comp=N,88nm,2.8s
YAK smax smax
comp=E,84nm,2.9s
D23K **Nanushuk River** 93.23 10 P P 10 12 54.0 +0.9
baz=207
B21K **Ikpikpuk River** 93.24 8 P P 10 12 54.3 +1.2
baz=203
B20K **Meade River** 93.27 8 P P 10 12 54.1 +0.9
baz=201
F26K **Sheenjek River** 93.31 13 P P 10 12 54.3 +0.7
baz=212
E25K **Arctic Village** 93.39 12 P P 10 12 54.5 +0.6
baz=211
H29M **Whitestone** 93.41 15 IAmb IAmb 10 12 55.4
comp=Z,31nm,0.9s
H29M **Whitestone** 93.41 15 P P 10 12 54.5 +0.5
baz=218
KOTAN **Kotaneelee Air** 93.51 24 P P 10 12 54.9 +0.3
baz=230
EGMT **Eagleton** 93.56 39 IAmb IAmb 10 16 50.0
comp=Z,77nm,1.6s
BRDY **Brady** 93.57 58 IAmb IAmb 10 12 57.4
comp=Z,31nm,1.2s
ABTX **Abilene, Hawle** 93.61 56 IAmb IAmb 10 12 57.5
comp=Z,35nm,1.0s
D24K **Happy Valley** 93.70 11 P P 10 12 55.8 +0.5
baz=208
EPYK **Eagle Plains** 93.94 16 IAmb IAmb 10 12 57.7
comp=Z,32nm,1.1s
EPYK **Eagle Plains** 93.94 16 P P 10 12 56.6 +0.2
baz=219,SNR=9.9
C23K **Itkillik River** 94.02 10 P P 10 12 57.4 +0.7
baz=207
G29M **Pine Creek** 94.04 15 IAmb IAmb 10 12 58.1
comp=Z,21nm,1.1s
G29M **Pine Creek** 94.04 15 P P 10 12 57.1 +0.2
baz=218
B22K **Teshekpuk Lake** 94.06 9 P P 10 12 57.2 +0.3
baz=204
H31M **Peel River** 94.13 17 P P 10 12 57.1 -0.2
baz=221
F28M **Old Crow** 94.17 14 P P 10 12 57.7 +0.2
baz=216
C24K **Franklin Bluff** 94.22 10 P P 10 12 58.3 +0.7
baz=208
E27K **Coleen River** 94.26 13 P P 10 12 58.6 +0.8
baz=215
D25K **Kavik River** 94.28 11 P P 10 12 58.4 +0.4
baz=210
G30M **tAoh Zraii Nji** 94.54 16 P P 10 12 59.4 +0.2
baz=220,SNR=22
A21K **Barrow** 94.57 7 P P 10 12 59.3 +0.2
baz=201
G31M **Satah River** 94.99 16 IAmb IAmb 10 13 02.3
comp=Z,36nm,1.0s
G31M **Satah River** 94.99 16 P P 10 13 01.3 +0.2
baz=221,SNR=21
C27K **Jago River** 95.03 12 P P 10 13 01.8 +0.5
baz=213
E28M **Babbage River** 95.04 14 IAmb IAmb 10 13 02.9
comp=Z,19nm,1.1s
E28M **Babbage River** 95.04 14 P P 10 13 01.6 +0.2
baz=217
C26K **Camden Bay** 95.06 11 P P 10 13 02.0 +0.7
baz=212
F30M **Barrier River** 95.13 15 P P 10 13 02.1 +0.3
baz=220
E29M **Blow River** 95.24 14 P P 10 13 02.2 -0.1
baz=218
D27M **Malcolm River** 95.26 13 IAmb IAmb 10 13 04.3
comp=Z,26nm,1.4s
D27M **Malcolm River** 95.26 13 P P 10 13 03.0 +0.6
baz=215
RSSD **Black Hills** 95.29 44 P P 10 13 03.1 -0.3
RSSD **Black Hills** 95.29 44 P P 10 13 03.1 -0.3
RSSD pmax pmax
comp=Z,13nm,1.0s
F31M **Tsiigehtchic** 95.52 16 P P 10 13 03.6 +0.1
baz=222,SNR=20
WRGLY **Wrigley** 95.71 22 P P 10 13 04.8 +0.3
baz=231
ULN **Ulaanbaatar** 95.72 320*ce*P P 10 13 04.0 -1.1
ULN pmax pmax
comp=Z,4.0nm,1.1s
X34A **Smith Ranch, M** 95.78 55 IAmb IAmb 10 13 07.8
comp=Z,60nm,1.7s
D28M **Stokes Point** 95.80 13 P P 10 13 04.9 +0.2
baz=217
SONM **Songino Array** 96.10 319 P P 10 13 07.2 +0.3
comp=Z,0.5nm,0.4s,baz=143,slow=4.3,SNR=4.9
SONM pP pP 10 15 11.5 +0.2
comp=Z,0.5nm,0.8s,baz=132,slow=4.4,SNR=1.2
SONM PP PP 10 17 07.9 -2.1
comp=Z,2.1nm,1.1s,baz=66,slow=1.8,SNR=6.0
SONM PKiKP PKiKP 10 17 42.1 +0.7
comp=Z,0.3nm,0.4s,baz=89,slow=3.0,SNR=1.1
SONM PKKPbc PKKPbc 10 29 51.8 -0.6
comp=Z,1.1nm,0.7s,baz=258,slow=2.4,SNR=8.6
comp=Z,0.5nm,0.4s
INK **Inuvik** 96.22 16 P P 10 13 06.5 -0.1
baz=222,SNR=12
HERN **Volcan Telica** 97.06 79 IAmb IAmb 10 17 01.6
comp=Z,212nm,0.5s
YKA **Yellowknife Ar** 98.58 25 P P 10 13 17.5 +0.1
comp=Z,2.6nm,0.8s,baz=249,slow=4.9,SNR=15
YKA PP PP 10 17 26.2 -1.9
comp=Z,1.0nm,0.9s,baz=248,slow=7.6,SNR=5.3
comp=Z,2.6nm,0.8s
TIXI **Tiksi** 99.99 345 *i* P Pdif 10 13 22.6 -0.8
TIXI pmax pmax
comp=Z,3.0nm,1.0s
LSA **Lhasa** 100.14 298 P Pdif 10 13 20.0 -5.7
LSA pmax pmax
comp=Z,7.0nm,0.6s
A36M **Sachs Harbour** 100.82 15 P Pdif 10 13 27.4 +0.3
baz=230
LPAZ **La Paz** 102.68 114 P Pdif 10 13 38.8 +1.3
comp=Z,0.9nm,0.4s,baz=350,slow=3.9,SNR=5.0
WMQ **Urumqi** 106.97 311 Pdif Pdif 10 13 56.8 +1.6
ZALV **Zalesovo Beam** 110.91 321 PKiKP PKiKP 10 18 07.0 -1.2
comp=Z,2.7nm,0.4s,baz=150,slow=2.3,SNR=16
ZALV SKP SKPdf 10 20 49.1 -0.4
comp=Z,0.8nm,0.5s,baz=223,slow=0.8,SNR=3.8
ZALV **Zalesovo Beam** 110.91 321 PKiKP 10 18 07.1 -1.1
ZALV **Zalesovo Beam** 110.91 321 *i* PKIKP PKiKP 10 18 07.1 -1.1
MK31 **Makanchi Array** 111.33 313*c* *i*PKIKP PKiKP 10 18 08.1 -1.1
MKAR **Makanchi Array** 111.33 313 PKiKP PKiKP 10 18 08.3 -0.9
comp=Z,2.4nm,0.4s,baz=177,slow=0.8,SNR=32
MKAR SKP SKPdf 10 20 50.4 -0.3
comp=Z,1.8nm,1.0s,baz=85,slow=2.6,SNR=3.8
MKAR PKKPbc PKKPbc 10 29 06.9 -0.3
comp=Z,3.2nm,0.8s,baz=278,slow=4.4,SNR=12
MKAR PKKPab PKKPab 10 29 17.8 +0.7
comp=Z,2.5nm,0.8s,baz=298,slow=2.6,SNR=7.2
KURK **Kurchatov** 114.27 317*c* *i*PKIKP PKPdf 10 18 13.9 -0.8
KURK pmax pmax
comp=Z,9.0nm,1.0s
KURBB **Kurchatov Arra** 114.32 317 PKP PKPdf 10 18 13.9 -0.9
comp=Z,4.4nm,0.5s,baz=102,slow=1.9,SNR=19
KURBB SKP SKPdf 10 20 56.1 -0.1
comp=Z,4.3nm,0.2s,baz=106,slow=2.0,SNR=4.6
KSH **Kashi** 114.70 305 PKP PKPdf 10 18 16.0 -0.1
AAK **Ala-Archa** 116.23 308 P Pdif 10 14 35.6 -1.0
AAK **Ala-Archa** 116.23 308 PKPdf 10 18 18.6 -0.4
AAK **Ala-Archa** 116.23 308*c* *i*PKIKP PKPdf 10 18 18.4 -0.6
AAK pmax pmax
comp=Z,5.0nm,1.3s
VOI **Vohitsoka** 117.14 229 PKiKP 10 18 21.6 +0.2
SJG **San Juan** 117.70 81 PKPdf 10 18 21.3 -0.9
SJG **San Juan** 117.70 81 PKIKP PKPdf 10 18 21.3 -0.9
KKAR **Karatay Array** 119.19 308 PKPdf 10 18 23.9 -0.5
KKAR **Karatay Array** 119.19 308 PKIKP PKPdf 10 18 23.9 -0.5
E62A **Clayton Lake** 119.31 48 PKPdf 10 18 24.1 -0.4
BDFB **Brasilia** 119.39 124 PKP PKPdf 10 18 25.1 -0.7
BVAR **Borovoye Array** 119.45 319 PKP PKPdf 10 18 24.0 -0.6
comp=Z,20nm,0.3s,baz=111,slow=2.2,SNR=126
BVAR PP PP 10 19 54.9 -2.1
comp=Z,2.9nm,0.9s,baz=62,slow=3.5,SNR=3.6
BVAR SKP SKPdf 10 21 06.2 +0.2
comp=Z,3.0nm,0.7s,baz=22,slow=1.6,SNR=4.6
BVAR **Borovoye Array** 119.45 319 PKIKP PKPdf 10 18 24.0 -0.6
NEEM **North Greenlan** 119.46 11 *i* P PKPdf 10 18 23.6 -0.8
KBL **Kabul** 119.47 298 P Pdif 10 14 53.7 +2.5
KBL **Kabul** 119.47 298 PKPdf 10 18 25.5 0.0
KBL **Kabul** 119.47 298 PKIKP PKPdf 10 18 25.5 0.0
BORK **Borovoye** 119.49 319 PKPdf 10 18 24.4 -0.3
BORK **Borovoye** 119.49 319*c* *i*PKIKP PKPdf 10 18 24.1 -0.6
BORK pmax pmax
comp=Z,18nm,1.3s
NOR **Nord** 120.07 3 *i* P PKPdf 10 18 23.9 -1.1
UPNV **Upernavik** 120.64 17 *i* P PKPdf 10 18 25.8 -0.5
SCHQ **Schefferville** 120.81 38 PKP PKPdf 10 18 26.2 -1.0
comp=Z,6.0nm,0.8s,baz=298,slow=2.5,SNR=3.8
SUR **Sutherland** 122.41 200 P Pdif 10 14 57.4 -7.1
SPITS **Spitsbergen Ar** 123.42 356 PKP PKPdf 10 18 31.4 -0.2
comp=Z,19nm,0.6s,baz=69,slow=4.6,SNR=45
ILULI **Ilulissat** 123.75 20 PKPdf 10 18 31.9 -0.4
ILULI **Ilulissat** 123.75 20 PKIKP PKPdf 10 18 31.9 -0.4
ILULI **Ilulissat** 123.75 20 *i* P PKPdf 10 18 31.7 -0.7
BOSA **Boshof** 124.18 206 PKP PKiKP 10 18 35.2 +0.2
comp=Z,7.3nm,0.9s,baz=146,slow=7.3,SNR=6.6
BOSA PKKPbc PKKPbc 10 28 21.4 -1.3
comp=Z,7.3nm,1.0s,baz=346,slow=5.0,SNR=5.7
SFJD **Kangerlussuaq** 124.98 22 PKPdf 10 18 34.0 -0.8
SFJD **Kangerlussuaq** 124.98 22 PKIKP PKPdf 10 18 34.0 -0.8
SFJD **Kangerlussuaq** 124.98 22 *i* P PKPdf 10 18 34.0 -0.8
SUMG **Summit** 125.07 13 PKPdf 10 18 34.8 -0.6
SUMG **Summit** 125.07 13 PKIKP PKPdf 10 18 34.8 -0.6
SUMG **Summit** 125.07 13 *i* P PKPdf 10 18 35.0 -0.3
NUUK **Nuuk** 125.84 25 *i* P PKiKP 10 18 36.7 -0.2
ARTI **Arti** 125.87 324 PKPdf 10 18 36.5 -0.3
ARTI **Arti** 125.87 324*c* *i*PKIKP PKPdf 10 18 37.0 +0.2
ARTI pmax pmax
comp=Z,37nm,1.3s
ABKAR **Akbulak array** 126.32 316 PKPdf 10 18 37.1 -0.8
DBG **Daneborg** 126.63 7 *i* P PKPdf 10 18 37.3 -0.5
LBTB **Lobatse** 127.17 209 PKiKP 10 18 41.4 +0.3
LBTB **Lobatse** 127.17 209 PKIKP PKiKP 10 18 41.4 +0.3
SMDO **Samad** 127.20 283 P PKPdf 10 18 38.3 -2.2
BSY **Bisya** 127.91 282 P PKPdf 10 18 35.1 -6.7
IVI **Ivigtut** 128.63 28 *i* P PKPdf 10 18 41.7 -0.1
ARQ **Araqi** 128.63 283 P PKPdf 10 18 35.0 -8.2
SOHO **SOHO** 128.76 284 P PKiKP 10 18 44.3 +0.3
SOHO **SOHO** 128.76 284 PKPdf PKPdf 10 18 42.8 -0.5
MDH **Madha** 129.16 285 P PKPdf 10 18 43.7 -0.3
MDH **Madha** 129.16 285 PKPdf PKPdf 10 18 43.2 -0.8
UOSS **Minazif** 129.19 285 P PKPdf 10 18 42.7 -1.4
UOSS **Minazif** 129.19 285 PKPdf 10 18 43.9 -0.2
HATD **Hatta, Dubai** 129.23 285 P PKPdf 10 18 41.0 -3.2
SNR=5.9
HATD **Hatta, Dubai** 129.23 285 PKPdf PKPdf 10 18 44.0 -0.2
BANOM **Banah** 129.25 286 *i* PKiKP PKiKP 10 18 47.0 +1.9
SNR=11
ASHO **Ashiyiah** 129.28 284 P PKPdf 10 18 44.0 -0.3
SNR=7.1
ASHO **Ashiyiah** 129.28 284 *i* PKPdf PKPdf 10 18 43.8 -0.5
SNR=11
MSFE **Esma-Masafi** 129.29 285 *i* PKPdf PKPdf 10 18 43.4 -0.9
SNR=14
MASF **Masafi** 129.29 285 P PKiKP 10 18 45.1 -0.1
SNR=11
ALNE **Al Ain** 129.45 284 *i* PKPdf PKPdf 10 18 44.2 -0.4
SNR=5.2
NAZ **Nazwa, Dubai** 129.68 285 P PKPdf 10 18 40.8 -4.2
SNR=8.5
NAZ **Nazwa, Dubai** 129.68 285 *i* PKPdf PKPdf 10 18 44.6 -0.5
SNR=9.1
KIRV **Kirov** 129.69 329 SKPbc SKPbc 10 21 12.5 -0.6
comp=Z,7.8nm,0.5s,baz=74,slow=8.0,SNR=1.6
KIRV **Kirov** 129.69 329*c* *i*PKIKP PKPdf 10 18 44.3 +0.3
FAQ **Al Faqa, Dubai** 129.71 284 P PKPdf 10 18 42.0 -3.1
SNR=8.0
NRS **Narsarsuaq** 129.82 27 *i* P PKPdf 10 18 42.8 -1.4
SCO **Scoresbysund** 129.87 10 *i* P PKPdf 10 18 43.9 -0.1
ASUD **Al Ashush, Dub** 129.92 284 P PKiKP 10 18 46.8 +0.4
SNR=8.0
ASUD **Al Ashush, Dub** 129.92 284 *i* PKPdf PKPdf 10 18 45.8 +0.3
SNR=11
AJN **Ajban** 130.22 284 P PKPdf 10 18 32.5 -14
SNR=5.5
ARCES **ARCESS Array B** 130.28 349 PKP PKPdf 10 18 44.5 -0.4
comp=Z,7.4nm,0.4s,baz=176,slow=1.2,SNR=13
ARCES SKPbc SKPbc 10 21 15.2 +0.2
comp=Z,38nm,1.0s,baz=28,slow=5.5,SNR=16
MZWR **Madinat Zayed** 131.09 283 P PKPdf 10 18 44.7 -3.0
MZR **Muzera** 131.33 282 *i* PKPdf PKPdf 10 18 48.4 +0.2
SNR=9.5
GHWR **Ruwais** 132.03 283 P PKPdf 10 18 44.1 -5.3
KLMR **Klimovskoe** 132.82 335 *e*PKIKP PKPdf 10 18 49.7 -0.1
KLMR *e* 10 21 23.8
KLMR pmax pmax
comp=Z,41nm,1.4s
BELG **Belogornoye** 133.08 322 SKPbc SKPbc 10 21 25.4 +0.2
comp=Z,134nm,0.9s,baz=131,slow=0.6,SNR=31
BELG **Belogornoye** 133.08 322 *i* PKIKP PKPdf 10 18 50.4 -0.1
SLWR **Sila** 133.12 283 P Pdif 10 15 47.5 -4.3
TRNA **Turayna** 133.64 284 P Pdif 10 16 00.5 +6.3
SHMA **Al-Shehemyia** 134.00 285 P Pdif 10 15 59.8 +4.1
TSUM **Tsumeb** 135.65 203 PKPdf 10 18 57.2 +0.6
KIBK **Kibwezi** 136.02 241 PKPdf 10 18 57.9 +0.5
AKT **Akhty** 136.11 307 *e*PKIKP PKiKP 10 18 59.5 +0.9
MOS **Moscow** 136.67 330 *i* PKIKP PKPdf 10 18 57.2 +0.1
VRH **Novokhopyorsk** 136.91 323 *e*PKIKP PKPdf 10 18 55.3 -2.4
VRH pmax pmax
comp=Z,20nm,0.9s
FINES **FINESS Array B** 136.95 342 PKhKP PKPpre 10 18 46.3
comp=Z,1.9nm,0.3s,baz=44,slow=3.5,SNR=13
FINES PKP PKPdf 10 18 57.7 +0.2
comp=Z,7.5nm,0.5s,baz=41,slow=3.5,SNR=11
FINES SKPbc SKPbc 10 21 37.1 +0.1
comp=Z,7.8nm,0.6s,baz=64,slow=4.4,SNR=9.3
FINES **FINESS Array B** 136.95 342 PKiKP 10 18 58.9 -0.6
FINES **FINESS Array B** 136.95 342*c* *i*PKIKP PKPdf 10 18 57.0 -0.5
FINES pmax pmax
comp=Z,8.0nm,0.4s
KMBO **Kilima Mbogo** 137.36 242 PKP PKiKP 10 19 01.2 -0.9
comp=Z,1.7nm,0.3s,baz=165,slow=2.9,SNR=5.7
KMBO SKPbc SKPbc 10 21 40.8 +0.8
comp=Z,9.3nm,0.9s,baz=109,slow=2.4,SNR=13
OBN **Obninsk** 137.53 330 SKPbc SKPbc 10 21 39.0 +0.3
comp=Z,28nm,0.5s,baz=43,slow=5.0,SNR=11
OBN **Obninsk** 137.53 330*c* *i*PKIKP PKPdf 10 18 59.4 +0.7
OBN *e* 10 25 18.0
OBN pmax pmax
comp=Z,39nm,1.7s
LPSR **Galich'ya Gora** 137.75 326 *e*PKIKP PKPdf 10 18 57.2 -2.0
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VORR **Voronezh** 138.08 324 *e*PKIKP PKPdf 10 19 00.4 +0.5
VORR pmax pmax
comp=Z,30nm,0.9s
VSR **Storozhevoye** 138.33 324 *e*PKIKP PKPdf 10 18 58.4 -1.9
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD **Divnogorie** 138.38 323 *e*PKIKP PKPdf 10 18 59.4 -1.0
VORD pmax pmax
comp=Z,7.0nm,0.9s
GNI **Garni** 138.60 306 SKPbc SKPbc 10 21 42.8 +0.3
comp=Z,6.6nm,0.6s,baz=68,slow=9.6,SNR=3.5
KBZ **Khabaz** 139.01 312 SKPbc SKPbc 10 21 43.5 +0.2
comp=Z,2.3nm,0.8s,baz=20,slow=11,SNR=3.9
KIV **Kislovodsk** 139.08 312 *e*PKIKP PKPdf 10 19 01.8 -0.3
KIV pmax pmax
comp=Z,12nm,1.1s
DOMB **Dombas** 139.71 354 *e*P PKPdf 10 18 55.5 -7.1
NB2 **NORSAR Subarra** 140.43 352 PKP PKPdf 10 18 58.0 -6.0
comp=Z,7.9nm,0.8s,baz=16,slow=3.2
NB2 pPKP SKPbc 10 21 46.8 +0.2
comp=Z,22nm,1.0s,baz=16,slow=2.8
NOA **NORSAR Array B** 140.43 352 PKhKP PKPpre 10 18 57.5
comp=Z,5.4nm,0.7s,baz=16,slow=4.9,SNR=20
NOA PKP PKiKP 10 19 05.7 -1.0
comp=Z,1.7nm,0.4s,baz=14,slow=2.5,SNR=5.7
NOA SKPbc SKPbc 10 21 47.0 +0.4
comp=Z,8.6nm,0.9s,baz=15,slow=4.3,SNR=14
NC602 **NORSAR Array S** 140.68 351 *e*P PKPdf 10 18 58.3 -6.0
HFS **Hagfors** 140.93 350 PKhKP PKPpre 10 18 59.0
comp=Z,13nm,0.3s,baz=61,slow=3.5,SNR=116
HFS SKPbc SKPbc 10 21 47.8 -0.1
comp=Z,14nm,0.8s,baz=293,slow=1.1,SNR=12
SUE **Sulen** 141.01 357 *e*P PKPdf 10 18 59.1 -5.7
SKAR **Skarslia** 141.12 354 *e*P PKPdf 10 19 00.1 -5.1
ASK **Askoy** 141.56 356 *e*P PKPdf 10 19 02.2 -3.7
OSL **Oslo** 141.56 352 *e*P PKPdf 10 19 01.6 -4.3
SHEL **Horse Pasture** 141.63 170 PKPdf 10 19 04.6 -2.9
SHEL **Horse Pasture** 141.63 170 PKHKP PKPpre 10 19 04.6
NACGM **Naroch** 141.84 336 *e*PKP PKPdf 10 19 04.6 -1.9
comp=Z,22nm,0.7s,baz=42
KONO **Kongsberg** 141.99 353 *e*P PKPdf 10 19 03.3 -3.4
KONO **Kongsberg** 141.99 353 ⇑PKHKP PKPpre 10 18 52.7
ODD1 **Odda** 142.03 355 *e*P PKPdf 10 19 03.4 -3.4
STRU **Stroemstad** 142.37 351 *i* P PKPdf 10 19 04.0 -3.4
BLS5 **Blasjo** 142.53 355 *e*P PKPdf 10 19 05.0 -2.7
KMY **Karmoy** 142.82 356 *e*P PKPdf 10 19 04.8 -3.4
MBAR **Mbarara** 142.87 236 PKPdf 10 19 08.9 -1.0
MBAR **Mbarara** 142.87 236 *i* PKIKP PKPdf 10 19 08.5 -1.4
TJOU **Tjoern** 143.27 350 *i* P PKPab 10 19 07.0 -0.2
BORU **Boraas** 143.45 349 *i* P PKPab 10 19 07.4 -0.5
HOMB **Homborsund** 143.46 353 *e*P PKPab 10 19 07.9 0.0
HOMB **Homborsund** 143.46 353 *i* P PKPbc 10 19 08.0 0.0
SNART **Snartemo** 143.53 354 *e*P PKPbc 10 19 08.5 +0.2
SNART **Snartemo** 143.53 354 *i* P PKPab 10 19 08.2 0.0
BIGH **Upper Bighouse** 143.56 4 *e*P PKPab 10 19 08.2 -0.1
LEWI **Lewis, Hebride** 143.65 7 *e*P PKPab 10 19 08.4 -0.2
AKASG **Malin Array Be** 143.75 329 PKP PKPbc 10 19 08.7 -0.5
comp=Z,25nm,0.4s,baz=44,slow=4.0,SNR=158
AKASG SKPbc SKPbc 10 21 55.1 +0.1
comp=Z,15nm,0.9s,baz=47,slow=2.6,SNR=19
AKASG **Malin Array Be** 143.75 329 PKPbc 10 19 08.4 -0.8
AKASG **Malin Array Be** 143.75 329 PKIKP PKPbc 10 19 08.4 -0.8
AKBB **Malin Array Si** 143.75 329 *i* PKIKP PKPab 10 19 09.5 +0.2
KIEV **Kiev** 143.77 329 PKPbc 10 19 08.1 -1.1
KIEV **Kiev** 143.77 329 ⇑P PKPbc 10 19 07.9 -1.4
KIEV **Kiev** 143.77 329 ⇑PKIKP PKPbc 10 19 07.9 -1.3
ONAU **Onsala** 143.83 350 *i* P PKPbc 10 19 08.5 -0.7
SUW **Suwalki** 143.86 337 *e*P PKPbc 10 19 09.5 +0.1
FABU **Falkenberg** 144.06 349 *i* P PKPbc 10 19 09.4 -0.6
OVD **Ostervraa, Den** 144.17 351 *i* P PKPbc 10 19 10.3 +0.1
SIM **Simferopol'** 144.33 318 *e*PKIKP PKPab 10 19 11.7 0.0
SIM pmax pmax
comp=Z,50nm,0.8s
SIM pmax pmax
comp=Z,83nm,1.3s
DEL **Delary** 144.34 347 *i* P PKPbc 10 19 10.4 -0.4
MCD **Coleburn Disti** 144.50 4 *e*P PKPdf 10 19 10.9 -0.3
KPL **Plockton** 144.56 6 *e*P PKPbc 10 19 11.6 +0.1
BJUU **Bjuv** 144.88 348 *i* P PKPdf 10 19 12.1 +0.3
MUD **Monsted U'grnd** 145.15 352 *i* P PKPbc 10 19 13.4 +0.1
LUNU **Lund** 145.21 347 *i* P PKPbc 10 19 13.2 -0.3
DRUM **Mains of Drumt** 145.21 3 *e*P PKPbc 10 19 13.2 -0.2
COP **Copenhagen** 145.36 348 *i* P PKPbc 10 19 13.9 0.0
BSD **Bornholm Skovb** 145.37 345 *i* P PKPbc 10 19 13.8 -0.2
INVG **Invergeldie, C** 145.60 5 *e*P PKPbc 10 19 14.6 0.0
LAWE **Loch Awe, Argy** 145.65 6 *e*P PKPbc 10 19 14.8 0.0
BZK **Bozkurt** 145.74 313 ⇑P PKPbc 10 19 15.8 +0.3
SORM **Soroca** 145.85 326 ⇑P PKPbc 10 19 15.4 -0.2
SORM **Soroca** 145.85 326 ⇑PKIKP PKPbc 10 19 15.4 -0.2
R9F13 **Warsaw-Wawer** 146.04 337 *e*PKP PKPbc 10 19 16.3 +0.3
EDI **Edinburgh** 146.16 4 *e*P PKPbc 10 19 16.1 -0.1
PGBU **Glenifferbraes** 146.18 5 *e*P PKPbc 10 19 16.1 -0.1
ESY **Stoneypath** 146.20 3 *e*P PKPbc 10 19 16.2 -0.1
ASF **Jabal al Asfar** 146.28 295 PKPbc PKPbc 10 19 17.7 +0.3
comp=Z,16nm,0.6s,baz=100,slow=2.5,SNR=14
MILM **Milestii Mici** 146.37 324 ⇑P PKPdf 10 19 14.8 +0.2
MILM **Milestii Mici** 146.37 324 ⇑PKIKP PKPdf 10 19 14.8 +0.2
MILM **Milestii Mici** 146.37 324 ⇑*i*PKP PKPdf 10 19 15.5 +0.9
comp=Z,220nm,1.1s
GKP **Gorka Klasztor** 146.42 342 *e*P PKPbc 10 19 17.2 +0.3
BEL **Belsk** 146.48 337 *e*P PKPbc 10 19 17.8 +0.6
IDGL **Inch Island, C** 146.58 8 PKPdf PKPbc 10 19 17.2 -0.1
IDGL **Inch Island, C** 146.58 8 *e*P PKPbc 10 19 16.9 -0.4
DRBR **Darabani** 146.69 328 ⇓P PKPbc 10 19 17.3 -0.6
ASCN **Ascension** 146.73 152 PKiKP 10 19 20.4 -0.7
CLGH **Cloghs, Cushen** 146.74 7 *e*P PKPbc 10 19 17.9 +0.1
EKA **Eskdalemuir Ar** 146.75 4 PKPbc PKPbc 10 19 17.4 -0.4
comp=Z,38nm,0.7s,baz=321,slow=2.6,SNR=60
ESK **Eskdalemuir** 146.76 4 PKPbc 10 19 17.6 -0.3
ESK **Eskdalemuir** 146.76 4 *e*P PKPbc 10 19 17.5 -0.3
ESK **Eskdalemuir** 146.76 4 PKIKP PKPbc 10 19 17.6 -0.3
BR131 **Keskin Array S** 146.88 310 P PKPdf 10 19 16.0 0.0
SNR=6.9
BR131 **Keskin Array S** 146.88 310 PKPbc 10 19 18.7 -0.2
BR131 **Keskin Array S** 146.88 310 *i* PKIKP PKPdf 10 19 15.2 -0.8
BRTR **Keskin Array B** 146.88 310 PKPbc PKPbc 10 19 18.8 -0.2
comp=Z,12nm,0.6s,baz=135,slow=5.0,SNR=38
BRTR pPKPbc pPKPdf 10 21 28.4 -0.3
comp=Z,2.0nm,1.0s,baz=150,slow=3.0,SNR=2.6
BRTR SKPbc SKiKP 10 22 03.5 +0.7
comp=Z,3.7nm,1.0s,baz=131,slow=2.4,SNR=3.1
BRTR **Keskin Array B** 146.88 310 PKPdf 10 19 15.5 -0.5
NEWG **New Galloway** 146.89 5 *e*P PKPbc 10 19 18.1 -0.1
KIRS **Kirsehir-Merke** 146.90 308 ⇓P PKPbc 10 19 18.8 -0.1
VASM **Vaslui** 147.09 324 ⇑P PKPbc 10 19 18.9 -0.1
GAL1 **Galloway** 147.10 6 *e*P PKPbc 10 19 18.8 +0.1
EDMD **Edmundbyers** 147.31 3 *e*P PKPbc 10 19 19.3 0.0
MMAI **Mount Meron Ar** 147.39 297 PKPbc PKiKP 10 19 21.5 -0.4
comp=Z,15nm,0.4s,baz=78,slow=5.2,SNR=36
MMAI pPKPbc pPKPbc 10 21 30.4 -0.5
comp=Z,1.6nm,0.4s,baz=56,slow=11,SNR=2.2
VLDR **Vladesti** 147.42 323 ⇑P PKPbc 10 19 18.7 -1.2
ANTO **Ankara** 147.43 310 P PKPdf 10 19 17.0 +0.3
ANTO **Ankara** 147.43 310 PKPbc 10 19 20.8 +0.6
ANTO **Ankara** 147.43 310 ⇓P PKPbc 10 19 20.2 0.0
ANTO **Ankara** 147.43 310 ⇓PKP2 PKPbc 10 19 20.2 0.0
KWP **Kalwaria Pacla** 147.46 333 *e*P PKPbc 10 19 20.1 +0.2
KESW **Keswick, Cumbr** 147.50 4 *e*P PKPbc 10 19 18.9 -0.1
SCTR **Scantiesti** 147.57 323 ⇓P PKPbc 10 19 20.8 +0.6
JURR **Jurilovca** 147.60 321 ⇓P PKPbc 10 19 20.1 -0.2
GHRR 147.66 324 ⇓P PKPbc 10 19 21.1 +0.6
IOMK **Kirk Michael** 147.71 6 *e*P PKPbc 10 19 20.3 -0.1
ILTH **Belurgan, Co L** 147.75 8 PKPdf PKPbc 10 19 18.7 -1.7
ILTH **Belurgan, Co L** 147.75 8 *e*P PKPbc 10 19 20.4 -0.1
BURAR **Bucovina Array** 147.78 328 PKPdf 10 19 17.1 0.0
BURAR **Bucovina Array** 147.78 328 ⇓P PKPbc 10 19 21.4 +0.5
BURAR **Bucovina Array** 147.78 328 ⇓PKP2 PKPbc 10 19 21.4 +0.5
TESR **Tescani** 147.78 325 ⇑P PKPbc 10 19 20.6 -0.2
CFR **Carcaliu** 147.79 322 ⇑P PKPbc 10 19 20.8 0.0
CFR **Carcaliu** 147.79 322 ⇑PKP2 PKPbc 10 19 20.8 0.0
WIM **Isle of Man** 147.81 6 *e*P PKPbc 10 19 20.7 0.0
TPGR **Topolog** 147.82 321 ⇑P PKPbc 10 19 21.3 +0.3
IGLA **Glengowla, Co** 147.88 11 PKPdf PKPbc 10 19 20.0 -0.8
IGLA **Glengowla, Co** 147.88 11 *e*P PKPbc 10 19 20.7 -0.1
PANC **Panciu** 147.92 324 ⇑P PKPbc 10 19 21.4 +0.2
ONER **Baraj Valea Uz** 148.03 325 ⇑P PKPbc 10 19 21.8 +0.3
TIRR **Tirgusor** 148.05 321 ⇑P PKPbc 10 19 21.6 +0.1
TIRR **Tirgusor** 148.05 321 ⇑PKP2 PKPbc 10 19 21.6 +0.1
VRI **Vrincioaia** 148.15 324 ⇑P PKPbc 10 19 20.3 -1.5
VRI **Vrincioaia** 148.15 324 ⇑PKHKP PKPpre 10 19 20.3
OJC **Ojcow** 148.16 336 *e*P PKPbc 10 19 22.1 +0.4
HPK **Haverah Park** 148.20 2 *e*P PKPbc 10 19 21.8 +0.2
MFTR **Murfatlar** 148.20 320 ⇓P PKiKP 10 19 22.9 -0.2
PLOR **Plostina** 148.20 324 ⇑P PKPdf 10 19 18.8 +1.0
PLOR **Plostina** 148.20 324 ⇑PKHKP PKPpre 10 19 18.8
TLBR **Topalu** 148.21 321 ⇑P PKPbc 10 19 21.8 -0.1
EIL **Elat** 148.24 291 PKP PKPdf 10 19 18.5 +0.2
comp=Z,33nm,0.9s,baz=42,slow=2.2,SNR=4.1
EIL PKPbc PKPbc 10 19 22.8 +0.3
comp=Z,33nm,0.9s,baz=3.7,slow=1.8,SNR=15
EIL pPKPbc pPKPbc 10 21 33.2 -0.2
comp=Z,5.1nm,0.9s,baz=225,slow=4.3,SNR=1.8
STHS **Stebnicka Huta** 148.24 334 *e*PKHKP PKPpre 10 19 21.2
STHS **Stebnicka Huta** 148.24 334 *e*PKP PKPbc 10 19 21.2 -0.7
MANR **Mangalia** 148.31 320 ⇓P PKPbc 10 19 22.5 +0.3
SAHE **Sakarya_HENDEK** 148.36 313 ⇓P PKPbc 10 19 22.0 -0.5
TURR **Turia** 148.41 325 ⇑P PKPbc 10 19 22.8 +0.4
COVR **Voineasa-Covas** 148.45 325 ⇑P PKPbc 10 19 22.4 -0.1
OZUR 148.51 325 ⇑P PKPbc 10 19 22.9 +0.2
DSB **Dublin** 148.51 8 PKPdf PKPbc 10 19 21.2 -1.2
DSB **Dublin** 148.51 8 PKPbc 10 19 21.6 -0.7
ARCR **ARCALIA** 148.57 328 ⇑P PKPbc 10 19 23.1 +0.3

BOSR	**Bodos**	**148.59 325**	⇓P	**PKiKP**	**10 19 23.6**	**-0.3**
WME	**Myndd Eilian**	**148.59 6**	*e*P	**PKPbc**	**10 19 22.4**	**-0.1**
ICOR	**Ion Corvin**	**148.60 321**	⇓P	**PKiKP**	**10 19 23.6**	**-0.4**
NIE	**Niedzica**	**148.61 335**	*e*P	**PKiKP**	**10 19 24.0**	**+0.1**
WLF1	**Llynfaes**	**148.69 6**	*e*P	**PKPbc**	**10 19 22.7**	**-0.1**
ISR	**Istrita**	**148.72 323**	⇑P	**PKPbc**	**10 19 23.4**	**+0.2**
ISR	**Istrita**	**148.72 323**	⇑PKHKP	PKPpre	10 19 23.4	
LMK	**Market Rasen**	**148.74 1**	*e*P	**PKPbc**	**10 19 22.8**	**-0.2**
LBWR	**Ladybower, Pea**	**148.75 3**	*e*P	**PKPbc**	**10 19 23.0**	**0.0**
DOPR	**Dopca**	**148.80 326**	⇑P	**PKiKP**	**10 19 24.0**	**-0.3**
MLR	**Muntele Rosu**	**148.81 324**	PKP	**PKPdf**	**10 19 19.3**	**+0.4**
	comp=Z,18nm,0.4s,baz=26,slow=5.8,SNR=4.5					
MLR			PKPbc	**PKPbc**	**10 19 23.4**	**-0.2**
	comp=Z,18nm,0.4s,baz=28,slow=2.8,SNR=24					
MLR	**Muntele Rosu**	**148.81 324**	⇑P	**PKPdf**	**10 19 18.0**	**-0.9**
MLR	**Muntele Rosu**	**148.81 324**	⇑PKiKP	**PKPdf**	**10 19 18.0**	**-0.9**
KSP	**Ksiaz**	**148.82 341**	*e*P	**PKiKP**	**10 19 24.0**	**-0.3**
OKC	**Ostrava-Krasne**	**149.07 338**	*e*PKHKP	PKPpre	10 19 24.5	
OKC	**Ostrava-Krasne**	**149.07 338**	⇑*e*PKP	**PKiKP**	**10 19 24.5**	**-0.3**
OSTC	**Ostas**	**149.10 340**	*e*PKP2	**PKiKP**	**10 19 24.8**	**0.0**
OSTC	**Ostas**	**149.10 340**	⇑*e*PKP	**PKiKP**	**10 19 24.8**	**0.0**
VAL	**Valentia**	**149.12 13**	PKPdf	**PKPbc**	**10 19 23.7**	**-0.2**
CHVC	**Chvalec**	**149.12 341**	*e*PKHKP	PKPpre	10 19 24.7	
CHVC	**Chvalec**	**149.12 341**	⇑*e*PKP	**PKiKP**	**10 19 24.7**	**-0.2**
STEB	**Steborice**	**149.12 338**	⇑*e*PKP	**PKPbc**	**10 19 24.4**	**+0.4**
LANS	**Liptovska Anna**	**149.15 335**	*e*PKP2	**PKiKP**	**10 19 25.6**	**+0.5**
LANS	**Liptovska Anna**	**149.15 335**	*e*PKP	**PKiKP**	**10 19 25.5**	**+0.5**
FOEL	**Foel Wylfa**	**149.18 4**	*e*P	**PKPbc**	**10 19 24.2**	**+0.2**
CBBR	**Cluj-Babes-Bol**	**149.18 328**	⇓P	**PKiKP**	**10 19 24.9**	**-0.1**
MESR	**Meseseni**	**149.20 329**	⇑P	**PKPbc**	**10 19 24.6**	**+0.4**
CJR	**Cluj-Napoca**	**149.20 328**	⇓P	**PKPbc**	**10 19 24.8**	**+0.4**
CJR	**Cluj-Napoca**	**149.20 328**	⇓PKHKP	PKPpre	10 19 24.8	
MDB	**Medias**	**149.21 327**	⇑P	**PKiKP**	**10 19 24.8**	**-0.4**
MDB	**Medias**	**149.21 327**	⇑PKHKP	PKPpre	10 19 24.8	
UPC	**Upice**	**149.21 341**	*e*PKHKP	PKPpre	10 19 25.0	
UPC	**Upice**	**149.21 341**	⇑*e*PKP	**PKiKP**	**10 19 25.0**	**0.0**
DPC	**Dobruska-Polom**	**149.25 340**	*e*PKP2	**PKiKP**	**10 19 25.3**	**+0.1**
DPC	**Dobruska-Polom**	**149.25 340**	⇑*e*PKP	**PKiKP**	**10 19 25.3**	**+0.1**
CLL	**Collm**	**149.32 345**	⇑*e*PKIKP	**PKPdf**	**10 19 19.0**	**-0.3**
CLL			*i*		10 19 31.8	
CLL			pmax	pmax		
	comp=Z,203nm,1.1s					
CLL			pmax	pmax		
	comp=Z,68nm,1.0s					
VOIR		**149.33 325**	⇑P	**PKPbc**	**10 19 23.6**	**-1.2**
VOIR		**149.33 325**	⇑PKHKP	PKPpre	10 19 23.6	
KRLC	**Kraliky**	**149.34 339**	*e*PKHKP	PKPpre	10 19 25.2	
KRLC	**Kraliky**	**149.34 339**	⇑*e*PKP	**PKiKP**	**10 19 25.2**	**-0.2**
MORC	**Moravsky Berou**	**149.34 338**	⇑P	**PKPbc**	**10 19 24.5**	**-0.1**
MORC	**Moravsky Berou**	**149.34 338**	*e*PKP	**PKPbc**	**10 19 24.8**	**+0.2**
MORC			*e*		10 21 41.6	
MORC	**Moravsky Berou**	**149.34 338**	⇑PKHKP	PKPpre	10 19 24.5	
CWF	**Charnwood Fore**	**149.43 2**	*e*P	**PKPbc**	**10 19 24.5**	**-0.1**
MARR	**Marisel-Cluj**	**149.46 329**	⇑P	**PKiKP**	**10 19 29.0**	**+3.2**
WACR	**West Acre**	**149.48 360**	*e*P	**PKPbc**	**10 19 24.6**	**-0.1**
DRGR		**149.57 329**	⇑P	**PKPbc**	**10 19 25.0**	**-0.3**
DRGR		**149.57 329**	⇑PKHKP	PKPpre	10 19 25.0	
HLM1	**Long Mynd**	**149.57 4**	*e*P	**PKPbc**	**10 19 25.0**	**0.0**
MAUC	**Maruska**	**149.58 337**	⇑*e*PKP	**PKiKP**	**10 19 26.2**	**+0.3**
TNR	**Turnu Rosu**	**149.59 326**	⇑P	**PKPbc**	**10 19 25.5**	**+0.2**
TNR	**Turnu Rosu**	**149.59 326**	⇑PKHKP	PKPpre	10 19 25.5	
ARR	**Arges**	**149.59 325**	⇓P	**PKiKP**	**10 19 26.6**	**+0.6**
PVCC	**Panska Ves**	**149.62 342**	*e*PKHKP	PKPpre	10 19 25.9	
PVCC	**Panska Ves**	**149.62 342**	⇑*e*PKP	**PKiKP**	**10 19 25.9**	**0.0**
RAZG	**Razgrad**	**149.69 321**	⇑P	**PKPbc**	**10 19 24.9**	**-0.7**
RICC	**Richard**	**149.73 343**	⇑*e*PKP	**PKiKP**	**10 19 26.1**	**0.0**
HSKC	**Hora Svate Kat**	**149.85 344**	⇑*e*PKP	**PKiKP**	**10 19 26.2**	**-0.2**
HUMR	**Humele**	**149.96 324**	⇓P	**PKPbc**	**10 19 25.6**	**-0.6**
LOT	**Lotru**	**149.99 326**	⇑P	**PKPbc**	**10 19 25.7**	**-0.6**
VRAC	**Vranov**	**150.06 339**	PKPbc	**PKiKP**	**10 19 26.8**	**-0.1**
	comp=Z,18nm,0.6s,baz=63,slow=1.8,SNR=21					
VRAC			PKPab	**PKPab**	**10 19 35.0**	**+0.3**
	comp=Z,6.2nm,0.4s,baz=41,slow=6.3,SNR=6.4					
VRAC	**Vranov**	**150.06 339**	⇑P	**PKPbc**	**10 19 26.4**	**+0.1**
VRAC	**Vranov**	**150.06 339**	*e*PKP	**PKiKP**	**10 19 26.7**	**-0.1**
VRAC			*e*		10 21 44.0	
JAVC	**Velka Javorina**	**150.06 337**	*e*PKP	**PKiKP**	**10 19 27.8**	**+0.9**
JAVC			*e*		10 21 44.5	
PRA	**Prague**	**150.06 342**	*e*PKHKP	PKPpre	10 19 26.9	
PRA	**Prague**	**150.06 342**	⇑*e*PKP	**PKiKP**	**10 19 26.9**	**+0.1**
MCH1	**Michaelchurch**	**150.08 4**	*e*P	**PKPbc**	**10 19 25.9**	**-0.3**
PRU	**Pruhonice**	**150.11 342**	*e*PKHKP	PKPpre	10 19 26.8	
PRU			*e*		10 19 35.8	
PRU	**Pruhonice**	**150.11 342**	⇑*e*PKP	**PKiKP**	**10 19 26.8**	**-0.1**
PRU			*e*PKPAB	**PKPab**	**10 19 35.8**	**+1.0**
DEV	**Deva**	**150.13 328**	⇑P	**PKPbc**	**10 19 26.5**	**0.0**
DEV	**Deva**	**150.13 328**	⇑PKHKP	PKPpre	10 19 26.5	
PHSR	**Pinarhisar**	**150.16 317**	⇑P	**PKPbc**	**10 19 26.3**	**-0.5**
MONM	**Monmouth**	**150.25 4**	*e*P	**PKPbc**	**10 19 26.5**	**-0.1**
KRUC	**Moravsky**	**150.34 339**	*e*PKP	**PKPbc**	**10 19 27.1**	**+0.2**
KRUC			*e*		10 21 44.7	
TREC	**Trest**	**150.43 340**	*e*PKIKP	**PKiKP**	**10 19 27.6**	**0.0**
TREC	**Trest**	**150.43 340**	⇑*e*PKP	**PKiKP**	**10 19 27.6**	**0.0**
ELND	**Elena**	**150.44 320**	⇓P	**PKPbc**	**10 19 27.3**	**0.0**
BAND	**Balkesir-Ban**	**150.44 314**	⇑P	**PKPbc**	**10 19 26.8**	**-0.6**
SMOL	**Smolenice**	**150.44 337**	*e*PKIKP	**PKiKP**	**10 19 28.7**	**+1.1**
SIRR	**Siria**	**150.45 330**	⇑P	**PKiKP**	**10 19 27.7**	**-0.1**
GZR	**Gura Zlata**	**150.53 327**	⇑P	**PKPbc**	**10 19 27.3**	**-0.3**
GZR	**Gura Zlata**	**150.53 327**	⇑PKIKP	**PKPbc**	**10 19 27.3**	**-0.3**
SURR	**Surduc**	**150.60 328**	⇓P	**PKPbc**	**10 19 27.7**	**+0.1**
MODS	**Modra-Piesok**	**150.61 337**	*e*PKIKP	**PKiKP**	**10 19 28.2**	**+0.2**
MODS			pmax	pmax		
	comp=N,58nm,0.3s					
MODS	**Modra-Piesok**	**150.61 337**	*e*PKP	**PKiKP**	**10 19 28.2**	**+0.2**
VLAD	**Vladila**	**150.61 323**	⇑P	**PKPbc**	**10 19 26.7**	**-0.9**
WOL	**Wolverton**	**150.86 2**	*e*P	**PKPbc**	**10 19 27.9**	**-0.1**
PLEV	**Pleven**	**150.88 322**	⇑P	**PKPbc**	**10 19 28.8**	**+0.1**
BZS	**Buzias**	**150.95 329**	⇓P	**PKPbc**	**10 19 27.8**	**-0.6**
BZS	**Buzias**	**150.95 329**	⇓PKIKP	**PKPbc**	**10 19 27.8**	**-0.6**
HERR	**Herculane**	**151.07 327**	⇓P	**PKPbc**	**10 19 28.3**	**-0.4**
BEBN	**Eben Emael**	**151.13 353**	*d*PKP	**PKiKP**	**10 19 28.9**	**0.0**
KHC	**Kasperske Hory**	**151.15 342**	*c i*PKIKP	**PKPdf**	**10 19 23.0**	**+0.7**
KHC			pmax	pmax		
	comp=Z,15nm,2.5s					
KHC	**Kasperske Hory**	**151.15 342**	*e*PKPDF	**PKPdf**	**10 19 22.5**	**+0.2**
KHC			⇑*e*PKP	**PKiKP**	**10 19 29.2**	**+0.1**
KHC			*e*PKPAB	**PKPab**	**10 19 39.9**	**+0.6**
KHC			*ep*PKP	**pPKPbc**	**10 21 42.0**	**+1.2**
CKRC	**Cesky Krumlov**	**151.22 341**	*e*PKIKP	**PKPdf**	**10 19 23.5**	**+1.1**
CKRC			*e*		10 19 40.5	
CKRC	**Cesky Krumlov**	**151.22 341**	*e*PKPDF	**PKPdf**	**10 19 23.5**	**+1.1**
CKRC			⇑*e*PKP	**PKiKP**	**10 19 29.5**	**+0.2**
CKRC			*e*PKPAB	**PKPab**	**10 19 40.5**	**+0.9**
CKRC			*ep*PKP	**pPKPab**	**10 21 43.4**	**-2.5**
UCC	**Uccle**	**151.25 355**	*d*PKPbc	**PKPbc**	**10 19 29.0**	**+0.1**
MEM	**Membach**	**151.28 353**	*d*PKPbc	**PKiKP**	**10 19 29.2**	**-0.1**
MEM			*d*PKPab	**PKPab**	**10 19 39.5**	**-0.2**
BTNL	**Ternell**	**151.28 353**	*d*PKPdf	**PKPdf**	**10 19 22.4**	**0.0**
BTNL			*d*PKPbc	**PKPbc**	**10 19 29.1**	**+0.1**
BTNL			*d*PKPab	**PKPab**	**10 19 39.6**	**-0.2**
SBD	**Saint Breward**	**151.35 7**	*e*P	**PKPbc**	**10 19 29.0**	**-0.1**
BSTI	**Sart Tilman**	**151.35 353**	*d*PKP	**PKiKP**	**10 19 29.7**	**+0.3**
GERES	**GERESS Array B**	**151.38 342**	PKP	**PKPdf**	**10 19 22.8**	**0.0**
	comp=Z,0.5nm,0.4s,baz=338,slow=1.4,SNR=6.4					
GERES			PKPbc	**PKiKP**	**10 19 29.6**	**-0.1**
	comp=Z,11nm,0.4s,baz=24,slow=2.2,SNR=38					
GERES			PKPab	**PKPab**	**10 19 40.8**	**+0.5**
	comp=Z,3.7nm,0.5s,baz=20,slow=5.3,SNR=6.8					
GERES			pPKPbc	**pPKPbc**	**10 21 41.4**	**0.0**
	comp=Z,3.4nm,1.0s,baz=64,slow=3.1,SNR=3.2					
CONA	**Conrad Observa**	**151.49 338**	*i* PKP	**PKiKP**	**10 19 29.8**	**-0.1**
	comp=Z,56nm,1.1s,SNR=13					
CONA			*ep*PKP	**pPKPab**	**10 21 48.1**	**+1.1**
	comp=Z,17nm,1.2s					
MDVR	**Moldovita**	**151.50 327**	⇑P	**PKPbc**	**10 19 28.5**	**-1.3**
RONA	**Rosalia, Austr**	**151.54 337**	*i* PKP	**PKiKP**	**10 19 29.9**	**-0.1**
	comp=Z,38nm,0.5s,SNR=12					
RONA			*ep*PKP	**pPKPab**	**10 21 48.1**	**+0.9**
	comp=Z,22nm,1.4s					
BCLA	**Clavier**	**151.54 354**	*d*PKPbc	**PKPbc**	**10 19 29.6**	**0.0**
BCLA			*d*PKP	**PKPab**	**10 19 40.9**	**+0.1**
BGES	**Gesves**	**151.60 354**	*d*PKPbc	**PKPbc**	**10 19 29.6**	**-0.1**
BGES			*d*PKPab	**PKPab**	**10 19 41.1**	**0.0**
BMRD	**Maredsous**	**151.71 354**	*d*PKPbc	**PKiKP**	**10 19 30.1**	**-0.1**
BMRD			*d*PKPab	**PKPab**	**10 19 42.0**	**+0.5**
RCHB	**Rochefort**	**151.81 354**	*d*PKPbc	**PKPbc**	**10 19 30.2**	**0.0**
RCHB			*d*PKPab	**PKPab**	**10 19 41.3**	**-0.6**
MORH	**Mrgy, Hungar**	**151.84 333**	⇑P	**PKPbc**	**10 19 29.7**	**-0.7**
EZN	**Ezine**	**151.88 315**	⇑P	**PKPbc**	**10 19 30.2**	**-0.4**
EZN	**Ezine**	**151.88 315**	⇑PKIKP	**PKPbc**	**10 19 30.2**	**-0.4**
DOU	**Dourbes**	**151.93 354**	*d*PKPbc	**PKPbc**	**10 19 30.4**	**-0.1**
DOU			*d*PKPab	**PKPab**	**10 19 42.1**	**-0.4**
MOA	**Molln**	**152.09 340**	*e*PKP	**PKPbc**	**10 19 30.8**	**-0.2**
	comp=Z,6.7nm,0.5s					
MOA			*e*PKP	**PKPab**	**10 19 44.3**	**+1.0**
	comp=Z,21nm,1.3s					
MOA			*ep*PKP	**pPKPab**	**10 21 48.7**	**-0.7**
	comp=Z,0.1nm,0.2s					
WLF	**Walferdange**	**152.19 352**	*d*PKP	**PKiKP**	**10 19 31.6**	**+0.4**
ARSA	**Arzberg**	**152.19 338**	*e*PKP	**PKPbc**	**10 19 30.8**	**-0.3**
	comp=Z,9.9nm,0.9s					
ARSA			*e*PKP	**PKPab**	**10 19 44.6**	**+0.8**
	comp=Z,1.2nm,0.3s					
ARSA			*ep*PKP	**pPKPab**	**10 21 49.6**	**-0.3**
	comp=Z,5.0nm,0.7s					
BOVS	**Bovan**	**152.31 326**	⇓P	**PKPdf**	**10 19 24.0**	**-0.1**
BIOA	**Bad Ischl, Aus**	**152.43 341**	*e*PKP	**PKPbc**	**10 19 31.3**	**-0.3**
	comp=Z,1.2nm,0.3s					
BIOA			*e*PKP	**PKPab**	**10 19 45.3**	**+0.6**
	comp=Z,28nm,0.8s					
BIOA			*ep*PKP	**pPKPab**	**10 21 49.4**	**-1.5**
	comp=Z,0.1nm,0.2s					
SOKA	**Soboth**	**152.86 338**	*e*PKP	**PKPbc**	**10 19 32.1**	**-0.6**
	comp=Z,17nm,0.9s					
SOKA			*e*PKP	**PKPab**	**10 19 46.7**	**+0.1**
	comp=Z,6.6nm,0.8s					
SOKA			*ep*PKP	**pPKPab**	**10 21 50.8**	**-1.9**
	comp=Z,20nm,1.3s					
LESA	**Schwarzleotal**	**152.95 342**	*i* PKP	**PKPbc**	**10 19 32.4**	**-0.5**
	comp=Z,9.1nm,0.4s,SNR=4.2					
LESA			*e*PKP	**PKPab**	**10 19 47.5**	**+0.4**
	comp=Z,3.3nm,0.4s					
LESA			*ep*PKP	**pPKPab**	**10 21 51.5**	**-1.7**
	comp=Z,12nm,1.2s					
LESA	**Schwarzleotal**	**152.95 342**	*e*P	**PKPbc**	**10 19 32.4**	**-0.5**
	comp=Z,9.1nm,0.4s,SNR=4.2					
KBA	**Koelnbreinsper**	**153.06 340**	*e*PKP	**PKPdf**	**10 19 24.7**	**-0.6**
	comp=Z,11nm,1.3s					
KBA			*e*PKP	**PKPbc**	**10 19 32.4**	**-0.9**
	comp=Z,3.4nm,0.5s					
OBKA	**Obir**	**153.17 338**	*e*PKP	**PKPdf**	**10 19 24.8**	**-0.6**
	comp=Z,9.4nm,1.1s					
OBKA			*e*PKP	**PKPbc**	**10 19 32.6**	**-0.8**
	comp=Z,7.4nm,0.9s					
OBKA			*e*PKP	**PKPab**	**10 19 48.1**	**0.0**
	comp=Z,8.8nm,0.9s					
OBKA			*ep*PKP	**pPKPab**	**10 21 50.9**	**-3.2**
	comp=Z,2.2nm,0.6s					
WATA	**Walderalm**	**153.34 343**	*e*PKP	**PKPbc**	**10 19 33.1**	**-0.7**
	comp=Z,5.2nm,0.3s					
WATA			*e*PKP	**PKPab**	**10 19 49.2**	**+0.4**
	comp=Z,2.2nm,0.4s					
WATA			*ep*PKP	**pPKPab**	**10 21 51.6**	**-3.3**
	comp=Z,27nm,1.2s					
MYKA	**Terra Mystica**	**153.37 340**	*i* PKP	**PKPbc**	**10 19 33.0**	**-0.8**
	comp=Z,4.2nm,0.4s,SNR=6.0					
MYKA			*e*PKP	**PKPab**	**10 19 48.7**	**-0.2**
	comp=Z,6.8nm,0.6s					
MYKA			*ep*PKP	**pPKPab**	**10 21 52.2**	**-2.6**
	comp=Z,8.4nm,1.1s					
MYKA	**Terra Mystica**	**153.37 340**	*e*P	**PKPbc**	**10 19 33.0**	**-0.8**
	comp=Z,4.2nm,0.4s,SNR=6.0					
WTTA	**Wattenberg**	**153.39 343**	*e*PKP	**PKPbc**	**10 19 33.7**	**-0.3**
	comp=Z,16nm,0.4s					
WTTA			*e*PKP	**PKPab**	**10 19 49.3**	**+0.2**
	comp=Z,13nm,0.5s					
WTTA			*ep*PKP	**pPKPab**	**10 21 53.1**	**-2.1**
	comp=Z,35nm,1.4s					
RETA	**Reutte**	**153.41 344**	*e*PKP	**PKPbc**	**10 19 33.5**	**-0.4**
	comp=Z,2.7nm,0.4s					
RETA			*e*PKP	**PKPab**	**10 19 49.1**	**+0.1**
	comp=Z,11nm,0.6s					
RETA			*ep*PKP	**pPKPab**	**10 21 52.7**	**-2.4**
	comp=Z,16nm,1.4s					
MOTA	**Moosalm**	**153.46 344**	*e*PKP	**PKPdf**	**10 19 25.2**	**-0.7**
	comp=Z,8.0nm,0.9s					
MOTA			*e*PKP	**PKPbc**	**10 19 33.6**	**-0.5**
	comp=Z,8.4nm,0.6s					
MOTA			*i* PKP	**PKPab**	**10 19 49.0**	**-0.3**
	comp=Z,2.5nm,0.5s,SNR=5.1					
MOTA			*ep*PKP	**pPKPab**	**10 21 52.2**	**-3.1**
	comp=Z,30nm,1.3s					
MOTA	**Moosalm**	**153.46 344**	*e*P	**PKPab**	**10 19 49.0**	**-0.3**
	comp=Z,2.5nm,0.5s,SNR=5.1					
SQTA	**Sankt Quirin**	**153.55 344**	*e*PKP	**PKPdf**	**10 19 25.1**	**-0.8**
	comp=Z,11nm,1.1s					
SQTA			*e*PKP	**PKPbc**	**10 19 33.8**	**-0.4**
	comp=Z,11nm,0.6s					
SQTA			*e*PKP	**PKPab**	**10 19 49.9**	**+0.3**
	comp=Z,0.9nm,0.3s					
SQTA			*ep*PKP	**pPKPab**	**10 21 51.7**	**-4.0**
	comp=Z,8.7nm,0.8s					
LJU	**Ljubljana**	**153.58 338**	*e*PKPdf	**PKPdf**	**10 19 25.5**	**-0.3**
LJU			*e*PKPbc	**PKPbc**	**10 19 34.1**	**-0.1**
LJU			*ep*PKPbc	**pPKPbc**	**10 21 46.9**	**+0.8**
LJU			*ep*PKPab	**pPKPab**	**10 21 53.5**	**-2.1**
ABTA	**Abfaltersbach**	**153.61 341**	*i* PKP	**PKPdf**	**10 19 25.2**	**-0.8**
	comp=Z,25nm,1.1s,SNR=8.4					
ABTA			*e*PKP	**PKPbc**	**10 19 33.5**	**-0.8**
	comp=Z,15nm,0.6s					
ABTA			*e*PKP	**PKPab**	**10 19 49.8**	**-0.1**
	comp=Z,17nm,0.6s					
ABTA			*ep*PKP	**pPKPab**	**10 21 52.4**	**-3.5**
	comp=Z,23nm,1.1s					
BOJS	**Bojanci**	**153.78 336**	*e*PKPdf	**PKPdf**	**10 19 25.6**	**-0.5**
BOJS			*e*PKPbc	**PKiKP**	**10 19 34.7**	**+0.1**
BOJS			*e*PKPab	**PKPab**	**10 19 50.4**	**-0.1**
DAVA	**Damuels**	**153.81 345**	*e*PKP	**PKPdf**	**10 19 25.8**	**-0.6**
	comp=Z,18nm,1.1s					
DAVA			*e*PKP	**PKPbc**	**10 19 34.4**	**-0.4**
	comp=Z,10.0nm,0.7s					
DAVA			*e*PKP	**PKPab**	**10 19 50.9**	**+0.1**
	comp=Z,16nm,0.6s					
DAVA			*ep*PKP	**pPKPab**	**10 21 53.4**	**-3.5**
	comp=Z,21nm,1.2s					
FETA	**Feichten**	**153.86 344**	*e*PKP	**PKPdf**	**10 19 26.0**	**-0.5**
	comp=Z,28nm,1.0s,SNR=6.2					
FETA			*e*PKP	**PKPab**	**10 19 51.3**	**+0.3**
	comp=Z,23nm,1.4s					
FETA			*ep*PKP	**pPKPab**	**10 21 53.9**	**-3.2**
	comp=Z,22nm,1.4s					
CEY	**Cerknica**	**153.88 338**	*e*PKPdf	**PKPdf**	**10 19 25.6**	**-0.7**
CEY			*e*PKPbc	**PKPbc**	**10 19 34.6**	**-0.3**
CEY			*e*PKPab	**PKPab**	**10 19 50.8**	**-0.2**
CEY			*ep*PKPab	**pPKPab**	**10 21 54.1**	**-2.9**
CEY			*e*		10 22 03.2	
DAVOX	**Davos/Dischmat**	**154.29 345**	PKP	**PKPdf**	**10 19 26.8**	**-0.3**
	comp=Z,10.0nm,0.8s,baz=357,slow=1.0,SNR=10					
DAVOX			PKPbc	**PKPbc**	**10 19 36.0**	**+0.1**
	comp=Z,5.1nm,0.4s,baz=145,slow=23,SNR=5.2					
DAVOX			PKPab	**PKPab**	**10 19 53.3**	**+0.4**
	comp=Z,21nm,0.8s,baz=331,slow=2.8,SNR=9.6					
DAVOX			pPKPbc	**pPKPbc**	**10 21 47.7**	**-0.7**
	comp=Z,2.1nm,0.3s,baz=144,slow=21,SNR=3.0					
FUORN	**Ofenpass-Fuorn**	**154.35 344**		**PKPdf**	**10 19 27.8**	**+0.5**
FUORN				**PKiKP**	**10 19 35.8**	**-0.3**
IDI	**Anoyia**	**155.03 307**	PKP	**PKPdf**	**10 19 28.1**	**-0.2**
	comp=Z,16nm,1.0s,baz=322,slow=0.7,SNR=4.4					
IDI			PKPbc	PKPab	10 19 38.3	-18
	comp=Z,4.0nm,0.3s,baz=109,slow=4.9,SNR=8.9					
PBRG	**Braganca**	**159.47 16**	*e*PKPab	**PKPab**	**10 20 15.8**	**+0.5**
POLO	**Lamas de Olo**	**159.59 18**	*e*PKPdf	**PKPdf**	**10 19 34.0**	**+0.2**
POLO			*e*PKPab	**PKPab**	**10 20 16.2**	**+0.2**
MVO	**Moncorvo**	**160.00 17**	*e*PKPdf	**PKPdf**	**10 19 35.2**	**+1.0**
MVO			*e*PKPab	**PKPab**	**10 20 18.2**	**+0.5**
PCAS	**Casmilo, Conde**	**160.57 21**	*e*PKPab	**PKPab**	**10 20 20.4**	**+0.3**
PSBE	**So Bento**	**160.95 23**	*e*PKPab	**PKPab**	**10 20 22.4**	**+0.5**
PSARD	**Sardoal**	**161.09 21**	*e*PKPdf	**PKPdf**	**10 19 36.2**	**+0.9**
PSARD			*e*PKPab	**PKPab**	**10 20 22.7**	**+0.2**
PCBR	**Castelo Branco**	**161.09 19**	*e*PKPdf	**PKPdf**	**10 19 36.2**	**+0.9**
PMAFR	**Mafra**	**161.26 24**	*e*PKPdf	**PKPdf**	**10 19 36.8**	**+1.3**
PMAFR			*e*PKPab	**PKPab**	**10 20 24.0**	**+0.7**
PMRV	**Marv??o**	**161.50 20**	*e*PKPdf	**PKPdf**	**10 19 36.4**	**+0.6**
PMRV			*e*PKPab	**PKPab**	**10 20 24.2**	**0.0**
PMTG	**Montargil**	**161.55 22**	*e*PKPab	**PKPab**	**10 20 24.2**	**-0.2**
PARRA	**Arraiolos**	**161.84 22**	*e*PKPab	**PKPab**	**10 20 25.7**	**+1.5**
PESTR	**Estremoz**	**161.94 21**	*e*PKPdf	**PKPdf**	**10 19 37.2**	**+0.9**
PESTR			*e*PKPab	**PKPab**	**10 20 26.3**	**0.0**
MOE	**Montemor**	**161.99 23**	*e*PKPdf	**PKPdf**	**10 19 37.2**	**+0.9**
MOE			*e*PKPab	**PKPab**	**10 20 26.4**	**0.0**
ESDC	**Sonseca Array**	**162.12 11**	PKP	**PKPdf**	**10 19 36.9**	**+0.5**
	comp=Z,3.0nm,1.2s,baz=20,slow=4.7,SNR=7.2					
ESDC			PKPab	**PKPab**	**10 20 27.3**	**+0.3**
	comp=Z,17nm,1.0s,baz=342,slow=4.4,SNR=28					
PBEJ	**Beja**	**162.60 23**	*e*PKPdf	**PKPdf**	**10 19 38.2**	**+1.3**
PBEJ			*e*PKPab	**PKPab**	**10 20 29.8**	**+0.6**
PBAR	**Barrancos**	**162.75 21**	*e*PKPdf	**PKPdf**	**10 19 38.1**	**+1.1**
PBAR			*e*PKPab	**PKPab**	**10 20 30.3**	**+0.5**
PCVE	**Castro Verde**	**162.89 24**	*e*PKPdf	**PKPdf**	**10 19 38.5**	**+1.4**
PCVE			*e*PKPab	**PKPab**	**10 20 31.0**	**+0.6**
MORF	**Marmelete**	**162.94 26**	*e*PKPdf	**PKPdf**	**10 19 37.4**	**+0.1**
MORF	**Marmelete**	**162.94 26**	*e*PKPdf	**PKPdf**	**10 19 38.7**	**+1.4**
MORF			*e*PKPab	**PKPab**	**10 20 31.4**	**+0.7**
PFVI	**Vila Bisbo**	**163.01 26**	*e*PKPdf	**PKPdf**	**10 19 38.9**	**+1.6**
PVAQ	**Vaqueiros**	**163.21 23**		**PKPab**	**10 20 32.5**	**+0.7**
PVAQ	**Vaqueiros**	**163.21 23**	*e*PKPab	**PKPab**	**10 20 32.4**	**+0.6**
PBDV	**Barranco-do-Ve**	**163.27 24**	*e*PKPdf	**PKPdf**	**10 19 39.2**	**+1.6**
PBDV			*e*PKPab	**PKPab**	**10 20 33.3**	**+1.2**
DBIC	**Dimbokro**	**163.75 161**	PKP	**PKPdf**	**10 19 38.2**	**-0.5**
	comp=Z,12nm,0.6s,baz=212,slow=1.0,SNR=12					
DBIC			PKPab	**PKPab**	**10 20 35.7**	**+1.1**
	comp=Z,21nm,0.9s,baz=240,slow=5.4,SNR=9.3					
KEST	**Kesra**	**164.44 332**	PKPab	**PKPab**	**10 20 38.0**	**+0.6**
	comp=Z,9.5nm,0.9s,baz=29,slow=3.4,SNR=4.5					
MDT	**Midelt**	**168.44 22**	PKP	**PKPdf**	**10 19 42.0**	**+0.1**
	comp=Z,12nm,1.0s,baz=331,slow=0.5,SNR=11					
MDT			PKPab	**PKPab**	**10 20 55.2**	**+0.1**
	comp=Z,19nm,1.0s,baz=359,slow=4.3,SNR=15					
TORD	**Torodi Ar. Bea**	**170.98 187**	PKP	**PKPdf**	**10 19 42.8**	**-0.9**
	comp=Z,11nm,1.0s,baz=29,slow=1.9,SNR=39					
TORD			PKPab	**PKPab**	**10 21 07.0**	**+0.5**

NEIC ***27*** *10:07:13.4±1.2, 14°.23N±0°.06×93°.05E±0°.09, h10km±1km, mb4.5/12, Error ellipse: s-maj=15.6km

	comp=Z,4.7nm,0.9s							
WR8	**Warramunga Arr**	**53.13**	**129**	P	**P**	**10 16 27.2**	**-3.5**
WR8				IAmb	IAmb	10 16 27.9		
	comp=Z,6.6nm,1.1s							
ASAR	**Alice Springs**	**54.97**	**133**	P	**P**	**10 16 42.6**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=308,slow=7.1,SNR=10							
ASAR				pP	**pP**	**10 16 51.5**	**-3.0**
	comp=Z,1.1nm,0.4s,baz=309,slow=7.2,SNR=5.0							
ASAR				PcP	**PcP**	**10 17 45.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=311,slow=3.4,SNR=5.2							
	comp=Z,1.5nm,0.6s							
BR131	**Keskin Array S**	**57.52**	**308**		**P**	**10 17 03.1**	**+1.0**
BR131				IAmb	IAmb	10 17 03.6		
	comp=Z,4.7nm,0.8s							
BRTR	**Keskin Array B**	**57.52**	**308**	P	**P**	**10 17 02.8**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=120,slow=7.7,SNR=15							
BRTR				pP	**pP**	**10 17 11.8**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=112,slow=7.0,SNR=11							
	comp=Z,3.0nm,0.8s							
BRTR	**Keskin Array B**	**57.52**	**308**	P	**P**	**10 17 02.5**	**+0.4**
AKASG	**Malin Array Be**	**62.50**	**320**	P	**P**	**10 17 36.0**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=91,slow=4.4,SNR=5.0							
	comp=Z,0.3nm,0.4s							
STKA	**Stephens Creek**	**65.38**	**135**	P	**P**	**10 17 53.9**	**-1.2**
	comp=Z,2.5nm,0.8s,baz=321,slow=13,SNR=3.6							
	comp=Z,2.5nm,0.8s							
FINES	**FINESS Array B**	**66.56**	**331**	P	**P**	**10 18 03.1**	**+0.9**
	comp=Z,3.7nm,0.7s,baz=116,slow=6.6,SNR=13							
FINES				pP	**pP**	**10 18 12.0**	**-0.5**
	comp=Z,6.4nm,0.8s,baz=90,slow=5.3,SNR=6.4							
	comp=Z,3.7nm,0.7s							
ARCES	**ARCESS Array B**	**68.88**	**340**	P	**P**	**10 18 18.0**	**+1.3**
	comp=Z,3.6nm,0.8s,baz=65,slow=3.7,SNR=9.3							
ARCES				pP	**pP**	**10 18 27.8**	**+0.7**
	comp=Z,4.8nm,0.9s,baz=85,slow=6.5,SNR=2.3							
	comp=Z,3.6nm,0.8s							
ARCES	**ARCESS Array B**	**68.88**	**340**	P	**P**	**10 18 18.1**	**+1.4**
H04N2	**CROZET ISLANDS**	**70.74**	**209**	T	T	11 35 40.0		
	baz=43,slow=75,SNR=7.3							
H04N1	**CROZET ISLANDS**	**70.75**	**209**	T	T	11 35 41.6		
	baz=43,slow=75,SNR=4.8							
H04N3	**CROZET ISLANDS**	**70.76**	**209**	T	T	11 35 39.5		
	baz=43,slow=75,SNR=5.5							
GERES	**GERESS Array B**	**72.36**	**317**	P	**P**	**10 18 39.7**	**+1.2**
	comp=Z,1.4nm,0.6s,baz=67,slow=7.8,SNR=7.0							
GERES				pP	**pP**	**10 18 48.8**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=75,slow=5.8,SNR=7.5							
	comp=Z,1.4nm,0.6s							
HFS	**Hagfors**	**72.39**	**329**	P	**P**	**10 18 39.1**	**+0.8**
	comp=Z,3.7nm,0.7s,baz=106,slow=10.0,SNR=6.4							
HFS				pP	**pP**	**10 18 48.1**	**-0.7**
	comp=Z,6.7nm,0.7s,baz=112,slow=6.9,SNR=6.3							
	comp=Z,3.7nm,0.7s							
CAN	**Canberra**	**72.41**	**135**	P	**P**	**10 18 39.2**	**+0.3**
CAN				IAmb	IAmb	10 18 50.8		
	comp=Z,8.2nm,1.0s							
SPITS	**Spitsbergen Ar**	**73.34**	**348**	P	**P**	**10 18 44.1**	**+0.4**
	comp=Z,5.3nm,0.8s,baz=124,slow=7.3,SNR=1.4							
	comp=Z,5.3nm,0.8s							
NOA	**NORSAR Array B**	**73.63**	**330**	P	**P**	**10 18 46.2**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=90,slow=5.7,SNR=6.5							
	comp=Z,1.4nm,0.6s							
BOSA	**Boshof**	**78.16**	**236**	P	**P**	**10 19 13.3**	**+1.1**
	comp=Z,4.5nm,0.7s,baz=81,slow=4.7,SNR=6.6							
	comp=Z,4.5nm,0.7s							
BOSA	**Boshof**	**78.16**	**236**	P	**P**	**10 19 13.0**	**+0.8**
TORD	**Torodi Ar. Bea**	**88.08**	**283**	P	P	10 20 09.0	+5.4
ILAR	**Eielson Array**	**89.20**	**22**	P	**P**	**10 20 07.7**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=295,slow=4.7,SNR=8.5							
	comp=Z,1.1nm,0.8s							
ILAR	**Eielson Array**	**89.20**	**22**	P	**P**	**10 20 08.1**	**+0.2**
PDAR	**Pinedale Array**	**119.52**	**19**	PKP	**PKiKP**	**10 26 02.6**	**0.0**
	comp=Z,0.4nm,0.6s,baz=26,slow=1.9,SNR=5.2							
NVAR	**Mina Array Bea**	**119.87**	**28**	PKP	**PKPdf**	**10 26 03.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=318,slow=2.0,SNR=4.4							
TXAR	**Lajitas Array**	**133.70**	**20**	PKP	**PKPdf**	**10 26 30.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=28,slow=2.4,SNR=2.9							
CPUP	**Villa Florida**	**149.83**	**242**	PKPbc	**PKPbc**	**10 27 01.6**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=112,slow=19,SNR=2.8							
PLCA	**Paso Flores**	**150.04**	**205**	PKPbc	**PKPbc**	**10 27 02.1**	**-1.2**
	comp=Z,1.8nm,0.9s,baz=213,slow=11,SNR=1.9							

*IDC **27** 10:16:23.4±1.1,5°.76N×124°.38E,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=29.2km s-min=13.7km az=118.0*

ISC 27 10:16:30.8±1.1,5°.8N±0°.1×124°.6E±0°.3,h54km,n6,σ0s61/7, mb3.5/5,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.59**	**37**	Pg	**Pn**	**10 16 57.0**	**+0.4**
	211nm,0.3s,baz=270,slow=20,SNR=11						
DAV				Lg	Lg	10 17 19.1	
	138nm,0.3s,baz=131,slow=21,SNR=14						
WRA	**Warramunga Arr**	**27.31**	**160**	P	**P**	**10 22 10.2**	**-0.3**
	0.4nm,0.5s,baz=335,slow=11,SNR=5.4						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**30.66**	**163**	P	**P**	**10 22 40.9**	**+0.6**
	0.4nm,0.7s,baz=334,slow=6.7,SNR=8.9						
ASAR				PcP	**PcP**	**10 25 37.3**	**-0.3**
	0.1nm,0.6s,baz=344,slow=2.2,SNR=1.6						
	0.4nm,0.7s						
MJAR	**Matsushiro Arr**	**33.04**	**20**	P	**P**	**10 23 00.9**	**-0.2**
	1.7nm,0.7s,baz=196,slow=9.6,SNR=3.9						
	1.7nm,0.7s						
MKAR	**Makanchi Array**	**54.67**	**325**	P	**P**	**10 25 54.7**	**+0.4**
	0.4nm,0.5s,baz=123,slow=7.1,SNR=5.7						
	0.4nm,0.5s						
ILAR	**Eielson Array**	**84.16**	**26**	P	**P**	**10 28 55.1**	**-0.8**
	0.5nm,0.9s,baz=254,slow=5.3,SNR=4.3						
	0.5nm,0.9s						

ROM 27 10:16:33.3±0.1,42°.662N±0°.003×13°.175E±0°.004, h12km,ML1.6/34,1C,Error ellipse: s-maj=0.3km s-min=0.1km az=259.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.12**	**239**	⇑P	Pg	10 16 36.9	+0.4
LNSS				S	Sg	10 16 39.3	+0.5
LNSS				AML	AML		
	comp=E,2040μm,0.3s						
LNSS				AML	AML		
	comp=N,1710μm,0.3s						
LNSS				AML	AML		
	comp=N,1860μm,0.3s						
LNSS				AML	AML		
	comp=E,2220μm,0.3s						
LNSS				AML	AML		
	comp=E,2040μm,0.3s						
LNSS				AML	AML		
	comp=N,1715μm,0.3s						
LNSS				AML	AML		
	comp=E,1825μm,0.1s						
LNSS				AML	AML		
	comp=N,1714μm,0.2s						
LNSS				AML	AML		
	comp=E,1905μm,0.1s						
LNSS				AML	AML		
	comp=N,1859μm,0.3s						
SMA1	**SAN MARTINO**	**0.12**	**105**	P	Pg	10 16 37.1	+0.5
SMA1				S	Sg	10 16 39.6	+0.7
SMA1				AML	AML		
	comp=N,740μm,0.3s						
SMA1				AML	AML		
	comp=E,1390μm,0.2s						
SMA1				AML	AML		
	comp=E,1387μm,0.2s						
SMA1				AML	AML		
	comp=N,740μm,0.3s						
RM33	**Pellescritta (**	**0.16**	**169**	P	Pg	10 16 37.5	+0.5
RM33				S	Sg	10 16 40.4	+0.7
RM33				AML	AML		
	comp=N,312μm,0.9s						
RM33				AML	AML		
	comp=E,230μm,0.5s						
RM33				AML	AML		
	comp=N,287μm,0.9s						
RM33				AML	AML		
	comp=E,246μm,0.9s						
RM33				AML	AML		
	comp=N,288μm,0.9s						
RM33				AML	AML		
	comp=E,231μm,0.5s						
RM33				AML	AML		
	comp=N,312μm,1.1s						
RM33				AML	AML		
	comp=N,288μm,1.1s						
RM33				AML	AML		
	comp=N,215μm,0.1s						
RM33				AML	AML		
	comp=N,225μm,0.1s						
RM33				AML	AML		
	comp=E,193μm,0.1s						
RM33				AML	AML		
	comp=E,199μm,0.1s						
NRCA	**Norcia**	**0.18**	**345**	P	Pg	10 16 37.6	+0.2
NRCA				S	Sg	10 16 40.4	+0.2
NRCA				AML	AML		
	comp=N,483μm,0.1s						
NRCA				AML	AML		
	comp=E,1270μm,0.1s						
NRCA				AML	AML		
	comp=N,483μm,0.1s						
NRCA				AML	AML		
	comp=E,1223μm,0.1s						
NRCA				AML	AML		
	comp=N,397μm,0.1s						
MTRA	**Matera**	**0.19**	**60**	P	Pg	10 16 37.8	+0.3
MTRA				S	Sg	10 16 40.9	+0.4
MTRA				AML	AML		
	comp=E,389μm,0.5s						
MTRA				AML	AML		
	comp=N,335μm,0.4s						
MTRA				AML	AML		
	comp=E,389μm,1.5s						
MTRA				AML	AML		
	comp=E,298μm,0.2s						
MTRA				AML	AML		
	comp=E,288μm,0.2s						
MTRA				AML	AML		
	comp=N,335μm,0.3s						
MTRA				AML	AML		
	comp=N,322μm,0.3s						
GAVE	**Gavelli**	**0.21**	**278**	P	Pg	10 16 38.3	+0.4
GAVE				S	Sg	10 16 41.5	+0.4
GAVE				AML	AML		
	comp=N,204μm,0.2s						
GAVE				AML	AML		
	comp=E,566μm,0.2s						
CAMP	**Campotosto**	**0.21**	**126**	P	Pg	10 16 38.4	+0.4
CAMP				S	Sg	10 16 41.8	+0.6
MC2	**Monte Cornacci**	**0.25**	**3**	P	Pg	10 16 38.9	+0.2
MC2				S	Sg	10 16 43.1	+0.8
MMO1	**Montemonaco**	**0.26**	**25**	P	Pg	10 16 39.1	+0.3
MMO1				S	Sg	10 16 43.2	+0.7
ARRO	**Arrone**	**0.31**	**255**	P	Pg	10 16 40.0	+0.3
ARRO				AML	AML		
	comp=E,104μm,0.7s						
ARRO				AML	AML		
	comp=E,104μm,1.3s						
ARRO				AML	AML		
	comp=N,100μm,0.2s						
ARRO				AML	AML		
	comp=N,100μm,0.2s						
ARRO				AML	AML		
	comp=E,83μm,0.2s						
TERO	**Teramo**	**0.32**	**97**	P	Pg	10 16 40.0	+0.2
TERO				S	Sg	10 16 44.7	+0.5
TERO				AML	AML		
	comp=E,131μm,0.6s						
TERO				AML	AML		
	comp=N,282μm,0.1s						
TERO				AML	AML		
	comp=E,131μm,1.4s						
TERO				AML	AML		
	comp=N,282μm,0.1s						
TERO				AML	AML		
	comp=E,126μm,0.1s						
GIGS	**Gran Sasso**	**0.36**	**126**	P	Pg	10 16 40.7	+0.1
GIGS				S	Sg	10 16 46.1	+0.7
GIGS				AML	AML		
	comp=E,42μm,0.3s						
GIGS				AML	AML		
	comp=N,54μm,0.1s						
GIGS				AML	AML		
	comp=E,30μm,0.1s						
GIGS				AML	AML		
	comp=N,54μm,0.1s						
FDMO	**Fiordimonte**	**0.38**	**350**	P	Pg	10 16 41.3	+0.3
FDMO				S	Sg	10 16 46.9	+0.9
FDMO				AML	AML		
	comp=E,47μm,0.8s						
FDMO				AML	AML		
	comp=N,47μm,0.3s						
FDMO				AML	AML		
	comp=N,47μm,0.3s						
FDMO				AML	AML		
	comp=E,39μm,0.2s						
MF5	**Montefalcone A**	**0.39**	**33**	P	Pb	10 16 41.7	-0.4
MF5				S	Sb	10 16 47.9	-0.2
MF5				AML	AML		
	comp=E,54μm,0.2s						
MF5				AML	AML		
	comp=N,84μm,0.1s						
FIAM	**Fiamignano**	**0.40**	**186**	P	Pg	10 16 41.5	+0.3
FIAM				S	Sb	10 16 47.8	-0.5
FIAM				AML	AML		
	comp=N,31μm,0.2s						
FIAM				AML	AML		
	comp=E,38μm,0.2s						
GUMA	**Gualdo di Mace**	**0.42**	**16**	P	Pb	10 16 42.2	-0.4
GUMA				S	Sb	10 16 49.0	+0.1
CSP1	**Cessapalombo**	**0.43**	**3**	P	Pg	10 16 42.2	+0.3
CSP1				AML	AML		
	comp=N,84μm,0.4s						
CSP1				AML	AML		
	comp=E,48μm,0.2s						
MOMA	**Monte Martano**	**0.47**	**288**	P	Pb	10 16 43.0	-0.5
MOMA				S	Sb	10 16 49.7	-0.7
T0110	**Collepietro**	**0.62**	**134**	P	Pg	10 16 45.4	0.0

VIE 27 10:17:09.7±0.4,47°.82N×14°.41E,h0km,mb0.6/2,ml1.6/2, Error ellipse: s-maj=3.0km s-min=1.9km az=107.0 12 km NNE of Windischgarsten Suspected Mining explosion.,Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOA	**Molln**	**0.10**	**288**	*e*Pg	Pg	10 17 11.6	+0.1
	2.0nm,0.3s						
MOA				*e*Sg	Sg	10 17 12.8	0.0
	8.8nm,0.1s						
BIOA	**Bad Ischl, Aus**	**0.53**	**256**	*e*Pg	Pg	10 17 20.0	+0.2
	0.8nm,0.2s						
BIOA				*e*Sg	Sg	10 17 27.6	+0.8
	6.7nm,0.3s						

STR 27 10:18:10.4±1.0,46°N±5°×±°,h0km,MLv1.9/7,LOCSAT earthModelID alpes_taup-2.11 preliminary,France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OG35	**Corcelles**	**0.29**	**108**	Pg	Pg	10 18 17.1	+1.0
OG35				Sg	Sg	10 18 20.6	+0.7
RIVEL	**MONT RIVEL**	**0.81**	**40**	Pg	Pg	10 18 26.7	+0.7
GIMEL	**St. Georges /**	**0.86**	**62**	Pg	Pn	10 18 29.5	-0.4
PLYF	**Puligny Montra**	**0.87**	**340**	Pn	Pn	10 18 30.1	+0.2
BRANT	**Les Verrieres**	**1.20**	**48**	Pg	Pb	10 18 34.0	-0.1
BRANT				Sg	Sg	10 18 49.3	+0.2
CHMF	**Charmoille**	**1.51**	**42**	Pn	Pn	10 18 38.1	-0.7
CHMF				Pg	Pb	10 18 39.7	+0.4

*IDC **27** 10:19:47.0±0.8,52°.69S×22°.09E,h0km,mb4.3/8, mbtmp4.3/8,MS4.0/18,Error ellipse: s-maj=34.2km s-min=22.9km az=13.0*
*NEIC **27** 10:19:49.8±1.1,52°.97S±0°.03×22°.0E±0°.2,h10km±1km, mb4.6/18,Error ellipse: s-maj=24.3km s-min=5.7km az=273.0*

ISC 27 10:19:49.4±0.5,52°.91S±0°.09×22°.0E±0°.1,h10km,n58, σ1s05/34,mb4.5/18,MS4.0/18,5C,South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H04S2	**CROZET ISLANDS**	**20.12**	**85**	T	T	10 45 11.6	
	baz=240,slow=75,SNR=25						
H04S3	**CROZET ISLANDS**	**20.12**	**84**	T	T	10 45 12.9	
	baz=240,slow=75,SNR=15						
H04S1	**CROZET ISLANDS**	**20.14**	**85**	T	T	10 45 12.5	
	baz=240,slow=75,SNR=20						
SUR	**Sutherland**	**20.54**	**357**	P	**P**	**10 24 28.9**	**+0.8**
SUR				IAmb	IAmb	10 24 32.6	
	comp=Z,44nm,1.4s						
TROLL	**Troll, Antarti**	**20.96**	**197**	⇑P	**P**	**10 24 32.9**	**+0.7**
	comp=Z,2μm,1.2s						
SNAA	**Sanae**	**21.75**	**201**	⇑P	**P**	**10 24 41.5**	**+0.8**
	comp=Z,656nm,1.1s						
SNAA	**Sanae**	**21.75**	**201**	P	**P**	**10 24 41.5**	**+0.8**
	comp=Z,56nm,1.2s,baz=33,slow=10,SNR=35						
SNAA				LR	LR	10 31 21.1	
	comp=Z,544nm,18.6s,baz=40,slow=32						
	comp=Z,56nm,1.2s						
SNAA	**Sanae**	**21.75**	**201**	P	**P**	**10 24 40.2**	**-0.5**
VNA2	**Neumayer--Watz**	**22.32**	**205**	⇑P	**P**	**10 24 47.3**	**+0.5**
	comp=Z,42nm,1.0s,baz=33,slow=11						
VNA1	**Neumayer--Stat**	**22.38**	**206**	⇑P	**P**	**10 24 46.9**	**-0.5**
	comp=Z,53nm,1.3s						
VNA3	**Neumayer Olymp**	**23.11**	**206**	⇑P	**P**	**10 24 55.7**	**+0.7**
	comp=Z,14nm,0.8s						
BOSA	**Boshof**	**24.39**	**7**	LR	LR	10 33 03.5	
	comp=Z,479nm,19.5s,baz=204,slow=33						
BOSA	**Boshof**	**24.39**	**7**	P	**P**	**10 25 07.8**	**-0.1**
MAW	**Mawson**	**24.44**	**143**	P	**P**	**10 25 08.8**	**+1.0**
	comp=Z,3.4nm,0.7s,baz=286,slow=10.0,SNR=2.4						
MAW				LR	LR	10 33 24.1	
	comp=Z,167nm,18.9s,baz=296,slow=33						
	comp=Z,3.4nm,0.7s						
LBTB	**Lobatse**	**27.99**	**7**	LR	LR	10 35 02.8	
	comp=Z,403nm,20.7s,baz=185,slow=33						
LBTB	**Lobatse**	**27.99**	**7**	P	**P**	**10 25 40.1**	**-0.2**
LPHEP	**Lephephe**	**29.65**	**7**	P	**P**	**10 25 55.1**	**0.0**
LPHEP				IAmb	IAmb	10 26 13.1	
	comp=Z,9.8nm,1.2s						
BELA	**Belgrano 2**	**31.98**	**199**	P	**P**	**10 26 12.9**	**-2.2**
BELA				IAmb	IAmb	10 26 16.2	
	comp=Z,16nm,1.1s						
FOMA	**Nahampoana Res**	**33.67**	**44**	P	**P**	**10 26 29.7**	**-0.6**
FOMA				IAmb	IAmb	10 26 48.2	
	comp=Z,18nm,1.3s						
TSUM	**Tsumeb**	**33.81**	**353**	LR	LR	10 38 21.4	
	comp=Z,256nm,19.4s,baz=150,slow=33						
TSUM	**Tsumeb**	**33.81**	**353**	P	**P**	**10 26 32.7**	**+1.0**
TSUM				IAmb	IAmb	10 26 41.6	
	comp=Z,9.5nm,1.2s						
QSPA	**South Pole Qui**	**37.31**	**180**	P	**P**	**10 27 04.4**	**+2.9**
	comp=Z,27nm,1.0s,baz=242,slow=4.4,SNR=38						
QSPA				LR	LR	10 41 13.4	
	comp=Z,291nm,20.2s,baz=215,slow=34						
QSPA	**South Pole Qui**	**37.31**	**180**	P	**P**	**10 27 01.2**	**-0.3**
ABPO	**Ambohimpanom**	**39.11**	**40**	P	**P**	**10 27 18.2**	**+1.2**
PMSA	**Palmer Station**	**42.52**	**219**	LR	LR	10 42 03.5	
	comp=Z,136nm,18.5s,baz=124,slow=31						
VNDA	**Vanda**	**47.47**	**169**	LR	LR	10 47 53.7	
	comp=Z,245nm,19.3s,baz=204,slow=35						
VNDA	**Vanda**	**47.47**	**169**	P	**P**	**10 28 23.8**	**0.0**
VNDA				IAmb	IAmb	10 28 24.6	
	comp=Z,8.8nm,1.3s						
MBAR	**Mbarara**	**52.64**	**11**	LR	LR	10 49 31.4	
	comp=Z,203nm,20.4s,baz=136,slow=34						
H10S2	**ASCENSION HYDR**	**52.88**	**312**	T	T	11 26 44.3	
	baz=152,slow=74,SNR=5.8						
H10S3	**ASCENSION HYDR**	**52.90**	**312**	T	T	11 26 48.6	
	baz=68,slow=74,SNR=8.0						
KMBO	**Kilima Mbogo**	**53.16**	**19**	LR	LR	10 50 51.0	
	comp=Z,181nm,18.3s,baz=100,slow=35						
PLCA	**Paso Flores**	**60.20**	**241**	P	**P**	**10 29 57.6**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=147,slow=5.1,SNR=4.4						
	comp=Z,2.8nm,0.9s						
PLCA	**Paso Flores**	**60.20**	**241**	IAmb	IAmb	10 29 59.4	
	comp=Z,3.8nm,0.9s						
CPUP	**Villa Florida**	**63.13**	**261**	P	**P**	**10 30 16.9**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=180,slow=4.0,SNR=3.4						
	comp=Z,1.1nm,1.0s						
CPUP	**Villa Florida**	**63.13**	**261**	IAmb	IAmb	10 30 17.3	
	comp=Z,4.5nm,1.4s						
DBIC	**Dimbokro**	**63.57**	**330**	LR	LR	10 51 09.2	
	comp=Z,145nm,21.2s,baz=144,slow=30						
MT08	**Bocatoma Ro**	**65.23**	**247**	P	**P**	**10 30 32.8**	**+1.6**
LPAZ	**La Paz**	**77.24**	**260**	P	**P**	**10 31 44.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=148,slow=8.1,SNR=3.7						
	comp=Z,0.5nm,0.3s						
LPAZ	**La Paz**	**77.24**	**260**	IAmb	IAmb	10 31 54.7	
	comp=Z,6.3nm,1.5s						
PALK	**Pallekele**	**77.78**	**60**	LR	LR	10 57 05.6	
	comp=Z,50nm,19.9s,baz=140,slow=29						
STKA	**Stephens Creek**	**80.59**	**131**	P	**P**	**10 32 01.9**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=275,slow=11,SNR=3.7						
	comp=Z,2.9nm,0.9s						
STKA	**Stephens Creek**	**80.59**	**131**	IAmb	IAmb	10 32 02.5	
	comp=Z,24nm,1.2s						
ASAR	**Alice Springs**	**83.68**	**121**	P	**P**	**10 32 17.9**	**-0.5**
	comp=Z,3.3nm,1.1s,baz=219,slow=6.1,SNR=9.6						
ASAR				LR	LR	11 02 45.2	
	comp=Z,50nm,20.0s,baz=254,slow=31						
	comp=Z,3.3nm,1.1s						
ASAR	**Alice Springs**	**83.68**	**121**	P	**P**	**10 32 18.3**	**0.0**
INKA	**Innaminka**	**83.69**	**129**	P	**P**	**10 32 19.6**	**+1.3**
INKA				IAmb	IAmb	10 32 19.9	
	comp=Z,7.7nm,1.2s						
URZ	**Urewera**	**86.67**	**161**	LR	LR	11 08 32.6	
	comp=Z,197nm,21.8s,baz=184,slow=34						
WRA	**Warramunga Arr**	**86.97**	**119**	P	**P**	**10 32 34.0**	**-0.8**
	comp=Z,3.7nm,1.1s,baz=203,slow=3.2,SNR=9.9						
	comp=Z,3.7nm,1.1s						
WRA	**Warramunga Arr**	**86.97**	**119**	P	**P**	**10 32 34.8**	**0.0**
KEST	**Kesra**	**88.96**	**350**	LR	LR	11 13 00.7	
	comp=Z,114nm,20.6s,baz=230,slow=36						
RPN	**Rapa Nui**	**89.73**	**222**	LR	LR	11 03 20.3	
	comp=Z,35nm,21.0s,baz=112,slow=29						
BRDH	**Bariadhala**	**96.36**	**61**	LR	LR	11 08 24.8	
	comp=Z,57nm,21.8s,baz=240,slow=30						
CMAR	**Chiang Mai Arr**	**96.94**	**69**	LR	LR	11 10 53.5	
	comp=Z,20nm,19.2s,baz=225,slow=32						
SONM	**Songino Array**	**123.26**	**53**	PKP	**PKPdf**	**10 38 44.3**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=258,slow=1.3,SNR=2.8						
TXAR	**Lajitas Array**	**134.10**	**261**	PKhKP	PKPpre	10 38 59.8	
	comp=Z,0.3nm,0.8s,baz=84,slow=3.2,SNR=2.3						
PDAR	**Pinedale Array**	**146.51**	**272**	PKPbc	**PKPdf**	**10 39 29.1**	**+0.1**
	comp=Z,2.8nm,1.1s,baz=106,slow=4.8,SNR=11						
NVAR	**Mina Array Bea**	**149.13**	**258**	PKPbc	**PKPbc**	**10 39 37.0**	**-0.6**
	comp=Z,3.1nm,1.0s,baz=113,slow=4.1,SNR=9.4						
PETK	**Petropavlovsk-**	**153.68**	**72**	PKPbc	**PKPbc**	**10 39 45.3**	**-2.0**
	comp=Z,5.4nm,1.1s,baz=270,slow=6.5,SNR=1.8						
YKA	**Yellowknife Ar**	**155.36**	**310**	PKPab	**PKPab**	**10 40 05.7**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=99,slow=3.7,SNR=7.2						

*NNC **27** 10:23:55.3±1.6,52°.01N×75°.77E,h0km,mb3.0,mpv2.5, Error ellipse: s-maj=28.8km s-min=10.3km az=28.0, Suspected Mining explosion.*
*IDC **27** 10:23:56.0±1.1,51°.78N×75°.87E,h0km,mbtmp2.7/3, ML1.9/3,Error ellipse: s-maj=20.9km s-min=8.5km az=30.0*

ISC 27 10:23:55.7±1.0,51°.8N±0°.1×75°.86E±0°.06,h0km,n9, σ0s88/11,4C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.04**	**121**	⇑Pn	**Pb**	**10 24 32.8**	**-0.9**
	0.9nm,0.7s						
KURK				⇑Sn	**Sg**	**10 25 02.5**	**+1.1**
	2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**2.05**	**124**	Pg	**Pn**	**10 24 32.5**	**+1.0**

0.5nm,0.3s
MK31 Makanchi Array 6.54 137 ⇓Lg Lg 10 27 27.8
2.7nm,0.7s,baz=322,slow=24,SNR=5.3
MKAR Makanchi Array 6.54 137 Pn **Pn 10 25 32.9 -0.2**
baz=329,slow=10,SNR=2.5
MKAR Sn **Sn 10 26 48.0 -0.4**
MKAR 0.1nm,0.3s,baz=324,slow=26,SNR=2.6
Lg Lg 10 27 21.1
0.1nm,0.3s,baz=315,slow=19,SNR=7.6
0.6nm,0.8s

*SKO **27** 10:55:07.5, 41.°66N×19.°36E, h0km, ML2.9*
*BEO **27** 10:55:09.5±0.6, 41.°47N×19.°50E, h19km±3km, ML2.8/10*
*TIR **27** 10:55:09.5, 41.°59N×19.°56E, h36km±2km, Ml3.0/5*
*PDG **27** 10:55:10.9±0.2, 41.°57N×19.°58E, h12km, ML2.7/12, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
ISC 27 10:55:08.9±0.9, **41.°50N**±0.°02×**19.°55E**±0.°02, **h13**km±8km, **n54**, σ1s**11**/92, **5C-6D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.28**	**123**	Pg		**Pg**	**10 55 15.3**	**+0.5**
TIR				S		**Sg**	**10 55 17.7**	**-1.1**
TIR				AML		AML	10 55 19.7	
	6.5nm,0.4s							
TIR				AML		AML	10 55 19.9	
	6.4nm,0.5s							
TIR	**Tirane**	**0.28**	**123**	*i* Pg		**Pg**	**10 55 15.4**	**+0.5**
ULC	**Ulcinj**	**0.51**	**334**	⇑*i*Pg		**Pg**	**10 55 18.6**	**-0.5**
ULC				*i* Sg		**Sg**	**10 55 26.2**	**+0.2**
SDA	**Shkodra**	**0.55**	**356**	Pg		**Pg**	**10 55 19.7**	**-0.1**
SDA				Sg		**Sb**	**10 55 27.4**	**-0.8**
PHP	**Peshkopia**	**0.69**	**74**	Pg		**Pg**	**10 55 21.7**	**-0.8**
PHP				Sg		**Sb**	**10 55 33.1**	**+0.7**
PHP				AML		AML	10 55 38.3	
	2.5nm,0.6s							
DRME	**Dracevica, Mon**	**0.74**	**338**	*e*Pg		**Pb**	**10 55 23.6**	**0.0**
DRME				*e*Sg		**Sn**	**10 55 36.0**	**-0.1**
DRME	**Dracevica, Mon**	**0.74**	**338**	⇓*i*Pg		**Pb**	**10 55 23.3**	**-0.3**
DRME				*i* Sg		**Sb**	**10 55 33.3**	**-0.3**
BUM	**Brajici-Budva**	**0.94**	**329**	⇓*i*Pg		**Pg**	**10 55 26.8**	**-0.2**
BUM				*i* Sg		**Sn**	**10 55 41.8**	**+0.6**
PDG	**Podgorica**	**0.95**	**347**	Pg		**Pb**	**10 55 26.2**	**-1.1**
PDG				Sg		**Sb**	**10 55 40.1**	**+0.3**
PDG	**Podgorica**	**0.95**	**347**	*e*Pg		**Pb**	**10 55 26.6**	**-0.7**
PDG				*e*Sg		**Sn**	**10 55 41.4**	**0.0**
PDG	**Podgorica**	**0.95**	**347**	⇑*i*Pg		**Pb**	**10 55 26.6**	**-0.7**
PDG				*i* Sg		**Sn**	**10 55 40.8**	**-0.6**
OHR	**Ohrid**	**1.02**	**112**	*i* Pg		**Pn**	**10 55 29.1**	**+0.2**
OHR				*i* Sg		**Sn**	**10 55 46.6**	**+3.5**
OHR				*e*Lg		Lg	10 55 47.2	
	comp=N,256nm,0.7s							
OHR				*e*Lg		Lg	10 55 48.7	
	comp=E,227nm,0.9s							
VLO	**Vlora**	**1.03**	**182**	Pn		**Pn**	**10 55 30.7**	**+1.6**
VLO				Sn		**Sn**	**10 55 45.6**	**+2.2**
VLO				AML		AML	10 55 53.8	
	comp=E,4.5nm,0.5s							
PVY	**Plav**	**1.13**	**15**	*e*Pg		**Pg**	**10 55 30.5**	**-0.3**
PVY	**Plav**	**1.13**	**15**	⇓*i*Pg		**Pb**	**10 55 29.9**	**-0.6**
PVY				*i* Sg		**Sn**	**10 55 45.7**	**-0.4**
CEME	**Cevo**	**1.15**	**336**	⇓*i*Pg		**Pg**	**10 55 30.8**	**-0.2**
CEME				*i* Sg		**Sn**	**10 55 47.1**	**+0.8**
HCY	**Herceg Novi**	**1.23**	**320**	⇑*i*Pg		**Pg**	**10 55 32.8**	**+0.2**
HCY				*i* Sg		**Sg**	**10 55 50.9**	**+2.3**
KBN	**Korca**	**1.28**	**133**	Pg		**Pg**	**10 55 33.5**	**-0.1**
NKME	**Niksic**	**1.34**	**341**	⇑*i*Pg		**Pb**	**10 55 33.6**	**-0.3**
NKME				*i* Sg		**Sg**	**10 55 53.1**	**+1.0**
KOME	**Kolasin**	**1.35**	**359**	*e*Pg		**Pg**	**10 55 35.1**	**+0.2**
KOME				*e*Sg		**Sg**	**10 55 53.9**	**+1.5**
KOME	**Kolasin**	**1.35**	**359**	*e*Pg		**Pb**	**10 55 33.9**	**-0.2**
KOME				*i* Sg		**Sg**	**10 55 53.3**	**+0.9**
BEY	**Berane**	**1.39**	**10**	*e*Pg		**Pb**	**10 55 34.6**	**-0.2**
IVA	**Berane**	**1.39**	**10**	⇓*i*Pg		**Pb**	**10 55 34.5**	**-0.3**
IVA				*i* Sg		**Sg**	**10 55 55.1**	**+1.3**
SKO	**Skopje**	**1.49**	**71**	*i* Pg		**Pg**	**10 55 36.9**	**-0.6**
SKO				*i* Sg		**Sg**	**10 55 56.9**	**0.0**
TREB	**Trebinje**	**1.51**	**324**	*e*Pg		**Pb**	**10 55 36.9**	**+0.1**
TREB				*e*Sg		**Sg**	**10 55 57.2**	**-0.3**
NEST	**Nestorio**	**1.57**	**133**	Pn		**Pg**	**10 55 38.8**	**-0.4**
NEST				AML		AML	10 56 07.2	
	comp=E,0.3nm,0.7s							
BRY	**Bratogost**	**1.59**	**332**	⇑*i*Pg		**Pb**	**10 55 38.2**	**0.0**
BRY				*i* Sg		**Sg**	**10 56 00.5**	**+0.4**
SJES	**Sjenica**	**1.79**	**10**	*e*Pg		**Pg**	**10 55 42.5**	**-0.7**
SJES				*e*Sg		**Sg**	**10 56 07.5**	**+1.1**
PLE	**Pljevlja**	**1.83**	**356**	⇓*i*Pn		**Pb**	**10 55 41.9**	**-0.4**
PLE				*i* Sn		**Sg**	**10 56 06.2**	**-1.6**
STON	**Ston**	**1.94**	**315**	*e*Pg		**Pb**	**10 55 43.7**	**-0.4**
STON				*e*Sg		**Sb**	**10 56 09.3**	**+1.1**
NOCI	**Noci**	**2.01**	**250**	Pn		**Pn**	**10 55 43.0**	**+0.5**
NOCI				Sn		**Sn**	**10 56 02.5**	**-5.0**
IGT	**Igoumenitsa**	**2.06**	**163**	Pn		**Pb**	**10 55 44.9**	**-1.2**
IGT				Sn		**Sb**	**10 56 13.6**	**+2.0**
IGT	**Igoumenitsa**	**2.06**	**163**	*i* Pn		**Pb**	**10 55 45.2**	**-1.2**
IGT				*i* Sn		**Sg**	**10 56 14.6**	**-0.5**
SELS	**Selova**	**2.07**	**34**	*e*Pn		**Pb**	**10 55 44.1**	**+0.7**
SELS				*e*Sn		**Sn**	**10 56 09.6**	**+0.5**
RUDO	**Rudo**	**2.12**	**356**	*e*Pn		**Pb**	**10 55 46.1**	**-1.1**
RUDO				*e*Sn		**Sb**	**10 56 12.0**	**-1.4**
IVAS	**Ivanjica**	**2.12**	**12**	*e*Pn		**Pn**	**10 55 45.0**	**+0.9**
IVAS				*e*Sn		**Sn**	**10 56 11.3**	**+1.0**
BARS	**Barje**	**2.13**	**51**	*i* Pn		**Pn**	**10 55 45.0**	**+0.7**
BARS				*i* Sn		**Sb**	**10 56 13.8**	**-0.1**
BARS	**Barje**	**2.13**	**51**	*e*Pn		**Pn**	**10 55 44.9**	**+0.7**
GRG	**Griva**	**2.22**	**103**	*i* Pn		**Pn**	**10 55 46.6**	**+1.1**
GRG				*i* Sn		**Sb**	**10 56 16.0**	**-0.3**
VAY	**Valandovo**	**2.28**	**94**	*i* Pn		**Pb**	**10 55 48.4**	**-1.5**
VAY				*i* Sn		**Sb**	**10 56 16.1**	**-1.9**
VAY				*e*Lg		Lg	10 56 24.2	
	comp=N,54nm,0.8s							
GOCS	**Kraljevo Serbi**	**2.28**	**25**	*e*Pn		**Pb**	**10 55 48.4**	**-1.6**
BBLS	**Lazi&#263i**	**2.36**	**357**	*e*Pn		**Pn**	**10 55 48.9**	**+1.4**
BOSS	**Bosilegrad**	**2.40**	**65**	*e*Pn		**Pn**	**10 55 48.3**	**+0.4**
KNT	**Kendrikon**	**2.54**	**97**	*i* Pn		**Pn**	**10 55 50.7**	**+0.8**
KNT				*i* Sn		**Sb**	**10 56 24.8**	**-0.9**
BOVS	**Bovan**	**2.66**	**36**	*e*Pn		**Pn**	**10 55 53.1**	**+1.6**
BOVS				*e*Sn		**Sn**	**10 56 23.1**	**-0.5**
KKB	**Krupnik**	**2.70**	**82**	*i* Pn		**Pn**	**10 55 53.5**	**+1.4**
THE	**Thessaloniki**	**2.72**	**107**	*i* Pn		**Pn**	**10 55 52.9**	**+0.6**
SGRT	**San Giovanni R**	**2.87**	**276**	Pn		**Pn**	**10 55 53.8**	**-0.5**
ZAPS	**Zavoj**	**2.89**	**51**	*e*Pn		**Pn**	**10 55 55.9**	**+1.2**
ZAPS				*e*Sn		**Sn**	**10 56 29.8**	**+0.5**
VTS	**Vitosha**	**2.96**	**67**	*e*Pn		**Pn**	**10 55 56.7**	**+0.9**
ZAGS	**Zajecar**	**3.04**	**40**	*e*Pn		**Pn**	**10 55 57.5**	**+0.8**
ZAGS				*e*Sn		**Sn**	**10 56 32.5**	**-0.4**
BLKB	**Belogradchik**	**3.13**	**46**	*e*Pn		**Pn**	**10 55 59.2**	**+1.2**
BORS2	**Bor- Borsko je**	**3.16**	**34**	*e*Pn		**Pn**	**10 55 57.9**	**-0.5**
KUBS	**Kucevo**	**3.30**	**27**	*e*Pn		**Pn**	**10 55 59.5**	**-0.8**

*NEIC **27** 10:57:50.6±1.2, 17.°3S±0.°2×178.°9W±0.°1, h544km±11km, mb4.1/13, Error ellipse: s-maj=32.7km s-min=5.3km az=151.0*
*IDC **27** 10:57:52.1±4.8, 17.°31S×179.°13W, h555km±54km, mb3.3/11, mbtmp4.2/12, Error ellipse: s-maj=29.3km s-min=19.3km az=103.0*
ISC 27 10:57:49.7±0.6, **17.°5S**±0.°1×**178.°9W**±0.°1, **h539**km, **n36**, σ1s**02**/38, **mb4.0**/19, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.72**	**64**	P		**P**	**10 59 44.4**	**-0.1**
MARNC	**Mare, Loyalty**	**12.95**	**250**	P		**P**	**11 00 38.8**	**+0.6**
PINNC	**Pines Island,**	**13.81**	**246**	P		**P**	**11 00 48.4**	**+1.3**
DZM	**Mont Dzumac**	**14.53**	**249**	P		**P**	**11 00 54.9**	**+0.3**
	7.8nm,0.6s,baz=120,slow=15,SNR=10							
DZM	**Mont Dzumac**	**14.53**	**249**	P		**P**	**11 00 55.0**	**+0.3**
URZ	**Urewera**	**21.02**	**189**	P		**P**	**11 01 51.9**	**-3.5**
	1.7nm,0.4s,baz=0.0,slow=2.0,SNR=1.8							
URZ				S		**S**	**11 05 14.4**	**+0.3**
	5.6nm,0.9s,baz=62,slow=15,SNR=1.5							
HNR	**Honiara**	**22.04**	**288**	P		**P**	**11 02 04.7**	**-0.2**
	25nm,0.5s,baz=246,slow=12,SNR=1.8							
	25nm,0.5s							
STKA	**Stephens Creek**	**38.43**	**241**	P		**P**	**11 04 25.8**	**+0.3**
	5.3nm,0.4s,baz=100,slow=12,SNR=14							
	5.3nm,0.4s							
INKA	**Innaminka**	**38.48**	**247**			**P**	**11 04 26.4**	**+0.5**
INKA					IAmb	IAmb	11 04 27.1	

	comp=Z,2.8nm,0.4s							
WB0	**Warramunga Arr**	**44.21**	**259**			**P**	**11 05 11.6**	**+0.2**
WB0					IAmb	IAmb	11 05 11.6	
	comp=Z,3.5nm,0.8s							
WRAB	**Tennant Creek**	**44.24**	**259**	P		**P**	**11 05 10.7**	**-1.0**
WRAB					IAmb	IAmb	11 05 11.7	
	comp=Z,3.3nm,0.6s							
WRA	**Warramunga Arr**	**44.25**	**259**	P		**P**	**11 05 11.0**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=96,slow=7.0,SNR=24							
	comp=Z,2.2nm,0.6s							
WRA	**Warramunga Arr**	**44.25**	**259**			**P**	**11 05 10.7**	**-1.1**
AS31	**Alice Springs**	**44.46**	**254**			**P**	**11 05 13.3**	**-0.1**
ASAR	**Alice Springs**	**44.46**	**254**	P		**P**	**11 05 13.2**	**-0.1**
	comp=Z,24nm,0.6s,baz=88,slow=8.1,SNR=574							
ASAR				PcP		**PcP**	**11 06 44.7**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=103,slow=4.0,SNR=3.6							
	comp=Z,24nm,0.6s							
ASAR	**Alice Springs**	**44.46**	**254**			**P**	**11 05 13.5**	**+0.2**
MTN	**Manton Dam**	**48.34**	**268**	P		**P**	**11 05 42.6**	**-0.1**
MTN					IAmb	IAmb	11 06 09.3	
	comp=Z,8.8nm,1.1s							
FORT	**Forrest**	**49.77**	**244**	P		**P**	**11 05 52.1**	**-1.0**
FORT					IAmb	IAmb	11 05 52.9	
	comp=Z,6.5nm,0.7s							
KNRA	**Kununurra**	**50.06**	**264**	P		**P**	**11 05 55.6**	**+0.1**
KNRA					IAmb	IAmb	11 05 56.1	
	comp=Z,4.9nm,0.7s							
FITZ	**Fitzroy Crossi**	**52.63**	**260**	P		**P**	**11 06 14.4**	**+0.4**
PSA00	**Pilbara Seismi**	**57.56**	**255**	P		**P**	**11 06 47.7**	**-0.7**
PSA00	**Pilbara Seismi**	**57.56**	**255**	P		**P**	**11 06 48.3**	**-0.2**
PSA00					IAmb	IAmb	11 07 15.9	
	comp=Z,11nm,1.1s							
GIRL	**Giralia**	**62.57**	**253**	P		**P**	**11 07 22.0**	**+0.4**
MJAR	**Matsushiro Arr**	**67.26**	**324**	P		**P**	**11 07 51.6**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=140,slow=6.3,SNR=2.5							
	comp=Z,0.9nm,0.6s							
QSPA	**South Pole Qui**	**72.59**	**180**	P		**P**	**11 08 24.6**	**+2.4**
	comp=Z,1.3nm,0.5s,baz=36,slow=0.6,SNR=8.4							
	comp=Z,1.3nm,0.5s							
QSPA	**South Pole Qui**	**72.59**	**180**	P		**P**	**11 08 24.2**	**+2.0**
PETK	**Petropavlovsk-**	**73.12**	**346**	P		**P**	**11 08 25.3**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=138,slow=7.6,SNR=6.5							
	comp=Z,3.6nm,0.9s							
PETK	**Petropavlovsk-**	**73.12**	**346**	P		**P**	**11 08 24.7**	**-0.5**
NVAR	**Mina Array Bea**	**79.43**	**44**	P		**P**	**11 09 02.6**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=263,slow=2.8,SNR=2.1							
	comp=Z,0.4nm,0.6s							
MXC	**Moxie City**	**82.70**	**36**	P		**P**	**11 09 15.9**	**-1.0**
ILAR	**Eielson Array**	**85.56**	**13**	P		**P**	**11 09 29.8**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=220,slow=5.3,SNR=9.2							
	comp=Z,0.2nm,0.4s							
ILAR	**Eielson Array**	**85.56**	**13**	P		**P**	**11 09 30.3**	**-0.2**
PDAR	**Pinedale Array**	**87.35**	**44**	P		**P**	**11 09 39.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=261,slow=6.0,SNR=1.6							
	comp=Z,0.2nm,0.5s							
PDAR	**Pinedale Array**	**87.35**	**44**	P		**P**	**11 09 39.7**	**-0.2**
SONM	**Songino Array**	**92.90**	**319**	P		**P**	**11 10 04.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=114,slow=6.6,SNR=1.5							
	comp=Z,0.1nm,0.3s							
AKTO	**Aktyubinsk**	**124.22**	**320**	PKP		**PKiKP**	**11 15 47.8**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=108,slow=4.8,SNR=3.9							

*TIR **27** 10:59:31.7, 41.°61N×19.°55E, h43km±4km, Ml3.2/4*
*BEO **27** 10:59:32.9±0.6, 41.°53N×19.°54E, h19km±5km, ML2.9/7*
*PDG **27** 10:59:33.3±0.3, 41.°56N×19.°59E, h11km±1km, ML2.9/13, Error ellipse: s-maj=1.4km s-min=1.6km az=0.0*
ISC 27 10:59:31.2±1.0, **41.°51N**±0.°02×**19.°55E**±0.°02, **h12**km±8km, **n52**, σ0s**90**/82, **20C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.28**	**124**	Pg		**Pb**	**10 59 37.5**	**-0.7**
TIR				Sg		**Sg**	**10 59 40.8**	**0.0**
TIR				AML		AML	10 59 42.0	
	10nm,0.4s							
TIR				AML		AML	10 59 42.2	
	9.5nm,0.4s							
ULC	**Ulcinj**	**0.51**	**333**	⇑*i*Pg		**Pg**	**10 59 41.2**	**0.0**
ULC				*i* Sg		**Sb**	**10 59 49.4**	**-0.2**
SDA	**Shkodra**	**0.55**	**356**	Pg		**Pb**	**10 59 41.9**	**-0.8**
SDA				Sg		**Sb**	**10 59 50.4**	**-0.2**
PHP	**Peshkopia**	**0.69**	**75**	Pg		**Pg**	**10 59 43.9**	**-0.6**
PHP				Sg		**Sb**	**10 59 54.9**	**+0.2**
PHP				AML		AML	11 00 00.9	
	3.3nm,0.5s							
DRME	**Dracevica, Mon**	**0.73**	**338**	*e*Pg		**Pb**	**10 59 45.5**	**-0.4**
DRME	**Dracevica, Mon**	**0.73**	**338**	⇑*i*Pg		**Pg**	**10 59 45.3**	**-0.1**
DRME				*i* Sg		**Sb**	**10 59 56.7**	**+0.7**
BUM	**Brajici-Budva**	**0.94**	**328**	⇓*i*Pg		**Pn**	**10 59 49.9**	**-0.4**
BUM				*i* Sg		**Sb**	**11 00 02.3**	**+0.5**
PDG	**Podgorica**	**0.95**	**347**	Pg		**Pg**	**10 59 48.6**	**-0.9**
PDG				Sg		**Sg**	**11 00 01.5**	**-0.4**
PDG	**Podgorica**	**0.95**	**347**	⇑P		**Pn**	**10 59 49.8**	**-0.6**
PDG				⇑S		**Sn**	**11 00 03.7**	**-0.2**
PDG	**Podgorica**	**0.95**	**347**	*e*Pg		**Pn**	**10 59 50.2**	**-0.2**
PDG				*e*Sg		**Sn**	**11 00 04.1**	**+0.2**
PDG	**Podgorica**	**0.95**	**347**	⇑*i*Pg		**Pb**	**10 59 49.6**	**0.0**
PDG				*i* Sg		**Sn**	**11 00 03.1**	**-0.8**
PVY	**Plav**	**1.13**	**15**	⇑*i*Pg		**Pb**	**10 59 52.1**	**-0.6**
PVY				*i* Sg		**Sn**	**11 00 08.3**	**-0.2**
CEME	**Cevo**	**1.14**	**336**	⇑*i*Pg		**Pn**	**10 59 53.1**	**0.0**
CEME				*i* Sg		**Sn**	**11 00 10.0**	**+1.2**
HCY	**Herceg Novi**	**1.23**	**320**	⇑*i*Pg		**Pg**	**10 59 55.0**	**+0.2**
HCY				*i* Sg		**Sn**	**11 00 14.0**	**+3.2**
KBN	**Korca**	**1.28**	**133**	Pn		**Pg**	**10 59 56.5**	**+0.7**
NKME	**Niksic**	**1.34**	**341**	⇑*i*Pg		**Pg**	**10 59 56.2**	**-0.7**
NKME				*i* Sg		**Sg**	**11 00 15.8**	**+1.5**
KOME	**Kolasin**	**1.34**	**359**	*e*Pg		**Pg**	**10 59 57.6**	**+0.6**
KOME	**Kolasin**	**1.34**	**359**	⇑*i*Pg		**Pn**	**10 59 55.7**	**-0.2**
KOME				*i* Sg		**Sg**	**11 00 16.0**	**+1.5**
IVA	**Berane**	**1.39**	**10**	⇓*i*Pg		**Pg**	**10 59 57.1**	**-0.8**
IVA				*i* Sg		**Sg**	**11 00 18.1**	**+2.2**
TREB	**Trebinje**	**1.51**	**324**	*e*Pg		**Pg**	**10 59 59.7**	**-0.4**
TREB				*e*Sg		**Sg**	**11 00 20.7**	**+1.1**
NEST	**Nestorio**	**1.57**	**133**	Pn		**Pg**	**11 00 01.1**	**-0.2**
NEST				Sn		**Sg**	**11 00 22.5**	**+0.8**
NEST				AML		AML	11 00 31.6	
	0.4nm,0.7s							
NEST				AML		AML	11 00 31.9	
	0.4nm,0.6s							
BRY	**Bratogost**	**1.59**	**332**	⇑*i*Pg		**Pb**	**11 00 00.4**	**-0.1**
BRY				*i* Sg		**Sg**	**11 00 23.3**	**+1.1**
UPM	**Unac-Piva**	**1.76**	**344**	⇑*i*Pn		**Pb**	**11 00 03.1**	**-0.5**
UPM				*i* Sn		**Sg**	**11 00 27.3**	**-0.6**
SJES	**Sjenica**	**1.78**	**10**	*e*Pg		**Pb**	**11 00 04.1**	**+0.2**
SJES				*e*Sg		**Sg**	**11 00 27.6**	**-0.9**
PLE	**Pljevlja**	**1.83**	**356**	⇑*i*Pn		**Pb**	**11 00 04.7**	**+0.1**
PLE				*i* Sn		**Sb**	**11 00 28.0**	**+0.5**
STON	**Ston**	**1.94**	**315**	*e*Pg		**Pb**	**11 00 06.4**	**-0.1**
STON				*e*Sg		**Sg**	**11 00 32.5**	**-1.0**
NOCI	**Noci**	**2.01**	**250**	Pn		**Pb**	**11 00 06.8**	**-1.0**
NOCI				Sn		**Sn**	**11 00 27.7**	**-2.4**
NOCI				AML		AML	11 00 43.8	
	1.1nm,0.3s							
IGT	**Igoumenitsa**	**2.06**	**163**	Pn		**Pb**	**11 00 08.0**	**-0.5**
SELS	**Selova**	**2.07**	**34**	*e*Pn		**Pn**	**11 00 06.8**	**+1.0**
SELS				*e*Sn		**Sn**	**11 00 31.9**	**+0.4**
IVAS	**Ivanjica**	**2.12**	**12**	*e*Pn		**Pn**	**11 00 06.9**	**+0.4**
IVAS				*e*Sn		**Sn**	**11 00 32.9**	**+0.1**
BARS	**Barje**	**2.13**	**51**	*e*Pn		**Pn**	**11 00 07.6**	**+1.0**
GOCS	**Kraljevo Serbi**	**2.27**	**25**	*e*Pn		**Pn**	**11 00 09.6**	**+0.9**
GOCS				*e*Sn		**Sn**	**11 00 37.1**	**+0.4**
MATE	**Matera**	**2.32**	**249**	⇓P		**Pn**	**11 00 10.6**	**+1.5**
BBLS	**Lazi&#263i**	**2.36**	**357**	*e*Pn		**Pn**	**11 00 12.0**	**-1.7**
BOSS	**Bosilegrad**	**2.40**	**65**	*e*Pn		**Pn**	**11 00 10.9**	**+0.6**
BOVS	**Bovan**	**2.66**	**36**	⇑P		**Pn**	**11 00 13.7**	**-0.1**
BOVS				⇓S		**Sn**	**11 00 46.3**	**+0.3**
BOVS	**Bovan**	**2.66**	**36**	*e*Pn		**Pn**	**11 00 14.6**	**+0.8**
BOVS				*e*Sn		**Sn**	**11 00 45.3**	**-0.7**
SGRT	**San Giovanni R**	**2.87**	**276**	Pn		**Pn**	**11 00 16.5**	**-0.4**
ZAPS	**Zavoj**	**2.88**	**51**	*e*Pn		**Pn**	**11 00 18.4**	**+1.4**
ZAPS				*e*Sn		**Sn**	**11 00 51.5**	**-0.2**
VTS	**Vitosha**	**2.96**	**67**	*e*Pn		**Pn**	**11 00 19.0**	**+0.9**
ZAGS	**Zajecar**	**3.04**	**40**	*e*Pn		**Pn**	**11 00 20.3**	**+1.2**
BLKB	**Belogradchik**	**3.13**	**46**	⇑S		**Sn**	**11 00 56.9**	**-0.9**
BORS2	**Bor- Borsko je**	**3.16**	**34**	*e*Pn		**Pn**	**11 00 19.8**	**-0.9**
TIP	**Timpagrande**	**3.16**	**224**	⇑P		**Pn**	**11 00 21.0**	**+0.2**
CUC	**Castrococco**	**3.22**	**243**	Pn		**Pn**	**11 00 23.0**	**+1.4**
BZS	**Buzias**	**4.37**	**19**	⇑P		**Pn**	**11 00 38.0**	**+0.6**
GZR	**Gura Zlata**	**4.54**	**30**	⇑P		**Pn**	**11 00 39.8**	**0.0**
SURR	**Surduc**	**4.64**	**23**	⇑P		**Pn**	**11 00 40.7**	**-0.4**
SIRR	**Siria**	**5.00**	**17**	⇓P		**Pn**	**11 00 46.2**	**+0.1**
ARR	**Arges**	**5.34**	**42**	⇓P		**Pn**	**11 00 49.6**	**-1.3**
VOIR		**5.61**	**44**	⇓P		**Pn**	**11 00 54.0**	**-0.5**
MLR	**Muntele Rosu**	**6.12**	**47**	⇑P		**Pn**	**11 01 00.0**	**-1.6**

*SKO **27** 11:03:34.2, 41.°54N×19.°38E, h0km, ML3.7*
*BEO **27** 11:03:35.8±1.0, 41.°46N×19.°62E, h5km±5km, ML3.6/15*
*NEIC **27** 11:03:35.0±1.1, 41.°57N±0.°03×19.°49E±0.°07, h10km±1km, mb4.1/3, Error ellipse: s-maj=9.5km s-min=4.4km az=255.0*
*TIR **27** 11:03:36.1, 41.°55N×19.°60E, h29km±3km, Ml3.9/7*
*RHSSO **27** 11:03:36.9±1.0, 41.°58N×19.°55E, h8km±4km, ML3.8/4*
*PRU **27** 11:03:38.9, 41.°41N×19.°38E, h10km, M4.1*
*IDC **27** 11:03:41.0±2.5, 41.°62N×19.°55E, h61km±24km, mb3.3/6, mbtmp3.7/11, ML3.3/4, Error ellipse: s-maj=26.1km s-min=16.5km az=16.0*
ISC 27 11:03:35.7±0.9, **41.°51N**±0.°02×**19.°54E**±0.°03, **h16**km±6km, **n139**, σ1s**53**/171, **mb3.9**/3, **11C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**123**	Pg		**Pg**	**11 03 41.5**	**-0.5**
TIR				Sg		**Sg**	**11 03 45.6**	**-0.7**
TIR				AML		AML	11 03 46.0	
	223nm,0.2s							
TIR				AML		AML	11 03 46.8	
	82nm,0.2s							
TIR	**Tirane**	**0.29**	**123**	*i* Pg		**Pg**	**11 03 41.5**	**-0.5**
TIR				*i* Sg		**Sg**	**11 03 46.9**	**+0.6**
SDA	**Shkodra**	**0.54**	**357**	Pg		**Pg**	**11 03 45.8**	**-0.7**
SDA				Sg		**Sb**	**11 03 54.3**	**-0.1**
SDA				AML		AML	11 03 58.5	
	74μm,0.3s							
PHP	**Peshkopia**	**0.70**	**75**	Pg		**Pg**	**11 03 48.3**	**-1.1**
PHP				Sg		**Sg**	**11 03 58.2**	**-0.5**
PHP				AML		AML	11 04 02.4	
	14nm,0.4s							
DRME	**Dracevica, Mon**	**0.73**	**339**	*e*Pg		**Pg**	**11 03 49.4**	**-0.5**
PDG	**Podgorica**	**0.94**	**347**	Pg		**Pg**	**11 03 53.4**	**-0.5**
PDG				Sg		**Sn**	**11 04 08.3**	**+0.8**
PDG	**Podgorica**	**0.94**	**347**			**Pg**	**11 03 52.1**	**-1.9**
PDG						**Sg**	**11 04 06.0**	**-0.4**
PDG	**Podgorica**	**0.94**	**347**	⇓P		**Pb**	**11 03 54.0**	**+0.3**
PDG				⇑S		**Sn**	**11 04 07.9**	**+0.4**
PDG	**Podgorica**	**0.94**	**347**	*e*Pg		**Pg**	**11 03 53.5**	**-0.5**
PDG				*e*Sg		**Sn**	**11 04 08.9**	**+1.4**
OHR	**Ohrid**	**1.03**	**112**	*i* Pg		**Pb**	**11 03 54.4**	**-0.8**
OHR				*i* Sg		**Sn**	**11 04 11.5**	**+1.8**
OHR				*e*Lg		Lg	11 04 11.9	
	comp=N,2μm,0.8s							
OHR				*e*Lg		Lg	11 04 14.1	
	comp=E,2μm,0.9s							
VLO	**V

BEHE	**Becsehely**		**5.34**	**339**	Pn		**Pn**	**11 04 53.6**	**-1.2**
BEHE	**Becsehely**		**5.34**	**339**	*e*Pn		**Pn**	**11 04 56.2**	**+1.4**
ARR	**Arges**		**5.35**	**42**	⇑P		**Pn**	**11 04 57.1**	**+2.1**
MURB	**Monte Urbino**		**5.48**	**291**			**Pn**	**11 04 56.8**	**+0.1**
VOIR			**5.61**	**44**	⇓P		**Pn**	**11 05 01.1**	**+2.5**
DRGR			**5.75**	**22**	⇑P		**Pn**	**11 05 01.9**	**+1.4**
MLR	**Muntele Rosu**		**6.13**	**47**	P		**Pn**	**11 05 08.9**	**+3.3**
	comp=N,1.7nm,0.3s,baz=191,slow=8.8,SNR=9.5								
MLR					S		**Sn**	**11 06 15.7**	**+0.3**
	comp=N,14nm,0.7s,baz=292,slow=19,SNR=6.4								
	comp=N,3.6nm,0.4s								
MLR	**Muntele Rosu**		**6.13**	**47**			**Pn**	**11 05 06.3**	**+0.6**
OBKA	**Obir**		**6.16**	**326**	*e*Pn		**Pn**	**11 05 08.1**	**+2.1**
	comp=N,1.1nm,0.2s								
SABO	**M.te Sabotino**		**6.20**	**318**			**Pn**	**11 05 05.4**	**-1.1**
TEOL	**Teolo**		**6.90**	**307**			**Pn**	**11 05 14.6**	**-1.5**
CONA	**Conrad Observa**		**6.93**	**339**	*e*Pn		**Pn**	**11 05 20.8**	**+4.1**
	comp=N,0.7nm,0.3s								
MODS	**Modra-Piesok**		**7.05**	**348**	*e*PG		**Pg**	**11 05 49.1**	**-1.4**
MODS					*e*SN		Sn	11 06 27.1	-11
KBA	**Koelnbreinsper**		**7.12**	**324**	*e*Pn		**Pn**	**11 05 21.0**	**+1.6**
	comp=N,1.1nm,0.4s								
TIRR	**Tirgusor**		**7.14**	**63**	Pn		**Pn**	**11 05 19.5**	**0.0**
ABTA	**Abfaltersbach**		**7.28**	**318**	*e*Pn		**Pn**	**11 05 23.5**	**+2.1**
	comp=N,2.2nm,0.5s								
CTI	**Castel Tesino**		**7.29**	**311**			**Pn**	**11 05 20.6**	**-1.0**
MOA	**Molln**		**7.37**	**331**	*e*Pn		**Pn**	**11 05 25.1**	**+2.5**
	comp=N,1.3nm,0.3s								
BIOA	**Bad Ischl, Aus**		**7.48**	**328**	*e*Pn		**Pn**	**11 05 26.6**	**+2.5**
	comp=N,1.1nm,0.3s								
IDI	**Anoyia**		**7.50**	**144**	P		**Pn**	**11 05 27.9**	**+3.5**
	comp=N,1.7nm,0.4s,baz=312,slow=12,SNR=2.0								
IDI					S		**Sn**	**11 06 43.9**	**-5.2**
	comp=N,11nm,0.8s,baz=336,slow=5.3,SNR=3.0								
MANT	**Manisa**		**7.55**	**111**	Pn		**Pn**	**11 05 26.6**	**+1.3**
LESA	**Schwarzleotal**		**7.68**	**323**	*e*Pn		**Pn**	**11 05 28.1**	**+1.2**
	comp=N,2.0nm,0.4s								
MSSA	**Maissana**		**7.87**	**294**	Pn		**Pn**	**11 05 27.4**	**-2.1**
WTTA	**Wattenberg**		**8.07**	**318**	*e*Pn		**Pn**	**11 05 34.3**	**+2.0**
	comp=N,2.0nm,0.3s								
WATA	**Walderalm**		**8.14**	**318**	*e*Pn		**Pn**	**11 05 35.6**	**+2.3**
	comp=N,0.9nm,0.2s								
SQTA	**Sankt Quirin**		**8.26**	**317**	*e*Pn		**Pn**	**11 05 37.5**	**+2.6**
	comp=N,1.0nm,0.2s								
FETA	**Feichten**		**8.38**	**314**	*e*Pn		**Pn**	**11 05 39.1**	**+2.5**
	comp=N,0.4nm,0.4s								
MOTA	**Moosalm**		**8.39**	**317**	*e*Pn		**Pn**	**11 05 38.9**	**+2.1**
	comp=N,1.2nm,0.3s								
FUORN	**Ofenpass-Fuorn**		**8.40**	**311**	Pn		**Pn**	**11 05 34.4**	**-2.6**
GERES	**GERESS Array B**		**8.41**	**333**	P		**Pn**	**11 05 39.2**	**+2.3**
	baz=145,slow=15,SNR=5.1								
GERES					S		**Sn**	**11 07 09.8**	**-1.8**
	comp=N,1.1nm,0.5s,baz=150,slow=22,SNR=2.5								
	comp=N,0.5nm,0.4s								
KHC	**Kasperske Hory**		**8.70**	**333**	*e*SN		**Sn**	**11 07 17.6**	**-0.9**
DAVOX	**Davos/Dischmat**		**8.71**	**310**	P		**Pn**	**11 05 44.7**	**+3.6**
	comp=N,0.4nm,0.3s,baz=131,slow=19,SNR=2.4								
DAVOX					S		**Sn**	**11 07 19.4**	**+0.2**
	comp=N,3.6nm,0.6s,baz=135,slow=19,SNR=2.4								
	comp=N,2.2nm,0.4s								
TUE	**Stuetta**		**8.86**	**307**	Pn		**Pn**	**11 05 41.2**	**-2.0**
DAVA	**Damuels**		**9.00**	**313**	*e*Pn		**Pn**	**11 05 47.8**	**+2.7**
	comp=N,0.4nm,0.2s								
BNI	**Bardonecchia**		**10.02**	**295**	Pn		**Pn**	**11 05 56.8**	**-2.2**
SENIN	**Lac Senin/Sane**		**10.07**	**303**	Pn		**Pn**	**11 05 56.7**	**-3.1**
BFO	**Black Forest**		**10.46**	**314**	Pn		**Pn**	**11 06 02.9**	**-2.2**
BRTR	**Keskin Array B**		**10.87**	**95**	P		Pn	11 06 20.1	+9.4
	comp=N,0.4nm,0.4s,baz=289,slow=10,SNR=1.8								
HFS	**Hagfors**		**19.00**	**351**	P		**P**	**11 07 55.9**	**-0.4**
	comp=N,0.2nm,0.3s,baz=152,slow=6.5,SNR=4.2								
	comp=N,2.0nm,0.7s								
GNI	**Garni**		**19.11**	**86**	P		**P**	**11 07 57.8**	**-0.1**
GNI					IAmb		IAmb	11 08 01.6	
	comp=Z,9.9nm,0.8s								
NC405	**NORSAR Array S**		**20.20**	**349**	P		**P**	**11 08 08.7**	**-0.8**
NC405					IAmb		IAmb	11 08 18.3	
	comp=Z,8.6nm,1.1s								
NOA	**NORSAR Array B**		**20.21**	**348**	P		**P**	**11 08 09.3**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=172,slow=12,SNR=2.4								
	comp=Z,0.8nm,0.7s								
EKA	**Eskdalemuir Ar**		**20.32**	**321**	P		**P**	**11 08 11.3**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=118,slow=8.4,SNR=1.7								
	comp=Z,0.6nm,0.6s								
FINES	**FINESS Array B**		**20.36**	**9**	P		**P**	**11 08 10.0**	**-1.2**
	comp=Z,2.5nm,0.6s,baz=183,slow=9.2,SNR=8.5								
	comp=Z,2.5nm,0.6s								
FINES	**FINESS Array B**		**20.36**	**9**	P		**P**	**11 08 10.8**	**-0.3**
FIA1	**FINESS Array S**		**20.36**	**9**	P		**P**	**11 08 10.1**	**-1.0**
FIA1					IAmb		IAmb	11 08 10.2	
	comp=Z,19nm,1.1s								
ABKAR	**Akbulak array**		**29.13**	**61**	P		**P**	**11 09 36.0**	**+0.3**
BVAR	**Borovoye Array**		**35.65**	**53**	P		**P**	**11 10 33.6**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=266,slow=7.1,SNR=2.3								
	comp=Z,0.3nm,0.4s								
ZALV	**Zalesovo Beam**		**44.10**	**50**	P		**P**	**11 11 41.8**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=280,slow=8.8,SNR=4.3								
	comp=Z,0.7nm,0.4s								
MKAR	**Makanchi Array**		**44.28**	**61**	P		**P**	**11 11 43.6**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=285,slow=7.6,SNR=14								
	comp=Z,0.9nm,0.5s								
MKAR	**Makanchi Array**		**44.28**	**61**	P		**P**	**11 11 44.0**	**-0.5**

*IDC **27** 11:23:20.4±0.8,1˚.45N×126˚.10E,h0km,mb3.7/8, mbtmp3.7/9,ML3.7/1,MS3.3/1,Error ellipse: s-maj=55.3km s-min=16.7km az=74.0*

*DJA **27** 11:23:24.4±0.3,1˚.N±3˚×12˚.6E±˚,h10km,M4.0/12,mB4.7/2, mb4.1/5,MLv3.9/12,Mw(mB)4.0/2*

ISC 27 11:23:25.8±0.8,**1˚.43N**±0˚.09×**126˚.23E**±0˚.07,**h35km,n18, σ0˚.88/18,mb3.8/8,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**120**	P	**Pn**	**11 23 48.0**	**+0.4**
KMSI	**Cibinong**	**2.40**	**249**	P	**Pn**	**11 24 03.0**	**+0.3**
GTOI	**Gorontalo**	**3.31**	**256**	P	**Pn**	**11 24 17.2**	**+2.0**
SANI	**Sanana**	**3.46**	**184**	P	**Pn**	**11 24 18.2**	**+1.0**
LUWI	**Luwuk**	**4.24**	**235**	P	**Pn**	**11 24 27.9**	**0.0**
APSI	**Ampana**	**5.14**	**243**	P	**Pn**	**11 24 39.1**	**-1.2**
MPSI	**Mapaga**	**6.42**	**260**	P	**Pn**	**11 24 59.1**	**+1.1**
TTSI	**Tana Toraja**	**7.80**	**235**	P	**Pn**	**11 25 16.6**	**-0.3**
JAY	**Jayapura**	**14.99**	**105**	LR	LR	11 32 56.3	
	comp=Z,100nm,19.2s,baz=144,slow=38						
FITZ	**Fitzroy Crossi**	**19.41**	**182**	P	**P**	**11 27 48.6**	**-0.5**
	0.2nm,0.3s,baz=30,slow=10,SNR=6.6						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**22.68**	**160**	P	**P**	**11 28 23.9**	**-0.6**
	1.5nm,0.3s,baz=337,slow=11,SNR=14						
	1.5nm,0.3s						
ASAR	**Alice Springs**	**26.04**	**164**	P	**P**	**11 28 56.3**	**+0.3**
	0.9nm,0.4s,baz=347,slow=6.7,SNR=33						
ASAR				PcP	**PcP**	**11 32 24.5**	**+0.9**
	0.2nm,0.6s,baz=345,slow=2.0,SNR=1.5						
	0.9nm,0.4s						
SONM	**Songino Array**	**49.32**	**342**	P	**P**	**11 32 11.1**	**-0.4**
	0.1nm,0.4s,baz=140,slow=5.4,SNR=4.8						
	0.1nm,0.4s						
PETK	**Petropavlovsk-**	**57.74**	**22**	P	**P**	**11 33 12.9**	**-0.2**
	8.9nm,1.1s,baz=291,slow=12,SNR=3.5						
	8.9nm,1.1s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	**P**	**11 33 22.3**	**-0.9**
	0.3nm,0.4s,baz=114,slow=6.6,SNR=5.7						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	**11 33 44.7**	**-0.4**
	0.3nm,0.3s,baz=140,slow=7.5,SNR=1.7						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**63.41**	**328**	P	**P**	**11 33 50.9**	**-0.9**
	0.3nm,0.3s,baz=117,slow=8.5,SNR=4.2						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**87.38**	**25**	P	**P**	**11 36 09.7**	**+0.6**
	0.1nm,0.7s,baz=255,slow=7.1,SNR=1.7						
	0.1nm,0.7s						

*NEIC **27** 11:33:49.0±1.3,17˚.66N±0˚.09×145˚.8E±0˚.2,h173km±8km, mb3.8/8,Error ellipse: s-maj=25.4km s-min=11.7km az=71.0*

*IDC **27** 11:33:48.4±2.2,17˚.77N×145˚.62E,h171km±22km,mb3.3/6, mbtmp3.8/7,Error ellipse: s-maj=43.5km s-min=16.2km az=103.0*

ISC 27 11:33:46.4±0.7,**17˚.83N**±0˚.08×**145˚.7E**±0˚.2,**h150km,n25, σ1˚.62/21,mb3.9/10,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.29**	**190**	P	**Pn**	**11 34 52.9**	**+2.4**
	95nm,0.5s,baz=356,slow=23,SNR=1.6						
GUMO				S	**Sn**	**11 35 41.7**	**+1.4**
	90nm,0.4s,baz=36,slow=18,SNR=2.2						
H11S3	**WAKE ISLAND Hy**	**19.99**	**85**	T	T	11 59 10.9	
	baz=265						
H11S1	**WAKE ISLAND Hy**	**20.00**	**85**	T	T	11 59 13.7	
	baz=265						
H11S2	**WAKE ISLAND Hy**	**20.01**	**85**	T	T	11 59 03.9	
	baz=265						
H11N1	**WAKE ISLAND Hy**	**20.19**	**81**	T	T	11 59 16.6	
	baz=275,slow=74						
H11N2	**WAKE ISLAND Hy**	**20.19**	**81**	T	T	11 59 15.5	
	baz=275,slow=74						
H11N3	**WAKE ISLAND Hy**	**20.20**	**81**	T	T	11 59 18.9	
	baz=275						
PETK	**Petropavlovsk-**	**36.44**	**12**	P	**P**	**11 40 38.0**	**+1.5**
	2.1nm,0.8s,baz=138,slow=5.7,SNR=6.1						
	2.1nm,0.8s						
KNRA	**Kununurra**	**37.23**	**208**	P	**P**	**11 40 42.6**	**-1.0**
WB0	**Warramunga Arr**	**38.97**	**197**	P	**P**	**11 40 56.6**	**-1.5**
WB0				IAmb	IAmb	11 41 03.0	
	comp=Z,2.6nm,1.0s						
WRA	**Warramunga Arr**	**39.15**	**197**	P	**P**	**11 40 59.2**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=18,slow=8.6,SNR=6.1						
	comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**39.15**	**197**	P	**P**	**11 40 57.3**	**-2.3**
FITZ	**Fitzroy Crossi**	**40.78**	**210**	P	**P**	**11 41 12.7**	**-0.4**
ASAR	**Alice Springs**	**42.81**	**196**	P	**P**	**11 41 29.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=17,slow=6.7,SNR=8.6						
ASAR				PcP	**PcP**	**11 43 17.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=352,slow=3.0,SNR=1.7						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**42.81**	**196**	P	**P**	**11 41 27.5**	**-2.1**
DZM	**Mont Dzumac**	**44.57**	**152**	P	**P**	**11 41 41.6**	**-2.2**
MKAR	**Makanchi Array**	**59.04**	**314**	P	**P**	**11 43 31.0**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=79,slow=7.8,SNR=2.1						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.04**	**314**	P	**P**	**11 43 31.2**	**+0.6**
ILAR	**Eielson Array**	**64.43**	**26**	P	**P**	**11 44 05.5**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=258,slow=5.7,SNR=7.5						
	comp=Z,0.4nm,0.5s						
D24K	**Happy Valley**	**64.82**	**21**	P	**P**	**11 44 09.9**	**+1.1**
D24K				IAmb	IAmb	11 44 14.4	
	comp=Z,2.2nm,1.1s						
E25K	**Arctic Village**	**65.70**	**23**	P	**P**	**11 44 16.0**	**+1.4**
E25K				IAmb	IAmb	11 44 20.8	
	comp=Z,1.5nm,1.1s						
J26L	**Joseph Creek**	**65.78**	**27**	P	**P**	**11 44 14.8**	**-0.4**
J26L				IAmb	IAmb	11 44 35.3	
	comp=Z,1.9nm,1.2s						
BMAR	**Burnt Mountain**	**65.92**	**23**	P	**P**	**11 44 16.9**	**+0.9**
BRTR	**Keskin Array B**	**94.69**	**314**	P	**P**	**11 46 48.6**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=32,slow=8.5,SNR=2.4						
	comp=Z,0.3nm,0.3s						
LPAZ	**La Paz**	**147.68**	**92**	PKPbc	**PKPdf**	**11 53 14.6**	**+2.6**
	comp=Z,0.6nm,0.5s,baz=358,slow=6.5,SNR=2.1						

*MEX **27** 11:47:50.3±0.4, 18˚.21N×106˚.07W,h10km,MD4.4*

*NEIC **27** 11:47:52.5±1.1, 18˚.03N±0˚.09×106˚.0W±0˚.1,h10km±1km, mb4.4/168,Md4.4/29(MEX),Error ellipse: s-maj=21.3km s-min=7.7km az=228.0*

*IDC **27** 11:47:56.6±4.4, 18˚.09N×106˚.32W,h59km±35km,mb3.5/6, mbtmp3.7/11,ML3.1/4,MS3.8/39,Error ellipse: s-maj=59.0km s-min=17.1km az=48.0*

ISC 27 11:47:52.8±0.9,**18˚.32N**±0˚.07×**105˚.86W**±0˚.07,**h10km, n210,σ2˚.51/112,mb4.4/35,MS3.8/34,1C,Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.41**	**33**	⇑*e*P	**Pn**	**11 48 15.2**	**-3.4**
	baz=217,slow=18						
CJM				*e*S	**Sn**	**11 48 34.4**	**-2.8**
CDAR	**Ciudad de Arme**	**1.86**	**70**	*e*P	**Pn**	**11 48 21.6**	**-3.2**
CDAR				*e*S	**Sn**	**11 48 46.6**	**-1.8**
CEGR	**Campo Tres**	**2.18**	**60**	*i* P	**Pn**	**11 48 27.0**	**-2.3**
CEGR				*i* S	**Sn**	**11 48 54.4**	**-2.0**
MMIG	**Aquila**	**2.39**	**90**		**Pn**	**11 48 30.0**	**-2.1**
MMIG	**Aquila**	**2.39**	**90**	*e*P	**Pn**	**11 48 30.0**	**-2.1**
MNGA	**Volcan de Coli**	**2.41**	**61**	*e*P	**Pn**	**11 48 30.2**	**-2.4**
MNGA				*e*S	**Sn**	**11 49 01.9**	**-0.4**
SOMAC	**Volcano de Col**	**2.43**	**60**	*e*P	**Pn**	**11 48 30.0**	**-3.0**
SOMAC				*e*S	**Sn**	**11 49 02.3**	**-0.6**
INCO	**Volcan de Coli**	**2.45**	**60**	*e*P	**Pn**	**11 48 31.1**	**-2.2**
INCO				*e*S	**Sn**	**11 49 03.3**	**-0.2**
ANIG	**Ahuacatlan**	**3.00**	**25**		**Pn**	**11 48 37.7**	**-2.9**
ANIG					**Sn**	**11 49 12.6**	**-4.1**
ANIG	**Ahuacatlan**	**3.00**	**25**	*i* P	**Pn**	**11 48 37.7**	**-2.9**
ANIG				*i* S	**Sn**	**11 49 12.6**	**-4.1**
ZIIG	**Zihuatanejo**	**4.24**	**99**		**Pn**	**11 48 53.3**	**-4.3**
ZIIG	**Zihuatanejo**	**4.24**	**99**	*e*P	**Pn**	**11 48 53.3**	**-4.3**
MOIG	**Morelia**	**4.62**	**72**		**Pn**	**11 49 03.7**	**+0.7**
MAIG	**Mazatlaan**	**4.88**	**354**		**Pn**	**11 49 03.4**	**-2.9**
MAIG	**Mazatlaan**	**4.88**	**354**	*e*P	**Pn**	**11 49 03.4**	**-2.9**
ARIG	**Puente Sto Nin**	**5.24**	**90**		**Pn**	**11 49 10.0**	**-1.3**
ARIG	**Puente Sto Nin**	**5.24**	**90**	*e*P	**Pn**	**11 49 10.0**	**-1.3**
ZAIG	**Zacatecas**	**5.40**	**34**		**Pn**	**11 49 17.1**	**+3.3**
ZAIG	**Zacatecas**	**5.40**	**34**	*e*P	**Pn**	**11 49 17.5**	**+3.8**
CAIG	**El Cayaco**	**5.48**	**102**		Pn	11 49 07.6	-6.9
CAIG	**El Cayaco**	**5.48**	**102**	*e*P	Pn	11 49 07.6	-6.9
JRQG	**Juriquilla Cam**	**5.63**	**64**	Pn	**Pn**	**11 49 18.3**	**+1.4**
MEIG	**Mezcala**	**5.95**	**93**		**Pn**	**11 49 22.6**	**+1.5**
MEIG	**Mezcala**	**5.95**	**93**	*e*P	**Pn**	**11 49 22.6**	**+1.5**
DAIG	**Los Arroyos**	**6.06**	**101**		Pn	11 49 16.5	-6.1
DAIG	**Los Arroyos**	**6.06**	**101**	*e*P	Pn	11 49 16.5	-6.1
SLBS	**Sierra La Lagu**	**6.56**	**325**		**Pn**	**11 49 30.9**	**+1.4**
PPIG	**Popocatepetl**	**6.90**	**83**		**Pn**	**11 49 33.4**	**-1.1**
PPM	**Popocatepetl**	**6.90**	**83**	*e*P	**Pn**	**11 49 33.4**	**-1.1**
MGIG	**Malinaltepec**	**6.97**	**98**		**Pn**	**11 49 35.4**	**+0.1**
MGIG	**Malinaltepec**	**6.97**	**98**	*e*P	**Pn**	**11 49 35.4**	**+0.1**
TLIG	**Tlapa**	**6.98**	**95**		**Pn**	**11 49 36.8**	**+1.5**
LPIG	**La Paz**	**7.09**	**325**	P	**Pn**	**11 49 37.2**	**+0.4**
	4.7nm,0.5s,baz=236,slow=4.5,SNR=3.5						
LPIG				LR	LR	11 51 43.4	
	comp=Z,2μm,19.9s,baz=164,slow=32						
FTIG	**Fresnillo de T**	**7.36**	**92**		**Pn**	**11 49 36.9**	**-3.7**
FTIG	**Fresnillo de T**	**7.36**	**92**	*e*P	**Pn**	**11 49 36.9**	**-3.7**
PNIG	**Pinotepa**	**7.63**	**103**		**Pn**	**11 49 39.5**	**-4.7**
PNIG	**Pinotepa**	**7.63**	**103**	*e*P	**Pn**	**11 49 39.5**	**-4.7**
HLIG	**Huajuapan de L**	**7.68**	**92**		Pn	11 49 40.0	-5.0
HLIG	**Huajuapan de L**	**7.68**	**92**	*e*P	Pn	11 49 40.0	-5.0
TXIG	**Tlaxiaco**	**7.78**	**97**		**Pn**	**11 49 47.9**	**+1.4**
TXIG	**Tlaxiaco**	**7.78**	**97**	*e*P	**Pn**	**11 49 47.9**	**+1.4**
YOIG	**Yosondua**	**8.06**	**99**		**Pn**	**11 49 48.6**	**-1.8**
YOIG	**Yosondua**	**8.06**	**99**	*e*P	**Pn**	**11 49 48.6**	**-1.8**
HPIG		**8.58**	**1**		**Pn**	**11 50 00.2**	**+2.9**
CMIG	**Matias Romero**	**10.53**	**95**	P	Pn	11 50 29.9	+6.0
	0.1nm,0.3s,baz=282,slow=15,SNR=3.7						
CMIG				LR	LR	11 54 21.7	
	comp=Z,459nm,18.9s,baz=282,slow=35						
	0.7nm,0.4s						
SRIG	**Santa Rosalia**	**10.72**	**328**	Pn	**Pn**	**11 50 28.0**	**+1.6**
TX31	**Lajitas Ar. Si**	**11.15**	**10**		**Pn**	**11 50 36.0**	**+3.6**
TXAR	**Lajitas Array**	**11.15**	**10**	P	Pn	11 50 36.8	+4.3
	0.1nm,0.3s,baz=190,slow=12,SNR=12						
TXAR				LR	LR	11 55 03.6	
	comp=Z,588nm,20.9s,baz=190,slow=37						
	2.5nm,0.8s						
TXAR	**Lajitas Array**	**11.15**	**10**	Pn	**Pn**	**11 50 35.5**	**+3.1**
DRIO	**Del Rio**	**12.05**	**22**		**Pn**	**11 50 49.3**	**+4.6**
SAND	**Sanderson**	**12.08**	**16**		**Pn**	**11 50 48.5**	**+3.4**
ALPN	**Alpine**	**12.17**	**9**		**Pn**	**11 50 49.7**	**+3.2**
VHRN	**Van Horn**	**12.44**	**4**		**Pn**	**11 50 53.2**	**+3.0**
HNDO	**Hondo**	**12.68**	**27**	Pn	**Pn**	**11 50 56.6**	**+3.3**
OZNA	**Ozona**	**13.27**	**18**		**Pn**	**11 51 05.3**	**+4.0**
MNHN	**Monahans**	**13.27**	**12**	Pn	**Pn**	**11 51 05.0**	**+3.6**
JCT	**Junction City**	**13.30**	**23**		**Pn**	**11 51 05.4**	**+3.6**
MNTX	**Cornudas Mount**	**13.33**	**2**		**Pn**	**11 51 05.2**	**+2.9**
319A	**Douglas**	**13.37**	**347**		**P**	**11 51 06.4**	**-6.1**
GDL2	**Guadalupe Moun**	**13.89**	**5**		**P**	**11 51 14.3**	**-4.0**
CLNB	**Carlsbad**	**14.00**	**7**		**Pn**	**11 51 14.1**	**+2.6**
ODSA	**Odessa**	**14.07**	**12**	Pn	**P**	**11 51 15.7**	**-4.5**
SGCY	**Sterling City**	**14.20**	**17**		**Pn**	**11 51 17.3**	**+3.1**
121A	**Cookes Peak, D**	**14.26**	**353**		**P**	**11 51 18.9**	**-3.5**
BRDY	**Brady**	**14.33**	**24**		**Pn**	**11 51 19.1**	**+3.2**
TUC	**Tucson**	**14.62**	**343**		**P**	**11 51 23.2**	**-3.2**
CPRX	**Cap Rock**	**14.76**	**7**	Pn	**P**	**11 51 24.9**	**-3.1**
APG	**El Apazote**	**15.12**	**100**	P	**P**	**11 51 33.4**	**+1.3**
	baz=319,slow=19,SNR=3.7						
	0.1nm,0.3s						
POST	**Post**	**15.20**	**14**		**P**	**11 51 29.7**	**-3.1**
POST				IAmb	IAmb	11 51 51.2	
	comp=Z,28nm,1.1s						
ABTX	**Abilene, Hawle**	**15.31**	**20**		**P**	**11 51 32.8**	**-1.1**
ABTX				IAmb	IAmb	11 51 41.2	
	comp=Z,36nm,1.3s						
SN07	**Snyder 07**	**15.38**	**16**	IAmb	IAmb	11 51 42.2	
	comp=Z,40nm,1.2s						
Y22A	**Socorro**	**15.59**	**357**		**P**	**11 51 37.1**	**0.0**
Y22A				IAmb	IAmb	11 51 46.1	
	comp=Z,36nm,1.4s						
CRNM	**Carthage**	**15.59**	**357**	P	**P**	**11 51 37.9**	**+0.6**
BNM	**Barren Site**	**15.79**	**358**		**P**	**11 51 39.3**	**-0.1**
MSTX	**Muleshoe**	**15.83**	**9**		**P**	**11 51 38.8**	**-1.0**
DKNS	**Dickens**	**15.91**	**15**	IAmb	IAmb	11 51 52.7	
	comp=Z,41nm,1.1s						
PLPT	**Palo Pinto**	**15.95**	**24**		**P**	**11 51 39.2**	**-1.8**
PLPT				IAmb	IAmb	11 51 49.3	
	comp=Z,53nm,1.4s						
113A	**Mohawk Valley,**	**16.05**	**335**		**P**	**11 51 41.3**	**-0.8**
113A				IAmb	IAmb	11 51 49.6	
	comp=Z,31nm,1.1s						
MTO3	**Montecristo**	**16.30**	**101**		**P**	**11 51 44.5**	**-0.8**
FW06	**Azle**	**16.39**	**25**		**P**	**11 51 47.1**	**+1.2**
FW06				IAmb	IAmb	11 51 53.5	
	comp=Z,19nm,0.7s						
ANMO	**Albuquerque**	**16.57**	**358**	P	**P**	**11 51 48.2**	**+0.1**
	baz=178,slow=13,SNR=5.6						
ANMO				LR	LR	11 57 26.3	
	comp=Z,274nm,20.2s,baz=183,slow=34						
	comp=Z,0.8nm,0.8s						
ANMO	**Albuquerque**	**16.57**	**358**		**P**	**11 51 48.2**	**+0.1**
TASM	**ASL Pad, Albuq**	**16.57**	**358**		**P**	**11 51 48.5**	**+0.4**
WTFS	**Witchita Falls**	**16.75**	**22**	IAmb	IAmb	11 52 07.2	
	comp=Z,41nm,1.2s						
AMTX	**Amarillo**	**16.92**	**12**	IAmb	IAmb	11 52 01.1	
	comp=Z,59nm,1.4s						
BLYC	**Blythe**	**17.21**	**335**	IAmb	IAmb	11 52 12.5	
	comp=Z,34nm,1.5s						
SMWD	**Samnorwood**	**17.45**	**16**	IAmb	IAmb	11 52 06.3	
	comp=Z,23nm,1.0s						
X34A	**Smith Ranch, M**	**17.73**	**22**	IAmb	IAmb	11 52 18.8	
	comp=Z,58nm,1.3s						
WUAZ	**Wupatki**	**17.82**	**345**		**P**	**11 52 01.5**	**-0.4**
PMD	**Palm Desert**	**17.94**	**330**	P	**P**	**11 52 03.2**	**+0.1**
PFO	**Pinyon Flats O**	**17.95**	**330**	LR	LR	11 58 06.3	
	comp=Z,337nm,18.5s,baz=197,slow=34						
PFO	**Pinyon Flats O**	**17.95**	**330**	P	**P**	**11 52 02.7**	**-0.5**
BELC	**Belle Mtn. Jos**	**18.06**	**332**	P	**P**	**11 52 03.9**	**-0.6**
BELC				IAmb	IAmb	11 52 24.4	
	comp=Z,25nm,1.3s						
NEE2	**Needles Airpor**	**18.15**	**336**	P	**P**	**11 52 06.5**	**+1.2**
NEE2				IAmb	IAmb

	comp=Z,0.5nm,0.8s							
PDAR	**Pinedale Array**	**24.57**	**353**	P	**P**	**11 53 12.7**	**-0.5**
CLTN	**Cedars of Leba**	**24.72**	**40**	P	**P**	**11 53 16.1**	**+1.7**
CLTN				IAmb	IAmb	11 53 19.7	
	comp=Z,7.0nm,1.1s						
K30B	**Basset**	**24.85**	**11**		**P**	**11 53 17.2**	**+1.6**
T47A	**Sharon Grove**	**24.86**	**38**	IAmb	IAmb	11 53 22.7	
	comp=Z,12nm,0.9s						
GOGA	**Godfrey**	**25.06**	**49**		**P**	**11 53 19.2**	**+1.7**
LOHW	**Long Hollow**	**25.54**	**352**	IAmb	IAmb	11 53 33.5	
	comp=Z,19nm,1.3s						
FXWY	**Fox Creek**	**25.62**	**351**	IAmb	IAmb	11 53 38.7	
	comp=Z,9.8nm,0.9s						
MOOW	**Moose Ponds**	**25.69**	**352**	IAmb	IAmb	11 53 31.3	
	comp=Z,7.1nm,1.1s						
TKL	**Tuckaleechee C**	**26.09**	**44**	LR	LR	12 06 22.9	
	comp=Z,123nm,20.7s,baz=244,slow=42						
HODGE	**Hodges**	**26.35**	**48**	IAmb	IAmb	11 53 50.2	
	comp=Z,13nm,1.2s						
WVOR	**Wild Horse Val**	**26.38**	**338**	IAmb	IAmb	11 53 34.5	
	comp=Z,10nm,1.2s						
YNE	**Yellowstone No**	**26.84**	**353**	IAmb	IAmb	11 53 42.8	
	comp=Z,7.3nm,1.2s						
YBH	**Yreka Blue Hor**	**27.42**	**332**	LR	LR	12 04 08.9	
	comp=Z,22nm,19.3s,baz=154,slow=36						
BOZ	**Bozeman (W)**	**27.62**	**351**	IAmb	IAmb	11 53 46.4	
	comp=Z,7.8nm,1.2s						
BMO	**Blue Mountains**	**28.14**	**343**	IAmb	IAmb	11 53 49.3	
	comp=Z,7.0nm,1.4s						
NEW	**Newport**	**31.25**	**345**	LR	LR	12 05 45.5	
	comp=Z,165nm,20.9s,baz=118,slow=34						
ULM	**Lac du Bonnet**	**32.85**	**12**	P	**P**	**11 54 27.6**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=190,slow=8.8,SNR=1.5						
ULM				LR	LR	12 08 16.1	
	comp=Z,151nm,21.8s,baz=200,slow=37						
	comp=Z,2.4nm,0.7s						
ROSC	**El Rosal**	**33.60**	**110**	LR	LR	12 07 53.3	
	comp=Z,62nm,19.2s,baz=3.1,slow=35						
SADO	**Sadowa**	**34.55**	**34**	LR	LR	12 09 22.4	
	comp=Z,118nm,18.2s,baz=306,slow=37						
SDV	**Santo Domingo**	**35.44**	**101**	LR	LR	12 08 51.3	
	comp=Z,62nm,21.1s,baz=266,slow=35						
ATAH	**Atahualpa**	**37.07**	**131**	LR	LR	12 06 56.5	
	comp=Z,343nm,20.3s,baz=309,slow=31						
BBB	**Bella Bella**	**38.05**	**338**	LR	LR	12 10 41.4	
	comp=Z,141nm,19.5s,baz=188,slow=36						
NNA	**Nana**	**41.55**	**134**	LR	LR	12 09 22.4	
	comp=Z,260nm,19.3s,baz=316,slow=31						
TAOE	**Nuku Hiva Isla**	**43.29**	**234**	*e*LR	LR	12 07 28.5	
	comp=Z,197nm,24.7s						
DLBC	**Dease Lake**	**43.82**	**342**	LR	LR	12 14 38.7	
	comp=Z,259nm,19.1s,baz=126,slow=36						
YKA	**Yellowknife Ar**	**44.55**	**354**	LR	LR	12 15 23.7	
	comp=Z,263nm,18.3s,baz=130,slow=37						
RPN	**Rapa Nui**	**45.30**	**184**	LR	LR	12 10 24.0	
	comp=Z,54nm,21.5s,baz=20,slow=30						
RKT	**Rikitea**	**50.05**	**216**	*e*LR	LR	12 10 58.7	
	comp=Z,23µm,39.8s						
LPAZ	**La Paz**	**50.62**	**131**	P	**P**	**11 56 51.6**	**-1.5**
	comp=Z,3.2nm,1.2s,baz=321,slow=5.9,SNR=4.1						
LPAZ				LR	LR	12 15 48.0	
	comp=Z,183nm,19.7s,baz=289,slow=33						
	comp=Z,3.2nm,1.2s						
LPAZ	**La Paz**	**50.62**	**131**	P	**P**	**11 56 51.1**	**-2.0**
LPAZ				IAmb	IAmb	11 57 12.2	
	comp=Z,5.4nm,1.3s						
DIV	**Divide**	**51.19**	**336**	P	**P**	**11 56 57.4**	**+1.2**
G31M	**Satah River**	**51.94**	**346**	P	**P**	**11 57 01.9**	**+0.4**
G31M				IAmb	IAmb	11 57 05.7	
	comp=Z,6.8nm,1.0s						
FRB	**Frobisher Bay**	**51.99**	**20**	LR	LR	12 19 59.8	
	comp=Z,142nm,18.4s,baz=221,slow=37						
KDAK	**Kodiak Island**	**52.22**	**330**	LR	LR	12 15 31.6	
	comp=Z,96nm,19.2s,baz=13,slow=32						
J26L	**Joseph Creek**	**52.63**	**341**	P	**P**	**11 57 07.6**	**+0.7**
J26L				IAmb	IAmb	11 57 12.2	
	comp=Z,11nm,1.2s						
MDP	**Montagnes des**	**53.55**	**97**	LR	LR	12 21 44.9	
	comp=Z,40nm,18.6s,baz=281,slow=38						
F28M	**Old Crow**	**53.83**	**345**	P	**P**	**11 57 15.6**	**0.0**
IL31		**53.89**	**340**		**P**	**11 57 15.4**	**-0.5**
ILAR	**Eielson Array**	**53.89**	**340**	P	**P**	**11 57 13.9**	**-2.2**
	comp=Z,0.8nm,0.8s,baz=143,slow=5.9,SNR=8.9						
ILAR				LR	LR	12 21 03.8	
	comp=Z,88nm,18.2s,baz=98,slow=37						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**53.89**	**340**		**P**	**11 57 16.0**	**-0.1**
E29M	**Blow River**	**53.95**	**346**		**P**	**11 57 17.5**	**+1.0**
NEA2	**Nenana**	**54.51**	**339**	P	**P**	**11 57 20.2**	**-0.5**
D27M	**Malcolm River**	**55.33**	**346**	P	**P**	**11 57 26.5**	**0.0**
SIV	**San Ignacio**	**55.74**	**125**	LR	LR	12 18 52.6	
	comp=Z,219nm,19.8s,baz=294,slow=33						
PPT	**Papeete**	**55.85**	**233**	LR	LR	12 15 33.9	
	comp=Z,72nm,21.0s,baz=70,slow=30						
PPT2	**Papeete2**	**55.87**	**233**	*e*LR	LR	12 13 19.4	
	comp=Z,137nm,22.8s						
PPT2				*e*LR	LR	12 13 25.5	
	comp=Z,126nm,21.8s						
RES	**Resolute Bay**	**56.70**	**3**	LR	LR	12 21 40.3	
	comp=Z,111nm,18.1s,baz=53,slow=36						
H03N2	**Juan Fernandez**	**57.53**	**153**	T	T	12 59 46.0	
	baz=331,slow=77,SNR=13						
H03N1	**Juan Fernandez**	**57.54**	**153**	T	T	12 59 51.4	
	baz=331,slow=77,SNR=16						
H03N3	**Juan Fernandez**	**57.55**	**153**	T	T	12 59 44.2	
	baz=331,slow=77,SNR=14						
TBI	**Tubuai**	**59.39**	**227**	*e*LR	LR	12 14 58.3	
	comp=Z,682nm,23.8s						
SFJD	**Kangerlussuaq**	**59.99**	**22**	LR	LR	12 23 00.3	
	comp=Z,65nm,18.1s,baz=266,slow=35						
CPUP	**Villa Florida**	**64.74**	**132**	LR	LR	12 24 32.9	
	comp=Z,35nm,20.1s,baz=196,slow=34						
RAR	**Rarotonga**	**65.81**	**236**	LR	LR	12 20 24.4	
	comp=Z,124nm,20.2s,baz=104,slow=30						
BDFB	**Brasília**	**66.21**	**117**	LR	LR	12 26 52.6	
	comp=Z,61nm,20.4s,baz=308,slow=35						
PLCA	**Paso Flores**	**67.29**	**152**	LR	LR	12 22 04.1	
	comp=Z,205nm,18.2s,baz=314,slow=30						
SPITS	**Spitsbergen Ar**	**78.39**	**10**	LR	LR	12 35 51.0	
	comp=Z,137nm,18.3s,baz=294,slow=36						
SEY	**Seymchan**	**79.09**	**333**	LR	LR	12 31 46.0	
	comp=Z,48nm,20.9s,baz=64,slow=33						
PETK	**Petropavlovsk-**	**79.34**	**322**	LR	LR	12 27 31.3	
	comp=Z,41nm,21.5s,baz=100,slow=30						
NOA	**NORSAR Array B**	**86.42**	**26**	LR	LR	12 41 30.0	
	comp=Z,22nm,18.7s,baz=20,slow=37						
DZM	**Mont Dzumac**	**94.66**	**248**	*e*LR	LR	12 31 35.6	
	comp=Z,151nm,21.9s						

IDC ***27*** *11:53:55.6±1.3, 1°.32N×125°.72E, h0km, mb3.9/5, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=109.1km s-min=18.6km az=67.0*
DJA ***27*** *11:53:59.1±0.3, 1°.1N±3′×12°.6E±°, h10km, M4.0/14, mB4.6/2, mb4.1/4, MLv3.9/14, Mw(mB)3.8/2*

ISC 27 11:54:00.8±0.9, 1°.42N±0′.07×126°.25E±0′.07, h35km, n15, σ0s90/16, mb3.9/5, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**120**	P	**Pn**	**11 54 22.5**	**+0.2**
SGSI	**Sangihe**	**2.36**	**342**	P	**Pn**	**11 54 38.2**	**+1.0**
KMSI	**Cibinong**	**2.42**	**250**	P	**Pn**	**11 54 38.3**	**+0.4**
GTOI	**Gorontalo**	**3.33**	**257**	P	**Pn**	**11 54 51.9**	**+1.5**
SANI	**Sanana**	**3.46**	**184**	P	**Pn**	**11 54 52.7**	**+0.5**
LUWI	**Luwuk**	**4.25**	**235**	P	**Pn**	**11 55 03.2**	**+0.1**
MRSI	**Marisa**	**4.41**	**258**	P	**Pn**	**11 55 04.1**	**-1.2**
APSI	**Ampana**	**5.15**	**243**	P	**Pn**	**11 55 16.4**	**+0.9**
	0.2nm856nm61nm,0.8s						
TTSI	**Tana Toraja**	**7.81**	**235**	P	**Pn**	**11 55 52.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.40**	**182**	P	**P**	**11 58 23.6**	**-0.4**
	0.2nm,0.3s,baz=15,slow=8.8,SNR=6.8						
	1.3nm,0.7s						
WRA	**Warramunga Arr**	**22.66**	**160**	P	**P**	**11 58 59.1**	**-0.2**
	1.2nm,0.3s,baz=334,slow=12,SNR=12						
	1.2nm,0.3s						
ASAR	**Alice Springs**	**26.02**	**164**	P	**P**	**11 59 31.1**	**+0.3**
	1.0nm,0.4s,baz=348,slow=6.7,SNR=20						
ASAR				PcP	**PcP**	**12 02 58.7**	**+0.1**
	0.1nm,0.4s,baz=332,slow=2.2,SNR=1.5						
	1.0nm,0.4s						
STKA	**Stephens Creek**	**36.17**	**158**	P	**P**	**12 01 01.1**	**+1.0**
	1.4nm,0.5s,baz=322,slow=13,SNR=3.8						
	1.4nm,0.5s						
MKAR	**Makanchi Array**	**59.18**	**326**	P	**P**	**12 03 57.1**	**-1.2**
	0.5nm,0.5s,baz=122,slow=6.9,SNR=7.7						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.42**	**328**	P	**P**	**12 04 25.7**	**-1.3**
	0.7nm,0.6s,baz=133,slow=6.7,SNR=4.6						
	0.7nm,0.6s						

SKO ***27*** *12:02:54.4, 41°.66N×19°.36E, h0km, ML3.0*
TIR ***27*** *12:02:55.6, 41°.64N×19°.50E, h38km±2km, Ml3.0/5*
PDG ***27*** *12:02:56.2±0.3, 41°.54N×19°.50E, h11km, ML2.9/13, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
BEO ***27*** *12:02:57.0±0.7, 41°.63N×19°.47E, h20km, ML3.0/6*
IDC ***27*** *12:03:00.7±79.0, 42°.20N×20°.59E, h0km, mb3.6/2, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=1440.0km s-min=69.4km az=51.0*

ISC 27 12:02:55.3±0.9, 41°.55N±0′.02×19°.48E±0′.02, h16km±7km, n66, σ1s21/109, 11C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**124**	Pg	**Pg**	**12 03 02.5**	**+0.1**
TIR				Sg	**Sg**	**12 03 07.4**	**+0.1**
TIR				AML	AML	12 03 07.8	
	14nm,0.2s						
TIR				AML	AML	12 03 08.5	
	6.6nm,0.2s						
TIR	**Tirane**	**0.35**	**124**	Pg	**Pg**	**12 03 02.6**	**+0.1**
TIR				Sg	**Sg**	**12 03 06.5**	**-0.8**
TIR				AML	AML	12 03 07.8	
	14nm,0.2s						
ULC	**Ulcinj**	**0.46**	**337**	⇑*i*Pg	**Pg**	**12 03 03.9**	**-0.5**
ULC				*i* Sg	**Sb**	**12 03 11.2**	**-0.3**
SDA	**Shkodra**	**0.51**	**1**	Pg	**Pg**	**12 03 05.0**	**-0.3**
SDA				Sg	**Sg**	**12 03 11.7**	**-0.4**
SDA	**Shkodra**	**0.51**	**1**	Pg	**Pg**	**12 03 04.7**	**-0.6**
SDA				Sg	**Sb**	**12 03 13.2**	**+0.2**
DRME	**Dracevica, Mon**	**0.68**	**341**	*e*Pg	**Pg**	**12 03 08.2**	**-0.4**
DRME				*e*Sg	**Sn**	**12 03 20.1**	**-0.4**
DRME	**Dracevica, Mon**	**0.68**	**341**	⇑*i*Pg	**Pg**	**12 03 08.0**	**-0.6**
DRME				*i* Sg	**Sn**	**12 03 19.0**	**-1.5**
PHP	**Peshkopia**	**0.73**	**79**	Pg	**Pg**	**12 03 08.5**	**-1.0**
PHP				Sg	**Sb**	**12 03 19.4**	**-0.1**
PHP				AML	AML	12 03 27.0	
	3.7nm,0.6s						
PHP	**Peshkopia**	**0.73**	**79**	Pg	**Pg**	**12 03 08.6**	**-1.0**
PHP				Sg	**Sb**	**12 03 19.6**	**+0.1**
PHP				AML	AML	12 03 27.0	
	3.7nm,0.6s						
BUM	**Brajici-Budva**	**0.87**	**330**	⇑*i*Pg	**Pg**	**12 03 12.1**	**-0.1**
BUM				*i* Sg	**Sn**	**12 03 25.6**	**+0.2**
PDG	**Podgorica**	**0.90**	**349**	Pg	**Pb**	**12 03 12.2**	**-0.3**
PDG				Sg	**Sn**	**12 03 26.2**	**+0.2**
PDG	**Podgorica**	**0.90**	**349**	Pg	**Pb**	**12 03 11.9**	**-0.6**
PDG				Sg	**Sn**	**12 03 26.3**	**+0.2**
PDG	**Podgorica**	**0.90**	**349**	⇑P	**Pg**	**12 03 12.4**	**-0.4**
PDG				⇑S	**Sn**	**12 03 26.1**	**+0.2**
PDG	**Podgorica**	**0.90**	**349**	*e*Pg	**Pb**	**12 03 12.3**	**-0.3**
PDG				*e*Sg	**Sn**	**12 03 26.0**	**0.0**
PDG	**Podgorica**	**0.90**	**349**	⇓*i*Pg	**Pb**	**12 03 12.2**	**-0.3**
PDG				*i* Sg	**Sn**	**12 03 25.9**	**0.0**
VLO	**Vlora**	**1.07**	**179**	Pg	**Pb**	**12 03 14.9**	**-0.5**
VLO				Sg	**Sg**	**12 03 30.4**	**+0.3**
OHR	**Ohrid**	**1.08**	**113**	*i* Pg	**Pg**	**12 03 16.0**	**-0.2**
OHR				*i* Sg	**Sn**	**12 03 33.0**	**+2.4**
OHR				*e*Lg	Lg	12 03 33.4	
	comp=N,381nm,0.8s						
OHR				*e*Lg	Lg	12 03 35.1	
	comp=E,266nm,0.4s						
CEME	**Cevo**	**1.09**	**337**	⇓*i*Pg	**Pn**	**12 03 15.6**	**-0.3**
CEME				*i* Sg	**Sn**	**12 03 32.1**	**+1.4**
PVY	**Plav**	**1.11**	**19**	⇑*i*Pg	**Pb**	**12 03 15.5**	**-0.6**
PVY				*i* Sg	**Sn**	**12 03 32.6**	**+1.3**
HCY	**Herceg Novi**	**1.17**	**321**	⇓*i*Pg	**Pg**	**12 03 17.4**	**-0.3**
HCY				*i* Sg	**Sg**	**12 03 35.4**	**+2.4**
NKME	**Niksic**	**1.28**	**342**	⇑*i*Pg	**Pg**	**12 03 19.3**	**-0.7**
NKME				*i* Sg	**Sg**	**12 03 38.2**	**+1.5**
KOME	**Kolasin**	**1.30**	**1**	*e*Pg	**Pg**	**12 03 20.8**	**+0.4**
KOME				*e*Sg	**Sg**	**12 03 37.4**	**0.0**
KOME	**Kolasin**	**1.30**	**1**	⇓*i*Pg	**Pb**	**12 03 19.5**	**0.0**
KOME				*i* Sg	**Sg**	**12 03 39.4**	**+2.0**
KBN	**Korca**	**1.35**	**133**	Pg	**Pn**	**12 03 19.4**	**-0.1**
KBN				Sg	**Sg**	**12 03 40.8**	**+2.0**
KBN	**Korca**	**1.35**	**133**	Pn	**Pg**	**12 03 21.6**	**+0.3**
IVA	**Berane**	**1.36**	**13**	⇓*i*Pg	**Pb**	**12 03 20.3**	**-0.1**
IVA				*i* Sg	**Sg**	**12 03 41.5**	**+2.3**
SKO	**Skopje**	**1.52**	**73**	*i* Pg	**Pb**	**12 03 22.4**	**-0.7**
SKO				*i* Sg	**Sg**	**12 03 44.5**	**0.0**
BRY	**Bratogost**	**1.53**	**333**	⇓*i*Pg	**Pb**	**12 03 23.3**	**0.0**
BRY				*i* Sg	**Sg**	**12 03 45.7**	**+1.2**
NEST	**Nestorio**	**1.64**	**133**	Pn	**Pg**	**12 03 26.2**	**-0.5**
NEST				Sn	**Sg**	**12 03 47.9**	**-0.1**
NEST				AML	AML	12 03 52.5	
	comp=E,0.6nm,0.7s						
NEST	**Nestorio**	**1.64**	**133**	Pn	**Pg**	**12 03 26.0**	**-0.7**
NEST				Sn	**Sg**	**12 03 48.3**	**+0.3**
NEST				AML	AML	12 03 52.5	
	comp=E,0.6nm,0.7s						
NEST				AML	AML	12 03 53.5	
	comp=E,0.5nm,0.4s						
UPM	**Unac-Piva**	**1.71**	**346**	⇑*i*Pn	**Pb**	**12 03 25.5**	**-1.0**
UPM				*i* Sn	**Sg**	**12 03 50.9**	**+0.5**
SJES	**Sjenica**	**1.75**	**12**	*e*Pg	**Pg**	**12 03 28.7**	**-0.2**
SJES				*e*Sg	**Sb**	**12 03 49.6**	**+0.6**
PLE	**Pljevlja**	**1.79**	**358**	⇓*i*Pn	**Pb**	**12 03 28.0**	**+0.3**
PLE				*i* Sn	**Sg**	**12 03 52.2**	**-0.6**
STON	**Ston**	**1.87**	**316**	*e*Pg	**Pb**	**12 03 29.5**	**+0.4**
STON				*e*Sg	**Sb**	**12 03 51.4**	**-0.9**
NOCI	**Noci**	**1.98**	**248**	Pn	**Pn**	**12 03 28.3**	**+0.2**
NOCI	**Noci**	**1.98**	**248**	Pn	**Pb**	**12 03 29.9**	**-1.0**
IVAS	**Ivanjica**	**2.09**	**13**	*e*Pn	**Pn**	**12 03 30.6**	**+0.9**
IVAS				*e*Sn	**Sn**	**12 03 53.4**	**-2.0**
IGT	**Igoumenitsa**	**2.11**	**162**	Pn	**Pn**	**12 03 31.5**	**+1.5**
IGT				Sg	**Sb**	**12 04 01.0**	**+1.9**
IGT	**Igoumenitsa**	**2.11**	**162**	Pn	**Pn**	**12 03 31.5**	**+1.5**
IGT				Sn	**Sn**	**12 03 56.4**	**+0.5**
IGT	**Igoumenitsa**	**2.11**	**162**	*i* Pn	**Pn**	**12 03 31.2**	**+1.3**
BARS	**Barje**	**2.15**	**53**	*i* Pn	**Pb**	**12 03 31.9**	**-1.9**
BARS				*i* Sn	**Sb**	**12 03 60.0**	**-0.3**
BARS	**Barje**	**2.15**	**53**	*e*Pn	**Pb**	**12 03 32.0**	**-1.8**
GOCS	**Kraljevo Serbi**	**2.26**	**27**	*e*Pn	**Pn**	**12 03 33.4**	**+1.3**
GOCS				*e*Sn	**Sn**	**12 03 58.2**	**-1.6**
GRG	**Griva**	**2.28**	**104**	*i* Pn	**Pn**	**12 03 33.9**	**+1.6**
GRG				*i* Sn	**Sn**	**12 03 59.8**	**-0.2**
MATE	**Matera**	**2.28**	**248**	⇑P	**Pn**	**12 03 32.4**	**+0.1**
BBLS	**Lazi&#263i**	**2.32**	**359**	*e*Pn	**Pn**	**12 03 31.3**	**-1.6**
VAY	**Valandovo**	**2.33**	**94**	*i* Pn	**Pg**	**12 03 38.2**	**-1.8**
VAY				*i* Sn	**Sn**	**12 04 02.6**	**+1.4**
VAY				*e*Lg	Lg	12 04 03.2	
	comp=E,67nm,0.7s						
VAY				*e*Lg	Lg	12 04 09.8	
	comp=N,70nm,0.8s						
BOSS	**Bosilegrad**	**2.43**	**66**	*e*Pn	**Pb**	**12 03 36.5**	**-2.1**
BOSS				*e*Sn	**Sn**	**12 04 02.7**	**-1.0**
KNT	**Kendrikon**	**2.60**	**97**	*i* Pn	**Pn**	**12 03 38.4**	**+1.7**
LIT	**Litokhoron**	**2.70**	**121**	*i* Pn	**Pb**	**12 03 41.1**	**-2.1**
KKB	**Krupnik**	**2.75**	**83**	*i* Pn	**Pn**	**12 03 40.4**	**+1.7**
KKB				*i* Sn	**Sn**	**12 04 13.1**	**+1.5**
THE	**Thessaloniki**	**2.79**	**108**	*i* Pn	**Pn**	**12 03 40.2**	**+1.0**
SGRT	**San Giovanni R**	**2.81**	**276**	Pn	**Pn**	**12 03 39.1**	**-0.5**
ZAPS	**Zavoj**	**2.90**	**52**	*e*Sn	**Sn**	**12 04 14.9**	**-0.6**
ZAGS	**Zajecar**	**3.04**	**41**	*e*Pn	**Pn**	**12 03 44.0**	**+1.3**
ZAGS				*e*Sn	**Sn**	**12 04 16.9**	**-1.9**
SRS	**Serrai**	**3.12**	**97**	*i* Pn	**Pn**	**12 03 45.6**	**+1.7**
TIP	**Timpagrande**	**3.15**	**222**	⇓P	**Pn**	**12 03 44.0**	**-0.2**
CUC	**Castrocucco**	**3.19**	**242**	Pn	**Pn**	**12 03 45.8**	**+1.0**
MDVR	**Moldovita**	**3.62**	**26**	⇓P	**Pn**	**12 03 53.1**	**+2.3**
BZS	**Buzias**	**4.36**	**20**	⇓P	**Pn**	**12 04 03.1**	**+2.4**
GZR	**Gura Zlata**	**4.53**	**31**	⇑P	**Pn**	**12 04 06.4**	**+3.1**
VOIR		**5.61**	**44**	⇑P	**Pn**	**12 04 21.2**	**+3.1**
MLR	**Muntele Rosu**	**6.13**	**48**	⇓P	**Pn**	**12 04 28.7**	**+3.4**
FINES	**FINESS Array B**	**20.32**	**9**	P	**P**	**12 07 29.7**	**-0.7**
	comp=N,0.1nm,0.3s,baz=187,slow=9.7,SNR=4.9						
	comp=N,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**44.10**	**51**	P	**P**	**12 11 01.9**	**-0.6**
	comp=N,0.6nm,0.4s,baz=284,slow=7.1,SNR=4.1						
	comp=N,0.6nm,0.4s						
MKAR	**Makanchi Array**	**44.30**	**61**	P	**P**	**12 11 03.5**	**-0.6**
	comp=N,0.3nm,0.4s,baz=296,slow=6.5,SNR=4.8						
	comp=N,0.3nm,0.4s						

JMA ***27*** *12:08:04.8±0.8, 44°.N±4°×14°.8E±°, h0km, MV3.5/15, SE OFF ETOROFU*

SKHL ***27*** *12:08:07.0±0.2, 44°.50N×148°.40E, h45km±5km, mb4.0/3*

ISC 27 12:08:05.4±4.2, 44°.4N±0°.1×148°.4E±0°.3, h55km, n10, σ1s47/15, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.89**	**335**	*e*P	**Pn**	**12 08 21.8**	**0.0**
KUR				AMB	AMB	12 08 22.6	
	110nm,0.3s						
KUR				*e*S	**Sn**	**12 08 33.1**	**-0.7**
KUR				A	A	12 08 34.7	
	330nm,0.2s						
KUR				A	A	12 08 34.7	
	330nm,0.2s						
NEM2	**Nemuro 2**	**2.19**	**242**	*e*P	**Pn**	**12 08 39.0**	**-0.4**
NEM2				S	**Sn**	**12 09 04.5**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.20**	**242**	*e*P	**Pn**	**12 08 39.0**	**-0.5**
NMR				AMB	AMB	12 08 41.7	
	30nm,0.6s						
NMR				*e*S	**Sn**	**12 09 02.8**	**-2.7**
JRA	**Rausu**	**2.41**	**259**	*e*P	**Pn**	**12 08 43.9**	**+1.6**
JNSB	**Nemuroshibetsu**	**2.53**	**256**	*e*P	**Pn**	**12 08 45.0**	**+1.0**
AKK	**Akkeshi**	**2.94**	**243**	*e*P	**Pn**	**12 08 51.1**	**+1.5**
AKK				AMB	AMB	12 08 51.6	
	50nm,0.6s						
AKK				*e*S	**Sn**	**12 09 23.2**	**-0.4**
AKK				A	A	12 09 24.9	
	60nm,0.4s						
AKK				A	A	12 09 24.9	
	50nm,0.4s						
JAK	**Akkeshi**	**3.04**	**243**	*e*P	**Pn**	**12 08 51.3**	**+0.3**
JAK				*e*S	**Sn**	**12 09 24.9**	**-1.3**
JAR	**Ashorobuto**	**3.53**	**253**	*e*P	**Pn**	**12 08 59.6**	**+1.8**
JCH	**Churui**	**4.09**	**245**	*e*P	**Pn**	**12 09 07.5**	**+2.2**
JNBK	**Urakawa-nobuka**	**4.64**	**244**	*e*P	**Pn**	**12 09 13.8**	**+0.8**

HEL 27 12:08:38.0±0.1, 64°.12N×28°.14E, h0km, ML1.3, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIF	**Nilsia**	**0.75**	**191**	PG	Pg	12 08 51.5	-0.8
NIF				SG	Sg	12 09 00.8	-1.2
NIF				smax	smax	12 09 01.4	
	comp=Z,1.5nm,0.2s						
OUL	**Oulu**	**1.37**	**316**	PN	Pg	12 09 03.3	-0.8
	baz=136						
OUL				SG	Sg	12 09 20.9	-0.9
OBF4	**Vikkela, Lumij**	**1.49**	**299**	PN	Pb	12 09 06.3	-0.2
OBF4				smax	smax	12 09 22.6	
	comp=Z,1.9nm,0.2s						
OUF	**Merijarvi**	**1.51**	**281**	PG	Pn	12 09 04.8	-1.4
OUF				smax	smax	12 09 23.4	
	comp=Z,3.6nm,0.2s						
OUF				SG	Sg	12 09 24.0	-2.4
KU1	**Kurvinen**	**1.57**	**22**	PG	Pn	12 09 06.4	-0.7
KU1				SG	Sn	12 09 26.7	-1.4
KU2	**Taivalkoski**	**1.59**	**1**	SN	Sn	12 09 27.8	-1.0
SUF	**Sumiainen**	**1.67**	**213**	PG	Pn	12 09 07.9	-0.5
SUF				smax	smax	12 09 27.8	
	comp=Z,0.8nm,0.2s						
SUF				SN	Sn	12 09 29.7	-0.7
OBF0	**Syolatti, Pyha**	**1.74**	**284**	PG	Pn	12 09 09.0	-0.4
OBF0				smax	smax	12 09 29.8	
	comp=Z,2.6nm,0.2s						
OBF0				SG	Sn	12 09 31.2	-1.1
MSF	**Maaselka**	**1.84**	**12**	PG	Pn	12 09 10.8	0.0
JOF	**Joensuu**	**1.87**	**129**	PG	Pn	12 09 11.3	+0.2
	baz=309						
JOF				SG	Sn	12 09 35.7	+0.3
RANF	**Ranua**	**1.98**	**344**	PG	Pn	12 09 13.6	+0.8
KU6	**Riekki**	**2.05**	**20**	PG	Pn	12 09 14.3	+0.6
	baz=203						
KU6				smax	smax	12 09 38.9	
	comp=Z,1.4nm,0.2s						
KU6				SG	Sb	12 09 41.2	-0.9
OBF8	**Ulkokalla**	**2.06**	**278**	smax	smax	12 09 39.2	
	comp=Z,1.2nm,0.2s						
OBF8				SG	Sb	12 09 42.7	+0.4

0.2nm,0.7s
KBZ Khabaz 54.04 310 P **P** 12 43 44.8 -0.3
0.8nm,0.4s,baz=72,slow=6.4,SNR=1.7
0.8nm,0.4s
IDI Anoyia 68.13 301 LR LR 13 22 08.8
comp=Z,73nm,18.2s,baz=164,slow=42

IDC ***27*** *12:42:03.1±1.4, 41°.49N×19°.43E, h0km, mb3.6/8, mbtmp3.7/14, ML2.8/3, MS2.9/2, Error ellipse: s-maj=26.0km s-min=11.9km az=25.0*
SKO ***27*** *12:42:05.7, 41°.68N×19°.38E, h0km, ML3.5*
THE ***27*** *12:42:06.7, 42°N×7°×2°.0E±1°.0, h2km±32km, M3.1/28, MLh3.1/28*
PDG ***27*** *12:42:06.8±0.2, 41°.58N×19°.55E, h11km±1km, MD3.4/7, ML3.3/12, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
TIR ***27*** *12:42:07.2, 41°.67N×19°.57E, h29km±2km, Ml3.7/7*
BEO ***27*** *12:42:07.9±0.5, 41°.62N×19°.52E, h17km±3km, ML3.4/17*
ISC 27 12:42:06.9±0.9, **41°.61N**±0°.02×**19°.51E**±0°.02, **h19**km±3km, **n157**, σ1°**44**/216, **mb3.6**/5, **18C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.38**	**134**	Pg	**Pg**	**12 42 14.5**	**-0.3**
TIR				Sg	**Sg**	**12 42 19.8**	**-0.5**
TIR				AML	AML	12 42 20.7	
	11nm,0.5s						
TIR	**Tirane**	**0.38**	**134**	*i* Pg	**Pg**	**12 42 14.4**	**-0.4**
TIR				*i* Sg	**Sb**	**12 42 20.9**	**+0.4**
ULC	**Ulcinj**	**0.40**	**331**	⇓*i*Pg	**Pg**	**12 42 14.8**	**-0.5**
ULC				*i* Sg	**Sb**	**12 42 21.2**	**0.0**
SDA	**Shkodra**	**0.44**	**359**	Pg	**Pg**	**12 42 15.3**	**-0.7**
SDA				Sg	**Sg**	**12 42 22.2**	**+0.1**
DRME	**Dracevica, Mon**	**0.62**	**337**	*e*Pg	**Pg**	**12 42 18.7**	**-0.6**
DRME				*e*Sg	**Sn**	**12 42 30.9**	**+0.8**
DRME	**Dracevica, Mon**	**0.62**	**337**	⇑*i*Pg	**Pg**	**12 42 18.5**	**-0.8**
DRME				*i* Sg	**Sb**	**12 42 28.4**	**+1.1**
PHP	**Peshkopia**	**0.70**	**84**	Pg	**Pb**	**12 42 19.7**	**-0.9**
PHP				Sg	**Sb**	**12 42 30.0**	**+0.2**
PHP				AML	AML	12 42 34.2	
	14nm,0.4s						
PHP	**Peshkopia**	**0.70**	**84**	P	**Pb**	**12 42 19.4**	**-1.1**
PHP				S	**Sg**	**12 42 30.6**	**+0.3**
BUM	**Brajici-Budva**	**0.82**	**327**	⇑*i*Pg	**Pb**	**12 42 22.0**	**-0.6**
BUM				*i* Sg	**Sn**	**12 42 35.6**	**+0.4**
PDG	**Podgorica**	**0.84**	**347**	Pg	**Pb**	**12 42 21.7**	**-1.1**
PDG				Sg	**Sn**	**12 42 35.4**	**0.0**
PDG	**Podgorica**	**0.84**	**347**	⇑P	**Pb**	**12 42 22.8**	**0.0**
PDG				⇓S	**Sg**	**12 42 34.8**	**+0.4**
PDG	**Podgorica**	**0.84**	**347**	*e*Pg	**Pb**	**12 42 22.2**	**-0.6**
PDG				*e*Sg	**Sn**	**12 42 35.1**	**-0.3**
PDG	**Podgorica**	**0.84**	**347**	⇓*i*Pg	**Pb**	**12 42 22.2**	**-0.6**
PDG				*i* Sg	**Sn**	**12 42 35.5**	**+0.1**
CEME	**Cevo**	**1.03**	**335**	⇑*i*Pg	**Pb**	**12 42 25.9**	**-0.2**
CEME				*i* Sg	**Sn**	**12 42 42.4**	**+2.1**
PVY	**Plav**	**1.04**	**19**	⇓*i*Pg	**Pb**	**12 42 25.2**	**-1.1**
PVY				*i* Sg	**Sn**	**12 42 41.4**	**+0.9**
OHR	**Ohrid**	**1.09**	**117**	*i* Pg	**Pb**	**12 42 27.2**	**+0.1**
OHR				*i* Sg	**Sg**	**12 42 44.7**	**+2.2**
OHR				*e*Lg	Lg	12 42 45.9	
	comp=E,609nm,0.5s						
OHR				*e*Lg	Lg	12 42 48.4	
	comp=N,1µm,0.7s						
HCY	**Herceg Novi**	**1.12**	**318**	⇑*i*Pg	**Pg**	**12 42 28.3**	**-0.4**
HCY				*i* Sg	**Sg**	**12 42 45.5**	**+2.1**
VLO	**Vlora**	**1.14**	**180**	Pg	**Pg**	**12 42 29.9**	**+0.9**
VLO				Sg	**Sg**	**12 42 45.2**	**+1.1**
VLO				AML	AML	12 42 54.0	
	comp=N,16nm,0.3s						
VLO	**Vlora**	**1.14**	**180**	P	**Pg**	**12 42 28.6**	**-0.5**
NKME	**Niksic**	**1.22**	**341**	⇑*i*Pg	**Pn**	**12 42 29.2**	**+0.2**
NKME				*i* Sg	**Sg**	**12 42 48.8**	**+2.2**
KOME	**Kolasin**	**1.24**	**0**	*e*Pg	**Pn**	**12 42 29.5**	**+0.3**
KOME				*e*Sg	**Sg**	**12 42 48.6**	**+1.6**
KOME	**Kolasin**	**1.24**	**0**	⇑*i*Pg	**Pn**	**12 42 29.4**	**+0.2**
KOME				*i* Sg	**Sg**	**12 42 48.2**	**+1.2**
BEY	**Berane**	**1.29**	**13**	*e*Pg	**Pn**	**12 42 30.4**	**+0.5**
IVA	**Berane**	**1.29**	**13**	⇑*i*Pg	**Pn**	**12 42 30.3**	**+0.4**
IVA				*i* Sg	**Sg**	**12 42 50.1**	**+1.4**
TREB	**Trebinje**	**1.40**	**322**	*e*Pg	**Pb**	**12 42 32.3**	**0.0**
TREB				*e*Sg	**Sg**	**12 42 52.7**	**+0.6**
BRY	**Bratogost**	**1.47**	**331**	⇑*i*Pg	**Pb**	**12 42 33.7**	**0.0**
BRY				*i* Sg	**Sg**	**12 42 56.1**	**+1.5**
SKO	**Skopje**	**1.49**	**75**	*i* Pg	**Pb**	**12 42 34.1**	**+0.2**
SKO				*i* Sg	**Sg**	**12 42 55.2**	**+0.1**
NEST	**Nestorio**	**1.67**	**135**	Pn	**Pb**	**12 42 37.5**	**+0.4**
NEST				Sn	**Sg**	**12 43 00.5**	**-0.4**
NEST				AML	AML	12 43 03.6	
	comp=N,1.6nm,0.8s						
NEST	**Nestorio**	**1.67**	**135**	P	**Pb**	**12 42 37.2**	**+0.1**
NEST				S	**Sg**	**12 42 59.6**	**-1.3**
SJES	**Sjenica**	**1.68**	**12**	*e*Pg	**Pb**	**12 42 37.5**	**+0.2**
SJES				*e*Sg	**Sg**	**12 43 00.7**	**-0.5**
PLE	**Pljevlja**	**1.72**	**357**	*e*Pg	**Pb**	**12 42 38.8**	**+0.9**
PLE	**Pljevlja**	**1.72**	**357**	⇓*i*Pg	**Pb**	**12 42 38.7**	**+0.8**
PLE				*i* Sn	**Sg**	**12 43 02.4**	**+0.1**
PENT	**Pentalofos**	**1.88**	**138**	P	**Pb**	**12 42 40.3**	**-0.4**
PENT				S	**Sb**	**12 43 05.0**	**+1.3**
SELS	**Selova**	**2.00**	**36**	*e*Pn	**Pn**	**12 42 41.0**	**+1.4**
SELS				*e*Sn	**Sn**	**12 43 05.9**	**+1.8**
NOCI	**Noci**	**2.02**	**247**	Pn	**Pb**	**12 42 43.7**	**+0.8**
NOCI				AML	AML	12 43 19.7	
	comp=N,3.2nm,0.4s						
NOCI				AML	AML	12 43 25.2	
	comp=N,3.1nm,0.5s						
IVAS	**Ivanjica**	**2.02**	**13**	*e*Pn	**Pn**	**12 42 41.1**	**+1.2**
IVAS				*e*Sn	**Sn**	**12 43 06.2**	**+1.6**
BARS	**Barje**	**2.09**	**54**	*i* Pn	**Pn**	**12 42 42.2**	**+1.3**
BARS				*i* Sn	**Sb**	**12 43 09.6**	**-0.2**
BARS	**Barje**	**2.09**	**54**	*e*Pn	**Pn**	**12 42 42.0**	**+1.1**
BARS				*e*Sn	**Sn**	**12 43 08.4**	**+2.0**
IGT	**Igoumenitsa**	**2.17**	**163**	Pn	**Pb**	**12 42 44.2**	**-1.4**
IGT				Sn	**Sb**	**12 43 10.4**	**-1.6**
IGT				AML	AML	12 43 30.4	
	comp=N,1.1nm,0.7s						
IGT	**Igoumenitsa**	**2.17**	**163**	P	**Pn**	**12 42 42.7**	**+0.7**
IGT	**Igoumenitsa**	**2.17**	**163**	*i* Pn	**Pn**	**12 42 43.2**	**+1.2**
GOCS	**Kraljevo Serbi**	**2.19**	**27**	*e*Pn	**Pn**	**12 42 43.7**	**+1.3**
GOCS				*e*Sn	**Sn**	**12 43 09.8**	**+0.8**
LFKM	**Lefkimmi**	**2.21**	**169**	P	**Pn**	**12 42 43.3**	**+0.9**
LFKM				S	**Sb**	**12 43 13.0**	**0.0**
JAN	**Janina**	**2.21**	**152**	P	**Pn**	**12 42 44.2**	**+1.7**
BBLS	**Lazi&#263i**	**2.25**	**358**	*e*Pn	**Pn**	**12 42 45.8**	**-1.2**
BBLS				*e*Sn	**Sb**	**12 43 13.2**	**-1.2**
GRG	**Griva**	**2.28**	**106**	P	**Pn**	**12 42 44.5**	**+1.1**
GRG	**Griva**	**2.28**	**106**	*i* Pn	**Pn**	**12 42 45.5**	**+2.0**
GRG				*i* Sn	**Sn**	**12 43 13.2**	**+2.2**
VAY	**Valandovo**	**2.32**	**96**	*i* Pn	**Pn**	**12 42 45.5**	**+1.5**
VAY				*i* Sn	**Sn**	**12 43 13.8**	**+1.8**
VAY				*e*Lg	Lg	12 43 15.0	
	comp=E,202nm,0.7s						
VAY				*e*Lg	Lg	12 43 16.6	
	comp=N,235nm,0.9s						
MATE	**Matera**	**2.33**	**246**	⇑P	**Pn**	**12 42 43.6**	**-0.5**
BOSS	**Bosilegrad**	**2.38**	**67**	*e*Pn	**Pn**	**12 42 46.1**	**+1.2**
GRUS	**Gruza**	**2.44**	**21**	*e*Pn	**Pn**	**12 42 47.2**	**+1.5**
BOVS	**Bovan**	**2.59**	**38**	⇓P	**Pn**	**12 42 49.7**	**+1.9**
BOVS				⇓S	**Sn**	**12 43 20.8**	**+2.2**
BOVS	**Bovan**	**2.59**	**38**	*e*Pn	**Pn**	**12 42 48.7**	**+1.0**
BOVS				*e*Sn	**Sn**	**12 43 19.7**	**+1.1**
KNT	**Kendrikon**	**2.59**	**99**	P	**Pn**	**12 42 49.1**	**+1.3**
KNT	**Kendrikon**	**2.59**	**99**	*i* Pn	**Pn**	**12 42 49.2**	**+1.5**
KNT				*i* Sn	**Sn**	**12 43 21.0**	**+2.3**
TETR	**Tetrakomo, Epi**	**2.64**	**149**	P	**Pn**	**12 42 50.1**	**+1.6**
TRUS	**Trudelj**	**2.69**	**14**	*e*Pn	**Pn**	**12 42 51.0**	**+1.9**
TRUS				*e*Sn	**Sn**	**12 43 23.9**	**+2.8**
KKB	**Krupnik**	**2.72**	**84**	P	**Pn**	**12 42 51.0**	**+1.5**
KKB	**Krupnik**	**2.72**	**84**	*i* Pn	**Pn**	**12 42 51.2**	**+1.7**
KKB				*i* Sn	**Sn**	**12 43 24.3**	**+2.4**
LIT	**Litokhoron**	**2.72**	**123**	P	**Pn**	**12 42 51.2**	**+1.7**
LIT	**Litokhoron**	**2.72**	**123**	*i* Pn	**Pn**	**12 42 51.4**	**+1.9**
THE	**Thessaloniki**	**2.79**	**109**	P	**Pn**	**12 42 51.9**	**+1.4**
THE	**Thessaloniki**	**2.79**	**109**	*i* Sn	**Sn**	**12 43 25.0**	**+1.5**
THL	**Klokotos Trika**	**2.80**	**136**	P	**Pn**	**12 42 52.2**	**+1.7**
TYRN	**Tyrnavos**	**2.81**	**132**	P	**Pn**	**12 42 53.1**	**+2.3**
SGRT	**San Giovanni R**	**2.82**	**274**	Pn	**Pn**	**12 42 50.5**	**-0.5**
ZAPS	**Zavoj**	**2.85**	**53**	*e*Pn	**Pn**	**12 42 52.8**	**+1.5**
ZAPS				*e*Sn	**Sn**	**12 43 26.5**	**+1.5**
HORT	**Hortiatis**	**2.90**	**109**	P	**Pn**	**12 43 53.2**	**+1.2**
TEKS	**Tekeris**	**2.93**	**0**	*e*Pn	**Pn**	**12 42 53.8**	**+1.3**
VTS	**Vitosha**	**2.95**	**69**	P	**Pn**	**12 42 53.2**	**+0.4**
VTS	**Vitosha**	**2.95**	**69**	*e*Pn	**Pn**	**12 42 54.5**	**+1.7**
ZAGS	**Zajecar**	**2.98**	**42**	*e*Pn	**Pn**	**12 42 54.6**	**+1.6**
ZAGS				*e*Sn	**Sn**	**12 43 28.5**	**+0.3**
SOH	**Sokhos**	**3.01**	**104**	P	**Pn**	**12 42 54.0**	**+0.5**
SOH	**Sokhos**	**3.01**	**104**	*i* Pn	**Pn**	**12 42 55.4**	**+1.9**
SOH				*i* Sn	**Sn**	**12 43 29.7**	**+0.6**
BLKB	**Belogradchik**	**3.08**	**48**	⇓S	**Sn**	**12 43 34.4**	**+3.5**
BLKB	**Belogradchik**	**3.08**	**48**	*e*Pn	**Pn**	**12 42 56.7**	**+2.2**
BORS2	**Bor- Borsko je**	**3.09**	**36**	*e*Pn	**Pn**	**12 42 54.6**	**0.0**
BORS2				*e*Sn	**Sn**	**12 43 30.6**	**-0.3**
SRS	**Serrai**	**3.12**	**98**	P	**Pn**	**12 42 56.6**	**+1.7**
SRS	**Serrai**	**3.12**	**98**	*i* Pn	**Pn**	**12 42 56.8**	**+1.9**
AVAS	**Avala Beograd**	**3.17**	**13**	*e*Sn	**Sn**	**12 43 32.3**	**-0.6**
MMB	**Musomishta**	**3.18**	**90**	P	**Pn**	**12 42 57.6**	**+1.7**
MMB	**Musomishta**	**3.18**	**90**	*i* Pn	**Pn**	**12 42 58.3**	**+2.4**
MMB				*i* Sn	**Sb**	**12 43 37.7**	**-3.5**
TIP	**Timpagrande**	**3.21**	**222**	⇑P	**Pn**	**12 42 55.9**	**-0.4**
KUBS	**Kucevo**	**3.22**	**29**	*e*Pn	**Pn**	**12 42 56.1**	**-0.2**
KUBS				*e*Sn	**Sn**	**12 43 33.4**	**-0.7**
EVR	**Evrytania**	**3.22**	**146**	P	**Pn**	**12 42 58.4**	**+1.9**
PLG	**Polygyros**	**3.23**	**111**	P	**Pn**	**12 42 58.1**	**+1.6**
MAKR	**Makrakomi, Fth**	**3.28**	**141**	P	**Pn**	**12 42 58.3**	**+1.1**
MAKR				S	**Sn**	**12 43 39.2**	**+3.4**
PVO	**Paravola**	**3.37**	**152**	P	**Pn**	**12 42 59.6**	**+1.2**
AGG	**Agios Georgios**	**3.37**	**139**	P	**Pn**	**12 43 00.2**	**+1.8**
ANX	**Ano Chora**	**3.54**	**148**	P	**Pn**	**12 43 02.7**	**+1.8**
MDVR	**Moldovita**	**3.55**	**26**	⇑P	**Pn**	**12 43 02.1**	**+1.1**
MDVR	**Moldovita**	**3.55**	**26**	*e*Pn	**Pn**	**12 43 02.1**	**+1.1**
EFP	**Efpalio**	**3.68**	**149**	P	**Pn**	**12 43 04.4**	**+1.7**
SERG	**Sergoula**	**3.75**	**148**	P	**Pn**	**12 43 04.7**	**+1.0**
KAVA	**Kavala**	**3.82**	**98**	P	**Pn**	**12 43 06.3**	**+1.7**
HERR	**Herculane**	**3.90**	**32**	⇓P	**Pn**	**12 43 07.1**	**+1.4**
PLD	**Plovdiv**	**3.95**	**81**	P	**Pn**	**12 43 08.2**	**+1.8**
PLD	**Plovdiv**	**3.95**	**81**	*i* Pn	**Pn**	**12 43 08.5**	**+2.1**
PLD	**Plovdiv**	**3.95**	**81**	*e*Pn	**Pn**	**12 43 08.5**	**+2.1**
ATAL	**Atalanti**	**3.97**	**136**	P	**Pn**	**12 43 07.8**	**+1.1**
THAS	**Thassos island**	**4.07**	**103**	P	**Pn**	**12 43 08.7**	**+0.8**
KLV	**Kalavryta, Ach**	**4.11**	**149**	P	**Pn**	**12 43 10.0**	**+1.4**
PLVB	**Pleven**	**4.18**	**63**	⇓P	**Pn**	**12 43 11.4**	**+1.9**
BZS	**Buzias**	**4.29**	**20**	⇓P	**Pn**	**12 43 12.4**	**+1.5**
BZS				⇑S	**Sn**	**12 44 00.6**	**+0.2**
KDZ	**Kurdzhali**	**4.37**	**88**	P	**Pn**	**12 43 14.0**	**+1.8**
GZR	**Gura Zlata**	**4.46**	**31**	⇓P	**Pn**	**12 43 15.6**	**+2.1**
SURR	**Surduc**	**4.55**	**24**	⇑P	**Pn**	**12 43 16.0**	**+1.3**
RDO	**Rodhopi**	**4.56**	**94**	P	**Pn**	**12 43 16.1**	**+1.3**
MORH	**Mrgy, Hungar**	**4.64**	**353**	*e*Pn	**Pn**	**12 43 17.9**	**+2.0**
ELND	**Elena**	**4.91**	**72**	⇑P	**Pn**	**12 43 21.6**	**+2.1**
SIRR	**Siria**	**4.91**	**18**	⇓P	**Pn**	**12 43 21.3**	**+1.8**
LOT	**Lotru**	**4.93**	**38**	⇑P	**Pn**	**12 43 21.7**	**+1.7**
BOJS	**Bojanci**	**4.97**	**323**	*e*Pn	**Pn**	**12 43 21.5**	**+1.2**
BOJS	**Bojanci**	**4.97**	**323**	*i* Pn	**Pn**	**12 43 21.5**	**+1.2**
BOJS				*i* Sn	**Sn**	**12 44 17.1**	**-0.1**
ARR	**Arges**	**5.29**	**43**	⇓P	**Pn**	**12 43 27.2**	**+2.3**
MTUR	**Matau**	**5.42**	**46**	⇑P	**Pn**	**12 43 29.4**	**+2.7**
CEY	**Cerknica**	**5.53**	**320**	*e*Pn	**Pn**	**12 43 29.2**	**+1.1**
VOIR		**5.55**	**45**	⇓P	**Pn**	**12 43 30.6**	**+2.1**
SKDS	**Skadanscina**	**5.60**	**316**	*e*Pn	**Pn**	**12 43 29.0**	**-0.1**
SKDS	**Skadanscina**	**5.60**	**316**	*i* Pn	**Pn**	**12 43 29.0**	**-0.1**
SKDS				*i* Sn	**Sn**	**12 44 31.0**	**-1.9**
DRGR		**5.67**	**23**	⇑P	**Pn**	**12 43 31.4**	**+1.3**
MARR	**Marisel-Cluj**	**5.69**	**26**	⇓P	**Pn**	**12 43 32.1**	**+1.8**
MOZS	**Mozjanca**	**5.94**	**324**	*i* Pn	**Pn**	**12 43 35.1**	**+1.4**
MOZS				*i* Sn	**Sn**	**12 44 40.5**	**-0.7**
SOKA	**Soboth**	**6.00**	**329**	*i* Pn	**Pn**	**12 43 35.3**	**+0.7**
	comp=N,3.0nm,0.3s						
OBKA	**Obir**	**6.06**	**326**	Pn	**Pn**	**12 43 36.2**	**+0.8**
	comp=N,8.3nm,0.4s,SNR=4.5						
MLR	**Muntele Rosu**	**6.07**	**48**	Pn	**Pn**	**12 43 38.5**	**+2.8**
	comp=N,8.6nm,0.5s,baz=257,slow=11,SNR=13						
MLR				Sn	**Sn**	**12 44 47.0**	**+2.3**
	comp=N,0.9nm,0.3s,baz=156,slow=15,SNR=5.6						
MLR				LR	LR	12 46 40.8	
	comp=N,90nm,18.3s,baz=275,slow=45						
MLR	**Muntele Rosu**	**6.07**	**48**	⇓P	**Pn**	**12 43 38.0**	**+2.3**
SRO	**Srobarova**	**6.26**	**353**	*e*PG	**Pg**	**12 44 02.2**	**-4.4**
ARSA	**Arzberg**	**6.32**	**335**	*i* Pn	**Pn**	**12 43 40.3**	**+1.4**
	comp=N,4.1nm,0.5s						
MYKA	**Terra Mystica**	**6.55**	**322**	*i* Pn	**Pn**	**12 43 42.7**	**+0.5**
	comp=N,4.0nm,0.3s						
VRI	**Vrincioaia**	**6.74**	**48**	⇓P	**Pn**	**12 43 47.1**	**+2.4**
KBA	**Koelnbreinsper**	**7.02**	**323**	*i* Pn	**Pn**	**12 43 49.7**	**+0.9**
	comp=N,6.0nm,0.5s						
MOA	**Molln**	**7.26**	**331**	Pn	**Pn**	**12 43 52.2**	**+0.2**
	comp=N,9.2nm,0.3s,SNR=4.9						
TPGR	**Topolog**	**7.27**	**61**	⇓P	**Pn**	**12 43 54.0**	**+2.0**
BIOA	**Bad Ischl, Aus**	**7.38**	**327**	*i* Pn	**Pn**	**12 43 55.0**	**+1.6**
	comp=N,8.9nm,0.3s						
LESA	**Schwarzleotal**	**7.58**	**322**	Pn	**Pn**	**12 43 57.2**	**+0.8**
	comp=N,7.3nm,0.4s,SNR=8.7						
IDI	**Anoyia**	**7.60**	**145**	Pn	**Pn**	**12 43 54.7**	**-1.9**
	comp=N,4.6nm,0.9s,baz=4.7,slow=17,SNR=1.3						
IDI				Sn	**Sn**	**12 45 18.0**	**-4.1**
	comp=N,1.2nm,0.3s,baz=328,slow=17,SNR=6.3						
WTTA	**Wattenberg**	**7.97**	**318**	*i* Pn	**Pn**	**12 44 01.9**	**+0.1**
	comp=N,1.1nm,0.2s						
WATA	**Walderalm**	**8.05**	**318**	*i* Pn	**Pn**	**12 44 04.7**	**+1.9**
	comp=N,7.0nm,0.3s						
CKRC	**Cesky Krumlov**	**8.08**	**335**	*e*PN	**Pn**	**12 44 04.1**	**+0.9**
CKRC				*e*SN	Sb	12 46 06.7	+4.7
SQTA	**Sankt Quirin**	**8.16**	**316**	*i* Pn	**Pn**	**12 44 05.7**	**+1.4**
	comp=N,7.0nm,0.3s						
FETA	**Feichten**	**8.29**	**314**	*e*Pn	**Pn**	**12 44 08.1**	**+2.0**
	comp=N,1.7nm,0.4s						
MOTA	**Moosalm**	**8.30**	**316**	*i* Pn	**Pn**	**12 44 07.1**	**+0.8**
	comp=N,3.5nm,0.3s						
GERES	**GERESS Array B**	**8.31**	**332**	Pn	**Pn**	**12 44 07.6**	**+1.3**
	comp=N,0.1nm,0.3s,baz=158,slow=14,SNR=5.5						
	comp=N,0.9nm,0.3s						
DAVOX	**Davos/Dischmat**	**8.63**	**310**	Pn	**Pn**	**12 44 11.3**	**+0.5**
	comp=N,3.4nm,0.4s,baz=119,slow=21,SNR=8.9						
DAVOX				Sn	**Sn**	**12 45 49.8**	**+2.2**
	comp=N,0.3nm,0.3s,baz=162,slow=20,SNR=1.3						
KEST	**Kesra**	**9.88**	**237**	LR	LR	12 49 25.3	
	comp=N,69nm,18.2s,baz=331,slow=45						
BRTR	**Keskin Array B**	**10.90**	**95**	Pn	**Pn**	**12 44 42.9**	**+1.0**
	comp=N,0.1nm,0.3s,baz=290,slow=12,SNR=1.7						
BRTR				Sn	**Sn**	**12 46 43.0**	**-0.4**
	comp=N,0.1nm,0.3s,baz=290,slow=26,SNR=2.0						
	comp=N,0.6nm,0.8s						
HFS	**Hagfors**	**18.89**	**351**	P	**P**	**12 46 25.8**	**-0.1**
	comp=N,0.1nm,0.3s,baz=163,slow=10,SNR=2.6						
	comp=N,4.2nm,1.0s						
NOA	**NORSAR Array B**	**20.10**	**348**	P	**P**	**12 46 39.5**	**+0.4**
	comp=N,0.6nm,0.7s,baz=110,slow=15,SNR=1.5						
	comp=N,0.6nm,0.7s						
EKA	**Eskdalemuir Ar**	**20.23**	**320**	P	**P**	**12 46 40.3**	**-0.2**
	comp=N,0.7nm,0.5s,baz=114,slow=9.0,SNR=5.6						
	comp=N,0.7nm,0.5s						
FINES	**FINESS Array B**	**20.25**	**9**	P	**P**	**12 46 40.7**	**0.0**
	comp=N,3.2nm,0.8s,baz=169,slow=11,SNR=6.2						
	comp=N,3.2nm,0.8s						
BVAR	**Borovoye Array**	**35.61**	**54**	P	**P**	**12 49 03.3**	**+0.3**
	comp=N,0.6nm,0.7s,baz=301,slow=6.2,SNR=2.5						
	comp=N,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**44.05**	**51**	P	**P**	**12 50 12.5**	**-0.6**
	comp=N,1.0nm,0.4s,baz=287,slow=7.0,SNR=6.7						
	comp=N,1.0nm,0.4s						
MKAR	**Makanchi Array**	**44.25**	**61**	P	**P**	**12 50 14.7**	**-0.2**
	comp=N,0.6nm,0.8s,baz=280,slow=7.6,SNR=6.0						
	comp=N,0.6nm,0.8s						
SCHQ	**Schefferville**	**55.44**	**315**	P	**P**	**12 51 38.9**	**-0.9**
	comp=N,7.5nm,1.0s,baz=153,slow=6.8,SNR=2.9						
	comp=N,7.5nm,1.0s						
SONM	**Songino Array**	**58.91**	**52**	P	**P**	**12 52 03.8**	**-0.8**
	comp=N,0.2nm,0.5s,baz=338,slow=6.4,SNR=1.5						
	comp=N,0.2nm,0.5s						
ASAR	**Alice Springs**	**123.23**	**93**	PKP	**PKPdf**	**13 01 02.6**	**+0.1**
	comp=N,0.2nm,0.8s,baz=290,slow=2.2,SNR=1.8						

TIR ***27*** *12:47:03.1, 41°.36N×19°.40E, h15km±4km, Ml3.3/4*
SKO ***27*** *12:47:06.0, 41°.49N×19°.44E, h0km, ML3.0*
PDG ***27*** *12:47:05.0±0.3, 41°.30N×19°.46E, h13km±3km, MD3.2/4, ML3.1/12, Error ellipse: s-maj=2.7km s-min=1.9km az=90.0*
ISC 27 12:47:04.9±1.1, **41°.41N**±0°.03×**19°.44E**±0°.03, **h9**km±9km, **n43**, σ0°**87**/70, **8C-13D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**101**	Pg	**Pg**	**12 47 11.6**	**+0.2**
TIR				Sg	**Sg**	**12 47 15.6**	**-0.2**
TIR				AML	AML	12 47 16.0	
	50nm,0.5s						
TIR	**Tirane**	**0.33**	**101**	*i* Pg	**Pg**	**12 47 11.7**	**+0.4**
TIR				*i* Sg	**Sg**	**12 47 16.8**	**+1.1**
ULC	**Ulcinj**	**0.57**	**345**	⇑*i*Pg	**Pb**	**12 47 16.3**	**-0.9**
ULC				*i* Sg	**Sn**	**12 47 27.1**	**-1.8**
SDA	**Shkodra**	**0.64**	**4**	Pg	**Pg**	**12 47 17.3**	**-0.1**
SDA				Sg	**Sb**	**12 47 26.7**	**-0.8**
DRME	**Dracevica, Mon**	**0.80**	**346**	⇑*i*Pg	**Pb**	**12 47 21.2**	**+0.2**
DRME				*i* Sg	**Sn**	**12 47 33.6**	**-0.9**
PHP	**Peshkopia**	**0.80**	**70**	Pn	**Pg**	**12 47 19.2**	**-1.2**
PHP				Sg	**Sg**	**12 47 29.7**	**-1.1**
PHP				AML	AML	12 47 36.5	
	3.8nm,0.5s						
BUM	**Brajici-Budva**	**0.98**	**336**	⇑*i*Pg	**Pb**	**12 47 23.8**	**-0.3**
BUM				*i* Sg	**Sn**	**12 47 38.7**	**-0.3**
PDG	**Podgorica**	**1.03**	**352**	Pg	**Pg**	**12 47 24.2**	**-0.5**
PDG				Sg	**Sn**	**12 47 39.1**	**-1.0**
PDG	**Podgorica**	**1.03**	**352**	⇓P	**Pn**	**12 47 24.9**	**-0.6**
PDG				⇑S	**Sb**	**12 47 38.2**	**-0.4**
PDG	**Podgorica**	**1.03**	**352**	⇓*i*Pg	**Pb**	**12 47 24.7**	**-0.2**
PDG				*i* Sg	**Sn**	**12 47 40.2**	**+0.1**
OHR	**Ohrid**	**1.07**	**106**	*i* Pg	**Pn**	**12 47 26.0**	**-0.1**
OHR				*i* Sg	**Sb**	**12 47 40.6**	**+0.9**
OHR				*e*Lg	Lg	12 47 41.8	
	comp=E,261nm,0.5s						
OHR				*e*Lg	Lg	12 47 42.5	
	comp=N,346nm,0.6s						
CEME	**Cevo**	**1.20**	**341**	⇓*i*Pg	**Pn**	**12 47 28.2**	**+0.2**
CEME				*i* Sg	**Sn**	**12 47 45.6**	**+1.1**
PVY	**Plav**	**1.25**	**18**	⇓*i*Pg	**Pn**	**12 47 28.6**	**-0.1**
PVY				*i* Sg	**Sn**	**12 47 46.6**	**+0.9**
HCY	**Herceg Novi**	**1.25**	**326**	⇓*i*Pg	**Pg**	**12 47 29.4**	**+0.4**
HCY				*i* Sg	**Sn**	**12 47 47.0**	**+1.3**
KBN	**Korca**	**1.29**	**127**	Pn	**Pn**	**12 47 26.4**	**-2.8**
KBN				Sn	**Sn**	**12 47 46.7**	**+0.1**
KBN				AML	AML	12 47 51.5	
	comp=N,1.8nm,0.6s						
NKME	**Niksic**	**1.40**	**345**	⇓*i*Pg	**Pg**	**12 47 31.5**	**-0.4**
NKME				*i* Sg	**Sg**	**12 47 51.2**	**+1.1**
KOME	**Kolas

KMI LR LR
comp=Z,1μm,9.7s
ENH Enshi 4.36 64 Pn Pn 13 04 10.8 +1.1
ENH Sn Sn 13 04 57.5 -3.1
GULI GuiLin 5.72 122 Pn Pn 13 04 31.8 +3.3
GULI Sn Sn 13 05 41.8 +7.5
XAN Xi'an 6.56 30 Pn Pn 13 04 41.5 +1.5
XAN Sn Sn 13 05 57.8 +2.9
XAN Sg Sg 13 06 34.0 +0.1
XAN smax smax
comp=N,680nm,1.2s
XAN smax smax
comp=E,800nm,1.1s
XAN LR LR
comp=N,1μm,6.2s
XAN LR LR
comp=Z,820nm,8.2s
TNCH TengChong 6.68 241 Pn Pn 13 04 45.0 +3.2
TNCH Sg Sg 13 06 37.3 -0.7
TNCH smax smax
comp=N,150nm,1.1s
TNCH smax smax
comp=E,160nm,1.2s
TNCH LR LR
comp=Z,530nm,9.9s
CNSH ChangSha 7.01 90 Pn Pn 13 04 47.3 +1.1
CNSH Sn Sn 13 06 02.5 -3.6
CNSH smax smax
comp=N,150nm,1.0s
CNSH smax smax
comp=E,160nm,0.9s
LZDM Lanzhou Array 7.61 352 Pn Pn 13 04 56.0 +1.3
baz=167,slow=13
LZDM Sn Sn 13 06 23.3 +2.1
baz=143,slow=20
LZDM Lg Lg 13 07 06.7
baz=174,slow=27
6.9nm,0.4s
LZH Lanzhou 7.72 353 Pn Pn 13 04 58.8 +2.7
LZH Sn Sn 13 06 24.8 +1.0
LZH Sg Sg 13 07 07.0 -4.4
LZH smax smax
comp=N,180nm,1.4s
LZH smax smax
comp=E,160nm,1.5s
LZH LR LR
comp=N,660nm,10.0s
LZH LR LR
comp=E,990nm,10.0s
WHN Wuhan 8.44 73 P Pn 13 05 08.0 +2.2
WHN S Sn 13 06 40.0 -1.2
WHN LR LR
comp=N,1μm,7.9s
WHN LR LR
comp=Z,2μm,11.7s
LYN LuoYang 8.86 44 P Pn 13 05 11.8 +0.3
LYN S Sn 13 06 50.3 -1.1
LYN pmax pmax
comp=Z,51nm,0.9s
LYN LR LR
comp=E,840nm,10.7s
LYN LR LR
comp=Z,1μm,14.1s
GZH Guangzhou 9.21 123 P Pn 13 05 13.5 -2.9
GZH S Sn 13 06 56.0 -4.1
GZH pmax pmax
comp=Z,44nm,0.9s
QIZ Qiongzhong 10.34 153 P Pn 13 05 30.5 -1.3
QIZ S Sn 13 07 26.8 -1.0
QIZ LR LR
comp=N,410nm,12.1s
QIZ LR LR
comp=E,730nm,9.3s
CHTO Chiang Mai 11.03 211 Pn 13 05 41.8 +0.5
CHTO Chiang Mai 11.03 211 P Pn 13 05 41.8 +0.5
CM31 Chiang Mai Arr 11.34 211 Pn 13 05 46.0 +0.4
CMAR Chiang Mai Arr 11.34 211 Pn Pn 13 05 49.2 +3.7
0.2nm,0.3s,baz=18,slow=12,SNR=44
CMAR Lg Lg 13 08 57.8
baz=35,slow=28
CMAR LR LR 13 10 42.6
comp=Z,237nm,19.4s,baz=30,slow=41
CMAR Chiang Mai Arr 11.34 211 Pn 13 05 46.4 +0.8
CMAR Chiang Mai Arr 11.34 211 P Pn 13 05 46.4 +0.8
GTA Gaotai 11.79 340 *eP* Pn 13 05 54.5 +2.8
GTA pmax pmax
comp=Z,9.0nm,1.4s
GTA LR LR
comp=N,390nm,11.5s
GTA LR LR
comp=E,540nm,13.5s
SHL Shillong 12.02 259 Pn Pn 13 05 54.7 -0.2
SHL Shillong 12.02 259 P Pn 13 05 54.7 -0.2
LSA Lhasa 12.17 279 Pn Pn 13 05 57.8 +0.5
LSA Lhasa 12.17 279 P Pn 13 05 57.8 +0.5
BTO Baotou 12.86 17 *eP* Pn 13 06 07.3 +0.9
BTO S Sn 13 08 33.3 +3.6
BTO pmax pmax
comp=Z,26nm,0.9s
BTO pmax pmax
comp=Z,200nm,4.1s
BTO LR LR
comp=N,890nm,7.0s
BTO LR LR
comp=E,510nm,4.9s
BTO LR LR
comp=Z,980nm,12.7s
XLT XiLinHaoTe 17.85 27 *eP* P 13 07 13.0 +0.4
XLT pP sP 13 07 20.0 +3.0
XLT sP pP 13 07 25.5 +10
XLT pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 19.43 3 P Pn 13 07 31.0 -0.2
0.4nm,0.3s,baz=185,slow=12,SNR=15
SONM LR LR 13 15 54.6
comp=Z,160nm,19.1s,baz=160,slow=40
4.0nm,0.9s
ULN Ulaanbaatar 19.50 4 P P 13 07 29.4 -1.4
ULN Ulaanbaatar 19.50 4*ceP* Pn 13 07 33.9 +1.8
ULN pmax pmax
comp=Z,17nm,2.5s
WMQ Urumqi 20.71 323 *eP* Pn 13 07 47.5 +1.2
WMQ pmax pmax
comp=Z,8.0nm,0.7s
KSAR Wonju Array Be 21.20 59 P P 13 07 48.7 -0.5
KSAR Wonju Array Be 21.20 59 P P 13 07 48.7 -0.5
KS19 Wonju Array Si 21.20 59 P P 13 07 48.3 -0.9
KSRS Korea Array 21.23 59 P P 13 07 49.8 +0.3
comp=Z,7.5nm,0.9s,baz=238,slow=9.7,SNR=8.9
comp=Z,7.5nm,0.9s
ZAK Zakamensk 21.99 357 *eP* P 13 07 57.7 0.0
ZAK pmax pmax
comp=Z,17nm,1.2s
JNU Nakatsue 22.73 72 P P 13 08 06.3 +0.7
comp=Z,4.6nm,0.7s,baz=282,slow=10,SNR=4.4
JNU LR LR 13 17 36.5
comp=Z,96nm,19.4s,baz=252,slow=38
comp=Z,4.6nm,0.7s
JNU Nakatsue 22.73 72 IAmb IAmb 13 08 18.1
comp=Z,20nm,1.1s
KNGR Kungurtug, Tuv 22.89 348 *i* P P 13 08 07.0 -0.2
KNGR pmax pmax
comp=Z,13nm,1.1s
HILR Hailar Array B 23.96 24 P P 13 08 18.8 +0.9
comp=Z,2.4nm,0.5s,baz=187,slow=11,SNR=4.4
comp=Z,2.4nm,0.5s
WUS Wushi 24.61 308 P 13 08 23.7 -0.3
WUS IAmb IAmb 13 08 25.7
comp=Z,8.8nm,0.7s
DGZ Jazzator, Alta 25.14 333 *i* P P 13 08 29.9 +1.1
DGZ pmax pmax
comp=Z,23nm,1.1s
MK31 Makanchi Array 25.55 322*ceP* P 13 08 32.1 -0.2
MKAR Makanchi Array 25.55 322 P P 13 08 32.1 -0.2
comp=Z,13nm,1.0s,baz=123,slow=11,SNR=30
MKAR PcP PcP 13 12 02.9 -0.6
comp=Z,1.2nm,0.8s,baz=131,slow=4.0,SNR=5.6
comp=Z,13nm,1.0s
MKAR Makanchi Array 25.55 322 P 13 08 32.1 -0.2
MKAR PcP 13 12 02.4 -1.1
MKAR Makanchi Array 25.55 322*ceP* P 13 08 32.5 +0.2
MKAR pmax pmax
comp=Z,13nm,1.0s
MAKZ Makanchi 25.72 322 P 13 08 34.3 +0.3
MAKZ IAmb IAmb 13 08 37.7
comp=Z,21nm,1.1s
MAKZ Makanchi 25.72 322 P P 13 08 34.3 +0.3
MAKZ pmax pmax
comp=Z,21nm,1.2s
TARG Taragay, Kyrgy 25.79 308 P 13 08 35.3 +0.2
TARG IAmb IAmb 13 08 38.8
comp=Z,6.6nm,0.8s
TARG Taragay, Kyrgy 25.79 308 P P 13 08 35.3 +0.2
TARG pmax pmax
comp=Z,7.0nm,0.8s
PSI Prapat 26.10 194 LR LR 13 19 50.2
comp=Z,52nm,19.7s,baz=9.5,slow=39
PSI Prapat 26.10 194 P P 13 08 38.4 +0.7
PSI pmax pmax
comp=Z,8.0nm,1.1s
RPSI Rantau Prapat 26.21 194 P P 13 08 38.4 0.0
KSH Kashi 26.38 302 P P 13 08 43.8 +3.7
SBUM Sibu 26.71 164 P 13 08 43.0 -0.1
USRK Ussuriysk Ar. 26.71 47 P P 13 08 43.8 +0.9
comp=Z,2.9nm,0.6s,baz=256,slow=8.5,SNR=5.4
comp=Z,2.9nm,0.6s
NIL Nilore 27.62 289 P P 13 08 49.6 -1.6
NIL IAmb IAmb 13 08 57.7
comp=Z,6.1nm,0.6s
NIL Nilore 27.62 289 P P 13 08 49.6 -1.6
NIL pmax pmax
comp=Z,6.0nm,0.6s
HEH HeiHe 27.68 32 *eP* P 13 08 52.0 +0.5
MJAR Matsushiro Arr 29.08 65 LR LR 13 20 53.8
comp=Z,48nm,18.5s,baz=264,slow=37
ZAA0 Zalesovo Array 29.48 336 P 13 09 07.0 -0.5
ZALV Zalesovo Beam 29.48 336 P P 13 09 07.5 0.0
comp=Z,4.5nm,0.8s,baz=137,slow=8.3,SNR=25
ZALV LR LR 13 21 34.7
comp=Z,23nm,20.3s,baz=87,slow=38
comp=Z,4.5nm,0.8s
ZALV Zalesovo Beam 29.48 336 P 13 09 07.1 -0.4
KURBB Kurchatov Arra 29.87 325 P P 13 09 10.7 -0.3
comp=Z,1.8nm,0.7s,baz=130,slow=10.0,SNR=25
KURBB PcP PcP 13 12 13.1 -0.8
comp=Z,1.4nm,0.7s,baz=119,slow=2.2,SNR=12
comp=Z,1.8nm,0.7s
KURK Kurchatov 29.88 325 P 13 09 10.9 -0.1
KURK Kurchatov 29.88 325 PcP 13 12 13.1 -0.8
KURK Kurchatov 29.88 325*ceP* P 13 09 11.6 +0.6
KURK pmax pmax
comp=Z,11nm,1.7s
ZEA Zeya 30.12 27 *eP* P 13 09 16.7 +3.5
JHJ Hachijo jima 2 30.19 72 LR LR 13 21 22.5
comp=Z,54nm,19.8s,baz=90,slow=36
JYT Yasato 30.64 66 P P 13 09 18.1 +0.2
TOLI2 Tolitoli 31.06 148 P P 13 09 21.7 -0.1
TOLI2 IAmb IAmb 13 09 22.9
comp=Z,5.5nm,0.9s
KK31 Karatay Array 31.34 307 P P 13 09 23.9 -0.2
KK31 Karatay Array 31.34 307 P P 13 09 23.9 -0.2
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 31.34 307 P 13 09 23.7 -0.4
KKAR Karatay Array 31.34 307 P P 13 09 23.7 -0.4
ASAJ Asahikawa 33.81 52 LR LR 13 24 44.3
comp=Z,28nm,18.4s,baz=134,slow=38
BVAR Borovoye Array 35.40 324 P P 13 09 59.6 +0.3
comp=Z,0.9nm,0.4s,baz=118,slow=9.2,SNR=7.3
BVAR PcP PcP 13 12 28.5 -0.6
comp=Z,2.1nm,0.7s,baz=116,slow=3.4,SNR=7.2
comp=Z,0.9nm,0.4s
BORK Borovoye 35.44 324*ceP* P 13 09 59.2 -0.5
BORK pmax pmax
comp=Z,8.0nm,2.5s
YAK Yakutsk 37.38 19 LR LR 13 26 40.9
comp=Z,100nm,18.1s,baz=270,slow=38
AB31 Akbulak array 40.06 314 P 13 10 38.7 0.0
ABKAR Akbulak array 40.06 314 P 13 10 39.3 +0.5
NRIK Noril'sk 42.21 351 P P 13 10 56.7 +0.5
comp=Z,8.0nm,0.9s,baz=145,slow=8.6,SNR=8.7
NRIK LR LR 13 29 59.2
comp=Z,58nm,18.9s,baz=160,slow=38
comp=Z,8.0nm,0.9s
NRIK Noril'sk 42.21 351 P P 13 10 56.4 +0.2
NRIK IAmb IAmb 13 10 57.8
comp=Z,14nm,1.1s
ARTI Arti 43.12 324 *i* P P 13 11 03.4 -0.4
ARTI pmax pmax
comp=Z,4.0nm,1.0s
SKR Severo-Kuril's 44.22 45*ceP* P 13 11 14.9 +2.3
TIXI Tiksi 45.26 10 LR LR 13 31 43.5
comp=Z,106nm,18.4s,baz=194,slow=38
TIXI Tiksi 45.26 10 *i* P P 13 11 20.3 -0.3
TIXI pmax pmax
comp=Z,4.0nm,0.9s
SEY Seymchan 46.09 28 LR LR 13 31 10.2
comp=Z,24nm,18.6s,baz=272,slow=36
BELG Belogornoye 48.31 316 LR LR 13 34 02.2
comp=Z,3μm,18.9s,baz=96,slow=38
KIRV Kirov 48.39 325 LR LR 13 32 02.7
comp=Z,38nm,18.0s,baz=68,slow=36
KIRV Kirov 48.39 325*ceP* P 13 11 44.9 -0.4
KNRA Kununurra 49.50 149 P 13 11 54.5 +0.3
KNRA IAmb IAmb 13 11 54.6
comp=Z,7.4nm,0.9s
MBWA Marble Bar 51.29 162 P P 13 12 07.7 0.0
KIV Kislovodsk 51.46 305 *eP* P 13 12 08.0 -1.0
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,12nm,17.0s
SHA1 Shidzhatmaz 51.49 305 *i* P P 13 12 07.6 -1.9
GURO Guroymak-BITLI 52.57 298 P P 13 12 17.3 -0.1
GURO IAmb IAmb 13 12 20.2
comp=Z,7.0nm,0.9s
RAYN Ar Rayn 53.24 279 P 13 12 21.8 -0.7
RAYN IAmb IAmb 13 12 23.8
comp=Z,11nm,1.1s
RAYN Ar Rayn 53.24 279 P P 13 12 21.8 -0.7
RAYN pmax pmax
comp=Z,11nm,1.1s
MOS Moscow 54.40 320 *eP* P 13 12 30.1 -0.3
MOS pmax pmax
comp=Z,38nm,0.7s
OBN Obninsk 55.00 319*deP* P 13 12 34.0 -0.8
OBN *e* 13 13 32.2
OBN *e* 13 14 42.2
OBN pmax pmax
comp=Z,12nm,1.2s
OBN MLR MLR
comp=Z,27nm,15.0s
PMG Port Moresby 55.44 126 P 13 12 37.4 -1.0
PMG Port Moresby 55.44 126*ceP* P 13 12 38.6 +0.2
PMG pmax pmax
comp=Z,12nm,1.0s
WB0 Warramunga Arr 55.69 146 P 13 12 39.5 -0.7
WB0 IAmb IAmb 13 12 40.7
comp=Z,14nm,1.1s
WRAB Tennant Creek 55.81 146 P P 13 12 40.4 -0.7
WRAB Tennant Creek 55.81 146*ceP* P 13 12 40.5 -0.5
WRAB pmax pmax
comp=Z,16nm,1.0s
WRA Warramunga Arr 55.81 146 P P 13 12 40.5 -0.5
comp=Z,6.9nm,0.6s,baz=337,slow=8.3,SNR=62
comp=Z,6.9nm,0.6s
WRA Warramunga Arr 55.81 146 P P 13 12 40.0 -1.0
WR8 Warramunga Arr 55.90 146 P 13 12 41.2 -0.4
BR131 Keskin Array S 58.76 301 P P 13 13 01.7 -0.3
BR131 IAmb IAmb 13 13 02.9
comp=Z,3.0nm,0.8s
BR131 Keskin Array S 58.76 301 P P 13 13 01.7 -0.3
BR131 pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 58.76 301 P P 13 13 01.3 -0.6
comp=Z,1.6nm,0.9s,baz=72,slow=4.7,SNR=6.1
comp=Z,1.6nm,0.9s
BRTR Keskin Array B 58.76 301 P P 13 13 01.7 -0.3
BRTR Keskin Array B 58.76 301*ceP* P 13 13 01.7 -0.3
BRTR pmax pmax
comp=Z,1.0nm,0.8s
AS31 Alice Springs 58.79 149 P 13 13 02.2 +0.1
ASAR Alice Springs 58.79 149 P P 13 13 01.9 -0.2
comp=Z,4.3nm,0.6s,baz=330,slow=6.9,SNR=70
ASAR PcP PcP 13 13 51.3 -0.4
comp=Z,0.6nm,0.4s,baz=334,slow=4.2,SNR=4.5
comp=Z,4.3nm,0.6s
KEV Kevo 59.50 337 P P 13 13 06.6 +0.2
KEV Kevo 59.50 337 P P 13 13 06.6 +0.2
KEV pmax pmax
comp=Z,17nm,1.0s
AKASG Malin Array Be 59.80 315 P P 13 13 08.3 -0.4
comp=Z,1.0nm,0.5s,baz=79,slow=5.5,SNR=8.7
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 59.80 315*ceP* P 13 13 08.3 -0.4
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 59.80 315 P P 13 13 08.5 -0.2
AKBB IAmb IAmb 13 13 08.7
comp=Z,4.3nm,0.7s
AKBB Malin Array Si 59.80 315*ceP* P 13 13 07.6 -1.1
AKBB pmax pmax
comp=Z,8.0nm,1.3s
KIEV Kiev 59.81 315 P P 13 13 08.4 -0.4
KIEV IAmb IAmb 13 13 08.7
comp=Z,3.8nm,0.7s
KIEV Kiev 59.81 315 P P 13 13 08.4 -0.4
KIEV pmax pmax
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 60.03 336 P P 13 13 10.0 0.0
comp=Z,7.0nm,0.8s,baz=79,slow=7.9,SNR=13
ARCES LR LR 13 42 07.5
comp=Z,29nm,18.4s,baz=248,slow=39
comp=Z,7.0nm,0.8s
ARCES ARCESS Array B 60.03 336 P P 13 13 10.2 +0.1
ARCES ARCESS Array B 60.03 336 P P 13 13 10.2 +0.1
ARCES pmax pmax
comp=Z,13nm,1.1s
MNK Minsk 60.06 319 *i* P P 13 13 08.5 -2.0
MNK *i* 13 15 21.3
MNK *i* S S 13 21 20.2 -3.0
MNK *i* SS SS 13 25 18.8 -0.7
MNK pmax pmax
comp=Z,7.0nm,0.5s
MNK pmax pmax
comp=E,21nm,0.7s
MNK pmax pmax
comp=N,22nm,0.8s
MNK MLR MLR
comp=Z,27nm,15.0s
MNK MLR MLR
comp=N,139nm,18.0s
MNK MLR MLR
comp=E,338nm,24.0s
VSU Vasula 60.21 324*ceP* P 13 13 10.5 -0.9
VSU pmax pmax
comp=Z,59nm,2.5s
FIA1 FINESS Array S 60.23 327 P P 13 13 10.2 -1.3
FINES FINESS Array B 60.23 327 P P 13 13 11.4 -0.1
comp=Z,1.9nm,0.4s,baz=101,slow=7.2,SNR=17
comp=Z,1.9nm,0.4s
FINES FINESS Array B 60.23 327 P P 13 13 10.4 -1.1
FINES FINESS Array B 60.23 327*ceP* P 13 13 11.0 -0.5
FINES pmax pmax
comp=Z,2.0nm,0.4s
ADK Adak 61.20 44 P P 13 13 17.1 -1.2
ADK Adak 61.20 44 P P 13 13 17.1 -1.2
ADK pmax pmax
comp=Z,41nm,1.0s
HFS Hagfors 66.44 327 P P 13 13 52.1 -0.6
comp=Z,2.7nm,0.4s,baz=71,slow=5.2,SNR=16
comp=Z,2.7nm,0.4s
IDI Anoyia 66.66 299 P P 13 13 54.6 -0.1
NC405 NORSAR Array S 67.09 328 P P 13 13 56.5 -0.4
NB2 NORSAR Subarra 67.34 328 P P 13 13 57.8 -0.7
comp=Z,1.8nm,0.5s,baz=76,slow=6.5
NOA NORSAR Array B 67.34 328 P P 13 13 57.7 -0.7
comp=Z,2.8nm,0.8s,baz=74,slow=6.5,SNR=7.3
comp=Z,2.8nm,0.8s
NC204 NORSAR Array S 67.48 329 P P 13 13 59.1 -0.3
BBOO Buckleboo 67.65 152 P P 13 14 00.6 -0.1
BBOO IAmb IAmb 13 14 05.7
comp=Z,8.9nm,1.1s
IMAR Indian Mountai 68.82 25 P P 13 14 07.6 0.0
TOLK Toolik Lake Re 69.25 22 P P 13 14 10.3 0.0
TOLK IAmb IAmb 13 14 11.8
comp=Z,4.9nm,1.0s
STKA Stephens Creek 69.33 147 P P 13 14 10.5 -0.7
comp=Z,1.5nm,0.4s,baz=333,slow=6.3,SNR=5.3
comp=Z,1.5nm,0.4s
STKA Stephens Creek 69.33 147 IAmb IAmb 13 14 28.2
comp=Z,5.2nm,1.0s
GERES GERESS Array B 69.99 315 P P 13 14 15.6 +0.3
comp=Z,0.7nm,0.4s,baz=60,slow=6.3,SNR=8.0
comp=Z,0.7nm,0.4s
BPAW Bear Paw Mtn. 70.66 27 P P 13 14 19.2 +0.2
BPAW IAmb IAmb 13 14 20.7
comp=Z,5.0nm,1.0s
PPLA Purkeypile 70.67 28 P P 13 14 19.7 +0.4
SKT Skwentna 71.34 29 P P 13 14 23.2 0.0
SKT IAmb IAmb 13 14 48.9
comp=Z,6.0nm,1.1s
ILAR Eielson Array 71.94 25 P P 13 14 26.1 -0.6
comp=Z,1.2nm,0.9s,baz=283,slow=4.9,SNR=8.3
comp=Z,1.2nm,0.9s
PRP Porcupine Dome 72.09 24 P P 13 14 27.4 -0.4
PRP IAmb IAmb 13 14 29.5
comp=Z,7.0nm,1.0s
A36M Sachs Harbour 74.08 14 P 13 14 39.4 +0.2
A36M IAmb IAmb 13 14 40.6
comp=Z,6.9nm,0.8s
K29M Barlow Dome 75.89 24 P P 13 14 50.1 +0.1
K29M IAmb IAmb 13 14 51.7
comp=Z,4.8nm,0.9s
SUMG Summit 76.23 349 P 13 14 51.6 -0.5
SUMG IAmb IAmb 13 14 56.3
comp=Z,7.9nm,1.1s
SUMG Summit 76.23 349 P P 13 14 51.7 -0.5
SUMG pmax pmax
comp=Z,8.0nm,1.1s
EKA Eskdalemuir Ar 76.61 326 P P 13 14 52.9 -1.2
comp=Z,2.1nm,0.8s,baz=58,slow=6.3,SNR=3.4
comp=Z,2.1nm,0.8s
YKA Yellowknife Ar 84.04 17 P P 13 15 34.0 0.0
comp=Z,0.9nm,0.7s,baz=313,slow=4.8,SNR=14
comp=Z,0.9nm,0.7s
YKA Yellowknife Ar 84.04 17 P P 13 15 33.8 -0.2
YKA Yellowknife Ar 84.04 17 P P 13 15 33.8 -0.2
NVL N'lazarevskaya 117.55 202 *i* PKIKP PKPdf 13 21 47.6 -1.0
NVL *e* 13 22 59.4
NVL *e*PPP PPP 13 25 27.5
NVL *e*SS SS 13 39 07.5 -4.8
NVL pmax pmax
comp=Z,5.0nm,0.6s

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*SDD **27** 13:08:43.0±1.2, 19°.21N×67°.09W, h23km±60km, MD3.5, ML2.4, MW2.9*
*NEIC **27** 13:08:45.0±1.9, 19°.02N±0°.04×67°.18W±0°.03, h10km±2km, ML2.4/10, Md2.8/11(RSPR), Error ellipse: s-maj=5.9km s-min=4.1km az=351.0*
*RSPR **27** 13:08:47.2, 19°.02N×67°.23W, h10km±31km, MD2.8/11*
ISC 27 13:08:44.4±1.6, 19°.04N±0°.06×67°.19W±0°.03, h10km±10km, n44, σ0°66/54, 9C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.57**	**172**	*e*Pg		**Pb**		**13 08 56.6**	**+0.2**
AGPR				*e*Sg		**Sb**		**13 09 05.8**	**+1.2**
AGPR				IAML				13 09 08.0	
comp=N,333nm,0.3s									
AGPR	**Aguadilla, PR**	**0.57**	**172**	Pg		**Pb**		**13 08 56.6**	**+0.2**
AGPR	**Aguadilla, PR**	**0.57**	**172**	*e*P		**Pb**		**13 08 57.0**	**+0.6**
AGPR	**Aguadilla, PR**	**0.57**	**172**	*e*S		**Sb**		**13 09 05.7**	**+1.1**
IDE	**Isla Desecheo**	**0.70**	**203**			**Pg**		**13 08 58.7**	**+0.8**
IDE						**Sb**		**13 09 09.6**	**+1.3**
IDE	**Isla Desecheo**	**0.70**	**203**	*e*P		**Pg**		**13 08 58.7**	**+0.8**
IDE	**Isla Desecheo**	**0.70**	**203**	*e*S		**Sb**		**13 09 09.6**	**+1.3**
AOPR	**Arecibo Observ**	**0.80**	**149**	*e*Pg		**Pg**		**13 09 00.2**	**+0.3**
AOPR				*e*Sg		**Sb**		**13 09 11.2**	**0.0**
AOPR				IAML				13 09 17.1	
comp=N,165nm,0.2s									
AOPR	**Arecibo Observ**	**0.80**	**149**			**Pg**		**13 09 00.2**	**+0.3**
AOPR	**Arecibo Observ**	**0.80**	**149**			**Sn**		**13 09 13.2**	**-0.5**
AOPR	**Arecibo Observ**	**0.80**	**149**	*e*P		**Pg**		**13 09 00.3**	**+0.3**
AOPR	**Arecibo Observ**	**0.80**	**149**	*e*S		**Sn**		**13 09 13.2**	**-0.5**
EMPR	**Esperanza - Ma**	**0.84**	**131**			**Pb**		**13 09 01.7**	**+0.7**
EMPR						**Sn**		**13 09 14.6**	**0.0**
EMPR	**Esperanza - Ma**	**0.84**	**131**	*e*P		**Pb**		**13 09 01.7**	**+0.7**
EMPR	**Esperanza - Ma**	**0.84**	**131**	*e*S		**Sn**		**13 09 14.6**	**0.0**
LSP	**Las Mesas**	**0.86**	**173**			**Pg**		**13 09 01.3**	**+0.3**
LSP						**Sb**		**13 09 12.9**	**-0.1**
LSP	**Las Mesas**	**0.86**	**173**	*e*P		**Pg**		**13 09 01.3**	**+0.3**
LSP	**Las Mesas**	**0.86**	**173**	*e*S		**Sb**		**13 09 12.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.03**	**176**	*e*Pg		**Pg**		**13 09 03.4**	**-0.7**
CRPR				*e*Sg		**Sn**		**13 09 19.2**	**0.0**
CRPR				IAML				13 09 23.2	

	comp=N,76nm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.03**	**176**		**Pg**		**13 09 03.6**	**-0.5**
CRPR					**Sb**		**13 09 18.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.03**	**176**	IAML			13 09 26.6	
	comp=E,68nm,0.5s							
CRPR				IAML			13 09 28.7	
	comp=N,66nm,0.5s							
CRPR	**Cabo Rojo, PR**	**1.03**	**176**⇓	*eP*	**Pg**		**13 09 03.6**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.03**	**176**	*eS*	**Sb**		**13 09 18.0**	**+0.3**
ECPR	**Experimental S**	**1.06**	**132**⇑	*eP*	**Pg**		**13 09 04.6**	**-0.2**
ECPR	**Experimental S**	**1.06**	**132**	*eS*	**Sn**		**13 09 20.2**	**+0.1**
MLPR	**Magueyes Islan**	**1.07**	**172**	*ePg*	**Pg**		**13 09 04.2**	**-0.8**
MLPR				*eSg*	**Sn**		**13 09 20.3**	**+0.1**
MLPR				IAML			13 09 28.4	
	comp=N,17nm,0.5s							
MLPR	**Magueyes Islan**	**1.07**	**172**⇑	*eP*	**Pg**		**13 09 04.2**	**-0.8**
MLPR	**Magueyes Islan**	**1.07**	**172**	*eS*	**Sg**		**13 09 18.1**	**-0.8**
OBIP	**Obispado Ponce**	**1.13**	**151**		**Pb**		**13 09 05.5**	**-0.6**
OBIP				IAML			13 09 22.3	
	comp=N,104nm,0.5s							
OBIP				IAML			13 09 27.3	
	comp=E,95nm,0.3s							
OBIP	**Obispado Ponce**	**1.13**	**151**		**Sb**		**13 09 21.6**	**+0.8**
OBIP	**Obispado Ponce**	**1.13**	**151**⇑	*eP*	**Pb**		**13 09 05.6**	**-0.4**
OBIP	**Obispado Ponce**	**1.13**	**151**	*eS*	**Sb**		**13 09 21.6**	**+0.8**
GCPR	**Guaynabo City**	**1.27**	**124**		**Pn**		**13 09 07.8**	**-0.4**
GCPR	**Guaynabo City**	**1.27**	**124**⇑	*eP*	**Pn**		**13 09 07.8**	**-0.4**
GCPR	**Guaynabo City**	**1.27**	**124**	*eS*	**Sb**		**13 09 25.1**	**+0.2**
HUMP	**Col San Antoni**	**1.55**	**125**		**Pn**		**13 09 11.8**	**-0.2**
HUMP					**Sn**		**13 09 32.6**	**+0.4**
HUMP				IAML			13 09 38.0	
	comp=E,70nm,0.2s							
HUMP				IAML			13 09 43.5	
	comp=N,49nm,0.2s							
HUMP	**Col San Antoni**	**1.55**	**125**⇑	*eP*	**Pn**		**13 09 12.0**	**0.0**
HUMP	**Col San Antoni**	**1.55**	**125**	*eS*	**Sn**		**13 09 32.6**	**+0.4**
MIDR	**Miches**	**1.76**	**269**	*ePg*	**Pn**		**13 09 14.9**	**+0.1**
MIDR				*eSg*	**Sb**		**13 09 39.2**	**+0.4**
MIDR				IAML			13 09 39.4	
	comp=N,32nm,0.4s							
MIDR	**Miches**	**1.76**	**269**⇑	*eP*	**Pn**		**13 09 14.4**	**-0.4**
MIDR	**Miches**	**1.76**	**269**	*eS*	**Sn**		**13 09 36.5**	**-0.9**
DR12	**Loma Pena Alta**	**2.09**	**264**	Pn	**Pn**		**13 09 19.1**	**-0.3**
HATOM	**Hato Mayor del**	**2.09**	**264**	*ePg*	**Pn**		**13 09 20.1**	**+0.7**
HATOM				*eSg*	**Sb**		**13 09 49.4**	**+1.1**
HATOM				IAML			13 09 50.9	
	comp=N,23nm,0.6s							
BANI	**BANI**	**3.07**	**258**	Pn	**Pn**		**13 09 31.0**	**-2.0**

*NEIC **27** 13:14:33.5±1.7, 18°.43N±0°.03×100°.32W±0°.04, h52km±9km, mb4.3/19, Mwr4.0/10, Md4.4/136(MEX), Error ellipse: s-maj=5.7km s-min=4.4km az=126.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.43; $M_{\theta\theta}$0.31; $M_{\phi\phi}$1.12; $M_{r\theta}$0.23; $M_{\theta\phi}$-0.30; $M_{\phi r}$-0.39; Fault plane solution: $M_0$1.41000×10^{15} NP1:φs338.41000°, δ54.33000°, λ-93.58000°. NP2:φs164.53000°, δ35.82000°, λ-85.03000°. Principal axes: T 1.2877, Plg9.0000°, Azm71.0000°; N 0.2188, Plg3.0000°, Azm340.0000°; P -1.5065, Plg80.0000°, Azm233.0000°;*
*NEIC **27** 13:14:34.5, 18°.48N×100°.24W, h47km*
*MEX **27** 13:14:35.3±0.6, 18°.44N×100°.32W, h51km±4km, MD4.4*
*IDC **27** 13:14:38.9±2.4, 18°.76N×99°.86W, h103km±22km, mb3.5/5, mbtmp3.7/11, MS3.1/7, Error ellipse: s-maj=36.7km s-min=14.5km az=36.0*

ISC 27 13:14:32.9±0.7, **18°.42N**±0°.02×**100°.29W**±0°.02, **h57**km±6km, **n176**, σ1**86**/281, **mb4.2**/10, **MS3.0**/4, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.15**	**201**				**Pn**	**13 14 41.8**	**0.0**
ARIG							**Sn**	**13 14 48.0**	**-0.3**
ARIG	**Puente Sto Nin**	**0.15**	**201**	*i*	P		**Pn**	**13 14 41.8**	**0.0**
ARIG				*i*	S		**Sn**	**13 14 48.0**	**-0.3**
MEIG	**Mezcala**	**0.80**	**127**				**Pn**	**13 14 49.2**	**+0.8**
MEIG							**Sn**	**13 15 00.6**	**+0.8**
MEIG	**Mezcala**	**0.80**	**127**	*i*	P		**Pn**	**13 14 49.2**	**+0.8**
MEIG				*eS*			**Sn**	**13 15 00.6**	**+0.8**
MAVM	**Malinalco, Edo**	**0.93**	**54**				**Pn**	**13 14 50.4**	**+0.2**
MAVM							**Sn**	**13 15 02.6**	**-0.2**
MAVM	**Malinalco, Edo**	**0.93**	**54**	*i*	P		**Pn**	**13 14 50.4**	**+0.2**
MAVM				*eS*			**Sn**	**13 15 02.6**	**-0.2**
TOVM	**TOLUCA**	**1.04**	**34**				**Pn**	**13 14 52.3**	**+0.6**
TOVM							**Sn**	**13 15 05.6**	**0.0**
TOVM	**TOLUCA**	**1.04**	**34**	*i*	P		**Pn**	**13 14 52.3**	**+0.6**
TOVM				*eS*			**Sn**	**13 15 05.6**	**0.0**
ATYC	**Atoyac**	**1.21**	**186**				**Pn**	**13 14 54.1**	**+0.5**
ATYC							**Sn**	**13 15 08.1**	**-0.9**
ATYC	**Atoyac**	**1.21**	**186**	*eP*			**Pn**	**13 14 54.1**	**+0.5**
ATYC				*eS*			**Sn**	**13 15 08.1**	**-0.9**
INVM	**La Marquesa**	**1.22**	**45**				**Pn**	**13 14 54.9**	**+0.7**
INVM							**Sn**	**13 15 10.4**	**+0.4**
INVM	**La Marquesa**	**1.22**	**45**	*i*	P		**Pn**	**13 14 54.9**	**+0.7**
INVM				*eS*			**Sn**	**13 15 10.4**	**+0.4**
YAIG	**Yautepec**	**1.24**	**69**				**Pn**	**13 14 54.7**	**+0.5**
YAIG							**Sn**	**13 15 09.5**	**-0.6**
YAIG	**Yautepec**	**1.24**	**69**	*eP*			**Pn**	**13 14 54.7**	**+0.5**
YAIG				*eS*			**Sn**	**13 15 09.5**	**-0.6**
AOVM	**Tlapan**	**1.25**	**47**				**Pn**	**13 14 55.4**	**+0.7**
AOVM							**Sn**	**13 15 10.8**	**+0.1**
AOVM	**Tlapan**	**1.25**	**47**	*i*	P		**Pn**	**13 14 55.4**	**+0.7**
AOVM				*eS*			**Sn**	**13 15 10.8**	**+0.1**
MZVM		**1.27**	**52**				**Pn**	**13 14 55.9**	**+1.5**
MZVM							**Sn**	**13 15 10.9**	**+0.5**
MZVM		**1.27**	**52**	*i*	P		**Pn**	**13 14 55.9**	**+1.5**
MZVM				*i*	S		**Sn**	**13 15 10.9**	**+0.5**
MCRU	**Las Cruces**	**1.33**	**47**	*i*	P		**Pn**	**13 14 56.6**	**+1.0**
MCRU				*eS*			**Sn**	**13 15 13.0**	**+0.5**
TLVM	**San Miguel Top**	**1.33**	**54**				**Pn**	**13 14 56.8**	**+1.1**
TLVM							**Sn**	**13 15 11.6**	**-1.0**
TLVM	**San Miguel Top**	**1.33**	**54**	*i*	P		**Pn**	**13 14 56.8**	**+1.1**
TLVM				*eS*			**Sn**	**13 15 11.6**	**-1.0**
CAIG	**El Cayaco**	**1.36**	**179**				**Pn**	**13 14 56.3**	**+0.6**
CAIG							**Sn**	**13 15 11.9**	**-0.9**
CAIG	**El Cayaco**	**1.36**	**179**	*i*	P		**Pn**	**13 14 56.3**	**+0.6**
CAIG				*eS*			**Sn**	**13 15 11.9**	**-0.9**
ZIIG	**Zihuatanejo**	**1.38**	**234**				**Pn**	**13 14 56.1**	**+0.1**
ZIIG							**Sn**	**13 15 12.7**	**-0.5**
ZIIG	**Zihuatanejo**	**1.38**	**234**	*eP*			**Pn**	**13 14 56.1**	**+0.1**
ZIIG				*eS*			**Sn**	**13 15 12.7**	**-0.5**
XCVM	**Xochimilco**	**1.39**	**53**				**Pn**	**13 14 57.1**	**+0.8**
XCVM							**Sn**	**13 15 10.7**	**-3.1**
XCVM	**Xochimilco**	**1.39**	**53**	*eP*			**Pn**	**13 14 57.1**	**+0.8**
XCVM				*i*	S		**Sn**	**13 15 10.7**	**-3.1**
CUP5	**Mexico City**	**1.39**	**49**				**Pn**	**13 14 57.0**	**+0.6**
CUP5							**Sn**	**13 15 16.0**	**+2.2**
CUP5	**Mexico City**	**1.39**	**49**	*eP*			**Pn**	**13 14 57.0**	**+0.6**
CUP5				*eS*			**Sn**	**13 15 16.0**	**+2.2**
UNM	**Universidad Na**	**1.39**	**49**				**Pn**	**13 14 56.3**	**-0.1**
UNM	**Universidad Na**	**1.39**	**49**	*eP*			**Pn**	**13 14 57.4**	**+1.0**
UNM				*eS*			**Sn**	**13 15 12.9**	**-0.9**
ATVM	**ATLACOMULCO**	**1.40**	**18**				**Pn**	**13 14 57.0**	**+0.4**
ATVM							**Sn**	**13 15 12.4**	**-1.8**
ATVM	**ATLACOMULCO**	**1.40**	**18**	*eP*			**Pn**	**13 14 57.0**	**+0.4**
ATVM				*eS*			**Sn**	**13 15 12.4**	**-1.8**
MHVM	**Bosque de Chap**	**1.42**	**46**				**Pn**	**13 14 58.0**	**+1.2**
MHVM							**Sn**	**13 15 13.9**	**-0.7**
MHVM	**Bosque de Chap**	**1.42**	**46**	*i*	P		**Pn**	**13 14 58.0**	**+1.2**
MHVM				*eS*			**Sn**	**13 15 13.9**	**-0.7**
MPVM	**San Francisco**	**1.44**	**57**				**Pn**	**13 14 58.2**	**+1.2**
MPVM							**Sn**	**13 15 14.5**	**-0.5**
MPVM	**San Francisco**	**1.44**	**57**	*i*	P		**Pn**	**13 14 58.2**	**+1.2**
MPVM				*eS*			**Sn**	**13 15 14.5**	**-0.5**
APVM	**Azcapotzalco**	**1.48**	**44**				**Pn**	**13 14 58.4**	**+0.9**
APVM							**Sn**	**13 15 12.7**	**-3.2**
APVM	**Azcapotzalco**	**1.48**	**44**	*eP*			**Pn**	**13 14 58.4**	**+0.9**
APVM				*eS*			**Sn**	**13 15 12.7**	**-3.2**
AZVM	**Cuida Lopez Ma**	**1.50**	**39**				**Pn**	**13 14 58.5**	**+0.7**
AZVM							**Sn**	**13 15 14.1**	**-2.5**
AZVM	**Cuida Lopez Ma**	**1.50**	**39**	*eP*			**Pn**	**13 14 58.5**	**+0.7**
AZVM				*i*	S		**Sn**	**13 15 14.1**	**-2.5**
MOIG	**Morelia**	**1.51**	**326**				**Pn**	**13 14 58.6**	**+0.6**
MOIG	**Morelia**	**1.51**	**326**				**Sn**	**13 15 17.6**	**+0.8**
MOIG	**Morelia**	**1.51**	**326**	*eP*			**Pn**	**13 14 58.8**	**+0.8**
MOIG				*eS*			**Sn**	**13 15 17.6**	**+0.8**
DAIG	**Los Arroyos**	**1.52**	**156**				**Pn**	**13 14 58.7**	**+0.9**
DAIG							**Sn**	**13 15 13.0**	**-3.6**
DAIG	**Los Arroyos**	**1.52**	**156**	*eP*			**Pn**	**13 14 58.7**	**+0.9**
DAIG				*eS*			**Sn**	**13 15 13.0**	**-3.6**
PBVM	**Pinon**	**1.53**	**48**				**Pn**	**13 14 58.9**	**+1.0**
PBVM							**Sn**	**13 15 18.8**	**+2.0**
PBVM	**Pinon**	**1.53**	**48**	*eP*			**Pn**	**13 14 58.9**	**+1.0**
PBVM				*eS*			**Sn**	**13 15 18.8**	**+2.0**
THVM	**De Xico**	**1.53**	**54**				**Pn**	**13 14 59.3**	**+1.0**
THVM							**Sn**	**13 15 14.8**	**-2.5**
THVM	**De Xico**	**1.53**	**54**	*eP*			**Pn**	**13 14 59.3**	**+1.0**
THVM				*i*	S		**Sn**	**13 15 14.8**	**-2.5**
VNTA	**La Mica**	**1.56**	**163**				**Pn**	**13 14 59.3**	**+0.8**
VNTA	**La Mica**	**1.56**	**163**	*eP*			**Pn**	**13 14 59.3**	**+0.8**
VNTA				*i*	S		**Sn**	**13 15 13.2**	**-4.4**
AMVM	**AMECAMECA**	**1.59**	**63**				**Pn**	**13 14 59.9**	**+0.8**
AMVM							**Sn**	**13 15 16.5**	**-2.3**
AMVM	**AMECAMECA**	**1.59**	**63**	*i*	P		**Pn**	**13 14 59.9**	**+0.8**
AMVM				*i*	S		**Sn**	**13 15 16.5**	**-2.3**
ACIG	**Acambay**	**1.60**	**14**				**Pn**	**13 14 59.7**	**+0.5**
ACIG							**Sn**	**13 15 16.2**	**-2.7**
ACIG	**Acambay**	**1.60**	**14**	*i*	P		**Pn**	**13 14 59.7**	**+0.5**
ACIG				*i*	S		**Sn**	**13 15 16.2**	**-2.7**
PTVM	**Pico Tres Padr**	**1.61**	**43**				**Pn**	**13 15 00.0**	**+0.6**
PTVM							**Sn**	**13 15 15.3**	**-4.0**
PTVM	**Pico Tres Padr**	**1.61**	**43**	*i*	P		**Pn**	**13 15 00.0**	**+0.6**
PTVM				*eS*			**Sn**	**13 15 15.3**	**-4.0**
TXVM	**Universitario**	**1.65**	**52**	*i*	S		**Sn**	**13 15 13.6**	**-6.5**
PPCL	**Tochimilco**	**1.66**	**73**	*i*	P		**Sn**	**13 15 01.1**	**+1.1**
PPCL				*eS*			**Sn**	**13 15 17.5**	**-2.9**
PPPT	**Popocatepetl**	**1.68**	**70**	*eP*			**Sn**	**13 15 01.4**	**+1.0**
PPPT				*eS*			**Sn**	**13 15 19.1**	**-2.1**
PPIG	**Popocatepetl**	**1.70**	**67**				**Sn**	**13 15 02.0**	**+1.2**
PPIG							**Sn**	**13 15 25.2**	**+3.4**
PPM	**Popocatepetl**	**1.70**	**67**	*i*	P		**Sn**	**13 15 02.0**	**+1.2**
PPM				*eS*			**Sn**	**13 15 25.2**	**+3.4**
HMTT	**Tlapaneco**	**1.76**	**110**				**Sn**	**13 15 03.0**	**+1.8**
HMTT	**Tlapaneco**	**1.76**	**110**	*eP*			**Sn**	**13 15 03.0**	**+1.8**
HMTT				*eS*			**Sn**	**13 15 18.3**	**-4.2**
ZUVM	**ZUMPANGO**	**1.81**	**39**				**Sn**	**13 15 02.7**	**+0.6**
ZUVM	**ZUMPANGO**	**1.81**	**39**	*i*	P		**Sn**	**13 15 02.7**	**+0.6**
ZUVM				*eS*			**Sn**	**13 15 18.4**	**-5.7**
PPSX	**Xalitzintla**	**1.81**	**68**	*eP*			**Pn**	**13 15 03.6**	**+1.5**
PPSX				*i*	S		**Sn**	**13 15 21.4**	**-2.8**
TLIG	**Tlapa**	**1.85**	**117**				**Pn**	**13 15 03.6**	**+1.2**
TLIG	**Tlapa**	**1.85**	**117**	*eP*			**Pn**	**13 15 04.1**	**+1.7**
TLIG				*eS*			**Sn**	**13 15 19.4**	**-5.4**
URUA	**Uruapan**	**1.96**	**301**				**Sn**	**13 15 04.9**	**+0.8**
URUA	**Uruapan**	**1.96**	**301**	*eP*			**Sn**	**13 15 04.9**	**+0.8**
URUA				*i*	S		**Sn**	**13 15 20.4**	**-7.2**
VTVM	**Tizayuca**	**1.97**	**47**				**Pn**	**13 15 04.7**	**+0.5**
VTVM	**Tizayuca**	**1.97**	**47**	*i*	P		**Pn**	**13 15 04.7**	**+0.5**
VTVM				*i*	S		**Sn**	**13 15 23.3**	**-4.6**
MGIG	**Malinaltepec**	**1.97**	**126**				**Pn**	**13 15 05.8**	**+1.7**
MGIG							**Sn**	**13 15 29.9**	**+2.1**
MGIG	**Malinaltepec**	**1.97**	**126**	*eP*			**Pn**	**13 15 05.8**	**+1.7**
MGIG				*eS*			**Sn**	**13 15 29.9**	**+2.1**
CRIG	**Cruz Grande**	**2.00**	**146**				**Pn**	**13 15 05.2**	**+0.8**
CRIG							**Sn**	**13 15 28.5**	**+0.1**
CRIG	**Cruz Grande**	**2.00**	**146**	*eP*			**Pn**	**13 15 05.2**	**+0.8**
CRIG				*eS*			**Sn**	**13 15 28.5**	**+0.1**
PHPU	**Puebla**	**2.11**	**72**				**Pn**	**13 15 06.6**	**+0.5**
PHPU							**Sn**	**13 15 33.8**	**+2.6**
PHPU	**Puebla**	**2.11**	**72**	*i*	P		**Pn**	**13 15 06.6**	**+0.5**
PHPU				*i*	S		**Sn**	**13 15 33.8**	**+2.6**
FTIG	**Fresnillo de T**	**2.11**	**104**				**Pn**	**13 15 07.7**	**+1.7**
FTIG							**Sn**	**13 15 30.9**	**-0.3**
FTIG	**Fresnillo de T**	**2.11**	**104**	*eP*			**Pn**	**13 15 07.7**	**+1.7**
FTIG				*eS*			**Sn**	**13 15 30.9**	**-0.3**
DHIG	**Demacu**	**2.22**	**32**				**Pn**	**13 15 07.6**	**+0.1**
DHIG							**Sn**	**13 15 30.6**	**+2.6**
DEIG	**Demacu**	**2.22**	**32**	*i*	P		**Pn**	**13 15 07.6**	**+0.1**
DEIG				*eS*			**Sn**	**13 15 36.6**	**+2.6**
JRQG	**Juriquilla Cam**	**2.28**	**356**				**Pn**	**13 15 07.9**	**-0.5**
JRQG	**Juriquilla Cam**	**2.28**	**356**				**Sn**	**13 15 37.9**	**+2.4**
JRQG	**Juriquilla Cam**	**2.28**	**356**	*eP*			**Pn**	**13 15 08.1**	**-0.3**
JRQG				*eS*			**Sn**	**13 15 37.9**	**+2.4**
HLIG	**Huajuapan de L**	**2.44**	**103**				**Pn**	**13 15 12.4**	**+1.9**
HLIG							**Sn**	**13 15 38.7**	**-0.6**
HLIG	**Huajuapan de L**	**2.44**	**103**	*eP*			**Pn**	**13 15 12.4**	**+1.9**
HLIG				*eS*			**Sn**	**13 15 38.7**	**-0.6**
TXIG	**Tlaxiaco**	**2.67**	**115**				**Pn**	**13 15 15.9**	**+2.1**
TXIG							**Sn**	**13 15 44.6**	**-0.5**
TXIG	**Tlaxiaco**	**2.67**	**115**	*i*	P		**Pn**	**13 15 15.9**	**+2.1**
TXIG				*i*	S		**Sn**	**13 15 44.6**	**-0.5**
TPIG	**Tehuac#an**	**2.78**	**90**				**Pn**	**13 15 17.2**	**+2.0**
TPIG							**Sn**	**13 15 47.4**	**-0.3**
TPIG	**Tehuac#an**	**2.78**	**90**	*eP*			**Pn**	**13 15 17.2**	**+2.0**
TPIG				*eS*			**Sn**	**13 15 47.4**	**-0.3**
PNIG	**Pinotepa**	**2.89**	**134**				**Pn**	**13 15 13.0**	**+1.5**
PNIG							**Sn**	**13 15 56.9**	**+6.8**
PNIG	**Pinotepa**	**2.89**	**134**	*eP*			**Pn**	**13 15 18.0**	**+1.5**
PNIG				*eS*			**Sn**	**13 15 56.9**	**+6.8**
MMIG	**Aquila**	**2.90**	**268**				**Pn**	**13 15 16.8**	**+0.1**
MMIG							**Sn**	**13 15 48.7**	**-1.7**
MMIG	**Aquila**	**2.90**	**268**	*eP*			**Pn**	**13 15 16.8**	**+0.1**
MMIG				*i*	S		**Sn**	**13 15 48.7**	**-1.7**
YOIG	**Yosondua**	**3.04**	**120**				**Pn**	**13 15 21.2**	**+2.3**
YOIG							**Sn**	**13 15 53.6**	**-0.7**
YOIG	**Yosondua**	**3.04**	**120**	*eP*			**Pn**	**13 15 21.2**	**+2.3**
YOIG				*eS*			**Sn**	**13 15 53.6**	**-0.7**
TOIG	**Toxpalan**	**3.08**	**95**				**Pn**	**13 15 21.4**	**+2.1**
TOIG							**Sn**	**13 15 54.8**	**-0.3**
TOIG	**Toxpalan**	**3.08**	**95**	*eP*			**Pn**	**13 15 21.4**	**+2.1**
TOIG				*i*	S		**Sn**	**13 15 54.8**	**-0.3**
CXUV	**Coxquihui**	**3.09**	**55**				**Pn**	**13 15 20.3**	**+0.9**
CXUV	**Coxquihui**	**3.09**	**55**	*i*	P		**Pn**	**13 15 20.3**	**+0.9**
MNGA	**Volcan de Coli**	**3.32**	**289**	*eP*			**Pn**	**13 15 25.0**	**+2.4**
MNGA				*i*	S		**Sn**	**13 16 06.4**	**+5.4**
INCO	**Volcan de Coli**	**3.32**	**290**	*eP*			**Pn**	**13 15 25.0**	**+2.2**
INCO				*i*	S		**Sn**	**13 15 58.4**	**-2.9**
SOMAC	**Volcano de Col**	**3.35**	**290**	*eP*			**Pn**	**13 15 25.5**	**+2.4**
JAUV	**Jalcomulco**	**3.43**	**74**				**Pn**	**13 15 25.3**	**+1.3**
JAUV							**Sn**	**13 16 02.7**	**-0.8**
JAUV	**Jalcomulco**	**3.43**	**74**	*eP*			**Pn**	**13 15 25.3**	**+1.3**
JAUV				*eS*			**Sn**	**13 16 02.7**	**-0.8**
CEGR	**Campo Tres**	**3.51**	**287**	*eP*			**Pn**	**13 15 27.4**	**+2.2**
CEGR				*i*	S		**Sn**	**13 16 06.1**	**+0.5**
CTUV	**Llano Grande**	**3.54**	**31**				**Pn**	**13 15 26.1**	**+0.6**
CTUV							**Sn**	**13 16 09.3**	**+3.2**
CTUV	**Llano Grande**	**3.54**	**31**	*eP*			**Pn**	**13 15 26.1**	**+0.6**
CTUV				*i*	S		**Sn**	**13 16 09.3**	**+3.2**
CDAR	**Ciudad de Arme**	**3.56**	**279**	*eP*			**Pn**	**13 15 27.1**	**+1.3**
CDAR				*i*	S		**Sn**	**13 16 08.7**	**-2.2**
OXIG	**Oaxaca**	**3.65**	**111**				**Pn**	**13 15 29.9**	**+2.8**
OXIG							**Sn**	**13 16 08.7**	**-0.3**
VHO	**Vista Hermosa**	**3.65**	**111**	*eP*			**Pn**	**13 15 29.9**	**+2.8**
VHO				*i*	S		**Sn**	**13 16 08.7**	**-0.3**
OXBJ	**Oaxaca**	**3.66**	**111**				Pn	13 15 33.3	+6.1
OXBJ							**Sn**	**13 16 10.9**	**+1.7**
OXBJ	**Oaxaca**	**3.66**	**111**	*eP*			Pn	13 15 33.3	+6.1
OXBJ				*eS*			**Sn**	**13 16 10.9**	**+1.7**
OXLC	**Oaxaca**	**3.67**	**111**				**Sn**	**13 15 29.1**	**+1.6**
OXLC							**Sn**	**13 16 08.7**	**-1.0**
OXLC	**Oaxaca**	**3.67**	**111**	*eP*			**Pn**	**13 15 29.1**	**+1.6**
OXLC				*eS*			**Sn**	**13 16 08.7**	**-1.0**
PEIG	**Puerto Escondi**	**3.85**	**128**				**Pn**	**13 15 31.4**	**+1.7**
PEIG							**Sn**	**13 16 11.7**	**-2.0**
PEIG	**Puerto Escondi**	**3.85**	**128**	*eP*			**Pn**	**13 15 31.4**	**+1.7**
PEIG				*eS*			**Sn**	**13 16 11.7**	**-2.0**
LVIG	**Laguna Verde**	**3.89**	**70**				**Pn**	**13 15 31.3**	**+1.1**
LVIG	**Laguna Verde**	**3.89**	**70**	*eP*			**Pn**	**13 15 31.3**	**+1.1**
AAIG	**Aguascalientes**	**4.04**	**331**				**Pn**	**13 15 33.4**	**+0.8**
AAIG	**Aguascalientes**	**4.04**	**331**	*eP*			**Pn**	**13 15 33.4**	**+0.8**
CJM	**Chamela**	**4.62**	**284**	*eP*			**Pn**	**13 15 41.5**	**+1.2**
CJM				*i*	S		**Sn**	**13 16 29.5**	**-3.2**
GTIG	**Gomez Farias**	**4.74**	**13**				**Pn**	**13 15 42.0**	**0.0**
GTIG	**Gomez Farias**	**4.74**	**13**	*eP*			**Pn**	**13 15 42.0**	**0.0**
HUIG	**Huatulco**	**4.79**	**123**				**Pn**	**13 15 45.1**	**+2.5**
HUIG							**Sn**	**13 16 34.2**	**-2.6**
HUIG	**Huatulco**	**4.79**	**123**	*eP*			**Pn**	**13 15 45.1**	**+2.5**
HUIG				*eS*			**Sn**	**13 16 34.2**	**-2.6**
ZAIG	**Zacatecas**	**4.83**	**334**				**Pn**	**13 15 42.5**	**-0.9**
PMUV	**Sontecomapan**	**4.91**	**88**				**Pn**	**13 15 44.7**	**+0.5**
PMUV	**Sontecomapan**	**4.91**	**88**	*i*	P		**Pn**	**13 15 44.7**	**+0.5**
PMUV				*i*				13 16 29.8	
CMIG	**Matias Romero**	**5.32**	**104**	P			**Pn**	**13 15 52.0**	**+2.2**
	55nm,0.6s,baz=290,slow=14,SNR=115								
CMIG					S		**Sn**	**13 16 48.7**	**-1.2**
	36nm,0.5s,baz=182,slow=21,SNR=5.7								
CMIG					LR		LR	13 18 17.4	
	comp=Z,107nm,20.8s,baz=294,slow=44								
CCIG	**Comitan**	**8.07**	**104**				**Pn**	**13 16 27.6**	**-0.2**
RTAL	**Retalhuleu**	**9.11**	**114**				**Pn**	**13 16 42.9**	**+1.1**
HPIG		**9.82**	**331**				**Pn**	**13 16 52.8**	**+1.1**
APG	**El Apazote**	**10.01**	**108**	P			**Pn**	**13 16 56.7**	**+2.4**
	0.4nm,0.4s,baz=61,slow=23,SNR=4.8								
APG				S			**Sn**	**13 18 44.1**	**-1.1**
	0.3nm,0.3s,baz=235,slow=19,SNR=2.2								
LPIG	**La Paz**	**10.92**	**303**	P			Pn	13 17 14.6	+8.2
	6.7nm,0.3s,baz=112,slow=5.4,SNR=1.7								
DRIO	**Del Rio**	**10.96**	**358**				**Pn**	**13 17 06.8**	**-0.3**
MTO3	**Montecristo**	**11.22**	**109**				**Pn**	**13 17 10.5**	**-0.4**
TXAR	**Lajitas Array**	**11.30**	**345**	P			**Pn**	**13 17 14.3**	**+2.6**
	0.3nm,0.4s,baz=170,slow=18,SNR=4.3								
TXAR				LR			LR	13 21 51.9	
	comp=Z,66nm,19.1s,baz=137,slow=39								
TEIG	**Tepich**	**11.48**	**79**	P			**Pn**	**13 17 14.3**	**+0.1**
	0.5nm,0.5s,baz=311,slow=19,SNR=1.2								
TEIG				S			**Sn**	**13 19 15.6**	**-5.4**
	0.3nm,0.3s,baz=313,slow=23,SNR=3.6								
TEIG	**Tepich**	**11.48**	**79**	P			**Pn**	**13 17 12.9**	**-1.4**
JCT	**Junction City**	**12.02**	**2**	P			**Pn**	**13 17 20.4**	**-1.1**
ABTX	**Abilene, Hawle**	**14.16**	**2**	P			**Pn**	**13 17 50.6**	**0.0**
CLNB	**Carlsbad**	**14.16**	**347**				**Pn**	**13 17 51.4**	**+0.7**
GDL2	**Guadalupe Moun**	**14.21**	**346**				**Pn**	**13 17 52.0**	**+0.7**
BOAB	**BOACO BROADBAN**	**16.29**	**111**				**Pn**	**13 18 06.5**	**+1.2**
Z38A	**Mt. Pleasant**	**15.53**	**17**	P			**Pn**	**13 18 08.4**	**+0.1

ASAR	**Alice Springs**	**26.25**	**169**	P		**P**	**13 24 00.9**	**-0.2**
ASAR						**PcP**	**13 27 26.6**	**-0.8**
ASAR						**ScP**	**13 31 03.4**	**-1.3**
JNU	**Nakatsue**	**30.76**	**3**	LR		LR	13 35 14.4	
	comp=Z,35nm,19.6s,baz=225,slow=33							
INKA	**Innaminka**	**31.97**	**160**	P		**P**	**13 24 52.5**	**+0.6**
FORT	**Forrest**	**32.86**	**181**	P		**P**	**13 24 59.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**33.39**	**301**	P		**P**	**13 25 05.7**	**+1.1**
	comp=Z,1.0nm,1.0s,baz=100,slow=5.8,SNR=5.3							
CMAR				LR		LR	13 41 05.2	
	comp=Z,4.6nm,18.7s,baz=180,slow=41							
	comp=Z,1.0nm,1.0s							
EIDS	**Eidsvold**	**34.94**	**143**	P		**P**	**13 25 18.6**	**+0.7**
KSRS	**Korea Array**	**35.03**	**359**	P		**P**	**13 25 19.0**	**+0.6**
	comp=Z,3.5nm,0.9s,baz=177,slow=10,SNR=5.2							
	comp=Z,3.5nm,0.9s							
MJAR	**Matsushiro Arr**	**35.20**	**13**	P		**P**	**13 25 19.4**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=180,slow=9.4,SNR=7.2							
	comp=Z,2.7nm,0.8s							
MJAR	**Matsushiro Arr**	**35.20**	**13**	IAmb		IAmb	13 25 21.7	
	comp=Z,1.9nm,0.8s							
BBOO	**Buckleboo**	**35.55**	**169**	P		**P**	**13 25 23.4**	**+0.4**
STKA	**Stephens Creek**	**36.06**	**161**	P		**P**	**13 25 27.9**	**+0.5**
	comp=Z,4.6nm,0.6s,baz=339,slow=9.8,SNR=12							
	comp=Z,4.6nm,0.6s							
STKA	**Stephens Creek**	**36.06**	**161**	IAmb		IAmb	13 25 29.1	
	comp=Z,21nm,0.7s							
ARMA	**Armidale**	**39.13**	**148**	P		**P**	**13 25 55.5**	**+2.0**
H11N1	**WAKE ISLAND Hy**	**41.06**	**62**	T		T	14 10 05.0	
	baz=250,slow=75,SNR=54							
H11N2	**WAKE ISLAND Hy**	**41.08**	**62**	T		T	14 10 04.4	
	baz=250,slow=75,SNR=22							
H11N3	**WAKE ISLAND Hy**	**41.08**	**62**	T		T	14 10 05.1	
	baz=250,slow=75,SNR=31							
TOO	**Toolangi**	**42.55**	**160**	P		**P**	**13 26 21.9**	**+0.4**
TOO				IAmb		IAmb	13 27 01.5	
	comp=Z,8.2nm,1.4s							
SONM	**Songino Array**	**49.35**	**340**	P		**P**	**13 27 15.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=149,slow=7.8,SNR=4.3							
SONM				PcP		**PcP**	**13 28 37.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=154,slow=4.6,SNR=2.1							
	comp=Z,1.0nm,0.7s							
PETK	**Petropavlovsk**	**56.04**	**21**	P		**P**	**13 28 05.9**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=223,slow=8.1,SNR=2.1							
PETK				LR		LR	13 49 52.5	
	comp=Z,15nm,20.7s,baz=211,slow=34							
	comp=Z,4.4nm,0.8s							
PETK	**Petropavlovsk-**	**56.04**	**21**	P		**P**	**13 28 04.3**	**0.0**
LBZ	**Lake Benmore**	**59.33**	**147**	P		**P**	**13 28 28.4**	**+0.8**
MKAR	**Makanchi Array**	**59.93**	**325**	P		**P**	**13 28 31.7**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=114,slow=7.9,SNR=20							
MKAR				PcP		**PcP**	**13 29 17.4**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=110,slow=6.0,SNR=5.0							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**59.93**	**325**	P		**P**	**13 28 30.8**	**-1.0**
MAKZ	**Makanchi**	**60.12**	**325**	P		**P**	**13 28 33.0**	**-0.1**
MAKZ				IAmb		IAmb	13 28 39.1	
	comp=Z,2.3nm,0.9s							
ZALV	**Zalesovo Beam**	**62.83**	**333**	P		**P**	**13 28 51.0**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=103,slow=4.6,SNR=2.3							
	comp=Z,0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**62.83**	**333**	P		**P**	**13 28 50.5**	**-0.6**
KURBB	**Kurchatov Array**	**64.08**	**327**	P		**P**	**13 28 59.1**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=126,slow=5.9,SNR=14							
	comp=Z,1.5nm,0.9s							
KURK	**Kurchatov**	**64.08**	**327**			**P**	**13 28 58.6**	**-1.0**
KURK				IAmb		IAmb	13 29 06.4	
	comp=Z,2.4nm,0.8s							
BVAR	**Borovoye Array**	**69.67**	**327**	P		**P**	**13 29 34.7**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=108,slow=4.8,SNR=5.4							
	comp=Z,0.6nm,0.3s							
ABKAR	**Akbulak array**	**74.58**	**321**	P		**P**	**13 30 04.0**	**-0.6**
ILAR	**Eielson Array**	**85.54**	**25**	P		**P**	**13 31 03.7**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=252,slow=5.4,SNR=4.6							
ILAR				LR		LR	14 04 17.3	
	comp=Z,23nm,20.9s,baz=282,slow=32							
	comp=Z,0.2nm,0.6s							

*SFS **27** 13:23:21.9,35˚.03N×3˚.93W,h0km, ML3.3/15,ML2.8/19, MLv2.5/19*
*CNRM **27** 13:23:21.9,34˚.96N×3˚.88W,h19km,ML2.8*
*MDD **27** 13:23:22.0±0.8,35˚.02N×3˚.93W,h4km±6km,mb_Lg2.5/11, Error ellipse: s-maj=6.5km s-min=4.0km az=130.0*
*INMG **27** 13:23:24.5±1.4,35˚.02N×3˚.86W,h21km±6km,ML2.3, Error ellipse: s-maj=4.9km s-min=3.1km az=114.0, #DIST_RANGE: REGIONAL #IPMA_REGION: SE Al Hoceima (MARR)*

ISC 27 13:23:21.5±1.1,34˚.95N±0˚.03×3˚.87W±0˚.02,h19km±3km, n58,σ1§24/84,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PALE	**Palemas**	**0.27**	**347**	P		**Pb**	**13 23 27.7**	**-0.1**
PALE	**Palemas**	**0.27**	**347**	S		**Sg**	**13 23 32.8**	**+0.9**
AKLM	**AKL**	**0.44**	**180**	P		**Pg**	**13 23 29.2**	**-1.4**
AKLM	**AKL**	**0.44**	**180**	S		**Sg**	**13 23 36.1**	**-0.6**
EMEL	**Melilla**	**0.82**	**65**	Pg		**Pb**	**13 23 36.3**	**-0.9**
EMEL				Sg		**Sn**	**13 23 50.1**	**+0.4**
EMEL				*i*	IVmb_Lg		13 23 53.1	
EMLI	**Melilla**	**0.83**	**65**	Pg		**Pb**	**13 23 36.5**	**-0.7**
EMLI				Sg		**Sg**	**13 23 49.2**	**+0.6**
WMELI	**Melilla**	**0.83**	**64**	Pg		**Pb**	**13 23 35.9**	**-1.5**
WMELI				Sg		**Sb**	**13 23 48.9**	**+0.7**
EALB	**Alboran**	**1.20**	**34**	Sg		**Sb**	**13 23 58.7**	**+0.1**
EALB				Pg		**Pn**	**13 23 42.8**	**-0.4**
EALB	**Alboran**	**1.20**	**34**	Pg		**Pb**	**13 23 44.0**	**+0.5**
EALB				Sg		**Sg**	**13 24 00.3**	**0.0**
EALB				*i*	IVmb_Lg		13 24 02.8	
TAF	**Taforalt**	**1.20**	**96**	P		**Pb**	**13 23 44.1**	**+0.4**
TAF	**Taforalt**	**1.20**	**96**	S		**Sg**	**13 24 01.5**	**+1.0**
CHEFC	**Chefchaouen**	**1.22**	**278**	P		**Pb**	**13 23 44.3**	**+0.3**
CHEFC	**Chefchaouen**	**1.22**	**278**	S		**Sg**	**13 24 00.9**	**-0.2**
JBK	**JBK**	**1.23**	**120**	P		**Pn**	**13 23 43.6**	**-0.4**
JBK	**JBK**	**1.23**	**120**	S		**Sb**	**13 23 59.3**	**-0.7**
SMIR	**Smir Dam**	**1.44**	**301**	P		**Pn**	**13 23 46.8**	**+0.2**
SMIR	**Smir Dam**	**1.44**	**301**	S		**Sb**	**13 24 06.2**	**+0.6**
LCRM	**LCR**	**1.51**	**213**	P		**Pb**	**13 23 49.0**	**0.0**
CEU	**Ceuta**	**1.55**	**308**	Sn		**Sn**	**13 24 03.9**	**-3.8**
CEU				Pn		**Pn**	**13 23 46.0**	**-2.1**
ECEU	**Ceuta**	**1.55**	**308**	Pn		**Pn**	**13 23 47.1**	**-1.0**
ECEU				Sn		**Sn**	**13 24 04.9**	**-2.9**
ECEU	**Ceuta**	**1.55**	**308**	Pn		**Pn**	**13 23 47.5**	**-0.7**
ECEU				Sn		**Sn**	**13 24 07.2**	**-0.6**
ECEU				*i*	IVmb_Lg		13 24 11.6	
EMIJ	**Mijas**	**1.77**	**336**	Sn		**Sn**	**13 24 12.8**	**-0.4**
EMIJ				*i*	IVmb_Lg		13 24 17.4	
IFR	**Ifrane**	**1.77**	**216**	Pn		**Pb**	**13 23 53.7**	**+0.1**
IFR				Sn		**Sb**	**13 24 16.6**	**+1.2**
ELGU	**Los Guajares,**	**1.92**	**6**	Pn		**Pn**	**13 23 52.5**	**-0.8**
ELGU				Sn		**Sn**	**13 24 17.3**	**+0.3**
ELGU	**Los Guajares,**	**1.92**	**6**	Pn		**Pn**	**13 23 52.5**	**-0.8**
ELGU				Sn		**Sn**	**13 24 16.2**	**-0.8**
ELGU				*i*	IVmb_Lg		13 24 23.4	
EJIF	**Jimena Fronter**	**1.98**	**319**	Pn		**Pn**	**13 23 54.6**	**+0.5**
EJIF				Sn		**Sn**	**13 24 17.4**	**-1.1**
CZD	**Col de Zad**	**2.15**	**207**	P		**Pn**	**13 23 57.1**	**+0.4**
EGOR	**Sierra Gorda,**	**2.16**	**355**	Pn		**Pn**	**13 23 57.6**	**+0.9**
EGOR	**Sierra Gorda,**	**2.16**	**355**	Pn		**Pn**	**13 23 56.1**	**-0.6**
EGOR				Sn		**Sn**	**13 24 22.0**	**-1.0**
EGOR				*i*	IVmb_Lg		13 24 35.9	
MD31	**MD31**	**2.21**	**200**	P		**Pn**	**13 23 58.1**	**+0.9**
MDT	**Midelt**	**2.22**	**196**	P		**Pn**	**13 23 58.2**	**+0.8**
EQUE	**Quentar**	**2.27**	**9**	Pn		**Pn**	**13 23 59.3**	**+1.1**
EQUE				Sn		**Sn**	**13 24 26.0**	**+0.3**
EQUE				*i*	IVmb_Lg		13 24 31.6	
EQTA	**Presa de Quent**	**2.27**	**9**	Sn		**Sn**	**13 24 27.3**	**+1.5**
EQTA				Pn		**Pn**	**13 23 59.2**	**+1.0**
ESPR	**Espera**	**2.50**	**320**	Pn		**Pn**	**13 24 00.9**	**-0.4**
ESPR				Sn		**Sn**	**13 24 30.9**	**-0.4**
ESPR				*i*	IVmb_Lg		13 24 44.3	
ZHG	**ZHG**	**2.75**	**238**	P		**Pn**	**13 24 06.1**	**+1.5**
EQES	**Quesada**	**2.92**	**12**	Pn		**Pn**	**13 24 07.8**	**+0.8**
EQES				Sn		**Sn**	**13 24 39.9**	**-1.7**
EQES				*i*	IVmb_Lg		13 24 51.8	
TLOR	**Lorca, Murcia**	**3.22**	**32**	Pn		**Pn**	**13 24 13.6**	**+2.6**
EADA	**Adamuz**	**3.26**	**350**	Pn		**Pn**	**13 24 13.1**	**+1.4**
ECAB	**El Cabril**	**3.36**	**339**	Pn		**Pn**	**13 24 13.4**	**+0.4**
ECAB				Sn		**Sn**	**13 24 52.3**	**-0.1**
EMIN	**Mina Concepcio**	**3.61**	**322**	Pn		**Pn**	**13 24 16.8**	**+0.4**
EMIN				Sn		**Sn**	**13 24 56.7**	**-1.8**
EGRO	**El Granado**	**3.90**	**312**	Pn		**Pn**	**13 24 21.1**	**+0.7**
EGRO				Sn		**Sn**	**13 25 04.5**	**-1.2**
PVAQ	**Vaqueiros**	**3.96**	**309**	*e*P		**Pn**	**13 24 22.2**	**+1.0**
PVAQ				*e*S		**Sn**	**13 25 06.7**	**-0.5**
PVAQ				*i*	IAML		13 25 10.6	
PVAQ				*i*	IAML		13 25 11.4	
PVAQ				*i*	IAML		13 25 13.6	
PVAQ	**Vaqueiros**	**3.96**	**309**	P		**Pn**	**13 24 21.7**	**+0.5**
PBDV	**Barranco-do-Ve**	**4.01**	**306**	Pn		**Pn**	**13 24 22.5**	**+0.5**
PBDV				Sn		**Sn**	**13 25 07.9**	**-0.5**
PBDV	**Barranco-do-Ve**	**4.01**	**306**	*e*P		**Pn**	**13 24 23.4**	**+1.5**
PBDV				*e*S		**Sn**	**13 25 07.4**	**-1.0**
PBDV				*i*	IAML		13 25 09.8	
PBAR	**Barrancos**	**4.11**	**322**	Pn		**Pn**	**13 24 23.9**	**+0.7**
PBAR	**Barrancos**	**4.11**	**322**	*e*P		**Pn**	**13 24 24.4**	**+1.1**
PBAR				*e*S		**Sn**	**13 25 11.2**	**+0.4**
PBAR				*i*	IAML		13 25 12.8	
PBAR				*i*	IAML		13 25 17.0	
PBAR				*i*	IAML		13 25 17.0	
ETOB	**Tobarra**	**4.13**	**26**	Pn		**Pn**	**13 24 23.5**	**-0.1**
PCVE	**Castro Verde**	**4.30**	**310**	Pn		**Pn**	**13 24 26.9**	**+1.0**
PCVE	**Castro Verde**	**4.30**	**310**	*e*P		**Pn**	**13 24 27.6**	**+1.6**
PCVE				*e*S		**Sn**	**13 25 15.1**	**-0.5**
PCVE				*i*	IAML		13 25 24.4	
MORF	**Marmelete**	**4.53**	**303**	*e*P		**Pn**	**13 24 31.4**	**+2.3**
MESJ	**Messejana**	**4.54**	**311**	*e*P		**Pn**	**13 24 31.1**	**+1.9**
MESJ				*e*S		**Sn**	**13 25 21.3**	**-0.3**
EBAD	**Badajoz**	**4.56**	**327**	Pn		**Pn**	**13 24 30.8**	**+1.3**
EBAD				Sn		**Sn**	**13 25 20.7**	**-1.2**
PFVI	**Vila Bisbo**	**4.57**	**300**	*e*P		**Pn**	**13 24 33.8**	**+4.2**
MOE	**Montemor**	**5.07**	**316**	*e*P		**Pn**	**13 24 38.3**	**+1.8**
PARRA	**Arraiolos**	**5.10**	**320**	*e*P		Pn	13 24 38.2	-6.4
PARRA				*e*S		Sn	13 25 33.8	-15
PARRA				*i*	IAML		13 25 37.3	
PARRA				*i*	IAML		13 25 38.2	
PARRA				*i*	IAML		13 25 39.6	
PMRV	**Marv??o**	**5.28**	**329**	*e*P		**Pn**	**13 24 41.4**	**+2.0**
PSARD	**Sardoal**	**5.77**	**325**	*e*S		**Sn**	**13 25 50.2**	**-1.5**

*IDC **27** 13:41:25.6±0.7,20˚.47S×70˚.74W,h0km,mb3.8/6, mbtmp3.8/8,ML3.6/2,MS3.3/6, Error ellipse: s-maj=24.1km s-min=18.0km az=88.0*
*SJA **27** 13:41:30.0±1.5,20˚.38S×70˚.44W,h40km±2km,ML4.3, MW4.3*
*GUC **27** 13:41:31.9±0.4,20˚.35S×70˚.41W,h43km±1km,ML4.3*
*NEIC **27** 13:41:31.2,20˚.42S×70˚.48W,h31km*
*NEIC **27** 13:41:31.5±1.9,20˚.34S±0˚.02×70˚.40W±0˚.05,h36km±5km, mb4.4/19,Mwr4.2/31,Mwr4.5(GUC), Error ellipse: s-maj=7.0km s-min=1.8km az=105.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr1.58; Mθθ-0.18; Mϕϕ-1.40; Mrθ-0.88; Mθϕ-0.14; Mϕr1.92; Fault plane solution: M₀2.59000×10¹⁵ NP1:φs342.63000°, δ73.02000°,λ78.29000°. NP2:φs198.00000°,δ20.53000°, λ123.62000°. Principal axes: T 2.7692, Plg60.0000°, Azm236.0000°; N -0.3948, Plg11.0000°, Azm346.0000°; P -2.3744, Plg27.0000°, Azm82.0000°;*
*VAO **27** 13:41:32.5±1.0,20˚.56S×70˚.34W,h92km±9km,mb4.3*

ISC 27 13:41:30.3±0.9,20˚.34S±0˚.02×70˚.49W±0˚.04,h32km±6km, n138,σ1§59/158,mb4.4/12,MS3.2/4,9C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TA02	**Huaiquique**	**0.35**	**78**	⇑*i*P		**Pn**	**13 41 39.4**	**+0.2**
TA02				*i*	S	**Sn**	**13 41 45.1**	**+0.1**
TA02	**Huaiquique**	**0.35**	**78**	*e*P		**Pn**	**13 41 39.3**	**+0.1**
TA02					IAML		13 41 48.1	
	comp=Z,23µm,0.9s							
TA01	**Diego Aracena**	**0.37**	**127**			**Pb**	**13 41 39.2**	**+0.3**
TA01						**Sn**	**13 41 45.5**	**-0.1**
TA01	**Diego Aracena**	**0.37**	**127**	⇑*i*P		**Pn**	**13 41 39.6**	**+0.1**
TA01				*i*	S	**Sn**	**13 41 45.5**	**-0.1**
TA01					IAML		13 41 45.8	
	comp=E,96µm,0.3s							
TA01	**Diego Aracena**	**0.37**	**127**	*e*P		**Pb**	**13 41 39.4**	**+0.5**
TA01				*e*S		**Sn**	**13 41 45.4**	**-0.1**
TA01					IAML		13 41 54.5	
	comp=Z,7µm,0.3s							
HMBC	**Humberstone**	**0.57**	**84**			**Pb**	**13 41 42.1**	**0.0**
HMBC					Sn	**Sb**	**13 41 49.3**	**-0.9**
HMBC	**Humberstone**	**0.57**	**84**	*e*P		**Pb**	**13 41 42.2**	**+0.1**
HMBC					IAML		13 41 53.6	
	comp=Z,27µm,0.5s							
PATCX	**Punta Patache**	**0.57**	**146**			**Pb**	**13 41 42.2**	**+0.1**
PATCX					Sn	**Sb**	**13 41 49.6**	**-0.6**
PATCX	**Punta Patache**	**0.57**	**146**	*e*P		**Pb**	**13 41 42.2**	**+0.1**
PATCX				*e*S		**Sb**	**13 41 49.9**	**-0.3**
PATCX					IAML		13 41 55.4	
	comp=Z,16µm,0.3s							
PSGCX	**Pisagua**	**0.82**	**25**			**Pn**	**13 41 45.9**	**+0.1**
PSGCX					Sn	**Sn**	**13 41 56.7**	**-0.1**
PB11	**IPOC Station P**	**0.98**	**54**			**Pn**	**13 41 48.0**	**0.0**
PB11					Sn	**Sn**	**13 42 00.5**	**-0.3**
PB11	**IPOC Station P**	**0.98**	**54**	⇓*i*P		**Pn**	**13 41 48.3**	**+0.3**
PB11				*i*	S	**Sn**	**13 42 00.9**	**+0.1**
PB11	**IPOC Station P**	**0.98**	**54**	*e*P		**Pn**	**13 41 48.2**	**+0.3**
PB11					IAML		13 42 04.7	
	comp=Z,12µm,0.8s							
PB02	**IPOC Station P**	**1.12**	**150**			**Pn**	**13 41 50.1**	**+0.2**
PB02					Sn	**Sn**	**13 42 04.3**	**0.0**
PB02	**IPOC Station P**	**1.12**	**150**	⇓*i*P		**Pn**	**13 41 50.3**	**+0.4**
PB02				*i*	S	**Sn**	**13 42 04.3**	**0.0**
PB02					IAML		13 42 05.7	
	comp=E,18µm,0.2s							
PB02	**IPOC Station P**	**1.12**	**150**	*e*P		**Pn**	**13 41 50.3**	**+0.4**
PB02					IAML		13 42 11.4	
	comp=Z,11µm,0.3s							
PB01	**IPOC Station P**	**1.17**	**127**			**Pn**	**13 41 50.3**	**-0.3**
PB01					Sn	**Sn**	**13 42 05.1**	**-0.5**
PB01	**IPOC Station P**	**1.17**	**127**	⇓*i*P		**Pn**	**13 41 50.8**	**+0.2**
PB01				*i*	S	**Sn**	**13 42 05.2**	**-0.3**
PB01					IAML		13 42 07.3	
	comp=N,19µm,0.4s							
PB01	**IPOC Station P**	**1.17**	**127**	*e*P		**Pn**	**13 41 50.8**	**+0.2**
PB01				*e*S		**Sn**	**13 42 05.3**	**-0.2**
PB01					IAML		13 42 08.6	
	comp=Z,7µm,0.2s							
PB08	**IPOC Station P**	**1.27**	**81**			**Pn**	**13 41 52.5**	**+0.3**
PB08					Sn	**Sn**	**13 42 08.0**	**-0.5**
PB08	**IPOC Station P**	**1.27**	**81**	⇓*i*P		**Pn**	**13 41 52.7**	**+0.4**
PB08				*i*	S	**Sn**	**13 42 08.5**	**+0.1**
PB08					IAML		13 42 09.8	
	comp=E,7µm,0.3s							
PB08	**IPOC Station P**	**1.27**	**81**	*e*P		**Pn**	**13 41 52.7**	**+0.4**
PB08				*e*S		**Sn**	**13 42 08.9**	**+0.4**
PB08					IAML		13 42 11.7	
	comp=Z,4µm,1.0s							
GO01	**Chusmiza**	**1.39**	**61**			**Pn**	**13 41 54.4**	**+0.4**
GO01	**Chusmiza**	**1.39**	**61**	*i*	P	**Pn**	**13 41 54.6**	**+0.6**
GO01				*i*	S	**Sn**	**13 42 12.1**	**+0.6**
GO01	**Chusmiza**	**1.39**	**61**	*e*P		**Pn**	**13 41 54.6**	**+0.6**
GO01				*e*S		**Sn**	**13 42 12.8**	**+1.2**
GO01					IAML		13 42 14.6	
	comp=Z,3µm,0.3s							
PB07	**IPOC Station P**	**1.49**	**158**			**Pn**	**13 41 54.9**	**-0.1**
PB07	**IPOC Station P**	**1.49**	**158**	⇑*i*P		**Pn**	**13 41 55.5**	**+0.4**
PB07				*i*	S	**Sn**	**13 42 13.4**	**-0.1**
PB07					IAML		13 42 19.2	
	comp=E,4µm,0.4s							
PB07	**IPOC Station P**	**1.49**	**158**	*e*P		**Pn**	**13 41 55.5**	**+0.4**
PB07				*e*S		**Sn**	**13 42 13.4**	**-0.1**
PB07					IAML		13 42 20.3	
	comp=Z,4µm,0.3s							
PB12	**IPOC Station P**	**1.73**	**5**			**Pn**	**13 41 59.1**	**+0.9**
PB12	**IPOC Station P**	**1.73**	**5**	⇓*i*P		**Pn**	**13 41 59.0**	**+0.8**
PB12				*i*	S	**Sn**	**13 42 20.7**	**+1.5**
PB12					IAML		13 42 27.1	
	comp=E,4µm,0.3s							
PB12	**IPOC Station P**	**1.73**	**5**	*e*P		**Pn**	**13 41 59.6**	**+1.4**
PB12				*e*S		**Sn**	**13 42 21.5**	**+2.3**
PB12					IAML		13 42 26.5	
	comp=Z,2µm,0.8s							
PB03	**IPOC Station P**	**1.83**	**158**			**Pn**	**13 41 59.8**	**0.0**
PB03	**IPOC Station P**	**1.83**	**158**	⇑*i*P		**Pn**	**13 42 00.3**	**+0.5**
PB03				*i*	S	**Sn**	**13 42 21.1**	**-0.9**
PB03	**IPOC Station P**	**1.83**	**158**	*e*P		**Pn**	**13 42 00.2**	**+0.5**
PB03					IAML		13 42 27.9	
	comp=Z,2µm,0.6s							
PB09	**IPOC Station P**	**1.86**	**141**			**Pn**	**13 42 01.4**	**+1.2**
PB09	**IPOC Station P**	**1.86**	**141**	*i*	P	**Pn**	**13 42 01.8**	**+1.6**
PB09				*i*	S	**Sn**	**13 42 24.3**	**+1.6**
PB09					IAML		13 42 30.9	
	comp=E,4µm,0.6s							
PB09	**IPOC Station P**	**1.86**	**141**	*e*P		**Pn**	**13 42 01.1**	**+1.0**
PB09					IAML		13 42 29.9	
	comp=Z,5µm,0.6s							
AP01	**Chacalluta**	**1.97**	**4**			**Pn**	**13 42 03.4**	**+2.0**
AP01	**Chacalluta**	**1.97**	**4**	*e*P		**Pb**	**13 42 04.2**	**-1.3**
AP01	**Chacalluta**	**1.97**	**4**	*e*P		**Pb**	**13 42 05.3**	**-0.2**
AP01					IAML		13 42 54.8	
	comp=Z,2µm,0.4s							
PB16	**IPOC Station P**	**2.20**	**25**	*e*P		**Pn**	**13 42 06.5**	**+1.3**
PB16					IAML		13 42 44.5	
	comp=Z,2µm,1.4s							
PB06	**IPOC Station P**	**2.50**	**160**			**Pn**	**13 42 08.6**	**-0.4**
PB06	**IPOC Station P**	**2.50**	**160**	⇑*i*P		**Pn**	**13 42 08.9**	**-0.1**
PB06	**IPOC Station P**	**2.50**	**160**	*e*P		**Pn**	**13 42 08.7**	**-0.4**
PB06					IAML		13 42 53.6	
	comp=Z,1µm,0.6s							
PB05	**IPOC Station P**	**2.51**	**174**			**Pn**	**13 42 08.8**	**-0.3**
PB05	**IPOC Station P**	**2.51**	**174**	*i*	P	**Pn**	**13 42 08.4**	**-0.7**
PB05					IAML		13 42 56.6	
	comp=E,1µm,0.5s							
PB05	**IPOC Station P**	**2.51**	**174**	*e*P		**Pn**	**13 42 08.5**	**-0.7**
PB05					IAML		13 42 55.0	
	comp=Z,709nm,0.4s							
PB18	**Visviri**	**2.90**	**19**			**Pn**	**13 42 18.2**	**+3.4**
PB18	**Visviri**	**2.90**	**19**	*e*P		**Pn**	**13 42 18.4**	**+3.6**
PB10	**IPOC Station P**	**3.16**	**181**			**Pn**	**13 42 17.0**	**-0.8**
PB10	**IPOC Station P**	**3.16**	**181**	*e*P		**Pn**	**13 42 17.2**	**-0.7**
AF01	**San Pedro de A**	**3.37**	**141**			**Pn**	**13 42 22.4**	**+1.3**
AF01	**San Pedro de A**	**3.37**	**141**	*e*P		**Pn**	**13 42 23.9**	**+2.8**
AF01	**San Pedro de A**	**3.37**	**141**	*e*P		**Pn**	**13 42 23.6**	**+2.5**
AF01				*e*S		**Sb**	**13 43 13.7**	**+3.3**
PB14	**IPOC Station P**	**4.26**	**179**			**Pn**	**13 42 32.5**	**-0.9**
PB14	**IPOC Station P**	**4.26**	**179**	*e*P		**Pn**	**13 42 31.8**	**-1.5**
PB14				*e*S		**Sn**	**13 43 19.5**	**-2.7**
PB14					IAML		13 43 56.1	
	comp=Z,180nm,0.9s							
LPAZ	**La Paz**	**4.62**	**29**	Pn		**Pn**	**13 42 41.6**	**+3.2**
	comp=Z,3.6nm,0.3s,baz=196,slow=6.0,SNR=47							
LPAZ				Lg		Lg	13 44 00.0	
	baz=212,slow=15							
LPAZ				LR		LR	13 44 49.0	
	comp=Z,338nm,18.2s,baz=242,slow=42							
	comp=Z,5.3nm,0.3s							
LPAZ	**La Paz**	**4.62**	**29**			**Pn**	**13 42 43.1**	**+4.6**
LPAZ	**La Paz**	**4.62**	**29**	*e*P		**Pn**	**13 42 41.7**	**+3.2**
GO02	**Mina Guanaco**	**4.87**	**170**			**Pn**	**13 42 41.6**	**0.0**
GO02	**Mina Guanaco**	**4.87**	**170**	*e*P		**Pn**	**13 42 41.1**	**-0.6**
GO02				*e*S		**Sn**	**13 43 37.9**	**+0.8**
GO02					IAML		13 44 12.1	
	comp=Z,371nm,0.6s							
AC01	**Pan de Azucar**	**5.78**	**181**	Pn		**Pn**	**13 42 52.3**	**-1.6**
AC01	**Pan de Azucar**	**5.78**	**181**	*e*P		**Pn**	**13 42 51.7**	**-2.2**
AC02	**Maricunga**	**6.58**	**169**			**Pn**	**13 43 05.1**	**-0.3**
AC02	**Maricunga**	**6.58**	**169**	*e*P		**Pn**	**13 43 05.5**	**+0.2**
AC06	**Mina Casimiro**	**6.99**	**179**	Pn		**Pn**	**13 43 09.4**	**-1.1**
GO03	**Copiapo**	**7.22**	**178**	Pn		**Pn**	**13 43 12.4**	**-1.4**
AC04	**Llanos de Chal**	**7.84**	**184**	Pn		**Pn**	**13 43 19.1**	**-3.1**
AC05	**El Transito**	**8.46**	**179**	Pn		**Pn**	**13 43 28.8**	**-2.0**

H11S2 **WAKE ISLAND Hy** 26.25 278 T T 16 19 58.0
baz=102,slow=74,SNR=169
H11S1 **WAKE ISLAND Hy** 26.26 278 T T 16 19 57.4
baz=102,slow=74,SNR=116
H11S3 **WAKE ISLAND Hy** 26.27 278 T T 16 20 00.6
baz=102,slow=74,SNR=104
H11N3 **WAKE ISLAND Hy** 26.31 280 T T 16 20 00.0
baz=101,slow=75,SNR=52
H11N2 **WAKE ISLAND Hy** 26.33 280 T T 16 20 00.1
baz=101,slow=75,SNR=50
H11N1 **WAKE ISLAND Hy** 26.33 280 T T 16 19 59.7
baz=101,slow=75,SNR=39
ASAR Alice Springs 130.21 210 PKP **PKPdf 14 00 37.5 -0.5**
comp=Z,0.4nm,0.5s,baz=129,slow=1.7,SNR=4.9
WRA Warramunga Arr 133.16 213 PKP **PKPdf 14 00 42.9 -0.8**
comp=Z,0.6nm,0.5s,baz=148,slow=1.9,SNR=6.3
BVAR Borovoye Array 135.66 33 PKP **PKPdf 14 00 46.9 -0.4**
comp=Z,0.6nm,0.7s,baz=298,slow=3.1,SNR=2.2
ZALV Zalesovo Beam 141.51 23 PKP **PKPdf 14 00 58.1 +0.2**
comp=Z,1.5nm,0.7s,baz=301,slow=0.8,SNR=5.0
ZALV Zalesovo Beam 141.51 23 **PKPdf 14 00 56.7 -1.3**
MKAR Makanchi Array 145.53 34 PKPbc **PKPdf 14 01 05.4 +0.1**
comp=Z,1.8nm,0.7s,baz=338,slow=2.9,SNR=11
MKAR Makanchi Array 145.53 34 **PKPdf 14 01 05.0 -0.4**
HILR Hailar Array B 149.72 347 PKPbc **PKPbc 14 01 15.2 -1.6**
comp=Z,1.0nm,0.3s,baz=357,slow=2.9,SNR=2.6
MJAR Matsushiro Arr 150.19 309 PKPbc **PKPbc 14 01 18.1 -0.3**
comp=Z,1.9nm,0.6s,baz=103,slow=2.7,SNR=4.8
SONM Songino Array 152.46 5 PKPbc **PKPbc 14 01 22.8 -0.6**
comp=Z,0.4nm,0.4s,baz=351,slow=1.9,SNR=2.5
SONM PKPab **pPKPbc 14 01 34.4 +0.7**
comp=Z,1.2nm,0.7s,baz=340,slow=1.7,SNR=5.7

IDC 27 13:44:03.2±1.5, 3.25S×140.19E, h0km, mb3.5/3, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=45.0km s-min=11.6km az=125.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.89**	**35**	Pg	Pb	13 44 22.2	+0.6
	3.9nm,0.3s,baz=232,slow=20,SNR=11						
JAY				Lg	Lg	13 44 31.4	
	8.7nm,0.3s,baz=246,slow=20,SNR=9.7						
WRA	**Warramunga Arr**	**17.55**	**199**	P	Pn	13 48 09.7	+0.3
	0.3nm,0.3s,baz=12,slow=12,SNR=14						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**21.19**	**196**	P	P	13 48 49.8	-0.7
	0.5nm,0.7s,baz=29,slow=10,SNR=9.2						
	0.5nm,0.7s						
HILR	**Hailar Array B**	**55.49**	**344**	P	P	13 53 40.1	+0.2
	0.4nm,0.3s,baz=151,slow=6.3,SNR=2.0						
	0.4nm,0.3s						
SONM	**Songino Array**	**58.84**	**334**	P	P	13 54 02.9	-0.9
	0.7nm,0.6s,baz=120,slow=6.4,SNR=2.0						
	0.7nm,0.6s						

GCG 27 13:45:04.3±1.1, 14.47N×92.34W, h50km±14km, MD3.6, ML3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMCA	**Catarina**	**0.47**	**34**	*i* P	Pn	13 45 15.2	0.0
SMCA				*i* S	Sn	13 45 23.9	+0.9
QUEO	**Labor Ovalle**	**0.90**	**63**	*i* S	Sn	13 45 35.2	+2.1
QUEO				IAML		13 45 35.7	
	comp=E,1μm,0.2s						
STG2	**El Palmar, Qui**	**0.94**	**92**	*i* P	Pn	13 45 18.7	-2.6
STG2				*e*S	Sn	13 45 29.7	-4.1
STG8	**El Palmar, Qui**	**0.96**	**91**	*i* P	Pn	13 45 19.4	-2.3
STG8				*e*S	Sn	13 45 31.3	-3.2
STG8				IAML		13 45 33.7	
	comp=N,2μm,0.2s						
STG5	**El Palmar, Qui**	**0.96**	**94**	*e*P	Pn	13 45 19.2	-2.4
STG5				*e*S	Sn	13 45 30.8	-3.6
QUIS	**Sacapulas**	**1.46**	**56**	*e*S	Sn	13 45 49.4	+2.9
ESSG	**Sabana Grande**	**1.47**	**93**	*e*S	Sn	13 45 47.6	+1.1
FG16	**Alotenango, Sa**	**1.79**	**96**	*e*P	Pn	13 45 29.1	-3.8
CCIG	**Comitan**	**1.82**	**6**	*i* P	Pn	13 45 33.9	+0.5
APG	**El Apazote**	**1.89**	**73**	*e*P	Pn	13 45 35.4	+1.0
PCG5	**San Vicente Pa**	**1.92**	**97**	*i* S	Sn	13 45 53.3	-4.5

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*KRSC **27** 13:46:09.5±1.8, 50.70N×156.78E, h111km±17km, Mc4.3, Ml5.2, Felt [IV] at Severo-Kurilsk; [II-III] at cape Lopatka; [II] at lighthouse Chibuiny, Podgornay, lighthouse Krugliy.*
*MOS **27** 13:46:10.8±1.0, 50.89N×156.33E, h123km, mb4.4/21, Error ellipse: s-maj=7.9km s-min=3.4km az=71.0*
MOS Felt (IV) at Severo-Kuril'sk.
*BJI **27** 13:46:11.4, 50.90N×156.40E, h132km, mB4.9/9, mb4.7/48*
*IDC **27** 13:46:12.0±0.4, 51.04N×156.38E, h118km±3km, mb4.1/32, mbtmp4.6/38, MS3.3/23, Error ellipse: s-maj=10.1km s-min=7.3km az=150.0*
*NEIC **27** 13:46:13.6±1.6, 51.04N±0.08×156.2E±0.1, h126km±4km, mb4.8/98, Error ellipse: s-maj=12.8km s-min=9.7km az=134.0*
*GCMT **27** 13:46:14.6±0.4, 50.74N±0.02×156.59E±0.03, h104km±4km, MW4.9/81, Moment Tensor Solution. s22,c24; s81,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.60±.10; Mθθ0.34±.14; Mφφ0.26±.13; Mrθ-0.01±.07; Mrφ2.17±.10; Mθφ~1.32±.06; Best double couple: M◎2.57600×10^16 NP1:ϕ1269.00000°, δ57.00000°, λ-10.00000°. NP2:ϕ2 4.00000°, δ81.00000°, λ-146.00000°. Principal axes: T 2.7440, Plg16.0000°, Azm132.0000°; N -0.3370, Plg55.0000°, Azm17.0000°; P -2.4080, Plg30.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 13:46:11.7±0.3, 50.86N±0.04×156.54E±0.04, h117km±3km, h116km:pP-P, n423, σ1.47/466, mb4.7/116, 17C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.32**	**237**	*i*PN	**Pn**	**13 46 27.6**	**-0.6**
SKR				*e*S	**Sn**	**13 46 39.0**	**-1.7**
SKR				pmax	pmax		
	comp=Z,12μm,0.4s						
SKR				smax	smax		
	comp=N,63μm,0.6s						
SKR				smax	smax		
	comp=E,89μm,0.6s						
SKR	**Severo-Kuril's**	**0.32**	**237**	*e*P	**Pn**	**13 46 27.5**	**-0.8**
SKR				*e*S	**Sn**	**13 46 39.1**	**-1.6**
PAU	**Pauzhetka**	**0.63**	**16**	PN	**Pn**	**13 46 29.9**	**-0.2**
PAU				S	**Sn**	**13 46 43.8**	**-0.2**
PAU	**Pauzhetka**	**0.63**	**16**	*e*P	**Pn**	**13 46 29.9**	**-0.2**
PAU				*e*S	**Sn**	**13 46 43.9**	**-0.2**
KDTR	**Khodutka, Kamc**	**1.36**	**45**	PN	**Pn**	**13 46 36.6**	**-0.5**
KDTR				S	**Sn**	**13 46 55.5**	**-1.0**
KDTR	**Khodutka, Kamc**	**1.36**	**45**	*e*P	**Pn**	**13 46 36.6**	**-0.5**
KDTR				*e*S	**Sn**	**13 46 55.5**	**-1.0**
MIPR	**Malaya Ipel'ka**	**1.43**	**6**	PN	**Pn**	**13 46 38.6**	**+0.6**
MIPR				S	**Sn**	**13 46 58.7**	**+0.7**
MIPR	**Malaya Ipel'ka**	**1.43**	**6**	*e*P	**Pn**	**13 46 38.6**	**+0.6**
MIPR				*e*S	**Sn**	**13 46 58.8**	**+0.7**
ASAK	**Asacha**	**1.75**	**29**	PN	**Pn**	**13 46 42.8**	**+1.0**
ASAK	**Asacha**	**1.75**	**29**	*e*P	**Pn**	**13 46 42.9**	**+1.0**
MTVR	**Mutnovka**	**1.92**	**32**	PN	**Pn**	**13 46 44.8**	**+0.7**
MTVR				S	**Sn**	**13 47 10.0**	**+1.2**
MTVR	**Mutnovka**	**1.92**	**32**	*e*P	**Pn**	**13 46 44.8**	**+0.7**
MTVR				*e*S	**Sn**	**13 47 10.1**	**+1.2**
GRL	**Gorelyy**	**1.95**	**29**	PN	**Pn**	**13 46 45.5**	**+1.1**
GRL	**Gorelyy**	**1.95**	**29**	*e*P	**Pn**	**13 46 45.5**	**+1.1**
RUS	**Russkaya**	**2.00**	**37**	PN	**Pn**	**13 46 44.7**	**-0.1**
RUS				S	**Sn**	**13 47 10.5**	**+0.2**
RUS	**Russkaya**	**2.00**	**37**	*e*P	**Pn**	**13 46 44.8**	**-0.1**
RUS				*e*S	**Sn**	**13 47 10.6**	**+0.2**
APC	**Apacha**	**2.11**	**10**	PN	**Pn**	**13 46 47.5**	**+1.3**
APC				S	**Sn**	**13 47 13.8**	**+1.2**
APC	**Apacha**	**2.11**	**10**	*e*P	**Pn**	**13 46 47.6**	**+1.3**
APC				*e*S	**Sn**	**13 47 13.9**	**+1.2**
KRMR	**Karymshinskiy**	**2.21**	**26**	PN	**Pn**	**13 46 48.5**	**+1.0**
KRMR	**Karymshinskiy**	**2.21**	**26**	*e*P	**Pn**	**13 46 48.6**	**+1.0**
PEA0B	**Petropavlovsk-**	**2.37**	**17**		**Pn**	**13 46 50.9**	**+1.4**
PEA0B	**Petropavlovsk-**	**2.37**	**17**	PN	**Pn**	**13 46 50.9**	**+1.4**
PEA0B				S	**Sn**	**13 47 20.3**	**+1.7**
PETK	**Petropavlovsk-**	**2.37**	**17**	P	**Pn**	**13 46 49.8**	**+0.2**
	comp=E,2μm,0.4s,baz=178,slow=12,SNR=6931						
PETK				S	**Sn**	**13 47 19.8**	**+1.2**
	comp=E,228nm,0.8s,baz=233,slow=19,SNR=1.3						
PETK	**Petropavlovsk-**	**2.37**	**17**		**Pn**	**13 46 50.1**	**+0.6**
PET	**Petropavlovsk**	**2.53**	**30**		**Pn**	**13 46 52.5**	**+0.8**
PET	**Petropavlovsk**	**2.53**	**30**	P	**Pn**	**13 46 52.3**	**+0.6**
PET	**Petropavlovsk**	**2.53**	**30**	PN	**Pn**	**13 46 52.2**	**+0.6**
PET				S	**Sn**	**13 47 23.6**	**+1.2**
PET	**Petropavlovsk**	**2.53**	**30**	*e*P	**Pn**	**13 46 52.2**	**+0.6**
PET				*e*S	**Sn**	**13 47 23.6**	**+1.2**
INSR	**Institute**	**2.56**	**29**	PN	**Pn**	**13 46 52.7**	**+0.8**
INSR				S	**Sn**	**13 47 25.2**	**+2.3**
INSR	**Institute**	**2.56**	**29**	*e*P	**Pn**	**13 46 52.7**	**+0.8**
INSR				*e*S	**Sn**	**13 47 25.2**	**+2.3**
DALK	**Dalny**	**2.57**	**31**	PN	**Pn**	**13 46 52.9**	**+0.7**
DALK				S	**Sn**	**13 47 24.6**	**+1.3**
DALK	**Dalny**	**2.57**	**31**	*e*P	**Pn**	**13 46 52.9**	**+0.7**
DALK				*e*S	**Sn**	**13 47 24.6**	**+1.3**
UGLR	**Uglovaya**	**2.75**	**30**	PN	**Pn**	**13 46 56.1**	**+1.6**
UGLR	**Uglovaya**	**2.75**	**30**	*e*P	**Pn**	**13 46 56.1**	**+1.6**
KOK	**Koryaka**	**2.76**	**27**	PN	**Pn**	**13 46 56.7**	**+2.0**
KOK	**Koryaka**	**2.76**	**27**	*e*P	**Pn**	**13 46 56.7**	**+2.0**
AVH	**Avacha**	**2.77**	**29**	PN	**Pn**	**13 46 56.7**	**+1.9**
AVH	**Avacha**	**2.77**	**29**	*e*P	**Pn**	**13 46 56.7**	**+1.9**
KRER	**Koryakskii**	**2.81**	**28**	PN	**Pn**	**13 46 57.2**	**+1.8**
KRER	**Koryakskii**	**2.81**	**28**	*e*P	**Pn**	**13 46 57.2**	**+1.8**
KRX	**Arik**	**2.82**	**27**	PN	**Pn**	**13 46 57.3**	**+1.7**
KRX	**Arik**	**2.82**	**27**	*e*P	**Pn**	**13 46 57.4**	**+1.7**
SDLR	**Sedlovina**	**2.82**	**30**	PN	**Pn**	**13 46 56.5**	**+1.0**
SDLR	**Sedlovina**	**2.82**	**30**	*e*P	**Pn**	**13 46 56.6**	**+1.0**
NLC	**Nalytchevo**	**2.90**	**36**	PN	**Pn**	**13 46 55.6**	**-0.7**
NLC				S	**Sn**	**13 47 29.2**	**-1.6**
NLC	**Nalytchevo**	**2.90**	**36**	*e*P	**Pn**	**13 46 55.6**	**-0.7**
NLC				*e*S	**Sn**	**13 47 29.2**	**-1.6**
GNL	**Ganaly**	**2.97**	**16**	PN	**Pn**	**13 46 58.9**	**+1.4**
GNL	**Ganaly**	**2.97**	**16**	*e*P	**Pn**	**13 46 59.0**	**+1.4**
SPN	**Mys Shipunski**	**3.11**	**43**	PN	**Pn**	**13 46 59.1**	**-0.1**
SPN				S	**Sn**	**13 47 34.5**	**-1.4**
SPN	**Mys Shipunski**	**3.11**	**43**	*e*P	**Pn**	**13 46 59.2**	**-0.1**
SPN				*e*S	**Sn**	**13 47 34.6**	**-1.4**
KII	**Karymskiy**	**3.65**	**28**	PN	**Pn**	**13 47 07.9**	**+1.5**
KII	**Karymskiy**	**3.65**	**28**	*e*P	**Pn**	**13 47 08.0**	**+1.5**
KZV	**Kizimen**	**4.83**	**27**	PN	**Pn**	**13 47 23.6**	**+1.3**
KZV	**Kizimen**	**4.83**	**27**	*e*P	**Pn**	**13 47 23.6**	**+1.3**
ESO	**Esso**	**5.24**	**13**	PN	**Pn**	**13 47 29.2**	**+1.6**
ESO	**Esso**	**5.24**	**13**	*e*P	**Pn**	**13 47 29.3**	**+1.6**
KMNR	**Kamenistaya**	**5.38**	**23**	PN	**Pn**	**13 47 31.9**	**+2.2**
KMNR	**Kamenistaya**	**5.38**	**23**	*e*P	**Pn**	**13 47 31.9**	**+2.2**
KPT	**Kopyto**	**5.57**	**22**	PN	**Pn**	**13 47 33.6**	**+1.4**
KPT	**Kopyto**	**5.57**	**22**	*e*P	**Pn**	**13 47 33.6**	**+1.4**
KOZ	**Kozyrevsk**	**5.58**	**20**	PN	**Pn**	**13 47 34.1**	**+1.9**
KOZ	**Kozyrevsk**	**5.58**	**20**	*e*P	**Pn**	**13 47 34.2**	**+1.9**
KIRR	**Kirishev**	**5.59**	**23**	PN	**Pn**	**13 47 35.2**	**+2.7**
KIRR	**Kirishev**	**5.59**	**23**	*e*P	**Pn**	**13 47 35.3**	**+2.7**
BZWR	**Bezymyannyi-We**	**5.64**	**23**	PN	**Pn**	**13 47 35.2**	**+2.0**
BZWR	**Bezymyannyi-We**	**5.64**	**23**	*e*P	**Pn**	**13 47 35.2**	**+2.0**
KLY	**Klyuchi**	**5.99**	**23**	PN	**Pn**	**13 47 39.4**	**+1.7**
KLY	**Klyuchi**	**5.99**	**23**	*e*P	**Pn**	**13 47 39.4**	**+1.7**
SRKR	**Sorokina**	**6.42**	**24**	PN	**Pn**	**13 47 45.1**	**+1.4**
SRKR	**Sorokina**	**6.42**	**24**	*e*P	**Pn**	**13 47 45.1**	**+1.4**
KBTR	**Krutoberegovo**	**6.54**	**32**	PN	**Pn**	**13 47 44.4**	**-0.7**
KBTR	**Krutoberegovo**	**6.54**	**32**	*e*P	**Pn**	**13 47 44.4**	**-0.7**
BKI	**Bering**	**7.16**	**49**	PN	**Pn**	**13 47 52.4**	**-1.2**
BKI	**Bering**	**7.16**	**49**	*e*P	**Pn**	**13 47 52.4**	**-1.2**
BKI				*e*S	**Sn**	**13 49 04.5**	**-8.9**
KUR	**Kuril'sk**	**8.08**	**229**	*e*PN	**Pn**	**13 48 07.3**	**+1.1**
KUR				*e*S	**Sn**	**13 49 36.4**	**+0.6**
KUR				pmax	pmax		
	comp=Z,165nm,0.5s						
KUR				smax	smax		
	comp=E,99nm,1.0s						
KUR				smax	smax		
	comp=N,76nm,0.8s						
TYV	**Tymovskoe**	**8.78**	**275**	*e*PN	**Pn**	**13 48 17.5**	**+1.9**
TYV				*e*S	**Sn**	**13 49 52.0**	**-0.7**
TYV				pmax	pmax		
	comp=Z,54nm,0.8s						
TYV				pmax	pmax		
	comp=Z,900nm,3.2s						
TYV				smax	smax		
	comp=N,26nm,1.7s						
TYV				smax	smax		
	comp=E,32nm,1.7s						
TYV				smax	smax		
	comp=N,700nm,3.6s						
TYV				smax	smax		
	comp=E,1μm,3.6s						
MA2	**Magadan**	**9.33**	**342**	P	**Pn**	**13 48 23.2**	**+0.3**
	comp=E,14nm,0.6s,baz=172,slow=9.1,SNR=11						
MA2				LR	LR	13 52 38.5	
	comp=E,129nm,18.5s,baz=184,slow=42						
MA2	**Magadan**	**9.33**	**342**	Pn	**Pn**	**13 48 19.2**	**-3.7**
MA2	**Magadan**	**9.33**	**342**	*i* PN	**Pn**	**13 48 21.9**	**-1.1**
UGL	**Uglegorsk**	**9.50**	**265**	*e*PN	**Pn**	**13 48 27.5**	**+2.3**
UGL				pmax	pmax		
	comp=Z,200nm,1.2s						
SHO	**Shikotan**	**9.60**	**227**	PN	**Pn**	**13 48 30.6**	**+4.0**
SHO	**Shikotan**	**9.60**	**227**	*e*P	**Pn**	**13 48 30.7**	**+4.0**
YSS	**Yuzhno-Sakhali**	**9.88**	**252**		**Pn**	**13 48 27.3**	**-3.1**
YSS	**Yuzhno-Sakhali**	**9.88**	**252**	*i* PN	**Pn**	**13 48 31.9**	**+1.5**
YSS				*e*S	**Sn**	**13 50 24.1**	**+4.8**
YSS				pmax	pmax		
	comp=Z,150nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**9.94**	**231**	*c* PN	**Pn**	**13 48 30.2**	**-1.0**
YUK				S	**Sn**	**13 50 18.2**	**-2.5**
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,330nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**9.94**	**231**	*e*P	**Pn**	**13 48 29.4**	**-1.8**
RUSJ	**Misakicho**	**10.19**	**233**	*e*PN	**Pn**	**13 48 33.6**	**-1.0**
RUSJ				*e*S	**Sn**	**13 50 30.0**	**+3.1**
GLVR	**Golovnino**	**10.32**	**231**	*e*PN	**Pn**	**13 48 34.6**	**-1.8**
GLVR				S	**Sn**	**13 50 25.5**	**-4.6**
GLVR				pmax	pmax		
	comp=Z,282nm,0.3s						
NMR	**Nemuro--Hokkai**	**10.50**	**229**	*i* PN	Pn	13 48 33.4	-5.4
SHEM	**Shemya Is, Ala**	**11.04**	**73**	P	**Pn**	**13 48 46.4**	**+0.4**
	comp=Z,115nm,0.5s,baz=278,slow=6.8,SNR=9.1						
SHEM				S	**Sn**	**13 50 41.5**	**-5.9**
	comp=Z,149nm,0.4s,baz=325,slow=20,SNR=11						
SMY	**Shemya**	**11.04**	**73**		**Pn**	**13 48 46.6**	**+0.6**
SMY	**Shemya**	**11.04**	**73**	P	**Pn**	**13 48 46.8**	**+0.8**
SMY	**Shemya**	**11.04**	**73**	PN	**Pn**	**13 48 46.6**	**+0.6**
JKA	**Kamikawa-asahi**	**11.58**	**240**		**Pn**	**13 48 53.6**	**+0.3**
ASAJ	**Asahikawa**	**11.58**	**240**	P	**Pn**	**13 48 54.2**	**+0.9**
	comp=Z,127nm,0.6s,baz=70,slow=13,SNR=118						
SEY	**Seymchan**	**12.31**	**351**	P	**Pn**	**13 49 04.5**	**+1.7**
	comp=Z,11nm,0.9s,baz=160,slow=13,SNR=23						
SEY				LR	LR	13 54 00.6	
	comp=Z,100nm,18.3s,baz=162,slow=39						
SEY	**Seymchan**	**12.31**	**351**	*i* PN	**Pn**	**13 49 03.7**	**+1.0**
SEY				pmax	pmax		
	comp=Z,24nm,1.1s						
GRNR	**Gornyy**	**12.72**	**277**	*i* PN	**P**	**13 49 13.3**	**-1.4**
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				MLR	MLR		
	comp=E,540nm,18.0s						
GRNR				MLR	MLR		
	comp=N,250nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,340nm,20.0s						
ERM	**Erimo**	**12.76**	**231**	Pn	**Pn**	**13 49 05.3**	**-3.5**
ERM	**Erimo**	**12.76**	**231**	P	**Pn**	**13 49 05.2**	**-3.6**
ERM	**Erimo**	**12.76**	**231**	PN	**Pn**	**13 49 05.3**	**-3.5**
AMKA	**Amchitka**	**14.30**	**79**		**P**	**13 49 31.5**	**-0.7**
TEY	**Ternei**	**14.55**	**254**	*e*P	**Pn**	**13 49 32.1**	**+0.3**
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
JTM	**Tenmabayashi**	**14.72**	**233**		Pn	13 49 27.9	-6.1
JTM	**Tenmabayashi**	**14.72**	**233**	P	**Pn**	**13 49 30.0**	**-4.0**
USRK	**Ussuriysk Ar.**	**17.82**	**258**	P	**P**	**13 50 10.4**	**-0.7**
	comp=Z,19nm,0.7s,baz=61,slow=13,SNR=12						
BILL	**Bilibino**	**17.89**	**12**		**P**	**13 50 11.6**	**-0.1**
BILL	**Bilibino**	**17.89**	**12**	*c*eP	**Pn**	**13 50 12.9**	**+0.3**
BILL				pmax	pmax		
	comp=Z,49nm,2.5s						
ZEA	**Zeya**	**18.08**	**291**	*e*P	**P**	**13 50 14.1**	**+0.2**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.4s						
ZEA				MLR	MLR		
	comp=Z,100nm,12.0s						
JSD	**Sado**	**18.23**	**232**		**P**	**13 50 15.6**	**0.0**
JSD	**Sado**	**18.23**	**232**	P	**P**	**13 50 14.2**	**-1.4**
YAK	**Yakutsk**	**18.43**	**318**	P	**P**	**13 50 16.3**	**-1.3**
	comp=Z,89nm,0.7s,baz=111,slow=3.0,SNR=25						
YAK				LR	LR	13 57 36.2	
	comp=Z,115nm,20.5s,baz=106,slow=38						
YAK	**Yakutsk**	**18.43**	**318**		**P**	**13 50 16.5**	**-1.1**
YAK	**Yakutsk**	**18.43**	**318**	*d* P	**P**	**13 50 17.1**	**-0.5**
YAK				*e*S	**S**	**13 53 41.0**	**-0.8**
YAK				pmax	pmax		
	comp=Z,147nm,1.1s						
YAK				pmax	pmax		
	comp=E,55nm,1.1s						
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				smax	smax		
	comp=E,266nm,3.2s						
YAK				smax	smax		
	comp=N,166nm,3.0s						
HEH	**HeiHe**	**18.47**	**279**	*e*P	**P**	**13 50 18.0**	**-0.2**
HEH				pmax	pmax		
	comp=N,210nm,0.9s						
MDJ	**Mudanjiang**	**19.10**	**261**		**P**	**13 50 23.4**	**-1.7**
MDJ	**Mudanjiang**	**19.10**	**261**	P	**P**	**13 50 24.3**	**-0.8**
MDJ				pmax	pmax		
	comp=N,94nm,0.8s						
MDJ	**Mudanjiang**	**19.10**	**261**	P	**P**	**13 50 23.6**	**-1.5**
MSHR	**Mys Shultsa**	**19.20**	**254**	*i* P	**P**	**13 50 24.6**	**-1.6**
MSHR				pmax	pmax		
	comp=Z,17nm,1.0s						
MJB9	**Matsu-Tunnel**	**19.42**	**230**	P	**P**	**13 50 29.5**	**+0.8**
MAJO	**Matsushiro**	**19.43**	**230**		**P**	**13 50 29.1**	**+0.4**
MAJO	**Matsushiro**	**19.43**	**230**	P	**P**	**13 50 28.4**	**-0.3**
MAJO	**Matsushiro**	**19.43**	**230**	*i* P	**P**	**13 50 27.9**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,56nm,0.6s						
MJAR	**Matsushiro Arr**	**19.43**	**230**	P	**P**	**13 50 29.0**	**+0.3**
	comp=Z,30nm,0.7s,baz=32,slow=9.7,SNR=62						
MJAR				LR	LR	13 57 29.0	
	comp=Z,69nm,19.9s,baz=32,slow=35						
MJAR	**Matsushiro Arr**	**19.43**	**230**		**P**	**13 50 28.9**	**+0.1**
BNX	**BinXian**	**19.97**	**267**	⇓P	**P**	**13 50 34.8**	**+0.3**
BNX				pmax	pmax		
	comp=Z,38nm,0.9s						
JGF	**Kuroka**	**20.59**	**230**	P	**P**	**13 50 42.0**	**+0.7**
JGF	**Kuroka**	**20.59**	**230**	P	**P**	**13 50 41.5**	**+0.2**
P08K	**Saint George I**	**20.72**	**61**	P	**P**	**13 50 43.1**	**+0.7**
JSG	**Sagara**	**20.96**	**227**	P	Pn	13 50 48.8	-0.2
INU	**Inuyama**	**20.96**	**230**		**P**	**13 50 44.9**	**-0.3**
INU	**Inuyama**	**20.96**	**230**	P	**P**	**13 50 45.1**	**-0.1**
HILR	**Hailar Array B**	**23.43**	**281**	P	**P**	**13 51 09.2**	**-1.0**
	comp=Z,8.5nm,0.4s,baz=70,slow=10,SNR=18						
HILR				pP	**pP**	**13 51 34.0**	**+0.7**
	comp=Z,11nm,0.8s,baz=79,slow=15,SNR=3.0						
	comp=Z,8.5nm,0.4s						
HIA	**Hailar**	**23.52**	**281**		**P**	**13 51 09.2**	**-1.8**
HIA	**Hailar**	**23.52**	**281**	P	**P**	**13 51 10.2**	**-0.8**
HIA	**Hailar**	**23.52**	**281**	P	**P**	**13 51 09.2**	**-1.8**
K13K	**Kusilvak Mount**	**23.78**	**47**	P	**P**	**13 51 14.7**	**+1.5**
K13K				IAmb	IAmb	13 51 38.1	
	comp=Z,114nm,2.0s						
JMN	**Monobe**	**23.80**	**233**	P	**P**	**13 51 14.3**	**+0.6**
JMN	**Monobe**	**23.80**	**233**	P	**P**	**13 51 14.4**	**+0.7**
M13K	**Dall Lake**	**24.21**	**51**	P	**P**	**13 51 18.8**	**+1.9**
M13K				IAmb	IAmb	13 51 41.8	
	comp=Z,75nm,1.1s						
TIXI	**Tiksi**	**24.29**	**339**	LR	LR	14 01 58.2	
	comp=Z,69nm,20.0s,baz=199,slow=39						
TIXI	**Tiksi**	**24.29**	**339**		**P**	**13 51 16.9**	**-0.7**
TIXI				IAmb	IAmb	13 51 47.2	
	comp=Z,25nm,0.8s						
TIXI	**Tiksi**	**24.29**	**339**	*ce*P	**P**	**13 51 17.6**	**0.0**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KS19	**Wonju Array Si**	**24.33**	**248**	P	**P**	**13 51 19.9**	**+1.5**
KSRS	**Korea Array**	**24.33**	**248**	P	**P**	**13 51 18.7**	**+0.4**
	comp=Z,9.0nm,0.7s,baz=47,slow=9.2,SNR=19						
	comp=Z,9.0nm,0.7s						
KSAR	**Wonju Array Be**	**24.36**	**248**	P	**P**	**13 51 18.5**	**-0.1**
KSAR	**Wonju Array Be**	**24.36**	**248**	P	**P**	**13 51 18.5**	**-0.1**
TJN	**Taejon**	**25.39**	**247**	P	**P**	**13 51 26.3**	**-1.7**
TJN	**Taejon**	**25.39**	**247**	P	**P**	**13 51 26.3**	**-1.7**
TJN				pmax	pmax		
	comp=Z,132nm,1.1s						
JNU	**Nakatsue**	**25.83**	**237**	P	**P**	**13 51 32.8**	**+0.8**
	comp=Z,49nm,0.7s,baz=54,slow=8.7,SNR=42						
	comp

baz=349,slow=76,SNR=165
NJ2 Nanjing 33.44 250 *e*P **P 13 52 40.3 +1.1**
G27K Doyon Strip 34.02 39 P 13 52 45.3 +1.4
L27K Beaver Creek, 34.34 45 P **P 13 52 47.8 +1.0**
L27K IAmb IAmb 13 53 12.7
comp=Z,25nm,1.2s
BCAR Beaver Creek A 34.35 45 P **P 13 52 48.0 +1.1**
F28M Old Crow 34.67 37 P 13 52 50.9 +1.4
F28M IAmb IAmb 13 53 16.1
comp=Z,9.1nm,0.8s
E28M Babbage River 34.74 35 P **P 13 52 51.0 +0.9**
E28M IAmb IAmb 13 53 28.9
comp=Z,29nm,1.8s
BARN Barnard Glacie 34.77 49 P **P 13 52 52.6 +2.0**
BARN IAmb IAmb 13 53 19.8
comp=Z,36nm,1.8s
I28M Miner Creek 34.84 41 P **P 13 52 52.0 +1.0**
I28M IAmb IAmb 13 53 17.1
comp=Z,10nm,1.1s
DAWY Dawson 35.26 43 P **P 13 52 55.4 +0.8**
DAWY IAmb IAmb 13 53 19.2
comp=Z,18nm,1.6s
H29M Whitestone 35.38 39 P 13 52 57.5 +1.8
JMJ Miyako jima 2 35.39 234 P **P 13 52 56.2 +0.1**
G29M Pine Creek 35.44 38 P 13 52 57.1 +1.0
G29M IAmb IAmb 13 53 23.6
comp=Z,14nm,0.9s
LYN LuoYang 35.65 260 P **P 13 52 57.8 -0.5**
LYN pmax pmax
comp=Z,24nm,0.6s
M29M Somme Creek 35.97 46 P **P 13 53 02.6 +1.8**
KNGR Kungurtug, Tuv 36.48 293 *i* P **P 13 53 04.6 -0.7**
KNGR pmax pmax
comp=Z,6.0nm,1.0s
NRIK Noril'sk 36.50 326 LR LR 14 08 47.4
comp=Z,52nm,20.8s,baz=89,slow=37
INK Inuvik 36.98 35 P 13 53 10.5 +1.4
INK Inuvik 36.98 35 P **P 13 53 10.5 +1.4**
INK pmax pmax
comp=Z,6.0nm,0.8s
WHN Wuhan 37.22 253 P **P 13 53 10.5 -1.1**
YHNB Yeheng 37.58 239 P **P 13 53 14.1 -0.7**
YHNB Yeheng 37.58 239 P **P 13 53 15.3 +0.5**
NACB Ninganchiao 37.86 238 P **P 13 53 15.7 -1.4**
NACB Ninganchiao 37.86 238 P **P 13 53 17.5 +0.4**
SSLB Suanglung 38.52 239 P **P 13 53 23.7 +1.1**
YULB Yu-li 38.65 238 P **P 13 53 24.1 +0.4**
YULB Yu-li 38.65 238 P **P 13 53 24.6 +0.9**
TPUB Ta-pu 39.09 239 P **P 13 53 27.2 -0.1**
TPUB Ta-pu 39.09 239 P **P 13 53 28.3 +1.0**
A36M Sachs Harbour 39.16 29 P **P 13 53 28.4 +1.1**
A36M IAmb IAmb 13 54 06.3
comp=Z,12nm,0.8s
TWGBT Beinan 39.23 238 P **P 13 53 29.6 +1.1**
KNMB Chin-men Tao 39.40 242 P **P 13 53 30.6 +0.8**
LZH Lanzhou 40.11 269 *e*P **P 13 53 35.8 -0.1**
LZH pP pP 13 54 04.8 +2.7
LZH sP sP 13 54 17.3 +2.0
LZH pmax pmax
comp=Z,19nm,1.3s
LZDM Lanzhou Array 40.29 269 P **P 13 53 37.3 -0.3**
comp=Z,2.6nm,0.4s,baz=66,slow=4.9,SNR=1.5
LZDM pP **pP 13 54 04.4 +0.7**
comp=Z,1.7nm,0.4s,baz=66,slow=14,SNR=1.4
comp=Z,2.6nm,0.4s
ENH Enshi 40.40 258 P **P 13 53 37.7 -0.4**
ENH Enshi 40.40 258 P **P 13 53 37.8 -0.4**
ENH Enshi 40.40 258 pP **pP 13 54 05.6 +1.4**
ENH PcP **PcP 13 55 39.1 +0.2**
GTA Gaotai 40.67 276 *e*P **P 13 53 39.8 -0.6**
GTA pP pP 13 54 08.8 +2.2
GTA pmax pmax
comp=Z,10.0nm,1.4s
DLBC Dease Lake 41.16 50 LR LR 14 12 48.9
comp=Z,30nm,18.0s,baz=271,slow=39
ZAA0 Zalesovo Array 42.15 303 P **P 13 53 50.1 -2.0**
ZALV Zalesovo Beam 42.15 303 P **P 13 53 50.7 -1.4**
comp=Z,1.1nm,0.4s,baz=60,slow=6.3,SNR=4.5
ZALV pP **pP 13 54 18.4 0.0**
comp=Z,7.6nm,0.8s,baz=64,slow=6.9,SNR=9.5
ZALV PcP **PcP 13 55 42.3 -1.9**
comp=Z,3.4nm,0.4s,baz=64,slow=3.4,SNR=8.3
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 42.15 303 P **P 13 53 50.4 -1.8**
ZALV **PcP 13 55 43.9 -0.4**
ZALV Zalesovo Beam 42.15 303 *i* P **P 13 53 53.4 +1.3**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
DGZ Jazzator, Alta 42.69 297 *i* P **P 13 53 56.1 -0.7**
DGZ pmax pmax
comp=Z,8.0nm,1.2s
BBB Bella Bella 44.91 58 LR LR 14 12 05.5
comp=Z,13nm,20.8s,baz=214,slow=35
WMQ Urumqi 45.63 289 *e*P **P 13 54 21.8 +1.6**
YKA Yellowknife Ar 46.30 40 P **P 13 54 25.2 +0.2**
comp=Z,1.9nm,0.9s,baz=297,slow=8.5,SNR=9.3
YKA pP **pP 13 54 50.5 -1.6**
comp=Z,2.1nm,0.7s,baz=299,slow=8.6,SNR=5.8
comp=Z,1.9nm,0.9s
YKA Yellowknife Ar 46.30 40 P **P 13 54 24.8 -0.2**
YKA PcP **PcP 13 56 00.0 +1.7**
KURK Kurchatov 47.04 302 P **P 13 54 30.2 -0.8**
KURK IAmb IAmb 13 55 00.9
comp=Z,17nm,1.0s
KURK Kurchatov 47.04 302 PcP 13 56 00.9 -0.3
KURK Kurchatov 47.04 302 *ce*P **P 13 54 30.1 -0.9**
KURK pmax pmax
comp=Z,18nm,1.3s
KURK Kurchatov 47.04 302 P **P 13 54 29.9 -1.1**
KURK Kurchatov 47.04 302 pP pP 13 54 58.8 +1.0
MK31 Makanchi Array 47.14 296 *ce*P **P 13 54 31.1 -0.8**
MKAR Makanchi Array 47.14 296 P **P 13 54 30.7 -1.2**
comp=Z,2.6nm,0.4s,baz=63,slow=6.8,SNR=79
MKAR pP **pP 13 54 59.3 +0.6**
comp=Z,8.4nm,0.7s,baz=60,slow=7.6,SNR=8.1
MKAR LR LR 14 15 01.4
comp=Z,52nm,21.7s,baz=40,slow=37
comp=Z,2.6nm,0.4s
MKAR Makanchi Array 47.14 296 P **P 13 54 30.8 -1.0**
MKAR PcP **PcP 13 56 00.8 -0.8**
KURBB Kurchatov Arra 47.14 302 P **P 13 54 30.6 -1.2**
comp=Z,4.0nm,0.5s,baz=62,slow=7.3,SNR=26
KURBB pP **pP 13 54 58.2 -0.4**
comp=Z,7.1nm,0.7s,baz=64,slow=7.9,SNR=6.1
KURBB PcP **PcP 13 56 00.9 -0.6**
comp=Z,5.3nm,0.8s,baz=61,slow=4.1,SNR=9.7
comp=Z,4.0nm,0.5s
KMI Kunming 48.24 259 P **P 13 54 40.8 -0.1**
KMI pmax pmax
comp=Z,25nm,0.8s
QIZ Qiongzhong 48.55 247 P **P 13 54 43.7 +0.7**
SPITS Spitsbergen Ar 48.97 350 P **P 13 54 44.0 -1.5**
comp=Z,1.5nm,0.6s,baz=45,slow=8.3,SNR=4.6
comp=Z,1.5nm,0.6s
SPITS Spitsbergen Ar 48.97 350 P **P 13 54 43.7 -1.8**
SPITS pmax pmax
comp=Z,59nm,1.5s
MLH Mauna Loa 49.00 112 P **P 13 54 48.2 +1.5**
RSD Rainshed 49.09 111 P **P 13 54 49.3 +2.0**
BVAR Borovoye Array 50.05 308 P **P 13 54 52.0 -2.0**
comp=Z,5.7nm,0.6s,baz=52,slow=7.8,SNR=26
BVAR pP **pP 13 55 21.5 +0.4**
comp=Z,7.2nm,0.6s,baz=61,slow=9.4,SNR=5.9
BVAR PcP **PcP 13 56 11.2 -0.8**
comp=Z,4.6nm,0.4s,baz=72,slow=4.7,SNR=7.9
BVAR LR LR 14 16 52.4
comp=Z,41nm,19.1s,baz=63,slow=37
comp=Z,5.7nm,0.6s
BORK Borovoye 50.07 308 P **P 13 54 52.7 -1.4**
BORK IAmb IAmb 13 55 23.5
comp=Z,6.9nm,0.7s
BORK Borovoye 50.07 308 *ce*P **P 13 54 52.4 -1.8**
BORK pmax pmax
comp=Z,6.0nm,0.8s
BORK Borovoye 50.07 308 P **P 13 54 52.9 -1.3**
BORK pP **pP 13 55 21.2 0.0**
BORK PcP **PcP 13 56 11.7 -0.3**
I02E Swisshome, OR 51.77 64 P **P 13 55 07.9 +0.9**
BLKN Baker Lake 52.17 32 P **P 13 55 09.7 +0.1**
BLKN IAmb IAmb 13 55 36.2
comp=Z,18nm,0.8s
I03D Drain, OR 52.31 65 P **P 13 55 13.6 +2.6**
TARG Taragay, Kyrgy 52.73 293 P **P 13 55 13.7 -0.9**
TARG PcP **PcP 13 56 22.9 +0.1**
TARG Taragay, Kyrgy 52.73 293 P **P 13 55 13.7 -0.9**
TARG pmax pmax 13 56 22.9
comp=Z,5.0nm,0.7s
ILON Igloolik, Nuna 52.74 22 P **P 13 55 14.1 +0.4**
KDJ Kajisay 52.84 293 P **P 13 55 14.1 -1.1**
KDJ IAmb IAmb 13 55 16.2
comp=Z,9.1nm,0.7s
KDJ Kajisay 52.84 293 P **P 13 55 14.1 -1.1**
KDJ pmax pmax
comp=Z,9.0nm,0.7s
ARTI Arti 53.64 317 LR LR 14 19 35.9
comp=Z,52nm,19.3s,baz=42,slow=38
ARTI Arti 53.64 317 *ce*P **P 13 55 19.9 -0.7**
ARTI pmax pmax
comp=Z,7.0nm,1.0s
J05D Fort Rock, OR 53.77 64 P **P 13 55 24.0 +2.1**
L04D Klamath Falls 53.83 65 P **P 13 55 24.4 +2.0**
AAK Ala-Archa 54.07 296 LR LR 14 19 12.2
comp=Z,44nm,20.4s,baz=48,slow=37
AAK Ala-Archa 54.07 296 P **P 13 55 23.6 -0.5**
AAK IAmb IAmb 13 55 27.4
comp=Z,5.0nm,0.7s
AAK Ala-Archa 54.07 296 *ce*P **P 13 55 22.9 -1.2**
AAK pmax pmax
comp=Z,10.0nm,1.3s
AAK Ala-Archa 54.07 296 P **P 13 55 23.2 -0.9**
AAK Ala-Archa 54.07 296 PcP **PcP 13 56 27.5 0.0**
ARCES ARCESS Array B 54.71 341 P **P 13 55 25.9 -2.2**
comp=Z,0.7nm,0.3s,baz=43,slow=6.9,SNR=16
ARCES LR LR 14 22 53.3
comp=Z,32nm,18.6s,baz=44,slow=40
comp=Z,0.7nm,0.3s
ARCES ARCESS Array B 54.71 341 P **P 13 55 26.4 -1.7**
ARCES ARCESS Array B 54.71 341 P **P 13 55 26.5 -1.7**
ARCES pmax pmax
comp=Z,111nm,1.8s
KSH Kashi 55.21 292 P **P 13 55 35.8 +3.5**
KSH pP pP 13 56 05.5 +5.6
KSH pmax pmax
comp=Z,6.0nm,1.2s
CHTO Chiang Mai 55.27 257 P **P 13 55 34.0 +1.1**
CHTO Chiang Mai 55.27 257 P **P 13 55 33.7 +0.8**
CHTO Chiang Mai 55.27 257 P **P 13 55 34.0 +1.1**
CHTO pmax pmax
comp=Z,51nm,0.7s
CHTO Chiang Mai 55.27 257 P **P 13 55 33.8 +1.0**
CHTO Chiang Mai 55.27 257 PcP **PcP 13 56 33.4 +1.1**
O03E Paynes Creek 55.35 67 P **P 13 55 35.3 +2.0**
O03E IAmb IAmb 13 55 36.0
comp=Z,18nm,0.9s
MYLDM Lahad Datu 55.49 228 P **P 13 55 36.3 +1.9**
CM31 Chiang Mai Arr 55.54 256 P **P 13 55 34.7 -0.1**
CMAR Chiang Mai Arr 55.54 256 P **P 13 55 36.2 +1.4**
comp=Z,34nm,0.7s,baz=30,slow=7.0,SNR=205
CMAR PcP **PcP 13 56 33.9 +0.6**
comp=Z,3.1nm,0.7s,baz=18,slow=2.3,SNR=4.9
comp=Z,34nm,0.7s
CMAR Chiang Mai Arr 55.54 256 **P 13 55 36.1 +1.3**
KIRV Kirov 55.86 323 LR LR 14 21 43.9
comp=Z,52nm,21.7s,baz=40,slow=38
KK31 Karatay Array 56.02 298 P **P 13 55 36.6 -1.4**
KK31 Karatay Array 56.02 298 P **P 13 55 36.6 -1.4**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 56.02 298 P **P 13 55 36.8 -1.2**
KKAR Karatay Array 56.02 298 P **P 13 55 36.8 -1.2**
EVN Everest 56.28 274 P 13 55 40.3 -0.5
EVN IAmb IAmb 13 56 38.3
comp=Z,5.6nm,0.8s
LRM Limekiln Ridge 56.97 57 P **P 13 55 46.5 +1.6**
PNTR Pine Nut 57.42 67 P **P 13 55 50.4 +2.2**
PNTR IAmb IAmb 13 55 56.4
comp=Z,11nm,0.7s
AB31 Akbulak array 57.54 310 P **P 13 55 47.6 -1.0**
AB31 IAmb IAmb 13 56 19.1
comp=Z,7.9nm,0.8s
ABKAR Akbulak array 57.54 310 P **P 13 55 47.3 -1.2**
AKTO Aktyubinsk 57.68 312 LR LR 14 20 22.1
comp=Z,40nm,18.1s,baz=193,slow=36
KLMR Klimovskoe 57.76 329 *e*P **P 13 55 47.3 -2.5**
KLMR *e**PP **pP 13 56 16.3 -1.3**
KLMR pmax pmax
comp=Z,17nm,1.7s
YHB Horse Butte 58.34 57 P **P 13 55 56.2 +1.7**
YHB IAmb IAmb 13 55 57.4
comp=Z,7.8nm,0.8s
NVAR Mina Array Bea 58.62 66 P **P 13 55 58.5 +2.0**
comp=Z,6.1nm,0.7s,baz=296,slow=7.5,SNR=42
NVAR pP **pP 13 56 24.6 +0.1**
comp=Z,6.4nm,0.8s,baz=293,slow=7.8,SNR=11
comp=Z,6.1nm,0.7s
NVAR Mina Array Bea 58.62 66 P **P 13 55 58.4 +1.9**
MPSI Mapaga 59.13 224 P **P 13 56 00.0 0.0**
PCI Palu 60.27 223 P **P 13 56 07.8 0.0**
comp=Z,37nm,1.0s
DUG Dugway, Tooele 60.55 62 P 13 56 11.4 +1.8
DUG IAmb IAmb 13 56 12.7
comp=Z,7.1nm,0.9s
DUG Dugway, Tooele 60.55 62 P **P 13 56 11.4 +1.8**
DUG pmax pmax
comp=Z,7.0nm,0.9s
PDAR Pinedale Array 60.56 58 P **P 13 56 11.5 +1.7**
comp=Z,6.4nm,0.7s,baz=322,slow=2.3,SNR=56
PDAR pP **pP 13 56 37.0 -1.0**
comp=Z,4.4nm,0.7s,baz=310,slow=3.0,SNR=5.2
comp=Z,6.4nm,0.7s
PDAR Pinedale Array 60.56 58 P 13 56 10.9 +1.1
PMG Port Moresby 60.56 191 LR LR 14 19 11.8
comp=Z,27nm,21.1s,baz=324,slow=33
SFJD Kangerlussuaq 60.68 12 LR LR 14 24 56.6
comp=Z,24nm,19.1s,baz=117,slow=38
CLC China Lake 60.81 68 P **P 13 56 12.4 +1.1**
CLC IAmb IAmb 13 56 39.9
comp=Z,8.7nm,0.8s
CLC China Lake 60.81 68 P **P 13 56 12.4 +1.1**
CLC pmax pmax
comp=Z,9.0nm,0.8s
SBUM Sibu 60.93 233 P **P 13 56 14.1 +1.8**
FINES FINESS Array B 61.27 335 P **P 13 56 11.5 -2.4**
comp=Z,0.8nm,0.3s,baz=29,slow=5.3,SNR=14
FINES PcP **sP 13 56 54.5 -0.3**
comp=Z,1.7nm,0.6s,baz=33,slow=3.3,SNR=5.4
FINES LR LR 14 25 58.6
comp=Z,38nm,19.8s,baz=46,slow=39
comp=Z,0.8nm,0.3s
FINES FINESS Array B 61.27 335 P **P 13 56 11.8 -2.1**
FINES FINESS Array B 61.27 335 *i* P **P 13 56 12.3 -1.6**
FINES pmax pmax
comp=Z,1.0nm,0.3s
Q16A Castle Valley 62.34 62 P **P 13 56 23.2 +1.4**
SRU San Rafael Swe 62.57 61 P **P 13 56 25.3 +2.0**
SRU IAmb IAmb 13 56 26.5
comp=Z,15nm,0.8s
SRU San Rafael Swe 62.57 61 P **P 13 56 25.3 +2.0**
SRU pmax pmax
comp=Z,15nm,0.8s
KBL Kabul 62.65 292 P **P 13 56 21.6 -2.3**
KBL Kabul 62.65 292 P **P 13 56 21.6 -2.3**
KBL pmax pmax
comp=Z,6.0nm,0.9s
PMD Palm Desert 63.03 69 P **P 13 56 27.2 +1.0**
SPSI Sidrap Palu 63.04 222 P **P 13 56 26.4 +0.1**
comp=Z,19nm,1.1s
YUH Yuha Desert 64.01 70 P **P 13 56 33.1 +0.5**
YUH IAmb IAmb 13 57 00.6
comp=Z,9.5nm,1.1s
GLA Glamis 64.37 69 P **P 13 56 36.4 +1.4**
GLA IAmb IAmb 13 57 03.9
comp=Z,12nm,0.8s
GLA Glamis 64.37 69 P **P 13 56 36.4 +1.4**
GLA pmax pmax
comp=Z,12nm,0.8s
BSSI Bau Bau, Buton 64.70 220 P **P 13 56 36.9 -0.3**
comp=Z,32nm,0.9s
BBKI Banjar Baru 64.79 227 P **P 13 56 38.9 +1.1**
comp=Z,47nm,1.0s
KULM Kulim 64.86 246 P **P 13 56 39.8 +1.5**
VTX Valle De La Tr 64.98 71 P **P 13 56 40.4 +1.4**
VTX IAmb IAmb 13 57 58.4
comp=Z,22nm,1.4s
NB2 NORSAR Subarra 65.04 342 P **P 13 56 37.3 -1.6**
comp=Z,1.1nm,0.5s,baz=25,slow=6.5
NOA NORSAR Array B 65.04 342 P **P 13 56 37.2 -1.7**
comp=Z,0.7nm,0.4s,baz=28,slow=6.4,SNR=11
NOA LR LR 14 28 53.3
comp=Z,15nm,20.0s,baz=220,slow=40
comp=Z,0.7nm,0.4s
IPM Ipoh 65.30 245 P **P 13 56 41.8 +0.6**
IPM IAmb IAmb 13 56 42.9
comp=Z,16nm,0.8s
HFS Hagfors 65.36 341 P **P 13 56 39.9 -1.0**
comp=Z,2.7nm,0.4s,baz=40,slow=7.8,SNR=27
HFS LR LR 14 30 23.3
comp=Z,27nm,19.1s,baz=72,slow=41
comp=Z,2.7nm,0.4s
COEN Coen 65.59 194 P **P 13 56 43.8 +0.9**
comp=Z,16nm,1.1s
COEN Coen 65.59 194 P **P 13 56 43.5 +0.6**
COEN IAmb IAmb 13 56 44.3
comp=Z,7.8nm,0.7s
COEN Coen 65.59 194 P **P 13 56 43.9 +1.0**
SOEI Soe 66.54 215 P **P 13 56 50.1 +0.9**
MNK Minsk 66.58 330 *i* P **P 13 56 48.3 -0.5**
MNK *i* *PP **pP 13 57 17.7 +0.4**
MNK *i* 13 59 16.2
MNK *i* PPP PPP 14 00 53.3
MNK *i* S **S 14 05 30.4 +0.2**
MNK *i* SS **SS 14 09 50.9 +2.5**
MNK pmax pmax
comp=E,13nm,0.9s
MNK pmax pmax
comp=Z,11nm,0.8s
MNK pmax pmax
comp=N,10.0nm,0.7s
MNK MLR MLR
comp=Z,74nm,18.0s
MNK MLR MLR
comp=N,584nm,24.0s
MNK MLR MLR
comp=E,452nm,19.0s
KDU Kakadu 66.67 206 P **P 13 56 50.3 +0.5**
comp=Z,6.0nm,1.1s
MTN Manton Dam 67.20 207 P **P 13 56 54.5 +1.4**
comp=Z,13nm,1.0s
MTN Manton Dam 67.20 207 P 13 56 54.3 +1.2
MTN IAmb IAmb 13 56 54.8
comp=Z,8.8nm,0.8s
DSRI Dabo 67.41 239 P **P 13 56 56.4 +1.8**
comp=Z,26nm,1.2s
TSI Tuntungan 67.52 246 P **P 13 56 55.8 +0.5**
TPI Tanjungpandan 67.71 234 P **P 13 56 57.2 +0.8**
comp=Z,18nm,1.1s
ANMO Albuquerque 67.82 62 *ce*P **P 13 56 58.0 +0.8**
ANMO pmax pmax
comp=Z,3.0nm,0.8s
ANMO Albuquerque 67.82 62 P **P 13 56 59.1 +1.9**
ANMO Albuquerque 67.82 62 pP **pP 13 57 29.5 +3.5**
ANMO sP sP 13 57 43.6 +5.0
TPTI 68.52 247 P **P 13 57 01.4 -0.1**
comp=Z,14nm,0.6s
SCHQ Schefferville 68.63 25 P **P 13 57 01.1 -0.6**
comp=Z,2.6nm,0.4s,baz=348,slow=5.0,SNR=10
comp=Z,2.6nm,0.4s
SCHQ Schefferville 68.63 25 P **P 13 57 01.3 -0.5**
AKASG Malin Array Be 69.35 327 P **P 13 57 03.8 -2.4**
comp=Z,1.0nm,0.4s,baz=32,slow=6.1,SNR=4.8
AKASG pP **pP 13 57 35.5 +0.6**
comp=Z,1.1nm,0.5s,baz=34,slow=6.3,SNR=1.7
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 69.35 327 *ce*P **P 13 57 05.9 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
MTSU Mount Surprise 69.53 192 P **P 13 57 08.5 +0.9**
comp=Z,4.9nm,0.8s
KBZ Kabaz 69.60 315 P **P 13 57 06.6 -1.2**
comp=Z,2.8nm,0.7s,baz=27,slow=2.3,SNR=5.7
comp=Z,2.8nm,0.7s
PPI Padang Panjang 69.70 242 P **P 13 57 08.7 -0.1**
SNSI Sinabang, Aceh 69.70 248 P **P 13 57 09.7 +0.9**
GSI Gunungsitoli 69.87 246 P **P 13 57 11.0 +1.1**
comp=Z,3µmcomp=Z,30nm,0.6s
KNRA Kununurra 70.58 208 P **P 13 57 14.8 +0.9**
comp=Z,14nm,1.0s
KNRA Kununurra 70.58 208 P **P 13 57 14.9 +0.9**
KNRA IAmb IAmb 13 57 15.7
comp=Z,15nm,1.1s
KLSI 70.87 236 P **P 13 57 15.8 -0.1**
comp=Z,21nm,0.9s
MASI Maura Aman, Be 70.90 239 P **P 13 57 16.8 +0.6**
comp=Z,112nm,1.1s
MDSI Maura Dua 70.98 237 P **P 13 57 16.3 -0.3**
comp=Z,8.2nm,0.8s
CTAO Charters Tower 71.21 190 P **P 13 57 18.6 +0.8**
CTAO IAmb IAmb 13 57 19.2
comp=Z,14nm,1.2s
CTAO Charters Tower 71.21 190 P **P 13 57 18.6 +0.8**
CTAO pmax pmax
comp=Z,14nm,1.2s
LWLI Liwa 71.50 236 P **P 13 57 19.0 -0.8**
EKA Eskdalemuir Ar 72.83 348 P **P 13 57 26.4 -0.8**
comp=Z,1.6nm,0.3s,baz=17,slow=5.0,SNR=24
comp=Z,1.6nm,0.3s
WB0 Warramunga Arr 72.97 202 P **P 13 57 28.8 +0.5**
WB0 IAmb IAmb 13 57 29.8
comp=Z,9.8nm,0.8s
WR8 Warramunga Arr 73.13 202 P 13 57 29.5 +0.3
WR8 IAmb IAmb 13 57 30.7
comp=Z,9.8nm,0.9s
WRAB Tennant Creek 73.14 202 P **P 13 57 29.9 +0.6**
WRAB Tennant Creek 73.14 202 *ce*P **P 13 57 30.1 +0.8**
WRAB pmax pmax
comp=Z,28nm,2.5s
WRAB Tennant Creek 73.14 202 P **P 13 57 29.9 +0.6**
WRA Warramunga Arr 73.15 202 P **P 13 57 29.5 +0.1**
comp=Z,6.1nm,0.7s,baz=15,slow=6.2,SNR=22
comp=Z,6.1nm,0.7s
WRA Warramunga Arr 73.15 202 P 13 57 29.8 +0.4
WRA Warramunga Arr 73.15 202 *ce*P **P 13 57 29.7 +0.4**
WRA pmax pmax
comp=Z,6.0nm,0.7s
SADO Sadowa 73.24 38 LR LR 14 30 57.8
comp=Z,30nm,18.1s,baz=14,slow=37
BUR08 Bucovina Ar. S 73.33 328 P **P 13 57 29.5 -0.9**
BURAR Bucovina Array 73.35 328 P **P 13 57 29.4 -1.1**
TXAR Lajitas Array 73.57 64 P **P 13 57 33.5 +1.4**
comp=Z,5.8nm,0.6s,baz=299,slow=4.6,SNR=76
TXAR pP **pP 13 58 00.5 -0.6**
comp=Z,6.4nm,0.7s,baz=291,slow=4.4,SNR=12
comp=Z,5.8nm,0.6s
LPIG La Paz 73.61 72 LR LR 14 28 51.5
comp=Z,17nm,18.2s,baz=335,slow=35
FITZ Fitzroy Crossi 73.83 211 P **P 13 57 34.4 +1.1**
comp=Z,5.8nm,1.0s
FITZ Fitzroy Crossi 73.83 211 P **P 13 57 34.2 +0.9**
comp=Z,18nm,0.7s,baz=9.5,slow=6.4,SNR=41
comp=Z,18nm,0.7s
FITZ Fitzroy Crossi 73.83 211 P 13 57 34.5 +1.1
FITZ Fitzroy Crossi 73.83 211 P **P 13 57 34.5 +1.2**
PALK Pallekele 75.45 264 P **P 13 57 42.6 -0.3**
PALK IAmb IAmb 13 57 44.2
comp=Z,25nm,0.8s
PALK Pallekele 75.45 264 P **P 13 57 42.7 -0.3**
PALK pmax pmax
comp=Z,25nm,0.8s
PALK Pallekele 75.45 264 P **P 13 57 43.4 +0.4**
KHC Kasperske Hory 75.47 336 *e*P P 13 57 48.7 +6.1
GERES GERESS Array B 75.70 336 P **P 13 57 43.5 -0.5**
comp=Z,0.4nm,0.3s,baz=15,slow=5.5,SNR=5.0
comp=Z,0.4nm,0.3s
EIDS Eidsvold 76.04 185 P **P 13 57 47.5 +1.6**
EIDS IAmb IAmb 13 58 49.6
comp=Z,53nm,1.9s
AS31 Alice Springs 76.84 201 P **P 13 57 51.9 +1.4**
ASAR Alice Springs 76.84 201 P **P 13 57 51.2 +0.7**
comp=Z,5.9nm,0.7s,baz=11,slow=5.6,SNR=41
comp=Z,5.9nm,0.7s
ASAR Alice Springs 76.84 201 P **P 13 57 51.4 +0.9**
ASAR Alice Springs 76.84 201 P **P 13 57 51.4 +0.9**
BRTR Keskin Array B 76.89 318 P **P 13 57 49.9 -1.1**
comp=Z,1.8nm,0.7s,baz=36,slow=7.6,SNR=7.7
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 76.89 318 *ce*P **P 13 57 53.0 +2.1**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
UOSS Minazif 77.22 294 P **P 13 57 52.1 -0.7**
UOSS Minazif 77.22 294 sP sP 13 58 37.4 +3.0
LESA Schwarzleotal 77.27 336 *i* PcP **P 13 57 57.3 +4.4**
comp=Z,6.1nm,0.6s
SOKA Soboth 77.33 334 *e*P **P 13 57 55.0 +1.8**
comp=Z,4.5nm,0.5s
KBA Koelnbreinsper 77.42 335 *e*P **P 13 57 53.8 0.0**
comp=Z,3.1nm,0.4s

WTTA	**Wattenberg**	**77.69**	**336**	*e*P	**P**	**13 57 54.9**	**-0.4**
	comp=Z,4.4nm,0.4s						
MOTA	**Moosalm**	**77.75**	**337**	*e*PcP	**P**	**13 57 59.2**	**+3.6**
	comp=Z,3.5nm,0.4s						
QLP	**Quilpie**	**77.86**	**191**	P	**P**	**13 57 57.9**	**+1.8**
PSA00	**Pilbara Seismi**	**79.03**	**215**	P	**P**	**13 58 01.9**	**-0.7**
PSA00				IAmb	IAmb	14 00 58.3	
	comp=Z,26nm,1.7s						
INKA	**Innaminka**	**79.49**	**194**		**P**	**13 58 06.2**	**+1.3**
ARMA	**Armidale**	**81.04**	**184**	P	**P**	**13 58 15.5**	**+2.2**
ARMA				IAmb	IAmb	13 59 09.9	
	comp=Z,46nm,1.6s						
RAR	**Rarotonga**	**81.41**	**139**	P	**P**	**13 58 18.3**	**+3.0**
MMAI	**Mount Meron Ar**	**81.71**	**313**	P	**P**	**13 58 16.7**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=38,slow=8.4,SNR=3.7						
	comp=Z,1.7nm,0.4s						
STKA	**Stephens Creek**	**83.43**	**193**	P	**P**	**13 58 26.6**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=346,slow=5.8,SNR=4.4						
	comp=Z,1.5nm,0.5s						
RAYN	**Ar Rayn**	**84.36**	**301**	P	**P**	**13 58 30.3**	**-0.6**
RAYN	**Ar Rayn**	**84.36**	**301**	PcP	**PcP**	**13 58 33.9**	**-0.4**
RAYN				pP	**pP**	**13 59 02.1**	**+1.4**
FORT	**Forrest**	**85.09**	**204**		**P**	**13 58 34.9**	**+0.9**
FORT				IAmb	IAmb	13 58 36.0	
	comp=Z,18nm,0.7s						
BBOO	**Buckleboo**	**85.25**	**197**	P	**P**	**13 58 35.5**	**+0.8**
BBOO				IAmb	IAmb	14 00 14.3	
	comp=Z,29nm,1.4s						
BBOO	**Buckleboo**	**85.25**	**197**	P	**P**	**13 58 35.6**	**+0.8**
HTT	**Hallett**	**85.35**	**195**	P	**P**	**13 58 37.3**	**+1.9**
MORW	**Morawa**	**87.25**	**215**	P	**P**	**13 58 44.8**	**+0.1**
MORW	**Morawa**	**87.25**	**215**	P	**P**	**13 58 45.4**	**+0.7**
ESDC	**Sonseca Array**	**88.24**	**345**	P	**P**	**13 58 48.4**	**-1.2**
	comp=Z,5.5nm,0.8s,baz=2.2,slow=4.0,SNR=25						
	comp=Z,5.5nm,0.8s						
GEXS	**Deakin Univers**	**89.33**	**190**	P	**P**	**13 58 56.3**	**+2.0**
QSPA	**South Pole Qui**	**140.60**	**180**	PKhKP	PKPpre	14 05 22.1	
	comp=Z,0.9nm,0.5s,baz=175,slow=1.3,SNR=18						
QSPA	**South Pole Qui**	**140.60**	**180**		PKPpre	14 05 20.9	
CPUP	**Villa Florida**	**144.44**	**59**	PKP	PKPbc	14 05 32.8	+0.1
	comp=Z,0.7nm,0.7s,baz=313,slow=0.8,SNR=4.9						
PLCA	**Paso Flores**	**146.17**	**91**	PKPbc	**PKPbc**	**14 05 38.0**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=275,slow=1.3,SNR=6.4						
PLCA				pPKPbc	**pPKPdf**	**14 06 07.5**	**-0.6**
	comp=Z,3.9nm,0.7s,baz=321,slow=1.9,SNR=4.7						
PLCA	**Paso Flores**	**146.17**	**91**	PKP2	**PKPbc**	**14 05 38.0**	**+0.2**
TROLL	**Troll, Antarti**	**155.82**	**199**	⇓P	**PKPab**	**14 06 18.1**	**+0.3**
	comp=Z,292nm,0.8s						
SNAA	**Sanae**	**157.14**	**197**	⇓P	**PKPab**	**14 06 23.4**	**0.0**
	comp=Z,71nm,0.8s						
SNAA	**Sanae**	**157.14**	**197**	PKPab	**PKPab**	**14 06 23.7**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=134,slow=2.0,SNR=15						
SNAA	**Sanae**	**157.14**	**197**	PKPdf	**PKPdf**	**14 05 51.3**	**-0.7**
SNAA					**PKPab**	**14 06 23.2**	**-0.2**
SNAA	**Sanae**	**157.14**	**197**	PKIKP	**PKPdf**	**14 05 51.3**	**-0.7**
SNAA						14 06 23.2	
VNA3	**Neumayer Olymp**	**158.60**	**192**	⇓P	**PKPab**	**14 06 29.6**	**-0.1**
	comp=Z,4.0nm,0.8s						

JMA 27 13:49:38.0±0.3, 37.4N×0.7×14.2E±, h33km±4km, MV1.9/21, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.85**	**265**	*e*P	Pn	13 49 53.5	-0.1
JFK				*e*S	Sn	13 50 04.4	-0.5
JMST	**Minamisoumatoc**	**0.88**	**289**	S	Sn	13 50 05.7	+0.1
JIKH	**Ishinomakikobu**	**0.95**	**337**	*e*P	Pn	13 49 55.0	+0.1
JIKH				*e*S	Sn	13 50 06.9	-0.4
JMM	**Marumori**	**1.00**	**295**	P	Pn	13 49 56.0	+0.4
JMM				*e*S	Sn	13 50 08.9	+0.3
JIO	**Ouri**	**1.11**	**336**	*e*P	Pn	13 49 57.7	+0.5
JIO				*e*S	Sn	13 50 11.7	+0.3
JOTO	**OTAMA OYAMA**	**1.28**	**276**	*e*P	Pb	13 50 00.9	-0.6
JOTO				*e*S	Sb	13 50 17.2	-0.5
JOU	**Okura**	**1.37**	**313**	*e*S	Sb	13 50 19.4	-0.8

*IDC **27** 13:51:45.3±2.1, 2.56S×129.25E, h0km, mb3.7/3, mbtmp3.7/5, ML3.7/2, MS2.4/1, Error ellipse: s-maj=131.1km s-min=23.8km az=73.0*
*DJA **27** 13:51:49.9±0.3, 3.3S±2.1×12.8E±, h10km, M3.8/13, mB4.8/1, mb4.3/3, MLv3.6/13, Mw(mB)4.1/1*
ISC 27 13:51:51.3±0.9, 2.95S±0.08×128.47E±0.06, h35km, n15, σ1§91/17, mb3.8/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.60**	**131**	P	**Pn**	**13 52 01.9**	**-1.6**
AAI	**Ambon**	**0.78**	**201**	P	**Pn**	**13 52 04.4**	**-1.5**
NLAI	**Namlea**	**1.40**	**258**	P	**Pn**	**13 52 15.5**	**+1.2**
NLAI				S	**Sn**	**13 52 35.3**	**+3.7**
BNDI	**Bandanaira**	**2.12**	**137**	P	**Pn**	**13 52 27.1**	**+2.8**
SANI	**Sanana**	**2.63**	**290**	P	**Pn**	**13 52 30.8**	**-0.6**
SANI				S	**Sn**	**13 53 00.7**	**-1.5**
SWI	**Sorong**	**3.48**	**53**	P	**Pn**	**13 52 45.1**	**+2.1**
FAKI	**Fak Fak**	**3.77**	**90**	P	**Pn**	**13 52 47.3**	**+0.2**
APSI	**Ampana**	**7.11**	**286**	P	**Pn**	**13 53 34.5**	**+1.6**
	678nm50nm,0.5s						
KAPI	**Kappang**	**8.93**	**256**	LR	LR	13 58 30.8	
	comp=Z,21nm,18.3s,baz=242,slow=41						
FITZ	**Fitzroy Crossi**	**15.31**	**190**	Pn	**P**	**13 55 31.1**	**+1.8**
	0.2nm,0.3s,baz=16,slow=15,SNR=5.9						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**17.83**	**162**	P	**P**	**13 55 56.4**	**-0.9**
	0.3nm,0.3s,baz=344,slow=12,SNR=16						
WRA				S	**Sn**	**13 59 13.8**	**-1.0**
	0.3nm,0.6s,baz=344,slow=24,SNR=1.6						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**21.25**	**166**	P	**P**	**13 56 35.5**	**+0.8**
	1.8nm,0.4s,baz=348,slow=12,SNR=41						
	1.8nm,0.4s						
COCO	**West Island**	**32.64**	**252**	P	**P**	**13 58 17.4**	**-2.8**
MKAR	**Makanchi Array**	**64.03**	**327**	P	**P**	**14 02 21.5**	**0.0**
	0.4nm,0.7s,baz=125,slow=9.0,SNR=1.8						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**68.28**	**328**	P	**P**	**14 02 48.7**	**0.0**
	0.5nm,0.6s,baz=120,slow=5.5,SNR=1.7						
	0.5nm,0.6s						

IDC 27 14:01:16.4±1.3, 5.94N×125.19E, h0km, mb3.6/4, mbtmp3.6/4, MS2.7/2, Error ellipse: s-maj=45.5km s-min=11.9km az=99.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.19**	**19**	Pg	Pg	14 01 37.6	-1.7
	96nm,0.3s,baz=198,slow=16,SNR=7.0						
DAV				Lg	Lg	14 01 56.6	
	130nm,0.3s,baz=315,slow=22,SNR=16						
DAV				LR	LR	14 02 24.0	
	comp=Z,218nm,20.2s,baz=222,slow=57						
KAPI	**Kappang**	**12.16**	**207**	LR	LR	14 08 54.1	
	comp=Z,33nm,20.7s,baz=63,slow=38						
WRA	**Warramunga Arr**	**27.25**	**161**	P	P	14 07 02.5	0.0
	0.9nm,1.0s,baz=342,slow=9.0,SNR=3.0						
	0.9nm,1.0s						
ASAR	**Alice Springs**	**30.63**	**164**	P	P	14 07 32.5	-0.1
	0.3nm,0.4s,baz=342,slow=7.3,SNR=7.9						
ASAR				PcP	PcP	14 10 30.4	-0.9
	0.4nm,0.8s,baz=335,slow=2.9,SNR=4.1						
	0.3nm,0.4s						
MJAR	**Matsushiro Arr**	**32.72**	**20**	LR	LR	14 21 24.7	
	comp=Z,15nm,19.5s,baz=159,slow=37						
STKA	**Stephens Creek**	**40.73**	**158**	P	P	14 08 59.7	+0.6
	2.4nm,0.9s,baz=346,slow=7.1,SNR=3.7						
	2.4nm,0.9s						
MKAR	**Makanchi Array**	**54.88**	**325**	P	P	14 10 49.2	+0.4
	0.3nm,0.7s,baz=133,slow=6.7,SNR=1.9						
	0.3nm,0.7s						

*SOME **27** 14:04:58.8, 41.88N×79.53E, h10km*
*KRNET **27** 14:04:58.2±0.1, 41.79N×79.55E, h17km, mb3.0*
*NNC **27** 14:04:59.8±2.5, 42.46N×81.02E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=21.6km s-min=11.2km az=7.0*
ISC 27 14:04:57.5±3.4, 41.76N±0.08×79.71E±0.07, h2km±23km, n25, σ1§42/48, 12C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.21**	**307**	⇓*i*P	**Pn**	**14 05 19.4**	**-2.2**
PRZ				⇓*i*S	**Sb**	**14 05 34.8**	**-2.6**
SHLS	**Shalkode**	**1.41**	**353**	*e*P	**Pn**	**14 05 24.1**	**-0.2**
	29nm,0.2s						
SHLS				*e*S	**Sn**	**14 05 42.2**	**-1.2**
	108nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.42**	**269**	⇑*i*P	**Pn**	**14 05 23.1**	**-1.7**
TARG				⇑*i*S	**Sb**	**14 05 41.3**	**-2.5**
UZB	**Uzynbulak**	**1.47**	**340**	*e*P	**Pn**	**14 05 24.6**	**-0.6**
	15nm,0.2s						
UZB				*e*S	**Sn**	**14 05 42.9**	**-2.3**
	94nm,0.2s						
PDGK	**Podgornoye**	**1.57**	**354**	⇑P	**Pn**	**14 05 26.3**	**-0.3**
	10nm,0.3s						
PDGK				⇓S	**Sn**	**14 05 45.8**	**-1.8**
	50nm,0.8s						
KTMS	**Ketmen**	**1.75**	**16**	*e*P	**Pn**	**14 05 29.7**	**+0.7**
	8.7nm,0.1s						
KTMS				*e*S	**Sn**	**14 05 51.8**	**-0.2**
	29nm,0.3s						
KPKS	**Kokpek**	**1.86**	**336**	*e*P	**Pn**	**14 05 31.5**	**+0.9**
	0.3nm,0.3s						
KPKS				*e*S	**Sn**	**14 05 54.9**	**+0.2**
	89nm,0.3s						
KDJ	**Kajisay**	**1.92**	**282**	⇑*i*P	**Pn**	**14 05 31.4**	**0.0**
KDJ				⇑*i*S	**Sn**	**14 05 55.8**	**-0.4**
TNSS	**Tian-Shan**	**2.41**	**303**	*e*P	**Pn**	**14 05 40.8**	**+2.5**
	1.8nm,0.2s						
TNSS				*e*S	**Sn**	**14 06 10.7**	**+2.1**
	7.8nm,0.3s						
KOTS	**Kotyrbulak**	**2.42**	**308**	*e*P	**Pn**	**14 05 41.5**	**+3.3**
	6.6nm,0.2s						
KOTS				*e*S	**Sb**	**14 06 12.2**	**+0.1**
	50nm,0.3s						
ULHL	**Ulahol**	**2.63**	**282**	⇓*i*P	**Pn**	**14 05 42.2**	**+1.1**
ULHL				⇓*i*S	**Sn**	**14 06 14.5**	**+0.8**
MTBS	**Maitube**	**2.78**	**300**	*e*P	**Pb**	**14 05 47.6**	**-0.4**
	1.9nm,0.2s						
MTBS				*e*S	**Sb**	**14 06 22.4**	**-0.2**
	10nm,0.5s						
ARXS	**Arharly**	**2.81**	**331**	*e*P	**Pn**	**14 05 47.5**	**+3.9**
	2.4nm,0.3s						
ARXS				*e*S	**Sb**	**14 06 22.8**	**-0.6**
	34nm,0.4s						
BOOM	**Boomskoye usch**	**2.89**	**286**	⇑*i*P	**Pn**	**14 05 45.9**	**+1.1**
BOOM				⇑*i*S	**Sn**	**14 06 20.8**	**+0.5**
KST	**Kastek**	**3.05**	**296**	*e*P	**Pb**	**14 05 52.0**	**-0.7**
	2.4nm,0.3s						
KST				*e*S	**Sb**	**14 06 29.9**	**-0.5**
	14nm,0.4s						
JNKS	**Jany-Kuch**	**3.13**	**258**	⇓*i*P	**Pn**	**14 05 49.3**	**+1.2**
JNKS				⇓*i*S	**Sn**	**14 06 26.8**	**+0.7**
TKM2	**Tokmak 2**	**3.26**	**292**	⇑*i*P	**Pn**	**14 05 50.9**	**+1.1**
TKM2				⇑*i*S	**Sn**	**14 06 29.6**	**+0.3**
DGS	**Degeres**	**3.26**	**298**	*e*P	**Pb**	**14 05 56.1**	**0.0**
	2.9nm,0.5s						
DGS				*e*S	**Sb**	**14 06 37.7**	**+1.3**
	9.6nm,0.6s						
KRBS	**Karabastau**	**3.54**	**304**	*e*P	**Pb**	**14 06 00.5**	**-0.4**
KRBS				*e*S	**Sb**	**14 06 44.6**	**+0.2**
UCH	**Uchtor**	**3.90**	**279**	⇓*i*P	**Pn**	**14 06 00.0**	**+1.2**
UCH				⇓*i*S	**Sn**	**14 06 45.0**	**-0.1**
AAK	**Ala-Archa**	**3.97**	**284**	⇓*i*P	**Pn**	**14 06 00.8**	**+1.3**
AAK				⇓*i*S	**Sn**	**14 06 46.6**	**-0.2**
ARLS	**Aral**	**4.03**	**273**	⇓*e*P	**Pn**	**14 06 01.3**	**+1.0**
ARLS				⇓*e*S	**Sn**	**14 06 47.8**	**-0.3**
USP	**Ospenovka**	**4.13**	**293**	⇑*i*P	**Pn**	**14 06 02.5**	**+0.8**
USP				⇑*i*S	**Sn**	**14 06 50.5**	**-0.1**
MAKZ	**Makanchi**	**5.30**	**17**	⇑Pg	**Pn**	**14 06 19.0**	**+1.3**
	0.4nm,0.3s						
MAKZ				⇓Lg	Lg	14 07 20.0	
	1.6nm,0.7s						
MK31	**Makanchi Array**	**5.36**	**19**	⇓Pg	**Pn**	**14 06 20.2**	**+1.7**
	0.3nm,0.3s,baz=202,slow=15,SNR=12						
MK31				⇓Lg	Lg	14 07 22.3	
	1.5nm,0.7s,baz=206,slow=25,SNR=5.8						

*NEIC **27** 14:08:24.6±0.9, 34.961N±0.007×97.78W±0.01, h5km±1km, mb_Lg2.5/31, ML2.5/44, ML2.3/25, Error ellipse: s-maj=2.9km s-min=1.9km az=311.0*
NEIC 27 14:08:24.9±1.0, 34.97N±0.01×97.78W±0.01, h9km±8km, Error ellipse: s-maj=1.8km s-min=1.6km az=174.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
X34A	**Smith Ranch, M**	**0.37**	**187**		Pg	14 08 32.7	+0.6
FNO	**Franklin**	**0.43**	**47**		Pg	14 08 33.1	-0.1
FNO					Sg	14 08 39.4	+0.6
FNO				IAML		14 08 46.6	
	comp=E,321nm,0.7s						
OKCSW	**OKLAHOMA CITY**	**0.52**	**33**	Pg	Pg	14 08 33.7	-1.3
OKCSW				IAML		14 08 46.3	
	comp=E,268nm,0.6s						
WMOK	**Wichita Mounta**	**0.85**	**255**		Pg	14 08 40.3	-1.0
WMOK					Sg	14 08 52.0	-0.4
LOOK	**Love County**	**1.09**	**153**		Pg	14 08 45.2	-0.7
OK052	**Battle Ridge R**	**1.30**	**38**		Pn	14 08 48.6	-0.7
WTFS	**Witchita Falls**	**1.32**	**205**		Pn	14 08 48.9	-0.7
WTFS					Sb	14 09 06.2	-0.8
DEOK	**Depew**	**1.36**	**50**		Pn	14 08 49.3	-0.8
DEOK					Sb	14 09 08.0	-0.3
CROK	**Carrier**	**1.54**	**354**		Pn	14 08 52.9	+0.2
Z35A	**Perchaven, San**	**1.69**	**165**		Pn	14 08 54.5	-0.2
TUL3	**Leonard**	**1.88**	**59**		Pn	14 08 57.5	+0.3
TUL3				IAmb_Lg		14 09 26.2	
	comp=Z,28nm,0.8s						
Z38A	**Mt. Pleasant**	**2.88**	**125**	IAmb_Lg		14 09 59.8	
	comp=Z,17nm,1.0s						
DKNS	**Dickens**	**2.91**	**244**	IAmb_Lg		14 09 57.7	
	comp=Z,14nm,0.8s						
U38A	**Gravette**	**3.13**	**61**	IAmb_Lg		14 10 08.5	
	comp=Z,9.3nm,0.8s						
AMTX	**Amarillo**	**3.21**	**270**	IAmb_Lg		14 10 04.7	
	comp=Z,8.9nm,0.9s						
R32A	**Long Quarter,**	**3.53**	**348**	IAmb_Lg		14 10 17.7	
	comp=Z,9.2nm,1.0s						
POST	**Post**	**3.62**	**240**	IAmb_Lg		14 10 23.1	
	comp=Z,12nm,1.0s						
BRDY	**Brady**	**3.81**	**196**	IAmb_Lg		14 10 36.1	
	comp=Z,12nm,1.0s						
X40A	**Basin Creek Fa**	**4.10**	**95**	IAmb_Lg		14 10 42.5	
	comp=Z,13nm,0.7s						
SGCY	**Sterling City**	**4.13**	**224**	IAmb_Lg		14 10 45.7	
	comp=Z,9.1nm,0.8s						
CBKS	**Cedar Bluff**	**4.15**	**338**	IAmb_Lg		14 10 48.2	
	comp=Z,12nm,0.8s						
WHAR	**Wooly Hollow**	**4.51**	**84**	IAmb_Lg		14 10 56.6	
	comp=Z,14nm,1.1s						
MNHN	**Monahans**	**5.52**	**230**	IAmb_Lg		14 11 24.0	
	comp=Z,9.1nm,0.8s						
CCM	**Cathedral Cave**	**6.10**	**58**	IAmb_Lg		14 11 49.4	
	comp=Z,8.8nm,0.8s						
SAND	**Sanderson**	**6.20**	**217**	IAmb_Lg		14 11 47.3	
	comp=Z,9.6nm,0.9s						
FVM	**French Village**	**6.65**	**61**	IAmb_Lg		14 11 59.3	
	comp=Z,8.9nm,0.8s						

*AEIC **27** 14:10:06.8±0.8, 52.38N±0.09×164.46W±0.09, h24km±9km, Error ellipse: s-maj=13.5km s-min=7.4km az=162.0*
NEIC 27 14:10:04.4±1.0, 52.41N±0.08×164.48W±0.05, h10km±2km, ML3.2/12, MLB3.0(AEIC), Error ellipse: s-maj=14.2km s-min=3.1km az=162.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**1.89**	**321**		Pn	14 10 36.6	0.0
UNV					Sn	14 10 60.0	-0.5
UNV	**Unalaska Valle**	**1.89**	**321**	IAML		14 11 00.7	
	comp=N,240nm,0.5s						
UNV				IAML		14 11 00.8	
	comp=E,191nm,0.7s						
AKUT	**Akutan**	**1.90**	**336**		Pn	14 10 36.5	-0.3
AKUT	**Akutan**	**1.90**	**336**		Sn	14 11 00.8	0.0
AKMO	**Akutan Morgan**	**1.92**	**332**		Pn	14 10 37.4	+0.3
AKMO					Sn	14 11 01.5	+0.1
AKLV	**Akutan Long Va**	**1.97**	**334**		Pn	14 10 37.5	-0.3
AKLV					Sn	14 11 02.3	-0.4
AKRB	**Akutan Reef Bi**	**1.97**	**332**		Pn	14 10 37.7	-0.2
AKRB					Sn	14 11 02.1	-0.6
MNAT	**Makushin Natee**	**1.99**	**319**		Pn	14 10 38.1	0.0
MNAT					Sn	14 11 02.5	-0.5
LVA	**Lava Point**	**1.99**	**333**	Pn	Pn	14 10 38.6	+0.5
LVA				IAML		14 11 14.1	
	comp=E,175nm,0.7s						
MGOD	**Makushin Gods**	**2.00**	**315**		Pn	14 10 38.2	-0.1
MGOD					Sn	14 11 03.2	-0.2
MSW	**Makushin Switc**	**2.05**	**318**		Pn	14 10 39.0	0.0
MSW					Sn	14 11 04.0	-0.6
WEBT	**Westdahl Beart**	**2.20**	**356**		Pn	14 10 41.4	+0.5
WEBT					Sn	14 11 07.7	-0.5
SSBA	**Shishaldin**	**2.38**	**5**		Pn	14 10 43.7	+0.1
SSBA					Sn	14 11 12.7	-0.1
OKER	**Okmok East Rim**	**2.40**	**297**		Pn	14 10 44.1	+0.3
OKER					Sn	14 11 13.0	-0.3
OKNC	**Okmok New Cone**	**2.44**	**297**		Pn	14 10 44.9	+0.5
OKNC					Sn	14 11 13.5	-0.7
OKCE	**Okmok Cone E**	**2.45**	**296**		Pn	14 10 44.7	+0.2
OKCE					Sn	14 11 14.0	-0.5
ISNN	**Isanotski Nort**	**2.47**	**9**		Pn	14 10 44.2	-0.4
ISNN					Sn	14 11 14.6	-0.2
FALS	**False Pass**	**2.54**	**14**		Pn	14 10 45.3	-0.2
FALS					Sn	14 11 15.9	-0.6
NIKH	**Nikolski High**	**2.72**	**284**	Pn	Pn	14 10 45.9	-2.3
NIKH				IAML		14 11 18.5	
	comp=N,90nm,0.9s						
NIKH				IAML		14 11 22.6	
	comp=E,98nm,0.9s						
DT1	**Dutton Round H**	**3.01**	**25**		Pn	14 10 51.5	-0.5
DT1					Sn	14 11 27.5	-0.6
DOL	**Dolgoi Island**	**3.16**	**28**		Pn	14 10 54.9	+0.8
PS1A	**Pavlof South-1**	**3.43**	**27**		Pn	14 10 58.4	+0.5
SDPT	**Sand Point**	**3.78**	**37**		Pn	14 11 03.0	+0.3
SDPT	**Sand Point**	**3.78**	**37**	IAML		14 13 35.0	
	comp=E,53nm,1.0s						
ATKA	**Atka Island**	**5.96**	**272**	Pn	Pn	14 11 32.9	+0.2
GSTR	**Great Sitkin T**	**7.12**	**272**	Pn	Pn	14 11 48.7	+0.2
ADK	**Adak**	**7.53**	**271**	Pn	Pn	14 11 54.9	+0.8
KIWB	**Kanaga Island**	**7.82**	**271**	Pn	Pn	14 11 58.7	+0.6
OHAK	**Old Harbor**	**8.06**	**49**	Pn	Pn	14 12 01.7	+0.3
AMKA	**Amchitka**	**10.08**	**271**	Pn	Pn	14 12 28.3	-0.7

*SJA **27** 14:23:37.9±0.8, 28.21S×71.07W, h49km±7km, ML3.7, MW3.8*
*NEIC **27** 14:23:38.8±2.1, 28.22S±0.03×71.21W±0.09, h40km±10km, mb4.2/3, ML4.0(GUC), Error ellipse: s-maj=11.6km s-min=3.8km az=105.0*
*GUC **27** 14:23:40.3±0.7, 28.24S×70.93W, h61km±4km, ML4.1*
*IDC **27** 14:23:42.9±7.5, 28.38S×70.97W, h90km±61km, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=79.1km s-min=27.9km az=96.0*
ISC 27 14:23:38.8±0.8, 28.21S±0.03×71.20W±0.06, h55km±6km, n76, σ1§31/88, mb4.2/5, 2C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.11**	**90**		**Pn**	**14 23 48.7**	**+1.4**
AC04					**Sn**	**14 23 54.6**	**+1.2**
AC04	**Llanos de Chal**	**0.11**	**90**	⇓*i*P	**Pn**	**14 23 48.9**	**+1.6**
AC04				*i* S	**Sn**	**14 23 55.5**	**+2.0**
AC04				IAML		14 23 57.0	
	comp=E,19μm,0.1s						
AC04	**Llanos de Chal**	**0.11**	**90**	*i* P	**Pn**	**14 23 46.2**	**-1.2**
AC04				IAML		14 23 56.8	
	comp=Z,4μm,0.1s						
LCO	**Las Campanas**	**0.92**	**151**		**Pn**	**14 23 55.2**	**-0.6**
LCO					**Sn**	**14 24 06.3**	**-2.1**
LCO	**Las Campanas**	**0.92**	**151**	*e*P	**Pn**	**14 23 55.5**	**-0.4**
LCO				*i* S	**Sn**	**14 24 07.2**	**-1.2**
LCO	**Las Campanas**	**0.92**	**151**	*i* P	**Pn**	**14 23 55.0**	**-0.9**
LCO				*i* S	**Sn**	**14 24 07.8**	**-0.6**
LCO				IAML		14 24 08.1	
	comp=Z,8μm,0.2s						
AC05	**El Transito**	**1.03**	**128**		**Pn**	**14 23 56.2**	**-1.1**
AC05					**Sn**	**14 24 08.5**	**-2.4**
AC05	**El Transito**	**1.03**	**128**	*e*P	**Pn**	**14 23 56.4**	**-0.9**
AC05				*e*S	**Sn**	**14 24 08.4**	**-2.4**
AC05				IAML		14 24 10.3	
	comp=E,7μm,0.2s						
AC05	**El Transito**	**1.03**	**128**	*i* P	**Pn**	**14 23 56.1**	**-1.1**
AC05				*i* S	**Sn**	**14 24 09.3**	**-1.5**
AC05				IAML		14 24 09.6	
	comp=Z,2μm,0.9s						
GO03	**Copiapo**	**1.05**	**55**		**Pn**	**14 23 56.7**	**-0.8**
GO03					**Sn**	**14 24 09.4**	**-1.8**
GO03	**Copiapo**	**1.05**	**55**	*e*P	**Pn**	**14 23 56.7**	**-0.8**
GO03				*e*S	**Sn**	**14 24 09.6**	**-1.6**
GO03				IAML		14 24 10.7	
	comp=N,11μm,0.5s						
GO03	**Copiapo**	**1.05**	**55**	*i* P	**Pn**	**14 23 56.4**	**-1.0**
GO03				*i* S	**Sn**	**14 24 09.7**	**-1.6**
GO03				IAML		14 24 10.5	
	comp=Z,4μm,0.1s						
AC06	**Mina Casimiro**	**1.13**	**42**		**Pn**	**14 23 58.4**	**-0.1**
AC06					**Sn**	**14 24 12.2**	**-0.9**
AC06	**Mina Casimiro**	**1.13**	**42**	⇓*i*P	**Pn**	**14 23 58.7**	**+0.2**
AC06				*e*S	**Sn**	**14 24 12.9**	**-0.2**
AC06				IAML		14 24 14.3	
	comp=E,7μm,0.2s						
GO04	**Tololo Observa**	**1.99**	**170**		**Pn**	**14 24 10.7**	**+0.4**
GO04					**Sn**	**14 24 34.7**	**+0.4**
GO04	**Tololo Observa**	**1.99**	**170**	⇓*e*P	**Pn**	**14 24 10.7**	**+0.4**
GO04	

MT08	**Bocatoma Ro**	**5.32**	**169**	Pn		**Pn**		**14 24 57.0**	**+1.0**
PB05	**IPOC Station P**	**5.41**	**10**	Pn		**Pn**		**14 24 53.9**	**-3.2**
MT09	**Talagante**	**5.56**	**178**			**Pn**		**14 24 58.1**	**-1.0**
MT13	**San Alfonso**	**5.58**	**172**			**Pn**		**14 24 59.1**	**-0.2**
MT01	**Popeta**	**5.64**	**180**			**Pn**		**14 24 58.6**	**-1.4**
BO04	**La Punta**	**5.79**	**175**	Pn		**Pn**		**14 25 00.4**	**-1.7**
BO01	**Tunca**	**6.17**	**179**			**Pn**		**14 25 05.1**	**-2.2**
BO02	**Sierra Bellavi**	**6.58**	**177**			**Pn**		**14 25 11.7**	**-1.3**
PB01	**IPOC Station P**	**7.30**	**13**	Pn		**Pn**		**14 25 19.9**	**-3.0**
PB08	**IPOC Station P**	**8.24**	**14**	Pn		**Pn**		**14 25 33.2**	**-3.0**
BI02	**San Fabin de**	**8.43**	**180**	Pn		**Pn**		**14 25 36.9**	**-1.5**
H03N1	**Juan Fernandez**	**8.44**	**230**	T		T		14 34 27.9	
	baz=56,slow=72,SNR=225								
H03N2	**Juan Fernandez**	**8.45**	**230**	T		T		14 34 21.4	
	baz=56,slow=72,SNR=207								
H03N3	**Juan Fernandez**	**8.45**	**230**	T		T		14 34 19.7	
	baz=56,slow=72,SNR=180								
GO01	**Chusmiza**	**8.69**	**13**	Pn		**Pn**		**14 25 39.3**	**-3.1**
CPUP	**Villa Florida**	**12.48**	**85**	P		**Pn**		**14 26 35.4**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=248,slow=19,SNR=1.2								
	comp=Z,0.2nm,0.3s								
SIV	**San Ignacio**	**15.35**	**40**	P		**P**		**14 27 13.8**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=274,slow=18								
VAO	**Valinhos**	**22.45**	**82**	P		**P**		**14 28 35.0**	**+1.6**
VAO				IAmb		IAmb		14 28 40.3	
	comp=Z,10nm,1.1s								
VNA3	**Neumayer Olymp**	**54.48**	**160**	⇓P		**P**		**14 32 60.0**	**-0.4**
	comp=Z,0.9nm,0.3s								
VNA2	**Neumayer--Watz**	**55.10**	**159**	⇓P		**P**		**14 33 04.1**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=286,slow=7.9								
SNAA	**Sanae**	**56.70**	**159**	⇓P		**P**		**14 33 15.7**	**-0.6**
	comp=Z,26nm,0.4s								
SNAA	**Sanae**	**56.70**	**159**	P		**P**		**14 33 15.7**	**-0.6**
SNAA				IAmb		IAmb		14 33 29.4	
	comp=Z,2.4nm,1.1s								
TROLL	**Troll, Antarti**	**58.42**	**160**	⇓P		**P**		**14 33 27.6**	**-0.9**
	comp=Z,93nm,0.8s								
QSPA	**South Pole Qui**	**62.01**	**180**	P		**P**		**14 33 56.6**	**+3.4**
QSPA				IAmb		IAmb		14 33 57.6	
	comp=Z,1.7nm,0.8s								
ASAR	**Alice Springs**	**123.03**	**208**	PKP		**PKPdf**		**14 42 29.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=140,slow=2.0,SNR=4.6								
WRA	**Warramunga Arr**	**126.14**	**210**	PKP		**PKPdf**		**14 42 35.3**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=162,slow=1.6,SNR=4.9								
ZALV	**Zalesovo Beam**	**148.86**	**28**	PKPbc		**PKPbc**		**14 43 19.4**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=320,slow=4.3,SNR=4.4								
MKAR	**Makanchi Array**	**152.16**	**41**	PKPbc		**PKPbc**		**14 43 27.8**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=284,slow=1.2,SNR=3.4								

BJI **27** *14:44:28.1,3.06N×63.68E,h10km,mB5.5/42,mb5.1/77, Ms5.3/70,Ms7 5.2/69*

MOS **27** *14:44:32.7±0.9,3.56N×64.19E,h10km,mb5.4/48, MS4.8/6,Error ellipse: s-maj=7.4km s-min=4.8km az=84.4*

IDC **27** *14:44:33.3±0.4,3.57N×64.16E,h0km,mb4.8/32, mbtmp4.8/33,ML4.6/1,MS4.8/52,Error ellipse: s-maj=13.5km s-min=11.7km az=31.0*

NEIC **27** *14:44:35.6±1.9,3.58N±0.06×64.26E±0.07,h10km±1km, mb5.5/77,Mww5.4/18,Error ellipse: s-maj=15.1km s-min=5.9km az=309.0*

NEIC **27** *14:44:35.4,3.55N×64.21E,h12km,Moment Tensor Solution. Duration: 2s4 Moment tensor: Scale 10^17Nm; Mrr1.11; Mθθ-0.72; Mφφ-0.40; Mrθ0.41; Mrφ0.41; Mθφ0.73; Fault plane solution: M0 1.35000×10^17 NP1: φs102.20000°,δ47.78000°,λ52.84000°. NP2: φs330.64000°,δ53.83000°,λ123.65000°. Principal axes: T 1.5358, Plg63.0000°, Azm301.0000°; N -0.5366, Plg27.0000°, Azm129.0000°; P -0.9992, Plg3.0000°, Azm38.0000°;*

NEIC **27** *14:44:35.4,3.55N×64.21E,h12km*

GCMT **27** *14:44:36.4±0.1,3.47N±0.01×64.15E±0.01,h12km, MW5.4/145,Moment Tensor Solution. s73,c104; s145,c269; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr1.28±.02; Mθθ-0.99±.01; Mφφ-0.29±.02; Mrθ-0.69±.05; Mφθ0.42±.01; Mφr-0.18±.05; Best double couple: M0 1.41100×10^17 NP1:φs128.00000°,δ35.00000°, λ115.00000°. NP2:φs278.00000°,δ59.00000°,λ73.00000°. Principal axes: T 1.5180, Plg71.0000°, Azm151.0000°; N -0.2150, Plg14.0000°, Azm287.0000°; P -1.3050, Plg13.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 14:44:37.2±0.3,**3.48N**±0.03×**64.10E**±0.04,**h23**km,**n592,** σ1s**86**/686,**mb5.3**/203,**MS4.9**/98,**14C-7D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HMDM	**Hanimaadhoo**	**9.62**	**70**	P		**Pn**	**14 46 52.5**	**-1.8**
HMDM				S		**Sn**	**14 48 39.5**	**-2.2**
HMDM	**Hanimaadhoo**	**9.62**	**70**	Pn		**Pn**	**14 46 50.4**	**-3.9**
DGAR	**Diego Garcia**	**13.66**	**142**	P		**Pn**	**14 47 49.5**	**-0.1**
DGAR				P		**Pn**	**14 47 49.5**	**-0.1**
DGAR				S		**Sn**	**14 50 23.5**	**+2.8**
DGAR				S		**Sn**	**14 50 23.5**	**+2.8**
DGAR	**Diego Garcia**	**13.66**	**142**	Pn		**Pn**	**14 47 48.8**	**-0.8**
DGAR	**Diego Garcia**	**13.66**	**142**	P		**Pn**	**14 47 48.8**	**-0.8**
TRD	**Trivandrum**	**13.72**	**68**	*e*P		**Pn**	**14 47 49.0**	**-1.5**
KOD	**Kodaikanal**	**14.86**	**62**	*e*P		**Pn**	**14 48 03.7**	**-2.6**
KOD				IAMs_20		IAMs_20	14 52 43.1	
	comp=Z,8μm,14.0s							
GOA	**Goa**	**15.30**	**38**	*e*P		**Pn**	**14 48 09.8**	**-2.0**
SALM	**Salem**	**16.15**	**59**	*e*P		**Pn**	**14 48 21.5**	**-1.4**
SHAO	**Shalim**	**16.67**	**331**	P		**P**	**14 48 32.4**	**+0.7**
SHAO				S		**S**	**14 51 40.0**	**-4.9**
SHAO	**Shalim**	**16.67**	**331**	P		**Pn**	**14 48 29.3**	**-0.2**
DMTO	**DMTO**	**16.75**	**328**	P		**P**	**14 48 32.9**	**+0.2**
	SNR=5.8							
DMTO				P		**P**	**14 48 32.9**	**+0.2**
	SNR=5.8							
DMTO				S		**Sn**	**14 51 40.5**	**+4.4**
DMTO				S		**Sn**	**14 51 40.5**	**+4.4**
KAD	**Karad**	**16.93**	**35**	*e*P		**Pn**	**14 48 29.2**	**-3.6**
KAD				IAMs_20		IAMs_20	14 53 28.8	
	comp=Z,8μm,20.5s							
PALK	**Pallekele**	**16.95**	**76**	Pn		**Pn**	**14 48 31.4**	**-1.6**
	comp=Z,2.0nm,0.3s,baz=277,slow=12,SNR=10							
PALK				LR		LR	14 53 35.2	
	comp=Z,5μm,19.9s,baz=258,slow=32							
	comp=Z,9.4nm,0.6s							
PALK	**Pallekele**	**16.95**	**76**	P		**Pn**	**14 48 32.6**	**-0.4**
PALK				S		**Sn**	**14 51 39.7**	**-1.2**
PALK	**Pallekele**	**16.95**	**76**	Pn		**Pn**	**14 48 30.5**	**-2.6**
PALK	**Pallekele**	**16.95**	**76**	P		**Pn**	**14 48 30.5**	**-2.6**
PALK				pmax		pmax		
	comp=Z,141nm,1.4s							
RBK	**Rabkut**	**16.98**	**326**	P		**P**	**14 48 35.4**	**+0.1**
	SNR=13							
RBK				P		**P**	**14 48 35.4**	**+0.1**
	SNR=13							
RBK				P		**P**	**14 48 35.4**	**+0.1**
	SNR=13							
RBK				S		**S**	**14 51 47.4**	**-4.0**
RBK				S		**S**	**14 51 47.4**	**-4.0**
RBK				S		**S**	**14 51 47.4**	**-4.0**
ABTO	**Aybut**	**17.39**	**323**	P		**P**	**14 48 41.3**	**+1.6**
	SNR=11							
ABTO				P		**P**	**14 48 41.3**	**+1.6**
	SNR=11							
ABTO				P		**P**	**14 48 41.3**	**+1.6**
	SNR=11							
ABTO				S		**S**	**14 51 56.5**	**-3.3**
ABTO				S		**S**	**14 51 56.5**	**-3.3**
ABTO				S		**S**	**14 51 56.5**	**-3.3**
DQM	**DQM**	**17.56**	**339**	P		**P**	**14 48 42.3**	**+0.8**
	SNR=6.1							
DQM				P		**P**	**14 48 42.3**	**+0.8**
	SNR=6.1							
WHFO	**Wadi Hawf**	**17.56**	**326**	P		**P**	**14 48 42.3**	**+0.7**
WHFO				P		**P**	**14 48 42.3**	**+0.7**
WHFO				S		**S**	**14 52 01.5**	**-1.8**
WHFO				S		**S**	**14 52 01.5**	**-1.8**
POO	**Poona**	**17.74**	**32**	*e*P		**Pn**	**14 48 42.2**	**-0.6**
POO				IAmb		IAmb	14 48 49.5	
	comp=Z,188nm,1.8s							
DOK	**Doka**	**17.93**	**328**	P		**P**	**14 48 47.3**	**+1.6**
DOK				P		**P**	**14 48 47.3**	**+1.6**
DOK				S		**S**	**14 52 09.6**	**-1.1**
DOK				S		**S**	**14 52 09.6**	**-1.1**
MHTO	**MHTO**	**18.40**	**342**	P		**Pn**	**14 48 51.4**	**+0.6**
MHTO				P		**Pn**	**14 48 51.4**	**+0.6**
MHTO				S		**S**	**14 52 20.6**	**+0.8**
MHTO				S		**S**	**14 52 20.6**	**+0.8**
JLN	**Jalan Bani Buh**	**19.11**	**347**	P		**Pn**	**14 48 59.2**	**-0.3**
JLN				P		**Pn**	**14 48 59.2**	**-0.3**
JLN				S		**S**	**14 52 38.3**	**+4.4**
JLN				S		**S**	**14 52 38.3**	**+4.4**
WBK	**Wadi Bani Khal**	**19.66**	**346**	P		**Pn**	**14 49 06.4**	**+0.3**
WBK				P		**Pn**	**14 49 06.4**	**+0.3**
WBK				S		**Sn**	**14 52 50.4**	**+4.1**
WBK				S		**Sn**	**14 52 50.4**	**+4.1**
JMDO	**Jabal Madar**	**19.66**	**343**	P		**Pn**	**14 49 06.2**	**+0.1**
JMDO				P		**Pn**	**14 49 06.2**	**+0.1**
JMDO				S		**Sn**	**14 52 52.3**	**+5.9**
JMDO				S		**Sn**	**14 52 52.3**	**+5.9**
HYB	**Hyderabad**	**19.82**	**45**	*e*P		**P**	**14 49 06.0**	**-0.4**
HYB				IAmb		IAmb	14 49 13.4	
	comp=Z,56nm,1.1s							
HYBB	**Hyderabad (bro**	**19.82**	**45**	*e*P		**P**	**14 49 05.8**	**-0.6**
HYBB				*e*S		**Sn**	**14 52 56.6**	**+6.3**
HYBB				IVMs_BB		IVMs_BB	14 55 11.6	
	comp=Z,3μm,18.7s							
BSY	**Bisya**	**20.29**	**341**	P		Pn	14 49 13.2	-0.3
	SNR=34							
BSY				S		Sn	14 53 03.3	+1.8
SMDO	**Samad**	**20.33**	**344**	P		Pn	14 49 13.0	-1.0
	SNR=11							
SMDO				P		Pn	14 49 13.0	-1.0
	SNR=11							
SMDO				P		Pn	14 49 13.0	-1.0
	SNR=11							
SMDO				S		Sn	14 53 04.2	+1.6
SMDO				S		Sn	14 53 04.2	+1.6
SMDO				S		Sn	14 53 04.2	+1.6
WSAR	**Wadi Sarin**	**20.34**	**345**	LR		LR	14 55 34.6	
	comp=Z,21nm,19.2s,baz=181,slow=33							
WSAR	**Wadi Sarin**	**20.34**	**345**	P		Pn	14 49 13.2	-1.0
WSAR				S		Sn	14 53 04.4	+1.5
BHUJ	**Bhuj**	**20.38**	**15**	*e*P		**P**	**14 49 11.8**	**-0.6**
BIDO	**Bidbid**	**20.74**	**344**	P		Pn	14 49 17.7	-1.2
	SNR=19							
BIDO				P		Pn	14 49 17.7	-1.2
	SNR=19							
VJD	**Vijayawada**	**20.79**	**50**	*e*P		**P**	**14 49 17.0**	**+0.1**
UMZA	**Um Al Zommool**	**20.99**	**336**	P		**P**	**14 49 19.7**	**+0.6**
UMZA				P		**P**	**14 49 19.7**	**+0.6**
UMZA				S		Sn	14 53 17.0	-1.4
UMZA				S		Sn	14 53 17.0	-1.4
HOQ	**Hoqain**	**21.04**	**342**	P		**P**	**14 49 20.1**	**+0.5**
HOQ				P		**P**	**14 49 20.1**	**+0.5**
HOQ				P		**P**	**14 49 20.1**	**+0.5**
HOQ				S		Sn	14 53 18.0	-1.5
HOQ				S		Sn	14 53 18.0	-1.5
HOQ				S		Sn	14 53 18.0	-1.5
ARQ	**Araqi**	**21.06**	**340**	P		**P**	**14 49 20.7**	**+0.8**
	SNR=35							
ARQ				P		**P**	**14 49 20.7**	**+0.8**
	SNR=35							
ARQ				S		Sn	14 53 19.8	-0.3
ARQ				S		Sn	14 53 19.8	-0.3
AKL	**Akola**	**21.24**	**35**	*e*P		**P**	**14 49 22.1**	**+0.3**
AKL				IAmb		IAmb	14 49 25.6	
	comp=Z,146nm,1.3s							
SOHO	**SOHO**	**21.79**	**341**	P		**P**	**14 49 28.1**	**+0.4**
SOHO				S		Sn	14 53 33.5	-4.2
SOHO	**SOHO**	**21.79**	**341**	*i* P		**P**	**14 49 27.1**	**-0.6**
	SNR=15							
SBV	**Sambava**	**21.94**	**220**	P		**P**	**14 49 32.9**	**+3.6**
MZR	**Muzera**	**21.96**	**333**	P		**P**	**14 49 30.0**	**+0.4**
MZR				P		**P**	**14 49 30.0**	**+0.4**
MZR				S		**S**	**14 53 36.3**	**+5.2**
MZR				S		**S**	**14 53 36.3**	**+5.2**
MZR	**Muzera**	**21.96**	**333**	*i* P		**P**	**14 49 29.2**	**-0.4**
	SNR=14							
ALNE	**Al Ain**	**21.99**	**339**	P		**P**	**14 49 30.3**	**+0.5**
	SNR=28							
ALNE				P		**P**	**14 49 30.3**	**+0.5**
	SNR=28							
ALNE				P		**P**	**14 49 30.3**	**+0.5**
	SNR=28							
ALNE				S		Sn	14 53 37.1	-5.3
ALNE				S		Sn	14 53 37.1	-5.3
ALNE				S		Sn	14 53 37.1	-5.3
ALNE	**Al Ain**	**21.99**	**339**	*i* P		**P**	**14 49 29.5**	**-0.3**
	SNR=21							
MZWR	**Madinat Zayed**	**22.45**	**335**	P		**P**	**14 49 35.8**	**+1.1**
MZWR				P		**P**	**14 49 35.8**	**+1.1**
MZWR				P		**P**	**14 49 35.8**	**+1.1**
MZWR				S		**S**	**14 53 45.8**	**+5.6**
MZWR				S		**S**	**14 53 45.8**	**+5.6**
MZWR				S		**S**	**14 53 45.8**	**+5.6**
ASHO	**Ashiyiah**	**22.46**	**341**	P		**P**	**14 49 36.0**	**+1.0**
	SNR=24							
ASHO				P		**P**	**14 49 36.0**	**+1.0**
	SNR=24							
ASHO	**Ashiyiah**	**22.46**	**341**	*i* P		**P**	**14 49 33.9**	**-1.0**
	SNR=27							
ATD	**Arta Tunnel**	**22.52**	**292**	LR		LR	14 56 51.4	
	comp=Z,48nm,20.8s,baz=126,slow=33							
ATD	**Arta Tunnel**	**22.52**	**292**	P		**P**	**14 49 37.9**	**+2.2**
	SNR=9.4							
ATD	**Arta Tunnel**	**22.52**	**292**			**P**	**14 49 35.8**	**+0.1**
HATD	**Hatta, Dubai**	**22.57**	**341**	P		**P**	**14 49 36.6**	**+0.6**
	SNR=19							
HATD				P		**P**	**14 49 36.6**	**+0.6**
	SNR=19							
HATD				P		**P**	**14 49 36.6**	**+0.6**
	SNR=19							
HATD				S		**S**	**14 53 47.7**	**+5.4**
HATD				S		**S**	**14 53 47.7**	**+5.4**
HATD				S		**S**	**14 53 47.7**	**+5.4**
HATD	**Hatta, Dubai**	**22.57**	**341**	*i* P		**P**	**14 49 34.7**	**-1.4**
	SNR=24							
UOSS	**Minazif**	**22.66**	**341**	P		**P**	**14 49 37.3**	**+0.4**
UOSS				P		**P**	**14 49 37.3**	**+0.4**
UOSS				S		**S**	**14 53 49.4**	**+5.5**
UOSS				S		**S**	**14 53 49.4**	**+5.5**
UOSS	**Minazif**	**22.66**	**341**			**P**	**14 49 35.5**	**-1.4**
UOSS				IAmb		IAmb	14 49 40.2	
	comp=Z,169nm,1.6s							
ASUD	**Al Ashush, Dub**	**22.66**	**339**	P		**P**	**14 49 38.2**	**+1.2**
	SNR=9.2							
ASUD	**Al Ashush, Dub**	**22.66**	**339**	*i* P		**P**	**14 49 37.5**	**+0.5**
	SNR=8.0							
FAQ	**Al Faqa, Dubai**	**22.68**	**340**	P		**P**	**14 49 39.0**	**+1.9**
	SNR=15							
FAQ				P		**P**	**14 49 39.0**	**+1.9**
	SNR=15							
FAQ				S		**S**	**14 53 50.0**	**+5.8**
FAQ				S		**S**	**14 53 50.0**	**+5.8**
FAQ	**Al Faqa, Dubai**	**22.68**	**340**	*i* P		**P**	**14 49 37.1**	**-0.1**
	SNR=13							
AJN	**Ajban**	**22.73**	**338**	P		**P**	**14 49 39.4**	**+1.7**
	SNR=7.7							
AJN				P		**P**	**14 49 39.4**	**+1.7**
	SNR=7.7							
AJN				S		**S**	**14 53 50.6**	**+5.4**
AJN				S		**S**	**14 53 50.6**	**+5.4**
AJN	**Ajban**	**22.73**	**338**	*i* P		**P**	**14 49 37.5**	**-0.2**
	SNR=7.5							
NAZ	**Nazwa, Dubai**	**22.88**	**340**	P		**P**	**14 49 40.7**	**+1.5**
	SNR=23							
NAZ				P		**P**	**14 49 40.7**	**+1.5**
	SNR=23							
NAZ				P		**P**	**14 49 40.7**	**+1.5**
	SNR=23							
NAZ				S		**S**	**14 53 52.2**	**+4.5**
NAZ				S		**S**	**14 53 52.2**	**+4.5**
NAZ				S		**S**	**14 53 52.2**	**+4.5**
NAZ	**Nazwa, Dubai**	**22.88**	**340**	*i* P		**P**	**14 49 40.6**	**+1.3**
	SNR=19							
UDPR	**Udaipur**	**22.93**	**23**	*e*P		**P**	**14 49 41.6**	**+1.7**
UDPR				IAmb		IAmb	14 49 45.1	
	comp=Z,194nm,1.7s							
NRDN	**NARMADA NAGAR**	**22.93**	**32**	IAmb		IAmb	14 49 35.9	
	comp=Z,260nm,1.6s							
NRDN				*e*P		**P**	**14 49 38.5**	**-1.4**
NRDN				IAMs_20		IAMs_20	14 57 19.7	
	comp=Z,5μm,16.5s							
MDH	**Madha**	**22.95**	**342**	S		**S**	**14 53 54.3**	**+5.2**
MDH	**Madha**	**22.95**	**342**	P		**P**	**14 49 38.5**	**-1.5**
MSFE	**Esma-Masafi**	**23.06**	**341**	*i* P		**P**	**14 49 41.2**	**0.0**
	SNR=11							
MASF	**Masafi**	**23.07**	**341**	P		**P**	**14 49 41.9**	**+0.7**
	SNR=9.2							
MASF				S		**S**	**14 53 56.1**	**+5.0**
GHWR	**Ruwais**	**23.07**	**333**	P		**P**	**14 49 41.6**	**+0.4**
GHWR				P		**P**	**14 49 41.6**	**+0.4**
GHWR				S		**S**	**14 53 55.9**	**+4.8**
GHWR				S		**S**	**14 53 55.9**	**+4.8**
BHPL	**Bhopal**	**23.49**	**32**	*e*P		**P**	**14 49 45.5**	**-0.1**
BHPL				IAmb		IAmb	14 49 49.6	
	comp=Z,440nm,1.5s							
BANOM	**Banah**	**23.54**	**342**	P		**P**	**14 49 46.5**	**+0.6**
BANOM	**Banah**	**23.54**	**342**	*i* P		**P**	**14 49 46.1**	**+0.2**
	SNR=5.8							
VIS	**Vishakhapatnam**	**23.57**	**52**	*e*P		**P**	**14 49 47.2**	**+0.9**
VIS				IAmb		IAmb	14 49 50.6	
	comp=Z,51nm,1.0s							
SHME	**Shamm**	**23.71**	**342**	P		**P**	**14 49 48.1**	**+0.6**
SHME				P		**P**	**14 49 48.1**	**+0.6**
SHME	**Shamm**	**23.71**	**342**	P		**P**	**14 49 47.9**	**+0.3**
SLWR	**Sila**	**23.72**	**331**	P		**P**	**14 49 48.4**	**+0.8**
SLWR				P		**P**	**14 49 48.4**	**+0.8**
SLWR				P		**P**	**14 49 48.4**	**+0.8**
SLWR				S		**S**	**14 54 06.7**	**+5.1**
SLWR				S		**S**	**14 54 06.7**	**+5.1**
SLWR				S		**S**	**14 54 06.7**	**+5.1**
JRN	**Qarnain Island**	**23.93**	**334**	S		**S**	**14 54 09.4**	**+4.4**
JASL	**Jaisalmer**	**24.20**	**15**	*e*P		**P**	**14 49 53.4**	**+1.2**
TRNA	**Turayna**	**24.51**	**331**	P		**P**	**14 49 56.0**	**+0.9**
	SNR=7.3							
TRNA				S		**S**	**14 54 19.1**	**+4.7**
RAGD	**RAYAGADA**	**24.56**	**49**	*e*P		**P**	**14 49 56.8**	**+1.2**
RAGD				IAmb		IAmb	14 49 59.0	
	comp=Z,101nm,1.3s							
RAGD				IAMs_20		IAMs_20	14 58 01.9	
	comp=Z,6μm,18.4s							
GUNA	**GUNA**	**24.61**	**30**	*e*P		**P**	**14 49 54.7**	**-1.2**
SMRA	**Abu-Samra**	**24.71**	**330**	P		**P**	**14 49 58.0**	**+1.2**
	SNR=8.6							
SMRA				S		**S**	**14 54 22.2**	**+4.6**
BLSP	**Bilaspur**	**25.49**	**42**	*e*P		**P**	**14 50 02.5**	**-1.4**
SHMA	**Al-Shehemyia**	**25.58**	**332**	P		**P**	**14 50 06.2**	**+1.6**
	SNR=6.4							
JHNI	**Jhansi**	**25.89**	**31**	*e*P		**P**	**14 50 09.0**	**+1.4**
JHNI				IAmb		IAmb	14 50 11.0	
	comp=Z,56nm,1.1s							
BKNR	**BIKANER**	**25.92**	**19**	*e*P		**P**	**14 50 08.6**	**+0.7**
KIBK	**Kibwezi**	**26.68**	**258**	P		**P**	**14 50 16.6**	**+1.6**
	SNR=11							
KIBK	**Kibwezi**	**26.68**	**258**			**P**	**14 50 16.0**	**+1.1**
RAYN	**Ar Rayn**	**26.84**	**320**	P		**P**	**14 50 17.1**	**+0.9**
RAYN				S		**S**	**14 54 56.2**	**+4.7**
RAYN	**Ar Rayn**	**26.84**	**320**			**P**	**14 50 17.0**	**+0.8**
RAYN				IAmb		IAmb	14 50 56.0	
	comp=Z,130nm,2.0s							
RAYN	**Ar Rayn**	**26.84**	**320**	*i* P		**P**	**14 50 17.3**	**+1.1**
	SNR=13							
RAYN	**Ar Rayn**	**26.84**	**320**	P		**P**	**14 50 17.0**	**+0.8**
RAYN				pmax		pmax		
	comp=Z,131nm,2.0s							
BWNR	**Bhubaneshwar**	**26.96**	**50**	*e*P		**P**	**14 50 17.1**	**-0.1**
KMBO	**Kilima Mbogo**	**27.23**	**261**	P		**P**	**14 50 20.5**	**+0.5**
	comp=Z,3.0nm,0.4s,baz=75,slow=10,SNR=19							
KMBO				LR		LR	14 59 36.8	
	comp=Z,2μm,21.2s,baz=96,slow=33							
	comp=Z,3.0nm,0.4s							
KMBO	**Kilima Mbogo**	**27.23**	**261**	*e*P		**P**	**14 50 19.2**	**-0.8**
KMBO				pmax		pmax		
	comp=Z,3.0nm,0.4s							
OPO	**Ambohidratompo**	**27.53**	**217**	LR		LR	14 58 42.4	
	comp=Z,3μm,19.0s,baz=192,slow=31							
ABPO	**Ambohimpanom**	**27.85**	**216**			**P**	**14 50 26.2**	**+0.7**
ABPO	**Ambohimpanom**	**27.85**	**216**	P		**P**	**14 50 26.2**	**+0.7**
ABPO				pmax		pmax		
	comp=Z,34nm,1.7s							
JMIU	**JAMIA UNIVERSI**	**27.93**	**25**	*e*P		**P**	**14 50 25.7**	**-0.1**
BISR	**Bishrakh**	**28.00**	**26**	*e*P		**P**	**14 50 27.4**	**+1.0**
LODK	**Lodwar**	**28.69**	**271**	P		**P**	**14 50 35.1**	**+2.2**
	SNR=32							
LODK	**Lodwar**	**28.69**	**271**			**P**	**14 50 34.3**	**+1.4**
LODK				IAmb		IAmb	14 50 42.2	
	comp=Z,105nm,1.7s							
BOK	**Bokaro**	**29.16**	**44**	IAmb		IAmb	14 55 10.7	
	comp=Z,50nm,0.8s							
BRCI	**Bahraich**	**29.19**	**33**	*e*P		**P**	**14 50 37.8**	**+0.6**
GAYA	**Gaya**	**29.38**	**42**	*e*P		**P**	**14 50 39.5**	**+0.6**
GAYA				IAmb		IAmb	14 55 02.8	
	comp=Z,68nm,0.9s							
CGRH	**CHANDIGARH**	**29.63**	**22**	*e*P		**P**	**14 50 41.2**	**+0.2**
PTH	**Pithoragarh**	**30.10**	**29**	*e*P		**P**	**14 50 46.0**	**+0.7**
PTH				IAmb		IAmb	14 50 48.1	
	comp=Z,75nm,1.4s							
SMLA	**Simla**	**30.13**	**23**	*e*P		**P**	**14 50 47.2**	**+1.8**
SMLA				IAmb		IAmb	14 50 50.2	
	comp=Z,46nm,1.4s							
JMU	**Jammu**	**30.79**	**18**	*e*P		**P**	**14 50 54.1**	**+2.9**
HRA	**Herat**	**30.80**	**357**	P		**P**	**14 50 51.1**	**-0.4**
NIL	**Nilore**	**31.21**	**15**	P		**P**	**14 50 53.5**	**-1.4**
NIL				IAmb		IAmb	14 50 58.6	
	comp=Z,120nm,1.4s							
NIL	**Nilore**	**31.21**	**15**	P		**P**	**14 50 53.5**	**-1.4**
NIL				pmax		pmax		
	comp=Z,120nm,1.4s							
KBL	**Kabul**	**31.24**	**8**	P		**P**	**14 50 57.0**	**+1.6**

IMP IAMs_20 IAMs_20 15 04 20.9
comp=Z,5µm,22.7s
TAWA Tawang 35.74 45 *e*P **P** **14 51 36.4 +1.5**
GAR Garm 35.80 8 P **P** **14 51 35.0 0.0**
GAR IAmb IAmb 14 51 37.5
comp=Z,134nm,1.4s
TEZP TEZPUR 35.83 47 *e*P **P** **14 51 35.9 +0.6**
KOHI KOHIMA 36.31 50 *e*P **P** **14 51 40.1 +0.5**
KOHI IAMs_20 IAMs_20 15 08 05.1
comp=Z,2µm,16.7s
KULM Kulim 36.48 86 P **P** **14 51 39.6 -1.4**
KULM Kulim 36.48 86 P **P** **14 51 41.2 +0.2**
PPI Padang Panjang 36.48 95 P **P** **14 51 41.3 +0.3**
comp=Z,827nmcomp=Z,19nm,1.1s
DRK Karamyk 36.51 10 P **P** **14 51 39.4 -1.8**
DRK IAmb IAmb 14 51 44.7
comp=Z,165nm,1.7s
DRK Karamyk 36.51 10 P **P** **14 51 39.4 -1.8**
DRK pmax pmax
comp=Z,165nm,1.7s
LSA Lhasa 36.56 42 P **P** **14 51 41.4 -0.6**
LSA IAmb IAmb 14 51 44.9
comp=Z,55nm,1.2s
LSA Lhasa 36.56 42 P P 14 51 36.0 -6.0
LSA S S 14 57 07.5 -16
LSA LR LR
comp=N,2µm,16.8s
LSA LR LR
comp=E,2µm,18.2s
LSA LR LR
comp=Z,4µm,17.2s
LSA Lhasa 36.56 42 P **P** **14 51 41.4 -0.6**
LSA pmax pmax
comp=Z,55nm,1.2s
PDSI Padang 36.60 96 P **P** **14 51 41.8 -0.2**
ITAN ITANAGAR 36.81 47 *e*P **P** **14 51 43.0 -0.6**
MOKO MOKOCHONG 36.95 49 *e*P **P** **14 51 46.6 +1.7**
MOKO IAMs_20 IAMs_20 15 06 07.5
comp=Z,3µm,17.0s
JORH JORHAT 36.98 48 *e*P **P** **14 51 44.9 -0.1**
ZIRO ZIRO 37.12 47 *e*P **P** **14 51 45.9 -0.6**
ZIRO IAMs_20 IAMs_20 15 05 09.3
comp=Z,2µm,19.9s
CM31 Chiang Mai Arr 37.19 64 P **P** **14 51 47.1 +0.1**
SNR=24
CM31 P **P** **14 51 47.1 +0.1**
SNR=24
CM31 P **P** **14 51 47.1 +0.1**
SNR=24
CM31 Chiang Mai Arr 37.19 64 P **P** **14 51 47.0 0.0**
CM31 IAmb IAmb 14 51 50.5
comp=Z,111nm,1.4s
CMAR Chiang Mai Arr 37.19 64 P **P** **14 51 47.4 +0.4**
comp=Z,34nm,1.1s,baz=259,slow=8.6,SNR=91
CMAR PcP **PcP** **14 54 06.2 -0.6**
comp=Z,5.7nm,1.0s,baz=249,slow=4.3,SNR=7.2
CMAR LR LR 15 06 25.2
comp=Z,1µm,19.6s,baz=255,slow=35
comp=Z,34nm,1.1s
CMAR Chiang Mai Arr 37.19 64 P **P** **14 51 45.5 -1.5**
CMAR Chiang Mai Arr 37.19 64 P **P** **14 51 45.5 -1.5**
CHTO Chiang Mai 37.31 63 P **P** **14 51 47.2 -0.8**
CHTO P **P** **14 51 47.2 -0.8**
CHTO Chiang Mai 37.31 63 P **P** **14 51 47.5 -0.5**
CHTO IAmb IAmb 14 51 50.7
comp=Z,75nm,1.1s
CHTO Chiang Mai 37.31 63 P **P** **14 51 48.1 +0.1**
CHTO Chiang Mai 37.31 63 P **P** **14 51 47.5 -0.5**
CHTO pmax pmax
comp=Z,75nm,1.2s
KSH Kashi 37.45 15 P **P** **14 51 44.8 -4.3**
KSH PP **PP** **14 53 10.5 -4.3**
KSH pmax pmax
comp=Z,52nm,1.5s
KSH LR LR
comp=Z,2µm,19.4s
KSH LR LR
comp=Z,1µm,19.5s
KSH LR LR
comp=Z,2µm,17.2s
EIL Elat 37.97 316 LR LR 15 06 23.1
comp=Z,2µm,18.5s,baz=22,slow=34
LKP Lekhapani 38.49 49 *e*P **P** **14 51 58.0 +0.2**
MASI Maura Aman, Be 38.68 99 P **P** **14 51 59.9 +0.2**
comp=Z,2µmcomp=Z,137nm,1.6s
CHM Chimkent 38.98 6 *e*P **P** **14 52 01.1 -0.7**
CHM Chimkent 38.98 6 *e*P **P** **14 52 01.0 -0.7**
TNCH TengChong 39.43 54 P **P** **14 52 06.0 0.0**
TNCH PP **PnPn** **14 53 40.8 +1.2**
TNCH S **S** **14 58 06.3 -0.6**
TNCH pmax pmax
comp=Z,140nm,1.0s
TNCH pmax pmax
comp=Z,650nm,3.8s
TNCH LR LR
comp=Z,1µm,15.8s
TNCH LR LR
comp=Z,600nm,18.4s
TNCH LR LR
comp=Z,2µm,16.7s
UCH Uchtor 39.69 12 P **P** **14 52 09.8 +1.6**
SNR=20
BRLS Boroldaу 39.71 7 *e*P **P** **14 52 04.8 -3.0**
BRLS Boroldaу 39.71 7 *e*P **P** **14 52 04.8 -3.0**
MYKOM Kota Tinggi 39.74 91 P **P** **14 52 05.3 -3.1**
MYKOM Kota Tinggi 39.74 91 P **P** **14 52 09.3 +0.8**
DZA Taraz 39.77 8 *e*P **P** **14 52 07.4 -1.0**
DZA Taraz 39.77 8 *e*P **P** **14 52 07.3 -1.0**
MMAI Mount Meron Ar 39.80 321 LR LR 15 06 38.2
comp=Z,1µm,20.1s,baz=194,slow=33
KKAR Karatay Array 39.86 7 P **P** **14 52 08.8 -0.3**
KKAR Karatay Array 39.86 7 P **P** **14 52 08.8 -0.3**
MARD Mardin 39.90 331 P **P** **14 52 09.6 0.0**
MARD IAmb IAmb 14 52 14.0
comp=Z,174nm,1.8s
EKS2 Erkin-Say 39.95 11 P **P** **14 52 11.9 +1.9**
SNR=36
AAK Ala-Archa 40.08 12 P **P** **14 52 11.3 +0.3**
AAK P **P** **14 52 11.3 +0.3**
AAK Ala-Archa 40.08 12 P **P** **14 52 10.6 -0.4**
AAK Ala-Archa 40.08 12 P **P** **14 52 12.4 +1.4**
SNR=12
AAK Ala-Archa 40.08 12 *i* P **P** **14 52 09.9 -1.1**
SNR=14
AAK Ala-Archa 40.08 12 P **P** **14 52 10.6 -0.4**
AAK pmax pmax
comp=Z,24nm,1.0s
KBK Karagaybulak 40.19 12 P **P** **14 52 13.5 +1.5**
SNR=22
GNI Garni 40.49 337 P **P** **14 52 15.5 +1.1**
comp=Z,31nm,0.9s,baz=162,slow=6.4,SNR=3.4
GNI LR LR 15 08 49.8
comp=Z,2µm,21.2s,baz=256,slow=36
comp=Z,31nm,0.9s
GNI Garni 40.49 337 P **P** **14 52 15.6 +1.1**
GNI IAmb IAmb 14 52 26.9
comp=Z,206nm,1.6s
GNI Garni 40.49 337 P **P** **14 52 17.3 +2.8**
GNI Garni 40.49 337 P **P** **14 52 15.6 +1.1**
GNI pmax pmax
comp=Z,206nm,1.7s
TKM2 Tokmak 2 40.58 13 P **P** **14 52 16.0 +0.7**
SNR=10
DSRI Dabo 40.64 95 P **P** **14 52 16.5 +0.5**
comp=Z,1µmcomp=Z,21nm,1.0s
LWLI Liwa 40.80 102 P **P** **14 52 17.9 +0.5**
comp=Z,3µmcomp=Z,102nm,1.4s
MDSI Maura Dua 40.81 101 P **P** **14 52 17.4 0.0**
comp=Z,1µmcomp=Z,56nm,1.4s
SGDS Sogindy 40.88 12 *e*P **P** **14 52 16.7 -0.9**
TNSS Tian-Shan 41.01 14 *e*P **P** **14 52 17.6 -1.5**
TNSS Tian-Shan 41.01 14 *e*P **P** **14 52 17.6 -1.5**
MDOK Medeo 41.16 14 *e*P **P** **14 52 18.9 -1.1**
MDOK Medeo 41.16 14 *e*P **P** **14 52 18.9 -1.1**
AAA Alma-Ata 41.17 14 *e*P **P** **14 52 18.9 -1.0**
comp=Z,49nm,1.5s
AAA Alma-Ata 41.17 14 *e*P **P** **14 52 18.9 -1.0**
AAA pmax pmax
comp=Z,49nm,1.5s
KASI Kota Agung 41.33 102 P **P** **14 52 22.7 +1.1**
comp=Z,982nmcomp=Z,65nm,1.3s
KLSI 41.39 101 P **P** **14 52 23.6 +1.4**
comp=Z,962nmcomp=Z,72nm,1.4s
SATY Saty 41.41 16 *e*P **P** **14 52 21.1 -0.9**
SATY Saty 41.41 16 *e*P **P** **14 52 21.1 -0.9**

UZB Uzynbulak 41.67 16 *e*P **P** **14 52 22.9 -1.2**
UZB Uzynbulak 41.67 16 *e*P **P** **14 52 22.9 -1.2**
SHLS Shalkode 41.80 17 *e*P **P** **14 52 25.3 +0.1**
comp=Z,44nm,1.7s
SHLS Shalkode 41.80 17 *e*P **P** **14 52 25.3 +0.1**
SHLS pmax pmax
comp=Z,44nm,1.7s
MAK Makhachkala 42.00 342 *d i* P P 14 52 19.5 -7.1
MAK *e*S **S** **14 58 35.4 -8.8**
MAK pmax pmax
comp=Z,685nm,1.4s
PZH PanZhiHua 42.69 54 P **P** **14 52 32.5 -0.2**
PZH PP **PP** **14 54 13.0 +1.1**
PZH S **S** **14 58 58.5 +3.3**
PZH SS **SS** **15 02 02.5 -3.6**
PZH pmax pmax
comp=Z,70nm,1.6s
PZH pmax pmax
comp=Z,490nm,4.8s
PZH LR LR
comp=Z,1µm,19.0s
PZH LR LR
comp=Z,900nm,21.1s
PZH LR LR
comp=Z,1µm,20.9s
KMI Kunming 42.92 56 P **P** **14 52 34.8 0.0**
KMI PP **PP** **14 54 16.5 +1.9**
KMI S **S** **14 59 04.5 +5.6**
KMI SS **SS** **15 02 12.5 +1.5**
KMI pmax pmax
comp=Z,41nm,1.4s
KMI pmax pmax
comp=Z,280nm,3.6s
KMI LR LR
comp=Z,1µm,15.3s
KMI LR LR
comp=Z,1µm,16.3s
KMI LR LR
comp=Z,1µm,20.4s
GOMU GeErMu 43.15 37 P **P** **14 52 35.5 -1.1**
GOMU pP pP 14 52 38.5 -4.6
GOMU sP sP 14 52 43.3 -2.1
GOMU S **S** **14 59 04.0 +1.9**
GOMU pmax pmax
comp=Z,10.0nm,1.1s
GOMU LR LR
comp=Z,2µm,19.1s
GOMU LR LR
comp=Z,2µm,19.0s
GOMU LR LR
comp=Z,3µm,19.1s
TDK Taldyqorghan 43.22 15 *e*P **P** **14 52 35.9 -0.8**
comp=Z,54nm,0.8s
TDK Taldyqorghan 43.22 15 *e*P **P** **14 52 35.8 -0.8**
TDK pmax pmax
comp=Z,54nm,0.8s
DBJI Dramaga 43.73 103 P **P** **14 52 39.4 -1.8**
POGA Pongola 43.77 224 P **P** **14 52 40.7 -0.6**
TPI Tanjungpandan 43.97 98 P **P** **14 52 42.9 -0.2**
KBZ Khabaz 44.26 338 P **P** **14 52 45.2 +0.2**
comp=Z,20nm,1.0s,baz=142,slow=3.7,SNR=6.1
KBZ LR LR 15 12 05.5
comp=Z,713nm,21.2s,baz=43,slow=37
comp=Z,20nm,1.0s
SHA1 Shidzhatmaz 44.36 338 *i* P **P** **14 52 47.3 +1.2**
KVAR Kislovodsk Arr 44.53 338 LR LR 15 12 30.5
comp=Z,593nm,21.3s,baz=64,slow=38
KIV Kislovodsk 44.53 338 P **P** **14 52 48.3 +1.0**
KIV Kislovodsk 44.53 338 P **P** **14 52 49.0 +1.7**
KIV Kislovodsk 44.53 338 *e*P **P** **14 52 44.7 -2.6**
KIV pmax pmax
comp=Z,44nm,1.1s
KIV MLR MLR
comp=Z,507nm,16.0s
BBJI Bungbulang 44.79 104 P **P** **14 52 49.0 -0.8**
WMQ Urumqi 45.27 24 *e*P **P** **14 52 54.0 +0.9**
WMQ S **S** **14 59 39.0 +6.7**
WMQ pmax pmax
comp=Z,50nm,1.3s
WMQ pmax pmax
comp=Z,410nm,3.7s
WMQ LR LR
comp=Z,1µm,18.7s
WMQ LR LR
comp=Z,2µm,18.7s
WMQ LR LR
comp=Z,2µm,19.3s
GOF Gofitskoye 45.35 339 *c e* P **P** **14 52 54.8 +1.2**
SOC Sochi 45.41 335 *e*P **P** **14 52 51.6 -2.5**
SOC *e* 14 54 31.8
SOC *e* PPP PPP 14 55 21.9
SOC *e*S **S** **14 59 33.4 -0.6**
SOC *e* SSS SSS 15 03 47.7
SOC MLR MLR
comp=Z,936nm,16.0s
BR131 Keskin Array S 45.42 327 *i* P **P** **14 52 53.2 -1.2**
BRTR Keskin Array B 45.42 327 P **P** **14 52 55.2 +0.8**
comp=Z,8.3nm,1.0s,baz=134,slow=8.8,SNR=10
BRTR LR LR 15 12 20.7
comp=Z,1µm,18.6s,baz=218,slow=37
comp=Z,8.3nm,1.0s
BRTR Keskin Array B 45.42 327 P **P** **14 52 54.0 -0.5**
BRTR Keskin Array B 45.42 327 *e*P **P** **14 52 56.1 +1.7**
BRTR pmax pmax
comp=Z,8.0nm,1.0s
KHWEE KHWEE 45.47 234 P **P** **14 52 55.5 +0.4**
LPHEP Lephephe 45.84 232 P **P** **14 52 58.4 +0.5**
MAKZ Makanchi 45.86 17 P **P** **14 52 57.1 -0.6**
MAKZ Makanchi 45.86 17 P **P** **14 52 57.1 -0.6**
MAKZ pmax pmax
comp=Z,31nm,0.9s
MK31 Makanchi Array 45.94 17 *i* P **P** **14 52 56.4 -1.9**
MKAR Makanchi Array 45.94 17 P **P** **14 52 56.4 -1.9**
comp=Z,3.2nm,0.9s,baz=198,slow=7.6,SNR=14
comp=Z,3.2nm,0.9s
MKAR Makanchi Array 45.94 17 P **P** **14 52 57.0 -1.3**
MKAR Makanchi Array 45.94 17 *e*P **P** **14 52 57.6 -0.7**
MKAR pmax pmax
comp=Z,3.0nm,0.9s
KPJI Karang Pucung 46.01 104 P **P** **14 52 58.4 -0.9**
comp=Z,948nmcomp=Z,34nm,1.8s
CD2 Chengdu 46.26 49 P **P** **14 53 02.3 +1.1**
CD2 S **S** **14 59 48.3 +1.4**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,550nm,4.7s
CD2 LR LR
comp=Z,1µm,18.4s
CD2 LR LR
comp=Z,1µm,19.0s
CD2 LR LR
comp=Z,2µm,18.4s
GYA Guiyang 46.70 56 ⇓P **P** **14 53 03.8 -0.9**
GYA PP **PP** **14 54 53.8 -1.0**
GYA S **S** **14 59 51.5 -1.9**
GYA pmax pmax
comp=Z,67nm,1.6s
GYA pmax pmax
comp=Z,390nm,3.5s
GYA LR LR
comp=Z,690nm,23.6s
GYA LR LR
comp=Z,800nm,22.3s
GYA LR LR
comp=Z,1µm,24.9s
LBTB Lobatse 46.90 231 LR LR 15 09 57.0
comp=Z,2µm,21.6s,baz=27,slow=32
LBTB Lobatse 46.90 231 P **P** **14 53 06.3 +0.1**
LBTB IAmb IAmb 14 53 08.6
comp=Z,50nm,1.1s
LBTB Lobatse 46.90 231 P **P** **14 53 06.3 +0.1**
LBTB pmax pmax
comp=Z,50nm,1.1s
BRZS Berezniki 46.90 8 *e*P **P** **14 53 05.2 -0.7**
BRZS Berezniki 46.90 8 *e*P **P** **14 53 05.1 -0.7**
QIZ Qiongzhong 47.27 67 P **P** **14 53 08.8 -0.3**
QIZ S **S** **15 00 00.3 -1.2**
QIZ SS **SS** **15 03 30.0 +0.8**
QIZ pmax pmax
comp=Z,57nm,2.1s
QIZ LR LR
comp=Z,650nm,14.4s
QIZ LR LR
comp=Z,1µm,18.3s

QIZ LR LR
comp=Z,1µm,15.3s
ZSN Zaisan 47.33 19 *e*P **P** **14 53 08.5 -0.7**
ZSN Zaisan 47.33 19 *e*P **P** **14 53 08.5 -0.7**
SBUM Sibu 48.06 90 P **P** **14 53 15.8 +0.4**
IDI Anoyia 48.13 316 P **P** **14 53 16.0 +0.3**
comp=Z,52nm,1.1s,baz=132,slow=7.2,SNR=6.3
comp=Z,52nm,1.1s
IDI Anoyia 48.13 316 P **P** **14 53 15.8 +0.1**
GTA Gaotai 48.24 37 P **P** **14 53 17.0 +0.5**
GTA pP pP 14 53 20.8 -2.3
GTA PP **PP** **14 55 10.0 +0.9**
GTA S **S** **15 00 16.5 +1.5**
GTA pmax pmax
comp=Z,23nm,1.4s
GTA pmax pmax
comp=Z,260nm,10.0s
GTA LR LR
comp=Z,3µm,17.5s
GTA LR LR
comp=Z,3µm,18.7s
GTA LR LR
comp=Z,4µm,20.7s
PCJI Pacitan 48.36 104 P **P** **14 53 15.7 -2.0**
comp=Z,74nm,1.3s
KURBB Kurchatov Arra 48.53 12 LR LR 15 13 28.5
comp=Z,3µm,19.9s,baz=206,slow=36
KURK Kurchatov 48.63 12 *i* P **P** **14 53 16.9 -2.3**
KURK pmax pmax
comp=Z,26nm,1.5s
LZDM Lanzhou Array 48.75 43 P **P** **14 53 20.7 0.0**
comp=Z,1.4nm,0.3s,baz=215,slow=4.8,SNR=8.3
comp=Z,1.4nm,0.3s
LZH Lanzhou 48.92 43 *e*P **P** **14 53 22.0 +0.1**
LZH pP pP 14 53 25.0 -3.4
LZH PcP **PcP** **14 54 47.3 +1.2**
LZH PP **PP** **14 55 12.5 -2.9**
LZH S **S** **15 00 20.5 -4.3**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,170nm,4.1s
LZH LR LR
comp=Z,900nm,13.4s
LZH LR LR
comp=Z,1µm,13.4s
LZH LR LR
comp=Z,2µm,13.4s
BOSA Boshof 49.10 227 P **P** **14 53 23.7 +0.5**
comp=Z,21nm,1.0s,baz=63,slow=9.4,SNR=19
comp=Z,21nm,1.0s
BOSA Boshof 49.10 227 P **P** **14 53 23.3 +0.1**
BOSA IAmb IAmb 14 53 25.3
comp=Z,51nm,1.1s
GULI GuiLin 49.43 59 P **P** **14 53 24.5 -1.3**
GULI S **S** **15 00 38.5 +6.5**
GULI pmax pmax
comp=Z,24nm,1.5s
GULI LR LR
comp=Z,420nm,14.3s
GULI LR LR
comp=Z,900nm,16.5s
GULI LR LR
comp=Z,920nm,17.3s
BVAR Borovoye Array 49.66 5 LR LR 15 15 25.1
comp=Z,2µm,20.1s,baz=247,slow=37
BORK Borovoye 49.67 5 *i* P **P** **14 53 25.5 -1.6**
BORK pmax pmax
comp=Z,10.0nm,1.0s
DGZ Jazzator, Alta 50.13 20 *i* P **P** **14 53 28.9 -2.0**
DGZ pmax pmax
comp=Z,21nm,1.4s
ENH Enshi 50.45 53 P **P** **14 53 32.5 -1.0**
BELG Belogornoye 50.64 347 P **P** **14 53 33.0 -1.4**
comp=Z,59nm,1.0s,baz=198,slow=4.9,SNR=4.7
BELG LR LR 15 16 16.2
comp=Z,778nm,19.8s,baz=115,slow=38
comp=Z,59nm,1.0s
BELG Belogornoye 50.64 347 *i* P **P** **14 53 33.2 -1.2**
BELG pmax pmax
comp=Z,14nm,1.0s
KMMI Kalianget 50.85 102 P **P** **14 53 35.5 -1.2**
comp=Z,31nm,1.6s
TSUM Tsumeb 50.99 242 LR LR 15 13 11.1
comp=Z,2µm,20.3s,baz=19,slow=34
TSUM Tsumeb 50.99 242 P **P** **14 53 38.4 +0.6**
BBKI Banjar Baru 51.17 97 P **P** **14 53 38.8 -0.3**
JAGI Jajag, Banyuwa 51.30 104 P **P** **14 53 39.7 -0.4**
JAGI Jajag, Banyuwa 51.30 104 P **P** **14 53 38.4 -1.7**
comp=Z,57nm,1.4s
XAN Xi'an 51.57 48 ⇓P **P** **14 53 40.8 -1.0**
XAN pP pP 14 53 45.0 -2.9
XAN S **S** **15 00 59.8 -1.7**
XAN pmax pmax
comp=Z,130nm,1.3s
XAN LR LR
comp=Z,1µm,19.2s
XAN LR LR
comp=Z,880nm,19.2s
XAN LR LR
comp=Z,1µm,19.9s
SRBI Singaraja 52.26 103 P **P** **14 53 47.0 -0.2**
IGBI Denpasar 52.33 104 P **P** **14 53 46.7 -1.0**
WIN Windhoek 52.69 238 P **P** **14 53 51.6 +1.1**
WIN IAmb IAmb 14 53 54.1
comp=Z,130nm,1.7s
WIN Windhoek 52.69 238 P **P** **14 53 51.6 +1.1**
WIN pmax pmax
comp=Z,130nm,1.7s
ARTI Arti 52.95 356 *d i* P **P** **14 53 50.6 -1.0**
ARTI 14 54 56.7
ARTI 14 55 50.4
ARTI S **S** **15 01 20.3 +0.7**
ARTI SS **SS** **15 04 58.7 -0.2**
ARTI pmax pmax
comp=Z,63nm,1.8s
MILM Milestii Mici 52.96 330 *e*P **P** **14 53 51.0 -0.8**
comp=Z,800nm,2.1s
SVE Sverdlovsk 53.26 358 *e*P **P** **14 53 54.4 +0.5**
SVE pmax pmax
comp=Z,50nm,1.6s
MLR Muntele Rosu 53.49 327 P **P** **14 53 57.0 +1.1**
comp=Z,63nm,1.3s,baz=93,slow=1.3,SNR=7.1
MLR LR LR 15 18 16.2
comp=Z,596nm,18.9s,baz=146,slow=38
comp=Z,63nm,1.3s
EDA Edea 53.84 272 P **P** **14 53 58.2 -0.7**
EDA IAmb IAmb 14 54 01.0
comp=Z,50nm,1.1s
TWSI Taliwang, Sumb 54.00 103 P **P** **14 53 57.4 -2.7**
comp=Z,868nmcomp=Z,57nm,1.5s
MYLDM Lahad Datu 54.26 86 P **P** **14 54 03.1 +1.2**
SUR Sutherland 54.37 226 P **P** **14 54 03.2 +0.5**
LYN LuoYang 54.45 49 P **P** **14 54 03.3 +0.3**
LYN S **S** **15 01 43.3 +2.7**
LYN pmax pmax
comp=Z,380nm,5.0s
LYN LR LR
comp=Z,1µm,21.0s
LYN LR LR
comp=Z,690nm,16.1s
LYN LR LR
comp=Z,2µm,19.2s
WHN Wuhan 54.47 55 ⇑P **P** **14 54 03.3 +0.1**
WHN sP **pP** **14 54 09.0 -0.3**
WHN S **S** **15 01 44.8 +3.9**
WHN LR LR
comp=Z,3µm,15.4s
WHN LR LR
comp=Z,1µm,10.7s
WHN LR LR
comp=Z,3µm,19.9s
KNGR Kungurtug, Tuv 54.73 25 *i* P **P** **14 54 03.0 -1.9**
KNGR pmax pmax
comp=Z,22nm,1.2s
PLAI Plampang 54.89 103 P **P** **14 54 05.4 -1.1**
PLAI Plampang 54.89 103 P **P** **14 54 04.2 -2.3**
comp=Z,1µmcomp=Z,90nm,1.6s
BURAR Bucovina Array 55.24 329 P **P** **14 54 07.9 -0.8**
BUR08 Bucovina Ar. S 55.27 329 P **P** **14 54 07.9 -1.0**
BUR08 IAmb IAmb 14 54 16.3
comp=Z,55nm,1.4s
BTO Baotou 55.40 42 *e*P **P** **14 54 10.3 +0.4**
BTO S **S** **15 01 56.0 +2.5**
BTO pmax pmax
comp=Z,67nm,1.0s

BTO pmax pmax
comp=Z,480nm,4.5s
BTO LR LR
comp=Z,2µm,14.6s
BTO LR LR
comp=Z,2µm,17.1s
BTO LR LR
comp=Z,4µm,19.8s
AKASG Malin Array Be 55.44 334 P **P** **14 54 08.4 -1.4**
comp=Z,1.4nm,0.6s,baz=137,slow=5.9,SNR=10.0
AKASG LR LR 15 20 30.5
comp=Z,475nm,18.8s,baz=138,slow=39
comp=Z,1.4nm,0.6s
AKASG Malin Array Be 55.44 334 **P** **14 54 07.9 -2.0**
AKASG Malin Array Be 55.44 334 *eP* **P** **14 54 09.5 -0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 55.44 334 *i* P **P** **14 54 09.0 -0.8**
AKBB pmax pmax
comp=Z,21nm,1.3s
TIY Taiyuan 55.73 46 P **P** **14 54 12.8 +0.5**
TIY S **S** **15 01 56.8 -1.1**
TIY pmax pmax
comp=Z,52nm,1.6s
TIY pmax pmax
comp=Z,270nm,5.7s
TIY LR LR
comp=Z,950nm,16.7s
TIY LR LR
comp=Z,910nm,15.5s
TIY LR LR
comp=Z,900nm,18.4s
MPSI Mapaga 55.84 92 P **P** **14 54 12.7 -0.7**
comp=Z,79nm,1.1s
PCI Palu 55.87 93 P **P** **14 54 12.8 -0.9**
comp=Z,54nm,1.1s
OBN Obninsk 56.09 341 *deP* **P** **14 54 13.4 -1.0**
OBN *e* 14 56 19.9
OBN pmax pmax
comp=Z,19nm,1.0s
OBN MLR MLR
comp=Z,477nm,18.0s
SPSI Sidrap Palu 56.12 97 P **P** **14 54 15.8 +0.4**
comp=Z,10nm,0.6s
KIRV Kirov 56.14 351 LR LR 15 19 50.5
comp=Z,755nm,19.1s,baz=186,slow=38
KIRV Kirov 56.14 351 *i* P **P** **14 54 13.7 -1.0**
KAPI Kappang 56.23 98 LR LR 15 15 52.3
comp=Z,373nm,21.3s,baz=269,slow=33
KAPI Kappang 56.23 98 P **P** **14 54 15.6 -0.6**
KAPI P **P** **14 54 15.6 -0.6**
KAPI Kappang 56.23 98 P **P** **14 54 15.5 -0.6**
KAPI Kappang 56.23 98 P **P** **14 54 16.5 +0.3**
KAPI Kappang 56.23 98 P **P** **14 54 15.5 -0.6**
KAPI pmax pmax
comp=Z,32nm,1.2s
MOS Moscow 56.29 342 *eP* **P** **14 54 15.5 -0.3**
MOS pmax pmax
comp=Z,255nm,1.6s
BNSI Bone 56.50 98 P **P** **14 54 17.2 -0.9**
comp=Z,2µmcomp=Z,87nm,1.4s
HHC Hu-ho-hao-te 56.55 42⇑ *i* P **P** **14 54 19.0 +0.9**
HHC sP sP 14 54 27.0 0.0
HHC S **S** **15 02 10.0 +1.3**
HHC pmax pmax
comp=Z,40nm,1.3s
HHC pmax pmax
comp=Z,170nm,6.7s
HHC LR LR
comp=Z,1µm,16.8s
HHC LR LR
comp=Z,730nm,15.1s
HHC LR LR
comp=Z,1µm,18.4s
WBSI Waikabubak, Su 56.60 104 P **P** **14 54 17.7 -1.2**
comp=Z,1µmcomp=Z,90nm,1.3s
VAE Valguarnera 56.62 313 LR LR 15 16 56.4
comp=Z,292nm,21.4s,baz=80,slow=34
BKSI Bulukumba 56.63 99 P **P** **14 54 18.3 -0.8**
comp=Z,741nmcomp=Z,60nm,1.2s
TOLI2 Tolitoli 56.67 91 P **P** **14 54 18.8 -0.6**
TGY Tagaytay City 57.01 76 LR LR 15 16 01.0
comp=Z,706nm,21.5s,baz=284,slow=33
MOY Mondy 57.02 26 *eP* **P** **14 54 20.0 -1.3**
MOY pmax pmax
comp=Z,65nm,1.9s
BSSI Bau Bau, Buton 57.11 100 P **P** **14 54 21.6 -0.8**
comp=Z,630nmcomp=Z,33nm,1.1s
SONM Songino Array 57.18 33 P **P** **14 54 21.9 -0.6**
comp=Z,21nm,1.0s,baz=226,slow=7.0,SNR=64
comp=Z,21nm,1.0s
ZAK Zakamensk 57.20 29 *eP* **P** **14 54 20.6 -2.0**
ZAK pmax pmax
comp=Z,34nm,1.6s
ULN Ulaanbaatar 57.55 33 P **P** **14 54 23.6 -1.6**
ULN Ulaanbaatar 57.55 33 *i* P **P** **14 54 22.9 -2.3**
ULN pmax pmax
comp=Z,11nm,1.2s
APSI Ampana 57.68 93 P **P** **14 54 25.1 -1.4**
comp=Z,870ncomp=Z,29nm,1.2s
BASI Baing, Sumba 57.86 104 P **P** **14 54 27.6 -0.1**
TLY Talaya 58.23 28 P **P** **14 54 29.2 -0.5**
TLY Talaya 58.23 28 *i* P **P** **14 54 28.0 -1.7**
TLY pmax pmax
comp=Z,32nm,1.3s
STHS Stebnicka Huta 58.43 329 *eP* **P** **14 54 30.0 -1.1**
STHS pmax pmax
comp=Z,19nm,1.3s
STHS Stebnicka Huta 58.43 329 *eP* **P** **14 54 30.0 -1.1**
TIA Tai'an 58.60 49 P **P** **14 54 32.5 0.0**
TIA pmax pmax
comp=Z,38nm,1.2s
NJ2 Nanjing 58.60 54 *eP* **P** **14 54 33.0 +0.4**
NJ2 S **S** **15 02 38.8 +3.1**
NJ2 pmax pmax
comp=Z,40nm,1.5s
NJ2 LR LR
comp=Z,1µm,23.4s
NJ2 LR LR
comp=Z,1µm,24.3s
NJ2 LR LR
comp=Z,1µm,24.1s
YULB Yu-li 58.62 65 P **P** **14 54 34.4 +1.5**
MNK Minsk 58.76 336 *i* P **P** **14 54 30.3 -3.0**
MNK *i* 14 56 40.1
MNK *i* S **S** **15 02 35.5 -1.4**
MNK *i* SS **SS** **15 06 29.7 -0.7**
MNK pmax pmax
comp=N,70nm,1.3s
MNK pmax pmax
comp=Z,43nm,0.9s
MNK pmax pmax
comp=E,61nm,0.9s
MNK MLR MLR
comp=N,599nm,19.0s
MNK MLR MLR
comp=Z,718nm,20.0s
MNK MLR MLR
comp=E,559nm,17.0s
LUWI Luwuk 58.81 93 **P** **14 54 33.3 -1.1**
LUWI Luwuk 58.81 93 P **P** **14 54 34.6 +0.2**
LUWI Luwuk 58.81 93 P **P** **14 54 33.0 -1.4**
comp=E,1µmcomp=E,28nm,1.6s
IRK Irkutsk 58.90 28 *eP* P 14 54 28.6 -5.7
IRK pmax pmax
comp=Z,74nm,1.9s
GTOI Gorontalo 58.93 91 P **P** **14 54 33.3 -1.9**
MMRI Maumere 59.20 102 P **P** **14 54 35.3 -1.8**
MMRI Maumere 59.20 102 P **P** **14 54 34.3 -2.8**
LANS Liptovska Anna 59.21 328 *eP* **P** **14 54 37.1 +0.5**
LANS pmax pmax
comp=Z,22nm,1.2s
LANS Liptovska Anna 59.21 328 *eP* **P** **14 54 37.1 +0.5**
BJT Baijiatuau 59.34 45 P **P** **14 54 36.8 -0.8**
BJT IAmb IAmb 14 54 39.6
comp=Z,75nm,1.5s
BJT Baijiatuau 59.34 45 P **P** **14 54 38.1 +0.5**
BJT Baijiatuau 59.34 45 P **P** **14 54 36.8 -0.8**
BJT pmax pmax
comp=Z,75nm,1.5s
BJI Beijing 59.36 45 P **P** **14 54 38.3 +0.6**
BJI S **S** **15 02 47.3 +2.1**
BJI pmax pmax
comp=Z,15nm,1.3s
BJI LR LR
comp=Z,490nm,15.8s
BJI LR LR
comp=Z,430nm,13.8s
BJI LR LR
comp=Z,930nm,15.2s
MORW Morawa 59.36 127 P **P** **14 54 38.3 +0.3**
comp=Z,97nm,1.1s
MORW Morawa 59.36 127 P **P** **14 54 37.9 -0.1**
MORW Morawa 59.36 127 P **P** **14 54 38.5 +0.5**
MBWA Marble Bar 59.71 117 P **P** **14 54 40.6 +0.1**
comp=Z,49nm,1.2s
MBWA Marble Bar 59.71 117 P **P** **14 54 39.1 -1.4**
MBWA IAmb IAmb 14 54 42.5
comp=Z,52nm,1.1s
MBWA Marble Bar 59.71 117 P **P** **14 54 41.7 +1.2**
KEST Kesra 59.76 310 LR LR 15 19 54.0
comp=Z,338nm,18.2s,baz=50,slow=36
PSAD1 Pilbara Seismi 59.89 117 P **P** **14 54 41.9 +0.1**
comp=Z,74nm,1.2s
PSA00 Pilbara Seismi 59.94 117 **P** **14 54 41.4 -0.6**
PSA00 Pilbara Seismi 59.94 117 P **P** **14 54 42.1 +0.1**
PSA00 IAmb IAmb 14 54 43.9
comp=Z,49nm,1.1s
PSA00 Pilbara Seismi 59.94 117 P **P** **14 54 42.6 +0.6**
MODS Modra-Piesok 59.98 326 *eP* **P** **14 54 42.1 +0.2**
MODS pmax pmax
comp=Z,280nm,1.9s
MODS Modra-Piesok 59.98 326 *eP* **P** **14 54 42.1 +0.2**
KLMR Klimovskoe 60.20 346 *eP* **P** **14 54 40.4 -2.7**
KLMR pmax pmax
comp=Z,171nm,1.4s
H01W3 Cape Leeuwin H 60.48 134 T T 16 00 04.4
baz=299,slow=75,SNR=119
H01W2 Cape Leeuwin H 60.48 134 T T 16 00 01.8
baz=299,slow=75,SNR=104
H01W1 Cape Leeuwin H 60.49 134 T T 16 00 05.6
baz=299,slow=75,SNR=150
BLDU Ballidu 60.52 128 P **P** **14 54 45.7 -0.2**
comp=Z,29nm,2.6s
MEEK Meekatharra 60.54 123 P **P** **14 54 45.9 -0.2**
comp=Z,43nm,1.2s
MEEK Meekatharra 60.54 123 P **P** **14 54 46.6 +0.5**
CONA Conrad Observa 60.55 325 *eP* **P** **14 54 45.7 -0.2**
comp=Z,6.7nm,0.7s
KRUC Moravsky 60.84 326 *eP* **P** **14 54 47.6 -0.1**
BATI Baumata 60.84 104 P **P** **14 54 48.7 +0.3**
comp=Z,1µmcomp=Z,81nm,1.2s
VRAC Vranov 60.86 326 P **P** **14 54 47.8 -0.1**
comp=Z,25nm,1.1s,baz=113,slow=9.1,SNR=3.3
VRAC LR LR 15 23 11.4
comp=Z,285nm,18.0s,baz=130,slow=38
comp=Z,25nm,1.1s
VRAC Vranov 60.86 326 *eP* **P** **14 54 47.7 -0.2**
XLT XiLinHaoTe 60.91 41 *eP* **P** **14 54 48.5 +0.1**
XLT pP pP 14 54 54.0 -1.0
XLT sP sP 14 54 56.3 -1.0
XLT PcP **PcP** **14 55 33.0 +1.2**
XLT S **S** **15 03 02.8 -2.5**
XLT ScS **ScS** **15 04 39.3 +0.9**
XLT pmax pmax
comp=Z,38nm,1.4s
XLT pmax pmax
comp=Z,150nm,3.7s
XLT LR LR
comp=Z,140nm,17.9s
XLT LR LR
comp=Z,1µm,17.0s
XLT LR LR
comp=Z,3µm,20.0s
DAV Davao City (W) 61.28 84 LR LR 15 20 17.3
comp=Z,294nm,21.3s,baz=238,slow=35
SOEI Soe 61.35 103 **P** **14 54 50.7 -1.2**
SOEI Soe 61.35 103 P **P** **14 54 51.9 -0.1**
SOEI Soe 61.35 103 P **P** **14 54 50.4 -1.6**
DPC Dobruska-Polom 61.58 327 *eP* **P** **14 54 52.2 -0.6**
DPC Dobruska-Polom 61.58 327 *eP* **P** **14 54 52.2 -0.6**
KBA Koelnbreinsper 61.60 323 *eP* **P** **14 54 53.9 +0.7**
comp=Z,10nm,1.2s
KLBR Kellerberrin 61.74 129 P **P** **14 54 53.5 -0.6**
comp=Z,58nm,1.1s
KLBR Kellerberrin 61.74 129 P **P** **14 54 55.2 +1.0**
NWAO Narrogin (SRO) 61.90 130 P **P** **14 54 55.2 0.0**
comp=Z,57nm,1.4s
NWAO Narrogin (SRO) 61.90 130 LR LR 15 16 24.5
comp=Z,572nm,20.9s,baz=276,slow=31
VSU Vasula 62.08 339 *i* P **P** **14 54 55.1 -0.8**
VSU pmax pmax
comp=Z,35nm,1.2s
SANI Sanana 62.10 94 P **P** **14 54 55.8 -1.1**
SANI Sanana 62.10 94 P **P** **14 54 55.5 -1.9**
comp=Z,424nmcomp=Z,32nm,1.3s
LESA Schwarzleotal 62.17 323 *i* P **P** **14 54 56.0 -0.9**
comp=Z,2.9nm,0.5s
TORD Torodi Ar. Bea 62.36 283 P **P** **14 54 58.7 +0.1**
comp=Z,2.4nm,0.5s,baz=96,slow=4.3,SNR=4.2
comp=Z,2.4nm,0.5s
TORD Torodi Ar. Bea 62.36 283 P **P** **14 54 58.7 +0.1**
RKGY Rocky Gully 62.43 132 P **P** **14 54 58.8 +0.1**
comp=Z,91nm,1.2s
KHC Kasperske Hory 62.47 325 *eP* **P** **14 54 57.9 -0.8**
KHC Kasperske Hory 62.47 325 *eP* **P** **14 54 57.9 -0.8**
WTTA Wattenberg 62.72 323 *eP* **P** **14 54 59.7 -0.9**
WATA Walderalm 62.79 323 *eP* **P** **14 55 00.5 -0.6**
comp=Z,11nm,0.5s
DL2 Dalian 62.88 48 P **P** **14 55 00.5 -1.1**
DL2 S **S** **15 03 30.3 +0.2**
DL2 pmax pmax
comp=Z,76nm,1.1s
DL2 pmax pmax
comp=Z,1µm,8.4s
DL2 LR LR
comp=Z,3µm,18.4s
DL2 LR LR
comp=Z,2µm,16.2s
DL2 LR LR
comp=Z,3µm,18.0s
MOTA Moosalm 63.08 322 *eP* **P** **14 55 02.2 -0.9**
comp=Z,8.2nm,0.7s
FETA Feichten 63.17 322 *eP* **P** **14 55 03.1 -0.5**
comp=Z,5.0nm,0.8s
TNTI Ternate 63.27 91 P **P** **14 55 02.4 -2.3**
TNTI IAmb IAmb 14 55 06.4
comp=Z,66nm,1.2s
TNTI Ternate 63.27 91 P **P** **14 55 05.2 +0.5**
TNTI Ternate 63.27 91 P **P** **14 55 03.6 -1.1**
comp=Z,1µmcomp=Z,53nm,1.2s
NLAI Namlea 63.31 95 P **P** **14 55 04.6 -0.4**
CIT Chita 63.36 32 *eP* **P** **14 55 03.0 -1.6**
CIT *e* 14 55 42.0
CIT *e* 14 57 27.0
CIT *e* 14 58 48.6
CIT pmax pmax
comp=Z,84nm,2.0s
DAVOX Davos/Dischmat 63.59 321 P **P** **14 55 05.5 -1.0**
comp=Z,32nm,1.0s,baz=126,slow=11,SNR=5.6
DAVOX LR LR 15 22 36.7
comp=Z,328nm,21.0s,baz=108,slow=36
comp=Z,32nm,1.0s
CLL Collm 63.87 327 *i* P **P** **14 55 08.7 +0.7**
CLL Collm 63.87 327 *i* P **P** **14 55 08.7 +0.7**
FITZ Fitzroy Crossi 64.29 112 P **P** **14 55 11.5 +0.2**
FITZ Fitzroy Crossi 64.29 112 LR LR 15 21 13.6
comp=Z,478nm,18.4s,baz=306,slow=34
FITZ Fitzroy Crossi 64.29 112 P **P** **14 55 10.8 -0.5**
FINES FINESS Array B 64.49 341 P **P** **14 55 10.5 -1.2**
comp=Z,8.0nm,0.9s,baz=145,slow=8.2,SNR=4.3
FINES LR LR 15 24 51.9
comp=Z,461nm,18.2s,baz=148,slow=38
comp=Z,8.0nm,0.9s
FINES FINESS Array B 64.49 341 P **P** **14 55 10.3 -1.5**
FINES FINESS Array B 64.49 341 P **P** **14 55 10.3 -1.5**
KMBL Kambalda 64.91 127 P **P** **14 55 14.7 -0.5**
comp=Z,15nm,1.4s
SENIN Lac Senin/Sane 65.04 320 P **P** **14 55 15.1 -0.9**
SENIN IAmb IAmb 14 55 18.1
comp=Z,39nm,1.1s
MSAI Masohi 65.14 95 P **P** **14 55 15.4 -1.6**
comp=Z,2µmcomp=Z,31nm,0.7s
SNY Shenyang 65.23 45⇑ P **P** **14 55 16.5 -0.5**
SNY pmax pmax
comp=Z,29nm,1.4s
SNY LR LR
comp=Z,860nm,17.8s
SNY LR LR
comp=Z,880nm,18.5s
SNY LR LR
comp=Z,3µm,18.5s
JOW Kunigami 65.44 62 LR LR 15 26 02.3
comp=Z,732nm,18.5s,baz=292,slow=38
HIA Hailar 65.50 36 P **P** **14 55 18.6 -0.1**
HIA Hailar 65.50 36 P **P** **14 55 19.5 +0.8**
HIA Hailar 65.50 36 P **P** **14 55 18.6 -0.1**
HIA pmax pmax
comp=Z,92nm,1.7s
HILR Hailar Array B 65.63 36 P **P** **14 55 18.8 -0.7**
comp=Z,17nm,1.1s,baz=224,slow=8.3,SNR=18
comp=Z,17nm,1.1s
BNDI Bandanaira 66.22 96 P **P** **14 55 22.0 -2.0**
KNRA Kununurra 66.71 109 P **P** **14 55 26.9 -0.1**
comp=Z,59nm,1.2s
KNRA Kununurra 66.71 109 P **P** **14 55 25.4 -1.6**
CN2 Changchun 67.16 44 *eP* **P** **14 55 29.5 +0.1**
CN2 *es*P pP 14 55 36.0 0.0
CN2 *eS* **S** **15 04 21.5 -1.1**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,500nm,13.0s
CN2 LR LR
comp=Z,700nm,13.0s
CN2 LR LR
comp=Z,900nm,15.0s
KSAR Wonju Array Be 67.20 51 P **P** **14 55 28.0 -1.8**
KSAR Wonju Array Be 67.20 51 P **P** **14 55 28.0 -1.8**
KSRS Korea Array 67.23 51 P **P** **14 55 28.7 -1.3**
comp=Z,6.6nm,1.0s,baz=261,slow=7.6,SNR=6.7
comp=Z,6.6nm,1.0s
KSRS Korea Array 67.23 51 *eP* **P** **14 55 29.3 -0.7**
KSRS pmax pmax
comp=Z,7.0nm,1.0s
SWI Sorong 67.26 92 P **P** **14 55 30.3 -0.3**
comp=Z,28nm,1.2s
APA Apatity 67.35 348⇓ *eP* **P** **14 55 28.1 -2.0**
APA *e*SS SS 15 08 41.0 -3.1
APA MLR MLR
comp=Z,1µm,17.2s
AUDHS Darwin High Sc 68.14 105 P **P** **14 55 36.8 +0.7**
DRS Darwin Rock St 68.20 105 P **P** **14 55 37.6 +1.1**
HFS Hagfors 68.25 335 P **P** **14 55 34.2 -1.7**
comp=Z,9.7nm,0.7s,baz=118,slow=5.7,SNR=7.8
HFS LR LR 15 27 06.0
comp=Z,573nm,20.3s,baz=124,slow=37
comp=Z,9.7nm,0.7s
WRKA Warakurna 68.36 119 P **P** **14 55 37.4 0.0**
comp=Z,20nm,1.4s
FAKI Fak Fak 68.40 94 **P** **14 55 36.2 -1.6**
FAKI Fak Fak 68.40 94 P **P** **14 55 39.3 +1.5**
FAKI Fak Fak 68.40 94 P **P** **14 55 38.0 +0.2**
comp=Z,35nm,1.3s
MTN Manton Dam 68.49 105 P **P** **14 55 38.2 -0.1**
comp=Z,25nm,1.2s
MTN Manton Dam 68.49 105 **P** **14 55 36.9 -1.4**
MTN IAmb IAmb 14 55 39.9
comp=Z,37nm,1.2s
JNU Nakatsue 68.71 56 P **P** **14 55 37.1 -2.3**
JNU Nakatsue 68.71 56 P **P** **14 55 40.9 +1.5**
BNX BinXian 69.08 42⇑ P **P** **14 55 41.0 -0.4**
BNX pmax pmax
comp=Z,23nm,1.4s
BNX pmax pmax
comp=Z,180nm,3.5s
BNX LR LR
comp=Z,3µm,14.1s
BNX LR LR
comp=Z,2µm,16.2s
BNX LR LR
comp=Z,4µm,15.2s
FORT Forrest 69.73 124 P **P** **14 55 44.8 -0.9**
comp=Z,18nm,1.3s
FORT Forrest 69.73 124 P **P** **14 55 43.4 -2.3**
KDU Kakadu 69.76 105 P **P** **14 55 45.4 -0.7**
comp=Z,39nm,1.2s
NB2 NORSAR Subarra 69.77 336 P **P** **14 55 44.0 -1.4**
comp=Z,82nm,2.0s,baz=122,slow=6.2
NOA NORSAR Array B 69.77 336 P **P** **14 55 43.4 -2.1**
comp=Z,8.4nm,1.1s,baz=115,slow=6.8,SNR=4.9
NOA LR LR 15 28 02.9
comp=Z,522nm,20.9s,baz=130,slow=37
comp=Z,8.4nm,1.1s
NOA NORSAR Array B 69.77 336 *eP* **P** **14 55 44.5 -0.9**
NOA pmax pmax
comp=Z,11nm,1.1s
NBO00 NORSAR Array S 69.94 335 P **P** **14 55 46.0 -0.5**
NBO00 IAmb IAmb 14 55 46.9
comp=Z,64nm,1.4s
MDJ Mudanjiang 70.25 44 P **P** **14 55 49.0 +0.4**
MDJ S **S** **15 05 02.5 +3.2**
MDJ SS **SS** **15 09 33.0 +3.2**
MDJ pmax pmax
comp=Z,35nm,1.6s
MDJ LR LR
comp=Z,3µm,12.7s
MDJ LR LR
comp=Z,2µm,13.1s
MDJ LR LR
comp=Z,5µm,15.1s
MDJ Mudanjiang 70.25 44 P **P** **14 55 49.7 +1.1**
MDT Midelt 70.26 304 P **P** **14 55 48.5 -0.6**
comp=Z,4.3nm,0.8s,baz=104,slow=10.0,SNR=4.5
MDT LR LR 15 27 05.7
comp=Z,530nm,19.7s,baz=76,slow=36
comp=Z,4.3nm,0.8s
MD01 Midelt array s 70.40 304 P **P** **14 55 49.1 -0.9**
HEH HeiHe 70.48 37 *eP* **P** **14 55 49.0 -1.0**
HEH pP **pP** **14 55 53.5 -3.1**
HEH S **S** **15 05 03.5 +1.7**
HEH pmax pmax
comp=Z,28nm,1.4s
HEH LR LR
comp=Z,2µm,14.8s
HEH LR LR
comp=Z,2µm,14.9s
HEH LR LR
comp=Z,4µm,15.4s
ARCES ARCESS Array B 70.68 347 P **P** **14 55 48.3 -2.5**
comp=Z,12nm,0.9s,baz=132,slow=3.8,SNR=5.4
ARCES LR LR 15 27 37.3
comp=Z,594nm,21.9s,baz=148,slow=37
comp=Z,12nm,0.9s
ARCES ARCESS Array B 70.68 347 P **P** **14 55 49.4 -1.5**
ARCES ARCESS Array B 70.68 347 *eP* **P** **14 55 50.2 -0.6**
ARCES pmax pmax
comp=Z,12nm,0.9s
MSHR Mys Shultsa 70.85 46 *i* P **P** **14 55 50.8 -1.5**
MSHR pmax pmax
comp=Z,23nm,1.2s
MAW Mawson 70.93 180 P **P** **14 55 53.0 +0.7**
comp=Z,5.2nm,1.6s
MAW Mawson 70.93 180 P **P** **14 55 52.3 +0.1**
comp=Z,9.4nm,0.9s,baz=16,slow=4.9,SNR=5.8
MAW LR LR 15 20 51.8
comp=Z,753nm,18.9s,baz=338,slow=31
comp=Z,9.4nm,0.9s
ESDC Sonseca Array 70.97 311 P **P** **14 55 52.2 -1.1**
comp=Z,10nm,1.0s,baz=90,slow=5.0,SNR=24
ESDC LR LR 15 26 47.1
comp=Z,139nm,18.3s,baz=90,slow=36
comp=Z,10nm,1.0s
PAB San Pablo 71.23 311 P **P** **14 55 54.3 -0.6**
PAB IAmb IAmb 14 55 57.7
comp=Z,69nm,1.5s
PAB San Pablo 71.23 311 P **P** **14 55 54.3 -0.6**
PAB pmax pmax
comp=Z,69nm,1.5s
USRK Ussuriysk Ar. 71.81 45 P **P** **14 55 56.9 -1.2**
comp=Z,4.4nm,0.9s,baz=268,slow=7.2,SNR=4.6
comp=Z,4.4nm,0.9s
WC1 Warramunga Arr 72.71 112 P **P** **14 56 03.2 -0.8**
WRA Warramunga Arr 72.72 112 P **P** **14 56 03.2 -0.8**
comp=Z,108nm,1.0s,baz=287,slow=5.7,SNR=166
WRA LR LR 15 26 13.5
comp=Z,298nm,18.7s,baz=282,slow=34
WRAB Tennant Creek 72.72 112 P **P** **14 56 02.4 -1.7**
WRAB Tennant Creek 72.72 112 P **P** **14 56 03.4 -0.7**
WRAB Tennant Creek 72.72 112 *i* P **P** **14 56 02.9 -1.2**
WRAB pmax pmax
comp=Z,155nm,1.1s
AUALC St Philip's Co 73.01 116 P **P** **14 56 05.8 0.0**
ASAR Alice Springs 73.03 116 P **P** **14 56 04.8 -1.1**
comp=Z,50nm,1.1s,baz=285,slow=5.1,SNR=154
ASAR LR LR 15 27 20.9
comp=Z,253nm,18.5s,baz=282,slow=35

	comp=Z,50nm,1.1s						
AS31	**Alice Springs**	**73.03**	**116**	P	**P**	**14 56 04.7**	**-1.2**
PBRG	**Braganca**	**73.44**	**313**	*e*P	**P**	**14 56 08.8**	**+0.8**
PBRG				*i* IAmb	IAmb	14 56 11.7	
	comp=Z,69nm,2.0s						
PMRV	**Marv??o**	**73.53**	**310**	*e*P	**P**	**14 56 08.4**	**-0.1**
PMRV				*i* IAmb	IAmb	14 56 11.7	
	comp=Z,67nm,1.9s						
MVO	**Moncorvo**	**73.55**	**312**	*e*P	**P**	**14 56 09.5**	**+0.9**
PCBR	**Castelo Branco**	**73.66**	**310**	*e*P	**P**	**14 56 09.5**	**+0.3**
PCBR				*i* IAmb	IAmb	14 56 12.6	
	comp=Z,55nm,1.9s						
PBEJ	**Beja**	**73.68**	**309**	*e*P	**P**	**14 56 09.3**	**-0.1**
PBEJ				*i* IAmb	IAmb	14 56 12.7	
	comp=Z,36nm,1.8s						
PCVE	**Castro Verde**	**73.76**	**308**	*e*P	**P**	**14 56 10.0**	**+0.2**
EVO	**Evora**	**73.87**	**309**	*e*P	**P**	**14 56 11.7**	**+1.2**
EVO				*i* IAmb	IAmb	14 56 14.3	
	comp=Z,45nm,1.9s						
PARRA	**Arraiolos**	**73.93**	**309**	*e*P	**P**	**14 56 11.2**	**-4.2**
PARRA				*i* IAmb	IAmb	14 56 13.7	
	comp=Z,82nm,1.7s						
PMTG	**Montargil**	**74.11**	**310**	*e*P	**P**	**14 56 12.2**	**+0.4**
PMTG				*i* IAmb	IAmb	14 56 15.5	
	comp=Z,85nm,1.8s						
PVIS	**Viseu**	**74.12**	**311**	*e*P	**P**	**14 56 12.9**	**+0.9**
SYO	**Syowa Base**	**74.28**	**189**	⇑*i*P	**P**	**14 56 13.6**	**+1.5**
SYO	**Syowa Base**	**74.28**	**189**	*i*pP	**P**	**14 56 15.0**	**+2.9**
SYO	**Syowa Base**	**74.28**	**189**	⇓*e*sP	sP	14 56 17.8	-3.6
EKA	**Eskdalemuir Ar**	**74.34**	**327**	P	**P**	**14 56 11.7**	**-1.1**
	comp=Z,3.2nm,0.9s,baz=104,slow=5.9,SNR=3.3						
	comp=Z,3.2nm,0.9s						
MJAR	**Matsushiro Arr**	**75.17**	**53**	P	**P**	**14 56 17.0**	**-1.1**
	comp=Z,9.5nm,1.2s,baz=262,slow=8.6,SNR=13						
	comp=Z,9.5nm,1.2s						
MJAR	**Matsushiro Arr**	**75.17**	**53**	P	**P**	**14 56 17.0**	**-1.1**
MJA0	**Matsu Arr-Jizo**	**75.20**	**53**	*e*P	**P**	**14 56 18.1**	**-0.2**
MJA0				pmax	pmax		
	comp=Z,11nm,1.2s						
YAK	**Yakutsk**	**75.66**	**26**	*e*P	**P**	**14 56 19.2**	**-1.1**
YAK				*e*		14 56 31.3	
YAK				*e*S	**S**	**15 06 00.3**	**+0.2**
YAK				*e*		15 06 34.8	
YAK				*e*SS	**SS**	**15 10 52.2**	**+0.7**
YAK				pmax	pmax		
	comp=Z,41nm,1.4s						
YAK				pmax	pmax		
	comp=N,14nm,1.4s						
YAK				pmax	pmax		
	comp=E,25nm,1.5s						
YAK				smax	smax		
	comp=N,122nm,3.2s						
YAK				smax	smax		
	comp=E,62nm,2.8s						
JHJ	**Hachijo jima 2**	**76.11**	**57**	LR	LR	15 30 06.0	
	comp=E,362nm,20.9s,baz=328,slow=36						
GENI	**Genyem**	**76.26**	**94**	P	**P**	**14 56 26.1**	**+1.3**
	comp=E,29nm,1.4s						
BBOO	**Buckleboo**	**76.83**	**125**	P	**P**	**14 56 26.9**	**-0.7**
	comp=Z,31nm,1.4s						
BBOO	**Buckleboo**	**76.83**	**125**	P	**P**	**14 56 26.3**	**-1.3**
BBOO	**Buckleboo**	**76.83**	**125**	P	**P**	**14 56 28.2**	**+0.6**
QIS	**Mount Isa**	**77.69**	**112**	P	**P**	**14 56 31.6**	**-1.1**
	comp=Z,127nm,1.4s						
QIS	**Mount Isa**	**77.69**	**112**	P	**P**	**14 56 32.4**	**-0.3**
SPITS	**Spitsbergen Ar**	**78.61**	**351**	LR	LR	15 34 08.4	
	comp=Z,612nm,20.0s,baz=142,slow=38						
TIXI	**Tiksi**	**78.93**	**17**	P	**P**	**14 56 37.0**	**-1.5**
TIXI				IAmb	IAmb	14 56 39.4	
	comp=Z,95nm,1.6s						
TIXI	**Tiksi**	**78.93**	**17**	*i* P	**P**	**14 56 37.7**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,32nm,1.5s						
AUJCS	**Jamestown Cent**	**79.01**	**125**	P	**P**	**14 56 40.0**	**+0.3**
HTT	**Hallett**	**79.31**	**125**	P	**P**	**14 56 42.2**	**+0.8**
AUMAR	**Marden Senior**	**79.37**	**126**	P	**P**	**14 56 42.6**	**+0.9**
YSS	**Yuzhno-Sakhali**	**79.72**	**43**	P	**P**	**14 56 44.9**	**+1.6**
	comp=Z,64nm,2.9s						
YSS	**Yuzhno-Sakhali**	**79.72**	**43**	*e*P	**P**	**14 56 38.9**	**-4.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=N,2μm,11.0s						
YSS				MLR	MLR		
	comp=Z,3μm,11.0s						
YSS				MLR	MLR		
	comp=E,2μm,12.0s						
AUMBR	**Murray Bridge**	**79.94**	**126**	P	**P**	**14 56 45.3**	**+0.6**
JMIC	**Jan Mayen**	**81.10**	**342**	LR	LR	15 35 31.1	
	comp=E,388nm,18.1s,baz=349,slow=38						
STKA	**Stephens Creek**	**81.24**	**123**	P	**P**	**14 56 51.7**	**-0.1**
	comp=E,29nm,1.1s,baz=283,slow=5.6,SNR=22						
STKA				LR	LR	15 28 34.8	
	comp=E,536nm,21.5s,baz=263,slow=32						
	comp=E,29nm,1.1s						
STKA	**Stephens Creek**	**81.24**	**123**	P	**P**	**14 56 50.2**	**-1.7**
STKA	**Stephens Creek**	**81.24**	**123**	P	**P**	**14 56 51.7**	**-0.1**
STKA	**Stephens Creek**	**81.24**	**123**	*e*P	**P**	**14 56 51.1**	**-0.7**
STKA				pmax	pmax		
	comp=Z,29nm,1.1s						
NVL	**N'lazarevskaya**	**81.63**	**195**	*e*P	**P**	**14 56 55.8**	**+2.8**
NVL				*e*		15 00 01.0	
NVL				*e*PPP	PPP	15 01 51.6	
NVL				*e*S	**SKSac**	**15 07 09.1**	**-2.0**
NVL				*e*SS	**SS**	**15 12 27.5**	**+6.3**
NVL				*e*SSS	SSS	15 15 55.1	
NVL				pmax	pmax		
	comp=Z,39nm,1.2s						
NVL				MLR	MLR		
	comp=Z,764nm,19.0s						
MTSU	**Mount Surprise**	**81.80**	**109**	P	**P**	**14 56 55.0**	**0.0**
QLP	**Quilpie**	**82.74**	**117**	P	**P**	**14 57 00.0**	**+0.2**
PMG	**Port Moresby**	**83.72**	**100**	P	**P**	**14 57 03.2**	**-1.9**
PMG	**Port Moresby**	**83.72**	**100**	P	**P**	**14 57 06.1**	**+1.0**
PMG	**Port Moresby**	**83.72**	**100**	P	**P**	**14 57 03.2**	**-1.9**
PMG				pmax	pmax		
	comp=Z,63nm,1.2s						
CTA	**Charters Tower**	**83.83**	**111**	LR	LR	15 32 22.4	
	comp=Z,13nm,18.7s,baz=262,slow=34						
CTAO	**Charters Tower**	**83.83**	**111**	P	**P**	**14 57 04.1**	**-1.4**
CTAO	**Charters Tower**	**83.83**	**111**	P	**P**	**14 57 05.4**	**-0.1**
CTAO	**Charters Tower**	**83.83**	**111**	P	**P**	**14 57 04.1**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,89nm,1.3s						
AUMTC	**Mt Clear Colle**	**84.03**	**128**	P	**P**	**14 57 07.6**	**+1.4**
BRAT	**Ballarat**	**84.06**	**128**	P	**P**	**14 57 08.0**	**+1.7**
TV1H	**Townsville Har**	**84.25**	**110**	P	**P**	**14 57 07.7**	**0.0**
AUMAG	**Moama Anglican**	**84.49**	**127**	P	**P**	**14 57 09.8**	**+1.2**
CMSA	**Cobar Meteorol**	**84.65**	**122**	P	**P**	**14 57 09.2**	**-0.3**
TROLL	**Troll, Antarti**	**84.82**	**196**	⇑P	**P**	**14 57 10.1**	**+0.4**
	comp=Z,767nm,1.6s						
AUAYR	**Ayr State High**	**84.86**	**110**	P	**P**	**14 57 10.8**	**+0.1**
BORG	**Borgarnes**	**84.92**	**335**	LR	LR	15 37 19.8	
	comp=Z,496nm,21.9s,baz=95,slow=37						
TOO	**Toolangi**	**85.29**	**128**	P	**P**	**14 57 12.4**	**-0.2**
TOO				IAmb	IAmb	14 57 16.1	
	comp=Z,56nm,1.5s						
TOO	**Toolangi**	**85.29**	**128**	P	**P**	**14 57 12.4**	**-0.2**
TOO				pmax	pmax		
	comp=Z,55nm,1.5s						
MA2	**Magadan**	**85.33**	**31**	LR	LR	15 36 37.3	
	comp=Z,2μm,20.6s,baz=308,slow=37						
SEY	**Seymchan**	**86.14**	**27**	*e*P	**P**	**14 57 15.3**	**-0.9**
SEY				pmax	pmax		
	comp=Z,28nm,1.4s						
SNAA	**Sanae**	**86.19**	**197**	⇑P	**P**	**14 57 16.9**	**+0.6**
	comp=Z,61nm,1.0s						
SNAA	**Sanae**	**86.19**	**197**	P	**P**	**14 57 16.7**	**+0.3**
	comp=Z,5.0nm,1.1s,baz=47,slow=6.1,SNR=10.0						
SNAA				LR	LR	15 28 02.6	
	comp=Z,726nm,22.0s,baz=42,slow=30						
	comp=Z,5.0nm,1.1s						
AULRC	**Lightning Ridg**	**86.36**	**120**	P	**P**	**14 57 18.1**	**0.0**
CORO	**Coronation Par**	**87.07**	**132**	P	**P**	**14 57 23.6**	**+2.4**
AUDCS	**Dubbo College**	**87.21**	**122**	P	**P**	**14 57 23.1**	**+0.9**
VNA2	**Neumayer--Watz**	**87.30**	**198**	⇑P	**P**	**14 57 22.8**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=56,slow=4.5						
VNA1	**Neumayer--Stat**	**87.48**	**199**	⇑P	**P**	**14 57 24.3**	**+1.8**
	comp=Z,8.2nm,1.3s						
AUSMG	**Snowy Mountain**	**87.63**	**127**	P	**P**	**14 57 25.7**	**+1.5**
CAN	**Canberra**	**87.83**	**125**		**P**	**14 57 23.8**	**-1.3**
CAN	**Canberra**	**87.83**	**125**	P	**P**	**14 57 26.2**	**+1.1**
CAN	**Canberra**	**87.83**	**125**	P	**P**	**14 57 23.8**	**-1.3**
CAN				pmax	pmax		
	comp=Z,217nm,1.5s						
AUMTS	**Mt Stromlo**	**87.83**	**125**	P	**P**	**14 57 26.5**	**+1.4**
AUMHS	**Melrose High S**	**87.91**	**125**	P	**P**	**14 57 26.7**	**+1.2**
AUSIS	**Research Schoo**	**87.91**	**125**	P	**P**	**14 57 27.2**	**+1.7**
AUDAR	**Daramalan Coll**	**87.94**	**125**	P	**P**	**14 57 26.9**	**+1.3**
AUNRC	**North Rockhamp**	**88.08**	**113**	P	**P**	**14 57 27.0**	**+0.5**
VNA3	**Neumayer Olymp**	**88.10**	**198**	⇑P	**P**	**14 57 26.5**	**+0.9**
	comp=Z,6.5nm,1.0s						
CNB	**Canberra Magne**	**88.12**	**125**	P	**P**	**14 57 27.9**	**+1.3**
GD1S	**Gladstone Soft**	**88.71**	**114**	P	**P**	**14 57 31.8**	**+2.4**
EIDS	**Eidsvold**	**88.75**	**115**	P	**P**	**14 57 30.7**	**+1.1**
AUPHS	**Peel High Scho**	**89.03**	**121**	P	**P**	**14 57 31.9**	**+1.1**
AUUHS	**Ulladulla High**	**89.03**	**125**	P	**P**	**14 57 32.6**	**+1.9**
PETK	**Petropavlovsk-**	**89.41**	**37**	LR	LR	15 37 07.9	
	comp=Z,3μm,20.0s,baz=318,slow=35						
ARMA	**Armidale**	**89.61**	**120**	P	**P**	**14 57 35.0**	**+1.3**
PET	**Petropavlovsk**	**89.99**	**37**	*i* P	**P**	**14 57 33.0**	**-1.8**
PET				pmax	pmax		
	comp=Z,18nm,1.1s						
SUMG	**Summit**	**90.45**	**343**	P	**P**	**14 57 35.6**	**-1.5**
SUMG				IAmb	IAmb	14 57 39.8	
	comp=Z,62nm,1.9s						
SUMG	**Summit**	**90.45**	**343**	P	**P**	**14 57 35.6**	**-1.5**
SUMG				pmax	pmax		
	comp=Z,62nm,1.9s						
BILL	**Bilibino**	**91.33**	**22**	P	**P**	**14 57 39.9**	**-0.8**
BILL				IAmb	IAmb	14 57 42.6	
	comp=Z,41nm,1.4s						
BILL	**Bilibino**	**91.33**	**22**	*i* P	**P**	**14 57 40.2**	**-0.6**
BILL				pmax	pmax		
	comp=Z,11nm,1.2s						
QSPA	**South Pole Qui**	**93.45**	**180**	P	**P**	**14 57 52.8**	**+2.1**
	comp=Z,2.9nm,1.1s,baz=289,slow=2.3,SNR=9.2						
QSPA				LR	LR	15 36 09.6	
	comp=Z,803nm,18.1s,baz=260,slow=33						
	comp=Z,2.9nm,1.1s						
QSPA	**South Pole Qui**	**93.45**	**180**	P	**P**	**14 57 51.2**	**+0.5**
QSPA				IAmb	IAmb	14 57 59.5	
	comp=Z,21nm,1.4s						
VNDA	**Vanda**	**95.06**	**168**	LR	LR	15 34 43.2	
	comp=Z,886nm,21.4s,baz=242,slow=32						
SFJD	**Kangerlussuaq**	**96.24**	**339**	LR	LR	15 44 15.1	
	comp=Z,289nm,18.3s,baz=65,slow=37						
SHEM	**Shemya Is, Ala**	**99.19**	**35**	LR	LR	15 45 04.8	
	comp=Z,553nm,20.3s,baz=292,slow=37						
DZM	**Mont Dzumac**	**102.73**	**112**	*e*LR	LR	15 32 02.1	
	comp=Z,630nm,23.8s						
LPAZ	**La Paz**	**131.39**	**251**	PKP	**PKiKP**	**15 03 50.3**	**-0.2**
	comp=Z,8.9nm,1.3s,baz=79,slow=5.2,SNR=7.7						
LPAZ	**La Paz**	**131.39**	**251**	*e*PKIKP	**PKiKP**	**15 03 50.8**	**+0.3**
LPAZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LPAZ	**La Paz**	**131.39**	**251**	*e*P	**PKiKP**	**15 03 50.1**	**-0.4**
PDAR	**Pinedale Array**	**133.61**	**354**	PKP	**PKPdf**	**15 03 52.8**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=56,slow=2.4,SNR=12						
PDAR	**Pinedale Array**	**133.61**	**354**		**PKPdf**	**15 03 50.5**	**-2.1**
NVAR	**Mina Array Bea**	**138.24**	**3**	PKP	**PKiKP**	**15 04 02.7**	**-0.7**
	comp=Z,5.0nm,0.9s,baz=322,slow=1.3,SNR=15						
NVAR	**Mina Array Bea**	**138.24**	**3**		**PKPdf**	**15 03 58.8**	**-2.6**
TBI	**Tubuai**	**142.02**	**124**	*e*LR	LR	15 50 20.9	
	comp=Z,1μm,31.8s						
PPT2	**Papeete2**	**144.13**	**115**	*e*LR	LR	15 51 14.6	
	comp=Z,344nm,28.0s						
PPT2				*e*LR	LR	15 51 15.8	
	comp=Z,448nm,27.5s						
TXAR	**Lajitas Array**	**145.33**	**341**	PKPbc	**PKPbc**	**15 04 12.5**	**-1.3**
	comp=Z,27nm,1.0s,baz=56,slow=2.3,SNR=57						
TXAR	**Lajitas Array**	**145.33**	**341**		**PKPbc**	**15 04 11.8**	**-2.0**
TXAR	**Lajitas Array**	**145.33**	**341**	PKIKP	**PKPbc**	**15 04 11.8**	**-2.0**
HDC	**Heredia**	**145.63**	**293**	*e*P	**PKPdf**	**15 04 15.0**	**-0.1**
RKT	**Rikitea**	**153.13**	**138**	*e*LR	LR	15 55 28.5	
	comp=Z,2μm,42.2s						
TAOE	**Nuku Hiva Isla**	**155.31**	**104**	*e*LR	LR	15 56 31.0	
	comp=Z,293nm,27.8s						

NAO ***27*** *14:45:15.4,40.6N×18.0E,h10km,MB4.8*
GII ***27*** *14:45:22.0±0.0,41.5N×19.4E,h13km,confirmed*
MOS ***27*** *14:45:22.9±1.1,41.4N×19.3E,h20km,mb5.4/39, MS4.9/26,Error ellipse: s-maj=4.4km s-min=2.9km az=78.5*
BGR ***27*** *14:45:22.4±2.1,41.1N×19.2E,h10km,ML5.3,Error ellipse: s-maj=42.3km s-min=8.9km az=9.0*
IDC ***27*** *14:45:22.1±0.4,41.5N×19.5E,h0km,mb4.7/29, mbtmp4.7/43,ML4.3/13,MS4.9/55,Error ellipse: s-maj=8.8km s-min=7.4km az=48.0*
NEIC ***27*** *14:45:24.0±1.9,41.5N±0.0×19.4E±0.0,h10km±1km, mb5.3/63,Mww5.3/29,Error ellipse: s-maj=7.6km s-min=6.3km az=238.0*
NEIC ***27*** *14:45:24.4,41.5N×19.4E,h18km,Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17Nm; Mrr0.88; Mθθ0.06; Mϕϕ-0.95; Mrθ0.14; Mθϕ0.39; Mϕr-0.68; Fault plane solution: M0 1.22000×10^17 NP1: ϕs334.49000°,δ27.79000°,λ79.51000°. NP2: ϕs166.32000°,δ62.71000°,λ95.48000°. Principal axes: T 1.1095, Plg72.0000°, Azm89.0000°; N 0.1906, Plg5.0000°, Azm344.0000°; P -1.3001, Plg18.0000°, Azm252.0000°;*
TIR ***27*** *14:45:24.6,41.6N×19.3E,h48km±2km,Ml5.3/6*
NEIC ***27*** *14:45:24.4,41.5N×19.4E,h18km*
BJI ***27*** *14:45:24.9,41.4N×19.3E,h45km,mB5.6/28,mb5.2/64, Ms5.5/36,Ms7 5.2/36*
PDG ***27*** *14:45:24.5±0.4,41.4N×19.5E,h11km±1km,ML5.2/13, Error ellipse: s-maj=1.3km s-min=2.1km az=0.0*
RHSSO ***27*** *14:45:24.9±0.9,41.5N×19.4E,h5km±4km,ML5.3/4*
ROM ***27*** *14:45:24.8±0.1,41.564N±0.007×19.52E±0.01,h25km, ML5.4/324,Error ellipse: s-maj=1.4km s-min=0.5km az=300.0*
SKO ***27*** *14:45:24.9,41.6N×19.4E,h0km,ML5.4*
THE ***27*** *14:45:25.8,42.N±7.7×1.9E±.,h4km±42km,M4.9/12, MLh4.9/12*
BEO ***27*** *14:45:25.5±0.5,41.4N×19.4E,h14km±2km,ML5.1/23*
PRU ***27*** *14:45:26.7,41.4N×19.3E,h15km,M5.3*
MED_RC ***27*** *14:45:27.0±0.2,41.5N×19.3E,h26km,MW5.4/26, Moment Tensor Solution. Body waves: s5,c5;Mantle waves: s26,c49; Duration: 1s7 Moment tensor: Scale 10^17Nm; Mrr1.03±.05; Mθθ0.15±.03; Mϕϕ-1.18±.03; Mrθ0.36±.05; Mϕθ0.54±.02; Mϕr-0.58±.04; Best double couple: M0 1.39000×10^17 NP1:ϕs352.00000°,δ31.00000°, λ107.00000°. NP2:ϕs152.00000°,δ60.00000°,λ80.00000°. Principal axes: T 1.2300, Plg73.0000°, Azm37.0000°; N 0.3200, Plg9.0000°, Azm157.0000°; P -1.5500, Plg15.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
GCMT ***27*** *14:45:27.0±0.1,41.49N±0.01×19.39E±0.01,h23km, MW5.4/129,Moment Tensor Solution. s97,c159; s129,c240; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr1.26±.03; Mθθ-0.10±.02; Mϕϕ-1.16±.02; Mrθ0.48±.03; Mθϕ0.43±.01; Mϕr-0.62±.03; Best double couple: M0 1.50800×10^17 NP1:ϕs350.00000°,δ31.00000°, λ107.00000°. NP2:ϕs151.00000°,δ61.00000°,λ80.00000°. Principal axes: T 1.4990, Plg73.0000°, Azm37.0000°; N 0.0210, Plg8.0000°, Azm156.0000°; P -1.5170, Plg15.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGS ***27*** *14:45:29.6±1.9,42.19N×19.43E,h10km,mb4.8*
ISC 27 14:45:25.3±0.3,**41.54N**±0.02×**19.49E**±0.02,**h22**km±2km, **n1161**,σ1**85**/1244,**mb5.1**/110,**MS5.1**/63,**94C-101D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.46**	**337**	⇓*i*Pg	**Pb**	**14 45 33.9**	**-0.9**
ULC				*i* Sg	**Sb**	**14 45 41.5**	**+0.3**
SDA	**Shkodra**	**0.51**	**1**	Pg	**Pb**	**14 45 34.7**	**-0.9**
SDA				Sg	**Sb**	**14 45 42.4**	**-0.2**
DRME	**Dracevica, Mon**	**0.69**	**341**	*e*Pg	**Pb**	**14 45 38.4**	**-0.2**
DRME				*e*Sg	**Sn**	**14 45 50.2**	**+0.4**
DRME	**Dracevica, Mon**	**0.69**	**341**	⇓*i*Pg	**Pb**	**14 45 38.1**	**-0.6**
DRME				*i* Sg	**Sn**	**14 45 48.8**	**-1.0**
BUM	**Brajici-Budva**	**0.88**	**330**	⇑*i*Pg	**Pb**	**14 45 41.8**	**-0.2**
BUM				*i* Sg	**Sn**	**14 45 56.0**	**+1.3**
PDG	**Podgorica**	**0.91**	**349**	P	**Pb**	**14 45 41.0**	**-1.4**
PDG	**Podgorica**	**0.91**	**349**		**Pb**	**14 45 41.1**	**-1.2**
PDG				Sn	**Sn**	**14 45 54.9**	**-0.3**
PDG	**Podgorica**	**0.91**	**349**	⇑P	**Pn**	**14 45 44.1**	**+1.3**
PDG				⇓S	**Sn**	**14 45 55.8**	**+0.6**
PDG	**Podgorica**	**0.91**	**349**	*e*Pg	**Pb**	**14 45 42.1**	**-0.3**
PDG				*e*Sg	**Sn**	**14 45 57.2**	**+2.0**
PDG	**Podgorica**	**0.91**	**349**	⇓P	**Pb**	**14 45 41.2**	**-1.1**
PDG				S	**Sb**	**14 45 54.5**	**+0.5**
PDG				AML	AML		
	comp=N,68400μm,0.6s						
PDG				AML	AML		
	comp=N,68200μm,0.5s						
PDG				AML	AML		
PDG				AML	AML		
PDG	**Podgorica**	**0.91**	**349**	⇓*i*Pg	**Pb**	**14 45 41.3**	**-1.1**
PDG				*i* Sg	**Sn**	**14 45 56.4**	**+1.2**
VLO	**Vlora**	**1.07**	**180**	Pg	**Pb**	**14 45 46.7**	**+1.6**
VLO				Sg	**Sn**	**14 46 02.0**	**+2.8**
OHR	**Ohrid**	**1.07**	**113**	*i* Pg	**Pb**	**14 45 45.6**	**+0.4**
OHR				*i* Sg	**Sn**	**14 46 01.8**	**+2.4**
OHR				*e*Lg	Lg	14 46 03.7	
	comp=N,56μm,0.6s						
OHR				*e*Lg	Lg	14 46 05.8	
	comp=E,108μm,1.1s						
CEME	**Cevo**	**1.09**	**337**	⇓*i*Pg	**Pn**	**14 45 45.1**	**-0.3**
CEME				*i* Sg	**Sn**	**14 46 02.6**	**+2.7**
PVY	**Plav**	**1.11**	**18**	⇑*i*Pg	**Pn**	**14 45 44.6**	**-1.1**
PVY				*i* Sg	**Sn**	**14 46 01.7**	**+1.3**
HCY	**Herceg Novi**	**1.17**	**321**	⇑*i*Pg	**Pb**	**14 45 47.1**	**+0.2**
HCY				*i* Sg	**Sn**	**14 46 04.7**	**+2.9**
NKME	**Niksic**	**1.29**	**342**	⇑*i*Pg	**Pn**	**14 45 48.3**	**+0.2**
NKME				*i* Sg	**Sb**	**14 46 08.3**	**+3.2**
KOME	**Kolasin**	**1.31**	**1**	*e*Pg	**Pb**	**14 45 50.2**	**+0.9**
KOME				*e*Sg	**Sb**	**14 46 09.2**	**+3.5**
KOME	**Kolasin**	**1.31**	**1**	⇓*i*Pg	**Pn**	**14 45 48.6**	**+0.2**
KOME				*i* Sg	**Sb**	**14 46 09.4**	**+3.7**
KBN	**Korca**	**1.34**	**133**	Pg	**Pb**	**14 45 51.0**	**+1.2**
KBN				Sg	**Sb**	**14 46 09.9**	**+3.4**
IVA	**Berane**	**1.36**	**13**	⇓*i*Pg	**Pn**	**14 45 49.7**	**+0.5**
IVA				*i* Sg	**Sb**	**14 46 10.9**	**+3.6**
TREB	**Trebinje**	**1.45**	**325**	⇑*i*Pg	**Pn**	**14 45 50.6**	**+0.3**
TREB				*e*Sg	**Sb**	**14 46 10.9**	**+1.3**
SKO	**Skopje**	**1.52**	**73**	*i* Pg	**Pb**	**14 45 52.4**	**-0.4**
SKO				*i* Sg	**Sb**	**14 46 15.1**	**+3.5**
BRY	**Bratogost**	**1.53**	**333**	⇑*i*Pn	**Pb**	**14 45 53.3**	**+0.2**
BRY				*i* Sn	**Sb**	**14 46 15.8**	**+3.6**
MESG	**Mesagne**	**1.56**	**233**	⇓P	**Pn**	**14 45 52.1**	**+0.3**
MESG				S	**Sb**	**14 46 11.8**	**-1.0**
MESG				AML	AML		
	comp=E,47050μm,1.1s						
MESG				AML	AML		
	comp=N,84750μm,1.1s						
NEST	**Nestorio**	**1.63**	**133**	Pn	**Pb**	**14 45 55.8**	**+1.1**
NEST				AML	AML	14 46 23.7	
	comp=N,86nm,0.9s						
NEST	**Nestorio**	**1.63**	**133**	P	**Pb**	**14 45 54.7**	**0.0**
NEST				S	**Sb**	**14 46 17.5**	**+2.7**
UPM	**Unac-Piva**	**1.72**	**346**	⇓*i*Pn	**Pb**	**14 45 56.7**	**+0.4**
UPM				*i* Sn	**Sb**	**14 46 20.6**	**+3.1**
SJES	**Sjenica**	**1.76**	**12**	*e*Pg	**Pb**	**14 45 58.2**	**+1.3**
SJES				*e*Sg	**Sb**	**14 46 22.5**	**+3.9**
KLINJ	**Klinje**	**1.76**	**338**	⇑*i*Pn	**Pb**	**14 45 56.0**	**-1.0**
KLINJ				*e*Sn	**Sb**	**14 46 19.6**	**+0.9**
PLE	**Pljevlja**	**1.79**	**358**	⇑*i*Pn	**Pb**	**14 45 57.6**	**+0.1**
PLE				*i* Sn	**Sb**	**14 46 21.9**	**+2.3**
KEK	**Kerkira**	**1.84**	**173**	*e*P	**Pb**	**14 46 01.5**	**+3.2**
KEK	**Kerkira**	**1.84**	**173**	Pg	**Pb**	**14 46 01.1**	**+2.9**
KEK	**Kerkira**	**1.84**	**173**	⇑P	**Pb**	**14 46 01.4**	**+3.2**
TAR1	**Taranto**	**1.95**	**239**	⇓P	**Pn**	**14 45 57.1**	**0.0**
TAR1				S	**Sb**	**14 46 22.2**	**-1.9**
TAR1				AML	AML		
	comp=N,26300μm,0.6s						
TAR1				AML	AML		
	comp=E,34500μm,0.9s						
NOCI	**Noci**	**1.98**	**249**	Pn	**Pn**	**14 45 58.0**	**+0.4**
NOCI				Sn	**Sn**	**14 46 22.3**	**+0.6**
NOCI				AML	AML	14 46 37.1	
	comp=E,156nm,0.5s						
NOCI				AML	AML	14 46 38.4	
	comp=E,87nm,0.4s						
NOCI	**Noci**	**1.98**	**249**	⇓P	**Pn**	**14 45 57.8**	**+0.3**
NOCI				S	**Sn**	**14 46 22.5**	**+0.8**
NOCI				AML	AML		
	comp=N,50950μm,1.5s						
NOCI				AML	AML		
	comp=E,28400μm,0.4s						
SELS	**Selova**	**2.07**	**35**	*e*Pn	**Pb**	**14 46 01.2**	**-1.0**
SELS				*e*Sn	**Sb**	**14 46 28.3**	**+0.9**
RUDO	**Rudo**	**2.08**	**358**	⇓*i*Pn	**Pn**	**14 46 00.4**	**+1.5**
RUDO				*e*Sn	**Sb**	**14 46 27.3**	**-0.4**
IVAS	**Ivanjica**	**2.09**	**13**	*e*Pn	**Pn**	**14 46 01.0**	**+1.8**
IVAS				*e*Sn	**Sb**	**14 46 27.1**	**-1.1**
IGT	**Igoumenitsa**	**2.10**	**162**	Pn	**Pb**	**14 46 01.3**	**-1.5**
IGT				Sn	**Sn**	**14 46 21.5**	**-3.3**
IGT	**Igoumenitsa**	**2.10**	**162**	P	**Pn**	**14 46 00.7**	**+1.5**

comp=N,33800µm,0.9s
BOVS Bovan 2.66 37 ⇓P **Pn** **14 46 09.1 +2.3**
BOVS Bovan 2.66 37 *e*Pn **Pn** **14 46 09.1 +2.3**
BOVS *e*Sn **Sn** **14 46 41.0 +2.6**
TRAN Tran 2.68 60 P **Pn** **14 46 09.9 +2.7**
LIT Litokhoron 2.69 121 P **Pn** **14 46 08.7 +1.4**
LIT S **Sb** **14 46 43.7 -1.6**
LIT Litokhoron 2.69 121 **Pn** **14 46 08.5 +1.2**
LIT Litokhoron 2.69 121 *i* Pn **Pn** **14 46 09.1 +1.7**
LIT *i* Sn **Sb** **14 46 43.2 -2.1**
LIT Litokhoron 2.69 121 P **Pn** **14 46 08.5 +1.2**
MSAG Monte S. Angel 2.69 275 ⇓P **Pn** **14 46 07.5 +0.1**
MSAG AML AML
comp=N,9200µm,0.5s
MSAG AML AML
comp=N,22200µm,0.5s
MSAG AML AML
comp=E,5845µm,1.1s
MSAG AML AML
comp=E,14150µm,1.1s
PALZ Palazzo San Ge 2.73 259 ⇓P **Pn** **14 46 08.5 +0.7**
PALZ AML AML
comp=E,52050µm,0.9s
PALZ AML AML
comp=N,50000µm,1.0s
ORI Oriolo Calabro 2.74 238 ⇓P **Pn** **14 46 08.3 +0.3**
ORI AML AML
comp=N,27650µm,1.2s
ORI AML AML
comp=E,28150µm,1.0s
KKB Krupnik 2.74 82 P **Pn** **14 46 10.3 +2.3**
KKB S **Sn** **14 46 44.1 +3.6**
KKB Krupnik 2.74 82 P **Pn** **14 46 10.8 +2.8**
KKB Krupnik 2.74 82 *i* Pn **Pn** **14 46 10.5 +2.4**
KKB *i* Sn **Sb** **14 46 44.6 -2.1**
THL Klokotos Trika 2.75 135 P **Pn** **14 46 09.7 +1.5**
THL Klokotos Trika 2.75 135 ⇑P **Pn** **14 46 09.7 +1.5**
THL AML AML
comp=E,1730µm,0.9s
THL AML AML
comp=N,1950µm,0.7s
TRUS Trudelj 2.77 14 *e*Pn **Pn** **14 46 10.4 +2.0**
TYRN Tyrnavos 2.77 130 P **Pn** **14 46 10.1 +1.7**
THE Thessaloniki 2.78 108 Pn **Pn** **14 46 10.4 +1.9**
THE AML AML 14 46 49.1
comp=N,16nm,0.6s
THE Thessaloniki 2.78 108 P **Pn** **14 46 09.9 +1.4**
THE Thessaloniki 2.78 108 *i* Pn **Pn** **14 46 10.2 +1.7**
THE *i* Sn **Sn** **14 46 44.4 +3.1**
ACER Acerenza 2.78 255 **Pn** **14 46 08.9 +0.3**
ACER Acerenza 2.78 255 ⇓P **Pn** **14 46 09.3 +0.7**
ACER AML AML
comp=N,41550µm,1.3s
ACER AML AML
comp=N,43050µm,1.3s
ACER AML AML
comp=E,29900µm,1.1s
ACER AML AML
comp=E,30900µm,1.1s
PTRP Pietrapertosa 2.79 250 ⇓P **Pn** **14 46 09.4 +0.7**
CAPA Cerignola FG 2.79 263 ⇓P **Pn** **14 46 09.3 +0.6**
CAPA AML AML
comp=N,23650µm,1.1s
CAPA AML AML
comp=E,48400µm,1.2s
CAPA AML AML
comp=N,23500µm,1.2s
CAPA AML AML
comp=E,21150µm,1.1s
SGRT San Giovanni R 2.82 276 Pn **Pn** **14 46 09.7 +0.5**
SGRT Sn **Sn** **14 46 37.2 -5.3**
SGRT AML AML 14 47 27.8
comp=E,33nm,0.9s
SGRT San Giovanni R 2.82 276 **Pn** **14 46 08.9 -0.2**
SGRT San Giovanni R 2.82 276 ⇓P **Pn** **14 46 09.3 +0.2**
SGRT AML AML
comp=N,12250µm,1.3s
SGRT AML AML
comp=E,8830µm,1.0s
ZAPS Zavoj 2.90 52 *e*Pn **Pn** **14 46 13.0 +2.8**
ZAPS *e*Sn **Sb** **14 46 48.5 -2.9**
VTS Vitosha 2.99 68 P **Pn** **14 46 13.8 +2.2**
VTS Vitosha 2.99 68 ⇑*i*P **Pn** **14 46 13.8 +2.2**
SOH Sokhos 3.00 103 *i* Pn **Pn** **14 46 13.6 +2.0**
SVIS Svilajnac 3.00 24 *e*Pn **Pn** **14 46 14.9 +3.3**
TEKS Tekeris 3.01 1 *e*Pn **Pn** **14 46 13.1 +1.4**
TEKS *e*Sn **Sn** **14 46 50.8 +3.7**
ZAGS Zajecar 3.04 41 *e*Pn **Pn** **14 46 14.4 +2.3**
ZAGS *e*Sn **Sn** **14 46 50.7 +2.9**
STN3 Satriano di Lu 3.08 252 AML AML
STN3 AML AML
PLNA Plana 3.08 71 P **Pn** **14 46 15.5 +2.8**
SOF Sofia 3.10 67 P **Pn** **14 46 16.2 +3.2**
BLSH Balsha 3.11 64 P **Pn** **14 46 15.8 +2.7**
SRS Serrai 3.12 96 *i* Pn **Pn** **14 46 15.2 +2.0**
SRS *i* Sn **Sn** **14 46 50.8 +1.1**
BLKB Belogradchik 3.14 47 ⇑S **Sb** **14 46 55.3 -3.0**
TIP Timpagrande 3.15 222 **Pn** **14 46 13.6 -0.1**
TIP Timpagrande 3.15 222 ⇓P **Pn** **14 46 14.2 +0.5**
BORS2 Bor- Borsko je 3.15 35 *e*Pn **Pn** **14 46 14.3 +0.6**
BORS2 *e*Sn **Sn** **14 46 51.8 +1.1**
CUC Castrocucco 3.19 242 Pn **Pn** **14 46 15.4 +1.1**
CUC Castrocucco 3.19 242 **Pn** **14 46 14.3 +0.1**
MMB Musomishta 3.20 88 P **Pn** **14 46 16.7 +2.4**
MMB Musomishta 3.20 88 *i* Pn **Pn** **14 46 16.5 +2.2**
AVAS Avala Beograd 3.24 13 *e*Pn **Pn** **14 46 16.1 +1.2**
AVAS *e*Sn **Sn** **14 46 55.6 +2.7**
KUBS Kucevo 3.29 28 *e*Pn **Pn** **14 46 16.0 +0.5**
KUBS *e*Sn **Sn** **14 46 56.6 +2.6**
BEO Beograd 3.35 12 *e*Pn **Pn** **14 46 17.4 +1.1**
VALD Valchedram 3.62 52 *e*P **Pn** **14 46 22.7 +2.7**
PGB Panagyurishte 3.62 73 ⇑*i*P **Pn** **14 46 23.3 +3.2**
FRGS Fruska Gora 3.62 4 *e*Pn **Pn** **14 46 21.3 +1.1**
BLY Banja Luka 3.62 333 ⇓*i*Pn **Pn** **14 46 21.9 +1.8**
BLY *e*Sn **Sn** **14 47 04.4 +2.2**
BLY Banja Luka 3.62 333 ⇑P **Pn** **14 46 22.2 +2.0**
BLY Banja Luka 3.62 333 *e*Pn **Pn** **14 46 22.8 +2.7**
BLY *e*Sn **Sn** **14 47 04.3 +2.1**
MDVR Moldovita 3.62 26 ⇑P **Pn** **14 46 22.4 +2.2**
MPEP Malo Peshtene 3.63 59 P **Pn** **14 46 22.9 +2.7**
PUNG Punghina 3.73 42 ⇓P **Pn** **14 46 24.1 +2.5**
PTRJ Pietraroja 3.73 269 AML AML
comp=E,8250µm,0.7s
PTRJ AML AML
comp=E,22µm,1.0s
PTRJ AML AML
comp=N,5835µm,1.1s
PTRJ AML AML
comp=N,4885µm,0.8s
BAIL Bailesti 3.77 48 ⇑P **Pn** **14 46 24.8 +2.8**
VRSS Vrsac 3.82 20 *e*Pn **Pn** **14 46 24.0 +1.1**
VRSS *e*Sn **Sn** **14 47 08.3 +1.1**
DJES Djerdap 3.83 34 ⇑P **Pn** **14 46 25.3 +2.3**
DJES ⇑S **Sn** **14 47 10.8 +3.4**
DJES Djerdap 3.83 34 *e*Pn **Pn** **14 46 24.8 +1.8**
DJES *e*Sn **Sn** **14 47 08.8 +1.4**
RMGR Halanga-Turnu 3.90 36 ⇑P **Pn** **14 46 27.8 +3.9**
RZN Rozhen 3.94 86 ⇑*i*P **Pn** **14 46 27.5 +2.9**
RZN S **Sn** **14 47 15.9 +5.7**
HERR Herculane 3.96 32 ⇓P **Pn** **14 46 27.0 +2.2**
PLD Plovdiv 3.97 79 *e*P **Pn** **14 46 27.8 +2.8**
PLD Plovdiv 3.97 79 ⇑P **Pn** **14 46 27.7 +2.8**
PLD Plovdiv 3.97 79 *i* Pn **Pn** **14 46 27.8 +2.8**
BANR Banloc 4.02 17 ⇓P **Pn** **14 46 28.6 +3.0**
SRE Strehaia 4.14 40 ⇓P **Pn** **14 46 30.2 +3.0**
SRE Strehaia 4.14 40 P **Pn** **14 46 29.6 +2.4**
CRAR CRAIOVA 4.21 47 ⇓P **Pn** **14 46 30.8 +2.6**
CRAR CRAIOVA 4.21 47 P **Pn** **14 46 30.8 +2.6**
PLVB Pleven 4.22 62 ⇓P **Pn** **14 46 31.5 +3.2**
CEL Celeste 4.29 221 **Pn** **14 46 29.0 -0.3**
BZS Buzias 4.36 20 *e*P **Pn** **14 46 31.3 +1.1**
BZS Buzias 4.36 20 ⇑P **Pn** **14 46 32.1 +1.9**
VLAD Vladila 4.37 54 ⇓P **Pn** **14 46 33.9 +3.5**
KDZ Kurdzhali 4.39 87 *e*P **Pn** **14 46 33.2 +2.6**
KDZ Kurdzhali 4.39 87 P **Pn** **14 46 33.1 +2.5**
PVL Pavlikeni 4.50 68 P **Pn** **14 46 35.3 +3.1**
GZR Gura Zlata 4.53 31 ⇑P **Pn** **14 46 35.9 +3.2**
GZR Gura Zlata 4.53 31 P **Pn** **14 46 34.2 +1.5**
RDO Rodhopi 4.57 93 *e*P **Pn** **14 46 35.2 +2.1**
RDO Rodhopi 4.57 93 **Pn** **14 46 35.0 +1.9**
SUBS Subotica 4.57 1 *e*Sn **Sn** **14 47 26.3 +0.7**
DIM Dimitrovgrad 4.58 82 P **Pn** **14 46 35.7 +2.5**

AQU L'Aquila 4.61 282 P **Pn** **14 46 34.9 +1.0**
AQU L'Aquila 4.61 282 ⇓*i*Pn **Pn** **14 46 34.8 +1.0**
AQU *e*Sn **Sn** **14 47 26.4 -0.3**
SURR Surduc 4.63 24 ⇓P **Pn** **14 46 36.0 +2.1**
CAMP Campotosto 4.64 284 **Pn** **14 46 34.9 +0.7**
MORH Mrgy, Hungar 4.71 353 *e*Pn **Pn** **14 46 35.9 +0.8**
MORH *e*Sn **Sn** **14 47 30.3 +1.2**
MORH Mrgy, Hungar 4.71 353 ⇑P **Pn** **14 46 36.5 +1.4**
ITM Ithomi 4.75 156 *e*P **Pn** **14 46 36.9 +1.3**
ITM Ithomi 4.75 156 **Pn** **14 46 36.4 +0.8**
GUMA Gualdo di Mace 4.81 290 **Pn** **14 46 36.9 +0.4**
ZIMR 4.82 62 P **Pn** **14 46 40.2 +3.6**
NRCA Norcia 4.91 287 **Pn** **14 46 38.6 +0.7**
ELND Elena 4.94 77 ⇑P **Pn** **14 46 41.3 +3.1**
COPA Copaceanca 4.94 56 ⇑P **Pn** **14 46 41.5 +3.2**
SIRR Siria 4.98 18 ⇑P **Pn** **14 46 41.2 +2.5**
FDMO Fiordimonte 4.98 290 **Pn** **14 46 39.4 +0.6**
LOT Lotru 4.99 37 ⇓P **Pn** **14 46 42.3 +3.2**
LOT ⇓S **Sn** **14 47 39.9 +3.8**
DEV Deva 5.00 29 ⇑P **Pn** **14 46 41.2 +2.1**
DEV Deva 5.00 29 P **Pn** **14 46 41.1 +2.1**
HUMR Humele 5.01 52 ⇓P **Pn** **14 46 41.9 +2.7**
BOJS Bojanci 5.02 324 *e*Pn **Pn** **14 46 40.4 +1.1**
BOJS *e*Sn **Sn** **14 47 35.2 -1.4**
GADA Gvkgeada 5.04 103 *e*P **Pn** **14 46 41.3 +1.7**
ENEZ Enez 5.09 97 *e*P **Pn** **14 46 42.4 +2.1**
SZH Strazhitsa 5.10 68 P **Pn** **14 46 43.3 +2.9**
CAVK Edirne/Enez-Ca 5.11 97 ⇑P **Pn** **14 46 43.5 +2.9**
STFAR Stefanesti-Arg 5.20 48 ⇑P **Pn** **14 46 45.5 +3.8**
CESX Cesi 5.25 284 **Pn** **14 46 43.2 +0.7**
BOZC Bozcaada 5.27 107 *e*P **Pn** **14 46 44.4 +1.7**
BEHE Becsehely 5.30 339 **Pn** **14 46 44.9 +1.7**
BEHE Becsehely 5.30 339 ⇑*i*Pn **Pn** **14 46 44.9 +1.7**
BEHE *e*Sn **Sn** **14 47 43.7 +0.1**
JMB Yambol 5.33 77 P **Pn** **14 46 45.9 +2.3**
ARR Arges 5.35 43 ⇑P **Pn** **14 46 47.1 +3.1**
ERIK Erikli-Kesan 5.38 97 *e*P **Pn** **14 46 46.3 +2.1**
TNR Turnu Rosu 5.38 39 ⇑P **Pn** **14 46 47.5 +3.2**
TNR Turnu Rosu 5.38 39 P **Pn** **14 46 47.5 +3.2**
SIGR SIGRI 5.39 113 *e*P **Pn** 14 46 49.2 +4.8
UKOP Uzunkopru-Edir 5.39 92 *e*P **Pn** **14 46 47.5 +3.1**
GELI Tayfur-Gelibol 5.41 100 *e*P **Pn** **14 46 46.8 +2.2**
MURB Monte Urbino 5.44 291 **Pn** **14 46 45.8 +0.7**
EDRB Edirne 5.44 84 *e*P **Pn** **14 46 47.5 +2.4**
SGRR Singureni 5.47 58 ⇑P **Pn** **14 46 48.8 +3.4**
EZN Ezine 5.47 106 *e*P **Pn** **14 46 47.5 +2.0**
EZN Ezine 5.47 106 ⇑P **Pn** **14 46 48.0 +2.4**
EZN Ezine 5.47 106 P **Pn** **14 46 47.9 +2.4**
MTUR Matau 5.48 46 ⇑P **Pn** **14 46 49.1 +3.4**
MTUR Matau 5.48 46 P **Pn** **14 46 49.1 +3.4**
COMU Canakkale 5.49 103 *e*P **Pn** **14 46 48.3 +2.5**
LOZB Loznitsa 5.56 68 ⇓P **Pn** **14 46 50.2 +3.4**
RAZG Razgrad 5.56 66 ⇓P **Pn** **14 46 49.8 +3.0**
VOIR 5.61 44 ⇑P **Pn** **14 46 50.3 +2.8**
VOIR 5.61 44 P **Pn** **14 46 50.3 +2.8**
LPK Lapseki 5.63 100 *e*P **Pn** **14 46 50.0 +2.4**
VAE Valguarnera 5.64 226 Pn **Pn** **14 46 51.0 +3.0**
comp=N,4.4nm,0.3s,baz=44,slow=1.5,SNR=9.0
VAE Sn **Sn** **14 47 55.3 +3.2**
comp=N,5.1nm,0.3s,baz=73,slow=22,SNR=5.2
DRGR 5.74 23 *e*P **Pn** **14 46 50.9 +1.7**
DRGR 5.74 23 ⇓P **Pn** **14 46 51.4 +2.1**
DRGR 5.74 23 P **Pn** **14 46 51.3 +2.1**
LJU Ljubljana 5.76 323 *i* Pn **Pn** **14 46 50.3 +0.8**
LJU *e*Sn **Sn** **14 47 55.8 +1.0**
MARR Marisel-Cluj 5.76 26 ⇑P **Pn** **14 46 52.2 +2.6**
BSZH Besenyszg 5.79 5 ⇑P **Pn** **14 46 52.4 +2.6**
BORR Bors 5.79 16 ⇓P **Pn** **14 46 53.2 +3.3**
MDB Medias 5.80 36 ⇓P **Pn** **14 46 54.1 +4.0**
MDB Medias 5.80 36 P **Pn** **14 46 54.0 +4.0**
PLAR PLOIESTI 5.84 53 ⇑P **Pn** **14 46 54.0 +3.3**
SULR 5.86 55 ⇑P **Pn** **14 46 54.5 +3.7**
RAFF Raffo Rosso 5.86 224 **Pn** **14 46 50.0 -0.9**
RKY Sarkoy-Tekirda 5.87 96 *e*P **Pn** **14 46 53.6 +2.6**
TRI Trieste 5.88 317 **Pn** **14 46 50.1 -1.1**
TRI Trieste 5.88 317 P **Pn** **14 46 50.1 -1.1**
CANM Can-anakkale 5.94 102 *e*P **Pn** **14 46 54.9 +2.9**
CHOS Chios island 5.94 120 *e*P **Pn** **14 46 54.3 +2.2**
BUD Budapest 5.95 357 *e*Sn **Sn** **14 48 06.9 +7.3**
CJR Cluj-Napoca 5.96 28 ⇓P **Pn** **14 46 55.5 +3.3**
CJR Cluj-Napoca 5.96 28 P **Pn** **14 46 55.5 +3.3**
CBBR Cluj-Babes-Bol 5.99 28 ⇓P **Pn** **14 46 56.3 +3.7**
NEF NEVSHA 6.01 71 P **Pn** **14 46 56.1 +3.1**
KRBG Karabiga-Canak 6.02 98 *e*P **Pn** **14 46 55.6 +2.6**
PHSR Pinarhisar 6.02 86 ⇓P **Pn** **14 46 55.9 +2.7**
SOKA Soboth 6.06 330 *i* Pn **Pn** **14 46 54.4 +0.7**
comp=N,167nm,0.7s,SNR=72
SOKA *e*Sn **Sn** **14 48 00.7 -1.5**
comp=N,347nm,0.9s
YAYO Edremit-Balk 6.08 106 *e*P **Pn** **14 46 56.7 +2.8**
LTVH Ltavrtes, Hu 6.09 16 ⇓P **Pn** **14 46 57.2 +3.2**
OBKA Obir 6.11 326 *e*Pn **Pn** **14 46 55.9 +1.5**
comp=N,104nm,0.4s,SNR=37
OBKA *e*Sn **Sn** **14 48 05.6 +1.9**
comp=N,420nm,0.5s
LEHL Lehliu 6.12 59 ⇑P **Pn** **14 46 57.7 +3.3**
MLR Muntele Rosu 6.13 48 Pn **Pn** **14 46 57.6 +2.9**
comp=N,70nm,0.3s,baz=222,slow=5.8,SNR=238
MLR Sn **Sn** **14 48 04.8 +0.6**
comp=N,13nm,0.3s,baz=188,slow=13,SNR=3.4
MLR LR LR 14 50 24.8
comp=N,8µm,19.2s,baz=228,slow=49
MLR Muntele Rosu 6.13 48 *e*P **Pn** **14 46 58.4 +3.7**
MLR Muntele Rosu 6.13 48 P **Pn** **14 46 56.2 +1.5**
MLR Muntele Rosu 6.13 48 ⇓P **Pn** **14 46 58.1 +3.4**
MLR Muntele Rosu 6.13 48 *e*Pn **Pn** **14 46 58.2 +3.4**
CICN Ciocanesti 6.14 62 ⇑P **Pn** **14 46 58.5 +3.8**
DOPR Dopca 6.15 42 ⇓P **Pn** **14 46 57.2 +2.3**
SABO M.te Sabotino 6.16 318 **Pn** **14 46 55.1 +0.1**
TGMR Targu Mures 6.17 34 ⇓P **Pn** **14 46 58.7 +3.6**
DKL Dikili 6.18 111 *e*P **Pn** **14 46 57.9 +2.7**
CRLT Corlu 6.22 91 *e*P **Pn** 14 47 02.6 +6.8
ISR Istrita 6.26 53 ⇓P **Pn** **14 46 59.8 +3.4**
ISR Istrita 6.26 53 P **Pn** **14 46 59.8 +3.4**
NEHR Nehoiu 6.29 50 ⇓P **Pn** **14 47 00.3 +3.5**
URLA Izmir 6.31 118 *e*P **Pn** **14 46 59.3 +2.2**
SRO Srobarova 6.33 353 *e*PN **Pn** 14 47 05.3 +8.0
SRO *e*SG **Sb** 14 48 42.0 +12
ARSA Arzberg 6.38 335 **Pn** **14 46 58.9 +0.9**
ARSA Arzberg 6.38 335 *i* Pn **Pn** **14 46 59.3 +1.3**
comp=N,224nm,0.8s,SNR=46
PSZ Piszkesteto 6.38 2 **Pn** **14 46 58.1 0.0**
PSZ Piszkesteto 6.38 2 P **Pn** **14 46 58.1 0.0**
PSZ Piszkesteto 6.38 2 *e*Sn **Sn** **14 48 13.7 +3.4**
OSSC Osservatorio P 6.41 291 **Pn** **14 46 58.4 +0.1**
PGOR Pogoanele 6.43 56 ⇓P **Pn** **14 47 02.2 +3.6**
OZUR 6.44 43 ⇓P **Pn** **14 47 01.9 +3.0**
APE Apeiranthos 6.47 132 *e*P **Pn** **14 47 00.4 +1.1**
APE Apeiranthos 6.47 132 *i* P **Pn** **14 46 59.4 +0.1**
COVR Voineasa-Covas 6.50 46 ⇓P **Pn** **14 47 03.3 +3.7**
AMRR Amara 6.51 59 ⇑P **Pn** **14 47 03.7 +3.9**
AMRR Amara 6.51 59 P **Pn** **14 47 03.7 +3.9**
TURR Turia 6.53 44 ⇓P **Pn** **14 47 03.2 +3.1**
CASP Castiglione de 6.53 284 **Pn** **14 46 59.0 -1.1**
RONA Rosalia, Austr 6.57 341 *i* Pn **Pn** **14 47 01.7 +1.1**
comp=N,421nm,1.0s,SNR=27
SOMA Soma-Manisa 6.59 109 *e*P **Pn** **14 47 03.8 +2.9**
BISRR Bisoca 6.60 50 ⇓P **Pn** **14 47 04.7 +3.6**
BLCB Balcova 6.60 116 *e*P **Pn** **14 47 03.4 +2.4**
MYKA Terra Mystica 6.60 322 *i* Pn **Pn** **14 47 01.5 +0.4**
comp=N,127nm,0.9s,SNR=31
CTYL Yalikoy Yolu 6.61 88 *e*P **Pn** **14 47 05.5 +4.4**
CTYL Yalikoy Yolu 6.61 88 ⇓P **Pn** **14 47 05.3 +4.2**
BAND Balkesir-Ban 6.62 97 ⇑P **Pn** **14 47 04.3 +2.9**
ICOR Ion Corvin 6.63 64 ⇑P **Pn** **14 47 04.7 +3.3**
BALB Balikesir 6.66 104 *e*P **Pn** **14 47 04.7 +2.9**
BALB Balikesir 6.66 104 **Pn** **14 47 04.0 +2.2**
SUSR Susurluk-Balik 6.71 101 *e*P **Pn** **14 47 05.4 +2.8**
PSN Preselentsi 6.72 69 P **Pn** **14 47 05.4 +2.8**
PLOR Plostina 6.74 48 ⇓P **Pn** **14 47 06.3 +3.2**
PLOR Plostina 6.74 48 P **Pn** **14 47 06.2 +3.2**
VRI Vrincioaia 6.80 48 *e*P **Pn** **14 47 06.6 +2.8**
VRI Vrincioaia 6.80 48 ⇑P **Pn** **14 47 06.6 +2.8**
VRI Vrincioaia 6.80 48 P **Pn** **14 47 06.5 +2.8**
STAL STALIGIAL 6.80 316 **Pn** **14 47 03.1 -0.7**
RODP Rodopos 6.84 149 *e*P **Pb** 14 47 15.9 -7.6
ZCCA Zocca 6.85 297 **Pn** **14 47 05.3 +0.8**
TEOL Teolo 6.85 306 **Pn** **14 47 03.4 -1.1**
KALB Balgarevo 6.86 71 ⇓P **Pn** **14 47 08.4 +3.8**
CVDA Cernavoda 6.87 63 ⇓P **Pn** **14 47 08.4 +3.8**

CONA Conrad Observa 6.89 339 *i* Pn **Pn** **14 47 07.6 +2.5**
comp=N,77nm,0.7s,SNR=16
WDD Wied Dalam 6.89 216 **Pn** **14 47 03.6 -1.4**
ONER Baraj Valea Uz 6.91 44 ⇓P **Pn** **14 47 08.2 +2.9**
TLBR Topalu 6.95 62 ⇑P **Pn** **14 47 09.4 +3.6**
KECS Kecovo 6.98 5 *e*P **Pn** **14 47 08.2 +2.0**
KECS Kecovo 6.98 5 *e*PN **Pn** **14 47 08.2 +2.0**
KECS *e*PG **Pb** 14 47 39.2 +13
KECS *e*SN **Sn** 14 48 13.9 -11
MODS Modra-Piesok 7.01 348 *e*P **Pn** **14 47 09.2 +2.5**
MODS Modra-Piesok 7.01 348 *e*PN **Pn** **14 47 09.2 +2.5**
MODS *e*PG **Pb** 14 47 36.4 +10
MODS *e*SN **Sn** 14 48 07.2 -18
PANC Panciu 7.04 49 ⇓P **Pn** **14 47 10.9 +3.9**
MFTR Murfatlar 7.07 65 ⇑P **Pn** **14 47 10.9 +3.5**
KBA Koelnbreinsper 7.08 324 *e*Pn **Pn** **14 47 08.4 +0.7**
comp=N,148nm,0.7s,SNR=68
KBA *e*Sn **Sn** **14 48 28.4 +0.8**
comp=N,192nm,0.8s
MANR Mangalia 7.08 68 ⇑P **Pn** **14 47 11.2 +3.6**
TSMN Mangalia Port- 7.08 68 ⇓P **Pn** **14 47 11.3 +3.7**
GCAM G?zelcaml? 7.10 120 *e*P **Pn** **14 47 10.4 +2.5**
COSR Cosmesti PH 7.12 50 ⇑P **Pn** **14 47 11.4 +3.3**
SMOL Smolenice 7.12 349 *e*P Pn 14 47 15.5 +7.3
TIRR Tirgusor 7.16 63 *e*P **Pn** **14 47 10.6 +1.9**
TIRR Tirgusor 7.16 63 **Pn** **14 47 10.6 +1.3**
TIRR Tirgusor 7.16 63 ⇓P **Pn** **14 47 11.5 +2.8**
TIRR Tirgusor 7.16 63 P **Pn** **14 47 11.4 +2.8**
TIRR Tirgusor 7.16 63 *e*Pn **Pn** **14 47 11.1 +2.4**
TESR Tescani 7.16 44 ⇑P **Pn** **14 47 11.8 +3.1**
VLC Villacollemand 7.18 294 P **Pn** **14 47 08.6 -0.5**
ISK Istanbul-Kandi 7.22 91 *e*P **Pn** **14 47 12.7 +3.2**
TSCT Constanta Port 7.23 66 ⇓P **Pn** **14 47 13.6 +4.0**
ABTA Abfaltersbach 7.23 318 *i* Pn **Pn** **14 47 10.1 +0.4**
comp=N,31nm,0.3s,SNR=31
ABTA *e*Sn **Sn** **14 48 34.4 +3.2**
comp=N,613nm,0.8s
SCHL Schela 7.24 54 ⇑P **Pn** **14 47 13.0 +3.2**
CTI Castel Tesino 7.24 311 **Pn** **14 47 08.9 -1.0**
CTI Castel Tesino 7.24 311 P **Pn** **14 47 08.9 -1.0**
CFR Carcaliu 7.27 57 ⇑P **Pn** **14 47 12.9 +2.7**
CFR Carcaliu 7.27 57 P **Pn** **14 47 12.9 +2.7**
NEGRR Negrea 7.29 54 ⇓P **Pn** **14 47 13.6 +3.2**
GHRR 7.29 49 ⇓P **Pn** **14 47 14.7 +4.1**
TPGR Topolog 7.32 60 ⇑P **Pn** **14 47 13.4 +2.5**
BURAR Bucovina Array 7.32 32 **Pn** **14 47 11.9 +0.9**
BURAR Bucovina Array 7.32 32 ⇑P **Pn** **14 47 15.1 +4.1**
BURAR Bucovina Array 7.32 32 P **Pn** **14 47 15.0 +4.1**
MOA Molln 7.32 331 *e*Pn **Pn** **14 47 13.5 +2.6**
comp=N,56nm,0.4s,SNR=57
BUR08 Bucovina Ar. S 7.34 32 **Pn** **14 47 10.7 -0.5**
ODEM Odemis-Izmir 7.36 113 *e*P **Pn** **14 47 14.4 +2.9**
AYDB Zeytinkoy-Aydi 7.40 116 *e*P **Pn** **14 47 14.7 +2.6**
TATR Tatarca 7.42 54 ⇑P **Pn** **14 47 14.9 +2.6**
SCTR Scanteiesti 7.43 53 ⇓P **Pn** **14 47 15.7 +3.3**
BIOA Bad Ischl, Aus 7.43 328 *i* Pn **Pn** **14 47 13.7 +1.3**
comp=N,115nm,0.4s,SNR=70
JAVC Velka Javorina 7.43 351 *e*PN **Pn** **14 47 14.5 +2.0**
PRMA PARMA 7.44 299 **Pn** **14 47 12.6 +0.1**
BODT Bodrum 7.53 124 *e*P **Pn** **14 47 17.9 +4.1**
YLV Yalova 7.53 94 *e*P **Pn** **14 47 15.3 +1.4**
BIR Birlad 7.54 48 ⇑P **Pn** **14 47 17.4 +3.6**
BIR Birlad 7.54 48 P **Pn** **14 47 17.4 +3.6**
IDI Anoyia 7.54 144 P **Pn** **14 47 12.9 -1.1**
IDI Anoyia 7.54 144 Pn **Pn** **14 47 14.0 0.0**
comp=N,22nm,0.6s,baz=2.1,slow=8.9,SNR=20
IDI Sn **Sn** **14 48 35.1 -3.8**
comp=N,24nm,0.3s,baz=78,slow=21,SNR=7.2
IDI LR LR 14 51 11.8
comp=N,6µm,18.4s,baz=340,slow=46
IDI Anoyia 7.54 144 **Pn** **14 47 13.2 -0.8**
IDI **Sn** **14 48 34.4 -4.5**
VLDR Vladesti 7.57 52 ⇓P **Pn** **14 47 18.2 +4.0**
JURR Jurilovca 7.58 62 ⇓P **Pn** **14 47 17.4 +2.9**
MANT Manisa 7.59 111 **Pn** **14 47 15.7 +0.8**
LANS Liptovska Anna 7.61 360 *e*P **Pn** **14 47 19.3 +4.4**
LANS Liptovska Anna 7.61 360 *e*PN **Pn** **14 47 19.3 +4.4**
LANS *e*PG **Pb** 14 47 50.0 +13
LESA Schwarzleotal 7.64 323 *i* Pn **Pn** **14 47 16.2 +0.8**
comp=N,208nm,0.7s,SNR=72
LESA *e*Sn **Sn** **14 48 39.9 -1.3**
comp=N,146nm,0.5s
SIMA Simav-Kutahya 7.66 106 *e*P **Pn** **14 47 18.9 +3.3**
KULA Kula-Manisa 7.66 110 *e*P **Pn** **14 47 18.6 +3.0**
NAZL Nazilli-Aydin 7.66 115 *e*P **Pn** **14 47 19.2 +3.6**
MLSB Milas 7.69 121 *e*P **Pn** **14 47 16.6 +0.6**
TLCR 7.71 59 ⇓P **Pn** **14 47 20.0 +3.8**
TLCR 7.71 59 P **Pn** **14 47 20.0 +3.8**
HRT Hereke 7.71 92 *e*P **Pn** **14 47 18.5 +2.2**
MSSA Maissana 7.83 294 **Pn** **14 47 17.5 -0.5**
KRUC Moravsky 7.83 345 *e*PN **Pn** **14 47 18.5 +0.6**
KRUC *e*SN **Sn** **14 48 44.7 -1.1**
KRUC Moravsky 7.83 345 *e*Sn **Sn** **14 48 43.6 -2.2**
VASR Vaslui 7.85 47 ⇑P **Pn** **14 47 21.4 +3.3**
TVSB Tavsanli 7.88 102 *e*P **Pn** **14 47 22.2 +3.5**
NIE Niedzica 7.90 4 *e*P **Pn** **14 47 21.7 +2.8**
NIE Niedzica 7.90 4 *e*Pn **Pn** **14 47 22.6 +3.7**
NIE *e*Sn **Sn** **14 48 56.7 +9.1**
MAUC Maruska 7.91 352 *e*PN **Pn** **14 47 21.9 +2.9**
VSL Villasalto 7.97 258 **Pn** **14 47 18.9 -0.9**
STHS Stebnicka Huta 7.97 8 *e*P **Pn** **14 47 22.0 +2.1**
STHS Stebnicka Huta 7.97 8 *e*PN **Pn** **14 47 22.0 +2.1**
WTTA Wattenberg 8.02 318 *e*Pn **Pn** **14 47 21.9 +1.2**
comp=N,145nm,0.7s,SNR=42
WTTA *e*Sn **Sn** **14 48 53.1 +2.3**
comp=N,413nm,0.6s
VRAC Vranov 8.03 346 Pn **Pn** **14 47 22.2 +1.6**
comp=N,1.3nm,0.3s,baz=159,slow=13,SNR=21
VRAC Sn **Sn** **14 48 52.1 +1.4**
comp=N,2.4nm,0.3s,baz=331,slow=4.9,SNR=4.1
comp=N,13nm,0.7s
VRAC Vranov 8.03 346 ⇑P **Pn** **14 47 22.9 +2.3**
VRAC Vranov 8.03 346 *e*PN **Pn** **14 47 21.7 +1.1**
VRAC *e*SN **Sn** **14 48 53.9 +3.1**
WATA Walderalm 8.10 318 *i* Pn **Pn** **14 47 23.0 +1.3**
comp=N,208nm,0.7s,SNR=46
WATA *e*Sn **Sn** **14 48 53.2 +0.5**
comp=N,199nm,0.5s
YER Yerkesik 8.11 120 *e*P Pn 14 47 26.7 +4.9
CKRC Cesky Krumlov 8.15 335 *e*P **Pn** **14 47 24.0 +1.8**
CKRC MLR MLR
comp=Z,10µm,12.9s
CKRC Cesky Krumlov 8.15 335 *e*PN **Pn** **14 47 24.0 +1.8**
CKRC AMS AMS 14 50 40.0
comp=Z,10µm,12.9s
CKRC Cesky Krumlov 8.15 335 *e*Pn **Pn** **14 47 23.6 +1.4**
CKRC *e*Sg **Sb** 14 49 52.8 +31
SQTA Sankt Quirin 8.21 317 *i* Pn **Pn** **14 47 24.5 +1.3**
comp=Z,112nm,0.4s,SNR=43
SQTA *e*Sn **Sn** **14 48 56.4 +1.0**
comp=Z,312nm,0.6s
TREC Trest 8.25 341 *e*P **Pn** **14 47 26.3 +2.6**
TREC MLR MLR
comp=Z,11µm,16.9s
TREC Trest 8.25 341 *e*PN **Pn** **14 47 26.3 +2.6**
TREC AMS AMS 14 50 50.0
comp=Z,11µm,16.9s
TREC Trest 8.25 341 *e*Sg **Sb** 14 49 51.6 +27
FETA Feichten 8.34 314 *e*Pn **Pn** **14 47 25.9 +0.9**
comp=Z,42nm,0.7s,SNR=17
FETA *e*Sn **Sn** **14 48 59.1 +0.6**
comp=Z,209nm,0.7s
MOTA Moosalm 8.35 317 *i* Pn **Pn** **14 47 25.9 +0.8**
comp=Z,190nm,0.8s,SN

comp=Z,1.8nm,0.3s,baz=164,slow=26,SNR=7.5
GERES LR LR 14 51 27.8
comp=Z,6µm,20.7s,baz=144,slow=44
comp=Z,24nm,0.5s
GULT Gulveren 8.41 94 *eP* **Pn 14 47 29.0 +3.0**
KARP Karpathos 8.48 132 **Pn 14 47 27.5 +0.7**
KARP Karpathos 8.48 132 *eP* **Pn 14 47 27.9 +1.1**
BORA Eskisehir 8.49 98 **Pn 14 47 27.6 +0.6**
DALY Dalyan (Mula) 8.53 121 *eP* **Pn 14 47 27.8 +0.3**
ARG Arkhangelos 8.58 125 **Pn 14 47 29.3 +1.2**
ARG Arkhangelos 8.58 125 P **Pn 14 47 29.3 +1.2**
MILM Milestii Mici 8.58 48 ⇑ *iP* **Pn 14 47 29.0 +0.8**
comp=Z,860nm,2.3s
MILM *eS* **Sn 14 49 00.0 -4.2**
MILM *eL* L 14 51 04.0
MILM LRM MLR 14 51 28.0
comp=Z,18µm,14.5s
RETA Reutte 8.61 317 *ePn* **Pn 14 47 29.9 +1.2**
comp=Z,17nm,0.3s,SNR=6.9
RETA *eSn* **Sn 14 49 08.1 +3.0**
comp=Z,83nm,0.4s
KIS Kishinev 8.63 48 *eP* **Pn 14 47 31.0 +2.1**
comp=Z,230nm,0.7s
KHC Kasperske Hory 8.66 333 **Pn 14 47 29.7 +0.5**
KHC Kasperske Hory 8.66 333 *eP* **Pn 14 47 30.3 +1.1**
KHC *e* 14 49 07.1
KHC MLR MLR
comp=Z,12µm,9.1s
KHC Kasperske Hory 8.66 333 *ePN* **Pn 14 47 30.3 +1.1**
KHC *eSN* **Sn 14 49 07.1 +1.0**
KHC AMS AMS 14 51 00.0
comp=Z,12µm,9.1s
KHC Kasperske Hory 8.66 333 *ePn* **Pn 14 47 30.1 +0.9**
KHC *eSg* 14 50 09.0
DAVOX Davos/Dischmat 8.67 310 Pn **Pn 14 47 30.7 +1.1**
comp=Z,16nm,0.3s,baz=131,slow=15,SNR=53
DAVOX Sn **Sn 14 49 06.4 -0.2**
comp=Z,7.8nm,0.3s,baz=147,slow=23,SNR=4.0
DAVOX LR LR 14 51 51.7
comp=Z,6µm,19.2s,baz=114,slow=45
comp=Z,64nm,0.5s
OJC Ojcow 8.68 1 *eP* **Pn 14 47 34.0 +4.4**
OJC Ojcow 8.68 1 **Pn 14 47 31.0 +1.4**
OJC Ojcow 8.68 1 P **Pn 14 47 31.0 +1.4**
KRLC Kraliky 8.74 348 *eP* **Pn 14 47 33.7 +3.3**
KRLC MLR MLR
comp=Z,25µm,12.7s
KRLC Kraliky 8.74 348 *ePN* **Pn 14 47 33.7 +3.3**
KRLC AMS AMS 14 51 30.0
comp=Z,25µm,12.7s
TUE Stuetta 8.81 307 **Pn 14 47 31.4 -0.1**
WET Wettzell 8.91 331 *ePn* **Pn 14 47 33.1 +0.3**
DAVA Damuels 8.96 313 *ePn* **Pn 14 47 35.2 +1.7**
comp=Z,46nm,0.6s,SNR=22
DAVA *eSn* **Sn 14 49 16.0 +2.3**
comp=Z,325nm,0.6s
SHUT Suhut-Afyon 8.99 106 *eP* **Pn 14 47 37.9 +4.0**
UBR Ueberruh 9.08 316 *ePn* **Pn 14 47 35.1 +0.1**
DPC Dobruska-Polom 9.08 347 *eP* **Pn 14 47 38.1 +3.0**
DPC MLR MLR
comp=Z,24µm,12.3s
DPC Dobruska-Polom 9.08 347 *ePN* **Pn 14 47 38.1 +3.0**
DPC AMS AMS 14 51 40.0
comp=Z,24µm,12.3s
CIFT Cifteler, Eski 9.09 100 *eP* **Pn 14 47 38.5 +3.3**
SORM Soroca 9.11 41 ⇓ *P* **Pn 14 47 38.4 +3.0**
SORM Soroca 9.11 41 P **Pn 14 47 38.4 +3.0**
PRU Pruhonice 9.13 339 *eP* **Pn 14 47 38.1 +2.4**
PRU MLR MLR
comp=Z,8µm,19.2s
PRU Pruhonice 9.13 339 *ePN* **Pn 14 47 38.1 +2.4**
PRU AMS AMS 14 51 20.0
comp=Z,8µm,19.2s
PRU Pruhonice 9.13 339 *ePn* **Pn 14 47 38.0 +2.3**
PRA Prague 9.23 339 *eP* **Pn 14 47 39.4 +2.3**
PRA MLR MLR
comp=Z,8µm,19.6s
PRA Prague 9.23 339 *ePN* **Pn 14 47 39.4 +2.3**
PRA AMS AMS 14 51 20.0
comp=Z,8µm,19.6s
ISP Isparta 9.28 110 **Pn 14 47 39.5 +1.7**
ISP Isparta 9.28 110 *ceP* **Pn 14 47 39.8 +1.9**
ISP pmax pmax
comp=Z,115nm,1.7s
UPC Upice 9.29 346 *eP* **Pn 14 47 40.1 +2.2**
UPC MLR MLR
comp=Z,22µm,10.9s
UPC Upice 9.29 346 *ePN* **Pn 14 47 40.1 +2.2**
UPC AMS AMS 14 52 00.0
comp=Z,22µm,10.9s
BLVD Bolvadin-AFYON 9.30 103 *eP* **Pn 14 47 41.9 +3.8**
YUVA Yuva-Kibriscik 9.30 93 *eP* **Pn 14 47 41.7 +3.6**
OSTC Ostas 9.30 347 AMS AMS 14 52 00.0
comp=Z,24µm,12.3s
CHVC Chvalec 9.36 346 AMS AMS 14 52 00.0
comp=Z,22µm,11.7s
AKAS Kas 9.50 121 **Pn 14 47 43.2 +2.3**
KORT Korkueli 9.56 115 *eP* Pn 14 47 46.9 +5.1
PVCC Panska Ves 9.62 341 *eP* **Pn 14 47 44.2 +1.8**
PVCC MLR MLR
comp=Z,8µm,16.7s
PVCC Panska Ves 9.62 341 *ePN* **Pn 14 47 44.2 +1.8**
PVCC AMS AMS 14 51 40.0
comp=Z,8µm,16.7s
ROTZ Rotzenmuhle 9.68 331 *ePn* **Pn 14 47 42.8 -0.4**
RICC Richard 9.75 339 AMS AMS 14 51 50.0
comp=Z,6µm,15.8s
KEST Kesra 9.82 237 Pn **Pn 14 47 45.8 +0.5**
comp=Z,0.9nm,0.3s,baz=2.4,slow=3.9,SNR=21
KEST LR LR 14 52 44.7
comp=Z,14µm,18.8s,baz=60,slow=45
comp=Z,20nm,0.9s
HSKC Hora Svate Kat 9.99 337 *ePN* **Pn 14 47 49.4 +1.8**
HSKC AMS AMS 14 51 50.0
comp=Z,10µm,10.6s
SENIN Lac Senin/Sane 10.02 303 **Pn 14 47 48.0 -0.2**
TANN Tannenbergstha 10.13 334 *ePn* **Pn 14 47 51.2 +1.8**
STU Stuttgart 10.25 318 **Pn 14 47 51.0 0.0**
STU Stuttgart 10.25 318 *eP* **Pn 14 47 51.4 +0.3**
STU Stuttgart 10.25 318 P **Pn 14 47 51.0 0.0**
BEL Belsk 10.34 4 *eP* **Pn 14 47 55.5 +3.3**
SEYD Seydisehir-KON 10.40 109 *eP* Pn 14 47 58.2 +5.0
BFO Black Forest 10.42 314 **Pn 14 47 52.2 -1.2**
BFO Black Forest 10.42 314 P **Pn 14 47 52.2 -1.2**
BFO Black Forest 10.42 314 *ePn* **Pn 14 47 52.5 -0.9**
LADK Ladik-KONYA 10.44 104 *eP* **Pn 14 47 57.5 +3.7**
MOX Moxa 10.62 332 *ePn* **Pn 14 47 56.2 +0.1**
ILGA Ilgaz 10.72 88 **Pn 14 47 58.5 +0.8**
CLL Collm 10.74 338 *eP* **Pn 14 48 00.0 +2.3**
CLL Collm 10.74 338 *ePn* **Pn 14 47 59.0 +1.3**
CLL *eSn* Sn 14 49 41.0 -16
CLL *ex* x 14 50 08.0
CLL *ex* x 14 50 24.0
CLL *eSb* 14 50 32.0
CLL *ex* x 14 50 47.0
CLL AMS AMS 14 51 00.0
comp=N,6µm,18.4s
CLL AMS AMS 14 51 00.0
comp=E,12µm,18.7s
CLL *eSg* 14 51 06.0
CLL AMS AMS 14 52 00.0
CLL AMS AMS 14 52 00.0
comp=Z,6µm,18.5s
R9F13 Warsaw-Wawer 10.74 5 *eP* **Pn 14 48 02.0 +4.2**
R9F13 *eS* Sn 14 49 37.0 -20
R9F13 *eSn* Sn 14 50 04.9 +7.7
BR131 Keskin Array S 10.91 95 *eP* **Pn 14 48 01.0 +0.8**
BRTR Keskin Array B 10.91 95 Pn **Pn 14 48 01.9 +1.7**
comp=Z,0.5nm,0.3s,baz=277,slow=10,SNR=16
BRTR LR LR 14 53 06.4
comp=Z,12µm,18.9s,baz=287,slow=43
comp=Z,3.9nm,0.7s
BRTR Keskin Array B 10.91 95 **Pn 14 48 01.5 +1.3**
BRTR Keskin Array B 10.91 95 *ceP* **Pn 14 48 03.2 +3.0**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
ECH Echery 11.00 312 **Pn 14 48 01.1 -0.2**
ECH Echery 11.00 312 P **Pn 14 48 01.1 -0.2**
SIM Simferopol' 11.20 67 *eP* **Pn 14 48 05.8 +1.8**
SIM *eS* **Sn 14 50 12.9 +4.4**
SIM pmax pmax
comp=Z,47nm,0.8s
SIM smax smax
comp=N,110nm,15.1s
SIM MLR MLR
comp=Z,4µm,14.0s
KIRS Kirsehir-Merke 11.27 98 ⇓ *P* **Pn 14 48 09.4 +4.2**
SULT Sultanhani-AKS 11.28 103 *eP* **Pn 14 48 09.9 +4.6**
KIEV Kiev 11.36 33 ⇓ *eP* **Pn 14 48 09.5 +3.2**
KIEV Kiev 11.36 33 P **Pn 14 48 09.4 +3.2**
AKASG Malin Array Be 11.37 33 Pn **Pn 14 48 07.9 +1.6**
comp=Z,2.3nm,0.3s,baz=225,slow=13,SNR=83
AKASG LR LR 14 53 16.5
comp=Z,4µm,19.5s,baz=213,slow=42
AKASG Malin Array Be 11.37 33 **Pn 14 48 06.2 -0.2**
AKASG Malin Array Be 11.37 33 P **Pn 14 48 06.2 -0.2**
AKBB Malin Array Si 11.37 33 **Pn 14 48 07.5 +1.2**
AKBB Malin Array Si 11.37 33 *ceP* **Pn 14 48 06.9 +0.5**
SSB Saint Sauveur 11.50 294 **Pn 14 48 06.5 -1.7**
SSB Saint Sauveur 11.50 294 P **Pn 14 48 06.5 -1.7**
CORM Corum 11.55 92 *eP* Pn 14 48 16.7 +7.7
YESY Yesilyurt 11.61 104 *eP* Pn 14 48 16.0 +6.2
MAHO Mahon 11.67 267 P **Pn 14 48 12.1 +1.6**
GKP Gorka Klasztor 11.83 353 *eP* **Pn 14 48 15.8 +3.1**
YOZ Yozgat 12.19 94 *eP* **Pn 14 48 21.9 +4.2**
KASTN Kahler Asten 12.31 325 *ePn* **Pn 14 48 20.0 +0.8**
WLF Walferdange 12.37 316 P **Pn 14 48 22.6 +2.7**
WLF Walferdange 12.37 316 **Pn 14 48 19.6 -0.3**
WLF Walferdange 12.37 316 *dP* **Pn 14 48 23.5 +3.6**
WLF Walferdange 12.37 316 P **Pn 14 48 19.6 -0.3**
EJON La Jonquera 12.39 280 P **Pn 14 48 20.4 +0.1**
MERS Mersin 12.55 107 *eP* Pn 14 48 27.5 +4.8
CSS Mathiatis 12.70 117 **Pn 14 48 25.0 +0.4**
SUW Suwalki 12.72 10 *eP* **Pn 14 48 26.6 +1.8**
SUW Suwalki 12.72 10 **Pn 14 48 26.4 +1.7**
SUW Suwalki 12.72 10 *eP* **Pn 14 48 29.4 +4.7**
SUW Suwalki 12.72 10 P **Pn 14 48 26.5 +1.7**
KARA Karaisali 12.77 104 *eP* Pn 14 48 30.4 +4.8
BNN Bunyan 12.79 97 *eP* **Pn 14 48 30.6 +4.6**
BNN Bunyan 12.79 97 **Pn 14 48 26.5 +0.6**
ETOS Mallorca 12.79 268 P **Pn 14 48 28.6 +2.7**
BTNL Ternell 12.94 319 *dP* **Pn 14 48 27.7 -0.1**
BTNL *dS* **Sn 14 50 50.5 -0.6**
TOKT Tokat 12.96 90 *eP* **P 14 48 34.1 -4.5**
MEM Membach 13.02 319 *dP* **Pn 14 48 30.4 +1.6**
RCHB Rochefort 13.14 316 *dP* **Pn 14 48 31.5 +1.0**
BCLA Clavier 13.26 317 *dP* **Pn 14 48 32.9 +0.8**
BCLA *dS* **Sn 14 50 56.4 -2.3**
BGES Gesves 13.35 316 *dP* **Pn 14 48 34.4 +1.1**
BGES *dS* **Sn 14 50 56.4 -4.5**
DOU Dourbes 13.44 315 *dP* **Pn 14 48 34.8 +0.3**
DOU *dS* **Sn 14 50 59.2 -4.0**
BMRD Maredsous 13.46 316 *dP* **Pn 14 48 36.2 +1.3**
ANN Anapa 13.49 70 *eP* **Pn 14 48 32.1 -3.3**
ANN *eS* **Sn 14 51 03.3 -1.3**
ANN pmax pmax
comp=Z,72nm,1.2s
ANN MLR MLR
comp=Z,4µm,14.0s
KMRS Kahramanmaras 14.03 101 *eP* **P 14 48 46.9 -3.6**
MNK Minsk 14.12 20 *i P* **Pn 14 48 41.7 -2.1**
comp=E,217nm,1.1s
MNK *i* P **Pn 14 48 41.7 -2.1**
comp=N,32nm,1.0s
MNK *i* P **Pn 14 48 41.7 -2.1**
comp=Z,151nm,1.1s,baz=206
MNK *i* PP **P 14 48 49.6 -1.7**
MNK *i* PPP PPP 14 48 57.2
MNK *i* S **Sn 14 51 18.7 -1.0**
MNK *i* SS **SnSn 14 51 32.3 +0.2**
MNK *i* SSS SSS 14 51 44.8
MNK *i* LQ LQ 14 52 48.8
MNK *i* LR LR 14 53 52.9
MNK *i* LRM MLR 14 54 40.3
comp=E,9µm,16.7s
MNK *i* LRM MLR 14 54 40.3
comp=N,3µm,16.4s
MNK *i* LRM MLR 14 54 40.3
comp=Z,11µm,16.6s
MNK Minsk 14.12 20 *i P* **Pn 14 48 41.7 -2.1**
MNK *i* S **Sn 14 51 18.7 -1.0**
MNK pmax pmax
comp=Z,151nm,1.1s
MNK pmax pmax
comp=N,32nm,1.0s
MNK pmax pmax
comp=E,217nm,1.1s
MNK MLR MLR
comp=Z,11µm,17.0s
MNK MLR MLR
comp=E,9µm,17.0s
MNK MLR MLR
comp=N,3µm,16.0s
NACGM Naroch 14.22 17 ⇓ *iP* **Pn 14 48 47.0 +1.8**
comp=Z,69nm,0.9s,baz=203
PABE Paberze 14.28 10 **Pn 14 48 46.0 -0.1**
PABE Paberze 14.28 10 *eP* **Pn 14 48 48.7 +2.6**
LUNU Lund 14.65 346 *i P* **P 14 48 56.9 -0.3**
ISAL Salakas 14.70 15 *eP* **Pn 14 48 54.5 +2.7**
VSVD Vaisvydziai 14.74 10 *eP* **P 14 48 57.3 -0.9**
SOC Sochi 15.04 75 *eP* **Pn 14 48 57.1 +0.6**
SOC *e* 14 51 47.4
SOC pmax pmax
comp=Z,273nm,0.8s
SOC MLR MLR
comp=Z,1µm,12.0s
BJUU Bjuv 15.15 346 *i P* **P 14 49 03.3 +0.6**
MMA0B Mount Meron ar 15.24 119 P **Pn 14 48 57.3 -1.9**
MMAI Mount Meron Ar 15.24 119 Pn **Pn 14 48 58.0 -1.3**
comp=Z,1.3nm,0.3s,baz=294,slow=18,SNR=8.5
MMAI Sn **Sn 14 51 47.7 +0.3**
comp=Z,1.4nm,0.3s,baz=296,slow=27,SNR=2.3
MMAI LR LR 14 56 07.0
comp=Z,4µm,19.1s,baz=302,slow=42
comp=Z,10nm,0.7s
BLGI Bet Lehem HaGe 15.28 120 P **Pn 14 48 57.8 -1.8**
GEM Giv'at Ha'Em 15.29 118 P **Pn 14 48 58.1 -1.8**
NATI Neve Ativ 15.31 117 P **Pn 14 48 58.5 -1.5**
DEL Delary 15.38 348 *i P* **P 14 49 06.7 +1.3**
SLTI Sal'it 15.50 122 P **Pn 14 49 00.7 -1.9**
SVRC Sivrice-ELAZID 15.52 95 *eP* **P 14 49 06.3 -0.9**
KSHT Keshet 15.53 118 P **Pn 14 49 01.2 -1.8**
MMLI Mount Malkishu 15.62 120 P **Pn 14 49 02.4 -1.7**
ECHE Chera 15.67 270 P **Pn 14 49 02.5 -2.2**
ERBR Yeremizino-Bor 15.75 68 *eP* **Pn 14 49 05.5 -0.2**
ERBR *eS* **Sn 14 52 02.4 +2.8**
ERBR pmax pmax
comp=Z,129nm,1.1s
ERBR MLR MLR
comp=Z,3µm,13.0s
HMDT Nahal Hemdat 15.80 121 P **Pn 14 49 04.6 -1.9**
LABN Labinsk 15.81 72 *eP* **Pn 14 49 05.5 -1.0**
LABN *eS* **Sn 14 52 01.7 +0.7**
LABN pmax pmax
comp=Z,248nm,0.8s
LABN MLR MLR
comp=Z,2µm,15.0s
BALJ Balqa 15.98 121 **Pn 14 49 08.6 -0.2**
CHOM Cayeli-Rize 15.99 85 *eP* **P 14 49 11.2 -1.0**
KZIT Kziot 16.02 127 P **Pn 14 49 05.9 -3.3**
FABU Falkenberg 16.08 347 *i P* **P 14 49 11.5 -1.6**
YTIR Yattir 16.14 124 P **Pn 14 49 08.9 -2.0**
DSI Dead Sea 16.16 123 P **Pn 14 49 08.9 -2.3**
CART Cartagena 16.28 263 P **Pn 14 49 12.3 -0.3**
MSBI Mazada 16.32 124 P **Pn 14 49 11.0 -2.1**
ETOB Tobarra 16.36 267 P **P 14 49 15.3 -1.0**
MUD Monsted U'grnd 16.36 339 *i P* **P 14 49 17.8 +1.7**
MUD IAmb IAmb 14 49 18.3
comp=Z,464nm,2.0s
BNGB Bingl 16.37 92 *eP* **P 14 49 16.8 +0.3**
EMUR La Murta 16.37 264 P **Pn 14 49 11.7 -2.1**
GHAJ Ghor Haditha 16.46 123 P **Pn 14 49 12.5 -2.3**
VORD Divnogorie 16.58 49 *eP* **Pn 14 49 14.8 -1.4**
VORD pmax pmax
comp=Z,80nm,0.9s
VORD MLR MLR
comp=Z,2µm,8.0s
BATM Batumi 16.61 82 ⇑ *P* **P 14 49 19.7 +0.6**
BATM Batumi 16.61 82 P **P 14 49 19.7 +0.6**
VSR Storozhevoye 16.62 48 *eP* **Pn 14 49 14.8 -2.0**
VSR pmax pmax
comp=Z,110nm,0.8s
VSR MLR MLR
comp=Z,12µm,14.0s
BORU Boraas 16.68 347 *i P* **Pn 14 49 17.9 +0.5**
ZFRI Zfri 16.74 126 P **Pn 14 49 16.3 -2.0**
ASF Jabal al Asfar 16.75 118 Pn **Pn 14 49 18.2 -0.4**
comp=Z,0.6nm,0.3s,baz=301,slow=9.5,SNR=6.0
comp=Z,2.3nm,0.4s
PRNI Paran 16.78 127 P **Pn 14 49 16.6 -2.3**
KRMI Paran Flat 16.78 128 P **Pn 14 49 16.8 -2.1**
VORR Voronezh 16.87 46 *eP* **Pn 14 49 21.0 +1.1**
VORR pmax pmax
comp=Z,211nm,0.8s
KOPR Koprukoy-ERZUR 17.01 88 *eP* **P 14 49 25.4 +1.7**
HRFI Mount Harif 17.02 127 P **Pn 14 49 19.9 -2.1**
MBRI Mt Berech 17.13 128 P **Pn 14 49 21.4 -2.0**
SHA1 Shidzhatmaz 17.18 75 *c iP* **Pn 14 49 23.7 -0.4**
LPSR Galich'ya Gora 17.19 43 *eP* **Pn 14 49 21.6 -2.4**
LPSR pmax pmax
comp=Z,290nm,1.4s
LPSR MLR MLR
comp=Z,9µm,14.0s
KIV Kislovodsk 17.20 74 *eP* **P 14 49 25.4 -0.3**
KIV Kislovodsk 17.20 74 Pn **Pn 14 49 23.9 -0.3**
KIV Kislovodsk 17.20 74 ⇓ *P* **P 14 49 27.6 +1.9**
KIV Kislovodsk 17.20 74 *eP* **Pn 14 49 24.3 +0.1**
KIV pmax pmax
comp=Z,50nm,1.0s
KIV MLR MLR
comp=Z,1µm,14.0s
KVAR Kislovodsk Arr 17.20 74 P **P 14 49 25.4 -0.3**
baz=281,slow=16
KVAR LR LR 14 57 36.8
comp=Z,2µm,18.1s,baz=172,slow=43
comp=Z,6.2nm,0.6s
EIL Elat 17.24 128 P **Pn 14 49 22.2 -2.5**
comp=Z,1.0nm,0.3s,baz=332,slow=16,SNR=7.1
EIL S Sn 14 52 23.9 -12
comp=Z,28nm,0.7s,baz=75,slow=15,SNR=7.0
comp=Z,8.5nm,0.6s
EIL Elat 17.24 128 P **Pn 14 49 21.9 -2.8**
SENK Senkaya-Erzuru 17.27 86 *eP* **P 14 49 28.1 +1.5**
KBZ Khabaz 17.35 75 P **P 14 49 28.4 +1.1**
comp=Z,31nm,0.8s,baz=281,slow=8.6,SNR=40
ENIJ Nijar 17.40 262 P **P 14 49 27.6 -0.3**
GOF Gofitskoye 17.48 70 *ceP* **Pn 14 49 28.1 +0.4**
GURO Guroymak-BITLI 17.51 92 *eP* **P 14 49 31.2 +2.0**
VSU Vasula 17.55 13 *eP* **P 14 49 29.1 -0.2**
VSU Vasula 17.55 13 *ceP* **Pn 14 49 28.5 +0.2**
VSU pmax pmax
comp=Z,733nm,1.7s
OBN Obninsk 17.64 34 P **Pn 14 49 29.3 -0.1**
comp=Z,16nm,0.3s,baz=175,slow=5.0,SNR=37
OBN LR LR 14 56 55.1
comp=Z,4µm,20.0s,baz=168,slow=39
comp=Z,43nm,0.4s
OBN Obninsk 17.64 34 **Pn 14 49 29.1 -0.3**
OBN IAmb IAmb 14 49 32.5
comp=Z,330nm,1.2s
OBN Obninsk 17.64 34 *deP* **Pn 14 49 26.9 -2.5**
OBN pmax pmax
comp=Z,91nm,1.0s
OBN MLR MLR
comp=Z,5µm,16.0s
ESBB Sonseca Array 17.90 272 P **P 14 49 33.0 -0.4**
ESDC Sonseca Array 17.90 272 P **Pn 14 49 32.6 -0.3**
comp=Z,0.2nm,0.3s,baz=72,slow=11,SNR=30
ESDC LR LR 14 56 58.5
comp=Z,2µm,18.5s,baz=78,slow=39
comp=Z,12nm,0.9s
ESDC Sonseca Array 17.90 272 P **P 14 49 33.3 -0.1**
AGRB Hanur-Agry 17.96 88 *eP* **P 14 49 36.4 +2.2**
VRH Novokhopyorsk 18.07 50 *eP* **Pn 14 49 32.8 -1.9**
VRH pmax pmax
comp=Z,50nm,0.6s
VRH MLR MLR
comp=Z,8µm,13.0s
PAB San Pablo 18.22 272 P **Pn 14 49 36.2 -0.6**
PAB San Pablo 18.22 272 P **Pn 14 49 36.2 -0.6**
PAB pmax pmax
comp=Z,13nm,0.9s
EQTA Presa de Quent 18.24 264 P **P 14 49 37.5 +0.3**
STRU Stroemstad 18.28 346 *i P* **P 14 49 37.3 0.0**
AKDM Akdamar-Van 18.28 92 *eP* **P 14 49 39.5 +1.7**
EALB Alboran 18.42 260 P **Pn 14 49 41.3 +2.1**
MOS Moscow 18.50 34 *eP* **P 14 49 37.0 -2.8**
MOS *eS* **Sn 14 53 02.6 -3.4**
MOS pmax pmax
comp=Z,251nm,0.9s
MOS MLR MLR
comp=Z,6µm,14.0s
AAL Aland 18.67 1 *eP* **P 14 49 40.5 -1.1**
HLM1 Long Mynd 18.71 314 *eP* **Pn 14 49 42.4 -0.3**
HLM1 IAmb IAmb 14 49 46.2
comp=Z,14nm,0.8s
HPK Haverah Park 18.78 319 *eP* **Pn 14 49 43.4 0.0**
TASB TASBURUN-IGDIR 18.80 87 *eP* **Pn 14 49 44.8 +0.9**
TBLG Delisi 18.86 81 *eP* **P 14 49 43.2 -0.7**
MEF Metsahovi 18.95 8 *eP* **P 14 49 44.1 -0.5**
HFS Hagfors 18.96 351 P **P 14 49 44.4 -0.4**
comp=Z,3.0nm,0.3s,baz=168,slow=7.6,SNR=48
HFS LR LR 14 58 48.6
comp=Z,3µm,18.4s,baz=170,slow=42
comp=Z,51nm,0.7s
FOEL Foel Wylfa 19.05 314 *eP* **Pn 14 49 47.3 +0.5**
FOEL IAmb IAmb 14 49 50.5
comp=Z,18nm,0.7s
GNI Garni 19.14 86 P **Pn 14 49 48.2 +0.2**
comp=Z,3.6nm,0.3s,baz=301,slow=4.8,SNR=20
GNI LR LR 14 57 53.5
comp=Z,2µm,20.1s,baz=290,slow=39
comp=Z,52nm,0.7s
GNI Garni 19.14 86 *eP* **Pn 14 49 48.6 +0.5**
GNI Garni 19.14 86 P **Pn 14 49 48.2 +0.2**
GNI IAmb IAmb 14 50 01.5
comp=Z,132nm,1.1s
GNI Garni 19.14 86 *ceP* **Pn 14 49 48.7 +0.6**
GNI pmax pmax
comp=Z,219nm,1.7s
KONO Kongsberg 19.15 345 P **P 14 49 46.9 0.0**
KONO IAmb IAmb 14 49 55.6
comp=Z,197nm,1.7s
KONO Kongsberg 19.15 345 *ceP* **Pn 14 49 47.6 -0.2**
KONO pmax pmax
comp=Z,44nm,1.3s
EDMD Edmundbyers 19.43 320 *eP* **P 14 49 50.4 +0.4**
EDMD IAmb IAmb 14 49 53.0
comp=Z,22nm,0.6s
PUL Pulkovo 19.46 17 *ceP* **P 14 49 50.8 +0.6**
PUL pmax pmax
comp=Z,83nm,0.5s
RAF Rauma 19.56 3 *eP* **P 14 49 50.4 -1.0**
PBRG Braganca 19.58 280 *eP* **Pn 14 49 53.9 +0.7**
PBRG *i* IAmb IAmb 14 50 16.2
comp=Z,89nm,1.7s
BLS5 Blasjo 19.66 340 *eP* **Pn 14 49 54.2 +0.1**
KMY Karmoy 19.81 338 *eP* **P 14 49 54.3 +0.3**
NC602 NORSAR Array S 19.83 348 P **P 14 49 53.5 -0.8**
NC602 NORSAR Array S 19.83 348 *eP* **P 14 49 53.7 -0.6**
MVO Moncorvo 19.89 278 *eP* **P 14 49 55.3 +0.1**
MVO *i* IAmb IAmb 14 50 07.5
comp=Z,132nm,2.0s
MVO *eS* **Sn 14 53 39.2 -0.7**
NAO01 NORSAR Array S 20.04 348 P **P 14 49 56.5 0.0**
NC405 NORSAR Array S 20.17 349 **P 14 49 57.6 -0.4**
NC405 IAmb IAmb 14 50 08.0
comp=Z,118nm,1.0s
NB201 NORSAR Array S 20.17 348 P **P 14 49 57.5 -0.5**
CEU Ceuta 20.17 262 P **P 14 49 57.2 -1.0**
NB2 NORSAR Subarra 20.17 348 P **P 14 49 57.2 -0.9**
comp=Z,55nm,0.9s,baz=165,slow=11
NOA NORSAR Array B 20.17 348 P **P 14 49 57.5 -0.6**
comp=Z,9.0nm,0.7s,baz=150,slow=9.7,SNR=40
NOA LR LR 14 59 00.3
comp=Z,3µm,19.6s,baz=170,slow=40
comp=Z,9.0nm,0.7s
NBO00 NORSAR Array S 20.23 348 P **P 14 49 58.4 -0.3**
NBO00 IAmb IAmb 14 50 09.8
comp=Z,204nm,1.7s
EKA Eskdalemuir Ar 20.28 321 P **P 14 49 59.7 +0.5**
comp=Z,8.0nm,0.5s,baz=114,slow=9.0,SNR=57
comp=Z,8.0nm,0.5s
ESK Eskdalemuir 20.29 321 P **P 14 49 59.1 -0.3**
ESK Eskdalemuir 20.29 321 *eP* **P 14 49 59.4 0.0**
ESK IAmb IAmb 14 50 04.8
comp=Z,22nm,0.7s
ESK Eskdalemuir 20.29 321 P **P 14 49 59.1 -0.3**
ESK pmax pmax
comp=Z,67nm,1.0s
NC303 NORSAR Array S 20.32 349 P **P 14 49 59.4 -0.3**
NC303 IAmb IAmb 14 50 09.9

comp=Z,152nm,1.1s
FINES FINESS Array B 20.33 9 P **P** 14 49 59.0 -0.8
comp=Z,78nm,0.8s,baz=170,slow=10.0,SNR=136
comp=Z,78nm,0.8s
FINES FINESS Array B 20.33 9 P **P** 14 49 59.5 -0.2
FINES FINESS Array B 20.33 9 P **P** 14 49 59.5 -0.2
FIA1 FINESS Array S 20.33 9 P **P** 14 49 59.5 -0.3
SKAR Skarslia 20.36 344 *eP* Pn 14 50 01.2 -1.1
PVRL Vila Real 20.38 278 *eP* Pn 14 50 03.5 +0.8
PVRL *i* IAmb IAmb 14 50 15.6
comp=Z,238nm,1.7s
MTE Manteigas 20.42 276 *eP* Pn 14 50 01.9 -1.2
MTE *i* IAmb IAmb 14 50 15.5
comp=Z,155nm,1.7s
MTE *eS* Sn 14 53 54.7 +2.0
MTE Manteigas 20.42 276 *eP* Pn 14 50 02.4 -0.7
WIM Isle of Man 20.42 316 *eP* **P** **14 50 01.4 +0.6**
EBAD Badajoz 20.43 271 P **P** **14 49 59.6 -1.4**
POLO Lamas de Olo 20.43 279 *eP* Pn 14 50 03.5 +0.2
POLO *i* IAmb IAmb 14 50 16.1
comp=Z,93nm,2.2s
POLO *eS* Sn 14 53 56.1 +3.3
CNIL Conil 20.49 264 P Pn 14 50 02.7 -1.2
PCBR Castelo Branco 20.50 274 *eP* Pn 14 50 03.2 -0.7
PCBR *i* IAmb IAmb 14 50 17.1
comp=Z,110nm,1.7s
PMRV Marv??o 20.53 273 *eP* Pn 14 50 04.4 0.0
PMRV *i* IAmb IAmb 14 50 50.8
comp=Z,101nm,1.6s
PCAB Cabril 20.54 280 *eP* Pn 14 50 07.4 +2.8
PCAB *i* IAmb IAmb 14 50 17.5
comp=Z,220nm,1.8s
PBAR Barrancos 20.61 269 P **P** **14 50 03.5 +0.4**
PBAR Barrancos 20.61 269 *eP* Pn 14 50 04.8 -0.6
PBAR *i* IAmb IAmb 14 50 18.2
comp=Z,245nm,1.8s
PBAR *eS* **S** **14 53 52.9 +0.5**
PVIS Viseu 20.62 277 *eP* Pn 14 50 04.1 -1.3
PVIS *eS* Sn 14 53 57.9 +0.5
EDI Edinburgh 20.62 322 *eP* **P** **14 50 03.0 +0.1**
EDI IAmb IAmb 14 50 08.9
comp=Z,29nm,0.5s
PGAV Gavieira, Arco 20.69 280 *eP* Pn 14 50 06.2 -0.1
MAK Makhachkala 20.75 77 *eP* **P** **14 50 02.6 -1.9**
MAK *e* 14 50 23.5
MAK *eS* **S** **14 53 53.7 -1.3**
MAK *eSS* **SnSn** **14 54 15.8 +0.7**
MAK pmax pmax
comp=Z,508nm,0.9s
MAK MLR MLR
comp=Z,5µm,13.0s
BER Bergen 20.78 340 *eP* Pn 14 50 06.2 -0.9
PESTR Estremoz 20.83 272 P Pn 14 50 07.0 -0.9
PESTR Estremoz 20.83 272 P **P** **14 50 05.6 +0.3**
PESTR IAmb IAmb 14 50 11.3
comp=Z,87nm,1.0s
PESTR Estremoz 20.83 272 *eP* Pn 14 50 09.2 +1.4
PESTR *i* IAmb IAmb 14 50 11.3
comp=Z,102nm,1.1s
DRUM Mains of Drumt 20.90 325 *eP* **P** **14 50 06.6 +0.7**
DRUM IAmb IAmb 14 50 07.7
comp=Z,18nm,0.6s
ASK Askoy 20.90 340 *eP* **P** **14 50 06.5 +0.5**
KEF Keuruu 20.91 7 *eP* **P** **14 50 05.4 -0.7**
MDT Midelt 21.03 253 P **P** **14 50 07.0 -0.7**
comp=Z,32nm,1.0s,baz=68,slow=9.5,SNR=30
MDT LR LR 14 58 12.5
comp=Z,2µm,19.9s,baz=66,slow=37
comp=Z,32nm,1.0s
IFR Ifrane 21.05 256 P **P** **14 50 07.9 -0.2**
PSARD Sardoal 21.07 274 *eP* **P** **14 50 11.1 +3.2**
PSARD *i* IAmb IAmb 14 50 32.4
comp=Z,106nm,1.3s
PSARD *eS* Sn 14 54 11.1 +3.1
AKT Akhty 21.11 81 *eP* **P** **14 50 07.4 -1.1**
AKT *e* 14 50 26.4
AKT *eS* **S** **14 54 03.4 +0.9**
AKT pmax pmax
comp=Z,109nm,1.0s
MD01 Midelt array s 21.11 254 P **P** **14 50 08.1 -0.5**
MD31 MD31 21.11 254 P **P** **14 50 08.2 -0.4**
PARRA Arraiolos 21.18 272 *eP* **P** **14 50 10.8 -6.4**
PARRA *i* IAmb IAmb 14 50 26.0
comp=Z,127nm,1.6s
PARRA *eS* **S** **14 54 11.1 -7.2**
PCAS Casmilo, Conde 21.21 275 *eP* **P** **14 50 10.7 +1.2**
PCAS *i* IAmb IAmb 14 50 24.4
comp=Z,182nm,1.5s
PCAS *eS* Sn 14 54 13.4 +1.9
EVO Evora 21.24 271 P **P** **14 50 11.0 +1.3**
EVO Evora 21.24 271 *eP* **P** **14 50 11.7 +1.9**
EVO *i* IAmb IAmb 14 50 16.2
comp=Z,83nm,1.5s
EVO *eS* Sn 14 54 13.9 +1.7
PMTG Montargil 21.25 273 *eP* **P** **14 50 11.7 +1.9**
PMTG *i* IAmb IAmb 14 50 25.7
comp=Z,155nm,2.0s
PMTG *eS* Sn 14 54 11.1 -1.3
HYA Hoyanger 21.26 342 *eP* **P** **14 50 10.3 +0.6**
INVG Invergeldie, C 21.30 322 *eP* **P** **14 50 10.1 -0.2**
INVG IAmb IAmb 14 50 15.0
comp=Z,41nm,0.7s
PVAQ Vaqueiros 21.37 268 P **P** **14 50 10.9 -0.3**
PVAQ IAmb IAmb 14 50 17.8
comp=Z,169nm,1.1s
PVAQ Vaqueiros 21.37 268 *eP* **P** **14 50 12.1 +0.9**
PVAQ *i* IAmb IAmb 14 50 33.7
comp=Z,213nm,1.7s
PVAQ *eS* **S** **14 54 08.9 +1.5**
DOMB Dombas 21.47 347 *eP* **P** **14 50 12.8 +0.7**
MOE Montemor 21.50 271 *eP* **P** **14 50 15.1 +2.5**
MOE *i* IAmb IAmb 14 50 26.3
comp=Z,97nm,1.6s
MOE *eS* Sn 14 54 18.9 +0.5
SUE Sulen 21.51 340 *eP* **P** **14 50 14.1 +1.7**
PCVE Castro Verde 21.54 269 P **P** **14 50 12.6 -0.3**
PCVE Castro Verde 21.54 269 *eP* **P** **14 50 14.7 +1.8**
PCVE *i* IAmb IAmb 14 50 53.2
comp=Z,147nm,1.6s
PCVE *eS* Sn 14 54 23.0 +3.7
PBDV Barranco-do-Ve 21.58 268 P **P** **14 50 14.7 +1.2**
PBDV Barranco-do-Ve 21.58 268 *eP* **P** **14 50 15.6 +2.1**
PBDV *i* IAmb IAmb 14 50 36.2
comp=Z,207nm,1.5s
PBDV *eS* **S** **14 54 12.8 +1.1**
CLGH Cloghs, Cushen 21.60 318 *eP* **P** **14 50 13.6 +0.1**
CLGH IAmb IAmb 14 50 18.7
comp=Z,31nm,0.7s
MESJ Messejana 21.60 269 *eP* **P** **14 50 14.0 +0.3**
MESJ *eS* **S** **14 54 10.8 -1.2**
MESJ IAMs_20 IAMs_20 14 59 30.7
comp=Z,4µm,16.7s
MESJ Messejana 21.60 269 *eP* **P** **14 50 15.1 +1.4**
MESJ *i* IAmb IAmb 14 50 54.1
comp=Z,89nm,1.7s
MESJ *eS* Sn 14 54 24.0 +3.0
MESJ Messejana 21.60 269 *eP* **P** **14 50 14.0 +0.3**
MESJ *eS* **S** **14 54 10.8 -1.2**
VAF Ylistaro 21.62 4 *eP* **P** **14 50 13.8 +0.2**
MCD Coleburn Disti 21.64 326 *eP* **P** **14 50 13.3 -0.6**
MCD IAmb IAmb 14 50 15.0
comp=Z,35nm,0.6s
LAWE Loch Awe, Argy 21.84 321 *eP* **P** **14 50 16.1 0.0**
BELG Belogornoye 21.91 51 P **P** **14 50 16.6 -0.2**
comp=Z,346nm,0.9s,baz=238,slow=13,SNR=122
BELG Belogornoye 21.91 51 *c iP* **P** **14 50 16.3 -0.6**
BELG pmax pmax
comp=Z,90nm,1.0s
AKN Aaknes 21.98 344 *eP* **P** **14 50 18.9 +1.3**
LIS Lisbon 22.04 272 *eP* **P** **14 50 18.7 +0.4**
LIS *eS* **S** **14 54 19.5 -0.9**
LIS IAMs_20 IAMs_20 15 00 22.4
comp=E,6µm,18.3s
LIS Lisbon 22.04 272 *eP* **P** **14 50 18.7 +0.4**
LIS *eS* **S** **14 54 19.5 -0.9**
TAM Tamanrasset 22.07 216 P **P** **14 50 19.2 +0.3**
TAM IAmb IAmb 14 50 31.9
comp=Z,66nm,1.0s
TAM Tamanrasset 22.07 216 P **P** **14 50 19.2 +0.3**
TAM pmax pmax
comp=Z,66nm,1.0s
PMAFR Mafra 22.07 273 *eS* Sn 14 54 29.9 -2.4
PTEO Sao Teotonio 22.08 269 *eP* **P** **14 50 21.6 +2.8**
PTEO *i* IAmb IAmb 14 50 41.5
comp=Z,179nm,1.7s
PTEO *eS* Sn 14 54 37.2 +4.9
MORF Marmelete 22.10 268 *eP* **P** **14 50 19.5 +0.4**
MORF *eS* **S** **14 54 20.7 -1.0**
MORF IAMs_20 IAMs_20 15 00 39.7
comp=Z,3µm,15.9s
MORF Marmelete 22.10 268 *eP* **P** **14 50 21.0 +1.9**
MORF *i* IAmb IAmb 14 51 22.7
comp=Z,95nm,1.7s
MORF *eS* **S** **14 54 23.0 +1.3**
MORF Marmelete 22.10 268 *eP* **P** **14 50 19.5 +0.4**
MORF *eS* **S** **14 54 20.7 -1.0**
MOL Molde 22.23 345 *eP* **P** **14 50 21.1 +0.9**
PFVI Vila Bisbo 22.29 268 P **P** **14 50 22.1 +1.0**
PFVI Vila Bisbo 22.29 268 *eP* **P** **14 50 24.7 +3.6**
PFVI *i* IAmb IAmb 14 50 37.1
comp=Z,302nm,1.9s
PFVI *eS* **S** **14 54 24.4 -0.8**
IDGL Inch Island, C 22.31 317 P **P** **14 50 21.5 +0.4**
IDGL Inch Island, C 22.31 317 *eP* **P** **14 50 21.6 +0.5**
JOF Joensuu 22.53 14 *eP* **P** **14 50 24.0 +0.7**
IGLA Glengowla, Co 22.67 311 P **P** **14 50 25.7 +0.7**
VAL Valentia 22.73 307 P **P** **14 50 25.0 -0.5**
KLMR Klimovskoe 22.88 26 *eP* **P** **14 50 24.7 -2.4**
KLMR S **S** **14 54 34.4 -0.9**
KLMR pmax pmax
comp=Z,348nm,1.2s
KLMR MLR MLR
comp=Z,8µm,14.0s
NSS Namsos 23.44 352 *eP* **P** **14 50 33.3 +0.6**
TIO Tiouine 23.95 252 P **P** **14 50 37.9 -0.2**
MOR8 Moi Rana 24.84 355 *eP* **P** **14 50 46.0 +0.2**
LEIR Leirfjorden 24.88 354 *eP* **P** **14 50 48.0 +2.0**
RAUS Rausandaksla 25.13 355 *eP* **P** **14 50 52.3 +3.9**
KIRV Kirov 25.37 38 LR LR 15 01 17.6
comp=Z,5µm,19.2s,baz=240,slow=38
KIRV Kirov 25.37 38 *ceP* **P** **14 50 50.0 -0.6**
VAGH Vaagaholmen 25.48 354 *eP* **P** **14 50 54.6 +3.1**
FAUS Fauske 26.00 356 *eP* **P** **14 50 55.6 -0.6**
STEI Steigen 26.55 356 *eP* **P** **14 51 02.4 +1.3**
APA Apatity 27.16 12 *eP* **P** **14 51 09.1 +2.4**
APA MLR MLR
comp=Z,6µm,13.1s
KTK1 Kautokeino 27.61 3 *eP* **P** **14 51 09.6 -1.1**
AKTO Aktyubinsk 27.94 58 LR LR 15 04 34.4
comp=Z,4µm,18.9s,baz=255,slow=41
TRO Tromso 28.16 360 *eP* **P** **14 51 14.9 -0.7**
ARA0 ARCESS Array S 28.24 4 *eP* **P** **14 51 15.6 -0.7**
ARCES ARCESS Array B 28.24 4 P **P** **14 51 15.8 -0.6**
comp=Z,7.1nm,0.8s,baz=191,slow=11,SNR=24
ARCES LR LR 15 03 01.5
comp=Z,1µm,21.4s,baz=190,slow=38
comp=Z,7.1nm,0.8s
ARCES ARCESS Array B 28.24 4 IAmb IAmb 14 51 44.5
comp=Z,106nm,1.5s
ARTI Arti 29.07 46 LR LR 15 04 04.9
comp=Z,5µm,19.2s,baz=256,slow=39
ARTI Arti 29.07 46 P **P** **14 51 22.9 -1.0**
ARTI Arti 29.07 46 *c iP* **P** **14 51 23.2 -0.7**
ARTI 14 52 13.7
ARTI S **S** **14 56 15.9 +1.8**
ARTI pmax pmax
comp=Z,125nm,0.8s
ARTI MLR MLR
comp=Z,7µm,15.0s
AB31 Akbulak array 29.15 61 P **P** **14 51 23.9 -0.8**
ABKAR Akbulak array 29.15 61 P **P** **14 51 24.0 -0.7**
SVE Sverdlovsk 30.39 46 *deP* **P** **14 51 35.7 +0.2**
SVE *eS* **S** **14 56 40.0 +5.3**
SVE pmax pmax
comp=Z,126nm,0.9s
SVE MLR MLR
comp=Z,7µm,14.0s
TORD Torodi Ar. Bea 32.26 214 P **P** **14 51 52.0 -0.4**
comp=Z,10nm,0.5s,baz=27,slow=11,SNR=10
TORD LR LR 15 07 39.5
comp=Z,2µm,18.6s,baz=35,slow=42
comp=Z,10nm,0.5s
BORG Borgarnes 32.81 329 LR LR 15 07 11.1
comp=Z,2µm,18.0s,baz=132,slow=40
HRA Herat 34.18 88 **P** **14 52 08.9 -0.4**
UOSS Minazif 34.57 107 P **P** **14 52 11.2 -1.3**
UOSS IAmb IAmb 14 52 27.1
comp=Z,15nm,0.6s
BORK Borovoye 35.62 53 P **P** **14 52 21.7 +0.5**
BORK Borovoye 35.62 53 *ceP* **P** **14 52 21.8 +0.6**
BORK pmax pmax
comp=Z,85nm,0.6s
BVAR Borovoye Array 35.66 54 P **P** **14 52 22.1 +0.6**
comp=Z,55nm,0.7s,baz=272,slow=6.2,SNR=263
comp=Z,55nm,0.7s
SCO Scoresbysund 35.77 338 *i* P **P** **14 52 23.7 +1.4**
SCO IAmb IAmb 14 52 24.7
comp=Z,31nm,1.5s
SPITS Spitsbergen Ar 36.77 359 P **P** **14 52 31.0 +0.2**
comp=Z,7.4nm,0.8s,baz=157,slow=9.1,SNR=4.1
SPITS LR LR 15 09 43.7
comp=Z,2µm,18.5s,baz=172,slow=40
comp=Z,7.4nm,0.8s
SPITS Spitsbergen Ar 36.77 359 P **P** **14 52 31.0 +0.2**
BRLS Borolday 36.82 70 *eP* **P** **14 52 31.3 -0.4**
BRLS Borolday 36.82 70 *eP* **P** **14 52 31.2 -0.4**
BRZS Berezniki 37.35 58 *eP* **P** **14 52 36.2 +0.2**
BRZS Berezniki 37.35 58 *eP* **P** **14 52 36.2 +0.2**
WSAR Wadi Sarin 37.37 107 LR LR 15 10 03.6
comp=Z,5.3nm,19.4s,baz=316,slow=40
DBG Daneborg 37.55 343 *i* P **P** **14 52 37.3 -0.1**
DBG IAmb IAmb 14 52 39.5
comp=Z,60nm,2.3s
CHGR Chuyangaron 37.68 78 **P** **14 52 38.9 -0.2**
CHGR IAmb IAmb 14 52 52.8
comp=Z,33nm,1.0s
CHGR Chuyangaron 37.68 78 P **P** **14 52 38.9 -0.2**
CHGR pmax pmax
comp=Z,33nm,1.0s
DZA Taraz 37.92 70 *eP* **P** **14 52 41.1 +0.2**
DZA Taraz 37.92 70 *eP* **P** **14 52 41.1 +0.2**
AAK Ala-Archa 40.22 69 LR LR 15 12 36.6
comp=Z,2µm,18.8s,baz=246,slow=41
AAK Ala-Archa 40.22 69 *ceP* **P** **14 52 59.9 -0.5**
AAK pmax pmax
comp=Z,41nm,1.7s
DBIC Dimbokro 40.92 219 P **P** **14 53 07.0 +0.9**
comp=Z,12nm,0.8s,baz=46,slow=9.2,SNR=7.7
DBIC LR LR 15 11 55.0
comp=Z,813nm,20.6s,baz=48,slow=39
comp=Z,12nm,0.8s
KURBB Kurchatov Arra 40.95 56 P **P** **14 53 06.3 +0.2**
comp=Z,7.3nm,0.6s,baz=287,slow=10,SNR=49
comp=Z,7.3nm,0.6s
KURK Kurchatov 40.99 56 P **P** **14 53 06.3 -0.1**
KURK Kurchatov 40.99 56 *ceP* **P** **14 53 06.7 +0.3**
KURK pmax pmax
comp=Z,75nm,1.7s
SUMG Summit 41.41 337 P **P** **14 53 06.7 -3.4**
SUMG Summit 41.41 337 **P** **14 53 09.3 -0.8**
SUMG Summit 41.41 337 P **P** **14 53 09.3 -0.8**
SUMG pmax pmax
comp=Z,28nm,1.4s
AAA Alma-Ata 41.73 68 *eP* **P** **14 53 12.8 0.0**
comp=Z,48nm,1.1s
AAA Alma-Ata 41.73 68 *eP* **P** **14 53 12.7 0.0**
AAA pmax pmax
comp=Z,48nm,1.1s
TNSS Tian-Shan 41.81 68 *eP* **P** **14 53 13.6 -0.2**
TNSS Tian-Shan 41.81 68 *eP* **P** **14 53 13.6 -0.2**
MDOK Medeo 41.84 68 *eP* **P** **14 53 13.9 +0.1**
MDOK Medeo 41.84 68 *eP* **P** **14 53 13.8 +0.1**
NOR Nord 42.05 353 *i* P **P** **14 53 15.1 +0.4**
NOR IAmb IAmb 14 53 24.9
comp=Z,78nm,1.6s
TDK Taldyqorghan 42.22 65 *eP* **P** **14 53 16.9 +0.3**
comp=Z,32nm,1.0s
TDK Taldyqorghan 42.22 65 *eP* **P** **14 53 16.9 +0.3**
TDK pmax pmax
comp=Z,33nm,1.0s
NIL Nilore 42.73 83 P **P** **14 53 20.8 -0.1**
NIL IAmb IAmb 14 53 22.5
comp=Z,75nm,1.1s
NIL Nilore 42.73 83 P **P** **14 53 20.8 -0.1**
NIL pmax pmax
comp=Z,75nm,1.2s
SATY Saty 42.82 67 *iP* **P** **14 53 21.8 +0.2**
comp=Z,48nm,1.7s
SATY Saty 42.82 67 *c iP* **P** **14 53 21.8 +0.2**
SATY pmax pmax
comp=Z,49nm,1.7s
TARG Taragay, Kyrgy 42.84 70 **P** **14 53 22.9 +0.7**
TARG IAmb IAmb 14 53 35.1
comp=Z,143nm,2.0s
TARG Taragay, Kyrgy 42.84 70 P **P** **14 53 22.9 +0.7**
TARG pmax pmax
comp=Z,143nm,2.0s
UZB Uzynbulak 43.22 67 *iP* **P** **14 53 24.8 -0.1**
UZB Uzynbulak 43.22 67 *c iP* **P** **14 53 24.7 -0.1**
SHLS Shalkode 43.52 67 *iP* **P** **14 53 29.6 +2.3**
comp=Z,45nm,1.4s
SHLS Shalkode 43.52 67 *c iP* **P** **14 53 29.5 +2.3**
SHLS pmax pmax
comp=Z,45nm,1.4s
MAKZ Makanchi 44.08 61 P **P** **14 53 31.5 -0.2**
MAKZ IAmb IAmb 14 53 32.8
comp=Z,31nm,0.9s
MAKZ Makanchi 44.08 61 P **P** **14 53 31.5 -0.2**
MAKZ pmax pmax
comp=Z,31nm,0.9s
ZAA0 Zalesovo Array 44.10 51 **P** **14 53 31.7 0.0**
ZALV Zalesovo Beam 44.10 51 P **P** **14 53 31.7 +0.1**
comp=Z,68nm,0.5s,baz=281,slow=8.6,SNR=381
ZALV Zalesovo Beam 44.10 51 P **P** **14 53 31.5 -0.2**
IVI Ivigtut 44.26 320 *i* P **P** **14 53 34.1 +1.3**
IVI IAmb IAmb 14 53 37.8
comp=Z,20nm,1.0s
MK31 Makanchi Array 44.29 61 *ceP* **P** **14 53 33.5 +0.2**
MKAR Makanchi Array 44.29 61 P **P** **14 53 33.6 +0.3**
comp=Z,67nm,0.7s,baz=285,slow=7.4,SNR=177
MKAR LR LR 15 15 05.0
comp=Z,2µm,19.6s,baz=261,slow=40
comp=Z,67nm,0.7s
MKAR Makanchi Array 44.29 61 *i* P **P** **14 53 33.5 +0.2**
MKAR pmax pmax
comp=Z,67nm,0.7s
SFJD Kangerlussuaq 44.94 328 LR LR 15 14 56.3
comp=Z,2µm,18.3s,baz=88,slow=40
KMBO Kilima Mbogo 45.42 155 LR LR 15 15 11.0
comp=Z,788nm,18.1s,baz=325,slow=39
NEEM North Greenlan 45.63 343 *i* P **P** **14 53 44.3 +0.4**
NEEM IAmb IAmb 14 53 53.1
comp=Z,86nm,1.7s
ZSN Zaisan 45.77 59 *iP* **P** **14 53 45.2 +0.1**
comp=Z,46nm,1.2s
ZSN Zaisan 45.77 59 *c iP* **P** **14 53 45.2 +0.1**
ZSN pmax pmax
comp=Z,46nm,1.2s
GDH Godhavn 45.94 332 *i* P **P** **14 53 47.5 +1.4**
GDH IAmb IAmb 14 53 54.1
comp=Z,28nm,1.0s
DGZ Jazzator, Alta 46.73 56 *i* P **P** **14 53 53.1 +0.4**
DGZ pmax pmax
comp=Z,44nm,0.7s
KIBK Kibwezi 46.82 154 P **P** **14 53 52.2 -1.5**
WMQ Urumqi 48.88 63 *eP* **P** **14 54 11.0 +1.6**
WMQ S **S** **15 01 17.0 +5.2**
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ pmax pmax
comp=Z,460nm,5.5s
WMQ LR LR
comp=Z,2µm,20.1s
WMQ LR LR
comp=Z,3µm,20.1s
WMQ LR LR
comp=Z,3µm,18.7s
KNGR Kungurtug, Tuv 52.53 52 *i* P **P** **14 54 37.3 +0.5**
KNGR pmax pmax
comp=Z,21nm,1.1s
FRB Frobisher Bay 52.91 326 LR LR 15 19 29.8
comp=Z,1µm,18.6s,baz=80,slow=39
SCHQ Schefferville 55.48 316 P **P** **14 54 59.5 +1.3**
comp=Z,6.1nm,0.8s,baz=62,slow=6.9,SNR=6.0
SCHQ LR LR 15 19 31.9
comp=Z,1µm,18.6s,baz=64,slow=37
comp=Z,6.1nm,0.8s
HYBB Hyderabad (bro 55.59 97 *eP* **P** **14 54 59.7 +0.2**
TLY Talaya 55.63 49 P **P** **14 55 00.3 +1.0**
TLY IAmb IAmb 14 55 02.0
comp=Z,46nm,0.9s
TLY Talaya 55.63 49 *ceP* **P** **14 55 00.8 +1.5**
TLY pmax pmax
comp=Z,104nm,1.7s
EVN Everest 55.66 81 P **P** **14 54 59.5 -1.1**
ZAK Zakamensk 55.98 50 *eP* **P** **14 55 01.6 -0.4**
ZAK pmax pmax
comp=Z,55nm,1.8s
RES Resolute Bay 56.32 343 P **P** **14 55 05.2 +1.3**
RES Resolute Bay 56.32 343 P **P** **14 55 05.2 +1.3**
RES pmax pmax
comp=Z,15nm,1.1s
TIXI Tiksi 56.79 21 LR LR 15 22 49.3
comp=Z,3µm,18.4s,baz=328,slow=40
TIXI Tiksi 56.79 21 P **P** **14 55 06.8 -0.5**
TIXI Tiksi 56.79 21 *ceP* **P** **14 55 07.5 +0.3**
TIXI pmax pmax
comp=Z,25nm,1.7s
LSA Lhasa 57.91 77 P **P** **14 55 15.4 -1.0**
LSA IAmb IAmb 14 55 17.3
comp=Z,23nm,0.8s
LSA Lhasa 57.91 77 P **P** **14 55 15.4 -1.0**
LSA pmax pmax
comp=Z,23nm,0.8s
GTA Gaotai 58.97 63 *eP* **P** **14 55 22.8 -0.4**
GTA pmax pmax
comp=Z,43nm,1.0s
GTA pmax pmax
comp=Z,450nm,9.2s
GTA LR LR
comp=Z,970nm,17.5s
GTA LR LR
comp=Z,810nm,18.7s
GTA LR LR
comp=Z,1µm,21.5s
SONM Songino Array 58.97 52 P **P** **14 55 24.1 +1.0**
comp=Z,12nm,0.8s,baz=289,slow=9.1,SNR=15
SONM LR LR 15 23 23.9
comp=Z,4µm,19.6s,baz=294,slow=39
comp=Z,12nm,0.8s
ULN Ulaanbaatar 59.34 51 P **P** **14 55 26.4 +0.7**
ULN Ulaanbaatar 59.34 51 *ceP* **P** **14 55 27.4 +1.7**
ULN pmax pmax
comp=Z,41nm,1.7s
SHL Shillong 60.75 81 **P** **14 55 33.9 -1.8**
SHL IAmb IAmb 14 55 34.9
comp=Z,42nm,1.0s
SHL Shillong 60.75 81 P **P** **14 55 33.9 -1.8**
SHL pmax pmax
comp=Z,42nm,1.0s
YAK Yakutsk 62.58 30 LR LR 15 25 50.3
comp=Z,3µm,19.2s,baz=294,slow=39
YAK Yakutsk 62.58 30 P **P** **14 55 46.6 -0.7**
YAK IAmb IAmb 14 55 57.0
comp=Z,25nm,0.7s
YAK Yakutsk 62.58 30 *eP* **P** **14 55 46.6 -0.7**
YAK *e* 14 56 26.7
YAK *e* 14 58 03.5
YAK *eS* **S** **15 04 15.4 +1.9**
YAK *e* 15 05 39.1
YAK *eSS* **SS** **15 08 21.0 +4.0**
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=E,17nm,1.5s
YAK pmax pmax
comp=N,17nm,1.5s
YAK pmax pmax
comp=Z,98nm,3.0s
YAK smax smax
comp=E,209nm,3.6s
YAK smax smax
comp=N,79nm,3.8s
YAK MLR MLR
comp=Z,3µm,19.0s
YAK MLR MLR
comp=N,1µm,21.0s
YAK MLR MLR
comp=E,1µm,19.0s
I63A Otisfield 62.80 306 P **P** **14 55 48.4 -0.6**
H62A Milan 62.87 307 P **P** **14 55 49.8 +0.3**
LZDM Lanzhou Array 63.40 65 P **P** **14 55 54.2 +0.6**
comp=E,14nm,0.6s,baz=296,slow=4.8,SNR=11
LZDM LR LR 15 28 16.4
comp=E,809nm,18.5s,baz=315,slow=41

comp=E,14nm,0.6s
LZH Lanzhou 63.43 64 *e*P P **14 55 54.3 +0.7**
LZH S **S** **15 04 23.3 -2.1**
LZH pmax pmax
comp=E,77nm,1.3s
LZH pmax pmax
comp=E,370nm,4.8s
LZH LR LR
comp=E,2µm,16.8s
LZH LR LR
comp=E,1µm,16.1s
LZH LR LR
comp=E,2µm,15.8s
PALK Pallekele 63.78 104 P **P** **14 55 54.6 -1.4**
comp=E,11nm,0.9s,baz=317,slow=6.1,SNR=4.1
comp=E,11nm,0.9s
PALK Pallekele 63.78 104 IAmb IAmb 14 56 24.2
comp=Z,59nm,1.6s
A36M Sachs Harbour 64.08 348 **P** **14 55 57.4 +0.4**
A36M IAmb IAmb 14 56 08.6
comp=Z,39nm,1.1s
A36M Sachs Harbour 64.08 348 P **P** **14 55 57.5 +0.5**
baz=29,SNR=9.2
BTO Baotou 64.97 57 *e*P **P** **14 56 02.8 -0.7**
BTO PP **PP** **14 58 27.8 +1.6**
BTO S **S** **15 04 42.0 -2.2**
BTO pmax pmax
comp=Z,33nm,0.7s
BTO pmax pmax
comp=Z,890nm,4.1s
BTO LR LR
comp=Z,3µm,14.4s
BTO LR LR
comp=Z,2µm,14.7s
BTO LR LR
comp=Z,2µm,15.3s
OPO Ambohidratompo 65.08 151 P **P** **14 56 04.1 -0.3**
comp=Z,2.7nm,0.7s,baz=320,slow=3.5,SNR=3.6
OPO LR LR 15 27 25.6
comp=Z,244nm,19.2s,baz=158,slow=39
comp=Z,2.7nm,0.7s
HILR Hailar Array B 65.53 45 P **P** **14 56 06.6 -0.3**
comp=Z,3.0nm,0.6s,baz=306,slow=4.8,SNR=4.5
comp=Z,3.0nm,0.6s
HIA Hailar 65.69 45 P **P** **14 56 09.9 +2.0**
HHC Hu-ho-hao-te 65.81 56 ⇓*i*P **P** **14 56 10.0 +1.1**
HHC S **S** **15 04 59.5 +5.1**
HHC pmax pmax
comp=Z,36nm,1.2s
HHC pmax pmax
comp=Z,330nm,9.3s
HHC LR LR
comp=Z,1µm,15.6s
HHC LR LR
comp=Z,2µm,14.1s
HHC LR LR
comp=Z,3µm,13.9s
TNCH TengChong 65.95 77 P **P** **14 56 09.8 -0.4**
TNCH pmax pmax
comp=Z,52nm,0.9s
TNCH pmax pmax
comp=Z,470nm,4.2s
C36M Paulatuk 66.21 347 P **P** **14 56 11.3 +0.5**
baz=29
CD2 Chengdu 66.29 69 P **P** **14 56 12.3 +0.2**
CD2 pmax pmax
comp=Z,90nm,1.0s
LBTB Lobatse 66.46 174 LR LR 15 27 37.9
comp=Z,2µm,19.5s,baz=16,slow=38
LBTB Lobatse 66.46 174 P **P** **14 56 13.3 +0.2**
LBTB IAmb IAmb 14 56 35.2
comp=Z,60nm,1.9s
LBTB Lobatse 66.46 174 P **P** **14 56 13.3 +0.2**
LBTB pmax pmax
comp=Z,60nm,1.9s
PHPEN Phepeng 66.75 177 P **P** **14 56 15.5 +0.6**
PHPEN IAmb IAmb 14 56 30.6
comp=Z,17nm,0.8s
XLT XiLinHaoTe 66.78 51 *e*P **P** **14 56 16.0 +0.9**
XLT S **S** **15 05 06.0 -0.1**
XLT pmax pmax
comp=Z,20nm,1.3s
XLT LR LR
comp=Z,140nm,17.4s
XLT LR LR
comp=Z,1µm,19.1s
XLT LR LR
comp=Z,2µm,19.1s
A21K Barrow 67.41 359 P **P** **14 56 18.9 +0.4**
baz=3.2
PZH PanZhiHua 67.42 74 P **P** **14 56 20.5 +1.0**
SADO Sadowa 67.45 310 LR LR 15 25 55.8
comp=Z,840nm,18.3s,baz=116,slow=36
A22K Sinclair Lake 67.70 358 P **P** **14 56 21.2 +0.9**
baz=4.5
BILL Bilibino 67.92 13 *i*P **P** **14 56 21.5 -0.3**
BILL pmax pmax
comp=Z,6.0nm,1.1s
XAN Xi'an 68.02 64 ⇑P **P** **14 56 23.5 +0.5**
XAN pmax pmax
comp=Z,74nm,1.3s
XAN pmax pmax
comp=Z,400nm,5.5s
XAN LR LR
comp=Z,1µm,18.5s
XAN LR LR
comp=Z,920nm,16.5s
XAN LR LR
comp=Z,1µm,19.2s
C26K Camden Bay 68.27 354 P **P** **14 56 24.7 +0.7**
baz=13
D28M Stokes Point 68.28 352 P **P** **14 56 24.9 +0.9**
baz=17
B22K Teshekpuk Lake 68.31 357 P **P** **14 56 24.1 -0.1**
baz=5.7
C27K Jago River 68.46 354 P **P** **14 56 25.5 +0.3**
baz=14
A19K Wainwright 68.57 0 P **P** **14 56 26.4 +0.6**
baz=360
D27M Malcolm River 68.59 353 P **P** **14 56 26.5 +0.4**
baz=16
INK Inuvik 68.62 350 P **P** **14 56 26.5 +0.3**
baz=22
C23K Itkillik River 68.70 356 P **P** **14 56 27.1 +0.4**
baz=8.0
C24K Franklin Bluff 68.72 356 P **P** **14 56 27.0 +0.3**
C24K Franklin Bluff 68.72 356 P **P** **14 56 27.7 +1.0**
baz=9.5
B20K Meade River 68.74 359 P **P** **14 56 27.3 +0.5**
baz=2.7
D25K Kavik River 68.96 355 P **P** **14 56 28.5 +0.2**
D25K IAmb IAmb 14 56 40.2
comp=Z,29nm,1.3s
D25K Kavik River 68.96 355 P **P** **14 56 28.9 +0.5**
baz=11
KMI Kunming 68.97 75 ⇑P **P** **14 56 28.5 -0.8**
KMI pmax pmax
comp=Z,23nm,1.5s
KMI pmax pmax
comp=Z,260nm,4.1s
HEH HeiHe 69.01 41 *e*P **P** **14 56 28.5 -0.4**
HEH pmax pmax
comp=Z,31nm,1.6s
HEH LR LR
comp=Z,2µm,14.8s
HEH LR LR
comp=Z,2µm,15.5s
HEH LR LR
comp=Z,3µm,19.1s
RCBR Riachuelo 69.05 241 *e*P **P** **14 56 28.8 -0.8**
E28M Babbage River 69.06 352 P **P** **14 56 29.6 +0.6**
baz=17,SNR=5.6
B21K Ikpikpuk River 69.07 358 P **P** **14 56 29.1 +0.2**
baz=4.8
E29M Blow River 69.09 351 P **P** **14 56 29.8 +0.7**
baz=18
BJI Beijing 69.13 55 P **P** **14 56 30.0 +0.2**
BJI S **S** **15 05 36.8 +2.8**
BJI pmax pmax
comp=Z,8.0nm,1.9s
BJI LR LR
comp=Z,850nm,19.0s
BJI LR LR
comp=Z,600nm,21.3s
BJI LR LR
comp=Z,1µm,21.0s
SEY Seymchan 69.28 21 LR LR 15 32 36.4
comp=Z,2µm,18.0s,baz=308,slow=41
SEY Seymchan 69.28 21 *ce*P **P** **14 56 31.3 +0.9**
SEY pmax pmax
comp=Z,17nm,1.3s
D24K Happy Valley 69.29 356 P **P** **14 56 30.5 +0.2**
baz=9.4
B18K Kokolik River 69.41 0 P **P** **14 56 31.9 +0.9**
baz=359
F31M Tsiigehtchic 69.46 349 P **P** **14 56 31.7 +0.3**
baz=21,SNR=22
C21K Knifeblade Rid 69.54 358 P **P** **14 56 32.6 +0.7**
baz=4.6
D23K Nanushuk River 69.57 356 P **P** **14 56 32.7 +0.7**
baz=7.9
F30M Barrier River 69.57 350 P **P** **14 56 32.2 +0.1**
baz=20
C19K Lookout Ridge 69.67 360 P **P** **14 56 33.1 +0.4**
baz=0.8
E27K Coleen River 69.68 353 P **P** **14 56 33.7 +0.9**
baz=15
D22K Ayikyak River 69.75 357 P **P** **14 56 34.0 +0.8**
baz=6.3
HNS HongShan 69.81 58 ⇑P **P** **14 56 34.0 0.0**
HNS pmax pmax
comp=Z,17nm,1.6s
TOLK Toolik Lake Re 69.84 356 P **P** **14 56 34.5 +0.7**
baz=8.7
YKAW3 Yellowknife Wh 69.91 339 **P** **14 56 34.8 +0.6**
YKAW3 IAmb IAmb 14 56 45.9
comp=Z,20nm,1.0s
YKA Yellowknife Ar 69.97 339 P **P** **14 56 34.9 +0.3**
comp=Z,4.7nm,0.8s,baz=28,slow=5.4,SNR=23
comp=Z,4.7nm,0.8s
YKA Yellowknife Ar 69.97 339 P **P** **14 56 35.9 +1.3**
YKA Yellowknife Ar 69.97 339 *i*P **P** **14 56 35.2 +0.6**
YKA pmax pmax
comp=Z,5.0nm,0.8s
BOSA Boshof 70.00 175 P **P** **14 56 35.1 -0.1**
comp=Z,7.1nm,0.8s,baz=357,slow=7.2,SNR=16
BOSA LR LR 15 29 44.8
comp=Z,2µm,19.2s,baz=15,slow=38
comp=Z,7.1nm,0.8s
BOSA Boshof 70.00 175 P **P** **14 56 35.9 +0.6**
BOSA IAmb IAmb 14 56 49.6
comp=Z,74nm,1.9s
BOSA Boshof 70.00 175 P **P** **14 56 35.9 +0.6**
BOSA pmax pmax
comp=Z,74nm,1.9s
CHTO Chiang Mai 70.00 82 P **P** **14 56 34.8 -0.7**
CHTO IAmb IAmb 14 56 35.6
comp=Z,18nm,0.9s
CHTO Chiang Mai 70.00 82 P **P** **14 56 33.8 -1.7**
CHTO Chiang Mai 70.00 82 P **P** **14 56 34.8 -0.7**
CHTO pmax pmax
comp=Z,18nm,0.9s
G31M Satah River 70.02 349 P **P** **14 56 35.0 +0.3**
baz=21,SNR=8.5
D20K Etivluk River 70.03 358 P **P** **14 56 34.6 -0.3**
baz=3.1
F28M Old Crow 70.05 352 P **P** **14 56 35.0 0.0**
baz=16,SNR=10
LYN LuoYang 70.08 61 P **P** **14 56 36.5 +0.8**
LYN pmax pmax
comp=Z,29nm,1.3s
LYN pmax pmax
comp=Z,460nm,5.3s
LYN LR LR
comp=Z,1µm,19.6s
LYN LR LR
comp=Z,1µm,13.7s
LYN LR LR
comp=Z,1µm,16.8s
E25K Arctic Village 70.09 354 P **P** **14 56 35.7 +0.4**
baz=12
C18K Utukok River 70.13 0 P **P** **14 56 36.1 +0.5**
baz=360
CMAR Chiang Mai Arr 70.22 83 P **P** **14 56 36.0 -0.9**
comp=Z,7.4nm,0.8s,baz=305,slow=7.4,SNR=42
comp=Z,7.4nm,0.8s
CMAR Chiang Mai Arr 70.22 83 P **P** **14 56 35.8 -1.1**
CMAR Chiang Mai Arr 70.22 83 *i*P **P** **14 56 36.0 -0.9**
CMAR pmax pmax
comp=Z,8.0nm,0.8s
G30M tAoh Zraii Nji 70.23 350 P **P** **14 56 36.4 +0.2**
baz=19
E21K Kilik River 70.23 357 P **P** **14 56 36.5 +0.3**
baz=5.2
D19K Kuna River 70.27 359 P **P** **14 56 35.7 -0.8**
baz=1.9
C17K DeLong Mountai 70.29 1 P **P** **14 56 36.2 -0.3**
baz=358
E24K Your Creek 70.33 355 P **P** **14 56 36.8 0.0**
baz=9.6
F26K Sheenjek River 70.39 353 P **P** **14 56 37.9 +0.8**
baz=13
E23K Chandalar 70.42 356 P **P** **14 56 38.0 +0.6**
baz=8.7
C16K Lisburne Hills 70.45 2 P **P** **14 56 37.6 +0.2**
baz=356
E22K Anaktuvuk Pass 70.45 357 P **P** **14 56 37.6 0.0**
baz=6.9
E20K Nigu River 70.48 358 P **P** **14 56 38.6 +0.9**
baz=3.5
G29M Pine Creek 70.52 351 P **P** **14 56 38.1 +0.2**
baz=18
F25K Christian River 70.61 354 P **P** **14 56 38.5 0.0**
baz=12
ENH Enshi 70.65 66 P **P** **14 56 39.2 -0.1**
BMAR Burnt Mountain 70.69 354 P **P** **14 56 39.5 +0.6**
RDOG Red Dog Mine 70.72 1 P **P** **14 56 39.4 +0.3**
baz=358
F24K Squaw Lake 70.85 355 P **P** **14 56 40.4 +0.4**
baz=10.0
EPYK Eagle Plains 70.87 350 P **P** **14 56 40.3 +0.2**
baz=19,SNR=5.6
GYA Guiyang 70.98 71 ⇓P **P** **14 56 41.5 0.0**
GYA pmax pmax
comp=Z,26nm,1.2s
G27K Doyon Strip 71.02 352 P **P** **14 56 41.6 +0.6**
baz=15
D17K Noatak River 71.07 1 P **P** **14 56 41.8 +0.5**
baz=358
H31M Peel River 71.08 349 P **P** **14 56 41.7 +0.3**
baz=20
G26K Porcupine Rive 71.08 353 P **P** **14 56 41.8 +0.5**
baz=13
F22K John River 71.10 357 P **P** **14 56 41.5 +0.1**
baz=6.6
H29M Whitestone 71.22 351 P **P** **14 56 42.6 +0.4**
baz=17
COLD Coldfoot 71.28 356 P **P** **14 56 43.2 +0.7**
baz=8.2
E19K Redstone River 71.30 359 P **P** **14 56 43.5 +0.8**
baz=2.6
E18K Tukpahlearik C 71.37 0 P **P** **14 56 43.8 +0.8**
baz=360
F21K Alatna River 71.43 357 P **P** **14 56 44.1 +0.6**
baz=5.6
G25K Bearman Lake 71.46 354 P **P** **14 56 44.0 +0.4**
baz=11
WRGLY Wrigley 71.48 343 P **P** **14 56 44.5 +0.8**
baz=28
H27K Steamboat Moun 71.57 352 P **P** **14 56 45.3 +1.0**
baz=15
G24K Hadweenzic Riv 71.63 355 P **P** **14 56 45.5 +0.8**
baz=10
F20K Avaraart Lake 71.68 358 P **P** **14 56 45.8 +0.9**
baz=3.8
E17K Hotham Inlet 71.70 1 P **P** **14 56 45.8 +0.7**
baz=359
G23K Bananza Creek 71.78 356 P **P** **14 56 46.1 +0.5**
baz=8.3
FFC Flin Flon 71.89 329 P **P** **14 56 46.1 -0.3**
FFC IAmb IAmb 14 57 08.3
comp=Z,40nm,1.9s
FFC Flin Flon 71.89 329 P **P** **14 56 46.1 -0.3**
FFC pmax pmax
comp=Z,40nm,1.9s
I30M Mount Dempster 71.92 350 P **P** **14 56 46.9 +0.4**
baz=19
F19K Shaleruckik Mo 71.94 359 P **P** **14 56 46.9 +0.5**
baz=2.2
BNX BinXian 71.95 44 ⇓P **P** **14 56 47.3 +0.4**
BNX pmax pmax
comp=Z,22nm,1.5s
TIA Tai'an 72.06 57 P **P** **14 56 47.5 -0.3**
TIA pmax pmax
comp=Z,10.0nm,1.0s
G21K Allakaket 72.14 357 P **P** **14 56 48.6 +0.8**
baz=5.5
I28M Miner Creek 72.15 351 P **P** **14 56 48.6 +0.7**
baz=16
CN2 Changchun 72.17 47 *e*P **P** **14 56 50.8 +2.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
I27K Kandik River 72.19 352 P **P** **14 56 48.5 +0.4**
baz=15,SNR=6.2
F18K Selawik 72.19 360 P **P** **14 56 48.1 +0.1**
baz=0.7
F17K Baldwin Pennin 72.35 0 P **P** **14 56 48.9 0.0**
baz=359
H24K Noodor Dome 72.51 355 P **P** **14 56 50.4 +0.4**
baz=9.9
J30M Hart River 72.53 349 P **P** **14 56 50.8 +0.6**
baz=19
ULM Lac du Bonnet 72.54 323 P **P** **14 56 51.2 +0.9**
comp=Z,3.9nm,0.4s,baz=42,slow=6.0,SNR=5.3
ULM LR LR 15 29 46.7
comp=Z,1µm,19.2s,baz=26,slow=37
comp=Z,3.9nm,0.4s
ULM Lac du Bonnet 72.54 323 IAmb IAmb 14 57 00.8
comp=Z,30nm,1.3s
G19K Purcell Mounta 72.62 359 P **P** **14 56 51.2 +0.6**
baz=2.7
H23K Yukon River 72.63 355 P **P** **14 56 52.0 +1.3**
baz=8.6
I26K Coal Creek Min 72.63 352 P **P** **14 56 51.6 +0.9**
baz=14
PRP Porcupine Dome 72.64 354 P **P** **14 56 51.0 +0.1**
baz=12
H22K Ishtalitna Cre 72.67 356 P **P** **14 56 51.6 +0.7**
baz=7.2
IMAR Indian Mountai 72.68 357 P **P** **14 56 51.6 +0.6**
G18K Tagagawik 72.89 359 P **P** **14 56 52.7 +0.5**
baz=1.5
J29N Klondike Camp 72.90 350 P **P** **14 56 52.8 +0.4**
baz=17
H21K Melozitna Rive 72.97 357 P **P** **14 56 52.9 +0.2**
baz=6.0,SNR=6.4
F15K North Star Dit 73.04 2 P **P** **14 56 53.7 +0.7**
baz=357
TNA Tin City 73.08 3 P **P** **14 56 54.0 +0.7**
baz=354
POKR Poker Plat Res 73.19 354 P **P** **14 56 54.9 +0.9**
baz=10
H20K Anotleneega Mo 73.21 358 P **P** **14 56 55.0 +0.9**
baz=4.4
H19K Roundabout Mou 73.22 358 P **P** **14 56 55.0 +0.9**
baz=3.2
F14K Arctic Creek 73.23 3 P **P** **14 56 55.5 +1.3**
baz=356
MDP Montagnes des 73.28 262 LR LR 15 25 43.8
comp=Z,511nm,19.8s,baz=95,slow=33
I23K Minto, Yukon-K 73.29 355 P **P** **14 56 55.2 +0.6**
baz=8.7
G17K Kiwalik Mounta 73.30 0 P **P** **14 56 55.2 +0.6**
baz=360
K29M Barlow Dome 73.39 350 P **P** **14 56 56.0 +0.7**
baz=18
G16K Koyuk River 73.39 1 P **P** **14 56 55.0 -0.1**
baz=359
MAYO Mayo, Yukon 73.39 349 P **P** **14 56 55.7 +0.4**
baz=19
I21K Tanana 73.41 356 P **P** **14 56 56.1 +0.9**
baz=6.7
DAWY Dawson 73.42 350 P **P** **14 56 56.2 +0.8**
baz=16
J26L Joseph Creek 73.46 352 P **P** **14 56 56.5 +0.8**
baz=13,SNR=11
COLA College 73.46 354 P **P** **14 56 57.2 +1.7**
COLA College 73.46 354 P **P** **14 56 56.2 +0.7**
baz=9.9
ILAR Eielson Array 73.49 354 P **P** **14 56 56.6 +0.9**
comp=Z,2.9nm,0.8s,baz=1.9,slow=4.5,SNR=40
comp=Z,2.9nm,0.8s
ILAR Eielson Array 73.49 354 P **P** **14 56 55.2 -0.6**
MLY Manley 73.49 356 P **P** **14 56 55.8 -0.1**
baz=7.6
J25K Salcha River, 73.52 353 P **P** **14 56 56.8 +0.8**
baz=12
H18K Honhosa River 73.63 359 P **P** **14 56 57.3 +0.7**
baz=1.7
K27K Chicken 73.77 352 P **P** **14 56 58.4 +1.0**
baz=14
G15K Niukluk 73.77 2 P **P** **14 56 57.7 +0.4**
baz=357
WHN Wuhan 73.79 64 ⇓P **P** **14 56 58.5 +0.5**
WHN pmax pmax
comp=Z,340nm,2.0s
NEA2 Nenana 73.83 355 P **P** **14 56 57.8 0.0**
baz=8.9,SNR=6.1
HDA Harding Lake 73.85 354 P **P** **14 56 58.1 +0.2**
baz=11,SNR=7.7
H17K Granite Mounta 73.86 360 P **P** **14 56 58.7 +0.8**
baz=0.5
I20K Naaghedeneel 73.90 357 P **P** **14 56 58.9 +0.8**
baz=4.7
SCRK Sand Creek 74.01 353 P **P** **14 56 59.7 +0.7**
baz=13,SNR=5.9
GCSA Galena City Sc 74.02 358 P **P** **14 56 59.6 +0.8**
baz=2.9
H16K Elim 74.15 1 P **P** **14 57 00.5 +0.9**
baz=359
ANM Nome 74.17 2 P **P** **14 57 00.1 +0.4**
baz=356
L29M L29M 74.17 350 P **P** **14 57 00.4 +0.5**
baz=17
CNSH ChangSha 74.30 66 P **P** **14 57 01.3 +0.2**
CNSH pmax pmax
comp=Z,40nm,1.1s
CNSH LR LR
comp=Z,960nm,15.8s
CNSH LR LR
comp=Z,580nm,11.5s
CNSH LR LR
comp=Z,860nm,27.7s
RIDG Independent Ri 74.33 353 P **P** **14 57 01.3 +0.6**
baz=12
K24K Donnelly Dome 74.35 353 P **P** **14 57 01.7 +0.9**
baz=11
KOTAN Kotaneelee Air 74.35 342 P **P** **14 57 02.1 +1.2**
baz=28
BPAW Bear Paw Mtn. 74.43 356 P **P** **14 57 02.0 +0.7**
baz=7.4
M31M Drury Creek, Y 74.48 348 P **P** **14 57 02.5 +0.9**
baz=20
M30M Minto, Yukon 74.50 349 P **P** **14 57 02.6 +0.9**
baz=18
J20K Nowinta River 74.51 357 P **P** **14 57 03.0 +1.4**
baz=5.0
GAMB Gambell 74.65 5 P **P** **14 57 03.5 +1.0**
baz=351
BCAR Beaver Creek A 74.67 351 P **P** **14 57 03.6 +0.8**
MCK McKinley 74.67 355 P **P** **14 57 03.4 +0.7**
baz=9.0
L27K Beaver Creek, 74.68 351 P **P** **14 57 04.4 +1.6**
baz=14
CHUM Lake Minchumin 74.72 356 P **P** **14 57 03.4 +0.5**
baz=6.4,SNR=6.4
J19K Poorman 74.74 358 P **P** **14 57 04.2 +1.1**
baz=3.8
M29M Somme Creek 74.86 350 P **P** **14 57 04.9 +1.0**
baz=17
L26K Log Cabin Wild 74.88 352 P **P** **14 57 04.6 +0.7**
baz=13
I17K Unalakleet 74.92 0 P **P** **14 57 04.8 +0.7**
baz=360
MENT Mentasta 75.00 352 P **P** **14 57 06.2 +1.6**
SJG San Juan 75.03 281 LR LR 15 25 59.9
comp=Z,184nm,20.9s,baz=36,slow=32
TRF Thorofare Moun 75.04 355 P **P** **14 57 05.3 +0.3**
baz=7.9
PAX Paxson 75.14 353 P **P** **14 57 05.9 +0.3**
baz=12
BVCY Beaver Creek 75.19 351 P **P** **14 57 06.7 +1.0**
baz=15
DHY Denali Highway 75.20 354 P **P** **14 57 06.4 +0.5**
baz=10,SNR=6.8
N32M Quiet Lake 75.25 347 P **P** **14 57 07.0 +0.9**
baz=21
J18K Innoko River 75.30 358 P **P** **14 57 07.3 +1.0**
baz=3.0
K20K Telida 75.32 357 P **P** **14 57 07.1 +0.7**
baz=5.0
M27K Edge Creek, AK 75.37 351 P **P** **14 57 07.9 +1.0**
baz=14

N31M	**Braeburn, Yuko**	75.38	348	P		P		14 57 07.7	+0.9
	baz=19								
USRK	**Ussuriysk Ar.**	75.38	43	P		P		14 57 06.7	-0.4
	comp=Z,3.3nm,0.8s,baz=304,slow=5.0,SNR=7.9								
	comp=Z,3.3nm,0.8s								
J17K	**VABM Dome**	75.40	359	P		P		14 57 07.6	+0.7
	baz=1.1								
WTLY	**Watson Lake, Y**	75.40	344	P		P		14 57 07.7	+0.7
	baz=24								
M26K	**Nabesna, AK**	75.45	352	P		P		14 57 08.4	+1.1
	baz=14								
LIRD	**Liard River Hi**	75.47	343	P		P		14 57 08.8	+1.5
	baz=26								
J16K	**Anvik River**	75.52	0	P		P		14 57 08.4	+0.9
	baz=360								
WAT1	**Susitna Watana**	75.54	354	P		P		14 57 07.8	+0.1
	baz=9.2								
N30M	**Aishikik Lake**	75.60	349	P		P		14 57 08.9	+0.8
	baz=18								
HARP	**HAARP**	75.67	353	P		P		14 57 09.3	+0.8
	baz=12								
PPLA	**Purkeypile**	75.70	356	P		P		14 57 09.1	+0.4
	baz=6.5								
WAT6	**Susitna Watana**	75.72	354	P		P		14 57 09.5	+0.5
	baz=9.9								
YUK3	**Moose Creek**	75.76	350	P		P		14 57 09.8	+0.6
	baz=15								
NJ2	**Nanjing**	75.81	60	*e*P		P		14 57 09.3	-0.4
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
TKL	**Tuckaleechee C**	75.93	305	LR		LR		15 31 39.8	
	comp=Z,882nm,18.0s,baz=68,slow=37								
YUK4	**Talbot Arm**	75.94	349	P		P		14 57 10.4	+0.2
	baz=17								
WHY	**Whitehorse**	76.02	347	P		P		14 57 11.2	+0.6
	baz=20								
J14K	**Nanvaranak Lak**	76.03	1	P		P		14 57 11.7	+1.3
	baz=358								
M24K	**Tolsona, Glenn**	76.06	353	P		P		14 57 11.6	+0.8
	baz=11								
CUT	**Chulitna**	76.08	355	P		P		14 57 11.2	+0.5
	baz=7.9								
K17K	**Iditarod**	76.08	359	P		P		14 57 11.2	+0.5
	baz=1.7								
P33M	**Teslin, Yukon**	76.08	346	P		P		14 57 11.5	+0.6
	baz=21								
O30N	**Mendenhall**	76.11	348	P		P		14 57 11.8	+0.8
	baz=19								
YUK8	**Steele Glacier**	76.15	350	P		P		14 57 12.1	+0.6
	baz=16								
L20K	**Farewell, AK**	76.19	357	P		P		14 57 12.3	+0.8
	baz=5.1								
HYT	**Haines Junctio**	76.27	349	P		P		14 57 13.0	+0.9
	baz=18								
YUK6	**Outpost Mounta**	76.28	349	P		P		14 57 13.1	+0.9
	baz=17								
N25K	**Chitina, Valde**	76.40	352	P		P		14 57 13.4	+0.7
	baz=12								
SCM	**Sheep Creek Mo**	76.43	354	P		P		14 57 13.7	+0.9
	baz=10								
MCARA	**McCarthy VSAT**	76.45	351	P		P		14 57 14.0	+1.1
	baz=13								
M23K	**Glacier View**	76.50	354	P		P		14 57 14.3	+1.1
	baz=9.8								
R33M	**Jennings River**	76.50	345	P		P		14 57 14.1	+0.7
	baz=22								
K15K	**Wolf Creek Mou**	76.51	0	P		P		14 57 13.6	+0.3
	baz=359								
L19K	**White Mountain**	76.53	357	P		P		14 57 13.8	+0.5
	baz=4.4								
SML	**Sawmill**	76.53	354	P		P		14 57 13.5	+0.1
	baz=9.4								
L18K	**Granite Mounta**	76.55	358	P		P		14 57 13.7	+0.3
	baz=3.0								
SKT	**Skwentna**	76.58	356	P		P		14 57 14.1	+0.5
	baz=6.9								
KLU	**Klutina**	76.64	353	P		P		14 57 14.5	+0.5
	baz=11								
CTG	**Chitna Glacier**	76.66	351	P		P		14 57 15.0	+0.8
	baz=15								
L17K	**Donlin**	76.66	359	P		P		14 57 15.0	+1.0
	baz=1.7								
O28M	**Mount Upton**	76.70	350	P		P		14 57 15.2	+0.6
	baz=16								
M22K	**Willow**	76.72	355	P		P		14 57 15.1	+0.8
	baz=8.0								
M20K	**Styx River**	76.76	356	P		P		14 57 15.4	+0.6
	baz=5.7								
M19K	**Big River Lodg**	76.79	357	P		P		14 57 14.4	-0.4
	baz=4.7								
PMR	**Palmer**	76.81	354	P		P		14 57 15.5	+0.6
	baz=8.8								
K13K	**Kusilvak Mount**	76.82	2	P		P		14 57 16.0	+1.0
	baz=357								
P32M	**Atlin**	76.83	346	P		P		14 57 15.8	+0.7
	baz=20								
P30M	**Million Dollar**	76.86	348	P		P		14 57 16.3	+1.0
	baz=18								
O29M	**Mount Kennedy**	76.93	349	P		P		14 57 16.8	+1.0
	baz=17								
KNK	**Knik Glacier**	76.93	354	P		P		14 57 16.4	+0.8
	baz=9.3								
BMRM	**Bremner River**	77.03	352	P		P		14 57 17.1	+0.9
	baz=12								
SUA	**Susitna One**	77.04	355	P		P		14 57 17.0	+0.7
	baz=7.5								
CRQE	**Cirque**	77.07	351	P		P		14 57 17.1	+0.6
	baz=13								
L16K	**Owhat River**	77.10	359	P		P		14 57 16.6	+0.1
	baz=0.8								
L15K	**Ungalak Mounta**	77.13	0	P		P		14 57 16.8	+0.1
	baz=359								
Q32M	**Nakina River**	77.15	345	P		P		14 57 18.1	+0.9
	baz=21								
DLBC	**Dease Lake**	77.20	344	P		P		14 57 18.5	+1.2
	baz=23								
M18K	**Stony River**	77.25	358	P		P		14 57 18.5	+1.2
	baz=3.6								
RC01	**Rabbit Creek A**	77.35	355	P		P		14 57 18.7	+0.8
	baz=8.3								
GLI	**Glacier Island**	77.35	353	P		P		14 57 18.4	+0.4
	baz=10								
PINM	**Pinnacle**	77.36	350	P		P		14 57 19.0	+0.9
	baz=15								
M17K	**Holitna River**	77.38	358	P		P		14 57 19.0	+0.8
	baz=2.4								
N20K	**Mount Spurr**	77.39	356	P		P		14 57 19.1	+0.8
	baz=6.4								
SPCR	**Spurr Chakacha**	77.39	356	P		P		14 57 18.9	+0.6
	baz=6.4								
PLBC	**Pleasant Camp**	77.40	348	P		P		14 57 19.3	+1.0
	baz=18								
P29M	**Windy Craggy**	77.45	348	P		P		14 57 19.6	+1.0
	baz=17								
L14K	**Kuka Creek**	77.46	1	P		P		14 57 19.9	+1.4
	baz=358								
PWL	**Port Wells**	77.47	354	P		P		14 57 19.7	+1.1
	baz=9.3								
MESA	**MESA**	77.50	351	P		P		14 57 19.8	+0.8
	baz=14								
EYAK	**Cordova Ski Ar**	77.55	353	P		P		14 57 20.1	+1.1
	baz=11								
BGLC	**Bering Glacier**	77.71	351	P		P		14 57 21.6	+1.6
	baz=13								
CAPN	**Captain Cook N**	77.76	355	P		P		14 57 21.6	+1.4
	baz=7.2								
M16K	**Timber Creek**	77.78	359	P		P		14 57 21.3	+0.9
	baz=1.2								
KSRS	**Korea Array**	77.81	51	P		P		14 57 21.0	+0.1
	comp=Z,3.2nm,0.7s,baz=316,slow=5.6,SNR=12								
	comp=Z,3.2nm,0.7s								
N19K	**Bonanza Creek**	77.88	357	P		P		14 57 22.1	+1.0
	baz=4.6								
QIZ	**Qiongzhong**	77.89	75	P		P		14 57 21.5	-0.2
QIZ				S		S		15 07 16.3	+2.6
QIZ				LR		LR			
	comp=Z,370nm,16.5s								
QIZ				LR		LR			
	comp=Z,760nm,17.0s								
QIZ				LR		LR			
	comp=Z,720nm,21.6s								
S34M	**Telegraph Cree**	77.91	344	P		P		14 57 22.1	+1.0
	baz=22								
KAIM	**Kayak Island**	78.03	352	P		P		14 57 22.8	+1.1
	baz=12								
M14K	**Bethel**	78.06	1	P		P		14 57 23.2	+1.4
	baz=359								
WVT	**Waverly**	78.06	308	P		P		14 57 21.8	-0.5
WVT				pmax		pmax			
	comp=Z,14nm,1.1s								
N18K	**Kilae Creek**	78.07	358	P		P		14 57 23.0	+1.0
	baz=3.6								
M15K	**Kasigluk River**	78.12	0	P		P		14 57 23.3	+1.1
	baz=360								
R32K	**Eaglecrest**	78.21	346	P		P		14 57 24.2	+1.4
	baz=20								
P23K	**Montague Islan**	78.25	353	P		P		14 57 24.2	+1.2
	baz=10.0								
N17K	**Nushagak Hills**	78.25	358	P		P		14 57 23.4	+0.4
	baz=2.6								
SEW	**Seward**	78.31	354	P		P		14 57 24.2	+1.0
	baz=8.5								
M11K	**Mekoryuk**	78.33	3	P		P		14 57 24.4	+1.0
	baz=356								
N16K	**Nishlik Lake**	78.33	359	P		P		14 57 24.5	+1.0
	baz=1.4								
M13K	**Dall Lake**	78.38	1	P		P		14 57 25.0	+1.4
	baz=358								
O19K	**Port Alsworth**	78.50	357	P		P		14 57 25.4	+1.1
	baz=4.8								
YSS	**Yuzhno-Sakhali**	78.51	36	*e*P		P		14 57 23.3	-1.3
YSS				*e*S		S		15 07 14.0	-5.5
YSS				pmax		pmax			
	comp=Z,40nm,1.3s								
CMC01	**Camacan, BA**	78.52	238	*e*P		P		14 57 24.9	-0.1
O20K	**Slope Mountain**	78.53	356	P		P		14 57 25.7	+1.1
	baz=6.0								
T35M	**Bob Quinn**	78.59	344	P		P		14 57 25.9	+1.0
	baz=23								
N15K	**Kwethluk River**	78.65	360	P		P		14 57 26.4	+1.2
	baz=0.3								
Q23K	**Middleton Isla**	78.71	353	P		P		14 57 26.3	+0.8
	baz=11								
BRSE	**Bradley Lake S**	78.76	355	P		P		14 57 26.4	+0.6
	baz=7.5								
S31K	**Pelican**	78.80	347	P		P		14 57 26.7	+0.7
	baz=18								
O18K	**Koktuh Hills**	78.87	357	P		P		14 57 27.1	+0.6
	baz=4.1								
N14K	**Kuskokwak Cree**	78.89	1	P		P		14 57 27.5	+1.0
	baz=359								
HOM	**Homer**	78.89	355	P		P		14 57 27.2	+0.7
	baz=6.8								
S32K	**Killisnoo**	78.98	346	P		P		14 57 28.1	+1.1
	baz=20								
P19K	**Oil Pt**	78.99	356	P		P		14 57 28.4	+1.3
	baz=5.6								
O17K	**Koliganek Bris**	79.01	358	P		P		14 57 28.3	+1.2
	baz=2.6								
SMTB	**Santa Maria do**	79.17	248	*e*P		P		14 57 28.2	-0.5
P18K	**Big Mountain,**	79.33	357	P		P		14 57 29.1	+0.1
	baz=4.0								
PET	**Petropavlovsk**	79.43	24	*e*P		P		14 57 26.0	-3.6
PET				*e*				15 00 29.5	
PET				*e*S		S		15 07 25.9	-3.2
PET				pmax		pmax			
	comp=Z,100nm,14.5s								
PET				pmax		pmax			
	comp=Z,100nm,13.8s								
PET				MLR		MLR			
	comp=Z,2μm,16.0s								
PET				MLR		MLR			
	comp=Z,2μm,17.0s								
SIT	**Sitka**	79.51	346	P		P		14 57 29.9	0.0
	baz=19								
KULM	**Kulim**	79.90	92	P		P		14 57 31.8	-0.9
PSI	**Prapat**	80.24	95	LR		LR		15 36 58.9	
	comp=Z,186nm,20.1s,baz=308,slow=39								
PSI	**Prapat**	80.24	95	P		P		14 57 33.4	-1.3
ASAJ	**Asahikawa**	80.62	38	P		P		14 57 36.2	0.0
	comp=Z,12nm,0.9s,baz=219,slow=3.4,SNR=4.5								
ASAJ				LR		LR		15 37 44.0	
	comp=Z,1μm,18.9s,baz=340,slow=39								
	comp=Z,12nm,0.9s								
JKA	**Kamikawa-asahi**	80.62	38	P		P		14 57 36.2	0.0
JKA	**Kamikawa-asahi**	80.62	38	IAmb		IAmb		14 57 39.4	
	comp=Z,58nm,1.3s								
JNU	**Nakatsue**	82.56	52	LR		LR		15 38 12.7	
	comp=Z,2μm,19.0s,baz=296,slow=38								
NPGB	**Novo Progresso**	83.44	255	*e*P		P		14 57 50.4	-1.0
SNDB	**Serra Nova Dou**	83.94	248	*e*P		P		14 57 53.5	-0.3
MJAR	**Matsushiro Arr**	84.19	45	P		P		14 57 55.4	+0.3
	comp=Z,5.1nm,0.9s,baz=320,slow=3.7,SNR=5.5								
	comp=Z,5.1nm,0.9s								
MJAR	**Matsushiro Arr**	84.19	45	P		P		14 57 55.0	0.0
MJAR				IAmb		IAmb		14 57 59.4	
	comp=Z,17nm,1.3s								
MJAR	**Matsushiro Arr**	84.19	45	P		P		14 57 55.0	0.0
MJAR				pmax		pmax			
	comp=Z,17nm,1.3s								
SDV	**Santo Domingo**	84.27	277	LR		LR		15 31 06.7	
	comp=Z,342nm,21.5s,baz=65,slow=33								
SDV	**Santo Domingo**	84.27	277	*e*P		P		14 57 55.3	-0.7
PDAR	**Pinedale Array**	84.34	325	P		P		14 57 56.5	+0.6
	comp=Z,3.5nm,0.8s,baz=59,slow=4.7,SNR=24								
	comp=Z,3.5nm,0.8s								
PDAR	**Pinedale Array**	84.34	325	P		P		14 57 55.1	-0.8
PDRB	**Porto dos Gac**	87.53	252	*e*P		P		14 58 11.2	-0.6
ELK	**Elko**	88.39	327	LR		LR		15 40 15.1	
	comp=Z,1μm,18.8s,baz=38,slow=37								
TGY	**Tagaytay City**	89.12	72	LR		LR		15 43 39.2	
	comp=Z,375nm,20.6s,baz=107,slow=39								
ROSC	**El Rosal**	89.68	276	LR		LR		15 35 13.0	
	comp=Z,270nm,21.5s,baz=58,slow=33								
NVAR	**Mina Array Bea**	91.59	328	P		P		14 58 32.6	+1.8
	comp=Z,0.3nm,0.5s,baz=24,slow=2.3,SNR=2.4								
NVAR				LR		LR		15 43 05.0	
	comp=Z,897nm,18.2s,baz=27,slow=38								
	comp=Z,0.3nm,0.5s								
NVAR	**Mina Array Bea**	91.59	328	P		P		14 58 31.4	+0.6
TXAR	**Lajitas Array**	92.09	313	P		P		14 58 34.8	+1.6
	comp=Z,2.2nm,0.9s,baz=64,slow=3.8,SNR=10								
TXAR				LR		LR		15 40 51.9	
	comp=Z,686nm,20.3s,baz=42,slow=36								
	comp=Z,2.2nm,0.9s								
JTS	**Las Juntas de**	93.84	287	LR		LR		15 37 48.2	
	comp=Z,240nm,20.2s,baz=54,slow=34								
PFO	**Pinyon Flats O**	94.95	324	LR		LR		15 44 30.3	
	comp=Z,758nm,19.2s,baz=32,slow=37								
DAV	**Davao City (W)**	97.22	74	LR		LR		15 49 45.2	
	comp=Z,520nm,19.6s,baz=332,slow=40								
CPUP	**Villa Florida**	97.92	242	LR		LR		15 45 35.4	
	comp=Z,420nm,18.6s,baz=298,slow=37								
LPAZ	**La Paz**	98.87	256	*e*P		P		14 59 03.2	-1.5
SYO	**Syowa Base**	111.24	172	*e*Pdiff		Pdif		15 00 01.8	+4.2
WRA	**Warramunga Arr**	121.38	90	PKP		PKPdf		15 04 16.2	-0.9
	comp=Z,0.9nm,0.8s,baz=302,slow=1.8,SNR=7.1								
ASAR	**Alice Springs**	123.24	93	PKP		PKPdf		15 04 20.1	-0.5
	comp=Z,3.2nm,0.7s,baz=319,slow=1.5,SNR=38								
ASAR	**Alice Springs**	123.24	93			PKPdf		15 04 19.2	-1.4
QSPA	**South Pole Qui**	131.39	180	PKP		PKiKP		15 04 36.2	+0.4
	comp=Z,1.1nm,0.9s,baz=229,slow=2.4,SNR=1.7								
STKA	**Stephens Creek**	133.36	98	PKP		PKPdf		15 04 39.5	-0.1
	comp=Z,1.9nm,0.7s,baz=322,slow=3.0,SNR=7.5								
DZM	**Mont Dzumac**	146.15	65	*e*LR		LR		15 53 11.3	
	comp=Z,540nm,22.4s								
PPT2	**Papeete2**	154.35	335	*e*LR		LR		15 56 58.6	
	comp=Z,471nm,24.2s								
PPT2				*e*LR		LR		15 56 59.7	
	comp=Z,570nm,23.5s								
TBI	**Tubuai**	159.64	330	*e*LR		LR		15 59 20.4	
	comp=Z,1μm,28.0s								
TBI				*e*LR		LR		15 59 24.1	
	comp=Z,2μm,23.8s								

*IDC **27** 14:52:40.1±2.4,41°.39N×19°.36E,h0km,mb3.8/3, mbtmp3.8/7,ML3.3/4,Error ellipse: s-maj=30.4km s-min=15.9km az=18.0*
*THE **27** 14:52:44.6,42°N×3°×2°0E±°,h0km,M3.1/14,MLh3.1/14*
*PDG **27** 14:52:46.3±0.2,41°.58N×19°.53E,h11km,MD3.4/5, ML3.3/12,Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
ISC 27 14:52:44.5±1.3,**41°.54N**±0°.04×**19°.43E**±0°.04,**h16**km±9km, **n37**,σ**1°15/59,4C-4D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ULC	**Ulcinj**	**0.45**	**342**	⇑*i*	Pg	**Pb**	**14 52 53.6**	**-0.5**
ULC				*e*	Sg	**Sb**	**14 53 00.1**	**-0.5**
DRME	**Dracevica, Mon**	**0.68**	**344**	⇓*i*	Pg	**Pb**	**14 52 58.0**	**+0.1**
DRME				*i*	Sg	**Sb**	**14 53 07.8**	**+0.7**
BUM	**Brajici-Budva**	**0.86**	**333**	⇑*i*	Pg	**Pn**	**14 53 01.8**	**-0.3**
BUM				*e*	Sg	**Sn**	**14 53 14.7**	**+0.3**
PDG	**Podgorica**	**0.90**	**352**	⇑*i*	Pg	**Pb**	**14 53 01.5**	**-0.3**
PDG				*i*	Sg	**Sn**	**14 53 14.7**	**-0.5**
CEME	**Cevo**	**1.08**	**339**	*e*	Pg	**Pn**	**14 53 05.3**	**+0.3**
CEME				*e*	Sg	**Sn**	**14 53 21.3**	**+1.6**
PVY	**Plav**	**1.13**	**20**	⇓*i*	Pg	**Pb**	**14 53 05.1**	**-0.6**
PVY				*i*	Sg	**Sn**	**14 53 21.4**	**+0.4**
HCY	**Herceg Novi**	**1.15**	**323**	*e*	Pg	**Pg**	**14 53 06.9**	**+0.2**
HCY				*i*	Sg	**Sn**	**14 53 24.4**	**+3.1**
NKME	**Niksic**	**1.28**	**344**	*e*	Pg	**Pg**	**14 53 08.8**	**-0.4**
NKME				*e*	Sg	**Sg**	**14 53 27.6**	**+1.7**
KOME	**Kolasin**	**1.32**	**3**	⇓*i*	Pg	**Pg**	**14 53 08.9**	**-1.0**
KOME				*e*	Sg	**Sg**	**14 53 27.6**	**+0.5**
IVA	**Berane**	**1.38**	**14**	⇓*i*	Pg	**Pb**	**14 53 09.8**	**-0.2**
IVA				*e*	Sg	**Sg**	**14 53 29.5**	**+0.4**
BRY	**Bratogost**	**1.52**	**334**	⇑*i*	Pg	**Pg**	**14 53 12.5**	**-1.2**
BRY				*e*	Sg	**Sg**	**14 53 35.9**	**+2.4**
PLE	**Pljevlja**	**1.79**	**359**	*e*	Pn	**Pb**	**14 53 17.2**	**+0.2**
PLE				*e*	Sn	**Sg**	**14 53 41.7**	**-0.6**
IGT	**Igoumenitsa**	**2.12**	**161**	P		**Pn**	**14 53 20.1**	**+0.9**
IGT				S		**Sb**	**14 53 47.2**	**-1.2**
KZN	**Kozani**	**2.16**	**124**	P		**Pn**	**14 53 21.2**	**+1.4**
KZN				S		**Sn**	**14 53 48.4**	**+2.1**
GRG	**Griva**	**2.31**	**103**	P		**Pn**	**14 53 22.4**	**+0.4**
GRG				S		**Sn**	**14 53 51.0**	**+0.9**
KNT	**Kendrikon**	**2.64**	**97**	P		**Pn**	**14 53 27.5**	**+1.1**
LIT	**Litokhoron**	**2.73**	**121**	P		**Pn**	**14 53 28.8**	**+1.2**
THL	**Klokotos Trika**	**2.78**	**134**	P		**Pn**	**14 53 30.0**	**+1.6**
THL				S		**Sn**	**14 54 02.7**	**+1.1**
TSLK	**Tsoukalades, L**	**2.87**	**160**	P		**Pn**	**14 53 30.3**	**+0.8**
LKD2	**Lefkada island**	**2.90**	**161**	P		**Pn**	**14 53 30.5**	**+0.5**
HORT	**Hortiatis**	**2.93**	**107**	P		**Pn**	**14 53 31.3**	**+0.8**
HORT				S		**Sn**	**14 54 05.9**	**+0.5**
NYDR	**Nydri-Lefkada**	**2.98**	**161**	P		**Pn**	**14 53 31.4**	**+0.3**
VTS	**Vitosha**	**3.03**	**68**	P		**Pn**	**14 53 32.5**	**+0.6**
VTS				S		**Sn**	**14 54 08.7**	**+0.7**
SOH	**Sokhos**	**3.05**	**102**	P		**Pn**	**14 53 32.7**	**+0.7**
SOH				S		**Sn**	**14 54 09.2**	**+1.0**
SRS	**Serrai**	**3.16**	**96**	P		**Pn**	**14 53 33.9**	**+0.3**
MMB	**Musomishta**	**3.24**	**88**	P		**Pn**	**14 53 36.2**	**+1.4**
PLG	**Polygyros**	**3.25**	**110**	P		**Pn**	**14 53 35.7**	**+0.8**
SERG	**Sergoula**	**3.71**	**146**	P		**Pn**	**14 53 42.9**	**+1.7**
RZN	**Rozhen**	**3.98**	**86**	P		**Pn**	**14 53 44.9**	**-0.2**
MLR	**Muntele Rosu**	**6.17**	**48**	Pn		**Pn**	**14 54 16.7**	**+1.7**
	2.3nm,0.3s,baz=228,slow=12,SNR=7.6							
MLR				Sn		**Sn**	**14 55 28.2**	**+3.0**
	0.2nm,0.3s,baz=300,slow=18,SNR=0.8							
	9.1nm,0.6s							
MORC	**Moravsky Berou**	**8.35**	**352**	*e*P		**Pn**	**14 54 45.7**	**+0.9**
GERES	**GERESS Array B**	**8.35**	**333**	Pn		**Pn**	**14 54 45.4**	**+0.5**
	baz=153,slow=6.6,SNR=1.8							
GERES				Sn		**Sn**	**14 56 19.7**	**+0.8**
	0.1nm,0.3s,baz=243,slow=37,SNR=3.8							
	0.7nm,0.6s							
DAVOX	**Davos/Dischmat**	**8.64**	**311**	Pn		**Pn**	**14 54 47.7**	**-1.2**
	0.7nm,0.3s,baz=108,slow=20,SNR=1.7							
DAVOX				Sn		**Sn**	**14 56 24.9**	**-1.1**
	0.5nm,0.3s,baz=127,slow=12,SNR=1.0							
	2.1nm,0.2s							
HFS	**Hagfors**	**18.96**	**351**	P		**Pn**	**14 57 05.2**	**-0.2**
	0.1nm,0.3s,baz=177,slow=9.8,SNR=1.6							
	2.2nm,0.7s							
FINES	**FINESS Array B**	**20.34**	**9**	P		**P**	**14 57 18.6**	**-1.1**
	3.0nm,0.9s,baz=187,slow=9.8,SNR=2.0							
	3.0nm,0.9s							
ZALV	**Zalesovo Beam**	**44.14**	**51**	P		**P**	**15 00 50.6**	**-1.4**
	0.8nm,0.4s,baz=279,slow=7.7,SNR=4.9							
	0.8nm,0.4s							
MKAR	**Makanchi Array**	**44.34**	**61**	P		**P**	**15 00 52.9**	**-0.8**
	0.4nm,0.4s,baz=280,slow=7.4,SNR=8.1							
	0.4nm,0.4s							

*IDC **27** 14:53:54.2±10.0,40°.25N×16°.74E,h0km,mb3.7/6, mbtmp3.8/7,ML1.2/1,Error ellipse: s-maj=198.9km s-min=33.0km az=60.0*
*PDG **27** 14:54:18.8±0.4,41°.57N×19°.40E,h11km±1km,MD3.3/5, ML3.3/13,Error ellipse: s-maj=1.5km s-min=1.9km az=0.0*
*THE **27** 14:54:18.8,41°N×3°×2°0E±°,h0km,M3.2/13,MLh3.2/13*
ISC 27 14:54:15.6±1.4,**41°.46N**±0°.03×**19°.44E**±0°.05,**h7**km±10km, **n36**,σ**1°41/58,mb3.9/5,6C-7D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ULC	**Ulcinj**	**0.53**	**344**	⇓*i*	Pg	**Pg**	**14 54 25.3**	**-0.4**
ULC				*i*	Sg	**Sg**	**14 54 32.2**	**-0.4**
DRME	**Dracevica, Mon**	**0.75**	**345**	⇑*i*	Pg	**Pg**	**14 54 29.2**	**-0.9**
DRME				*i*	Sg	**Sg**	**14 54 40.0**	**+0.2**
BUM	**Brajici-Budva**	**0.94**	**334**	⇓*i*	Pg	**Pg**	**14 54 33.3**	**-0.2**
BUM				*i*	Sg	**Sg**	**14 54 46.3**	**+0.6**
PDG	**Podgorica**	**0.98**	**352**	⇓*i*	Pg	**Pg**	**14 54 33.2**	**-1.2**
PDG				*i*	Sg	**Sg**	**14 54 47.6**	**+0.4**
CEME	**Cevo**	**1.16**	**341**	⇑*i*	Pg	**Pg**	**14 54 37.7**	**0.0**
CEME				*i*	Sg	**Sb**	**14 54 53.6**	**+0.4**
PVY	**Plav**	**1.20**	**19**	⇑*i*	Pg	**Pg**	**14 54 38.7**	**+0.1**
PVY				*i*	Sg	**Sb**	**14 54 55.2**	**+0.7**
HCY	**Herceg Novi**	**1.21**	**325**	⇓*i*	Pg	**Pg**	**14 54 39.0**	**+0.1**

az=60.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**57.13**	**33**	P	P	15 07 28.3	-0.1
	0.5nm,0.9s,baz=243,slow=6.3,SNR=2.7						
	0.5nm,0.9s						
H01W3	**Cape Leeuwin H**	**60.46**	**134**	T	T	16 13 19.3	
	baz=300						
H01W2	**Cape Leeuwin H**	**60.46**	**134**	T	T	16 13 19.2	
	baz=300						
H01W1	**Cape Leeuwin H**	**60.48**	**134**	T	T	16 13 24.0	
	baz=300						
WRA	**Warramunga Arr**	**72.68**	**112**	P	P	15 09 10.2	+0.1
	1.8nm,0.9s,baz=277,slow=6.2,SNR=7.0						
	1.8nm,0.9s						
ASAR	**Alice Springs**	**72.99**	**116**	P	P	15 09 12.0	0.0
	0.5nm,0.7s,baz=284,slow=5.7,SNR=6.9						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**145.32**	**341**	PKPbc	PKPbc	15 17 19.4	-0.9
	0.5nm,0.8s,baz=29,slow=1.9,SNR=4.7						

IDC 27 15:15:24.6±646.0, 54°39N×4°05E, h0km, Error ellipse: s-maj=312.8km s-min=132.8km az=117.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**8.18**	**129**	I	I	16 04 50.0	
	baz=313,slow=321,SNR=0.6						
I43RU	**DUBNA INFRASON**	**18.80**	**69**	I	I	17 09 30.0	
	baz=279,slow=328,SNR=1.9						
I48TN	**KESRA INFRASON**	**18.94**	**167**	I	I	17 09 10.0	
	baz=358,slow=302,SNR=0.5						
I46RU	**ZALESOVO INFRA**	**44.79**	**56**	I	I	19 47 20.0	
	baz=305,slow=338,SNR=1.5						

BEO ***27*** *15:15:25.3±0.7, 41°.49N×19°.64E, h4km±3km, ML2.8/9*
PDG 27 15:15:26.7±0.5, 41°.57N×19°.52E, h11km±2km, ML3.3/12, 4C-8D, Error ellipse: s-maj=2.1km s-min=2.5km az=0.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.45**	**332**	⇑*i*Pg	Pg	15 15 33.9	-1.7
ULC				*e*Sg	Sg	15 15 40.6	-1.0
DRME	**Dracevica, Mon**	**0.67**	**338**	*e*Pg	Pg	15 15 39.4	-0.3
DRME				*e*Sg	Sb	15 15 49.8	+0.1
DRME	**Dracevica, Mon**	**0.67**	**338**	*e*Pg	Pg	15 15 38.4	-1.3
DRME				*i* Sg	Sg	15 15 48.5	-0.1
BUM	**Brajici-Budva**	**0.87**	**328**	⇓*i*Pg	Pg	15 15 42.6	-1.0
BUM				*i* Sg	Sb	15 15 55.6	0.0
PDG	**Podgorica**	**0.89**	**347**	*e*Pg	Pg	15 15 43.2	-0.6
PDG				*e*Sg	Sn	15 15 57.4	-0.5
PDG	**Podgorica**	**0.89**	**347**	⇓*i*Pg	Pg	15 15 42.2	-1.6
PDG				*i* Sg	Sb	15 15 55.9	0.0
PVY	**Plav**	**1.08**	**17**	⇑*i*Pg	Pb	15 15 45.5	-1.9
PVY				*i* Sg	Sn	15 16 02.5	-0.3
CEME	**Cevo**	**1.08**	**335**	⇓*i*Pg	Pb	15 15 45.9	-1.5
CEME				*e*Sg	Sn	15 16 02.5	-0.3
HCY	**Herceg Novi**	**1.17**	**319**	⇓*i*Pg	Pb	15 15 48.3	-0.6
HCY				*e*Sg	Sn	15 16 05.3	+0.4
NKME	**Niksic**	**1.27**	**341**	⇓*i*Pg	Pn	15 15 49.7	-0.8
NKME				*e*Sg	Sg	15 16 08.6	+0.8
KOME	**Kolasin**	**1.28**	**360**	*e*Pg	Pn	15 15 49.4	-1.2
KOME				*e*Sg	Sg	15 16 09.8	+1.7
KOME	**Kolasin**	**1.28**	**360**	⇓*i*Pg	Pn	15 15 50.1	-0.5
KOME				*e*Sg	Sg	15 16 09.1	+1.0
IVA	**Berane**	**1.33**	**12**	⇓*i*Pg	Pn	15 15 50.1	-1.2
IVA				*i* Sg	Sg	15 16 11.4	+1.7
BRY	**Bratogost**	**1.52**	**332**	⇑*i*Pg	Pn	15 15 53.9	-0.1
BRY				*e*Sg	Sb	15 16 15.0	+0.6
UPM	**Unac-Piva**	**1.70**	**345**	⇓*i*Pn	Pn	15 15 56.3	-0.1
SJES	**Sjenica**	**1.73**	**11**	*e*Pg	Pb	15 15 57.8	-0.7
SJES				*e*Sg	Sb	15 16 21.0	+0.8
PLE	**Pljevlja**	**1.77**	**357**	⇑*i*Pn	Pn	15 15 58.2	+0.9
PLE				*e*Sn	Sb	15 16 21.7	+0.3
SELS	**Selova**	**2.03**	**35**	*e*Pn	Pn	15 16 00.5	-0.4
SELS				*e*Sn	Sn	15 16 27.5	+1.3
IVAS	**Ivanjica**	**2.06**	**13**	*e*Pn	Pn	15 16 00.9	-0.4
IVAS				*e*Sn	Sb	15 16 28.7	-1.1
BARS	**Barje**	**2.11**	**53**	*e*Pn	Pn	15 16 01.5	-0.4
GOCS	**Kraljevo Serbi**	**2.23**	**26**	*e*Pn	Pn	15 16 03.3	-0.4
BBLS	**Lazi&#263i**	**2.30**	**358**	*e*Pn	Pb	15 16 06.5	-1.7
BBLS				*e*Sn	Sb	15 16 35.5	-1.2
BOSS	**Bosilegrad**	**2.39**	**66**	*e*Pn	Pn	15 16 05.4	-0.4
BOSS				*e*Sn	Sn	15 16 35.0	0.0
GRUS	**Gruza**	**2.48**	**20**	*e*Pn	Pn	15 16 06.7	-0.3
GRUS				*e*Sn	Sn	15 16 38.7	+1.4
BOVS	**Bovan**	**2.62**	**37**	*e*Pn	Pn	15 16 08.5	-0.4
BOVS				*e*Sn	Sn	15 16 40.3	-0.4
TRUS	**Trudelj**	**2.73**	**13**	*e*Pn	Pn	15 16 11.2	+0.7
TRUS				*e*Sn	Sn	15 16 43.5	0.0
ZAPS	**Zavoj**	**2.87**	**52**	*e*Pn	Pn	15 16 10.9	-1.4
ZAGS	**Zajecar**	**3.01**	**41**	*e*Pn	Pn	15 16 14.0	-0.2
ZAGS				*e*Sn	Sn	15 16 48.2	-2.0
BORS2	**Bor- Borsko je**	**3.12**	**35**	*e*Pn	Pn	15 16 13.1	-2.7

IDC ***27*** *15:15:55.9±2.7, 41°.56N×19°.38E, h0km, mb3.6/6, mbtmp3.6/7, ML2.8/1, Error ellipse: s-maj=54.9km s-min=21.1km az=31.0*
TIR ***27*** *15:15:59.4, 41°.63N×19°.42E, h18km±1km, Ml2.9/2*
BEO ***27*** *15:16:00.1±0.7, 41°.57N×19°.48E, h12km±3km, ML3.1/8*
PDG ***27*** *15:16:01.1±0.5, 41°.59N×19°.35E, h23km±1km, MD3.5/5, ML3.4/13, Error ellipse: s-maj=2.0km s-min=2.5km az=0.0*
ISC 27 15:15:58.9±1.2, 41°.55N±0.04×19°.42E±0.03, h16km±7km, n49, σ1§22/75, mb3.8/4, 6C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.39**	**121**	Pg	**Pg**	**15 16 06.5**	**-0.4**
TIR				Sg	**Sb**	**15 16 13.4**	**+0.1**
TIR				AML	AML	15 16 15.0	
	2.8nm,0.5s						
ULC	**Ulcinj**	**0.43**	**342**	⇑*i*Pg	**Pg**	**15 16 07.0**	**-0.7**
ULC				*i* Sg	**Sb**	**15 16 14.3**	**-0.3**
SDA	**Shkodra**	**0.50**	**6**	Pg	**Pg**	**15 16 08.4**	**-0.5**
SDA				Sg	**Sg**	**15 16 14.5**	**-1.2**
DRME	**Dracevica, Mon**	**0.66**	**344**	*e*Pg	**Pb**	**15 16 12.5**	**+0.4**
DRME				*e*Sg	**Sb**	**15 16 21.1**	**0.0**
DRME	**Dracevica, Mon**	**0.66**	**344**	⇓*i*Pg	**Pg**	**15 16 11.2**	**-0.7**
DRME				*i* Sg	**Sb**	**15 16 22.0**	**+0.9**
PHP	**Peshkopia**	**0.78**	**80**	Pg	**Pg**	**15 16 14.3**	**+0.3**
PHP				Sg	**Sb**	**15 16 25.3**	**+0.9**
PHP				AML	AML	15 16 32.4	
	4.3nm,0.7s						
BUM	**Brajici-Budva**	**0.85**	**332**	⇓*i*Pg	**Pg**	**15 16 15.7**	**+0.3**
BUM				*e*Sg	**Sn**	**15 16 27.8**	**-0.7**
PDG	**Podgorica**	**0.89**	**352**	Pg	**Pb**	**15 16 15.6**	**-0.4**
PDG				Sg	**Sb**	**15 16 26.6**	**-1.0**
PDG	**Podgorica**	**0.89**	**352**	*e*Pg	**Pg**	**15 16 16.3**	**+0.2**
PDG				*e*Sg	**Sg**	**15 16 27.7**	**-0.1**
PDG	**Podgorica**	**0.89**	**352**	⇓*i*Pg	**Pg**	**15 16 16.0**	**-0.1**
PDG				*i* Sg	**Sn**	**15 16 29.1**	**-0.2**
CEME	**Cevo**	**1.06**	**339**	⇑*i*Pg	**Pb**	**15 16 18.5**	**-0.5**
CEME				*i* Sg	**Sn**	**15 16 34.7**	**+0.9**
PVY	**Plav**	**1.12**	**21**	⇓*i*Pg	**Pg**	**15 16 21.1**	**+0.6**
PVY				*i* Sg	**Sn**	**15 16 37.9**	**+2.7**
HCY	**Herceg Novi**	**1.13**	**323**	⇑*i*Pg	**Pg**	**15 16 21.2**	**+0.4**
HCY				*i* Sg	**Sg**	**15 16 37.5**	**+1.9**
NKME	**Niksic**	**1.26**	**344**	⇑*i*Pg	**Pg**	**15 16 23.2**	**-0.1**
NKME				*i* Sg	**Sg**	**15 16 40.9**	**+1.1**
KOME	**Kolasin**	**1.30**	**3**	*e*Pg	**Pg**	**15 16 24.3**	**+0.3**
KOME				*e*Sg	**Sg**	**15 16 42.0**	**+1.0**
KOME	**Kolasin**	**1.30**	**3**	⇓*i*Pg	**Pg**	**15 16 25.0**	**+1.0**
KOME				*i* Sg	**Sg**	**15 16 42.4**	**+1.4**
IVA	**Berane**	**1.36**	**15**	⇑*i*Pg	**Pg**	**15 16 25.9**	**+0.7**
IVA				*e*Sg	**Sg**	**15 16 43.6**	**+0.6**
KBN	**Korca**	**1.39**	**131**	Pg	**Pg**	**15 16 25.5**	**-0.1**
BRY	**Bratogost**	**1.50**	**334**	⇑*i*Pg	**Pb**	**15 16 26.5**	**0.0**
BRY				*i* Sg	**Sg**	**15 16 46.8**	**-0.6**
UPM	**Unac-Piva**	**1.69**	**347**	⇓*i*Pn	**Pb**	**15 16 29.3**	**-0.6**
UPM				*i* Sn	**Sb**	**15 16 51.1**	**+0.1**
SJES	**Sjenica**	**1.76**	**13**	*e*Pg	**Pg**	**15 16 32.2**	**-0.5**
SJES				*e*Sg	**Sg**	**15 16 54.2**	**-1.3**
PLE	**Pljevlja**	**1.78**	**359**	⇓*i*Pn	**Pb**	**15 16 30.3**	**-0.9**
PLE				*i* Sn	**Sb**	**15 16 54.2**	**+0.8**
SELS	**Selova**	**2.09**	**36**	*e*Sn	**Sb**	**15 17 00.9**	**-1.3**
IVAS	**Ivanjica**	**2.10**	**15**	*e*Sn	**Sb**	**15 17 01.6**	**-0.8**
IGT	**Igoumenitsa**	**2.13**	**161**	Pn	Pn	15 16 26.1	-7.8
BARS	**Barje**	**2.18**	**54**	*e*Pn	**Pn**	**15 16 35.2**	**+0.6**
BARS				*e*Sn	**Sn**	**15 17 02.2**	**+0.9**
GOCS	**Kraljevo Serbi**	**2.28**	**28**	*e*Sn	**Sn**	**15 17 05.0**	**+1.2**
BBLS	**Lazi&#263i**	**2.31**	**360**	*e*Pn	**Pn**	**15 16 38.2**	**+1.7**
BBLS				*e*Sn	**Sn**	**15 17 05.8**	**+1.1**
BOVS	**Bovan**	**2.68**	**38**	*e*Pn	**Pn**	**15 16 42.7**	**+1.3**
BOVS				*e*Sn	**Sn**	**15 17 13.6**	**0.0**
TRUS	**Trudelj**	**2.77**	**15**	*e*Pn	**Pn**	**15 16 44.4**	**+1.8**
ZAPS	**Zavoj**	**2.94**	**53**	*e*Pn	**Pn**	**15 16 46.3**	**+1.3**
ZAPS				*e*Sn	**Sn**	**15 17 22.2**	**+2.2**
TEKS	**Tekeris**	**3.00**	**1**	*e*Pn	**Pn**	**15 16 46.6**	**+0.8**
ZAGS	**Zajecar**	**3.07**	**42**	*e*Pn	**Pn**	**15 16 47.0**	**+0.3**
ZAGS				*e*Sn	**Sn**	**15 17 23.4**	**+0.3**
BORS2	**Bor- Borsko je**	**3.18**	**36**	*e*Pn	**Pn**	**15 16 48.0**	**-0.3**
BORS2				*e*Sn	**Sn**	**15 17 23.5**	**-2.3**
SOKA	**Soboth**	**6.02**	**330**	*e*Pn	**Pn**	**15 17 28.3**	**+0.9**
	4.6nm,0.6s						
OBKA	**Obir**	**6.07**	**326**	*e*Pn	**Pn**	**15 17 30.3**	**+2.1**
	5.0nm,0.4s						
RONA	**Rosalia, Austr**	**6.54**	**341**	*e*Pn	Pn	15 17 42.1	+7.6
	2.4nm,0.6s						
KBA	**Koelnbreinsper**	**7.04**	**324**	*e*Pn	**Pn**	**15 17 43.0**	**+1.5**
	1.2nm,0.3s						
MOA	**Molln**	**7.29**	**332**	*i* Pn	**Pn**	**15 17 48.0**	**+3.2**
	2.7nm,0.3s						
LESA	**Schwarzleotal**	**7.60**	**323**	*e*Pn	**Pn**	**15 17 49.8**	**+0.8**
	3.4nm,0.3s						
WTTA	**Wattenberg**	**7.98**	**318**	*i* Pn	**Pn**	**15 17 56.8**	**+2.5**
	2.0nm,0.2s						
GERES	**GERESS Array B**	**8.34**	**333**	Pn	**Pn**	**15 17 58.9**	**-0.2**
	baz=150,slow=13,SNR=5.4						
GERES				Sn	**Sn**	**15 19 28.4**	**-4.6**
	baz=149,slow=25,SNR=2.0						
	1.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**20.23**	**321**	P	**P**	**15 20 32.9**	**-0.3**
	0.8nm,0.5s,baz=123,slow=9.2,SNR=3.8						
	0.8nm,0.5s						
FINES	**FINESS Array B**	**20.33**	**9**	P	**P**	**15 20 33.1**	**-1.0**
	0.9nm,0.5s,baz=186,slow=11,SNR=4.2						
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**35.69**	**54**	P	**P**	**15 22 56.2**	**-0.2**
	0.5nm,0.6s,baz=283,slow=6.8,SNR=3.7						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**40.99**	**56**	P	**P**	**15 23 40.1**	**-0.7**
	0.2nm,0.5s,baz=285,slow=9.3,SNR=2.3						
	0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**44.13**	**51**	P	**P**	**15 24 05.7**	**-0.7**
	2.0nm,0.6s,baz=281,slow=8.7,SNR=7.5						
	2.0nm,0.6s						
MKAR	**Makanchi Array**	**44.33**	**61**	P	**P**	**15 24 08.0**	**-0.2**
	1.6nm,0.8s,baz=284,slow=7.8,SNR=11						
	1.6nm,0.8s						
ASAR	**Alice Springs**	**123.29**	**93**	PKP	**PKPdf**	**15 34 54.4**	**-0.9**
	0.2nm,1.1s,baz=311,slow=1.7,SNR=1.1						

NEIC 27 15:17:12.1±0.4, 40°.39N±0°.04×104°.66W±0°.07, h6km±4km, ML1.0/10, Error ellipse: s-maj=8.5km s-min=4.4km az=120.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISCO	**Idaho Springs**	**0.94**	**232**	Pg	Pg	15 17 29.3	-0.9
ISCO				Sg	Sg	15 17 41.7	-0.6

NEIC ***27*** *15:43:06.3±0.5, 35°.842N±0°.007×98°.07W±0°.01, h3km±2km, mb_Lg2.8/79, ML3.2/86, ML3.1/38, Error ellipse: s-maj=1.4km s-min=0.9km az=124.0*
NEIC 27 15:43:06.7±0.4, 35°.848N±0°.009×98°.07W±0°.01, h7km±1km, Error ellipse: s-maj=1.4km s-min=1.1km az=133.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCOK	**Bluff Creek, N**	**0.42**	**117**		Pg	15 43 15.1	+0.3
BCOK					Sg	15 43 21.2	+0.9
OK029	**Liberty Lake**	**0.50**	**96**		Pg	15 43 16.4	0.0
OK029					Sg	15 43 24.0	+1.0
OK029				IAML		15 43 24.0	
	1µm,0.3s						
CSTR	**Hydro, Custer**	**0.54**	**248**		Pg	15 43 17.2	+0.1
CSTR					Sg	15 43 25.3	+1.2
OK004	**Okla Sci Mus**	**0.58**	**123**		Pg	15 43 18.2	+0.2
OK004					Sg	15 43 26.4	+0.8
ADOK	**Arcadia Dam**	**0.60**	**109**		Pg	15 43 18.3	0.0
CROK	**Carrier**	**0.66**	**6**		Pg	15 43 19.5	+0.1
CROK					Sg	15 43 28.1	+0.1
CROK				IAML		15 43 29.1	
	comp=E,2µm,0.4s						
CROK				IAML		15 43 36.0	
	comp=N,1µm,0.3s						
OKCSW	**OKLAHOMA CITY**	**0.68**	**130**		Pg	15 43 19.7	0.0
OKCSW					Sg	15 43 29.0	+0.4
OKCSW				IAML		15 43 29.2	
	comp=E,892nm,0.2s						
OKCSW				IAML		15 43 29.2	
	comp=N,2µm,0.4s						
FNO	**Franklin**	**0.81**	**137**		Pg	15 43 21.6	-0.5
FNO					Sg	15 43 33.0	+0.4
FNO				IAML		15 43 33.2	
	comp=E,680nm,0.4s						
OK038	**West end E0370**	**0.83**	**319**		Pg	15 43 22.5	-0.1
OK038					Sg	15 43 34.0	+0.6
GC02	**Grant County #**	**1.02**	**10**		Pg	15 43 25.5	-0.7
GC02					Sg	15 43 39.6	+0.2
OK052	**Battle Ridge R**	**1.04**	**82**		Pg	15 43 26.1	-0.5
OK052					Sg	15 43 40.4	+0.3
OK052				IAML		15 43 50.4	
	comp=E,492nm,0.2s						
NOKA	**Waynoka**	**1.05**	**319**		Pg	15 43 26.4	-0.4
NOKA					Sg	15 43 40.6	+0.2
OK048	**Pawnee Station**	**1.07**	**58**		Pg	15 43 26.7	-0.6
OK048				IAML		15 43 45.5	
	comp=E,518nm,0.2s						
ELIS	**Ellis County**	**1.11**	**282**		Pg	15 43 27.6	-0.4
ELIS				IAML		15 43 45.1	
	comp=N,741nm,0.2s						
ELIS				IAML		15 43 54.6	
	comp=E,662nm,0.3s						
QUOK	**Quay**	**1.15**	**73**		Pg	15 43 27.9	-0.9
QUOK				IAML		15 43 47.8	
	comp=E,579nm,0.3s						
QUOK				IAML		15 43 51.7	
	comp=N,588nm,0.3s						
WMOK	**Wichita Mounta**	**1.25**	**208**		Pb	15 43 29.3	-1.3
X34A	**Smith Ranch, M**	**1.26**	**171**		Pn	15 43 30.3	-0.5
X34A				IAML		15 43 49.5	
	comp=E,340nm,0.3s						
DEOK	**Depew**	**1.28**	**90**	IAML		15 43 53.0	
	comp=E,424nm,0.3s						
DEOK				IAML		15 43 53.7	
	comp=N,346nm,0.2s						
KAN01	**Argonia South**	**1.33**	**11**	IAML		15 43 52.2	
	comp=N,376nm,0.2s						
KAN01				IAML		15 43 53.2	
	comp=E,444nm,0.2s						
KAN08	**Anthony NE Sta**	**1.38**	**3**		Pn	15 43 32.2	-0.3
T35A	**Sooner Cattle**	**1.65**	**49**		Pn	15 43 36.0	-0.1
TUL3	**Leonard**	**1.85**	**87**		Pn	15 43 38.6	-0.3
TUL3				IAmb_Lg		15 44 05.7	
	comp=Z,36nm,0.7s						
SMWD	**Samnorwood**	**1.92**	**248**		Pn	15 43 39.9	0.0
LOOK	**Love County**	**1.99**	**158**	IAmb_Lg		15 44 08.0	
	comp=Z,33nm,0.7s						
WTFS	**Witchita Falls**	**2.10**	**189**		Pn	15 43 41.8	-0.6
RLO	**Rose Lookout**	**2.49**	**82**		Pn	15 43 47.4	-0.3
RLO				IAmb_Lg		15 44 30.2	
	comp=Z,34nm,0.7s						
R32A	**Long Quarter,**	**2.62**	**349**	IAmb_Lg		15 44 36.6	
	comp=Z,27nm,0.8s						
AMTX	**Amarillo**	**3.10**	**253**	IAmb_Lg		15 44 43.1	
	comp=Z,27nm,0.8s						
DKNS	**Dickens**	**3.20**	**228**	IAmb_Lg		15 44 52.9	
	comp=Z,39nm,0.8s						
CBKS	**Cedar Bluff**	**3.25**	**336**	IAmb_Lg		15 44 56.8	
	comp=Z,32nm,0.8s						
HHAR	**Hobbs**	**3.38**	**81**	IAmb_Lg		15 44 58.8	
	comp=Z,24nm,0.8s						
KSU1	**Kansas State U**	**3.45**	**19**	IAmb_Lg		15 44 58.4	
	comp=Z,37nm,0.9s						
SN07	**Snyder 07**	**3.60**	**221**	IAmb_Lg		15 45 06.1	
	comp=Z,19nm,0.8s						
WHTX	**Lake Whitney,**	**3.88**	**172**	IAmb_Lg		15 45 17.4	
	comp=Z,16nm,0.7s						
POST	**Post**	**3.96**	**227**	IAmb_Lg		15 45 18.5	
	comp=Z,36nm,0.9s						
MSTX	**Muleshoe**	**4.29**	**245**	IAmb_Lg		15 45 30.1	
	comp=Z,14nm,0.8s						
BRDY	**Brady**	**4.62**	**190**	IAmb_Lg		15 45 34.4	
	comp=Z,14nm,0.7s						
WHAR	**Wooly Hollow**	**4.75**	**95**	IAmb_Lg		15 45 44.9	
	comp=Z,26nm,1.0s						
UALR	**University of**	**4.81**	**101**	IAmb_Lg		15 45 45.7	
	comp=Z,20nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.83**	**88**	IAmb_Lg		15 45 40.5	
	comp=Z,18nm,0.9s						
MGMO	**Mountain Grove**	**4.85**	**73**	IAmb_Lg		15 45 40.2	
	comp=Z,20nm,0.7s						
435B	**Jarrell**	**5.07**	**175**	IAmb_Lg		15 46 00.9	
	comp=Z,24nm,0.8s						
P38A	**Dawn**	**5.21**	**42**	IAmb_Lg		15 46 02.3	
	comp=Z,16nm,0.8s						
R40A	**Maddies Statio**	**5.24**	**61**	IAmb_Lg		15 46 05.5	
	comp=Z,16nm,0.8s						
T25A	**Trinidad**	**5.27**	**286**	IAmb_Lg		15 45 56.3	
	comp=Z,24nm,0.7s						
OZNA	**Ozona**	**5.54**	**208**	IAmb_Lg		15 46 12.4	
	comp=Z,24nm,1.0s						
LCAR	**Lake Charles**	**5.62**	**86**	IAmb_Lg		15 46 08.7	
	comp=Z,19nm,1.1s						
MNHN	**Monahans**	**5.96**	**222**	IAmb_Lg		15 46 31.0	
	comp=Z,11nm,0.7s						
PBMO	**Poplar Bluff**	**6.24**	**79**	IAmb_Lg		15 46 35.7	
	comp=Z,17nm,0.8s						
HNDO	**Hondo**	**6.38**	**190**	IAmb_Lg		15 46 35.6	
	comp=Z,13nm,0.8s						
Q24A	**Divide**	**6.43**	**301**	IAmb_Lg		15 46 36.3	
	comp=Z,12nm,0.9s						
PECS	**Pecos**	**6.58**	**229**	IAmb_Lg		15 46 39.5	
	comp=Z,12nm,0.9s						
TASM	**ASL Pad, Albuq**	**6.91**	**265**	IAmb_Lg		15 46 48.5	
	comp=Z,4.3nm,1.1s						
ALPN	**Alpine**	**7.18**	**222**	IAmb_Lg		15 47 06.6	
	comp=Z,9.1nm,0.8s						
VHRN	**Van Horn**	**7.68**	**231**	IAmb_Lg		15 47 22.2	
	comp=Z,6.6nm,0.7s						
K22A	**Casper**	**9.44**	**319**	IAmb_Lg		15 48 23.0	
	comp=Z,9.6nm,0.7s						

TIR ***27*** *15:46:39.6, 41°.44N×19°.36E, h2km±7km, Ml3.0/3*
BEO ***27*** *15:46:40.1±0.8, 41°.39N×19°.52E, h8km±4km, ML2.8/8*
ISC 27 15:46:41.5±1.2, 41°.51N±0°.03×19°.57E±0°.04, h5km±10km, n29, σ1§32/49, 6C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.27**	**126**	Pg	**Pb**	**15 46 47.2**	**-1.7**
TIR				Sg	**Sb**	**15 46 53.1**	**-0.7**
TIR				AML	AML	15 46 53.2	
	13nm,0.4s						
SDA	**Shkodra**	**0.55**	**354**	Pg	**Pg**	**15 46 50.9**	**-1.2**
SDA				Sg	**Sg**	**15 47 01.4**	**+2.2**
PHP	**Peshkopia**	**0.68**	**74**	Pg	**Pg**	**15 46 55.3**	**+0.7**
PHP				AML	AML	15 47 10.2	
	2.1nm,0.5s						
DRME	**Dracevica, Mon**	**0.74**	**337**	*e*Pg	**Pb**	**15 46 55.7**	**-1.2**
PDG	**Podgorica**	**0.95**	**346**	Pg	**Pg**	**15 46 59.1**	**-0.7**
PDG				Sg	**Sb**	**15 47 14.0**	**+0.5**
PDG	**Podgorica**	**0.95**	**346**	⇑P	**Pb**	**15 46 59.9**	**-0.7**
PDG				⇓S	**Sg**	**15 47 10.8**	**-1.3**
PDG	**Podgorica**	**0.95**	**346**	*e*Pg	**Pg**	**15 46 59.1**	**-0.7**
PDG				*e*Sg	**Sb**	**15 47 14.5**	**+1.1**
KBN	**Korca**	**1.27**	**133**	Pg	**Pb**	**15 47 07.6**	**+1.5**
KBN				AML	AML	15 47 28.7	
	0.9nm,0.5s						
KOME	**Kolasin**	**1.34**	**358**	*e*Pg	**Pg**	**15 47 07.4**	**+0.1**
KOME				*e*Sg	**Sb**	**15 47 25.0**	**+0.2**
NEST	**Nestorio**	**1.56**	**134**	Pn	**Pg**	**15 47 10.7**	**-0.8**
SJES	**Sjenica**	**1.78**	**10**	*e*Pn	**Pn**	**15 47 11.6**	**-1.4**
SJES				*e*Sg	**Sg**	**15 47 39.8**	**+1.1**
IGT	**Igoumenitsa**	**2.06**	**163**	Pn	**Pg**	**15 47 19.2**	**-1.7**
SELS	**Selova**	**2.06**	**33**	*e*Pn	**Pn**	**15 47 16.6**	**-0.2**
SELS				*e*Sn	**Sn**	**15 47 43.9**	**+1.0**
IVAS	**Ivanjica**	**2.11**	**12**	*e*Pn	**Pn**	**15 47 16.7**	**-0.9**
IVAS				*e*Sn	**Sn**	**15 47 45.5**	**+1.2**
BARS	**Barje**	**2.12**	**51**	*e*Pn	**Pn**	**15 47 16.4**	**-1.3**
BARS				*e*Sn	**Sn**	**15 47 45.7**	**+1.3**
GOCS	**Kraljevo Serbi**	**2.27**	**25**	*e*Pn	**Pn**	**15 47 20.2**	**+0.4**
GOCS				*e*Sn	**Sn**	**15 47 49.3**	**+1.1**
MATE	**Matera**	**2.33**	**249**	⇓P	**Pg**	**15 47 26.3**	**+0.1**
MATE				⇓S	**Sg**	**15 47 58.3**	**+1.9**
BBLS	**Lazi&#263i**	**2.36**	**357**	*e*Pn	**Pn**	**15 47 19.6**	**-1.4**
BBLS				*e*Sn	**Sn**	**15 47 51.6**	**+1.2**
GRUS	**Gruza**	**2.52**	**19**	*e

KBN	**Korca**	**1.31**	**156**	Pg	**Pg**	15 52 28.3	-0.3
KBN				Sg	**Sg**	15 52 47.5	+2.0
KBN				AML	AML	15 52 51.8	
	10nm,0.6s						
KBN	**Korca**	**1.31**	**156**	P	**Pg**	15 52 28.3	-0.3
KBN				S	**Sg**	15 52 47.4	+1.8
HCY	**Herceg Novi**	**1.35**	**298**	⇓*i*Pg	**Pn**	15 52 27.6	-0.1
HCY				*i* Sg	**Sg**	15 52 47.2	+0.3
VLO	**Vlora**	**1.43**	**199**	Pg	**Pg**	15 52 30.9	0.0
VLO				Sg	**Sg**	15 52 52.1	+2.7
VLO				AML	AML	15 53 03.9	
	11nm,0.4s						
VLO	**Vlora**	**1.43**	**199**	P	**Pn**	15 52 29.1	+0.3
SJES	**Sjenica**	**1.44**	**356**	*e*Pg	**Pb**	15 52 29.8	-0.2
SJES				*e*Sg	**Sg**	15 52 51.7	+1.8
TREB	**Trebinje**	**1.58**	**305**	*e*Pn	**Pn**	15 52 31.3	+0.4
TREB				*e*Sn	**Sg**	15 52 55.2	+1.0
NEST	**Nestorio**	**1.58**	**153**	Pn	**Pb**	15 52 32.3	-0.1
NEST				AML	AML	15 53 00.1	
	6.1nm,0.5s						
NEST	**Nestorio**	**1.58**	**153**	P	**Pb**	15 52 32.4	+0.1
NEST				S	**Sg**	15 52 54.7	+0.4
BRY	**Bratogost**	**1.58**	**314**	⇓*i*Pg	**Pn**	15 52 31.8	+0.7
BRY				*i* Sg	**Sg**	15 52 54.6	+0.2
SELS	**Selova**	**1.59**	**28**	*e*Pn	**Pn**	15 52 31.8	+0.8
SELS				*e*Sn	**Sb**	15 52 52.9	+0.5
PLE	**Pljevlja**	**1.59**	**341**	⇓*i*Pn	**Pn**	15 52 32.1	+0.9
PLE				*i* Sn	**Sg**	15 52 55.2	+0.4
BARS	**Barje**	**1.61**	**51**	*e*Pn	**Pn**	15 52 32.2	+0.8
BARS				*e*Sn	**Sb**	15 52 53.1	0.0
UPM	**Unac-Piva**	**1.64**	**328**	⇓*i*Pn	**Pn**	15 52 32.9	+1.0
UPM				*i* Sn	**Sg**	15 52 55.8	-0.4
KLINJ	**Klinje**	**1.75**	**321**	*e*Pn	**Pn**	15 52 34.4	+1.0
KLINJ				*e*Sn	**Sg**	15 53 00.1	+0.3
IVAS	**Ivanjica**	**1.75**	**1**	*e*Pn	**Pn**	15 52 34.4	+1.0
IVAS				*e*Sn	**Sg**	15 52 59.9	+0.1
GOCS	**Kraljevo Serbi**	**1.83**	**18**	*e*Pn	**Pn**	15 52 35.1	+0.7
GOCS				*e*Sn	**Sn**	15 52 58.5	+1.1
RUDO	**Rudo**	**1.87**	**344**	⇑*i*Pn	**Pn**	15 52 36.1	+1.1
RUDO				*e*Sn	**Sb**	15 53 02.2	+1.6
BOSS	**Bosilegrad**	**1.89**	**68**	*e*Pn	**Pn**	15 52 36.4	+1.2
BOSS				*e*Sn	**Sn**	15 52 59.3	+0.4
GRG	**Griva**	**1.94**	**116**	P	**Pn**	15 52 36.6	+0.7
KZN	**Kozani**	**1.97**	**140**	P	**Pn**	15 52 37.6	+1.2
BBLS	**Lazi&#263i**	**2.10**	**346**	*e*Pn	**Pn**	15 52 40.0	+1.8
BBLS				*e*Sn	**Sb**	15 53 09.4	+2.1
GRUS	**Gruza**	**2.11**	**12**	*e*Pn	**Pn**	15 52 38.9	+0.6
TRAN	**Tran**	**2.15**	**61**	*e*P	**Pn**	15 52 40.3	+1.6
BOVS	**Bovan**	**2.16**	**33**	⇑P	**Pb**	15 52 42.0	-0.3
BOVS	**Bovan**	**2.16**	**33**	*e*Pn	**Pn**	15 52 39.8	+0.9
BOVS				*e*Sn	**Sn**	15 53 05.1	-0.4
KNT	**Kendrikon**	**2.20**	**107**	P	**Pn**	15 52 39.8	+0.3
KKB	**Krupnik**	**2.26**	**89**	P	**Pn**	15 52 41.6	+1.2
KKB				S	**Sn**	15 53 09.3	+1.3
IGT	**Igoumenitsa**	**2.29**	**175**	Pn	**Pb**	15 52 43.2	-1.3
IGT				AML	AML	15 53 27.2	
	1.9nm,1.0s						
IGT	**Igoumenitsa**	**2.29**	**175**	P	**Pn**	15 52 42.1	+1.4
ZAPS	**Zavoj**	**2.37**	**51**	*e*Pn	**Pn**	15 52 42.8	+1.0
TRUS	**Trudelj**	**2.41**	**5**	*e*Pn	**Pn**	15 52 43.7	+1.4
TRUS				*e*Sn	**Sb**	15 53 18.6	-0.4
VTS	**Vitosha**	**2.46**	**70**	P	**Pn**	15 52 43.8	+0.6
VTS	**Vitosha**	**2.46**	**70**	P	**Pn**	15 52 43.9	+0.7
THE	**Thessaloniki**	**2.47**	**118**	P	**Pn**	15 52 43.5	+0.4
LIT	**Litokhoron**	**2.50**	**133**	P	**Pn**	15 52 44.4	+0.8
NOCI	**Noci**	**2.51**	**247**	Pn	**Pn**	15 52 43.5	-0.2
ZAGS	**Zajecar**	**2.53**	**38**	*e*Pn	**Pn**	15 52 45.0	+1.0
PLNA	**Plana**	**2.56**	**74**	P	**Pn**	15 52 46.4	+1.9
HORT	**Hortiatis**	**2.57**	**117**	P	**Pn**	15 52 44.8	+0.2
BLSH	**Balsha**	**2.57**	**65**	P	**Pb**	15 52 49.2	-0.1
BLKB	**Belogradchik**	**2.62**	**46**	⇓S	**Sb**	15 53 21.5	-0.4
SOH	**Sokhos**	**2.65**	**111**	P	**Pn**	15 52 47.1	+1.5
TYRN	**Tyrnavos**	**2.66**	**142**	P	**Pn**	15 52 47.5	+1.8
BORS2	**Bor- Borsko je**	**2.67**	**31**	*e*Pn	**Pn**	15 52 45.1	-0.8
BORS2				*e*Sn	**Sn**	15 53 18.2	+0.2
THL	**Klokotos Trika**	**2.69**	**147**	P	**Pn**	15 52 48.1	+2.0
SRS	**Serrai**	**2.72**	**104**	P	**Pn**	15 52 46.7	+0.1
MMB	**Musomishta**	**2.75**	**95**	P	**Pn**	15 52 48.0	+0.9
MMB	**Musomishta**	**2.75**	**95**	P	**Pn**	15 52 48.2	+1.2
TEKS	**Tekeris**	**2.76**	**351**	*e*Pn	**Pn**	15 52 47.9	+0.8
TEKS				*e*Sn	**Sb**	15 53 23.8	-2.2
MATE	**Matera**	**2.82**	**247**	⇓P	**Pn**	15 52 47.0	-0.9
MATE				⇓S	**Sn**	15 53 20.2	-1.4
KUBS	**Kucevo**	**2.83**	**23**	*e*Pn	**Pn**	15 52 47.7	-0.5
KUBS				*e*Sn	**Sb**	15 53 26.1	-2.1
AVAS	**Avala Beograd**	**2.89**	**6**	*e*Pn	**Pn**	15 52 49.8	+0.9
AVAS				*e*Sn	**Sb**	15 53 27.0	-2.8
PLG	**Polygyros**	**2.91**	**119**	P	**Pn**	15 52 50.5	+1.3
AMPL	**Ampelaki**	**3.02**	**163**	P	**Pn**	15 52 52.4	+1.7
LKD2	**Lefkada island**	**3.06**	**172**	P	**Pn**	15 52 52.1	+0.8
MPEP	**Malo Peshtene**	**3.09**	**59**	P	**Pn**	15 52 54.2	+2.5
PGB	**Panagyurishte**	**3.11**	**76**	P	**Pn**	15 52 54.5	+2.6
NYDR	**Nydri-Lefkada**	**3.14**	**171**	S	**Sn**	15 53 32.8	+3.2
MDVR	**Moldovita**	**3.18**	**21**	⇑P	**Pn**	15 52 55.4	+2.4
MDVR				⇓S	**Sb**	15 53 34.7	-3.6
MAKR	**Makrakomi, Fth**	**3.21**	**150**	P	**Pn**	15 52 55.6	+2.3
PUNG	**Punghina**	**3.21**	**39**	⇑P	**Pn**	15 52 56.3	+2.9
SGRT	**San Giovanni R**	**3.26**	**270**	Pn	**Pn**	15 52 53.8	-0.2
AGG	**Agios Georgios**	**3.27**	**148**	P	**Pn**	15 52 55.2	+1.0
AGG				S	**Sn**	15 53 36.2	+3.2
FRGS	**Fruska Gora**	**3.34**	**356**	*e*Pn	**Pn**	15 52 56.2	+1.1
FRGS				*e*Sn	**Sn**	15 53 37.8	+3.2
PVO	**Paravola**	**3.38**	**161**	P	**Pn**	15 52 57.7	+2.0
KAVA	**Kavala**	**3.42**	**103**	P	**Pn**	15 52 57.2	+1.0
RZN	**Rozhen**	**3.47**	**91**	P	**Pn**	15 52 58.3	+1.2
RZN	**Rozhen**	**3.47**	**91**	P	**Pn**	15 52 58.4	+1.2
HERR	**Herculane**	**3.49**	**28**	⇓P	**Pn**	15 52 58.9	+1.8
ANX	**Ano Chora**	**3.52**	**156**	P	**Pn**	15 53 00.1	+2.5
BLY	**Banja Luka**	**3.62**	**325**	*e*Pn	**Pn**	15 53 00.3	+1.4
BLY				*e*Sn	**Sn**	15 53 45.2	+3.9
BLY	**Banja Luka**	**3.62**	**325**	⇓P	**Pn**	15 52 58.9	0.0
BLY	**Banja Luka**	**3.62**	**325**	*e*Pn	**Pn**	15 53 00.7	+1.8
BLY				*e*Sn	**Sn**	15 53 45.0	+3.7
SRE	**Strehaia**	**3.63**	**38**	⇑P	**Pn**	15 53 02.4	+3.3
EFP	**Efpalio**	**3.66**	**157**	P	**Pn**	15 53 01.9	+2.3
TIP	**Timpagrande**	**3.67**	**225**	⇑P	**Pn**	15 52 59.4	-0.3
PLVB	**Pleven**	**3.69**	**63**	⇓P	**Pn**	15 53 03.4	+3.6
THAS	**Thassos island**	**3.69**	**108**	P	**Pn**	15 53 00.5	+0.6
KALE	**Kalithea**	**3.77**	**155**	P	**Pn**	15 53 03.7	+2.6
RTZL	**Ratzakli, Kefa**	**3.78**	**172**	P	**Pn**	15 53 02.5	+1.4
AOS	**Alonnisos**	**3.92**	**131**	P	**Pn**	15 53 04.6	+1.6
KDZ	**Kurdzhali**	**3.93**	**91**	P	**Pn**	15 53 04.6	+1.4
BZS	**Buzias**	**3.95**	**16**	⇓P	**Pn**	15 53 04.6	+1.1
BZS				⇓S	**Sn**	15 53 51.6	+2.1
DRO	**Drossia**	**4.06**	**162**	P	**Pn**	15 53 06.9	+1.9
GZR	**Gura Zlata**	**4.06**	**28**	⇑P	**Pn**	15 53 06.8	+1.7
KLV	**Kalavryta, Ach**	**4.09**	**157**	P	**Pn**	15 53 07.6	+2.1
RDO	**Rodhopi**	**4.14**	**98**	P	**Pn**	15 53 07.2	+1.1
LTHK	**Lithakia**	**4.15**	**172**	P	**Pn**	15 53 08.8	+2.6
SURR	**Surduc**	**4.19**	**20**	⇑P	**Pn**	15 53 08.4	+1.6
GUR	**Goura**	**4.25**	**155**	P	**Pn**	15 53 09.4	+1.7
LIA	**Limnos Island**	**4.31**	**115**	P	**Pn**	15 53 09.0	+0.6
SMTH	**Samothraki Isl**	**4.32**	**106**	P	**Pn**	15 53 09.1	+0.5
LTK	**Loutraki**	**4.39**	**149**	P	**Pn**	15 53 11.9	+2.3
VILL	**Villia**	**4.41**	**145**	P	**Pn**	15 53 12.5	+2.6
ELND	**Elena**	**4.42**	**74**	⇓P	**Pn**	15 53 12.7	+2.8
HUMR	**Humele**	**4.48**	**51**	⇓P	**Pn**	15 53 13.6	+2.8
MORH	**Mrgy, Hungar**	**4.51**	**347**	⇑*i*Pn	**Pn**	15 53 12.3	+1.1
MORH				*e*Sn	**Sn**	15 54 04.9	+1.5
MORH	**Mrgy, Hungar**	**4.51**	**347**	⇑P	**Pn**	15 53 12.5	+1.3
SIRR	**Siria**	**4.58**	**14**	⇑P	**Pn**	15 53 14.5	+2.3
CAVK	**Edirne/Enez-Ca**	**4.71**	**102**	⇑P	**Pn**	15 53 17.0	+3.1
DION	**Dionisos Attik**	**4.76**	**141**	P	**Pn**	15 53 17.1	+2.5
ARR	**Arges**	**4.84**	**41**	⇓P	**Pn**	15 53 18.2	+2.5
ITM	**Ithomi**	**4.85**	**162**	P	**Pn**	15 53 17.3	+1.5
VLY	**Voula,Athens**	**4.88**	**143**	P	**Pn**	15 53 18.9	+2.6
AQU	**L'Aquila**	**5.01**	**278**	*e*Pn	**Pn**	15 53 18.6	+0.5
AQU				*e*Sn	**Sn**	15 54 16.8	+1.0
RAZG	**Razgrad**	**5.03**	**68**	⇑P	**Pn**	15 53 21.8	+3.4
VOIR		**5.09**	**43**	⇓P	**Pn**	15 53 21.6	+2.3
EZN	**Ezine**	**5.13**	**111**	⇑P	**Pn**	15 53 22.6	+3.0
BEHE	**Becsehely**	**5.22**	**334**	*e*Pn	**Pn**	15 53 22.3	+1.3
BEHE				*e*Sn	**Sn**	15 54 22.6	+1.6
MLR	**Muntele Rosu**	**5.61**	**47**	Pn	**Pn**	15 53 27.0	+0.7
	1.5nm,0.3s,baz=203,slow=4.4,SNR=7.9						
MLR				Sn	**Sn**	15 54 32.5	+1.9
	0.3nm,0.3s,baz=291,slow=18,SNR=3.0						
	2.6nm,0.5s						
MLR	**Muntele Rosu**	**5.61**	**47**	⇓P	**Pn**	15 53 29.0	+2.6
DOPR	**Dopca**	**5.63**	**41**	⇓P	**Pn**	15 53 29.2	+2.5
CHOS	**Chios island**	**5.71**	**125**	P	**Pn**	15 53 30.6	+2.8
TURR	**Turia**	**6.01**	**43**	⇓P	**Pn**	15 53 34.5	+2.7
KTHA	**Kythira Island**	**6.02**	**157**	P	**Pn**	15 53 33.8	+1.9
SOKA	**Soboth**	**6.07**	**325**	Pn	**Pn**	15 53 34.2	+1.5
	9.7nm,0.6s,SNR=6.9						
OBKA	**Obir**	**6.15**	**321**	*e*Pn	**Pn**	15 53 36.4	+2.6
	3.5nm,0.2s						
PLOR	**Plostina**	**6.22**	**47**	⇑P	**Pn**	15 53 37.6	+3.0
VRI	**Vrincioaia**	**6.27**	**48**	⇑P	**Pn**	15 53 38.1	+2.8
ARSA	**Arzberg**	**6.33**	**330**	*e*Pn	**Pn**	15 53 39.1	+2.8
	6.4nm,0.4s						
ANKY	**Antikythira Is**	**6.45**	**156**	P	**Pn**	15 53 39.4	+1.6
RONA	**Rosalia, Austr**	**6.47**	**337**	*i* Pn	**Pn**	15 53 41.5	+3.4
	1.5nm,0.2s						
MYKA	**Terra Mystica**	**6.68**	**318**	*e*Pn	**Pn**	15 53 42.6	+1.5
	8.7nm,0.6s						
CONA	**Conrad Observa**	**6.80**	**335**	*i* Pn	**Pn**	15 53 46.0	+3.3
	2.5nm,0.4s						
BURAR	**Bucovina Array**	**6.84**	**30**	⇑P	**Pn**	15 53 46.4	+3.1
MODS	**Modra-Piesok**	**6.85**	**344**	*e*PN	**Pn**	15 53 45.1	+1.8
MODS				*e*SN	Sn	15 54 43.0	-18
MODS				*e*SG	**Sb**	15 55 30.6	+7.0
KBA	**Koelnbreinsper**	**7.14**	**320**	*i* Pn	**Pn**	15 53 49.0	+1.6
	15nm,0.7s,SNR=8.0						
MOA	**Molln**	**7.31**	**327**	*e*Pn	**Pn**	15 53 52.6	+2.9
	2.3nm,0.2s						
MOA				*e*Sn	**Sn**	15 55 15.5	+3.1
	11nm,0.5s						
ABTA	**Abfaltersbach**	**7.34**	**315**	*i* Pn	**Pn**	15 53 51.6	+1.5
	4.2nm,0.3s,SNR=5.4						
BIOA	**Bad Ischl, Aus**	**7.45**	**324**	*i* Pn	**Pn**	15 53 52.1	+0.5
	3.9nm,0.3s						
IDI	**Anoyia**	**7.53**	**149**	Pn	**Pn**	15 53 51.1	-1.6
	2.5nm,0.4s,baz=325,slow=16,SNR=9.0						
STHS	**Stebnicka Huta**	**7.64**	**6**	*e*PN	**Pn**	15 53 54.2	+0.1
STHS				*e*PG	Pg	15 54 30.4	+0.9
STHS				*e*SN	Sn	15 55 01.0	-19
KRUC	**Moravsky**	**7.69**	**341**	*e*PN	**Pn**	15 53 55.3	+0.4
KRUC				*e*SN	**Sn**	15 55 22.6	+0.9
LESA	**Schwarzleotal**	**7.70**	**319**	*i* Pn	**Pn**	15 53 56.8	+1.7
	12nm,0.6s,SNR=7.7						
MAUC	**Maruska**	**7.71**	**349**	*e*SN	**Sn**	15 55 23.4	+1.2
VRAC	**Vranov**	**7.88**	**343**	Pn	**Pn**	15 53 59.0	+1.6
	0.1nm,0.3s,baz=173,slow=17,SNR=1.5						
VRAC				Sn	**Sn**	15 55 27.4	+1.1
	0.5nm,0.3s,baz=180,slow=19,SNR=2.3						
	1.4nm,0.5s						
VRAC	**Vranov**	**7.88**	**343**	*e*PN	**Pn**	15 53 57.6	+0.2
VRAC				*e*SN	**Sn**	15 55 27.8	+1.5
CKRC	**Cesky Krumlov**	**8.10**	**332**	*e*PN	**Pn**	15 54 03.5	+3.1
WTTA	**Wattenberg**	**8.13**	**315**	*i* Pn	**Pn**	15 54 03.2	+2.2
	4.8nm,0.2s						
MORC	**Moravsky Berou**	**8.15**	**348**	*e*PN	**Pn**	15 54 01.9	+0.7
MORC				*e*SN	**Sn**	15 55 34.1	+1.0
WATA	**Walderalm**	**8.21**	**315**	*e*Pn	**Pn**	15 54 04.5	+2.5
	4.8nm,0.3s						
SQTA	**Sankt Quirin**	**8.33**	**313**	*i* Pn	**Pn**	15 54 06.3	+2.6
	6.2nm,0.4s,SNR=4.4						
SQTA				*e*Sn	**Sn**	15 55 40.1	+2.5
	10nm,0.5s						
GERES	**GERESS Array B**	**8.34**	**330**	Pn	**Pn**	15 54 05.4	+1.5
	baz=147,slow=12,SNR=7.5						
GERES				Sn	**Sn**	15 55 38.2	+0.4
	baz=143,slow=25,SNR=1.5						
	2.1nm,0.8s						
MOTA	**Moosalm**	**8.46**	**314**	*i* Pn	**Pn**	15 54 07.8	+2.2
	11nm,0.7s,SNR=6.6						
FETA	**Feichten**	**8.48**	**311**	*e*Pn	**Pn**	15 54 07.7	+1.9
	5.4nm,0.7s						
KRLC	**Kraliky**	**8.57**	**346**	*e*SN	**Sn**	15 55 44.1	+0.8
KHC	**Kasperske Hory**	**8.62**	**330**	*e*PN	**Pn**	15 54 10.7	+3.1
KHC				*e*SN	**Sn**	15 55 50.3	+5.7
DAVOX	**Davos/Dischmat**	**8.84**	**308**	Pn	**Pn**	15 54 11.7	+0.8
	0.7nm,0.3s,baz=124,slow=11,SNR=7.5						
DAVOX				Sn	**Sn**	15 55 52.2	+1.9
	0.6nm,0.3s,baz=156,slow=20,SNR=1.7						
DAVOX				LR	LR	15 58 44.6	
	comp=Z,108nm,18.0s,baz=46,slow=45						
	3.6nm,0.6s						
DPC	**Dobruska-Polom**	**8.92**	**344**	*e*SN	**Sn**	15 55 55.5	+3.5
BRTR	**Keskin Array B**	**10.48**	**97**	Pn	**Sn**	15 54 31.2	-2.0
	0.1nm,0.3s,baz=285,slow=15,SNR=2.2						
	0.3nm,0.7s						
MMAI	**Mount Meron Ar**	**14.99**	**121**	Pn	**Pn**	15 55 33.9	-0.8
	0.7nm,0.3s,baz=297,slow=13,SNR=2.4						
	3.7nm,0.8s						
HFS	**Hagfors**	**18.76**	**350**	P	**P**	15 56 20.7	-0.9
	0.2nm,0.3s,baz=171,slow=10,SNR=6.4						
	2.1nm,0.6s						
FINES	**FINESS Array B**	**19.98**	**8**	P	**P**	15 56 34.5	-0.4
	1.9nm,0.8s,baz=193,slow=16,SNR=3.8						
	1.9nm,0.8s						
NOA	**NORSAR Array B**	**19.99**	**347**	P	**P**	15 56 34.6	-0.6
	1.2nm,0.8s,baz=160,slow=10,SNR=2.7						
	1.2nm,0.8s						
EKA	**Eskdalemuir Ar**	**20.35**	**320**	P	**P**	15 56 38.2	-0.9
	1.7nm,0.8s,baz=118,slow=9.4,SNR=3.7						
	1.7nm,0.8s						
BVAR	**Borovoye Array**	**35.12**	**54**	P	**P**	15 58 56.5	+0.4
	1.5nm,0.7s,baz=280,slow=8.6,SNR=6.7						
	1.5nm,0.7s						
KURBB	**Kurchatov Arra**	**40.41**	**57**	P	**P**	15 59 40.7	-0.1
	0.2nm,0.7s,baz=290,slow=9.2,SNR=2.4						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**43.57**	**51**	P	**P**	16 00 06.4	-0.1
	2.4nm,0.6s,baz=273,slow=9.1,SNR=9.7						
	2.4nm,0.6s						
MKAR	**Makanchi Array**	**43.76**	**61**	P	**P**	16 00 08.1	-0.1
	0.8nm,0.5s,baz=279,slow=7.4,SNR=7.9						
	0.8nm,0.5s						
SONM	**Songino Array**	**58.44**	**52**	P	**P**	16 01 58.5	0.0
	0.2nm,0.4s,baz=286,slow=5.4,SNR=1.8						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**69.74**	**83**	P	**P**	16 03 11.7	-1.4
	1.1nm,0.8s,baz=308,slow=6.8,SNR=8.5						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**73.25**	**354**	P	**P**	16 03 33.3	-0.3
	0.1nm,0.6s,baz=354,slow=8.6,SNR=1.5						
	0.1nm,0.6s						
BBB	**Bella Bella**	**82.39**	**341**	LR	LR	16 43 22.9	
	comp=Z,60nm,18.2s,baz=155,slow=37						
TXAR	**Lajitas Array**	**92.23**	**313**	P	**P**	16 05 12.3	-0.7
	0.6nm,0.8s,baz=30,slow=4.6,SNR=3.2						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**122.81**	**94**	PKP	**PKPdf**	16 10 56.7	-2.3
	0.3nm,0.8s,baz=312,slow=2.7,SNR=6.5						

IDC ***27*** *15:57:15.8±2.6, 41°.56N×19°.73E, h0km, mb3.6/3, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=48.0km s-min=26.0km az=115.0*
SKO ***27*** *15:57:17.8, 41°.46N×19°.33E, h0km, ML3.0*
TIR ***27*** *15:57:18.1, 41°.52N×19°.47E, h36km±3km, Ml3.0/3*
PDG ***27*** *15:57:21.1±0.2, 41°.62N×19°.59E, h11km±1km, MD2.9/2, ML2.9/8, Error ellipse: s-maj=1.5km s-min=1.5km az=0.0*

ISC 27 15:57:18.3±0.9, 41°.52N±0°.02×19°.51E±0°.03, h16km±7km, n39, σ1s 41°/73°, 14C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**122**	Pg	**Pg**	**15 57 24.8**	**-0.1**
TIR				Sg	**Sg**	**15 57 28.8**	**-0.7**
TIR				AML	AML	15 57 29.1	
	6.8nm,0.3s						
TIR				AML	AML	15 57 29.2	
	9.0nm,0.4s						
TIR	**Tirane**	**0.32**	**122**	*i* Pg	**Pg**	**15 57 24.6**	**-0.3**
TIR				*i* Sg	**Sg**	**15 57 30.3**	**+0.8**
ULC	**Ulcinj**	**0.49**	**336**	⇑*i*Pg	**Pb**	**15 57 28.5**	**-0.1**
ULC				*i* Sg	**Sb**	**15 57 35.2**	**-0.3**
SDA	**Shkodra**	**0.54**	**359**	Pg	**Pb**	**15 57 29.5**	**+0.2**
SDA				Sg	**Sb**	**15 57 37.2**	**+0.4**
BUM	**Brajici-Budva**	**0.91**	**330**	⇓*i*Pg	**Pn**	**15 57 36.8**	**+0.3**
BUM				*i* Sg	**Sn**	**15 57 49.5**	**+0.2**
PDG	**Podgorica**	**0.93**	**348**	Pg	**Pn**	**15 57 37.1**	**+0.3**
PDG				Sg	**Sn**	**15 57 49.3**	**-0.5**
PDG	**Podgorica**	**0.93**	**348**	⇓P	**Pn**	**15 57 37.4**	**+0.6**
PDG				⇓S	**Sn**	**15 57 51.7**	**+1.9**
PDG	**Podgorica**	**0.93**	**348**	⇑*i*Pg	**Pb**	**15 57 36.0**	**-0.1**
PDG				*i* Sg	**Sb**	**15 57 48.6**	**+0.4**
OHR	**Ohrid**	**1.05**	**112**	*i* Pg	**Pn**	**15 57 39.1**	**+0.6**
OHR				*i* Sg	**Sn**	**15 57 55.3**	**+2.3**
OHR				*e*Lg	Lg	15 57 58.8	
	comp=N,199nm,0.5s						
OHR				*e*Lg	Lg	15 57 59.4	
	comp=E,282nm,0.7s						
HCY	**Herceg Novi**	**1.20**	**321**	⇓*i*Pg	**Pg**	**15 57 41.6**	**+0.2**
HCY				*i* Sg	**Sn**	**15 57 59.4**	**+3.0**
NKME	**Niksic**	**1.32**	**342**	⇓*i*Pg	**Pg**	**15 57 43.8**	**+0.1**
NKME				*i* Sg	**Sg**	**15 58 01.8**	**+1.0**
KBN	**Korca**	**1.32**	**132**	Pn	**Pn**	**15 57 40.5**	**-1.6**
KBN				Sn	**Sg**	**15 58 03.5**	**+2.7**
IVA	**Berane**	**1.39**	**12**	⇑*i*Pg	**Pb**	**15 57 43.6**	**-0.3**
IVA				*i* Sg	**Sg**	**15 58 03.2**	**+0.2**
SKO	**Skopje**	**1.52**	**72**	*i* Pg	**Pg**	**15 57 47.6**	**+0.1**
SKO				*i* Sg	**Sg**	**15 58 06.9**	**-0.3**
BRY	**Bratogost**	**1.56**	**333**	⇑*i*Pg	**Pg**	**15 57 47.6**	**-0.7**
BRY				*i* Sg	**Sg**	**15 58 10.0**	**+1.4**
NEST	**Nestorio**	**1.60**	**133**	Pn	**Pn**	**15 57 47.3**	**+1.2**
NEST				Sn	**Sb**	**15 58 08.5**	**+0.8**
NEST				AML	AML	15 58 16.1	
	comp=E,0.5nm,1.0s						
PLE	**Pljevlja**	**1.81**	**357**	*e*Pn	**Pb**	**15 57 51.6**	**+0.4**
PLE				*i* Sn	**Sg**	**15 58 15.6**	**-1.1**
NOCI	**Noci**	**1.98**	**249**	Pn	**Pn**	**15 57 50.9**	**-0.3**
IGT	**Igoumenitsa**	**2.08**	**162**	*i* Pn	**Pb**	**15 57 55.0**	**-0.7**
IGT				*i* Sn	**Sb**	**15 58 22.0**	**+0.8**
BARS	**Barje**	**2.15**	**52**	*i* Pn	**Pb**	**15 57 55.5**	**-1.4**
BARS				*i* Sn	**Sb**	**15 58 24.2**	**+0.8**
GRG	**Griva**	**2.25**	**103**	*i* Pn	**Pn**	**15 57 56.2**	**+1.3**
GRG				*i* Sn	**Sn**	**15 58 25.0**	**+2.5**
MATE	**Matera**	**2.29**	**249**	⇑P	**Pn**	**15 57 56.7**	**+1.3**
MATE				⇑S	**Sb**	**15 58 25.8**	**-1.5**
VAY	**Valandovo**	**2.31**	**94**	*i* Pn	**Pg**	**15 58 01.4**	**-1.2**
VAY				*i* Sn	**Sn**	**15 58 26.0**	**+2.2**
VAY				*e*Lg	Lg	15 58 27.6	
	comp=E,46nm,0.7s						
VAY				*e*Lg	Lg	15 58 33.5	
	comp=N,70nm,1.1s						
BOVS	**Bovan**	**2.67**	**37**	⇓P	**Pn**	**15 58 01.2**	**+0.5**
BOVS				⇑S	**Sn**	**15 58 32.8**	**+0.1**
KKB	**Krupnik**	**2.73**	**82**	*i* Pn	**Pn**	**15 58 03.9**	**+2.4**
KKB				*i* Sn	**Sn**	**15 58 36.9**	**+2.6**
TIP	**Timpagrande**	**3.14**

PMPST				*e*S	Sg	16 14 07.5	-10		
PMPST				*i* IAML		16 14 08.4			
PMPST				*i* IAML		16 14 08.5			
PMPST				*i* IAML		16 14 08.5			
CPUN	**Puntallana, La**	**3.65**	**196**	P	**Pn**	**16 14 49.3**	**+2.6**		
CPUN				⇑*i*Vmb_VC		16 14 51.7			
	734nm,SNR=1.6								
CPUN				S	**Sn**	**16 15 28.4**	**-1.6**		
CROM	**Garafia, La Pa**	**3.66**	**198**	P	**Pn**	**16 14 49.3**	**+2.3**		
CROM				⇑*i*Vmb_VC		16 14 53.1			
	573nm,SNR=1.8								
CROM				S	**Sn**	**16 15 28.8**	**-1.6**		
CMIR	**El Paso, La Pa**	**3.71**	**198**	P	**Pn**	**16 14 49.6**	**+1.9**		
CMIR				S	**Sn**	**16 15 30.4**	**-1.2**		
TBT	**Taburiente**	**3.75**	**198**	P	**Pn**	**16 14 51.4**	**+3.4**		
TBT				⇑*i*Vmb_VC		16 14 55.7			
	244nm,SNR=1.3								
TBT				S	**Sn**	**16 15 30.4**	**-1.8**		
CVIE	**Villa de Mazo,**	**3.81**	**197**	P	**Pn**	**16 14 50.2**	**+1.3**		
CVIE				S	**Sn**	**16 15 32.2**	**-1.7**		
CGUI	**Guimar, Teneri**	**3.92**	**178**	S	**Sn**	**16 15 36.6**	**0.0**		
CFOR	**Fortaleza, Los**	**3.93**	**180**	S	**Sn**	**16 15 37.4**	**+0.4**		
CNOR	**Icod de los Vi**	**3.93**	**181**	P	**Pn**	**16 14 52.9**	**+2.2**		
CNOR				S	**Sn**	**16 15 36.6**	**-0.4**		
CBOL	**Buenavista del**	**3.93**	**183**	S	**Sn**	**16 15 35.2**	**-1.8**		
CDIE	**La Orotava (Te**	**3.96**	**180**	S	**Sn**	**16 15 37.3**	**-0.4**		
MACI	**Morro de la Ar**	**3.99**	**179**	P	**Pn**	**16 14 53.4**	**+1.8**		
MACI				⇑*i*Vmb_VC		16 14 57.4			
	471nm,SNR=1.1								
MACI				S	**Sn**	**16 15 38.2**	**-0.3**		
CCHO	**La Orotava (Te**	**4.02**	**181**	P	**Pn**	**16 14 53.8**	**+1.9**		
CCHO				⇑*i*Vmb_VC		16 14 54.4			
	130nm,SNR=0.9								
CCHO				S	**Sn**	**16 15 39.2**	**0.0**		
CCAN	**Las Canadas**	**4.02**	**180**	P	**Pn**	**16 14 52.4**	**+0.4**		
CCAN				⇑*i*Vmb_VC		16 14 58.7			
	335nm,SNR=1.2								
CCAN				S	**Sn**	**16 15 36.5**	**-2.8**		
CADE	**Adeje, Tenerif**	**4.08**	**182**	S	**Sn**	**16 15 39.2**	**-1.4**		
CLAJ	**Vilaflor (Tene**	**4.09**	**181**	P	**Pn**	**16 14 54.2**	**+1.3**		
CLAJ				⇑*i*Vmb_VC		16 15 01.2			
	482nm,SNR=1.0								
CLAJ				S	**Sn**	**16 15 39.2**	**-1.6**		
EGOM	**La Gomera**	**4.12**	**188**	P	**Pn**	**16 14 54.6**	**+1.5**		
EGOM				S	**Sn**	**16 15 39.4**	**-1.9**		
EOSO	**Osorio**	**4.26**	**168**	S	**Sn**	**16 15 43.6**	**-1.5**		
CLUM	**San Bartolome**	**4.50**	**169**	P	**Pn**	**16 15 01.2**	**+2.8**		
CLUM				⇑*i*Vmb_VC		16 15 06.2			
	679nm,SNR=1.2								
CLUM				S	**Sn**	**16 15 50.0**	**-0.7**		
CGIN	**Giniginamar, F**	**4.58**	**151**	P	**Pn**	**16 15 00.9**	**+1.5**		
CGIN				⇑*i*Vmb_VC		16 15 03.6			
	359nm,SNR=1.4								
CGIN				S	**Sn**	**16 15 48.1**	**-4.6**		
CJUL	**El Julan, El H**	**4.70**	**197**	P	**Pn**	**16 15 02.3**	**+1.1**		
CJUL				⇑*i*Vmb_VC		16 15 05.7			
	548nm,SNR=1.5								
CJUL				S	**Sn**	**16 15 51.3**	**-4.5**		

*BJI **27** 16:23:27.8,27˚.57N×85˚.73E,h14^{km},mB4.8/5,mb4.3/25, Ms3.7/3,Ms7 3.5/3*
*IDC **27** 16:23:28.9±0.6,27˚.63N×85˚.65E,h0^{km},mb4.1/24, mbtmp4.1/28,ML4.1/4,Error ellipse: s-maj=18.3km s-min=12.5km az=47.0*
*DMN **27** 16:23:30.7±0.0,27˚.79N×85˚.80E,h10^{km},Ml5.0/7,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **27** 16:23:31.7±1.4,27˚.80N±0˚.08×85˚.82E±0˚.04,h10^{km}±1^{km}, mb4.6/65,Error ellipse: s-maj=14.1km s-min=6.0km az=174.0*
*NDI **27** 16:23:33.3±3.8,27˚.70N×85˚.74E,h10^{km},ML4.1,MW3.8*
ISC 27 16:23:30.5±0.9,27˚.70N±0˚.03×85˚.75E±0˚.02,h10^{km}±6^{km}, n165,σ1º56/202,mb4.5/53,8C-2D,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GUN	**Gumba**	**0.24**	**29**	Pg		**Pg**	**16 23 34.9**	**-0.8**
	baz=31,slow=0.0							
GUN				Sg		**Sg**	**16 23 37.6**	**-1.6**
	72μm,0.3s,baz=31,slow=0.0							
PKI	**Pulchoki**	**0.32**	**248**	Pg		**Pb**	**16 23 39.9**	**+1.4**
	baz=238,slow=0.0							
PKI				Sg		**Sb**	**16 23 44.7**	**+0.8**
	22μm,0.4s,baz=238,slow=0.0							
PKIN	**Phulchoki**	**0.33**	**249**	Pg		**Pb**	**16 23 39.1**	**+0.5**
	baz=239,slow=0.0							
PKIN				Sg		**Sb**	**16 23 44.7**	**+0.6**
	23μm,0.4s,baz=239,slow=0.0							
JIRN	**Jiri**	**0.40**	**95**	Pg		**Pg**	**16 23 38.4**	**0.0**
	baz=111,slow=0.0							
JIRN				Sg		**Sg**	**16 23 43.1**	**-0.6**
	18μm,0.3s,baz=111,slow=0.0							
KKN	**Kakani**	**0.42**	**283**	Pg		**Pb**	**16 23 40.5**	**+0.3**
	baz=271,slow=0.0							
KKN				Sg		**Sb**	**16 23 46.4**	**-0.3**
	12μm,0.2s,baz=271,slow=0.0							
DMN	**Daman**	**0.57**	**262**	Pg		**Pb**	**16 23 43.4**	**+0.6**
	baz=254,slow=0.0							
DMN				Sg		**Sb**	**16 23 52.3**	**+1.2**
	9μm,0.3s,baz=254,slow=0.0							
EVN	**Everest**	**0.98**	**74**			**Pg**	**16 23 48.9**	**-0.6**
EVN				Sg		**Sg**	**16 23 59.8**	**-2.6**
GKN	**Gorkha**	**1.03**	**288**	Pg		**Pn**	**16 23 51.5**	**+0.4**
	baz=282,slow=0.0							
GKN				Sg		**Sb**	**16 24 04.7**	**+0.6**
	4μm,0.2s,baz=282,slow=0.0							
RAMN	**Ramite**	**1.06**	**134**	Pg		**Pg**	**16 23 50.9**	**0.0**
	baz=139,slow=0.0							
RAMN				Sg		**Sn**	**16 24 06.1**	**-0.5**
	3μm,0.3s,baz=139,slow=0.0							
ODAN	**Odare**	**1.68**	**119**	Pg		**Pg**	**16 24 02.7**	**-0.1**
	baz=123,slow=0.0							
ODAN				Sg		**Sg**	**16 24 24.9**	**+0.2**
	3μm,0.3s,baz=123,slow=0.0							
TAPN	**Taplejung**	**1.78**	**101**	Pg		**Pb**	**16 24 03.5**	**+0.2**
	baz=104,slow=0.0							
TAPN				Sg		**Sg**	**16 24 27.4**	**-0.3**
	3μm,0.5s,baz=104,slow=0.0							
DANN	**Dangsing**	**1.87**	**291**	Pg		**Pb**	**16 24 05.2**	**+0.2**
	baz=288,slow=0.0							
DANN				Sg		**Sg**	**16 24 30.6**	**-0.2**
	2μm,0.3s,baz=288,slow=0.0							
KOLN	**Koldanda**	**1.90**	**273**	Pg		**Pb**	**16 24 05.9**	**+0.5**
	baz=270,slow=0.0							
KOLN				Sg		**Sg**	**16 24 31.3**	**-0.4**
	baz=270,slow=0.0							
GAYA	**Gaya**	**2.92**	**189**	*e*P		**Pb**	**16 24 20.6**	**-2.0**
GAYA				*e*S		**Sb**	**16 24 55.8**	**-2.5**
GAYA				IAML			16 25 11.6	
	comp=N,2μm,0.3s							
GAYA				IAML			16 25 11.7	
	comp=E,3μm,0.2s							
BOK	**Bokaro**	**3.89**	**178**	*e*P		**Pn**	**16 24 33.4**	**+3.2**
BOK				*e*S		**Sn**	**16 25 16.6**	**+0.6**
BOK				IAML			16 25 36.1	
	comp=E,393nm,0.7s							
BOK				IAML			16 25 38.4	
	comp=N,245nm,0.5s							
DHUB	**DHUBRI**	**4.15**	**113**	*e*P		**Pn**	**16 24 35.7**	**+1.9**
DHUB				*e*S		**Sn**	**16 25 22.5**	**+0.1**
DHUB				IAML			16 25 49.7	
	comp=E,140nm,0.8s							
DHUB				IAML			16 25 50.1	
	comp=N,178nm,0.2s							
ALBI	**Allahabad**	**4.25**	**237**	*e*P		**Pn**	**16 24 39.5**	**+4.2**
LGTI	**Lohaghat**	**5.14**	**291**	*e*P		**Pn**	**16 24 51.4**	**+3.9**
LGTI				*e*S		**Sn**	**16 25 49.8**	**+2.9**
LGTI				IAML			16 25 52.1	
	comp=E,150nm,0.4s							
LGTI				IAML			16 25 52.6	
	comp=N,147nm,0.3s							
LSA	**Lhasa**	**5.15**	**66**	Pn		**Pn**	**16 24 47.9**	**-0.2**
LSA	**Lhasa**	**5.15**	**66**	Pn		**Pn**	**16 24 46.5**	**-1.6**
GUWA	**GUWAHATI**	**5.51**	**104**	*e*S		**Sn**	**16 25 56.9**	**+0.8**
GUWA				IAML			16 26 01.4	
	comp=E,143nm,0.3s							
GUWA				IAML			16 26 03.9	
	comp=N,134nm,0.3s							
SHL	**Shillong**	**5.89**	**110**	Pn		**Pn**	**16 24 58.5**	**+0.5**
SHL	**Shillong**	**5.89**	**110**	*e*P		**Pn**	**16 24 59.1**	**+1.2**
SHL				*e*S		**Sn**	**16 26 05.1**	**-0.5**
SHL				IAML			16 26 38.8	
	comp=E,185nm,0.6s							
SHL				IAML			16 26 40.0	
	comp=N,148nm,0.6s							
JHSG	**JHARSUGUGA**	**6.17**	**197**	*e*P		**Pn**	**16 25 05.0**	**+3.3**
JHSG				*e*S		**Sn**	**16 26 12.0**	**-0.4**
JHSG				IAML			16 26 22.4	
	comp=E,492nm,0.3s							
JHSG				IAML			16 26 23.2	
	comp=N,449nm,0.3s							
TEZP	**TEZPUR**	**6.37**	**98**	*e*P		**Pn**	**16 25 05.8**	**+1.4**
TEZP				*e*S		**Sn**	**16 26 16.2**	**-1.1**
TEZP				IAML			16 26 18.9	
	comp=N,112nm,0.1s							
TEZP				IAML			16 26 21.3	
	comp=E,183nm,0.2s							
JHNI	**Jhansi**	**6.82**	**253**	*e*P		**Pn**	**16 25 09.1**	**-1.6**
JHNI				*e*S		**Sn**	**16 26 23.3**	**-5.1**
JHNI				IAML			16 26 25.4	
	comp=N,197nm,0.1s							
JHNI				IAML			16 26 27.9	
	comp=E,168nm,0.2s							
ITAN	**ITANAGAR**	**7.11**	**93**	*e*P		**Pn**	**16 25 16.2**	**+1.6**
ITAN				*e*S		**Sn**	**16 26 32.0**	**-3.5**
ITAN				IAML			16 27 15.1	
	comp=E,107nm,0.8s							
ITAN				IAML			16 27 17.5	
	comp=N,184nm,0.2s							
ZIRO	**ZIRO**	**7.19**	**89**	*e*P		**Pn**	**16 25 16.4**	**+0.5**
ZIRO				*e*S		**Sn**	**16 26 35.8**	**-1.9**
ZIRO				IAML			16 26 44.8	
	comp=N,585nm,0.7s							
ZIRO				IAML			16 26 48.5	
	comp=E,367nm,0.7s							
DDI	**Dehra Dun**	**7.22**	**293**	*e*P		**Pn**	**16 25 19.4**	**+3.1**
DDI				*e*S		**Sn**	**16 26 37.5**	**-0.9**
AYAN	**Aya Nagar**	**7.65**	**278**	*e*P		**Pn**	**16 25 24.5**	**+2.4**
AYAN				*e*S		**Sn**	**16 26 44.7**	**-4.1**
KOHI	**KOHIMA**	**7.73**	**103**	*e*P		**Pn**	**16 25 24.5**	**+1.2**
KOHI				*e*S		**Sn**	**16 26 50.4**	**-0.6**
KOHI				IAML			16 27 38.4	
	comp=E,171nm,1.0s							
KOHI				IAML			16 27 43.8	
	comp=N,165nm,1.0s							
IMP	**Imphal**	**7.89**	**109**	*e*P		**Pn**	**16 25 26.6**	**+1.2**
IMP				*e*S		**Sn**	**16 26 52.5**	**-2.3**
IMP				IAML			16 27 04.0	
	comp=N,120nm,0.7s							
IMP				IAML			16 27 06.3	
	comp=E,118nm,0.7s							
MOKO	**MOKOCHONG**	**7.94**	**98**	*e*P		**Pn**	**16 25 26.2**	**+0.1**
MOKO				*e*S		**Sn**	**16 26 54.5**	**-1.6**
MOKO				IAML			16 26 58.1	
	comp=N,78nm,0.1s							
MOKO				IAML			16 26 59.0	
	comp=E,92nm,0.4s							
SMLA	**Simla**	**8.23**	**297**	*e*P		**Pn**	**16 25 30.8**	**+0.9**
SMLA				*e*S		**Sn**	**16 27 00.1**	**-2.8**
SMLA				IAML			16 27 02.7	
	comp=N,78nm,0.4s							
SMLA				IAML			16 27 02.7	
	comp=E,103nm,0.3s							
SAIH	**SAIHA**	**8.36**	**127**	*e*P		**Pn**	**16 25 34.4**	**+2.5**
SAIH				*e*S		**Sn**	**16 27 04.3**	**-2.1**
SAIH				IAML			16 27 06.6	
	comp=N,150nm,0.6s							
SAIH				IAML			16 27 08.4	
	comp=E,157nm,0.5s							
RAGD	**RAYAGADA**	**8.67**	**194**	*e*P		**Pn**	**16 25 38.1**	**+2.1**
RAGD				*e*S		**Sn**	**16 27 11.8**	**-2.0**
RAGD				IAML			16 27 15.8	
	comp=E,142nm,0.7s							
RAGD				IAML			16 27 19.0	
	comp=N,125nm,0.9s							
BHPL	**Bhopal**	**8.73**	**241**	*e*P		**Pn**	**16 25 35.8**	**-1.1**
BHPL				*e*S		**Sn**	**16 27 09.0**	**-6.4**
BHPL				IAML			16 27 10.6	
	comp=N,126nm,0.4s							
BHPL				IAML			16 27 12.3	
	comp=E,197nm,0.5s							
LKP	**Lekhapani**	**8.97**	**90**	IAML			16 27 14.7	
	comp=E,152nm,0.2s							
LKP				IAML			16 27 14.9	
	comp=N,169nm,0.5s							
TSSA	**Tissa**	**9.75**	**304**	*e*P		**Pn**	**16 25 50.3**	**-0.6**
TSSA				*e*S		**Sn**	**16 27 35.1**	**-5.5**
TSSA				IAML			16 27 38.4	
	comp=N,150nm,0.2s							
TSSA				IAML			16 27 41.8	
	comp=E,152nm,0.5s							
ALCI	**Alchi Leh**	**9.81**	**314**	*e*P		**Pn**	**16 25 52.6**	**+0.7**
ALCI				*e*S		**Sn**	**16 27 38.8**	**-3.5**
NIL	**Nilore**	**12.28**	**302**	Pn		**Pn**	**16 26 23.2**	**-2.3**
KSH	**Kashi**	**14.32**	**328**	P		**Pn**	**16 26 49.5**	**-3.8**
KSH				sP		P	16 26 56.3	-4.3
KSH				pmax		pmax		
	comp=E,6.0nm,0.6s							
WUS	**Wushi**	**14.50**	**340**	Pn		**Pn**	**16 26 55.2**	**-0.6**
CHTO	**Chiang Mai**	**15.00**	**123**	P		**P**	**16 27 09.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**15.22**	**124**	Pn		**Pn**	**16 27 03.8**	**-1.8**
	comp=E,0.1nm,0.3s,baz=306,slow=14,SNR=6.4							
	comp=E,0.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**15.22**	**124**	Pn		**Pn**	**16 27 05.0**	**-0.6**
TARG	**Taragay, Kyrgy**	**15.44**	**337**	Pn		**Pn**	**16 27 08.0**	**-0.7**
KBL	**Kabul**	**15.84**	**300**	Pn		**Pn**	**16 27 11.6**	**-2.1**
WMQ	**Urumqi**	**16.17**	**5**	*e*P		**P**	**16 27 26.0**	**+5.0**
DRK	**Karamyk**	**16.50**	**319**	Pn		**Pn**	**16 27 19.9**	**-2.5**
GTA	**Gaotai**	**16.53**	**41**	P		**P**	**16 27 25.5**	**+0.4**
GTA				pP		sP	16 27 30.5	+0.6
GTA				pmax		pmax		
	comp=E,14nm,0.9s							
GAR	**Garm**	**17.10**	**315**	Pn		**Pn**	**16 27 26.7**	**-3.0**
ARSB	**Arslanbob**	**17.16**	**326**	Pn		**Pn**	**16 27 26.5**	**-4.0**
LZDM	**Lanzhou Array**	**17.32**	**57**	P		**P**	**16 27 34.3**	**+0.2**
	baz=246,slow=11							
	comp=E,5.1nm,0.5s							
AAK	**Ala-Archa**	**17.49**	**331**	P		**Pn**	**16 27 34.2**	**-0.5**
	comp=E,0.2nm,0.3s,baz=175,slow=5.5,SNR=5.2							
	comp=E,1.1nm,0.4s							
AAK	**Ala-Archa**	**17.49**	**331**	Pn		**Pn**	**16 27 32.2**	**-2.4**
CHGR	**Chuyangaron**	**17.64**	**312**	Pn		**Pn**	**16 27 34.3**	**-2.2**
CHGR				IAmb		IAmb	16 27 46.6	
	comp=Z,24nm,0.9s							
MKAR	**Makanchi Array**	**19.26**	**353**	P		**Pn**	**16 27 55.7**	**-0.4**
	comp=E,1.0nm,0.3s,baz=179,slow=11,SNR=48							
	comp=Z,6.0nm,0.7s							
MKAR	**Makanchi Array**	**19.26**	**353**	P		**P**	**16 27 55.1**	**0.0**
MAKZ	**Makanchi**	**19.31**	**352**	P		**P**	**16 27 55.5**	**-0.1**
XAN	**Xi'an**	**20.85**	**67**	⇑P		**P**	**16 28 13.0**	**+0.4**
XAN				pmax		pmax		
	comp=Z,8.0nm,0.6s							
PALK	**Pallekele**	**20.87**	**194**	P		**P**	**16 28 11.6**	**-1.2**
	comp=Z,4.6nm,0.9s,baz=30,slow=20,SNR=1.2							
	comp=Z,4.6nm,0.9s							
ENH	**Enshi**	**20.92**	**77**	P		**P**	**16 28 13.6**	**+0.2**
ENH				IAmb		IAmb	16 28 17.4	
	comp=Z,8.4nm,0.5s							
KURBB	**Kurchatov Arra**	**23.55**	**348**	P		**P**	**16 28 41.7**	**+0.9**
	comp=Z,2.7nm,0.5s,baz=167,slow=10,SNR=21							
	comp=Z,2.7nm,0.5s							
KURK	**Kurchatov**	**23.62**	**349**	P		**P**	**16 28 41.0**	**-0.5**
SONM	**Songino Array**	**25.75**	**33**	P		**P**	**16 29 02.7**	**+1.4**
	comp=Z,7.3nm,0.6s,baz=221,slow=9.7,SNR=47							
	comp=Z,7.3nm,0.6s							
ULN	**Ulaanbaatar**	**26.09**	**34**	P		**P**	**16 29 05.1**	**+0.6**
ULN				IAmb		IAmb	16 29 08.2	
	comp=Z,11nm,0.6s							
ZAA0	**Zalesovo Array**	**26.24**	**359**	P		**P**	**16 29 05.7**	**+0.2**
ZALV	**Zalesovo Beam**	**26.24**	**359**	P		**P**	**16 29 06.2**	**+0.7**
	comp=Z,2.4nm,0.4s,baz=183,slow=9.9,SNR=16							
	comp=Z,2.4nm,0.4s							
ZALV	**Zalesovo Beam**	**26.24**	**359**	P		**P**	**16 29 06.0**	**+0.5**
KULM	**Kulim**	**26.41**	**145**	P		**P**	**16 29 08.8**	**+1.4**
KULM				IAmb		IAmb	16 29 21.1	
	comp=Z,29nm,1.4s							
BVAR	**Borovoye Array**	**27.76**	**340**	P		**P**	**16 29 20.0**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=145,slow=9.6,SNR=14							
	comp=Z,1.1nm,0.4s							
AB31	**Akbulak array**	**29.27**	**324**	P		**P**	**16 29 33.5**	**+0.8**
AB31				IAmb		IAmb	16 29 34.6	
	comp=Z,3.2nm,0.5s							
ABKAR	**Akbulak array**	**29.27**	**324**	P		**P**	**16 29 33.4**	**+0.6**
ARTI	**Arti**	**34.69**	**333**	P		**P**	**16 30 20.4**	**+0.2**
KSRS	**Korea Array**	**36.59**	**64**	P		**P**	**16 30 36.8**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=273,slow=11,SNR=1.7							
	comp=Z,1.2nm,0.9s							
USRK	**Ussuriysk Ar.**	**40.33**	**53**	P		**P**	**16 31 07.4**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=250,slow=6.9,SNR=2.6							
	comp=Z,1.4nm,0.7s							
BRTR	**Keskin Array B**	**44.41**	**300**	P		**P**	**16 31 41.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=109,slow=7.1,SNR=3.8							
	comp=Z,0.7nm,0.8s							
YAK	**Yakutsk**	**44.87**	**28**	P		**P**	**16 31 45.0**	**+0.4**
YAK				IAmb		IAmb	16 31 46.2	
	comp=Z,6.6nm,0.7s							
ELL	**Elmali**	**47.52**	**296**	P		**P**	**16 32 06.9**	**+0.8**
AKASG	**Malin Array Be**	**48.10**	**315**	P		**P**	**16 32 09.6**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=83,slow=7.0,SNR=10							
	comp=Z,0.8nm,0.3s							
AKASG	**Malin Array Be**	**48.10**	**315**	P		**P**	**16 32 10.5**	**+0.3**
AKBB	**Malin Array Si**	**48.10**	**315**	P		**P**	**16 32 09.8**	**-0.4**
AKBB				IAmb		IAmb	16 32 11.4	
	comp=Z,4.8nm,0.6s							
KIEV	**Kiev**	**48.11**	**315**	P		**P**	**16 32 09.6**	**-0.8**
KIEV				IAmb		IAmb	16 32 11.4	
	comp=Z,4.3nm,0.6s							
KIEV	**Kiev**	**48.11**	**315**	⇑P		**P**	**16 32 09.5**	**-0.8**
MNK	**Minsk**	**49.41**	**319**	*i* P		**P**	**16 32 19.4**	**-0.9**
	comp=E,13nm,0.8s							
MNK				*i* P		**P**	**16 32 19.4**	**-0.9**
	comp=N,14nm,0.9s							
MNK				*i* P		**P**	**16 32 19.4**	**-0.9**
	comp=Z,10.0nm,0.7s,baz=98							
MNK				*i* PcP		**PcP**	**16 33 41.8**	**-0.7**
MNK				*i* PP		**PP**	**16 34 13.4**	**-0.7**
MNK				*i* PPP		PPP	16 35 05.2	
MNK				*i* S		**S**	**16 39 26.6**	**-0.5**
MNK				*i* ScS		**ScS**	**16 42 11.4**	**-0.7**
MNK				*i* SS		**SS**	**16 42 59.8**	**+1.3**
MNK				*i* SSS		SSS	16 44 17.4	
MNK				*i* LQ		LQ	16 49 43.4	
MNK				*i* LR		LR	16 53 36.4	
MNK				*i* LRM		MLR	16 54 42.3	
	comp=N,208nm,16.5s							
MNK				*i* LRM		MLR	16 54 44.8	
	comp=E,249nm,19.2s							
MNK				*i* LRM		MLR	16 55 20.9	
	comp=Z,42nm,16.2s							
VRI	**Vrincioaia**	**49.48**	**308**	⇑P		**P**	**16 32 22.4**	**+1.4**
PLOR	**Plostina**	**49.54**	**308**	⇓P		**P**	**16 32 23.3**	**+1.8**
TIXI	**Tiksi**	**49.95**	**16**	P		**P**	**16 32 24.6**	**+0.5**
TIXI				IAmb		IAmb	16 32 24.7	
	comp=Z,4.3nm,0.8s							
MLR	**Muntele Rosu**	**50.03**	**308**	P		**P**	**16 32 26.8**	**+1.4**
MLR				IAmb		IAmb	16 32 28.2	
	comp=Z,5.2nm,0.7s							
MLR	**Muntele Rosu**	**50.03**	**308**	⇑P		**P**	**16 32 27.1**	**+1.7**
SGRR	**Singureni**	**50.04**	**306**	⇑P		P	16 32 13.9	-11
BURAR	**Bucovina Array**	**50.54**	**310**	P		**P**	**16 32 29.4**	**+0.3**
BURAR	**Bucovina Array**	**50.54**	**310**	⇑P		**P**	**16 32 29.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**50.55**	**310**	P		**P**	**16 32 28.9**	**-0.3**
BUR08				IAmb		IAmb	16 32 33.7	
	comp=Z,8.9nm,1.3s							
FINES	**FINESS Array B**	**51.64**	**328**	P		**P**	**16 32 37.0**	**0.0**
	comp=Z,1.1nm,0.4s,baz=116,slow=9.5,SNR=12							
	comp=Z,1.1nm,0.4s							
PABE	**Paberze**	**51.77**	**320**	P		**P**	**16 32 38.5**	**+0.4**
MARR	**Marisel-Cluj**	**51.98**	**309**	⇑P		P	16 32 45.3	+5.4
DRGR		**52.25**	**309**	⇑P		**P**	**16 32 43.3**	**+1.4**
STHS	**Stebnicka Huta**	**53.17**	**313**	*e*P		**P**	**16 32 47.2**	**-1.4**
KEV	**Kevo**	**53.59**	**338**	P		**P**	**16 32 52.1**	**+0.9**
ARCES	**ARCESS Array B**	**54.01**	**338**	P		**P**	**16 32 54.5**	**0.0**
	comp=Z,4.7nm,0.6s,baz=105,slow=8.1,SNR=22							
	comp=Z,4.7nm,0.6s							
ARCES	**ARCESS Array B**	**54.01**	**338**	P		**P**	**16 32 53.8**	**-0.7**
ARCES				IAmb		IAmb	16 33 25.9	
	comp=Z,15nm,1.2s							
LANS	**Liptovska Anna**	**54.34**	**312**	*e*P		P	16 32 52.0	-5.2
PDG	**Podgorica**	**55.06**	**304**	⇓P		P	16 32 51.1	-11
MODS	**Modra-Piesok**	**55.84**	**311**	*e*P		**P**	**16 33 04.7**	**-3.3**
MODS				*e*PP		**PP**	**16 35 12.6**	**+0.2**
HFS	**Hagfors**	**57.52**	**326**	P		**P**	**16 33 19.7**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=103,slow=6.7,SNR=11							
	comp=Z,2.8nm,0.5s							
PETK	**Petropavlovsk-**	**57.69**	**43**	P		**P**	**16 33 23.1**	**+2.0**
	comp=Z,3.3nm,0.9s,baz=276,slow=14,SNR=1.6							
	comp=Z,3.3nm,0.9s							
GERES	**GERESS Array B**	**58.15**	**312**	P		**P**	**16 33 24.8**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=98,slow=8.2,SNR=6.2							
	comp=Z,0.8nm,0.5s							
NC405	**NORSAR Array S**	**58.49**	**327**	P		**P**	**16 33 25.5**	**-1.1**
NC405				IAmb		IAmb	16 33 46.2	
	comp=Z,10nm,1.2s							
NB2	**NORSAR Subarra**	**58.74**	**327**	P		**P**	**16 33 27.5**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=88,slow=7.4							
NOA	**NORSAR Array B

ILAR	**Eielson Array**	**79.22**	**20**	P	**P**	**16 35 34.7**	**-0.8**
L22K	**Petersville**	**79.47**	**23**	P	**P**	**16 35 36.9**	**0.0**
L22K				IAmb	IAmb	16 36 14.5	
	comp=Z,7.9nm,1.3s						
SKT	**Skwentna**	**79.56**	**24**	P	**P**	**16 35 37.5**	**+0.1**
SKT				IAmb	IAmb	16 35 42.1	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**79.60**	**134**	P	**P**	**16 35 37.9**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=292,slow=11,SNR=1.4						
	comp=Z,0.6nm,0.5s						
STKA	**Stephens Creek**	**79.60**	**134**	P	**P**	**16 35 38.1**	**+0.2**
J25K	**Salcha River,**	**79.79**	**20**	P	**P**	**16 35 36.5**	**-2.2**
G29M	**Pine Creek**	**80.08**	**16**	P	**P**	**16 35 40.9**	**+0.8**
G29M				IAmb	IAmb	16 36 01.2	
	comp=Z,8.7nm,1.4s						
J26L	**Joseph Creek**	**80.41**	**19**	P	**P**	**16 35 42.5**	**+0.4**
SCRK	**Sand Creek**	**80.67**	**20**	P	**P**	**16 35 43.8**	**+0.3**
SML	**Sawmill**	**80.81**	**23**	P	**P**	**16 35 44.7**	**+0.5**
KNK	**Knik Glacier**	**81.03**	**23**	P	**P**	**16 35 46.2**	**+0.8**
KNK				IAmb	IAmb	16 36 21.6	
	comp=Z,12nm,1.2s						
PWL	**Port Wells**	**81.46**	**24**	P	**P**	**16 35 48.3**	**+0.7**
KDAK	**Kodiak Island**	**81.89**	**27**	P	**P**	**16 35 50.3**	**+0.4**
BCAR	**Beaver Creek A**	**82.01**	**20**	P	**P**	**16 35 52.0**	**+1.5**
K29M	**Barlow Dome**	**82.63**	**18**	P	**P**	**16 35 54.4**	**+0.5**
K29M				IAmb	IAmb	16 35 55.5	
	comp=Z,3.2nm,1.1s						
CRQM	**Cirque**	**83.31**	**22**	P	**P**	**16 35 57.8**	**+0.3**
TGL	**Tana Glacier**	**83.42**	**22**	P	**P**	**16 35 59.2**	**+1.2**
WAX	**Waxell Ridge**	**83.64**	**22**	P	**P**	**16 35 59.6**	**+0.5**
O30N	**Mendenhall**	**85.50**	**19**	P	**P**	**16 36 09.4**	**+0.9**
O30N				IAmb	IAmb	16 36 10.3	
	comp=Z,4.3nm,0.9s						
TRQA	**Tornquist**	**151.12**	**241**	PKPbc	**PKPbc**	**16 43 23.6**	**-0.4**

*IDC **27** 16:32:08.2±1.0,31°.60S×177°.96W,h0km,mb4.0/4, mbtmp4.0/5,ML4.2/1,Error ellipse: s-maj=33.5km s-min=24.3km az=116.0*
*NEIC **27** 16:32:10.4±2.2,31°.64S±0°.08×178°.0W±0°.2,h9km±2km, mb4.6/14,Error ellipse: s-maj=26.8km s-min=10.8km az=102.0*

ISC 27 16:32:13.7±0.8,31°.67S±0°.08×178°.2W±0°.2,h35km,n44, σ1§56/40,mb4.4/11,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.42**	**5**	Pn	**Pn**	**16 32 49.6**	**-1.1**
	61nm,0.3s,baz=90,slow=14,SNR=5.3						
RAO				Sn	**Sn**	**16 33 17.8**	**-1.3**
	108nm,0.3s,baz=270,slow=24,SNR=7.5						
	158nm,0.3s						
RAO	**Raoul Island**	**2.42**	**5**		**Pn**	**16 32 48.9**	**-1.8**
URZ	**Urewera**	**7.64**	**209**	Pn	**Pn**	**16 33 59.7**	**-2.8**
	1.2nm,0.3s,baz=358,slow=19,SNR=8.3						
URZ				Sn	**Sn**	**16 35 24.5**	**-3.3**
	3.4nm,0.3s,baz=16,slow=18,SNR=10						
RTZ	**Ruatahuna**	**8.00**	**209**	Pn	**Pn**	**16 34 06.2**	**-1.3**
TCW	**Tory Channel**	**11.30**	**210**	Pn	**Pn**	**16 34 51.7**	**-0.9**
RPZ	**Rata Peaks**	**14.74**	**212**	Pn	**Pn**	**16 35 36.6**	**-2.9**
	0.7nm,0.3s,baz=133,slow=22,SNR=1.3						
CAN	**Canberra**	**27.57**	**253**	P	**P**	**16 37 57.9**	**+0.5**
CTAO	**Charters Tower**	**33.90**	**281**	P	**P**	**16 38 56.2**	**+2.8**
CTAO				IAmb	IAmb	16 39 11.6	
	comp=Z,4.7nm,0.8s						
STKA	**Stephens Creek**	**34.09**	**259**	P	**P**	**16 38 55.9**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=118,slow=13,SNR=4.2						
	comp=Z,1.3nm,0.6s						
STKA	**Stephens Creek**	**34.09**	**259**	P	**P**	**16 38 56.3**	**+1.3**
INKA	**Innaminka**	**35.77**	**265**	P	**P**	**16 39 10.3**	**+0.9**
BBOO	**Buckleboo**	**38.52**	**256**	P	**P**	**16 39 32.8**	**0.0**
BBOO				IAmb	IAmb	16 39 40.9	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**42.93**	**268**	P	**P**	**16 40 09.9**	**+0.5**
ASAR	**Alice Springs**	**42.93**	**268**	P	**P**	**16 40 10.2**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=108,slow=7.5,SNR=32						
	comp=Z,1.4nm,0.6s						
ASAR	**Alice Springs**	**42.93**	**268**	P	**P**	**16 40 08.8**	**-0.6**
WR8	**Warramunga Arr**	**43.89**	**274**	P	**P**	**16 40 17.9**	**+0.9**
WR8				IAmb	IAmb	16 40 32.9	
	comp=Z,5.7nm,0.7s						
WRAB	**Tennant Creek**	**44.02**	**274**	P	**P**	**16 40 19.0**	**+0.8**
WRAB				IAmb	IAmb	16 40 33.5	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**44.03**	**274**	P	**P**	**16 40 19.1**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=113,slow=7.9,SNR=36						
	comp=Z,1.6nm,0.4s						
WRA	**Warramunga Arr**	**44.03**	**274**	P	**P**	**16 40 18.0**	**-0.2**
WB0	**Warramunga Arr**	**44.06**	**274**	P	**P**	**16 40 19.2**	**+0.7**
WB0				IAmb	IAmb	16 40 34.2	
	comp=Z,9.4nm,0.6s						
MTN	**Manton Dam**	**50.06**	**280**	P	**P**	**16 41 05.2**	**-0.1**
MTN				IAmb	IAmb	16 41 42.3	
	comp=Z,11nm,1.2s						
KNRA	**Kununurra**	**50.68**	**275**	P	**P**	**16 41 11.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**52.24**	**271**	P	**P**	**16 41 22.9**	**+1.3**
QSPA	**South Pole Qui**	**58.45**	**180**	P	**P**	**16 42 09.9**	**+4.1**
	comp=Z,0.8nm,0.9s,baz=305,slow=1.6,SNR=6.8						
QSPA	**South Pole Qui**	**58.45**	**180**	P	**P**	**16 42 08.4**	**+2.6**
QSPA				IAmb	IAmb	16 42 20.4	
	comp=Z,5.5nm,0.7s						
SNAA	**Sanae**	**76.90**	**178**	P	**P**	**16 44 03.3**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=192,slow=19,SNR=4.0						
	comp=Z,0.5nm,0.7s						
SNAA	**Sanae**	**76.90**	**178**	P	**P**	**16 44 01.9**	**0.0**
SNAA				IAmb	IAmb	16 44 27.1	
	comp=Z,1.7nm,0.8s						
H03S2	**Juan Fernandez**	**79.88**	**123**	T	T	18 13 38.7	
	baz=242,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**79.89**	**123**	T	T	18 13 40.4	
	baz=242,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**79.89**	**123**	T	T	18 13 38.6	
	baz=242,slow=74,SNR=10						
H03N3	**Juan Fernandez**	**80.08**	**123**	T	T	18 13 52.1	
	baz=242						
H03N2	**Juan Fernandez**	**80.08**	**123**	T	T	18 13 50.0	
	baz=242,slow=74						
H03N1	**Juan Fernandez**	**80.09**	**123**	T	T	18 13 50.4	
	baz=242,slow=74						
KURBB	**Kurchatov Arra**	**121.86**	**313**	PKP	**PKPdf**	**16 51 03.0**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=117,slow=2.1,SNR=5.4						
BVAR	**Borovoye Array**	**127.21**	**315**	PKP	**PKiKP**	**16 51 13.9**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=143,slow=1.1,SNR=6.0						
FINES	**FINESS Array B**	**146.28**	**339**	PKPbc	**PKPbc**	**16 51 49.6**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=54,slow=3.9,SNR=18						
FINES	**FINESS Array B**	**146.28**	**339**		**PKPbc**	**16 51 49.1**	**-0.7**
NOA	**NORSAR Array B**	**149.98**	**351**	PKPbc	**PKPbc**	**16 51 57.6**	**-2.2**
	comp=Z,0.6nm,0.8s,baz=20,slow=2.5,SNR=2.0						
HFS	**Hagfors**	**150.45**	**348**	PKPbc	**PKPbc**	**16 52 00.2**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=10,slow=3.2,SNR=4.4						
MMAI	**Mount Meron Ar**	**151.68**	**282**	PKPbc	**PKPbc**	**16 52 04.4**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=77,slow=7.9,SNR=4.5						
AKASG	**Malin Array Be**	**152.22**	**321**	PKPbc	**PKiKP**	**16 52 06.2**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=77,slow=2.0,SNR=2.1						
ILGA	**Ilgaz**	**152.81**	**299**	PKPbc	**PKPbc**	**16 52 05.2**	**-1.9**
BRTR	**Keskin Array B**	**153.06**	**296**	PKPbc	**PKiKP**	**16 52 07.7**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=144,slow=4.1,SNR=6.6						
BRTR	**Keskin Array B**	**153.06**	**296**	PKPbc	**PKPbc**	**16 52 07.2**	**-0.5**

*IDC **27** 16:43:48.8±1.9,13°.44S×167°.76E,h0km,mb3.8/4, mbtmp3.9/5,ML4.0/1,MS3.5/1,Error ellipse: s-maj=56.7km s-min=31.0km az=125.0*
*NEIC **27** 16:43:53.2±1.9,13°.86S±0°.06×167°.86E±0°.06,h10km±2km, mb4.3/8,Error ellipse: s-maj=13.6km s-min=6.0km az=42.0*

ISC 27 16:43:54.3±1.4,13°.72S±0°.08×167°.9E±0°.1,h35km,n28, σ1§13/24,mb4.0/8,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.84**	**201**		**Pn**	**16 44 21.5**	**-1.9**
SANVU				Sn	**Sn**	**16 44 44.7**	**-0.7**
MARNC	**Mare, Loyalty**	**7.72**	**179**	Pn	**Pn**	**16 45 43.5**	**-0.7**
DZM	**Mont Dzumac**	**8.42**	**189**	Pn	**Pn**	**16 45 54.1**	**+0.3**
	1.9nm,0.3s,baz=318,slow=11,SNR=22						
DZM				Sn	**Sn**	**16 47 27.9**	**+0.2**
	baz=36,slow=19						
	3.5nm,0.3s						
DZM	**Mont Dzumac**	**8.42**	**189**	Pn	**Pn**	**16 45 53.2**	**-0.7**
ONTNC	**Ouen Toro**	**8.65**	**189**	Pn	**Pn**	**16 45 57.7**	**+0.8**
PINNC	**Pines Island,**	**8.85**	**183**	Pn	**Pn**	**16 46 00.1**	**+0.3**
HNR	**Honiara**	**8.87**	**298**	Pn	**Pn**	**16 46 01.6**	**+1.5**
	1.9nm,0.3s,baz=167,slow=13,SNR=2.9						
HNR				Sn	**Sn**	**16 47 36.7**	**-2.1**
	0.8nm,0.3s,baz=164,slow=18,SNR=1.5						
HNR	**Honiara**	**8.87**	**298**	Pn	**Pn**	**16 46 02.2**	**+2.2**
EIDS	**Eidsvold**	**19.60**	**231**		**Pn**	**16 48 21.7**	**+0.6**
CTAO	**Charters Tower**	**21.63**	**250**	P	**P**	**16 48 42.6**	**+0.9**
CTAO				IAmb	IAmb	16 48 44.6	
	comp=Z,14nm,1.5s						
URZ	**Urewera**	**25.77**	**163**	LR	LR	16 57 12.7	
	comp=Z,103nm,18.2s,baz=53,slow=31						
STKA	**Stephens Creek**	**30.10**	**229**	P	**P**	**16 50 02.0**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=63,slow=16,SNR=4.2						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**30.10**	**229**	P	**P**	**16 50 01.8**	**+1.1**
WB0	**Warramunga Arr**	**32.59**	**255**		**P**	**16 50 22.1**	**-0.7**
WB0				IAmb	IAmb	16 50 22.8	
	comp=Z,4.2nm,0.8s						
WRAB	**Tennant Creek**	**32.65**	**254**	P	**P**	**16 50 22.5**	**-0.8**
WRAB				IAmb	IAmb	16 50 36.5	
	comp=Z,3.8nm,1.2s						
WRA	**Warramunga Arr**	**32.66**	**254**	P	**P**	**16 50 22.2**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=85,slow=9.2,SNR=8.8						
	comp=Z,1.3nm,0.7s						
AS31	**Alice Springs**	**33.60**	**248**		**P**	**16 50 30.7**	**-0.8**
ASAR	**Alice Springs**	**33.60**	**248**	P	**P**	**16 50 30.9**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=71,slow=9.9,SNR=25						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**33.60**	**248**		**P**	**16 50 30.8**	**-0.7**
BBOO	**Buckleboo**	**34.67**	**231**		**P**	**16 50 40.7**	**+0.1**
FORT	**Forrest**	**40.33**	**238**		**P**	**16 51 29.0**	**+0.4**
FORT				IAmb	IAmb	16 52 00.4	
	comp=Z,6.7nm,0.9s						
ILAR	**Eielson Array**	**85.39**	**18**	P	**P**	**16 56 26.5**	**-1.1**
	comp=Z,0.7nm,1.0s,baz=236,slow=6.2,SNR=4.5						
	comp=Z,0.7nm,1.0s						
H03S2	**Juan Fernandez**	**100.83**	**129**	T	T	18 50 27.7	
	baz=242,slow=74,SNR=101						
H03S1	**Juan Fernandez**	**100.84**	**129**	T	T	18 50 27.9	
	baz=242,slow=74,SNR=109						
H03S3	**Juan Fernandez**	**100.84**	**129**	T	T	18 50 28.5	
	baz=242,slow=74,SNR=112						
H03N2	**Juan Fernandez**	**100.99**	**128**	T	T	18 50 36.1	
	baz=250,slow=72,SNR=18						
H03N3	**Juan Fernandez**	**100.99**	**128**	T	T	18 50 37.7	
	baz=250,slow=72,SNR=21						
H03N1	**Juan Fernandez**	**101.00**	**128**	T	T	18 50 39.1	
	baz=250,slow=72,SNR=21						

IDC 27 16:43:56.6±2.2,7°.17S×128°.55E,h0km,mb3.1/1, mbtmp3.0/3,ML2.8/2,Error ellipse: s-maj=116.3km s-min=34.4km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.89**	**157**	Pn	Pn	16 47 14.7	-0.2
	baz=335,slow=14,SNR=1.8						
WRA				Sn	Sn	16 49 37.9	-12
	0.1nm,0.3s,baz=337,slow=22,SNR=5.6						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**17.19**	**163**	Pn	Pn	16 47 58.5	+0.1
	baz=336,slow=9.2,SNR=7.2						
	0.3nm,1.0s						
MKAR	**Makanchi Array**	**67.58**	**328**	P	P	16 54 55.1	0.0
	0.1nm,0.3s,baz=123,slow=7.1,SNR=1.3						
	0.1nm,0.3s						

*BJI **27** 16:52:01.1,2°.89N×63°.42E,h10km,mB5.4/39,mb4.9/71, Ms5.1/59,Ms7.5/0/59*
*IDC **27** 16:52:08.3±0.5,3°.65N×64°.13E,h0km,mb4.6/36, mbtmp4.6/37,ML4.3/1,MS4.6/74,Error ellipse: s-maj=13.8km s-min=11.3km az=30.0*
*NEIC **27** 16:52:10.8±1.7,3°.60N±0°.09×64°.17E±0°.08,h10km±1km, mb5.2/124,Mww5.3/19,Error ellipse: s-maj=15.7km s-min=13.3km az=165.0*
*NEIC **27** 16:52:10.8,3°.40N×63°.87E,h18km,Moment Tensor Solution. Duration: 2s3 Moment tensor: Scale 10^17^Nm; Mrr1.03; Mθθ-0.60; Mφφ-0.42; Mrθ0.10; Mrφ0.28; Mθφ-0.91; Fault plane solution: M0 1.31000×10^17^ NP1: φs299.82000°,δ27.08000°,λ56.92000°. NP2: φs156.01000°,δ67.58000°,λ105.60000°. Principal axes: T 1.4684, Plg64.0000°, Azm92.0000°; N -0.4141, Plg14.0000°, Azm330.0000°; P -1.0543, Plg21.0000°, Azm234.0000°;*
*GCMT **27** 16:52:10.8±0.1,3°.46N±0°.01×64°.10E±0°.01,h12km, MW5.3/140,Moment Tensor Solution. s73,c101; s140,c246; Duration: 1s0 Moment tensor: Scale 10^17^ Nm; Mrr0.91±.01; Mθθ-0.71±.01; Mφφ-0.19±.01; Mrθ-0.33±.03; Mrφ0.35±.01; Mθφ-0.16±.04; Best double couple: M0 0.96500×10^17^ NP1:φs131.00000°,δ40.00000°, λ114.00000°. NP2:φs281.00000°,δ54.00000°,λ71.00000°. Principal axes: T 1.0140, Plg73.0000°, Azm139.0000°; N -0.0980, Plg15.0000°, Azm292.0000°; P -0.9160, Plg7.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **27** 16:52:10.8,3°.60N×64°.17E,h18km*

ISC 27 16:52:10.2±0.3,3°.46N±0°.04×64°.12E±0°.04,h10km,n539, σ1§77/586,mb5.1/163,MS4.7/113,23C-31D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMDM	**Hanimaadhoo**	**9.60**	**70**	P	**Pn**	**16 54 27.1**	**-1.5**
HMDM	**Hanimaadhoo**	**9.60**	**70**	Pn	**Pn**	**16 54 25.2**	**-3.4**
DGAR	**Diego Garcia**	**13.63**	**142**	P	**Pn**	**16 55 24.5**	**+0.8**
DGAR	**Diego Garcia**	**13.63**	**142**	Pn	**Pn**	**16 55 23.9**	**+0.2**
GOA	**Goa**	**15.30**	**38**	*e*P	**P**	**16 55 51.4**	**+0.2**
GOA				IAMs_20	IAMs_20	17 00 32.6	
	comp=Z,4μm,18.7s						
SALM	**Salem**	**16.14**	**59**	*e*P	**P**	**16 56 02.2**	**+1.6**
SHAO	**Shalim**	**16.70**	**331**	P	**P**	**16 56 07.7**	**+0.9**
SHAO				P	**P**	**16 56 07.7**	**+0.9**
SHAO				S	**S**	**16 59 16.4**	**-4.9**
SHAO				S	**S**	**16 59 16.4**	**-4.9**
DMTO	**DMTO**	**16.78**	**328**	P	**P**	**16 56 08.4**	**+0.7**
DMTO				P	**P**	**16 56 08.4**	**+0.7**
DMTO				S	**S**	**16 59 20.2**	**-2.8**
DMTO				S	**S**	**16 59 20.2**	**-2.8**
PALK	**Pallekele**	**16.93**	**76**	Pn	**Pn**	**16 56 07.7**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=246,slow=11,SNR=6.5						
PALK				LR	LR	17 01 11.9	
	comp=Z,3μm,20.0s,baz=258,slow=32						
	comp=Z,23nm,0.9s						
PALK	**Pallekele**	**16.93**	**76**	P	**P**	**16 56 08.5**	**-0.9**
PALK				P	**P**	**16 56 08.5**	**-0.9**
PALK	**Pallekele**	**16.93**	**76**		**P**	**16 56 09.9**	**+0.4**
KAD	**Karad**	**16.93**	**35**	*e*P	**P**	**16 56 11.0**	**+1.6**
KAD				IAmb	IAmb	16 56 18.3	
	comp=Z,50nm,0.9s						
RBK	**Rabkut**	**17.01**	**326**	P	**P**	**16 56 11.0**	**+0.7**
	SNR=8.8						
RBK				P	**P**	**16 56 11.0**	**+0.7**
	SNR=8.8						
ABTO	**Aybut**	**17.42**	**323**	P	**P**	**16 56 16.0**	**+1.2**
	SNR=11						
ABTO				P	**P**	**16 56 16.0**	**+1.2**
	SNR=11						
DQM	**DQM**	**17.58**	**339**	P	**P**	**16 56 16.9**	**+0.3**
DQM				P	**P**	**16 56 16.9**	**+0.3**
DQM				S	**S**	**16 59 33.7**	**-5.6**
DQM				S	**S**	**16 59 33.7**	**-5.6**
WHFO	**Wadi Hawf**	**17.59**	**326**	P	**P**	**16 56 17.6**	**+0.9**
WHFO				P	**P**	**16 56 17.6**	**+0.9**
WHFO				S	**S**	**16 59 38.9**	**-0.6**
WHFO				S	**S**	**16 59 38.9**	**-0.6**
POO	**Poona**	**17.74**	**32**	*e*P	**P**	**16 56 17.3**	**-1.1**
POO				IAmb	IAmb	16 56 22.4	
	comp=Z,56nm,1.1s						
POO				IAMs_20	IAMs_20	17 02 03.5	
	comp=Z,4μm,19.3s						
DOK	**Doka**	**17.96**	**328**	P	**P**	**16 56 21.8**	**+1.1**
DOK				P	**P**	**16 56 21.8**	**+1.1**
DOK				S	**S**	**16 59 45.9**	**-1.1**
DOK				S	**S**	**16 59 45.9**	**-1.1**
MHTO	**MHTO**	**18.42**	**342**	P	**P**	**16 56 27.1**	**+1.3**
MHTO				P	**P**	**16 56 27.1**	**+1.3**
MHTO				P	**P**	**16 56 27.1**	**+1.3**
MHTO				S	**S**	**16 59 57.2**	**+0.9**
MHTO				S	**S**	**16 59 57.2**	**+0.9**
MHTO				S	**S**	**16 59 57.2**	**+0.9**

JLN	**Jalan Bani Buh**	**19.13**	**347**	P	**Pn**	**16 56 35.6**	**+1.1**
JLN				P	**Pn**	**16 56 35.6**	**+1.1**
JLN				S	**S**	**17 00 11.8**	**+1.1**
JLN				S	**S**	**17 00 11.8**	**+1.1**
WBK	**Wadi Bani Khal**	**19.68**	**346**	P	**Pn**	**16 56 42.6**	**+1.5**
JMDO	**Jabal Madar**	**19.68**	**343**	P	**Pn**	**16 56 42.3**	**+1.2**
JMDO				P	**Pn**	**16 56 42.3**	**+1.2**
JMDO				P	**Pn**	**16 56 42.3**	**+1.2**
JMDO				S	**Sn**	**17 00 27.4**	**+5.1**
JMDO				S	**Sn**	**17 00 27.4**	**+5.1**
JMDO				S	**Sn**	**17 00 27.4**	**+5.1**
HYB	**Hyderabad**	**19.82**	**45**	*e*P	**Pn**	**16 56 42.3**	**-0.4**
HYBB	**Hyderabad (bro**	**19.82**	**45**	*e*P	**P**	**16 56 40.2**	**-1.0**
BSY	**Bisya**	**20.31**	**341**	P	Pn	16 56 48.6	+0.1
	SNR=22						
BSY				S	Sn	17 00 40.1	+2.6
SMDO	**Samad**	**20.35**	**344**	P	Pn	16 56 48.6	-0.5
SMDO				P	Pn	16 56 48.6	-0.5
SMDO				P	Pn	16 56 48.6	-0.5
WSAR	**Wadi Sarin**	**20.37**	**345**	LR	LR	17 03 08.5	
	comp=Z,17nm,19.1s,baz=182,slow=33						
WSAR	**Wadi Sarin**	**20.37**	**345**	P	Pn	16 56 48.6	-0.6
WSAR				S	Sn	17 00 40.8	+2.0
BHUJ	**Bhuj**	**20.39**	**15**	*e*P	Pn	16 56 48.9	-0.5
BHUJ				IAMs_20	IAMs_20	17 03 20.3	
	comp=Z,3μm,18.3s						
BIDO	**Bidbid**	**20.77**	**344**	P	Pn	16 56 53.9	0.0
	SNR=13						
BIDO				P	Pn	16 56 53.9	0.0
	SNR=13						
VJD	**Vijayawada**	**20.78**	**50**	*e*P	Pn	16 56 54.0	-0.1
UMZA	**Um Al Zommool**	**21.02**	**336**	P	**P**	**16 56 54.7**	**+0.6**
UMZA				P	**P**	**16 56 54.7**	**+0.6**
UMZA				P	**P**	**16 56 54.7**	**+0.6**
UMZA				S	Sn	17 00 52.0	-2.4
UMZA				S	Sn	17 00 52.0	-2.4
UMZA				S	Sn	17 00 52.0	-2.4
HOQ	**Hoqain**	**21.06**	**342**	P		16 56 55.8	
	SNR=12						
HOQ				P		16 56 55.8	
	SNR=12						
HOQ				P		16 56 55.8	
	SNR=12						
HOQ				S	Sn	17 00 55.9	+0.5
HOQ				S	Sn	17 00 55.9	+0.5
HOQ				S	Sn	17 00 55.9	+0.5
ARQ	**Araqi**	**21.08**	**340**	P		16 56 56.4	
	SNR=22						
ARQ				P		16 56 56.4	
	SNR=22						
ARQ				P		16 56 56.4	
	SNR=22						
ARQ				S	Sn	17 00 56.0	0.0
ARQ				S	Sn	17 00 56.0	0.0
ARQ				S	Sn	17 00 56.0	0.0
AKL	**Akola**	**21.24**	**35**	*e*P	**P**	**16 56 57.9**	**+1.2**
AKL				IAmb	IAmb	16 57 08.2	
	comp=Z,175nm,1.4s						
SOHO	**SOHO**	**21.82**	**341**	P	**P**	**16 57 03.6**	**+0.9**
SOHO				S	Sn	17 01 10.6	-3.1
SOHO	**SOHO**	**21.82**	**341**	*i* P	**P**	**16 57 03.1**	**+0.3**
	SNR=14						
SBV	**Sambava**	**21.94**	**220**	P	**P**	**16 57 08.9**	**+4.8**
	SNR=6.3						
NGCH	**Negor - Chabah**	**21.96**	**353**	P	**P**	**16 57 07.2**	**+3.0**
MZR	**Muzera**	**21.99**	**333**	P	**P**	**16 57 05.2**	**+0.5**
	SNR=26						
MZR				P	**P**	**16 57 05.2**	**+0.5**
	SNR=26						
MZR				S	Sn	17 01 11.4	-6.4
MZR				S	Sn	17 01 11.4	-6.4
MZR	**Muzera**	**21.99**	**333**	*i* P	**P**	**16 57 04.8**	**+0.2**
	SNR=15						
ALNE	**Al Ain**	**22.01**	**339**	P	**P**	**16 57 06.1**	**+1.2**
	SNR=18						
ALNE				P	**P**	**16 57 06.1**	**+1.2**
	SNR=18						
ALNE				S	Sn	17 01 13.3	-5.0
ALNE				S	Sn	17 01 13.3	-5.0
ALNE	**Al Ain**	**22.01**	**339**	*i* P	**P**	**16 57 05.3**	**+0.4**
	SNR=8.9						
MZWR	**Madinat Zayed**	**22.48**	**335**	P	**P**	**16 57 10.7**	**+0.9**
MZWR				P	**P**	**16 57 10.7**	**+0.9**
MZWR				S	**S**	**17 01 19.9**	**+3.3**
MZWR				S	**S**	**17 01 19.9**	**+3.3**
ASHO	**Ashiyiah**	**22.48**	**341**	P	**P**	**16 57 10.8**	**+0.8**
	SNR=22						
ASHO				P	**P**	**16 57 10.8**	**+0.8**
	SNR=22						
ASHO	**Ashiyiah**	**22.48**	**341**	*i* P	**P**	**16 57 10.3**	**+0.4**
	SNR=12						
ATD	**Arta Tunnel**	**22.55**	**292**	LR	LR	17 04 24.4	
	comp=Z,35nm,20.9s,baz=118,slow=33						
ATD	**Arta Tunnel**	**22.55**	**292**	P	**P**	**16 57 11.0**	**+0.2**
HATD	**Hatta, Dubai**	**22.59**	**341**	P	**P**	**16 57 11.8**	**+0.7**
	SNR=17						
HATD				P	**P**	**16 57 11.8**	**+0.7**
	SNR=17						
HATD				S	Sn	17 01 24.4	-7.9
HATD				S	Sn	17 01 24.4	-7.9
HATD	**Hatta, Dubai**	**22.59**	**341**	*i* P	**P**	**16 57 11.3**	**+0.2**
	SNR=16						
UOSS	**Minazif**	**22.68**	**341**	P	**P**	**16 57 12.4**	**+0.4**
UOSS				P	**P**	**16 57 12.4**	**+0.4**
UOSS				P	**P**	**16 57 12.4**	**+0.4**
UOSS				S	Sn	17 01 26.4	-7.9
UOSS				S	Sn	17 01 26.4	-7.9
UOSS				S	Sn	17 01 26.4	-7.9
UOSS	**Minazif**	**

BANOM **Banah** 23.56 342 P **P** 16 57 22.8 +1.7
BANOM P **P** 16 57 22.8 +1.7
BANOM **Banah** 23.56 342 *i* P **P** 16 57 21.1 0.0
SNR=11
VIS Vishakhapatnam 23.56 52 *e*P **P** 16 57 22.4 +1.3
VIS IAmb IAmb 16 57 25.1
comp=Z,176nm,1.6s
VIS IAMs_20 IAMs_20 17 05 27.5
comp=Z,5μm,18.0s
SHME Shamm 23.73 342 P **P** 16 57 24.1 +1.4
SHME P **P** 16 57 24.1 +1.4
SHME S **S** 17 01 42.2 +4.2
SHME S **S** 17 01 42.2 +4.2
SHME Shamm 23.73 342 *i* P **P** 16 57 23.7 +1.0
SNR=5.4
SLWR Sila 23.74 331 P **P** 16 57 24.4 +1.6
SLWR S **S** 17 01 42.9 +4.7
JRN Qarnain Island 23.96 334 P **P** 16 57 26.7 +1.9
JRN S **S** 17 01 44.4 +2.8
JASL Jaisalmer 24.21 15 *e*P **P** 16 57 28.6 +1.4
TRNA Turayna 24.54 331 P **P** 16 57 31.6 +1.4
SNR=6.1
TRNA S **S** 17 01 55.3 +4.3
RAGD RAYAGADA 24.55 49 *e*P **P** 16 57 31.7 +1.3
GUNA GUNA 24.61 30 *e*P **P** 16 57 31.9 +0.9
SMRA Abu-Samra 24.74 330 P **P** 16 57 33.2 +1.2
SNR=8.9
SMRA S **S** 17 01 58.5 +4.3
BLSP Bilaspur 25.49 42 *e*P **P** 16 57 37.0 -1.9
SHMA Al-Shehemyia 25.60 332 P **P** 16 57 41.8 +2.0
SHMA S **S** 17 02 11.2 +3.2
JHNI Jhansi 25.90 31 *e*P **P** 16 57 43.2 +0.6
JHNI IAmb IAmb 16 57 47.5
comp=Z,48nm,1.4s
BKNR BIKANER 25.93 19 *e*P **P** 16 57 44.3 +1.4
KIBK Kibwezi 26.70 258 P **P** 16 57 52.0 +1.9
SNR=9.7
KIBK Kibwezi 26.70 258 **P** 16 57 50.4 +0.4
RAYN Ar Rayn 26.86 320 P **P** 16 57 52.6 +1.3
RAYN S **S** 17 02 32.2 +4.0
RAYN Ar Rayn 26.86 320 **P** 16 57 50.7 -0.7
RAYN Ar Rayn 26.86 320 *i* P **P** 16 57 51.5 +0.1
SNR=16
BWNR Bhubaneshwar 26.95 50 *e*P **P** 16 57 52.1 -0.1
KMBO Kilima Mbogo 27.24 261 P **P** 16 57 56.3 +1.2
comp=Z,1.5nm,0.3s,baz=76,slow=9.7,SNR=12
KMBO LR LR 17 06 59.3
comp=Z,2μm,21.9s,baz=96,slow=33
comp=Z,1.5nm,0.3s
OPO Ambohidratompo 27.52 217 LR LR 17 06 17.1
comp=Z,2μm,19.0s,baz=193,slow=31
BISR Bishrakh 28.00 26 *e*P **P** 16 58 02.5 +1.1
LODK Lodwar 28.71 271 P **P** 16 58 10.8 +2.7
SNR=15
LODK Lodwar 28.71 271 **P** 16 58 08.8 +0.7
BOK Bokaro 29.16 44 *e*P **P** 16 58 10.0 -1.9
BOK IAMs_20 IAMs_20 17 08 52.8
comp=Z,4μm,19.6s
GAYA Gaya 29.39 42 *e*P **P** 16 58 14.0 +0.2
PBA Port Blair 29.49 72 P **P** 16 58 12.7 -2.1
CGRH CHANDIGARH 29.64 22 *e*P **P** 16 58 16.3 +0.3
DDI Dehra Dun 29.79 25 *e*P **P** 16 58 17.8 +0.4
DDI IAMs_20 IAMs_20 17 08 43.1
comp=Z,5μm,21.1s
BHK Bhakra 30.12 21 *e*P **P** 16 58 17.6 -2.7
SMLA Simla 30.14 23 *e*P **P** 16 58 19.8 -0.7
SMLA IAMs_20 IAMs_20 17 09 50.6
comp=Z,4μm,18.8s
VOI Vohitsoka 30.39 213 P **P** 16 58 25.1 +2.3
HRA Herat 30.82 357 P **P** 16 58 26.9 +0.3
HRA IAmb IAmb 16 58 56.2
comp=Z,64nm,2.0s
NIL Nilore 31.22 15 P **P** 16 58 31.5 +1.6
NIL P **P** 16 58 31.5 +1.6
NIL Nilore 31.22 15 P **P** 16 58 30.3 +0.3
NIL IAmb IAmb 16 58 32.6
comp=Z,39nm,1.1s
KBL Kabul 31.26 8 P **P** 16 58 32.6 +2.1
SNR=18
KBL P **P** 16 58 32.6 +2.1
SNR=18
KBL Kabul 31.26 8 P **P** 16 58 31.1 +0.6
MLSI Meulaboh, Aceh 32.22 88 P **P** 16 58 39.8 +0.8
comp=Z,52nm,2.0s
EVN Everest 32.58 39 P **P** 16 58 41.3 -1.5
EVN IAmb IAmb 16 58 45.0
comp=Z,49nm,1.5s
BRDH Bariadhala 32.79 52 LR LR 17 13 24.0
comp=Z,4μm,18.8s,baz=230,slow=39
ALCI Alchi Leh 32.92 20 *e*P **P** 16 58 44.3 -1.0
ALCI IAmb IAmb 16 58 47.0
comp=Z,24nm,1.3s
TPTI 33.00 89 P **P** 16 58 46.4 +0.6
comp=Z,13nm,1.7s
AGT Agartala 33.14 50⇑ *e*P **P** 16 58 48.4 +1.5
AGT IAMs_20 IAMs_20 17 12 29.4
comp=Z,4μm,18.5s
COBR COOCHBEHAR 33.25 44 *e*P **P** 16 58 48.3 +0.5
DHUB DHUBRI 33.45 45⇑ *e*P **P** 16 58 49.7 +0.1
DHUB IAMs_20 IAMs_20 17 11 07.3
comp=Z,3μm,18.0s
KCSI Kotacane, Aceh 33.58 89 P **P** 16 58 50.0 -1.0
comp=Z,17nm,1.6s
MBAR Mbarara 33.61 264 LR LR 17 11 09.0
comp=Z,2μm,20.9s,baz=83,slow=34
MBAR Mbarara 33.61 264 P **P** 16 58 54.0 +2.6
MBAR P **P** 16 58 54.0 +2.6
MBAR Mbarara 33.61 264 P **P** 16 58 51.5 +0.1
SHL Shillong 34.56 48 P **P** 16 58 59.8 +0.3
SNR=23
SHL Shillong 34.56 48 P **P** 16 58 58.8 -0.7
SHL Shillong 34.56 48 *e*P **P** 16 58 59.7 +0.3
SHL IAmb IAmb 16 59 02.5
comp=Z,172nm,2.0s
SHL IAMs_20 IAMs_20 17 11 47.2
comp=Z,4μm,19.0s
PSI Prapat 34.75 90 LR LR 17 11 09.9
comp=Z,1μm,20.4s,baz=261,slow=33
PSI Prapat 34.75 90 P **P** 16 59 02.0 +0.7
RPSI Rantau Prapat 34.76 90 P **P** 16 59 00.5 -0.6
GUWA GUWAHATI 34.78 47 *e*P **P** 16 58 59.9 -1.2
SILR SILCHAR 34.81 50 *e*P **P** 16 59 03.8 +2.3
SILR IAMs_20 IAMs_20 17 13 57.3
comp=Z,4μm,19.2s
CHGR Chuyangaron 35.33 7 P **P** 16 59 05.0 -0.8
MNSI Mandailing Nat 35.53 93 P **P** 16 59 09.0 +1.2
IMP Imphal 35.72 51 *e*P **P** 16 59 09.5 +0.2
IMP IAMs_20 IAMs_20 17 13 33.7
comp=Z,4μm,19.1s
TAWA Tawang 35.73 45 *e*P **P** 16 59 09.5 -0.3
TAWA IAMs_20 IAMs_20 17 13 43.1
comp=Z,4μm,19.3s
GAR Garm 35.82 8 P **P** 16 59 09.2 -0.9
GAR IAmb IAmb 16 59 11.6
comp=Z,59nm,1.3s
TEZP TEZPUR 35.83 47 *e*P **P** 16 59 08.9 -1.3
KOHI KOHIMA 36.31 50⇑ *e*P **P** 16 59 15.3 +0.8
PPI Padang Panjang 36.46 95 P **P** 16 59 17.8 +2.0
DRK Karamyk 36.52 10 IAmb IAmb 16 59 17.9
comp=Z,80nm,1.6s
LSA Lhasa 36.56 42 P **P** 16 59 14.9 -2.1
LSA IAmb IAmb 16 59 19.2
comp=Z,34nm,1.1s
LSA Lhasa 36.56 42 *i* P **P** 16 59 16.4 -0.6
SNR=9.8
PDSI Padang 36.58 96 P **P** 16 59 18.0 +1.2
comp=Z,14nm,1.0s
ITAN ITANAGAR 36.81 47 *e*P **P** 16 59 17.9 -0.7
MOKO MOKOCHONG 36.94 49 *e*P **P** 16 59 20.4 +0.5
JORH JORHAT 36.98 48 *e*P **P** 16 59 21.1 +1.1
ZIRO ZIRO 37.12 47 *e*P **P** 16 59 21.1 -0.4
CM31 Chiang Mai Arr 37.18 64 P **P** 16 59 23.1 +1.2
SNR=22
CM31 P **P** 16 59 23.1 +1.2
SNR=22
CM31 Chiang Mai Arr 37.18 64 P **P** 16 59 20.8 -1.1
CM31 IAmb IAmb 16 59 24.4
comp=Z,98nm,1.4s
CMAR Chiang Mai Arr 37.18 64 P **P** 16 59 22.4 +0.5
comp=Z,20nm,1.1s,baz=258,slow=8.6,SNR=87
CMAR PcP **PcP** 17 01 41.2 -0.9
comp=Z,4.1nm,0.9s,baz=250,slow=4.5,SNR=7.3
CMAR LR LR 17 14 10.9
comp=Z,839nm,19.2s,baz=245,slow=36
comp=Z,20nm,1.1s

CMAR Chiang Mai Arr 37.18 64 P **P** 16 59 21.3 -0.5
CMAR **PcP** 17 01 41.9 -0.1
CHTO Chiang Mai 37.30 63 P **P** 16 59 24.0 +1.1
CHTO P **P** 16 59 24.0 +1.1
CHTO S **S** 17 05 13.6 +2.9
CHTO S **S** 17 05 13.6 +2.9
CHTO Chiang Mai 37.30 63 **P** 16 59 22.9 0.0
CHTO IAmb IAmb 16 59 25.1
comp=Z,90nm,1.4s
CHTO Chiang Mai 37.30 63 P **P** 16 59 23.8 +0.9
KSH Kashi 37.47 15 P **P** 16 59 20.3 -3.8
KSH pmax pmax
comp=Z,19nm,1.5s
KSH LR LR
comp=Z,1μm,21.8s
KSH LR LR
comp=Z,590nm,16.2s
KSH LR LR
comp=Z,1μm,22.2s
EIL Elat 37.99 316 LR LR 17 13 37.8
comp=Z,796nm,20.5s,baz=146,slow=34
ASF Jabal al Asfar 38.32 321 LR LR 17 15 07.4
comp=Z,613nm,18.8s,baz=182,slow=36
LKP Lekhapani 38.49 49 *e*P **P** 16 59 29.6 -3.2
CHM Chimkent 39.00 6 *e*P **P** 16 59 35.7 -1.2
TNCH TengChong 39.42 54 P **P** 16 59 41.5 +0.6
TNCH sP pwP 16 59 47.0 +0.9
TNCH S **S** 17 05 38.0 -5.0
TNCH pmax pmax
comp=Z,87nm,1.5s
TNCH pmax pmax
comp=Z,450nm,3.7s
TNCH LR LR
comp=Z,840nm,13.7s
TNCH LR LR
comp=Z,480nm,18.4s
TNCH LR LR
comp=Z,1μm,18.6s
BRLS Boroldoy 39.73 7 *e*P **P** 16 59 39.5 -3.5
DZA Taraz 39.78 8 *e*P **P** 16 59 42.5 -1.0
MMAI Mount Meron Ar 39.82 321 LR LR 17 15 12.2
comp=Z,778nm,20.2s,baz=132,slow=35
KK31 Karatay Array 39.88 7 P **P** 16 59 42.7 -1.6
KKAR Karatay Array 39.88 7 P **P** 16 59 43.3 -0.9
MARD Mardin 39.92 331 P **P** 16 59 45.5 +0.7
MARD IAmb IAmb 16 59 47.8
comp=Z,61nm,1.4s
WUS Wushi 39.95 18 P **P** 16 59 43.6 -1.4
AAK Ala-Archa 40.09 12 LR LR 17 17 05.7
comp=Z,778nm,18.0s,baz=200,slow=38
AAK Ala-Archa 40.09 12 P **P** 16 59 47.1 +0.9
AAK Ala-Archa 40.09 12 P **P** 16 59 45.7 -0.4
AAK Ala-Archa 40.09 12 *i* P **P** 16 59 45.3 -0.9
SNR=5.8
FRU1 Bishkek 40.28 12 P **P** 16 59 46.1 -1.5
GNI Garni 40.51 337 LR LR 17 16 56.8
comp=Z,635nm,19.8s,baz=144,slow=37
GNI Garni 40.51 337 P **P** 16 59 51.6 +1.9
GNI P **P** 16 59 51.6 +1.9
GNI Garni 40.51 337 P **P** 16 59 50.4 +0.7
GNI Garni 40.51 337 P **P** 16 59 50.9 +1.2
LWLI Liwa 40.77 102 P **P** 16 59 53.0 +0.8
comp=Z,89nm,1.6s
MDSI Maura Dua 40.79 101 P **P** 16 59 52.6 +0.4
comp=Z,900nmcomp=Z,37nm,1.5s
TNSS Tian-Shan 41.02 14 *e*P **P** 16 59 52.8 -1.4
MDOK Medeo 41.17 14 *e*P **P** 16 59 53.9 -1.2
AAA Alma-Ata 41.18 14 *e*P **P** 16 59 54.0 -1.1
KLSI 41.37 101 P **P** 16 59 58.2 +1.2
comp=Z,1μmcomp=Z,53nm,1.7s
SATY Saty 41.42 16 *e*P **P** 16 59 56.0 -1.2
comp=Z,17nm,1.1s
GAZ Gaziantep 41.66 327 P **P** 16 59 59.0 -0.1
GAZ IAmb IAmb 17 00 10.5
comp=Z,57nm,1.4s
UZB Uzynbulak 41.68 16 *e*P **P** 16 59 58.2 -1.1
comp=Z,19nm,1.3s
SHLS Shalkode 41.81 17 *e*P **P** 16 59 59.9 -0.4
UBPT Khong Chiam 42.36 71 P **P** 17 00 05.5 +0.5
PZH PanZhiHua 42.68 54 P P 17 00 02.5 -5.2
PZH PanZhiHua 42.68 54 P **P** 17 00 08.0 +0.3
PZH PP **PP** 17 01 50.0 +3.3
PZH S **S** 17 06 36.0 +4.6
PZH pmax pmax
comp=Z,50nm,1.6s
PZH pmax pmax
comp=Z,270nm,5.1s
PZH LR LR
comp=Z,1μm,18.4s
PZH LR LR
comp=Z,530nm,19.2s
PZH LR LR
comp=Z,780nm,22.0s
KMI Kunming 42.92 56 P **P** 17 00 10.3 +0.6
KMI S **S** 17 06 39.3 +4.2
KMI pmax pmax
comp=Z,30nm,1.5s
KMI pmax pmax
comp=Z,380nm,4.0s
KMI LR LR
comp=Z,880nm,18.1s
KMI LR LR
comp=Z,780nm,15.4s
KMI LR LR
comp=Z,800nm,19.7s
GOMU GeErMu 43.15 37 P **P** 17 00 11.0 -0.6
GOMU pP sP 17 00 14.5 -0.5
GOMU sP pwP 17 00 18.5 +1.6
GOMU PP **PP** 17 01 52.0 +0.2
GOMU S **S** 17 06 38.0 -0.4
GOMU pmax pmax
comp=Z,10.0nm,1.1s
GOMU LR LR
comp=Z,2μm,19.1s
GOMU LR LR
comp=Z,2μm,19.4s
GOMU LR LR
comp=Z,2μm,19.5s
TDK Taldygorghan 43.23 15 *e*P **P** 17 00 10.5 -1.2
comp=Z,25nm,1.0s
BNN Bunyan 43.62 328 P **P** 17 00 14.9 -0.2
TPI Tanjungpandan 43.94 98 P **P** 17 00 17.8 -0.1
comp=Z,12nm,1.5s
KBZ Khabaz 44.29 338 P **P** 17 00 20.1 -0.1
comp=Z,17nm,1.0s,baz=167,slow=5.6,SNR=13
KBZ LR LR 17 19 47.9
comp=Z,465nm,19.3s,baz=144,slow=38
comp=Z,17nm,1.0s
TOKA Tokat 44.38 330 P **P** 17 00 20.2 -0.9
TOKA IAmb IAmb 17 00 23.4
comp=Z,51nm,1.4s
KVAR Kislovodsk Arr 44.56 338 LR LR 17 19 52.1
comp=Z,323nm,20.4s,baz=50,slow=38
KIV Kislovodsk 44.56 338 P **P** 17 00 23.2 +0.7
KIV S **S** 17 07 01.6 +3.4
KIV Kislovodsk 44.56 338 P **P** 17 00 21.5 -1.0
KIV IAmb IAmb 17 00 24.4
comp=Z,56nm,1.3s
KIV Kislovodsk 44.56 338 *i* P **P** 17 00 22.9 +0.4
SNR=5.8
LEM Lembang 44.60 103 LR LR 17 17 06.3
comp=Z,280nm,20.8s,slow=34
KIRS Kirsehir-Merke 44.88 326 ⇑P **P** 17 00 26.7 +1.6
WMQ Urumqi 45.28 24 *e*P **P** 17 00 29.0 +0.8
WMQ S **S** 17 07 13.3 +4.6
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ pmax pmax
comp=Z,100nm,3.7s
WMQ LR LR
comp=Z,1μm,21.7s
WMQ LR LR
comp=Z,2μm,21.7s
WMQ LR LR
comp=Z,2μm,24.1s
BR131 Keskin Array S 45.44 327 P **P** 17 00 30.4 +0.7
BR131 P **P** 17 00 30.4 +0.7
BRTR Keskin Array B 45.44 327 P **P** 17 00 29.4 -0.2
comp=Z,7.2nm,0.9s,baz=147,slow=9.4,SNR=28
BRTR LR LR 17 20 04.0
comp=Z,788nm,18.6s,baz=119,slow=37
comp=Z,7.2nm,0.9s
BRTR Keskin Array B 45.44 327 P **P** 17 00 28.2 -1.4
KHWEE **KHWEE** 45.48 234 IAmb IAmb 17 00 39.7
comp=Z,47nm,1.1s

AB31 Akbulak array 45.77 356 IAmb IAmb 17 00 33.2
comp=Z,30nm,1.3s
ABKAR **Akbulak array** 45.77 356 P **P** 17 00 30.9 -0.9
LPHEP **Lephephe** 45.85 232 P **P** 17 00 33.9 +0.8
LPHEP IAmb IAmb 17 00 43.1
comp=Z,56nm,1.3s
MAKZ Makanchi 45.87 17 P **P** 17 00 30.6 -2.2
MKAR Makanchi Array 45.95 17 P **P** 17 00 31.8 -1.6
comp=Z,1.9nm,0.8s,baz=198,slow=7.4,SNR=16
MKAR PcP **PcP** 17 02 09.1 -1.1
comp=Z,2.8nm,1.0s,baz=208,slow=4.1,SNR=6.8
MKAR LR LR 17 20 41.6
comp=Z,344nm,18.2s,baz=204,slow=37
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 45.95 17 P **P** 17 00 31.2 -2.3
MKAR **PcP** 17 02 08.1 -2.1
KPJI Karang Pucung 45.98 104 P **P** 17 00 34.6 +0.5
comp=Z,26nm,1.7s
ANTO Ankara 46.01 326 P **P** 17 00 34.4 +0.3
ANTO P **P** 17 00 34.4 +0.3
ANTO S **S** 17 07 22.6 +3.2
ANTO S **S** 17 07 22.6 +3.2
ANTO Ankara 46.01 326 P **P** 17 00 34.0 0.0
ANTO IAmb IAmb 17 00 35.9
comp=Z,23nm,1.1s
CD2 Chengdu 46.26 49 P **P** 17 00 36.5 +0.4
CD2 S **S** 17 07 22.3 -0.8
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 LR LR
comp=Z,2μm,18.4s
CD2 LR LR
comp=Z,770nm,14.0s
CD2 LR LR
comp=Z,1μm,18.4s
GYA Guiyang 46.69 56 ⇓P **P** 17 00 39.5 -0.2
GYA S **S** 17 07 27.8 -1.8
GYA pmax pmax
comp=Z,62nm,1.3s
GYA pmax pmax
comp=Z,270nm,3.2s
GYA LR LR
comp=Z,540nm,21.0s
GYA LR LR
comp=Z,620nm,25.7s
GYA LR LR
comp=Z,990nm,23.6s
LBTB Lobatse 46.90 231 LR LR 17 17 30.9
comp=Z,1μm,21.5s,baz=58,slow=32
LBTB Lobatse 46.90 231 P **P** 17 00 41.5 +0.2
LBTB IAmb IAmb 17 00 51.4
comp=Z,27nm,1.1s
BRZS Berezniki 46.92 8 *e*P **P** 17 00 40.0 -1.0
AKTO Aktyubinsk 47.09 355 LR LR 17 21 33.3
comp=Z,652nm,20.3s,baz=180,slow=38
QIZ Qiongzhong 47.25 67 P **P** 17 00 46.0 +2.0
QIZ S **S** 17 07 44.5 +6.9
QIZ SS **SS** 17 11 09.8 +4.7
QIZ pmax pmax
comp=Z,63nm,2.1s
QIZ LR LR
comp=Z,420nm,11.1s
QIZ LR LR
comp=Z,980nm,15.0s
QIZ LR LR
comp=Z,1μm,17.8s
ZSN Zaisan 47.34 19 *e*P **P** 17 00 43.5 -0.7
SMRI Semarang 47.39 103 P **P** 17 00 43.7 -1.5
SMRI Semarang 47.39 103 P **P** 17 00 44.6 -0.6
MANT Manisa 47.59 322 IAmb IAmb 17 00 48.0
comp=Z,46nm,1.5s
SBUM Sibu 48.04 90 P **P** 17 00 49.7 -0.5
SBUM IAmb IAmb 17 00 52.4
comp=Z,34nm,1.1s
SBUM Sibu 48.04 90 P **P** 17 00 51.3 +1.1
IDI Anoyia 48.16 316 LR LR 17 21 49.0
comp=Z,129nm,20.5s,baz=109,slow=37
IDI Anoyia 48.16 316 P **P** 17 00 50.5 -0.4
GTA Gaotai 48.24 37 P **P** 17 00 51.0 -0.6
GTA pP pwP 17 00 56.3 -0.6
GTA PP **PP** 17 02 46.0 +2.0
GTA S **S** 17 07 48.8 -2.5
GTA pmax pmax
comp=Z,18nm,1.6s
GTA pmax pmax
comp=Z,270nm,10.0s
GTA LR LR
comp=Z,2μm,18.7s
GTA LR LR
comp=Z,3μm,18.7s
GTA LR LR
comp=Z,3μm,21.5s
PCJI Pacitan 48.34 104 P **P** 17 00 51.7 -0.8
comp=Z,53nm,1.3s
KURBB **Kurchatov Arra** 48.54 12 P **P** 17 00 52.3 -1.2
comp=Z,3.9nm,1.0s,baz=211,slow=8.0,SNR=19
KURBB PcP **PcP** 17 02 17.7 -1.6
comp=Z,3.5nm,1.1s,baz=216,slow=4.0,SNR=5.3
KURBB PP **PP** 17 02 40.7 -5.7
comp=Z,0.2nm,0.3s,baz=210,slow=7.9,SNR=4.6
KURBB LR LR 17 21 57.5
comp=Z,961nm,18.4s,baz=196,slow=37
comp=Z,3.9nm,1.0s
KGCAE Kacgae 48.55 235 IAmb IAmb 17 00 57.0
comp=Z,21nm,1.1s
KURK Kurchatov 48.65 12 P **P** 17 00 53.4 -0.9
KURK P **P** 17 00 53.4 -0.9
KURK S **S** 17 07 58.1 +1.8
KURK S **S** 17 07 58.1 +1.8
KURK Kurchatov 48.65 12 P **P** 17 00 52.6 -1.6
LZDM Lanzhou Array 48.75 43 P **P** 17 00 55.1 -0.7
comp=Z,1.9nm,0.3s,baz=289,slow=4.4,SNR=1.4
comp=Z,1.9nm,0.3s
LZH Lanzhou 48.92 43 *e*P **P** 17 00 57.0 +0.1
LZH sP pwP 17 01 04.5 +2.3
LZH PP **PP** 17 02 50.8 +0.4
LZH S **S** 17 07 57.0 -4.1
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,170nm,4.2s
LZH LR LR
comp=Z,690nm,13.4s
LZH LR LR
comp=Z,910nm,14.1s
LZH LR LR
comp=Z,1μm,14.4s
BOSA Boshof 49.10 227 P **P** 17 00 58.9 +0.6
comp=Z,13nm,1.1s,baz=62,slow=10,SNR=8.2
BOSA LR LR 17 19 04.1
comp=Z,738nm,21.0s,baz=56,slow=33
comp=Z,13nm,1.1s
BOSA Boshof 49.10 227 P **P** 17 00 58.8 +0.6
BOSA IAmb IAmb 17 01 08.1
comp=Z,31nm,1.3s
PHPEN **Phepeng** 49.27 232 IAmb IAmb 17 01 01.6
comp=Z,33nm,1.4s
GULI GuiLin 49.42 59 P **P** 17 01 01.5 +0.8
GULI S **S** 17 08 14.5 +6.3
GULI pmax pmax
comp=Z,21nm,2.0s
GULI LR LR
comp=Z,360nm,10.4s
GULI LR LR
comp=Z,550nm,16.7s
GULI LR LR
comp=Z,710nm,17.6s
BVAR Borovoye Array 49.67 5 P **P** 17 01 00.6 -1.5
comp=Z,3.3nm,1.1s,baz=178,slow=4.5,SNR=12
BVAR PcP **PcP** 17 02 22.5 -0.9
comp=Z,3.2nm,0.9s,baz=186,slow=4.5,SNR=8.1
BVAR LR LR 17 22 59.3
comp=Z,2μm,19.5s,baz=175,slow=37
comp=Z,3.3nm,1.1s
BORK Borovoye 49.69 5 P **P** 17 01 00.7 -1.5
EZN Ezine 49.78 322 ⇓P **P** 17 01 04.2 +1.1
KOOLE **Kule** 50.27 236 IAmb IAmb 17 01 17.0
comp=Z,31nm,1.4s
ENH Enshi 50.44 53 P **P** 17 01 07.1 -1.3
ENH Enshi 50.44 53 P **P** 17 01 07.9 -0.5
H04N2 CROZET ISLANDS 50.61 191 T T 17 56 30.9
baz=10,slow=76,SNR=31
H04N1 CROZET ISLANDS 50.61 191 T T 17 56 18.8
baz=10,slow=76,SNR=30
H04N3 CROZET ISLANDS 50.62 191 T T 17 56 29.6
baz=10,slow=76,SNR=37

BELG Belogornoye 50.66 347 P P 17 01 08.0 -1.6
comp=Z,56nm,1.0s,baz=133,slow=2.2,SNR=18
comp=Z,56nm,1.0s
MTKI Muara Teweh, K 50.94 94 P P 17 01 12.5 +0.1
comp=Z,31nm,1.1s
TSUM Tsumeb 51.00 242 LR LR 17 20 44.8
comp=Z,2µm,20.3s,baz=69,slow=34
TSUM Tsumeb 51.00 242 P P 17 01 13.3 +0.4
RDO Rodhopi 51.05 323 P P 17 01 12.4 -0.4
RDO IAmb IAmb 17 01 14.5
comp=Z,45nm,1.4s
BBKI Banjar Baru 51.15 97 P P 17 01 14.0 0.0
comp=Z,41nm,1.4s
JAGI Jajag, Banyuwa 51.28 104 P P 17 01 13.1 -1.8
JAGI IAmb IAmb 17 01 14.9
comp=Z,44nm,1.2s
JAGI Jajag, Banyuwa 51.28 104 P P 17 01 14.6 -0.3
JAGI Jajag, Banyuwa 51.28 104 P P 17 01 14.0 -0.9
comp=Z,34nm,1.4s
JURR Jurilovca 51.48 328 ⇑P P 17 01 16.5 +0.6
TIRR Tirgusor 51.52 328 ⇓P P 17 01 16.5 +0.3
XAN Xi'an 51.57 48 ⇑P P 17 01 16.3 -0.5
XAN pP sP 17 01 20.5 +0.2
XAN S **S 17 08 35.0 -2.8**
XAN pmax pmax
comp=Z,74nm,1.3s
XAN LR LR
comp=Z,850nm,23.4s
XAN LR LR
comp=Z,760nm,19.9s
XAN LR LR
comp=Z,1µm,21.3s
TPGR Topolog 51.78 328 ⇓P P 17 01 18.6 +0.4
LOZB Loznitsa 51.81 326 ⇑P P 17 01 19.3 +0.9
ELND Elena 51.94 325 ⇓P P 17 01 20.3 +0.8
RAZG Razgrad 51.98 326 ⇑P P 17 01 20.7 +1.0
CFR Carcaliu 52.14 328 ⇓P P 17 01 21.1 +0.3
SRBI Singaraja 52.23 103 P P 17 01 21.8 -0.2
comp=Z,1µmcomp=Z,81nm,1.6s
IGBI Denpasar 52.31 104 P P 17 01 21.6 -1.0
DNP Denpasar 52.34 104 P P 17 01 21.8 -1.1
LIT Litokhoron 52.36 320 P P 17 01 21.7 -0.9
LIT IAmb IAmb 17 01 23.1
comp=Z,53nm,1.7s
CNSH ChangSha 52.52 57 P P 17 01 23.5 -0.5
CNSH S **S 17 08 49.0 -1.9**
CNSH pmax pmax
comp=Z,37nm,1.6s
CNSH LR LR
comp=Z,590nm,17.8s
CNSH LR LR
comp=Z,580nm,16.2s
CNSH LR LR
comp=Z,700nm,26.7s
WIN Windhoek 52.69 238 IAmb IAmb 17 01 36.8
comp=Z,59nm,1.6s
PLVB Pleven 52.95 324 ⇑P P 17 01 27.9 +1.1
ISR Istrita 52.95 327 ⇑P P 17 01 27.6 +0.7
ARTI Arti 52.97 356 LR LR 17 25 07.4
comp=Z,456nm,18.9s,baz=157,slow=38
ARTI Arti 52.97 356 P P 17 01 24.9 -1.8
MILM Milestii Mici 52.98 330 ⇑/P P 17 01 25.0 -2.0
comp=Z,450nm,2.4s
ZALV Zalesovo Beam 53.10 15 P P 17 01 25.3 -2.5
comp=Z,6.7nm,0.8s,baz=216,slow=7.3,SNR=32
ZALV LR LR 17 23 50.8
comp=Z,802nm,20.9s,baz=210,slow=36
comp=Z,6.7nm,0.8s
ZALV Zalesovo Beam 53.10 15 P P 17 01 25.5 -2.3
GHRR 53.11 329 ⇑P P 17 01 29.7 +1.6
NEHR Nehoiu 53.29 327 ⇑P P 17 01 30.8 +1.4
VASR Vaslui 53.31 329 ⇓P P 17 01 30.9 +1.5
VRI Vrincioaia 53.34 328 ⇓P P 17 01 31.1 +1.4
PLOR Plostina 53.37 328 ⇑P P 17 01 31.2 +1.1
HUMR Humele 53.44 326 ⇑P P 17 01 31.7 +1.2
MLR Muntele Rosu 53.52 327 P P 17 01 30.4 -0.8
comp=Z,19nm,1.1s,baz=169,slow=1.8,SNR=16
MLR LR LR 17 24 59.4
comp=Z,433nm,20.3s,baz=120,slow=37
comp=Z,19nm,1.1s
MLR Muntele Rosu 53.52 327 IAmb IAmb 17 01 33.6
comp=Z,65nm,1.4s
MLR Muntele Rosu 53.52 327 ⇓P P 17 01 31.6 +0.4
COVR Voineasa-Covas 53.61 328 ⇓P P 17 01 32.7 +1.0
TESR Tescani 53.81 329 ⇓P P 17 01 33.5 +0.4
ONER Baraj Valea Uz 53.82 328 ⇑P P 17 01 34.3 +1.0
TURR Turia 53.84 328 ⇓P P 17 01 34.3 +0.8
EDA Edea 53.86 272 P P 17 01 33.2 -0.8
EDA IAmb IAmb 17 01 44.1
comp=Z,31nm,1.2s
VOIR 53.97 327 ⇓P P 17 01 34.6 +0.1
TWSI Taliwang, Sumb 53.98 103 P P 17 01 32.9 -2.0
comp=Z,37nm,1.5s
OZUR 53.99 328 ⇓P P 17 01 34.8 +0.2
SORM Soroca 54.05 331 ⇑P P 17 01 34.8 -0.1
DOPR Dopca 54.12 327 ⇓P P 17 01 35.8 +0.3
LYN LuoYang 54.45 49 P P 17 01 38.3 +0.3
LYN S **S 17 09 16.8 -0.1**
LYN pmax pmax
comp=Z,32nm,1.4s
LYN pmax pmax
comp=Z,390nm,5.0s
LYN LR LR
comp=Z,560nm,22.7s
LYN LR LR
comp=Z,1µm,18.2s
LYN LR LR
comp=Z,1µm,18.5s
WHN Wuhan 54.46 55 ⇑P P 17 01 38.0 -0.2
WHN S **S 17 09 22.0 +4.8**
WHN LR LR
comp=Z,2µm,18.7s
LOT Lotru 54.68 326 ⇑P P 17 01 39.7 0.0
PLAI Plampang 54.86 103 P P 17 01 40.4 -1.0
PLAI Plampang 54.86 103 P P 17 01 40.0 -1.4
comp=Z,895nmcomp=Z,53nm,1.6s
HERR Herculane 55.11 325 ⇓P P 17 01 42.9 +0.2
BURAR Bucovina Array 55.27 329 P P 17 01 43.4 -0.5
BURAR Bucovina Array 55.27 329 ⇓P P 17 01 44.7 +0.8
BUR08 Bucovina Ar. S 55.30 329 IAmb IAmb 17 01 51.5
comp=Z,33nm,1.4s
BTO Baotou 55.40 42 eP P 17 01 44.8 -0.2
BTO PP **PP 17 03 51.5 +2.6**
BTO S **S 17 09 30.3 +0.5**
BTO pmax pmax
comp=Z,49nm,1.4s
BTO pmax pmax
comp=Z,730nm,4.3s
BTO LR LR
comp=Z,2µm,14.9s
BTO LR LR
comp=Z,2µm,17.6s
BTO LR LR
comp=Z,2µm,18.2s
MDVR Moldovita 55.46 324 ⇓P P 17 01 45.2 0.0
AKASG Malin Array Be 55.47 334 P P 17 01 43.2 -1.9
AKASG LR LR 17 28 13.6
comp=Z,5.6nm,1.1s,baz=135,slow=6.2,SNR=23
comp=Z,335nm,18.6s,baz=109,slow=39
comp=Z,5.6nm,1.1s
AKASG Malin Array Be 55.47 334 P P 17 01 43.2 -1.9
AKBB Malin Array Si 55.47 334 IAmb IAmb 17 01 45.1
comp=Z,60nm,1.8s
KIEV Kiev 55.47 334 P P 17 01 43.4 -1.7
KIEV IAmb IAmb 17 01 45.1
comp=Z,50nm,1.8s
KIEV Kiev 55.47 334 ⇑P P 17 01 45.8 +0.7
SURR Surduc 55.79 325 ⇓P P 17 01 47.8 +0.3
MARR Marisel-Cluj 55.79 327 ⇓P P 17 01 48.5 +0.8
MPSI Mapaga 55.82 92 P P 17 01 47.8 -0.5
PCI Palu 55.85 93 P P 17 01 47.9 -0.7
comp=Z,26nm,1.2s
BZS Buzias 56.00 325 ⇓P P 17 01 48.9 -0.1
DRGR 56.09 327 ⇓P P 17 01 50.1 +0.3
SPSI Sidrap Palu 56.09 97 P P 17 01 50.7 +0.5
comp=Z,14nm,1.1s
OBN Obninsk 56.11 341 P P 17 01 47.5 -2.1
comp=Z,10nm,0.4s,baz=86,slow=11,SNR=4.7
comp=Z,10nm,0.4s
OBN Obninsk 56.11 341 P P 17 01 47.7 -1.9
KIRV Kirov 56.16 351 P P 17 01 47.5 -2.4
comp=Z,13nm,0.9s,baz=135,slow=10.0,SNR=6.0
KIRV LR LR 17 27 24.5
comp=Z,781nm,19.7s,baz=156,slow=38
comp=Z,13nm,0.9s

KAPI Kappang 56.21 98 LR LR 17 23 29.2
comp=Z,224nm,21.6s,baz=272,slow=34
KAPI Kappang 56.21 98 P P 17 01 50.6 -0.5
SIRR Siria 56.35 326 ⇓P P 17 01 52.2 +0.6
BNSI Bone 56.48 98 P P 17 01 52.8 -0.2
comp=Z,1µmcomp=Z,69nm,1.4s
HHC Hu-ho-hao-te 56.55 42 ⇓/P P 17 01 53.5 +0.3
HHC sP pwP 17 02 00.5 +2.0
HHC S **S 17 09 44.0 -1.1**
HHC pmax pmax
comp=Z,24nm,1.1s
HHC pmax pmax
comp=Z,200nm,6.7s
HHC LR LR
comp=Z,990nm,17.4s
HHC LR LR
comp=Z,680nm,15.0s
HHC LR LR
comp=Z,880nm,17.7s
WBSI Waikabubak, Su 56.58 104 P P 17 01 52.8 -0.9
VAE Valguarnera 56.64 313 LR LR 17 25 10.3
comp=Z,190nm,19.3s,baz=139,slow=35
TOLI2 Tolitoli 56.65 91 P P 17 01 53.3 -1.0
TOLI2 IAmb IAmb 17 01 54.8
comp=Z,36nm,1.4s
TGY Tagaytay City 57.00 76 LR LR 17 23 26.7
comp=Z,608nm,21.8s,baz=286,slow=33
SONM Songino Array 57.18 33 P P 17 01 57.4 -0.1
comp=Z,11nm,1.1s,baz=235,slow=7.1,SNR=51
SONM LR LR 17 26 38.3
comp=Z,2µm,20.6s,baz=235,slow=36
comp=Z,11nm,1.1s
HNS HongShan 57.24 47 ⇑P P 17 01 57.8 -0.2
HNS S **S 17 09 57.0 +2.9**
HNS pmax pmax
comp=Z,31nm,1.2s
HNS LR LR
comp=Z,660nm,17.2s
HNS LR LR
comp=Z,590nm,16.7s
HNS LR LR
comp=Z,800nm,20.6s
ULN Ulaanbaatar 57.55 33 P P 17 01 59.9 -0.3
ULN P **P 17 01 59.9 -0.3**
ULN Ulaanbaatar 57.55 33 P P 17 01 59.2 -1.1
APSI Ampana 57.66 93 P P 17 02 01.7 +0.3
BASI Baing, Sumba 57.83 104 P P 17 02 02.5 -0.1
KWP Kalwaria Pacla 57.84 329 eP P 17 02 01.7 -0.3
MRSI Marisa 57.85 92 P P 17 02 01.8 -0.9
comp=Z,685nmcomp=Z,48nm,1.4s
MORH Mrgy, Hungar 58.05 324 ⇓P P 17 02 03.6 0.0
TLY Talaya 58.24 28 P P 17 02 05.0 +0.2
TLY P **P 17 02 05.0 +0.2**
PSZ Piszkesteto 58.30 327 ⇓P P 17 02 04.7 -0.7
NJ2 Nanjing 58.59 54 eP P 17 02 07.0 -0.6
NJ2 pmax pmax
comp=Z,12nm,0.8s
TIA Tai'an 58.59 49 P P 17 02 06.5 -1.1
TIA pmax pmax
comp=Z,28nm,1.2s
LUWI Luwuk 58.79 93 P P 17 02 07.5 -1.8
GTOI Gorontalo 58.91 91 P P 17 02 08.9 -1.2
comp=Z,32nm,1.8s
NIE Niedzica 58.95 328 eP P 17 02 10.1 +0.3
MMRI Maumere 59.17 102 P P 17 02 10.2 -1.8
MMRI Maumere 59.17 102 P P 17 02 09.2 -2.8
comp=Z,796nmcomp=Z,50nm,1.5s
LANS Liptovska Anna 59.24 328 eP P 17 02 11.5 -0.4
BEHE Becsehely 59.28 324 P P 17 02 12.2 0.0
BEHE IAmb IAmb 17 02 13.1
comp=Z,14nm,0.9s
MORW Morawa 59.34 127 P P 17 02 13.1 +0.2
MORW Morawa 59.34 127 P P 17 02 13.9 +1.1
BJT Baijiatuau 59.34 45 P P 17 02 12.1 -0.6
BJT Baijiatuau 59.34 45 P P 17 02 12.9 +0.2
BJI Beijing 59.36 45 P P 17 02 13.0 +0.3
BJI S **S 17 10 23.3 +1.7**
BJI pmax pmax
comp=Z,9.0nm,1.4s
BJI LR LR
comp=Z,320nm,19.1s
BJI LR LR
comp=Z,370nm,14.3s
BJI LR LR
comp=Z,700nm,16.2s
MBWA Marble Bar 59.69 117 P P 17 02 15.8 +0.4
MBWA P **P 17 02 15.8 +0.4**
OJC Ojcow 59.69 329 eP P 17 02 13.2 -1.7
KEST Kesra 59.78 310 P P 17 02 14.9 -1.0
comp=Z,4.7nm,1.0s,baz=90,slow=12,SNR=2.9
KEST LR LR 17 26 24.8
comp=Z,305nm,20.9s,baz=20,slow=34
comp=Z,4.7nm,1.0s
KEST Kesra 59.78 310 P P 17 02 18.0 +2.0
KEST Kesra 59.78 310 IAmb IAmb 17 03 04.7
comp=Z,20nm,1.3s
TAM Tamanrasset 59.80 294 P P 17 02 15.4 -1.0
TAM IAmb IAmb 17 02 17.6
comp=Z,28nm,1.0s
NRCA Norcia 59.83 319 P P 17 02 15.3 -0.8
PSA00 Pilbara Seismi 59.91 117 P P 17 02 16.8 -0.1
PSA00 IAmb IAmb 17 02 18.5
comp=Z,28nm,1.2s
PSA00 Pilbara Seismi 59.91 117 P P 17 02 17.5 +0.6
FDMO Fiordimonte 59.93 319 P P 17 02 15.8 -1.0
FDMO IAmb IAmb 17 02 26.5
comp=Z,22nm,0.9s
MODS Modra-Piesok 60.01 326 eP P 17 02 16.2 -0.9
JAVC Velka Javorina 60.05 326 eP P 17 02 17.4 -0.1
RONA Rosalia, Austr 60.20 325 i P P 17 02 18.2 -0.3
comp=Z,5.2nm,0.8s,SNR=5.7
ARSA Arzberg 60.42 324 IAmb IAmb 17 02 20.6
comp=Z,27nm,1.3s
ARSA Arzberg 60.42 324 eP P 17 02 19.5 -0.5
comp=Z,2.7nm,0.7s,SNR=5.3
SOKA Soboth 60.42 323 i P P 17 02 19.2 -0.9
comp=Z,3.0nm,0.7s,SNR=5.0
SUW Suwalki 60.43 334 eP P 17 02 19.2 -0.6
H01W3 Cape Leeuwin H 60.45 134 T T 18 07 45.9
baz=299,slow=75,SNR=90
H01W2 Cape Leeuwin H 60.45 134 T T 18 07 46.3
baz=299,slow=75,SNR=117
H01W1 Cape Leeuwin H 60.47 134 T T 18 07 47.2
baz=299,slow=75,SNR=100
CONA Conrad Observa 60.57 325 i P P 17 02 20.4 -0.7
comp=Z,7.0nm,0.7s,SNR=9.7
STEB Steborice 60.59 328 eP P 17 02 20.4 -0.7
STEB epP **pwP 17 02 26.4 -0.2**
MORC Moravsky Berou 60.63 327 IAmb IAmb 17 02 21.6
comp=Z,32nm,1.2s
MORC Moravsky Berou 60.63 327 eP P 17 02 20.1 -1.3
OBKA Obir 60.63 323 eP P 17 02 21.3 -0.3
comp=Z,3.2nm,0.6s
BATI Baumata 60.82 104 LR LR 17 28 00.6
comp=Z,450nm,21.0s,baz=296,slow=35
BATI Baumata 60.82 104 P P 17 02 23.5 +0.2
KRUC Moravsky 60.87 326 eP P 17 02 21.7 -1.3
VRAC Vranov 60.89 326 P P 17 02 22.0 -1.1
comp=Z,17nm,1.0s,baz=137,slow=6.8,SNR=3.4
VRAC LR LR 17 30 34.1
comp=Z,227nm,19.7s,baz=122,slow=38
comp=Z,17nm,1.0s
VRAC Vranov 60.89 326 ⇓P P 17 02 22.7 -0.4
VRAC Vranov 60.89 326 eP P 17 02 22.2 -1.0
XLT XiLinHaoTe 60.91 41 eP P 17 02 23.3 -0.2
XLT pP sP 17 02 28.0 +1.0
XLT sP pwP 17 02 30.5 +1.6
XLT PcP **PcP 17 03 04.3 -2.7**
XLT PP **PP 17 04 40.3 +2.5**
XLT S **S 17 10 38.8 -2.9**
XLT pmax pmax
comp=Z,26nm,1.4s
XLT LR LR
comp=Z,940nm,19.6s
KRLC Kraliky 61.20 327 eP P 17 02 24.2 -1.1
MYKA Terra Mystica 61.24 323 eP P 17 02 25.5 -0.2
comp=Z,3.6nm,0.6s
DAV Davao City (W) 61.27 84 LR LR 17 29 08.3
comp=Z,162nm,19.4s,baz=237,slow=36
SOEI Soe 61.33 103 P P 17 02 25.7 -1.2
SOEI Soe 61.33 103 P P 17 02 26.8 -0.1
SOEI Soe 61.33 103 P P 17 02 26.3 -0.6
MOA Molln 61.46 324 eP P 17 02 25.9 -1.2
comp=Z,10nm,0.4s,SNR=9.9
TREC Trest 61.50 326 AMS AMS 17 34 00.0

comp=Z,400nm,18.1s
DPC Dobruska-Polom 61.60 327 eP P 17 02 27.1 -0.9
KBA Koelnbreinsper 61.63 323 eP P 17 02 27.6 -0.8
comp=Z,2.6nm,0.8s
BIOA Bad Ischl, Aus 61.75 324 eP P 17 02 28.4 -0.7
comp=Z,4.0nm,0.4s,SNR=6.3
NWAO Narrogin (SRO) 61.87 130 P P 17 02 30.8 +0.8
comp=Z,7.5nm,1.0s,baz=217,slow=10,SNR=3.1
NWAO LR LR 17 24 01.5
comp=Z,324nm,21.3s,baz=266,slow=31
comp=Z,7.5nm,1.0s
ZCCA Zocca 61.88 319 P P 17 02 30.1 +0.1
KSP Ksiaz 61.88 328 eP P 17 02 29.0 -0.8
ABTA Abfaltersbach 61.98 322 eP P 17 02 29.9 -0.8
comp=Z,8.2nm,0.8s
SANI Sanana 62.08 94 P P 17 02 31.3 -0.5
SANI Sanana 62.08 94 P P 17 02 30.3 -1.5
comp=Z,20nm,1.7s
GERES GERESS Array B 62.28 325 P P 17 02 29.8 -2.9
comp=Z,0.9nm,0.8s,baz=115,slow=6.3,SNR=7.6
GERES LR LR 17 30 33.1
comp=Z,184nm,19.8s,baz=108,slow=37
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 62.38 283 P P 17 02 33.3 -0.5
comp=Z,3.3nm,1.1s,baz=69,slow=7.7,SNR=12
TORD LR LR 17 30 33.6
comp=Z,389nm,18.8s,baz=102,slow=37
comp=Z,3.3nm,1.1s
TORD Torodi Ar. Bea 62.38 283 P P 17 02 33.4 -0.5
TORD IAmb IAmb 17 03 02.9
comp=Z,30nm,1.9s
KHC Kasperske Hory 62.49 325 IAmb IAmb 17 02 33.1
comp=Z,15nm,1.2s
KHC Kasperske Hory 62.49 325 eP P 17 02 32.0 -2.0
KHC epP **sP 17 02 38.6 +1.2**
WTTA Wattenberg 62.75 323 eP P 17 02 34.4 -1.5
comp=Z,6.6nm,0.8s
WATA Walderalm 62.82 323 eP P 17 02 34.8 -1.6
comp=Z,3.5nm,0.5s
DL2 Dalian 62.87 48 P P 17 02 32.0 -4.7
DL2 pmax pmax
comp=Z,68nm,1.3s
DL2 pmax pmax
comp=Z,510nm,10.4s
DL2 LR LR
comp=Z,970nm,19.1s
DL2 LR LR
comp=Z,1µm,17.8s
DL2 LR LR
comp=Z,1µm,19.2s
SQTA Sankt Quirin 62.99 322 eP P 17 02 35.8 -1.6
comp=Z,6.2nm,0.7s
MOTA Moosalm 63.11 322 i P P 17 02 36.6 -1.6
comp=Z,9.9nm,0.9s
FETA Feichten 63.19 322 i P P 17 02 37.6 -1.3
comp=Z,5.7nm,0.9s
TNTI Ternate 63.25 91 P P 17 02 37.6 -2.0
TNTI Ternate 63.25 91 P P 17 02 39.6 0.0
FUORN Ofenpass-Fuorn 63.30 321 P P 17 02 38.4 -1.3
FUORN IAmb IAmb 17 02 40.2
comp=Z,18nm,1.1s
DAVOX Davos/Dischmat 63.61 321 P P 17 02 40.6 -1.1
comp=Z,25nm,1.0s,baz=127,slow=7.1,SNR=20
DAVOX LR LR 17 31 06.3
comp=Z,204nm,21.4s,baz=101,slow=37
comp=Z,25nm,1.0s
TUE Stuetta 63.81 321 P P 17 02 41.6 -1.4
DAVA Damuels 63.83 322 eP P 17 02 42.0 -1.1
comp=Z,20nm,1.1s,SNR=8.5
CLL Collm 63.90 327 IAmb IAmb 17 02 43.6
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 64.26 112 LR LR 17 28 51.0
comp=Z,260nm,18.6s,baz=302,slow=34
FITZ Fitzroy Crossi 64.26 112 P P 17 02 46.4 +0.2
FINES FINESS Array B 64.51 341 P P 17 02 45.3 -1.7
comp=Z,3.8nm,0.8s,baz=125,slow=4.1,SNR=6.9
FINES LR LR 17 34 00.3
comp=Z,287nm,18.1s,baz=130,slow=39
comp=Z,3.8nm,0.8s
FINES FINESS Array B 64.51 341 P P 17 02 45.5 -1.5
SENIN Lac Senin/Sane 65.07 320 IAmb IAmb 17 03 03.8
comp=Z,26nm,1.0s
BFO Black Forest 65.22 323 P P 17 02 50.6 -1.4
JOW Kunigami 65.43 62 LR LR 17 33 29.6
comp=Z,548nm,18.3s,baz=268,slow=38
HIA Hailar 65.51 36 P P 17 02 52.2 -1.6
HIA IAmb IAmb 17 02 55.0
comp=Z,33nm,1.4s
HIA Hailar 65.51 36 P P 17 02 54.1 +0.3
HILR Hailar Array B 65.64 36 P P 17 02 53.8 -0.9
comp=Z,5.1nm,0.8s,baz=186,slow=6.8,SNR=3.6
HILR LR LR 17 32 10.2
comp=Z,2µm,20.6s,baz=95,slow=37
comp=Z,5.1nm,0.8s
ECH Echery 65.89 322 IAmb IAmb 17 02 56.1
comp=Z,12nm,1.0s
KNRA Kununurra 66.69 109 P P 17 03 01.5 -0.4
CN2 Changchun 67.16 44 eP P 17 03 05.8 +1.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
KSRS Korea Array 67.23 51 P P 17 03 02.9 -2.1
comp=Z,3.7nm,0.9s,baz=244,slow=8.2,SNR=5.1
comp=Z,3.7nm,0.9s
NRIK Noril'sk 67.59 9 LR LR 17 34 56.0
comp=Z,826nm,19.6s,baz=208,slow=38
NRIK Noril'sk 67.59 9 P P 17 03 05.1 -1.6
NRIK IAmb IAmb 17 03 07.0
comp=Z,4nm,1.8s
AUDHS Darwin High Sc 68.11 105 P P 17 03 11.5 +0.5
BMRD Maredsous 68.14 324 dP P 17 03 10.0 -0.5
BMRD dPcP **PcP 17 03 36.5 0.0**
HFS Hagfors 68.27 335 P P 17 03 08.6 -2.6
comp=Z,11nm,0.9s,baz=137,slow=7.4,SNR=14
HFS LR LR 17 34 40.2
comp=Z,353nm,21.3s,baz=116,slow=38
comp=Z,11nm,0.9s
JNU Nakatsue 68.70 56 LR LR 17 33 17.8
comp=Z,440nm,21.8s,baz=258,slow=36
DBIC Dimbokro 68.74 276 P P 17 03 14.5 -0.5
comp=Z,2.6nm,0.8s,baz=96,slow=4.4,SNR=2.1
DBIC LR LR 17 33 49.7
comp=Z,380nm,19.0s,baz=124,slow=36
comp=Z,2.6nm,0.8s
DBIC Dimbokro 68.74 276 P P 17 03 13.7 -1.3
DBIC IAmb IAmb 17 04 44.0
comp=Z,12nm,0.9s
BNX BinXian 69.08 42 ⇓P P 17 03 15.5 -1.0
BNX pmax pmax
comp=Z,17nm,1.3s
NOA NORSAR Array B 69.79 336 P P 17 03 18.4 -2.3
comp=Z,7.8nm,1.1s,baz=115,slow=6.7,SNR=6.0
NOA LR LR 17 35 36.8
comp=Z,372nm,21.3s,baz=120,slow=38
comp=Z,7.8nm,1.1s
MDJ Mudanjiang 70.25 44 P P 17 03 23.0 -0.7
MDJ S **S 17 12 38.5 +2.8**
MDJ pmax pmax
comp=Z,26nm,1.6s
MDJ pmax pmax
comp=Z,350nm,4.8s
MDJ LR LR
comp=Z,690nm,19.9s
MDJ LR LR
comp=Z,750nm,13.7s
MDJ LR LR
comp=Z,1µm,19.2s
MDJ Mudanjiang 70.25 44 P P 17 03 23.8 +0.1
MDT Midelt 70.29 304 LR LR 17 34 38.8
comp=Z,323nm,20.2s,baz=93,slow=36
HEH HeiHe 70.49 37 eP P 17 03 24.0 -1.1
HEH sP **sP 17 03 29.5 +0.9**
HEH S **S 17 12 34.8 -3.5**
HEH pmax pmax
comp=Z,17nm,1.4s
HEH LR LR
comp=Z,590nm,18.4s
HEH LR LR
comp=Z,1µm,16.6s
HEH LR LR
comp=Z,2µm,18.5s
ARCES ARCESS Array B 70.70 347 P P 17 03 24.4 -1.7
comp=Z,11nm,0.9s,baz=107,slow=4.1,SNR=8.6
ARCES LR LR 17 37 10.1
comp=Z,225nm,18.2s,baz=126,slow=38
comp=Z,11nm,0.9s
ARCES ARCESS Array B 70.70 347 P P 17 03 23.6 -2.5
MAW Mawson 70.91 181 P P 17 03 29.0 +1.8

comp=Z,4.3nm,0.9s,baz=354,slow=7.2,SNR=4.0
MAW LR LR 17 28 27.8
comp=Z,422nm,19.1s,baz=34,slow=31
comp=Z,4.3nm,0.9s
ESDC Sonseca Array 70.99 311 P **P 17 03 27.4 -1.1**
comp=Z,7.9nm,1.0s,baz=84,slow=5.4,SNR=27
ESDC LR LR 17 33 27.0
comp=Z,78nm,19.9s,baz=90,slow=35
comp=Z,7.9nm,1.0s
ESDC Sonseca Array 70.99 311 P **P 17 03 26.9 -1.6**
ESDC IAmb IAmb 17 03 28.8
comp=Z,18nm,1.2s
USRK Ussuriysk Ar. 71.81 45 P **P 17 03 31.6 -1.6**
comp=Z,1.9nm,0.8s,baz=227,slow=7.7,SNR=3.4
comp=Z,1.9nm,0.8s
WRA Warramunga Arr 72.69 112 P **P 17 03 39.1 +0.2**
comp=Z,44nm,1.0s,baz=288,slow=5.5,SNR=134
WRA LR LR 17 33 41.5
comp=Z,155nm,18.7s,baz=271,slow=34
WRA Warramunga Arr 72.69 112 P **P 17 03 38.9 -0.1**
WRAB Tennant Creek 72.70 112 P **P 17 03 38.9 -0.1**
WRAB Tennant Creek 72.70 112 P **P 17 03 39.6 +0.6**
AUALC St Philip's Co 72.99 116 P **P 17 03 41.2 +0.5**
ASAR Alice Springs 73.00 116 P **P 17 03 40.8 0.0**
comp=Z,21nm,1.0s,baz=287,slow=5.8,SNR=114
ASAR LR LR 17 35 07.1
comp=Z,134nm,18.4s,baz=228,slow=35
comp=Z,21nm,1.0s
ASAR Alice Springs 73.00 116 P **P 17 03 40.1 -0.7**
SYO Syowa Base 74.26 189⇑*iP* **P 17 03 48.8 +1.6**
SYO Syowa Base 74.26 189⇑*epP* pP 17 03 51.0 +1.1
SYO Syowa Base 74.26 189⇓*esP* sP 17 03 56.4 +5.6
EKA Eskdalemuir Ar 74.36 327 P **P 17 03 46.1 -2.0**
comp=Z,3.2nm,0.9s,baz=160,slow=5.9,SNR=4.0
comp=Z,3.2nm,0.9s
MJAR Matsushiro Arr 75.17 53 P **P 17 03 51.3 -1.9**
comp=Z,2.5nm,1.0s,baz=267,slow=10.0,SNR=6.8
MJAR LR LR 17 39 58.8
comp=Z,309nm,18.9s,baz=265,slow=38
comp=Z,2.5nm,1.0s
MJAR Matsushiro Arr 75.17 53 P **P 17 03 51.9 -1.3**
MJAR IAmb IAmb 17 03 55.2
comp=Z,38nm,1.9s
YAK Yakutsk 75.66 26 LR LR 17 38 17.1
comp=Z,1µm,20.1s,baz=258,slow=37
YAK Yakutsk 75.66 26 P **P 17 03 53.8 -1.6**
YAK IAmb IAmb 17 03 55.3
comp=Z,51nm,1.4s
JHJ Hachijo jima 2 76.11 57 LR LR 17 39 47.4
comp=Z,251nm,19.0s,baz=216,slow=38
QIS Mount Isa 77.67 112 P **P 17 04 08.1 +0.4**
JCJ Chichijima 77.80 63 LR LR 17 36 51.6
comp=Z,111nm,21.9s,baz=232,slow=34
SPITS Spitsbergen Ar 78.63 351 LR LR 17 41 52.5
comp=Z,487nm,19.5s,baz=120,slow=38
TIXI Tiksi 78.94 17 LR LR 17 40 52.5
comp=Z,804nm,18.5s,baz=346,slow=37
TIXI Tiksi 78.94 17 P **P 17 04 12.0 -1.7**
TIXI IAmb IAmb 17 04 13.5
comp=Z,40nm,1.4s
AUJCS Jamestown Cent 78.98 125 P **P 17 04 15.5 +0.8**
HTT Hallett 79.28 125 P **P 17 04 16.7 +0.3**
ASAJ Asahikawa 79.32 46 LR LR 17 40 03.3
comp=Z,337nm,19.5s,baz=182,slow=36
GUMO Guam 80.21 77 LR LR 17 37 56.3
comp=Z,122nm,20.8s,baz=248,slow=34
JMIC Jan Mayen 81.12 342 LR LR 17 42 46.1
comp=Z,313nm,18.8s,baz=5.0,slow=38
STKA Stephens Creek 81.22 123 P **P 17 04 26.1 -0.7**
comp=Z,11nm,1.0s,baz=305,slow=6.7,SNR=12
STKA LR LR 17 36 12.2
comp=Z,285nm,21.2s,baz=220,slow=32
comp=Z,11nm,1.0s
STKA Stephens Creek 81.22 123 P **P 17 04 26.6 -0.2**
MTSU Mount Surprise 81.77 109 P **P 17 04 30.3 +0.3**
QLP Quilpie 82.71 117 P **P 17 04 35.5 +0.7**
PMG Port Moresby 83.70 100 P **P 17 04 39.3 -0.8**
PMG Port Moresby 83.70 100 P **P 17 04 40.7 +0.6**
CTA Charters Tower 83.80 111 LR LR 17 37 53.2
comp=Z,7.7nm,21.1s,baz=216,slow=33
CTA Charters Tower 83.80 111 P **P 17 04 39.8 -0.7**
CTAO Charters Tower 83.80 111 P **P 17 04 39.8 -0.7**
CTAO IAmb IAmb 17 04 41.5
comp=Z,27nm,1.1s
CTAO Charters Tower 83.80 111 P **P 17 04 40.4 -0.1**
AUMTC Mt Clear Colle 84.00 128 P **P 17 04 42.3 +1.1**
BRAT Ballarat 84.03 128 P **P 17 04 43.1 +1.8**
TV1H Townsville Har 84.23 110 P **P 17 04 43.2 +0.5**
CMSA Cobar Meteorol 84.62 122 P **P 17 04 44.5 0.0**
BORG Borgarnes 84.94 335 LR LR 17 47 01.5
comp=Z,255nm,20.0s,baz=335,slow=39
TOO Toolangi 85.26 128 P **P 17 04 47.4 -0.2**
TOO IAmb IAmb 17 04 49.8
comp=Z,25nm,1.4s
MA2 Magadan 85.33 31 LR LR 17 43 50.5
comp=Z,1µm,21.8s,baz=267,slow=36
SEY Seymchan 86.14 27 LR LR 17 45 45.8
comp=Z,755nm,19.3s,baz=272,slow=37
SNAA Sanae 86.18 197 P **P 17 04 51.3 -0.2**
AULRC Lightning Ridg 86.34 120 P **P 17 04 53.5 +0.4**
CAN Canberra 87.80 125 P **P 17 05 00.1 0.0**
CAN Canberra 87.80 125 P **P 17 05 01.5 +1.4**
AUMTS Mt Stromlo 87.80 125 P **P 17 05 01.2 +1.1**
AUMHS Melrose High S 87.88 125 P **P 17 05 01.5 +1.0**
AUDAR Daramalan Coll 87.91 125 P **P 17 05 01.7 +1.1**
AUNRC North Rockhamp 88.06 113 P **P 17 05 01.9 +0.4**
AUPHS Peel High Scho 89.00 121 P **P 17 05 06.8 +0.9**
PETK Petropavlovsk- 89.41 37 LR LR 17 46 42.8
comp=Z,920nm,21.5s,baz=260,slow=37
ARMA Armidale 89.58 120 P **P 17 05 09.1 +0.3**
ARMA IAmb IAmb 17 05 10.7
comp=Z,25nm,1.0s
ARMA Armidale 89.58 120 P **P 17 05 10.0 +1.3**
BILL Bilibino 91.34 22 P **P 17 05 14.9 -1.1**
QSPA South Pole Qui 90.43 180 P **P 17 05 29.0 +3.2**
comp=Z,3.3nm,1.1s,baz=256,slow=0.8,SNR=5.1
VNDA Vanda 95.03 168 LR LR 17 42 19.1
comp=Z,616nm,21.4s,baz=256,slow=32
BELA Belgrano 2 95.21 192 P **P 17 05 33.3 -0.3**
BELA IAmb IAmb 17 07 29.6
comp=Z,6.2nm,0.6s
SFJD Kangerlussuaq 96.26 339 LR LR 17 51 40.1
comp=Z,228nm,18.6s,baz=57,slow=37
HNR Honiara 96.30 99 LR LR 17 47 59.7
comp=Z,70nm,21.9s,baz=228,slow=35
SHEM Shemya Is, Ala 99.19 35 LR LR 17 53 57.2
comp=Z,345nm,18.2s,baz=288,slow=37
DZM Mont Dzumac 102.71 112 *e*LR LR 17 39 48.7
comp=Z,369nm,23.8s
MSO Missoula 129.89 358 PKPdf 17 11 20.2 -0.3
LPAZ La Paz 131.40 251 PKP **PKPdf 17 11 24.2 -0.6**
comp=Z,2.2nm,1.0s,baz=90,slow=1.0,SNR=5.3
LPAZ La Paz 131.40 251 PKPdf **PKPdf 17 11 25.4 +0.6**
BCYI Bear Canyon 132.39 358 PKPdf **PKPdf 17 11 25.1 -0.4**
PD31 Pinedale Array 133.63 354 PKPdf **PKPdf 17 11 26.1 -1.8**
PDAR Pinedale Array 133.63 354 PKP **PKPdf 17 11 27.1 -0.7**
comp=Z,1.3nm,0.8s,baz=48,slow=2.2,SNR=11
NVAR Mina Array Bea 138.26 3 PKP **PKPdf 17 11 37.3 +0.7**
comp=Z,2.9nm,0.9s,baz=313,slow=1.2,SNR=9.0
TBI Tubuai 141.99 124 *e*LR LR 17 57 59.3
comp=Z,631nm,31.5s
MNTX Cornudas Mount 143.63 345 PKPdf PKPbc 17 11 43.4 -0.1
TUC Tucson 144.10 353 PKPbc 17 11 45.0 0.0
PPT2 Papeete2 144.11 115 *e*LR LR 17 58 52.5
comp=Z,176nm,26.2s
PPT2 *e*LR LR 17 58 59.2
comp=Z,250nm,25.8s
ALPN Alpine 144.38 342 PKPdf PKPab 17 11 44.9 -0.7
ESPN Las Esperanzas 144.97 297 PKPab 17 11 46.2 -1.9
TXAR Lajitas Array 145.35 341 PKPbc **PKPbc 17 11 48.3 -0.8**
comp=Z,15nm,1.0s,baz=52,slow=2.1,SNR=71
TXAR Lajitas Array 145.35 341 PKPbc 17 11 47.8 -1.3
MTO3 Montecristo 148.28 305 PKPdf 17 11 56.3 +1.6
TAOE Nuku Hiva Isla 155.29 104 *e*LR LR 18 04 09.0
comp=Z,180nm,24.5s

*IDC **27** 16:58:02.1±2.4,41.°65N×19.°08E, h0km, mb3.6/5, mbtmp3.5/7, ML2.9/2, Error ellipse: s-maj=35.6km s-min=21.3km az=4.0*
*SKO **27** 16:58:04.3,41.°56N×19.°28E, h0km, ML3.0*
*BEO **27** 16:58:05.4±0.6,41.°47N×19.°51E, h9km±3km, ML3.0/11*
ISC 27 16:58:04.9±1.2**,41.°55N**±0.°03×**19.°37E**±0.°04**, h10**km±9km**, n52**, σ1s27/77, mb3.5/4, 11C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.42**	**118**	*i* Pg	**Pg**	**16 58 12.9**	**-0.4**
TIR				*i* Sg	**Sg**	**16 58 19.1**	**+0.2**
DRME	**Dracevica, Mon**	**0.65**	**348**	*e*Pg	**Pb**	**16 58 18.2**	**-0.2**
DRME				*e*Sg	**Sn**	**16 58 32.2**	**+1.6**
PDG	**Podgorica**	**0.89**	**355**	⇑P	**Pb**	**16 58 22.5**	**+0.1**
PDG	**Podgorica**	**0.89**	**355**	*e*Pg	**Pb**	**16 58 22.5**	**+0.1**
PDG				*e*Sg	**Sn**	**16 58 37.1**	**+0.8**
OHR	**Ohrid**	**1.16**	**112**	*i* Pg	**Pg**	**16 58 26.7**	**-0.6**
OHR				*i* Sg	**Sg**	**16 58 43.9**	**+1.5**
OHR				*e*Lg	Lg	16 58 44.9	
	comp=N,220nm,0.4s						
OHR				*e*Lg	Lg	16 58 45.5	
	comp=E,199nm,0.7s						
KOME	**Kolasin**	**1.31**	**5**	*e*Pg	**Pb**	**16 58 29.6**	**0.0**
KOME				*e*Sg	**Sn**	**16 58 49.2**	**+2.4**
SKO	**Skopje**	**1.61**	**74**	*i* Pg	**Pn**	**16 58 34.1**	**+0.7**
SKO				*i* Sg	**Sn**	**16 58 54.8**	**+0.7**
SJES	**Sjenica**	**1.77**	**14**	*e*Pg	**Pg**	**16 58 38.5**	**-0.4**
SJES				*e*Sg	**Sg**	**16 59 01.9**	**0.0**
IVAS	**Ivanjica**	**2.11**	**16**	*e*Pn	**Pn**	**16 58 41.6**	**+1.3**
IVAS				*e*Sn	**Sb**	**16 59 10.1**	**+0.6**
SELS	**Selova**	**2.12**	**37**	*e*Pn	**Pn**	**16 58 41.2**	**+0.9**
SELS				*e*Sn	**Sn**	**16 59 08.5**	**+1.8**
IGT	**Igoumenitsa**	**2.14**	**160**	*i* Pn	**Pn**	**16 58 42.0**	**+1.3**
IGT				*i* Sn	**Sn**	**16 59 08.8**	**+1.5**
MATE	**Matera**	**2.20**	**247**	⇑P	**Pn**	**16 58 43.9**	**-0.9**
BARS	**Barje**	**2.22**	**54**	*i* Pn	**Pn**	**16 58 43.4**	**+1.7**
BARS				*i* Sn	**Sn**	**16 59 10.6**	**+1.4**
BARS	**Barje**	**2.22**	**54**	*e*Pn	**Pn**	**16 58 42.3**	**+0.6**
BARS				*e*Sn	**Sn**	**16 59 09.2**	**0.0**
GOCS	**Kraljevo Serbi**	**2.30**	**28**	*e*Pn	**Pn**	**16 58 43.7**	**+0.7**
GOCS				*e*Sn	**Sn**	**16 59 12.9**	**+1.5**
BBLS	**Lazi&#263i**	**2.32**	**1**	*e*Pn	**Pn**	**16 58 44.8**	**+1.6**
BBLS				*e*Sn	**Sb**	**16 59 14.6**	**-0.9**
GRG	**Griva**	**2.36**	**103**	*i* Pn	**Pn**	**16 58 44.2**	**+0.4**
GRG				*i* Sn	**Sn**	**16 59 13.2**	**+0.4**
VAY	**Valandovo**	**2.42**	**94**	*i* Pn	**Pn**	**16 58 45.1**	**+0.7**
VAY				*i* Sn	**Sn**	**16 59 14.2**	**+0.1**
VAY				*e*Lg	Lg	16 59 16.5	
	comp=E,43nm,0.6s						
VAY				*e*Lg	Lg	16 59 22.8	
	comp=N,52nm,0.6s						
BOSS	**Bosilegrad**	**2.50**	**67**	*e*Pn	**Pn**	**16 58 45.5**	**-0.2**
BOSS				*e*Sn	**Sn**	**16 59 15.9**	**-0.4**
GRUS	**Gruza**	**2.54**	**23**	*e*Pn	**Pn**	**16 58 47.5**	**+1.3**
GRUS				*e*Sn	**Sn**	**16 59 19.0**	**+1.8**
KNT	**Kendrikon**	**2.69**	**97**	*i* Pn	**Pn**	**16 58 48.8**	**+0.6**
BOVS	**Bovan**	**2.71**	**39**	⇑P	**Pn**	**16 58 49.6**	**+1.1**
BOVS	**Bovan**	**2.71**	**39**	*e*Pn	**Pn**	**16 58 49.1**	**+0.6**
BOVS				*e*Sn	**Sn**	**16 59 20.9**	**-0.3**
LIT	**Litokhoron**	**2.78**	**120**	*i* Pn	**Pn**	**16 58 50.6**	**+1.2**
KKB	**Krupnik**	**2.83**	**83**	*i* Pn	**Pn**	**16 58 51.2**	**+1.0**
KKB				*i* Sn	**Sn**	**16 59 24.7**	**+0.4**
ZAPS	**Zavoj**	**2.97**	**53**	*e*Pn	**Pn**	**16 58 53.7**	**+1.6**
ZAPS				*e*Sn	**Sn**	**16 59 27.5**	**-0.3**
TEKS	**Tekeris**	**3.00**	**2**	*e*Pn	**Pn**	**16 58 53.5**	**+1.0**
TIP	**Timpagrande**	**3.09**	**221**	⇑P	**Pn**	**16 58 55.3**	**+1.5**
SOH	**Sokhos**	**3.10**	**102**	*i* Pn	**Pn**	**16 58 54.1**	**+0.2**
ZAGS	**Zajecar**	**3.10**	**42**	*e*Pn	**Pn**	**16 58 54.7**	**+0.9**
ZAGS				*e*Sn	**Sn**	**16 59 31.5**	**+0.7**
BORS2	**Bor- Borsko je**	**3.20**	**37**	*e*Pn	**Pn**	**16 58 55.0**	**-0.3**
BORS2				*e*Sn	**Sn**	**16 59 32.1**	**-1.4**
SRS	**Serrai**	**3.21**	**96**	*i* Pn	**Pn**	**16 58 55.8**	**+0.4**
MMB	**Musomishta**	**3.29**	**89**	*i* Pn	**Pn**	**16 58 57.6**	**+1.1**
KUBS	**Kucevo**	**3.33**	**30**	*e*Pn	**Pn**	**16 58 56.5**	**-0.5**
KUBS				*e*Sn	**Sn**	**16 59 34.6**	**-1.9**
MDVR	**Moldovita**	**3.66**	**27**	⇓P	**Pn**	**16 59 02.6**	**+1.0**
HERR	**Herculane**	**4.01**	**33**	⇓P	**Pn**	**16 59 07.4**	**+1.1**
SRE	**Strehaia**	**4.19**	**41**	⇑P	**Pn**	**16 59 10.7**	**+1.9**
BZS	**Buzias**	**4.38**	**21**	⇓P	**Pn**	**16 59 12.9**	**+1.4**
GZR	**Gura Zlata**	**4.58**	**32**	⇑P	**Pn**	**16 59 15.6**	**+1.4**
HUMR	**Humele**	**5.08**	**52**	⇑P	**Pn**	**16 59 22.3**	**+1.3**
ARR	**Arges**	**5.41**	**43**	⇓P	**Pn**	**16 59 27.8**	**+2.1**
VOIR		**5.67**	**45**	⇑P	**Pn**	**16 59 31.3**	**+2.0**
MLR	**Muntele Rosu**	**6.20**	**48**	Pn	**Pn**	**16 59 39.7**	**+3.2**
	comp=N,1.1nm,0.3s,baz=233,slow=10,SNR=7.2						
MLR				Sn	**Sn**	**17 00 47.5**	**+0.1**
	comp=N,0.2nm,0.3s,baz=195,slow=12,SNR=2.2						
	comp=N,3.4nm,0.5s						
MLR	**Muntele Rosu**	**6.20**	**48**	⇑P	**Pn**	**16 59 38.6**	**+2.1**
PLOR	**Plostina**	**6.81**	**48**	⇑P	**Pn**	**16 59 46.9**	**+2.1**
VRI	**Vrincioaia**	**6.86**	**49**	⇑P	**Pn**	**16 59 47.0**	**+1.5**
GERES	**GERESS Array B**	**8.32**	**333**	Pn	**Pn**	**17 00 02.3**	**-3.3**
	baz=145,slow=19,SNR=1.4						
	comp=N,0.2nm,0.4s						
FINES	**FINESS Array B**	**20.34**	**9**	P	**P**	**17 02 39.6**	**-1.3**
	comp=N,2.2nm,0.8s,baz=183,slow=12,SNR=7.6						
	comp=N,2.2nm,0.8s						
BVAR	**Borovoye Array**	**35.73**	**54**	P	**P**	**17 05 03.0**	**-0.5**
	comp=N,0.3nm,0.6s,baz=316,slow=14,SNR=2.2						
	comp=N,0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**41.02**	**56**	P	**P**	**17 05 47.5**	**-0.5**
	comp=N,0.2nm,0.6s,baz=286,slow=9.8,SNR=2.4						
	comp=N,0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**44.17**	**51**	P	**P**	**17 06 12.2**	**-1.3**
	comp=N,0.8nm,0.4s,baz=282,slow=7.5,SNR=5.7						
	comp=N,0.8nm,0.4s						
MKAR	**Makanchi Array**	**44.37**	**61**	P	**P**	**17 06 14.3**	**-1.0**
	comp=N,0.4nm,0.4s,baz=280,slow=7.4,SNR=12						
	comp=N,0.4nm,0.4s						

*IDC **27** 17:01:26.2±2.3,49.°21S×118.°67E, h0km, mb3.7/4, mbtmp3.8/5, ML2.0/1, Error ellipse: s-maj=116.7km s-min=22.3km az=99.0*
ISC 27 17:01:27.6±1.4**,49.°2S**±0.°1×**118.°5E**±0.°5**, h10**km**, n9, σ0s98/6, mb3.7/4, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.65**	**346**	T	T	17 18 28.4	
	baz=170,slow=74,SNR=13						
H01W1	**Cape Leeuwin H**	**14.65**	**346**	T	T	17 18 28.4	
	baz=170,slow=74,SNR=12						
H01W3	**Cape Leeuwin H**	**14.67**	**346**	T	T	17 18 28.8	
	baz=170,slow=74,SNR=9.5						
NWAO	**Narrogin (SRO)**	**16.29**	**356**	Pn	**Pn**	**17 05 16.8**	**+0.4**
	0.3nm,0.3s,baz=174,slow=13,SNR=2.5						
	13nm,1.0s						
ASAR	**Alice Springs**	**28.23**	**31**	P	**P**	**17 07 21.1**	**+0.4**
	0.4nm,0.8s,baz=202,slow=7.0,SNR=6.1						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**31.84**	**29**	P	**P**	**17 07 52.4**	**-0.2**
	0.5nm,0.8s,baz=198,slow=10,SNR=1.7						
	0.5nm,0.8s						
VNDA	**Vanda**	**32.81**	**164**	P	**P**	**17 08 01.1**	**+0.5**
	1.4nm,0.9s,baz=284,slow=7.3,SNR=2.4						
	1.4nm,0.9s						
QSPA	**South Pole Qui**	**40.92**	**180**	P	**P**	**17 09 10.0**	**+0.1**
	2.6nm,1.1s,baz=276,slow=9.2,SNR=6.2						
	2.6nm,1.1s						
PDAR	**Pinedale Array**	**146.46**	**82**	PKPbc	**PKPdf**	**17 21 05.7**	**-1.5**
	0.4nm,0.8s,baz=126,slow=2.6,SNR=3.6						

*IDC **27** 17:07:22.3±1.1, 12.°43N×144.°02E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=33.6km s-min=18.1km az=110.0*
ISC 27 17:07:26.3±1.1**, 12.°4N**±0.°2×**144.°0E**±0.°2**, h27**km**, n14, σ0s72/9, mb3.7/7, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.43**	**36**	Pn	**Pn**	**17 07 50.5**	**0.0**
	26nm,0.3s,baz=190,slow=18,SNR=1.7						
GUMO				Sn	**Sn**	**17 08 08.8**	**+0.3**
	63nm,0.3s,baz=161,slow=22,SNR=8.1						
GUMO				LR	LR	17 08 32.2	
	comp=Z,342nm,19.3s,baz=204,slow=49						
H11S3	**WAKE ISLAND Hy**	**22.67**	**72**	T	T	17 36 00.9	
	baz=258						
H11S1	**WAKE ISLAND Hy**	**22.68**	**72**	T	T	17 36 10.3	
	baz=258						
H11S2	**WAKE ISLAND Hy**	**22.68**	**72**	T	T	17 35 58.2	
	baz=258						
H11N1	**WAKE ISLAND Hy**	**23.14**	**69**	T	T	17 36 25.9	
	baz=255,slow=75,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**23.15**	**69**	T	T	17 36 26.2	
	baz=255,slow=75,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**23.16**	**69**	T	T	17 36 26.4	
	baz=255,slow=75,SNR=5.4						
WRA	**Warramunga Arr**	**33.54**	**197**	P	**P**	**17 14 04.5**	**+0.5**
	0.7nm,0.7s,baz=21,slow=9.7,SNR=7.1						
	0.7nm,0.7s						
ASAR	**Alice Springs**	**37.20**	**195**	P	**P**	**17 14 35.4**	**-0.1**
	0.2nm,0.6s,baz=19,slow=12,SNR=7.9						
	0.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.76**	**284**	P	**P**	**17 15 30.0**	**+0.1**
	0.4nm,0.3s,baz=86,slow=8.9,SNR=1.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**61.75**	**317**	P	**P**	**17 17 42.8**	**+0.3**
	0.1nm,0.5s,baz=89,slow=7.5,SNR=2.1						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**64.97**	**320**	P	**P**	**17 18 04.3**	**+0.6**
	0.5nm,0.7s,baz=106,slow=7.0,SNR=3.5						
	0.5nm,0.7s						
BVAR	**Borovoye Array**	**70.32**	**322**	P	**P**	**17 18 38.0**	**+0.6**
	0.6nm,0.3s,baz=105,slow=8.1,SNR=8.8						
	0.6nm,0.3s						
FINES	**FINESS Array B**	**91.86**	**335**	P	**P**	**17 20 30.4**	**-1.4**
	1.2nm,0.8s,baz=339,slow=18,SNR=0.8						
	1.2nm,0.8s						

*IDC **27** 17:11:01.7±0.9,41.°52N×19.°41E, h0km, mb3.7/9, mbtmp3.8/17, ML2.8/6, Error ellipse: s-maj=16.1km s-min=12.4km az=149.0*
*NEIC **27** 17:11:03.6±2.2,41.°56N±0.°05×19.°50E±0.°07, h10km±1km, mb4.3/6, Error ellipse: s-maj=9.4km s-min=7.6km az=253.0*
*BEO **27** 17:11:03.1±0.6,41.°43N×19.°53E, h6km±3km, ML3.5/16*
*RHSSO **27** 17:11:03.9±1.0,41.°41N×19.°27E, h8km±4km, ML3.6/4*
*SKO **27** 17:11:03.6,41.°61N×19.°38E, h0km, ML3.5*
*PRU **27** 17:11:04.5,41.°40N×19.°48E, h10km, M4.3*
*TIR **27** 17:11:05.4,41.°59N×19.°58E, h31km±2km, Ml3.3/8*
ISC 27 17:11:03.7±1.0**,41.°51N**±0.°02×**19.°47E**±0.°02**, h13**km±7km**, n174, σ1s58/223, mb4.1/8, 21C-25D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**119**	Pg	**Pb**	**17 11 11.5**	**-0.1**
TIR				Sg	**Sg**	**17 11 14.6**	**-0.7**
TIR				AML	AML	17 11 16.5	
	10nm,0.2s						
TIR				AML	AML	17 11 21.7	
	12nm,0.8s						
TIR	**Tirane**	**0.34**	**119**	*i* Pg	**Pb**	**17 11 11.5**	**-0.1**
TIR				*i* Sg	**Sb**	**17 11 17.2**	**+0.2**
SDA	**Shkodra**	**0.54**	**3**	Pg	**Pg**	**17 11 14.1**	**-0.2**
SDA				Sg	**Sb**	**17 11 23.1**	**+0.4**
DRME	**Dracevica, Mon**	**0.70**	**343**	*e*Pg	**Pg**	**17 11 17.5**	**+0.1**
DRME				*e*Sg	**Sn**	**17 11 30.9**	**+0.8**
PHP	**Peshkopia**	**0.75**	**76**	Pg	**Pg**	**17 11 17.3**	**-0.9**
PHP				Sg	**Sg**	**17 11 27.9**	**-0.3**
PHP				AML	AML	17 11 34.8	
	16nm,0.8s						
PDG	**Podgorica**	**0.93**	**350**	Pg	**Pg**	**17 11 21.2**	**-0.5**
PDG				Sg	**Sn**	**17 11 35.4**	**-0.1**
PDG	**Podgorica**	**0.93**	**350**		**Pg**	**17 11 20.2**	**-1.4**
PDG	**Podgorica**	**0.93**	**350**	⇑P	**Pg**	**17 11 21.2**	**-0.5**
PDG				⇑S	**Sg**	**17 11 33.2**	**-0.6**
PDG	**Podgorica**	**0.93**	**350**	*e*Pg	**Pg**	**17 11 20.7**	**-1.0**
PDG				*e*Sg	**Sb**	**17 11 34.9**	**+1.0**
VLO	**Vlora**	**1.04**	**179**	Pg	**Pn**	**17 11 25.5**	**+1.5**
VLO				Sg	**Sn**	**17 11 41.6**	**+3.3**
VLO				AML	AML	17 11 52.6	
	8.7nm,0.7s						
OHR	**Ohrid**	**1.08**	**111**	*i* Pg	**Pb**	**17 11 24.6**	**+0.3**
OHR				*i* Sg	**Sn**	**17 11 42.1**	**+2.7**
OHR				*e*Lg	Lg	17 11 43.5	
	comp=N,628nm,0.5s						
OHR				*e*Lg	Lg	17 11 43.9	
	comp=E,805nm,0.6s						
KOME	**Kolasin**	**1.34**	**2**	*e*Pg	**Pn**	**17 11 28.5**	**+0.4**
KOME				*e*Sg	**Sg**	**17 11 48.1**	**+1.3**
KBN	**Korca**	**1.34**	**131**	Pg	**Pg**	**17 11 30.4**	**+1.0**
KBN				Sg	**Sg**	**17 11 47.7**	**+0.9**
KBN				AML	AML	17 11 59.3	
	comp=E,2.4nm,0.8s						
TREB	**Trebinje**	**1.46**	**326**	*e*Pg	**Pb**	**17 11 30.9**	**+0.2**
TREB				*e*Sg	**Sb**	**17 11 50.2**	**+1.0**
SKO	**Skopje**	**1.55**	**72**	*i* Pg	**Pb**	**17 11 32.5**	**+0.3**
SKO				*i* Sg	**Sg**	**17 11 53.4**	**-0.1**
NEST	**Nestorio**	**1.63**	**132**	Pn	**Pg**	**17 11 35.0**	**+0.1**
NEST				Sn	**Sg**	**17 11 56.6**	**+0.5**
NEST				AML	AML	17 12 04.6	
	comp=E,1.0nm,0.7s						
SJES	**Sjenica**	**1.79**	**12**	*e*Pg	**Pb**	**17 11 36.5**	**+0.2**
SJES				*e*Sg	**Sg**	**17 12 00.9**	**-0.3**
KEK	**Kerkira**	**1.82**	**172**		**Pg**	**17 11 39.7**	**+1.2**
NOCI	**Noci**	**1.95**	**249**	Pn	**Pg**	**17 11 41.2**	**+0.1**
NOCI				AML	AML	17 12 16.6	
	comp=E,2.3nm,0.4s						
IGT	**Igoumenitsa**	**2.09**	**161**	Pn	**Pb**	**17 11 40.7**	**-0.7**
IGT				Sn	**Sg**	**17 12 09.3**	**-1.4**
IGT	**Igoumenitsa**	**2.09**	**161**	*i* Pn	**Pb**	**17 11 40.2**	**-1.1**
SELS	**Selova**	**2.10**	**35**	*e*Pn	**Pn**	**17 11 39.8**	**+1.3**
SELS				*e*Sn	**Sb**	**17 12 06.8**	**-0.8**
RUDO	**Rudo**	**2.10**	**358**	*e*Pn	**Pb**	**17 11 41.1**	**-0.6**
RUDO				*e*Sn	**Sb**	**17 12 08.0**	**+0.3**
IVAS	**Ivanjica**	**2.12**	**14**	*e*Pn	**Pn**	**17 11 39.8**	**+0.9**
IVAS				*e*Sn	**Sb**	**17 12 07.9**	**-0.4**
BARS	**Barje**	**2.18**	**53**	*i* Pn	**Pn**	**17 11 40.7**	**+1.1**
BARS	**Barje**	**2.18**	**53**	*e*Pn	**Pn**	**17 11 40.4**	**+0.8**
BARS				*e*Sn	**Sn**	**17 12 05.9**	**-0.5**
MATE	**Matera**	**2.26**	**248**	⇓P	**Pn**	**17 11 42.2**	**+1.6**
GRG	**Griva**	**2.28**	**103**	*i* Pn	**Pn**	**17 11 42.8**	**+1.8**
GRG				*i* Sn	**Sb**	**17 12 11.6**	**-1.3**
GOCS	**Kraljevo Serbi**	**2.30**	**26**	*e*Pn	**Pn**	**17 11 42.4**	**+1.1**
GOCS				*e*Sn	**Sn**	**17 12 10.9**	**+1.4**
VAY	**Valandovo

BLY Banja Luka 3.64 333 *e*Pn **Pn** 17 12 00.1 +0.4
BLY *e*Sn **Sn** 17 12 43.4 +1.0
BLY Banja Luka 3.64 333 ⇑P **Pn** 17 11 59.2 -0.5
FRGS Fruska Gora 3.65 4 *e*Pn **Pn** 17 12 00.2 +0.3
MDVR Moldovita 3.66 26 ⇓P **Pn** 17 12 00.8 +0.9
RZN Rozhen 3.96 86 P **Pn** 17 12 05.7 +1.5
HERR Herculane 4.00 32 ⇓P **Pn** 17 12 05.9 +1.4
HERR ⇓S **Sn** 17 12 51.8 +0.5
PLD Plovdiv 4.00 79 *i* Pn **Pn** 17 12 06.6 +2.0
SRE Strehaia 4.17 40 ⇑P **Pn** 17 12 08.7 +1.7
PLVB Pleven 4.25 62 ⇑P **Pn** 17 12 10.3 +2.2
CEL Celeste 4.25 221 **Pn** 17 12 08.5 +0.4
BZS Buzias 4.39 20 ⇓P **Pn** 17 12 10.7 +0.7
BZS ⇓S **Sn** 17 13 01.2 +0.3
GZR Gura Zlata 4.57 31 ⇓P **Pn** 17 12 13.6 +1.1
GZR ⇓S **Sn** 17 13 07.0 +1.6
RDO Rodhopi 4.59 93 **Pn** 17 12 14.4 +1.7
AQU L'Aquila 4.60 283 *e*Pn **Pn** 17 12 11.7 -1.2
AQU *e*Sn **Sn** 17 13 02.8 -3.4
CAMP Campotosto 4.63 285 **Pn** 17 12 14.3 +0.9
SURR Surduc 4.66 24 ⇓P **Pn** 17 12 14.6 +1.0
ITM Ithomi 4.73 155 Pn **Pn** 17 12 15.1 +0.5
MORH Mrgy, Hungar 4.74 353 *e*Pn **Pn** 17 12 15.7 +1.0
MORH *e*Sn **Sn** 17 13 11.2 +1.7
MORH Mrgy, Hungar 4.74 353 ⇑P **Pn** 17 12 15.7 +1.0
GUMA Gualdo di Mace 4.80 291 **Pn** 17 12 14.9 -0.8
NRCA Norcia 4.90 288 **Pn** 17 12 18.4 +1.3
ELND Elena 4.97 71 ⇑P **Pn** 17 12 19.9 +2.0
FDMO Fiordimonte 4.97 290 **Pn** 17 12 19.6 +1.6
SIRR Siria 5.01 18 ⇓P **Pn** 17 12 19.9 +1.4
SIRR ⇓S **Sn** 17 13 15.9 -0.4
LOT Lotru 5.03 37 ⇑P **Pn** 17 12 20.4 +1.5
HUMR Humele 5.04 51 ⇓P **Pn** 17 12 20.5 +1.6
STFAR Stefanesti-Arg 5.23 48 ⇓P **Pn** 17 12 24.3 +2.8
CESX Cesi 5.24 284 **Pn** 17 12 22.1 +0.4
BEHE Becsehely 5.32 340 Pn **Pn** 17 12 22.6 -0.2
BEHE Becsehely 5.32 340 *e*Pn **Pn** 17 12 23.5 +0.7
ARR Arges 5.38 43 ⇓P **Pn** 17 12 25.2 +1.5
MURB Monte Urbino 5.43 291 **Pn** 17 12 25.7 +1.3
MTUR Matau 5.51 46 ⇓P **Pn** 17 12 28.3 +2.8
LOZB Loznitsa 5.59 68 ⇑P **Pn** 17 12 28.8 +2.3
VAE Valguarnera 5.61 226 Pn **Pn** 17 12 27.9 +1.0
comp=E,1.5nm,0.3s,baz=28,slow=20,SNR=6.5
comp=E,5.8nm,0.4s
VOIR 5.65 44 ⇓P **Pn** 17 12 29.0 +1.7
DRGR 5.77 23 ⇑P **Pn** 17 12 29.9 +0.9
RAFF Raffo Rosso 5.83 224 Pn **Pn** 17 12 29.8 +0.1
SOKA Soboth 6.07 330 *e*Pn **Pn** 17 12 33.7 +0.6
comp=E,5.1nm,0.5s,SNR=9.1
SOKA *e*Sn **Sn** 17 13 43.3 +0.9
comp=E,6.0nm,0.9s
OBKA Obir 6.12 326 *i* Pn **Pn** 17 12 36.3 +2.4
comp=E,4.4nm,0.5s
SABO M.te Sabotino 6.16 318 Pn **Pn** 17 12 34.9 +0.6
MLR Muntele Rosu 6.16 48 Pn **Pn** 17 12 38.0 +3.6
comp=E,15nm,0.6s,baz=168,slow=7.7,SNR=32
MLR Sn **Sn** 17 13 47.0 +2.1
comp=E,0.5nm,0.3s,baz=174,slow=18,SNR=1.2
MLR Muntele Rosu 6.16 48 **Pn** 17 12 36.4 +1.9
MLR Muntele Rosu 6.16 48 ⇑P **Pn** 17 12 36.9 +2.4
DOPR Dopca 6.18 42 ⇑P **Pn** 17 12 36.8 +2.2
ISR Istrita 6.29 53 ⇑P **Pn** 17 12 38.9 +2.7
NEHR Nehoiu 6.32 49 ⇓P **Pn** 17 12 39.4 +2.9
ARSA Arzberg 6.39 335 Pn **Pn** 17 12 36.7 -0.8
ARSA Arzberg 6.39 335 *i* Pn **Pn** 17 12 39.4 +1.8
comp=E,4.1nm,0.4s
PSZ Piszkesteto 6.41 3 **Pn** 17 12 37.9 +0.1
PSZ Piszkesteto 6.41 3 ⇑P **Pn** 17 12 38.6 +0.8
OZUR 6.47 43 ⇓P **Pn** 17 12 41.3 +2.7
COVR Voineasa-Covas 6.53 46 ⇓P **Pn** 17 12 42.2 +2.9
TURR Turia 6.56 44 ⇓P **Pn** 17 12 42.3 +2.5
RONA Rosalia, Austr 6.59 341 *i* Pn **Pn** 17 12 44.0 +3.9
comp=E,2.4nm,0.4s
MYKA Terra Mystica 6.61 323 *e*Pn **Pn** 17 12 42.1 +1.6
comp=E,2.4nm,0.5s
BISRR Bisoca 6.63 50 ⇓P **Pn** 17 12 43.4 +2.6
ICOR Ion Corvin 6.66 64 ⇓P **Pn** 17 12 43.8 +2.7
PLOR Plostina 6.78 48 ⇑P **Pn** 17 12 45.3 +2.5
VRI Vrincioaia 6.83 48 ⇓P **Pn** 17 12 45.9 +2.4
TEOL Teolo 6.85 307 Pn **Pn** 17 12 44.0 +0.2
ONER Baraj Valea Uz 6.95 44 ⇑P **Pn** 17 12 47.6 +2.5
MODS Modra-Piesok 7.03 348 *e*PG **Pb** 17 13 05.4 -0.2
KBA Koelnbreinsper 7.09 324 *i* Pn **Pn** 17 12 48.7 +1.5
comp=E,4.6nm,0.6s
ABTA Abfaltersbach 7.24 319 *i* Pn **Pn** 17 12 51.3 +2.1
comp=E,2.7nm,0.4s
CTI Castel Tesino 7.25 311 **Pn** 17 12 48.5 -0.8
CFR Carcaliu 7.30 57 ⇑P **Pn** 17 12 51.5 +1.6
TPGR Topolog 7.35 60 ⇓P **Pn** 17 12 52.9 +2.3
BURAR Bucovina Array 7.35 32 Pn **Pn** 17 12 51.2 +0.5
BURAR Bucovina Array 7.35 32 ⇑P **Pn** 17 12 53.0 +2.3
BUR08 Bucovina Ar. S 7.37 32 **Pn** 17 12 52.8 +1.8
BIOA Bad Ischl, Aus 7.44 328 *i* Pn **Pn** 17 12 55.2 +3.3
comp=E,4.8nm,0.5s
IDI Anoyia 7.53 144 Pn **Pn** 17 12 52.7 -0.5
comp=E,3.9nm,0.9s,baz=276,slow=6.8,SNR=1.8
IDI Sn **Sn** 17 14 12.9 -5.6
comp=E,0.3nm,0.3s,baz=29,slow=20,SNR=1.7
LANS Liptovska Anna 7.64 0 *e*PN Pn 17 12 48.8 -5.8
LANS *e*PG Pg 17 13 23.8 -6.0
LANS *e*SN Sn 17 14 03.7 -17
LESA Schwarzleotal 7.65 323 *e*Pn **Pn** 17 12 56.0 +1.3
comp=E,3.1nm,0.4s,SNR=4.2
TLCR 7.74 59 ⇓P **Pn** 17 12 58.9 +3.0
STHS Stebnicka Huta 8.00 8 *e*PG **Pg** 17 13 36.7 -0.1
WTTA Wattenberg 8.03 318 *e*Pn **Pn** 17 13 03.3 +3.3
comp=E,2.4nm,0.2s
VRAC Vranov 8.05 346 Sn Sn 17 14 19.5 -12
comp=E,0.5nm,0.3s,baz=180,slow=20,SNR=2.0
WATA Walderalm 8.11 319 *i* Pn **Pn** 17 13 05.1 +3.9
comp=E,3.7nm,0.3s
SQTA Sankt Quirin 8.21 317 *i* Pn **Pn** 17 13 05.2 +2.6
comp=E,2.1nm,0.4s
FETA Feichten 8.34 314 *e*Pn **Pn** 17 13 07.3 +3.0
comp=E,1.0nm,0.3s
MOTA Moosalm 8.35 317 *e*Pn **Pn** 17 13 06.7 +2.2
comp=E,2.1nm,0.5s
MOTA *e*Sn **Sn** 17 14 40.0 +1.3
comp=E,10nm,0.8s
FUORN Ofenpass-Fuorn 8.36 311 Pn **Pn** 17 13 05.6 +0.9
GERES GERESS Array B 8.38 333 Pn **Pn** 17 13 05.3 +0.4
baz=155,slow=14,SNR=7.5
comp=E,1.1nm,0.6s
DAVOX Davos/Dischmat 8.67 311 Pn **Pn** 17 13 09.9 +1.0
comp=E,0.6nm,0.3s,baz=122,slow=19,SNR=6.1
DAVOX Sn **Sn** 17 14 44.9 -1.7
comp=E,0.3nm,0.3s,baz=180,slow=20,SNR=1.5
comp=E,1.7nm,0.3s
KHC Kasperske Hory 8.67 333 Pn **Pn** 17 13 10.1 +1.3
KHC Kasperske Hory 8.67 333 *e*PN **Pn** 17 13 09.9 +1.1
TUE Stuetta 8.82 308 Pn **Pn** 17 13 12.1 +1.2
DAVA Damuels 8.96 313 *e*Pn **Pn** 17 13 15.9 +3.0
comp=E,1.7nm,0.3s
KEST Kesra 9.79 237 Pn **Pn** 17 13 25.0 +0.8
comp=E,0.1nm,0.3s,baz=72,slow=20,SNR=1.6
comp=E,1.8nm,0.7s
SENIN Lac Senin/Sane 10.02 303 Pn **Pn** 17 13 26.7 -0.7
AKASG Malin Array Be 11.40 33 Pn **Pn** 17 13 46.1 0.0
comp=E,0.3nm,0.3s,baz=222,slow=12,SNR=4.3
comp=E,0.5nm,0.5s
HFS Hagfors 18.98 351 P **P** 17 15 23.6 -1.0
comp=E,0.2nm,0.3s,baz=156,slow=12,SNR=5.7
comp=E,3.9nm,0.7s
NOA NORSAR Array B 20.19 348 P **P** 17 15 36.8 -1.0
comp=E,0.6nm,0.7s,baz=150,slow=9.7,SNR=3.9
comp=E,0.6nm,0.7s
EKA Eskdalemuir Ar 20.28 321 P **Pz** 17 15 38.8 0.0
comp=E,1.1nm,0.6s,baz=111,slow=9.6,SNR=5.1
comp=E,1.1nm,0.6s
FINES FINESS Array B 20.36 9 P **P** 17 15 38.5 -1.0
comp=E,5.1nm,0.6s,baz=185,slow=9.2,SNR=33
comp=E,5.1nm,0.6s
FINES FINESS Array B 20.36 9 P **P** 17 15 38.4 -1.1
FIA1 FINESS Array S 20.36 9 P **P** 17 15 38.1 -1.5
FIA1 IAmb IAmb 17 16 01.9
comp=Z,64nm,1.5s
ARTI Arti 29.11 46 P **P** 17 17 01.7 -2.1
TORD Torodi Ar. Bea 32.23 214 P **P** 17 17 32.9 +1.2
comp=Z,0.3nm,0.8s,baz=27,slow=9.7,SNR=1.5
comp=Z,0.3nm,0.8s
TORD Torodi Ar. Bea 32.23 214 IAmb IAmb 17 17 45.1
comp=Z,1.4nm,0.8s
BORK Borovoye 35.65 53 P **P** 17 17 59.5 -1.6
BORK IAmb IAmb 17 18 02.1
comp=Z,2.3nm,0.6s
BVAR Borovoye Array 35.69 53 P **P** 17 18 01.5 +0.1
comp=Z,1.4nm,0.7s,baz=275,slow=6.9,SNR=10
comp=Z,1.4nm,0.7s
KURBB Kurchatov Arra 40.98 56 P **P** 17 18 45.6 -0.3
comp=Z,0.4nm,0.5s,baz=285,slow=9.4,SNR=5.2
comp=Z,0.4nm,0.5s
KURK Kurchatov 41.02 56 P **P** 17 18 45.6 -0.6
KURK Kurchatov 41.02 56 IAmb IAmb 17 18 46.4
comp=Z,2.1nm,1.1s
ZAA0 Zalesovo Array 44.13 50 P **P** 17 19 10.7 -0.9
ZAA0 IAmb IAmb 17 19 11.5
comp=Z,3.8nm,0.7s
ZALV Zalesovo Beam 44.13 50 P **P** 17 19 10.7 -0.9
comp=Z,2.7nm,0.4s,baz=285,slow=8.4,SNR=18
comp=Z,2.7nm,0.4s
ZALV Zalesovo Beam 44.13 50 P **P** 17 19 09.6 -2.0
MKAR Makanchi Array 44.32 61 P **P** 17 19 12.9 -0.3
comp=Z,1.8nm,0.5s,baz=281,slow=7.7,SNR=26
comp=Z,1.8nm,0.5s
MKAR Makanchi Array 44.32 61 P **P** 17 19 12.1 -1.1
SONM Songino Array 59.00 52 P **P** 17 21 02.7 -0.2
comp=Z,0.6nm,0.6s,baz=303,slow=8.0,SNR=5.6
comp=Z,0.6nm,0.6s
ASAR Alice Springs 123.26 93 PKP **PKPdf** 17 29 58.9 -1.5
comp=Z,0.5nm,1.1s,baz=330,slow=2.2,SNR=4.3

IDC ***27*** *17:12:52.8±0.6,58°.37S×139°.67W,h0km,mb4.3/10, mbtmp4.3/10,MS4.3/23,Error ellipse: s-maj=26.3km s-min=17.0km az=178.0*

GCMT ***27*** *17:12:54.9±0.2,58°.39S±0°.02×139°.46W±0°.03,h12km, MW5.0/94 ,Moment Tensor Solution. s38,c44; s94,c125; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.58±.09; Mθθ-2.01±.11; Mϕϕ-1.57±.08; Mrθ-2.88±.43; Mθϕ-1.40±.08; Mϕr0.95±.32; Best double couple: Mo4.39200×10^16 NP1:ϕs35.00000°,δ34.00000°,λ50.00000°. NP2: ϕs260.00000°,δ64.00000°,λ113.00000°. Principal axes: T 5.1050, Plg63.0000°, Azm208.0000°; N -1.4250, Plg21.0000°, Azm69.0000°; P -3.6800, Plg16.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***27*** *17:12:54.9±2.1,58°.3S±0°.1×139°.7W±0°.2,h10km±1km, mb5.0/23 Error ellipse: s-maj=24.6km s-min=13.8km az=344.0*

ISC 27 17:12:54.2±0.4,58°.23S±0°.09×139°.65W±0°.09,h10km, n102,σ1°.44/64,mb4.8/22,MS4.3/25,3C-1D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**27.33**	**204**	P	**P**	**17 18 39.3**	**+0.7**
	1.9nm,1.0s,baz=86,slow=12,SNR=5.3						
VNDA				LR	LR	17 26 36.7	
	comp=Z,478nm,20.2s,baz=92,slow=30						
	1.9nm,1.0s						
VNDA	**Vanda**	**27.33**	**204**		**P**	**17 18 35.5**	**-3.1**
VNDA				IAmb	IAmb	17 18 47.8	
	comp=Z,46nm,1.8s						
QSPA	**South Pole Qui**	**31.93**	**180**	P	P	17 19 24.0	+4.4
	comp=Z,7.4nm,1.1s,baz=83,slow=3.9,SNR=18						
QSPA				LR	LR	17 30 45.6	
	comp=Z,729nm,18.1s,baz=98,slow=34						
QSPA	**South Pole Qui**	**31.93**	**180**		**P**	**17 19 18.7**	**-1.0**
RPZ	**Rata Peaks**	**33.43**	**274**	LR	LR	17 29 56.4	
	comp=Z,1μm,21.6s,baz=137,slow=31						
RTZ	**Ruatahuna**	**34.03**	**286**	P	**P**	**17 19 37.7**	**-0.4**
URZ	**Urewera**	**34.24**	**287**	LR	LR	17 30 12.3	
	comp=Z,1μm,21.9s,baz=143,slow=30						
PMSA	**Palmer Station**	**34.61**	**133**	LR	LR	17 30 33.3	
	comp=Z,608nm,19.4s,baz=205,slow=31						
RKT	**Rikitea**	**35.23**	**7**	*e*LR	LR	17 29 23.5	
	comp=Z,6μm,28.5s						
TBI	**Tubuai**	**35.55**	**344**	*e*S	**S**	**17 25 24.2**	**-2.5**
	comp=Z,307nm,29.0s						
TBI				*e*LR	LR	17 29 19.6	
	comp=Z,5μm,25.5s						
TBI				*e*LR	LR	17 29 29.6	
	comp=Z,2μm,27.0s						
BELA	**Belgrano 2**	**36.84**	**160**	P	**P**	**17 20 01.2**	**-0.6**
BELA				IAmb	IAmb	17 20 11.1	
	comp=Z,14nm,0.6s						
RPN	**Rapa Nui**	**37.63**	**47**	LR	LR	17 30 51.5	
	comp=Z,38nm,21.2s,baz=268,slow=29						
RAO	**Raoul Island**	**39.15**	**301**	LR	LR	17 32 18.3	
	comp=Z,386nm,19.6s,baz=151,slow=30						
RAR	**Rarotonga**	**39.75**	**330**	LR	LR	17 33 11.7	
	comp=Z,319nm,19.1s,baz=148,slow=31						
PPT2	**Papeete2**	**41.23**	**346**	*e*S	S	17 26 44.5	-8.3
PPT2	comp=Z,127nm,25.0s			*e*SS	SS	17 29 43.5	-12
	comp=Z,217nm,27.5s						
PPT2				*e*LR	LR	17 31 55.2	
	comp=Z,1μm,25.5s						
PPT2				*e*LR	LR	17 32 03.1	
	comp=Z,745nm,24.0s						
PPT	**Papeete**	**41.26**	**346**	LR	LR	17 33 41.1	
	comp=Z,400nm,18.6s,baz=196,slow=30						
PLCA	**Paso Flores**	**45.97**	**99**	P	**P**	**17 21 16.5**	**-0.7**
	comp=Z,10nm,1.2s,baz=228,slow=9.2,SNR=3.7						
PLCA				LR	LR	17 36 33.6	
	comp=Z,414nm,18.3s,baz=182,slow=31						
	comp=Z,10nm,1.2s						
PLCA	**Paso Flores**	**45.97**	**99**		**P**	**17 21 17.4**	**+0.3**
PLCA				IAmb	IAmb	17 21 22.4	
	comp=Z,33nm,1.6s						
H03S2	**Juan Fernandez**	**46.71**	**86**	T	T	18 11 39.3	
	baz=217,slow=74,SNR=23						
H03S1	**Juan Fernandez**	**46.72**	**86**	T	T	18 11 44.0	
	baz=217,slow=74,SNR=23						
H03S3	**Juan Fernandez**	**46.73**	**86**	T	T	18 11 42.3	
	baz=217,slow=74,SNR=26						
VNA2	**Neumayer--Watz**	**46.81**	**161**	⇑P	**P**	**17 21 22.9**	**-0.5**
	comp=Z,5.3nm,0.7s,baz=207,slow=7.7						
VNA1	**Neumayer--Stat**	**46.89**	**160**	⇑P	**P**	**17 21 24.1**	**+0.2**
	comp=Z,7.2nm,1.0s						
SNAA	**Sanae**	**46.93**	**163**	⇑P	**P**	**17 21 23.4**	**-0.9**
	comp=Z,49nm,0.5s						
SNAA	**Sanae**	**46.93**	**163**	P	**P**	**17 21 22.9**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=226,slow=8.3,SNR=24						
SNAA				LR	LR	17 40 09.8	
	comp=Z,566nm,18.5s,baz=83,slow=35						
	comp=Z,2.0nm,0.6s						
SNAA	**Sanae**	**46.93**	**163**		**P**	**17 21 23.2**	**-1.1**
SNAA				IAmb	IAmb	17 21 26.6	
	comp=Z,43nm,1.7s						
H03N3	**Juan Fernandez**	**47.01**	**86**	T	T	18 11 59.9	
	baz=220,slow=72,SNR=27						
H03N2	**Juan Fernandez**	**47.01**	**86**	T	T	18 11 54.8	
	baz=220,slow=72,SNR=22						
H03N1	**Juan Fernandez**	**47.02**	**86**	T	T	18 11 56.7	
	baz=220,slow=72,SNR=20						
BI02	**San Fabin de**	**48.60**	**95**	P	**P**	**17 21 39.4**	**+1.7**
BI02				IAmb	IAmb	17 21 41.1	
	comp=Z,12nm,1.0s						
TAOE	**Nuku Hiva Isla**	**49.26**	**359**	*e*S	**S**	**17 28 45.0**	**-3.9**
	comp=Z,133nm,26.2s						
TAOE				*e*LR	LR	17 35 49.8	
	comp=Z,700nm,25.2s						
MT09	**Talagante**	**50.95**	**93**	P	**P**	**17 21 56.4**	**+0.6**
MT09				IAmb	IAmb	17 21 58.0	
	comp=Z,34nm,1.1s						
MT13	**San Alfonso**	**51.35**	**93**	P	**P**	**17 22 00.5**	**+1.8**
MT13				IAmb	IAmb	17 22 06.1	
	comp=Z,28nm,1.3s						
VA03	**San Esteban**	**51.97**	**92**	P	**P**	**17 22 04.6**	**+1.3**
DZM	**Mont Dzumac**	**52.69**	**290**	*e*S	S	17 29 56.4	+20
	comp=Z,82nm,26.1s						
DZM				*e*LR	LR	17 37 52.9	
	comp=Z,794nm,24.3s						
SYO	**Syowa Base**	**53.07**	**180**	⇓*e*pP	pP	17 22 12.8	+0.1
MAW	**Mawson**	**53.38**	**191**	P	**P**	**17 22 12.6**	**-0.6**
	comp=Z,4.4nm,0.9s,baz=231,slow=4.5,SNR=4.0						
MAW				LR	LR	17 42 59.3	
	comp=Z,204nm,19.5s,baz=182,slow=34						
	comp=Z,4.4nm,0.9s						
STKA	**Stephens Creek**	**57.74**	**261**	P	**P**	**17 22 45.9**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=134,slow=13,SNR=3.5						
	comp=Z,2.5nm,0.9s						
BBOO	**Buckleboo**	**59.87**	**256**	P	**P**	**17 23 02.3**	**+2.5**
INKA	**Innaminka**	**61.48**	**263**	P	**P**	**17 23 11.2**	**+0.4**
CPUP	**Villa Florida**	**64.04**	**98**	P	**P**	**17 23 27.3**	**-0.6**
	comp=Z,1.8nm,1.2s,baz=227,slow=2.7,SNR=3.7						
	comp=Z,1.8nm,1.2s						
CPUP	**Villa Florida**	**64.04**	**98**	IAmb	IAmb	17 23 29.1	
	comp=Z,7.5nm,1.6s						
CTA	**Charters Tower**	**64.79**	**272**	LR	LR	17 46 40.8	
	comp=Z,6.1nm,21.1s,baz=207,slow=31						
FORT	**Forrest**	**65.55**	**251**	P	**P**	**17 23 39.9**	**+2.2**
FORT				IAmb	IAmb	17 25 09.8	
	comp=Z,12nm,1.1s						
LPAZ	**La Paz**	**66.57**	**83**	P	**P**	**17 23 46.6**	**+1.5**
	comp=Z,11nm,1.2s,baz=193,slow=5.7,SNR=13						
	comp=Z,11nm,1.2s						
LPAZ	**La Paz**	**66.57**	**83**		**P**	**17 23 45.6**	**+0.6**
LPAZ				IAmb	IAmb	17 23 48.2	
	comp=Z,14nm,1.2s						
ASAR	**Alice Springs**	**68.36**	**260**	P	**P**	**17 23 55.6**	**0.0**
	comp=Z,8.8nm,1.1s,baz=145,slow=6.8,SNR=60						
ASAR				LR	LR	17 49 58.5	
	comp=Z,217nm,18.9s,baz=171,slow=33						
	comp=Z,8.8nm,1.1s						
ASAR	**Alice Springs**	**68.36**	**260**		**P**	**17 23 54.9**	**-0.8**
AS31	**Alice Springs**	**68.36**	**260**		**P**	**17 23 55.9**	**+0.2**
H01W1	**Cape Leeuwin H**	**68.78**	**238**	T	T	18 39 35.5	
	baz=146,slow=76,SNR=6.8						
H01W2	**Cape Leeuwin H**	**68.79**	**238**	T	T	18 39 35.2	
	baz=146,slow=76,SNR=5.3						
H01W3	**Cape Leeuwin H**	**68.80**	**238**	T	T	18 39 31.9	
	baz=146,slow=76,SNR=6.1						
WR8	**Warramunga Arr**	**71.10**	**263**		**P**	**17 24 13.2**	**+0.6**
WRA	**Warramunga Arr**	**71.20**	**262**	P	**P**	**17 24 13.7**	**+0.5**
	comp=Z,4.4nm,0.9s,baz=148,slow=5.5,SNR=19						
WRA				LR	LR	17 50 50.3	
	comp=Z,117nm,21.6s,baz=110,slow=32						
	comp=Z,4.4nm,0.9s						
WRAB	**Tennant Creek**	**71.20**	**262**	P	**P**	**17 24 14.3**	**+1.1**
WB0	**Warramunga Arr**	**71.31**	**263**		**P**	**17 24 14.7**	**+0.8**
WB0				IAmb	IAmb	17 24 16.5	
	comp=Z,7.3nm,1.0s						
PMG	**Port Moresby**	**73.22**	**279**	LR	LR	17 53 55.7	
	comp=Z,175nm,18.2s,baz=164,slow=34						
OTAV	**Otavalo**	**75.44**	**65**	P	**P**	**17 24 38.6**	**-0.1**
OTAV				IAmb	IAmb	17 24 42.2	
	comp=Z,16nm,1.3s						
FITZ	**Fitzroy Crossi**	**77.25**	**256**	LR	LR	17 53 43.0	
	comp=Z,92nm,21.2s,baz=170,slow=32						
BDFB	**Brasilia**	**77.71**	**100**	LR	LR	17 55 28.2	
	comp=Z,512nm,20.4s,baz=128,slow=33						
MTN	**Manton Dam**	**78.79**	**264**	P	**P**	**17 24 58.5**	**+1.5**
MTN				IAmb	IAmb	17 25 00.3	
	comp=Z,23nm,1.4s						
MACA	**Manacapuru-AM**	**81.51**	**82**	P	**P**	**17 25 11.5**	**-0.2**
MACA				IAmb	IAmb	17 25 13.3	
	comp=Z,14nm,0.8s						
JAY	**Jayapura**	**82.42**	**277**	LR	LR	18 00 39.2	
	comp=Z,106nm,18.1s,baz=138,slow=35						
BATI	**Baumata**	**84.91**	**259**	LR	LR	18 01 31.8	
	comp=Z,137nm,18.1s,baz=178,slow=34						
KAPI	**Kappang**	**91.33**	**258**	LR	LR	18 05 21.7	
	comp=Z,75nm,18.1s,baz=139,slow=34						
TXAR	**Lajitas Array**	**92.27**	**31**	P	**P**	**17 26 05.9**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=36,slow=16,SNR=2.3						
	comp=Z,0.3nm,0.6s						
BOSA	**Boshof**	**92.57**	**167**	LR	LR	18 06 24.7	
	comp=Z,193nm,18.2s,baz=202,slow=35						
LBTB	**Lobatse**	**96.17**	**167**	LR	LR	18 07 00.4	
	comp=Z,131nm,18.5s,baz=181,slow=34						
SJG	**San Juan**	**96.85**	**67**	LR	LR	18 06 33.5	
	comp=Z,111nm,18.7s,baz=142,slow=33						
DAV	**Davao City (W)**	**98.48**	**270**	LR	LR	18 09 46.4	
	comp=Z,74nm,19.9s,baz=120,slow=35						
H10S3	**ASCENSION HYDR**	**99.70**	**125**	T	T	19 18 24.1	
	baz=15,slow=74,SNR=6.5						
H10S2	**ASCENSION HYDR**	**99.71**	**125**	T	T	19 18 19.7	
	baz=205,slow=74,SNR=7.4						
H10N3	**ASCENSION HYDR**	**100.77**	**124**	T	T	19 19 45.3	
	baz=204,slow=75,SNR=4.8						
H10N1	**ASCENSION HYDR**	**100.77**	**124**	T	T	19 19 29.2	
	baz=204,slow=75,SNR=6.6						
H10N2	**ASCENSION HYDR**	**100.78**	**124**	T	T	19 19 31.5	
	baz=204,slow=75,SNR=6.6						
CCB	**Clear Creek Bu**	**122.71**	**356**		**PKiKP**	**17 31 49.5**	**+0.9**
ILAR	**Eielson Array**	**122.80**	**356**	PKP	**PKiKP**	**17 31 49.6**	**+0.8**
	comp=Z,3.9nm,0.8s,baz=229,slow=1.9,SNR=28						
G30M	**tAoh Zraii Nji**	**124.92**	**2**		**PKiKP**	**17 31 53.8**	**+0.8**
E27K	**Coleen River**	**126.11**	**359**		**PKiKP**	**17 31 57.2**	**+1.9**
TORD	**Torodi Ar. Bea**	**126.46**	**131**	PKP	**PKPdf**	**17 31 56.5**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=270,slow=2.9,SNR=5.7						
A36M	**Sachs Harbour**	**130.31**	**6**		**PKiKP**	**17 32 04.2**	**+0.6**
TIXI	**Tiksi**	**144.02**	**327**		PKPbc	17 32 27.2	+1.2
RAYN	**Ar Rayn**	**145.13**	**188**		**PKPab**	**17 32 30.6**	**-0.5**
ESDC	**Sonseca Array**	**146.28**	**104**	PKPbc	**PKPab**	**17 32 35.2**	**+0.2**
	comp=Z,1.8nm,1.0s,baz=243,slow=4.8,SNR=4.5						
ESDC	**Sonseca Array**	**146.28**	**104**		**PKPab**	**17 32 35.7**	**+0.7**
NIL	**Nilore**	**146.99**	**236**		**PKPdf**	**17 32 35.2**	**+0.8**
TARG	**Taragay, Kyrgy**	**151.29**	**251**		**PKPdf**	**17 32 43.7**	**+2.2**
MKAR	**Makanchi Array**	**152.50**	**264**	PKPbc	**PKPbc**	**17 32 49.3**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=123,slow=8.5,SNR=9.6						
MKAR	**Makanchi Array**	**152.50**	**264**		**PKPdf**	**17 32 40.0**	**-2.7**
GAR	**Garm**	**152.75**	**238**		**PKPbc**	**17 32 50.4**	**-0.1**
ARSB	**Arslanbob**	**153.36**	**245**		**PKiKP**	**17 32 52.7**	**+0.7**
AAK	**Ala-Archa**	**153.62**	**249**		**PKPab**	**17 33 05.4**	**+0.3**
ZAA0	**Zalesovo Array**	**155.18**	**279**		**PKPab**	**17 33 11.2**	**0.0**
ZALV	**Zalesovo Beam**	**155.18**	**279**	PKPab	**PKPab**	**17 33 09.0**	**-2.2**
	comp=Z,3.6nm,0.8s,baz=140,slow=3.5,SNR=14						
ZALV	**Zalesovo Beam**	**155.18**	**279**		**PKPab**	**17 33 10.3**	**-0.9**
KURBB	**Kurchatov Arra**	**156.79**	**268**	PKP	**PKPdf**	**17 32 51.1**	**+2.7**
	comp=Z,0.4nm,0.9s,baz=134,slow=1.5,SNR=2.4						
KURBB				PKPab	**PKPab**	**17 33 18.5**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=118,slow=3.8,SNR=2.9						
KURK	**Kurchatov**	**156.79**	**268**		**PKPdf**	**17 32 51.1**	**+2.7**
BRTR	**Keskin Array B**	**160.99**	**164**	PKPab	**PKPab**	**17 33 34.4**	**-2.4**
	comp=Z,1.0nm,0.9s,baz=120,slow=5.0,SNR=4.4						
BRTR	**Keskin Array B**	**160

TPNV				IAML			17 27 09.2	
	comp=N,238nm,0.4s							
NSP	**Numbskull Pass**	**0.99**	**191**		Pg		17 26 58.8	+0.2
MCY	**Mercury**	**1.04**	**179**		Pn		17 26 59.8	0.0
WCT	**Wildcat Mounta**	**1.04**	**210**		Pb		17 26 59.1	-0.3
WCT	**Wildcat Mounta**	**1.04**	**210**	IAML			17 27 19.3	
	comp=E,128nm,0.6s							
SDH	**Striped Hills**	**1.09**	**195**		Pg		17 27 01.6	+1.0
GMN	**Gold Mountain**	**1.09**	**249**		Pb		17 26 59.6	-0.7
GMN	**Gold Mountain**	**1.09**	**249**	IAML			17 27 17.7	
	comp=N,143nm,0.5s							
SGV	**South Grapevin**	**1.10**	**230**		Pb		17 27 00.1	-0.4
AMDNV	**Amargosa**	**1.27**	**191**		Pb		17 27 03.5	+0.4
GRAC	**Grapevine Rang**	**1.31**	**238**		Pb		17 27 04.3	+0.4
GRAC	**Grapevine Rang**	**1.31**	**238**		Pn		17 27 03.6	+0.1
GRAC	**Grapevine Rang**	**1.31**	**238**	IAML			17 27 24.4	
	comp=N,165nm,0.4s							
GRAC				IAML			17 27 24.8	
	comp=E,135nm,0.6s							
SHPR	**Sheep Range**	**1.36**	**151**		Pg		17 27 05.4	-0.3
LCH	**Last Change Ra**	**1.41**	**251**		Pb		17 27 05.3	-0.3
FURC	**Furnace Creek,**	**1.42**	**210**		Pb		17 27 06.2	+0.5
Q09A	**Carvers**	**1.48**	**320**		Pn		17 27 06.1	+0.3
GWY	**Greenwater Val**	**1.61**	**200**		Pg		17 27 10.0	-0.4
GWY	**Greenwater Val**	**1.61**	**200**	IAML			17 27 40.9	
	comp=E,100nm,0.5s							
GWY				IAML			17 27 42.2	
	comp=N,98nm,0.6s							
DSP	**Deep Springs**	**1.62**	**259**		Pn		17 27 08.0	+0.4
DSP	**Deep Springs**	**1.62**	**259**	IAML			17 27 32.6	
	comp=N,66nm,0.9s							
DSP				IAML			17 27 33.1	
	comp=E,64nm,0.9s							
SHOC	**Shoshone, Teco**	**1.81**	**188**		Pn		17 27 10.1	-0.2
SPR3	**Spring Creek 3**	**1.83**	**44**		Pn		17 27 09.2	-1.7
SPR3	**Spring Creek 3**	**1.83**	**44**	IAML			17 27 39.2	
	comp=E,38nm,0.9s							
NV11	**Mina Array Sit**	**1.87**	**294**		Pn		17 27 10.8	-0.4
NV11				IAML			17 27 39.6	
	comp=N,33nm,0.6s							
PSUT	**Pine Spring**	**1.87**	**63**		Pn		17 27 09.9	-1.4
PSUT				IAML			17 27 38.2	
	comp=N,86nm,0.9s							
PSUT				IAML			17 27 40.0	
	comp=E,90nm,0.7s							
QSM	**Queen of Sheba**	**1.87**	**203**		Pn		17 27 10.9	-0.2
QSM				IAML			17 27 40.7	
	comp=E,46nm,0.8s							
QSM				IAML			17 27 40.9	
	comp=N,57nm,1.2s							
TIN	**Tinemaha, Big**	**1.91**	**251**		Pn		17 27 10.4	-1.2
TIN				IAML			17 27 46.7	
	comp=N,88nm,0.9s							
NVAR	**Mina Array Bea**	**1.97**	**292**		Pn		17 27 12.1	-0.6
LHV	**Little Huntoon**	**2.07**	**286**		Pb		17 27 16.5	-0.3
LHV				IAML			17 27 47.3	
	comp=N,79nm,0.8s							
CWC	**Cottonwood Cre**	**2.10**	**234**		Pb		17 27 17.9	+0.4
V12A	**Nelson**	**2.17**	**155**		Pb		17 27 19.6	+1.0
V12A				IAML			17 27 52.3	
	comp=E,30nm,0.5s							
RYN	**Ryan**	**2.21**	**296**		Pn		17 27 17.5	+1.6
RYN				IAML			17 27 49.8	
	comp=N,41nm,0.5s							
RYN				IAML			17 27 50.0	
	comp=E,66nm,0.6s							
MTPC	**Mountain Pass**	**2.24**	**171**		Pg		17 27 21.1	-1.3
MTPC				IAML			17 27 55.5	
	comp=E,43nm,1.0s							
MTPC				IAML			17 27 57.6	
	comp=N,25nm,0.6s							
CLC	**China Lake**	**2.29**	**215**		Pb		17 27 21.9	+1.4
CCCA	**Chr Cany lake**	**2.44**	**208**		Pb		17 27 24.6	+1.4
CCCA				IAML			17 28 54.7	
	comp=E,53nm,0.1s							
KNB	**Kanab**	**2.61**	**104**		Pg		17 27 28.2	-1.2
MTPU	**Mount Pierson**	**3.02**	**82**		Pn		17 27 26.1	-1.2
ELK	**Elko**	**3.10**	**310**		Pb		17 27 35.3	+0.9
W13A	**Hualapai Mount**	**3.10**	**146**		Pg		17 27 37.2	-1.6
PNTR	**Pine Nut**	**3.17**	**297**		Pb		17 27 36.6	+1.0
U15A	**North Rim**	**3.21**	**112**		Pb		17 27 38.3	+1.9
DUG	**Dugway, Tooele**	**3.51**	**44**		Pb		17 27 43.1	+1.7
DUG				IAML			17 28 30.9	
	comp=E,13nm,2.4s							
DUG				IAML			17 28 31.7	
	comp=E,11nm,0.9s							
MFID	**Camas Ranch**	**5.71**	**1**		Pb		17 28 20.6	+1.6

*NOU **27** 17:29:21.9,31°.89S×178°.51W,h257km,mb4.1/28, Kermadec Islands Region*

*NEIC **27** 17:29:22.2±1.2,31°.8S±0°.1×179°.4W±0°.2,h197km±8km, mb4.3/16,Error ellipse: s-maj=26.5km s-min=15.9km az=108.0*

*WEL **27** 17:29:25.8±0.5,32°.5±6°×17°.9W±1°.7,h12km,M4.9/12, mB5.4/6,ML4.6/13,MLv5.0/12,Mw(mB)4.8/6,Error ellipse: s-maj=23.3km s-min=3.3km az=109.5,confirmed*

*IDC **27** 17:29:26.1±1.3,31°.47S×179°.51W,h231km±11km,mb4.1/4, mbtmp4.7/5,Error ellipse: s-maj=24.7km s-min=16.5km az=152.0*

ISC 27 17:29:22.6±0.6,**31°.72S**±0°.05×**179°.53W**±0°.09,**h200**km, **n112**,σ**2**s**17**/111,**mb4.5**/15,**4C,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.81**	**30**	P	**Pn**	**17 30 12.7**	**+2.6**
GLKZ				S	**Sn**	**17 30 49.4**	**+2.2**
RAO	**Raoul Island**	**2.83**	**30**	P	**Pn**	**17 30 13.0**	**+2.7**
	120nm,0.3s,baz=270,slow=20,SNR=2.4						
RAO				S	**Sn**	**17 30 50.4**	**+3.0**
	354nm,0.3s,baz=197,slow=19,SNR=6.9						
RAO	**Raoul Island**	**2.83**	**30**	Pn	**Pn**	**17 30 09.5**	**-0.8**
RAO				Sn	**Sn**	**17 30 42.3**	**-5.2**
RIZ	**Raoul Island**	**2.83**	**30**	P	**Pn**	**17 30 13.3**	**+3.0**
RIZ				S	**Sn**	**17 30 50.5**	**+3.1**
MXZ	**Matakaoa Point**	**6.10**	**196**	Pn	**Pn**	**17 30 52.0**	**+1.0**
MXZ				Sn	**Sn**	**17 31 58.2**	**-2.9**
MXZ	**Matakaoa Point**	**6.10**	**196**	P	**Pn**	**17 30 52.4**	**+1.4**
MXZ	**Matakaoa Point**	**6.10**	**196**	S	**Sn**	**17 32 05.9**	**+4.8**
MXZ	**Matakaoa Point**	**6.10**	**196**	P	**Pn**	**17 30 52.6**	**+1.5**
MXZ				S	**Sn**	**17 32 00.7**	**-0.4**
GRZ	**Great Barrier**	**6.14**	**221**	P	**Pn**	17 30 58.7	+7.0
WMGZ	**Waiomatatini S**	**6.32**	**195**	P	**Pn**	**17 30 56.1**	**+2.2**
WMGZ				S	**Sn**	**17 32 09.9**	**+3.6**
KUZ	**Kuaotunu**	**6.37**	**217**	P	Pn	17 31 01.8	+7.2
KUZ	**Kuaotunu**	**6.37**	**217**	P	Pn	17 31 01.4	+6.8
HAZ	**Te Kaha**	**6.42**	**199**	P	**Pn**	**17 30 57.6**	**+2.5**
HAZ				S	**Sn**	**17 32 15.3**	**+6.7**
PKGZ	**Pakihiroa**	**6.44**	**197**	P	**Pn**	**17 30 57.5**	**+2.0**
PKGZ				S	**Sn**	**17 32 08.9**	**-0.3**
PUZ	**Puketiti**	**6.59**	**195**	P	**Pn**	**17 30 59.0**	**+1.5**
PUZ				S	**Sn**	**17 32 12.7**	**-0.1**
WCZ	**Waipu Caves**	**6.61**	**229**	P	Pn	17 31 05.0	+7.3
RUGZ	**Raukumara Rang**	**6.64**	**199**	P	Pn	**17 31 00.4**	**+2.1**
OUZ	**Omahuta**	**6.72**	**237**	P	Pn	17 31 07.8	+8.6
TWGZ	**Tauwhareparae**	**6.76**	**197**	P	**Pn**	**17 31 02.6**	**+2.9**
TWGZ				S	**Sn**	**17 32 19.3**	**+2.5**
OPRZ	**Ohinepanea**	**6.91**	**207**	P	Pn	17 31 06.9	+5.4
MKAZ	**Moumakai**	**6.94**	**218**	P	Pn	17 31 09.2	+7.3
MARZ	**Manawahe**	**6.99**	**205**	P	Pn	17 31 07.7	+5.1
CNGZ	**Carnagh Statio**	**7.00**	**195**	P	**Pn**	**17 31 04.3**	**+1.5**
MWZ	**Matawai**	**7.03**	**199**	P	**Pn**	**17 31 04.2**	**+1.0**
MWZ				S	**Sn**	**17 32 22.4**	**-0.7**
URZ	**Urewera**	**7.08**	**202**	P	**Pn**	**17 31 04.9**	**+1.0**
	7.8nm,0.3s,baz=2.8,slow=5.6,SNR=26						
URZ				S	**Sn**	**17 32 23.8**	**-0.5**
	52nm,0.3s,baz=328,slow=19,SNR=12						
URZ	**Urewera**	**7.08**	**202**	P	**Pn**	**17 31 05.5**	**+1.7**
TOZ	**Tahuroa Road**	**7.26**	**213**	Pn	**Pn**	**17 31 05.2**	**-0.9**
RIGZ	**Rimuhau**	**7.31**	**197**	P	**Pn**	**17 31 07.6**	**+0.7**
RIGZ				S	**Sn**	**17 32 28.7**	**-1.1**
MUGZ	**Murupara**	**7.39**	**203**	P	**Pn**	**17 31 10.1**	**+2.3**
MUGZ				S	**Sn**	**17 32 30.2**	**-1.4**
RTZ	**Ruatahuna**	**7.45**	**202**		**Pn**	**17 31 06.2**	**-2.5**
BKZ	**Black Stump Fm**	**8.11**	**202**		**Pn**	**17 31 16.6**	**-0.7**
BKZ	**Black Stump Fm**	**8.11**	**202**	P	**Pn**	**17 31 16.9**	**-0.3**
HIZ	**Hauiti**	**8.19**	**213**		Pn	17 31 25.5	+7.2
HIZ	**Hauiti**	**8.19**	**213**	P	Pn	17 31 24.7	+6.4
KHEZ	**Kahui Hut**	**9.21**	**213**	P	Pn	17 31 37.2	+5.6
BFZ	**Birch Farm**	**9.57**	**200**		**Pn**	**17 31 38.2**	**+2.0**
BFZ	**Birch Farm**	**9.57**	**200**	P	**Pn**	**17 31 36.1**	**-0.1**
MRZ	**Mangatainoka R**	**9.76**	**203**		**Pn**	**17 31 37.6**	**-1.0**

MSWZ	**Moikau Station**	**10.55**	**202**	Pn	**Pn**	**17 31 48.8**	**-0.1**
SNZO	**South Karori**	**10.63**	**204**	Pn	**Pn**	**17 31 49.6**	**-0.3**
SNZO	**South Karori**	**10.63**	**204**	P	**Pn**	**17 31 50.4**	**+0.5**
BHW	**Baring Head**	**10.66**	**203**	Pn	**Pn**	**17 31 49.9**	**-0.4**
PLWZ	**Palliser**	**10.68**	**202**	Pn	**Pn**	**17 31 49.8**	**-0.8**
TCW	**Tory Channel**	**10.70**	**206**		**Pn**	**17 31 49.8**	**-1.0**
TUWZ	**Tuamarina**	**11.02**	**207**		**Pn**	**17 31 53.5**	**-1.4**
NNZ	**Nelson**	**11.06**	**209**	Pn	**Pn**	**17 31 54.5**	**-0.9**
TKNZ	**Takaka Hill**	**11.09**	**211**		**Pn**	**17 31 55.8**	**0.0**
QRZ	**Quartz Range**	**11.12**	**213**	P	**Pn**	**17 31 57.0**	**+0.9**
MRNZ	**Matariki Terra**	**11.47**	**211**		**Pn**	**17 32 01.4**	**+0.7**
KHZ	**Kahutara**	**12.02**	**205**	P	**Pn**	**17 32 07.8**	**+0.2**
RPZ	**Rata Peaks**	**14.09**	**209**	P	**Pn**	**17 32 32.2**	**-1.4**
	4.7nm,0.3s,baz=132,slow=19,SNR=7.3						
RPZ				S	S	17 34 58.4	-12
	8.9nm,0.4s,baz=319,slow=23,SNR=13						
RPZ	**Rata Peaks**	**14.09**	**209**	P	**Pn**	**17 32 33.5**	**-0.1**
MSVF	**Nonsavu**	**14.10**	**350**		**Pn**	**17 32 32.8**	**-1.1**
MSVF	**Nonsavu**	**14.10**	**350**	P	**P**	**17 32 36.1**	**+0.4**
OUENC	**Ouen Island, N**	**15.26**	**304**	P	**P**	**17 32 52.0**	**+3.6**
ODZ	**Otahua Downs**	**15.36**	**207**	P	**P**	**17 32 49.8**	**+0.5**
YATNC	**Mamie plateau,**	**15.46**	**305**	P	**P**	**17 32 54.5**	**+3.8**
ONTNC	**Ouen Toro**	**15.61**	**303**	P	**Pn**	**17 32 54.6**	**+2.3**
ONTNC	**Ouen Toro**	**15.61**	**303**	P	**Pn**	**17 32 57.1**	**+4.8**
DZM	**Mont Dzumac**	**15.76**	**304**	P	**Pn**	**17 32 56.7**	**+2.4**
	12nm,0.8s,baz=174,slow=18,SNR=7.6						
DZM	**Mont Dzumac**	**15.76**	**304**	P	**Pn**	**17 32 57.0**	**+2.8**
DZM				IAmb	IAmb	17 32 58.6	
	comp=Z,18nm,0.9s						
DZM	**Mont Dzumac**	**15.76**	**304**	P	**Pn**	**17 32 58.0**	**+3.7**
CMSA	**Cobar Meteorol**	**29.54**	**261**	P	**P**	**17 35 10.8**	**+2.2**
CTA	**Charters Tower**	**32.76**	**282**	P	**P**	**17 35 38.4**	**+1.5**
CTAO	**Charters Tower**	**32.76**	**282**	P	**P**	**17 35 36.5**	**-0.4**
CTAO				IAmb	IAmb	17 35 48.5	
	comp=Z,12nm,1.4s						
CTAO	**Charters Tower**	**32.76**	**282**	P	**P**	**17 35 38.4**	**+1.5**
STKA	**Stephens Creek**	**32.92**	**259**	P	**P**	**17 35 40.0**	**+1.7**
	comp=Z,4.4nm,0.6s,baz=99,slow=12,SNR=11						
	comp=Z,4.4nm,0.6s						
STKA	**Stephens Creek**	**32.92**	**259**	P	**P**	**17 35 38.6**	**+0.4**
STKA	**Stephens Creek**	**32.92**	**259**	P	**P**	**17 35 40.4**	**+2.2**
INKA	**Innaminka**	**34.59**	**266**		**P**	**17 35 52.9**	**+0.3**
INKA				IAmb	IAmb	17 35 55.6	
	comp=Z,3.8nm,0.8s						
HTT	**Hallett**	**34.89**	**256**	P	**P**	**17 35 56.7**	**+1.5**
BBOO	**Buckleboo**	**37.37**	**256**	P	**P**	**17 36 16.8**	**+0.6**
BBOO	**Buckleboo**	**37.37**	**256**	P	**P**	**17 36 16.7**	**+0.6**
COEN	**Coen**	**38.41**	**289**	P	**P**	**17 36 25.9**	**+0.9**
AS31	**Alice Springs**	**41.75**	**269**		**P**	**17 36 52.3**	**-0.1**
ASAR	**Alice Springs**	**41.75**	**269**	P	**P**	**17 36 52.8**	**+0.3**
	comp=Z,6.6nm,0.3s,baz=108,slow=7.6,SNR=358						
ASAR				ScP	**ScP**	**17 42 11.1**	**-5.0**
	comp=Z,0.2nm,0.5s,baz=109,slow=3.5,SNR=5.4						
	comp=Z,6.6nm,0.3s						
ASAR	**Alice Springs**	**41.75**	**269**	P	**P**	**17 36 52.2**	**-0.2**
WR8	**Warramunga Arr**	**42.72**	**274**		**P**	**17 36 59.9**	**-0.4**
WR8				IAmb	IAmb	17 37 01.1	
	comp=Z,9.4nm,0.7s						
WRAB	**Tennant Creek**	**42.86**	**274**	P	**P**	**17 37 00.6**	**-0.8**
WRAB				IAmb	IAmb	17 37 02.0	
	comp=Z,11nm,0.7s						
WRAB	**Tennant Creek**	**42.86**	**274**	P	**P**	**17 37 01.4**	**0.0**
WRA	**Warramunga Arr**	**42.86**	**274**	P	**P**	**17 37 01.4**	**0.0**
	comp=Z,13nm,0.5s,baz=114,slow=7.8,SNR=169						
WRA				ScP	**ScP**	**17 42 15.0**	**-5.5**
	comp=Z,0.4nm,0.7s,baz=117,slow=3.4,SNR=1.8						
WRA				S	**S**	**17 43 03.6**	**-7.3**
	comp=Z,0.4nm,0.9s,baz=113,slow=15,SNR=2.9						
	comp=Z,13nm,0.5s						
WRA	**Warramunga Arr**	**42.86**	**274**		**P**	**17 36 59.5**	**-1.9**
WB0	**Warramunga Arr**	**42.86**	**275**		**P**	**17 37 01.2**	**-0.5**
VNDA	**Vanda**	**46.66**	**185**	P	**P**	**17 37 26.9**	**-3.7**
	comp=Z,1.9nm,1.1s,baz=32,slow=10.0,SNR=2.0						
VNDA	**Vanda**	**46.66**	**185**	IAmb	IAmb	17 37 27.7	
	comp=Z,6.1nm,1.4s						
MTN	**Manton Dam**	**48.92**	**281**	P	**P**	**17 37 47.4**	**-1.4**
MTN				IAmb	IAmb	17 37 48.7	
	comp=Z,4.6nm,0.6s						
KNRA	**Kununurra**	**49.52**	**276**	P	**P**	**17 37 54.0**	**+0.8**
KNRA				IAmb	IAmb	17 37 54.1	
	comp=Z,5.8nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.07**	**272**	P	**P**	**17 38 03.6**	**-1.2**
FITZ	**Fitzroy Crossi**	**51.07**	**272**	P	**P**	**17 38 05.0**	**+0.1**
QSPA	**South Pole Qui**	**58.39**	**180**	P	P	17 39 03.2	+6.3
	comp=Z,4.6nm,0.5s,baz=28,slow=2.9,SNR=47						
SNAA	**Sanae**	**76.87**	**179**	⇑P	**P**	**17 40 53.6**	**+1.5**
	comp=Z,27nm,0.5s						
SNAA	**Sanae**	**76.87**	**179**	P	**P**	**17 40 53.5**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=217,slow=7.1,SNR=18						
	comp=Z,1.8nm,0.7s						
SNAA	**Sanae**	**76.87**	**179**		**P**	**17 40 53.7**	**+1.5**
SNAA				IAmb	IAmb	17 40 55.0	
	comp=Z,3.3nm,1.1s						
VNA3	**Neumayer Olymp**	**77.07**	**177**	⇑P	**P**	**17 40 54.9**	**+1.7**
	comp=Z,11nm,0.8s						
VNA2	**Neumayer--Watz**	**77.49**	**177**	⇑P	**P**	**17 40 57.6**	**+2.1**
	comp=Z,5.7nm,0.4s,baz=177,slow=5.8						
VNA1	**Neumayer--Stat**	**77.73**	**177**	⇑P	**P**	**17 40 58.8**	**+1.9**
	comp=Z,2.3nm,0.2s						
H03S2	**Juan Fernandez**	**80.82**	**124**	T	T	19 10 42.2	
	baz=240						
H03S1	**Juan Fernandez**	**80.83**	**124**	T	T	19 10 49.0	
	baz=240						
H03S3	**Juan Fernandez**	**80.84**	**124**	T	T	19 10 44.2	
	baz=240						
H03N3	**Juan Fernandez**	**81.03**	**124**	T	T	19 11 02.1	
	baz=240						
H03N2	**Juan Fernandez**	**81.03**	**124**	T	T	19 10 59.1	
	baz=240						
H03N1	**Juan Fernandez**	**81.04**	**124**	T	T	19 10 48.7	
	baz=240						
KURK	**Kurchatov**	**121.01**	**313**		**PKPdf**	**17 47 49.5**	**-1.3**
KURBB	**Kurchatov Arra**	**121.04**	**313**	PKP	**PKPdf**	**17 47 49.5**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=118,slow=2.0,SNR=4.9						
BVAR	**Borovoye Array**	**126.42**	**315**	PKP	**PKPdf**	**17 48 00.3**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=112,slow=2.2,SNR=5.2						
ARCES	**ARCESS Array B**	**139.58**	**347**	PKP	**PKiKP**	**17 48 26.6**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=28,slow=5.6,SNR=1.2						
FINES	**FINESS Array B**	**145.91**	**338**	PKPbc	**PKPdf**	**17 48 36.9**	**+0.2**
	comp=Z,2.8nm,0.5s,baz=58,slow=3.7,SNR=29						
NB2	**NORSAR Subarra**	**149.83**	**350**	PKP	**PKPbc**	**17 48 47.6**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.83**	**350**	PKPbc	**PKPbc**	**17 48 47.0**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=16,slow=4.2,SNR=6.8						
HFS	**Hagfors**	**150.25**	**347**	PKPbc	**PKPbc**	**17 48 48.2**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=67,slow=4.8,SNR=15						
MMAI	**Mount Meron Ar**	**150.55**	**282**	PKPbc	**PKiKP**	**17 48 51.3**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=90,slow=6.8,SNR=6.2						
BRTR	**Keskin Array B**	**152.03**	**296**	PKPbc	**PKPbc**	**17 48 53.0**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=139,slow=4.4,SNR=5.9						

RSNC 27 17:45:42.7±0.0,**6°N**×**3°.7W**±°,**h16**km±3km,**M2.7,mb3.8, ML2.4,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.95**	**51**	P	Pb	17 45 58.9	-1.8
SOLC				S	Sb	17 46 11.8	-1.3
PIZC	**Pizarro, Choco**	**1.03**	**130**	P	Pb	17 46 00.8	-1.3
PIZC				S	Sb	17 46 15.4	0.0
PTAC	**Punta Ardita,**	**1.54**	**13**	P	Pn	17 46 05.8	-3.8
PTAC				S	Sn	17 46 22.7	-6.6
CBOC	**Ciudad Bolivar**	**2.14**	**84**	P	Pn	17 46 16.6	-1.3
CBOC				S	Sn	17 46 42.0	-2.3
DBBC	**Dabeiba**	**2.37**	**54**	P	Pn	17 46 21.0	0.0
DBBC				S	Sn	17 46 50.4	+0.5
YOTC	**Yotoco, Valle**	**2.43**	**132**	P	Pn	17 46 20.5	-1.4
YOTC				S	Sn	17 46 49.6	-1.8
HELC	**Santa Helena**	**2.67**	**78**	P	Pn	17 46 25.3	-0.1
HELC				S	Sn	17 46 57.9	+0.3
GUY2C	**Guyana, Caldas**	**2.80**	**98**	P	Pn	17 46 27.7	+0.4
GUY2C				S	Sn	17 47 03.3	+2.3
JAMC	**Jamundi, Valle**	**2.81**	**148**	P	Pn	17 46 25.6	-1.7
JAMC				S	Sn	17 46 58.0	-3.0
CAPC	**Capurgana**	**3.09**	**15**	P	Pn	17 46 29.4	-1.5
CAPC				S	Sn	17 47 01.9	-5.6
NORC	**Norcasia**	**3.27**	**91**	P	Pn	17 46 34.6	+1.3
NORC				S	Sn	17 47 10.3	-1.6
UREC	**San Jos de Ur**	**3.35**	**51**	P	Pn	17 46 35.3	+0.9
ORTC	**Ortega, Tolima**	**3.36**	**120**	P	Pn	17 46 36.0	+1.4
ORTC				S	Sn	17 47 17.5	+3.2
POPC	**Popayan, Colom**	**3.40**	**154**	P	Pn	17 46 34.0	-1.4
POPC				S	Sn	17 47 11.2	-4.4
BBAC	**Balboa, Cauca**	**3.70**	**166**	P	Pn	17 46 37.5	-1.9
BBAC				S	Sn	17 47 15.6	-7.2
PRAC	**Prado**	**3.77**	**120**	P	Pn	17 46 42.1	+1.8
PRAC				S	Sn	17 47 26.9	+2.5
PTBC	**PUERTO BERRIO,**	**3.78**	**76**	P	Pn	17 46 42.1	+1.7
PTBC				S	Sn	17 47 28.4	+3.8
GARC	**Garzon, Huila**	**4.33**	**142**	P	Pn	17 46 49.7	+1.6
GARC				S	Sn	17 47 38.7	+0.3
URMC	**La Uribe, Meta**	**4.44**	**122**	P	Pn	17 46 51.5	+1.9
URMC				S	Sn	17 47 40.9	-0.1
BARC	**Barichara**	**5.03**	**79**	P	Pn	17 47 00.9	+3.1
SJCC	**San Jacinto, C**	**5.16**	**35**	P	Pn	17 46 59.6	+0.2
	14nm,1.4s						
SJCC				S	Sn	17 47 56.4	-2.3
	14nm,1.4s						

*BEO **27** 17:57:49.1±0.7,41°.36N×19°.51E,h11km±4km,ML2.7/8*

*PDG **27** 17:57:49.9±0.3,41°.47N×19°.58E,h23km,ML2.8/9,Error ellipse: s-maj=2.0km s-min=2.0km az=0.0*

ISC 27 17:57:50.5±1.5,**41°.49N**±0°.06×**19°.48E**±0°.04,**h12**km±10km, **n41**,σ1s**00**/69,**20C-12D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.51**	**340**	⇑*i*Pg	**Pg**	**17 57 59.2**	**-1.2**
ULC				*i* Sg	**Sg**	**17 58 08.8**	**+1.6**
DRME	**Dracevica, Mon**	**0.73**	**343**	*e*Pg	**Pb**	**17 58 03.7**	**-1.5**
DRME				*e*Sg	**Sn**	**17 58 17.7**	**-0.1**
BUM	**Brajici-Budva**	**0.92**	**332**	⇓*i*Pg	**Pb**	**17 58 08.0**	**-0.5**
BUM				*i* Sg	**Sn**	**17 58 24.0**	**+1.4**
PDG	**Podgorica**	**0.95**	**350**	⇑P	**Pb**	**17 58 08.3**	**-0.7**
PDG				⇑S	**Sb**	**17 58 22.0**	**+0.3**
PDG	**Podgorica**	**0.95**	**350**	*e*Pg	**Pb**	**17 58 08.1**	**-0.9**
PDG				*e*Sg	**Sn**	**17 58 23.6**	**+0.3**
PDG	**Podgorica**	**0.95**	**350**	⇑*i*Pg	**Pb**	**17 58 07.6**	**-1.4**
PDG				*i* Sg	**Sn**	**17 58 23.3**	**0.0**
PVY	**Plav**	**1.16**	**18**	⇑*i*Pg	**Pn**	**17 58 10.7**	**-2.1**
PVY				*i* Sg	**Sg**	**17 58 29.2**	**+1.2**
HCY	**Herceg Novi**	**1.21**	**323**	⇑*i*Pg	**Pn**	**17 58 12.7**	**-0.6**
HCY				*i* Sg	**Sg**	**17 58 30.9**	**+1.5**
NKME	**Niksic**	**1.33**	**343**	⇓*i*Pg	**Pn**	**17 58 14.6**	**-0.5**
NKME				*i* Sg	**Sb**	**17 58 34.1**	**+1.4**
KOME	**Kolasin**	**1.36**	**1**	*e*Pg	**Pb**	**17 58 15.7**	**-0.3**
KOME				*e*Sg	**Sg**	**17 58 36.2**	**+1.8**
IVA	**Berane**	**1.42**	**13**	⇑*i*Pg	**Pn**	**17 58 14.9**	**-1.3**
IVA				*i* Sg	**Sn**	**17 58 34.6**	**-0.3**
BRY	**Bratogost**	**1.57**	**334**	⇓*i*Pn	**Pn**	**17 58 17.8**	**-0.7**
BRY				*i* Sn	**Sb**	**17 58 39.8**	**+0.2**
SJES	**Sjenica**	**1.81**	**12**	*e*Pn	**Pb**	**17 58 22.7**	**-1.0**
SJES				*e*Sn	**Sb**	**17 58 47.4**	**+1.0**
PLE	**Pljevlja**	**1.84**	**358**	⇑*i*Pn	**Pn**	**17 58 21.8**	**-0.3**
PLE				*i* Sn	**Sn**	**17 58 46.1**	**+0.7**
SELS	**Selova**	**2.12**	**35**	*e*Pn	**Pn**	**17 58 26.2**	**+0.4**
SELS				*e*Sn	**Sb**	**17 58 53.6**	**-1.5**
IVAS	**Ivanjica**	**2.15**	**13**	*e*Pn	**Pn**	**17 58 26.2**	**0.0**
IVAS				*e*Sn	**Sb**	**17 58 54.7**	**-1.3**
BARS	**Barje**	**2.19**	**52**	*e*Pn	**Pn**	**17 58 26.6**	**-0.2**
**MATE

SNAA			IAmb	IAmb	18 16 47.8	
	comp=Z,3.0nm,1.5s					
FINES	**FINESS Array B**	**144.63 339**	PKP	**PKPab**	**18 23 35.5**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=52,slow=3.7,SNR=7.9					
TORD	**Torodi Ar. Bea**	**163.08 182**	PKPab	**PKPab**	**18 24 55.6**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=169,slow=1.5,SNR=0.6					

NEIC ***27*** *18:07:57.8±1.3, 19°.323N±0°.004×155°.79W±0°.01, h10km±1km, Error ellipse: s-maj=2.9km s-min=1.6km az=251.0*
HVO 27 18:07:57.5±1.4, **19°.330N**±0°.007×**155°.81W**±0°.01, **h9**km±4km, **ML2.5**/23, **ML2.6**/42(NEIC), **Error ellipse: s-maj=1.7km s-min=0.9km az=69.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KHU	**Kahuku**	**0.20**	**114**			Pg		18 08 02.3	+0.4
KHU						Sg		18 08 05.7	+0.8
MWH	**Mokuaweoweo**	**0.26**	**53**			Pg		18 08 03.1	+0.2
MWH						Sg		18 08 07.0	+0.4
MWH	**Mokuaweoweo**	**0.26**	**53**	IAML				18 08 07.4	
	comp=N,1μm,0.4s								
MWH				IAML				18 08 11.1	
	comp=E,1μm,0.6s								
ALEP	**Alea Permanent**	**0.26**	**37**			Pg		18 08 03.6	+0.5
ALEP						Sg		18 08 07.9	+1.2
KHLU	**Kahalu`u**	**0.27**	**344**			Pg		18 08 03.1	0.0
KHLU						Sg		18 08 07.4	+0.6
KHLU	**Kahalu`u**	**0.27**	**344**	IAML				18 08 08.3	
	comp=E,382nm,0.4s								
KHLU				IAML				18 08 08.6	
	comp=N,354nm,0.1s								
MLOA	**Mauna Loa Obse**	**0.30**	**47**			Pg		18 08 03.9	+0.1
MLOA						Sg		18 08 08.3	+0.4
MLOA	**Mauna Loa Obse**	**0.30**	**47**	IAML				18 08 08.9	
	comp=N,2μm,0.2s								
MLOA				IAML				18 08 09.2	
	comp=E,1μm,0.3s								
AIN	**Ainahou**	**0.34**	**83**			Pg		18 08 04.3	0.0
AIN						Sg		18 08 09.3	+0.5
AIN	**Ainahou**	**0.34**	**83**	IAML				18 08 09.5	
	comp=E,1μm,0.3s								
AIN				IAML				18 08 09.7	
	comp=N,1μm,0.3s								
HUH	**Hualalai**	**0.35**	**356**	Pg		Pg		18 08 04.8	+0.1
KKH	**Kailua Kona**	**0.38**	**329**			Pg		18 08 05.0	-0.1
KKH						Sg		18 08 10.5	+0.4
HTC	**Hot Caves**	**0.40**	**103**			Pg		18 08 05.2	-0.2
HMH	**Humu'ula Sheep**	**0.41**	**49**			Pg		18 08 05.4	-0.3
HMH						Sg		18 08 11.5	+0.3
HMH	**Humu'ula Sheep**	**0.41**	**49**	IAML				18 08 14.2	
	comp=N,667nm,0.2s								
HMH				IAML				18 08 20.1	
	comp=E,1μm,0.5s								
MLH	**Mauna Loa**	**0.43**	**68**			Pg		18 08 05.7	-0.4
MLH						Sg		18 08 12.1	+0.2
MLH	**Mauna Loa**	**0.43**	**68**	IAML				18 08 20.6	
	comp=E,368nm,0.8s								
MLH				IAML				18 08 20.8	
	comp=N,448nm,0.6s								
HLP	**Hilina Pali**	**0.48**	**94**			Pg		18 08 06.5	-0.4
HLP	**Hilina Pali**	**0.48**	**94**	IAML				18 08 21.5	
	comp=E,598nm,3.5s								
HLP				IAML				18 08 21.7	
	comp=N,465nm,1.3s								
WRMHI	**West Rim**	**0.49**	**81**			Pg		18 08 06.6	-0.6
WRMHI						Sg		18 08 13.7	+0.1
SDHHI	**Sand Hill**	**0.49**	**83**			Pg		18 08 06.5	-0.7
SDHHI						Sg		18 08 13.8	+0.1
UWE	**Uwekahuna**	**0.50**	**79**			Pg		18 08 06.7	-0.6
POHA	**Pohakuloa**	**0.50**	**32**			Pg		18 08 06.8	-0.5
POHA	**Pohakuloa**	**0.50**	**32**	IAML				18 08 23.3	
	comp=N,362nm,0.8s								
POHA				IAML				18 08 24.6	
	comp=N,507nm,0.5s								
OBL	**Observatory Le**	**0.51**	**80**			Pg		18 08 06.6	-0.8
OBL						Sg		18 08 14.2	0.0
KKO	**Keanakako'i**	**0.52**	**82**			Pg		18 08 06.8	-0.8
KKO						Sg		18 08 14.2	-0.3
RSD	**Rainshed**	**0.52**	**75**			Pg		18 08 07.3	-0.5
RSD				IAML				18 08 19.3	
	comp=E,473nm,0.3s								
SBLHI	**Steaming Bluff**	**0.52**	**79**			Pg		18 08 07.1	-0.7
SBLHI						Sg		18 08 14.4	-0.2
BYL	**Byron's Ledge**	**0.53**	**81**			Pg		18 08 07.0	-0.8
BYL				IAML				18 08 15.9	
	comp=E,453nm,0.6s								
BYL				IAML				18 08 16.1	
	comp=N,352nm,1.8s								
HATHI	**Halema'uma'u T**	**0.53**	**80**			Pg		18 08 07.0	-0.9
HATHI	**Halema'uma'u T**	**0.53**	**80**	IAML				18 08 15.4	
	comp=E,417nm,0.4s								
HATHI				IAML				18 08 25.1	
	comp=N,414nm,1.1s								
PUH	**Pauahi**	**0.56**	**85**	IAML				18 08 16.2	
	comp=N,413nm,2.5s								
PUH				IAML				18 08 19.9	
	comp=E,298nm,3.0s								
KNHH	**Kane Nui o Ham**	**0.61**	**85**			Pg		18 08 07.7	-1.7
STCH	**Steam Cracks**	**0.65**	**85**	Pg		Pg		18 08 08.2	-1.9

PDG ***27*** *18:08:06.1±0.1, 43°.30N×18°.00E, h19km, MD2.8/1, ML2.7/10, Error ellipse: s-maj=0.5km s-min=1.5km az=0.0*
RHSSO ***27*** *18:08:06.6±0.5, 43°.26N×18°.02E, h8km, ML2.7/4*
BEO ***27*** *18:08:07.8±0.4, 43°.33N×18°.02E, h15km±3km, ML2.4/7*
ISC 27 18:08:06.3±1.1, **43°.28N**±0°.02×**18°.03E**±0°.02, **h5**km±10km, **n42**, σ1**$**07/78, **6C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRY	**Bratogost**	**0.53**	**135**	⇑*i*	Pg	**Pg**		**18 08 16.3**	**-0.2**
BRY				*i*	Sg	**Sg**		**18 08 24.8**	**+1.4**
TREB	**Trebinje**	**0.61**	**157**	*e*	Pg	**Pg**		**18 08 17.4**	**-0.6**
TREB				*e*	Sg	**Sg**		**18 08 26.5**	**+0.6**
DBRK	**Dubrovnik**	**0.61**	**172**	*i*	Pg	**Pg**		**18 08 18.1**	**0.0**
DBRK					Sg	**Sg**		**18 08 26.9**	**+0.8**
UPM	**Unac-Piva**	**0.65**	**96**	⇓*i*	Pg	**Pg**		**18 08 18.2**	**-0.5**
UPM				*i*	Sg	**Sb**		**18 08 29.1**	**-0.4**
RICI	**Ricice**	**0.69**	**289**	*i*	Pg	**Pg**		**18 08 19.2**	**-0.2**
RICI					Sg	**Sb**		**18 08 29.9**	**-0.7**
MAKA	**Makarska**	**0.74**	**271**	*i*	Pg	**Pg**		**18 08 20.2**	**-0.2**
MAKA					Sg	**Sg**		**18 08 30.9**	**+0.9**
NKME	**Niksic**	**0.85**	**127**	⇑*i*	Pg	**Pg**		**18 08 21.7**	**-0.9**
NKME				*i*	Sg	**Sb**		**18 08 35.4**	**+0.1**
HCY	**Herceg Novi**	**0.90**	**157**	⇑*i*	Pg	**Pg**		**18 08 22.4**	**-1.1**
HCY				*i*	Sg	**Sb**		**18 08 36.9**	**+0.3**
LSTV	**Lastovo**	**0.98**	**239**	*i*	Pg	**Pg**		**18 08 23.9**	**-1.1**
LSTV					Sg	**Sg**		**18 08 37.7**	**0.0**
PLE	**Pljevlja**	**0.99**	**87**	⇓*i*	Pg	**Pg**		**18 08 24.2**	**-1.2**
PLE				*i*	Sg	**Sb**		**18 08 40.2**	**+0.7**
RUDO	**Rudo**	**1.03**	**70**	⇑*i*	Pg	**Pg**		**18 08 25.2**	**-0.9**
RUDO				*e*	Sg	**Sg**		**18 08 39.5**	**0.0**
HVAR	**Hvar**	**1.16**	**266**	*i*	Pg	**Pg**		**18 08 28.1**	**-0.4**
HVAR					Sg	**Sg**		**18 08 43.6**	**+0.1**
BBLS	**Lazi&#263i**	**1.16**	**59**	*e*	Pg	**Pg**		**18 08 28.2**	**-0.3**
BBLS				*e*	Sg	**Sg**		**18 08 43.8**	**+0.2**
BUM	**Brajici-Budva**	**1.17**	**147**	⇓*i*	Pg	**Pg**		**18 08 27.7**	**-0.9**
BUM				*i*	Sg	**Sn**		**18 08 46.2**	**+0.5**
KOME	**Kolasin**	**1.17**	**111**	*e*	Pg	**Pg**		**18 08 28.5**	**-0.2**
KOME				*e*	Sg	**Sn**		**18 08 47.6**	**+1.8**
PDG	**Podgorica**	**1.24**	**133**	*e*	Pg	**Pb**		**18 08 29.3**	**-0.8**
PDG				*e*	Sg	**Sn**		**18 08 49.5**	**+2.2**
PDG	**Podgorica**	**1.24**	**133**	⇓*i*	Pg	**Pb**		**18 08 28.7**	**-1.4**
PDG				*i*	Sg	**Sn**		**18 08 47.7**	**+0.4**
DRME	**Dracevica, Mon**	**1.38**	**142**	*e*	Pg	**Pn**		**18 08 32.2**	**-0.1**
DRME				*e*	Sg	**Sg**		**18 08 53.6**	**+2.9**
KIJV	**Kijevo**	**1.38**	**302**	*e*	Pg	**Pg**		**18 08 33.3**	**+0.5**
KIJV					Sg	**Sg**		**18 08 53.3**	**+2.5**
SJES	**Sjenica**	**1.42**	**90**	*e*	Pg	**Pb**		**18 08 33.5**	**+0.2**
SJES				*e*	Sg	**Sg**		**18 08 52.6**	**+0.7**
IVA	**Berane**	**1.43**	**106**	⇑*i*	Pg	**Pn**		**18 08 31.6**	**-1.3**
IVA				*i*	Sg	**Sg**		**18 08 53.2**	**+1.1**
PVY	**Plav**	**1.57**	**115**	⇓*i*	Pn	**Pn**		**18 08 34.1**	**-0.9**
PVY				*i*	Sn	**Sn**		**18 08 55.5**	**-0.2**
IVAS	**Ivanjica**	**1.58**	**78**	*e*	Pn	**Pb**		**18 08 35.6**	**-0.4**
IVAS				*e*	Sn	**Sn**		**18 08 55.6**	**-0.2**
BLY	**Banja Luka**	**1.59**	**338**	*e*	Pn	**Pn**		**18 08 34.9**	**-0.2**
BLY				*e*	Sn	**Sb**		**18 08 56.3**	**-0.3**
BLY	**Banja Luka**	**1.59**	**338**	*e*	Pg	**Pb**		**18 08 36.5**	**+0.3**
BLY				*e*	Sg	**Sg**		**18 08 59.0**	**+1.6**
ULC	**Ulcinj**	**1.59**	**145**	⇑*i*	Pn	**Pn**		**18 08 34.3**	**-0.8**
ULC				*i*	Sn	**Sb**		**18 08 56.5**	**-0.1**
TEKS	**Tekeris**	**1.67**	**40**	*e*	Pn	**Pn**		**18 08 35.0**	**-1.2**
TEKS				*e*	Sn	**Sn**		**18 08 55.9**	**-2.2**
ZIRJ	**Zirje**	**1.78**	**283**	*e*	Pn	**Pn**		**18 08 38.4**	**+0.8**
ZIRJ					Sn	**Sg**		**18 09 02.7**	**-0.7**
MORI	**Morici**	**1.79**	**290**	*i*	Pn	**Pb**		**18 08 38.8**	**-0.7**
MORI					Sn	**Sg**		**18 09 03.4**	**-0.2**
TRUS	**Trudelj**	**1.96**	**60**	*e*	Pn	**Pn**		**18 08 39.4**	**-0.9**
UDBI	**Udbina**	**2.06**	**308**	*e*	Pn	**Pb**		**18 08 44.3**	**+0.1**
UDBI					Sn	**Sg**		**18 09 11.8**	**-0.6**
SELS	**Selova**	**2.26**	**90**	*e*	Pn	**Pn**		**18 08 44.7**	**+0.4**
DUGI	**Dugi Otok**	**2.27**	**289**	*e*	Pn	**Pb**		**18 08 46.7**	**-1.1**
DUGI					Sn	**Sb**		**18 09 16.0**	**-0.2**
PLIT	**Plitvice**	**2.36**	**314**	*e*	Pn	**Pb**		**18 08 48.4**	**-0.9**
PLIT					Sn	**Sb**		**18 09 18.6**	**-0.2**
VIRC	**Vir**	**2.38**	**296**	*e*	Pn	**Pb**		**18 08 48.4**	**-1.2**
VIRC					Sn	**Sb**		**18 09 18.0**	**-1.2**
NVLJ	**Novalja**	**2.62**	**300**	*e*	Pn	**Pb**		**18 08 52.0**	**-1.7**
NVLJ					Sn	**Sb**		**18 09 24.1**	**-2.0**
BARS	**Barje**	**2.81**	**98**	*e*	Pn	**Pn**		**18 08 52.6**	**+0.7**
BARS				*e*	Sn	**Sn**		**18 09 26.2**	**-0.1**
MORH	**Mrgy, Hungar**	**2.97**	**8**	*e*	Pn	**Pn**		**18 08 55.0**	**+1.0**
MORH				*e*	Sn	**Sn**		**18 09 30.0**	**0.0**
ZAPS	**Zavoj**	**3.36**	**89**	*e*	Pn	**Pn**		**18 09 01.1**	**+1.6**
SOKA	**Soboth**	**4.01**	**329**	*e*	Pn	**Pn**		**18 09 09.6**	**+1.2**
	comp=Z,2.1nm,0.4s								
LESA	**Schwarzleotal**	**5.60**	**320**	*i*	Pn	**Pn**		**18 09 32.3**	**+2.0**
	comp=Z,1.2nm,0.2s								
WTTA	**Wattenberg**	**6.02**	**314**	*e*	Pn	**Pn**		**18 09 39.0**	**+2.9**
	comp=Z,0.8nm,0.2s								

IDC 27 18:15:36.7±2.2, **1°.86N×127°.48E, h0**km, **mb3.1**/3, **mbtmp3.3**/4, **ML3.0**/1, **Error ellipse: s-maj=115.2km s-min=27.5km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.91**	**185**	P		P	Pn	18 20 11.0	-0.7
	baz=0.0,slow=13,SNR=2.0								
	3.1nm,1.1s								
WRA	**Warramunga Arr**	**22.69**	**163**	P		P		18 20 40.2	+0.2
	0.3nm,0.4s,baz=342,slow=11,SNR=5.5								
	0.3nm,0.4s								
ASAR	**Alice Springs**	**26.13**	**167**	P		P		18 21 12.0	-0.7
	0.1nm,0.4s,baz=344,slow=7.9,SNR=5.2								
	0.1nm,0.4s								
MKAR	**Makanchi Array**	**59.51**	**326**	P		P		18 25 42.0	+0.1
	0.1nm,0.4s,baz=110,slow=6.3,SNR=1.3								
	0.1nm,0.4s								

IDC 27 18:23:07.6±610.0, **54°.48N×5°.17E, h0**km, **Error ellipse: s-maj=299.5km s-min=126.8km az=121.0, North Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**7.74**	**133**	I		I		19 09 30.0	
	baz=320,slow=322,SNR=1.0								
I43RU	**DUBNA INFRASONI**	**8.16**	**70**	I		I		20 15 40.0	
	baz=278,slow=326,SNR=1.1								
I48TN	**KERA INFRASONI**	**8.90**	**170**	I		I		20 13 30.0	
	baz=357,slow=296,SNR=0.4								
I46RU	**ZALESOVO INFRA**	**44.19**	**57**	I		I		22 52 28.0	
	baz=306,slow=308								

CATAC ***27*** *18:30:04.3±0.7, 14°.N±3°, 9°.1W±°, h24km±4km, M3.7/12, MLv3.7/12, Error ellipse: s-maj=7.4km s-min=2.5km az=28.0, confirmed*
GCG ***27*** *18:30:05.2±1.2, 13°.73N×91°.00W, h60km±12km, MD4.0, ML3.9*
SNET ***27*** *18:30:06.2±1.5, 13°.55N×90°.85W, h72km, ML3.5*
ISC 27 18:30:02.6±1.6, **13°.56N**±0°.08×**91°.03W**±0°.05, **h29**km, **n44, σ1$06**/49, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESSJ	**San Jos, E**	**0.52**	**90**	*i*	P	**Pn**		**18 30 15.9**	**+1.9**
ESSG	**Sabana Grande**	**0.84**	**13**	*i*	P	**Pn**		**18 30 19.1**	**+0.5**
FG16	**Alotenango, Sa**	**0.87**	**36**	*i*	P	**Pn**		**18 30 20.5**	**+1.4**
FG16				*i*	S	**Sn**		**18 30 32.0**	**+1.1**
FG16					IAML			18 30 32.6	
	comp=N,20μm,0.2s								
STG5	**El Palmar, Qui**	**0.89**	**340**	*i*	P	Pb		18 30 24.6	+5.0
PCG5	**San Vicente Pa**	**0.91**	**44**	*i*	P	**Pb**		**18 30 20.0**	**0.0**
STG8	**El Palmar, Qui**	**0.94**	**341**	*e*	P	Pb		18 30 25.6	+5.2
STG8					IAML			18 30 44.3	
	comp=E,2μm,0.2s								
FAME	**Alcaldia de Sa**	**1.03**	**74**	P		**Pb**		**18 30 22.4**	**+0.6**
RTAL	**Retalhuleu**	**1.15**	**326**	P		**Pb**		**18 30 24.2**	**+0.2**
RTAL	**Retalhuleu**	**1.15**	**326**	S		**Sb**		**18 30 39.2**	**+0.6**
NUBE	**Las Nubes**	**1.26**	**74**	*e*	P	**Pb**		**18 30 26.4**	**+0.5**
NUBE				*e*	S	**Sb**		**18 30 41.4**	**-0.4**
NUBE	**Las Nubes**	**1.26**	**74**	*e*	P	**Pb**		**18 30 25.9**	**0.0**
NUBE	**Las Nubes**	**1.26**	**74**	P		**Pb**		**18 30 25.9**	**0.0**
LOAL	**Lomas de Alarc**	**1.29**	**70**	*e*	P	**Pb**		**18 30 27.1**	**+0.7**
LOAL				*e*	S	**Sb**		**18 30 43.0**	**+0.5**
LOAL	**Lomas de Alarc**	**1.29**	**70**	P		**Pb**		**18 30 27.0**	**+0.7**
SOKI	**Kika Raxquin**	**1.30**	**344**	*e*	P	**Pb**		**18 30 26.7**	**-0.1**
CEVE	**Cerro Verde**	**1.39**	**79**	*e*	P	**Pb**		**18 30 27.9**	**-0.2**
CEVE				*e*	S	**Sb**		**18 30 46.0**	**+0.3**
CEVE	**Cerro Verde**	**1.39**	**79**	P		**Pb**		**18 30 28.3**	**+0.1**
CEVE	**Cerro Verde**	**1.39**	**79**	S		**Sb**		**18 30 45.3**	**-0.4**
UNIC	**Universidad Ca**	**1.50**	**74**	S		**Sb**		**18 30 47.5**	**-1.0**
UNIC	**Universidad Ca**	**1.50**	**74**	P		**Pb**		**18 30 29.3**	**-0.6**
APG	**El Apazote**	**1.54**	**21**	*i*	P	**Pb**		**18 30 30.0**	**-0.6**
APG					eS	**Sb**		**18 30 48.5**	**-1.3**
JAYA	**Jayaque - finc**	**1.54**	**86**	*e*	P	**Pb**		**18 30 30.0**	**-0.7**
JAYA				*e*	S	**Sb**		**18 30 48.4**	**-1.5**
JAYA	**Jayaque - finc**	**1.54**	**86**	*e*	P	**Pb**		**18 30 30.1**	**-0.5**
JAYA	**Jayaque - finc**	**1.54**	**86**	P		**Pb**		**18 30 29.9**	**-0.7**
CEDA	**San Andres**	**1.61**	**81**	S		**Sb**		**18 30 51.1**	**-0.6**
CEDA	**San Andres**	**1.61**	**81**	P		**Pb**		**18 30 30.3**	**-1.4**
SMCA	**Catarina**	**1.64**	**322**	*e*	P	**Pb**		**18 30 30.6**	**-1.6**
LALI	**Alcalda de L**	**1.67**	**92**	S		**Sb**		**18 30 52.1**	**-1.1**
PMON	**Piamonte**	**1.68**	**85**	S		**Sb**		**18 30 52.9**	**-0.8**
PMON	**Piamonte**	**1.68**	**85**	P		**Pb**		**18 30 32.5**	**-0.4**
BOQS	**Boqueron**	**1.71**	**84**	*e*	P	**Pb**		**18 30 32.1**	**-1.5**
QUIS	**Sacapulas**	**1.72**	**358**	*e*	P	**Pb**		**18 30 32.7**	**-1.0**
QUIS					IAML			18 30 57.5	
	comp=E,554nm,0.3s								
UEES	**Universidad Ev**	**1.75**	**85**	S		**Sb**		**18 30 54.1**	**-1.6**
HUEH	**Huehuetenango**	**1.81**	**345**	S		**Sb**		**18 30 55.7**	**-1.8**
LOMA	**Loma Larga**	**1.81**	**87**	*e*	P	**Pb**		**18 30 33.8**	**-1.4**
LOMA	**Loma Larga**	**1.81**	**87**	S		**Sb**		**18 30 56.0**	**-1.5**
LOMA	**Loma Larga**	**1.81**	**87**	P		**Pb**		**18 30 34.2**	**-1.0**
IGN	**Direccin Gen**	**1.82**	**85**	S		**Sb**		**18 30 56.3**	**-1.4**
MTO3	**Montecristo**	**1.82**	**63**	*e*	P	**Pb**		**18 30 33.7**	**-1.8**
MTO3				*e*	S	**Sb**		**18 30 57.6**	**-0.4**
MTO3	**Montecristo**	**1.82**	**63**	*i*	P	**Pb**		**18 30 33.7**	**-1.8**
MTO3	**Montecristo**	**1.82**	**63**	P		**Pb**		**18 30 34.0**	**-1.5**
UDBS	**Universidad Do**	**1.83**	**85**	S		**Sb**		**18 30 56.7**	**-1.4**
LFRS	**El Faro**	**1.92**	**88**	*e*	P	**Pb**		**18 30 35.8**	**-1.2**
ESQI	**Esquipulas**	**1.92**	**59**	S		**Sb**		**18 31 00.4**	**-0.2**

IDC 27 18:36:06.7±6.7, **3°.09N×128°.67E, h190**km±68km, **mb3.3**/11, **mbtmp3.8**/11, **Error ellipse: s-maj=36.0km s-min=13.6km az=69.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.26**	**188**	P		P		18 40 37.3	-1.0
	1.5nm,0.5s,baz=17,slow=9.6,SNR=10.0								
	1.5nm,0.5s								
WRA	**Warramunga Arr**	**23.56**	**167**	P		P		18 41 00.5	+0.4
	1.0nm,0.5s,baz=344,slow=8.8,SNR=17								
	1.0nm,0.5s								
ASAR	**Alice Springs**	**27.08**	**169**	P		P		18 41 31.9	+0.1
	0.6nm,0.4s,baz=350,slow=7.2,SNR=7.0								
ASAR				PcP		PcP		18 44 47.6	-0.4
	0.1nm,0.4s,baz=354,slow=2.6,SNR=1.6								
	0.6nm,0.4s								
CMAR	**Chiang Mai Arr**	**32.86**	**300**	P		P		18 42 23.6	+0.7
	0.8nm,0.7s,baz=107,slow=6.8,SNR=6.8								
	0.8nm,0.7s								
MJAR	**Matsushiro Arr**	**34.43**	**14**	P		P		18 42 36.0	-0.2
	0.7nm,0.5s,baz=192,slow=8.3,SNR=4.3								
	0.7nm,0.5s								
STKA	**Stephens Creek**	**36.88**	**162**	P		P		18 42 57.3	+0.3
	2.5nm,0.8s,baz=334,slow=9.5,SNR=4.5								
	2.5nm,0.8s								

SONM	**Songino Array**	**48.54**	**340**	P		P		18 44 31.4	+0.7
	0.7nm,0.9s,baz=155,slow=7.9,SNR=2.9								
	0.7nm,0.9s								
MKAR	**Makanchi Array**	**59.19**	**325**	P		P		18 45 48.0	+0.3
	0.9nm,0.6s,baz=118,slow=7.4,SNR=16								
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**	**62.04**	**332**	P		P		18 46 06.5	-0.3
	0.2nm,0.3s,baz=123,slow=5.3,SNR=2.0								
	0.2nm,0.3s								
KURBB	**Kurchatov Arra**	**63.32**	**327**	P		P		18 46 14.7	-0.7
	0.6nm,0.5s,baz=124,slow=5.9,SNR=12								
	0.6nm,0.5s								
BVAR	**Borovoye Array**	**68.91**	**327**	P		P		18 46 50.5	-0.4
	1.2nm,0.7s,baz=104,slow=6.1,SNR=4.9								
	1.2nm,0.7s								

NEIC ***27*** *18:59:56.5±0.5, 19°.38N±0°.03×154°.90W±0°.03, h6km±6km, Error ellipse: s-maj=5.6km s-min=1.5km az=137.0*
HVO 27 18:59:56.2±1.0, **19°.40N**±0°.03×**154°.90W**±0°.02, **h2**km±8km, **ML2.4**/19, **ML2.5**/35(NEIC), **Error ellipse: s-maj=4.9km s-min=1.0km az=148.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCUZ	**Jacuzzi**	**0.19**	**264**			Pg		19 00 00.5	+0.5
JCUZ						Sg		19 00 03.5	+0.8
NPOC	**North of Pu'u**	**0.20**	**267**			Pg		19 00 00.5	+0.4
NPOC						Sg		19 00 03.0	+0.4
STCH	**Steam Cracks**	**0.21**	**265**	Pg		Pg		18 59 59.8	-0.6
KNHH	**Kane Nui o Ham**	**0.26**	**265**			Pg		19 00 01.8	+0.7
PUH	**Pauahi**	**0.30**	**264**			Pg		19 00 02.5	+0.5
PUH						Sg		19 00 07.1	+1.2
PUH	**Pauahi**	**0.30**	**264**	IAML				19 00 08.2	
	comp=E,320nm,0.3s								
PUH				IAML				19 00 11.4	
	comp=N,322nm,0.8s								
BYL	**Byron's Ledge**	**0.34**	**271**			Pg		19 00 03.0	+0.3
BYL						Sg		19 00 08.3	+1.1
BYL	**Byron's Ledge**	**0.34**	**271**	IAML				19 00 09.0	
	comp=E,316nm,1.5s								
HATHI	**Halema'uma'u T**	**0.34**	**273**			Pg		19 00 03.1	+0.4
HATHI						Sg		19 00 08.3	+1.1
HATHI	**Halema'uma'u T**	**0.34**	**273**	IAML				19 00 11.8	
	comp=E,403nm,1.1s								
HATHI				IAML				19 00 12.2	
	comp=N,332nm,0.3s								
KKO	**Keanakako'i**	**0.35**	**269**			Pg		19 00 03.1	+0.3
KKO						Sg		19 00 08.6	+1.2
SBLHI	**Steaming Bluff**	**0.35**	**274**			Pg		19 00 03.2	+0.3
SBLHI						Sg		19 00 08.4	+0.9
RIM	**Rim**	**0.35**	**269**			Pg		19 00 03.4	+0.4
RIM						Sg		19 00 08.8	+1.2
UWB	**Uwekahuna Bluf**	**0.36**	**273**			Pg		19 00 03.3	+0.2
UWB						Sg		19 00 09.1	+1.3
RSD	**Rainshed**	**0.36**	**279**			Pg		19 00 03.7	+0.5
RSD						Sg		19 00 09.2	+1.3
RSD	**Rainshed**	**0.36**	**279**	IAML				19 00 10.1	
	comp=N,994nm,0.4s								
RSD				IAML				19 00 10.7	
	comp=E,426nm,0.3s								
OBL	**Observatory Le**	**0.36**	**272**			Pg		19 00 03.5	+0.3
OBL						Sg		19 00 09.2	+1.2
UWE	**Uwekahuna**	**0.37**	**273**			Pg		19 00 03.6	+0.2
UWE						Sg		19 00 09.8	+1.5
UWE	**Uwekahuna**	**0.37**	**273**	IAML				19 00 11.2	
	comp=E,362nm,0.4s								
UWE				IAML				19 00 16.1	
	comp=N,576

MBDF				*e*Sg		**Sg**	**19 10 09.8**	**-1.2**
	3.4nm,0.3s								
VERF	**Verneugheol**	**1.70**	**308**	Pn		**Pb**	**19 09 47.6**	**+0.3**
VERF				Pg		**Pg**	**19 09 49.8**	**+0.7**
RRL	**Rocca Remolon**	**1.71**	**82**	Pn		**Pg**	**19 09 48.5**	**-0.9**
RRL				Pg		**Pb**	**19 09 50.7**	**+3.2**
SURF	**Saint Ours**	**1.74**	**97**	Pn		**Pb**	**19 09 48.2**	**+0.2**
TRIGF	**Trigance**	**1.74**	**123**	Pn		**Pg**	**19 09 48.9**	**-1.0**
TRIGF				Sn		**Sb**	**19 10 08.9**	**-0.6**
LPL	**La Plagne**	**1.83**	**63**	*e*Pg		**Pg**	**19 09 52.0**	**+0.3**
LPL				*e*Sn		**Sn**	**19 10 10.6**	**+0.4**
LPL				*e*Sg		**Sg**	**19 10 14.9**	**-0.6**
	7.7nm,0.5s								
LPG	**La Plagne**	**1.84**	**64**	*e*Pg		**Pg**	**19 09 52.1**	**+0.3**
LPG				*e*Sg		**Sg**	**19 10 15.9**	**+0.2**
	5.4nm,0.3s								
RSL	**Roselend**	**1.85**	**58**	Pn		**Pb**	**19 09 49.3**	**-0.5**
RSL				Pg		**Pg**	**19 09 52.1**	**+0.2**
RSL				Sn		**Sb**	**19 10 11.8**	**-0.9**
CLAF	**Gruissan**	**1.85**	**211**	Pg		**Pg**	**19 09 52.3**	**+0.3**
SMF	**Signal de Mont**	**1.96**	**349**	*e*Pg		**Pg**	**19 09 54.1**	**-0.1**
SMF				*e*Sg		**Sg**	**19 10 18.5**	**-1.2**
	5.9nm,0.2s								
LMR	**La Mourre**	**2.06**	**132**	*e*Pn		**Pn**	**19 09 51.4**	**+1.2**
LMR	**La Mourre**	**2.06**	**132**	*e*Pg		**Pg**	**19 09 55.4**	**-0.6**
LMR				*e*Sn		**Sn**	**19 10 14.8**	**-0.6**
LMR				*e*Sg		**Sg**	**19 10 21.0**	**-1.7**
	5.4nm,0.2s								
MTLF	**Montolieu**	**2.09**	**230**	*e*Pg		**Pg**	**19 09 56.5**	**-0.1**
MTLF				*e*Sn		**Sn**	**19 10 16.7**	**+0.4**
MTLF				*e*Sg		**Sg**	**19 10 23.0**	**-0.8**
	13nm,0.2s								
MTLF	**Montolieu**	**2.09**	**230**	Pn		**Pn**	**19 09 51.8**	**+1.1**
MTLF				Pg		**Pg**	**19 09 56.8**	**+0.1**
MTLF				Sg		**Sg**	**19 10 23.2**	**-0.6**
RJF	**Les Rejaudoux**	**2.13**	**287**	*e*Pn		**Pn**	**19 09 51.7**	**+0.5**
RJF	**Les Rejaudoux**	**2.13**	**287**	*e*Pg		**Pg**	**19 09 57.0**	**-0.3**
RJF				*e*Sg		**Sg**	**19 10 24.0**	**-0.9**
	6.5nm,0.2s								
BGF	**Bois d'Agland**	**2.14**	**330**	*e*Pg		**Pg**	**19 09 57.5**	**0.0**
BGF				*e*Sg		**Sg**	**19 10 24.5**	**-0.7**
	26nm,0.4s								
AVF	**Avril sur Loir**	**2.20**	**341**	*e*Pg		**Pg**	**19 09 58.4**	**-0.2**
AVF				*e*Sg		**Sg**	**19 10 25.8**	**-1.3**
	3.0nm,0.2s								
TCF	**Toulx Ste Croi**	**2.20**	**316**	*e*Pg		**Pg**	**19 09 58.3**	**-0.3**
TCF				*e*Sg		**Sg**	**19 10 26.0**	**-1.2**
	3.4nm,0.2s								
CABF	**La Chapelle**	**2.23**	**31**	*e*Pg		**Pg**	**19 09 59.2**	**-0.1**
CABF				*e*Sg		**Sg**	**19 10 27.2**	**-1.0**
	9.4nm,0.3s								
SBF	**Sospel**	**2.34**	**110**	*e*Sn		**Sn**	**19 10 22.8**	**+0.3**
SBF				*e*Sg		**Sg**	**19 10 30.9**	**-0.9**
	14nm,0.3s								
SSF	**Saint Saulge**	**2.42**	**345**	*e*Pg		**Pg**	**19 10 02.9**	**0.0**
SSF				*e*Sg		**Sg**	**19 10 32.4**	**-2.0**
	7.0nm,0.4s								
FNEB	**Nbias**	**2.46**	**223**	Pn		**Pb**	**19 09 58.1**	**-2.1**
FNEB				Pg		**Pg**	**19 10 03.8**	**+0.2**
FNEB				Sg		**Sg**	**19 10 36.0**	**+0.5**
EJON	**La Jonquera**	**2.52**	**206**	⇑*i*Vmb_VC			19 10 08.2		
	242nm,SNR=1.5								
EJON				Sn		**Sg**	**19 10 36.4**	**-1.2**
FILF	**Fillols**	**2.54**	**212**	Pg		**Pg**	**19 10 06.2**	**+1.0**
FILF				Sg		**Sg**	**19 10 39.4**	**+1.3**
LOR	**Lormes**	**2.58**	**352**	*e*Pg		**Pg**	**19 10 05.5**	**-0.3**
LOR				*e*Sg		**Sg**	**19 10 37.3**	**-1.9**
	7.5nm,0.2s								
CARF	**Carcanieres**	**2.60**	**221**	Pg		**Pg**	**19 10 06.1**	**-0.3**
CARF				Sg		**Sg**	**19 10 40.5**	**+0.3**
LFF	**La Frestale**	**2.61**	**276**	*e*Pg		**Pg**	**19 10 05.9**	**-0.7**
LFF				*e*Sg		**Sg**	**19 10 38.9**	**-1.5**
	29nm,0.6s								
SENIN	**Lac Senin/Sane**	**2.62**	**50**	Pn		**Pb**	**19 10 01.8**	**-1.1**
SENIN				Sn		**Sn**	**19 10 32.0**	**+2.4**
BRANT	**Les Verrieres**	**2.65**	**32**	Pn		**Pb**	**19 10 03.4**	**-0.1**
BRANT				Sn		**Sb**	**19 10 35.2**	**-0.5**
SALF	**Salau**	**3.04**	**231**	Pg		**Pg**	**19 10 14.7**	**-0.1**
SALF				Sg		**Sg**	**19 10 54.0**	**-0.2**
FIESA	**Fiescheralp**	**3.12**	**55**	Pn		**Pb**	**19 10 08.8**	**-2.7**
FIESA				Sn		**Sn**	**19 10 44.2**	**+2.2**
EPF	**Esparros**	**3.39**	**242**	*e*Pn		**Pn**	**19 10 08.9**	**+0.4**
EPF	**Esparros**	**3.39**	**242**	*e*Pg		**Pg**	**19 10 19.7**	**-1.7**
EPF				*e*Sn		**Sn**	**19 10 46.6**	**-1.7**
EPF				*e*Sg		**Sg**	**19 11 02.6**	**-2.6**
	3.4nm,0.2s								
HINF	**Hinteralfeld**	**3.53**	**28**	*e*Pg		**Pg**	**19 10 22.9**	**-1.2**
HINF				*e*Sg		**Sg**	**19 11 06.7**	**-3.2**
	8.0nm,0.5s								
LABF	**Labassere**	**3.55**	**243**	Pg		**Pg**	**19 10 23.7**	**-0.8**
LABF				Sg		**Sg**	**19 11 09.9**	**-0.4**
HAU	**Haudompre**	**3.55**	**22**	*e*Sg		**Sg**	**19 11 08.3**	**-2.2**
	5.1nm,0.3s								
MFF	**Saint Martin d**	**3.70**	**302**	*e*Sg		**Sg**	**19 11 12.4**	**-2.9**
	1.9nm,0.3s								
MFF				*e*Sg		**Sb**	**19 11 12.6**	**+6.7**
REYF	**Montagne du Re**	**3.84**	**246**	Pg		**Pg**	**19 10 28.6**	**-1.4**
PGF	**Pioggiola**	**3.98**	**121**	*e*Pn		**Pn**	**19 10 17.9**	**+1.1**
PGF				*e*Sn		**Sn**	**19 11 02.5**	**-0.6**
	1.4nm,0.2s								

LJU ***27*** *19:17:09.8,45°.40N×15°.75E,h1km,ML2.5*
BEO ***27*** *19:17:12.3±0.4,44°.88N×15°.54E,h3km±4km,ML2.6/5*
PRU ***27*** *19:17:12.8,45°.55N×15°.85E,h10km*
RHSSO ***27*** *19:17:14.0±0.6,45°.50N×16°.04E,h6km±4km,ML3.0/6*

ISC 27 19:17:10.2±1.1,45°.44N±0°.01×15°.79E±0°.02,h4km±9km, n89,σ1°55/143,8C-5D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZLJ	**Ozalj**	**0.29**	**308**	*i* Pg	**Pg**	**19 17 16.0**	**+0.3**
OZLJ				Sg	**Sg**	**19 17 20.2**	**+0.8**
BOJS	**Bojanci**	**0.38**	**280**	⇑*i* Pg	**Pg**	**19 17 17.3**	**-0.2**
BOJS				*i* Sg	**Sg**	**19 17 22.6**	**0.0**
BOJS				IAML		19 17 25.1	
	comp=Z,196nm,0.1s						
ZAG	**Zagreb**	**0.41**	**20**	*i* Pg	**Pg**	**19 17 19.3**	**-0.8**
ZAG				Sg	**Sb**	**19 17 26.1**	**-0.6**
GCIS	**Gornji Cirnik**	**0.44**	**345**	*i* Pg	**Pg**	**19 17 19.3**	**+0.5**
GCIS				*i* Sg	**Sg**	**19 17 25.1**	**+0.6**
GCIS				IAML		19 17 33.0	
	comp=Z,285nm,0.2s						
CRES	**Cresnjevec Ost**	**0.45**	**329**	*i* Pg	**Pg**	**19 17 19.1**	**+0.2**
CRES				*i* Sg	**Sg**	**19 17 25.5**	**+0.7**
CRES				IAML		19 17 29.8	
	comp=Z,314nm,0.2s						
PTJ	**Puntijarka**	**0.49**	**15**	*i* Pg	**Pb**	**19 17 20.4**	**-1.0**
PTJ				Sg	**Sb**	**19 17 28.2**	**-0.7**
PLIT	**Plitvice**	**0.57**	**192**	*e*Pg	**Pg**	**19 17 20.7**	**-0.4**
PLIT				Sg	**Sg**	**19 17 28.0**	**-0.6**
CESS	**Cesta pri Krsk**	**0.58**	**337**	*i* Pg	**Pb**	**19 17 22.3**	**-0.6**
CESS				*i* Sg	**Sb**	**19 17 30.9**	**-0.7**
CESS				IAML		19 17 37.4	
	comp=Z,338nm,0.3s						
GOLS	**Golise**	**0.58**	**349**	*i* Pg	**Pb**	**19 17 22.2**	**-0.8**
GOLS				IAML		19 17 35.6	
	comp=Z,147nm,0.2s						
LEGS	**Legarje**	**0.61**	**327**	*i* Pg	**Pg**	**19 17 21.9**	**+0.1**
LEGS				*i* Sg	**Sb**	**19 17 31.4**	**-1.0**
MOSL	**Moslavina**	**0.70**	**75**	*i* Pg	**Pb**	**19 17 24.1**	**-0.9**
MOSL				Sg	**Sb**	**19 17 34.4**	**-0.7**
LOBO	**Lobor**	**0.74**	**15**	*e*Pg	**Pb**	**19 17 25.5**	**-0.2**
LOBO				Sg	**Sb**	**19 17 36.0**	**-0.2**
DOBS	**Dobrina**	**0.75**	**343**	*i* Pg	**Pb**	**19 17 25.4**	**-0.4**
DOBS				IAML		19 17 41.4	
	comp=Z,101nm,0.1s						
VISS	**Visnje**	**0.76**	**299**	⇑*i* Pg	**Pg**	**19 17 24.6**	**-0.1**
VISS				*i* Sg	**Sg**	**19 17 35.2**	**+0.6**
VISS				IAML		19 17 39.3	
	comp=Z,134nm,0.2s						
PDKS	**Podkum**	**0.83**	**319**	*i* Pg	**Pg**	**19 17 26.4**	**+0.3**
PDKS				*i* Sg	**Sb**	**19 17 38.5**	**-0.3**
PDKS				IAML		19 17 41.8	
	comp=Z,87nm,0.2s						
KALN	**Kalnik**	**0.84**	**34**	*e*Pg	**Pb**	**19 17 26.6**	**-0.7**
KALN				Sg	**Sb**	**19 17 39.4**	**+0.5**
UDBI	**Udbina**	**0.91**	**181**	*i* Pg	**Pg**	**19 17 26.6**	**-1.0**
UDBI				Sg	**Sg**	**19 17 39.0**	**-0.5**
RIY	**Rijeka**	**0.93**	**263**	*e*Pg	**Pg**	**19 17 27.2**	**-0.7**
RIY				Sg	**Sg**	**19 17 39.1**	**-0.8**
RIY	**Rijeka**	**0.93**	**263**	*e*Pg	**Pg**	**19 17 26.9**	**-1.0**
RIY				*e*Sg	**Sg**	**19 17 41.1**	**+1.2**
RABC	**Rab**	**0.99**	**226**	*e*Pg	**Pg**	**19 17 28.6**	**-0.6**
RABC				Sg	**Sg**	**19 17 41.6**	**-0.3**
NVLJ	**Novalja**	**1.09**	**217**	*e*Pg	**Pg**	**19 17 30.4**	**-0.7**
NVLJ				Sg	**Sg**	**19 17 44.6**	**-0.6**
BLY	**Banja Luka**	**1.21**	**124**	⇑*i*Pg	**Pb**	**19 17 33.4**	**-0.2**
BLY				*e*Sg	**Sg**	**19 17 49.1**	**+0.2**
BLY	**Banja Luka**	**1.21**	**124**	⇑P	**Pn**	**19 17 33.8**	**0.0**
BLY				⇓S	**Sn**	**19 17 53.3**	**+2.7**
BLY	**Banja Luka**	**1.21**	**124**	*e*Pg	**Pb**	**19 17 33.6**	**0.0**
BLY				*e*Sg	**Sb**	**19 17 50.0**	**+0.5**
BEHE	**Becsehely**	**1.24**	**33**	*e*Pg	**Pb**	**19 17 33.8**	**-0.4**
BEHE				*e*Sg	**Sg**	**19 17 49.6**	**-0.4**
VIRC	**Vir**	**1.26**	**205**	*e*Pg	**Pg**	**19 17 34.0**	**-0.3**
VIRC				Sg	**Sg**	**19 17 51.0**	**+0.4**
SOKA	**Soboth**	**1.35**	**337**	*e*Pg	**Pg**	**19 17 35.6**	**-0.3**
	comp=Z,20nm,0.2s,SNR=60						
SOKA				*e*Sg	**Sn**	**19 17 55.1**	**+0.8**
	comp=Z,20nm,0.2s						
OBKA	**Obir**	**1.38**	**322**	*e*Pg	**Pb**	**19 17 36.6**	**+0.1**
	comp=Z,43nm,0.4s,SNR=50						
OBKA				*e*Sg	**Sn**	**19 17 55.3**	**+0.3**
	comp=Z,155nm,0.4s						
KIJV	**Kijevo**	**1.50**	**163**	*e*Pg	**Pg**	**19 17 39.0**	**+0.2**
KIJV				Sg	**Sn**	**19 17 58.7**	**+0.8**
DUGI	**Dugi Otok**	**1.54**	**200**	*i* Pg	**Pn**	**19 17 39.1**	**+0.7**
DUGI				Sg	**Sn**	**19 17 59.6**	**+0.8**
MORI	**Morici**	**1.57**	**182**	*e*Pn	**Pn**	**19 17 39.5**	**+0.7**
MORI				Sg	**Sn**	**19 18 00.5**	**+0.8**
ZIRJ	**Zirje**	**1.79**	**183**	*e*Pn	**Pb**	**19 17 43.3**	**-0.1**
ZIRJ				Sn	**Sb**	**19 18 06.8**	**+0.6**
ARSA	**Arzberg**	**1.82**	**354**	*e*Pn	**Pn**	**19 17 42.4**	**+0.1**
	comp=Z,9.2nm,0.3s,SNR=5.6						
MYKA	**Terra Mystica**	**1.91**	**309**	Pn	**Pn**	**19 17 44.7**	**+1.1**
	comp=Z,15nm,0.3s,SNR=22						
MORH	**Mrgy, Hungar**	**2.14**	**68**	*e*Pn	**Pn**	**19 17 46.8**	**+0.1**
MORH				*e*Sn	**Sn**	**19 18 12.3**	**-1.4**
MORH	**Mrgy, Hungar**	**2.14**	**68**	⇓P	**Pn**	**19 17 47.8**	**+1.1**
RICI	**Ricice**	**2.17**	**153**	*e*Pn	**Pb**	**19 17 48.9**	**-1.1**
RICI				Sn	**Sn**	**19 18 16.3**	**+1.8**
RONA	**Rosalia, Austr**	**2.29**	**9**	*e*Pn	**Pn**	**19 17 48.8**	**0.0**
	comp=Z,33nm,0.5s,SNR=48						
RONA				*e*Sg	**Sg**	**19 18 27.9**	**+4.2**
	comp=Z,24nm,0.4s						
HVAR	**Hvar**	**2.31**	**168**	*e*Pn	**Pn**	**19 17 50.6**	**+1.6**
HVAR				Sn	**Sb**	**19 18 20.7**	**-0.5**
MAKA	**Makarska**	**2.32**	**157**	*i* Pn	**Pn**	**19 17 51.0**	**+1.8**
MAKA				Sn	**Sn**	**19 18 20.3**	**+2.1**
KBA	**Koelnbreinsper**	**2.36**	**315**	Pn	**Pb**	**19 17 52.0**	**-1.3**
	comp=Z,5.3nm,0.3s						
CONA	**Conrad Observa**	**2.49**	**1**	*e*Pn	**Pn**	**19 17 51.9**	**+0.3**
	comp=Z,9.9nm,0.3s,SNR=26						
CONA				*e*Sg	**Sn**	**19 18 24.3**	**+1.8**
	comp=Z,15nm,0.4s						
ABTA	**Abfaltersbach**	**2.63**	**301**	Pn	**Pn**	**19 17 54.5**	**+1.0**
	comp=Z,15nm,0.5s,SNR=4.9						
MOA	**Molln**	**2.63**	**337**	*e*Pn	**Pn**	**19 17 54.6**	**+1.2**
	comp=Z,5.2nm,0.2s						
MOA				*e*Sg	**Sn**	**19 18 26.6**	**+0.8**
	comp=Z,12nm,0.4s						
BIOA	**Bad Ischl, Aus**	**2.70**	**327**	*e*Pn	**Pn**	**19 17 55.2**	**+0.8**
	comp=Z,9.8nm,0.3s,SNR=12						
LSTV	**Lastovo**	**2.79**	**163**	*e*Pn	**Pn**	**19 17 57.2**	**+1.7**
LSTV				Sn	**Sn**	**19 18 31.2**	**+1.6**
TEKS	**Tekeris**	**2.80**	**107**	*e*Pn	**Pn**	**19 17 57.6**	**+1.8**
TEKS				*e*Sn	**Sb**	**19 18 34.2**	**-1.2**
FRGS	**Fruska Gora**	**2.85**	**94**	*e*Pn	**Pb**	**19 18 00.7**	**-1.0**
FRGS				*e*Sn	**Sg**	**19 18 40.0**	**-1.8**
LESA	**Schwarzleotal**	**2.93**	**314**	*e*Pn	**Pn**	**19 18 00.2**	**+2.6**
	comp=Z,4.3nm,0.4s,SNR=6.3						
BBLS	**Lazi&#263i**	**3.02**	**120**	*e*Pn	**Pn**	**19 18 00.2**	**+1.3**
BBLS				*e*Sn	**Sn**	**19 18 35.0**	**-0.6**
KLINJ	**Klinje**	**3.03**	**137**	*e*Pn	**Pn**	**19 18 02.0**	**+3.0**
KLINJ				*e*Sn	**Sn**	**19 18 36.8**	**+1.0**
MODS	**Modra-Piesok**	**3.11**	**19**	*e*PN	**Pn**	**19 17 59.0**	**-1.0**
MODS				*e*SN	Sn	19 18 21.5	-16
MODS				*e*SG	**Sg**	**19 18 56.5**	**+6.5**
RUDO	**Rudo**	**3.14**	**124**	*e*Pn	**Pn**	**19 18 02.5**	**+2.0**
RUDO				*e*Sn	**Sn**	**19 18 39.3**	**+0.9**
RUDO	**Rudo**	**3.14**	**124**	*e*Pn	**Pn**	**19 18 02.5**	**+2.0**
DBRK	**Dubrovnik**	**3.25**	**148**	*e*Pn	**Pn**	**19 18 03.7**	**+1.8**
DBRK				Sn	**Sn**	**19 18 43.5**	**+2.4**
TREB	**Trebinje**	**3.29**	**145**	*e*Pn	**Pn**	**19 18 05.0**	**+2.5**
TREB				*e*Sn	**Sn**	**19 18 44.2**	**+2.2**
TREB	**Trebinje**	**3.29**	**145**	*e*Pn	**Pn**	**19 18 00.8**	**-1.7**
WTTA	**Wattenberg**	**3.41**	**304**	*i* Pn	**Pn**	**19 18 06.4**	**+2.1**
	comp=Z,3.0nm,0.3s						
WATA	**Walderalm**	**3.48**	**305**	*e*Pn	**Pn**	**19 18 08.4**	**+3.2**
	comp=Z,3.1nm,0.4s						
CKRC	**Cesky Krumlov**	**3.53**	**344**	*e*PN	**Pn**	**19 18 07.2**	**+1.4**
AQU	**L'Aquila**	**3.53**	**210**	*e*Pn	**Pb**	**19 18 10.7**	**-2.6**
AQU				*e*Sn	**Sb**	**19 18 54.5**	**-2.0**
IVAS	**Ivanjica**	**3.63**	**119**	*e*Pn	**Pn**	**19 18 09.1**	**+1.8**
SQTA	**Sankt Quirin**	**3.64**	**301**	*e*Pn	**Pn**	**19 18 11.3**	**+3.9**
	comp=Z,2.0nm,0.3s						
KRUC	**Moravsky**	**3.65**	**6**	*e*PN	**Pn**	**19 18 07.2**	**-0.2**
KRUC				*e*SN	**Sn**	**19 18 48.3**	**-2.6**
SJES	**Sjenica**	**3.71**	**124**	*e*Pn	**Pn**	**19 18 08.5**	**+0.2**
KOME	**Kolasin**	**3.73**	**133**	*e*Pn	**Pn**	**19 18 09.6**	**+1.0**
MOTA	**Moosalm**	**3.76**	**302**	*e*Pn	**Pn**	**19 18 10.8**	**+1.7**
	comp=Z,1.7nm,0.4s						
GRUS	**Gruza**	**3.84**	**112**	*e*Pn	**Pn**	**19 18 11.1**	**+1.0**
FETA	**Feichten**	**3.85**	**296**	*e*Pn	**Pn**	**19 18 13.7**	**+3.3**
	comp=Z,3.2nm,0.5s,SNR=4.9						
VRAC	**Vranov**	**3.91**	**8**	⇓P	**Pn**	**19 18 10.9**	**-0.1**
VRAC	**Vranov**	**3.91**	**8**	*e*PN	**Pn**	**19 18 10.7**	**-0.3**
VRAC				*e*SN	**Sn**	**19 18 54.6**	**-2.8**
BEY	**Berane**	**3.91**	**130**	*e*Pn	**Pn**	**19 18 11.6**	**+0.5**
KHC	**Kasperske Hory**	**3.99**	**339**	*e*PN	**Pn**	**19 18 11.9**	**-0.2**
KHC				*e*SN	**Sn**	**19 18 57.2**	**-2.1**
DRME	**Dracevica, Mon**	**4.08**	**142**	*e*Pn	**Pn**	**19 18 10.8**	**-2.5**
BZS	**Buzias**	**4.10**	**85**	⇓P	**Pn**	**19 18 15.5**	**+1.9**
BZS				⇑S	**Sb**	**19 19 08.8**	**-4.0**
KUBS	**Kucevo**	**4.30**	**102**	*e*Pn	**Pn**	**19 18 19.0**	**+2.6**
SELS	**Selova**	**4.42**	**118**	*e*Pn	**Pn**	**19 18 18.5**	**+0.4**
DAVA	**Damuels**	**4.49**	**296**	*i* Pn	**Pn**	**19 18 21.8**	**+2.7**
	comp=Z,0.9nm,0.2s						
MORC	**Moravsky Berou**	**4.50**	**15**	⇑P	**Pn**	**19 18 19.5**	**+0.3**
MORC				⇓S	**Sn**	**19 19 11.8**	**-0.2**
MORC	**Moravsky Berou**	**4.50**	**15**	*e*PN	**Pn**	**19 18 19.3**	**+0.1**
MORC				*e*SN	**Sn**	**19 19 09.2**	**-2.8**
BOVS	**Bovan**	**4.60**	**111**	⇑P	**Pn**	**19 18 21.8**	**+1.3**
BOVS	**Bovan**	**4.60**	**111**	*e*Pn	**Pn**	**19 18 21.5**	**+1.0**
PRU	**Pruhonice**	**4.63**	**350**	*e*PN	**Pn**	**19 18 21.3**	**+0.4**
KRLC	**Kraliky**	**4.69**	**8**	*e*PN	**Pn**	**19 18 22.2**	**+0.5**
KRLC				*e*SN	**Sn**	**19 19 13.8**	**-2.8**
ZAGS	**Zajecar**	**4.88**	**107**	*e*Pn	**Pn**	**19 18 24.8**	**+0.5**
GZR	**Gura Zlata**	**4.92**	**88**	⇑P	**Pn**	**19 18 27.1**	**+2.2**
BARS	**Barje**	**5.07**	**119**	*e*Pn	**Pn**	**19 18 28.4**	**+1.5**
ZAPS	**Zavoj**	**5.36**	**111**	*e*Pn	**Pn**	**19 18 31.6**	**+0.6**
CLL	**Collm**	**6.16**	**343**	*e*Sg	**Sg**	**19 20 26.0**	**-1.8**
	comp=Z,11nm,1.0s						

DJA ***27*** *19:17:53.1±1.9,5°.5±16°×15°.0E±°,h144km±11km,M5.1/10, mb4.5/10,mB4.8/3,MLv5.5/1,Mw(mB)4.1/3*
NEIC ***27*** *19:17:53.7±2.0,5°.57S±0°.08×149°.85E±0°.08,h133km±7km, mb4.7/37,Error ellipse: s-maj=13.9km s-min=9.0km az=135.0*
IDC ***27*** *19:17:55.1±1.4,5°.72S×149°.79E,h152km±13km,mb4.0/15, mbtmp4.5/17,MS3.0/4,Error ellipse: s-maj=16.3km s-min=8.3km az=111.0*

ISC 27 19:17:53.6±0.4,5°.55S±0°.05×149°.82E±0°.06,h135km,n115, σ1°30/116,mb4.4/31,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.70**	**60**		**Pn**	**19 18 35.9**	**-0.7**
PMG	**Port Moresby**	**4.65**	**214**	P	**Pn**	**19 19 02.4**	**+0.3**
	638nm,0.5s,baz=45,slow=6.2,SNR=98						
PMG				S	**Sn**	**19 19 54.2**	**-1.3**
	213nm,0.4s,baz=340,slow=21,SNR=7.8						
PMG				LR	LR	19 20 31.1	
	comp=Z,109nm,18.1s,baz=142,slow=35						
PMG	**Port Moresby**	**4.65**	**214**		**Pn**	**19 19 02.2**	**+0.1**
PMG	**Port Moresby**	**4.65**	**214**	P	**Pn**	**19 19 03.0**	**+0.9**
PMG	**Port Moresby**	**4.65**	**214**	S	**Sn**	**19 19 57.5**	**+2.1**
PMG	**Port Moresby**	**4.65**	**214**	S	**Sn**	**19 19 57.1**	**+1.7**
PMG	**Port Moresby**	**4.65**	**214**	P	**Pn**	**19 19 02.7**	**+0.6**
PMG	**Port Moresby**	**4.65**	**214**	S	**Sn**	**19 19 57.3**	**+1.9**
TATA	**Tatamba Isabel**	**10.30**	**106**	P	**Pn**	**19 20 18.7**	**+0.8**
TATA	**Tatamba Isabel**	**10.30**	**106**	P	**Pn**	**19 20 18.3**	**+0.4**
SAVO	**Savo Central**	**10.53**	**110**	P	**Pn**	**19 20 24.2**	**+3.1**
SAVO	**Savo Central**	**10.53**	**110**	P	**Pn**	**19 20 21.8**	**+0.7**
COEN	**Coen**	**10.61**	**218**	Pn	**Pn**	**19 20 22.5**	**+0.4**
COEN	**Coen**	**10.61**	**218**	P	**Pn**	**19 20 21.8**	**-0.3**
HNR	**Honiara**	**10.75**	**112**	P	**Pn**	**19 20 24.2**	**+0.3**
	28nm,0.6s,baz=243,slow=10,SNR=4.5						
HNR				S	**Sn**	**19 22 20.9**	**-1.8**
	31nm,0.4s,baz=323,slow=10,SNR=4.2						
HNR				LR	LR	19 24 11.8	
	comp=Z,45nm,18.8s,baz=9.5,slow=35						
HNR	**Honiara**	**10.75**	**112**		**Pn**	**19 20 21.6**	**-2.4**
NGOA	**Tingoa Renbel**	**11.75**	**121**	P	**Pn**	**19 20 38.2**	**+1.1**
MTSU	**Mount Surprise**	**13.61**	**203**	P	**Pn**	**19 21 03.4**	**+2.1**
MTSU	**Mount Surprise**	**13.61**	**203**	P	**Pn**	**19 21 03.0**	**+1.7**
CTAO	**Charters Tower**	**14.86**	**193**	P	**P**	**19 21 21.1**	**+1.8**
AUNRC	**North Rockhamp**	**17.71**	**178**	P	**Pn**	**19 21 52.5**	**+0.7**
QIS	**Mount Isa**	**17.91**	**213**	P	**P**	**19 21 53.3**	**+0.2**
QIS	**Mount Isa**	**17.91**	**213**	P	**P**	**19 21 53.8**	**+0.7**
QIS	**Mount Isa**	**17.91**	**213**	S	**S**	**19 25 11.9**	**-0.2**
SANVU	**Saraoutou**	**19.70**	**121**		**P**	**19 22 12.2**	**-0.3**
SANVU				IAmb	IAmb	19 22 14.1	
	comp=Z,50nm,0.9s						
SANVU	**Saraoutou**	**19.70**	**121**	P	**P**	**19 22 12.5**	**0.0**
EIDS	**Eidsvold**	**19.74**	**177**	P	**P**	**19 22 13.7**	**+0.8**
EIDS				IAmb	IAmb	19 22 14.6	
	comp=Z,13nm,0.8s						
EIDS	**Eidsvold**	**19.74**	**177**	P	**P**	**19 22 13.5**	**+0.6**
EIDS	**Eidsvold**	**19.74**	**177**	P	**P**	**19 22 14.1**	**+1.2**
MTN	**Manton Dam**	**19.81**	**247**		**P**	**19 22 13.0**	**-0.7**
WR8	**Warramunga Arr**	**20.66**	**225**		**P**	**19 22 22.3**	**-0.6**
WR8				IAmb	IAmb	19 22 23.0	
	comp=Z,18nm,0.6s						
WRAB	**Tennant Creek**	**20.75**	**225**	P	**P**	**19 22 23.2**	**-0.6**
WRAB				IAmb	IAmb	19 22 24.2	
	comp=Z,27nm,0.7s						
WRAB	**Tennant Creek**	**20.75**	**225**	P	**P**	**19 22 22.8**	**-1.1**
WRAB	**Tennant Creek**	**20.75**	**225**	P	**P**	**19 22 23.1**	**-0.8**
WRAB	**Tennant Creek**	**20.75**	**225**	S	**S**	**19 26 05.8**	**-2.5**
WRA	**Warramunga Arr**	**20.77**	**225**	P	**P**	**19 22 23.4**	**-0.6**
	comp=Z,24nm,0.6s,baz=48,slow=10,SNR=119						
WRA				S	**S**	**19 26 04.8**	**-3.8**
	comp=Z,2.4nm,1.1s,baz=59,slow=17,SNR=6.3						
	comp=Z,24nm,0.6s						
WRA	**Warramunga Arr**	**20.77**	**225**		**P**	**19 22 22.5**	**-1.5**
QLP	**Quilpie**	**21.58**	**194**	P	**P**	**19 22 33.8**	**+1.1**
DZM	**Mont Dzumac**	**22.98**	**

KURK	**Kurchatov**	**82.55**	**323**	P		**P**	19 29 59.8	**-1.5**
KURBB	**Kurchatov Arra**	**82.57**	**323**	P		**P**	19 29 59.8	**-1.6**
	comp=Z,0.6nm,0.6s,baz=114,slow=4.7,SNR=4.2 comp=Z,0.6nm,0.6s							
MAW	**Mawson**	**83.74**	**203**	P		**P**	19 30 05.0	**-2.2**
	comp=Z,5.4nm,0.8s,baz=100,slow=6.1,SNR=4.2 comp=Z,5.4nm,0.8s							
ILAR	**Eielson Array**	**83.98**	**23**	P		**P**	19 30 06.2	**-2.2**
	comp=Z,0.7nm,0.5s,baz=255,slow=5.4,SNR=13							
QSPA	**South Pole Qui**	**84.41**	**180**	P		**P**	19 30 13.9	**+3.1**
	comp=Z,5.2nm,0.6s,baz=292,slow=1.9,SNR=21							
QSPA	**South Pole Qui**	**84.41**	**180**	P		**P**	19 30 13.1	**+2.3**
QSPA				IAmb		IAmb	19 30 14.6	
	comp=Z,6.7nm,0.7s							
J25K	**Salcha River,**	**84.50**	**23**	P		**P**	19 30 09.5	**-1.6**
K29M	**Barlow Dome**	**87.40**	**25**	P		**P**	19 30 25.4	**-0.1**
K29M				IAmb		IAmb	19 30 26.9	
	comp=Z,3.5nm,0.8s							
BVAR	**Borovoye Array**	**88.07**	**324**	P		**P**	19 30 25.6	**-3.1**
	comp=Z,0.6nm,0.5s,baz=123,slow=5.3,SNR=3.2							
A36M	**Sachs Harbour**	**93.67**	**18**	P		**P**	19 30 53.0	**-1.3**
A36M				IAmb		IAmb	19 30 54.1	
	comp=Z,3.5nm,0.8s							
NB2	**NORSAR Subarra**	**116.58**	**339**	PKP		PP	19 37 22.4	-7.7
	comp=Z,0.7nm,0.5s,baz=11,slow=2.9							
LPAZ	**La Paz**	**136.63**	**121**	PKP		**PKPdf**	19 37 01.4	**-0.3**
	comp=Z,1.3nm,0.7s,baz=316,slow=4.4,SNR=4.1							

DJA 27 19:26:51.7±0.3, **1°N**±5°×**12°4E**±°, **h10**km, **M3.8**/13, **mb4.2**/3, **MLv3.6**/13, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**1.08**	**235**	P	Pg	19 27 11.1	-1.3
GTOI				S	Sb	19 27 26.7	+0.1
MRSI	**Marisa**	**2.10**	**248**	P	Pn	19 27 27.5	+0.6
MRSI				S	Sn	19 27 53.8	+0.7
LUWI	**Luwuk**	**2.54**	**206**	P	Pn	19 27 32.0	-1.1
APSI	**Ampana**	**3.11**	**226**	P	Pn	19 27 41.4	+0.5
SANI	**Sanana**	**3.90**	**147**	P	Pn	19 27 50.2	-1.5
MPSI	**Mapaga**	**4.09**	**257**	P	Pn	19 27 57.6	+3.2
TTSI	**Tana Toraja**	**5.90**	**224**	P	Pn	19 28 21.0	+1.7
	0.1nm20nm,0.6s						
SPSI	**Sidrap Palu**	**6.62**	**218**	P	Pn	19 28 30.5	+1.3
	8.8nm,1.1s						
BSSI	**Bau Bau, Buton**	**8.10**	**205**	P	Pn	19 28 50.5	+1.0

PDG ***27*** *19:31:25.6*±*0.3, 41°36N*×*19°50E, h7*km±*1*km*, ML2.7/8, Error ellipse: s-maj=1.6km s-min=2.1km az=0.0*

BEO 27 19:31:25.1±0.6, **41°33N**×**19°52E, h3**km±3km, **ML2.3**/12, **4C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.67**	**342**	⇓*i*	Pg	19 31 36.4	-1.5
ULC				*i*	Sg	19 31 46.7	+0.1
DRME	**Dracevica, Mon**	**0.89**	**344**	*e*	Pg	19 31 41.8	-0.5
DRME	**Dracevica, Mon**	**0.89**	**344**	*e*	Pg	19 31 41.7	-0.6
DRME				*e*	Sg	19 31 54.9	-0.7
BUM	**Brajici-Budva**	**1.08**	**335**	⇑*i*	Pg	19 31 44.6	-1.2
BUM				*i*	Sg	19 32 00.1	+0.3
PDG	**Podgorica**	**1.12**	**350**	*e*	Pg	19 31 45.3	-1.3
PDG				*e*	Sb	19 32 01.9	-0.2
PDG	**Podgorica**	**1.12**	**350**	*e*	Pg	19 31 45.4	-1.2
PDG				*e*	Sg	19 32 01.0	-0.1
PDG	**Podgorica**	**1.12**	**350**	⇓*i*	Pg	19 31 44.7	-1.9
PDG				*i*	Sg	19 32 00.8	-0.3
PVY	**Plav**	**1.31**	**14**	*e*	Pg	19 31 49.5	-0.7
PVY	**Plav**	**1.31**	**14**	*e*	Pg	19 31 49.3	-0.9
PVY	**Plav**	**1.31**	**14**	⇓*i*	Pg	19 31 48.6	-1.6
HCY	**Herceg Novi**	**1.35**	**326**	⇓*i*	Pg	19 31 48.7	-2.2
HCY				*i*	Sg	19 32 09.7	+0.3
NKME	**Niksic**	**1.50**	**344**	⇓*i*	Pg	19 31 51.4	-1.6
NKME				*i*	Sg	19 32 14.2	+0.9
KOME	**Kolasin**	**1.52**	**360**	*e*	Pg	19 31 52.7	-0.6
KOME				*e*	Sg	19 32 14.4	+0.4
KOME	**Kolasin**	**1.52**	**360**	*e*	Pg	19 31 52.4	-0.9
KOME				*e*	Sg	19 32 12.6	-1.1
BEY	**Berane**	**1.57**	**10**	*e*	Pg	19 31 53.2	-0.8
BEY				*e*	Sg	19 32 15.1	0.0
BEY	**Berane**	**1.57**	**10**	*e*	Pg	19 31 52.6	-1.4
BEY				*e*	Sg	19 32 14.9	+0.1
IVA	**Berane**	**1.57**	**10**	⇑*i*	Pg	19 31 52.6	-1.4
IVA				*i*	Sg	19 32 16.1	+0.6
TREB	**Trebinje**	**1.64**	**328**	*e*	Pg	19 31 53.5	-1.3
TREB				*e*	Sb	19 32 16.8	-0.2
TREB	**Trebinje**	**1.64**	**328**	*e*	Pg	19 31 54.2	-0.6
TREB				*e*	Sn	19 32 15.4	-1.0
BRY	**Bratogost**	**1.73**	**336**	⇑*i*	Pn	19 31 56.2	-0.1
BRY				*i*	Sg	19 32 20.6	-0.2
SJES	**Sjenica**	**1.96**	**10**	*e*	Pg	19 31 59.1	-0.3
SJES				*e*	Sb	19 32 26.6	+0.1
SJES	**Sjenica**	**1.96**	**10**	*e*	Pg	19 31 59.3	-0.1
SJES				*e*	Sb	19 32 26.7	+0.2
PLE	**Pljevlja**	**2.00**	**357**	*e*	Pg	19 32 00.4	-0.9
PLE				*e*	Sb	19 32 27.6	-0.1
PLE	**Pljevlja**	**2.00**	**357**	⇑*i*	Pn	19 31 59.9	-0.1
PLE				*i*	Sn	19 32 27.0	-0.7
SELS	**Selova**	**2.23**	**32**	*e*	Pn	19 32 02.4	-0.6
SELS				*e*	Sn	19 32 31.3	+0.1
SELS	**Selova**	**2.23**	**32**	*e*	Pn	19 32 04.4	+1.4
SELS				*e*	Sn	19 32 30.9	-0.3
BARS	**Barje**	**2.27**	**48**	*e*	Pn	19 32 03.8	+0.3
BARS				*e*	Sn	19 32 33.3	+1.3
BARS	**Barje**	**2.27**	**48**	*e*	Pb	19 32 05.2	-1.5
BARS				*e*	Sb	19 32 33.6	-1.5
RUDO	**Rudo**	**2.29**	**357**	*e*	Pg	19 32 07.6	+0.5
RUDO				*e*	Sg	19 32 35.9	+0.1
RUDO	**Rudo**	**2.29**	**357**	*e*	Pg	19 32 06.4	-0.7
RUDO				*e*	Sg	19 32 35.9	+0.1
IVAS	**Ivanjica**	**2.30**	**12**	*e*	Pn	19 32 03.8	-0.1
IVAS				*e*	Sn	19 32 33.2	+0.4
IVAS	**Ivanjica**	**2.30**	**12**	*e*	Pn	19 32 05.2	-1.6
IVAS				*e*	Sn	19 32 33.8	+1.0
GOCS	**Kraljevo Serbi**	**2.45**	**24**	*e*	Pn	19 32 07.1	+1.0
GOCS				*e*	Sn	19 32 34.8	-1.8
GOCS	**Kraljevo Serbi**	**2.45**	**24**	*e*	Pn	19 32 07.3	+1.2
GOCS				*e*	Sn	19 32 36.3	-0.3
BOSS	**Bosilegrad**	**2.50**	**61**	*e*	Pn	19 32 05.2	-1.5
BOSS	**Bosilegrad**	**2.50**	**61**	*e*	Pn	19 32 07.6	+0.9
BBLS	**Lazi&#263i**	**2.54**	**358**	*e*	Pn	19 32 07.4	+0.1
BBLS				*e*	Sn	19 32 39.1	+0.4
BBLS	**Lazi&#263i**	**2.54**	**358**	*e*	Pn	19 32 08.9	+1.6
BBLS				*e*	Sn	19 32 40.4	+1.7
GRUS	**Gruza**	**2.71**	**19**	*e*	Pn	19 32 10.0	+0.5
GRUS				*e*	Sn	19 32 42.5	-0.3
BOVS	**Bovan**	**2.82**	**34**	*e*	Pn	19 32 11.9	+0.9
BOVS				*e*	Sn	19 32 46.5	+1.0
BOVS	**Bovan**	**2.82**	**34**	*e*	Pn	19 32 11.3	+0.3
BOVS				*e*	Sn	19 32 45.2	-0.3
TRUS	**Trudelj**	**2.97**	**12**	*e*	Pn	19 32 13.3	+0.2
ZAPS	**Zavoj**	**3.02**	**49**	*e*	Pn	19 32 13.1	-0.8
ZAPS				*e*	Sn	19 32 50.3	-0.3
ZAGS	**Zajecar**	**3.19**	**38**	*e*	Pn	19 32 14.8	-1.4
ZAGS				*e*	Sn	19 32 53.1	-1.6
ZAGS	**Zajecar**	**3.19**	**38**	*e*	Pn	19 32 17.3	+1.1
ZAGS				*e*	Sn	19 32 53.8	-0.9
TEKS	**Tekeris**	**3.22**	**0**	*e*	Pn	19 32 18.2	+1.6
BORS2	**Bor- Borsko je**	**3.32**	**33**	*e*	Pn	19 32 18.1	+0.1

IDC ***27*** *19:43:36.1*±*2.1, 23°88N*×*124°34E, h0km, mb3.5/7, mbtmp3.5/7, Error ellipse: s-maj=171.1km s-min=19.8km az=66.0*

JMA ***27*** *19:43:40.2*±*0.3, 23°9N*±*0°7*×*124°4E*±*0°7, h12km*±*4km, MV3.4/13, NEAR ISHIGAKIJIMA ISLAND*

ISC 27 19:43:40.4±1.5, **23°89N**±0°07×**124°33E**±0°04, **h27**km±10km, **n27**, σ0**°72**/35, **mb3.5**/7, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKRS	**Kuro-shima**	**0.45**	**320**	*i* P		**Pb**	19 43 49.7	**-0.2**
JIJ	**Ishigaki jima**	**0.50**	**340**	*i* P		**Pb**	19 43 50.3	**-0.4**
JIJ				*e*		**Sb**	19 43 57.4	**-0.3**
HATJ	**Hateruma jima**	**0.51**	**289**	P		**Pb**	19 43 50.5	**-0.3**
JISG	**Ishigakijimahi**	**0.69**	**359**	*i* P		**Pn**	19 43 53.4	**-1.1**
JISG				*e*		**Sb**	19 44 03.0	**-0.2**
IRIF	**Iriomote-Funau**	**0.70**	**309**	*i* P		**Pn**	19 43 54.2	**-0.4**
IRIF				*e*		**Sn**	19 44 04.0	**-0.6**
JTJ	**Tarama**	**0.82**	**24**	*i* P		**Pn**	19 43 55.8	**-0.4**
JTJ				*e*		**Sb**	19 44 07.1	**+0.3**
JIRB	**Irabujima**	**1.21**	**39**	*e* P		**Pn**	19 44 01.8	**+0.2**
JMJ2	**Miyako jima3**	**1.25**	**47**	P		**Pb**	19 44 02.7	**-0.6**
JMJ2				*e*		**Sb**	19 44 19.9	**+1.0**
JMJ	**Miyako jima 2**	**1.27**	**43**	P		**Pb**	19 44 03.6	**-0.1**
JOGS	**Gusukube**	**1.31**	**48**	P		**Pn**	19 44 03.6	**+0.6**
JOGS				*e*		**Sb**	19 44 20.9	**+0.1**
JIKM	**Ikemajima**	**1.33**	**39**	*e* P		**Pb**	19 44 05.2	**+0.6**
JIKM				*e*		**Sb**	19 44 22.5	**+1.3**
YOJ	**Yonaguni jima**	**1.33**	**296**	P		**Pb**	19 44 05.1	**+0.4**
YOJ	**Yonaguni jima**	**1.33**	**296**	*e* P		**Pb**	19 44 05.0	**+0.3**
YOJ				*e*		**Sb**	19 44 22.7	**+1.3**
JYNG	**Yonagunijimaku**	**1.38**	**294**	P		**Pn**	19 44 04.9	**+0.9**
NACB	**Ninganchiao**	**2.52**	**277**	P		**Pn**	19 44 19.2	**-0.3**
YHNB	**Yeheng**	**2.81**	**287**	P		**Pn**	19 44 24.5	**+0.9**
YULB	**Yu-li**	**2.82**	**261**	P		**Pn**	19 44 22.7	**-1.1**
SSLB	**Suanglung**	**3.09**	**269**	P		**Pn**	19 44 28.2	**+0.7**
TWGBT	**Beinan**	**3.17**	**251**	P		**Pn**	19 44 27.3	**-1.2**
TPUB	**Ta-pu**	**3.44**	**261**	P		**Pn**	19 44 33.1	**+0.8**
SONM	**Songino Array**	**27.83**	**334**	P		**P**	19 49 27.5	**-0.1**
	0.2nm,0.6s,baz=145,slow=5.3,SNR=1.3 0.2nm,0.6s							
MKAR	**Makanchi Array**	**40.56**	**315**	P		**P**	19 51 17.4	**-0.2**
	0.2nm,0.4s,baz=102,slow=8.7,SNR=5.7 0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**42.08**	**326**	P		**P**	19 51 28.7	**-1.1**
	0.4nm,0.4s,baz=138,slow=7.0,SNR=1.8 0.4nm,0.4s							
WRA	**Warramunga Arr**	**44.65**	**167**	P		**P**	19 51 50.1	**-0.7**
	0.7nm,0.5s,baz=343,slow=7.9,SNR=6.9 0.7nm,0.5s							
ASAR	**Alice Springs**	**48.18**	**168**	P		**P**	19 52 18.5	**-0.1**
	0.4nm,0.7s,baz=349,slow=9.8,SNR=4.9 0.4nm,0.7s							
BVAR	**Borovoye Array**	**49.73**	**320**	P		**P**	19 52 30.6	**+0.3**
	0.2nm,0.6s,baz=92,slow=7.2,SNR=1.7 0.2nm,0.6s							
FINES	**FINESS Array B**	**73.14**	**330**	P		**P**	19 55 08.7	**+0.4**
	1.6nm,0.9s,baz=44,slow=8.1,SNR=4.9 1.6nm,0.9s							

IDC ***27*** *19:45:46.0*±*1.5, 31°88N*×*93°55E, h0km, mb3.5/4, mbtmp3.5/6, ML3.4/2, MS2.4/2, Error ellipse: s-maj=69.3km s-min=20.9km az=65.0*

ISC 27 19:45:51.1±1.7, **31°9N**±0°2×**93°5E**±0°3, **h35**km, **n6**, σ0**°47**/6, **mb3.7**/4, **Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.16**	**333**	P		**P**	19 49 49.2	**-0.1**
MKAR	0.1nm,0.3s,baz=141,slow=14,SNR=4.9				LR	LR	19 57 48.5	
	comp=Z,10nm,18.3s,baz=48,slow=42 0.3nm,0.8s							
SONM	**Songino Array**	**18.67**	**28**	P		**P**	19 50 06.3	**+0.2**
	0.2nm,0.3s,baz=215,slow=13,SNR=8.1							
SONM					LR	LR	19 57 04.8	
	comp=Z,11nm,20.0s,baz=218,slow=36 0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**21.72**	**334**	P		**P**	19 50 39.5	**+0.4**
	1.0nm,0.2s,baz=144,slow=12,SNR=7.3 1.0nm,0.2s							
ZALV	**Zalesovo Beam**	**22.87**	**347**	P		**P**	19 50 50.6	**-0.6**
	0.3nm,0.4s,baz=140,slow=7.0,SNR=2.6 0.3nm,0.4s							
WRA	**Warramunga Arr**	**64.75**	**137**	P		**P**	19 56 26.3	**+0.2**
	0.4nm,0.9s,baz=322,slow=8.3,SNR=1.2 0.4nm,0.9s							
ASAR	**Alice Springs**	**67.45**	**140**	P		**P**	19 56 43.1	**-0.2**
	0.5nm,0.5s,baz=323,slow=6.6,SNR=12 0.5nm,0.5s							

IDC ***27*** *19:55:40.2*±*2.5, 5°94S*×*145°57E, h83km*±*24km, mb3.4/4, mbtmp3.8/7, MS3.5/1, Error ellipse: s-maj=25.4km s-min=17.8km az=58.0*

ISC 27 19:55:42.2±1.3, **6°0S**±0°1×**145°6E**±0°2, **h109**km, **n8**, σ0**°99**/8, **mb3.7**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.74**	**155**	P		**Pn**	19 56 38.1	**+0.1**
	57nm,0.4s,baz=0.9,slow=4.4,SNR=48							
PMG					S	**Sn**	19 57 19.8	**-1.4**
	35nm,0.5s,baz=160,slow=21,SNR=16							
JAY	**Jayapura**	**5.97**	**305**	P		**Pn**	19 57 07.1	**-1.0**
	10.0nm,0.7s,baz=135,slow=14,SNR=5.1							
WRA	**Warramunga Arr**	**17.66**	**217**	P		**P**	19 59 40.8	**0.0**
	0.7nm,0.5s,baz=34,slow=12,SNR=8.9							
ASAR	**Alice Springs**	**20.87**	**211**	P		**P**	20 00 16.5	**+0.8**
	1.4nm,1.1s,baz=34,slow=13,SNR=16 1.4nm,1.1s							
FITZ	**Fitzroy Crossi**	**22.89**	**237**	P		**P**	20 00 37.1	**+0.4**
	2.5nm,0.7s,baz=50,slow=11,SNR=10 2.5nm,0.7s							
STKA	**Stephens Creek**	**26.03**	**188**	P		**P**	20 01 06.0	**+0.8**
	1.5nm,0.8s,baz=9.1,slow=9.5,SNR=5.4 1.5nm,0.8s							
NWAO	**Narrogin (SRO)**	**37.61**	**221**	LR		LR	20 19 35.9	
	comp=Z,64nm,18.7s,baz=268,slow=38							
ILAR	**Eielson Array**	**86.02**	**23**	P		**P**	20 08 10.7	**+0.5**
	0.5nm,0.6s,baz=247,slow=5.4,SNR=9.9 0.5nm,0.6s							

NIED ***27*** *20:24:36.1, 33°28N*×*137°98E, h353km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10*15*Nm; Mrr0.90; Mθθ-0.31; Mϕϕ-0.59; Mrθ0.25; Mθϕ-3.08; Mϕr-2.51; Fault plane solution: M*0*4.05000×10*15 *NP1:*ϕs*85.00000°, δ50.00000°, λ168.00000°. NP2:*ϕs*183.00000°, δ81.00000°, λ41.00000°.*

JMA ***27*** *20:24:36.1*±*0.4, 33°N*±*1°*×*13°8E*±°, *h353km*±*3km, MV4.1/38, FAR S OFF TOKAI DISTRICT*

IDC ***27*** *20:24:37.6*±*0.8, 33°28N*×*137°77E, h336km*±*8km, mb3.8/30, mbtmp4.5/36, Error ellipse: s-maj=9.7km s-min=9.3km az=2.0*

NEIC ***27*** *20:24:37.6*±*1.9, 33°32N*±*0°09*×*137°88E*±*0°09, h333km*±*5km, mb4.4/157, Error ellipse: s-maj=12.9km s-min=10.1km az=157.0*

ISC 27 20:24:36.9±0.6, **33°23N**±0°06×**137°92E**±0°04, **h335**km±5km, **n450**, σ1**°57**/406, **mb4.3**/107, **3C-1D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TK02	**Tokai 2**	**0.73**	**349**	P		**Pn**	20 25 21.7	**+2.0**
TTO2	**TONANKAI O.B.S**	**0.90**	**304**	P		**Pn**	20 25 22.4	**+2.2**
TTO1	**TONANKAI O.B.S**	**1.03**	**293**	P		**Pn**	20 25 22.7	**+1.9**
TTO5	**TONANKAI O.B.S**	**1.04**	**351**	P		**Pn**	20 25 22.9	**+1.9**
TTO5				*e*		**S**	20 25 59.0	**+2.8**
JSG	**Sagara**	**1.46**	**9**	Pn		**Pn**	20 25 23.4	**+0.1**
JIE	**Ise**	**1.54**	**319**	P		**Pn**	20 25 25.0	**+1.3**
JIE				*e*		**S**	20 26 01.9	**+0.8**
JHJ	**Hachijo jima 2**	**1.57**	**93**	P		**Pn**	20 25 25.3	**+1.4**
	175nm,0.3s,baz=113,slow=21,SNR=20							
JHJ					S	**S**	20 25 58.0	**-3.5**
	184nm,0.3s,baz=240,slow=16,SNR=2.4							
JHJ2	**Mitsune**	**1.59**	**94**	Pn		**Pn**	20 25 24.6	**+0.5**
JHJ2	**Mitsune**	**1.59**	**94**	*e* P		**Pn**	20 25 25.1	**+1.0**
JAOM	**Aogashimamukai**	**1.73**	**116**	*e* P		**Pn**	20 25 26.4	**+1.4**
JTNC	**Tanabenakahech**	**2.02**	**288**	P		**Pn**	20 25 27.9	**+1.0**
JTNC				*e*		**S**	20 26 07.7	**+0.6**
JWY	**Kouya**	**2.18**	**298**	P		**Pn**	20 25 29.6	**+1.4**
JWY				*e*		**S**	20 26 09.7	**+0.5**
INU	**Inuyama**	**2.25**	**341**			**Pn**	20 25 29.5	**+0.9**
INU	**Inuyama**	**2.25**	**341**	P		**Pn**	20 25 29.9	**+1.3**
JOD2	**Odawara 2**	**2.25**	**25**	*e* P		**Pn**	20 25 29.3	**+0.6**
JOD2				*e*		**S**	20 26 10.4	**+0.3**
JYN	**Shimodo**	**2.32**	**13**	P		**Pn**	20 25 30.6	**+1.3**
JGF	**Kuroka**	**2.41**	**349**			**Pn**	20 25 29.9	**-0.1**
JGF	**Kuroka**	**2.41**	**349**	P		**Pn**	20 25 30.9	**+0.9**
JYTA	**Yamagatataniai**	**2.56**	**338**	*e* P		**Pn**	20 25 32.2	**+1.1**
JYTA				*e*		**S**	20 26 15.3	**+0.6**
JRY	**Ryogami san**	**2.90**	**16**	P		**Pn**	20 25 35.1	**+1.0**
JRY				*e*		**S**	20 26 20.6	**+0.5**
BSO1	**Boso 1**	**2.91**	**60**	*e* P		**Pn**	20 25 32.8	**-0.9**
BSO1				*e*		**S**	20 26 18.1	**-1.2**
JWT	**Wachi**	**2.93**	**315**	*e* P		**Pn**	20 25 35.4	**+1.0**
JWT				*e*		**S**	20 26 20.4	**-0.2**
JAI	**Aioi**	**2.95**	**282**	P		**Pn**	20 25 35.5	**+0.9**
JAI				S		**S**	20 26 21.2	**+0.1**
JKG	**Kaga**	**3.31**	**337**	P		**Pn**	20 25 38.7	**+0.7**
MJAR	**Matsushiro Arr**	**3.32**	**4**	P		**Pn**	20 25 38.2	**+0.1**
	22nm,0.8s,baz=187,slow=9.8,SNR=48							
MJAR	**Matsushiro Arr**	**3.32**	**4**			**Pn**	20 25 38.1	**0.0**
MAJO	**Matsushiro**	**3.32**	**4**			**Pn**	20 25 38.0	**-0.1**
MAJO	**Matsushiro**	**3.32**	**4**	P		**Pn**	20 25 38.3	**+0.2**
MAT	**Matsushiro**	**3.32**	**4**	P		**Pn**	20 25 38.4	**+0.3**
MAT				*e*		**S**	20 26 26.1	**-1.2**
MJB9	**Matsu-Tunnel**	**3.32**	**4**			**Pn**	20 25 38.8	**+0.7**
JMN	**Monobe**	**3.42**	**280**			**Pn**	20 25 39.6	**+0.5**
JMN	**Monobe**	**3.42**	**280**	P		**Pn**	20 25 40.0	**+0.9**
JMN	**Monobe**	**3.42**	**280**	P		**Pn**	20 25 40.2	**+1.1**
JMN				S		**S**	20 26 29.5	**+0.4**
JAG	**Ashikaga**	**3.43**	**21**	P		**Pn**	20 25 38.6	**-0.6**
JAG				*e*		**S**	20 26 26.0	**-3.3**
JSZ	**Suzu**	**4.24**	**354**	*e* P		**Pn**	20 25 47.7	**+0.3**
JTO	**Tosashimizu**	**4.31**	**267**	P		**Pn**	20 25 49.1	**+0.8**
JTO				*e*		**S**	20 26 46.8	**+0.9**
JNA	**Nagahama**	**4.56**	**276**	P		**Pn**	20 25 52.2	**+1.1**
JNA				*e*		**S**	20 26 51.4	**+0.6**
JSD	**Sado**	**4.81**	**3**	Pn		**Pn**	20 25 53.4	**-0.2**
JNU	**Nakatsue**	**5.91**	**271**	P		**Pn**	20 26 06.3	**+0.1**
	19nm,0.6s,baz=110,slow=1.3,SNR=18							
JNU	**Nakatsue**	**5.91**	**271**	Pn		**Pn**	20 26 07.3	**+1.1**
JCJ	**Chichijima**	**7.14**	**148**	P		**Pn**	20 26 06.1	-15
	196nm,0.3s,baz=277,slow=23,SNR=44							
JCJ				S		S	20 27 26.2	-19
	246nm,0.3s,baz=294,slow=21,SNR=9.3							
KSRS	**Korea Array**	**9.19**	**300**	P		**Pn**	20 26 46.0	**+1.0**
	63nm,0.7s,baz=110,slow=13,SNR=127							
KSAR	**Wonju Array Be**	**9.21**	**300**			**Pn**	20 26 45.6	**+0.2**
TJN	**Taejon**	**9.23**	**293**			**Pn**	20 26 45.2	**-0.3**
KS19	**Wonju Array Si**	**9.25**	**300**			**Pn**	20 26 45.1	**-0.7**
ERM	**Erimo**	**9.70**	**24**	Pn		**Pn**	20 26 50.4	**-0.8**
INCN	**Inchon**	**10.15**	**298**			**Pn**	20 26 57.1	**+0.5**
INCN	**Inchon**	**10.15**	**298**	P		**Pn**	20 26 57.5	**+0.9**
JOW	**Kunigami**	**10.51**	**235**	P		**Pn**	20 27 01.1	**+0.1**
	16nm,0.6s,baz=18,slow=13,SNR=2.0							
ASAJ	**Asahikawa**	**11.47**	**17**	P		**Pn**	20 27 12.1	**-0.2**
	7.0nm,0.3s,baz=225,slow=13,SNR=15							
ASAJ					S	**S**	20 29 12.1	**-8.3**
	17nm,0.8s,baz=13,slow=32,SNR=4.0							
JKA	**Kamikawa-asahi**	**11.47**	**17**	P		**Pn**	20 27 12.1	**-0.2**
USRK	**Ussuriysk Ar.**	**11.89**	**339**	P		**Pn**	20 27 16.7	**-0.7**
	71nm,0.7s,baz=162,slow=11,SNR=76							
MDJ	**Mudanjiang**	**13.08**	**333**			**P**	20 27 30.2	**-0.8**
MDJ	**Mudanjiang**	**13.08**	**333**	P		**Pn**	20 27 31.3	**-0.2**
MDJ				pmax		pmax		
	comp=Z,38nm,0.8s							
MDJ	**Mudanjiang**	**13.08**	**333**	P		**Pn**	20 27 32.0	**+0.5**
YSS	**Yuzhno-Sakhali**	**14.20**	**14**			**P**	20 27 43.2	**0.0**
SNY	**Shenyang**	**14.24**	**311**	⇑P		**P**	20 27 44.0	**+0.2**
SNY				pmax		pmax		
	comp=Z,31nm,0.8s							
BNX	**BinXian**	**14.88**	**330**	⇓P		**P**	20 27 50.0	**-0.8**
BNX				pmax		pmax		
	comp=Z,26nm,0.8s							
YHNB	**Yeheng**	**16.79**	**244**	P		**P**	20 28 10.1	**-1.8**
NACB	**Ninganchiao**	**16.91**	**242**	P		**P**	20 28 10.6	**-2.5**
NACB				IAmb		IAmb	20 28 16.1	
	comp=Z,26nm,1.0s							
SSLB	**Suanglung**	**17.61**	**242**	P		**P**	20 28 16.4	**-4.2**
SSLB				IAmb		IAmb	20 28 22.2	
	comp=Z,28nm,1.3s							
TPUB	**Ta-pu**	**18.14**	**241**	P		**P**	20 28 23.8	**-2.4**
HEH	**HeiHe**	**18.70**	**339**	*e* P		**P**	20 28 30.3	**-1.5**
HEH				pmax		pmax		
	comp=Z,14nm,0.6s							
BJT	**Baijiatuau**	**18.71**	**297**			**P**	20 28 31.0	**-1.1**
BJT	**Baijiatuau**	**18.71**	**297**	P		**P**	20 28

comp=Z,10nm,0.5s,baz=89,slow=6.8,SNR=123
comp=Z,10nm,0.5s
ANM Nome 46.32 30 P P **20 32 31.9 +2.0**
baz=256
M13K Dall Lake 46.42 36 P P **20 32 32.7 +2.0**
baz=262
S12K Black Hills 46.63 42 P P **20 32 34.2 +1.7**
baz=267
WUS Wushi 46.65 298 P P **20 32 32.5 -0.5**
J14K Nanvaranak Lak 46.72 33 P P **20 32 34.7 +1.8**
J14K IAmb IAmb 20 32 49.8
comp=Z,27nm,1.4s
J14K Nanvaranak Lak 46.72 33 P P **20 32 34.9 +2.0**
baz=259
L14K Kuka Creek 46.88 35 P P **20 32 36.1 +1.9**
baz=261
F15K North Star Dit 46.91 29 P P **20 32 36.3 +1.9**
F15K IAmb IAmb 20 32 37.4
comp=Z,24nm,0.7s
F15K North Star Dit 46.91 29 P P **20 32 36.4 +2.0**
baz=255
G15K Niukluk 46.98 30 P P **20 32 36.7 +1.8**
baz=257
M14K Bethel 47.14 36 P P **20 32 38.3 +2.0**
M14K IAmb IAmb 20 32 39.2
comp=Z,15nm,0.7s
M14K Bethel 47.14 36 P P **20 32 38.2 +2.0**
baz=263
N14K Kuskokwak Cree 47.18 37 P P **20 32 38.0 +1.5**
baz=264
O14K Tigyukauivet M 47.32 38 P P **20 32 39.1 +1.4**
baz=265
C16K Lisburne Hills 47.36 25 P P **20 32 38.8 +1.0**
C16K Lisburne Hills 47.36 25 P P **20 32 39.2 +1.4**
baz=252
L15K Ungalak Mounta 47.50 34 P P **20 32 40.5 +1.6**
baz=262
SDPT Sand Point 47.52 43 P P **20 32 38.9 -0.2**
SDPT Sand Point 47.52 43 P P **20 32 40.6 +1.4**
baz=269
K15K Wolf Creek Mou 47.56 33 P P **20 32 41.0 +1.6**
baz=262
H16K Elim 47.66 30 P P **20 32 41.5 +1.4**
baz=259
M15K Kasigluk River 47.76 36 P P **20 32 42.4 +1.5**
baz=264
G16K Koyuk River 47.76 29 P P **20 32 42.2 +1.3**
baz=258
N15K Kwethluk River 48.00 36 P P **20 32 44.3 +1.5**
baz=265
D17K Noatak River 48.02 26 P P **20 32 44.3 +1.5**
baz=255
CHNA Chernabura Isl 48.02 44 P P **20 32 44.3 +1.3**
baz=270
O15K Ungalikthiuk R 48.05 38 P P **20 32 44.7 +1.5**
baz=266
S14K Fog Glacier 48.06 42 P P **20 32 44.8 +1.4**
baz=269
J16K Anvik River 48.13 32 P P **20 32 45.2 +1.4**
baz=262
RDOG Red Dog Mine 48.18 26 P P **20 32 45.4 +1.3**
baz=255
I17K Unalakleet 48.19 31 P P **20 32 45.9 +1.8**
baz=261
C17K DeLong Mountai 48.19 25 P P **20 32 45.7 +1.6**
baz=254
E17K Hotham Inlet 48.34 27 P P **20 32 47.0 +1.8**
baz=257
F17K Baldwin Pennin 48.43 28 IAmb IAmb 20 32 48.7
comp=Z,21nm,0.7s
F17K Baldwin Pennin 48.43 28 P P **20 32 47.6 +1.7**
baz=258
L16K Owhat River 48.45 34 P P **20 32 47.9 +1.7**
baz=264
G17K Kiwalik Mounta 48.48 29 P P **20 32 48.1 +1.8**
baz=260
M16K Timber Creek 48.63 35 P P **20 32 49.1 +1.6**
baz=265
N16K Nishlik Lake 48.68 36 P P **20 32 49.5 +1.5**
baz=266
H17K Granite Mounta 48.69 30 P P **20 32 49.6 +1.7**
baz=261
J17K VABM Dome 48.83 32 P P **20 32 51.3 +2.3**
baz=263
E18K Tukpahlearik C 48.88 27 P P **20 32 51.2 +1.9**
baz=258
C18K Utukok River 48.94 25 P P **20 32 51.3 +1.5**
baz=256
O16K Kokwok River B 48.96 37 P P **20 32 51.9 +1.9**
baz=267
P16K Nushagak River 48.99 38 P P **20 32 52.0 +1.8**
baz=268
L17K Donlin 49.05 34 P P **20 32 52.5 +1.8**
baz=265
F18K Selawik 49.09 28 P P **20 32 52.6 +1.8**
baz=260,SNR=5.2
K17K Iditarod 49.10 33 P P **20 32 53.0 +1.9**
baz=264
G18K Tagagawik 49.36 29 IAmb IAmb 20 32 55.9
comp=Z,17nm,1.1s
G18K Tagagawik 49.36 29 P P **20 32 54.5 +1.5**
baz=261
A19K Wainwright 49.37 23 P P **20 32 54.4 +1.5**
baz=255
H18K Honhosa River 49.37 30 P P **20 32 54.7 +1.6**
baz=262
M17K Holitna River 49.40 35 P P **20 32 55.1 +1.8**
baz=266
KSH Kashi 49.42 296 P P **20 32 57.0 +3.0**
KSH pmax pmax
comp=Z,10.0nm,0.8s
N17K Nushagak Hills 49.47 36 P P **20 32 55.7 +1.9**
baz=267
O17K Koliganek Bris 49.48 37 P P **20 32 55.8 +1.9**
baz=268
C19K Lookout Ridge 49.61 25 P P **20 32 56.8 +1.9**
baz=258
Q16K King Salmon 49.67 39 P P **20 32 57.5 +2.2**
baz=269
P17K Kvichak River 49.79 38 P P **20 32 58.3 +2.0**
baz=269
L18K Granite Mounta 49.81 34 P P **20 32 58.3 +2.0**
baz=266
R17L Mt. Peulik Vol 49.82 40 P P **20 32 58.3 +1.7**
baz=270
F19K Shaleruckik Mo 49.86 28 P P **20 32 58.3 +1.7**
baz=261
D19K Kuna River 50.01 26 P P **20 32 59.5 +1.6**
baz=260
G19K Purcell Mounta 50.03 29 P P **20 32 59.6 +1.7**
baz=262
N18K Kilae Creek 50.11 36 P P **20 33 00.4 +1.7**
baz=268
E19K Redstone River 50.17 27 P P **20 33 00.7 +1.8**
baz=261
M18K Stony River 50.18 35 P P **20 33 00.9 +1.8**
baz=268
H19K Roundabout Mou 50.22 30 IAmb IAmb 20 33 02.0
comp=Z,8.6nm,0.8s
H19K Roundabout Mou 50.22 30 P P **20 33 01.0 +1.7**
baz=264,SNR=5.9
CHIR Chirikof Islan 50.27 42 P P **20 33 01.7 +1.9**
baz=272
P18K Big Mountain, 50.42 38 P P **20 33 02.4 +1.4**
baz=270
J19K Poorman 50.42 32 P P **20 33 02.5 +1.6**
baz=266
O18K Koktuh Hills 50.43 37 P P **20 33 02.3 +1.2**
baz=269
Q18K Katmai Hardscr 50.53 39 P P **20 33 03.0 +1.1**
baz=271
D20K Etivluk River 50.59 25 IAmb IAmb 20 33 04.7
comp=Z,16nm,0.7s
D20K Etivluk River 50.59 25 P P **20 33 03.5 +1.3**
baz=261
B20K Meade River 50.63 24 P P **20 33 03.8 +1.4**
baz=259
L19K White Mountain 50.66 34 P P **20 33 04.2 +1.4**
baz=268
E20K Nigu River 50.68 26 P P **20 33 03.8 +1.0**
baz=262
F20K Avaraart Lake 50.69 28 P P **20 33 04.2 +1.5**
baz=263
N19K Bonanza Creek 50.80 36 P P **20 33 05.5 +1.6**
baz=269
H20K Anotleneega Mo 50.86 30 P P **20 33 05.9 +1.7**
baz=265
M19K Big River Lodg 50.87 34 P P **20 33 06.0 +1.7**
baz=268
O19K Port Alsworth 50.88 37 P P **20 33 06.0 +1.7**
baz=270
I20K Naaghedeneel 50.98 31 P P **20 33 06.6 +1.6**
baz=266
SII Sitkinak Islan 51.04 41 P P **20 33 07.3 +1.7**
baz=273
A21K Barrow 51.06 22 P P **20 33 07.1 +1.6**
baz=259
K20K Telida 51.08 33 IAmb IAmb 20 33 08.7
comp=Z,17nm,0.7s
K20K Telida 51.08 33 P P **20 33 07.6 +1.8**
baz=268,SNR=7.0
J20K Nowinta River 51.08 31 IAmb IAmb 20 33 08.7
comp=Z,14nm,0.8s
J20K Nowinta River 51.08 31 P P **20 33 07.8 +2.0**
baz=267,SNR=7.7
BVAR Borovoye Array 51.09 314 P P **20 33 05.6 -0.4**
comp=Z,6.5nm,0.5s,baz=97,slow=8.2,SNR=32
comp=Z,6.5nm,0.5s
BORK Borovoye 51.13 314 P **20 33 05.9 -0.4**
L20K Farewell, AK 51.13 34 P P **20 33 07.3 +1.1**
baz=268
Q19K Cape Douglas, 51.24 38 P P **20 33 07.7 +0.7**
baz=272
C21K Knifeblade Rid 51.31 25 P P **20 33 08.9 +1.4**
baz=262
P19K Oil Pt 51.43 37 P P **20 33 09.8 +1.4**
baz=271
B21K Ikpikpuk River 51.44 24 P P **20 33 09.8 +1.5**
baz=262
M20K Styx River 51.47 34 P P **20 33 10.1 +1.3**
baz=270
OHAK Old Harbor 51.50 40 P P **20 33 10.5 +1.6**
baz=273
G21K Allakaket 51.51 28 P P **20 33 10.2 +1.3**
baz=266
E21K Killik River 51.52 26 P P **20 33 10.3 +1.4**
baz=264
A22K Sinclair Lake 51.53 23 P P **20 33 10.6 +1.7**
baz=261
F21K Alatna River 51.58 28 P P **20 33 10.7 +1.3**
baz=265
O20K Slope Mountain 51.73 37 P P **20 33 12.0 +1.3**
baz=272
H21K Melozitna Rive 51.74 30 P P **20 33 12.2 +1.6**
baz=267
KDAK Kodiak Island 51.84 40 P P **20 33 12.6 +1.2**
baz=273
CHUM Lake Minchumin 51.88 32 P P **20 33 13.1 +1.5**
baz=269
Q20K Shuyak Island 51.90 39 P P **20 33 13.5 +1.6**
baz=273
SPCR Spurr Chakacha 51.91 35 P P **20 33 13.6 +1.5**
baz=271
N20K Mount Spurr 51.91 35 P P **20 33 13.4 +1.4**
baz=271
PPLA Purkeypile 51.92 33 P P **20 33 13.6 +1.5**
baz=270
B22K Teshekpuk Lake 51.95 24 P P **20 33 13.5 +1.5**
baz=263
D22K Ayikyak River 52.03 25 P P **20 33 14.5 +1.8**
baz=264,SNR=6.7
I21K Tanana 52.06 30 P P **20 33 14.9 +2.0**
baz=268
F22K John River 52.10 27 P P **20 33 15.3 +2.0**
baz=266
SKT Skwentna 52.23 34 P P **20 33 15.8 +1.6**
baz=271
E22K Anaktuvuk Pass 52.29 26 IAmb IAmb 20 33 16.9
comp=Z,14nm,0.6s
E22K Anaktuvuk Pass 52.29 26 P P **20 33 16.4 +1.7**
baz=266,SNR=11
H22K Ishtalitna Cre 52.34 29 IAmb IAmb 20 33 17.7
comp=Z,12nm,0.6s
H22K Ishtalitna Cre 52.34 29 P P **20 33 17.0 +2.0**
baz=268,SNR=9.1
CAPN Captain Cook N 52.44 36 P P **20 33 17.5 +1.8**
baz=272
BPAW Bear Paw Mtn. 52.47 32 P P **20 33 17.5 +1.5**
baz=270
DRK Karamyk 52.56 297 IAmb IAmb 20 33 18.0
comp=Z,6.9nm,0.6s
L22K Petersville 52.57 34 IAmb IAmb 20 33 18.6
comp=Z,14nm,0.9s
MLY Manley 52.58 30 P P **20 33 18.4 +1.6**
baz=269
SUA Susitna One 52.61 35 P P **20 33 18.6 +1.4**
baz=272
KK31 Karatay Array 52.62 302 IAmb IAmb 20 33 17.8
comp=Z,11nm,0.8s
KKAR Karatay Array 52.62 302 P **20 33 16.9 -0.5**
BRSE Bradley Lake S 52.69 37 P P **20 33 19.1 +1.4**
baz=273
D23K Nanushuk River 52.76 25 P P **20 33 19.7 +1.7**
baz=266
TRF Thorofare Moun 52.78 32 P P **20 33 19.8 +1.4**
baz=271
CUT Chulitna 52.81 34 P P **20 33 20.0 +1.6**
baz=272
COLD Coldfoot 52.85 28 P P **20 33 20.1 +1.5**
baz=268
M22K Willow 52.90 35 P P **20 33 20.7 +1.7**
baz=272
G23K Bananza Creek 52.91 28 P P **20 33 20.7 +1.6**
baz=269
WRA Warramunga Arr 52.98 184 P P **20 33 20.1 0.0**
comp=Z,1.1nm,0.5s,baz=360,slow=7.6,SNR=18
comp=Z,1.1nm,0.5s
WRA Warramunga Arr 52.98 184 IAmb IAmb 20 33 26.9
comp=Z,0.2nm,0.8s
H23K Yukon River 53.09 29 P P **20 33 22.2 +1.7**
baz=270
E23K Chandalar 53.11 27 IAmb IAmb 20 33 23.6
comp=Z,15nm,0.8s
E23K Chandalar 53.11 27 P P **20 33 22.4 +1.8**
baz=268
RC01 Rabit Creek A 53.12 35 P P **20 33 22.3 +1.6**
baz=273
NIL Nilore 53.13 290 P **20 33 20.9 -0.4**
NIL IAmb IAmb 20 33 22.1
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 53.15 26 P P **20 33 22.4 +1.5**
baz=268
I23K Minto, Yukon-K 53.17 30 P P **20 33 22.5 +1.6**
baz=270
NEA2 Nenana 53.30 31 IAmb IAmb 20 33 24.4
comp=Z,16nm,0.8s
NEA2 Nenana 53.30 31 P P **20 33 23.4 +1.4**
baz=271,SNR=8.5
SEW Seward 53.32 37 P P **20 33 24.0 +1.9**
baz=274
MCK McKinley 53.38 32 IAmb IAmb 20 33 25.7
comp=Z,22nm,1.2s
MCK McKinley 53.38 32 P P **20 33 23.7 +1.2**
baz=272
PMR Palmer 53.38 35 P P **20 33 23.5 +0.9**
baz=273
D24K Happy Valley 53.44 25 IAmb IAmb 20 33 25.6
comp=Z,18nm,0.9s
D24K Happy Valley 53.44 25 P P **20 33 24.7 +1.8**
baz=268
C24K Franklin Bluff 53.51 25 P P **20 33 25.0 +1.7**
baz=268
E24K Your Creek 53.53 27 P P **20 33 26.1 +2.4**
baz=269
WAT1 Susitna Watana 53.59 33 P P **20 33 25.1 +1.0**
baz=273
KNK Knik Glacier 53.71 35 P P **20 33 25.9 +0.9**
baz=274
SML Sawmill 53.75 34 P P **20 33 26.5 +1.2**
baz=274
F24K Squaw Lake 53.76 27 P P **20 33 26.7 +1.5**
baz=270,SNR=6.5
H24K Noodor Dome 53.77 29 IAmb IAmb 20 33 27.9
comp=Z,8.6nm,0.6s
H24K Noodor Dome 53.77 29 P P **20 33 27.4 +2.0**
baz=271,SNR=6.4
COLA College 53.81 31 P P **20 33 27.3 +1.7**
baz=272
PWL Port Wells 53.81 36 P P **20 33 26.9 +1.2**
baz=275
G24K Hadweenzic Riv 53.92 28 P P **20 33 28.1 +1.6**
baz=271
WAT6 Susitna Watana 53.97 33 P P **20 33 28.1 +1.0**
baz=274
POKR Poker Plat Res 53.98 30 IAmb IAmb 20 33 29.6
comp=Z,25nm,1.1s
POKR Poker Plat Res 53.98 30 P P **20 33 28.4 +1.5**
baz=272,SNR=7.3
DHY Denali Highway 54.11 33 P P **20 33 29.6 +1.6**
baz=274
SCM Sheep Creek Mo 54.22 34 P P **20 33 29.7 +1.0**
baz=275
HDA Harding Lake 54.22 31 IAmb IAmb 20 33 29.8
comp=Z,11nm,0.8s
HDA Harding Lake 54.22 31 P P **20 33 29.0 +0.4**
baz=273
ILAR Eielson Array 54.23 31 P P **20 33 28.9 +0.3**
comp=Z,4.7nm,0.8s,baz=260,slow=4.9,SNR=62
comp=Z,4.7nm,0.8s
ILAR Eielson Array 54.23 31 P P **20 33 28.7 +0.1**
D25K Kavik River 54.31 25 IAmb IAmb 20 33 31.8
comp=Z,8.4nm,0.8s
D25K Kavik River 54.31 25 P P **20 33 30.6 +1.4**
baz=270
G25K Bearman Lake 54.47 28 P P **20 33 32.2 +1.9**
baz=272
F25K Christian Rive 54.62 27 P P **20 33 33.3 +1.9**
baz=272,SNR=6.1
E25K Arctic Village 54.63 27 P P **20 33 33.1 +1.6**
baz=272
M24K Tolsona, Glenn 54.74 34 P P **20 33 34.0 +1.7**
baz=276
PRP Porcupine Dome 54.76 30 P P **20 33 33.4 +0.8**
baz=274
J25K Salcha River, 54.89 31 P P **20 33 34.4 +1.0**
baz=274
KLU Klutina 54.92 35 IAmb IAmb 20 33 36.4
comp=Z,7.5nm,0.5s
KLU Klutina 54.92 35 P P **20 33 35.1 +1.5**
baz=276
PAX Paxson 54.98 33 P P **20 33 35.4 +1.3**
baz=276
F26K Sheenjek River 55.18 27 IAmb IAmb 20 33 38.4
comp=Z,7.7nm,0.6s
F26K Sheenjek River 55.18 27 P P **20 33 37.3 +1.9**
baz=273,SNR=7.9
HARP HAARP 55.18 34 P P **20 33 37.0 +1.5**
baz=276
RIDG Independent Ri 55.19 32 P P **20 33 36.8 +1.2**
baz=276
C27K Jago River 55.25 25 P P **20 33 37.4 +1.6**
baz=272
G26K Porcupine Rive 55.37 28 P P **20 33 38.3 +1.7**
baz=274
N25K Chitina, Valde 55.54 34 P P **20 33 39.1 +1.0**
baz=277
SCRK Sand Creek 55.55 32 P P **20 33 39.1 +0.9**
baz=276,SNR=19
BMRM Bremner River 55.61 35 IAmb IAmb 20 33 41.0
comp=Z,11nm,0.7s
BMRM Bremner River 55.61 35 P P **20 33 40.0 +1.5**
baz=278
J26L Joseph Creek 55.68 31 IAmb IAmb 20 33 40.7
comp=Z,13nm,0.7s
J26L Joseph Creek 55.68 31 P P **20 33 39.8 +0.8**
baz=276,SNR=14
I26K Coal Creek Min 55.77 30 P P **20 33 40.4 +0.9**
baz=276
KAIM Kayak Island 55.85 36 P P **20 33 41.0 +0.9**
baz=278
L26K Log Cabin Wild 55.94 33 IAmb IAmb 20 33 43.4
comp=Z,14nm,0.8s
L26K Log Cabin Wild 55.94 33 P P **20 33 41.7 +0.9**
baz=277
E27K Coleen River 56.11 26 P P **20 33 43.8 +1.9**
baz=275,SNR=5.2
M26K Nabesna, AK 56.18 33 IAmb IAmb 20 33 45.1
comp=Z,7.4nm,0.7s
M26K Nabesna, AK 56.18 33 P P **20 33 44.2 +1.7**
baz=278,SNR=9.4
G27K Doyon Strip 56.22 28 P P **20 33 44.5 +1.8**
baz=276
D27M Malcolm River 56.24 25 IAmb IAmb 20 33 45.7
comp=Z,13nm,1.4s
D27M Malcolm River 56.24 25 P P **20 33 44.5 +1.6**
baz=275
MCARA McCarthy VSAT 56.31 35 P P **20 33 45.1 +1.7**
baz=279
H27K Steamboat Moun 56.34 29 IAmb IAmb 20 33 47.3
comp=Z,6.2nm,0.7s
H27K Steamboat Moun 56.34 29 P P **20 33 45.3 +1.8**
baz=277
CRQM Cirque 56.35 35 IAmb IAmb 20 33 47.0
comp=Z,32nm,1.4s
I27K Kandik River 56.37 29 IAmb IAmb 20 33 46.4
comp=Z,7.1nm,0.6s
I27K Kandik River 56.37 29 P P **20 33 45.7 +1.9**
baz=277,SNR=8.7
K27K Chicken 56.38 31 IAmb IAmb 20 33 46.3
comp=Z,10nm,0.7s
K27K Chicken 56.38 31 P P **20 33 45.7 +1.9**
baz=278
CRQE Cirque 56.38 35 P P **20 33 45.4 +1.4**
baz=279
L27K Beaver Creek, 56.62 33 IAmb IAmb 20 33 49.0
comp=Z,5.8nm,0.6s
L27K Beaver Creek, 56.62 33 P P **20 33 47.4 +1.8**
baz=278
BCAR Beaver Creek A 56.64 33 P **20 33 46.8 +1.1**
ASAR Alice Springs 56.70 184 P P **20 33 47.8 +1.1**
comp=Z,0.8nm,0.7s,baz=2.8,slow=6.6,SNR=15
comp=Z,0.8nm,0.7s
M27K Edge Creek, AK 56.70 33 IAmb IAmb 20 33 48.8
comp=Z,11nm,0.9s
M27K Edge Creek, AK 56.70 33 P P **20 33 47.9 +1.6**
baz=279,SNR=7.7
F28M Old Crow 56.82 27 P P **20 33 48.7 +1.8**
baz=277
E28M Babbage River 56.82 26 IAmb IAmb 20 33 49.9
comp=Z,15nm,1.5s
E28M Babbage River 56.82 26 P P **20 33 48.8 +1.9**
baz=277
D28M Stokes Point 57.02 25 P P **20 33 49.9 +1.7**
baz=277
MESA MESA 57.03 36 P P **20 33 50.3 +1.6**
baz=280
I28M Miner Creek 57.09 30 IAmb IAmb 20 33 51.5
comp=Z,14nm,0.8s
I28M Miner Creek 57.09 30 P P **20 33 50.7 +1.8**
baz=279
BVCY Beaver Creek 57.16 33 P P **20 33 50.9 +1.6**
baz=280
CTG Chitna Glacier 57.19 35 P P **20 33 51.0 +1.3**
baz=280
E29M Blow River 57.45 26 P P **20 33 52.8 +1.6**
baz=278
ARTI Arti 57.46 320 P P **20 33 50.8 -0.7**
comp=Z,11nm,0.4s,baz=84,slow=4.4,SNR=34
comp=Z,11nm,0.4s
ARTI Arti 57.46 320 P **20 33 50.7 -0.8**
YUK3 Moose Creek 57.46 34 P P **20 33 52.9 +1.2**
baz=280
DAWY Dawson 57.54 31 P P **20 33 53.4 +1.4**
baz=280
H29M Whitestone 57.60 29 P P **20 33 53.7 +1.4**
baz=280
G29M Pine Creek 57.63 28 IAmb IAmb 20 33 55.7
comp=Z,9.7nm,0.9s
G29M Pine Creek 57.63 28 P P **20 33 54.3 +1.8**
baz=279,SNR=5.8
O28M Mount Upton 57.78 35 P P **20 33 55.3 +1.4**
baz=281
YUK8 Steele Glacier 57.88 34 P P **20 33 56.1 +1.4**
baz=281
PINM Pinnacle 57.88 36 P P **20 33 55.9 +1.5**
baz=282
J29N Klondike Camp 57.98 31 IAmb IAmb 20 33 57.7
comp=Z,8.2nm,0.8s
J29N Klondike Camp 57.98 31 P P **20 33 56.8 +1.8**
baz=281
EPYK Eagle Plains 58.23 28 IAmb IAmb 20 33 59.3
comp=Z,21nm,1.1s
EPYK Eagle Plains 58.23 28 P P **20 33 58.4 +1.7**
baz=281,SNR=12
AB31 Akbulak array 58.24 311 IAmb IAmb 20 33 57.2
comp=Z,5.3nm,0.5s
ABKAR Akbulak array 58.24 311 P **20 33 56.3 -0.6**
M29M Somme Creek 58.26 33 IAmb IAmb 20 33 60.0
comp=Z,7.7nm,0.7s
M29M Somme Creek 58.26 33 P P **20 33 58.8 +1.8**
baz=282,SNR=10
L29M L29M 58.27 32 IAmb IAmb 20 34 00.3
comp=Z,12nm,0.9s
L29M L29M 58.27 32 P P **20 33 59.0 +2.0**

baz=282,SNR=10.0
G30M tAoh Zraii Nji 58.32 27 IAmb IAmb 20 33 59.0
comp=Z,13nm,1.1s
G30M tAoh Zraii Nji 58.32 27 P **P** **20 33 58.5 +1.3**
baz=281,SNR=8.8
F30M Barrier River 58.36 27 P **P** **20 33 59.4 +1.9**
baz=281
K29M Barlow Dome 58.39 31 IAmb IAmb 20 34 00.6
comp=Z,7.8nm,0.8s
K29M Barlow Dome 58.39 31 P **P** **20 33 59.7 +1.8**
baz=282,SNR=10
YUK4 Talbot Arm 58.40 34 P **P** **20 33 59.9 +1.9**
baz=282
I30M Mount Dempster 58.60 29 IAmb IAmb 20 34 02.5
comp=Z,11nm,0.7s
I30M Mount Dempster 58.60 29 P **P** **20 34 00.9 +1.6**
baz=282,SNR=9.4
YUK6 Outpost Mounta 58.62 35 P **P** **20 34 01.2 +1.5**
baz=283
O29M Mount Kennedy 58.66 35 IAmb IAmb 20 34 02.6
comp=Z,7.4nm,0.7s
O29M Mount Kennedy 58.66 35 P **P** **20 34 01.8 +2.0**
baz=283,SNR=5.8
J30M Hart River 58.75 30 P **P** **20 34 02.0 +1.6**
baz=282
M30M Minto, Yukon 58.98 33 P **P** **20 34 03.5 +1.6**
baz=283
HYT Haines Junctio 59.05 35 P **P** **20 34 03.8 +1.3**
baz=284
INK Inuvik 59.06 26 IAmb IAmb 20 34 03.9
comp=Z,15nm,1.5s
INK Inuvik 59.06 26 P **P** **20 34 03.2 +1.1**
baz=282
G31M Satah River 59.08 27 P **P** **20 34 02.9 +0.6**
G31M IAmb IAmb 20 34 03.7
comp=Z,5.1nm,0.5s
G31M Satah River 59.08 27 P **P** **20 34 03.2 +0.9**
baz=283,SNR=5.3
N30M Aishikik Lake 59.10 34 P **P** **20 34 04.5 +1.8**
baz=283
AKTO Aktyubinsk 59.12 313 P **P** **20 34 02.3 -0.7**
comp=Z,2.1nm,0.5s,baz=74,slow=8.1,SNR=6.8
comp=Z,2.1nm,0.5s
F31M Tsiigehtchic 59.17 27 P **P** **20 34 04.9 +2.0**
baz=283
P29M Windy Craggy 59.22 36 IAmb IAmb 20 34 06.2
comp=Z,7.6nm,0.7s
P29M Windy Craggy 59.22 36 P **P** **20 34 05.5 +2.0**
baz=284
H31M Peel River 59.30 29 IAmb IAmb 20 34 06.4
comp=Z,10nm,0.8s
H31M Peel River 59.30 29 P **P** **20 34 05.5 +1.6**
baz=283,SNR=6.5
P30M Million Dollar 59.48 35 P **P** **20 34 07.0 +1.7**
baz=284
N31M Braeburn, Yuko 59.71 34 P **P** **20 34 08.9 +2.1**
baz=284
O30N Mendenhall 59.74 35 P **P** **20 34 08.5 +1.5**
baz=285
PLBC Pleasant Camp 59.94 36 P **P** **20 34 10.3 +1.9**
baz=285,SNR=8.5
M31M Drury Creek, Y 60.16 33 P **P** **20 34 11.4 +1.6**
baz=285
WHY Whitehorse 60.34 34 **P** **20 34 12.6 +1.4**
WHY Whitehorse 60.34 34 P **P** **20 34 12.9 +1.7**
baz=286,SNR=6.5
S31K Pelican 60.41 38 P **P** **20 34 13.1 +1.6**
baz=286
SKAG Skagway 60.45 36 P **P** **20 34 13.4 +1.7**
baz=286
R31K City Hall, Gus 60.54 37 P **P** **20 34 13.7 +1.4**
baz=286
A36M Sachs Harbour 60.84 21 IAmb IAmb 20 34 16.4
comp=Z,9.0nm,0.8s
A36M Sachs Harbour 60.84 21 P **P** **20 34 15.7 +1.6**
baz=288
R32K Eaglecrest 61.19 37 P **P** **20 34 18.6 +1.9**
baz=287
P32M Atlin 61.20 35 P **P** **20 34 18.5 +1.6**
baz=287
S32K Killisnoo 61.40 38 P **P** **20 34 19.8 +1.7**
baz=288
HRA Herat 61.44 294 **P** **20 34 18.6 -0.4**
MMPY Sheldon Lake, 61.44 32 P **P** **20 34 19.6 +1.2**
MMPY IAmb IAmb 20 34 26.2
comp=Z,12nm,1.5s
MMPY Sheldon Lake, 61.44 32 P **P** **20 34 20.0 +1.6**
baz=288
P33M Teslin, Yukon 61.45 35 P **P** **20 34 20.3 +1.7**
P33M Teslin, Yukon 61.45 35 P **P** **20 34 20.1 +1.5**
baz=288
C36M Paulatuk 62.06 23 P **P** **20 34 23.5 +1.2**
baz=290
Q32M Nakina River 62.10 36 P **P** **20 34 24.3 +1.3**
baz=289
U33K Whale Pass 62.59 39 P **P** **20 34 27.7 +1.7**
baz=289
R33M Jennings River 62.60 35 P **P** **20 34 27.7 +1.5**
baz=289
CRAG Craig 62.81 40 P **P** **20 34 28.8 +1.4**
baz=290
WRAK Wrangell Islan 62.90 39 P **P** **20 34 29.4 +1.5**
baz=290
S34M Telegraph Cree 63.01 37 P **P** **20 34 30.6 +1.9**
baz=290
DLBC Dease Lake 63.38 36 P **P** **20 34 32.8 +1.6**
baz=291
WTLY Watson Lake, Y 63.38 34 P **P** **20 34 32.9 +1.7**
baz=291
V35K Ketchikan 63.66 40 P **P** **20 34 34.7 +1.7**
baz=291
T35M Bob Quinn 63.79 38 P **P** **20 34 35.6 +1.7**
baz=291
U35K Hyder 64.29 39 P **P** **20 34 38.6 +1.6**
baz=292
WRGLY Wrigley 64.57 30 P **P** **20 34 40.5 +1.7**
baz=294
BELG Belogornoye 64.64 317 P **P** **20 34 38.3 -1.0**
comp=Z,15nm,0.6s,baz=315,slow=1.7,SNR=12
comp=Z,15nm,0.6s
LIRD Liard River Hi 64.91 34 P **P** **20 34 42.7 +1.7**
baz=293
TOAD Toad River Com 65.55 35 P **P** **20 34 46.7 +1.6**
baz=294
ARCES ARCESS Array B 66.54 339 P **P** **20 34 51.2 +0.1**
comp=Z,1.8nm,0.5s,baz=66,slow=8.5,SNR=17
comp=Z,1.8nm,0.5s
RES Resolute Bay 66.97 13 **P** **20 34 54.0 +0.2**
RES IAmb IAmb 20 34 55.3
comp=Z,8.3nm,1.0s
YKA Yellowknife Ar 68.52 28 P **P** **20 35 04.2 +0.6**
comp=Z,1.5nm,0.6s,baz=261,slow=5.5,SNR=16
comp=Z,1.5nm,0.6s
FINES FINESS Array B 70.83 332 P **P** **20 35 17.0 -0.5**
comp=Z,2.5nm,0.5s,baz=66,slow=5.7,SNR=23
comp=Z,2.5nm,0.5s
KBZ Khabaz 71.19 310 P **P** **20 35 20.1 +0.2**
comp=Z,4.9nm,0.8s,baz=67,slow=2.4,SNR=8.4
comp=Z,4.9nm,0.8s
H04A Detroit Lake 73.77 47 P **P** **20 35 36.1 +0.9**
NEW Newport 74.86 42 P **P** **20 35 42.1 +0.8**
comp=Z,5.7nm,0.8s,baz=14,slow=4.2,SNR=3.8
comp=Z,5.7nm,0.8s
NEW Newport 74.86 42 IAmb IAmb 20 35 43.5
comp=Z,6.6nm,0.9s
PINE Pine Mountain 75.00 47 **P** **20 35 44.9 +2.5**
AKASG Malin Array Be 75.52 322 P **P** **20 35 44.3 -0.6**
comp=Z,1.4nm,0.4s,baz=57,slow=5.0,SNR=5.9
comp=Z,1.4nm,0.4s
AKASG Malin Array Be 75.52 322 IAmb IAmb 20 35 47.7
comp=Z,1.7nm,0.9s
MARD Mardin 75.75 305 P **P** **20 35 47.1 +0.4**
MARD IAmb IAmb 20 35 47.6
comp=Z,6.4nm,0.7s
F10A Beach Ranch, E 76.05 44 IAmb IAmb 20 35 51.3
comp=Z,4.4nm,0.7s
HFS Hagfors 76.34 335 P **P** **20 35 49.1 -0.2**
comp=Z,4.0nm,1.0s,baz=69,slow=7.6,SNR=9.6
comp=Z,4.0nm,1.0s
NB2 NORSAR Subarra 76.55 336 P **P** **20 35 50.2 -0.4**
comp=Z,0.6nm,0.6s,baz=43,slow=5.6
NOA NORSAR Array B 76.55 336 P **P** **20 35 50.4 -0.2**
comp=Z,1.0nm,0.6s,baz=55,slow=6.5,SNR=5.2
comp=Z,1.0nm,0.6s
BMO Blue Mountains 76.62 45 IAmb IAmb 20 35 53.6
comp=Z,5.9nm,0.7s
WVOR Wild Horse Val 77.15 48 IAmb IAmb 20 35 56.9
comp=Z,6.2nm,0.9s
PAHR Pah Rah Range 78.17 50 IAmb IAmb 20 36 02.1
comp=Z,10.0nm,1.0s
BRTR Keskin Array B 79.18 310 P **P** **20 36 05.5 -0.1**
comp=Z,1.4nm,0.6s,baz=105,slow=5.1,SNR=9.1
comp=Z,1.4nm,0.6s
RAYN Ar Rayn 79.40 291 **P** **20 36 06.2 -0.6**
BOZ Bozeman (W) 79.47 42 IAmb IAmb 20 36 09.0
comp=Z,6.3nm,0.8s
NVAR Mina Array Bea 79.58 51 P **P** **20 36 09.1 +1.3**
comp=Z,2.7nm,0.6s,baz=289,slow=5.9,SNR=13
comp=Z,2.7nm,0.6s
YHL Hebgen Lake 80.17 42 IAmb IAmb 20 36 13.4
comp=Z,7.5nm,1.0s
ELK Elko 80.21 48 P **P** **20 36 12.7 +1.6**
comp=Z,2.7nm,0.7s,baz=308,slow=5.9,SNR=10
comp=Z,2.7nm,0.7s
ELK Elko 80.21 48 IAmb IAmb 20 36 13.2
comp=Z,3.0nm,0.7s
YHB Horse Butte 80.23 42 IAmb IAmb 20 36 13.7
comp=Z,8.2nm,0.9s
HVU Hansel Valley 81.10 46 IAmb IAmb 20 36 18.2
comp=Z,6.2nm,0.7s
ASF Jabal al Asfar 81.19 303 P **P** **20 36 16.1 -0.2**
comp=Z,1.6nm,0.5s,baz=50,slow=7.9,SNR=2.8
comp=Z,1.6nm,0.5s
R11B Troy Canyon, C 81.38 50 IAmb IAmb 20 36 19.4
comp=Z,9.5nm,1.4s
DUG Dugway, Tooele 82.02 47 IAmb IAmb 20 36 23.1
comp=Z,9.5nm,1.1s
PDAR Pinedale Array 82.38 43 P **P** **20 36 23.2 +0.9**
comp=Z,2.3nm,0.7s,baz=283,slow=3.0,SNR=14
comp=Z,2.3nm,0.7s
KNB Kanab 83.93 49 IAmb IAmb 20 36 32.8
comp=Z,5.8nm,0.7s
GERES GERESS Array B 84.37 327 P **P** **20 36 31.5 -0.7**
comp=Z,0.2nm,0.5s,baz=42,slow=6.3,SNR=2.1
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 94.73 50 P **P** **20 37 22.4 +1.3**
comp=Z,1.2nm,0.6s,baz=270,slow=3.0,SNR=12
comp=Z,1.2nm,0.6s
PB05 IPOC Station P 153.19 75 **PKPbc** **20 43 53.9 -1.9**

*IDC **27** 20:27:01.4±3.4, 41.3°N×19.2°E, h0km, mb3.9/4, mbtmp3.8/6, ML3.1/2, Error ellipse: s-maj=48.0km s-min=17.2km az=31.0*
*NEIC **27** 20:27:06.9±2.3, 41.54°N±0.06°×19.44°E±0.07°, h10km±1km, mb4.5/2, Error ellipse: s-maj=10.8km s-min=9.1km az=194.0*
*BEO **27** 20:27:06.7±0.5, 41.48°N×19.52°E, h6km±2km, ML2.9/13*
*TIR **27** 20:27:07.8, 41.59°N×19.55°E, h30km±3km, Ml3.0/6*
*PRU **27** 20:27:07.0, 41.17°N×19.05°E, h10km, M4.5*
*PDG **27** 20:27:08.4±0.3, 41.57°N×19.57°E, h11km, MD3.3/4, ML3.2/13, Error ellipse: s-maj=1.1km s-min=1.3km az=0.0*
ISC 27 20:27:06.9±1.0, 41.52°N±0.02°×19.47°E±0.02°, h15km±7km, n130, σ1°37/172, mb4.0/3, 30C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**119**	Pg	**Pg**	**20 27 14.1**	**+0.1**
TIR				Sg	**Sb**	**20 27 19.9**	**-0.1**
TIR				AML	AML	20 27 23.5	
	3.9nm,0.5s						
ULC	**Ulcinj**	**0.48**	**340**	↑*i* Pg	**Pg**	**20 27 16.1**	**-0.3**
ULC				*i* Sg	**Sg**	**20 27 22.8**	**-0.1**
SDA	**Shkodra**	**0.54**	**3**	Pg	**Pg**	**20 27 16.8**	**-0.7**
SDA				Sg	**Sb**	**20 27 25.4**	**-0.2**
DRME	**Dracevica, Mon**	**0.70**	**343**	*e*Pg	**Pg**	**20 27 20.0**	**-0.6**
DRME				*e*Sg	**Sb**	**20 27 31.4**	**+1.1**
DRME	**Dracevica, Mon**	**0.70**	**343**	↑*i* Pg	**Pg**	**20 27 20.1**	**-0.6**
DRME				*i* Sg	**Sb**	**20 27 30.5**	**+0.2**
PHP	**Peshkopia**	**0.75**	**77**	Pg	**Pg**	**20 27 20.4**	**-1.1**
PHP				Sg	**Sg**	**20 27 31.3**	**-0.1**
PHP				AML	AML	20 27 37.8	
	5.0nm,0.7s						
BUM	**Brajici-Budva**	**0.89**	**332**	↑*i* Pg	**Pb**	**20 27 24.5**	**+0.4**
BUM				*i* Sg	**Sn**	**20 27 37.4**	**-0.3**
PDG	**Podgorica**	**0.93**	**350**	Pg	**Pb**	**20 27 24.7**	**+0.1**
PDG				Sg	**Sg**	**20 27 36.8**	**-0.2**
PDG	**Podgorica**	**0.93**	**350**		**Pb**	**20 27 23.6**	**-1.1**
PDG	**Podgorica**	**0.93**	**350**	↑P	**Pg**	**20 27 24.9**	**0.0**
PDG				↑S	**Sn**	**20 27 40.1**	**+1.7**
PDG	**Podgorica**	**0.93**	**350**	*e*Pg	**Pb**	**20 27 24.5**	**-0.2**
PDG				*e*Sg	**Sn**	**20 27 37.9**	**-0.5**
PDG	**Podgorica**	**0.93**	**350**	↑*i* Pg	**Pb**	**20 27 24.4**	**-0.2**
PDG				*i* Sg	**Sb**	**20 27 37.6**	**+0.8**
VLO	**Vlora**	**1.05**	**179**	Pg	**Pn**	**20 27 29.2**	**+2.2**
VLO				Sg	**Sn**	**20 27 46.4**	**+5.1**
CEME	**Cevo**	**1.11**	**339**	↑*i* Pg	**Pb**	**20 27 27.9**	**+0.1**
CEME				*i* Sg	**Sn**	**20 27 44.6**	**+1.6**
PVY	**Plav**	**1.14**	**19**	*e*Pg	**Pb**	**20 27 26.7**	**-1.7**
PVY				*e*Sg	**Sn**	**20 27 45.5**	**+1.7**
PVY	**Plav**	**1.14**	**19**	↑*i* Pg	**Pb**	**20 27 26.7**	**-1.7**
PVY				*i* Sg	**Sb**	**20 27 43.5**	**+0.5**
HCY	**Herceg Novi**	**1.18**	**322**	↑*i* Pg	**Pg**	**20 27 29.6**	**0.0**
HCY				*i* Sg	**Sg**	**20 27 47.9**	**+2.9**
NKME	**Niksic**	**1.31**	**343**	↑*i* Pg	**Pg**	**20 27 31.7**	**-0.4**
NKME				*i* Sg	**Sg**	**20 27 50.3**	**+1.2**
KOME	**Kolasin**	**1.33**	**2**	*e*Pg	**Pb**	**20 27 31.7**	**0.0**
KOME				*e*Sg	**Sg**	**20 27 50.3**	**+0.3**
KOME	**Kolasin**	**1.33**	**2**	↑*i* Pg	**Pn**	**20 27 31.0**	**-0.1**
KOME				*i* Sg	**Sg**	**20 27 51.1**	**+1.1**
KBN	**Korca**	**1.34**	**131**	Pn	**Pg**	**20 27 32.7**	**+0.1**
KBN				AML	AML	20 28 02.1	
	1.1nm,1.1s						
BEY	**Berane**	**1.39**	**13**	*e*Pg	**Pn**	**20 27 31.9**	**0.0**
BEY				*e*Sg	**Sb**	**20 27 51.0**	**+0.7**
IVA	**Berane**	**1.39**	**13**	↑*i* Pg	**Pn**	**20 27 31.7**	**-0.2**
IVA				*i* Sg	**Sg**	**20 27 52.1**	**+0.3**
TREB	**Trebinje**	**1.46**	**326**	*e*Pn	**Pb**	**20 27 34.3**	**+0.5**
TREB	**Trebinje**	**1.46**	**326**	*e*Pg	**Pb**	**20 27 34.2**	**+0.5**
TREB				*e*Sg	**Sg**	**20 27 54.2**	**+0.2**
BRY	**Bratogost**	**1.55**	**334**	↓*i* Pg	**Pb**	**20 27 35.7**	**+0.4**
BRY				*i* Sg	**Sg**	**20 27 58.4**	**+1.6**
NEST	**Nestorio**	**1.63**	**132**	Pn	**Pb**	**20 27 37.4**	**+0.7**
NEST				AML	AML	20 28 12.2	
	0.4nm,0.6s						
UPM	**Unac-Piva**	**1.74**	**346**	↑*i* Pn	**Pb**	**20 27 39.1**	**+0.5**
UPM				*i* Sn	**Sg**	**20 28 02.9**	**0.0**
SJES	**Sjenica**	**1.79**	**12**	*e*Pg	**Pb**	**20 27 39.5**	**+0.1**
SJES				*e*Sg	**Sg**	**20 28 03.4**	**-1.0**
PLE	**Pljevlja**	**1.81**	**358**	*e*Pg	**Pb**	**20 27 40.2**	**+0.3**
PLE				*e*Sg	**Sg**	**20 28 04.3**	**-1.0**
PLE	**Pljevlja**	**1.81**	**358**	↓*i* Pn	**Pb**	**20 27 39.6**	**-0.3**
PLE				*i* Sn	**Sg**	**20 28 04.1**	**-1.2**
KEK	**Kerkira**	**1.82**	**172**		**Pg**	**20 27 43.0**	**+1.2**
NOCI	**Noci**	**1.95**	**249**	Pn	**Pg**	**20 27 43.5**	**-0.9**
NOCI				Sn	**Sn**	**20 28 02.1**	**-1.7**
NOCI				AML	AML	20 28 18.9	
	1.1nm,0.3s						
IGT	**Igoumenitsa**	**2.09**	**161**	Pn	**Pb**	**20 27 43.7**	**-0.8**
SELS	**Selova**	**2.10**	**35**	*e*Pn	**Pb**	**20 27 42.1**	**+0.6**
SELS				*e*Sn	**Sn**	**20 28 09.4**	**+2.1**
RUDO	**Rudo**	**2.10**	**358**	*e*Pn	**Pb**	**20 27 43.2**	**+1.6**
RUDO	**Rudo**	**2.10**	**358**	*e*Pn	**Pb**	**20 27 43.5**	**-1.2**
RUDO				*e*Sn	**Sb**	**20 28 10.2**	**-0.4**
IVAS	**Ivanjica**	**2.12**	**14**	*e*Pn	**Pn**	**20 27 42.7**	**+0.8**
IVAS				*e*Sn	**Sb**	**20 28 10.2**	**-1.0**
BARS	**Barje**	**2.18**	**53**	*e*Pn	**Pn**	**20 27 43.2**	**+0.6**
BARS				*e*Sn	**Sb**	**20 28 11.9**	**-0.9**
MATE	**Matera**	**2.26**	**248**	↓P	**Pg**	**20 27 48.8**	**-1.4**
MATE				↓S	**Sg**	**20 28 19.4**	**-0.1**
GOCS	**Kraljevo Serbi**	**2.29**	**26**	*e*Pn	**Pn**	**20 27 45.4**	**+1.1**
GOCS				*e*Sn	**Sn**	**20 28 14.1**	**+1.8**
BBLS	**Lazi&#263i**	**2.35**	**359**	*e*Pn	**Pn**	**20 27 46.7**	**+1.7**
BBLS				*e*Sn	**Sb**	**20 28 16.9**	**-0.9**
BOSS	**Bosilegrad**	**2.45**	**65**	*e*Pn	**Pn**	**20 27 47.1**	**+0.8**
BOSS				*e*Sn	**Sn**	**20 28 18.3**	**+2.3**
GRUS	**Gruza**	**2.54**	**21**	*e*Pn	**Pn**	**20 27 48.8**	**+1.2**
GRUS				*e*Sn	**Sn**	**20 28 20.5**	**+2.2**
BOVS	**Bovan**	**2.69**	**37**	↑P	**Pn**	**20 27 50.3**	**+0.7**
BOVS				↑S	**Sn**	**20 28 23.2**	**+1.3**
BOVS	**Bovan**	**2.69**	**37**	*e*Pn	**Pn**	**20 27 50.2**	**+0.6**
BOVS				*e*Sn	**Sn**	**20 28 21.6**	**-0.2**
LIT	**Litokhoron**	**2.70**	**121**	Pn	**Pn**	**20 27 50.5**	**+0.8**
ACER	**Acerenza**	**2.76**	**256**		**Pn**	**20 27 51.0**	**+0.4**
TRUS	**Trudelj**	**2.79**	**14**	*e*Pn	**Pn**	**20 27 52.5**	**+1.5**
SGRT	**San Giovanni R**	**2.80**	**276**	Pn	**Pn**	**20 27 51.5**	**+0.3**
ZAPS	**Zavoj**	**2.93**	**52**	*e*Pn	**Pn**	**20 27 54.1**	**+1.1**
ZAPS				*e*Sn	**Sn**	**20 28 28.4**	**+0.5**
TEKS	**Tekeris**	**3.03**	**1**	*e*Pn	**Pn**	**20 27 54.5**	**+0.2**
TEKS				*e*Sn	**Sn**	**20 28 32.8**	**+2.4**
ZAGS	**Zajecar**	**3.07**	**41**	*e*Pn	**Pn**	**20 27 55.8**	**+1.0**
ZAGS				*e*Sn	**Sn**	**20 28 32.4**	**+1.1**
TIP	**Timpagrande**	**3.12**	**222**		**Pn**	**20 27 55.8**	**+0.3**
CUC	**Castrocucco**	**3.16**	**242**		**Pn**	**20 27 57.5**	**+1.3**
BLKB	**Belogradchik**	**3.17**	**47**	↓S	**Sn**	**20 28 34.5**	**+0.7**
BORS2	**Bor- Borsko je**	**3.19**	**35**	*e*Pn	**Pn**	**20 27 56.3**	**-0.1**
BORS2				*e*Sn	**Sn**	**20 28 34.2**	**0.0**
AVAS	**Avala Beograd**	**3.27**	**13**	*e*Pn	**Pn**	**20 27 59.3**	**+1.7**
KUBS	**Kucevo**	**3.32**	**29**	*e*Pn	**Pn**	**20 27 58.1**	**-0.2**
KUBS				*e*Sn	**Sn**	**20 28 37.1**	**-0.3**
BLY	**Banja Luka**	**3.64**	**333**	*e*Pn	**Pb**	**20 28 09.8**	**-1.1**
BLY	**Banja Luka**	**3.64**	**333**	↑P	**Pn**	**20 28 05.4**	**+2.7**
BLY	**Banja Luka**	**3.64**	**333**	*e*Pn	**Pn**	**20 28 05.0**	**+2.4**
FRGS	**Fruska Gora**	**3.65**	**4**	*e*Pn	**Pn**	**20 28 03.4**	**+0.6**
MDVR	**Moldovita**	**3.66**	**26**	↓P	**Pn**	**20 28 03.9**	**+1.0**
MDVR				↓S	**Sn**	**20 28 46.6**	**+0.9**
PUNG	**Punghina**	**3.76**	**42**	↓P	**Pn**	**20 28 06.5**	**+2.2**
HERR	**Herculane**	**4.00**	**32**	↓P	**Pn**	**20 28 08.7**	**+1.1**
BANR	**Banloc**	**4.05**	**17**	↑P	**Pn**	**20 28 09.5**	**+1.2**
SRE	**Strehaia**	**4.17**	**40**	↑P	**Pn**	**20 28 11.5**	**+1.5**
PLVB	**Pleven**	**4.25**	**62**	↑P	**Pn**	**20 28 12.1**	**+1.1**
CEL	**Celeste**	**4.26**	**221**	Pn	**Pn**	**20 28 10.7**	**-0.6**
BZS	**Buzias**	**4.39**	**20**	↑P	**Pn**	**20 28 13.8**	**+0.8**
GZR	**Gura Zlata**	**4.56**	**31**	↓P	**Pn**	**20 28 16.8**	**+1.3**
RDO	**Rodhopi**	**4.59**	**93**		**Pn**	**20 28 17.2**	**+1.5**
AQU	**L'Aquila**	**4.60**	**282**	*e*Pn	**Pn**	**20 28 16.1**	**+0.2**
CAMP	**Campotosto**	**4.62**	**285**	Pn	**Pn**	**20 28 17.6**	**+1.2**
SURR	**Surduc**	**4.66**	**24**	↑P	**Pn**	**20 28 17.6**	**+1.0**
ITM	**Ithomi**	**4.73**	**155**	Pn	**Pn**	**20 28 18.5**	**+0.8**
MORH	**Mrgy, Hungar**	**4.74**	**353**	*e*Pn	**Pn**	**20 28 16.3**	**-1.4**
MORH	**Mrgy, Hungar**	**4.74**	**353**	↑P	**Pn**	**20 28 20.3**	**+2.6**
NRCA	**Norcia**	**4.90**	**288**		**Pn**	**20 28 21.2**	**+1.1**
FDMO	**Fiordimonte**	**4.97**	**290**		**Pn**	**20 28 21.7**	**+0.7**
SIRR	**Siria**	**5.01**	**18**	↑P	**Pn**	**20 28 23.0**	**+1.5**
LOT	**Lotru**	**5.03**	**37**	↑P	**Pn**	**20 28 23.2**	**+1.4**
DEV	**Deva**	**5.03**	**29**	↑P	**Pn**	**20 28 23.7**	**+2.0**
HUMR	**Humele**	**5.04**	**51**	↓P	**Pn**	**20 28 22.9**	**+1.0**
CESX	**Cesi**	**5.24**	**284**	Pn	**Pn**	**20 28 24.2**	**-0.5**
ARR	**Arges**	**5.38**	**43**	↑P	**Pn**	**20 28 28.6**	**+1.9**
MURB	**Monte Urbino**	**5.43**	**291**		**Pn**	**20 28 28.4**	**+1.0**
VOIR		**5.64**	**44**	↑P	**Pn**	**20 28 32.3**	**+2.0**
SOKA	**Soboth**	**6.07**	**330**	*i* Pn	**Pn**	**20 28 37.4**	**+1.3**
	0.7nm,0.2s						
OBKA	**Obir**	**6.12**	**326**	*e*Pn	**Pn**	**20 28 39.2**	**+2.4**
	1.7nm,0.3s						
SABO	**M.te Sabotino**	**6.16**	**318**	Pn	**Pn**	**20 28 36.6**	**-0.7**
SABO				Sn	**Sn**	**20 29 46.9**	**-0.5**
MLR	**Muntele Rosu**	**6.16**	**48**	Pn	**Pn**	**20 28 40.0**	**+2.5**
	1.2nm,0.3s,baz=192,slow=5.8,SNR=16						
MLR				Sn	**Sn**	**20 29 48.7**	**+1.0**
	0.1nm,0.3s,baz=282,slow=22,SNR=1.3						
	6.5nm,0.6s						
MLR	**Muntele Rosu**	**6.16**	**48**		**Pn**	**20 28 38.7**	**+1.2**
MLR	**Muntele Rosu**	**6.16**	**48**	↑P	**Pn**	**20 28 38.9**	**+1.4**
DOPR	**Dopca**	**6.18**	**42**	↓P	**Pn**	**20 28 39.4**	**+1.8**
NEHR	**Nehoiu**	**6.32**	**50**	↑P	**Pn**	**20 28 41.0**	**+1.5**
ARSA	**Arzberg**	**6.39**	**335**	Pn	**Pn**	**20 28 39.4**	**-1.1**
ARSA	**Arzberg**	**6.39**	**335**	*i* Pn	**Pn**	20 28 47.8	+7.3
	2.0nm,0.4s						
PSZ	**Piszkestetо**	**6.41**	**3**	Pn	**Pn**	**20 28 39.8**	**-0.9**
COVR	**Voineasa-Covas**	**6.53**	**46**	↑P	**Pn**	**20 28 43.7**	**+1.4**
RONA	**Rosalia, Austr**	**6.58**	**341**	*i* Pn	**Pn**	20 28 50.0	+6.9
	0.7nm,0.3s						
PLOR	**Plostina**	**6.77**	**48**	↓P	**Pn**	**20 28 48.0**	**+2.2**
VRI	**Vrincioaia**	**6.83**	**48**	↓P	**Pn**	**20 28 48.0**	**+1.5**
ZCCA	**Zocca**	**6.84**	**297**	Pn	**Pn**	**20 28 47.4**	**+0.7**
TEOL	**Teolo**	**6.85**	**307**	Pn	**Pn**	**20 28 46.8**	**0.0**
TEOL				Sn	**Sn**	**20 30 01.8**	**-2.6**
CONA	**Conrad Observa**	**6.91**	**339**	*i* Pn	**Pn**	20 28 54.7	+7.1
	0.5nm,0.2s						
KBA	**Koelnbreinsper**	**7.08**	**324**	*i* Pn	**Pn**	20 28 57.8	+7.7
	1.4nm,0.3s						
ABTA	**Abfaltersbach**	**7.24**	**319**	*i* Pn	**Pn**	**20 28 55.5**	**+3.4**
	1.0nm,0.3s						
CTI	**Castel Tesino**	**7.25**	**311**	Pn	**Pn**	**20 28 52.6**	**+0.3**
BURAR	**Bucovina Array**	**7.35**	**32**	Pn	**Pn**	**20 28 55.8**	**+2.1**
BUR08	**Bucovina Ar. S**	**7.37**	**32**	Pn	**Pn**	**20 28 56.3**	**+2.4**
LESA	**Schwarzleotal**	**7.64**	**323**	*e*Pn	**Pn**	**20 28 58.8**	**+1.1**
	1.6nm,0.3s						
WTTA	**Wattenberg**	**8.03**	**318**	*e*Pn	**Pn**	**20 29 05.6**	**+2.5**
	2.7nm,0.6s						
WATA	**Walderalm**	**8.11**	**319**	*e*Pn	**Pn**	**20 29 08.1**	**+4.0**
	2.3nm,0.5s						
SQTA	**Sankt Quirin**	**8.21**	**317**	*e*Pn	Pn	20 29 11.1	+5.5
	1.9nm,0.3s						
FETA	**Feichten**	**8.34**	**314**	*e*Pn	Pn	20 29 13.3	+6.0
	0.9nm,0.4s						
MOTA	**Moosalm**	**8.35**	**317**	*e*Pn	**Pn**	**20 29 12.2**	**+4.8**
	1.6nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**8.36**	**311**	Pn	**Pn**	**20 29 08.1**	**+0.4**
GERES	**GERESS Array B**	**8.38**	**333**	Pn	**Pn**	**20 29 08.0**	**+0.1**
	baz=153,slow=14,SNR=4.1						
GERES				Sn	**Sn**	**20 30 43.9**	**+1.7**
	baz=149,slow=24,SNR=3.2						
	0.7nm,0.7s						
KHC	**Kasperske Hory**	**8.67**	**333**	*e*SN	**Sn**	**20 30 50.8**	**+1.6**
TUE	**Stuetta**	**8.81**	**308**	Pn	**Pn**	**20 29 14.3**	**+0.4**
SENIN	**Lac Senin/Sane**	**10.02**	**303**	Pn	**Pn**	**20 29 29.7**	**-0.8**
FINES	**FINESS Array B**	**20.36**	**9**	P	**P**	**20 31 41.9**	**-0.6**
	2.1nm,0.6s,baz=189,slow=9.1,SNR=11						
	2.1nm,0.6s						
FIA1	**FINESS Array S**	**20.36**	**9**	P	**P**	**20 31 41.7**	**-0.8**
FIA1				IAmb	IAmb	20 31 56.9	
	comp=Z,47nm,1.2s						
ARTI	**Arti**	**29.10**	**46**	P	**P**	**20 33 05.4**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=262,slow=7.1,SNR=4.1						
	comp=Z,1.9nm,0.5s						
ARTI	**Arti**	**29.10**	**46**	IAmb	IAmb	20 33 05.7	
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	**P**	**20 35 13.8**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=280,slow=8.2,SNR=6.1						
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**44.32**	**61**	P	**P**	**20 35 15.7**	**-0.5**
	com

ROCH	**El Roble**	**3.59**	**155**	*eP*			20 28 59.0	
ROCH				*eP*		Pn	20 28 59.0	+4.8
AGUA	**GUANDACOL**	**3.76**	**88**	*eP*		**Pn**	**20 28 58.8**	**+2.3**
AGUA				*eS*		**Sn**	**20 29 43.5**	**+3.9**
AGUA				IAML			20 29 49.1	
	comp=Z,116nm,0.5s							
RTLL	**Cerro Villicun**	**4.06**	**114**	*eP*		**Pn**	**20 29 02.0**	**+1.4**
RTLL				*eS*		**Sn**	**20 29 44.0**	**-3.0**
RTLL				IAML			20 30 05.9	
	comp=Z,71nm,1.3s							
VCA	**Vinchina**	**4.13**	**77**	*eP*		**Pn**	**20 29 03.8**	**+2.1**
VCA				*eS*		**Sn**	**20 29 51.4**	**+2.5**
VCA				IAML			20 30 00.1	
	comp=Z,122nm,0.5s							
AC02	**Maricunga**	**4.33**	**49**	*eP*		**Pn**	**20 29 05.0**	**+0.3**
AC02				*eS*		Sn	20 30 11.2	+17
AC02				IAML			20 30 11.5	
	comp=Z,47nm,0.7s							
AVFE	**Valle Fertil**	**4.72**	**103**	*eP*		**Pn**	**20 29 10.7**	**+1.0**
AVFE				*eS*		**Sn**	**20 30 05.8**	**+2.6**
AVFE				IAML			20 30 18.1	
	comp=Z,37nm,0.4s							
TINO	**Tinogasta**	**4.88**	**71**	*eP*		**Pn**	**20 29 13.2**	**+1.4**
TINO				*eS*		**Sn**	**20 30 11.7**	**+4.6**
ACLC	**CERRO LA CRUZ**	**5.11**	**88**	*eP*		**Pn**	**20 29 17.2**	**+2.2**
ACLC				*eS*		**Sn**	**20 30 16.5**	**+3.6**
ACLC				IAML			20 30 23.4	
	comp=Z,30nm,0.7s							
AANI	**Anillaco**	**5.20**	**81**	*eP*		**Pn**	**20 29 19.3**	**+3.0**
GO02	**Mina Guanaco**	**5.36**	**33**	*eP*		**Pn**	**20 29 20.3**	**+1.7**
GO02				IAML			20 31 03.4	
	comp=Z,26nm,0.8s							
APLL	**PUNTA DE LOS L**	**5.48**	**99**	*eP*		**Pn**	**20 29 21.4**	**+1.4**
APLL				*eS*		**Sn**	**20 30 25.0**	**+3.1**
APLL				IAML			20 30 46.1	
	comp=Z,16nm,0.9s							
CYA	**Choya**	**6.26**	**80**	*eP*		**Pn**	**20 29 33.1**	**+2.4**
CYA				*eS*		Sn	20 30 58.0	+17
CYA				IAML			20 31 04.2	
	comp=Z,14nm,2.2s							
SLA	**San Lorenzo**	**8.18**	**54**	*eS*		**Sn**	**20 31 27.6**	**-1.1**
SLA				IAML			20 31 34.0	
	comp=Z,6.7nm,0.1s							

GCG 27 20:29:16.4±0.3, 14°12N×91°77W, h84km±18km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG2	**El Palmar, Qui**	**0.50**	**50**	*eP*	Pn	20 29 32.3	+1.7
STG5	**El Palmar, Qui**	**0.50**	**55**	*eP*	Pn	20 29 31.7	+1.1
STG5				*eS*	Sn	20 29 43.5	+2.3
STG8	**El Palmar, Qui**	**0.52**	**51**	*eP*	Pn	20 29 32.7	+1.6
STG8				*i S*	Sn	20 29 45.7	+3.8
SOKI	**Kika Raxquin**	**0.79**	**27**	*eS*	Sn	20 29 49.1	+2.5
APG	**El Apazote**	**1.54**	**55**	*eP*	Pn	20 29 43.3	+0.7

IDC 27 20:32:28.6±1.1, 28°91S×62°08E, h0km, mb3.9/8, mbtmp3.9/8, Error ellipse: s-maj=40.8km s-min=24.8km az=75.0
NEIC 27 20:32:30.1±0.6, 28°92S±0°09×62°0E±0°3, h10km±1km, mb4.1/4, Error ellipse: s-maj=41.3km s-min=14.1km az=277.0
ISC 27 20:32:30.1±1.1, 28°9S±0°2×62°1E±0°3, h10km, n23, σ0s40/11, mb4.0/10, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H04N2	**CROZET ISLANDS**	**19.03**	**202**	T	T	20 56 16.4	
	baz=29,slow=74,SNR=250						
H04N1	**CROZET ISLANDS**	**19.03**	**202**	T	T	20 56 22.2	
	baz=29,slow=74,SNR=312						
H04N3	**CROZET ISLANDS**	**19.05**	**202**	T	T	20 56 30.9	
	baz=29,slow=74,SNR=284						
H08S1	**Diego Garcia H**	**23.31**	**27**	T	T	21 01 52.5	
	baz=203,slow=75						
H08S2	**Diego Garcia H**	**23.32**	**27**	T	T	21 01 54.3	
	baz=203						
H08S3	**Diego Garcia H**	**23.33**	**27**	T	T	21 01 55.2	
	baz=203,slow=75						
H01W2	**Cape Leeuwin H**	**44.22**	**112**	T	T	21 27 48.5	
	baz=265,slow=74,SNR=4.5						
H01W3	**Cape Leeuwin H**	**44.22**	**112**	T	T	21 27 42.7	
	baz=265,slow=74,SNR=4.2						
H01W1	**Cape Leeuwin H**	**44.24**	**112**	T	T	21 27 49.8	
	baz=265,slow=74,SNR=4.4						
CMAR	**Chiang Mai Arr**	**59.05**	**42**	P	**P**	**20 42 31.0**	**+0.5**
	0.5nm,0.4s,baz=220,slow=6.0,SNR=5.0						
	0.5nm,0.4s						
QSPA	**South Pole Qui**	**61.26**	**180**	P	**P**	**20 42 45.6**	**+0.3**
	1.1nm,0.3s,baz=250,slow=2.8,SNR=7.4						
	1.1nm,0.3s						
QSPA	**South Pole Qui**	**61.26**	**180**	IAmb	IAmb	20 42 53.1	
	comp=Z,3.5nm,0.9s						
ASAR	**Alice Springs**	**63.75**	**104**	P	**P**	**20 43 02.2**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=245,slow=7.1,SNR=12						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**65.55**	**100**	P	**P**	**20 43 13.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=246,slow=6.7,SNR=2.4						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**65.55**	**100**	IAmb	IAmb	20 43 15.0	
	comp=Z,0.2nm,1.1s						
BRTR	**Keskin Array B**	**73.21**	**337**	P	**P**	**20 44 00.9**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=148,slow=7.3,SNR=4.2						
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**77.53**	**14**	P	**P**	**20 44 26.0**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=202,slow=6.1,SNR=5.1						
	comp=Z,0.9nm,0.9s						
AB31	**Akbulak array**	**77.82**	**359**	P	**P**	**20 44 27.0**	**-0.3**
AB31				IAmb	IAmb	20 44 28.4	
	comp=Z,1.5nm,0.7s						
ABKAR	**Akbulak array**	**77.82**	**359**	P	**P**	**20 44 27.2**	**-0.1**
KURBB	**Kurchatov Arra**	**80.50**	**11**	P	**P**	**20 44 42.5**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=211,slow=6.0,SNR=7.0						
	comp=Z,0.5nm,0.7s						
KURK	**Kurchatov**	**80.61**	**11**	P	**P**	**20 44 42.5**	**0.0**
KURK	**Kurchatov**	**80.61**	**11**	IAmb	IAmb	20 45 21.1	
	comp=Z,1.7nm,1.1s						
ZALV	**Zalesovo Beam**	**84.83**	**13**	P	**P**	**20 45 04.8**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=192,slow=4.6,SNR=8.5						
	comp=Z,2.0nm,0.7s						

GCG 27 21:06:13.1±2.0, 14°90N×93°49W, h37km±880km, MD4.2, ML4.0
MEX 27 21:06:15.1±0.9, 14°97N×93°51W, h16km±285km, MD4.2
ISC 27 21:06:10.6±1.4, 14°79N±0°06×93°49W±0°04, h81km±23km, n31, σ2s33/53, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.19**	**84**	*eP*	**Pn**	**21 06 33.2**	**+1.3**
THIG				*eS*	**Sn**	**21 06 47.5**	**-0.5**
THIG		**1.19**	**84**	*i P*	**Pn**	**21 06 33.4**	**+1.5**
PATR	**El Naranjo**	**1.25**	**75**	*eP*	**Pn**	**21 06 33.8**	**+0.8**
PATR				*eS*	**Sn**	**21 06 48.9**	**-1.0**
PAVE	**Pavencul**	**1.33**	**72**	*eP*	**Pn**	**21 06 35.2**	**+1.3**
PAVE				*eS*	**Sn**	**21 06 51.1**	**-0.4**
CHUJ	**Union Juarez**	**1.37**	**77**	*eP*	**Pn**	**21 06 36.0**	**+1.5**
CHUJ				*eS*	**Sn**	**21 06 51.3**	**-1.1**
SMCA	**Catarina**	**1.37**	**87**	*i P*	**Pn**	**21 06 36.1**	**+1.8**
SMCA				*eS*	**Sn**	**21 06 52.5**	**+0.5**
RTAL	**Retalhuleu**	**1.75**	**98**	*eP*	**Pn**	**21 06 42.4**	**+3.1**
RTAL				*eS*	**Sn**	**21 07 03.0**	**+1.9**
CCIG	**Comitan**	**1.97**	**41**	*eP*	**Pn**	**21 06 43.8**	**+1.6**
CCIG				*eS*	**Sn**	**21 07 04.9**	**-1.6**
CCIG	**Comitan**	**1.97**	**41**	*eP*	**Pn**	**21 06 43.9**	**+1.6**
HUEH	**Huehuetenango**	**1.99**	**74**	*eP*	**Pn**	**21 06 45.7**	**+3.1**
HUEH				*eS*	**Sn**	**21 07 08.3**	**+1.4**
HUEH	**Huehuetenango**	**1.99**	**74**	IAML		21 07 18.4	
	comp=E,2μm,0.5s						
TGIG		**2.01**	**10**	*eP*	**Pn**	**21 06 42.9**	**+0.2**
TGIG				*eS*	**Sn**	**21 07 04.1**	**-3.0**
TGIG		**2.01**	**10**	*i P*	**Pn**	**21 06 43.4**	**+0.7**
STG2	**El Palmar, Qui**	**2.07**	**99**	*i P*	**Pn**	**21 06 42.5**	**-1.2**
STG2				*i S*	**Sn**	**21 07 03.5**	**-5.3**
STG8	**El Palmar, Qui**	**2.10**	**99**	*i P*	**Pn**	**21 06 43.0**	**-1.0**
STG8				*i S*	**Sn**	**21 07 03.6**	**-5.8**
STG8				IAML		21 07 08.7	
	comp=N,1μm,0.2s						
STG5	**El Palmar, Qui**	**2.10**	**100**	*eP*	**Pn**	**21 06 43.2**	**-0.8**
STG5				*eS*	**Sn**	**21 07 05.1**	**-4.4**
QUIS	**Sacapulas**	**2.37**	**78**	IAML		21 07 23.5	
	comp=N,459nm,0.4s						
UXUV	**UXUV**	**2.59**	**346**	*eP*	**Pn**	**21 06 51.7**	**+1.2**
UXUV				*eS*	**Sn**	**21 07 18.6**	**-2.4**
HUIG	**Huatulco**	**2.71**	**291**	*eP*	**Pn**	**21 06 52.9**	**+0.8**
HUIG				*eS*	**Sn**	**21 07 19.9**	**-4.1**
HUIG	**Huatulco**	**2.71**	**291**	*i P*	**Pn**	**21 06 52.7**	**+0.6**
APG	**El Apazote**	**2.93**	**85**	*eP*	**Pn**	**21 06 59.3**	**+4.1**
NEUV	**Arroyo Zacate**	**3.66**	**323**	*eP*	**Pn**	**21 07 06.0**	**+1.1**
NEUV				*eS*	**Sn**	**21 07 45.8**	**-1.2**
PEIG	**Puerto Escondi**	**3.73**	**289**	*eP*	**Pn**	**21 07 07.0**	**+1.1**
PEIG				*eS*	**Sn**	**21 07 50.0**	**+1.3**
YOIG	**Yosondua**	**4.41**	**298**	*eP*	**Pn**	**21 07 18.2**	**+2.8**
YOIG				*eS*	**Sn**	**21 08 07.0**	**+1.2**
SCIG	**Sabancuy**	**4.70**	**28**	*eP*	**Pn**	**21 07 21.2**	**+2.1**
SCIG				*eS*	**Sn**	**21 08 10.0**	**-2.4**
PNIG	**Pinotepa**	**4.75**	**290**	*eP*	**Pn**	**21 07 22.0**	**+2.3**
PNIG				*eS*	**Sn**	**21 08 10.6**	**-2.9**
TOIG	**Toxpalan**	**4.75**	**314**	*eP*	**Pn**	**21 07 22.4**	**+2.5**
TOIG				*eS*	**Sn**	**21 08 13.2**	**-0.6**
TXIG	**Tlaxiaco**	**4.79**	**301**	*eP*	**Pn**	**21 07 22.8**	**+2.2**
TXIG				*eS*	**Sn**	**21 08 14.9**	**0.0**
HLIG	**Huajuapan de L**	**5.13**	**307**	*eP*	**Pn**	**21 07 26.1**	**+1.0**
HLIG				*eS*	**Sn**	**21 08 22.2**	**-1.0**
FTIG	**Fresnillo de T**	**5.43**	**305**	*eP*	**Pn**	**21 07 30.1**	**+0.9**
FTIG				*eS*	**Sn**	**21 08 27.8**	**-2.6**
JAUV	**Jalcomulco**	**5.55**	**326**	*eP*	**Pn**	**21 07 32.5**	**+1.9**
JAUV				*eS*	**Sn**	**21 08 28.7**	**-4.4**

OTT 27 21:14:08.7±0.3, 44°59N×56°92W, h18km, ML3.5/9, 281km southeast from Louisbourg, Ns Laurentian Slope Seismic Zone., North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**3.36**	**286**	PN	Pn	21 14 59.9	-0.4
GBN				SN	Sn	21 15 38.8	-0.9
GBN				Trac		21 15 40.7	
	comp=Z,6.0nm,0.1s						
DRLN	**Deer Lake**	**4.69**	**355**	PN	Pn	21 15 18.0	-0.5
DRLN				SN	Sn	21 16 09.7	-2.7
DRLN				Trac		21 16 18.6	
	comp=Z,8.1nm,0.3s						
HAL	**Halifax**	**4.77**	**273**	PN	Pn	21 15 18.6	-1.0
HAL				SN	Sn	21 16 10.6	-3.7
HAL				Trac		21 16 11.4	
	comp=Z,7.3nm,0.0s						
LMN	**Caledonia Moun**	**5.71**	**286**	PN	Pn	21 15 31.9	-0.7
LMN				SN	Sn	21 16 33.9	-3.8
LMN				Trac		21 16 39.3	
	comp=Z,5.2nm,0.3s						
ELNB	**Elgin, New Bru**	**5.95**	**285**	SN	Sn	21 16 40.0	-3.5
HKNB	**Havelock Quarr**	**6.13**	**286**	PN	Pn	21 15 32.0	-6.4
HKNB				SN	Sn	21 16 37.1	-11
HKNB				Trac		21 16 39.9	
	comp=Z,30nm,0.6s						
WCNB	**Wards Creek**	**6.17**	**283**	PN	Pn	21 15 38.3	-0.6
WCNB				SN	Sn	21 16 44.5	-4.5
WCNB				Trac		21 16 48.8	
	comp=Z,4.6nm,0.2s						
SRNB	**Snider Mountai**	**6.28**	**284**	PN	Pn	21 15 39.3	-1.1
SRNB				SN	Sn	21 16 47.0	-4.7
SRNB				Trac		21 16 48.2	
	comp=Z,0.3nm,0.0s						
HSNB	**Heath Steele M**	**6.92**	**296**	PN	Pn	21 15 48.0	-1.2
HSNB				SN	Sn	21 17 01.1	-6.3
HSNB				Trac		21 17 02.0	
	comp=Z,2.2nm,0.2s						
BJBQ	**Baie Johan-Bee**	**6.96**	**327**	PN	Pn	21 15 49.1	-0.6
BJBQ				SN	Sn	21 17 03.2	-5.1
BJBQ				Trac		21 17 05.0	
	comp=Z,70nm,0.8s						
PMAQ	**Port Menier**	**7.27**	**319**	SN	Sn	21 17 09.1	-7.0
PMAQ				SN	Sb	21 17 10.2	-30
PMAQ				Trac		21 17 12.0	
	comp=Z,147nm,0.9s						
ICQ	**Pointe Anglais**	**8.62**	**309**	SN	Sn	21 17 41.6	-7.5
ICQ				SN		21 17 41.8	
ICQ				Trac		21 17 44.8	
	comp=Z,34nm,1.1s						
A16	**Riviere Ouelle**	**9.55**	**292**	SN	Sn	21 18 03.8	-8.2

NEIC 27 21:37:29.9±2.5, 18°92N±0°07×121°1E±0°1, h39km±9km, mb4.2/19, Error ellipse: s-maj=14.3km s-min=9.7km az=88.0
IDC 27 21:37:30.4±4.6, 18°80N×121°31E, h51km±43km, mb3.4/10, mbtmp3.7/10, ML4.8/1, MS3.3/16, Error ellipse: s-maj=39.1km s-min=14.4km az=65.0
ISC 27 21:37:29.1±0.5, 18°87N±0°06×121°14E±0°09, h39km, n63, σ1s09/49, mb4.0/20, MS3.3/14, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.94**	**359**		**Pn**	**21 38 26.0**	**-1.0**
TPUB	**Ta-pu**	**4.44**	**354**		**Pn**	**21 38 32.6**	**-1.3**
YULB	**Yu-li**	**4.51**	**2**		**Pn**	**21 38 34.4**	**-0.5**
TGY	**Tagaytay City**	**4.74**	**182**	P	**Pn**	**21 38 40.4**	**+2.3**
	44nm,0.3s,baz=201,slow=2.8,SNR=4.5						
SSLB	**Suanglung**	**4.90**	**358**		**Pn**	**21 38 39.6**	**-0.7**
NACB	**Ninganchiao**	**5.30**	**5**	Pn	**Pn**	**21 38 44.8**	**-1.0**
YHNB	**Yeheng**	**5.78**	**2**		**Pn**	**21 38 53.1**	**+0.7**
HKPS	**Hong Kong Po S**	**7.38**	**299**	Pn	**Pn**	**21 39 12.4**	**-1.9**
QIZ	**Qiongzhong**	**10.69**	**273**	Pn	**Pn**	**21 39 57.3**	**-2.4**
DAV	**Davao City (W)**	**12.50**	**159**	LR	LR	21 45 57.3	
	comp=Z,314nm,20.0s,baz=16,slow=41						
JNU	**Nakatsue**	**16.67**	**30**	LR	LR	21 47 25.4	
	comp=Z,48nm,21.6s,baz=164,slow=36						
TOLI2	**Tolitoli**	**17.65**	**181**	P	**P**	**21 41 34.0**	**+1.3**
SBUM	**Sibu**	**18.50**	**209**	P	**P**	**21 41 42.4**	**+0.3**
SBUM				IAmb	IAmb	21 41 45.9	
	comp=Z,7.4nm,0.8s						
CHTO	**Chiang Mai**	**21.00**	**273**	P	**P**	**21 42 10.2**	**+0.7**
CHTO				IAmb	IAmb	21 42 16.6	
	comp=Z,5.7nm,1.0s						
CM31	**Chiang Mai Arr**	**21.03**	**272**	P	**P**	**21 42 10.2**	**+0.5**
CM31				IAmb	IAmb	21 42 28.9	
	comp=Z,7.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**21.03**	**272**	P	**P**	**21 42 11.8**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=83,slow=10,SNR=8.6						
CMAR				LR	LR	21 51 07.6	
	comp=Z,54nm,18.2s,baz=85,slow=38						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**21.03**	**272**	P	**P**	**21 42 09.9**	**+0.2**
BJT	**Baijiatuao**	**21.51**	**350**	P	**P**	**21 42 14.1**	**-0.5**
BJT				IAmb	IAmb	21 42 36.1	
	comp=Z,8.8nm,1.1s						
JHJ	**Hachijo jima 2**	**21.91**	**46**	LR	LR	21 49 38.4	
	comp=Z,33nm,21.5s,baz=12,slow=33						
JGF	**Kuroka**	**21.99**	**37**	P	**P**	**21 42 18.4**	**-1.5**
JGF				IAmb	IAmb	21 42 40.6	
	comp=Z,20nm,1.3s						
KAPI	**Kappang**	**23.77**	**183**	LR	LR	21 52 55.8	
	comp=Z,57nm,19.1s,baz=1.0,slow=39						
KULM	**Kulim**	**24.11**	**239**	P	**P**	**21 42 42.3**	**+0.9**
KULM				IAmb	IAmb	21 43 02.1	
	comp=Z,26nm,1.3s						
ASAJ	**Asahikawa**	**30.94**	**31**	LR	LR	21 56 06.2	
	comp=Z,38nm,20.3s,baz=142,slow=36						
SONM	**Songino Array**	**31.30**	**341**	P	**P**	**21 43 46.8**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=144,slow=7.2,SNR=5.6						
SONM				LR	LR	21 57 25.9	
	comp=Z,94nm,18.1s,baz=178,slow=38						
	comp=Z,0.2nm,0.3s						
FITZ	**Fitzroy Crossi**	**37.00**	**173**	P	**P**	**21 44 34.4**	**-0.7**
PSA00	**Pilbara Seismi**	**40.21**	**182**	P	**P**	**21 45 00.7**	**-1.3**
WB0	**Warramunga Arr**	**40.53**	**161**	P	**P**	**21 45 02.8**	**-2.0**
WB0				IAmb	IAmb	21 45 07.2	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**40.68**	**161**	P	**P**	**21 45 03.7**	**-2.3**
	comp=Z,1.7nm,0.8s,baz=342,slow=9.1,SNR=9.7						
WRA				PcP	**PcP**	**21 47 07.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=338,slow=3.3,SNR=8.1						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**40.68**	**161**	P	**P**	**21 45 04.4**	**-1.6**
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**21 45 19.2**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=111,slow=9.3,SNR=4.9						
MKAR				PcP	**PcP**	**21 47 12.5**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=101,slow=3.8,SNR=4.6						
MKAR				LR	LR	22 03 28.8	
	comp=Z,38nm,19.6s,baz=108,slow=37						
	comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**21 45 18.2**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**43.06**	**83**	T	T	22 30 57.7	
	baz=276						
H11S1	**WAKE ISLAND Hy**	**43.07**	**83**	T	T	22 31 04.6	
	baz=276						
H11S2	**WAKE ISLAND Hy**	**43.08**	**83**	T	T	22 31 08.5	
	baz=276						
H11N1	**WAKE ISLAND Hy**	**43.09**	**81**	T	T	22 31 20.4	
	baz=280						
H11N2	**WAKE ISLAND Hy**	**43.10**	**81**	T	T	22 31 26.7	
	baz=280						
H11N3	**WAKE ISLAND Hy**	**43.11**	**81**	T	T	22 31 27.7	
	baz=280						
AS31	**Alice Springs**	**44.07**	**163**	P	**P**	**21 45 33.7**	**+0.2**
ASAR	**Alice Springs**	**44.07**	**163**	P	**P**	**21 45 32.2**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=344,slow=6.7,SNR=10.0						
ASAR				PcP	**PcP**	**21 47 18.4**	**0.0**
	comp=Z,0.4nm,0.7s,baz=347,slow=3.5,SNR=2.5						
ASAR				LR	LR	22 06 21.9	
	comp=Z,21nm,18.7s,baz=292,slow=39						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**44.07**	**163**	P	**P**	**21 45 33.7**	**+0.2**
ZALV	**Zalesovo Beam**	**44.74**	**330**	P	**P**	**21 45 39.7**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=100,slow=7.7,SNR=3.6						
ZALV				LR	LR	22 04 39.4	
	comp=Z,35nm,20.5s,baz=90,slow=36						
	comp=Z,0.6nm,0.5s						
NIL	**Nilore**	**45.01**	**299**	P	**P**	**21 45 41.6**	**+0.6**
NIL				IAmb	IAmb	21 45 43.0	
	comp=Z,5.7nm,0.9s						
AAK	**Ala-Archa**	**45.84**	**312**	LR	LR	22 07 07.7	
	comp=Z,48nm,19.2s,baz=103,slow=39						
KURK	**Kurchatov**	**46.23**	**323**	P	**P**	**21 45 50.0**	**-0.3**
KURK				IAmb	IAmb	21 46 17.7	
	comp=Z,1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**46.23**	**323**	P	**P**	**21 45 51.0**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=121,slow=7.5,SNR=6.0						
	comp=Z,0.9nm,0.8s						
HNR	**Honiara**	**47.49**	**123**	LR	LR	22 02 55.6	
	comp=Z,34nm,21.2s,baz=322,slow=32						
KKAR	**Karatay Array**	**48.79**	**311**	P	**P**	**21 46 11.1**	**+0.7**
BVAR	**Borovoye Array**	**51.83**	**323**	PcP	**PcP**	**21 47 45.5**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=116,slow=3.1,SNR=10						
TIXI	**Tiksi**	**52.98**	**3**	LR	LR	22 10 21.6	
	comp=Z,32nm,18.1s,baz=238,slow=37						
BBOO	**Buckleboo**	**53.33**	**164**	P	**P**	**21 46 43.9**	**-0.6**
STKA	**Stephens Creek**	**54.13**	**158**	P	**P**	**21 46 49.2**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=324,slow=9.3,SNR=2.9						
	comp=Z,1.3nm,0.8s						
NRIK	**Noril'sk**	**54.52**	**346**	LR	LR	22 12 02.4	
	comp=Z,49nm,18.3s,baz=144,slow=38						
AB31	**Akbulak array**	**57.20**	**317**	P	**P**	**21 47 12.2**	**0.0**
AB31				IAmb	IAmb	21 47 28.1	
	comp=Z,4.5nm,1.4s						
ABKAR	**Akbulak array**	**57.20**	**317**	P	**P**	**21 47 12.3**	**+0.1**
KBZ	**Khabaz**	**68.82**	**310**	LR	LR	22 20 57.7	
	comp=Z,33nm,21.6s,baz=350,slow=38						
H18K	**Honhosa River**	**69.06**	**26**	P	**P**	**21 48 31.1**	**+0.4**
H19K	**Roundabout Mou**	**69.86**	**26**	P	**P**	**21 48 36.0**	**+0.4**
J20K	**Nowinta River**	**70.91**	**27**	P	**P**	**21 48 42.5**	**+0.6**
J20K				IAmb	IAmb	21 48 53.7	
	comp=Z,8.9nm,1.5s						
ILAR	**Eielson Array**	**73.95**	**26**	P	**P**	**21 48 59.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=261,slow=4.2,SNR=5.2						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**73.95**	**26**	P	**P**	**21 48 59.2**	**-0.9**
BMAR	**Burnt Mountain**	**74.38**	**24**	P	**P**	**21 49 03.3**	**+0.6**
NOA	**NORSAR Array B**	**82.89**	**333**	LR	LR	22 29 46.3	
	comp=Z,40nm,18.8s,baz=75,slow=38						
YKA	**Yellowknife Ar**	**87.87**	**23**	P	**P**	**21 50 14.8**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=312,slow=5.8,SNR=4.5						
	comp=Z,1.0nm,0.8s						

IDC 27 21:47:06.4±48.0, 53°81S×25°94E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1335.0km s-min=68.8km az=119.0, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**46.11**	**168**	P	P	21 55 31.5	-0.1
	0.9nm,0.7s,baz=222,slow=5.6,SNR=7.7						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**81.16**	**118**	P	P	21 59 24.0	+0.1
	0.4nm,0.7s,baz=215,slow=5.2,SNR=5.7						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**84.44**	**116**	P	P	21 59 40.9	-0.1
	0.4nm,0.7s,baz=210,slow=3.9,SNR=1.6						
	0.4nm,0.7s						

ISN 27 21:49:01.6±0.7, 33°70N×45°57E, h10km±4km, ML3.0
TEH 27 21:49:01.5, 33°73N×45°62E, h13km±32km
ISC 27 21:49:01.1±1.8, 33°71N±0°03×45°64E±0°04, h1km±15km, n18, σ0s95/23, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLG1	**Gilan-e-Gharb**	**0.46**	**29**	Pg	**Pg**	**21 49 10.5**	**+0.5**
IBDR	**Badra**	**0.65**	**158**	*e*Pg	**Pb**	**21 49 14.5**	**-0.7**
IBDR				*e*Sg	**Sb**	**21 49 23.7**	**-1.0**
IGHG	**Ghaleghazi**	**0.98**	**

MCHZ				S	Sn	22 07 41.4	+1.2	
TSZ	**Takapari Road**	**5.97**	**228**	P	Pn	22 06 52.2	0.0	
TSZ				S	Sn	22 07 59.4	-1.1	
BFZ	**Birch Farm**	**6.22**	**222**	P	Pn	22 06 55.0	-0.5	
BFZ				S	Sn	22 08 07.1	+0.5	
MRZ	**Mangatainoka R**	**6.58**	**226**	P	Pn	22 07 01.5	+1.0	
MRZ				S	Sn	22 08 13.7	-1.8	

NEIC ***27*** *22:16:00.8±0.9, 62°.15N±0°.03×152°.10W±0°.08, h104km±6km, Error ellipse: s-maj=5.3km s-min=4.8km az=120.0*

AEIC 27 22:16:01.6±0.7, 62°.16N±0°.03×152°.12W±0°.07, h105km±5km, ML2.6, ML2.8/114(NEIC), **Error ellipse: s-maj=4.8km s-min=4.1km az=222.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.33**	**122**		Pn	22 16 16.2	-0.7
SKT				Sn	Sn	22 16 27.8	-0.7
M20K	**Styx River**	**0.55**	**240**		Pn	22 16 17.5	-0.8
M20K				Sn	Sn	22 16 29.9	-1.0
M20K				IAML		22 16 30.8	
	comp=E,204nm,0.5s						
M20K				IAML		22 16 31.2	
	comp=N,142nm,1.0s						
STLK	**Strandline Lak**	**0.68**	**168**		Pn	22 16 18.4	-1.0
STLK				Sn	Sn	22 16 31.7	-0.9
L22K	**Petersville**	**0.73**	**59**		Pn	22 16 19.2	-0.6
L22K				Sn	Sn	22 16 32.3	-1.2
L22K				IAML		22 16 33.5	
	comp=E,394nm,0.4s						
PPLA	**Purkeypile**	**0.74**	**358**		Pn	22 16 19.6	-0.4
PPLA					Sn	22 16 33.5	-0.4
PPLA	**Purkeypile**	**0.74**	**358**	IAML		22 16 34.5	
	comp=E,220nm,0.7s						
PPLA				IAML		22 16 34.8	
	comp=N,206nm,0.8s						
SPCG	**Spurr Capps Gl**	**0.87**	**177**		Pn	22 16 20.3	-0.9
SPCG					Sn	22 16 35.4	-0.6
L20K	**Farewell, AK**	**0.88**	**292**	Pn	Pn	22 16 20.4	-0.7
CUT	**Chulitna**	**0.90**	**73**		Pn	22 16 20.8	-0.5
CUT				Sn	Sn	22 16 36.0	-0.2
SPBG	**Spurr Blockage**	**0.91**	**188**		Pn	22 16 20.9	-0.6
SPBG					Sn	22 16 36.9	+0.4
SUA	**Susitna One**	**0.95**	**136**		Pn	22 16 21.4	-0.7
SUA				IAML		22 16 37.0	
	comp=E,102nm,0.6s						
SUA	**Susitna One**	**0.95**	**136**		Sn	22 16 36.9	-0.5
SPCR	**Spurr Chakacha**	**0.96**	**182**		Pn	22 16 21.2	-0.9
SPCR					Sn	22 16 37.1	-0.4
SPU	**Mount Spurr**	**0.98**	**178**		Pn	22 16 21.1	-1.1
M22K	**Willow**	**1.03**	**112**		Pn	22 16 21.7	-0.9
M22K				Sn	Sn	22 16 38.1	-0.4
M19K	**Big River Lodg**	**1.10**	**258**		Pn	22 16 22.7	-0.8
L19K	**White Mountain**	**1.28**	**272**		Pn	22 16 24.8	-0.7
K20K	**Telida**	**1.50**	**324**		Pn	22 16 27.2	-0.9
K20K				IAML		22 16 47.2	
	comp=N,72nm,0.7s						
K20K				IAML		22 16 47.2	
	comp=E,120nm,0.6s						
KTH	**Kantishna Hill**	**1.50**	**21**		Pn	22 16 27.4	-0.8
KTH				IAML		22 16 47.9	
	comp=E,75nm,0.5s						
KTH				IAML		22 16 49.0	
	comp=N,59nm,0.6s						
PMR	**Palmer**	**1.53**	**110**	Pn	Pn	22 16 26.8	-1.5
PMR				IAML		22 16 49.0	
	comp=N,83nm,0.2s						
PMR				IAML		22 16 51.4	
	comp=E,63nm,0.2s						
TRF	**Thorofare Moun**	**1.55**	**32**		Pn	22 16 28.2	-0.6
TRF				IAML		22 16 50.2	
	comp=N,97nm,0.7s						
TRF				IAML		22 16 51.6	
	comp=E,117nm,0.8s						
GHO	**Glory Hole Cre**	**1.56**	**103**		Pn	22 16 28.0	-0.9
GHO				IAML		22 16 50.4	
	comp=N,115nm,0.2s						
RC01	**Rabbit Creek A**	**1.56**	**132**	Pn	Pn	22 16 27.8	-1.0
RC01				IAML		22 16 52.5	
	comp=N,128nm,0.3s						
RC01				IAML		22 16 53.9	
	comp=E,84nm,0.3s						
N19K	**Bonanza Creek**	**1.76**	**221**		Pn	22 16 30.6	-0.8
RED	**Redoubt Volcan**	**1.77**	**190**		Pn	22 16 30.7	-0.9
RED				IAML		22 16 57.7	
	comp=E,51nm,0.8s						
SML	**Sawmill**	**1.82**	**99**		Pn	22 16 30.8	-1.3
SML				IAML		22 16 55.4	
	comp=E,80nm,1.1s						
SML				IAML		22 17 03.0	
	comp=N,94nm,0.7s						
SLKM	**Skilak Lake**	**1.89**	**150**	Pn	Pn	22 16 32.5	-0.5
SLKM				IAML		22 17 01.3	
	comp=E,69nm,0.2s						
SLKM				IAML		22 17 01.6	
	comp=N,108nm,0.3s						
KNK	**Knik Glacier**	**1.90**	**112**		Pn	22 16 31.5	-1.5
RND	**Reindeer**	**1.96**	**49**		Pn	22 16 33.2	-0.6
RND				IAML		22 16 58.6	
	comp=E,42nm,0.3s						
RND				IAML		22 17 00.8	
	comp=N,47nm,0.3s						
BPAW	**Bear Paw Mtn.**	**2.02**	**14**		Pn	22 16 33.4	-1.1
BPAW				IAML		22 16 59.1	
	comp=E,64nm,0.6s						
BPAW				IAML		22 17 01.4	
	comp=N,88nm,0.7s						
O22K	**Cooper Landing**	**2.04**	**144**	Pn	Pn	22 16 34.0	-0.8
L18K	**Granite Mounta**	**2.14**	**274**		Pn	22 16 35.3	-0.8
MCK	**McKinley**	**2.15**	**41**		Pn	22 16 35.6	-0.7
MCK				IAML		22 17 05.2	
	comp=N,35nm,1.1s						
IVE	**Iliamna Volcan**	**2.19**	**192**		Pn	22 16 36.2	-0.7
J20K	**Nowinta River**	**2.23**	**337**		Pn	22 16 36.2	-1.0
J20K				IAML		22 17 03.0	
	comp=E,56nm,0.6s						
J20K				IAML		22 17 04.9	
	comp=N,44nm,0.9s						
PWL	**Port Wells**	**2.23**	**124**	Pn	Pn	22 16 35.2	-2.2
ILSW	**Iliamna Southw**	**2.24**	**193**		Pn	22 16 36.9	-0.6
SCM	**Sheep Creek Mo**	**2.29**	**96**	Pn	Pn	22 16 36.5	-1.5
SCM				IAML		22 17 06.3	
	comp=N,75nm,0.8s						
N18K	**Kilae Creek**	**2.34**	**232**	Pn	Pn	22 16 37.6	-1.1
N18K				IAML		22 17 33.9	
	comp=N,51nm,1.0s						
DHY	**Denali Highway**	**2.38**	**65**	Pn	Pn	22 16 38.3	-1.1
DHY				IAML		22 17 09.8	
	comp=E,72nm,0.6s						
DHY				IAML		22 17 10.6	
	comp=N,43nm,0.4s						
J19K	**Poorman**	**2.44**	**321**		Pn	22 16 39.0	-0.9
J18K	**Innoko River**	**2.48**	**304**		Pn	22 16 39.5	-1.1
M17K	**Holitna River**	**2.64**	**256**	Pn	Pn	22 16 41.4	-1.2
GLI	**Glacier Island**	**2.73**	**116**		Pn	22 16 42.0	-1.8
GLI				IAML		22 17 14.6	
	comp=N,61nm,0.3s						
M24K	**Tolsona, Glenn**	**2.79**	**88**		Pn	22 16 43.4	-1.3
M24K				IAML		22 17 19.6	
	comp=N,56nm,0.5s						
I20K	**Naaghedeneel**	**2.85**	**339**	Pn	Pn	22 16 44.8	-0.6
K17K	**Iditarod**	**2.93**	**284**		Pn	22 16 45.6	-0.8
K17K				IAML		22 18 46.4	
	comp=E,18nm,1.1s						
MLY	**Manley**	**2.95**	**11**		Pn	22 16 45.5	-1.2
MLY				IAML		22 17 22.6	
	comp=N,22nm,0.7s						
WRH	**Wood River Hil**	**2.95**	**36**		Pn	22 16 45.4	-1.2
KLU	**Klutina**	**3.02**	**100**		Pn	22 16 45.4	-2.3
KLU				IAML		22 17 21.9	
	comp=E,24nm,0.5s						
KLU				IAML		22 17 22.3	
	comp=N,40nm,0.3s						
I21K	**Tanana**	**3.04**	**1**		Pn	22 16 46.9	-0.9
I21K				IAML		22 17 22.6	
	comp=E,20nm,0.9s						
I21K				IAML		22 17 24.5	
	comp=N,19nm,0.8s						
FID	**Port Fidalgo**	**3.06**	**115**	Pn	Pn	22 16 45.3	-2.8
CCB	**Clear Creek Bu**	**3.17**	**36**		Pn	22 16 48.1	-1.4
PAX	**Paxson**	**3.19**	**72**		Pn	22 16 49.4	-0.5
PAX				IAML		22 17 34.4	
	comp=N,27nm,0.7s						
PAX				IAML		22 17 39.9	
	comp=E,31nm,0.6s						
DIV	**Divide**	**3.20**	**106**		Pn	22 16 48.7	-1.4
DIV				IAML		22 19 00.4	
	comp=E,23nm,0.5s						
I23K	**Minto, Yukon-K**	**3.25**	**21**		Pn	22 16 49.6	-0.9
I23K				IAML		22 17 29.2	
	comp=N,20nm,0.7s						
I23K				IAML		22 17 30.4	
	comp=E,16nm,0.7s						
HDA	**Harding Lake**	**3.25**	**44**		Pn	22 16 49.1	-1.6
HDA				IAML		22 17 32.1	
	comp=N,29nm,0.4s						
HDA				IAML		22 17 35.6	
	comp=E,20nm,0.4s						
L16K	**Owhat River**	**3.50**	**266**	Pn	Pn	22 16 53.3	-0.8
L16K				IAML		22 18 24.6	
	comp=E,14nm,1.0s						
L16K				IAML		22 18 24.6	
	comp=N,17nm,1.1s						
IL31		**3.52**	**40**		Pn	22 16 52.8	-1.4
ILAR	**Eielson Array**	**3.52**	**40**		Pn	22 16 52.8	-1.5
H21K	**Melozitna Rive**	**3.53**	**355**		Pn	22 16 53.6	-0.7
H21K				IAML		22 17 35.1	
	comp=N,18nm,0.7s						
IMAR	**Indian Mountai**	**3.91**	**350**		Pn	22 16 58.8	-0.7
PRP	**Porcupine Dome**	**4.46**	**38**		Pn	22 17 06.6	-0.5
PRP	**Porcupine Dome**	**4.46**	**38**	IAML		22 20 06.7	
	comp=N,5.7nm,0.8s						
PRP				IAML		22 20 07.1	
	comp=E,6.9nm,1.1s						
WAX	**Waxell Ridge**	**4.79**	**107**		Pn	22 17 10.1	-1.3
KIAG	**Kiagna River**	**4.83**	**101**		Pn	22 17 09.8	-2.3
I26K	**Coal Creek Min**	**5.08**	**48**		Pn	22 17 14.3	-1.1
I26K	**Coal Creek Min**	**5.08**	**48**	IAML		22 18 17.4	
	comp=N,7.7nm,1.0s						
I26K				IAML		22 18 19.0	
	comp=E,7.4nm,0.7s						
F21K	**Alatna River**	**5.12**	**354**		Pn	22 17 15.7	-0.1
GRNC	**Granite Creek**	**5.18**	**101**		Pn	22 17 15.2	-1.6
YUK3	**Moose Creek**	**5.52**	**89**		Pn	22 17 19.9	-1.5
DAWY	**Dawson**	**6.09**	**66**		Pn	22 17 27.4	-1.6
I28M	**Miner Creek**	**6.32**	**53**		Pn	22 17 31.1	-1.2

IDC ***27*** *22:16:18.5±2.2, 58°.12N×156°.40W, h101km±20km, mb3.6/8, mbtmp3.9/11, MS3.0/2, Error ellipse: s-maj=24.9km s-min=17.0km az=38.0*

NEIC ***27*** *22:16:20.4±0.7, 57°.88N±0°.05×156°.25W±0°.03, h129km±3km, Error ellipse: s-maj=7.3km s-min=2.3km az=185.0*

AEIC ***27*** *22:16:21.5±0.7, 57°.88N±0°.05×156°.23W±0°.09, h126km±3km, ML3.3, ML3.3/50(NEIC), Error ellipse: s-maj=7.5km s-min=6.9km az=156.0*

ISC 27 22:16:20.2±0.7, 57°.90N±0°.04×156°.23W±0°.04, h131km±5km, n58, σ0°98/71, mb3.8/7, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLK2	**Peulik 2**	**0.15**	**201**		Pn	22 16 38.2	+0.1
PLK2					Sn	22 16 51.3	-0.1
PLK3	**Peulik 3**	**0.22**	**186**		Pn	22 16 38.2	+0.1
PLK3					Sn	22 16 51.5	-0.2
PLK1	**Peulik 1**	**0.23**	**243**		Pn	22 16 38.1	-0.1
PLK1					Sn	22 16 51.5	-0.2
PLK4	**Peulik 4**	**0.28**	**195**		Pn	22 16 38.5	0.0
PLK4				Sn	Sn	22 16 51.6	-0.6
PLK5	**Peulik 5**	**0.36**	**285**		Pn	22 16 38.8	+0.2
PLK5					Sn	22 16 52.2	-0.3
PLBL	**Peulik Blue Cr**	**0.38**	**237**		Pn	22 16 38.6	-0.1
PLBL					Sn	22 16 52.1	-0.6
CNTC	**Contact Creek**	**0.41**	**27**		Pn	22 16 38.9	-0.1
CNTC					Sn	22 16 52.2	-1.0
ANCK	**Angle Creek**	**0.49**	**52**		Pn	22 16 39.5	+0.2
KABU	**Katmai Buttres**	**0.62**	**53**		Sn	22 16 55.3	0.0
KAKN	**Katmai Knife C**	**0.73**	**57**		Sn	22 16 56.7	0.0
Q16K	**King Salmon**	**0.81**	**344**		Pn	22 16 41.6	+0.2
Q16K					Sn	22 16 57.6	+0.1
KAWH	**Katmai**	**0.90**	**57**		Sn	22 16 59.0	0.0
KAHC	**Katmai Hardscr**	**0.98**	**40**		Pn	22 16 43.3	+0.2
KAHC					Sn	22 17 00.1	-0.4
KARR	**Katmai Rainbow**	**1.00**	**53**		Pn	22 16 43.6	+0.4
KARR					Sn	22 17 01.1	+0.5
KAHG	**Katmai Hook Gl**	**1.07**	**56**		Sn	22 17 02.2	+0.4
P16K	**Nushagak River**	**1.46**	**321**		Pn	22 16 48.0	+0.2
P16K				IAML		22 17 10.0	
	comp=N,517nm,0.9s						
P16K				IAML		22 17 12.6	
	comp=E,329nm,1.0s						
AZAC	**Aniakchak**	**1.48**	**228**		Pn	22 16 48.3	+0.1
ANPB	**Aniakchak Plen**	**1.57**	**226**		Pn	22 16 49.0	-0.1
P18K	**Big Mountain,**	**1.58**	**19**		Pn	22 16 49.5	+0.2
Q19K	**Cape Douglas,**	**1.70**	**52**		Pn	22 16 51.4	+0.8
OHAK	**Old Harbor**	**1.73**	**112**		Pn	22 16 50.5	-0.3
OHAK				IAML		22 17 13.5	
	comp=E,332nm,0.3s						
OHAK				IAML		22 17 13.8	
	comp=N,324nm,0.4s						
SII	**Sitkinak Islan**	**1.75**	**140**		Pn	22 16 50.8	-0.4
SII					Sn	22 17 13.7	-1.1
O17K	**Koliganek Bris**	**1.93**	**347**		Pn	22 16 53.3	+0.1
KDAK	**Kodiak Island**	**1.95**	**92**	P	Pn	22 16 53.2	-0.3
	comp=N,179nm,0.3s,baz=91,slow=2.1,SNR=1557						
KDAK				S	Sn	22 17 17.0	-2.0
	comp=N,150nm,0.4s,baz=118,slow=18,SNR=4.6						
KDAK				LR	LR	22 17 45.2	
	comp=N,92nm,18.2s,baz=281,slow=42						
KDAK	**Kodiak Island**	**1.95**	**92**		Pn	22 16 53.8	+0.3
O16K	**Kokwok River B**	**1.95**	**331**		Pn	22 16 53.7	+0.2
O16K				IAML		22 17 19.3	
	comp=N,259nm,0.8s						
O18K	**Koktuh Hills**	**2.03**	**15**		Pn	22 16 54.8	+0.4
O18K				IAML		22 17 21.7	
	comp=N,153nm,1.1s						
SYI	**Shuyak Island**	**2.15**	**69**		Pn	22 16 56.4	+0.5
SYI					Sn	22 17 22.8	-0.5
O15K	**Ungalikthiuk R**	**2.28**	**306**		Pn	22 16 57.7	+0.2
O15K				IAML		22 17 27.1	
	comp=N,127nm,1.2s						
O15K				IAML		22 17 27.6	
	comp=E,211nm,1.1s						
VNSG	**Veniaminof 6**	**2.37**	**222**		Pn	22 16 59.1	+0.3
VNFG	**Fog Glacier, M**	**2.44**	**230**		Pn	22 16 59.8	+0.2
VNFG				IAML		22 17 50.5	
	comp=N,214nm,1.1s						
O19K	**Port Alsworth**	**2.50**	**22**	Pn	Pn	22 17 00.8	+0.5
O19K				IAML		22 17 52.4	
	comp=N,133nm,0.5s						
O19K				IAML		22 17 58.0	
	comp=E,141nm,0.5s						
VNKR	**Veniaminof 5**	**2.55**	**224**		Pn	22 17 01.4	+0.4
ILSW	**Iliamna Southw**	**2.63**	**36**	Pn	Pn	22 17 03.1	+1.1
ILSW				IAML		22 17 35.8	
	comp=E,61nm,0.8s						
N18K	**Kilae Creek**	**2.79**	**3**		Pn	22 17 04.2	+0.2
N18K				IAML		22 18 03.7	
	comp=E,55nm,1.0s						
N16K	**Nishlik Lake**	**2.89**	**334**		Pn	22 17 05.5	+0.2
O14K	**Tigyukauivet M**	**2.96**	**299**		Pn	22 17 06.7	+0.4
O14K				IAML		22 17 43.3	
	comp=E,78nm,0.9s						
O14K				IAML		22 17 45.0	
	comp=N,59nm,0.7s						
N15K	**Kwethluk River**	**3.02**	**320**		Pn	22 17 07.1	0.0
N15K				IAML		22 18 02.9	
	comp=E,52nm,0.6s						
N15K				IAML		22 18 03.5	
	comp=N,65nm,0.9s						
N19K	**Bonanza Creek**	**3.05**	**16**		Pn	22 17 08.1	+0.6
M16K	**Timber Creek**	**3.42**	**337**		Pn	22 17 12.4	+0.1
M16K				IAML		22 18 16.5	
	comp=E,35nm,1.1s						
SDPT	**Sand Point**	**3.47**	**224**	Pn	Pn	22 17 12.2	-0.8
SDPT				IAML		22 18 01.0	
	comp=E,62nm,1.2s						
SDPT				IAML		22 18 30.0	
	comp=N,61nm,1.2s						
N14K	**Kuskokwak Cree**	**3.48**	**308**		Pn	22 17 13.5	+0.6
N14K				IAML		22 18 13.3	
	comp=E,66nm,1.2s						
N14K				IAML		22 18 19.8	
	comp=N,87nm,1.1s						

M17K	**Holitna River**	**3.56**	**351**		Pn	22 17 14.3	+0.3	
M17K				IAML		22 18 11.3		
	comp=E,88nm,1.0s							
M17K				IAML		22 18 31.4		
	comp=N,72nm,0.8s							
M15K	**Kasigluk River**	**3.62**	**323**		Pn	22 17 14.7	0.0	
M14K	**Bethel**	**4.10**	**317**		Pn	22 17 21.5	+0.4	
M14K				IAML		22 18 44.0		
	comp=E,28nm,1.0s							
M19K	**Big River Lodg**	**4.12**	**12**	Pn	Pn	22 17 22.4	+1.0	
M19K				IAML		22 18 59.9		
	comp=E,20nm,1.0s							
M20K	**Styx River**	**4.28**	**20**	Pn	Pn	22 17 25.4	+1.7	
ILAR	**Eielson Array**	**8.21**	**29**	P	Pn	22 18 13.2	-3.0	
	comp=E,2.3nm,0.4s,baz=220,slow=14,SNR=4.6							
ILAR				S	Sn	22 19 43.1	-4.2	
	comp=E,2.4nm,0.7s,baz=219,slow=23,SNR=8.4							
INK	**Inuvik**	**14.52**	**35**	P	Pn	22 19 37.3	-1.8	
	comp=E,0.5nm,0.5s,baz=228,slow=11,SNR=6.5							
YKA	**Yellowknife Ar**	**20.90**	**60**	P	P	22 20 53.2	+1.4	
	comp=E,2.2nm,0.7s,baz=276,slow=11,SNR=9.7							
	comp=E,2.2nm,0.7s							
NVAR	**Mina Array Bea**	**31.33**	**112**	P	P	22 22 30.5	+2.3	
	comp=E,0.9nm,0.7s,baz=317,slow=11,SNR=4.9							
	comp=E,0.9nm,0.7s							
PDAR	**Pinedale Array**	**32.66**	**97**	P	P	22 22 42.5	+2.7	
	comp=E,0.6nm,0.5s,baz=331,slow=3.8,SNR=8.9							
	comp=E,0.6nm,0.5s							
HILR	**Hailar Array B**	**47.32**	**298**	P	P	22 24 39.5	-0.8	
	comp=E,0.8nm,0.4s,baz=50,slow=9.3,SNR=3.0							
	comp=E,0.8nm,0.4s							
SONM	**Songino Array**	**54.65**	**305**	P	P	22 25 35.8	+0.7	
	comp=E,2.0nm,0.6s,baz=45,slow=6.5,SNR=12							
	comp=E,2.0nm,0.6s							
HFS	**Hagfors**	**62.03**	**6**	P	P	22 26 25.3	-0.8	
	comp=E,4.1nm,1.1s,baz=20,slow=4.6,SNR=5.5							
	comp=E,4.1nm,1.1s							
MKAR	**Makanchi Array**	**64.99**	**320**	P	P	22 26 45.0	-0.8	
	comp=E,0.2nm,0.4s,baz=44,slow=7.1,SNR=4.6							
	comp=E,0.2nm,0.4s							
EKA	**Eskdalemuir Ar**	**65.04**	**17**	P	P	22 26 46.0	+0.2	
	comp=E,0.8nm,0.4s,baz=345,slow=6.2,SNR=9.9							
	comp=E,0.8nm,0.4s							
DAVOX	**Davos/Dischmat**	**75.05**	**10**	LR	LR	23 03 19.5		
	comp=E,35nm,18.8s,baz=92,slow=38							

NAO ***27*** *22:18:48.6, 40°.36N×17°.79E, h10km, MB3.0*

IDC ***27*** *22:18:58.3±0.7, 41°.60N×19°.39E, h0km, mb4.2/13, mbtmp4.1/26, ML3.6/11, MS3.3/14, Error ellipse: s-maj=11.9km s-min=9.7km az=6.0*

SKO ***27*** *22:18:59.7, 41°.56N×19°.28E, h3km, ML4.0*

BEO ***27*** *22:19:00.9±0.5, 41°.52N×19°.51E, h7km±2km, ML3.8/17 TIR* ***27*** *22:19:00.4, 41°.64N×19°.36E, h33km±4km, Ml4.2/6*

NEIC ***27*** *22:19:00.3±2.1, 41°.57N±0°.03×19°.41E±0°.07, h10km±1km, mb4.3/22, Error ellipse: s-maj=8.9km s-min=5.6km az=78.0*

MED_RC ***27*** *22:19:01.0±0.6, 41°.64N×19°.35E, h12km±4km, MW4.0/11, Moment Tensor Solution.Mantle waves: s11,c12; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr0.89±.32; Mθθ-0.10±.25; Mϕϕ-0.79±.23; Mrθ0.34±.78; Mθϕ0.05±.11; Mϕr-0.74±.58; Best double couple: M0 1.17000×10^15 NP1:ϕs 5.00000°, δ24.00000°, λ111.00000° NP2:ϕs 163.00000°, δ67.00000°, λ81.00000°. Principal axes: T 1.2400, Plg67.0000°, Azm56.0000°; N -0.1300, Plg8.0000°, Azm166.0000°; P -1.1000, Plg22.0000°, Azm259.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

PRU ***27*** *22:19:01.1, 41°.38N×19°.26E, h10km, MM4.3*

THE ***27*** *22:19:02.5, 42°N±4°×2°0E±°, h6km±15km, M3.6/53, MLh3.6/53*

PDG ***27*** *22:19:03.4±0.2, 41°.67N×19°.52E, h14km, MD4.0/13, ML3.9/13, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0*

ISC 27 22:19:00.7±0.9, 41°.57N±0°.01×19°.42E±0°.02, h17km±6km, n343, σ1°66/439, mb4.4/17, MS3.3/8, 30C-48D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.40**	**123**	Pg	Pg	22 19 08.5	-0.5
TIR				S	Sg	22 19 14.2	-0.4
TIR				AML	AML	22 19 15.6	
	94nm,0.4s						
TIR				AML	AML	22 19 15.7	
	138nm,0.5s						
TIR	**Tirane**	**0.40**	**123**	*i* Pg	Pg	22 19 08.5	-0.5
TIR				*i* Sg	Sb	22 19 15.4	0.0
ULC	**Ulcinj**	**0.41**	**342**	⇓*i* Pg	Pg	22 19 09.2	0.0
ULC				*i* Sg	Sb	22 19 15.4	-0.3
SDA	**Shkodra**	**0.48**	**7**	Pg	Pg	22 19 10.3	-0.1
SDA				Sg	Sg	22 19 17.1	+0.1
DRME	**Dracevica, Mon**	**0.64**	**344**	*e*Pg	Pb	22 19 13.6	+0.1
DRME				*e*Sg	Sn	22 19 24.4	-0.5
DRME	**Dracevica, Mon**	**0.64**	**344**	⇓*i* Pg	Pb	22 19 13.7	+0.2
DRME				*i* Sg	Sb	22 19 21.9	-0.3
PHP	**Peshkopia**	**0.78**	**81**	Pg	Pg	22 19 14.7	-1.2
PHP				Sg	Sb	22 19 26.6	+0.5
PHP				AML	AML	22 19 31.6	
	32nm,0.5s						
PHP	**Peshkopia**	**0.78**	**81**	P	Pg	22 19 14.6	-1.4
PHP				S	Sb	22 19 26.5	+0.3
BUM	**Brajici-Budva**	**0.83**	**332**	⇓*i* Pg	Pn	22 19 17.6	-0.1
BUM				*i* Sg	Sn	22 19 29.5	-0.1
PDG	**Podgorica**	**0.87**	**352**	Pg	Pb	22 19 17.0	-0.3
PDG				Sg	Sn	22 19 31.2	+0.7
PDG	**Podgorica**	**0.87**	**352**		Pb	22 19 16.8	-0.6
PDG					Sn	22 19 31.2	+0.7
PDG	**Podgorica**	**0.87**	**352**	⇓P	Pb	22 19 17.2	-0.2
PDG				⇑S	Sn	22 19 30.9	+0.4
PDG	**Podgorica**	**0.87**	**352**	*e*Pg	Pb	22 19 17.2	-0.2
PDG				*e*Sg	Sn	22 19 31.4	+0.9
PDG	**Podgorica**	**0.87**	**352**	⇑*i* Pg	Pb	22 19 17.2	-0.2
PDG				*i* Sg	Sg	22 19 29.3	+0.2
CEME	**Cevo**	**1.04**	**339**	⇓*i* Pg	Pg	22 19 20.9	-0.1
CEME				*i* Sg	Sn	22 19 36.1	+1.2
PVY	**Plav**	**1.10**	**21**	*e*Pg	Pb	22 19 20.7	-0.7
PVY				*e*Sg	Sn	22 19 37.2	+0.8
PVY	**Plav**	**1.10**	**21**	⇓*i* Pg	Pb	22 19 20.6	-0.8
PVY				*i* Sg	Sg	22 19 36.4	-0.1
VLO	**Vlora**	**1.10**	**177**	Pg	Pg	22 19 23.1	+1.0
VLO				Sg	Sg	22 19 36.7	+0.3
VLO				AML	AML	22 19 41.3	
	59nm,0.3s						
VLO	**Vlora**	**1.10**	**177**	P	Pg	22 19 22.6	+0.6
VLO				S	Sg	22 19 36.6	+0.1
HCY	**Herceg Novi**	**1.11**

PLE	Pljevlja	1.76	359	*e*Pg	Pg	22 19 33.6	-1.0	STFN	Stefani	4.64	136	P	Pn	22 20 11.0	+0.8	VRAC	Vranov	7.99	347	Pn	Pn	22 20 53.8	-2.2
PLE				*e*Sg	Sg	22 19 58.2	+0.8	MORH	Mrgy, Hungar	4.68	353	*e*Pn	Pn	22 20 11.2	+0.7		comp=E,0.3nm,0.3s,baz=315,slow=10.0,SNR=2.3						
PLE	Pljevlja	1.76	359	⇓*i*Pn	Pg	22 19 33.6	-1.0	MORH	Mrgy, Hungar	4.68	353	⇓P	Pn	22 20 11.6	+1.1	VRAC				Sn	Sn	22 22 21.2	-4.7
PLE				*i* Sn	Sb	22 19 55.7	+1.2	LIA	Limnos Island	4.69	109	P	Pn	22 20 11.3	+0.6		comp=E,0.2nm,0.3s,baz=171,slow=13,SNR=1.4						
KEK	Kerkira	1.88	171		Pg	22 19 37.3	+0.4	MAGU	Magoula	4.70	137	P	Pn	22 20 11.5	+0.6	VRAC				LR	LR	22 23 59.4	
KEK				Sg	Sg	22 20 00.4	-0.8	SMTH	Samothraki Isl	4.75	101	P	Pn	22 20 12.3	+0.7		comp=E,50nm,19.4s,baz=170,slow=38						
NOCI	Noci	1.94	247	Pn	Pn	22 19 32.9	-0.1	ITM	Ithomi	4.80	155		Pn	22 20 12.6	+0.3	WATA	Walderalm	8.04	318	Pn	Pn	22 20 58.7	+1.9
RUDO	Rudo	2.05	359	*e*Pn	Pb	22 19 36.4	-1.1	NRCA	Norcia	4.85	287		Pn	22 20 14.1	+1.1		comp=E,5.4nm,0.2s,SNR=9.0						
RUDO	Rudo	2.05	359	*e*Pn	Pb	22 19 36.3	-1.2	ATH	Athens Observa	4.89	136	P	Pn	22 20 14.7	+1.2	CKRC	Cesky Krumlov	8.09	335	*e*PN	Pn	22 20 58.3	+0.8
RUDO				*e*Sn	Sb	22 20 04.0	+1.3	PTL	Penteli	4.91	134	P	Pn	22 20 14.7	+0.9	SQTA	Sankt Quirin	8.15	317	*i* Pn	Pn	22 21 00.3	+2.0
SELS	Selova	2.08	37	*e*Pn	Pb	22 19 36.8	-1.2	FDMO	Fiordimonte	4.92	289		Pn	22 20 15.0	+1.1		comp=E,8.3nm,0.3s,SNR=12						
SELS				*e*Sn	Sn	22 20 02.0	+1.7	DION	Dionisos Attik	4.92	134	P	Pn	22 20 14.8	+0.8	FETA	Feichten	8.27	314	*e*Pn	Pn	22 21 02.4	+2.3
IVAS	Ivanjica	2.08	15	*e*Pn	Pn	22 19 36.3	+1.4	ATHU	Athens Univers	4.93	136	P	Pn	22 20 15.1	+1.0		comp=E,6.1nm,0.5s						
IVAS				*e*Sn	Sb	22 20 04.2	+0.6	BOJS	Bojanci	4.96	324	*i* Pn	Pn	22 20 15.8	+1.4	MOTA	Moosalm	8.28	317	*i* Pn	Pn	22 21 01.7	+1.4
IGT	Igoumenitsa	2.15	161	Pn	Pn	22 19 33.8	+1.2	BOJS				*e*Sn	Sn	22 20 15.8	+1.0		comp=E,9.9nm,0.4s,SNR=5.4						
IGT				AML	AML	22 20 12.0		SIRR	Siria	4.97	18	⇓P	Pn	22 20 15.8	+1.2	FUORN	Ofenpass-Fuorn	8.30	311		Pn	22 21 01.8	+1.3
	comp=E,3.3nm,0.5s							COPA	Copaceanca	4.97	57	⇓P	Pn	22 20 17.1	+2.5	GEC2	GERESS Array S	8.31	333	Pn	Pn	22 21 00.8	+0.2
IGT	Igoumenitsa	2.15	161	P	Pn	22 19 36.7	+0.8	ELND	Elena	4.98	72	⇓P	Pn	22 20 17.1	+2.4	GERES	GERESS Array B	8.31	333	Pn	Pn	22 21 00.9	+0.3
IGT				S	Sn	22 20 03.3	+1.1	DEV	Deva	5.00	29	⇓P	Pn	22 20 16.5	+1.6		comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=11						
BARS	Barje	2.17	54	*i* Pn	Pn	22 19 38.0	+1.7	LOT	Lotru	5.00	38	⇓P	Pn	22 20 17.1	+2.0	GERES				Sn	Sn	22 22 31.7	-2.5
BARS				*i* Sn	Sb	22 20 07.3	+1.0	HUMR	Humele	5.04	52	⇑P	Pn	22 20 17.5	+2.0		comp=E,0.1nm,0.3s,baz=150,slow=26,SNR=1.9						
BARS	Barje	2.17	54	*e*Pn	Pn	22 19 37.9	+1.7	GADA	Gvkgeada	5.10	104	P	Pn	22 20 17.5	+1.1		comp=E,0.8nm,0.4s						
BARS				*e*Sn	Sn	22 20 04.7	+1.9	SZH	Strazhitsa	5.14	69	P	Pn	22 20 19.1	+2.1	STEB	Steborice	8.44	353	*e*SN	Sn	22 22 38.9	+1.8
LFKM	Lefkimmi	2.18	167	P	Pn	22 19 37.3	+1.1	CESX	Cesi	5.19	284		Pn	22 20 18.4	+0.8	KARP	Karpathos	8.54	132	Pn	Pn	22 21 03.7	0.0
LFKM				S	Sb	22 20 05.5	-0.9	STFAR	Stefanesti-Arg	5.22	49	⇓P	Pn	22 20 20.3	+2.3	BORA	Eskisehir	8.55	98		Pn	22 21 05.1	+1.3
KZN	Kozani	2.19	125	P	Pb	22 19 38.2	-1.7	KARY	Karystos	5.24	131	P	Pn	22 20 19.1	+0.8	RETA	Reutte	8.55	317	*e*Pn	Pn	22 21 06.3	+2.5
KZN				S	Sb	22 20 05.4	-1.4	BEHE	Becsehely	5.25	340		Pn	22 20 20.0	+1.5		comp=E,3.0nm,0.4s						
JAN	Janina	2.20	150	P	Pn	22 19 38.1	+1.5	BEHE	Becsehely	5.25	340	*e*Pn	Pn	22 20 20.5	+2.0	KHC	Kasperske Hory	8.60	333		Pn	22 21 05.5	+1.0
JAN				S	Sb	22 20 05.8	-1.4	ARR	Arges	5.37	43	⇓P	Pn	22 20 22.6	+2.5	KHC	Kasperske Hory	8.60	333	*e*PN	Pn	22 21 06.2	+1.7
MATE	Matera	2.25	247	⇓P	Pn	22 19 37.4	+0.2	MURB	Monte Urbino	5.37	291		Pn	22 20 21.4	+1.1	KHC				eSN	Sn	22 22 40.4	-0.7
MATE				⇓S	Sn	22 20 04.2	-0.3	JMB	Yambol	5.38	78	P	Pn	22 20 22.1	+1.9	DAVOX	Davos/Dischmat	8.61	310	Pn	Pn	22 21 05.4	+0.8
GOCS	Kraljevo Serbi	2.26	28	*e*Pn	Sn	22 19 39.2	+1.7	SGRR	Singureni	5.50	59	⇑P	Pn	22 20 24.1	+2.3		comp=E,1.4nm,0.3s,baz=128,slow=14,SNR=14						
GOCS				*e*Sn	Sb	22 20 07.2	-1.8	MTUR	Matau	5.50	46	⇑P	Pn	22 20 24.8	+2.8	DAVOX				Sn	Sn	22 22 40.2	-1.1
BBLS	Lazi&#263i	2.29	360	*e*Pn	Pb	22 19 40.0	-1.7	EZN	Ezine	5.53	106	P	Pn	22 20 23.8	+1.5		comp=E,1.2nm,0.3s,baz=317,slow=16,SNR=3.7						
BBLS				*e*Sn	Sb	22 20 09.8	0.0	EZN	Ezine	5.53	106	⇓P	Pn	22 20 24.0	+1.7	DAVOX				LR	LR	22 25 33.6	
GRG	Griva	2.33	104	P	Pn	22 19 39.2	+0.8	RAZG	Razgrad	5.60	67	⇓P	Pn	22 20 25.7	+2.3		comp=E,93nm,19.3s,baz=96,slow=46						
GRG				S	Sn	22 20 08.0	+1.3	LOZB	Loznitsa	5.60	69	⇓P	Pn	22 20 25.3	+2.0		comp=E,3.8nm,0.5s						
GRG	Griva	2.33	104	*i* Pn	Pn	22 19 40.1	+1.7	VAE	Valguarnera	5.63	225	Pn	Pn	22 20 25.2	+1.5	TUE	Stuetta	8.75	307		Pn	22 21 07.5	+0.8
VAY	Valandovo	2.38	95	*i* Pn	Pn	22 19 40.6	+1.6		comp=E,5.4nm,0.4s,baz=66,slow=11,SNR=5.4							DAVA	Damuels	8.90	313	*i* Pn	Pn	22 21 11.5	+2.9
VAY				*i* Sn	Sb	22 20 11.4	-0.9	VOIR		5.63	45	⇓P	Pn	22 20 26.1	+2.4		comp=E,4.9nm,0.5s						
VAY				*e*Lg	Lg	22 20 11.7		PRK	Paraskevi	5.72	112	P	Pn	22 20 26.3	+1.4	DPC	Dobruska-Polom	9.04	347	*e*PN	Pn	22 21 11.9	+1.4
	comp=N,500nm,0.7s							DRGR		5.73	23	⇑P	Pn	22 20 26.6	+1.5	SORM	Soroca	9.12	41	⇓P	Pn	22 21 14.1	+2.5
VAY				*e*Lg	Lg	22 20 11.9		TRI	Trieste	5.82	317	Pn	Pn	22 20 26.7	+0.4	KEST	Kesra	9.79	237	Pn	Pn	22 21 22.3	+1.4
	comp=E,414nm,0.7s							RAFF	Raffo Rosso	5.84	224	Pn	Pn	22 20 25.5	-1.2		comp=E,0.2nm,0.3s,baz=18,slow=13,SNR=6.7						
BOSS	Bosilegrad	2.46	67	*e*Pn	Pn	22 19 41.4	+1.2	SULR		5.89	56	⇓P	Pn	22 20 30.3	+3.1		comp=E,3.8nm,0.7s						
BOSS				*e*Sn	Sn	22 20 12.0	+2.1	CJR	Cluj-Napoca	5.96	29	⇓P	Pn	22 20 30.8	+2.6	KEST	Kesra	9.79	237		Pn	22 21 21.9	+1.0
GRUS	Gruza	2.51	22	*e*Pn	Pn	22 19 42.4	+1.7	SOKA	Soboth	6.00	330	*e*Pn	Pn	22 20 30.2	+1.4	BNI	Bardonecchia	9.91	295	Pn	Pn	22 21 21.4	-1.2
TETR	Tetrakomo, Epi	2.64	147	P	Pn	22 19 44.6	+2.0		comp=E,13nm,0.4s,SNR=11							SENIN	Lac Senin/Sane	9.96	303		Pn	22 21 23.1	-0.1
TETR				S	Sn	22 20 16.3	+2.0	SOKA				*e*Sn	Sn	22 21 35.2	-2.0	BFO	Black Forest	10.36	314	Pn	Pn	22 21 28.3	-0.2
KNT	Kendrikon	2.65	98	P	Pn	22 19 43.8	+1.0		comp=E,21nm,0.7s							CLL	Collm	10.69	338	*e*Pn	Pn	22 21 36.0	+3.0
KNT				S	Sn	22 20 16.2	+1.7	CHOS	Chios island	6.01	120	P	Pn	22 20 30.3	+1.4	CLL				*ex*	x	22 21 48.0	
KNT	Kendrikon	2.65	98	*i* Pn	Pn	22 19 44.1	+1.4	OBKA	Obir	6.05	326	*i* Pn	Pn	22 20 31.3	+1.7	CLL				*ex*	x	22 23 34.0	
BOVS	Bovan	2.67	39	⇑P	Pn	22 19 44.5	+1.6		comp=E,9.3nm,0.4s,SNR=8.3							CLL				*e*Sb	Sn	22 24 12.0	+40
BOVS	Bovan	2.67	39	*e*Pn	Pn	22 19 44.5	+1.6	OBKA				*e*Sn	Sn	22 21 42.0	+3.5	CLL				*e*Sg		22 24 39.0	
BOVS				*e*Sn	Sn	22 20 16.8	+1.9		comp=E,32nm,0.4s							ECH	Echery	10.94	312	Pn	Pn	22 21 36.5	+0.1
TRAN	Tran	2.71	61	P	Pn	22 19 45.4	+1.7	LTVH	Ltavrtes, Hu	6.08	16	⇓P	Pn	22 20 31.9	+2.1	BRTR	Keskin Array B	10.96	95	Pn	Pn	22 21 37.6	+0.7
TRAN				S	Sb	22 20 20.0	-1.9	SABO	M.te Sabotino	6.09	318		Pn	22 20 30.1	0.0		comp=E,0.1nm,0.3s,baz=267,slow=9.4,SNR=4.1						
ACER	Acerenza	2.74	255		Pn	22 19 44.4	+0.5	LEHL	Lehliu	6.15	59	⇓P	Pn	22 20 34.0	+3.2	BRTR				LR	LR	22 26 53.1	
TRUS	Trudelj	2.75	15	*e*Pn	Pn	22 19 45.5	+1.4	MLR	Muntele Rosu	6.15	48	Pn	Pn	22 20 33.6	+2.6		comp=E,99nm,19.6s,baz=286,slow=43						
TRUS				*e*Sn	Sn	22 20 19.2	+2.3		comp=E,3.7nm,0.3s,baz=239,slow=3.1,SNR=74								comp=E,0.4nm,0.5s						
LIT	Litokhoron	2.76	121	P	Pn	22 19 44.9	+0.7	MLR				Sn	Sn	22 21 43.4	+2.4	BRTR	Keskin Array B	10.96	95		Pn	22 21 37.0	+0.1
LIT	Litokhoron	2.76	121		Pn	22 19 45.3	+1.1		comp=E,1.9nm,0.3s,baz=171,slow=17,SNR=1.3							AKASG	Malin Array Be	11.38	33	Pn	Pn	22 21 42.2	-0.2
SGRT	San Giovanni R	2.76	275		Pn	22 19 44.3	0.0	MLR				LR	LR	22 23 22.7			comp=E,0.4nm,0.3s,baz=222,slow=14,SNR=7.4						
KKB	Krupnik	2.79	83	P	Pn	22 19 46.5	+1.8		comp=E,221nm,19.3s,baz=238,slow=43								comp=E,2.4nm,0.7s						
KKB				S	Sn	22 20 20.6	+2.6		comp=E,22nm,0.5s							MNK	Minsk	14.11	21	*i* P	Pn	22 22 16.8	-2.9
KKB	Krupnik	2.79	83	P	Pn	22 19 46.5	+1.8	MLR	Muntele Rosu	6.15	48		Pn	22 20 32.3	+1.4	MNK				*i* P	Pn	22 22 16.8	-2.9
KKB				S	Sn	22 22 01.0	+3.0	MLR	Muntele Rosu	6.15	48	⇑P	Pn	22 20 33.5	+2.6		comp=E,26nm,1.1s						
KKB	Krupnik	2.79	83	*i* Pn	Pn	22 19 46.6	+1.8	DOPR	Dopca	6.16	43	⇑P	Pn	22 20 33.4	+2.2	MNK				*i* P	Pn	22 22 16.8	-2.9
THL	Klokotos Trika	2.82	135	P	Pn	22 19 45.8	+0.8	CICN	Ciocanesti	6.17	62	⇓P	Pn	22 20 33.9	+2.8		comp=E,9.0nm,1.0s						
TYRN	Tyrnavos	2.84	130	P	Pn	22 19 46.3	+1.0	ISR	Istrita	6.29	53	⇓P	Pn	22 20 35.3	+2.6	MNK				*i* P	Pn	22 22 16.8	-2.9
THE	Thessaloniki	2.84	108	P	Pn	22 19 46.1	+0.8	SRO	Srobarova	6.29	353	*e*PN	Pb	22 20 46.0	-3.8		comp=E,8.0nm,1.0s,baz=207						
THE				S	Sn	22 20 19.9	+0.7	SRO				*e*PG	Pg	22 21 03.0	+1.9	MNK				*i* PP	P	22 22 24.7	-2.6
THE	Thessaloniki	2.84	108	*i* Pn	Pn	22 19 46.2	+0.8	SRO				*e*SG	Sg	22 22 22.2	-0.3	MNK				*i* PPP	PPP	22 22 32.3	
TSLK	Tsoukalades, L	2.90	161	P	Pn	22 19 46.9	+0.7	NEHR	Nehoiu	6.31	50	⇑P	Pn	22 20 36.1	+3.0	MNK				*i* S	Sn	22 24 54.6	-1.1
ZAPS	Zavoj	2.93	53	*e*Pn	Pn	22 19 48.4	+1.8	ARSA	Arzberg	6.33	335		Pn	22 20 34.4	+1.1	MNK				*i* SS	SnSn	22 25 08.2	+0.1
ZAPS				*e*Sn	Sn	22 20 22.5	+1.1	ARSA	Arzberg	6.33	335	*i* Pn	Pn	22 20 35.5	+2.3	MNK				*i* SSS	SSS	22 25 20.7	
LKD2	Lefkada island	2.94	161	P	Pn	22 19 47.2	+0.5		comp=E,5.4nm,0.3s,SNR=6.4							MNK				*i* LQ	LQ	22 26 25.2	
HORT	Hortiatis	2.95	108	P	Pn	22 19 47.6	+0.7	OSSC	Osservatorio P	6.34	291		Pn	22 20 34.3	+0.8	MNK				*i* LR	LR	22 27 27.7	
HORT				S	Sn	22 20 23.3	+1.3	PSZ	Piszkesteto	6.36	3		Pn	22 20 34.6	+0.9	MNK				*i* LRM	MLR	22 27 50.5	
LRSO	Larissa Observ	2.95	129	P	Pn	22 19 47.6	+0.8	PSZ	Piszkesteto	6.36	3	⇓P	Pn	22 20 34.9	+1.2		comp=E,627nm,19.3s						
TEKS	Tekeris	2.98	2	*e*Pn	Pn	22 19 48.3	+1.0	BOSR	Bodos	6.38	43	⇑P	Pn	22 20 36.7	+2.7	MNK				*i* LRM	MLR	22 27 54.3	
VTS	Vitosha	3.03	69	P	Pn	22 19 49.7	+1.7	OZUR		6.45	43	⇑P	Pn	22 20 37.1	+2.1		comp=N,510nm,21.3s						
VTS				S	Sn	22 20 25.8	+1.7	PGOR	Pogoanele	6.46	56	⇑P	Pn	22 20 38.2	+3.2	MNK				*i* LRM	MLR	22 28 22.2	
VTS	Vitosha	3.03	69	P	Pn	22 19 49.6	+1.5	CASP	Castiglione de	6.47	284	Pn	Pn	22 20 35.2	0.0		comp=Z,141nm,15.9s						
VTS				S	Sb	22 20 28.0	-3.1	COVR	Voineasa-Covas	6.51	47	⇑P	Pn	22 20 38.5	+2.7	NACGM	Naroch	14.20	18	*e*P	P	22 22 25.1	-3.3
ZAGS	Zajecar	3.05	42	*e*Pn	Pn	22 19 49.9	+1.6	RONA	Rosalia, Austr	6.52	341	*i* Pn	Pn	22 20 38.8	+2.9		comp=N,21nm,0.9s						
ZAGS				*e*Sn	Sn	22 20 26.1	+1.7		comp=E,5.7nm,0.4s,SNR=6.2							PABE	Paberze	14.26	11	Pn	Pn	22 22 23.2	+1.5
SOH	Sokhos	3.06	103	P	Pn	22 19 49.7	+1.2	RONA				*i* Sn	Sn	22 21 51.9	+2.0	MMAI	Mount Meron Ar	15.31	119	Pn	Pn	22 22 37.6	+1.5
SOH				S	Sn	22 20 27.1	+2.3		comp=E,6.6nm,0.4s								comp=N,0.9nm,0.3s,baz=322,slow=11,SNR=4.3						
SOH	Sokhos	3.06	103	*i* Pn	Pn	22 19 49.7	+1.2	AMRR	Amara	6.54	60	⇓P	Pn	22 20 39.3	+3.1	MMAI				LR	LR	22 29 43.8	
PLNA	Plana	3.12	72	P	Pn	22 19 51.4	+2.1	MYKA	Terra Mystica	6.54	323	*i* Pn	Pn	22 20 37.2	+0.9		comp=N,64nm,18.2s,baz=300,slow=42						
PLNA				S	Sn	22 20 29.7	+3.4		comp=E,3.9nm,0.2s								comp=N,3.5nm,0.6s						
TIP	Timpagrande	3.14	221		Pn	22 19 49.4	-0.1	TURR	Turia	6.55	45	⇓P	Pn	22 20 38.3	+2.0	GHAJ	Ghor Haditha	16.52	123	Pn	Pn	22 22 52.0	+0.3
BLSH	Balsha	3.14	65	P	Pn	22 19 51.6	+2.0	CTYL	Yalikoy Yolu	6.66	88	⇑P	Pn	22 20 39.8	+2.0	MARD	Mardin	17.03	97	Pn	Pn	22 22 57.2	-1.0
BLSH				S	Sn	22 20 30.2	+3.5	ICOR	Ion Corvin	6.67	65	⇑P	Pn	22 20 40.3	+2.4	EIL	Elat	17.30	128	LR	LR	22 31 27.0	
CUC	Castrocucco	3.16	241		Pn	22 19 50.6	+0.9	BAAD	Balkesir-Ban	6.68	98	⇓P	Pn	22 20 40.4	+2.2		comp=N,53nm,18.8s,baz=360,slow=43						
BORS2	Bor- Borsko je	3.16	36	*e*Pn	Pn	22 19 50.3	+0.2	GRER		6.69	53	⇑P	Pn	22 20 40.0	+1.9	KBZ	Khabaz	17.40	75	P	Pn	22 23 02.6	+0.1
BORS2				*e*Sn	Sn	22 20 28.0	+0.9	BALB	Balikesir	6.72	104		Pn	22 20 40.3	+1.6		comp=N,0.2nm,0.3s,baz=320,slow=8.0,SNR=7.1						
SRS	Serrai	3.18	97	P	Pn	22 19 51.2	+1.2	STAL	STALIGIAL	6.74	316		Pn	22 20 39.1	+0.2		comp=N,2.6nm,0.7s						
SRS				S	Sn	22 20 28.3	+0.8	PLOR	Plostina	6.76	48	⇑P	Pn	22 20 41.8	+2.5	OBN	Obninsk	17.64	34	Pn	Pn	22 23 04.0	-1.5
SRS	Serrai	3.18	97	*i* Pn	Pn	22 19 51.3	+1.3	ZCCA	Zocca	6.79	297		Pn	22 20 40.8	+1.2	OBN				IAmb	IAmb	22 23 06.7	
EVR	Evrytania	3.22	145	P	Pn	22 19 52.7	+2.0	TEOL	Teolo	6.79	306		Pn	22 20 39.8	+0.2		comp=Z,19nm,0.7s						
AVAS	Avala Beograd	3.23	14	*e*Pn	Pn	22 19 51.6	+1.0	VRI	Vrincioaia	6.82	49	⇓P	Pn	22 20 42.6	+2.6	ESDC	Sonseca Array	17.84	272	P	P	22 23 09.1	+0.3
AVAS				*e*Sn	Sn	22 20 29.1	+0.4	CONA	Conrad Observa	6.84	340	*i* Pn	Pn	22 20 43.2	+2.8		comp=Z,0.1nm,0.3s,baz=74,slow=12,SNR=5.3						
MMB	Musomishta	3.25	89	P	Pn	22 19 52.6	+1.6		comp=E,2.9nm,0.4s								comp=Z,1.0nm,0.8s						
MMB	Musomishta	3.25	89	P	Pn	22 19 52.7	+1.7	CONA				*i* Sn	Sn	22 21 56.8	-1.1	HFS	Hagfors	18.92	351	P	P	22 23 19.5	-1.0
MMB				S	Sn	22 20 32.4	+3.0		comp=E,8.9nm,0.6s								comp=Z,0.5nm,0.3s,baz=166,slow=14,SNR=13						
MMB	Musomishta	3.25	89	*i* Pn	Pn	22 19 53.0	+1.9	CVDA	Cernavoda	6.90	64	⇑P	Pn	22 20 44.4	+3.3		comp=Z,2.0nm,0.5s						
PLG	Polygyros	3.28	110	P	Pn	22 19 52.6	+1.2	ONER	Baraj Valea Uz	6.93	44	⇓P	Pn	22 20 44.3	+2.8	GNI	Garni	19.19	86	P	P	22 23 22.7	-1.1
PLG				S	Sn	22 20 31.5	+1.5	MODS	Modra-Piesok	6.97	348	*e*PN	Pn	22 20 45.9	+3.8		comp=Z,0.2nm,0.3s,baz=333,slow=5.7,SNR=5.4						
KUBS	Kucevo	3.29	30	*e*Pn	Pn	22 19 51.7	+0.2	MODS				*e*PG	Pg	22 21 16.6	-3.5		comp=Z,7.0nm,0.8s						
KUBS				*e*Sn	Sn	22 20 30.9	+0.7	MODS				*e*SG	Sg	22 22 43.2	-1.0	GNI	Garni	19.19	86	P	P	22 23 23.4	-0.4
MAKR	Makrakomi, Fth	3.29	140	P	Pn	22 19 53.2	+1.6	TLBR	Topalu	6.98	62	⇑P	Pn	22 20 45.1	+2.8	GNI				IAmb	IAmb	22 23 31.7	
MAKR				S	Sn	22 20 33.1	+2.7	KBA	Koelnbreinsper	7.02	324	*e*Pn	Pn	22 20 44.9	+2.0		comp=Z,29nm,1.4s						
PVO	Paravola	3.37	151	P	Pn	22 19 53.3	+1.2		comp=E,7.7nm,0.3s							NC602	NORSAR Array S	19.79	349	P	P	22 23 28.6	-1.4
AGG	Agios Georgios	3.38	138	P	Pn	22 19 54.0	+1.2	KBA				*e*Sn	Sn	22 22 06.1	+3.8	NC602				IAmb	IAmb	22 23 43.7	
AGG				S	Sn	22 20 33.8	+1.2		comp=E,3.8nm,0.3s								comp=Z,25nm,1.3s						
ANX	Ano Chora	3.54	146	P	Pn	22 19 56.7	+1.6	MANR	Mangalia	7.12	69	⇑P	Pn	22 20 46.4	+2.3	NB2	NORSAR Subarra	20.13	348	P	P	22 23 32.6	-1.1
BLY	Banja Luka	3.57	334	*e*Pn	Pn	22 19 57.8	+2.4	ABTA	Abfaltersbach	7.17	319	*i* Pn	Pn	22 20 45.9	+1.1		comp=Z,0.4nm,0.4s,baz=166,slow=11						
BLY	Banja Luka	3.57	334	*e*Pn	Pn	22 19 57.5	+2.1		comp=E,5.4nm,0.3s,SNR=6.5							NOA	NORSAR Array B	20.13	348	P	P	22 23 32.4	-1.3
FRGS	Fruska Gora	3.60	4	*e*Pn	Pn	22 19 56.8	+1.0	ABTA				*i* Sn	Sn	22 20 08.3	+2.3		comp=Z,0.8nm,0.8s,baz=146,slow=10,SNR=6.4						
MDVR	Moldovita	3.62	27	⇑P	Pn	22 19 57.7	+1.6		comp=E,26nm,0.6s							EKA	Eskdalemuir Ar	20.22	321	P	P	22 23 34.2	-0.4
MPEP	Malo Peshtene	3.66	59	P	Pn	22 19 58.8	+2.2	TESR	Tescani	7.18	44	⇓P	Pn	22 20 47.2	+2.3		comp=Z,1.2nm,0.5s,baz=115,slow=8.6,SNR=15						
MPEP				S	Sn	22 20 44.2	+4.8	CTI	Castel Tesino	7.18	311		Pn	22 20 45.0	0.0		comp=Z,1.2nm,0.5s						
OUR	Ouranopolis	3.67	108	P	Pn	22 19 57.7	+1.0	TIRR	Tirgusor	7.20	63		Pn	22 20 45.8	+0.7	ESK	Eskdalemuir	20.23	321	P	P	22 23 34.5	-0.3
OUR				S	Sn	22 20 41.5	+1.8	TIRR	Tirgusor	7.20	63	⇓P	Pn	22 20 47.3	+2.1	ESK				IAmb	IAmb	22 23 59.8	
EFP	Efpalio	3.68	148	P	Pn	22 19 58.8	+2.0	MOA	Molln	7.27	331	*i* Pn	Pn	22 20 48.8	+2.6		comp=Z,27nm,1.2s						
NEO	Neokhori	3.68	127	P	Pn	22 19 57.4	+0.4		comp=E,3.6nm,0.2s,SNR=12							FINES	FINESS Array B	20.31	9	P	P	22 23 34.0	-1.6
PUNG	Punghina	3.74	42	⇓P	Pn	22 19 59.4	+1.8	MOA				*e*Sn	Sn	22 22 11.5	+3.2		comp=Z,6.3nm,0.5s,baz=180,slow=10,SNR=36						
AXAR	Agios Charalam	3.74	137	P	Pn	22 19 59.0	+1.2		comp=E,5.2nm,0.3s							FINES				LR	LR	22 32 23.0	
SERG	Sergoula	3.75	146	P	Pn	22 19 59.7	+1.9	CFR	Carcaliu	7.30	58	⇓P	Pn	22 20 48.2	+1.6		comp=Z,102nm,18.6s,baz=220,slow=40						
BAIL	Bailesti	3.79	48	⇑P	Pn	22 20 00.6	+2.2	BURAR	Bucovina Array	7.32	32		Pn	22 20 49.1	+2.1		comp=Z,6.3nm,0.5s						
DJES	Djerdap	3.84	35	⇑P	Pn	22 20 00.8	+1.7	BURAR	Bucovina Array	7.32	32	⇓P	Pn	22 20 50.2	+3.2	FINES	FINESS Array B	20.31	9	P	P	22 23 34.6	-1.0
RLS	Riolos of Patr	3.85	155	P	Pn	22 19 59.7	+0.6	BGR88	Bucovina Ar. S	7.34	32		Pn

	comp=Z,1.2nm,0.6s,baz=288,slow=10.0,SNR=9.1								
	comp=Z,1.2nm,0.6s								
KURK	**Kurchatov**	**41.02**	**56**	P		**P**		**22 26 42.6**	**-0.2**
KURK				IAmb		IAmb		22 26 43.6	
	comp=Z,2.1nm,0.6s								
MAKZ	**Makanchi**	**44.12**	**61**	P		**P**		**22 27 08.0**	**-0.1**
MAKZ				IAmb		IAmb		22 27 08.8	
	comp=Z,4.0nm,0.9s								
ZAA0	**Zalesovo Array**	**44.13**	**51**			**P**		**22 27 07.7**	**-0.3**
ZALV	**Zalesovo Beam**	**44.13**	**51**	P		**P**		**22 27 07.8**	**-0.2**
	comp=Z,12nm,0.7s,baz=280,slow=8.6,SNR=52								
	comp=Z,12nm,0.7s								
MKAR	**Makanchi Array**	**44.33**	**61**	P		**P**		**22 27 09.6**	**-0.2**
	comp=Z,8.1nm,0.7s,baz=282,slow=6.6,SNR=61								
MKAR				LR		LR		22 48 42.6	
	comp=Z,31nm,20.6s,baz=272,slow=40								
	comp=Z,8.1nm,0.7s								
MKAR	**Makanchi Array**	**44.33**	**61**			**P**		**22 27 09.3**	**-0.5**
TIXI	**Tiksi**	**56.78**	**21**	LR		LR		22 56 25.5	
	comp=Z,50nm,18.5s,baz=208,slow=40								
LSA	**Lhasa**	**57.96**	**77**	P		P		22 28 44.0	-8.9
SONM	**Songino Array**	**58.99**	**52**	P		**P**		**22 28 59.1**	**-0.4**
	comp=Z,1.7nm,0.9s,baz=297,slow=6.5,SNR=8.1								
	comp=Z,1.7nm,0.9s								
YAK	**Yakutsk**	**62.58**	**30**	LR		LR		22 59 16.3	
	comp=Z,47nm,18.9s,baz=47,slow=39								
HHC	**Hu-ho-hao-te**	**65.83**	**56**	*eP*		**P**		**22 29 45.5**	**+0.2**
HHC				pmax		pmax			
	comp=Z,7.0nm,0.7s								
LBTB	**Lobatse**	**66.50**	**174**	P		**P**		**22 29 49.8**	**+0.3**
LBTB				IAmb		IAmb		22 30 01.6	
	comp=Z,4.8nm,1.1s								
PZH	**PanZhiHua**	**67.47**	**74**	P		**P**		**22 29 57.8**	**+1.8**
D23K	**Nanushuk River**	**69.54**	**356**	P		**P**		**22 30 08.8**	**+0.7**
D23K				IAmb		IAmb		22 30 32.6	
	comp=Z,5.1nm,1.4s								
MA2	**Magadan**	**71.53**	**24**	LR		LR		23 05 47.7	
	comp=Z,34nm,18.4s,baz=91,slow=39								
ILAR	**Eielson Array**	**73.45**	**354**	P		**P**		**22 30 32.4**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=1.8,slow=4.8,SNR=5.7								
	comp=Z,0.4nm,0.7s								
SJG	**San Juan**	**74.96**	**281**	LR		LR		22 59 01.5	
	comp=Z,21nm,21.7s,baz=152,slow=32								

NEIC ***27*** *22:40:26.7±1.9,21.9°S±0.1×179.4°W±0.1,h587km±6km, mb4.6/49, Error ellipse: s-maj=16.0km s-min=14.8km az=125.0*

NOU ***27*** *22:40:26.0,21.94°S×179.29°W,h599km,mb4.6/45, Fiji Islands Region*

IDC ***27*** *22:40:27.0±1.5,21.7°S×179.69°W,h584km±16km, mb3.9/14,mbtmp4.8/15, Error ellipse: s-maj=13.6km s-min=10.1km az=144.0*

ISC 27 22:40:26.5±0.3, 22.01°S±0.05×179.41°W±0.06, h592km, n213, σ1§30/218, mb4.6/49, 13C-7D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.88**	**330**			**P**	**22 41 58.2**	**+0.1**
MSVF	**Nonsavu**	**4.88**	**330**	P		**P**	**22 41 58.5**	**+0.4**
MSVF	**Nonsavu**	**4.88**	**330**	S		**S**	**22 43 13.5**	**+0.7**
RAO	**Raoul Island**	**7.34**	**170**	P		**P**	**22 42 19.5**	**+0.4**
GLKZ	**Green Lake**	**7.34**	**170**	P		**P**	**22 42 17.9**	**-1.3**
GLKZ				S		**S**	**22 43 49.4**	**-2.2**
NIUE	**Niue**	**9.35**	**74**			**P**	**22 42 37.5**	**-1.3**
NIUE	**Niue**	**9.35**	**74**	P		**P**	**22 42 37.6**	**-1.1**
AFI	**Afiamalu**	**10.84**	**43**			**P**	**22 42 50.7**	**-3.1**
AFI	**Afiamalu**	**10.84**	**43**	P		**P**	**22 42 51.6**	**-2.2**
MARNC	**Mare, Loyalty**	**11.68**	**270**			**P**	**22 43 01.9**	**-0.2**
MARNC	**Mare, Loyalty**	**11.68**	**270**	P		**P**	**22 43 02.0**	**0.0**
MARNC	**Mare, Loyalty**	**11.68**	**270**	S		**S**	**22 45 11.3**	**+1.4**
OUENC	**Ouen Island, N**	**12.74**	**266**	P		**P**	**22 43 13.6**	**+0.9**
DZM	**Mont Dzumac**	**13.12**	**267**	P		**P**	**22 43 13.6**	**-3.1**
	20nm,1.1s,baz=89,slow=16,SNR=11							
DZM	**Mont Dzumac**	**13.12**	**267**	P		**P**	**22 43 15.7**	**-1.0**
DZM	**Mont Dzumac**	**13.12**	**267**	P		**P**	**22 43 16.3**	**-0.4**
SANVU	**Saraoutou**	**14.26**	**295**			**P**	**22 43 26.5**	**-1.6**
SANVU	**Saraoutou**	**14.26**	**295**	P		**P**	**22 43 27.9**	**-0.2**
SANVU	**Saraoutou**	**14.26**	**295**	S		**S**	**22 45 58.3**	**+1.7**
OUZ	**Omahuta**	**14.52**	**203**	P		**P**	**22 43 31.1**	**+0.9**
OUZ	**Omahuta**	**14.52**	**203**	P		**P**	**22 43 31.6**	**+1.4**
KUZ	**Kuaotunu**	**15.28**	**195**	P		**P**	**22 43 38.0**	**+0.7**
KUZ	**Kuaotunu**	**15.28**	**195**	P		**P**	**22 43 38.6**	**+1.3**
MYRZ	**Mayor Island**	**15.68**	**193**	P		**P**	**22 43 42.1**	**+1.0**
WMGZ	**Waiomatatini S**	**15.87**	**186**	P		**P**	**22 43 41.7**	**-1.1**
HAZ	**Te Kaha**	**15.88**	**188**	P		**P**	**22 43 42.1**	**-0.7**
RUGZ	**Raukumara Rang**	**16.10**	**188**	P		**P**	**22 43 44.2**	**-0.9**
TGRZ	**Tauranga**	**16.11**	**192**	P		**P**	**22 43 45.2**	**+0.2**
TWGZ	**Tauwhareparae**	**16.27**	**187**	P		**P**	**22 43 46.6**	**+0.1**
TOZ	**Tahuroa Road**	**16.27**	**195**	P		**P**	**22 43 47.7**	**+1.2**
URZ	**Urewera**	**16.47**	**190**	P		**P**	**22 43 45.9**	**-2.4**
	59nm,0.8s,baz=360,slow=4.3,SNR=31							
URZ				S		**S**	**22 46 24.7**	**-7.9**
	14nm,0.3s,baz=207,slow=21,SNR=8.9							
URZ	**Urewera**	**16.47**	**190**	P		**P**	**22 43 48.3**	**0.0**
URZ	**Urewera**	**16.47**	**190**	P		**P**	**22 43 45.8**	**-2.4**
MWZ	**Matawai**	**16.48**	**189**	P		**P**	**22 43 47.1**	**-1.4**
MUGZ	**Murupara**	**16.74**	**190**	P		**P**	**22 43 50.1**	**-0.7**
TLZ	**Tolley Road**	**16.84**	**194**	P		**P**	**22 43 53.8**	**+2.1**
RTZ	**Ruatahuna**	**16.84**	**190**			**P**	**22 43 50.3**	**-1.4**
RTZ	**Ruatahuna**	**16.84**	**190**	P		**P**	**22 43 49.9**	**-1.9**
HIZ	**Hauiti**	**17.17**	**195**	P		**P**	**22 43 55.1**	**+0.4**
HIZ	**Hauiti**	**17.17**	**195**	P		**P**	**22 43 58.2**	**+3.5**
BKZ	**Black Stump Fm**	**17.46**	**191**	P		**P**	**22 43 55.9**	**-1.5**
BKZ	**Black Stump Fm**	**17.46**	**191**	P		**P**	**22 43 55.6**	**-1.8**
NGZ	**Ngauruhoe**	**17.64**	**193**	P		**P**	**22 44 02.1**	**+3.0**
VRZ	**Vera Road**	**17.77**	**195**	P		**P**	**22 44 03.5**	**+3.3**
TSZ	**Takapari Road**	**18.42**	**191**	P		**P**	**22 44 05.9**	**-0.2**
BFZ	**Birch Farm**	**18.98**	**190**	P		**P**	**22 44 10.6**	**-0.5**
BFZ	**Birch Farm**	**18.98**	**190**	P		**P**	**22 44 09.5**	**-1.6**
MRZ	**Mangatainoka R**	**19.07**	**192**	P		**P**	**22 44 10.9**	**-1.1**
SNZO	**South Karori**	**19.87**	**193**	P		**P**	**22 44 18.4**	**-0.8**
QRZ	**Quartz Range**	**19.96**	**198**	P		**P**	**22 44 20.3**	**+0.3**
QRZ	**Quartz Range**	**19.96**	**198**	P		**P**	**22 44 21.5**	**+1.4**
NNZ	**Nelson**	**20.09**	**196**	P		**P**	**22 44 20.3**	**-0.9**
THZ	**Tophouse**	**20.73**	**196**	P		**P**	**22 44 26.2**	**-0.8**
DSZ	**Denniston Nort**	**21.02**	**199**	P		**P**	**22 44 29.5**	**-0.1**
KHZ	**Kahutara**	**21.19**	**195**	P		**P**	**22 44 30.0**	**-1.0**
KHZ	**Kahutara**	**21.19**	**195**	P		**P**	**22 44 29.4**	**-1.6**
GVZ	**Greta Valley S**	**21.83**	**195**	P		**P**	**22 44 35.4**	**-1.4**
LTZ	**Lake Taylor**	**21.85**	**197**	P		**P**	**22 44 35.4**	**-1.6**
RPZ	**Rata Peaks**	**23.05**	**198**	P		**P**	**22 44 47.5**	**-0.1**
RPZ	**Rata Peaks**	**23.05**	**198**	P		**P**	**22 44 48.4**	**+0.8**
JCZ	**Jackson Bay**	**24.07**	**201**	P		**P**	**22 44 56.5**	**-0.3**
EIDS	**Eidsvold**	**27.20**	**257**	P		**P**	**22 45 24.7**	**+0.2**
EIDS				IAmb		IAmb	22 45 26.0	
	comp=Z,26nm,1.2s							
EIDS	**Eidsvold**	**27.20**	**257**	P		**P**	**22 45 24.7**	**+0.2**
ARMA	**Armidale**	**27.24**	**246**	P		**P**	**22 45 26.3**	**+1.4**
ARMA	**Armidale**	**27.24**	**246**	P		**P**	**22 45 26.3**	**+1.4**
MGCD	**Mangrove Creek**	**28.31**	**240**	P		**P**	**22 45 35.4**	**+1.3**
CNB	**Canberra Magne**	**30.30**	**237**	P		**P**	**22 45 52.3**	**+1.0**
CAN	**Canberra**	**30.58**	**237**	P		**P**	**22 45 54.7**	**+1.0**
CAN	**Canberra**	**30.58**	**237**	P		**P**	**22 45 54.6**	**+1.0**
CTA	**Charters Tower**	**32.06**	**267**	P		**P**	**22 46 06.5**	**+0.1**
CTAO	**Charters Tower**	**32.06**	**267**	P		**P**	**22 46 06.6**	**+0.1**
CTAO				IAmb		IAmb	22 46 07.7	
	comp=Z,13nm,0.6s							
CTAO	**Charters Tower**	**32.06**	**267**	P		**P**	**22 46 06.5**	**+0.1**
CMSA	**Cobar Meteorol**	**32.45**	**246**	P		**P**	**22 46 10.1**	**+0.6**
QLP	**Quilpie**	**33.37**	**255**	P		**P**	**22 46 17.7**	**+0.3**
TOO	**Toolangi**	**33.95**	**235**	P		**P**	**22 46 22.6**	**+0.6**
TOO				IAmb		IAmb	22 46 23.4	
	comp=Z,16nm,0.7s							
PMG	**Port Moresby**	**34.44**	**286**	P		**P**	**22 46 26.1**	**-0.3**
STKA	**Stephens Creek**	**35.96**	**246**	P		**P**	**22 46 39.0**	**+0.2**
	comp=Z,20nm,0.5s,baz=88,slow=9.9,SNR=51							
STKA				ScP		**ScP**	**22 51 41.8**	**+2.3**
	comp=Z,4.4nm,1.0s,baz=81,slow=8.5,SNR=6.2							
	comp=Z,20nm,0.5s							
STKA	**Stephens Creek**	**35.96**	**246**	P		**P**	**22 46 39.5**	**+0.7**
COEN	**Coen**	**36.40**	**276**	P		**P**	**22 46 43.0**	**+0.4**
COEN				IAmb		IAmb	22 46 44.2	
	comp=Z,10nm,0.8s							
COEN	**Coen**	**36.40**	**276**	P		**P**	**22 46 43.5**	**+0.9**
INKA	**Innaminka**	**36.48**	**253**			**P**	**22 46 43.4**	**+0.3**
INKA				IAmb		IAmb	22 46 45.4	
	comp=Z,13nm,1.0s							
QIS	**Mount Isa**	**38.14**	**264**	P		**P**	**22 46 56.3**	**-0.4**
HTT	**Hallett**	**38.37**	**244**	P		**P**	**22 46 58.6**	**+0.1**
BBOO	**Buckleboo**	**40.71**	**245**	P		**P**	**22 47 16.8**	**-0.4**
BBOO	**Buckleboo**	**40.71**	**245**	P		**P**	**22 47 16.7**	**-0.4**
AS31	**Alice Springs**	**42.91**	**258**	P		**P**	**22 47 34.3**	**-0.2**
ASAR	**Alice Springs**	**42.91**	**258**	P		**P**	**22 47 34.4**	**-0.2**
	comp=Z,29nm,0.8s,baz=88,slow=8.4,SNR=194							
ASAR				ScP		**ScP**	**22 52 09.8**	**+2.9**
	comp=Z,3.2nm,0.9s,baz=108,slow=4.0,SNR=11							
ASAR				S		**S**	**22 53 15.7**	**-2.1**
	comp=Z,8.3nm,1.0s,baz=97,slow=14,SNR=29							
	comp=Z,29nm,0.8s							
WB0	**Warramunga Arr**	**43.09**	**264**	P		**P**	**22 47 35.0**	**-1.0**
WRAB	**Tennant Creek**	**43.10**	**264**	P		**P**	**22 47 35.0**	**-1.1**
WRA	**Warramunga Arr**	**43.11**	**264**	P		**P**	**22 47 35.3**	**-0.9**
	comp=Z,19nm,0.8s,baz=97,slow=7.6,SNR=100							
WRA				ScP		**ScP**	**22 52 10.4**	**+2.7**
	comp=Z,2.9nm,1.1s,baz=90,slow=4.2,SNR=6.1							
WRA				S		**S**	**22 53 16.6**	**-4.1**
	comp=Z,2.4nm,1.0s,baz=98,slow=14,SNR=8.0							
	comp=Z,19nm,0.8s							
WRA	**Warramunga Arr**	**43.11**	**264**	P		**P**	**22 47 35.2**	**-0.9**
JAY	**Jayapura**	**43.31**	**291**	P		**P**	**22 47 37.1**	**-0.7**
	comp=Z,43nm,0.8s							
FORT	**Forrest**	**47.50**	**248**	P		**P**	**22 48 08.9**	**-0.5**
FORT				IAmb		IAmb	22 48 09.8	
	comp=Z,23nm,0.8s							
KNRA	**Kununurra**	**49.27**	**268**			**P**	**22 48 22.3**	**-0.3**
KNRA				IAmb		IAmb	22 48 22.9	
	comp=Z,12nm,1.0s							
FITZ	**Fitzroy Crossi**	**51.54**	**264**	P		**P**	**22 48 39.2**	**+0.1**
SWI	**Sorong**	**52.39**	**287**	P		**P**	**22 48 45.1**	**-0.1**
SOEI	**Soe**	**55.25**	**273**	P		**P**	**22 49 05.7**	**+0.2**
SOEI				IAmb		IAmb	22 49 07.9	
	comp=Z,30nm,0.9s							
SOEI	**Soe**	**55.25**	**273**	P		**P**	**22 49 06.6**	**+1.1**
	comp=Z,40nm,1.0s							
PSA00	**Pilbara Seismi**	**56.06**	**258**	P		**P**	**22 49 09.8**	**-1.0**
PSA00	**Pilbara Seismi**	**56.06**	**258**	P		**P**	**22 49 10.4**	**-0.5**
MEEK	**Meekatharra**	**56.19**	**252**	P		**P**	**22 49 11.0**	**-0.8**
KLBR	**Kellerberrin**	**56.23**	**246**	P		**P**	**22 49 11.6**	**-0.3**
MBWA	**Marble Bar**	**56.25**	**259**	P		**P**	**22 49 11.6**	**-0.6**
MBWA				IAmb		IAmb	22 49 12.5	
	comp=Z,28nm,0.9s							
MBWA	**Marble Bar**	**56.25**	**259**	P		**P**	**22 49 11.4**	**-0.8**
VNDA	**Vanda**	**56.30**	**185**	P		**P**	**22 49 13.8**	**+2.2**
	comp=Z,4.8nm,0.7s,baz=357,slow=6.8,SNR=23							
	comp=Z,4.8nm,0.7s							
VNDA	**Vanda**	**56.30**	**185**	P		**P**	**22 49 13.7**	**+2.1**
BLDU	**Balidu**	**57.25**	**247**	P		**P**	**22 49 18.3**	**-0.6**
PLAI	**Plampang**	**61.59**	**272**	P		**P**	**22 49 47.5**	**-0.4**
CASY	**Casey**	**62.04**	**206**	P		**P**	**22 49 50.1**	**+0.2**
CASY				IAmb		IAmb	22 49 52.0	
	comp=Z,23nm,0.8s							
TOLI2	**Tolitoli**	**62.65**	**283**	P		**P**	**22 49 54.9**	**+0.1**
MPSI	**Mapaga**	**63.12**	**282**	P		**P**	**22 49 57.1**	**-0.7**
	comp=Z,890nmcomp=Z,7.5nm,0.7s							
JAGI	**Jajag, Banyuwa**	**65.07**	**271**	P		**P**	**22 50 08.8**	**-1.4**
JAGI				IAmb		IAmb	22 50 09.2	
	comp=Z,28nm,1.4s							
PCJI	**Pacitan**	**67.93**	**270**	P		**P**	**22 50 27.7**	**-0.1**
QSPA	**South Pole Qui**	**68.06**	**180**	P		**P**	**22 50 32.3**	**+4.4**
	comp=Z,18nm,0.8s,baz=37,slow=1.5,SNR=55							
	comp=Z,18nm,0.8s							
QSPA	**South Pole Qui**	**68.06**	**180**	P		**P**	**22 50 32.1**	**+4.3**
QSPA				IAmb		IAmb	22 50 33.7	
	comp=Z,21nm,0.9s							
MJAR	**Matsushiro Arr**	**70.66**	**325**	P		**P**	**22 50 43.3**	**-0.3**
	comp=Z,7.2nm,0.8s,baz=156,slow=6.1,SNR=12							
	comp=Z,7.2nm,0.8s							
MJAR	**Matsushiro Arr**	**70.66**	**325**	P		**P**	**22 50 42.5**	**-1.1**
ADK	**Adak**	**73.61**	**2**	P		**P**	**22 50 59.5**	**-0.7**
TPUB	**Ta-pu**	**73.71**	**304**	P		**P**	**22 50 59.9**	**-1.6**
UNV	**Unalaska Valle**	**76.36**	**8**	P		**P**	**22 51 14.4**	**-1.1**
PEA0B	**Petropavlovsk-**	**77.40**	**346**	P		**P**	**22 51 20.8**	**-0.4**
PETK	**Petropavlovsk-**	**77.40**	**346**	P		**P**	**22 51 20.9**	**-0.3**
	comp=Z,11nm,0.6s,baz=154,slow=3.2,SNR=15							
	comp=Z,11nm,0.6s							
PETK	**Petropavlovsk-**	**77.40**	**346**	P		**P**	**22 51 20.3**	**-0.8**
SMAI	**San Martin Ant**	**77.67**	**159**	P		**P**	**22 51 23.4**	**+0.9**
BELA	**Belgrano 2**	**78.23**	**173**			**P**	**22 51 25.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**79.48**	**327**	P		**P**	**22 51 33.5**	**+1.0**
	comp=Z,6.5nm,0.9s,baz=103,slow=8.4,SNR=6.1							
	comp=Z,6.5nm,0.9s							
MAW	**Mawson**	**79.70**	**200**	P		**P**	**22 51 34.0**	**+0.7**
	comp=Z,3.9nm,0.6s,baz=146,slow=7.9,SNR=8.7							
	comp=Z,3.9nm,0.6s							
NJ2	**Nanjing**	**79.84**	**311**	*eP*		**P**	**22 51 37.3**	**+2.7**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
PMSA	**Palmer Station**	**80.43**	**157**	P		**P**	**22 51 38.5**	**+1.4**
PMSA				IAmb		IAmb	22 52 04.5	
	comp=Z,52nm,1.4s							
YBH	**Yreka Blue Hor**	**82.29**	**39**	P		**P**	**22 51 48.4**	**+1.3**
PNTR	**Pine Nut**	**82.58**	**43**	P		**P**	**22 51 50.0**	**+1.2**
PNTR				IAmb		IAmb	22 51 51.0	
	comp=Z,18nm,0.9s							
BNX	**BinXian**	**82.91**	**326**	⇓P		**P**	**22 51 50.0**	**+0.1**
BNX				pmax		pmax		
	comp=Z,11nm,0.8s							
NVAR	**Mina Array Bea**	**83.02**	**44**	P		**P**	**22 51 52.3**	**+1.3**
	comp=Z,4.5nm,0.9s,baz=224,slow=8.9,SNR=14							
	comp=Z,4.5nm,0.9s							
NVAR	**Mina Array Bea**	**83.02**	**44**	P		**P**	**22 51 51.6**	**+0.6**
J05D	**Fort Rock, OR**	**84.10**	**39**			**P**	**22 51 57.4**	**+1.2**
J05D				IAmb		IAmb	22 51 59.1	
	comp=Z,18nm,1.0s							
TUC	**Tucson**	**84.94**	**52**			**P**	**22 52 01.2**	**+0.8**
K15K	**Wolf Creek Mou**	**85.22**	**8**	P		**P**	**22 52 01.4**	**+0.5**
K15K				IAmb		IAmb	22 52 04.2	
	comp=Z,16nm,1.1s							
HEH	**HeiHe**	**85.91**	**329**	*eP*		**P**	**22 52 04.5**	**0.0**
HEH				pmax		pmax		
	comp=Z,9.0nm,0.7s							
L19K	**White Mountain**	**86.16**	**11**			**P**	**22 52 05.4**	**0.0**
L19K				IAmb		IAmb	22 52 06.7	
	comp=Z,16nm,1.0s							
TROLL	**Troll, Antarti**	**86.22**	**181**	⇓P		**P**	**22 52 05.5**	**-0.4**
	comp=Z,433nm,0.7s							
SNAA	**Sanae**	**86.54**	**179**	⇓P		**P**	**22 52 06.8**	**-0.6**
	comp=Z,32nm,0.5s							
SNAA	**Sanae**	**86.54**	**179**	P		**P**	**22 52 06.9**	**-0.4**
G08A	**Pilot Rock**	**86.61**	**38**			**P**	**22 52 08.6**	**+0.5**
G08A				IAmb		IAmb	22 52 10.3	
	comp=Z,10nm,1.0s							
VNA3	**Neumayer Olymp**	**86.72**	**177**	⇓P		**P**	**22 52 07.8**	**-0.4**
	comp=Z,9.0nm,0.6s							
GHO	**Glory Hole Cre**	**87.00**	**14**	P		**P**	**22 52 09.2**	**-0.2**
VNA2	**Neumayer--Watz**	**87.15**	**177**	⇓P		**P**	**22 52 09.9**	**-0.2**
	comp=Z,6.7nm,0.6s,baz=182,slow=4.3							
L22K	**Petersville**	**87.27**	**13**	P		**P**	**22 52 09.8**	**-0.8**
L22K				IAmb		IAmb	22 52 10.7	
	comp=Z,11nm,0.8s							
VNA1	**Neumayer--Stat**	**87.38**	**177**	⇓P		**P**	**22 52 11.2**	**0.0**
	comp=Z,7.2nm,0.8s							
XAN	**Xi'an**	**88.01**	**308**	⇓P		**P**	**22 52 16.0**	**+1.2**
XAN				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KTH	**Kantishna Hill**	**88.16**	**12**	P		**P**	**22 52 13.9**	**-0.9**
KTH				IAmb		IAmb	22 52 14.6	
	comp=Z,9.2nm,0.9s							
BARN	**Barnard Glacie**	**88.21**	**17**	P		**P**	**22 52 15.6**	**+0.4**
BARN				IAmb		IAmb	22 52 16.7	
	comp=Z,10nm,0.8s							
PLID	**Pearl Lake**	**88.21**	**39**			**P**	**22 52 15.9**	**+0.2**
PLID				IAmb		IAmb	22 52 18.2	
	comp=Z,9.0nm,1.4s							
MCK	**McKinley**	**88.73**	**13**			**P**	**22 52 16.9**	**-0.5**
MCK				IAmb		IAmb	22 52 18.8	
	comp=Z,8.9nm,0.9s							
TXAR	**Lajitas Array**	**88.97**	**58**	P		**P**	**22 52 20.6**	**+1.2**
	comp=Z,3.1nm,0.9s,baz=212,slow=6.1,SNR=17							
	comp=Z,3.1nm,0.9s							
TXAR	**Lajitas Array**	**88.97**	**58**	P		**P**	**22 52 20.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**89.39**	**290**	P		**P**	**22 52 22.2**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=133,slow=3.0,SNR=16							
	comp=Z,1.7nm,0.5s							
HHC	**Hu-ho-hao-te**	**89.47**	**315**	*eP*		**P**	**22 52 21.5**	**0.0**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.8s							
BCAR	**Beaver Creek A**	**89.83**	**16**	P		**P**	**22 52 22.5**	**-0.1**
IMAR	**Indian Mountai**	**89.86**	**10**	P		**P**	**22 52 22.4**	**-0.2**
ILAR	**Eielson Array**	**90.08**	**13**	P		**P**	**22 52 22.1**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=216,slow=4.8,SNR=20							
	comp=Z,1.7nm,0.8s							
ILAR	**Eielson Array**	**90.08**	**13**			**P**	**22 52 23.1**	**-0.5**
M29M	**Somme Creek**	**90.22**	**18**	P		**P**	**22 52 24.6**	**+0.1**
M29M				IAmb		IAmb	22 52 25.8	
	comp=Z,4.9nm,1.0s							
PZH	**PanZhiHua**	**90.26**	**298**	P		**P**	**22 52 27.3**	**+1.8**
PDAR	**Pinedale Array**	**90.96**	**44**	P		**P**	**22 52 28.4**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=224,slow=4.1,SNR=11							
	comp=Z,2.4nm,1.0s							
PDAR	**Pinedale Array**	**90.96**	**44**	P		**P**	**22 52 27.7**	**-0.8**
DAWY	**Dawson**	**91.27**	**16**			**P**	**22 52 28.9**	**-0.3**
DAWY				IAmb		IAmb	22 52 30.2	
	comp=Z,3.5nm,0.9s							
LZH	**Lanzhou**	**92.65**	**308**	*eP*		**P**	**22 52 37.5**	**+1.2**
LZH				sP		PcP	22 52 44.3	+7.6
LZH				pmax		pmax		
	comp=Z,18nm,1.3s							
BMAR	**Burnt Mountain**	**92.85**	**13**	P		**P**	**22 52 36.6**	**+0.2**
BVAR	**Borovoye Array**	**119.37**	**319**	PKP		**PKPdf**	**22 58 08.4**	**-0.7**
	comp=Z,2.2nm,0.3s,baz=111,slow=2.3,SNR=24							
ARCES	**ARCESS Array B**	**130.15**	**349**	PKP		**PKPdf**	**22 58 28.6**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=116,slow=1.3,SNR=9.8							
KGCAE	**Kacgae**	**130.69**	**207**	PKPdf		**PKPdf**	**22 58 32.0**	**0.0**
GRTLG	**Ghanzi**	**132.42**	**206**	PKPdf		**PKPdf**	**22 58 35.0**	**-0.3**
FINES	**FINESS Array B**	**136.83**	**342**	PKP		**PKiKP**	**22 58 43.2**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=105,slow=1.9,SNR=8.1							
NB2	**NORSAR Subarra**	**140.30**	**352**	PKP		PKPpre	22 58 41.6	
	comp=Z,2.2nm,0.7s,baz=14,slow=4.6							
NOA	**NORSAR Array B**	**140.30**	**352**	PKhKP		PKPpre	22 58 41.3	
	comp=Z,0.4nm,0.5s,baz=50,slow=1.0,SNR=4.5							
HFS	**Hagfors**	**140.80**	**350**	PKhKP		PKPpre	22 58 43.1	
	comp=Z,2.7nm,0.3s,baz=64,slow=2.3,SNR=28							
MBAR	**Mbarara**	**142.99**	**237**			**PKPdf**	**22 58 53.5**	**-1.3**
AKASG	**Malin Array Be**	**143.66**	**329**	PKP		PKPbc	22 58 52.7	-1.0
	comp=Z,5.0nm,0.3s,baz=43,slow=4.3,SNR=40							
AKBB	**Malin Array Si**	**143.66**	**329**			PKPbc	22 58 52.5	-1.2
KIEV	**Kiev**	**143.67**	**329**			PKPbc	22 58 52.5	-1.3
SUW	**Suwalki**	**143.75**	**337**			PKPbc	22 58 53.0	-0.9
ASF	**Jabal al Asfar**	**146.27**	**295**	PKPbc		**PKPbc**	**22 59 03.2**	**+1.1**
	comp=Z,3.3nm,0.7s,baz=105,slow=3.1,SNR=4.3							
EKA	**Eskdalemuir Ar**	**146.61**	**4**	PKPbc		**PKPbc**	**22 59 01.9**	**-0.2**
	comp=Z,7.4nm,0.8s,baz=356,slow=3.1,SNR=8.8							
BR131	**Keskin Array S**	**146.83**	**310**			**PKPbc**	**22 59 02.3**	**-1.3**
BRTR	**Keskin Array B**	**146.83**	**310**	PKPbc		**PKPbc**	**22 59 03.1**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=124,slow=3.9,SNR=14							
BRTR	**Keskin Array B**

TIR Tirane 0.33 109 Pg Pg 22 50 22.5 -0.3
TIR Sg Sg 22 50 26.6 -0.9
TIR AML AML 22 50 28.4
107nm,0.4s
TIR Tirane 0.33 109 *i* Pg Pg 22 50 22.5 -0.3
TIR *i* Sg Sg 22 50 27.8 +0.2
ULC Ulcinj 0.53 343 ⇓*i* Pg Pb 22 50 26.6 +0.1
ULC *i* Sg Sb 22 50 35.3 +1.5
SDA Shkodra 0.60 3 Pg Pb 22 50 27.4 -0.2
SDA Sg Sb 22 50 36.2 +0.6
DRME Dracevica, Mon 0.76 345 *e*Pg Pn 22 50 31.3 -0.2
DRME *e*Sg Sn 22 50 41.9 -0.6
DRME Dracevica, Mon 0.76 345 ⇑*i* Pg Pb 22 50 30.2 -0.2
DRME *i* Sg Sn 22 50 43.4 +0.9
PHP Peshkopia 0.78 72 Pg Pb 22 50 29.6 -1.1
PHP Sg Sg 22 50 41.9 +0.6
PHP AML AML 22 50 47.9
56nm,0.7s
PHP Peshkopia 0.78 72 P Pb 22 50 28.4 -2.3
PHP S Sb 22 50 40.9 0.0
BUM Brajici-Budva 0.94 334 ⇑*i* Pg Pn 22 50 34.4 +0.3
BUM *i* Sg Sn 22 50 48.6 +1.5
VLO Vlora 0.98 178 Pg Pg 22 50 36.3 +1.5
VLO Sg Sn 22 50 52.3 +4.4
VLO AML AML 22 50 56.2
38nm,0.5s
VLO AML AML 22 51 00.3
40nm,0.4s
VLO Vlora 0.98 178 P Pg 22 50 35.5 +0.7
VLO S Sn 22 50 49.8 +1.9
PDG Podgorica 0.99 352 Pg Pn 22 50 34.6 +0.1
PDG Sn Sn 22 50 50.4 +2.3
PDG Podgorica 0.99 352 Pb 22 50 34.4 +0.1
PDG Sn 22 50 48.7 +0.7
PDG Podgorica 0.99 352 ⇑P Pg 22 50 35.5 +0.5
PDG Podgorica 0.99 352 *e*Pg Pg 22 50 35.1 +0.2
PDG *e*Sg Sn 22 50 50.2 +2.1
PDG Podgorica 0.99 352 ⇑*i* Pg Pn 22 50 34.7 +0.1
PDG *i* Sg Sn 22 50 50.5 +2.4
OHR Ohrid 1.07 108 *i* Pg Pb 22 50 35.2 -0.5
OHR *i* Sg Sg 22 50 52.9 +2.3
OHR *e*Lg Lg 22 50 53.0
comp=N,5µm,1.0s
OHR *e*Lg Lg 22 50 55.2
comp=E,5µm,1.0s
CEME Cevo 1.16 340 ⇑*i* Pg Pg 22 50 38.1 -0.2
CEME *i* Sg Sg 22 50 54.2 +0.7
PVY Plav 1.20 18 *e*Pg Pb 22 50 38.0 0.0
PVY *e*Sg Sg 22 50 56.3 +1.5
PVY Plav 1.20 18 ⇑*i* Pg Pn 22 50 37.2 -0.5
PVY *i* Sg Sg 22 50 56.3 +1.5
HCY Herceg Novi 1.22 325 ⇑*i* Pg Pg 22 50 39.9 +0.5
HCY *i* Sg Sg 22 50 55.1 -0.3
KBN Korca 1.31 129 Pn Pg 22 50 41.1 +0.1
KBN Sn Sg 22 51 00.4 +2.4
KBN AML AML 22 51 06.7
comp=E,10nm,0.7s
KBN Korca 1.31 129 P Pg 22 50 40.4 -0.6
KBN S Sg 22 50 59.4 +1.4
NKME Niksic 1.36 344 ⇑*i* Pg Pb 22 50 41.3 +0.6
NKME *i* Sg Sg 22 50 59.3 -0.6
KOME Kolasin 1.40 2 *e*Pg Pg 22 50 42.6 -0.1
KOME *e*Sg Sg 22 51 00.6 -0.4
KOME Kolasin 1.40 2 ⇑*i* Pg Pb 22 50 41.5 +0.2
KOME *i* Sg Sg 22 51 00.1 -0.9
BEY Berane 1.46 13 *e*Pg Pb 22 50 42.7 +0.4
BEY *e*Sg Sg 22 51 02.6 -0.2
IVA Berane 1.46 13 ⇓*i* Pg Pb 22 50 42.4 +0.1
IVA *i* Sg Sg 22 51 03.1 +0.3
TREB Trebinje 1.51 327 *e*Pn Pg 22 50 44.2 -0.5
TREB Trebinje 1.51 327 *e*Pg Pg 22 50 44.3 -0.5
TREB *e*Sg Sg 22 51 04.3 -0.1
SKO Skopje 1.58 70 *i* Pg Pb 22 50 44.4 +0.1
SKO *i* Sg Sg 22 51 06.5 -0.1
NEST Nestorio 1.59 130 Pn Pg 22 50 45.8 -0.7
NEST Nestorio 1.59 130 P Pb 22 50 44.4 -0.2
BRY Bratogost 1.60 335 ⇑*i* Pg Pb 22 50 45.4 +0.6
BRY *i* Sg Sb 22 51 04.5 -0.2
KEK Kerkira 1.76 171 Pg 22 50 48.7 -0.8
UPM Unac-Piva 1.79 347 ⇑*i* Pn Pb 22 50 48.1 0.0
UPM *i* Sn Sb 22 51 09.6 -0.8
KLINJ Klinje 1.83 340 *e*Pn Pb 22 50 49.4 +0.7
SJES Sjenica 1.85 12 *e*Pg Pb 22 50 49.3 +0.3
SJES *e*Sg Sg 22 51 15.0 -0.3
PLE Pljevlja 1.88 359 *e*Pg Pb 22 50 49.8 +0.3
PLE *e*Sg Sg 22 51 15.0 -1.2
PLE Pljevlja 1.88 359 ⇑*i* Pn Pb 22 50 49.7 +0.3
PLE *i* Sn Sb 22 51 12.6 0.0
NOCI Noci 1.92 251 Pn Pn 22 50 48.2 +0.7
NOCI AML AML 22 51 29.4
comp=E,9.0nm,0.5s
IGT Igoumenitsa 2.03 160 Pn Pb 22 50 51.1 -1.0
IGT Igoumenitsa 2.03 160 P Pn 22 50 49.9 +0.9
JAN Janina 2.09 149 P Pb 22 50 51.8 -1.2
KZN Kozani 2.10 122 P Pn 22 50 51.3 +1.3
KZN S Sb 22 51 18.4 -0.5
SELS Selova 2.15 34 *e*Pn Pn 22 50 51.5 +0.8
SELS *e*Sn Sb 22 51 20.0 -0.5
IVAS Ivanjica 2.18 13 *e*Pn Pn 22 50 52.3 +1.2
IVAS *e*Sn Sn 22 51 19.5 +1.8
BARS Barje 2.22 51 *i* Pn Pn 22 50 53.2 +1.6
BARS *i* Sn Sb 22 51 22.3 -0.2
BARS Barje 2.22 51 *e*Pn Pn 22 50 52.2 +0.6
BARS *e*Sn Sn 22 51 19.9 +1.3
GRG Griva 2.28 102 P Sb 22 50 53.0 +0.6
GRG S Sb 22 51 22.4 -1.8
GRG Griva 2.28 102 *i* Pn Pn 22 50 54.0 +1.6
PRMD Pramanda 2.29 146 P Pb 22 50 55.0 -1.6
VAY Valandovo 2.35 92 *i* Pn Pn 22 50 54.6 +1.2
VAY *i* Sn Sn 22 51 23.6 +2.0
VAY *e*Lg Lg 22 51 29.0
comp=E,1µm,1.4s
VAY *e*Lg Lg 22 51 29.2
comp=N,514nm,0.7s
GOCS Kraljevo Serbi 2.35 26 *e*Pn Pn 22 50 54.7 +1.2
GOCS *e*Sn Sb 22 51 24.8 -1.6
BBLS Lazi&#263i 2.41 359 *e*Pn Pn 22 50 56.1 +1.8
BBLS *e*Sn Sb 22 51 26.9 -1.1
BOSS Bosilegrad 2.49 64 *e*Pn Pn 22 50 55.7 +0.5
BOSS *e*Sn Sb 22 51 25.9 +0.8
TETR Tetrakomo, Epi 2.52 146 P Pn 22 50 57.9 +2.1
GRUS Gruza 2.61 21 *e*Pn Pn 22 50 58.3 +1.4
KNT Kendrikon 2.61 95 P Pn 22 50 57.2 +0.2
KNT Kendrikon 2.61 95 *i* Pn Pn 22 50 58.0 +1.1
LIT Litokhoron 2.67 119 P Pn 22 50 58.6 +0.8
LIT Litokhoron 2.67 119 Pn 22 50 59.1 +1.3
THL Klokotos Trika 2.71 133 P Pn 22 50 59.7 +1.4
THL S Sn 22 51 33.6 +2.9
ACER Acerenza 2.73 257 Pn 22 50 59.6 +0.9
TYRN Tyrnavos 2.74 129 P Pn 22 50 59.9 +1.2
BOVS Bovan 2.74 37 ⇑P Pn 22 50 59.8 +1.1
BOVS Bovan 2.74 37 *e*Pn Pn 22 50 59.9 +1.1
BOVS *e*Sn Sn 22 51 32.3 +0.9
TRAN Tran 2.75 59 P Pn 22 51 00.3 +1.4
THE Thessaloniki 2.78 106 P Pn 22 50 59.2 0.0
THE Thessaloniki 2.78 106 *i* Pn Pn 22 51 00.2 +1.0
KKB Krupnik 2.78 81 P Pn 22 50 59.6 +0.3
KKB Krupnik 2.78 81 P Pn 22 51 01.1 +1.8
KKB Krupnik 2.78 81 *i* Pn Pn 22 51 01.2 +1.8
SGRT San Giovanni R 2.80 277 Pn 22 51 00.2 +0.6
TRUS Trudelj 2.86 14 *e*Pn Pn 22 51 01.5 +1.2
HORT Hortiatis 2.89 106 P Pn 22 51 01.3 +0.4
ZAPS Zavoj 2.98 51 *e*Pn Pn 22 51 03.0 +1.0
ZAPS *e*Sn Sn 22 51 40.5 +3.3
SOH Sokhos 3.01 101 P Pn 22 51 02.5 0.0
SOH S Sn 22 51 40.8 +2.7
SOH Sokhos 3.01 101 *i* Pn Pn 22 51 03.9 +1.3
VTS Vitosha 3.05 66 P Pn 22 51 03.4 +0.3
VTS S Sn 22 51 40.8 +1.6
VTS Vitosha 3.05 66 P Pn 22 51 04.6 +1.5
TIP Timpagrande 3.07 223 Pn 22 51 03.0 -0.3
TIP Timpagrande 3.07 223 ⇑P Pn 22 51 02.9 -0.3
TIP Timpagrande 3.07 223 P Pn 22 51 03.0 -0.3
SVIS Svilajnac 3.10 24 *e*Pn Pn 22 51 05.4 +1.8
TEKS Tekeris 3.10 1 *e*Pn Pn 22 51 04.3 +0.7
EVR Evrytania 3.11 144 P Pn 22 51 06.1 +2.2
EVR S Sb 22 51 44.8 -3.3
CUC Castrocucco 3.12 243 Pn 22 51 04.9 +0.8
ZAGS Zajecar 3.13 40 *e*Pn Pn 22 51 04.9 +0.9
PLNA Plana 3.13 70 P Pn 22 51 06.2 +2.0

SRS Serrai 3.14 95 P Pn 22 51 04.2 0.0
SRS Serrai 3.14 95 *i* Pn Pn 22 51 05.5 +1.3
BLSH Balsha 3.17 62 P Pn 22 51 06.8 +2.1
MAKR Makrakomi, Fth 3.19 139 P Pn 22 51 06.8 +2.0
PLG Polygyros 3.21 108 P Pn 22 51 05.4 +0.1
MMB Musomishta 3.23 87 P Pn 22 51 06.8 +1.3
MMB Musomishta 3.23 87 P Pn 22 51 06.7 +1.3
MMB Musomishta 3.23 87 *i* Pn Pn 22 51 07.1 +1.7
BORS2 Bor- Borsko je 3.24 35 *e*Pn Pn 22 51 05.7 +0.1
BORS2 *e*Sn Sn 22 51 43.5 -0.2
PVO Paravola 3.25 150 P Pn 22 51 06.9 +1.2
AVAS Avala Beograd 3.33 13 *e*Pn Pn 22 51 07.5 +0.6
KUBS Kucevo 3.38 28 *e*Pn Pn 22 51 06.5 -1.0
KUBS *e*Sn Sn 22 51 46.6 -0.5
NEO Neokhori 3.59 125 P Pn 22 51 11.1 +0.7
OUR Ouranopolis 3.61 107 P Pn 22 51 11.8 +1.1
AXAR Agios Charalam 3.64 136 P Pn 22 51 13.0 +1.9
BLY Banja Luka 3.69 334 *e*Pn Pn 22 51 14.2 +2.5
MPEP Malo Peshtene 3.70 58 P Pn 22 51 14.0 +2.1
FRGS Fruska Gora 3.71 4 *e*Pn Pn 22 51 12.7 +0.6
MDVR Moldovita 3.72 26 ⇓P Pn 22 51 13.0 +0.9
RLS Riolos of Patr 3.73 155 P Pn 22 51 13.8 +1.5
PUNG Punghina 3.81 41 ⇓P Pn 22 51 14.9 +1.5
KAVA Kavala 3.84 95 P Pn 22 51 15.0 +1.1
ATAL Atalanti 3.88 134 P Pn 22 51 15.9 +1.4
LKR Lokris 3.90 135 P Pn 22 51 15.9 +1.2
DJES Djerdap 3.92 34 ⇓P Pn 22 51 16.6 +1.7
DJES Djerdap 3.92 34 *e*Pn Pn 22 51 16.0 +1.1
RZN Rozhen 3.97 85 P Pn 22 51 16.5 +0.7
RZN Rozhen 3.97 85 P Pn 22 51 17.6 +1.8
RMGR Halanga-Turnu 3.99 35 ⇓P Pn 22 51 18.1 +2.2
PLD Plovdiv 4.02 78 P Pn 22 51 18.3 +2.0
HERR Herculane 4.05 31 ⇑P Pn 22 51 18.0 +1.3
THAS Thassos island 4.07 100 P Pn 22 51 17.5 +0.5
CEL Celeste 4.20 222 Pn 22 51 18.9 0.0
CEL Celeste 4.20 222 P Pn 22 51 18.3 -0.6
SRE Strehaia 4.22 39 ⇓P Pn 22 51 21.0 +1.8
PLVB Pleven 4.29 61 ⇓P Pn 22 51 21.6 +1.6
VILL Villia 4.43 137 P Pn 22 51 23.8 +1.8
VLAD Vladila 4.45 53 ⇓P Pn 22 51 24.2 +2.0
BZS Buzias 4.45 20 ⇑P Pn 22 51 23.1 +0.9
STFN Stefani 4.54 135 P Pn 22 51 24.9 +1.4
KYMI Kymi, Euboea I 4.54 127 P Pn 22 51 25.3 +1.8
RDO Rodhopi 4.59 92 P Pn 22 51 25.3 +1.2
RDO Rodhopi 4.59 92 Pn 22 51 25.4 +1.2
AQU L'Aquila 4.60 283 *e*Pn Pn 22 51 25.7 +1.3
AQU L'Aquila 4.60 283 P Pn 22 51 25.4 +1.0
DIM Dimitrovgrad 4.62 81 P Pn 22 51 26.3 +1.8
GZR Gura Zlata 4.62 30 ⇑P Pn 22 51 25.7 +1.0
LIA Limnos Island 4.63 108 P Pn 22 51 25.3 +0.7
CAMP Campotosto 4.63 286 Pn 22 51 25.2 +0.4
ITM Ithomi 4.68 155 Pn 22 51 26.7 +1.3
SMTH Samothraki Isl 4.71 100 P Pn 22 51 26.3 +0.6
SURR Surduc 4.72 23 ⇓P Pn 22 51 26.6 +0.7
MORH Mrgy, Hungar 4.80 353 *e*Pn Pn 22 51 27.4 +0.5
MORH Mrgy, Hungar 4.80 353 ⇑P Pn 22 51 27.7 +0.8
PTL Penteli 4.81 134 P Pn 22 51 28.2 +1.0
GUMA Gualdo di Mace 4.82 292 Pn 22 51 28.5 +1.2
DION Dionisos Attik 4.83 133 P Pn 22 51 28.6 +1.2
NRCA Norcia 4.91 288 Pn 22 51 29.1 +0.5
VLY Voula,Athens 4.92 136 P Pn 22 51 29.7 +1.1
FDMO Fiordimonte 4.98 291 Pn 22 51 29.7 +0.2
ELND Elena 4.99 71 ⇑P Pn 22 51 31.7 +2.0
SIRR Siria 5.07 18 ⇑P Pn 22 51 31.6 +0.9
BOJS Bojanci 5.07 324 *i* Pn Pn 22 51 32.2 +1.5
BOJS *i* Sn Sn 22 52 26.4 -2.4
LOT Lotru 5.08 37 ⇑P Pn 22 51 32.5 +1.5
DEV Deva 5.09 28 ⇑P Pn 22 51 32.3 +1.3
HUMR Humele 5.09 51 ⇓P Pn 22 51 33.0 +2.0
KARY Karystos 5.14 130 P Pn 22 51 33.1 +1.4
SZH Strazhitsa 5.16 67 P Pn 22 51 33.7 +1.8
CESX Cesi 5.25 285 Pn 22 51 33.8 +0.7
BEHE Becsehely 5.38 340 Pn 22 51 35.5 +0.6
BEHE Becsehely 5.38 340 *e*Pn Pn 22 51 35.7 +0.8
ARR Arges 5.43 42 ⇓P Pn 22 51 37.8 +2.0
MURB Monte Urbino 5.44 292 Pn 22 51 36.7 +0.8
EZN Ezine 5.47 105 ⇓P Pn 22 51 37.8 +1.5
SGRR Singureni 5.54 58 ⇓P Pn 22 51 38.6 +1.5
MTUR Matau 5.56 45 ⇓P Pn 22 51 40.1 +2.5
VAE Valguarnera 5.56 226 P Pb 22 51 45.5 -6.8
comp=N,22nm,0.9s,baz=113,slow=3.4,SNR=7.1
LOZB Loznitsa 5.62 68 ⇑P Pn 22 51 40.2 +1.9
RAZG Razgrad 5.63 66 ⇑P Pn 22 51 40.4 +2.2
VOIR 5.70 44 ⇑P Pn 22 51 41.1 +1.7
VOIR 5.70 44 P Pn 22 51 40.9 +1.5
comp=N,0.2nmcomp=N,45nm,0.8s
RAFF Raffo Rosso 5.78 225 Pn Pn 22 51 39.9 -0.6
MARR Marisel-Cluj 5.85 26 ⇓P Pn 22 51 43.5 +2.0
BORR Bors 5.88 16 ⇑P Pn 22 51 44.0 +2.1
MDB Medias 5.89 36 ⇓P Pn 22 51 43.8 +1.9
TRI Trieste 5.93 318 Pn Pn 22 51 42.6 +0.1
SULR 5.93 55 ⇓P Pn 22 51 45.2 +2.7
CJR Cluj-Napoca 6.05 28 ⇓P Pn 22 51 45.9 +1.8
CBBR Cluj-Babes-Bol 6.08 28 ⇓P Pn 22 51 46.5 +2.0
SOKA Soboth 6.12 330 *e*Pn Pn 22 51 46.4 +1.3
comp=N,9.4nm,0.5s,SNR=7.9
SOKA *e*Sn Sn 22 52 52.4 -2.2
comp=N,41nm,0.7s
OBKA Obir 6.17 327 *i* Pn Pn 22 51 48.1 +2.2
comp=N,4.5nm,0.2s
LTVH Ltavrtes, Hu 6.18 16 ⇑P Pn 22 51 47.7 +1.8
LEHL Lehliu 6.19 58 ⇓P Pn 22 51 48.9 +2.8
SABO M.te Sabotino 6.20 319 Pn 22 51 46.7 +0.4
CICN Ciocanesti 6.21 61 ⇑P Pn 22 51 48.8 +2.5
MLR Muntele Rosu 6.21 47 P Pn 22 51 49.0 +2.5
comp=N,31nm,0.6s,baz=246,slow=2.9,SNR=87
MLR S Sn 22 52 57.3 +0.2
comp=N,29nm,0.5s,baz=148,slow=7.3,SNR=7.2
MLR LR LR 22 55 00.8
comp=N,480nm,18.4s,baz=204,slow=46
MLR Muntele Rosu 6.21 47 Pn 22 51 48.6 +2.1
MLR Muntele Rosu 6.21 47 ⇓P Pn 22 51 49.2 +2.7
MLR Muntele Rosu 6.21 47 P Pn 22 51 48.2 +1.7
comp=N,0.2nmcomp=N,636nmcomp=N,58nm,0.9s
DOPR Dopca 6.23 42 ⇓P Pn 22 51 49.3 +2.6
ISR Istrita 6.34 52 ⇑P Pn 22 51 51.5 +3.3
ISR Istrita 6.34 52 P Pn 22 51 50.4 +2.2
comp=N,0.4nmcomp=N,50nm,0.5s
NEHR Nehoiu 6.37 49 ⇑P Pn 22 51 51.5 +2.9
OSSC Osservatorio P 6.41 292 Pn 22 51 49.3 +0.2
SRO Srobarova 6.41 353 *e*PN Pn 22 51 54.9 +5.8
SRO *e*PG Pg 22 52 14.6 -3.8
SRO *e*SN Sn 22 52 47.5 -14
SRO *e*SG Sg 22 53 37.8 -3.5
ARSA Arzberg 6.44 335 Pn 22 51 50.7 +1.1
ARSA Arzberg 6.44 335 *i* Pn Pn 22 51 51.3 +1.7
comp=N,18nm,0.4s,SNR=4.9
BOSR Bodos 6.45 42 ⇑P Pn 22 51 51.8 +2.2
PSZ Piszkesteto 6.47 3 Pn 22 51 50.5 +0.4
PSZ Piszkesteto 6.47 3 ⇓P Pn 22 51 50.9 +0.8
PGOR Pogoanele 6.50 55 ⇓P Pn 22 51 53.4 +3.1
OZUR 6.52 43 ⇑P Pn 22 51 52.7 +2.0
CASP Castiglione de 6.52 285 Pn Pn 22 51 51.3 +0.6
COVR Voineasa-Covas 6.58 46 ⇓P Pn 22 51 54.1 +2.7
TURR Turia 6.61 44 ⇓P Pn 22 51 53.8 +1.9
RONA Rosalia, Austr 6.64 341 *e*Pn Pn 22 51 54.0 +1.7
comp=N,1.7nm,0.3s
RONA *i* Sn Sn 22 53 09.9 +2.5
comp=N,18nm,0.4s
MYKA Terra Mystica 6.66 323 *i* Pn Pn 22 51 54.5 +2.0
comp=N,5.0nm,0.3s
BALB Balikesir 6.67 103 Pn 22 51 54.2 +1.5
ICOR Ion Corvin 6.69 64 ⇑P Pn 22 51 55.5 +2.5
GRER 6.74 52 ⇑P Pn 22 51 57.6 +4.0
PLOR Plostina 6.82 47 ⇓P Pn 22 51 57.0 +2.1
STAL STALIGIAL 6.84 317 Pn 22 51 55.1 0.0
VRI Vrincioaia 6.88 48 ⇑P Pn 22 51 58.0 +2.5
VRI Vrincioaia 6.88 48 P Pn 22 51 57.4 +1.9
comp=N,0.2nmcomp=N,53nm,0.7s
TEOL Teolo 6.88 307 Pn 22 51 55.7 +0.1
CVDA Cernavoda 6.93 63 ⇓P Pn 22 51 58.7 +2.5
CONA Conrad Observa 6.96 340 *i* Pn Pn 22 51 57.4 +0.6
comp=N,1.8nm,0.4s
ONER Baraj Valea Uz 7.00 43 ⇓P Pn 22 51 55.7 -1.4
TLBR Topalu 7.02 61 ⇑P Pn 22 51 59.4 +2.0
MODS Modra-Piesok 7.09 348 *e*PN Pn 22 52 03.9 +5.4
MODS *e*PG Pg 22 52 32.0 +0.7
MODS *e*SN Sn 22 53 03.0 -16
MODS *e*SG Sg 22 53 59.1 -4.0
TRSU Trosnyk 7.09 19 P Pn 22 52 00.2 +1.7
KBA Koelnbreinsper 7.13 324 *e*Pn Pn 22 52 00.6 +1.5

comp=N,5.7nm,0.4s,SNR=5.9
KBA *e*Sn Sn 22 53 20.3 +0.6
comp=N,17nm,0.4s
MFTR Murfatlar 7.13 65 ⇑P Pn 22 52 01.5 +2.4
BERU Beregovo 7.15 17 P Pn 22 52 00.7 +1.5
KORU Korolevo 7.20 20 P Pn 22 52 01.5 +1.6
TIRR Tirgusor 7.23 62 Pn 22 52 01.6 +1.2
TIRR Tirgusor 7.23 62 ⇑P Pn 22 52 02.1 +1.8
TIRR Tirgusor 7.23 62 P Pn 22 52 01.5 +1.2
comp=N,0.1nmcomp=N,26nm,0.6s
TESR Tescani 7.25 43 ⇑P Pn 22 52 02.4 +1.8
TESR Tescani 7.25 43 P Pn 22 52 02.5 +1.9
comp=N,0.1nmcomp=N,19nm,0.9s
ABTA Abfaltersbach 7.28 319 *i* Pn Pn 22 52 01.7 +0.7
comp=N,7.7nm,0.4s
CTI Castel Tesino 7.28 312 Pn 22 52 01.3 +0.1
BRIU Brid 7.33 19 P Pn 22 52 03.7 +1.9
CFR Carcaliu 7.34 57 ⇓P Pn 22 52 03.6 +1.7
MUKU Mukachevo 7.37 17 P Pn 22 52 04.1 +1.9
GHRR 7.37 49 ⇓P Pn 22 52 03.7 +1.4
GHRR 7.37 49 P Pn 22 52 03.6 +1.3
RAKU Rahkiv 7.38 25 P Pn 22 52 05.5 +3.1
MOA Molln 7.39 332 *i* Pn Pn 22 52 03.9 +1.4
comp=N,3.1nm,0.2s
TPGR Topolog 7.39 60 ⇑P Pn 22 52 01.4 -1.1
BURAR Bucovina Array 7.41 32 Pn 22 52 04.5 +1.6
BURAR Bucovina Array 7.41 32 ⇓P Pn 22 52 06.3 +3.3
BUR08 Bucovina Ar. S 7.42 32 Pn 22 52 05.2 +2.0
UZHM Uzhgorod 7.45 15 P Pn 22 52 04.9 +1.5
BIOA Bad Ischl, Aus 7.49 328 *e*Pn Pn 22 52 06.0 +2.0
comp=N,11nm,0.4s,SNR=8.3
IDI Anoyia 7.49 144 P Pn 22 52 03.0 -1.0
comp=N,2.2nm,0.3s,baz=92,slow=2.9,SNR=13
IDI S Sn 22 53 15.1 -13
comp=N,4.5nm,0.4s,baz=329,slow=18,SNR=2.0
IDI Anoyia 7.49 144 Pn 22 52 03.6 -0.4
JAVC Velka Javorina 7.51 351 *e*PN Pn 22 52 05.7 +1.4
MANT Manisa 7.59 110 Pn 22 52 06.0 +0.4
MEZ Mezhgor'ye 7.62 21 P Pn 22 52 05.7 -0.1
JURR Jurilovca 7.65 61 ⇓P Pn 22 52 07.7 +1.6
LESA Schwarzleotal 7.69 323 *i* Pn Pn 22 52 07.8 +1.1
comp=N,7.4nm,0.3s,SNR=12
LESA *i* Sn Sn 22 53 31.5 -1.9
comp=N,20nm,0.4s
LANS Liptovska Anna 7.70 0 *e*PN Pn 22 52 14.1 +7.3
LANS *e*PG Pb 22 52 43.6 +15
LANS *e*SN Sn 22 53 38.6 +5.1
LANS *e*SG Sb 22 54 20.0 +20
TLCR 7.78 58 ⇑P Pn 22 52 09.8 +1.9
KRUC Moravsky 7.91 345 *e*PN Pn 22 52 10.1 +0.4
KRUC *e*SN Sn 22 53 37.8 -0.8
KSV Kosov 7.93 28 P Pn 22 52 11.7 +1.7
NIE Niedzica 7.99 4 P Pn 22 52 13.4 +2.6
comp=N,11nm,1.5s
MAUC Maruska 8.00 352 *e*PN Pn 22 52 13.8 +2.9
STHS Stebnicka Huta 8.06 8 *e*PN Pn 22 52 14.2 +2.4
STHS *e*PG Pb 22 52 51.0 +16
STHS *e*SN Sn 22 53 23.8 -19
STHS *e*SG Sb 22 54 31.0 +21
WTTA Wattenberg 8.07 319 *i* Pn Pn 22 52 14.5 +2.5
comp=N,15nm,0.6s,SNR=9.6
STNU Starunia 8.09 24 P Pn 22 52 14.1 +2.0
VRAC Vranov 8.11 347 P Pn 22 52 13.1 +0.7
comp=N,2.1nm,0.6s,baz=140,slow=8.3,SNR=4.7
VRAC S Sn 22 53 44.1 +0.6
comp=N,8.8nm,0.8s,baz=136,slow=6.6,SNR=5.4
VRAC LR LR 22 55 48.7
comp=N,181nm,20.6s,baz=166,slow=41
VRAC Vranov 8.11 347 *e*PN Pn 22 52 13.1 +0.7
VRAC *e*SN Sn 22 53 43.1 -0.4
WATA Walderalm 8.14 319 *i* Pn Pn 22 52 13.4 +0.3
comp=N,17nm,0.4s,SNR=8.0
CKRC Cesky Krumlov 8.21 335 *e*PN Pn 22 52 16.2 +2.3
SHIU Shidnytsya 8.24 18 P Pn 22 52 16.1 +1.8
SQTA Sankt Quirin 8.25 317 *i* Pn Pn 22 52 16.4 +1.9
comp=N,10nm,0.4s,SNR=12
MORS Morshin 8.29 21 P Pn 22 52 16.5 +1.6
FETA Feichten 8.38 315 *e*Pn Pn 22 52 17.9 +1.6
comp=N,4.8nm,0.4s
MOTA Moosalm 8.39 317 *i* Pn Pn 22 52 17.8 +1.4
comp=N,22nm,0.7s,SNR=5.6
FUORN Ofenpass-Fuorn 8.39 311 Pn 22 52 17.9 +1.4
MORC Moravsky Berou 8.43 352 *e*PN Pn 22 52 16.0 +0.9
GEC2 GERESS Array S 8.43 333 Pn 22 52 17.3 +0.3
GERES GERESS Array B 8.43 333 P Pn 22 52 18.3 +1.4
comp=N,2.3nm,0.6s,baz=156,slow=14,SNR=11
GERES S Sn 22 53 50.9 -0.7
comp=N,3.6nm,0.3s,baz=154,slow=22,SNR=6.5
KARP Karpathos 8.44 132 Pn Pn 22 52 17.7 +0.6
KARP Karpathos 8.44 132 P Pn 22 52 15.6 -1.4
BORA Eskisehir 8.51 97 Pn 22 52 19.7 +1.7
RETA Reutte 8.66 317 *i* Pn Pn 22 52 21.4 +1.4
comp=N,2.7nm,0.3s
MILM Milestii Mici 8.66 48 ⇑P Pn 22 52 21.4 +1.4
MILM Milestii Mici 8.66 48 *e*P Pn 22 52 21.0 +1.0
comp=N,20nm,0.8s
MILM *e*L L 22 56 12.0
MILM LRM MLR 22 56 28.0
comp=N,400nm,11.5s
KMPD K-Podol'skiy 8.67 33 P Pn 22 52 21.1 +1.1
KMPD P Pn 22 52 21.1 +1.1
DAVOX Davos/Dischmat 8.70 311 P Pn 22 52 23.0 +2.3
comp=N,5.5nm,0.4s,baz=135,slow=18,SNR=23
DAVOX S Sn 22 53 59.0 +0.6
comp=N,9.9nm,0.3s,baz=314,slow=24,SNR=3.8
KIS Kishinev 8.71 47 *e*P Pn 22 52 21.0 +0.3
KIS *e*L L 22 56 09.0
KIS LRM MLR 22 56 35.0
comp=N,300nm,14.5s
KHC Kasperske Hory 8.72 334 Pn Pn 22 52 21.0 +0.2
KHC Kasperske Hory 8.72 334 *e*PN Pn 22 52 22.1 +1.3
KHC *e*SN Sn 22 53 54.7 -3.9
KHC AMS AMS 22 57 10.0
comp=N,400nm,11.5s
KHC Kasperske Hory 8.72 334 P Pn 22 52 24.1 +3.3
comp=N,12nm,0.7s
OJC Ojcow 8.77 1 P Pn 22 52 24.9 +3.4
comp=N,11nm,1.3s
KRLC Kraliky 8.82 349 AMS AMS 22 56 30.0
comp=N,600nm,14.2s
TUE Stuetta 8.85 308 Pn 22 52 23.7 +1.0
TUE Stuetta 8.85 308 P Pn 22 52 23.4 +0.7
comp=N,45nm,0.7s
DAVA Damuels 9.00 314 *i* Pn Pn 22 52 26.3 +1.5
comp=N,17nm,0.7s
DPC Dobruska-Polom 9.16 347 AMS AMS 22 56 40.0
comp=N,600nm,14.6s
SORM Soroca 9.20 40 ⇓P Pn 22 52 29.8 +2.5
OSTC Ostas 9.38 347 AMS AMS 22 56 50.0
comp=N,600nm,17.1s
KEST Kesra 9.75 237 P Pn 22 52 40.4 +5.3
comp=N,4.7nm,0.9s,baz=66,slow=13,SNR=4.7
KEST Kesra 9.75 237 Pn 22 52 36.1 +1.0
SENIN Lac Senin/Sane 10.05 303 Pn 22 52 39.6 +0.4
LUBAR Lubar, Ukraine 10.26 32 P Pn 22 52 44.1 +2.2
RNPP5 Staryi Chortor 10.74 22 P Pn 22 52 50.4 +2.0
CLL Collm 10.81 338 P Pn 22 52 52.7 +3.3
comp=N,12nm,1.4s
RNPP8 Varash 10.82 22 P Pn 22 52 51.7 +2.1
RNPP9 Sopachiv 10.90 22 P Pn 22 52 52.6 +2.0
BRTR Keskin Array B 10.93 94 P Pn 22 52 54.6 +3.4
comp=N,1.3nm,1.0s,baz=270,slow=14,SNR=4.4
ECH Echery 11.03 312 Pn Pn 22 52 52.7 +0.2
AK07 Malin Array Si 11.34 33 P Pn 22 52 57.8 +1.2
AK06 Malin Array Si 11.36 33 P Pn 22 52 58.3 +1.4
AK17 Malin Array Si 11.38 33 P Pn 22 52 58.0 +0.8
AK12 Malin Array Si 11.39 33 P Pn 22 52 58.1 +0.8
AK16 Malin Array Si 11.39 33 P Pn 22 52 59.0 +1.7
AK05 Malin Array Si 11.39 33 P Pn 22 52 59.0 +1.7
AK19 Malin Array Si 11.39 32 P Pn 22 52 59.0 +1.7
AK18 Malin Array Si 11.41 32 P Pn 22 52 59.3 +1.7
AK02 Malin Array Si 11.42 33 P Pn 22 52 58.5 +0.8
AK09 Malin Array Si 11.42 33 P Pn 22 52 59.1 +1.4
AK11 Malin Array Si 11.42 33 P Pn 22 52 59.2 +1.5
AK08 Malin Array Si 11.42 33 P Pn 22 52 58.2 +0.5
AK21 Malin Array Si 11.45 32 P Pn 22 52 59.8 +1.7
AK01 Malin Array Si 11.45 33 P Pn 22 52 58.4 +0.3
KIEV Kiev 11.45 33 P Pn 22 53 00.0 +1.9
comp=N,45nm,1.4s
AK04 Malin Array Si 11.45 33 P Pn 22 52 58.7 +0.5
AKASG Malin Array Be 11.46 33 P Pn 22 52 59.8 +1.5
comp=N,4.5nm,1.0s,baz=220,slow=13,SNR=9.6
AKASG LR LR 22 58 10.5
comp=N,170nm,20.2s,baz=226,slow=42

AKBB	**Malin Array Si**	11.46	33	P		Pn		22 52 59.7	+1.4
AK03	**Malin Array Si**	11.48	33	P		Pn		22 52 59.2	+0.7
MNK	**Minsk**	14.21	20	*i* P		Pn		22 53 36.4	+0.5
	comp=E,18nm,0.9s								
MNK				*i* P		Pn		22 53 36.4	+0.5
	comp=N,5.0nm,0.7s								
MNK				*i* P		Pn		22 53 36.4	+0.5
	comp=Z,11nm,0.9s,baz=206								
MNK				*i* PP		PnPn		22 53 44.3	+0.6
MNK				*i* PPP		PPP		22 53 51.9	
MNK				*i* S		Sn		22 56 13.8	+1.0
MNK				*i* SS		SnSn		22 56 27.4	+2.2
MNK				*i* SSS		SSS		22 56 39.9	
MNK				*i* LQ		LQ		22 57 44.2	
MNK				*i* LR		LR		22 58 48.5	
MNK				*i* LRM		MLR		22 59 31.0	
	comp=E,413nm,20.5s								
MNK				*i* LRM		MLR		22 59 36.2	
	comp=Z,307nm,16.8s								
MNK				*i* LRM		MLR		22 59 46.8	
	comp=N,358nm,21.2s								
NACGM	**Naroch**	14.31	17	*e*P		Pn		22 53 38.5	+1.3
	comp=E,23nm,0.9s								
PABE	**Paberze**	14.37	10	Pn		Pn		22 53 37.9	-0.1
PABE	**Paberze**	14.37	10	*e*P		P		22 53 44.8	-0.1
ISAL	**Salakas**	14.79	15	*e*P		P		22 53 50.6	+1.0
MMAI	**Mount Meron Ar**	15.23	118	P		P		22 53 53.6	-1.0
	comp=E,3.5nm,0.7s,baz=324,slow=11,SNR=4.7								
MMAI				LR		LR		23 01 55.8	
	comp=E,147nm,19.4s,baz=302,slow=46								
KVAR	**Kislovodsk Arr**	17.26	74	LR		LR		23 02 31.3	
	comp=E,72nm,21.1s,baz=216,slow=42								
KBZ	**Khabaz**	17.40	75	P		P		22 54 19.4	+0.8
	comp=E,3.1nm,0.8s,baz=288,slow=8.1,SNR=6.6								
GURO	**Guroymak-BITLI**	17.53	92			P		22 54 20.6	+0.4
VSU	**Vasula**	17.64	13	*e*P		Pn		22 54 20.0	-0.2
OBN	**Obninsk**	17.72	34	LR		LR		23 02 49.0	
	comp=E,143nm,19.0s,baz=180,slow=43								
OBN	**Obninsk**	17.72	34	Pn		Pn		22 54 20.7	-0.6
ESDC	**Sonseca Array**	17.87	272	P		P		22 54 25.5	+1.6
	comp=E,0.6nm,0.7s,baz=69,slow=13,SNR=4.7								
ARBE	**Arbavere**	18.46	11	*e*P		P		22 54 29.6	-0.5
AAL	**Aland**	18.75	1	*e*P		P		22 54 32.7	-0.6
MEF	**Metsahovi**	19.04	8	*e*P		P		22 54 36.9	+0.5
HFS	**Hagfors**	19.04	351	P		P		22 54 35.6	-0.9
	comp=E,3.8nm,0.7s,baz=165,slow=12,SNR=13								
HFS				LR		LR		23 03 41.6	
	comp=E,116nm,18.1s,baz=174,slow=42								
GNI	**Garni**	19.17	86	P		P		22 54 38.5	+0.2
	comp=E,16nm,1.0s,baz=324,slow=3.5,SNR=5.3								
GNI	**Garni**	19.17	86	P		P		22 54 38.7	+0.4
GNI				IAmb		IAmb		22 54 40.8	
	comp=Z,22nm,1.1s								
RAF	**Rauma**	19.65	3	*e*P		P		22 54 43.1	0.0
NC602	**NORSAR Array S**	19.91	349	P		P		22 54 45.0	-1.0
NB2	**NORSAR Subarra**	20.25	348	P		P		22 54 48.7	-1.0
	comp=Z,1.6nm,0.7s,baz=165,slow=11								
NOA	**NORSAR Array B**	20.25	348	P		P		22 54 49.1	-0.6
	comp=Z,1.2nm,0.8s,baz=166,slow=11,SNR=6.0								
	comp=Z,1.2nm,0.8s								
EKA	**Eskdalemuir Ar**	20.32	321	P		P		22 54 51.4	+0.9
	comp=Z,2.7nm,0.6s,baz=113,slow=8.7,SNR=7.2								
	comp=Z,2.7nm,0.6s								
ESK	**Eskdalemuir**	20.34	321	P		P		22 54 50.6	-0.1
ESK				IAmb		IAmb		22 55 13.5	
	comp=Z,26nm,1.1s								
MTE	**Manteigas**	20.40	276	*e*P		P		22 54 52.2	+0.7
FINES	**FINESS Array B**	20.42	9	P		P		22 54 50.4	-1.1
	comp=Z,6.4nm,0.6s,baz=184,slow=11,SNR=30								
FINES				LR		LR		23 04 58.7	
	comp=Z,217nm,18.3s,baz=205,slow=43								
	comp=Z,6.4nm,0.6s								
FIA1	**FINESS Array S**	20.42	9	P		P		22 54 51.0	-0.5
PBAR	**Barrancos**	20.58	270	*e*P		Pn		22 54 56.3	+0.6
MDT	**Midelt**	20.98	254	P		P		22 54 58.2	+0.3
	comp=Z,5.4nm,0.9s,baz=78,slow=11,SNR=7.5								
MDT				LR		LR		23 03 12.1	
	comp=Z,135nm,19.3s,baz=72,slow=37								
	comp=Z,5.4nm,0.9s								
KEF	**Keuruu**	21.00	7	*e*P		P		22 54 57.5	-0.3
PSARD	**Sardoal**	21.04	274	*e*P		P		22 54 56.9	-1.6
MD31	**MD31**	21.06	254	P		P		22 54 58.1	-0.7
PARRA	**Arraiolos**	21.15	272	*e*P		P		22 55 01.7	-6.0
PMTG	**Montargil**	21.22	273	*e*P		P		22 55 05.6	+5.2
VAF	**Ylistaro**	21.71	4	*e*P		P		22 55 05.1	-0.2
TAM	**Tamanrasset**	21.98	216	P		P		22 55 08.9	+0.2
BELG	**Belogornoye**	21.99	51	P		P		22 55 07.5	-1.0
	comp=Z,49nm,1.0s,baz=118,slow=0.8,SNR=17								
	comp=Z,49nm,1.0s								
JOF	**Joensuu**	22.62	14	*e*P		P		22 55 15.2	0.0
ARTI	**Arti**	29.16	46	P		P		22 56 14.2	-1.2
AB31	**Akbulak array**	29.22	61	P		P		22 56 15.2	-0.8
ABKAR	**Akbulak array**	29.22	61	P		P		22 56 15.1	-1.0
UOSS	**Minazif**	34.58	107	P		P		22 57 02.4	-1.0
UOSS				IAmb		IAmb		22 57 22.4	
	comp=Z,14nm,1.4s								
BORK	**Borovoye**	35.69	53			P		22 57 12.3	-0.4
BVAR	**Borovoye Array**	35.73	53	P		P		22 57 13.2	+0.2
	comp=Z,6.4nm,0.7s,baz=282,slow=6.0,SNR=38								
	comp=Z,6.4nm,0.7s								
KKAR	**Karatay Array**	37.34	70	P		P		22 57 26.4	-0.4
CHGR	**Chuyangaron**	37.73	77	P		P		22 57 30.4	0.0
CHGR				IAmb		IAmb		22 57 48.7	
	comp=Z,6.5nm,0.8s								
ARSB	**Arslanbob**	39.61	72	P		P		22 57 45.4	-0.7
ARSB				IAmb		IAmb		22 57 55.8	
	comp=Z,10nm,1.4s								
KURBB	**Kurchatov Arra**	41.02	56	P		P		22 57 56.8	-0.7
	comp=Z,1.7nm,0.9s,baz=280,slow=8.3,SNR=7.6								
	comp=Z,1.7nm,0.9s								
NIL	**Nilore**	42.77	82	P		P		22 58 11.9	-0.2
NIL				IAmb		IAmb		22 58 13.2	
	comp=Z,8.7nm,1.1s								
MAKZ	**Makanchi**	44.15	61	P		P		22 58 22.7	-0.3
MAKZ				IAmb		IAmb		22 58 23.7	
	comp=Z,6.7nm,0.9s								
ZAA0	**Zalesovo Array**	44.18	50	P		P		22 58 22.7	-0.4
ZALV	**Zalesovo Beam**	44.18	50	P		P		22 58 22.6	-0.5
	comp=Z,12nm,0.8s,baz=279,slow=8.3,SNR=40								
	comp=Z,12nm,0.8s								
MKAR	**Makanchi Array**	44.36	61	P		P		22 58 24.4	-0.3
	comp=Z,8.3nm,0.7s,baz=283,slow=6.9,SNR=71								
	comp=Z,8.3nm,0.7s								
FRB	**Frobisher Bay**	52.96	326	LR		LR		23 22 16.1	
	comp=Z,61nm,20.4s,baz=116,slow=36								
GTA	**Gaotai**	59.03	63	*e*P		P		23 00 14.0	-0.5
GTA				pP		pP		23 00 17.8	-2.7
GTA				pmax		pmax			
	comp=Z,7.0nm,0.9s								
SONM	**Songino Array**	59.05	52	P		P		23 00 13.9	-0.6
	comp=Z,5.5nm,1.2s,baz=293,slow=7.9,SNR=15								
	comp=Z,5.5nm,1.2s								
LZDM	**Lanzhou Array**	63.47	64	P		P		23 00 44.6	-0.2
	comp=Z,0.6nm,0.3s,baz=287,slow=10,SNR=3.5								
	comp=Z,0.6nm,0.3s								
LZH	**Lanzhou**	63.50	64	*e*P		P		23 00 45.0	+0.1
LZH				pP		pP		23 00 50.5	-0.4
LZH				pmax		pmax			
	comp=Z,13nm,1.2s								
HHC	**Hu-ho-hao-te**	65.88	56	*e*P		P		23 01 00.0	-0.2
HHC				pmax		pmax			
	comp=Z,9.0nm,0.8s								
XLT	**XiLinHaoTe**	66.86	51	*e*P		P		23 01 06.5	0.0
XLT				pP		sP		23 01 15.5	+0.8
XLT				sP		PcP		23 01 26.0	-9.1
XLT				PcP		pP		23 01 33.5	+21
XLT				pmax		pmax			
	comp=Z,6.0nm,1.1s								
XAN	**Xi'an**	68.08	64	||P	P		23 01 14.3	0.0
XAN				pmax		pmax			
	comp=Z,11nm,1.2s								
CMAR	**Chiang Mai Arr**	70.26	83	P		P		23 01 27.0	-1.0
	comp=Z,1.1nm,0.3s,baz=306,slow=4.2,SNR=4.8								
	comp=Z,1.1nm,0.3s								
CMAR	**Chiang Mai Arr**	70.26	83	P		P		23 01 26.4	-1.6
F26K	**Sheenjek River**	70.47	353	P		P		23 01 29.2	+0.7
F26K				IAmb		IAmb		23 01 35.3	
	comp=Z,2.6nm,1.1s								
G29M	**Pine Creek**	70.60	351	P		P		23 01 29.2	-0.1
G29M				IAmb		IAmb		23 01 30.1	
	comp=Z,4.0nm,0.8s								
BMAR	**Burnt Mountain**	70.77	354	P		P		23 01 29.9	-0.4
ILAR	**Eielson Array**	73.57	354	P		P		23 01 47.4	+0.3
	comp=Z,0.3nm,0.7s,baz=1.9,slow=3.5,SNR=5.3								
	comp=Z,0.3nm,0.7s								
ILAR	**Eielson Array**	73.57	354	P		P		23 01 47.1	0.0
	comp=Z,0.2nm,0.3s,baz=270,slow=2.3,SNR=4.7								
	comp=Z,3.5nm,0.8s								
OBN	**Obninsk**	17.64	34	Pn		Pn		22 55 29.2	-0.6
ESDC	**Sonseca Array**	17.96	272	P		P		22 55 35.8	+1.3
	comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=4.7								
	comp=Z,0.4nm,0.6s								
HFS	**Hagfors**	19.02	351	P		Pn		22 55 46.6	0.0
	comp=Z,0.4nm,0.3s,baz=153,slow=9.7,SNR=4.0								
	comp=Z,2.3nm,0.5s								
GNI	**Garni**	19.08	86	P		Pn		22 55 47.4	-0.3
	comp=Z,0.5nm,0.3s,baz=286,slow=7.0,SNR=5.3								
	comp=Z,14nm,0.9s								
GNI	**Garni**	19.08	86	P		Pn		22 55 47.7	0.0
GNI				IAmb		IAmb		22 55 49.6	
	comp=Z,20nm,1.0s								
NC602	**NORSAR Array S**	19.89	348	P		P		22 55 53.5	-1.8
NC602				IAmb		IAmb		22 55 54.8	
	comp=Z,20nm,1.1s								
NB2	**NORSAR Subarra**	20.23	348	P		P		22 55 57.5	-1.6
	comp=Z,3.7nm,0.9s,baz=154,slow=11								
NOA	**NORSAR Array B**	20.23	348	P		P		22 55 58.0	-1.0
	comp=Z,1.2nm,0.8s,baz=155,slow=11,SNR=3.9								
	comp=Z,1.2nm,0.8s								
EKA	**Eskdalemuir Ar**	20.35	321	P		P		22 56 00.1	-0.3
	comp=Z,3.3nm,0.7s,baz=115,slow=8.2,SNR=4.7								
	comp=Z,3.3nm,0.7s								
FINES	**FINESS Array B**	20.36	9	P		P		22 55 59.8	-0.6
	comp=Z,7.2nm,0.6s,baz=188,slow=10,SNR=8.8								
	comp=Z,7.2nm,0.6s								
FINES	**FINESS Array B**	20.36	9	P		P		22 56 00.0	-0.5
FIA1	**FINESS Array S**	20.36	9	P		P		22 56 00.1	-0.4
MTE	**Manteigas**	20.49	276	*e*P		P		22 56 01.6	-0.6
PBAR	**Barrancos**	20.68	270	*e*P		P		22 56 04.8	+0.7
PBAR				*i* IAmb		IAmb		22 56 24.8	
	comp=Z,35nm,1.8s								
MDT	**Midelt**	21.08	254	P		P		22 56 07.7	-0.9
	comp=Z,5.1nm,0.9s,baz=75,slow=13,SNR=4.3								
	comp=Z,5.1nm,0.9s								
MD31	**MD31**	21.16	254	P		P		22 56 08.1	-1.4
EVO	**Evora**	21.30	271	*e*P		P		22 56 11.4	+0.6
PCVE	**Castro Verde**	21.60	269	*e*P		P		22 56 14.3	+0.3
BELG	**Belogornoye**	21.89	51	P		P		22 56 16.7	-0.3
	comp=Z,82nm,1.2s,baz=235,slow=2.0,SNR=7.2								
	comp=Z,82nm,1.2s								
TAM	**Tamanrasset**	22.07	217	P		P		22 56 18.2	-1.1
TAM				IAmb		IAmb		22 56 20.8	
	comp=Z,10nm,0.8s								
ARTI	**Arti**	29.06	46	P		P		22 57 23.1	-1.0
AB31	**Akbulak array**	29.11	61	P		P		22 57 24.1	-0.5
ABKAR	**Akbulak array**	29.11	61	P		P		22 57 24.1	-0.6
UOSS	**Minazif**	34.50	107	P		P		22 58 12.5	+0.3
UOSS				IAmb		IAmb		22 58 33.5	
	comp=Z,6.9nm,1.1s								
BORK	**Borovoye**	35.59	53	P		P		22 58 21.8	+0.5
BVAR	**Borovoye Array**	35.63	53	P		P		22 58 21.7	0.0
	comp=Z,5.6nm,0.7s,baz=276,slow=5.9,SNR=14								
	comp=Z,5.6nm,0.7s								
KK31	**Karatay Array**	37.24	70	P		P		22 58 36.3	+0.8
KKAR	**Karatay Array**	37.24	70	P		P		22 58 35.4	-0.1
ARSB	**Arslanbob**	39.51	72	P		P		22 58 54.5	-0.3
ARSB				IAmb		IAmb		22 58 57.4	
	comp=Z,10nm,1.3s								
KURBB	**Kurchatov Arra**	40.92	56	P		P		22 59 05.6	-0.5
	comp=Z,1.0nm,0.6s,baz=293,slow=9.7,SNR=6.1								
	comp=Z,1.0nm,0.6s								
MAKZ	**Makanchi**	44.05	61	P		P		22 59 31.6	0.0
MAKZ				IAmb		IAmb		22 59 32.6	
	comp=Z,6.2nm,0.9s								
ZAA0	**Zalesovo Array**	44.08	50			P		22 59 31.4	-0.4
ZAA0				IAmb		IAmb		22 59 32.4	
	comp=Z,11nm,0.9s								
ZALV	**Zalesovo Beam**	44.08	50	P		P		22 59 30.9	-0.9
	comp=Z,6.9nm,0.5s,baz=287,slow=7.6,SNR=15								
	comp=Z,6.9nm,0.5s								
ZALV	**Zalesovo Beam**	44.08	50			P		22 59 31.4	-0.3
MKAR	**Makanchi Array**	44.26	61	P		P		22 59 33.3	-0.1
	comp=Z,9.1nm,0.8s,baz=282,slow=7.0,SNR=26								
	comp=Z,9.1nm,0.6s								
WMQ	**Urumqi**	48.85	63	*e*P		P		23 00 15.0	+5.6
WMQ				pP		sP		23 00 18.3	-1.9
WMQ				pmax		pmax			
	comp=Z,12nm,0.7s								
GTA	**Gaotai**	58.93	63	*e*P		P		23 01 22.8	-0.5
GTA				pP		pP		23 01 27.0	-4.1
GTA				pmax		pmax			
	comp=Z,7.0nm,0.8s								
SONM	**Songino Array**	58.95	52	P		P		23 01 22.8	-0.5
	comp=Z,4.1nm,1.2s,baz=283,slow=7.7,SNR=7.4								
	comp=Z,4.1nm,1.2s								
LZDM	**Lanzhou Array**	63.36	65	P		P		23 01 53.7	+0.1
	comp=Z,1.3nm,0.3s,baz=270,slow=5.9,SNR=4.3								
	comp=Z,1.3nm,0.3s								
LZH	**Lanzhou**	63.39	64	*e*P		P		23 01 54.5	+0.9
LZH				sP		pP		23 02 02.5	+1.0
LZH				pmax		pmax			
	comp=Z,15nm,1.3s								
HHC	**Hu-ho-hao-te**	65.78	56	*e*P		P		23 02 09.5	+0.5
HHC				pmax		pmax			
	comp=Z,14nm,0.7s								
XAN	**Xi'an**	67.98	64	||P	P		23 02 23.3	+0.2
XAN				pmax		pmax			
	comp=Z,10.0nm,1.1s								
C27K	**Jago River**	68.52	354	P		P		23 02 26.1	+0.3
C27K				IAmb		IAmb		23 02 35.6	
	comp=Z,3.4nm,1.0s								
C23K	**Itkillik River**	68.75	356	P		P		23 02 27.6	+0.4
C23K				IAmb		IAmb		23 02 30.8	
	comp=Z,4.7nm,1.1s								
D23K	**Nanushuk River**	69.62	356	P		P		23 02 33.0	+0.3
D23K				IAmb		IAmb		23 02 49.5	
	comp=Z,7.5nm,1.1s								
CMAR	**Chiang Mai Arr**	70.17	83	P		P		23 02 34.7	-2.1
	comp=Z,1.2nm,0.3s,baz=316,slow=9.1,SNR=1.9								
	comp=Z,1.2nm,0.3s								
BMAR	**Burnt Mountain**	70.74	354	P		P		23 02 40.3	+0.8
ILAR	**Eielson Array**	73.54	354	P		P		23 02 54.8	-1.5
	comp=Z,0.4nm,0.7s,baz=0.2,slow=5.3,SNR=4.4								
	comp=Z,0.4nm,0.7s								
ILAR	**Eielson Array**	73.54	354	P		P		23 02 56.2	-0.2
BCAR	**Beaver Creek A**	74.72	351	P		P		23 03 03.6	+0.3
PDAR	**Pinedale Array**	84.41	325	P		P		23 03 56.2	-0.4
	comp=Z,0.6nm,0.7s,baz=35,slow=5.4,SNR=5.1								
	comp=Z,0.6nm,0.7s								
PDAR	**Pinedale Array**	84.41	325	P		P		23 03 55.9	-0.7
TXAR	**Lajitas Array**	92.17	313	P		P		23 04 33.4	-0.4
	comp=Z,0.8nm,0.8s,baz=93,slow=5.0,SNR=4.2								
	comp=Z,0.8nm,0.8s								
ASAR	**Alice Springs**	123.17	93	PKP		PKPdf		23 10 19.4	-1.3
	comp=Z,0.7nm,0.7s,baz=330,slow=1.0,SNR=6.7								

NJ2	**Nanjing**	75.88	60	*e*P		P		23 02 01.0	0.0
NJ2				pmax		pmax			
	comp=Z,5.0nm,0.5s								
PDAR	**Pinedale Array**	84.39	325	P		P		23 02 47.0	-0.1
	comp=Z,0.6nm,0.7s,baz=40,slow=5.8,SNR=6.0								
	comp=Z,0.6nm,0.7s								
PDAR	**Pinedale Array**	84.39	325	P		P		23 02 46.6	-0.4
ROSC	**El Rosal**	89.66	276	LR		LR		23 39 16.7	
	comp=Z,53nm,18.1s,baz=65,slow=33								
TXAR	**Lajitas Array**	92.13	313	P		P		23 03 25.5	+1.3
	comp=Z,0.5nm,0.8s,baz=75,slow=5.1,SNR=2.4								
	comp=Z,0.5nm,0.8s								
WRA	**Warramunga Arr**	121.41	90	PKP		PKPdf		23 09 05.1	-2.9
	comp=Z,0.2nm,0.7s,baz=343,slow=0.8,SNR=1.8								
ASAR	**Alice Springs**	123.27	93	PKP		PKPdf		23 09 10.5	-1.0
	comp=Z,0.4nm,0.6s,baz=342,slow=3.1,SNR=5.0								

NAO ***27*** *22:51:12.7, 40.67N×20.08E, h10km, MB3.7*
THE ***27*** *22:51:24.9, 42.9N±12.1×1.9E±1.4, h1km±29km, M3.9/12, MLh3.9/12*
NEIC ***27*** *22:51:24.2±1.6, 41.47N±0.04×19.46E±0.07, h10km±1km, mb4.4/19, Error ellipse: s-maj=8.7km s-min=5.9km az=286.0*
TIR ***27*** *22:51:26.1, 41.49N×19.56E, h15km±4km, Ml4.2/5*
PDG ***27*** *22:51:28.0±0.2, 41.58N×19.53E, h15km, MD4.3/12, ML4.2/13, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
IDC ***27*** *22:51:28.4±2.3, 41.51N×19.55E, h49km±23km, mb3.9/15, mbtmp4.1/22, ML3.7/7, Error ellipse: s-maj=22.9km s-min=14.2km az=172.0*

ISC 27 22:51:26.1±0.9, **41.49N**±0.02×**19.58E**±0.03, **h25**km±7km, **n132**,σ1§49/153, **mb4.5**/25, **5C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.26**	**124**	Pg		**Pb**		**22 51 31.1**	**-1.4**
TIR				Sg		**Sb**		**22 51 36.1**	**-0.8**
TIR				AML		AML		22 51 37.2	
	168nm,0.4s								
ULC	**Ulcinj**	**0.53**	**332**	||*i* Pg		**Pb**	**22 51 35.7**	**-1.1**
ULC				*i* Sg			**Sb**	**22 51 43.9**	**-0.3**
SDA	**Shkodra**	**0.56**	**354**	Pg			**Pn**	**22 51 37.9**	**-0.6**
SDA				Sg			**Sn**	**22 51 45.8**	**-1.1**
PHP	**Peshkopia**	**0.68**	**73**	Pg			**Pb**	**22 51 38.5**	**-0.8**
PHP				Sg			**Sn**	**22 51 50.4**	**+0.5**
PHP				AML			AML	22 51 56.7	
	44nm,0.8s								
PHP	**Peshkopia**	**0.68**	**73**	P			**Pb**	**22 51 37.9**	**-1.3**
PHP				S			**Sn**	**22 51 50.0**	**+0.1**
DRME	**Dracevica, Mon**	**0.75**	**337**	⇑*i* Pg			**Pn**	**22 51 40.7**	**-0.4**
DRME				*i* Sg			**Sn**	**22 51 50.7**	**-1.0**
BUM	**Brajici-Budva**	**0.95**	**328**	||*i* Pg		**Pn**	**22 51 44.0**	**0.0**
BUM				*i* Sg			**Sn**	**22 51 57.8**	**+1.0**
PDG	**Podgorica**	**0.97**	**346**	Pg			**Pn**	**22 51 44.3**	**+0.2**
PDG				Sg			**Sn**	**22 51 58.9**	**+1.9**
PDG	**Podgorica**	**0.97**	**346**	Pg			**Pn**	**22 51 44.0**	**-0.1**
PDG	**Podgorica**	**0.97**	**346**	||*i* Pg		**Pn**	**22 51 44.3**	**+0.2**
PDG				*i* Sg			**Sn**	**22 51 58.4**	**+1.4**
VLO	**Vlora**	**1.03**	**184**	Pg			**Pn**	**22 51 44.5**	**-0.3**
VLO				Sg			**Sn**	**22 52 00.3**	**+1.9**
VLO				AML			AML	22 52 06.8	
	64nm,0.3s								
VLO				AML			AML	22 52 08.3	
	72nm,0.4s								
VLO	**Vlora**	**1.03**	**184**	P			**Pb**	**22 51 45.5**	**+0.4**
VLO				S			**Sn**	**22 52 00.1**	**+1.6**
PVY	**Plav**	**1.14**	**14**	||*i* Pg		**Pb**	**22 51 47.5**	**+0.4**
PVY				*i* Sg			**Sn**	**22 52 05.0**	**+3.6**
CEME	**Cevo**	**1.16**	**335**	||*i* Pg		**Pb**	**22 51 47.9**	**+0.4**
CEME				*i* Sg			**Sb**	**22 52 04.8**	**+2.6**
HCY	**Herceg Novi**	**1.25**	**320**	||*i* Pg		**Pb**	**22 51 49.0**	**0.0**
HCY				*i* Sg			**Sb**	**22 52 07.2**	**+2.5**
KBN	**Korca**	**1.26**	**133**	Sg			**Sb**	**22 52 08.0**	**+2.9**
KBN				AML			AML	22 52 11.6	
	17nm,0.5s								
KBN	**Korca**	**1.26**	**133**	P			**Pb**	**22 51 50.4**	**+1.2**
NKME	**Niksic**	**1.35**	**340**	⇑*i* Pg			**Pb**	**22 51 51.1**	**+0.3**
NKME				*i* Sg			**Sb**	**22 52 11.0**	**+3.3**
KOME	**Kolasin**	**1.36**	**358**	⇑*i* Pg			**Pb**	**22 51 51.3**	**+0.4**
KOME				*i* Sg			**Sb**	**22 52 11.3**	**+3.5**
IVA	**Berane**	**1.40**	**10**	⇑*i* Pg			**Pb**	**22 51 51.8**	**+0.3**
IVA				*i* Sg			**Sb**	**22 52 12.5**	**+3.5**
NEST	**Nestorio**	**1.55**	**134**	Pn			**Pb**	**22 51 53.5**	**-0.6**
NEST				Sn			**Sb**	**22 52 16.0**	**+2.6**
NEST				AML			AML	22 52 19.8	
	7.9nm,0.6s								
NEST	**Nestorio**	**1.55**	**134**	P			**Pb**	**22 51 54.7**	**+0.5**
NEST				S			**Sb**	**22 52 16.9**	**+3.5**
BRY	**Bratogost**	**1.60**	**332**	*e*Pg			**Pb**	**22 51 56.1**	**+1.0**
BRY				*i* Sg			**Sb**	**22 52 17.4**	**+2.4**
UPM	**Unac-Piva**	**1.78**	**344**	*e*Pn			**Pb**	**22 52 58.0**	**-0.1**
UPM				*i* Sn			**Sb**	**22 52 21.9**	**+1.8**
KEK	**Kerkira**	**1.79**	**175**	Pn			**Pb**	**22 51 58.9**	**+0.8**
PLE	**Pljevlja**	**1.84**	**356**	||*i* Pn		**Pb**	**22 51 59.2**	**+0.1**
PLE				*i* Sn			**Sb**	**22 52 23.6**	**+1.9**
IGT	**Igoumenitsa**	**2.04**	**163**	Pn			**Pb**	**22 52 06.6**	**+4.2**
IGT	**Igoumenitsa**	**2.04**	**163**	P			**Pn**	**22 52 00.5**	**+1.6**
KZN	**Kozani**	**2.04**	**125**	P			**Pn**	**22 52 00.7**	**+1.8**
KZN				S			**Sb**

*THE **27** 23:02:50.2,42°N±4″×2°0E±°, h4km±17km, M3.2/35, MLh3.2/35*
*BEO **27** 23:02:50.8±0.6, 41°.50N×19°.48E, h20km±3km, ML3.2/10*
*IDC **27** 23:02:52.0±11.0, 41°.98N×20°.17E, h0km, mb4.0/4, mbtmp4.1/5, ML3.3/1, MS2.6/2, Error ellipse: s-maj=189.9km s-min=63.7km az=49.0*
*PRU **27** 23:02:52.6, 41°.40N×19°.13E, h10km, M4.2*
ISC 27 23:02:49.2±0.9, 41°.49N±0″.02×19°.49E±0″.02, h15km±7km, n197, σ1°44/241, mb4.1/5, 19C-19D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
MORF				*i* IAML		23 03 25.7	
MORF				*i* IAML		23 03 26.6	
PSBE	**So Bento**	**5.44**	**66**	*eP*	**Pn**	**23 02 24.3**	**+2.6**
PSBE				*eS*	**Sn**	**23 03 24.6**	**+0.2**
MOE	**Montemor**	**5.53**	**77**	*eP*	**Pn**	**23 02 24.9**	**+1.9**
MOE				*eS*	**Sn**	**23 03 25.9**	**-0.7**
MOE				*i* IAML		23 03 27.8	
MOE				*i* IAML		23 03 34.0	
MOE				*i* IAML		23 03 46.8	
MESJ	**Messejana**	**5.57**	**84**	*eP*	**Pn**	**23 02 25.9**	**+2.5**
MESJ				*eS*	**Sn**	**23 03 27.0**	**-0.6**
MESJ				IAML		23 03 29.9	
	comp=E,1.3nm,0.1s						
MESJ	**Messejana**	**5.57**	**84**	*eP*	**Pn**	**23 02 25.9**	**+2.5**
MESJ				*eS*	**Sn**	**23 03 26.8**	**-0.8**
MESJ				*i* IAML		23 03 29.3	
MESJ				*i* IAML		23 03 29.3	
MESJ				*i* IAML		23 03 47.8	
PCVE	**Castro Verde**	**5.71**	**86**	Pn	**Pn**	**23 02 26.3**	**+0.9**
PCVE				Sn	**Sn**	**23 03 28.9**	**-2.2**
PCVE	**Castro Verde**	**5.71**	**86**	*eP*	**Pn**	**23 02 26.9**	**+1.5**
PCVE				*eS*	**Sn**	**23 03 30.1**	**-1.0**
PCVE				*i* IAML		23 03 34.1	
PCVE				*i* IAML		23 03 34.3	
PCVE				*i* IAML		23 03 38.4	
PMTG	**Montargil**	**5.74**	**72**	*eP*	**Pn**	**23 02 28.2**	**+2.5**
PMTG				*eS*	**Sn**	**23 03 31.3**	**-0.3**
PMTG				*i* IAML		23 03 34.5	
PMTG				*i* IAML		23 03 37.3	
PMTG				*i* IAML		23 03 41.4	
EVO	**Evora**	**5.79**	**77**	Pn	**Pn**	**23 02 27.8**	**+1.3**
EVO				Sn	**Sn**	**23 03 30.5**	**-2.6**
EVO	**Evora**	**5.79**	**77**	*eP*	**Pn**	**23 02 29.0**	**+2.5**
EVO				*eS*	**Sn**	**23 03 32.4**	**-0.7**
EVO				*i* IAML		23 03 36.7	
EVO				*i* IAML		23 03 38.1	
EVO				*i* IAML		23 03 39.7	
PBDV	**Barranco-do-Ve**	**5.82**	**90**	Pn	**Pn**	**23 02 28.5**	**+1.7**
PBDV				Sn	**Sn**	**23 03 32.8**	**-0.8**
PBDV	**Barranco-do-Ve**	**5.82**	**90**	*eP*	**Pn**	**23 02 29.5**	**+2.7**
PBDV				*eS*	**Sn**	**23 03 33.4**	**-0.3**
PBDV				*i* IAML		23 03 37.2	
PBDV				*i* IAML		23 03 38.3	
PBDV				*i* IAML		23 03 43.5	
PARRA	**Arraiolos**	**5.82**	**74**	*eP*	**Pb**	**23 02 28.3**	**-0.8**
PARRA				*eS*	**Sb**	**23 03 32.8**	**+2.8**
PARRA				*i* IAML		23 03 35.4	
PARRA				*i* IAML		23 03 40.2	
PARRA				*i* IAML		23 03 41.2	
PCAS	**Casmilo, Conde**	**5.86**	**62**	*eP*	**Pn**	**23 02 29.4**	**+2.0**
PCAS				*eS*	**Sn**	**23 03 33.7**	**-0.8**
PBEJ	**Beja**	**5.86**	**82**	*eS*	**Sn**	**23 03 33.3**	**-1.4**
PSARD	**Sardoal**	**5.93**	**67**	*eP*	**Pn**	**23 02 30.9**	**+2.5**
PSARD				*eS*	**Sn**	**23 03 36.1**	**-0.3**
PSARD				*i* IAML		23 03 39.9	
PSARD				*i* IAML		23 03 41.4	
PSARD				*i* IAML		23 03 41.8	
PVAQ	**Vaqueiros**	**5.98**	**88**	*eP*	**Pn**	**23 02 32.5**	**+3.5**
PVAQ				*eS*	**Sn**	**23 03 36.1**	**-1.4**
PVAQ				*i* IAML		23 03 40.1	
PVAQ				*i* IAML		23 03 40.5	
PVAQ				*i* IAML		23 03 43.2	
PVAQ	**Vaqueiros**	**5.98**	**88**	P	**Pn**	**23 02 29.7**	**+0.7**
PVAQ	**Vaqueiros**	**5.98**	**88**	S	**Sn**	**23 03 34.2**	**-3.3**
EGRO	**El Granado**	**6.16**	**87**	Pn	**Pn**	**23 02 33.9**	**+2.4**
EGRO				Sn	**Sn**	**23 03 39.6**	**-2.4**
EGRO	**El Granado**	**6.16**	**87**	Pn	**Pn**	**23 02 33.9**	**+2.4**
EGRO				⇑*i*Vmb_VC		23 02 37.4	
	comp=E,118nm,SNR=1.0						
EGRO				Sn	**Sn**	**23 03 42.7**	**+0.8**
PESTR	**Estremoz**	**6.18**	**75**	*eS*	**Sn**	**23 03 41.9**	**-0.6**
PESTR	**Estremoz**	**6.18**	**75**	P	**Pn**	**23 02 30.8**	**-1.0**
PESTR	**Estremoz**	**6.18**	**75**	S	**Sn**	**23 03 39.5**	**-3.0**
PMRV	**Marv??o**	**6.45**	**70**	*eP*	**Pn**	**23 02 37.5**	**+2.0**
PMRV				*eS*	**Sn**	**23 03 48.1**	**-1.2**
PMRV				*i* IAML		23 03 48.3	
PMRV				*i* IAML		23 03 49.3	
PMRV				*i* IAML		23 03 54.8	
PCBR	**Castelo Branco**	**6.51**	**66**	*eP*	**Pn**	**23 02 38.5**	**+2.1**
PCBR				*eS*	**Sn**	**23 03 49.2**	**-1.5**
PCBR				*i* IAML		23 03 54.5	
PCBR				*i* IAML		23 03 54.6	
PBAR	**Barrancos**	**6.52**	**81**	Pn	**Pn**	**23 02 38.5**	**+2.1**
PBAR				Sn	**Sn**	**23 03 48.8**	**-2.1**
PBAR	**Barrancos**	**6.52**	**81**	*eP*	**Pn**	**23 02 38.8**	**+2.3**
PBAR				*eS*	**Sn**	**23 03 48.9**	**-2.1**
PBAR				*i* IAML		23 03 51.8	
PBAR				*i* IAML		23 03 53.0	
PBAR				*i* IAML		23 03 54.0	
PVIS	**Viseu**	**6.56**	**58**	*eS*	**Sn**	**23 03 50.1**	**-1.8**
EBAD	**Badajoz**	**6.60**	**76**	Pn	**Pn**	**23 02 39.3**	**+1.7**
EBAD				Sn	**Sn**	**23 03 51.1**	**-1.8**
EBAD	**Badajoz**	**6.60**	**76**	Pn	**Pn**	**23 02 39.3**	**+1.7**
EBAD				⇑*i*Vmb_VC		23 02 40.3	
	comp=E,100nm,SNR=0.9						
EBAD				Sn	**Sn**	**23 03 50.3**	**-2.6**
EMIN	**Mina Concepcio**	**6.80**	**85**	⇑*i*Vmb_VC		23 02 42.8	
	comp=E,135nm,SNR=1.5						
EMIN				Sn	**Sn**	**23 03 57.1**	**-0.7**
PVRL	**Vila Real**	**6.95**	**55**	*eS*	**Sn**	**23 04 00.5**	**-1.0**
POLO	**Lamas de Olo**	**6.95**	**54**	*eS*	**Sn**	**23 03 58.8**	**-2.8**
PCAB	**Cabril**	**6.99**	**50**	*eS*	**Sn**	**23 04 00.0**	**-2.4**
ELOB	**Lobios**	**7.06**	**49**	Pn	**Pn**	**23 02 44.4**	**+0.4**
ELOB				⇑*i*Vmb_VC		23 02 44.7	
	comp=E,310nm,SNR=1.1						
ELOB				Sn	**Sn**	**23 04 00.1**	**-4.2**
MVO	**Moncorvo**	**7.35**	**57**	*eP*	**Pn**	**23 02 49.4**	**+1.5**
MVO				*eS*	**Sn**	**23 04 08.6**	**-2.8**
MVO				*i* IAML		23 04 09.9	
MVO				*i* IAML		23 04 10.7	
MVO				*i* IAML		23 04 20.2	
ESPR	**Espera**	**7.51**	**92**	⇑*i*Vmb_VC		23 02 55.5	
	comp=E,93nm,SNR=1.0						
ESPR				Sn	**Sn**	**23 04 14.5**	**-0.7**
EPLA	**Plasencia**	**7.60**	**67**	Pn	**Pn**	**23 02 52.9**	**+1.6**
EPLA				⇑*i*Vmb_VC		23 02 54.5	
	comp=E,133nm,SNR=1.0						
EPLA				Sn	**Sn**	**23 04 15.7**	**-1.9**
EAGO	**Agolada(Pontev**	**7.63**	**44**	Pn	**Pn**	**23 02 51.2**	**-0.5**
EAGO				⇑*i*Vmb_VC		23 02 55.5	
	comp=E,328nm,SNR=1.2						
EAGO				Sn	**Sn**	**23 04 12.1**	**-6.1**
ECAB	**El Cabril**	**7.79**	**83**	Pn	**Pn**	**23 02 55.7**	**+1.7**
ECAB				Sn	**Sn**	**23 04 16.6**	**-5.7**
ECAB	**El Cabril**	**7.79**	**83**	Pn	**Pn**	**23 02 55.9**	**+1.9**
ECAB				⇑*i*Vmb_VC		23 02 58.4	
	comp=E,104nm,SNR=1.1						
ECAB				Sn	**Sn**	**23 04 19.7**	**-2.5**
PBRG	**Braganca**	**7.85**	**54**	*eP*	**Pn**	**23 02 56.8**	**+2.0**
ECAL	**Calabor**	**7.92**	**53**	Pn	**Pn**	**23 02 57.2**	**+1.5**
ECAL	**Calabor**	**7.92**	**53**	Pn	**Pn**	**23 02 57.6**	**+1.8**
ECAL				⇑*i*Vmb_VC		23 02 58.1	
	comp=E,230nm,SNR=1.2						
EJUZ	**Juzbado, Salam**	**8.09**	**61**	Sn	**Sn**	**23 04 30.2**	**+0.5**
CDLV	**Cueva Verdes**	**8.42**	**169**	Sn	**Sn**	**23 04 39.1**	**+1.4**
EFAM	**Famara**	**8.44**	**170**	Sn	**Sn**	**23 04 38.3**	**0.0**
EADA	**Adamuz**	**8.46**	**82**	Pn	**Pn**	**23 03 04.9**	**+1.8**
EADA				⇑*i*Vmb_VC		23 03 06.1	
	comp=E,128nm,SNR=1.2						
EADA				Sn	**Sn**	**23 04 36.4**	**-2.2**
PAB	**San Pablo**	**8.78**	**73**	Pn	**Pn**	**23 03 08.6**	**+1.1**
PAB				⇑*i*Vmb_VC		23 03 09.0	
	comp=E,74nm,SNR=0.9						
PAB				Sn	**Sn**	**23 04 45.0**	**-1.6**
TIO	**Tiouine**	**9.28**	**132**	P	**Pn**	**23 03 15.4**	**+0.9**
TIO	**Tiouine**	**9.28**	**132**	S	**Sn**	**23 04 57.2**	**-1.8**
MD31	**MD31**	**9.72**	**115**	P	**Pn**	**23 03 20.3**	**-0.2**
MD31	**MD31**	**9.72**	**115**	S	**Sn**	**23 05 05.9**	**-3.9**
MDT	**Midelt**	**9.86**	**115**	P	**Pn**	**23 03 20.6**	**-1.8**
MDT	**Midelt**	**9.86**	**115**	S	**Sn**	**23 05 08.9**	**-4.3**
TIR	**Tirane**	**0.32**	**117**	Pg	**Pg**	**23 02 55.5**	**-0.2**
TIR				Sg	**Sg**	**23 02 59.4**	**-0.8**
TIR				AML	AML	23 02 59.8	
	43nm,0.4s						
TIR	**Tirane**	**0.32**	**117**	⇓*i*Pg	**Pg**	**23 02 55.6**	**-0.1**
TIR				*i* Sg	**Sg**	**23 03 00.8**	**+0.6**
ULC	**Ulcinj**	**0.51**	**339**	⇓*i*Pg	**Pb**	**23 02 59.9**	**0.0**
ULC				*i* Sg	**Sn**	**23 03 10.0**	**-0.5**
SDA	**Shkodra**	**0.56**	**1**	Pg	**Pb**	**23 03 01.2**	**+0.4**
SDA				Sg	**Sb**	**23 03 08.9**	**+0.3**
DRME	**Dracevica, Mon**	**0.73**	**342**	*eP*g	**Pn**	**23 03 04.7**	**-0.4**
DRME				*eS*g	**Sn**	**23 03 16.3**	**+0.3**
DRME	**Dracevica, Mon**	**0.73**	**342**	⇑*i*Pg	**Pn**	**23 03 04.4**	**-0.7**
DRME				*i* Sg	**Sn**	**23 03 17.3**	**+1.3**
PHP	**Peshkopia**	**0.74**	**74**	Pg	**Pg**	**23 03 02.9**	**-0.7**
PHP				Sg	**Sb**	**23 03 14.7**	**+1.0**
PHP				AML	AML	23 03 20.9	
	9.4nm,0.8s						
PHP	**Peshkopia**	**0.74**	**74**	P	**Pg**	**23 03 02.1**	**-1.5**
PHP				S	**Sg**	**23 03 12.9**	**-0.5**
BUM	**Brajici-Budva**	**0.93**	**331**	⇑*i*Pg	**Pn**	**23 03 07.8**	**0.0**
BUM				*i* Sg	**Sn**	**23 03 23.5**	**+2.7**
PDG	**Podgorica**	**0.96**	**350**	Pg	**Pn**	**23 03 08.5**	**+0.4**
PDG				Sg	**Sn**	**23 03 22.6**	**+1.2**
PDG	**Podgorica**	**0.96**	**350**		**Pn**	**23 03 08.3**	**+0.2**
PDG				Sg	**Sn**	**23 03 22.8**	**+1.3**
PDG	**Podgorica**	**0.96**	**350**	*eP*g	**Pn**	**23 03 08.1**	**0.0**
PDG				*eS*g	**Sn**	**23 03 21.8**	**+0.3**
PDG	**Podgorica**	**0.96**	**350**	⇓*i*Pg	**Pn**	**23 03 08.4**	**+0.3**
PDG				*i* Sg	**Sn**	**23 03 24.1**	**+2.6**
VLO	**Vlora**	**1.02**	**180**	Pg	**Pg**	**23 03 09.2**	**+0.3**
VLO				Sg	**Sb**	**23 03 22.4**	**+0.7**
VLO				AML	AML	23 03 29.3	
	18nm,0.5s						
VLO	**Vlora**	**1.02**	**180**	P	**Pn**	**23 03 09.6**	**+0.6**
VLO				S	**Sn**	**23 03 25.3**	**+2.3**
OHR	**Ohrid**	**1.06**	**111**	*i* Pg	**Pb**	**23 03 08.6**	**-0.6**
OHR				*i* Sg	**Sn**	**23 03 24.8**	**+0.8**
OHR				*e*Lg	Lg	23 03 25.6	
	comp=N,840nm,0.7s						
OHR				*e*Lg	Lg	23 03 26.9	
	comp=E,1μm,1.0s						
CEME	**Cevo**	**1.14**	**338**	*e*Pg	**Pg**	**23 03 11.4**	**+0.2**
CEME				*i* Sg	**Sn**	**23 03 28.8**	**+2.7**
PVY	**Plav**	**1.16**	**17**	*e*Pg	**Pb**	**23 03 10.7**	**-0.3**
PVY				*e*Sg	**Sn**	**23 03 29.0**	**+2.3**
PVY	**Plav**	**1.16**	**17**	⇓*i*Pg	**Pg**	**23 03 11.4**	**-0.2**
PVY				*i* Sg	**Sn**	**23 03 29.6**	**+2.9**
HCY	**Herceg Novi**	**1.21**	**323**	⇑*i*Pg	**Pg**	**23 03 12.3**	**-0.3**
HCY				*i* Sg	**Sg**	**23 03 30.2**	**+1.8**
KBN	**Korca**	**1.31**	**131**	Pn	**Pg**	**23 03 14.8**	**+0.5**
KBN				Sn	**Sg**	**23 03 32.6**	**+1.2**
KBN				AML	AML	23 03 40.4	
	comp=E,4.5nm,0.5s						
KBN	**Korca**	**1.31**	**131**	P	**Pg**	**23 03 14.4**	**0.0**
NKME	**Niksic**	**1.34**	**343**	⇑*i*Pg	**Pg**	**23 03 15.1**	**+0.1**
NKME				*i* Sg	**Sg**	**23 03 33.9**	**+1.5**
KOME	**Kolasin**	**1.36**	**1**	*e*Pg	**Pg**	**23 03 16.2**	**+0.8**
KOME				*e*Sg	**Sg**	**23 03 32.8**	**-0.3**
KOME	**Kolasin**	**1.36**	**1**	⇑*i*Pg	**Pb**	**23 03 14.5**	**+0.1**
KOME				*i* Sg	**Sg**	**23 03 34.8**	**+1.7**
BEY	**Berane**	**1.41**	**12**	*e*Pg	**Pg**	**23 03 11.4**	**0.0**
BEY				*e*Sg	**Sg**	**23 03 35.6**	**+0.8**
IVA	**Berane**	**1.41**	**12**	⇓*i*Pg	**Pg**	**23 03 16.5**	**+0.1**
IVA				*i* Sg	**Sg**	**23 03 36.1**	**+1.3**
TREB	**Trebinje**	**1.49**	**326**	*e*Pg	**Pb**	**23 03 16.5**	**-0.1**
TREB				*e*Sg	**Sg**	**23 03 36.8**	**-0.5**
SKO	**Skopje**	**1.54**	**71**	*i* Pg	**Pb**	**23 03 17.7**	**+0.3**
SKO				*i* Sg	**Sg**	**23 03 39.2**	**+0.5**
BRY	**Bratogost**	**1.58**	**334**	⇓*i*Pn	**Pb**	**23 03 17.7**	**-0.5**
BRY				*i* Sn	**Sg**	**23 03 39.9**	**-0.2**
NEST	**Nestorio**	**1.59**	**132**	Pn	**Pb**	**23 03 18.8**	**+0.4**
NEST				Sn	**Sg**	**23 03 40.8**	**+0.2**
NEST				AML	AML	23 03 43.3	
	comp=E,3.2nm,0.7s						
NEST				AML	AML	23 03 46.0	
	comp=E,2.1nm,0.7s						
NEST	**Nestorio**	**1.59**	**132**	P	**Pb**	**23 03 18.6**	**+0.2**
NEST				S	**Sg**	**23 03 40.0**	**-0.6**
UPM	**Unac-Piva**	**1.77**	**346**	⇓*i*Pn	**Pb**	**23 03 21.5**	**+0.1**
UPM				*i* Sn	**Sb**	**23 03 44.1**	**+0.6**
KEK	**Kerkira**	**1.79**	**172**		**Pg**	**23 03 24.4**	**+0.8**
SJES	**Sjenica**	**1.81**	**11**	*e*Pg	**Pb**	**23 03 22.3**	**+0.2**
SJES				*e*Sg	**Sg**	**23 03 47.6**	**+0.2**
PLE	**Pljevlja**	**1.84**	**358**	*e*Pg	**Pg**	**23 03 23.6**	**-1.0**
PLE				*e*Sg	**Sg**	**23 03 48.0**	**-0.5**
PLE	**Pljevlja**	**1.84**	**358**	⇓*i*Pn	**Pb**	**23 03 22.8**	**+0.2**
PLE				*i* Sn	**Sb**	**23 03 46.2**	**+0.7**
NOCI	**Noci**	**1.96**	**250**	Pn	**Pn**	**23 03 21.5**	**-0.4**
NOCI				Sn	**Sn**	**23 03 44.2**	**-2.0**
NOCI				AML	AML	23 04 03.8	
	comp=E,2.9nm,0.3s						
IGT	**Igoumenitsa**	**2.06**	**162**	Pn	**Pn**	**23 03 24.9**	**+1.7**
IGT	**Igoumenitsa**	**2.06**	**162**	P	**Pn**	**23 03 24.1**	**+0.8**
KZN	**Kozani**	**2.09**	**124**	P	**Pn**	**23 03 25.3**	**+1.5**
KZN				S	**Sb**	**23 03 52.9**	**+0.1**
JAN	**Janina**	**2.10**	**150**	P	**Pn**	**23 03 25.4**	**+1.5**
JAN				S	**Sb**	**23 03 53.2**	**+0.2**
SELS	**Selova**	**2.11**	**34**	*e*Pn	**Pn**	**23 03 24.9**	**+0.9**
SELS				*e*Sn	**Sn**	**23 03 51.5**	**+1.5**
IVAS	**Ivanjica**	**2.14**	**13**	*e*Pn	**Pn**	**23 03 25.7**	**+1.2**
BARS	**Barje**	**2.18**	**52**	*i* Pn	**Pn**	**23 03 26.6**	**+1.6**
BARS				*i* Sn	**Sb**	**23 03 55.1**	**0.0**
BARS	**Barje**	**2.18**	**52**	*e*Pn	**Pn**	**23 03 26.3**	**+1.4**
BARS				*e*Sn	**Sn**	**23 03 53.1**	**+1.4**
GRG	**Griva**	**2.26**	**103**	P	**Pn**	**23 03 27.0**	**+0.9**
GRG				S	**Sn**	**23 03 55.3**	**+1.6**
GRG	**Griva**	**2.26**	**103**	*i* Pn	**Pn**	**23 03 27.3**	**+1.2**
GOCS	**Kraljevo Serbi**	**2.31**	**26**	*e*Pn	**Pn**	**23 03 56.4**	**+0.8**
GOCS				*e*Sn	**Sn**	**23 03 56.3**	**+1.3**
VAY	**Valandovo**	**2.32**	**93**	*i* Pn	**Pn**	**23 03 27.7**	**+0.8**
VAY				*i* Sn	**Sn**	**23 03 57.0**	**+1.8**
VAY				*e*Lg	Lg	23 04 00.8	
	comp=E,99nm,0.8s						
VAY				*e*Lg	Lg	23 04 02.2	
	comp=N,118nm,0.7s						
BBLS	**Lazi&#263i**	**2.38**	**359**	*e*Pn	**Pb**	**23 03 31.7**	**0.0**
BOSS	**Bosilegrad**	**2.44**	**65**	*e*Pn	**Pn**	**23 03 29.6**	**+1.0**
BOSS				*e*Sn	**Sn**	**23 03 59.3**	**+1.1**
TETR	**Tetrakomo, Epi**	**2.54**	**147**	P	**Pn**	**23 03 31.8**	**+1.8**
GRUS	**Gruza**	**2.56**	**20**	*e*Pn	**Pn**	**23 03 32.1**	**+1.9**
KNT	**Kendrikon**	**2.59**	**96**	P	**Pn**	**23 03 31.3**	**+0.8**
KNT	**Kendrikon**	**2.59**	**96**	*i* Pn	**Pn**	**23 03 31.6**	**+1.1**
LIT	**Litokhoron**	**2.67**	**120**	P	**Pn**	**23 03 32.6**	**+1.0**
LIT	**Litokhoron**	**2.67**	**120**		**Pn**	**23 03 32.3**	**+0.7**
BOVS	**Bovan**	**2.70**	**37**	⇑P	**Pn**	**23 03 33.7**	**+1.7**
BOVS	**Bovan**	**2.70**	**37**	*e*Pn	**Pn**	**23 03 33.1**	**+1.1**
TRAN	**Tran**	**2.71**	**59**	P	**Pn**	**23 03 34.2**	**+2.0**
THL	**Klokotos Trika**	**2.72**	**134**	P	**Pn**	**23 03 33.6**	**+1.3**
TYRN	**Tyrnavos**	**2.74**	**129**	P	**Pn**	**23 03 33.8**	**+1.2**
TYRN				S	**Sn**	**23 04 07.1**	**+1.6**
KKB	**Krupnik**	**2.75**	**81**	P	**Pn**	**23 03 34.1**	**+1.3**
KKB	**Krupnik**	**2.75**	**81**	P	**Pn**	**23 03 34.4**	**+1.6**
KKB	**Krupnik**	**2.75**	**81**	*i* Pn	**Pn**	**23 03 34.3**	**+1.5**
THE	**Thessaloniki**	**2.76**	**107**	P	**Pn**	**23 03 33.4**	**+0.5**
THE	**Thessaloniki**	**2.76**	**107**	*i* Pn	**Pn**	**23 03 33.4**	**+0.5**
ACER	**Acerenza**	**2.77**	**256**		**Pn**	**23 03 33.3**	**+0.3**
TRUS	**Trudelj**	**2.81**	**14**	*e*Pn	**Pn**	**23 03 36.1**	**+2.4**
SGRT	**San Giovanni R**	**2.82**	**277**	Pn	**Pn**	**23 03 33.8**	**-0.1**
SGRT	**San Giovanni R**	**2.82**	**277**		**Pn**	**23 03 33.4**	**-0.4**
HORT	**Hortiatis**	**2.87**	**107**	P	**Pn**	**23 03 34.8**	**+0.3**
ZAPS	**Zavoj**	**2.93**	**52**	*e*Pn	**Sn**	**23 03 37.1**	**+1.8**
ZAPS				*e*Sn	**Sn**	**23 04 09.6**	**-0.7**
SOH	**Sokhos**	**2.99**	**102**	P	**Pn**	**23 03 37.0**	**+0.9**
SOH	**Sokhos**	**2.99**	**102**	*i* Pn	**Pn**	**23 03 37.1**	**+0.9**
VTS	**Vitosha**	**3.01**	**67**	P	**Pn**	**23 03 37.6**	**+1.1**
VTS				S	**Sn**	**23 04 13.7**	**+1.4**
VTS	**Vitosha**	**3.01**	**67**	P	**Pn**	**23 03 37.6**	**+1.1**
TEKS	**Tekeris**	**3.06**	**1**	*e*Pn	**Pn**	**23 03 38.1**	**+1.1**
TEKS				*e*Sn	**Sn**	**23 04 13.6**	**+0.2**
ZAGS	**Zajecar**	**3.08**	**40**	*e*Pn	**Pn**	**23 03 38.3**	**+1.0**
PLNA	**Plana**	**3.10**	**70**	P	**Pn**	**23 03 40.0**	**+2.4**
SRS	**Serrai**	**3.11**	**96**	P	**Pn**	**23 03 38.5**	**+0.7**
SRS	**Serrai**	**3.11**	**96**	*i* Pn	**Pn**	**23 03 38.6**	**+0.9**
TIP	**Timpagrande**	**3.11**	**223**		**Pn**	**23 03 37.4**	**-0.5**
TIP	**Timpagrande**	**3.11**	**223**	⇑P	**Pn**	**23 03 37.2**	**-0.6**
EVR	**Evrytania**	**3.12**	**145**	P	**Pn**	**23 03 39.8**	**+1.8**
CUC	**Castrocucco**	**3.17**	**243**		**Pn**	**23 03 38.6**	**+0.1**
MAKR	**Makrakomi, Fth**	**3.19**	**140**	P	**Pn**	**23 03 40.2**	**+1.3**
MAKR				S	**Sn**	**23 04 19.2**	**+2.5**
BORS2	**Bor- Borsko je**	**3.20**	**35**	*e*Pn	**Pn**	**23 03 39.0**	**+0.1**
BORS2				*e*Sn	**Sn**	**23 04 16.8**	**0.0**
PLG	**Polygyros**	**3.20**	**109**	P	**Pn**	**23 03 39.5**	**+0.6**
PLG				S	**Sn**	**23 04 18.3**	**+1.5**
MMB	**Musomishta**	**3.20**	**88**	P	**Pn**	**23 03 40.3**	**+1.3**
MMB	**Musomishta**	**3.20**	**88**	P	**Pn**	**23 03 40.3**	**+1.3**
MMB	**Musomishta**	**3.20**	**88**	*i* Pn	**Pn**	**23 03 40.3**	**+1.3**
PVO	**Paravola**	**3.27**	**151**	P	**Pn**	**23 03 40.9**	**+1.0**
AGG	**Agios Georgios**	**3.29**	**138**	P	**Pn**	**23 03 41.0**	**+0.9**
AVAS	**Avala Beograd**	**3.29**	**13**	*e*Pn	**Pn**	**23 03 41.5**	**+1.3**
KUBS	**Kucevo**	**3.33**	**28**	*e*Pn	**Pn**	**23 03 40.8**	**0.0**
ANX	**Ano Chora**	**3.44**	**146**	P	**Pn**	**23 03 44.1**	**+1.7**
EFP	**Efpalio**	**3.58**	**148**	P	**Pn**	**23 03 45.6**	**+1.5**
NEO	**Neokhori**	**3.59**	**126**	P	**Pn**	**23 03 45.6**	**+1.3**
OUR	**Ouranopolis**	**3.59**	**107**	P	**Pn**	**23 03 44.8**	**+0.5**
OUR				S	**Sn**	**23 04 28.0**	**+1.5**
AXAR	**Agios Charalam**	**3.65**	**137**	P	**Pn**	**23 03 46.2**	**+1.1**
SERG	**Sergoula**	**3.65**	**146**	P	**Pn**	**23 03 48.0**	**+2.8**
MDVR	**Moldovita**	**3.67**	**26**	⇑P	Pg	23 04 04.5	+5.0
FRGS	**Fruska Gora**	**3.67**	**4**	*e*Pn	**Pn**	**23 03 46.3**	**+0.8**
KAVA	**Kavala**	**3.82**	**96**	P	**Pn**	**23 03 48.3**	**+0.8**
LKR	**Lokris**	**3.91**	**135**	P	**Pn**	**23 03 49.6**	**+0.9**
RZN	**Rozhen**	**3.94**	**85**	P	**Pn**	**23 03 50.7**	**+1.4**
RZN	**Rozhen**	**3.94**	**85**	P	**Pn**	**23 03 50.8**	**+1.5**
PLD	**Plovdiv**	**3.98**	**79**	P	**Pn**	**23 03 51.1**	**+1.4**
PLD	**Plovdiv**	**3.98**	**79**	P	**Pn**	**23 03 51.7**	**+2.0**
HERR	**Herculane**	**4.01**	**31**	⇑P	**Pn**	**23 03 51.2**	**+1.2**
THAS	**Thassos island**	**4.05**	**101**	P	**Pn**	**23 03 51.0**	**+0.4**
SRE	**Strehaia**	**4.18**	**39**	⇑P	**Pn**	**23 03 54.9**	**+2.5**
PLVB	**Pleven**	**4.24**	**62**	⇓P	**Pn**	**23 03 56.2**	**+2.9**
CEL	**Celeste**	**4.25**	**222**		**Pn**	**23 03 52.0**	**-1.5**
KDZ	**Kurdzhali**	**4.39**	**86**	P	**Pn**	**23 03 56.6**	**+1.3**
BZS	**Buzias**	**4.41**	**20**	⇓P	**Pn**	**23 03 56.6**	**+1.0**
RDO	**Rodhopi**	**4.57**	**92**	P	**Pn**	**23 03 58.5**	**+0.8**
RDO	**Rodhopi**	**4.57**	**92**		**Pn**	**23 03 58.4**	**+0.7**
CAMP	**Campotosto**	**4.65**	**285**		**Pn**	**23 03 59.4**	**+0.4**
MORH	**Mrgy, Hungar**	**4.76**	**353**	⇓P	**Pg**	**23 04 22.9**	**+2.6**
GUMA	**Gualdo di Mace**	**4.83**	**291**		**Pn**	**23 04 01.7**	**+0.3**
NRCA	**Norcia**	**4.93**	**288**		**Pn**	**23 04 03.5**	**+0.8**
ELND	**Elena**	**4.96**	**71**	⇑P	**Pn**	**23 04 04.5**	**+1.4**
FDMO	**Fiordimonte**	**5.00**	**290**		**Pn**	**23 04 04.2**	**+0.5**
LOT	**Lotru**	**5.04**	**37**	⇓P	**Pn**	**23 04 05.5**	**+1.2**
CESX	**Cesi**	**5.27**	**285**		**Pn**	**23 04 07.9**	**+0.6**
JMB	**Yambol**	**5.34**	**77**	P	**P

KDAK	**Kodiak Island**	**80.87**	**356**	LR	LR	23 51 47.7	
	comp=Z,153nm,20.9s,baz=247,slow=36						

BEO ***27*** *23:12:21.9±0.6,41.45N×19.63E,h3km±3km,ML2.8/9*
TIR ***27*** *23:12:22.1,41.50N×19.30E,h48km±2km,Ml3.4/7*
PDG ***27*** *23:12:23.9±0.3,41.59N×19.57E,h9km±1km,MD3.3/2,*
ML3.2/12,Error ellipse: s-maj=1.4km s-min=1.7km az=0.0
IDC ***27*** *23:12:23.4±19.0,41.93N×20.07E,h0km,mb3.7/2,*
mbtmp3.7/4,ML2.8/2,MS2.5/2,Error ellipse:
s-maj=357.9km s-min=48.4km az=43.0

ISC 27 23:12:21.8±0.9,41.47N±0.02×19.49E±0.02,h17km±7km,
n53,σ1§22/90,7C-8D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**114**	⇓*i* Pg	**Pg**	**23 12 27.9**	**-0.5**
TIR				Sg	**Sg**	**23 12 31.8**	**-1.1**
TIR				AML	AML	23 12 32.0	
	16nm,0.4s						
ULC	**Ulcinj**	**0.52**	**340**	⇑*i* Pg	**Pg**	**23 12 32.3**	**+0.1**
ULC				*i* Sg	**Sb**	**23 12 40.3**	**+0.6**
SDA	**Shkodra**	**0.58**	**1**	Pg	**Pb**	**23 12 33.8**	**+0.4**
SDA				Sg	**Sn**	**23 12 43.4**	**-0.8**
PHP	**Peshkopia**	**0.75**	**73**	⇑Pg	**Pg**	**23 12 35.3**	**-1.0**
PHP				Sg	**Sb**	**23 12 46.8**	**+0.6**
PHP				AML	AML	23 12 49.1	
	3.8nm,0.5s						
DRME	**Dracevica, Mon**	**0.75**	**342**	*e*Pg	**Pb**	**23 12 37.0**	**+0.7**
DRME				*e*Sg	**Sn**	**23 12 48.4**	**0.0**
DRME	**Dracevica, Mon**	**0.75**	**342**	⇓*i* Pg	**Pb**	**23 12 36.7**	**+0.4**
DRME				*i* Sg	**Sb**	**23 12 47.5**	**+1.3**
BUM	**Brajici-Budva**	**0.94**	**332**	⇓*i* Pg	**Pg**	**23 12 39.8**	**-0.2**
BUM				*i* Sg	**Sn**	**23 12 54.9**	**+1.7**
PDG	**Podgorica**	**0.97**	**350**	⇑Pg	**Pn**	**23 12 41.0**	**+0.5**
PDG				Sg	**Sb**	**23 12 53.8**	**+1.2**
PDG	**Podgorica**	**0.97**	**350**	*e*Pg	**Pn**	**23 12 40.7**	**+0.2**
PDG				*e*Sg	**Sn**	**23 12 55.0**	**+1.1**
PDG	**Podgorica**	**0.97**	**350**	⇑*i* Pg	**Pn**	**23 12 40.8**	**+0.2**
PDG				*i* Sg	**Sn**	**23 12 54.4**	**+0.5**
VLO	**Vlora**	**1.00**	**180**	Pg	**Pn**	**23 12 41.8**	**+0.8**
VLO				Sg	**Sg**	**23 12 55.2**	**+0.8**
VLO				AML	AML	23 13 02.6	
	6.6nm,0.4s						
CEME	**Cevo**	**1.15**	**339**	⇑*i* Pg	**Pg**	**23 12 44.5**	**+0.4**
CEME				*i* Sg	**Sn**	**23 13 01.7**	**+3.2**
PVY	**Plav**	**1.17**	**17**	*e*Pg	**Pn**	**23 12 43.2**	**-0.4**
PVY				*e*Sg	**Sn**	**23 12 59.9**	**+0.8**
PVY	**Plav**	**1.17**	**17**	⇑*i* Pg	**Pb**	**23 12 43.0**	**-0.6**
PVY				*i* Sg	**Sn**	**23 12 59.9**	**+0.8**
HCY	**Herceg Novi**	**1.22**	**323**	*e*Pg	**Pg**	**23 12 45.5**	**+0.1**
HCY				*i* Sg	**Sg**	**23 13 03.7**	**+2.3**
KBN	**Korca**	**1.30**	**130**	Pn	**Pg**	**23 12 47.0**	**+0.2**
KBN				Sn	**Sg**	**23 13 06.3**	**+2.5**
NKME	**Niksic**	**1.35**	**343**	⇑*i* Pg	**Pb**	**23 12 47.3**	**+0.7**
NKME				*i* Sg	**Sg**	**23 13 07.0**	**+1.5**
KOME	**Kolasin**	**1.38**	**1**	*e*Pg	**Pg**	**23 12 48.1**	**-0.2**
KOME				*e*Sg	**Sb**	**23 13 03.4**	**-1.0**
KOME	**Kolasin**	**1.38**	**1**	⇓*i* Pg	**Pn**	**23 12 47.0**	**+0.8**
KOME				*i* Sg	**Sg**	**23 13 06.9**	**+0.6**
BEY	**Berane**	**1.43**	**12**	*e*Pg	**Pb**	**23 12 48.2**	**+0.2**
BEY				*e*Sg	**Sg**	**23 13 07.4**	**-0.6**
IVA	**Berane**	**1.43**	**12**	⇓*i* Pg	**Pn**	**23 12 47.7**	**+0.7**
IVA				*i* Sg	**Sg**	**23 13 09.1**	**+1.1**
TREB	**Trebinje**	**1.50**	**326**	*e*Pg	**Pb**	**23 12 49.6**	**+0.4**
TREB				*e*Sg	**Sg**	**23 13 11.5**	**+1.2**
NEST	**Nestorio**	**1.59**	**131**	Pn	**Pb**	**23 12 51.3**	**+0.7**
NEST				Sn	**Sg**	**23 13 13.3**	**+0.4**
NEST				AML	AML	23 13 18.8	
	0.7nm,0.6s						
BRY	**Bratogost**	**1.59**	**334**	⇓*i* Pg	**Pb**	**23 12 51.2**	**+0.4**
BRY				*i* Sg	**Sg**	**23 13 14.3**	**+1.2**
UPM	**Unac-Piva**	**1.78**	**346**	⇓*i* Pn	**Pb**	**23 12 54.3**	**+0.3**
UPM				*i* Sn	**Sg**	**23 13 19.4**	**+0.2**
SJES	**Sjenica**	**1.82**	**11**	*e*Pg	**Pb**	**23 12 55.2**	**+0.5**
SJES				*e*Sg	**Sg**	**23 13 19.2**	**-1.3**
PLE	**Pljevlja**	**1.86**	**358**	*e*Pg	**Pb**	**23 12 55.8**	**+0.5**
PLE				*e*Sg	**Sg**	**23 13 21.3**	**-0.3**
PLE	**Pljevlja**	**1.86**	**358**	⇓*i* Pn	**Pb**	**23 12 55.8**	**+0.5**
PLE				*i* Sn	**Sg**	**23 13 20.7**	**+0.9**
NOCI	**Noci**	**1.95**	**250**	Pn	**Pn**	**23 12 53.7**	**-0.4**
NOCI				Sn	**Sg**	**23 13 26.4**	**+1.8**
NOCI				AML	AML	23 13 33.5	
	1.7nm,0.4s						
IGT	**Igoumenitsa**	**2.04**	**161**	Pn	**Pb**	**23 12 58.0**	**-0.4**
IGT				Sn	**Sb**	**23 13 23.4**	**-0.1**
SELS	**Selova**	**2.12**	**34**	*e*Pn	**Pn**	**23 12 57.7**	**+1.3**
SELS				*e*Sn	**Sn**	**23 13 24.2**	**+1.8**
IVAS	**Ivanjica**	**2.16**	**13**	*e*Pn	**Pn**	**23 12 58.1**	**+1.1**
IVAS				*e*Sn	**Sb**	**23 13 25.7**	**-1.2**
BARS	**Barje**	**2.19**	**51**	*e*Pn	**Pn**	**23 12 58.3**	**+1.0**
BARS				*e*Sn	**Sn**	**23 13 25.4**	**+1.4**
GOCS	**Kraljevo Serbi**	**2.33**	**26**	*e*Pn	**Pn**	**23 13 01.6**	**+2.3**
GOCS				*e*Sn	**Sb**	**23 13 30.2**	**-1.5**
BBLS	**Lazi&#263i**	**2.39**	**359**	*e*Pn	**Pb**	**23 13 03.0**	**-1.4**
BBLS				*e*Sn	**Sb**	**23 13 33.8**	**+0.2**
GRUS	**Gruza**	**2.58**	**20**	*e*Pn	**Pn**	**23 13 03.7**	**+1.0**
BOVS	**Bovan**	**2.71**	**36**	*e*Pn	**Pn**	**23 13 05.8**	**+1.3**
BOVS				*e*Sn	**Sn**	**23 13 38.7**	**+1.8**
SGRT	**San Giovanni R**	**2.82**	**277**	Pn	**Pn**	**23 13 05.9**	**-0.1**
SGRT				Sn	**Sn**	**23 13 37.6**	**-2.1**
SGRT				AML	AML	23 13 41.8	
	0.3nm,0.4s						
TRUS	**Trudelj**	**2.83**	**14**	*e*Pn	**Pb**	**23 13 09.9**	**-1.9**
ZAPS	**Zavoj**	**2.94**	**51**	*e*Pn	**Pn**	**23 13 09.3**	**+1.6**
TEKS	**Tekeris**	**3.07**	**1**	*e*Pn	**Pn**	**23 13 11.0**	**+1.5**
ZAGS	**Zajecar**	**3.09**	**40**	*e*Pn	**Pn**	**23 13 10.9**	**+1.2**
BORS2	**Bor- Borsko je**	**3.21**	**35**	*e*Pn	**Pn**	**23 13 11.4**	**0.0**
KUBS	**Kucevo**	**3.35**	**28**	*e*Pn	**Pn**	**23 13 12.1**	**-1.1**
FRGS	**Fruska Gora**	**3.69**	**4**	*e*Pn	**Pn**	**23 13 18.9**	**+0.9**
SOKA	**Soboth**	**6.11**	**330**	*e*Pn	**Pn**	**23 13 53.2**	**+1.9**
	1.5nm,0.5s						
SOKA				*e*Sn	**Sn**	**23 14 58.1**	**-2.7**
	2.8nm,0.7s						
OBKA	**Obir**	**6.17**	**326**	*i* Pn	**Pn**	**23 13 48.1**	**-3.9**
	2.6nm,0.5s						
OBKA				*e*Sn	**Sn**	**23 15 01.7**	**-0.5**
	6.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**8.71**	**311**	LR	LR	23 18 04.6	
	comp=Z,46nm,19.1s,baz=258,slow=39						
AKASG	**Malin Array Be**	**11.43**	**33**	LR	LR	23 18 54.0	
	comp=Z,19nm,20.5s,baz=234,slow=36						
HFS	**Hagfors**	**19.02**	**351**	P	**P**	**23 16 42.4**	**-0.2**
	baz=168,slow=7.4,SNR=1.5						
	1.5nm,0.8s						
FINES	**FINESS Array B**	**20.39**	**9**	P	**P**	**23 16 56.0**	**-1.5**
	0.1nm,0.3s,baz=187,slow=9.8,SNR=4.2						
	2.9nm,1.0s						
ZALV	**Zalesovo Beam**	**44.15**	**50**	P	**P**	**23 20 28.4**	**-0.7**
	0.6nm,0.4s,baz=265,slow=9.6,SNR=3.8						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**44.33**	**61**	P	**P**	**23 20 30.1**	**-0.6**
	0.7nm,0.6s,baz=295,slow=6.5,SNR=8.1						
	0.7nm,0.6s						

IDC ***27*** *23:16:06.5±1.0,30.42N×141.53E,h0km,mb3.9/12,*
mbtmp3.9/14,ML3.4/2,MS3.3/1,Error ellipse:
s-maj=38.8km s-min=17.1km az=76.0
NEIC ***27*** *23:16:07.7±0.9,30.54N±0.08×141.9E±0.2,h10km±1km,*
mb4.4/12,Error ellipse: s-maj=30.2km s-min=10.4km
az=71.0

ISC 27 23:16:09.9±0.8,30.37N±0.08×141.6E±0.2,h28km,n37,
σ1§64/38,mb4.1/18,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.14**	**331**	Pn	**Pn**	**23 16 55.9**	**-1.5**
JHJ	**Hachijo jima 2**	**3.16**	**331**	Pn	**Pn**	**23 16 56.1**	**-1.6**
	12nm,0.3s,baz=97,slow=22,SNR=5.1						
JHJ				Sn	**Sn**	**23 17 29.2**	**-5.2**
	6.6nm,0.3s,baz=94,slow=21,SNR=1.2						
	72nm,0.4s						
JCJ	**Chichijima**	**3.30**	**171**	Pn	Pn	23 16 51.0	-8.7
	16nm,0.3s,baz=144,slow=23,SNR=10.0						
JCJ				Sn	**Sn**	**23 17 31.9**	**-6.1**
	30nm,0.3s,baz=270,slow=23,SNR=7.0						
JCJ	**Chichijima**	**3.30**	**171**		**Pn**	**23 17 01.2**	**+1.5**
JGF	**Kuroka**	**6.33**	**327**	Pn	**Pn**	**23 17 41.3**	**-0.1**
MJAR	**Matsushiro Arr**	**6.78**	**336**	Pn	**Pn**	**23 17 47.0**	**-0.5**
	0.7nm,0.3s,baz=161,slow=11,SNR=27						
	5.1nm,0.5s						
MJAR	**Matsushiro Arr**	**6.78**	**336**		**Pn**	**23 17 46.4**	**-1.2**
MAJO	**Matsushiro**	**6.79**	**336**		**Pn**	**23 17 46.6**	**-1.0**
MJB9	**Matsu-Tunnel**	**6.79**	**336**		**Pn**	**23 17 47.3**	**-0.4**
HILR	**Hailar Array B**	**25.30**	**325**	P	**P**	**23 21 34.6**	**+0.7**
	1.0nm,0.4s,baz=128,slow=9.3,SNR=2.9						
	1.0nm,0.4s						
ULN	**Ulaanbaatar**	**31.66**	**313**	P	**P**	**23 22 31.3**	**+0.4**
ULN				IAmb	IAmb	23 22 34.2	
	comp=Z,2.6nm,1.0s						
SONM	**Songino Array**	**32.07**	**313**	P	**P**	**23 22 34.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=134,slow=10,SNR=3.9						
	comp=Z,0.4nm,0.5s						
HNR	**Honiara**	**43.32**	**153**	LR	LR	23 42 10.2	
	comp=Z,38nm,20.0s,baz=337,slow=36						
ZALV	**Zalesovo Beam**	**46.73**	**317**	P	**P**	**23 24 36.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=81,slow=12,SNR=2.3						
ZALV				PcP	**PcP**	**23 26 09.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=116,slow=6.6,SNR=3.8						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**48.05**	**307**	P	**P**	**23 24 47.6**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=86,slow=9.2,SNR=11						
	comp=Z,1.1nm,0.6s						
MAKZ	**Makanchi**	**48.27**	**307**	P	**P**	**23 24 49.2**	**+0.8**
MAKZ				IAmb	IAmb	23 25 12.6	
	comp=Z,4.3nm,1.4s						
WB0	**Warramunga Arr**	**50.33**	**189**	P	**P**	**23 25 05.4**	**+1.1**
KURK	**Kurchatov**	**50.38**	**313**	P	**P**	**23 25 04.7**	**+0.3**
KURBB	**Kurchatov Arra**	**50.44**	**313**	P	**P**	**23 25 05.2**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=90,slow=7.8,SNR=12						
	comp=Z,0.7nm,0.5s						
WRA	**Warramunga Arr**	**50.51**	**189**	P	**P**	**23 25 06.8**	**+1.2**
	comp=Z,5.0nm,0.6s,baz=6.5,slow=7.7,SNR=73						
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**50.51**	**189**	P	**P**	**23 25 06.6**	**+0.9**
FITZ	**Fitzroy Crossi**	**50.58**	**200**	P	**P**	**23 25 07.6**	**+1.4**
ASAR	**Alice Springs**	**54.23**	**189**	P	**P**	**23 25 34.5**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=4.5,slow=6.0,SNR=11						
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**55.11**	**30**	P	**P**	**23 25 41.0**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=266,slow=7.3,SNR=5.4						
	comp=Z,0.2nm,0.6s						
BVAR	**Borovoye Array**	**55.33**	**316**	P	**P**	**23 25 41.1**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=90,slow=8.6,SNR=3.4						
	comp=Z,1.1nm,0.5s						
BMAR	**Burnt Mountain**	**56.14**	**27**	P	**P**	**23 25 45.2**	**-1.4**
GAR	**Garm**	**57.92**	**299**		**P**	**23 26 00.7**	**+1.0**
GAR				IAmb	IAmb	23 26 02.4	
	comp=Z,6.9nm,0.8s						
CHGR	**Chuyangaron**	**58.88**	**299**		**P**	**23 26 07.5**	**+1.1**
ARTI	**Arti**	**61.66**	**321**	P	**P**	**23 26 25.3**	**+0.3**
ARTI				IAmb	IAmb	23 26 37.1	
	comp=Z,6.0nm,1.2s						
AB31	**Akbulak array**	**62.48**	**313**	P	**P**	**23 26 30.9**	**+0.3**
AB31				IAmb	IAmb	23 26 31.4	
	comp=Z,1.4nm,0.7s						
ABKAR	**Akbulak array**	**62.48**	**313**	P	**P**	**23 26 31.0**	**+0.4**
FIA1	**FINESS Array S**	**74.80**	**333**	P	**P**	**23 27 46.8**	**-0.4**
FINES	**FINESS Array B**	**74.81**	**333**	P	**P**	**23 27 46.8**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=58,slow=4.7,SNR=14						
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**74.81**	**333**	P	**P**	**23 27 46.5**	**-0.7**
NOA	**NORSAR Array B**	**80.40**	**338**	P	**P**	**23 28 17.9**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=41,slow=5.3,SNR=1.8						
	comp=Z,0.4nm,0.5s						
RAYN	**Ar Rayn**	**83.39**	**293**	P	**P**	**23 28 36.2**	**+1.2**
RAYN				IAmb	IAmb	23 28 38.1	
	comp=Z,2.1nm,0.6s						
BRTR	**Keskin Array B**	**83.43**	**312**	P	**P**	**23 28 35.0**	**0.0**
	comp=Z,0.8nm,0.9s,baz=54,slow=6.3,SNR=3.5						
	comp=Z,0.8nm,0.9s						

WEL 27 23:18:38.3±1.2,36.5S±12.1×17.9W±.5,h12km,M3.6/7,
ML3.6/10,MLv3.6/7,Error ellipse: s-maj=18.6km
s-min=7.8km az=147.0,confirmed,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.94**	**232**	P	Pn	23 19 23.8	-1.1
MXZ				S	Sn	23 20 01.2	+1.0
WMGZ	**Waiomatatini S**	**3.04**	**227**	P	Pn	23 19 26.5	+0.3
WMGZ				S	Sn	23 20 05.6	+3.2
PKGZ	**Pakihiroa**	**3.27**	**229**	P	Pn	23 19 29.3	-0.2
PKGZ				S	Sn	23 20 10.4	+2.2
PUZ	**Puketiti**	**3.30**	**225**	P	Pn	23 19 29.2	-0.6
PUZ				S	Sn	23 20 10.7	+1.8
HAZ	**Te Kaha**	**3.39**	**233**	P	Pn	23 19 31.4	+0.4
HAZ				S	Sn	23 20 13.0	+1.7
TWGZ	**Tauwhareparae**	**3.53**	**226**	P	Pn	23 19 33.2	+0.2
TWGZ				S	Sn	23 20 17.7	+3.0
RUGZ	**Raukumara Rang**	**3.58**	**231**	P	Pn	23 19 33.4	-0.4
RUGZ				S	Sn	23 20 18.2	+2.1
CNGZ	**Carnagh Statio**	**3.62**	**221**	P	Pn	23 19 33.3	-0.9
MWZ	**Matawai**	**3.90**	**228**	P	Pn	23 19 37.7	-0.4
MWZ				S	Sn	23 20 25.0	+1.1
URZ	**Urewera**	**4.12**	**232**	P	Pn	23 19 40.1	-0.9
URZ				S	Sn	23 20 29.6	+0.5
SNGZ	**Shannon Statio**	**4.31**	**225**	P	Pn	23 19 43.7	0.0
SNGZ				S	Sn	23 20 34.1	+0.2
MTHZ	**Maungataniwha**	**4.65**	**227**	P	Pn	23 19 48.4	0.0
MTHZ				S	Sn	23 20 43.1	+0.8
BKZ	**Black Stump Fm**	**5.06**	**227**	P	Pn	23 19 53.9	-0.1
BKZ				S	Sn	23 20 52.2	-0.2
TSZ	**Takapari Road**	**5.96**	**223**	P	Pn	23 20 04.5	-2.0
TSZ				S	Sn	23 21 12.6	-2.1
BFZ	**Birch Farm**	**6.27**	**217**	P	Pn	23 20 08.2	-2.4
BFZ				S	Sn	23 21 19.9	-2.2
CTZ	**Chatham Island**	**8.12**	**169**	P	Pn	23 20 38.1	+2.0
CTZ				S	Sn	23 22 01.9	-5.9

SJA ***27*** *23:20:10.0±0.7,18.43S×69.78W,h117km±4km,ML3.7,*
MW3.7
GUC ***27*** *23:20:12.0±0.8,18.43S×69.75W,h109km±4km,ML3.9*

ISC 27 23:20:10.8±1.9,18.43S±0.06×69.84W±0.08,
h118km±12km,n26,σ0§82/44,2C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**0.48**	**277**	⇑*e*P	**Pn**	**23 20 28.6**	**+0.2**
AP01				*e*S	**Sn**	**23 20 41.8**	**+0.1**
AP01	**Chacalluta**	**0.48**	**277**	*e*P	**Pn**	**23 20 28.8**	**+0.4**
AP01				*e*S	**Sn**	**23 20 42.2**	**+0.5**
AP01				IAML		23 20 43.2	
	comp=Z,5μm,0.1s						
PB12	**IPOC Station P**	**0.50**	**249**	⇑*e*P	**Pn**	**23 20 28.4**	**-0.3**
PB12				*e*S	**Sn**	**23 20 41.9**	**-0.3**
PB12	**IPOC Station P**	**0.50**	**249**	*e*P	**Pn**	**23 20 28.3**	**-0.3**
PB12				*e*S	**Sn**	**23 20 42.5**	**+0.3**
PB12				IAML		23 20 44.1	
	comp=Z,965nm,0.1s						
PB11	**IPOC Station P**	**1.33**	**172**	⇓*e*P	**Pn**	**23 20 36.2**	**-0.2**
PB11				*e*S	**Sn**	**23 20 55.1**	**-0.7**
PB11				IAML		23 20 57.8	
	comp=N,2μm,0.1s						
PB11	**IPOC Station P**	**1.33**	**172**	*e*P	**Pn**	**23 20 36.2**	**-0.2**
PB11				*e*S	**Sn**	**23 20 55.9**	**0.0**
PB11				IAML		23 20 57.4	
	comp=Z,874nm,0.2s						
GO01	**Chusmiza**	**1.37**	**154**	⇓*e*P	**Pn**	**23 20 37.1**	**-0.2**
GO01				*e*S	**Sn**	**23 20 57.2**	**0.0**
GO01				IAML		23 21 00.9	
	comp=N,3μm,0.1s						
GO01	**Chusmiza**	**1.37**	**154**	*e*P	**Pn**	**23 20 37.0**	**-0.2**
GO01				*e*S	**Sn**	**23 20 56.8**	**-0.4**
GO01				IAML		23 21 01.8	
	comp=Z,407nm,0.1s						
PB08	**IPOC Station P**	**1.82**	**159**	⇓*e*P	**Pn**	**23 20 42.5**	**+0.2**
PB08				*e*S	**Sn**	**23 21 06.4**	**0.0**
PB08				IAML		23 21 08.2	
	comp=E,969nm,0.2s						
PB08	**IPOC Station P**	**1.82**	**159**	*e*P	**Pn**	**23 20 42.7**	**+0.3**
PB08				*e*S	**Sn**	**23 21 07.0**	**+0.6**
PB08				IAML		23 21 07.3	
	comp=Z,383nm,0.3s						
TA02	**Huaiquique**	**1.85**	**188**	*e*P	**Pn**	**23 20 42.4**	**+0.1**
TA02	**Huaiquique**	**1.85**	**188**	*e*P	**Pn**	**23 20 42.6**	**+0.3**
TA02				IAML		23 21 12.3	
	comp=Z,640nm,0.1s						
TA01	**Diego Aracena**	**2.15**	**189**	*e*P	**Pn**	**23 20 45.8**	**-0.1**
TA01				*e*S	**Sn**	**23 21 12.7**	**-0.3**
TA01				IAML		23 21 21.9	
	comp=E,574nm,0.2s						
TA01	**Diego Aracena**	**2.15**	**189**	*e*P	**Pn**	**23 20 45.9**	**-0.1**
TA01				*e*S	**Sn**	**23 21 11.9**	**-1.1**
TA01				IAML		23 21 21.1	
	comp=Z,176nm,0.5s						
PATCX	**Punta Patache**	**2.39**	**187**	*e*P	**Pn**	**23 20 49.4**	**+0.2**
PATCX				*e*S	**Sn**	**23 21 18.4**	**-0.3**
PATCX				IAML		23 21 29.4	
	comp=E,340nm,0.4s						
PATCX	**Punta Patache**	**2.39**	**187**	*e*P	**Pn**	**23 20 50.0**	**+0.7**
PATCX				IAML		23 21 29.8	
	comp=Z,193nm,0.6s						
PB01	**IPOC Station P**	**2.62**	**173**	*e*P	**Pn**	**23 20 52.3**	**+0.1**
PB01				*e*S	**Sn**	**23 21 24.4**	**+0.5**
PB01				IAML		23 21 33.3	
	comp=N,450nm,0.3s						
PB01	**IPOC Station P**	**2.62**	**173**	*e*P	**Pn**	**23 20 51.9**	**-0.3**
PB01				*e*S	**Sn**	**23 21 26.3**	**+2.4**
PB01				IAML		23 21 31.9	
	comp=Z,266nm,0.2s						
LPAZ	**La Paz**	**2.69**	**38**	*e*P	**Pn**	**23 20 53.5**	**-0.1**
PB02	**IPOC Station P**	**2.87**	**181**	*e*P	**Pn**	**23 20 56.2**	**+0.8**
PB02	**IPOC Station P**	**2.87**	**181**	*e*P	**Pn**	**23 20 56.3**	**+0.8**
PB02				*e*S	Sn	23 21 18.8	-11
PB02				IAML		23 21 42.9	
	comp=Z,497nm,0.3s						
PB07	**IPOC Station P**	**3.28**	**181**	*e*P	**Pn**	**23 21 01.4**	**+0.6**
PB07				*e*S	**Sn**	**23 21 40.9**	**+1.4**
PB07				IAML		23 21 49.8	
	comp=Z,210nm,0.5s						
PB09	**IPOC Station P**	**3.39**	**171**	*e*P	**Pn**	**23 21 03.3**	**+0.9**
PB09				*e*S	Sn	23 21 52.3	+10
PB09				IAML		23 22 01.6	
	comp=Z,158nm,0.6s						
PB03	**IPOC Station P**	**3.60**	**179**	*e*P	**Pn**	**23 21 05.7**	**+0.6**
PB03				*e*S	**Sn**	**23 21 46.8**	**-0.3**
PB03				IAML		23 22 01.1	
	comp=Z,255nm,0.3s						
PB06	**IPOC Station P**	**4.26**	**177**	*e*P	**Pn**	**23 21 14.1**	**+0.1**
PB06				*e*S	**Sn**	**23 21 59.5**	**-3.4**
PB06				IAML		23 22 18.1	
	comp=Z,76nm,0.3s						
PB05	**IPOC Station P**	**4.41**	**184**	*e*P	**Pn**	**23 21 15.5**	**-0.5**
PB05				*e*S	Sn	23 22 23.6	+17
PB05				IAML		23 22 24.9	
	comp=Z,71nm,0.4s						

JMA ***27*** *23:22:24.1±0.3,24.1×124.4E±0.9,h20km,MV3.3/13,*
NEAR ISHIGAKIJIMA ISLAND

ISC 27 23:22:24.4±1.7,23.88N±0.08×124.33E±0.04,h24km±15km,
n19,σ0§70/28,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**0.46**	**321**	P	**Pb**	**23 22 34.1**	**+0.3**
JKRS				S	**Sb**	**23 22 41.2**	**+0.8**
HATJ	**Hateruma jima**	**0.51**	**291**	P	**Pb**	**23 22 34.5**	**-0.2**
HATJ				S	**Sb**	**23 22 41.4**	**-0.2**
JIJ	**Ishigaki jima**	**0.51**	**341**	P	**Pb**	**23 22 34.2**	**-0.6**
JIJ				S	**Sb**	**23 22 41.4**	**-0.4**
JISG	**Ishigakijimahi**	**0.71**	**359**	P	**Pb**	**23 22 37.3**	**-0.8**
JISG				S	**Sb**	**23 22 46.9**	**-0.5**
IRIF	**Iriomote-Funau**	**0.71**	**310**	*i* P	**Pb**	**23 22 38.1**	**0.0**
IRIF				S	**Sn**	**23 22 48.9**	**-0.2**
JTJ	**Tarama**	**0.83**	**24**	P	**Pb**	**23 22 39.7**	**-0.5**
JTJ				S	**Sb**	**23 22 50.9**	**-0.1**
JIRB	**Irabujima**	**1.22**	**39**	P	**Pn**	**23 22 45.8**	**-0.2**
JMJ2	**Miyako jima3**	**1.25**	**47**	P	**Pb**	**23 22 47.4**	**0.0**
JMJ2				S	**Sb**	**23 23 04.0**	**+0.9**
JOGS	**Gusukube**	**1.32**	**48**	P	**Pb**	**23 22 48.9**	**+0.4**
JOGS				S	**Sb**	**23 23 06.2**	**+1.2**
YOJ	**Yonaguni jima**	**1.33**	**296**	P	**Pb**	**23 22 48.6**	**-0.1**
YOJ	**Yonaguni jima**	**1.33**	**296**	*e*S	**Sb**	**23 23 06.0**	**+0.7**
JIKM	**Ikemajima**	**1.34**	**39**	P	**Pn**	**23 22 47.1**	**-0.4**
JYNG	**Yonagunijimaku**	**1.38**	**295**	P	**Pn**	**23 22 48.8**	**+0.6**
JYNG				*e*S	**Sb**	**23 23 07.3**	**+0.6**
NACB	**Ninganchiao**	**2.51**	**277**	P	**Pn**	**23 23 03.1**	**-0.6**
YHNB	**Yeheng**	**2.80**	**287**	P	**Pn**	**23 23 08.7**	**+0.9**
YULB	**Yu-li**	**2.82

h43km±11km, **n94**, σ1s**02**/102, **mb4.1**/22, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCO	**Concord Point,**	**0.54**	**329**		**Pn**	**23 43 31.3**	**-0.9**
CLCO					**Sn**	**23 43 40.3**	**+0.1**
CLES	**Cleveland East**	**0.63**	**322**		**Pn**	**23 43 32.8**	**-0.6**
CLES				Sn	**Sn**	**23 43 43.9**	**+1.6**
CLES				IAML		23 43 50.1	
	comp=E,5μm,0.4s						
CLES				IAML		23 43 53.8	
	comp=N,6μm,0.5s						
NIKH	**Nikolski High**	**0.69**	**21**		**Pn**	**23 43 33.0**	**-1.2**
NIKH					**Sn**	**23 43 43.8**	**-0.1**
NIKH				IAML		23 43 48.4	
	comp=E,3μm,0.5s						
OKSP	**Okmok Steeple**	**1.10**	**32**		**Pn**	**23 43 39.0**	**-0.7**
OKSP					**Sn**	**23 43 53.1**	**-0.7**
OKCE	**Okmok Cone E**	**1.29**	**31**		**Pn**	**23 43 42.5**	**+0.1**
OKCE					**Sn**	**23 43 58.2**	**-0.2**
OKTU	**Okmok Mt. Tuli**	**1.29**	**34**		**Pn**	**23 43 41.9**	**-0.5**
OKTU					**Sn**	**23 43 58.4**	**-0.1**
MGOD	**Makushin Gods**	**2.06**	**43**		**Pn**	**23 43 53.2**	**+0.3**
MGOD					**Sn**	**23 44 17.7**	**+0.3**
MREP	**Makushin Rep't**	**2.12**	**45**		**Pn**	**23 43 54.1**	**+0.3**
MREP					**Sn**	**23 44 20.3**	**+1.3**
MSW	**Makushin Switc**	**2.18**	**42**		**Pn**	**23 43 54.8**	**+0.3**
MSW					**Sn**	**23 44 20.7**	**+0.4**
MNAT	**Makushin Natee**	**2.20**	**44**		**Pn**	**23 43 55.4**	**+0.5**
MNAT					**Sn**	**23 44 21.0**	**+0.2**
UNV	**Unalaska Valle**	**2.25**	**46**		**Pn**	**23 43 55.0**	**-0.5**
UNV					**Sn**	**23 44 21.8**	**-0.2**
ZRO	**Akutan Zero**	**2.65**	**47**		**Pn**	**23 44 01.6**	**+0.6**
ZRO					**Sn**	**23 44 33.1**	**+1.2**
AKBBA	**Akutan Broad B**	**2.67**	**47**		**Pn**	**23 44 01.6**	**+0.3**
AKBBA					**Sn**	**23 44 33.6**	**+1.2**
AKV	**Akutan Volcano**	**2.68**	**46**		**Pn**	**23 44 01.2**	**-0.2**
AHB	**Akutan Harbor**	**2.74**	**48**		**Pn**	**23 44 03.0**	**+0.8**
AHB					**Sn**	**23 44 34.9**	**+0.9**
AKUT	**Akutan**	**2.77**	**48**	Pn	**Pn**	**23 44 02.7**	**+0.1**
AKUT				IAML		23 44 54.4	
	comp=E,271nm,0.9s						
KOFP	**Korovin Flat P**	**2.97**	**271**		**Pn**	**23 44 05.3**	**-0.1**
KOFP					**Sn**	**23 44 42.1**	**+2.4**
ATKA	**Atka Island**	**3.04**	**270**		**Pn**	**23 44 05.6**	**-0.6**
ATKA					**Sn**	**23 44 41.2**	**-0.1**
ATKA				IAML		23 44 56.9	
	comp=E,212nm,1.0s						
ATKA				IAML		23 45 03.7	
	comp=N,211nm,0.7s						
GSIG	**Igitkin Island**	**4.12**	**268**		**Pn**	**23 44 20.9**	**-0.3**
GSTR	**Great Sitkin T**	**4.19**	**270**	Pn	**Pn**	**23 44 22.2**	**+0.1**
GSTD	**Great Sitkin T**	**4.25**	**269**		**Pn**	**23 44 22.7**	**-0.2**
ETKA	**Kagalaska Isla**	**4.43**	**267**		**Pn**	**23 44 24.8**	**-0.7**
ADK	**Adak**	**4.60**	**267**		**Pn**	**23 44 27.1**	**-0.6**
ADK				IAML		23 45 41.7	
	comp=N,138nm,1.3s						
ADK				IAML		23 45 43.9	
	comp=N,129nm,1.1s						
KIWB	**Kanaga Island**	**4.89**	**268**	Pn	**Pn**	**23 44 32.0**	**+0.3**
KIMD	**Kanaga Island**	**4.96**	**267**		**Pn**	**23 44 32.5**	**0.0**
AMKA	**Amchitka**	**7.15**	**267**		**Pn**	**23 45 02.6**	**-0.1**
N15K	**Kwethluk River**	**9.36**	**29**	Pn	**Pn**	**23 45 33.4**	**+0.4**
KDAK	**Kodiak Island**	**11.00**	**54**	Pn	**Pn**	**23 45 55.6**	**+0.3**
	comp=N,0.6nm,0.3s,baz=270,slow=9.1,SNR=5.3						
	comp=N,11nm,0.9s						
KDAK	**Kodiak Island**	**11.00**	**54**	Pn	**Pn**	**23 45 54.5**	**-0.9**
L22K	**Petersville**	**14.21**	**37**	Pn	**Pn**	**23 46 40.4**	**+1.3**
PWL	**Port Wells**	**14.29**	**45**	Pn	**Pn**	**23 46 39.2**	**-0.9**
GHO	**Glory Hole Cre**	**14.49**	**41**	Pn	**Pn**	**23 46 44.0**	**+1.1**
HIN	**Hinchinbrook I**	**14.91**	**48**	Pn	**Pn**	**23 46 47.2**	**-1.3**
BPAW	**Bear Paw Mtn.**	**15.15**	**32**		**Pn**	**23 46 53.0**	**+1.4**
BPAW				IAmb	IAmb	23 47 09.9	
	comp=Z,9.4nm,1.3s						
SCM	**Sheep Creek Mo**	**15.18**	**43**	Pn	**Pn**	**23 46 50.3**	**-1.8**
M24K	**Tolsona, Glenn**	**15.79**	**43**	Pn	**Pn**	**23 46 56.7**	**-3.1**
BMRM	**Bremner River**	**15.99**	**48**	Pn	**Pn**	**23 47 00.0**	**-2.5**
BMRM				IAmb	IAmb	23 47 08.1	
	comp=Z,16nm,1.2s						
N25K	**Chitina, Valde**	**16.24**	**45**	Pn	**Pn**	**23 47 03.5**	**-2.2**
N25K				IAmb	IAmb	23 47 18.0	
	comp=Z,12nm,1.1s						
GLB	**Gilahina Butte**	**16.53**	**47**	Pn	**Pn**	**23 47 08.0**	**-1.3**
GLB				IAmb	IAmb	23 47 15.5	
	comp=Z,10nm,1.3s						
VRDI	**Verde Repeater**	**16.61**	**47**	Pn	**Pn**	**23 47 09.1**	**-1.3**
F21K	**Alatna River**	**16.83**	**21**		**P**	**23 47 14.4**	**-0.2**
ILAR	**Eielson Array**	**16.95**	**34**	Pn	**Pn**	**23 47 13.5**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=231,slow=11,SNR=4.6						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**16.95**	**34**		**Pn**	**23 47 14.2**	**-0.2**
H24K	**Noodor Dome**	**17.30**	**30**		**Pn**	**23 47 19.1**	**+0.2**
J26L	**Joseph Creek**	**17.99**	**37**	P	**Pn**	**23 47 26.6**	**-0.8**
D22K	**Ayikyak River**	**18.37**	**19**	P	**Pn**	**23 47 33.0**	**+1.0**
D22K				IAmb	IAmb	23 47 37.6	
	comp=Z,16nm,1.4s						
HYT	**Haines Junctio**	**19.27**	**51**	P	**Pn**	**23 47 43.1**	**+0.2**
HYT				IAmb	IAmb	23 48 03.8	
	comp=Z,6.1nm,0.7s						
BMAR	**Burnt Mountain**	**19.34**	**29**	P	**P**	**23 47 42.5**	**+0.3**
PEA0B	**Petropavlovsk-**	**19.94**	**285**	P	**P**	**23 47 48.4**	**-0.4**
PETK	**Petropavlovsk-**	**19.94**	**285**	P	**P**	**23 47 47.5**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=83,slow=14,SNR=11						
PETK				LR	LR	23 54 45.7	
	comp=Z,48nm,20.6s,baz=51,slow=35						
	comp=Z,4.4nm,0.5s						
PETK	**Petropavlovsk-**	**19.94**	**285**	P	**P**	**23 47 48.4**	**-0.3**
O30N	**Mendenhall**	**19.95**	**52**	P	**P**	**23 47 49.6**	**+0.8**
O30N				IAmb	IAmb	23 47 52.6	
	comp=Z,12nm,0.9s						
WHY	**Whitehorse**	**20.51**	**53**		**P**	**23 47 55.2**	**+0.1**
WHY				IAmb	IAmb	23 48 15.1	
	comp=Z,11nm,0.8s						
H29M	**Whitestone**	**20.73**	**36**		**P**	**23 47 56.4**	**-0.9**
H29M				IAmb	IAmb	23 48 13.2	
	comp=Z,6.0nm,0.8s						
C27K	**Jago River**	**21.02**	**25**	P	**P**	**23 48 00.9**	**+0.5**
G29M	**Pine Creek**	**21.18**	**34**	P	**P**	**23 48 01.2**	**-0.9**
G29M				IAmb	IAmb	23 48 17.2	
	comp=Z,11nm,0.9s						
EPYK	**Eagle Plains**	**21.40**	**36**	P	**P**	**23 48 02.7**	**-1.7**
EPYK				IAmb	IAmb	23 48 09.5	
	comp=Z,9.2nm,1.0s						
SEY	**Seymchan**	**22.75**	**313**	LR	LR	23 57 18.2	
	comp=Z,42nm,19.5s,baz=45,slow=37						
YKA	**Yellowknife Ar**	**30.22**	**49**	P	**P**	**23 49 27.4**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=284,slow=9.2,SNR=2.5						
	comp=Z,0.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**37.46**	**219**	T	T	00 31 15.8	
	baz=23						
H11N3	**WAKE ISLAND Hy**	**37.47**	**219**	T	T	00 31 09.5	
	baz=23						
H11N1	**WAKE ISLAND Hy**	**37.48**	**219**	T	T	00 30 57.9	
	baz=23						
H11S1	**WAKE ISLAND Hy**	**38.65**	**218**	T	T	00 31 53.6	
	baz=23,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**38.66**	**218**	T	T	00 31 53.8	
	baz=23,slow=76,SNR=8.0						
H11S3	**WAKE ISLAND Hy**	**38.67**	**218**	T	T	00 31 53.2	
	baz=23,slow=76,SNR=6.8						
PDAR	**Pinedale Array**	**40.35**	**79**	P	**P**	**23 50 55.3**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=296,slow=3.8,SNR=6.1						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**40.35**	**79**	P	**P**	**23 50 53.8**	**-0.5**
HILR	**Hailar Array B**	**43.17**	**296**	P	**P**	**23 51 16.6**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=60,slow=8.8,SNR=1.6						
	comp=Z,0.7nm,0.5s						
FRB	**Frobisher Bay**	**48.97**	**35**	LR	LR	00 15 31.8	
	comp=Z,56nm,18.4s,baz=70,slow=40						
SONM	**Songino Array**	**51.38**	**301**	P	**P**	**23 52 21.5**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=63,slow=6.7,SNR=6.8						
	comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**52.68**	**89**	P	**P**	**23 52 31.2**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=324,slow=7.2,SNR=3.1						
	comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**52.68**	**89**	P	**P**	**23 52 28.7**	**-2.1**
ZALV	**Zalesovo Beam**	**57.50**	**318**	P	**P**	**23 53 03.8**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=54,slow=3.7,SNR=2.0						
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	**57.97**	**354**	P	**P**	**23 53 07.7**	**-0.6**
	comp=Z,11nm,1.2s,baz=17,slow=6.8,SNR=4.6						
	comp=Z,11nm,1.2s						
KURK	**Kurchatov**	**62.45**	**318**	P	**P**	**23 53 39.1**	**0.0**
KURBB	**Kurchatov Arra**	**62.56**	**318**	P	**P**	**23 53 39.8**	**0.0**
	comp=Z,1.3nm,0.8s,baz=45,slow=7.8,SNR=9.2						
	comp=Z,1.3nm,0.8s						
BVAR	**Borovoye Array**	**63.78**	**324**	P	**P**	**23 53 47.4**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=50,slow=7.2,SNR=15						
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**63.88**	**313**	P	**P**	**23 53 48.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=45,slow=6.3,SNR=6.3						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**63.88**	**313**	P	**P**	**23 53 47.4**	**-1.3**
FINES	**FINESS Array B**	**65.92**	**352**	P	**P**	**23 54 01.6**	**0.0**
	comp=Z,2.3nm,0.9s,baz=354,slow=5.7,SNR=7.5						
	comp=Z,2.3nm,0.9s						
FINES	**FINESS Array B**	**65.92**	**352**	P	**P**	**23 54 00.2**	**-1.5**
NOA	**NORSAR Array B**	**66.98**	**360**	P	**P**	**23 54 08.5**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=0.8,slow=6.5,SNR=2.7						
	comp=Z,1.6nm,0.9s						
HFS	**Hagfors**	**67.87**	**358**	P	**P**	**23 54 14.0**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=13,slow=3.3,SNR=12						
	comp=Z,1.9nm,0.5s						
PZH	**PanZhiHua**	**68.90**	**286**	P	**P**	**23 54 21.8**	**+0.6**
AB31	**Akbulak array**	**70.51**	**328**	P	**P**	**23 54 30.3**	**-0.2**
AB31				IAmb	IAmb	23 54 51.0	
	comp=Z,4.9nm,1.4s						
ABKAR	**Akbulak array**	**70.51**	**328**	P	**P**	**23 54 30.4**	**-0.2**
KKAR	**Karatay Array**	**71.86**	**318**	P	**P**	**23 54 38.6**	**-0.3**
PABE	**Paberze**	**71.98**	**352**	P	**P**	**23 54 39.6**	**+0.3**
EKA	**Eskdalemuir Ar**	**72.09**	**8**	P	**P**	**23 54 40.8**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=347,slow=5.7,SNR=1.8						
	comp=Z,1.1nm,0.7s						
KSH	**Kashi**	**72.45**	**313**	P	**P**	**23 54 47.0**	**+4.3**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	**Malin Array Be**	**76.16**	**348**	P	**P**	**23 55 03.5**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=18,slow=5.4,SNR=4.4						
	comp=Z,1.2nm,0.5s						
WRA	**Warramunga Arr**	**87.03**	**232**	P	**P**	**23 56 01.7**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=31,slow=4.5,SNR=1.6						
	comp=Z,0.1nm,0.5s						
ESDC	**Sonseca Array**	**87.48**	**11**	P	**P**	**23 56 04.6**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=324,slow=6.3,SNR=3.2						
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**90.42**	**230**	P	**P**	**23 56 16.9**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=50,slow=3.3,SNR=2.7						
	comp=Z,0.2nm,0.4s						

*IDC **27** 23:49:49.8±0.5, 22.91N×106.67E, h0km, mb4.4/28, mbtmp4.4/30, ML4.5/2, MS3.9/40, Error ellipse: s-maj=15.3km s-min=12.5km az=61.0*

*MOS **27** 23:49:50.5±0.8, 22.87N×106.68E, h17km, mb5.0/52, MS4.5/4, Error ellipse: s-maj=8.3km s-min=4.6km az=123.2*

*BJI **27** 23:49:50.0, 22.89N×106.65E, h8km, mB4.9/18, mb4.5/50, ML4.7/13, Ms4.6/38, Ms7 4.6/56*

*PLV **27** 23:49:52.5±2.1, 22.83N×106.62E, h13km±9km, ML4.8, MW4.8*

*NEIC **27** 23:49:52.1±1.2, 22.92N±0.07×106.73E±0.07, h10km±1km, mb5.0/89, Error ellipse: s-maj=11.3km s-min=10.1km az=164.0*

*GCMT **27** 23:49:53.1±0.3, 22.94N±0.04×106.75E±0.05, h12km, MW4.7/77, Moment Tensor Solution. s8,c9; s77,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.50±.06; Mθθ -0.57±.06; Mϕϕ -0.93±.07; Mrθ -0.32±.33; Mθϕ -0.63±.05; Mϕr -0.45±.34; Best double couple: M0 1.55400×10^16 NP1:ϕs37.00000°, δ35.00000°, λ91.00000°. NP2: ϕs217.00000°, δ55.00000°, λ90.00000°. Principal axes: T 1.6010, Plg80.0000°, Azm125.0000°; N -0.0970, Plg0.0000°, Azm217.0000°; P -1.5060, Plg10.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BKK **27** 23:49:55.2±1.1, 23.7N±7.7×10^7E±^, h22km, M4.9/8, mB4.9/7, mb4.5/7, Mjma4.8/8, ML5.5/8, MLv5.4/8, Mw(mB)4.2/7*

ISC 27 23:49:50.8±0.8, **22.92N**±0.03×**106.68E**±0.03, **h6**km±4km, **n637**, σ1s**20**/648, **mb4.8**/134, **MS4.1**/43, **22C-8D, Vietnam**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGVB	**Ha Giang**	**1.56**	**267**	*e*Pn	**Pn**	**23 50 18.8**	**-0.3**
HGVB				*e*Sg	**Sn**	**23 50 39.8**	**+0.2**
HGVB				IAML		23 50 42.2	
	comp=E,11μm,0.5s						
HGVB				IAML		23 50 44.4	
	comp=N,14μm,0.8s						
BGV	**Bac-Giang**	**1.67**	**195**	*e*Pn	**Pn**	**23 50 20.0**	**-0.5**
BGV				*e*Sg	**Sg**	**23 50 44.0**	**-0.4**
VTVB	**Vinh Tuy**	**1.78**	**249**	*e*Pn	**Pn**	**23 50 21.3**	**-0.7**
VTVB				*e*Sg	**Sn**	**23 50 45.7**	**+0.8**
VTVB				IAML		23 50 48.3	
	comp=E,5μm,0.5s						
VTVB				IAML		23 50 57.0	
	comp=N,6μm,1.2s						
PLV	**Phu-Lien**	**2.10**	**181**	*e*Pn	**Pn**	**23 50 25.7**	**-0.8**
PLV				*e*Sg	**Sg**	**23 50 56.9**	**-1.4**
HBVN	**Hoa-Binh**	**2.42**	**211**	*e*Pn	**Pn**	**23 50 30.0**	**-0.9**
HBVN				IAML		23 51 08.7	
	comp=E,8μm,0.4s						
MLVB	**It Ong**	**2.83**	**241**	*e*Pn	**Pg**	**23 50 44.8**	**-0.3**
MLVB				IAML		23 51 41.5	
	comp=N,5μm,0.9s						
MLVB				IAML		23 51 52.6	
	comp=E,3μm,0.6s						
THV	**Thanh Hoa**	**3.16**	**196**	*e*Pg	**Pg**	**23 50 51.8**	**+0.4**
THV				IAML		23 51 37.8	
	comp=E,2μm,0.8s						
GYA	**Guiyang**	**3.53**	**360**	⇓Pn	**Pn**	**23 50 46.3**	**+0.1**
GYA				Sn	**Sn**	**23 51 29.0**	**+0.7**
GYA				smax	smax		
	comp=E,2μm,0.6s						
GYA				smax	smax		
	comp=E,2μm,0.8s						
GYA				LR	LR		
	comp=E,11μm,6.3s						
DBV	**Dienbien**	**3.72**	**247**	*e*Pn	**Pn**	**23 50 49.0**	**+0.2**
DBV				*e*Pg	**Pg**	**23 51 01.6**	**-0.4**
DBV				*e*Sg	**Sg**	**23 51 49.3**	**-0.9**
GULI	**GuiLin**	**4.11**	**54**	Pn	**Pn**	**23 50 54.8**	**+0.6**
GULI				Pg	**Pg**	**23 51 06.8**	**-2.8**
GULI				Sn	**Sn**	**23 51 42.0**	**-0.6**
GULI				smax	smax		
	comp=E,1μm,0.8s						
GULI				smax	smax		
	comp=E,1μm,0.8s						
CCVB	**Con Cuong**	**4.20**	**204**	*e*Pn	**Pn**	**23 50 55.4**	**0.0**
CCVB				*e*Pg	**Pg**	**23 51 09.6**	**-1.7**
CCVB				*e*Sg	**Sg**	**23 52 03.3**	**-2.5**
KMI	**Kunming**	**4.22**	**302**	⇓Pn	**Pn**	**23 50 56.8**	**+0.9**
KMI				Sn	**Sb**	**23 51 52.8**	**-4.2**
KMI				Sg	**Sg**	**23 52 09.3**	**+2.8**
KMI				smax	smax		
	comp=E,2μm,1.0s						
KMI				smax	smax		
	comp=E,2μm,1.1s						
KMI				LR	LR		
	comp=E,11μm,6.9s						
QIZ	**Qiongzhong**	**4.87**	**142**		**Pn**	**23 51 02.1**	**-2.5**
QIZ	**Qiongzhong**	**4.87**	**142**	Pn	**Pn**	**23 51 02.0**	**-2.5**
QIZ				Sn	**Sn**	**23 52 01.8**	**+0.6**
QIZ				Sg	**Sg**	**23 52 25.5**	**-1.6**
QIZ				smax	smax		
	comp=E,840nm,1.1s						
QIZ				smax	smax		
	comp=E,1μm,1.0s						
QIZ				LR	LR		
	comp=E,8μm,7.0s						
QIZ				LR	LR		
	comp=E,14μm,7.7s						
PZH	**PanZhiHua**	**5.74**	**309**	Pn	**Pn**	**23 51 17.8**	**+1.1**
PZH				Pg	**Pb**	**23 51 28.5**	**-2.9**
PZH				Sn	**Sn**	**23 52 27.5**	**+4.6**
PZH				Sg	**Sg**	**23 52 56.3**	**+1.2**
PZH				smax	smax		
	comp=E,190nm,1.3s						
PZH				smax	smax		
	comp=E,280nm,1.2s						
PANO	**Nakornpanom**	**6.06**	**199**	P	**Pn**	**23 51 21.6**	**+0.6**
	comp=E,5.2nmcomp=E,3.8nmcomp=E,3.8nmcomp=E,796nm						
	comp=E,68nm,1.0s						
GZH	**Guangzhou**	**6.14**	**87**	Pn	**Pn**	**23 51 25.8**	**+3.8**
GZH				Sn	**Sn**	**23 52 39.0**	**+6.4**
SKNT	**Sakolnakorn**	**6.43**	**204**	P	**Pn**	**23 51 26.7**	**+0.6**
	comp=E,4.8nmcomp=E,6.3nmcomp=E,59nm,1.3s						
HKPS	**Hong Kong Po S**	**6.92**	**94**	Pn	**Pn**	**23 51 31.4**	**-1.4**
CNSH	**ChangSha**	**7.70**	**46**	Pn	**Pn**	**23 51 41.5**	**-2.0**
CNSH				Sn	**Sn**	**23 52 09.0**	**-2.0**
CNSH				smax	smax		
	comp=E,510nm,0.9s						
CNSH				smax	smax		
	comp=E,640nm,0.9s						
UTTA	**Uttaradit**	**7.72**	**229**	P	**Pn**	**23 51 43.9**	**+0.2**
ENH	**Enshi**	**7.74**	**18**		**Pn**	**23 51 43.2**	**-0.9**
TNCH	**TengChong**	**7.76**	**287**	Pn	**Pn**	**23 51 44.8**	**+0.4**
TNCH				Sn	**Sn**	**23 53 14.5**	**+1.8**
TNCH				Sg	**Sg**	**23 54 00.3**	**+0.4**
TNCH				smax	smax		
	comp=E,1μm,1.6s						
TNCH				smax	smax		
	comp=E,1μm,1.6s						
TNCH				LR	LR		
	comp=E,1μm,5.6s						
LAMP	**Lampang**	**7.92**	**238**	P	**Pn**	**23 51 47.2**	**+0.8**
PHIT	**Phitsanulok**	**8.19**	**227**	P	Pn	23 51 58.3	+8.0
CHTO	**Chiang Mai**	**8.31**	**242**		**Pn**	**23 51 51.8**	**0.0**
CHTO	**Chiang Mai**	**8.31**	**242**	P	**Pn**	**23 51 51.8**	**0.0**
CHTO	**Chiang Mai**	**8.31**	**242**	P	**Pn**	**23 51 53.2**	**+1.4**
CD2	**Chengdu**	**8.38**	**342**	P	**Pn**	**23 51 52.5**	**-0.3**
CD2				S	**Sn**	**23 53 28.3**	**+0.5**
CD2				pmax	pmax		
	comp=E,80nm,1.0s						
CD2				LR	LR		
	comp=E,13μm,11.4s						
CMAR	**Chiang Mai Arr**	**8.49**	**240**	Pn	**Pn**	**23 51 55.2**	**+0.8**
	comp=E,1.3nm,0.3s,baz=54,slow=12,SNR=24						
CMAR				Lg	Lg	23 54 17.7	
	comp=E,0.4nm,0.3s,baz=55,slow=30,SNR=6.2						
CMAR				LR	LR	23 55 44.0	
	comp=E,440nm,19.1s,baz=65,slow=42						
	comp=E,3.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**8.49**	**240**	Pn	**Pn**	**23 51 53.9**	**-0.5**
WHN	**Wuhan**	**10.23**	**40**	⇑P	**Pn**	**23 52 18.0**	**-0.1**
WHN				sP		23 52 25.3	
WHN				S	**Sn**	**23 54 13.8**	**+0.7**
WHN				LR	LR		
	comp=E,5μm,12.0s						
XAN	**Xi'an**	**11.26**	**10**	⇓P	**Pn**	**23 52 29.3**	**-2.9**
XAN				S	**Sn**	**23 54 36.0**	**-2.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				LR	LR		
	comp=N,3μm,10.0s						
XAN				LR	LR		
	comp=E,1μm,8.2s						
XAN				LR	LR		
	comp=Z,4μm,11.0s						
LYN	**LuoYang**	**12.65**	**22**	P	**Pn**	**23 52 52.5**	**+1.2**
LYN				S	**Sn**	**23 55 17.0**	**+4.5**
LYN				pmax	pmax		
	comp=Z,33nm,0.7s						
LYN				LR	LR		
	comp=Z,1μm,5.5s						
TPUB	**Ta-pu**	**12.84**	**86**	Pn	**Pn**	**23 52 53.3**	**-0.6**
LZDM	**Lanzhou Array**	**13.25**	**349**	Pn	**Pn**	**23 52 58.4**	**-1.4**
	baz=170,slow=13						
LZDM				LR	LR	23 58 54.8	
	comp=Z,348nm,21.0s,baz=65,slow=41						
	comp=Z,8.1nm,0.5s						
LZH	**Lanzhou**	**13.36**	**350**	*e*P	**Pn**	**23 53 00.3**	**-0.7**
LZH				sP	P	23 53 11.3	+0.5
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				LR	LR		
	comp=Z,2μm,11.3s						
YHNB	**Yeheng**	**13.56**	**80**	Pn	**Pn**	**23 53 03.1**	**-0.8**
SHL	**Shillong**	**13.76**	**284**		**Pn**	**23 53 06.0**	**-0.6**
SHL	**Shillong**	**13.76**	**284**	P	**Pn**	**23 53 06.0**	**-0.6**
BRDH	**Bariadhala**	**13.88**	**272**	LR	LR	23 59 28.9	
	comp=Z,430nm,19.1s,baz=134,slow=42						
NJ2	**Nanjing**	**14.11**	**47**	*e*P	**Pn**	**23 53 13.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,22nm,1.5s						
NJ2				LR	LR		
	comp=Z,1μm,12.6s						
NJ2				LR	LR		
	comp=Z,1μm,14.3s						
NJ2				LR	LR		
	comp=Z,1μm,14.3s						
LSA	**Lhasa**	**15.47**	**299**		**Pn**	**23 53 29.3**	**-0.8**
LSA	**Lhasa**	**15.47**	**299**	P	**Pn**	**23 53 29.3**	**-0.8**
LSA				pmax	pmax		
	comp=Z,21nm,1.0s						
HNS	**HongShan**	**16.00**	**24**	⇓P	**P**	**23 53 39.5**	**-0.5**
HNS				pmax	pmax		
	comp=Z,11nm,1.0s						
TIA	**Tai'an**	**16.05**	**32**	P	**P**	**23 53 42.5**	**+2.0**
TIA				pmax	pmax		
	comp=Z,32nm,0.8s						
TIA				LR	LR		
	comp=N,600nm,6.5s						
TIA				LR	LR		
	comp=E,270nm,8.2s						
TIA				LR	LR		
	comp=Z,1μm,8.3s						
TGY	**Tagaytay City**	**16.10**	**121**	LR	LR	23 59 37.2	
	comp=Z,645nm,19.2s,baz=116,slow=36						
GTA	**Gaotai**	**17.45**	**342**	P	**Pn**	**23 53 54.5**	**-0.5**
GTA				pP	sP	23 53 58.8	-0.1
GTA				LR	LR		
	comp=Z,3μm,14.3s						
BTO	**Baotou**	**17.86**	**8**	*e*P	**Pn**	**23 54 00.3**	**+0.3**
BTO				S	**Sn**	**23 57 21.5**	**+2.1**
BTO				pmax	pmax		
	comp=Z,18nm,0.6s						
BTO				pmax	pmax		
	comp=Z,370nm,5.4s						
HHC	**Hu-ho-hao-te**	**18.35**	**12**	⇓*i*P	**P**	**23 54 08.5**	**+2.4**
HHC				pP

comp=Z,4.2nm,0.8s,baz=240,slow=11,SNR=6.5
comp=Z,4.2nm,0.8s
JNU Nakatsue 23.61 59 LR LR 00 03 29.4
comp=Z,271nm,18.2s,baz=245,slow=35
PPI Padang Panjang 24.02 196 P **P** **23 55 08.6 +2.0**
PDSI Padang 24.45 195 P **P** **23 55 12.2 +1.6**
SONM Songino Array 24.87 360 P **P** **23 55 15.5 +1.3**
comp=Z,9.6nm,1.0s,baz=178,slow=11,SNR=29
SONM LR LR 00 05 56.6
comp=Z,398nm,20.6s,baz=188,slow=39
comp=Z,9.6nm,1.0s
ULN Ulaanbaatar 24.90 1 P **P** **23 55 14.5 0.0**
ULN Ulaanbaatar 24.90 1 P **P** **23 55 14.5 0.0**
ULN pmax pmax
comp=Z,17nm,0.9s
MTKI Muara Teweh, K 25.03 160 P **P** **23 55 18.0 +2.2**
TOLI2 Tolitoli 25.64 146 P **P** **23 55 19.7 -1.7**
CN2 Changchun 25.95 32 *eP* **P** **23 55 25.5 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
WMQ Urumqi 26.08 328 *eP* **P** **23 55 27.3 +2.1**
WMQ sP sP 23 55 34.0 +6.0
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ LR LR
comp=Z,630nm,11.7s
WMQ LR LR
comp=Z,810nm,11.5s
WMQ LR LR
comp=Z,200nm,11.7s
PCI Palu 26.92 150 P **P** **23 55 34.7 +1.8**
HYBB Hyderabad (bro 26.94 263 *eP* **P** **23 55 33.9 +0.7**
MDSI Maura Dua 27.34 185 P **P** **23 55 38.3 +1.6**
comp=Z,19nm,1.3s
MDSI pP **sP** **23 55 41.3 +1.8**
comp=Z,19nm,1.3s
BBKI Banjar Baru 27.40 162 P **P** **23 55 39.5 +2.3**
KLSI 27.50 184 P **P** **23 55 39.4 +1.3**
comp=Z,20nm,1.2s
ZAK Zakamensk 27.54 355 *eP* **P** **23 55 37.8 -0.6**
ZAK pmax pmax
comp=Z,12nm,1.4s
APSI Ampana 27.81 146 P **P** **23 55 43.9 +3.0**
comp=Z,22nm,0.8s
BNX BinXian 28.32 31 ⇑P **P** **23 55 45.5 +0.3**
BNX pmax pmax
comp=Z,8.0nm,1.2s
LUWI Luwuk 28.51 145 P **P** **23 55 47.2 +0.1**
LUWI IAmb IAmb 23 55 49.5
comp=Z,38nm,1.1s
LUWI Luwuk 28.51 145 P **P** **23 55 48.1 +1.0**
comp=Z,35nm,1.3s
HILR Hailar Array B 28.51 18 P **P** **23 55 46.4 -0.6**
comp=Z,1.9nm,0.6s,baz=187,slow=10,SNR=4.7
comp=Z,1.9nm,0.6s
TTSI Tana Toraja 28.81 152 P **P** **23 55 52.3 +2.5**
comp=Z,3µmcomp=Z,17nm,0.8s
DBJI Dramaga 29.29 180 P **P** **23 55 57.0 +2.9**
WUS Wushi 29.38 315 **P** **23 55 55.2 +0.3**
WUS IAmb IAmb 23 55 58.3
comp=Z,17nm,0.8s
PALK Pallekele 29.43 242 LR LR 00 07 51.3
comp=Z,102nm,19.6s,baz=46,slow=37
SPSI Sidrap Palu 29.62 153 P **P** **23 55 58.8 +1.8**
comp=Z,1µmcomp=Z,18nm,1.2s
USRK Ussuriysk Ar. 29.71 38 P **P** **23 55 57.5 -0.1**
comp=Z,4.7nm,0.8s,baz=248,slow=13,SNR=6.0
comp=Z,4.7nm,0.8s
ZSN Zaisan 30.09 330 *eP* **P** **23 56 01.5 +0.6**
ZSN Zaisan 30.09 330 *eP* **P** **23 56 01.5 +0.6**
KPJI Karang Pucung 30.14 176 P **P** **23 56 04.0 +2.4**
comp=Z,10nm,1.0s
SHLS Shalkode 30.25 318 *eP* **P** **23 56 00.7 -1.9**
comp=Z,33nm,1.5s
SHLS Shalkode 30.25 318 *eP* **P** **23 56 00.6 -1.9**
SHLS pmax pmax
comp=Z,33nm,1.5s
MJAR Matsushiro Arr 30.41 56 P **P** **23 56 04.6 +0.7**
comp=Z,3.3nm,0.9s,baz=260,slow=11,SNR=1.4
MJAR LR LR 00 08 21.2
comp=Z,116nm,20.4s,baz=246,slow=36
comp=Z,3.3nm,0.9s
UZB Uzynbulak 30.51 318 *eP* **P** **23 56 05.4 +0.5**
comp=Z,15nm,1.0s
UZB Uzynbulak 30.51 318 *eP* **P** **23 56 05.4 +0.5**
UZB pmax pmax
comp=Z,15nm,1.0s
KAPI Kappang 30.56 154 LR LR 00 08 11.1
comp=Z,101nm,21.6s,baz=7.0,slow=36
KAPI Kappang 30.56 154 P **P** **23 56 04.8 -0.5**
KAPI IAmb IAmb 23 56 13.1
comp=Z,17nm,1.1s
KAPI Kappang 30.56 154 P **P** **23 56 04.8 -0.5**
KAPI pmax pmax
comp=Z,17nm,1.1s
TARG Taragay, Kyrgy 30.57 315 P **P** **23 56 05.9 +0.2**
TARG IAmb IAmb 23 56 09.7
comp=Z,27nm,1.3s
TARG Taragay, Kyrgy 30.57 315 P **P** **23 56 05.9 +0.2**
TARG pmax pmax
comp=Z,27nm,1.3s
DGZ Jazzator, Alta 30.72 335 *i* P **P** **23 56 07.3 +0.6**
DGZ pmax pmax
comp=Z,24nm,1.2s
KSH Kashi 30.84 310 P **P** **23 56 11.3 +3.4**
KSH pmax pmax
comp=Z,19nm,1.2s
KSH LR LR
comp=Z,570nm,13.7s
KSH LR LR
comp=Z,700nm,14.3s
SATY Saty 30.85 317 *eP* **P** **23 56 08.3 +0.5**
comp=Z,14nm,1.2s
SATY Saty 30.85 317 *eP* **P** **23 56 08.3 +0.5**
SATY pmax pmax
comp=Z,14nm,1.2s
MK31 Makanchi Array 30.88 326 *ceP* **P** **23 56 09.7 +1.7**
MKAR Makanchi Array 30.88 326 P **P** **23 56 09.2 +1.3**
comp=Z,4.3nm,0.7s,baz=127,slow=8.8,SNR=47
MKAR PcP **PcP** **23 59 05.2 +0.5**
comp=Z,2.0nm,0.8s,baz=142,slow=4.9,SNR=5.2
MKAR LR LR 00 09 39.7
comp=Z,264nm,19.3s,baz=126,slow=38
comp=Z,4.3nm,0.7s
MKAR Makanchi Array 30.88 326 **P** **23 56 08.3 +0.3**
MKAR **PcP** **23 59 05.2 +0.5**
MKAR Makanchi Array 30.88 326 *ceP* **P** **23 56 09.1 +1.1**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MAKZ Makanchi 31.05 326 P **P** **23 56 10.0 +0.6**
MAKZ Makanchi 31.05 326 P **P** **23 56 10.0 +0.6**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
NIL Nilore 31.20 297 **P** **23 56 11.3 +0.3**
NIL IAmb IAmb 23 56 13.0
comp=Z,32nm,1.1s
NIL Nilore 31.20 297 P **P** **23 56 11.3 +0.3**
NIL pmax pmax
comp=Z,31nm,1.1s
HEH HeiHe 31.74 26 *eP* **P** **23 56 15.5 0.0**
HEH pmax pmax
comp=Z,8.0nm,0.8s
HEH LR LR
comp=Z,350nm,11.6s
HEH LR LR
comp=Z,250nm,10.9s
HEH LR LR
comp=Z,330nm,13.9s
MDOK Medeo 31.76 317 *eP* **P** **23 56 16.6 +0.7**
MDOK Medeo 31.76 317 *eP* **P** **23 56 16.6 +0.7**
TNSS Tian-Shan 31.76 316 *eP* **P** **23 56 16.3 +0.1**
TNSS Tian-Shan 31.76 316 *eP* **P** **23 56 16.2 +0.1**
ULHL Ulahol 31.84 315 P **P** **23 56 19.1 +2.5**
SNR=6.0
AAA Alma-Ata 31.86 317 *eP* **P** **23 56 17.2 +0.5**
comp=Z,8.2nm,0.5s
AAA Alma-Ata 31.86 317 *eP* **P** **23 56 17.2 +0.5**
AAA pmax pmax
comp=Z,8.0nm,0.5s
BSSI Bau Bau, Buton 31.88 153 P **P** **23 56 17.8 +0.8**
comp=Z,13nm,1.1s
TDK Taldyqorghan 31.91 321 *eP* **P** **23 56 17.5 +0.5**
comp=Z,12nm,1.3s
TDK Taldyqorghan 31.91 321 *eP* **P** **23 56 17.5 +0.5**
TDK pmax pmax
comp=Z,12nm,1.3s

BOOM Boomskoye usch 32.15 315 **P** **23 56 19.4 0.0**
BOOM IAmb IAmb 23 56 23.3
comp=Z,21nm,1.0s
BOOM Boomskoye usch 32.15 315 P **P** **23 56 19.4 0.0**
BOOM pmax pmax
comp=Z,21nm,1.0s
JCJ Chichijima 32.38 75 LR LR 00 08 57.7
comp=Z,67nm,21.0s,baz=236,slow=36
TKM2 Tokmak 2 32.57 315 P **P** **23 56 25.2 +2.1**
SNR=7.4
NLAI Namlea 32.75 140 P **P** **23 56 26.7 +2.0**
comp=Z,27nm,1.2s
KBK Karagaybulak 32.88 314 P **P** **23 56 28.1 +2.4**
SNR=24
UCH Uchtor 32.98 313 P **P** **23 56 29.4 +2.5**
SNR=14
TWSI Taliwang, Sumb 33.01 161 P **P** **23 56 28.6 +1.8**
comp=Z,23nm,1.3s
FRU1 Bishkek 33.15 314 P **P** **23 56 28.7 +0.7**
FRU1 IAmb IAmb 23 56 31.7
comp=Z,22nm,0.9s
FRU1 Bishkek 33.15 314 P **P** **23 56 28.7 +0.7**
FRU1 pmax pmax
comp=Z,22nm,0.9s
AAK Ala-Archa 33.17 314 LR LR 00 11 47.1
comp=Z,1µm,20.6s,baz=108,slow=40
AAK Ala-Archa 33.17 314 P **P** **23 56 29.4 +1.2**
AAK IAmb IAmb 23 56 32.0
comp=Z,39nm,1.3s
AAK Ala-Archa 33.17 314 P **P** **23 56 29.8 +1.5**
SNR=21
AAK Ala-Archa 33.17 314 *ceP* **P** **23 56 30.8 +2.5**
AAK pmax pmax
comp=Z,26nm,1.0s
USP Ospenovka 33.44 315 P **P** **23 56 32.2 +1.7**
SNR=35
ARSB Arslanbob 33.65 311 **P** **23 56 33.1 +0.6**
ARSB IAmb IAmb 23 56 35.4
comp=Z,25nm,1.2s
ARSB Arslanbob 33.65 311 P **P** **23 56 33.1 +0.6**
ARSB pmax pmax
comp=Z,25nm,1.2s
EKS2 Erkin-Say 33.65 314 P **P** **23 56 35.0 +2.5**
SNR=18
DRK Karamyk 33.85 307 P **P** **23 56 34.9 +0.5**
DRK Karamyk 33.85 307 P **P** **23 56 34.9 +0.5**
DRK pmax pmax
comp=Z,51nm,1.3s
MSAI Masohi 33.95 137 P **P** **23 56 37.3 +2.2**
KBL Kabul 34.79 298 **P** **23 56 42.8 +0.2**
KBL IAmb IAmb 23 56 44.9
comp=Z,21nm,1.2s
KBL Kabul 34.79 298 P **P** **23 56 42.8 +0.2**
KBL pmax pmax
comp=Z,21nm,1.3s
GAR Garm 34.80 306 P **P** **23 56 43.2 +0.7**
GAR IAmb IAmb 23 56 44.9
comp=Z,25nm,0.9s
MMRI Maumere 34.86 152 P **P** **23 56 43.3 +0.3**
ZAA0 Zalesovo Array 35.11 337 **P** **23 56 45.0 +0.3**
ZALV Zalesovo Beam 35.11 337 P **P** **23 56 45.7 +1.0**
comp=Z,12nm,0.6s,baz=138,slow=8.0,SNR=46
ZALV LR LR 00 12 06.7
comp=Z,513nm,18.6s,baz=136,slow=38
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 35.11 337 **P** **23 56 45.1 +0.4**
KURBB Kurchatov Arra 35.29 329 P **P** **23 56 47.5 +1.2**
comp=Z,33nm,1.1s,baz=137,slow=9.1,SNR=61
KURBB PcP **PcP** **23 59 15.8 -1.0**
comp=Z,1.1nm,0.7s,baz=139,slow=2.7,SNR=4.6
comp=Z,33nm,1.1s
KURK Kurchatov 35.30 329 **P** **23 56 47.1 +0.7**
KURK IAmb IAmb 23 56 49.5
comp=Z,34nm,0.9s
KURK Kurchatov 35.30 329 *ceP* **P** **23 56 47.7 +1.2**
KURK pmax pmax
comp=Z,59nm,1.3s
CHGR Chuyangaron 35.57 305 **P** **23 56 49.1 0.0**
CHGR Chuyangaron 35.57 305 P **P** **23 56 49.1 0.0**
CHGR pmax pmax
comp=Z,68nm,1.0s
KK31 Karatay Array 36.03 313 **P** **23 56 53.7 +0.8**
KK31 IAmb IAmb 23 56 55.5
comp=Z,18nm,1.1s
KK31 Karatay Array 36.03 313 P **P** **23 56 53.7 +0.8**
KK31 pmax pmax
comp=Z,18nm,1.2s
KKAR Karatay Array 36.03 313 **P** **23 56 53.5 +0.7**
KKAR Karatay Array 36.03 313 P **P** **23 56 53.6 +0.7**
ASAJ Asahikawa 36.25 46 LR LR 00 12 19.0
comp=Z,108nm,18.6s,baz=36,slow=37
CHM Chimkent 36.37 311 *eP* **P** **23 56 56.3 +0.5**
comp=Z,13nm,1.1s
CHM Chimkent 36.37 311 *eP* **P** **23 56 56.2 +0.5**
CHM pmax pmax
comp=Z,13nm,1.1s
BRLS Borolday 36.46 312 *eP* **P** **23 56 57.2 +0.6**
BRLS Borolday 36.46 312 *eP* **P** **23 56 57.1 +0.6**
BATI Baumata 36.88 151 LR LR 00 12 30.8
comp=Z,143nm,21.2s,baz=319,slow=37
YSS Yuzhno-Sakhali 37.57 41 *eP* P 23 57 10.8 +4.9
BRZS Berezniki 37.90 324 *eP* **P** **23 57 09.2 +0.5**
BRZS Berezniki 37.90 324 *eP* **P** **23 57 09.1 +0.5**
HRA Herat 40.35 297 **P** **23 57 29.3 -0.4**
BVAR Borovoye Array 40.76 327 P **P** **23 57 33.5 +0.9**
comp=Z,4.6nm,0.8s,baz=116,slow=10,SNR=19
BVAR PcP **PcP** **23 59 32.2 -1.5**
comp=Z,2.9nm,1.0s,baz=132,slow=6.2,SNR=3.8
BVAR LR LR 00 16 51.6
comp=Z,96nm,19.3s,baz=116,slow=40
comp=Z,4.6nm,0.8s
BORK Borovoye 40.81 327 **P** **23 57 33.5 +0.6**
BORK IAmb IAmb 23 57 35.1
comp=Z,24nm,1.3s
BORK Borovoye 40.81 327 *ceP* **P** **23 57 33.2 +0.3**
BORK pmax pmax
comp=Z,17nm,1.0s
YAK Yakutsk 42.13 16 LR LR 00 16 49.8
comp=Z,234nm,19.8s,baz=212,slow=38
YAK Yakutsk 42.13 16 P **P** **23 57 43.2 -0.4**
YAK IAmb IAmb 23 57 45.0
comp=Z,19nm,0.8s
YAK Yakutsk 42.13 16 *ceP* **P** **23 57 43.9 +0.3**
YAK pmax pmax
comp=Z,19nm,0.6s
FITZ Fitzroy Crossi 44.78 154 LR LR 00 19 58.3
comp=Z,78nm,18.4s,baz=338,slow=40
FITZ Fitzroy Crossi 44.78 154 P **P** **23 58 05.4 0.0**
AB31 Akbulak array 45.05 318 **P** **23 58 08.2 +0.9**
ABKAR Akbulak array 45.05 318 **P** **23 58 07.9 +0.6**
AKTO Aktyubinsk 46.60 319 LR LR 00 19 51.5
comp=Z,310nm,21.7s,baz=56,slow=39
SVE Sverdlovsk 47.53 328 *eP* **P** **23 58 27.8 +1.1**
SVE pmax pmax
comp=Z,26nm,1.2s
NRIK Noril'sk 47.85 351 LR LR 00 20 29.9
comp=Z,164nm,21.3s,baz=153,slow=38
NRIK Noril'sk 47.85 351 P **P** **23 58 29.6 +0.6**
NRIK IAmb IAmb 23 58 32.0
comp=Z,23nm,1.2s
NRIK Noril'sk 47.85 351 P **P** **23 58 29.6 +0.6**
NRIK pmax pmax
comp=Z,23nm,1.2s
MA2 Magadan 47.91 28 LR LR 00 19 02.7
comp=Z,37nm,18.6s,baz=267,slow=37
ARTI Arti 48.48 326 **P** **23 58 34.3 +0.2**
ARTI IAmb IAmb 23 58 35.9
comp=Z,27nm,1.3s
ARTI Arti 48.48 326 *d iP* **P** **23 58 34.7 +0.6**
ARTI 00 00 25.1
ARTI PPP PPP 00 01 14.9
ARTI S **S** **00 05 37.5 +2.1**
ARTI SS **SS** **00 09 02.1 -2.9**
ARTI pmax pmax
comp=Z,29nm,1.4s
PETK Petropavlovsk- 48.81 39 LR LR 00 21 23.8
comp=Z,61nm,18.3s,baz=333,slow=39
SEY Seymchan 50.29 25 LR LR 00 22 51.4
comp=Z,79nm,18.1s,baz=6.0,slow=39
WB0 Warramunga Arr 50.31 145 **P** **23 58 47.9 -0.6**
WB0 IAmb IAmb 23 58 49.9
comp=Z,21nm,1.5s
TIXI Tiksi 50.38 9 LR LR 00 22 36.1
comp=Z,266nm,18.5s,baz=198,slow=39
TIXI Tiksi 50.38 9 **P** **23 58 47.7 -0.7**
TIXI IAmb IAmb 23 58 49.5
comp=Z,15nm,1.4s
TIXI Tiksi 50.38 9 *ceP* **P** **23 58 48.0 -0.3**
TIXI pmax pmax
comp=Z,17nm,1.7s
WRAB Tennant Creek 50.43 145 P **P** **23 58 48.6 -0.8**
WRAB IAmb IAmb 23 58 51.0
comp=Z,17nm,1.3s
WRAB Tennant Creek 50.43 145 *ceP* **P** **23 58 49.6 +0.2**
WRAB pmax pmax
comp=Z,14nm,1.3s
WRA Warramunga Arr 50.43 145 P **P** **23 58 49.5 +0.1**
comp=Z,5.1nm,0.8s,baz=331,slow=8.6,SNR=32
WRA PcP **PcP** **00 00 08.0 +0.3**
comp=Z,1.8nm,1.1s,baz=335,slow=3.4,SNR=4.6
WRA LR LR 00 22 38.1
comp=Z,42nm,21.7s,baz=16,slow=39
comp=Z,5.1nm,0.8s
WRA Warramunga Arr 50.43 145 P **P** **23 58 48.6 -0.7**
WR8 Warramunga Arr 50.52 145 **P** **23 58 49.6 -0.5**
WR8 IAmb IAmb 23 58 51.4
comp=Z,26nm,1.5s
PMG Port Moresby 51.01 125 LR LR 00 23 35.9
comp=Z,21nm,18.0s,baz=244,slow=40
AS31 Alice Springs 53.33 148 P **P** **23 59 11.0 0.0**
ASAR Alice Springs 53.33 148 P **P** **23 59 11.4 +0.4**
comp=Z,3.7nm,1.0s,baz=329,slow=7.1,SNR=23
ASAR PcP **PcP** **00 00 19.2 +0.6**
comp=Z,1.5nm,0.9s,baz=340,slow=4.5,SNR=5.6
ASAR LR LR 00 25 13.5
comp=Z,42nm,18.4s,baz=352,slow=40
comp=Z,3.7nm,1.0s
ASAR Alice Springs 53.33 148 P **P** **23 59 10.9 -0.1**
KIRV Kirov 53.78 327 LR LR 00 25 43.3
comp=Z,152nm,18.5s,baz=113,slow=40
KIRV Kirov 53.78 327 *ceP* **P** **23 59 14.8 +1.0**
GNI Garni 54.47 304 LR LR 00 26 13.5
comp=Z,101nm,20.6s,baz=78,slow=40
GOF Gofitskoye 55.72 310 *ceP* **P** **23 59 29.0 +0.8**
KBZ Khabaz 55.81 308 LR LR 00 27 12.2
comp=Z,148nm,18.1s,baz=92,slow=40
KBZ Khabaz 55.81 308 *ceP* **P** **23 59 29.4 +0.6**
KBZ pmax pmax
comp=Z,7.0nm,1.4s
RAYN Ar Rayn 55.83 284 **P** **23 59 28.8 -0.6**
RAYN Ar Rayn 55.83 284 P **P** **23 59 28.8 -0.6**
RAYN pmax pmax
comp=Z,8.0nm,1.2s
KIV Kislovodsk 55.96 308 P **P** **23 59 30.1 +0.1**
KIV Kislovodsk 55.96 308 P **P** **23 59 29.6 -0.5**
comp=Z,19nm,1.2s
GURO Guroymak-BITLI 56.65 302 P **P** **23 59 35.6 +0.5**
GURO IAmb IAmb 23 59 37.7
comp=Z,18nm,1.1s
BILL Bilibino 57.70 23 *i* P **P** **23 59 42.6 +0.7**
BILL pmax pmax
comp=Z,6.0nm,1.4s
MARD Mardin 57.74 301 **P** **23 59 42.9 +0.1**
MARD IAmb IAmb 23 59 44.7
comp=Z,18nm,1.2s
KLMR Klimovskoe 59.15 328 *eP* **P** **23 59 50.1 -2.0**
KLMR *e* 00 02 01.5
KLMR pmax pmax
comp=Z,45nm,1.4s
KLMR MLR MLR
comp=Z,248nm,14.0s
MOS Moscow 59.62 322 *eP* **P** **23 59 53.2 -2.2**
MOS pmax pmax
comp=Z,28nm,1.0s
OBN Obninsk 60.19 321 *deP* **P** **23 59 59.6 +0.3**
OBN *e* 00 00 46.7
OBN *e* 00 02 13.5
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN MLR MLR
comp=Z,321nm,19.0s
OBN Obninsk 60.19 321 P **P** **23 59 58.5 -0.8**
comp=Z,20nm,0.5s
KHAM Kharkiv 60.33 316 P **P** **00 00 00.6 +0.1**
BBOO Buckleboo 62.11 152 P **P** **00 00 12.7 +0.1**
LVZ Lovozero 62.22 336 P **P** **00 00 13.0 0.0**
LVZ Lovozero 62.22 336 P **P** **00 00 13.0 0.0**
LVZ pmax pmax
comp=Z,161nm,1.7s
APA Apatity 62.66 336 ⇓ *eP* **P** **00 00 16.3 +0.5**
APA MLR MLR
comp=Z,867nm,3.9s
BRTR Keskin Array B 63.01 304 P **P** **00 00 18.4 -0.4**
comp=Z,1.1nm,1.0s,baz=122,slow=1.6,SNR=4.6
comp=Z,1.1nm,1.0s
BRTR Keskin Array B 63.01 304 P **P** **00 00 18.1 -0.8**
BRTR Keskin Array B 63.01 304 *ceP* **P** **00 00 18.5 -0.4**
BRTR pmax pmax
comp=Z,2.0nm,1.1s
STKA Stephens Creek 63.91 147 P **P** **00 00 24.1 -0.5**
comp=Z,0.7nm,0.3s,baz=311,slow=11,SNR=3.3
STKA LR LR 00 31 56.4
comp=Z,39nm,18.0s,baz=345,slow=40
comp=Z,0.7nm,0.3s
EIDS Eidsvold 64.47 135 P **P** **00 00 27.9 -0.4**
EIDS IAmb IAmb 00 00 31.5
comp=Z,21nm,1.2s
AK09 Malin Array Si 64.75 317 P **P** **00 00 28.2 -1.7**
AKASG Malin Array Be 64.78 317 P **P** **00 00 29.9 -0.2**
comp=Z,9.6nm,1.1s,baz=75,slow=6.5,SNR=12
comp=Z,9.6nm,1.1s
AKASG Malin Array Be 64.78 317 P **P** **00 00 29.4 -0.7**
AKASG Malin Array Be 64.78 317 *ceP* **P** **00 00 29.8 -0.3**
AKASG pmax pmax
comp=Z,7.0nm,1.0s
AKBB Malin Array Si 64.78 317 *ceP* **P** **00 00 29.6 -0.5**
AKBB pmax pmax
comp=Z,10.0nm,1.1s
AKBB Malin Array Si 64.78 317 P **P** **00 00 29.7 -0.4**
AK01 Malin Array Si 64.79 317 P **P** **00 00 29.5 -0.7**
KIEV Kiev 64.79 317 P **P** **00 00 29.0 -1.2**
KIEV IAmb IAmb 00 00 31.9
comp=Z,22nm,1.4s
KIEV Kiev 64.79 317 P **P** **00 00 29.0 -1.2**
KIEV pmax pmax
comp=Z,22nm,1.4s
KIEV Kiev 64.79 317 P **P** **00 00 29.3 -0.9**
comp=Z,50nm,1.8s
AK02 Malin Array Si 64.80 317 P **P** **00 00 29.5 -0.7**
AK05 Malin Array Si 64.80 317 P **P** **00 00 29.3 -1.0**
AK06 Malin Array Si 64.81 317 P **P** **00 00 29.4 -0.9**
AK07 Malin Array Si 64.81 317 P **P** **00 00 29.6 -0.7**
AK04 Malin Array Si 64.81 317 P **P** **00 00 29.5 -0.8**
AK11 Malin Array Si 64.82 317 P **P** **00 00 29.6 -0.8**
AK12 Malin Array Si 64.83 317 P **P** **00 00 29.7 -0.7**
AK16 Malin Array Si 64.86 317 P **P** **00 00 30.1 -0.5**
AK14 Malin Array Si 64.86 317 P **P** **00 00 30.2 -0.5**
AK22 Malin Array Si 64.87 317 P **P** **00 00 30.1 -0.6**
AK18 Malin Array Si 64.88 317 P **P** **00 00 30.4 -0.3**
AK17 Malin Array Si 64.89 317 P **P** **00 00 30.4 -0.4**
AK21 Malin Array Si 64.89 317 P **P** **00 00 30.1 -0.7**
KEV Kevo 65.14 338 P **P** **00 00 32.4 +0.3**
KEV Kevo 65.14 338 P **P** **00 00 32.4 +0.3**
KEV pmax pmax
comp=Z,96nm,1.6s
MNK Minsk 65.23 321 *i* P **P** **00 00 31.7 -1.3**
MNK *i* 00 01 03.7
MNK *i* 00 02 55.4
MNK *i* PPP PPP 00 04 28.1
MNK *i* S **S** **00 09 16.4 -0.3**
MNK *i* 00 10 27.1
MNK *i* SS **SS** **00 13 30.6 +1.8**
MNK pmax pmax
comp=N,11nm,1.2s
MNK pmax pmax
comp=E,11nm,1.1s
MNK pmax pmax
comp=Z,14nm,1.0s
MNK MLR MLR
comp=E,783nm,19.0s
MNK MLR MLR
comp=N,391nm,19.0s
MNK MLR MLR
comp=Z,268nm,18.0s
VSU Vasula 65.55 325 *ceP* **P** **00 00 34.4 -0.5**
VSU pmax pmax
comp=Z,28nm,1.3s
ARCES ARCESS Array B 65.66 338 P **P** **00 00 35.0 -0.5**
comp=Z,5.9nm,1.0s,baz=53,slow=4.7,SNR=6.9
ARCES LR LR 00 32 49.3
comp=Z,215nm,18.2s,baz=77,slow=39

comp=Z,5.9nm,1.0s
ARCES **ARCESS Array B** 65.66 338 P P 00 00 35.1 -0.5
ARCES **ARCESS Array B** 65.66 338 P P 00 00 35.1 -0.5
ARCES pmax pmax
comp=Z,136nm,2.0s
FINES **FINESS Array B** 65.68 329 P P 00 00 34.9 -0.9
comp=Z,7.4nm,1.0s,baz=54,slow=9.7,SNR=7.9
comp=Z,7.4nm,1.0s
FINES **FINESS Array B** 65.68 329 P P 00 00 35.2 -0.6
FINES **FINESS Array B** 65.68 329 *ce*P P 00 00 35.9 +0.1
FINES pmax pmax
comp=Z,5.0nm,0.8s
LUBAR **Lubar, Ukraine** 65.80 316 P P 00 00 36.5 -0.3
GAMB **Gambell** 66.01 29 P P 00 00 38.2 +0.4
baz=273
ELL **Elmali** 66.42 301 P P 00 00 41.3 +0.1
ELL IAmb IAmb 00 00 42.3
comp=Z,18nm,1.2s
RNPP9 **Sopachiv** 66.78 318 P P 00 00 42.2 -0.8
RNPP5 **Staryi Chortor** 66.81 318 P P 00 00 42.5 -0.7
RNPP8 **Varash** 66.81 318 P P 00 00 42.6 -0.6
KMPD **K-Podol'skiy** 66.83 315 P P 00 00 42.3 -1.1
TESR **Tescani** 67.03 312 P P 00 00 44.2 -0.6
comp=Z,10nm,1.4s
VRI **Vrincioaia** 67.09 312 P P 00 00 44.5 -0.6
comp=Z,28nm,1.2s
SPIA **Saint Paul Isl** 67.34 36 P P 00 00 46.4 0.0
baz=277
ISR **Istrita** 67.34 311 P P 00 00 46.8 0.0
PABE **Paberze** 67.36 322 P 00 00 46.8 +0.2
BALB **Balikesir** 67.40 305 P P 00 00 47.1 -0.1
BALB IAmb IAmb 00 00 48.5
comp=Z,16nm,1.0s
TNA **Tin City** 67.49 27 P P 00 00 47.1 -0.1
baz=276
MLR **Muntele Rosu** 67.69 311 P P 00 00 49.4 +0.3
comp=Z,7.4nm,0.9s,baz=145,slow=1.8,SNR=12
comp=Z,7.4nm,0.9s
MLR **Muntele Rosu** 67.69 311 P 00 00 49.2 +0.1
MLR IAmb IAmb 00 00 51.4
comp=Z,10nm,1.0s
MLR **Muntele Rosu** 67.69 311 P P 00 00 49.2 +0.1
MLR pmax pmax
comp=Z,11nm,1.0s
MLR **Muntele Rosu** 67.69 311 P P 00 00 48.5 -0.6
comp=Z,12nm,1.2s
KSV **Kosov** 67.79 314 P P 00 00 48.7 -0.8
BURAR **Bucovina Array** 67.81 314 P 00 00 50.2 +0.4
BUR08 **Bucovina Ar. S** 67.82 314 P 00 00 49.8 0.0
SUW **Suwalki** 68.03 321 *e*P P 00 00 51.4 +0.5
SUW **Suwalki** 68.03 321 P 00 00 50.8 -0.1
SUW **Suwalki** 68.03 321 P P 00 00 50.8 -0.1
STNU **Starunia** 68.09 315 P P 00 00 51.3 -0.1
F14K **Arctic Creek** 68.16 27 P P 00 00 51.5 0.0
baz=277
C16K **Lisburne Hills** 68.19 24 P P 00 00 51.7 0.0
baz=277
VOIR 68.32 311 P P 00 00 52.7 -0.3
comp=Z,3.2nm,1.0s
MORS **Morshin** 68.41 316 P P 00 00 53.8 +0.4
ANM **Nome** 68.69 28 P P 00 00 53.8 -1.0
baz=278
SHIU **Shidnytsya** 68.74 316 P P 00 00 54.7 -0.8
NIKH **Nikolski High** 68.77 40 P P 00 00 55.0 -0.5
baz=280
F15K **North Star Dit** 68.82 26 P P 00 00 55.0 -0.6
baz=279
M11K **Mekoryuk** 68.96 32 P P 00 00 55.2 -1.4
baz=279
C17K **DeLong Mountai** 68.96 23 P P 00 00 54.8 -1.7
baz=279
KWP **Kalwaria Pacla** 69.08 316 *e*P P 00 00 58.6 +1.0
KWP **Kalwaria Pacla** 69.08 316 P P 00 00 56.7 -0.9
comp=Z,30nm,1.2s
KORU **Korolevo** 69.09 315 P P 00 00 57.4 -0.2
D17K **Noatak River** 69.12 24 P P 00 00 56.4 -1.0
baz=279
RDOG **Red Dog Mine** 69.13 24 P P 00 00 56.6 -0.9
baz=279
BRIU **Brid** 69.13 315 P P 00 00 58.2 +0.3
G15K **Niukluk** 69.18 27 P P 00 00 56.6 -1.3
baz=280
B18K **Kokolik River** 69.31 22 P P 00 00 57.9 -0.7
baz=280
BERU **Beregovo** 69.39 315 P P 00 01 00.1 +0.6
A19K **Wainwright** 69.41 21 P P 00 00 58.4 -0.7
baz=280
K13K **Kusilvak Mount** 69.43 30 P P 00 00 58.9 -0.6
baz=280
C18K **Utukok River** 69.65 23 P P 00 01 00.3 -0.6
baz=281
E17K **Hotham Inlet** 69.70 25 P P 00 01 00.5 -0.6
baz=281
J14K **Nanvaranak Lak** 69.79 29 P P 00 01 01.3 -0.3
baz=281
G16K **Koyuk River** 69.81 26 P P 00 01 01.5 -0.3
baz=281
UNV **Unalaska Valle** 69.98 39 P P 00 01 02.4 -0.6
baz=282
H16K **Elim** 70.00 27 P P 00 01 02.1 -0.9
baz=281
F17K **Baldwin Pennin** 70.05 25 P P 00 01 03.0 -0.2
baz=281
E18K **Tukpahlearik C** 70.11 24 P P 00 01 03.2 -0.4
baz=282
C19K **Lookout Ridge** 70.13 22 P P 00 01 03.3 -0.4
baz=282
M13K **Dall Lake** 70.34 32 P P 00 01 03.9 -1.1
baz=282
L14K **Kuka Creek** 70.47 31 P P 00 01 05.2 -0.7
baz=282
G17K **Kiwalik Mounta** 70.49 26 P P 00 01 05.3 -0.7
baz=282
F18K **Selawik** 70.65 25 P P 00 01 06.4 -0.5
baz=283
NIE **Niedzica** 70.66 316 *e*P P 00 01 08.9 +1.6
NIE **Niedzica** 70.66 316 P P 00 01 07.4 +0.1
comp=Z,5.4nm,1.2s
B20K **Meade River** 70.76 21 P P 00 01 06.9 -0.5
baz=284
D19K **Kuna River** 70.79 23 P P 00 01 07.1 -0.7
baz=284
OJC **Ojcow** 70.80 317 *e*P P 00 01 09.0 +0.9
OJC **Ojcow** 70.80 317 P P 00 01 07.8 -0.3
comp=Z,14nm,1.8s
K15K **Wolf Creek Mou** 70.80 30 P P 00 01 07.4 -0.5
baz=283
I17K **Unalakleet** 70.82 28 P P 00 01 08.0 0.0
baz=283
H17K **Granite Mounta** 70.92 27 P 00 01 09.9 +1.3
H17K IAmb IAmb 00 01 12.1
comp=Z,18nm,1.1s
H17K **Granite Mounta** 70.92 27 P P 00 01 08.0 -0.6
baz=283
M14K **Bethel** 70.94 31 P P 00 01 07.7 -1.0
baz=283
L15K **Ungalak Mounta** 70.96 30 P P 00 01 07.9 -0.9
baz=283
J16K **Anvik River** 71.00 29 P P 00 01 08.6 -0.5
baz=283
G18K **Tagagawik** 71.20 26 P P 00 01 10.7 +0.4
G18K **Tagagawik** 71.20 26 P P 00 01 09.5 -0.8
baz=284
A22K **Sinclair Lake** 71.22 20 P P 00 01 09.7 -0.5
baz=286
LANS **Liptovska Anna** 71.25 316 *e*P P 00 01 16.6 +5.7
N14K **Kuskokwak Cree** 71.26 32 P P 00 01 10.3 -0.4
baz=283
D20K **Etivluk River** 71.27 23 P P 00 01 10.2 -0.4
baz=285
F19K **Shaleruckik Mo** 71.32 25 P P 00 01 10.4 -0.5
baz=284
KIBK **Kibwezi** 71.34 259 P 00 01 11.8 -0.3
E19K **Redstone River** 71.36 24 P P 00 01 12.1 +0.8
E19K IAmb IAmb 00 03 25.4
comp=Z,25nm,1.6s
E19K **Redstone River** 71.36 24 P P 00 01 10.5 -0.8
baz=285
LODK **Lodwar** 71.47 266 P P 00 01 12.5 -0.4
H18K **Honhosa River** 71.50 26 P P 00 01 11.4 -0.7
baz=284
FALS **False Pass** 71.53 38 P P 00 01 12.0 -0.4
baz=284
E20K **Nigu River** 71.54 23 P P 00 01 11.6 -0.7
baz=285
KMBO **Kilima Mbogo** 71.56 261 P P 00 01 12.8 -0.9
comp=Z,5.6nm,0.8s,baz=41,slow=6.9,SNR=8.7
comp=Z,5.6nm,0.8s
KMBO **Kilima Mbogo** 71.56 261 *ce*P P 00 01 13.8 +0.2
KMBO pmax pmax
comp=Z,2.0nm,0.3s
M15K **Kasigluk River** 71.56 31 P P 00 01 11.4 -1.1
baz=284
O14K **Tigyukauivet M** 71.63 33 P P 00 01 12.2 -0.8
baz=284
J17K **VABM Dome** 71.64 28 P P 00 01 12.5 -0.5
baz=284
B21K **Ikpikpuk River** 71.71 21 P P 00 01 12.8 -0.5
baz=286
G19K **Purcell Mounta** 71.76 25 P P 00 01 13.0 -0.7
baz=285
C21K **Knifeblade Rid** 71.79 22 P P 00 01 13.4 -0.4
baz=286
HFS **Hagfors** 71.87 328 P P 00 01 13.7 -0.7
comp=Z,7.8nm,1.1s,baz=157,slow=4.5,SNR=4.5
HFS LR LR 00 36 44.7
comp=Z,646nm,18.4s,baz=265,slow=39
comp=Z,7.8nm,1.1s
L16K **Owhat River** 71.88 30 P P 00 01 13.9 -0.5
baz=284
B22K **Teshekpuk Lake** 71.90 21 P P 00 01 13.8 -0.6
baz=287
N15K **Kwethluk River** 71.98 32 P P 00 01 14.5 -0.6
baz=284
F20K **Avaraart Lake** 72.04 24 P P 00 01 14.6 -0.6
baz=286
S12K **Black Hills** 72.08 36 P P 00 01 14.3 -1.4
baz=284
K17K **Iditarod** 72.15 29 P P 00 01 15.1 -1.0
baz=285
H19K **Roundabout Mou** 72.18 26 P P 00 01 15.6 -0.5
baz=286
GCSA **Galena City Sc** 72.22 27 P P 00 01 15.9 -0.4
baz=286
E21K **Killik River** 72.28 23 P P 00 01 16.2 -0.6
baz=287
M16K **Timber Creek** 72.30 31 P P 00 01 16.4 -0.5
baz=285
L17K **Donlin** 72.31 29 P P 00 01 16.5 -0.5
baz=285
MORC **Moravsky Berou** 72.32 317 P P 00 01 17.6 +0.3
MORC IAmb IAmb 00 02 24.1
comp=Z,26nm,1.9s
MORC **Moravsky Berou** 72.32 317 *e*P P 00 01 18.1 +0.8
MORC **Moravsky Berou** 72.32 317 P P 00 01 17.6 +0.3
MORC pmax pmax
comp=Z,27nm,1.9s
O15K **Ungalikthiuk R** 72.36 33 P P 00 01 16.7 -0.7
baz=285
JAVC **Velka Javorina** 72.47 316 *e*P P 00 01 20.3 +2.0
MORH **Mrgy, Hungar** 72.51 313 P P 00 01 19.1 +0.6
comp=Z,9.9nm,1.4s
N16K **Nishlik Lake** 72.53 31 P P 00 01 17.4 -1.0
baz=286
D22K **Ayikyak River** 72.59 22 P P 00 01 17.8 -0.8
baz=288
J18K **Innoko River** 72.64 28 P P 00 01 18.2 -0.8
baz=286
H20K **Anotleneega Mo** 72.81 26 P P 00 01 19.1 -0.8
baz=287
NOA **NORSAR Array B** 72.81 330 P P 00 01 19.4 -0.7
comp=Z,5.0nm,1.0s,baz=75,slow=5.9,SNR=6.4
NOA LR LR 00 35 16.6
comp=Z,171nm,20.7s,baz=270,slow=37
comp=Z,5.0nm,1.0s
KSP **Ksiaz** 72.82 318 *e*P P 00 01 22.0 +1.7
KSP **Ksiaz** 72.82 318 P P 00 01 20.8 +0.6
comp=Z,21nm,1.1s
F21K **Alatna River** 72.82 24 P P 00 01 19.2 -0.8
baz=288
MODS **Modra-Piesok** 72.85 316 *e*P P 00 01 22.1 +1.6
M17K **Holitna River** 72.90 30 P P 00 01 19.8 -0.8
baz=286
J19K **Poorman** 72.96 27 P P 00 01 20.5 -0.3
baz=287
C23K **Itkillik River** 72.97 21 P P 00 01 21.5 +0.8
C23K **Itkillik River** 72.97 21 P P 00 01 20.5 -0.3
baz=290
L18K **Granite Mounta** 73.01 29 P P 00 01 20.5 -0.6
baz=287
VRAC **Vranov** 73.04 317 P P 00 01 21.8 +0.2
comp=Z,8.6nm,0.9s,baz=85,slow=7.3,SNR=8.9
VRAC LR LR 00 38 43.8
comp=Z,556nm,20.5s,baz=308,slow=40
comp=Z,8.6nm,0.9s
VRAC **Vranov** 73.04 317 *e*P P 00 01 22.9 +1.3
G21K **Allakaket** 73.04 24 P 00 01 22.1 +0.8
G21K **Allakaket** 73.04 24 P P 00 01 20.5 -0.8
baz=288
SDPT **Sand Point** 73.04 37 P P 00 01 20.7 -0.7
baz=286
O16K **Kokwok River B** 73.10 32 P P 00 01 21.1 -0.7
baz=286
IMAR **Indian Mountai** 73.11 25 P P 00 01 22.4 +0.8
E22K **Anaktuvuk Pass** 73.14 23 P 00 01 22.2 +0.3
E22K IAmb IAmb 00 01 25.3
comp=Z,25nm,1.4s
E22K **Anaktuvuk Pass** 73.14 23 P P 00 01 21.2 -0.7
baz=289,SNR=6.5
I20K **Naaghedeneel** 73.19 26 P P 00 01 21.3 -0.8
baz=286
F22K **John River** 73.21 23 P P 00 01 21.7 -0.6
baz=289
KRUC **Moravsky** 73.23 317 *e*P P 00 01 24.0 +1.3
D23K **Nanushuk River** 73.25 22 P P 00 01 22.2 -0.3
baz=290,SNR=9.6
N17K **Nushagak Hills** 73.27 31 P P 00 01 21.6 -1.1
baz=287
S14K **Fog Glacier** 73.28 36 P P 00 01 22.8 -0.2
baz=286
P16K **Nushagak River** 73.31 33 P P 00 01 22.1 -0.9
baz=287
DZM **Mont Dzumac** 73.38 123 *e*LR LR 00 23 47.2
comp=Z,85nm,35.4s
VOI **Vohitsoka** 73.39 237 P P 00 01 23.9 -0.3
VOI IAmb IAmb 00 01 25.3
comp=Z,8.7nm,1.0s
J20K **Nowinta River** 73.52 27 P P 00 01 23.6 -0.5
baz=288
O17K **Koliganek Bris** 73.54 32 P P 00 01 23.5 -0.8
baz=287
H21K **Melozitna Rive** 73.58 25 P P 00 01 23.6 -1.0
baz=289
M18K **Stony River** 73.62 30 P P 00 01 24.1 -0.7
baz=288
C24K **Franklin Bluff** 73.64 21 P P 00 01 24.1 -0.6
baz=292
RONA **Rosalia, Austr** 73.66 315 *e*P P 00 01 25.9 +0.5
comp=Z,8.4nm,1.4s
CHNA **Chignabura Isl** 73.67 37 P P 00 01 24.0 -1.2
baz=286
TOLK **Toolik Lake Re** 73.74 22 P 00 01 26.3 +0.8
TOLK IAmb IAmb 00 01 28.1
comp=Z,8.2nm,0.8s
TOLK **Toolik Lake Re** 73.74 22 P P 00 01 24.8 -0.6
baz=291,SNR=5.7
D24K **Happy Valley** 73.81 21 P P 00 01 24.9 -0.9
baz=292
K20K **Telida** 73.81 28 P P 00 01 25.0 -0.9
baz=289
N18K **Kilae Creek** 73.84 31 P P 00 01 24.6 -1.5
baz=288
L19K **White Mountain** 73.84 29 P P 00 01 24.5 -1.6
baz=288
CONA **Conrad Observa** 73.88 316 *e*P P 00 01 27.0 +0.3
comp=Z,13nm,1.3s
E23K **Chandalar** 73.94 22 P P 00 01 25.6 -1.0
baz=291
COLD **Coldfoot** 74.03 23 P P 00 01 26.0 -1.0
baz=291
P17K **Kvichak River** 74.03 32 P P 00 01 26.6 -0.6
baz=288
H22K **Ishtalitna Cre** 74.06 25 P P 00 01 26.6 -0.7
baz=290,SNR=8.2
I21K **Tanana** 74.07 25 P P 00 01 26.6 -0.7
baz=290
Q16K **King Salmon** 74.08 33 P P 00 01 26.8 -0.7
baz=288
G23K **Bananza Creek** 74.28 24 P P 00 01 27.8 -0.8
baz=291
ARSA **Arzberg** 74.29 315 *e*P P 00 01 29.4 +0.4
comp=Z,5.3nm,0.9s
E24K **Your Creek** 74.32 22 P P 00 01 28.7 -0.2
baz=292
CHUM **Lake Minchumin** 74.38 27 P P 00 01 29.1 0.0
baz=290
O18K **Koktuh Hills** 74.42 31 P P 00 01 28.8 -0.7
baz=289
N19K **Bonanza Creek** 74.45 30 P P 00 01 29.3 -0.5
baz=289
D25K **Kavik River** 74.54 21 P P 00 01 30.6 +0.5
D25K IAmb IAmb 00 01 32.6
comp=Z,36nm,1.6s
D25K **Kavik River** 74.54 21 P P 00 01 29.8 -0.3
baz=294,SNR=8.1
R17L **Mt. Peulik Vol** 74.56 34 P P 00 01 29.8 -0.5
baz=288
P18K **Big Mountain,** 74.56 32 P P 00 01 29.7 -0.7
baz=289
Q17K **Contact Creek** 74.59 33 P P 00 01 29.8 -0.9
baz=288
MLY **Manley** 74.61 25 P P 00 01 31.6 +1.0
MLY IAmb IAmb 00 01 34.3
comp=Z,9.3nm,0.8s
MLY **Manley** 74.61 25 P P 00 01 30.0 -0.6
baz=291
CLL **Collm** 74.68 319 *i* P P 00 01 32.1 +1.0
CLL pmax pmax
comp=Z,9.0nm,0.9s
CLL MLR MLR
comp=Z,500nm,21.3s
M20K **Styx River** 74.71 29 P P 00 01 30.7 -0.6
baz=290
O19K **Port Alsworth** 74.73 31 P P 00 01 30.9 -0.3
baz=289
F24K **Squaw Lake** 74.75 23 P P 00 01 31.1 -0.2
baz=293
C26K **Camden Bay** 74.76 20 P P 00 01 30.8 -0.5
baz=295
PPLA **Purkeypile** 74.77 28 P P 00 01 30.6 -1.1
baz=290
H23K **Yukon River** 74.79 24 P P 00 01 30.9 -0.7
baz=292
BPAW **Bear Paw Mtn.** 74.85 26 P P 00 01 32.7 +0.7
BPAW IAmb IAmb 00 01 35.0
comp=Z,9.0nm,0.9s
BPAW **Bear Paw Mtn.** 74.85 26 P P 00 01 31.4 -0.6
baz=291
Q18K **Katmai Hardscr** 74.91 32 P P 00 01 31.9 -0.5
baz=289
MOA **Molln** 74.93 316 *e*P P 00 01 33.5 +0.8
comp=Z,6.0nm,1.1s
KHC **Kasperske Hory** 74.98 317 *ce*P P 00 01 33.2 +0.2
KHC pmax pmax
comp=Z,6.0nm,1.3s
GEC2 **GERESS Array S** 74.99 317 P 00 01 33.2 +0.1
GERES **GERESS Array B** 74.99 317 P P 00 01 33.2 +0.1
comp=Z,1.7nm,0.7s,baz=64,slow=6.5,SNR=12
GERES LR LR 00 37 42.9
comp=Z,524nm,20.3s,baz=282,slow=38
comp=Z,1.7nm,0.7s
I23K **Minto, Yukon-K** 75.11 25 P P 00 01 32.4 -0.9
baz=292
G24K **Hadweenzic Riv** 75.22 23 P P 00 01 33.3 -0.7
baz=293
C27K **Jago River** 75.27 20 P P 00 01 33.3 -0.9
baz=296,SNR=10
E25K **Arctic Village** 75.31 22 P P 00 01 34.1 -0.4
baz=295
SPCR **Spurr Chakacha** 75.36 29 P P 00 01 33.9 -1.1
baz=291
N20K **Mount Spurr** 75.36 29 P P 00 01 34.0 -1.0
baz=291
TRF **Thorofare Moun** 75.38 27 P P 00 01 33.8 -1.3
baz=292
BIOA **Bad Ischl, Aus** 75.38 316 *e*P P 00 01 35.9 +0.6
comp=Z,14nm,1.4s
SKT **Skwentna** 75.38 29 P P 00 01 34.5 -0.6
baz=291
H24K **Noodor Dome** 75.42 24 P P 00 01 34.5 -0.7
baz=293
P19K **Oil Pt** 75.43 31 P P 00 01 34.4 -1.0
baz=290
NEA2 **Nenana** 75.44 26 P P 00 01 36.1 +0.7
NEA2 IAmb IAmb 00 01 37.2
comp=Z,28nm,1.6s
NEA2 **Nenana** 75.44 26 P P 00 01 35.3 0.0
baz=293,SNR=6.4
Q19K **Cape Duglas,** 75.48 32 P P 00 01 34.6 -1.1
baz=290
F25K **Christian Rive** 75.51 22 P P 00 01 35.0 -0.7
baz=295
CHIR **Chirikof Islan** 75.53 35 P P 00 01 34.5 -1.4
baz=289
R18K **Karluk** 75.55 33 P P 00 01 35.1 -0.9
baz=290
O20K **Slope Mountain** 75.57 31 P P 00 01 34.9 -1.3
baz=291
G25K **Bearman Lake** 75.69 23 P P 00 01 35.9 -0.8
baz=295
CUT **Chulitna** 75.78 28 P P 00 01 36.4 -0.9
baz=292
MCK **McKinley** 75.83 26 P P 00 01 36.5 -1.0
baz=293
POKR **Poker Plat Res** 75.87 25 P P 00 01 37.0 -0.8
baz=294
SUA **Susitna One** 75.92 29 P P 00 01 37.3 -1.0
baz=292
BMAR **Burnt Mountain** 75.95 22 P 00 01 39.5 +1.2
F26K **Sheenjek River** 75.98 22 P P 00 01 37.5 -0.9
baz=296
CAPN **Captain Cook N** 76.00 30 P P 00 01 37.8 -0.7
baz=292
SII **Sitkinak Islan** 76.03 34 P P 00 01 37.9 -0.9
baz=290
M22K **Willow** 76.09 29 P P 00 01 38.9 -0.1
baz=292
HOM **Homer** 76.18 31 P P 00 01 38.6 -0.9
baz=292
Q20K **Shuyak Island** 76.20 32 P P 00 01 38.7 -1.1
baz=291
ILAR **Eielson Array** 76.23 25 P P 00 01 39.2 -0.6
comp=Z,0.8nm,0.8s,baz=281,slow=3.5,SNR=9.9
comp=Z,0.8nm,0.8s
ILAR **Eielson Array** 76.23 25 P P 00 01 40.8 +1.0
ILAR **Eielson Array** 76.23 25 P P 00 01 40.8 +1.0
OHAK **Old Harbor** 76.26 33 P P 00 01 38.9 -1.2
baz=291
D27M **Malcolm River** 76.31 20 P P 00 01 39.0 -1.2
baz=299
WAT1 **Susitna Watana** 76.34 27 P P 00 01 39.2 -1.3
baz=293
HDA **Harding Lake** 76.36 25 P P 00 01 39.3 -1.2
baz=294
KDAK **Kodiak Island** 76.41 33 P P 00 01 39.6 -1.3
baz=291
PRP **Porcupine Dome** 76.44 24 P 00 01 41.6 +0.5
PRP **Porcupine Dome** 76.44 24 P P 00 01 40.2 -0.9
baz=295
G26K **Porcupine Rive** 76.44 22 P P 00 01 40.0 -0.9
baz=297
RC01 **Rabbit Creek A** 76.52 29 P P 00 01 40.3 -1.2
baz=293
BRSE **Bradley Lake S** 76.57 31 P P 00 01 40.9 -1.0
baz=292
PMR **Palmer** 76.59 28 P P 00 01 41.2 -0.7
baz=293
E27K **Coleen River** 76.61 21 P P 00 01 40.9 -1.1
baz=298
DHY **Denali Highway** 76.73 27 P P 00 01 41.7 -1.2
baz=294
O22K **Cooper Landing** 76.76 30 P P 00 01 41.9 -0.9
baz=293
WAT6 **Susitna Watana** 76.79 27 P P 00 01 42.1 -1.1
baz=294
WTTA **Wattenberg** 76.81 316 *e*P P 00 01 43.6 -0.1
comp=Z,11nm,1.0s
WATA **Walderalm** 76.82 316 *e*P P 00 01 43.6 0.0
comp=Z,12nm,1.3s
SML **Sawmill** 76.85 28 P P 00 01 43.8 +0.4
SML **Sawmill** 76.85 28 P P 00 01 42.1 -1.4
baz=294
J25K **Salcha River,** 76.89 25 P P 00 01 42.9 -0.8
baz=296
D28M **Stokes Point** 76.95 19 P P 00 01 42.8 -1.0
baz=301
KNK **Knik Glacier** 76.95 29 P P 00 01 42.8 -1.2
baz=294
SEW **Seward** 77.03 30 P P 00 01 42.9 -1.5
baz=293
E28M **Babbage River** 77.07 20 P P 00 01 43.3 -1.2
baz=300,SNR=8.6
K24K **Donnelly Dome** 77.08 26 P P 00 01 43.4 -1.3

	baz=296									
SQTA	**Sankt Quirin**	**77.09**	**316**	*e*P		**P**		**00 01 45.3**	**+0.1**	
	comp=Z,11nm,0.8s									
M23K	**Glacier View**	**77.12**	**28**	P		**P**		**00 01 43.8**	**-1.1**	
	baz=294									
MOTA	**Moosalm**	**77.12**	**316**	*e*P		**P**		**00 01 45.3**	**-0.1**	
	comp=Z,12nm,1.0s									
PWL	**Port Wells**	**77.23**	**29**	P		**P**		**00 01 44.2**	**-1.4**	
	baz=294									
G27K	**Doyon Strip**	**77.25**	**22**	P		**P**		**00 01 44.3**	**-1.3**	
	baz=298									
SCM	**Sheep Creek Mo**	**77.27**	**28**	P		**P**		**00 01 44.8**	**-1.0**	
	baz=295									
MBAR	**Mbarara**	**77.30**	**264**			**P**		**00 01 47.7**	**+0.7**	
MBAR					IAmb	IAmb		00 01 49.6		
	comp=Z,11nm,1.0s									
MBAR	**Mbarara**	**77.30**	**264**	P		**P**		**00 01 47.7**	**+0.7**	
MBAR				pmax		pmax				
	comp=Z,11nm,1.0s									
I26K	**Coal Creek Min**	**77.42**	**24**	P		**P**		**00 01 45.5**	**-1.0**	
	baz=298									
F28M	**Old Crow**	**77.46**	**21**	P		**P**		**00 01 45.9**	**-0.9**	
	baz=300									
FETA	**Feichten**	**77.47**	**316**	*e*P		**P**		**00 01 47.3**	**0.0**	
	comp=Z,21nm,1.3s									
RIDG	**Independent Ri**	**77.48**	**26**	P		**P**		**00 01 47.1**	**+0.1**	
RIDG	**Independent Ri**	**77.48**	**26**	P		**P**		**00 01 45.3**	**-1.7**	
	baz=296									
PAX	**Paxson**	**77.57**	**26**	P		**P**		**00 01 46.1**	**-1.4**	
	baz=296									
H27K	**Steamboat Moun**	**77.57**	**23**	P		**P**		**00 01 46.6**	**-0.8**	
	baz=299									
J26L	**Joseph Creek**	**77.64**	**25**	P		**P**		**00 01 48.0**	**+0.2**	
J26L				IAmb		IAmb		00 01 50.4		
	comp=Z,11nm,0.8s									
J26L	**Joseph Creek**	**77.64**	**25**	P		**P**		**00 01 46.9**	**-0.9**	
	baz=297,SNR=12									
M24K	**Tolsona, Glenn**	**77.65**	**27**	P		**P**		**00 01 46.9**	**-1.0**	
	baz=296									
E29M	**Blow River**	**77.70**	**20**	P		**P**		**00 01 46.9**	**-1.2**	
	baz=302									
SCRK	**Sand Creek**	**77.71**	**25**	P		**P**		**00 01 47.4**	**-1.0**	
	baz=297									
GLI	**Glacier Island**	**77.78**	**29**	P		**P**		**00 01 48.1**	**-0.5**	
	baz=295									
I27K	**Kandik River**	**77.84**	**23**	P		**P**		**00 01 48.7**	**-0.3**	
	baz=299									
HARP	**HAARP**	**77.95**	**27**	P		**P**		**00 01 48.7**	**-0.9**	
	baz=296									
P23K	**Montague Islan**	**78.01**	**30**	P		**P**		**00 01 48.8**	**-1.1**	
	baz=295									
KLU	**Klutina**	**78.03**	**28**	P		**P**		**00 01 49.2**	**-0.8**	
	baz=296									
DAVOX	**Davos/Dischmat**	**78.10**	**316**	P		**P**		**00 01 50.5**	**-0.5**	
	comp=Z,5.1nm,0.7s,baz=72,slow=5.0,SNR=7.6									
	comp=Z,5.1nm,0.7s									
VAE	**Valguarnera**	**78.14**	**306**	LR		LR		00 40 05.4		
	comp=Z,142nm,21.2s,baz=233,slow=39									
L26K	**Log Cabin Wild**	**78.41**	**26**	P		**P**		**00 01 51.2**	**-0.9**	
	baz=298									
K27K	**Chicken**	**78.43**	**25**	P		**P**		**00 01 51.7**	**-0.5**	
	baz=299									
G29M	**Pine Creek**	**78.44**	**21**	P		**P**		**00 01 51.4**	**-0.8**	
	baz=302									
EYAK	**Cordova Ski Ar**	**78.52**	**29**	P		**P**		**00 01 52.4**	**-0.3**	
	baz=296									
I28M	**Miner Creek**	**78.53**	**23**	P		**P**		**00 01 52.0**	**-0.8**	
	baz=300,SNR=6.1									
N25K	**Chitina, Valde**	**78.54**	**28**	P		**P**		**00 01 52.0**	**-1.0**	
	baz=297									
H29M	**Whitestone**	**78.69**	**22**	P		**P**		**00 01 52.9**	**-0.7**	
	baz=302									
Q23K	**Middleton Isla**	**78.74**	**30**	P		**P**		**00 01 52.8**	**-1.1**	
	baz=296									
F30M	**Barrier River**	**78.79**	**20**	P		**P**		**00 01 54.6**	**+0.5**	
F30M				IAmb		IAmb		00 02 01.3		
	comp=Z,47nm,1.9s									
F30M	**Barrier River**	**78.79**	**20**	P		**P**		**00 01 53.4**	**-0.7**	
	baz=304									
BMRM	**Bremner River**	**78.83**	**28**	P		**P**		**00 01 53.6**	**-0.9**	
	baz=297									
M26K	**Nabesna, AK**	**78.84**	**26**	P		**P**		**00 01 53.2**	**-1.4**	
	baz=298									
A36M	**Sachs Harbour**	**78.98**	**14**			**P**		**00 01 55.1**	**+0.1**	
A36M	**Sachs Harbour**	**78.98**	**14**	P		**P**		**00 01 53.8**	**-1.2**	
	baz=312									
L27K	**Beaver Creek,**	**79.00**	**26**	P		**P**		**00 01 53.9**	**-1.5**	
	baz=299									
G30M	**tAoh Zraii Nji**	**79.00**	**21**	P		**P**		**00 01 54.2**	**-1.1**	
	baz=303									
BCAR	**Beaver Creek A**	**79.01**	**26**			**P**		**00 01 55.5**	**+0.1**	
INK	**Inuvik**	**79.10**	**19**			**P**		**00 01 55.7**	**0.0**	
INK					IAmb	IAmb		00 01 57.6		
	comp=Z,23nm,1.4s									
INK	**Inuvik**	**79.10**	**19**	P		**P**		**00 01 55.7**	**0.0**	
INK				pmax		pmax				
	comp=Z,23nm,1.5s									
INK	**Inuvik**	**79.10**	**19**	P		**P**		**00 01 55.1**	**-0.6**	
	baz=305									
I29M	**Ogilvie Camp,**	**79.16**	**23**	P		**P**		**00 01 55.2**	**-1.0**	
	baz=302									
EPYK	**Eagle Plains**	**79.17**	**22**	P		**P**		**00 01 55.4**	**-0.8**	
	baz=303,SNR=5.3									
MCARA	**McCarthy VSAT**	**79.31**	**27**	P		**P**		**00 01 55.7**	**-1.3**	
	baz=298									
M27K	**Edge Creek, AK**	**79.32**	**26**	P		**P**		**00 01 55.8**	**-1.5**	
	baz=299									
KAIM	**Kayak Island**	**79.39**	**29**	P		**P**		**00 01 56.2**	**-1.3**	
	baz=297									
DAWY	**Dawson**	**79.44**	**24**			**P**		**00 01 58.1**	**+0.4**	
DAWY	**Dawson**	**79.44**	**24**	P		**P**		**00 01 56.9**	**-0.9**	
	baz=301,SNR=7.5									
F31M	**Tsiigehtchic**	**79.54**	**20**	P		**P**		**00 01 57.4**	**-0.7**	
	baz=305									
CRQE	**Cirque**	**79.59**	**28**	P		**P**		**00 01 57.3**	**-1.4**	
	baz=298									
G31M	**Satah River**	**79.67**	**21**	P		**P**		**00 01 58.1**	**-0.7**	
	baz=305									
J29N	**Klondike Camp**	**79.67**	**24**	P		**P**		**00 01 58.0**	**-1.0**	
	baz=302									
BVCY	**Beaver Creek**	**79.70**	**26**	P		**P**		**00 01 58.2**	**-1.0**	
	baz=300									
BGLC	**Bering Glacier**	**79.81**	**29**	P		**P**		**00 01 58.6**	**-1.1**	
	baz=298									
I30M	**Mount Dempster**	**79.92**	**22**	P		**P**		**00 01 59.2**	**-1.2**	
	baz=303									
GRNC	**Granite Creek**	**80.17**	**28**	P		**P**		**00 02 02.3**	**+0.3**	
GRNC					IAmb	IAmb		00 02 05.4		
	comp=Z,21nm,1.2s									
YUK3	**Moose Creek**	**80.19**	**26**	P		**P**		**00 02 00.8**	**-1.3**	
	baz=300									
CTG	**Chitna Glacier**	**80.23**	**27**	P		**P**		**00 02 00.9**	**-1.3**	
	baz=300									
K29M	**Barlow Dome**	**80.26**	**24**	P		**P**		**00 02 01.2**	**-1.1**	
	baz=303									
H31M	**Peel River**	**80.29**	**21**	P		**P**		**00 02 00.5**	**-1.8**	
	baz=305									
J30M	**Hart River**	**80.29**	**23**	P		**P**		**00 02 00.8**	**-1.7**	
	baz=304									
MESA	**MESA**	**80.36**	**28**	P		**P**		**00 02 01.1**	**-2.0**	
	baz=299									
L29M	**L29M**	**80.42**	**25**	P		**P**		**00 02 01.0**	**-2.1**	
	baz=302									
M29M	**Somme Creek**	**80.65**	**25**	P		**P**		**00 02 02.1**	**-2.3**	
	baz=302									
YUK8	**Steele Glacier**	**80.73**	**27**	P		**P**		**00 02 03.1**	**-1.9**	
	baz=301									
O28M	**Mount Upton**	**80.82**	**27**	P		**P**		**00 02 03.5**	**-2.1**	
	baz=301									
MAYO	**Mayo, Yukon**	**81.00**	**24**	P		**P**		**00 02 04.9**	**-1.2**	
	baz=304									
C36M	**Paulatuk**	**81.08**	**16**	P		**P**		**00 02 06.5**	**+0.1**	
C36M	**Paulatuk**	**81.08**	**16**	P		**P**		**00 02 05.3**	**-1.1**	
	baz=314									
PINM	**Pinnacle**	**81.14**	**28**	P		**P**		**00 02 05.9**	**-1.1**	
	baz=301									
YUK4	**Talbot Arm**	**81.16**	**26**	P		**P**		**00 02 05.7**	**-1.6**	
	baz=302									
M30M	**Minto, Yukon**	**81.23**	**25**	P		**P**		**00 02 05.9**	**-1.5**	
	baz=303									
YUK6	**Outpost Mounta**	**81.49**	**27**	P		**P**		**00 02 07.4**	**-1.7**	
	baz=302									
N30M	**Aishikik Lake**	**81.73**	**26**	P		**P**		**00 02 08.7**	**-1.5**	
	baz=303									
O29M	**Mount Kennedy**	**81.74**	**27**	P		**P**		**00 02 09.3**	**-1.0**	
	baz=302									
HYT	**Haines Junctio**	**81.91**	**26**	P		**P**		**00 02 09.8**	**-1.3**	
	baz=303									
EKA	**Eskdalemuir Ar**	**82.02**	**327**	P		**P**		**00 02 11.1**	**-0.6**	
	comp=Z,0.5nm,0.4s,baz=62,slow=4.2,SNR=1.9									
	comp=Z,0.5nm,0.4s									
N31M	**Braeburn, Yuko**	**82.23**	**25**	P		**P**		**00 02 11.9**	**-0.8**	
	baz=304									
M31M	**Drury Creek, Y**	**82.36**	**24**	P		**P**		**00 02 12.1**	**-1.3**	
	baz=306									
P29M	**Windy Craggy**	**82.46**	**28**	P		**P**		**00 02 12.6**	**-1.3**	
	baz=303									
O30N	**Mendenhall**	**82.51**	**26**	P		**P**		**00 02 12.5**	**-1.7**	
	baz=304									
P30M	**Million Dollar**	**82.52**	**27**	P		**P**		**00 02 13.0**	**-1.3**	
	baz=304									
WHY	**Whitehorse**	**83.07**	**26**	P		**P**		**00 02 15.3**	**-1.9**	
	baz=305									
PLBC	**Pleasant Camp**	**83.14**	**27**	P		**P**		**00 02 15.8**	**-1.6**	
	baz=304									
N32M	**Quiet Lake**	**83.49**	**25**	P		**P**		**00 02 17.5**	**-1.8**	
	baz=307									
SKAG	**Skagway**	**83.57**	**27**	P		**P**		**00 02 18.4**	**-1.3**	
	baz=305									
S31K	**Pelican**	**84.04**	**29**	P		**P**		**00 02 20.5**	**-1.5**	
	baz=304									
P33M	**Teslin, Yukon**	**84.16**	**26**	P		**P**		**00 02 21.0**	**-1.8**	
	baz=307									
P32M	**Atlin**	**84.17**	**26**	P		**P**		**00 02 21.4**	**-1.4**	
	baz=306									
R32K	**Eaglecrest**	**84.61**	**28**	P		**P**		**00 02 23.6**	**-1.4**	
	baz=306									
SIT	**Sitka**	**84.96**	**29**	P		**P**		**00 02 25.5**	**-1.2**	
	baz=305									
S32K	**Killisnoo**	**85.05**	**28**	P		**P**		**00 02 25.5**	**-1.7**	
	baz=306									
Q32M	**Nakina River**	**85.14**	**26**	P		**P**		**00 02 26.1**	**-1.8**	
	baz=308									
R33M	**Jennings River**	**85.40**	**26**	P		**P**		**00 02 27.2**	**-1.9**	
	baz=309									
WTLY	**Watson Lake, Y**	**85.79**	**24**	P		**P**		**00 02 28.8**	**-2.1**	
	baz=310									
S34M	**Telegraph Cree**	**86.26**	**27**	P		**P**		**00 02 31.7**	**-1.5**	
	baz=309									
DLBC	**Dease Lake**	**86.38**	**26**	P		**P**		**00 02 32.2**	**-1.7**	
	baz=310									
U33K	**Whale Pass**	**86.50**	**29**	P		**P**		**00 02 32.6**	**-1.8**	
	baz=307									
WRAK	**Wrangell Islan**	**86.66**	**29**	P		**P**		**00 02 33.2**	**-1.9**	
	baz=308									
CRAG	**Craig**	**86.89**	**30**	P		**P**		**00 02 34.6**	**-1.7**	
	baz=307									
T35M	**Bob Quinn**	**87.22**	**27**	P		**P**		**00 02 36.5**	**-1.4**	
	baz=309									
V35K	**Ketchikan**	**87.66**	**29**	P		**P**		**00 02 38.8**	**-1.3**	
	baz=308									
YKA	**Yellowknife Ar**	**88.78**	**18**	P		**P**		**00 02 45.7**	**+0.5**	
	comp=Z,1.5nm,0.8s,baz=316,slow=5.5,SNR=5.9									
YKA				LR		LR		00 46 44.7		
	comp=Z,100nm,21.1s,baz=93,slow=38									
	comp=Z,1.5nm,0.8s									
YKA	**Yellowknife Ar**	**88.78**	**18**	*ce*P		**P**		**00 02 45.7**	**+0.5**	
YKA				pmax		pmax				
	comp=Z,1.0nm,0.8s									
ESDC	**Sonseca Array**	**90.27**	**314**	P		**P**		**00 02 52.9**	**+0.1**	
	comp=Z,0.9nm,0.9s,baz=61,slow=5.7,SNR=3.4									
	comp=Z,0.9nm,0.9s									
BOSA	**Boshof**	**93.65**	**241**	P		**P**		**00 03 08.8**	**+0.2**	
	comp=Z,2.5nm,0.8s,baz=300,slow=2.9,SNR=3.8									
	comp=Z,2.5nm,0.8s									
KGCAE	**Kacgae**	**93.88**	**247**	P		**P**		**00 03 09.8**	**+0.1**	
SYO	**Syowa Base**	**103.41**	**200**	*e*Pdiff		**Pdif**		**00 03 53.4**	**+2.1**	
PPT2	**Papeete2**	**108.98**	**102**	*e*LR		LR		00 40 16.3		
	comp=Z,68nm,25.2s									

IDC ***28*** *00:02:04.9±1.7,41°.46N×19°.43E,h0km,mb3.7/5, mbtmp3.7/10,ML3.3/4,MS3.1/3,Error ellipse: s-maj=22.3km s-min=13.2km az=24.0*
PRU ***28*** *00:02:05.9,41°.23N×19°.42E,h10km*
BEO ***28*** *00:02:07.9±0.5,41°.53N×19°.59E,h5km±2km,ML3.1/19*
TIR ***28*** *00:02:08.5,41°.61N×19°.58E,h26km±4km,Ml3.4/4*
SKO ***28*** *00:02:08.3,41°.52N×19°.42E,h6km,ML3.1*
PDG ***28*** *00:02:09.5±0.3,41°.63N×19°.64E,h11km±1km,MD3.4/5, ML3.3/13,Error ellipse: s-maj=1.1km s-min=1.2km az=0.0*

ISC 28 00:02:08.0±0.9,41°.56N±0.02×19°.49E±0°.02,h17km±6km, n140,σ1§60/206,mb3.8/3,30C-20D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**126**	Pg		**Pg**	**00 02 14.9**	**-0.4**
TIR				Sg		**Sg**	**00 02 19.9**	**-0.4**
TIR				AML		AML	00 02 20.2	
	8.1nm,0.2s							
TIR	**Tirane**	**0.35**	**126**	*i* Pg		**Pg**	**00 02 15.2**	**-0.1**
TIR				*i* Sg		**Sb**	**00 02 21.1**	**+0.1**
ULC	**Ulcinj**	**0.45**	**336**	⇑Pg		**Pg**	**00 02 16.6**	**-0.4**
ULC				*i* Sg		**Sg**	**00 02 23.3**	**+0.1**
SDA	**Shkodra**	**0.50**	**1**	⇑Pg		**Pg**	**00 02 17.3**	**-0.6**
SDA				Sg		**Sg**	**00 02 25.3**	**+0.6**
DRME	**Dracevica, Mon**	**0.67**	**341**	*e*Pg		**Pg**	**00 02 20.7**	**-0.5**
DRME				*e*Sg		**Sn**	**00 02 32.6**	**-0.2**
DRME	**Dracevica, Mon**	**0.67**	**341**	⇓*i*Pg		**Pg**	**00 02 20.6**	**-0.6**
DRME				*i* Sg		**Sb**	**00 02 31.4**	**+1.2**
PHP	**Peshkopia**	**0.73**	**79**	⇑Pg		**Pg**	**00 02 20.6**	**-1.6**
PHP				Sg		**Sg**	**00 02 31.1**	**-0.8**
PHP				AML		AML	00 02 36.6	
	5.4nm,0.5s							
BUM	**Brajici-Budva**	**0.87**	**330**	⇑*i*Pg		**Pn**	**00 02 25.3**	**-0.1**
BUM				*i* Sg		**Sn**	**00 02 38.2**	**+0.5**
PDG	**Podgorica**	**0.89**	**349**	Pg		**Pb**	**00 02 24.0**	**-0.9**
PDG				Sg		**Sg**	**00 02 37.8**	**+0.8**
PDG	**Podgorica**	**0.89**	**349**	⇑P		**Pb**	**00 02 24.1**	**-0.9**
PDG				⇑S		**Sb**	**00 02 35.2**	**-1.3**
PDG	**Podgorica**	**0.89**	**349**	*e*Pg		**Pb**	**00 02 24.2**	**-0.8**
PDG				*e*Sg		**Sn**	**00 02 38.9**	**+0.7**
PDG	**Podgorica**	**0.89**	**349**	⇓*i*Pg		**Pb**	**00 02 24.4**	**-0.6**
PDG				*i* Sg		**Sg**	**00 02 37.5**	**+0.4**
CEME	**Cevo**	**1.08**	**337**	⇓*i*Pg		**Pg**	**00 02 28.6**	**-0.2**
CEME				*i* Sg		**Sn**	**00 02 44.4**	**+1.5**
OHR	**Ohrid**	**1.08**	**114**	*i* Pg		**Pb**	**00 02 28.4**	**+0.1**
OHR				*i* Sg		**Sn**	**00 02 44.9**	**+1.8**
OHR				*e*Lg		Lg	00 02 47.4	
	comp=N,643nm,0.9s							
OHR				*e*Lg		Lg	00 02 48.2	
	comp=E,366nm,0.6s							
VLO	**Vlora**	**1.09**	**180**	Pg		**Pg**	**00 02 30.6**	**+1.7**
VLO				Sg		**Sn**	**00 02 45.1**	**+2.1**
VLO				AML		AML	00 02 57.3	
	comp=E,4.7nm,0.4s							
PVY	**Plav**	**1.10**	**19**	*e*Pg		**Pb**	**00 02 26.6**	**-2.0**
PVY				*e*Sg		**Sb**	**00 02 43.4**	**+0.8**
PVY	**Plav**	**1.10**	**19**	⇑*i*Pg		**Pb**	**00 02 27.0**	**-1.6**
PVY				*i* Sg		**Sb**	**00 02 42.0**	**-0.6**
HCY	**Herceg Novi**	**1.16**	**321**	⇑*i*Pg		**Pg**	**00 02 30.6**	**+0.2**
HCY				*i* Sg		**Sg**	**00 02 48.7**	**+3.2**
NKME	**Niksic**	**1.27**	**342**	⇓*i*Pg		**Pb**	**00 02 31.8**	**+0.3**
NKME				*i* Sg		**Sg**	**00 02 50.1**	**+0.9**
KOME	**Kolasin**	**1.29**	**1**	*e*Pg		**Pn**	**00 02 31.3**	**-0.1**
KOME	**Kolasin**	**1.29**	**1**	⇓*i*Pg		**Pn**	**00 02 31.2**	**-0.2**
KOME				*i* Sg		**Sn**	**00 02 49.4**	**+1.1**
BEY	**Berane**	**1.35**	**13**	*e*Pg		**Pn**	**00 02 31.9**	**-0.2**
BEY				*e*Sg		**Sg**	**00 02 52.0**	**+0.3**
BEY	**Berane**	**1.35**	**13**	⇑*i*Pg		**Pn**	**00 02 31.9**	**-0.2**
IVA				*i* Sg		**Sb**	**00 02 51.1**	**+1.2**
TREB	**Trebinje**	**1.44**	**324**	*e*Pn		**Pb**	**00 02 34.2**	**-0.1**
TREB	**Trebinje**	**1.44**	**324**	*e*Pg		**Pb**	**00 02 34.4**	**+0.1**
TREB				*e*Sg		**Sg**	**00 02 55.3**	**+1.0**
BRY	**Bratogost**	**1.52**	**333**	⇑*i*Pg		**Pb**	**00 02 35.7**	**-0.1**
BRY				*i* Sg		**Sg**	**00 02 58.6**	**+1.6**
SKO	**Skopje**	**1.52**	**73**	*i* Pg		**Pb**	**00 02 36.7**	**+1.0**
SKO				*i* Sg		**Sg**	**00 02 58.0**	**+0.9**
UPM	**Unac-Piva**	**1.70**	**346**	⇑*i*Pn		**Pb**	**00 02 39.1**	**+0.2**
UPM				*i* Sn		**Sg**	**00 03 01.8**	**-1.1**
SJES	**Sjenica**	**1.74**	**12**	*e*Pg		**Pb**	**00 02 39.4**	**-0.2**
SJES				*e*Sg		**Sg**	**00 03 03.3**	**-0.9**
KLINJ	**Klinje**	**1.75**	**338**	*e*Pn		**Pb**	**00 02 39.1**	**-0.5**
PLE	**Pljevlja**	**1.77**	**358**	*e*Pg		**Pb**	**00 02 40.9**	**+0.8**
PLE				*e*Sg		**Sg**	**00 03 04.3**	**-0.9**
PLE	**Pljevlja**	**1.77**	**358**	⇑*i*Pn		**Pb**	**00 02 40.6**	**+0.5**
PLE				*i* Sn		**Sb**	**00 03 03.9**	**+1.8**
NOCI	**Noci**	**1.98**	**248**	⇑Pn		**Pg**	**00 02 44.9**	**-1.1**
NOCI				Sn		**Sg**	**00 03 12.0**	**+0.3**
NOCI				AML		AML	00 03 23.9	
	comp=E,1.6nm,0.4s							
SELS	**Selova**	**2.06**	**36**	*e*Pn		**Pn**	**00 02 42.8**	**+1.0**
SELS				*e*Sn		**Sn**	**00 03 08.8**	**+1.7**
IVAS	**Ivanjica**	**2.08**	**13**	*e*Pn		**Pn**	**00 02 43.2**	**+1.1**
IVAS				*e*Sn		**Sb**	**00 03 10.7**	**-0.1**
BARS	**Barje**	**2.14**	**53**	*i* Pn		**Pn**	**00 02 44.5**	**+1.5**
BARS				*i* Sn		**Sb**	**00 03 14.5**	**+1.9**
BARS	**Barje**	**2.14**	**53**	*e*Pn		**Pn**	**00 02 43.8**	**+0.9**
BARS				*e*Sn		**Sn**	**00 03 09.7**	**+0.6**
GOCS	**Kraljevo Serbi**	**2.25**	**27**	*e*Pn		**Pn**	**00 02 45.9**	**+1.4**
GOCS				*e*Sn		**Sn**	**00 03 13.4**	**+1.4**
GRG	**Griva**	**2.28**	**104**	*i* Pn		**Pb**	**00 02 46.9**	**-1.8**
MATE	**Matera**	**2.29**	**248**	⇓P		**Pn**	**00 02 45.9**	**+1.0**
BBLS	**Lazi&#263i**	**2.31**	**359**	*e*Pn		**Pn**	**00 02 47.4**	**+2.1**
BBLS				*e*Sn		**Sb**	**00 03 16.9**	**-0.6**
VAY	**Valandovo**	**2.33**	**95**	*i* Pn		**Pn**	**00 02 47.2**	**+1.7**
VAY				*i* Sn		**Sb**	**00 03 16.5**	**-1.6**
VAY				*e*Lg		Lg	00 03 16.7	
	comp=N,100nm,0.8s							
VAY				*e*Lg		Lg	00 03 17.5	
	comp=E,74nm,0.8s							
BOSS	**Bosilegrad**	**2.42**	**66**	*e*Pn		**Pn**	**00 02 47.8**	**+1.0**
BOSS				*e*Sn		**Sn**	**00 03 15.2**	**-0.8**
GRUS	**Gruza**	**2.50**	**21**	*e*Pn		**Pn**	**00 02 49.4**	**+1.5**
GRUS				*e*Sn		**Sb**	**00 03 21.4**	**-1.5**
KNT	**Kendrikon**	**2.60**	**98**	*i* Pn		**Pn**	**00 02 50.7**	**+1.5**
BOVS	**Bovan**	**2.65**	**38**	⇓P		**Pn**	**00 02 51.1**	**+1.3**
BOVS				⇓S		**Sn**	**00 03 24.1**	**+2.5**
BOVS	**Bovan**	**2.65**	**38**	*e*Pn		**Pn**	**00 02 51.0**	**+1.1**
BOVS				*e*Sn		**Sn**	**00 03 22.8**	**+1.2**
TRAN	**Tran**	**2.68**	**60**	P		**Pn**	**00 02 52.3**	**+2.0**
KKB	**Krupnik**	**2.74**	**83**	P		**Pn**	**00 02 52.9**	**+1.7**
KKB	**Krupnik**	**2.74**	**83**	*i* Pn		**Pn**	**00 02 53.0**	**+1.8**
TRUS	**Trudelj**	**2.75**	**14**	*e*Pn		**Pn**	**00 02 52.7**	**+1.4**
THE	**Thessaloniki**	**2.79**	**108**	*i* Pn		**Pn**	**00 02 53.4**	**+1.7**
SGRT	**San Giovanni R**	**2.81**	**275**	Pn		**Pn**	**00 02 52.8**	**+0.6**
SGRT				Sn		**Sn**	**00 03 27.8**	**+2.1**
ZAPS	**Zavoj**	**2.90**	**53**	*e*Pn		**Pn**	**00 02 54.8**	**+1.5**
ZAPS				*e*Sn		**Sn**	**00 03 28.9**	**+1.1**
VTS	**Vitosha**	**2.99**	**68**	P		**Pn**	**00 02 56.1**	**+1.4**
VTS	**Vitosha**	**2.99**	**68**	*e*Pn		**Pn**	**00 02 56.0**	**+1.4**
SVIS	**Svilajnac**	**2.99**	**25**	*e*Pn		**Pn**	**00 02 56.2**	**+1.6**
TEKS	**Tekeris**	**2.99**	**1**	*e*Pn		**Pn**	**00 02 55.5**	**+0.9**
TEKS				*e*Sn		**Sb**	**00 03 34.4**	**-2.7**
ZAGS	**Zajecar**	**3.03**	**41**	*e*Pn		**Pn**	**00 02 56.6**	**+1.5**
ZAGS				*e*Sn		**Sn**	**00 03 31.1**	**+0.1**
PLNA	**Plana**	**3.08**	**71**	P		**Pn**	**00 02 58.9**	**+3.0**
SRS	**Serrai**	**3.12**	**97**	*i* Pn		**Pn**	**00 02 58.3**	**+1.9**
BLKB	**Belogradchik**	**3.13**	**48**	⇓S		**Sn**	**00 03 37.0**	**+3.4**
BLKB	**Belogradchik**	**3.13**	**48**	*e*Pn		**Pn**	**00 02 58.7**	**+2.1**
BORS2	**Bor- Borsko je**	**3.15**	**35**	*e*Pn		**Pn**	**00 02 56.1**	**-0.6**
BORS2				*e*Sn		**Sn**	**00 03 34.7**	**+0.8**
TIP	**Timpagrande**	**3.16**	**222**	⇓P		**Pn**	**00 02 58.0**	**+1.1**
MMB	**Musomishta**	**3.20**	**89**	P		**Pn**	**00 02 59.3**	**+1.8**
MMB	**Musomishta**	**3.20**	**89**	*i* Pn		**Pn**	**00 02 59.2**	**+1.7**
KUBS	**Kucevo**	**3.28**	**29**	*e*Pn		**Pn**	**00 02 57.9**	**-0.6**
KUBS				*e*Sn		**Sn**	**00 03 37.2**	**+0.1**
BLY	**Banja Luka**	**3.61**	**333**	*e*Pn		**Pn**	**00 03 04.0**	**+0.9**
BLY	**Banja Luka**	**3.61**	**333**	*e*Pn		**Pn**	**00 03 05.3**	**+2.2**
FRGS	**Fruska Gora**	**3.61**	**4**	*e*Pn		**Pn**	**00 03 04.1**	**+1.0**
MDVR	**Moldovita**	**3.61**	**26**	⇓P		**Pn**	**00 03 04.2**	**+1.0**
HERR	**Herculane**	**3.95**	**32**	⇑P	

MOTA	**Moosalm**	**8.33**	**317**	*e*Pn		**Pn**	**00 04 05.9**	**-2.1**
	comp=E,2.0nm,0.3s							
MOTA				*e*Sn		**Sn**	**00 05 38.1**	**-3.7**
	comp=E,5.9nm,0.3s							
GERES	**GERESS Array B**	**8.35**	**333**	Pn		**Pn**	**00 04 08.7**	**+0.5**
	comp=E,0.1nm,0.3s,baz=160,slow=13,SNR=8.9							
GERES				Sn		**Sn**	**00 05 44.8**	**+2.5**
	comp=E,0.1nm,0.3s,baz=149,slow=23,SNR=8.2							
	comp=E,0.6nm,0.3s							
RETA	**Reutte**	**8.60**	**317**	*e*Pn		**Pn**	**00 04 10.1**	**-1.5**
	comp=E,1.0nm,0.3s							
RETA				*e*Sn		**Sn**	**00 05 45.8**	**-2.4**
	comp=E,3.2nm,0.3s							
KHC	**Kasperske Hory**	**8.64**	**333**	*e*PN		**Pn**	**00 04 13.0**	**+0.8**
KHC				*e*SN		**Sn**	**00 05 49.1**	**-0.1**
DAVOX	**Davos/Dischmat**	**8.65**	**310**	Pn		**Pn**	**00 04 13.6**	**+1.1**
	comp=E,0.5nm,0.3s,baz=299,slow=20,SNR=7.1							
DAVOX				Sn		**Sn**	**00 05 48.5**	**-1.2**
	comp=E,0.7nm,0.3s,baz=270,slow=17,SNR=2.3							
	comp=E,1.3nm,0.3s							
DAVA	**Damuels**	**8.94**	**313**	*e*Pn		**Pn**	**00 04 16.8**	**+0.3**
	comp=E,0.6nm,0.2s							
HFS	**Hagfors**	**18.94**	**351**	P		**Pn**	**00 06 28.7**	**+0.1**
	comp=E,0.1nm,0.3s,baz=165,slow=12,SNR=2.2							
	comp=E,1.9nm,0.8s							
EKA	**Eskdalemuir Ar**	**20.26**	**321**	P		**P**	**00 06 42.5**	**+0.1**
	comp=E,2.4nm,0.9s,baz=120,slow=9.2,SNR=1.9							
	comp=E,2.4nm,0.9s							
FINES	**FINESS Array B**	**20.32**	**9**	P		**P**	**00 06 41.9**	**-0.9**
	comp=E,2.0nm,0.5s,baz=185,slow=10,SNR=14							
	comp=E,2.0nm,0.5s							
ARTI	**Arti**	**29.07**	**46**	LR		LR	00 19 41.3	
	comp=E,49nm,20.4s,baz=100,slow=36							
ZALV	**Zalesovo Beam**	**44.10**	**51**	P		**P**	**00 10 14.7**	**-0.3**
	comp=E,0.9nm,0.3s,baz=290,slow=8.8,SNR=7.0							
	comp=E,0.9nm,0.3s							
MKAR	**Makanchi Array**	**44.29**	**61**	P		**P**	**00 10 16.6**	**-0.1**
	comp=E,0.8nm,0.6s,baz=280,slow=7.3,SNR=3.9							
	comp=E,0.8nm,0.6s							
KMBO	**Kilima Mbogo**	**45.44**	**155**	LR		LR	00 30 29.3	
	comp=E,39nm,18.3s,baz=95,slow=38							
SONM	**Songino Array**	**56.96**	**52**	P		**P**	**00 12 06.0**	**-0.4**
	comp=E,0.7nm,1.0s,baz=292,slow=9.0,SNR=4.2							
	comp=E,0.7nm,1.0s							

TIR ***28*** *00:03:42.6, 40˚.18N×20˚.77E, h7km±1km, Ml3.4/2*
THE ***28*** *00:03:42.3, 40˚.2N±0˚.7×2˚1E±˚, h1km±1km, M3.0/12, MLh3.0/12*
ATH ***28*** *00:03:42.4, 40˚.19N×20˚.74E, h6km±1km, ML3.0/12, Manual Solution by A.Plessa First location: 2019/11/28 00:04:58, This location: 2019/11/28 08:15:31 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

ISC 28 00:03:42.8±1.0, 40˚.20N±0˚.02×20˚.74E±0˚.03, h8km±10km, n40, σ0s56/54, 4C, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.32**	**48**	⇑Pg	**Pg**	**00 03 49.0**	**-0.1**
NEST				Sg	**Sg**	**00 03 53.8**	**+0.4**
NEST				AML	AML	00 03 57.3	
	10nm,0.3s						
NEST	**Nestorio**	**0.32**	**48**	P	**Pg**	**00 03 49.0**	**-0.1**
NEST				S	**Sg**	**00 03 54.3**	**+0.9**
NEST	**Nestorio**	**0.32**	**48**	P	**Pg**	**00 03 49.0**	**-0.1**
NEST				S	**Sg**	**00 03 53.7**	**+0.3**
KBN	**Korca**	**0.42**	**5**	⇑Pg	**Pg**	**00 03 50.9**	**-0.2**
KBN				Sg	**Sg**	**00 03 57.2**	**+0.5**
KBN	**Korca**	**0.42**	**5**	P	**Pg**	**00 03 50.3**	**-0.8**
KBN				S	**Sg**	**00 03 57.4**	**+0.7**
MSVA	**Metsovo**	**0.55**	**141**	P	**Pg**	**00 03 53.3**	**-0.2**
MSVA				S	**Sg**	**00 04 00.1**	**-0.6**
JAN	**Janina**	**0.55**	**171**	P	**Pg**	**00 03 52.9**	**-0.6**
JAN				S	**Sg**	**00 04 00.9**	**+0.3**
JAN	**Janina**	**0.55**	**171**	P	**Pg**	**00 03 53.1**	**-0.4**
JAN				S	**Sg**	**00 04 01.0**	**+0.3**
LMS2	**Laimos Florina**	**0.70**	**26**	P	**Pg**	**00 03 55.6**	**-0.8**
LMS2				S	**Sg**	**00 04 04.6**	**+0.8**
PRMD	**Pramanda**	**0.72**	**157**	P	**Pg**	**00 03 56.4**	**-0.4**
IGT	**Igoumenitsa**	**0.74**	**205**	⇑Pg	**Pg**	**00 03 57.0**	**0.0**
IGT				Sg	**Sb**	**00 04 08.6**	**+0.4**
IGT	**Igoumenitsa**	**0.74**	**205**	P	**Pg**	**00 03 56.4**	**-0.5**
IGT	**Igoumenitsa**	**0.74**	**205**	P	**Pg**	**00 03 56.5**	**-0.5**
KZN	**Kozani**	**0.80**	**82**	P	**Pg**	**00 03 57.6**	**-0.6**
KZN				S	**Sb**	**00 04 09.9**	**-0.2**
KZN	**Kozani**	**0.80**	**82**	P	**Pg**	**00 03 57.6**	**-0.6**
KRK1	**kERKiRA**	**0.86**	**228**	P	**Pg**	**00 03 58.7**	**-0.6**
TETR	**Tetrakomo, Epi**	**0.95**	**154**	P	**Pg**	**00 04 00.3**	**-0.8**
TETR				S	**Sb**	**00 04 14.7**	**+0.3**
TETR	**Tetrakomo, Epi**	**0.95**	**154**	P	**Pg**	**00 04 00.6**	**-0.5**
VLO	**Vlora**	**0.99**	**286**	⇑Pg	**Pg**	**00 04 01.6**	**-0.1**
VLO				Sg	**Sg**	**00 04 15.8**	**+1.3**
VLO				AML	AML	00 04 23.3	
	9.1nm,0.7s						
VLO	**Vlora**	**0.99**	**286**	P	**Pg**	**00 04 00.4**	**-1.4**
THL	**Klokotos Trika**	**1.17**	**122**	P	**Pg**	**00 04 04.7**	**-0.6**
THL	**Klokotos Trika**	**1.17**	**122**	P	**Pg**	**00 04 04.7**	**-0.6**
TYRN	**Tyrnavos**	**1.25**	**113**	P	**Pg**	**00 04 06.3**	**-0.4**
TYRN				S	**Sn**	**00 04 24.3**	**+0.7**
TYRN	**Tyrnavos**	**1.25**	**113**	P	**Pg**	**00 04 06.4**	**-0.4**
AMPL	**Ampelaki**	**1.33**	**164**	P	**Pn**	**00 04 08.0**	**+0.3**
LIT	**Litokhoron**	**1.35**	**94**	P	**Pn**	**00 04 07.3**	**-0.7**
LIT	**Litokhoron**	**1.35**	**94**	P	**Pn**	**00 04 07.7**	**-0.3**
LRSO	**Larissa Observ**	**1.38**	**112**	P	**Pn**	**00 04 07.8**	**-0.5**
PHP	**Peshkopia**	**1.50**	**351**	P	**Pn**	**00 04 09.7**	**-0.5**
EVR	**Evrytania**	**1.53**	**147**	P	**Pn**	**00 04 10.1**	**-0.4**
EVR	**Evrytania**	**1.53**	**147**	P	**Pb**	**00 04 11.3**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.60**	**137**	P	**Pn**	**00 04 11.3**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.60**	**137**	P	**Pg**	**00 04 13.5**	**0.0**
PVO	**Paravola**	**1.70**	**159**	P	**Pb**	**00 04 14.5**	**+0.2**
AGG	**Agios Georgios**	**1.70**	**133**	P	**Pb**	**00 04 14.5**	**+0.1**
THE	**Thessaloniki**	**1.75**	**75**	P	**Pn**	**00 04 12.7**	**-0.9**
HORT	**Hortiatis**	**1.85**	**77**	P	**Pn**	**00 04 14.6**	**-0.3**
KNT	**Kendrikon**	**1.90**	**59**	P	**Pn**	**00 04 15.4**	**-0.3**
KNT	**Kendrikon**	**1.90**	**59**	P	**Pn**	**00 04 15.2**	**-0.4**
NEO	**Neokhori**	**2.11**	**114**	P	**Pn**	**00 04 19.1**	**+0.5**

DNK ***28*** *00:04:35.3±1.6, 51˚.40N×16˚.70E, h33km±54km, ML3.0*
PRU ***28*** *00:04:37.4, 51˚.35N×16˚.25E, h0km*

ISC 28 00:04:33.4±0.9, 51˚.50N±0˚.03×16˚.35E±0˚.04, h0km, n21, σ0s88/37, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**183**	*e*Pg	**Pg**	**00 04 47.0**	**+0.8**
KSP				*e*Sg	**Sg**	**00 04 54.5**	**-0.2**
CHVC	**Chvalec**	**0.94**	**192**	*e*PG	**Pg**	**00 04 51.7**	**+0.4**
CHVC				*e*SG	**Sg**	**00 05 02.3**	**-1.1**
OSTC	**Ostas**	**0.95**	**185**	*e*PG	**Pb**	**00 04 52.4**	**-0.4**
OSTC				*e*SG	**Sg**	**00 05 03.5**	**-0.5**
UPC	**Upice**	**1.02**	**192**	*e*PG	**Pb**	**00 04 53.7**	**-0.3**
UPC				*e*SG	**Sg**	**00 05 05.4**	**-0.8**
	comp=Z,24nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**181**	*e*PG	**Pb**	**00 04 56.1**	**-0.2**
DPC				*e*SG	**Sg**	**00 05 09.3**	**-1.2**
	comp=Z,6.9nm,0.4s						
KRLC	**Kraliky**	**1.46**	**169**	*e*PG	**Pb**	**00 05 01.6**	**+0.2**
KRLC				*e*SG	**Sg**	**00 05 19.5**	**-0.7**
	comp=Z,8.4nm,0.2s						
PVCC	**Panska Ves**	**1.49**	**230**	*e*PG	**Pb**	**00 05 02.4**	**+0.4**
PVCC				*e*SG	**Sg**	**00 05 20.1**	**-1.1**
	comp=Z,29nm,0.2s						
STEB	**Steborice**	**1.81**	**150**	*e*PG	**Pg**	**00 05 08.2**	**0.0**
STEB				*e*SG	**Sb**	**00 05 31.1**	**+0.4**
	comp=Z,8.9nm,0.3s						
MORC	**Moravsky Berou**	**1.89**	**156**	*e*PN	**Pn**	**00 05 07.5**	**+0.5**
MORC				*e*SG	**Sg**	**00 05 34.1**	**0.0**
PRU	**Pruhonice**	**1.90**	**218**	*e*SG	**Sn**	**00 05 32.0**	**+0.2**
	comp=Z,5.2nm,0.3s						
OKC	**Ostrava-Krasne**	**2.02**	**145**	*e*SG	**Sg**	**00 05 37.9**	**-0.5**
HSKC	**Hora Svate Kat**	**2.05**	**245**	*e*PG	**Pb**	**00 05 11.8**	**+0.3**
HSKC				*e*SG	**Sb**	**00 05 37.3**	**-0.2**
CLL	**Collm**	**2.10**	**266**	*e*Pg	**Pg**	**00 05 14.0**	**+0.2**
CLL				*e*Sg	**Sg**	**00 05 41.0**	**0.0**
VRAC	**Vranov**	**2.20**	**176**	*e*PN	**Pb**	**00 05 13.7**	**-0.4**
VRAC				*e*SG	**Sb**	**00 05 42.1**	**+0.1**
TREC	**Trest**	**2.28**	**194**	*e*SG	**Sb**	**00 05 44.6**	**+0.4**
KRUC	**Moravsky**	**2.44**	**179**	*e*SG	**Sg**	**00 05 51.7**	**-0.2**
KHC	**Kasperske Hory**	**2.97**	**218**	*e*SG	**Sg**	**00 06 07.3**	**-1.4**
BSD	**Bornholm Skovb**	**3.72**	**347**	*i* P	**Pn**	**00 05 34.0**	**+2.0**
BSD				*i* S	**Sn**	**00 06 15.0**	**-1.5**
BSD				IAML		00 06 31.2	
	comp=Z,17nm,0.9s						
LUNU	**Lund**	**4.48**	**338**	*i* P	**Pn**	**00 05 43.4**	**+0.8**
LUNU				*i* S	**Sn**	**00 06 35.0**	**-0.3**
BJUU	**Bjuv**	**4.99**	**338**	*i* P	**Pn**	**00 05 49.9**	**+0.5**
BJUU				*i* S	**Sn**	**00 06 46.4**	**-1.3**
DEL	**Delary**	**5.19**	**345**	*i* P	**Pn**	**00 05 53.3**	**+1.1**
DEL				*i* S	**Sn**	**00 06 50.2**	**-2.5**

BEO 28 00:04:38.4±0.7, 41˚.55N×19˚.68E, h4km±3km, ML2.4/11, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRME	**Dracevica, Mon**	**0.74**	**330**	*e*Pg	Pg	00 04 51.4	-1.2
DRME				*e*Sg	Sg	00 05 03.1	+1.0
PDG	**Podgorica**	**0.94**	**341**	*e*Pg	Pg	00 04 56.1	-0.3
PDG				*e*Sg	Sg	00 05 08.9	+0.4
PVY	**Plav**	**1.07**	**11**	*e*Pg	Pg	00 04 58.9	0.0
PVY				*e*Sg	Sg	00 05 11.5	-1.3
KOME	**Kolasin**	**1.31**	**355**	*e*Pg	Pg	00 05 02.8	-0.7
BEY	**Berane**	**1.33**	**7**	*e*Pg	Pn	00 05 02.4	-1.5
BEY				*e*Sg	Sg	00 05 20.2	-1.1
TREB	**Trebinje**	**1.53**	**320**	*e*Sg	Sn	00 05 25.6	-1.3
SJES	**Sjenica**	**1.73**	**7**	*e*Pg	Pb	00 05 11.0	+0.2
SJES				*e*Sg	Sg	00 05 34.4	+0.5
PLE	**Pljevlja**	**1.79**	**353**	*e*Pg	Pn	00 05 09.1	-1.2
PLE				*e*Sg	Sn	00 05 33.3	-0.3
SELS	**Selova**	**1.98**	**32**	*e*Pn	Pn	00 05 11.8	-1.0
SELS				*e*Sn	Sb	00 05 39.2	-1.0
IVAS	**Ivanjica**	**2.06**	**10**	*e*Pn	Pn	00 05 13.3	-0.6
IVAS				*e*Sn	Sn	00 05 40.6	+0.6
GOCS	**Kraljevo Serbi**	**2.20**	**23**	*e*Pn	Pn	00 05 16.3	+0.5
GOCS				*e*Sn	Sn	00 05 43.5	-0.1
BBLS	**Lazi&#263i**	**2.33**	**355**	*e*Pn	Pn	00 05 18.1	+0.6
BBLS				*e*Sn	Sn	00 05 47.2	+0.6
GRUS	**Gruza**	**2.46**	**18**	*e*Pn	Pn	00 05 19.8	+0.5
BOVS	**Bovan**	**2.57**	**35**	*e*Pn	Pn	00 05 20.5	-0.3
BOVS				*e*Sn	Sn	00 05 52.8	+0.3
ZAPS	**Zavoj**	**2.79**	**51**	*e*Sn	Sn	00 05 58.0	0.0
ZAGS	**Zajecar**	**2.95**	**39**	*e*Pn	Pn	00 05 25.2	-0.8
ZAGS				*e*Sn	Sn	00 06 01.3	-0.5
BORS2	**Bor- Borsko je**	**3.07**	**33**	*e*Pn	Pn	00 05 26.3	-1.4
BORS2				*e*Sn	Sn	00 06 03.2	-1.7

KRNET ***28*** *00:07:02.5±0.1, 42˚.78N×70˚.52E, h11km, mb3.5*
NNC ***28*** *00:07:02.6±0.6, 42˚.84N×70˚.54E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=5.9km s-min=2.3km az=67.0*
SOME ***28*** *00:07:03.5, 42˚.90N×70˚.55E, h15km*

ISC 28 00:07:03.4±0.9, 42˚.90N±0˚.03×70˚.35E±0˚.02, h15km±6km, n66, σ1s99/117, 5C-20D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK07	**Karatay Array**	**0.22**	**30**	⇑P	**Pg**	**00 07 07.8**	**-0.7**
KK07				⇑S	**Sg**	**00 07 11.7**	**-0.1**
KK08	**Karatay Array**	**0.23**	**26**	⇑P	**Pg**	**00 07 08.1**	**-0.5**
KK08				⇑S	**Sb**	**00 07 12.1**	**-1.1**
KK03	**Karatay Array**	**0.23**	**28**	⇑P	**Pg**	**00 07 08.0**	**-0.6**
KK03				⇑S	**Sb**	**00 07 12.1**	**-1.2**
KK06	**Karatay Array**	**0.23**	**33**	⇑P	**Pg**	**00 07 07.9**	**-0.7**
KK06				⇑S	**Sg**	**00 07 11.8**	**-0.4**
KK01	**Karatay Array**	**0.24**	**29**	⇑P	**Pg**	**00 07 08.0**	**-0.7**
KK01				⇑S	**Sg**	**00 07 12.1**	**-0.2**
KK02	**Karatay Array**	**0.24**	**30**	⇑P	**Pg**	**00 07 08.0**	**-0.7**
KK02				⇑S	**Sg**	**00 07 12.1**	**-0.2**
KK31	**Karatay Array**	**0.24**	**30**	⇑P	**Pg**	**00 07 08.0**	**-0.7**
	36nm,0.2s,baz=52,slow=38,SNR=5630						
KK31				⇑S	**Sg**	**00 07 11.6**	**-0.7**
	1um,0.6s,baz=199,slow=36,SNR=6.7						
KK04	**Karatay Array**	**0.24**	**28**	⇑P	**Pg**	**00 07 08.2**	**-0.6**
KK04				⇑S	**Sb**	**00 07 12.4**	**-1.2**
KK09	**Karatay Array**	**0.25**	**26**	⇓P	**Pg**	**00 07 08.4**	**-0.5**
KK09				⇓S	**Sb**	**00 07 12.6**	**-1.2**
KK05	**Karatay Array**	**0.25**	**30**	⇑P	**Pg**	**00 07 08.3**	**-0.6**
KK05				⇓S	**Sg**	**00 07 12.6**	**-0.2**
BRLS	**Borolday**	**0.40**	**290**	*e*P	**Pn**	**00 07 13.1**	**-1.5**
BRLS				*e*S	**Sn**	**00 07 20.0**	**-1.9**
BRLS	**Borolday**	**0.40**	**290**	*e*P	**Pn**	**00 07 13.1**	**-1.5**
	25nm,0.3s						
BRLS				*e*S	**Sn**	**00 07 20.0**	**-1.9**
	247nm,0.1s						
DZA	**Taraz**	**0.72**	**90**	*e*P	**Pg**	**00 07 14.2**	**-3.2**
DZA				*e*S	**Sg**	**00 07 22.8**	**-4.2**
DZA	**Taraz**	**0.72**	**90**	*e*P	**Pg**	**00 07 14.2**	**-3.2**
	64nm,0.2s						
DZA				*e*S	**Sg**	**00 07 22.8**	**-4.2**
	453nm,0.3s						
CHM	**Chimkent**	**0.80**	**224**	*e*P	**Pb**	**00 07 18.5**	**-0.4**
CHM				*e*S	**Sg**	**00 07 29.0**	**-0.4**
CHM	**Chimkent**	**0.80**	**224**	*e*P	**Pb**	**00 07 18.5**	**-0.4**
	48nm,0.2s						
CHM				*e*S	**Sg**	**00 07 29.0**	**-0.4**
	359nm,0.3s						
TRKS	**Terek-Say**	**1.49**	**156**	⇓*e*P	**Pn**	**00 07 28.7**	**-1.0**
TRKS				⇓*e*S	**Sn**	**00 07 48.2**	**-0.7**
ARK	**Arkit**	**1.62**	**132**	⇓*e*P	**Pn**	**00 07 29.8**	**-1.7**
ARK				⇓*e*S	**Sn**	**00 07 49.5**	**-2.7**
MNAS	**Manas**	**1.64**	**104**	⇓*e*P	**Pn**	**00 07 30.2**	**-1.6**
MNAS				⇓*e*S	**Sn**	**00 07 50.5**	**-2.1**
MRKS	**Merke**	**2.12**	**93**	*e*P	**Pn**	**00 07 39.6**	**+1.3**
MRKS				*e*S	**Sn**	**00 08 06.1**	**+1.6**
MRKS	**Merke**	**2.12**	**93**	*e*P	**Pn**	**00 07 39.6**	**+1.3**
	34nm,0.5s						
MRKS				*e*S	**Sn**	**00 08 06.1**	**+1.6**
	130nm,0.6s						
ARSB	**Arslanbob**	**2.51**	**128**	⇓*e*P	**Pn**	**00 07 43.9**	**+0.2**
ARSB				⇓*e*S	**Sn**	**00 08 14.2**	**+0.1**
EKS2	**Erkin-Say**	**2.53**	**94**	P	**Pb**	**00 07 47.4**	**-1.2**
	SNR=27						
EKS2	**Erkin-Say**	**2.53**	**94**	⇓*e*P	**Pn**	**00 07 44.9**	**+0.9**
EKS2				⇓*e*S	**Sn**	**00 08 15.8**	**+1.1**
OHH	**Osh**	**2.99**	**142**	⇓*e*P	**Pn**	**00 07 50.6**	**+0.3**
OHH				⇓*e*S	**Sn**	**00 08 25.7**	**-0.2**
AAK	**Ala-Archa**	**3.06**	**93**	P	**Pb**	**00 07 56.5**	**-1.2**
	SNR=16						
AAK	**Ala-Archa**	**3.06**	**93**	⇑Pg	**Pb**	**00 07 55.9**	**-1.7**
	3.6nm,0.5s						
AAK				⇑Lg	Lg	00 08 35.4	
	22nm,0.6s						
AAK	**Ala-Archa**	**3.06**	**93**	⇓*e*P	**Pn**	**00 07 52.2**	**+0.9**
AAK				⇓*e*S	**Sn**	**00 08 28.5**	**+0.7**
USP	**Ospenovka**	**3.06**	**82**	P	**Pb**	**00 07 56.9**	**-0.6**
	SNR=8.0						
USP	**Ospenovka**	**3.06**	**82**	⇑*e*P	**Pn**	**00 07 52.5**	**+1.3**
USP				⇑*e*S	**Sn**	**00 08 29.1**	**+1.5**
ARLS	**Aral**	**3.12**	**108**	⇑*e*P	**Pn**	**00 07 52.7**	**+0.6**
ARLS				⇑*e*S	**Sn**	**00 08 29.4**	**+0.2**
UCH	**Uchtor**	**3.15**	**101**	P	**Pb**	**00 07 57.6**	**-1.7**
	SNR=16						
UCH	**Uchtor**	**3.15**	**101**	⇑*e*P	**Pn**	**00 07 53.5**	**+0.7**
UCH				⇑*e*S	**Sn**	**00 08 30.5**	**+0.2**
FRU1	**Bishkek**	**3.15**	**90**	⇑*e*P	**Pn**	**00 07 53.3**	**+0.9**
FRU1				⇑*e*S	**Sn**	**00 08 30.3**	**+0.6**
SGDS	**Sogindy**	**3.18**	**79**	Pg	**Pb**	**00 07 58.5**	**-1.1**
	1.3nm,0.1s						
SGDS				Lg	Lg	00 08 38.7	
	28nm,0.4s						
CHMS	**Chumysh**	**3.23**	**87**	⇑*e*P	**Pn**	**00 07 54.7**	**+1.1**
CHMS				⇑*e*S	**Sn**	**00 08 32.8**	**+1.0**
SALK	**Salom-Alik**	**3.28**	**127**	⇓*e*P	**Pn**	**00 07 54.7**	**+0.4**
SALK				⇓*e*S	**Sn**	**00 08 32.8**	**-0.4**
KBK	**Karagaybulak**	**3.39**	**93**	P	**Pb**	**00 08 02.3**	**-1.0**
	SNR=8.0						
KBK	**Karagaybulak**	**3.39**	**93**	⇑*e*P	**Pn**	**00 07 56.9**	**+1.0**
KBK				⇑*e*S	**Sn**	**00 08 36.6**	**+0.7**
DRK	**Karamyk**	**3.58**	**162**	⇑*e*P	**Pn**	**00 07 59.4**	**+0.8**
DRK				⇑*e*S	**Sn**	**00 08 40.9**	**+0.1**
SFK	**Sufi-Kurgan**	**3.73**	**140**	⇑*e*P	**Pn**	**00 08 01.0**	**+0.4**
SFK				⇑*e*S	**Sn**	**00 08 43.7**	**-0.6**
TKM2	**Tokmak 2**	**3.85**	**88**	P	**Pb**	**00 08 10.4**	**-0.7**
	SNR=9.4						
TKM2	**Tokmak 2**	**3.85**	**88**	⇓*e*P	**Pn**	**00 08 03.5**	**+1.2**
TKM2				⇓*e*S	**Sn**	**00 08 47.9**	**+0.5**
GAR	**Garm**	**3.89**	**180**	⇓*e*P	**Pn**	**00 08 04.1**	**+1.4**
GAR				⇓*e*S	**Sn**	**00 08 49.2**	**+1.0**
KRBS	**Karabastau**	**3.97**	**77**	Pg	**Pb**	**00 08 13.8**	**+0.8**
	11nm,0.3s						
KRBS				Lg	Lg	00 09 04.2	
	32nm,0.3s						
KRBS	**Karabastau**	**3.97**	**77**	*e*P	**Pb**	**00 08 13.8**	**+0.8**
KRBS				*e*S	**Sb**	**00 09 04.2**	**+3.4**
DGS	**Degeres**	**3.99**	**83**	Pg	**Pb**	**00 08 14.0**	**+0.6**
	31nm,0.5s						
DGS				Lg	Lg	00 09 05.5	
	37nm,0.7s						
DGS	**Degeres**	**3.99**	**83**	*e*P	**Pb**	**00 08 14.0**	**+0.6**
	31nm,0.5s						
DGS				*e*S	**Sb**	**00 09 05.5**	**+4.0**
	37nm,0.7s						
KST	**Kastek**	**4.12**	**86**	Pg	**Pb**	**00 08 16.1**	**+0.5**
	15nm,0.7s						
KST				Lg	Lg	00 09 08.3	
	37nm,0.7s						
KST	**Kastek**	**4.12**	**86**	*e*P	**Pb**	**00 08 16.1**	**+0.5**
	15nm,0.7s						
KST				*e*S	**Sb**	**00 09 08.3**	**+3.0**
	37nm,0.7s						
BOOM	**Boomskoye usch**	**4.14**	**94**	⇑*e*P	**Pn**	**00 08 07.2**	**+1.0**
BOOM				⇑*e*S	**Sn**	**00 08 54.5**	**+0.1**
CHGR	**Chuyangaron**	**4.33**	**192**	⇑*e*P	**Pn**	**00 08 10.6**	**+1.9**
CHGR				⇑*e*S	**Sn**	**00 09 00.4**	**+1.4**
JNKS	**Jany-Kuch**	**4.36**	**113**	⇑*e*P	**Pn**	**00 08 09.8**	**+0.6**
JNKS				⇑*e*S	**Sn**	**00 08 59.0**	**-0.9**
MTBS	**Maitube**	**4.46**	**85**	Pg	**Pb**	**00 08 23.5**	**+2.0**
	3.0nm,0.4s						
MTBS				Lg	Lg	00 09 20.4	
	23nm,0.6s						
MTBS	**Maitube**	**4.46**	**85**	*e*P	**Pb**	**00 08 23.5**	**+2.0**
	3.0nm,0.4s						
MTBS				*e*S	**Sb**	**00 09 20.4**	**+5.4**
	23nm,0.6s						
KUU	**Kurty**	**4.48**	**75**	Pg	**Pb**	**00 08 22.6**	**+0.9**
	6.2nm,0.1s						
KUU				Lg	Lg	00 09 19.8	
	35nm,0.6s						
KUU	**Kurty**	**4.48**	**75**	*e*P	**Pb**	**00 08 22.6**	**+0.9**
	6.2nm,0.1s						
KUU				*e*S	**Sb**	**00 09 19.8**	**+4.4**
	35nm,0.6s						
KOTS	**Kotyrbulak**	**4.97**	**84**	*e*P	**Pb**	**00 08 32.9**	**+2.8**
	3.1nm,0.2s						
KOTS				*e*S	**Sb**	**00 09 36.7**	**+7.1**
	34nm,0.6s						
KDJ	**Kajisay**	**5.11**	**96**	⇑*e*P	**Pn**	**00 08 20.7**	**+1.3**
KDJ				⇑*e*S	**Sn**	**00 09 17.6**	**-0.6**
TARG	**Taragay, Kyrgy**	**5.65**	**99**	⇑*e*P	**Pn**	**00 08 28.0**	**+0.9**
TARG				⇑*e*S	**Sn**	**00 09 30.4**	**-1.5**
KPKS	**Kokpek**	**6.12**	**82**	*e*P	**Pb**	**00 08 52.9**	**+3.3**
	0.3nm,0.1s						
KPKS				*e*S	**Sg**	**00 10 12.6**	**-7.1**
	14nm,0.6s						
UZB	**Uzynbulak**	**6.36**	**85**	*e*P	Pb	00 08 58.8	+5.0
	2.1nm,0.1s						
UZB				*e*S	**Sg**	**00 10 21.1**	**-6.4**
	3.6nm,0.5s						
SHLS	**Shalkode**	**6.68**	**85**	*e*P	**Pg**	**00 09 10.6**	**-0.7**
	3.2nm,0.3s						
SHLS				*e*S	**Sg**	**00 10 41.4**	**+3.6**
	5.5nm,0.4s						
PDGK	**Podgornoye**	**6.70**	**83**	⇓Pg	**Pb**	**00 08 59.7**	**0.0**
	4.9nm,1.4s						
PDGK				⇑Lg	Lg	00 10 26.6	
	17nm,1.1s						
MK31	**Makanchi Array**	**9.33**	**61**	Pn	**Pn**	**00 09 14.3**	**-3.0**
	0.9nm,0.6s,baz=245,slow=14,SNR=16						
MK31				⇓Sn	**Sn**	**00 10 58.0**	**-3.9**
	1.0nm,0.

MTE *i* IAMs_20 IAMs_20 00 31 30.9
comp=Z,623nm,20.0s
PCBR Castelo Branco 18.18 117 *e*P P 00 26 10.7 +7.5
PMTG Montargil 18.28 120 *e*P **P 00 26 09.8 +5.4**
PMRV Marv??o 18.51 117 *e*LR LR 00 30 37.9
PMRV *i* IAMs_20 IAMs_20 00 31 53.3
comp=Z,656nm,20.0s
PCVE Castro Verde 19.41 122 *e*P **Pn 00 26 20.9 +3.0**
PBAR Barrancos 19.57 120 *e*P **Pn 00 26 21.5 +1.6**
PVAQ Vaqueiros 19.75 122 P **P 00 26 20.1 -0.4**
PVAQ IAmb IAmb 00 26 26.6
comp=Z,103nm,1.8s
PVAQ Vaqueiros 19.75 122 *e*P **Pn 00 26 24.7 +2.7**
PVAQ *e*LR LR 00 31 13.1
PVAQ *i* IAMs_20 IAMs_20 00 32 27.0
comp=Z,376nm,20.0s
SFJD Kangerlussuaq 20.16 335 P **P 00 26 23.7 -0.9**
comp=Z,4.5nm,0.8s,baz=153,slow=10,SNR=2.4
SFJD LR LR 00 32 34.6
comp=Z,269nm,21.2s,baz=141,slow=32
comp=Z,4.5nm,0.8s
SFJD Kangerlussuaq 20.16 335 P **P 00 26 23.4 -1.3**
PAB San Pablo 20.20 112 P **P 00 26 25.3 -0.2**
CLF Chambon-Foret 20.34 84 P **P 00 26 27.0 +0.2**
ESBB Sonseca Array 20.35 112 **P 00 26 25.8 -1.3**
ESDC Sonseca Array 20.35 112 P **P 00 26 26.7 -0.4**
comp=Z,2.4nm,0.8s,baz=309,slow=8.6,SNR=14
ESDC LR LR 00 32 57.7
comp=Z,669nm,19.1s,baz=290,slow=33
comp=Z,2.4nm,0.8s
ESDC Sonseca Array 20.35 112 P **P 00 26 25.4 -1.8**
UCC Uccle 20.98 75 P **P 00 26 32.8 -0.9**
UCC Uccle 20.98 75 *d*P **P 00 26 34.6 +0.9**
comp=Z,14nm,1.0s
DOU Dourbes 21.27 77 *d*P **P 00 26 35.1 -1.8**
comp=Z,19nm,1.1s
BMRD Maredsous 21.33 77 *d*P **P 00 26 38.3 +0.7**
comp=Z,19nm,1.2s
BGES Gesves 21.52 76 *d*P **P 00 26 39.7 +0.1**
BCLA Clavier 21.64 76 *d*P **P 00 26 40.0 -0.9**
RCHB Rochefort 21.65 77 *d*P **P 00 26 40.6 -0.4**
comp=Z,14nm,1.3s
BSTI Sart Tilman 21.77 76 *d*P **P 00 26 43.5 +1.3**
comp=Z,4.3nm,1.1s
ILULI Ilulissat 21.92 339 P **P 00 26 43.4 -0.3**
CEST Esterri de Car 21.92 99 **P 00 26 42.9 -1.3**
MEM Membach 22.04 75 *d*P **P 00 26 45.3 +0.2**
comp=Z,17nm,1.4s
BTNL Ternell 22.12 75 *d*P **P 00 26 47.2 +1.1**
comp=Z,13nm,1.1s
WLF Walferdange 22.35 78 *d*P **P 00 26 49.2 +0.7**
WLF *d*PP **PnPn 00 27 11.2 0.0**
JMIC Jan Mayen 22.88 17 LR LR 00 33 33.1
comp=Z,281nm,21.1s,baz=244,slow=31
SUMG Summit 22.89 352 P **P 00 26 54.6 +0.1**
ECH Echery 23.40 81 P **P 00 26 58.3 -1.2**
ECH IAmb IAmb 00 27 18.1
comp=Z,26nm,1.4s
SCHQ Schefferville 23.44 296 LR LR 00 34 14.4
comp=Z,352nm,21.2s,baz=102,slow=32
NB2 NORSAR Subarra 24.64 49 P **P 00 27 12.1 +1.1**
comp=Z,24nm,1.4s,baz=262,slow=10
NOA NORSAR Array B 24.64 49 P **P 00 27 12.1 +1.1**
comp=Z,2.2nm,1.0s,baz=263,slow=9.7,SNR=5.3
comp=Z,2.2nm,1.0s
MD01 Midelt array s 24.76 125 **P 00 27 11.4 -1.1**
MD31 MD31 24.76 125 P **P 00 27 12.3 -0.1**
FRB Frobisher Bay 25.09 318 LR LR 00 34 45.5
comp=Z,282nm,18.4s,baz=102,slow=31
TUE Stuetta 25.41 84 P **P 00 27 18.4 +0.1**
TUE IAmb IAmb 00 27 27.8
comp=Z,66nm,1.7s
DAVA Damuels 25.44 81 *e*P **P 00 27 20.0 +1.4**
comp=Z,9.8nm,0.9s
DAVOX Davos/Dischmat 25.63 83 LR LR 00 37 17.0
comp=Z,775nm,18.2s,baz=290,slow=36
HFS Hagfors 25.77 51 P **P 00 27 22.6 +1.4**
comp=Z,1.7nm,0.7s,baz=249,slow=12,SNR=4.6
comp=Z,1.7nm,0.7s
RETA Reutte 25.93 81 *e*P **P 00 27 22.6 -0.3**
comp=Z,13nm,1.4s
FUORN Ofenpass-Fuorn 25.93 83 P **P 00 27 23.8 +0.6**
FUORN IAmb IAmb 00 27 40.9
comp=Z,30nm,1.3s
CLL Collm 26.19 71 P **P 00 27 25.2 +0.1**
CLL Collm 26.19 71 *i* P **P 00 27 26.1 +1.0**
comp=Z,12nm,1.2s
CLL *i* x x 00 27 32.1
CLL *e*S **S 00 31 48.0 -8.8**
CLL AMS AMS 00 36 00.0
comp=Z,500nm,21.3s
MOTA Moosalm 26.20 81 *e*P **P 00 27 27.9 +2.4**
comp=Z,16nm,1.3s
SQTA Sankt Quirin 26.31 81 *e*pP pP 00 27 28.3 -0.3
comp=Z,20nm,1.5s
WATA Walderalm 26.50 80 *e*pP pP 00 27 30.2 -0.2
comp=Z,18nm,1.3s
WTTA Wattenberg 26.57 81 *e*pP pP 00 27 30.8 -0.1
comp=Z,27nm,1.3s
CTI Castel Tesino 27.04 83 **P 00 27 32.7 -0.3**
CTI IAmb IAmb 00 27 50.1
comp=Z,64nm,1.9s
GERES GERESS Array B 27.32 76 P **P 00 27 36.6 +1.1**
comp=Z,2.1nm,1.1s,baz=281,slow=7.7,SNR=5.7
comp=Z,2.1nm,1.1s
MYKA Terra Mystica 28.08 81 *e*pP pP 00 27 43.9 -0.5
comp=Z,9.4nm,0.9s
OBKA Obir 28.70 80 *e*P **P 00 27 47.7 -0.1**
comp=Z,10nm,1.1s
SOKA Soboth 28.94 80 *e*P **P 00 27 49.6 -0.3**
comp=Z,2.7nm,0.7s
MODS Modra-Piesok 29.71 75 *e*P **P 00 27 58.5 +1.8**
LANS Liptovska Anna 30.79 73 *e*P **P 00 28 10.1 +3.9**
KEST Kesra 31.01 103 P **P 00 28 08.9 +0.5**
comp=Z,4.5nm,0.9s,baz=351,slow=2.2,SNR=4.4
KEST LR LR 00 39 42.1
comp=Z,308nm,19.3s,baz=329,slow=34
comp=Z,4.5nm,0.9s
POIN Pond Inlet 31.08 334 P **P 00 28 08.7 +0.2**
POIN IAmb IAmb 00 28 21.8
comp=Z,47nm,2.0s
PSZ Piszkesteto 31.51 75 **P 00 28 12.6 0.0**
PSZ IAmb IAmb 00 28 22.3
comp=Z,15nm,1.2s
SUW Suwalki 31.53 63 P **P 00 28 12.5 -0.2**
FINES FINESS Array B 31.82 48 P **P 00 28 16.1 +1.0**
comp=Z,5.9nm,0.9s,baz=269,slow=7.6,SNR=10
FINES LR LR 00 40 23.2
comp=Z,608nm,19.4s,baz=261,slow=35
comp=Z,5.9nm,0.9s
FINES FINESS Array B 31.82 48 P **P 00 28 15.6 +0.5**
ARCES ARCESS Array B 31.89 33 P **P 00 28 16.8 +1.2**
comp=Z,3.8nm,0.9s,baz=242,slow=2.6,SNR=5.2
comp=Z,3.8nm,0.9s
ARCES ARCESS Array B 31.89 33 P **P 00 28 15.7 +0.1**
SPITS Spitsbergen Ar 32.54 16 LR LR 00 38 11.5
comp=Z,219nm,18.5s,baz=226,slow=30
NACGM Naroch 33.34 60 *e*P **P 00 28 29.7 +1.3**
MNK Minsk 34.06 60 *i* P **P 00 28 32.9 -1.8**
comp=E,10.0nm,0.9s
MNK *i* P **P 00 28 32.9 -1.8**
comp=N,6.0nm,0.7s
MNK *i* P **P 00 28 32.9 -1.8**
comp=Z,5.0nm,0.8s,baz=287
MNK *i* PP **PnPn 00 29 46.1 -1.7**
MNK *i* PPP PPP 00 29 57.5
MNK *i* S **S 00 33 59.1 -0.9**
MNK *i* SS **SnSn 00 36 07.1 +0.4**
MNK *i* SSS SSS 00 36 22.8
MNK *i* LRM MLR 00 42 53.2
comp=Z,321nm,16.0s
MNK *i* LRM MLR 00 43 27.0
comp=E,306nm,14.4s
MNK *i* LRM MLR 00 43 28.0
comp=N,214nm,15.3s
BUR08 Bucovina Ar. S 34.90 73 **P 00 28 42.8 +0.6**
BURAR Bucovina Array 34.92 73 **P 00 28 43.2 +0.8**
SSPA Standing Stone 35.22 274 P **P 00 28 44.9 -0.1**
SSPA IAmb IAmb 00 29 07.0
comp=Z,18nm,1.1s
KIEV Kiev 36.09 66 P **P 00 28 52.3 +0.1**
KIEV IAmb IAmb 00 28 53.4
comp=Z,17nm,1.5s
AKASG Malin Array Be 36.10 66 P **P 00 28 52.7 +0.3**
comp=Z,2.1nm,0.7s,baz=288,slow=8.7,SNR=6.8
AKASG LR LR 00 45 19.7
comp=Z,356nm,18.4s,baz=283,slow=39
comp=Z,2.1nm,0.7s
AKBB Malin Array Si 36.10 66 P **P 00 28 52.3 0.0**
AKBB IAmb IAmb 00 28 53.4
comp=Z,18nm,1.5s
RES Resolute Bay 36.16 336 LR LR 00 40 57.3
comp=Z,149nm,21.7s,baz=22,slow=32
MLR Muntele Rosu 36.31 76 LR LR 00 43 10.3
comp=Z,230nm,21.2s,baz=313,slow=35
RDO Rodhopi 38.23 82 P **P 00 29 10.1 -0.4**
RDO IAmb IAmb 00 29 19.8
comp=Z,16nm,1.2s
OBN Obninsk 38.63 57 LR LR 00 44 19.7
comp=Z,310nm,21.7s,baz=216,slow=35
BALB Balikesir 40.55 83 P **P 00 29 29.7 -0.2**
MANT Manisa 41.64 84 P **P 00 29 39.2 0.0**
T50A Nancy 41.74 274 P **P 00 29 40.2 +0.4**
H05N1 Guadeloupe/Mar 42.64 229 T T 01 14 36.5
SJG San Juan 43.75 237 LR LR 00 43 56.1
comp=Z,163nm,21.6s,baz=24,slow=30
KIRV Kirov 43.82 48 LR LR 00 48 11.3
comp=Z,364nm,18.0s,baz=304,slow=36
BR131 Keskin Array S 44.16 79 P **P 00 29 59.0 -0.4**
BRTR Keskin Array B 44.16 79 P **P 00 30 01.2 +1.7**
comp=Z,2.2nm,0.8s,baz=294,slow=7.3,SNR=10
BRTR LR LR 00 49 50.7
comp=Z,161nm,18.2s,baz=290,slow=38
comp=Z,2.2nm,0.8s
BRTR Keskin Array B 44.16 79 P **P 00 29 58.7 -0.8**
FVM French Village 44.74 279 **P 00 30 03.6 -0.4**
FVM IAmb IAmb 00 30 09.9
comp=Z,10nm,0.8s
CCM Cathedral Cave 45.21 279 **P 00 30 07.3 -0.4**
CCM IAmb IAmb 00 30 18.5
comp=Z,21nm,1.1s
ECSD EROS Data Cent 45.32 289 **P 00 30 07.9 -0.6**
ECSD IAmb IAmb 00 30 15.8
comp=Z,13nm,1.1s
YKA Yellowknife Ar 45.58 320 P **P 00 30 11.7 +1.3**
comp=Z,0.9nm,1.0s,baz=56,slow=7.7,SNR=4.0
comp=Z,0.9nm,1.0s
BNN Bunyan 46.06 78 **P 00 30 14.8 +0.3**
BNN IAmb IAmb 00 30 23.9
comp=Z,9.5nm,1.0s
KVAR Kislovodsk Arr 47.34 69 LR LR 00 51 52.1
comp=Z,176nm,18.4s,baz=262,slow=38
WHAR Wooly Hollow 47.56 277 P **P 00 30 25.6 -0.6**
KBZ Khabaz 47.59 69 LR LR 00 50 43.9
comp=Z,214nm,21.5s,baz=312,slow=36
DBIC Dimbokro 47.75 147 P **P 00 30 27.2 -0.6**
comp=Z,5.1nm,0.8s,baz=353,slow=8.9,SNR=5.5
comp=Z,5.1nm,0.8s
DBIC Dimbokro 47.75 147 P **P 00 30 26.4 -1.4**
ARTI Arti 49.12 47 LR LR 00 50 41.3
comp=Z,261nm,18.8s,baz=290,slow=35
ARTI Arti 49.12 47 **P 00 30 38.4 +0.4**
ARTI IAmb IAmb 00 30 46.9
comp=Z,12nm,1.0s
MMAI Mount Meron Ar 49.39 85 LR LR 00 53 16.6
comp=Z,168nm,19.0s,baz=312,slow=38
INK Inuvik 49.46 332 LR LR 00 49 29.4
comp=Z,240nm,20.2s,baz=9.5,slow=34
INK Inuvik 49.46 332 P **P 00 30 40.8 +0.4**
INK IAmb IAmb 00 30 43.6
comp=Z,11nm,1.6s
EDM Edmonton 49.59 308 P **P 00 30 41.4 -0.2**
CBKS Cedar Bluff 50.09 286 **P 00 30 46.0 +0.4**
CBKS IAmb IAmb 00 30 51.7
comp=Z,10nm,0.9s
F30M Barrier River 50.56 332 P **P 00 30 48.1 -0.6**
F30M IAmb IAmb 00 30 57.5
comp=Z,13nm,1.2s
GNI Garni 50.80 71 LR LR 00 55 06.1
comp=Z,112nm,18.1s,baz=315,slow=39
ASF Jabal al Asfar 50.89 85 LR LR 00 54 34.3
comp=Z,116nm,19.5s,baz=25,slow=38
G30M tAoh Zraii Nji 51.08 331 P **P 00 30 53.4 +0.7**
C27K Jago River 51.51 336 P **P 00 30 55.6 -0.3**
C27K IAmb IAmb 00 31 04.0
comp=Z,12nm,1.4s
E27K Coleen River 51.90 334 P **P 00 30 59.0 +0.1**
RLMT Red Lodge 51.99 298 **P 00 30 59.7 -0.4**
RLMT IAmb IAmb 00 31 06.1
comp=Z,24nm,1.6s
NRIK Noril'sk 52.05 24 P **P 00 31 01.2 +1.3**
NRIK IAmb IAmb 00 32 10.3
comp=Z,7.7nm,0.3s
AKTO Aktyubinsk 52.26 54 LR LR 00 53 20.7
comp=Z,208nm,18.2s,baz=356,slow=36
BOZ Bozeman (W) 53.04 299 P **P 00 31 07.3 -0.4**
BOZ IAmb IAmb 00 31 14.0
comp=Z,25nm,1.8s
I28M Miner Creek 53.22 331 P **P 00 31 08.0 -0.8**
BMAR Burnt Mountain 53.25 334 P **P 00 31 09.0 +0.2**
PD31 Pinedale Array 53.58 295 **P 00 31 10.3 -1.5**
PD31 IAmb IAmb 00 31 21.4
comp=Z,18nm,1.7s
PDAR Pinedale Array 53.58 295 P **P 00 31 09.8 -2.0**
comp=Z,0.7nm,0.6s,baz=60,slow=8.1,SNR=7.2
PDAR LR LR 00 53 02.1
comp=Z,117nm,18.4s,baz=52,slow=35
comp=Z,0.7nm,0.6s
PDAR Pinedale Array 53.58 295 P **P 00 31 10.0 -1.8**
AMTX Amarillo 53.77 283 P **P 00 31 12.7 -0.5**
AB31 Akbulak array 53.96 54 P **P 00 31 13.9 -0.4**
AB31 IAmb IAmb 00 32 02.6
comp=Z,13nm,1.6s
ABKAR Akbulak array 53.96 54 P **P 00 31 13.7 -0.5**
NEW Newport 54.41 305 LR LR 00 52 34.9
comp=Z,154nm,18.3s,baz=81,slow=34
BOAV Boa Vista 54.70 220 P **P 00 31 19.2 -0.8**
BOAV IAmb IAmb 00 31 26.7
comp=Z,7.2nm,1.0s
MSTX Muleshoe 55.04 283 **P 00 31 22.0 -0.5**
BCAR Beaver Creek A 55.44 329 P **P 00 31 25.8 +0.9**
SCRK Sand Creek 55.50 331 **P 00 31 26.4 +1.0**
SCRK IAmb IAmb 00 31 34.0
comp=Z,37nm,2.0s
ILAR Eielson Array 55.81 333 P **P 00 31 27.2 -0.2**
comp=Z,1.1nm,0.9s,baz=35,slow=5.8,SNR=11
comp=Z,1.1nm,0.9s
ILAR Eielson Array 55.81 333 **P 00 31 27.8 +0.4**
HLID Hailey 55.86 299 **P 00 31 28.7 +0.3**
HLID IAmb IAmb 00 31 35.4
comp=Z,13nm,1.5s
NEA2 Nenana 56.57 334 P **P 00 31 33.4 +0.5**
NEA2 IAmb IAmb 00 31 34.7
comp=Z,22nm,1.6s
BORK Borovoye 56.67 46 **P 00 31 33.4 -0.4**
ANMO Albuquerque 56.70 286 LR LR 00 54 42.5
comp=Z,373nm,18.8s,baz=62,slow=35
ANMO Albuquerque 56.70 286 P **P 00 31 33.8 -0.7**
ANMO IAmb IAmb 00 31 41.4
comp=Z,18nm,1.8s
BVAR Borovoye Array 56.72 46 P **P 00 31 35.0 +0.9**
comp=Z,3.9nm,0.9s,baz=298,slow=6.4,SNR=10
BVAR LR LR 00 55 02.4
comp=Z,311nm,21.7s,baz=297,slow=35
comp=Z,3.9nm,0.9s
IMAR Indian Mountai 56.78 336 P **P 00 31 35.0 +0.7**
TIXI Tiksi 57.44 8 **P 00 31 40.1 +1.2**
TIXI IAmb IAmb 00 31 42.1
comp=Z,33nm,2.0s
MTPU Mount Pierson 58.13 293 P **P 00 31 44.4 -0.3**
MTPU IAmb IAmb 00 31 51.9
comp=Z,29nm,1.6s
TX31 Lajitas Ar. Si 58.72 279 **P 00 31 48.4 -0.1**
TXAR Lajitas Array 58.72 279 P **P 00 31 49.6 +1.1**
comp=Z,1.3nm,0.8s,baz=48,slow=7.4,SNR=5.5
comp=Z,1.3nm,0.8s
TXAR Lajitas Array 58.72 279 P **P 00 31 48.6 0.0**
SPR3 Spring Creek 3 58.77 295 P **P 00 31 49.0 0.0**
SPR3 IAmb IAmb 00 31 56.6
comp=Z,12nm,1.4s
ROSC El Rosal 59.16 236 **P 00 31 51.2 -0.9**
J05D Fort Rock, OR 59.81 302 P **P 00 31 55.6 -0.4**
KURK Kurchatov 62.01 43 **P 00 32 10.3 -0.4**
KURBB Kurchatov Arra 62.04 44 P **P 00 32 12.1 +1.2**
comp=Z,4.2nm,0.2s,baz=318,slow=7.2,SNR=6.0
KURBB LR LR 00 58 33.0
comp=Z,199nm,21.8s,baz=209,slow=35
ZALV Zalesovo Beam 62.23 38 P **P 00 32 13.0 +0.9**
comp=Z,0.2nm,0.4s,baz=339,slow=7.7,SNR=1.2
ZALV LR LR 00 59 45.4
comp=Z,88nm,19.9s,baz=310,slow=36
comp=Z,0.2nm,0.4s
BLYC Blythe 62.42 290 P **P 00 32 13.8 +0.1**
KKAR Karatay Array 63.53 54 P **P 00 32 21.2 +0.3**
OTAV Otavalo 65.23 237 **P 00 32 31.2 -1.7**
AAK Ala-Archa 65.90 52 LR LR 01 01 35.0
comp=Z,292nm,18.7s,baz=316,slow=36
ARSB Arslanbob 66.08 54 P **P 00 32 37.6 -0.2**
ARSB IAmb IAmb 00 33 02.0
comp=Z,13nm,1.4s
GAR Garm 66.35 57 **P 00 32 40.1 +0.6**
MK31 Makanchi Array 66.55 44 P **P 00 32 40.5 0.0**
MK31 IAmb IAmb 00 33 13.9
comp=Z,7.6nm,1.6s
MKAR Makanchi Array 66.55 44 P **P 00 32 41.5 +0.9**
comp=Z,1.1nm,0.6s,baz=327,slow=5.6,SNR=9.6
MKAR LR LR 01 01 27.0
comp=Z,206nm,19.5s,baz=302,slow=36
comp=Z,1.1nm,0.6s
MKAR Makanchi Array 66.55 44 **P 00 32 41.1 +0.6**
BDFB Brasilia 67.70 200 P **P 00 32 47.1 -1.0**
comp=Z,1.0nm,0.3s
comp=Z,1.0nm,0.3s
UOSS Minazif 68.12 77 **P 00 32 50.3 -0.5**
KBL Kabul 68.87 61 **P 00 32 55.2 -0.4**
KBL IAmb IAmb 00 33 04.4
comp=Z,6.7nm,1.4s
KSH Kashi 68.96 53 P **P 00 32 59.0 +3.1**
KSH sP pwP 00 33 05.3 +3.0
KSH pmax pmax
comp=Z,6.0nm,1.2s
PTLB Pontes e Lacer 70.61 211 P **P 00 33 05.8 -0.2**
WMQ Urumqi 71.26 43 *e*P **P 00 33 12.8 +2.9**
WMQ LR LR
comp=Z,240nm,24.9s
NIL Nilore 71.88 59 P **P 00 33 13.7 -0.1**
NIL IAmb IAmb 00 33 23.4
comp=Z,8.1nm,1.0s
LPAZ La Paz 74.71 219 P **P 00 33 30.8 -0.4**
comp=Z,0.6nm,0.5s,baz=26,slow=7.5,SNR=4.2
comp=Z,0.6nm,0.5s
LPAZ La Paz 74.71 219 P **P 00 33 29.8 -1.4**
SONM Songino Array 74.99 29 P **P 00 33 33.9 +1.9**
comp=Z,1.6nm,1.0s,baz=324,slow=7.3,SNR=6.0
comp=Z,1.6nm,1.0s
GTA Gaotai 79.99 38 *e*P **P 00 34 01.0 +0.9**
GTA pP pwP 00 34 05.5 -0.9
GTA pmax pmax
comp=Z,3.0nm,1.4s
HHC Hu-ho-hao-te 82.89 29 *e*P **P 00 34 15.0 -0.4**
HHC pmax pmax
comp=Z,13nm,0.8s
EVN Everest 83.58 53 P **P 00 34 19.0 -0.9**
EVN IAmb IAmb 00 34 28.1
comp=Z,10nm,1.2s
LZDM Lanzhou Array 84.50 37 P **P 00 34 26.2 +2.2**
comp=Z,0.8nm,0.3s,baz=256,slow=3.0,SNR=1.7
comp=Z,0.8nm,0.3s
USRK Ussuriysk Ar. 84.52 14 P **P 00 34 23.2 -0.3**
comp=Z,1.4nm,0.5s,baz=15,slow=9.8,SNR=4.3
comp=Z,1.4nm,0.5s
HNS HongShan 87.03 28 ⇑P **P 00 34 38.0 +1.9**
HNS pmax pmax
comp=Z,14nm,1.2s
BOSA Boshof 91.87 135 P **P 00 35 00.1 +1.2**
comp=Z,0.7nm,0.6s,baz=354,slow=10,SNR=1.2
comp=Z,0.7nm,0.6s
BOSA Boshof 91.87 135 P **P 00 34 59.2 +0.3**
PZH PanZhiHua 91.95 43 P **P 00 34 59.3 -0.3**
NJ2 Nanjing 93.24 27 *e*P **P 00 35 04.5 -0.8**
NJ2 pmax pmax
comp=Z,13nm,0.5s
CMAR Chiang Mai Arr 97.59 49 P **P 00 35 25.2 -0.2**
WRA Warramunga Arr 146.97 30 PKPbc **PKPab 00 41 34.8 0.0**
comp=Z,2.7nm,1.1s,baz=341,slow=3.0,SNR=5.9
WRA Warramunga Arr 146.97 30 **PKPdf 00 41 31.1 -0.4**
ASAR Alice Springs 150.27 33 PKPbc **PKPbc 00 41 41.0 -0.9**
comp=Z,1.6nm,0.8s,baz=340,slow=1.8,SNR=5.0
ASAR Alice Springs 150.27 33 **PKPbc 00 41 40.4 -1.6**
VNDA Vanda 152.26 185 **PKPbc 00 41 44.7 -0.2**

*SJA **28** 00:23:13.3±0.8,21°.94S×70°.47W,h13km±3km, ML3.8, MW3.7*
*NEIC **28** 00:23:15.8±1.5,21°.98S±0°.01×70°.37W±0°.06, h34km±8km, mb4.1/2, ML4.0(GUC), Error ellipse: s-maj=8.2km s-min=1.6km az=89.0*
*GUC **28** 00:23:15.1±0.8,21°.98S×70°.40W, h32km±6km, ML4.0*
ISC 28 00:23:14.8±1.0, 21°.98S±0°.02×70°.41W±0°.04, h32km±9km, n68,σ1°.941/95, 8D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB07	**IPOC Station P**	**0.54**	**63**		**Pb**	**00 23 26.1**	**-0.2**
PB07				Sg	**Sb**	**00 23 33.4**	**-0.7**
PB07	**IPOC Station P**	**0.54**	**63**	⇓*i*P	**Pb**	**00 23 26.0**	**-0.2**
PB07				*e*S	**Sb**	**00 23 33.4**	**-0.7**
PB07				IAML		00 23 34.0	
	comp=N,14μm,0.3s						
PB07	**IPOC Station P**	**0.54**	**63**	*e*P	**Pb**	**00 23 25.7**	**-0.5**
PB07				*e*S	**Sb**	**00 23 33.6**	**-0.4**
PB07				IAML		00 23 35.0	
	comp=Z,5μm,0.2s						
PB03	**IPOC Station P**	**0.61**	**97**		**Pb**	**00 23 27.1**	**-0.2**
PB03	**IPOC Station P**	**0.61**	**97**	⇓*i*P	**Pb**	**00 23 27.0**	**-0.2**
PB03				*e*S	**Sb**	**00 23 35.1**	**-0.7**
PB03	**IPOC Station P**	**0.61**	**97**	*e*P	**Pb**	**00 23 26.8**	**-0.4**
PB03				*e*S	**Sn**	**00 23 38.9**	**+2.7**
PB03				IAML		00 23 40.2	
	comp=Z,2μm,0.3s						
PB02	**IPOC Station P**	**0.81**	**36**		**Pn**	**00 23 29.7**	**-0.4**
PB02				Sn	**Sn**	**00 23 39.7**	**-1.3**
PB02	**IPOC Station P**	**0.81**	**36**	⇓*i*P	**Pn**	**00 23 29.7**	**-0.4**
PB02				*e*S	**Sn**	**00 23 40.5**	**-0.5**
PB02				IAML		00 23 42.3	
	comp=E,8μm,0.2s						
PB02	**IPOC Station P**	**0.81**	**36**	*e*P	**Pn**	**00 23 29.7**	**-0.4**
PB02				IAML		00 23 43.4	
	comp=Z,7μm,0.3s						
PB05	**IPOC Station P**	**0.89**	**168**		**Pn**	**00 23 31.4**	**+0.1**
PB05				Sn	**Sn**	**00 23 42.9**	**-0.2**
PB05	**IPOC Station P**	**0.89**	**168**	⇓*i*P	**Pn**	**00 23 31.4**	**+0.1**
PB05				*e*S	**Sn**	**00 23 42.9**	**-0.2**
PB05	**IPOC Station P**	**0.89**	**168**	*e*P	**Pn**	**00 23 31.4**	**+0.1**
PB05				*e*S	**Sn**	**00 23 43.2**	**+0.1**
PB06	**IPOC Station P**	**1.06**	**133**		**Pn**	**00 23 34.0**	**+0.3**
PB06				Sn	**Sn**	**00 23 47.5**	**+0.2**
PB06	**IPOC Station P**	**1.06**	**133**	⇓*i*P	**Pn**	**00 23 33.9**	**+0.3**
PB06				*e*S	**Sn**	**00 23 47.7**	**+0.4**
PB06	**IPOC Station P**	**1.06**	**133**	*e*P	**Pn**	**00 23 33.9**	**+0.3**
PB06				*e*S	**Sb**	**00 23 50.9**	**+2.5**
PB06				IAML		00 24 02.5	
	comp=Z,773nm,0.5s						
PB09	**IPOC Station P**	**1.09**	**81**		**Pn**	**00 23 34.9**	**+0.8**
PB09	**IPOC Station P**	**1.09**	**81**	⇓*i*P	**Pn**	**00 23 34.9**	**+0.8**
PB09				*e*S	**Sb**	**00 23 49.2**	**-0.3**
PB09	**IPOC Station P**	**1.09**	**81**	*e*P	**Pn**	**00 23 34.9**	**+0.8**
PB09				*e*S	**Sb**	**00 23 50.3**	**+0.8**
PB09				IAML		00 23 52.3	
	comp=Z,1μm,0.5s						
PATCX	**Punta Patache**	**1.17**	**12**		**Pn**	**00 23 35.4**	**+0.3**
PATCX	**Punta Patache**	**1.17**	**12**	⇓*i*P	**Pn**	**00 23 35.3**	**+0.3**
PATCX				IAML		00 23 53.1	
	comp=N,4μm,0.3s						
PATCX	**Punta Patache**	**1.17**	**12**	*e*P	**Pn**	**00 23 34.7**	**-0.4**
PATCX				*e*S	**Sb**	**00 23 51.8**	**+0.2**
PATCX				IAML		00 23 52.5	
	comp=Z,2μm,0.4s						
PB01	**IPOC Station P**	**1.26**	**43**		**Pn**	**00 23 37.1**	**+0.7**
PB01				Sn	**Sn**	**00 23 52.3**	**+0.1**
PB01	**IPOC Station P**	**1.26**	**43**	⇓*i*P	**Pn**	**00 23 36.9**	**+0.7**
PB01				IAML		00 23 56.7	
	comp=E,4μm,0.2s						
PB01	**IPOC Station P**	**1.26**	**43**	*e*P	**Pn**	**00 23 37.0**	**+0.7**
PB01				*e*S	**Sn**	**00 23 53.0**	**+0.8**
PB01				IAML		00 23 53.5	
	comp=Z,2μm,0.3s						
TA01	**Diego Aracena**	**1.42**	**9**		**Pn**	**00 23 39.1**	**+0.8**
TA01				Sn	**Sn**	**00 23 56.7**	**+0.7**
TA01	**Diego Aracena**	**1.42**	**9**	*e*P	**Pn**	**00 23 39.0**	**+0.6**
TA01				IAML		00 23 59.5	
	comp=N,4μm,0.4s						
TA01	**Diego Aracena**	**1.42**	**9**	*e*P	**Pn**	**00 23 39.2**	**+0.8**
TA01				IAML		00 23 59.7	
	comp=Z,2μm,0.4s						
PB10	**IPOC Station P**	**1.54**	**185**		**Pn**	**00 23 41.0**	**+1.0**

PB10	**IPOC Station P**	**1.54**	**185**	*eP*		**Pn**	**00 23 40.6**	**+0.6**
PB10	**IPOC Station P**	**1.54**	**185**	*eP*		**Pb**	**00 23 43.1**	**+0.4**
PB10				*eS*		**Sb**	**00 24 07.4**	**+5.6**
TA02	**Huaiquique**	**1.72**	**9**	*eP*		**Pn**	**00 23 43.8**	**+1.3**
TA02				IAML			00 24 08.0	
	comp=N,2μm,0.2s							
TA02	**Huaiquique**	**1.72**	**9**	*eP*		**Pb**	**00 23 44.9**	**-0.9**
TA02				*eS*		**Sb**	**00 24 06.3**	**-0.7**
TA02				IAML			00 24 14.8	
	comp=Z,762nm,0.5s							
HMBC	**Humberstone**	**1.76**	**16**			**Pn**	**00 23 44.2**	**+1.1**
PB08	**IPOC Station P**	**2.17**	**33**			**Pn**	**00 23 51.3**	**+2.2**
PB08	**IPOC Station P**	**2.17**	**33**	*eP*		**Pn**	**00 23 51.5**	**+2.5**
PB08				IAML			00 24 21.8	
	comp=N,1μm,0.3s							
PB08	**IPOC Station P**	**2.17**	**33**	*eP*		**Pb**	**00 23 51.9**	**-1.8**
PB08				*eS*		**Sb**	**00 24 20.4**	**+0.1**
PB08				IAML			00 24 22.7	
	comp=Z,688nm,0.3s							
AF01	**San Pedro de A**	**2.28**	**116**			**Pn**	**00 23 52.2**	**+1.7**
AF01	**San Pedro de A**	**2.28**	**116**	*eP*		**Pb**	**00 23 54.7**	**-0.8**
AF01	**San Pedro de A**	**2.28**	**116**	*eP*		**Pn**	**00 23 52.8**	**+2.3**
AF01				*eS*		Sb	00 24 33.3	+10
AF01				IAML			00 24 53.8	
	comp=Z,1μm,0.5s							
PB11	**IPOC Station P**	**2.31**	**18**			**Pn**	**00 23 52.5**	**+1.6**
PB11	**IPOC Station P**	**2.31**	**18**	*eP*		**Pn**	**00 23 52.1**	**+1.3**
PB11				IAML			00 24 28.4	
	comp=N,2μm,0.4s							
PB11	**IPOC Station P**	**2.31**	**18**	*eP*		**Pn**	**00 23 53.0**	**+2.1**
PB11				*eS*		**Sb**	**00 24 24.9**	**+0.6**
PB11				IAML			00 24 28.9	
	comp=Z,720nm,0.9s							
PSGCX	**Pisagua**	**2.38**	**6**			**Pn**	**00 23 52.6**	**+0.9**
GO01	**Chusmiza**	**2.56**	**26**			**Pn**	**00 23 56.4**	**+1.8**
GO01	**Chusmiza**	**2.56**	**26**	*eP*		**Pn**	**00 23 57.1**	**+2.6**
GO01				IAML			00 24 33.6	
	comp=N,2μm,0.2s							
GO01	**Chusmiza**	**2.56**	**26**	*eP*		**Pn**	**00 23 57.6**	**+3.1**
GO01				*eS*		**Sb**	**00 24 30.9**	**-0.8**
GO01				IAML			00 24 32.8	
	comp=Z,500nm,0.4s							
PB14	**IPOC Station P**	**2.64**	**180**			**Pn**	**00 23 55.8**	**+0.4**
PB14	**IPOC Station P**	**2.64**	**180**	*eP*		**Pn**	**00 23 55.9**	**+0.4**
PB14	**IPOC Station P**	**2.64**	**180**	*eP*		**Pn**	**00 23 51.5**	**-3.9**
PB14				*eS*		**Sb**	**00 24 32.0**	**-1.7**
PB14				IAML			00 24 37.6	
	comp=Z,181nm,0.6s							
GO02	**Mina Guanaco**	**3.26**	**167**			**Pn**	**00 24 04.7**	**+0.7**
GO02	**Mina Guanaco**	**3.26**	**167**	*eP*		**Pn**	**00 24 05.7**	**+1.7**
GO02	**Mina Guanaco**	**3.26**	**167**	*eP*		**Pn**	**00 24 05.9**	**+1.9**
GO02				*eS*		**Sb**	**00 24 48.9**	**-2.7**
GO02				IAML			00 24 59.6	
	comp=Z,244nm,0.7s							
PB12	**IPOC Station P**	**3.35**	**1**			**Pn**	**00 24 05.7**	**+0.7**
PB12	**IPOC Station P**	**3.35**	**1**	*eP*		**Pn**	**00 24 06.1**	**+1.1**
PB12				*eS*		**Sn**	**00 24 47.7**	**+4.0**
PB12				IAML			00 24 59.5	
	comp=Z,302nm,0.5s							
PB16	**IPOC Station P**	**3.72**	**13**			**Pn**	**00 24 11.6**	**+1.0**
AC01	**Pan de Azucar**	**4.16**	**182**	Pn		**Pn**	**00 24 16.7**	**+0.6**
AC01	**Pan de Azucar**	**4.16**	**182**	*eP*		**Pn**	**00 24 15.8**	**-0.3**
AC01				*eS*		**Sb**	**00 25 17.0**	**-0.1**
AC01				IAML			00 25 27.3	
	comp=Z,95nm,0.8s							
SALTA		**4.36**	**122**	*eP*		**Pb**	**00 24 28.0**	**-3.0**
PB18	**Visviri**	**4.45**	**11**			**Pn**	**00 24 21.2**	**+0.6**
AC02	**Maricunga**	**4.97**	**167**			**Pn**	**00 24 28.0**	**+0.2**
SLA	**San Lorenzo**	**5.27**	**122**	*eP*		Pn	00 24 38.6	+7.1
AC06	**Mina Casimiro**	**5.36**	**180**	Pn		**Pn**	**00 24 33.7**	**+1.1**
PTLB	**Pontes e Lacer**	**12.49**	**61**			**Pn**	**00 26 11.2**	**+0.7**
VILB	**Vilhena**	**13.23**	**49**			**Pn**	**00 26 19.5**	**-1.1**
ITAB	**Concordia**	**17.42**	**111**			**Pn**	**00 27 15.6**	**+0.2**
TRQA	**Tornquist**	**17.59**	**158**			**Pn**	**00 27 18.0**	**+0.4**
BOAV	**Boa Vista**	**26.08**	**23**	P		**P**	**00 28 44.9**	**-0.7**
BOAV				IAmb	IAmb		00 28 57.8	
	comp=Z,4.2nm,1.0s							
RUSC	**La Rusia**	**27.82**	**354**	P		**P**	**00 29 00.8**	**-1.0**
RUSC				IAmb	IAmb		00 29 04.0	
	comp=Z,6.1nm,1.2s							

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*IDC **28** 00:26:28.2±0.4,60.˚84S×50.˚93W,h0km,mb5.0/19, mbtmp5.0/20,ML4.3/1,MS5.0/37,Error ellipse: s-maj=17.6km s-min=12.4km az=82.0*

*MOS **28** 00:26:28.6±1.0,60.˚87S×51.˚05W,h10km,mb5.6/22, MS5.1/16,Error ellipse: s-maj=25.9km s-min=7.8km az=98.8*

*NEIC **28** 00:26:29.4±1.4,60.˚90S±0.˚05×50.˚9W±0.˚1,h10km±1km, mb5.5/115,Ms_20 5.2/324,Mww5.5/39,Error ellipse: s-maj=12.2km s-min=3.0km az=312.0*

*NEIC **28** 00:26:29.8,60.˚99S×50.˚72W,h12km,Moment Tensor Solution. Duration: 3s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.20; $M_{\theta\theta}$1.30; $M_{\phi\phi}$0.91; $M_{r\theta}$-1.07; $M_{\theta\phi}$0.92; $M_{\phi r}$-0.05; Fault plane solution: $M_0$2.38000×10^{17} NP1: ϕ_s219.27000°,δ35.11000°,λ-111.41000°. NP2: ϕ_s64.88000°,δ57.63000°,λ-75.60000°. Principal axes: T 2.2215, Plg12.0000°, Azm145.0000°; N 0.2945, Plg12.0000°, Azm237.0000°; P -2.5159, Plg73.0000°, Azm12.0000°;*

*NEIC **28** 00:26:29.8,60.˚89S×50.˚92W,h12km*

*GCMT **28** 00:26:32.4±0.1,61.˚06S±0.˚01×51.˚18W±0.˚02,h12km, MW5.5/147,Moment Tensor Solution. s102,c181; s147,c286; Duration: 1s4 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.25±.03; $M_{\theta\theta}$1.36±.02; $M_{\phi\phi}$0.89±.03; $M_{r\theta}$-0.70±.07; $M_{\theta\phi}$1.27±.02; $M_{\phi r}$0.27±.07; Best double couple: $M_0$2.45800×10^{17} NP1:ϕ_s215.00000°,δ43.00000°, λ-114.00000°. NP2:ϕ_s68.00000°,δ52.00000°, λ-70.00000°. Principal axes: T 2.4490, Plg5.0000°, Azm141.0000°; N 0.0240, Plg16.0000°, Azm233.0000°; P -2.4670, Plg73.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 00:26:29.7±0.2,60.˚86S±0.˚04×50.˚98W±0.˚05,h10km,n871, σ1♀35/732,**mb5.5**/96,**MS5.2**/214,**6C-6D,Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESPZ	**Base Esperanza**	**3.81**	**225**		**Pn**	**00 27 27.3**	**-1.0**
PMSA	**Palmer Station**	**7.16**	**231**	Pn	**Pn**	**00 28 13.6**	**-0.6**
	4.9nm,0.3s,baz=45,slow=9.3,SNR=28						
PMSA				Sn	**Sn**	**00 29 42.1**	**+6.7**
	4.4nm,0.3s,baz=132,slow=9.6,SNR=2.1						
PMSA				LR	LR	00 30 23.1	
	comp=Z,2μm,21.6s,baz=59,slow=33 9.5nm,0.3s						
PMSA	**Palmer Station**	**7.16**	**231**		**Pn**	**00 28 13.5**	**-0.8**
EFI	**East Falkland**	**10.00**	**334**		**Pn**	**00 28 54.3**	**+1.0**
EFI	**East Falkland**	**10.00**	**334**	P	**Pn**	**00 28 54.3**	**+1.0**
SMAI	**San Martin Ant**	**10.04**	**217**		**Pn**	**00 28 53.1**	**-0.7**
HOPE	**Hope Point**	**10.18**	**56**		**Pn**	**00 28 54.2**	**-1.5**
HOPE	**Hope Point**	**10.18**	**56**	P	**Pn**	**00 28 54.2**	**-1.5**
MG01	**Puerto William**	**10.65**	**296**	Pn	**Pn**	**00 29 03.2**	**+1.1**
USHA	**Ushuaia**	**11.07**	**295**	LR	LR	00 32 21.8	
	comp=Z,27μm,21.1s,baz=172,slow=32						
BELA	**Belgrano 2**	**17.90**	**169**		**Pn**	**00 30 36.1**	**-2.3**
AY03	**Cochrane**	**18.49**	**308**	P	**P**	**00 30 44.4**	**-1.2**
VNA3	**Neumayer Olymp**	**19.25**	**140**	⇑P	**Pn**	**00 30 54.9**	**0.0**
	comp=Z,259nm,0.8s						
VNA1	**Neumayer--Stat**	**19.61**	**138**	⇑P	**Pn**	**00 30 59.8**	**+0.7**
	comp=Z,115nm,0.9s						
COYC	**Coyhaique**	**19.70**	**311**		**P**	**00 30 58.1**	**-0.8**
VNA2	**Neumayer--Watz**	**19.93**	**138**	⇓P	**Pn**	**00 31 02.4**	**-0.5**
	comp=Z,79nm,0.7s,baz=284,slow=12						
VNA2				⇓S	Sn	00 34 59.8	+13
	baz=340,slow=13						
AY01	**Puyuhuapi**	**20.90**	**312**		**P**	**00 31 10.5**	**-1.4**
SNAA	**Sanae**	**21.48**	**140**	⇑P	**P**	**00 31 18.9**	**+0.9**
	comp=Z,5μm,1.3s						
SNAA				⇓S	Sn	00 35 25.7	+1.8
SNAA	**Sanae**	**21.48**	**140**	P	**P**	**00 31 18.9**	**+0.9**
	comp=Z,83nm,0.9s,baz=284,slow=8.2,SNR=137						
SNAA				S	**S**	**00 35 10.3**	**-5.6**
	comp=Z,3.6nm,0.8s,baz=252,slow=18,SNR=1.2						
SNAA				LR	LR	00 37 48.2	
	comp=Z,10μm,21.7s,baz=314,slow=32 comp=Z,83nm,0.9s						
SNAA	**Sanae**	**21.48**	**140**		**P**	**00 31 17.7**	**-0.4**
SNAA				IAMs_20	IAMs_20	00 37 25.1	
	comp=Z,10μm,22.0s						

LL02	**Futaleuf**	**21.69**	**315**			**P**	**00 31 20.1**	**-0.3**
LL02				IAMs_20	IAMs_20	00 39 06.5		
	comp=Z,8μm,20.0s							
LL01	**San Ignacio de**	**22.60**	**315**	P		**P**	**00 31 30.8**	**+0.6**
LL01				IAMs_20	IAMs_20	00 39 37.6		
	comp=Z,9μm,21.0s							
TROLL	**Troll, Antarti**	**23.18**	**141**	⇑P		**P**	**00 31 36.3**	**+0.1**
	comp=Z,4μm,0.7s							
TROLL				⇓S		**S**	**00 35 51.9**	**+4.4**
PLCA	**Paso Flores**	**23.46**	**320**	P		**P**	**00 31 38.8**	**-0.5**
	comp=Z,31nm,1.0s,baz=155,slow=10.0,SNR=18							
PLCA				LR		LR	00 40 53.5	
	comp=Z,5μm,18.1s,baz=166,slow=37 comp=Z,31nm,1.0s							
PLCA	**Paso Flores**	**23.46**	**320**			**P**	**00 31 38.7**	**-0.5**
PLCA				IAmb		IAmb	00 31 45.6	
	comp=Z,147nm,1.3s							
PLCA	**Paso Flores**	**23.46**	**320**	*eP*		**P**	**00 31 34.9**	**-4.3**
LL03	**Petrohue**	**23.70**	**317**	P		**P**	**00 31 40.4**	**-1.0**
LL03				IAmb		IAmb	00 31 48.3	
	comp=Z,107nm,0.8s							
LL03				IAMs_20	IAMs_20		00 40 22.7	
	comp=Z,6μm,20.0s							
LL05	**Los Muermos**	**23.83**	**315**	IAMs_20	IAMs_20		00 40 24.1	
	comp=Z,6μm,20.0s							
TRQA	**Tornquist**	**23.85**	**338**			**P**	**00 31 43.4**	**+0.5**
TRQA				IAmb		IAmb	00 31 52.6	
	comp=Z,251nm,1.4s							
TRQA	**Tornquist**	**23.85**	**338**	P		**P**	**00 31 43.4**	**+0.5**
TRQA				pmax		pmax		
	comp=Z,251nm,1.4s							
TRQA				MLR		MLR		
	comp=Z,6μm,20.0s							
LR05	**Currie**	**24.39**	**318**	P		**P**	**00 31 46.9**	**-0.9**
LR05				IAmb		IAmb	00 31 55.3	
	comp=Z,81nm,1.1s							
LR05				IAMs_20	IAMs_20		00 41 22.8	
	comp=Z,8μm,18.0s							
LR03	**Panguipulli**	**25.04**	**318**	IAMs_20	IAMs_20		00 41 27.1	
	comp=Z,6μm,19.0s							
LR04	**Corral**	**25.17**	**316**	P		**P**	**00 31 54.9**	**0.0**
LR04				IAmb		IAmb	00 32 03.1	
	comp=Z,173nm,1.1s							
NVL	**N'lazarevskaya**	**26.25**	**138**	*eP*		**P**	**00 32 05.3**	**+0.8**
NVL				*e*PPP		PPP	00 32 52.7	
NVL				*eS*		**S**	**00 36 38.4**	**+2.0**
NVL				*e*SS		**SnSn**	**00 37 38.7**	**+3.5**
NVL				pmax		pmax		
	comp=Z,155nm,1.4s							
NVL				MLR		MLR		
	comp=Z,4μm,18.0s							
BI02	**San Fabin de**	**27.43**	**323**	P		**P**	**00 32 15.0**	**-0.4**
ML02	**Panimavida**	**28.31**	**323**	P		**P**	**00 32 23.1**	**-0.1**
ML02				IAmb		IAmb	00 32 39.2	
	comp=Z,122nm,1.1s							
BO02	**Sierra Bellavi**	**29.03**	**325**			**P**	**00 32 29.9**	**+0.2**
BO02				IAMs_20	IAMs_20		00 43 24.1	
	comp=Z,5μm,21.0s							
PLTB	**Pedras Altas**	**29.15**	**355**			**P**	**00 32 31.1**	**+0.3**
PLTB	**Pedras Altas**	**29.15**	**355**	*eP*		**P**	**00 32 32.1**	**+1.4**
QSPA	**South Pole Qui**	**29.38**	**180**	P		**P**	**00 32 36.3**	**+3.6**
	comp=Z,65nm,0.9s,baz=171,slow=3.9,SNR=100							
QSPA				LR		LR	00 47 18.4	
	comp=Z,7μm,18.0s,baz=158,slow=42							
QSPA	**South Pole Qui**	**29.38**	**180**	P		**P**	**00 32 34.9**	**+2.2**
BO01	**Tunca**	**29.49**	**325**			**P**	**00 32 33.6**	**-0.1**
BO01				IAMs_20	IAMs_20		00 44 11.3	
	comp=Z,4μm,20.0s							
BO04	**La Punta**	**29.74**	**326**	IAMs_20	IAMs_20		00 43 55.8	
	comp=Z,5μm,22.0s							
LMEL	**Las Melosas**	**29.76**	**326**	P		**P**	**00 32 36.0**	**-0.3**
LMEL				IAMs_20	IAMs_20		00 45 04.4	
	comp=Z,5μm,18.0s							
MT13	**San Alfonso**	**29.88**	**326**	P		**P**	**00 32 37.1**	**-0.3**
MT13				IAmb		IAmb	00 32 49.9	
	comp=Z,46nm,0.8s							
MT13				IAMs_20	IAMs_20		00 44 22.6	
	comp=Z,4μm,20.0s							
MT01	**Popeta**	**30.03**	**325**	P		**P**	**00 32 38.6**	**0.0**
MT01				IAmb		IAmb	00 32 46.6	
	comp=Z,71nm,1.1s							
MT01				IAMs_20	IAMs_20		00 43 53.6	
	comp=Z,5μm,22.0s							
MT09	**Talagante**	**30.04**	**325**			**P**	**00 32 38.3**	**-0.5**
MT09				IAmb		IAmb	00 32 49.0	
	comp=Z,95nm,0.9s							
MT09				IAMs_20	IAMs_20		00 44 36.9	
	comp=Z,4μm,20.0s							
MT08	**Bocatoma Ro**	**30.09**	**327**			**P**	**00 32 39.6**	**+0.3**
MT08				IAMs_20	IAMs_20		00 44 57.0	
	comp=Z,4μm,19.0s							
PSAL	**Palomas, Salto**	**30.10**	**349**	*eP*		**P**	**00 32 39.5**	**+0.4**
MT03	**Universidad Ad**	**30.18**	**326**	P		**P**	**00 32 39.8**	**-0.2**
MT03				IAmb		IAmb	00 32 51.6	
	comp=Z,115nm,0.9s							
MT16	**CCHEN**	**30.24**	**326**	P		**P**	**00 32 40.3**	**-0.1**
MT16				IAMs_20	IAMs_20		00 44 45.2	
	comp=Z,4μm,19.0s							
VA05	**Santo Domingo**	**30.33**	**324**	IAMs_20	IAMs_20		00 44 36.5	
	comp=Z,4μm,20.0s							
MT05	**Renca**	**30.34**	**326**	P		**P**	**00 32 40.8**	**-0.5**
MT05				IAMs_20	IAMs_20		00 44 45.6	
	comp=Z,4μm,20.0s							
CPSB	**Cacapava Do Su**	**30.50**	**356**	*eP*		**P**	**00 32 45.6**	**+2.9**
PEL	**Peldehue**	**30.55**	**326**			**P**	**00 32 43.6**	**+0.5**
PEL				IAmb		IAmb	00 32 51.8	
	comp=Z,102nm,1.2s							
PEL				IAMs_20	IAMs_20		00 45 04.4	
	comp=Z,5μm,20.0s							
PEL	**Peldehue**	**30.55**	**326**	P		**P**	**00 32 43.7**	**+0.5**
PEL				pmax		pmax		
	comp=Z,102nm,1.2s							
PEL				MLR		MLR		
	comp=Z,5μm,20.0s							
MT02	**Curacav**	**30.57**	**325**	IAMs_20	IAMs_20		00 44 10.9	
	comp=Z,5μm,22.0s							
VA03	**San Esteban**	**30.88**	**327**	IAMs_20	IAMs_20		00 45 04.0	
	comp=Z,4μm,18.0s							
VA01	**Torpederas**	**30.93**	**325**	IAMs_20	IAMs_20		00 44 38.4	
	comp=Z,5μm,20.0s							
CFA	**Coronel Fontan**	**31.39**	**331**	LR	LR		00 45 46.2	
	comp=Z,3μm,20.3s,baz=177,slow=37							
ZON	**Zonda**	**31.56**	**330**			**P**	**00 32 52.0**	**-0.1**
ZON	**Zonda**	**31.56**	**330**	P		**P**	**00 32 52.0**	**-0.1**
ZON				pmax		pmax		
	comp=Z,43nm,1.4s							
CO02	**Combarbal**	**32.47**	**327**	IAMs_20	IAMs_20		00 46 41.3	
	comp=Z,4μm,20.0s							
CO03	**El Pedregal**	**32.74**	**328**	IAMs_20	IAMs_20		00 46 35.6	
	comp=Z,4μm,19.0s							
ITAB	**Concordia**	**33.62**	**358**	P		**P**	**00 33 10.5**	**+0.4**
ITAB				IAmb		IAmb	00 33 20.4	
	comp=Z,157nm,1.5s							
ITAB	**Concordia**	**33.62**	**358**	*eP*		**P**	**00 33 13.4**	**+3.3**
LCO	**Las Campanas**	**34.48**	**329**	P		**P**	**00 33 17.4**	**-0.5**
LCO				IAmb		IAmb	00 33 26.3	
	comp=Z,85nm,1.2s							
LCO	**Las Campanas**	**34.48**	**329**	IAMs_20	IAMs_20		00 47 10.4	
	comp=Z,5μm,21.0s							
LCO	**Las Campanas**	**34.48**	**329**	P		**P**	**00 33 17.4**	**-0.5**
LCO				pmax		pmax		
	comp=Z,85nm,1.3s							
LCO				MLR		MLR		
	comp=Z,5μm,21.0s							
AC05	**El Transito**	**34.54**	**329**	IAMs_20	IAMs_20		00 47 24.9	
	comp=Z,5μm,20.0s							
CPUP	**Villa Florida**	**34.79**	**350**	P		**P**	**00 33 20.5**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=29,slow=7.1,SNR=25							
CPUP				LR		LR	00 46 31.9	
	comp=Z,725nm,21.1s,baz=30,slow=35 comp=Z,2.9nm,0.7s							
CPUP	**Villa Florida**	**34.79**	**350**			**P**	**00 33 20.6**	**+0.4**
CPUP	**Villa Florida**	**34.79**	**350**	P		**P**	**00 33 20.6**	**+0.4**
CPUP				pmax		pmax		
	comp=Z,4.0nm,0.8s							
CPUP	**Villa Florida**	**34.79**	**350**	*eP*		**P**	**00 33 21.8**	**+1.6**
AC04	**Llanos de Chal**	**35.34**	**328**			**P**	**00 33 25.5**	**+0.5**
AC04				IAMs_20	IAMs_20		00 47 28.2	
	comp=Z,4μm,20.0s							
SYO	**Syowa Base**	**35.74**	**142**	⇓*es*P		**P**	**00 33 28.8**	**+0.8**
AC06	**Mina Casimiro**	**35.97**	**330**	P		**P**	**00 33 30.9**	**+0.4**
AC06				IAmb		IAmb	00 33 38.5	
	comp=Z,78nm,1.1s							
AC06				IAMs_20	IAMs_20		00 48 49.9	
	comp=Z,4μm,18.0s							
PTGB	**Pitanga**	**36.13**	**358**	*eP*		**P**	**00 33 33.6**	**+1.7**

AC02	**Maricunga**	**36.18**	**332**	P		**P**	**00 33 32.4**	**-0.4**
AC02				IAmb		IAmb	00 33 40.4	
	comp=Z,51nm,0.8s							
PET01	**Itanhaem-SP**	**36.64**	**6**	*eP*		**P**	**00 33 37.6**	**+1.5**
AC01	**Pan de Azucar**	**37.19**	**330**	IAMs_20	IAMs_20		00 48 17.2	
	comp=Z,5μm,21.0s							
SPB	**Sao Paulo**	**37.32**	**5**	P		**P**	**00 33 42.4**	**+0.5**
SPB				IAmb		IAmb	00 33 45.4	
	comp=Z,83nm,0.6s							
SPB	**Sao Paulo**	**37.32**	**5**	*eP*		**P**	**00 33 43.5**	**+1.6**
FRTB	**Fartura**	**37.50**	**2**	*eP*		**P**	**00 33 45.6**	**+2.1**
PARB	**Paraibuna**	**37.68**	**8**	*eP*		**P**	**00 33 47.4**	**+2.4**
VAO	**Valinhos**	**37.93**	**6**	P		**P**	**00 33 47.5**	**+0.4**
VAO				IAmb		IAmb	00 33 50.4	
	comp=Z,52nm,0.7s							
VAO	**Valinhos**	**37.93**	**6**	*eP*		**P**	**00 33 48.6**	**+1.4**
AMBA	**Amambai (Brazi**	**38.01**	**354**	*eP*		**P**	**00 33 49.6**	**+1.8**
RCLB	**Rio Claro- Sao**	**38.48**	**5**	*eP*		**P**	**00 33 53.9**	**+2.1**
VAS01	**Vassouras-RJ**	**38.91**	**11**	*eP*		**P**	**00 33 57.7**	**+2.4**
DUB01	**Friburgo-RJ**	**39.21**	**13**	*eP*		**P**	**00 34 00.3**	**+2.4**
CAM01	**Campos-RJ**	**39.54**	**14**	*eP*		**P**	**00 34 03.0**	**+2.4**
SBA	**Scott Base**	**39.63**	**192**	P		**P**	**00 34 00.6**	**-0.1**
SBA	**Scott Base**	**39.63**	**192**	P		**P**	**00 34 00.6**	**-0.1**
SBA				pmax		pmax		
	comp=Z,37nm,1.0s							
SBA				MLR		MLR		
	comp=Z,2μm,18.0s							
AF01	**San Pedro de A**	**39.72**	**335**	P		**P**	**00 34 02.5**	**0.0**
AF01				IAmb		IAmb	00 34 12.2	
	comp=Z,94nm,0.9s							
AF01				IAMs_20	IAMs_20		00 51 08.3	
	comp=Z,4μm,22.0s							
BB19B	**Bebedouro**	**39.79**	**4**	*eP*		**P**	**00 34 03.6**	**+0.8**
BSCB	**Bom Sucesso**	**40.06**	**9**	*eP*		**P**	**00 34 07.2**	**+2.1**
PB06	**IPOC Station P**	**40.26**	**333**	IAMs_20	IAMs_20		00 50 43.6	
	comp=Z,4μm,21.0s							
VNDA	**Vanda**	**40.39**	**190**	P		**P**	**00 34 07.2**	**+0.1**
	comp=Z,4.6nm,1.1s,baz=176,slow=7.0,SNR=7.0							
VNDA				LR		LR	00 53 36.6	
	comp=Z,1μm,18.2s,baz=159,slow=40 comp=Z,4.6nm,1.1s							
VNDA	**Vanda**	**40.39**	**190**	P		**P**	**00 34 06.8**	**-0.3**
AQDB	**Aquidauana**	**40.48**	**353**	P		**P**	**00 34 07.9**	**-0.4**
AQDB	**Aquidauana**	**40.48**	**353**	*eP*		**P**	**00 34 09.5**	**+1.1**
BDQN	**Bodoquena, MS**	**40.58**	**352**	*eP*		**P**	**00 34 10.4**	**+1.2**
PB03	**IPOC Station P**	**40.94**	**333**	P		**P**	**00 34 12.3**	**-0.1**
PB03				IAmb		IAmb	00 34 21.4	
	comp=Z,98nm,1.1s							
ITRB	**Iturama**	**41.11**	**1**	*eP*		**P**	**00 34 14.2**	**+0.6**
PB01	**IPOC Station P**	**41.85**	**334**	P		**P**	**00 34 20.2**	**+0.4**
PB01				IAmb		IAmb	00 34 29.2	
	comp=Z,87nm,1.0s							
C2SB	**Chapadao do Su**	**42.06**	**357**	*eP*		**P**	**00 34 23.4**	**+2.0**
RIB01	**Linhares ES**	**42.17**	**15**	*eP*		**P**	**00 34 24.9**	**+2.6**
PMNB	**Patos De Minas**	**42.40**	**6**	*eP*		**P**	**00 34 25.2**	**+1.0**
BSFB	**Barra de Sao F**	**42.59**	**14**	*eP*		**P**	**00 34 27.9**	**+2.2**
PB08	**IPOC Station P**	**42.65**	**334**	P		**P**	**00 34 27.1**	**+0.4**
SJMB	**Sao Joao De Ma**	**42.68**	**14**	*eP*		**P**	**00 34 27.3**	**+0.9**
DIAM	**Diamantina, MG**	**42.83**	**10**	*eP*		**P**	**00 34 29.5**	**+1.7**
IPMB	**Ipameri, GO**	**42.87**	**4**	*eP*		**P**	**00 34 30.1**	**+2.1**
GO01	**Chusmiza**	**43.12**	**334**	P		**P**	**00 34 30.4**	**-0.2**
GO01				IAmb		IAmb	00 34 40.3	
	comp=Z,90nm,1.2s							
MAW	**Mawson**	**43.15**	**149**	P		**P**	**00 34 30.7**	**+1.0**
MAW	**Mawson**	**43.15**	**149**	P		**P**	**00 34 30.9**	**+1.2**
	comp=Z,36nm,1.0s,baz=198,slow=8.7,SNR=20							
MAW				LR		LR	00 51 25.6	
	comp=Z,13μm,20.7s,baz=238,slow=35 comp=Z,36nm,1.0s							
PP1B	**Ponte de Pedra**	**43.29**	**355**	*eP*		**P**	**00 34 32.3**	**+0.9**
AP01	**Chacalluta**	**44.62**	**333**	IAMs_20	IAMs_20		00 53 34.1	
	comp=Z,4μm,20.0s							
GUA01	**Guaratinga, BA**	**44.94**	**15**	*eP*		**P**	**00 34 44.7**	**+0.1**
SALV	**Santo Antonio**	**45.02**	**354**	*eP*		**P**	**00 34 47.1**	**+1.8**
ARAG	**Araguaiana, MT**	**45.09**	**359**	*eP*		**P**	**00 34 47.3**	**+1.5**
BDFB	**Brasilia**	**45.20**	**4**	P		**P

comp=Z,3µm,18.8s,baz=212,slow=32
comp=Z,15nm,0.6s
BOSA Boshof 58.81 93 P **P 00 36 27.6 -0.6**
BOSA IAmb IAmb 00 36 30.0
comp=Z,44nm,0.9s
H10N3 ASCENSION HYDR 59.46 43 T T 01 41 33.2
baz=199,slow=75,SNR=64
H10N1 ASCENSION HYDR 59.46 43 T T 01 41 30.2
baz=199,slow=75,SNR=50
H10N2 ASCENSION HYDR 59.48 43 T T 01 41 31.9
baz=199,slow=75,SNR=89
WIN Windhoek 59.89 82 **P 00 36 35.0 -0.8**
WIN IAmb IAmb 00 36 38.3
comp=Z,47nm,1.1s
WIN IAMs_20 IAMs_20 00 57 43.3
comp=Z,2µm,20.0s
WIN Windhoek 59.89 82 P **P 00 36 35.0 -0.8**
WIN pmax pmax
comp=Z,47nm,1.1s
PHPEN Phepeng 60.25 89 P **P 00 36 37.5 -0.7**
PHPEN IAmb IAmb 00 36 40.1
comp=Z,54nm,1.1s
PHPEN Phepeng 60.25 89 *i* P **P 00 36 37.6 -0.5**
PHPEN Phepeng 60.25 89 *i* P **P 00 36 38.0 -0.2**
MCRA Macar, Loja 60.46 326 P **P 00 36 39.6 +0.1**
comp=Z,22nm,1.2s
MAKGR Makgori 60.92 91 P **P 00 36 41.5 -1.1**
MAKGR Makgori 60.92 91 *i* P **P 00 36 41.6 -1.1**
MAKGR Makgori 60.92 91 *i* P **P 00 36 41.7 -1.0**
KOOLE Kule 61.04 85 *i* P **P 00 36 42.8 -0.7**
SKOMA Sekoma 61.58 90 *i* P **P 00 36 47.3 +0.1**
SKOMA Sekoma 61.58 90 *i* P **P 00 36 46.4 -0.8**
SGC2 Sao Gabriel da 61.78 342 P **P 00 36 47.1 -1.3**
comp=Z,1µmcomp=Z,74nm,1.3s
LBTB Lobatse 61.98 91 LR LR 00 58 56.2
comp=Z,3µm,20.1s,baz=211,slow=31
LBTB Lobatse 61.98 91 P **P 00 36 49.0 -0.8**
LBTB Lobatse 61.98 91 P **P 00 36 49.0 -0.8**
LBTB pmax pmax
comp=Z,381nm,1.9s
COHC Cochancay 62.10 328 P **P 00 36 51.6 +1.1**
comp=Z,960nmcomp=Z,41nm,1.0s
KGCAE Kacgae 62.14 87 *i* P **P 00 36 50.0 -0.9**
KGCAE Kacgae 62.14 87 *i* P **P 00 36 50.2 -0.8**
GRTLG Ghanzi 62.92 85 P **P 00 36 55.4 -0.7**
GRTLG Ghanzi 62.92 85 *i* P **P 00 36 55.2 -0.9**
GRTLG Ghanzi 62.92 85 *i* P **P 00 36 55.6 -0.5**
TSUM Tsumeb 62.99 81 LR LR 00 59 46.6
comp=Z,1µm,19.5s,baz=161,slow=32
TSUM Tsumeb 62.99 81 P **P 00 36 55.9 -0.8**
TSUM IAmb IAmb 00 37 04.1
comp=Z,28nm,1.1s
TSUM Tsumeb 62.99 81 IAMs_20 IAMs_20 00 59 24.7
comp=Z,1µm,20.0s
POGA Pongola 63.01 98 **P 00 36 55.8 -0.7**
LPHEP Lephephe 63.50 91 *i* P **P 00 37 00.1 +0.2**
LPHEP Lephephe 63.50 91 *i* P **P 00 36 60.0 0.0**
BOAV Boa Vista 63.51 349 P **P 00 36 59.5 -0.4**
BOAV Boa Vista 63.51 349 *eP* **P 00 36 58.8 -1.1**
BOAV Boa Vista 63.51 349 P **P 00 37 00.1 +0.2**
comp=Z,2µmcomp=Z,189nm,0.8s
PTLC Puerto Leguiza 63.56 333 P **P 00 36 59.0 -1.3**
comp=Z,2µmcomp=Z,93nm,1.5s
QNGWA Qangwa 64.45 84 P **P 00 37 05.9 -0.4**
QNGWA Qangwa 64.45 84 *i* P **P 00 37 05.9 -0.4**
QNGWA Qangwa 64.45 84 *i* P **P 00 37 05.6 -0.7**
OTAV Otavalo 64.49 329 P **P 00 37 07.0 +0.1**
OTAV Otavalo 64.49 329 IAMs_20 IAMs_20 01 07 38.0
comp=Z,1µm,22.0s
OTAV Otavalo 64.49 329 P **P 00 37 07.0 +0.1**
OTAV pmax pmax
comp=Z,116nm,1.2s
OTAV MLR MLR
comp=Z,1µm,22.0s
OTAV Otavalo 64.49 329 *eP* **P 00 37 06.2 -0.7**
OTAV Otavalo 64.49 329 P **P 00 37 08.4 +1.5**
comp=Z,1µmcomp=Z,86nm,1.5s
MREMI Moremi 64.94 92 *i* P **P 00 37 08.7 -0.8**
MREMI Moremi 64.94 92 *i* P **P 00 37 08.4 -1.0**
MACC Macarena, Meta 65.27 335 P **P 00 37 11.3 -0.2**
comp=Z,720nmcomp=Z,45nm,0.8s
XAUDM Khaudum 65.38 84 *i* P **P 00 37 12.8 +0.4**
GARC Garzon, Huila 65.67 333 P **P 00 37 15.0 +0.7**
comp=Z,1µmcomp=Z,41nm,1.7s
BROLN Tlhalogang 66.13 91 *i* P **P 00 37 16.1 -1.0**
BROLN Tlhalogang 66.13 91 *i* P **P 00 37 16.1 -1.0**
POPC Popayan, Colom 66.28 332 P **P 00 37 19.8 +1.6**
comp=Z,715nmcomp=Z,26nm,1.6s
SLIND Selinda 66.36 86 *i* P **P 00 37 17.1 -1.6**
SLIND Selinda 66.36 86 *i* P **P 00 37 19.0 +0.3**
PRAC Prado 67.02 334 P **P 00 37 24.2 +1.5**
comp=Z,2µmcomp=Z,72nm,1.8s
RKT Rikitea 67.19 263 *eS* **S 00 46 16.0 -2.2**
RKT *e*SS **SS 00 50 34.3 -2.6**
comp=Z,5µm,29.2s
RKT *e*LQ LQ 00 54 38.0
comp=Z,1µm,28.5s
RKT *e*LR LR 00 57 33.7
comp=Z,1µm,24.8s
ORTC Ortega, Tolima 67.28 334 P **P 00 37 25.3 +0.9**
comp=Z,12µm,29.0s
KSANE Kasane 67.87 87 *i* P **P 00 37 27.8 -0.5**
KSANE Kasane 67.87 87 *i* P **P 00 37 27.8 -0.5**
ROSC El Rosal 67.99 335 P **P 00 37 31.2 +2.0**
comp=Z,1µmcomp=Z,75nm,1.1s
comp=Z,27nm,0.5s,baz=123,slow=1.6,SNR=13
ROSC LR LR 01 07 46.9
comp=Z,2µm,19.2s,baz=203,slow=36
comp=Z,27nm,0.5s
ROSC El Rosal 67.99 335 P **P 00 37 28.9 -0.4**
ROSC IAmb IAmb 00 37 33.1
comp=Z,35nm,0.8s
GUY2C Guyana, Caldas 68.58 334 P **P 00 37 33.1 0.0**
comp=Z,2µmcomp=Z,1µmcomp=Z,117nm,0.7s
RUSC La Rusia 68.76 336 **P 00 37 32.8 -1.4**
RUSC IAmb IAmb 00 37 34.9
comp=Z,42nm,0.8s
CBOC Ciudad Bolivar 69.35 333 P **P 00 37 37.9 +0.5**
comp=Z,1µmcomp=Z,58nm,1.0s
RPZ Rata Peaks 70.31 211 P **P 00 37 44.2 +1.2**
comp=Z,18nm,1.0s,baz=172,slow=9.2,SNR=3.9
comp=Z,18nm,1.0s
DBBC Dabeiba 70.51 333 P **P 00 37 44.7 +0.2**
comp=Z,28nm,1.3s
LTZ Lake Taylor 70.87 212 P **P 00 37 46.2 -0.3**
URREC San Jos de Ur 71.07 334 P **P 00 37 47.7 -0.1**
comp=Z,737nmcomp=Z,29nm,1.1s
INZ Inchbonnie 71.14 212 P **P 00 37 48.4 +0.4**
INZ IAmb IAmb 00 37 57.0
comp=Z,30nm,0.8s
SDV Santo Domingo 71.23 339 LR LR 01 10 04.9
comp=Z,1µm,20.1s,baz=172,slow=37
SDV Santo Domingo 71.23 339 **P 00 37 48.8 -0.3**
SDV IAmb IAmb 00 37 51.1
comp=Z,23nm,0.7s
SDV IAMs_20 IAMs_20 01 09 32.8
comp=Z,1µm,20.0s
SDV Santo Domingo 71.23 339 *eP* **P 00 37 48.3 -0.7**
SDV Santo Domingo 71.23 339 P **P 00 37 48.7 -0.3**
comp=Z,810nmcomp=Z,42nm,0.8s
THZ Tophouse 71.66 213 P **P 00 37 51.6 +0.4**
THZ IAmb IAmb 00 37 54.0
comp=Z,82nm,1.1s
THZ Tophouse 71.66 213 P **P 00 37 52.0 +0.8**
BFZ Birch Farm 71.73 216 P **P 00 37 52.3 +0.7**
MRZ Mangatainoka R 71.94 216 **P 00 37 52.2 -0.7**
MRZ IAmb IAmb 00 38 01.3
comp=Z,30nm,0.9s
MRZ Mangatainoka R 71.94 216 P **P 00 37 52.1 -0.7**
DSZ Denniston Nort 71.97 212 P **P 00 37 52.3 -0.8**
MRNZ Matariki Terra 72.04 213 P **P 00 37 53.1 -0.3**
FOMA Nahampoana Res 72.26 109 P **P 00 37 54.6 -0.4**
FOMA IAmb IAmb 00 37 58.3
comp=Z,73nm,1.2s
QRZ Quartz Range 72.63 213 P **P 00 37 55.4 -1.6**
ARGC Ariguani, Magd 72.85 336 P **P 00 37 59.9 +1.4**
comp=Z,3µmcomp=Z,292nm,0.7s
BKZ Black Stump Fm 73.06 217 P **P 00 37 59.2 -0.4**
BKZ IAmb IAmb 00 38 04.0
comp=Z,124nm,1.9s
SJCC San Jacinto, C 73.08 335 P **P 00 38 00.9 +1.0**
GRGR Grenville 73.24 349 IAMs_20 IAMs_20 01 12 44.0
comp=Z,1µm,21.0s
NGZ Ngauruhoe 73.31 216 P **P 00 38 01.6 +0.3**
RTZ Ruatahuna 73.43 217 P **P 00 38 01.7 -0.2**
RTZ IAMs_20 IAMs_20 01 11 09.7
comp=Z,967nm,18.0s
PIRO Carate, Puerto 73.59 326 P **P 00 38 02.8 0.0**
URZ Urewera 73.72 218 P **P 00 38 04.3 +0.9**
comp=Z,17nm,1.0s,baz=102,slow=6.6,SNR=5.6
URZ LR LR 01 07 11.6
comp=Z,451nm,19.2s,baz=158,slow=33
comp=Z,17nm,1.0s
BRU2 Volcan 73.79 327 P **P 00 38 04.0 -0.2**
BRU2 IAmb IAmb 00 38 23.4
comp=Z,38nm,0.9s
TBI Tubuai 73.90 251 *eP* **P 00 38 01.4 -3.3**
comp=Z,448nm,42.2s
TBI *e*S **SKiKP 00 47 34.7 +1.6**
comp=Z,1µm,29.8s
TBI *e*LQ LQ 00 57 29.1
comp=Z,1µm,25.0s
TBI *e*LR LR 01 00 40.2
comp=Z,2µm,28.2s
TBI *e*LR LR 01 00 43.3
comp=Z,7µm,27.0s
SMRC Santa Marta, M 74.12 336 P **P 00 38 05.5 -0.4**
SMRC IAmb IAmb 00 39 08.5
comp=Z,53nm,1.2s
HIZ Hauiti 74.14 216 P **P 00 38 06.4 +0.4**
TOZ Tahuroa Road 74.68 217 **P 00 38 09.3 +0.2**
TOZ IAmb IAmb 00 38 17.8
comp=Z,70nm,1.0s
TOZ Tahuroa Road 74.68 217 P **P 00 38 10.6 +1.6**
VOI Vohitsoka 74.81 108 P **P 00 38 09.7 -0.5**
VOI IAmb IAmb 00 38 14.0
comp=Z,110nm,1.5s
VOI IAMs_20 IAMs_20 01 03 51.5
comp=Z,2µm,22.0s
TAU Tasmania Unive 75.52 194 **P 00 38 13.4 -0.4**
TAU Tasmania Unive 75.52 194 P **P 00 38 13.4 -0.4**
TAU pmax pmax
comp=Z,115nm,1.2s
KUZ Kuautunu 75.53 217 P **P 00 38 15.1 +1.1**
BIM Bigot 75.55 350 IAMs_20 IAMs_20 01 13 32.0
comp=Z,1µm,22.0s
JTS Las Juntas de 75.83 325 LR LR 01 06 02.2
comp=Z,580nm,21.9s,baz=146,slow=31
JTS Las Juntas de 75.83 325 **P 00 38 15.6 -0.2**
JTS IAmb IAmb 00 38 26.2
comp=Z,29nm,0.9s
JTS Las Juntas de 75.83 325 P **P 00 38 15.6 -0.2**
JTS pmax pmax
comp=Z,29nm,1.0s
JUD3 Juan Diaz 3 75.88 325 **P 00 38 15.8 -0.4**
MOO Moorlands 75.99 194 P **P 00 38 18.0 +1.4**
comp=Z,108nm,1.1s
DBIC Dimbokro 76.33 47 P **P 00 38 19.4 +0.7**
comp=Z,9.3nm,0.7s,baz=213,slow=4.1,SNR=8.3
DBIC LR LR 01 05 22.0
comp=Z,346nm,21.3s,baz=212,slow=31
comp=Z,9.3nm,0.7s
DBIC Dimbokro 76.33 47 P **P 00 38 18.4 -0.3**
MAGL Barre de l'Ile 76.99 350 IAMs_20 IAMs_20 01 12 59.1
comp=Z,965nm,22.0s
CBE Ff, Capester 77.14 350 P **P 00 38 23.3 +0.2**
CBE IAMs_20 IAMs_20 01 14 59.9
comp=Z,951nm,21.0s
GDHS Morne Mazeau, 77.35 349 **P 00 38 24.0 -0.3**
GDHS IAMs_20 IAMs_20 01 15 24.1
comp=Z,1µm,21.0s
ABPO Ambohimpanom 77.51 106 P **P 00 38 24.8 -0.8**
ABPO IAmb IAmb 00 38 29.1
comp=Z,65nm,1.8s
ABPO Ambohimpanom 77.51 106 P **P 00 38 24.8 -0.8**
ABPO pmax pmax
comp=Z,65nm,1.8s
OUZ Omahuta 77.58 216 P **P 00 38 25.1 -0.4**
OPO Ambohidratompo 77.87 106 LR LR 01 06 10.1
comp=Z,1µm,21.9s,baz=355,slow=31
BOAB BOACO BROADBAN 78.09 325 **P 00 38 27.2 -1.3**
SEUS St. Eustatius 78.67 348 IAMs_20 IAMs_20 01 13 52.8
comp=Z,1µm,22.0s
ANWB Willy Bob 78.73 349 IAMs_20 IAMs_20 01 13 03.4
comp=Z,1µm,22.0s
SABA Saba 78.83 348 IAMs_20 IAMs_20 01 13 41.8
comp=Z,1µm,21.0s
PPT2 Papeete2 78.92 254 *eP* P 00 38 26.1 -7.2
comp=Z,20nm,21.2s
PPT2 Papeete2 78.92 254 *eS* **S 00 48 27.3 -4.4**
comp=Z,145nm,23.2s
PPT2 Papeete2 78.92 254 *e*LQ LQ 00 59 45.2
comp=Z,3µm,47.5s
PPT2 *e*LR LR 01 02 56.0
comp=Z,1µm,28.5s
PPT2 *e*LR LR 01 02 56.9
comp=Z,2µm,27.8s
PPT Papeete 78.94 254 LR LR 01 05 29.0
comp=Z,474nm,18.3s,baz=167,slow=30
SIUN Universidad Ur 79.05 327 P **P 00 38 32.9 -0.9**
SIUN IAmb IAmb 00 38 40.9
comp=Z,76nm,1.7s
OBIP Obispado Ponce 79.63 345 P **P 00 38 36.0 -0.9**
SJG San Juan 79.64 345 LR LR 01 15 52.2
comp=Z,388nm,18.5s,baz=161,slow=37
RAR Rarotonga 80.41 244 LR LR 01 09 19.2
comp=Z,211nm,18.6s,baz=179,slow=32
TOO Toolangi 81.00 193 **P 00 38 43.5 -0.8**
TOO Toolangi 81.00 193 P **P 00 38 43.5 -0.8**
TOO pmax pmax
comp=Z,11nm,0.9s
MTO3 Montecristo 81.01 322 **P 00 38 43.9 -0.7**
MTDJ Mount Denham 81.66 335 IAMs_20 IAMs_20 01 17 05.0
comp=Z,812nm,19.0s
APG El Apazote 81.91 322 LR LR 01 09 50.3
comp=Z,71nm,19.0s,baz=256,slow=32
TAOE Nuku Hiva Isla 81.93 266 *eS* **S 00 48 59.0 -4.4**
comp=Z,241nm,23.2s
TAOE Nuku Hiva Isla 81.93 266 *e*LR LR 01 04 29.3
comp=Z,2µm,27.3s
CAN Canberra 82.78 196 P **P 00 38 53.4 -0.3**
CAN IAmb IAmb 00 39 02.2
comp=Z,42nm,1.2s
CAN Canberra 82.78 196 P **P 00 38 53.4 -0.3**
CAN pmax pmax
comp=Z,42nm,1.2s
TORD Torodi Ar. Bea 84.72 51 P **P 00 39 04.7 +1.0**
comp=Z,3.8nm,0.5s,baz=237,slow=1.7,SNR=7.5
comp=Z,3.8nm,0.5s
TORD Torodi Ar. Bea 84.72 51 P **P 00 39 03.5 -0.2**
CMIG Matias Romero 85.26 318 LR LR 01 10 28.0
comp=Z,734nm,21.5s,baz=146,slow=31
MBAR Mbarara 85.44 83 LR LR 01 14 40.5
comp=Z,996nm,18.8s,baz=194,slow=34
MBAR Mbarara 85.44 83 P **P 00 39 07.6 0.0**
MBAR Mbarara 85.44 83 P **P 00 39 07.6 0.0**
MBAR pmax pmax
comp=Z,354nm,0.2s
NWAO Narrogin (SRO) 86.06 170 LR LR 01 17 17.2
comp=Z,1µm,19.1s,baz=182,slow=35
NWAO Narrogin (SRO) 86.06 170 P **P 00 39 09.7 -0.6**
NWAO Narrogin (SRO) 86.06 170 P **P 00 39 09.7 -0.6**
NWAO pmax pmax
comp=Z,62nm,1.0s
BBOO Buckleboo 86.49 186 **P 00 39 10.4 -2.0**
BBOO IAmb IAmb 00 39 19.1
comp=Z,26nm,1.0s
TLIG Tlapa 86.94 315 **P 00 39 14.3 -0.4**
STKA Stephens Creek 87.03 191 P **P 00 39 15.3 +0.2**
comp=Z,4.3nm,0.9s,baz=148,slow=5.7,SNR=6.4
STKA LR LR 01 16 49.2
comp=Z,1µm,19.7s,baz=168,slow=35
comp=Z,4.3nm,0.9s
STKA Stephens Creek 87.03 191 P **P 00 39 13.2 -1.9**
ARMA Armidale 87.19 199 **P 00 39 15.3 -0.7**
ARMA IAmb IAmb 00 39 18.3
comp=Z,43nm,1.5s
KIBK Kibwezi 87.50 90 P **P 00 39 16.8 -0.8**
KIBK IAmb IAmb 00 39 22.8
comp=Z,30nm,1.3s
KIBK IAMs_20 IAMs_20 01 14 24.2
comp=Z,999nm,21.0s
KMBO Kilima Mbogo 88.16 89 P **P 00 39 22.6 +1.7**
comp=Z,4.2nm,0.9s,baz=214,slow=7.5,SNR=14
KMBO LR LR 01 14 59.6
comp=Z,1µm,19.0s,baz=224,slow=33
comp=Z,4.2nm,0.9s
KMBO Kilima Mbogo 88.16 89 *d* P **P 00 39 20.8 -0.2**
FORT Forrest 88.69 179 **P 00 39 21.6 -1.4**
FORT IAmb IAmb 00 39 25.0
comp=Z,26nm,0.9s
UNM Universidad Na 88.78 315 IAMs_20 IAMs_20 01 12 02.7
comp=Z,765nm,19.0s
MORW Morawa 89.78 169 P **P 00 39 27.1 -1.1**
060A Indiantown 90.79 334 IAMs_20 IAMs_20 01 23 05.9
comp=Z,756nm,20.0s
LODK Lodwar 91.18 85 P **P 00 39 33.2 -1.7**
LODK IAmb IAmb 00 39 53.4
comp=Z,42nm,2.0s
INKA Innaminka 91.21 190 P **P 00 39 33.7 -1.1**
INKA IAmb IAmb 00 39 42.9
comp=Z,18nm,1.1s
ONTNC Quen Toro 91.77 214 P **P 00 39 37.1 -0.4**
DZM Mont Dzumac 92.00 214 P **P 00 39 39.3 +0.6**
comp=Z,22nm,1.1s,baz=118,slow=13,SNR=5.0
comp=Z,22nm,1.1s
DZM Mont Dzumac 92.00 214 *eP* **P 00 39 38.4 -0.3**
comp=Z,61nm,1.1s
DZM Mont Dzumac 92.00 214 *e*LR LR 01 09 04.7
comp=Z,583nm,21.2s
DZM Mont Dzumac 92.00 214 P **P 00 39 37.1 -1.5**
DZM IAmb IAmb 00 39 47.4
comp=Z,33nm,1.1s
EIDS Eidsvold 92.23 200 **P 00 39 38.5 -1.1**
EIDS IAmb IAmb 00 39 47.4
comp=Z,26nm,1.1s
456A Hilliard 94.71 334 IAMs_20 IAMs_20 01 20 04.8
comp=Z,737nm,22.0s
ASAR Alice Springs 95.69 184 P **P 00 39 54.3 -1.3**
comp=Z,16nm,1.1s,baz=170,slow=4.1,SNR=51
ASAR PP **PP 00 43 44.7 -1.3**
comp=Z,4.0nm,1.2s,baz=171,slow=6.6,SNR=5.0
ASAR PKKP **PKKPdf 00 56 41.4 -0.1**
comp=Z,0.7nm,0.7s,baz=0.8,slow=2.1,SNR=6.7
ASAR LR LR 01 22 17.4
comp=Z,2µm,21.9s,baz=178,slow=35
comp=Z,16nm,1.1s
ASAR Alice Springs 95.69 184 **P 00 39 53.9 -1.7**
ASAR Alice Springs 95.69 184 P **P 00 39 53.9 -1.7**
AS31 Alice Springs 95.69 185 **P 00 39 54.1 -1.5**
Y60A Bolivia 97.12 337 IAMs_20 IAMs_20 01 22 02.3
comp=Z,780nm,22.0s
LPIG La Paz 97.23 308 LR LR 01 16 24.0
comp=Z,575nm,18.7s,baz=156,slow=31
PSA00 Pilbara Seismi 97.53 171 **P 00 40 02.0 -1.9**
PSA00 IAmb IAmb 00 40 05.2
comp=Z,23nm,1.2s
Y57A Sumter 97.55 336 IAMs_20 IAMs_20 01 25 19.8
comp=Z,731nm,20.0s
X58A Rowland 97.86 337 IAMs_20 IAMs_20 01 24 54.1
comp=Z,899nm,21.0s
CTAO Charters Tower 98.14 196 P **P 00 40 05.8 -0.9**
CTAO IAmb IAmb 00 40 10.5
comp=Z,21nm,1.4s
CTAO Charters Tower 98.14 196 IAMs_20 IAMs_20 01 27 02.1
comp=Z,720nm,19.0s
CTAO Charters Tower 98.14 196 P **P 00 40 05.8 -0.9**
CTAO pmax pmax
CTAO comp=Z,21nm,1.4s
CTAO MLR MLR
comp=Z,700nm,19.0s
Y52A Lilburn 98.19 333 IAMs_20 IAMs_20 01 27 26.6
comp=Z,661nm,21.0s
W59A Clinton 98.29 338 IAMs_20 IAMs_20 01 22 11.3
comp=Z,942nm,22.0s
H08S1 Diego Carcia H 98.76 123 T T 02 31 10.7
baz=206,slow=75,SNR=66
H08S2 Diego Garcia H 98.76 123 T T 02 31 05.0
baz=206,slow=75,SNR=28
H08S3 Diego Garcia H 98.78 123 T T 02 31 08.6
baz=206,slow=75,SNR=66
KMSC Kings Mountain 98.83 335 IAMs_20 IAMs_20 01 26 18.7
comp=Z,791nm,21.0s
W52A Murphy 99.34 333 IAMs_20 IAMs_20 01 26 37.1
comp=Z,644nm,22.0s
WRA Warramunga Arr 99.37 185 P **Pdif 00 40 10.9 -1.3**
comp=Z,5.2nm,1.0s,baz=180,slow=4.1,SNR=29
WRA PP **PP 00 44 15.4 +1.0**
comp=Z,2.7nm,1.0s,baz=179,slow=7.9,SNR=5.5
WRA PKKP **PKKPbc 00 56 33.8 +1.2**
comp=Z,0.6nm,0.8s,baz=350,slow=3.0,SNR=4.8
WRA LR LR 01 24 22.1
comp=Z,2µm,21.9s,baz=184,slow=35
comp=Z,5.2nm,1.0s
WRA Warramunga Arr 99.37 185 **Pdif 00 40 10.8 -1.4**
WRAB Tennant Creek 99.38 185 P **Pdif 00 40 10.9 -1.3**
WRAB IAmb IAmb 00 40 13.0
comp=Z,15nm,1.3s
WRAB Tennant Creek 99.38 185 P **Pdif 00 40 10.9 -1.3**
WRAB pmax pmax
comp=Z,15nm,1.3s
WRAB MLR MLR
comp=Z,2µm,22.0s
V55A Taylorsville 99.49 335 IAMs_20 IAMs_20 01 26 05.2
comp=Z,602nm,21.0s
WB0 Warramunga Arr 99.55 185 **Pdif 00 40 10.3 -2.6**
WB0 IAmb IAmb 00 40 13.6
comp=Z,15nm,1.1s
TXAR Lajitas Array 99.55 315 P **Pdif 00 40 12.9 +0.3**
comp=Z,0.3nm,0.6s,baz=165,slow=5.3,SNR=2.3
TXAR LR LR 01 18 17.7
comp=Z,911nm,21.2s,baz=154,slow=31
comp=Z,0.3nm,0.6s
V53A Saluda 99.65 334 IAMs_20 IAMs_20 01 22 23.3
comp=Z,598nm,19.0s
W50A Signal Mountai 99.75 332 IAMs_20 IAMs_20 01 28 17.1
comp=Z,556nm,20.0s
TKL Tuckaleechee C 99.84 333 LR LR 01 27 36.2
comp=Z,405nm,21.3s,baz=153,slow=37
U54A Nelsons Funny 100.26 335 IAMs_20 IAMs_20 01 27 20.6
comp=Z,634nm,19.0s
V48A Smith Brothers 100.62 331 IAMs_20 IAMs_20 01 28 35.1
comp=Z,566nm,20.0s
BLA Blacksburg 100.65 336 IAMs_20 IAMs_20 01 26 49.8
comp=Z,600nm,20.0s
S57A Dark Hollow, R 100.90 338 IAMs_20 IAMs_20 01 24 54.5
comp=Z,621nm,21.0s
R58B Mineral 100.90 339 IAMs_20 IAMs_20 01 23 37.5
comp=Z,667nm,22.0s
T50A Nancy 101.39 333 IAMs_20 IAMs_20 01 27 40.4
comp=Z,651nm,20.0s
R55A Marlinton 101.63 337 IAMs_20 IAMs_20 01 26 43.7
comp=Z,641nm,21.0s
T47A Sharon Grove 101.88 331 IAMs_20 IAMs_20 01 30 09.4
comp=Z,614nm,20.0s
Q56A Snyder Ridge, 102.19 338 IAMs_20 IAMs_20 01 34 27.5
comp=Z,625nm,22.0s
P57A Homestead Farm 102.41 339 IAMs_20 IAMs_20 01 18 05.3
comp=Z,597nm,22.0s
R50A Paris 102.49 334 IAMs_20 IAMs_20 01 25 42.4
comp=Z,645nm,22.0s
R49A Shelbyville 102.68 333 IAMs_20 IAMs_20 01 28 37.6
comp=Z,548nm,20.0s
Q52A Bidwell 102.71 335 IAMs_20 IAMs_20 01 27 19.3
comp=Z,556nm,21.0s
WCI Wyandotte Cave 102.87 332 IAMs_20 IAMs_20 01 26 49.7
comp=Z,910nm,21.0s
MCWV Mont Chateau 102.91 338 IAMs_20 IAMs_20 01 23 06.6
comp=Z,622nm,20.0s
P53A Whipple 103.04 336 IAMs_20 IAMs_20 01 26 25.1
comp=Z,629nm,21.0s
M65A Busby, Falmout 103.32 345 P **Pdif 00 40 31.3 +2.4**
baz=170
OK052 Battle Ridge R 103.51 323 IAMs_20 IAMs_20 01 33 12.6
comp=Z,638nm,20.0s
O52A Adamsville 103.73 336 IAMs_20 IAMs_20 01 27 08.5
comp=Z,764nm,22.0s
ACSO Alum Creek Sta 104.08 335 IAMs_20 IAMs_20 01 25 11.5
comp=Z,726nm,22.0s
HRV Adam Dziewonsk 104.37 344 IAMs_20 IAMs_20 01 25 37.2
comp=Z,819nm,21.0s
N51A Ashland 104.61 336 IAMs_20 IAMs_20 01 27 23.8
comp=Z,908nm,22.0s
TUC Tucson 104.80 311 IAMs_20 IAMs_20 01 20 46.6
comp=Z,662nm,20.0s
N49A Columbus Grove 104.99 335 IAMs_20 IAMs_20 01 27 57.7
comp=Z,754nm,21.0s
M52A Chesterland 105.02 337 IAMs_20 IAMs_20 01 28 27.4
comp=Z,812nm,21.0s
M50A Fremont 105.22 336 IAMs_20 IAMs_20 01 27 20.7
comp=Z,696nm,21.0s
ERPA Erie 105.32 338 IAMs_20 IAMs_20 01 27 16.3
comp=Z,645nm,20.0s
ANMO Albuquerque 105.62 315 IAMs_20 IAMs_20 01 21 46.6
comp=Z,669nm,19.0s
HNH Hanover 105.64 344 IAMs_20 IAMs_20 01 25 40.9
comp=Z,691nm,20.0s
I63A Otisfield 105.77 345 IAMs_20 IAMs_20 01 24 14.1
comp=Z,615nm,19.0s

J55A	**Hilton**	**106.05**	**340**		IAMs_20	IAMs_20	01 27 57.7		
	comp=Z,762nm,22.0s								
EMMW	**East Machias**	**106.06**	**348**		IAMs_20	IAMs_20	01 28 55.9		
	comp=Z,807nm,20.0s								
CART	**Cartagena**	**106.24**	**39**		IAMs_20	IAMs_20	01 28 45.5		
	comp=Z,633nm,20.0s								
CBKS	**Cedar Bluff**	**106.99**	**322**		IAMs_20	IAMs_20	01 24 00.8		
	comp=Z,576nm,21.0s								
L40A	**Anamosa**	**107.69**	**330**		IAMs_20	IAMs_20	01 27 58.1		
	comp=Z,822nm,22.0s								
SDCO	**Great Sand Dun**	**107.84**	**317**		IAMs_20	IAMs_20	01 26 00.2		
	comp=Z,655nm,20.0s								
KSCO	**Kaye Shedlock'**	**108.06**	**320**		IAMs_20	IAMs_20	01 25 44.1		
	comp=Z,707nm,22.0s								
PMG	**Port Moresby**	**108.51**	**199**		IAMs_20	IAMs_20	01 29 09.8		
	comp=Z,767nm,21.0s								
BGNE	**Belgrade**	**108.92**	**324**		IAMs_20	IAMs_20	01 26 15.8		
	comp=Z,635nm,22.0s								
OGNE	**Ogallala**	**109.64**	**321**		IAMs_20	IAMs_20	01 25 59.0		
	comp=Z,730nm,21.0s								
ISCO	**Idaho Springs**	**109.74**	**318**		IAMs_20	IAMs_20	01 25 10.3		
	comp=Z,769nm,20.0s								
WDD	**Wied Dalam**	**110.08**	**52**		IAMs_20	IAMs_20	01 40 36.0		
	comp=Z,522nm,20.0s								
K30B	**Basset**	**110.51**	**324**		IAMs_20	IAMs_20	01 26 53.8		
	comp=Z,784nm,21.0s								
MMRI	**Maumere**	**110.52**	**173**		IAMs_20	IAMs_20	01 36 21.5		
	comp=Z,622nm,18.0s								
SPMN	**Marine on St.**	**111.05**	**330**		IAMs_20	IAMs_20	01 31 05.1		
	comp=Z,649nm,21.0s								
SUSD	**Miller**	**111.95**	**325**		IAMs_20	IAMs_20	01 28 52.9		
	comp=Z,586nm,21.0s								
DUG	**Dugway, Tooele**	**112.56**	**313**		IAMs_20	IAMs_20	01 29 03.0		
	comp=Z,453nm,18.0s								
K22A	**Casper**	**112.60**	**319**		IAMs_20	IAMs_20	01 25 49.3		
	comp=Z,752nm,21.0s								
CEL	**Celeste**	**112.73**	**52**		IAMs_20	IAMs_20	01 40 49.1		
	comp=Z,482nm,20.0s								
NVAR	**Mina Array Bea**	**113.05**	**308**		PKKPab	PKKPab	00 56 02.6	+4.4	
	comp=Z,1.1nm,0.9s,baz=259,slow=2.3,SNR=3.9								
PDAR	**Pinedale Array**	**113.71**	**317**		PKiKP	**PKiKP**	**00 45 07.3**	**-0.3**	
	comp=Z,0.3nm,0.6s,baz=170,slow=2.2,SNR=4.1								
E28A	**Huff**	**114.39**	**325**		IAMs_20	IAMs_20	01 30 16.6		
	comp=Z,492nm,20.0s								
AGMN	**Agassiz Nation**	**114.68**	**329**		IAMs_20	IAMs_20	01 32 44.1		
	comp=Z,630nm,21.0s								
FXWY	**Fox Creek**	**114.97**	**316**		IAMs_20	IAMs_20	01 30 43.0		
	comp=Z,652nm,20.0s								
GHAJ	**Ghor Haditha**	**115.19**	**71**		IAMs_20	IAMs_20	01 32 59.6		
	comp=Z,460nm,20.0s								
MDND	**Maddock**	**115.25**	**326**		IAMs_20	IAMs_20	01 29 52.6		
	comp=Z,536nm,18.0s								
BNI	**Bardonecchia**	**115.44**	**42**		IAMs_20	IAMs_20	01 18 33.9		
	comp=Z,518nm,18.0s								
BKNI	**Bangkinang**	**115.92**	**149**		IAMs_20	IAMs_20	01 25 48.1		
	comp=Z,542nm,21.0s								
DLMT	**Dillon**	**117.03**	**316**		IAMs_20	IAMs_20	01 28 52.3		
	comp=Z,618nm,20.0s								
PLID	**Pearl Lake**	**117.97**	**313**			**PKPdf**	**00 45 15.2**	**-0.6**	
ABTA	**Abfaltersbach**	**118.87**	**45**		*e*pPKiKP	**PKiKP**	**00 45 23.8**	**+6.6**	
	comp=Z,1.4nm,0.7s								
MOTA	**Moosalm**	**118.91**	**43**		*e*PKiKP	**PKiKP**	**00 45 19.3**	**+1.8**	
	comp=Z,9.7nm,1.3s								
OBKA	**Obir**	**119.38**	**46**		pPKP	pPKPdf	00 45 22.6	+1.6	
	comp=Z,1.0nm,0.5s								
SOKA	**Soboth**	**119.69**	**46**	*i*	pPKiKP	**PKiKP**	**00 45 24.8**	**+5.9**	
	comp=Z,1.8nm,0.8s								
ARSA	**Arzberg**	**120.36**	**46**	*i*	pPKiKP	**PKiKP**	**00 45 26.6**	**+6.5**	
	comp=Z,1.1nm,0.4s								
CONA	**Conrad Observa**	**121.06**	**46**		*e*pPKiKP	**PKiKP**	**00 45 26.9**	**+5.4**	
	comp=Z,0.8nm,0.4s								
ANTO	**Ankara**	**121.06**	**63**		IAMs_20	IAMs_20	01 42 09.1		
	comp=Z,418nm,20.0s								
GERES	**GERESS Array B**	**121.09**	**44**		PKP	**PKPdf**	**00 45 19.4**	**-2.0**	
	comp=Z,2.7nm,0.9s,baz=64,slow=3.1,SNR=5.1								
GERES	**GERESS Array B**	**121.09**	**44**		*e*PKiKP	**PKiKP**	**00 45 24.1**	**+2.5**	
GERES					pmax	pmax			
	comp=Z,3.0nm,0.9s								
BRTR	**Keskin Array B**	**121.31**	**64**		PKP	**PKPdf**	**00 45 20.5**	**-1.8**	
	comp=Z,0.9nm,0.6s,baz=190,slow=4.8,SNR=6.7								
BRTR	**Keskin Array B**	**121.31**	**64**			**PKPdf**	**00 45 21.0**	**-1.2**	
BRTR	**Keskin Array B**	**121.31**	**64**		*e*PKiKP	**PKPdf**	**00 45 21.8**	**-0.5**	
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
BR131	**Keskin Array S**	**121.31**	**64**			**PKPdf**	**00 45 21.5**	**-0.8**	
BR131	**Keskin Array S**	**121.31**	**64**		PKiKP	**PKPdf**	**00 45 21.5**	**-0.8**	
EKA	**Eskdalemuir Ar**	**121.86**	**30**		PKP	**PKPdf**	**00 45 22.3**	**-0.2**	
	comp=Z,0.8nm,0.6s,baz=178,slow=2.2,SNR=1.9								
MLR	**Muntele Rosu**	**122.81**	**55**			**PKPdf**	**00 45 24.0**	**-0.9**	
MLR	**Muntele Rosu**	**122.81**	**55**		PKiKP	**PKPdf**	**00 45 24.0**	**-0.9**	
CLL	**Collm**	**122.96**	**42**		*e*PKiKP	**PKPdf**	**00 45 24.0**	**-0.8**	
CLL					MLR	MLR			
	comp=Z,300nm,22.0s								
CLL	**Collm**	**122.96**	**42**		*e*PKPdf	**PKPdf**	**00 45 24.0**	**-0.8**	
CLL					AMS	AMS	01 47 00.0		
	comp=Z,300nm,22.0s								
LANS	**Liptovska Anna**	**123.38**	**48**		*e*PKiKP	**PKiKP**	**00 45 27.2**	**+1.2**	
LANS	**Liptovska Anna**	**123.38**	**48**		*e*PKP	**PKiKP**	**00 45 27.2**	**+1.2**	
HYBB	**Hyderabad (bro**	**123.84**	**118**		*e*PKiKP	**PKPdf**	**00 45 27.4**	**-0.2**	
EDM	**Edmonton**	**124.07**	**320**			**PKPdf**	**00 45 26.6**	**-0.4**	
EDM	**Edmonton**	**124.07**	**320**		PKiKP	**PKPdf**	**00 45 26.6**	**-0.4**	
BUR08	**Bucovina Ar. S**	**124.29**	**53**			**PKPdf**	**00 45 26.8**	**-0.8**	
GNI	**Garni**	**126.69**	**72**		IAMs_20	IAMs_20	01 38 58.8		
	comp=Z,544nm,20.0s								
NEUR	**Neytrino**	**128.20**	**68**		PKiKP	**PKPdf**	**00 45 35.5**	**+0.1**	
AKASG	**Malin Array Be**	**128.32**	**53**		PKP	**PKPdf**	**00 45 34.0**	**-1.0**	
	comp=Z,2.3nm,0.7s,baz=242,slow=2.0,SNR=7.2								
AKASG	**Malin Array Be**	**128.32**	**53**			**PKPdf**	**00 45 34.1**	**-0.9**	
AKASG	**Malin Array Be**	**128.32**	**53**		*e*PKiKP	**PKPdf**	**00 45 35.0**	**-0.1**	
AKASG					pmax	pmax			
	comp=Z,2.0nm,0.7s								
AKBB	**Malin Array Si**	**128.32**	**53**	*i*	PKiKP	**PKiKP**	**00 45 35.8**	**+0.1**	
SHA1	**Shidzhatmaz**	**128.56**	**68**	*i*	PKiKP	**PKiKP**	**00 45 38.3**	**+1.6**	
KBZ	**Khabaz**	**128.66**	**68**		PKP	**PKPdf**	**00 45 36.2**	**+0.2**	
	comp=Z,5.2nm,1.0s,baz=194,slow=4.9,SNR=5.7								
KIV	**Kislovodsk**	**128.74**	**68**	*i*	PKiKP	**PKPdf**	**00 45 36.2**	**-0.1**	
KIV					pmax	pmax			
	comp=Z,21nm,1.0s								
KIV					MLR	MLR			
	comp=Z,250nm,23.0s								
AKT	**Akhty**	**129.13**	**73**		*e*PKiKP	**PKiKP**	**00 45 42.7**	**+4.9**	
AKT					MLR	MLR			
	comp=Z,1μm,21.0s								
HRA	**Herat**	**130.53**	**91**			**PKPdf**	**00 45 39.8**	**-0.4**	
HFS	**Hagfors**	**130.55**	**37**		PKP	**PKPdf**	**00 45 37.3**	**-1.7**	
	comp=Z,1.6nm,0.6s,baz=137,slow=7.4,SNR=4.7								
NB2	**NORSAR Subarra**	**130.59**	**35**		PKPdf	**PKiKP**	**00 45 39.8**	**-0.2**	
	comp=Z,80nm,2.5s,baz=202,slow=1.9								
NOA	**NORSAR Array B**	**130.59**	**35**		PKP	**PKPdf**	**00 45 38.2**	**-0.9**	
	comp=Z,1.3nm,1.1s,baz=171,slow=5.0								
NOA					SKPbc	**SKPab**	**00 49 03.0**	**+0.5**	
	comp=Z,1.5nm,0.8s,baz=211,slow=4.1,SNR=4.9								
MNK	**Minsk**	**130.78**	**49**	*i*	PKP	**PKPdf**	**00 45 37.4**	**-2.2**	
	comp=E,7.0nm,0.8s								
MNK				*i*	PKP	**PKPdf**	**00 45 37.4**	**-2.2**	
	comp=N,17nm,0.9s								
MNK				*i*	PKP	**PKPdf**	**00 45 37.4**	**-2.2**	
	comp=Z,17nm,1.0s,baz=219								
MNK				*i*	PP	**PP**	**00 47 55.3**	**-1.2**	
MNK				*i*	PPP	PPP	00 50 44.6		
MNK				*i*	SKS	**SKSdf**	**00 52 48.9**	**-1.6**	
MNK				*i*	PS	**PS**	**00 58 08.5**	**+0.5**	
MNK				*i*	SKKS	**SKKSdf**	**01 02 55.1**	**+4.8**	
MNK				*i*	SS	SS	01 05 14.3	-12	
MNK				*i*	SSS	SSS	01 10 04.3		
MNK				*i*	LRM	MLR	01 43 11.0		
	comp=Z,229nm,18.6s								
MNK	**Minsk**	**130.78**	**49**	*i*	PKIKP	**PKPdf**	**00 45 37.4**	**-2.2**	
MNK				*i*			00 47 55.2		
MNK				*i*	PPP	PPP	00 50 44.6		
MNK				*i*			00 52 48.8		
MNK				*i*	PS	**PS**	**00 58 08.5**	**+0.5**	
MNK					pmax	pmax			
	comp=E,7.0nm,0.8s								
MNK					pmax	pmax			
	comp=Z,17nm,1.0s								
MNK					pmax	pmax			
	comp=N,17nm,0.9s								
MNK					MLR	MLR			
	comp=Z,229nm,19.0s								
U35K	**Hyder**	**131.94**	**312**		P	**PKiKP**	**00 45 43.4**	**+0.7**	
	baz=140								
V35K	**Ketchikan**	**132.07**	**311**		P	**PKiKP**	**00 45 43.9**	**+0.8**	
	baz=140								
YKA	**Yellowknife Ar**	**132.17**	**326**		PKP	**PKPdf**	**00 45 41.0**	**-1.0**	
	comp=Z,3.6nm,0.6s,baz=157,slow=1.5,SNR=19								
YKA					SKPbc	**SKPbc**	**00 49 07.9**	**-0.2**	
	comp=Z,2.3nm,1.0s,baz=160,slow=3.0,SNR=4.9								
YKA	**Yellowknife Ar**	**132.17**	**326**			**PKPdf**	**00 45 41.9**	**-0.1**	
YKA	**Yellowknife Ar**	**132.17**	**326**		PKIKP	**PKPdf**	**00 45 41.9**	**-0.1**	
TOAD	**Toad River Com**	**132.52**	**317**		P	**PKiKP**	**00 45 44.7**	**+0.7**	
	baz=140								
CMAR	**Chiang Mai Arr**	**132.57**	**140**		PKP	**PKPdf**	**00 45 44.5**	**+0.3**	
	comp=Z,4.2nm,0.6s,baz=231,slow=3.6,SNR=18								
CRAG	**Craig**	**132.74**	**310**		P	**PKiKP**	**00 45 45.1**	**+0.6**	
	baz=139								
T35M	**Bob Quinn**	**132.83**	**313**		P	**PKiKP**	**00 45 45.2**	**+0.6**	
	baz=139								
CHTO	**Chiang Mai**	**132.90**	**140**			**PKPdf**	**00 45 45.1**	**+0.3**	
CHTO					IAMs_20	IAMs_20	01 42 48.2		
	comp=Z,541nm,19.0s								
CHTO	**Chiang Mai**	**132.90**	**140**		PKIKP	**PKPdf**	**00 45 45.1**	**+0.3**	
CHTO					MLR	MLR			
	comp=Z,500nm,19.0s								
KOTAN	**Kotaneelee Air**	**133.12**	**319**		P	**PKiKP**	**00 45 46.0**	**+0.9**	
	baz=140								
WRAK	**Wrangell Islan**	**133.17**	**311**		P	**PKiKP**	**00 45 46.2**	**+0.9**	
	baz=138								
U33K	**Whale Pass**	**133.23**	**310**		P	**PKiKP**	**00 45 46.4**	**+1.0**	
	baz=138								
SUMG	**Summit**	**133.44**	**5**			**PKPdf**	**00 45 44.5**	**-0.2**	
SUMG	**Summit**	**133.44**	**5**		PKIKP	**PKPdf**	**00 45 44.5**	**-0.2**	
S34M	**Telegraph Cree**	**133.84**	**313**		P	**PKiKP**	**00 45 47.1**	**+0.5**	
	baz=138								
DLBC	**Dease Lake**	**133.84**	**314**		P	**PKiKP**	**00 45 47.1**	**+0.4**	
	baz=138								
OBN	**Obninsk**	**134.56**	**54**	*i*	PKIKP	**PKiKP**	**00 45 49.0**	**+0.9**	
OBN					pmax	pmax			
	comp=Z,6.0nm,1.1s								
WTLY	**Watson Lake, Y**	**134.67**	**316**		P	**PKiKP**	**00 45 48.8**	**+0.5**	
	baz=138								
SIT	**Sitka**	**134.75**	**310**		P	**PKiKP**	**00 45 48.8**	**+0.3**	
	baz=137								
S32K	**Killisnoo**	**134.77**	**311**		P	**PKiKP**	**00 45 48.8**	**+0.4**	
	baz=137								
R33M	**Jennings River**	**134.88**	**315**		P	**PKiKP**	**00 45 48.8**	**-0.1**	
	baz=137								
Q32M	**Nakina River**	**135.02**	**314**		P	**PKiKP**	**00 45 49.4**	**+0.1**	
	baz=137								
NIL	**Nilore**	**135.29**	**101**			**PKPdf**	**00 45 47.2**	**-1.7**	
NIL	**Nilore**	**135.29**	**101**		IAMs_20	IAMs_20	01 57 27.5		
	comp=Z,542nm,21.0s								
NIL	**Nilore**	**135.29**	**101**		PKIKP	**PKPdf**	**00 45 47.2**	**-1.7**	
WRGLY	**Wrigley**	**135.29**	**322**		P	**PKiKP**	**00 45 49.7**	**+0.3**	
	baz=138								
R32K	**Eaglecrest**	**135.33**	**312**		P	**PKiKP**	**00 45 49.4**	**-0.2**	
	baz=136								
FINES	**FINESS Array B**	**135.40**	**42**		PKP	**PKPdf**	**00 45 47.9**	**-0.2**	
	comp=Z,7.8nm,1.1s,baz=262,slow=3.9,SNR=4.6								
S31K	**Pelican**	**135.74**	**310**		P	**PKiKP**	**00 45 50.4**	**-0.1**	
	baz=136								
R31K	**City Hall, Gus**	**135.88**	**311**		P	**PKiKP**	**00 45 50.5**	**-0.2**	
	baz=136								
P32M	**Atlin**	**135.99**	**313**			**PKPdf**	**00 45 49.6**	**+0.2**	
P32M	**Atlin**	**135.99**	**313**		P	**PKiKP**	**00 45 50.6**	**-0.4**	
	baz=136								
QIZ	**Qiongzhong**	**136.05**	**153**		PKP	**PKPdf**	**00 45 49.0**	**-1.7**	
QIZ					PP	**PP**	**00 48 29.3**	**-0.4**	
QIZ					SS	SS	01 06 31.0	+2.1	
QIZ					LR	LR			
	comp=Z,1μm,19.5s								
QIZ					LR	LR			
	comp=Z,580nm,14.1s								
QIZ					LR	LR			
	comp=Z,1μm,22.2s								
P33M	**Teslin, Yukon**	**136.12**	**315**		P	**PKiKP**	**00 45 50.7**	**-0.6**	
	baz=136								
SKAG	**Skagway**	**136.48**	**312**		P	**PKiKP**	**00 45 51.8**	**-0.1**	
	baz=135								
EVN	**Everest**	**136.67**	**120**			**PKPdf**	**00 45 50.8**	**-1.7**	
PLBC	**Pleasant Camp**	**136.85**	**312**		P	**PKiKP**	**00 45 52.4**	**-0.3**	
	baz=135,SNR=7.2								
N32M	**Quiet Lake**	**136.88**	**315**		P	**PKiKP**	**00 45 52.2**	**-0.5**	
	baz=135								
WHY	**Whitehorse**	**137.16**	**314**			**PKPdf**	**00 45 51.2**	**-0.4**	
WHY	**Whitehorse**	**137.16**	**314**		P	**PKiKP**	**00 45 53.0**	**-0.5**	
	baz=134,SNR=5.5								
P29M	**Windy Craggy**	**137.47**	**311**		P	**PKiKP**	**00 45 53.4**	**-0.6**	
	baz=134								
P30M	**Million Dollar**	**137.53**	**312**		P	**PKiKP**	**00 45 54.0**	**-0.2**	
	baz=134								
TULEG	**Thule**	**137.61**	**354**		IAMs_20	IAMs_20	01 45 30.0		
	comp=Z,470nm,22.0s								
O30N	**Mendenhall**	**137.67**	**313**		P	**PKiKP**	**00 45 53.8**	**-0.6**	
	baz=134,SNR=5.5								
N31M	**Braeburn, Yuko**	**138.05**	**314**			**PKPdf**	**00 45 53.1**	**0.0**	
N31M	**Braeburn, Yuko**	**138.05**	**314**		P	**PKiKP**	**00 45 54.3**	**-0.8**	
	baz=133,SNR=11								
M31M	**Drury Creek, Y**	**138.07**	**316**		IAMs_20	IAMs_20	01 53 19.0		
	comp=Z,373nm,20.0s								
M31M	**Drury Creek, Y**	**138.07**	**316**		P	**PKiKP**	**00 45 54.8**	**-0.4**	
	baz=133								
HYT	**Haines Junctio**	**138.21**	**313**		P	**PKPdf**	**00 45 54.7**	**+1.1**	
	baz=133								
N30M	**Aishikik Lake**	**138.50**	**314**		P	**PKiKP**	**00 45 55.4**	**-0.7**	
	baz=133								
TNCH	**TengChong**	**138.55**	**136**		PKP	**PKPdf**	**00 45 53.0**	**-2.4**	
TNCH					sPKP	sPKPdf	00 45 57.5	-1.6	
TNCH					PP	**PP**	**00 48 52.0**	**+6.3**	
TNCH					AMB	AMB			
	comp=Z,320nm,5.0s								
YUK6	**Outpost Mounta**	**138.60**	**312**		P	**PKPdf**	**00 45 55.4**	**+1.0**	
	baz=132								
PINM	**Pinnacle**	**138.72**	**311**		P	**PKiKP**	**00 45 56.0**	**-0.6**	
	baz=132								
YUK4	**Talbot Arm**	**138.97**	**313**		P	**PKiKP**	**00 45 56.5**	**-0.7**	
	baz=132								
M30M	**Minto, Yukon**	**139.14**	**315**		P	**PKiKP**	**00 45 56.4**	**-0.9**	
	baz=132,SNR=6.9								
O28M	**Mount Upton**	**139.15**	**311**		P	**PKiKP**	**00 45 56.9**	**-0.8**	
	baz=132								
YUK8	**Steele Glacier**	**139.34**	**312**		P	**PKPdf**	**00 45 57.0**	**+1.2**	
	baz=131								
MESA	**MESA**	**139.41**	**310**		P	**PKiKP**	**00 45 57.1**	**-1.0**	
	baz=131								
MAYO	**Mayo, Yukon**	**139.52**	**317**		P	**PKiKP**	**00 45 57.5**	**-0.6**	
	baz=131								
M29M	**Somme Creek**	**139.64**	**314**		P	**PKiKP**	**00 45 57.7**	**-0.8**	
	baz=131								
KLMR	**Klimovskoe**	**139.68**	**49**		*e*PKIKP	**PKPdf**	**00 45 56.1**	**+0.1**	
KLMR					pmax	pmax			
	comp=Z,13nm,1.3s								
CTG	**Chitna Glacier**	**139.70**	**311**		P	**PKiKP**	**00 45 58.0**	**-0.7**	
	baz=131								
ISLE	**Juniper Island**	**139.84**	**310**		IAMs_20	IAMs_20	01 54 14.9		
	comp=Z,362nm,20.0s								
BGLC	**Bering Glacier**	**139.88**	**309**		P	**PKiKP**	**00 45 58.3**	**-0.5**	
	baz=131								
C36M	**Paulatuk**	**139.89**	**328**		P	**PKiKP**	**00 45 58.1**	**-0.4**	
	baz=133								
YUK3	**Moose Creek**	**139.91**	**312**		P	**PKiKP**	**00 45 58.5**	**-0.7**	
	baz=131								
L29M	**L29M**	**139.96**	**315**		IAMs_20	IAMs_20	01 39 24.0		
	comp=Z,351nm,19.0s								
L29M	**L29M**	**139.96**	**315**		P	**PKiKP**	**00 45 58.6**	**-0.4**	
	baz=131								
KMI	**Kunming**	**140.00**	**141**		PKP	**PKiKP**	**00 46 00.5**	**0.0**	
KMI					LR	LR			
	comp=Z,300nm,19.2s								
KMI					LR	LR			
	comp=Z,480nm,18.7s								
KMI					LR	LR			
	comp=Z,670nm,20.6s								
LSA	**Lhasa**	**140.00**	**124**		IAMs_20	IAMs_20	01 45 43.6		
	comp=Z,422nm,18.0s								
KAIM	**Kayak Island**	**140.19**	**308**		P	**PKiKP**	**00 45 59.1**	**-0.4**	
	baz=130								
CRQE	**Cirque**	**140.22**	**310**		P	**PKiKP**	**00 45 59.3**	**-0.4**	
	baz=130								
K29M	**Barlow Dome**	**140.23**	**316**			**PKPdf**	**00 45 57.7**	**+0.5**	
K29M					IAMs_20	IAMs_20	01 50 46.2		
	comp=Z,482nm,21.0s								
K29M	**Barlow Dome**	**140.23**	**316**		P	**PKiKP**	**00 45 59.0**	**-0.7**	
	baz=130								
J30M	**Hart River**	**140.30**	**318**		IAMs_20	IAMs_20	01 52 05.3		
	comp=Z,450nm,21.0s								
J30M	**Hart River**	**140.30**	**318**		P	**PKiKP**	**00 45 59.1**	**-0.7**	
	baz=130								
CHM	**Chimkent**	**140.32**	**90**		*e*PKP	**PKPdf**	**00 45 58.5**	**+0.6**	
CHM	**Chimkent**	**140.32**	**90**		*e*PKIKP	**PKPdf**	**00 45 58.5**	**+0.6**	
H31M	**Peel River**	**140.46**	**320**		P	**PKiKP**	**00 45 59.3**	**-0.7**	
	baz=130								
BVCY	**Beaver Creek**	**140.47**	**313**		P	**PKiKP**	**00 45 59.6**	**-0.4**	
	baz=130								
MCARA	**McCarthy VSAT**	**140.60**	**311**		P	**PKiKP**	**00 45 59.9**	**-0.4**	
	baz=130								
Q23K	**Middleton Isla**	**140.62**	**307**		P	**PKiKP**	**00 45 59.8**	**-0.5**	
	baz=130								
I30M	**Mount Dempster**	**140.74**	**318**		IAMs_20	IAMs_20	01 45 31.7		
	comp=Z,421nm,22.0s								
I30M	**Mount Dempster**	**140.74**	**318**		P	**PKiKP**	**00 45 60.0**	**-0.7**	
	baz=130								
M27K	**Edge Creek, AK**	**140.80**	**312**		P	**PKiKP**	**00 46 00.1**	**-0.8**	
	baz=129								
J29N	**Klondike Camp**	**140.85**	**317**		IAMs_20	IAMs_20	01 51 09.6		
	comp=Z,510nm,20.0s								
ARCES	**ARCESS Array B**	**140.90**	**33**		PKhKP	PKPpre	00 45 50.8		
	comp=Z,1.8nm,0.5s,baz=211,slow=2.4,SNR=22								
ARCES					PKP	**PKPdf**	**00 45 58.9**	**+0.8**	
	comp=Z,2.4nm,0.6s,baz=240,slow=2.2,SNR=8.0								
BMRM	**Bremner River**	**140.93**	**309**		P	**PKPdf**	**00 45 59.8**	**+1.4**	
	baz=129								
BRLS	**Borolday**	**140.97**	**90**	*e*	PKP	**PKPdf**	**00 45 59.2**	**+0.2**	
BRLS				*e*	PP	**PP**	**00 48 59.3**	**-1.4**	
BRLS	**Borolday**	**140.97**	**90**	*e*	PKIKP	**PKPdf**	**00 45 59.2**	**+0.2**	
BRLS				*e*			00 48 59.3		
PZH	**PanZhiHua**	**140.98**	**139**		PKP	**Pdif**	**00 43 21.3**	**+4.3**	
PZH	**PanZhiHua**	**140.98**	**139**		PKP	**PKPdf**	**00 46 00.5**	**+0.8**	
DAWY	**Dawson**	**141.01**	**316**		P	**PKiKP**	**00 46 00.1**	**-1.0**	
	baz=129								
EYAK	**Cordova Ski Ar**	**141.10**	**308**		P	**PKPdf**	**00 45 59.7**	**+1.1**	
	baz=129								
G31M	**Satah River**	**141.16**	**321**		P	**PKiKP**	**00 46 00.4**	**-0.8**	
	baz=129								
L27K	**Beaver Creek,**	**141.22**	**313**		P	**PKiKP**	**00 46 00.3**	**-1.3**	
	baz=129								
M26K	**Nabesna, AK**	**141.23**	**312**		P	**PKPdf**	**00 46 00.3**	**+1.4**	
	baz=129								
KSH	**Kashi**	**141.28**	**99**		PKP	**PKPdf**	**00 45 54.0**	**-5.8**	
KSH					LR	LR			
	comp=Z,530nm,18.6s								
KSH					LR	LR			
	comp=Z,540nm,20.7s								
F31M	**Tsiigehtchic**	**141.32**	**322**		P	**PKPdf**	**00 46 00.1**	**+1.3**	
	baz=129								
N25K	**Chitina, Valde**	**141.32**	**310**		P	**PKPdf**	**00 46 00.2**	**+1.1**	
	baz=129								
P23K	**Montague Islan**	**141.39**	**307**		P	**PKPdf**	**00 46 00.4**	**+1.3**	
	baz=129								
I29M	**Ogilvie Camp,**	**141.45**	**318**		IAMs_20	IAMs_20	01 45 17.8		
	comp=Z,482nm,20.0s								
I29M	**Ogilvie Camp,**	**141.45**	**318**		P	**PKiKP**	**00 46 00.9**	**-1.1**	
	baz=128								
EPYK	**Eagle Plains**	**141.57**	**320**		P	**PKiKP**	**00 46 01.2**	**-1.0**	
	baz=128								
DZA	**Taraz**	**141.60**	**91**	*e*	PKP	**PKPdf**	**00 46 00.9**	**+0.7**	
DZA	**Taraz**	**141.60**	**91**	*e*	PKIKP	**PKPdf**	**00 46 00.8**	**+0.7**	
L26K	**Log Cabin Wild**	**141.75**	**313**		P	**PKPdf**	**00 46 01.1**	**+1.3**	
	baz=128								
KLU	**Klutina**	**141.75**	**309**		P	**PKPdf**	**00 46 00.8**	**+0.9**	
	baz=128								

baz=125
P19K Oil Pt 143.51 303 P PKPdf 00 46 04.5 +1.5
baz=126
M22K Willow 143.51 308 P PKiKP 00 46 04.8 -1.4
baz=126
O20K Slope Mountain 143.52 304 P PKPdf 00 46 04.7 +1.6
baz=126
WAT1 Susitna Watana 143.54 310 P PKPdf 00 46 04.7 +1.7
baz=125
SUA Susitna One 143.59 307 P PKPdf 00 46 04.7 +1.5
baz=126
R17L Mt. Peulik Vol 143.60 299 P PKiKP 00 46 05.2 -1.4
baz=127
Q18K Katmai Hardscr 143.65 301 P PKPdf 00 46 05.1 +1.7
baz=127
E28M Babbage River 143.77 322 P PKiKP 00 46 05.7 -0.9
baz=124
Q17K Contact Creek 143.78 300 P PKPdf 00 46 05.4 +1.8
baz=127
HDA Harding Lake 143.86 313 P PKiKP 00 46 05.6 -1.3
baz=124
D28M Stokes Point 143.94 323 P PKiKP 00 46 05.7 -1.2
baz=124
CUT Chulitna 143.95 309 PKPbc 00 46 02.4 +0.9
CUT Chulitna 143.95 309 P PKiKP 00 46 05.6 -1.5
baz=125
PRP Porcupine Dome 143.98 315 IAMs_20 IAMs_20 01 49 06.0
comp=Z,426nm,20.0s
PRP Porcupine Dome 143.98 315 P PKiKP 00 46 06.0 -1.3
baz=124
RND Reindeer 143.99 311 PKPbc 00 46 02.2 +0.4
RND IAMs_20 IAMs_20 01 51 46.2
comp=Z,482nm,21.0s
RND Reindeer 143.99 311 PKIKP PKPbc 00 46 02.2 +0.4
RND MLR MLR
comp=Z,500nm,21.0s
SDPT Sand Point 144.01 294 P PKiKP 00 46 05.8 -1.6
baz=128
N20K Mount Spurr 144.01 306 P PKiKP 00 46 05.9 -1.4
baz=125
SPCR Spurr Chakacha 144.01 306 P PKiKP 00 46 05.9 -1.5
baz=125
ILAR Eielson Array 144.04 313 PKP PKPbc 00 46 02.0 +0.2
comp=Z,14nm,1.0s,baz=154,slow=1.7,SNR=60
ILAR Eielson Array 144.04 313 PKPab 00 46 01.1 -0.2
ILAR Eielson Array 144.04 313 PKIKP PKPbc 00 46 02.0 +0.2
WUS Wushi 144.15 100 PKPab 00 46 02.9 +0.3
WUS Wushi 144.15 100 IAMs_20 IAMs_20 01 53 26.0
comp=Z,346nm,20.0s
E27K Coleen River 144.17 320 IAMs_20 IAMs_20 01 48 39.5
comp=Z,451nm,21.0s
S14K Fog Glacier 144.17 295 P PKPdf 00 46 05.8 +1.5
baz=128
P18K Big Mountain, 144.18 302 P PKiKP 00 46 06.4 -1.4
baz=126
SKT Skwentna 144.19 307 P PKiKP 00 46 06.4 -1.3
baz=125
G26K Porcupine Rive 144.19 318 IAMs_20 IAMs_20 01 49 54.0
comp=Z,444nm,21.0s
MCK McKinley 144.20 311 PKPbc 00 46 02.8 +0.4
MCK McKinley 144.20 311 PKIKP PKPbc 00 46 02.8 +0.4
L22K Petersville 144.21 309 PKPab 00 46 02.0 -0.1
WRH Wood River Hil 144.31 313 PKPbc 00 46 02.6 0.0
WRH IAMs_20 IAMs_20 01 49 35.6
comp=Z,475nm,21.0s
Q16K King Salmon 144.35 300 P PKPdf 00 46 03.7 -0.7
baz=126,SNR=7.6
POKR Poker Plat Res 144.43 314 IAMs_20 IAMs_20 01 54 39.8
comp=Z,434nm,20.0s
POKR Poker Plat Res 144.43 314 P PKPdf 00 46 04.1 -0.4
baz=123,SNR=10
O18K Koktuh Hills 144.44 303 P PKPdf 00 46 04.0 -0.6
baz=125
COLA College 144.44 313 PKPab 00 46 02.8 +0.1
COLA College 144.44 313 PKIKP PKPab 00 46 02.8 +0.1
COLA College 144.44 313 P PKPdf 00 46 04.2 -0.2
baz=123
TNSS Tian-Shan 144.45 96 ePKP PKPdf 00 46 05.1 -0.6
TNSS Tian-Shan 144.45 96 ePKIKP PKPdf 00 46 05.1 -0.6
SPB2 Spitsbergen Ar 144.53 19 PKPab 00 46 02.7 -0.1
SPITS Spitsbergen Ar 144.53 19 PKP PKPab 00 46 02.7 -0.2
comp=Z,22nm,0.8s,baz=149,slow=8.5,SNR=9.1
SPITS Spitsbergen Ar 144.53 19 PKIKP PKPbc 00 46 03.3 +0.3
TRF Thorofare Moun 144.55 310 PKPab 00 46 03.1 -0.3
TRF Thorofare Moun 144.55 310 P PKPdf 00 46 04.7 -0.2
baz=124
D27M Malcolm River 144.56 322 P PKPdf 00 46 04.7 +0.1
baz=122
AAA Alma-Ata 144.56 96 ePKP PKPdf 00 46 05.4 -0.1
AAA Alma-Ata 144.56 96 ePKIKP PKPdf 00 46 05.3 -0.1
P17K Kvichak River 144.57 301 P PKPdf 00 46 04.7 -0.1
baz=126,SNR=6.9
ARTI Arti 144.59 65 PKPab 00 46 02.7 -0.9
ARTI Arti 144.59 65 PKIKP PKPab 00 46 02.7 -0.9
MDOK Medeo 144.59 96 ePKP PKPdf 00 46 05.5 -0.1
MDOK Medeo 144.59 96 ePKIKP PKPdf 00 46 05.5 -0.1
N19K Bonanza Creek 144.70 304 P PKPdf 00 46 04.8 -0.3
baz=125
BMAR Burnt Mountain 144.71 318 PKPab 00 46 03.4 -0.4
F26K Sheenjek River 144.72 319 IAMs_20 IAMs_20 01 49 46.8
comp=Z,395nm,21.0s
F26K Sheenjek River 144.72 319 P PKPdf 00 46 05.4 +0.5
baz=122
NEA2 Nenana 144.73 312 P PKPdf 00 46 05.1 +0.1
baz=123,SNR=26
M20K Styx River 144.76 307 P PKPdf 00 46 05.0 -0.2
baz=124
G25K Bearman Lake 144.86 317 P PKPdf 00 46 05.9 +0.9
baz=122
S12K Black Hills 144.94 293 P PKPdf 00 46 05.8 +0.2
baz=128
PPLA Purkeypile 144.96 309 P PKPdf 00 46 05.9 +0.3
baz=123
H24K Noodor Dome 144.97 315 PKPbc 00 46 03.8 -1.0
H24K Noodor Dome 144.97 315 P PKPdf 00 46 05.9 +0.5
baz=122,SNR=11
FALS False Pass 145.03 291 P PKPdf 00 46 06.0 +0.3
baz=128
I23K Minto, Yukon-K 145.13 313 P PKPdf 00 46 06.2 +0.6
baz=122,SNR=23
F25K Christian Rive 145.15 318 IAMs_20 IAMs_20 01 51 19.3
comp=Z,418nm,18.0s
BPAW Bear Paw Mtn. 145.16 311 P PKPdf 00 46 06.5 +0.7
baz=122,SNR=66
SATY Saty 145.17 97 ePKP PKPbc 00 46 06.3 +0.1
SATY Saty 145.17 97 ePKIKP PKPbc 00 46 06.3 +0.1
O17K Koliganek Bris 145.18 302 P PKPdf 00 46 06.6 +0.7
baz=125,SNR=5.5
N18K Kilae Creek 145.19 304 P PKPdf 00 46 06.6 +0.7
baz=124
G24K Hadweenzic Riv 145.29 316 P PKPab 00 46 07.4 +1.5
baz=121,SNR=18
L20K Farewell, AK 145.38 307 P PKPab 00 46 07.4 +1.0
baz=123
E25K Arctic Village 145.40 319 IAMs_20 IAMs_20 01 51 54.3
comp=Z,452nm,22.0s
E25K Arctic Village 145.40 319 P PKPab 00 46 07.5 +1.2
baz=121,SNR=19
O16K Kokwok River B 145.49 301 P PKPab 00 46 07.6 +0.8
baz=124
UZB Uzynbulak 145.54 98 ePKP PKPdf 00 46 07.2 0.0
UZB Uzynbulak 145.54 98 ePKIKP PKPdf 00 46 07.2 0.0
CHUM Lake Minchumin 145.54 310 P PKPab 00 46 07.5 +0.7
baz=122
H23K Yukon River 145.55 314 P PKPab 00 46 07.7 +0.8
baz=121
MLY Manley 145.56 312 P PKPab 00 46 07.6 +0.6
baz=122
CNSH ChangSha 145.57 154 PKPbc PKPab 00 46 08.0 0.0
C27K Jago River 145.58 322 P PKPab 00 46 08.1 +1.2
baz=120
L19K White Mountain 145.60 306 P PKPab 00 46 07.9 +0.7
baz=123
M18K Stony River 145.61 305 P PKPab 00 46 07.9 +0.7
baz=123
N17K Nushagak Hills 145.64 303 P PKPab 00 46 08.5 +1.2
baz=124
CD2 Chengdu 145.71 139 PKPbc PKPdf 00 46 07.5 -0.3
SHLS Shalkode 145.76 98 ePKP PKPbc 00 46 08.2 +0.1
SHLS ePP PP 00 49 30.8 +1.1
SHLS Shalkode 145.76 98 ePKP2 PKPbc 00 46 08.1 +0.1
SHLS e 00 49 30.7
UNV Unalaska Valle 145.83 288 P PKPab 00 46 08.9 +0.7
baz=128
F24K Squaw Lake 145.85 317 P PKPab 00 46 09.2 +1.2
baz=120,SNR=41

K20K Telida 145.93 308 P PKPab 00 46 09.0 +0.7
baz=122
O15K Ungalikthiuk R 145.99 299 P PKPab 00 46 09.5 +0.8
baz=124
C26K Camden Bay 146.09 322 P PKPab 00 46 10.0 +1.3
baz=119
I21K Tanana 146.09 312 P PKPab 00 46 09.8 +1.0
baz=121,SNR=38
G23K Bananza Creek 146.17 315 P PKPab 00 46 10.3 +1.1
baz=120
M17K Holitna River 146.22 304 P PKPab 00 46 10.7 +1.2
baz=122,SNR=11
H22K Ishtalitna Cre 146.24 313 P PKPab 00 46 10.1 +0.6
baz=120
D25K Kavik River 146.25 320 IAMs_20 IAMs_20 01 50 57.4
comp=Z,469nm,20.0s
D25K Kavik River 146.25 320 P PKPab 00 46 10.0 +0.5
baz=119
N16K Nishlik Lake 146.26 302 P PKPab 00 46 10.7 +0.9
baz=123
E24K Your Creek 146.32 318 P PKPab 00 46 10.5 +0.7
baz=119,SNR=25
L18K Granite Mounta 146.35 306 P PKPab 00 46 11.0 +1.0
baz=122
J20K Nowinta River 146.38 310 P PKPab 00 46 10.6 +0.5
baz=121
NIKH Nikolski High 146.39 285 P PKPab 00 46 10.4 0.0
baz=129
COLD Coldfoot 146.49 316 IAMs_20 IAMs_20 01 53 44.2
comp=Z,407nm,20.0s
COLD Coldfoot 146.49 316 P PKPab 00 46 11.2 +0.8
baz=119
TDK Taldyqorghan 146.61 95 ePKP PKPdf 00 46 09.1 +0.2
TDK Taldyqorghan 146.61 95 ePKP2 PKPdf 00 46 09.0 +0.2
H21K Melozitna Rive 146.63 312 P PKPab 00 46 11.4 +0.4
baz=120
M16K Timber Creek 146.64 303 P PKPab 00 46 11.8 +0.7
baz=122,SNR=8.6
O14K Tigyukauivet M 146.65 299 P PKPab 00 46 11.6 +0.4
baz=124
N15K Kwethluk River 146.65 301 P PKPab 00 46 11.7 +0.5
baz=123
E23K Chandalar 146.69 317 P PKPab 00 46 11.3 0.0
baz=118
ENH Enshi 146.77 148 PKPdf 00 46 08.9 -0.7
ENH IAMs_20 IAMs_20 01 45 16.2
comp=Z,484nm,20.0s
I20K Naaghedeneel 146.82 310 P PKPab 00 46 11.9 +0.2
baz=120
J19K Poorman 146.85 309 P PKPab 00 46 12.1 +0.2
baz=120
D24K Happy Valley 146.94 319 P PKPab 00 46 12.0 -0.1
baz=117
TOLK Toolik Lake Re 146.95 318 P PKPab 00 46 12.2 -0.1
baz=118
L17K Donlin 146.95 305 P PKPab 00 46 12.7 +0.3
baz=121
J18K Innoko River 147.00 307 P PKPab 00 46 12.8 +0.2
baz=120,SNR=18
GOMU GeErMu 147.16 123 PKPbc PKPdf 00 46 11.0 +0.5
GOMU SS SS 01 08 34.3 -5.1
GOMU LR LR
comp=Z,220nm,12.6s
GOMU LR LR
comp=Z,140nm,12.2s
GOMU LR LR
comp=Z,320nm,12.1s
C24K Franklin Bluff 147.16 320 P PKPab 00 46 12.6 -0.4
baz=117
M15K Kasigluk River 147.18 301 P PKPab 00 46 13.0 -0.3
baz=122,SNR=6.4
N14K Kuskokwak Cree 147.19 300 P PKPab 00 46 12.9 -0.4
baz=122,SNR=7.6
L16K Owhat River 147.21 303 P PKPab 00 46 13.3 0.0
baz=121
K17K Iditarod 147.25 306 P PKPab 00 46 13.2 -0.3
baz=120
F22K John River 147.29 316 P PKPab 00 46 13.2 -0.3
baz=117
G21K Allakaket 147.29 314 P PKPab 00 46 13.3 -0.2
baz=118,SNR=14
H20K Anotleneega Mo 147.31 311 P PKPab 00 46 13.6 -0.1
baz=118
D23K Nanuktuvuk River 147.46 319 P PKPab 00 46 13.8 -0.4
baz=116
E22K Anaktuvuk Pass 147.46 317 P PKPab 00 46 13.4 -0.8
baz=117
F21K Alatna River 147.61 315 IAMs_20 IAMs_20 01 54 27.0
comp=Z,424nm,18.0s
F21K Alatna River 147.61 315 P PKiKP 00 46 14.2 -0.4
baz=117
GCSA Galena City Sc 147.69 309 P PKiKP 00 46 14.7 -0.1
baz=118
M14K Bethel 147.74 301 P PKiKP 00 46 14.2 -0.7
baz=121
C23K Itkillik River 147.81 320 P PKiKP 00 46 14.6 -0.3
baz=115,SNR=14
J17K VABM Dome 147.90 306 P PKiKP 00 46 15.2 -0.1
baz=119
H19K Roundabout Mou 147.90 311 P PKiKP 00 46 15.1 -0.1
baz=118,SNR=15
L15K Ungalak Mounta 148.02 302 P PKiKP 00 46 15.4 -0.2
baz=120
BORK Borovoye 148.07 77 PKPdf 00 46 10.8 -0.2
BORK Borovoye 148.07 77 IAMs_20 IAMs_20 01 51 28.3
comp=Z,348nm,21.0s
BORK Borovoye 148.07 77 PKIKP PKPdf 00 46 10.8 -0.2
BORK MLR MLR
comp=Z,300nm,21.0s
D22K Ayikyak River 148.07 318 P PKiKP 00 46 15.5 0.0
baz=115
BVAR Borovoye Array 148.09 77 PKPbc PKPbc 00 46 13.4 -0.8
comp=Z,8.7nm,0.7s,baz=225,slow=1.9,SNR=24
WHN Wuhan 148.16 156 PKPbc PKPbc 00 46 15.8 +0.7
M13K Dall Lake 148.16 300 P PKiKP 00 46 15.8 0.0
baz=121
E21K Killik River 148.31 317 P PKiKP 00 46 15.8 -0.2
baz=115
F20K Avaraart Lake 148.32 314 P PKiKP 00 46 15.8 -0.2
baz=116
K15K Wolf Creek Mou 148.34 304 P PKiKP 00 46 16.2 0.0
baz=119
L14K Kuka Creek 148.35 301 P PKiKP 00 46 15.7 -0.5
baz=120,SNR=6.3
G19K Purcell Mounta 148.41 312 IAMs_20 IAMs_20 01 52 45.7
comp=Z,397nm,18.0s
G19K Purcell Mounta 148.41 312 P PKiKP 00 46 16.3 +0.1
baz=116
H18K Honhosa River 148.44 310 P PKiKP 00 46 16.6 +0.3
baz=117,SNR=9.6
J16K Anvik River 148.45 306 P PKiKP 00 46 16.5 +0.2
baz=118,SNR=5.9
I17K Unalakleet 148.76 307 P PKiKP 00 46 17.2 +0.3
baz=117,SNR=7.5
P08K Saint George I 148.87 290 P PKiKP 00 46 17.4 0.0
baz=124
C21K Knifeblade Rid 148.88 318 P PKiKP 00 46 17.5 +0.4
baz=113
G18K Tagagawik 148.88 311 P PKiKP 00 46 17.5 +0.2
baz=116
B22K Teshekpuk Lake 148.90 320 P PKiKP 00 46 17.1 0.0
baz=112
H17K Granite Mounta 148.94 309 P PKiKP 00 46 17.4 0.0
baz=116,SNR=10.0
F19K Shaleruckik Mo 148.96 313 P PKiKP 00 46 17.5 +0.2
baz=115
E20K Nigu River 148.99 316 P PKiKP 00 46 17.9 +0.5
baz=114
D20K Ettivluk River 149.31 316 P PKiKP 00 46 18.6 +0.6
baz=113
M11K Mekoryuk 149.37 298 P PKiKP 00 46 18.8 +0.5
baz=120
J14K Nanvaranak Lak 149.39 303 P PKiKP 00 46 18.9 +0.6
baz=118,SNR=7.1
K13K Kusilvak Mount 149.46 302 P PKiKP 00 46 19.1 +0.7
baz=118
G17K Kiwalik Mounta 149.46 309 P PKiKP 00 46 18.8 +0.4
baz=115,SNR=9.9
SPIA Saint Paul Isl 149.50 291 P PKiKP 00 46 18.9 +0.2
baz=123
F18K Selawik 149.54 312 P PKiKP 00 46 19.1 +0.7
baz=114
A22K Sinclair Lake 149.62 321 P PKiKP 00 46 19.0 +0.5
baz=110
MAKZ Makanchi 149.64 96 PKPdf PKPdf 00 46 12.9 -0.9
MAKZ IAMs_20 IAMs_20 01 50 53.7
comp=Z,439nm,20.0s
MAKZ Makanchi 149.64 96 PKHKP PKPpre 00 46 12.9
MAKZ MLR MLR
comp=Z,400nm,20.0s
H16K Elim 149.70 307 P PKiKP 00 46 19.4 +0.5
baz=115
D19K Kuna River 149.74 316 IAMs_20 IAMs_20 01 54 48.9
comp=Z,494nm,22.0s
D19K Kuna River 149.74 316 P PKiKP 00 46 19.6 +0.6
baz=112
MK31 Makanchi Array 149.78 96 i PKHKP PKPpre 00 46 13.2
MKAR Makanchi Array 149.78 96 PKPbc PKPbc 00 46 16.9 -1.8
comp=Z,12nm,0.9s,baz=242,slow=3.3,SNR=9.4
MKAR Makanchi Array 149.78 96 PKPdf 00 46 12.3 -1.7
MKAR Makanchi Array 149.78 96 ePKHKP PKPpre 00 46 13.7
MKAR pmax pmax
comp=Z,12nm,0.9s
B20K Meade River 149.97 319 P PKiKP 00 46 20.0 +0.8
baz=110
G16K Koyuk River 150.06 309 P PKiKP 00 46 20.4 +0.8
baz=114
F17K Baldwin Pennin 150.07 311 P PKiKP 00 46 20.3 +0.7
baz=113
XAN Xi'an 150.18 145 ⇑PKPbc PKPdf 00 46 14.3 -0.8
XAN PKPab PKPab 00 46 26.5 +0.3
XAN LR LR
comp=Z,650nm,20.6s
XAN LR LR
comp=Z,320nm,22.0s
XAN LR LR
comp=Z,650nm,18.6s
WMQ Urumqi 150.20 106 ePKPbc PKPdf 00 46 15.8 +1.0
WMQ LR LR
comp=Z,370nm,21.1s
WMQ LR LR
comp=Z,380nm,22.1s
WMQ LR LR
comp=Z,430nm,24.2s
E18K Tukpahlearik C 150.21 313 P PKiKP 00 46 20.7 +0.9
baz=112,SNR=15
A21K Barrow 150.23 321 P PKiKP 00 46 20.1 +0.4
baz=108
LZDM Lanzhou Array 150.31 136 PKPbc PKPbc 00 46 19.4 -1.3
comp=Z,22nm,0.9s,baz=216,slow=7.3,SNR=18
NJ2 Nanjing 150.42 162 ePKPbc PKPdf 00 46 15.5 +0.1
C19K Lookout Ridge 150.46 316 P PKiKP 00 46 21.3 +0.9
baz=110,SNR=7.9
LZH Lanzhou 150.48 136 ePKPbc PKiKP 00 46 22.0 +0.3
LZH pPKP sPKPab 00 46 33.5 +2.3
LZH PP PP 00 49 52.0 -5.0
LZH AMB AMB
comp=Z,370nm,4.8s
LZH LR LR
comp=N,760nm,19.7s
LZH LR LR
comp=E,540nm,20.0s
LZH LR LR
comp=Z,600nm,20.3s
E17K Hotham Inlet 150.53 312 P PKiKP 00 46 21.2 +0.7
baz=112
KURBB Kurchatov Arra 150.53 87 PKP PKPdf 00 46 14.5 -0.4
comp=Z,2.0nm,0.7s,baz=230,slow=2.7,SNR=13
KURBB PKPbc sPKPdf 00 46 19.3 +0.6
comp=Z,8.1nm,0.5s,baz=234,slow=3.1,SNR=38
G15K Niukluk 150.55 307 P PKiKP 00 46 21.5 +0.8
baz=114
KURK Kurchatov 150.63 87 PKPdf 00 46 14.0 -1.1
KURK Kurchatov 150.63 87 IAMs_20 IAMs_20 01 51 47.1
comp=Z,448nm,21.0s
KURK Kurchatov 150.63 87 PKIKP PKPdf 00 46 14.0 -1.1
C18K Utukok River 150.85 315 P PKiKP 00 46 22.0 +0.7
baz=110
ANM Nome 150.90 306 P PKiKP 00 46 22.2 +0.8
baz=114
F15K North Star Dit 151.07 308 P PKiKP 00 46 22.7 +1.0
baz=112
D17K Noatak River 151.20 313 P PKiKP 00 46 22.9 +1.0
baz=110,SNR=6.5
RDOG Red Dog Mine 151.25 314 P PKiKP 00 46 22.9 +0.8
baz=109,SNR=5.4
B18K Kokolik River 151.29 316 P PKiKP 00 46 23.5 +1.5
baz=108
A19K Wainwright 151.30 318 P PKiKP 00 46 23.6 +1.5
baz=107
C17K DeLong Mountai 151.49 314 P PKiKP 00 46 23.6 +1.1
baz=108
ZSN Zaisan 151.50 98 ePKP PKPdf 00 46 17.1 +0.5
ZSN Zaisan 151.50 98 ePKIKP PKPdf 00 46 17.1 +0.5
LYN LuoYang 151.59 150 PKPbc PKPdf 00 46 17.3 +0.2
LYN LR LR
comp=Z,1μm,23.4s
LYN LR LR
comp=Z,580nm,22.3s
LYN LR LR
comp=Z,2μm,24.4s
F14K Arctic Creek 151.63 307 P PKiKP 00 46 24.0 +1.2
baz=112
GTA Gaotai 151.93 127 PKPbc PKPdf 00 46 17.8 +0.1
GTA SS SS 01 09 36.8 +4.7
GTA AMB AMB
comp=Z,290nm,10.8s
GTA LR LR
comp=Z,360nm,17.9s
GTA LR LR
comp=Z,310nm,19.5s
GTA LR LR
comp=Z,430nm,21.5s
C16K Lisburne Hills 152.19 313 P PKiKP 00 46 24.4 +0.4
baz=107
TNA Tin City 152.28 307 P PKiKP 00 46 24.8 +0.6
baz=110
GAMB Gambell 153.17 302 P PKiKP 00 46 27.1 +1.1
baz=111
TIA Tai'an 154.19 157 PKPbc PKPab 00 46 43.8 +0.9
HNS HongShan 154.84 152 ⇑PKPbc PKPdf 00 46 22.0 +0.3
HNS PP PP 00 50 27.5 +6.2
HNS LR LR
comp=Z,590nm,21.2s
HNS LR LR
comp=Z,330nm,17.8s
HNS LR LR
comp=Z,820nm,21.6s
MJAR Matsushiro Arr 154.97 198 PKP PKPdf 00 46 22.5 +0.5
comp=Z,0.7nm,0.3s,baz=287,slow=22,SNR=1.9
MJAR PKPbc PKiKP 00 46 31.5 +0.8
comp=Z,0.8nm,0.4s,baz=98,slow=37,SNR=2.8
MJAR PKPab PKPab 00 46 46.4 +0.2
comp=Z,12nm,1.0s,baz=88,slow=8.1,SNR=4.2
MJAR Matsushiro Arr 154.97 198 PKPdf 00 46 20.7 -1.3
ZAA0 Zalesovo Array 155.61 86 PKPdf 00 46 20.8 -1.4
ZALV Zalesovo Beam 155.61 86 PKP PKPdf 00 46 21.0 -1.2
comp=Z,0.4nm,0.3s,baz=199,slow=4.1,SNR=6.4
ZALV PKPab PKPab 00 46 47.9 -0.6
comp=Z,2.0nm,0.6s,baz=246,slow=4.8,SNR=5.7
ZALV Zalesovo Beam 155.61 86 PKPdf 00 46 20.4 -1.8
KSAR Wonju Array Be 156.55 178 PKPdf PKPdf 00 46 22.9 -1.1
KSAR Wonju Array Be 156.55 178 PKIKP PKPdf 00 46 22.9 -1.1
KSRS Korea Array 156.56 178 PKPab PKPab 00 46 53.1 +0.2
comp=Z,6.0nm,0.9s,baz=196,slow=4.0,SNR=4.4
BTO Baotou 156.60 141 ePKP PKPdf 00 46 23.8 -0.3
BTO PKPab PKPab 00 46 54.0 +0.8
BTO PP PP 00 50 29.8 -1.6
BTO SS SS 01 10 20.0 -2.5
BTO LR LR
comp=Z,750nm,17.3s
BTO LR LR
comp=Z,420nm,8.8s
BTO LR LR
comp=Z,900nm,16.9s
HHC Hu-ho-hao-te 157.28 144 ePKP PKPdf 00 46 21.0 -4.0
BJI Beijing 157.69 153 PKP PKPab 00 46 58.3 +0.5
BJI LR LR
comp=N,230nm,21.4s
BJI LR LR
comp=E,150nm,18.8s
BJI LR LR
comp=Z,420nm,21.5s
XLT XiLinHaoTe 161.33 150 ePKP PKPdf 00 46 28.0 -1.6
XLT PKPab PKPab 00 47 13.8 +0.1
XLT LR LR
comp=Z,280nm,21.8s
XLT LR LR
comp=Z,500nm,22.9s
SONM Songino Array 161.59 125 PKP PKPdf 00 46 30.1 +0.3
comp=Z,4.6nm,1.1s,baz=192,slow=2.4,SNR=16
SONM PKPab PKPab 00 47 15.9 +1.1
comp=Z,9.8nm,1.0s,baz=205,slow=3.8,SNR=16
SONM PP PP 00 50 59.3 +0.6
comp=Z,1.9nm,0.9s,baz=183,slow=8.5,SNR=3.9

ULN	**Ulaanbaatar**	**161.87**	**126**		**PKPdf**	00 46 29.1	**-1.0**
ULN				PKPab	**PKPab**	00 47 14.9	**-1.2**
ULN	**Ulaanbaatar**	**161.87**	**126**	PKIKP	**PKPdf**	00 46 29.1	**-1.0**
ULN						00 47 14.9	
CN2	**Changchun**	**162.78**	**171**	PKP	**PKPdf**	00 46 25.8	**-5.1**
CN2				PP	**PP**	00 51 01.8	**-2.7**
USRK	**Ussuriysk Ar.**	**163.22**	**187**	PKPab	**PKPab**	00 47 22.6	**+0.9**
	comp=Z,18nm,1.0s,baz=196,slow=3.2,SNR=11						
YSS	**Yuzhno-Sakhali**	**163.94**	**216**	*i* PKIKP	**PKPdf**	00 46 29.3	**-2.6**
BNX	**BinXian**	**164.82**	**176**	PKP	**PKPdf**	00 46 32.5	**-0.2**
HILR	**Hailar Array B**	**167.52**	**151**	PKPab	**PKPab**	00 47 40.5	**-0.2**
	comp=Z,5.9nm,0.8s,baz=191,slow=4.5,SNR=7.3						
CIT	**Chita**	**167.72**	**129**	*e*PKP2	**PKPab**	00 47 40.4	**-1.1**
CIT				pmax	pmax		
	comp=Z,142nm,1.7s						
HEH	**HeiHe**	**169.33**	**174**	PKP	**PKPdf**	00 46 41.0	**+5.1**
HEH				PKPab	**PKPab**	00 47 48.5	**-0.1**
HEH				PP	**PP**	00 51 44.5	**+6.1**
HEH				AMB	AMB		
	comp=Z,510nm,5.0s						
HEH				LR	LR		
	comp=Z,570nm,18.8s						
HEH				LR	LR		
	comp=Z,400nm,18.4s						
HEH				LR	LR		
	comp=Z,580nm,18.2s						

*IDC **28** 00:28:58.5±1.0,49.°99N×29.°09W,h0km,mb3.7/11, mbtmp3.8/12,ML3.6/1,Error ellipse: s-maj=28.7km s-min=20.1km az=10.0*

ISC 28 00:28:59.8±0.9,50.°0N±0.°2×29.°1W±0.°1,h10km,n14, σ1$01/14,mb3.7/9,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**16.57**	**61**	Pn	**Pn**	**00 32 50.7**	**-1.3**
	baz=254,slow=13						
	5.5nm,1.0s						
ESDC	**Sonseca Array**	**20.48**	**111**	P	**P**	**00 33 38.0**	**+0.3**
	1.4nm,0.9s,baz=300,slow=9.1,SNR=4.8						
	1.4nm,0.9s						
HFS	**Hagfors**	**26.07**	**51**	P	**P**	**00 34 32.5**	**-0.6**
	1.5nm,0.8s,baz=260,slow=16,SNR=1.3						
	1.5nm,0.8s						
FINES	**FINESS Array B**	**32.12**	**48**	P	**P**	**00 35 25.5**	**-1.4**
	2.9nm,0.8s,baz=258,slow=9.5,SNR=8.1						
	2.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**32.80**	**16**	P	**P**	**00 35 34.7**	**+2.0**
	11nm,1.1s,baz=201,slow=7.7,SNR=1.1						
	11nm,1.1s						
BRTR	**Keskin Array B**	**44.41**	**78**	P	**P**	**00 37 11.3**	**+0.6**
	0.5nm,0.8s,baz=292,slow=7.6,SNR=3.6						
	0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**44.52**	**135**	P	**P**	**00 37 11.9**	**+0.4**
	2.7nm,1.2s,baz=346,slow=9.3,SNR=5.6						
	2.7nm,1.2s						
PDAR	**Pinedale Array**	**53.47**	**295**	P	**P**	**00 38 19.3**	**-0.9**
	0.3nm,0.6s,baz=22,slow=6.9,SNR=3.6						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**55.89**	**333**	P	**P**	**00 38 37.5**	**+0.3**
	0.4nm,0.9s,baz=39,slow=4.7,SNR=4.1						
	0.4nm,0.9s						
BVAR	**Borovoye Array**	**57.02**	**45**	P	**P**	**00 38 45.7**	**+0.3**
	1.2nm,0.7s,baz=311,slow=7.3,SNR=6.5						
	1.2nm,0.7s						
TXAR	**Lajitas Array**	**58.53**	**279**	P	**P**	**00 38 56.6**	**+0.2**
	0.4nm,0.7s,baz=103,slow=4.0,SNR=2.8						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**66.85**	**44**	P	**P**	**00 39 52.0**	**+0.3**
	0.5nm,0.6s,baz=320,slow=5.0,SNR=4.6						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**147.26**	**30**	PKPbc	**PKPab**	**00 48 44.2**	**-0.9**
	0.6nm,0.8s,baz=346,slow=3.8,SNR=4.4						
ASAR	**Alice Springs**	**150.57**	**33**	PKPbc	**PKPbc**	**00 48 51.1**	**-0.7**
	0.2nm,0.5s,baz=339,slow=3.1,SNR=3.6						

PDG 28 00:38:53.7±0.2,41.°44N×19.°57E,h2km±11km,ML2.2/10, 3C-1D,Error ellipse: s-maj=1.2km s-min=1.6km az=0.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.57**	**335**	*e*Pg	Pg	00 39 03.2	-1.5
ULC				*i* Sg	Sg	00 39 12.3	+0.1
DRME	**Dracevica, Mon**	**0.80**	**339**	*e*Pg	Pg	00 39 07.5	-1.5
DRME				*e*Sg	Sg	00 39 19.7	+0.4
BUM	**Brajici-Budva**	**0.99**	**330**	*e*Pg	Pg	00 39 11.4	-1.4
BUM				*e*Sg	Sb	00 39 26.6	-0.7
PDG	**Podgorica**	**1.01**	**347**	⇓*i*Pg	Pg	00 39 11.4	-1.8
PDG				*e*Sg	Sb	00 39 27.2	-0.6
PVY	**Plav**	**1.19**	**14**	*e*Pg	Pg	00 39 14.6	-1.9
PVY				*e*Sg	Sb	00 39 32.9	0.0
CEME	**Cevo**	**1.21**	**336**	⇑*i*Pg	Pg	00 39 15.5	-1.3
CEME				*e*Sg	Sb	00 39 33.0	-0.4
NKME	**Niksic**	**1.40**	**341**	⇑*i*Pg	Pn	00 39 19.3	-1.0
NKME				*e*Sg	Sn	00 39 39.3	-0.1
KOME	**Kolasin**	**1.41**	**358**	⇑*i*Pg	Pn	00 39 18.7	-1.8
KOME				*e*Sg	Sb	00 39 39.3	+0.1
IVA	**Berane**	**1.45**	**9**	*e*Pg	Pn	00 39 19.3	-1.7
IVA				*i* Sg	Sg	00 39 40.3	+0.1

*THE **28** 00:39:39.5,40.°2N±0.°8×2.°1E±.°,h0km±2km,M2.3/8, MLh2.3/8*

*ATH **28** 00:39:39.2,40.°24N×20.°69E,h6km±1km,ML2.4/10, Manual Solution by A.Papageorgiou First location: 2019/11/28 00:41:00, This location: 2019/11/28 08:48:36 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km*

*TIR **28** 00:39:40.4,40.°22N×20.°68E,h7km±2km,Ml2.6/2*

ISC 28 00:39:39.4±1.1,40.°23N±0.°02×20.°71E±0.°02,h10km±9km, n34,σ0$46/54,1C-1D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.32**	**55**	⇓Pn	**Pg**	**00 39 46.2**	**+0.4**
NEST				Sg	**Sb**	**00 39 52.6**	**+0.1**
NEST				AML	AML	00 39 56.9	
	1.6nm,0.4s						
NEST	**Nestorio**	**0.32**	**55**	P	**Pb**	**00 39 46.6**	**-0.7**
NEST				S	**Sb**	**00 39 52.5**	**-0.1**
NEST	**Nestorio**	**0.32**	**55**	P	**Pg**	**00 39 45.8**	**-0.1**
NEST				S	**Sb**	**00 39 51.4**	**-1.2**
KBN	**Korca**	**0.40**	**9**	⇑Pg	**Pg**	**00 39 47.6**	**+0.3**
KBN				Sg	**Sb**	**00 39 54.0**	**-0.8**
KBN	**Korca**	**0.40**	**9**	P	**Pb**	**00 39 47.8**	**-0.9**
KBN				S	**Sb**	**00 39 54.8**	**0.0**
JAN	**Janina**	**0.58**	**169**	P	**Pg**	**00 39 50.6**	**-0.2**
JAN				S	**Sg**	**00 39 58.4**	**-0.1**
JAN	**Janina**	**0.58**	**169**	P	**Pg**	**00 39 50.4**	**-0.4**
JAN				S	**Sb**	**00 39 59.5**	**-0.6**
LMS2	**Laimos Florina**	**0.69**	**29**	P	**Pg**	**00 39 52.6**	**-0.2**
IGT	**Igoumenitsa**	**0.76**	**203**	Pg	**Pb**	**00 39 54.8**	**+0.2**
IGT				Sg	**Sb**	**00 40 05.7**	**+0.7**
IGT	**Igoumenitsa**	**0.76**	**203**	P	**Pg**	**00 39 53.5**	**-0.6**
IGT				S	**Sg**	**00 40 04.3**	**+0.4**
IGT	**Igoumenitsa**	**0.76**	**203**	P	**Pg**	**00 39 53.8**	**-0.2**
IGT				S	**Sg**	**00 40 04.3**	**+0.4**
PRMD	**Pramanda**	**0.76**	**157**	P	**Pg**	**00 39 53.8**	**-0.4**
PRMD				S	**Sb**	**00 40 05.4**	**+0.2**
KZN	**Kozani**	**0.82**	**84**	P	**Pg**	**00 39 55.3**	**0.0**
KZN				S	**Sn**	**00 40 08.6**	**-0.6**
KZN	**Kozani**	**0.82**	**84**	P	**Pg**	**00 39 55.2**	**0.0**
KZN				S	**Sb**	**00 40 06.8**	**0.0**
KRK1	**kERKIRA**	**0.86**	**225**	P	**Pg**	**00 39 55.7**	**-0.4**
KRK1				S	**Sb**	**00 40 08.0**	**0.0**
VLO	**Vlora**	**0.96**	**285**	Pg	**Pb**	**00 39 57.9**	**-0.2**
VLO				Sg	**Sb**	**00 40 11.1**	**+0.3**
VLO				AML	AML	00 40 16.2	
	1.5nm,0.7s						
TETR	**Tetrakomo, Epi**	**0.99**	**154**	P	**Pg**	**00 39 58.0**	**-0.4**
TETR	**Tetrakomo, Epi**	**0.99**	**154**	P	**Pg**	**00 39 58.1**	**-0.3**
TETR				S	**Sb**	**00 40 11.8**	**0.0**
ARTB	**Arta**	**1.09**	**169**	P	**Pg**	**00 39 59.5**	**-0.9**
ARTB				S	**Sb**	**00 40 15.1**	**+0.4**
THL	**Klokotos Trika**	**1.21**	**123**	P	**Pb**	**00 40 02.0**	**-0.3**
THL	**Klokotos Trika**	**1.21**	**123**	P	**Pb**	**00 40 02.1**	**-0.3**
THL				S	**Sg**	**00 40 18.2**	**0.0**
TYRN	**Tyrnavos**	**1.28**	**113**	P	**Pb**	**00 40 03.7**	**+0.1**
TYRN				S	**Sn**	**00 40 21.0**	**+0.4**
AMPL	**Ampelaki**	**1.36**	**163**	P	**Pn**	**00 40 04.5**	**0.0**
AMPL	**Ampelaki**	**1.36**	**163**	P	**Pn**	**00 40 04.8**	**+0.3**
LIT	**Litokhoron**	**1.37**	**95**	P	**Pg**	**00 40 05.9**	**+0.1**
LIT	**Litokhoron**	**1.37**	**95**	P	**Pg**	**00 40 05.7**	**-0.1**
LIT				S	**Sg**	**00 40 23.4**	**-0.2**
TSLK	**Tsoukalades, L**	**1.41**	**182**	P	**Pn**	**00 40 05.2**	**+0.2**
LRSO	**Larissa Observ**	**1.41**	**113**	P	**Pb**	**00 40 05.6**	**-0.2**
LKD2	**Lefkada island**	**1.44**	**182**	P	**Pn**	**00 40 05.6**	**0.0**
EVR	**Evrytania**	**1.56**	**147**	P	**Pb**	**00 40 08.2**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.64**	**137**	P	**Pb**	**00 40 09.3**	**-0.5**
KNT	**Kendrikon**	**1.91**	**60**	P	**Pn**	**00 40 12.6**	**+0.6**
PLG	**Polygyros**	**2.10**	**85**	P	**Pn**	**00 40 15.6**	**+1.0**
ATAL	**Atalanti**	**2.36**	**130**	P	**Pn**	**00 40 19.3**	**+1.1**

*NOU **28** 00:45:35.2,38.°75S×175.°55E,h183km,MLv4.0/19,North Island, New Zealand*

*WEL **28** 00:45:37.7±1.1,39.°5S±9.°×17.°6E±1.°2,h162km±8km, M2.9/20,ML2.5/6,MLv2.9/20,Error ellipse: s-maj=16.0km s-min=10.1km az=113.8,confirmed*

ISC 28 00:45:33.8±2.0,38.°69S±0.°08×175.°56E±0.°06, h195km±11km,n53,σ1$04/59,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATZ	**Wairara**	**0.14**	**96**	P	**Pn**	**00 46 00.3**	**+0.9**
RATZ	**Rangitukua**	**0.24**	**136**	P	**Pn**	**00 46 00.3**	**+0.7**
KUTZ	**Kaahu Road**	**0.29**	**46**	P	**Pn**	**00 46 00.3**	**+0.6**
KATZ	**Kakaramea**	**0.30**	**159**	P	**Pn**	**00 46 00.7**	**+0.9**
WHTZ	**Whakaora**	**0.31**	**85**	P	**Pn**	**00 46 00.4**	**+0.6**
TLZ	**Tolley Road**	**0.36**	**357**	P	**Pn**	**00 46 00.4**	**+0.5**
TLZ				S	**Sn**	**00 46 19.2**	**-0.8**
RITZ	**Rihia Road**	**0.37**	**141**	P	**Pn**	**00 46 01.1**	**+1.3**
TWVZ	**Taurewa**	**0.39**	**194**	P	**Pn**	**00 46 00.9**	**+1.0**
TWVZ				S	**Sn**	**00 46 19.1**	**-1.4**
KRVZ	**Karewarewa**	**0.41**	**171**	P	**Pn**	**00 46 01.2**	**+1.1**
NTVZ	**North Tongariro**	**0.41**	**167**	P	**Pn**	**00 46 01.3**	**+1.2**
WTVZ	**West Tongariro**	**0.42**	**177**	P	**Pn**	**00 46 01.2**	**+1.1**
TMVZ	**Te Maari**	**0.44**	**165**	P	**Pn**	**00 46 01.5**	**+1.3**
NNVZ	**North Ngauruho**	**0.44**	**174**	P	**Pn**	**00 46 01.3**	**+1.1**
ETVZ	**East Tongariro**	**0.46**	**165**	P	**Pn**	**00 46 01.5**	**+1.2**
HATZ	**Hinemaiaia**	**0.46**	**116**	P	**Pn**	**00 46 00.8**	**+0.7**
OTVZ	**Oturere**	**0.48**	**170**	P	**Pn**	**00 46 01.4**	**+1.0**
NGZ	**Ngauruhoe**	**0.48**	**176**	P	**Pn**	**00 46 01.5**	**+1.2**
SNVZ	**South Ngauruho**	**0.50**	**173**	P	**Pn**	**00 46 02.0**	**+1.5**
SNVZ				S	**Sn**	**00 46 20.3**	**-1.0**
WPRZ	**Whakapapatarin**	**0.50**	**70**	P	**Pn**	**00 46 01.0**	**+0.7**
COVZ	**Chateau Observ**	**0.51**	**181**	P	**Pn**	**00 46 01.5**	**+1.1**
GRRZ	**Galatos Road**	**0.55**	**52**	P	**Pn**	**00 46 01.2**	**+0.7**
FWVZ	**Far West T-bar**	**0.56**	**180**	P	**Pn**	**00 46 02.0**	**+1.2**
MAVZ	**Mataerangi**	**0.57**	**180**	P	**Pn**	**00 46 02.1**	**+1.2**
HIZ	**Hauiti**	**0.58**	**288**	P	**Pn**	**00 46 01.3**	**+0.7**
HIZ	**Hauiti**	**0.58**	**288**	S	**Sn**	**00 46 21.2**	**0.0**
HIZ	**Hauiti**	**0.58**	**288**	P	**Pn**	**00 46 01.2**	**+0.7**
TUVZ	**Tukino**	**0.58**	**173**	P	**Pn**	**00 46 02.1**	**+1.4**
ALRZ	**Allen Road**	**0.63**	**78**	P	**Pn**	**00 46 01.5**	**+0.6**
ALRZ				S	**Sn**	**00 46 20.4**	**-1.2**
HRRZ	**Handcock Road**	**0.64**	**62**	P	**Pn**	**00 46 01.5**	**+0.5**
HSRZ	**Hossack Road**	**0.66**	**55**	P	**Pn**	**00 46 01.7**	**+0.7**
PRRZ	**Plateau Road**	**0.68**	**74**	P	**Pn**	**00 46 01.7**	**+0.6**
MRHZ	**Matea Rd**	**0.69**	**102**	P	**Pn**	**00 46 01.8**	**+0.7**
MRHZ				S	**Sn**	**00 46 19.9**	**-2.4**
UTU	**Utuhina**	**0.72**	**44**	P	**Pn**	**00 46 01.9**	**+0.6**
HLRZ	**Highlands Stat**	**0.76**	**55**	P	**Pn**	**00 46 02.5**	**+0.9**
NGRZ	**Ngongotaha**	**0.77**	**40**	P	**Pn**	**00 46 02.2**	**+0.6**
BKZ	**Black Stump Fm**	**0.87**	**123**	P	**Pn**	**00 46 03.3**	**+1.2**
BKZ	**Black Stump Fm**	**0.87**	**123**	S	**Sn**	**00 46 22.3**	**+1.0**
URZ	**Urewera**	**1.29**	**71**	P	**Pn**	**00 46 05.5**	**+0.3**
KHEZ	**Kahui Hut**	**1.34**	**243**	P	**Pn**	**00 46 07.2**	**+1.5**
KHEZ	**Kahui Hut**	**1.34**	**243**	S	**Sn**	**00 46 30.9**	**+0.4**
PRGZ	**Paritu Road**	**1.83**	**98**	P	**Pn**	**00 46 11.9**	**+1.8**
PRGZ				S	**Sn**	**00 46 37.4**	**-1.0**
BFZ	**Birch Farm**	**2.06**	**165**	P	**Pn**	**00 46 13.7**	**+1.3**
BFZ	**Birch Farm**	**2.06**	**165**	P	**Sn**	**00 46 41.9**	**-0.8**
MXZ	**Matakaoa Point**	**2.44**	**63**	P	**Pn**	**00 46 17.6**	**+0.9**
SNZO	**South Karori**	**2.69**	**194**	P	**Pn**	**00 46 20.6**	**+1.2**
SNZO	**South Karori**	**2.69**	**194**	S	**Sn**	**00 46 54.3**	**-1.0**
QRZ	**Quartz Range**	**3.16**	**227**	P	**Pn**	**00 46 24.9**	**-0.1**
KHZ	**Kahutara**	**4.03**	**202**	P	**Pn**	**00 46 36.5**	**+1.0**
KHZ	**Kahutara**	**4.03**	**202**	S	**Sn**	**00 47 22.9**	**-1.3**
RPZ	**Rata Peaks**	**6.06**	**213**	P	**Pn**	**00 47 01.8**	**+0.2**
ODZ	**Otahua Downs**	**7.33**	**208**	P	**Pn**	**00 47 18.2**	**+0.1**
JCZ	**Jackson Bay**	**7.40**	**221**	P	**Pn**	**00 47 19.6**	**+0.4**
SYZ	**Scrubby Hill**	**9.15**	**209**	P	**Pn**	**00 47 42.5**	**+0.6**

*IDC **28** 00:50:08.2±1.2,41.°61N×19.°50E,h0km,mb3.8/8, mbtmp3.8/18,ML3.5/8,MS3.6/4,Error ellipse: s-maj=17.3km s-min=12.6km az=6.0*

*THE **28** 00:50:09.7,42.°N±7.°×1.°9E±.°,h7km±2.2km,M3.4/15, MLh3.4/15*

*TIR **28** 00:50:09.4,41.°66N×19.°47E,h63km±4km,Ml4.0/7*

*NEIC **28** 00:50:09.3±2.0,41.°47N±0.°02×19.°48E±0.°06,h10km±1km, mb4.4/8,Error ellipse: s-maj=8.1km s-min=2.9km az=114.0*

*SKO **28** 00:50:09.4,41.°51N×19.°38E,h0km,ML3.6*

*PDG **28** 00:50:13.7±0.3,41.°61N×19.°49E,h11km±1km,MD3.8/13, ML3.7/13,Error ellipse: s-maj=1.5km s-min=1.8km az=0.0*

*PRU **28** 00:50:17.0,41.°64N×19.°11E,h10km*

ISC 28 00:50:10.0±0.9,41.°51N±0.°02×19.°48E±0.°02,h18km±5km, n216,σ1$76/266,mb4.3/7,47C-23D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**119**	⇓Pg	**Pg**	**00 50 16.2**	**-0.8**
TIR				Sg	**Sg**	**00 50 21.2**	**-0.5**
TIR				AML	AML	00 50 21.6	
	36nm,0.5s						
TIR	**Tirane**	**0.33**	**119**	⇓*i*Pg	**Pg**	**00 50 16.2**	**-0.8**
TIR				*i* Sg	**Sg**	**00 50 21.8**	**+0.1**
ULC	**Ulcinj**	**0.49**	**339**	⇑*i*Pg	**Pb**	**00 50 20.4**	**+0.2**
ULC				*i* Sg	**Sn**	**00 50 30.5**	**+0.2**
SDA	**Shkodra**	**0.55**	**1**	Pg	**Pb**	**00 50 21.1**	**0.0**
SDA				Sg	**Sb**	**00 50 29.8**	**+1.3**
DRME	**Dracevica, Mon**	**0.72**	**342**	⇓*i*Pg	**Pn**	**00 50 24.0**	**-0.5**
DRME				*i* Sg	**Sn**	**00 50 34.7**	**-1.1**
PHP	**Peshkopia**	**0.74**	**76**	Pg	**Pg**	**00 50 23.5**	**-1.0**
PHP				Sg	**Sb**	**00 50 34.7**	**+0.5**
PHP				AML	AML	00 50 39.5	
	19nm,0.6s						
PHP	**Peshkopia**	**0.74**	**76**	P	**Pg**	**00 50 23.8**	**-0.7**
PHP				S	**Sb**	**00 50 35.1**	**+0.9**
BUM	**Brajici-Budva**	**0.91**	**331**	⇑*i*Pg	**Pn**	**00 50 28.7**	**+0.7**
BUM				*i* Sg	**Sn**	**00 50 40.7**	**0.0**
PDG	**Podgorica**	**0.94**	**350**	⇑Pg	**Pn**	**00 50 28.2**	**-0.1**
PDG				Sg	**Sb**	**00 50 37.9**	**-2.0**
PDG	**Podgorica**	**0.94**	**350**		**Pg**	**00 50 27.9**	**-0.4**
PDG					**Sn**	**00 50 43.0**	**+1.7**
PDG	**Podgorica**	**0.94**	**350**	⇑P	**Pn**	**00 50 29.5**	**+1.2**
PDG				⇑S	**Sn**	**00 50 42.3**	**+1.0**
PDG	**Podgorica**	**0.94**	**350**	⇓*i*Pg	**Pn**	**00 50 28.2**	**0.0**
PDG				*i* Sg	**Sn**	**00 50 41.2**	**-0.1**
VLO	**Vlora**	**1.03**	**179**	⇑Pg	**Pg**	**00 50 31.3**	**+1.2**
VLO				Sg	**Sn**	**00 50 46.6**	**+3.0**
VLO				AML	AML	00 50 60.0	
	12nm,0.5s						
VLO	**Vlora**	**1.03**	**179**	P	**Pg**	**00 50 30.8**	**+0.7**
VLO				S	**Sn**	**00 50 47.4**	**+3.8**
OHR	**Ohrid**	**1.07**	**111**	*i* Pg	**Pn**	**00 50 30.6**	**+0.5**
OHR				*i* Sg	**Sn**	**00 50 46.2**	**+1.7**
OHR				*e*Lg	Lg	00 50 46.6	
	comp=N,3μm,1.6s						
OHR				*e*Lg	Lg	00 50 48.1	
	comp=E,735nm,0.7s						
CEME	**Cevo**	**1.12**	**338**	⇓*i*Pg	**Pg**	**00 50 32.2**	**+0.5**
CEME				*i* Sg	**Sn**	**00 50 47.6**	**+1.6**
PVY	**Plav**	**1.15**	**18**	⇑*i*Pg	**Pg**	**00 50 31.7**	**-0.5**
PVY				*i* Sg	**Sg**	**00 50 48.2**	**+1.0**
HCY	**Herceg Novi**	**1.20**	**322**	⇑*i*Pg	**Pg**	**00 50 33.8**	**+0.7**
HCY				*i* Sg	**Sg**	**00 50 51.3**	**+2.5**
KBN	**Korca**	**1.32**	**131**	Pn	**Pg**	**00 50 35.6**	**+0.1**
KBN				Sn	**Sg**	**00 50 53.3**	**+0.5**
KBN				AML	AML	00 51 00.7	
	comp=E,4.1nm,1.0s						
KBN	**Korca**	**1.32**	**131**	P	**Pb**	**00 50 34.9**	**+0.6**
KBN				S	**Sg**	**00 50 55.0**	**+2.2**
NKME	**Niksic**	**1.32**	**343**	⇑*i*Pg	**Pg**	**00 50 35.6**	**+0.1**
NKME				*i* Sg	**Sg**	**00 50 53.8**	**+1.0**
KOME	**Kolasin**	**1.34**	**1**	⇑*i*Pg	**Pg**	**00 50 36.1**	**+0.1**
KOME				*i* Sg	**Sg**	**00 50 54.3**	**+0.8**
IVA	**Berane**	**1.40**	**12**	⇓*i*Pg	**Pg**	**00 50 37.1**	**+0.1**
IVA				*i* Sg	**Sg**	**00 50 57.6**	**+2.3**
TREB	**Trebinje**	**1.48**	**326**	*e*Pn	**Pb**	**00 50 36.9**	**0.0**
SKO	**Skopje**	**1.54**	**72**	*i* Pg	**Pb**	**00 50 38.5**	**+0.5**
SKO				*i* Sg	**Sg**	**00 50 59.8**	**+0.3**
BRY	**Bratogost**	**1.56**	**334**	⇑*i*Pg	**Pg**	**00 50 39.6**	**-0.5**
BRY				*i* Sg	**Sg**	**00 51 01.7**	**+1.2**
NEST	**Nestorio**	**1.61**	**132**	Pn	**Pb**	**00 50 39.6**	**+0.3**
NEST				Sn	**Sg**	**00 51 01.5**	**-0.4**
NEST				AML	AML	00 51 07.2	
	comp=E,1.0nm,3.0s						
NEST	**Nestorio**	**1.61**	**132**	P	**Pb**	**00 50 39.5**	**+0.3**
UPM	**Unac-Piva**	**1.75**	**346**	⇑*i*Pn	**Pg**	**00 50 42.8**	**-0.9**
UPM				*i* Sn	**Sg**	**00 51 05.9**	**-0.6**
KLINJ	**Klinje**	**1.79**	**338**	*e*Pn	**Pb**	**00 50 43.0**	**+0.7**
PLE	**Pljevlja**	**1.83**	**358**	⇑*i*Pn	**Pb**	**00 50 43.4**	**+0.5**
PLE				*i* Sn	**Sg**	**00 51 08.2**	**-0.6**
NOCI	**Noci**	**1.96**	**249**	⇑Pn	**Pn**	**00 50 42.4**	**0.0**
NOCI				Sn	**Sb**	**00 51 08.7**	**-0.7**
NOCI				AML	AML	00 51 22.9	
	comp=E,4.1nm,0.5s						
IGT	**Igoumenitsa**	**2.07**	**162**	Pn	**Pb**	**00 50 46.1**	**-1.0**
IGT				Sn	**Sb**	**00 51 14.3**	**+1.8**
IGT	**Igoumenitsa**	**2.07**	**162**	P	**Pn**	**00 50 45.0**	**+1.1**
KZN	**Kozani**	**2.11**	**124**	P	**Pn**	**00 50 46.1**	**+1.6**
JAN	**Janina**	**2.12**	**150**	P	**Pn**	**00 50 46.5**	**+1.9**
BARS	**Barje**	**2.17**	**52**	*i* Pn	**Pn**	**00 50 47.0**	**+1.7**
BARS				*i* Sn	**Sb**	**00 51 16.5**	**+1.1**
GRG	**Griva**	**2.27**	**103**	*i* Pn	**Pn**	**00 50 48.1**	**+1.5**
MATE	**Matera**	**2.27**	**249**	⇑P	**Pn**	**00 50 46.5**	**0.0**
MATE				⇑S	**Sn**	**00 51 13.8**	**-0.2**
PRMD	**Pramanda**	**2.32**	**148**	P	**Pn**	**00 50 49.1**	**+1.6**
VAY	**Valandovo**	**2.33**	**93**	*i* Pn	**Pn**	**00 50 49.2**	**+1.8**
VAY				*i* Sn	**Sb**	**00 51 20.4**	**+0.6**
VAY				*e*Lg	Lg	00 51 20.7	
	comp=E,143nm,0.7s						
VAY				*e*Lg	Lg	00 51 23.5	
	comp=N,173nm,0.6s						
TETR	**Tetrakomo, Epi**	**2.55**	**147**	P	**Pn**	**00 50 52.5**	**+1.9**
KNT	**Kendrikon**	**2.59**	**96**	P	**Pn**	**00 50 52.2**	**+1.1**
KNT	**Kendrikon**	**2.59**	**96**	*i* Pn	**Pn**	**00 50 53.3**	**+2.2**
LIT	**Litokhoron**	**2.68**	**121**		**Pn**	**00 50 53.7**	**+1.4**
BOVS	**Bovan**	**2.69**	**37**	⇑P	**Pn**	**00 50 54.5**	**+2.1**
BOVS				⇑S	**Sb**	**00 51 27.5**	**-2.7**
TRAN	**Tran**	**2.70**	**60**	P	**Pn**	**00 50 54.6**	**+2.0**
THL	**Klokotos Trika**	**2.73**	**134**	P	**Pn**	**00 50 54.5**	**+1.5**
THL				S	**Sb**	**00 51 29.5**	**-2.0**
KKB	**Krupnik**	**2.75**	**82**	P	**Pn**	**00 50 54.5**	**+1.3**
KKB	**Krupnik**	**2.75**	**82**	P	**Pn**	**00 50 54.7**	**+1.5**
KKB	**Krupnik**	**2.75**	**82**	*i* Pn	**Pn**	**00 50 55.0**	**+1.7**
TYRN	**Tyrnavos**	**2.75**	**130**	P	**Pn**	**00 50 54.7**	**+1.5**
ACER	**Acerenza**	**2.77**	**256**		**Pn**	**00 50 54.1**	**+0.6**
THE	**Thessaloniki**	**2.77**	**107**	P	**Pn**	**00 50 54.2**	**+0.7**
THE	**Thessaloniki**	**2.77**	**107**	*i* Pn	**Pn**	**00 50 54.2**	**+0.7**
SGRT	**San Giovanni R**	**2.81**	**276**	Pn	**Pn**	**00 50 54.7**	**+0.5**
SGRT				Sn	**Sn**	**00 51 28.6**	**+0.9**
SGRT				AML	AML	00 52 04.4	
	comp=N,1.5nm,0.7s						
SGRT	**San Giovanni R**	**2.81**	**276**		**Pn**	**00 50 54.3**	**+0.1**
AMPL	**Ampelaki**	**2.90**	**152**	P	**Pn**	**00 50 56.4**	**+1.2**
SOH	**Sokhos**	**3.00**	**102**	*i* Pn	**Pn**	**00 50 58.1**	**+1.4**
VTS	**Vitosha**	**3.01**	**67**	P	**Pn**	**00 50 57.8**	**+0.9**
VTS

ICOR	**Ion Corvin**	**6.65**	**64**	⇓P		**Pn**	**00 51 49.3**	**+2.6**
BALB	**Balikesir**	**6.66**	**103**	Pn		**Pn**	**00 51 47.5**	**+0.6**
PLOR	**Plostina**	**6.77**	**48**	⇑P		**Pn**	**00 51 51.4**	**+3.0**
VRI	**Vrincioaia**	**6.82**	**48**	⇑P		**Pn**	**00 51 52.2**	**+3.0**
TEOL	**Teolo**	**6.87**	**307**			**Pn**	**00 51 49.9**	**+0.1**
CONA	**Conrad Observa**	**6.92**	**339**	*e*Pn		**Pn**	**00 51 55.2**	**+4.6**
	comp=N,2.1nm,0.5s							
ONER	**Baraj Valea Uz**	**6.94**	**44**	⇓P		**Pn**	**00 51 52.6**	**+1.8**
TLBR	**Topalu**	**6.97**	**61**	⇓P		**Pn**	**00 51 52.6**	**+1.4**
KECS	**Kecovo**	**7.01**	**5**	*e*PN		**Pn**	**00 51 55.1**	**+3.3**
KECS				*e*SN		**Sn**	**00 53 09.6**	**-1.4**
MODS	**Modra-Piesok**	**7.04**	**348**	*e*PN		Pn	00 51 59.7	+7.5
MODS				*e*			00 53 18.4	
TIRR	**Tirgusor**	**7.18**	**63**	Pn		**Pn**	**00 51 54.5**	**+0.4**
ABTA	**Abfaltersbach**	**7.25**	**319**	*e*Pn		**Pn**	**00 51 56.5**	**+1.4**
	comp=N,4.1nm,0.6s							
ABTA				Sn		**Sn**	**00 53 16.8**	**-0.3**
	comp=N,24nm,0.6s							
CTI	**Castel Tesino**	**7.26**	**311**			**Pn**	**00 51 55.4**	**+0.1**
CFR	**Carcaliu**	**7.30**	**57**	⇓P		**Pn**	**00 51 57.4**	**+1.8**
TPGR	**Topolog**	**7.34**	**60**	⇑P		**Pn**	**00 51 58.1**	**+1.8**
BURAR	**Bucovina Array**	**7.35**	**32**			**Pn**	**00 51 58.4**	**+1.9**
BURAR	**Bucovina Array**	**7.35**	**32**	⇓P		**Pn**	**00 51 58.7**	**+2.2**
MOA	**Molln**	**7.35**	**331**	*e*Pn		**Pn**	**00 52 00.0**	**+3.6**
	comp=N,4.1nm,0.7s							
MOA				*e*Sn		**Sn**	**00 53 20.7**	**+1.3**
	comp=N,8.9nm,0.5s							
BUR08	**Bucovina Ar. S**	**7.37**	**32**			**Pn**	**00 51 59.0**	**+2.2**
BIOA	**Bad Ischl, Aus**	**7.46**	**328**	*e*Pn		**Pn**	**00 52 00.5**	**+2.6**
	comp=N,1.8nm,0.4s							
IDI	**Anoyia**	**7.52**	**144**	Pn		**Pn**	**00 52 00.8**	**+2.0**
	comp=N,5.3nm,0.8s,baz=34,slow=23,SNR=1.7							
IDI				Sn		**Sn**	**00 53 20.0**	**-3.6**
	comp=N,0.6nm,0.3s,baz=192,slow=9.3,SNR=7.6							
IDI	**Anoyia**	**7.52**	**144**	Pn		**Pn**	**00 51 57.4**	**-1.3**
MANT	**Manisa**	**7.59**	**110**			**Pn**	**00 51 59.5**	**-0.4**
LANS	**Liptovska Anna**	**7.65**	**360**	*e*PN		Pn	00 52 10.4	+10
LESA	**Schwarzleotal**	**7.66**	**323**	*e*Pn		**Pn**	**00 52 02.1**	**+1.3**
	comp=N,2.0nm,0.4s							
LESA				*e*Sn		**Sn**	**00 53 25.0**	**-2.0**
	comp=N,5.0nm,0.5s							
TLCR		**7.73**	**58**	⇑P		**Pn**	**00 52 03.8**	**+2.2**
STHS	**Stebnicka Huta**	**8.01**	**8**	*e*PN		Pn	00 52 10.4	+5.0
STHS				*e*SN		**Sn**	**00 53 40.2**	**+4.7**
WTTA	**Wattenberg**	**8.04**	**318**	*e*Pn		**Pn**	**00 52 08.9**	**+2.9**
	comp=N,6.0nm,0.8s							
WTTA				*e*Sn		**Sn**	**00 53 35.9**	**-0.7**
	comp=N,28nm,0.9s							
VRAC	**Vranov**	**8.06**	**346**	Pn		**Pn**	**00 52 05.8**	**-0.4**
	comp=N,0.4nm,0.3s,baz=256,slow=4.1,SNR=3.6							
VRAC				Sn		**Sn**	**00 53 29.9**	**-6.9**
	comp=N,0.1nm,0.3s,baz=171,slow=21,SNR=1.9							
	comp=N,0.8nm,0.3s							
WATA	**Walderalm**	**8.12**	**319**	*e*Pn		**Pn**	**00 52 09.9**	**+2.8**
	comp=N,4.0nm,0.4s							
WATA				*e*Sn		**Sn**	**00 53 36.5**	**-1.9**
	comp=N,17nm,0.6s							
SQTA	**Sankt Quirin**	**8.23**	**317**	*e*Pn		**Pn**	**00 52 10.1**	**+1.6**
	comp=N,4.9nm,0.7s							
SQTA				*e*Sn		**Sn**	**00 53 40.1**	**-1.0**
	comp=N,18nm,0.5s							
FETA	**Feichten**	**8.36**	**314**	*e*Pn		**Pn**	**00 52 13.4**	**+3.1**
	comp=N,2.4nm,0.9s							
FETA				*e*Sn		**Sn**	**00 53 44.0**	**-0.2**
	comp=N,12nm,0.8s							
MOTA	**Moosalm**	**8.37**	**317**	Pn		**Pn**	**00 52 11.9**	**+1.4**
	comp=N,3.4nm,0.5s							
MOTA				*e*Sn		**Sn**	**00 53 45.1**	**+0.6**
	comp=N,39nm,0.8s							
FUORN	**Ofenpass-Fuorn**	**8.38**	**311**	Pn		**Pn**	**00 52 11.4**	**+0.7**
GEC2	**GERESS Array S**	**8.40**	**333**	Pn		**Pn**	**00 52 12.2**	**+1.4**
GERES	**GERESS Array B**	**8.40**	**333**	Pn		**Pn**	**00 52 11.7**	**+0.9**
	baz=162,slow=13,SNR=6.1							
GERES				Sn		**Sn**	**00 53 48.3**	**+3.2**
	comp=N,0.1nm,0.3s,baz=150,slow=23,SNR=1.8							
	comp=N,0.8nm,0.5s							
BORA	**Eskisehir**	**8.49**	**97**	Pn		**Pn**	**00 52 12.4**	**+0.3**
RETA	**Reutte**	**8.63**	**317**	*e*Pn		**Pn**	**00 52 15.7**	**+1.6**
	comp=N,2.4nm,0.7s							
RETA				*e*Sn		**Sn**	**00 53 49.7**	**-1.2**
	comp=N,14nm,0.5s							
KHC	**Kasperske Hory**	**8.68**	**333**	Pn		**Pn**	**00 52 15.3**	**+0.6**
KHC	**Kasperske Hory**	**8.68**	**333**	*e*PN		**Pn**	**00 52 19.2**	**+4.5**
KHC				*e*SN		**Sn**	**00 53 48.7**	**-3.4**
DAVOX	**Davos/Dischmat**	**8.69**	**311**	Pn		**Pn**	**00 52 16.4**	**+1.5**
	comp=N,0.6nm,0.3s,baz=141,slow=19,SNR=9.2							
DAVOX				Sn		**Sn**	**00 53 52.9**	**+0.4**
	comp=N,0.8nm,0.3s,baz=306,slow=12,SNR=4.9							
	comp=N,1.3nm,0.3s							
TUE	**Stuetta**	**8.83**	**308**	Pn		**Pn**	**00 52 17.9**	**+1.0**
DAVA	**Damuels**	**8.98**	**313**	*e*Pn		**Pn**	**00 52 20.3**	**+1.5**
	comp=N,6.3nm,0.9s							
DAVA				Sn		**Sn**	**00 53 59.4**	**-0.1**
	comp=N,19nm,1.6s							
KEST	**Kesra**	**9.80**	**237**	LR		LR	00 57 35.9	
	comp=N,193nm,19.0s,baz=249,slow=45							
BNI	**Bardonecchia**	**9.99**	**295**	Pn		**Pn**	**00 52 32.2**	**-0.4**
SENIN	**Lac Senin/Sane**	**10.04**	**303**	Pn		**Pn**	**00 52 33.3**	**-0.1**
ECH	**Echery**	**11.02**	**312**	Pn		**Pn**	**00 52 46.3**	**-0.3**
AKASG	**Malin Array Be**	**11.40**	**33**	Pn		**Pn**	**00 52 50.5**	**-1.4**
	comp=N,0.4nm,0.3s,baz=219,slow=13,SNR=2.0							
AKASG				LR		LR	00 57 46.4	
	comp=N,120nm,19.8s,baz=198,slow=40							
	comp=N,0.2nm,0.3s							
NACGM	**Naroch**	**14.25**	**17**	*e*P		**P**	**00 53 38.1**	**+0.1**
	comp=Z,20nm,1.0s,baz=203							
PABE	**Paberze**	**14.32**	**10**	Pn		**Pn**	**00 53 31.0**	**-0.6**
MMAI	**Mount Meron Ar**	**15.23**	**119**	Pn		**Pn**	**00 53 46.4**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=293,slow=28,SNR=1.5							
	comp=Z,5.1nm,1.0s							
ESDC	**Sonseca Array**	**17.89**	**272**	P		**P**	**00 54 19.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=88,slow=11,SNR=2.0							
	comp=Z,0.5nm,0.8s							
HFS	**Hagfors**	**18.99**	**351**	P		**P**	**00 54 30.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=180,slow=17,SNR=2.9							
	comp=Z,4.3nm,0.9s							
NC405	**NORSAR Array S**	**20.20**	**349**	P		**P**	**00 54 42.9**	**-0.6**
NC405				IAmb		IAmb	00 54 53.3	
	comp=Z,23nm,1.4s							
NOA	**NORSAR Array B**	**20.20**	**348**	P		**P**	**00 54 42.6**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=160,slow=10,SNR=2.2							
	comp=Z,0.9nm,0.8s							
EKA	**Eskdalemuir Ar**	**20.30**	**321**	P		**P**	**00 54 44.5**	**-0.2**
	comp=Z,2.3nm,0.9s,baz=118,slow=9.8,SNR=2.0							
	comp=Z,2.3nm,0.9s							
EKB	**Eskdalemuir**	**20.32**	**321**	P		**P**	**00 54 44.4**	**-0.4**
EKB				IAmb		IAmb	00 54 48.8	
	comp=Z,25nm,1.2s							
FINES	**FINESS Array B**	**20.36**	**9**	P		**P**	**00 54 44.9**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=186,slow=9.5,SNR=11							
	comp=Z,3.2nm,0.6s							
FINES	**FINESS Array B**	**20.36**	**9**	P		**P**	**00 54 44.2**	**-1.1**
FIA1	**FINESS Array S**	**20.37**	**9**	P		**P**	**00 54 44.4**	**-0.9**
MD01	**Midelt array s**	**21.10**	**254**	P		**P**	**00 54 52.0**	**-1.7**
ARTI	**Arti**	**29.10**	**46**	P		**P**	**00 56 07.8**	**-1.6**
AB31	**Akbulak array**	**29.17**	**61**	P		**P**	**00 56 09.0**	**-1.0**
ABKAR	**Akbulak array**	**29.17**	**61**	P		**P**	**00 56 10.3**	**+0.3**
BORK	**Borovoye**	**35.64**	**53**	P		**P**	**00 57 06.7**	**+0.1**
BORK				IAmb		IAmb	00 57 08.0	
	comp=Z,3.9nm,0.7s							
BVAR	**Borovoye Array**	**35.69**	**53**	P		**P**	**00 57 07.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=284,slow=6.0,SNR=12							
	comp=Z,2.6nm,0.8s							
KURBB	**Kurchatov Arra**	**40.98**	**56**	P		**P**	**00 57 51.2**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=286,slow=9.4,SNR=1.4							
	comp=Z,0.4nm,0.3s							
ZAA0	**Zalesovo Array**	**44.13**	**50**	P		**P**	**00 58 16.6**	**-0.5**
ZAA0				IAmb		IAmb	00 58 17.5	
	comp=Z,4.3nm,0.8s							
ZALV	**Zalesovo Beam**	**44.13**	**50**	P		**P**	**00 58 16.7**	**-0.4**
	comp=Z,3.3nm,0.6s,baz=280,slow=8.5,SNR=17							
	comp=Z,3.3nm,0.6s							
ZALV	**Zalesovo Beam**	**44.13**	**50**	P		**P**	**00 58 16.3**	**-0.8**
MKAR	**Makanchi Array**	**44.31**	**61**	P		**P**	**00 58 18.6**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=282,slow=6.9,SNR=19							
	comp=Z,2.9nm,0.6s							
MKAR	**Makanchi Array**	**44.31**	**61**	P		**P**	**00 58 18.2**	**-0.5**
SONM	**Songino Array**	**58.99**	**52**	P		**P**	**01 00 08.3**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=285,slow=7.5,SNR=4.3							
	comp=Z,1.3nm,1.0s							
JCJ	**Chichijima**	**93.59**	**49**	LR		LR	01 48 49.6	
	comp=Z,229nm,21.9s,baz=160,slow=38							

*IDC **28** 00:54:21.9±3.4, 10.96N×62.50W, h82km±34km, mb3.7/8, mbtmp4.0/10, MS4.4/1, Error ellipse: s-maj=29.9km s-min=20.7km az=17.0*

*NEIC **28** 00:54:24.3±1.7, 10.65N±0.08×62.57W±0.10, h109km±8km, mb4.4/13, Error ellipse: s-maj=14.0km s-min=10.8km az=104.0*

*FUNV **28** 00:54:25.5, 10.64N×62.65W, h91km, MW4.0*

ISC 28 00:54:22.7±0.6, **10.59N**±0.06×**62.63W**±0.05, **h100**km, **n45,** σ1§**84**/53, **mb4.2**/12, **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GRGR	**Grenville**	**1.80**	**32**			**Pn**	**00 54 53.9**	**+1.1**
GRGR				Sn		**Sn**	**00 55 16.1**	**+0.5**
PCRV	**Puerto La Cruz**	**2.02**	**258**	*e*P		**Pn**	**00 54 56.6**	**+1.1**
PCRV				*e*S		**Sn**	**00 55 18.5**	**-2.1**
BIM	**Bigot**	**4.18**	**21**	Pn		**Pn**	**00 55 25.4**	**+0.9**
MPOM	**Morne Pois Mar**	**4.20**	**24**	Pn		**Pn**	**00 55 25.1**	**+0.6**
MPOM				Sn		**Sn**	**00 56 09.8**	**-2.8**
TACV	**Tcata**	**4.35**	**264**	*e*P		**Pn**	**00 55 27.9**	**+1.2**
TACV				*e*S		**Sn**	**00 56 14.3**	**-2.1**
CACV	**CAICARA DEL OR**	**4.90**	**232**	*e*P		**Pn**	**00 55 31.0**	**-3.0**
CACV				*e*S		Sn	00 56 18.8	-11
BENV	**Beln**	**4.93**	**263**	*e*P		**Pn**	**00 55 35.5**	**+0.9**
BENV				*e*S		**Sn**	**00 56 28.3**	**-2.2**
TURV	**Turiamo**	**5.13**	**269**	*e*P		**Pn**	**00 55 39.0**	**+1.8**
TURV				*e*S		**Sn**	**00 56 32.8**	**-2.4**
CBE	**Ff, Capester**	**5.53**	**10**	Pn		**Pn**	**00 55 44.6**	**+2.0**
GDHS	**Morne Mazeau,**	**5.71**	**8**	Pn		**Pn**	**00 55 46.2**	**+1.1**
MAPV	**Macapo**	**5.79**	**263**	*e*P		**Pn**	**00 55 46.5**	**+0.3**
MAPV				*e*S		**Sn**	**00 56 47.2**	**-4.1**
GDSD	**La Dsirade Is**	**5.88**	**15**	Pn		**Pn**	**00 55 48.6**	**+1.2**
ABD	**La Joyeuse, An**	**5.95**	**11**	Pn		**Pn**	**00 55 48.4**	**+0.1**
SDV	**Santo Domingo**	**8.07**	**259**	P		**Pn**	**00 56 20.7**	**+3.3**
	1.8nm,0.4s,baz=63,slow=8.0,SNR=1.7							
SDV				S		**Sn**	**00 57 42.8**	**-4.4**
	8.4nm,0.4s,baz=40,slow=17,SNR=8.0							
SDV	**Santo Domingo**	**8.07**	**259**	Pn		**Pn**	**00 56 19.2**	**+1.8**
HUMP	**Col San Antoni**	**8.13**	**338**	Pn		**Pn**	**00 56 17.6**	**-0.3**
BOAV	**Boa Vista**	**8.41**	**165**			**Pn**	**00 56 23.1**	**+1.2**
CRPR	**Cabo Rojo, PR**	**8.55**	**330**	Pn		**Pn**	**00 56 25.2**	**+1.5**
DR12	**Loma Pena Alta**	**10.44**	**322**	Pn		**Pn**	**00 56 50.8**	**+1.3**
MDP	**Montagnes des**	**11.29**	**118**	P		**Pn**	**00 57 00.1**	**-1.0**
	4.1nm,0.4s,baz=307,slow=14,SNR=20							
MDP				S		**Sn**	**00 59 00.0**	**-5.3**
	28nm,0.7s,baz=67,slow=16,SNR=15							
MACA	**Manacapuru-AM**	**13.80**	**172**	Pn		**Pn**	**00 57 35.5**	**+1.4**
MAL2	**Monte Alegre,**	**15.09**	**146**	Pn		**Pn**	**00 57 50.7**	**0.0**
MAL2				IAmb		IAmb	00 57 59.3	
	comp=Z,15nm,1.0s							
BRDY	**Brady**	**39.45**	**307**	P		**P**	**01 01 42.9**	**-0.5**
BRDY				IAmb		IAmb	01 01 43.9	
	comp=Z,6.3nm,0.9s							
NOKA	**Waynoka**	**41.77**	**314**	P		**P**	**01 02 01.4**	**-0.9**
TXAR	**Lajitas Array**	**42.56**	**302**	P		**P**	**01 02 09.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=130,slow=10.0,SNR=4.2							
	comp=Z,0.4nm,0.6s							
ANMO	**Albuquerque**	**46.62**	**308**	LR		LR	01 21 39.1	
	comp=Z,511nm,21.4s,baz=151,slow=35							
PLCA	**Paso Flores**	**51.59**	**188**	P		**P**	**01 03 22.7**	**+3.8**
	comp=Z,1.1nm,0.6s,baz=7.3,slow=7.5,SNR=4.0							
	comp=Z,1.1nm,0.6s							
PD31	**Pinedale Array**	**51.83**	**317**			**P**	**01 03 20.1**	**-0.8**
PD31				IAmb		IAmb	01 03 20.9	
	comp=Z,2.3nm,0.6s							
PDAR	**Pinedale Array**	**51.83**	**317**	P		**P**	**01 03 20.3**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=113,slow=9.5,SNR=24							
	comp=Z,1.9nm,0.5s							
PDAR	**Pinedale Array**	**51.83**	**317**	P		**P**	**01 03 20.5**	**-0.4**
YHL	**Hebgen Lake**	**53.75**	**319**	P		**P**	**01 03 35.7**	**+0.6**
EDM	**Edmonton**	**58.65**	**327**	P		**P**	**01 04 09.3**	**-0.2**
ESDC	**Sonseca Array**	**59.28**	**50**	P		**P**	**01 04 13.9**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=277,slow=5.2,SNR=2.3							
	comp=Z,0.9nm,1.0s							
YKA	**Yellowknife Ar**	**63.71**	**336**	P		**P**	**01 04 42.3**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=119,slow=5.8,SNR=13							
	comp=Z,1.0nm,0.5s							
M31M	**Drury Creek, Y**	**72.21**	**332**	P		**P**	**01 05 37.3**	**+0.6**
M31M				IAmb		IAmb	01 05 38.4	
	comp=Z,4.4nm,0.8s							
GERES	**GERESS Array B**	**73.10**	**42**	P		**P**	**01 05 40.3**	**-2.0**
	comp=Z,1.5nm,1.0s,baz=248,slow=5.2,SNR=3.8							
	comp=Z,1.5nm,1.0s							
IL31		**78.04**	**334**	P		**P**	**01 06 09.1**	**-0.9**
ILAR	**Eielson Array**	**78.04**	**334**	P		**P**	**01 06 09.2**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=93,slow=4.6,SNR=30							
	comp=Z,1.5nm,0.6s							
C24K	**Franklin Bluff**	**78.78**	**339**	P		**P**	**01 06 13.9**	**-0.1**
C24K				IAmb		IAmb	01 06 20.4	
	comp=Z,5.9nm,1.2s							
FINES	**FINESS Array B**	**80.16**	**29**	P		**P**	**01 06 22.8**	**+1.1**
	comp=Z,5.5nm,1.1s,baz=273,slow=8.3,SNR=6.0							
	comp=Z,5.5nm,1.1s							
FINES	**FINESS Array B**	**80.16**	**29**	P		**P**	**01 06 22.6**	**+0.9**
BUR08	**Bucovina Ar. S**	**80.81**	**43**	P		**P**	**01 06 26.7**	**+1.1**
BURAR	**Bucovina Array**	**80.82**	**43**	P		**P**	**01 06 26.8**	**+1.1**
MLR	**Muntele Rosu**	**81.54**	**45**	P		**P**	**01 06 30.8**	**+1.2**
G18K	**Tagagawik**	**82.87**	**336**	P		**P**	**01 06 36.2**	**+0.3**
G18K				IAmb		IAmb	01 06 37.2	
	comp=Z,4.3nm,0.8s							

*SDD **28** 00:56:07.5±2.0, 18.03N×67.30W, h140km±13km, MD3.1, ML2.5, MW4.4*

ISC 28 00:56:06.8±3.1, **18.0N**±0.2×**67.4W**±0.1, **h132**km±21km, **n11,** σ0§**77**/15, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**0.25**	**92**	*e*Pg		**Pn**	**00 56 26.2**	**+1.2**
CRPR				*e*Sg		**Sn**	**00 56 39.7**	**+1.0**
CRPR				IAML			00 56 46.3	
	comp=N,39nm,1.6s							
MLPR	**Magueyes Islan**	**0.32**	**98**	*e*Pg		**Pn**	**00 56 24.6**	**-0.7**
MLPR				*e*Sg		**Sn**	**00 56 38.1**	**-1.0**
MLPR				IAML			00 57 01.8	
	comp=N,9.4nm,1.6s							
AGPR	**Aguadilla, PR**	**0.51**	**29**	*e*Pg		**Pn**	**00 56 26.7**	**+0.4**
AGPR				*e*Sg		**Sn**	**00 56 41.1**	**+0.2**
AGPR				IAML			00 57 16.9	
	comp=N,62nm,1.6s							
AOPR	**Arecibo Observ**	**0.67**	**61**	*e*Pg		**Pn**	**00 56 26.8**	**-0.5**
AOPR	**Arecibo Observ**	**0.67**	**61**			**Pn**	**00 56 27.0**	**-0.2**
HIDR	**Higuey Centro**	**1.40**	**294**	*e*Pg		**Pn**	**00 56 33.1**	**-0.9**
HIDR				*e*Sg		**Sn**	**00 56 54.3**	**-0.3**
HIDR				IAML			00 57 33.2	
	comp=N,48nm,0.1s							
MIDR	**Miches**	**1.86**	**301**	*e*Pg		**Pn**	**00 56 40.1**	**+0.8**
MIDR				IAML			00 57 09.5	
	comp=N,20nm,2.2s							
HATOM	**Hato Mayor del**	**2.06**	**292**	*e*Pg		**Pn**	**00 56 41.1**	**-0.6**
HATOM				IAML			00 57 10.8	
	comp=N,21nm,2.8s							
BANI	**BANI**	**2.86**	**278**	*e*Pg		**Pn**	**00 56 52.4**	**+0.5**
BANI				IAML			00 57 27.4	
	comp=N,64nm,3.8s							
PODR	**Polo**	**3.72**	**273**	*e*Pg		**Pn**	**00 57 03.0**	**-0.1**
PODR				IAML			00 58 23.5	
	comp=N,56nm,2.0s							
JIDR	**Jimani**	**4.28**	**277**	*e*Pg		**Pn**	**00 57 10.7**	**+0.3**

*KRSC **28** 00:56:16.8±2.1, 51.91N×152.88E, h532km±37km, Ml4.8*

*SKHL **28** 00:56:17.4±0.3, 52.00N×152.40E, h533km±3km, mb5.3/5, mbv4.7/3, msh5.1/3, msha5.3/3*

*MOS **28** 00:56:17.1±0.9, 51.92N×152.54E, h524km, mb4.1/25, Error ellipse: s-maj=9.3km s-min=7.0km az=89.6*

*NEIC **28** 00:56:18.6±1.6, 52.21N±0.09×152.1E±0.2, h489km±6km, mb4.3/88, Error ellipse: s-maj=15.0km s-min=12.0km az=131.0*

*IDC **28** 00:56:18.8±0.7, 52.24N×152.13E, h493km±8km, mb3.6/37, mbtmp4.4/43, Error ellipse: s-maj=8.6km s-min=7.5km az=147.0*

ISC 28 00:56:18.2±0.5, **52.10N**±0.06×**152.22E**±0.05, **h493**km±5km, **n535,** σ1§**02**/571, **mb4.2**/94, **10C-1D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.83**	**119**	*i* P		**P**	**00 57 27.6**	**+0.3**
SKR				*e*S		**S**	**00 58 22.3**	**-1.4**
SKR				pmax		pmax		
	comp=Z,604nm,0.6s							
SKR				smax		smax		
	comp=E,329nm,0.8s							
SKR				smax		smax		
	comp=N,552nm,0.8s							
SKR	**Severo-Kuril's**	**2.83**	**119**	*e*P		**P**	**00 57 27.5**	**+0.1**
SKR	**Severo-Kuril's**	**2.83**	**119**	*i* P		**P**	**00 57 27.6**	**+0.3**
SKR				AMB		AMB	00 57 27.9	
	comp=N,600nm,0.6s							
SKR				AMB		AMB	00 57 33.0	
	comp=N,610nm,4.0s							
SKR				*e*S		**S**	**00 58 22.3**	**-1.4**
SKR				A		A	00 58 24.1	
	comp=N,550nm,0.8s							
SKR				A		A	00 58 24.1	
	comp=N,330nm,0.8s							
SKR				A		A	00 58 24.8	
	comp=N,2µm,3.0s							
SKR				A		A	00 58 24.8	
	comp=N,2µm,3.0s							
PAU	**Pauzhetka**	**2.92**	**101**	P		**P**	**00 57 28.0**	**+0.1**
PAU	**Pauzhetka**	**2.92**	**101**	*e*P		**P**	**00 57 28.1**	**+0.1**
PAU	**Pauzhetka**	**2.92**	**101**	*e*P		**P**	**00 57 28.8**	**+0.9**
PAU				AMB		AMB	00 57 29.4	
	comp=N,540nm,0.5s							
PAU				AMB		AMB	00 57 34.6	
	comp=N,1µm,3.0s							
PAU				*e*S		**S**	**00 58 24.8**	**0.0**
PAU				A		A	00 58 26.5	
	comp=N,250nm,0.6s							
PAU				A		A	00 58 26.5	
	comp=N,410nm,0.6s							
PAU				A		A	00 58 26.6	
	comp=N,2µm,2.0s							
PAU				A		A	00 58 26.6	
	comp=N,2µm,2.0s							
PEA0B	**Petropavlovsk-**	**3.49**	**71**	P		**P**	**00 57 32.0**	**+0.1**
PEA0B	**Petropavlovsk-**	**3.49**	**71**	*ce*P		**P**	**00 57 31.6**	**-0.3**
PETK	**Petropavlovsk-**	**3.49**	**71**	P		**P**	**00 57 31.7**	**-0.3**
	comp=N,32nm,0.6s,baz=250,slow=7.7,SNR=62							
PETK				S		**S**	**00 58 32.3**	**+0.1**
	comp=N,7.0nm,0.7s,baz=122,slow=12,SNR=1.8							
PETK	**Petropavlovsk-**	**3.49**	**71**	P		**P**	**00 57 31.1**	**-0.9**
ASAK	**Asacha**	**3.50**	**83**	P		**P**	**00 57 33.0**	**+0.8**
ASAK	**Asacha**	**3.50**	**83**	*e*P		**P**	**00 57 33.0**	**+0.8**
GRL	**Gorelyy**	**3.62**	**81**	P		**P**	**00 57 34.5**	**+1.4**
GRL				S		**S**	**00 58 34.0**	**-0.2**
GRL	**Gorelyy**	**3.62**	**81**	*e*P		**P**	**00 57 34.5**	**+1.4**
GRL				*e*S		**S**	**00 58 34.1**	**-0.2**
KDTR	**Khodutka, Kamc**	**3.63**	**92**	P		**P**	**00 57 32.8**	**-0.2**
KDTR				S		**S**	**00 58 30.2**	**-4.0**
KDTR	**Khodutka, Kamc**	**3.63**	**92**	*e*P		**P**	**00 57 32.8**	**-0.2**
KDTR				*e*S		**S**	**00 58 30.3**	**-4.0**
KRMR	**Karymshinskiy**	**3.69**	**76**	P		**P**	**00 57 33.8**	**+0.4**
KRMR				S		**S**	**00 58 35.5**	**+0.6**
KRMR	**Karymshinskiy**	**3.69**	**76**	*e*P		**P**	**00 57 33.8**	**+0.4**
KRMR				*e*S		**S**	**00 58 35.5**	**+0.6**
GNL	**Ganaly**	**3.81**	**63**	P		**P**	**00 57 34.7**	**+0.2**
GNL	**Ganaly**	**3.81**	**63**	*e*P		**P**	**00 57 34.8**	**+0.2**
RUS	**Russkaya**	**3.88**	**83**	P		**P**	**00 57 35.5**	**+0.6**
RUS				S		**S**	**00 58 35.0**	**-2.7**
RUS	**Russkaya**	**3.88**	**83**	*e*P		**P**	**00 57 35.5**	**+0.6**
RUS				*e*S		**S**	**00 58 35.0**	**-2.7**
INSR	**Institute**	**4.01**	**74**	*e*S		**S**	**00 58 40.9**	**+1.2**
PET	**Petropavlovsk**	**4.03**	**74**	P		**P**	**00 57 36.9**	**+0.7**
PET	**Petropavlovsk**	**4.03**	**74**	*e*P		**P**	**00 57 36.8**	**+0.7**
PET				*e*S

SEY pmax pmax
comp=Z,35nm,2.5s
SEY Seymchan 10.86 0 *e*P **P 00 58 45.9 +1.7**
ERM Erimo 11.82 215 P **P 00 58 53.5 -1.3**
ERM Erimo 11.82 215 P **P 00 58 53.5 -1.3**
SHEM Shemya Is, Ala 13.36 79 P **P 00 59 12.0 +1.0**
comp=Z,34nm,0.5s,baz=270,slow=1.6,SNR=4.9
JTM Tenmabayashi 13.66 218 P **P 00 59 11.8 -2.6**
USRK Ussuriysk Ar. 15.61 248 P **P 00 59 35.3 +0.6**
comp=Z,2.7nm,0.5s,baz=72,slow=12,SNR=4.2
AMKA Amchitka 16.76 82 **P 00 59 46.3 -0.3**
BILL Bilibino 17.37 18 P **P 00 59 52.2 -0.3**
BILL IAmb IAmb 01 00 17.4
comp=Z,10nm,1.5s
BILL Bilibino 17.37 18 *i* P **P 00 59 52.4 -0.1**
BILL pmax pmax
comp=Z,14nm,3.2s
BILL Bilibino 17.37 18 *e*P **P 00 59 52.4 -0.1**
BNX BinXian 17.46 258 ⇑P **P 00 59 52.5 -1.1**
BNX pmax pmax
comp=Z,13nm,1.1s
MJA0 Matsu Arr-Jizo 18.44 218 *e*P **P 01 00 03.5 +0.6**
MJA0 pmax pmax
comp=Z,5.0nm,0.5s
MJB9 Matsu-Tunnel 18.45 218 P **P 01 00 04.3 +1.3**
MAJO Matsushiro 18.45 218 P **P 01 00 03.5 +0.4**
MAJO Matsushiro 18.45 218 P **P 01 00 03.5 +0.4**
MAJO pmax pmax
comp=Z,15nm,0.8s
MJAR Matsushiro Arr 18.45 218 P **P 01 00 02.6 -0.5**
comp=Z,3.5nm,0.5s,baz=14,slow=10.0,SNR=15
MJAR Matsushiro Arr 18.45 218 P **P 01 00 03.1 +0.1**
MJAR Matsushiro Arr 18.45 218 P **P 01 00 03.1 +0.1**
MJAR pmax pmax
comp=Z,4.0nm,1.0s
KIWB Kanaga Island 18.80 79 P **P 01 00 05.3 -0.7**
ADK Adak 19.08 78 P **P 01 00 08.4 -0.1**
ADK Adak 19.08 78 P **P 01 00 08.4 -0.1**
ADK pmax pmax
comp=Z,130nm,1.5s
JGF Kuroka 19.61 219 P **P 01 00 14.0 +0.4**
HILR Hailar Array B 20.57 276 P **P 01 00 20.7 -1.5**
comp=Z,0.9nm,0.3s,baz=60,slow=9.0,SNR=3.6
HILR S **S 01 03 42.1 +1.8**
comp=Z,0.5nm,0.3s,baz=75,slow=40,SNR=1.2
comp=Z,0.9nm,0.3s
JHJ Hachijo jima 2 21.01 210 P **P 01 00 28.6 +2.3**
comp=Z,66nm,0.2s,baz=38,slow=12,SNR=12
GAMB Gambell 22.08 44 P **P 01 00 35.3 -0.2**
baz=255
SPIA Saint Paul Isl 22.10 62 P **P 01 00 35.8 0.0**
baz=273
TIXI Tiksi 22.19 341 P **P 01 00 36.1 -0.2**
comp=Z,3.1nm,0.3s,baz=153,slow=9.0,SNR=6.1
comp=Z,3.1nm,0.3s
TIXI Tiksi 22.19 341 P **P 01 00 36.0 -0.4**
TIXI IAmb IAmb 01 00 37.0
comp=Z,6.6nm,1.0s
TIXI Tiksi 22.19 341 *ce*P **P 01 00 36.8 +0.4**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
TIXI Tiksi 22.19 341 *e*P **P 01 00 36.8 +0.4**
P08K Saint George I 22.52 63 P **P 01 00 40.0 +0.5**
baz=275
NIKH Nikolski High 23.50 72 P **P 01 00 48.9 +0.5**
baz=284
TNA Tin City 24.11 41 P **P 01 00 53.9 +0.2**
baz=256
M11K Mekoryuk 24.17 54 P **P 01 00 54.9 +0.7**
baz=269
UNV Unalaska Valle 24.67 69 P **P 01 00 59.6 +0.9**
baz=283
F14K Arctic Creek 24.74 41 P **P 01 00 59.5 +0.3**
baz=258
ANM Nome 24.96 44 P **P 01 01 01.3 +0.1**
baz=261
K13K Kusilvak Mount 24.98 50 P **P 01 01 02.3 +0.9**
K13K Kusilvak Mount 24.98 50 P **P 01 01 02.0 +0.6**
baz=267
F15K North Star Dit 25.47 41 P **P 01 01 06.5 +0.8**
baz=259
J14K Nanvaranak Lak 25.55 48 P **P 01 01 06.9 +0.6**
baz=266
M13K Dall Lake 25.59 54 P **P 01 01 08.1 +1.4**
baz=271
G15K Niukluk 25.59 43 P **P 01 01 07.7 +0.9**
baz=261
C16K Lisburne Hills 25.84 35 P **P 01 01 09.7 +0.8**
baz=253
L14K Kuka Creek 25.91 51 P **P 01 01 10.4 +0.9**
baz=270
M14K Bethel 26.26 53 P **P 01 01 13.6 +0.9**
baz=272
H16K Elim 26.31 44 P **P 01 01 13.5 +0.4**
baz=264
G16K Koyuk River 26.36 42 P **P 01 01 14.1 +0.6**
G16K IAmb IAmb 01 01 45.8
comp=Z,17nm,1.3s
G16K Koyuk River 26.36 42 P **P 01 01 13.7 +0.2**
baz=262
N14K Kuskokwak Cree 26.44 55 P **P 01 01 15.7 +1.4**
N14K Kuskokwak Cree 26.44 55 P **P 01 01 15.3 +1.0**
baz=274
K15K Wolf Creek Mou 26.46 49 P **P 01 01 15.2 +0.7**
baz=269
L15K Ungalak Mounta 26.48 51 P **P 01 01 15.1 +0.4**
baz=270
D17K Noatak River 26.51 37 P **P 01 01 15.3 +0.5**
baz=257
RDOG Red Dog Mine 26.66 36 P **P 01 01 16.0 -0.2**
baz=256
C17K DeLong Mountai 26.67 35 P **P 01 01 16.2 -0.1**
baz=255
O14K Tigyukauivet M 26.70 56 P **P 01 01 17.3 +0.7**
O14K Tigyukauivet M 26.70 56 P **P 01 01 17.4 +0.7**
baz=276
S12K Black Hills 26.79 64 P **P 01 01 18.6 +1.1**
baz=282
E17K Hotham Inlet 26.85 39 P **P 01 01 18.3 +0.5**
baz=259
M15K Kasigluk River 26.89 53 P **P 01 01 19.2 +0.9**
baz=273
I17K Unalakleet 26.91 46 P **P 01 01 19.1 +0.7**
baz=267
J16K Anvik River 26.92 47 P **P 01 01 19.2 +0.7**
baz=268
F17K Baldwin Pennin 26.96 40 P **P 01 01 19.1 +0.3**
baz=261
G17K Kiwalik Mounta 27.07 42 P **P 01 01 20.1 +0.2**
baz=264
N15K Kwethluk River 27.22 54 P **P 01 01 21.3 +0.1**
baz=275
H17K Granite Mounta 27.33 43 P **P 01 01 22.8 +0.7**
baz=265
E18K Tukpahlearik C 27.38 38 P **P 01 01 22.8 +0.3**
baz=260
B18K Kokolik River 27.38 34 P **P 01 01 22.2 -0.3**
baz=255
C18K Utukok River 27.42 35 P **P 01 01 23.2 +0.3**
C18K Utukok River 27.42 35 P **P 01 01 22.6 -0.3**
baz=257
L16K Owhat River 27.44 51 P **P 01 01 23.1 0.0**
baz=272
O15K Ungalikthiuk R 27.45 56 P **P 01 01 23.9 +0.7**
baz=277
J17K VABM Dome 27.61 47 P **P 01 01 25.2 +0.6**
baz=269
F18K Selawik 27.62 40 P **P 01 01 24.7 +0.1**
baz=262
M16K Timber Creek 27.72 52 P **P 01 01 26.0 +0.5**
baz=274
SDPT Sand Point 27.75 64 P **P 01 01 26.3 +0.4**
baz=284
N16K Nishlik Lake 27.85 53 P **P 01 01 27.5 +0.7**
baz=275
A19K Wainwright 27.86 32 P **P 01 01 26.7 +0.1**
baz=254
G18K Tagagawik 27.94 42 P **P 01 01 28.3 +0.8**
G18K IAmb IAmb 01 01 29.2
comp=Z,11nm,0.8s
G18K Tagagawik 27.94 42 P **P 01 01 28.1 +0.6**
baz=265
K17K Iditarod 27.96 48 P **P 01 01 28.6 +0.9**
baz=271
L17K Donlin 27.98 50 P **P 01 01 28.5 +0.7**
baz=272
H18K Honhosa River 28.00 43 P **P 01 01 29.1 +1.1**
H18K IAmb IAmb 01 01 29.9
comp=Z,16nm,0.9s
H18K Honhosa River 28.00 43 P **P 01 01 28.6 +0.6**
baz=266
S14K Fog Glacier 28.05 62 P **P 01 01 28.7 0.0**
baz=282
C19K Lookout Ridge 28.09 35 P **P 01 01 28.9 +0.2**
baz=258
O16K Kokwok River B 28.28 55 P **P 01 01 30.8 +0.3**
baz=277
CHNA Chernabura Isl 28.37 65 P **P 01 01 31.9 +0.6**
baz=285
F19K Shaleruckik Mo 28.39 40 **P 01 01 31.9 +0.5**
F19K IAmb IAmb 01 01 32.6
comp=Z,8.4nm,0.8s
F19K Shaleruckik Mo 28.39 40 P **P 01 01 31.9 +0.5**
baz=264
P16K Nushagak River 28.40 56 P **P 01 01 32.0 +0.5**
baz=278
M17K Holitna River 28.43 51 P **P 01 01 31.9 +0.1**
baz=274
D19K Kuna River 28.49 36 P **P 01 01 32.1 -0.2**
baz=261
G19K Purcell Mounta 28.60 41 P **P 01 01 33.4 +0.2**
baz=266
GCSA Galena City Sc 28.61 44 P **P 01 01 33.8 +0.5**
baz=269
N17K Nushagak Hills 28.62 53 P **P 01 01 34.3 +0.8**
baz=276
E19K Redstone River 28.67 38 P **P 01 01 34.8 +1.0**
E19K IAmb IAmb 01 01 35.7
comp=Z,15nm,0.7s
E19K Redstone River 28.67 38 P **P 01 01 34.4 +0.5**
baz=263
J18K Innoko River 28.67 47 P **P 01 01 34.4 +0.5**
baz=271
L18K Granite Mounta 28.73 49 P **P 01 01 35.2 +0.8**
baz=274
O17K Koliganek Bris 28.76 54 P **P 01 01 35.3 +0.6**
baz=278
H19K Roundabout Mou 28.82 42 P **P 01 01 35.2 0.0**
baz=268,SNR=11
D20K Etivluk River 29.07 36 P **P 01 01 37.4 0.0**
baz=262
B20K Meade River 29.11 33 P **P 01 01 37.7 +0.1**
baz=259
Q16K King Salmon 29.14 57 P **P 01 01 38.6 +0.7**
baz=280
J19K Poorman 29.15 46 P **P 01 01 38.0 0.0**
baz=271
E20K Nigu River 29.16 37 P **P 01 01 37.9 -0.3**
baz=263
P17K Kvichak River 29.17 56 P **P 01 01 39.1 +0.9**
baz=279
M18K Stony River 29.19 51 P **P 01 01 38.9 +0.5**
baz=276
F20K Avaraart Lake 29.21 39 P **P 01 01 38.7 +0.2**
baz=266
N18K Kilae Creek 29.25 52 P **P 01 01 39.4 +0.5**
baz=277
SONM Songino Array 29.40 280 P **P 01 01 40.3 -0.3**
comp=Z,0.6nm,0.3s,baz=64,slow=8.2,SNR=6.0
SONM PcP **PcP 01 04 30.9 -0.2**
comp=Z,1.6nm,0.6s,baz=84,slow=1.3,SNR=11
comp=Z,0.6nm,0.3s
H20K Anotleneega Mo 29.48 43 P **P 01 01 40.8 0.0**
baz=269
R17L Mt. Peulik Vol 29.49 59 P **P 01 01 41.7 +0.6**
baz=282
L19K White Mountain 29.59 49 P **P 01 01 42.1 +0.2**
baz=275
Q17K Contact Creek 29.61 57 P **P 01 01 42.6 +0.4**
baz=281
I20K Naaghedeneel 29.64 44 P **P 01 01 42.5 +0.2**
baz=271
O18K Koktuh Hills 29.69 54 P **P 01 01 43.0 +0.2**
baz=279
P18K Big Mountain, 29.75 55 P **P 01 01 44.1 +0.7**
baz=280
C21K Knifeblade Rid 29.79 35 P **P 01 01 43.5 0.0**
baz=263
J20K Nowinta River 29.80 45 P **P 01 01 44.2 +0.5**
baz=272
K20K Telida 29.87 47 P **P 01 01 45.1 +0.9**
baz=274
B21K Ikpikpuk River 29.91 34 P **P 01 01 44.7 +0.1**
baz=262
N19K Bonanza Creek 29.91 52 P **P 01 01 45.4 +0.6**
baz=278
IMAR Indian Mountai 29.95 42 P **P 01 01 45.5 +0.5**
Q18K Katmai Hardscr 30.00 56 P **P 01 01 45.9 +0.3**
baz=281
E21K Killik River 30.00 37 P **P 01 01 45.5 +0.1**
baz=265
L20K Farewell, AK 30.02 49 P **P 01 01 46.0 +0.4**
baz=275
A22K Sinclair Lake 30.02 31 P **P 01 01 45.4 -0.1**
baz=259
G21K Allakaket 30.06 41 P **P 01 01 46.3 +0.4**
baz=269
O19K Port Alsworth 30.08 53 P **P 01 01 47.1 +1.0**
baz=279
F21K Alatna River 30.10 39 P **P 01 01 46.5 +0.3**
baz=267
CHIR Chirikof Islan 30.30 62 P **P 01 01 48.9 +0.8**
baz=286
H21K Melozitna Rive 30.34 42 P **P 01 01 48.6 +0.2**
baz=271
B22K Teshekpuk Lake 30.42 33 P **P 01 01 49.2 +0.2**
baz=262
M20K Styx River 30.43 50 P **P 01 01 49.5 +0.2**
baz=277
R18K Karluk 30.51 58 P **P 01 01 50.3 +0.5**
baz=283
D22K Ayikyak River 30.51 36 P **P 01 01 49.7 -0.1**
baz=265
F22K John River 30.62 39 P **P 01 01 51.0 +0.3**
baz=268
CHUM Lake Minchumin 30.62 46 P **P 01 01 51.2 +0.5**
baz=274
Q19K Cape Douglas, 30.64 56 P **P 01 01 51.4 +0.4**
baz=282
I21K Tanana 30.69 43 P **P 01 01 51.6 +0.2**
baz=272
P19K Oil Pt 30.71 54 P **P 01 01 51.5 -0.1**
baz=281
PPLA Purkeypile 30.76 48 P **P 01 01 52.1 0.0**
baz=276
E22K Anaktuvuk Pass 30.78 37 **P 01 01 52.9 +0.7**
E22K IAmb IAmb 01 01 53.6
comp=Z,7.1nm,0.6s
E22K Anaktuvuk Pass 30.78 37 P **P 01 01 52.2 0.0**
baz=268,SNR=5.6
SII Sitkinak Islan 30.89 60 P **P 01 01 53.3 +0.1**
baz=285
H22K Ishtalitna Cre 30.92 42 P **P 01 01 53.4 0.0**
baz=272,SNR=6.2
O20K Slope Mountain 30.94 53 P **P 01 01 53.4 -0.2**
baz=280
N20K Mount Spurr 30.96 51 P **P 01 01 53.0 -0.8**
baz=279
SPCR Spurr Chakacha 30.96 51 P **P 01 01 53.2 -0.6**
baz=279
STLK Strandline Lak 31.09 50 P **P 01 01 56.6 +1.6**
STLK IAmb IAmb 01 01 57.5
comp=Z,11nm,0.7s
SKT Skwentna 31.17 49 P **P 01 01 55.2 -0.3**
baz=278
BPAW Bear Paw Mtn. 31.18 45 P **P 01 01 55.1 -0.5**
baz=275
OHAK Old Harbor 31.20 59 P **P 01 01 57.0 +1.2**
baz=285
MLY Manley 31.23 43 P **P 01 01 56.3 +0.3**
baz=274
D23K Nanushuk River 31.24 36 P **P 01 01 56.3 +0.2**
baz=267
KTH Kantishna Hill 31.26 46 P **P 01 01 57.2 +0.8**
KTH IAmb IAmb 01 01 58.8
comp=Z,10nm,1.0s
C23K Itkillik River 31.32 34 P **P 01 01 56.5 -0.2**
baz=266
Q20K Shuyak Island 31.34 56 P **P 01 01 56.9 -0.1**
baz=283
COLD Coldfoot 31.38 39 **P 01 01 57.9 +0.7**
COLD IAmb IAmb 01 01 59.2
comp=Z,8.6nm,0.8s
COLD Coldfoot 31.38 39 P **P 01 01 56.9 -0.4**
baz=270,SNR=8.0
KDAK Kodiak Island 31.43 58 P **P 01 01 58.1 +0.3**
KDAK Kodiak Island 31.43 58 P **P 01 01 58.1 +0.3**
KDAK pmax pmax
comp=Z,120nm,1.5s
KDAK Kodiak Island 31.43 58 P **P 01 01 58.4 +0.6**
baz=284
G23K Bananza Creek 31.45 40 P **P 01 01 57.8 -0.2**
baz=272
HOM Homer 31.50 54 P **P 01 01 58.6 +0.2**
baz=282
CAPN Captain Cook N 31.54 52 P **P 01 01 58.9 +0.2**
baz=280
TRF Thorofare Moun 31.56 46 P **P 01 01 59.4 +0.3**
baz=277
E23K Chandalar 31.60 38 P **P 01 01 59.2 -0.1**
baz=270
SUA Susitna One 31.61 50 P **P 01 01 59.4 -0.1**
baz=280
TOLK Toolik Lake Re 31.63 36 P **P 01 01 58.9 -0.6**
baz=269
H23K Yukon River 31.68 42 P **P 01 02 01.3 +1.4**
H23K IAmb IAmb 01 02 02.2
comp=Z,9.1nm,0.7s
H23K Yukon River 31.68 42 P **P 01 01 60.0 +0.1**
baz=273
CUT Chulitna 31.70 48 P **P 01 02 00.4 +0.4**
baz=278
I23K Minto, Yukon-K 31.80 43 P **P 01 02 01.7 +0.8**
baz=275,SNR=6.8
M22K Willow 31.86 50 P **P 01 02 01.8 +0.4**
baz=280
D24K Happy Valley 31.92 35 P **P 01 02 02.3 +0.5**
baz=269
BRSE Bradley Lake S 31.93 53 P **P 01 02 02.6 +0.5**
baz=282
NEA2 Nenana 31.97 44 P **P 01 02 02.6 +0.3**
baz=276,SNR=6.3
C24K Franklin Bluff 31.98 34 P **P 01 02 02.6 +0.3**
C24K IAmb IAmb 01 02 03.6
comp=Z,9.6nm,0.9s
C24K Franklin Bluff 31.98 34 P **P 01 02 02.7 +0.3**
baz=268
E24K Your Creek 32.03 38 P **P 01 02 04.0 +1.2**
E24K Your Creek 32.03 38 P **P 01 02 03.4 +0.5**
baz=271,SNR=13
MCK McKinley 32.12 46 P **P 01 02 04.6 +0.9**
baz=277
F24K Squaw Lake 32.27 39 P **P 01 02 05.9 +1.0**
baz=272,SNR=5.0
PMR Palmer 32.35 50 P **P 01 02 06.1 +0.5**
baz=280
H24K Noodor Dome 32.36 42 P **P 01 02 06.6 +0.8**
baz=275
WAT1 Susitna Watana 32.42 47 P **P 01 02 06.9 +0.6**
baz=279
GHO Glory Hole Cre 32.42 49 P **P 01 02 07.0 +0.7**
GHO IAmb IAmb 01 02 17.5
comp=Z,18nm,1.0s
COLA College 32.46 44 P **P 01 02 06.9 +0.4**
baz=276
G24K Hadweenzic Riv 32.47 40 P **P 01 02 06.8 +0.3**
baz=274,SNR=6.7
SEW Seward 32.49 53 P **P 01 02 07.3 +0.6**
baz=283
POKR Poker Plat Res 32.62 43 P **P 01 02 08.5 +0.7**
baz=276,SNR=5.6
SML Sawmill 32.69 49 P **P 01 02 09.4 +0.8**
baz=281,SNR=5.5
KNK Knik Glacier 32.70 50 P **P 01 02 09.0 +0.3**
baz=281,SNR=7.6
D25K Kavik River 32.79 35 P **P 01 02 09.1 -0.2**
baz=271
WAT6 Susitna Watana 32.83 48 P **P 01 02 10.6 +0.7**
baz=280
PWL Port Wells 32.87 51 P **P 01 02 10.6 +0.5**
PWL Port Wells 32.87 51 P **P 01 02 11.2 +1.1**
baz=282
ILAR Eielson Array 32.89 44 P **P 01 02 10.7 +0.6**
comp=Z,5.1nm,0.8s,baz=283,slow=12,SNR=98
ILAR ScP **ScP 01 07 36.0 -0.9**
comp=Z,0.5nm,0.7s,baz=262,slow=3.2,SNR=5.0
comp=Z,5.1nm,0.8s
HDA Harding Lake 32.91 44 P **P 01 02 10.7 +0.4**
baz=276
DHY Denali Highway 32.91 47 P **P 01 02 10.9 +0.3**
baz=280
M23K Glacier View 32.98 49 P **P 01 02 12.1 +1.1**
baz=281
G25K Bearman Lake 33.01 40 P **P 01 02 11.5 +0.5**
baz=275
E25K Arctic Village 33.12 37 P **P 01 02 12.7 +0.6**
baz=273
F25K Christian Rive 33.12 38 P **P 01 02 13.2 +1.0**
baz=274
SCM Sheep Creek Mo 33.15 49 P **P 01 02 13.7 +1.1**
baz=281
C26K Camden Bay 33.30 34 P **P 01 02 14.3 +0.8**
baz=271
PRP Porcupine Dome 33.37 42 P **P 01 02 15.2 +0.8**
baz=277,SNR=17
GLI Glacier Island 33.46 51 P **P 01 02 15.8 +0.8**
baz=283
K24K Donnelly Dome 33.50 45 P **P 01 02 15.8 +0.4**
baz=280
P23K Montague Islan 33.52 52 P **P 01 02 16.1 +0.6**
baz=284
BMAR Burnt Mountain 33.54 39 P **P 01 02 16.9 +1.2**
J25K Salcha River, 33.55 44 P **P 01 02 16.4 +0.5**
baz=279
M24K Tolsona, Glenn 33.63 48 P **P 01 02 17.0 +0.4**
baz=282
F26K Sheenjek River 33.69 38 P **P 01 02 17.5 +0.6**
baz=275,SNR=8.5
C27K Jago River 33.72 35 P **P 01 02 18.0 +0.9**
baz=273
KLU Klutina 33.88 49 P **P 01 02 18.9 +0.2**
baz=283
G26K Porcupine Rive 33.90 39 P **P 01 02 19.4 +0.7**
baz=277,SNR=6.6
RIDG Independent Ri 33.92 45 P **P 01 02 19.1 +0.1**
baz=280
HARP HAARP 34.04 48 P **P 01 02 21.0 +1.1**
baz=282
EYAK Cordova Ski Ar 34.18 51 P **P 01 02 21.6 +0.5**
baz=284
SCRK Sand Creek 34.25 45 P **P 01 02 22.4 +0.5**
baz=281,SNR=11
J26L Joseph Creek 34.34 44 P **P 01 02 22.7 +0.2**
baz=280
I26K Coal Creek Min 34.38 42 P **P 01 02 24.0 +1.3**
baz=280
N25K Chitina, Valde 34.47 49 P **P 01 02 25.1 +1.4**
baz=284
E27K Coleen River 34.60 37 P **P 01 02 25.3 +0.7**
baz=277
BMRM Bremner River 34.62 50 P **P 01 02 25.9 +1.0**
baz=285
D27M Malcolm River 34.72 35 P **P 01 02 25.9 +0.3**
baz=276
G27K Doyon Strip 34.75 39 P **P 01 02 26.9 +1.0**
baz=279,SNR=5.3
H27K Steamboat Moun 34.89 40 P **P 01 02 27.6 +0.5**
baz=280
I27K Kandik River 34.96 42 P **P 01 02 28.5 +0.8**
baz=280
KAIM Kayak Island 34.99 52 P **P 01 02 28.9 +1.0**
baz=286
M26K Nabesna, AK 35.02 47 P **P 01 02 29.5 +1.3**
baz=284,SNR=5.5
K27K Chicken 35.07 44 P **P 01 02 29.1 +0.6**
baz=282,SNR=6.5
MCARA McCarthy VSAT 35.26 49 P **P 01 02 31.1 +0.9**
baz=285
E28M Babbage River 35.30 36 P **P 01 02 31.4 +1.0**
baz=278
F28M Old Crow 35.32 38 P **P 01 02 31.7 +1.1**
baz=279
L27K Beaver Creek, 35.39 46 P **P 01 02 33.0 +1.7**
baz=284
CRQE Cirque 35.40 50 P **P 01 02 32.9 +1.4**
baz=286
BCAR Beaver Creek A 35.41 46 **P 01 02 32.9 +1.4**
M27K Edge Creek, AK 35.54 47 P **P 01 02 33.9 +1.2**
baz=285,SNR=7.1
I28M Miner Creek 35.68 42 P **P 01 02 34.8 +1.1**
baz=282
E29M Blow River 35.93 36 P **P 01 02 36.7 +1.1**
baz=280

BVCY **Beaver Creek** 35.98 47 P P 01 02 37.1 +0.9
baz=285
MESA **MESA** 36.10 51 P P 01 02 38.9 +1.5
baz=288
G29M **Pine Creek** 36.15 39 P P 01 02 39.0 +1.5
baz=281
H29M **Whitestone** 36.15 40 P P 01 02 39.0 +1.5
baz=282
CTG **Chitna Glacier** 36.16 49 P P 01 02 38.6 +0.8
baz=287,SNR=7.5
DAWY **Dawson** 36.21 44 P P 01 02 39.2 +1.1
baz=284
YUK3 **Moose Creek** 36.34 48 P P 01 02 40.3 +0.9
baz=286
O28M **Mount Upton** 36.75 49 P P 01 02 44.0 +1.1
baz=288
EPYK **Eagle Plains** 36.77 40 P P 01 02 43.8 +1.2
baz=283
YUK8 **Steele Glacier** 36.80 48 P P 01 02 44.5 +1.3
baz=288
G30M **tAoh Zraii Nji** 36.83 38 P P 01 02 44.3 +1.1
baz=283
F30M **Barrier River** 36.86 37 P P 01 02 44.5 +1.1
baz=282,SNR=5.6
PINM **Pinnacle** 36.94 50 P P 01 02 44.8 +0.7
baz=289
L29M **L29M** 37.01 45 P P 01 02 46.3 +1.6
baz=286
M29M **Somme Creek** 37.05 46 P P 01 02 45.9 +0.8
baz=287
K29M **Barlow Dome** 37.07 44 P P 01 02 45.6 +0.4
baz=286
I30M **Mount Dempster** 37.18 41 P P 01 02 46.8 +0.6
baz=285
J30M **Hart River** 37.37 42 P P 01 02 48.3 +0.6
baz=286
INK **Inuvik** 37.54 36 P P 01 02 49.7 +0.8
baz=283
YUK6 **Outpost Mounta** 37.55 49 P P 01 02 49.8 +0.4
baz=289
G31M **Satah River** 37.59 38 P P 01 02 50.2 +1.0
baz=284
F31M **Tsiigehtchic** 37.66 37 P P 01 02 50.4 +0.5
baz=284
LZDM **Lanzhou Array** 37.67 264 P P 01 02 51.7 +0.9
comp=Z,1.2nm,0.3s,baz=44,slow=43,SNR=1.4
LZDM PcP **PcP** 01 04 55.3 0.0
comp=Z,3.0nm,0.5s,baz=72,slow=4.7,SNR=4.8
comp=Z,1.2nm,0.3s
M30M **Minto, Yukon** 37.75 46 P P 01 02 52.4 +1.6
baz=288,SNR=5.3
H31M **Peel River** 37.85 40 P P 01 02 52.7 +1.2
baz=286
N30M **Aishikik Lake** 37.97 47 P P 01 02 54.3 +1.7
baz=289
HYT **Haines Junctio** 37.99 49 P 01 02 54.1 +1.2
HYT IAmb IAmb 01 02 55.9
comp=Z,11nm,0.8s
HYT **Haines Junctio** 37.99 49 P P 01 02 54.0 +1.2
baz=290,SNR=9.1
P29M **Windy Craggy** 38.29 50 P P 01 02 56.8 +1.6
baz=291
P30M **Million Dollar** 38.48 49 P P 01 02 58.7 +1.9
baz=291
N31M **Braeburn, Yuko** 38.55 47 P P 01 02 59.0 +1.7
baz=290,SNR=5.2
O30N **Mendenhall** 38.66 48 P P 01 02 58.9 +0.7
baz=291
M31M **Drury Creek, Y** 38.93 46 P P 01 03 01.3 +0.9
baz=290
PLBC **Pleasant Camp** 39.00 50 P P 01 03 01.7 +0.7
baz=292,SNR=5.7
ZAA0 **Zalesovo Array** 39.20 300 P P 01 03 01.9 -0.6
ZALV **Zalesovo Beam** 39.20 300 P P 01 03 02.2 -0.3
comp=Z,3.5nm,0.3s,baz=59,slow=7.0,SNR=26
ZALV PcP **PcP** 01 04 58.9 -0.5
comp=Z,1.3nm,0.4s,baz=90,slow=3.4,SNR=7.9
comp=Z,3.5nm,0.3s
WHY **Whitehorse** 39.25 48 P P 01 03 04.4 +1.3
WHY IAmb IAmb 01 03 05.9
comp=Z,10.0nm,0.7s
WHY **Whitehorse** 39.25 48 P P 01 03 03.9 +0.8
baz=292
A36M **Sachs Harbour** 39.38 29 P P 01 03 04.2 +0.5
A36M **Sachs Harbour** 39.38 29 P P 01 03 04.5 +0.7
baz=286
SKAG **Skagway** 39.49 50 P P 01 03 06.3 +1.4
baz=293
S31K **Pelican** 39.64 52 P P 01 03 06.8 +0.7
baz=294
DGZ **Jazzator, Alta** 39.72 293 *i* P P 01 03 06.3 -0.8
DGZ pmax pmax
comp=Z,3.0nm,0.6s
N32M **Quiet Lake** 39.89 47 P P 01 03 09.5 +1.4
baz=292
P32M **Atlin** 40.20 49 P P 01 03 11.7 +1.1
baz=294
R32K **Eaglecrest** 40.35 51 P P 01 03 13.2 +1.4
baz=294
P33M **Teslin, Yukon** 40.37 48 P P 01 03 13.4 +1.3
baz=293
Q32M **Nakina River** 41.13 50 P P 01 03 19.1 +0.8
baz=295
R33M **Jennings River** 41.56 49 P P 01 03 23.4 +1.8
baz=295
U33K **Whale Pass** 41.97 54 P P 01 03 25.7 +1.0
baz=298
S34M **Telegraph Cree** 42.13 51 P P 01 03 27.5 +1.6
baz=297
WTLY **Watson Lake, Y** 42.24 47 P P 01 03 28.2 +1.3
baz=296
CRAG **Craig** 42.27 55 P P 01 03 29.0 +1.9
baz=298
DLBC **Dease Lake** 42.42 50 P P 01 03 30.0 +1.7
baz=297
T35M **Bob Quinn** 42.98 52 P P 01 03 34.5 +1.8
baz=298
V35K **Ketchikan** 43.09 54 P P 01 03 34.9 +1.3
baz=299
WRGLY **Wrigley** 43.16 41 P P 01 03 35.4 +1.4
baz=296
U35K **Hyder** 43.60 53 P P 01 03 39.2 +1.8
baz=299
KURK **Kurchatov** 44.09 299 P 01 03 41.7 +0.3
KURK IAmb IAmb 01 03 42.2
comp=Z,9.4nm,0.6s
KURK **Kurchatov** 44.09 299 *ce* P P 01 03 40.5 -0.9
KURK pmax pmax
comp=Z,9.0nm,1.0s
KURK **Kurchatov** 44.09 299 *e* P P 01 03 40.5 -0.9
MK31 **Makanchi Array** 44.16 292 *de* P P 01 03 42.1 0.0
MKAR **Makanchi Array** 44.16 292 P P 01 03 42.2 +0.1
comp=Z,3.4nm,0.3s,baz=63,slow=7.1,SNR=104
comp=Z,3.4nm,0.3s
MKAR **Makanchi Array** 44.16 292 P P 01 03 42.0 -0.1
MKAR **Makanchi Array** 44.16 292 *e* P P 01 03 42.1 -0.1
KURBB **Kurchatov Arra** 44.18 299 P P 01 03 42.2 +0.1
comp=Z,5.6nm,0.5s,baz=62,slow=7.9,SNR=18
KURBB PcP **pwP** 01 05 15.7 +0.7
comp=Z,1.7nm,0.6s,baz=56,slow=3.4,SNR=6.1
KURBB ScP **ScP** 01 08 18.3 -2.3
comp=Z,0.6nm,0.8s,baz=69,slow=3.2,SNR=5.0
comp=Z,5.6nm,0.5s
MAKZ **Makanchi** 44.34 292 P P 01 03 43.2 -0.2
MAKZ **Makanchi** 44.34 292 P P 01 03 43.2 -0.2
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
KOTAN **Kotaneelee Air** 44.34 45 P P 01 03 44.9 +1.7
baz=299
TOAD **Toad River Com** 44.44 47 P P 01 03 46.2 +2.2
baz=299
YKA **Yellowknife Ar** 47.06 39 P P 01 04 04.5 +0.6
comp=Z,2.5nm,0.6s,baz=302,slow=8.0,SNR=20
YKA PcP **PcP** 01 05 25.8 -0.4
comp=Z,0.2nm,0.4s,baz=307,slow=4.5,SNR=5.3
comp=Z,2.5nm,0.6s
BVAR **Borovoye Array** 47.14 305 P P 01 04 04.8 +0.1
comp=Z,4.6nm,0.5s,baz=61,slow=8.2,SNR=30
BVAR PcP **PcP** 01 05 26.1 -0.6
comp=Z,1.5nm,0.3s,baz=67,slow=3.3,SNR=7.1
BVAR PP **PP** 01 05 56.3 -5.0
comp=Z,1.5nm,0.7s,baz=52,slow=9.6,SNR=4.2
BVAR ScP **ScP** 01 08 30.9 -2.0
comp=Z,0.3nm,0.3s,baz=117,slow=1.9,SNR=2.4
comp=Z,4.6nm,0.5s
BORK **Borovoye** 47.16 305 P P 01 04 04.6 -0.2
BORK **Borovoye** 47.16 305 *ce* P P 01 04 03.4 -1.5
BORK pmax pmax
comp=Z,5.0nm,0.9s
SPITS **Spitsbergen Ar** 47.24 349 P P 01 04 04.2 -0.9
comp=Z,2.4nm,0.6s,baz=72,slow=9.5,SNR=6.1
comp=Z,2.4nm,0.6s
SPITS **Spitsbergen Ar** 47.24 349 P P 01 04 04.5 -0.6
SPITS pmax pmax
comp=Z,56nm,1.4s
TARG **Taragay, Kyrgy** 49.76 289 P P 01 04 25.4 +0.4
TARG IAmb IAmb 01 04 39.1
comp=Z,14nm,1.5s
TARG **Taragay, Kyrgy** 49.76 289 P P 01 04 25.4 +0.4
TARG pmax pmax
comp=Z,14nm,1.5s
KDJ **Kajisay** 49.87 290 P P 01 04 25.3 -0.2
KDJ **Kajisay** 49.87 290 P P 01 04 25.3 -0.2
KDJ pmax pmax
comp=Z,36nm,1.4s
BOOM **Boomskoye usch** 50.36 291 P P 01 04 29.1 0.0
BOOM IAmb IAmb 01 04 30.8
comp=Z,8.2nm,0.9s
BOOM **Boomskoye usch** 50.36 291 P P 01 04 29.1 0.0
BOOM pmax pmax
comp=Z,8.0nm,0.9s
ARTI **Arti** 50.86 314 P P 01 04 31.7 -0.6
comp=Z,7.3nm,0.6s,baz=61,slow=3.3,SNR=17
ARTI PcP **PcP** 01 05 39.5 -0.8
comp=Z,1.6nm,0.4s,baz=49,slow=6.2,SNR=4.3
comp=Z,7.3nm,0.6s
ARTI **Arti** 50.86 314 P 01 04 31.7 -0.6
ARTI PcP 01 05 39.2 -1.1
ARTI **Arti** 50.86 314 *c i* P P 01 04 32.2 -0.1
ARTI 01 05 36.1
ARTI 01 06 32.9
ARTI S **S** 01 11 12.5 +1.7
ARTI SS **SS** 01 14 53.8 +0.9
ARTI pmax pmax
comp=Z,12nm,0.9s
AAK **Ala-Archa** 51.10 292 P 01 04 34.7 +0.3
AAK **Ala-Archa** 51.10 292 *ce* P P 01 04 33.6 -0.8
AAK pmax pmax
comp=Z,3.0nm,1.0s
AAK **Ala-Archa** 51.10 292 *e* P P 01 04 33.6 -0.8
NLWA **Neilton Lookou** 51.54 60 P P 01 04 38.2 +0.8
NLWA IAmb IAmb 01 04 51.4
comp=Z,29nm,1.4s
KSH **Kashi** 52.25 288 P P 01 04 47.0 +4.3
KSH pmax pmax
comp=Z,3.0nm,0.7s
BLKN **Baker Lake** 52.50 31 P P 01 04 43.4 -0.5
BLKN IAmb IAmb 01 05 10.2
comp=Z,18nm,1.4s
ARA0 **ARCESS Array S** 52.62 339 *e* P P 01 04 44.5 -0.3
ARCES **ARCESS Array B** 52.62 339 P P 01 04 43.9 -0.8
comp=Z,1.1nm,0.4s,baz=33,slow=8.3,SNR=22
comp=Z,1.1nm,0.4s
ARCES **ARCESS Array B** 52.62 339 P P 01 04 44.0 -0.8
ARCES IAmb IAmb 01 05 10.1
comp=Z,22nm,1.5s
ARCES **ARCESS Array B** 52.62 339 P P 01 04 44.0 -0.8
ARCES pmax pmax
comp=Z,22nm,1.5s
KK31 **Karatay Array** 53.05 295 P P 01 04 48.0 -0.4
KK31 **Karatay Array** 53.05 295 P P 01 04 48.0 -0.4
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR **Karatay Array** 53.05 295 P P 01 04 48.1 -0.2
KKAR **Karatay Array** 53.05 295 P P 01 04 48.1 -0.2
KIRV **Kirov** 53.21 320 P P 01 04 49.0 -0.1
comp=Z,11nm,0.5s,baz=15,slow=1.2,SNR=5.7
comp=Z,11nm,0.5s
CMAR **Chiang Mai Arr** 53.29 252 P P 01 04 51.5 +1.1
comp=Z,1.9nm,0.8s,baz=25,slow=7.4,SNR=7.7
CMAR PcP **PcP** 01 05 50.9 +0.7
comp=Z,1.4nm,0.3s,baz=18,slow=3.1,SNR=5.5
comp=Z,1.9nm,0.8s
KTK1 **Kautokeino** 53.53 340 *e* P P 01 04 50.6 -0.7
EVN **Everest** 53.55 270 P P 01 04 52.7 -0.1
JETT **Jettan, Norway** 53.67 341 *e* P P 01 04 51.4 -0.9
AB31 **Akbulak array** 54.65 307 P 01 04 59.4 -0.1
ABKAR **Akbulak array** 54.65 307 P 01 04 59.7 +0.2
AKTO **Aktyubinsk** 54.81 309 P P 01 05 00.4 -0.3
comp=Z,3.5nm,0.4s,baz=58,slow=7.4,SNR=16
comp=Z,3.5nm,0.4s
SUMG **Summit** 55.39 4 P P 01 05 04.8 0.0
SUMG **Summit** 55.39 4 P P 01 05 04.8 0.0
SUMG pmax pmax
comp=Z,7.0nm,1.0s
J05D **Fort Rock, OR** 55.60 62 P P 01 05 08.8 +2.4
GAR **Garm** 55.87 291 P 01 05 08.2 -0.2
GAR IAmb IAmb 01 05 09.0
comp=Z,16nm,0.5s
FAUS **Fauske** 56.53 342 *e* P P 01 05 11.7 -0.5
CHGR **Chuyangaron** 56.77 292 P 01 05 14.4 -0.2
CHGR **Chuyangaron** 56.77 292 P P 01 05 14.4 -0.2
CHGR pmax pmax
comp=Z,29nm,0.9s
FCC **Fort Churchill** 57.14 35 P P 01 05 16.3 -0.3
FCC IAmb IAmb 01 05 16.4
comp=Z,32nm,1.4s
FCC **Fort Churchill** 57.14 35 P P 01 05 16.3 -0.3
FCC pmax pmax
comp=Z,32nm,1.4s
PLID **Pearl Lake** 57.18 57 P P 01 05 18.7 +1.3
RAUS **Rausandaksla** 57.59 341 *e* P P 01 05 19.2 -0.4
MOR8 **Moi Rana** 57.75 341 *e* P P 01 05 17.8 -2.8
NIL **Nilore** 57.82 285 P P 01 05 22.1 +0.3
NIL IAmb IAmb 01 05 23.4
comp=Z,15nm,1.0s
NIL **Nilore** 57.82 285 P P 01 05 22.1 +0.3
NIL pmax pmax
comp=Z,15nm,1.0s
LEIR **Leirfjorden** 58.06 342 *e* P P 01 05 20.8 -1.9
BELG **Belogornoye** 58.21 316 P P 01 05 23.3 -0.7
comp=Z,14nm,0.6s,baz=223,slow=0.6,SNR=11
comp=Z,14nm,0.6s
FIA1 **FINESS Array S** 58.97 333 P P 01 05 28.1 -0.8
FINES **FINESS Array B** 58.97 333 P P 01 05 28.5 -0.4
comp=Z,3.9nm,0.4s,baz=33,slow=7.9,SNR=48
FINES PcP **PcP** 01 06 11.0 -0.7
comp=Z,1.8nm,0.9s,baz=54,slow=3.6,SNR=3.4
comp=Z,3.9nm,0.4s
FINES **FINESS Array B** 58.97 333 P P 01 05 28.4 -0.6
NVAR **Mina Array Bea** 60.55 64 P P 01 05 41.3 +1.1
comp=Z,0.7nm,0.6s,baz=227,slow=32,SNR=2.7
comp=Z,0.7nm,0.6s
OBN **Obninsk** 60.60 324 P P 01 05 39.3 -0.6
comp=Z,7.2nm,0.5s,baz=329,slow=4.1,SNR=1.9
comp=Z,7.2nm,0.5s
OBN **Obninsk** 60.60 324 *i* P P 01 05 38.6 -1.4
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN **Obninsk** 60.60 324 *e* P P 01 05 38.6 -1.4
PDAR **Pinedale Array** 62.12 56 P P 01 05 51.8 +1.3
comp=Z,0.4nm,0.5s,baz=353,slow=2.3,SNR=8.6
comp=Z,0.4nm,0.5s
PDAR **Pinedale Array** 62.12 56 P P 01 05 51.5 +0.9
MOL **Molde** 62.32 342 *e* P P 01 05 51.9 +0.8
DOMB **Dombas** 62.51 341 *e* P P 01 05 53.8 +1.4
NB2 **NORSAR Subarra** 62.98 340 P P 01 05 54.8 -0.7
comp=Z,1.3nm,0.5s,baz=24,slow=6.5
NOA **NORSAR Array B** 62.98 340 P P 01 05 55.1 -0.4
comp=Z,1.5nm,0.4s,baz=27,slow=6.5,SNR=25
comp=Z,1.5nm,0.4s
KULM **Kulim** 63.01 241 P P 01 05 56.6 +0.3
NC602 **NORSAR Array S** 63.19 340 *e* P P 01 05 56.1 -0.7
HFS **Hagfors** 63.25 338 P P 01 05 56.6 -0.6
comp=Z,2.9nm,0.4s,baz=64,slow=3.8,SNR=32
comp=Z,2.9nm,0.4s
SKAR **Skarslia** 63.91 341 *e* P P 01 06 01.4 -0.1
KONO **Kongsberg** 64.59 340 *e* P P 01 06 05.9 +0.2
COEN **Coen** 66.25 190 P P 01 06 18.1 +1.4
COEN IAmb IAmb 01 06 18.8
comp=Z,7.7nm,0.9s
KIV **Kislovodsk** 66.70 312 *e* P P 01 06 18.3 -1.1
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV **Kislovodsk** 66.70 312 *e* P P 01 06 18.3 -1.1
KBZ **Khabaz** 66.78 312 P P 01 06 20.0 +0.3
comp=Z,3.6nm,0.7s,baz=95,slow=4.9,SNR=10
comp=Z,3.6nm,0.7s
KBZ **Khabaz** 66.78 312 *e* P P 01 06 18.6 -1.1
KBZ pmax pmax
comp=Z,6.0nm,1.0s
KBZ **Khabaz** 66.78 312 *e* P P 01 06 18.6 -1.1
AKASG **Malin Array Be** 66.81 325 P P 01 06 18.8 -1.0
comp=Z,1.8nm,0.4s,baz=35,slow=6.4,SNR=6.2
comp=Z,1.8nm,0.4s
AKBB **Malin Array Si** 66.81 325 P P 01 06 18.5 -1.2
AKBB IAmb IAmb 01 06 19.2
comp=Z,5.2nm,0.8s
AKBB **Malin Array Si** 66.81 325 *ce* P P 01 06 17.1 -2.6
AKBB pmax pmax
comp=Z,3.0nm,0.9s
MTN **Manton Dam** 67.21 202 P P 01 06 23.6 +1.0
MTN IAmb IAmb 01 06 24.4
comp=Z,9.7nm,0.7s
ECSD **EROS Data Cent** 67.62 47 P P 01 06 25.0 +0.1
SCHQ **Schefferville** 68.60 23 P P 01 06 30.2 -0.5
comp=Z,2.9nm,0.3s,baz=345,slow=4.6,SNR=14
comp=Z,2.9nm,0.3s
SCHQ **Schefferville** 68.60 23 P P 01 06 30.1 -0.6
OJC **Ojcow** 70.37 330 P P 01 06 41.3 -0.1
OJC **Ojcow** 70.37 330 P P 01 06 41.3 -0.1
KNRA **Kununurra** 70.51 204 P P 01 06 43.4 +0.9
KNRA IAmb IAmb 01 06 44.2
comp=Z,6.3nm,0.9s
STHS **Stebnicka Huta** 70.61 328 *e* P P 01 06 42.3 -0.6
STHS **Stebnicka Huta** 70.61 328 *e* P P 01 06 42.3 -0.6
BUR08 **Bucovina Ar. S** 70.81 325 P P 01 06 43.8 -0.4
BURAR **Bucovina Array** 70.83 325 P P 01 06 43.8 -0.4
EKA **Eskdalemuir Ar** 71.00 345 P P 01 06 44.8 -0.2
comp=Z,1.9nm,0.4s,baz=16,slow=5.1,SNR=22
comp=Z,1.9nm,0.4s
ESK **Eskdalemuir** 71.02 345 P P 01 06 44.8 -0.3
ESK **Eskdalemuir** 71.02 345 P P 01 06 44.8 -0.3
ESK pmax pmax
comp=Z,38nm,1.5s
LANS **Liptovska Anna** 71.41 329 *e* P P 01 06 48.5 +0.9
LANS **Liptovska Anna** 71.41 329 *e* P P 01 06 48.5 +0.9
VRAC **Vranov** 72.15 331 P P 01 06 51.2 -0.7
comp=Z,2.5nm,0.5s,baz=18,slow=6.6,SNR=5.7
comp=Z,2.5nm,0.5s
MLR **Muntele Rosu** 72.38 323 P P 01 06 53.0 -0.4
MLR IAmb IAmb 01 06 54.5
comp=Z,3.6nm,0.5s
MLR **Muntele Rosu** 72.38 323 P P 01 06 53.0 -0.4
MLR pmax pmax
comp=Z,4.0nm,0.5s
MODS **Modra-Piesok** 72.78 330 *e* P P 01 06 57.1 +1.6
MODS **Modra-Piesok** 72.78 330 *e* P P 01 06 57.1 +1.6
MARD **Mardin** 72.82 309 P P 01 06 56.7 +0.6
MARD IAmb IAmb 01 06 57.7
comp=Z,8.9nm,0.6s
WB0 **Warramunga Arr** 73.24 198 P P 01 06 58.9 +0.5
WB0 IAmb IAmb 01 06 59.8
comp=Z,4.6nm,0.8s
GERES **GERESS Array B** 73.40 333 P P 01 06 58.9 -0.3
comp=Z,1.1nm,0.4s,baz=34,slow=5.0,SNR=7.8
comp=Z,1.1nm,0.4s
GERES **GERESS Array B** 73.40 333 *e* P P 01 06 59.1 -0.1
GERES pmax pmax
comp=Z,1.0nm,0.4s
WR8 **Warramunga Arr** 73.40 197 P P 01 06 59.9 +0.5
WRA **Warramunga Arr** 73.42 198 P P 01 07 00.2 +0.8
comp=Z,4.5nm,0.7s,baz=12,slow=5.9,SNR=35
comp=Z,4.5nm,0.7s
WRA **Warramunga Arr** 73.42 198 P P 01 06 59.7 +0.2
WRA **Warramunga Arr** 73.42 198 P P 01 06 59.7 +0.2
CONA **Conrad Observa** 73.60 331 *i* P P 01 07 01.1 +0.8
comp=Z,1.5nm,0.5s
FITZ **Fitzroy Crossi** 73.64 206 P P 01 07 01.5 +0.8
RONA **Rosalia, Austr** 73.68 331 *i* P P 01 07 00.9 +0.2
comp=Z,0.5nm,0.3s
BR131 **Keskin Array S** 74.13 315 P 01 07 02.8 -0.8
BR131 **Keskin Array S** 74.13 315 P P 01 07 02.8 -0.8
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BRTR **Keskin Array B** 74.13 315 P P 01 07 03.5 0.0
comp=Z,2.5nm,0.8s,baz=52,slow=3.2,SNR=12
comp=Z,2.5nm,0.8s
BRTR **Keskin Array B** 74.13 315 P P 01 07 02.8 -0.8
MOA **Molln** 74.14 332 *e* P P 01 07 03.6 +0.2
comp=Z,1.1nm,0.5s
UOSS **Minazif** 74.25 290 P P 01 07 03.3 -1.0
UOSS IAmb IAmb 01 07 04.2
comp=Z,4.4nm,0.8s
LMQ **La Malbaie** 74.27 28 P P 01 07 03.8 -0.3
ARSA **Arzberg** 74.31 331 *i* P P 01 07 04.0 -0.3
comp=Z,0.8nm,0.3s
SOKA **Soboth** 74.97 331 *i* P P 01 07 07.3 -0.9
comp=Z,1.4nm,0.4s
LESA **Schwarzleotal** 74.98 333 *i* P P 01 07 07.8 -0.4
comp=Z,1.0nm,0.3s
D62A **Allapoint, All** 75.06 28 P P 01 07 08.0 -0.5
D62A IAmb IAmb 01 07 50.8
comp=Z,28nm,1.5s
KBA **Koelnbreinsper** 75.11 332 *i* P P 01 07 09.9 +0.9
comp=Z,4.4nm,0.5s
TXAR **Lajitas Array** 75.39 61 P P 01 07 12.2 +1.5
comp=Z,0.4nm,0.7s,baz=302,slow=2.8,SNR=3.4
comp=Z,0.4nm,0.7s
MOTA **Moosalm** 75.49 334 *i* P P 01 07 11.0 0.0
comp=Z,1.6nm,0.5s
FUORN **Ofenpass-Fuorn** 76.38 334 P P 01 07 16.3 +0.1
FUORN IAmb IAmb 01 07 41.2
comp=Z,7.7nm,1.2s
TUE **Stuetta** 76.76 335 P P 01 07 18.4 +0.2
TUE IAmb IAmb 01 07 21.8
comp=Z,6.4nm,1.0s
AS31 **Alice Springs** 77.13 197 P P 01 07 21.6 +1.4
ASAR **Alice Springs** 77.13 197 P P 01 07 21.7 +1.5
comp=Z,8.1nm,0.7s,baz=8.5,slow=5.4,SNR=89
comp=Z,8.1nm,0.7s
ASAR **Alice Springs** 77.13 197 P P 01 07 21.4 +1.3
LMN **Caledonia Moun** 77.36 26 P P 01 07 20.6 -0.6
MBWA **Marble Bar** 78.28 211 P P 01 07 26.3 -0.1
MBWA IAmb IAmb 01 07 29.7
comp=Z,22nm,1.4s
PSA00 **Pilbara Seismi** 78.63 211 P P 01 07 27.9 -0.4
BNI **Bardonecchia** 78.77 336 P P 01 07 28.7 -0.3
BNI IAmb IAmb 01 07 46.9
comp=Z,11nm,1.3s
BNI **Bardonecchia** 78.77 336 P P 01 07 28.7 -0.3
BNI pmax pmax
comp=Z,11nm,1.3s
MMAI **Mount Meron Ar** 78.87 310 P P 01 07 30.3 +0.6
comp=Z,3.9nm,0.4s,baz=46,slow=6.0,SNR=46
comp=Z,3.9nm,0.4s
BALJ **Balqa** 79.52 309 P P 01 07 33.0 -0.1
BALJ IAmb IAmb 01 07 34.3
comp=Z,11nm,0.7s
RAYN **Ar Rayn** 81.40 297 P 01 07 42.1 -0.9
RAYN IAmb IAmb 01 07 43.7
comp=Z,12nm,1.3s
RAYN **Ar Rayn** 81.40 297 P P 01 07 42.1 -0.9
RAYN pmax pmax
comp=Z,12nm,1.3s
STKA **Stephens Creek** 84.14 189 P P 01 07 57.7 +1.4
comp=Z,1.1nm,0.3s,baz=282,slow=12,SNR=4.0
comp=Z,1.1nm,0.3s
FORT **Forrest** 85.21 201 P P 01 08 01.6 0.0
FORT IAmb IAmb 01 08 17.0
comp=Z,8.7nm,1.1s
ESDC **Sonseca Array** 86.27 342 P P 01 08 05.9 -1.1
comp=Z,0.7nm,0.8s,baz=352,slow=3.9,SNR=3.0
comp=Z,0.7nm,0.8s
KEST **Kesra** 86.70 331 P P 01 08 08.6 -0.5
comp=Z,3.3nm,0.6s,baz=11,slow=2.0,SNR=15
comp=Z,3.3nm,0.6s
KEST **Kesra** 86.70 331 P P 01 08 08.8 -0.3
KEST IAmb IAmb 01 08 41.4
comp=Z,10nm,1.3s
VNDA **Vanda** 129.49 177 PKP **PKPdf** 01 14 28.4 -0.2
comp=Z,0.8nm,0.8s,baz=274,slow=3.8,SNR=4.0
BOSA **Boshof** 134.52 280 PKP **PKPdf** 01 14 40.0 +0.3
comp=Z,2.9nm,1.0s,baz=60,slow=4.3,SNR=5.8
QSPA **South Pole Qui** 141.84 180 PKP **PKPdf** 01 14 51.3 -0.5
comp=Z,2.0nm,0.6s,baz=244,slow=0.7,SNR=6.2
MT02 **Curacav** 143.65 76 PKPbc PKPab 01 14 54.9 +0.2
BI02 **San Fabin de** 145.87 81 PKPdf **PKPdf** 01 15 00.9 +1.1
CPUP **Villa Florida** 145.97 52 PKPbc **PKPdf** 01 15 01.0 +0.8
comp=Z,0.3nm,0.4s,baz=237,slow=0.9,SNR=4.0
CPUP **Villa Florida** 145.97 52 PKP2 **PKPdf** 01 15 01.0 +0.8
PLCA **Paso Flores** 148.84 86 PKPbc **PKPbc** 01 15 10.2 +1.0
comp=Z,2.5nm,0.6s,baz=304,slow=4.1,SNR=13
PLCA **Paso Flores** 148.84 86 **PKPbc** 01 15 09.6 +0.4
TRQA **Tornquist** 152.36 73 PKPbc **PKPbc** 01 15 17.1 -0.2
TRQA **Tornquist** 152.36 73 PKIKP **PKPbc** 01 15 17.1 -0.2

SDD ***28*** *01:14:22.7±1.3, 19°46N×68°07W, h20km±181km, MD3.3,*

ML1.9,MW2.1
*NEIC **28** 01:14:23.1±1.1,19.43N±0.05×68.15W±0.05,h10km±2km, ML2.3/2,Md2.7/5(RSPR),Error ellipse: s-maj=11.0km s-min=4.7km az=48.0*
*RSPR **28** 01:14:25.9,19.56N×68.15W,h34km±23km, MD2.7/5*

ISC 28 01:14:22.7±2.5,19.4N±0.1×68.16W±0.04,h11km±11km, n17,σ0s56/22,7C-4D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.93**	**193**	*e*Pg	**Pg**	**01 14 40.9**	**+0.2**
PCDR				⇑*e*Sg	**Sg**	**01 14 52.5**	**-0.3**
PCDR				IAML		01 14 53.8	
	comp=N,90nm,1.3s						
MIDR	**Miches**	**0.95**	**243**	⇑*e*Pg	**Pb**	**01 14 40.9**	**-0.3**
MIDR				⇑*e*Sg	**Sb**	**01 14 54.6**	**+0.9**
MIDR				IAML		01 15 37.7	
	comp=N,12nm,1.3s						
MIDR	**Miches**	**0.95**	**243**	⇑*e*P	**Pb**	**01 14 40.9**	**-0.3**
MIDR	**Miches**	**0.95**	**243**	*e*S	**Sn**	**01 14 55.1**	**-0.4**
DR12	**Loma Pena Alta**	**1.32**	**241**	Pn	**Pn**	**01 14 46.6**	**-0.5**
DR12				Sn	**Sn**	**01 15 05.1**	**+0.4**
HATOM	**Hato Mayor del**	**1.32**	**241**	⇑*e*Pg	**Pn**	**01 14 46.5**	**-0.5**
HATOM				⇑*e*Sg	**Sg**	**01 15 05.7**	**+0.6**
HATOM				IAML		01 15 47.4	
	comp=N,18nm,2.1s						
AGPR	**Aguadilla, PR**	**1.38**	**134**	⇓*e*P	**Pg**	**01 14 49.3**	**+0.1**
AGPR	**Aguadilla, PR**	**1.38**	**134**	*e*S	**Sb**	**01 15 06.3**	**+0.3**
LSP	**Las Mesas**	**1.61**	**141**		**Pb**	**01 14 52.3**	**-0.1**
LSP					**Sb**	**01 15 12.2**	**-0.5**
LSP	**Las Mesas**	**1.61**	**141**	⇓*e*P	**Pb**	**01 14 52.3**	**-0.1**
LSP	**Las Mesas**	**1.61**	**141**	*e*S	**Sb**	**01 15 12.2**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.73**	**145**		**Pb**	**01 14 53.6**	**-0.8**
CRPR					**Sn**	**01 15 15.2**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.73**	**145**	IAML		01 15 13.6	
	comp=N,35nm,2.4s						
CRPR				IAML		01 15 18.4	
	comp=N,32nm,2.0s						
CRPR	**Cabo Rojo, PR**	**1.73**	**145**	⇓*e*P	**Pb**	**01 14 53.6**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.73**	**145**	*e*S	**Sb**	**01 15 15.6**	**-0.5**
MLPR	**Magueyes Islan**	**1.79**	**144**	⇓*e*P	**Pn**	**01 14 54.3**	**+0.8**
MLPR	**Magueyes Islan**	**1.79**	**144**	*e*S	**Sn**	**01 15 16.9**	**+0.6**

*RHSSO **28** 01:20:39.0±0.4,43.13N×18.12E,h6km, ML2.5/3*

ISC 28 01:20:39.3±1.0,43.12N±0.03×18.16E±0.04,h12km±10km, n16,σ1s14/30,1C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.31**	**81**	*e*Pg	**Pg**	**01 20 45.1**	**-0.6**
KLINJ				*e*Sg	**Sg**	**01 20 50.8**	**+0.8**
TREB	**Trebinje**	**0.43**	**161**	⇑*i*Pg	**Pg**	**01 20 47.3**	**-0.4**
TREB				*e*Sg	**Sg**	**01 20 54.3**	**+0.9**
DBRK	**Dubrovnik**	**0.45**	**181**	*e*Pg	**Pg**	**01 20 48.2**	**0.0**
DBRK				Sg	**Sg**	**01 20 54.9**	**+0.7**
RICI	**Ricice**	**0.84**	**297**	*e*Pg	**Pb**	**01 20 55.8**	**0.0**
MAKA	**Makarska**	**0.85**	**282**	*e*Pg	**Pb**	**01 20 55.7**	**-0.3**
MAKA				Sg	**Sn**	**01 21 08.8**	**-0.6**
LSTV	**Lastovo**	**1.00**	**250**	*e*Pg	**Pn**	**01 20 58.8**	**-0.3**
LSTV				Sg	**Sn**	**01 21 13.0**	**-0.1**
HVAR	**Hvar**	**1.25**	**273**	*i*Pg	**Pn**	**01 21 03.7**	**+1.1**
HVAR				Sg	**Sn**	**01 21 21.3**	**+1.9**
KIJV	**Kijevo**	**1.55**	**305**	*e*Pg	**Pg**	**01 21 09.8**	**+0.8**
KIJV				Sg	**Sg**	**01 21 31.8**	**+2.6**
BLY	**Banja Luka**	**1.77**	**337**	*e*Pn	**Pn**	**01 21 10.0**	**+0.2**
BLY				*e*Sn	**Sn**	**01 21 32.6**	**+0.3**
ZIRJ	**Zirje**	**1.91**	**287**	*e*Pn	**Pb**	**01 21 14.0**	**0.0**
ZIRJ				Sn	**Sg**	**01 21 39.7**	**-1.0**
MORI	**Morici**	**1.94**	**293**	*i*Pn	**Pg**	**01 21 15.4**	**-1.0**
MORI				Sn	**Sg**	**01 21 41.0**	**-0.5**
DUGI	**Dugi Otok**	**2.42**	**292**	Sn	**Sb**	**01 21 51.7**	**-0.8**
PLIT	**Plitvice**	**2.54**	**315**	*e*Pn	**Pn**	**01 21 22.1**	**+1.8**
PLIT				Sn	**Sb**	**01 21 56.3**	**+0.4**
VIRC	**Vir**	**2.54**	**299**	*e*Pn	**Pb**	**01 21 22.5**	**-2.2**
VIRC				Sn	**Sb**	**01 21 56.2**	**+0.3**
NVLJ	**Novalja**	**2.78**	**302**	*e*Pn	**Pb**	**01 21 26.5**	**-2.4**
NVLJ				Sn	**Sb**	**01 22 01.9**	**-1.0**
MORH	**Mrgy, Hungar**	**3.11**	**6**	*e*Pn	**Pn**	**01 21 28.7**	**+0.6**
MORH				*e*Sn	**Sn**	**01 22 05.2**	**0.0**

*NEIC **28** 01:24:01.0±1.6,14.22S±0.10×167.3E±0.2,h151km±8km, mb4.4/19,Error ellipse: s-maj=27.5km s-min=12.5km az=105.0*
*IDC **28** 01:24:02.9±5.2,14.24S×167.14E,h170km±48km,mb3.8/7, mbtmp4.1/8,Error ellipse: s-maj=42.2km s-min=26.7km az=153.0*

ISC 28 01:24:00.5±0.7,14.17S±0.09×167.2E±0.1,h150km,n38, σ0s96/39,mb4.2/17,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.27**	**178**		**Pn**	**01 24 28.8**	**+1.0**
SANVU				Sn	**Sn**	**01 24 48.0**	**-0.7**
DZM	**Mont Dzumac**	**7.89**	**185**	P	**Pn**	**01 25 54.7**	**+2.2**
	2.1nm,0.5s						
DZM	**Mont Dzumac**	**7.89**	**185**		**Pn**	**01 25 51.9**	**-0.7**
EIDS	**Eidsvold**	**18.77**	**231**	P	**P**	**01 28 09.0**	**+0.8**
CTAO	**Charters Tower**	**20.82**	**251**	P	**P**	**01 28 30.7**	**+0.3**
ARMA	**Armidale**	**21.59**	**219**	P	**P**	**01 28 41.2**	**+2.5**
ARMA				IAmb	IAmb	01 28 46.3	
	comp=Z,18nm,1.4s						
CAN	**Canberra**	**26.66**	**215**	P	**P**	**01 29 25.9**	**+0.4**
CAN				IAmb	IAmb	01 30 07.7	
	comp=Z,19nm,1.5s						
STKA	**Stephens Creek**	**29.28**	**229**	P	**P**	**01 29 49.6**	**+0.8**
	comp=Z,7.5nm,0.5s,baz=49,slow=11,SNR=17						
	comp=Z,7.5nm,0.5s						
STKA	**Stephens Creek**	**29.28**	**229**	P	**P**	**01 29 49.9**	**+1.1**
TOO	**Toolangi**	**30.24**	**216**	P	**P**	**01 29 57.9**	**+0.7**
TOO				IAmb	IAmb	01 30 33.5	
	comp=Z,5.7nm,1.2s						
WR8	**Warramunga Arr**	**31.72**	**255**	P	**P**	**01 30 10.1**	**-0.3**
WR8				IAmb	IAmb	01 30 35.7	
	comp=Z,4.8nm,1.4s						
WB0	**Warramunga Arr**	**31.80**	**255**	P	**P**	**01 30 10.9**	**-0.2**
WB0				IAmb	IAmb	01 30 15.6	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**31.87**	**255**	P	**P**	**01 30 11.2**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=86,slow=9.2,SNR=6.6						
	comp=Z,1.0nm,0.7s						
AS31	**Alice Springs**	**32.78**	**248**	P	**P**	**01 30 18.9**	**-0.8**
ASAR	**Alice Springs**	**32.78**	**248**	P	**P**	**01 30 18.9**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=78,slow=8.9,SNR=29						
	comp=Z,2.5nm,0.5s						
ASAR	**Alice Springs**	**32.78**	**248**	P	**P**	**01 30 18.7**	**-1.0**
BBOO	**Buckleboo**	**33.84**	**231**	P	**P**	**01 30 29.3**	**+0.6**
BBOO				IAmb	IAmb	01 30 29.9	
	comp=Z,14nm,0.7s						
KNRA	**Kununurra**	**37.10**	**263**	P	**P**	**01 30 56.6**	**-0.2**
KNRA				IAmb	IAmb	01 30 58.3	
	comp=Z,4.9nm,0.9s						
FORT	**Forrest**	**39.50**	**239**	P	**P**	**01 31 16.6**	**0.0**
FORT				IAmb	IAmb	01 31 17.2	
	comp=Z,6.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.02**	**259**	P	**P**	**01 31 21.1**	**0.0**
MBWA	**Marble Bar**	**45.60**	**254**	P	**P**	**01 32 06.3**	**+0.3**
MBWA				IAmb	IAmb	01 32 12.3	
	comp=Z,20nm,1.4s						
NWAO	**Narrogin (SRO)**	**48.95**	**239**	P	**P**	**01 32 30.2**	**-1.6**
INCN	**Inchon**	**63.96**	**325**	P	**P**	**01 34 18.1**	**+0.3**
DHY	**Denali Highway**	**84.66**	**19**	P	**P**	**01 36 17.6**	**+0.4**
DHY				IAmb	IAmb	01 36 38.5	
	comp=Z,12nm,0.7s						
ILAR	**Eielson Array**	**86.03**	**18**	P	**P**	**01 36 22.9**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=249,slow=4.6,SNR=5.6						
	comp=Z,0.6nm,0.8s						
ILAR	**Eielson Array**	**86.03**	**18**	P	**P**	**01 36 24.4**	**+0.7**
PV03	**Paradox Valley**	**94.01**	**52**	P	**P**	**01 37 02.4**	**+0.3**
SNAA	**Sanae**	**94.10**	**183**	P	**P**	**01 36 59.8**	**-1.9**
	comp=Z,1.2nm,1.0s,baz=195,slow=8.1,SNR=5.0						
	comp=Z,1.2nm,1.0s						
SNAA	**Sanae**	**94.10**	**183**	P	**P**	**01 37 00.3**	**-1.4**
SNAA				IAmb	IAmb	01 37 01.7	
	comp=Z,2.4nm,1.1s						
MKAR	**Makanchi Array**	**96.73**	**316**	P	**P**	**01 37 15.1**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=102,slow=6.6,SNR=2.2						
	comp=Z,0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**96.88**	**324**	P	**P**	**01 37 14.8**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=117,slow=5.0,SNR=2.1						
	comp=Z,0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**96.88**	**324**	P	**P**	**01 37 12.8**	**-1.7**
ARCES	**ARCESS Array B**	**119.69**	**345**	PKP	**PKiKP**	**01 42 32.4**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=60,slow=1.9,SNR=16						
ARCES	**ARCESS Array B**	**119.69**	**345**		**PKiKP**	**01 42 32.7**	**+0.5**
FINES	**FINESS Array B**	**125.17**	**338**	PKP	**PKPdf**	**01 42 42.5**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=46,slow=5.5,SNR=4.3						
FINES	**FINESS Array B**	**125.17**	**338**		**PKiKP**	**01 42 43.1**	**-0.1**
KEST	**Kesra**	**150.72**	**321**	PKPbc	**PKiKP**	**01 43 36.6**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=199,slow=2.1,SNR=7.0						
KEST	**Kesra**	**150.72**	**321**		**PKPbc**	**01 43 35.9**	**+0.3**

*SOME **28** 01:27:00.7,42.47N×78.52E,h15km*
*KRNET **28** 01:27:00.9±0.1,42.44N×78.55E,h22km,mb2.6*
*NNC **28** 01:27:01.0±0.7,42.54N×78.52E,h0km,mb2.6,mpv3.2, Error ellipse: s-maj=5.3km s-min=2.0km az=171.0*

ISC 28 01:27:01.3±1.0,42.48N±0.04×78.52E±0.03,h10km±6km, n32,σ1s37/61,11C-11D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.09**	**272**	⇑*e*P	**Pg**	**01 27 04.6**	**+0.6**
PRZ				⇑*e*S	**Sg**	**01 27 07.3**	**+1.3**
SATY	**Saty**	**0.58**	**352**	P	**Pg**	**01 27 11.7**	**-1.0**
	8.5nm,0.1s						
SATY				S	**Sg**	**01 27 19.3**	**-1.1**
	39nm,0.1s						
UZB	**Uzynbulak**	**0.76**	**29**	P	**Pg**	**01 27 14.9**	**-1.2**
	7.6nm,0.1s						
UZB				S	**Sg**	**01 27 25.1**	**-1.0**
	46nm,0.1s						
UZB	**Uzynbulak**	**0.76**	**29**	*e*P	**Pg**	**01 27 14.9**	**-1.2**
	7.6nm,0.1s						
UZB				*e*S	**Sg**	**01 27 25.1**	**-1.0**
	46nm,0.1s						
TARG	**Taragay, Kyrgy**	**0.92**	**215**	⇑*e*P	**Pg**	**01 27 17.8**	**-1.3**
TARG				⇑*e*S	**Sg**	**01 27 30.1**	**-1.0**
SHLS	**Shalkode**	**0.97**	**45**	P	**Pn**	**01 27 23.2**	**+2.1**
	2.7nm,0.1s						
SHLS				S	**Sn**	**01 27 38.9**	**+3.9**
	16nm,0.2s						
SHLS	**Shalkode**	**0.97**	**45**	*e*P	**Pn**	**01 27 23.2**	**+2.1**
	2.7nm,0.1s						
SHLS				*e*S	**Sn**	**01 27 38.9**	**+3.9**
	16nm,0.2s						
KPKS	**Kokpek**	**0.99**	**7**	P	**Pb**	**01 27 19.1**	**-1.5**
	0.3nm,0.1s						
KPKS				S	**Sb**	**01 27 32.0**	**-1.8**
	25nm,0.2s						
KPKS	**Kokpek**	**0.99**	**7**	*e*P	**Pb**	**01 27 19.1**	**-1.5**
	0.3nm,0.1s						
KPKS				*e*S	**Sb**	**01 27 32.0**	**-1.8**
	25nm,0.2s						
KDJ	**Kajisay**	**1.05**	**251**	⇓*i*P	**Pb**	**01 27 20.5**	**-1.2**
KDJ				⇓*e*S	**Sg**	**01 27 34.8**	**-0.5**
PDGK	**Podgornoye**	**1.11**	**40**	⇑P	**Pb**	**01 27 21.4**	**-1.3**
	1.2nm,0.6s						
PDGK				⇓S	**Sb**	**01 27 35.2**	**-2.0**
	9.8nm,0.6s						
KOTS	**Kotyrbulak**	**1.28**	**307**	P	**Pn**	**01 27 24.6**	**-0.8**
	21nm,0.1s						
KOTS				S	**Sb**	**01 27 41.4**	**-0.7**
	18nm,0.2s						
KOTS	**Kotyrbulak**	**1.28**	**307**	*e*P	**Pn**	**01 27 24.6**	**-0.8**
	21nm,0.1s						
KOTS				*e*S	**Sb**	**01 27 41.4**	**-0.7**
	18nm,0.2s						
KNDC	**Almaty**	**1.36**	**303**	⇑P	**Pb**	**01 27 25.9**	**-0.9**
	5.4nm,0.3s						
KNDC				⇑S	**Sb**	**01 27 43.7**	**-0.6**
	13nm,0.3s						
BLB	**Baldybastay**	**1.62**	**359**	P	**Pb**	**01 27 30.6**	**-0.7**
	26nm,0.1s						
BLB				S	**Sb**	**01 27 51.7**	**-0.1**
	26nm,0.2s						
MTBS	**Maitube**	**1.67**	**294**	P	**Pb**	**01 27 31.4**	**-0.8**
	1.2nm,0.1s						
MTBS				S	**Sb**	**01 27 53.0**	**-0.2**
	7.9nm,0.2s						
MTBS	**Maitube**	**1.67**	**294**	*e*P	**Pb**	**01 27 31.4**	**-0.8**
	1.2nm,0.1s						
MTBS				*e*S	**Sb**	**01 27 53.0**	**-0.2**
	7.9nm,0.2s						
ULHL	**Ulahol**	**1.70**	**263**	⇑*e*P	**Pb**	**01 27 32.4**	**-0.4**
ULHL				⇑*e*S	**Sg**	**01 27 55.3**	**-0.8**
ARXS	**Arharly**	**1.80**	**344**	P	**Pb**	**01 27 33.8**	**-0.6**
	6.8nm,0.1s						
ARXS				S	**Sb**	**01 27 57.6**	**+0.4**
	28nm,0.4s						
ARXS	**Arharly**	**1.80**	**344**	*e*P	**Pb**	**01 27 33.8**	**-0.6**
	6.8nm,0.1s						
ARXS				*e*S	**Sb**	**01 27 57.5**	**+0.4**
	28nm,0.4s						
BOOM	**Boomskoye usch**	**1.91**	**271**	⇑*e*P	**Pb**	**01 27 35.3**	**-1.0**
BOOM				⇑*e*S	**Sb**	**01 28 00.5**	**+0.3**
KNOS	**Konyrlen**	**1.94**	**14**	P	**Pb**	**01 27 35.7**	**-1.1**
	5.8nm,0.1s						
KNOS				S	**Sb**	**01 28 00.6**	**-0.5**
	9.9nm,0.2s						
KST	**Kastek**	**1.96**	**287**	Pg	**Pb**	**01 27 36.9**	**-0.3**
	2.3nm,0.2s						
KST				Lg	Lg	01 28 02.4	
	14nm,0.3s						
KST	**Kastek**	**1.96**	**287**	*e*P	**Pb**	**01 27 36.9**	**-0.3**
	2.3nm,0.2s						
KST				*e*S	**Sb**	**01 28 02.5**	**+0.7**
	14nm,0.3s						
DGS	**Degeres**	**2.16**	**292**	Pg	**Pb**	**01 27 40.0**	**-0.6**
	2.0nm,0.3s						
DGS				Lg	Lg	01 28 07.9	
	2.7nm,0.2s						
DGS	**Degeres**	**2.16**	**292**	*e*P	**Pb**	**01 27 40.0**	**-0.6**
	2.0nm,0.3s						
DGS				*e*S	**Sb**	**01 28 07.9**	**+0.6**
	2.7nm,0.2s						
TKM2	**Tokmak 2**	**2.20**	**283**	⇓*e*P	**Pb**	**01 27 39.6**	**-1.7**
TKM2				⇓*e*S	**Sb**	**01 28 07.9**	**-0.7**
KRBS	**Karabastau**	**2.41**	**301**	Pg	**Pb**	**01 27 44.0**	**-0.8**
	3.8nm,0.3s						
KRBS				Lg	Lg	01 28 14.9	
	3.9nm,0.3s						
KRBS	**Karabastau**	**2.41**	**301**	*e*P	**Pb**	**01 27 44.0**	**-0.8**
KRBS				*e*S	**Sb**	**01 28 14.9**	**+0.4**
JNKS	**Jany-Kuch**	**2.57**	**237**	⇓*e*P	**Pn**	**01 27 44.2**	**+1.0**
JNKS				⇓*e*S	**Sb**	**01 28 16.0**	**-3.4**
UCH	**Uchtor**	**2.98**	**266**	⇓*e*P	**Pn**	**01 27 50.3**	**+1.3**
UCH				⇓*e*S	**Sn**	**01 28 26.5**	**+1.5**
ARLS	**Aral**	**3.18**	**260**	⇓*e*P	**Pn**	**01 27 53.1**	**+1.6**
ARLS				⇓*e*S	**Sn**	**01 28 30.7**	**+1.2**

*IDC **28** 01:33:20.2±1.9,41.36N×19.36E,h0km,mb3.7/5, mbtmp3.6/10,ML3.1/5,MS3.6/1,Error ellipse: s-maj=25.8km s-min=13.0km az=28.0*
*PRU **28** 01:33:23.4,41.68N×20.17E,h10km*
*TIR **28** 01:33:24.6,41.72N×19.52E,h45km±2km,Ml3.4/7*
*BEO **28** 01:33:25.5±0.5,41.58N×19.67E,h7km±2km,ML2.9/16*
*PDG **28** 01:33:26.0±0.4,41.59N×19.60E,h7km±2km, MD3.3/5, ML3.2/13,Error ellipse: s-maj=1.9km s-min=2.1km az=0.0*

ISC 28 01:33:25.0±0.9,41.61N±0.02×19.60E±0.02,h15km±7km, n128,σ1s91/197,mb3.6/4,28C-31D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**143**	⇓Pg	**Pg**	**01 33 32.1**	**+0.2**
TIR				Sg	**Sg**	**01 33 36.9**	**+0.3**
TIR				AML	AML	01 33 37.4	
	19nm,0.5s						
ULC	**Ulcinj**	**0.44**	**323**	⇑*i*Pg	**Pg**	**01 33 33.6**	**-0.2**
ULC				*e*Sg	**Sb**	**01 33 40.3**	**-0.5**
SDA	**Shkodra**	**0.45**	**350**	Pg	**Pb**	**01 33 34.1**	**-0.5**
SDA				Sg	**Sb**	**01 33 40.6**	**-0.3**
PHP	**Peshkopia**	**0.64**	**83**	⇑Pg	**Pb**	**01 33 37.5**	**-0.3**
PHP				Sg	**Sn**	**01 33 48.7**	**-0.7**
PHP				AML	AML	01 33 54.0	
	6.6nm,0.7s						
DRME	**Dracevica, Mon**	**0.65**	**332**	*e*Pg	**Pb**	**01 33 37.8**	**-0.3**
DRME				*e*Sg	**Sn**	**01 33 49.2**	**-0.5**
DRME	**Dracevica, Mon**	**0.65**	**332**	*e*Pg	**Pb**	**01 33 37.5**	**-0.6**
DRME				*e*Sg	**Sb**	**01 33 47.3**	**+0.4**
PDG	**Podgorica**	**0.85**	**343**	Pg	**Pg**	**01 33 40.9**	**-0.7**
PDG				Sg	**Sg**	**01 33 50.8**	**-2.1**
PDG	**Podgorica**	**0.85**	**343**	⇓P	**Pn**	**01 33 43.0**	**+0.5**
PDG				⇑S	**Sn**	**01 33 54.4**	**-0.2**
PDG	**Podgorica**	**0.85**	**343**	*e*Pg	**Pg**	**01 33 40.6**	**-1.0**
PDG				*e*Sg	**Sn**	**01 33 55.5**	**+0.8**
PDG	**Podgorica**	**0.85**	**343**	⇓*i*Pg	**Pg**	**01 33 40.9**	**-0.7**
PDG				*e*Sg	**Sn**	**01 33 54.3**	**-0.4**
BUM	**Brajici-Budva**	**0.86**	**323**	*e*Pg	**Pb**	**01 33 41.6**	**-0.1**
BUM				*e*Sg	**Sn**	**01 33 54.6**	**-0.4**
PVY	**Plav**	**1.02**	**15**	*e*Pg	**Pb**	**01 33 44.0**	**-0.4**
PVY				*e*Sg	**Sb**	**01 33 57.6**	**0.0**
PVY	**Plav**	**1.02**	**15**	⇑*i*Pg	**Pb**	**01 33 43.9**	**-0.5**
PVY				*e*Sg	**Sn**	**01 33 59.9**	**+1.0**
CEME	**Cevo**	**1.06**	**332**	⇓*i*Pg	**Pn**	**01 33 45.3**	**-0.1**
CEME				*e*Sg	**Sn**	**01 34 01.2**	**+1.3**
VLO	**Vlora**	**1.15**	**184**	⇓Pg	**Pg**	**01 33 47.4**	**+0.3**
VLO				Sg	**Sn**	**01 34 03.9**	**+2.1**
VLO				AML	AML	01 34 14.1	
	6.5nm,0.7s						
HCY	**Herceg Novi**	**1.17**	**316**	⇑*i*Pg	**Pg**	**01 33 47.7**	**+0.1**
HCY				*e*Sg	**Sn**	**01 34 05.3**	**+2.8**
KOME	**Kolasin**	**1.24**	**357**	*e*Pg	**Pg**	**01 33 48.4**	**-0.5**
KOME				*e*Sg	**Sn**	**01 34 07.0**	**+2.7**
KOME	**Kolasin**	**1.24**	**357**	*e*Pg	**Pg**	**01 33 48.5**	**-0.4**
KOME				*e*Sg	**Sn**	**01 34 07.5**	**+3.2**
NKME	**Niksic**	**1.25**	**338**	*e*Pg	**Pg**	**01 33 48.5**	**-0.6**
NKME				*i*Sg	**Sg**	**01 34 07.7**	**+2.3**
BEY	**Berane**	**1.28**	**10**	*e*Pg	**Pg**	**01 33 48.8**	**-0.8**
BEY				*e*Sg	**Sg**	**01 34 07.2**	**+0.9**
IVA	**Berane**	**1.28**	**10**	⇓*i*Pg	**Pg**	**01 33 48.7**	**-0.9**
IVA				*e*Sg	**Sg**	**01 34 08.9**	**+2.6**
KBN	**Korca**	**1.34**	**137**	⇑P	**Pg**	**01 33 51.6**	**+0.9**
KBN				Sg	**Sg**	**01 34 09.5**	**+1.4**
TREB	**Trebinje**	**1.44**	**320**	*e*Pn	**Pb**	**01 33 51.3**	**-0.2**
TREB	**Trebinje**	**1.44**	**320**	*e*Pg	**Pb**	**01 33 51.4**	**-0.1**
TREB				*e*Sg	**Sg**	**01 34 12.4**	**+0.9**
BRY	**Bratogost**	**1.51**	**329**	⇓*i*Pg	**Pb**	**01 33 52.9**	**+0.1**
BRY				*e*Sg	**Sg**	**01 34 16.7**	**+3.0**
NEST	**Nestorio**	**1.62**	**137**	⇓Pn	**Pg**	**01 33 55.8**	**-0.4**
NEST				Sn	**Sg**	**01 34 17.7**	**+0.3**
NEST				AML	AML	01 34 24.6	
	1.1nm,0.5s						
SJES	**Sjenica**	**1.67**	**9**	*e*Pg	**Pg**	**01 33 56.6**	**-0.5**
SJES				*e*Sg	**Sg**	**01 34 19.3**	**+0.5**
UPM	**Unac-Piva**	**1.67**	**342**	⇑*i*Pn	**Pg**	**01 33 56.6**	**-0.5**
UPM				*e*Sn	**Sg**	**01 34 20.3**	**+1.5**
PLE	**Pljevlja**	**1.72**	**355**	*e*Pg	**Pg**	**01 33 57.4**	**-0.7**
PLE				*e*Sg	**Sg**	**01 34 20.4**	**-0.1**
PLE	**Pljevlja**	**1.72**	**355**	⇑*i*Pn	**Pg**	**01 33 57.7**	**-0.4**
PLE				*i*Sn	**Sg**	**01 34 21.6**	**+1.1**
SELS	**Selova**	**1.96**	**35**	*e*Pn	**Pb**	**01 34 00.0**	**-0.4**
SELS				*e*Sn	**Sb**	**01 34 22.8**	**-1.8**
IVAS	**Ivanjica**	**2.00**	**12**	*e*Pn	**Pb**	**01 33 59.9**	**-1.3**
IVAS				*e*Sn	**Sg**	**01 34 26.8**	**-2.7**
BARS	**Barje**	**2.04**	**53**	*e*Pn	**Pb**	**01 34 00.9**	**-0.8**
BARS				*e*Sn	**Sb**	**01 34 26.2**	**-0.7**
NOCI	**Noci**	**2.08**	**248**	Pn	**Pn**	**01 33 58.1**	**-1.3**
NOCI				Sn	**Sn**	**01 34 26.9**	**+1.9**
NOCI				AML	AML	01 34 39.3	
	1.2nm,0.5s						
IGT	**Igoumenitsa**	**2.15**	**165**	Pn	**Pn**	**01 34 01.6**	**+1.3**
IGT				Sn	**Sb**	**01 34 30.7**	**+0.5**
IGT				AML	AML	01 34 47.2	
	0.6nm,0.9s						
GOCS	**Kraljevo Serbi**	**2.16**	**25**	*e*Pn	**Pb**	**01 34 02.6**	**-1.3**
GOCS				*e*Sn	**Sb**	**01 34 30.4**	**-0.2**
BBLS	**Lazi&#263i**	**2.26**	**356**	*e*Pn	**Pb**	**01 34 04.4**	**-1.1**
BBLS				*e*Sn	**Sb**	**01 34 32.3**	**-0.9**
BOSS	**Bosilegrad**	**2.32**	**67**	*e*Pn	**Pb**	**01 34 04.5**	**-2.0**
BOSS				*e*Sn	**Sn**	**01 34 30.6**	**-0.3**
MATE	**Matera**	**2.39**	**247**	⇓P	**Pb**	**01 34 06.6**	**-1.0**
GRUS	**Gruza**	**2.42**	**20**	*e*Pn	**Pb**	**01 34 06.2**	**-2.0**
GRUS				*e*Sn	**Sb**	**01 34 37.6**	**-0.2**
BOVS	**Bovan**	**2.55**	**37**	⇑P	**Pb**	**01 34 07.8**	**-2.6**
BOVS				⇓S	**Sb**	**01 34 39.5**	**-2.0**
BOVS	**Bovan**	**2.55**	**37**	*e*Pn	**Pn**	**01 34 07.6**	**+1.8**
BOVS				*e*Sn	**Sn**	**01 34 37.4**	**+0.9**
TRAN	**Tran**	**2.58**	**61**	P	**Pb**	**01 34 08.8**	**-2.1**
KKB	**Krupnik**	**2.65**	**84**	P	**Pb**	**01 34 09.7**	**-2.5**
TRUS	**Trudelj**	**2.68**	**13**	*e*Pn	**Pb**	**01 34 09.6**	**-3.0**
TRUS				*e*

KECS					*e*SN	**Sn**	**01 36 26.7 +3.1**
KBA	**Koelnbreinsper**	**7.07**	**323**		*i* Pn	**Pn**	**01 35 08.9 +1.0**
	1.4nm,0.3s						
KBA					*i* Sn	**Sn**	**01 36 25.8 -2.2**
	1.0nm,0.3s						
CFR	**Carcaliu**	**7.17**	**57**	⇓	P	**Pn**	**01 35 11.6 +2.5**
BURAR	**Bucovina Array**	**7.21**	**32**	⇑	P	**Pn**	**01 35 12.2 +2.3**
ABTA	**Abfaltersbach**	**7.23**	**318**		*i* Pn	**Pn**	**01 35 09.8 -0.3**
	0.6nm,0.2s						
ABTA					*i* Sn	**Sn**	**01 36 27.9 -4.0**
	1.7nm,0.3s						
MOA	**Molln**	**7.30**	**330**		*e*Pn	**Pn**	**01 35 12.7 +1.7**
	2.1nm,0.2s						
MOA					*i* Sn	**Sn**	**01 36 35.1 +1.6**
	3.8nm,0.5s						
BIOA	**Bad Ischl, Aus**	**7.41**	**327**		*e*Pn	**Pn**	**01 35 13.9 +1.3**
	1.9nm,0.4s						
BIOA					*e*Sn	**Sn**	**01 36 35.1 -1.2**
	1.1nm,0.3s						
VLDR	**Vladesti**	**7.46**	**53**	⇓	P	**Pn**	**01 35 16.6 +3.5**
LESA	**Schwarzleotal**	**7.63**	**322**		*i* Pn	**Pn**	**01 35 16.1 +0.6**
	3.2nm,0.4s,SNR=5.5						
LESA					*e*Sn	**Sn**	**01 36 39.6 -2.1**
	2.2nm,0.3s						
WTTA	**Wattenberg**	**8.02**	**317**		*e*Pn	**Pn**	**01 35 22.7 +1.7**
	2.3nm,0.2s,SNR=5.2						
WTTA					*e*Sn	**Sn**	**01 36 47.5 -4.0**
	2.7nm,0.3s						
WATA	**Walderalm**	**8.10**	**318**		*e*Pn	**Pn**	**01 35 22.3 +0.2**
	1.0nm,0.2s						
WATA					*e*Sn	**Sn**	**01 36 52.6 -0.8**
	3.2nm,0.3s						
SQTA	**Sankt Quirin**	**8.21**	**316**		*i* Pn	**Pn**	**01 35 24.7 +1.1**
	1.4nm,0.3s						
SQTA					*e*Sn	**Sn**	**01 36 53.6 -2.5**
	1.4nm,0.3s						
GERES	**GERESS Array B**	**8.34**	**332**		Pn	**Pn**	**01 35 25.6 +0.2**
	baz=156,slow=14,SNR=5.1						
GERES					Sn	**Sn**	**01 36 59.8 +0.6**
	0.1nm,0.3s,baz=148,slow=23,SNR=6.8						
	0.3nm,0.4s						
FETA	**Feichten**	**8.34**	**313**		*e*Pn	**Pn**	**01 35 27.0 +1.5**
	0.8nm,0.5s						
FETA					*i* Sn	**Sn**	**01 36 58.1 -1.3**
	1.0nm,0.4s						
MOTA	**Moosalm**	**8.35**	**316**		*e*Pn	**Pn**	**01 35 26.2 +0.7**
	0.9nm,0.3s						
MOTA					*e*Sn	**Sn**	**01 36 59.2 -0.3**
	7.5nm,0.6s						
RETA	**Reutte**	**8.62**	**316**		*i* Pn	**Pn**	**01 35 30.3 +1.2**
	1.8nm,0.5s						
RETA					*i* Sn	**Sn**	**01 37 05.2 -0.8**
	3.0nm,0.3s						
KHC	**Kasperske Hory**	**8.63**	**333**		*e*SN	**Sn**	**01 37 04.1 -2.1**
DAVOX	**Davos/Dischmat**	**8.68**	**310**		Pn	**Pn**	**01 35 29.0 -1.2**
	0.3nm,0.3s,baz=122,slow=23,SNR=6.1						
DAVOX					Sn	**Sn**	**01 37 05.0 -2.8**
	0.4nm,0.3s,baz=76,slow=12,SNR=2.2						
	0.9nm,0.4s						
DAVA	**Damuels**	**8.97**	**313**		*e*Pn	**Pn**	**01 35 36.2 +2.2**
	1.0nm,0.4s						
DAVA					*e*Sn	**Sn**	**01 37 14.0 -0.7**
	2.9nm,0.5s						
BRTR	**Keskin Array B**	**10.83**	**95**		Pn	**Pn**	**01 35 58.8 -0.7**
	baz=288,slow=12,SNR=1.7						
	0.1nm,0.4s						
HFS	**Hagfors**	**18.90**	**351**		P	**Pn**	**01 37 45.7 +0.4**
	0.1nm,0.3s,baz=163,slow=11,SNR=5.2						
	3.6nm,1.0s						
FINES	**FINESS Array B**	**20.24**	**9**		P	**P**	**01 37 58.5 -0.8**
	1.5nm,0.6s,baz=180,slow=10,SNR=14						
	1.5nm,0.6s						
BVAR	**Borovoye Array**	**35.55**	**54**		P	**P**	**01 40 21.8 +0.5**
	0.3nm,0.4s,baz=282,slow=7.2,SNR=2.6						
	0.3nm,0.4s						
DBIC	**Dimbokro**	**41.03**	**219**		LR	LR	02 00 56.6
	comp=Z,80nm,18.4s,baz=198,slow=41						
ZALV	**Zalesovo Beam**	**43.99**	**51**		P	**P**	**01 41 31.2 -0.1**
	1.2nm,0.4s,baz=276,slow=8.7,SNR=7.4						
	1.2nm,0.4s						
MKAR	**Makanchi Array**	**44.19**	**61**		P	**P**	**01 41 33.3 +0.2**
	0.4nm,0.4s,baz=279,slow=7.1,SNR=6.2						
	0.4nm,0.4s						
SONM	**Songino Array**	**58.86**	**52**		P	**P**	**01 43 21.4 -1.6**
	0.5nm,0.8s,baz=303,slow=8.4,SNR=2.5						
	0.5nm,0.8s						

DMN ***28*** *01:39:57.3±0.0,31°.52N×84°.26E, h10km, Ml4.8/9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
BJI ***28*** *01:40:02.5, 30°.72N×84°.42E, h7km, mb4.2/29, Ms4.0/12, Ms7 3.9/12*
NEIC ***28*** *01:40:04.3±2.0, 30°.50N±0°.08×84°.29E±0°.09, h15km±4km, mb4.6/42, Error ellipse: s-maj=13.9km s-min=9.0km az=222.0*
IDC ***28*** *01:40:06.5±6.4, 30°.41N×84°.48E, h33km±49km, mb4.0/19, mbtmp4.2/23, ML4.2/4, MS3.8/3, Error ellipse: s-maj=22.3km s-min=14.5km az=43.0*
NDI ***28*** *01:40:09.3±3.1, 30°.25N×84°.46E, h15km, ML4.3, MW4.3*

ISC 28 01:40:03.2±0.3, 30°.54N±0°.03×84°.39E±0°.03, h10km, n126, σ2$03/143, mb4.6/37, MS4.1/4, 1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.25**	**194**	Pn	**Pg**	**01 40 46.1**	**-0.2**
	baz=188,slow=0.0						
DANN				Sn	**Sg**	**01 41 21.3**	**+5.9**
	2µm,0.7s,baz=188,slow=0.0						
KKN	**Kakani**	**2.84**	**164**	Pn	**Pb**	**01 40 54.7**	**+0.5**
	baz=166,slow=0.0						
KKN				Sn	**Sg**	**01 41 36.5**	**+1.9**
	2µm,1.1s,baz=166,slow=0.0						
GUN	**Gumba**	**2.92**	**153**	Pn	**Pb**	**01 40 55.1**	**-0.5**
	baz=158,slow=0.0						
GUN				Sn	**Sg**	**01 41 38.1**	**+1.0**
	1µm,0.6s,baz=158,slow=0.0						
DMN	**Daman**	**2.98**	**168**	Pn	**Pb**	**01 40 56.4**	**-0.2**
	baz=169,slow=0.0						
DMN				Sn	**Sg**	**01 41 40.7**	**+1.7**
	2µm,0.8s,baz=169,slow=0.0						
PKIN	**Phulchoki**	**3.08**	**163**	Pn	**Pb**	**01 40 57.5**	**-0.7**
	baz=166,slow=0.0						
PKIN				Sn	**Sg**	**01 41 42.8**	**+0.8**
	854nm,0.6s,baz=166,slow=0.0						
PKI	**Pulchoki**	**3.08**	**163**	Pn	**Pb**	**01 40 57.5**	**-0.9**
	baz=165,slow=0.0						
PKI				Sn	**Sg**	**01 41 43.5**	**+1.2**
	630nm,0.7s,baz=165,slow=0.0						
JIRN	**Jiri**	**3.27**	**151**	Pn	**Pb**	**01 40 59.7**	**-1.8**
	baz=156,slow=0.0						
JIRN				Sn	**Sb**	**01 41 45.4**	**+3.9**
	553nm,0.7s,baz=156,slow=0.0						
EVN	**Everest**	**3.33**	**140**	Pn	**Pn**	**01 40 56.7**	**+0.8**
LGTI	**Lohaghat**	**3.76**	**254**	*e*P	**Pb**	**01 41 09.8**	**+0.2**
LGTI				*e*S	**Sb**	**01 41 52.5**	**-2.7**
LGTI				IAML		01 42 19.2	
	comp=E,558nm,0.3s						
LGTI				IAML		01 42 21.4	
	comp=N,642nm,0.4s						
RAMN	**Ramite**	**4.06**	**151**	Pn	**Pn**	**01 41 09.6**	**+3.9**
	baz=155,slow=0.0						
RAMN				Sn	**Sb**	**01 42 04.5**	**+0.2**
	comp=N,602nm,0.8s,baz=155,slow=0.0						
TAPN	**Taplejung**	**4.30**	**137**	Pn	**Pn**	**01 41 12.7**	**+3.7**
	baz=143,slow=0.0						
ODAN	**Odare**	**4.51**	**144**	Pn	**Pn**	**01 41 15.8**	**+4.0**
	baz=149,slow=0.0						
ODAN				Sn	**Sb**	**01 42 13.9**	**-3.2**
	comp=N,472nm,0.8s,baz=149,slow=0.0						
DDI	**Dehra Dun**	**5.48**	**269**	*e*P	**Pn**	**01 41 29.7**	**+4.8**
ALBI	**Allahabad**	**5.69**	**204**	*e*P	**Pn**	**01 41 30.8**	**+3.0**
GAYA	**Gaya**	**5.76**	**172**	*e*P	**Pn**	**01 41 32.9**	**+4.2**
GAYA				IAML		01 43 08.2	
	comp=E,496nm,0.3s						
GAYA				IAML		01 43 13.3	
	comp=N,574nm,0.2s						
LSA	**Lhasa**	**5.91**	**96**			**Pn**	**01 41 32.2**	**+0.9**
LSA	**Lhasa**	**5.91**	**96**	Pn		**Pn**	**01 41 30.5**	**-0.8**
SMLA	**Simla**	**6.24**	**277**	*e*P		**Pn**	**01 41 40.2**	**+4.8**
DHUB	**DHUBRI**	**6.68**	**131**	*e*P		**Pn**	**01 41 44.6**	**+3.2**
BOK	**Bokaro**	**6.84**	**168**	*e*P		**Pn**	**01 41 46.0**	**+2.3**
BOK				IAML			01 43 43.0	
	comp=E,246nm,0.9s							
BOK				IAML			01 43 50.1	
	comp=N,234nm,0.8s							
ALCI	**Alchi Leh**	**7.12**	**303**	*e*P		Pn	01 41 53.7	+6.0
ALCI				*e*S		**Sn**	**01 43 13.9**	**+5.1**
KUDL	**Kundal**	**7.30**	**253**	*e*P		**Pn**	**01 41 53.7**	**+3.8**
KUDL				IAmb		IAmb	01 41 58.7	
	comp=Z,122nm,0.7s							
TSSA	**Tissa**	**7.39**	**290**	*e*P		Pn	01 41 58.3	+7.0
TSSA				*e*S		**Sn**	**01 43 18.2**	**+2.8**
TSSA				IAML			01 43 26.5	
	comp=N,144nm,1.2s							
TSSA				IAML			01 43 27.0	
	comp=E,145nm,1.2s							
SHL	**Shillong**	**8.26**	**125**			**Pn**	**01 42 02.9**	**-0.4**
SHL	**Shillong**	**8.26**	**125**	*e*P		**Pn**	**01 42 04.8**	**+1.5**
GUNA	**GUNA**	**8.58**	**229**	*e*P		**Pn**	**01 42 10.6**	**+3.1**
GUNA				*e*S		**Sn**	**01 43 38.0**	**-6.4**
GUNA				IAML			01 43 48.9	
	comp=E,153nm,0.8s							
GUNA				IAML			01 43 51.8	
	comp=N,156nm,0.9s							
BHPL	**Bhopal**	**9.56**	**222**	*e*P		**Pn**	**01 42 22.2**	**+1.2**
BHPL				*e*S		**Sn**	**01 44 02.7**	**-5.9**
BHPL				IAML			01 44 13.9	
	comp=E,148nm,1.1s							
BHPL				IAML			01 44 15.8	
	comp=N,133nm,0.9s							
KOHI	**KOHIMA**	**9.82**	**117**	*e*P		**Pn**	**01 42 25.5**	**+0.8**
KOHI				*e*S		**Sn**	**01 44 08.4**	**-6.7**
KOHI				IAML			01 44 17.7	
	comp=N,145nm,1.2s							
KOHI				IAML			01 44 18.2	
	comp=E,158nm,1.1s							
NIL	**Nilore**	**9.95**	**291**			**Pn**	**01 42 25.6**	**-0.7**
SAIH	**SAIHA**	**11.10**	**134**	*e*P		**Pn**	**01 42 44.4**	**+2.1**
SAIH				*e*S		Sn	01 44 34.3	-12
SAIH				IAML			01 44 54.0	
	comp=N,128nm,1.1s							
SAIH				IAML			01 44 54.8	
	comp=E,124nm,1.1s							
RAGD	**RAYAGADA**	**11.27**	**185**	*e*P		**Pn**	**01 42 46.5**	**+2.0**
RAGD				*e*S		Sn	01 44 37.4	-13
RAGD				IAML			01 45 12.0	
	comp=N,98nm,0.7s							
RAGD				IAML			01 45 13.6	
	comp=E,112nm,0.5s							
KSH	**Kashi**	**11.30**	**325**	P		**Pn**	**01 42 45.3**	**+0.4**
KSH				sP			01 42 52.0	
KSH				S		**Sn**	**01 44 46.5**	**-4.9**
KSH				pmax		pmax		
	comp=E,6.0nm,1.0s							
AKL	**Akola**	**11.83**	**216**	*e*P		**Pn**	**01 42 52.7**	**+0.6**
TARG	**Taragay, Kyrgy**	**12.37**	**336**	Pn		**Pn**	**01 42 59.4**	**-0.3**
WMQ	**Urumqi**	**13.52**	**10**	*e*P		**Pn**	**01 43 18.5**	**+3.4**
WMQ				LR		LR		
	comp=E,380nm,18.5s							
WMQ				LR		LR		
	comp=E,400nm,13.9s							
WMQ				LR		LR		
	comp=E,250nm,19.3s							
KBL	**Kabul**	**13.55**	**291**			**Pn**	**01 43 13.9**	**-1.8**
HYBB	**Hyderabad (bro**	**14.10**	**204**	*e*P		**Pn**	**01 43 22.6**	**-0.5**
ARSB	**Arslanbob**	**14.18**	**323**	P		**P**	**01 43 29.4**	**-2.3**
GAR	**Garm**	**14.31**	**310**	Pn		**Pn**	**01 43 23.9**	**-2.1**
AAK	**Ala-Archa**	**14.45**	**329**	Pn		**Pn**	**01 43 30.6**	**+2.7**
	comp=E,0.2nm,0.3s,baz=152,slow=9.8,SNR=14							
	comp=E,0.9nm,0.8s							
AAK	**Ala-Archa**	**14.45**	**329**	Pn		**Pn**	**01 43 27.1**	**-0.8**
CHGR	**Chuyangaron**	**14.92**	**307**			**Pn**	**01 43 32.6**	**-1.6**
GTA	**Gaotai**	**15.42**	**51**	*e*P		**P**	**01 43 44.5**	**-1.0**
GTA				sP		pP	01 43 50.5	+0.7
GTA				LR		LR		
	comp=E,340nm,15.5s							
GTA				LR		LR		
	comp=E,360nm,11.2s							
PZH	**PanZhiHua**	**15.77**	**100**	P		**P**	**01 43 50.3**	**+0.8**
MK31	**Makanchi Array**	**16.32**	**355**	Pn		**Pn**	**01 43 51.5**	**-0.8**
MKAR	**Makanchi Array**	**16.32**	**355**	Pn		**Pn**	**01 43 53.3**	**+0.9**
	comp=E,0.3nm,0.3s,baz=172,slow=12,SNR=16							
	comp=E,5.2nm,0.9s							
MKAR	**Makanchi Array**	**16.32**	**355**	Pn		**Pn**	**01 43 52.2**	**-0.2**
MAKZ	**Makanchi**	**16.36**	**354**	Pn		**Pn**	**01 43 52.0**	**-0.8**
CD2	**Chengdu**	**16.66**	**84**	P		**P**	**01 43 58.8**	**-0.5**
CD2				pmax		pmax		
	comp=E,10.0nm,1.0s							
KK31	**Karatay Array**	**16.73**	**322**	Pn		**Pn**	**01 43 56.7**	**-1.0**
KKAR	**Karatay Array**	**16.73**	**322**	Pn		**Pn**	**01 43 56.8**	**-0.8**
LZDM	**Lanzhou Array**	**17.02**	**66**	P		**Pn**	**01 44 01.4**	**-0.2**
	baz=244,slow=6.4							
	comp=E,1.1nm,0.3s							
KMI	**Kunming**	**17.09**	**104**	P		**P**	**01 44 06.5**	**+2.2**
KMI				pmax		pmax		
	comp=E,19nm,1.1s							
CHTO	**Chiang Mai**	**17.61**	**128**			**Pn**	**01 44 09.4**	**+0.6**
CM31	**Chiang Mai Arr**	**17.86**	**129**			**Pn**	**01 44 12.4**	**+0.4**
CM31				IAmb		IAmb	01 44 27.2	
	comp=Z,24nm,1.4s							
CMAR	**Chiang Mai Arr**	**17.86**	**129**	P		**Pn**	**01 44 10.7**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=309,slow=12,SNR=27							
CMAR				LR		LR	01 52 31.7	
	comp=Z,143nm,18.2s,baz=310,slow=42							
	comp=Z,5.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**17.86**	**129**			**Pn**	**01 44 11.9**	**0.0**
HRA	**Herat**	**19.07**	**287**	P		**P**	**01 44 25.1**	**-0.9**
KURBB	**Kurchatov Arra**	**20.54**	**349**	P		**P**	**01 44 42.4**	**+0.7**
	comp=Z,18nm,1.0s,baz=172,slow=9.9,SNR=47							
	comp=Z,18nm,1.0s							
KURK	**Kurchatov**	**20.62**	**350**	P		**P**	**01 44 41.0**	**-1.5**
KURK				IAmb		IAmb	01 44 44.9	
	comp=Z,33nm,1.1s							
XAN	**Xi'an**	**21.01**	**74**	⇓	P	**P**	**01 44 47.0**	**0.0**
XAN				pmax		pmax		
	comp=Z,7.0nm,1.0s							
XAN				LR		LR		
	comp=Z,470nm,11.7s							
XAN				LR		LR		
	comp=Z,390nm,14.4s							
XAN				LR		LR		
	comp=Z,530nm,17.9s							
PALK	**Pallekele**	**23.40**	**189**	LR		LR	01 53 46.1	
	comp=Z,187nm,20.8s,baz=36,slow=35							
ZAA0	**Zalesovo Array**	**23.40**	**1**	P		**P**	**01 45 12.3**	**+0.3**
ZAA0				IAmb		IAmb	01 45 16.4	
	comp=Z,20nm,1.1s							
ZALV	**Zalesovo Beam**	**23.40**	**1**	P		**P**	**01 45 12.7**	**+0.7**
	comp=Z,17nm,1.0s,baz=179,slow=9.6,SNR=30							
	comp=Z,17nm,1.0s							
ZALV	**Zalesovo Beam**	**23.40**	**1**	P		**P**	**01 45 12.0**	**0.0**
SONM	**Songino Array**	**24.14**	**38**	P		**P**	**01 45 21.0**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=230,slow=9.9,SNR=7.3							
	comp=Z,0.9nm,0.6s							
HHC	**Hu-ho-hao-te**	**24.26**	**57**	*e*P		**P**	**01 45 21.8**	**+1.2**
HHC				pmax		pmax		
	comp=Z,14nm,0.7s							
ULN	**Ulaanbaatar**	**24.51**	**39**	P		**P**	**01 45 24.1**	**+1.3**
ULN				IAmb		IAmb	01 45 31.8	
	comp=Z,6.4nm,0.8s							
BVAR	**Borovoye Array**	**24.69**	**340**	P		**P**	**01 45 25.7**	**+1.5**
	comp=Z,6.1nm,1.0s,baz=150,slow=10,SNR=16							
	comp=Z,6.1nm,1.0s							
BORK	**Borovoye**	**24.73**	**339**	P		**P**	**01 45 25.6**	**+1.0**
AB31	**Akbulak array**	**26.30**	**322**	P		**P**	**01 45 39.2**	**+0.4**
AB31				IAmb		IAmb	01 45 43.7	
	comp=Z,9.3nm,1.1s							
ABKAR	**Akbulak array**	**26.30**	**322**	P		**P**	**01 45 39.8**	**+1.0**
NJ2	**Nanjing**	**29.41**	**78**	*e*P		**P**	**01 46 08.8**	**+1.9**
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
INCN	**Inchon**	**35.46**	**67**	P		**P**	**01 47 01.2**	**+1.4**
MMAI	**Mount Meron Ar**	**41.42**	**287**	P		**P**	**01 47 51.9**	**+1.8**
	comp=Z,5.3nm,1.0s,baz=52,slow=51,SNR=2.3							
	comp=Z,5.3nm,1.0s							
BR131	**Keskin Array S**	**42.03**	**297**	P		**P**	**01 47 52.2**	**-2.9**
BRTR	**Keskin Array B**	**42.03**	**297**	P		**P**	**01 47 57.3**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=111,slow=6.8,SNR=4.9							
	comp=Z,0.9nm,0.9s							
BRTR	**Keskin Array B**	**42.03**	**297**	P		**P**	**01 47 52.4**	**-2.7**
BORA	**Eskisehir**	**44.47**	**297**	P		**P**	**01 48 14.6**	**-0.1**
BORA				IAmb		IAmb	01 48 18.3	
	comp=Z,2.9nm,0.7s							
ELL	**Elmali**	**45.27**	**293**	P		**P**	**01 48 20.1**	**-1.1**
AKASG	**Malin Array Be**	**45.29**	**313**	P		**P**	**01 48 22.6**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=82,slow=7.0,SNR=2.0							
	comp=Z,0.3nm,0.4s							
AKASG	**Malin Array Be**	**45.29**	**313**	P		**P**	**01 48 21.3**	**+0.4**
MNK	**Minsk**	**46.50**	**318**	*i* P		**P**	**01 48 29.7**	**-0.7**
MNK				*i* P		**P**	**01 48 29.7**	**-0.7**
	comp=E,9.0nm,0.8s							
	comp=N,10.0nm,0.9s							
MNK				*i* P		**P**	**01 48 29.7**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=97							
MNK				*i* PP		**PP**	**01 50 18.8**	**-0.7**
MNK				*i* PPP		PPP	01 51 00.6	
MNK				*i* S		**S**	**01 55 18.4**	**-0.2**
MNK				*i* SS		**SS**	**01 58 45.8**	**+1.6**
MNK				*i* SSS		SSS	01 59 39.9	
MNK				*i* LQ		LQ	02 04 44.7	
MNK				*i* LR		LR	02 07 32.9	
MNK				*i* LRM		MLR	02 10 00.7	
	comp=E,382nm,17.4s							
MNK				*i* LRM		MLR	02 10 00.7	
	comp=N,568nm,19.3s							
MNK				*i* LRM		MLR	02 10 00.7	
	comp=Z,114nm,16.8s							
MLR	**Muntele Rosu**	**47.40**	**305**	P		**P**	**01 48 37.3**	**-0.5**
MLR				IAmb		IAmb	01 49 09.5	
	comp=Z,9.7nm,1.3s							
TIXI	**Tiksi**	**47.58**	**17**	P		**P**	**01 48 39.0**	**+0.4**
TIXI				IAmb		IAmb	01 48 43.1	
	comp=Z,13nm,1.2s							
BURAR	**Bucovina Array**	**47.83**	**308**	P		**P**	**01 48 41.2**	**+0.1**
LUWI	**Luwuk**	**48.15**	**124**	P		**P**	**01 48 43.9**	**+0.1**
FINES	**FINESS Array B**	**48.62**	**327**	P		**P**	**01 48 47.6**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=191,slow=9.7,SNR=12							
	comp=Z,6.0nm,1.0s							
FINES	**FINESS Array B**	**48.62**	**327**	P		**P**	**01 48 47.0**	**+0.3**
ARCES	**ARCESS Array B**	**50.95**	**337**	P		**P**	**01 49 06.4**	**+2.0**
	comp=Z,12nm,0.8s,baz=90,slow=7.3,SNR=14							
	comp=Z,12nm,0.8s							
ARCES	**ARCESS Array B**	**50.95**	**337**	P		**P**	**01 49 04.9**	**+0.5**
HFS	**Hagfors**	**54.52**	**325**	P		**P**	**01 49 30.9**	**-0.1**
	comp=Z,7.5nm,0.7s,baz=90,slow=7.2,SNR=11							
	comp=Z,7.5nm,0.7s							
NB2	**NORSAR Subarra**	**55.73**	**326**	P		**P**	**01 49 40.4**	**+0.7**
	comp=Z,11nm,0.9s,baz=88,slow=7.4							
NOA	**NORSAR Array B**	**55.73**	**326**	P		**P**	**01 49 40.9**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=88,slow=7.1,SNR=22							
	comp=Z,6.5nm,0.8s							
NC204	**NORSAR Array S**	**55.94**	**326**	P		**P**	**01 49 40.4**	**-0.8**
EKA	**Eskdalemuir Ar**	**64.16**	**321**	P		**P**	**01 50 38.9**	**+1.3**
	comp=Z,6.3nm,0.9s,baz=87,slow=5.9,SNR=5.4							
	comp=Z,6.3nm,0.9s							
WRA	**Warramunga Arr**	**69.45**	**130**	P		**P**	**01 51 11.6**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=323,slow=6.5,SNR=8.1							
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**69.45**	**130**	P		**P**	**01 51 11.8**	**-0.1**
SUMG	**Summit**	**70.06**	**344**	P		**P**	**01 51 14.7**	**-0.6**
ESDC	**Sonseca Array**	**70.09**	**305**	P		**P**	**01 51 15.1**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=38,slow=7.7,SNR=4.0							
	comp=Z,0.8nm,0.9s							
ESDC	**Sonseca Array**	**70.09**	**305**	P		**P**	**01 51 15.0**	**-0.7**
ESDC				IAmb		IAmb	01 51 16.2	
	comp=Z,2.5nm,1.4s							
ASAR	**Alice Springs**	**71.83**	**133**	P		**P**	**01 51 25.5**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=317,slow=6.0,SNR=5.1							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**71.83**	**133**	P		**P**	**01 51 26.4**	**0.0**
BMAR	**Burnt Mountain**	**75.66**	**17**	P		**P**	**01 51 50.1**	**+1.9**
A36M	**Sachs Harbour**	**75.69**	**9**	P		**P**	**01 51 48.5**	**+0.2**
A36M				IAmb		IAmb	01 51 51.6	
	comp=Z,9.3nm,1.0s							
ILAR	**Eielson Array**	**76.97**	**20**	P		**P**	**01 51 55.7**	**0.0**
	comp=Z,1.5nm,0.8s,baz=304,slow=5.1,SNR=14							
	comp=Z,1.5nm,0.8s							
ILAR	**Eielson Array**	**76.97**	**20**	P		**P**	**01 51 56.1**	**+0.5**
SFJD	**Kangerlussuaq**	**77.00**	**343**			**P**	**01 51 56.5**	**+0.8**
SFJD				IAmb		IAmb	01 51 58.9	
	comp=Z,12nm,0.9s							
TORD	**Torodi Ar. Bea**	**77.23**	**278**	P		**P**	**01 51 57.5**	**-0.5**
	comp=Z,4.4nm,1.0s,baz=43,slow=8.2,SNR=3.7							
	comp=Z,4.4nm,1.0s							
TORD	**Torodi Ar. Bea**	**77.23**	**278**	P		**P**	**01 51 56.0**	**-1.9**
TORD				IAmb		IAmb	01 52 20.1	
	comp=Z,3.3nm,1.1s							
G30M	**tAoh Zrail Nji**	**78.04**	**15**	P		**P**	**01 52 03.3**	**+1.6**
G30M				IAmb		IAmb	01 52 05.5	
	comp=Z,9.4nm,1.2s							
SCRK	**Sand Creek**	**78.41**	**20**			**P**	**01 52 04.3**	**+0.4**
SCRK				IAmb		IAmb	01 52 07.2	
	comp=Z,8.1nm,1.1s							
G31M	**Satah River**	**78.52**	**15**	P		**P**	**01 52 05.2**	**+1.0**
G31M				IAmb		IAmb	01 52 07.2	
	comp=Z,7.0nm,1.1s							
H31M	**Peel River**	**79.44**	**15**			**P**	**01 52 10.7**	**+1.3**
H31M				IAmb		IAmb	01 52 11.8	
	comp=Z,11nm,1.1s							
MCARA	**McCarthy VSAT**	**80.67**	**21**	P		**P**	**01 52 15.7**	**-0.4**
BARN	**Barnard Glacie**	**81.34**	**21**	P		**P**	**01 52 19.2**	**-0.7**
LKGWB	**Lokgwabe**	**81.35**	**236**	P		**P**	**01 52 17.5**	**-2.9**
KOOLE

CEME				*e*Sg	**Sn**	**01 44 59.2**	**+4.1**	
KBN	**Korca**	**1.24**	**133**	Pn	**Pn**	**01 44 39.0**	**-0.8**	
KBN				Sn	**Sb**	**01 44 56.3**	**+0.3**	
KBN	**Korca**	**1.24**	**133**	P	**Pn**	**01 44 39.4**	**-0.4**	
KBN				S	**Sn**	**01 44 58.2**	**+1.6**	
HCY	**Herceg Novi**	**1.27**	**320**	*e*Pg	**Pg**	**01 44 40.3**	**-0.4**	
HCY				*e*Sg	**Sn**	**01 45 01.0**	**+3.8**	
KOME	**Kolasin**	**1.37**	**358**	*e*Pg	**Pg**	**01 44 42.3**	**-0.4**	
KOME				*e*Sg	**Sg**	**01 45 01.0**	**+0.5**	
KOME	**Kolasin**	**1.37**	**358**	*e*Pg	**Pg**	**01 44 42.2**	**-0.5**	
KOME				*e*Sg	**Sg**	**01 45 04.0**	**+3.5**	
NKME	**Niksic**	**1.37**	**340**	*e*Pg	**Pb**	**01 44 41.9**	**-0.2**	
NKME				*e*Sg	**Sg**	**01 45 03.9**	**+3.4**	
BEY	**Berane**	**1.41**	**9**	*e*Pg	**Pn**	**01 44 41.5**	**-0.6**	
BEY				*e*Sg	**Sg**	**01 45 02.1**	**+0.4**	
IVA	**Berane**	**1.41**	**9**	*e*Pg	**Pn**	**01 44 41.7**	**-0.4**	
IVA				*e*Sg	**Sg**	**01 45 04.4**	**+2.7**	
NEST	**Nestorio**	**1.53**	**133**	⇑Pn	**Pn**	**01 44 44.2**	**+0.4**	
NEST				Sn	**Sb**	**01 45 04.4**	**+0.2**	
NEST				AML	AML	01 45 10.4		
	0.9nm,0.5s							
NEST	**Nestorio**	**1.53**	**133**	P	**Pn**	**01 44 44.0**	**+0.2**	
TREB	**Trebinje**	**1.54**	**324**	*e*Pg	**Pn**	**01 44 44.1**	**+0.2**	
TREB				*e*Sg	**Sg**	**01 45 06.8**	**+0.8**	
BRY	**Bratogost**	**1.62**	**332**	*e*Pn	**Pb**	**01 44 46.0**	**-0.4**	
BRY				*i* Sn	**Sg**	**01 45 09.9**	**+1.3**	
UPM	**Unac-Piva**	**1.80**	**344**	*e*Pn	**Pn**	**01 44 48.1**	**+0.6**	
UPM				*e*Sn	**Sg**	**01 45 14.3**	**+0.1**	
SJES	**Sjenica**	**1.80**	**9**	*e*Pg	**Pb**	**01 44 49.2**	**-0.3**	
SJES				*e*Sg	**Sg**	**01 45 14.2**	**-0.1**	
PLE	**Pljevlja**	**1.86**	**355**	*e*Pg	**Pb**	**01 44 50.3**	**-0.1**	
PLE				*e*Sg	**Sg**	**01 45 16.1**	**+0.1**	
PLE	**Pljevlja**	**1.86**	**355**	*e*Pn	**Pn**	**01 44 48.2**	**-0.1**	
PLE				*e*Sn	**Sg**	**01 45 15.4**	**-0.6**	
IGT	**Igoumenitsa**	**2.02**	**164**	⇑Pn	**Pn**	**01 44 51.1**	**+0.6**	
IGT				Sn	**Sb**	**01 45 17.7**	**-0.7**	
IGT	**Igoumenitsa**	**2.02**	**164**	P	**Pn**	**01 44 50.3**	**-0.2**	
IGT				S	**Sn**	**01 45 17.3**	**+1.6**	
KZN	**Kozani**	**2.02**	**125**	P	**Pn**	**01 44 50.9**	**+0.4**	
KZN				S	**Sb**	**01 45 18.0**	**-0.5**	
NOCI	**Noci**	**2.03**	**251**	⇓Pn	**Pn**	**01 44 49.8**	**-0.8**	
NOCI				Sn	**Sn**	**01 45 14.7**	**-1.2**	
NOCI				AML	AML	01 45 21.2		
	1.3nm,0.3s							
JAN	**Janina**	**2.06**	**152**	P	**Pn**	**01 44 51.0**	**+0.1**	
JAN				S	**Sn**	**01 45 18.0**	**+1.4**	
SELS	**Selova**	**2.08**	**33**	*e*Pn	**Pn**	**01 44 51.5**	**+0.3**	
SELS				*e*Sn	**Sb**	**01 45 18.8**	**-1.1**	
BARS	**Barje**	**2.13**	**50**	*e*Pn	**Pn**	**01 44 52.2**	**+0.3**	
BARS				*e*Sn	**Sb**	**01 45 20.5**	**-0.8**	
IVAS	**Ivanjica**	**2.14**	**11**	*e*Pn	**Pn**	**01 44 52.2**	**+0.1**	
IVAS				*e*Sn	**Sb**	**01 45 20.8**	**-0.9**	
PRMD	**Pramanda**	**2.26**	**149**	P	**Pn**	**01 44 54.5**	**+0.8**	
GOCS	**Kraljevo Serbi**	**2.29**	**24**	*e*Pn	**Pn**	**01 44 54.5**	**+0.3**	
GOCS				*e*Sn	**Sn**	**01 45 23.5**	**+1.1**	
MATE	**Matera**	**2.34**	**250**	⇓P	**Pn**	**01 44 53.0**	**-1.7**	
MATE				⇓S	**Sn**	**01 45 22.1**	**-1.3**	
BOSS	**Bosilegrad**	**2.38**	**64**	*e*Pn	**Pn**	**01 44 55.2**	**-0.2**	
BOSS				*e*Sn	**Sn**	**01 45 24.4**	**-0.2**	
BBLS	**Lazi&#263i**	**2.39**	**357**	*e*Pn	**Pb**	**01 44 57.5**	**-2.0**	
BBLS				*e*Sn	**Sb**	**01 45 28.2**	**-0.8**	
TETR	**Tetrakomo, Epi**	**2.49**	**148**	P	**Pn**	**01 44 57.4**	**+0.5**	
KNT	**Kendrikon**	**2.51**	**96**	P	**Pn**	**01 44 56.9**	**-0.3**	
GRUS	**Gruza**	**2.55**	**19**	*e*Pn	**Pn**	**01 44 58.5**	**+0.9**	
TRAN	**Tran**	**2.65**	**58**	P	**Pn**	**01 44 59.6**	**+0.5**	
THL	**Klokotos Trika**	**2.66**	**135**	P	**Pn**	**01 44 58.8**	**-0.3**	
BOVS	**Bovan**	**2.66**	**35**	⇓P	**Pn**	**01 44 59.7**	**+0.5**	
BOVS	**Bovan**	**2.66**	**35**	*e*Pn	**Pn**	**01 44 59.5**	**+0.3**	
BOVS				*e*Sn	**Sn**	**01 45 32.6**	**+1.1**	
KKB	**Krupnik**	**2.67**	**81**	P	**Pn**	**01 44 59.1**	**-0.3**	
KKB	**Krupnik**	**2.67**	**81**	P	**Pn**	**01 44 59.7**	**+0.3**	
TYRN	**Tyrnavos**	**2.67**	**130**	P	**Pn**	**01 44 59.3**	**-0.1**	
THE	**Thessaloniki**	**2.69**	**107**	Pn	**Pn**	**01 44 59.3**	**-0.3**	
THE	**Thessaloniki**	**2.69**	**107**	P	**Pn**	**01 44 59.1**	**-0.4**	
TRUS	**Trudelj**	**2.81**	**12**	*e*Pn	**Pn**	**01 45 01.7**	**+0.5**	
ZAPS	**Zavoj**	**2.88**	**50**	*e*Pn	**Pn**	**01 45 02.5**	**+0.2**	
SGRT	**San Giovanni R**	**2.90**	**277**	Pn	**Pn**	**01 45 01.6**	**-1.0**	
SGRT				Sn	**Sn**	**01 45 35.5**	**-2.0**	
SGRT				AML	AML	01 45 41.3		
	0.5nm,0.6s							
VTS	**Vitosha**	**2.94**	**66**	P	**Pn**	**01 45 03.5**	**+0.3**	
PLNA	**Plana**	**3.03**	**69**	P	**Pn**	**01 45 05.1**	**+0.8**	
ZAGS	**Zajecar**	**3.04**	**39**	*e*Pn	**Pn**	**01 45 04.6**	**+0.2**	
TEKS	**Tekeris**	**3.07**	**359**	*e*Pn	**Pn**	**01 45 04.9**	**0.0**	
MMB	**Musomishta**	**3.12**	**87**	P	**Pn**	**01 45 06.3**	**+0.7**	
BLKB	**Belogradchik**	**3.13**	**46**	⇓S	**Sn**	**01 45 44.7**	**+1.7**	
TIP	**Timpagrande**	**3.16**	**224**	⇑P	**Pn**	**01 45 04.6**	**-1.5**	
BORS2	**Bor- Borsko je**	**3.16**	**34**	*e*Pn	**Pn**	**01 45 05.2**	**-0.9**	
BORS2				*e*Sn	**Sn**	**01 45 44.8**	**+0.9**	
KUBS	**Kucevo**	**3.31**	**27**	*e*Pn	**Pn**	**01 45 06.8**	**-1.3**	
MDVR	**Moldovita**	**3.65**	**24**	⇑P	**Pn**	**01 45 12.9**	**+0.1**	
FRGS	**Fruska Gora**	**3.68**	**2**	*e*Pn	**Pn**	**01 45 13.2**	**-0.1**	
BLY	**Banja Luka**	**3.71**	**332**	⇓P	**Pn**	**01 45 14.5**	**+0.8**	
BLY	**Banja Luka**	**3.71**	**332**	*e*Pn	**Pn**	**01 45 14.3**	**+0.6**	
RZN	**Rozhen**	**3.87**	**85**	P	**Pn**	**01 45 16.6**	**+0.7**	
PLD	**Plovdiv**	**3.91**	**78**	P	**Pn**	**01 45 17.0**	**+0.6**	
HER	**Herculane**	**3.98**	**30**	⇓P	**Pn**	**01 45 16.7**	**+0.4**	
BZS	**Buzias**	**4.39**	**19**	⇓P	**Pn**	**01 45 22.9**	**0.0**	
BZS				⇓S	**Sn**	**01 46 14.9**	**+0.7**	
GZR	**Gura Zlata**	**4.55**	**30**	⇑P	**Pn**	**01 45 26.0**	**+0.8**	
SURR	**Surduc**	**4.65**	**22**	⇓P	**Pn**	**01 45 26.8**	**+0.2**	
MORH	**Mrgy, Hungar**	**4.79**	**352**	⇑P	**Pn**	**01 45 28.5**	**+0.2**	
ELND	**Elena**	**4.89**	**71**	⇑P	**Pn**	**01 45 30.5**	**+0.8**	
HUMR	**Humele**	**4.99**	**51**	⇑P	**Pn**	**01 45 32.0**	**+0.8**	
LOT	**Lotru**	**5.00**	**36**	⇑P	**Pn**	**01 45 32.1**	**+0.7**	
DEV	**Deva**	**5.01**	**27**	⇓P	**Pn**	**01 45 31.8**	**+0.3**	
SIRR	**Siria**	**5.01**	**17**	⇓P	**Pn**	**01 45 32.5**	**+0.9**	
SIRR				⇑S	**Sn**	**01 46 30.9**	**+1.4**	
ARR	**Arges**	**5.35**	**42**	⇓P	**Pn**	**01 45 37.2**	**+1.0**	
LOZB	**Loznitsa**	**5.51**	**68**	⇑P	**Pn**	**01 45 39.0**	**+0.6**	
VOIR		**5.61**	**43**	⇑P	**Pn**	**01 45 41.0**	**+1.2**	
VOIR				⇓S	**Sn**	**01 46 45.8**	**+1.6**	
MARR	**Marisel-Cluj**	**5.78**	**25**	⇓P	**Pn**	**01 45 42.5**	**+0.3**	
MLR	**Muntele Rosu**	**6.12**	**47**	⇑P	**Pn**	**01 45 47.7**	**+0.9**	
DOPR	**Dopca**	**6.14**	**41**	⇓P	**Pn**	**01 45 48.5**	**+1.4**	
SOKA	**Soboth**	**6.15**	**329**	*e*Pn	**Pn**	**01 45 47.2**	**0.0**	
	0.5nm,0.2s							
OBKA	**Obir**	**6.21**	**326**	*i* Pn	**Pn**	**01 45 48.3**	**+0.3**	
	2.1nm,0.3s							
OBKA				*e*Sn	**Sn**	**01 46 59.4**	**+0.4**	
	2.7nm,0.4s							
PSZ	**Piszkesteto**	**6.44**	**2**	⇑P	**Pn**	**01 45 51.9**	**+0.7**	
ARSA	**Arzberg**	**6.46**	**335**	*e*Pn	**Pn**	**01 45 52.8**	**+1.3**	
	0.8nm,0.4s							
BISRR	**Bisoca**	**6.58**	**49**	⇑P	**Pn**	**01 45 54.3**	**+1.2**	
PLOR	**Plostina**	**6.73**	**47**	⇓P	**Pn**	**01 45 56.0**	**+0.9**	
VRI	**Vrincioaia**	**6.78**	**47**	⇑P	**Pn**	**01 45 56.4**	**+0.6**	
KECS	**Kecovo**	**7.03**	**5**	*e*PN	**Pn**	**01 46 01.9**	**+2.6**	
KBA	**Koelnbreinsper**	**7.17**	**323**	*i* Pn	**Pn**	**01 46 02.4**	**+1.1**	
	1.2nm,0.3s							
CFR	**Carcaliu**	**7.24**	**56**	⇓P	**Pn**	**01 46 02.9**	**+0.8**	
ABTA	**Abfaltersbach**	**7.33**	**318**	*i* Pn	**Pn**	**01 46 02.4**	**-1.0**	
	0.6nm,0.2s							
ABTA				*i* Sn	**Sn**	**01 47 25.5**	**-1.1**	
	0.5nm,0.2s							
BURAR	**Bucovina Array**	**7.33**	**31**	⇑P	**Pn**	**01 46 05.3**	**+1.9**	
BIOA	**Bad Ischl, Aus**	**7.53**	**328**	*e*Pn	**Pn**	**01 46 06.1**	**+0.1**	
	1.5nm,0.6s							
LESA	**Schwarzleotal**	**7.73**	**323**	*e*Pn	**Pn**	**01 46 08.3**	**-0.7**	
	0.8nm,0.3s							
LESA				*e*Sn	**Sn**	**01 47 34.3**	**-2.3**	
	3.1nm,0.5s							
WTTA	**Wattenberg**	**8.12**	**318**	*e*Pn	**Pn**	**01 46 14.1**	**-0.2**	
	1.5nm,0.2s							
WTTA				*e*Sn	**Sn**	**01 47 45.0**	**-1.2**	
	2.4nm,0.4s							
WATA	**Walderalm**	**8.20**	**318**	*i* Pn	**Pn**	**01 46 16.2**	**+0.8**	
	2.6nm,0.3s							
WATA				*e*Sn	**Sn**	**01 47 46.1**	**-1.9**	
	2.1nm,0.3s							
SQTA	**Sankt Quirin**	**8.31**	**317**	*e*Pn	**Pn**	**01 46 17.1**	**+0.2**	
	0.8nm,0.2s							
SQTA				*e*Sn	**Sn**	**01 47 50.8**	**+0.1**	
	2.4nm,0.3s							
FETA	**Feichten**	**8.43**	**314**	*e*Pn	**Pn**	**01 46 17.5**	**-1.1**	
	0.4nm,0.3s							
FETA				*e*Sn	**Sn**	**01 47 52.0**	**-1.9**	
	1.3nm,0.4s							
MOTA	**Moosalm**	**8.44**	**317**	*e*Pn	**Pn**	**01 46 18.7**	**-0.1**	
	0.7nm,0.4s							
MOTA				*e*Sn	**Sn**	**01 47 52.9**	**-1.2**	
	4.6nm,0.6s							
RETA	**Reutte**	**8.71**	**317**	*e*Pn	**Pn**	**01 46 23.1**	**+0.8**	
	0.9nm,0.3s							
RETA				*i* Sn	**Sn**	**01 48 00.9**	**+0.3**	
	1.4nm,0.3s							
KHC	**Kasperske Hory**	**8.74**	**333**	*e*SN	**Sn**	**01 47 54.6**	**-6.7**	
DAVA	**Damuels**	**9.06**	**313**	*e*Pn	**Pn**	**01 46 28.8**	**+1.6**	
	0.7nm,0.3s							
DAVA				*e*Sn	**Sn**	**01 48 07.2**	**-2.0**	
	3.9nm,0.4s							

*IDC **28** 01:49:51.2±0.7, 80.86N×4.02W, h0km, mb3.8/14, mbtmp3.9/16, ML4.3/2, MS3.6/4, Error ellipse: s-maj=21.7km s-min=13.4km az=35.0*
*BER **28** 01:49:51.4±1.9, 80.85N×3.81W, h10km, mb(Pn)4.1, ML4.1(NAO), Confirmed Earthquake*
*NEIC **28** 01:49:52.3±2.0, 80.99N±0.10×3.6W±0.4, h10km±1km, mb4.6/23, Error ellipse: s-maj=16.9km s-min=11.0km az=189.0*
*KOLA **28** 01:49:53.4, 80.96N×2.30W, h0km, ML3.0, Error ellipse: s-maj=151.5km s-min=39.3km az=40.0, Greenland sea,Knipovich ridge, north*
*FCIAR **28** 01:49:54.0, 80.86N×2.44W, h10km, station ZFI2 has station magnitude of 3.80 station OMEGA has station magnitude of 3.70*
*DNK **28** 01:49:54.6±5.0, 80.87N×3.46W, h36km±27km, ML2.8*

ISC 28 01:49:51.4±0.5, 80.79N±0.06×3.66W±0.04, h10km, n102, σ3ϕ05/119, mb4.1/26, MS3.5/3, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.16**	**299**			Pn	**Pn**	**01 50 25.4**	**-2.0**
NOR						Sn	**Sn**	**01 50 49.4**	**-4.7**
NOR	**Nord**	**2.16**	**299**	*e*	P	**Pn**	**Pn**	**01 50 24.9**	**-2.6**
NOR				*e*	S	**Sn**	**Sn**	**01 50 49.0**	**-5.1**
NOR	**Nord**	**2.16**	**299**	⇑	*i* P	**Pn**	**Pn**	**01 50 24.8**	**-2.6**
NOR				*i*	S	**Sn**	**Sn**	**01 50 49.5**	**-4.7**
NOR					IAML			01 50 54.2	
	comp=Z,97nm,1.0s								
NOR	**Nord**	**2.16**	**299**	*i*	P	**Pn**	**Pn**	**01 50 24.4**	**-3.0**
NOR				*i*	S	**Sn**	**Sn**	**01 50 51.1**	**-3.1**
NOR					IAML			01 51 13.8	
	comp=Z,89nm,1.1s								
BRBB	**Barentsburg B**	**4.24**	**120**		Pn	**Pn**	**Pn**	**01 50 55.5**	**-0.3**
BRBB					Sn	**Sn**	**Sn**	**01 51 41.5**	**-3.8**
BRBB	**Barentsburg B**	**4.24**	**120**		P	**Pn**	**Pn**	**01 50 55.2**	**-0.7**
BRBB					S	**Sn**	**Sn**	**01 51 41.3**	**-4.0**
BRBB	**Barentsburg B**	**4.24**	**120**	*e*	P	**Pn**	**Pn**	**01 50 55.4**	**-0.5**
BRBB				*e*	S	**Sn**	**Sn**	**01 51 41.2**	**-4.1**
BRBA	**Barentsburg A**	**4.26**	**121**		Pn	**Pn**	**Pn**	**01 50 55.9**	**-0.3**
BRBA					Sn	**Sn**	**Sn**	**01 51 41.5**	**-4.5**
BRBA	**Barentsburg A**	**4.26**	**121**	*e*	P	**Pn**	**Pn**	**01 50 56.1**	**-0.2**
BRBA				*e*	S	**Sn**	**Sn**	**01 51 41.9**	**-4.0**
BRBA					IAML			01 51 45.8	
	comp=Z,56nm,0.4s								
SPA0	**Spitsbergen Ar**	**4.48**	**115**		Pn	**Pn**	**Pn**	**01 50 58.2**	**-1.1**
	baz=328,slow=8.6								
SPA0					Sn		**Sn**	**01 51 46.6**	**-4.8**
	baz=310,slow=18								
SPA0	**Spitsbergen Ar**	**4.48**	**115**	*e*	P	**Pn**	**Pn**	**01 50 58.1**	**-1.2**
SPA0				*e*	S	**Sn**	**Sn**	**01 51 45.3**	**-6.1**
SPA0	**Spitsbergen Ar**	**4.48**	**115**		Pn	**Pn**	**Pn**	**01 50 58.2**	**-1.1**
	baz=328,slow=8.6								
SPA0					Sn		**Sn**	**01 51 46.6**	**-4.8**
	baz=310,slow=18								
SPITS	**Spitsbergen Ar**	**4.48**	**115**		Pn	**Pn**	**Pn**	**01 50 58.3**	**-1.0**
	baz=342,slow=7.9								
SPITS					Sn		**Sn**	**01 51 45.5**	**-5.9**
	baz=323,slow=12								
	comp=Z,119nm,0.4s								
SPITS	**Spitsbergen Ar**	**4.48**	**115**		P	**Pn**	**Pn**	**01 50 57.9**	**-1.4**
SPITS					S	**Sn**	**Sn**	**01 51 46.4**	**-5.0**
SPB2	**Spitsbergen Ar**	**4.49**	**115**			**Pn**	**Pn**	**01 50 58.2**	**-1.2**
HSPB	**Hornsund (broa**	**5.28**	**126**		Pn	**Pn**	**Pn**	**01 51 09.9**	**-0.3**
HSPB					Sn	**Sn**	**Sn**	**01 52 08.0**	**-2.8**
HSPB	**Hornsund (broa**	**5.28**	**126**		P	**Pn**	**Pn**	**01 51 09.7**	**-0.4**
HSPB	**Hornsund (broa**	**5.28**	**126**	*e*	P	**Pn**	**Pn**	**01 51 09.8**	**-0.3**
HSPB				*e*	S	**Sn**	**Sn**	**01 52 05.4**	**-5.4**
HSPB	**Hornsund (broa**	**5.28**	**126**	*e*	P	**Pn**	**Pn**	**01 51 09.8**	**-0.4**
HSPB				*e*	S	**Sn**	**Sn**	**01 52 06.5**	**-4.4**
HSPB					IAML			01 52 11.4	
	comp=Z,24nm,0.5s								
HSPB	**Hornsund (broa**	**5.28**	**126**	*i*	P	**Pn**	**Pn**	**01 51 09.4**	**-0.7**
HSPB				*i*	S	**Sn**	**Sn**	**01 52 05.7**	**-5.2**
HOPEN	**Hopen**	**7.00**	**112**		Pn	**Pn**	**Pn**	**01 51 32.2**	**-1.6**
HOPEN					Sn	**Sn**	**Sn**	**01 52 45.6**	**-7.7**
HOPEN	**Hopen**	**7.00**	**112**	*e*	P	**Pn**	**Pn**	**01 51 31.9**	**-1.9**
HOPEN				*e*	S	**Sn**	**Sn**	**01 52 45.0**	**-8.3**
HOPEN	**Hopen**	**7.00**	**112**	*e*	P	**Pn**	**Pn**	**01 51 32.0**	**-1.8**
HOPEN				*e*	S	**Sn**	**Sn**	**01 52 45.2**	**-8.1**
HOPEN					IAML			01 52 49.0	
	comp=Z,9.1nm,0.3s								
DBG	**Daneborg**	**7.38**	**217**		Pn	**Pn**	**Pn**	**01 51 38.8**	**-0.2**
DBG					Sn	**Sn**	**Sn**	**01 52 56.0**	**-6.6**
DBG	**Daneborg**	**7.38**	**217**		Pn	**Pn**	**Pn**	**01 51 38.8**	**-0.2**
DBG					Sn	**Sn**	**Sn**	**01 52 56.0**	**-6.6**
DBG	**Daneborg**	**7.38**	**217**	*i*	P	**Pn**	**Pn**	**01 51 38.0**	**-1.0**
DBG				*i*	S	**Sn**	**Sn**	**01 52 54.4**	**-8.2**
DBG					IAML			01 52 59.1	
	comp=Z,39nm,0.3s								
DBG	**Daneborg**	**7.38**	**217**	*i*	P	**Pn**	**Pn**	**01 51 37.0**	**-2.0**
DBG				*i*	S	Sn	**Sn**	**01 52 51.4**	**-11**
DBG					IAML			01 53 09.2	
	comp=Z,39nm,0.5s								
ZFI2	**Zemlya Franca-**	**7.99**	**64**	*e*	P	**Pn**	**Pn**	**01 51 44.4**	**-3.0**
ZFI2				*e*	S	Sn	**Sn**	**01 53 05.4**	**-12**
	comp=Z,27nm,2.8s								
OMEGA	**Omega**	**8.02**	**65**	*e*	P	**Pn**	**Pn**	**01 51 44.4**	**-3.2**
OMEGA				*e*	S	Sn	**Sn**	**01 53 05.4**	**-13**
	comp=Z,23nm,2.8s								
NEEM	**North Greenlan**	**9.29**	**274**	*i*	P	**Pn**	**Pn**	**01 52 01.9**	**-3.5**
NEEM				*i*	S	Sn	**Sn**	**01 53 39.2**	**-11**
NEEM					IAML			01 53 47.1	
	comp=Z,17nm,0.2s								
NEEM	**North Greenlan**	**9.29**	**274**	*i*	P	**Pn**	**Pn**	**01 52 02.2**	**-3.2**
NEEM				*i*	S	Sn	**Sn**	**01 53 39.0**	**-11**
NEEM					IAML			01 53 51.0	
	comp=Z,23nm,0.8s								
JNW	**Jan Mayen West**	**9.88**	**189**	*e*	P	**Pn**	**Pn**	**01 52 15.3**	**+2.1**
JNE	**Jan Mayen East**	**9.91**	**189**	*e*	P	**Pn**	**Pn**	**01 52 16.1**	**+2.4**
SCO	**Scoresbysund**	**11.20**	**213**	*i*	P	**Pn**	**Pn**	**01 52 31.2**	**-0.1**
SCO				*i*				01 54 31.5	
SCO	**Scoresbysund**	**11.20**	**213**	*i*	P		**Pn**	**01 52 32.8**	**+1.5**
SCO					IAML			01 54 55.9	
	comp=Z,5.4nm,1.0s								
SUMG	**Summit**	**11.20**	**242**				**Pn**	**01 52 29.4**	**-2.3**
SUMG	**Summit**	**11.20**	**242**	*e*	P		**Pn**	**01 52 28.5**	**-3.2**
SUMG				*i*				01 54 26.4	
SUMG	**Summit**	**11.20**	**242**	*i*	P		**Pn**	**01 52 28.8**	**-2.8**
SUMG				*i*	S		Sn	**01 54 23.4**	**-14**
SUMG					IAML			01 54 32.5	
	comp=Z,26nm,0.9s								
HAMF	**Hammerfest**	**11.99**	**133**	*e*	P		Pn	01 52 35.4	-6.6
TULEG	**Thule**	**12.76**	**286**				Pn	01 52 47.7	-4.8
TULEG	**Thule**	**12.76**	**286**	*i*	P		Pn	01 52 46.6	-5.8
TULEG				*i*	S		Sn	01 54 56.8	-17
TULEG					IAML			01 56 27.5	
	comp=Z,16nm,0.8s								
VADS	**Vadso**	**13.19**	**125**	*e*	P		**Pn**	**01 52 57.2**	**-1.2**
KIF	**Kilpisjarvi**	**13.23**	**139**	*e*	P		**Pn**	**01 53 00.7**	**+1.8**
KEV	**Kevo**	**13.23**	**129**	*e*	P		**Pn**	**01 52 58.3**	**-0.7**
ARA0	**ARCESS Array S**	**13.25**	**132**		Pn		**Pn**	**01 52 59.0**	**-0.3**
	baz=350,slow=11								
ARA0					Sn		Sn	01 55 13.8	-13
	baz=349,slow=28								
ARA0	**ARCESS Array S**	**13.25**	**132**		Pn		**Pn**	**01 52 59.0**	**-0.3**
	baz=350,slow=11								
ARA0					Sn		Sn	01 55 13.8	-13
	baz=349,slow=28								
ARCES	**ARCESS Array B**	**13.25**	**132**		Pn		**Pn**	**01 52 59.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=340,slow=7.1,SNR=13								
ARCES					Sn		Sn	01 55 14.4	-12
	comp=Z,0.1nm,0.3s,baz=46,slow=6.9,SNR=2.4								
	comp=Z,8.0nm,0.8s								
ARCES	**ARCESS Array B**	**13.25**	**132**				**Pn**	**01 53 02.0**	**+2.7**
LOF	**Lofoten**	**13.41**	**151**	*e*	P		**Pn**	**01 53 03.1**	**+1.7**
UPNV	**Upernavik**	**13.74**	**264**	*e*				01 55 24.3	
STEI	**Steigen**	**13.75**	**149**	*e*	P		**Pn**	**01 53 09.2**	**+3.2**
NUUG	**Nuugaatsiaq**	**14.35**	**258**	*i*	P		**Pn**	**01 53 15.8**	**+1.7**
BORG	**Borgarnes**	**16.79**	**207**		Pn		**P**	**01 53 48.1**	**-0.3**
POIN	**Pond Inlet**	**17.30**	**284**		Pn		**Pn**	**01 53 46.6**	**-5.9**
SFJD	**Kangerlussuaq**	**18.06**	**248**		P		**Pn**	**01 53 58.5**	**-3.4**
	comp=Z,8.2nm,0.6s,baz=26,slow=9.8,SNR=7.6								
SFJD					S		Sn	01 57 06.1	-17
	comp=Z,9.1nm,0.9s,baz=106,slow=18,SNR=3.2								
SFJD					LR		LR	02 00 29.1	
	comp=Z,153nm,19.5s,baz=28,slow=35								
SFJD	**Kangerlussuaq**	**18.06**	**248**		P		**Pn**	**01 53 59.0**	**-3.0**
RES	**Resolute Bay**	**18.10**	**301**		P		**Pn**	**01 53 56.9**	**-5.5**
	comp=Z,2.0nm,0.4s,baz=38,slow=13,SNR=15								
RES					S		Sn	01 57 05.1	-19
	comp=Z,2.1nm,0.9s,baz=198,slow=12,SNR=1.9								
RES	**Resolute Bay**	**18.10**	**301**		Pn		**Pn**	**01 54 01.0**	**-1.4**
NRA0	**NORESS Array S**	**20.61**	**159**		P		Pn	01 54 32.5	-0.1
	baz=355,slow=11								
NRA0	**NORESS Array S**	**20.61**	**159**		P		Pn	01 54 32.5	-0.1
	baz=355,slow=11								
FINES	**FINESS Array B**	**21.13**	**139**		P		**P**	**01 54 37.7**	**+1.8**
	comp=Z,2.9nm,0.7s,baz=12,slow=10,SNR=6.5								
	comp=Z,2.9nm,0.7s								
HFS	**Hagfors**	**21.34**	**156**		P		**P**	**01 54 39.8**	**+1.5**
	comp=Z,3.6nm,0.8s,baz=9.8,slow=9.6,SNR=5.2								
	comp=Z,3.6nm,0.8s								
FRB	**Frobisher Bay**	**23.88**	**264**		LR		LR	02 04 09.4	
	comp=Z,134nm,21.5s,baz=92,slow=36								
SCHQ	**Schefferville**	**32.11**	**256**		LR		LR	02 09 30.9	
	comp=Z,106nm,20.1s,baz=74,slow=37								
ILAR	**Eielson Array**	**33.24**	**332**		P		**P**	**01 56 29.1**	**+1.1**
	comp=Z,1.1nm,1.0s,baz=3.3,slow=7.0,SNR=6.3								
ILAR					PcP		**PcP**	**01 59 10.8**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=347,slow=3.7,SNR=4.8								
	comp=Z,1.1nm,1.0s								
ILAR	**Eielson Array**	**33.24**	**332**		P		**P**	**01 56 27.4**	**-0.6**
ILAR							**PcP**	**01 59 10.1**	**+0.2**
PPLA	**Purkeypile**	**35.48**	**336**		P		**P**	**01 56 45.9**	**-1.7**
BVAR	**Borovoye Array**	**35.58**	**93**		P		**P**	**01 56 51.3**	**+2.9**
	comp=Z,0.7nm,0.8s,baz=352,slow=9.3,SNR=4.3								
	comp=Z,0.7nm,0.8s								
L22K	**Pet

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.69**	**226**	PN	**Pn**	**02 40 10.3**	**-0.3**
SPN				S	**Sn**	**02 40 19.9**	**-1.1**
SPN	**Mys Shipunski**	**0.69**	**226**	*e*P	**Pn**	**02 40 10.3**	**-0.3**
SPN				*e*S	**Sn**	**02 40 20.0**	**-1.1**
KII	**Karymskiy**	**0.94**	**300**	PN	**Pn**	**02 40 13.4**	**-0.5**
KII				S	**Sn**	**02 40 25.3**	**-1.5**
KII	**Karymskiy**	**0.94**	**300**	*e*P	**Pn**	**02 40 13.4**	**-0.5**
KII				*e*S	**Sn**	**02 40 25.3**	**-1.5**
NLC	**Nalytchevo**	**0.98**	**246**	PN	**Pn**	**02 40 14.3**	**0.0**
NLC				S	**Sn**	**02 40 27.0**	**-0.5**
NLC	**Nalytchevo**	**0.98**	**246**	*e*P	**Pn**	**02 40 14.3**	**0.0**
NLC				*e*S	**Sn**	**02 40 27.1**	**-0.5**
MKZ	**Mys Kozlova**	**1.11**	**28**	PN	**Pn**	**02 40 18.2**	**+2.3**
MKZ	**Mys Kozlova**	**1.11**	**28**	*e*P	**Pn**	**02 40 18.3**	**+2.3**
SDLR	**Sedlovina**	**1.21**	**256**	PN	**Pn**	**02 40 17.7**	**+0.4**
SDLR				S	**Sn**	**02 40 33.1**	**+0.1**
SDLR	**Sedlovina**	**1.21**	**256**	*e*P	**Pn**	**02 40 17.8**	**+0.4**
SDLR				*e*S	**Sn**	**02 40 33.1**	**+0.1**
UGLR	**Uglovaya**	**1.26**	**254**	PN	**Pn**	**02 40 18.9**	**+0.9**
UGLR				S	**Sn**	**02 40 35.0**	**+0.8**
UGLR	**Uglovaya**	**1.26**	**254**	*e*P	**Pn**	**02 40 19.0**	**+0.9**
UGLR				*e*S	**Sn**	**02 40 35.0**	**+0.8**
KRER	**Koryakskii**	**1.28**	**258**	PN	**Pn**	**02 40 19.4**	**+1.0**
KRER				S	**Sn**	**02 40 35.5**	**+0.7**
KRER	**Koryakskii**	**1.28**	**258**	*e*P	**Pn**	**02 40 19.5**	**+1.0**
KRER				*e*S	**Sn**	**02 40 35.5**	**+0.7**
AVH	**Avacha**	**1.29**	**257**	PN	**Pn**	**02 40 19.3**	**+0.8**
AVH				S	**Sn**	**02 40 35.9**	**+1.0**
AVH	**Avacha**	**1.29**	**257**	*e*P	**Pn**	**02 40 19.4**	**+0.8**
AVH				*e*S	**Sn**	**02 40 36.0**	**+1.0**
KRX	**Arik**	**1.33**	**261**	PN	**Pn**	**02 40 19.5**	**+0.6**
KRX	**Arik**	**1.33**	**261**	*e*P	**Pn**	**02 40 19.6**	**+0.6**
KOK	**Koryaka**	**1.35**	**259**	PN	**Pn**	**02 40 19.9**	**+0.7**
KOK				S	**Sn**	**02 40 36.8**	**+0.6**
KOK	**Koryaka**	**1.35**	**259**	*e*P	**Pn**	**02 40 20.0**	**+0.7**
KOK				*e*S	**Sn**	**02 40 36.9**	**+0.6**
DALK	**Dalny**	**1.36**	**247**	PN	**Pn**	**02 40 19.7**	**+0.4**
DALK				S	**Sn**	**02 40 36.4**	**-0.1**
DALK	**Dalny**	**1.36**	**247**	*e*P	**Pn**	**02 40 19.8**	**+0.4**
DALK				*e*S	**Sn**	**02 40 36.5**	**-0.1**
PET	**Petropavlovsk**	**1.42**	**248**		**Pn**	**02 40 19.8**	**-0.3**
PET	**Petropavlovsk**	**1.42**	**248**	*e*PN	**Pn**	**02 40 20.1**	**0.0**
PET				*e*S	**Sn**	**02 40 38.3**	**+0.4**
PET	comp=Z,76nm,0.2s			pmax	pmax		
PET	comp=N,221nm,0.7s			smax	smax		
PET	comp=E,408nm,0.5s			smax	smax		
INSR	**Institute**	**1.43**	**250**	PN	**Pn**	**02 40 22.1**	**+1.9**
INSR				S	**Sn**	**02 40 39.0**	**+0.9**
INSR	**Institute**	**1.43**	**250**	*e*P	**Pn**	**02 40 22.2**	**+1.9**
INSR				*e*S	**Sn**	**02 40 39.0**	**+0.9**
KZV	**Kizimen**	**1.57**	**349**	PN	**Pn**	**02 40 22.8**	**+0.6**
KZV				S	**Sn**	**02 40 41.6**	**0.0**
KZV	**Kizimen**	**1.57**	**349**	*e*P	**Pn**	**02 40 22.9**	**+0.6**
KZV				*e*S	**Sn**	**02 40 41.7**	**0.0**
GNL	**Ganaly**	**1.73**	**275**	PN	**Pn**	**02 40 25.4**	**+1.1**
GNL	**Ganaly**	**1.73**	**275**	*e*P	**Pn**	**02 40 25.4**	**+1.1**
KRMR	**Karymshinskiy**	**1.79**	**246**	PN	**Pn**	**02 40 26.3**	**+1.2**
KRMR	**Karymshinskiy**	**1.79**	**246**	*e*P	**Pn**	**02 40 26.3**	**+1.2**
RUS	**Russkaya**	**1.81**	**232**	PN	**Pn**	**02 40 26.4**	**+1.1**
RUS	**Russkaya**	**1.81**	**232**	*e*P	**Pn**	**02 40 26.4**	**+1.1**
PEA0B	**Petropavlovsk-**	**1.94**	**257**		**Pn**	**02 40 28.6**	**+1.5**
PEA0B	**Petropavlovsk-**	**1.94**	**257**	PN	**Pn**	**02 40 28.6**	**+1.5**
PEA0B				S	**Sn**	**02 40 51.3**	**+0.9**
PETK	**Petropavlovsk-**	**1.94**	**257**	Pg	**Pn**	**02 40 27.6**	**+0.5**
PETK	comp=E,10nm,0.3s,baz=74,slow=19,SNR=111			Lg	Lg	02 40 52.1	
PETK	comp=E,18nm,0.3s,baz=47,slow=34,SNR=11 **Petropavlovsk-**	**1.94**	**257**		**Pn**	**02 40 27.7**	**+0.6**
MTVR	**Mutnovka**	**1.94**	**237**	PN	**Pn**	**02 40 28.1**	**+0.9**
MTVR	**Mutnovka**	**1.94**	**237**	*e*P	**Pn**	**02 40 28.1**	**+0.9**
GRL	**Gorelyy**	**1.96**	**239**	PN	**Pn**	**02 40 29.5**	**+2.1**
GRL	**Gorelyy**	**1.96**	**239**	*e*P	**Pn**	**02 40 29.6**	**+2.1**
ASAK	**Asacha**	**2.14**	**237**	PN	Pn	02 40 33.3	+3.4
ASAK	**Asacha**	**2.14**	**237**	*e*P	Pn	02 40 33.4	+3.4
KMNR	**Kamenistaya**	**2.21**	**351**	PN	**Pn**	**02 40 32.5**	**+1.7**
KMNR	**Kamenistaya**	**2.21**	**351**	*e*P	**Pn**	**02 40 32.5**	**+1.7**
KIRR	**Kirishev**	**2.40**	**353**	PN	**Pn**	**02 40 35.2**	**+1.8**
KIRR	**Kirishev**	**2.40**	**353**	*e*P	**Pn**	**02 40 35.3**	**+1.8**
BZWR	**Bezymyannyi-We**	**2.40**	**355**	PN	**Pn**	**02 40 36.0**	**+2.6**
BZWR	**Bezymyannyi-We**	**2.40**	**355**	*e*P	**Pn**	**02 40 36.1**	**+2.6**
KPT	**Kopyto**	**2.42**	**352**	PN	**Pn**	**02 40 34.0**	**+0.4**
KPT	**Kopyto**	**2.42**	**352**	*e*P	**Pn**	**02 40 34.0**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.44**	**225**	PN	**Pn**	**02 40 36.4**	**+2.6**
KDTR	**Khodutka, Kamc**	**2.44**	**225**	*e*P	**Pn**	**02 40 36.5**	**+2.6**
KOZ	**Kozyrevsk**	**2.55**	**348**	PN	**Pn**	**02 40 36.8**	**+1.5**
KOZ	**Kozyrevsk**	**2.55**	**348**	*e*P	**Pn**	**02 40 36.9**	**+1.5**
ESO	**Esso**	**2.66**	**333**	PN	**Pn**	**02 40 38.0**	**+1.2**
ESO	**Esso**	**2.66**	**333**	*e*P	**Pn**	**02 40 38.1**	**+1.2**
KLY	**Klyuchi**	**2.74**	**358**	PN	**Pn**	**02 40 39.9**	**+2.0**
KLY	**Klyuchi**	**2.74**	**358**	*e*P	**Pn**	**02 40 39.9**	**+2.0**
KBTR	**Krutoberegovo**	**2.87**	**23**	PN	**Pn**	**02 40 41.7**	**+2.0**
KBTR	**Krutoberegovo**	**2.87**	**23**	*e*P	**Pn**	**02 40 41.8**	**+2.0**
SMKR	**Semkarok**	**3.03**	**7**	PN	**Pn**	**02 40 44.5**	**+2.5**
SMKR	**Semkarok**	**3.03**	**7**	*e*P	**Pn**	**02 40 44.5**	**+2.5**
SRKR	**Sorokina**	**3.09**	**3**	PN	**Pn**	**02 40 45.7**	**+3.0**
SRKR	**Sorokina**	**3.09**	**3**	*e*P	**Pn**	**02 40 45.7**	**+3.0**
BKI	**Bering**	**3.42**	**59**	PN	**Pn**	**02 40 48.6**	**+1.5**
BKI				S	**Sn**	**02 41 24.9**	**-1.4**
BKI	**Bering**	**3.42**	**59**	*e*P	**Pn**	**02 40 48.6**	**+1.5**
BKI				*e*S	**Sn**	**02 41 24.9**	**-1.4**
SHEM	**Shemya Is, Ala**	**8.02**	**91**	Pn	Pn	02 41 33.5	-17
SPIA	**Saint Paul Isl**	**16.76**	**66**	Pn	Pn	02 43 30.7	-16
YAK	**Yakutsk**	**18.46**	**310**		**Pn**	**02 44 10.5**	**+3.0**
YAK	comp=Z,23nm,0.5s			IAmb	IAmb	02 44 29.7	
K13K	**Kusilvak Mount**	**20.00**	**52**	P	P	02 44 14.4	-9.0
K13K	comp=Z,28nm,1.5s			IAmb	IAmb	02 44 35.3	
K15K	**Wolf Creek Mou**	**21.50**	**51**	P	P	02 44 30.9	-8.7
I17K	**Unalakleet**	**22.11**	**47**	P	P	02 44 36.8	-9.3
B22K	**Teshekpuk Lake**	**26.33**	**33**	P	**P**	**02 45 19.2**	**-6.7**
B22K	comp=Z,29nm,1.5s			IAmb	IAmb	02 45 51.6	
KTH	**Kantishna Hill**	**26.41**	**49**	P	P	02 45 19.0	-7.7
KTH	comp=Z,21nm,1.4s			IAmb	IAmb	02 45 29.7	
RND	**Reindeer**	**27.34**	**49**	P	P	02 45 25.5	-10
RND	comp=Z,15nm,0.7s			IAmb	IAmb	02 45 31.5	
ISLE	**Juniper Island**	**30.77**	**54**	P	P	02 45 57.9	-7.8
ISLE	comp=Z,13nm,1.2s			IAmb	IAmb	02 46 27.4	
H11N2	**WAKE ISLAND Hy** baz=353,slow=76,SNR=13	**34.11**	**170**	T	T	03 23 10.6	
H11N3	**WAKE ISLAND Hy** baz=353,slow=76,SNR=24	**34.12**	**170**	T	T	03 23 27.4	
H11N1	**WAKE ISLAND Hy** baz=353,slow=76,SNR=18	**34.12**	**170**	T	T	03 22 58.3	
H11S1	**WAKE ISLAND Hy** baz=353	**35.30**	**170**	T	T	03 24 30.7	
H11S3	**WAKE ISLAND Hy** baz=353,SNR=3.8	**35.31**	**170**	T	T	03 24 31.8	
H11S2	**WAKE ISLAND Hy** baz=353	**35.31**	**170**	T	T	03 24 25.0	
CRAG	**Craig**	**37.08**	**60**	P	P	02 46 52.3	-7.8
SPB2	**Spitsbergen Ar**	**46.73**	**351**	P	**P**	**02 48 17.2**	**-1.3**
KURK	**Kurchatov**	**47.85**	**302**	P	**P**	**02 48 28.1**	**+0.6**
KURK	**Kurchatov**	**47.85**	**302**	P	**P**	**02 48 28.1**	**+0.6**
KURK	comp=Z,3.0nm,1.2s			pmax	pmax		
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.5s,baz=58,slow=7.6,SNR=3.5 comp=Z,0.5nm,0.5s	**47.96**	**302**	P	**P**	**02 48 27.8**	**-0.5**
MKAR	**Makanchi Array** comp=Z,0.1nm,0.4s,baz=49,slow=9.0,SNR=1.3 comp=Z,0.1nm,0.4s	**48.35**	**296**	P	**P**	**02 48 30.6**	**-0.8**
MKAR	**Makanchi Array**	**48.35**	**296**	P	**P**	**02 48 31.3**	**-0.1**
MKAR	**Makanchi Array**	**48.35**	**296**	P	**P**	**02 48 31.3**	**-0.1**
ARCES	**ARCESS Array B** comp=Z,3.9nm,1.1s,baz=30,slow=7.1,SNR=1.5 comp=Z,3.9nm,1.1s	**52.96**	**342**	P	**P**	**02 49 05.7**	**-0.1**
ARCES	**ARCESS Array B**	**52.96**	**342**	P	**P**	**02 49 05.0**	**-0.8**
YMR	**Madison River**	**54.84**	**61**	P	P	02 49 13.2	-7.0
YMR	comp=Z,3.5nm,1.0s			IAmb	IAmb	02 49 31.6	
FINES	**FINES Array B** comp=Z,1.7nm,0.8s,baz=26,slow=6.7,SNR=7.2	**59.85**	**337**	P	**P**	**02 49 55.8**	**+1.0**
FINES	**FINES Array B** comp=Z,1.7nm,0.8s	**59.85**	**337**	P	**P**	**02 49 54.9**	**+0.1**
NOA	**NORSAR Array B** comp=Z,0.2nm,0.4s,baz=22,slow=6.7,SNR=3.9 comp=Z,0.2nm,0.4s	**63.20**	**344**	P	**P**	**02 50 17.1**	**-0.4**
HFS	**Hagfors** comp=Z,1.3nm,0.8s,baz=28,slow=6.5,SNR=7.3 comp=Z,1.3nm,0.8s	**63.62**	**342**	P	**P**	**02 50 20.9**	**+0.7**
WB0	**Warramunga Arr**	**76.53**	**206**	P	**P**	**02 51 37.1**	**-2.5**
WB0	comp=Z,9.7nm,1.4s			IAmb	IAmb	02 51 56.4	
WRA	**Warramunga Arr**	**76.71**	**206**	P	**P**	**02 51 38.0**	**-2.6**
WRA	**Warramunga Arr**	**76.71**	**206**	P	**P**	**02 51 38.0**	**-2.6**

*ISK **28** 03:20:48.6, 41.56N×25.52E, h5km, ML2.0/16*
*SOF **28** 03:20:48.6, 41.58N±0.01°×25.51E±0.01, h14km±1km, MD2.5/4*
*AFAD **28** 03:20:50.3, 41.59N×25.73E, h7km±3km, ML2.1*

ISC 28 03:20:48.7±1.0, 41.59N±0.02°×25.58E±0.03, h7km±11km, n30, σ0.69/43, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDZ	**Kurdzhali**	**0.18**	**283**	Pg	**Pg**	**03 20 52.5**	**+0.1**
KDZ				Sg	**Sg**	**03 20 54.7**	**-0.2**
KDZ	**Kurdzhali**	**0.18**	**283**	*i* Pg	**Pg**	**03 20 52.4**	**+0.1**
KDZ				*i* Sg	**Sg**	**03 20 54.7**	**-0.2**
RDO	**Rodhopi**	**0.44**	**184**	Pg	**Pg**	**03 20 57.2**	**0.0**
RDO				Sg	**Sg**	**03 21 02.8**	**-0.2**
DIM	**Dimitrovgrad**	**0.46**	**360**	*i* Pg	**Pg**	**03 20 58.3**	**+0.8**
DIM				*i* Sg	**Sg**	**03 21 04.7**	**+1.2**
RZN	**Rozhen**	**0.64**	**280**	*i* Pg	**Pg**	**03 21 00.6**	**-0.4**
RZN				*i* Sg	**Sg**	**03 21 08.7**	**-0.6**
PLD	**Plovdiv**	**0.83**	**312**	Pg	**Pg**	**03 21 04.8**	**+0.1**
PLD				Sg	**Sg**	**03 21 16.3**	**+0.7**
PLD	**Plovdiv**	**0.83**	**312**	*i* Pg	**Pg**	**03 21 04.3**	**-0.4**
PLD				Sg	**Sg**	**03 21 16.5**	**+0.1**
EDRB	**Edirne**	**0.91**	**73**	Pg	**Pb**	**03 21 06.9**	**+0.1**
UKOP	**Uzunkopru-Edir**	**0.92**	**120**	Pg	**Pb**	**03 21 07.1**	**+0.2**
ENEZ	**Enez**	**0.95**	**153**	Pg	**Pb**	**03 21 07.4**	**-0.1**
CAVK	**Edirne/Enez-Ca**	**1.00**	**153**	P	**Pb**	**03 21 08.3**	**0.0**
CAVK				S	**Sg**	**03 21 20.2**	**-0.6**
CAVK	comp=E,119nm,0.4s			*i* IAML		03 21 23.0	
CAVK	comp=N,87nm,0.5s			*i* IAML		03 21 24.0	
KESN	**Edirne-Kesan**	**1.13**	**132**	P	**Pb**	**03 21 10.6**	**-0.1**
KESN				S	**Sb**	**03 21 25.4**	**-0.3**
KESN	comp=E,55nm,0.2s			*i* IAML		03 21 28.0	
JMB	**Yambol**	**1.15**	**38**	P	**Pb**	**03 21 11.1**	**+0.3**
KIRK	**Kırklareli**	**1.15**	**80**	P	**Pg**	**03 21 09.5**	**-1.3**
KIRK				S	**Sb**	**03 21 25.4**	**-0.7**
ERIK	**Erikli-Kesan**	**1.16**	**142**	Pn	**Pb**	**03 21 10.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.37**	**150**	Pn	**Pb**	**03 21 14.6**	**0.0**
MMB	**Musomishta**	**1.37**	**269**	P	**Pn**	**03 21 14.1**	**-0.2**
ARMN	**Kirklareli, Me**	**1.41**	**78**	P	**Pn**	**03 21 15.1**	**+0.2**
ARMN				S	**Sg**	**03 21 33.1**	**-1.0**
GADA	**Gvkgeada**	**1.42**	**170**	Pn	**Pb**	**03 21 15.5**	**+0.1**
GOAD	**anakkale-G¶**	**1.45**	**170**	P	**Pg**	**03 21 17.7**	**+1.3**
GOAD				S	**Sg**	**03 21 34.0**	**-1.2**
GOAD	comp=N,38nm,0.3s			*i* IAML		03 21 38.0	
GOAD	comp=E,29nm,0.4s			*i* IAML		03 21 40.0	
LPK	**Lapseki**	**1.51**	**143**	Pn	**Pn**	**03 21 16.5**	**+0.4**
COMU	**Canakkale**	**1.64**	**155**	Pn	**Pb**	**03 21 19.1**	**-0.1**
CNKL	**anakkale-Mer**	**1.64**	**158**	P	**Pg**	**03 21 21.9**	**+1.9**
CNKL	comp=N,21nm,1.4s			*i* IAML		03 22 11.0	
CNKL	comp=E,19nm,1.2s			*i* IAML		03 22 16.0	
VIZE	**Kirklareli, Vi**	**1.70**	**90**	P	**Pb**	**03 21 20.3**	**+0.1**
KRBG	**Karabiga-Canak**	**1.77**	**132**	Pn	**Pb**	**03 21 21.2**	**-0.2**
MRMT	**Marmara Adasi**	**1.81**	**122**	Pn	**Pb**	**03 21 22.0**	**-0.2**
CANM	**Can-anakkale**	**1.93**	**144**	Pn	**Pn**	**03 21 22.9**	**+0.9**
BAYC	**CANAKKALE_Bayr**	**1.99**	**158**	P	**Pn**	**03 21 21.6**	**+1.1**
BAYC				S	**Sn**	**03 21 48.0**	**+0.1**
SLVT	**Silivri**	**2.01**	**99**	Pn	**Pb**	**03 21 24.7**	**-0.9**
KCTX	**Karacabey (Bur**	**2.48**	**121**	Pn	**Pn**	**03 21 30.8**	**+1.2**

*GCG **28** 03:23:26.8±2.1, 16.58N×91.20W, h11km±19km, MD4.0*
*MEX **28** 03:23:26.5±0.8, 16.78N×91.13W, h5km, MD3.9*

ISC 28 03:23:25.3±1.4, 16.69N±0.05°×91.17W±0.05, h14km±15km, n14, σ1.01/26, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.01**	**246**	*e*P	**Pb**	**03 23 44.2**	**-0.6**
CCIG				*e*S	**Sb**	**03 23 58.5**	**+0.5**
CCIG	**Comitan**	**1.01**	**246**	*i* P	**Pb**	**03 23 44.0**	**-0.8**
CCIG				*e*S	**Sb**	**03 23 58.8**	**+0.7**
PETF	**Flores**	**1.27**	**80**	*e*P	**Pg**	**03 23 49.4**	**-0.3**
PETF				*i* S	**Sg**	**03 24 05.8**	**-0.5**
PETF	**Flores**	**1.27**	**80**	*e*P	**Pg**	**03 23 49.5**	**-0.3**
PETF				*e*S	**Sg**	**03 24 09.2**	**+2.9**
QUIS	**Sacapulas**	**1.40**	**177**	*i* P	**Pn**	**03 23 51.0**	**+0.4**
HUEH	**Huehuetenango**	**1.40**	**193**	*e*P	**Pn**	**03 23 50.6**	**-0.2**
HUEH				*e*S	**Sn**	**03 24 08.2**	**-1.0**
PAVE	**Pavencul**	**1.78**	**213**	*e*P	**Pn**	**03 23 55.4**	**-0.5**
PAVE				*e*S	**Sn**	**03 24 19.4**	**+1.0**
APG	**El Apazote**	**1.81**	**158**	*e*P	**Pn**	**03 23 56.9**	**+0.5**
APG				*e*S	**Sn**	**03 24 19.0**	**-0.3**
CHUJ	**Union Juarez**	**1.83**	**210**	*e*P	**Pn**	**03 23 56.4**	**-0.2**
CHUJ				*e*S	**Sn**	**03 24 20.3**	**+0.5**
PATR	**El Naranjo**	**1.87**	**213**	*e*P	**Pn**	**03 23 56.9**	**-0.3**
PATR				*e*S	**Sn**	**03 24 22.0**	**+1.2**
TGIG		**1.87**	**273**	*i* P	**Pn**	**03 23 57.1**	**+0.1**
TGIG				*i* S	**Sn**	**03 24 20.3**	**-0.2**
TGIG		**1.87**	**273**	*e*P	**Pn**	**03 23 57.8**	**+0.8**
TGIG				*e*S	**Sb**	**03 24 24.1**	**+1.4**
SCIG	**Sabancuy**	**2.26**	**360**	*i* P	**Pg**	**03 24 07.9**	**-0.8**
SCIG				*i* S	**Sb**	**03 24 33.5**	**-0.3**
STG5	**El Palmar, Qui**	**2.28**	**184**	*e*P	**Pn**	**03 24 00.7**	**-2.0**

*NEIC **28** 03:51:22.3±1.8, 6.21S±0.08°×154.81E±0.08, h35km±1km, mb4.7/45, Error ellipse: s-maj=15.4km s-min=10.6km az=37.0*
*IDC **28** 03:51:27.3±1.9, 6.24S×154.76E, h90km±17km, mb4.2/19, mbtmp4.6/22, MS3.4/22, Error ellipse: s-maj=12.7km s-min=11.6km az=121.0*

ISC 28 03:51:26.0±1.0, 6.21S±0.06°×154.79E±0.05, h74km±9km, n124, σ1.42/115, mb4.6/46, 2C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.29**	**307**		**Pn**	**03 52 12.1**	**-3.2**
RABL					**Sn**	**03 52 50.9**	**-2.5**
TATA	**Tatamba Isabel**	**5.43**	**114**	P	**Pn**	**03 52 43.4**	**-1.0**
TATA	**Tatamba Isabel**	**5.43**	**114**	S	**Sn**	**03 53 45.6**	**+0.1**
SAVO	**Savo Central**	**5.77**	**121**	P	**Pn**	**03 52 49.1**	**-0.1**
SAVO	**Savo Central**	**5.77**	**121**	S	**Sn**	**03 53 55.0**	**+0.9**
HNR	**Honiara**	**6.03**	**122**	P	**Pn**	**03 52 53.6**	**+0.9**
HNR	306nm,0.5s,baz=234,slow=4.6,SNR=9.5 920nm,0.9s,baz=260,slow=18,SNR=10			S	**Sn**	**03 54 03.6**	**+3.2**
HNR	comp=Z,274nm,19.4s,baz=301,slow=38			LR	LR	03 55 19.7	
HNR	**Honiara**	**6.03**	**122**		**Pn**	**03 52 50.0**	**-2.6**
HNR	**Honiara**	**6.03**	**122**	P	**Pn**	**03 52 53.8**	**+1.1**
PMG	**Port Moresby**	**8.20**	**247**	P	**Pn**	**03 53 22.3**	**0.0**
PMG	110nm,0.7s,baz=80,slow=6.7,SNR=35 22nm,0.5s,baz=54,slow=18,SNR=8.2			S	**Sn**	**03 54 55.0**	**+1.6**
PMG	comp=Z,339nm,20.2s,baz=54,slow=36			LR	LR	03 56 23.6	
PMG	**Port Moresby**	**8.20**	**247**		**Pn**	**03 53 19.3**	**-3.0**
PMG	**Port Moresby**	**8.20**	**247**	P	**Pn**	**03 53 24.4**	**+2.2**
PMG	**Port Moresby**	**8.20**	**247**	S	**Sn**	**03 54 57.0**	**+3.5**
PMG	**Port Moresby**	**8.20**	**247**	P	**Pn**	**03 53 24.5**	**+2.2**
PMG	**Port Moresby**	**8.20**	**247**	S	**Sn**	**03 54 56.9**	**+3.5**
SANVU	**Saraoutou**	**15.26**	**128**		**Pn**	**03 54 57.2**	**0.0**
SANVU	comp=Z,70nm,1.0s			IAmb	IAmb	03 55 02.2	
MTSU	**Mount Surprise**	**15.65**	**220**	P	**P**	**03 55 03.2**	**-1.8**
CTA	**Charters Tower**	**16.09**	**210**	LR	LR	04 00 51.7	
CTAO	comp=Z,4.2nm,18.7s,baz=40,slow=35 **Charters Tower**	**16.09**	**210**	P	**Pn**	**03 55 05.6**	**-2.3**
DZM	**Mont Dzumac** comp=Z,20nm,0.8s,baz=330,slow=17,SNR=14	**19.38**	**146**	P	**P**	**03 55 46.1**	**-0.1**
DZM	comp=Z,99nm,20.1s,baz=342,slow=34			LR	LR	04 02 19.3	
DZM	**Mont Dzumac** comp=Z,40nm,0.8s	**19.38**	**146**	*e*P	**P**	**03 55 45.8**	**-0.3**
DZM	comp=Z,215nm,25.7s			*e*LR	LR	04 00 18.3	
DZM	**Mont Dzumac** comp=Z,20nm,0.7s	**19.38**	**146**	P	**P**	**03 55 44.3**	**-1.8**
DZM				IAmb	IAmb	03 55 47.2	
DZM	**Mont Dzumac**	**19.38**	**146**	P	**P**	**03 55 46.5**	**+0.4**
EIDS	**Eidsvold**	**19.38**	**190**	P	**P**	**03 55 44.6**	**-1.4**
ONTNC	**Ouen Toro**	**19.57**	**146**	P	**P**	**03 55 47.1**	**-1.0**
ONTNC	comp=Z,28nm,0.8s			IAmb	IAmb	03 55 48.7	
QIS	**Mount Isa**	**20.50**	**224**	P	Pn	03 56 01.3	+0.2
QLP	**Quilpie**	**22.62**	**205**	P	**P**	**03 56 23.9**	**+3.0**
FAKI	**Fak Fak**	**22.70**	**277**		**P**	**03 56 21.8**	**-0.1**
FAKI	comp=Z,16nm,0.7s			IAmb	IAmb	03 56 24.7	
WB0	**Warramunga Arr**	**23.97**	**234**		**P**	**03 56 33.6**	**-0.2**
WR8	**Warramunga Arr**	**23.98**	**233**		**P**	**03 56 33.6**	**-0.3**
WRAB	**Tennant Creek**	**24.09**	**234**	P	**P**	**03 56 34.8**	**-0.1**
WRAB	**Tennant Creek**	**24.09**	**234**	P	**P**	**03 56 35.1**	**+0.2**
WRA	**Warramunga Arr** comp=Z,7.6nm,0.9s,baz=56,slow=9.3,SNR=29	**24.10**	**234**	P	**P**	**03 56 34.5**	**-0.5**
WRA	comp=Z,1.4nm,0.5s,baz=59,slow=2.6,SNR=7.1			PcP	**PcP**	**04 00 14.4**	**-0.4**
WRA	comp=Z,0.2nm,0.4s,baz=56,slow=16,SNR=1.8 comp=Z,7.6nm,0.9s			S	**S**	**04 00 47.2**	**-0.5**
WRA	**Warramunga Arr**	**24.10**	**234**	P	**P**	**03 56 33.1**	**-1.9**
WRA					**PcP**	**04 00 13.9**	**-0.8**
WRA					**S**	**04 00 47.0**	**-0.6**
ARMA	**Armidale**	**24.27**	**187**	P	**P**	**03 56 36.4**	**-0.1**
ARMA	comp=Z,24nm,1.5s			IAmb	IAmb	03 57 10.9	
INKA	**Innaminka**	**25.23**	**210**		**P**	**03 56 44.0**	**-1.0**
ASAR	**Alice Springs** comp=Z,2.2nm,0.6s,baz=51,slow=8.8,SNR=25	**26.55**	**227**	P	**P**	**03 56 56.2**	**-1.0**
ASAR	comp=Z,2.8nm,0.7s,baz=55,slow=2.4,SNR=15			PcP	**PcP**	**04 00 20.1**	**-0.2**
ASAR	comp=Z,110nm,21.5s,baz=104,slow=34 comp=Z,2.2nm,0.6s			LR	LR	04 06 27.2	
ASAR	**Alice Springs**	**26.55**	**227**		**PcP**	**04 00 19.9**	**-0.3**
KNRA	**Kununurra**	**27.20**	**248**	P	**P**	**03 57 03.2**	**+0.2**
H11S3	**WAKE ISLAND Hy** baz=205,slow=75,SNR=25	**27.21**	**25**	T	T	04 25 09.3	
H11S2	**WAKE ISLAND Hy** baz=205,slow=75,SNR=33	**27.21**	**25**	T	T	04 25 12.1	
H11S1	**WAKE ISLAND Hy** baz=205,slow=75,SNR=28	**27.23**	**25**	T	T	04 25 10.5	
STKA	**Stephens Creek** comp=Z,1.8nm,0.6s,baz=32,slow=14,SNR=5.1	**28.36**	**204**	P	**P**	**03 57 11.8**	**-1.5**
STKA	comp=Z,1.9nm,0.6s,baz=53,slow=5.1,SNR=4.0 comp=Z,1.8nm,0.6s			PcP	**PcP**	**04 00 22.4**	**-2.0**
STKA	**Stephens Creek**	**28.36**	**204**	P	**P**	**03 57 12.4**	**-0.8**
STKA	comp=Z,20nm,1.0s			IAmb	IAmb	03 57 17.4	
STKA				PcP	**PcP**	**04 00 24.2**	**-0.2**
FITZ	**Fitzroy Crossi** comp=Z,107nm,21.6s,baz=34,slow=36	**30.79**	**245**	LR	LR	04 09 38.4	
FITZ	**Fitzroy Crossi**	**30.79**	**245**	P	**P**	**03 57 33.9**	**-1.0**
BATI	**Baumata** comp=Z,71nm,20.0s,baz=144,slow=41	**31.05**	**261**	LR	LR	04 12 31.3	
BBOO	**Buckleboo** comp=Z,14nm,1.1s	**31.70**	**211**	P	**P**	**03 57 40.7**	**-2.1**
BBOO				IAmb	IAmb	03 57 56.7	
DAV	**Davao City (W)** comp=Z,43nm,21.7s,baz=3.0,slow=32	**31.99**	**294**	LR	LR	04 08 28.9	
TOLI2	**Tolitoli**	**34.72**	**281**		**P**	**03 58 09.1**	**-0.2**
TOLI2	comp=Z,6.7nm,0.8s			IAmb	IAmb	03 58 10.8	
FORT	**Forrest**	**35.02**	**222**	P	**P**	**03 58 10.8**	**-0.8**
FORT	comp=Z,7.5nm,0.6s			IAmb	IAmb	03 58 20.9	
RTZ	**

comp=Z,11nm,1.5s
ILAR Eielson Array 82.72 22 P **P** 04 03 40.0 -1.4
comp=Z,1.3nm,0.4s,baz=246,slow=5.4,SNR=46
ILAR LR LR 04 33 36.3
comp=Z,59nm,21.4s,baz=248,slow=31
comp=Z,1.3nm,0.4s
ILAR Eielson Array 82.72 22 P **P** 04 03 41.2 -0.2
MAKZ Makanchi 82.89 319 P **P** 04 03 42.9 +0.2
MAKZ IAmb IAmb 04 03 43.3
comp=Z,4.7nm,0.8s
J25K Salcha River, 83.20 22 P **P** 04 03 43.9 -0.1
J25K IAmb IAmb 04 03 44.5
comp=Z,8.0nm,1.2s
ZAA0 Zalesovo Array 83.42 326 P **P** 04 03 44.9 -0.3
ZAA0 IAmb IAmb 04 03 45.0
comp=Z,4.3nm,0.8s
ZALV Zalesovo Beam 83.42 326 P **P** 04 03 44.2 -1.0
comp=Z,3.4nm,0.6s,baz=116,slow=4.7,SNR=13
comp=Z,3.4nm,0.6s
ZALV Zalesovo Beam 83.42 326 P **P** 04 03 44.5 -0.7
QSPA South Pole Qui 83.76 180 P **P** 04 03 49.6 +2.7
comp=Z,7.3nm,0.6s,baz=357,slow=2.3,SNR=40
QSPA South Pole Qui 83.76 180 P **P** 04 03 47.3 +0.3
G26K Porcupine Rive 84.92 20 P **P** 04 03 52.9 +0.3
G26K IAmb IAmb 04 03 54.7
comp=Z,5.6nm,0.9s
MAW Mawson 85.04 203 P **P** 04 03 53.0 -0.2
comp=Z,10.0nm,0.6s,baz=98,slow=8.0,SNR=19
comp=Z,10.0nm,0.6s
KSH Kashi 85.35 310 P **P** 04 03 57.5 +2.0
KSH pmax pmax
comp=Z,6.0nm,0.7s
KURK Kurchatov 86.09 322 **P** 04 03 57.8 -0.9
KURBB Kurchatov Arra 86.12 322 P **P** 04 03 57.7 -1.2
comp=Z,1.5nm,0.5s,baz=96,slow=4.8,SNR=10
comp=Z,1.5nm,0.5s
C27K Jago River 86.25 18 P **P** 04 04 00.2 +1.1
C27K IAmb IAmb 04 04 01.3
comp=Z,3.7nm,0.9s
E27K Coleen River 86.25 20 **P** 04 04 00.3 +1.2
E27K IAmb IAmb 04 04 01.6
comp=Z,5.0nm,0.8s
F28M Old Crow 86.58 20 **P** 04 04 01.7 +0.9
F28M IAmb IAmb 04 04 39.3
comp=Z,8.5nm,1.5s
DLBC Dease Lake 87.57 31 LR LR 04 37 30.8
comp=Z,22nm,19.4s,baz=276,slow=32
NRIK Noril'sk 87.93 341 P **P** 04 04 05.7 -1.5
comp=Z,3.2nm,0.5s,baz=105,slow=4.7,SNR=4.9
NRIK LR LR 04 45 26.5
comp=Z,18nm,18.6s,baz=142,slow=37
comp=Z,3.2nm,0.5s
NRIK Noril'sk 87.93 341 P **P** 04 04 06.5 -0.7
G31M Satah River 88.33 22 P **P** 04 04 09.5 +0.4
NVAR Mina Array Bea 91.40 52 P **P** 04 04 25.2 +0.7
comp=Z,3.0nm,0.8s,baz=275,slow=7.1,SNR=12
comp=Z,3.0nm,0.8s
NVAR Mina Array Bea 91.40 52 P **P** 04 04 24.9 +0.4
BVAR Borovoye Array 91.55 323 P **P** 04 04 22.8 -1.7
comp=Z,3.1nm,0.6s,baz=106,slow=5.2,SNR=14
BVAR LR LR 04 47 36.9
comp=Z,8.9nm,18.9s,baz=77,slow=37
comp=Z,3.1nm,0.6s
BORK Borovoye 91.59 323 P **P** 04 04 23.1 -1.7
BORK IAmb IAmb 04 04 23.6
comp=Z,2.4nm,0.6s
A36M Sachs Harbour 92.76 18 P **P** 04 04 29.8 +0.1
NEW Newport 93.31 42 LR LR 04 40 00.7
comp=Z,64nm,20.7s,baz=274,slow=31
ELK Elko 93.99 50 LR LR 04 38 14.2
comp=Z,21nm,21.4s,baz=278,slow=30
PDAR Pinedale Array 98.33 48 P **P** 04 04 55.8 -0.3
comp=Z,0.4nm,0.8s,baz=289,slow=3.4,SNR=3.6
PDAR LR LR 04 45 16.6
comp=Z,15nm,18.5s,baz=216,slow=33
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 98.33 48 P **P** 04 04 55.3 -0.7
ARTI Arti 98.68 326 LR LR 04 53 06.6
comp=Z,6.2nm,18.2s,baz=132,slow=38
SNAA Sanae 100.89 187 P **Pdif** 04 05 06.6 -0.1
comp=Z,0.4nm,0.7s,baz=215,slow=14,SNR=1.4
SNAA Sanae 100.89 187 Pdif **Pdif** 04 05 06.8 +0.2
BRTR Keskin Array B 117.71 312 PKP **PKPdf** 04 10 01.6 -2.8
comp=Z,0.2nm,0.5s,baz=96,slow=1.4,SNR=1.8
BRTR Keskin Array B 117.71 312 **PKPdf** 04 10 03.3 -1.0
BOSA Boshof 120.34 232 PKP **PKPdf** 04 10 08.6 -1.2
comp=Z,0.9nm,0.4s,baz=100,slow=1.8,SNR=4.2
BOSA Boshof 120.34 232 **PKPdf** 04 10 08.7 -1.1
TORD Torodi Ar. Bea 152.61 287 PKPbc **PKPbc** 04 11 13.6 -1.6
comp=Z,0.5nm,0.4s,baz=41,slow=5.4,SNR=24

DJA 28 04:17:55.7±0.2,3°S±1°×12°2E±°,h10km,M3.8/13,mb3.9/1,MLv3.8/13,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.21**	**157**	P	P	Pg	04 18 19.0	+0.1
KDI				S	S	Sb	04 18 33.2	-1.1
LUWI	**Luwuk**	**1.89**	**19**	P	P	Pn	04 18 28.4	+0.3
LUWI				S	S	Sb	04 18 53.7	-0.3
APSI	**Ampana**	**1.98**	**345**	P	P	Pn	04 18 29.6	+0.3
TTSI	**Tana Toraja**	**2.34**	**265**	P	P	Pn	04 18 34.3	+0.1
TTSI				S	S	Sn	04 19 04.8	+1.8
BNSI	**Bone**	**2.56**	**233**	P	P	Pn	04 18 37.0	-0.3
SPSI	**Sidrap Palu**	**2.63**	**245**	P	P	Pn	04 18 38.8	+0.6
SPSI				S	S	Sn	04 19 10.5	+0.4
BBSI	**Bau Bau**	**2.66**	**171**	P	P	Pn	04 18 37.9	-0.8
PCI	**Palu**	**3.01**	**310**	P	P	Pn	04 18 43.1	-0.3
PCI				S	S	Sn	04 19 20.6	+1.0
MRSI	**Marisa**	**3.30**	**356**	P	P	Pn	04 18 47.5	0.0
MRSI				S	S	Sn	04 19 26.8	0.0
GTOI	**Gorontalo**	**3.56**	**14**	P	P	Pn	04 18 51.9	+0.9
GTOI				S	S	Sn	04 19 35.7	+2.5
BSSI	**Bau Bau, Buton**	**3.67**	**207**	P	P	Pn	04 18 52.6	0.0
BSSI				S	S	Sn	04 19 38.0	+1.9
EDFI	**Ende, Flores**	**5.89**	**184**	P	P	Pn	04 19 23.2	0.0

*NEIC **28** 04:48:17.7±1.3,5.°93N±0.°08×127.°2E±0.°1,h35km±9km, mb4.3/12,Error ellipse: s-maj=17.2km s-min=8.4km az=54.0*
*IDC **28** 04:48:23.8±3.0,5.°88N×127.°42E,h106km±22km,mb3.7/10, mbtmp4.0/11,Error ellipse: s-maj=52.9km s-min=12.2km az=65.0*
*DJA **28** 04:48:25.5±1.0,6.°N±3.°×12.°7E±.°,h14km±8km,M4.4/10, mb4.5/5,MLv4.3/10*
ISC 28 04:48:22.2±0.7,5.°76N±0.°05×127.°12E±0.°09,h83km,n37,σ2°45/41,mb4.2/15,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.01**	**310**	P	**Pn**		**04 48 57.9**	**+3.5**
	276nm,0.4s,baz=66,slow=20,SNR=4.3							
DAV				S	**Sn**		**04 49 26.5**	**+7.7**
	250nm,0.3s,baz=108,slow=20,SNR=7.5							
DAV	**Davao City (W)**	**2.01**	**310**	Pn	Pn		04 48 47.6	-6.7
DAV					**Sn**		**04 49 10.5**	**-8.4**
SGSI	**Sangihe**	**2.60**	**218**	P	**Pn**		**04 49 03.6**	**+1.3**
SGSI				S	**Sn**		**04 49 34.2**	**+1.1**
TNTI	**Ternate**	**4.96**	**177**	Pn	**Pn**		**04 49 32.5**	**-1.9**
TNTI	**Ternate**	**4.96**	**177**	P	**Pn**		**04 49 37.7**	**+3.3**
GTOI	**Gorontalo**	**6.54**	**219**	P	**Pn**		**04 49 58.2**	**+2.3**
	0.1nm26nm,0.7s							
MRSI	**Marisa**	**7.37**	**225**	P	**Pn**		**04 50 09.0**	**+1.8**
MRSI				S	**Sn**		**04 51 29.0**	**-0.3**
SWI	**Sorong**	**7.77**	**148**	P	**Pn**		**04 50 15.8**	**+3.1**
TOLI2	**Tolitoli**	**7.83**	**234**	Pn	**Pn**		**04 50 10.9**	**-2.7**
FAKI	**Fak Fak**	**10.03**	**149**	Pn	Pn		04 50 38.6	-4.9
SBUM	**Sibu**	**15.22**	**258**	P	**P**		**04 51 56.0**	**+0.2**
SBUM					IAmb	IAmb	04 51 59.0	
	comp=Z,14nm,0.8s							
KNRA	**Kununurra**	**21.36**	**176**	P	**P**		**04 53 02.7**	**-0.3**
KNRA					IAmb	IAmb	04 53 06.4	
	comp=Z,8.8nm,1.1s							
FITZ	**Fitzroy Crossi**	**23.75**	**183**	P	**P**		**04 53 28.1**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=13,slow=12,SNR=6.4							
	comp=Z,1.2nm,0.4s							
FITZ	**Fitzroy Crossi**	**23.75**	**183**	P	**P**		**04 53 28.1**	**+0.9**
WB0	**Warramunga Arr**	**26.36**	**164**	P	**P**		**04 53 50.9**	**0.0**
WRA	**Warramunga Arr**	**26.51**	**165**	P	**P**		**04 53 52.1**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=346,slow=9.2,SNR=1.7							
WRA				ScP	**ScP**		**05 00 43.8**	**-4.2**
	comp=Z,0.5nm,1.1s,baz=342,slow=3.3,SNR=2.1							
	comp=Z,0.4nm,0.3s							
WR8	**Warramunga Arr**	**26.57**	**164**	P	**P**		**04 53 52.7**	**0.0**
ASAR	**Alice Springs**	**29.99**	**167**	P	**P**		**04 54 22.4**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=348,slow=9.4,SNR=9.2							
ASAR				ScP	**ScP**		**05 00 54.6**	**-4.1**
	comp=Z,0.3nm,0.7s,baz=349,slow=3.1,SNR=2.2							
	comp=Z,0.6nm,0.3s							
ASAR	**Alice Springs**	**29.99**	**167**	P	**P**		**04 54 23.7**	**+0.5**
FORT	**Forrest**	**36.35**	**179**	P	**P**		**04 55 19.1**	**+0.8**
FORT					IAmb	IAmb	04 55 28.4	
	comp=Z,6.0nm,1.0s							
BBOO	**Buckleboo**	**39.29**	**168**	P	**P**		**04 55 43.2**	**+0.1**
NWAO	**Narrogin (SRO)**	**39.61**	**193**	P	**P**		**04 55 46.4**	**+0.7**
STKA	**Stephens Creek**	**39.89**	**161**	P	**P**		**04 55 48.2**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=336,slow=10.0,SNR=4.9							
	comp=Z,1.5nm,0.4s							
STKA	**Stephens Creek**	**39.89**	**161**	P	**P**		**04 55 49.1**	**+0.9**
EVN	**Everest**	**44.13**	**305**	P	**P**		**04 56 23.0**	**-0.5**
EVN					IAmb	IAmb	04 56 24.1	
	comp=Z,7.9nm,1.3s							
SONM	**Songino Array**	**45.52**	**340**	P	**P**		**04 56 33.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=153,slow=7.6,SNR=2.3							
	comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**56.13**	**324**	P	**P**		**04 57 53.3**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=116,slow=7.2,SNR=28							
	comp=Z,1.4nm,0.3s							
MKAR	**Makanchi Array**	**56.13**	**324**	P	**P**		**04 57 52.8**	**-0.4**
ZALV	**Zalesovo Beam**	**58.97**	**332**	P	**P**		**04 58 11.9**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=114,slow=7.0,SNR=2.0							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**58.97**	**332**	P	**P**		**04 58 12.1**	**-0.9**
KURK	**Kurchatov**	**60.26**	**327**	P	**P**		**04 58 21.4**	**-0.4**
KURK					IAmb	IAmb	04 58 22.6	
	comp=Z,2.5nm,0.8s							
KURBB	**Kurchatov Arra**	**60.26**	**327**	P	**P**		**04 58 21.0**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=125,slow=6.6,SNR=5.1							
	comp=Z,1.1nm,0.3s							
KKAR	**Karatay Array**	**62.03**	**316**	P	**P**		**04 58 34.3**	**+0.2**
BVAR	**Borovoye Array**	**65.85**	**326**	P	**P**		**04 58 58.4**	**-0.5**
	comp=Z,1.4nm,0.4s,baz=125,slow=7.6,SNR=6.9							
	comp=Z,1.4nm,0.4s							
AB31	**Akbulak array**	**70.84**	**320**	P	**P**		**04 59 29.5**	**-0.6**
AB31					IAmb	IAmb	04 59 30.8	
	comp=Z,2.4nm,1.1s							
ABKAR	**Akbulak array**	**70.84**	**320**	P	**P**		**04 59 29.6**	**-0.6**
AKTO	**Aktyubinsk**	**72.32**	**321**	P	**P**		**04 59 38.8**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=86,slow=8.5,SNR=5.3							
	comp=Z,1.9nm,0.5s							

*IDC **28** 04:53:06.7±5.8,36.°01N×70.°24E,h138km±52km,mb3.6/8, mbtmp4.0/13,Error ellipse: s-maj=41.2km s-min=20.7km az=33.0*
*NNC **28** 04:53:10.4±6.7,36.°82N×69.°94E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=54.4km s-min=40.4km az=167.0*
ISC 28 04:53:15.2±1.3,36.°6N±0.°1×70.°4E±0.°1,h200km,n23,σ1°33/27,mb3.4/6,5C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**6.42**	**28**	P	**Pn**		**04 54 49.0**	**+0.7**
	SNR=23							
KK31	**Karatay Array**	**6.47**	**1**	⇑P	**Pn**		**04 54 46.5**	**-1.9**
	2.0nm,0.2s,baz=197,slow=14,SNR=28							
KK31				⇑S	**Sn**		**04 55 59.9**	**-2.5**
	5.5nm,0.4s,baz=185,slow=14,SNR=7.7							
EKS2	**Erkin-Say**	**6.56**	**22**	P	**Pn**		**04 54 50.7**	**+1.0**
	SNR=7.7							
AAK	**Ala-Archa**	**6.77**	**26**	P	**Pn**		**04 54 53.1**	**+0.6**
	6.0nm,0.3s,baz=178,slow=6.6,SNR=31							
AAK				S	**Sn**		**04 56 08.9**	**-0.9**
	7.8nm,0.6s,baz=143,slow=20,SNR=4.7							
AAK	**Ala-Archa**	**6.77**	**26**	P	**Pn**		**04 54 53.5**	**+1.0**
	SNR=14							
AAK	**Ala-Archa**	**6.77**	**26**	⇓P	**Pn**		**04 54 52.1**	**-0.4**
	1.0nm,0.4s							
AAK				⇓S	**Sn**		**04 56 08.3**	**-1.4**
	10nm,0.7s							
USP	**Ospenovka**	**7.33**	**24**	P	**Pn**		**04 55 00.5**	**+0.8**
	SNR=8.3							
TKM2	**Tokmak 2**	**7.44**	**31**	P	**Pn**		**04 55 02.0**	**+0.8**
	SNR=8.3							
MKAR	**Makanchi Array**	**13.46**	**37**	P	**Pn**		**04 56 19.9**	**+1.6**
	0.7nm,0.4s,baz=219,slow=11,SNR=13							
AB31	**Akbulak array**	**14.75**	**332**	⇓P	**Pn**		**04 56 33.7**	**-0.5**
	0.7nm,0.4s,baz=148,slow=11,SNR=20							
AB31				⇑S	**S**		**04 59 16.8**	**-1.1**
	0.7nm,0.5s,baz=161,slow=22,SNR=4.9							
KURBB	**Kurchatov Arra**	**15.15**	**20**	P	**Pn**		**04 56 39.6**	**+0.6**
	0.6nm,0.3s,baz=208,slow=9.8,SNR=11							
BVAR	**Borovoye Array**	**16.40**	**360**	P	**Pn**		**04 56 54.7**	**+0.7**
	1.2nm,0.5s,baz=181,slow=11,SNR=7.1							
AKTO	**Aktyubinsk**	**16.44**	**331**	P	**Pn**		**04 56 55.3**	**+0.7**
	9.6nm,0.7s,baz=147,slow=10,SNR=29							
AKTO	**Aktyubinsk**	**16.44**	**331**	⇑P	**P**		**04 56 54.7**	**+0.9**
	7.0nm,0.8s							
AKTO				⇑S	**S**		**04 59 55.0**	**-0.5**
	3.6nm,1.4s							
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	**P**		**04 57 33.7**	**+1.5**
	1.0nm,0.3s,baz=214,slow=10,SNR=7.2							
	1.0nm,0.3s							
FINES	**FINESS Array B**	**37.12**	**326**	P	**P**		**05 00 07.3**	**+1.2**
	3.5nm,0.9s,baz=113,slow=8.2,SNR=5.8							
	3.5nm,0.9s							
ARCES	**ARCESS Array B**	**40.85**	**338**	P	**P**		**05 00 38.6**	**+1.7**
	0.8nm,0.5s,baz=123,slow=7.9,SNR=7.0							
	0.8nm,0.5s							
HFS	**Hagfors**	**42.68**	**322**	P	**P**		**05 00 53.2**	**+1.3**
	2.6nm,0.8s,baz=101,slow=13,SNR=6.8							
	2.6nm,0.8s							
NB2	**NORSAR Subarra**	**44.00**	**323**	P	**P**		**05 01 02.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.00**	**323**	P	**P**		**05 01 03.4**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=98,slow=8.1,SNR=3.5							
	comp=Z,0.5nm,0.5s							
TORD	**Torodi Ar. Bea**	**65.26**	**268**	P	P		05 03 31.7	-4.1
	comp=Z,3.2nm,0.3s,baz=42,slow=8.6,SNR=4.4							
	comp=Z,3.2nm,0.3s							
WRA	**Warramunga Arr**	**82.45**	**122**	P	**P**		**05 05 13.1**	**-2.3**
	comp=Z,0.6nm,0.9s,baz=313,slow=5.1,SNR=3.3							
	comp=Z,0.6nm,0.9s							
ASAR	**Alice Springs**	**84.70**	**125**	P	**P**		**05 05 24.6**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=308,slow=4.5,SNR=4.0							
	comp=Z,0.4nm,0.6s							

*IDC **28** 05:16:54.9±1.4,61.°77N×152.°47W,h90km±15km,mb3.7/17, mbtmp4.0/22,Error ellipse: s-maj=16.5km s-min=9.6km az=107.0*
*NEIC **28** 05:16:58.1±0.9,61.°75N±0.°03×152.°22W±0.°07, h115km±3km,Error ellipse: s-maj=5.2km s-min=3.3km az=61.0*
*AEIC **28** 05:16:58.8±0.7,61.°73N±0.°03×152.°11W±0.°07, h114km±4km,ML3.6,mb4.1/11(NEIC),ML3.9/242(NEIC), Error ellipse: s-maj=5.2km s-min=3.8km az=48.0*
ISC 28 05:16:58.0±0.6,61.°74N±0.°04×152.°17W±0.°04,h118km±5km,n293,σ0°72/306,mb4.1/20,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STLK	**Strandline Lak**	**0.29**	**146**			**Pn**	**05 17 14.2**	**-0.5**
STLK					Sn	**Sn**	**05 17 26.2**	**-1.0**
SKT	**Skwentna**	**0.39**	**51**			**Pn**	**05 17 14.7**	**-0.3**
SKT					Sn	**Sn**	**05 17 27.1**	**-0.8**
SKT					IAML		05 17 27.8	
	comp=N,2μm,0.4s							
SKT					IAML		05 17 27.8	
	comp=E,2μm,0.5s							
SPNN	**North Nagishla**	**0.45**	**215**			**Pn**	**05 17 15.4**	**-0.2**
SPCG	**Spurr Capps Gl**	**0.45**	**171**			**Pn**	**05 17 15.0**	**-0.5**
SPCG						**Sn**	**05 17 27.7**	**-1.1**
M20K	**Styx River**	**0.48**	**288**			**Pn**	**05 17 15.4**	**-0.3**
M20K						**Sn**	**05 17 27.9**	**-1.1**
M20K					IAML		05 17 28.7	
	comp=E,1μm,0.8s							
M20K					IAML		05 17 28.9	
	comp=N,2μm,0.9s							
SPBG	**Spurr Blockage**	**0.49**	**192**			**Pn**	**05 17 15.5**	**-0.3**
SPWE	**Spurr West**	**0.50**	**202**			**Pn**	**05 17 15.6**	**-0.2**
SPCN	**Chakachatna No**	**0.52**	**181**			**Pn**	**05 17 15.5**	**-0.3**
SPCR	**Spurr Chakacha**	**0.54**	**182**			**Pn**	**05 17 15.4**	**-0.6**
SPCR						**Sn**	**05 17 29.4**	**-0.2**
SPCR	**Spurr Chakacha**	**0.54**	**182**			**Pn**	**05 17 15.4**	**-0.6**
SPCR						**Sn**	**05 17 29.4**	**-0.2**
CKL	**Chakachamna La**	**0.55**	**189**			**Pn**	**05 17 15.7**	**-0.4**
SPU	**Mount Spurr**	**0.56**	**174**			**Pn**	**05 17 15.3**	**-0.8**
SUA	**Susitna One**	**0.73**	**112**			**Pn**	**05 17 17.6**	**+0.1**
SUA					Sn	**Sn**	**05 17 31.8**	**-0.4**
SUA					IAML		05 17 33.6	
	comp=N,2μm,0.4s							
M22K	**Willow**	**0.97**	**88**			**Pn**	**05 17 19.8**	**+0.4**
M22K						**Sn**	**05 17 36.0**	**+0.3**
L22K	**Petersville**	**1.03**	**39**			**Pn**	**05 17 20.2**	**+0.1**
L22K					IAML		05 17 36.8	
	comp=E,2μm,0.5s							
L22K					IAML		05 17 40.6	
	comp=N,2μm,0.6s							
M19K	**Big River Lodg**	**1.07**	**280**	Pn	**Pn**		**05 17 20.4**	**0.0**
M19K					IAML		05 17 40.0	
	comp=N,702nm,0.9s							
CAPN	**Captain Cook N**	**1.09**	**153**			**Pn**	**05 17 22.0**	**+1.4**
L20K	**Farewell, AK**	**1.10**	**313**			**Pn**	**05 17 20.8**	**0.0**
L20K					IAML		05 17 38.4	
	comp=N,892nm,0.7s							
L20K					IAML		05 17 39.0	
	comp=E,770nm,0.7s							
FIS	**Fire Island**	**1.11**	**122**			**Pn**	**05 17 22.2**	**+1.3**
FIS					IAML		05 17 44.6	
	comp=E,2μm,0.5s							
CUT	**Chulitna**	**1.11**	**52**			**Pn**	**05 17 21.3**	**+0.4**
CUT						**Sn**	**05 17 39.3**	**+1.0**
CUT					IAML		05 17 39.8	
	comp=N,3μm,0.4s							
PPLA	**Purkeypile**	**1.16**	**359**			**Pn**	**05 17 22.1**	**+0.5**
PPLA					IAML		05 17 42.7	
	comp=E,890nm,0.5s							
PPLA					IAML		05 17 43.6	
	comp=N,902nm,0.7s							
RDT	**Redoubt**	**1.18**	**186**			**Pn**	**05 17 21.3**	**-0.3**
DFR	**Drift River**	**1.18**	**193**			**Pn**	**05 17 21.5**	**-0.2**
RDJH	**Redoubt Jeurge**	**1.19**	**195**			**Pn**	**05 17 21.9**	**0.0**
RDJH						**Sn**	**05 17 39.6**	**-0.4**
RDWB	**Redoubt West**	**1.30**	**195**			**Pn**	**05 17 23.1**	**0.0**
RDSO	**Redoubt South**	**1.32**	**193**			**Pn**	**05 17 23.1**	**-0.2**
RC01	**Rabbit Creek A**	**1.34**	**118**			**Pn**	**05 17 23.1**	**-0.3**
RC01					IAML		05 17 46.4	
	comp=N,2μm,0.6s							
RC01					IAML		05 17 46.6	
	comp=E,1μm,0.3s							
L19K	**White Mountain**	**1.35**	**290**			**Pn**	**05 17 23.4**	**-0.1**
L19K					IAML		05 17 43.2	
	comp=N,670nm,1.2s							
L19K					IAML		05 17 43.8	
	comp=E,1μm,1.0s							
RED	**Redoubt Volcan**	**1.36**	**193**			**Pn**	**05 17 23.8**	**+0.1**
RED					IAML		05 17 46.1	
	comp=E,746nm,1.2s							
RED					IAML		05 17 50.3	
	comp=N,708nm,0.8s							
N19K	**Bonanza Creek**	**1.46**	**231**			**Pn**	**05 17 24.7**	**-0.1**
PMR	**Palmer**	**1.46**	**94**			**Pn**	**05 17 23.8**	**-0.8**
PMR						**Sn**	**05 17 44.1**	**-0.8**
PMR					IAML		05 17 49.0	
	comp=E,744nm,0.4s							
PMR					IAML		05 17 49.9	
	comp=N,776nm,0.3s							
PMR	**Palmer**	**1.46**	**94**	P	**Pn**		**05 17 23.5**	**-1.1**
PMR	**Palmer**	**1.46**	**94**	S	**Sn**		**05 17 43.5**	**-1.4**
GHO	**Glory Hole Cre**	**1.54**	**87**		**Pn**		**05 17 25.4**	**-0.4**
GHO					IAML		05 17 48.7	
	comp=N,1μm,0.7s							
GHO					IAML		05 17 55.6	
	comp=E,1μm,0.4s							
SLKM	**Skilak Lake**	**1.56**	**142**			**Pn**	**05 17 26.1**	**+0.2**
O20K	**Slope Mountain**	**1.68**	**188**			**Pn**	**05 17 28.0**	**+0.6**
O22K	**Cooper Landing**	**1.73**	**136**			**Pn**	**05 17 27.7**	**-0.2**
M18K	**Stony River**	**1.77**	**264**			**Pn**	**05 17 28.1**	**-0.2**
M18K						**Sn**	**05 17 50.4**	**-1.2**
IVE	**Iliamna Volcan**	**1.78**	**194**			**Pn**	**05 17 28.5**	**-0.1**
KNK	**Knik Glacier**	**1.80**	**99**			**Pn**	**05 17 27.9**	**-0.9**
SML	**Sawmill**	**1.82**	**86**			**Pn**	**05 17 28.4**	**-0.7**
SML						**Sn**	**05 17 52.2**	**-0.7**
SML					IAML		05 17 52.7	
	comp=N,1μm,0.7s							
SML					IAML		05 17 54.2	
	comp=E,1μm,0.4s							
ILSW	**Iliamna Southw**	**1.82**	**196**			**Pn**	**05 17 29.2**	**0.0**
ILS	**Iliamna Low So**	**1.84**	**194**			**Pn**	**05 17 29.5**	**+0.1**
K20K	**Telida**	**1.85**	**332**			**Pn**	**05 17 29.2**	**-0.1**
O19K	**Port Alsworth**	**1.87**	**215**			**Pn**	**05 17 29.4**	**-0.2**
O19K					IAML		05 18 05.6	
	comp=E,490nm,0.5s							
O19K					IAML		05 18 16.0	
	comp=N,564nm,0.4s							
WAT7	**Susitna Watana**	**1.90**	**53**			**Pn**	**05 17 29.9**	**-0.2**
WAT7						**Sn**	**05 17 53.6**	**-1.0**
KTH	**Kantishna Hill**	**1.91**	**17**			**Pn**	**05 17 30.2**	**0.0**
KTH					IAML		05 17 57.1	
	comp=E,1μm,0.4s							
KTH					IAML		05 17 57.2	
	comp=N,992nm,0.7s							
TRF	**Thorofare Moun**	**1.93**	**26**			**Pn**	**05 17 30.8**	**+0.3**
TRF					IAML		05 17 58.4	
	comp=E,1μm,0.7s							
WAT1	**Susitna Watana**	**2.01**	**55**			**Pn**	**05 17 31.2**	**-0.3**
PWL	**Port Wells**	**2.05**	**114**			**Pn**	**05 17 30.8**	**-1.1**
PWL					IAML		05 18 07.7	
	comp=E,1μm,0.6s							
N18K	**Kilae Creek**	**2.09**	**241**			**Pn**	**05 17 32.2**	**-0.2**
HOM	**Homer**	**2.10**	**173**			**Pn**	**05 17 32.7**	**+0.2**
SEW	**Seward**	**2.11**	**140**			**Pn**	**05 17 32.2**	**-0.4**
M23K	**Glacier View**	**2.11**	**87**			**Pn**	**05 17 31.8**	**-0.9**
BRSE	**Bradley Lake S**	**2.12**	**160**			**Pn**	**05 17 31.6**	**-1.2**
CHUM	**Lake Minchumin**	**2.15**	**358**			**Pn**	**05 17 33.4**	**+0.2**
P19K	**Oil Pt**	**2.16**	**195**			**Pn**	**05 17 34.0**	**+0.7**
L18K	**Granite Mounta**	**2.19**	**285**			**Pn**	**05 17 33.8**	**+0.2**
WAT6

HIN	**Hinchinbrook I**	**3.06**	**114**			**Pn**	**05 17 43.3**	**-1.7**
HIN					IAML		05 18 21.7		
	comp=E,399nm,0.7s								
O17K	**Koliganek Bris**	**3.12**	**233**			**Pn**	**05 17 45.8**	**+0.1**
DIV	**Divide**	**3.13**	**98**			**Pn**	**05 17 44.7**	**-1.2**
DIV					IAML		05 18 23.2		
	comp=E,279nm,0.4s								
SYI	**Shuyak Island**	**3.14**	**182**			**Pn**	**05 17 45.4**	**-0.6**
NEA2	**Nenana**	**3.19**	**25**			**Pn**	**05 17 46.0**	**-0.6**
NEA2					IAML		05 18 23.7		
	comp=N,126nm,0.8s								
NEA2					IAML		05 18 24.5		
	comp=E,192nm,0.5s								
I20K	**Naaghedeneel**	**3.24**	**342**			**Pn**	**05 17 47.4**	**+0.2**
WRH	**Wood River Hil**	**3.31**	**32**			**Pn**	**05 17 47.9**	**-0.3**
EYAK	**Cordova Ski Ar**	**3.33**	**108**			**Pn**	**05 17 47.7**	**-0.8**
EYAK					IAML		05 18 44.5		
	comp=E,121nm,0.5s								
EYAK					IAML		05 18 45.0		
	comp=N,200nm,0.5s								
EYAK	**Cordova Ski Ar**	**3.33**	**108**	P		**Pn**	**05 17 47.7**	**-0.8**
EYAK	**Cordova Ski Ar**	**3.33**	**108**	S		**Sn**	**05 18 26.7**	**-0.8**
M16K	**Timber Creek**	**3.35**	**261**			**Pn**	**05 17 49.0**	**+0.3**
PAX	**Paxson**	**3.36**	**65**			**Pn**	**05 17 49.1**	**+0.3**
PAX					IAML		05 18 28.9		
	comp=E,218nm,0.4s								
PAX					IAML		05 18 42.1		
	comp=N,277nm,0.6s								
MLY	**Manley**	**3.37**	**10**			**Pn**	**05 17 48.9**	**-0.1**
MLY					IAML		05 18 30.1		
	comp=E,293nm,0.7s								
MLY					IAML		05 18 31.2		
	comp=N,283nm,0.6s								
I21K	**Tanana**	**3.46**	**1**			**Pn**	**05 17 50.3**	**+0.2**
I21K					IAML		05 18 32.9		
	comp=N,173nm,0.8s								
I21K					IAML		05 18 33.0		
	comp=E,214nm,0.8s								
L16K	**Owhat River**	**3.48**	**273**			**Pn**	**05 17 50.7**	**+0.3**
KARR	**Katmai Rainbow**	**3.49**	**202**			**Pn**	**05 17 50.9**	**+0.3**
CCB	**Clear Creek Bu**	**3.52**	**32**			**Pn**	**05 17 50.7**	**-0.3**
CCB					IAML		05 18 34.8		
	comp=E,106nm,0.7s								
HDA	**Harding Lake**	**3.58**	**39**			**Pn**	**05 17 51.6**	**-0.1**
HDA					IAML		05 18 40.4		
	comp=E,287nm,0.4s								
HDA					IAML		05 18 41.4		
	comp=N,306nm,0.5s								
J17K	**VABM Dome**	**3.60**	**301**			**Pn**	**05 17 52.0**	**-0.1**
N25K	**Chitina, Valde**	**3.61**	**89**			**Pn**	**05 17 52.1**	**-0.1**
N25K					IAML		05 18 34.5		
	comp=E,275nm,0.6s								
KAWH	**Katmai**	**3.62**	**203**			**Pn**	**05 17 52.2**	**-0.1**
O16K	**Kokwok River B**	**3.62**	**236**			**Pn**	**05 17 52.4**	**+0.1**
I23K	**Minto, Yukon-K**	**3.65**	**19**			**Pn**	**05 17 52.6**	**0.0**
I23K					IAML		05 18 36.3		
	comp=E,109nm,0.6s								
I23K					IAML		05 18 40.1		
	comp=N,130nm,0.8s								
MID	**Middleton Isla**	**3.69**	**126**	Pn		**Pn**	**05 17 53.2**	**0.0**
MID					IAML		05 18 35.8		
	comp=N,266nm,1.1s								
MID					IAML		05 18 55.9		
	comp=E,241nm,1.1s								
COLA	**College**	**3.70**	**30**			**Pn**	**05 17 53.0**	**-0.3**
COLA	**College**	**3.70**	**30**	P		**Pn**	**05 17 52.9**	**-0.4**
WACK	**Wrangell Chich**	**3.72**	**83**			**Pn**	**05 17 53.8**	**-0.1**
BMRM	**Bremner River**	**3.72**	**99**			**Pn**	**05 17 52.3**	**-1.4**
BMRM					IAML		05 18 46.0		
	comp=E,239nm,0.7s								
BMRM					IAML		05 18 51.5		
	comp=N,248nm,1.2s								
Q16K	**King Salmon**	**3.80**	**218**			**Pn**	**05 17 55.0**	**+0.3**
KABU	**Katmai Buttres**	**3.81**	**206**			**Pn**	**05 17 55.2**	**+0.2**
IL31		**3.87**	**36**			**Pn**	**05 17 55.2**	**-0.3**
ILAR	**Eielson Array**	**3.87**	**36**	P		**Pn**	**05 17 54.8**	**-0.7**
	comp=N,30nm,0.4s,baz=217,slow=14,SNR=328								
ILAR				S		**Sn**	**05 18 38.0**	**-2.2**
	comp=N,16nm,0.6s,baz=218,slow=20,SNR=3.5								
ACHA	**Angle Creek He**	**3.88**	**206**			**Pn**	**05 17 56.2**	**+0.4**
RIDG	**Independent Ri**	**3.92**	**56**			**Pn**	**05 17 56.9**	**+0.6**
H21K	**Melozitna Rive**	**3.94**	**356**			**Pn**	**05 17 56.9**	**+0.3**
H21K					IAML		05 18 42.7		
	comp=N,110nm,0.6s								
H21K					IAML		05 18 42.8		
	comp=E,77nm,0.9s								
CNTC	**Contact Creek**	**3.95**	**210**			**Pn**	**05 17 57.2**	**+0.4**
H20K	**Anotleneega Mo**	**3.96**	**343**			**Pn**	**05 17 56.9**	**+0.1**
P16K	**Nushagak River**	**3.97**	**229**			**Pn**	**05 17 57.5**	**+0.7**
P16K					IAML		05 19 16.1		
	comp=E,165nm,1.1s								
P16K					IAML		05 19 38.5		
	comp=N,128nm,1.1s								
KDAK	**Kodiak Island**	**3.98**	**183**	P		**Pn**	**05 17 54.6**	**-2.4**
	comp=N,29nm,0.3s,baz=15,slow=10,SNR=94								
KDAK				S		**Sn**	**05 18 39.0**	**-3.8**
	comp=N,54nm,0.3s,baz=37,slow=20,SNR=12								
POKR	**Poker Plat Res**	**4.00**	**30**			**Pn**	**05 17 57.5**	**+0.2**
POKR					IAML		05 18 47.0		
	comp=N,84nm,0.7s								
POKR					IAML		05 18 48.5		
	comp=E,92nm,0.9s								
GLB	**Gilahina Butte**	**4.00**	**91**			**Pn**	**05 17 57.3**	**-0.2**
GLB					IAML		05 18 43.7		
	comp=N,197nm,0.6s								
GLB					IAML		05 18 44.3		
	comp=E,156nm,0.5s								
KJL	**Kejulik**	**4.08**	**206**			**Pn**	**05 17 58.9**	**+0.5**
MENT	**Mentasta**	**4.12**	**69**			**Pn**	**05 17 58.8**	**-0.1**
N15K	**Kwethluk River**	**4.17**	**251**			**Pn**	**05 17 60.0**	**+0.3**
N15K					IAML		05 19 24.9		
	comp=E,57nm,1.1s								
H22K	**Ishtalitna Cre**	**4.19**	**4**			**Pn**	**05 18 00.2**	**+0.4**
H22K					IAML		05 18 49.1		
	comp=E,163nm,0.8s								
H22K					IAML		05 18 49.2		
	comp=N,131nm,1.1s								
DOT	**Dot Lake**	**4.20**	**59**			**Pn**	**05 18 00.1**	**+0.1**
DOT					IAML		05 19 05.0		
	comp=E,154nm,0.7s								
DOT					IAML		05 19 05.0		
	comp=N,154nm,0.8s								
J16K	**Anvik River**	**4.21**	**295**			**Pn**	**05 18 00.2**	**+0.2**
VRDI	**Verde Repeater**	**4.21**	**93**			**Pn**	**05 17 59.2**	**-1.1**
VRDI					IAML		05 19 08.2		
	comp=N,89nm,1.1s								
VRDI					IAML		05 19 09.0		
	comp=E,81nm,0.6s								
J25K	**Salcha River,**	**4.22**	**44**			**Pn**	**05 18 00.3**	**0.0**
J25K					IAML		05 18 52.6		
	comp=E,154nm,0.3s								
J25K					IAML		05 18 57.7		
	comp=N,182nm,0.7s								
M15K	**Kasigluk River**	**4.25**	**260**			**Pn**	**05 18 00.5**	**-0.2**
H19K	**Roundabout Mou**	**4.26**	**335**			**Pn**	**05 18 00.6**	**-0.1**
L26K	**Log Cabin Wild**	**4.30**	**69**			**Pn**	**05 18 02.0**	**+0.5**
L26K					IAML		05 19 14.6		
	comp=N,188nm,0.4s								
IMAR	**Indian Mountai**	**4.32**	**351**			**Pn**	**05 18 01.8**	**+0.2**
M26K	**Nabesna, AK**	**4.37**	**77**			**Pn**	**05 18 01.9**	**-0.4**
M26K					IAML		05 19 16.7		
	comp=E,107nm,0.4s								
M26K					IAML		05 19 19.3		
	comp=N,148nm,0.6s								
SCRK	**Sand Creek**	**4.37**	**55**			**Pn**	**05 18 02.1**	**-0.2**
SCRK					IAML		05 18 52.3		
	comp=N,91nm,0.5s								
SCRK					IAML		05 19 09.0		
	comp=E,92nm,0.7s								
MCARA	**McCarthy VSAT**	**4.39**	**91**			**Pn**	**05 18 02.9**	**+0.3**
H18K	**Honhosa River**	**4.41**	**324**			**Pn**	**05 18 02.8**	**0.0**
L15K	**Ungalak Mounta**	**4.44**	**273**			**Pn**	**05 18 03.4**	**+0.2**
K15K	**Wolf Creek Mou**	**4.45**	**281**			**Pn**	**05 18 03.8**	**+0.4**
I17K	**Unalakleet**	**4.47**	**303**			**Pn**	**05 18 04.1**	**+0.6**
CRQM	**Cirque**	**4.47**	**99**			**Pn**	**05 18 03.8**	**0.0**
KHIT	**Khitrov Hills**	**4.52**	**103**			**Pn**	**05 18 04.1**	**-0.3**
H24K	**Noodor Dome**	**4.53**	**23**			**Pn**	**05 18 04.5**	**+0.1**
H24K					IAML		05 19 33.8		
	comp=E,50nm,1.1s								
GRIN	**Grindle Hills**	**4.55**	**105**			**Pn**	**05 18 04.4**	**-0.3**
OHAK	**Old Harbor**	**4.57**	**188**			**Pn**	**05 18 03.6**	**-1.3**
OHAK					IAML		05 18 52.7		
	comp=N,124nm,0.8s								
OHAK					IAML		05 19 08.3		
	comp=E,93nm,0.8s								
O15K	**Ungalikthiuk R**	**4.58**	**239**			**Pn**	**05 18 05.8**	**+0.6**
TGL	**Tana Glacier**	**4.62**	**98**			**Pn**	**05 18 05.2**	**-0.5**
TGL					IAML		05 19 00.4		
	comp=E,159nm,0.4s								
PLK4	**Peulik 4**	**4.63**	**209**			**Pn**	**05 18 06.6**	**+0.6**
PLK4					IAML		05 19 19.8		
	comp=N,79nm,1.1s								
PLK4					IAML		05 19 55.9		
	comp=E,82nm,1.1s								
PTPK	**Patty Peak**	**4.69**	**93**			**Pn**	**05 18 06.1**	**-0.6**
H17K	**Granite Mounta**	**4.74**	**316**			**Pn**	**05 18 07.7**	**+0.5**
BALM	**Baldy**	**4.78**	**94**			**Pn**	**05 18 07.1**	**-0.7**
J26L	**Joseph Creek**	**4.79**	**51**			**Pn**	**05 18 07.9**	**0.0**
SNH	**Sunshine Point**	**4.81**	**105**			**Pn**	**05 18 07.2**	**-1.0**
SNH					IAML		05 19 05.2		
	comp=E,125nm,0.4s								
SNH					IAML		05 19 05.6		
	comp=N,112nm,0.3s								
PRP	**Porcupine Dome**	**4.81**	**35**			**Pn**	**05 18 08.9**	**+0.6**
PRP					IAML		05 19 06.4		
	comp=N,71nm,0.7s								
PRP					IAML		05 19 10.6		
	comp=E,65nm,0.8s								
G21K	**Allakaket**	**4.83**	**354**			**Pn**	**05 18 08.8**	**+0.3**
G21K					IAML		05 19 04.7		
	comp=N,47nm,0.8s								
G21K					IAML		05 19 33.5		
	comp=E,41nm,0.9s								
M14K	**Bethel**	**4.83**	**263**	Pn		**Pn**	**05 18 09.3**	**+0.9**
M27K	**Edge Creek, AK**	**4.88**	**78**			**Pn**	**05 18 09.9**	**+0.6**
M27K					IAML		05 19 34.7		
	comp=N,66nm,1.0s								
M27K					IAML		05 19 39.7		
	comp=E,38nm,0.9s								
BARK	**Barkley Ridge**	**4.89**	**102**			**Pn**	**05 18 08.1**	**-1.2**
ISLE	**Juniper Island**	**4.89**	**99**			**Pn**	**05 18 09.7**	**+0.3**
L27K	**Beaver Creek,**	**4.99**	**70**			**Pn**	**05 18 10.4**	**-0.2**
L27K					IAML		05 19 42.7		
	comp=N,41nm,0.7s								
BCAR	**Beaver Creek A**	**5.01**	**70**			**Pn**	**05 18 10.8**	**-0.1**
BAGL	**Bagley Icefiel**	**5.04**	**100**			**Pn**	**05 18 11.0**	**-0.3**
L14K	**Kuka Creek**	**5.05**	**270**			**Pn**	**05 18 12.8**	**+1.4**
L14K					IAML		05 19 26.8		
	comp=N,31nm,1.1s								
L14K					IAML		05 19 43.3		
	comp=E,31nm,1.1s								
G18K	**Tagagawik**	**5.06**	**328**	Pn		**Pn**	**05 18 12.4**	**+0.8**
G23K	**Bananza Creek**	**5.08**	**10**			**Pn**	**05 18 12.1**	**+0.3**
G23K					IAML		05 19 09.3		
	comp=N,35nm,0.8s								
G23K					IAML		05 19 10.7		
	comp=E,68nm,0.9s								
BARN	**Barnard Glacie**	**5.09**	**93**			**Pn**	**05 18 12.5**	**+0.3**
BARN					IAML		05 19 12.3		
	comp=E,98nm,0.4s								
BARN					IAML		05 19 12.5		
	comp=N,77nm,0.5s								
GRNC	**Granite Creek**	**5.13**	**97**			**Pn**	**05 18 12.6**	**-0.1**
GRNC					IAML		05 19 11.8		
	comp=N,106nm,0.8s								
GRNC					IAML		05 19 13.7		
	comp=E,71nm,0.7s								
O14K	**Tigyukauivet M**	**5.14**	**245**			**Pn**	**05 18 13.2**	**+0.6**
MESA	**MESA**	**5.22**	**103**			**Pn**	**05 18 13.7**	**-0.2**
YAH	**Yahtse**	**5.25**	**101**			**Pn**	**05 18 14.4**	**+0.1**
YAH					IAML		05 19 14.7		
	comp=E,91nm,0.5s								
YAH					IAML		05 19 18.5		
	comp=N,76nm,0.7s								
CTGM	**Chitina Glacie**	**5.27**	**94**			**Pn**	**05 18 14.8**	**+0.2**
CTGM					IAML		05 19 16.3		
	comp=N,87nm,0.5s								
CTGM					IAML		05 19 16.5		
	comp=E,86nm,0.4s								
SII	**Sitkinak Islan**	**5.30**	**192**	P		**Pn**	**05 18 14.5**	**-0.3**
G17K	**Kiwalik Mounta**	**5.34**	**319**			**Pn**	**05 18 15.6**	**+0.3**
BVCY	**Beaver Creek**	**5.36**	**78**			**Pn**	**05 18 15.9**	**+0.3**
G24K	**Hadweenzic Riv**	**5.38**	**20**			**Pn**	**05 18 15.9**	**0.0**
G24K					IAML		05 19 18.6		
	comp=N,52nm,1.0s								
G24K					IAML		05 19 31.3		
	comp=E,29nm,0.8s								
I26K	**Coal Creek Min**	**5.39**	**44**			**Pn**	**05 18 16.2**	**+0.3**
I26K					IAML		05 19 24.7		
	comp=N,80nm,1.0s								
I26K					IAML		05 19 39.7		
	comp=E,86nm,0.9s								
H16K	**Elim**	**5.41**	**307**			**Pn**	**05 18 16.2**	**0.0**
J14K	**Nanvaranak Lak**	**5.42**	**286**			**Pn**	**05 18 16.9**	**+0.5**
RKAV	**Rock Avalanche**	**5.46**	**101**			**Pn**	**05 18 16.9**	**-0.2**
LOGN	**Logan Glacier**	**5.46**	**95**			**Pn**	**05 18 16.8**	**-0.3**
TABL	**Table Mountain**	**5.51**	**99**			**Pn**	**05 18 17.0**	**-0.8**
F21K	**Alatna River**	**5.54**	**355**			**Pn**	**05 18 18.8**	**+0.9**
F20K	**Avaraart Lake**	**5.55**	**345**			**Pn**	**05 18 18.6**	**+0.6**
YUK3	**Moose Creek**	**5.56**	**84**			**Pn**	**05 18 18.1**	**-0.4**
COLD	**Coldfoot**	**5.58**	**8**			**Pn**	**05 18 18.6**	**+0.1**
CHX	**Chaix Hills**	**5.65**	**102**			**Pn**	**05 18 19.7**	**+0.2**
F19K	**Shaleruckik Mo**	**5.67**	**337**			**Pn**	**05 18 20.0**	**+0.3**
FYU	**Fort Yukon**	**5.71**	**29**			**Pn**	**05 18 20.2**	**-0.1**
SAMH	**Samovar Hills**	**5.78**	**101**			**Pn**	**05 18 21.2**	**-0.2**
G16K	**Koyuk River**	**5.84**	**313**			**Pn**	**05 18 22.0**	**0.0**
O28M	**Mount Upton**	**5.86**	**94**			**Pn**	**05 18 23.3**	**+0.7**
F18K	**Selawik**	**5.87**	**329**			**Pn**	**05 18 23.3**	**+0.9**
K13K	**Kusilvak Mount**	**5.92**	**277**	Pn		**Pn**	**05 18 23.9**	**+0.8**
PCA	**Pinnacle**	**6.04**	**101**			**Pn**	**05 18 25.1**	**+0.3**
I27K	**Kandik River**	**6.08**	**46**			**Pn**	**05 18 25.5**	**+0.1**
F24K	**Squaw Lake**	**6.09**	**16**			**Pn**	**05 18 25.6**	**+0.2**
E19K	**Redstone River**	**6.14**	**341**			**Pn**	**05 18 26.9**	**+0.9**
F17K	**Baldwin Pennin**	**6.17**	**324**			**Pn**	**05 18 26.7**	**+0.3**
DAWY	**Dawson**	**6.29**	**63**			**Pn**	**05 18 28.2**	**+0.1**
G26K	**Porcupine Rive**	**6.37**	**31**			**Pn**	**05 18 28.4**	**-0.8**
BCPM	**Bancas Point**	**6.38**	**101**			**Pn**	**05 18 29.4**	**+0.1**
E22K	**Anaktuvuk Pass**	**6.42**	**1**			**Pn**	**05 18 30.8**	**+0.9**
M29M	**Somme Creek**	**6.47**	**78**			**Pn**	**05 18 31.1**	**+0.4**
H27K	**Steamboat Moun**	**6.49**	**41**			**Pn**	**05 18 30.6**	**-0.2**
F25K	**Christian Rive**	**6.51**	**23**			**Pn**	**05 18 30.8**	**-0.2**
E24K	**Your Creek**	**6.55**	**12**			**Pn**	**05 18 32.3**	**+0.7**
BMAR	**Burnt Mountain**	**6.58**	**26**			**Pn**	**05 18 31.4**	**-0.6**
I28M	**Miner Creek**	**6.60**	**50**			**Pn**	**05 18 32.2**	**-0.2**
ANM	**Nome**	**6.62**	**301**	Pn		**Pn**	**05 18 33.4**	**+0.8**
L29M	**L29M**	**6.66**	**72**			**Pn**	**05 18 33.3**	**+0.1**
YUK6	**Outpost Mounta**	**6.69**	**321**			**Pn**	**05 18 33.6**	**-0.2**
E18K	**Tukpahlearik C**	**6.76**	**331**			**Pn**	**05 18 35.9**	**+1.5**
O29M	**Mount Kennedy**	**6.76**	**96**			**Pn**	**05 18 34.7**	**+0.1**
E20K	**Nigu River**	**6.76**	**347**			**Pn**	**05 18 35.6**	**+1.1**
E21K	**Killik River**	**6.77**	**354**			**Pn**	**05 18 36.0**	**+1.3**
E17K	**Hotham Inlet**	**6.80**	**326**			**Pn**	**05 18 35.6**	**+0.7**
F15K	**North Star Dit**	**6.82**	**311**			**Pn**	**05 18 35.9**	**+0.7**
G27K	**Doyon Strip**	**6.84**	**37**			**Pn**	**05 18 34.5**	**-1.0**
J29N	**Klondike Camp**	**6.89**	**61**			**Pn**	**05 18 36.1**	**-0.1**
F26K	**Sheenjek River**	**6.89**	**26**			**Pn**	**05 18 35.3**	**-0.9**
E25K	**Arctic Village**	**6.99**	**21**			**Pn**	**05 18 37.5**	**0.0**
TOLK	**Toolik Lake Re**	**7.02**	**8**			**Pn**	**05 18 39.2**	**+1.2**
K29M	**Barlow Dome**	**7.04**	**66**			**Pn**	**05 18 38.3**	**0.0**
HYT	**Haines Junctio**	**7.12**	**91**			**Pn**	**05 18 39.5**	**0.0**
I29M	**Ogilvie Camp,**	**7.17**	**54**			**Pn**	**05 18 40.1**	**+0.1**
D22K	**Ayikyak River**	**7.18**	**359**			**Pn**	**05 18 41.9**	**+1.9**
N30M	**Aishikik Lake**	**7.20**	**86**			**Pn**	**05 18 39.7**	**-0.7**
D19K	**Kuna River**	**7.23**	**342**			**Pn**	**05 18 41.7**	**+0.9**
D20K	**Etivluk River**	**7.25**	**347**			**Pn**	**05 18 41.9**	**+0.9**
M30M	**Minto, Yukon**	**7.25**	**77**			**Pn**	**05 18 41.6**	**+0.5**
D23K	**Nanushuk River**	**7.29**	**4**			**Pn**	**05 18 43.4**	**+1.9**
P29M	**Windy Craggy**	**7.39**	**100**			**Pn**	**05 18 43.5**	**+0.5**
C21K	**Knifeblade Rid**	**7.53**	**353**			**Pn**	**05 18 45.5**	**+0.7**
H29M	**Whitestone**	**7.54**	**47**			**Pn**	**05 18 44.8**	**-0.2**
P30M	**Million Dollar**	**7.58**	**96**			**Pn**	**05 18 45.8**	**+0.2**
MAYO	**Mayo, Yukon**	**7.72**	**69**			**Pn**	**05 18 47.5**	**+0.1**
O30N	**Mendenhall**	**7.81**	**90**	Pn		**Pn**	**05 18 47.9**	**-0.8**
F28M	**Old Crow**	**7.89**	**36**			**Pn**	**05 18 48.9**	**-0.9**
G29M	**Pine Creek**	**8.03**	**44**			**Pn**	**05 18 51.3**	**-0.3**
C24K	**Franklin Bluff**	**8.14**	**9**			**Pn**	**05 18 53.8**	**+0.7**
C23K	**Itkillik River**	**8.16**	**4**			**Pn**	**05 18 53.7**	**+0.5**
EPYK	**Eagle Plains**	**8.20**	**49**			**Pn**	**05 18 53.5**	**-0.4**
B20K	**Meade River**	**8.55**	**348**	Pn		**Pn**	**05 18 58.4**	**-0.1**
C27K	**Jago River**	**8.64**	**20**			**Pn**	**05 19 00.1**	**+0.3**
B22K	**Teshekpuk Lake**	**8.65**	**357**			**Pn**	**05 18 59.7**	**-0.2**
G30M	**tAoh Zrai Nji**	**8.67**	**46**			**Pn**	**05 18 59.5**	**-0.8**
E28M	**Babbage River**	**8.68**	**32**			**Pn**	**05 19 00.4**	**0.0**
D27M	**Malcolm River**	**8.84**	**27**			**Pn**	**05 19 03.0**	**+0.4**
H31M	**Peel River**	**8.87**	**55**			**Pn**	**05 19 02.7**	**-0.3**
E29M	**Blow River**	**8.97**	**36**			**Pn**	**05 19 03.8**	**-0.5**
F30M	**Barrier River**	**9.14**	**43**			**Pn**	**05 19 06.4**	**-0.1**
G31M	**Satah River**	**9.32**	**48**			**Pn**	**05 19 08.0**	**-1.0**
JIS	**Juneau Island**	**9.55**	**103**	P		**Pn**	**05 19 12.3**	**+0.2**
SIT	**Sitka**	**9.77**	**111**	P		**Pn**	**05 19 14.4**	**-0.7**
INK	**Inuvik**	**10.23**	**42**	P		**Pn**	**05 19 19.9**	**-1.4**
	comp=E,7.8nm,0.5s,baz=242,slow=14,SNR=70								
INK				S		**Sn**	**05 21 11.6**	**-2.2**
	comp=E,2.1nm,0.7s,baz=189,slow=16,SNR=1.9								
INK	**Inuvik**	**10.23**	**42**	Pn		**Pn**	**05 19 21.1**	**-0.1**
Q32M	**Nakina River**	**10.23**	**97**	Pn		**Pn**	**05 19 21.4**	**-0.2**
R33M	**Jennings River**	**10.68**	**93**	Pn		**Pn**	**05 19 27.9**	**+0.4**
UNV	**Unalaska Valle**	**10.98**	**230**	P		**Pn**	**05 19 33.3**	**+1.8**
DLBC	**Dease Lake**	**11.52**	**97**	P		**Pn**	**05 19 39.4**	**+0.8**
	comp=E,0.4nm,0.4s,baz=274,slow=13,SNR=1.4								
CRAG	**Craig**	**11.72**	**114**	Pn		**Pn**	**05 19 41.7**	**+0.5**
CRAG	**Craig**	**11.72**	**114**	P		**Pn**	**05 19 41.4**	**+0.2**
DIB	**Dawson Inlet,**	**13.56**	**120**	Pn		**Pn**	**05 20 05.9**	**+0.6**
C36M	**Paulatuk**	**13.78**	**45**	Pn		**Pn**	**05 20 05.8**	**-2.2**
A36M	**Sachs Harbour**	**14.57**	**34**	Pn		**Pn**	**05 20 16.7**	**-1.3**
YKAW3	**Yellowknife Wh**	**17.41**	**71**	P		**P**	**05 20 52.5**	**-0.1**
YKA	**Yellowknife Ar**	**17.43**	**71**	P		**P**	**05 20 53.1**	**+0.3**
	comp=E,3.7nm,0.8s,baz=284,slow=13,SNR=13								
RES	**Resolute Bay**	**23.62**	**34**	P		**P**	**05 21 58.2**	**+0.6**
H04A	**Detroit Lake**	**24.43**	**120**	P		**P**	**05 22 06.0**	**+0.7**
H04A					IAmb	IAmb	05 22 17.6		
	comp=Z,5.7nm,1.0s								
WIFE	**Three Sisters-**	**25.10**	**121**	P		**P**	**05 22 13.1**	**+1.5**
WIFE					IAmb	IAmb	05 22 15.1		
	comp=Z,8.6nm,0.9s								
PDAR	**Pinedale Array**	**31.46**	**107**	P		**P**	**05 23 09.5**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=315,slow=7.7,SNR=7.0								
	comp=Z,0.4nm,0.5s								
SPITS	**Spitsbergen Ar**	**40.15**	**4**	P		**P**	**05 24 20.8**	**-0.8**
	comp=Z,5.4nm,0.9s,baz=336,slow=9.5,SNR=5.3								
	comp=Z,5.4nm,0.9s								
SCHQ	**Schefferville**	**42.29**	**59**	P		**P**	**05 24 40.1**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=329,slow=12,SNR=11								
	comp=Z,2.6nm,0.5s								
NRIK	**Noril'sk**	**42.52**	**333**	P		**P**	**05 24 40.1**	**-0.9**
	comp=Z,2.0nm,0.4s,baz=24,slow=6.9,SNR=2.6								
	comp=Z,2.0nm,0.4s								
NRIK	**Noril'sk**	**42.52**	**333**	IAmb		IAmb	05 25 09.4		
	comp=Z,2.4nm,1.1s								
TXAR	**Lajitas Array**	**45.25**	**113**	P		**P**	**05 25 05.4**	**+2.0**
	comp=Z,0.7nm,0.9s,baz=329,slow=7.8,SNR=5.9								
	comp=Z,0.7nm,0.9s								
ARCES	**ARCESS Array B**	**49.00**	**1**	P		**P**	**05 25 31.1**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=356,slow=7.2,SNR=5.2								
	comp=Z,1.7nm,0.6s								
SONM	**Songino Array**	**54.11**	**305**	P		**P**	**05 26 10.8**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=49,slow=9.1,SNR=4.4								
	comp=Z,1.2nm,0.6s								
NOA	**NORSAR Array B**	**56.89**	**10**	P		**P**	**05 26 29.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=351,slow=7.1,SNR=4.1								
	comp=Z,0.7nm,0.6s								
FINES	**FINESS Array B**	**57.13**	**1**	P		**P**	**05 26 30.7**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=358,slow=7.0,SNR=7.3								
	comp=Z,2.1nm,0.8s								
HFS	**Hagfors**	**57.97**	**8**	P		**P**	**05 26 36.0**	**-1.4**
	comp=Z,0.9nm,0.3s,baz=9.6,slow=3.0,SNR=9.8		

CONA	**Conrad Observa**	**2.56**	**224**	*e*Pn	**Pn**	**05 23 45.9**	**+0.5**
	1.0nm,0.2s						
CONA				*e*Sn	**Sn**	**05 24 16.7**	**-0.6**
	1.5nm,0.2s						
PRU	**Pruhonice**	**2.59**	**276**	*e*SG	**Sb**	**05 24 23.7**	**+1.6**
	comp=Z,8.8nm,0.6s						
PVCC	**Panska Ves**	**2.65**	**288**	*e*SG	**Sg**	**05 24 27.3**	**-0.5**
	comp=Z,16nm,0.5s						
KHC	**Kasperske Hory**	**3.30**	**260**	*e*PG	**Pb**	**05 24 02.3**	**+0.4**
KHC				*e*SG	**Sg**	**05 24 47.2**	**-1.2**
	comp=Z,7.2nm,0.4s						
MOA	**Molln**	**3.42**	**237**	Pg	**Pg**	**05 24 06.5**	**-1.6**
	1.6nm,0.2s						
MOA				*e*Sg	**Sg**	**05 24 51.7**	**-0.7**
	2.5nm,0.3s						

*IDC **28** 05:28:17.9±1.0,29°.66S×68°.42W,h0km,mb3.7/4, mbtmp3.5/6,ML3.3/2,Error ellipse: s-maj=31.1km s-min=25.5km az=98.0*
*SJA **28** 05:28:18.9±0.7,29°.81S×68°.72W,h7km±2km,ML3.8, MW3.4*
ISC 28 05:28:18.1±1.1,29°.81S±0°.02×68°.74W±0°.02,h3km±8km, n49,σ1°99/94,mb3.6/3,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGUA	**GUANDACOL**	**0.39**	**34**	*e*P	**Pb**	**05 28 27.5**	**-0.1**
AGUA				IAML		05 28 34.2	
	comp=Z,11μm,0.3s						
AGUA				*e*S	**Sb**	**05 28 34.3**	**+0.2**
ACDV	**Cuesta del Vie**	**0.49**	**222**	*e*P	**Pb**	**05 28 30.1**	**+0.6**
AROD	**Rodeo**	**0.73**	**241**	*e*P	**Pb**	**05 28 34.5**	**+0.9**
AROD				*e*S	**Sb**	**05 28 45.0**	**+0.8**
ACCO	**Cerro Coronel**	**0.83**	**200**	*e*P	**Pb**	**05 28 36.0**	**+0.7**
VCA	**Vinchina**	**1.17**	**24**	*e*P	**Pg**	**05 28 40.9**	**+0.4**
VCA				*e*S	**Sn**	**05 28 58.2**	**+0.3**
VCA				IAML		05 28 58.6	
	comp=Z,2μm,0.6s						
CO01	**Juntas del Tor**	**1.19**	**262**	*e*P	**Pn**	**05 28 42.5**	**+0.7**
CO01				*e*S	**Sn**	**05 28 59.5**	**+0.8**
AVFE	**Valle Fertil**	**1.40**	**128**	*e*P	**Pb**	**05 28 45.2**	**+0.4**
AVFE				*e*S	**Sg**	**05 29 03.8**	**+0.8**
AVFE				IAML		05 29 03.8	
	comp=Z,1μm,0.2s						
RTLL	**Cerro Villicun**	**1.53**	**172**	*e*P	**Pb**	**05 28 47.7**	**+0.6**
RTLL				*e*S	**Sg**	**05 29 08.3**	**+0.9**
ACLC	**CERRO LA CRUZ**	**1.60**	**77**	*e*P	Pn	05 28 42.6	-4.8
ACLC				*e*P	**Pb**	**05 28 48.1**	**-0.3**
ACLC				*e*P	**Pg**	**05 28 48.2**	**-0.6**
ACLC				*e*S	**Sb**	**05 29 09.4**	**+0.3**
ACLC				IAML		05 29 10.0	
	comp=Z,536nm,0.4s						
AC05	**El Transito**	**1.65**	**305**	*e*P	**Pb**	**05 28 50.4**	**+1.1**
AC05				*e*S	Sn	05 29 00.6	-9.3
AC05				IAML		05 29 19.8	
	comp=Z,488nm,0.6s						
SJA	**San Juan**	**1.72**	**175**	*e*P	**Pg**	**05 28 51.6**	**+0.5**
SJA				*e*S	**Sg**	**05 29 15.1**	**+1.7**
SJA				IAML		05 29 15.2	
	comp=Z,590nm,0.2s						
ZON	**Zonda**	**1.73**	**178**	*e*P	**Pb**	**05 28 51.3**	**+0.7**
ZON				*e*S	**Sg**	**05 29 15.7**	**+1.9**
GO04	**Tololo Observa**	**1.82**	**258**	*e*P	**Pn**	**05 28 48.1**	**-2.5**
GO04				*e*P	**Pg**	**05 28 53.6**	**+0.6**
GO04				*e*S	**Sn**	**05 29 14.1**	**-0.2**
GO04				IAML		05 29 26.4	
	comp=Z,3μm,0.5s						
CFA	**Coronel Fontan**	**1.84**	**167**	*e*P	**Pb**	**05 28 53.0**	**+0.6**
CFA				*e*S	**Sg**	**05 29 17.5**	**+0.2**
AANI	**Anillaco**	**1.86**	**58**	*e*P	**Pb**	**05 28 52.8**	**0.0**
AANI				*e*S	**Sn**	**05 29 14.6**	**-0.4**
AANI				*e*S	**Sg**	**05 29 18.7**	**+0.8**
AANI				IAML		05 29 27.6	
	comp=Z,2μm,0.7s						
LCO	**Las Campanas**	**1.89**	**294**	*e*P	**Pb**	**05 28 54.6**	**+1.3**
LCO				*e*S	**Sn**	**05 29 14.1**	**-1.8**
LCO				*e*S	**Sg**	**05 29 19.6**	**+0.8**
LCO				IAML		05 29 24.2	
	comp=Z,756nm,0.6s						
CO03	**El Pedregal**	**1.97**	**238**	*e*P	**Pb**	**05 28 55.3**	**+0.6**
CO03				*e*S	**Sn**	**05 29 17.6**	**-0.2**
CO03				IAML		05 29 31.8	
	comp=Z,561nm,0.4s						
APLL	**PUNTA DE LOS L**	**2.00**	**108**	*e*P	**Pb**	**05 28 54.7**	**-0.4**
APLL				*e*S	**Sn**	**05 29 14.6**	**-3.8**
APLL				*e*S	**Sg**	**05 29 22.4**	**-0.1**
APLL				IAML		05 29 23.9	
	comp=Z,667nm,0.5s						
TINO	**Tinogasta**	**2.02**	**31**	*e*P	**Pb**	**05 28 55.9**	**+0.4**
TINO				*e*S	**Sn**	**05 29 17.6**	**-1.3**
TINO				*e*S	**Sg**	**05 29 22.8**	**-0.2**
RTLS	**Leoncito**	**2.04**	**193**	*e*P	**Pn**	**05 28 51.6**	**-2.0**
RTLS				*e*P	**Pb**	**05 28 57.0**	**+1.0**
RTLS				*e*S	**Sg**	**05 29 25.1**	**+1.4**
RTLS				IAML		05 29 26.4	
	comp=Z,2μm,0.4s						
ACHE	**Chepes**	**2.24**	**127**	*e*P	**Pb**	**05 28 59.4**	**0.0**
ACHE				*e*S	Sn	05 29 13.6	-11
ACHE				*e*S	**Sb**	**05 29 28.7**	**+1.2**
CO02	**Combarbal**	**2.40**	**234**	*e*P	**Pb**	**05 29 02.4**	**+0.4**
CO02				*e*S	**Sb**	**05 29 31.1**	**-0.8**
CO02				IAML		05 29 39.2	
	comp=Z,735nm,0.8s						
AC04	**Llanos de Chal**	**2.60**	**307**	*e*P	Pn	05 28 47.7	-13
AC04				*e*P	**Pb**	**05 29 04.0**	**-1.3**
AC04				*e*S	**Sn**	**05 29 33.1**	**+0.1**
ACAN	**Cantantal**	**2.79**	**152**	*e*P	**Pn**	**05 29 06.5**	**+2.7**
ACAN				IAML		05 30 00.6	
	comp=Z,828nm,0.5s						
CYA	**Choya**	**2.91**	**63**	*e*P	**Pn**	**05 29 07.0**	**+1.7**
CYA				*e*S	**Sn**	**05 29 42.6**	**+1.8**
CYA				*e*S	**Sb**	**05 29 48.1**	**+1.5**
ARCO	**CERRO ARCO**	**3.03**	**183**	*e*P	**Pb**	**05 29 11.7**	**-1.0**
ARCO				*e*S	**Sb**	**05 29 48.1**	**-2.0**
ARCO				*e*S	**Sg**	**05 29 51.1**	**-4.3**
ARCO				IAML		05 29 58.2	
	comp=Z,273nm,0.5s						
AAGR	**Agrelo**	**3.27**	**181**	*e*P	**Pb**	**05 29 15.3**	**-1.4**
AAGR				*e*S	**Sb**	**05 29 57.1**	**+0.1**
AAGR				IAML		05 30 17.7	
	comp=Z,158nm,1.8s						
VA03	**San Esteban**	**3.33**	**207**	*e*P	**Pb**	**05 29 15.7**	**-2.1**
VA03				*e*S	**Sb**	**05 29 58.6**	**-0.2**
VA03				IAML		05 30 07.5	
	comp=Z,356nm,0.6s						
MRA	**San Martin**	**3.67**	**136**	*e*P	**Pn**	**05 29 18.6**	**+2.8**
MRA				*e*P	Pb	05 29 18.7	-5.0
MRA				*e*P	Pg	05 29 18.8	-10
MRA				*e*S	**Sg**	**05 30 13.6**	**-2.5**
MRA				IAML		05 30 14.3	
	comp=Z,322nm,0.6s						
MT04	**Ro Olivares**	**3.78**	**198**	*e*P	**Pb**	**05 29 23.2**	**-2.4**
MT04				*e*S	**Sg**	**05 30 20.0**	**+0.5**
MT04				IAML		05 30 21.4	
	comp=Z,82nm,0.5s						
MT08	**Bocatoma Ro**	**3.79**	**196**	*e*P	**Pb**	**05 29 23.1**	**-2.6**
MT08				*e*P	Pn	05 29 24.1	+6.6
MT08				*e*S	**Sg**	**05 30 17.5**	**-2.2**
MT08				IAML		05 30 18.3	
	comp=Z,170nm,0.3s						
TCA	**Tanti**	**3.88**	**114**	*e*P	**Pn**	**05 29 21.1**	**+2.3**
TCA				*e*S	**Sb**	**05 30 10.7**	**-4.0**
TCA				*e*S	Sg	05 30 14.1	-8.8
TCA				IAML		05 30 24.5	
	comp=Z,168nm,0.5s						
MT05	**Renca**	**3.96**	**205**	*e*P	**Pn**	**05 29 24.1**	**+4.4**
MT05				*e*S	**Sb**	**05 30 18.6**	**+1.8**
MT05				IAML		05 30 31.9	
	comp=Z,117nm,0.7s						
MT03	**Universidad Ad**	**3.97**	**202**	*e*P	**Pn**	**05 29 19.6**	**-0.4**
MT03				*e*P	**Pb**	**05 29 24.7**	**-4.1**
MT03				*e*S	**Sb**	**05 30 19.6**	**+2.3**
MT03				*e*S	**Sg**	**05 30 25.2**	**-0.5**
MT03				IAML		05 30 25.8	
	comp=Z,202nm,0.3s						
MT02	**Curacav**	**4.00**	**210**	*e*P	**Pn**	**05 29 23.8**	**+3.5**
MT02				*e*S	**Sb**	**05 30 14.6**	**-3.5**
MT02				IAML		05 30 27.9	
	comp=Z,99nm,0.9s						
FSA	**Cafayete**	**4.42**	**34**	*e*P	**Pn**	**05 29 24.1**	**-2.1**
FSA				*e*P	Pb	05 29 29.9	-6.6
FSA				*e*S	**Sn**	**05 30 22.1**	**+3.9**
MT01	**Popeta**	**4.57**	**207**	*e*P	**Pn**	**05 29 31.8**	**+3.6**
MT01				*e*S	**Sg**	**05 30 41.5**	**-3.5**
MT01				IAML		05 30 43.2	
	comp=Z,51nm,0.7s						
RFA	**San Rafael**	**4.95**	**177**	*e*P	**Pn**	**05 29 36.2**	**+2.8**
RFA				*e*S	**Sb**	**05 30 51.1**	**+5.6**
RFA				IAML		05 31 03.6	
	comp=Z,45nm,0.3s						
BO01	**Tunca**	**4.98**	**203**	*e*P	**Pn**	**05 29 36.9**	**+3.1**
BO01				IAML		05 30 58.1	
	comp=Z,29nm,1.0s						
BO02	**Sierra Bellavi**	**5.26**	**199**	*e*P	**Pn**	**05 29 41.5**	**+3.8**
BO02				*e*P	Pb	05 29 41.6	-9.2
CPUP	**Villa Florida**	**10.65**	**74**	Pn	**Pn**	**05 30 48.1**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=187,slow=8.1,SNR=3.3						
CPUP				Lg	Lg	05 33 45.9	
	comp=Z,0.1nm,0.3s,baz=233,slow=10,SNR=1.4						
	comp=Z,0.4nm,0.9s						
LPAZ	**La Paz**	**13.47**	**3**	Pn	**Pn**	**05 31 29.5**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=179,slow=18,SNR=1.5						
	comp=Z,0.4nm,0.5s						
SNAA	**Sanae**	**54.45**	**159**	P	**P**	**05 37 45.5**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=274,slow=15,SNR=5.6						
	comp=Z,0.5nm,0.9s						
QSPA	**South Pole Qui**	**60.42**	**180**	P	**P**	**05 38 31.3**	**+2.7**
	comp=Z,1.0nm,0.9s,baz=159,slow=1.1,SNR=5.2						
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**67.60**	**327**	P	**P**	**05 39 16.3**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=155,slow=5.4,SNR=3.5						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.11**	**69**	P	**P**	**05 40 29.0**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=236,slow=6.9,SNR=2.8						
	comp=Z,0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**147.88**	**40**	PKPbc	**PKPbc**	**05 48 03.5**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=289,slow=2.8,SNR=5.4						
ZALV	**Zalesovo Beam**	**149.20**	**31**	PKPbc	**PKPbc**	**05 48 06.7**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=318,slow=2.8,SNR=7.8						
MKAR	**Makanchi Array**	**151.86**	**45**	PKPbc	**PKPbc**	**05 48 13.0**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=315,slow=2.6,SNR=2.7						

*IDC **28** 05:31:59.5±0.6,1°.45N×126°.29E,h0km,mb4.0/14, mbtmp4.0/16,ML3.8/2,MS3.3/2,Error ellipse: s-maj=34.0km s-min=13.0km az=78.0*
*NEIC **28** 05:32:01.3±0.8,1°.46N±0°.10×126°.33E±0°.05,h12km±6km, mb4.4/10,Error ellipse: s-maj=14.6km s-min=5.1km az=198.0*
*DJA **28** 05:32:03.6±0.8,1°N±2°×12°6E±°,h15km±6km,M4.2/13, mb4.1/2,MLv4.3/13*
ISC 28 05:32:04.4±0.5,1°.46N±0°.05×126°.46E±0°.06,h35km,n42, σ1°20/48,mb4.1/20,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.13**	**127**		**Pn**	**05 32 24.3**	**+0.5**
TNTI	**Ternate**	**1.13**	**127**	P	**Pn**	**05 32 24.7**	**+0.9**
TNTI				S	**Sn**	**05 32 39.7**	**+1.6**
SGSI	**Sangihe**	**2.40**	**337**	P	**Pn**	**05 32 42.7**	**+1.4**
SGSI				S	**Sn**	**05 33 11.0**	**+1.5**
KMSI	**Cibinong**	**2.63**	**251**	P	**Pn**	**05 32 45.3**	**+0.9**
KMSI				S	**Sn**	**05 33 17.8**	**+2.7**
SANI	**Sanana**	**3.52**	**188**	P	**Pn**	**05 32 57.0**	**+0.4**
SANI				S	**Sn**	**05 33 38.3**	**+1.3**
GTOI	**Gorontalo**	**3.54**	**257**	P	**Pn**	**05 32 59.3**	**+2.3**
LUWI	**Luwuk**	**4.45**	**236**	P	**Pn**	**05 33 11.2**	**+1.8**
TOLI2	**Tolitoli**	**5.69**	**267**		**Pn**	**05 33 23.6**	**-2.9**
MYLDM	**Lahad Datu**	**8.77**	**295**		Pn	05 34 02.6	-6.1
KAPI	**Kappang**	**9.29**	**226**	Pn	**Pn**	**05 34 13.9**	**-2.0**
	1.0nm,0.3s,baz=45,slow=16,SNR=2.4						
	2.5nm,0.4s						
KAPI	**Kappang**	**9.29**	**226**		**Pn**	**05 34 15.2**	**-0.7**
KNRA	**Kununurra**	**17.18**	**172**	P	**Pn**	**05 36 00.1**	**-1.8**
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**05 36 28.3**	**+0.1**
	0.2nm,0.3s,baz=10,slow=11,SNR=8.3						
	1.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**05 36 27.1**	**-1.1**
YULB	**Yu-li**	**22.37**	**347**	P	**P**	**05 36 58.4**	**-1.4**
WB0	**Warramunga Arr**	**22.48**	**160**	P	**P**	**05 37 00.5**	**-0.4**
WB0				IAmb	IAmb	05 37 10.5	
	comp=Z,9.8nm,0.6s						
WRA	**Warramunga Arr**	**22.63**	**160**	P	**P**	**05 37 02.4**	**-0.1**
	comp=Z,6.5nm,0.7s,baz=340,slow=10,SNR=34						
WRA				PcP	**PcP**	**05 40 56.2**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=341,slow=2.0,SNR=1.5						
WRA				S	**S**	**05 41 08.7**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=346,slow=16,SNR=2.3						
	comp=Z,6.5nm,0.7s						
WR8	**Warramunga Ar**	**22.69**	**160**	P	**P**	**05 37 03.2**	**0.0**
WR8				IAmb	IAmb	05 37 28.7	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**26.00**	**164**	P	**P**	**05 37 35.0**	**+0.8**
AS31				IAmb	IAmb	05 37 47.4	
	comp=Z,2.1nm,0.4s						
ASAR	**Alice Springs**	**26.00**	**164**	P	**P**	**05 37 35.4**	**+1.1**
	comp=Z,2.4nm,0.7s,baz=345,slow=11,SNR=16						
ASAR				PcP	**PcP**	**05 41 02.9**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=350,slow=2.8,SNR=4.1						
	comp=Z,2.4nm,0.7s						
ASAR	**Alice Springs**	**26.00**	**164**	P	**P**	**05 37 33.7**	**-0.6**
KSRS	**Korea Array**	**35.85**	**2**	P	**P**	**05 39 02.4**	**+1.6**
	comp=Z,1.9nm,0.7s,baz=176,slow=9.5,SNR=3.0						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**36.13**	**158**	P	**P**	**05 39 03.5**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=334,slow=9.6,SNR=4.7						
	comp=Z,1.1nm,0.4s						
MJAR	**Matsushiro Arr**	**36.56**	**16**	P	**P**	**05 39 07.0**	**0.0**
	comp=Z,3.1nm,0.8s,baz=180,slow=9.7,SNR=6.8						
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**49.36**	**342**	P	**P**	**05 40 50.6**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=148,slow=8.4,SNR=2.9						
SONM				LR	LR	06 06 15.2	
	comp=Z,25nm,18.4s,baz=210,slow=42						
	comp=Z,0.5nm,0.6s						
PETK	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**05 41 52.2**	**+1.3**
	comp=Z,1.4nm,0.5s,baz=227,slow=6.9,SNR=1.3						
	comp=Z,1.4nm,0.5s						
PETK	**Petropavlvsk-**	**57.62**	**22**	P	**P**	**05 41 51.0**	**+0.1**
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**05 42 02.0**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=125,slow=7.7,SNR=9.3						
MKAR				PcP	**PcP**	**05 42 50.4**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=124,slow=3.8,SNR=2.1						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.27**	**326**	P	**P**	**05 42 01.7**	**-0.9**
ZALV	**Zalesovo Beam**	**62.49**	**334**	P	**P**	**05 42 23.3**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=141,slow=5.5,SNR=2.7						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**62.49**	**334**	P	**P**	**05 42 23.4**	**-0.9**
GAR	**Garm**	**63.27**	**314**	P	**P**	**05 42 27.7**	**-2.2**
GAR				IAmb	IAmb	05 42 43.8	
	comp=Z,5.1nm,1.0s						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	**P**	**05 42 30.7**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=122,slow=5.8,SNR=26						
	comp=Z,2.2nm,0.6s						
KURK	**Kurchatov**	**63.51**	**328**	P	**P**	**05 42 30.8**	**-0.3**
KURK				IAmb	IAmb	05 42 32.3	
	comp=Z,4.5nm,0.9s						
BVAR	**Borovoye Array**	**69.07**	**328**	P	**P**	**05 43 07.3**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=115,slow=13,SNR=3.0						
	comp=Z,0.7nm,0.4s						
NRIK	**Noril'sk**	**72.56**	**346**	P	**P**	**05 43 28.4**	**+0.8**
	comp=Z,3.7nm,0.5s,baz=123,slow=6.0,SNR=3.8						
	comp=Z,3.7nm,0.5s						
NRIK	**Noril'sk**	**72.56**	**346**	P	**P**	**05 43 27.5**	**-0.1**
AB31	**Akbulak array**	**73.73**	**321**	P	**P**	**05 43 34.7**	**-0.3**
AB31				IAmb	IAmb	05 43 58.2	
	comp=Z,1.3nm,0.8s						
ABKAR	**Akbulak array**	**73.73**	**321**	P	**P**	**05 43 34.5**	**-0.4**
AKTO	**Aktyubinsk**	**75.27**	**322**	LR	LR	06 18 41.2	
	comp=Z,18nm,18.0s,baz=248,slow=37						
VNDA	**Vanda**	**81.22**	**173**	P	**P**	**05 44 15.6**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=332,slow=5.0,SNR=3.8						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**87.26**	**25**	P	**P**	**05 44 47.5**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=270,slow=6.0,SNR=1.2						
	comp=Z,0.2nm,0.6s						

WEL 28 05:40:02.6±0.9,32°S±9°×18°0W±2°4,h299km±15km, M4.1/11,mB4.5/8,ML4.2/7,MLv4.5/11,Mw(mB)3.7/8, Error ellipse: s-maj=33.0km s-min=4.5km az=110.7, confirmed,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.40**	**27**	P	Pn	05 41 01.5	-0.9
GLKZ				S	S	05 41 50.1	-0.1
MXZ	**Matakaoa Point**	**5.49**	**197**	P	Pn	05 41 26.9	+1.2
MXZ				S	S	05 42 33.3	+0.7
WMGZ	**Waiomatatini S**	**5.71**	**195**	P	Pn	05 41 28.5	+0.1
WMGZ				S	S	05 42 37.7	+0.3
HAZ	**Te Kaha**	**5.82**	**200**	P	Pn	05 41 29.8	+0.3
HAZ				S	S	05 42 42.6	+3.0
PKGZ	**Pakihiroa**	**5.84**	**197**	P	Pn	05 41 29.7	-0.1
PKGZ				S	S	05 42 41.6	+1.4
PUZ	**Puketiti**	**5.99**	**196**	P	Pn	05 41 33.5	+1.8
PUZ				S	S	05 42 43.1	-0.4
RUGZ	**Raukumara Rang**	**6.04**	**200**	P	Pn	05 41 31.7	-0.7
RUGZ				S	S	05 42 43.9	-0.9
TWGZ	**Tauwhareparae**	**6.16**	**197**	P	Pn	05 41 34.9	+1.2
TWGZ				S	S	05 42 48.3	+1.1
CNGZ	**Carnagh Statio**	**6.40**	**195**	P	Pn	05 41 38.1	+1.6
MWZ	**Matawai**	**6.43**	**200**	P	Pn	05 41 37.3	+0.3
MWZ				S	S	05 42 52.8	-0.3
TKGZ	**Te Karaka**	**6.44**	**197**	P	Pn	05 41 37.4	+0.3
TKGZ				S	S	05 42 53.2	-0.1
URZ	**Urewera**	**6.49**	**203**	P	Pn	05 41 36.6	-1.0
URZ				S	S	05 42 51.1	-3.1
RAGZ	**Rawiri**	**6.61**	**200**	P	Pn	05 41 40.6	+1.4
RAGZ				S	S	05 42 59.6	+2.4
AWAZ	**Awhitu Peninsu**	**6.65**	**223**	P	Pn	05 41 41.3	+1.7
TOZ	**Tahuroa Road**	**6.69**	**215**	P	Pn	05 41 42.7	+2.6
RIGZ	**Rimuhau**	**6.71**	**197**	P	Pn	05 41 39.9	-0.5
RIGZ				S	S	05 43 00.6	+1.2
MUGZ	**Murupara**	**6.80**	**204**	P	Pn	05 41 42.2	+0.8
MUGZ				S	S	05 43 01.6	+0.4
SNGZ	**Shannon Statio**	**6.90**	**200**	P	Pn	05 41 40.2	-2.4
SNGZ				S	S	05 43 02.1	-1.3
WAZ	**Wanganui**	**8.59**	**209**	P	Pn	05 42 01.8	-1.4
WAZ				P	S	05 43 38.7	-2.6

*NEIC **28** 06:00:17.0±0.8,36°.100N±0°.006×117°.86W±0°.01, h4km±2km,Error ellipse: s-maj=1.5km s-min=1.0km az=81.0*
PAS 28 06:00:17.3±0.9,36°.098N±0°.007×117°.861W±0°.008, h3km±2km,ML3.1/115,ML2.8/86(NEIC),Error ellipse: s-maj=1.3km s-min=0.5km az=219.0,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFS	**McCloud Flat S**	**0.02**	**14**		Pg	06 00 18.3	+0.2
MFS					Sg	06 00 19.1	+0.4
WRVM	**Rose V. Centra**	**0.09**	**195**		Pg	06 00 19.4	+0.2
WRVM					Sg	06 00 20.0	+0.5
WCSM	**Coso Springs S**	**0.10**	**133**		Pg	06 00 19.9	+0.2
WCSM					Sg	06 00 21.4	+0.6
JRC2	**Joshua Ridge**	**0.12**	**160**		Pg	06 00 19.9	+0.2
JRC2					Sg	06 00 22.0	+0.6
WVPM	**Volcano Peak E**	**0.15**	**166**		Pg	06 00 20.4	+0.1
WVPM					Sg	06 00 22.8	+0.5
WNMM	**Nine Mile Cany**	**0.26**	**188**		Pb	06 00 26.1	+1.5
TOW	**Tower One**	**0.30**	**165**		Pg	06 00 23.6	+0.6
TOW					Sg	06 00 28.4	+1.5
CLC	**China Lake**	**0.35**	**143**		Pg	06 00 24.0	-0.1
CLC					Sg	06 00 29.1	+0.4
CWC	**Cottonwood Cre**	**0.39**	**333**		Pg	06 00 24.7	0.0
CWC					Sg	06 00 30.1	+0.3
CWC				IAML		06 00 30.4	
	comp=E,2μm,0.2s						
CWC				IAML		06 00 34.4	
	comp=N,1μm,0.2s						
SRTC	**Snort**	**0.41**	**167**		Pg	06 00 25.8	+0.5
SRTC					Sg	06 00 32.2	+1.5
CGO	**Cerro Gordo**	**0.45**	**6**		Pg	06 00 26.0	-0.1
CGO					Sg	06 00 32.8	+0.7
GPO	**China Lake**	**0.48**	**160**		Sg	06 00 33.1	+0.5
WORM	**Onyx Ranch**	**0.51**	**218**		Pg	06 00 26.9	-0.1
WORM					Sg	06 00 33.8	+0.2
WHFM	**Hanning Flat**	**0.56**	**225**		Pg	06 00 28.0	-0.1
WHFM					Sg	06 00 35.8	+0.4
WSHM	**Spangler Hills**	**0.58**	**149**		Pg	06 00 28.4	0.0
WSHM	**Spangler Hills**	**0.58**	**149**		Sg	06 00 36.4	+0.5
WBSM	**Bird Springs**	**0.60**	**202**		Pg	06 00 28.8	-0.1
WBSM					Sg	06 00 37.3	+0.6
LRMC	**Laurel Mtn Rad**	**0.63**	**167**		Pg	06 00 29.5	0.0
LRMC				IAML		06 00 38.6	
	comp=E,436nm,0.5s						
LRMC				IAML		06 00 38.8	
	comp=N,375nm,0.2s						
LRMC	**Laurel Mtn Rad**	**0.63**	**167**		Sg	06 00 38.2	+0.5
ISA	**Isabella, Lake**	**0.66**	**229**		Pg	06 00 29.8	-0.1
ISA				IAML		06 00 39.0	
	comp=N,539nm,0.6s						
ISA				IAML		06 00 39.1	
	comp=E,542nm,0.4s						
ISA	**Isabella, Lake**	**0.66**	**229**		Sg	06 00 38.8	+0.3
WASM	**Alta Sierra Ca**	**0.67**	**238**		Pg	06 00 30.1	-0.1
WASM					Sg	06 00 39.2	+0.4
CCCA	**Chr Cany lake**	**0.70**	**145**		Pg	06

MWC				IAML		06 01 18.9	
	comp=E,66nm,1.1s						
MWC				IAML		06 01 22.8	
	comp=N,80nm,0.6s						
SMMC	**Simmler**	**1.91**	**246**		Pn	06 00 51.6	+0.8
PASC	**Pasadena Art C**	**1.94**	**188**		Pn	06 00 51.9	+0.7
PASC				IAML		06 01 21.7	
	comp=E,58nm,0.8s						
MTPC	**Mountain Pass**	**1.97**	**107**		Pn	06 00 51.1	-0.8
MTPC				IAML		06 01 22.2	
	comp=N,64nm,0.4s						
MTPC				IAML		06 01 24.0	
	comp=E,64nm,0.3s						
PKD	**Bear Valley Ra**	**2.18**	**267**		Pn	06 00 55.2	+0.7
PKD				IAML		06 01 43.8	
	comp=N,44nm,1.4s						
PKD				IAML		06 01 46.4	
	comp=E,48nm,2.3s						
LHV	**Little Huntoon**	**2.21**	**347**		Pn	06 00 55.9	+1.0
LHV				IAML		06 01 35.7	
	comp=E,40nm,0.7s						
SHPR	**Sheep Range**	**2.22**	**79**		Pn	06 00 55.3	+0.1
NV11	**Mina Array Sit**	**2.34**	**354**		Pn	06 00 57.4	+0.4
NVAR	**Mina Array Bea**	**2.35**	**352**		Pn	06 00 57.2	+0.1
PMPB	**Monarch Peak**	**2.38**	**274**	Pn	Pn	06 00 58.5	+1.2
V12A	**Nelson**	**2.47**	**98**		Pn	06 00 57.9	-0.7
V12A				IAML		06 01 39.0	
	comp=E,38nm,0.4s						
V12A				IAML		06 01 41.4	
	comp=N,38nm,0.8s						
RYN	**Ryan**	**2.58**	**348**		Pn	06 01 00.6	+0.4
BELC	**Belle Mtn. Jos**	**2.59**	**143**		Pn	06 00 59.8	-0.5
BBGB	**Big Mountain B**	**2.61**	**282**		Pn	06 01 01.7	+1.1
HULI	**Fort Hunter Li**	**2.73**	**269**	Pn	Pn	06 01 02.0	-0.1
DPP	**Dos Picos Cty**	**3.18**	**166**		Pn	06 01 07.4	-0.9
BAR	**Barrett**	**3.55**	**164**	Pn	Pn	06 01 12.7	-0.7
BAR				IAML		06 02 17.0	
	comp=E,17nm,4.9s						
BLYC	**Blythe**	**3.61**	**130**	Pn	Pn	06 01 13.1	-1.0
BLYC				IAML		06 02 18.4	
	comp=N,14nm,0.6s						
ELK	**Elko**	**5.08**	**23**	Pn	Pn	06 01 35.3	+0.8
ELK				IAML		06 02 56.3	
	comp=N,3.8nm,4.6s						
ELK				IAML		06 03 03.0	
	comp=N,6.1nm,1.9s						

IDC 28 06:02:32.2±3.7, 57°.13S×148°.61E, h0km, mb3.4/3, mbtmp3.5/3, MS3.5/11, Error ellipse: s-maj=382.6km s-min=28.9km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**21.00**	**172**	P	P	06 07 16.6	0.0
	1.9nm,1.0s,baz=342,slow=10.0,SNR=5.2						
VNDA				LR	LR	06 13 50.3	
	comp=Z,61nm,20.0s,baz=332,slow=32						
	1.9nm,1.0s						
URZ	**Urewera**	**26.60**	**57**	LR	LR	06 18 49.8	
	comp=Z,111nm,18.2s,baz=218,slow=37						
H01W1	**Cape Leeuwin H**	**32.12**	**299**	T	T	06 42 31.9	
	baz=145,slow=76						
H01W2	**Cape Leeuwin H**	**32.12**	**299**	T	T	06 42 32.2	
	baz=145,slow=76						
H01W3	**Cape Leeuwin H**	**32.13**	**299**	T	T	06 42 35.8	
	baz=145,slow=76						
QSPA	**South Pole Qui**	**32.98**	**180**	LR	LR	06 22 46.8	
	comp=Z,110nm,18.6s,baz=28,slow=37						
ASAR	**Alice Springs**	**35.09**	**336**	P	P	06 09 26.5	-0.5
	0.3nm,0.6s,baz=159,slow=8.1,SNR=1.9						
ASAR				LR	LR	06 21 13.0	
	comp=Z,64nm,20.3s,baz=128,slow=32						
	0.3nm,0.6s						
CTA	**Charters Tower**	**37.03**	**356**	LR	LR	06 23 32.9	
	comp=Z,4.1nm,18.2s,baz=220,slow=34						
DZM	**Mont Dzumac**	**37.37**	**28**	LR	LR	06 22 12.6	
	comp=Z,118nm,19.8s,baz=205,slow=32						
MAW	**Mawson**	**37.84**	**219**	LR	LR	06 24 20.6	
	comp=Z,114nm,18.5s,baz=92,slow=35						
WRA	**Warramunga Arr**	**38.61**	**338**	P	P	06 09 57.2	+0.3
	0.7nm,0.7s,baz=167,slow=7.8,SNR=5.1						
	0.7nm,0.7s						
PMG	**Port Moresby**	**47.62**	**358**	LR	LR	06 29 00.4	
	comp=Z,74nm,18.6s,baz=162,slow=33						
SNAA	**Sanae**	**49.94**	**191**	LR	LR	06 32 20.3	
	comp=Z,87nm,19.4s,baz=60,slow=36						
RAR	**Rarotonga**	**51.87**	**68**	LR	LR	06 30 05.6	
	comp=Z,39nm,20.1s,baz=136,slow=32						
H04S2	**CROZET ISLANDS**	**55.54**	**236**	T	T	07 12 13.9	
	baz=139,slow=74,SNR=5.2						
H04S1	**CROZET ISLANDS**	**55.54**	**236**	T	T	07 12 14.8	
	baz=139,slow=74,SNR=6.0						
H04S3	**CROZET ISLANDS**	**55.55**	**236**	T	T	07 12 13.4	
	baz=139,slow=74,SNR=4.7						
KAPI	**Kappang**	**56.73**	**325**	LR	LR	06 34 14.8	
	comp=Z,34nm,21.8s,baz=160,slow=34						
H08S2	**Diego Garcia H**	**76.08**	**278**	T	T	07 37 20.9	
	baz=147,slow=76						
H08S1	**Diego Carcia H**	**76.09**	**278**	T	T	07 37 18.6	
	baz=147,slow=76						
H08S3	**Diego Garcia H**	**76.10**	**278**	T	T	07 37 15.4	
	baz=147,slow=76						
CMAR	**Chiang Mai Arr**	**85.91**	**314**	LR	LR	06 52 56.4	
	comp=Z,16nm,19.5s,baz=150,slow=35						

*IDC **28** 06:09:16.2±2.0, 21°.68N×143°.06E, h232km±18km, mb3.3/9, mbtmp3.9/10, Error ellipse: s-maj=27.3km s-min=13.1km az=86.0*

ISC 28 06:09:17.7±0.8, 21°.7N±0°.1×143°.1E±0°.2, h250km, n13, σ0s84/15, mb3.6/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.39**	**352**	P	**Pn**	**06 10 37.7**	**-0.7**
	38nm,0.4s,baz=180,slow=16,SNR=5.2						
JCJ				S	**S**	**06 11 41.6**	**-1.1**
	46nm,0.4s,baz=133,slow=23,SNR=8.2						
WRA	**Warramunga Arr**	**42.29**	**192**	P	**P**	**06 16 46.8**	**-0.4**
	1.9nm,0.6s,baz=15,slow=8.3,SNR=24						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**46.00**	**192**	P	**P**	**06 17 16.0**	**-0.6**
	0.4nm,0.6s,baz=16,slow=10,SNR=9.7						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**54.11**	**322**	PcP	**PcP**	**06 19 17.5**	**-0.7**
	0.7nm,0.4s,baz=134,slow=3.0,SNR=2.8						
MKAR	**Makanchi Array**	**54.59**	**313**	P	**P**	**06 18 21.3**	**+0.8**
	0.2nm,0.6s,baz=88,slow=7.4,SNR=1.6						
MKAR				PcP	**PcP**	**06 19 20.0**	**-0.2**
	0.3nm,0.5s,baz=83,slow=5.8,SNR=1.9						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**57.42**	**317**	P	**P**	**06 18 41.1**	**+0.7**
	1.1nm,0.3s,baz=102,slow=7.5,SNR=2.6						
	1.1nm,0.3s						
ILAR	**Eielson Array**	**62.06**	**27**	P	**P**	**06 19 12.1**	**+0.4**
	0.4nm,1.0s,baz=236,slow=4.2,SNR=1.7						
	0.4nm,1.0s						
BVAR	**Borovoye Array**	**62.57**	**319**	P	**P**	**06 19 16.1**	**+0.9**
	1.8nm,0.3s,baz=100,slow=7.6,SNR=13						
	1.8nm,0.3s						
ARCES	**ARCESS Array B**	**78.85**	**341**	P	**P**	**06 20 54.1**	**+1.3**
	0.7nm,0.5s,baz=81,slow=7.5,SNR=5.7						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**83.10**	**334**	P	**P**	**06 21 14.8**	**-0.4**
	0.9nm,0.5s,baz=55,slow=4.1,SNR=7.9						
	0.9nm,0.5s						
NVAR	**Mina Array Bea**	**83.21**	**51**	P	**P**	**06 21 17.4**	**+0.7**
	0.5nm,0.7s,baz=289,slow=4.5,SNR=3.6						
	0.5nm,0.7s						
PLCA	**Paso Flores**	**145.87**	**131**	PKPbc	**PKPab**	**06 28 27.9**	**-1.0**
	1.6nm,0.6s,baz=229,slow=3.8,SNR=6.7						
LPAZ	**La Paz**	**150.05**	**85**	PKPbc	**PKiKP**	**06 28 40.7**	**-0.4**
	1.1nm,0.5s,baz=301,slow=2.4,SNR=6.1						

*IDC **28** 06:29:07.0±0.5, 10°.19N×126°.46E, h0km, mb4.2/20, mbtmp4.2/21, ML4.2/1, MS3.3/2, Error ellipse: s-maj=29.3km s-min=11.9km az=77.0*
*NEIC **28** 06:29:13.4±1.3, 10°.16N±0°.09×126°.5E±0°.2, h39km±8km, mb4.3/24, Error ellipse: s-maj=22.5km s-min=13.4km az=87.0*

ISC 28 06:29:13.0±0.4, 10°.16N±0°.06×126°.5E±0°.1, h42km, n60, σ0s76/63, mb4.2/30, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.20**	**196**	Pn	**Pn**	**06 30 00.6**	**-0.3**
	28nm,0.3s,baz=23,slow=15,SNR=1.5						
DAV				Sn	**Sn**	**06 30 38.4**	**+0.7**
	85nm,0.3s,baz=0.0,slow=6.1,SNR=1.4						
	283nm,0.4s						
DAV	**Davao City (W)**	**3.20**	**196**		**Pn**	**06 30 00.4**	**-0.4**
BATI	**Baumata**	**20.43**	**188**	P	**P**	**06 33 47.9**	**+1.0**
	82nm,0.9s,baz=78,slow=1.1,SNR=4.7						
	82nm,0.9s						
KNRA	**Kununurra**	**25.77**	**175**	P	**P**	**06 34 39.5**	**-0.6**
KNRA				IAmb	IAmb	06 34 57.0	
	comp=Z,8.8nm,0.8s						
KSRS	**Korea Array**	**27.21**	**3**	P	**P**	**06 34 52.7**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=180,slow=11,SNR=3.0						
	comp=Z,1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**27.89**	**290**	P	**P**	**06 34 58.9**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=109,slow=9.4,SNR=2.5						
	comp=Z,1.8nm,0.3s						
CMAR	**Chiang Mai Arr**	**27.89**	**290**	P	**P**	**06 35 00.6**	**+1.2**
FITZ	**Fitzroy Crossi**	**28.09**	**182**	P	**P**	**06 35 00.9**	**-0.1**
COEN	**Coen**	**29.13**	**145**	P	**P**	**06 35 09.9**	**-0.4**
COEN				IAmb	IAmb	06 35 31.9	
	comp=Z,4.6nm,0.9s						
WB0	**Warramunga Arr**	**30.74**	**165**	P	**P**	**06 35 23.1**	**-1.5**
WRA	**Warramunga Arr**	**30.90**	**165**	P	**P**	**06 35 23.9**	**-2.0**
	comp=Z,0.9nm,0.9s,baz=344,slow=9.7,SNR=4.5						
WRA				PcP	**PcP**	**06 38 22.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=331,slow=3.2,SNR=4.6						
	comp=Z,0.9nm,0.9s						
WRA	**Warramunga Arr**	**30.90**	**165**	P	**P**	**06 35 26.2**	**+0.3**
WR8	**Warramunga Arr**	**30.95**	**165**	P	**P**	**06 35 25.2**	**-1.2**
MBWA	**Marble Bar**	**31.82**	**192**	P	**P**	**06 35 33.8**	**-0.2**
PSA00	**Pilbara Seismi**	**32.20**	**192**	P	**P**	**06 35 37.1**	**-0.2**
PSA00				IAmb	IAmb	06 35 37.9	
	comp=Z,8.2nm,0.8s						
PSA00	**Pilbara Seismi**	**32.20**	**192**	P	**P**	**06 35 37.5**	**+0.3**
PSA00				IAmb	IAmb	06 35 38.0	
	comp=Z,20nm,0.7s						
ASAR	**Alice Springs**	**34.40**	**168**	P	**P**	**06 35 55.6**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=357,slow=7.0,SNR=13						
ASAR				PcP	**PcP**	**06 38 32.2**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=351,slow=3.3,SNR=7.3						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**34.40**	**168**	P	**P**	**06 35 55.8**	**-0.6**
BRDH	**Bariadhala**	**35.55**	**295**	LR	LR	06 54 15.2	
	comp=Z,34nm,18.1s,baz=167,slow=42						
MORW	**Morawa**	**40.28**	**194**	P	**P**	**06 36 46.5**	**+0.3**
FORT	**Forrest**	**40.73**	**178**		**P**	**06 36 50.5**	**+0.6**
ULN	**Ulaanbaatar**	**40.99**	**340**	P	**P**	**06 36 51.1**	**-1.0**
ULN				IAmb	IAmb	06 36 54.1	
	comp=Z,3.1nm,0.7s						
SONM	**Songino Array**	**41.19**	**339**	P	**P**	**06 36 54.5**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=160,slow=9.7,SNR=6.0						
	comp=Z,1.4nm,0.6s						
EIDS	**Eidsvold**	**42.68**	**146**	P	**P**	**06 37 04.9**	**-1.1**
EIDS				IAmb	IAmb	06 37 09.3	
	comp=Z,5.0nm,1.1s						
BBOO	**Buckleboo**	**43.70**	**168**	P	**P**	**06 37 14.3**	**+0.2**
BBOO				IAmb	IAmb	06 37 19.0	
	comp=Z,6.3nm,0.6s						
NWAO	**Narrogin (SRO)**	**43.74**	**191**	P	**P**	**06 37 14.9**	**+0.5**
STKA	**Stephens Creek**	**44.23**	**161**	P	**P**	**06 37 18.1**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=327,slow=6.6,SNR=6.9						
	comp=Z,1.5nm,0.4s						
PETK	**Petropavlovsk-**	**49.65**	**24**	P	**P**	**06 38 01.2**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=214,slow=9.2,SNR=1.5						
	comp=Z,1.9nm,0.6s						
PETK	**Petropavlovsk-**	**49.65**	**24**	P	**P**	**06 38 01.4**	**+0.9**
PET	**Petropavlovsk**	**49.98**	**25**	P	**P**	**06 38 02.9**	**0.0**
MKAR	**Makanchi Array**	**52.24**	**323**	P	**P**	**06 38 19.9**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=120,slow=8.5,SNR=14						
MKAR				PcP	**PcP**	**06 39 31.5**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=104,slow=5.1,SNR=5.7						
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	**52.43**	**323**	P	**P**	**06 38 21.3**	**-0.2**
MAKZ				IAmb	IAmb	06 38 22.3	
	comp=Z,4.5nm,1.1s						
ZAA0	**Zalesovo Array**	**54.82**	**331**	P	**P**	**06 38 37.7**	**-1.1**
ZAA0				IAmb	IAmb	06 38 40.8	
	comp=Z,2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**54.82**	**331**	P	**P**	**06 38 38.2**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=112,slow=7.1,SNR=10						
	comp=Z,2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**54.82**	**331**	P	**P**	**06 38 39.2**	**+0.4**
KURK	**Kurchatov**	**56.27**	**325**	P	**P**	**06 38 48.4**	**-0.8**
KURK				IAmb	IAmb	06 39 01.2	
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**56.28**	**325**	P	**P**	**06 38 48.4**	**-0.9**
	comp=Z,1.6nm,0.2s,baz=124,slow=7.0,SNR=8.3						
	comp=Z,1.6nm,0.2s						
BVAR	**Borovoye Array**	**61.87**	**325**	P	**P**	**06 39 28.3**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=99,slow=9.2,SNR=4.4						
BVAR				PcP	**PcP**	**06 40 08.8**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=104,slow=4.7,SNR=6.9						
	comp=Z,1.2nm,0.8s						
NRIK	**Norilsk**	**64.17**	**346**	LR	LR	07 12 08.8	
	comp=Z,24nm,18.4s,baz=147,slow=40						
AB31	**Akbulak array**	**67.09**	**319**	P	**P**	**06 40 02.1**	**-0.1**
ABKAR	**Akbulak array**	**67.09**	**319**	P	**P**	**06 40 01.7**	**-0.5**
H17K	**Granite Mounta**	**73.92**	**25**	P	**P**	**06 40 45.3**	**+1.7**
C18K	**Utukok River**	**74.19**	**21**	P	**P**	**06 40 46.3**	**+1.2**
C18K				IAmb	IAmb	06 41 06.8	
	comp=Z,11nm,1.1s						
D19K	**Kuna River**	**75.26**	**22**	P	**P**	**06 40 52.2**	**+0.8**
D19K				IAmb	IAmb	06 41 03.1	
	comp=Z,2.5nm,1.0s						
ILAR	**Eielson Array**	**79.45**	**26**	P	**P**	**06 41 14.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=227,slow=5.8,SNR=6.5						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**79.45**	**26**	P	**P**	**06 41 15.0**	**+0.2**
SPITS	**Spitsbergen Ar**	**84.16**	**349**	P	**P**	**06 41 39.0**	**-0.4**
	comp=Z,14nm,1.0s,baz=99,slow=4.3,SNR=4.7						
	comp=Z,14nm,1.0s						
ARCES	**ARCESS Array B**	**84.37**	**340**	P	**P**	**06 41 40.9**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=96,slow=8.7,SNR=15						
	comp=Z,3.3nm,0.6s						
ARCES	**ARCESS Array B**	**84.37**	**340**	P	**P**	**06 41 41.0**	**+0.4**
BRTR	**Keskin Array B**	**85.76**	**309**	P	**P**	**06 41 47.5**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=81,slow=8.9,SNR=2.0						
	comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**85.76**	**309**	P	**P**	**06 41 47.7**	**-0.7**
FINES	**FINESS Array B**	**86.08**	**332**	P	**P**	**06 41 48.7**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=58,slow=5.2,SNR=8.0						
	comp=Z,3.9nm,0.8s						
FINES	**FINESS Array B**	**86.08**	**332**	P	**P**	**06 41 49.2**	**0.0**
VNDA	**Vanda**	**89.80**	**173**	P	**P**	**06 42 07.3**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=317,slow=6.6,SNR=7.9						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**89.80**	**173**	P	**P**	**06 42 07.5**	**+1.0**
VNDA				IAmb	IAmb	06 42 28.0	
	comp=Z,1.0nm,0.8s						
HFS	**Hagfors**	**92.24**	**332**	P	**P**	**06 42 17.6**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=100,slow=8.0,SNR=5.6						
	comp=Z,1.4nm,0.6s						
NOA	**NORSAR Array B**	**92.94**	**334**	P	**P**	**06 42 20.3**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=63,slow=4.6,SNR=2.1						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**117.74**	**49**	PKP	**PKiKP**	**06 47 56.6**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=44,slow=2.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**120.50**	**292**	PKP	**PKPdf**	**06 48 00.8**	**-0.3**
	comp=Z,2.4nm,0.4s,baz=49,slow=4.5,SNR=2.4						
PLCA	**Paso Flores**	**146.03**	**157**	PKPbc	**PKPab**	**06 48 50.1**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=243,slow=2.3,SNR=7.2						

*THE **28** 06:35:09.2, 37°.N±2°.2×20°.0E±°, h0km±2km, M2.6/7, MLh2.6/7*
*ATH **28** 06:35:09.4, 37°.24N×20°.49E, h6km±2km, ML2.6/12, Manual Solution by A.Plessa First location: 2019/11/28 06:36:21, This location: 2019/11/28 09:14:35 ML*
Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 4 km

ISC 28 06:35:07.9±2.2, 37°.24N±0°.06×20°.38E±0°.09, h13km±11km, n27, σ0s46/35, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.59**	**37**	P	**Pb**	**06 35 19.7**	**-0.4**
LTHK				S	**Sg**	**06 35 28.0**	**+0.7**
LTHK	**Lithakia**	**0.59**	**37**	P	**Pb**	**06 35 20.0**	**-0.1**
LTHK				S	**Sg**	**06 35 26.6**	**-0.7**
KYPS	**Kipseli, Zakin**	**0.68**	**31**	P	**Pn**	**06 35 22.0**	**-1.2**
KYPS				S	**Sg**	**06 35 30.3**	**+0.3**
CLEM	**Kyllini,Ilia,G**	**0.88**	**42**	P	**Pb**	**06 35 25.1**	**+0.1**
RTZL	**Ratzakli, Kefa**	**0.89**	**20**	P	**Pn**	**06 35 25.8**	**-0.4**
RTZL				S	**Sn**	**06 35 38.8**	**-0.1**
VLS	**Valsamata**	**0.95**	**10**	P	**Pn**	**06 35 26.8**	**-0.2**
VLS				S	**Sn**	**06 35 40.9**	**+0.5**
VLS	**Valsamata**	**0.95**	**10**	P	**Pn**	**06 35 26.5**	**-0.5**
DMLN	**Damoulianata-K**	**1.00**	**360**	P	**Pn**	**06 35 28.4**	**+0.7**
AMT	**Artemida-Makis**	**1.09**	**74**	P	**Pn**	**06 35 28.8**	**-0.2**
PYL	**PYLOS**	**1.14**	**107**	P	**Pn**	**06 35 29.1**	**-0.5**
PYL				S	**Sg**	**06 35 45.0**	**+0.3**
PYL	**PYLOS**	**1.14**	**107**	P	**Pg**	**06 35 29.5**	**-0.3**
RLS	**Riolos of Patr**	**1.19**	**46**	P	**Pg**	**06 35 30.3**	**-0.5**
RLS				S	**Sg**	**06 35 46.8**	**+0.7**
RLS	**Riolos of Patr**	**1.19**	**46**	P	**Pg**	**06 35 30.8**	**+0.1**
ITM	**Ithomi**	**1.23**	**92**	P	**Pg**	**06 35 32.0**	**+0.4**
AXS	**Araxos**	**1.24**	**39**	P	**Pg**	**06 35 31.6**	**-0.1**
DRO	**Drossia**	**1.27**	**56**	P	**Pb**	**06 35 31.5**	**-0.2**
DRO				S	**Sn**	**06 35 49.2**	**+0.9**
DRO	**Drossia**	**1.27**	**56**	P	**Pb**	**06 35 31.9**	**+0.2**
EVGI	**Lefkada island**	**1.40**	**9**	P	**Pg**	**06 35 34.8**	**+0.1**
EVGI	**Lefkada island**	**1.40**	**9**	P	**Pg**	**06 35 35.0**	**+0.3**
LKD2	**Lefkada island**	**1.56**	**8**	P	**Pg**	**06 35 37.6**	**-0.3**
VLX	**Vlachokerasia**	**1.60**	**85**	P	**Pb**	**06 35 37.8**	**+0.4**
KLV	**Kalavryta, Ach**	**1.61**	**60**	P	**Pb**	**06 35 37.4**	**-0.3**
KLV	**Kalavryta, Ach**	**1.61**	**60**	P	**Pb**	**06 35 37.2**	**-0.4**
PVO	**Paravola**	**1.64**	**33**	P	**Pb**	**06 35 38.0**	**-0.1**
GUR	**Goura**	**1.70**	**65**	P	**Pb**	**06 35 38.9**	**-0.2**
ANX	**Ano Chora**	**1.82**	**42**	P	**Pb**	**06 35 40.9**	**-0.2**
TETR	**Tetrakomo, Epi**	**2.21**	**18**	P	**Pb**	**06 35 47.6**	**-0.2**

*IDC **28** 06:36:09.2±0.7, 27°.31S×70°.96W, h0km, mb4.1/7, mbtmp4.0/10, ML3.4/3, MS3.5/13, Error ellipse: s-maj=23.7km s-min=20.9km az=46.0*
*SJA **28** 06:36:10.8±0.6, 27°.21S×71°.19W, h29km±2km, ML4.2, MW4.3*
*VAO **28** 06:36:11.7±1.4, 27°.21S×71°.17W, h10km, mb4.5*
*NEIC **28** 06:36:14.0±1.6, 27°.30S±0°.03×71°.06W±0°.05, h35km±1km, mb4.5/21, ML4.3(GUC), Error ellipse: s-maj=8.1km s-min=4.9km az=94.0*
*GUC **28** 06:36:15.0±0.7, 27°.28S×71°.09W, h15km±5km, ML4.3*

ISC 28 06:36:10.0±1.3, 27°.29S±0°.02×71°.20W±0°.04, h8km±8km, n177, σ1s74/196, mb4.5/17, MS3.4/11, 5C-10D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC06	**Mina Casimiro**	**0.75**	**95**		**Pn**	**06 36 26.3**	**-0.6**
AC06					**Sb**	**06 36 34.8**	**-1.0**
AC06	**Mina Casimiro**	**0.75**	**95**	||iP	**Pn**	**06 36 26.4**	**-0.5**
AC06				eS	**Sg**	**06 36 34.5**	**+0.3**
GO03	**Copiapo**	**0.90**	**109**		**Pn**	**06 36 29.2**	**+0.2**
GO03					**Sg**	**06 36 39.4**	**+0.2**
GO03	**Copiapo**	**0.90**	**109**	eP	**Pn**	**06 36 28.9**	**-0.1**
GO03				eS	**Sg**	**06 36 38.8**	**-0.3**
GO03				IAML		06 36 40.4	
	comp=N,11μm,0.1s						
GO03	**Copiapo**	**0.90**	**109**	eP	**Pn**	**06 36 29.0**	**-0.1**
GO03				eS	**Sb**	**06 36 39.6**	**-0.6**
GO03				IAML		06 36 40.4	
	comp=Z,6μm,0.4s						
AC04	**Llanos de Chal**	**0.91**	**173**		**Pn**	**06 36 30.2**	**+1.1**
AC04					**Sb**	**06 36 41.6**	**+1.2**
AC04	**Llanos de Chal**	**0.91**	**173**	||iP	**Pn**	**06 36 30.0**	**+0.9**
AC04				eS	**Sb**	**06 36 41.6**	**+1.2**
AC04	**Llanos de Chal**	**0.91**	**173**	eP	**Pn**	**06 36 30.0**	**+0.9**
AC04				eS	**Pn**	**06 36 30.0**	**+0.9**
AC04				IAML		06 36 43.2	
	comp=Z,3μm,0.7s						
AC01	**Pan de Azucar**	**1.26**	**25**		**Pg**	**06 36 34.9**	**+0.7**
AC01				Sn	**Sb**	**06 36 50.0**	**-0.3**
AC01	**Pan de Azucar**	**1.26**	**25**	||iP	**Pg**	**06 36 34.8**	**+0.7**
AC01				eS	**Sb**	**06 36 49.6**	**-0.7**
AC01				IAML		06 36 51.0	
	comp=E,7μm,0.3s						
AC01	**Pan de Azucar**	**1.26**	**25**	eP	**Pg**	**06 36 34.9**	**+0.7**
AC01				eS	**Sb**	**06 36 49.9**	**-0.5**
AC01				IAML		06 36 58.2	
	comp=Z,2μm,0.5s						
AC05	**El Transito**	**1.74**	**152**		**Pb**	**06 36 43.0**	**+0.8**
AC05	**El Transito**	**1.74**	**152**	eP	**Pb**	**06 36 43.0**	**+0.8**
AC05				eS	**Sb**	**06 37 04.0**	**-0.3**
AC05				IAML		06 37 09.5	
	comp=N,5μm,0.5s						
AC05	**El Transito**	**1.74**	**152**	eP	**Pb**	**06 36 43.1**	**+0.8**
AC05				eS	**Sg**	**06 37 05.5**	**-0.4**
AC05				IAML		06 37 07.5	
	comp=Z,1μm,0.8s						
LCO	**Las Campanas**	**1.77**	**166**		**Pb**	**06 36 43.1**	**+0.3**
LCO	**Las Campanas**	**1.77**	**166**	eP	**Pb**	**06 36 43.1**	**+0.3**
LCO				IAML	

PB10	**IPOC Station P**	**3.81**	**9**	*eP*		**Pn**	**06 37 08.7**	**-0.2**
PB10	**IPOC Station P**	**3.81**	**9**	*eP*		**Pn**	**06 37 08.9**	**0.0**
PB10				*eS*		**Sn**	**06 37 51.7**	**-2.3**
CO02	**Combarbal**	**3.90**	**178**			**Pn**	**06 37 12.1**	**+1.8**
CO02	**Combarbal**	**3.90**	**178**	‖	*eP*	**Pn**	**06 37 11.8**	**+1.5**
CO02	**Combarbal**	**3.90**	**178**	*eP*		**Pn**	**06 37 12.0**	**+1.7**
CO02				*eS*		**Sn**	**06 37 56.1**	**-0.3**
CO02				IAML			06 38 15.2	
	comp=Z,613nm,0.6s							
ACLC	**CERRO LA CRUZ**	**4.30**	**121**	*eP*		**Pn**	**06 37 19.3**	**+3.4**
ACLC				IAML			06 38 34.1	
	comp=Z,126nm,1.2s							
PB05	**IPOC Station P**	**4.51**	**12**			**Pn**	**06 37 18.5**	**-0.3**
PB05	**IPOC Station P**	**4.51**	**12**	‖	*eP*	**Pn**	**06 37 18.4**	**-0.4**
PB05	**IPOC Station P**	**4.51**	**12**	*eP*		**Pn**	**06 37 18.4**	**-0.3**
PB05				*eS*		**Sn**	**06 38 08.8**	**-2.7**
PB05				IAML			06 38 41.0	
	comp=Z,191nm,0.5s							
AVFE	**Valle Fertil**	**4.69**	**137**	*eP*		**Pn**	**06 37 24.4**	**+3.3**
AVFE				*eS*		**Sn**	**06 38 18.7**	**+3.0**
AVFE				IAML			06 38 39.9	
	comp=Z,130nm,0.5s							
CO04	**Los Peladeros**	**4.74**	**178**	‖	*eP*	**Pn**	**06 37 23.9**	**+1.9**
RTLS	**Leoncito**	**4.78**	**160**	*eP*		**Pn**	**06 37 27.2**	**+4.5**
RTLS				*eS*		**Sb**	**06 38 36.0**	**+3.9**
PB06	**IPOC Station P**	**4.80**	**18**			**Pn**	**06 37 23.0**	**+0.2**
PB06	**IPOC Station P**	**4.80**	**18**	‖	*eP*	**Pn**	**06 37 22.6**	**0.0**
PB06	**IPOC Station P**	**4.80**	**18**	*eP*		**Pn**	**06 37 22.7**	**0.0**
PB06				*eS*		**Sb**	**06 38 29.8**	**-2.6**
PB06				IAML			06 38 48.5	
	comp=Z,452nm,0.9s							
FSA	**Cafayete**	**4.81**	**77**	*eP*		**Pn**	**06 37 26.4**	**+3.5**
CYA	**Choya**	**4.91**	**105**	*eP*		**Pn**	**06 37 27.3**	**+3.2**
CFA	**Coronel Fontan**	**5.01**	**150**	Pn		**Pn**	**06 37 28.9**	**+3.4**
	comp=Z,2.7nm,0.3s,baz=335,slow=15,SNR=79							
CFA				Sn		**Sn**	**06 38 20.6**	**-3.0**
	comp=Z,2.0nm,0.3s,baz=335,slow=12,SNR=4.4							
AF01	**San Pedro de A**	**5.12**	**33**	*eP*		**Pn**	**06 37 28.9**	**+1.7**
AF01	**San Pedro de A**	**5.12**	**33**	*eP*		**Pn**	**06 37 29.7**	**+2.5**
VA06	**Catapilco**	**5.25**	**181**	Pn		**Pn**	**06 37 29.6**	**+0.9**
AHML	**Horco Molle**	**5.25**	**86**	*eP*		**Pn**	**06 37 26.9**	**-1.9**
PB03	**IPOC Station P**	**5.38**	**14**			**Pn**	**06 37 30.2**	**-0.6**
VA03	**San Esteban**	**5.48**	**174**			**Pn**	**06 37 34.4**	**+2.4**
VA03	**San Esteban**	**5.48**	**174**	*eP*		**Pn**	**06 37 34.1**	**+2.1**
PB07	**IPOC Station P**	**5.67**	**12**			**Pn**	**06 37 34.2**	**-0.5**
VA01	**Torpederas**	**5.72**	**184**	Pn		**Pn**	**06 37 35.0**	**-0.2**
PB09	**IPOC Station P**	**5.75**	**18**			**Pn**	**06 37 36.8**	**+0.9**
PEL	**Peldehue**	**5.85**	**176**			**Pn**	**06 37 38.5**	**+1.5**
MT02	**Curacav**	**5.95**	**180**			**Pn**	**06 37 39.3**	**+1.0**
PB02	**IPOC Station P**	**6.07**	**12**			**Pn**	**06 37 39.4**	**-0.7**
MT05	**Renca**	**6.09**	**176**	Pn		**Pn**	**06 37 42.2**	**+1.9**
MT16	**CCHEN**	**6.14**	**175**			**Pn**	**06 37 43.3**	**+2.3**
MT03	**Universidad Ad**	**6.21**	**175**			**Pn**	**06 37 44.1**	**+2.1**
PB01	**IPOC Station P**	**6.42**	**14**			**Pn**	**06 37 44.2**	**-0.7**
MT09	**Talagante**	**6.46**	**178**			**Pn**	**06 37 46.5**	**+1.0**
PATCX	**Punta Patache**	**6.51**	**9**	Pn		**Pn**	**06 37 44.3**	**-1.9**
MT01	**Popeta**	**6.55**	**180**			**Pn**	**06 37 47.3**	**+0.7**
BO04	**La Punta**	**6.69**	**176**			**Pn**	**06 37 49.5**	**+0.9**
TCA	**Tanti**	**7.03**	**127**	*eP*		**Pn**	**06 37 54.0**	**+0.7**
BO01	**Tunca**	**7.08**	**179**			**Pn**	**06 37 54.4**	**+0.6**
PB08	**IPOC Station P**	**7.36**	**15**	Pn		**Pn**	**06 37 57.3**	**-0.8**
BO02	**Sierra Bellavi**	**7.48**	**177**			**Pn**	**06 38 00.1**	**+0.6**
PB11	**IPOC Station P**	**7.63**	**11**			**Pn**	**06 37 59.8**	**-1.8**
PSGCX	**Pisagua**	**7.72**	**8**			**Pn**	**06 38 01.0**	**-1.8**
GO01	**Chusmiza**	**7.81**	**14**			**Pn**	**06 38 03.6**	**-0.8**
ML02	**Panimavida**	**8.45**	**181**	Pn		**Pn**	**06 38 12.2**	**-0.4**
PB12	**IPOC Station P**	**8.68**	**5**	Pn		**Pn**	**06 38 14.9**	**-1.0**
H03N1	**Juan Fernandez**	**9.05**	**226**	T		T	06 47 53.4	
	baz=52,slow=71,SNR=6295							
H03N2	**Juan Fernandez**	**9.06**	**226**	T		T	06 47 53.9	
	baz=52,slow=71,SNR=7136							
H03N3	**Juan Fernandez**	**9.07**	**226**	T		T	06 47 52.7	
	baz=52,slow=71,SNR=8018							
BI02	**San Fabin de**	**9.34**	**180**			**Pn**	**06 38 25.1**	**+0.1**
LPAZ	**La Paz**	**11.32**	**15**	Pn		**Pn**	**06 38 52.6**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=196,slow=7.1,SNR=14							
LPAZ				LR		LR	06 43 37.3	
	comp=Z,188nm,21.6s,baz=204,slow=40							
	comp=Z,2.6nm,0.4s							
CPUP	**Villa Florida**	**12.42**	**89**	Pn		**Pn**	**06 39 06.5**	**-0.7**
	baz=222,slow=18,SNR=2.0							
CPUP				Lg		Lg	06 42 37.9	
	comp=Z,0.1nm,0.3s,baz=212,slow=19,SNR=2.9							
	comp=Z,0.2nm,0.4s							
CPUP	**Villa Florida**	**12.42**	**89**			**Pn**	**06 39 06.6**	**-0.6**
TRQA	**Tornquist**	**13.23**	**146**	Pn		**Pn**	**06 39 18.3**	**+0.1**
PLCA	**Paso Flores**	**13.42**	**178**	Pn		**Pn**	**06 39 20.4**	**-0.3**
	baz=337,slow=13,SNR=2.2							
PLCA				LR		LR	06 44 51.4	
	comp=Z,210nm,19.5s,baz=352,slow=39							
	comp=Z,1.1nm,1.0s							
SIV	**San Ignacio**	**14.65**	**42**	Pn		**Pn**	**06 39 33.1**	**-4.7**
	baz=274,slow=8.7							
AQDB	**Aquidauana**	**15.71**	**68**	*eP*		**Pn**	**06 39 52.6**	**+1.0**
CPSB	**Cacapava Do Su**	**15.86**	**105**	*eP*		**Pn**	**06 39 55.0**	**+1.3**
ITAB	**Concordia**	**16.95**	**94**	Pn		**Pn**	**06 40 06.8**	**-0.7**
PTGB	**Pitanga**	**17.39**	**86**	*eP*		**P**	**06 40 14.9**	**+0.4**
TRCB	**Terra Rica**	**17.40**	**79**	*eP*		**P**	**06 40 14.1**	**-0.5**
SALV	**Santo Antonio**	**18.32**	**55**	*eP*		**P**	**06 40 25.6**	**+0.9**
LDASE	**Londrina, Braz**	**18.55**	**82**	*eP*		**Pn**	**06 40 28.2**	**+0.7**
C2SB	**Chapadao do Su**	**18.89**	**67**	*eP*		**Pn**	**06 40 30.1**	**+0.3**
PCMB	**Pacaembu**	**19.00**	**77**	*eP*		**Pn**	**06 40 33.3**	**+0.4**
PDRB	**Porto dos Gac**	**20.69**	**44**	*eP*		**P**	**06 40 50.4**	**-0.3**
ARAG	**Araguaiana, MT**	**21.37**	**61**	*eP*		**P**	**06 40 58.9**	**+0.9**
BB19B	**Bebedouro**	**21.57**	**78**	*eP*		**P**	**06 41 01.2**	**+1.1**
PET01	**Itanhaem-SP**	**21.74**	**87**	*eP*		**P**	**06 41 03.2**	**+1.3**
VAO	**Valinhos**	**22.33**	**84**	P		**P**	**06 41 06.5**	**-1.9**
VAO	**Valinhos**	**22.33**	**84**	*eP*		**P**	**06 41 08.9**	**+0.5**
IPMB	**Ipameri, GO**	**23.12**	**71**	*eP*		**P**	**06 41 17.8**	**+1.1**
PARB	**Paraibuna**	**23.44**	**86**	*eP*		**P**	**06 41 21.0**	**+1.2**
SNDB	**Serra Nova Dou**	**24.10**	**55**	*eP*		**P**	**06 41 26.2**	**-0.1**
PMNB	**Patos De Minas**	**24.38**	**74**	*eP*		**P**	**06 41 29.9**	**+1.0**
BDFB	**Brasilia**	**24.44**	**66**	P		**P**	**06 41 27.6**	**-1.9**
	comp=Z,2.2nm,0.5s,baz=308,slow=12							
BDFB				LR		LR	06 52 20.4	
	comp=Z,242nm,18.8s,baz=128,slow=40							
	comp=Z,2.2nm,0.5s							
BDFB	**Brasilia**	**24.44**	**66**	P		**P**	**06 41 27.5**	**-2.0**
BDFB				IAmb		IAmb	06 41 42.5	
	comp=Z,14nm,1.1s							
TEFE	**Tefe**	**24.47**	**16**	*eP*		**P**	**06 41 30.5**	**+0.9**
NPGB	**Novo Progresso**	**25.13**	**40**	*eP*		**P**	**06 41 35.8**	**+0.2**
MACA	**Manacapuru-AM**	**26.02**	**25**	P		**P**	**06 41 42.9**	**-0.7**
MACA				IAmb		IAmb	06 41 59.7	
	comp=Z,17nm,1.2s							
MACA	**Manacapuru-AM**	**26.02**	**25**	*eP*		**P**	**06 41 43.9**	**+0.3**
DUB01	**Friburgo-RJ**	**26.66**	**85**	*eP*		**P**	**06 41 50.8**	**+1.2**
BOAV	**Boa Vista**	**31.26**	**21**	P		**P**	**06 42 30.4**	**0.0**
CMC01	**Camacan, BA**	**31.71**	**75**	*eP*		**P**	**06 42 36.0**	**+1.5**
ROSC	**El Rosal**	**32.09**	**354**	LR		LR	06 55 49.5	
	comp=Z,74nm,19.8s,baz=159,slow=37							
RPN	**Rapa Nui**	**33.83**	**261**	LR		LR	06 52 17.3	
	comp=Z,30nm,18.1s,baz=100,slow=28							
SDV	**Santo Domingo**	**35.97**	**1**	LR		LR	06 59 17.8	
	comp=Z,42nm,18.7s,baz=181,slow=39							
NBTA	**Tacaratu-PE**	**36.12**	**66**	*eP*		**P**	**06 43 13.6**	**+0.8**
NBPS	**Pedro II - PI**	**36.38**	**57**	*eP*		**P**	**06 43 15.8**	**+0.7**
MDP	**Montagnes des**	**36.86**	**32**	LR		LR	07 00 56.0	
	comp=Z,46nm,18.6s,baz=208,slow=40							
PMSA	**Palmer Station**	**37.77**	**175**	LR		LR	06 57 44.4	
	comp=Z,105nm,18.0s,baz=304,slow=34							
PRVC	**Isla de Provid**	**41.62**	**345**	P		**P**	**06 43 58.3**	**-0.4**
TEIG	**Tepich**	**50.05**	**339**	P		**P**	**06 45 04.8**	**-0.4**
BELA	**Belgrano 2**	**53.35**	**171**	P		**P**	**06 45 30.5**	**+1.2**
VNA3	**Neumayer Olymp**	**55.33**	**160**	⇑	P	**P**	**06 45 44.6**	**+0.8**
	comp=Z,4.0nm,0.7s							
VNA1	**Neumayer--Stat**	**55.60**	**159**	⇑	P	**P**	**06 45 46.9**	**+1.2**
	comp=Z,3.0nm,1.0s							
VNA2	**Neumayer--Watz**	**55.95**	**159**	⇑	P	**P**	**06 45 49.0**	**+0.8**
	comp=Z,3.9nm,0.5s,baz=283,slow=8.0							
SNAA	**Sanae**	**57.55**	**160**	⇑	P	**P**	**06 46 00.1**	**+0.4**
	comp=Z,74nm,0.6s							
SNAA	**Sanae**	**57.55**	**160**	P		**P**	**06 46 00.0**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=276,slow=9.0,SNR=49							
	comp=Z,2.9nm,0.6s							
SNAA	**Sanae**	**57.55**	**160**	P		**P**	**06 46 00.6**	**+0.9**
SNAA				IAmb		IAmb	06 46 00.8	
	comp=Z,3.4nm,0.7s							
TROLL	**Troll, Antarti**	**59.27**	**160**	⇑	P	**P**	**06 46 12.4**	**+0.7**
	comp=Z,152nm,0.8s							
QSPA	**South Pole Qui**	**62.92**	**180**	P		**P**	**06 46 41.0**	**+4.4**
	comp=Z,1.6nm,0.6s,baz=156,slow=2.7,SNR=13							
QSPA	**South Pole Qui**	**62.92**	**180**	P		**P**	**06 46 37.8**	**+1.2**
QSPA				IAmb		IAmb	06 46 42.6	
	comp=Z,4.1nm,1.1s							
TKL	**Tuckaleechee C**	**63.73**	**349**	LR		LR	07 17 52.9	
	comp=Z,23nm,18.0s,baz=206,slow=39							
TKL	**Tuckaleechee C**	**63.73**	**349**	P		**P**	**06 46 42.7**	**+0.6**
TKL				IAmb		IAmb	06 46 55.7	
	comp=Z,5.7nm,1.0s							
TXAR	**Lajitas Array**	**64.33**	**329**	P		**P**	**06 46 48.7**	**+2.4**
	comp=Z,0.6nm,0.7s,baz=149,slow=7.7,SNR=5.6							
TXAR				LR		LR	07 10 05.5	
	comp=Z,16nm,21.6s,baz=276,slow=32							
	comp=Z,0.6nm,0.7s							
TXAR	**Lajitas Array**	**64.33**	**329**	P		**P**	**06 46 45.9**	**-0.4**
WHAR	**Wooly Hollow**	**65.36**	**341**	P		**P**	**06 46 53.5**	**+0.8**
WHAR				IAmb		IAmb	06 47 16.9	
	comp=Z,4.6nm,1.0s							
LCAR	**Lake Charles**	**65.78**	**342**	P		**P**	**06 46 56.5**	**+1.0**
LCAR				IAmb		IAmb	06 46 57.3	
	comp=Z,4.8nm,0.7s							
DBIC	**Dimbokro**	**72.41**	**73**	P		**P**	**06 47 36.6**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=287,slow=10,SNR=4.2							
DBIC				LR		LR	07 16 00.0	
	comp=Z,35nm,22.0s,baz=176,slow=33							
	comp=Z,5.2nm,0.8s							
DBIC	**Dimbokro**	**72.41**	**73**	P		**P**	**06 47 36.3**	**-0.9**
DBIC				IAmb		IAmb	06 47 41.8	
	comp=Z,5.9nm,0.9s							
HWUT	**Hardware Ranch**	**78.07**	**330**	IAmb		IAmb	06 48 12.6	
	comp=Z,3.7nm,0.7s							
PDAR	**Pinedale Array**	**78.16**	**332**	P		**P**	**06 48 10.8**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=137,slow=3.3,SNR=5.5							
	comp=Z,0.5nm,0.6s							
PDAR	**Pinedale Array**	**78.16**	**332**	P		**P**	**06 48 09.9**	**0.0**
NVAR	**Mina Array Bea**	**78.85**	**324**	P		**P**	**06 48 15.1**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=155,slow=5.3,SNR=4.7							
	comp=Z,0.7nm,0.7s							
SNOW	**Snow King Mount**	**79.23**	**332**	IAmb		IAmb	06 48 19.3	
	comp=Z,3.2nm,0.8s							
YNE	**Yellowstone No**	**80.19**	**333**	IAmb		IAmb	06 48 24.2	
	comp=Z,3.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**81.26**	**70**	P		**P**	**06 48 26.7**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=302,slow=3.1,SNR=3.3							
	comp=Z,2.4nm,0.4s							
BOSA	**Boshof**	**82.56**	**118**	LR		LR	07 22 46.3	
	comp=Z,25nm,19.8s,baz=34,slow=34							
MDT	**Midelt**	**87.03**	**51**	LR		LR	07 26 40.1	
	comp=Z,38nm,18.9s,baz=203,slow=35							
ASAR	**Alice Springs**	**123.84**	**208**	PKP		**PKPdf**	**06 55 09.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=145,slow=1.9,SNR=8.1							
WRA	**Warramunga Arr**	**126.92**	**210**	PKP		**PKiKP**	**06 55 15.9**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=167,slow=1.7,SNR=13							
BVAR	**Borovoye Array**	**141.69**	**37**	PKP		**PKPdf**	**06 55 40.4**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=289,slow=3.2,SNR=2.7							
KURK	**Kurchatov**	**147.26**	**36**	PKPbc		**PKPbc**	**06 55 53.7**	**0.0**
KURBB	**Kurchatov Arra**	**147.26**	**36**	PKPbc		**PKPbc**	**06 55 53.2**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=302,slow=3.0,SNR=20							
ARSB	**Arslanbob**	**147.51**	**55**	PKPbc		**PKPab**	**06 55 56.1**	**-0.9**
ZALV	**Zalesovo Beam**	**148.05**	**27**	PKPbc		**PKPbc**	**06 55 54.7**	**-1.0**
	comp=Z,9.4nm,0.6s,baz=304,slow=3.5,SNR=34							
AAK	**Ala-Archa**	**148.24**	**52**	PKPbc		**PKiKP**	**06 55 58.7**	**+0.1**
MKAR	**Makanchi Array**	**151.47**	**40**	PKPbc		**PKiKP**	**06 56 05.0**	**+0.2**
	comp=Z,6.9nm,0.7s,baz=328,slow=2.2,SNR=50							
MKAR	**Makanchi Array**	**151.47**	**40**			**PKiKP**	**06 56 04.9**	**0.0**

*IDC **28** 06:51:58.3± 1.0, 36°.36N× 28°.76E, h0km, mb3.6/4, mbtmp3.6/11, ML3.5/6, MS2.6/3, Error ellipse: s-maj=16.8km s-min=15.1km az=22.0*
*ISK **28** 06:51:59.5, 36°.48N× 28°.71E, h5km, ML3.4/41*
*THE **28** 06:52:00.3, 36°.N±3°×2°.9E±°, h3km±4km, M3.2/10, MLh3.2/10*
*AFAD **28** 06:52:00.0, 36°.44N× 28°.71E, h7km±4km, MW3.5*
*ATH **28** 06:52:00.4, 36°.41N× 28°.76E, h11km±2km, ML3.3/6, Manual Solution by A.Plessa First location: 2019/11/28 06:53:27, This location: 2019/11/28 09:19:49 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 2 km; Longitude uncertainty: 1 km*

ISC 28 06:51:60.0± 1.0, 36°.44N± 0°.02× 28°.73E± 0°.02, h8km± 7km, n98, σ1s49/131, mb3.4/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FETY	**Fethiye**	**0.35**	**55**	P		Pg	06 51 59.1	-7.6
FETY				S		**Sg**	**06 52 04.0**	**-7.3**
DALY	**Dalyan (Mula)**	**0.39**	**351**	Pg		**Pg**	**06 52 06.9**	**-0.6**
DALY				Sg		**Sg**	**06 52 13.2**	**+0.6**
IZZE	**Mula-Seydike**	**0.40**	**90**	SPECP			06 52 08.0	
IZZE				P		**Pg**	**06 52 08.0**	**+0.3**
IZZE				S		**Sg**	**06 52 13.9**	**+0.9**
IZZE				*i*	IAML		06 52 18.0	
	comp=N,7μm,0.3s							
IZZE				*i*	IAML		06 52 18.0	
	comp=E,4μm,0.3s							
RDI1	**Rhodes Town Ha**	**0.41**	**272**	P		**Pg**	**06 52 08.2**	**+0.3**
RDI1				S		**Sg**	**06 52 14.7**	**+1.3**
RODB	**Rodos**	**0.41**	**272**	P		**Pb**	**06 52 09.1**	**-0.4**
RODB				S		**Sb**	**06 52 15.1**	**-0.8**
SABU	**Mula-Dalaman**	**0.43**	**26**	SPECP			06 52 08.0	
SABU				P		**Pg**	**06 52 08.0**	**-0.3**
SABU				S		**Sg**	**06 52 14.8**	**+0.8**
SABU				*i*	IAML		06 52 16.0	
	comp=N,2μm,0.4s							
SABU				*i*	IAML		06 52 18.0	
	comp=E,2μm,0.4s							
TURN	**Turunc**	**0.52**	**311**	P		**Pg**	**06 52 08.9**	**-1.1**
TURN				S		**Sg**	**06 52 17.9**	**+1.1**
TURN	**Turunc**	**0.52**	**311**	Pg		**Pg**	**06 52 09.7**	**-0.3**
TURN				Sg		**Sg**	**06 52 17.7**	**+0.9**
ARG	**Arkhangelos**	**0.54**	**246**	Pg		**Pg**	**06 52 10.5**	**+0.2**
ARG				Sg		**Sb**	**06 52 19.8**	**+0.3**
ARG	**Arkhangelos**	**0.54**	**246**	P		**Pg**	**06 52 10.5**	**+0.2**
ARG				S		**Sb**	**06 52 19.2**	**-0.3**
ARG	**Arkhangelos**	**0.54**	**246**	P		**Pg**	**06 52 10.3**	**0.0**
ARG				S		**Sg**	**06 52 18.8**	**+1.4**
CAME	**Cameli-Denizli**	**0.68**	**42**	Pg		**Pg**	**06 52 13.2**	**0.0**
CAME				Sg		**Sb**	**06 52 23.9**	**0.0**
AKAS	**Kas**	**0.73**	**106**	P		**Pb**	**06 52 15.5**	**+0.4**
AKAS				S		**Sn**	**06 52 28.5**	**+0.4**
AKAS	**Kas**	**0.73**	**106**	Pg		**Pb**	**06 52 14.9**	**-0.1**
YER	**Yerkesik**	**0.79**	**333**	Pg		**Pg**	**06 52 15.0**	**-0.1**
YER				Sg		**Sb**	**06 52 26.7**	**0.0**
YER	**Yerkesik**	**0.79**	**333**	P		**Pg**	**06 52 15.5**	**+0.4**
YER				S		**Sb**	**06 52 26.5**	**-0.2**
KNIK	**Mula-Seydike**	**0.79**	**59**	SPECP			06 52 15.0	
KNIK				P		**Pg**	**06 52 15.3**	**+0.2**
KNIK				S		**Sb**	**06 52 28.5**	**+1.6**
KNIK				*i*	IAML		06 52 29.0	
	comp=N,1μm,0.9s							
KNIK				*i*	IAML		06 52 32.0	
	comp=E,889nm,0.7s							
CAEL	**Denizli, Camel**	**0.83**	**34**	P		**Pg**	**06 52 13.8**	**-2.2**
DNZT	**Denizli-Tavas-**	**0.87**	**15**	SPECP			06 52 15.0	
DNZT				P		**Pg**	**06 52 15.8**	**-1.0**
DNZT				*i*	IAML		06 52 35.0	
	comp=N,265nm,0.4s							
DNZT				*i*	IAML		06 52 36.0	
	comp=E,339nm,0.5s							
MULA	**Mugla, Merkez-**	**0.88**	**338**	P		**Pg**	**06 52 16.3**	**-0.7**
MULA				S		**Sb**	**06 52 29.4**	**-0.2**
DATC	**Datca-Mugla**	**0.92**	**291**	Pg		**Pg**	**06 52 17.9**	**+0.2**
DEMR	**Demre-Antalya**	**0.97**	**102**	Pg		**Pn**	**06 52 20.1**	**+0.3**
DAT	**Datca**	**0.97**	**288**	Pg		**Pg**	**06 52 18.9**	**+0.2**
ELL	**Elmali**	**1.00**	**71**	Pg		**Pb**	**06 52 19.8**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.04**	**8**	SPECP			06 52 20.0	
TAVA				P		**Pb**	**06 52 20.2**	**0.0**
TAVA				S		**Sb**	**06 52 33.8**	**-0.2**
TAVA				*i*	IAML		06 52 41.0	
	comp=N,478nm,0.5s							
GOLH	**Golhisar**	**1.04**	**39**	SPECP			06 52 19.0	
GOLH				P		**Pg**	**06 52 19.7**	**-0.2**
GOLH				S		**Sn**	**06 52 35.9**	**+0.2**
YAZI	**Mula-Dat§a-**	**1.06**	**284**	SPECP			06 52 20.0	
YAZI				P		**Pg**	**06 52 20.2**	**-0.1**
YAZI				S		**Sb**	**06 52 35.8**	**+1.2**
YAZI				*i*	IAML		06 52 40.0	
	comp=N,396nm,0.3s							
APMY	**Acipayam-Deniz**	**1.13**	**24**	Pn		**Pg**	**06 52 20.9**	**-0.8**
MLSB	**Milas**	**1.15**	**318**	Pn		**Pg**	**06 52 20.9**	**-1.2**
DNIZ	**Denizli-Tavas-**	**1.21**	**12**	SPECP			06 52 23.0	
DNIZ				P		**Pg**	**06 52 23.1**	**-0.1**
DNIZ				S		**Sn**	**06 52 42.1**	**+2.1**
DNIZ				*i*	IAML		06 52 44.0	
	comp=N,2μm,0.5s							
DNIZ				*i*	IAML		06 52 47.0	
	comp=E,3μm,0.3s							
BODT	**Bodrum**	**1.30**	**299**	P		**Pg**	**06 52 25.4**	**+0.4**
BODT				S		**Sn**	**06 52 43.4**	**+1.4**
AKUM	**Antalya-Kumluc**	**1.30**	**94**	P		**Pg**	**06 52 26.1**	**+1.1**
AKUM				S		**Sn**	**06 52 48.1**	**+6.1**
NISR	**Nisiros**	**1.30**	**278**	P		**Pn**	**06 52 24.5**	**0.0**
NISR				S		**Sn**	**06 52 43.9**	**+1.9**
NISR	**Nisiros**	**1.30**	**278**	P		**Pn**	**06 52 24.5**	**0.0**
YKAV	**Yalikavak-Bodr**	**1.35**	**301**	Pn		**Pn**	**06 52 25.6**	**+0.5**
ESEN	**Aydn-Nazilli**	**1.39**	**347**	SPECP			06 52 25.0	
ESEN				P		**Pn**	**06 52 25.5**	**-0.1**
ESEN				S		**Sn**	**06 52 45.0**	**+0.7**
ESEN				*i*	IAML		06 52 46.0	
	comp=E,498nm,0.3s							
ESEN				*i*	IAML		06 52 48.0	
	comp=N,390nm,0.2s							
KORT	**Korkueli**	**1.42**	**66**	P		**Pg**	**06 52 28.5**	**+1.4**
KORT				S		**Sn**	**06 52 50.6**	**+5.6**
KORT	**Korkueli**	**1.42**	**66**	Pn		**Pg**	**06 52 27.5**	**+0.4**
INCE	**Denizli-Bozkur**	**1.44**	**28**	SPECP		Pb	06 52 27.0	-0.1
INCE				P		**Pb**	**06 52 27.0**	**-0.1**
INCE				*i*	IAML		06 52 55.0	
	comp=E,303nm,1.0s							
KEMT	**Kemer-ANTALYA**	**1.48**	**83**	Pn		**Pg**	**06 52 28.6**	**+0.3**
DIDI	**Didim-Aydin**	**1.52**	**309**	Pn		**Pb**	**06 52 28.9**	**+0.5**
KARP	**Karpathos**	**1.55**	**236**	Pn		**Pb**	**06 52 29.6**	**+0.6**
KARP	**Karpathos**	**1.55**	**236**	P		**Pn**	**06 52 28.1**	**+0.2**
KARP				S		**Sg**	**06 52 50.5**	**+0.6**
KARP	**Karpathos**	**1.55**	**236**	P		**Pn**	**06 52 28.2**	**+0.3**
NAZL	**Nazilli-Aydin**	**1.57**	**347**	Pn		**Pn**	**06 52 28.8**	**+0.7**
ANTB	**Antalya**	**1.61**	**73**	Pn		**Pg**	**06 52 30.8**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.65**	**336**	Pn		**Pn**	**06 52 30.3**	**+0.9**
BUCA	**Burdur, Bucak-**	**1.71**	**58**	SPECP			06 52 32.0	
BUCA				P		**Pg**	**06 52 32.8**	**0.0**
BUCA				S		**Sg**	**06 52 57.2**	**+2.1**
BUCA				*i*	IAML		06 53 07.0	
	comp=N,177nm,0.7s							
GCAM	**G?zelcaml?**	**1.74**	**317**	Pn		**Pn**	**06 52 31.2**	**+0.8**
BCK	**Bucak**	**1.81**	**55**	Pn		**Pb**	**06 52 33.6**	**+0.3**
BASM	**Basmaki-Afyon**	**1.82**	**35**	Pn		**Pb**	**06 52 32.9**	**-0.6**
KUSD	**Kusadasi-Aydin**	**1.83**	**321**	Pn		**Pb**	**06 52 33.1**	**-0.6**
ODEM	**Odem

EDP2	Potrero Grande	0.78	338	eP	Pb	06 55 55.6	-0.2
PBNVO	Pueblo Nuevo,	0.90	49	||P	Pn	06 55 58.6	-0.1
RBALA	Bur	0.93	51	||P	Pg	06 55 59.3	+0.9
DRK0	Durika	1.03	339	S	Sg	06 56 15.7	+1.6
DRK0	Durika	1.03	339	||eP	Pb	06 55 59.3	-0.9
EDPE	Pejibaye, P	1.10	322	eP	Pn	06 56 00.5	-1.1
OCHAL	Ojochal	1.11	317	S	Sn	06 56 16.2	-0.4
PDCAN	Manzana , Fuen	1.17	90	⇑P	Pg	06 56 01.3	-1.7
KKNTU	Kakint²	1.19	63	||P	Pg	06 56 03.2	-0.3
SAJE	San Jernim	1.22	329	⇑P	Pn	06 56 02.0	-1.2
BRIBI	Bribri	1.32	3	eP	Pg	06 56 06.3	+0.4
CEUA	Cerro Uatsi, L	1.32	357	⇑P	Pg	06 56 06.5	+0.5
LAES	El Progreso Va	1.47	353	⇑P	Pg	06 56 08.3	-0.5
BUS1	Rivas	1.52	326	eP	Pb	06 56 08.8	0.0
LLNJ	Naranjito	1.69	314	eP	Pb	06 56 10.7	-0.6
PIEC	Cerro El Cedra	1.70	321	eP	Pb	06 56 10.7	-0.9
QUEP	Quepos	1.70	312	S	Sb	06 56 33.7	+0.9
RAZU	San Marcos de	1.77	320	eP	Pb	06 56 12.8	0.0
PITB	Pirrs, San	1.77	320	eP	Pb	06 56 12.6	-0.3
VINA	Juan Vinas	1.81	332	eP	Pb	06 56 12.4	-1.1
REPA	Paraso	1.81	327	eP	Pb	06 56 13.9	+0.4
LCR2	La Lucha 2	1.82	322	S	Sb	06 56 38.0	+1.5
LCR2	La Lucha 2	1.82	322	P	Pb	06 56 13.6	-0.1
PICV	PH. Pirrs	1.86	316	eP	Pb	06 56 13.0	-1.3
PCAYA	Pacayas	1.86	330	eP	Pb	06 56 13.6	-0.8
VTCV	VTCV, Calle Va	1.88	334	eP	Pb	06 56 14.3	-0.3
RESJ	San Isidro (Tu	1.89	336	eP	Pb	06 56 13.5	-1.2
ABRB	Las Abras (San	1.90	334	eP	Pb	06 56 14.2	-0.8
LCOCO	El Coco	1.91	339	eP	Pb	06 56 14.7	-0.3
CVTV	Tajo	1.91	333	eP	Pb	06 56 14.2	-1.0
CVTQ	Turrialba Volc	1.92	333	eP	Pb	06 56 14.2	-1.2
CVTR	Volcan Turrial	1.93	333	eP	Pb	06 56 15.3	-0.3
ACOS	Acosta	1.96	320	⇑P	Pb	06 56 16.1	0.0
CVIMO	Finca Echandi	2.02	329	eP	Pg	06 56 18.9	-0.3
SANTA	Santa Ana	2.08	322	eP	Pb	06 56 17.3	-0.8
BELE	Belen	2.12	322	eP	Pb	06 56 18.0	-0.7
TCS1	Tacares	2.24	321	P	Pb	06 56 19.8	-0.9
ATEO	Atenas	2.24	319	eP	Pb	06 56 19.9	-0.9
TRT2	Tortugero	2.41	339	S	Sb	06 56 53.6	+0.5
TRT2	Tortugero	2.41	339	P	Pb	06 56 22.3	-1.3
JUNT	Juntas	2.85	314	eP	Pn	06 56 25.3	-0.3
JTS	Las Juntas de	2.85	314	P	Pb	06 56 28.3	-2.9
JTS	Las Juntas de	2.85	314	eP	Pn	06 56 27.6	+2.0
CMARA	Lajas Hojancha	3.05	305	S	Sn	06 57 05.0	+0.4
BCIP	Isla Barro Col	3.13	74	P	Pb	06 56 34.4	-1.5
CUI	Cuipilapa	3.26	316	eP	Pb	06 56 34.4	-3.7
ARIN	Rivas	4.29	317	P	Pn	06 56 48.3	+3.0
APQ2	Apoyeque	5.16	319	S	Sn	06 58 00.4	+3.8

MOS ***28*** *07:14:48.6,41˚.1N×48˚.61E,h31km, MPVA3.5*
DRS ***28*** *07:14:48.7,41˚.15N×48˚.60E,h9km*
ISC 28 07:14:50.6±3.0,41˚2N±0˚.1×48˚7E±0˚.1,h21km±6km,n13,
σ1§12/26,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSMR	Kasumkent	0.60	315	eP g	Pb	07 15 02.3	-0.3
KSMR				eS g	Sb	07 15 11.6	+0.8
AKT	Akhty	0.79	293	eP g	Pb	07 15 04.4	-1.3
AKT				eS g	Sb	07 15 14.9	-1.1
DRN	Derbent	0.90	342	eP g	Pb	07 15 06.7	-0.7
DRN				eS g	Sb	07 15 19.8	+0.9
URKR	Urkarakh	1.27	321	eP g	Pn	07 15 12.4	-0.9
URKR				eS g	Sn	07 15 29.4	-0.3
SGKR	Sergokala	1.50	329	eP g	Pn	07 15 16.4	+0.1
SGKR				eS g	Sb	07 15 38.9	+2.6
KMKR	Kumukh	1.53	309	eP g	Pn	07 15 16.2	-0.7
KMKR				eS g	Sb	07 15 37.1	-0.4
VSHL	Vashlovani	1.74	272	P	Pb	07 15 21.0	-0.8
VSHL				S	Sb	07 15 46.3	+3.1
ARKR	Arakani	1.91	319	eP g	Pn	07 15 22.0	0.0
ARKR				eS g	Sn	07 15 46.1	+0.6
TLTR	Tlyarata	1.99	299	eP g	Pn	07 15 24.4	+1.2
TLTR				eS g	Sb	07 15 49.9	-0.6
XNZR	Khunzakh	2.02	313	eP g	Pn	07 15 23.6	0.0
XNZR				eS g	Sb	07 15 51.8	+0.4
BUJR	Buynaksk	2.03	325	eP g	Pn	07 15 23.8	+0.2
BUJR				eS g	Sb	07 15 52.0	+0.4
UNCR	Uncukul	2.09	318	eP g	Pn	07 15 24.7	+0.2
UNCR				eS g	Sb	07 15 52.8	-0.6
KRNR	Karanay	2.12	322	eP g	Pn	07 15 24.8	-0.1
KRNR				eS g	Sn	07 15 51.7	+1.0

ASRS ***28*** *07:18:32.0±1.0,53˚.77N×91˚.12E,h0km,M3.2, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*
IDC ***28*** *07:18:37.0±3.4,53˚.66N×90˚.97E,h0km,mbtmp3.4/3, ML2.9/3, Error ellipse: s-maj=29.1km s-min=27.0km az=64.0*
NNC ***28*** *07:18:37.2±2.9,53˚.74N×90˚.65E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=21.9km s-min=17.2km az=49.0, Suspected Mining explosion.*
ISC 28 07:18:39.2±3.6,53˚7N±0˚.1×90˚6E±0˚.2,h0km,n9,σ1§19/13,
7C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.42	277	⇑Pg	Pb	07 19 39.2	-1.3
	1.5nm,0.5s						
ZAA0				⇑Lg	Lg	07 20 29.5	
	10nm,1.2s						
ZALV	Zalesovo Beam	3.42	277	Pn	Pn	07 19 35.4	+1.8
	1.6nm,0.3s,baz=96,slow=11,SNR=17						
ZALV				Sn	Sb	07 20 21.7	-0.8
	2.5nm,0.3s,baz=93,slow=26,SNR=7.7						
	4.0nm,0.5s						
KURK	Kurchatov	7.91	253	⇑Pn	Pn	07 20 34.3	-1.0
	2.9nm,1.5s						
KURK				⇑Sn	Sn	07 22 05.9	+0.4
	2.8nm,0.7s						
KURK				⇓Lg	Lg	07 22 51.1	
	8.8nm,0.9s						
KURBB	Kurchatov Arra	8.00	252	Pn	Pn	07 20 36.5	-0.1
	0.2nm,0.3s,baz=65,slow=15,SNR=4.3						
KURBB				Sn	Sn	07 22 09.3	+1.5
	0.1nm,0.3s,baz=67,slow=26,SNR=9.1						
KURBB				Lg	Lg	07 22 59.3	
	0.1nm,0.3s,baz=61,slow=33,SNR=10						
	0.7nm,0.3s						
KURBB	Kurchatov Arra	8.00	252	⇓Pn	Pn	07 20 37.4	+0.8
	3.9nm,0.8s						
KURBB				⇓Sn	Sn	07 22 08.6	+0.8
	25nm,0.7s						
KURBB				⇑Lg	Lg	07 22 51.6	
	19nm,0.8s						
MK31	Makanchi Array	8.68	221	⇑Pn	Pn	07 20 45.1	-0.9
	7.8nm,1.4s,baz=30,slow=16,SNR=4.1						
MK31				⇓Sn	Sn	07 22 25.8	+1.2
	6.4nm,1.1s						
MK31				⇑Lg	Lg	07 23 17.2	
	21nm,1.2s						
MKAR	Makanchi Array	8.68	221	Pn	Pn	07 20 47.1	+1.1
	0.5nm,0.3s,baz=42,slow=13,SNR=16						
MKAR				Sn	Sn	07 22 24.9	+0.4
	0.1nm,0.3s,baz=42,slow=22,SNR=2.5						
MKAR				Lg	Lg	07 23 17.9	
	baz=41,slow=27						
	1.5nm,0.5s						
SONM	Songino Array	11.60	114	Lg	Lg	07 24 32.7	
	0.2nm,0.3s,baz=300,slow=27,SNR=7.7						
I34MN	SONGINO INFRAS	11.62	114	I	I	08 25 30.0	
	baz=309,slow=339,SNR=2.5						

UCR ***28*** *07:19:04.1±1.5,8˚.30N×82˚.95W,h2km±7km,MW4.0*
CATAC ***28*** *07:19:05.9±0.4,8˚N±3˚×8˚3W±˚,h5km±1km,M3.6/17, MLv3.6/17, Error ellipse: s-maj=6.0km s-min=2.7km az=10.7,confirmed*
ISC 28 07:19:04.7±0.9,8˚32N±0˚.04×82˚96W±0˚.02,h10km,n119,
σ1§14/117,7C-36D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIEL	Armuelles	0.11	107	⇓P	Pg	07 19 22.6	+15
LMNES	Limones	0.24	156	⇓P	Pg	07 19 10.2	+0.7
CDITO	Canoas	0.27	18	P	Pb	07 19 11.1	-0.5
CDITO	Canoas	0.27	18	S	Sb	07 19 15.8	-0.5
NELY	Ciudad Neily	0.33	2	⇓P	Pb	07 19 12.1	-0.7
PIRO	Carate, Puerto	0.39	283	P	Pg	07 19 12.4	+0.1
PIRO	Carate, Puerto	0.39	283	S	Sb	07 19 18.5	-1.1
PIRO	Carate, Puerto	0.39	283	⇓eP	Pg	07 19 12.1	-0.2
DMCAL	E. de Neily	0.39	25	⇓P	Pb	07 19 13.4	-0.3
EDAD	Golfito	0.39	328	⇓P	Pg	07 19 12.1	-0.3
PTJ1	Puerto Jimnez	0.41	303	P	Pb	07 19 13.5	-0.4
JIME	Puerto Jimenez	0.42	301	⇓eP	Pg	07 19 13.2	+0.2
VITO	San Vito	0.50	359	⇓P	Pb	07 19 15.3	-0.4
RSRNO	Rio Sereno	0.51	11	⇓P	Pb	07 19 15.6	-0.1
SCLRA	Santa Clara, W	0.54	19	⇓P	Pb	07 19 16.2	-0.1
BRU2	Volcan	0.54	29	P	Pb	07 19 16.2	-0.3
BRU2	Volcan	0.54	29	S	Sb	07 19 24.6	+0.3
BRU2	Volcan	0.54	29	⇓P	Pb	07 19 16.1	-0.3
CLLRA	Cordillera,	0.54	39	⇓P	Pb	07 19 16.2	-0.3
JEFFS	S de V. Baru	0.55	50	⇓P	Pb	07 19 16.3	-0.1
TBS2		0.56	32	⇓P	Pn	07 19 17.4	-1.4
ALCO	Alturas Coton,	0.64	11	⇓P	Pb	07 19 17.4	-0.7
BQTLY	Boquete Panama	0.66	48	⇓P	Pb	07 19 17.7	-0.7
WILLF	Boquete	0.67	50	⇓P	Pb	07 19 17.9	-0.7
DAP26	falda E V. Bar	0.71	48	⇓P	Pg	07 19 18.3	-0.1
EDP2	Potrero Grande	0.73	343	⇓P	Pb	07 19 18.9	-0.6
FIMO	Fila Mora	0.78	330	eP	Pg	07 19 19.4	-0.3
PANP	Palmar Norte	0.81	322	⇓P	Pg	07 19 19.4	-0.9
BURE	Buenos Aires	0.93	336	eP	Pn	07 19 23.5	-0.4
PBNVO	Pueblo Nuevo,	0.95	53	⇓P	Pg	07 19 21.9	-1.0
RBALA	Bur	0.97	55	⇓P	Pg	07 19 22.7	-0.7
DRK0	Durika	0.98	343	S	Sn	07 19 38.1	-0.7
DRK0	Durika	0.98	343	⇓P	Pg	07 19 22.7	-1.0
OCHAL	Ojochal	1.03	319	S	Sn	07 19 39.5	-0.2
EDPE	Pejibaye, P	1.03	324	⇓eP	Pg	07 19 23.2	-1.4
SAJE	San Jernim	1.16	332	⇓eP	Pb	07 19 25.4	-1.5
PDCAN	Manzana , Fuen	1.25	91	⇑P	Pn	07 19 26.2	-2.1
KKNTU	Kakint²	1.25	65	⇓P	Pn	07 19 26.5	-1.8
ZEDO	Perez Zeledon	1.26	325	eP	Pn	07 19 26.5	-1.0
CEUA	Cerro Uatsi, L	1.30	1	⇑P	Pg	07 19 30.1	+0.5
BRIBI	Bribri	1.30	6	eP	Pg	07 19 29.5	-0.2
LAES	El Progreso Va	1.44	356	⇓P	Pb	07 19 31.0	-0.7
BUS1	Rivas	1.46	328	eP	Pn	07 19 30.6	-0.8
LLNJ	Naranjito	1.61	316	⇓eP	Pn	07 19 33.0	-0.2
VERH	Veragua Rainfo	1.62	352	eP	Pn	07 19 33.6	+0.2
QUEP	Quepos	1.63	313	S	Sb	07 19 56.1	+0.7
QUEP	Quepos	1.63	313	P	Pn	07 19 33.6	+0.2
PIEC	Cerro El Cedra	1.63	323	eP	Pn	07 19 33.7	0.0
RAZU	San Marcos de	1.70	322	eP	Pn	07 19 35.0	+0.4
PITB	Pirrs, San	1.70	322	eP	Pn	07 19 35.1	+0.5
REPA	Paraso	1.75	329	eP	Pn	07 19 35.1	-0.2
VINA	Juan Vinas	1.75	334	eP	Pn	07 19 35.2	0.0
LCR2	La Lucha 2	1.75	324	P	Pb	07 19 36.1	-1.0
PICV	PH. Pirrs	1.79	317	eP	Pn	07 19 36.2	+0.6
GMAL	Guarumal, Vera	1.79	108	eP	Pn	07 19 34.0	-1.8
TAAN	Batan	1.80	348	eP	Pb	07 19 37.1	-0.6
PCAYA	Pacayas	1.80	332	⇓eP	Pb	07 19 36.7	-1.2
VTCV	VTCV, Calle Va	1.82	335	eP	Pn	07 19 36.2	-0.1
RESJ	San Isidro (Tu	1.83	338	⇑eP	Pn	07 19 37.0	+0.6
RAFA	San Farael, Vo	1.84	333	eP	Pn	07 19 37.1	+0.5
ABRB	Las Abras (San	1.84	336	⇑P	Pn	07 19 37.0	+0.4
IRES	Siquirres	1.85	343	eP	Pn	07 19 37.0	+0.5
CVTV	Tajo	1.85	335	eP	Pn	07 19 37.4	+0.5
LCOCO	El Coco	1.85	341	⇑eP	Pb	07 19 37.7	-1.0
CVTQ	Turrialba Volc	1.86	335	eP	Pn	07 19 37.4	+0.4
VTR0	Volcan Turrial	1.87	335	⇓eP	Pn	07 19 38.4	-0.7
CVTR	Volcan Turrial	1.87	335	⇓eP	Pn	07 19 37.4	+0.2
VICA	Volcano Irazu	1.87	332	eP	Pb	07 19 38.5	-0.8
TRIO	Tres Rios	1.88	327	eP	Pn	07 19 36.9	-0.2
RVLA	Villa Bonita	1.89	341	eP	Pn	07 19 37.8	+0.8
ACOS	Acosta	1.89	321	⇓eP	Pn	07 19 37.8	+0.6
AMPA	Desamparados	1.91	325	eP	Pb	07 19 38.6	-1.1
ECI	Escuela Centro	1.94	326	eP	Pb	07 19 39.4	-0.9
SJS3	Mercedes San J	1.94	326	eP	Pn	07 19 38.3	+0.4
LUJA	Lujan	1.94	326	eP	Pb	07 19 39.3	-0.9
SJS	Escuela Geolog	1.94	326	eP	Pn	07 19 38.2	+0.3
CORON	Coronado	1.94	328	eP	Pn	07 19 40.0	-0.3
LUPE	Guadalupe	1.95	326	eP	Pn	07 19 37.4	-0.7
CVIMO	Finca Echandi	1.96	330	eP	Pn	07 19 38.5	+0.4
EGUB	Earth Gujpi	1.98	342	⇑eP	Pb	07 19 39.6	-1.3
CVTG	V. Turrialba,	1.99	336	eP	Pn	07 19 38.8	+0.3
SANTA	Santa Ana	2.01	323	eP	Pn	07 19 39.8	+1.0
PURI	Puriscal	2.02	319	eP	Pn	07 19 39.2	+0.2
HDC	Heredia	2.03	326	⇓eP	Pb	07 19 40.7	-1.0
HEME	Heredia, Merce	2.03	325	eP	Pb	07 19 41.1	-0.7
BELE	Belen	2.05	324	⇑eP	Pn	07 19 39.8	+0.5
PILE	Guapiles	2.06	337	eP	Pn	07 19 40.2	+0.8
POAS	San Pedro de P	2.16	324	eP	Pn	07 19 42.1	+1.2
TCS1	Tacares	2.17	322	P	Pb	07 19 42.6	-1.5
TCS1	Tacares	2.17	322	eP	Pb	07 19 42.4	-1.7
ATEO	Atenas	2.17	320	⇓eP	Pb	07 19 42.3	-1.8
SRA1	San Ramn	2.31	320	eP	Pn	07 19 43.2	+0.2
JCR1	Coral	2.62	306	eP	Pn	07 19 46.7	-0.4
SOCE	Pocosol	2.63	322	eP	Pn	07 19 50.7	-1.2
AZU	Azuero	2.71	101	⇓eP	Pn	07 19 49.7	+1.4
VACR	Volcan Arenal	2.73	322	eP	Pb	07 19 52.1	-1.6
CASO	Castillo	2.74	320	eP	Pn	07 19 28.4	-20
ARE1	Arenal 1	2.75	321	eP	Pn	07 19 28.3	-21
VARE2	V. Arenal	2.75	321	eP	Pn	07 19 28.4	-21
JUNT	Juntas	2.78	315	eP	Pn	07 19 49.8	+0.5
JTS	Las Juntas de	2.78	315	P	Pn	07 19 51.0	+1.7
JTS				S	Sn	07 20 25.2	+2.2
JTS	Las Juntas de	2.78	315	eP	Pn	07 19 49.6	+0.3
COVE	Coope Vega, Sa	2.78	329	P	Pn	07 19 51.5	+2.2
COVE	Coope Vega, Sa	2.78	329	S	Sn	07 20 24.4	+1.4
CMARA	Lajas Hojancha	2.96	305	S	Sn	07 20 28.9	+1.3
TIMP	Tierras Morena	3.03	318	eP	Pb	07 19 55.6	-3.3
ZANG	Zanguenga, Cho	3.12	78	eP	Pb	07 19 58.7	-1.6
JUD3	Juan Diaz 3	3.14	306	eP	Pn	07 19 54.6	+0.3
BAD3	Bagaces	3.16	314	eP	Pn	07 19 57.0	+2.4
CUI	Cuipilapa	3.19	317	⇓P	Pn	07 19 57.3	+2.1
BCIP	Isla Barro Col	3.20	74	P	Pn	07 19 57.2	+2.1
BCIP				S	Sn	07 20 36.4	+3.1
BCIP	Isla Barro Col	3.20	74	eP	Pn	07 19 55.5	+0.4
SAJU	San Juanillo,	3.23	303	eP	Pn	07 19 54.2	-1.2
MESS	Mesas	3.27	318	eP	Pn	07 19 58.4	+2.3
UPAL	Upala	3.27	322	P	Pn	07 19 58.1	+2.1
UPAL	Upala	3.27	322	S	Sn	07 20 37.6	+2.6
ALIBA	Liberia Airpor	3.41	312	eP	Pn	07 19 59.3	+1.3
LAPC	Finca la Perla	3.45	315	eP	Pn	07 20 00.2	+1.7
ELI1	Hacienda Flor	3.45	312	P	Pn	07 20 00.8	+2.2

IDC ***28*** *07:37:29.1±0.7,35˚.11N×141˚.23E,h0km,mb3.9/14, mbtmp3.8/16,ML3.5/2, Error ellipse: s-maj=21.6km s-min=17.4km az=64.0*
JMA ***28*** *07:37:30.6±0.3,35˚.2N±0˚.4×14˚1E±˚,h41km±3km, MV3.4/25,E OFF BOSO PENINSULA*
NEIC ***28*** *07:37:31.7±1.3,35˚.23N±0˚.09×141˚.4E±0˚.1,h19km±2km, mb4.4/7, Error ellipse: s-maj=17.5km s-min=11.1km az=113.0*
ISC 28 07:37:33.1±0.7,35˚18N±0˚07×141˚25E±0˚07,h27km,n47,
σ1§16/41,mb3.9/19,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.57	203	P	Pb	07 37 42.8	-1.4
BSO1				X		07 37 50.0	
BSO3	Boso 3	0.71	238	eP	Pb	07 37 45.1	-1.7
BSO4	Boso 4	0.77	256	P	Pb	07 37 46.2	-1.7
JKUC	kamogawauchiur	0.86	269	P	Pn	07 37 47.3	-2.2
JKUC				eS	Sb	07 37 59.3	-1.3
JSG	Sagara	2.57	260	Pn	Pn	07 38 13.2	+0.3
MJAR	Matsushiro Arr	2.82	300	Pn	Pn	07 38 16.7	+0.2
	1.0nm,0.3s,baz=106,slow=14,SNR=19						
	4.3nm,0.4s						
MJAR	Matsushiro Arr	2.82	300		Pn	07 38 17.6	+1.2
MAJO	Matsushiro	2.82	300		Pn	07 38 16.9	+0.5
MJB9	Matsu-Tunnel	2.83	300		Pn	07 38 16.5	0.0
JGF	Kuroka	3.21	279		Pn	07 38 21.6	-0.2
JSD	Sado	3.73	321	Pn	Pn	07 38 29.1	+0.1
JTM	Tenmabayashi	5.60	359	Pn	Pn	07 38 54.6	+0.1
ERM	Erimo	6.99	12	Pn	Pn	07 39 11.8	-1.9
JCJ	Chichijima	8.10	174	Pn	Pn	07 39 16.9	-12
	11nm,0.3s,baz=277,slow=23,SNR=6.8						
JCJ				Sn	Sn	07 40 40.8	-19
	2.2nm,0.3s,baz=267,slow=20,SNR=1.4						
ASAJ	Asahikawa	8.99	6	Pn	Pn	07 39 39.2	-1.9
	1.7nm,0.3s,baz=211,slow=13,SNR=8.1						
	3.9nm,0.3s						
JKA	Kamikawa-asahi	8.99	6	Pn	Pn	07 39 38.1	-3.0
JMZ	Minamidaito 2	12.71	226	Pn	Pn	07 40 32.9	+0.8
H11N2	WAKE ISLAND Hy	27.36	117	T	T	08 12 13.9	
	baz=310,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	27.37	118	T	T	08 12 26.9	
	baz=310,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	27.38	117	T	T	08 12 16.7	
	baz=310,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	28.01	120	T	T	08 12 59.3	
	baz=312,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	28.01	120	T	T	08 12 46.0	
	baz=312,slow=75,SNR=18						
H11S2	WAKE ISLAND Hy	28.02	120	T	T	08 13 00.4	
	baz=312,slow=75,SNR=16						
SONM	Songino Array	28.75	307	P	P	07 43 29.7	+1.3
	0.4nm,0.5s,baz=101,slow=7.5,SNR=2.2						
	0.4nm,0.5s						
ZAA0	Zalesovo Array	43.08	314	P	P	07 45 30.6	0.0
ZAA0				IAmb	IAmb	07 45 44.4	
	comp=Z,2.4nm,0.9s						
ZALV	Zalesovo Beam	43.08	314	P	P	07 45 29.8	-0.8
	comp=Z,0.9nm,0.6s,baz=100,slow=8.0,SNR=4.3						
	comp=Z,0.9nm,0.6s						
ZALV	Zalesovo Beam	43.08	314	P	P	07 45 30.1	-0.5
MKAR	Makanchi Array	45.01	304	P	P	07 45 46.1	-0.1
	comp=Z,0.7nm,0.6s,baz=91,slow=9.4,SNR=4.3						
	comp=Z,0.7nm,0.6s						
KURBB	Kurchatov Arra	47.05	309	P	P	07 46 01.6	-0.6
	comp=Z,1.5nm,0.6s,baz=86,slow=8.1,SNR=14						
	comp=Z,1.5nm,0.6s						
KULM	Kulim	47.79	241	P	P	07 46 08.7	+0.4
ILAR	Eielson Array	51.13	32	P	P	07 46 33.9	+0.7
	comp=Z,0.5nm,0.8s,baz=253,slow=6.6,SNR=5.1						
	comp=Z,0.5nm,0.8s						
BVAR	Borovoye Array	51.73	313	P	P	07 46 37.7	-0.2
	comp=Z,0.4nm,0.5s,baz=57,slow=10,SNR=2.3						
	comp=Z,0.4nm,0.5s						
KNRA	Kununurra	51.95	195		P	07 46 39.0	-0.7
KNRA				IAmb	IAmb	07 46 42.1	
	comp=Z,16nm,1.5s						
WB0	Warramunga Arr	55.03	188		P	07 47 01.0	-1.3
WB0				IAmb	IAmb	07 47 01.9	
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	55.21	188	P	P	07 47 02.3	-1.4
	comp=Z,3.6nm,0.6s,baz=5.2,slow=7.5,SNR=49						
	comp=Z,3.6nm,0.6s						
WRA	Warramunga Arr	55.21	188		P	07 47 02.0	-1.7
ARTI	Arti	57.77	319	P	P	07 47 21.3	-0.3
	comp=Z,1.1nm,0.3s,baz=60,slow=8.1,SNR=2.0						
	comp=Z,1.1nm,0.3s						
AS31	Alice Springs	58.94	188		P	07 47 30.3	+0.3
AS31				IAmb	IAmb	07 47 33.6	
	comp=Z,1.1nm,0.6s						
ASAR	Alice Springs	58.94	188	P	P	07 47 30.1	+0.1
	comp=Z,0.8nm,0.6s,baz=15,slow=14,SNR=31						
	comp=Z,0.8nm,0.6s						
ASAR	Alice Springs	58.94	188	P	P	07 47 29.2	-0.8
AB31	Akbulak array	59.04	311	P	P	07 47 31.0	+0.5
AB31				IAmb	IAmb	07 47 49.9	
	comp=Z,3.1nm,1.3s						
ABKAR	Akbulak array	59.04	311	P	P	07 47 30.2	-0.4
AKTO	Aktyubinsk	59.83	313	P	P	07 47 38.0	+2.1
	comp=Z,0.7nm,0.4s,baz=80,slow=8.6,SNR=1.7						
	comp=Z,0.7nm,0.4s						
NOA	NORSAR Array B	75.84	337	P	P	07 49 17.1	+0.5
	comp=Z,0.8nm,0.8s,baz=43,slow=5.9,SNR=2.2						
	comp=Z,0.8nm,0.8s						
NVAR	Mina Array Bea	76.21	53	P	P	07 49 20.1	+0.8
	comp=Z,0.9nm,0.8s,baz=277,slow=6.1,SNR=6.6						
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	79.06	45	P	P	07 49 35.9	+0.7
	comp=Z,0.4nm,0.7s,baz=291,slow=1.3,SNR=4.6						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	91.36	52	P	P	07 50 38.0	+1.1
	comp=Z,0.4nm,0.8s,baz=299,slow=3.1,SNR=3.6						
	comp=Z,0.4nm,0.8s						

BJI ***28*** *07:41:14.0,42

YUK AMB AMB 07 41 38.4
comp=E,10µm,0.3s
YUK *i* S **Sn** **07 41 52.7 -1.3**
YUK A A 07 41 54.1
comp=E,28µm,0.5s
YUK A A 07 41 54.1
comp=E,41µm,0.5s
RUSJ Misakicho 1.32 358⇑ *i* PN **Pn** **07 41 37.6 -0.2**
RUSJ S **Sn** **07 41 52.7 -1.5**
JCH Churui 1.45 264⇓ *i* P **Pn** **07 41 38.5 -1.1**
JCH Churui 1.45 264 A A 07 41 38.5
comp=N,15nm,1.5s,comp=E,20nm,0.8s
JTKR Abashiri--Toko 1.56 320 *i* P **Pn** **07 41 41.0 -0.2**
JTKR Abashiri--Toko 1.56 320 A A 07 41 41.0
comp=N,22nm,1.5s,comp=E,9.0nm,1.9s
JTHR Tokachihiroo 1.57 252 A A 07 41 41.1
comp=N,14nm,0.7s,comp=E,22nm,0.5s
JEM Erimo 1.77 245 A A 07 41 44.1
comp=N,12nm,3.0s,comp=E,13nm,1.3s
ERM Erimo 1.77 245 **Pn** **07 41 45.1 +1.1**
ERM Erimo 1.77 245 PN **Pn** **07 41 45.1 +1.1**
JMP Maruseppu 1.87 311 A A 07 41 45.1
comp=N,25nm,0.9s,comp=E,17nm,0.4s
JNBK Urakawa-nobuka 1.96 256 A A 07 41 46.6
comp=N,17nm,0.6s,comp=E,16nm,0.5s
JFR Furan 2.03 282 A A 07 41 47.4
comp=N,13nm,0.7s,comp=E,12nm,0.6s
JSHD Hidakashinhida 2.13 261 A A 07 41 49.1
comp=N,12nm,1.4s,comp=E,11nm,1.5s
JBT2 Biratori 2 2.17 271 A A 07 41 49.5
comp=N,6.0nm,1.9s,comp=E,5.0nm,5.9s
JAB Ashibetsu 2.37 289 A A 07 41 52.2
comp=N,9.0nm,2.6s,comp=E,8.0nm,2.2s
JKA Kamikawa-asahi 2.38 305 **Pn** **07 41 53.1 +0.8**
ASAJ Asahikawa 2.38 305 P **Pn** **07 41 53.6 +1.3**
comp=E,418nm,0.3s,baz=154,slow=10,SNR=253
ASAJ S **Sn** **07 42 21.1 +0.8**
comp=E,3µm,0.7s,baz=127,slow=20,SNR=14
JIAM Iburiatsuma 2.50 267 A A 07 41 54.3
comp=N,26nm,1.4s,comp=E,20nm,1.4s
JHR Hokuryu 2.79 291 A A 07 41 58.2
comp=N,7.0nm,3.2s,comp=E,6.0nm,2.8s
JEW Eniwo 2.84 272 A A 07 41 59.0
comp=N,8.0nm,2.6s,comp=E,7.0nm,1.3s
JISS Ishikarishitsu 2.90 281 A A 07 41 59.7
comp=N,10.0nm,2.4s,comp=E,11nm,2.2s
JSE Soyaes 2.93 319 A A 07 42 00.2
comp=N,6.0nm,1.7s,comp=E,10.0nm,2.3s
JSS Shosan 2.98 304 A A 07 42 00.9
comp=N,6.0nm,2.9s,comp=E,16nm,3.2s
KUR Kuril'sk 3.06 36*c i* PN **Pn** **07 42 01.7 0.0**
KUR *i* S **Sn** **07 42 37.3 +0.2**
KUR pmax pmax
comp=Z,795nm,0.7s
KUR smax smax
comp=N,3µm,0.6s
KUR smax smax
comp=E,3µm,0.7s
KUR Kuril'sk 3.06 36 *i* P **Pn** **07 42 01.7 0.0**
KUR AMB AMB 07 42 04.1
comp=E,450nm,0.4s
KUR *i* S **Sn** **07 42 36.5 -0.6**
KUR A A 07 42 47.7
comp=E,4µm,0.5s
KUR A A 07 42 47.7
comp=E,4µm,0.5s
JNB Noboribetsu 3.17 266 A A 07 42 03.7
comp=N,4.0nm,0.5s,comp=E,3.0nm,2.6s
JKB Kayabe 3.30 256 A A 07 42 05.6
comp=N,5.0nm,1.1s,comp=E,5.0nm,2.3s
JAHD Aomorihigashid 3.33 244 A A 07 42 06.2
comp=N,10.0nm,0.6s,comp=E,11nm,0.5s
JTM Tenmabayashi 3.75 239 **Pn** **07 42 11.2 0.0**
JOM Ohasama 4.49 224 A A 07 42 22.8
comp=N,5.0nm,0.5s,comp=E,6.0nm,0.4s
YSS Yuzhno-Sakhali 4.54 337 **Pn** **07 42 22.3 +0.3**
YSS Yuzhno-Sakhali 4.54 337 *e*PN **Pn** **07 42 23.3 +1.3**
YSS *e*S **Sn** **07 43 12.7 -0.8**
YSS pmax pmax
comp=Z,70nm,1.0s
YSS smax smax
comp=E,140nm,0.7s
YSS MLR MLR
comp=Z,2µm,13.0s
YSS MLR MLR
comp=N,2µm,15.0s
YSS MLR MLR
comp=E,900nm,15.0s
YSS Yuzhno-Sakhali 4.54 337 *e*P **Pn** **07 42 23.0 +1.0**
YSS *e*S **Sn** **07 43 12.7 -0.8**
JYAR Yonezawaarcadi 6.27 221 A A 07 42 47.7
comp=N,8.0nm,1.4s,comp=E,6.0nm,1.2s
JSD Sado 7.17 231 **Pn** **07 42 57.5 -0.6**
TYV Tymovskoe 8.28 348 *e*PN Pn 07 43 21.8 +8.6
TYV pmax pmax
comp=Z,300nm,2.8s
TYV pmax pmax
comp=Z,55nm,0.7s
TYV Tymovskoe 8.28 348 *e*P **Pn** **07 43 14.6 +1.4**
TYV *e*S **Sn** **07 44 45.2 -0.1**
MJB9 Matsu-Tunnel 8.30 224 **Pn** **07 43 13.6 +0.1**
MAJO Matsushiro 8.30 224 **Pn** **07 43 12.7 -0.9**
MAJO Matsushiro 8.30 224*c i* PN **Pn** **07 43 12.4 -1.2**
MAJO pmax pmax
comp=Z,23nm,0.8s
MJAR Matsushiro Arr 8.30 224 P **Pn** **07 43 12.8 -0.7**
comp=Z,16nm,0.6s,baz=28,slow=13,SNR=23
MJAR S **Sn** **07 44 46.2 +0.3**
comp=Z,5.1nm,0.5s,baz=4.8,slow=16,SNR=1.2
JGF Kuroka 9.46 223 **Pn** **07 43 29.9 +0.3**
USRK Ussuriysk Ar. 9.79 283 P **Pn** **07 43 35.1 +1.2**
comp=Z,20nm,0.8s,baz=85,slow=14,SNR=17
INU Inuyama 9.83 224 **Pn** **07 43 34.3 -0.2**
GRNR Gornyy 10.04 326⇑ *i* PN **Pn** **07 43 39.7 +2.4**
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR MLR MLR
comp=E,400nm,17.0s
GRNR MLR MLR
comp=N,190nm,18.0s
GRNR MLR MLR
comp=Z,400nm,17.0s
JHJ Hachijo jima 2 10.59 206 S Sn 07 45 30.5 -12
comp=Z,286nm,0.3s,baz=72,slow=20,SNR=6.4
PSTR Posyet 10.68 274⇓ *e*PN **Pn** **07 43 46.7 +0.6**
PSTR Posyet 10.68 274 *e*P **Pn** **07 43 46.7 +0.6**
NKL Nikolayevsk 10.82 345 *e*P **Pn** **07 43 49.3 +1.4**
NKL AMB AMB 07 43 52.9
comp=Z,60nm,0.6s
SKR Severo-Kuril's 10.82 39 *e*PN Pn 07 43 53.6 +5.6
SKR pmax pmax
comp=Z,245nm,0.7s
SKR pmax pmax
comp=Z,300nm,4.7s
SKR MLR MLR
comp=Z,900nm,14.0s
SKR Severo-Kuril's 10.82 39 *e*P **Pn** **07 43 50.2 +2.2**
SKR AMB AMB 07 43 53.9
comp=Z,250nm,0.7s
SKR *e*S **Sn** **07 45 44.2 -3.4**
MDJ Mudanjiang 11.53 284 **Pn** **07 43 56.7 -1.0**
MDJ Mudanjiang 11.53 284 P **Pn** **07 43 59.3 +1.6**
MDJ pmax pmax
comp=Z,12nm,1.2s
JMN Monobe 12.74 229 Pn **Pn** **07 44 12.2 -2.0**
BNX BinXian 13.17 289⇑ P **Pn** **07 44 21.0 +0.9**
BNX pmax pmax
comp=Z,23nm,0.8s
PEA0B Petropavlovsk- 13.23 34 **Pn** **07 44 19.6 -1.3**
PEA0B Petropavlovsk- 13.23 34*de*PN **Pn** **07 44 24.3 +3.4**
PETK Petropavlovsk- 13.23 34 P **Pn** **07 44 20.2 -0.6**
comp=Z,11nm,0.7s,baz=186,slow=6.6,SNR=20
PETK Petropavlovsk- 13.23 34 **Pn** **07 44 19.4 -1.5**
KSRS Korea Array 14.32 254 P **Pn** **07 44 35.6 -0.2**
comp=Z,2.8nm,0.8s,baz=64,slow=14,SNR=5.5
HEH HeiHe 14.38 307 *e*P **Pn** **07 44 38.0 +1.5**
HEH pmax pmax
comp=Z,11nm,0.8s
HEH LR LR
comp=Z,380nm,16.5s
HEH LR LR
comp=Z,740nm,16.9s
HEH LR LR
comp=Z,1µm,17.0s
CN2 Changchun 14.50 281 P **Pn** **07 44 39.5 +1.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
JNU Nakatsue 14.90 234 P **Pn** **07 44 43.2 -0.3**
comp=Z,7.6nm,0.9s,baz=70,slow=12,SNR=1.6
JNU LR LR 07 50 48.6
comp=Z,441nm,21.2s,baz=42,slow=38
JNU Nakatsue 14.90 234 Pn **Pn** **07 44 43.9 +0.3**
JCJ Chichijima 15.86 190 P Pn 07 44 41.8 -14
comp=Z,49nm,0.7s,baz=294,slow=20,SNR=2.0
JCJ S Sn 07 47 23.4 -27
comp=Z,60nm,0.4s,baz=297,slow=22,SNR=6.5
JCJ LR LR 07 49 34.6
comp=Z,196nm,21.1s,baz=26,slow=31
ZEA Zeya 16.22 319 *e*P **P** **07 45 01.7 -1.0**
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,0.8s
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=N,200nm,17.0s
ZEA MLR MLR
comp=Z,400nm,19.0s
MA2 Magadan 17.14 9 P **P** **07 45 13.1 +0.2**
comp=Z,29nm,0.8s,baz=192,slow=12,SNR=6.5
MA2 LR LR 07 51 42.8
comp=Z,195nm,18.3s,baz=172,slow=37
MA2 Magadan 17.14 9 P **Pn** **07 45 11.8 0.0**
MA2 Magadan 17.14 9 P **Pn** **07 45 11.8 0.0**
MA2 pmax pmax
comp=Z,63nm,1.2s
DL2 Dalian 18.32 266 P **P** **07 45 25.8 -0.2**
DL2 pmax pmax
comp=Z,45nm,0.8s
HIA Hailar 18.85 299 **P** **07 45 31.3 -0.5**
HIA Hailar 18.85 299 P **P** **07 45 31.3 -0.5**
HIA pmax pmax
comp=Z,9.0nm,0.5s
HILR Hailar Array B 18.90 300 P **P** **07 45 32.4 0.0**
comp=Z,6.8nm,0.3s,baz=94,slow=10,SNR=26
SEY Seymchan 20.60 9 P **P** **07 45 50.0 -0.7**
comp=Z,9.2nm,0.7s,baz=181,slow=7.7,SNR=14
SEY LR LR 07 53 25.0
comp=Z,192nm,21.4s,baz=185,slow=35
comp=Z,9.2nm,0.7s
SEY Seymchan 20.60 9⇓ *e*P **P** **07 45 50.7 0.0**
SEY pmax pmax
comp=Z,45nm,2.5s
JOW Kunigami 21.13 227 P **P** **07 45 56.0 -0.6**
comp=Z,43nm,0.7s,baz=42,slow=14,SNR=3.0
JOW LR LR 07 54 20.0
comp=Z,278nm,21.6s,baz=24,slow=37
comp=Z,43nm,0.7s
YAK Yakutsk 21.39 340 P **P** **07 45 59.7 +0.6**
comp=Z,20nm,0.4s,baz=190,slow=15,SNR=4.0
comp=Z,20nm,0.4s
YAK Yakutsk 21.39 340 P **P** **07 45 59.4 +0.2**
YAK IAmb IAmb 07 46 19.4
comp=Z,38nm,0.6s
YAK Yakutsk 21.39 340 *e*P **P** **07 46 00.9 +1.7**
YAK *e* 07 46 22.4
YAK *e*S **S** **07 49 56.3 +2.5**
YAK *e* 07 50 03.8
YAK *e**SS **sS** **07 50 15.9 +4.5**
YAK *e*SS **SnSn** **07 50 23.2 +4.2**
YAK *e* 07 57 19.2
YAK pmax pmax
comp=Z,21nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,178nm,3.0s
YAK pmax pmax
comp=N,141nm,2.3s
YAK pmax pmax
comp=E,158nm,2.8s
YAK smax smax
comp=N,144nm,2.8s
YAK smax smax
comp=E,98nm,2.5s
YAK Yakutsk 21.39 340 *e*P **P** **07 46 00.2 +1.0**
BJI Beijing 21.98 273 P **P** **07 46 04.5 -1.1**
BJI pmax pmax
comp=E,14nm,1.0s
BJT Baijiatuau 21.99 273 **P** **07 46 04.4 -1.4**
BJT Baijiatuau 21.99 273 P **P** **07 46 04.4 -1.4**
BJT pmax pmax
comp=Z,26nm,1.0s
NJ2 Nanjing 23.50 252 *e*P **P** **07 46 21.0 -0.4**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
HHC Hu-ho-hao-te 25.13 277 *e*P **P** **07 46 37.3 +0.8**
HHC pP pP 07 46 47.8 -0.8
HHC sP sP 07 47 00.0 +5.9
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.9s
BTO Baotou 26.33 277 *e*P **P** **07 46 48.0 +0.7**
BTO pP **pP** **07 46 59.8 +0.4**
BTO S **S** **07 51 19.0 +2.0**
BTO pmax pmax
comp=Z,23nm,0.9s
BTO pmax pmax
comp=Z,330nm,5.0s
BTO LR LR
comp=Z,340nm,5.6s
BTO LR LR
comp=Z,410nm,6.2s
BTO LR LR
comp=Z,260nm,10.2s
LYN LuoYang 26.80 263 *e*P **P** **07 46 52.5 +1.0**
LYN pP pP 07 47 03.5 -0.1
LYN sS sS 07 51 42.8 -1.8
LYN pmax pmax
comp=Z,12nm,0.8s
ULN Ulaanbaatar 27.18 294 **P** **07 46 54.5 -0.4**
ULN Ulaanbaatar 27.18 294*de*P **P** **07 46 54.6 -0.4**
ULN pmax pmax
comp=Z,22nm,1.7s
ULN Ulaanbaatar 27.18 294 *e*P **P** **07 46 54.6 -0.4**
SONM Songino Array 27.62 294 P **P** **07 46 58.6 -0.3**
comp=Z,18nm,0.7s,baz=84,slow=8.3,SNR=23
SONM LR LR 07 58 58.0
comp=Z,306nm,18.0s,baz=107,slow=38
comp=Z,18nm,0.7s
BILL Bilibino 27.66 17⇓ *e*P **P** **07 46 58.6 -0.3**
BILL pmax pmax
comp=Z,10.0nm,1.1s
BILL Bilibino 27.66 17 *e*P **P** **07 46 58.6 -0.3**
GUMO Guam 29.10 181 LR LR 07 56 50.0
comp=Z,86nm,20.6s,baz=49,slow=32
H11N2 WAKE ISLAND Hy 29.31 135 T T 08 18 10.1
baz=327,slow=76,SNR=435
H11N1 WAKE ISLAND Hy 29.32 135 T T 08 18 18.6
baz=327,slow=76,SNR=913
H11N3 WAKE ISLAND Hy 29.33 135 T T 08 18 19.8
baz=327,slow=76,SNR=785
ZAK Zakamensk 29.54 300 *e*P **P** **07 47 15.3 -0.6**
ZAK pmax pmax
comp=Z,13nm,1.5s
XAN Xi'an 29.63 265 ⇓P **P** **07 47 21.0 +4.2**
XAN pP pP 07 47 28.3 -0.7
XAN pmax pmax
comp=Z,10.0nm,1.0s
TIXI Tiksi 30.05 350 P **P** **07 47 18.2 -1.7**
TIXI Tiksi 30.05 350 P **P** **07 47 18.3 -1.7**
TIXI pmax pmax
comp=Z,3.0nm,0.7s
H11S1 WAKE ISLAND Hy 30.23 137 T T 08 19 18.8
baz=329,slow=76
H11S3 WAKE ISLAND Hy 30.24 137 T T 08 19 24.6
baz=329,slow=76
H11S2 WAKE ISLAND Hy 30.25 137 T T 08 19 24.2
baz=329,slow=76
ENH Enshi 31.15 258 P **P** **07 47 29.7 -0.5**
ENH IAmb IAmb 07 47 42.6
comp=Z,24nm,0.8s
SPIA Saint Paul Isl 31.36 47 P **P** **07 47 32.4 +0.7**
baz=262
P08K Saint George I 31.67 48 P **P** **07 47 34.1 -0.3**
baz=264
NIKH Nikolski High 31.88 55 P **P** **07 47 37.0 +0.7**
baz=270
GAMB Gambell 32.26 35 P **P** **07 47 40.3 +0.7**
baz=250
LZH Lanzhou 32.47 272 *e*P **P** **07 47 44.5 +2.6**
LZH pP pP 07 47 53.8 -0.3
LZH pmax pmax
comp=Z,19nm,1.2s
LZDM Lanzhou Array 32.63 272 P **P** **07 47 44.7 +1.2**
comp=Z,1.1nm,0.3s,baz=91,slow=7.2,SNR=3.5
LZDM pP **pP** **07 47 55.3 -0.5**
comp=Z,18nm,0.7s,baz=132,slow=2.2,SNR=5.7
comp=Z,1.1nm,0.3s
UNV Unalaska Valle 33.28 54 P **P** **07 47 48.8 +0.3**
UNV Unalaska Valle 33.28 54 P **P** **07 47 48.9 +0.4**
baz=271
M11K Mekoryuk 33.93 42 P **P** **07 47 54.0 0.0**
baz=261
GTA Gaotai 34.13 280 *e*P **P** **07 47 56.8 +0.4**
GTA pP pP 07 48 07.8 -0.9
GTA pmax pmax
comp=Z,4.0nm,0.8s
TNA Tin City 34.39 32 P **P** **07 47 58.4 +0.4**
baz=252
K13K Kusilvak Mount 34.92 39 P **P** **07 48 02.6 0.0**
K13K IAmb IAmb 07 48 15.4
comp=Z,24nm,1.1s
K13K Kusilvak Mount 34.92 39 P **P** **07 48 03.1 +0.5**
baz=260
F14K Arctic Creek 34.99 33 P **P** **07 48 03.7 +0.4**
baz=254
FALS False Pass 35.06 52 P **P** **07 48 04.7 +0.8**
baz=272
ANM Nome 35.15 35 P **P** **07 48 05.6 +1.0**
baz=256
M13K Dall Lake 35.33 42 P **P** **07 48 06.9 +0.7**
baz=264
J14K Nanvaranak Lak 35.56 38 P **P** **07 48 08.7 +0.6**
baz=260
F15K North Star Dit 35.73 33 P **P** **07 48 10.0 +0.4**
baz=255
L14K Kuka Creek 35.76 41 **P** **07 48 09.1 -0.8**
L14K IAmb IAmb 07 48 23.6
comp=Z,20nm,0.8s
L14K Kuka Creek 35.76 41 P **P** **07 48 10.7 +0.8**
baz=263
G15K Niukluk 35.80 34 P **P** **07 48 10.6 +0.4**
baz=257
S12K Black Hills 35.82 50 P **P** **07 48 11.7 +1.2**
baz=272
M14K Bethel 36.05 42 P **P** **07 48 13.6 +1.2**
M14K Bethel 36.05 42 P **P** **07 48 13.3 +0.9**
baz=265
N14K Kuskokwak Cree 36.12 43 P **P** **07 48 13.5 +0.6**
baz=266
C16K Lisburne Hills 36.22 29 P **P** **07 48 14.0 +0.3**
baz=251
O14K Tigyukauivet M 36.29 44 P **P** **07 48 15.2 +0.8**
baz=267
L15K Ungalak Mounta 36.37 40 P **P** **07 48 15.8 +0.6**
baz=264
K15K Wolf Creek Mou 36.42 39 P **P** **07 48 16.1 +0.5**
baz=263
H16K Elim 36.48 35 P **P** **07 48 16.4 +0.4**
baz=259
G16K Koyuk River 36.59 34 P **P** **07 48 17.7 +0.8**
baz=258
M15K Kasigluk River 36.67 42 P **P** **07 48 18.3 +0.6**
baz=266
SDPT Sand Point 36.73 51 P **P** **07 48 19.2 +0.9**
baz=273
D17K Noatak River 36.86 30 P **P** **07 48 20.0 +0.8**
baz=254
N15K Kwethluk River 36.93 43 P **P** **07 48 20.4 +0.5**
baz=267
J16K Anvik River 36.98 37 P **P** **07 48 20.5 +0.2**
baz=263
I17K Unalakleet 37.02 36 P **P** **07 48 21.7 +1.1**
I17K IAmb IAmb 07 48 25.3
comp=Z,10nm,0.7s
I17K Unalakleet 37.02 36 P **P** **07 48 21.4 +0.8**
baz=262
RDOG Red Dog Mine 37.02 29 P **P** **07 48 21.2 +0.5**
RDOG IAmb IAmb 07 48 30.6
comp=Z,11nm,0.8s
RDOG Red Dog Mine 37.02 29 P **P** **07 48 21.2 +0.5**
baz=254
O15K Ungalikthiuk R 37.03 44 P **P** **07 48 21.4 +0.6**
baz=269
C17K DeLong Mountai 37.05 29 P **P** **07 48 21.4 +0.5**
baz=253
E17K Hotham Inlet 37.17 31 P **P** **07 48 22.3 +0.5**
baz=256
S14K Fog Glacier 37.21 49 P **P** **07 48 23.3 +0.9**
baz=273
F17K Baldwin Pennin 37.25 32 P **P** **07 48 23.5 +0.9**
baz=258
CHNA Chernabura Isl 37.28 52 P **P** **07 48 24.5 +1.6**
baz=275
G17K Kiwalik Mounta 37.30 34 P **P** **07 48 24.1 +1.1**
baz=260
L16K Owhat River 37.33 40 **P** **07 48 23.9 +0.6**
L16K IAmb IAmb 07 48 36.5
comp=Z,19nm,0.9s
L16K Owhat River 37.33 40 P **P** **07 48 22.8 -0.4**
baz=266
H17K Granite Mounta 37.51 35 P **P** **07 48 24.4 -0.4**
baz=261
M16K Timber Creek 37.53 41 P **P** **07 48 24.9 -0.1**
baz=267
N16K Nishlik Lake 37.60 42 P **P** **07 48 24.8 -0.8**
baz=268
J17K VABM Dome 37.67 37 P **P** **07 48 25.9 -0.2**
baz=264
E18K Tukpahlearik C 37.72 31 P **P** **07 48 26.6 +0.1**
baz=257
B18K Kokolik River 37.78 27 P **P** **07 48 26.6 -0.4**
baz=254
C18K Utukok River 37.80 29 P **P** **07 48 26.8 -0.5**
baz=255
F18K Selawik 37.91 32 P **P** **07 48 27.5 -0.6**
baz=259
L17K Donlin 37.92 40 P **P** **07 48 27.5 -0.7**
baz=266
O16K Kokwok River B 37.92 44 P **P** **07 48 27.4 -0.9**
baz=270
K17K Iditarod 37.96 39 P **P** **07 48 28.1 -0.5**
baz=266
P16K Nushagak River 37.97 45 P **P** **07 48 29.6 +0.9**
P16K Nushagak River 37.97 45 P **P** **07 48 28.9 +0.2**
baz=270
G18K Tagagawik 38.19 33 P **P** **07 48 30.3 -0.2**
baz=261,SNR=8.3
H18K Honhosa River 38.20 35 P **P** **07 48 31.4 +0.8**
H18K IAmb IAmb 07 48 34.2
comp=Z,19nm,0.8s
H18K Honhosa River 38.20 35 P **P** **07 48 30.6 0.0**
baz=262
A19K Wainwright 38.27 26 P **P** **07 48 30.9 -0.1**
baz=253
M17K Holitna River 38.29 41 P **P** **07 48 31.3 0.0**
baz=268
N17K Nushagak Hills 38.38 42 P **P** **07 48 31.7 -0.5**
baz=269
O17K Koliganek Bris 38.43 43 P **P** **07 48 32.1 -0.4**
baz=270
C19K Lookout Ridge 38.48 28 P **P** **07 48 32.2 -0.7**
baz=256
Q16K King Salmon 38.67 45 P **P** **07 48 34.2 -0.4**
baz=272
L18K Granite Mounta 38.67 39 **P** **07 48 35.8 +1.2**
L18K IAmb IAmb 07 48 48.0
comp=Z,15nm,0.9s
L18K Granite Mounta 38.67 39 P **P** **07 48 33.9 -0.7**
baz=268
F19K Shaleruckik Mo 38.69 32 P **P** **07 48 34.1 -0.5**
baz=261
J18K Innoko River 38.73 37 P **P** **07 48 34.8 -0.3**
baz=266
P17K Kvichak River 38.77 44 P **P** **07 48 35.4 0.0**
baz=272
GCSA Galena City Sc 38.77 35 P **P** **07 48 35.5 +0.1**
baz=264
G19K Purcell Mounta 38.86 33 P **P** **07 48 36.0 -0.1**
G19K Purcell Mounta 38.86 33 P **P** **07 48 36.1 0.0**
baz=262
D19K Kuna River 38.86 29 P **P** **07 48 36.1 0.0**
baz=258

R17L Mt. Peulik Vol 38.88 47 P P 07 48 36.0 -0.4
baz=274
PZH PanZhiHua 38.89 260 P P 07 48 37.3 +0.3
E19K Redstone River 39.00 31 P P 07 48 37.4 +0.1
baz=261
N18K Kilae Creek 39.03 42 P P 07 48 38.3 +0.7
baz=270
GOMU GeErMu 39.04 278 P P 07 48 38.3 -0.1
GOMU S S 07 54 30.3 -4.2
GOMU pmax pmax
comp=Z,3.0nm,0.6s
GOMU LR LR
comp=Z,120nm,12.5s
GOMU LR LR
comp=Z,59nm,12.5s
GOMU LR LR
comp=Z,140nm,12.7s
H19K Roundabout Mou 39.04 34 P 07 48 38.4 +0.8
H19K Roundabout Mou 39.04 34 P P 07 48 38.2 +0.6
baz=264,SNR=18
M18K Stony River 39.06 41 P P 07 48 38.4 +0.5
baz=269
Q17K Contact Creek 39.10 46 P P 07 48 38.5 +0.2
baz=273
J19K Poorman 39.26 37 P P 07 48 39.5 0.0
baz=266
O18K Koktuh Hills 39.38 43 P P 07 48 40.8 +0.2
O18K Koktuh Hills 39.38 43 P P 07 48 40.9 +0.4
baz=272
P18K Big Mountain, 39.38 44 P P 07 48 41.0 +0.4
baz=272
ACHA Angle Creek He 39.40 46 P P 07 48 41.4 +0.6
ACHA IAmb IAmb 07 49 04.4
comp=Z,24nm,1.3s
CHIR Chirikof Islan 39.44 50 P P 07 48 40.9 -0.1
baz=276
D20K Etivluk River 39.45 29 P P 07 48 40.8 -0.3
baz=260
NRIK Noril'sk 39.45 332 P P 07 48 40.5 -0.5
comp=Z,1.2nm,0.4s,baz=67,slow=11,SNR=2.3
comp=Z,1.2nm,0.4s
B20K Meade River 39.52 27 P 07 48 41.4 -0.1
B20K Meade River 39.52 27 P P 07 48 41.2 -0.3
baz=258,SNR=5.5
F20K Avaraart Lake 39.52 32 P P 07 48 41.2 -0.3
baz=263
E20K Nigu River 39.52 30 P P 07 48 41.5 -0.2
baz=261
L19K White Mountain 39.53 40 P P 07 48 41.4 -0.5
baz=269
Q18K Katmai Hardscr 39.53 45 P P 07 48 41.9 -0.1
baz=274
DAV Davao City (W) 39.60 212 LR LR 08 03 47.4
comp=Z,136nm,21.8s,baz=72,slow=34
H20K Anotleneega Mo 39.69 34 P P 07 48 43.1 +0.1
baz=265
N19K Bonanza Creek 39.72 42 P P 07 48 43.0 -0.4
baz=271
DGZ Jazzator, Alta 39.75 301⇑ *eP* P 07 48 44.0 +0.1
DGZ pmax pmax
comp=Z,11nm,1.4s
M19K Big River Lodg 39.75 40 P P 07 48 43.7 +0.1
baz=270
I20K Naaghedeneel 39.80 35 P P 07 48 43.9 -0.1
baz=266
O19K Port Alsworth 39.81 43 P P 07 48 44.2 +0.1
baz=272
R18K Karluk 39.91 47 P P 07 48 45.2 +0.3
baz=275
J20K Nowinta River 39.91 36 P P 07 48 45.2 +0.3
baz=268
K20K Telida 39.92 38 P P 07 48 45.0 0.0
baz=269
A21K Barrow 39.99 25 P P 07 48 45.4 0.0
baz=257
L20K Farewell, AK 39.99 39 P P 07 48 45.6 0.0
baz=270
SII Sitkinak Islan 40.16 48 P P 07 48 46.9 -0.2
baz=277
C21K Knifeblade Rid 40.17 29 P P 07 48 46.8 -0.3
baz=261
Q19K Cape Douglas, 40.23 45 P P 07 48 47.7 +0.1
Q19K Cape Douglas, 40.23 45 P P 07 48 47.5 -0.1
baz=274
B21K Ikpikpuk River 40.31 28 P 07 48 47.8 -0.3
B21K IAmb IAmb 07 48 50.4
comp=Z,42nm,1.1s
B21K Ikpikpuk River 40.31 28 P P 07 48 48.0 -0.1
baz=261
G21K Allakaket 40.33 33 P P 07 48 48.8 +0.4
G21K IAmb IAmb 07 49 01.6
comp=Z,34nm,1.0s
G21K Allakaket 40.33 33 P P 07 48 48.1 -0.2
baz=265
M20K Styx River 40.35 40 P P 07 48 48.5 -0.1
baz=271
E21K Killik River 40.36 30 P P 07 48 48.4 -0.2
baz=263
P19K Oil Pt 40.39 44 P P 07 48 48.6 -0.4
baz=274
F21K Alatna River 40.41 32 P P 07 48 48.7 -0.3
baz=264
A22K Sinclair Lake 40.44 26 P P 07 48 48.7 -0.4
baz=259
ZAA0 Zalesovo Array 40.51 308 P P 07 48 49.0 -1.0
ZALV Zalesovo Beam 40.51 308 P P 07 48 49.2 -0.7
comp=Z,3.3nm,0.4s,baz=97,slow=9.7,SNR=14
ZALV PcP PcP 07 50 51.9 +0.2
comp=Z,3.6nm,0.6s,baz=72,slow=3.6,SNR=5.6
ZALV LR LR 08 06 48.2
comp=Z,242nm,18.5s,baz=78,slow=38
comp=Z,3.3nm,0.4s
ZALV Zalesovo Beam 40.51 308 P 07 48 48.5 -1.5
H21K Melozitna Rive 40.56 34 P P 07 48 50.1 -0.1
baz=267
OHAK Old Harbor 40.57 47 P P 07 48 50.2 -0.2
OHAK Old Harbor 40.57 47 P P 07 48 50.3 -0.2
baz=276
O20K Slope Mountain 40.67 43 P P 07 48 50.9 -0.4
baz=274
CHUM Lake Minchumin 40.71 37 P P 07 48 51.1 -0.4
baz=270
PPLA Purkeypile 40.77 38 P P 07 48 51.9 -0.3
baz=271
N20K Mount Spurr 40.81 41 P P 07 48 51.9 -0.5
baz=273
SPCR Spurr Chakacha 40.81 41 P P 07 48 52.5 0.0
baz=273
B22K Teshekpuk Lake 40.83 27 P P 07 48 51.8 -0.6
baz=261
I21K Tanana 40.88 35 P P 07 48 52.4 -0.5
baz=268
D22K Ayikyak River 40.88 29 P P 07 48 52.5 -0.4
baz=263
KDAK Kodiak Island 40.89 46 P P 07 48 52.9 -0.1
baz=276
Q20K Shuyak Island 40.90 45 P P 07 48 52.9 -0.2
baz=276
F22K John River 40.94 31 P P 07 48 53.3 -0.1
baz=266
SKT Skwentna 41.10 40 P P 07 48 54.7 0.0
baz=272
E22K Anaktuvuk Pass 41.13 30 P P 07 48 54.8 -0.1
baz=265
G22K Bettles 41.16 32 P P 07 48 55.1 0.0
baz=267
H22K Ishtalitna Cre 41.16 34 P P 07 48 55.5 +0.3
baz=268,SNR=9.3
HOM Homer 41.19 43 P P 07 48 55.1 -0.3
baz=275
WMQ Urumqi 41.20 292 *eP* P 07 48 57.3 +1.4
WMQ LR LR
comp=Z,140nm,23.9s
BPAW Bear Paw Mtn. 41.30 37 P P 07 48 56.1 -0.3
baz=270
CAPN Captain Cook N 41.35 42 P P 07 48 56.7 -0.1
baz=274
MLY Manley 41.41 35 P P 07 48 57.0 -0.2
baz=270
SUA Susitna One 41.50 41 P P 07 48 57.5 -0.6
baz=274
D23K Nanushuk River 41.61 29 P P 07 48 57.8 -1.1
baz=265
TRF Thorofare Moun 41.62 38 P P 07 48 57.9 -1.3
baz=272
BRSE Bradley Lake S 41.64 43 P P 07 48 58.4 -0.8
baz=276
CUT Chulitna 41.67 39 P P 07 48 59.2 -0.2
baz=273
COLD Coldfoot 41.68 32 P P 07 48 59.3 -0.2
baz=268
C23K Itkillik River 41.72 28 P P 07 48 59.8 +0.1
baz=264
G23K Bananza Creek 41.73 33 P P 07 49 00.5 +0.6
baz=268
H23K Yukon River 41.91 34 P P 07 49 02.5 +1.2
baz=270
E23K Chandalar 41.94 31 P P 07 49 01.0 -0.6
baz=267
I23K Minto, Yukon-K 41.99 35 P P 07 49 01.7 -0.2
baz=271,SNR=6.3
TOLK Toolik Lake Re 41.99 30 P P 07 49 01.8 -0.2
baz=267
RC01 Rabbit Creek A 42.01 41 P P 07 49 02.2 0.0
baz=275
O22K Cooper Landing 42.08 42 P P 07 49 01.7 -1.0
baz=276
NEA2 Nenana 42.12 36 P P 07 49 02.8 -0.3
baz=272,SNR=14
MCK McKinley 42.22 37 P P 07 49 03.4 -0.4
baz=273
SEW Seward 42.25 43 P P 07 49 03.8 -0.3
baz=276
PMR Palmer 42.26 40 P P 07 49 03.5 -0.7
baz=275
D24K Happy Valley 42.29 29 P P 07 49 04.6 +0.2
D24K IAmb IAmb 07 49 05.3
comp=Z,23nm,0.5s
D24K Happy Valley 42.29 29 P P 07 49 04.1 -0.3
baz=267,SNR=16
E24K Your Creek 42.37 31 P P 07 49 04.7 -0.4
baz=268
C24K Franklin Bluff 42.37 28 P P 07 49 04.7 -0.3
baz=266
WAT1 Susitna Watana 42.44 38 P P 07 49 04.9 -0.8
baz=274
WRH Wood River Hil 42.55 36 P P 07 49 07.4 +0.9
F24K Squaw Lake 42.58 31 P 07 49 07.2 +0.4
F24K Squaw Lake 42.58 31 P P 07 49 06.2 -0.6
baz=270
H24K Noodor Dome 42.60 34 P P 07 49 06.7 -0.3
baz=271,SNR=21
KNK Knik Glacier 42.60 41 P P 07 49 06.1 -0.9
baz=276
SML Sawmill 42.62 40 P P 07 49 07.2 -0.1
SML IAmb IAmb 07 49 20.3
comp=Z,35nm,0.9s
SML Sawmill 42.62 40 P P 07 49 06.8 -0.5
baz=275
COLA College 42.64 35 *d i* P P 07 49 08.3 +1.1
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 42.64 35 P P 07 49 06.9 -0.3
baz=272
COLA College 42.64 35 P P 07 49 08.3 +1.1
COLA College 42.64 35 pP pP 07 49 19.2 -0.5
CCB Clear Creek Bu 42.67 36 P 07 49 07.4 -0.1
PWL Port Wells 42.72 41 P P 07 49 07.2 -0.8
baz=276
G24K Hadweenzic Riv 42.75 33 P P 07 49 08.8 +0.7
G24K IAmb IAmb 07 49 21.8
comp=Z,35nm,1.2s
G24K Hadweenzic Riv 42.75 33 P P 07 49 08.7 +0.6
baz=271,SNR=8.1
POKR Poker Flat Res 42.80 35 P P 07 49 09.0 +0.4
baz=272,SNR=7.0
WAT6 Susitna Watana 42.83 39 P P 07 49 09.2 +0.2
baz=275
M23K Glacier View 42.91 40 P P 07 49 09.0 -0.5
baz=276
DHY Denali Highway 42.96 38 P P 07 49 10.2 +0.2
baz=275
HDA Harding Lake 43.05 36 P P 07 49 11.1 +0.5
baz=274
ILAR Eielson Array 43.05 36 P P 07 49 10.7 0.0
comp=Z,8.9nm,0.8s,baz=260,slow=5.1,SNR=69
comp=Z,8.9nm,0.8s
SCM Sheep Creek Mo 43.09 40 P P 07 49 11.4 +0.3
baz=276
D25K Kavik River 43.17 29 P P 07 49 11.9 +0.3
baz=269
P23K Montague Islan 43.28 43 P P 07 49 12.7 +0.2
baz=278
G25K Bearman Lake 43.29 33 P P 07 49 12.2 -0.3
baz=272
GLI Glacier Island 43.32 41 P P 07 49 12.6 -0.2
baz=277
F25K Christian Rive 43.45 31 P P 07 49 13.3 -0.5
baz=272,SNR=8.8
E25K Arctic Village 43.46 31 P P 07 49 14.7 +0.8
baz=271,SNR=7.3
PRP Porcupine Dome 43.58 34 P 07 49 15.6 +0.5
PRP IAmb IAmb 07 49 18.2
comp=Z,27nm,0.7s
PRP Porcupine Dome 43.58 34 P P 07 49 15.6 +0.5
baz=274,SNR=30
M24K Tolsona, Glenn 43.61 39 P P 07 49 14.7 -0.5
baz=277
K24K Donnelly Dome 43.61 37 P P 07 49 14.7 -0.5
baz=275
C26K Camden Bay 43.69 28 P P 07 49 15.6 -0.1
baz=270
J25K Salcha River, 43.72 36 P P 07 49 16.1 0.0
baz=275
KLU Klutina 43.80 40 P P 07 49 16.6 -0.2
baz=278
PAX Paxson 43.83 38 P 07 49 17.7 +0.7
PAX Paxson 43.83 38 P P 07 49 17.7 +0.7
PAX pmax pmax
comp=Z,8.0nm,0.9s
PAX Paxson 43.83 38 P P 07 49 17.4 +0.4
baz=276
MK31 Makanchi Array 43.84 298 *c i* P P 07 49 16.4 -0.9
MKAR Makanchi Array 43.84 298 P P 07 49 16.6 -0.7
comp=Z,13nm,0.7s,baz=80,slow=9.9,SNR=40
MKAR LR LR 08 08 42.0
comp=Z,164nm,18.1s,baz=63,slow=38
comp=Z,13nm,0.7s
MKAR Makanchi Array 43.84 298 P 07 49 16.7 -0.6
MKAR Makanchi Array 43.84 298 P P 07 49 16.7 -0.6
BMAR Burnt Mountain 43.86 32 P P 07 49 18.3 +1.2
Q23K Middleton Isla 43.90 43 P P 07 49 17.6 +0.2
baz=280
F26K Sheenjek River 44.01 31 P P 07 49 18.9 +0.5
baz=273,SNR=14
RIDG Independent Ri 44.03 37 P P 07 49 18.7 +0.2
RIDG IAmb IAmb 07 49 56.0
comp=Z,23nm,1.3s
RIDG Independent Ri 44.03 37 P P 07 49 18.7 +0.2
baz=276
HARP HAARP 44.04 39 P P 07 49 18.7 +0.1
baz=277
MAKZ Makanchi 44.04 298 P 07 49 18.4 -0.5
MAKZ IAmb IAmb 07 49 22.1
comp=Z,15nm,1.0s
MAKZ Makanchi 44.04 298 P P 07 49 18.4 -0.5
MAKZ pmax pmax
comp=Z,15nm,1.0s
MAKZ Makanchi 44.04 298 P P 07 49 18.2 -0.6
MAKZ Makanchi 44.04 298 pP pP 07 49 30.1 -1.3
C27K Jago River 44.11 28 P P 07 49 19.3 +0.2
baz=271
G26K Porcupine Rive 44.20 32 P P 07 49 20.0 +0.2
baz=274,SNR=12
SCRK Sand Creek 44.38 37 P 07 49 21.5 +0.1
SCRK IAmb IAmb 07 49 33.3
comp=Z,12nm,0.8s
SCRK Sand Creek 44.38 37 P P 07 49 21.5 +0.1
baz=277,SNR=8.1
DOT Dot Lake 44.38 37 P P 07 49 21.5 +0.2
N25K Chitina, Valde 44.41 40 P P 07 49 22.1 +0.5
baz=279
J26L Joseph Creek 44.50 36 P P 07 49 23.0 +0.7
baz=276
BMRM Bremner River 44.51 41 P P 07 49 23.1 +0.7
baz=279
I26K Coal Creek Min 44.59 35 P P 07 49 23.7 +0.8
baz=276
KAIM Kayak Island 44.78 42 P P 07 49 25.4 +0.9
baz=280
L26K Log Cabin Wild 44.79 38 P P 07 49 25.4 +0.9
L26K IAmb IAmb 07 49 38.3
comp=Z,22nm,0.9s
L26K Log Cabin Wild 44.79 38 P P 07 49 25.2 +0.6
baz=278,SNR=5.9
LSA Lhasa 44.87 271 P P 07 49 29.5 +3.3
E27K Coleen River 44.95 30 P P 07 49 25.9 +0.1
baz=274,SNR=6.1
KURK Kurchatov 44.96 304 P 07 49 25.5 -0.5
KURK IAmb IAmb 07 49 29.6
comp=Z,12nm,0.6s
KURK Kurchatov 44.96 304 *ceP* P 07 49 24.8 -1.2
KURK pmax pmax
comp=Z,10.0nm,0.6s
KURK Kurchatov 44.96 304 *eP* P 07 49 24.8 -1.2
VRDI Verde Repeater 45.02 40 P P 07 49 26.7 +0.1
VRDI IAmb IAmb 07 49 30.5
comp=Z,9.3nm,0.6s
M26K Nabesna, AK 45.04 39 P P 07 49 27.1 +0.5
baz=279
KURBB Kurchatov Arra 45.04 304 P P 07 49 25.9 -0.8
comp=Z,12nm,0.6s,baz=71,slow=8.7,SNR=43
KURBB PcP PcP 07 51 06.8 -0.1
comp=Z,2.1nm,0.6s,baz=78,slow=3.3,SNR=2.8
comp=Z,12nm,0.6s
G27K Doyon Strip 45.05 32 P P 07 49 27.4 +0.8
baz=276
D27M Malcolm River 45.10 29 P P 07 49 27.4 +0.4
baz=274
H27K Steamboat Moun 45.16 33 P P 07 49 27.9 +0.4
baz=277
MCARA McCarthy VSAT 45.19 40 P P 07 49 28.0 +0.2
baz=280
I27K Kandik River 45.20 34 P P 07 49 28.0 +0.2
baz=277
K27K Chicken 45.21 36 P P 07 49 28.2 +0.3
baz=278
CRQM Cirque 45.25 41 P P 07 49 29.4 +0.9
CRQE Cirque 45.27 41 P P 07 49 29.0 +0.4
baz=281
JAY Jayapura 45.28 186 LR LR 08 04 26.7
comp=Z,71nm,20.6s,baz=2.5,slow=31
BGLC Bering Glacier 45.30 42 P P 07 49 28.9 +0.3
baz=281
L27K Beaver Creek, 45.47 38 P P 07 49 30.6 +0.6
baz=279
M27K Edge Creek, AK 45.56 39 P P 07 49 31.4 +0.6
baz=280
F28M Old Crow 45.65 31 P P 07 49 32.4 +1.1
baz=277,SNR=8.5
E28M Babbage River 45.67 30 P P 07 49 32.4 +0.9
baz=276,SNR=9.0
CHTO Chiang Mai 45.72 253 P 07 49 32.7 +0.2
CHTO IAmb IAmb 07 49 46.4
comp=Z,12nm,1.0s
CHTO Chiang Mai 45.72 253 P P 07 49 32.7 +0.2
CHTO pmax pmax
comp=Z,12nm,1.0s
D28M Stokes Point 45.88 29 P P 07 49 33.6 +0.5
baz=276
I28M Miner Creek 45.91 34 P P 07 49 33.9 +0.4
baz=279
GRNC Granite Creek 45.92 41 P P 07 49 34.5 +0.6
MESA MESA 45.94 42 P P 07 49 34.3 +0.3
baz=282
BVCY Beaver Creek 46.02 38 P P 07 49 35.0 +0.7
baz=281,SNR=7.0
CTG Chitna Glacier 46.08 40 P P 07 49 35.5 +0.6
baz=282
E29M Blow River 46.29 30 P P 07 49 36.2 -0.2
baz=278,SNR=9.6
YUK3 Moose Creek 46.33 39 P P 07 49 37.5 +0.5
baz=282
DAWY Dawson 46.37 36 P P 07 49 37.6 +0.6
baz=280
H29M Whitestone 46.43 33 P P 07 49 38.3 +0.8
baz=279,SNR=8.9
G29M Pine Creek 46.46 32 P P 07 49 38.4 +0.7
baz=279,SNR=8.9
I29M Ogilvie Camp, 46.60 34 P P 07 49 39.9 +1.1
baz=280,SNR=22
O28M Mount Upton 46.67 41 P P 07 49 39.8 +0.1
baz=283
YUK8 Steele Glacier 46.76 40 P P 07 49 40.6 +0.2
baz=283
PINM Pinnacle 46.79 41 P P 07 49 40.7 +0.2
baz=284
J29N Klondike Camp 46.80 35 P P 07 49 40.4 0.0
baz=281
EPYK Eagle Plains 47.06 33 P P 07 49 43.3 +0.9
baz=280,SNR=13
M29M Somme Creek 47.10 38 P P 07 49 43.6 +0.7
baz=283
L29M L29M 47.11 37 P P 07 49 43.8 +0.9
baz=282
G30M tAoh Zraii Nji 47.14 32 P P 07 49 44.1 +1.0
baz=280
F30M Barrier River 47.20 31 P P 07 49 43.9 +0.5
baz=280,SNR=13
K29M Barlow Dome 47.22 36 P P 07 49 44.3 +0.5
baz=282
YUK4 Talbot Arm 47.27 40 P P 07 49 45.3 +1.0
baz=284
I30M Mount Dempster 47.42 34 P P 07 49 46.2 +0.9
baz=282,SNR=9.8
YUK6 Outpost Mounta 47.50 40 P P 07 49 47.1 +1.0
baz=284
O29M Mount Kennedy 47.55 41 P P 07 49 47.1 +0.7
baz=285
J30M Hart River 47.58 35 P P 07 49 47.5 +0.9
baz=282
M30M Minto, Yukon 47.83 38 P P 07 49 49.0 +0.5
baz=284,SNR=5.8
INK Inuvik 47.91 30 LR LR 08 11 20.9
comp=Z,88nm,19.7s,baz=344,slow=38
INK Inuvik 47.91 30 P P 07 49 49.5 +0.6
baz=282,SNR=18
G31M Satah River 47.91 32 P P 07 49 49.2 +0.3
baz=282,SNR=10
HYT Haines Junctio 47.93 40 P P 07 49 50.6 +1.2
baz=285,SNR=21
N30M Aishikik Lake 47.97 39 P P 07 49 49.3 -0.3
baz=285
MAYO Mayo, Yukon 47.98 36 P P 07 49 49.9 +0.3
baz=284
F31M Tsiigehtchic 48.00 31 P P 07 49 49.8 +0.2
baz=282,SNR=8.5
H31M Peel River 48.12 33 P P 07 49 51.0 +0.3
baz=283,SNR=18
P29M Windy Craggy 48.13 42 P P 07 49 51.6 +0.8
baz=286
P30M Million Dollar 48.38 41 P P 07 49 52.9 +0.2
baz=286
N31M Braeburn, Yuko 48.57 39 P P 07 49 54.1 0.0
baz=286,SNR=5.0
O30N Mendenhall 48.62 40 P P 07 49 55.0 +0.4
baz=286
PLBC Pleasant Camp 48.85 42 P P 07 49 56.9 +0.6
baz=287,SNR=6.3
M31M Drury Creek, Y 49.01 38 P P 07 49 57.9 +0.4
baz=286,SNR=6.0
BVAR Borovoye Array 49.08 309 P P 07 49 57.6 -0.6
comp=Z,3.3nm,0.3s,baz=76,slow=8.9,SNR=20
BVAR PcP PcP 07 51 20.9 -0.3
comp=Z,3.9nm,0.7s,baz=76,slow=4.5,SNR=1.9
comp=Z,3.3nm,0.3s
BORK Borovoye 49.11 310 P 07 49 57.0 -1.4
BORK IAmb IAmb 07 50 03.2
comp=Z,9.5nm,0.9s
BORK Borovoye 49.11 310 *ceP* P 07 49 57.5 -0.9
BORK pmax pmax
comp=Z,20nm,1.7s
BORK Borovoye 49.11 310 P P 07 49 57.9 -0.4
WHY Whitehorse 49.22 40 P P 07 49 58.8 -0.5
baz=287
SKAG Skagway 49.36 41 P P 07 49 60.0 -0.2
baz=288
S31K Pelican 49.37 43 P P 07 50 00.6 +0.3
baz=288
A36M Sachs Harbour 49.80 24 P P 07 50 03.8 +0.4
baz=286
N32M Quiet Lake 49.91 39 P P 07 50 04.9 +0.5
baz=288
P32M Atlin 50.10 41 P P 07 50 06.1 +0.2
baz=289
SIT Sitka 50.13 44 P P 07 50 06.4 +0.4
baz=290
R32K Eaglecrest 50.13 43 P P 07 50 06.3 +0.3
baz=289
P33M Teslin, Yukon 50.33 40 P P 07 50 07.5 -0.1
baz=289
S32K Killisnoo 50.37 44 P P 07 50 07.9 +0.1
baz=290

AAK	**Ala-Archa**	**50.56**	**296**	LR		LR		08 14 05.8	
	comp=Z,57nm,19.7s,baz=60,slow=39								
AAK	**Ala-Archa**	**50.56**	**296**			**P**		**07 50 08.4**	**-1.4**
AAK				IAmb		IAmb		07 50 21.8	
	comp=Z,6.1nm,0.6s								
AAK	**Ala-Archa**	**50.56**	**296**	*ce*	P	**P**		**07 50 09.0**	**-0.8**
AAK				pmax		pmax			
	comp=Z,4.0nm,0.6s								
AAK	**Ala-Archa**	**50.56**	**296**	*e*	P	**P**		**07 50 09.0**	**-0.8**
C36M	**Paulatuk**	**50.95**	**27**	P		**P**		**07 50 12.2**	**+0.1**
	baz=289								
Q32M	**Nakina River**	**51.01**	**41**	P		**P**		**07 50 12.2**	**-0.7**
	baz=290								
T33K	**Petersburg**	**51.43**	**44**	P		**P**		**07 50 16.1**	**+0.3**
	baz=291								
R33M	**Jennings River**	**51.49**	**41**	P		**P**		**07 50 16.1**	**-0.3**
	baz=291								
U33K	**Whale Pass**	**51.60**	**45**	P		**P**		**07 50 17.1**	**0.0**
	baz=292								
CRAG	**Craig**	**51.84**	**46**	P		**P**		**07 50 18.7**	**-0.2**
	baz=292								
WRAK	**Wrangell Islan**	**51.89**	**44**	P		**P**		**07 50 18.8**	**-0.4**
	baz=292								
S34M	**Telegraph Cree**	**51.95**	**42**	P		**P**		**07 50 19.7**	**0.0**
	baz=292								
PMG	**Port Moresby**	**51.97**	**178**	LR		LR		08 09 16.1	
	comp=Z,32nm,21.1s,baz=19,slow=32								
WTLY	**Watson Lake, Y**	**52.25**	**39**	P		**P**		**07 50 21.7**	**-0.3**
	baz=292								
DLBC	**Dease Lake**	**52.29**	**41**	P		**P**		**07 50 21.7**	**-0.7**
	baz=292								
V35K	**Ketchikan**	**52.69**	**46**	P		**P**		**07 50 25.1**	**-0.1**
	baz=293								
T35M	**Bob Quinn**	**52.74**	**43**	P		**P**		**07 50 24.8**	**-0.8**
	baz=293								
SVE	**Sverdlovsk**	**52.92**	**317**	*e*	P	**P**		**07 50 26.5**	**-0.4**
SVE				pmax		pmax			
	comp=Z,20nm,1.0s								
KAPI	**Kappang**	**52.93**	**213**	LR		LR		08 16 45.1	
	comp=Z,12nm,18.0s,baz=17,slow=40								
KKAR	**Karatay Array**	**52.97**	**298**			**P**		**07 50 26.9**	**-0.7**
KKAR	**Karatay Array**	**52.97**	**298**	P		**P**		**07 50 26.9**	**-0.7**
U35K	**Hyder**	**53.28**	**44**	P		**P**		**07 50 29.1**	**-0.4**
	baz=294								
WRGLY	**Wrigley**	**53.40**	**34**	P		**P**		**07 50 30.2**	**0.0**
	baz=294								
HNR	**Honiara**	**53.66**	**162**	LR		LR		08 09 51.3	
	comp=Z,117nm,21.9s,baz=350,slow=32								
ARTI	**Arti**	**54.24**	**317**			**P**		**07 50 34.9**	**-1.6**
ARTI	**Arti**	**54.24**	**317**	*c*	*i* P	**P**		**07 50 35.2**	**-1.4**
ARTI								07 51 36.2	
ARTI					S	**S**		**07 58 10.8**	**+0.5**
ARTI					SS	**SKiKP**		**08 01 46.8**	**+3.7**
ARTI				pmax		pmax			
	comp=Z,14nm,0.6s								
ARTI	**Arti**	**54.24**	**317**	P		**P**		**07 50 35.5**	**-1.1**
ARTI	**Arti**	**54.24**	**317**	pP		pP		07 50 46.8	-2.8
TOAD	**Toad River Com**	**54.42**	**40**	P		**P**		**07 50 38.0**	**+0.1**
	baz=295,SNR=5.4								
GAR	**Garm**	**55.06**	**293**			**P**		**07 50 42.5**	**-0.4**
SPA0	**Spitsbergen Ar**	**55.47**	**349**	*e*	P	P		07 50 39.3	-5.9
SPITS	**Spitsbergen Ar**	**55.47**	**349**	P		**P**		**07 50 44.1**	**-1.1**
	comp=Z,3.7nm,0.5s,baz=92,slow=6.2,SNR=5.8								
	comp=Z,3.7nm,0.5s								
NIL	**Nilore**	**55.77**	**286**	P		**P**		**07 50 48.2**	**+0.1**
NIL				IAmb		IAmb		07 51 01.3	
	comp=Z,17nm,0.8s								
NIL	**Nilore**	**55.77**	**286**	P		**P**		**07 50 48.2**	**+0.1**
NIL				pmax		pmax			
	comp=Z,17nm,0.8s								
BBB	**Bella Bella**	**55.92**	**48**	LR		LR		08 14 07.6	
	comp=Z,16nm,20.1s,baz=279,slow=35								
CHGR	**Chuyangaron**	**56.01**	**294**			**P**		**07 50 49.2**	**-0.6**
CHGR	**Chuyangaron**	**56.01**	**294**	P		**P**		**07 50 49.2**	**-0.6**
CHGR				pmax		pmax			
	comp=Z,27nm,0.8s								
AB31	**Akbulak array**	**56.62**	**309**			**P**		**07 50 53.1**	**-0.7**
AB31				IAmb		IAmb		07 50 58.4	
	comp=Z,14nm,0.6s								
ABKAR	**Akbulak array**	**56.62**	**309**			**P**		**07 50 53.2**	**-0.6**
MTN	**Manton Dam**	**56.87**	**197**			**P**		**07 50 55.3**	**-0.5**
AKTO	**Aktyubinsk**	**57.14**	**310**	LR		LR		08 17 40.6	
	comp=Z,188nm,19.4s,baz=120,slow=38								
YKA	**Yellowknife Ar**	**57.34**	**33**	P		**P**		**07 50 58.5**	**-0.2**
	comp=Z,3.2nm,0.9s,baz=254,slow=5.6,SNR=12								
	comp=Z,3.2nm,0.9s								
KIRV	**Kirov**	**57.52**	**322**	*ce*	P	**P**		**07 50 59.4**	**-0.6**
ARA0	**ARCESS Array S**	**59.68**	**339**	*e*	P	**P**		**07 51 14.2**	**-0.7**
ARCES	**ARCESS Array B**	**59.68**	**339**	P		**P**		**07 51 14.1**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=44,slow=7.8,SNR=23								
	comp=Z,1.6nm,0.4s								
KLMR	**Klimovskoe**	**60.52**	**327**	*e*	P	**P**		**07 51 19.1**	**-1.6**
KLMR				pmax		pmax			
	comp=Z,12nm,1.4s								
KLMR				MLR		MLR			
	comp=Z,398nm,19.0s								
KTK1	**Kautokeino**	**60.62**	**339**	*e*	P	**P**		**07 51 20.9**	**-0.5**
JETT	**Jettan, Norway**	**60.94**	**341**	*e*	P	**P**		**07 51 22.9**	**-0.7**
TRO	**Tromso**	**61.24**	**341**	*e*	P	**P**		**07 51 24.8**	**-0.6**
BELG	**Belogornoye**	**61.67**	**316**	*c*	*i* P	**P**		**07 51 27.3**	**-1.3**
BELG				pmax		pmax			
	comp=Z,3.0nm,0.9s								
WB0	**Warramunga Arr**	**63.05**	**192**			**P**		**07 51 36.9**	**-1.2**
WB0				IAmb		IAmb		07 51 38.3	
	comp=Z,7.7nm,0.7s								
WR8	**Warramunga Arr**	**63.22**	**191**			**P**		**07 51 38.8**	**-0.5**
WR8				IAmb		IAmb		07 51 39.5	
	comp=Z,9.0nm,1.1s								
WRAB	**Tennant Creek**	**63.22**	**192**	*ce*	P	**P**		**07 51 38.7**	**-0.6**
WRAB				pmax		pmax			
	comp=Z,11nm,1.3s								
WRAB	**Tennant Creek**	**63.22**	**192**	P		**P**		**07 51 38.2**	**-1.1**
WRA	**Warramunga Arr**	**63.23**	**192**	P		**P**		**07 51 38.5**	**-0.8**
	comp=Z,4.1nm,0.6s,baz=13,slow=7.0,SNR=27								
	comp=Z,4.1nm,0.6s								
WRA	**Warramunga Arr**	**63.23**	**192**			**P**		**07 51 37.9**	**-1.5**
WRA	**Warramunga Arr**	**63.23**	**192**	P		**P**		**07 51 37.9**	**-1.5**
WRA				pmax		pmax			
	comp=Z,1.0nm,1.1s								
FITZ	**Fitzroy Crossi**	**63.23**	**201**			**P**		**07 51 39.7**	**+0.4**
STEI	**Steigen**	**63.41**	**341**	*e*	P	**P**		**07 51 37.7**	**-2.3**
FAUS	**Fauske**	**63.83**	**341**	*e*	P	**P**		**07 51 41.7**	**-1.1**
PINE	**Pine Mountain**	**64.41**	**53**			**P**		**07 51 48.1**	**+0.9**
PINE				IAmb		IAmb		07 52 01.2	
	comp=Z,9.2nm,0.9s								
VAGH	**Vaagaholmen**	**64.83**	**341**	*e*	P	**P**		**07 51 48.4**	**-1.0**
RAUS	**Rausandaksla**	**64.88**	**341**	*e*	P	**P**		**07 51 48.5**	**-1.1**
SUMG	**Summit**	**64.91**	**1**			**P**		**07 51 49.6**	**-0.7**
SUMG	**Summit**	**64.91**	**1**	P		**P**		**07 51 49.6**	**-0.7**
SUMG				pmax		pmax			
	comp=Z,18nm,0.7s								
MOR8	**Moi Rana**	**64.99**	**340**	*e*	P	**P**		**07 51 48.5**	**-1.9**
K05A	**Summer Lake**	**65.06**	**54**	P		**P**		**07 51 52.9**	**+1.4**
K05A				IAmb		IAmb		07 52 06.1	
	comp=Z,10nm,0.8s								
FIA1	**FINESS Array S**	**65.11**	**332**			**P**		**07 51 50.5**	**-0.7**
FINES	**FINESS Array B**	**65.11**	**332**	P		**P**		**07 51 50.3**	**-0.9**
	comp=Z,18nm,0.7s,baz=48,slow=7.3,SNR=84								
	comp=Z,18nm,0.7s								
FINES	**FINESS Array B**	**65.11**	**332**			**P**		**07 51 50.0**	**-1.3**
OBN	**Obninsk**	**65.29**	**323**	*i* P		**P**		**07 51 50.8**	**-1.7**
OBN				*i*				07 52 02.2	
OBN				*i*				07 52 22.2	
OBN				*i*				07 54 20.4	
OBN				pmax		pmax			
	comp=Z,7.0nm,0.7s								
OBN				MLR		MLR			
	comp=Z,104nm,20.0s								
VRH	**Novokhopyorsk**	**65.34**	**318**	*e*	P	**P**		**07 51 50.8**	**-2.1**
VRH				pmax		pmax			
	comp=Z,8.0nm,0.7s								
LEIR	**Leirfjorden**	**65.37**	**341**	*e*	P	**P**		**07 51 52.0**	**-0.8**
LPSR	**Galich'ya Gora**	**65.81**	**320**	*e*	P	**P**		**07 51 53.3**	**-2.6**
LPSR				pmax		pmax			
	comp=Z,10.0nm,0.9s								
PALK	**Pallekele**	**66.53**	**258**	LR		LR		08 24 15.0	
	comp=Z,19nm,18.0s,baz=74,slow=39								
VSR	**Storozhevoye**	**66.58**	**319**	*e*	P	**P**		**07 51 58.9**	**-2.0**
VSR				pmax		pmax			
	comp=Z,7.0nm,0.8s								
VORD	**Divnogorie**	**66.68**	**319**	*e*	P	**P**		**07 51 57.8**	**-3.7**
VORD				pmax		pmax			
	comp=Z,10.0nm,0.9s								
NSS	**Namsos**	**66.93**	**340**	*e*	P	**P**		**07 52 02.5**	**-0.4**
ASAR	**Alice Springs**	**66.95**	**191**	P		**P**		**07 52 03.5**	**0.0**
	comp=Z,3.7nm,0.6s,baz=6.7,slow=5.8,SNR=61								
ASAR				LR		LR		08 24 50.2	
	comp=Z,17nm,18.7s,baz=312,slow=39								
	comp=Z,3.7nm,0.6s								
ASAR	**Alice Springs**	**66.95**	**191**	P		**P**		**07 52 04.2**	**+0.7**
ASAR	**Alice Springs**	**66.95**	**191**	P		**P**		**07 52 04.2**	**+0.7**
FFC	**Flin Flon**	**67.27**	**35**	P		**P**		**07 52 05.4**	**+0.2**
FFC	**Flin Flon**	**67.27**	**35**	pP		pP		07 52 17.3	-1.2
DZM	**Mont Dzumac**	**67.41**	**159**	eLR		LR		08 12 16.4	
	comp=Z,130nm,22.1s								
NVAR	**Mina Array Bea**	**69.23**	**57**	P		**P**		**07 52 19.3**	**+1.3**
	comp=Z,4.1nm,0.8s,baz=284,slow=6.3,SNR=34								
NVAR				pP		**pP**		**07 52 31.6**	**+0.4**
	comp=Z,4.8nm,0.6s,baz=295,slow=7.6,SNR=12								
	comp=Z,4.1nm,0.8s								
KIV	**Kislovodsk**	**69.39**	**311**			**P**		**07 52 19.3**	**+0.5**
KIV	**Kislovodsk**	**69.39**	**311**	⇓P		**P**		**07 52 20.6**	**+1.8**
KIV	**Kislovodsk**	**69.39**	**311**	*e*	P	**P**		**07 52 19.2**	**+0.4**
KIV				pmax		pmax			
	comp=Z,21nm,1.0s								
KIV				MLR		MLR			
	comp=Z,115nm,17.0s								
KIV	**Kislovodsk**	**69.39**	**311**	*e*	P	**P**		**07 52 20.2**	**+1.4**
KBZ	**Khabaz**	**69.42**	**311**	P		**P**		**07 52 18.7**	**-0.1**
	comp=Z,5.3nm,0.7s,baz=57,slow=1.6,SNR=11								
KBZ				LR		LR		08 27 21.1	
	comp=Z,107nm,20.7s,baz=34,slow=40								
	comp=Z,5.3nm,0.7s								
YHH	**Holmes Hill**	**69.52**	**48**			**P**		**07 52 20.6**	**+0.7**
MOL	**Molde**	**69.67**	**341**	*e*	P	**P**		**07 52 18.9**	**-1.1**
DOMB	**Dombas**	**69.74**	**340**	*e*	P	**P**		**07 52 19.9**	**-0.6**
NB2	**NORSAR Subarra**	**70.00**	**338**	P		**P**		**07 52 21.0**	**-1.2**
	comp=Z,8.5nm,1.0s,baz=35,slow=6.2								
NOA	**NORSAR Array B**	**70.00**	**338**	P		**P**		**07 52 21.3**	**-0.9**
	comp=Z,5.5nm,0.7s,baz=34,slow=6.3,SNR=25								
	comp=Z,5.5nm,0.7s								
HFS	**Hagfors**	**70.05**	**337**	P		**P**		**07 52 21.5**	**-0.9**
	comp=Z,11nm,0.6s,baz=54,slow=7.5,SNR=42								
	comp=Z,11nm,0.6s								
AKN	**Aaknes**	**70.14**	**341**	*e*	P	**P**		**07 52 21.9**	**-1.1**
NC602	**NORSAR Array S**	**70.17**	**338**	*e*	P	**P**		**07 52 21.4**	**-1.7**
SKAR	**Skarslia**	**71.09**	**339**	*e*	P	**P**		**07 52 26.0**	**-2.8**
HYA	**Hoyanger**	**71.21**	**340**	*e*	P	**P**		**07 52 28.3**	**-1.1**
AKASG	**Malin Array Be**	**71.55**	**323**	P		**P**		**07 52 30.7**	**-1.0**
	comp=Z,4.1nm,0.4s,baz=43,slow=6.3,SNR=26								
	comp=Z,4.1nm,0.4s								
AKBB	**Malin Array Si**	**71.55**	**323**			**P**		**07 52 30.8**	**-0.9**
AKBB				IAmb		IAmb		07 52 35.4	
	comp=Z,12nm,0.8s								
AKBB	**Malin Array Si**	**71.55**	**323**	P		**P**		**07 52 30.8**	**-0.9**
AKBB				pmax		pmax			
	comp=Z,12nm,0.8s								
PDAR	**Pinedale Array**	**71.56**	**49**	P		**P**		**07 52 32.4**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=216,slow=0.4,SNR=29								
PDAR				pP		**pP**		**07 52 44.3**	**-1.1**
	comp=Z,4.9nm,0.5s,baz=268,slow=1.4,SNR=17								
	comp=Z,2.6nm,0.5s								
KIEV	**Kiev**	**71.56**	**323**			**P**		**07 52 30.9**	**-0.8**
KIEV				IAmb		IAmb		07 52 35.3	
	comp=Z,11nm,0.8s								
KIEV	**Kiev**	**71.56**	**323**	⇑P		**P**		**07 52 31.3**	**-0.5**
KIEV	**Kiev**	**71.56**	**323**	P		**P**		**07 52 30.9**	**-0.8**
KIEV				pmax		pmax			
	comp=Z,11nm,0.8s								
KIEV	**Kiev**	**71.56**	**323**	P		**P**		**07 52 30.6**	**-1.2**
SORM	**Soroca**	**73.80**	**322**	⇓P		**P**		**07 52 45.2**	**+0.1**
SORM	**Soroca**	**73.80**	**322**	P		**P**		**07 52 45.2**	**+0.1**
STKA	**Stephens Creek**	**74.38**	**183**	P		**P**		**07 52 48.8**	**+0.4**
	comp=Z,5.4nm,0.9s,baz=344,slow=7.5,SNR=12								
	comp=Z,5.4nm,0.8s								
STKA	**Stephens Creek**	**74.38**	**183**	⇑*e*P		**P**		**07 52 48.5**	**+0.1**
BUR08	**Bucovina Ar. S**	**75.59**	**323**			**P**		**07 52 56.0**	**+0.4**
BURAR	**Bucovina Array**	**75.60**	**323**	P		**P**		**07 52 56.0**	**+0.3**
BURAR				IAmb		IAmb		07 53 08.6	
	comp=Z,6.7nm,0.7s								
BURAR	**Bucovina Array**	**75.60**	**323**	⇓P		**P**		**07 52 55.6**	**-0.1**
BURAR	**Bucovina Array**	**75.60**	**323**	P		**P**		**07 52 55.5**	**-0.1**
BBOO	**Buckleboo**	**75.71**	**188**	P		**P**		**07 52 56.6**	**+0.5**
BBOO				IAmb		IAmb		07 53 02.8	
	comp=Z,25nm,1.4s								
TESR	**Tescani**	**75.78**	**321**	⇑P		**P**		**07 52 57.6**	**+0.9**
OJC	**Ojcow**	**75.88**	**327**			**P**		**07 52 57.0**	**-0.1**
OJC	**Ojcow**	**75.88**	**327**	P		**P**		**07 52 57.0**	**-0.1**
ONER	**Baraj Valea Uz**	**76.03**	**321**	⇑P		**P**		**07 52 58.8**	**+0.8**
X16A	**Lo Mia Camp, P**	**76.03**	**56**			**P**		**07 52 59.1**	**+0.6**
TPGR	**Topolog**	**76.17**	**319**	⇓P		**P**		**07 53 00.2**	**+1.4**
TURR	**Turia**	**76.42**	**321**	⇓P		**P**		**07 53 01.6**	**+1.3**
OZUR		**76.49**	**321**	⇑P		**P**		**07 53 02.1**	**+1.4**
LANS	**Liptovska Anna**	**76.85**	**327**	*e*P		**P**		**07 53 05.1**	**+2.4**
LANS	**Liptovska Anna**	**76.85**	**327**	*e*P		**P**		**07 53 05.0**	**+2.4**
MLR	**Muntele Rosu**	**76.87**	**321**	⇓P		**P**		**07 53 03.7**	**+0.7**
MLR	**Muntele Rosu**	**76.87**	**321**	P		**P**		**07 53 03.6**	**+0.7**
MORC	**Moravsky Berou**	**77.11**	**328**	⇑P		**P**		**07 53 05.5**	**+1.4**
MORC	**Moravsky Berou**	**77.11**	**328**	*e*P		**P**		**07 53 05.0**	**+0.9**
MORC	**Moravsky Berou**	**77.11**	**328**	P		**P**		**07 53 05.5**	**+1.4**
BR131	**Keskin Array S**	**77.22**	**313**	⇓*e*P		**P**		**07 53 05.4**	**+0.3**
BRTR	**Keskin Array B**	**77.22**	**313**	P		**P**		**07 53 05.0**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=70,slow=3.9,SNR=5.3								
	comp=Z,1.1nm,0.6s								
VOIR		**77.33**	**321**	⇓P		**P**		**07 53 06.7**	**+1.3**
VOIR		**77.33**	**321**	P		**P**		**07 53 06.7**	**+1.3**
CLL	**Collm**	**77.53**	**332**	*i* P		**P**		**07 53 06.1**	**-0.3**
CLL				*i*	*PP	**pP**		**07 53 22.3**	**+2.3**
CLL	**Collm**	**77.53**	**332**	*i* P		**P**		**07 53 06.1**	**-0.3**
CLL				*i*	PcP	**PcP**		**07 53 15.0**	**-1.6**
CLL				*i*	(pP)	**pP**		**07 53 22.3**	**+2.3**
ARR	**Arges**	**77.57**	**322**	⇓P		**P**		**07 53 07.9**	**+1.1**
PSZ	**Piszkesteto**	**77.65**	**326**	⇓P		**P**		**07 53 08.8**	**+1.6**
PSZ	**Piszkesteto**	**77.65**	**326**	P		**P**		**07 53 08.8**	**+1.6**
JAVC	**Velka Javorina**	**77.80**	**328**	*e*P		**P**		**07 53 09.6**	**+1.6**
VRAC	**Vranov**	**77.86**	**329**	*e*P		**P**		**07 53 08.5**	**+0.2**
KRUC	**Moravsky**	**78.13**	**328**	*e*P		**P**		**07 53 10.8**	**+1.0**
MODS	**Modra-Piesok**	**78.35**	**328**	*e*P		**P**		**07 53 13.3**	**+2.3**
MODS	**Modra-Piesok**	**78.35**	**328**	*e*P		**P**		**07 53 13.3**	**+2.3**
GZR	**Gura Zlata**	**78.39**	**323**	⇓P		**P**		**07 53 11.3**	**0.0**
GZR	**Gura Zlata**	**78.39**	**323**	P		**P**		**07 53 11.3**	**0.0**
EKA	**Eskdalemuir Ar**	**78.64**	**342**	P		**P**		**07 53 12.2**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=21,slow=4.9,SNR=24								
EKA				pP		**pP**		**07 53 24.1**	**-2.0**
	comp=Z,6.9nm,0.6s,baz=19,slow=5.1,SNR=6.9								
	comp=Z,2.1nm,0.4s								
ANMO	**Albuquerque**	**78.65**	**53**	⇑*e*P		**P**		**07 53 14.1**	**+0.9**
ANMO				pmax		pmax			
	comp=Z,5.0nm,1.4s								
SCHQ	**Schefferville**	**78.97**	**18**	P		**P**		**07 53 14.4**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=357,slow=7.4,SNR=6.8								
	comp=Z,4.0nm,0.7s								
KHC	**Kasperske Hory**	**79.14**	**330**	⇓*e*P		**P**		**07 53 15.3**	**0.0**
KHC				pmax		pmax			
	comp=Z,6.0nm,0.8s								
CONA	**Conrad Observa**	**79.26**	**328**	*e*P		**P**		**07 53 16.6**	**+0.5**
	comp=Z,4.1nm,0.6s								
RONA	**Rosalia, Austr**	**79.28**	**328**	*e*P		**P**		**07 53 17.6**	**+1.4**
	comp=Z,7.6nm,0.9s								
GERES	**GERESS Array B**	**79.33**	**330**	P		**P**		**07 53 15.7**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=352,slow=3.0,SNR=5.9								
	comp=Z,1.0nm,0.5s								
SOKA	**Soboth**	**80.61**	**328**	*e*P		**P**		**07 53 24.2**	**+0.7**
	comp=Z,14nm,1.1s								
ASF	**Jabal al Asfar**	**80.71**	**305**	LR		LR		08 32 42.7	
	comp=Z,58nm,19.5s,baz=29,slow=38								
LESA	**Schwarzleotal**	**80.89**	**330**	*e*P		**P**		**07 53 25.9**	**+1.0**
	comp=Z,5.7nm,0.6s								
KBA	**Koelnbreinsper**	**80.93**	**329**	*e*P		**P**		**07 53 26.3**	**+1.0**
	comp=Z,9.3nm,0.7s								
MMAI	**Mount Meron Ar**	**81.00**	**307**	P		**P**		**07 53 26.3**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=40,slow=8.1,SNR=1.8								
MMAI				pP		**pP**		**07 53 38.1**	**-1.2**
	comp=Z,14nm,0.8s,baz=47,slow=8.5,SNR=3.4								
	comp=Z,2.6nm,0.5s								
RAYN	**Ar Rayn**	**81.17**	**294**	P		**P**		**07 53 26.2**	**-0.5**
RAYN	**Ar Rayn**	**81.17**	**294**	P		**P**		**07 53 26.3**	**-0.5**
RAYN				pmax		pmax			
	comp=Z,7.0nm,1.1s								
RAR	**Rarotonga**	**81.30**	**129**	LR		LR		08 20 25.7	
	comp=Z,64nm,21.4s,baz=292,slow=29								
ABTA	**Abfaltersbach**	**81.52**	**329**	*e*P		**P**		**07 53 28.0**	**-0.2**
	comp=Z,3.4nm,0.7s								
MOTA	**Moosalm**	**81.54**	**330**	*e*P		**P**		**07 53 29.0**	**+0.6**
	comp=Z,21nm,1.2s								
RETA	**Reutte**	**81.54**	**331**	*e*P		**P**		**07 53 29.2**	**+0.9**
	comp=Z,6.9nm,0.7s								
FETA	**Feichten**	**81.95**	**331**	*e*P		**P**		**07 53 29.5**	**-1.1**
	comp=Z,2.6nm,0.6s								
TXAR	**Lajitas Array**	**84.30**	**55**	P		**P**		**07 53 43.7**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=298,slow=3.4,SNR=52								
	comp=Z,4.0nm,0.7s								
PPT	**Papeete**	**84.69**	**120**	LR		LR		08 22 07.5	
	comp=Z,73nm,21.8s,baz=333,slow=29								
PPT2	**Papeete2**	**84.71**	**120**	*e*LR		LR		08 20 15.3	
	comp=Z,134nm,23.2s								
PPT2				*e*LR		LR		08 20 25.7	
	comp=Z,131nm,25.5s								
URZ	**Urewera**	**85.69**	**155**	LR		LR		08 26 08.4	
	comp=Z,62nm,19.8s,baz=12,slow=31								
TBI	**Tubuai**	**89.04**	**123**	*e*LR		LR		08 22 21.8	
	comp=Z,368nm,28.2s								
ESDC	**Sonseca Array**	**93.33**	**337**	P		**P**		**07 54 25.7**	**0.0**
	comp=Z,0.6nm,0.5s,baz=20,slow=4.7,SNR=2.2								
ESDC				pP		**pP**		**07 54 37.5**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=14,slow=3.7,SNR=4.7								
	comp=Z,0.6nm,0.5s								
MDT	**Midelt**	**99.87**	**335**	LR		LR		08 48 05.7	
	comp=Z,32nm,18.4s,baz=18,slow=40								
VNDA	**Vanda**	**120.47**	**176**	PKP		**PKPdf**		**08 00 00.7**	**0.0**
	comp=Z,0.6nm,0.5s,baz=326,slow=4.5,SNR=8.0								
VNDA				pPKP		**pPKPdf**		**08 00 14.3**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=333,slow=3.5,SNR=3.4								
QSPA	**South Pole Qui**	**132.52**	**180**	PKhKP		PKPpre		08 00 15.2	
	comp=Z,0.7nm,0.7s,baz=314,slow=1.4,SNR=6.4								
QSPA				PKP		**PKiKP**		**08 00 27.8**	**+2.7**
	comp=Z,2.1nm,0.6s,baz=304,slow=1.4,SNR=17								
QSPA				pPKP		sPKPdf		08 00 41.4	-1.2
	comp=Z,1.7nm,0.6s,baz=320,slow=2.2,SNR=4.0								
LPAZ	**La Paz**	**141.13**	**57**	PKP		**PKPdf**		**08 00 42.0**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=0.0,slow=3.0,SNR=2.6								
H03N2	**Juan Fernandez**	**144.31**	**90**	T		T		10 41 58.4	
	baz=302,slow=77,SNR=9.3								
H03N3	**Juan Fernandez**	**144.32**	**90**	T		T		10 42 01.3	
	baz=302,slow=77,SNR=11								
H03N1	**Juan Fernandez**	**144.33**	**90**	T		T		10 41 59.4	
	baz=302,slow=77,SNR=14								
TROLL	**Troll, Antarti**	**145.64**	**199**	⇓P		**PKPbc**		**08 00 48.1**	**-0.1**
	comp=Z,1μm,0.6s								
SNAA	**Sanae**	**147.13**	**198**	⇑P		**PKPdf**		**08 00 50.3**	**+0.1**
	comp=Z,220nm,0.8s								
SNAA	**Sanae**	**147.13**	**198**	PKPbc		**PKPbc**		**08 00 52.4**	**0.0**
	comp=Z,8.7nm,0.7s,baz=189,slow=3.6,SNR=28								
SNAA				pPKPbc		**pPKPbc**		**08 01 06.4**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=196,slow=4.8,SNR=6.7								
VNA2	**Neumayer--Watz**	**148.68**	**197**	⇑P		**PKPdf**		**08 00 53.2**	**+0.4**
	comp=Z,26nm,0.6s,baz=119,slow=2.4								
VNA3	**Neumayer Olymp**	**148

ALEP Sg 08 34 36.9 +0.4
MWH Mokuaweoweo 0.07 93 Pg 08 34 35.2 -0.2
MWH Mokuaweoweo 0.07 93 Sg 08 34 36.9 -0.1
MLOA Mauna Loa Obse 0.10 63 Pg 08 34 35.8 +0.1
MLOA Sg 08 34 37.9 +0.3
HMH Humu'ula Sheep 0.21 57 Pg 08 34 37.6 +0.2
HMH Sg 08 34 40.8 +0.4
HMH Humu'ula Sheep 0.21 57 IAML 08 34 41.5
comp=N,3μm,0.3s
HMH IAML 08 34 41.5
comp=E,2μm,0.3s
AIN Ainahou 0.23 120 Pg 08 34 37.9 +0.1
AIN IAML 08 34 42.5
comp=E,2μm,0.3s
AIN Ainahou 0.23 120 Sg 08 34 42.1 +1.1
KHLU Kahalu`u 0.23 296 Pg 08 34 37.6 -0.1
KHLU Sg 08 34 41.5 +0.6
KHLU Kahalu`u 0.23 296 IAML 08 34 42.7
comp=E,7μm,0.2s
KHLU IAML 08 34 42.8
comp=N,6μm,0.3s
KHU Kahuku 0.25 167 Pg 08 34 38.1 0.0
KHU Sg 08 34 42.4 +1.0
HUH Hualalai 0.25 322 Pg 08 34 38.2 +0.1
MLH Mauna Loa 0.27 89 Pg 08 34 38.5 -0.1
MLH Sg 08 34 42.8 +0.7
MLH Mauna Loa 0.27 89 IAML 08 34 43.5
comp=N,1μm,0.5s
MLH IAML 08 34 43.8
comp=E,853nm,0.1s
POHA Pohakuloa 0.30 26 Pg 08 34 38.9 -0.2
POHA Pohakuloa 0.30 26 IAML 08 34 47.9
comp=E,668nm,0.3s
POHA IAML 08 34 47.9
comp=E,1μm,0.5s
HTC Hot Caves 0.36 134 Pg 08 34 39.8 -0.3
WRMHI West Rim 0.36 103 Pg 08 34 39.9 -0.3
WRMHI Sg 08 34 45.6 +0.6
UWE Uwekahuna 0.36 101 Pg 08 34 40.1 -0.2
UWE Sg 08 34 46.1 +1.0
UWE Uwekahuna 0.36 101 IAML 08 34 46.4
comp=N,2μm,0.2s
UWE IAML 08 34 47.1
comp=E,2μm,0.3s
KKH Kailua Kona 0.37 297 Pg 08 34 39.7 -0.6
KKH Sg 08 34 45.2 +0.1
SDHHI Sand Hill 0.37 105 Pg 08 34 40.0 -0.4
SDHHI Sg 08 34 45.6 +0.4
RSD Rainshed 0.37 94 Pg 08 34 40.4 -0.1
RSD Sg 08 34 46.1 +0.7
RSD Rainshed 0.37 94 IAML 08 34 46.4
comp=N,2μm,0.7s
RSD IAML 08 34 48.0
comp=E,946nm,0.3s
OBL Observatory Le 0.37 101 Pg 08 34 40.1 -0.4
OBL Sg 08 34 46.2 +0.8
UWB Uwekahuna Bluf 0.38 100 Pg 08 34 40.1 -0.4
UWB Sg 08 34 45.7 +0.2
SBLHI Steaming Bluff 0.39 99 Pg 08 34 40.2 -0.5
SBLHI Sg 08 34 46.1 +0.4
RIM Rim 0.39 104 Pg 08 34 40.3 -0.4
RIM Sg 08 34 46.5 +0.6
HATHI Halema'uma'u T 0.39 100 Pg 08 34 40.3 -0.5
HATHI Sg 08 34 46.2 +0.2
HATHI Halema'uma'u T 0.39 100 IAML 08 34 50.2
comp=E,851nm,0.5s
HATHI IAML 08 34 50.8
comp=N,994nm,0.7s
HLP Hilina Pali 0.39 119 Pg 08 34 40.4 -0.4
HLP Hilina Pali 0.39 119 IAML 08 34 49.3
comp=E,770nm,0.4s
HLP IAML 08 34 51.8
comp=N,791nm,0.6s
KKO Keanakako'i 0.39 103 Pg 08 34 40.4 -0.4
KKO Sg 08 34 46.5 +0.5
BYL Byron's Ledge 0.40 101 Pg 08 34 40.5 -0.3
BYL Sg 08 34 46.5 +0.4
BYL Byron's Ledge 0.40 101 IAML 08 34 52.9
comp=N,582nm,0.7s
BYL IAML 08 34 53.3
comp=E,701nm,0.5s
HPO Honuapo 0.41 164 Pg 08 34 41.2 +0.1
PUH Pauahi 0.45 105 Pg 08 34 41.1 -0.7
PUH Sg 08 34 47.7 +0.1
KNHH Kane Nui o Ham 0.49 103 Pg 08 34 41.8 -0.8
STCH Steam Cracks 0.53 101 Pg 08 34 42.5 -0.8
HPAH Hawaii Prepara 0.54 357 Pg 08 34 42.7 -0.9
HPAH Sg 08 34 50.1 -0.6
HPAH Hawaii Prepara 0.54 357 IAML 08 34 50.3
comp=N,478nm,0.2s
HPAH IAML 08 34 59.8
comp=E,471nm,0.4s
NPOC North of Pu'u 0.54 100 Pg 08 34 43.0 -0.6
NPOC Sg 08 34 50.3 -0.3
JCUZ Jacuzzi 0.55 101 Pg 08 34 43.1 -0.6
JCUZ Sg 08 34 50.4 -0.5
JOKA Jonika Flow 0.63 95 Pg 08 34 44.3 -1.0
JOKA Jonika Flow 0.63 95 Sg 08 34 52.7 -0.9
JOKA IAML 08 34 58.5
comp=E,207nm,0.6s
JOKA IAML 08 35 00.1
comp=N,438nm,1.0s
MHA Mahukona 0.73 343 Pg Pg 08 34 45.4 -1.7

*HVO **28** 08:52:30.5±1.6, 19°.49N±0°.01×155°.663W±0°.006, h-2km±8km, ML2.6/24, ML2.6/46(NEIC), Error ellipse: s-maj=1.9km s-min=0.7km az=186.0*
NEIC 28 08:52:31.5±1.4, **19°.49N**±0°.01×**155°.658W**±0°.009, **h3**km±3km, **Error ellipse: s-maj=1.9km s-min=1.2km az=193.0, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALEP	**Alea Permanent**	**0.05**	**16**		Pg	08 52 33.1	+0.3
ALEP					Sg	08 52 34.8	+1.1
MWH	**Mokuaweoweo**	**0.06**	**99**		Pg	08 52 33.2	+0.3
MWH					Sg	08 52 35.1	+1.1
MWH				IAML		08 52 35.5	
	comp=N,3μm,0.5s						
MLOA	**Mauna Loa Obse**	**0.09**	**62**		Pg	08 52 33.8	+0.4
MLOA	**Mauna Loa Obse**	**0.09**	**62**		Sg	08 52 36.0	+1.3
HMH	**Humu'ula Sheep**	**0.20**	**57**		Pg	08 52 35.6	+0.2
HMH	**Humu'ula Sheep**	**0.20**	**57**		Sg	08 52 39.0	+1.0
HMH				IAML		08 52 39.4	
	comp=N,2μm,0.6s						
HMH				IAML		08 52 39.4	
	comp=E,1μm,0.3s						
AIN	**Ainahou**	**0.23**	**123**		Pg	08 52 35.9	+0.1
AIN					Sg	08 52 39.7	+0.9
AIN	**Ainahou**	**0.23**	**123**	IAML		08 52 40.2	
	comp=N,2μm,0.5s						
AIN				IAML		08 52 40.5	
	comp=E,2μm,0.3s						
KHLU	**Kahalu`u**	**0.24**	**294**		Pg	08 52 35.6	-0.6
KHLU					Sg	08 52 40.2	+0.9
KHLU	**Kahalu`u**	**0.24**	**294**	IAML		08 52 40.7	
	comp=E,9μm,0.2s						
KHLU				IAML		08 52 40.7	
	comp=N,7μm,0.2s						
KHU	**Kahuku**	**0.25**	**171**		Pg	08 52 36.0	-0.3
KHU					Sg	08 52 40.2	+0.6
HUH	**Hualalai**	**0.25**	**319**		Pg	08 52 36.4	0.0
HUH					Sg	08 52 41.3	+1.6
HUH	**Hualalai**	**0.25**	**319**	IAML		08 52 41.9	
	comp=N,4μm,0.4s						
HUH				IAML		08 52 42.7	
	comp=E,4μm,0.3s						
MLH	**Mauna Loa**	**0.26**	**90**		Pg	08 52 36.4	0.0
MLH	**Mauna Loa**	**0.26**	**90**		Sg	08 52 40.5	+0.6
MLH				IAML		08 52 41.4	
	comp=N,942nm,0.7s						
MLH				IAML		08 52 41.5	
	comp=E,530nm,0.6s						
POHA	**Pohakuloa**	**0.29**	**24**		Pg	08 52 36.9	-0.2
POHA	**Pohakuloa**	**0.29**	**24**	IAML		08 52 45.9	
	comp=E,792nm,0.5s						
POHA				IAML		08 52 45.9	
	comp=E,467nm,0.3s						
WRMHI	**West Rim**	**0.35**	**104**		Pg	08 52 37.9	-0.4
WRMHI					Sg	08 52 43.5	+0.7
UWE	**Uwekahuna**	**0.35**	**102**		Pg	08 52 38.0	-0.3
UWE				IAML		08 52 48.4	
	comp=N,1μm,0.3s						
UWE	**Uwekahuna**	**0.35**	**102**		Sg	08 52 43.8	+0.9
HTC	**Hot Caves**	**0.35**	**136**		Pg	08 52 37.7	-0.6
SDHHI	**Sand Hill**	**0.36**	**107**		Pg	08 52 38.0	-0.4
SDHHI					Sg	08 52 44.4	+1.3
RSD	**Rainshed**	**0.36**	**95**		Pg	08 52 38.3	-0.2
RSD					Sg	08 52 43.5	+0.4
RSD				IAML		08 52 45.2	
	comp=N,1μm,0.5s						
RSD				IAML		08 52 46.0	
	comp=E,630nm,0.5s						
OBL	**Observatory Le**	**0.36**	**102**		Pg	08 52 38.0	-0.4
OBL					Sg	08 52 44.0	+0.8
UWB	**Uwekahuna Bluf**	**0.36**	**101**		Pg	08 52 38.1	-0.5
UWB					Sg	08 52 44.0	+0.7
SBLHI	**Steaming Bluff**	**0.37**	**100**		Pg	08 52 38.2	-0.5
SBLHI					Sg	08 52 43.9	+0.3
RIM	**Rim**	**0.38**	**105**		Pg	08 52 38.2	-0.5
RIM					Sg	08 52 44.4	+0.7
HATHI	**Halema'uma'u T**	**0.38**	**101**		Pg	08 52 38.2	-0.6
HATHI				IAML		08 52 47.7	
	comp=N,655nm,0.7s						
HATHI				IAML		08 52 48.3	
	comp=E,661nm,0.6s						
HATHI	**Halema'uma'u T**	**0.38**	**101**		Sg	08 52 44.3	+0.5
KKO	**Keanakako'i**	**0.38**	**104**		Pg	08 52 38.4	-0.5
KKO					Sg	08 52 44.6	+0.7
BYL	**Byron's Ledge**	**0.38**	**102**		Pg	08 52 38.4	-0.5
BYL				IAML		08 52 50.5	
	comp=E,517nm,0.7s						
BYL				IAML		08 52 51.2	
	comp=N,435nm,0.7s						
HLP	**Hilina Pali**	**0.39**	**121**		Pg	08 52 38.4	-0.5
HLP					Sg	08 52 45.0	+1.1
HLP	**Hilina Pali**	**0.39**	**121**	IAML		08 52 48.9	
	comp=E,560nm,0.9s						
HLP				IAML		08 52 49.7	
	comp=N,510nm,0.6s						
PUH	**Pauahi**	**0.43**	**106**		Pg	08 52 39.1	-0.7
STCH	**Steam Cracks**	**0.52**	**102**		Pg	08 52 40.3	-1.0
STCH					Sg	08 52 48.1	+0.1
NPOC	**North of Pu'u**	**0.53**	**101**		Pg	08 52 41.1	-0.5
HPAH	**Hawaii Prepara**	**0.54**	**356**		Pg	08 52 40.6	-1.2
HPAH					Sg	08 52 47.9	-0.8
HPAH				IAML		08 52 57.6	
	comp=E,415nm,0.8s						
HPAH				IAML		08 52 59.7	
	comp=N,349nm,0.5s						
JOKA	**Jonika Flow**	**0.62**	**95**		Pg	08 52 41.7	-1.7
JOKA				IAML		08 52 58.0	
	comp=N,307nm,0.9s						
MHA	**Mahukona**	**0.73**	**342**	Pg	Pg	08 52 43.3	-2.2

Gll 28 09:10:25.4±0.0, **33°.01N**±0°.01×**35°.54E**±0°.01, **h0**km, **confirmed, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMID	**Amiad**	**0.08**	**183**	P	Pg	09 10 27.7	+0.8
AMID	**Amiad**	**0.08**	**183**	S	Sg	09 10 28.8	+0.9
MMA0B	**Mount Meron ar**	**0.12**	**275**	P	Pg	09 10 28.5	+0.8
MMA0B	**Mount Meron ar**	**0.12**	**275**	S	Sg	09 10 31.0	+1.7
KNHM	**Kefar Nahum**	**0.12**	**166**	P	Pg	09 10 28.5	+0.7
MMC7	**Mount Meron ar**	**0.13**	**278**	P	Pg	09 10 28.6	+0.7
MGDL	**Migdal**	**0.17**	**191**	P	Pg	09 10 29.6	+0.9

*SJA **28** 09:19:22.4±0.9, 33°.23S×73°.00W, h10km, ML3.5, MW3.3*
*GUC **28** 09:19:33.6±0.9, 33°.06S×72°.17W, h24km±46km, ML3.3*
ISC 28 09:19:32.7±2.0, **33°.16S**±0°.04×**72°.13W**±0°.10, **h10**km, **n18, s16, 64/36, 2C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.42**	**72**	*i* P	**Pb**	**09 19 42.1**	**-0.2**
VA01				*e*S	**Sb**	**09 19 48.6**	**-0.1**
VA01				IAML		09 19 49.3	
	comp=E,5μm,0.1s						
MT02	**Curacav**	**0.83**	**97**	*i* P	**Pb**	**09 19 49.3**	**0.0**
MT02				*e*S	**Sb**	**09 20 01.2**	**+0.6**
VA06	**Catapilco**	**0.92**	**50**	*e*P	**Pg**	**09 19 49.2**	**-1.1**
VA06				*e*S	**Sg**	**09 20 01.3**	**-0.9**
VA06				IAML		09 20 05.9	
	comp=E,2μm,0.4s						
ROCH	**El Roble**	**0.95**	**79**	*i* P	**Pg**	**09 19 50.9**	**-0.2**
ROCH				*e*S	**Sg**	**09 20 03.9**	**+0.4**
ROCH				IAML		09 20 05.4	
	comp=N,1μm,0.1s						
MT01	**Popeta**	**1.02**	**134**	*i* P	**Pn**	**09 19 52.8**	**-0.2**
MT01				*e*S	**Sn**	**09 20 07.1**	**-0.3**
MT01				IAML		09 20 09.0	
	comp=N,861nm,0.2s						
MT09	**Talagante**	**1.13**	**123**	*i* P	**Pg**	**09 19 54.8**	**+0.3**
MT09				*e*S	**Sn**	**09 20 11.0**	**+0.5**
MT09				IAML		09 20 12.3	
	comp=N,2μm,0.3s						
MT05	**Renca**	**1.19**	**102**	*e*P	**Pg**	**09 19 55.5**	**+0.1**
MT05				*e*S	**Sn**	**09 20 11.9**	**+0.2**
MT05				IAML		09 20 17.0	
	comp=N,875nm,0.5s						
PEL	**Peldehue**	**1.21**	**90**	*e*P	**Pg**	**09 19 55.7**	**-0.2**
PEL				*e*S	**Sg**	**09 20 11.9**	**+0.3**
PEL				IAML		09 20 17.1	
	comp=N,547nm,0.5s						
MT10	**Hacienda Santa**	**1.34**	**95**	*e*P	**Pg**	**09 19 58.0**	**-0.3**
MT10				*e*S	**Sg**	**09 20 16.2**	**+0.4**
MT10				IAML		09 20 22.7	
	comp=N,2μm,0.5s						
MT14	**Cerro Cal¡n**	**1.35**	**101**	*e*P	**Pg**	**09 19 58.4**	**-0.3**
MT14				*e*S	**Sg**	**09 20 16.8**	**+0.5**
MT14				IAML		09 20 23.1	
	comp=N,749nm,0.4s						
VA03	**San Esteban**	**1.38**	**74**	*e*P	**Pn**	**09 19 57.3**	**-0.8**
VA03				*e*S	**Sn**	**09 20 15.9**	**-0.6**
VA03				IAML		09 20 21.2	
	comp=E,814nm,0.3s						
ARCO	**CERRO ARCO**	**2.70**	**84**	*e*P	**Pb**	**09 20 19.8**	**-1.5**
ARCO				*e*S	**Sg**	**09 21 00.7**	**+1.1**
ARCO				IAML		09 21 01.9	
	comp=Z,65nm,1.6s						
RTLS	**Leoncito**	**2.75**	**61**	*i* P	**Pb**	**09 20 19.2**	**-2.9**
RTLS				*e*S	**Sg**	**09 21 02.0**	**+1.0**
RTLS				IAML		09 21 02.9	
	comp=Z,133nm,0.4s						
ACCO	**Cerro Coronel**	**3.65**	**46**	*i* P	**Pn**	**09 20 31.5**	**+1.9**
ACCO				*e*S	**Sb**	**09 21 22.9**	**+0.8**
AROD	**Rodeo**	**3.74**	**38**	*i* P	**Pn**	**09 20 30.8**	**0.0**
AROD				*e*S	**Sb**	**09 21 23.6**	**-1.0**
ACDV	**Cuesta del Vie**	**3.93**	**42**	*i* P	**Pn**	**09 20 34.1**	**+0.9**
ACDV				*e*S	**Sb**	**09 21 27.0**	**-2.9**
ACDV				IAML		09 21 40.3	
	comp=Z,28nm,0.7s						
AVFE	**Valle Fertil**	**4.69**	**59**	*i* P	**Pn**	**09 20 46.5**	**+2.9**
AVFE				*e*S	**Sb**	**09 21 48.2**	**-3.3**
AVFE				IAML		09 22 00.0	
	comp=Z,22nm,0.6s						
VCA	**Vinchina**	**5.54**	**38**	*i* P	**Pn**	**09 20 56.5**	**+1.0**
VCA				*e*S	**Sn**	**09 22 05.4**	**+6.0**
VCA				IAML		09 22 40.1	
	comp=Z,26nm,1.1s						

*NNC **28** 09:20:04.2±4.9, 37°.52N×71°.81E, h0km, mb4.5, mpv4.0, Error ellipse: s-maj=38.6km s-min=26.0km az=3.0*
*MOS **28** 09:20:11.6±0.7, 37°.57N×72°.31E, h196km, mb4.2/8, Error ellipse: s-maj=9.4km s-min=4.6km az=82.2*
*BJI **28** 09:20:11.2, 37°.67N×72°.26E, h191km, mB4.4/4, mb4.5/21*
*IDC **28** 09:20:11.9±3.1, 37°.43N×72°.39E, h190km±26km, mb3.6/12, mbtmp4.2/18, Error ellipse: s-maj=23.8km s-min=13.2km az=18.0*
*NEIC **28** 09:20:12.5±2.0, 37°.58N±0°.06×72°.29E±0°.09, h196km±5km, mb4.4/15, Error ellipse: s-maj=10.2km s-min=8.9km az=79.0*
ISC 28 09:20:12.3±0.5, **37°.52N**±0°.04×**72°.34E**±0°.05, **h200**km, **n139, s215/154, mb4.2/27, 9C-17D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**2.00**	**348**		**Pn**	**09 20 50.6**	**-0.5**
DRK				Sn	**Sn**	**09 21 18.3**	**-3.2**
GAR	**Garm**	**2.17**	**313**		**Pn**	**09 20 51.4**	**-1.3**
GAR				Sn	**Sn**	**09 21 19.8**	**-4.5**
CHGR	**Chuyangaron**	**2.76**	**295**		**Pn**	**09 20 57.8**	**-1.4**
CHGR				Sn	**Sn**	**09 21 31.1**	**-4.7**
KSH	**Kashi**	**3.48**	**54**	P	**Pn**	**09 21 03.3**	**-4.4**
KSH				S	Sn	09 21 41.0	-10
KSH				smax	smax		
	comp=N,500nm,0.8s						
KSH				smax	smax		
	comp=E,820nm,0.7s						
ARSB	**Arslanbob**	**3.83**	**7**		**Pn**	**09 21 11.3**	**-0.7**
ARSB	**Arslanbob**	**3.83**	**7**	PN	**Pn**	**09 21 11.3**	**-0.7**
NIL	**Nilore**	**3.93**	**169**		**Pn**	**09 21 14.1**	**+0.8**
NIL	**Nilore**	**3.93**	**169**	PN	**Pn**	**09 21 14.1**	**+0.8**
KBL	**Kabul**	**4.00**	**223**		**Pn**	**09 21 14.1**	**-0.2**
KBL	**Kabul**	**4.00**	**223**	PN	**Pn**	**09 21 14.1**	**-0.2**
IUG	**Iuzhnay**	**4.95**	**340**	⇓*i* P	**Pn**	**09 21 25.8**	**-0.3**
IUG	**Iuzhnay**	**4.95**	**340**	*d i* PN	**Pn**	**09 21 25.8**	**-0.3**
UCH	**Uchtor**	**4.99**	**19**	P	**Pn**	**09 21 26.4**	**-0.5**
	SNR=33						
ALCI	**Alchi Leh**	**5.13**	**129**	*e*P	**Pn**	**09 21 27.9**	**-0.9**
ALCI				*e*S	**Sn**	**09 22 26.4**	**-2.5**
ALCI				IAML		09 22 31.1	
	comp=N,184nm,0.4s						
ALCI				IAML		09 22 31.8	
	comp=E,171nm,0.6s						
JMU	**Jammu**	**5.23**	**156**	*e*P	**Pn**	**09 21 30.6**	**+1.0**
JMU				*e*S	**Sn**	**09 22 28.8**	**-1.8**
JMU				IAML		09 22 29.4	
	comp=N,497nm,0.4s						
JMU				IAML		09 22 29.5	
	comp=E,660nm,0.6s						
CHM	**Chimkent**	**5.23**	**337**	⇓*i* P	**Pn**	**09 21 29.4**	**-0.2**
CHM	**Chimkent**	**5.23**	**337**	*d i* PN	**Pn**	**09 21 29.4**	**-0.2**
EKS2	**Erkin-Say**	**5.25**	**12**	P	**Pn**	**09 21 30.8**	**+0.9**
	SNR=9.6						
AAK	**Ala-Archa**	**5.37**	**17**	P	**Pn**	**09 21 31.5**	**0.0**
	comp=E,18nm,0.4s,baz=179,slow=5.7,SNR=61						
AAK				S	**Sn**	**09 22 32.3**	**-1.7**
	comp=E,23nm,0.5s,baz=142,slow=23,SNR=13						
AAK	**Ala-Archa**	**5.37**	**17**		**Pn**	**09 21 31.4**	**-0.1**
AAK	**Ala-Archa**	**5.37**	**17**	P	**Pn**	**09 21 31.6**	**0.0**
	SNR=33						
AAK	**Ala-Archa**	**5.37**	**17**	⇓P	**Pn**	**09 21 27.4**	**-4.1**
	comp=E,6.7nm,0.5s						
AAK				⇓S	**Sn**	**09 22 31.2**	**-2.9**
	comp=E,18nm,0.6s						
AAK	**Ala-Archa**	**5.37**	**17**	*c i* PN	**Pn**	**09 21 31.0**	**-0.5**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DZA	**Taraz**	**5.42**	**352**	*e*P	**Pn**	**09 21 31.6**	**-0.4**
DZA	**Taraz**	**5.42**	**352**	*e*PN	**Pn**	**09 21 31.6**	**-0.4**
KBK	**Karagaybulak**	**5.50**	**20**	P	**Pn**	**09 21 33.8**	**+0.5**
	SNR=8.0						
TSSA	**Tissa**	**5.62**	**145**	*e*P	**Pn**	**09 21 34.3**	**-0.6**
TSSA				*e*S	**Sn**	**09 22 35.2**	**-4.8**
TSSA				IAML		09 22 38.4	
	comp=E,690nm,0.6s						
TSSA				IAML		09 22 39.2	
	comp=N,905nm,0.4s						
BOOM	**Boomskoye usch**	**5.68**	**28**		**Pn**	**09 21 35.0**	**-0.5**
BOOM	**Boomskoye usch**	**5.68**	**28**	PN	**Pn**	**09 21 35.0**	**-0.5**
KK31	**Karatay Array**	**5.75**	**346**		**Pn**	**09 21 35.3**	**-0.9**
KK31	**Karatay Array**	**5.75**	**346**	P	Pn	09 21 31.6	-4.6
	comp=N,9.5nm,0.3s,baz=159,slow=10,SNR=101						
KK31				⇓S	**Sn**	**09 22 36.2**	**-6.5**
	comp=N,54nm,0.3s,baz=170,slow=14,SNR=28						
KK31	**Karatay Array**	**5.75**	**346**	PN	**Pn**	**09 21 35.3**	**-0.9**
KKAR	**Karatay Array**	**5.75**	**346**		**Pn**	**09 21 35.3**	**-0.9**
KKAR	**Karatay Array**	**5.75**	**346**	PN	**Pn**	**09 21 35.3**	**-0.9**
THN	**Thein Dam**	**5.78**	**150**	*e*P	**Pn**	**09 21 37.0**	**+0.3**
THN				*e*S	**Sn**	**09 22 39.9**	**-3.6**
THN				IAML		09 22 44.0	
	comp=E,420nm,0.5s						
THN				IAML		09 22 46.4	
	comp=N,448nm,0.6s						
BRLS	**Boroldaу**	**5.83**	**342**	*e*P	**Pn**	**09 21 33.5**	**-3.7**
BRLS	**Boroldaу**	**5.83**	**342**	*e*PN	**Pn**	**09 21 33.5**	**-3.7**
KDJ	**Kajisay**	**5.92**	**37**		**Pn**	**09 21 38.2**	**-0.4**
KDJ	**Kajisay**	**5.92**	**37**	PN	**Pn**	**09 21 38.2**	**-0.4**
TKM2	**Tokmak 2**	**5.94**	**24**	P	**Pn**	**09 21 38.5**	**-0.3**
	SNR=34						
TARG	**Taragay, Kyrgy**	**5.95**	**43**		**Pn**	**09 21 38.0**	**-1.2**
TARG	**Taragay, Kyrgy**	**5.95**	**43**	PN	**Pn**	**09 21 38.0**	**-1.2**
DHRM	**DHARAMSHALA**	**6.18**	**147**	*e*P	**Pn**	**09 21 41.9**	**-0.2**
DHRM				*e*S	**Sn**	**09 22 49.0**	**-4.2**
DHRM				IAML		09 22 52.6	
	comp=N,1μm,0.7s						
DHRM				IAML		09 22 54.0	
	comp=E,902nm,0.5s						
TLWR	**Talawar**	**6.30**	**151**	*e*P	**Pn**	**09 21 43.4**	**0.0**
TLWR				*e*S	**Sn**	**09 22 50.9**	**-4.7**
TLWR				IAML		09 22 54.2	
	comp=E,138nm,0.6s						
WUS	**Wushi**	**6.47**	**53**		**Pn**	**09 21 45.5**	**-0.2**
TNSS	**Tian-Shan**	**6.54**	**31**	*e*P	**Pn**	**09 21 46.8**	**0.0**
TNSS	**Tian-Shan**	**6.54**	**31**	*e*PN	**Pn**	**09 21 46.7**	**0.0**
AAA	**Alma-Ata**	**6.67**	**30**	*e*P	**Pn**	**09 21 48.9**	**+0.8**
AAA	**Alma-Ata**	**6.67**	**30**	*e*PN	**Pn**	**09 21 48.9**	**+0.8**
MDOK	**Medeo**	**6.68**	**31**	*e*P	**Pn**	**09 21 48.7**	**+0.2**
MDOK	**Medeo**	**6.68**	**31**	*e*PN	**Pn**	**09 21 48.6**	**+0.2**
BHK	**Bhakra**	**6.96**	**150**	*e*P	**Pn**	**09 21 52.5**	**+0.5**
BHK				*e*S	**Sn**	**09 23 09.1**	**-2.0**
BHK				IAML		09 23 09.9	
	comp=N,173nm,0.4s						
BHK				IAML		09 23 12.3	
	comp=E,180nm,0.3s						
HNLY	**HANLEY**	**7.20**	**129**	*e*P	**Pn**	**09 21 55.3**	**-0.3**
HNLY				*e*S	**Sn**	**09 23 14.6**	**-3.0**
HNLY				IAML		09 23 17.0	
	comp=N,19nm,0.8s						
HNLY				IAML		09 23 17.5	
	comp=E,28nm,1.4s						
SATY	**Saty**	**7.21**	**38**	*e*P	**Pn**	**09 21 55.9**	**+0.6**
SATY	**Saty**	**7.21**	**38**	*e*PN	**Pn**	**09 21 55.9**	**+0.6**
SMLA	**Simla**	**7.52**	**147**	*e*P	**Pn**	**09 21 58.4**	**-0.9**
SMLA				*e*S	**Sn**	**09 23 17.7**	**-6.6**
SMLA				IAML		09 23 20.8	
	comp=N,372nm,0.7s						
SMLA				IAML		09 23 22.8	
	comp=E,398nm,0.8s						
UZB	**Uzynbulak**	**7.59**	**40**	*e*P	**Pn**	**09 22 00.7**	**+0.4**
UZB	**Uzynbulak**	**7.59**	**40**	*e*PN	**Pn**	**09 22 00.6**	**+0.4**
SHLS	**Shalkode**	**7.83**	**42**	*e*P	**Pn**	**09 22 06.7**	**+3.4**
SHLS	**Shalkode**	**7.83**	**42**	*e*PN	**Pn**	**09 22 06.6**	**+3.4**
PDGK	**Podgornoye**	**7.96**	**41**	⇑P	**Pn**	**09 22 02.9**	**-2.1**
	comp=E,4.5nm,0.7s						
PDGK				⇑S	Sn	09 23 43.8	+9.1
	comp=E,8.3nm,1.1s						
DDI	**Dehra Dun**	**8.61**	**145**	*e*S	**Sn**	**09 23 43.6**	**-6.6**
DDI				IAML		09 23 48.4	
	comp=N,217nm,0.5s						
DDI				IAML		09 23 54.5	
	comp=E,235nm,0.5s						
NDI	**New Delhi**	**9.71**	**154**	*e*P	**Pn**	**09 22 26.0**	**-1.8**
NDI				*e*S	**Sn**	**09 24 07.6**	**-8.9**
AYAN	**Aya Nagar**	**9.87**	**155**	*e*P	**Pn**	**09 22 27.6**	**-2.1**
AYAN				*e*S	Sn	09 24 10.8	-9.3
KUDL	**Kundal**	**9.98**	**158**	*e*P	**Pn**	**09 22 28.6**	**-2.6**
KUDL				*e*S	Sn	09 24 12.0	-11
KUDL				IAML		09 24 15.8	
	comp=E,57nm,0.5s						
KUDL				IAML		09 24 17.8	
	comp=N,27nm,0.7s						
SONA	**Sohna**	**10.06**	**155**	*e*S	Sn	09 24 14.9	-10
LGTI	**Lohaghat**	**10.40**	**138**	*e*S	Sn	09 24 22.9	-10
MAKZ	**Makanchi**	**11.71**	**35**		**Pn**	**09 22 52.5**	**-0.8**
MAKZ	**Makanchi**	**11.71**	**35**	P	**Pn**	**09 22 52.5**	**-0.8**
MK31	**Makanchi Array**	**11.84**	**35**	*de*P	**Pn**	**09 22 55.1**	**+0.2**

KURK					pmax	pmax			
	comp=Z,12nm,1.0s								
AB31	**Akbulak array**	**14.77**	**327**			**Pn**	**09 23 29.7**	**-1.8**	
AB31	**Akbulak array**	**14.77**	**327**	P		**Pn**	**09 23 29.8**	**-1.6**	
	comp=Z,9.3nm,0.5s,baz=141,slow=12,SNR=143								
AB31				⇑S		**Sn**	**09 26 16.7**	**+0.1**	
	comp=Z,12nm,0.6s,baz=130,slow=24,SNR=9.3								
ABKAR	**Akbulak array**	**14.77**	**327**			**Pn**	**09 23 29.8**	**-1.6**	
BHPL	**Bhopal**	**14.89**	**162**	*ex*		x	09 23 27.1		
BHPL					IAmb	IAmb	09 23 32.1		
	comp=Z,5.8nm,0.6s								
BHPL				*e*S		S	09 26 09.3	-9.4	
EVN	**Everest**	**15.45**	**124**	P		**Pn**	**09 23 40.1**	**-0.5**	
EVN					IAmb	IAmb	09 23 46.0		
	comp=Z,25nm,1.1s								
BVAR	**Borovoye Array**	**15.56**	**356**	P		**Pn**	**09 23 41.0**	**-0.1**	
	comp=Z,5.9nm,0.7s,baz=168,slow=12,SNR=25								
BVAR				S		**S**	**09 26 29.1**	**-4.6**	
	comp=Z,2.1nm,0.5s,baz=165,slow=23,SNR=5.5								
BORK	**Borovoye**	**15.59**	**355**	P		**Pn**	**09 23 40.0**	**-1.4**	
BORK	**Borovoye**	**15.59**	**355**	*de*P		**Pn**	**09 23 40.9**	**-0.5**	
BORK					pmax	pmax			
	comp=Z,4.0nm,0.8s								
DGZ	**Jazzator, Alta**	**16.32**	**37**	*de*P		**Pn**	**09 23 50.3**	**-0.1**	
DGZ					pmax	pmax			
	comp=Z,5.0nm,0.7s								
AKTO	**Aktyubinsk**	**16.48**	**326**	P		**Pn**	**09 23 52.5**	**+0.3**	
	comp=Z,18nm,0.5s,baz=128,slow=8.9,SNR=38								
AKTO				S		**S**	**09 26 48.6**	**-4.8**	
	comp=Z,8.5nm,0.7s,baz=37,slow=20,SNR=7.8								
AKTO	**Aktyubinsk**	**16.48**	**326**	⇑P		**P**	**09 23 51.8**	**+0.5**	
	comp=Z,10nm,0.6s								
AKTO				⇓S		**Sn**	**09 26 56.9**	**-0.5**	
	comp=Z,7.3nm,0.7s								
ZAA0	**Zalesovo Array**	**18.55**	**24**	P		**P**	**09 24 13.8**	**0.0**	
ZAA0					IAmb	IAmb	09 24 15.4		
	comp=Z,23nm,0.7s								
ZALV	**Zalesovo Beam**	**18.55**	**24**	P		**P**	**09 24 14.8**	**+1.0**	
	comp=Z,28nm,0.7s,baz=221,slow=10.0,SNR=100								
ZALV	**Zalesovo Beam**	**18.55**	**24**	P		**P**	**09 24 15.0**	**+1.2**	
ARTI	**Arti**	**21.07**	**338**	P		**P**	**09 24 41.3**	**+0.7**	
ARTI	**Arti**	**21.07**	**338**	*de*P		**P**	**09 24 41.3**	**+0.7**	
ARTI					pmax	pmax			
	comp=Z,15nm,1.7s								
GTA	**Gaotai**	**21.57**	**76**	P		**P**	**09 24 47.5**	**+1.3**	
GTA					pmax	pmax			
	comp=Z,16nm,1.1s								
KNGR	**Kungurtug, Tuv**	**22.19**	**46**	⇓*e*P		**P**	**09 24 55.2**	**+3.0**	
KNGR					pmax	pmax			
	comp=Z,32nm,0.8s								
BELG	**Belogornoye**	**22.80**	**319**	*de*P		**Pn**	**09 24 58.2**	**+0.7**	
BELG					pmax	pmax			
	comp=Z,3.0nm,0.8s								
KBZ	**Khabaz**	**23.12**	**295**	P		**P**	**09 25 01.1**	**+0.7**	
	comp=Z,3.2nm,0.8s,baz=114,slow=7.7,SNR=5.6								
	comp=Z,3.2nm,0.8s								
KBZ	**Khabaz**	**23.12**	**295**	⇓*e*P		**P**	**09 25 01.3**	**+0.8**	
KIV	**Kislovodsk**	**23.29**	**295**	*e*P		**P**	**09 25 02.4**	**+0.2**	
KIV					pmax	pmax			
	comp=Z,12nm,1.0s								
SONM	**Songino Array**	**26.88**	**57**	P		**P**	**09 25 36.3**	**+1.7**	
	comp=Z,1.9nm,0.7s,baz=257,slow=10,SNR=7.9								
	comp=Z,1.9nm,0.7s								
PZH	**PanZhiHua**	**27.14**	**105**	P		**P**	**09 25 39.8**	**+2.7**	
ULN	**Ulaanbaatar**	**27.32**	**57**	⇑*e*P		**P**	**09 25 40.4**	**+1.9**	
ULN					pmax	pmax			
	comp=Z,20nm,4.9s								
OBN	**Obninsk**	**29.89**	**318**	*e*P		**P**	**09 26 03.4**	**+2.5**	
OBN					pmax	pmax			
	comp=Z,6.0nm,0.9s								
BR131	**Keskin Array S**	**30.16**	**286**	⇓*e*P		**P**	**09 26 05.7**	**+2.0**	
BRTR	**Keskin Array B**	**30.16**	**286**	P		**P**	**09 26 05.9**	**+2.2**	
	comp=Z,0.7nm,0.5s,baz=96,slow=7.3,SNR=5.5								
	comp=Z,0.7nm,0.5s								
HHC	**Hu-ho-hao-te**	**30.41**	**71**	*e*P		**P**	**09 26 07.0**	**+1.1**	
HHC					pmax	pmax			
	comp=Z,17nm,0.8s								
AKBB	**Malin Array Si**	**33.16**	**307**	⇑*e*P		**P**	**09 26 30.4**	**+0.8**	
APA	**Apatity**	**37.12**	**336**	⇓*e*P		**P**	**09 27 02.5**	**-0.6**	
APA				*e**PP		**pP**	**09 27 39.7**	**-6.3**	
APA					MLR	MLR			
	comp=Z,759nm,3.9s								
FINES	**FINESS Array B**	**37.25**	**325**	P		**P**	**09 27 05.5**	**+1.2**	
	comp=Z,1.2nm,0.5s,baz=118,slow=8.6,SNR=7.0								
	comp=Z,1.2nm,0.5s								
FINES	**FINESS Array B**	**37.25**	**325**	*i* P		**P**	**09 27 04.9**	**+0.6**	
FINES					pmax	pmax			
	comp=Z,1.0nm,0.3s								
NJ2	**Nanjing**	**38.28**	**84**	*e*P		**P**	**09 27 15.0**	**+1.7**	
NJ2					pmax	pmax			
	comp=Z,13nm,0.6s								
ARCES	**ARCESS Array B**	**40.62**	**337**	P		**P**	**09 27 33.7**	**+1.5**	
	comp=Z,0.8nm,0.3s,baz=116,slow=6.0,SNR=21								
	comp=Z,0.8nm,0.3s								
ARCES	**ARCESS Array B**	**40.62**	**337**	IAmb		IAmb	09 27 50.9		
	comp=Z,22nm,1.4s								
HEH	**HeiHe**	**40.78**	**54**	*e*P		**P**	**09 27 35.8**	**+2.1**	
HEH					pmax	pmax			
	comp=Z,22nm,0.8s								
HFS	**Hagfors**	**42.94**	**321**	P		**P**	**09 27 52.2**	**+1.2**	
	comp=Z,2.6nm,0.5s,baz=106,slow=11,SNR=13								
	comp=Z,2.6nm,0.5s								
CLL	**Collm**	**43.40**	**308**	*e*P		**P**	**09 27 57.0**	**+2.2**	
NB2	**NORSAR Subarra**	**44.22**	**322**	P		**P**	**09 28 02.1**	**+0.8**	
	comp=Z,1.0nm,0.5s,baz=92,slow=7.9								
NOA	**NORSAR Array B**	**44.22**	**322**	P		**P**	**09 28 02.1**	**+0.8**	
	comp=Z,1.3nm,0.6s,baz=94,slow=7.7,SNR=6.1								
	comp=Z,1.3nm,0.6s								
TIXI	**Tiksi**	**44.42**	**22**	P		**P**	**09 28 03.6**	**+0.9**	
TIXI					IAmb	IAmb	09 28 04.6		
	comp=Z,7.9nm,0.8s								
TIXI	**Tiksi**	**44.42**	**22**	⇑*e*P		**P**	**09 28 03.9**	**+1.2**	
TIXI					pmax	pmax			
	comp=Z,20nm,2.5s								
PETK	**Petropavlovsk-**	**58.49**	**45**	P		**P**	**09 29 47.9**	**+0.8**	
	comp=Z,13nm,1.1s,baz=305,slow=5.1,SNR=3.6								
	comp=Z,13nm,1.1s								
G19K	**Purcell Mounta**	**69.90**	**19**	P		**P**	**09 31 01.2**	**+0.2**	
E27K	**Coleen River**	**71.58**	**13**	P		**P**	**09 31 13.0**	**+1.8**	
E27K					IAmb	IAmb	09 31 36.5		
	comp=Z,7.1nm,1.5s								
BMAR	**Burnt Mountain**	**71.69**	**14**	P		**P**	**09 31 14.2**	**+2.3**	
K17K	**Iditarod**	**72.19**	**22**	P		**P**	**09 31 16.8**	**+2.0**	
K17K					IAmb	IAmb	09 31 48.9		
	comp=Z,25nm,1.4s								
INK	**Inuvik**	**72.72**	**10**	P		**P**	**09 31 19.5**	**+1.6**	
INK					IAmb	IAmb	09 31 20.2		
	comp=Z,7.5nm,1.4s								
INK	**Inuvik**	**72.72**	**10**	P		**P**	**09 31 19.5**	**+1.6**	
INK					pmax	pmax			
	comp=Z,7.0nm,1.4s								
ILAR	**Eielson Array**	**73.50**	**16**	P		**P**	**09 31 23.2**	**+0.7**	
	comp=Z,1.1nm,0.9s,baz=323,slow=5.0,SNR=6.1								
	comp=Z,1.1nm,0.9s								
G30M	**tAoh Zraii Nji**	**73.56**	**11**	P		**P**	**09 31 23.8**	**+0.9**	
G30M					IAmb	IAmb	09 31 48.7		
	comp=Z,7.0nm,1.4s								
I28M	**Miner Creek**	**74.33**	**13**	P		**P**	**09 31 28.6**	**+1.2**	
KNRA	**Kununurra**	**74.89**	**124**	P		**P**	**09 31 32.4**	**+1.2**	
KNRA					IAmb	IAmb	09 31 59.5		
	comp=Z,8.6nm,1.2s								
SML	**Sawmill**	**75.68**	**19**	P		**P**	**09 31 36.4**	**+1.2**	
BCAR	**Beaver Creek A**	**76.10**	**15**	P		**P**	**09 31 39.2**	**+1.7**	
YKA	**Yellowknife Ar**	**80.17**	**3**	P		**P**	**09 32 00.6**	**+0.9**	
	comp=Z,1.4nm,0.6s,baz=348,slow=5.7,SNR=11								
	comp=Z,1.4nm,0.6s								
WRA	**Warramunga Arr**	**81.63**	**123**	P		**P**	**09 32 08.2**	**+0.1**	
	comp=Z,0.6nm,0.4s,baz=327,slow=5.2,SNR=27								
	comp=Z,0.6nm,0.4s								
ASAR	**Alice Springs**	**83.97**	**126**	P		**P**	**09 32 20.1**	**0.0**	
	comp=Z,0.3nm,0.5s,baz=310,slow=5.1,SNR=6.9								
	comp=Z,0.3nm,0.5s								

*LVSN **28** 09:25:24.6±5.4, 57.71N×23.05E, h0km±425km, ML1.6*
HEL 28 09:25:21.7±0.3, 60.93N×29.25E, h0km, ML1.5,
Suspected explosion, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUF	**Ruokolahti**	**0.52**	**344**	PG	Pg	09 25 31.2	-0.4
RUF				SG	Sg	09 25 37.6	-0.8
RUF				smax	smax	09 25 38.6	
	comp=Z,5.5nm,0.2s						
VJF	**Virojoki**	**0.92**	**246**	PG	Pg	09 25 38.3	-1.0
VJF				smax	smax	09 25 50.0	
	comp=Z,12nm,0.2s						
VJF				SB	Sg	09 25 50.8	-0.3
FIA0	**FINESS Array S**	**1.62**	**290**	PG	Pn	09 25 50.3	-1.2
	baz=109						
FIA0				smax	smax	09 26 10.2	
	comp=Z,2.1nm,0.2s						
FIA0				SG	Sn	09 26 11.9	-1.1
PVF	**Pernaja**	**1.71**	**258**	PG	Pn	09 25 52.2	-0.4
	baz=73						
PVF				smax	smax	09 26 12.8	
	comp=Z,3.7nm,0.2s						
PVF				SN	Sg	09 26 16.7	+0.2
ARBE	**Arbavere**	**2.21**	**229**	*e*P	Pn	09 25 58.9	-0.7
ARBE				*e*S	Sn	09 26 27.2	-0.4
ARBE	**Arbavere**	**2.21**	**229**	SN	Sn	09 26 27.4	-0.2
JOF	**Joensuu**	**2.22**	**25**	PG	Pb	09 26 01.4	-1.3
JOF				SG	Sb	09 26 29.4	-1.3
NUR	**Nurmijarvi**	**2.30**	**261**	PG	Pn	09 26 02.4	+1.6
NUR				smax	smax	09 26 29.6	
	comp=Z,1.5nm,0.2s						
SUF	**Sumiainen**	**2.32**	**322**	PG	Pb	09 26 03.9	-0.5
	baz=143						
SUF				smax	smax	09 26 30.4	
	comp=Z,1.4nm,0.2s						
SUF				SG	Sb	09 26 33.5	-0.1
KEF	**Keuruu**	**2.44**	**303**	smax	smax	09 26 33.7	
	comp=Z,0.9nm,0.2s						
KEF				SG	Sb	09 26 36.8	-0.1
MEF	**Metsahovi**	**2.50**	**256**	*e*P	Pn	09 26 05.2	+1.6
MEF				*e*S	Sn	09 26 36.2	+1.6
MEF				AML	AML	09 26 51.5	
	comp=N,4.4nm,0.8s						
MEF				AML	AML	09 26 57.0	
	comp=Z,7.5nm,0.7s						
MEF				AML	AML	09 27 21.9	
	comp=E,3.7nm,0.7s						
MEF	**Metsahovi**	**2.50**	**256**	PG	Pb	09 26 05.8	-1.6
MEF				smax	smax	09 26 35.5	
	comp=Z,1.4nm,0.2s						
NIF	**Nilsia**	**2.56**	**345**	smax	smax	09 26 37.4	
	comp=Z,1.1nm,0.2s						
NIF				SG	Sb	09 26 41.1	+0.7
VSU	**Vasula**	**2.78**	**208**	*e*P	Pn	09 26 00.1	-7.4
VSU				AML	AML	09 26 34.6	
	comp=E,14nm,0.5s						
VSU				AML	AML	09 26 34.9	
	comp=Z,9.6nm,0.3s						
VSU				AML	AML	09 27 05.5	
	comp=N,13nm,0.4s						

*RHSSO **28** 09:29:02.8±0.5, 43.21N×17.99E, h5km, ML2.5/3*
*PDG **28** 09:29:05.7±0.1, 43.13N×18.10E, h0km±11km, ML2.3/9,*
Error ellipse: s-maj=0.4km s-min=1.0km az=0.0
ISC 28 09:29:02.8±1.1, 43.21N±0.03×18.07E±0.02, h14km±10km,
n27, σ1s08/53, 3C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.38**	**96**	*e*Pg	**Pb**	**09 29 11.0**	**-0.4**
KLINJ				*e*Sg	**Sb**	**09 29 17.6**	**+0.5**
BRY	**Bratogost**	**0.46**	**132**	⇓*i*Pg	**Pb**	**09 29 12.5**	**-0.3**
BRY				*e*Sg	**Sb**	**09 29 19.8**	**+0.2**
TREB	**Trebinje**	**0.54**	**157**	*e*Pg	**Pb**	**09 29 12.9**	**-1.1**
TREB				*e*Sg	**Sb**	**09 29 21.4**	**-0.1**
DBRK	**Dubrovnik**	**0.55**	**174**	*i* Pg	**Pb**	**09 29 13.8**	**-0.4**
DBRK				*e*Sg	**Sb**	**09 29 21.2**	**-0.5**
UPM	**Unac-Piva**	**0.61**	**91**	⇑*i*Pg	**Pn**	**09 29 15.7**	**-1.5**
UPM				*e*Sg	**Sn**	**09 29 25.1**	**-1.8**
RICI	**Ricice**	**0.74**	**293**	*e*Pg	**Pb**	**09 29 17.4**	**0.0**
RICI				Sg	**Sb**	**09 29 28.4**	**+1.0**
MAKA	**Makarska**	**0.77**	**276**	*i* Pg	**Pg**	**09 29 17.5**	**-0.3**
MAKA				Sg	**Sb**	**09 29 28.6**	**+0.4**
NKME	**Niksic**	**0.79**	**124**	⇓*i*Pg	**Pb**	**09 29 17.9**	**-0.4**
NKME				*e*Sg	**Sn**	**09 29 29.9**	**-1.1**
HCY	**Herceg Novi**	**0.82**	**158**	⇓*i*Pg	**Pb**	**09 29 18.9**	**0.0**
HCY				*e*Sg	**Sn**	**09 29 31.1**	**-0.8**
CEME	**Cevo**	**0.91**	**137**	⇑*i*Pg	**Pn**	**09 29 20.3**	**-0.9**
CEME				*e*Sg	**Sn**	**09 29 34.2**	**+0.1**
PLE	**Pljevlja**	**0.97**	**83**	⇓*i*Pg	**Pn**	**09 29 22.0**	**-0.1**
PLE				*e*Sg	**Sn**	**09 29 37.0**	**+1.3**
LSTV	**Lastovo**	**0.97**	**243**	*e*Pg	**Pg**	**09 29 20.9**	**-0.7**
LSTV				Sg	**Sb**	**09 29 34.9**	**+0.8**
RUDO	**Rudo**	**1.03**	**66**	*e*Pg	**Pn**	**09 29 22.6**	**-0.2**
RUDO				*e*Sg	**Sn**	**09 29 37.3**	**+0.3**
BUM	**Brajici-Budva**	**1.09**	**146**	*e*Pg	**Pn**	**09 29 23.8**	**+0.1**
BUM				*e*Sg	**Sn**	**09 29 40.1**	**+1.4**
HVAR	**Hvar**	**1.19**	**269**	*e*Pg	**Pg**	**09 29 25.2**	**-0.5**
HVAR				Sg	**Sn**	**09 29 41.9**	**+1.1**
DRME	**Dracevica, Mon**	**1.31**	**141**	*e*Pg	**Pg**	**09 29 28.0**	**-0.1**
DRME				*i* Sg	**Sn**	**09 29 47.5**	**+3.5**
IVA	**Berane**	**1.38**	**104**	*e*Pg	**Pg**	**09 29 29.7**	**+0.3**
KIJV	**Kijevo**	**1.45**	**304**	*e*Pn	**Pg**	**09 29 30.8**	**+0.2**
KIJV				Sg	**Sg**	**09 29 52.0**	**+2.6**
PVY	**Plav**	**1.52**	**113**	⇑*i*Pg	**Pg**	**09 29 31.9**	**-0.1**
PVY				*e*Sg	**Sg**	**09 29 53.2**	**+1.4**
BLY	**Banja Luka**	**1.66**	**338**	*e*Pn	**Pb**	**09 29 32.2**	**-1.0**
BLY				*e*Sn	**Sb**	**09 29 54.2**	**+0.2**
ZIRJ	**Zirje**	**1.82**	**285**	*e*Pn	**Pb**	**09 29 36.0**	**+0.1**
ZIRJ				Sn	**Sg**	**09 30 00.7**	**-0.8**
MORI	**Morici**	**1.84**	**292**	*i* Pn	**Pb**	**09 29 36.7**	**+0.6**
MORI				Sn	**Sg**	**09 30 01.6**	**-0.4**
DUGI	**Dugi Otok**	**2.32**	**291**	*i* Pn	**Pb**	**09 29 44.3**	**-0.1**
DUGI				Sn	**Sb**	**09 30 14.2**	**+1.2**
PLIT	**Plitvice**	**2.43**	**314**	*e*Pn	**Pb**	**09 29 45.6**	**-0.6**
PLIT				Sn	**Sb**	**09 30 17.7**	**+1.7**
VIRC	**Vir**	**2.44**	**297**	*i* Pn	**Pb**	**09 29 45.1**	**-1.3**
VIRC				Sn	**Sb**	**09 30 17.0**	**+0.8**
NVLJ	**Novalja**	**2.68**	**301**	*e*Pn	**Pb**	**09 29 48.8**	**-1.7**
NVLJ				Sn	**Sb**	**09 30 23.2**	**0.0**
RABC	**Rab**	**2.83**	**304**	*i* Pn	**Pb**	**09 29 51.0**	**-2.1**
RABC				Sn	**Sb**	**09 30 26.6**	**-0.9**

*KRNET **28** 09:40:40.6±0.1, 41.23N×70.52E, h15km, mb2.9*
*ISU **28** 09:40:41, 41.38N×70.52E, h24km*
*SOME **28** 09:40:43.8, 41.33N×70.62E, h10km*
*NNC **28** 09:40:46.9±3.5, 41.42N×70.53E, h0km, mb3.2, mpv3.2,*
Error ellipse: s-maj=27.2km s-min=11.5km az=29.0
ISC 28 09:40:41.7±1.2, 41.32N±0.03×70.52E±0.02, h2km±10km,
n27, σ1s21/50, 20C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMG	**Chimgan**	**0.45**	**301**	P	**Pg**	**09 40 50.1**	**-0.2**
CHMG				S	**Sg**	**09 40 56.5**	**+0.4**
TRKS	**Terek-Say**	**0.51**	**66**	⇑*i*P	**Pg**	**09 40 51.1**	**-0.4**
TRKS				⇑*i*S	**Sg**	**09 40 58.6**	**+0.5**
CHRV	**Charvak**	**0.54**	**307**	P	**Pg**	**09 40 51.8**	**-0.2**
CHRV				S	**Sg**	**09 40 59.5**	**+0.6**
PSK	**Pskem**	**0.62**	**350**	P	**Pg**	**09 40 51.4**	**-2.1**
PSK				S	**Sg**	**09 41 00.0**	**-1.5**
TVKS	**Tavaksay**	**0.70**	**292**	P	**Pg**	**09 40 54.5**	**-0.6**
TVKS				S	**Sg**	**09 41 04.5**	**+0.3**
IUG	**Iuzhnay**	**0.90**	**336**	P	**Pb**	**09 41 02.0**	**+1.9**
	91nm,0.1s						
IUG				S	**Sn**	**09 41 16.0**	**+0.8**
	159nm,0.2s						
ARK	**Arkit**	**1.18**	**66**	⇑*e*P	**Pg**	**09 41 03.6**	**-0.8**
ARK				⇑*e*S	**Sn**	**09 41 20.6**	**-1.5**
CHMI	**Chimion**	**1.30**	**144**	P	**Pn**	**09 41 06.5**	**-0.4**
CHMI				S	**Sg**	**09 41 24.6**	**+1.3**
FRG	**Fergana**	**1.35**	**134**	S	**Sb**	**09 41 24.0**	**-1.3**
TSTA	**Tashata**	**1.66**	**116**	P	**Pn**	**09 41 12.3**	**+0.5**
TSTA				S	**Sb**	**09 41 34.2**	**-0.1**
KK31	**Karatay Array**	**1.78**	**360**	⇓P	**Pb**	**09 41 16.4**	**+1.3**
	1.2nm,0.2s,baz=189,slow=17,SNR=39						
KK31				⇓S	**Sg**	**09 41 40.0**	**+1.1**
	7.0nm,0.3s,baz=158,slow=27,SNR=13						
BRLS	**Borolday**	**1.78**	**344**	P	**Pn**	**09 41 13.6**	**0.0**
	3.0nm,0.2s						
BRLS				S	**Sn**	**09 41 35.6**	**-1.2**
	32nm,0.2s						
BRLS	**Borolday**	**1.78**	**344**	*e*P	**Pn**	**09 41 13.6**	**0.0**
	3.0nm,0.2s						
BRLS				*e*S	**Sn**	**09 41 35.6**	**-1.2**
	32nm,0.2s						
ARSB	**Arslanbob**	**1.85**	**89**	⇑*e*P	**Pn**	**09 41 15.2**	**+0.6**
ARSB				⇑*e*S	**Sb**	**09 41 39.8**	**-0.3**
MNAS	**Manas**	**1.88**	**51**	⇑*i*P	**Pb**	**09 41 16.5**	**-0.4**
MNAS				⇑*i*S	**Sg**	**09 41 42.4**	**+0.2**
OHH	**Osh**	**1.89**	**114**	⇑*i*P	**Pn**	**09 41 14.7**	**-0.4**
OHH				⇑*i*S	**Sb**	**09 41 39.8**	**-1.3**
GAR	**Garm**	**2.32**	**184**	⇑*i*P	**Pn**	**09 41 20.3**	**-0.8**
GAR				⇑*i*S	**Sn**	**09 41 49.1**	**-1.2**
KRSA	**Karasay**	**2.43**	**241**	P	**Pn**	**09 41 22.1**	**-0.4**
KRSA				S	**Sn**	**09 41 51.9**	**-0.9**
MRKS	**Merke**	**2.47**	**54**	Pg	**Pb**	**09 41 27.8**	**+1.0**
	13nm,0.5s						
MRKS				Lg	Lg	09 42 00.2	
MRKS	**Merke**	**2.47**	**54**	*e*P	**Pb**	**09 41 28.1**	**+1.3**
	9.6nm,0.3s						
MRKS				*e*S	**Sg**	**09 42 00.4**	**-0.6**
	39nm,0.5s						
SALK	**Salom-Alik**	**2.53**	**99**	⇑*e*P	**Pn**	**09 41 24.5**	**+0.5**
SALK				⇑*i*S	**Sn**	**09 41 56.3**	**+0.8**
SFK	**Sufi-Kurgan**	**2.62**	**119**	⇑*e*P	**Pn**	**09 41 24.9**	**-0.3**
SFK				⇑*e*S	**Sn**	**09 41 57.5**	**-0.2**
ARLS	**Aral**	**2.90**	**78**	⇑*e*P	**Pn**	**09 41 30.0**	**+0.9**
ARLS				⇑*e*S	**Sn**	**09 42 05.4**	**+0.8**
AAK	**Ala-Archa**	**3.24**	**65**	⇑Pn	**Pb**	**09 41 41.5**	**+1.5**
	2.3nm,0.8s						
AAK				⇑Sn	**Sb**	**09 42 20.8**	**+0.8**
	3.2nm,0.6s						
KST	**Kastek**	**4.39**	**65**	Pg	**Pb**	**09 42 02.8**	**+3.2**
	0.9nm,0.1s						
KST				Lg	Lg	09 43 00.2	
	9.7nm,0.5s						
KST	**Kastek**	**4.39**	**65**	*e*P	**Pb**	**09 42 02.8**	**+3.2**
	0.9nm,0.1s						
KST				*e*S	**Sg**	**09 43 00.2**	**-2.6**
	9.7nm,0.5s						
KRBS	**Karabastau**	**4.49**	**56**	Pg	**Pg**	**09 42 06.1**	**-1.6**
	1.3nm,0.3s						
KRBS				Lg	Lg	09 43 06.0	
	1.2nm,0.4s						

IDC 28 09:44:18.0±802.0, 24.13S×178.30W, h0km, Error ellipse: s-maj=1590.0km s-min=56.2km az=137.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**84.18**	**124**	H	H	11 29 31.9	
	baz=242,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**84.19**	**124**	H	H	11 29 33.0	
	baz=242,slow=74,SNR=32						
H03S3	**Juan Fernandez**	**84.20**	**124**	H	H	11 29 31.8	
	baz=242,slow=74,SNR=40						
H03N2	**Juan Fernandez**	**84.34**	**124**	H	H	11 29 41.2	
	baz=248,slow=73,SNR=8.3						
H03N3	**Juan Fernandez**	**84.34**	**124**	H	H	11 29 46.2	
	baz=248,slow=73,SNR=6.1						
H03N1	**Juan Fernandez**	**84.36**	**124**	H	H	11 29 41.9	
	baz=248,slow=73,SNR=8.4						
H10S3	**ASCENSION HYDR**	**84.43**	**152**	H	H	12 44 29.7	
	baz=204,slow=74,SNR=6.0						
H10S2	**ASCENSION HYDR**	**84.43**	**152**	H	H	12 44 29.8	
	baz=16,slow=74,SNR=5.9						
H10N3	**ASCENSION HYDR**	**84.51**	**152**	H	H	12 45 55.0	
	baz=203,slow=75,SNR=7.0						
H10N1	**ASCENSION HYDR**	**84.51**	**152**	H	H	12 45 54.7	
	baz=203,slow=75,SNR=10						
H10N2	**ASCENSION HYDR**	**84.52**	**152**	H	H	12 45 50.3	
	baz=203,slow=75,SNR=11						

*KRNET **28** 09:51:42.5±0.1, 41.24N×69.43E, mb2.6*
ISC 28 09:51:28.0±5.7, 40.3N±0.2×69.0E±0.2, h10km, n5, σ1s98/9,
7C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**2.06**	**51**	⇓*e*P	**Pg**	**09 52 07.8**	**+0.2**
TRKS				⇓*e*S	**Sn**	**09 52 26.5**	**-2.2**
ARK	**Arkit**	**2.72**	**54**	⇑*e*P	**Pg**	**09 52 19.6**	**-0.5**
ARK				⇑*e*S	**Sn**	**09 52 46.3**	**+1.4**
KK31	**Karatay Array**	**3.07**	**21**	⇓Pg	**Pg**	**09 52 27.1**	**+0.3**
	0.7nm,0.2s,baz=199,slow=16,SNR=49						
KK31				⇓Lg	Lg	09 52 59.5	
	1.8nm,0.2s,baz=196,slow=27,SNR=4.1						
ARSB	**Arslanbob**	**3.20**	**69**	⇑*e*P	**Pg**	**09 52 29.0**	**-0.4**
ARSB				⇑*e*S	**Sb**	**09 53 03.3**	**-0.9**
ARLS	**Aral**	**4.33**	**66**	⇑*e*P	**Pb**	**09 52 43.8**	**-0.5**
ARLS				⇑*e*S	**Sn**	**09 53 28.5**	**+3.9**

*IDC **28** 09:53:11.2±1.3, 11.72N×86.55W, h108km±25km, mb3.1/1,*
mbtmp3.7/3, Error ellipse: s-maj=139.3km s-min=16.8km
az=41.0
*UCR **28** 09:53:11.9±1.3, 11.56N×86.85W,

DELF					*e*S		**Sn**	09 54 03.4	-0.1
MESS	**Mesas**	**1.75**	**130**		*e*P		**Pn**	09 53 40.9	-0.4
UPAL	**Upala**	**1.81**	**123**		*e*P		**Pn**	09 53 41.0	-0.8
CUI	**Cuipilapa**	**1.83**	**132**	⇓	*i*P		**Pn**	09 53 42.2	0.0
CUI					*e*S		**Sn**	09 54 06.2	+0.5
BAGA	**Bagaces**	**1.85**	**137**		*e*P		**Pn**	09 53 41.9	-0.5
BAGA					*e*S		**Sn**	09 54 05.7	-0.5
CNCH	**Conchagua**	**1.86**	**318**		S		**Sn**	09 54 06.7	+0.1
CNCH	**Conchagua**	**1.86**	**318**		P		**Pn**	09 53 43.3	+0.6
SACU	**Santa Cruz**	**1.87**	**149**	⇓	*i*P		**Pn**	09 53 43.1	+0.4
SACU					*e*S		**Sn**	09 54 05.2	-1.5
LCND	**La Caada**	**1.92**	**317**		P		**Pn**	09 53 43.6	+0.4
JUD3	**Juan Diaz 3**	**1.98**	**150**	⇓	*i*P		**Pn**	09 53 44.4	+0.3
JUD3					*e*S		**Sn**	09 54 07.4	-1.7
TIMP	**Tierras Morena**	**1.99**	**131**		*e*P		**Pn**	09 53 44.0	-0.1
SAJU	**San Juanillo,**	**1.99**	**155**	⇓	*i*P		**Pn**	09 53 44.2	+0.1
CMARA	**Lajas Hojancha**	**2.16**	**149**	⇓	*e*P		**Pn**	09 53 46.6	+0.2
CMARA					*e*S		**Sn**	09 54 11.9	-1.4
JTS	**Las Juntas de**	**2.23**	**135**		P		**Pn**	09 53 47.1	-0.2
	42nm,0.3s,baz=314,slow=14,SNR=45								
JTS					S		**Sn**	09 54 12.0	-2.8
	46nm,0.3s,baz=115,slow=22,SNR=5.5								
JTS	**Las Juntas de**	**2.23**	**135**		*e*P		**Pn**	09 53 47.1	-0.2
JUNT	**Juntas**	**2.24**	**135**		*e*P		**Pn**	09 53 46.6	-0.6
NYURE	**Nandayure**	**2.27**	**146**		*e*P		**Pn**	09 53 47.8	+0.1
NYURE					*e*S		**Sn**	09 54 14.2	-1.5
ARE1	**Arenal 1**	**2.29**	**128**		*e*P		**Pn**	09 53 47.9	-0.2
VARE2	**V. Arenal**	**2.29**	**128**		*e*P		**Pn**	09 53 47.9	-0.2
CASO	**Castillo**	**2.30**	**129**		*e*P		**Pn**	09 53 48.5	+0.4
PAQE	**Paquera**	**2.60**	**142**		*e*P		**Pn**	09 53 52.9	+0.9
CAO2	**Cobano, Puntar**	**2.61**	**147**		*e*P		**Pn**	09 53 52.0	-0.1
CBL1	**Cabuya**	**2.70**	**148**		*e*P		**Pn**	09 53 53.5	+0.1
PALD	**Palmares**	**2.77**	**131**		*e*P		**Pn**	09 53 55.7	+1.4
ATEO	**Atenas**	**2.86**	**131**		*e*P		**Pn**	09 53 57.2	+1.8
BELE	**Belen**	**3.00**	**129**		*e*P		**Pn**	09 53 58.7	+1.3
SANTA	**Santa Ana**	**3.03**	**130**		*e*P		**Pn**	09 53 58.5	+0.7
AMPA	**Desamparados**	**3.15**	**129**		*e*P		**Pn**	09 53 59.8	+0.4
REPA	**Paraso**	**3.34**	**128**		*e*P		**Pn**	09 54 04.0	+2.1
LLNJ	**Naranjito**	**3.40**	**135**		*e*P		**Pn**	09 54 03.8	+1.2
PIEC	**Cerro El Cedra**	**3.40**	**131**		*e*P		**Pn**	09 54 04.1	+1.2
BUS1	**Rivas**	**3.60**	**130**		*e*P		**Pn**	09 54 07.0	+1.2
SAJE	**San Jernim**	**3.92**	**130**		*e*P		**Pn**	09 54 10.8	+1.1
EDPE	**Pejibaye, P**	**4.00**	**132**		*e*P		**Pn**	09 54 11.8	+1.2
DRK0	**Durika**	**4.17**	**128**		*e*P		**Pn**	09 54 14.0	+0.9
FIMO	**Fila Mora**	**4.27**	**132**		*e*P		**Pn**	09 54 14.9	+0.6
ALCO	**Alturas Coton,**	**4.68**	**128**		*e*P		**Pn**	09 54 20.8	+0.8
APG	**El Apazote**	**4.91**	**310**		P		**Pn**	09 54 25.4	+2.4
	0.2nm,0.4s,baz=136,slow=13,SNR=3.5								
APG					S		**Sn**	09 55 15.3	-3.6
	0.3nm,0.4s,baz=113,slow=15,SNR=2.3								
CMIG	**Matias Romero**	**9.58**	**304**		P		**Pn**	09 55 26.2	0.0
	1.9nm,0.3s,baz=130,slow=9.9,SNR=48								
CMIG					S		**Sn**	09 57 06.4	-5.7
	1.0nm,0.4s,baz=351,slow=2.4,SNR=2.1								
TXAR	**Lajitas Array**	**23.56**	**320**		P		**P**	09 58 13.1	+1.0
	0.6nm,0.6s,baz=141,slow=9.9,SNR=10								
	0.6nm,0.6s								
ASAR	**Alice Springs**	**139.87**	**247**		PKP		**PKPdf**	10 12 27.7	+0.3
	0.4nm,0.5s,baz=96,slow=1.8,SNR=8.1								
WRA	**Warramunga Arr**	**139.95**	**253**		PKP		**PKPdf**	10 12 27.2	-0.4
	0.5nm,0.6s,baz=90,slow=2.1,SNR=7.6								

*SJA **28** 10:00:23.3±1.1,34.77S×72.01W,h43km,ML3.7,MW3.6*
*GUC **28** 10:00:27.1±0.8,34.78S×71.70W,h43km±2km,ML3.7*
ISC 28 10:00:27.7±1.1,**34.79S**±0.03×**71.71W**±0.04,**h25**km±11km,
n37,σ**2s00/50,1C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Hualane**	**0.28**	**219**	*e*P	**Pb**	**10 00 35.3**	**+0.7**
GO05				*e*S	**Sn**	**10 00 41.8**	**0.0**
BO03	**Pichilemu**	**0.36**	**325**	⇑ *i*P	**Pn**	**10 00 36.0**	**-1.2**
BO03				*e*S	**Sn**	**10 00 42.5**	**-1.0**
BO03				IAML		10 00 43.5	
	comp=N,4μm,0.3s						
BO01	**Tunca**	**0.65**	**53**	⇓ *i*P	**Pb**	**10 00 39.7**	**-0.8**
BO01				*e*S	**Sb**	**10 00 48.9**	**-0.3**
BO01				IAML		10 00 49.5	
	comp=N,2μm,0.2s						
BO02	**Sierra Bellavi**	**0.77**	**90**	⇓ *i*P	**Pb**	**10 00 41.3**	**-1.2**
BO02				*e*S	**Sb**	**10 00 51.8**	**-0.7**
BO02				IAML		10 00 53.0	
	comp=N,12μm,0.2s						
MT01	**Popeta**	**1.00**	**23**	*e*P	**Pb**	**10 00 44.3**	**-2.0**
MT01				*e*S	**Sb**	**10 00 57.2**	**-1.9**
MT01				IAML		10 00 59.4	
	comp=N,2μm,0.3s						
ML02	**Panimavida**	**1.00**	**166**	*e*P	**Pn**	**10 00 44.9**	**-1.3**
ML02				*e*S	**Sb**	**10 00 58.2**	**-1.0**
ML02				IAML		10 00 59.0	
	comp=E,2μm,0.4s						
MT09	**Talagante**	**1.18**	**31**	⇓ *i*P	**Pn**	**10 00 47.3**	**-1.4**
MT09				*e*S	**Sb**	**10 01 02.4**	**-1.9**
MT09				IAML		10 01 05.4	
	comp=N,4μm,0.3s						
BO04	**La Punta**	**1.21**	**49**	*e*P	**Pn**	**10 00 47.6**	**-1.5**
BO04				*e*S	**Sn**	**10 01 03.0**	**-1.7**
BO04				IAML		10 01 05.4	
	comp=E,3μm,0.3s						
MT12	**Pirque**	**1.43**	**43**	*e*P	**Pn**	**10 00 50.6**	**-1.5**
MT12				*e*S	**Sn**	**10 01 08.3**	**-1.8**
MT12				IAML		10 01 13.3	
	comp=N,4μm,0.4s						
MT15	**Las Vizcachas**	**1.55**	**40**	*e*P	**Pn**	**10 00 52.5**	**-1.3**
MT15				*e*S	**Sn**	**10 01 12.0**	**-1.2**
LMEL	**Las Melosas**	**1.56**	**53**	*e*P	**Pn**	**10 00 52.6**	**-1.4**
LMEL				*e*S	**Sn**	**10 01 13.0**	**-0.6**
LMEL				IAML		10 01 16.2	
	comp=N,2μm,0.1s						
MT13	**San Alfonso**	**1.58**	**49**	*e*P	**Pn**	**10 00 53.0**	**-1.2**
MT13				*e*S	**Sn**	**10 01 13.3**	**-0.5**
MT13				IAML		10 01 16.4	
	comp=E,2μm,0.4s						
MT05	**Renca**	**1.61**	**30**	IAML		10 01 20.9	
	comp=E,2μm,0.3s						
MT03	**Universidad Ad**	**1.63**	**38**	IAML		10 01 18.0	
	comp=E,3μm,0.4s						
MT14	**Cerro Cal¡n**	**1.70**	**35**	IAML		10 01 19.8	
	comp=E,2μm,0.2s						
MT10	**Hacienda Santa**	**1.80**	**33**	IAML		10 01 24.5	
	comp=N,3μm,0.5s						
PEL	**Peldehue**	**1.85**	**28**	IAML		10 01 26.1	
	comp=E,560nm,0.2s						
MT04	**Ro Olivares**	**1.90**	**44**	IAML		10 01 26.4	
	comp=E,1μm,0.3s						
ROCH	**El Roble**	**1.91**	**18**	IAML		10 01 27.7	
	comp=N,2μm,0.7s						
MT08	**Bocatoma Ro**	**1.94**	**47**	IAML		10 01 28.2	
	comp=N,578nm,0.5s						
EDS3	**Malargue**	**2.13**	**118**	*e*P	**Pn**	**10 01 03.7**	**+1.9**
RFA	**San Rafael**	**2.67**	**91**	*e*P	**Pn**	**10 01 09.4**	**+0.1**
AAGR	**Agrelo**	**2.94**	**55**	*e*P	**Pn**	**10 01 12.9**	**0.0**
ARCO	**CERRO ARCO**	**3.02**	**51**	*e*P	**Pn**	**10 01 11.9**	**-2.2**
CANA	**Caviahue**	**3.14**	**171**	*e*P	**Pn**	**10 01 13.9**	**-1.8**
CANA				*e*S	Sb	10 02 15.4	+15
AUSP	**Uspallata**	**3.21**	**38**	*e*P	**Pn**	**10 01 17.3**	**+0.4**
AUSP				*e*S	**Sb**	**10 02 08.9**	**+5.8**
ASAL	**Salagasta**	**3.25**	**48**	*e*P	**Pn**	**10 01 18.4**	**+1.3**
ASAL				*e*S	**Sb**	**10 02 05.8**	**+1.8**
RTLS	**Leoncito**	**3.60**	**35**	*e*P	**Pn**	**10 01 22.6**	**+0.4**
RTLS				*e*S	**Sb**	**10 02 19.2**	**+4.8**
RTLS				IAML		10 02 25.7	
	comp=Z,197nm,1.2s						
ACAN	**Cantantal**	**4.54**	**58**	*e*P	**Pn**	**10 01 34.8**	**0.0**
ACAN				IAML		10 02 56.1	
	comp=Z,65nm,2.8s						
ACCO	**Cerro Coronel**	**4.75**	**29**	*e*P	**Pn**	**10 01 37.1**	**-0.9**
ACCO				*e*S	**Sn**	**10 02 36.4**	**+4.0**
AROD	**Rodeo**	**4.98**	**23**	*e*P	**Pn**	**10 01 40.0**	**-1.2**
AROD				*e*S	**Sn**	**10 02 44.4**	**+6.2**
ACDV	**Cuesta del Vie**	**5.10**	**26**	*e*P	**Pn**	**10 01 41.9**	**-0.8**
ACDV				*e*S	**Sn**	**10 02 42.9**	**+2.0**
ACDV				IAML		10 02 56.8	
	comp=Z,25nm,0.8s						
AVFE	**Valle Fertil**	**5.46**	**42**	*e*P	**Pn**	**10 01 46.3**	**-1.3**
AVFE				*e*S	**Sn**	**10 02 50.4**	**+0.7**
AVFE				IAML		10 02 58.9	
	comp=Z,33nm,0.7s						
AGUA	**GUANDACOL**	**5.95**	**28**	*e*P	**Pn**	**10 01 53.1**	**-1.3**
AGUA				*e*S	Sn	10 03 09.4	+7.6
AGUA				IAML		10 03 18.5	
	comp=Z,31nm,1.9s						

PLCA	**Paso Flores**	**6.00**	**172**		*e*P		**Pn**	**10 01 55.6**	**+0.6**
PLCA					*e*P			10 01 55.7	
APLL	**PUNTA DE LOS L**	**6.19**	**46**		*e*P		**Pn**	**10 01 55.7**	**-1.9**
APLL					*e*S		**Sn**	**10 03 07.9**	**+0.3**
APLL					IAML			10 03 15.7	
	comp=Z,23nm,0.9s								
ACLC	**CERRO LA CRUZ**	**6.70**	**38**		*e*P		**Pn**	**10 02 03.4**	**-1.3**
ACLC					*e*S		**Sn**	**10 03 20.9**	**+0.5**

IDC 28 10:04:01.7±1.7,**55.53N**×**166.31E**,**h0**km,**mb3.6/4,**
mbtmp3.7/5,ML3.2/1,Error ellipse: s-maj=61.7km
s-min=21.6km az=166.0,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.59**	**248**	Pn	Pn	10 06 26.3	+0.3
	3.3nm,0.3s,baz=66,slow=18,SNR=8.6						
PETK				Sn	Sn	10 06 31.7	+0.8
	1.1nm,0.3s,baz=293,slow=25,SNR=4.1						
	11nm,0.5s						
ILAR	**Eielson Array**	**24.49**	**49**	P	P	10 09 21.6	-0.5
	1.8nm,1.0s,baz=256,slow=8.1,SNR=9.4						
	1.8nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**35.74**	**179**	T	T	10 48 27.6	
	baz=359,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**35.75**	**179**	T	T	10 48 35.2	
	baz=359,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**35.76**	**179**	T	T	10 48 42.7	
	baz=359,slow=76,SNR=13						
KURBB	**Kurchatov Arra**	**49.59**	**303**	P	P	10 12 53.8	-0.3
	0.7nm,0.7s,baz=59,slow=7.1,SNR=4.7						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**50.33**	**297**	P	P	10 12 59.8	0.0
	0.6nm,0.8s,baz=57,slow=8.8,SNR=2.1						
	0.6nm,0.8s						
TXAR	**Lajitas Array**	**66.38**	**72**	P	P	10 14 52.8	+0.4
	0.4nm,0.5s,baz=312,slow=5.7,SNR=6.0						
	0.4nm,0.5s						

*IGIL **28** 10:04:59.2,37.14N×5.42W,h0km,ML3.6*
*MDD **28** 10:04:59.1±0.2,37.14N×5.42W,h0km,mb_Lg3.3/38,*
Error ellipse: s-maj=1.6km s-min=1.1km az=177.0
*INMG **28** 10:05:00.1±1.4,37.07N×5.41W,h16km±1km,ML3.2,Error*
ellipse: s-maj=1.5km s-min=1.2km az=27.0,
#DIST_RANGE: REGIONAL #IPMA_REGION: SE Sevilha
(ESP)
*SFS **28** 10:05:00.4,37.05N×5.43W,h14km,ML3.5/20,ML3.4/20,*
MLv3.3/20
ISC 28 10:04:58.4±0.8,**37.12N**±0.02×**5.43W**±0.01,**h17**km±5km,
n87,σ**1s45**/192,**4D,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXMOR	**Moron de la Fr**	**0.02**	**270**	Pg	**Pg**	**10 05 01.2**	**-0.2**
EXMOR				Sg	**Sg**	**10 05 04.4**	**+0.9**
UMV12	**Villanueva de**	**0.21**	**110**	Pg	**Pg**	**10 05 02.6**	**-0.9**
UMV12				Sg	**Sg**	**10 05 07.3**	**+0.3**
ESPR	**Espera**	**0.43**	**234**	Sg	**Sg**	**10 05 13.2**	**+0.3**
ESPR				Pg	**Pb**	**10 05 08.2**	**+0.8**
ESPR	**Espera**	**0.43**	**234**	Pg	**Pb**	**10 05 08.2**	**+0.8**
ESPR				Sg	**Sb**	**10 05 14.7**	**+1.2**
ESPR				*i* lVmb_Lg		10 05 18.5	
EJIF	**Jimena Fronter**	**0.67**	**183**	Pg	**Pg**	**10 05 11.1**	**-0.5**
EJIF				Sg	**Sb**	**10 05 21.5**	**+0.9**
EMIJ	**Mijas**	**0.77**	**136**	Sg	**Sb**	**10 05 23.6**	**+0.2**
EMIJ				Pg	**Pg**	**10 05 12.6**	**-0.8**
EMIJ	**Mijas**	**0.77**	**136**	Pg	**Pg**	**10 05 12.5**	**-0.8**
EMIJ				Sg	**Sg**	**10 05 22.9**	**-0.6**
EMIJ				*i* lVmb_Lg		10 05 31.8	
CNIL	**Conil**	**0.90**	**214**	Pg	**Pn**	**10 05 17.3**	**+1.0**
ECAB	**El Cabril**	**0.95**	**0**	Sg	**Sn**	**10 05 31.5**	**+1.3**
ECAB				Pg	**Pn**	**10 05 17.9**	**+0.9**
ECAB	**El Cabril**	**0.95**	**0**	⇓ Pg	**Pn**	**10 05 17.9**	**+0.9**
ECAB				Sg	**Sb**	**10 05 29.3**	**+0.6**
ECAB				*i* lVmb_Lg		10 05 33.4	
ARNO	**Arenosillo**	**1.04**	**269**	Sg	**Sn**	**10 05 34.5**	**+2.2**
ARNO				Pg	**Pn**	**10 05 19.7**	**+1.5**
EGOR	**Sierra Gorda,**	**1.05**	**90**	Sg	**Sn**	**10 05 34.2**	**+1.3**
EGOR				Pg	**Pn**	**10 05 19.3**	**+0.8**
EGOR	**Sierra Gorda,**	**1.05**	**90**	Pg	**Pn**	**10 05 18.9**	**+0.4**
EGOR				Sg	**Sb**	**10 05 33.3**	**+1.4**
EGOR				*i* lVmb_Lg		10 05 39.8	
EMIN	**Mina Concepcio**	**1.18**	**303**	Sn	**Sn**	**10 05 37.0**	**+1.2**
EMIN				Pn	**Pn**	**10 05 21.2**	**+1.0**
EMIN	**Mina Concepcio**	**1.18**	**303**	⇓ Pg	**Pn**	**10 05 21.2**	**+1.0**
EMIN				Sg	**Sn**	**10 05 37.8**	**+2.0**
EMIN				*i* lVmb_Lg		10 05 39.6	
EXHU	**Huelva**	**1.21**	**278**	Pg	**Pn**	**10 05 22.4**	**+1.8**
EXHU				Sg	**Sn**	**10 05 38.6**	**+2.1**
CEU	**Ceuta**	**1.22**	**178**	Pn	**Pb**	**10 05 21.5**	**+0.5**
CEU				Sn	**Sb**	**10 05 34.0**	**-2.5**
ECEU	**Ceuta**	**1.22**	**178**	Pn	**Pb**	**10 05 21.3**	**+0.3**
ECEU	**Ceuta**	**1.22**	**178**	Pg	**Pb**	**10 05 21.4**	**+0.3**
ECEU				Sg	**Sb**	**10 05 38.0**	**+1.4**
ECEU				*i* lVmb_Lg		10 05 40.2	
EADA	**Adamuz**	**1.24**	**33**	Sn	**Sn**	**10 05 39.7**	**+2.3**
EADA				Pn	**Pg**	**10 05 22.1**	**-0.4**
EADA	**Adamuz**	**1.24**	**33**	Pg	**Pg**	**10 05 22.0**	**-0.4**
EADA				Sg	**Sn**	**10 05 39.8**	**+2.4**
EADA				*i* lVmb_Lg		10 05 42.7	
EXAGR	**Agron**	**1.28**	**94**	Pg	**Pg**	**10 05 23.4**	**+0.3**
EXAGR				Sg	**Sn**	**10 05 40.8**	**+2.4**
ELGU	**Los Guajares,**	**1.47**	**99**	Pn	**Pb**	**10 05 25.5**	**+0.2**
ELGU				Sn	**Sg**	**10 05 45.0**	**-0.7**
ELGU	**Los Guajares,**	**1.47**	**99**	Pg	**Pb**	**10 05 25.8**	**+0.5**
ELGU				Sg	**Sg**	**10 05 45.3**	**-0.4**
ELGU				*i* lVmb_Lg		10 05 50.0	
EXAYA	**Ayamonte**	**1.58**	**274**	Pg	**Pb**	**10 05 27.3**	**+0.2**
EXAYA				Sg	**Sb**	**10 05 48.4**	**+1.5**
EQTA	**Presa de Quent**	**1.59**	**86**	Sn	**Sb**	**10 05 48.0**	**+0.8**
EQTA				Pn	**Pb**	**10 05 27.3**	**-0.1**
EQUE	**Quentar**	**1.59**	**86**	Pg	**Pb**	**10 05 27.7**	**+0.3**
EQUE				Sg	**Sg**	**10 05 49.2**	**-0.6**
EQUE				*i* lVmb_Lg		10 05 52.7	
PBAR	**Barrancos**	**1.66**	**310**	Sn	**Sg**	**10 05 51.1**	**-0.7**
PBAR				Pn	**Pn**	**10 05 27.6**	**+1.0**
PBAR	**Barrancos**	**1.66**	**310**	*e*P	**Pn**	**10 05 27.7**	**+1.1**
PBAR				*e*S	**Sn**	**10 05 48.7**	**+1.2**
PBAR				*i* IAML		10 05 54.3	
PBAR				*i* IAML		10 05 55.5	
PBAR				*i* IAML		10 05 56.5	
EGRO	**El Granado**	**1.69**	**285**	Sn	**Sb**	**10 05 51.5**	**+1.5**
EGRO				Pn	**Pn**	**10 05 28.0**	**+0.9**
EGRO	**El Granado**	**1.69**	**285**	Pn	**Pn**	**10 05 28.1**	**+0.9**
EGRO				Pg	**Pg**	**10 05 28.1**	**-0.7**
EGRO				Sn	**Sn**	**10 05 49.0**	**+0.7**
EGRO				Sg	**Sg**	**10 05 52.9**	**+0.1**
EGRO				*i* lVmb_Lg		10 05 56.5	
PVAQ	**Vaqueiros**	**1.85**	**279**	*e*Pn	**Pn**	**10 05 30.1**	**+0.8**
PVAQ				*e*Sn	**Sn**	**10 05 52.6**	**+0.4**
PVAQ				*e*Sg	**Sg**	**10 05 58.1**	**+0.2**
PVAQ				*i* IAML		10 06 02.0	
PVAQ				*i* IAML		10 06 02.1	
PVAQ				*i* IAML		10 06 02.2	
E0802	**Ubeda,Jaen**	**1.86**	**60**	Pg	**Pg**	**10 05 33.5**	**-0.8**
E0802				Sg	**Sg**	**10 05 57.9**	**-0.6**
EQES	**Quesada**	**2.00**	**69**	Pn	**Pn**	**10 05 32.5**	**+1.1**
EQES				Pg	**Pg**	**10 05 35.9**	**-0.8**
EQES				Sn	**Sb**	**10 05 58.7**	**-0.2**
EQES				Sg	**Sg**	**10 06 02.9**	**+0.3**
EQES				*i* lVmb_Lg		10 06 07.1	
PBDV	**Barranco-do-Ve**	**2.00**	**274**	*e*Pn	**Pn**	**10 05 32.4**	**+1.0**
PBDV				*e*Sn	**Sn**	**10 05 56.8**	**+0.7**
PBDV				*e*Sg	**Sg**	**10 06 02.2**	**-0.6**
PBDV				*i* IAML		10 06 06.5	
PBDV				*i* IAML		10 06 06.9	
PBDV				*i* IAML		10 06 10.3	
EBAD	**Badajoz**	**2.06**	**323**	Sn	**Sn**	**10 06 00.1**	**+2.7**
EBAD				Pn	**Pn**	**10 05 33.4**	**+1.2**
EBAD	**Badajoz**	**2.06**	**323**	Pn	**Pn**	**10 05 33.4**	**+1.2**
EBAD				Pg	**Pb**	**10 05 35.6**	**+0.3**
EBAD				Sn	**Sn**	**10 05 59.4**	**+2.0**
EBAD				Sg	**Sg**	**10 06 04.5**	**-0.1**
PBEJ	**Beja**	**2.14**	**296**	*e*Pn	**Pn**	**10 05 34.4**	**+1.2**
PBEJ				*e*Sg	**Sg**	**10 06 07.7**	**+0.5**
PBEJ				*i* IAML		10 06 11.1	
PBEJ				*i* IAML		10 06 12.7	
PBEJ				*i* IAML		10 06 12.8	
PCVE	**Castro Verde**	**2.14**	**285**	⇓ *e*Pn	**Pn**	**10 05 34.3**	**+1.0**
PCVE				*e*Sg	**Sg**	**10 06 07.2**	**-0.1**
PCVE				*i* IAML		10 06 09.3	
PCVE				*i* IAML		10 06 09.9	
PCVE				*i* IAML		10 06 16.4	
PSIM	**Granatula de C**	**2.15**	**37**	Pn	**Pn**	**10 05 34.9**	**+1.4**
PSIM				Sn	**Sn**	**10 06 00.7**	**+0.9**
PSIM				Sg	**Sg**	**10 06 07.6**	**0.0**
EALB	**Alboran**	**2.26**	**121**	Pn	**Pn**	**10 05 36.0**	**+1.1**
EALB	**Alboran**	**2.26**	**121**	Pn	**Pn**	**10 05 35.8**	**+0.9**
EALB				Pg	**Pb**	**10 05 39.7**	**+1.0**
EALB				Sn	**Sn**	**10 06 05.2**	**+2.8**
EALB				*i* lVmb_Lg		10 06 08.6	
MESJ	**Messejana**	**2.33**	**289**	*e*P	**Pn**	**10 05 37.0**	**+1.1**
MESJ	**Messejana**	**2.33**	**289**	⇓ *e*Pn	**Pn**	**10 05 37.2**	**+1.2**
MESJ				*e*Sg	**Sg**	**10 06 14.3**	**+0.8**
MESJ				*i* IAML		10 06 19.0	
MESJ				*i* IAML		10 06 22.3	
MESJ				*i* IAML		10 06 23.6	
PESTR	**Estremoz**	**2.44**	**316**	Pn	**Pn**	**10 05 39.0**	**+1.5**
PESTR				Sn	**Sn**	**10 06 07.4**	**+0.5**
PESTR	**Estremoz**	**2.44**	**316**	*e*Pn	**Pn**	**10 05 39.1**	**+1.6**
PESTR				*e*Sg	**Sg**	**10 06 16.3**	**-0.6**
PESTR				*i* IAML		10 06 22.1	
PESTR				*i* IAML		10 06 22.2	
PESTR				*i* IAML		10 06 25.2	
EVO	**Evora**	**2.48**	**305**	Pn	**Pn**	**10 05 39.4**	**+1.3**
EVO				Sn	**Sn**	**10 06 08.5**	**+0.5**
EVO	**Evora**	**2.48**	**305**	*e*Sn	**Sn**	**10 06 09.0**	**+1.1**
EVO				*e*Sg	**Sg**	**10 06 18.3**	**0.0**
EVO				*i* IAML		10 06 23.3	
EVO				*i* IAML		10 06 24.0	
PAB	**San Pablo**	**2.56**	**19**	Pn	**Pn**	**10 05 41.8**	**+2.5**
PAB				Pg	**Pg**	**10 05 45.8**	**-1.8**
PAB				Sn	**Sn**	**10 06 11.0**	**+0.9**
PAB				Sg	**Sg**	**10 06 18.7**	**-2.1**
PAB				*i* lVmb_Lg		10 06 24.7	
MORF	**Marmelete**	**2.58**	**275**	*e*P	**Pn**	**10 05 40.1**	**+0.7**
MORF				*e*S	**Sn**	**10 06 10.4**	**0.0**
MORF				IAML		10 06 28.5	
	comp=N,268nm,0.3s						
MORF	**Marmelete**	**2.58**	**275**	*e*Pn	**Pn**	**10 05 40.1**	**+0.7**
MORF				*e*Sn	**Sn**	**10 06 11.0**	**+0.6**
MORF				*e*Sg	**Sg**	**10 06 21.0**	**-0.3**
MORF				*i* IAML		10 06 25.8	
MORF				*i* IAML		10 06 25.8	
MORF				*i* IAML		10 06 28.4	
ENIJ	**Nijar**	**2.58**	**92**	Sn	**Sn**	**10 06 13.6**	**+3.2**
ENIJ				*i* lVmb_Lg		10 06 20.9	
PTEO	**Sao Teotonio**	**2.66**	**280**	*e*Pn	**Pn**	**10 05 41.6**	**+1.2**
PTEO				*e*Sn	**Sn**	**10 06 12.9**	**+0.6**
PTEO				*e*Sg	**Sg**	**10 06 23.0**	**-0.9**
PTEO				*i* IAML		10 06 30.7	
PTEO				*i* IAML		10 06 36.1	
PTEO				*i* IAML		10 06 37.2	
PARRA	**Arraiolos**	**2.67**	**310**	*e*Pn	Pn	10 05 41.8	-7.7
PARRA				*e*Sg	**Sn**	**10 06 23.6**	**-4.9**
PARRA				*i* IAML		10 06 28.6	
PARRA				*i* IAML		10 06 29.1	
PARRA				*i* IAML		10 06 30.0	
MOE	**Montemor**	**2.70**	**302**	*e*Pn	**Pn**	**10 05 42.4**	**+1.4**
MOE				*e*Sn	**Sn**	**10 06 16.0**	**+2.7**
MOE				*e*Sg	**Sg**	**10 06 24.0**	**-1.3**
MOE				*i* IAML		10 06 30.8	
MOE				*i* IAML		10 06 31.1	
MOE				*i* IAML		10 06 33.0	
PFVI	**Vila Bisbo**	**2.72**	**271**	*e*Pn	**Pn**	**10 05 41.8**	**+0.6**
PFVI				*e*Sn	**Sn**	**10 06 14.4**	**+0.8**
PFVI				*i* IAML		10 06 29.1	
PFVI				*i* IAML		10 06 31.6	
PFVI				*i* IAML		10 06 32.2	
PMRV	**Marv??o**	**2

POLO				*e*Sg	**Sg**	**10 07 24.3**	**-2.6**
POLO				*i* IAML		10 07 29.4	
POLO				*i* IAML		10 07 34.7	
POLO				*i* IAML		10 07 34.7	
PBRG	**Braganca**	**4.79**	**348**	*e*Pn	**Pn**	**10 06 10.8**	**+1.1**
PBRG				*e*Sn	**Sn**	**10 07 05.0**	**+0.3**
PBRG				*e*Sg	**Sg**	**10 07 29.0**	**-3.0**
PBRG				*i* IAML		10 07 37.6	
PBRG				*i* IAML		10 07 39.0	
PBRG				*i* IAML		10 07 39.4	
ECAL	**Calabor**	**4.92**	**349**	Pn	**Pn**	**10 06 14.3**	**+2.7**
ECAL				Sn	**Sn**	**10 07 08.8**	**+0.7**
ECAL	**Calabor**	**4.92**	**349**	Pn	**Pn**	**10 06 12.7**	**+1.1**
ECAL				Sn	**Sn**	**10 07 08.7**	**+0.7**
ECAL				*i* IVmb_Lg		10 07 44.4	
EMOS	**Mosqueruela**	**5.05**	**49**	Pn	**Pn**	**10 06 14.5**	**+1.1**
EMOS				Sn	**Sn**	**10 07 11.3**	**-0.1**
EMOS				*i* IVmb_Lg		10 07 42.1	
ELOB	**Lobios**	**5.16**	**338**	Pn	**Pn**	**10 06 15.4**	**+0.5**
ELOB				Sn	**Sn**	**10 07 11.9**	**-2.1**
ELOB				*i* IVmb_Lg		10 07 55.7	
PGAV	**Gavieira, Arco**	**5.31**	**336**	*e*Pn	**Pn**	**10 06 18.6**	**+1.6**
PGAV				*e*Sn	**Sn**	**10 07 17.7**	**-0.1**
PGAV				*e*Sg	**Sg**	**10 07 45.0**	**-3.9**
PGAV				*i* IAML		10 07 54.3	
PGAV				*i* IAML		10 07 55.8	
PGAV				*i* IAML		10 08 07.0	
TIO	**Tiouine**	**6.36**	**194**	Sn	**Sn**	**10 07 38.5**	**-5.4**

*SOME **28** 10:04:54.2, 43˚.63N×69˚.70E*
*NNC **28** 10:04:55.2±2.7, 43˚.67N×69˚.74E, h0km, mb3.7, mpv3.0, Error ellipse: s-maj=14.3km s-min=9.4km az=122.0, Suspected Mining explosion.*
*KRNET **28** 10:04:57.5±0.1, 43˚.64N×69˚.34E, mb2.8*

ISC 28 10:05:02.1±2.5, **43˚.56N**±0˚.07×**70˚.2E**±0˚.1, **h0**km, **n9,** σ1§**32**/14, **8C-4D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.50**	**154**	⇑P	**Pg**	**10 05 10.1**	**-1.7**
	1.0nm,0.3s,baz=321,slow=18,SNR=144						
KK31				⇓S	**Sb**	**10 05 22.1**	**+0.4**
	26nm,0.4s,baz=316,slow=31,SNR=22						
TRKS	**Terek-Say**	**2.14**	**161**	⇑*e*P	**Pn**	**10 05 39.4**	**+0.1**
TRKS				⇑*e*S	**Sb**	**10 06 09.9**	**+0.9**
ARK	**Arkit**	**2.18**	**143**	⇓*e*P	**Pn**	**10 05 40.9**	**+1.1**
ARK				⇓*e*S	**Sg**	**10 06 12.5**	**+0.3**
MRKS	**Merke**	**2.35**	**109**	Pg	**Pb**	**10 05 45.6**	**+0.3**
	4.1nm,0.4s						
MRKS				Lg	Lg	10 06 21.9	
	18nm,0.6s						
ARSB	**Arslanbob**	**3.03**	**137**	⇑*e*P	**Pn**	**10 05 52.8**	**+1.3**
ARSB				⇑*e*S	**Sb**	**10 06 33.7**	**-0.9**
BTLS	**Baital**	**3.12**	**60**	Pg	**Pg**	**10 06 00.6**	**-1.4**
	26nm,0.5s						
BTLS				Lg	Lg	10 06 48.1	
	10nm,0.7s						
SGDS	**Sogindy**	**3.21**	**90**	Pg	**Pg**	**10 06 02.5**	**-1.2**
SGDS				Lg	Lg	10 06 50.8	
AAK	**Ala-Archa**	**3.27**	**105**	⇑Pg	**Pb**	**10 06 01.1**	**0.0**
	1.9nm,0.5s						
AAK				⇓Lg	Lg	10 06 51.5	
	6.6nm,0.9s						
ARLS	**Aral**	**3.47**	**118**	⇑*e*P	**Pn**	**10 06 00.2**	**+2.6**
ARLS				⇑*e*S	**Sb**	**10 06 46.4**	**-0.9**

*IDC **28** 10:07:48.1±1.2, 52˚.33N×169˚.24W, h0km, mb3.9/11, mbtmp3.9/13, ML3.4/2, Error ellipse: s-maj=31.4km s-min=20.0km az=176.0*
*AEIC **28** 10:07:52.6±2.1, 52˚.25N±0˚.05×169˚.26W±0˚.05, h23km±5km, Error ellipse: s-maj=7.3km s-min=4.5km az=165.0*
*NEIC **28** 10:07:54.5±1.4, 52˚.34N±0˚.06×169˚.30W±0˚.04, h41km±8km, mb4.1/3, ML3.8/22, ML3.2(AEIC), Error ellipse: s-maj=9.3km s-min=0.9km az=160.0*

ISC 28 10:07:52.8±1.7, **52˚.27N**±0˚.07×**169˚.16W**±0˚.05, **h33**km±6km, **n53,** σ1§**77**/50, **mb4.0**/13, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLCO	**Concord Point,**	**0.62**	**327**		**Pn**	**10 08 04.9**	**-0.4**
CLCO					**Sn**	**10 08 14.6**	**+0.4**
CLES	**Cleveland East**	**0.72**	**321**		**Pn**	**10 08 06.1**	**-0.5**
CLES					**Sb**	**10 08 16.7**	**+0.2**
CLES	**Cleveland East**	**0.72**	**321**	IAML		10 08 22.1	
	comp=E,5μm,0.3s						
CLES				IAML		10 08 23.5	
	comp=N,7μm,0.3s						
NIKH	**Nikolski High**	**0.73**	**15**		**Pn**	**10 08 06.8**	**0.0**
NIKH					**Sb**	**10 08 17.3**	**+0.3**
NIKH				IAML		10 08 20.1	
	comp=N,2μm,0.5s						
NIKH				IAML		10 08 20.8	
	comp=E,2μm,0.6s						
OKTU	**Okmok Mt. Tuli**	**1.31**	**31**		**Pn**	**10 08 15.6**	**+0.8**
OKCE	**Okmok Cone E**	**1.31**	**27**		**Pn**	**10 08 15.6**	**+0.8**
OKNC	**Okmok New Cone**	**1.35**	**27**		**Pn**	**10 08 16.6**	**+1.3**
OKNC					**Sb**	**10 08 35.4**	**+0.9**
MREP	**Makushin Rep't**	**2.13**	**42**		**Pn**	**10 08 27.5**	**+1.5**
MSW	**Makushin Switc**	**2.19**	**40**		**Pn**	**10 08 28.5**	**+1.7**
MSW					**Sb**	**10 08 56.5**	**-1.9**
MNAT	**Makushin Natee**	**2.20**	**42**		**Pn**	**10 08 28.8**	**+1.8**
UNV	**Unalaska Valle**	**2.25**	**44**		**Pn**	**10 08 29.2**	**+1.5**
UNV					**Sn**	**10 08 57.9**	**+3.6**
AKMO	**Akutan Morgan**	**2.63**	**45**		**Pn**	**10 08 34.7**	**+1.8**
AKRB	**Akutan Reef Bi**	**2.63**	**44**		**Pn**	**10 08 35.5**	**+2.5**
ZRO	**Akutan Zero**	**2.65**	**45**		**Pn**	**10 08 35.9**	**+2.7**
LVA	**Lava Point**	**2.67**	**43**		**Pn**	**10 08 36.2**	**+2.7**
LVA	**Lava Point**	**2.67**	**43**	IAML		10 09 27.1	
	comp=E,324nm,0.7s						
LVA				IAML		10 09 27.7	
	comp=N,595nm,0.8s						
AKBBA	**Akutan Broad B**	**2.67**	**45**		**Pn**	**10 08 36.0**	**+2.5**
AKUT	**Akutan**	**2.77**	**46**	Pn	**Pn**	**10 08 37.3**	**+2.6**
AKUT				IAML		10 09 27.8	
	comp=E,161nm,0.9s						
KOFP	**Korovin Flat P**	**3.03**	**272**		**Pn**	**10 08 38.9**	**+0.4**
ATKA	**Atka Island**	**3.10**	**271**		**Pn**	**10 08 39.3**	**0.0**
GSTR	**Great Sitkin T**	**4.25**	**270**	Pn	**Pn**	**10 08 56.1**	**+0.9**
GSTR				IAML		10 10 06.0	
	comp=E,235nm,0.9s						
FALS	**False Pass**	**4.30**	**51**	Pn	**Pn**	**10 08 56.7**	**+0.9**
ADK	**Adak**	**4.66**	**268**	Pn	**Pn**	**10 09 01.0**	**+0.3**
ADK				IAML		10 10 17.9	
	comp=E,62nm,0.7s						
ADK				IAML		10 10 21.9	
	comp=E,62nm,1.0s						
KIWB	**Kanaga Island**	**4.95**	**268**	Pn	**Pn**	**10 09 06.0**	**+1.2**
KIWB				IAML		10 10 27.4	
	comp=N,64nm,1.0s						
KIWB				IAML		10 10 28.3	
	comp=E,84nm,0.9s						
SPIA	**Saint Paul Isl**	**4.96**	**353**	Pn	**Pn**	**10 09 08.1**	**+3.2**
AMKA	**Amchitka**	**7.21**	**267**	Pn	**Pn**	**10 09 36.5**	**+0.7**
N15K	**Kwethluk River**	**9.38**	**29**	Pn	**Pn**	**10 10 08.5**	**+2.9**
K15K	**Wolf Creek Mou**	**10.86**	**19**	Pn	**Pn**	**10 10 27.5**	**+1.8**
KDAK	**Kodiak Island**	**10.99**	**53**	Pn	**Pn**	**10 10 26.5**	**-1.0**
	comp=E,0.2nm,0.3s,baz=165,slow=21,SNR=0.8						
KDAK				Sn	**Sn**	**10 12 23.1**	**-6.0**
	comp=E,0.1nm,0.3s,baz=356,slow=8.4,SNR=2.0						
ILAR	**Eielson Array**	**16.96**	**34**	Pn	**Pn**	**10 11 44.1**	**-3.2**
	comp=E,0.1nm,0.3s,baz=208,slow=9.4,SNR=4.9						
	comp=E,0.1nm,0.4s						
ILAR	**Eielson Array**	**16.96**	**34**		**Pn**	**10 11 47.3**	**0.0**
PETK	**Petropavlovsk-**	**20.01**	**286**	P	**P**	**10 12 21.8**	**-0.7**
	comp=E,0.9nm,0.3s,baz=85,slow=15,SNR=23						
	comp=E,4.1nm,0.6s						
G29M	**Pine Creek**	**21.19**	**34**	P	**P**	**10 12 35.4**	**+0.3**
G29M				IAmb	IAmb	10 12 50.2	
	comp=Z,7.1nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**37.45**	**219**	T	T	10 55 48.9	
	baz=24						
H11N3	**WAKE ISLAND Hy**	**37.46**	**219**	T	T	10 55 54.5	
	baz=24						
H11N1	**WAKE ISLAND Hy**	**37.47**	**219**	T	T	10 55 38.4	
	baz=24						
H11S1	**WAKE ISLAND Hy**	**38.64**	**218**	T	T	10 56 22.4	
	baz=23,slow=76,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**38.66**	**218**	T	T	10 56 26.8	
	baz=23,slow=76,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**38.66**	**218**	T	T	10 56 31.0	
	baz=23,slow=76,SNR=5.5						
PDAR	**Pinedale Array**	**40.30**	**79**	P	**P**	**10 15 27.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=316,slow=7.5,SNR=3.1						
	comp=Z,0.4nm,0.6s						
KSRS	**Korea Array**	**45.54**	**277**	P	**P**	**10 16 09.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=39,slow=7.1,SNR=1.9						
	comp=Z,0.9nm,0.6s						
TXAR	**Lajitas Array**	**52.62**	**89**	P	**P**	**10 17 04.6**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=299,slow=7.4,SNR=4.0						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**58.04**	**354**	P	**P**	**10 17 42.0**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=20,slow=7.8,SNR=3.7						
	comp=Z,3.4nm,0.9s						
KURK	**Kurchatov**	**62.53**	**318**	P	**P**	**10 18 13.5**	**+0.7**
KURK	**Kurchatov**	**62.53**	**318**	IAmb	IAmb	10 18 13.8	
	comp=Z,1.2nm,0.6s						
KURBB	**Kurchatov Arra**	**62.64**	**318**	P	**P**	**10 18 13.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=41,slow=7.9,SNR=6.0						
	comp=Z,0.6nm,0.6s						
BVAR	**Borovoye Array**	**63.86**	**325**	P	**P**	**10 18 21.7**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=56,slow=4.5,SNR=4.5						
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**65.99**	**352**	P	**P**	**10 18 35.0**	**-0.3**
	comp=Z,6.8nm,1.1s,baz=4.6,slow=9.6,SNR=2.7						
	comp=Z,6.8nm,1.1s						
NOA	**NORSAR Array B**	**67.04**	**360**	P	**P**	**10 18 42.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=210,slow=16,SNR=1.4						
	comp=Z,0.3nm,0.5s						
HFS	**Hagfors**	**67.93**	**358**	P	**P**	**10 18 47.6**	**0.0**
	comp=Z,3.2nm,0.9s,baz=46,slow=6.4,SNR=6.8						
	comp=Z,3.2nm,0.9s						
AKASG	**Malin Array Be**	**76.23**	**348**	P	**P**	**10 19 37.2**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=354,slow=7.3,SNR=2.1						
	comp=Z,0.9nm,0.5s						
AKASG	**Malin Array Be**	**76.23**	**348**	IAmb	IAmb	10 20 07.9	
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**90.43**	**230**	P	**P**	**10 20 50.7**	**0.0**
	comp=Z,0.8nm,1.1s,baz=39,slow=8.1,SNR=4.1						
	comp=Z,0.8nm,1.1s						

IDC 28 10:19:07.4±3.3, **23˚.48N×96˚.47E, h0**km, **mb3.6**/4, **mbtmp3.6**/4, **MS4.0/2, Error ellipse: s-maj=339.8km s-min=22.2km az=59.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.91**	**337**	P	P	10 24 41.5	+0.4
	0.5nm,0.4s,baz=136,slow=10.0,SNR=4.2						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**30.48**	**337**	P	P	10 25 21.4	-0.4
	0.4nm,0.3s,baz=150,slow=9.1,SNR=4.1						
	0.4nm,0.3s						
HILR	**Hailar Array B**	**31.80**	**29**	LR	LR	10 41 02.8	
	comp=Z,73nm,21.8s,baz=45,slow=41						
WRA	**Warramunga Arr**	**56.80**	**136**	P	P	10 28 54.0	+0.3
	0.3nm,0.4s,baz=324,slow=7.3,SNR=13						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**59.31**	**140**	P	P	10 29 10.9	-0.4
	0.3nm,0.4s,baz=320,slow=7.0,SNR=11						
	0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**89.13**	**284**	LR	LR	11 15 21.0	
	comp=Z,262nm,18.0s,baz=349,slow=38						

*IDC **28** 10:22:46.0±1.9, 41˚.40N×19˚.53E, h0km, mb3.9/4, mbtmp3.9/7, ML3.8/2, Error ellipse: s-maj=27.7km s-min=23.3km az=152.0*
*THE **28** 10:22:48.0, 42˚N±14˚×1˚9E±1˚5, h4km±30km, M3.2/8, MLh3.2/8*
*TIR **28** 10:22:48.8, 41˚.44N×19˚.36E, h26km±8km, Ml3.4/5*
*BEO **28** 10:22:49.9±0.6, 41˚.42N×19˚.49E, h19km±3km, ML3.2/16*
*PDG **28** 10:22:49.4±0.4, 41˚.43N×19˚.63E, h15km±1km, MD3.5/5, ML3.4/12, Error ellipse: s-maj=1.8km s-min=2.1km az=0.0*

ISC 28 10:22:50.3±0.7, **41˚.47N**±0.02×**19˚.54E**±0˚.03, **h20**km±5km, **n73,** σ1§**63**/117, **mb3.9**/3, **11C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**116**	Pg	**Pb**	**10 22 55.5**	**-1.1**
TIR				Sg	**Sb**	**10 22 59.5**	**-1.3**
TIR				AML	AML	10 22 59.7	
	20nm,0.4s						
ULC	**Ulcinj**	**0.54**	**336**	⇑*i*Pg	**Pb**	**10 22 59.8**	**-1.3**
ULC				*e*Sg	**Sb**	**10 23 09.0**	**+0.5**
SDA	**Shkodra**	**0.58**	**357**	Pg	**Pb**	**10 23 00.2**	**-1.6**
SDA				Sg	**Sb**	**10 23 10.0**	**+0.4**
PHP	**Peshkopia**	**0.71**	**72**	Pg	**Pb**	**10 23 02.4**	**-1.6**
PHP				Sg	**Sb**	**10 23 14.3**	**+1.0**
PHP				AML	AML	10 23 18.5	
	5.6nm,0.5s						
PHP	**Peshkopia**	**0.71**	**72**	P	**Pb**	**10 23 02.7**	**-1.2**
PHP				S	**Sn**	**10 23 14.9**	**-0.7**
DRME	**Dracevica, Mon**	**0.76**	**340**	*e*Pg	**Pb**	**10 23 04.3**	**-0.6**
DRME				*e*Sg	**Sn**	**10 23 18.8**	**+2.0**
DRME	**Dracevica, Mon**	**0.76**	**340**	⇓*i*Pg	**Pb**	**10 23 04.1**	**-0.8**
DRME				*e*Sg	**Sn**	**10 23 16.4**	**-0.4**
BUM	**Brajici-Budva**	**0.96**	**330**	⇓*i*Pg	**Pb**	**10 23 08.0**	**-0.2**
BUM				*e*Sg	**Sn**	**10 23 23.6**	**+1.8**
PDG	**Podgorica**	**0.98**	**348**	Pg	**Pb**	**10 23 08.4**	**-0.2**
PDG				Sg	**Sn**	**10 23 23.1**	**+0.8**
PDG	**Podgorica**	**0.98**	**348**	⇓P	**Pb**	**10 23 08.7**	**+0.1**
PDG				⇑S	**Sn**	**10 23 23.0**	**+0.8**
PDG	**Podgorica**	**0.98**	**348**	*e*Pg	**Pb**	**10 23 07.8**	**-0.8**
PDG				*e*Sg	**Sn**	**10 23 23.5**	**+1.3**
PDG	**Podgorica**	**0.98**	**348**	⇓*i*Pg	**Pb**	**10 23 08.2**	**-0.4**
PDG				*i* Sg	**Sn**	**10 23 23.9**	**+1.7**
PVY	**Plav**	**1.17**	**15**	⇓*i*Pg	**Pn**	**10 23 10.8**	**-0.8**
PVY				*e*Sg	**Sn**	**10 23 28.2**	**+1.2**
CEME	**Cevo**	**1.17**	**337**	⇑*i*Pg	**Pb**	**10 23 11.7**	**-0.1**
CEME				*e*Sg	**Sn**	**10 23 30.6**	**+3.6**
HCY	**Herceg Novi**	**1.25**	**322**	⇑*i*Pg	**Pb**	**10 23 13.0**	**-0.1**
KBN	**Korca**	**1.27**	**131**	Pg	**Pb**	**10 23 14.4**	**+0.9**
KBN				Sg	**Sb**	**10 23 33.4**	**+4.0**
KBN	**Korca**	**1.27**	**131**	P	**Pb**	**10 23 14.3**	**+0.9**
KBN				S	**Sb**	**10 23 33.5**	**+4.1**
NKME	**Niksic**	**1.37**	**342**	⇑*i*Pg	**Pb**	**10 23 14.9**	**-0.3**
NKME				*e*Sg	**Sb**	**10 23 34.8**	**+2.6**
KOME	**Kolasin**	**1.38**	**359**	*e*Pg	**Pb**	**10 23 16.1**	**+0.7**
KOME				*e*Sg	**Sb**	**10 23 34.9**	**+2.3**
KOME	**Kolasin**	**1.38**	**359**	*e*Pg	**Pn**	**10 23 14.7**	**+0.2**
KOME				*e*Sg	**Sb**	**10 23 36.2**	**+3.6**
IVA	**Berane**	**1.43**	**11**	*e*Pg	**Pn**	**10 23 15.5**	**+0.4**
IVA				*i* Sg	**Sb**	**10 23 37.4**	**+3.4**
NEST	**Nestorio**	**1.56**	**132**	Pn	**Pb**	**10 23 18.8**	**+0.4**
NEST				AML	AML	10 23 43.2	
	1.5nm,0.7s						
NEST	**Nestorio**	**1.56**	**132**	P	**Pb**	**10 23 18.2**	**-0.2**
NEST				S	**Sb**	**10 23 41.2**	**+3.6**
BRY	**Bratogost**	**1.61**	**333**	*e*Pn	**Pb**	**10 23 19.0**	**-0.4**
BRY				*i* Sn	**Sb**	**10 23 42.0**	**+2.6**
SJES	**Sjenica**	**1.82**	**10**	*e*Pg	**Pb**	**10 23 22.7**	**-0.2**
SJES				*e*Sg	**Sb**	**10 23 47.3**	**+2.0**
PLE	**Pljevlja**	**1.86**	**357**	⇑*i*Pn	**Pn**	**10 23 22.0**	**+0.9**
PLE				*i* Sn	**Sb**	**10 23 47.3**	**+0.8**
NOCI	**Noci**	**1.99**	**251**	Pn	**Pn**	**10 23 21.6**	**-1.1**
NOCI				Sn	**Sn**	**10 23 46.2**	**-0.9**
NOCI				AML	AML	10 24 03.8	
	1.5nm,0.5s						
IGT	**Igoumenitsa**	**2.03**	**162**	P	**Pn**	**10 23 23.8**	**+0.5**
IGT				S	**Sb**	**10 23 51.8**	**+0.6**
SELS	**Selova**	**2.10**	**33**	*e*Pn	**Pn**	**10 23 25.2**	**+0.8**
SELS				*e*Sn	**Sb**	**10 23 52.2**	**-1.2**
IVAS	**Ivanjica**	**2.15**	**12**	*e*Pn	**Pn**	**10 23 25.1**	**0.0**
IVAS				*e*Sn	**Sb**	**10 23 54.1**	**-0.8**
BARS	**Barje**	**2.16**	**51**	*e*Pn	**Pn**	**10 23 26.2**	**+1.1**
BARS				*e*Sn	**Sb**	**10 23 54.5**	**-0.6**
PRMD	**Pramanda**	**2.27**	**148**	P	**Pn**	**10 23 28.1**	**+1.4**
MATE	**Matera**	**2.29**	**250**	⇑P	**Pn**	**10 23 27.8**	**+0.9**
GOCS	**Kraljevo Serbi**	**2.31**	**25**	*e*Pn	**Pn**	**10 23 27.8**	**+0.5**
GOCS				*e*Sn	**Sn**	**10 23 57.2**	**+2.0**
BBLS	**Lazi&#263i**	**2.40**	**358**	*e*Pn	**Pn**	**10 23 30.2**	**+1.8**
BBLS				*e*Sn	**Sb**	**10 24 00.1**	**-1.8**
BOSS	**Bosilegrad**	**2.42**	**64**	*e*Pn	**Pn**	**10 23 29.5**	**+0.8**
BOSS				*e*Sn	**Sn**	**10 23 59.5**	**+1.8**
TETR	**Tetrakomo, Epi**	**2.50**	**147**	P	**Pn**	**10 23 31.3**	**+1.4**
KNT	**Kendrikon**	**2.55**	**96**	P	**Pn**	**10 23 31.0**	**+0.5**
GRUS	**Gruza**	**2.57**	**19**	*e*Pn	**Pn**	**10 23 32.1**	**+1.4**
GRUS				*e*Sn	**Sn**	**10 24 02.3**	**+1.0**
THL	**Klokotos Trika**	**2.68**	**134**	P	**Pn**	**10 23 33.1**	**+0.9**
BOVS	**Bovan**	**2.69**	**36**	⇑P	**Pn**	**10 23 33.8**	**+1.4**
BOVS	**Bovan**	**2.69**	**36**	*e*Pn	**Pn**	**10 23 33.3**	**+0.9**
BOVS				*e*Sn	**Sn**	**10 24 06.5**	**+2.1**
TYRN	**Tyrnavos**	**2.70**	**130**	P	**Pn**	**10 23 33.9**	**+1.4**
KKB	**Krupnik**	**2.71**	**81**	P	**Pn**	**10 23 33.2**	**+0.5**
AMPL	**Ampelaki**	**2.85**	**153**	P	**Pn**	**10 23 35.3**	**+0.7**
ZAPS	**Zavoj**	**2.92**	**51**	*e*Pn	**Pn**	**10 23 36.7**	**+1.2**
ZAPS				*e*Sn	**Sn**	**10 24 11.4**	**+1.4**
ZAGS	**Zajecar**	**3.07**	**39**	*e*Pn	**Pn**	**10 23 38.9**	**+1.3**
ZAGS				*e*Sn	**Sn**	**10 24 15.3**	**+1.6**
TEKS	**Tekeris**	**3.08**	**360**	*e*Pn	**Pn**	**10 23 38.4**	**+0.7**
TEKS				*e*Sn	**Sn**	**10 24 13.3**	**-0.6**
BORS2	**Bor- Borsko je**	**3.19**	**34**	*e*Pn	**Pn**	**10 23 38.8**	**-0.5**
BORS2				*e*Sn	**Sn**	**10 24 16.7**	**0.0**
KUBS	**Kucevo**	**3.33**	**27**	*e*Pn	**Pn**	**10 23 40.2**	**-1.0**
KUBS				*e*Sn	**Sn**	**10 24 19.0**	**-1.2**
MDVR	**Moldovita**	**3.67**	**25**	⇓P	**Pn**	**10 23 47.0**	**+1.1**
FRGS	**Fruska Gora**	**3.69**	**3**	*e*Pn	**Pn**	**10 23 46.2**	**0.0**
FRGS				*e*Sn	**Sn**	**10 24 29.2**	**+0.1**
HERR	**Herculane**	**4.01**	**31**	⇑P	**Pn**	**10 23 51.6**	**+1.1**
BZS	**Buzias**	**4.41**	**19**	⇑P	**Pn**	**10 23 56.4**	**+0.4**
GZR	**Gura Zlata**	**4.58**	**30**	⇑P	**Pn**	**10 23 59.7**	**+1.4**
MORH	**Mrgy, Hungar**	**4.79**	**353**	⇓P	**Pn**	**10 24 02.8**	**+1.6**
SIRR	**Siria**	**5.04**	**17**	⇓P	**Pn**	**10 24 06.6**	**+2.0**
ARR	**Arges**	**5.38**	**42**	⇓P	**Pn**	**10 24 10.7**	**+1.3**
VOIR		**5.64**	**43**	⇓P	**Pn**	**10 24 14.6**	**+1.6**
SOKA	**Soboth**	**6.13**	**330**	*e*Pn	**Pn**	**10 24 19.7**	**0.0**
	1.5nm,0.6s						
SOKA				*i* Sn	**Sn**	**10 25 26.0**	**-3.3**
	5.0nm,0.8s						
MLR	**Muntele Rosu**	**6.15**	**47**	Pn	**Pn**	**10 24 21.2**	**+1.1**
	1.5nm,0.3s,baz=161,slow=18,SNR=8.6						
MLR				Sn	**Sn**	**10 25 31.8**	**+1.9**
	0.6nm,0.3s,baz=285,slow=23,SNR=3.2						
	3.4nm,0.5s						
MLR	**Muntele Rosu**	**6.15**	**47**	⇓P	**Pn**	**10 24 20.6**	**+0.6**
OBKA	**Obir**	**6.19**	**326**	*i* Pn	**Pn**	**10 24 20.1**	**-0.4**
	0.8nm,0.1s						
OBKA				*e*Sn	**Sn**	**10 25 31.7**	**+0.9**
	4.8nm,0.3s						
KECS	**Kecovo**	**7.04**	**5**	*e*SN	**Sn**	**10 25 50.1**	**-1.5**
MODS	**Modra-Piesok**	**7.09**	**348**	*e*PN	Pn	10 24 42.0	+9.2
KBA	**Koelnbreinsper**	**7.15**	**324**	*e*Pn	**Pn**	**10 24 37.7**	**+3.8**
	1.3nm,0.3s						
IDI	**Anoyia**	**7.46**	**144**	Pn	**Pn**	**10 24 36.3**	**-1.8**
	2.6nm,0.3s,baz=226,slow=4.0,SNR=1.8						
IDI				Sn	**Sn**	**10 25 56.0**	**-6.2**
	0.3nm,0.3s,baz=166,slow=17,SNR=1.4						
WTTA	**Wattenberg**	**8.10**	**318**	*e*Pn	**Pn**	**10 24 48.3**	**+1.5**
	3.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**8.74**	**311**	Pn	**Pn**	**10 24 55.5**	**-0.2**
	0.5nm,0.3s,baz=344,slow=22,SNR=2.5						
DAVOX				Sn	**Sn**	**10 26 36.3**	**+2.7**
	0.5nm,0.3s,baz=331,slow=22,SNR=2.5						
	1.9nm,0.5s						
FINES	**FINESS Array B**	**20.39**	**9**	P	**P**	**10 27 23.8**	**-1.7**
	5.7nm,1.1s,baz=185,slow=9.9,SNR=8.1						
	5.7nm,1.1s						
BVAR	**Borovoye Array**	**35.67**	**53**	P	**P**	**10 29 46.4**	**-0.4**
	0.8nm,0.6s,baz=254,slow=4.3,SNR=3.8						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**44.12**	**50**	P	**P**	**10 30 55.3**	**-1.6**
	1.1nm,0.4s,baz=276,slow=9.2,SNR=5.5						
	1.1nm,0.4s						
MKAR	**Makanchi Array**	**44.29**	**61**	P	**P**	**10 30 57.3**	**-1.2**
	1.2nm,0.6s,baz=284,slow=7.6,SNR=9.6						
	1.2nm,0.6s						

*MOS **28** 10:25:02.9±1.2, 41˚.40N×19˚.43E, h13km, mb4.7/12, Error ellipse: s-maj=8.0km s-min=4.2km az=66.3*
*PDG **28** 10:25:04.4±0.2, 41˚.35N×19˚.55E, h16km, MD4.3/12, ML4.2/12, Error ellipse: s-maj=0.7km s-min=1.5km az=0.0*
*SKO **28** 10:25:05.6, 41˚.46N×19˚.42E, h6km, ML3.8*
*NEIC **28** 10:25:05.0±2.5, 41˚.52N±0˚.05×19˚.44E±0˚.07, h10km±1km, mb4.5/17,

UPM Unac-Piva 1.77 345 *e*Pn **Pn** 10 25 36.8 +0.9
UPM *e*Sn **Sg** 10 26 02.7 -0.7
KEK Kerkira 1.79 173 **Pb** 10 25 38.1 -0.1
SJES Sjenica 1.81 11 *e*Pg **Pg** 10 25 39.4 -1.5
SJES *e*Sg **Sg** 10 26 03.8 -0.6
KLINJ Klinje 1.82 338 *e*Pn **Pb** 10 25 38.0 -0.8
KLINJ *e*Sn **Sb** 10 26 00.9 -0.3
PLE Pljevlja 1.84 357⇑ *i*Pn **Pn** 10 25 37.7 +0.9
PLE *e*Sn **Sg** 10 26 04.4 -1.3
NOCI Noci 1.98 250 Pn **Pn** 10 25 38.0 -0.6
NOCI AML AML 10 26 17.2
comp=E,4.1nm,0.3s
SELS Selova 2.10 34 *e*Pn **Pn** 10 25 41.8 +1.5
SELS *e*Sn **Sb** 10 26 09.4 +0.1
RUDO Rudo 2.13 357⇑ *i*Pn **Pn** 10 25 42.2 +1.5
RUDO *e*Sn **Sb** 10 26 09.1 -1.1
IVAS Ivanjica 2.14 13 *e*Pn **Pn** 10 25 42.2 +1.3
IVAS *e*Sn **Sb** 10 26 10.1 -0.4
BARS Barje 2.17 51 *i* Pn **Pb** 10 25 42.9 -1.8
BARS *i* Sn **Sb** 10 26 12.2 +1.1
BARS Barje 2.17 51 *e*Pn **Pb** 10 25 42.9 -1.8
BARS *e*Sn **Sn** 10 26 09.6 +2.1
GRG Griva 2.24 103 *i* Pn **Pn** 10 25 43.7 +1.5
MATE Matera 2.28 249 ⇓P **Pn** 10 25 43.7 +1.0
GOCS Kraljevo Serbi 2.31 25 *e*Pn **Pn** 10 25 44.8 +1.7
GOCS *e*Sn **Sb** 10 26 15.0 -0.2
VAY Valandovo 2.31 93 *i* Pn **Pn** 10 25 44.5 +1.4
VAY *i* Sn **Sb** 10 26 13.3 -1.8
VAY *e*Lg Lg 10 26 16.3
comp=E,52µm,13.5s
VAY *e*Lg Lg 10 26 18.0
comp=N,513nm,0.8s
BBLS Lazi&#263i 2.38 358 *e*Pn **Pn** 10 25 46.1 +2.0
BBLS *e*Sn **Sb** 10 26 16.9 -0.5
BOSS Bosilegrad 2.43 64 *e*Pn **Pn** 10 25 45.9 +1.1
BOSS *e*Sn **Sn** 10 26 14.4 +0.4
GRUS Gruza 2.56 20 *e*Pn **Pn** 10 25 48.1 +1.6
GRUS *e*Sn **Sb** 10 26 20.6 -1.8
KNT Kendrikon 2.57 96 *i* Pn **Pn** 10 25 48.0 +1.3
LIT Litokhoron 2.65 121 **Pn** 10 25 49.6 +1.8
LIT Litokhoron 2.65 121 P **Pn** 10 25 49.6 +1.8
BOVS Bovan 2.69 36 *e*Pn **Pn** 10 25 49.5 +1.2
BOVS *e*Sn **Sn** 10 26 22.1 +1.8
BOVS Bovan 2.69 36 ⇓P **Pn** 10 25 50.3 +2.0
TRAN Tran 2.69 59 P **Pn** 10 25 50.0 +1.6
TRAN S **Sn** 10 26 22.0 +1.5
KKB Krupnik 2.73 81 P **Pn** 10 25 50.5 +1.6
KKB S **Sn** 10 26 24.0 +2.6
KKB Krupnik 2.73 81 *i* Pn **Pn** 10 25 51.1 +2.2
THE Thessaloniki 2.75 107 *i* Pn **Pn** 10 25 50.1 +1.0
ACER Acerenza 2.79 257 Pn **Pn** 10 25 49.3 -0.4
TRUS Trudelj 2.81 13 *e*Pn **Pn** 10 25 52.5 +2.5
SGRT San Giovanni R 2.84 277 Pn **Pn** 10 25 50.0 -0.4
ZAPS Zavoj 2.92 51 *e*Pn **Pn** 10 25 53.4 +1.8
ZAPS *e*Sn **Sn** 10 26 29.2 +3.1
SOH Sokhos 2.97 102 *i* Pn **Pn** 10 25 53.8 +1.5
VTS Vitosha 2.99 67 P **Pn** 10 25 54.1 +1.5
VTS S **Sn** 10 26 30.4 +2.4
SVIS Svilajnac 3.05 24 *e*Pn **Pb** 10 25 56.4 -3.3
SVIS *e*Sn **Sn** 10 26 30.6 +1.5
TEKS Tekeris 3.06 0 *e*Pn **Pn** 10 25 54.0 +0.5
ZAGS Zajecar 3.07 40 *e*Pn **Pn** 10 25 55.2 +1.6
ZAGS *e*Sn **Sn** 10 26 31.6 +1.9
PLNA Plana 3.08 70 P **Pn** 10 25 55.9 +2.1
PLNA S **Sn** 10 26 33.8 +3.7
SRS Serrai 3.09 96 *i* Pn **Pn** 10 25 55.1 +1.2
BLSH Balsha 3.12 63 P **Pn** 10 25 56.7 +2.5
TIP Timpagrande 3.12 223 **Pn** 10 25 53.8 -0.6
CUC Castrocucco 3.18 243 **Pn** 10 25 55.1 -0.1
MMB Musomishta 3.18 88 P **Pn** 10 25 56.8 +1.7
MMB S **Sn** 10 26 33.8 +1.3
MMB Musomishta 3.18 88 *i* Pn **Pn** 10 25 56.9 +1.8
BORS2 Bor- Borsko je 3.19 34 *e*Pn **Pn** 10 25 55.1 -0.1
BORS2 *e*Sn **Sn** 10 26 32.8 +0.1
AVAS Avala Beograd 3.29 13 *e*Pn **Pn** 10 25 57.1 +0.5
AVAS *e*Sn **Sn** 10 26 35.0 -0.2
KUBS Kucevo 3.33 28 *e*Pn **Pn** 10 25 57.1 0.0
KUBS *e*Sn **Sn** 10 26 35.9 -0.2
PGB Panagyurishte 3.62 72 P **Pn** 10 26 03.9 +2.7
MPEP Malo Peshtene 3.64 58 P **Pn** 10 26 03.2 +1.7
MPEP S **Sn** 10 26 49.1 +5.2
MDVR Moldovita 3.67 25 ⇑P **Pn** 10 26 03.0 +1.2
FRGS Fruska Gora 3.68 3 *e*Pn **Pn** 10 26 02.5 +0.6
BLY Banja Luka 3.68 333 *e*Pn **Pn** 10 26 03.4 +1.5
BLY *e*Sn **Sn** 10 26 45.7 +1.0
BLY Banja Luka 3.68 333 ⇑P **Pn** 10 26 04.5 +2.5
BLY Banja Luka 3.68 333 *e*Pn **Pn** 10 26 04.5 +2.5
PAOL Paolisi 3.76 265 **Pn** 10 26 03.2 +0.2
DJES Djerdap 3.87 34 ⇓P **Pn** 10 26 06.2 +1.7
VRSS Vrsac 3.87 19 *e*Pn **Pn** 10 26 04.2 -0.3
RZN Rozhen 3.92 85 P **Pn** 10 26 07.6 +2.1
HERR Herculane 4.00 31 ⇑P **Pn** 10 26 09.2 +2.9
SRE Strehaia 4.17 39 ⇑P **Pn** 10 26 11.1 +2.4
SRE Strehaia 4.17 39 P **Pn** 10 26 11.0 +2.4
PLVB Pleven 4.23 62 ⇑P **Pn** 10 26 11.1 +1.6
CEL Celeste 4.26 222 **Pn** 10 26 09.0 -1.0
BZS Buzias 4.40 20 P **Pn** 10 26 13.2 +1.4
BZS Buzias 4.40 20 ⇑P **Pn** 10 26 13.3 +1.4
RDO Rodhopi 4.55 92 **Pn** 10 26 15.1 +1.2
GZR Gura Zlata 4.57 30 P **Pn** 10 26 17.2 +3.0
GZR Gura Zlata 4.57 30 ⇑P **Pn** 10 26 17.2 +3.0
AQU L'Aquila 4.64 283 *e*Pn **Pn** 10 26 15.0 -0.2
AQU *e*Sn **Sn** 10 27 07.4 -1.2
CAMP Campotosto 4.67 285 **Pn** 10 26 15.6 -0.1
SURR Surduc 4.67 23 ⇓P **Pn** 10 26 17.9 +2.4
ITM Ithomi 4.69 156 Pn **Pn** 10 26 16.7 +0.8
MORH Mrgy, Hungar 4.77 353 *e*Pn **Pn** 10 26 18.2 +1.3
MORH *e*Sn **Sn** 10 27 12.6 +1.0
MORH Mrgy, Hungar 4.77 353 ⇑P **Pn** 10 26 18.0 +1.1
GUMA Gualdo di Mace 4.85 291 **Pn** 10 26 17.9 -0.1
ELND Elena 4.94 71 ⇓P **Pn** 10 26 21.8 +2.5
NRCA Norcia 4.94 288 **Pn** 10 26 19.2 -0.2
FDMO Fiordimonte 5.01 290 **Pn** 10 26 20.2 -0.1
SIRR Siria 5.03 17 ⇑P **Pn** 10 26 22.8 +2.4
BOJS Bojanci 5.07 324 *e*Pn **Pn** 10 26 22.0 +0.9
CESX Cesi 5.28 285 **Pn** 10 26 23.7 -0.3
GBRS Gornja Briga 5.29 321 *e*Pn **Pn** 10 25 25.8 +1.6
BEHE Becsehely 5.36 339 *e*Pn **Pn** 10 26 26.7 +1.7
BEHE *e*Sn **Sn** 10 27 26.7 +0.6
ARR Arges 5.38 42 ⇑P **Pn** 10 26 27.7 +2.4
MURB Monte Urbino 5.47 291 **Pn** 10 26 26.7 0.0
MTUR Matau 5.51 45 ⇑P **Pn** 10 26 29.8 +2.6
MTUR Matau 5.51 45 P **Pn** 10 26 29.7 +2.6
VOIR 5.64 44 P **Pn** 10 26 31.4 +2.5
VOIR 5.64 44 ⇑P **Pn** 10 26 31.4 +2.5
SKDS Skadanscina 5.70 317 *i* Pn **Pn** 10 26 30.8 +1.1
SKDS *e*Sn **Sn** 10 27 31.9 -2.6
RAFF Raffo Rosso 5.84 225 Pn **Pn** 10 26 29.8 -1.8
SOKA Soboth 6.11 330 *e*Pn **Pn** 10 26 37.9 +2.5
comp=N,6.0nm,0.3s
MLR Muntele Rosu 6.16 47 P **Pn** 10 26 37.9 +1.9
comp=N,3.2nm,0.3s,baz=166,slow=7.0,SNR=18
MLR S **Sn** 10 27 42.6 -3.3
comp=N,10.0nm,0.7s,baz=260,slow=15,SNR=1.0
comp=N,21nm,0.6s
MLR Muntele Rosu 6.16 47 **Pn** 10 26 37.6 +1.5
MLR Muntele Rosu 6.16 47 ⇑P **Pn** 10 26 39.4 +3.3
OBKA Obir 6.17 326 *e*Pn **Pn** 10 26 39.8 +3.6
comp=N,2.8nm,0.2s
DOPR Dopca 6.18 42 ⇑P **Pn** 10 26 39.3 +3.1
ISR Istrita 6.28 52 ⇓P **Pn** 10 26 40.9 +3.1
ISR Istrita 6.28 52 P **Pn** 10 26 40.8 +3.1
NEHR Nehoiu 6.31 49 ⇓P **Pn** 10 26 40.4 +2.3
APE Apeiranthos 6.42 131⇑ *e*P **Pn** 10 26 40.6 +0.9
ARSA Arzberg 6.43 335 **Pn** 10 26 40.1 +0.3
ARSA Arzberg 6.43 335 *e*Pn Pb 10 26 49.1 -8.3
comp=N,12nm,0.4s
PSZ Piszkesteto 6.44 2 **Pn** 10 26 39.5 -0.4
PSZ Piszkesteto 6.44 2 ⇑P **Pn** 10 26 41.6 +1.7
PSZ Piszkesteto 6.44 2 P **Pn** 10 26 39.5 -0.4
RONA Rosalia, Austr 6.62 341 *e*Pn **Pn** 10 26 44.7 +2.3
comp=N,1.1nm,0.3s
MYKA Terra Mystica 6.66 323 *e*Pn **Pn** 10 26 45.4 +2.5
comp=N,3.0nm,0.3s
PLOR Plostina 6.77 47 ⇑P **Pn** 10 26 47.1 +2.7
PLOR Plostina 6.77 47 P **Pn** 10 26 47.0 +2.7
VRI Vrincioaia 6.82 48 ⇓P **Pn** 10 26 48.0 +2.9
VRI Vrincioaia 6.82 48 P **Pn** 10 26 47.9 +2.9
ONER Baraj Valea Uz 6.94 43 ⇓P **Pn** 10 26 48.9 +2.2
CONA Conrad Observa 6.95 339 *e*Pn Pb 10 26 56.5 -10
comp=N,3.1nm,0.4s
KECS Kecovo 7.03 5 *e*P **Pn** 10 26 50.1 +2.2
KECS *e* 10 28 06.5
KECS Kecovo 7.03 5 *e*PN **Pn** 10 26 50.1 +2.2
KECS *e*SN **Sn** 10 28 06.5 -0.8
MODS Modra-Piesok 7.07 348 *e*P **Pn** 10 26 50.0 +1.5
MODS *e* 10 28 13.7
MODS Modra-Piesok 7.07 348 *e*PN **Pn** 10 26 50.0 +1.5
MODS *e* 10 28 13.7
KBA Koelnbreinsper 7.13 324 *e*Pn **Pn** 10 26 51.1 +1.7
comp=N,3.0nm,0.3s
TIRR Tirgusor 7.17 63 **Pn** 10 26 50.4 +0.5
TIRR Tirgusor 7.17 63 P **Pn** 10 26 50.4 +0.5
ABTA Abfaltersbach 7.28 319 *e*Pn Pn 10 26 58.9 +7.5
comp=N,6.4nm,0.3s
ABTA *e*Sn **Sn** 10 28 12.4 -1.2
comp=N,29nm,0.6s
CFR Carcaliu 7.29 57 ⇓P **Pn** 10 26 53.2 +1.8
CFR Carcaliu 7.29 57 P **Pn** 10 26 53.2 +1.8
CTI Castel Tesino 7.29 311 **Pn** 10 26 50.0 -1.6
CTI Castel Tesino 7.29 311 P **Pn** 10 26 50.0 -1.6
TPGR Topolog 7.33 60 ⇓P **Pn** 10 26 53.9 +1.9
BURAR Bucovina Array 7.36 32 **Pn** 10 26 53.3 +0.8
BURAR Bucovina Array 7.36 32 ⇑P **Pn** 10 26 55.7 +3.2
BURAR Bucovina Array 7.36 32 P **Pn** 10 26 55.7 +3.2
BUR08 Bucovina Ar. S 7.37 31 **Pn** 10 26 53.0 +0.2
MOA Molln 7.38 331 *e*Pn **Pn** 10 26 54.5 +1.8
comp=N,2.6nm,0.2s
MOA *e*Sn **Sn** 10 28 19.7 +3.8
comp=N,18nm,0.7s
JAVC Velka Javorina 7.49 351 *e*PN **Pn** 10 26 56.5 +2.2
IDI Anoyia 7.49 144 P **Pn** 10 26 54.3 0.0
comp=N,7.7nm,1.1s,baz=65,slow=21,SNR=1.5
IDI S **Sn** 10 28 11.6 -7.2
comp=N,2.9nm,0.3s,baz=136,slow=17,SNR=1.7
MANT Manisa 7.56 110 **Pn** 10 26 56.8 +1.4
LANS Liptovska Anna 7.66 360 *e*P Pn 10 27 04.1 +7.4
LANS *e* 10 28 24.6
LANS Liptovska Anna 7.66 360 *e*PN Pn 10 27 04.1 +7.4
LANS *e*SN **Sn** 10 28 24.6 +1.7
LESA Schwarzleotal 7.69 323 *i* Pn **Pn** 10 27 00.8 +3.7
comp=N,3.9nm,0.2s
TLCR 7.72 58 ⇑P **Pn** 10 27 00.1 +2.6
TLCR 7.72 58 P **Pn** 10 27 00.0 +2.6
STHS Stebnicka Huta 8.02 8 *e*P Pn 10 27 06.7 +5.1
STHS *e* 10 28 36.6
STHS Stebnicka Huta 8.02 8 *e*PN Pn 10 27 06.7 +5.1
STHS *e*SN **Sn** 10 28 36.6 +4.9
WTTA Wattenberg 8.07 318 *i* Pn **Pn** 10 27 04.3 +1.9
comp=N,3.7nm,0.2s
VRAC Vranov 8.09 346 LR LR 10 30 59.6
comp=N,146nm,20.0s,baz=168,slow=43
VRAC Vranov 8.09 346 *e*PG 10 27 44.3
WATA Walderalm 8.15 319 *i* Pn **Pn** 10 27 05.9 +2.4
comp=N,4.6nm,0.3s
SQTA Sankt Quirin 8.26 317 *i* Pn **Pn** 10 27 08.5 +3.6
comp=N,7.7nm,0.4s
SQTA *e*Sn **Sn** 10 28 36.6 -1.1
comp=N,24nm,0.6s
FETA Feichten 8.38 314 *i* Pn Pn 10 27 12.0 +5.3
comp=N,2.3nm,0.4s
MOTA Moosalm 8.39 317 *e*Pn **Pn** 10 27 09.8 +3.0
comp=N,7.2nm,0.4s
GERES GERESS Array B 8.42 333 P **Pn** 10 27 09.0 +1.9
comp=N,0.1nm,0.3s,baz=159,slow=13,SNR=4.7
GERES S **Sn** 10 28 42.3 +0.6
comp=N,1.8nm,0.3s,baz=152,slow=24,SNR=3.7
GERES LR LR 10 31 11.0
comp=N,153nm,19.0s,baz=96,slow=43
comp=N,1.2nm,0.4s
KHC Kasperske Hory 8.71 333 *e*P **Pn** 10 27 14.6 +3.6
KHC *e* 10 28 47.8
KHC Kasperske Hory 8.71 333 *e*PN **Pn** 10 27 14.6 +3.6
KHC *e*SN **Sn** 10 28 47.8 -0.8
DAVOX Davos/Dischmat 8.71 311 P **Pn** 10 27 14.3 +3.0
comp=N,0.8nm,0.3s,baz=161,slow=22,SNR=2.3
DAVOX S **Sn** 10 28 42.2 -6.8
comp=N,5.1nm,0.7s,baz=169,slow=22,SNR=1.6
comp=N,2.8nm,0.3s
KEST Kesra 9.81 237 LR LR 10 32 32.4
comp=N,336nm,18.0s,baz=356,slow=45
BRTR Keskin Array B 10.88 95 P Pn 10 27 45.6 +4.6
comp=N,0.9nm,0.8s,baz=283,slow=13,SNR=3.6
BRTR LR LR 10 32 46.8
comp=N,201nm,18.6s,baz=286,slow=42
AKASG Malin Array Be 11.41 33 P **Pn** 10 27 47.2 -0.7
comp=N,0.4nm,0.3s,baz=222,slow=13,SNR=7.2
AKASG LR LR 10 32 41.8
comp=N,182nm,18.4s,baz=224,slow=40
comp=N,1.8nm,0.6s
AKASG Malin Array Be 11.41 33 *i* P **Pn** 10 27 50.7 +2.8
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 11.41 33⇓ *e*P **Pn** 10 27 47.9 0.0
MNK Minsk 14.16 20 *i* P **Pn** 10 28 21.2 -4.3
comp=E,34nm,0.9s
MNK *i* P **Pn** 10 28 21.2 -4.3
comp=N,8.0nm,0.6s
MNK *i* P **Pn** 10 28 21.2 -4.3
comp=Z,3.0nm,0.5s,baz=207
MNK *i* PP **P** 10 28 29.1 -3.8
MNK *i* S **Sn** 10 30 57.7 -4.3
MNK *i* SS **SnSn** 10 31 11.2 -3.1
MNK *i* LR LR 10 33 31.3
MNK *i* LRM MLR 10 34 20.4
comp=Z,217nm,15.5s
MNK Minsk 14.16 20 *i* P **Pn** 10 28 21.2 -4.3
MNK *i* S **Sn** 10 30 57.6 -4.3
MNK pmax pmax
comp=Z,3.0nm,0.5s
MNK pmax pmax
comp=E,34nm,0.9s
MNK pmax pmax
comp=N,8.0nm,0.6s
MNK MLR MLR
comp=Z,217nm,15.0s
NACGM Naroch 14.26 17 *e*P **P** 10 28 33.8 -0.2
comp=Z,33nm,0.9s,baz=203
PABE Paberze 14.33 10 Pn **Pn** 10 28 27.2 -0.6
MMAI Mount Meron Ar 15.20 119 LR LR 10 35 45.6
comp=Z,89nm,18.2s,baz=313,slow=42
VORD Divnogorie 16.60 48 *e*P **Pn** 10 28 57.3 -0.3
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 16.65 48 *e*P **Pn** 10 28 57.0 -1.2
VSR pmax pmax
comp=Z,8.0nm,1.0s
VORR Voronezh 16.89 46 *e*P **P** 10 29 07.7 +4.5
VORR pmax pmax
comp=Z,64nm,0.4s
KIV Kislovodsk 17.20 74 *e*P **P** 10 29 07.1 +0.4
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,14nm,14.0s
LPSR Galich'ya Gora 17.22 43 *e*P **Pn** 10 29 04.9 -0.5
LPSR pmax pmax
comp=Z,19nm,0.8s
KBZ Khabaz 17.35 75 P **Pn** 10 29 07.2 +0.2
comp=Z,0.1nm,0.3s,baz=279,slow=9.2,SNR=4.2
KBZ LR LR 10 38 58.7
comp=Z,36nm,18.2s,baz=228,slow=48
comp=Z,2.3nm,0.8s
KBZ Khabaz 17.35 75⇑ *e*P **Pn** 10 29 06.9 -0.1
KBZ pmax pmax
comp=Z,6.0nm,1.0s
GURO Guroymak-BITLI 17.49 92 **P** 10 29 10.2 +0.2
VSU Vasula 17.60 13 *de*P **Pn** 10 29 10.1 +0.1
VSU pmax pmax
comp=Z,35nm,0.8s
OBN Obninsk 17.67 34 *e*P **P** 10 29 11.6 -0.1
OBN pmax pmax
comp=Z,14nm,1.0s
OBN MLR MLR
comp=Z,83nm,17.0s
ESDC Sonseca Array 17.92 272 P **P** 10 29 17.4 +2.7
comp=Z,0.1nm,0.3s,baz=80,slow=10,SNR=5.1
ESDC LR LR 10 35 35.2
comp=Z,54nm,19.3s,baz=80,slow=35
comp=Z,0.6nm,0.9s
VRH Novokhopyorsk 18.09 50 *e*P P 10 29 24.0 +7.6
VRH pmax pmax
comp=Z,13nm,0.6s
HFS Hagfors 19.02 351 P **P** 10 29 25.9 -0.6
comp=Z,0.4nm,0.3s,baz=162,slow=15,SNR=9.0
HFS LR LR 10 37 19.6
comp=Z,37nm,21.7s,baz=228,slow=38
comp=Z,2.4nm,0.5s
GNI Garni 19.12 86 P **P** 10 29 27.5 -0.6
comp=Z,0.8nm,0.3s,baz=35,slow=23,SNR=3.2
GNI LR LR 10 38 21.1
comp=Z,28nm,18.4s,baz=280,slow=42
comp=Z,12nm,0.7s
GNI Garni 19.12 86 P **P** 10 29 28.6 +0.5
GNI IAmb IAmb 10 29 30.4
comp=Z,17nm,0.8s
GNI Garni 19.12 86 *de*P **Pn** 10 29 29.0 0.0
GNI pmax pmax
comp=Z,21nm,0.8s
NOA NORSAR Array B 20.23 348 P **P** 10 29 39.3 -0.5
comp=Z,1.4nm,0.8s,baz=154,slow=10,SNR=4.1
NOA LR LR 10 38 44.3
comp=Z,55nm,19.3s,baz=175,slow=40
EKA Eskdalemuir Ar 20.33 321 P Pn 10 29 42.1 -0.8
comp=Z,2.0nm,0.8s,baz=118,slow=10,SNR=3.8
comp=Z,2.0nm,0.6s
FINES FINESS Array B 20.38 9 P **P** 10 29 40.1 -1.2
comp=Z,14nm,1.0s,baz=182,slow=8.4,SNR=18
FINES LR LR 10 38 05.9
comp=Z,84nm,18.8s,baz=222,slow=38
comp=Z,14nm,1.0s
FINES FINESS Array B 20.38 9 P **P** 10 29 39.3 -2.1
FIA1 FINESS Array S 20.38 9 P **P** 10 29 39.3 -2.1
NC204 NORSAR Array S 20.52 348 P **P** 10 29 41.6 -1.4
NC204 IAmb IAmb 10 29 56.3
comp=Z,28nm,1.4s
BELG Belogornoye 21.93 51 P **P** 10 29 56.9 -1.3
comp=Z,31nm,1.0s,baz=76,slow=2.7,SNR=8.3
comp=Z,31nm,1.0s
BELG Belogornoye 21.93 51 *de*P **P** 10 29 58.1 -0.1
BELG pmax pmax
comp=Z,6.0nm,1.0s
KLMR Klimovskoe 22.92 25 *e*P **P** 10 30 06.5 -2.1
KLMR pmax pmax
comp=Z,58nm,1.2s
KIRV Kirov 25.40 37 LR LR 10 41 00.5
comp=Z,115nm,20.3s,baz=236,slow=38
KIRV Kirov 25.40 37⇓ *e*P **P** 10 30 30.8 -1.2
AKTO Aktyubinsk 27.95 58 LR LR 10 45 59.6
comp=Z,53nm,19.8s,baz=220,slow=45
ARCES ARCESS Array B 28.29 4 LR LR 10 42 53.8
comp=Z,43nm,21.6s,baz=225,slow=38
ARTI Arti 29.10 46 P **P** 10 31 03.7 -1.5
comp=Z,8.9nm,0.7s,baz=260,slow=4.9,SNR=14
ARTI LR LR 10 43 46.6
comp=Z,112nm,19.5s,baz=253,slow=38
comp=Z,8.9nm,0.7s
ARTI Arti 29.10 46 **P** 10 31 03.5 -1.7
ARTI Arti 29.10 46 *c i*P **P** 10 31 04.0 -1.2
ARTI 10 31 54.6
ARTI S **S** 10 35 57.3 +1.5
ARTI pmax pmax
comp=Z,12nm,0.8s
SVE Sverdlovsk 30.41 46 *e*P **P** 10 31 16.4 -0.5
SVE pmax pmax
comp=Z,25nm,1.6s
TORD Torodi Ar. Bea 32.23 214 P **P** 10 31 33.3 +0.1
comp=Z,7.9nm,0.3s,baz=27,slow=9.7,SNR=1.7
comp=Z,7.9nm,0.3s
BORK Borovoye 35.63 53 **P** 10 32 02.1 -0.4
BORK IAmb IAmb 10 32 03.7
comp=Z,6.4nm,0.8s
BORK Borovoye 35.63 53 *ce*P **P** 10 32 02.4 -0.1
BORK pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 35.68 53 P **P** 10 32 02.2 -0.6
comp=Z,5.0nm,0.8s,baz=274,slow=6.7,SNR=17
BVAR LR LR 10 46 20.8
comp=Z,30nm,21.3s,baz=271,slow=36
comp=Z,5.0nm,0.8s
KKAR Karatay Array 37.28 70 P **P** 10 32 16.6 -0.1
KKAR Karatay Array 37.28 70 P **P** 10 32 16.6 -0.1
AAK Ala-Archa 40.22 69 LR LR 10 51 47.6
comp=Z,28nm,20.0s,baz=332,slow=40
KURBB Kurchatov Arra 40.97 56 P **P** 10 32 46.0 -1.4
comp=Z,0.9nm,0.8s,baz=295,slow=8.5,SNR=5.3
comp=Z,0.9nm,0.8s
KURK Kurchatov 41.00 56 P **P** 10 32 46.0 -1.7
KURK Kurchatov 41.00 56 IAmb IAmb 10 32 47.8
comp=Z,2.6nm,1.0s
KURK Kurchatov 41.00 56 *ce*P **P** 10 32 47.1 -0.5
KURK pmax pmax
comp=Z,8.0nm,2.5s
MAKZ Makanchi 44.09 61 **P** 10 33 12.2 -0.6
MAKZ IAmb IAmb 10 33 13.4
comp=Z,4.7nm,0.9s
MAKZ Makanchi 44.09 61 P **P** 10 33 12.2 -0.6
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
ZAA0 Zalesovo Array 44.12 50 **P** 10 33 11.8 -1.2
ZAA0 IAmb IAmb 10 33 13.2
comp=Z,7.9nm,0.9s
ZALV Zalesovo Beam 44.12 50 P **P** 10 33 12.3 -0.6
comp=Z,5.3nm,0.7s,baz=282,slow=8.3,SNR=28
ZALV LR LR 10 54 00.5
comp=Z,89nm,18.8s,baz=284,slow=39
comp=Z,5.3nm,0.7s
ZALV Zalesovo Beam 44.12 50 **P** 10 33 11.9 -1.0
NRIK Noril'sk 44.22 28 LR LR 10 54 01.8
comp=Z,61nm,18.6s,baz=280,slow=39
MK31 Makanchi Array 44.30 61 *c i*P **P** 10 33 14.0 -0.5
MKAR Makanchi Array 44.30 61 P **P** 10 33 14.1 -0.5
comp=Z,5.8nm,0.7s,baz=284,slow=6.9,SNR=43
comp=Z,5.8nm,0.7s
DGZ Jazzator, Alta 46.74 56⇑ *i*P **P** 10 33 33.8 -0.2
DGZ pmax pmax
comp=Z,4.0nm,0.8s
SCHQ Schefferville 55.53 316 P **P** 10 34 40.5 +0.8
comp=Z,3.6nm,0.9s,baz=279,slow=15,SNR=1.7
comp=Z,3.6nm,0.9s
TLY Talaya 55.65 49⇓ *e*P **P** 10 34 41.5 +0.9
TLY pmax pmax
comp=Z,7.0nm,1.0s
EVN Everest 55.65 81 P **P** 10 34 40.3 -1.4
EVN IAmb IAmb 10 34 41.5
comp=Z,5.6nm,0.8s
TIXI Tiksi 56.83 21 LR LR 11 01 50.2
comp=Z,56nm,20.7s,baz=42,slow=39
GTA Gaotai 58.98 63 *e*P **P** 10 35 03.8 -0.6
GTA pP pP 10 35 07.8 -2.9
GTA pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 58.99 52 P **P** 10 35 03.5 -0.9
comp=Z,2.2nm,1.0s,baz=282,slow=8.3,SNR=7.5
comp=Z,2.2nm,1.0s
ULN Ulaanbaatar 59.36 51⇑ *e*P **P** 10 35 07.8 +0.8
ULN pmax pmax
comp=Z,3.0nm,1.7s
LZDM Lanzhou Array 63.41 65 P **P** 10 35 33.8 -1.0
comp=Z,1.5nm,0.4s,baz=307,slow=10,SNR=1.5
comp=Z,1.5nm,0.4s
A36M Sachs Harbour 64.13 348 P **P** 10 35 37.5 -1.0
A36M IAmb IAmb 10 35 43.6
comp=Z,7.6nm,1.4s
HHC Hu-ho-hao-te 65.82 56 *e*P **P** 10 35 50.5 +0.3
HHC pmax pmax
comp=Z,11nm,0.8s
PZH PanZhiHua 67.42 74 P **P** 10 36 03.5 +2.9
XAN Xi'an 68.03 64 ⇓P **P** 10 36 04.0 -0.2
XAN pmax pmax
comp=Z,9.0nm,1.4s
F31M Tsilgehtchic 69.52 349 P **P** 10 36 12.0 -0.8
F31M IAmb IAmb 10 36 31.0
comp=Z,6.1nm,1.4s
CMAR Chiang Mai Arr 70.21 83 P **P** 10 36 16.5 -1.5
comp=Z,0.4nm,0.3s,baz=301,slow=5.9,SNR=4.8
comp=Z,0.4nm,0.3s
CMAR Chiang Mai Arr 70.21 83 *i* P **P** 10 36 17.2 -0.8
CMAR pmax pmax
comp=Z,1.0nm,0.3s
ILAR Eielson Array 73.54 354 P **P** 10 36 37.3 +0.1
comp=Z,0.3nm,0.7s,baz=214,slow=9.9,SNR=4.5
comp=Z,0.3nm,0.7s
NJ2 Nanjing 75.82 60 *e*P **P** 10 36 50.3 -0.6
NJ2 pmax pmax
comp=Z,11nm,0.6s
TXAR Lajitas Array 92.14 313 P **P** 10 38 15.1 +0.5
comp=Z,0.4nm,0.8s,baz=104,slow=5.3,SNR=3.9
comp=Z,0.4nm,0.8s
NVL N'lazarevskaya 112.08 183 *i* PKIKP **PKiKP** 10 43 43.1 +4.3
NVL *e* 10 44 26.9
NVL *e*PPP PPP 10 46 48.4
NVL *e*SS SS 11 00 06.4 +5.7

NVL					eSSS	SSS	11 04 16.6		
NVL					pmax	pmax			
	comp=Z,9.0nm,1.2s								
ASAR	**Alice Springs**	**123.22**	**93**		PKP	**PKPdf**	**10 44 00.2**	**-1.6**	
	comp=Z,0.8nm,1.1s,baz=317,slow=3.0,SNR=4.5								

*IDC **28** 10:30:52.0±1.4, 1°.11N×125°.51E, h0km, mb3.9/5, mbtmp3.9/5, MS3.3/1, Error ellipse: s-maj=180.1km s-min=21.0km az=64.0*
*DJA **28** 10:30:56.4±0.7, 1°.1N±3°×12°.6E±°, h14km±5km, M3.7/13, mb3.9/3, MLv3.7/13*
*NEIC **28** 10:30:57.1±0.6, 1°.6N±0°.2×126°.5E±0°.1, h35km±13km, mb4.0/8, Error ellipse: s-maj=27.7km s-min=9.3km az=213.0*
ISC 28 10:30:57.4±0.8, **1°.49N**±0°.07×**126°.45E**±0°.05, **h35**km, **n24,** σ1**59**/25, **mb3.9**/9, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.16**	**128**			**Pn**	**10 31 17.3**	**+0.1**
TNTI	**Ternate**	**1.16**	**128**	P		**Pn**	**10 31 17.4**	**+0.2**
TNTI				S		**Sn**	**10 31 32.4**	**+0.6**
SGSI	**Sangihe**	**2.37**	**337**	P		**Pn**	**10 31 37.2**	**+3.4**
KMSI	**Cibinong**	**2.63**	**250**	P		**Pn**	**10 31 38.4**	**+1.0**
KMSI				S		**Sn**	**10 32 10.6**	**+2.5**
GTOI	**Gorontalo**	**3.54**	**256**	P		**Pn**	**10 31 52.9**	**+3.0**
SANI	**Sanana**	**3.54**	**187**	P		**Pn**	**10 31 49.5**	**-0.5**
SWI	**Sorong**	**5.35**	**116**	P		**Pn**	**10 32 15.1**	**+0.3**
	0.1nm31nm,1.0s							
SWI				S		**Sn**	**10 33 17.3**	**+2.1**
	0.1nm31nm,1.0s							
TOLI2	**Tolitoli**	**5.68**	**266**	Pn		**Pn**	**10 32 18.8**	**-0.6**
TTSI	**Tana Toraja**	**8.01**	**236**	P		**Pn**	**10 32 54.4**	**+3.0**
MYLDM	**Lahad Datu**	**8.74**	**295**	Pn		**Pn**	**10 33 00.2**	**-1.2**
WB0	**Warramunga Arr**	**22.52**	**160**	P		**P**	**10 35 53.5**	**-0.8**
WB0				IAmb		IAmb	10 35 59.7	
	comp=Z,3.4nm,0.8s							
WRAB	**Tennant Creek**	**22.66**	**160**	P		**P**	**10 35 54.6**	**-1.2**
WRAB				IAmb		IAmb	10 35 56.5	
	comp=Z,3.6nm,0.8s							
WRA	**Warramunga Arr**	**22.66**	**160**	P		**P**	**10 35 54.3**	**-1.5**
	comp=Z,2.1nm,0.5s,baz=336,slow=11,SNR=34							
	comp=Z,2.1nm,0.5s							
WR8	**Warramunga Arr**	**22.73**	**160**	P		**P**	**10 35 55.3**	**-1.3**
WR8				IAmb		IAmb	10 35 59.8	
	comp=Z,4.4nm,1.1s							
AS31	**Alice Springs**	**26.03**	**164**	P		**P**	**10 36 27.3**	**-0.3**
ASAR	**Alice Springs**	**26.03**	**164**	P		**P**	**10 36 26.9**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=345,slow=8.3,SNR=27							
ASAR				PcP		**PcP**	**10 39 54.3**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=332,slow=2.2,SNR=1.7							
	comp=Z,0.8nm,0.5s							
BBOO	**Buckleboo**	**35.30**	**166**	P		**P**	**10 37 48.8**	**-0.4**
STKA	**Stephens Creek**	**36.16**	**158**	P		**P**	**10 37 56.2**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=336,slow=10.0,SNR=4.8							
	comp=Z,1.2nm,0.6s							
STKA	**Stephens Creek**	**36.16**	**158**	IAmb		IAmb	10 38 00.9	
	comp=Z,18nm,1.2s							
ASAJ	**Asahikawa**	**44.81**	**17**	LR		LR	10 57 45.5	
	comp=Z,36nm,20.8s,baz=172,slow=36							
MKAR	**Makanchi Array**	**59.24**	**326**	P		**P**	**10 40 54.0**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=132,slow=8.5,SNR=2.5							
	comp=Z,0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**63.47**	**328**	P		**P**	**10 41 22.7**	**-1.2**
	comp=Z,1.0nm,0.2s,baz=131,slow=6.1,SNR=1.8							
	comp=Z,1.0nm,0.2s							
KURK	**Kurchatov**	**63.48**	**328**	P		**P**	**10 41 22.7**	**-1.2**
KURK	**Kurchatov**	**63.48**	**328**	IAmb		IAmb	10 41 38.6	
	comp=Z,1.9nm,0.6s							

*IDC **28** 10:31:41.5±2.2, 53°.44N×165°.11W, h0km, mb3.5/2, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=45.0km s-min=30.5km az=167.0*
*AEIC **28** 10:31:48.8±1.5, 53°.8N±0°.1×165°.4W±0°.1, h80km±7km, Error ellipse: s-maj=18.0km s-min=5.9km az=155.0*
*NEIC **28** 10:31:49.6±1.2, 53°.7N±0°.1×165°.3W±0°.1, h65km±12km, ML3.6/12, ML3.4(AEIC), Error ellipse: s-maj=17.2km s-min=5.9km az=153.0*
ISC 28 10:31:48.6±1.6, **53°.6N**±0°.2×**165°.24W**±0°.08, **h62**km±18km, **n48,** σ0**76**/52, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKSA	**Akutan Strait**	**0.63**	**335**			**Pn**	**10 32 02.0**	**-0.2**
AKSA						**Sn**	**10 32 12.1**	**0.0**
AHB	**Akutan Harbor**	**0.65**	**328**			**Pn**	**10 32 02.4**	**0.0**
AHB						**Sn**	**10 32 12.9**	**+0.4**
AKUT	**Akutan**	**0.65**	**331**			**Pn**	**10 32 02.4**	**0.0**
AKUT				IAML			10 32 13.3	
	comp=N,5μm,0.5s							
AKUT	**Akutan**	**0.65**	**331**			**Sn**	**10 32 12.8**	**+0.4**
AKBBA	**Akutan Broad B**	**0.67**	**322**			**Pn**	**10 32 02.7**	**0.0**
AKBBA						**Sn**	**10 32 13.2**	**+0.3**
ZRO	**Akutan Zero**	**0.68**	**320**			**Pn**	**10 32 02.6**	**-0.2**
ZRO						**Sn**	**10 32 13.5**	**+0.3**
AKMO	**Akutan Morgan**	**0.69**	**319**			**Pn**	**10 32 03.0**	**0.0**
AKMO						**Sn**	**10 32 13.7**	**+0.3**
AKV	**Akutan Volcano**	**0.70**	**323**			**Pn**	**10 32 03.0**	**-0.1**
AKV						**Sn**	**10 32 13.5**	**-0.2**
AKLV	**Akutan Long Va**	**0.73**	**325**			**Pn**	**10 32 03.1**	**-0.3**
AKLV						**Sn**	**10 32 13.7**	**-0.6**
LVA	**Lava Point**	**0.76**	**322**			**Pn**	**10 32 03.8**	**+0.1**
LVA				IAML			10 32 15.5	
	comp=N,2μm,0.6s							
UNV	**Unalaska Valle**	**0.80**	**291**			**Pn**	**10 32 04.3**	**+0.1**
UNV						**Sn**	**10 32 15.9**	**+0.2**
UNV	**Unalaska Valle**	**0.80**	**291**	IAML			10 32 16.6	
	comp=N,1μm,0.3s							
MNAT	**Makushin Natee**	**0.92**	**291**			**Pn**	**10 32 05.8**	**+0.1**
MSW	**Makushin Switc**	**0.98**	**291**			**Pn**	**10 32 06.6**	**+0.1**
MSW						**Sn**	**10 32 20.4**	**+0.6**
WEBT	**Westdahl Beart**	**1.06**	**15**			**Pn**	**10 32 07.4**	**-0.2**
WEBT						**Sn**	**10 32 21.6**	**-0.1**
SSLS	**Shishaldin Sou**	**1.36**	**32**			**Pn**	**10 32 11.4**	**-0.1**
SSBA	**Shishaldin**	**1.37**	**28**			**Pn**	**10 32 11.6**	**0.0**
SSBA						**Sn**	**10 32 29.2**	**+0.3**
ISNN	**Isanotski Nort**	**1.53**	**34**			**Pn**	**10 32 14.2**	**+0.5**
ISNN						**Sn**	**10 32 33.5**	**+0.9**
FALS	**False Pass**	**1.67**	**39**			**Pn**	**10 32 15.6**	**0.0**
OKTU	**Okmok Mt. Tuli**	**1.69**	**265**			**Pn**	**10 32 16.5**	**+0.6**
DTT	**Dutton Round H**	**2.32**	**47**			**Pn**	**10 32 24.3**	**0.0**
DOL	**Dolgoi Island**	**2.53**	**50**			**Pn**	**10 32 27.4**	**+0.1**
PN7A	**Pavlof North-7**	**2.66**	**44**			**Pn**	**10 32 29.3**	**+0.3**
S12K	**Black Hills**	**2.82**	**40**			**Pn**	**10 32 31.0**	**-0.3**
S12K	**Black Hills**	**2.82**	**40**	IAML			10 33 04.6	
	comp=E,121nm,0.6s							
SDPT	**Sand Point**	**3.30**	**55**	Pn		**Pn**	**10 32 37.2**	**-0.5**
SDPT				IAML			10 33 23.1	
	comp=E,103nm,1.1s							
SDPT				IAML			10 33 27.9	
	comp=N,98nm,1.2s							
O14K	**Tigyukauivet M**	**6.11**	**20**	Pn		**Pn**	**10 33 17.0**	**+0.8**
N14K	**Kuskokwak Cree**	**6.66**	**16**	Pn		**Pn**	**10 33 23.7**	**+0.1**
M13K	**Dall Lake**	**6.94**	**8**	Pn		**Pn**	**10 33 27.2**	**-0.3**
L14K	**Kuka Creek**	**7.91**	**9**	Pn		**Pn**	**10 33 40.6**	**-0.2**
M17K	**Holitna River**	**8.90**	**25**	Pn		**Pn**	**10 33 54.4**	**+0.2**
N19K	**Bonanza Creek**	**9.30**	**34**	Pn		**Pn**	**10 34 00.9**	**+1.0**
J17K	**VABM Dome**	**10.36**	**16**	Pn		**Pn**	**10 34 14.8**	**+0.6**
K20K	**Telida**	**11.40**	**26**	Pn		**Pn**	**10 34 28.5**	**0.0**
J20K	**Nowinta River**	**12.06**	**24**	Pn		**Pn**	**10 34 37.5**	**+0.1**
BPAW	**Bear Paw Mtn.**	**12.84**	**29**	Pn		**Pn**	**10 34 48.4**	**+0.4**
ILAR	**Eielson Array**	**14.57**	**32**	Pn		**Pn**	**10 35 08.2**	**-2.9**
	comp=N,0.1nm,0.3s,baz=223,slow=13,SNR=5.9							
	comp=N,0.4nm,0.9s							
BARN	**Barnard Glacie**	**14.71**	**50**	Pn		**Pn**	**10 35 12.3**	**-0.9**
BCAR	**Beaver Creek A**	**15.47**	**43**	Pn		**Pn**	**10 35 19.4**	**-3.3**
E22K	**Anaktuvuk Pass**	**15.94**	**18**			**Pn**	**10 35 29.8**	**+1.1**
PETK	**Petropavlovsk-**	**21.98**	**284**	P		**P**	**10 36 37.5**	**+0.4**
	comp=N,4.6nm,1.1s,baz=76,slow=11,SNR=1.4							
	comp=N,4.6nm,1.1s							
H11N2	**WAKE ISLAND Hy 40.00**	**223**		T		T	11 22 07.6	
	baz=25,slow=76,SNR=6.5							
H11N3	**WAKE ISLAND Hy 40.01**	**223**		T		T	11 22 09.6	
	baz=25,slow=76,SNR=5.5							
H11N1	**WAKE ISLAND Hy 40.02**	**223**		T		T	11 22 12.2	
	baz=25,slow=76,SNR=5.1							
H11S1	**WAKE ISLAND Hy 41.18**	**223**		T		T	11 23 26.6	
	baz=25,slow=76,SNR=5.3							
H11S2	**WAKE ISLAND Hy 41.19**	**223**		T		T	11 23 38.2	
	baz=25,slow=76,SNR=3.5							
H11S3	**WAKE ISLAND Hy 41.19**	**223**		T		T	11 23 38.1	
	baz=25,slow=76,SNR=3.0							
TXAR	**Lajitas Array**	**50.27**	**93**	P		**P**	**10 40 39.1**	**+0.5**
	comp=N,0.2nm,0.5s,baz=315,slow=6.4,SNR=3.9							
	comp=N,0.2nm,0.5s							

*SJA **28** 10:43:56.9±0.8, 28°.06S×69°.44W, h124km±4km, ML3.5, MW3.5*
*GUC **28** 10:44:00.2±0.8, 28°.12S×69°.55W, h115km±5km, ML3.5*
*IDC **28** 10:44:03.2±7.6, 28°.36S×68°.97W, h131km±62km, mbtmp3.1/2, Error ellipse: s-maj=100.0km s-min=28.6km az=122.0*
ISC 28 10:43:59.2±0.9, **28°.11S**±0°.03×**69°.47W**±0°.03, **h112**km±7km, **n40,** σ1**59**/64, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GO03	**Copiapo**	**0.85**	**307**	*eP*		**Pn**	**10 44 19.2**	**0.0**
GO03				*i* S		**Sn**	**10 44 33.9**	**-0.2**
GO03				IAML			10 44 34.3	
	comp=N,2μm,0.2s							
GO03	**Copiapo**	**0.85**	**307**	*eP*		**Pn**	**10 44 19.1**	**-0.1**
GO03				*eS*		**Sn**	**10 44 34.2**	**+0.1**
GO03				IAML			10 44 34.5	
	comp=Z,2μm,0.3s							
AC05	**El Transito**	**1.01**	**224**	*eP*		**Pn**	**10 44 20.9**	**+0.1**
AC05				*i* S		**Sn**	**10 44 36.7**	**-0.4**
AC05				IAML			10 44 37.5	
	comp=N,2μm,0.2s							
AC06	**Mina Casimiro**	**1.08**	**314**	*eP*		**Pn**	**10 44 21.6**	**+0.1**
AC06				*i* S		**Sn**	**10 44 37.9**	**-0.3**
AC06				IAML			10 44 41.8	
	comp=E,673nm,0.2s							
VCA	**Vinchina**	**1.28**	**119**	*eP*		**Pn**	**10 44 23.9**	**+0.1**
VCA				*eS*		**Sn**	**10 44 42.4**	**+0.1**
VCA				IAML			10 44 44.5	
	comp=Z,2μm,0.2s							
AC02	**Maricunga**	**1.31**	**14**	*eP*		**Pn**	**10 44 25.5**	**+1.1**
AC02				*i* S		**Sn**	**10 44 49.9**	**+1.5**
AC02				IAML			10 44 47.1	
	comp=E,2μm,0.2s							
LCO	**Las Campanas**	**1.40**	**230**	*eP*		**Pn**	**10 44 25.0**	**-0.3**
LCO				*i* S		**Sn**	**10 44 45.2**	**+0.2**
LCO	**Las Campanas**	**1.40**	**230**	*eP*		**Pn**	**10 44 25.1**	**-0.1**
LCO				*eS*		**Sn**	**10 44 45.2**	**+0.2**
LCO				IAML			10 44 45.7	
	comp=Z,2μm,0.3s							
AC04	**Llanos de Chal**	**1.42**	**266**	*eP*		**Pn**	**10 44 25.2**	**+0.1**
AC04				*i* S		**Sn**	**10 44 44.6**	**-0.2**
AC04				IAML			10 44 45.3	
	comp=N,1μm,0.1s							
AGUA	**GUANDACOL**	**1.62**	**148**	*eP*		**Pn**	**10 44 27.9**	**+0.2**
AGUA				*eS*		**Sn**	**10 44 50.1**	**+0.8**
AGUA				IAML			10 44 53.2	
	comp=Z,271nm,0.2s							
TINO	**Tinogasta**	**1.68**	**89**	*eP*		**Pn**	**10 44 27.4**	**-1.0**
CO01	**Juntas del Tor**	**1.94**	**196**	*eP*		**Pn**	**10 44 32.5**	**+0.8**
CO01				*i* S		**Sn**	**10 44 56.9**	**+0.4**
CO01				IAML			10 44 59.6	
	comp=E,211nm,0.4s							
AROD	**Rodeo**	**2.05**	**180**	*eP*		**Pn**	**10 44 34.4**	**+1.1**
ACDV	**Cuesta del Vie**	**2.08**	**171**	*eP*		**Pn**	**10 44 34.3**	**+0.9**
ACDV				*eS*		**Sn**	**10 45 02.1**	**+2.6**
AC01	**Pan de Azucar**	**2.20**	**333**	*eP*		**Pn**	**10 44 35.4**	**+0.6**
AC01				*i* S		**Sn**	**10 45 00.1**	**-2.0**
AC01				IAML			10 45 06.7	
	comp=N,324nm,0.4s							
AANI	**Anillaco**	**2.34**	**108**	*eP*		Pn	10 44 21.2	-16
AANI				IAML			10 45 05.7	
	comp=Z,412nm,0.6s							
GO04	**Tololo Observa**	**2.36**	**209**	*eP*		**Pn**	**10 44 36.6**	**-0.5**
GO04				*i* S		**Sn**	**10 45 05.3**	**-0.8**
GO04	**Tololo Observa**	**2.36**	**209**	*eP*		**Pn**	**10 44 36.8**	**-0.3**
GO04				IAML			10 45 08.6	
	comp=Z,391nm,0.3s							
ACCO	**Cerro Coronel**	**2.49**	**172**	*eP*		**Pn**	**10 44 39.5**	**+0.6**
ACCO				*eS*		**Sn**	**10 45 11.3**	**+1.9**
ACLC	**CERRO LA CRUZ**	**2.57**	**121**	*eP*		**Pn**	**10 44 39.2**	**-0.6**
ACLC				*eS*		**Sn**	**10 45 09.6**	**-1.3**
ACLC				IAML			10 45 10.0	
	comp=Z,84nm,0.3s							
GO02	**Mina Guanaco**	**2.94**	**358**	*eP*		**Pn**	**10 44 45.9**	**+1.2**
GO02				*i* S		**Sn**	**10 45 20.6**	**+0.8**
GO02	**Mina Guanaco**	**2.94**	**358**	*eP*		**Pn**	**10 44 46.0**	**+1.2**
GO02				IAML			10 45 30.8	
	comp=Z,109nm,0.6s							
AVFE	**Valle Fertil**	**3.09**	**146**	*eP*		**Pn**	**10 44 45.9**	**-0.6**
AVFE				*eS*		**Sn**	**10 45 22.5**	**-0.5**
AVFE				IAML			10 45 22.8	
	comp=Z,80nm,0.5s							
CO06	**Fray Jorge**	**3.17**	**216**	*eP*		**Pn**	**10 44 46.2**	**-1.3**
CO06				*i* S		**Sn**	**10 45 23.6**	**-1.3**
CYA	**Choya**	**3.25**	**97**	*eP*		**Pn**	**10 44 47.7**	**-0.9**
CYA				*eS*		**Sn**	**10 45 23.6**	**-3.2**
CYA				IAML			10 45 24.3	
	comp=Z,55nm,0.4s							
RTLL	**Cerro Villicun**	**3.32**	**165**	*eP*		**Pn**	**10 44 49.7**	**+0.1**
RTLL				*eS*		**Sn**	**10 45 27.7**	**-0.7**
RTLL				IAML			10 45 31.9	
	comp=Z,94nm,0.6s							
CO02	**Combarbal**	**3.36**	**203**	*eP*		**Pn**	**10 44 48.9**	**-1.2**
CO02				*i* S		**Sn**	**10 45 25.8**	**-3.5**
APLL	**PUNTA DE LOS L**	**3.44**	**132**	*eP*		**Pn**	**10 44 50.3**	**-0.8**
APLL				IAML			10 45 29.3	
	comp=Z,52nm,0.4s							
APLL				*eS*		**Sn**	**10 45 29.5**	**-1.7**
ZON	**Zonda**	**3.49**	**169**	*eP*		Pn	10 44 40.5	-11
ZON				*eS*		**Sn**	**10 45 31.7**	**-0.8**
PB14	**IPOC Station P**	**3.57**	**346**	*eP*		**Pn**	**10 44 53.6**	**+0.4**
PB14				*eS*		**Sn**	**10 45 32.2**	**-2.6**
PB14				IAML			10 45 47.4	
	comp=Z,82nm,0.6s							
CFA	**Coronel Fontan**	**3.64**	**163**	P		**Pn**	**10 44 53.6**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=350,slow=15,SNR=32							
CFA				S		**Sn**	**10 45 33.4**	**-2.7**
	comp=Z,24nm,0.4s,baz=317,slow=12,SNR=18							
FSA	**Cafayete**	**3.70**	**58**	*eP*		Pn	10 44 34.9	-20
PB05	**IPOC Station P**	**5.28**	**353**	*eP*		**Pn**	**10 45 14.3**	**-1.6**
PB05				IAML			10 46 33.4	
	comp=Z,29nm,3.0s							
TCA	**Tanti**	**5.32**	**128**	*eP*		**Pn**	**10 45 14.9**	**-1.5**
TCA				*eS*		Sn	10 46 00.2	-16
TCA				IAML			10 46 12.6	
	comp=Z,15nm,0.5s							
MRA	**San Martin**	**5.38**	**144**	*eP*		**Pn**	**10 45 16.1**	**-1.2**
MRA				*eS*		**Sn**	**10 46 25.4**	**+7.3**
MRA				IAML			10 46 35.0	
	comp=Z,19nm,0.5s							
CPUP	**Villa Florida**	**10.95**	**83**	P		**Pn**	**10 46 30.1**	**-2.6**
	comp=Z,0.3nm,0.5s,baz=121,slow=10,SNR=6.0							
ASAR	**Alice Springs**	**123.80**	**206**	PKP		**PKPdf**	**11 02 45.2**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=134,slow=1.4,SNR=4.9							
WRA	**Warramunga Arr**	**126.97**	**208**	PKP		**PKPdf**	**11 02 51.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=152,slow=1.9,SNR=6.7							
ZALV	**Zalesovo Beam**	**148.05**	**29**	PKPbc		**PKPbc**	**11 03 33.0**	**+1.8**
	comp=Z,0.8nm,0.4s,baz=316,slow=4.0,SNR=4.4							
MKAR	**Makanchi Array**	**151.08**	**42**	PKPbc		**PKPbc**	**11 03 40.4**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=288,slow=2.1,SNR=4.8							

*UPP **28** 10:44:59.0±0.6, 56°.08N×11°.37E, h1km, ML2.6, Presumed earthquake*
*DNK **28** 10:45:00.4±2.4, 56°.14N×11°.45E, h0km, ML2.6, Explosion*
*BER **28** 10:45:01.2±1.8, 56°.11N×11°.47E, h0km, ML1.9, ML2.6(DNK), Suspected explosion*
*IDC **28** 10:45:04.1±1.3, 56°.48N×10°.97E, h0km, mbtmp3.1/6, ML2.2/5, Error ellipse: s-maj=23.8km s-min=10.8km az=95.0*
ISC 28 10:44:58.7±0.8, **56°.16N**±0°.02×**11°.51E**±0°.02, **h0**km, **n62,** σ1**06**/98, **2C, Denmark**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STE05	**Stenlille05**	**0.57**	**175**	*i* P		**Pb**	**10 45 11.5**	**-0.1**
STE00	**Stenlille00**	**0.62**	**174**	*i* P		**Pb**	**10 45 12.1**	**-0.2**
STE02	**Stenlille02**	**0.63**	**172**	*i* P		**Pb**	**10 45 12.3**	**-0.2**
STE06	**Stenlille06**	**0.65**	**176**	*i* P		**Pb**	**10 45 12.4**	**-0.4**
COP	**Copenhagen**	**0.71**	**132**	*i*		**Pn**	**10 45 18.7**	**+2.8**
COP				IAML			10 45 46.7	
	comp=Z,200nm,0.8s							
COP	**Copenhagen**	**0.71**	**132**	*eP*		**Pb**	**10 45 13.6**	**-0.2**
COP				*i*			10 45 18.7	
COP				IAML			10 45 46.7	
	comp=Z,200nm,0.8s							
BJUU	**Bjuv**	**0.85**	**95**	P		**Pb**	**10 45 16.4**	**0.0**
BJUU				S		**Sb**	**10 45 29.6**	**+1.2**
BJUU	**Bjuv**	**0.85**	**95**	*eP*		**Pb**	**10 45 16.4**	**0.0**
BJUU				*i* S		**Sn**	**10 45 30.8**	**-0.4**
BJUU	**Bjuv**	**0.85**	**95**	P		**Pb**	**10 45 16.4**	**0.0**
BJUU				*eP*		**Pb**	**10 45 16.4**	**0.0**
BJUU				S		**Sb**	**10 45 29.6**	**+1.2**
BJUU				*i* S		**Sn**	**10 45 30.8**	**-0.4**
FABU	**Falkenberg**	**1.08**	**38**	P		**Pb**	**10 45 20.9**	**+0.7**
FABU				S		**Sn**	**10 45 36.9**	**+0.3**
FABU	**Falkenberg**	**1.08**	**38**	*iP*		**Pb**	**10 45 20.9**	**+0.7**
FABU				*i* S		**Sn**	**10 45 36.4**	**-0.2**
FABU	**Falkenberg**	**1.08**	**38**	*iP*		**Pb**	**10 45 20.9**	**+0.7**
FABU				P		**Pb**	**10 45 20.9**	**+0.7**
FABU				*i* S		**Sn**	**10 45 36.4**	**-0.2**
FABU				S		**Sn**	**10 45 36.9**	**+0.3**
LUNU	**Lund**	**1.22**	**115**	P		**Pb**	**10 45 22.3**	**-0.3**
LUNU	**Lund**	**1.22**	**115**	*i* P		**Pb**	**10 45 22.2**	**-0.3**
LUNU				*i* S		**Sn**	**10 45 39.5**	**-0.6**
LUNU	**Lund**	**1.22**	**115**	*i* P		**Pb**	**10 45 22.2**	**-0.3**
LUNU				P		**Pb**	**10 45 22.3**	**-0.3**
LUNU				*i* S		**Sn**	**10 45 39.5**	**-0.6**
SSRD	**Sdr. Stenderup**	**1.26**	**238**	*eP*		**Pg**	**10 45 22.8**	**0.0**
SSRD	**Sdr. Stenderup**	**1.26**	**238**	*eP*		**Pg**	**10 45 22.8**	**0.0**
ONAU	**Onsala**	**1.26**	**10**	P		**Pn**	**10 45 24.4**	**+1.0**
ONAU	**Onsala**	**1.26**	**10**	*i* P		**Pn**	**10 45 24.5**	**+1.0**
ONAU				*i* S		**Sn**	**10 45 41.7**	**+0.5**
ONAU	**Onsala**	**1.26**	**10**	P		**Pn**	**10 45 24.4**	**+1.0**
ONAU				*i* P		**Pn**	**10 45 24.5**	**+1.0**
ONAU				*i* S		**Sn**	**10 45 41.7**	**+0.5**
MUD	**Monsted U'grnd**	**1.33**	**284**	*i* P		**Pb**	**10 45 25.6**	**+1.1**
MUD				*i* S		**Sn**	**10 45 44.2**	**+1.3**
MUD				IAML			10 45 48.4	
	comp=Z,15nm,0.6s							
MUD	**Monsted U'grnd**	**1.33**	**284**	*i* P		**Pb**	**10 45 25.6**	**+1.1**
MUD				*i* S		**Sn**	**10 45 44.2**	**+1.3**
MUD				IAML			10 45 48.4	
	comp=Z,15nm,0.6s							
DEL	**Delary**	**1.35**	**76**	P		**Pb**	**10 45 25.1**	**+0.2**
DEL	**Delary**	**1.35**	**76**	*eP*		**Pb**	**10 45 25.2**	**+0.3**
DEL				*i* S		**Sn**	**10 45 43.3**	**-0.2**
DEL	**Delary**	**1.35**	**76**	P		**Pb**	**10 45 25.1**	**+0.2**
DEL				*eP*		**Pb**	**10 45 25.2**	**+0.3**
DEL				*i* S		**Sn**	**10 45 43.3**	**-0.2**
GOET	**G??ttrup**	**1.54**	**306**	*i* P		**Pg**	**10 45 28.6**	**+0.5**
GOET				*i* S		**Sn**	**10 45 47.2**	**-0.7**
GOET				IAML			10 46 25.7	
	comp=Z,40nm,1.0s							
GOET	**G??ttrup**	**1.54**	**306**	*i* P		**Pg**	**10 45 28.6**	**+0.5**
GOET				*i* S		**Sn**	**10 45 47.2**	**-0.7**
GOET				IAML			10 46 25.7	
	comp=Z,40nm,1.0s							
BORU	**Boraas**	**1.63**	**25**	P		**Pg**	**10 45 30.2**	**+0.3**
BORU	**Boraas**	**1.63**	**25**	*i* P		**Pg**	**10 45 30.3**	**+0.3**
BORU				*i* S		**Sg**	**10 45 52.0**	**+0.9**
BORU	**Boraas**	**1.63**	**25**	P		**Pg**	**10 45 30.2**	**+0.3**
BORU				*i* P		**Pg**	**10 45 30.3**	**+0.3**
BORU				*i* S		**Sg**	**10 45 52.0**	**+0.9**
GNOU	**Gnosjoe**	**1.68**	**47**	P		**Pg**	**10 45 31.4**	**+0.5**
GNOU	**Gnosjoe**	**1.68**	**47**	P		**Pg**	**10 45 31.4**	**+0.5**
TJOU	**Tjoern**	**1.88**	**2**	P		**Pb**	**10 45 33.5**	**-0.4**
TJOU	**Tjoern**	**1.88**	**2**	*eP*		**Pb**	**10 45 33.4**	**-0.4**
TJOU				*i* S		**Sb**	**10 45 58.2**	**+0.3**
TJOU	**Tjoern**	**1.88**	**2**	*eP*		**Pb**	**10 45 33.4**	**-0.4**
TJOU				P		**Pb**	**10 45 33.5**	**-0.4**
TJOU				*i* S		**Sb**	**10 45 58.2**	**+0.3**
BSD	**Bornholm Skovb**	**2.20**	**117**	*eP*		**Pn**	**10 45 35.7**	**-0.7**
BSD				*i* S		**Sn**	**10 46 03.8**	**-0.5**
BSD				IAML			10 46 26.0	
	comp=Z,24nm,0.8s							
BSD	**Bornholm Skovb**	**2.20**	**117**	*eP*		**Pn**	**10 45 35.7**	**-0.

MJAR				Sn	**Sn**	**10 51 39.4**	**+1.6**
	0.7nm,0.3s,baz=130,slow=14,SNR=7.2							
	2.2nm,0.3s							
MJAR	**Matsushiro Arr**	**2.85**	**299**		**Pn**	**10 51 04.7**	**+0.1**
MAJO	**Matsushiro**	**2.86**	**299**		**Pn**	**10 51 06.2**	**+1.6**
MJB9	**Matsu-Tunnel**	**2.86**	**299**		**Pn**	**10 51 04.8**	**+0.1**
JGF	**Kuroka**	**3.25**	**278**		**Pn**	**10 51 09.4**	**-0.7**
INU	**Inuyama**	**3.51**	**274**	Pn	**Pn**	**10 51 14.2**	**+0.5**
JSD	**Sado**	**3.75**	**320**	Pn	**Pn**	**10 51 17.6**	**+0.7**
JTM	**Tenmabayashi**	**5.60**	**358**	Pn	**Pn**	**10 51 42.2**	**-0.1**
ERM	**Erimo**	**6.97**	**11**	Pn	**Pn**	**10 52 01.1**	**-0.1**
JCJ	**Chichijima**	**8.10**	**174**	Pn	Pn	10 52 04.0	-13
	3.2nm,0.3s,baz=301,slow=23,SNR=1.8							
ASAJ	**Asahikawa**	**8.98**	**6**	Pn	**Pn**	**10 52 26.0**	**-2.7**
	0.8nm,0.3s,baz=239,slow=9.3,SNR=5.3							
ASAJ				Sn	**Sn**	**10 54 03.7**	**-4.7**
	0.2nm,0.3s,baz=86,slow=33,SNR=1.8							
	4.1nm,0.4s							
JKA	**Kamikawa-asahi**	**8.98**	**6**		**Pn**	**10 52 26.0**	**-2.7**
H11N2	**WAKE ISLAND Hy**	**27.32**	**118**	T	T	11 24 51.0	
	baz=310,slow=75,SNR=17							
H11N1	**WAKE ISLAND Hy**	**27.33**	**118**	T	T	11 24 51.6	
	baz=310,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**27.34**	**118**	T	T	11 24 57.5	
	baz=310,slow=75,SNR=20							
H11S3	**WAKE ISLAND Hy**	**27.97**	**120**	T	T	11 25 46.8	
	baz=312,slow=75,SNR=24							
H11S1	**WAKE ISLAND Hy**	**27.98**	**120**	T	T	11 25 39.6	
	baz=312,slow=75,SNR=28							
H11S2	**WAKE ISLAND Hy**	**27.99**	**120**	T	T	11 25 45.4	
	baz=312,slow=75,SNR=14							
SONM	**Songino Array**	**28.78**	**307**	P	**P**	**10 56 16.1**	**0.0**
	0.4nm,0.4s,baz=119,slow=12,SNR=3.0							
	0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**43.11**	**314**	P	**P**	**10 58 18.7**	**+0.5**
	0.8nm,0.5s,baz=76,slow=6.3,SNR=3.7							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**45.05**	**304**	P	**P**	**10 58 33.0**	**-0.8**
	0.6nm,0.6s,baz=95,slow=8.8,SNR=6.2							
	0.6nm,0.6s							
KURK	**Kurchatov**	**47.02**	**309**	P	**P**	**10 58 49.6**	**+0.4**
KURK				IAmb	IAmb	10 58 54.0		
	comp=Z,2.4nm,0.7s							
KURBB	**Kurchatov Arra**	**47.09**	**309**	P	**P**	**10 58 49.2**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=85,slow=7.9,SNR=7.7							
	comp=Z,0.8nm,0.3s							
ILAR	**Eielson Array**	**51.11**	**32**	P	**P**	**10 59 21.5**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=271,slow=6.8,SNR=3.0							
	comp=Z,0.4nm,0.8s							
FITZ	**Fitzroy Crossi**	**55.04**	**198**	P	**P**	**10 59 50.0**	**+0.2**
FITZ				IAmb	IAmb	10 59 50.5		
	comp=Z,0.6nm,0.8s							
WB0	**Warramunga Arr**	**55.04**	**188**	P	**P**	**10 59 49.6**	**-0.2**
WB0				IAmb	IAmb	10 59 58.6		
	comp=Z,4.5nm,0.8s							
WRAB	**Tennant Creek**	**55.21**	**188**	P	**P**	**10 59 50.5**	**-0.5**
WRAB				IAmb	IAmb	10 59 59.9		
	comp=Z,3.3nm,0.9s							
WR8	**Warramunga Arr**	**55.22**	**188**	P	**P**	**10 59 51.0**	**-0.1**
WRA	**Warramunga Arr**	**55.22**	**188**	P	**P**	**10 59 50.6**	**-0.5**
	comp=Z,2.5nm,0.6s,baz=5.5,slow=7.5,SNR=40							
	comp=Z,2.5nm,0.6s							
WRA	**Warramunga Arr**	**55.22**	**188**	P	**P**	**10 59 50.6**	**-0.5**
ASAR	**Alice Springs**	**58.95**	**188**	P	**P**	**11 00 18.2**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=13,slow=13,SNR=20							
	comp=Z,0.6nm,0.8s							
NVAR	**Mina Array Bea**	**76.17**	**53**	P	**P**	**11 02 08.1**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=271,slow=8.3,SNR=3.7							
	comp=Z,0.5nm,0.7s							
PDAR	**Pinedale Array**	**79.03**	**45**	P	**P**	**11 02 23.6**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=225,slow=1.9,SNR=3.7							
	comp=Z,0.4nm,0.7s							
TXAR	**Lajitas Array**	**91.32**	**52**	P	**P**	**11 03 25.8**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=325,slow=7.1,SNR=2.3							
	comp=Z,0.2nm,0.7s							
LPAZ	**La Paz**	**147.67**	**62**	PKPbc	**PKPbc**	**11 10 04.1**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=9.5,slow=12,SNR=2.3							

PRU 28 10:51:57.5, 51.41N×16.07E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHVC	**Chvalec**	**0.82**	**181**	*e*PG		Pg	10 52 12.8	-0.4
CHVC				*e*SG		Sg	10 52 24.4	+0.5
OSTC	**Ostas**	**0.86**	**174**	*e*PG		Pg	10 52 13.5	-0.4
OSTC				*e*SG		Sg	10 52 25.7	+0.6
	comp=Z,17nm,0.3s							
UPC	**Upice**	**0.91**	**182**	*e*PG		Pg	10 52 14.7	-0.1
UPC				*e*SG		Sg	10 52 27.0	+0.5
	comp=Z,27nm,0.3s							
DPC	**Dobruska-Polom**	**1.07**	**171**	*e*PG		Pg	10 52 16.4	-1.6
DPC				*e*SG		Sg	10 52 31.3	-0.6
	comp=Z,8.0nm,0.2s							
PVCC	**Panska Ves**	**1.30**	**228**	*e*PG		Pg	10 52 21.0	-1.3
PVCC				*e*SG		Sg	10 52 39.1	0.0
	comp=Z,72nm,0.4s							
KRLC	**Kraliky**	**1.41**	**161**	*e*PG		Pn	10 52 22.9	-1.6
KRLC				*e*SG		Sg	10 52 41.0	-1.8
	comp=Z,6.8nm,0.2s							
PRU	**Pruhonice**	**1.72**	**215**	*e*SG		Sb	10 52 52.2	0.0
	comp=Z,9.2nm,0.4s							
STEB	**Steborice**	**1.83**	**143**	*e*PG		Pb	10 52 31.2	-0.7
STEB				*e*SG		Sn	10 52 54.0	-0.1
HSKC	**Hora Svate Kat**	**1.85**	**245**	*e*SG		Sn	10 52 54.5	-0.1
	comp=Z,12nm,0.3s							
MORC	**Moravsky Berou**	**1.89**	**150**	*e*PN		Pn	10 52 27.9	-3.1
MORC				*e*SG		Sn	10 52 56.0	+0.5
CLL	**Collm**	**1.93**	**268**	*e*Pg		Pn	10 52 31.0	-0.5
CLL				*e*Sg		Sn	10 52 56.0	-0.4
VRAC	**Vranov**	**2.13**	**171**	*e*SG		Sb	10 53 04.4	+0.5
KRUC	**Moravsky**	**2.36**	**175**	*e*SG		Sg	10 53 12.1	-1.2
KHC	**Kasperske Hory**	**2.79**	**216**	*e*SG		Sg	10 53 25.3	-1.6

BJI ***28*** *10:52:35.6, 41.27N×19.01E, h10km, mB5.1/16, mb5.0/52, Ms4.8/22, Ms7 4.5/22*

BGR ***28*** *10:52:40.0±1.9, 41.10N×19.25E, h10km, ML4.8, Error ellipse: s-maj=36.7km s-min=8.9km az=8.0*

PRU ***28*** *10:52:39.1, 41.07N×19.27E, h10km, M4.9*

IDC ***28*** *10:52:39.3±0.4, 41.48N×19.45E, h0km, mb4.6/31, mbtmp4.6/47, ML4.1/15, MS4.1/71, Error ellipse: s-maj=7.4km s-min=7.1km az=102.0*

MOS ***28*** *10:52:40.1±1.1, 41.50N×19.35E, h16km, mb5.0/29, MS4.2/17, Error ellipse: s-maj=4.5km s-min=3.0km az=72.2*

PDG ***28*** *10:52:40.7±0.3, 41.38N×19.42E, h11km±1km, MD4.8/13, ML4.7/13, Error ellipse: s-maj=1.1km s-min=2.0km az=0.0*

MED_RC ***28*** *10:52:41.0±0.3, 41.45N×19.23E, h20km±1km, MW4.7/22, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s22,c29; Duration: 1s2 Moment tensor: Scale 10^16Nm; Mrr1.11±.10; Mθθ-0.03±.06; Mφφ-1.08±.08; Mrθ0.61±.10; Mθφ0.41±.05; Mφr-0.71±.10; Best double couple: M0 1.49000×10^16 NP1:φs355.00000°, δ28.00000°, λ115.00000°. NP2:φs147.00000°, δ65.00000°, λ77.00000°. Principal axes: T 1.4800, Plg68.0000°, Azm33.0000°; N 0.0300, Plg12.0000°, Azm153.0000°; P -1.5100, Plg19.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

NEIC ***28*** *10:52:41.9±1.6, 41.54N±0.04×19.42E±0.07, h10km±1km, mb5.0/199 Error ellipse: s-maj=8.6km s-min=7.2km az=257.0*

BEO ***28*** *10:52:41.8±0.6, 41.42N×19.39E, h12km±3km, ML4.5/14*

ROM ***28*** *10:52:41.9±0.1, 41.448N±0.008×19.393E±0.010, h14km, ML4.8/286, Error ellipse: s-maj=0.8km s-min=0.8km az=156.0*

RHSSO ***28*** *10:52:41.7±0.9, 41.42N×19.30E, h7km±4km, ML4.9/6*

NAO ***28*** *10:52:42.0, 41.71N×19.32E, h10km, MB4.5*

TIR ***28*** *10:52:43.8, 41.56N×19.58E, h25km±5km, Ml5.0/6*

GCMT ***28*** *10:52:43.9±0.3, 41.47N±0.03×19.06E±0.03, h31km±1km, MW4.8/73, Moment Tensor Solution. s19,c20; s73,c92; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.68±.15; Mθθ0.06±.10; Mφφ-1.74±.10; Mrθ0.37±.12; Mθφ0.77±.06; Mφr-1.30±.10; Best double couple: M0 2.29400×10^16 NP1:φs336.00000°, δ27.00000°, λ84.00000°. NP2: φs163.00000°, δ63.00000°, λ93.00000°. Principal axes: T 2.1230, Plg72.0000°, Azm80.0000°; N 0.3420, Plg3.0000°, Azm341.0000°; P -2.4650, Plg18.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

THE ***28*** *10:52:44.3, 42.4N×1.9E±, h11km, M4.6/13, MLh4.6/13*

ISC 28 10:52:42.9±0.3, 41.50N±0.02×19.46E±0.02, h22km±3km, n884, σ1§62/863, mb5.0/165, MS4.3/70, 69C-132D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.34**	**117**	Pg		**Pb**	**10 52 49.7**	**-0.6**
TIR				Sg		**Sb**	**10 52 54.8**	**-0.4**
TIR				AML		AML	10 52 55.4	
	712nm,0.5s							
TIR				AML		AML	10 52 56.8	
	381nm,0.5s							
TIR	**Tirane**	**0.34**	**117**	⇓P		**Pb**	**10 52 49.5**	**-0.8**
TIR				S		**Sb**	**10 52 55.9**	**+0.7**
TIR				AML		AML		
TIR				AML		AML		
TIR				AML		AML		
ULC	**Ulcinj**	**0.49**	**340**	⇑*i*Pg		**Pb**	**10 52 51.3**	**-1.6**
ULC				*e*Sg		**Sb**	**10 53 00.2**	**+0.6**
SDA	**Shkodra**	**0.55**	**3**	Pg		**Pb**	**10 52 52.7**	**-1.2**
SDA				Sg		**Sb**	**10 53 01.8**	**+0.4**
DRME	**Dracevica, Mon**	**0.71**	**343**	*e*Pg		**Pb**	**10 52 55.9**	**-0.8**
DRME				*e*Sg		**Sn**	**10 53 08.3**	**+0.2**
DRME	**Dracevica, Mon**	**0.71**	**343**	⇓*i*Pg		**Pb**	**10 52 55.0**	**-1.7**
DRME				*e*Sg		**Sn**	**10 53 08.2**	**+0.2**
PHP	**Peshkopia**	**0.76**	**76**	Pg		**Pb**	**10 52 56.7**	**-0.6**
PHP				AML		AML	10 53 17.2	
	104nm,0.9s							
BUM	**Brajici-Budva**	**0.91**	**332**	⇓*i*Pg		**Pb**	**10 52 58.9**	**-1.1**
BUM				*i* Sg		**Sn**	**10 53 14.2**	**+1.4**
PDG	**Podgorica**	**0.94**	**351**	Pg		**Pb**	**10 52 59.2**	**-1.3**
PDG				Sg		**Sn**	**10 53 14.9**	**+1.3**
PDG	**Podgorica**	**0.94**	**351**			**Pb**	**10 52 58.5**	**-2.0**
PDG	**Podgorica**	**0.94**	**351**	⇑P		**Pb**	**10 52 59.8**	**-0.7**
PDG				⇑S		**Sn**	**10 53 13.4**	**-0.2**
PDG	**Podgorica**	**0.94**	**351**	*e*Pg		**Pb**	**10 52 59.0**	**-1.5**
PDG				*e*Sg		**Sn**	**10 53 15.2**	**+1.7**
PDG	**Podgorica**	**0.94**	**351**	⇓P		**Pb**	**10 52 58.9**	**-1.7**
PDG				S		**Sn**	**10 53 13.9**	**+0.4**
PDG				AML		AML		
	comp=E,27750μm,1.3s							
PDG				AML		AML		
	comp=N,24200μm,1.2s							
PDG				AML		AML		
	comp=E,27900μm,1.3s							
PDG				AML		AML		
	comp=N,24050μm,1.2s							
PDG	**Podgorica**	**0.94**	**351**	⇑*i*Pg		**Pb**	**10 52 58.8**	**-1.7**
PDG				*e*Sg		**Sn**	**10 53 15.3**	**+1.7**
VLO	**Vlora**	**1.03**	**179**	Pg		**Pn**	**10 53 03.7**	**+1.6**
VLO				Sg		**Sn**	**10 53 18.4**	**+2.6**
VLO				AML		AML	10 53 20.4	
	comp=N,276nm,1.2s							
VLO				AML		AML	10 53 34.9	
	comp=N,254nm,0.5s							
VLO	**Vlora**	**1.03**	**179**	P		**Pn**	**10 53 03.6**	**+1.6**
VLO				S		**Sn**	**10 53 19.0**	**+3.2**
VLO	**Vlora**	**1.03**	**179**	⇓P		**Pn**	**10 53 02.7**	**+0.6**
VLO				S		**Sn**	**10 53 19.2**	**+3.4**
VLO				AML		AML		
	comp=E,89350μm,1.2s							
VLO				AML		AML		
	comp=N,82600μm,0.5s							
VLO				AML		AML		
	comp=E,89350μm,0.8s							
VLO				AML		AML		
	comp=N,82600μm,1.5s							
CEME	**Cevo**	**1.12**	**339**	⇓*i*Pg		**Pn**	**10 53 02.4**	**-1.0**
CEME				*e*Sg		**Sn**	**10 53 21.7**	**+3.5**
PVY	**Plav**	**1.15**	**18**	*e*Pg		**Pb**	**10 53 06.2**	**+2.0**
PVY	**Plav**	**1.15**	**18**	⇓*i*Pg		**Pn**	**10 53 02.9**	**-1.0**
PVY				*i* Sg		**Sn**	**10 53 23.3**	**+4.3**
HCY	**Herceg Novi**	**1.19**	**323**	*e*Pg		**Pn**	**10 53 03.1**	**-1.2**
HCY				*e*Sg		**Sn**	**10 53 23.0**	**+3.2**
NKME	**Niksic**	**1.32**	**343**	⇑*i*Pg		**Pb**	**10 53 06.4**	**-0.6**
NKME				*e*Sg		**Sb**	**10 53 28.3**	**+4.8**
KBN	**Korca**	**1.33**	**131**	Pn		**Pb**	**10 53 08.4**	**+1.2**
KBN	**Korca**	**1.33**	**131**	P		**Pb**	**10 53 08.4**	**+1.2**
KBN				S		**Sb**	**10 53 26.9**	**+3.0**
KBN	**Korca**	**1.33**	**131**	⇑P		**Pb**	**10 53 08.2**	**+1.0**
KBN				S		**Sb**	**10 53 27.4**	**+3.6**
KOME	**Kolasin**	**1.35**	**2**	*e*Pg		**Pb**	**10 53 06.9**	**-0.6**
KOME				*e*Sg		**Sb**	**10 53 27.1**	**+2.7**
KOME	**Kolasin**	**1.35**	**2**	⇑*i*Pg		**Pb**	**10 53 06.9**	**-0.6**
KOME				*i* Sg		**Sb**	**10 53 29.0**	**+4.6**
BEY	**Berane**	**1.41**	**13**	*e*Pg		**Pb**	**10 53 08.1**	**-0.4**
IVA	**Berane**	**1.41**	**13**	⇓*i*Pg		**Pb**	**10 53 07.6**	**+0.3**
IVA				*e*Sg		**Sb**	**10 53 31.4**	**+5.4**
TREB	**Trebinje**	**1.47**	**326**	⇑*i*Pg		**Pn**	**10 53 08.5**	**+0.4**
TREB				*e*Sg		**Sb**	**10 53 27.9**	**+0.1**
TREB	**Trebinje**	**1.47**	**326**	*e*Pg		**Pb**	**10 53 09.1**	**-0.4**
TREB				*e*Sg		**Sb**	**10 53 31.2**	**+3.4**
BRY	**Bratogost**	**1.56**	**334**	*e*Pn		**Pb**	**10 53 10.1**	**-1.0**
BRY				*e*Sn		**Sb**	**10 53 34.1**	**+3.6**
NEST	**Nestorio**	**1.62**	**132**	Pn		**Pb**	**10 53 13.0**	**+0.9**
NEST				Sn		**Sb**	**10 53 35.0**	**+2.9**
NEST				AML		AML	10 53 40.1	
	comp=N,61nm,0.6s							
NEST				AML		AML	10 53 40.5	
	comp=N,58nm,0.6s							
NEST	**Nestorio**	**1.62**	**132**	P		**Pb**	**10 53 12.7**	**+0.6**
UPM	**Unac-Piva**	**1.75**	**346**	*e*Pn		**Pb**	**10 53 13.1**	**-1.3**
UPM				*e*Sn		**Sb**	**10 53 39.2**	**+3.2**
KLINJ	**Klinje**	**1.79**	**339**	*e*Pn		**Pn**	**10 53 13.5**	**+0.9**
KLINJ				*e*Sn		**Sb**	**10 53 36.3**	**-0.8**
SJES	**Sjenica**	**1.80**	**12**	*e*Pg		**Pb**	**10 53 15.3**	**+0.1**
SJES				*e*Sg		**Sb**	**10 53 39.4**	**+2.1**
KEK	**Kerkira**	**1.81**	**172**	⇓P		**Pb**	**10 53 17.4**	**+2.1**
PLE	**Pljevlja**	**1.83**	**358**	*e*Pg		**Pb**	**10 53 16.0**	**+0.3**
PLE	**Pljevlja**	**1.83**	**358**	*e*Pn		**Pb**	**10 53 14.5**	**-1.2**
PLE				*e*Sn		**Sb**	**10 53 41.0**	**+2.8**
TAR1	**Taranto**	**1.92**	**240**	⇓P		**Pn**	**10 53 13.2**	**-1.0**
TAR1				AML		AML		
	comp=N,23450μm,0.7s							
TAR1				AML		AML		
	comp=N,23450μm,1.3s							
TAR1				AML		AML		
	comp=E,28300μm,1.1s							
NOCI	**Noci**	**1.95**	**249**	Pn		**Pn**	**10 53 13.9**	**-0.8**
NOCI				AML		AML	10 53 49.7	
	comp=E,60nm,0.6s							
NOCI	**Noci**	**1.95**	**249**	⇓P		**Pn**	**10 53 13.8**	**-0.8**
NOCI				AML		AML		
	comp=E,15250μm,0.8s							
NOCI				AML		AML		
	comp=N,19900μm,1.0s							
IGT	**Igoumenitsa**	**2.08**	**161**	Pn		**Pn**	**10 53 17.9**	**+1.4**
IGT	**Igoumenitsa**	**2.08**	**161**	P		**Pn**	**10 53 18.0**	**+1.6**
SELS	**Selova**	**2.11**	**35**	*e*Pn		**Pb**	**10 53 18.7**	**-1.8**
SELS				*e*Sn		**Sb**	**10 53 46.7**	**+0.5**
RUDO	**Rudo**	**2.12**	**358**	*e*Pn		**Pn**	**10 53 17.9**	**+0.9**
RUDO				*e*Sn		**Sb**	**10 53 45.9**	**-0.5**
RUDO	**Rudo**	**2.12**	**358**	*e*Pn		**Pn**	**10 53 18.6**	**+1.6**
KZN	**Kozani**	**2.12**	**124**	P		**Pb**	**10 53 19.6**	**-1.0**
KZN				S		**Sb**	**10 53 46.0**	**-0.4**
JAN	**Janina**	**2.12**	**150**	P		**Pb**	**10 53 19.5**	**-1.3**
IVAS	**Ivanjica**	**2.13**	**14**	*e*Pn		**Pn**	**10 53 18.6**	**+1.3**
BARS	**Barje**	**2.19**	**52**	*e*Pn		**Pn**	**10 53 19.2**	**+1.2**
BARS				*e*Sn		**Sb**	**10 53 48.6**	**+0.2**
LTRZ	**Laterza**	**2.19**	**247**	⇓P		**Pn**	**10 53 17.0**	**-1.0**
LTRZ				S		**Sn**	**10 53 42.4**	**-2.1**
LTRZ				AML		AML		
	comp=N,12845μm,0.8s							
LTRZ				AML		AML		
	comp=E,12650μm,1.0s							
LTRZ				AML		AML		
	comp=N,128μm,0.4s							
LTRZ				AML		AML		
	comp=N,128μm,1.6s							
LTRZ				AML		AML		
	comp=E,12850μm,1.0s							
AMUR	**Altamura**	**2.24**	**256**	⇓P		**Pn**	**10 53 18.0**	**-0.7**
AMUR				S		**Sn**	**10 53 42.3**	**-3.3**
AMUR				AML		AML		
	comp=N,8595μm,1.2s							
AMUR				AML		AML		
	comp=E,12200μm,0.7s							
AMUR				AML		AML		
	comp=N,8595μm,0.8s							
MATE	**Matera**	**2.25**	**249**	⇑P		**Pn**	**10 53 18.1**	**-0.7**
MATE	**Matera**	**2.25**	**249**	⇓P		**Pn**	**10 53 18.0**	**-0.8**
MATE				AML		AML		
	comp=E,11250μm,0.8s							
MATE				AML		AML		
	comp=N,15850μm,0.5s							
MATE				AML		AML		
	comp=N,15850μm,1.5s							
GOCS	**Kraljevo Serbi**	**2.31**	**26**	*e*Pn		**Pn**	**10 53 21.2**	**+1.5**
GOCS				*e*Sn		**Sb**	**10 53 49.8**	**-2.2**
PRMD	**Pramanda**	**2.33**	**147**	P		**Pn**	**10 53 22.4**	**-1.9**
BBLS	**Lazi&#263i**	**2.36**	**359**	*e*Pn		**Pn**	**10 53 21.9**	**+1.5**
MIGL	**Miglionico**	**2.46**	**250**	⇓P		**Pn**	**10 53 21.0**	**-0.7**
MIGL				AML		AML		
	comp=E,38900μm,0.8s							
MIGL				AML		AML		
	comp=N,55000μm,0.7s							
MIGL				AML		AML		
	comp=N,55000μm,1.3s							
BOSS	**Bosilegrad**	**2.46**	**65**	*e*Pn		**Pn**	**10 53 23.5**	**+1.8**
BOSS				*e*Sn		**Sn**	**10 53 52.1**	**+1.0**
MRVN	**Minervino Murg**	**2.50**	**261**	⇓P		**Pn**	**10 53 21.9**	**-0.5**
MRVN				AML		AML		
	comp=N,7465μm,0.9s							
MRVN				AML		AML		
	comp=E,7805μm,0.7s							
GRUS	**Gruza**	**2.56**	**21**	*e*Pn		**Pn**	**10 53 24.1**	**+1.1**
TETR	**Tetrakomo, Epi**	**2.56**	**147**	P		**Pn**	**10 53 25.4**	**+2.3**
CRAC	**Craco**	**2.56**	**245**	⇓P		**Pn**	**10 53 22.3**	**-0.8**
CRAC				AML		AML		
	comp=E,25150μm,0.8s							
CRAC				AML		AML		
	comp=N,24500μm,0.9s							
KNT	**Kendrikon**	**2.61**	**96**	P		**Pn**	**10 53 25.3**	**+1.6**
MSAG	**Monte S. Angel**	**2.67**	**276**	⇓P		**Pn**	**10 53 24.1**	**-0.7**
MSAG				AML		AML		
	comp=E,10585μm,0.8s							
MSAG				AML		AML		
	comp=N,12100μm,1.6s							
MSAG				AML		AML		
	comp=E,4200μm,0.8s							
MSAG				AML		AML		
	comp=N,5055μm,1.6s							
LIT	**Litokhoron**	**2.69**	**120**	P		**Pn**	**10 53 26.7**	**+1.8**
LIT	**Litokhoron**	**2.69**	**120**			**Pn**	**10 53 25.9**	**+1.0**
LIT	**Litokhoron**	**2.69**	**120**	P		**Pn**	**10 53 25.9**	**+1.0**
BOVS	**Bovan**	**2.70**	**37**	⇑P		**Pn**	**10 53 26.7**	**+1.7**
BOVS	**Bovan**	**2.70**	**37**	*e*Pn		**Pn**	**10 53 26.2**	**+1.2**
BOVS				*e*Sn		**Sn**	**10 53 59.7**	**+2.7**
PALZ	**Palazzo San Ge**	**2.70**	**259**	⇓P		**Pn**	**10 53 24.7**	**-0.3**
PALZ				AML		AML		
	comp=N,24550μm,0.8s							
PALZ				AML		AML		
	comp=E,34650μm,1.0s							
PALZ				AML		AML		
	comp=N,24550μm,1.2s							
ORI	**Oriolo Calabro**	**2.70**	**239**	P		**Pn**	**10 53 24.3**	**-0.8**
ORI				AML		AML		
	comp=N,14600μm,0.6s							
ORI				AML		AML		
	comp=E,17200μm,0.6s							
TRAN	**Tran**	**2.72**	**60**	P		**Pn**	**10 53 27.0**	**+1.7**
TRAN				S		**Sb**	**10 54 01.5**	**-2.2**
THL	**Klokotos Trika**	**2.74**	**134**	P		**Pn**	**10 53 27.2**	**+1.6**
THL	**Klokotos Trika**	**2.74**	**134**	⇑P		**Pn**	**10 53 27.0**	**+1.4**
THL				AML		AML		
	comp=E,630μm,1.4s							
THL				AML		AML		
	comp=N,897μm,0.5s							
THL				AML		AML		
	comp=E,630μm,0.6s							
ACER	**Acerenza**	**2.75**	**256**			**Pn**	**10 53 25.4**	**-0.3**
ACER	**Acerenza**	**2.75**	**256**	⇓P		**Pn**	**10 53 25.5**	**-0.3**
ACER				AML		AML		
	comp=E,17900μm,0.7s							
ACER				AML		AML		
	comp=N,15200μm,0.6s							
ACER				AML		AML		
	comp=E,18550μm,0.7s							
ACER				AML		AML		
	comp=N,15650μm,0.6s							
ACER				AML		AML		
	comp=E,18550μm,1.3s							
ACER				AML		AML		
	comp=E,17900μm,1.3s							
ACER				AML		AML		
	comp=N,15200μm,1.4s							
ACER				AML		AML		
	comp=N,15650μm,1.4s							
PTRP	**Pietrapertosa**	**2.75**	**250**	P		**Pn**	**10 53 25.4**	**-0.5**
PTRP				AML		AML		
	comp=E,17750μm,0.8s							
PTRP				AML		AML		
	comp=N,20000μm,0.9s							
PTRP				AML		AML		
	comp=E,17750μm,1.2s							
TYRN	**Tyrnavos**	**2.76**	**129**	P		**Pn**	**10 53 27.9**	**+2.0**
KKB	**Krupnik**	**2.77**	**82**	P		**Pn**	**10 53 28.0**	**+2.1**
KKB	**Krupnik**	**2.77**	**82**	P		**Pn**	**10 53 28.3**	**+2.4**
KKB				S		**Sb**	**10 54 03.0**	**-2.1**
THE	**Thessaloniki**	**2.79**	**107**	P		**Pn**	**10 53 27.6**	**+1.4**
SGRT	**San Giovanni R**	**2.80**	**276**			**Pn**	**10 53 25.3**	**-1.1**
SGRT	**San Giovanni R**	**2.80**	**276**	⇓P		**Pn**	**10 53 25.6**	**-0.9**
SGRT				AML		AML		
	comp=E,6685μm,0.7s							
SGRT				AML		AML		
	comp=N,8480μm,1.0s							
TRUS	**Trudelj**	**2.81**	**14**	*e*Pn		**Pn**	**10 53 27.7**	**+1.2**
SALB	**San Lorenzo Be**	**2.87**	**237**	⇓P		**Pn**	**10 53 26.3**	**-1.2**
SALB				AML		AML		
	comp=

CELI	**Celico**	**3.08**	**228**	⇓P		**Pn**	**10 53 29.3**	**-1.0**
CELI				AML	AML				
	comp=E,2685µm,1.0s								
CELI				AML	AML				
	comp=N,3210µm,0.7s								
CELI				AML	AML				
	comp=N,8065µm,0.7s								
CELI				AML	AML				
	comp=E,6765µm,1.0s								
ZAGS	**Zajecar**	**3.08**	**41**	*e*Pn		**Pn**	**10 53 31.7**	**+1.4**	
ZAGS				*e*Sn		**Sn**	**10 54 08.4**	**+2.0**	
MRLC	**Muro Lucano**	**3.09**	**257**	⇓P		**Pn**	**10 53 30.1**	**-0.4**	
MRLC				AML	AML				
	comp=E,6105µm,1.0s								
MRLC				AML	AML				
	comp=N,4670µm,1.0s								
MRLC				AML	AML				
	comp=N,4670µm,1.0s								
MRLC				AML	AML				
	comp=N,2500µm,0.7s								
MRLC				AML	AML				
	comp=E,6105µm,1.0s								
MRLC				AML	AML				
	comp=E,2790µm,0.7s								
SLCN	**Sala Consilina**	**3.11**	**250**	P		**Pn**	**10 53 30.2**	**-0.5**	
SLCN				AML	AML				
	comp=N,7560µm,1.2s								
SLCN				AML	AML				
	comp=N,7920µm,1.2s								
SLCN				AML	AML				
	comp=E,12150µm,0.7s								
SLCN				AML	AML				
	comp=E,13600µm,0.7s								
SLCN				AML	AML				
	comp=N,7560µm,0.8s								
SLCN				AML	AML				
	comp=N,7920µm,0.8s								
TIP	**Timpagrande**	**3.11**	**223**			**Pn**	**10 53 29.8**	**-0.9**	
PLNA	**Plana**	**3.11**	**70**	P		**Pn**	**10 53 33.3**	**+2.6**	
PLNA				S		**Sb**	**10 54 12.8**	**-2.3**	
SGTA	**Sant Agata di**	**3.11**	**265**	⇓P		**Pn**	**10 53 30.6**	**-0.1**	
SGTA				AML	AML				
	comp=E,10260µm,0.7s								
SGTA				AML	AML				
	comp=N,7525µm,0.8s								
SGTA				AML	AML				
	comp=E,10540µm,0.7s								
SGTA				AML	AML				
	comp=N,7580µm,0.8s								
SGTA				AML	AML				
	comp=E,10540µm,1.3s								
SGTA				AML	AML				
	comp=E,10260µm,1.3s								
SRS	**Serrai**	**3.13**	**96**	P		**Pn**	**10 53 32.9**	**+1.9**	
BLSH	**Balsha**	**3.14**	**63**	P		**Pn**	**10 53 33.3**	**+2.2**	
BLSH				S		**Sb**	**10 54 13.9**	**-2.0**	
CUC	**Castrocucco**	**3.15**	**243**			**Pn**	**10 53 31.1**	**-0.2**	
BORS2	**Bor- Borsko je**	**3.20**	**35**	*e*Pn		**Pn**	**10 53 32.1**	**+0.2**	
BORS2				*e*Sn		**Sn**	**10 54 12.9**	**+3.6**	
MAKR	**Makrakomi, Fth**	**3.22**	**140**	P		**Pn**	**10 53 34.3**	**+2.2**	
MMB	**Musomishta**	**3.22**	**88**	P		**Pn**	**10 53 34.0**	**+1.8**	
MMB	**Musomishta**	**3.22**	**88**	P		**Pn**	**10 53 34.3**	**+2.1**	
MMB				S		**Sn**	**10 54 12.2**	**+2.4**	
PLG	**Polygyros**	**3.22**	**109**	P		**Pn**	**10 53 33.8**	**+1.6**	
CAFE	**Carife**	**3.22**	**263**	⇓P		**Pn**	**10 53 32.1**	**-0.2**	
CAFE				AML	AML				
	comp=E,8880µm,1.0s								
CAFE				AML	AML				
	comp=N,4010µm,0.7s								
CAFE				AML	AML				
	comp=E,9075µm,1.0s								
CAFE				AML	AML				
	comp=N,4090µm,0.7s								
CAFE				AML	AML				
	comp=N,4090µm,1.3s								
CAFE				AML	AML				
	comp=N,4010µm,1.3s								
SNAL	**S. Angelo Dei**	**3.26**	**261**	⇓P		**Pn**	**10 53 32.4**	**-0.4**	
SNAL				AML	AML				
	comp=E,7490µm,1.1s								
SNAL				AML	AML				
	comp=N,11750µm,1.1s								
SNAL				AML	AML				
	comp=E,7805µm,0.7s								
SNAL				AML	AML				
	comp=N,12100µm,1.1s								
SNAL				AML	AML				
	comp=N,12100µm,0.9s								
SNAL				AML	AML				
	comp=N,11750µm,0.9s								
SNAL				AML	AML				
	comp=E,7805µm,1.3s								
MGR	**Morigerati**	**3.27**	**247**	⇓P		**Pn**	**10 53 32.4**	**-0.4**	
MGR				AML	AML				
	comp=E,4670µm,0.7s								
MGR				AML	AML				
	comp=N,4905µm,1.2s								
MGR				AML	AML				
	comp=E,3485µm,0.7s								
MGR				AML	AML				
	comp=N,5840µm,1.1s								
MGR				AML	AML				
	comp=N,5840µm,0.9s								
MGR				AML	AML				
	comp=N,4905µm,0.8s								
AVAS	**Avala Beograd**	**3.28**	**13**	*e*Pn		**Pn**	**10 53 33.5**	**+0.5**	
CDRU	**Civita di Ruta**	**3.31**	**254**	P		**Pn**	**10 53 32.8**	**-0.7**	
CDRU				AML	AML				
	comp=E,2170µm,1.3s								
CDRU				AML	AML				
	comp=N,2690µm,1.3s								
CDRU				AML	AML				
	comp=N,2690µm,0.7s								
CDRU				AML	AML				
	comp=E,2170µm,0.7s								
CET2	**Cetraro**	**3.32**	**235**	P		**Pn**	**10 53 33.4**	**-0.3**	
KUBS	**Kucevo**	**3.33**	**28**	*e*Pn		**Pn**	**10 53 33.8**	**+0.1**	
KUBS				*e*Sn		**Sn**	**10 54 14.2**	**+1.6**	
CAR1	**CAROLEI**	**3.35**	**229**	⇓P		**Pn**	**10 53 33.6**	**-0.4**	
CAR1				AML	AML				
	comp=E,7970µm,0.8s								
CAR1				AML	AML				
	comp=N,6170µm,1.2s								
CAR1				AML	AML				
	comp=E,8885µm,0.8s								
CAR1				AML	AML				
	comp=N,5480µm,0.8s								
CAR1				AML	AML				
	comp=N,5480µm,1.2s								
CAR1				AML	AML				
	comp=E,8885µm,1.2s								
CAR1				AML	AML				
	comp=E,7970µm,1.2s								
CMPR	**Campora**	**3.37**	**251**	P		**Pn**	**10 53 33.8**	**-0.5**	
CMPR				AML	AML				
	comp=E,2715µm,1.0s								
CMPR				AML	AML				
	comp=N,3740µm,1.0s								
MRB1	**Monte Rocchett**	**3.40**	**265**	⇓P		**Pn**	**10 53 34.9**	**+0.1**	
MRB1				AML	AML				
	comp=E,7305µm,0.6s								
MRB1				AML	AML				
	comp=N,6705µm,0.9s								
MRB1				AML	AML				
	comp=E,7375µm,0.6s								
MRB1				AML	AML				
	comp=N,6890µm,0.9s								
BULG	**Bulgheria - Ca**	**3.41**	**247**	⇓P		**Pn**	**10 53 34.8**	**-0.1**	
BULG				AML	AML				
	comp=E,3630µm,0.6s								
BULG				AML	AML				
	comp=N,7765µm,1.0s								
BULG				AML	AML				
	comp=E,3695µm,0.6s								
BULG				AML	AML				
	comp=N,7955µm,1.0s								
BULG				AML	AML				
	comp=N,7955µm,1.0s								
BULG				AML	AML				
	comp=N,7765µm,1.0s								
MTMR	**Montemarano**	**3.42**	**262**	⇓P		**Pn**	**10 53 34.4**	**-0.5**	
MTMR				AML	AML				
	comp=E,2615µm,0.8s								
MTMR				AML	AML				
	comp=N,3490µm,0.9s								
MTMR				AML	AML				
	comp=N,3490µm,1.1s								
MTMR				AML	AML				
	comp=E,2615µm,1.2s								
GATE	**Gambatesa**	**3.42**	**272**	⇓P		**Pn**	**10 53 35.6**	**+0.7**	
GATE				AML	AML				
	comp=E,3870µm,1.1s								
GATE				AML	AML				
	comp=N,5265µm,0.7s								
GATE				AML	AML				
	comp=E,3865µm,1.1s								
GATE				AML	AML				
	comp=N,5285µm,0.7s								
CIGN	**Sant'Elia a Pi**	**3.42**	**274**	⇓P		**Pn**	**10 53 35.1**	**+0.2**	
CIGN				AML	AML				
	comp=E,4115µm,1.1s								
CIGN				AML	AML				
	comp=N,3450µm,1.2s								
VLS	**Valsamata**	**3.43**	**165**	P		**Pn**	**10 53 34.8**	**-0.3**	
VLS				AML	AML				
	comp=E,3705µm,0.5s								
VLS				AML	AML				
	comp=N,3320µm,0.7s								
VLS				AML	AML				
	comp=E,3705µm,1.5s								
VLS				AML	AML				
	comp=N,3320µm,1.3s								
ANX	**Ano Chora**	**3.46**	**146**	P		**Pn**	**10 53 38.5**	**+2.9**	
ANX	**Ano Chora**	**3.46**	**146**	P		**Pn**	**10 53 38.0**	**+2.4**	
GRI	**Girifalco**	**3.55**	**222**	P		**Pn**	**10 53 35.7**	**-1.0**	
GRI				AML	AML				
	comp=N,2620µm,0.7s								
GRI				AML	AML				
	comp=E,3680µm,0.9s								
SACR	**S. Croce Del S**	**3.58**	**270**	⇓P		**Pn**	**10 53 37.4**	**+0.2**	
SACR				AML	AML				
	comp=N,2335µm,0.8s								
SACR				AML	AML				
	comp=N,2630µm,0.8s								
SACR				AML	AML				
	comp=E,3730µm,1.1s								
SACR				AML	AML				
	comp=E,3435µm,1.1s								
EFP	**Efpalio**	**3.60**	**148**	P		**Pn**	**10 53 39.2**	**+1.9**	
FRES	**Fresagrandinar**	**3.62**	**279**	P		**Pn**	**10 53 37.7**	**+0.1**	
FRES				AML	AML				
	comp=E,5500µm,0.7s								
FRES				AML	AML				
	comp=N,5160µm,0.6s								
FRES				AML	AML				
	comp=E,5500µm,1.3s								
BLY	**Banja Luka**	**3.65**	**334**	⇑*i*Pn		**Pn**	**10 53 38.8**	**+0.8**	
BLY				*e*Sn		**Sn**	**10 54 21.4**	**+1.0**	
BLY	**Banja Luka**	**3.65**	**334**	⇓P		**Pn**	**10 53 39.3**	**+1.3**	
BLY	**Banja Luka**	**3.65**	**334**	*e*Pn		**Pn**	**10 53 39.2**	**+1.2**	
BLY	**Banja Luka**	**3.65**	**334**	P		**Pn**	**10 53 39.1**	**+1.0**	
BLY				AML	AML				
	comp=E,5730µm,0.8s								
BLY				AML	AML				
	comp=N,6330µm,0.8s								
BLY				AML	AML				
	comp=E,5725µm,1.0s								
BLY				AML	AML				
	comp=N,6280µm,0.8s								
BLY				AML	AML				
	comp=E,5730µm,1.2s								
PGB	**Panagyurishte**	**3.65**	**72**	P		**Pn**	**10 53 40.7**	**+2.6**	
VITU	**Vitulano (BN)**	**3.65**	**267**	⇓P		**Pn**	**10 53 38.6**	**+0.5**	
VITU				AML	AML				
	comp=E,2240µm,0.3s								
VITU				AML	AML				
	comp=E,4915µm,0.6s								
VITU				AML	AML				
	comp=N,4650µm,0.7s								
VITU				AML	AML				
	comp=E,2240µm,1.7s								
VITU				AML	AML				
	comp=E,4915µm,1.4s								
VITU				AML	AML				
	comp=N,4520µm,0.7s								
BSSO	**Busso**	**3.66**	**272**	P		**Pn**	**10 53 38.3**	**0.0**	
BSSO				AML	AML				
	comp=E,968µm,0.9s								
BSSO				AML	AML				
	comp=N,906µm,0.9s								
FRGS	**Fruska Gora**	**3.66**	**4**	*e*Pn		**Pn**	**10 53 38.5**	**+0.2**	
MDVR	**Moldovita**	**3.67**	**26**	⇑P		**Pn**	**10 53 39.8**	**+1.5**	
MDVR	**Moldovita**	**3.67**	**26**	*e*Pn		**Pn**	**10 53 39.8**	**+1.5**	
SERG	**Sergoula**	**3.67**	**146**	P		**Pn**	**10 53 41.0**	**+2.6**	
TRIV	**Trivento**	**3.69**	**276**	⇓P		**Pn**	**10 53 39.0**	**+0.3**	
TRIV				AML	AML				
	comp=E,3595µm,0.8s								
TRIV				AML	AML				
	comp=N,5040µm,1.0s								
TRIV				AML	AML				
	comp=N,5250µm,1.1s								
TRIV				AML	AML				
	comp=N,5250µm,0.9s								
TRIV				AML	AML				
	comp=N,5040µm,1.0s								
TRIV				AML	AML				
	comp=E,3730µm,0.8s								
PTRJ	**Pietraroja**	**3.71**	**270**	AML	AML				
PTRJ	comp=E,4445µm,0.9s			AML	AML				
	comp=N,4005µm,1.5s								
PTRJ				AML	AML				
	comp=N,3840µm,0.7s								
PTRJ				AML	AML				
	comp=E,97µm,0.9s								
PTRJ				AML	AML				
	comp=N,4005µm,0.5s								
PTRJ				AML	AML				
	comp=N,3840µm,1.3s								
PAOL	**Paolisi**	**3.72**	**264**			**Pn**	**10 53 39.4**	**+0.3**	
KALE	**Kalithea**	**3.73**	**146**	P		**Pn**	**10 53 41.7**	**+2.6**	
PLAC	**Placanica**	**3.83**	**218**	⇓P		**Pn**	**10 53 39.4**	**-1.2**	
PLAC				AML	AML				
	comp=E,2050µm,0.9s								
PLAC				AML	AML				
	comp=N,1670µm,0.6s								
PLAC				AML	AML				
	comp=E,1685µm,0.6s								
PLAC				AML	AML				
	comp=N,2105µm,0.9s								
VBKN	**Vesuvio Bunker**	**3.86**	**262**	P		**Pn**	**10 53 41.1**	**+0.1**	
VBKN				AML	AML				
	comp=E,6150µm,1.3s								
VBKN				AML	AML				
	comp=N,9900µm,0.9s								
VRSS	**Vrsac**	**3.87**	**20**	*e*Pn		**Pn**	**10 53 40.8**	**-0.2**	
VTIR	**Vesuvio Tirone**	**3.87**	**261**	P		**Pn**	**10 53 41.2**	**+0.1**	
VTIR				AML	AML				
	comp=E,2290µm,0.8s								
VTIR				AML	AML				
	comp=N,1685µm,0.8s								
VTIR				AML	AML				
	comp=E,2290µm,1.2s								
DJES	**Djerdap**	**3.87**	**34**	⇑P		**Pn**	**10 53 42.8**	**+1.7**	
MIDA	**Miranda**	**3.91**	**274**	⇓P		**Pn**	**10 53 41.7**	**0.0**	
MIDA				AML	AML				
	comp=E,2740µm,0.6s								
MIDA				AML	AML				
	comp=N,1875µm,0.7s								
MIDA				AML	AML				
	comp=E,2000µm,0.7s								
MIDA				AML	AML				
	comp=N,2695µm,0.6s								
MIDA				AML	AML				
	comp=E,2740µm,1.4s								
MIDA				AML	AML				
	comp=N,2695µm,1.4s								
MIDA				AML	AML				
	comp=E,2000µm,1.3s								
MIDA				AML	AML				
	comp=N,1875µm,1.3s								
VAGA	**Valle Agricola**	**3.93**	**270**	⇓P		**Pn**	**10 53 42.4**	**+0.4**	
VAGA				AML	AML				
	comp=E,2890µm,0.3s								
VAGA				AML	AML				
	comp=N,4440µm,0.4s								
VAGA				AML	AML				
	comp=E,3035µm,0.3s								
VAGA				AML	AML				
	comp=N,4560µm,0.4s								
RZN	**Rozhen**	**3.96**	**85**	P		**Pn**	**10 53 44.8**	**+2.3**	
RZN				S		**Sn**	**10 54 33.9**	**+5.5**	
LPEL	**Lama dei Pelig**	**3.99**	**280**	⇓P		**Pn**	**10 53 42.9**	**+0.1**	
LPEL				AML	AML				
	comp=E,2550µm,0.7s								
LPEL				AML	AML				
	comp=N,2270µm,1.1s								
LPEL				AML	AML				
	comp=N,2125µm,1.1s								
LPEL				AML	AML				
	comp=E,2695µm,0.7s								
LPEL				AML	AML				
	comp=N,2270µm,0.9s								
LPEL				AML	AML				
	comp=N,2125µm,0.9s								
JOPP	**Joppolo**	**3.99**	**225**	⇓P		**Pn**	**10 53 41.3**	**-1.4**	
JOPP				AML	AML				
	comp=N,1155µm,0.8s								
JOPP				AML	AML				
	comp=E,1210µm,0.6s								
RNI2	**Rionero Sannit**	**3.99**	**275**	⇓P		**Pn**	**10 53 43.5**	**+0.7**	
RNI2				AML	AML				
	comp=E,2810µm,1.2s								
RNI2				AML	AML				
	comp=N,2485µm,1.6s								
RNI2				AML	AML				
	comp=E,2890µm,1.2s								
RNI2				AML	AML				
	comp=N,2560µm,1.6s								
RNI2				AML	AML				
	comp=N,2560µm,0.4s								
RNI2				AML	AML				
	comp=N,2485µm,0.4s								
RNI2				AML	AML				
	comp=E,2890µm,0.8s								
RNI2				AML	AML				
	comp=E,2810µm,0.8s								
PIGN	**Pignataro Magg**	**3.99**	**267**	⇓P		**Pn**	**10 53 43.0**	**+0.2**	
PIGN				AML	AML				
	comp=E,1350µm,0.3s								
PIGN				AML	AML				
	comp=E,1495µm,0.4s								
PIGN				AML	AML				
	comp=N,1490µm,1.2s								
PIGN				AML	AML				
	comp=N,1535µm,0.9s								
PIGN				AML	AML				
	comp=N,1490µm,0.8s								
PLD	**Plovdiv**	**4.00**	**79**	P		**Pn**	**10 53 45.5**	**+2.6**	
HERR	**Herculane**	**4.01**	**32**	⇓P		**Pn**	**10 53 44.8**	**+1.9**	
KLV	**Kalavryta, Ach**	**4.03**	**148**	⇑P		**Pn**	**10 53 44.5**	**+1.2**	
KLV				AML	AML				
	comp=N,1253µm,1.6s								
KLV				AML	AML				
	comp=N,1253µm,0.4s								
KLV				AML	AML				
	comp=E,1475µm,1.0s								
CERA	**Filignano**	**4.09**	**273**	P		**Pn**	**10 53 44.8**	**+0.6**	
CERA				AML	AML				
	comp=N,5240µm,0.8s								
CERA				AML	AML				
	comp=E,4600µm,0.7s								
CERA				AML	AML				
	comp=N,5375µm,0.8s								
CERA				AML	AML				
	comp=E,4490µm,0.7s								
CPOZ	**Campi Flegrei,**	**4.09**	**262**	P		**Pn**	**10 53 43.8**	**-0.3**	
CPOZ				AML	AML				
	comp=N,4705µm,1.0s								
CPOZ				AML	AML				
	comp=E,11935µm,0.9s								
SRE	**Strehaia**	**4.18**	**40**	⇓P		**Pn**	**10 53 47.5**	**+2.2**	
SRE	**Strehaia**	**4.18**	**40**	P		**Pn**	**10 53 47.5**	**+2.2**	
MODR	**Mondragone**	**4.22**	**267**	⇓P		**Pn**	**10 53 45.7**	**-0.2**	
MODR				AML	AML				
	comp=E,1690µm,0.9s								
MODR				AML	AML				
	comp=N,1540µm,1.4s								
MCI	**Monte Cassino**	**4.24**	**272**	⇓P		**Pn**	**10 53 46.8**	**+0.6**	
MCI				AML	AML				
	comp=N,3035µm,0.2s								
MCI				AML	AML				
	comp=E,4330µm,0.3s								
CEL	**Celeste**	**4.25**	**221**			**Pn**	**10 53 45.0**	**-1.3**	
PLVB	**Pleven**	**4.25**	**62**	⇓P		**Pn**	**10 53 49.1**	**+2.7**	
IOCA	**Ischia Osserva**	**4.27**	**262**	P		**Pn**	**10 53 46.1**	**-0.5**	
IOCA				AML	AML				
	comp=E,4290µm,0.8s								
IOCA				AML	AML				
	comp=E,4290µm,1.2s								
IOCA				AML	AML				
	comp=N,3955µm,0.7s								
VCEL	**Villa Celiera**	**4.29**	**284**	⇓P		**Pn**	**10 53 47.0**	**+0.1**	
VCEL				AML	AML				
	comp=E,2785µm,0.6s								
VCEL				AML	AML				
	comp=N,3650µm,0.6s								
VCEL				AML	AML				
	comp=E,2785µm,1.4s								
IMTC	**Ischia Forio M**	**4.29**	**261**	P		**Pn**	**10 53 46.4**	**-0.5**	
IMTC				AML	AML				
	comp=N,2735µm,0.6s								
IMTC				AML	AML				
	comp=E,2490µm,0.7s								
T0110	**Collepietro**	**4.31**	**282**	⇓P		**Pn**	**10 53 47.5**	**+0.3**	
T0110				AML	AML				
	comp=E,3060µm,0.8s								
T0110				AML	AML				
	comp=N,3770µm,0.6s								
T0110				AML	AML				
	comp=N,3770µm,1.4s								
T0110				AML	AML				
	comp=E,3060µm,1.2s								
SOI	**Samo**	**4.32**	**219**	⇓P		**Pn**	**10 53 45.9**	**-1.3**	
SOI				AML	AML				
	comp=N,1575µm,0.8s								
SOI				AML	AML				
	comp=E,1385µm,0.9s								
POFI	**Posta Fibreno**	**4.32**	**275**	⇓P		**Pn**	**10 53 47.5**	**+0.1**	
POFI				AML	AML				
	comp=E,2060µm,0.9s								
POFI				AML	AML				
	comp=E,1615µm,0.9s								
POFI				AML	AML				
	comp=E,2060µm,1.1s								
POFI				AML	AML				
	comp=E,1615µm,1.1s								
POFI				AML	AML				
	comp=N,818µm,1.0s								
POFI				AML	AML				
	comp=N,1034µm,1.1s								
TRTR	**Tortoreto Alta**	**4.33**	**289**	⇓P		**Pn**	**10 53 48.4**	**+1.0**	
TRTR				AML	AML				
	comp=E,5475µm,1.2s								
TRTR				AML	AML				
	comp=N,4215µm,1.0s								
SICLA	**Scilla**	**4.34**	**223**	P		**Pn**	**10 53 45.5**	**-2.0**	
SICLA				AML	AML				
	comp=E,2485µm,0.7s								
SICLA				AML	AML				
	comp=N,1985µm,0.8s								
VVLD	**Villa Vallelon**	**4.39**	**277**	P		**Pn**	**10 53 48.2**	**-0.1**	
BZS	**Buzias**	**4.40**	**20**	⇓P		**Pn**	**10 53 49.6**	**+1.2**	
BZS	**Buzias**	**4.40**	**20**	P		**Pn**	**10 53 49.5**	**+1.2**	
LRP	**Arpino**	**4.41**	**274**	P		**Pn**	**10 53 48.6**	**0.0**	
LRP				AML	AML				
	comp=E,1380µm,1.4s								
LRP				AML	AML				
	comp=N,1355µm,1.0s								
LRP				AML	AML				
	comp=E,1380µm,0.6s								
LRP				AML	AML				
	comp=N,1355µm,1.0s								
FAGN	**Fagnano**	**4.46**	**282**	⇓P		**Pn**	**10 53 49.4**	**+0.2**	
FAGN				AML	AML				
	comp=N,4670µm,0.5s								
FAGN				AML	AML				
	comp=N,4670µm,1.5s								
FAGN				AML	AML				
	comp=E,5325µm,0.6s								
GIGS	**Gran Sasso**	**4.50**	**284**	⇓P		**Pn**	**10 53 49.4**	**-0.3**	
GIGS				AML	AML				
	comp=E,600µm,1.2s								
GIGS				AML	AML				
	comp=N,668µm,0.8s								
GIGS				AML	AML				
	comp=E,600µm,0.8s								
TERO	**Teramo**	**4.50**	**286**	⇓P		**Pn**	**10 53 50.0**	**+0.2**	
TERO				AML	AML				
	comp=E,1350µm,0.3s								

TERO AML AML
comp=N,1945µm,0.6s
OFFI Offida 4.52 290 P Pn 10 53 50.8 +0.7
OFFI AML AML
comp=E,4405µm,0.5s
OFFI AML AML
comp=N,4970µm,0.8s
PTQR Pietraquaria 4.56 279 P Pn 10 53 50.9 +0.2
PTQR AML AML
comp=E,924µm,0.7s
PTQR AML AML
comp=N,1035µm,0.7s
PTQR AML AML
comp=E,924µm,1.3s
GZR Gura Zlata 4.58 31 ⇑P Pn 10 53 52.9 +2.1
GZR Gura Zlata 4.58 31 P Pn 10 53 52.9 +2.1
RDO Rodhopi 4.59 92 Pn 10 53 52.2 +1.3
AQU L'Aquila 4.60 283 *e*Pn **Pn 10 53 49.7 -1.5**
AQU *e*Sn **Sn 10 54 41.2 -2.8**
MPNC Port Mandanici 4.61 225 ⇓P Pn 10 53 48.9 -2.4
MPNC AML AML
comp=E,3395µm,0.5s
MPNC AML AML
comp=N,3365µm,0.7s
VENT Ventotene 4.62 263 P Pn 10 53 50.1 -1.2
VENT AML AML
comp=E,1130µm,1.4s
VENT AML AML
comp=N,734µm,1.5s
VENT AML AML
comp=N,734µm,0.5s
VENT AML AML
comp=E,1130µm,0.6s
GUAR Guarcino 4.62 276 P Pn 10 53 51.4 0.0
GUAR AML AML
comp=E,950µm,0.7s
GUAR AML AML
comp=N,1520µm,1.4s
GUAR AML AML
comp=N,1520µm,0.6s
MNTT Montottone 4.62 292 P Pn 10 53 52.3 +0.8
MNTT AML AML
comp=E,9350µm,1.1s
MNTT AML AML
comp=E,9350µm,0.9s
MNTT AML AML
comp=N,7315µm,0.6s
CAMP Campotosto 4.63 285 Pn 10 53 51.2 -0.4
CAMP Campotosto 4.63 285 ⇓P Pn 10 53 51.7 +0.1
CAMP AML AML
comp=E,1635µm,0.6s
CAMP AML AML
comp=N,1570µm,0.8s
GIUL Giuliano Di Ro 4.66 273 ⇓P Pn 10 53 51.7 -0.3
MTRA Matera 4.68 288 P Pn 10 53 52.2 -0.1
MTRA AML AML
comp=N,2525µm,0.4s
MTRA AML AML
comp=N,2495µm,0.4s
MTRA AML AML
comp=E,2650µm,0.7s
MTRA AML AML
comp=E,2650µm,0.7s
MF5 Montefalcone A 4.70 290 ⇓P Pn 10 53 52.9 +0.4
MF5 AML AML
comp=N,2800µm,0.8s
MF5 AML AML
comp=E,2545µm,1.1s
SMA1 SAN MARTINO 4.70 286 ⇓P Pn 10 53 52.8 +0.2
SMA1 AML AML
comp=N,2430µm,0.9s
SMA1 AML AML
comp=E,2760µm,0.7s
SMA1 AML AML
comp=N,2430µm,1.1s
ITM Ithomi 4.72 155 Pn 10 53 53.5 +0.7
ITM Ithomi 4.72 155 ⇑P Pn 10 53 53.7 +0.9
ITM AML AML
comp=E,244µm,1.6s
ITM AML AML
comp=N,211µm,1.5s
ITM AML AML
comp=N,211µm,0.5s
ITM AML AML
comp=E,244µm,0.4s
MORH Mrgy, Hungar 4.75 353 ⇑*i*Pn **Pn 10 53 53.2 +0.1**
MORH *e*Sn **Sn 10 54 49.0 +1.5**
MORH Mrgy, Hungar 4.75 353 ⇓P Pn 10 53 53.8 +0.7
RM33 Pellescritta (4.76 284 ⇓P Pn 10 53 53.8 +0.4
RM33 AML AML
comp=E,2825µm,1.1s
RM33 AML AML
comp=N,1905µm,1.3s
RM33 AML AML
comp=E,2830µm,1.2s
RM33 AML AML
comp=N,2005µm,1.3s
RM33 AML AML
comp=E,2825µm,0.9s
MMO1 Montemonaco 4.77 289 ⇓P Pn 10 53 53.7 +0.2
SAP2 Sant'Angelo in 4.77 292 P Pn 10 53 53.8 +0.3
SAP2 AML AML
comp=N,12550µm,0.3s
SAP2 AML AML
comp=E,2615µm,0.3s
FIAM Fiamignano 4.80 281 ⇓P Pn 10 53 54.7 +0.8
FIAM AML AML
comp=E,5015µm,1.6s
FIAM AML AML
comp=N,2530µm,0.6s
FIAM AML AML
comp=E,1295µm,0.7s
FIAM AML AML
comp=N,1240µm,0.6s
FIAM AML AML
comp=N,1240µm,1.4s
FIAM AML AML
comp=E,1295µm,1.3s
FIAM AML AML
comp=E,5015µm,0.4s
AIO Antillo 4.80 224 ⇓P Pn 10 53 51.9 -2.1
AIO AML AML
comp=E,898µm,0.7s
AIO AML AML
comp=N,940µm,1.0s
AIO AML AML
comp=N,940µm,1.0s
GUMA Gualdo di Mace 4.81 291 Pn 10 53 53.6 -0.4
GUMA Gualdo di Mace 4.81 291 P Pn 10 53 54.0 0.0
GUMA AML AML
comp=E,3685µm,0.6s
GUMA AML AML
comp=N,3480µm,0.7s
GUMA AML AML
comp=E,4465µm,0.8s
GUMA AML AML
comp=N,3805µm,0.7s
GUMA AML AML
comp=N,3480µm,1.3s
GUMA AML AML
comp=E,4465µm,1.2s
GUMA AML AML
comp=N,3805µm,1.3s
MC2 Monte Cornacci 4.87 289 ⇓P Pn 10 53 55.3 +0.3
CERT Cerreto 4.87 277 ⇓P Pn 10 53 55.0 +0.1
CERT AML AML
comp=E,1078µm,0.6s
CERT AML AML
comp=N,746µm,0.9s
CERT AML AML
comp=E,1078µm,1.4s
CERT AML AML
comp=N,746µm,1.1s
LATB Latina 4.88 272 P Pn 10 53 54.0 -0.9
LATB AML AML
comp=E,375µm,1.1s
LATB AML AML
comp=N,424µm,1.1s
NRCA Norcia 4.90 288 Pn 10 53 55.4 +0.1
NRCA Norcia 4.90 288 ⇓P Pn 10 53 55.7 +0.3
NRCA AML AML
comp=E,2220µm,0.8s
NRCA AML AML
comp=E,2215µm,0.8s
NRCA AML AML
comp=N,1830µm,1.5s
NRCA AML AML
comp=N,1790µm,0.7s
NRCA AML AML
comp=N,1830µm,0.5s
NRCA AML AML
comp=E,2215µm,1.2s
NRCA AML AML
comp=E,2220µm,1.2s
CSP1 Cessapalombo 4.91 291 ⇓P Pn 10 53 55.2 -0.2
CSP1 AML AML
comp=E,1350µm,0.9s
CSP1 AML AML
comp=N,2145µm,1.2s
LNSS Leonessa 4.91 285 ⇓P Pn 10 53 55.9 +0.5
ELND Elena 4.97 71 ⇓P Pn 10 53 58.8 +2.6
FDMO Fiordimonte 4.97 290 Pn 10 53 56.4 +0.1
FDMO Fiordimonte 4.97 290 ⇓P Pn 10 53 56.3 +0.1
FDMO AML AML
comp=N,1190µm,0.5s
FDMO AML AML
comp=N,1190µm,1.5s
FDMO AML AML
comp=E,2705µm,0.8s
SIRR Siria 5.02 18 ⇓P Pn 10 53 58.3 +1.4
GAVE Gavelli 5.03 286 ⇓P Pn 10 53 57.8 +0.7
GAVE AML AML
comp=E,2525µm,0.7s
GAVE AML AML
comp=N,704µm,1.4s
GAVE AML AML
comp=E,2440µm,0.4s
GAVE AML AML
comp=N,1930µm,1.5s
GAVE AML AML
comp=N,1930µm,0.5s
GAVE AML AML
comp=N,704µm,0.6s
LOT Lotru 5.04 37 ⇓P Pn 10 53 59.2 +2.0
BOJS Bojanci 5.04 324 *i*Pn **Pn 10 53 57.7 +0.5**
BOJS *e*Sn **Sn 10 54 51.9 -2.7**
BOJS IAML 10 54 59.5
comp=Z,524nm,0.6s
BOJS Bojanci 5.04 324 P Pn 10 53 57.6 +0.5
BOJS AML AML
comp=E,6020µm,0.9s
BOJS AML AML
comp=N,5500µm,1.3s
DEV Deva 5.04 28 ⇓P Pn 10 53 59.8 +2.7
DEV Deva 5.04 28 P Pn 10 53 59.8 +2.7
HUMR Humele 5.05 51 ⇑P Pn 10 54 00.0 +2.7
EL6 Elcito 5.05 293 P Pn 10 53 57.0 -0.4
EL6 AML AML
comp=E,2410µm,0.8s
EL6 AML AML
comp=E,2410µm,1.2s
EL6 AML AML
comp=N,2530µm,0.8s
SENI Senigallia 5.10 298 P Pn 10 53 58.0 0.0
ARRO Arrone 5.10 284 P Pn 10 53 59.0 +1.0
ARRO AML AML
comp=E,752µm,0.3s
ARRO AML AML
comp=N,916µm,0.7s
SNTG Esanatoglia 5.14 292 ⇓P Pn 10 53 58.2 -0.4
SNTG AML AML
comp=E,1008µm,0.7s
SNTG AML AML
comp=N,1325µm,0.6s
SNTG AML AML
comp=E,914µm,0.6s
SNTG AML AML
comp=N,1375µm,0.7s
SNTG AML AML
comp=E,914µm,1.4s
SNTG AML AML
comp=E,1008µm,1.3s
ARVD Arcevia 5.22 295 ⇓P Pn 10 53 59.2 -0.4
COR1 Corinaldo 5.23 296 P Pn 10 54 00.1 +0.4
STFAR Stefanesti-Arg 5.24 48 ⇑P Pn 10 54 03.2 +3.4
CESX Cesi 5.24 284 Pn 10 54 00.0 +0.1
CESX Cesi 5.24 284 ⇓P Pn 10 54 00.3 +0.3
CESX AML AML
comp=N,858µm,0.5s
CESX AML AML
comp=E,1094µm,0.7s
FOSV Fossato di Vic 5.28 292 ⇓P Pn 10 54 00.3 -0.1
FOSV AML AML
comp=N,2905µm,0.7s
FOSV AML AML
comp=E,2105µm,0.3s
MOMA Monte Martano 5.29 287 P Pn 10 54 01.0 +0.4
SSFR Montelago di S 5.31 294 ⇓P Pn 10 54 00.7 -0.2
SSFR AML AML
comp=E,4180µm,0.3s
SSFR AML AML
comp=E,3925µm,0.2s
SSFR AML AML
comp=N,4390µm,0.3s
SSFR AML AML
comp=N,3845µm,0.3s
ATCC AVT- Casa Cast 5.33 291 ⇓P Pn 10 54 01.4 +0.2
ATCC AML AML
comp=E,2440µm,0.8s
ATCC AML AML
comp=N,2645µm,1.2s
ATCC AML AML
comp=N,2645µm,0.8s
ATCC AML AML
comp=E,2440µm,1.2s
BEHE Becsehely 5.33 340 Pn 10 54 00.8 -0.3
BEHE Becsehely 5.33 340 ⇑*i*Pn **Pn 10 54 01.6 +0.4**
BEHE *e*Sn **Sn 10 55 01.2 -0.7**
FRON Frontone 5.37 294 ⇓P Pn 10 54 01.5 -0.2
FRON AML AML
comp=E,1510µm,1.2s
FRON AML AML
comp=N,1895µm,0.7s
FRON AML AML
comp=E,1510µm,0.8s
FRON AML AML
comp=N,1895µm,1.3s
BRJN Brijuni 5.39 311 P Pn 10 54 02.1 +0.3
MPAG Monte Paganucc 5.39 295 ⇓P Pn 10 54 01.7 -0.3
MPAG AML AML
comp=E,1355µm,0.7s
MPAG AML AML
comp=N,1675µm,0.6s
MPAG AML AML
comp=N,1640µm,0.6s
MPAG AML AML
comp=E,1295µm,0.6s
ARR Arges 5.39 43 ⇓P Pn 10 54 04.2 +2.1
ATFO Monte Foce - G 5.43 292 ⇓P Pn 10 54 02.6 0.0
MURB Monte Urbino 5.43 291 Pn 10 54 02.9 +0.3
MURB Monte Urbino 5.43 291 ⇓P Pn 10 54 03.0 +0.3
PESA Pesaro 5.45 299 P Pn 10 54 02.6 -0.3
KOGS Kog 5.46 336 P Pn 10 54 03.1 +0.2
HLNI Lentini 5.46 222 P Pn 10 54 00.3 -2.7
EZN Ezine 5.48 106 ⇓P Pn 10 54 05.2 +1.9
EZN Ezine 5.48 106 P Pn 10 54 05.1 +1.9
NARO Abbazia di Nar 5.50 295 ⇓P Pn 10 54 03.1 -0.4
PIEI Pieia 5.51 294 ⇓P Pn 10 54 03.2 -0.4
SSY Sortino 5.52 220 P Pn 10 54 00.3 -3.4
MTUR Matau 5.52 46 ⇑P Pn 10 54 06.7 +2.8
MTUR Matau 5.52 46 P Pn 10 54 06.7 +2.8
ATPI Pietralunga - 5.57 293 P Pn 10 54 04.5 0.0
PE3 Peglio 5.59 295 P Pn 10 54 04.6 -0.1
APEC Apecchio 5.60 294 ⇓P Pn 10 54 05.0 +0.2
LOZB Loznitsa 5.60 68 ⇓P Pn 10 54 07.5 +2.7
RAZG Razgrad 5.60 66 ⇑P Pn 10 54 07.1 +2.2
VAE Valguarnera 5.61 226 Pn Pn 10 54 04.7 -0.3
comp=E,28nm,0.4s,baz=163,slow=4.6,SNR=6.1
VAE Sn **Sn 10 55 10.8 +2.1**
comp=E,1.8nm,0.3s,baz=178,slow=23,SNR=3.1
VAE Lg Lg 10 55 37.9
comp=E,6.2nm,0.3s,baz=12,slow=22,SNR=3.6
VAE LR LR 10 57 05.7
comp=E,2µm,20.6s,baz=79,slow=47
TOLF Tolfa 5.61 278 P Pn 10 54 04.6 -0.4
ATMI Monte Miggiano 5.63 291 P Pn 10 54 06.0 +0.7
MGAB Montegabbione 5.64 287 P Pn 10 54 05.3 -0.1
VOIR 5.66 44 ⇓P Pn 10 54 07.9 +2.2
VOIR 5.66 44 P Pn 10 54 07.9 +2.2
BADI Badiali 5.70 293 P Pn 10 54 07.0 +0.7
PARC Parchiule 5.75 294 ⇓P Pn 10 54 07.0 +0.1
SACS San Casciano d 5.77 286 P Pn 10 54 07.0 -0.3
LJU Ljubljana 5.78 323 P Pn 10 54 07.3 0.0
SSP9 Sansepolcro 5.80 293 P Pn 10 54 08.0 +0.4
RAFF Raffo Rosso 5.82 224 Pn 10 54 06.1 -1.8
RAFF Raffo Rosso 5.82 224 P Pn 10 54 06.2 -1.8
BSZH Besenyszg 5.83 5 ⇓P Pn 10 54 09.2 +1.3
HPAC Pachino 5.87 217 P Pn 10 54 05.8 -2.7
JAVS Javornik 5.88 320 *i*Pn **Pn 10 54 08.8 0.0**
JAVS *e*Sn **Sn 10 55 13.6 -1.9**
JAVS IAML 10 56 05.8
comp=Z,3µm,1.7s
SULR 5.90 55 ⇑P Pn 10 54 12.2 +3.3
TRI Trieste 5.90 317 Pn 10 54 08.7 -0.3
TRI Trieste 5.90 317 P Pn 10 54 08.7 -0.3
TRI Trieste 5.90 317 P Pn 10 54 08.2 -0.7
CRE Caprese Michel 5.94 293 P Pn 10 54 09.5 -0.1
SF04 Casetta 5.95 286 P Pn 10 54 09.2 -0.5
CORL Corleone 5.96 235 P Pn 10 54 09.2 -0.7
CJR Cluj-Napoca 6.00 28 ⇑P Pn 10 54 13.2 +2.8
CJR Cluj-Napoca 6.00 28 P Pn 10 54 13.1 +2.8
PHSR Pinarhisar 6.05 86 ⇑P Pn 10 54 13.3 +2.3
VOJS Vojsko 6.07 320 *i*Pn **Pn 10 54 11.2 -0.1**
SOKA Soboth 6.08 330 *i*Pn **Pn 10 54 12.1 +0.6**
comp=Z,23nm,0.3s,SNR=16
SOKA *e*Sn **Sn 10 55 18.3 -2.1**
comp=Z,125nm,0.6s
ARCI Arcidosso 6.09 285 P Pn 10 54 12.0 +0.4
ASQU Asqua 6.11 295 P Pn 10 54 12.0 +0.2
OBKA Obir 6.13 326 *i*Pn **Pn 10 54 13.3 +1.1**
comp=Z,28nm,0.3s,SNR=8.0
OBKA *i*Sn **Sn 10 55 25.8 +4.1**
comp=Z,182nm,0.4s
LTVH Ltavrtes, Hu 6.13 16 ⇓P Pn 10 54 14.6 +2.4
SABO M.te Sabotino 6.17 318 P Pn 10 54 12.2 -0.5
MLR Muntele Rosu 6.17 48 Pn **Pn 10 54 14.5 +1.7**
comp=Z,5.9nm,0.3s,baz=152,slow=13,SNR=44
MLR Sn **Sn 10 55 26.0 +3.3**
comp=Z,1.7nm,0.3s,baz=160,slow=10,SNR=3.4
MLR Lg Lg 10 55 57.1
comp=Z,1.8nm,0.3s,baz=293,slow=20,SNR=3.4
MLR LR LR 10 57 07.6
comp=Z,1µm,21.2s,baz=202,slow=43
comp=Z,78nm,0.8s
MLR Muntele Rosu 6.17 48 Pn 10 54 14.1 +1.2
MLR Muntele Rosu 6.17 48 ⇓P Pn 10 54 16.2 +3.3
MLR Muntele Rosu 6.17 48 *e*Pn **Pn 10 54 16.1 +3.3**
MESR Meseseni 6.17 23 ⇑P Pn 10 54 14.0 +1.3
CICN Ciocanesti 6.18 62 ⇑P Pn 10 54 15.1 +2.3
DOPR Dopca 6.19 42 ⇓P Pn 10 54 15.5 +2.5
DRE Drenchia 6.29 320 P Pn 10 54 14.1 -0.2
ISR Istrita 6.30 53 ⇑P Pn 10 54 17.6 +3.1
ISR Istrita 6.30 53 P Pn 10 54 17.6 +3.1
RUFI Rufina 6.31 294 P Pn 10 54 14.2 -0.4
NEHR Nehoiu 6.33 49 ⇑P Pn 10 54 18.2 +3.3
CSNT Castellina Chi 6.36 291 P Pn 10 54 15.1 -0.2
OSSC Osservatorio P 6.40 291 Pn 10 54 15.4 -0.4
ARSA Arzberg 6.40 335 Pn 10 54 16.3 +0.4
ARSA Arzberg 6.40 335 *i*Pn **Pn 10 54 16.7 +0.8**
comp=Z,36nm,0.5s,SNR=9.8
ARSA Arzberg 6.40 335 P Pn 10 54 16.6 +0.8
BRIS BRISIGHELLA 6.42 297 P Pn 10 54 14.1 -1.9
PSZ Piszkesteto 6.42 3 Pn 10 54 16.3 +0.1
PSZ Piszkesteto 6.42 3 ⇑P Pn 10 54 17.4 +1.1
PSZ Piszkesteto 6.42 3 P Pn 10 54 17.3 +1.1
APE Apeiranthos 6.46 131 ⇓P Pn 10 54 18.1 +1.4
APE Apeiranthos 6.46 131 *c*P **Pn 10 54 17.3 +0.6**
OZUR 6.48 43 ⇓P Pn 10 54 19.2 +2.2
SEI Scarperia 6.49 296 P Pn 10 54 17.9 +0.8
CASP Castiglione de 6.52 284 Pn 10 54 16.5 -1.0
CASP Castiglione de 6.52 284 P Pn 10 54 16.3 -1.2
COVR Voineasa-Covas 6.54 46 ⇑P Pn 10 54 21.2 +3.4
AMRR Amara 6.55 59 ⇓P Pn 10 54 21.0 +3.1
AMRR Amara 6.55 59 P Pn 10 54 20.9 +3.1
MOCL Monte Cuccoli 6.59 295 P Pn 10 54 18.7 +0.2
PTCC Patocco-Chiusa 6.59 320 P Pn 10 54 18.3 -0.2
RONA Rosalia, Austr 6.60 341 *i*Pn **Pn 10 54 19.6 +1.0**
comp=Z,17nm,0.5s
MYKA Terra Mystica 6.62 323 *i*Pn **Pn 10 54 19.1 +0.2**
comp=Z,15nm,0.3s,SNR=7.5
BAND Balkesir-Ban 6.64 97 ⇑P Pn 10 54 22.0 +2.9
MPRI Monte Prat 6.66 318 P Pn 10 54 18.9 -0.6
ICOR Ion Corvin 6.66 64 ⇑P Pn 10 54 22.5 +3.1
BALB Balikesir 6.67 103 Pn 10 54 21.5 +1.9
PLOR Plostina 6.78 48 ⇓P Pn 10 54 23.7 +2.5
PLOR Plostina 6.78 48 P Pn 10 54 23.6 +2.5
STAL STALIGIAL 6.81 317 P Pn 10 54 20.7 -0.8
VRI Vrincioaia 6.84 48 ⇑P Pn 10 54 24.5 +2.6
VRI Vrincioaia 6.84 48 P Pn 10 54 24.4 +2.6
CLUD Cludinico 6.86 318 P Pn 10 54 21.3 -0.9
CVD1 Cernavoda-Powe 6.91 63 ⇓P Pn 10 54 25.5 +2.6
CONA Conrad Observa 6.92 339 *i*Pn **Pn 10 54 24.8 +1.7**
comp=Z,11nm,0.5s
ONER Baraj Valea Uz 6.95 44 ⇑P Pn 10 54 26.0 +2.6
PII Pisa 6.96 292 P Pn 10 54 23.3 -0.2
CIMO Cimolais 6.99 316 P Pn 10 54 23.0 -0.9
KECS Kecovo 7.02 6 *e*P **Pn 10 54 25.8 +1.5**
KECS *e* 10 55 44.4
KECS Kecovo 7.02 6 *e*PN **Pn 10 54 25.8 +1.5**
KECS *e*SN **Sn 10 55 44.4 +1.0**
MODS Modra-Piesok 7.04 348 *e*P **Pn 10 54 26.2 +1.5**
MODS *e* 10 55 46.4
MODS Modra-Piesok 7.04 348 *e*PN **Pn 10 54 26.2 +1.5**
MODS *e*SN **Sn 10 55 46.4 +2.4**
KBA Koelnbreinsper 7.09 324 *i*Pn **Pn 10 54 25.9 +0.4**
comp=Z,28nm,0.5s,SNR=15
KBA *i*Sn **Sn 10 55 45.7 +0.2**
comp=Z,60nm,0.5s
MFTR Murfatlar 7.11 65 ⇓P Pn 10 54 28.5 +3.0
MANR Mangalia 7.11 68 ⇑P Pn 10 54 28.6 +3.0
SMOL Smolenice 7.16 349 *e*P **Pn 10 54 29.9 +3.7**
TIRR Tirgusor 7.20 63 Pn 10 54 28.4 +1.7
TIRR Tirgusor 7.20 63 ⇓P Pn 10 54 29.1 +2.3
TIRR Tirgusor 7.20 63 P Pn 10 54 28.4 +1.7
TIRR Tirgusor 7.20 63 *e*Pn **Pn 10 54 28.4 +1.7**
TESR Tescani 7.20 44 ⇑P Pn 10 54 30.2 +3.3
ABTA Abfaltersbach 7.25 319 *i*Pn **Pn 10 54 27.3 -0.2**
comp=Z,37nm,0.5s,SNR=14
ABTA *e*Sn **Sn 10 55 48.4 -0.7**
comp=Z,271nm,1.0s
CFR Carcaliu 7.31 57 ⇓P Pn 10 54 30.7 +2.3
CFR Carcaliu 7.31 57 P Pn 10 54 30.6 +2.3
GHRR 7.33 49 ⇓P Pn 10 54 31.1 +2.4
MOA Molln 7.35 331 *i*Pn **Pn 10 54 30.7 +1.9**
comp=Z,19nm,0.3s,SNR=7.5
MOA *e*Sn **Sn 10 55 54.3 +2.7**
comp=Z,108nm,0.6s
TPGR Topolog 7.35 60 ⇓P Pn 10 54 31.3 +2.4
BURAR Bucovina Array 7.36 32 Pn 10 54 31.3 +2.2
BURAR Bucovina Array 7.36 32 ⇑P Pn 10 54 32.6 +3.5
BURAR Bucovina Array 7.36 32 P Pn 10 54 32.6 +3.5
BUR08 Bucovina Ar. S 7.38 32 Pn 10 54 30.9 +1.5
PRMA PARMA 7.44 299 Pn 10 54 30.3 +0.2
BIOA Bad Ischl, Aus 7.45 328 *i*Pn **Pn 10 54 31.6 +1.3**
comp=Z,47nm,0.5s,SNR=13
JAVC Velka Javorina 7.46 351 *e*PN **Pn 10 54 31.9 +1.4**
JAVC Velka Javorina 7.46 351 *e*Pn **Pn 10 54 32.7 +2.2**
GRAM Graiana 7.51 297 P Pn 10 54 31.7 +0.6
IDI Anoyia 7.52 144 Pn **Pn 10 54 29.5 -1.8**
comp=Z,18nm,0.5s,baz=330,slow=12,SNR=18
IDI Sn **Sn 10 55 49.4 -6.6**
comp=Z,21nm,0.3s,baz=100,slow=21,SNR=10
IDI Lg Lg 10 56 37.3
baz=65,slow=24
MANT Manisa 7.60 110 Pn 10 54 34.9 +2.4
LANS Liptovska Anna 7.65 0 *e*P Pn 10 54 38.3 +5.3
LANS *e* 10 55 56.9
LANS Liptovska Anna 7.65 0 *e*PN Pn 10 54 38.3 +5.3
LANS *e*SN **Sn 10 55 56.9 -2.1**
LESA Schwarzleotal 7.65 323 *i*Pn **Pn 10 54 33.4 +0.3**
comp=Z,39nm,0.5s,SNR=12
LESA *i*Sn **Sn 10 56 01.6 +2.4**
comp=Z,98nm,0.5s
APPI Appiano 7.75 313 P Pn 10 54 33.8 -0.6
TLCR 7.75 58 ⇓P Pn 10 54 37.8 +3.5
TLCR 7.75 58 P Pn 10 54 37.7 +3.5
RJOB Jochberg 7.84 325 *e*Pn **Pn 10 54 37.0 +1.4**
RJOB *e*Sn **Sn 10 56 03.5 -0.2**
PGF Pioggiola 7.86 281 P Pn 10 54 36.5 +0.5
KRUC Moravsky 7.86 345 *e*PN **Pn 10 54 37.1 +1.2**
ROSI Rosskopf 7.93 316 P Pn 10 54 37.0 0.0
NIE Niedzica 7.94 4 Pn 10 54 40.0 +3.0
NIE Niedzica 7.94 4 *e*Pn **Pn 10 54 40.0 +3.0**

MAUC Maruska 7.95 352 ePN Pn 10 54 38.9 +1.8
STHS Stebnicka Huta 8.01 8 eP Pn 10 54 39.9 +1.9
STHS Stebnicka Huta 8.01 8 eP Pn 10 54 39.9 +1.9
WTTA Wattenberg 8.04 318 ePn Pn 10 54 38.8 +0.4
comp=Z,31nm,0.2s,SNR=21
WTTA eSn Sn 10 56 09.0 +0.3
comp=Z,227nm,0.7s
WTTA Wattenberg 8.04 318 P Pn 10 54 38.9 +0.5
VRAC Vranov 8.06 346 Pn Pn 10 54 39.6 +1.0
comp=Z,0.7nm,0.3s,baz=175,slow=12,SNR=4.7
VRAC Sn Sn 10 56 08.6 -0.4
comp=Z,0.6nm,0.3s,baz=15,slow=4.2,SNR=2.0
VRAC Lg Lg 10 56 53.6
comp=Z,0.7nm,0.3s,baz=162,slow=13,SNR=3.2
VRAC LR LR 10 57 34.4
comp=Z,203nm,19.2s,baz=168,slow=36
comp=Z,5.7nm,0.6s
VRAC Vranov 8.06 346 ⇑P Pn 10 54 39.9 +1.2
VRAC Vranov 8.06 346 ePN Pn 10 54 39.4 +0.8
VRAC Vranov 8.06 346 eSg Sb 10 57 01.9 +25
WATA Walderalm 8.11 319 i Pn Pn 10 54 41.1 +1.6
comp=Z,38nm,0.2s,SNR=21
CKRC Cesky Krumlov 8.17 335 eP Pn 10 54 40.9 +0.8
CKRC MLR MLR
comp=Z,2µm,11.9s
CKRC Cesky Krumlov 8.17 335 ePN Pn 10 54 40.9 +0.8
CKRC AMS AMS 10 58 10.0
comp=Z,2µm,11.9s
CKRC Cesky Krumlov 8.17 335 ePn Pn 10 54 41.0 +0.9
SQTA Sankt Quirin 8.22 317 i Pn Pn 10 54 41.9 +0.9
comp=Z,32nm,0.3s,SNR=22
FETA Feichten 8.35 314 i Pn Pn 10 54 43.3 +0.6
comp=Z,10nm,0.4s,SNR=15
MOTA Moosalm 8.36 317 i Pn Pn 10 54 43.5 +0.6
comp=Z,19nm,0.4s,SNR=24
FUORN Ofenpass-Fuorn 8.37 311 Pn 10 54 43.4 +0.3
MORC Moravsky Berou 8.38 351 Pn 10 54 43.5 +0.4
MORC Moravsky Berou 8.38 351 ⇓P Pn 10 54 44.7 +1.6
MORC Moravsky Berou 8.38 351 ePN Pn 10 54 44.5 +1.4
MORC Moravsky Berou 8.38 351 P Pn 10 54 43.5 +0.4
GEC2 GERESS Array S 8.39 333 Pn 10 54 43.3 0.0
GEC2 GERESS Array S 8.39 333 eSn Sn 10 56 17.0 -0.3
GERES GERESS Array B 8.39 333 Pn Pn 10 54 43.3 0.0
comp=Z,0.3nm,0.3s,baz=163,slow=14,SNR=14
GERES Sn Sn 10 56 17.3 0.0
comp=Z,0.5nm,0.3s,baz=150,slow=23,SNR=5.8
GERES Lg Lg 10 57 06.2
baz=151,slow=29
GERES LR LR 10 58 28.9
comp=Z,1µm,19.2s,baz=137,slow=42
comp=Z,4.3nm,0.4s
KWP Kalwaria Pacla 8.44 15 eP Pn 10 54 47.9 +4.1
KARP Karpathos 8.47 132 Pn 10 54 45.1 +0.8
KARP Karpathos 8.47 132 eP Sn 10 56 21.8 +2.6
STEB Steborice 8.52 353 ePN Pn 10 54 46.9 +2.1
ARG Arkhangelos 8.57 125 Pn 10 54 48.1 +2.5
ARG Arkhangelos 8.57 125 P Pn 10 54 48.1 +2.5
MILM Milestii Mici 8.62 48 ⇓P Pn 10 54 49.0 +2.6
MILM Milestii Mici 8.62 48 P Pn 10 54 48.9 +2.6
MILM Milestii Mici 8.62 48 eP Pn 10 54 46.0 -0.3
comp=Z,90nm,1.0s
MILM Milestii Mici 8.62 48 ePP Pn 10 54 54.0 +7.7
MILM eS Sn 10 56 24.0 +1.2
MILM eLg Lg 10 57 31.0
MILM eLR LR 10 58 33.0
comp=Z,3µm,15.0s
RETA Reutte 8.63 317 i Pn Pn 10 54 47.3 +0.9
comp=Z,4.3nm,0.2s
KIS Kishinev 8.67 48 eP Pn 10 54 45.0 -2.0
KIS eL L 10 58 37.0
KIS LRM MLR 10 59 03.0
comp=Z,1µm,16.0s
DAVOX Davos/Dischmat 8.68 311 Pn Pn 10 54 47.4 +0.2
comp=Z,5.5nm,0.3s,baz=122,slow=13,SNR=28
DAVOX Sn Sn 10 56 22.9 -1.5
comp=Z,4.6nm,0.3s,baz=276,slow=21,SNR=4.6
DAVOX Lg Lg 10 57 14.7
comp=Z,1.2nm,0.3s,baz=119,slow=3.5,SNR=3.3
DAVOX LR LR 10 59 07.6
comp=Z,1µm,18.3s,baz=114,slow=45
comp=Z,14nm,0.3s
KHC Kasperske Hory 8.68 333 Pn 10 54 47.2 +0.1
KHC Kasperske Hory 8.68 333 ceP Pn 10 54 46.8 -0.3
KHC pmax pmax
comp=Z,13nm,0.9s
KHC Kasperske Hory 8.68 333 ePN Pn 10 54 47.2 +0.1
KHC eSN Sn 10 56 26.1 +1.8
KHC AMS AMS 10 58 30.0
comp=Z,2µm,13.0s
KHC Kasperske Hory 8.68 333 eSn Sn 10 56 24.4 +0.1
OJC Ojcow 8.72 1 eP Pn 10 54 49.9 +2.3
OJC Ojcow 8.72 1 Pn 10 54 48.4 +0.7
OJC Ojcow 8.72 1 P Pn 10 54 48.4 +0.7
KRLC Kraliky 8.78 349 eP Pn 10 54 49.8 +1.3
KRLC MLR MLR
comp=Z,5µm,12.1s
KRLC Kraliky 8.78 349 ePN Pn 10 54 49.8 +1.3
KRLC AMS AMS 10 58 50.0
comp=Z,5µm,12.1s
WET Wettzell 8.94 331 ePn Pn 10 54 51.3 +0.6
DAVA Damuels 8.97 313 i Pn Pn 10 54 53.3 +2.1
comp=Z,5.8nm,0.2s,SNR=7.1
UBR Ueberruh 9.09 316 ePn Pn 10 54 52.3 -0.5
DPC Dobruska-Polom 9.12 347 eP Pn 10 54 55.0 +1.9
DPC MLR MLR
comp=Z,5µm,11.6s
DPC Dobruska-Polom 9.12 347 ePN Pn 10 54 55.0 +1.9
DPC AMS AMS 10 59 10.0
comp=Z,5µm,11.6s
SORM Soroca 9.15 41 ⇑P Pn 10 54 55.6 +2.0
SORM Soroca 9.15 41 P Pn 10 54 55.5 +2.0
PRU Pruhonice 9.16 340 eP Pn 10 54 54.6 +1.0
PRU MLR MLR
comp=Z,2µm,16.3s
PRU Pruhonice 9.16 340 ePN Pn 10 54 54.6 +1.0
PRU AMS AMS 10 58 40.0
comp=Z,2µm,16.3s
PRU Pruhonice 9.16 340 ePn Pn 10 54 54.9 +1.3
ISP Isparta 9.28 110 ⇑eP Pn 10 54 57.7 +2.2
UPC Upice 9.32 346 AMS AMS 10 59 20.0
comp=Z,4µm,12.7s
OSTC Ostas 9.33 347 AMS AMS 10 59 20.0
comp=Z,4µm,11.8s
AKAS Kas 9.49 120 Pn 10 55 01.6 +3.1
PVCC Panska Ves 9.65 341 AMS AMS 10 59 10.0
comp=Z,2µm,11.7s
KEST Kesra 9.79 237 Pn Pn 10 55 01.9 -0.5
comp=Z,0.4nm,0.3s,baz=1.2,slow=3.3,SNR=14
KEST Lg Lg 10 57 50.9
comp=Z,0.2nm,0.3s,baz=47,slow=19,SNR=1.6
KEST LR LR 10 59 57.4
comp=Z,2µm,18.9s,baz=42,slow=45
comp=Z,21nm,0.8s
KEST Kesra 9.79 237 P Pn 10 55 06.0 +3.6
KEST Kesra 9.79 237 Pn 10 55 04.9 +2.5
BNI Bardonecchia 9.98 295 Pn 10 55 06.0 +1.0
BNI Bardonecchia 9.98 295 P Pn 10 55 06.0 +1.0
HSKC Hora Svate Kat 10.02 337 AMS AMS 10 59 20.0
comp=Z,2µm,13.6s
CIDE Kastamonu/Cide 10.10 83 ⇑P Pn 10 55 08.4 +1.9
ANTO Ankara 10.26 95 P Pn 10 55 06.8 -2.0
STU Stuttgart 10.26 319 Pn 10 55 08.4 -0.4
STU Stuttgart 10.26 319 P Pn 10 55 08.4 -0.4
BFO Black Forest 10.43 315 Pn 10 55 09.9 -1.2
BFO Black Forest 10.43 315 P Pn 10 55 09.9 -1.2
BFO Black Forest 10.43 315 ePn Pn 10 55 10.2 -0.9
ILGA Ilgaz 10.74 88 Pn 10 55 16.9 +1.4
CLL Collm 10.77 338 Pn Pn 10 55 15.6 -0.1
CLL Collm 10.77 338 eP Pn 10 55 17.0 +1.3
CLL Collm 10.77 338 ePn Pn 10 55 17.0 +1.3
CLL ex x 10 55 26.0
CLL ex x 10 55 33.0
CLL eSn Sn 10 56 54.0 -21
CLL ex x 10 57 09.0
CLL eSb 10 57 43.0
CLL eSg 10 58 25.0
CLL AMS AMS 10 58 42.0
comp=N,900nm,20.1s
CLL AMS AMS 10 58 42.0
comp=E,2µm,20.7s
CLL AMS AMS 10 59 00.0
BR131 Keskin Array S 10.92 95 P Pn 10 55 16.2 -1.8
BR131 Keskin Array S 10.92 95 Pn 10 55 20.3 +2.3
BR131 Keskin Array S 10.92 95 ceP Pn 10 55 20.8 +2.8
BRTR Keskin Array B 10.92 95 Pn Pn 10 55 18.6 +0.6
comp=E,0.2nm,0.3s,baz=276,slow=11,SNR=14
BRTR LR LR 11 00 35.2
comp=E,1µm,19.2s,baz=286,slow=44
BRTR Keskin Array B 10.92 95 Pn 10 55 18.1 +0.1
ECH Echery 11.01 312 Pn 10 55 17.6 -1.4
ECH Echery 11.01 312 P Pn 10 55 17.6 -1.4
SIM Simferopol' 11.23 67 eP Pn 10 55 22.9 +0.9
SIM pmax pmax
comp=Z,31nm,1.1s
SIM MLR MLR
comp=Z,939nm,17.0s
KIRS Kirsehir-Merke 11.29 97 ⇓P Pn 10 55 25.4 +2.5
KIEV Kiev 11.40 33 Pn 10 55 24.7 +0.4
KIEV Kiev 11.40 33 ⇑P Pn 10 55 27.2 +2.9
KIEV Kiev 11.40 33 i P Pn 10 55 26.7 +2.4
SNR=11
KIEV Kiev 11.40 33 P Pn 10 55 27.2 +2.9
AKASG Malin Array Be 11.41 33 Pn Pn 10 55 24.3 -0.2
comp=Z,0.5nm,0.3s,baz=223,slow=13,SNR=36
AKASG LR LR 11 00 36.6
comp=Z,882nm,18.9s,baz=215,slow=42
comp=Z,13nm,0.9s
AKBB Malin Array Si 11.41 33 Pn 10 55 26.3 +1.8
AKBB Malin Array Si 11.41 33 deP Pn 10 55 26.6 +2.1
SSB Saint Sauveur 11.49 294 Pn 10 55 23.1 -2.6
SSB Saint Sauveur 11.49 294 P Pn 10 55 23.1 -2.6
CSS Mathiatis 12.70 116 Pn 10 55 43.5 +1.3
SUW Suwalki 12.76 10 eP Pn 10 55 46.2 +3.4
SUW Suwalki 12.76 10 Pn 10 55 43.4 +0.5
SUW Suwalki 12.76 10 P Pn 10 55 43.4 +0.5
BNN Bunyan 12.81 97 Pn 10 55 45.1 +1.4
ANN Anapa 13.53 70 eP Pn 10 55 52.0 -1.4
ANN eS Sn 10 58 24.2 +1.3
ANN pmax pmax
comp=Z,30nm,0.8s
ANN MLR MLR
comp=Z,669nm,13.0s
ANN MLR MLR
comp=E,661nm,17.0s
MNK Minsk 14.16 20 i P Pn 10 55 59.7 -2.3
comp=E,64nm,0.9s
MNK i P Pn 10 55 59.7 -2.3
comp=N,21nm,0.7s
MNK i P Pn 10 55 59.7 -2.3
comp=Z,34nm,0.9s,baz=208
MNK i PP P 10 56 07.6 -1.7
MNK i S Sn 10 58 38.2 -0.1
MNK i SS SnSn 10 58 50.9 +0.2
MNK i LR LR 11 01 12.2
MNK i LRM MLR 11 01 54.1
comp=N,607nm,14.5s
MNK i LRM MLR 11 01 55.5
comp=Z,2µm,15.8s
MNK i LRM MLR 11 01 59.9
comp=E,1µm,16.1s
MNK Minsk 14.16 20 i P Pn 10 55 59.7 -2.3
MNK i S Sn 10 58 38.2 -0.1
MNK pmax pmax
comp=Z,34nm,0.9s
MNK pmax pmax
comp=E,64nm,0.9s
MNK pmax pmax
comp=N,21nm,0.7s
MNK MLR MLR
comp=N,607nm,14.0s
MNK MLR MLR
comp=Z,2µm,16.0s
MNK MLR MLR
comp=E,1µm,16.0s
NACGM Naroch 14.26 17 eP P 10 56 09.7 -0.7
PABE Paberze 14.32 10 Pn 10 56 04.2 +0.1
PABE Paberze 14.32 10 eP Pn 10 56 05.8 +1.6
ISAL Salakas 14.74 15 eP P 10 56 16.6 +0.8
SOC Sochi 15.07 75 eP Pn 10 56 14.3 -0.1
SOC e 10 59 03.9
SOC pmax pmax
comp=Z,26nm,0.8s
SOC MLR MLR
comp=Z,321nm,19.0s
MMAI Mount Meron Ar 15.24 119 Pn Pn 10 56 15.0 -1.8
comp=Z,2.4nm,0.3s,baz=290,slow=17,SNR=6.7
comp=Z,7.5nm,0.7s
VSLR Vesyoloye 15.30 76 ⇓eP Pn 10 56 18.6 +1.1
ERBR Yeremizino-Bor 15.79 67 eP Pn 10 56 23.4 -0.3
ERBR eS Sn 10 59 21.4 +3.4
ERBR pmax pmax
comp=Z,69nm,1.1s
ERBR MLR MLR
comp=E,2µm,13.0s
ERBR MLR MLR
comp=Z,802nm,13.0s
LABN Labinsk 15.84 71 eP P 10 56 26.4 -1.7
LABN eS Sn 10 59 22.2 +2.8
LABN pmax pmax
comp=Z,145nm,0.8s
LABN MLR MLR
comp=Z,658nm,14.0s
LABN MLR MLR
comp=E,2µm,14.0s
VORD Divnogorie 16.62 49 eP Pn 10 56 31.6 -2.7
VORD pmax pmax
comp=Z,70nm,1.0s
VORD MLR MLR
comp=Z,720nm,11.0s
BATM Batumi 16.64 82 ⇑P P 10 56 37.2 +0.2
BATM Batumi 16.64 82 P P 10 56 37.1 +0.2
VSR Storozhevoye 16.66 48 eP Pn 10 56 33.6 -1.3
VSR pmax pmax
comp=Z,60nm,1.0s
VSR MLR MLR
comp=Z,2µm,13.0s
ASF Jabal al Asfar 16.75 118 Pn Pn 10 56 34.9 -1.3
comp=Z,0.2nm,0.3s,baz=124,slow=20,SNR=1.5
comp=Z,1.5nm,0.5s
VORR Voronezh 16.91 46 eP Pn 10 56 38.8 +0.9
VORR pmax pmax
comp=Z,77nm,0.4s
MARD Mardin 16.99 97 P P 10 56 41.4 +0.5
SHA1 Shidzhatmaz 17.21 75 ceP P 10 56 44.7 +1.2
KIV Kislovodsk 17.23 74 P Pn 10 56 42.8 +0.6
KIV Kislovodsk 17.23 74 eP Pn 10 56 42.7 +0.6
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,157nm,14.0s
EIL Elat 17.23 128 P Pn 10 56 41.6 -0.5
comp=Z,0.6nm,0.3s,baz=340,slow=15,SNR=4.8
EIL S Sn 10 59 43.2 -10
comp=Z,18nm,0.7s,baz=115,slow=19,SNR=5.1
comp=Z,14nm,0.8s
LPSR Galich'ya Gora 17.23 43 eP Pn 10 56 40.2 -1.8
LPSR pmax pmax
comp=Z,120nm,1.0s
LPSR MLR MLR
comp=Z,2µm,14.0s
KBZ Khabaz 17.38 75 P P 10 56 45.0 -0.1
comp=Z,0.4nm,0.3s,baz=302,slow=9.9,SNR=32
KBZ LR LR 11 05 30.6
comp=Z,248nm,18.4s,baz=274,slow=44
comp=Z,20nm,0.8s
KBZ Khabaz 17.38 75 ceP P 10 56 46.4 +1.3
KBZ pmax pmax
comp=Z,20nm,0.8s
GOF Gofitskoye 17.52 70 ceP P 10 56 49.2 +2.6
GURO Guroymak-BITLI 17.53 92 P P 10 56 47.0 0.0
VSU Vasula 17.59 13 eP Pn 10 56 46.7 +0.3
VSU Vasula 17.59 13 c iP Pn 10 56 46.3 -0.1
VSU pmax pmax
comp=Z,225nm,0.8s
OBN Obninsk 17.68 34 P Pn 10 56 45.5 -1.9
comp=Z,7.6nm,0.3s,baz=173,slow=4.2,SNR=18
OBN LR LR 11 04 34.1
comp=Z,342nm,18.4s,baz=157,slow=40
comp=Z,44nm,0.6s
OBN Obninsk 17.68 34 Pn Pn 10 56 47.0 -0.4
OBN IAmb IAmb 10 56 49.2
comp=Z,190nm,1.1s
OBN Obninsk 17.68 34 eP Pn 10 56 45.5 -1.9
OBN pmax pmax
comp=Z,135nm,1.1s
OBN MLR MLR
comp=Z,777nm,16.0s
ESBB Sonseca Array 17.88 272 P P 10 56 51.2 +0.5
ESDC Sonseca Array 17.88 272 P Pn 10 56 49.5 -0.7
comp=Z,0.2nm,0.3s,baz=71,slow=12,SNR=22
ESDC LR LR 11 04 02.9
comp=Z,338nm,18.6s,baz=77,slow=38
comp=Z,4.4nm,0.8s
ESDC Sonseca Array 17.88 272 P 10 56 50.7 0.0
VRH Novokhopyorsk 18.11 50 eP Pn 10 56 52.6 -0.2
VRH pmax pmax
comp=Z,99nm,0.9s
PAB San Pablo 18.20 272 P Pn 10 56 53.7 -0.5
PAB San Pablo 18.20 272 P Pn 10 56 53.7 -0.5
PAB pmax pmax
comp=Z,35nm,1.6s
ARBE Arbavere 18.41 11 eP P 10 56 56.1 -0.3
MOS Moscow 18.54 34 eP P 10 56 55.5 -2.3
MOS pmax pmax
comp=Z,126nm,1.0s
MOS MLR MLR
comp=Z,900nm,14.0s
AAL Aland 18.70 1 eP P 10 56 54.8 -4.7
MEF Metsahovi 18.99 8 eP P 10 57 01.6 -1.0
HFS Hagfors 18.99 351 P P 10 57 02.2 -0.6
comp=Z,0.7nm,0.3s,baz=172,slow=12,SNR=13
HFS LR LR 11 05 05.2
comp=Z,312nm,19.6s,baz=174,slow=39
comp=Z,13nm,0.8s
GNI Garni 19.16 86 P P 10 57 05.0 +0.1
comp=Z,1.5nm,0.3s,baz=8.4,slow=3.2,SNR=11
GNI LR LR 11 05 13.7
comp=Z,280nm,19.2s,baz=286,slow=39
comp=Z,92nm,1.1s
GNI Garni 19.16 86 P P 10 57 05.4 +0.5
GNI S Sn 11 00 37.1 -2.9
GNI Garni 19.16 86 P Pn 10 57 05.6 -0.3
GNI IAmb IAmb 10 57 08.0
comp=Z,86nm,1.1s
GNI Garni 19.16 86 P Pn 10 57 06.3 +0.3
GNI Garni 19.16 86 c iP Pn 10 57 06.2 +0.3
GNI pmax pmax
comp=Z,82nm,1.0s
KONO Kongsberg 19.18 345 ⇑eP P 10 57 02.7 -2.1
KONO pmax pmax
comp=Z,63nm,2.2s
PUL Pulkovo 19.50 17 ⇑eP P 10 57 08.2 0.0
PUL pmax pmax
comp=Z,119nm,0.8s
PBRG Braganca 19.57 280 eP Pn 10 57 11.1 +0.5
PBRG i IAmb IAmb 10 57 35.0
comp=Z,57nm,1.9s
RAF Rauma 19.60 3 eP P 10 57 08.4 -0.9
NC602 NORSAR Array S 19.86 349 P P 10 57 11.0 -1.2
MVO Moncorvo 19.88 278 eP Pn 10 57 14.2 -0.1
MVO i IAmb IAmb 10 57 22.3
comp=Z,58nm,1.4s
MVO eLQ LQ 11 01 04.0
MVO eLR LR 11 01 16.6
MVO i IAMs_20 IAMs_20 11 08 43.0
comp=Z,418nm,16.0s
NC405 NORSAR Array S 20.20 349 P 10 57 15.2 -0.7
NB2 NORSAR Subarra 20.20 348 P P 10 57 14.5 -1.5
comp=Z,39nm,1.4s,baz=154,slow=11
NOA NORSAR Array B 20.20 348 P P 10 57 15.7 -0.3
comp=Z,4.3nm,0.8s,baz=152,slow=9.9,SNR=14
NOA PcP PcP 11 01 29.2 -0.3
comp=Z,2.3nm,0.8s,baz=126,slow=6.6,SNR=3.3
NOA LR LR 11 06 28.7
comp=Z,736nm,18.4s,baz=170,slow=41
comp=Z,4.3nm,0.8s
EKA Eskdalemuir Ar 20.29 321 P P 10 57 16.9 0.0
comp=Z,5.4nm,0.5s,baz=113,slow=9.3,SNR=21
comp=Z,5.4nm,0.5s
EKA Eskdalemuir Ar 20.29 321 P P 10 57 17.0 0.0
ESK Eskdalemuir 20.30 321 P P 10 57 17.0 -0.1
ESK IAmb IAmb 10 57 27.5
comp=Z,95nm,1.4s
ESK Eskdalemuir 20.30 321 P P 10 57 17.0 -0.1
ESK pmax pmax
comp=Z,95nm,1.5s
FINES FINESS Array B 20.37 9 P P 10 57 16.8 -0.9
comp=Z,56nm,1.0s,baz=169,slow=11,SNR=44
FINES PcP PcP 11 01 29.4 -0.4
comp=Z,4.7nm,0.6s,baz=188,slow=2.0,SNR=9.1
FINES LR LR 11 05 43.7
comp=Z,570nm,19.0s,baz=197,slow=38
comp=Z,56nm,1.0s
FINES FINESS Array B 20.37 9 P 10 57 17.6 -0.2
FINES FINESS Array B 20.37 9 ceP P 10 57 16.7 -1.0
FINES pmax pmax
comp=Z,42nm,0.9s
FIA1 FINESS Array S 20.37 9 P P 10 57 16.9 -0.8
MTE Manteigas 20.41 276 P P 10 57 18.5 +0.1
MTE IAmb IAmb 10 57 31.5
comp=Z,76nm,1.3s
MTE Manteigas 20.41 276 eP P 10 57 16.2 -2.2
MTE i IAmb IAmb 10 57 32.1
comp=Z,83nm,1.8s
MTE eLQ LQ 11 01 16.9
MTE eLR LR 11 02 00.2
MTE i IAMs_20 IAMs_20 11 06 59.0
comp=Z,389nm,16.0s
POLO Lamas de Olo 20.41 279 eP Pn 10 57 20.9 +0.3
POLO i IAmb IAmb 10 57 59.8
comp=Z,39nm,1.8s
PCBR Castelo Branco 20.48 274 eP P 10 57 18.8 -0.3
PCBR i IAmb IAmb 10 57 32.9
comp=Z,48nm,1.8s
NC204 NORSAR Array S 20.50 348 P 10 57 19.2 0.0
PMRV Marv??o 20.51 273 eP Pn 10 57 21.3 -0.5
PMRV i IAmb IAmb 10 57 41.8
comp=Z,61nm,1.7s
PMRV eLQ LQ 11 01 11.2
PMRV eLR LR 11 01 59.7
PMRV i IAMs_20 IAMs_20 11 09 16.8
comp=Z,398nm,18.0s
PBAR Barrancos 20.59 269 eP P 10 57 20.6 +0.2
PBAR i IAmb IAmb 10 57 35.8
comp=Z,90nm,1.5s
PVIS Viseu 20.60 277 eP P 10 57 21.2 +0.7
PGAV Gavieira, Arco 20.67 281 eP Pn 10 57 24.0 +0.3
PGAV i IAmb IAmb 10 57 50.2
comp=Z,131nm,1.9s
PGAV eLQ LQ 11 00 14.8
PGAV eLR LR 11 01 51.9
PGAV i IAMs_20 IAMs_20 11 07 52.4
comp=Z,492nm,16.0s
MAK Makhachkala 20.78 77 c iP P 10 57 18.0 -4.3
MAK eS S 11 01 09.6 -3.6
MAK pmax pmax
comp=Z,458nm,1.1s
MAK MLR MLR
comp=Z,1µm,14.0s
PESTR Estremoz 20.81 272 P P 10 57 22.7 0.0
PESTR Estremoz 20.81 272 eP P 10 57 23.6 +0.9
PESTR i IAmb IAmb 10 57 28.9
comp=Z,53nm,2.2s
IWEX Carrickbyrne, 20.84 310 P Pn 10 57 25.5 +0.1
DSB Dublin 20.95 313 P Pn 10 57 26.7 0.0
KEF Keuruu 20.95 7 eP P 10 57 23.3 -0.7
MDT Midelt 21.00 253 P P 10 57 24.1 -0.9
comp=Z,24nm,0.8s,baz=80,slow=11,SNR=17
MDT LR LR 11 05 15.3
comp=Z,351nm,20.0s,baz=62,slow=36
comp=Z,24nm,0.8s
PSARD Sardoal 21.05 274 eP P 10 57 28.7 +3.4
PSARD i IAmb IAmb 10 58 50.0
comp=Z,56nm,1.6s
MD01 Midelt array s 21.09 254 P 10 57 25.6 -0.3
AKT Akhty 21.14 81 eP P 10 57 24.2 -2.2
AKT e 10 57 43.7
AKT pmax pmax
comp=Z,145nm,1.7s
PARRA Arraiolos 21.16 272 eP P 10 57 26.2 -8.3
PARRA i IAmb IAmb 10 57 53.8
comp=Z,56nm,1.8s
PCAS Casmilo, Conde 21.19 275 eP P 10 57 27.5 +0.6
PCAS i IAmb IAmb 10 58 51.7
comp=Z,110nm,1.7s
ILTH Belurgan, Co L 21.25 315 P P 10 57 30.7 +3.4
PBEJ Beja 21.26 270 eP P 10 57 28.3 +0.7
PBEJ i IAmb IAmb 10 57 41.3
comp=Z,39nm,1.5s
PVAQ Vaqueiros 21.35 268 P P 10 57 29.0 +0.4
PVAQ IAmb IAmb 10 57 33.0
comp=Z,67nm,1.2s
PVAQ Vaqueiros 21.35 268 eP P 10 57 28.9 +0.4
PVAQ i IAmb IAmb 10 57 51.2
comp=Z,76nm,1.4s

PVAQ eLQ LQ 11 00 42.0
PVAQ eLR LR 11 01 50.5
PVAQ i IAms_20 IAms_20 11 07 29.2
comp=Z,308nm,16.0s
MOE Montemor 21.48 271 eP **P 10 57 32.4 +2.5**
MOE i IAmb IAmb 10 57 46.5
comp=Z,54nm,1.9s
PCVE Castro Verde 21.51 269 eP **P 10 57 31.0 +0.7**
PCVE i IAmb IAmb 10 57 52.8
comp=Z,67nm,1.7s
PBDV Barranco-do-Ve 21.56 268 eP **P 10 57 31.8 +1.0**
PBDV i IAmb IAmb 10 57 37.0
comp=Z,83nm,1.8s
VAF Ylistaro 21.66 4 eP **P 10 57 31.4 -0.1**
BELG Belogornoye 21.95 51 P **P 10 57 34.9 +0.1**
comp=Z,199nm,0.9s,baz=70,slow=1.7,SNR=31
BELG PcP **PcP 11 01 32.7 -0.2**
comp=Z,9.3nm,0.7s,baz=243,slow=2.7,SNR=1.8
comp=Z,199nm,0.9s
TAM Tamanrasset 22.02 216 P 10 57 36.7 +0.7
TAM IAmb IAmb 10 57 48.1
comp=Z,87nm,1.4s
TAM Tamanrasset 22.02 216 P **P 10 57 36.7 +0.7**
TAM pmax pmax
comp=Z,87nm,1.4s
PTEO Sao Teotonio 22.06 269 eP **P 10 57 39.5 +3.4**
PTEO i IAmb IAmb 10 57 40.8
comp=Z,104nm,1.7s
MORF Marmelete 22.08 268 eP **P 10 57 40.1 +3.6**
MORF i IAmb IAmb 10 59 24.3
comp=Z,62nm,1.8s
PFVI Vila Bisbo 22.27 268 eP **P 10 57 41.8 +3.4**
PFVI i IAmb IAmb 10 58 19.4
comp=Z,73nm,1.5s
IDGL Inch Island, C 22.32 317 P **P 10 57 41.7 +2.9**
JOF Joensuu 22.57 14 eP **P 10 57 42.1 +0.7**
IGLA Glengowla, Co 22.68 312 P **P 10 57 42.5 -0.1**
KLMR Klimovskoe 22.92 26 eP **P 10 57 42.6 -2.5**
KLMR pmax pmax
comp=Z,225nm,1.0s
KLMR MLR MLR
comp=Z,1μm,13.0s
KIRV Kirov 25.41 38 LR LR 11 08 47.6
comp=Z,786nm,18.7s,baz=243,slow=38
KIRV Kirov 25.41 38deP **P 10 58 07.5 -1.0**
APA Apatity 27.21 12⇓eP **P 10 58 28.9 +4.2**
APA MLR MLR
comp=Z,2μm,12.7s
AKTO Aktyubinsk 27.97 58 LR LR 11 11 29.7
comp=Z,342nm,20.8s,baz=234,slow=40
ARCES ARCESS Array B 28.27 4 P **P 10 58 35.0 +0.7**
comp=Z,6.4nm,0.9s,baz=186,slow=6.1,SNR=4.8
ARCES PcP **PcP 11 01 46.2 -0.6**
comp=Z,3.2nm,0.7s,baz=101,slow=1.2,SNR=4.6
ARCES LR LR 11 10 31.1
comp=Z,467nm,19.6s,baz=188,slow=38
comp=Z,6.4nm,0.9s
ARTI Arti 29.11 46 LR LR 11 11 25.8
comp=Z,803nm,20.1s,baz=254,slow=39
ARTI Arti 29.11 46 P **P 10 58 41.1 -0.7**
ARTI Arti 29.11 46c iP **P 10 58 40.7 -1.1**
ARTI pmax pmax
comp=Z,86nm,1.0s
ABKAR Akbulak array 29.18 61 **P 10 58 42.2 -0.3**
PMOZ Porto Moniz, M 30.29 265 i IAms_20 IAms_20 11 10 18.2
comp=Z,64nm,20.0s
SHMA Al-Shehemyia 30.30 111 P **P 10 58 52.2 -0.4**
SVE Sverdlovsk 30.43 46 eP **P 10 58 53.3 -0.1**
SVE pmax pmax
comp=Z,69nm,0.9s
SVE MLR MLR
comp=Z,1μm,14.0s
SMRA Abu-Samra 30.91 113 P **P 10 58 56.7 -1.3**
TORD Torodi Ar. Bea 32.22 214 P **P 10 59 09.6 0.0**
comp=Z,6.0nm,0.3s,baz=28,slow=9.2,SNR=16
TORD PcP **PcP 11 01 58.0 +0.1**
comp=Z,1.4nm,0.8s,baz=18,slow=5.0,SNR=3.1
comp=Z,6.0nm,0.3s
BORG Borgarnes 32.83 329 LR LR 11 14 47.1
comp=Z,375nm,18.4s,baz=134,slow=40
SHME Shamm 33.88 105 P **P 10 59 23.0 -1.0**
SHME P **P 10 59 23.0 -1.0**
SHME Shamm 33.88 105 P **P 10 59 22.1 -1.9**
BANOM Banah 34.06 105 P **P 10 59 24.3 -1.3**
BANOM P **P 10 59 24.3 -1.3**
BANOM Banah 34.06 105 i P **P 10 59 24.0 -1.6**
SNR=6.6
ASUD Al Ashush, Dub 34.15 108 P **P 10 59 25.6 -0.8**
ASUD Al Ashush, Dub 34.15 108 P **P 10 59 25.5 -0.9**
NAZ Nazwa, Dubai 34.17 107 P **P 10 59 25.5 -1.0**
NAZ Nazwa, Dubai 34.17 107 i P **P 10 59 25.4 -1.0**
SNR=6.9
HRA Herat 34.20 88 P **P 10 59 26.9 -0.1**
HRA IAmb IAmb 10 59 28.6
comp=Z,17nm,1.1s
MSFE Esma-Masafi 34.30 106 P **P 10 59 26.4 -1.3**
MDH Madha 34.44 106 P **P 10 59 27.3 -1.6**
SNR=6.3
MDH Madha 34.44 106 P **P 10 59 27.2 -1.7**
UOSS Minazif 34.58 107 P **P 10 59 29.1 -1.1**
HATD Hatta, Dubai 34.60 107 P **P 10 59 29.1 -1.2**
SNR=9.8
HATD Hatta, Dubai 34.60 107 i P **P 10 59 28.8 -1.5**
SNR=9.8
ASHO Ashiyiah 34.64 107 P **P 10 59 29.0 -1.7**
SNR=19
ASHO Ashiyiah 34.64 107 i P **P 10 59 29.0 -1.7**
SNR=19
ALNE Al Ain 34.81 109 P **P 10 59 31.0 -1.2**
SNR=8.3
ALNE Al Ain 34.81 109 i P **P 10 59 30.9 -1.2**
SNR=11
SOHO SOHO 35.32 108 P **P 10 59 35.4 -1.1**
SOHO P **P 10 59 35.4 -1.1**
SOHO SOHO 35.32 108 i P **P 10 59 34.9 -1.5**
SNR=16
BORK Borovoye 35.66 53 **P 10 59 39.7 +0.7**
BORK Borovoye 35.66 53c iP **P 10 59 39.5 +0.4**
BORK pmax pmax
comp=Z,54nm,0.9s
BVAR Borovoye Array 35.70 53 P **P 10 59 39.9 +0.4**
comp=Z,42nm,0.8s,baz=270,slow=5.9,SNR=158
BVAR PcP **PcP 11 02 07.3 0.0**
comp=Z,2.8nm,0.7s,baz=318,slow=2.0,SNR=2.1
BVAR LR LR 11 16 17.8
comp=Z,303nm,20.9s,baz=267,slow=40
comp=Z,42nm,0.8s
ARQ Araqi 35.81 109 P **P 10 59 39.5 -1.2**
HOQ Hoqain 36.22 108 P **P 10 59 42.8 -1.5**
HOQ P **P 10 59 42.8 -1.5**
BSY Bisya 36.66 109 P **P 10 59 46.6 -1.5**
SPITS Spitsbergen Ar 36.81 359 P **P 10 59 48.8 +0.1**
comp=Z,2.1nm,0.7s,baz=152,slow=6.5,SNR=1.1
SPITS PcP **PcP 11 02 09.9 -0.3**
comp=Z,4.8nm,0.8s,baz=128,slow=5.4,SNR=1.7
SPITS LR LR 11 17 03.9
comp=Z,333nm,19.1s,baz=173,slow=40
comp=Z,2.1nm,0.7s
BIDO Bidbid 36.84 107 P **P 10 59 48.0 -1.5**
BRLS Borolday 36.86 70 i P **P 10 59 48.8 -0.7**
BRLS pmax pmax
comp=Z,5.0nm,2.4s
SMDO Samad 37.07 108 P **P 10 59 50.0 -1.6**
SMDO P **P 10 59 50.0 -1.6**
IUG Iuzhnay 37.24 72 i P **P 10 59 51.8 -1.0**
DOK Doka 37.31 117 P **P 10 59 52.0 -1.5**
SNR=10
KK31 Karatay Array 37.31 70 P **P 10 59 52.7 -0.7**
KK31 Karatay Array 37.31 70 P **P 10 59 52.7 -0.7**
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KKAR Karatay Array 37.31 70 **P 10 59 52.8 -0.6**
KKAR Karatay Array 37.31 70 P **P 10 59 52.8 -0.6**
WSAR Wadi Sarin 37.38 107 P **P 10 59 52.7 -1.4**
JMDO Jabal Madar 37.54 108 P **P 10 59 54.0 -1.5**
JMDO P **P 10 59 54.0 -1.5**
CHGR Chuyangaron 37.71 77 IAmb IAmb 10 59 58.2
comp=Z,25nm,0.8s
WBK Wadi Bani Khal 38.01 107 P **P 10 59 58.8 -0.7**
MHTO MHTO 38.34 110 P **P 11 00 00.8 -1.4**
MHTO P **P 11 00 00.8 -1.4**
GAR Garm 38.44 76 P **P 11 00 03.0 -0.1**
GAR IAmb IAmb 11 00 04.8
comp=Z,33nm,1.0s
DMTO DMTO 38.50 117 P **P 11 00 01.9 -1.6**

DQM DQM 38.74 112 P **P 11 00 03.9 -1.7**
BTLS Baital 39.27 66 P **P 11 00 08.8 -1.0**
BTLS pmax pmax
comp=Z,15nm,1.0s
AAK Ala-Archa 40.25 69 LR LR 11 19 49.2
comp=Z,174nm,19.9s,baz=298,slow=40
AAK Ala-Archa 40.25 69 P **P 11 00 18.3 +0.1**
AAK Ala-Archa 40.25 69 **P 11 00 18.4 +0.3**
AAK Ala-Archa 40.25 69 i P **P 11 00 18.5 +0.3**
SNR=8.1
AAK Ala-Archa 40.25 69deP **P 11 00 18.9 +0.7**
AAK pmax pmax
comp=Z,20nm,1.7s
LODK Lodwar 40.51 155 P **P 11 00 20.2 -0.2**
LODK Lodwar 40.51 155 **P 11 00 21.9 +1.5**
LODK IAmb IAmb 11 00 30.1
comp=Z,57nm,1.8s
DBIC Dimbokro 40.88 219 P **P 11 00 23.4 0.0**
comp=Z,4.8nm,0.4s,baz=54,slow=8.9,SNR=13
DBIC LR LR 11 18 09.0
comp=Z,154nm,18.1s,baz=31,slow=37
comp=Z,4.8nm,0.4s
DBIC Dimbokro 40.88 219 P **P 11 00 23.6 +0.2**
DBIC IAmb IAmb 11 00 31.4
comp=Z,20nm,0.8s
DBIC Dimbokro 40.88 219 P **P 11 00 23.6 +0.2**
DBIC pmax pmax
comp=Z,20nm,0.8s
KURBB Kurchatov Arra 40.99 56 P **P 11 00 23.3 -0.6**
comp=Z,2.0nm,0.3s,baz=286,slow=10.0,SNR=28
KURBB PP **PP 11 01 58.6 +0.2**
comp=Z,3.5nm,0.8s,baz=287,slow=10.0,SNR=5.4
KURBB PcP **PcP 11 02 23.6 -0.1**
comp=Z,3.8nm,0.7s,baz=285,slow=4.0,SNR=7.1
KURBB LR LR 11 20 48.9
comp=Z,407nm,18.9s,baz=341,slow=41
comp=Z,2.0nm,0.3s
KURK Kurchatov 41.03 56 P **P 11 00 23.7 -0.6**
KURK Kurchatov 41.03 56 P **P 11 00 24.1 -0.2**
KURK Kurchatov 41.03 56ceP **P 11 00 23.9 -0.4**
KURK pmax pmax
comp=Z,28nm,1.7s
ARXS Arharly 42.09 66 i P **P 11 00 32.3 -0.9**
KSH Kashi 42.35 73 P **P 11 00 34.5 -1.0**
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH LR LR
comp=Z,350nm,15.1s
KSH LR LR
comp=Z,360nm,13.8s
NIL Nilore 42.76 82 P **P 11 00 38.8 +0.1**
NIL IAmb IAmb 11 00 40.3
comp=Z,38nm,0.9s
NIL Nilore 42.76 82 P **P 11 00 38.8 +0.1**
NIL pmax pmax
comp=Z,38nm,1.0s
MBAR Mbarara 43.14 163 LR LR 11 20 14.1
comp=Z,280nm,19.9s,baz=333,slow=38
MBAR Mbarara 43.14 163⇑eP **P 11 00 42.3 +0.3**
MBAR pmax pmax
comp=Z,20nm,1.3s
UZB Uzynbulak 43.25 67 i P **P 11 00 41.5 -1.2**
UZB pmax pmax
comp=Z,33nm,3.6s
WUS Wushi 44.05 70 IAmb IAmb 11 00 50.4
comp=Z,20nm,1.1s
MAKZ Makanchi 44.12 61 P **P 11 00 49.2 -0.3**
MAKZ IAmb IAmb 11 00 50.7
comp=Z,24nm,0.8s
MAKZ Makanchi 44.12 61 P **P 11 00 49.2 -0.3**
MAKZ pmax pmax
comp=Z,24nm,0.9s
ZALV Zalesovo Beam 44.14 50 P **P 11 00 49.4 -0.1**
comp=Z,30nm,0.7s,baz=281,slow=8.6,SNR=133
ZALV LR LR 11 21 29.2
comp=Z,838nm,18.4s,baz=273,slow=39
comp=Z,30nm,0.7s
NRIK Noril'sk 44.22 28 LR LR 11 21 39.7
comp=Z,444nm,19.6s,baz=265,slow=39
MK31 Makanchi Array 44.33 61c iP **P 11 00 51.1 -0.1**
MKAR Makanchi Array 44.33 61 P **P 11 00 51.3 +0.1**
comp=Z,38nm,0.7s,baz=283,slow=6.1,SNR=226
MKAR PcP **PcP 11 02 35.0 0.0**
comp=Z,4.4nm,0.7s,baz=290,slow=3.9,SNR=4.6
MKAR LR LR 11 22 34.3
comp=Z,307nm,19.2s,baz=270,slow=40
comp=Z,38nm,0.7s
MKAR Makanchi Array 44.33 61 **P 11 00 51.4 +0.2**
SFJD Kangerlussuaq 44.96 328 LR LR 11 21 01.6
comp=Z,332nm,19.1s,baz=90,slow=38
KMBO Kilima Mbogo 45.40 155 P **P 11 01 00.3 +0.1**
comp=Z,1.3nm,0.3s,baz=352,slow=9.4,SNR=5.0
comp=Z,1.3nm,0.3s
KMBO Kilima Mbogo 45.40 155⇓eP **P 11 01 01.8 +1.6**
DGZ Jazzator, Alta 46.76 56c iP **P 11 01 10.8 +0.2**
DGZ pmax pmax
comp=Z,22nm,0.8s
KIBK Kibwezi 46.79 154 P **P 11 01 11.9 +0.9**
WMQ Urumqi 48.92 63 eP **P 11 01 28.3 +1.1**
WMQ pP pP 11 01 33.8 -0.3
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ LR LR
comp=Z,410nm,16.9s
WMQ LR LR
comp=Z,590nm,16.9s
WMQ LR LR
comp=Z,250nm,20.1s
TULEG Thule 49.68 342 P **P 11 01 31.3 -1.2**
TULEG IAmb IAmb 11 01 35.5
comp=Z,34nm,1.8s
KNGR Kungurtug, Tuv 52.57 52⇓eP **P 11 01 55.5 +0.8**
KNGR pmax pmax
comp=Z,22nm,1.4s
FRB Frobisher Bay 52.92 326 LR LR 11 26 16.3
comp=Z,278nm,18.9s,baz=94,slow=38
MOY Mondy 54.17 49 eP **P 11 02 07.3 +0.9**
MOY pmax pmax
comp=Z,24nm,1.9s
SCHQ Schefferville 55.49 316 P **P 11 02 15.8 -0.1**
comp=Z,8.2nm,0.7s,baz=81,slow=6.3,SNR=8.5
SCHQ LR LR 11 25 01.7
comp=Z,179nm,20.5s,baz=92,slow=35
comp=Z,8.2nm,0.7s
SCHQ Schefferville 55.49 316 IAmb IAmb 11 02 19.6
comp=Z,963nm,2.0s
HYBB Hyderabad (bro 55.61 97 eP **P 11 02 18.5 +1.3**
HYBB ePcP **PcP 11 03 17.3 +0.5**
HYBB ePP **PP 11 04 22.7 +1.3**
TLY Talaya 55.67 49 P **P 11 02 18.2 +1.1**
TLY Talaya 55.67 49 **P 11 02 17.9 +0.8**
TLY Talaya 55.67 49deP **P 11 02 18.5 +1.3**
TLY pmax pmax
comp=Z,16nm,1.1s
EVN Everest 55.69 81 **P 11 02 17.4 -1.0**
ZAK Zakamensk 56.02 50 eP **P 11 02 19.8 0.0**
ZAK pmax pmax
comp=Z,22nm,1.4s
TIXI Tiksi 56.83 21 LR LR 11 30 09.8
comp=Z,527nm,18.0s,baz=5.5,slow=40
TIXI Tiksi 56.83 21⇓eP **P 11 02 24.7 -0.4**
TIXI pmax pmax
comp=Z,6.0nm,1.7s
LSZ Lusaka 57.06 170 P **P 11 02 29.1 +1.6**
LSZ Lusaka 57.06 170 P **P 11 02 29.1 +1.6**
LSZ pmax pmax
comp=Z,11nm,1.1s
LSA Lhasa 57.94 77 P **P 11 02 33.9 -0.3**
GTA Gaotai 59.00 63 P **P 11 02 40.8 -0.2**
GTA pP pP 11 02 47.5 -0.5
GTA PP **PP 11 04 53.0 +1.8**
GTA pmax pmax
comp=Z,27nm,0.9s
GTA pmax pmax
comp=Z,170nm,7.6s
GTA LR LR
comp=Z,200nm,16.3s
GTA LR LR
comp=Z,220nm,13.9s
GTA LR LR
comp=Z,260nm,17.1s
SONM Songino Array 59.01 52 P **P 11 02 41.1 +0.2**
comp=Z,3.7nm,0.7s,baz=286,slow=8.1,SNR=22
SONM LR LR 11 30 44.3
comp=Z,549nm,19.4s,baz=316,slow=39
comp=Z,3.7nm,0.7s

ULN Ulaanbaatar 59.38 51 P **P 11 02 43.7 +0.2**
ULN IAmb IAmb 11 02 51.4
comp=Z,22nm,1.2s
ULN Ulaanbaatar 59.38 51⇓eP **P 11 02 44.1 +0.6**
ULN pmax pmax
comp=Z,12nm,1.7s
TSUM Tsumeb 60.42 182 LR LR 11 33 11.3
comp=Z,154nm,19.0s,baz=336,slow=40
BRDH Bariadhala 62.27 83 LR LR 11 35 34.7
comp=Z,72nm,18.6s,baz=337,slow=41
YAK Yakutsk 62.63 30 LR LR 11 33 10.4
comp=Z,448nm,18.8s,baz=294,slow=39
YAK Yakutsk 62.63 30 eP **P 11 03 03.4 -1.7**
YAK pmax pmax
comp=Z,9.0nm,1.8s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.1s
LZDM Lanzhou Array 63.44 64 P **P 11 03 11.5 +0.2**
comp=E,12nm,0.8s,baz=298,slow=3.2,SNR=9.3
comp=E,12nm,0.8s
LZH Lanzhou 63.47 64 eP **P 11 03 12.0 +0.6**
LZH pP pP 11 03 18.5 +0.1
LZH pmax pmax
comp=E,42nm,1.2s
LZH pmax pmax
comp=E,170nm,4.1s
LZH LR LR
comp=E,340nm,14.4s
LZH LR LR
comp=E,210nm,14.1s
LZH LR LR
comp=E,370nm,13.7s
PALK Pallekele 63.80 104 LR LR 11 34 48.2
comp=E,64nm,18.9s,baz=302,slow=40
BTO Baotou 65.01 57 eP P 11 03 27.3 +6.0
BTO S S 11 12 15.5 +13
BTO pmax pmax
comp=Z,52nm,1.1s
BTO pmax pmax
comp=Z,390nm,5.1s
BTO LR LR
comp=N,280nm,5.6s
BTO LR LR
comp=E,370nm,5.2s
BTO LR LR
comp=Z,700nm,16.1s
HILR Hailar Array B 65.57 45 P **P 11 03 24.2 -0.5**
comp=Z,0.4nm,0.3s,baz=232,slow=1.6,SNR=1.9
comp=Z,0.4nm,0.3s
HHC Hu-ho-hao-te 65.84 56 eP **P 11 03 27.5 +0.8**
HHC sP pP 11 03 33.8 +0.1
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,84nm,6.7s
CD2 Chengdu 66.32 69 P **P 11 03 29.8 -0.1**
CD2 pmax pmax
comp=Z,60nm,1.1s
LBTB Lobatse 66.42 174 LR LR 11 35 45.5
comp=Z,222nm,18.4s,baz=1.5,slow=39
PHPEN Phepeng 66.71 177 P **P 11 03 32.3 +0.1**
XLT XiLinHaoTe 66.82 51 eP P 11 03 40.0 +7.1
XLT pmax pmax
comp=Z,17nm,1.1s
XLT LR LR
comp=N,19nm,17.9s
XLT LR LR
comp=E,290nm,17.8s
XLT LR LR
comp=Z,560nm,19.1s
MAKGR Makgori 67.16 175 P **P 11 03 36.0 +1.0**
PZH PanZhiHua 67.45 74 P **P 11 03 36.5 -0.7**
PZH pmax pmax
comp=Z,20nm,1.0s
SADO Sadowa 67.46 310 LR LR 11 33 21.2
comp=Z,152nm,18.1s,baz=160,slow=36
BILL Bilibino 67.96 13⇑eP **P 11 03 40.7 +1.1**
BILL pmax pmax
comp=Z,4.0nm,1.2s
XAN Xi'an 68.05 64 ⇓P **P 11 03 41.3 +0.5**
XAN pP pP 11 03 45.0 -2.9
XAN sP sP 11 03 47.5 -3.0
XAN pmax pmax
comp=Z,37nm,1.2s
D27M Malcolm River 68.62 353 IAmb IAmb 11 03 45.3
comp=Z,7.5nm,0.9s
INK Inuvik 68.65 350 IAmb IAmb 11 03 53.4
comp=Z,13nm,1.5s
C23K Itkillik River 68.74 356 IAmb IAmb 11 03 46.5
comp=Z,11nm,0.8s
D25K Kavik River 69.00 355 IAmb IAmb 11 03 54.2
comp=Z,10nm,1.1s
HEH HeiHe 69.05 41 eP **P 11 03 46.8 +0.1**
HEH pmax pmax
comp=Z,30nm,1.2s
HEH LR LR
comp=Z,380nm,12.9s
HEH LR LR
comp=Z,550nm,13.9s
HEH LR LR
comp=Z,830nm,14.0s
E28M Babbage River 69.10 352 IAmb IAmb 11 03 55.0
comp=Z,15nm,1.2s
BJI Beijing 69.17 55 P P 11 03 55.0 +7.4
BJI pmax pmax
comp=Z,7.0nm,1.4s
SEY Seymchan 69.33 21 LR LR 11 37 55.6
comp=Z,253nm,18.2s,baz=317,slow=39
SEY Seymchan 69.33 21⇓eP **P 11 03 48.2 0.0**
SEY pmax pmax
comp=Z,6.0nm,1.0s
D23K Nanushuk River 69.61 356 IAmb IAmb 11 03 51.7
comp=Z,14nm,0.9s
E27K Coleen River 69.71 353 IAmb IAmb 11 03 59.4
comp=Z,16nm,1.2s
TOLK Toolik Lake Re 69.87 356 P **P 11 03 50.0 -1.5**
BOSA Boshof 69.97 175 P **P 11 03 52.8 +0.2**
comp=Z,9.1nm,0.8s,baz=4.6,slow=6.4,SNR=18
BOSA LR LR 11 38 01.6
comp=Z,291nm,18.0s,baz=22,slow=39
comp=Z,9.1nm,0.8s
BOSA Boshof 69.97 175 P **P 11 03 53.4 +0.8**
BOSA IAmb IAmb 11 04 01.1
comp=Z,19nm,1.1s
BOSA Boshof 69.97 175 P **P 11 03 53.4 +0.8**
BOSA pmax pmax
comp=Z,19nm,1.1s
YKA Yellowknife Ar 69.99 339 P **P 11 03 52.1 -0.2**
comp=Z,6.9nm,0.9s,baz=28,slow=5.3,SNR=10
YKA LR LR 11 37 01.4
comp=Z,112nm,18.4s,baz=336,slow=38
comp=Z,6.9nm,0.9s
YKA Yellowknife Ar 69.99 339 P **P 11 03 50.6 -1.7**
YKA Yellowknife Ar 69.99 339ceP **P 11 03 52.0 -0.3**
YKA pmax pmax
comp=Z,6.0nm,0.8s
LYN LuoYang 70.11 61 eP **P 11 03 54.0 +0.5**
LYN pmax pmax
comp=Z,12nm,0.5s
CMAR Chiang Mai Arr 70.25 83 P **P 11 03 53.3 -1.3**
comp=Z,5.1nm,1.0s,baz=304,slow=7.8,SNR=8.7
CMAR LR LR 11 41 50.0
comp=Z,38nm,18.9s,baz=295,slow=42
comp=Z,5.1nm,1.0s
CMAR Chiang Mai Arr 70.25 83ceP **P 11 03 57.4 +2.8**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
E23K Chandalar 70.45 356 IAmb IAmb 11 04 03.7
comp=Z,19nm,1.3s
G29M Pine Creek 70.55 351 IAmb IAmb 11 04 03.4
comp=Z,19nm,1.0s
ENH Enshi 70.68 66 P **P 11 03 56.3 -0.8**
G26K Porcupine Rive 71.12 353 IAmb IAmb 11 04 01.2
comp=Z,9.8nm,0.9s
H29M Whitestone 71.25 351 IAmb IAmb 11 04 07.5
comp=Z,10nm,0.9s
COLD Coldfoot 71.31 356 IAmb IAmb 11 04 09.0
comp=Z,16nm,1.1s
E19K Redstone River 71.34 359 IAmb IAmb 11 04 02.3
comp=Z,12nm,0.8s
F21K Alatna River 71.47 357 IAmb IAmb 11 04 09.8
comp=Z,17nm,1.1s
WRGLY Wrigley 71.51 343 P **P 11 04 01.6 +0.2**
WRGLY IAmb IAmb 11 04 03.0
comp=Z,15nm,1.0s

MA2	Magadan	71.58	24	LR	LR	11 39 32.9		
	comp=Z,486nm,18.4s,baz=294,slow=39							
H27K	Steamboat Moun	71.60	352	IAmb	IAmb	11 04 03.9		
	comp=Z,8.3nm,0.8s							
FYU	Fort Yukon	71.62	354	P	P	11 04 03.2	+1.1	
F20K	Avaraart Lake	71.72	358	IAmb	IAmb	11 04 11.0		
	comp=Z,30nm,1.8s							
I30M	Mount Dempster	71.95	350	IAmb	IAmb	11 04 05.2		
	comp=Z,9.7nm,0.8s							
F19K	Shaleruckik Mo	71.97	359	IAmb	IAmb	11 04 12.3		
	comp=Z,12nm,1.1s							
BNX	BinXian	71.99	44	⇑P	P	11 04 04.0	-0.7	
BNX				pmax	pmax			
	comp=Z,18nm,1.0s							
I29M	Ogilvie Camp,	72.07	350	IAmb	IAmb	11 04 05.7		
	comp=Z,9.2nm,0.8s							
CN2	Changchun	72.21	47	P	P	11 04 05.8	-0.2	
CN2				pP	pP	11 04 12.5	-0.6	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.9s							
J30M	Hart River	72.56	349	IAmb	IAmb	11 04 16.3		
	comp=Z,19nm,1.1s							
H22K	Ishtalitna Cre	72.70	356	IAmb	IAmb	11 04 17.7		
	comp=Z,25nm,1.4s							
IMAR	Indian Mountai	72.72	357	P	P	11 04 09.0	+0.2	
H21K	Melozitna Rive	73.01	357	IAmb	IAmb	11 04 19.5		
	comp=Z,16nm,1.0s							
MDP	Montagnes des	73.25	262	LR	LR	11 34 47.8		
	comp=Z,72nm,18.1s,baz=74,slow=34							
I23K	Minto, Yukon-K	73.33	355	IAmb	IAmb	11 04 20.8		
	comp=Z,16nm,1.2s							
DAWY	Dawson	73.45	350		P	11 04 13.3	+0.1	
DAWY				IAmb	IAmb	11 04 14.6		
	comp=Z,10nm,0.9s							
COLA	College	73.50	354⇑	eP	P	11 04 13.9	+0.6	
COLA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
IL31		73.52	354	IAmb	IAmb	11 06 41.7		
	comp=Z,41nm,1.9s							
ILAR	Eielson Array	73.52	354	P	P	11 04 13.9	+0.4	
	comp=Z,2.1nm,0.7s,baz=0.4,slow=5.6,SNR=29							
ILAR				LR	LR	11 38 39.4		
	comp=Z,54nm,19.5s,baz=310,slow=38							
MLY	Manley	73.53	356	IAmb	IAmb	11 04 22.2		
	comp=Z,17nm,1.3s							
K27K	Chicken	73.80	352	IAmb	IAmb	11 04 23.7		
	comp=Z,12nm,1.0s							
WHN	Wuhan	73.82	64	P	P	11 04 11.8	-4.0	
NEA2	Nenana	73.86	355	IAmb	IAmb	11 04 23.3		
	comp=Z,18nm,1.2s							
HDA	Harding Lake	73.89	354	IAmb	IAmb	11 04 23.3		
	comp=Z,14nm,1.0s							
BWN	Browne	74.30	355	P	P	11 04 19.0	+0.9	
BCAR	Beaver Creek A	74.70	351		P	11 04 21.2	+0.7	
L27K	Beaver Creek,	74.71	351	IAmb	IAmb	11 04 29.2		
	comp=Z,18nm,1.3s							
M29M	Somme Creek	74.89	350	IAmb	IAmb	11 04 23.6		
	comp=Z,12nm,0.9s							
SJG	San Juan	75.01	281	LR	LR	11 33 03.6		
	comp=Z,45nm,21.2s,baz=42,slow=32							
USRK	Ussuriysk Ar.	75.42	43	P	P	11 04 24.3	-0.6	
	comp=Z,2.9nm,0.8s,baz=310,slow=6.8,SNR=5.5							
	comp=Z,2.9nm,0.8s							
WTLY	Watson Lake, Y	75.44	344	IAmb	IAmb	11 04 26.8		
	comp=Z,10nm,0.9s							
NJ2	Nanjing	75.84	60	eP	P	11 04 27.3	-0.2	
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
TKL	Tuckaleechee C	75.93	305	LR	LR	11 39 15.0		
	comp=Z,141nm,18.0s,baz=52,slow=37							
R33M	Jennings River	76.53	345	IAmb	IAmb	11 04 42.1		
	comp=Z,27nm,1.4s							
T47A	Sharon Grove	77.06	308	P	P	11 04 34.7	+0.4	
T47A				IAmb	IAmb	11 04 35.9		
	comp=Z,18nm,0.9s							
EDM	Edmonton	77.26	333	IAmb	IAmb	11 04 36.4		
	comp=Z,14nm,0.9s							
V48A	Smith Brothers	77.73	307	IAmb	IAmb	11 04 39.2		
	comp=Z,13nm,1.0s							
KSRS	Korea Array	77.85	51	P	P	11 04 38.7	0.0	
	comp=Z,3.9nm,0.9s,baz=317,slow=5.3,SNR=6.2							
	comp=Z,3.9nm,0.9s							
YSS	Yuzhno-Sakhali	78.55	36	eP	P	11 04 42.1	-0.3	
YSS				eS	S	11 14 36.4	-1.1	
YSS				eSS	SS	11 19 45.3	+5.3	
YSS				pmax	pmax			
	comp=Z,30nm,1.3s							
YSS				MLR	MLR			
	comp=Z,700nm,15.0s							
YSS				MLR	MLR			
	comp=N,600nm,17.0s							
YSS				MLR	MLR			
	comp=E,400nm,15.0s							
CCM	Cathedral Cave	78.72	311	P	P	11 04 43.4	-0.1	
CCM	Cathedral Cave	78.72	311	P	P	11 04 43.4	-0.1	
CCM				pmax	pmax			
	comp=Z,8.0nm,0.8s							
P38A	Dawn	78.89	314		P	11 04 44.9	+0.4	
P38A				IAmb	IAmb	11 04 45.6		
	comp=Z,13nm,0.8s							
PETK	Petropavlovsk-	79.11	24	P	P	11 04 46.5	+1.1	
	comp=Z,3.3nm,1.0s,baz=142,slow=7.4,SNR=3.9							
PETK				LR	LR	11 44 37.5		
	comp=Z,506nm,18.2s,baz=324,slow=39							
	comp=Z,3.3nm,1.0s							
R40A	Maddies Statio	79.13	312	IAmb	IAmb	11 04 47.5		
	comp=Z,26nm,1.5s							
PET	Petropavlovsk	79.47	24	ceP	P	11 04 45.3	-2.0	
PET				pmax	pmax			
	comp=Z,42nm,1.3s							
LRAL	Lakeview Retre	79.67	305	P	P	11 04 48.8	0.0	
LRAL				IAmb	IAmb	11 04 50.3		
	comp=Z,12nm,0.9s							
KULM	Kulim	79.92	92	P	P	11 04 49.3	-1.1	
KULM				IAmb	IAmb	11 04 50.0		
	comp=Z,19nm,0.9s							
PSI	Prapat	80.25	95	P	P	11 04 51.0	-1.3	
	comp=Z,12nm,0.7s,baz=320,slow=7.8,SNR=12							
PSI				LR	LR	11 43 18.5		
	comp=Z,48nm,20.6s,baz=313,slow=38							
	comp=Z,12nm,0.7s							
RPSI	Rantau Prapat	80.32	95	IAmb	IAmb	11 04 51.9		
	comp=Z,14nm,0.7s							
ASAJ	Asahikawa	80.66	38	LR	LR	11 45 04.7		
	comp=Z,187nm,19.1s,baz=347,slow=39							
IPM	Ipoh	80.73	92	IAmb	IAmb	11 04 54.0		
	comp=Z,17nm,0.9s							
FCAR	Ozark Folk Cen	80.74	310	IAmb	IAmb	11 05 21.6		
	comp=Z,23nm,1.6s							
U38A	Gravette	81.63	312	IAmb	IAmb	11 05 01.1		
	comp=Z,28nm,1.6s							
MIAR	Mount Ida	82.53	310	IAmb	IAmb	11 05 15.9		
	comp=Z,12nm,1.1s							
JNU	Nakatsue	82.59	52	LR	LR	11 46 27.0		
	comp=Z,154nm,18.2s,baz=323,slow=39							
NEW	Newport	82.73	332	LR	LR	11 44 28.8		
	comp=Z,123nm,18.3s,baz=4.0,slow=38							
YNE	Yellowstone No	82.73	326	IAmb	IAmb	11 05 07.4		
	comp=Z,13nm,0.8s							
TUL3	Leonard	82.80	312	IAmb	IAmb	11 05 17.2		
	comp=Z,15nm,0.9s							
K22A	Casper	83.11	323	IAmb	IAmb	11 05 08.0		
	comp=Z,14nm,1.0s							
OK052	Battle Ridge R	83.30	313	IAmb	IAmb	11 05 10.0		
	comp=Z,12nm,0.7s							
YHL	Hebgen Lake	83.34	327	IAmb	IAmb	11 05 18.5		
	comp=Z,12nm,1.2s							
YMR	Madison River	83.40	327	IAmb	IAmb	11 05 11.4		
	comp=Z,9.4nm,1.0s							
C09A	Chrisman Ranch	83.53	333	IAmb	IAmb	11 05 10.7		
	comp=Z,10nm,0.9s							
SHEM	Shemya Is, Ala	83.61	15	LR	LR	11 47 32.7		
	comp=Z,105nm,18.4s,baz=298,slow=39							
YPP	Pitchstone Pla	83.66	327	IAmb	IAmb	11 05 26.6		
	comp=Z,19nm,1.3s							
MAJO	Matsushiro	84.23	45	deP	P	11 05 12.3	-0.5	
MAJO				pmax	pmax			
	comp=Z,9.0nm,1.0s							
MJAR	Matsushiro Arr	84.23	45	P	P	11 05 12.2	-0.5	
	comp=Z,6.0nm,0.8s,baz=312,slow=5.1,SNR=9.9							
MJAR				LR	LR	11 46 14.1		
	comp=Z,191nm,18.3s,baz=329,slow=38							
	comp=Z,6.0nm,0.8s							
MJAR	Matsushiro Arr	84.23	45	IAmb	IAmb	11 05 20.7		
	comp=Z,13nm,1.3s							
BDFB	Brasilia	84.24	243	P	P	11 05 13.1	0.0	
	comp=Z,6.6nm,0.8s							
BDFB	Brasilia	84.24	243	IAmb	IAmb	11 05 27.4		
	comp=Z,12nm,1.0s							
SDV	Santo Domingo	84.26	277	LR	LR	11 37 46.7		
	comp=Z,48nm,19.3s,baz=74,slow=32							
SDV	Santo Domingo	84.26	277	IAmb	IAmb	11 05 22.8		
	comp=Z,15nm,1.1s							
FXWY	Fox Creek	84.27	326	IAmb	IAmb	11 05 23.3		
	comp=Z,10.0nm,1.2s							
PDAR	Pinedale Array	84.36	325	P	P	11 05 13.8	+0.2	
	comp=Z,4.6nm,0.8s,baz=61,slow=3.6,SNR=27							
PDAR				LR	LR	11 45 11.8		
	comp=Z,112nm,18.9s,baz=16,slow=37							
	comp=Z,4.6nm,0.8s							
F10A	Beach Ranch, E	84.73	331	IAmb	IAmb	11 05 28.4		
	comp=Z,14nm,1.2s							
PLID	Pearl Lake	85.03	330	IAmb	IAmb	11 05 28.2		
	comp=Z,15nm,1.9s							
WMOK	Wichita Mounta	85.31	313	IAmb	IAmb	11 05 27.9		
	comp=Z,23nm,1.6s							
JOW	Kunigami	85.41	58	LR	LR	11 49 13.8		
	comp=Z,145nm,19.2s,baz=148,slow=40							
BMO	Blue Mountains	85.71	331	IAmb	IAmb	11 05 20.9		
	comp=Z,7.5nm,0.9s							
MFID	Camas Ranch	86.38	329	IAmb	IAmb	11 05 25.3		
	comp=Z,9.6nm,0.8s							
PLPT	Palo Pinto	86.49	312	IAmb	IAmb	11 05 36.4		
	comp=Z,12nm,1.0s							
BGU	Big Grassy Mou	87.35	326	IAmb	IAmb	11 05 37.3		
	comp=Z,16nm,1.7s							
PV20	West Nyswonger	87.67	322	IAmb	IAmb	11 05 31.0		
	comp=Z,12nm,1.1s							
PV18	Skein Mesa, Pa	87.72	322	IAmb	IAmb	11 05 32.7		
	comp=Z,12nm,1.1s							
DUG	Dugway, Tooele	87.86	325	IAmb	IAmb	11 05 32.1		
	comp=Z,5.3nm,0.8s							
BRDY	Brady	88.01	311	IAmb	IAmb	11 05 40.5		
	comp=Z,8.7nm,1.1s							
J05D	Fort Rock, OR	88.48	332	IAmb	IAmb	11 05 36.0		
	comp=Z,7.3nm,0.8s							
HMU	Henry Mountain	88.81	323	IAmb	IAmb	11 05 36.1		
	comp=Z,8.5nm,0.8s							
MDSI	Maura Dua	88.99	97	P	P	11 05 34.3	-1.9	
ANMO	Albuquerque	89.17	318	LR	LR	11 45 41.8		
	comp=Z,128nm,20.4s,baz=42,slow=36							
OZNA	Ozona	89.48	312	IAmb	IAmb	11 05 47.5		
	comp=Z,11nm,1.1s							
ROSC	El Rosal	89.66	276	LR	LR	11 41 41.2		
	comp=Z,93nm,20.7s,baz=69,slow=33							
PSUT	Pine Spring	89.69	325	IAmb	IAmb	11 07 19.3		
	comp=Z,7.3nm,0.8s							
DRIO	Del Rio	90.33	311	IAmb	IAmb	11 05 51.7		
	comp=Z,13nm,1.0s							
YBH	Yreka Blue Hor	90.36	333	LR	LR	11 51 04.5		
	comp=Z,12nm,18.3s,baz=37,slow=39							
PECS	Pecos	90.63	314	IAmb	IAmb	11 05 53.3		
	comp=Z,18nm,1.4s							
SAND	Sanderson	90.77	312	IAmb	IAmb	11 06 52.6		
	comp=Z,20nm,1.8s							
NVAR	Mina Array Bea	91.61	328	P	P	11 05 48.5	0.0	
	comp=Z,0.8nm,0.8s,baz=37,slow=4.5,SNR=5.6							
NVAR				PKKPbc	PKKPbc	11 23 07.2	+0.5	
	comp=Z,0.4nm,0.7s,baz=197,slow=3.2,SNR=3.8							
NVAR				LR	LR	11 47 53.4		
	comp=Z,162nm,20.0s,baz=28,slow=36							
	comp=Z,0.8nm,0.8s							
TXAR	Lajitas Array	92.10	313	P	P	11 05 51.5	+0.8	
	comp=Z,3.6nm,0.9s,baz=64,slow=4.3,SNR=26							
	comp=Z,3.6nm,0.9s							
TX31	Lajitas Ar. Si	92.11	313	IAmb	IAmb	11 05 59.6		
	comp=Z,9.1nm,1.1s							
JTS	Las Juntas de	93.83	287	LR	LR	11 45 32.5		
	comp=Z,45nm,18.6s,baz=40,slow=34							
PFO	Pinyon Flats O	94.97	324	LR	LR	11 52 07.3		
	comp=Z,118nm,18.9s,baz=42,slow=38							
CMIG	Matias Romero	95.93	299	LR	LR	11 49 13.7		
	comp=Z,99nm,18.8s,baz=10,slow=35							
DAV	Davao City (W)	97.25	74	LR	LR	11 57 05.7		
	comp=Z,84nm,19.4s,baz=330,slow=40							
CPUP	Villa Florida	97.89	242	LR	LR	11 52 48.5		
	comp=Z,57nm,18.7s,baz=264,slow=37							
LPAZ	La Paz	98.84	256	LR	LR	11 51 25.6		
	comp=Z,40nm,18.5s,baz=61,slow=36							
LPIG	La Paz	99.85	315	LR	LR	11 52 55.7		
	comp=Z,88nm,18.9s,baz=24,slow=36							
NVL	N'lazarevskaya	112.09	183	i PKIKP	PKiKP	11 11 17.1	+1.9	
NVL				e		11 12 00.9		
NVL				ePPP	PPP	11 14 25.2		
NVL				eSS	SS	11 27 40.5	+3.5	
NVL				eSSS	SSS	11 31 50.7		
NVL				pmax	pmax			
	comp=Z,9.0nm,0.7s							
SNAA	Sanae	113.98	188	PP	PP	11 12 14.5	+0.6	
	comp=Z,1.6nm,1.1s,baz=50,slow=7.8,SNR=3.2							
WRA	Warramunga Arr	121.40	90	PKP	PKPdf	11 11 33.4	-1.3	
	comp=Z,1.6nm,0.8s,baz=301,slow=2.2,SNR=10							
ASAR	Alice Springs	123.26	93	PKP	PKPdf	11 11 37.2	-0.9	
	comp=Z,3.7nm,0.8s,baz=327,slow=1.8,SNR=40							
QSPA	South Pole Qui	131.35	180	PKP	PKiKP	11 11 54.5	+1.2	
	comp=Z,1.0nm,0.6s,baz=277,slow=1.7,SNR=9.0							
STKA	Stephens Creek	133.38	98	PKP	PKPdf	11 11 56.9	-0.3	
	comp=Z,2.5nm,0.8s,baz=132,slow=6.4,SNR=6.9							
VNDA	Vanda	140.69	168	PKP	PKPdf	11 12 09.8	+0.4	
	comp=Z,0.9nm,1.0s,baz=192,slow=2.6,SNR=1.9							
DZM	Mont Dzumac	146.18	65	eLR	LR	12 00 25.6		
	comp=Z,112nm,24.4s							
PPT2	Papeete2	154.38	335	eLR	LR	12 04 07.9		
PPT2				eLR	LR	12 04 17.4		
	comp=Z,76nm,23.0s							
TBI	Tubuai	159.66	329	eLR	LR	12 06 42.3		
	comp=Z,530nm,30.8s							

*IDC **28** 11:00:02.3±4.5,2°.69S×101°.81E,h0km,mb3.5/3, mbtmp3.5/3,Error ellipse: s-maj=239.9km s-min=27.6km az=52.0*

*DJA **28** 11:00:19.4±0.3,3°.5S×104°.2E±°,h160km±3km,M4.0/13, mB4.9/2,mb4.2/6,MLv3.9/13,Mw(mB)4.2/2*

ISC 28 11:00:20.1±0.9,2°.6S±0°.1×102°.10E±0°.09,h159km±8km, n23,σ0s87/24,mb3.4/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASI	Maura Aman, Be	0.54	165	P	Pn	11 00 42.8	0.0
MASI				S	Sn	11 01 00.4	+0.2
KRJI	Kerinci	0.82	309	P	Pn	11 00 44.7	+0.1
KRJI				S	Sn	11 01 04.4	+1.2
KSI	Kapahiang	1.14	154	P	Pn	11 00 46.5	-0.6
KSI				S	Sn	11 01 07.2	-0.6
PPSI	Pulau Pagai	2.09	266	P	Pn	11 00 57.9	+1.0
PPSI				S	Sn	11 01 24.1	-1.1
PDSI	Padang	2.35	316	P	Pn	11 00 59.3	-0.7
PDSI				S	Sn	11 01 30.7	-0.1
MDSI	Maura Dua	2.79	132	P	Pn	11 01 05.0	-0.2
SISI	Saibi	3.27	293	P	Pn	11 01 11.8	+0.6
SISI				S	Sn	11 01 50.3	-0.6
KLSI		3.34	128	P	Pn	11 01 12.2	0.0
KASI	Kota Agung	3.75	140	P	Pn	11 01 16.2	-1.2
KASI				S	Sn	11 02 01.3	-0.8
GSI	Gunungsitoli	5.96	311	P	Pn	11 01 45.8	-0.7
	0.3nm4s,149nm,0.6s						
SNSI	Sinabang, Aceh	7.63	311	P	Pn	11 02 08.5	-0.1
	69nm,1.1s						
TPTI		7.63	320	P	Pn	11 02 07.8	-0.8
	0.1nm30nm,1.2s						
MLSI	Meulaboh, Aceh	8.89	320	P	Pn	11 02 24.8	-0.6
H08S2	Diego Garcia H	29.90	259	T	T	11 35 43.6	
	baz=82,slow=74						
H08S3	Diego Garcia H	29.90	259	T	T	11 35 39.0	
	baz=82,slow=74						
H08S1	Diego Garcia H	29.91	259	T	T	11 35 44.8	
	baz=82						
WRA	Warramunga Arr	35.88	121	P	P	11 07 05.7	+0.6
	0.5nm,1.0s,baz=297,slow=8.6,SNR=8.0						
	0.5nm,1.0s						
ASAR	Alice Springs	37.20	127	P	P	11 07 17.7	+1.4
	0.3nm,0.4s,baz=301,slow=8.2,SNR=13						
	0.3nm,0.4s						
MKAR	Makanchi Array	52.20	343	P	P	11 09 15.2	+0.6
	0.4nm,0.4s,baz=150,slow=8.9,SNR=5.4						
	0.4nm,0.4s						
H04N2	CROZET ISLANDS	61.57	217	T	T	12 15 56.5	
	baz=60,slow=75,SNR=7.2						
H04N1	CROZET ISLANDS	61.58	217	T	T	12 15 49.7	
	baz=60,slow=75,SNR=8.8						
H04N3	CROZET ISLANDS	61.59	217	T	T	12 15 52.7	
	baz=60,slow=75,SNR=4.0						
TXAR	Lajitas Array	143.87	40	PKP	PKiKP	11 19 39.1	-1.8
	0.4nm,1.0s,baz=326,slow=2.6,SNR=1.6						

TRN 28 11:20:41.3,16°.83N×60°.86W,h24km,MD3.7,South-east of Antigua.,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSDZ	La Diserade, G	0.55	201	eP	Pn	11 20 54.3	+0.7
DSDZ				eS	Sn	11 21 03.3	+1.3
DHSZ	Broadband at M	1.03	238	eP	Pb	11 21 00.8	+0.3
DHSZ				eS	Sn	11 21 16.2	+2.3
MMLZ	Guadeloupe Bro	1.10	225	eP	Pb	11 21 03.5	+1.9
MMLZ				eS	Sn	11 21 19.6	+3.9
ATGZ	Broadband at L	1.11	229	eP	Pb	11 21 03.0	+1.3
ANWB	Willy Bob	1.22	313	eP	Pb	11 21 03.5	-0.2
ANWB				eS	Sb	11 21 21.3	+2.3
TBG	Guadaloupe-3	1.23	218	eP	Pb	11 21 04.1	+0.2
TBG				eS	Sb	11 21 22.3	+2.9
MBFL	Flemmings, Mon	1.30	267	eP	Pb	11 21 05.4	+0.3
DWS	Wesley	1.33	199	eP	Pb	11 21 06.2	+0.7
DWS				eS	Sb	11 21 24.4	+2.3
DSLB	Salisbury	1.48	201	eP	Pb	11 21 08.4	+0.2
DSLB				eS	Sb	11 21 27.0	+0.3
DLPL	La Plaine	1.53	194	eS	Sb	11 21 28.3	+0.2
SKI	Saint Kitts	1.87	286	eP	Pn	11 21 13.1	+1.3
SKI				eS	Sb	11 21 37.9	+0.1
SVN	Savane Anatole	2.00	189	eP	Pb	11 21 15.6	-1.4
SVN				eS	Sb	11 21 40.4	-1.1
ILAM	Ilet Lapin Mar	2.04	180	eP	Pb	11 21 17.0	-0.7
ILAM				eS	Sn	11 21 40.3	+1.4
BIM	Bigot	2.31	185	eP	Pb	11 21 20.5	-1.8
BIM				eS	Sn	11 21 47.6	+2.1
SLBI	Saint Lucia, B	2.79	182	eP	Pn	11 21 27.0	+2.5
SLBI				eS	Sn	11 21 59.1	+1.7

*SOF **28** 11:37:49.6,43°.40N±0°.01×28°.69E±0°.02,h15km±2km, MD3.3/3*

*AFAD **28** 11:37:49.9,43°.21N×28°.75E,h9km±2km,ML2.9*

ISC 28 11:37:50.2±1.0,43°.47N±0°.02×28°.72E±0°.03,h16km±7km, n63,σ1s00/100,31C-31D,Black Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KALB	Balgarevo	0.23	253	⇓P	Pg	11 37 55.3	-0.1
KALB				⇓S	Sg	11 37 59.2	+0.3
TSMN	Mangalia Port-	0.34	345	⇓P	Pb	11 37 58.6	+0.8
TSMN				⇓S	Sb	11 38 04.1	+1.0
MANR	Mangalia	0.35	345	⇓P	Pb	11 37 58.8	+0.6
MANR				⇓S	Sb	11 38 04.0	+0.5
PSN	Preselentsi	0.45	291	Pg	Pg	11 37 59.4	+0.1
PSN				Sg	Sg	11 38 05.2	-0.3
EFOR	EFORIE	0.61	354	⇓P	Pn	11 38 03.7	-0.6
EFOR				⇓S	Sn	11 38 11.9	-1.8
TSCT	Constanta Port	0.69	356	⇑P	Pn	11 38 05.0	-0.3
TSCT				⇓S	Sn	11 38 14.9	-0.8
MFTR	Murfatlar	0.73	343	⇓P	Pn	11 38 05.6	-0.4
MFTR				⇓S	Sn	11 38 15.9	-0.9
AVR	AVREN	0.84	246	P	Pb	11 38 05.7	-0.8
AVR				S	Sb	11 38 17.2	-0.4
ICOR	Ion Corvin	0.92	314	⇓P	Pn	11 38 08.7	+0.1
CVD1	Cernavoda-Powe	0.97	331	⇑P	Pn	11 38 09.8	+0.6
CVDA	Cernavoda	0.99	330	⇓P	Pn	11 38 09.9	+0.4
PRD	Provadia	1.00	252	Pg	Pb	11 38 08.7	-0.5
PRD				Sg	Sb	11 38 21.0	-0.4
TIRR	Tirgusor	1.01	347	⇑P	Pn	11 38 10.3	+0.6
NEF	NEVSHA	1.07	259	P	Pb	11 38 09.9	-0.5
NEF				S	Sb	11 38 23.4	-0.8
JURR	Jurilovca	1.30	5	⇓P	Pg	11 38 15.8	+0.6
TPGR	Topolog	1.40	351	⇓P	Pg	11 38 17.1	-0.1
TPGR				⇓S	Sg	11 38 36.0	+0.6
CICN	Ciocanesti	1.42	301	⇑P	Pb	11 38 17.0	+0.7
AMRR	Amara	1.51	319	⇓P	Pg	11 38 18.6	-0.7
AMRR				⇓S	Sg	11 38 39.8	+0.8
RAZG	Razgrad	1.61	274	⇓P	Pn	11 38 19.1	+1.1
LEHL	Lehliu	1.70	307	⇑P	Pb	11 38 22.1	+1.1
LEHL				⇑S	Sg	11 38 44.5	-0.4
TLCR		1.71	2	⇓P	Pg	11 38 21.9	-1.2
TLCR				⇓S	Sg	11 38 44.1	-1.3
CFR	Carcaliu	1.75	346	⇓P	Pb	11 38 21.3	-0.7
CFR				⇓S	Sg	11 38 46.0	-0.7
TSSL	Sulina	1.84	23	⇓S	Sb	11 38 46.3	+0.2
ARMN	Kirklareli, Me	1.87	211	P	Pn	11 38 22.2	+0.6
ARMN				S	Sn	11 38 44.5	-0.3
ARMN				i IAML		11 38 48.0	
	comp=E,137nm,0.4s						
JMB	Yambol	1.88	239	P	Pn	11 38 22.0	+0.3
VIZE	Kirklareli, Vi	2.00	199	P	Pn	11 38 23.7	+0.3
VIZE				S	Sn	11 38 47.9	-0.3
VIZE				i IAML		11 38 49.0	
	comp=E,155nm,0.4s						
VIZE				i IAML		11 38 50.0	
	comp=N,131nm,0.1s						
PHSR	Pinarhisar	2.04	206	⇑P	Pn	11 38 25.0	+1.1
PHSR				⇑S	Sn	11 38 49.1	-0.1
KIRK	Kırklareli	2.07	216	P	Pn	11 38 25.1	+0.8
KIRK				S	Sn	11 38 49.7	-0.1
KIRK				i IAML		11 38 52.0	
	comp=N,88nm,0.5s						
KIRK				i IAML		11 38 56.0	
	comp=E,87nm,0.4s						
INCR	INCERC-Sediu C	2.08	299	⇑S	Sb	11 38 54.2	+0.9
BUC	Bucharest	2.11	297	⇓S	Sb	11 38 54.9	+0.7
SGRR	Sing

SUSU				S		**Sn**	**11 39 26.2**	**+0.7**
MPEP	**Malo Peshtene**	**3.63**	**270**	P		**Pn**	**11 38 46.3**	**+0.5**
BCAM	**Yenicaga**	**3.64**	**136**	P		**Pn**	**11 38 46.2**	**+0.2**
BCAM				S		**Sn**	**11 39 30.5**	**+1.8**
KBUK	**KARABUK-Merkez**	**3.66**	**126**	P		**Pn**	**11 38 47.1**	**+0.9**
KBUK				S		**Sn**	**11 39 30.2**	**+1.1**
DURS	**Dursunbey**	**3.87**	**183**	P		**Pn**	**11 38 49.5**	**+0.3**
DURS				S		**Sn**	**11 39 33.4**	**-1.1**
BZK	**Bozkurt**	**4.18**	**109**	⇓P		**Pn**	**11 38 54.0**	**+0.7**
BZK				⇓S		**Sn**	**11 39 42.1**	**+0.3**

*NEIC **28** 11:39:42.9±1.8, 34°.48N±0°.02×96°.21W±0°.02, h5km±1km, mb_Lg1.9/8, ML2.6/20, ML2.6/12, Error ellipse: s-maj=4.0km s-min=2.8km az=129.0*

NEIC 28 11:39:42.4±1.4, 34°.47N±0°.02×96°.18W±0°.02, h5km±1km, Error ellipse: s-maj=3.3km s-min=2.7km az=137.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOOK	**Love County**	**0.96**	**240**		Pg	11 40 00.5	-0.3
LOOK					Sb	11 40 14.5	+0.1
FNO	**Franklin**	**1.27**	**308**		Pg	11 40 06.0	-0.8
FNO					Sb	11 40 23.6	0.0
FNO				IAML		11 40 25.5	
	comp=E,172nm,0.1s						
X34A	**Smith Ranch, M**	**1.37**	**276**		Pn	11 40 07.7	-0.6
X34A					Sn	11 40 26.9	+0.1
OKCSW	**OKLAHOMA CITY**	**1.39**	**312**		Pn	11 40 07.9	-0.7
OKCSW					Sb	11 40 26.8	-0.2
DEOK	**Depew**	**1.39**	**349**		Pn	11 40 07.8	-0.8
DEOK					Sb	11 40 26.8	-0.2
Z35A	**Perchaven, San**	**1.45**	**218**		Pn	11 40 08.1	-1.2
Z35A					Sb	11 40 26.8	-1.7
TUL3	**Leonard**	**1.47**	**12**		Pn	11 40 09.2	-0.4
TUL3					Sn	11 40 29.2	-0.1
OK052	**Battle Ridge R**	**1.60**	**342**		Pn	11 40 10.8	-0.6
OK052					Sb	11 40 32.9	-0.2
FW06	**Azle**	**1.89**	**218**	IAmb_Lg		11 40 42.9	
	comp=Z,5.9nm,0.8s						
WTFS	**Witchita Falls**	**2.02**	**250**		Pn	11 40 16.8	-0.4
OK048	**Pawnee Station**	**2.04**	**342**		Pn	11 40 16.4	-1.0
OK048				IAmb_Lg		11 40 47.3	
	comp=Z,6.2nm,1.0s						
OK051	**E0350 and S346**	**2.10**	**345**		Pn	11 40 17.7	-0.6
MIAR	**Mount Ida**	**2.15**	**87**		Pn	11 40 20.0	+1.0
MIAR				IAmb_Lg		11 40 55.8	
	comp=Z,5.5nm,0.8s						
PLPT	**Palo Pinto**	**2.43**	**228**		Pn	11 40 22.4	-0.4
T35A	**Sooner Cattle**	**2.45**	**354**		Pn	11 40 22.9	-0.2

*SOME **28** 11:50:23.8, 40°.50N×78°.30E, h10km*
*KRNET **28** 11:50:24.2±0.1, 40°.38N×77°.96E, mb3.1*
*NNC **28** 11:50:24.4±2.2, 40°.52N×78°.26E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=15.3km s-min=9.8km az=170.0*

ISC 28 11:50:24.4±2.4, 40°.51N±0°.09×78°.21E±0°.05, h5km±12km, n26, σ1°59/40, 9C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.26**	**346**	⇓*i*P	**Pg**	**11 50 49.6**	**+1.0**
TARG				⇓*i*S	**Sn**	**11 51 08.3**	**+1.7**
PRZ	**Przheval'sk**	**1.98**	**4**	⇓*e*P	**Pg**	**11 51 03.0**	**+0.6**
PRZ				⇓*e*S	**Sg**	**11 51 31.1**	**+3.0**
JNKS	**Jany-Kuch**	**2.02**	**287**	⇑*i*P	**Pn**	**11 50 59.2**	**-0.1**
JNKS				⇑*i*S	**Sn**	**11 51 24.3**	**-0.8**
SATY	**Saty**	**2.56**	**3**	Pg	**Pb**	**11 51 10.5**	**-0.3**
	22nm,0.5s						
SATY				Lg	Lg	11 51 44.8	
	9.2nm,0.2s						
BOOM	**Boomskoye usch**	**2.62**	**320**	⇑*i*P	**Pb**	**11 51 09.4**	**-2.5**
BOOM				⇑*i*S	**Sb**	**11 51 42.2**	**-2.2**
TNSS	**Tian-Shan**	**2.70**	**340**	Pg	**Pg**	**11 51 15.2**	**-1.0**
	12nm,0.4s						
TNSS				Lg	Lg	11 51 52.6	
	7.0nm,0.4s						
TNSS	**Tian-Shan**	**2.70**	**340**	*e*P	**Pg**	**11 51 15.2**	**-1.0**
	12nm,0.4s						
TNSS				*e*S	**Sg**	**11 51 52.6**	**+1.4**
	7.0nm,0.4s						
UZB	**Uzynbulak**	**2.71**	**13**	Pg	**Pb**	**11 51 13.9**	**+0.5**
	14nm,0.5s						
UZB				Lg	Lg	11 51 49.9	
	33nm,0.3s						
UZB	**Uzynbulak**	**2.71**	**13**	*e*P	**Pb**	**11 51 13.9**	**+0.5**
	14nm,0.5s						
UZB				*e*S	**Sg**	**11 51 49.9**	**-1.5**
	33nm,0.3s						
MDOK	**Medeo**	**2.79**	**342**	Pg	**Pg**	**11 51 16.5**	**-1.5**
	12nm,0.1s						
MDOK				Lg	Lg	11 51 54.6	
	17nm,0.8s						
SHLS	**Shalkode**	**2.81**	**19**	Pg	**Pg**	**11 51 17.2**	**-1.0**
	24nm,0.5s						
SHLS				Lg	Lg	11 51 56.0	
	37nm,0.5s						
SHLS	**Shalkode**	**2.81**	**19**	*e*P	**Pg**	**11 51 17.2**	**-1.0**
	24nm,0.5s						
SHLS				*e*S	**Sg**	**11 51 56.0**	**+1.4**
	37nm,0.5s						
KOTS	**Kotyrbulak**	**2.85**	**344**	Pg	**Pg**	**11 51 17.9**	**-1.0**
	17nm,0.2s						
KOTS				Lg	Lg	11 51 57.1	
	30nm,0.5s						
KOTS	**Kotyrbulak**	**2.85**	**344**	*e*P	**Pg**	**11 51 17.9**	**-1.0**
	17nm,0.2s						
KOTS				*e*S	**Sg**	**11 51 57.1**	**+1.2**
	30nm,0.5s						
MTBS	**Maitube**	**2.94**	**334**	Pg	**Pb**	**11 51 18.5**	**+1.2**
	15nm,0.2s						
MTBS				Lg	Lg	11 51 58.3	
	27nm,0.4s						
MTBS	**Maitube**	**2.94**	**334**	*e*P	**Pb**	**11 51 18.5**	**+1.2**
	15nm,0.2s						
MTBS				*e*S	**Sg**	**11 51 58.3**	**-0.6**
	27nm,0.4s						
PDGK	**Podgornoye**	**2.98**	**18**	⇑Pg	**Pb**	**11 51 15.9**	**-2.1**
	6.2nm,0.3s						
PDGK				⇑Lg	Lg	11 51 56.8	
	32nm,0.6s						
KST	**Kastek**	**3.04**	**327**	Pg	**Pb**	**11 51 20.6**	**+1.4**
	14nm,0.3s						
KST				Lg	Lg	11 52 01.4	
	79nm,0.5s						
KST	**Kastek**	**3.04**	**327**	*e*P	**Pb**	**11 51 20.6**	**+1.4**
	14nm,0.3s						
KST				*e*S	**Sg**	**11 52 01.4**	**-0.7**
	79nm,0.5s						
ARLS	**Aral**	**3.23**	**296**	⇓*e*P	**Pn**	**11 51 16.3**	**+0.4**
ARLS				⇓*e*S	**Sn**	**11 51 54.6**	**-0.3**
SALK	**Salom-Alik**	**3.36**	**278**	⇓*i*P	**Pn**	**11 51 17.4**	**-0.3**
SALK				⇓*i*S	**Sn**	**11 51 56.3**	**-1.7**
AAK	**Ala-Archa**	**3.51**	**309**	⇑Pg	**Pb**	**11 51 27.9**	**+0.9**
	6.9nm,0.8s						
AAK				⇓Lg	Lg	11 52 12.8	
	25nm,1.0s						
KRBS	**Karabastau**	**3.71**	**330**	Pg	**Pb**	**11 51 31.4**	**+1.0**
	7.8nm,0.3s						
KRBS				Lg	Lg	11 52 20.9	
	4.6nm,0.6s						
ARXS	**Arharly**	**3.72**	**356**	*e*P	**Pg**	**11 51 32.8**	**-2.8**
ARXS				*e*S	**Sg**	**11 52 22.2**	**-1.6**
KK31	**Karatay Array**	**6.31**	**297**	⇓Pg	**Pb**	**11 52 19.1**	**+4.3**
	0.4nm,0.3s						
KK31				⇓Lg	Lg	11 53 40.2	
	1.4nm,0.5s,baz=104,slow=30,SNR=5.0						
MK31	**Makanchi Array**	**6.95**	**24**	⇑Pn	**Pn**	**11 52 08.0**	**+1.2**
	0.5nm,0.6s,baz=210,slow=13,SNR=5.7						
MK31				⇓Sn	**Sn**	**11 53 27.3**	**+1.2**
	3.0nm,1.1s,baz=198,slow=23,SNR=4.2						
MK31				⇑Lg	Lg	11 53 59.8	
	1.3nm,0.6s,baz=211,slow=28						

*PDG **28** 11:56:30.8±0.3, 41°.54N×19°.56E, h9km±1km, MD2.9/4, ML2.8/12, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0*
*BEO **28** 11:56:31.9±0.7, 41°.56N×19°.49E, h8km±4km, ML2.8/12*
*TIR **28** 11:56:31.2, 41°.61N×19°.53E, h17km±3km, Ml2.9/6*

ISC 28 11:56:30.7±1.1, 41°.56N±0°.03×19°.46E±0°.03, h7km±9km, n43, σ1°08/75, 8C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.37**	**125**	Pg	**Pb**	**11 56 38.8**	**-0.8**
TIR				Sg	**Sg**	**11 56 43.6**	**+0.8**
TIR				AML	AML	11 56 45.4	
	2.3nm,0.3s						
ULC	**Ulcinj**	**0.43**	**338**	⇑*i*Pg	**Pg**	**11 56 39.2**	**+0.1**
ULC				*e*Sg	**Sg**	**11 56 46.2**	**+1.3**
SDA	**Shkodra**	**0.49**	**3**	Pg	**Pg**	**11 56 39.9**	**-0.4**
SDA				Sg	**Sg**	**11 56 47.2**	**+0.6**
DRME	**Dracevica, Mon**	**0.66**	**342**	*e*Pg	**Pg**	**11 56 43.2**	**-0.2**
DRME				*e*Sg	**Sb**	**11 56 53.4**	**-0.5**
DRME	**Dracevica, Mon**	**0.66**	**342**	⇑*i*Pg	**Pg**	**11 56 42.9**	**-0.5**
DRME				*e*Sg	**Sg**	**11 56 53.2**	**+1.2**
PHP	**Peshkopia**	**0.75**	**80**	Pg	**Pg**	**11 56 44.7**	**-0.3**
PHP				Sn	**Sg**	**11 56 55.0**	**+0.2**
PHP				AML	AML	11 57 01.2	
	3.7nm,0.7s						
BUM	**Brajici-Budva**	**0.85**	**331**	⇓*i*Pg	**Pg**	**11 56 46.6**	**-0.5**
BUM				*e*Sg	**Sn**	**11 57 01.2**	**-0.7**
PDG	**Podgorica**	**0.88**	**350**	Pg	**Pg**	**11 56 47.3**	**-0.4**
PDG				Sg	**Sg**	**11 56 59.8**	**+0.6**
PDG	**Podgorica**	**0.88**	**350**	⇓P	**Pg**	**11 56 48.0**	**+0.4**
PDG				⇓S	**Sb**	**11 57 00.0**	**-0.3**
PDG	**Podgorica**	**0.88**	**350**	*e*Pg	**Pg**	**11 56 47.3**	**-0.4**
PDG				*e*Sg	**Sb**	**11 57 00.4**	**+0.1**
PDG	**Podgorica**	**0.88**	**350**	⇓*i*Pg	**Pg**	**11 56 47.0**	**-0.7**
PDG				*e*Sg	**Sb**	**11 57 00.4**	**+0.1**
CEME	**Cevo**	**1.07**	**338**	⇓*i*Pg	**Pg**	**11 56 50.2**	**-1.0**
CEME				*e*Sg	**Sn**	**11 57 07.3**	**+0.1**
PVY	**Plav**	**1.10**	**20**	⇓*i*Pg	**Pg**	**11 56 50.1**	**-1.7**
PVY				*e*Sg	**Sg**	**11 57 06.1**	**0.0**
HCY	**Herceg Novi**	**1.14**	**321**	*e*Pg	**Pn**	**11 56 52.8**	**-0.3**
HCY				*e*Sg	**Sn**	**11 57 10.9**	**+1.9**
NKME	**Niksic**	**1.26**	**343**	⇓*i*Pg	**Pn**	**11 56 54.0**	**-0.8**
NKME				*e*Sg	**Sn**	**11 57 13.6**	**+1.5**
KOME	**Kolasin**	**1.29**	**2**	*e*Pg	**Pn**	**11 56 55.0**	**-0.2**
KOME				*e*Sg	**Sn**	**11 57 14.6**	**+1.8**
KOME	**Kolasin**	**1.29**	**2**	⇑*i*Pg	**Pn**	**11 56 54.3**	**-0.9**
KOME				*e*Sg	**Sn**	**11 57 14.1**	**+1.3**
IVA	**Berane**	**1.35**	**14**	⇓*i*Pg	**Pn**	**11 56 54.8**	**-1.2**
IVA				*e*Sg	**Sg**	**11 57 15.3**	**+1.2**
KBN	**Korca**	**1.37**	**133**	Pn	**Pn**	**11 56 54.5**	**-1.8**
KBN				Sn	**Sg**	**11 57 19.1**	**+4.3**
KBN				AML	AML	11 57 20.3	
	0.7nm,0.6s						
BRY	**Bratogost**	**1.50**	**333**	⇓*i*Pg	**Pb**	**11 56 58.6**	**-0.4**
BRY				*e*Sg	**Sg**	**11 57 21.7**	**+2.6**
NEST	**Nestorio**	**1.66**	**133**	Pn	**Pb**	**11 57 01.6**	**0.0**
NEST				Sn	**Sg**	**11 57 24.7**	**+0.6**
NEST				AML	AML	11 57 28.6	
	0.4nm,0.5s						
SJES	**Sjenica**	**1.74**	**12**	*e*Pg	**Pb**	**11 57 03.0**	**-0.1**
SJES				*e*Sg	**Sg**	**11 57 26.3**	**-0.4**
PLE	**Pljevlja**	**1.77**	**358**	*e*Pn	**Pn**	**11 57 02.3**	**+0.5**
PLE				*i* Sn	**Sg**	**11 57 27.3**	**-0.3**
NOCI	**Noci**	**1.96**	**248**	AML	AML	11 57 42.2	
	0.8nm,0.5s						
SELS	**Selova**	**2.06**	**36**	*e*Pn	**Pn**	**11 57 06.3**	**+0.5**
SELS				*e*Sn	**Sn**	**11 57 31.3**	**-0.5**
IVAS	**Ivanjica**	**2.08**	**14**	*e*Pn	**Pn**	**11 57 07.2**	**+1.2**
IVAS				*e*Sn	**Sn**	**11 57 32.6**	**+0.4**
IGT	**Igoumenitsa**	**2.13**	**162**	Pn	**Pb**	**11 57 08.1**	**-1.5**
BARS	**Barje**	**2.15**	**54**	*e*Pn	**Pn**	**11 57 07.7**	**+0.7**
BARS				*e*Sn	**Sn**	**11 57 35.4**	**+1.4**
GOCS	**Kraljevo Serbi**	**2.26**	**27**	*e*Pn	**Pn**	**11 57 09.4**	**+0.9**
GOCS				*e*Sn	**Sn**	**11 57 37.5**	**+0.8**
MATE	**Matera**	**2.27**	**247**	⇓P	**Pb**	**11 57 10.8**	**-1.1**
BBLS	**Lazi&#263i**	**2.31**	**359**	*e*Pn	**Pn**	**11 57 09.7**	**+0.5**
BOSS	**Bosilegrad**	**2.44**	**66**	*e*Pn	**Pn**	**11 57 11.6**	**+0.7**
BOSS				*e*Sn	**Sn**	**11 57 41.3**	**+0.3**
GRUS	**Gruza**	**2.50**	**21**	*e*Pn	**Pn**	**11 57 12.2**	**+0.4**
GRUS				*e*Sn	**Sn**	**11 57 44.0**	**+1.4**
BOVS	**Bovan**	**2.66**	**38**	⇓P	**Pn**	**11 57 13.9**	**0.0**
BOVS				⇓S	**Sn**	**11 57 45.5**	**-0.9**
BOVS	**Bovan**	**2.66**	**38**	*e*Pn	**Pn**	**11 57 14.6**	**+0.7**
BOVS				*e*Sn	**Sn**	**11 57 46.1**	**-0.2**
TRUS	**Trudelj**	**2.75**	**14**	*e*Pn	**Pb**	**11 57 17.9**	**-2.3**
ZAPS	**Zavoj**	**2.91**	**53**	*e*Pn	**Pn**	**11 57 18.9**	**+1.5**
ZAPS				*e*Sn	**Sn**	**11 57 53.2**	**+0.6**
TEKS	**Tekeris**	**2.99**	**1**	*e*Pn	**Pn**	**11 57 20.3**	**+1.8**
ZAGS	**Zajecar**	**3.04**	**41**	*e*Pn	**Pn**	**11 57 20.4**	**+1.2**
ZAGS				*e*Sn	**Sn**	**11 57 55.9**	**+0.1**
MDVR	**Moldovita**	**3.62**	**26**	⇑P	**Pn**	**11 57 27.3**	**+0.2**
HERR	**Herculane**	**3.96**	**32**	⇑P	**Pn**	**11 57 31.3**	**-0.5**
BZS	**Buzias**	**4.35**	**20**	⇑P	**Pn**	**11 57 37.3**	**+0.1**
GZR	**Gura Zlata**	**4.53**	**31**	⇑P	**Pn**	**11 57 39.8**	**+0.1**

*IDC **28** 12:23:48.9±1.0, 15°.65S×173°.46W, h0km, mb3.7/6, mbtmp3.7/6, MS3.5/5, Error ellipse: s-maj=50.0km s-min=24.7km az=141.0*

ISC 28 12:23:54.9±1.0, 15°.65S±0°.3×173°.5W±0°.2, h42km, n16, σ0°84/7, mb3.8/6, MS3.5/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**20.02**	**248**	LR	LR	12 35 00.3	
	comp=Z,117nm,20.1s,baz=62,slow=34						
PPT	**Papeete**	**23.02**	**98**	LR	LR	12 35 09.4	
	comp=Z,47nm,19.4s,baz=298,slow=30						
H11S2	**WAKE ISLAND Hy 39.09**	**329**		T	T	13 13 26.6	
	baz=149,slow=76,SNR=4.3						
H11S3	**WAKE ISLAND Hy 39.10**	**329**		T	T	13 13 32.7	
	baz=149,slow=76,SNR=4.0						
H11S1	**WAKE ISLAND Hy 39.10**	**329**		T	T	13 13 31.6	
	baz=149,slow=76,SNR=3.8						
H11N3	**WAKE ISLAND Hy 40.04**	**331**		T	T	13 14 36.7	
	baz=150,slow=77,SNR=3.0						
H11N1	**WAKE ISLAND Hy 40.05**	**331**		T	T	13 14 43.2	
	baz=150,slow=77,SNR=3.2						
H11N2	**WAKE ISLAND Hy 40.06**	**331**		T	T	13 14 38.4	
	baz=150,slow=77,SNR=3.5						
WRA	**Warramunga Arr**	**49.69**	**257**	P	**P**	**12 32 42.4**	**-0.7**
	0.3nm,0.5s,baz=95,slow=8.2,SNR=3.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**49.94**	**252**	P	**P**	**12 32 44.8**	**-0.2**
	1.3nm,0.5s,baz=85,slow=8.3,SNR=16						
ASAR				LR	LR	12 52 57.5	
	comp=Z,51nm,19.3s,baz=113,slow=35						
	1.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**58.06**	**258**	LR	LR	12 57 16.5	
	comp=Z,57nm,18.7s,baz=66,slow=35						
VNDA	**Vanda**	**63.16**	**186**	P	**P**	**12 34 18.5**	**+0.5**
	1.4nm,1.0s,baz=39,slow=4.7,SNR=1.5						
	1.4nm,1.0s						
NVAR	**Mina Array Bea**	**74.56**	**42**	P	**P**	**12 35 29.3**	**-0.5**
	0.8nm,0.9s,baz=255,slow=6.3,SNR=4.5						
	0.8nm,0.9s						
TXAR	**Lajitas Array**	**80.82**	**56**	P	**P**	**12 36 04.1**	**-0.7**
	0.2nm,0.6s,baz=246,slow=4.5,SNR=1.8						
TXAR				LR	LR	13 05 27.3	
	comp=Z,28nm,20.2s,baz=208,slow=31						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**82.67**	**11**	P	**P**	**12 36 14.7**	**+1.1**
	1.4nm,1.1s,baz=209,slow=5.2,SNR=7.8						
	1.4nm,1.1s						
BRTR	**Keskin Array B**	**146.25**	**321**	PKPbc	**PKPab**	**12 43 32.5**	**+0.3**
	1.1nm,0.8s,baz=51,slow=2.9,SNR=5.8						

*BEO **28** 12:27:14.5±0.5, 43°.17N×17°.90E, h12km±4km, ML2.2/7*
*RHSSO **28** 12:27:14.9±0.5, 43°.17N×18°.01E, h6km, ML2.4/3*
*PDG **28** 12:27:15.7±0.2, 43°.17N×18°.00E, h14km±2km, ML2.5/10, Error ellipse: s-maj=1.2km s-min=1.6km az=0.0*

ISC 28 12:27:14.7±1.0, 43°.17N±0°.02×17°.98E±0°.02, h10km±9km, n41, σ1°03/73, 9C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.44**	**90**	*e*Pg	**Pg**	**12 27 22.7**	**-0.6**
KLINJ				*e*Sg	**Sg**	**12 27 29.4**	**+0.3**
BRY	**Bratogost**	**0.49**	**123**	⇑*i*Pg	**Pg**	**12 27 23.9**	**-0.3**
BRY				*e*Sg	**Sb**	**12 27 31.6**	**-1.1**
DBRK	**Dubrovnik**	**0.52**	**167**	*i* Pg	**Pg**	**12 27 25.1**	**+0.4**
DBRK				Sg	**Sg**	**12 27 31.9**	**+0.5**
TREB	**Trebinje**	**0.53**	**149**	⇑*i*Pg	**Pg**	**12 27 24.4**	**-0.5**
TREB				*e*Sg	**Sg**	**12 27 32.3**	**+0.5**
TREB	**Trebinje**	**0.53**	**149**	*e*Pg	**Pg**	**12 27 24.5**	**-0.5**
TREB				*e*Sg	**Sb**	**12 27 33.9**	**+0.2**
RICI	**Ricice**	**0.70**	**298**	*i* Pg	**Pg**	**12 27 27.4**	**-0.8**
RICI				Sg	**Sg**	**12 27 37.6**	**+0.2**
MAKA	**Makarska**	**0.71**	**280**	*i* Pg	**Pg**	**12 27 27.8**	**-0.7**
MAKA				Sg	**Sg**	**12 27 38.1**	**+0.3**
HCY	**Herceg Novi**	**0.81**	**152**	⇑*i*Pg	**Pg**	**12 27 30.0**	**-0.4**
HCY				*e*Sg	**Sn**	**12 27 43.1**	**-1.2**
NKME	**Niksic**	**0.82**	**119**	⇓*i*Pg	**Pg**	**12 27 29.9**	**-0.5**
NKME				*e*Sg	**Sn**	**12 27 43.0**	**-1.5**
LSTV	**Lastovo**	**0.90**	**244**	*e*Pg	**Pg**	**12 27 31.0**	**-0.9**
LSTV				Sg	**Sb**	**12 27 44.4**	**+0.1**
CEME	**Cevo**	**0.93**	**132**	⇓*i*Pg	**Pg**	**12 27 31.9**	**-0.6**
CEME				*e*Sg	**Sn**	**12 27 46.5**	**-0.7**
PLE	**Pljevlja**	**1.04**	**81**	⇓*i*Pg	**Pb**	**12 27 34.5**	**-0.3**
PLE				*e*Sg	**Sn**	**12 27 49.3**	**-0.8**
BUM	**Brajici-Budva**	**1.10**	**142**	⇑*i*Pg	**Pb**	**12 27 35.4**	**-0.4**
BUM				*e*Sg	**Sn**	**12 27 52.7**	**+1.3**
RUDO	**Rudo**	**1.10**	**66**	⇑*i*Pg	**Pb**	**12 27 33.7**	**-2.2**
RUDO				*e*Sg	**Sb**	**12 27 49.7**	**-0.7**
RUDO	**Rudo**	**1.10**	**66**	*e*Pg	**Pb**	**12 27 33.7**	**-2.2**
RUDO				*e*Sg	**Sg**	**12 27 50.4**	**+0.1**
HVAR	**Hvar**	**1.12**	**271**	*e*Pg	**Pb**	**12 27 35.1**	**-1.1**
HVAR				Sg	**Sn**	**12 27 51.9**	**-0.1**
KOME	**Kolasin**	**1.17**	**105**	*e*Pg	**Pg**	**12 27 37.7**	**+0.6**
KOME	**Kolasin**	**1.17**	**105**	⇑*i*Pg	**Pb**	**12 27 36.3**	**-0.7**
KOME				*e*Sg	**Sn**	**12 27 53.2**	**0.0**
PDG	**Podgorica**	**1.19**	**128**	*e*Pg	**Pn**	**12 27 35.6**	**-1.8**
PDG				*e*Sg	**Sn**	**12 27 55.6**	**+1.9**
PDG	**Podgorica**	**1.19**	**128**	⇑*i*Pg	**Pn**	**12 27 37.0**	**-0.4**
PDG				*e*Sg	**Sn**	**12 27 55.5**	**+1.9**
BBLS	**Lazi&#263i**	**1.25**	**56**	*e*Pg	**Pn**	**12 27 37.3**	**-0.9**
BBLS				*e*Sg	**Sg**	**12 27 56.8**	**+2.0**
DRME	**Dracevica, Mon**	**1.32**	**138**	*e*Pg	**Pb**	**12 27 39.5**	**-0.1**
DRME	**Dracevica, Mon**	**1.32**	**138**	⇑*i*Pg	**Pb**	**12 27 39.4**	**-0.1**
DRME				*e*Sg	**Sg**	**12 28 00.4**	**+3.2**
KUJV	**Kijevo**	**1.42**	**307**	*e*Pg	**Pb**	**12 27 41.6**	**+0.4**
KUJV				Sg	**Sg**	**12 28 02.0**	**+1.7**
BEY	**Berane**	**1.43**	**101**	*e*Pg	**Pn**	**12 27 40.7**	**0.0**
IVA	**Berane**	**1.43**	**101**	⇑*i*Pg	**Pn**	**12 27 40.8**	**0.0**
IVA				*e*Sg	**Sg**	**12 28 02.6**	**+1.9**
SJES	**Sjenica**	**1.46**	**86**	*e*Pg	**Pn**	**12 27 41.4**	**+0.2**
SJES				*e*Sg	**Sg**	**12 28 03.0**	**+1.4**
IVAS	**Ivanjica**	**1.63**	**75**	*e*Pn	**Pn**	**12 27 42.8**	**-0.7**
BLY	**Banja Luka**	**1.68**	**340**	*e*Pn	**Pn**	**12 27 44.7**	**+0.6**
BLY				*e*Sn	**Sb**	**12 28 07.5**	**+0.6**
BLY	**Banja Luka**	**1.68**	**340**	*e*Pg	**Pb**	**12 27 45.8**	**+0.1**
ZIRJ	**Zirje**	**1.77**	**287**	*i* Pn	**Pn**	**12 27 46.3**	**+0.9**
ZIRJ				Sn	**Sb**	**12 28 10.3**	**+0.8**
TEKS	**Tekeris**	**1.77**	**38**	*e*Pg	**Pb**	**12 27 47.4**	**+0.1**
TEKS				*e*Sg	**Sg**	**12 28 12.9**	**+1.2**
MORI	**Morici**	**1.80**	**294**	*e*Pn	**Pb**	**12 27 47.0**	**-0.7**
MORI				Sn	**Sb**	**12 28 10.8**	**+0.6**
TRUS	**Trudelj**	**2.05**	**58**	*e*Pn	**Pb**	**12 27 51.3**	**-0.7**
UDBI	**Udbina**	**2.10**	**311**	*e*Pn	**Pb**	**12 27 52.5**	**-0.4**
UDBI				Sn	**Sb**	**12 28 20.7**	**+1.5**
GOCS	**Kraljevo Serbi**	**2.14**	**78**	*e*Pn	**Pn**	**12 27 50.5**	**-0.1**
DUGI	**Dugi Otok**	**2.28**	**292**	*e*Pn	**Pb**	**12 27 54.7**	**-1.2**
DUGI				Sn	**Sb**	**12 28 24.0**	**-0.1**
SELS	**Selova**	**2.29**	**88**	*e*Pn	**Pn**	**12 27 52.8**	**+0.2**
VIRC	**Vir**	**2.40**	**299**	*e*Pn	**Pb**	**12 27 56.4**	**-1.6**
VIRC				Sn	**Sb**	**12 28 26.9**	**-0.7**
PLIT	**Plitvice**	**2.41**	**316**	*e*Pn	**Pb**	**12 27 56.7**	**-1.5**
PLIT				Sn	**Sb**	**12 28 28.0**	**0.0**
MORH	**Mrgy, Hungar**	**3.08**	**9**	*e*Sn	**Sn**	**12 28 40.9**	**+0.7**

*IDC **28** 12:30:47.4±1.6, 35°.47N×139°.41E, h122km±12km, mb3.4/7, mbtmp3.8/7, Error ellipse: s-maj=27.4km s-min=18.2km az=79.0*
*NIED **28** 12:30:48.9, 35°.63N×139°.44E, h126km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr=1.51; Mθθ=1.68; Mϕϕ=3.19; Mrθ=3.45; Mrϕ=0.20; Mθϕ=2.84; Fault plane solution: Mo5.22000×10^14 NP1: ϕs=215.00000°, δ30.00000°, λ-18.00000°. NP2: ϕs=321.00000°, δ81.00000°, λ-119.00000°.*
*NEIC **28** 12:30:48.5±1.9, 35°.60N±0°.06×139°.5E±0°.1, h125km±8km, mb4.5/12 Error ellipse: s-maj=13.4km s-min=8.0km az=95.0*
*JMA **28** 12:30:48.9±0.2, 35°.6N±0°.6×139°.4E±0°.8, h126km±1km, MV3.7/40, TOKYO PREF*
*JMA Felt I J1 at TOKY

WRA	**Warramunga Arr**	**55.47**	**186**	IAmb	IAmb	12 40 09.6			
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	**59.20**	**186**	P	**P**	**12 40 34.2**	**-1.6**		
	comp=Z,0.6nm,0.5s,baz=8.3,slow=7.8,SNR=6.8								
	comp=Z,0.6nm,0.5s								
NVAR	**Mina Array Bea**	**77.13**	**52**	P	**P**	**12 42 28.7**	**+0.8**		
	comp=Z,0.4nm,0.6s,baz=314,slow=6.4,SNR=4.0								
	comp=Z,0.4nm,0.6s								

NEIC 28 12:52:41.8±1.1, 32°03'N±0°02'×103°78'W±0°02, h10km±8km, mb_Lg2.6/39, ML2.7/14, Error ellipse: s-maj=2.6km s-min=2.2km az=84.0, New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLNB	**Carlsbad**	**0.25**	**340**		Pg	12 52 46.7	-0.3
CLN7	**Carlsbad 7**	**0.39**	**356**		Pg	12 52 49.4	-0.1
GDL2	**Guadalupe Moun**	**0.53**	**289**		Pg	12 52 52.0	-0.1
PECS	**Pecos**	**0.66**	**187**		Pg	12 52 54.9	+0.3
PECS				Sg	Sg	12 53 01.1	-2.2
PECS				IAML		12 53 16.4	
	298nm,0.6s						
PECS				IAML		12 53 17.9	
	258nm,0.6s						
CPRX	**Cap Rock**	**1.00**	**356**		Pg	12 53 00.6	-0.6
ODSA	**Odessa**	**1.05**	**85**		Pg	12 53 01.7	-0.3
ODSA				Sg	Sg	12 53 14.8	-0.8
MNHN	**Monahans**	**1.10**	**128**		Pg	12 53 02.0	-1.0
MNTX	**Cornudas Mount**	**1.40**	**257**		Pb	12 53 08.1	0.0
VHRN	**Van Horn**	**1.61**	**220**		Pb	12 53 12.2	+0.4
ALPN	**Alpine**	**1.65**	**176**		Pb	12 53 12.3	-0.2
MSTX	**Muleshoe**	**2.11**	**23**		Pb	12 53 18.9	-1.4
POST	**Post**	**2.19**	**61**		Pn	12 53 19.4	+1.0
POST				IAmb_Lg		12 53 54.9	
	comp=Z,20nm,0.8s						
SGCY	**Sterling City**	**2.26**	**92**		Pn	12 53 20.9	+1.6
EPT	**El Paso**	**2.33**	**264**		Pn	12 53 22.0	+1.6
EPT				IAmb_Lg		12 54 00.2	
	comp=Z,20nm,1.0s						
SAND	**Sanderson**	**2.51**	**145**		Pb	12 53 25.1	-1.9
OZNA	**Ozona**	**2.52**	**115**		Pn	12 53 24.7	+1.8
OZNA				IAmb_Lg		12 54 09.0	
	comp=Z,30nm,1.2s						
TX31	**Lajitas Ar. Si**	**2.69**	**178**		Pn	12 53 27.5	+2.2
TXAR	**Lajitas Array**	**2.69**	**178**		Pn	12 53 27.5	+2.3
DKNS	**Dickens**	**2.91**	**55**		Pn	12 53 29.6	+1.3
Y22A	**Socorro**	**3.29**	**306**		Pn	12 53 35.0	+1.4
Y22A				IAmb_Lg		12 54 33.1	
	comp=Z,16nm,0.8s						
APMT	**Aspermont**	**3.34**	**66**	IAmb_Lg		12 54 30.9	
	comp=Z,16nm,1.0s						
AMTX	**Amarillo**	**3.35**	**31**		Pn	12 53 34.5	+0.2
AMTX				IAmb_Lg		12 54 32.4	
	comp=Z,13nm,1.0s						
LENM	**Lemitar**	**3.43**	**309**	Pn	Pn	12 53 35.9	+0.4
121A	**Cookes Peak, D**	**3.43**	**280**		Pn	12 53 37.2	+1.6
121A				IAmb_Lg		12 54 35.3	
	comp=Z,19nm,0.7s						
ABTX	**Abilene, Hawle**	**3.55**	**79**		Pn	12 53 37.0	-0.2
ABQ	**Albuquerque**	**3.67**	**323**	IAmb_Lg		12 54 44.1	
	comp=Z,12nm,0.9s						
ANMO	**Albuquerque**	**3.67**	**323**	IAmb_Lg		12 54 40.6	
	comp=Z,12nm,0.7s						
ANMO	**Albuquerque**	**3.67**	**323**	IAmb_Lg		12 54 41.7	
	comp=Z,13nm,0.7s						
ANMO	**Albuquerque**	**3.67**	**323**	IAmb_Lg		12 54 44.7	
	comp=Z,15nm,1.0s						
ANMO				IAmb_Lg		12 54 44.8	
	comp=Z,16nm,1.0s						
TASM	**ASL Pad, Albuq**	**3.67**	**323**	IAmb_Lg		12 54 41.7	
	comp=Z,12nm,0.7s						
TASM	**ASL Pad, Albuq**	**3.67**	**323**	IAmb_Lg		12 54 41.7	
	comp=Z,11nm,0.8s						
TASM	**ASL Pad, Albuq**	**3.67**	**323**	IAmb_Lg		12 54 44.3	
	comp=Z,9.9nm,0.7s						
BRDY	**Brady**	**4.14**	**99**		Pn	12 53 46.6	+1.4
BRDY				IAmb_Lg		12 54 55.9	
	comp=Z,12nm,0.8s						
RTBA	**Rita Blanca**	**4.48**	**11**	IAmb_Lg		12 55 11.6	
	comp=Z,14nm,0.7s						
PLPT	**Palo Pinto**	**4.69**	**79**	IAmb_Lg		12 55 17.6	
	comp=Z,11nm,1.0s						

*ISK **28** 13:04:56.3, 39°.56N×26°.04E, h7km, ML2.6/27*
*AFAD **28** 13:04:56.9, 39°.55N×26°.05E, h6km±2km, ML2.3*
ISC 28 13:04:56.6±1.0, 39°.55N±0°.02×26°.04E±0°.05, h11km±6km, n38, σ0°.44/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.09**	**120**	P	**Pg**	**13 04 59.1**	**-0.1**
KOCA				*i* IAML		13 05 00.0	
	comp=N,2μm,0.6s						
KOCA				S	**Sg**	**13 05 00.7**	**-0.3**
KOCA				*i* IAML		13 05 01.0	
	comp=E,2μm,0.4s						
GPNR	**Gulpinar-Canak**	**0.11**	**142**	Pg	**Pg**	**13 04 59.4**	**-0.1**
GPNR				S	**Sg**	**13 05 01.4**	**-0.2**
BOZC	**Bozcaada**	**0.30**	**2**	P	**Pg**	**13 05 02.8**	**+0.1**
BOZC				*i* IAML		13 05 07.0	
	comp=N,1μm,0.3s						
BOZC				*i* IAML		13 05 07.0	
	comp=E,814nm,0.4s						
BOZC				S	**Sg**	**13 05 07.0**	**+0.3**
BOZC	**Bozcaada**	**0.30**	**2**	Pg	**Pg**	**13 05 02.7**	**+0.1**
BOZC				Sg	**Sg**	**13 05 07.2**	**+0.5**
EZNE	**Ezine-Canakkal**	**0.33**	**50**	Pg	**Pg**	**13 05 02.9**	**-0.3**
EZNE				Sg	**Sg**	**13 05 07.8**	**+0.2**
EZN	**Ezine**	**0.35**	**38**	Pg	**Pg**	**13 05 03.6**	**-0.1**
EZN				Sg	**Sg**	**13 05 08.8**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.44**	**63**	P	**Pg**	**13 05 04.8**	**-0.4**
BAYC				S	**Sg**	**13 05 10.9**	**-0.1**
BAYC				*i* IAML		13 05 11.0	
	comp=N,259nm,0.5s						
BAYC				*i* IAML		13 05 11.0	
	comp=E,214nm,0.2s						
ECEA	**Canakkale, Ece**	**0.51**	**11**	P	**Pg**	**13 05 06.8**	**+0.2**
ECEA				S	**Sb**	**13 05 14.5**	**-0.5**
ECEA				*i* IAML		13 05 17.0	
	comp=N,278nm,0.4s						
ECEA				*i* IAML		13 05 17.0	
	comp=E,352nm,0.5s						
AYVA	**Ayvalik**	**0.56**	**115**	P	**Pn**	**13 05 10.0**	**-0.4**
AYVA				S	**Sn**	**13 05 19.4**	**-0.3**
AYVA				*i* IAML		13 05 23.0	
	comp=E,111nm,0.3s						
AYVA				*i* IAML		13 05 24.0	
	comp=N,215nm,0.4s						
CNKL	**anakkale-Mer**	**0.58**	**27**	P	**Pg**	**13 05 07.6**	**-0.4**
CNKL				S	**Sb**	**13 05 16.6**	**-0.6**
CNKL				*i* IAML		13 05 20.0	
	comp=N,113nm,0.3s						
COMU	**Canakkale**	**0.65**	**31**	Pg	**Pg**	**13 05 08.8**	**-0.4**
GADA	**Gvkgeada**	**0.65**	**350**	Pg	**Pg**	**13 05 09.1**	**-0.2**
YAYO	**Edremit-Balk**	**0.80**	**85**	Pg	**Pb**	**13 05 13.1**	**+0.6**
BUHA	**Balikesir, Bur**	**0.80**	**93**	P	**Pb**	**13 05 12.9**	**+0.3**
BUHA				S	**Sb**	**13 05 23.9**	**+0.4**
BUHA				*i* IAML		13 05 26.0	
	comp=N,128nm,0.6s						
BUHA				*i* IAML		13 05 26.0	
	comp=E,198nm,0.3s						
DKL	**Dikili**	**0.82**	**125**	Pg	**Pb**	**13 05 13.1**	**+0.2**
CANM	**Can-anakkale**	**0.91**	**59**	Pg	**Pb**	**13 05 14.3**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.91**	**21**	Pg	**Pg**	**13 05 13.9**	**-0.4**
LPK	**Lapseki**	**0.99**	**34**	Pg	**Pg**	**13 05 15.3**	**-0.5**
YENI	**Yenice-Canakka**	**1.00**	**67**	Pg	**Pb**	**13 05 16.0**	**0.0**
BIGA	**Biga-Canakkale**	**1.12**	**49**	Pn	**Pg**	**13 05 18.0**	**-0.3**
CHOS	**Chios island**	**1.16**	**180**	Pn	**Pg**	**13 05 18.9**	**0.0**
ERIK	**Erikli-Kesan**	**1.18**	**18**	Pn	**Pg**	**13 05 18.3**	**-1.0**
ENEZ	**Enez**	**1.19**	**4**	Pn	**Pg**	**13 05 19.3**	**-0.3**
SOMA	**Soma-Manisa**	**1.22**	**108**	Pn	**Pn**	**13 05 20.4**	**+0.8**
URLA	**Izmir**	**1.26**	**160**	Pn	**Pn**	**13 05 19.3**	**-0.9**
KRBG	**Karabiga-Canak**	**1.28**	**48**	Pn	**Pn**	**13 05 20.5**	**0.0**
GONE	**Gonen-Balikesi**	**1.36**	**68**	Pn	**Pb**	**13 05 22.3**	**+0.2**
BLCB	**Balcova**	**1.40**	**146**	Pn	**Pb**	**13 05 23.0**	**+0.3**
BALB	**Balikesir**	**1.42**	**86**	Pn	**Pb**	**13 05 23.2**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.44**	**37**	Pn	**Pn**	**13 05 23.1**	**+0.4**
MRMT	**Marmara Adasi**	**1.59**	**48**	Pn	**Pn**	**13 05 25.1**	**+0.3**
EDC	**Edincik**	**1.61**	**60**	Pn	**Pn**	**13 05 25.4**	**+0.4**
SUSR	**Susurluk-Balik**	**1.63**	**75**	Pn	**Pn**	**13 05 26.1**	**+0.8**
RDO	**Rodhopi**	**1.65**	**347**	Pn	**Pn**	**13 05 25.9**	**+0.4**
UKOP	**Uzunkopru-Edir**	**1.65**	**16**	Pn	**Pn**	**13 05 25.5**	**0.0**
GORD	**Gordes-Manisa**	**1.78**	**110**	Pn	**Pn**	**13 05 27.9**	**+0.6**
ODEM	**Odemis-Izmir**	**2.03**	**128**	Pn	**Pn**	**13 05 31.9**	**+1.1**
AYDB	**Zeytinkoy-Aydi**	**2.15**	**137**	Pn	**Pn**	**13 05 32.6**	**0.0**

*IDC **28** 13:08:12.2±1.6, 3°.13N×128°.86E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=79.3km s-min=18.2km az=69.0*
ISC 28 13:08:18.3±2.1, 3°.1N±0°.2×128°.9E±0°.5, h44km, n6, σ0°.48/6, mb3.9/6, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.28**	**188**	P	**P**	**13 13 01.4**	**+0.3**
	1.8nm,0.7s,baz=20,slow=12,SNR=1.9						
	1.8nm,0.7s						
WRA	**Warramunga Arr**	**23.50**	**167**	P	**P**	**13 13 24.8**	**+0.4**
	1.3nm,0.3s,baz=346,slow=10,SNR=13						
	1.3nm,0.3s						
ASAR	**Alice Springs**	**27.03**	**170**	P	**P**	**13 13 56.0**	**-0.5**
	0.5nm,0.5s,baz=355,slow=7.9,SNR=21						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**33.04**	**300**	P	**P**	**13 14 49.7**	**-0.1**
	0.6nm,0.3s,baz=110,slow=9.7,SNR=2.9						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**59.31**	**325**	P	**P**	**13 18 16.1**	**+0.4**
	0.5nm,0.4s,baz=113,slow=8.3,SNR=8.4						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**63.44**	**327**	P	**P**	**13 18 43.3**	**-0.2**
	0.7nm,0.6s,baz=129,slow=6.0,SNR=11						
	0.7nm,0.6s						

*CATAC **28** 13:14:27.7±0.5, 12°.N×3°.8W±°, h32km±5km, M2.9/13, MLv2.9/13, Error ellipse: s-maj=7.1km s-min=2.7km az=27.8, confirmed*
*SNET **28** 13:14:28.9±0.8, 12°.56N×88°.17W, h33km±21km, ML2.8*
ISC 28 13:14:27.5±1.7, 12°.46N±0°.07×88°.19W±0°.04, h30km±13km, n35, σ0°.47/46, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.81**	**50**	P	**Pb**	**13 14 43.0**	**-0.1**
CSGN				S	**Sb**	**13 14 55.4**	**+1.7**
CNCH	**Conchagua**	**0.89**	**23**	*e*P	**Pn**	**13 14 44.0**	**-0.1**
CNCH				*e*S	**Sb**	**13 14 55.7**	**-0.3**
CNCH	**Conchagua**	**0.89**	**23**	P	**Pn**	**13 14 44.0**	**-0.1**
LCY	**Lacayo**	**0.96**	**354**	*e*P	**Pn**	**13 14 45.3**	**+0.2**
VSM	**San Miguel**	**0.97**	**355**	*e*P	**Pb**	**13 14 45.7**	**-0.2**
RANC	**El Ranchito**	**0.97**	**354**	*e*P	**Pn**	**13 14 45.5**	**+0.2**
RANC				*e*S	**Sb**	**13 14 58.3**	**-0.3**
BLLM	**Bellamira**	**0.98**	**357**	*e*P	**Pn**	**13 14 45.1**	**-0.2**
PACA	**Pacayal**	**1.01**	**353**	*e*P	**Pb**	**13 14 46.4**	**-0.2**
PACA				*e*S	**Sn**	**13 14 58.9**	**-0.3**
PACA	**Pacayal**	**1.01**	**353**	S	**Sb**	**13 14 59.4**	**-0.2**
PACA	**Pacayal**	**1.01**	**353**	P	**Pb**	**13 14 46.8**	**+0.2**
TECA	**Tecapa**	**1.07**	**344**	*e*P	**Pn**	**13 14 46.7**	**-0.1**
PKGN	**Cerro Pekin**	**1.21**	**80**	P	**Pn**	**13 14 48.6**	**+0.2**
PKGN				S	**Sb**	**13 15 04.2**	**-0.8**
TECO	**Alcaldia de Te**	**1.22**	**332**	S	**Sn**	**13 15 03.4**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.34**	**337**	*e*P	**Pn**	**13 14 50.5**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.34**	**337**	P	**Pn**	**13 14 50.9**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.34**	**337**	S	**Sn**	**13 15 07.5**	**+0.4**
POLN	**Al Sur del Vol**	**1.36**	**82**	P	**Pn**	**13 14 50.3**	**-0.2**
POLN				S	**Sn**	**13 15 07.6**	**0.0**
CNGA	**Al SSO del Vol**	**1.46**	**88**	P	**Pn**	**13 14 51.4**	**-0.5**
CNGA				S	**Sn**	**13 15 09.7**	**-0.3**
CNGN	**Cerro Negro**	**1.46**	**88**	P	**Pn**	**13 14 51.6**	**-0.3**
CNGN	**Cerro Negro**	**1.46**	**88**	S	**Sn**	**13 15 10.0**	**0.0**
LOMA	**Loma Larga**	**1.52**	**321**	S	**Sn**	**13 15 11.3**	**-0.3**
COPN	**Copaltepe**	**1.59**	**100**	P	**Pn**	**13 14 53.2**	**-0.4**
MOMN	**Momotombo**	**1.61**	**92**	P	**Pn**	**13 14 53.6**	**-0.4**
MOM3	**MOM3**	**1.64**	**88**	P	**Pn**	**13 14 54.2**	**-0.1**
MOM3				S	**Sn**	**13 15 15.5**	**+1.1**
PMON	**Piamonte**	**1.66**	**319**	P	**Pn**	**13 14 54.2**	**-0.5**
PMON	**Piamonte**	**1.66**	**319**	S	**Sn**	**13 15 15.3**	**+0.2**
MOM2	**El Cardon**	**1.67**	**91**	P	**Pn**	**13 14 55.3**	**+0.6**
MOM2				S	**Sn**	**13 15 15.1**	**0.0**
JAYA	**Jayaque - finc**	**1.71**	**314**	*e*P	**Pn**	**13 14 56.1**	**+0.7**
JAYA				*e*S	**Sn**	**13 15 16.6**	**+0.3**
JAYA				IAML		13 15 19.4	
	comp=Z,106nm,0.2s						
LIMN	**Finca el Limon**	**1.88**	**71**	P	**Pn**	**13 14 57.2**	**-0.5**
LIMN				S	**Sn**	**13 15 20.8**	**+0.3**
YUSH	**Yuscaran**	**1.98**	**41**	P	**Pn**	**13 14 59.2**	**0.0**
YUSH	**Yuscaran**	**1.98**	**41**	S	**Sn**	**13 15 22.9**	**-0.2**
NANN	**Nandasmo**	**2.09**	**104**	S	**Sn**	**13 15 26.1**	**+0.5**
NUBE	**Las Nubes**	**2.11**	**313**	*e*P	**Pn**	**13 15 00.7**	**-0.3**
NUBE	**Las Nubes**	**2.11**	**313**	S	**Sn**	**13 15 26.3**	**0.0**
NUBE	**Las Nubes**	**2.11**	**313**	P	**Pn**	**13 15 01.3**	**+0.3**

*DJA **28** 13:18:48.7±1.1, 9°.S±4°×111°.1E±°, h16km±9km, M4.2/22, mB5.2/2, mb4.3/4, MLv4.2/22, Mw(mB)4.5/2*
*IDC **28** 13:18:49.4±11.0, 8°.16S×112°.00E, h50km±99km, mb3.4/5, mbtmp3.7/6, ML3.3/1, MS2.5/2, Error ellipse: s-maj=160.0km s-min=23.2km az=53.0*
ISC 28 13:18:48.7±0.9, 8°.97S±0°.09×111°.40E±0°.05, h50km, n38, σ1§86/33, mb3.5/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.81**	**344**	P	**Pn**	**13 19 03.3**	**-0.5**
UGM	**Wanagama**	**1.37**	**320**	P	**Pn**	**13 19 12.6**	**+1.1**
UGM	**Wanagama**	**1.37**	**320**	S	**Sn**	**13 19 29.8**	**+1.3**
UGM	**Wanagama**	**1.37**	**320**	P	**Pn**	**13 19 12.2**	**+0.8**
UGM				S	**Sn**	**13 19 29.5**	**+1.0**
YOGI	**Yogyakarta**	**1.59**	**316**	P	**Pn**	**13 19 15.3**	**+0.9**
YOGI				S	**Sn**	**13 19 35.0**	**+1.2**
NGJI	**Ngawi**	**1.60**	**2**	P	**Pn**	**13 19 17.3**	**+2.7**
SMRI	**Semarang**	**2.14**	**333**	P	**Pn**	**13 19 24.2**	**+2.2**
SMRI	**Semarang**	**2.14**	**333**	P	**Pn**	**13 19 23.6**	**+1.6**
TBJI	**Tambak Boyo**	**2.19**	**12**	P	**Pn**	**13 19 23.2**	**+0.6**
GRJI	**Gresik**	**2.31**	**28**	P	**Pn**	**13 19 25.3**	**+1.0**
BLJI	**Banyuglugur**	**2.49**	**61**	P	**Pn**	**13 19 27.3**	**+0.5**
JAGI	**Jajag, Banyuwa**	**2.76**	**80**	P	**Pn**	**13 19 31.3**	**+0.8**
JAGI	**Jajag, Banyuwa**	**2.76**	**80**	P	**Pn**	**13 19 31.0**	**+0.5**
KPJI	**Karang Pucung**	**2.94**	**304**	P	**Pn**	**13 19 35.0**	**+2.1**
KMMI	**Kalianget**	**3.18**	**53**	P	**Pn**	**13 19 37.3**	**+1.1**
IGBI	**Denpasar**	**3.70**	**88**	P	**Pn**	**13 19 46.4**	**+3.0**
SRBI	**Singaraja**	**3.87**	**77**	P	**Pn**	**13 19 47.5**	**+1.8**
BBJI	**Bungbulang**	**4.01**	**292**	P	**Pn**	**13 19 49.1**	**+1.4**
CNJI	**Cibinong**	**4.54**	**291**	P	**Pn**	**13 19 56.4**	**+1.5**
TWSI	**Taliwang, Sumb**	**5.42**	**88**	P	**Pn**	**13 20 08.6**	**+1.6**
	0.2nm834nm18nm,0.7s						
XMI	**Christmas Isla**	**5.82**	**255**	P	**Pn**	**13 20 13.8**	**+1.3**
PLAI	**Plampang**	**6.30**	**89**	P	**Pn**	**13 20 22.4**	**+3.3**
PLAI	**Plampang**	**6.30**	**89**	P	**Pn**	**13 20 22.4**	**+3.3**
	0.2nm22nm,1.2s						
BBKI	**Banjar Baru**	**6.46**	**32**	P	**Pn**	**13 20 22.7**	**+1.5**
KAPI	**Kappang**	**9.17**	**65**	LR	LR	13 25 07.1	
	comp=Z,24nm,20.2s,baz=250,slow=46						
FITZ	**Fitzroy Crossi**	**16.54**	**125**	P	**Pn**	**13 22 37.5**	**+0.2**
	0.1nm,0.3s,baz=309,slow=12,SNR=1.5						
FITZ				S	Sn	13 25 25.4	-15
	1.0nm,0.5s,baz=218,slow=21,SNR=5.7						
	1.1nm,0.9s						
WRA	**Warramunga Arr**	**24.71**	**119**	P	**P**	**13 24 05.4**	**0.0**
	0.6nm,0.6s,baz=295,slow=11,SNR=6.6						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**26.01**	**127**	P	**P**	**13 24 17.9**	**+0.7**
	0.5nm,0.5s,baz=299,slow=9.1,SNR=10.0						
ASAR				PcP	**PcP**	**13 27 44.9**	**+0.3**
	0.3nm,0.3s,baz=319,slow=2.6,SNR=4.2						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.90**	**336**	LR	LR	13 38 05.4	
	comp=Z,14nm,18.3s,baz=150,slow=39						
H08S2	**Diego Garcia H**	**38.51**	**269**	T	T	14 07 10.5	
	baz=94,slow=75,SNR=12						
H08S3	**Diego Garcia H**	**38.52**	**269**	T	T	14 07 10.3	
	baz=94,slow=75,SNR=12						
H08S1	**Diego Carcia H**	**38.53**	**269**	T	T	14 07 13.6	
	baz=94,slow=75,SNR=12						
MKAR	**Makanchi Array**	**61.29**	**338**	P	**P**	**13 28 56.5**	**-2.4**
	0.7nm,0.4s,baz=153,slow=7.6,SNR=15						
	0.7nm,0.4s						
H04N2	**CROZET ISLANDS**	**62.69**	**222**	T	T	14 37 43.4	
	baz=72						
H04N1	**CROZET ISLANDS**	**62.70**	**222**	T	T	14 37 15.8	
	baz=72,slow=74						
H04N3	**CROZET ISLANDS**	**62.70**	**222**	T	T	14 37 51.0	
	baz=72,slow=74						
KURBB	**Kurchatov Arra**	**65.86**	**338**	P	**P**	**13 29 26.3**	**-2.6**
	0.2nm,0.4s,baz=156,slow=6.0,SNR=5.1						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**66.59**	**343**	P	**P**	**13 29 29.6**	**-4.0**
	0.9nm,0.5s,baz=165,slow=5.6,SNR=5.7						
	0.9nm,0.5s						

*IDC **28** 13:24:21.0±11.0, 23°.74S×179°.76W, h455km±140km, mb3.2/4, mbtmp4.1/5, Error ellipse: s-maj=85.0km s-min=31.0km az=6.0*
*NOU **28** 13:24:25.8, 23°.80S×179°.55W, h536km, mb3.6/13, South of Fiji Islands*
ISC 28 13:24:26.1±1.1, 23°.84S±0°.09×179°.7W±0°.1, h512km, n33, σ1§62/34, mb3.7/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGTI	**Dogotuki**	**7.51**	**356**	P	**P**	**13 26 18.5**	**+0.5**
MARNC	**Mare, Loyalty**	**11.53**	**279**	P	**P**	**13 27 00.5**	**+0.8**
PINNC	**Pines Island,**	**11.84**	**273**	P	**P**	**13 27 05.2**	**+2.2**
HAZ	**Te Kaha**	**14.04**	**188**	P	**P**	**13 27 27.0**	**+1.2**
RUGZ	**Raukumara Rang**	**14.26**	**188**	P	**P**	**13 27 30.9**	**+2.6**
PUZ	**Puketiti**	**14.29**	**186**	P	**P**	**13 27 30.3**	**+1.7**
TWGZ	**Tauwhareparae**	**14.43**	**187**	P	**P**	**13 27 32.2**	**+2.2**
TOZ	**Tahuroa Road**	**14.44**	**195**	P	**P**	**13 27 33.8**	**+3.7**
URZ	**Urewera**	**14.63**	**190**	P	**P**	**13 27 28.7**	**-3.3**
	2.2nm,0.3s,baz=275,slow=4.6,SNR=11						
URZ				S	**S**	**13 30 04.7**	**-0.7**
	4.6nm,0.8s,baz=50,slow=22,SNR=6.0						
URZ	**Urewera**	**14.63**	**190**	P	**P**	**13 27 32.7**	**+0.7**
URZ	**Urewera**	**14.63**	**190**	P	**P**	**13 27 31.8**	**-0.3**
MWZ	**Matawai**	**14.64**	**189**	P	**P**	**13 27 33.4**	**+1.1**
TKGZ	**Te Karaka**	**14.70**	**187**	P	**P**	**13 27 33.9**	**+1.0**
TLZ	**Tolley Road**	**15.00**	**194**	P	**P**	**13 27 39.6**	**+3.6**
BKZ	**Black Stump Fm**	**15.61**	**191**	P	**P**	**13 27 40.9**	**-1.5**
BKZ	**Black Stump Fm**	**15.61**	**191**	S	**S**	**13 30 24.0**	**-0.1**
BKZ	**Black Stump Fm**	**15.61**	**191**	P	**P**	**13 27 41.1**	**-1.3**
ETZ	**East Tongariro**	**15.73**	**193**	P	**P**	**13 27 44.9**	**+0.8**
OTVZ	**Oturere**	**15.77**	**193**	P	**P**	**13 27 42.9**	**-1.3**
MCHZ	**McNeill Hill**	**15.85**	**190**	P	**P**	**13 27 43.8**	**-1.0**
WNVZ	**Wahianoa**	**15.94**	**193**	P	**P**	**13 27 45.9**	**-0.1**
PNHZ	**Pukenui**	**16.39**	**191**	P	**P**	**13 27 49.0**	**-1.4**
TSZ	**Takapari Road**	**16.57**	**192**	P	**P**	**13 27 50.7**	**-1.6**
QRZ	**Quartz Range**	**18.14**	**199**	P	**P**	**13 28 06.9**	**-0.1**
KHZ	**Kahutara**	**19.35**	**195**	P	**P**	**13 28 16.5**	**-1.5**
EIDS	**Eidsvold**	**26.55**	**261**	P	**P**	**13 29 23.0**	**+0.3**
CTA	**Charters Tower**	**31.71**	**270**	P	**P**	**13 30 07.5**	**-0.1**
CTAO	**Charters Tower**	**31.71**	**270**	P	**P**	**13 30 07.5**	**-0.1**
BBOO	**Buckleboo**	**39.68**	**247**	P	**P**	**13 31 12.6**	**-1.1**
ASAR	**Alice Springs**	**42.28**	**260**	P	**P**	**13 31 33.6**	**-0.9**
	1.6nm,0.5s,baz=97,slow=7.6,SNR=39						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**42.65**	**266**	P	**P**	**13 31 36.0**	**-1.4**
	3.2nm,0.5s,baz=103,slow=8.0,SNR=32						
	3.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**51.07**	**265**	P	**P**	**13 32 40.0**	**-1.1**
	1.0nm,0.4s,baz=103,slow=5.7,SNR=7.6						
	1.0nm,0.4s						
TXAR	**Lajitas Array**	**90.20**	**58**	P	**P**	**13 36 32.1**	**+0.1**
	0.2nm,0.7s,baz=273,slow=5.9,SNR=2.2						
	0.2nm,0.7s						

*IDC **28** 13:28:19.3±1.1, 41°.39N×19°.39E, h0km, mb3.9/13, mbtmp3.9/22, ML3.3/7, MS3.3/22, Error ellipse: s-maj=20.0km s-min=12.8km az=22.0*
*PRU **28** 13:28:23.9, 41°.38N×19°.31E, h10km*
*SKO **28** 13:28:23.1, 41°.53N×19°.38E, h11km, ML3.8*
*THE **28** 13:28:23.9, 41°.N±14°.×19°.9E±1°.2, h1km±23km, M3.6/11, MLh3.6/11*
*RHSSO **28** 13:28:24.5±0.9, 41°.58N×19°.43E, h9km±4km, ML3.9/6*
*TIR **28** 13:28:24.3, 41°.64N×19°.62E, h20km±40km, MI4.0/6*
*BEO **28** 13:28:25.7±0.4, 41°.75N×19°.71E, h0km, ML3.6/24*
*PDG **28** 13:28:25.3±0.4, 41°.62N×19°.57E, h1km±1km, MD3.9/7, ML3.8/12, Error ellipse: s-maj=1.5km s-min=1.7km az=0.0*
**ISC 28 13:28:23.

RUDO					*e*Sn		**Sb**	13 29 24.1	-1.8
SELS	**Selova**	2.08	36	*e*Pn			**Pn**	13 28 58.7	+1.5
SELS					*e*Sg		**Sn**	13 29 21.5	-0.9
IVAS	**Ivanjica**	2.10	14	*e*Pn			**Pn**	13 28 58.8	+1.3
IVAS					*e*Sg		**Sb**	13 29 25.4	-1.2
IGT	**Igoumenitsa**	2.12	161		Pn		**Pb**	13 28 59.8	-1.5
IGT					Sn		**Sb**	13 29 26.2	-0.9
IGT	**Igoumenitsa**	2.12	161		P		**Pb**	13 28 59.7	-1.5
IGT					S		**Sb**	13 29 28.1	+1.1
KZN	**Kozani**	2.14	124		P		**Pb**	13 29 01.3	-0.5
LFKM	**Lefkimmi**	2.14	168		P		**Pb**	13 28 60.0	-1.8
LFKM					S		**Sb**	13 29 28.5	+0.6
BARS	**Barje**	2.16	53	*i* Pn			**Pn**	13 28 59.7	+1.4
BARS				*i* Sn			**Sb**	13 29 30.9	+2.4
BARS	**Barje**	2.16	53	*e*Pn			**Pn**	13 28 59.5	+1.1
BARS					*e*Sg		**Sn**	13 29 24.9	+0.4
MATE	**Matera**	2.27	248	⇓P			**Pn**	13 29 00.7	+1.0
GOCS	**Kraljevo Serbi**	2.27	27	*e*Pn			**Pn**	13 29 01.3	+1.4
GOCS					*e*Sg		**Sb**	13 29 29.9	-1.8
GRG	**Griva**	2.29	104	*i* Pn			**Pb**	13 29 02.3	-2.0
BBLS	**Lazi&#263i**	2.32	359	*e*Pn			**Pb**	13 29 02.8	-2.0
BBLS					*e*Sg		**Sb**	13 29 32.8	-0.3
VAY	**Valandovo**	2.35	94	*i* Pn			**Pn**	13 29 02.5	+1.6
VAY				*i* Sn			**Sn**	13 29 31.0	+2.0
VAY					*e*Lg		Lg	13 29 31.3	
	comp=N,286nm,0.8s								
VAY					*e*Lg		Lg	13 29 32.8	
	comp=E,352nm,0.7s								
PRMD	**Pramanda**	2.37	148	P			**Pb**	13 29 04.4	-1.2
BOSS	**Bosilegrad**	2.44	66	*e*Pn			**Pn**	13 29 03.5	+1.3
BOSS					*e*Sg		**Sn**	13 29 32.8	+1.4
GRUS	**Gruza**	2.52	21	*e*Pn			**Pn**	13 29 04.9	+1.6
TETR	**Tetrakomo, Epi**	2.59	147	P			**Pb**	13 29 07.2	-2.3
KNT	**Kendrikon**	2.61	97	*i* Pn			**Pn**	13 29 06.1	+1.5
BOVS	**Bovan**	2.67	38	⇓P			**Pn**	13 29 06.7	+1.4
BOVS	**Bovan**	2.67	38	*e*Pn			**Pn**	13 29 06.5	+1.2
BOVS					*e*Sg		**Sn**	13 29 40.0	+3.1
LIT	**Litokhoron**	2.71	121	P			**Pb**	13 29 09.4	-2.1
KKB	**Krupnik**	2.76	83	P			**Pn**	13 29 08.5	+1.9
KKB	**Krupnik**	2.76	83	*i* Pn			**Pn**	13 29 08.5	+1.9
TRUS	**Trudelj**	2.77	14	*e*Pn			**Pn**	13 29 08.1	+1.4
THL	**Klokotos Trika**	2.77	135	P			**Pn**	13 29 08.9	+2.1
TYRN	**Tyrnavos**	2.79	130	P			**Pn**	13 29 09.7	+2.7
THE	**Thessaloniki**	2.80	108	*i* Pn			**Pn**	13 29 09.2	+2.2
ZAPS	**Zavoj**	2.92	53	*e*Pn			**Pn**	13 29 10.3	+1.6
ZAPS					*e*Sg		**Sb**	13 29 48.1	-2.1
TEKS	**Tekeris**	3.00	1	*e*Pn			**Pn**	13 29 10.8	+0.8
VTS	**Vitosha**	3.01	68	P			**Pn**	13 29 11.5	+1.4
VTS	**Vitosha**	3.01	68	*e*Pn			**Pn**	13 29 11.8	+1.7
SOH	**Sokhos**	3.02	103	*i* Pn			**Pn**	13 29 12.8	+2.5
ZAGS	**Zajecar**	3.05	41	*e*Pn			**Pn**	13 29 12.1	+1.5
ZAGS					*e*Sg		**Sb**	13 29 55.1	+1.1
PLNA	**Plana**	3.10	71	P			**Pn**	13 29 13.5	+2.2
SRS	**Serrai**	3.14	96	*i* Pn			**Pn**	13 29 13.7	+1.9
BLKB	**Belogradchik**	3.15	48	⇑S			**Sn**	13 29 52.1	+3.1
BLKB	**Belogradchik**	3.15	48	*e*Pn			**Pn**	13 29 14.1	+2.1
BORS2	**Bor- Borsko je**	3.17	36	*e*Pn			**Pn**	13 29 12.2	+0.1
MMB	**Musomishta**	3.22	89	P			**Pn**	13 29 14.9	+2.0
MMB	**Musomishta**	3.22	89	*i* Pn			**Pn**	13 29 14.8	+2.0
AVAS	**Avala Beograd**	3.24	13	*e*Pn			**Pn**	13 29 14.7	+1.5
KUBS	**Kucevo**	3.29	29	*e*Pn			**Pn**	13 29 13.8	-0.1
BLY	**Banja Luka**	3.61	333	*e*Pn			**Pn**	13 29 20.7	+2.4
BLY					*e*Sn		**Sn**	13 30 01.4	+1.2
BLY	**Banja Luka**	3.61	333	*e*Pn			**Pn**	13 29 20.7	+2.4
FRGS	**Fruska Gora**	3.62	4	*e*Pn			**Pn**	13 29 19.4	+1.0
MDVR	**Moldovita**	3.63	26	⇓P			**Pn**	13 29 19.8	+1.3
MDVR	**Moldovita**	3.63	26	*e*Pn			**Pn**	13 29 19.7	+1.1
MPEP	**Malo Peshtene**	3.65	59	P			**Pn**	13 29 20.6	+1.8
VRSS	**Vrsac**	3.83	20	*e*Pn			**Pn**	13 29 22.7	+1.5
RZN	**Rozhen**	3.96	86	P			**Pn**	13 29 25.5	+2.3
HERR	**Herculane**	3.97	32	⇓P			**Pn**	13 29 25.4	+2.1
PLD	**Plovdiv**	3.99	80	P			**Pn**	13 29 25.7	+2.2
PLD	**Plovdiv**	3.99	80	*e*Pn			**Pn**	13 29 25.6	+2.1
SRE	**Strehaia**	4.15	40	⇓P			**Pn**	13 29 27.5	+1.8
PLVB	**Pleven**	4.24	63	⇑P			**Pn**	13 29 29.1	+2.2
BZS	**Buzias**	4.36	20	⇑P			**Pn**	13 29 29.9	+1.3
KDZ	**Kurdzhali**	4.41	87	P			**Pn**	13 29 31.2	+2.0
GZR	**Gura Zlata**	4.54	31	⇑P			**Pn**	13 29 32.6	+1.5
AQU	**L'Aquila**	4.59	282	*e*Pn			**Pn**	13 29 33.1	+1.3
AQU					*e*Sn		**Sn**	13 30 25.1	+0.6
MORH	**Mrgy, Hungar**	4.71	353	*e*Pn			**Pn**	13 29 34.2	+0.9
MORH					*e*Sn		**Sn**	13 30 01.4	+0.6
MORH	**Mrgy, Hungar**	4.71	353	⇓P			**Pn**	13 29 34.0	+0.7
MORH	**Mrgy, Hungar**	4.71	353	*e*Pn			**Pn**	13 29 34.9	+1.6
ELND	**Elena**	4.96	72	⇓P			**Pn**	13 29 39.1	+2.3
SIRR	**Siria**	4.98	18	⇓P			**Pn**	13 29 38.7	+1.6
SIRR	**Siria**	4.98	18	*e*Pn			**Pn**	13 29 38.8	+1.7
BOJS	**Bojanci**	5.00	324	*e*Pn			**Pn**	13 29 38.9	+1.5
BOJS	**Bojanci**	5.00	324	*i* Pn			**Pn**	13 29 39.1	+1.7
LOT	**Lotru**	5.00	37	⇑P			**Pn**	13 29 39.3	+1.8
BEHE	**Becsehely**	5.29	339	*e*Pn			**Pn**	13 29 42.8	+1.4
BEHE					*e*Sn		**Sn**	13 30 42.2	+0.6
ARR	**Arges**	5.36	43	⇑P			**Pn**	13 29 45.3	+2.9
EZN	**Ezine**	5.49	106	⇓P			**Pn**	13 29 47.3	+3.2
MTUR	**Matau**	5.50	46	⇑P			**Pn**	13 29 46.8	+2.6
CEY	**Cerknica**	5.56	321	*e*Pn			**Pn**	13 29 46.7	+1.6
VOIR		5.63	44	⇑P			**Pn**	13 29 48.4	+2.4
SKDS	**Skadanscina**	5.63	317	*e*Pn			**Pn**	13 29 48.7	+2.7
JAVS	**Javornik**	5.85	320	*i* Pn			**Pn**	13 29 50.0	+1.1
CRNS	**Crni Vrh**	5.89	322	*i* Pn			**Pn**	13 29 50.6	+1.0
VOJS	**Vojsko**	6.04	320	*i* Pn			**Pn**	13 29 52.9	+1.2
SOKA	**Soboth**	6.04	330	*i* Pn			**Pn**	13 29 52.9	+1.2
	comp=E,2.3nm,0.4s								
OBKA	**Obir**	6.10	326	*i* Pn			**Pn**	13 29 54.2	+1.7
	comp=E,3.6nm,0.3s,SNR=7.3								
MLR	**Muntele Rosu**	6.15	48		Pn		**Pn**	13 29 55.4	+2.2
	comp=E,30nm,0.6s,baz=312,slow=24,SNR=42								
MLR					Sn		**Sn**	13 31 04.3	+1.5
	comp=E,0.4nm,0.3s,baz=182,slow=18,SNR=1.2								
MLR					LR		LR	13 32 42.2	
	comp=E,176nm,19.1s,baz=219,slow=42								
MLR	**Muntele Rosu**	6.15	48	⇑P			**Pn**	13 29 55.4	+2.2
DOPR	**Dopca**	6.16	42	⇓P			**Pn**	13 29 56.1	+2.8
NEHR	**Nehoiu**	6.31	50	⇑P			**Pn**	13 29 58.2	+2.9
ARSA	**Arzberg**	6.37	335	*i* Pn			**Pn**	13 29 57.2	+1.1
	comp=E,2.9nm,0.4s								
PSZ	**Piszkesteto**	6.38	3	⇓P			**Pn**	13 29 57.5	+1.1
APE	**Apeiranthos**	6.49	132	⇑P			**Pn**	13 29 59.7	+1.9
COVR	**Voineasa-Covas**	6.51	46	⇑P			**Pn**	13 30 01.0	+3.0
TURR	**Turia**	6.54	44	⇑P			**Pn**	13 30 01.0	+2.5
RONA	**Rosalia, Austr**	6.56	341	*e*Pn			**Pn**	13 30 00.2	+1.5
	comp=E,0.6nm,0.4s								
PLOR	**Plostina**	6.76	48	⇑P			**Pn**	13 30 04.3	+2.8
VRI	**Vrincioaia**	6.81	48	⇑P			**Pn**	13 30 05.1	+2.9
CONA	**Conrad Observa**	6.88	339	*e*Pn			**Pn**	13 30 06.6	+3.4
	comp=E,1.9nm,0.4s								
ONER	**Baraj Valea Uz**	6.92	44	⇑P			**Pn**	13 30 06.5	+2.7
KECS	**Kecovo**	6.98	6	*e*PN			**Pn**	13 30 08.8	+4.3
KECS					*e*SN		**Sn**	13 31 22.9	-0.2
KBA	**Koelnbreinsper**	7.06	324	*i* Pg			**Pn**	13 30 07.1	+1.3
	comp=E,0.2nm,0.1s								
KBA					Pn		**Pn**	13 30 07.6	+1.8
	comp=E,3.2nm,0.4s,SNR=7.9								
TIRR	**Tirgusor**	7.18	63	⇑P			**Pn**	13 30 09.2	+1.9
ABTA	**Abfaltersbach**	7.21	318	*e*Pn			**Pn**	13 30 08.8	+1.0
	comp=E,4.2nm,0.4s								
ABTA					*e*Sn		**Sn**	13 31 31.3	+2.3
	comp=E,32nm,0.9s								
CFR	**Carcaliu**	7.29	57	⇓P			**Pn**	13 30 10.2	+1.5
MOA	**Molln**	7.31	331	*e*Pn			**Pn**	13 30 11.9	+2.8
	comp=E,12nm,1.0s								
BURAR	**Bucovina Array**	7.33	32	⇓P			**Pn**	13 30 11.4	+2.0
TPGR	**Topolog**	7.33	60	⇓P			**Pn**	13 30 11.5	+2.1
BIOA	**Bad Ischl, Aus**	7.42	328	*i* Pn			**Pn**	13 30 12.5	+1.9
	comp=E,6.5nm,0.4s								
IDI	**Anoyia**	7.56	144		Pn		**Pn**	13 30 10.7	-1.8
	comp=E,6.2nm,0.9s,baz=312,slow=15,SNR=2.4								
IDI					Sn		**Sn**	13 31 33.0	-4.5
	comp=E,1.1nm,0.3s,baz=284,slow=20,SNR=2.3								
LANS	**Liptovska Anna**	7.61	0	*e*PN			**Pn**	13 30 17.8	+4.6
LESA	**Schwarzleotal**	7.62	323	*e*Pn			**Pn**	13 30 14.8	+1.4
	comp=E,4.2nm,0.4s,SNR=7.1								
STHS	**Stebnicka Huta**	7.97	8	*e*PN			**Pn**	13 30 21.7	+3.6
STHS					*e*SN		**Sn**	13 31 48.9	+1.3
WTTA	**Wattenberg**	8.00	318	*e*Pn			**Pn**	13 30 19.8	+1.1
	comp=E,1.5nm,0.4s								
VRAC	**Vranov**	8.02	346		Sn		**Sn**	13 31 47.7	-1.1
	comp=E,0.2nm,0.3s,baz=313,slow=21,SNR=1.5								
VRAC					LR		LR	13 34 23.4	
	comp=E,158nm,20.0s,baz=168,slow=45								
WATA	**Walderalm**	8.08	318	*e*Pn			**Pn**	13 30 23.5	+3.7
	comp=E,8.5nm,0.7s								
SQTA	**Sankt Quirin**	8.19	317	*e*Pn			**Pn**	13 30 22.6	+1.4
	comp=E,3.0nm,0.4s								
FETA	**Feichten**	8.32	314	*e*Pn			**Pn**	13 30 24.0	+1.0
	comp=E,1.9nm,0.5s								
MOTA	**Moosalm**	8.33	317	*i* Pn			**Pn**	13 30 24.7	+1.5
	comp=E,3.2nm,0.4s								
MOTA					*e*Sn		**Sn**	13 31 58.2	+1.7
	comp=E,13nm,0.6s								
GERES	**GERESS Array B**	8.36	333		Pn		**Pn**	13 30 23.9	+0.5
	comp=E,0.1nm,0.3s,baz=152,slow=14,SNR=7.5								
GERES					Sn		**Sn**	13 31 54.0	-3.1
	comp=E,0.1nm,0.3s,baz=163,slow=24,SNR=5.3								
	comp=E,0.7nm,0.3s								
KHC	**Kasperske Hory**	8.64	333	*e*PN			**Pn**	13 30 28.8	+1.4
KHC					*e*SN		**Sn**	13 32 03.5	-0.6
DAVOX	**Davos/Dischmat**	8.65	310	Pn			**Pn**	13 30 27.3	-0.3
	comp=E,1.1nm,0.3s,baz=291,slow=23,SNR=5.7								
DAVOX					Sn		**Sn**	13 31 58.9	-5.6
	comp=E,0.5nm,0.3s,baz=98,slow=24,SNR=6.2								
DAVOX					LR		LR	13 34 32.3	
	comp=E,84nm,18.6s,baz=96,slow=43								
	comp=E,2.6nm,0.3s								
KEST	**Kesra**	9.81	237	LR			LR	13 35 35.2	
	comp=E,135nm,20.0s,baz=332,slow=45								
BRTR	**Keskin Array B**	10.93	95	Pn			**Pn**	13 30 58.5	-0.3
	comp=E,0.1nm,0.3s,baz=278,slow=11,SNR=1.3								
BRTR					LR		LR	13 36 02.0	
	comp=E,116nm,18.7s,baz=284,slow=42								
	comp=E,0.2nm,0.3s								
AKASG	**Malin Array Be**	11.38	33	Pn			**Pn**	13 31 05.2	+0.4
	comp=E,0.3nm,0.3s,baz=224,slow=14,SNR=7.7								
AKASG					LR		LR	13 36 32.1	
	comp=E,31nm,18.1s,baz=224,slow=43								
	comp=E,2.5nm,0.8s								
KBZ	**Khabaz**	17.37	75	P			**Pn**	13 32 24.7	+0.2
	comp=E,0.1nm,0.3s,baz=301,slow=13,SNR=3.6								
	comp=E,2.2nm,0.8s								
ESDC	**Sonseca Array**	17.88	272	P			**Pn**	13 32 28.9	-2.0
	baz=89,slow=11,SNR=1.7								
	comp=E,0.3nm,0.5s								
HFS	**Hagfors**	18.95	351	P			**P**	13 32 41.7	-1.3
	comp=E,0.2nm,0.3s,baz=162,slow=15,SNR=4.4								
HFS					LR		LR	13 40 51.9	
	comp=E,36nm,19.7s,baz=212,slow=39								
	comp=E,5.7nm,0.8s								
NOA	**NORSAR Array B**	20.16	348	P			Pn	13 32 57.2	-1.0
	comp=E,0.9nm,0.8s,baz=89,slow=7.6,SNR=2.4								
NOA					LR		LR	13 41 58.6	
	comp=E,40nm,19.7s,baz=170,slow=40								
	comp=E,0.9nm,0.8s								
EKA	**Eskdalemuir Ar**	20.26	321	P			**P**	13 32 57.4	0.0
	comp=E,1.8nm,0.8s,baz=112,slow=9.3,SNR=3.7								
	comp=E,1.8nm,0.8s								
FINES	**FINESS Array B**	20.33	9	P			**P**	13 32 57.4	-0.6
	comp=E,2.6nm,0.4s,baz=184,slow=10,SNR=21								
	comp=E,2.6nm,0.4s								
BELG	**Belogornoye**	21.93	51	P			**P**	13 33 15.3	0.0
	comp=E,26nm,0.8s,baz=188,slow=1.0,SNR=9.5								
	comp=E,26nm,0.8s								
KIRV	**Kirv**	25.38	38	P			**P**	13 33 49.2	+0.3
	comp=E,7.6nm,0.7s,baz=232,slow=12,SNR=4.1								
KIRV					LR		LR	13 44 24.9	
	comp=E,70nm,21.0s,baz=217,slow=38								
	comp=E,7.6nm,0.7s								
AKTO	**Aktyubinsk**	27.95	58	LR			LR	13 47 30.1	
	comp=E,50nm,18.0s,baz=80,slow=41								
ARCES	**ARCESS Array B**	28.23	4	LR			LR	13 46 29.7	
	comp=E,97nm,18.2s,baz=160,slow=38								
ARTI	**Arti**	29.09	46	LR			LR	13 47 01.1	
	comp=E,75nm,18.6s,baz=241,slow=38								
BORG	**Borgarnes**	32.80	329	LR			LR	13 50 02.8	
	comp=E,38nm,18.5s,baz=181,slow=40								
BVAR	**Borovoye Array**	35.67	54	P			**P**	13 35 19.9	-0.1
	comp=E,2.5nm,0.7s,baz=272,slow=7.3,SNR=11								
	comp=E,2.5nm,0.7s								
AAK	**Ala-Archa**	40.24	69	LR			LR	13 54 59.1	
	comp=E,17nm,19.4s,baz=232,slow=40								
KURBB	**Kurchatov Arra**	40.97	56	P			**P**	13 36 04.5	0.0
	comp=E,0.4nm,0.4s,baz=286,slow=9.5,SNR=6.1								
	comp=E,0.4nm,0.4s								
ZALV	**Zalesovo Beam**	44.12	51	P			**P**	13 36 29.8	-0.2
	comp=E,4.2nm,0.5s,baz=282,slow=8.5,SNR=28								
ZALV					LR		LR	13 57 15.2	
	comp=E,46nm,21.2s,baz=295,slow=39								
	comp=E,4.2nm,0.5s								
NRIK	**Noril'sk**	44.19	28	LR			LR	13 57 16.4	
	comp=E,54nm,18.4s,baz=314,slow=39								
MKAR	**Makanchi Array**	44.31	61	P			**P**	13 36 31.9	+0.1
	comp=E,3.2nm,0.7s,baz=283,slow=6.2,SNR=26								
MKAR					LR		LR	13 57 49.4	
	comp=E,31nm,20.0s,baz=284,slow=40								
	comp=E,3.2nm,0.7s								
TIXI	**Tiksi**	56.79	21	LR			LR	14 05 45.9	
	comp=E,50nm,18.5s,baz=226,slow=39								
SONM	**Songino Array**	58.98	52	P			**P**	13 38 22.1	+0.6
	comp=E,1.7nm,0.8s,baz=303,slow=8.1,SNR=6.8								
	comp=E,1.7nm,0.8s								
YAK	**Yakutsk**	62.59	30	LR			LR	14 08 16.8	
	comp=E,38nm,18.1s,baz=268,slow=38								
BOSA	**Boshof**	70.01	175	LR			LR	14 12 51.0	
	comp=E,39nm,18.1s,baz=188,slow=38								
CMAR	**Chiang Mai Arr**	70.25	83	P			**P**	13 39 33.9	-1.4
	comp=E,0.5nm,0.3s,baz=309,slow=6.6,SNR=4.6								
	comp=E,0.5nm,0.3s								
MA2	**Magadan**	71.55	24	LR			LR	14 14 42.7	
	comp=E,36nm,19.2s,baz=160,slow=39								
ILAR	**Eielson Array**	73.48	354	P			**P**	13 39 54.6	+0.7
	comp=E,0.3nm,0.8s,baz=357,slow=9.3,SNR=2.6								
	comp=E,0.3nm,0.8s								
PDAR	**Pinedale Array**	84.32	325	P			**P**	13 40 54.7	+0.6
	comp=E,0.1nm,0.5s,baz=357,slow=6.2,SNR=1.6								
	comp=E,0.1nm,0.5s								
PFO	**Pinyon Flats O**	94.93	324	LR			LR	14 27 29.8	
	comp=E,26nm,19.6s,baz=195,slow=37								
ASAR	**Alice Springs**	123.26	93	PKP			**PKPdf**	13 47 17.8	-1.2
	comp=E,0.2nm,0.9s,baz=314,slow=2.7,SNR=4.2								

*LDG **28** 13:31:52.1±0.1, 45.˚46N×5.˚92E, h2km, Md1.8/1, Ml1.9/4, Error ellipse: s-maj=1.1km s-min=1.0km az=68.0*
STR 28 13:31:51.9±0.0, 45.˚46N±0.˚05×5.˚91E±0.˚06, h2km, MLv1.6/14, LOCSAT earthModelID alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGSM	**Saint Maurice**	0.21	316	Pg	Pg	13 31 56.1	0.0
OGSM				Sg	Sg	13 31 59.6	+0.7
GRN	**Grenoble**	0.24	208	Pg	Pg	13 31 56.8	+0.2
GRN				Sg	Sg	13 32 01.4	+1.6
OGMY	**Moye**	0.43	358	Pg	Pg	13 32 00.1	-0.1
OGMY				Sg	Sg	13 32 06.2	+0.5
ORIF	**Oris-en-Rattie**	0.54	182	*e*Pg	Pg	13 32 01.5	-0.7
ORIF				*e*Sg	Sg	13 32 08.8	-0.4
	6.2nm,0.2s						
ORIF	**Oris-en-Rattie**	0.54	182	Pg	Pg	13 32 02.0	-0.3
ORIF				Sg	Sg	13 32 09.7	+0.5
RSL	**Roselend**	0.56	65	Pg	Pg	13 32 02.6	-0.1
RSL				Sg	Sg	13 32 09.7	-0.1
LPL	**La Plagne**	0.58	84	*e*Pg	Pg	13 32 03.2	0.0
LPL				*e*Sg	Sg	13 32 10.7	0.0
	2.6nm,0.3s						
LPG	**La Plagne**	0.60	86	*e*Pg	Pg	13 32 03.3	-0.1
LPG				*e*Sg	Sg	13 32 11.1	0.0
	1.1nm,0.2s						
OG35	**Corcelles**	0.63	338	Pg	Pg	13 32 04.2	+0.1
OG35				Sg	Sg	13 32 12.9	+0.5
RRL	**Rocca Remolon**	0.82	130	Pg	Pg	13 32 07.4	-0.3
OGSI	**Sixt**	0.85	44	Pg	Pb	13 32 09.0	-0.6
OGSI				Sg	Sg	13 32 19.3	0.0
MBDF	**Montbardon**	0.95	140	*e*Pg	Pg	13 32 10.2	0.0
MBDF				*e*Sg	Sg	13 32 22.4	-0.1
	1.9nm,0.2s						
SSB	**Saint Sauveur**	0.98	260	Pg	Pg	13 32 10.5	-0.2
SSB				Sg	Sg	13 32 23.5	+0.2
RSP	**Reno Superiore**	1.01	107	Pg	Pg	13 32 11.2	0.0
CREF	**Crivoux**	1.04	150	Pg	Pg	13 32 11.8	-0.1
CREF				Sg	Sg	13 32 25.2	-0.1
VIVF	**Saint-Julien-l**	1.06	236	*e*Pg	Pg	13 32 12.1	-0.1
VIVF				*e*Sg	Sg	13 32 26.0	+0.1
	5.0nm,0.2s						
CABF	**La Chapelle**	1.16	6	*e*Pg	Pg	13 32 13.8	-0.4
CABF				*e*Sg	Sg	13 32 28.9	-0.4
	1.9nm,0.2s						
SURF	**Saint Ours**	1.17	146	Pg	Pg	13 32 14.4	0.0
SURF				Sg	Sb	13 32 30.2	-0.4
DIX	**Grande Dixence**	1.22	59	Pg	Pg	13 32 15.0	-0.4
RIVEL	**MONT RIVEL**	1.30	0	Pg	Pg	13 32 16.5	-0.4
SMF	**Signal de Mont**	1.87	310	*e*Sg	Sb	13 32 50.3	-0.3
	1.0nm,0.2s						

*SNET **28** 13:37:14.4±1.0, 12.˚59N×88.˚18W, h24km±6km, ML2.9*
*CATAC **28** 13:37:14.2±0.4, 13.˚N±3.˚×8.˚8W±.˚, h31km±2km, M3.1/18, MLv3.1/18, Error ellipse: s-maj=5.8km s-min=2.0km az=24.3, confirmed*
ISC 28 13:37:13.7±1.3, 12.˚55N±0.˚05×88.˚05W±0.˚03, h29km±12km, n51, σ0°57/67, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	0.64	49	P	Pn	13 37 26.8	-0.2
CSGN				S	Sn	13 37 36.7	+0.5
POTN	**Potosi Cosigui**	0.69	50	P	Pn	13 37 27.5	-0.1
POTN				S	Sn	13 37 37.9	+0.6
CNCH	**Conchagua**	0.75	16	*e*P	Pb	13 37 28.2	-0.1
CNCH				*e*S	Sn	13 37 40.8	+1.8
CNCH	**Conchagua**	0.75	16	P	Pn	13 37 28.5	0.0
CNCH	**Conchagua**	0.75	16	S	Sn	13 37 39.7	+0.7
LCND	**La Caada**	0.77	12	*e*P	Pn	13 37 28.4	-0.3
LCND				IAML		13 37 42.8	
	comp=Z,365nm,0.3s						
LCND	**La Caada**	0.77	12	P	Pb	13 37 28.6	0.0
VSM	**San Miguel**	0.90	346	*e*P	Pb	13 37 31.0	+0.1
LCY	**Lacayo**	0.90	345	*e*P	Pn	13 37 30.2	-0.3
LCY				*e*S	Sn	13 37 41.9	-0.7
BLLM	**Bellamira**	0.90	348	*e*P	Pn	13 37 30.4	-0.2
RANC	**El Ranchito**	0.91	345	*

PRU	**Pruhonice**	**2.52**	**269**	*e*SG	**Sb**	**13 46 46.4**	**-0.1**
	comp=Z,17nm,0.6s						
PVCC	**Panska Ves**	**2.53**	**282**	*e*PG	**Pb**	**13 46 15.3**	**+0.3**
PVCC				*e*SG	**Sg**	**13 46 48.9**	**-1.1**
	comp=Z,44nm,0.8s						
CONA	**Conrad Observa**	**2.75**	**219**	*e*Pn	**Pn**	**13 46 14.0**	**-0.2**
	0.2nm,0.1s						
CONA				*e*Sn	**Sn**	**13 46 47.1**	**-1.1**
	3.9nm,0.3s						
RONA	**Rosalia, Austr**	**2.78**	**212**	*e*Sn	**Sn**	**13 46 49.5**	**+0.7**
	4.8nm,0.4s						
CKRC	**Cesky Krumlov**	**2.99**	**246**	*e*SG	**Sg**	**13 47 03.3**	**-1.4**
	comp=Z,21nm,0.7s						
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PG	**Pb**	**13 46 29.0**	**+0.6**
KHC				*e*SG	**Sg**	**13 47 12.7**	**-2.4**
	comp=Z,15nm,0.4s						
ARSA	**Arzberg**	**3.44**	**216**	*e*Sn	**Sn**	**13 47 05.8**	**+0.7**
	1.4nm,0.3s						
MOA	**Molln**	**3.55**	**233**	*e*Sg	**Sg**	**13 47 20.7**	**-2.2**
	12nm,0.8s						
FETA	**Feichten**	**5.98**	**242**	*e*Sg	**Sg**	**13 48 43.7**	**+3.1**
	2.8nm,0.6s						

*IDC **28** 13:51:16.9±4.6,54˚.38N×162˚.11E,h70km±43km,mb3.3/5, mbtmp3.6/6,ML3.2/1,MS2.8/2,Error ellipse: s-maj=35.0km s-min=33.0km az=103.0*

ISC 28 13:51:12.8±1.2,54˚.6N±0˚.2×162˚.3E±0˚.2,h29km,n13, σ1ᵗ13/7,mb3.4/5,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**3.08**	**243**	P	**Pn**	**13 52 00.1**	**+0.7**
	16nm,0.3s,baz=76,slow=20,SNR=43						
PETK				S	**Sn**	**13 52 35.7**	**+0.6**
	7.7nm,0.4s,baz=82,slow=22,SNR=4.8						
PETK				LR	LR	13 53 21.9	
	comp=Z,49nm,18.3s,baz=81,slow=43 25nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**34.98**	**172**	T	T	14 35 15.7	
	baz=355,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**34.99**	**172**	T	T	14 35 27.5	
	baz=355,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**34.99**	**172**	T	T	14 35 27.7	
	baz=355,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**36.17**	**173**	T	T	14 36 47.6	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**36.19**	**173**	T	T	14 36 49.4	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**36.19**	**173**	T	T	14 36 53.3	
	baz=352						
NEW	**Newport**	**48.06**	**62**	LR	LR	14 18 55.0	
	comp=Z,26nm,18.2s,baz=52,slow=34						
MKAR	**Makanchi Array**	**48.66**	**296**	P	**P**	**13 59 52.7**	**-1.1**
	0.2nm,0.5s,baz=47,slow=6.3,SNR=1.3 0.2nm,0.5s						
FINES	**FINESS Array B**	**59.25**	**337**	P	**P**	**14 01 11.3**	**+0.5**
	1.2nm,0.6s,baz=42,slow=8.8,SNR=6.9 1.2nm,0.6s						
HFS	**Hagfors**	**62.91**	**343**	P	**P**	**14 01 35.9**	**+0.2**
	4.2nm,1.0s,baz=0.0,slow=7.9,SNR=1.9 4.2nm,1.0s						
TXAR	**Lajitas Array**	**68.89**	**69**	P	**P**	**14 02 15.8**	**+1.0**
	0.2nm,0.7s,baz=326,slow=7.3,SNR=1.7 0.2nm,0.7s						
ASAR	**Alice Springs**	**81.66**	**206**	P	**P**	**14 03 26.6**	**-1.3**
	0.2nm,0.8s,baz=15,slow=5.5,SNR=1.8 0.2nm,0.8s						

*AFAD **28** 14:13:29.3,35˚.89N×30˚.53E,h8km±4km,ML2.9*
*ISK **28** 14:13:29.8,35˚.90N×30˚.51E,h17km,ML2.9/21*
*IDC **28** 14:13:31.8±2.0,35˚.86N×30˚.55E,h57km±25km,mb3.6/3, mbtmp3.6/7,ML3.2/3,MS2.0/1,Error ellipse: s-maj=20.1km s-min=13.6km az=77.0*

ISC 28 14:13:29.8±1.2,35˚.86N±0˚.04×30˚.55E±0˚.03,h26km±11km, n36,σ1ᵗ69/52,mb4.1/3,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.49**	**340**	P	**Pb**	**14 13 38.8**	**-1.2**
AKUM				S	**Sb**	**14 13 45.1**	**-1.9**
AKUM				*i* IAML		14 13 49.0	
	comp=E,837nm,0.4s						
DEMR	**Demre-Antalya**	**0.65**	**306**	Pg	**Pb**	**14 13 41.9**	**-0.7**
DEMR				Sg	**Sb**	**14 13 50.8**	**-0.4**
KEMT	**Kemer-ANTALYA**	**0.75**	**0**	Pg	**Pb**	**14 13 44.0**	**-0.2**
KEMT				Sg	**Sn**	**14 13 54.4**	**-0.7**
AKAS	**Kas**	**0.85**	**296**	P	**Pb**	**14 13 45.3**	**-0.9**
AKAS				S	**Sn**	**14 14 02.4**	**+4.3**
AKAS				*i* IAML		14 14 03.0	
	comp=N,659nm,0.5s						
AKAS				*i* IAML		14 14 04.0	
	comp=E,536nm,0.5s						
AKAS	**Kas**	**0.85**	**296**	Pg	**Pb**	**14 13 46.0**	**-0.1**
AKAS				Sg	**Sn**	**14 13 57.8**	**-0.2**
ELL	**Elmali**	**1.03**	**330**	Pg	**Pn**	**14 13 48.9**	**+0.2**
ANTB	**Antalya**	**1.04**	**4**	Pg	**Pb**	**14 13 49.9**	**+0.6**
KORT	**Korkueli**	**1.15**	**352**	P	**Pn**	**14 13 49.5**	**-1.0**
KORT				S	**Sn**	**14 14 07.3**	**+1.9**
KORT				*i* IAML		14 14 18.0	
	comp=E,244nm,0.5s						
KORT	**Korkueli**	**1.15**	**352**	Pn	**Pb**	**14 13 51.0**	**-0.2**
IZZE	**Mula-Seydike**	**1.22**	**299**	P	**Pn**	**14 13 51.4**	**+0.2**
IZZE				*i* IAML		14 14 11.0	
	comp=E,169nm,0.4s						
IZZE				S	**Sb**	**14 14 11.1**	**+3.5**
IZZE				*i* IAML		14 14 15.0	
	comp=N,311nm,0.5s						
KNIK	**Mula-Seydike**	**1.27**	**322**	P	**Pb**	**14 13 52.5**	**-0.6**
KNIK				S	**Sb**	**14 14 08.9**	**-0.1**
KNIK				*i* IAML		14 14 10.0	
	comp=E,176nm,0.3s						
ALAN	**Alanya-ANTALYA**	**1.39**	**59**	Pn	**Pb**	**14 13 55.2**	**+0.1**
ALAN				Sn	**Sb**	**14 14 14.0**	**+1.6**
GAZI	**Gazipasa**	**1.48**	**75**	Pn	**Pb**	**14 13 56.7**	**0.0**
CAME	**Cameli-Denizli**	**1.48**	**317**	Pn	**Pn**	**14 13 55.6**	**+0.7**
CAME				Sn	**Sb**	**14 14 14.5**	**-0.7**
GOLH	**Golhisar**	**1.59**	**330**	P	**Pn**	**14 13 57.3**	**+0.9**
GOLH				S	**Sb**	**14 14 19.0**	**+0.6**
GOLH				*i* IAML		14 14 32.0	
	comp=E,129nm,0.8s						
GOLH				*i* IAML		14 14 35.0	
	comp=N,144nm,1.1s						
SABU	**Mula-Dalaman**	**1.60**	**307**	P	**Pn**	**14 13 55.8**	**-0.6**
CAEL	**Denizli, Camel**	**1.61**	**322**	P	**Pb**	**14 13 58.1**	**-0.8**
CAEL				S	**Sb**	**14 14 24.6**	**+5.7**
CAEL				*i* IAML		14 14 33.0	
	comp=E,249nm,1.0s						
CAEL				*i* IAML		14 14 38.0	
	comp=N,262nm,0.8s						
DALY	**Dalyan (Mula)**	**1.81**	**303**	Pn	**Pn**	**14 13 59.6**	**+0.3**
SEYD	**Seydisehir-KON**	**1.86**	**33**	Pn	**Pb**	**14 14 01.7**	**-1.5**
APMY	**Acipayam-Deniz**	**1.90**	**328**	Pn	**Pn**	**14 14 01.6**	**+1.0**
ISP	**Isparta**	**1.96**	**359**	Pn	**Pn**	**14 14 02.8**	**+1.3**
ARG	**Arkhangelos**	**2.00**	**281**	Pn	**Pb**	**14 14 03.7**	**-1.8**
TURN	**Turunc**	**2.08**	**297**	Pn	**Pn**	**14 14 03.4**	**+0.4**
YER	**Yerkesik**	**2.23**	**306**	Pn	**Pn**	**14 14 06.1**	**+1.0**
DAT	**Datca**	**2.56**	**291**	Pn	**Pn**	**14 14 11.2**	**+1.5**
MLSB	**Milas**	**2.66**	**304**	Pn	**Pn**	**14 14 12.1**	**+1.1**
KARP	**Karpathos**	**2.78**	**265**	Pn	**Pn**	**14 14 14.5**	**+1.9**
BODT	**Bodrum**	**2.88**	**296**	Pn	**Pn**	**14 14 16.2**	**+2.2**
AYDB	**Zeytinkoy-Aydi**	**2.98**	**315**	Pn	**Pn**	**14 14 15.5**	**-0.1**
BRTR	**Keskin Array B**	**4.57**	**31**	P	**Pn**	**14 14 36.9**	**-0.5**
	0.3nm,0.3s,baz=207,slow=15,SNR=4.3						
BRTR				S	**Sn**	**14 15 31.4**	**+1.6**
	0.5nm,0.4s,baz=307,slow=30,SNR=4.8						
BRTR				LR	LR	14 17 13.3	
	comp=Z,15nm,18.2s,baz=169,slow=48 1.2nm,0.5s						
IDI	**Anoyia**	**4.65**	**265**	P	**Pn**	**14 14 40.3**	**+1.8**
	2.9nm,0.3s,baz=172,slow=5.5,SNR=10						
IDI				S	**Sn**	**14 15 29.5**	**-2.1**
	6.7nm,0.5s,baz=330,slow=21,SNR=7.7						
MMAI	**Mount Meron Ar**	**4.91**	**124**	P	**Pn**	**14 14 44.9**	**+2.9**
	3.1nm,0.3s,baz=302,slow=14,SNR=4.8						
MMAI				S	**Sn**	**14 15 38.6**	**+0.6**
	1.3nm,0.3s,baz=308,slow=32,SNR=2.1 2.1nm,0.4s						
EIL	**Elat**	**7.20**	**148**	P	**Pn**	**14 15 15.6**	**+2.2**
	0.6nm,0.3s,baz=328,slow=17,SNR=2.0						
EIL				S	**Sn**	**14 16 33.9**	**-0.4**
	2.3nm,0.5s,baz=279,slow=23,SNR=1.8 2.9nm,0.5s						
FINES	**FINESS Array B**	**25.77**	**355**	P	**P**	**14 18 55.9**	**-2.2**
	4.8nm,1.0s,baz=183,slow=9.7,SNR=2.0 4.8nm,1.0s						
ARCES	**ARCESS Array B**	**33.85**	**357**	P	**P**	**14 20 07.6**	**-2.1**
	2.8nm,1.0s,baz=175,slow=11,SNR=1.8 2.8nm,1.0s						
MKAR	**Makanchi Array**	**39.70**	**58**	P	**P**	**14 20 59.9**	**0.0**
	0.5nm,0.9s,baz=290,slow=9.0,SNR=2.0 0.5nm,0.9s						

AFAD 28 14:21:55.1,39˚.32N×28˚.28E,h7km±2km,ML1.0,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.32**	**28**	P	Pg	14 22 02.0	+0.6
DURS				S	Sg	14 22 06.2	+0.6
DURS				*i* IAML		14 22 10.0	
	comp=E,18nm,0.4s						
STEP	**BALIKESIR_Sava**	**0.44**	**278**	P	Pg	14 22 03.6	0.0
STEP				S	Sg	14 22 10.7	+1.3
STEP				*i* IAML		14 22 12.0	
	comp=E,28nm,0.3s						
STEP				*i* IAML		14 22 19.0	
	comp=N,14nm,0.6s						
BKES	**Balkesir-Mer**	**0.50**	**327**	P	Pb	14 22 05.6	-0.5
BKES				S	Sg	14 22 12.1	+0.9
BKES				*i* IAML		14 22 14.0	
	comp=E,9.1nm,0.4s						
BKES				*i* IAML		14 22 20.0	
	comp=N,9.7nm,1.0s						

ATH 28 14:21:57.3,37˚.33N×20˚.59E,h8km±1km,ML2.2/8,Manual Solution by G.Panopoulou First location: 2019/11/28 14:23:29, This location: 2019/11/28 14:49:51 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 1 km,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.43**	**27**	P	Pg	14 22 06.2	+0.6
LTHK				S	Sg	14 22 11.6	+0.4
KYPS	**Kipseli, Zakin**	**0.52**	**21**	P	Pg	14 22 07.2	-0.2
KYPS				S	Sg	14 22 14.2	0.0
VLS	**Valsamata**	**0.84**	**360**	P	Pg	14 22 13.5	-0.1
VLS				S	Sg	14 22 24.2	-0.4
AMT	**Artemida-Makis**	**0.91**	**77**	P	Pb	14 22 15.1	-0.3
AMT				S	Sg	14 22 27.0	+0.3
RLS	**Riolos of Patr**	**1.00**	**43**	P	Pg	14 22 16.3	-0.3
PYL	**PYLOS**	**1.02**	**115**	P	Pb	14 22 17.1	-0.1
PYL				S	Sb	14 22 30.5	-0.1
AXS	**Araxos**	**1.06**	**36**	P	Pb	14 22 17.9	-0.1
ITM	**Ithomi**	**1.08**	**98**	P	Pg	14 22 17.9	0.0
ITM				S	Sg	14 22 31.3	-0.7
DRO	**Drossia**	**1.08**	**55**	P	Pg	14 22 17.9	-0.2
DRO				S	Sg	14 22 32.4	+0.1
EVGI	**Lefkada island**	**1.29**	**2**	P	Pn	14 22 21.0	-0.6
NYDR	**Nydri-Lefkada**	**1.38**	**3**	P	Pn	14 22 22.9	0.0
KLV	**Kalavryta, Ach**	**1.43**	**60**	P	Pn	14 22 23.8	+0.2
KLV				S	Sn	14 22 42.7	+0.1
LKD2	**Lefkada island**	**1.46**	**2**	P	Pb	14 22 24.6	-0.1
PVO	**Paravola**	**1.48**	**30**	P	Pn	14 22 24.5	+0.2
PVO				S	Sb	14 22 44.1	0.0
EFP	**Efpalio**	**1.51**	**43**	P	Pn	14 22 24.9	+0.3
GUR	**Goura**	**1.52**	**66**	P	Pn	14 22 24.6	-0.2
ANX	**Ano Chora**	**1.64**	**39**	P	Pb	14 22 27.5	-0.4
MAKR	**Makrakomi, Fth**	**2.07**	**35**	P	Pn	14 22 32.6	+0.1

*NAO **28** 14:22:34.0,40˚.54N×16˚.93E,h10km,MB3.8*
*PDG **28** 14:22:36.8±0.3,41˚.25N×19˚.53E,h9km,MD4.1/12, ML4.0/13,Error ellipse: s-maj=1.2km s-min=2.0km az=0.0*
*RHSSO **28** 14:22:37.1±0.9,41˚.28N×19˚.31E,h7km,ML4.0/5*
*SKO **28** 14:22:37.7,41˚.49N×19˚.31E,h0km,ML3.8*
*NEIC **28** 14:22:38.0±1.7,41˚.44N±0˚.05×19˚.51E±0˚.07,h10km±2km, mb4.5/5,Error ellipse: s-maj=9.7km s-min=9.1km az=126.0*
*TIR **28** 14:22:39.1,41˚.49N×19˚.33E,h46km±4km,Ml4.1/7*
*THE **28** 14:22:39.8,42˚N±11˚×2˚0E±˚,h1km±22km,M3.6/8, MLh3.6/8*
*IDC **28** 14:22:41.7±1.8,41˚.42N×19˚.57E,h44km±18km,mb3.9/11, mbtmp3.9/20,ML3.7/6,MS3.3/17,Error ellipse: s-maj=16.8km s-min=13.9km az=156.0*
*BEO **28** 14:22:41.0±0.3,41˚.53N×19˚.82E,h0km,ML3.6/21*
*PRU **28** 14:22:46.0,41˚.26N×18˚.64E,h10km,M4.5*

ISC 28 14:22:39.8±0.9,41˚.45N±0˚.02×19˚.55E±0˚.02,h23km±7km, n199,σ2ᵗ30/256,mb4.2/9,MS3.2/7,22C-19D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.26**	**114**	Pg	**Pb**	**14 22 45.3**	**-0.6**
TIR				Sg	**Sb**	**14 22 49.3**	**-0.9**
TIR				AML	AML	14 22 53.1	
	78nm,0.3s						
TIR				AML	AML	14 22 53.6	
	63nm,0.7s						
TIR	**Tirane**	**0.26**	**114**	*i* Pg	**Pb**	**14 22 45.4**	**-0.6**
TIR				*i* Sg	**Sb**	**14 22 50.8**	**+0.6**
ULC	**Ulcinj**	**0.56**	**336**	⇓*i* Pg	**Pb**	**14 22 49.5**	**-1.6**
ULC				*i* Sg	**Sn**	**14 23 00.9**	**-0.3**
SDA	**Shkodra**	**0.60**	**356**	Pg	**Pb**	**14 22 50.3**	**-1.4**
SDA				Sg	**Sn**	**14 23 00.8**	**-1.3**
PHP	**Peshkopia**	**0.71**	**70**	Pg	**Pb**	**14 22 52.2**	**-1.3**
PHP				AML	AML	14 23 10.6	
	22nm,0.5s						
PHP	**Peshkopia**	**0.71**	**70**	P	**Pb**	**14 22 52.5**	**-1.0**
DRME	**Dracevica, Mon**	**0.79**	**340**	*e*Pn	**Pn**	**14 22 56.3**	**+0.7**
DRME	**Dracevica, Mon**	**0.79**	**340**	⇑*i* Pg	**Pb**	**14 22 53.8**	**-1.0**
DRME				*i* Sg	**Sn**	**14 23 08.5**	**+1.9**
BUM	**Brajici-Budva**	**0.98**	**330**	⇓*i* Pg	**Pn**	**14 22 57.8**	**-0.5**
BUM				*i* Sg	**Sn**	**14 23 15.2**	**+3.6**
VLO	**Vlora**	**0.98**	**183**	Pg	**Pn**	**14 22 59.8**	**+1.6**
VLO				Sg	**Sn**	**14 23 16.1**	**+4.7**
VLO				AML	AML	14 23 25.7	
	36nm,0.5s						
VLO	**Vlora**	**0.98**	**183**	P	**Pn**	**14 23 00.7**	**+2.5**
VLO				S	**Sn**	**14 23 16.5**	**+5.0**
OHR	**Ohrid**	**1.00**	**109**	*i* Pg	**Pb**	**14 22 58.4**	**-0.1**
OHR				*i* Sg	**Sn**	**14 23 16.6**	**+4.6**
OHR				*e*Lg	Lg	14 23 19.0	
	comp=N,2μm,0.8s						
OHR				*e*Lg	Lg	14 23 20.6	
	comp=E,2μm,0.7s						
PDG	**Podgorica**	**1.00**	**347**	Pg	**Pn**	**14 22 58.2**	**-0.4**
PDG				Sg	**Sn**	**14 23 11.3**	**-0.7**
PDG	**Podgorica**	**1.00**	**347**		**Pb**	**14 22 58.0**	**-0.5**
PDG	**Podgorica**	**1.00**	**347**	⇑P	**Pn**	**14 22 58.8**	**+0.2**
PDG				⇑S	**Sn**	**14 23 14.7**	**+2.7**
PDG	**Podgorica**	**1.00**	**347**	*e*Pg	**Pn**	**14 22 58.3**	**-0.2**
PDG				*e*Sg	**Sn**	**14 23 12.6**	**+0.6**
PDG	**Podgorica**	**1.00**	**347**	⇑*i* Pg	**Pn**	**14 22 58.3**	**-0.2**
PDG				*i* Sg	**Sn**	**14 23 16.2**	**+4.2**
PVY	**Plav**	**1.18**	**15**	⇓*i* Pg	**Pb**	**14 23 01.4**	**-0.3**
PVY				*i* Sg	**Sn**	**14 23 21.5**	**+4.9**
CEME	**Cevo**	**1.19**	**337**	⇑*i* Pg	**Pb**	**14 23 01.1**	**-0.7**
CEME				*i* Sg	**Sn**	**14 23 22.3**	**+5.5**
KBN	**Korca**	**1.25**	**131**	Pn	**Pb**	**14 23 03.3**	**+0.6**
KBN				Sn	**Sb**	**14 23 22.1**	**+3.7**
KBN	**Korca**	**1.25**	**131**	P	**Pb**	**14 23 04.2**	**+1.4**
KBN				S	**Sb**	**14 23 24.3**	**+5.9**
HCY	**Herceg Novi**	**1.27**	**322**	⇓*i* Pg	**Pb**	**14 23 03.0**	**-0.1**
HCY				*i* Sg	**Sb**	**14 23 24.5**	**+5.5**
NKME	**Niksic**	**1.39**	**341**	⇓*i* Pn	**Pb**	**14 23 04.5**	**-0.6**
NKME				*i* Sn	**Sb**	**14 23 28.1**	**+5.7**
KOME	**Kolasin**	**1.40**	**359**	*e*Pn	**Pb**	**14 23 06.0**	**+0.7**
KOME	**Kolasin**	**1.40**	**359**	⇑*i* Pn	**Pb**	**14 23 05.5**	**+0.2**
KOME				*i* Sn	**Sb**	**14 23 28.7**	**+5.9**
IVA	**Berane**	**1.44**	**10**	⇓*i* Pn	**Pb**	**14 23 05.6**	**-0.5**
IVA				*i* Sn	**Sb**	**14 23 28.9**	**+4.9**
SKO	**Skopje**	**1.50**	**69**	*i* Pg	**Pb**	**14 23 07.4**	**+0.3**
SKO				*i* Sg	**Sb**	**14 23 30.3**	**+4.5**
NEST	**Nestorio**	**1.54**	**132**	Pn	**Pb**	**14 23 08.7**	**+1.1**
NEST				AML	AML	14 23 37.9	
	comp=E,5.9nm,0.4s						
NEST	**Nestorio**	**1.54**	**132**	P	**Pb**	**14 23 08.8**	**+1.1**
NEST				S	**Sb**	**14 23 31.2**	**+4.5**
TREB	**Trebinje**	**1.55**	**325**	*e*Pn	**Pn**	**14 23 06.0**	**-0.1**
TREB				*e*Sn	**Sb**	**14 23 26.7**	**-0.3**

BRY	**Bratogost**	**1.63**	**333**	⇓*i* Pn	**Pb**	**14 23 08.7**	**-0.7**
BRY				*i* Sn	**Sb**	**14 23 33.8**	**+4.2**
UPM	**Unac-Piva**	**1.81**	**345**	⇑*i* Pn	**Pb**	**14 23 11.5**	**-1.0**
UPM				*i* Sn	**Sb**	**14 23 38.4**	**+3.5**
SJES	**Sjenica**	**1.83**	**10**	*e*Pn	**Pb**	**14 23 12.4**	**-0.4**
SJES				*e*Sg	**Sb**	**14 23 37.5**	**+2.1**
KLINJ	**Klinje**	**1.86**	**338**	*e*Pn	**Pn**	**14 23 10.8**	**+0.4**
KLINJ				*e*Sn	**Sb**	**14 23 35.4**	**-0.7**
PLE	**Pljevlja**	**1.88**	**356**	⇓*i* Pn	**Pb**	**14 23 13.1**	**-0.5**
PLE				*i* Sn	**Sb**	**14 23 40.2**	**+3.5**
STON	**Ston**	**1.98**	**316**	*e*Pn	**Pb**	**14 23 16.4**	**+1.3**
STON				*e*Sg	**Sb**	**14 23 46.0**	**+6.7**
NOCI	**Noci**	**1.99**	**251**	Pn	**Pn**	**14 23 11.6**	**-0.6**
NOCI				Sn	**Sn**	**14 23 33.7**	**-2.7**
NOCI				AML	AML	14 23 54.1	
	comp=E,4.4nm,0.3s						
IGT	**Igoumenitsa**	**2.01**	**163**	AML	AML	14 23 55.2	
	comp=E,3.0nm,0.6s						
IGT	**Igoumenitsa**	**2.01**	**163**	P	**Pb**	**14 23 15.2**	**-0.5**
IGT				S	**Sb**	**14 23 43.7**	**+3.6**
KZN	**Kozani**	**2.03**	**123**	P	**Pb**	**14 23 15.8**	**-0.3**
KZN				S	**Sb**	**14 23 43.4**	**+2.4**
LFKM	**Lefkimmi**	**2.04**	**169**	P	**Pb**	**14 23 16.2**	**0.0**
LFKM				S	**Sb**	**14 23 45.2**	**+4.1**
SELS	**Selova**	**2.11**	**33**	*e*Pn	**Pn**	**14 23 15.1**	**+1.2**
SELS				*e*Sg	**Sb**	**14 23 43.2**	**-0.1**
BARS	**Barje**	**2.17**	**50**	*i* Pn	**Pb**	**14 23 19.6**	**+1.3**
BARS	**Barje**	**2.17**	**50**	*e*Pn	**Pb**	**14 23 15.0**	**+0.5**
BARS				*e*Sg	**Sn**	**14 23 42.3**	**+1.6**
IVAS	**Ivanjica**	**2.17**	**12**	*e*Pn	**Pb**	**14 23 17.7**	**-0.7**
IVAS				*e*Sg	**Sb**	**14 23 47.1**	**+2.2**
RUDO	**Rudo**	**2.17**	**356**	*e*Pn	**Pn**	**14 23 15.4**	**+0.8**
RUDO				*e*Sn	**Sb**	**14 23 45.2**	**+0.3**
GRG	**Griva**	**2.21**	**102**	P	**Pb**	**14 23 17.2**	**-1.8**
GRG	**Griva**	**2.21**	**102**	*i* Pn	**Pb**	**14 23 17.1**	**-1.9**
PRMD	**Pramanda**	**2.25**	**148**	P	**Pb**	**14 23 18.9**	**-0.9**
VAY	**Valandovo**	**2.27**	**92**	*i* Pn	**Pb**	**14 23 19.9**	**-0.3**
VAY				*i* Sn	**Sb**	**14 23 50.0**	**+2.2**
VAY				*e*Lg	Lg	14 23 50.2	
	comp=E,258nm,0.8s						
VAY				*e*Lg	Lg	14 23 50.4	
	comp=N,250nm,0.7s						
MATE	**Matera**	**2.30**	**251**	⇑P	**Pn**	**14 23 16.1**	**-0.2**
GOCS	**Kraljevo Serbi**	**2.33**	**24**	*e*Pn	**Pn**	**14 23 18.0**	**+1.2**
GOCS				*e*Sg	**Sb**	**14 23 49.7**	**+0.3**
BBLS	**Lazi&#263i**	**2.42**	**357**	*e*Pn	**Pb**	**14 23 21.6**	**-1.0**
BBLS				*e*Sg	**Sb**	**14 23 57.1**	**+5.1**
BOSS	**Bosilegrad**	**2.42**	**63**	*e*Pn	**Pn**	**14 23 19.7**	**+1.7**
BOSS				*e*Sg	**Sb**	**14 23 50.0**	**-2.0**
KNT	**Kendrikon**	**2.54**	**95**	*i* Pn	**Pb**	**14 23 25.3**	**+0.7**
GRUS	**Gruza**	**2.58**	**19**	*e*Pn	**Pn**	**14 23 21.8**	**+1.5**
GRUS				*e*Sg	**Sb**	**14 23 58.4**	**+1.7**
LIT	**Litokhoron**	**2.61**	**120**		**Pn**	**14 23 21.5**	**+0.9**
BOVS	**Bovan**	**2.70**	**35**	⇑P	**Pn**	**14 23 23.2**	**+1.3**
BOVS				⇓S	**Sb**	**14 23 58.4**	**-1.7**
BOVS	**Bovan**	**2.70**	**35**	*e*Pn	**Pn**	**14 23 23.4**	**+1.5**
BOVS				*e*Sg	**Sb**	**14 24 00.7**	**+0.6**
THE	**Thessaloniki**	**2.71**	**106**	*i* Pn	**Pn**	**14 23 23.2**	**+1.3**
KKB	**Krupnik**	**2.71**	**81**	P	**Pn**	**14 23 24.6**	**+2.6**
KKB	**Krupnik**	**2.71**	**81**	*i* Pn	**Pn**	**14 23 23.0**	**+1.9**
ACER	**Acerenza**	**2.81**	**258**		**Pn**	**14 23 23.4**	**0.0**
TRUS	**Trudelj**	**2.84**	**12**	*e*Pn	**Pn**	**14 23 25.4**	**+1.6**
TRUS				*e*Sg	**Sb**	**14 24 07.5**	**+3.3**
SGRT	**San Giovanni R**	**2.87**	**277**	Pn	**Pn**	**14 23 23.1**	**-1.2**
SGRT	**San Giovanni R**	**2.87**	**277**		**Pn**	**14 23 22.6**	**-1.7**
ZAPS	**Zavoj**	**2.92**	**50**	*e*Pn	**Pn**	**14 23 26.6**	**+1.7**
ZAPS				*e*Sg	**Sb**	**14 24 07.4**	**+0.9**
VTS	**Vitosha**	**2.98**	**66**	P	**Pn**	**14 23 27.7**	**+1.8**
VTS	**Vitosha**	**2.98**	**66**	*e*Pn	**Pn**	**14 23 27.6**	**+1.7**
VTS				*e*Sg	**Sb**	**14 24 07.8**	**-0.5**
SRS	**Serrai**	**3.06**	**95**	*i* Pn	**Pn**	**14 23 28.6**	**+1.7**
PLNA	**Plana**	**3.06**	**69**	P	**Pb**	**14 23 30.5**	**-3.2**
SVIS	**Svilajnac**	**3.07**	**23**	*e*Pn	**Pn**	**14 23 28.7**	**+1.8**
ZAGS	**Zajecar**	**3.08**	**39**	*e*Pn	**Pn**	**14 23 28.5**	**+1.4**
ZAGS				*e*Sg	**Sb**	**14 24 13.2**	**+2.2**
TEKS	**Tekeris**	**3.10**	**360**	*e*Pn	**Pn**	**14 23 29.6**	**+2.3**
BLSH	**Balsha**	**3.11**	**62**	P	**Pn**	**14 23 33.6**	**-0.8**
TIP	**Timpagrande**	**3.12**	**224**		**Pn**	**14 23 27.1**	**-0.5**
MMB	**Musomishta**	**3.15**	**87**	P	**Pn**	**14 23 30.7**	**+2.6**
MMB	**Musomishta**	**3.15**	**87**	*i* Pn	**Pn**	**14 23 30.2**	**+2.1**
BLKB	**Belogradchik**	**3.17**	**46**	*e*Pn	**Pn**	**14 23 30.1**	**+1.

PLOR	**Plostina**	**6.77**	**47**	⇑P		**Pn**	**14 24 20.4**	**+2.6**
VRI	**Vrincioaia**	**6.82**	**47**	⇑P		**Pn**	**14 24 21.0**	**+2.6**
TEOL	**Teolo**	**6.94**	**307**			**Pn**	**14 24 18.6**	**-1.6**
CONA	**Conrad Observa**	**6.99**	**339**	*e*Pn		**Pn**	**14 24 23.1**	**+2.2**
	comp=N,0.6nm,0.3s							
CONA				*e*Sn		**Sn**	**14 25 41.5**	**+1.9**
	comp=N,2.9nm,0.3s							
KECS	**Kecovo**	**7.06**	**5**	*e*PG		**Pn**	**14 24 26.2**	**+4.4**
MODS	**Modra-Piesok**	**7.11**	**348**	*e*PG		**Pb**	14 24 32.2	-10
MODS				*e*SN		**Sn**	**14 25 44.6**	**+2.1**
TIRR	**Tirgusor**	**7.16**	**62**	⇓P		**Pn**	**14 24 25.5**	**+2.4**
KBA	**Koelnbreinsper**	**7.17**	**324**	*e*Pn		Pn	14 24 28.4	+4.9
	comp=N,0.6nm,0.4s							
CFR	**Carcaliu**	**7.28**	**56**	⇑P		**Pn**	**14 24 26.4**	**+1.6**
TPGR	**Topolog**	**7.32**	**59**	⇑P		**Pn**	**14 24 27.5**	**+2.2**
ABTA	**Abfaltersbach**	**7.33**	**319**	*e*Pn		**Pn**	**14 24 26.6**	**+1.1**
	comp=N,2.3nm,0.6s							
ABTA				*i* Sn		**Sn**	**14 25 50.5**	**+2.5**
	comp=N,16nm,0.4s							
CTI	**Castel Tesino**	**7.34**	**311**			**Pn**	**14 24 24.3**	**-1.4**
BURAR	**Bucovina Array**	**7.37**	**31**	Pn		**Pn**	**14 24 25.6**	**-0.5**
BURAR	**Bucovina Array**	**7.37**	**31**	⇓P		**Pn**	**14 24 29.2**	**+3.1**
MOA	**Molln**	**7.42**	**331**	*e*Pn		Pn	14 24 31.4	+4.7
	comp=N,2.0nm,0.4s							
MOA				*e*Sn		**Sn**	**14 25 54.4**	**+4.1**
	comp=N,5.9nm,0.5s							
IDI	**Anoyia**	**7.44**	**144**	P		**Pn**	**14 24 25.9**	**-1.2**
	comp=N,4.0nm,0.7s,baz=14,slow=22,SNR=1.7							
IDI				S		**Sn**	**14 25 46.3**	**-4.6**
	comp=N,5.0nm,0.3s,baz=102,slow=20,SNR=6.6							
BIOA	**Bad Ischl, Aus**	**7.53**	**328**	*e*Pn		**Pn**	**14 24 30.2**	**+1.9**
	comp=N,0.7nm,0.3s							
BIOA				*i* Sn		**Sn**	**14 25 56.5**	**+3.6**
	comp=N,6.8nm,0.4s							
TLCR		**7.71**	**58**	⇓P		**Pn**	**14 24 32.6**	**+1.9**
LESA	**Schwarzleotal**	**7.74**	**323**	*e*Pn		**Pn**	**14 24 34.9**	**+3.8**
	comp=N,2.8nm,0.7s							
MSSA	**Maissana**	**7.91**	**295**	Pn		**Pn**	**14 24 32.3**	**-1.1**
VSL	**Villasalto**	**8.00**	**259**	Pn		**Pn**	**14 24 33.5**	**-1.2**
STHS	**Stebnicka Huta**	**8.05**	**8**	*e*PG		Pn	14 24 41.4	+6.0
STHS				*e*SN		**Sn**	**14 26 10.9**	**+5.2**
WTTA	**Wattenberg**	**8.12**	**318**	*e*Pn		**Pn**	**14 24 37.4**	**+1.0**
	comp=N,3.6nm,0.8s							
WTTA				*e*Sn		**Sn**	**14 26 10.9**	**+3.3**
	comp=N,17nm,0.4s							
VRAC	**Vranov**	**8.13**	**346**	LR		LR	14 28 37.9	
	comp=N,152nm,19.5s,baz=167,slow=44							
WATA	**Walderalm**	**8.20**	**319**	*e*Pn		**Pn**	**14 24 39.0**	**+1.5**
	comp=N,2.9nm,0.5s							
WATA				*e*Sn		**Sn**	**14 26 14.2**	**+4.8**
	comp=N,18nm,0.4s							
FETA	**Feichten**	**8.43**	**314**	*e*Pn		Pn	14 24 46.0	+5.3
	comp=N,0.8nm,0.4s							
FETA				*e*Sn		**Sn**	**14 26 19.0**	**+3.8**
	comp=N,4.6nm,0.4s							
MOTA	**Moosalm**	**8.44**	**317**	*e*Pn		Pn	14 24 46.2	+5.3
	comp=N,2.0nm,0.3s							
MOTA				*e*Sn		**Sn**	**14 26 18.0**	**+2.6**
	comp=N,13nm,0.5s							
GERES	**GERESS Array B**	**8.47**	**333**	P		**Pn**	**14 24 43.6**	**+2.4**
	comp=N,0.4nm,0.3s,baz=150,slow=14,SNR=1.4							
GERES				S		**Sn**	**14 26 15.1**	**-0.9**
	comp=N,2.4nm,0.4s,baz=149,slow=23,SNR=5.5							
KHC	**Kasperske Hory**	**8.76**	**333**	*e*PN		Pn	14 24 51.1	+6.1
KHC				*e*SN		**Sn**	**14 26 23.2**	**+0.2**
DAVOX	**Davos/Dischmat**	**8.76**	**311**	P		**Pn**	**14 24 46.6**	**+1.3**
	comp=N,1.3nm,0.3s,baz=129,slow=18,SNR=4.5							
DAVOX				S		**Sn**	**14 26 20.1**	**-3.3**
	comp=N,2.3nm,0.4s,baz=324,slow=22,SNR=1.5							
DAVOX				LR		LR	14 29 09.6	
	comp=N,134nm,18.1s,baz=94,slow=44							
	comp=N,2.2nm,0.3s							
TUE	**Stuetta**	**8.91**	**308**			**Pn**	**14 24 46.7**	**-0.6**
KEST	**Kesra**	**9.82**	**238**	P		**Pn**	**14 24 59.2**	**-0.5**
	comp=N,0.2nm,0.3s,baz=80,slow=17,SNR=2.0							
KEST				LR		LR	14 30 07.9	
	comp=N,333nm,18.0s,baz=62,slow=46							
	comp=N,3.6nm,0.8s							
BRTR	**Keskin Array B**	**10.85**	**95**	LR		LR	14 30 14.6	
	comp=N,242nm,18.3s,baz=288,slow=42							
AKASG	**Malin Array Be**	**11.42**	**33**	P		**Pn**	**14 25 21.9**	**+0.4**
	comp=N,0.2nm,0.2s,baz=216,slow=12,SNR=4.4							
AKASG				LR		LR	14 30 18.6	
	comp=N,197nm,18.3s,baz=232,slow=40							
NACGM	**Naroch**	**14.29**	**17**	*e*P		**Pn**	**14 26 03.3**	**+2.8**
MMAI	**Mount Meron Ar**	**15.16**	**119**	LR		LR	14 32 36.4	
	comp=N,50nm,19.5s,baz=320,slow=39							
KBZ	**Khabaz**	**17.33**	**75**	P		**P**	**14 26 41.7**	**+0.3**
	comp=N,0.1nm,0.3s,baz=308,slow=6.2,SNR=3.6							
KBZ				LR		LR	14 34 57.2	
	comp=N,29nm,20.6s,baz=260,slow=42							
	comp=N,2.6nm,0.9s							
ESDC	**Sonseca Array**	**17.95**	**272**	P		**P**	**14 26 48.1**	**-0.2**
	baz=88,slow=12,SNR=1.4							
ESDC				LR		LR	14 33 24.3	
	comp=N,71nm,19.7s,baz=136,slow=36							
	comp=N,0.3nm,0.6s							
HFS	**Hagfors**	**19.05**	**351**	P		**Pn**	**14 27 00.6**	**-0.5**
	comp=N,0.3nm,0.3s,baz=165,slow=12,SNR=5.3							
HFS				LR		LR	14 34 56.8	
	comp=N,41nm,19.1s,baz=160,slow=38							
	comp=N,3.8nm,1.0s							
NB201	**NORSAR Array S**	**20.26**	**348**	P		**P**	**14 27 12.0**	**-1.5**
NB201				IAmb		IAmb	14 27 28.9	
	comp=Z,22nm,1.2s							
NB2	**NORSAR Subarra**	**20.27**	**348**	P		Pn	14 27 15.2	-0.4
	comp=Z,5.3nm,1.1s,baz=168,slow=11							
NOA	**NORSAR Array B**	**20.27**	**348**	P		Pn	14 27 14.4	-1.2
	comp=Z,1.0nm,0.7s,baz=153,slow=10,SNR=3.6							
NOA				LR		LR	14 36 21.7	
	comp=Z,53nm,20.0s,baz=165,slow=40							
NBO00	**NORSAR Array S**	**20.33**	**348**	P		**P**	**14 27 13.3**	**-0.8**
NBO00				IAmb		IAmb	14 27 42.5	
	comp=Z,24nm,1.3s							
EKA	**Eskdalemuir Ar**	**20.37**	**321**	P		**P**	**14 27 15.1**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=120,slow=9.2,SNR=4.7							
	comp=Z,1.3nm,0.8s							
FINES	**FINESS Array B**	**20.41**	**9**	P		**P**	**14 27 14.0**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=185,slow=9.7,SNR=20							
FINES				LR		LR	14 36 07.1	
	comp=Z,104nm,20.8s,baz=214,slow=39							
	comp=Z,1.8nm,0.3s							
FINES	**FINESS Array B**	**20.41**	**9**	P		**P**	**14 27 14.2**	**-0.8**
FIA1	**FINESS Array S**	**20.41**	**9**	P		**P**	**14 27 14.9**	**-0.1**
MDT	**Midelt**	**21.05**	**254**	LR		LR	14 35 07.9	
	comp=Z,98nm,19.4s,baz=65,slow=35							
BELG	**Belogornoye**	**21.93**	**51**	P		**P**	**14 27 30.9**	**-0.6**
	comp=Z,20nm,1.0s,baz=74,slow=5.9,SNR=5.7							
	comp=Z,20nm,1.0s							
KIRV	**Kirov**	**25.41**	**37**	LR		LR	14 39 32.7	
	comp=Z,73nm,19.6s,baz=279,slow=40							
ARCES	**ARCESS Array B**	**28.32**	**4**	P		**P**	**14 28 31.4**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=187,slow=9.2,SNR=1.3							
ARCES				LR		LR	14 41 02.0	
	comp=Z,131nm,18.6s,baz=154,slow=39							
	comp=Z,2.2nm,1.0s							
ARTI	**Arti**	**29.10**	**46**	LR		LR	14 41 23.6	
	comp=Z,100nm,19.3s,baz=253,slow=38							
TORD	**Torodi Ar. Bea**	**32.22**	**214**	P		**P**	**14 29 06.0**	**-0.4**
	comp=Z,5.8nm,0.4s,baz=13,slow=11,SNR=1.3							
	comp=Z,5.8nm,0.4s							
TORD	**Torodi Ar. Bea**	**32.22**	**214**	P		**P**	**14 29 03.9**	**-2.5**
TORD				IAmb		IAmb	14 29 47.9	
	comp=Z,8.7nm,0.8s							
BORG	**Borgarnes**	**32.91**	**329**	LR		LR	14 44 38.9	
	comp=Z,47nm,19.3s,baz=136,slow=40							
BORK	**Borovoye**	**35.63**	**53**	P		**P**	**14 29 34.1**	**-1.6**
BVAR	**Borovoye Array**	**35.67**	**53**	P		**P**	**14 29 35.4**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=265,slow=7.1,SNR=5.7							
	comp=Z,2.7nm,0.9s							
KURBB	**Kurchatov Arra**	**40.96**	**56**	P		**P**	**14 30 19.9**	**-0.7**
	comp=Z,0.7nm,0.2s,baz=294,slow=9.5,SNR=1.1							
	comp=Z,0.7nm,0.2s							
ZALV	**Zalesovo Beam**	**44.12**	**50**	P		**P**	**14 30 44.9**	**-1.3**
	comp=Z,2.6nm,0.4s,baz=283,slow=7.4,SNR=7.3							
	comp=Z,2.6nm,0.4s							
ZALV	**Zalesovo Beam**	**44.12**	**50**	P		**P**	**14 30 45.8**	**-0.4**
MKAR	**Makanchi Array**	**44.29**	**61**	P		**P**	**14 30 46.5**	**-1.2**
	comp=Z,2.1nm,0.4s,baz=282,slow=7.7,SNR=16							
MKAR				PcP		**PP**	**14 32 30.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=278,slow=3.4,SNR=1.5							
	comp=Z,2.1nm,0.4s							
MKAR	**Makanchi Array**	**44.29**	**61**	P		**P**	**14 30 45.1**	**-2.6**
SONM	**Songino Array**	**58.99**	**52**	P		**P**	**14 32 37.3**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=292,slow=7.6,SNR=2.1							
	comp=Z,0.4nm,0.3s							
CMAR	**Chiang Mai Arr**	**70.19**	**83**	P		**P**	**14 33 50.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=303,slow=6.2,SNR=1.5							
	comp=Z,0.3nm,0.3s							
ASAR	**Alice Springs**	**123.19**	**93**	PKP		**PKPdf**	**14 41 33.9**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=282,slow=1.8,SNR=1.3							

MOS ***28*** *14:39:11.4±1.1,23˚.18N×95˚.94E,h10km,mb5.2/48, MS4.7/13,Error ellipse: s-maj=7.7km s-min=3.7km az=116.3*

BJI ***28*** *14:39:11.9,23˚.05N×95˚.91E,h19km,mB5.5/46,mb5.0/72, ML5.6/7,Ms5.4/79,Ms7 5.1/76*

NDI ***28*** *14:39:11.5±3.3,23˚.06N×96˚.28E,h10km,mb5.2,ML5.2, MW5.0*

IDC ***28*** *14:39:12.0±0.4,23˚.23N×95˚.90E,h0km,mb4.6/36, mbtmp4.6/39,ML5.1/3,MS4.5/73,Error ellipse: s-maj=11.1km s-min=9.9km az=78.0*

NEIC ***28*** *14:39:13.8,23˚.18N×96˚.04E,h12km*

NEIC ***28*** *14:39:13.8,23˚.18N×96˚.04E,h12km,Moment Tensor Solution. Duration: 2s2 Moment tensor: Scale 10^16Nm; Mrr-0.34; Mθθ1.00; Mφφ-0.66; Mrθ0.77; Mθφ7.02; Mφr5.03; Fault plane solution: Mo8.72000×10^16 NP1:φs93.91000°, δ54.31000°,λ-0.31000°. NP2:φs184.09000°,δ89.75000°, λ-144.31000°. Principal axes: T 9.0067, Plg24.0000°, Azm313.0000°; N -0.6131, Plg54.0000°, Azm184.0000°; P -8.3936, Plg25.0000°, Azm55.0000°;*

GCMT ***28*** *14:39:13.8±0.1,23˚.10N±0˚.01×96˚.06E±0˚.01,h21km, MW5.3/133,Moment Tensor Solution. s91,c134; s133,c251; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.03±.01; Mθθ0.16±.01; Mφφ-0.12±.01; Mrθ0.45±.03; Mθφ0.88±.01; Mφr0.15±.02; Best double couple: Mo0.99900×10^17 NP1:φs3.00000°,δ65.00000°, λ173.00000°. NP2:φs95.00000°,δ84.00000°,λ25.00000°. Principal axes: T 1.0830, Plg22.0000°, Azm322.0000°; N -0.1670, Plg64.0000°, Azm108.0000°; P -0.9160, Plg13.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***28*** *14:39:13.8±1.5,23˚.18N±0˚.06×96˚.04E±0˚.06,h10km±1km, mb5.3/143,Mww5.2/14 Error ellipse: s-maj=11.7km s-min=7.4km az=42.0*

BKK ***28*** *14:39:14.4±0.3,23˚N±4˚×9˚6E±˚,h10km,M5.9/26, Mjma5.7/26,MLv5.9/22*

ISC 28 14:39:15.1±0.4,23˚.26N±0˚.02×95˚.85E±0˚.02,h16km±2km, h16km:pP-P,n831,σ1s73/815,mb5.1/216,MS4.6/100, 56C-22D,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.34**	**312**	*e*P		**Pb**	**14 39 58.1**	**+1.1**
IMP				*e*S		**Sg**	**14 40 31.2**	**+0.9**
IMP				IAML			14 40 36.5	
	comp=E,19μm,0.8s							
IMP				IAML			14 40 39.0	
	comp=N,19μm,1.1s							
SAIH	**SAIHA**	**2.75**	**254**	*e*P		**Pn**	**14 40 00.3**	**+1.6**
SAIH				*e*S		**Sb**	**14 40 38.1**	**+0.6**
SAIH				IAML			14 40 50.7	
	comp=E,11μm,0.9s							
SAIH				IAML			14 40 50.7	
	comp=N,13μm,0.8s							
KOHI	**KOHIMA**	**2.92**	**327**	*e*P		**Pb**	**14 40 04.3**	**-2.5**
KOHI				*e*S		**Sb**	**14 40 41.9**	**-0.4**
KOHI				IAML			14 41 02.0	
	comp=E,10μm,1.0s							
KOHI				IAML			14 41 02.2	
	comp=N,9μm,0.8s							
TNCH	**TengChong**	**3.01**	**54**	Pn		**Pn**	**14 40 01.5**	**-0.8**
TNCH				Pg		**Pg**	**14 40 11.0**	**-1.8**
TNCH				Sn		**Sn**	**14 40 38.0**	**-0.1**
TNCH				Sg		**Sg**	**14 40 49.3**	**-2.5**
TNCH				smax	smax			
	comp=N,32μm,1.4s							
TNCH				smax	smax			
	comp=N,23μm,1.2s							
TNCH				LR	LR			
	comp=N,31μm,4.9s							
SILR	**SILCHAR**	**3.17**	**299**	*e*P		**Pb**	**14 40 08.6**	**-2.4**
SILR				*e*S		**Sb**	**14 40 49.9**	**+0.5**
SILR				IAML			14 40 57.9	
	comp=N,8μm,1.0s							
SILR				IAML			14 41 07.5	
	comp=E,9μm,1.3s							
MOKO	**MOKOCHONG**	**3.28**	**339**	*e*P		**Pn**	**14 40 09.2**	**+3.2**
MOKO				*e*S		**Sb**	**14 40 50.4**	**-2.3**
MOKO				*e*S		**Sg**	**14 40 57.0**	**-3.5**
MOKO				IAML			14 41 15.4	
	comp=E,8μm,0.8s							
MOKO				IAML			14 41 16.6	
	comp=N,9μm,0.8s							
JORH	**JORHAT**	**3.76**	**338**	*e*P		**Pn**	**14 40 15.0**	**+2.6**
JORH				*ex*		x	14 41 09.3	
JORH				IAML			14 41 35.1	
	comp=E,8μm,1.2s							
JORH				IAML			14 41 36.7	
	comp=N,8μm,1.1s							
BRDH	**Bariadhala**	**3.92**	**262**	Pn		**Pn**	**14 40 15.7**	**+1.0**
	comp=N,44nm,0.3s,baz=71,slow=12,SNR=12							
BRDH				Pg		**Pb**	**14 40 23.4**	**-0.5**
	comp=N,73nm,0.3s,baz=57,slow=18,SNR=8.1							
BRDH				Sn		**Sn**	**14 41 04.7**	**+4.3**
	comp=N,374nm,0.3s,baz=73,slow=22,SNR=8.4							
BRDH				Lg		Lg	14 41 09.7	
	comp=N,268nm,0.3s,baz=259,slow=22,SNR=4.1							
BRDH				LR		LR	14 41 41.4	
	comp=N,6μm,18.2s,baz=246,slow=38							
	comp=N,113nm,0.3s							
BELO	**BELONIA**	**4.05**	**271**	*e*P		**Pn**	**14 40 19.5**	**+3.1**
BELO				*e*S		**Sn**	**14 41 10.4**	**+6.8**
LKP	**Lekhapani**	**4.05**	**360**	*e*P		**Pn**	**14 40 14.7**	**-1.8**
LKP				*e*S		**Sn**	**14 41 04.0**	**+0.4**
LKP				IAML			14 41 29.0	
	comp=E,7μm,1.9s							
LKP				IAML			14 41 31.1	
	comp=N,8μm,0.8s							
AGT	**Agartala**	**4.26**	**279**	*e*P		**Pn**	**14 40 22.6**	**+3.2**
AGT				*e*S		**Sn**	**14 41 15.1**	**+6.2**
AGT				IAML			14 41 31.3	
	comp=E,6μm,0.7s							
AGT				IAML			14 41 35.1	
	comp=N,8μm,1.2s							
DIBR	**DIBRUGARH**	**4.27**	**349**	*e*P		**Pb**	**14 40 30.7**	**+0.8**
SHL	**Shillong**	**4.28**	**303**			**Pn**	**14 40 21.9**	**+2.1**
SHL	**Shillong**	**4.28**	**303**	*e*P		**Pn**	**14 40 22.3**	**+2.5**
SHL				*e*S		**Sn**	**14 41 12.2**	**+2.7**
SHL				IAML			14 41 18.4	
	comp=N,8μm,0.6s							
SHL				IAML			14 41 21.9	
	comp=E,8μm,0.3s							
SHL	**Shillong**	**4.28**	**303**	P		**Pn**	**14 40 21.9**	**+2.1**
ITAN	**ITANAGAR**	**4.32**	**334**	*e*P		**Pn**	**14 40 22.4**	**+2.3**
TEZP	**TEZPUR**	**4.34**	**321**	*e*P		**Pn**	**14 40 21.3**	**+0.9**
TEZP				*e*S		**Sn**	**14 41 13.5**	**+2.8**
CMAI	**Chiengmai2**	**4.45**	**137**	P		**Pn**	**14 40 19.2**	**-3.0**
ZIRO	**ZIRO**	**4.61**	**337**	*e*P		**Pn**	**14 40 26.4**	**+2.0**
ZIRO				*e*S		**Sn**	**14 41 22.0**	**+4.2**
GUWA	**GUWAHATI**	**4.78**	**309**	*e*P		**Pn**	**14 40 27.8**	**+1.4**
GUWA				*e*S		**Sn**	**14 41 24.9**	**+3.5**
GUWA				IAML			14 41 29.3	
	comp=E,6μm,0.5s							
GUWA				IAML			14 41 36.0	
	comp=N,6μm,0.6s							
PASG	**PASIGHAT**	**4.80**	**354**	*e*P		Pn	14 40 28.6	-10
CHTO	**Chiang Mai**	**5.29**	**146**			**Pn**	**14 40 30.5**	**-3.0**
CHTO	**Chiang Mai**	**5.29**	**146**	P		**Pn**	**14 40 30.5**	**-3.0**
CHTO	**Chiang Mai**	**5.29**	**146**	P		**Pn**	**14 40 30.7**	**-2.8**
MHMT	**Maesariang**	**5.42**	**159**	P		**Pn**	**14 40 33.2**	**-2.2**
CM31	**Chiang Mai Arr**	**5.59**	**148**			**Pn**	**14 40 35.0**	**-2.6**
CMAR	**Chiang Mai Arr**	**5.59**	**148**	Pn		**Pn**	**14 40 35.0**	**-2.7**
	comp=N,50nm,0.3s,baz=325,slow=13,SNR=594							
CMAR				Pg		**Pb**	**14 40 54.1**	**+1.8**
	comp=N,133nm,0.3s,baz=328,slow=16,SNR=31							
CMAR				Lg		Lg	14 42 03.3	
	comp=N,98nm,0.3s,baz=322,slow=30,SNR=8.1							
	comp=N,168nm,0.4s							
TAWA	**Tawang**	**5.62**	**321**	*e*P		**Pn**	**14 40 41.1**	**+2.8**
TAWA				*e*S		**Sn**	**14 41 45.8**	**+3.1**
TAWA				IAML			14 41 52.1	
	comp=E,5μm,0.9s							
TAWA				IAML			14 41 54.1	
	comp=N,6μm,0.8s							
LAMP	**Lampang**	**5.89**	**142**	P		**Pn**	**14 40 39.0**	**-2.9**

DHUB	**DHUBRI**	**5.99**	**298**	*e*P		**Pn**	**14 40 44.5**	**+1.4**
DHUB				*e*S		**Sn**	**14 41 53.2**	**+1.8**
DHUB				IAML			14 41 54.5	
	comp=N,6μm,1.0s							
PZH	**PanZhiHua**	**6.25**	**58**	Pg		Pb	14 41 07.8	+4.2
PZH				Sg		**Sg**	**14 42 33.0**	**-2.7**
PZH				smax	smax			
	comp=N,1μm,1.7s							
PZH				smax	smax			
	comp=N,810nm,1.5s							
PZH				LR	LR			
	comp=N,9μm,6.1s							
PZH				LR	LR			
	comp=N,18μm,7.3s							
PZH				LR	LR			
	comp=N,12μm,8.8s							
COBR	**COOCHBEHAR**	**6.54**	**299**	*e*P		**Pn**	**14 40 52.7**	**+2.0**
COBR				*e*S		**Sn**	**14 42 06.5**	**+1.4**
COBR				IAML			14 42 20.9	
	comp=N,5μm,0.7s							
KMI	**Kunming**	**6.56**	**72**	⇓Pn		**Pn**	**14 40 54.0**	**+2.8**
KMI				Sn		**Sn**	**14 42 05.3**	**-0.5**
KMI				smax	smax			
	comp=N,4μm,1.4s							
KMI				smax	smax			
	comp=E,3μm,1.2s							
KMI				LR	LR			
	comp=N,65μm,9.1s							
KMI				LR	LR			
	comp=E,26μm,8.1s							
KMI				LR	LR			
	comp=Z,4μm,10.8s							
UTTA	**Uttaradit**	**7.04**	**140**	P		**Pn**	**14 40 54.9**	**-2.7**
LSA	**Lhasa**	**7.67**	**328**			**Pn**	**14 41 09.6**	**+3.0**
LSA	**Lhasa**	**7.67**	**328**	P		**Pn**	**14 41 05.5**	**-1.1**
LSA				S		**Sn**	**14 42 35.0**	**+1.6**
LSA				pmax	pmax			
	comp=Z,120nm,0.8s							
LSA				LR	LR			
	comp=Z,3μm,10.0s							
LSA				LR	LR			
	comp=Z,4μm,8.2s							
LSA				LR	LR			
	comp=Z,3μm,8.9s							
LSA	**Lhasa**	**7.67**	**328**	P		**Pn**	**14 41 09.6**	**+3.0**
UTHA	**Uthaitani**	**8.38**	**155**	P		**Pn**	**14 41 14.5**	**-1.5**
KHLT	**Khaolaem Dam**	**8.81**	**162**	P		**Pn**	**14 41 20.6**	**-1.3**
BOK	**Bokaro**	**9.16**	**275**	*e*P		**Pn**	**14 41 29.9**	**+3.3**
BOK				*e*S		**Sn**	**14 43 06.4**	**-3.1**
BOK				IAML			14 43 17.7	
	comp=N,803nm,0.8s							
BOK				IAML			14 43 21.2	
	comp=E,983nm,0.8s							
EVN	**Everest**	**9.39**	**302**			**Pn**	**14 41 31.5**	**+1.0**
KHON	**Khomkaen**	**9.51**	**135**	P		**Pn**	**14 41 29.6**	**-1.9**
BWNR	**Bhubaneshwar**	**9.79**	**254**	*e*P		**Pn**	**14 41 35.9**	**+0.6**
BWNR				*e*S		**Sn**	**14 43 20.2**	**-4.7**
BWNR				IAML			14 43 28.5	
	comp=N,2μm,0.9s							
BWNR				IAML			14 43 28.7	
	comp=E,2μm,0.6s							
STMR	**SITAMARHI**	**10.20**	**292**	*e*P		**Pn**	**14 41 43.3**	**+2.3**
STMR				*e*S		**Sn**	**14 43 35.1**	**+0.1**
STMR				IAML			14 43 40.4	
	comp=E,4μm,2.1s							
STMR				IAML			14 43 40.7	
	comp=N,5μm,1.4s							
PANO	**Nakornpanom**	**10.23**	**125**	P		**Pn**	**14 41 40.2**	**-1.2**
GYA	**Guiyang**	**10.32**	**70**	⇑P		**Pn**	**14 41 42.5**	**-0.2**
GYA				S		**Sn**	**14 43 37.3**	**-0.9**
GYA				pmax	pmax			
	comp=N,34nm,1.2s							
GYA				pmax	pmax			
	comp=N,450nm,4.2s							
GYA				LR	LR			
	comp=N,5μm,7.6s							
GYA				LR	LR			
	comp=N,10μm,7.8s							
GYA				LR	LR			
	comp=N,6μm,6.7s							
CD2	**Chengdu**	**10.37**	**41**	P		**Pn**	**14 41 45.0**	**+1.7**
CD2				S		**Sn**	**14 43 45.5**	**+6.2**
CD2				pmax	pmax			
	comp=N,50nm,1.0s							
CD2				pmax	pmax			
	comp=N,2μm,3.9s							
CD2				LR	LR			
	comp=N,22μm,10.2s							
CD2				LR	LR			
	comp=N,16μm,9.5s							
CD2				LR	LR			
	comp=N,27μm,12.1s							
DGPR	**DIGLIPUR**	**10.41**	**196**	*e*P		**Pn**	**14 41 41.6**	**-2.2**
GOMU	**GeErMu**	**12.92**	**356**	P		**Pn**	**14 42 17.5**	**-1.0**
GOMU				S		**Sn**	**14 44 41.0**	**-1.2**
GOMU				pmax	pmax			
	comp=N,66nm,1.0s							
GOMU				LR	LR			
	comp=N,5μm,11.4s							
GOMU				LR	LR			
	comp=N,2μm,11.3s							
GOMU				LR	LR			
	comp=N,7μm,12.0s							
GULI	**GuiLin**	**13.39**	**78**	P		**P**	**14 42 34.5**	**+0.4**
GULI				S		**S**	**14 45 15.0**	**-2.1**
GULI				pmax	pmax			
	comp=Z,34nm,1.2s							
GULI	

CNSH smax smax
comp=N,120nm,3.1s
CNSH LR LR
comp=N,19μm,12.4s
CNSH LR LR
comp=E,6μm,15.1s
CNSH smax smax
comp=E,83nm,2.5s
GTA Gaotai 16.45 11 *e*P **Pn 14 43 06.0 +0.6**
GTA pP P 14 43 09.3 +1.2
GTA S **S 14 46 15.5 -4.2**
GTA pmax pmax
comp=E,340nm,12.0s
GTA LR LR
comp=E,10μm,10.4s
GTA LR LR
comp=E,20μm,15.5s
GTA LR LR
comp=E,9μm,11.2s
DLV Lat 16.47 131 P **P 14 43 07.0 -1.5**
BHPL Bhopal 16.93 274 *e*P **Pn 14 43 11.9 +0.4**
BHPL *e*S Sn 14 46 08.4 -11
BHPL IAML 14 46 42.6
comp=N,96nm,1.5s
BHPL IAML 14 46 58.1
comp=E,68nm,1.8s
HYBB Hyderabad (bro 17.23 253 *e*P **P 14 43 17.6 +0.9**
DDI Dehra Dun 17.36 298 *e*P **P 14 43 20.4 +2.2**
DDI *e*S **Sn 14 46 23.7 -6.2**
DDI IAML 14 46 32.6
comp=E,392nm,1.1s
DDI IAML 14 46 36.3
comp=N,600nm,1.7s
NDI New Delhi 17.60 292 *e*P **P 14 43 22.0 +1.3**
NPLP NPLP New Delhi 17.62 292 *e*P **P 14 43 21.1 +0.1**
WHN Wuhan 18.01 62 P **Pn 14 43 23.5 -1.3**
WHN pP **pP 14 43 27.0 -2.8**
WHN sP **sP 14 43 29.8 -2.1**
WHN pmax pmax
comp=N,210nm,1.2s
WHN LR LR
comp=N,30μm,11.2s
WHN LR LR
comp=N,15μm,8.4s
WHN LR LR
comp=N,15μm,11.3s
KUDL Kundal 18.11 290 *e*P **P 14 43 28.4 +2.0**
KUDL IAmb IAmb 14 43 37.7
comp=Z,161nm,1.0s
KUDL *e*S Sn 14 46 35.7 -12
LYN LuoYang 18.36 49⇑ *i*P **Pn 14 43 27.5 -1.6**
LYN pP pP 14 43 30.8 -2.8
LYN sP sP 14 43 36.8 +1.1
LYN S **Sn 14 46 54.5 +0.6**
LYN sS sS 14 47 03.8 -1.9
LYN pmax pmax
comp=Z,43nm,0.9s
LYN pmax pmax
comp=Z,830nm,6.9s
LYN LR LR
comp=Z,12μm,10.0s
LYN LR LR
comp=Z,8μm,9.6s
LYN LR LR
comp=Z,12μm,9.6s
KULM Kulim 18.46 165 **P 14 43 25.8 -4.5**
KULM IAmb IAmb 14 43 35.9
comp=Z,204nm,1.3s
KULM Kulim 18.46 165 P **Pn 14 43 33.3 +2.9**
MLSI Meulaboh, Aceh 18.89 178 P **Pn 14 43 36.8 +1.1**
IPM Ipoh 19.33 164 P **Pn 14 43 40.4 -0.6**
TLWR Talawar 19.62 301 *e*P **Pn 14 43 48.3 +3.9**
TLWR *e*S **S 14 47 15.4 -8.5**
KCSI Kotacane, Aceh 19.71 174 P **P 14 43 44.1 0.0**
comp=Z,1μmcomp=Z,86nm,1.1s
TSSA Tissa 19.80 303 *e*P **Pn 14 43 49.3 +2.6**
TSSA IAmb IAmb 14 44 01.2
comp=Z,151nm,0.8s
TSI Tuntungan 19.82 172 P **Pn 14 43 47.8 +1.0**
TPTI 19.93 176 P **P 14 43 44.3 -2.1**
comp=Z,82nm,1.0s
TIY Taiyuan 20.24 41 *e*P Pn 14 43 51.5 -0.3
TIY PP **PnPn 14 44 14.8 +8.2**
TIY S **S 14 47 36.8 +0.3**
TIY pmax pmax
comp=Z,55nm,0.9s
TIY pmax pmax
comp=Z,540nm,4.6s
TIY LR LR
comp=Z,3μm,9.1s
TIY LR LR
comp=Z,2μm,10.1s
TIY LR LR
comp=Z,3μm,16.2s
PSI Prapat 20.56 171 P **P 14 43 53.3 -0.1**
comp=Z,37nm,0.9s,baz=339,slow=10,SNR=18
PSI S **S 14 47 41.9 -1.1**
comp=Z,5.3nm,0.4s,baz=161,slow=14,SNR=1.7
PSI Lg Lg 14 50 05.2
comp=Z,1.1nm,0.3s,baz=68,slow=23,SNR=6.4
PSI LR LR 14 53 32.3
comp=Z,2μm,18.5s,baz=336,slow=42
comp=Z,37nm,0.9s
PSI Prapat 20.56 171 P Pn 14 43 55.2 -0.4
RPSI Rantau Prapat 20.66 171 **P 14 43 49.2 -5.2**
RPSI IAmb IAmb 14 44 04.0
comp=Z,101nm,1.0s
SNSI Sinabang, Aceh 20.74 179 P Pn 14 43 56.9 -0.7
comp=Z,2μmcomp=Z,183nm,1.0s
BTO Baotou 21.01 31 *e*P **P 14 43 57.5 -0.6**
BTO PP **PnPn 14 44 26.3 +9.2**
BTO S Sn 14 47 55.0 -3.0
BTO pmax pmax
comp=Z,260nm,0.9s
BTO pmax pmax
comp=Z,2μm,3.2s
BTO LR LR
comp=Z,16μm,13.1s
BTO LR LR
comp=Z,27μm,14.9s
BTO LR LR
comp=Z,17μm,11.6s
HNS HongShan 21.47 45⇓ P **P 14 44 04.5 +1.6**
HNS S **S 14 48 02.5 +1.9**
HNS pmax pmax
comp=Z,54nm,1.1s
HNS LR LR
comp=Z,7μm,11.1s
HNS LR LR
comp=Z,3μm,10.2s
PALK Pallekele 21.56 225 P **P 14 44 05.1 +1.0**
comp=Z,19nm,0.7s,baz=33,slow=11,SNR=12
PALK S **S 14 47 57.6 -5.1**
comp=Z,6.0nm,0.9s,baz=218,slow=22,SNR=1.4
PALK ScP **ScP 14 51 44.9 +2.0**
comp=Z,7.5nm,0.8s,baz=99,slow=9.7,SNR=1.1
PALK LR LR 14 54 27.2
comp=Z,1μm,18.1s,baz=48,slow=42
comp=Z,19nm,0.7s
PALK Pallekele 21.56 225 **P 14 44 01.9 -2.2**
PALK IAmb IAmb 14 44 10.7
comp=Z,263nm,1.8s
PALK Pallekele 21.56 225⇑ *e*P **P 14 44 07.9 +3.8**
PALK pmax pmax
comp=Z,185nm,1.7s
WMQ Urumqi 21.58 344 ⇑P **P 14 44 05.8 +1.7**
WMQ pP sP 14 44 13.3 +2.4
WMQ PP **PnPn 14 44 29.8 +5.0**
WMQ S **S 14 48 02.5 -0.3**
WMQ pmax pmax
comp=Z,90nm,1.3s
WMQ pmax pmax
comp=Z,830nm,3.8s
WMQ LR LR
comp=Z,3μm,16.9s
WMQ LR LR
comp=Z,4μm,15.5s
WMQ LR LR
comp=Z,1μm,24.0s
GSI Gunungsitoli 21.89 175 **P 14 44 05.6 -2.0**
GSI Gunungsitoli 21.89 175 P **P 14 44 08.8 +1.2**
GSI Gunungsitoli 21.89 175 P **P 14 44 05.4 -2.2**
comp=Z,2μmcomp=Z,125nm,1.3s
HHC Hu-ho-hao-te 21.96 33⇓ *i*P **P 14 44 09.5 +1.2**
HHC pP sP 14 44 15.8 +0.8
HHC S **S 14 48 08.5 -1.8**
HHC pmax pmax
comp=Z,38nm,1.3s
HHC pmax pmax
comp=Z,300nm,5.9s
HHC LR LR
comp=Z,4μm,14.8s
HHC LR LR
comp=Z,7μm,16.8s
HHC LR LR
comp=Z,4μm,11.0s
NJ2 Nanjing 22.14 62 *e*P **P 14 44 08.0 -2.2**
NJ2 pP **pP 14 44 14.3 -0.5**
NJ2 sP **sP 14 44 19.0 +2.1**
NJ2 PP **PnPn 14 44 34.3 +1.8**
NJ2 S **S 14 48 15.5 +1.7**
NJ2 sS Sn 14 48 24.3 -0.8
NJ2 pmax pmax
comp=Z,22nm,0.7s
NJ2 pmax pmax
comp=Z,580nm,3.7s
NJ2 LR LR
comp=Z,6μm,9.8s
NJ2 LR LR
comp=Z,5μm,9.8s
NJ2 LR LR
comp=Z,3μm,12.2s
NIL Nilore 22.36 303 **P 14 44 13.2 +0.6**
NIL Nilore 22.36 303 P **P 14 44 13.2 +0.6**
NIL pmax pmax
comp=Z,358nm,1.2s
TIA Tai'an 22.47 50 P **P 14 44 13.0 -0.8**
TIA pP **pP 14 44 17.3 -1.0**
TIA sP **sP 14 44 22.5 +2.1**
TIA S **S 14 48 14.8 -5.1**
TIA pmax pmax
comp=Z,52nm,1.2s
TIA pmax pmax
comp=Z,550nm,3.7s
TIA LR LR
comp=Z,8μm,13.5s
TIA LR LR
comp=Z,4μm,12.9s
TIA LR LR
comp=Z,4μm,11.4s
MNSI Mandailing Nat 22.62 170 P **P 14 44 14.9 -0.6**
BTDF Bukit Timah Da 23.09 159 P **P 14 44 23.3 +3.0**
KSH Kashi 23.38 318 P **P 14 44 25.0 +1.7**
KSH pP sP 14 44 31.8 +1.7
KSH S **S 14 48 35.8 0.0**
KSH pmax pmax
comp=Z,130nm,1.2s
KSH pmax pmax
comp=Z,1μm,5.1s
KSH LR LR
comp=Z,1μm,16.5s
KSH LR LR
comp=Z,1μm,15.8s
KSH LR LR
comp=Z,2μm,17.3s
SZP Santa 23.74 99 P **P 14 44 29.7 +2.9**
TARG Taragay, Kyrgy 23.80 325 P **P 14 44 29.3 +1.6**
TARG Taragay, Kyrgy 23.80 325 P **P 14 44 29.3 +1.6**
TARG pmax pmax
comp=Z,318nm,1.2s
SSE Sheshan 23.82 65 P **P 14 44 25.5 -1.9**
SSE S **S 14 48 40.8 -1.8**
SSE pmax pmax
comp=Z,13nm,0.7s
SSE pmax pmax
comp=Z,340nm,4.6s
SSE LR LR
comp=Z,5μm,13.1s
SSE LR LR
comp=Z,2μm,12.3s
BJT Baijiatuau 23.96 41 **P 14 44 28.2 -0.5**
BJT IAmb IAmb 14 44 34.9
comp=Z,93nm,1.2s
BJT Baijiatuau 23.96 41 P **P 14 44 29.3 +0.6**
BJT Baijiatuau 23.96 41 P **P 14 44 28.2 -0.5**
BJT pmax pmax
comp=Z,93nm,1.2s
BJI Beijing 23.98 41 P **P 14 44 28.5 -0.3**
BJI S **S 14 48 42.5 -2.5**
BJI sS **sS 14 48 54.5 +1.5**
BJI pmax pmax
comp=Z,31nm,1.2s
BJI pmax pmax
comp=Z,450nm,4.0s
BJI LR LR
comp=Z,1μm,10.7s
BJI LR LR
comp=Z,1μm,10.3s
BJI LR LR
comp=Z,1μm,17.9s
SHLS Shalkode 24.04 330 *e*P **P 14 44 27.9 -1.7**
comp=Z,55nm,1.1s
SHLS *e*S **S 14 48 45.5 -0.7**
SHLS Shalkode 24.04 330 *e*P **P 14 44 27.8 -1.7**
SHLS *e*S **S 14 48 45.5 -0.7**
SHLS pmax pmax
comp=Z,55nm,1.1s
PDGK Podgornoye 24.16 330 P **P 14 44 31.5 +0.8**
UZB Uzynbulak 24.23 329 *e*P **P 14 44 31.4 -0.1**
comp=Z,57nm,1.4s
UZB *e*S **S 14 48 51.5 +2.1**
UZB Uzynbulak 24.23 329 *e*P **P 14 44 31.3 -0.1**
UZB *e*S **S 14 48 51.5 +2.1**
UZB pmax pmax
comp=Z,57nm,1.4s
KDJ Kajisay 24.42 325 P **P 14 44 35.2 +2.0**
KDJ Kajisay 24.42 325 P **P 14 44 35.2 +2.0**
KDJ pmax pmax
comp=Z,467nm,1.2s
PDSI Padang 24.45 169 P **P 14 44 35.2 +1.8**
SATY Saty 24.46 328 *e*P **P 14 44 33.9 +0.3**
comp=Z,62nm,1.1s
SATY Saty 24.46 328 *e*P **P 14 44 33.8 +0.3**
SATY pmax pmax
comp=Z,62nm,1.1s
DSRI Dabo 25.08 159 P **P 14 44 42.0 +2.9**
comp=Z,1μmcomp=Z,42nm,1.4s
TNSS Tian-Shan 25.18 326 *e*P **P 14 44 40.4 +0.1**
TNSS Tian-Shan 25.18 326 *e*P **P 14 44 40.4 +0.1**
MDOK Medeo 25.22 326 *e*P **P 14 44 40.9 +0.5**
MDOK *e*S **S 14 49 07.9 +2.6**
MDOK Medeo 25.22 326 *e*P **P 14 44 40.8 +0.5**
MDOK *e*S **S 14 49 07.9 +2.6**
KNDC Almaty 25.30 326 P **P 14 44 43.1 +2.1**
AAA Alma-Ata 25.32 326 *e*P **P 14 44 41.8 +0.6**
AAA Alma-Ata 25.32 326 *e*P **P 14 44 41.7 +0.6**
TGY Tagaytay City 25.42 107 LR LR 14 53 32.8
comp=Z,827nm,20.8s,baz=298,slow=34
ARXS Arharly 25.61 329 *i* P **P 14 44 44.0 +0.2**
ZSN Zaisan 25.69 343 *e*P **P 14 44 44.7 +0.2**
comp=Z,33nm,1.3s
ZSN *e*S **S 14 49 14.8 +2.3**
ZSN Zaisan 25.69 343 *e*P **P 14 44 44.6 +0.2**
ZSN *e*S **S 14 49 14.7 +2.3**
ZSN pmax pmax
comp=Z,33nm,1.3s
MK31 Makanchi Array 25.89 338 *i* P **P 14 44 46.8 +0.5**
MK31 pmax pmax
comp=Z,108nm,1.0s
MKAR Makanchi Array 25.89 338 P **P 14 44 47.0 +0.7**
comp=Z,56nm,0.9s,baz=140,slow=10,SNR=106
MKAR PcP **PcP 14 48 14.8 -0.2**
comp=Z,2.6nm,0.8s,baz=175,slow=2.6,SNR=1.7
MKAR ScP **ScP 14 51 55.5 +1.4**
comp=Z,2.1nm,1.0s,baz=145,slow=4.4,SNR=3.5
MKAR LR LR 14 56 47.6
comp=Z,1μm,20.2s,baz=152,slow=41
comp=Z,56nm,0.9s
MKAR Makanchi Array 25.89 338 **P 14 44 46.7 +0.4**
SONM Songino Array 25.93 16 P **P 14 44 47.3 +0.6**
comp=Z,36nm,1.0s,baz=202,slow=8.0,SNR=42
SONM ScP **ScP 14 51 56.2 +1.9**
comp=Z,0.6nm,0.3s,baz=180,slow=0.7,SNR=2.3
SONM LR LR 14 56 13.5
comp=Z,2μm,21.9s,baz=200,slow=39
comp=Z,36nm,1.0s
KBL Kabul 25.94 302 **P 14 44 48.0 +0.9**
KBL Kabul 25.94 302 P **P 14 44 48.0 +0.9**
KBL pmax pmax
comp=Z,109nm,1.1s
TDK Taldyqorghan 25.94 331 *e*P **P 14 44 47.1 +0.3**
comp=Z,27nm,0.8s
TDK Taldyqorghan 25.94 331 *e*P **P 14 44 47.1 +0.3**
TDK pmax pmax
comp=Z,27nm,0.8s
MAKZ Makanchi 26.01 338 P **P 14 44 48.1 +0.7**
MAKZ Makanchi 26.01 338 P **P 14 44 48.1 +0.7**
MAKZ pmax pmax
comp=Z,110nm,1.0s
DRK Karamyk 26.02 314 P **P 14 44 49.2 +1.4**
DRK Karamyk 26.02 314 P **P 14 44 49.2 +1.4**
DRK pmax pmax
comp=Z,137nm,0.5s
SBUM Sibu 26.07 140 P **P 14 44 43.6 -4.6**
SBUM Sibu 26.07 140 P **P 14 44 50.3 +2.2**
ULN Ulaanbaatar 26.13 17*c**e*P **P 14 44 48.7 +0.1**
ULN pmax pmax
comp=Z,27nm,1.2s
AAK Ala-Archa 26.22 323 **P 14 44 51.5 +2.0**
AAK IAmb IAmb 14 44 53.0
comp=Z,117nm,1.2s
AAK Ala-Archa 26.22 323*c i*P **P 14 44 51.4 +1.9**
AAK pmax pmax
comp=Z,76nm,1.1s
XLT XiLinHaoTe 26.47 34 *e*P **P 14 44 52.3 +0.7**
XLT pP sP 14 44 57.5 -1.1
XLT S **S 14 49 26.0 +1.0**
XLT SS **SnSn 14 50 34.8 +8.3**
XLT pmax pmax
comp=Z,42nm,1.0s
XLT LR LR
comp=Z,3μm,13.9s
XLT LR LR
comp=Z,3μm,10.5s
SGDS Sogindy 26.69 324 *e*P **P 14 44 54.0 +0.5**
comp=Z,27nm,1.4s
DL2 Dalian 26.90 49 P **P 14 44 54.0 -1.4**
DL2 S **S 14 49 32.3 +0.6**
DL2 sS **sS 14 49 45.5 +5.7**
DL2 pmax pmax
comp=Z,63nm,0.9s
DL2 pmax pmax
comp=Z,300nm,6.1s
DL2 LR LR
comp=Z,2μm,16.1s
DL2 LR LR
comp=Z,3μm,12.2s
DL2 LR LR
comp=Z,4μm,12.4s
DGZ Jazzator, Alta 27.20 348⇑ *e*P **P 14 44 58.5 +0.3**
DGZ pmax pmax
comp=Z,36nm,1.2s
KNGR Kungurtug, Tuv 27.32 2*ce*P **P 14 45 01.2 +2.0**
KNGR pmax pmax
comp=Z,23nm,1.6s
ZAK Zakamensk 27.68 10 *e*P **P 14 45 02.4 -0.1**
ZAK pmax pmax
comp=Z,79nm,1.6s
BTLS Baital 28.07 326⇑ *i*P **P 14 45 06.5 +0.5**
comp=Z,35nm,1.9s
BTLS Baital 28.07 326*c i*P **P 14 45 06.4 +0.5**
BTLS pmax pmax
comp=Z,35nm,1.9s
DZA Taraz 28.21 320 *e*P **P 14 45 07.4 +0.2**
DZA Taraz 28.21 320 *e*P **P 14 45 07.3 +0.2**
MYLDM Lahad Datu 28.29 126 P **P 14 45 11.4 +3.3**
IUG Iuzhnay 28.57 317 *e*P **P 14 45 11.1 +0.6**
comp=Z,34nm,1.1s
IUG Iuzhnay 28.57 317 *e*P **P 14 45 11.1 +0.6**
IUG pmax pmax
comp=Z,34nm,1.1s
MOY Mondy 28.63 7 *e*P **P 14 45 12.8 +1.9**
MOY pmax pmax
comp=Z,41nm,2.1s
KK31 Karatay Array 28.82 319 *i* P **P 14 45 13.0 +0.4**
KKAR Karatay Array 28.82 319 P **P 14 45 13.0 +0.4**
KKAR Karatay Array 28.82 319 P **P 14 45 13.0 +0.4**
CHM Chimkent 28.93 317 *e*P **P 14 45 14.0 +0.3**
comp=Z,28nm,1.4s
CHM Chimkent 28.93 317 *e*P **P 14 45 13.9 +0.3**
CHM pmax pmax
comp=Z,28nm,1.4s
TLY Talaya 29.00 10⇑ *e*P **P 14 45 14.7 +0.6**
TLY pmax pmax
comp=Z,9.0nm,1.1s
BRLS Borolday 29.18 319⇑ *i*P **P 14 45 15.9 0.0**
BRLS Borolday 29.18 319*c i*P **P 14 45 15.8 0.0**
JOW Kunigami 29.55 76 LR LR 14 58 28.6
comp=Z,1μm,21.6s,baz=206,slow=39
SNY Shenyang 29.62 45⇑ P **P 14 45 22.8 +3.2**
SNY pmax pmax
comp=Z,20nm,0.9s
SNY pmax pmax
comp=Z,180nm,5.3s
SNY LR LR
comp=Z,2μm,12.0s
SNY LR LR
comp=Z,2μm,10.2s
SNY LR LR
comp=Z,2μm,13.7s
IRK Irkutsk 29.65 10 *e*P **P 14 45 18.2 -1.6**
IRK pmax pmax
comp=Z,65nm,2.7s
SEM Semipalatinsk 29.71 340 *e*P **P 14 45 20.7 0.0**
comp=Z,15nm,0.9s
SEM Semipalatinsk 29.71 340 *e*P **P 14 45 20.6 0.0**
SEM pmax pmax
comp=Z,15nm,0.9s
MTKI Muara Teweh, K 30.37 140 P **P 14 45 30.5 +4.0**
comp=Z,24nm,0.7s
KURBB Kurchatov Arra 30.46 338 P **P 14 45 27.4 +0.4**
comp=Z,9.1nm,0.6s,baz=148,slow=8.5,SNR=34
KURBB PcP **PcP 14 48 26.2 +0.1**
comp=Z,8.0nm,0.9s,baz=164,slow=3.1,SNR=5.5
KURBB ScP **ScP 14 52 09.0 +1.0**
comp=Z,0.6nm,0.2s,baz=151,slow=3.2,SNR=4.2
KURBB LR LR 14 59 32.7
comp=Z,2μm,19.0s,baz=150,slow=40
comp=Z,9.1nm,0.6s
KURBB Kurchatov Arra 30.46 338 P **P 14 45 26.6 -0.4**
KURK Kurchatov 30.51 338 **P 14 45 27.4 0.0**
KURK Kurchatov 30.51 338*ce*P **P 14 45 27.5 +0.1**
KURK pmax pmax
comp=Z,22nm,0.8s
KSRS Korea Array 30.91 55 P **P 14 45 29.4 -1.7**
comp=Z,5.0nm,0.9s,baz=245,slow=9.2,SNR=6.5
KSRS PP **PnPn 14 46 29.5 -2.3**
comp=Z,7.1nm,1.1s,baz=250,slow=11,SNR=5.4
comp=Z,5.0nm,0.9s
ZALV Zalesovo Beam 31.75 348 P **P 14 45 38.3 0.0**
comp=Z,2.2nm,0.4s,baz=157,slow=8.0,SNR=21
ZALV LR LR 15 00 00.1
comp=Z,689nm,19.8s,baz=172,slow=39
comp=Z,2.2nm,0.4s
ZALV Zalesovo Beam 31.75 348 P **P 14 45 38.6 +0.3**
CIT Chita 31.77 21 *e*P **P 14 45 37.0 -1.6**
CIT *e* 14 46 41.4
CIT *e* 14 47 00.0
CIT pmax pmax
comp=Z,121nm,2.3s
CN2 Changchun 31.80 43 P **P 14 45 41.0 +2.1**
CN2 S **S 14 50 49.5 +0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,2μm,13.0s
CN2 LR LR
comp=Z,1μm,13.0s
CN2 LR LR
comp=Z,1μm,11.0s
HIA Hailar 32.06 30 **P 14 45 38.7 -2.4**
HIA Hailar 32.06 30 P **P 14 45 42.3 +1.2**
HIA Hailar 32.06 30 P **P 14 45 38.7 -2.4**
HIA pmax pmax
comp=Z,20nm,1.0s
BRZS Berezniki 32.25 332 *e*P **P 14 45 43.1 +0.2**
BRZS Berezniki 32.25 332 *e*P **P 14 45 43.0 +0.2**
HILR Hailar Array B 32.27 30 P **P 14 45 44.0 +1.1**
comp=Z,21nm,0.8s,baz=213,slow=10,SNR=25
HILR LR LR 15 00 05.7
comp=Z,2μm,18.1s,baz=145,slow=39
comp=Z,21nm,0.8s
JNU Nakatsue 32.27 64 LR LR 14 59 50.6
comp=Z,787nm,19.4s,baz=256,slow=38
BBKI Banjar Baru 32.38 143 P **P 14 45 47.2 +2.9**
MPSI Mapaga 32.64 131 P **P 14 45 48.0 +1.5**

TOLI2 **Tolitoli** 32.72 129 P **P** 14 45 49.3 +2.1
DAV **Davao City (W)** 32.79 115 LR LR 14 57 49.0
comp=Z,668nm,21.2s,baz=269,slow=34
KPJI **Karang Pucung** 32.99 156 P **P** 14 45 52.8 +3.3
comp=Z,56nm,1.2s
BNX **BinXian** 33.99 41 ⇓P **P** 14 45 57.8 -0.2
BNX pmax pmax
comp=Z,33nm,1.2s
WSAR **Wadi Sarin** 34.13 277 LR LR 15 00 30.8
comp=Z,6.6nm,20.3s,baz=105,slow=37
GTOI **Gorontalo** 34.66 127 P **P** 14 46 05.5 +1.4
comp=Z,22nm,1.0s
APSI **Ampana** 34.75 130 P **P** 14 46 08.3 +3.4
comp=Z,41nm,1.0s
TTSI **Tana Toraja** 35.07 135 P **P** 14 46 10.6 +3.0
comp=Z,672nmcomp=Z,36nm,1.4s
KMSI **Cibinong** 35.42 126 P **P** 14 46 12.8 +2.1
BVA0 **Borovoye Array** 35.46 333 *i* P **P** 14 46 10.5 -0.1
BVAR **Borovoye Array** 35.46 333 P **P** 14 46 10.9 +0.3
comp=Z,8.4nm,0.6s,baz=136,slow=11,SNR=53
BVAR PP **PP** 14 47 32.0 +0.9
comp=Z,17nm,0.9s,baz=143,slow=11,SNR=5.4
BVAR PcP **PcP** 14 48 40.0 0.0
comp=Z,6.5nm,0.8s,baz=149,slow=1.4,SNR=2.4
BVAR ScP **ScP** 14 52 26.6 +1.3
comp=Z,1.7nm,0.9s,baz=122,slow=1.9,SNR=2.3
BVAR LR LR 15 01 05.8
comp=Z,820nm,21.8s,baz=132,slow=37
comp=Z,8.4nm,0.6s
BORK **Borovoye** 35.50 333 P **P** 14 46 11.1 +0.1
BORK **Borovoye** 35.50 333*de*P **P** 14 46 10.7 -0.3
BORK pmax pmax
comp=Z,30nm,1.0s
LUWI **Luwuk** 35.63 129 P **P** 14 46 15.9 +3.4
LUWI **Luwuk** 35.63 129 P **P** 14 46 14.7 +2.2
VLA **Vladivostok** 35.71 48⇑*e*P **P** 14 46 11.6 -1.3
VLA pmax pmax
comp=Z,40nm,1.1s
SPSI **Sidrap Palu** 35.74 136 P **P** 14 46 16.3 +2.9
comp=Z,41nm,2.3s
USRK **Ussuriysk Ar.** 36.19 46 P **P** 14 46 16.2 -0.8
comp=Z,27nm,1.0s,baz=242,slow=7.1,SNR=17
comp=Z,27nm,1.0s
SRBI **Singaraja** 36.46 146 P **P** 14 46 21.4 +1.9
comp=Z,1µmcomp=Z,50nm,1.1s
HEH **HeiHe** 36.47 34 *e*P **P** 14 46 19.5 +0.2
HEH PP **PP** 14 47 48.5 +6.2
HEH S **S** 14 51 59.8 -0.8
HEH pmax pmax
comp=Z,52nm,1.3s
HEH LR LR
comp=Z,990nm,11.4s
HEH LR LR
comp=Z,2µm,13.7s
HEH LR LR
comp=Z,2µm,13.7s
KAPI **Kappang** 36.53 137 LR LR 15 02 30.8
comp=Z,676nm,21.9s,baz=299,slow=38
BKSI **Bulukumba** 37.00 137 P **P** 14 46 25.3 +1.1
comp=Z,16nm,1.1s
INU **Inuyama** 37.62 62 P **P** 14 46 28.6 -0.6
TWSI **Taliwang, Sumb** 37.88 145 P **P** 14 46 35.0 +3.4
comp=Z,666nmcomp=Z,44nm,1.2s
JGF **Kuroka** 37.92 61 P **P** 14 46 33.7 +1.8
AB31 **Akbulak array** 38.30 322 *i* P **P** 14 46 35.0 +0.1
ABKAR **Akbulak array** 38.30 322 P **P** 14 46 35.5 +0.6
ZEA **Zeya** 38.53 30 *e*P **P** 14 46 37.5 +0.7
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=N,900nm,20.0s
ZEA MLR MLR
comp=E,700nm,20.0s
ZEA MLR MLR
comp=Z,1µm,18.0s
MAJO **Matsushiro** 38.73 60 P **P** 14 46 37.3 -1.4
MAJO **Matsushiro** 38.73 60*de*P **P** 14 46 36.6 -2.1
MAJO pmax pmax
comp=Z,26nm,0.9s
MJAR **Matsushiro Arr** 38.73 60 P **P** 14 46 37.6 -1.1
comp=Z,35nm,1.1s,baz=273,slow=9.1,SNR=16
MJAR PcP **PcP** 14 48 50.1 -0.2
comp=Z,2.7nm,0.8s,baz=281,slow=4.7,SNR=1.6
MJAR LR LR 15 02 34.4
comp=Z,1µm,18.4s,baz=260,slow=36
comp=Z,35nm,1.1s
JHJ **Hachijo jima 2** 39.70 66 LR LR 15 03 01.3
comp=Z,771nm,20.5s,baz=324,slow=36
AKTO **Aktyubinsk** 39.97 322 LR LR 15 05 21.6
comp=Z,687nm,21.8s,baz=125,slow=39
AKTO **Aktyubinsk** 39.97 322 P **P** 14 46 48.7 -0.1
WBSI **Waikabubak, Su** 40.00 142 P **P** 14 46 50.4 +0.9
EDFI **Ende, Flores** 40.64 139 P **P** 14 46 56.1 +1.3
comp=Z,18nm,1.2s
GRNR **Gornyy** 41.67 38⇓*i*P **P** 14 47 03.1 +0.2
GRNR pmax pmax
comp=Z,7.0nm,0.9s
GRNR MLR MLR
comp=N,520nm,11.0s
GRNR MLR MLR
comp=E,1µm,11.0s
GRNR MLR MLR
comp=Z,1µm,15.0s
JCJ **Chichijima** 41.93 75 LR LR 15 04 41.2
comp=Z,385nm,18.0s,baz=261,slow=36
SVE **Sverdlovsk** 42.17 332*de*P **P** 14 47 07.8 +1.0
SVE pmax pmax
comp=Z,47nm,0.8s
SVE MLR MLR
comp=Z,658nm,16.0s
ARTI **Arti** 42.92 330 LR LR 15 06 24.2
comp=Z,532nm,19.7s,baz=122,slow=38
ARTI **Arti** 42.92 330 P **P** 14 47 12.6 -0.3
ARTI IAmb IAmb 14 47 20.6
comp=Z,36nm,0.5s
ARTI **Arti** 42.92 330*ce*P **P** 14 47 13.0 +0.1
ARTI pmax pmax
comp=Z,61nm,2.5s
BATI **Baumata** 42.98 138 LR LR 15 06 13.0
comp=Z,1µm,21.5s,baz=332,slow=38
BATI **Baumata** 42.98 138 P **P** 14 47 14.5 +0.6
comp=Z,41nm,1.0s
SOEI **Soe** 43.01 137 P **P** 14 47 14.5 +0.2
SOEI **Soe** 43.01 137 P **P** 14 47 14.4 +0.2
ASAJ **Asahikawa** 43.42 50 LR LR 15 04 27.9
comp=Z,471nm,21.7s,baz=230,slow=35
AKT **Akhty** 43.91 306 *e*P **P** 14 47 20.7 -0.6
AKT *e*S **S** 14 53 52.9 +0.7
AKT *e* 14 57 13.6
AKT pmax pmax
comp=Z,33nm,0.7s
AKT MLR MLR
comp=Z,406nm,14.0s
YSS **Yuzhno-Sakhali** 44.23 46 *e*P **P** 14 47 23.1 -0.5
YSS *e*S **S** 14 53 55.3 -1.2
YSS *e*SS **SS** 14 57 16.1 +1.5
YSS MLR MLR
comp=Z,2µm,15.0s
YSS MLR MLR
comp=E,2µm,14.0s
MAK **Makhachkala** 44.32 308*c i*P P 14 47 18.6 -5.8
MAK *e* 14 49 01.2
MAK *e*S S 14 53 48.9 -9.0
MAK *e*SS **SS** 14 57 15.0 -1.5
MAK pmax pmax
comp=Z,399nm,1.7s
MAK MLR MLR
comp=Z,1µm,13.0s
YAK **Yakutsk** 45.05 22 LR LR 15 07 46.9
comp=Z,1µm,19.7s,baz=220,slow=38
YAK **Yakutsk** 45.05 22 *e*P **P** 14 47 28.5 -1.4
YAK *e* 14 49 09.0
YAK *e* 14 49 14.2
YAK *e*PPP PPP 14 49 52.0
YAK *e*S **S** 14 54 08.4 +0.5
YAK *e**SS **sS** 14 54 16.8 +0.5
YAK *e* 14 57 25.8
YAK *e*SSS SSS 14 58 16.7
YAK pmax pmax
comp=Z,21nm,1.1s
YAK pmax pmax
comp=N,16nm,1.4s
YAK pmax pmax
comp=E,14nm,1.7s
YAK pmax pmax
comp=Z,116nm,3.2s
YAK pmax pmax
comp=N,115nm,3.0s
YAK pmax pmax
comp=E,106nm,2.7s
YAK smax smax
comp=N,65nm,2.3s
YAK smax smax
comp=E,52nm,1.7s
YAK MLR MLR
comp=Z,441nm,13.0s
YAK MLR MLR
comp=N,359nm,15.0s
YAK MLR MLR
comp=E,350nm,15.0s
GNI **Garni** 45.99 304 LR LR 15 09 21.1
comp=E,321nm,19.1s,baz=120,slow=39
GNI **Garni** 45.99 304*ce*P **P** 14 47 39.6 +1.7
GNI pmax pmax
comp=Z,40nm,1.2s
RAYN **Ar Rayn** 46.01 281 **P** 14 47 38.9 +0.8
RAYN **Ar Rayn** 46.01 281 ⇓P **P** 14 47 38.4 +0.2
NRIK **Noril'sk** 46.36 356 P **P** 14 47 39.4 -0.8
comp=Z,7.7nm,1.0s,baz=158,slow=6.3,SNR=8.0
NRIK LR LR 15 07 01.2
comp=Z,724nm,18.9s,baz=174,slow=36
comp=Z,7.7nm,1.0s
BELG **Belogornoye** 46.70 321*de*P **P** 14 47 41.7 -1.4
BELG pmax pmax
comp=Z,6.0nm,1.2s
GUMO **Guam** 47.30 93 LR LR 15 06 55.1
comp=Z,373nm,19.3s,baz=294,slow=35
KBZ **Khabaz** 47.76 309 P **P** 14 47 51.5 0.0
comp=Z,4.6nm,0.9s,baz=151,slow=5.2,SNR=5.8
KBZ LR LR 15 11 34.0
comp=Z,531nm,18.4s,baz=94,slow=41
comp=Z,4.6nm,0.9s
KBZ **Khabaz** 47.76 309*de*P **P** 14 47 52.0 +0.5
KBZ pmax pmax
comp=Z,7.0nm,1.0s
SHA1 **Shidzhatmaz** 47.94 309*c i*P **P** 14 47 53.7 +0.5
KIV **Kislovodsk** 47.95 309 ⇑P **P** 14 47 53.7 +0.7
KIV **Kislovodsk** 47.95 309 *e*P **P** 14 47 53.5 +0.4
KIV *e*S **S** 14 54 52.3 +2.1
KIV pmax pmax
comp=Z,31nm,1.0s
KIV MLR MLR
comp=Z,354nm,16.0s
KIV **Kislovodsk** 47.95 309 P **P** 14 47 53.1 0.0
comp=Z,401nmcomp=Z,34nm,1.4s
KIRV **Kirov** 48.20 329⇓*e*P **P** 14 47 55.0 +0.4
BATM **Batumi** 48.42 306 ⇑P **P** 14 47 57.3 +0.7
BATM **Batumi** 48.42 306 ⇑P **P** 14 47 57.3 +0.7
MARD **Mardin** 48.94 300 **P** 14 48 01.1 +0.3
AUDHS **Darwin High Sc** 49.31 132 P **P** 14 48 04.7 +1.0
VRH **Novokhopyorsk** 49.89 318 *e*P **P** 14 48 06.7 -1.0
VRH pmax pmax
comp=Z,62nm,1.2s
MBWA **Marble Bar** 49.91 150 **P** 14 48 05.0 -3.1
MBWA IAmb IAmb 14 48 11.1
comp=Z,32nm,1.0s
MBWA **Marble Bar** 49.91 150 P **P** 14 48 10.2 +2.0
SOC **Sochi** 50.04 308 *e*P **P** 14 48 05.2 -3.8
SOC *e* 14 49 58.8
SOC *e*PPP PPP 14 50 56.6
SOC *e*S **S** 14 55 15.7 -3.8
SOC *e*SSS SSS 15 00 15.2
PSAB1 **Pilbara Seismi** 50.31 151 P **P** 14 48 10.9 -0.3
comp=Z,38nm,1.1s
PSAA2 **Pilbara Seismi** 50.31 151 P **P** 14 48 11.2 -0.1
comp=Z,38nm,1.6s
PSAB2 **Pilbara Seismi** 50.31 151 P **P** 14 48 11.4 +0.2
comp=Z,39nm,1.0s
PSA00 **Pilbara Seismi** 50.32 151 P **P** 14 48 12.8 +1.5
KNRA **Kununurra** 50.34 137 P **P** 14 48 10.7 -0.8
comp=Z,23nm,1.0s
KNRA **Kununurra** 50.34 137 P **P** 14 48 09.8 -1.7
FITZ **Fitzroy Crossi** 50.37 142 P **P** 14 48 11.3 -0.3
FITZ **Fitzroy Crossi** 50.37 142 LR LR 15 13 34.3
comp=Z,485nm,18.8s,baz=307,slow=41
JAY **Jayapura** 50.64 114 LR LR 15 08 29.8
comp=Z,211nm,21.1s,baz=323,slow=35
VSR **Storozhevoye** 51.46 318 *e*P **P** 14 48 17.0 -2.6
VSR pmax pmax
comp=Z,8.0nm,1.0s
VORR **Voronezh** 51.52 318 *e*P **P** 14 48 17.9 -2.1
VORR pmax pmax
comp=Z,121nm,0.4s
ATD **Arta Tunnel** 51.65 266 LR LR 15 10 15.3
comp=Z,24nm,19.8s,baz=42,slow=36
LPSR **Galich'ya Gora** 51.88 319 *e*P **P** 14 48 18.7 -4.0
LPSR pmax pmax
comp=Z,21nm,0.5s
TIXI **Tiksi** 51.92 13 LR LR 15 12 49.0
comp=Z,678nm,18.0s,baz=234,slow=39
TIXI **Tiksi** 51.92 13⇓*e*P **P** 14 48 22.0 -0.7
TIXI pmax pmax
comp=Z,22nm,1.3s
ASF **Jabal al Asfar** 52.38 293 LR LR 15 16 50.9
comp=Z,317nm,19.2s,baz=86,slow=43
MA2 **Magadan** 52.62 32 LR LR 15 13 23.4
comp=Z,727nm,19.0s,baz=253,slow=39
MA2 **Magadan** 52.62 32 P **P** 14 48 27.9 -0.2
comp=Z,4µmcomp=Z,68nm,2.7s
MOS **Moscow** 53.29 323 *e*P **P** 14 48 30.5 -2.6
MOS *e* 14 50 32.0
MOS pmax pmax
comp=Z,42nm,1.2s
MOS MLR MLR
comp=Z,700nm,16.0s
MMAI **Mount Meron Ar** 53.55 295 P **P** 14 48 35.5 0.0
comp=Z,12nm,1.1s,baz=104,slow=6.1,SNR=5.8
MMAI LR LR 15 17 47.0
comp=Z,489nm,18.1s,baz=92,slow=43
comp=Z,12nm,1.1s
KLMR **Klimovskoe** 53.70 330 *e*P **P** 14 48 33.4 -2.6
KLMR *e* 14 50 34.2
KLMR pmax pmax
comp=Z,48nm,1.3s
KLMR MLR MLR
comp=Z,445nm,14.0s
OBN **Obninsk** 53.75 322 LR LR 15 14 29.0
comp=Z,401nm,18.4s,baz=39,slow=39
OBN **Obninsk** 53.75 322 *e*P **P** 14 48 35.9 -0.5
OBN *i* 14 48 41.3
OBN *i*S **S** 14 56 06.2 -3.8
OBN pmax pmax
comp=Z,18nm,1.2s
OBN MLR MLR
comp=Z,381nm,16.0s
BZK **Bozkurt** 54.18 306 ⇑P **P** 14 48 36.8 -3.0
KIRS **Kirsehir-Merke** 54.31 302 ⇑P **P** 14 48 40.2 -0.8
EIL **Elat** 54.36 291 LR LR 15 14 59.3
comp=Z,664nm,22.0s,baz=86,slow=40
ILGA **Ilgaz** 54.41 305 **P** 14 48 41.1 -0.7
SEY **Seymchan** 54.46 28 LR LR 15 13 52.6
comp=Z,1µm,18.5s,baz=246,slow=38
SEY **Seymchan** 54.46 28⇑*e*P **P** 14 48 41.4 -0.2
SEY pmax pmax
comp=Z,9.0nm,1.3s
BR104 **Keskin Array S** 54.50 303 P **P** 14 48 42.0 -0.4
comp=Z,75nmcomp=Z,5.5nm,1.5s
BR131 **Keskin Array S** 54.50 303*de*P **P** 14 48 42.3 -0.1
BRTR **Keskin Array B** 54.50 303 P **P** 14 48 41.5 -0.9
comp=Z,1.2nm,0.5s,baz=108,slow=4.7,SNR=14
comp=Z,1.2nm,0.5s
BRTR **Keskin Array B** 54.50 303 **P** 14 48 41.9 -0.5
BRTR **Keskin Array B** 54.50 303 *i* P **P** 14 48 41.9 -0.5
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BR106 **Keskin Array S** 54.52 303 P **P** 14 48 42.2 -0.3
comp=Z,71nmcomp=Z,6.0nm,0.7s
BR105 **Keskin Array S** 54.52 303 P **P** 14 48 41.7 -0.9
comp=Z,75nmcomp=Z,8.4nm,0.8s
PETK **Petropavlovsk-** 54.91 41 LR LR 15 13 38.2
comp=Z,598nm,19.9s,baz=235,slow=38
MORW **Morawa** 55.54 159 P **P** 14 48 53.0 +3.3
WB0 **Warramunga Arr** 56.95 136 **P** 14 48 56.4 -3.6
WRA **Warramunga Arr** 57.04 136 P **P** 14 48 59.2 -1.4
comp=Z,10nm,0.9s,baz=326,slow=7.5,SNR=21
WRA LR LR 15 15 32.5
comp=Z,237nm,21.8s,baz=300,slow=38
comp=Z,10nm,0.9s
WRA **Warramunga Arr** 57.04 136 *i* P **P** 14 49 01.2 +0.6
WRA pmax pmax
comp=Z,11nm,0.9s
WRAB **Tennant Creek** 57.04 136 P **P** 14 49 01.9 +1.3
WRAB **Tennant Creek** 57.04 136*ce*P **P** 14 49 02.8 +2.2
WRAB pmax pmax
comp=Z,22nm,1.3s
WR8 **Warramunga Arr** 57.15 136 **P** 14 48 58.8 -2.6
WRKA **Warakurna** 57.40 145 P **P** 14 49 02.9 -0.2
comp=Z,8.2nm,2.0s
AKASG **Malin Array Be** 57.65 316 P **P** 14 49 03.0 -1.5
comp=Z,3.0nm,0.6s,baz=78,slow=6.3,SNR=16
AKASG LR LR 15 18 33.1
comp=Z,481nm,18.6s,baz=93,slow=41
comp=Z,3.0nm,0.6s
AKASG **Malin Array Be** 57.65 316 *i* P **P** 14 49 03.0 -1.5
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB **Malin Array Si** 57.65 316⇑*e*P **P** 14 49 02.5 -2.0
AKBB **Malin Array Si** 57.65 316 P **P** 14 49 03.2 -1.3
AK07 **Malin Array Si** 57.66 316 P **P** 14 49 03.7 -0.9
KIEV **Kiev** 57.66 316 ⇑P **P** 14 49 03.6 -1.0
KIEV **Kiev** 57.66 316 ⇑P **P** 14 49 03.6 -1.0
KIEV **Kiev** 57.66 316 P **P** 14 49 03.1 -1.5
comp=Z,106nm,0.9s
AK15 **Malin Array Si** 57.71 316 P **P** 14 49 04.3 -0.7
AK14 **Malin Array Si** 57.72 316 P **P** 14 49 04.3 -0.7
AK16 **Malin Array Si** 57.72 316 P **P** 14 49 04.1 -1.0
AK22 **Malin Array Si** 57.75 316 P **P** 14 49 04.2 -1.0
SORM **Soroca** 58.17 313 ⇑P **P** 14 49 06.7 -1.5
SORM **Soroca** 58.17 313 ⇑P **P** 14 49 06.7 -1.5
TPGR **Topolog** 58.19 309 ⇑P **P** 14 49 07.1 -1.4
TIRR **Tirgusor** 58.21 309 P **P** 14 49 07.4 -1.2
comp=Z,8.4nm,1.8s
APA **Apatity** 58.27 336⇓*e*P **P** 14 49 08.3 -0.3
APA MLR MLR
comp=Z,905nm,12.6s
CFR **Carcaliu** 58.38 310 ⇑P **P** 14 49 09.1 -0.7
CFR **Carcaliu** 58.38 310 ⇑P **P** 14 49 09.1 -0.7
LUBAR **Lubar, Ukraine** 58.57 315 P **P** 14 49 09.0 -2.0
MNK **Minsk** 58.65 321 *i* P **P** 14 49 09.4 -2.1
MNK *i* 14 51 19.5
MNK *i* S **S** 14 57 15.6 +0.4
MNK *i* SS **SS** 15 01 10.3 +2.5
MNK *i* SSS SSS 15 03 31.6
MNK pmax pmax
comp=E,9.0nm,0.5s
MNK pmax pmax
comp=N,24nm,1.0s
MNK pmax pmax
comp=Z,10.0nm,0.8s
MNK MLR MLR
comp=Z,382nm,18.0s
VRI **Vrincioaia** 59.34 311 ⇓P **P** 14 49 15.9 -0.6
VRI **Vrincioaia** 59.34 311 ⇓P **P** 14 49 15.9 -0.6
VRI **Vrincioaia** 59.34 311 P **P** 14 49 16.0 -0.5
comp=Z,45nm,1.0s
TESR **Tescani** 59.37 311 ⇑P **P** 14 49 14.3 -2.3
TESR **Tescani** 59.37 311 P **P** 14 49 15.5 -1.1
comp=Z,15nm,1.4s
PLOR **Plostina** 59.39 311 ⇑P **P** 14 49 15.2 -1.7
PLOR **Plostina** 59.39 311 ⇑P **P** 14 49 15.2 -1.7
KMPD **K-Podol'skiy** 59.43 314 P **pP** 14 49 15.5 -6.7
KMPD P **P** 14 49 14.8 -2.2
NWAO **Narrogin (SRO)** 59.49 159 P **P** 14 49 16.1 -1.4
NWAO **Narrogin (SRO)** 59.49 159 LR LR 15 15 13.3
comp=Z,890nm,20.3s,baz=304,slow=36
AS31 **Alice Springs** 59.52 139 **P** 14 49 16.9 -1.0
ASAR **Alice Springs** 59.52 139 P **P** 14 49 17.7 -0.3
comp=Z,4.6nm,0.7s,baz=323,slow=6.4,SNR=39
ASAR ScP **ScP** 14 54 06.2 +0.5
comp=Z,0.5nm,0.9s,baz=304,slow=4.0,SNR=1.8
ASAR LR LR 15 17 37.4
comp=Z,342nm,21.1s,baz=308,slow=39
comp=Z,4.6nm,0.7s
ASAR **Alice Springs** 59.52 139 **P** 14 49 16.0 -1.9
AUALC **St Philip's Co** 59.53 139 P **P** 14 49 19.9 +1.9
ONER **Baraj Valea Uz** 59.55 311 ⇑P **P** 14 49 16.9 -1.0
LOZB **Loznitsa** 59.59 308 ⇑P **P** 14 49 16.2 -2.0
COVR **Voineasa-Covas** 59.70 311 ⇑P **P** 14 49 18.6 -0.4
RNPP9 **Sopachiv** 59.77 317 P **P** 14 49 18.1 -1.2
RNPP5 **Staryi Chortor** 59.77 317 P **P** 14 49 18.5 -0.8
KMBL **Kambalda** 59.77 154 P **P** 14 49 19.0 -0.5
comp=Z,12nm,1.3s
RNPP8 **Varash** 59.79 317 P **P** 14 49 18.6 -0.8
TURR **Turia** 59.83 311 ⇑P **P** 14 49 18.7 -1.1
MLR **Muntele Rosu** 59.91 310 LR LR 15 20 31.3
comp=Z,271nm,19.7s,baz=52,slow=41
MLR **Muntele Rosu** 59.91 310 **P** 14 49 20.8 +0.2
MLR **Muntele Rosu** 59.91 310 ⇑P **P** 14 49 19.8 -0.7
MLR **Muntele Rosu** 59.91 310 ⇑P **P** 14 49 19.8 -0.7
MLR **Muntele Rosu** 59.91 310 P **P** 14 49 20.4 -0.1
comp=Z,532nmcomp=Z,40nm,0.8s
KARP **Karpathos** 60.01 299 **P** 14 49 20.8 -0.4
FINES **FINESS Array B** 60.19 329 P **P** 14 49 21.7 -0.3
comp=Z,2.5nm,0.7s,baz=90,slow=6.5,SNR=7.5
FINES LR LR 15 16 58.6
comp=Z,361nm,18.6s,baz=92,slow=38
comp=Z,2.5nm,0.7s
FINES **FINESS Array B** 60.19 329 P **P** 14 49 22.3 +0.3
FINES **FINESS Array B** 60.19 329 *i* P **P** 14 49 26.2 +4.2
FINES pmax pmax
comp=Z,4.0nm,0.7s
BURAR **Bucovina Array** 60.30 313 **P** 14 49 22.7 -0.4
BURAR **Bucovina Array** 60.30 313 ⇑P **P** 14 49 22.2 -0.9
BURAR **Bucovina Array** 60.30 313 ⇑P **P** 14 49 22.2 -0.9
VOIR 60.54 310 ⇑P **P** 14 49 24.2 -0.6
VOIR 60.54 310 ⇑P **P** 14 49 24.2 -0.6
ARR **Arges** 60.84 310 ⇑P **P** 14 49 25.3 -1.5
QIS **Mount Isa** 60.96 132 P **P** 14 49 27.7 -0.1
comp=Z,18nm,1.0s
QIS **Mount Isa** 60.96 132 P **P** 14 49 29.6 +1.7
BILL **Bilibino** 61.33 24 **P** 14 49 28.6 -1.1
BILL IAmb IAmb 14 49 35.5
comp=Z,35nm,1.3s
BILL **Bilibino** 61.33 24*de*P **P** 14 49 29.1 -0.6
BILL pmax pmax
comp=Z,21nm,1.0s
ARCES **ARCESS Array B** 61.55 338 P **P** 14 49 30.8 -0.3
comp=Z,2.3nm,0.8s,baz=79,slow=6.3,SNR=5.2
ARCES LR LR 15 19 37.3
comp=Z,748nm,18.6s,baz=93,slow=39
comp=Z,2.3nm,0.8s
ARCES **ARCESS Array B** 61.55 338 P **P** 14 49 31.1 0.0
ARCES **ARCESS Array B** 61.55 338 P **P** 14 49 31.2 0.0
ARCES pmax pmax
comp=Z,135nm,2.0s
MARR **Marisel-Cluj** 61.78 312 ⇓P **P** 14 49 32.6 -0.7
KWP **Kalwaria Pacla** 61.85 315 *e*P **P** 14 49 33.2 -0.4
KWP **Kalwaria Pacla** 61.85 315 P **P** 14 49 32.6 -0.9
comp=Z,46nm,0.9s
KMBO **Kilima Mbogo** 61.87 255 P **P** 14 49 34.0 -0.4
comp=Z,1.6nm,0.3s,baz=162,slow=7.6,SNR=3.9
comp=Z,1.6nm,0.3s
IDI **Anoyia** 61.88 299 LR LR 15 23 28.9
comp=Z,94nm,19.8s,baz=106,slow=43
GZR **Gura Zlata** 62.14 310 ⇑P **P** 14 49 34.7 -0.9
GZR **Gura Zlata** 62.14 310 ⇑P **P** 14 49 34.7 -0.9
HERR **Herculane** 62.45 310 ⇑P **P** 14 49 36.8 -0.8
SURR **Surduc** 62.56 311 ⇓P **P** 14 49 35.3 -3.0
MDVR **Moldovita** 62.95 310 ⇓P **P** 14 49 39.5 -1.6
BOVS **Bovan** 63.10 308 ⇑P **P** 14 49 39.9 -2.0
OPO **Ambohidratompo** 63.13 233 P **P** 14 49 42.4 -0.2
comp=Z,6.8nm,1.0s,baz=14,slow=7.3,SNR=5.3
OPO LR LR 15 15 42.9
comp=Z,143nm,20.2s,baz=182,slow=35
comp=Z,6.8nm,1.0s
KECS **Kecovo** 63.40 314 *e*P **P** 14 49 48.0 +4.1
KECS **Kecovo** 63.40 314 *e*P **P** 14 49 48.0 +4.1
NIE **Niedzica** 63.43 315 *e*P **P** 14 49 44.6 +0.5
NIE **Niedzica** 63.43 315 P **P** 14 49 43.7 -0.4
comp=Z,8.5nm,0.9s
LANS **Liptovska Anna** 64.00 315 *e*P **P** 14 49 48.2 +0.3
LANS **Liptovska Anna** 64.00 315 *e*P **P** 14 49 48.2 +0.3
SHEM **Shemya Is, Ala** 64.81 41 LR LR 15 18 25.9
comp=Z,238nm,20.4s,baz=249,slow=36
MORH **Mrgy, Hungar** 64.91 312 ⇑P **P** 14 49 53.3 -0.6
MORH **Mrgy, Hungar** 64.91 312 P **P** 14 49 52.8 -1.0
comp=Z,4.4nm,0.8s
MAUC **Maruska** 65.04 315 *e*P P 14 50 01.1 +6.4
MORC **Moravsky Berou** 65.17 316 *e*P **P** 14 49 55.1 -0.5
JAVC **Velka Javorina** 65.21 315 *e*P **P** 14 49 55.8 0.0
SPITS **Spitsbergen Ar** 65.23 347 P **P** 14 49 55.0 -0.4
comp=Z,18nm,1.1s,baz=120,slow=5.7,SNR=6.0
comp=Z,18nm,1.1s
CTA **Charters Tower** 65.36 127 LR LR 15 21 27.1
comp=Z,5.1nm,20.7s,baz=288,slow=39
VRAC **Vranov** 65.85 315 LR LR 15 23 00.0

comp=Z,333nm,18.8s,baz=83,slow=40
VRAC Vranov 65.85 315 eP P 14 49 59.6 -0.3
KRUC Moravsky 66.01 315 eP P 14 50 00.5 -0.4
HFS Hagfors 66.25 327 P P 14 50 02.7 +0.5
comp=Z,3.8nm,0.6s,baz=90,slow=3.0,SNR=12
HFS LR LR 15 23 04.6
comp=Z,205nm,18.6s,baz=78,slow=40
comp=Z,3.8nm,0.6s
RONA Rosalia, Austr 66.28 313 i P P 14 50 02.6 -0.1
comp=Z,5.8nm,1.1s
CONA Conrad Observa 66.54 314 eP P 14 50 04.1 -0.3
comp=Z,11nm,1.4s
ARSA Arzberg 66.87 313 eP P 14 50 06.2 -0.3
comp=Z,4.3nm,1.0s
NB2 NORSAR Subarra 67.36 328 P P 14 50 07.8 -1.6
comp=Z,14nm,1.1s,baz=83,slow=6.5
NOA NORSAR Array B 67.36 328 P P 14 50 08.0 -1.4
comp=Z,1.0nm,0.6s,baz=83,slow=6.3,SNR=6.9
NOA LR LR 15 21 41.1
comp=Z,246nm,18.2s,baz=85,slow=38
comp=Z,1.0nm,0.6s
MBAR Mbarara 67.48 259 P P 14 50 09.7 -1.3
comp=Z,2.3nm,0.2s,baz=64,slow=7.3,SNR=5.8
MBAR LR LR 15 20 41.2
comp=Z,492nm,19.7s,baz=66,slow=37
comp=Z,2.3nm,0.2s
MOA Molln 67.61 314 eP P 14 50 11.0 -0.2
comp=Z,6.6nm,0.9s
BBOO Buckleboo 67.69 144 P P 14 50 11.6 -0.1
comp=Z,27nm,1.1s
BBOO Buckleboo 67.69 144 P 14 50 10.3 -1.4
BBOO IAmb IAmb 14 50 17.9
comp=Z,20nm,0.9s
BBOO Buckleboo 67.69 144 P P 14 50 14.7 +3.0
GERES GERESS Array B 67.80 315 P P 14 50 11.8 -0.7
comp=Z,1.3nm,0.7s,baz=76,slow=8.4,SNR=8.4
GERES LR LR 15 23 45.4
comp=Z,327nm,18.4s,baz=90,slow=39
comp=Z,1.3nm,0.7s
KHC Kasperske Hory 67.83 315 eP P 14 50 04.5 -8.0
QLP Quilpie 68.15 134 P P 14 50 15.4 +0.6
comp=Z,30nm,1.2s
QLP Quilpie 68.15 134 P P 14 50 17.7 +3.0
KBA Koelnbreinsper 68.37 313 eP P 14 50 15.7 -0.5
comp=Z,5.0nm,1.3s
LESA Schwarzleotal 68.74 314 eP P 14 50 18.0 -0.3
comp=Z,1.2nm,0.3s
WTTA Wattenberg 69.47 314 eP P 14 50 21.8 -1.2
comp=Z,5.2nm,0.8s
WATA Walderalm 69.49 314 eP P 14 50 22.4 -0.7
comp=Z,2.7nm,0.4s
HTT Hallett 69.73 142 P P 14 50 24.4 -0.1
comp=Z,6.7nm,2.6s
HTT Hallett 69.73 142 P P 14 50 27.5 +3.0
SQTA Sankt Quirin 69.76 314 eP P 14 50 23.7 -1.1
comp=Z,1.5nm,0.4s
MOTA Moosalm 69.81 314 eP P 14 50 23.9 -1.1
comp=Z,7.7nm,1.0s
TATA Tatamba Isabel 69.96 109 P P 14 50 29.5 +3.2
RETA Reutte 70.00 314 eP P 14 50 25.2 -0.9
comp=Z,3.5nm,0.9s
STKA Stephens Creek 70.15 140 P P 14 50 26.9 -0.1
comp=Z,81nm,1.0s
STKA Stephens Creek 70.15 140 P P 14 50 26.1 -1.0
comp=Z,15nm,1.0s,baz=323,slow=7.1,SNR=16
STKA LR LR 15 26 23.5
comp=Z,332nm,18.2s,baz=299,slow=40
comp=Z,15nm,1.0s
STKA Stephens Creek 70.15 140 P P 14 50 26.0 -1.0
STKA Stephens Creek 70.15 140 P P 14 50 27.5 +0.5
STKA Stephens Creek 70.15 140 P P 14 50 26.0 -1.0
STKA pmax pmax
comp=Z,80nm,1.1s
GAMB Gambell 70.47 28 P P 14 50 27.5 -1.0
baz=283
AUMAR Marden Senior 70.66 144 P P 14 50 33.3 +3.2
DAVOX Davos/Dischmat 70.75 313 LR LR 15 26 33.5
comp=Z,325nm,18.0s,baz=78,slow=40
AUMBR Murray Bridge 71.19 143 P P 14 50 36.5 +3.2
TNA Tin City 71.60 26 P P 14 50 34.6 -0.8
baz=285
C16K Lisburne Hills 71.82 23 P P 14 50 36.4 -0.3
baz=287
EIDS Eidsvold 72.11 129 P P 14 50 38.8 -0.3
comp=Z,12nm,0.9s
EIDS Eidsvold 72.11 129 P P 14 50 41.4 +2.3
F14K Arctic Creek 72.27 26 P P 14 50 39.0 -0.4
baz=287
CMSA Cobar Meteorol 72.42 137 P P 14 50 40.7 -0.1
comp=Z,18nm,1.1s
CMSA Cobar Meteorol 72.42 137 P P 14 50 41.3 +0.5
C17K DeLong Mountai 72.52 22 P P 14 50 40.5 -0.4
baz=289
A19K Wainwright 72.64 20 P P 14 50 41.0 -0.6
baz=290
B18K Kokolik River 72.69 21 P P 14 50 41.3 -0.6
baz=290
RDOG Red Dog Mine 72.75 23 P P 14 50 42.0 -0.2
baz=289
JMIC Jan Mayen 72.77 341 LR LR 15 27 04.1
comp=Z,159nm,20.4s,baz=40,slow=39
D17K Noatak River 72.81 23 P P 14 50 42.1 -0.4
baz=289
SPIA Saint Paul Isl 72.83 35 P P 14 50 42.1 -0.8
baz=286
F15K North Star Dit 72.86 25 P P 14 50 42.9 -0.1
baz=288
ANM Nome 72.93 27 P P 14 50 43.1 -0.2
baz=288
C18K Utukok River 73.15 22 P P 14 50 44.3 -0.4
C18K Utukok River 73.15 22 P P 14 50 44.6 -0.1
baz=290
G15K Niukluk 73.33 26 P P 14 50 45.4 -0.3
baz=289
P08K Saint George I 73.36 35 P P 14 50 45.4 -0.6
baz=287
E17K Hotham Inlet 73.47 24 P P 14 50 46.2 -0.4
baz=290
C19K Lookout Ridge 73.52 21 P P 14 50 46.5 -0.4
baz=292
E18K Tukpahlearik C 73.80 23 P 14 50 48.3 -0.2
E18K IAmb IAmb 14 50 55.1
comp=Z,26nm,1.2s
E18K Tukpahlearik C 73.80 23 P P 14 50 48.4 0.0
baz=291
ARPS Mount Arapiles 73.80 143 P P 14 50 49.3 +0.5
comp=Z,22nm,1.9s
G16K Koyuk River 73.86 25 P P 14 50 48.2 -0.7
baz=290
F17K Baldwin Pennin 73.92 24 P P 14 50 48.8 -0.3
baz=291
B20K Meade River 73.96 20 P P 14 50 48.9 -0.4
baz=294
K13K Kusilvak Mount 74.08 29 P P 14 50 49.5 -0.7
baz=289
KEST Kesra 74.10 302 P P 14 50 50.0 -0.9
comp=Z,5.3nm,0.9s,baz=295,slow=23,SNR=2.5
KEST LR LR 15 30 46.7
comp=Z,195nm,18.0s,baz=35,slow=42
comp=Z,5.3nm,0.9s
H16K Elim 74.18 26 P P 14 50 50.2 -0.5
baz=290
A22K Sinclair Lake 74.21 19 P P 14 50 50.6 -0.1
baz=295
D19K Kuna River 74.25 22 P 14 50 50.7 -0.5
D19K IAmb IAmb 14 50 55.4
comp=Z,21nm,0.8s
D19K Kuna River 74.25 22 P P 14 50 50.9 -0.3
baz=293
J14K Nanvaranak Lak 74.29 28 P P 14 50 51.6 +0.3
baz=290
F18K Selawik 74.45 24 P P 14 50 51.9 -0.4
baz=292
G17K Kiwalik Mounta 74.49 25 P P 14 50 52.4 -0.1
baz=292
D20K Etivluk River 74.67 21 IAmb IAmb 14 51 08.8
comp=Z,64nm,1.4s
D20K Etivluk River 74.67 21 P P 14 50 53.2 -0.4
baz=294
AUWSH Wavell State H 74.74 129 P P 14 50 57.5 +3.0
AUDCS Dubbo College 74.75 136 P P 14 50 58.4 +3.9
NIKH Nikolski High 74.85 39 P P 14 50 54.0 -0.7
baz=288
B21K Ikpikpuk River 74.92 20 P P 14 50 54.5 -0.4
baz=296
B22K Teshekpuk Lake 74.97 19 IAmb IAmb 14 50 57.9
comp=Z,26nm,0.6s
B22K Teshekpuk Lake 74.97 19 P P 14 50 54.5 -0.7
baz=297
AUMAG Moama Anglican 74.97 141 P P 14 50 59.2 +3.5
E19K Redstone River 74.98 22 P P 14 50 54.9 -0.4
baz=294
H17K Granite Mounta 74.99 25 P P 14 50 55.1 -0.4
baz=292
E20K Nigu River 75.00 22 P P 14 50 55.1 -0.5
baz=295
F19K Shaleruckik Mo 75.04 23 P P 14 50 54.9 -0.7
baz=294
C21K Knifeblade Rid 75.08 20 P P 14 50 56.0 +0.1
baz=296
I17K Unalakleet 75.08 26 IAmb IAmb 14 52 43.7
comp=Z,73nm,1.9s
I17K Unalakleet 75.08 26 P P 14 50 55.9 0.0
baz=292
G18K Tagagawik 75.10 24 P P 14 50 56.0 0.0
baz=293
L14K Kuka Creek 75.17 29 IAmb IAmb 14 51 02.3
comp=Z,36nm,1.1s
L14K Kuka Creek 75.17 29 P P 14 50 56.4 -0.1
baz=291
M13K Dall Lake 75.20 30 P P 14 50 56.3 -0.4
baz=291
K15K Wolf Creek Mou 75.33 28 P P 14 50 56.6 -0.8
baz=292
J16K Anvik River 75.35 27 IAmb IAmb 14 51 01.9
comp=Z,36nm,1.2s
J16K Anvik River 75.35 27 P P 14 50 56.8 -0.8
baz=292
H18K Honhosa River 75.51 25 IAmb IAmb 14 51 02.4
comp=Z,46nm,1.4s
H18K Honhosa River 75.51 25 P P 14 50 57.9 -0.5
baz=294
BRAT Ballarat 75.52 142 P P 14 51 02.2 +3.4
L15K Ungalak Mounta 75.58 29 P P 14 50 57.9 -0.9
baz=292
G19K Purcell Mounta 75.58 24 P P 14 50 57.9 -0.9
baz=295
ARMA Armidale 75.59 132 P P 14 50 59.8 +0.4
comp=Z,24nm,1.4s
ARMA Armidale 75.59 132 P P 14 51 03.7 +4.2
E21K Killik River 75.66 21 IAmb IAmb 14 51 00.0
comp=Z,20nm,0.8s
E21K Killik River 75.66 21 P P 14 50 58.5 -0.8
baz=297
F20K Avaraart Lake 75.69 23 IAmb IAmb 14 50 59.4
comp=Z,37nm,1.6s
F20K Avaraart Lake 75.69 23 P P 14 50 58.4 -1.0
baz=296
M14K Bethel 75.72 30 IAmb IAmb 14 51 23.5
comp=Z,40nm,1.2s
M14K Bethel 75.72 30 P P 14 50 58.4 -1.3
baz=292
D22K Ayikyak River 75.88 20 P P 14 50 59.6 -0.8
baz=298,SNR=7.3
UNV Unalaska Valle 75.89 37 P P 14 50 59.5 -1.3
baz=290
J17K VABM Dome 75.94 27 IAmb IAmb 14 51 01.8
comp=Z,23nm,1.2s
J17K VABM Dome 75.94 27 P P 14 51 00.7 -0.2
baz=294
C23K Itkillik River 76.06 19 IAmb IAmb 14 51 06.0
comp=Z,36nm,0.9s
C23K Itkillik River 76.06 19 P P 14 51 01.8 +0.4
baz=300
H19K Roundabout Mou 76.08 24 IAmb IAmb 14 51 03.5
comp=Z,30nm,1.2s
H19K Roundabout Mou 76.08 24 P P 14 51 01.3 -0.3
baz=295
EKA Eskdalemuir Ar 76.11 324 P P 14 51 02.7 +0.7
comp=Z,4.3nm,0.9s,baz=69,slow=6.3,SNR=4.4
comp=Z,4.3nm,0.9s
N14K Kuskokwak Cree 76.16 30 P P 14 51 01.5 -0.6
baz=292
GCSA Galena City Sc 76.25 25 P P 14 51 02.6 0.0
baz=295
M15K Kasigluk River 76.32 30 P P 14 51 02.7 -0.4
baz=293
LUES Luesalemba Tem 76.35 108 P P 14 51 04.3 +0.3
F21K Alatna River 76.39 22 IAmb IAmb 14 51 08.8
comp=Z,22nm,1.1s
F21K Alatna River 76.39 22 P P 14 51 03.1 -0.4
baz=298
TOO Toolangi 76.42 141 P P 14 51 04.3 +0.3
comp=Z,11nm,1.9s
L16K Owhat River 76.45 28 P P 14 51 03.5 -0.4
baz=294
D23K Nanushuk River 76.47 20 IAmb IAmb 14 51 06.9
comp=Z,27nm,1.0s
D23K Nanushuk River 76.47 20 P P 14 51 03.4 -0.4
baz=300
E22K Anaktuvuk Pass 76.52 21 P P 14 51 03.8 -0.4
baz=299
K17K Iditarod 76.54 27 IAmb IAmb 14 51 05.5
comp=Z,43nm,1.2s
K17K Iditarod 76.54 27 P P 14 51 04.1 -0.2
baz=294
O14K Tigyukauivet M 76.61 31 P P 14 51 04.2 -0.5
baz=293
H20K Anoteeega Mo 76.68 24 P P 14 51 04.8 -0.3
baz=297
C24K Franklin Bluff 76.69 19 IAmb IAmb 14 51 07.6
comp=Z,30nm,1.2s
C24K Franklin Bluff 76.69 19 P P 14 51 05.1 +0.1
baz=301,SNR=6.3
F22K John River 76.70 22 P P 14 51 04.8 -0.3
baz=299
G21K Allakaket 76.71 23 IAmb IAmb 14 51 20.1
comp=Z,38nm,1.6s
G21K Allakaket 76.71 23 P P 14 51 05.1 -0.1
baz=298
L17K Donlin 76.78 28 P P 14 51 06.1 +0.4
baz=294
N15K Kwethluk River 76.80 30 P P 14 51 06.2 +0.3
baz=293
IMAR Indian Mountai 76.87 23 P P 14 51 05.8 -0.3
J18K Innoko River 76.87 26 IAmb IAmb 14 51 11.6
comp=Z,28nm,1.3s
J18K Innoko River 76.87 26 P P 14 51 06.2 0.0
baz=296,SNR=6.8
D24K Happy Valley 76.95 19 IAmb IAmb 14 51 08.7
comp=Z,21nm,1.1s
D24K Happy Valley 76.95 19 P P 14 51 06.8 +0.3
baz=301
M16K Timber Creek 76.96 29 P P 14 51 06.9 +0.2
baz=294
TOLK Toolik Lake Re 76.98 20 IAmb IAmb 14 51 20.5
comp=Z,11nm,1.1s
TOLK Toolik Lake Re 76.98 20 P P 14 51 06.8 0.0
baz=301,SNR=6.4
J19K Poorman 77.08 25 IAmb IAmb 14 51 13.2
comp=Z,32nm,1.2s
J19K Poorman 77.08 25 P P 14 51 07.4 0.0
baz=296
I20K Naaghedeneel 77.15 24 P P 14 51 07.6 -0.1
baz=297
FALS False Pass 77.21 36 P P 14 51 08.0 -0.2
baz=292
G22K Bettles 77.21 22 P P 14 51 07.7 -0.3
baz=299
E23K Chandalar 77.27 21 IAmb IAmb 14 51 11.9
comp=Z,37nm,1.6s
E23K Chandalar 77.27 21 P P 14 51 08.4 -0.1
baz=301
N16K Nishlik Lake 77.27 29 P P 14 51 08.6 +0.1
baz=294
O15K Ungalikthiuk R 77.32 31 P P 14 51 07.9 -0.9
baz=294
H21K Melozitna Rive 77.37 23 IAmb IAmb 14 51 10.1
comp=Z,21nm,1.0s
H21K Melozitna Rive 77.37 23 P P 14 51 08.6 -0.4
baz=298
L18K Granite Mounta 77.43 27 P P 14 51 09.1 -0.3
baz=296
M17K Holitna River 77.47 28 P P 14 51 09.1 -0.5
baz=295
COLD Coldfoot 77.50 21 P P 14 51 09.7 0.0
baz=300
J20K Nowinta River 77.57 25 IAmb IAmb 14 51 14.6
comp=Z,25nm,1.2s
J20K Nowinta River 77.57 25 P P 14 51 09.7 -0.4
baz=298
D25K Kavik River 77.59 19 IAmb IAmb 14 51 14.7
comp=Z,23nm,1.1s
D25K Kavik River 77.59 19 P P 14 51 10.0 -0.2
baz=303,SNR=12
S12K Black Hills 77.60 35 P P 14 51 09.6 -0.8
baz=293
E24K Your Creek 77.62 20 IAmb IAmb 14 51 35.4
comp=Z,21nm,1.1s
E24K Your Creek 77.62 20 P P 14 51 09.9 -0.5
baz=302,SNR=11
C26K Camden Bay 77.68 18 P P 14 51 10.6 0.0
baz=305,SNR=7.1
H22K Ishtalitna Cre 77.77 23 P P 14 51 11.1 -0.1
baz=300
G23K Bananza Creek 77.83 22 P P 14 51 11.3 -0.3
baz=301
O16K Kokwok River B 77.95 30 P P 14 51 11.8 -0.4
baz=295
N17K Nushagak Hills 77.96 29 P P 14 51 11.9 -0.4
baz=296
K20K Telida 77.98 26 IAmb IAmb 14 51 18.5
comp=Z,37nm,1.4s
K20K Telida 77.98 26 P P 14 51 12.0 -0.5
baz=298
F24K Squaw Lake 78.11 21 P P 14 51 13.5 +0.4
baz=302
M18K Stony River 78.12 28 P P 14 51 13.4 +0.2
baz=297
C27K Jago River 78.19 18 IAmb IAmb 14 51 16.1
comp=Z,36nm,1.4s
C27K Jago River 78.19 18 P P 14 51 13.3 -0.2
baz=306,SNR=13
L19K White Mountain 78.21 27 IAmb IAmb 14 51 15.6
comp=Z,30nm,1.2s
L19K White Mountain 78.21 27 P P 14 51 13.6 -0.2
baz=297,SNR=5.6
O17K Koliganek Bris 78.33 30 P P 14 51 13.8 -0.5
baz=296
CHUM Lake Minchumin 78.42 25 P P 14 51 14.6 -0.2
baz=299
H23K Yukon River 78.45 22 P P 14 51 14.6 -0.4
baz=301
N18K Kilae Creek 78.46 28 P P 14 51 15.0 -0.1
baz=297
L20K Farewell, AK 78.48 26 P P 14 51 15.5 +0.3
baz=298
E25K Arctic Village 78.51 20 IAmb IAmb 14 51 30.1
comp=Z,58nm,1.9s
E25K Arctic Village 78.51 20 P P 14 51 15.6 +0.3
baz=304,SNR=6.8
SDPT Sand Point 78.57 34 P P 14 51 15.5 -0.2
baz=294
S14K Fog Glacier 78.65 33 P P 14 51 16.7 +0.3
baz=295
G24K Hadweenzic Riv 78.69 21 P P 14 51 15.9 -0.4
baz=303
F25K Christian Rive 78.79 20 IAmb IAmb 14 51 20.9
comp=Z,64nm,2.0s
F25K Christian Rive 78.79 20 P P 14 51 17.1 +0.3
baz=304
BPAW Bear Paw Mtn. 78.82 24 P P 14 51 17.1 +0.1
baz=300
I23K Minto, Yukon-K 78.87 23 P P 14 51 17.2 0.0
baz=302
P17K Kvichak River 78.89 30 P P 14 51 17.6 +0.1
baz=297
PPLA Purkeypile 78.96 26 P P 14 51 17.9 -0.1
baz=300
N19K Bonanza Creek 79.01 28 P P 14 51 18.2 -0.1
baz=298
Q16K King Salmon 79.02 30 P P 14 51 18.2 0.0
baz=296
H24K Noodor Dome 79.03 22 P P 14 51 18.2 0.0
baz=303
M20K Styx River 79.07 27 IAmb IAmb 14 51 25.2
comp=Z,50nm,1.5s
M20K Styx River 79.07 27 P P 14 51 18.2 -0.4
baz=299
G25K Bearman Lake 79.11 21 P P 14 51 18.4 -0.1
baz=304
O18K Koktuh Hills 79.14 29 P P 14 51 18.2 -0.7
baz=298
D27M Malcolm River 79.19 18 P P 14 51 18.9 -0.1
baz=308
F26K Sheenjek River 79.20 20 IAmb IAmb 14 51 21.7
comp=Z,81nm,1.9s
F26K Sheenjek River 79.20 20 P P 14 51 18.7 -0.4
baz=306
BMAR Burnt Mountain 79.22 20 P 14 51 19.7 +0.5
CHNA Chernabura Isl 79.25 35 P P 14 51 19.0 -0.5
baz=295
NEA2 Nenana 79.27 23 P P 14 51 19.1 -0.5
baz=302
P18K Big Mountain, 79.35 30 P P 14 51 19.7 -0.3
baz=298
O19K Port Alsworth 79.38 29 P P 14 51 19.8 -0.3
baz=298
TRF Thorofare Moun 79.42 25 P P 14 51 20.1 -0.5
baz=301
COLA College 79.56 23 P P 14 51 21.0 0.0
COLA College 79.56 23 P P 14 51 20.7 -0.3
baz=303
Q17K Contact Creek 79.57 31 P P 14 51 20.7 -0.7
baz=297
SUMG Summit 79.58 347 P 14 51 20.8 -0.7
SUMG Summit 79.58 347 P P 14 51 20.8 -0.7
SUMG pmax pmax
comp=Z,88nm,1.2s
POKR Poker Plat Res 79.58 23 P P 14 51 21.0 -0.2
baz=303
R17L Mt. Peulik Vol 79.64 31 P P 14 51 20.7 -0.9
baz=297
E27K Coleen River 79.67 19 P P 14 51 21.7 +0.1
baz=308
SKT Skwentna 79.68 26 P 14 51 20.0 -1.8
SKT IAmb IAmb 14 51 22.5
comp=Z,34nm,1.3s
SKT Skwentna 79.68 26 P P 14 51 21.0 -0.8
baz=300,SNR=5.8
L22K Petersville 79.71 26 IAmb IAmb 14 51 36.2
comp=Z,32nm,1.2s
G26K Porcupine Rive 79.75 20 IAmb IAmb 14 51 25.4
comp=Z,40nm,1.1s
G26K Porcupine Rive 79.75 20 P P 14 51 21.9 -0.1
baz=306
D28M Stokes Point 79.75 17 P P 14 51 22.3 +0.3
baz=310
MCK McKinley 79.78 24 P P 14 51 22.3 -0.1
baz=302
SPCR Spurr Chakacha 79.79 27 P P 14 51 21.8 -0.7
baz=300
N20K Mount Spurr 79.79 27 P P 14 51 21.8 -0.7
baz=300
Q18K Katmai Hardscr 79.80 30 P P 14 51 21.6 -1.0
baz=298
BORG Borgarnes 79.95 337 LR LR 15 30 19.9
comp=Z,246nm,18.7s,baz=46,slow=38
ILAR Eielson Array 79.96 23 P P 14 51 21.4 -1.8
comp=Z,2.2nm,0.8s,baz=292,slow=4.8,SNR=22
ILAR LR LR 15 30 23.1
comp=Z,652nm,18.7s,baz=286,slow=38
comp=Z,2.2nm,0.8s
TULEG Thule 79.98 356 IAmb IAmb 14 51 23.4
comp=Z,42nm,1.1s
E28M Babbage River 80.00 18 P P 14 51 23.2 -0.2
baz=310
PRP Porcupine Dome 80.02 22 P P 14 51 23.3 -0.4
baz=305,SNR=7.2
P19K Oil Pt 80.12 29 P P 14 51 24.4 +0.1
baz=299
HDA Harding Lake 80.14 23 P P 14 51 23.7 -0.6
baz=304
O20K Slope Mountain 80.17 28 P P 14 51 23.9 -0.7
baz=300
SUA Susitna One 80.27 27 P P 14 51 24.5 -0.6
baz=301
Q19K Cape Douglas, 80.29 30 P P 14 51 24.7 -0.5
baz=299
M22K Willow 80.37 26 P P 14 51 24.8 -0.6
baz=301
WAT1 Susitna Watana 80.42 25 P P 14 51 24.8 -1.0
baz=303
CAPN Captain Cook N 80.46 27 P P 14 51 25.6 -0.3
baz=301
G27K Doyon Strip 80.51 20 P P 14 51 25.6 -0.6
baz=308
F28M Old Crow 80.54 19 P P 14 51 25.9 -0.4
baz=309,SNR=9.2
R18K Karluk 80.57 31 P P 14 51 26.1 -0.5
baz=298
J25K Salcha River, 80.59 23 P P 14 51 26.3 -0.4
baz=305
E29M Blow River 80.60 18 IAmb IAmb 14 51 28.0

comp=Z,57nm,1.7s
E29M Blow River 80.60 18 P **P** **14 51 26.4 -0.2**
baz=311
DHY Denali Highway 80.73 24 P **P** **14 51 27.1 -0.5**
baz=304
HOM Homer 80.82 28 P **P** **14 51 27.4 -0.5**
baz=300
CHIR Chirikof Islan 80.83 33 P **P** **14 51 27.7 -0.4**
baz=298
PMR Palmer 80.86 26 P **P** **14 51 28.5 +0.4**
baz=302
WAT6 Susitna Watana 80.87 25 P **P** **14 51 28.1 -0.3**
baz=303
RC01 Rabbit Creek A 80.88 27 P **P** **14 51 27.7 -0.6**
baz=302
H27K Steamboat Moun 80.91 20 IAmb IAmb 14 51 33.1
comp=Z,22nm,0.9s
H27K Steamboat Moun 80.91 20 P **P** **14 51 28.2 -0.1**
baz=308
K24K Donnelly Dome 80.91 23 P **P** **14 51 28.0 -0.4**
baz=305
A36M Sachs Harbour 80.93 12 IAmb IAmb 14 51 34.0
comp=Z,35nm,0.9s
A36M Sachs Harbour 80.93 12 P **P** **14 51 28.0 -0.3**
baz=322,SNR=24
I26K Coal Creek Min 80.94 21 P **P** **14 51 28.2 -0.3**
baz=307
Q20K Shuyak Island 81.01 29 P **P** **14 51 28.6 -0.4**
baz=300
SML Sawmill 81.06 26 P **P** **14 51 29.0 -0.3**
baz=303
BRSE Bradley Lake S 81.17 28 P **P** **14 51 29.2 -0.7**
baz=301
O22K Cooper Landing 81.21 27 P **P** **14 51 29.4 -0.6**
baz=302
KNK Knik Glacier 81.23 26 P **P** **14 51 30.0 -0.2**
baz=303
I27K Kandik River 81.27 21 IAmb IAmb 14 51 32.0
comp=Z,29nm,1.2s
I27K Kandik River 81.27 21 P **P** **14 51 29.9 -0.4**
baz=308,SNR=9.8
RIDG Independent Ri 81.29 23 P **P** **14 51 30.2 -0.2**
baz=306
J26L Joseph Creek 81.29 22 P **P** **14 51 30.0 -0.5**
baz=307
OHAK Old Harbor 81.29 31 P **P** **14 51 29.7 -0.8**
baz=300
M23K Glacier View 81.31 25 P **P** **14 51 29.5 -1.0**
baz=303
KDAK Kodiak Island 81.34 30 LR LR 15 28 59.9
comp=Z,503nm,18.9s,baz=323,slow=37
KDAK Kodiak Island 81.34 30 P **P** **14 51 29.6 -1.1**
baz=300
SCM Sheep Creek Mo 81.44 25 P **P** **14 51 30.3 -1.0**
baz=304
SCRK Sand Creek 81.45 23 IAmb IAmb 14 52 46.6
comp=Z,39nm,1.7s
SCRK Sand Creek 81.45 23 P **P** **14 51 30.2 -1.2**
baz=306,SNR=7.2
PAX Paxson 81.51 24 P **P** **14 51 31.1 -0.5**
baz=305
SEW Seward 81.52 27 P **P** **14 51 31.1 -0.6**
baz=302
G29M Pine Creek 81.55 19 IAmb IAmb 14 51 39.5
comp=Z,78nm,1.8s
G29M Pine Creek 81.55 19 P **P** **14 51 31.2 -0.5**
baz=311
PWL Port Wells 81.58 26 P **P** **14 51 31.5 -0.5**
baz=303
F30M Barrier River 81.72 18 P **P** **14 51 32.5 0.0**
baz=313
M24K Tolsona, Glenn 81.74 25 P **P** **14 51 32.6 -0.3**
baz=305
INK Inuvik 81.84 17 LR LR 15 33 26.9
comp=Z,474nm,19.1s,baz=295,slow=40
INK Inuvik 81.84 17 IAmb IAmb 14 51 34.7
comp=Z,38nm,1.2s
INK Inuvik 81.84 17 P **P** **14 51 32.9 -0.3**
baz=315,SNR=27
H29M Whitestone 81.90 19 IAmb IAmb 14 51 37.4
comp=Z,62nm,1.6s
H29M Whitestone 81.90 19 P **P** **14 51 33.2 -0.3**
baz=311
I28M Miner Creek 81.91 20 IAmb IAmb 14 51 37.9
comp=Z,26nm,1.1s
I28M Miner Creek 81.91 20 P **P** **14 51 33.3 -0.5**
baz=310
HARP HAARP 81.96 24 P **P** **14 51 33.6 -0.4**
baz=306
G30M tAoh Zraii Nji 82.02 18 IAmb IAmb 14 51 37.9
comp=Z,25nm,1.0s
G30M tAoh Zraii Nji 82.02 18 P **P** **14 51 33.8 -0.5**
baz=313,SNR=12
GLI Glacier Island 82.07 26 P **P** **14 51 34.4 -0.2**
baz=304
K27K Chicken 82.09 22 P **P** **14 51 34.7 +0.1**
baz=308
DZM Mont Dzumac 82.14 118 *e*LR LR 15 17 13.0
comp=Z,256nm,26.1s
KLU Klutina 82.19 25 P **P** **14 51 35.2 -0.1**
baz=305
L26K Log Cabin Wild 82.26 23 P **P** **14 51 35.5 0.0**
baz=307
EPYK Eagle Plains 82.30 19 IAmb IAmb 14 51 50.3
comp=Z,30nm,1.3s
EPYK Eagle Plains 82.30 19 P **P** **14 51 35.5 -0.1**
baz=312
F31M Tsiigehtchic 82.40 17 IAmb IAmb 14 51 37.5
comp=Z,42nm,1.4s
F31M Tsiigehtchic 82.40 17 P **P** **14 51 36.0 -0.1**
baz=315,SNR=11
P23K Montague Islan 82.44 27 P **P** **14 51 36.0 -0.5**
baz=304
I29M Ogilvie Camp, 82.49 20 P **P** **14 51 36.5 -0.2**
baz=311
ESDC Sonseca Array 82.60 310 P **P** **14 51 37.4 -0.5**
comp=Z,0.8nm,0.8s,baz=44,slow=6.6,SNR=5.4
ESDC LR LR 15 34 11.9
comp=Z,192nm,18.6s,baz=50,slow=40
comp=Z,0.8nm,0.8s
G31M Satah River 82.62 18 IAmb IAmb 14 51 38.5
comp=Z,44nm,1.4s
G31M Satah River 82.62 18 P **P** **14 51 36.8 -0.5**
baz=314,SNR=8.4
N25K Chitina, Valde 82.64 25 P **P** **14 51 37.3 -0.4**
baz=306
M26K Nabesna, AK 82.77 24 P **P** **14 51 37.9 -0.3**
baz=307
L27K Beaver Creek, 82.78 23 IAmb IAmb 14 51 40.0
comp=Z,24nm,1.1s
L27K Beaver Creek, 82.78 23 P **P** **14 51 37.8 -0.5**
baz=308
BCAR Beaver Creek A 82.79 23 **P** **14 51 38.4 0.0**
EYAK Cordova Ski Ar 82.81 26 P **P** **14 51 38.0 -0.3**
baz=305
DAWY Dawson 82.98 21 IAmb IAmb 14 51 42.3
comp=Z,44nm,1.7s
DAWY Dawson 82.98 21 P **P** **14 51 38.9 -0.5**
baz=310
BMRM Bremner River 83.02 25 P **P** **14 51 38.9 -0.7**
baz=306
J29N Klondike Camp 83.12 21 P **P** **14 51 39.8 -0.3**
baz=311
I30M Mount Dempster 83.18 20 IAmb IAmb 14 51 44.1
comp=Z,22nm,1.1s
I30M Mount Dempster 83.18 20 P **P** **14 51 39.7 -0.8**
baz=313
M27K Edge Creek, AK 83.20 23 IAmb IAmb 14 51 49.7
comp=Z,35nm,1.2s
M27K Edge Creek, AK 83.20 23 P **P** **14 51 40.0 -0.6**
baz=308
Q23K Middleton Isla 83.21 27 P **P** **14 51 40.0 -0.5**
baz=305
C36M Paulatuk 83.28 13 P **P** **14 51 40.5 -0.2**
baz=323
LBTB Lobatse 83.29 239 P **P** **14 51 42.1 +0.5**
comp=Z,2.9nm,0.5s,baz=65,slow=2.6,SNR=8.0
LBTB LR LR 15 26 47.3
comp=Z,162nm,21.3s,baz=46,slow=34
comp=Z,2.9nm,0.5s
MCARA McCarthy VSAT 83.38 25 P **P** **14 51 41.0 -0.4**
baz=307
H31M Peel River 83.39 19 P **P** **14 51 40.6 -0.7**
baz=314
BVCY Beaver Creek 83.54 23 P **P** **14 51 41.6 -0.6**
baz=309
J30M Hart River 83.64 20 P **P** **14 51 42.1 -0.7**
baz=313
KAIM Kayak Island 83.71 26 P **P** **14 51 42.2 -0.9**
baz=306
CRQE Cirque 83.74 25 P **P** **14 51 42.7 -0.7**
baz=307
K29M Barlow Dome 83.75 21 IAmb IAmb 14 51 47.7
comp=Z,12nm,0.9s
K29M Barlow Dome 83.75 21 P **P** **14 51 42.8 -0.6**
baz=312
L29M L29M 84.04 22 P **P** **14 51 44.4 -0.4**
baz=311
BGLC Bering Glacier 84.05 26 P **P** **14 51 44.0 -0.7**
baz=307
YUK3 Moose Creek 84.09 23 P **P** **14 51 44.6 -0.7**
baz=310
CTG Chitna Glacier 84.28 24 P **P** **14 51 45.4 -0.7**
baz=309
M29M Somme Creek 84.37 22 IAmb IAmb 14 52 05.8
comp=Z,20nm,1.2s
M29M Somme Creek 84.37 22 P **P** **14 51 46.0 -0.5**
baz=311
MAYO Mayo, Yukon 84.45 21 P **P** **14 51 46.4 -0.5**
baz=313
MESA MESA 84.54 25 P **P** **14 51 47.0 -0.6**
baz=308
YUK8 Steele Glacier 84.66 24 P **P** **14 51 47.6 -0.6**
baz=310
O28M Mount Upton 84.83 24 P **P** **14 51 48.6 -0.6**
baz=310
M30M Minto, Yukon 84.85 22 IAmb IAmb 14 51 55.8
comp=Z,26nm,1.6s
M30M Minto, Yukon 84.85 22 P **P** **14 51 48.4 -0.5**
baz=313
YUK4 Talbot Arm 85.03 23 P **P** **14 51 49.2 -0.8**
baz=311
PINM Pinnacle 85.25 25 P **P** **14 51 49.6 -1.3**
baz=310
BOSA Boshof 85.32 236 P **P** **14 51 51.5 -0.3**
comp=Z,7.1nm,0.8s,baz=72,slow=4.0,SNR=9.7
BOSA LR LR 15 27 15.8
comp=Z,195nm,21.7s,baz=27,slow=34
comp=Z,7.1nm,0.8s
BOSA Boshof 85.32 236 P **P** **14 51 51.6 -0.3**
BOSA IAmb IAmb 14 52 07.2
comp=Z,22nm,1.1s
BOSA Boshof 85.32 236 P **P** **14 51 51.6 -0.3**
BOSA pmax pmax
comp=Z,22nm,1.2s
YUK6 Outpost Mounta 85.40 23 P **P** **14 51 51.1 -0.8**
baz=311
N30M Aishikik Lake 85.51 23 IAmb IAmb 14 51 53.8
comp=Z,23nm,1.2s
N30M Aishikik Lake 85.51 23 P **P** **14 51 51.7 -0.5**
baz=312
O29M Mount Kennedy 85.75 24 P **P** **14 51 52.6 -1.0**
baz=311
HYT Haines Junctio 85.79 23 IAmb IAmb 14 51 55.1
comp=Z,20nm,1.2s
HYT Haines Junctio 85.79 23 P **P** **14 51 53.3 -0.4**
baz=312
MDT Midelt 85.91 304 LR LR 15 35 57.1
comp=Z,271nm,20.5s,baz=82,slow=40
M31M Drury Creek, Y 85.92 21 IAmb IAmb 14 51 56.0
comp=Z,54nm,1.9s
M31M Drury Creek, Y 85.92 21 P **P** **14 51 53.7 -0.5**
baz=316
N31M Braeburn, Yuko 85.95 22 **P** **14 51 53.9 -0.5**
N31M Braeburn, Yuko 85.95 22 P **P** **14 51 53.6 -0.8**
baz=314,SNR=6.6
O30N Mendenhall 86.34 23 P **P** **14 51 56.0 -0.3**
baz=313,SNR=5.6
P30M Million Dollar 86.47 24 P **P** **14 51 56.2 -0.8**
baz=313
P29M Windy Craggy 86.51 24 P **P** **14 51 56.4 -0.7**
baz=312
SFJD Kangerlussuaq 86.57 347 LR LR 15 37 18.6
comp=Z,364nm,18.1s,baz=18,slow=40
WHY Whitehorse 86.84 22 P **P** **14 51 58.3 -0.6**
baz=314
N32M Quiet Lake 87.11 21 P **P** **14 51 59.3 -0.8**
baz=316
PLBC Pleasant Camp 87.14 24 P **P** **14 51 58.8 -1.4**
baz=313
TSUM Tsumeb 87.23 248 LR LR 15 30 08.5
comp=Z,314nm,20.6s,baz=3.5,slow=35
SKAG Skagway 87.52 23 P **P** **14 52 01.3 -0.7**
baz=314
P33M Teslin, Yukon 87.88 22 P **P** **14 52 03.4 -0.5**
baz=316
P32M Atlin 88.01 23 P **P** **14 52 03.9 -0.6**
baz=315
R31K City Hall, Gus 88.10 24 P **P** **14 52 03.6 -1.1**
baz=314
S31K Pelican 88.22 25 P **P** **14 52 04.5 -0.8**
baz=313
WRGLY Wrigley 88.40 17 P **P** **14 52 05.5 -0.7**
baz=324
TORD Torodi Ar. Bea 88.63 284 P **P** **14 52 06.9 -1.2**
comp=Z,12nm,0.7s,baz=54,slow=6.4,SNR=6.2
TORD LR LR 15 36 40.3
comp=Z,313nm,18.9s,baz=74,slow=39
comp=Z,12nm,0.7s
R32K Eaglecrest 88.66 24 P **P** **14 52 06.2 -1.2**
baz=315
Q32M Nakina River 88.98 23 P **P** **14 52 08.0 -1.2**
baz=317
R33M Jennings River 89.12 22 P **P** **14 52 08.1 -1.7**
baz=318
S32K Killisnoo 89.20 25 P **P** **14 52 09.7 -0.3**
baz=315
SIT Sitka 89.20 25 P **P** **14 52 09.3 -0.7**
baz=314
WTLY Watson Lake, Y 89.30 21 P **P** **14 52 09.9 -0.6**
baz=320
DLBC Dease Lake 90.16 22 P **P** **14 52 13.7 -0.9**
baz=319
S34M Telegraph Cree 90.16 23 P **P** **14 52 13.8 -0.7**
baz=318
LIRD Liard River Hi 90.71 20 P **P** **14 52 16.6 -0.4**
baz=322
U33K Whale Pass 90.73 25 P **P** **14 52 16.7 -0.4**
baz=316
KOTAN Kotaneelee Air 90.75 19 P **P** **14 52 17.1 -0.2**
baz=324
WRAK Wrangell Islan 90.81 24 P **P** **14 52 16.9 -0.7**
baz=317
YKA Yellowknife Ar 91.16 14 P **P** **14 52 17.8 -1.3**
comp=Z,3.0nm,1.1s,baz=337,slow=5.7,SNR=2.7
YKA LR LR 15 38 48.6
comp=Z,338nm,18.2s,baz=330,slow=39
comp=Z,3.0nm,1.1s
T35M Bob Quinn 91.17 23 IAmb IAmb 14 52 24.4
comp=Z,24nm,1.4s
T35M Bob Quinn 91.17 23 P **P** **14 52 18.4 -0.9**
baz=318
CRAG Craig 91.20 25 P **P** **14 52 18.8 -0.6**
baz=316
TOAD Toad River Com 91.42 20 P **P** **14 52 19.9 -0.5**
baz=323
V35K Ketchikan 91.89 25 P **P** **14 52 21.7 -0.8**
baz=317
U35K Hyder 92.06 24 P **P** **14 52 22.5 -0.8**
baz=318
FRB Frobisher Bay 92.42 353 LR LR 15 37 54.0
comp=Z,248nm,18.7s,baz=351,slow=38
MAW Mawson 93.85 192 LR LR 15 31 48.3
comp=Z,134nm,18.2s,baz=64,slow=34
BBB Bella Bella 95.63 25 LR LR 15 38 02.1
comp=Z,310nm,19.7s,baz=324,slow=37
DBIC Dimbokro 97.14 280 LR LR 15 39 36.9
comp=Z,140nm,21.1s,baz=85,slow=37
URZ Urewera 97.60 128 LR LR 15 41 40.0
comp=Z,172nm,19.2s,baz=290,slow=38
SYO Syowa Base 100.50 198 *e*Pdiff **Pdif** **14 53 02.8 +1.7**
SYO Syowa Base 100.50 198 *e*PP **PP** **14 57 10.8 +2.6**
M65A Busby, Falmout 114.30 349 P **PKiKP** **14 57 53.9 -0.3**
baz=13
PPT2 Papeete2 118.87 98 *e*SS SS 15 15 38.8 -3.5
comp=Z,169nm,22.8s
PPT2 Papeete2 118.87 98 *e*LR LR 15 34 09.3
comp=Z,224nm,23.5s
PPT2 *e*LR LR 15 34 18.7
comp=Z,174nm,27.0s
TBI Tubuai 120.52 104 *e*SS SS 15 15 47.2 -16
comp=Z,542nm,37.0s
TBI Tubuai 120.52 104 *e*LR LR 15 35 01.9
comp=Z,929nm,29.8s
TXAR Lajitas Array 124.44 21 PKP **PKPdf** **14 58 12.1 -2.1**
comp=Z,1.0nm,0.9s,baz=246,slow=0.3,SNR=6.0
TAOE Nuku Hiva Isla 124.63 85 *e*LR LR 15 36 50.2
comp=Z,217nm,23.6s
SMTB Santa Maria do 142.19 286 *e*P **PKPdf** **14 58 48.0 +0.4**
BDFB Brasilia 145.16 270 PKPbc **PKPbc** **14 58 51.7 -0.7**
baz=124,slow=3.6
SDV Santo Domingo 145.42 336 PKPdf **PKPbc** **14 58 53.1 -0.3**
SDV Santo Domingo 145.42 336 *e*P **PKPbc** **14 58 52.4 -1.0**
BOAV Boa Vista 145.64 315 *e*P **PKPdf** **14 58 53.8 +0.1**
IPMB Ipameri, GO 146.01 272 *e*P **PKPdf** **14 58 54.0 -0.2**
ITTB Itaituba 146.75 300 *e*P **PKPdf** **14 58 56.4 +0.8**
NPGB Novo Progresso 147.97 296 *e*P **PKPdf** **14 58 57.8 +0.2**
ARAG Araguaiana, MT 148.65 278 *e*P **PKPdf** **14 58 59.1 +0.5**
MACA Manacapuru-AM 149.75 308 *e*P **PKPdf** **14 59 00.7 +0.2**
CLDB Colider 150.29 290 *e*P **PKPdf** **14 59 02.3 +1.0**
ROSC El Rosal 150.47 340 PKPbc **PKiKP** **14 59 08.4 +0.2**
comp=Z,320nm,0.6s,baz=100,slow=2.1,SNR=19
CPUP Villa Florida 155.48 257 PKPbc PKPdf 14 59 17.6 +9.0
comp=Z,0.5nm,0.6s,baz=269,slow=3.4,SNR=3.2
PLCA Paso Flores 159.16 210 PKPab **PKPab** **14 59 48.7 -1.0**
comp=Z,3.0nm,1.0s,baz=134,slow=9.2,SNR=3.7
LPAZ La Paz 163.41 292 PKP **PKPdf** **14 59 18.2 -0.5**
comp=Z,2.5nm,0.8s,baz=55,slow=5.7,SNR=6.7
LPAZ PKPab **PKPab** **15 00 11.1 +1.4**
comp=Z,0.5nm,0.4s,baz=65,slow=4.5,SNR=1.5
LPAZ La Paz 163.41 292 *e*P **PKPdf** **14 59 18.4 -0.3**

GII 28 14:43:42.5±0.0, 32°.79N±0°.01×35°.39E±0°.02, h0km, confirmed, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGDL	**Migdal**	**0.11**	**63**	P		Pg	14 43 45.3	+0.6
MGDL	**Migdal**	**0.11**	**63**	S		Sg	14 43 47.8	+1.7
BLGI	**Bet Lehem HaGe**	**0.17**	**251**	P		Pg	14 43 46.6	+0.8
BLGI	**Bet Lehem HaGe**	**0.17**	**251**	S		Sg	14 43 50.6	+2.5
AMID	**Amiad**	**0.19**	**43**	P		Pg	14 43 46.8	+0.6
AMID	**Amiad**	**0.19**	**43**	S		Sg	14 43 50.5	+1.9
KNHM	**Kefar Nahum**	**0.19**	**60**	P		Pg	14 43 47.0	+0.9
KNHM	**Kefar Nahum**	**0.19**	**60**	S		Sg	14 43 50.9	+2.4
MMA0B	**Mount Meron ar**	**0.23**	**3**	P		Pg	14 43 47.8	+0.9
MMA0B	**Mount Meron ar**	**0.23**	**3**	S		Sg	14 43 52.5	+2.7
GOLA	**Golan Heights**	**0.23**	**109**	P		Pg	14 43 47.6	+0.6
GOLA	**Golan Heights**	**0.23**	**109**	S		Sg	14 43 53.0	+3.0
KSHT	**Keshet**	**0.41**	**62**	P		Pg	14 43 51.2	+0.9
KSHT	**Keshet**	**0.41**	**62**	S		Sb	14 43 58.6	-0.7

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*JMA **28** 14:55:17.0±0.4, 32°.N±3°.×13°.8E±°, h425km, MV3.0/18, FAR S OFF TOKAI DISTRICT*
*IDC **28** 14:55:25.3±2.2, 32°.42N×137°.92E, h372km±21km, mb2.9/8, mbtmp3.7/11, Error ellipse: s-maj=25.2km s-min=23.4km az=35.0*
ISC 28 14:55:26.9±1.1, 32°.5N±0°.1×137°.8E±0°.1, h400km, n23, σ2s88/20, mb3.2/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO2	**TONANKAI O.B.S**	**1.43**	**332**	P		**Pn**	**14 56 15.6**	**-3.7**
TTO1	**TONANKAI O.B.S**	**1.44**	**323**	*e*P		**Pn**	**14 56 15.4**	**-3.9**
TTO4	**TONANKAI O.B.S**	**1.55**	**351**	P		**Pn**	**14 56 16.1**	**-3.8**
JIE	**Ise**	**2.13**	**334**	P		**Pn**	**14 56 19.7**	**-3.9**
JTNC	**Tanabenakahech**	**2.30**	**306**	P		Pn	14 56 20.4	-4.3
JWY	**Kouya**	**2.56**	**313**	*e*P		**Pn**	**14 56 22.9**	**-3.8**
JAI	**Aioi**	**3.13**	**296**	*e*P		**Pn**	**14 56 27.3**	**-3.8**
BSO1	**Boso 1**	**3.40**	**50**	S		S	14 57 15.8	-11
JWT	**Wachi**	**3.45**	**325**	*e*P		**Pn**	**14 56 30.5**	**-3.3**
JMN	**Monobe**	**3.55**	**292**	P		**Pn**	**14 56 31.4**	**-3.3**
MJAR	**Matsushiro Arr**	**4.07**	**4**	P		**Pn**	**14 56 36.1**	**-3.4**
	1.6nm,0.6s,baz=184,slow=11,SNR=6.1						
MAT	**Matsushiro**	**4.07**	**4**	*e*P		**Pn**	**14 56 36.3**	**-3.2**
JCJ	**Chichijima**	**6.56**	**144**	P		Pn	14 56 48.6	-17
	40nm,0.7s,baz=2.0,slow=22,SNR=6.2						
JCJ				S		S	14 58 01.8	-25
	27nm,0.4s,baz=288,slow=23,SNR=7.0						
KSRS	**Korea Array**	**9.53**	**304**	P		**P**	**14 57 39.4**	**+0.3**
	2.7nm,0.9s,baz=122,slow=10,SNR=4.2						
ASAJ	**Asahikawa**	**12.20**	**16**	P		**P**	**14 58 08.7**	**+0.1**
	7.2nm,0.9s,baz=191,slow=16,SNR=1.2						
SONM	**Songino Array**	**28.27**	**312**	P		**P**	**15 00 46.6**	**+1.2**
	0.4nm,0.4s,baz=106,slow=11,SNR=2.1						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**42.98**	**316**	P		**P**	**15 02 49.4**	**+0.9**
	0.3nm,0.3s,baz=63,slow=7.0,SNR=2.2						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**44.20**	**306**	P		**P**	**15 02 59.6**	**+1.3**
	1.2nm,0.7s,baz=85,slow=10,SNR=9.4						
	1.2nm,0.7s						
KURBB	**Kurchatov Arra**	**46.62**	**311**	P		**P**	**15 03 17.9**	**+1.1**
	0.7nm,0.3s,baz=106,slow=5.9,SNR=5.3						
	0.7nm,0.3s						
BVAR	**Borovoye Array**	**51.56**	**315**	P		**P**	**15 03 55.0**	**+1.4**
	0.4nm,0.3s,baz=92,slow=7.8,SNR=5.0						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**52.23**	**184**	P		**P**	**15 03 59.3**	**+0.3**
	0.2nm,0.7s,baz=1.1,slow=7.5,SNR=1.6						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**54.91**	**30**	P		**P**	**15 04 18.5**	**+1.0**
	0.2nm,0.7s,baz=277,slow=6.9,SNR=6.2						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**71.45**	**332**	P		**P**	**15 06 06.1**	**+1.3**
	1.1nm,0.7s,baz=25,slow=4.6,SNR=1.2						
	1.1nm,0.7s						

IDC 28 14:58:21.4±999.0, 50°.42N×54°.07E, h0km, Error ellipse: s-maj=552.5km s-min=191.7km az=37.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**19.10**	**67**	I	I	16 56 00.0	
	baz=272,slow=316,SNR=1.5						
I34MN	**SONGINO INFRAS**	**33.78**	**74**	I	I	18 24 40.0	
	baz=291,slow=336,SNR=0.9						
I18DK	**QAANAAQ INFRAS**	**87.67**	**346**	I	I	19 48 10.0	
	baz=41,slow=338,SNR=2.2						

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*NEIC **28** 15:04:29.3±1.4, 19°.514N±0°.006×155°.659W±0°.007, h5km±1km, Error ellipse: s-maj=2.9km s-min=1.2km az=283.0*
HVO 28 15:04:29.3±1.3, 19°.517N±0°.007×155°.666W±0°.008, h5km±3km, ML2.5/24, ML2.4/48(NEIC), Error ellipse: s-maj=1.0km s-min=1.0km az=118.0, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALEP	**Alea Permanent**	**0.03**	**40**		Pg	15 04 31.4	+0.6
ALEP					Sg	15 04 33.0	+1.2
MWH	**Mokuaweoweo**	**0.07**	**116**		Pg	15 04 31.9	+0.6
MWH	**Mokuaweoweo**	**0.07**	**116**		Sg	15 04 33.3	+0.6
MWH				IAML		15 04 34.2	
	comp=N,4μm,0.3s						
MWH				IAML		15 04 36.3	
	comp=E,2μm,0.2s						
MLOA	**Mauna Loa Obse**	**0.09**	**78**		Pg	15 04 32.1	+0.6
MLOA	**Mauna Loa Obse**	**0.09**	**78**		Sg	15 04 33.9	+1.0
MLOA				IAML		15 04 34.3	
	comp=E,3μm,0.3s						
MLOA				IAML		15 04 34.3	
	comp=N,5μm,0.3s						
HMH	**Humu'ula Sheep**	**0.19**	**64**		Pg	15 04 33.8	+0.6
HMH					Sg	15 04 37.3	+1.5
HMH	**Humu'ula Sheep**	**0.19**	**64**	IAML		15 04 37.4	
	comp=N,991nm,0.3s						
HMH				IAML		15 04 37.4	
	comp=E,397nm,0.5s						
KHLU	**Kahalu`u**	**0.23**	**289**		Pg	15 04 34.0	+0.3
KHLU					Sg	15 04 37.9	+1.1
HUH	**Hualalai**	**0.23**	**316**		Pg	15 04 34.5	+0.6
HUH					Sg	15 04 39.2	+2.2
AIN	**Ainahou**	**0.24**	**126**		Pg	15 04 34.4	+0.4
AIN					Sg	15 04 38.2	+0.9
AIN				IAML		15 04 39.1	
	comp=E,1μm,0.3s						
MLH	**Mauna Loa**	**0.27**	**95**		Pg	15 04 34.7	+0.2
MLH	**Mauna Loa**	**0.27**	**95**		Sg	15 04 37.5	-0.6
MLH				IAML		15 04 39.4	
	comp=E,509nm,0.4s						
MLH				IAML		15 04 39.4	
	comp=N,854nm,1.4s						
POHA	**Pohakuloa**	**0.27**	**28**		Pg	15 04 34.8	+0.2
POHA					Sg	15 04 39.9	+1.6
POHA	**Pohakuloa**	**0.27**	**28**	IAML		15 04 42.5	
	comp=N,386nm,0.3s						

POHA				IAML		15 04 43.7		
	comp=N,380nm,0.4s							
KHU	**Kahuku**	**0.27**	**170**		Pg	15 04 34.7	+0.1	
KHU					Sg	15 04 39.1	+0.8	
KKH	**Kailua Kona**	**0.36**	**293**		Pg	15 04 35.9	-0.4	
KKH					Sg	15 04 40.7	-0.3	
WRMHI	**West Rim**	**0.36**	**108**		Pg	15 04 36.3	0.0	
WRMHI					Sg	15 04 41.9	+0.8	
UWE	**Uwekahuna**	**0.36**	**105**		Pg	15 04 35.6	-0.8	
UWE					Sg	15 04 40.9	-0.3	
UWE				IAML		15 04 45.4		
	comp=N,626nm,0.5s							
RSD	**Rainshed**	**0.37**	**98**		Pg	15 04 36.5	+0.1	
RSD					Sg	15 04 41.7	+0.3	
RSD				IAML		15 04 43.4		
	comp=E,357nm,2.0s							
OBL	**Observatory Le**	**0.37**	**105**		Pg	15 04 36.5	0.0	
OBL					Sg	15 04 42.5	+1.0	
SDHHI	**Sand Hill**	**0.37**	**110**		Pg	15 04 36.5	-0.1	
SDHHI					Sg	15 04 42.1	+0.6	
HTC	**Hot Caves**	**0.38**	**138**		Pg	15 04 36.4	-0.2	
UWB	**Uwekahuna Bluf**	**0.38**	**104**		Pg	15 04 36.5	-0.1	
UWB					Sg	15 04 42.2	+0.7	
SBLHI	**Steaming Bluff**	**0.39**	**103**		Pg	15 04 36.6	-0.2	
SBLHI					Sg	15 04 42.4	+0.5	
RIM	**Rim**	**0.39**	**108**		Pg	15 04 36.8	-0.1	
RIM					Sg	15 04 42.4	+0.5	
HATHI	**Halema'uma'u T**	**0.39**	**104**		Sg	15 04 42.4	+0.3	
HATHI	**Halema'uma'u T**	**0.39**	**104**		Pg	15 04 36.6	-0.3	
HATHI				IAML		15 04 47.4		
	comp=N,282nm,1.7s							
HATHI				IAML		15 04 49.8		
	comp=E,381nm,0.8s							
BYL	**Byron's Ledge**	**0.40**	**105**		Pg	15 04 36.9	-0.1	
BYL	**Byron's Ledge**	**0.40**	**105**	IAML		15 04 45.5		
	comp=E,317nm,1.9s							
BYL				IAML		15 04 47.5		
	comp=N,208nm,0.9s							
HLP	**Hilina Pali**	**0.40**	**123**		Pg	15 04 37.0	-0.1	
HLP					Sg	15 04 42.7	+0.3	
HLP				IAML		15 04 50.9		
	comp=N,455nm,1.3s							
PUH	**Pauahi**	**0.45**	**109**		Pg	15 04 37.4	-0.5	
PUH				IAML		15 04 44.9		
	comp=E,238nm,3.3s							
PUH				IAML		15 04 48.5		
	comp=N,382nm,3.6s							
KNHH	**Kane Nui o Ham**	**0.49**	**106**		Pg	15 04 38.0	-0.7	
HPAH	**Hawaii Prepara**	**0.51**	**357**		Pg	15 04 38.5	-0.7	
HPAH	**Hawaii Prepara**	**0.51**	**357**		Sg	15 04 45.5	-0.4	
STCH	**Steam Cracks**	**0.53**	**104**	Pg	Pg	15 04 38.7	-0.7	
NPOC	**North of Pu'u**	**0.54**	**103**		Pg	15 04 39.1	-0.6	
NPOC					Sg	15 04 46.6	-0.1	
JCUZ	**Jacuzzi**	**0.55**	**104**		Pg	15 04 39.6	-0.2	
JCUZ					Sg	15 04 47.1	+0.1	
JOKA	**Jonika Flow**	**0.63**	**97**		Pg	15 04 40.2	-1.2	
JOKA	**Jonika Flow**	**0.63**	**97**	IAML		15 04 48.2		
	comp=E,184nm,4.3s							
JOKA				IAML		15 04 49.1		
	comp=N,329nm,4.3s							
MHA	**Mahukona**	**0.70**	**342**	Pg	Pg	15 04 41.3	-1.5	
KPA	**Kalaupapa**	**2.07**	**324**		Pn	15 05 03.0	-1.7	

IDC 28 15:08:13.6±5.0,2°.88S×150°.90E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=168.7km s-min=30.6km az=104.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.43**	**222**	P	P	15 13 25.1	+0.4
	0.2nm,0.3s,baz=47,slow=9.6,SNR=4.7						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**26.41**	**217**	P	P	15 13 51.9	-0.2
	0.3nm,0.7s,baz=50,slow=8.2,SNR=7.2						
	0.3nm,0.7s						
MJAR	**Matsushiro Arr**	**40.97**	**344**	P	P	15 15 57.9	-0.4
	2.3nm,1.0s,baz=171,slow=10,SNR=2.2						
	2.3nm,1.0s						

*TIR **28** 15:19:13.9, 41°.52N×19°.43E, h33km±1km, Ml3.5/4*
*PDG **28** 15:19:15.2±0.2, 41°.48N×19°.60E, h11km, ML2.9/12, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
*BEO **28** 15:19:21.3±0.5, 41°.89N×19°.97E, h0km, ML2.6/14*
ISC 28 15:19:15.3±1.0, 41°.50N±0°.02×19°.51E±0°.02, h13km±8km, n49, σ1°.46/85, 15C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**119**	Pg	**Pg**	**15 19 21.0**	**-0.6**
TIR				AML	AML	15 19 25.4	
	62nm,0.4s						
TIR				Sg	**Sg**	**15 19 26.1**	**+0.3**
ULC	**Ulcinj**	**0.51**	**337**	*e*Pg	**Pg**	**15 19 24.5**	**-0.9**
ULC				*e*Sg	**Sg**	**15 19 32.1**	**0.0**
SDA	**Shkodra**	**0.56**	**359**	Pg	**Pb**	**15 19 25.3**	**-1.6**
SDA				Sg	**Sg**	**15 19 33.7**	**+0.1**
PHP	**Peshkopia**	**0.72**	**75**	Pn	**Pb**	**15 19 27.6**	**-2.2**
PHP				Sn	**Sb**	**15 19 39.7**	**+0.1**
PHP				AML	AML	15 19 42.9	
	2.2nm,0.5s						
DRME	**Dracevica, Mon**	**0.73**	**341**	⇑*i*Pg	**Pb**	**15 19 28.5**	**-1.4**
DRME				*e*Sg	**Sb**	**15 19 39.5**	**-0.3**
BUM	**Brajici-Budva**	**0.93**	**330**	*e*Pg	**Pb**	**15 19 32.4**	**-0.9**
BUM				*i* Sg	**Sg**	**15 19 47.3**	**+1.9**
PDG	**Podgorica**	**0.95**	**348**	Pn	**Pb**	**15 19 31.7**	**-1.9**
PDG				Sn	**Sb**	**15 19 45.3**	**-0.9**
PDG	**Podgorica**	**0.95**	**348**	⇑P	**Pb**	**15 19 33.4**	**-0.3**
PDG				⇑S	**Sb**	**15 19 45.7**	**-0.5**
PDG	**Podgorica**	**0.95**	**348**	*e*Pg	**Pb**	**15 19 33.2**	**-0.5**
PDG				*e*Sg	**Sb**	**15 19 44.3**	**-1.9**
PDG	**Podgorica**	**0.95**	**348**	⇓*i*Pg	**Pb**	**15 19 32.4**	**-1.3**
PDG				*e*Sg	**Sb**	**15 19 47.0**	**+0.8**
VLO	**Vlora**	**1.03**	**181**	Pn	**Pb**	**15 19 33.1**	**-1.8**
VLO				Sn	**Sb**	**15 19 48.0**	**-0.3**
VLO				AML	AML	15 19 58.2	
	4.3nm,0.4s						
CEME	**Cevo**	**1.14**	**337**	⇓*i*Pg	**Pn**	**15 19 36.1**	**-0.9**
CEME				*e*Sg	**Sg**	**15 19 53.6**	**+1.5**
PVY	**Plav**	**1.15**	**17**	⇓*i*Pg	**Pn**	**15 19 35.3**	**-1.9**
PVY				*e*Sg	**Sn**	**15 19 52.8**	**0.0**
HCY	**Herceg Novi**	**1.22**	**322**	⇑*i*Pg	**Pn**	**15 19 38.0**	**0.0**
HCY				*i* Sg	**Sg**	**15 19 56.7**	**+2.1**
KBN	**Korca**	**1.30**	**132**	Pn	**Pn**	**15 19 35.8**	**+0.6**
KBN				Sn	**Sb**	**15 19 57.2**	**+1.0**
KBN				AML	AML	15 20 00.9	
	2.8nm,0.6s						
NKME	**Niksic**	**1.34**	**342**	*e*Pg	**Pn**	**15 19 39.7**	**0.0**
NKME				*i* Sg	**Sg**	**15 20 00.1**	**+1.7**
KOME	**Kolasin**	**1.35**	**0**	*e*Pg	**Pn**	**15 19 40.9**	**+0.9**
KOME	**Kolasin**	**1.35**	**0**	⇑*i*Pg	**Pn**	**15 19 39.3**	**-0.7**
KOME				*e*Sg	**Sg**	**15 20 00.4**	**+1.4**
IVA	**Berane**	**1.40**	**12**	⇑*i*Pg	**Pn**	**15 19 40.2**	**-0.5**
IVA				*e*Sg	**Sg**	**15 20 01.6**	**+1.0**
BRY	**Bratogost**	**1.58**	**333**	⇓*i*Pn	**Pn**	**15 19 44.0**	**+0.9**
BRY				*i* Sn	**Sg**	**15 20 07.3**	**+1.1**
SJES	**Sjenica**	**1.80**	**11**	*e*Pn	**Pb**	**15 19 48.1**	**0.0**
SJES				*e*Sg	**Sn**	**15 20 05.0**	**-3.8**
PLE	**Pljevlja**	**1.83**	**357**	⇓*i*Pn	**Pn**	**15 19 47.5**	**+0.9**
PLE				*e*Sn	**Sb**	**15 20 12.9**	**+1.2**
NOCI	**Noci**	**1.98**	**250**	P	**Pn**	**15 19 47.9**	**-0.6**
NOCI				S	**Sn**	**15 20 12.2**	**-0.9**
SELS	**Selova**	**2.09**	**34**	*e*Pn	**Pn**	**15 19 51.1**	**+1.0**
SELS				*e*Sg	**Sn**	**15 20 12.6**	**-3.4**
IVAS	**Ivanjica**	**2.13**	**13**	*e*Pn	**Pn**	**15 19 51.5**	**+0.9**
BARS	**Barje**	**2.16**	**52**	*e*Pn	**Pn**	**15 19 51.6**	**+0.6**
BARS				*e*Sg	**Sn**	**15 20 14.2**	**-3.4**
MATE	**Matera**	**2.29**	**249**	⇑P	**Pb**	**15 19 58.0**	**+1.6**
MATE				⇑S	**Sg**	**15 20 30.3**	**+1.6**
GOCS	**Kraljevo Serbi**	**2.30**	**26**	*e*Pn	**Pn**	**15 19 54.5**	**+1.6**
GOCS				*e*Sg	**Sn**	**15 20 18.0**	**-3.1**
BBLS	**Lazi&#263i**	**2.37**	**358**	*e*Pn	**Pn**	**15 19 55.4**	**+1.5**
BBLS				*e*Sg	**Sb**	**15 20 26.2**	**-0.8**
BOSS	**Bosilegrad**	**2.43**	**65**	*e*Pn	**Pn**	**15 19 55.4**	**+0.7**
MRVN	**Minervino Murg**	**2.54**	**261**	P	**Pn**	**15 19 55.5**	**-0.7**
MRVN				S	**Sn**	**15 20 27.0**	**+0.1**
GRUS	**Gruza**	**2.55**	**20**	*e*Pn	**Pn**	**15 19 57.4**	**+1.1**
BOVS	**Bovan**	**2.68**	**36**	⇑P	**Pn**	**15 19 59.8**	**+1.7**
BOVS				⇑S	**Sn**	**15 20 30.6**	**+0.1**
BOVS	**Bovan**	**2.68**	**36**	*e*Pn	**Pn**	**15 19 59.1**	**+1.0**
BOVS				*e*Sg	**Sn**	**15 20 28.9**	**-1.5**
SGRT	**San Giovanni R**	**2.84**	**276**	P	**Pn**	**15 19 59.1**	**-1.2**
SGRT				S	**Sn**	**15 20 34.7**	**+0.3**
ZAPS	**Zavoj**	**2.92**	**51**	*e*Pn	**Pn**	**15 20 02.6**	**+1.2**
ZAPS				*e*Sg	**Sn**	**15 20 37.8**	**+1.5**
VTS	**Vitosha**	**2.99**	**67**	*e*Pn	**Pn**	**15 20 03.1**	**+0.6**
VTS				*e*Sg	**Sn**	**15 20 39.6**	**+1.3**
ZAGS	**Zajecar**	**3.06**	**40**	*e*Pn	**Pn**	**15 20 05.1**	**+1.7**
ZAGS				*e*Sg	**Sn**	**15 20 42.1**	**+2.3**
BLKB	**Belogradchik**	**3.16**	**47**	⇑S	**Sn**	**15 20 42.8**	**+0.6**
BLKB	**Belogradchik**	**3.16**	**47**	*e*Sg	**Sn**	**15 20 44.5**	**+2.2**
KUBS	**Kucevo**	**3.32**	**28**	*e*Pn	**Pn**	**15 20 06.1**	**-0.8**
KUBS				*e*Sg	**Sn**	**15 20 49.9**	**+3.7**
MDVR	**Moldovita**	**3.66**	**25**	⇓P	**Pn**	**15 20 11.8**	**+0.2**
MDVR	**Moldovita**	**3.66**	**25**	*e*Pn	**Pn**	**15 20 11.7**	**+0.1**
HERR	**Herculane**	**3.99**	**31**	⇑P	**Pn**	**15 20 16.8**	**+0.7**
HERR				⇓S	**Sn**	**15 21 02.3**	**-0.5**
BZS	**Buzias**	**4.39**	**20**	⇑P	**Pn**	**15 20 23.3**	**+1.7**
GZR	**Gura Zlata**	**4.56**	**30**	⇑P	**Pn**	**15 20 25.8**	**+1.7**
MORH	**Mrgy, Hungar**	**4.76**	**353**	⇓P	**Pn**	**15 20 29.1**	**+2.5**
LOT	**Lotru**	**5.02**	**37**	⇓P	**Pn**	**15 20 31.3**	**+0.9**
VOIR		**5.63**	**44**	⇑P	**Pn**	**15 20 40.3**	**+1.6**

*SOME **28** 15:33:54.0, 41°.25N×83°.17E, h10km*
*NNC **28** 15:33:54.4±2.0, 41°.38N×83°.36E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=16.3km s-min=10.3km az=172.0*
ISC 28 15:34:04.7±2.9, 41°.7N±0°.1×82°.94E±0°.10, h10km, n22, σ1°.20/28, 5C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.98**	**301**	Pg	**Pn**	**15 34 52.5**	**+0.4**
	10nm,0.4s						
SHLS				Lg	Lg	15 35 34.8	
	146nm,0.4s						
SHLS	**Shalkode**	**2.98**	**301**	*e*P	**Pn**	**15 34 52.5**	**+0.4**
	10nm,0.4s						
SHLS				*e*S	**Sb**	**15 35 34.8**	**+0.2**
	146nm,0.4s						
PDGK	**Podgornoye**	**3.05**	**304**	⇑Pg	**Pb**	**15 34 60.0**	**+0.8**
	10.0nm,0.8s						
PDGK				⇑Lg	Lg	15 35 44.4	
	121nm,0.7s						
UZB	**Uzynbulak**	**3.26**	**299**	Pg	**Pb**	**15 35 01.8**	**-1.0**
	5.4nm,0.4s						
UZB				Lg	Lg	15 35 51.2	
	75nm,0.5s						
UZB	**Uzynbulak**	**3.26**	**299**	*e*P	**Pb**	**15 35 01.8**	**-1.0**
	5.4nm,0.4s						
UZB				*e*S	**Sg**	**15 35 51.2**	**+1.7**
	75nm,0.5s						
KPKS	**Kokpek**	**3.63**	**301**	Pg	**Pb**	**15 35 08.1**	**-0.9**
	0.9nm,0.3s						
KPKS				Lg	Lg	15 36 01.7	
	27nm,0.4s						
SATY	**Saty**	**3.64**	**294**	Pg	**Pb**	**15 35 07.6**	**-1.6**
	7.5nm,0.7s						
SATY				Lg	Lg	15 36 00.8	
	27nm,0.5s						
KNOS	**Konyrlen**	**3.86**	**316**	Pg	**Pb**	**15 35 13.0**	**0.0**
	6.3nm,0.5s						
KNOS				Lg	Lg	15 36 09.7	
	20nm,0.5s						
KURS	**Kuram**	**3.97**	**299**	Pg	**Pb**	**15 35 14.0**	**-0.8**
KURS				Lg	Lg	15 36 11.4	
BLB	**Baldybastay**	**4.09**	**308**	Pg	**Pb**	**15 35 15.7**	**-1.1**
	2.2nm,0.1s						
BLB				Lg	Lg	15 36 14.6	
	27nm,0.7s						
ARXS	**Arharly**	**4.54**	**306**	*e*P	**Pb**	**15 35 25.6**	**+1.0**
ARXS				*e*S	**Sg**	**15 36 31.0**	**+0.5**
KOTS	**Kotyrbulak**	**4.59**	**292**	*e*P	**Pb**	**15 35 24.2**	**-1.2**
	22nm,0.2s						
KOTS				*e*S	**Sg**	**15 36 28.9**	**-3.3**
	38nm,0.5s						
MDOK	**Medeo**	**4.62**	**291**	Pg	**Pb**	**15 35 25.3**	**-0.5**
	2.8nm,0.5s						
MDOK				Lg	Lg	15 36 31.1	
	13nm,0.7s						
TNSS	**Tian-Shan**	**4.65**	**289**	Pg	**Pb**	**15 35 27.1**	**+0.5**
	1.5nm,0.5s						
TNSS				Lg	Lg	15 36 34.1	
	5.5nm,0.5s						
TNSS	**Tian-Shan**	**4.65**	**289**	*e*P	**Pb**	**15 35 27.1**	**+0.5**
	1.5nm,0.5s						
TNSS				*e*S	**Sg**	**15 36 34.1**	**0.0**
	5.5nm,0.5s						
MK31	**Makanchi Array**	**5.16**	**355**	⇓Pn	Pn	15 35 14.2	-7.8
	3.2nm,1.1s,baz=168,slow=14,SNR=15						
MK31				⇓Pg	**Pb**	**15 35 35.3**	**+0.3**
	2.0nm,0.5s,baz=169,slow=15,SNR=3.3						
MK31				⇑Lg	Lg	15 36 48.5	
	7.7nm,0.6s,baz=163,slow=25,SNR=3.8						
MAKZ	**Makanchi**	**5.20**	**353**	⇓Pg	**Pb**	**15 35 34.6**	**-1.1**
	4.6nm,0.8s						
MAKZ				⇑Lg	Lg	15 36 55.5	
	7.8nm,0.7s						
KST	**Kastek**	**5.35**	**287**	Pg	**Pb**	**15 35 39.9**	**+1.6**
	3.6nm,0.5s						
KST				Lg	Lg	15 36 56.1	
	24nm,0.6s						
KST	**Kastek**	**5.35**	**287**	*e*P	**Pb**	**15 35 39.9**	**+1.6**
	3.6nm,0.5s						
KST				*e*S	**Sg**	**15 36 56.1**	**-0.4**
	24nm,0.6s						
DGS	**Degeres**	**5.54**	**289**	Pg	**Pb**	**15 35 41.5**	**0.0**
	1.2nm,0.6s						
DGS				Lg	Lg	15 36 59.3	
	17nm,0.4s						
KRBS	**Karabastau**	**5.73**	**293**	Pg	**Pb**	**15 35 46.6**	**+1.8**
	1.3nm,0.4s						
KRBS				Lg	Lg	15 37 07.2	
	2.2nm,0.6s						
AAK	**Ala-Archa**	**6.36**	**282**	⇑Pg	**Pb**	**15 35 54.4**	**-1.0**
	1.4nm,0.7s						
AAK				⇓Lg	Lg	15 37 29.0	
	5.3nm,0.7s						

*IDC **28** 15:45:32.0±3.8, 22°.24S×179°.44E, h434km±37km, mb2.9/4, mbtmp4.0/5, Error ellipse: s-maj=39.9km s-min=22.8km az=21.0*
*NEIC **28** 15:45:40.2±1.3, 23°.0S±0°.1×179°.2E±0°.2, h492km±9km, mb4.3/19, Error ellipse: s-maj=24.9km s-min=17.6km az=131.0*
ISC 28 15:45:38.3±0.8, 23°.17S±0°.08×179°.4E±0°.1, h500km, n67, σ2°.81/66, mb4.1/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.56**	**346**	P	**P**	**15 47 10.5**	**-0.1**
RIZ	**Raoul Island**	**6.50**	**159**	P	**P**	**15 47 20.7**	**+1.2**
RAO	**Raoul Island**	**6.51**	**159**	P	**P**	**15 47 20.8**	**+1.3**
	230nm,0.3s,baz=75,slow=23,SNR=6.7						
RAO	**Raoul Island**	**6.51**	**159**	P	**P**	**15 47 20.7**	**+1.1**
AFI	**Afiamalu**	**12.43**	**44**	P	**P**	**15 48 21.7**	**+0.1**
WCZ	**Waipu Caves**	**13.47**	**198**	P	P	15 48 39.6	+7.4
KUZ	**Kuaotunu**	**13.90**	**192**	P	P	15 48 45.1	+8.3
MXZ	**Matakaoa Point**	**14.38**	**184**	P	**P**	**15 48 45.6**	**+3.8**
MXZ	**Matakaoa Point**	**14.38**	**184**	P	P	15 48 48.2	+6.4
TOZ	**Tahuroa Road**	**14.90**	**192**	P	**P**	**15 48 51.4**	**+4.1**
URZ	**Urewera**	**15.17**	**187**	P	**P**	**15 48 53.9**	**+3.8**
	13nm,0.5s,baz=291,slow=3.4,SNR=10						
URZ				S	**S**	**15 51 25.5**	**-2.8**
	5.2nm,0.7s,baz=160,slow=22,SNR=7.4						
URZ	**Urewera**	**15.17**	**187**	P	P	15 48 36.8	-13
URZ	**Urewera**	**15.17**	**187**	P	**P**	**15 48 52.5**	**+2.4**
URZ				S	**S**	**15 51 23.2**	**-5.1**
TLZ	**Tolley Road**	**15.47**	**191**	P	P	15 49 00.8	+7.5
BKZ	**Black Stump Fm**	**16.14**	**188**	P	**P**	**15 49 02.6**	**+2.3**
BKZ				S	**S**	**15 51 44.6**	**-2.2**
OTVZ	**Oturere**	**16.26**	**190**	P	**P**	**15 49 05.7**	**+4.0**
NGZ	**Ngauruhoe**	**16.29**	**191**	P	**P**	**15 49 07.1**	**+5.1**
NGZ				S	**S**	**15 51 41.6**	**-7.9**
VRZ	**Vera Road**	**16.39**	**193**	P	**P**	**15 49 09.0**	**+6.1**
WNVZ	**Wahianoa**	**16.43**	**191**	P	**P**	**15 49 06.3**	**+2.9**
PKVZ	**Pokaka**	**16.44**	**191**	S	**P**	**15 49 05.5**	**+2.0**
KAHZ	**Kahuranaki**	**16.71**	**187**	P	**P**	**15 49 11.0**	**+4.7**
DUWZ	**D'Urville Isla**	**18.18**	**193**	S	**S**	**15 52 19.2**	**-2.0**
SNZO	**South Karori**	**18.52**	**191**	P	**P**	**15 49 20.9**	**-2.3**
QRZ	**Quartz Range**	**18.54**	**197**	P	**P**	**15 49 26.9**	**+3.5**
QRZ	**Quartz Range**	**18.54**	**197**	P	**P**	**15 49 27.4**	**+4.0**
QRZ	**Quartz Range**	**18.54**	**197**	P	**P**	**15 49 26.8**	**+3.5**
QRZ				S	**S**	**15 52 24.7**	**-2.2**
BHW	**Baring Head**	**18.58**	**191**	P	**P**	**15 49 26.4**	**+2.6**
TKNZ	**Takaka Hill**	**18.62**	**195**	P	**P**	**15 49 27.4**	**+3.2**
NNZ	**Nelson**	**18.70**	**194**	P	**P**	**15 49 27.7**	**+2.9**
TUWZ	**Tuamarina**	**18.78**	**193**	P	**P**	**15 49 27.6**	**+2.0**
MRNZ	**Matariki Terra**	**19.02**	**196**	P	**P**	**15 49 31.4**	**+3.6**
MRNZ				S	**S**	**15 52 33.5**	**-1.2**
THZ	**Tophouse**	**19.33**	**195**	P	**P**	**15 49 32.8**	**+2.1**
THZ				S	**S**	**15 52 34.9**	**-5.0**
DSZ	**Denniston Nort**	**19.59**	**197**	P	**P**	**15 49 36.4**	**+3.4**
KHZ	**Kahutara**	**19.81**	**193**	P	**P**	**15 49 37.4**	**+2.4**
KHZ	**Kahutara**	**19.81**	**193**	P	**P**	**15 49 36.1**	**+1.1**
LTZ	**Lake Taylor**	**20.44**	**195**	P	**P**	**15 49 42.6**	**+1.8**
GVZ	**Greta Valley S**	**20.44**	**194**	P	**P**	**15 49 42.8**	**+2.0**
INZ	**Inchbonnie**	**20.60**	**197**	P	**P**	**15 49 44.4**	**+2.2**
MQZ	**McQueen's Vall**	**21.23**	**194**	P	**P**	**15 49 49.7**	**+1.8**
FOZ	**Fox Glacier**	**21.81**	**199**	P	**P**	**15 49 55.6**	**+2.6**
LBZ	**Lake Benmore**	**22.48**	**198**	P	**P**	**15 50 01.5**	**+2.3**
JCZ	**Jackson Bay**	**22.61**	**200**	P	**P**	**15 50 02.8**	**+2.3**
WKZ	**Wanaka**	**23.22**	**199**	P	**P**	**15 50 07.2**	**+1.4**
WKZ	**Wanaka**	**23.22**	**199**	P	**P**	**15 50 07.7**	**+1.9**
WHZ	**Wether Hill Ro**	**24.51**	**200**	P	**P**	**15 50 19.5**	**+2.3**
WHZ	**Wether Hill Ro**	**24.51**	**200**	P	**P**	**15 50 20.1**	**+2.9**
ARMA	**Armidale**	**25.79**	**248**	P	**P**	**15 50 29.8**	**+0.9**
ARMA				IAmb	IAmb	15 50 53.3	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**25.90**	**259**	P	**P**	**15 50 30.1**	**+0.3**
EIDS				IAmb	IAmb	15 50 52.2	
	comp=Z,10.0nm,1.3s						
CAN	**Canberra**	**29.05**	**238**	P	**P**	**15 50 59.0**	**+1.5**
TOO	**Toolangi**	**32.40**	**236**	P	**P**	**15 51 27.7**	**+1.4**
TOO				IAmb	IAmb	15 51 50.4	
	comp=Z,7.1nm,1.4s						
STKA	**Stephens Creek**	**34.50**	**247**	P	**P**	**15 51 44.2**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=81,slow=13,SNR=4.3						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**34.50**	**247**	IAmb	IAmb	15 51 44.5	
	comp=Z,25nm,1.4s						
STKA				P	**P**	**15 51 45.3**	**+1.2**
INKA	**Innaminka**	**35.11**	**254**	P	**P**	**15 51 50.4**	**+1.2**
BBOO	**Buckleboo**	**39.24**	**246**	P	**P**	**15 52 23.8**	**+0.6**
BBOO				IAmb	IAmb	15 52 39.8	
	comp=Z,21nm,1.4s						
AS31	**Alice Springs**	**41.63**	**260**	P	**P**	**15 52 42.5**	**+0.1**
ASAR	**Alice Springs**	**41.63**	**260**	P	**P**	**15 52 42.6**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=91,slow=8.0,SNR=22						
ASAR				PcP	**PcP**	**15 54 26.3**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=90,slow=1.9,SNR=2.0						
	comp=Z,0.6nm,0.6s						
WB0	**Warramunga Arr**	**41.91**	**266**	P	**P**	**15 52 44.4**	**-0.3**
WB0				IAmb	IAmb	15 53 00.8	
	comp=Z,5.4nm,1.4s						
WRA	**Warramunga Arr**	**41.92**	**266**	P	**P**	**15 52 44.2**	**-0.5**
	comp=Z,0.2nm,0.2s,baz=96,slow=8.4,SNR=8.0						
	comp=Z,0.2nm,0.2s						
FORT	**Forrest**	**46.07**	**249**	P	**P**	**15 53 16.9**	**+0.1**
FORT				IAmb	IAmb	15 53 52.5	
	comp=Z,10nm,1.1s						
NWAO	**Narrogin (SRO)**	**55.05**	**245**	P	**P**	**15 54 22.4**	**-0.1**
NWAO				IAmb	IAmb	15 54 27.2	
	comp=Z,30nm,1.2s						
QSPA	**South Pole Qui**	**66.91**	**180**	P	P	15 55 45.8	+5.7
	comp=Z,1.0nm,0.7s,baz=352,slow=7.1,SNR=7.2						
	comp=Z,1.0nm,0.7s						
QSPA	**South Pole Qui**	**66.91**	**180**	P	P	15 55 45.5	+5.3
DCMP	**DeCamp, Califo**	**82.08**	**41**	P	P	15 57 10.7	+4.8
AKASG	**Malin Array Be**	**144.07**	**327**	PKP	PKPbc	16 04 13.4	-2.2
	comp=Z,1.5nm,0.6s,baz=50,slow=2.9,SNR=5.0						
BRTR	**Keskin Array B**	**146.71**	**308**	PKPbc	**PKPbc**	**16 04 22.5**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=160,slow=5.8,SNR=2.7						
MMAI	**Mount Meron Ar**	**146.91**	**295**	PKPbc	**PKPbc**	**16 04 24.4**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=95,slow=3.5,SNR=4.2						
EKA	**Eskdalemuir Ar**	**147.82**	**3**	PKPbc	**PKPbc**	**16 04 23.5**	**-2.7**
	comp=Z,2.4nm,0.8s,baz=35,slow=2.6,SNR=3.7						

*WEL **28** 15:47:54.7±1.6, 38°.5S±0°.9×17°.6E±1°.0, h141km±18km, M1.9/7, MLv1.9/7, Error ellipse: s-maj=14.3km s-min=9.4km az=127.1, confirmed*
*NOU **28** 15:48:23.4, 37°.82S×176°.49E, h23km, mb4.1/6, North Island, New Zealand*
ISC 28 15:47:52.6±3.8, 38°.2S±0°.1×176°.1E±0°.1, h166km±25km, n15, σ0°.77/22, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLZ	**Tolley Road**	**

TAPN				Sn		**Sn**	**16 07 53.5**	**+0.8**
	comp=N,41nm,0.3s,baz=308,slow=0.0							
ODAN	**Odare**	**6.68**	**299**	Pn		**Pn**	**16 06 39.5**	**+1.3**
	baz=303,slow=0.0							
ODAN				Sn		**Sn**	**16 07 52.6**	**-0.4**
	comp=N,63nm,0.3s,baz=303,slow=0.0							
CMAR	**Chiang Mai Arr**	**7.04**	**137**	P		**Pn**	**16 06 41.0**	**-1.9**
	comp=N,0.4nm,0.4s,baz=315,slow=14,SNR=4.9							
RAMN	**Ramite**	**7.36**	**297**	Pn		**Pn**	**16 06 48.8**	**+1.4**
	baz=301,slow=0.0							
RAMN				Sn		**Sn**	**16 08 07.9**	**-1.6**
	comp=N,35nm,0.4s,baz=301,slow=0.0							
JIRN	**Jiri**	**8.00**	**301**	Pn		**Pn**	**16 06 57.2**	**+1.0**
	baz=304,slow=0.0							
JIRN				Sn		**Sn**	**16 08 23.7**	**-1.5**
	comp=N,30nm,0.3s,baz=304,slow=0.0							
GUN	**Gumba**	**8.36**	**301**	Pn		**Pn**	**16 07 02.5**	**+1.4**
	baz=305,slow=0.0							
GUN				Sn		**Sn**	**16 08 32.5**	**-1.5**
	comp=N,35nm,0.3s,baz=305,slow=0.0							
PKI	**Pulchoki**	**8.58**	**298**	Pn		**Pn**	**16 07 05.3**	**+1.2**
	baz=302,slow=0.0							
PKI				Sn		**Sn**	**16 08 37.3**	**-2.1**
	comp=N,12nm,0.3s,baz=302,slow=0.0							
PKIN	**Phulchoki**	**8.59**	**298**	Pn		**Pn**	**16 07 05.5**	**+1.3**
	baz=302,slow=0.0							
PKIN				Sn		**Sn**	**16 08 37.5**	**-2.1**
	comp=N,18nm,0.3s,baz=302,slow=0.0							
KKN	**Kakani**	**8.78**	**299**	Pn		**Pn**	**16 07 08.2**	**+1.5**
	baz=302,slow=0.0							
KKN				Sn		**Sn**	**16 08 42.1**	**-1.9**
	comp=N,20nm,0.3s,baz=302,slow=0.0							
DMN	**Daman**	**8.84**	**298**	Pn		**Pn**	**16 07 06.9**	**-0.7**
	baz=301,slow=0.0							
DMN				Sn		**Sn**	**16 08 42.3**	**-3.4**
	comp=N,9.3nm,0.3s,baz=301,slow=0.0							
DANN	**Dangsing**	**10.23**	**299**	Pn		**Pn**	**16 07 27.1**	**+0.5**
	baz=302,slow=0.0							
DANN				Sn		**Sn**	**16 09 16.2**	**-3.4**
	comp=N,8.9nm,0.3s,baz=302,slow=0.0							
MJAR	**Matsushiro Arr**	**40.03**	**61**	P		**P**	**16 12 30.8**	**+1.9**
	comp=N,2.9nm,0.5s,baz=264,slow=7.1,SNR=15							
	comp=N,2.9nm,0.5s							
ASF	**Jabal al Asfar**	**50.58**	**293**	LR		LR	16 40 49.6	
	comp=N,27nm,18.5s,baz=289,slow=42							
WRA	**Warramunga Arr**	**58.62**	**134**	P		**P**	**16 14 50.3**	**-0.3**
	comp=N,0.2nm,0.4s,baz=320,slow=7.5,SNR=7.2							
	comp=N,0.2nm,0.4s							
ASAR	**Alice Springs**	**61.05**	**138**	P		**P**	**16 15 07.5**	**+0.3**
	comp=N,0.3nm,0.3s,baz=313,slow=6.3,SNR=15							
	comp=N,0.3nm,0.3s							

*IDC **28** 16:13:36.4±3.7, 0.°24S×124.°29E, h32km±28km, mb4.0/17, mbtmp4.1/18, ML3.9/1, MS3.1/10, Error ellipse: s-maj=30.2km s-min=12.5km az=73.0*

*DJA **28** 16:13:37.8±0.2, 0.°5S×122.°5E±.°, h10km, M4.6/28, mB5.1/6, mb4.8/14, MLv4.7/28, Mw(mB)4.5/6*

*NEIC **28** 16:13:39.4±2.5, 0.°18S±0.°06×124.°57E±0.°05, h49km±7km, mb5.1/57, Error ellipse: s-maj=9.3km s-min=7.1km az=164.0*

ISC 28 16:13:37.4±0.4, **0.°15S**±0.°05×**124.°62E**±0.°04, **h35**km, **n130,** σ1§**77**/130, **mb4.8**/44, **MS3.1/7, 1C-1D, Southern Moluccca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.96**	**319**	P	**Pn**	**16 13 56.2**	**+1.8**
GTOI	**Gorontalo**	**1.78**	**296**	P	**Pn**	**16 14 09.7**	**+3.9**
LUWI	**Luwuk**	**2.04**	**244**		**Pn**	**16 14 11.6**	**+2.2**
LUWI				Sn	**Sn**	**16 14 35.6**	**+1.9**
LUWI	**Luwuk**	**2.04**	**244**	P	**Pn**	**16 14 11.6**	**+2.2**
LUWI				S	**Sn**	**16 14 39.4**	**+5.7**
SANI	**Sanana**	**2.33**	**144**	P	**Pn**	**16 14 12.6**	**-0.8**
MRSI	**Marisa**	**2.75**	**283**	P	**Pn**	**16 14 18.7**	**-0.3**
TNTI	**Ternate**	**2.90**	**72**		**Pn**	**16 14 24.7**	**+3.5**
TNTI				Sn	**Sn**	**16 14 58.1**	**+3.3**
TNTI	**Ternate**	**2.90**	**72**	P	**Pn**	**16 14 25.3**	**+4.2**
APSI	**Ampana**	**3.06**	**256**	P	**Pn**	**16 14 26.0**	**+2.7**
NLAI	**Namlea**	**3.95**	**141**	P	**Pn**	**16 14 36.9**	**+1.3**
TOLI2	**Tolitoli**	**4.03**	**288**		**Pn**	**16 14 38.4**	**+1.6**
TOLI2				Sn	**Sn**	**16 15 22.6**	**-0.2**
KDI	**Kendari**	**4.28**	**208**	P	**Pn**	**16 14 41.7**	**+1.6**
MPSI	**Mapaga**	**4.74**	**276**	P	**Pn**	**16 14 48.9**	**+2.4**
PCI	**Palu**	**4.84**	**261**	P	**Pn**	**16 14 50.0**	**+2.2**
AAI	**Ambon**	**5.01**	**135**	P	**Pn**	**16 14 52.4**	**+2.2**
MSAI	**Masohi**	**5.35**	**126**	P	**Pn**	**16 14 58.0**	**+3.1**
TTSI	**Tana Toraja**	**5.59**	**239**	P	**Pn**	**16 15 01.3**	**+3.2**
SPSI	**Sidrap Palu**	**6.15**	**232**	P	**Pn**	**16 15 09.2**	**+3.4**
	0.4nm1μm83nm,0.8s						
BNSI	**Bone**	**6.17**	**227**	P	**Pn**	**16 15 08.9**	**+2.7**
SWI	**Sorong**	**6.68**	**96**	P	**Pn**	**16 15 16.4**	**+3.2**
BKSI	**Bulukumba**	**6.82**	**221**	P	**Pn**	**16 15 17.7**	**+2.6**
	0.2nm277nm,0.5s						
BNDI	**Bandanaira**	**6.84**	**129**	P	**Pn**	**16 15 18.2**	**+2.9**
	0.5nm121nm,1.2s						
KAPI	**Kappang**	**6.85**	**225**	Pn	**Pn**	**16 15 17.9**	**+2.5**
	5.2nm,0.3s,baz=65,slow=8.1,SNR=11						
KAPI				Sn	**Sn**	**16 16 33.9**	**+1.6**
	4.1nm,0.3s,baz=13,slow=23,SNR=7.2						
KAPI				LR	LR	16 17 36.9	
	comp=Z,68nm,18.3s,baz=57,slow=37						
KAPI	**Kappang**	**6.85**	**225**		**Pn**	**16 15 15.9**	**+0.4**
KAPI				Sn	**Sn**	**16 16 30.8**	**-1.5**
BSSI	**Bau Bau, Buton**	**7.24**	**215**	P	**Pn**	**16 15 23.5**	**+2.7**
	0.2nm38nm,0.5s						
DAV	**Davao City (W)**	**7.24**	**8**	LR	LR	16 18 16.9	
	comp=Z,342nm,21.9s,baz=236,slow=38						
MYLDM	**Lahad Datu**	**8.08**	**311**		**Pn**	**16 15 32.8**	**+0.4**
FAKI	**Fak Fak**	**8.11**	**110**		**Pn**	**16 15 33.5**	**+0.7**
FAKI	**Fak Fak**	**8.11**	**110**	P	**Pn**	**16 15 33.6**	**+0.7**
EDFI	**Ende, Flores**	**9.03**	**199**	P	**Pn**	**16 15 47.2**	**+1.7**
	18nm,0.8s						
SOEI	**Soe**	**9.55**	**182**		**Pn**	**16 15 51.1**	**-1.6**
SOEI	**Soe**	**9.55**	**182**	P	**Pn**	**16 15 53.9**	**+1.3**
BATI	**Baumata**	**10.04**	**185**	LR	LR	16 20 13.5	
	comp=Z,175nm,22.0s,baz=26,slow=40						
KKM	**Kota Kinabalu**	**10.40**	**306**	Pn	**Pn**	**16 16 04.3**	**0.0**
MTN	**Manton Dam**	**14.17**	**153**		**Pn**	**16 16 55.9**	**+0.1**
KNRA	**Kununurra**	**15.96**	**165**	Pn	**Pn**	**16 17 18.2**	**-1.3**
FITZ	**Fitzroy Crossi**	**17.86**	**177**	P	**Pn**	**16 17 43.3**	**0.0**
	0.3nm,0.3s,baz=19,slow=9.3,SNR=11						
	5.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**17.86**	**177**	P	**Pn**	**16 17 43.0**	**-0.3**
MYKOM	**Kota Tinggi**	**20.85**	**275**	P	**P**	**16 18 16.1**	**-0.4**
MBWA	**Marble Bar**	**21.42**	**193**		**P**	**16 18 22.0**	**-0.5**
WB0	**Warramunga Arr**	**21.72**	**154**		**P**	**16 18 24.4**	**-1.4**
WRA	**Warramunga Arr**	**21.86**	**155**	P	**P**	**16 18 26.1**	**-1.1**
	3.3nm,0.5s,baz=336,slow=10.0,SNR=32						
	3.3nm,0.5s						
WRA	**Warramunga Arr**	**21.86**	**155**		**P**	**16 18 23.9**	**-3.3**
WR8	**Warramunga Arr**	**21.94**	**154**		**P**	**16 18 26.5**	**-1.6**
COEN	**Coen**	**22.93**	**128**	P	**P**	**16 18 37.0**	**-1.7**
YULB	**Yu-li**	**23.62**	**352**	P	**P**	**16 18 44.8**	**-0.7**
YULB				IAmb	IAmb	16 19 09.8	
	comp=Z,47nm,1.3s						
TPUB	**Ta-pu**	**23.63**	**351**	P	**P**	**16 18 44.4**	**-1.2**
TPUB				IAmb	IAmb	16 19 01.1	
	comp=Z,257nm,2.0s						
SSLB	**Suanglung**	**24.06**	**352**	P	**P**	**16 18 47.2**	**-2.4**
SSLB				IAmb	IAmb	16 19 14.9	
	comp=Z,45nm,1.3s						
YHNB	**Yeheng**	**24.87**	**353**	P	**P**	**16 18 56.8**	**-0.3**
AS31	**Alice Springs**	**25.05**	**160**		**P**	**16 18 57.7**	**-1.0**
ASAR	**Alice Springs**	**25.06**	**160**	P	**P**	**16 18 58.3**	**-0.4**
	comp=Z,5.0nm,0.8s,baz=325,slow=6.7,SNR=51						
ASAR				PcP	**PcP**	**16 22 33.4**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=346,slow=2.3,SNR=4.8						
ASAR				ScP	**ScP**	**16 26 08.9**	**-0.8**
	comp=Z,0.3nm,0.9s,baz=339,slow=2.9,SNR=4.1						
ASAR				LR	LR	16 29 46.2	
	comp=Z,33nm,18.0s,baz=313,slow=39						
	comp=Z,5.0nm,0.8s						
ASAR	**Alice Springs**	**25.06**	**160**		**P**	**16 18 57.5**	**-1.2**
FORT	**Forrest**	**30.64**	**174**	P	**P**	**16 19 47.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**31.28**	**308**	P	**P**	**16 19 51.2**	**-3.2**
	comp=Z,0.5nm,0.7s,baz=123,slow=8.8,SNR=4.8						
CMAR				LR	LR	16 32 24.4	
	comp=Z,32nm,21.8s,baz=130,slow=36						
	comp=Z,0.5nm,0.7s						
INKA	**Innaminka**	**31.50**	**152**	P	**P**	**16 19 56.4**	**+0.2**
JNU	**Nakatsue**	**33.62**	**10**	LR	LR	16 33 43.6	
	comp=Z,41nm,21.3s,baz=54,slow=36						
JNU	**Nakatsue**	**33.62**	**10**	P	**P**	**16 20 14.0**	**-0.7**
JNU				IAmb	IAmb	16 20 24.2	
	comp=Z,89nm,1.6s						
BBOO	**Buckleboo**	**34.23**	**163**	P	**P**	**16 20 19.5**	**-0.5**
BBOO				IAmb	IAmb	16 20 51.8	
	comp=Z,48nm,1.9s						
JMN	**Monobe**	**34.81**	**14**	P	**P**	**16 20 25.0**	**0.0**
STKA	**Stephens Creek**	**35.41**	**155**	P	**P**	**16 20 29.8**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=343,slow=9.0,SNR=6.9						
	comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**35.41**	**155**	IAmb	IAmb	16 20 35.7	
	comp=Z,93nm,1.8s						
TJN	**Taejon**	**36.43**	**4**	P	**P**	**16 20 38.4**	**-0.4**
INU	**Inuyama**	**37.17**	**17**	P	**P**	**16 20 45.1**	**-0.1**
INU				IAmb	IAmb	16 22 00.2	
	comp=Z,106nm,1.8s						
JGF	**Kuroka**	**37.50**	**17**	P	**P**	**16 20 48.4**	**+0.3**
KSRS	**Korea Array**	**37.54**	**4**	P	**P**	**16 20 47.0**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=183,slow=9.1,SNR=2.5						
	comp=Z,1.3nm,0.7s						
MJAR	**Matsushiro Arr**	**38.63**	**18**	P	**P**	**16 20 57.3**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=197,slow=8.6,SNR=6.0						
MJAR				LR	LR	16 35 03.1	
	comp=Z,23nm,21.3s,baz=181,slow=33						
	comp=Z,3.0nm,0.8s						
MJAR	**Matsushiro Arr**	**38.63**	**18**	P	**P**	**16 21 00.2**	**+2.7**
MJAR				IAmb	IAmb	16 21 27.4	
	comp=Z,23nm,1.9s						
JYT	**Yasato**	**38.98**	**20**	P	**P**	**16 21 01.7**	**+1.2**
ARMA	**Armidale**	**39.57**	**142**	P	**P**	**16 21 05.3**	**-0.3**
ARMA				IAmb	IAmb	16 21 08.8	
	comp=Z,51nm,1.9s						
CAN	**Canberra**	**41.73**	**150**	P	**P**	**16 21 25.2**	**+2.0**
TOO	**Toolangi**	**41.93**	**155**	P	**P**	**16 21 26.5**	**+1.6**
TOO				IAmb	IAmb	16 22 47.0	
	comp=Z,20nm,1.9s						
PALK	**Pallekele**	**44.41**	**281**	LR	LR	16 41 14.8	
	comp=Z,31nm,19.2s,baz=87,slow=38						
USRK	**Ussuriysk Ar.**	**44.64**	**8**	P	**P**	**16 21 47.6**	**+1.0**
	comp=Z,3.5nm,0.4s,baz=189,slow=7.5,SNR=27						
	comp=Z,3.5nm,0.4s						
MDJ	**Mudanjiang**	**44.79**	**5**	P	**P**	**16 21 49.2**	**+1.4**
MDJ				IAmb	IAmb	16 21 54.9	
	comp=Z,36nm,1.7s						
GTA	**Gaotai**	**45.44**	**333**	*e*P	**P**	**16 21 55.5**	**+2.3**
GTA				pP	pP	16 22 00.8	-1.7
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
EVN	**Everest**	**45.75**	**311**	P	**P**	**16 21 55.2**	**-1.3**
ASAJ	**Asahikawa**	**46.90**	**18**	P	**P**	**16 22 05.3**	**+0.9**
	comp=Z,7.0nm,0.9s,baz=230,slow=9.8,SNR=4.8						
	comp=Z,7.0nm,0.9s						
JKA	**Kamikawa-asahi**	**46.90**	**18**	P	**P**	**16 22 04.6**	**+0.1**
HYBB	**Hyderabad (bro**	**48.57**	**294**	*e*P	**P**	**16 22 17.2**	**-0.7**
HILR	**Hailar Array B**	**49.69**	**356**	P	**P**	**16 22 26.5**	**+0.6**
	comp=Z,2.1nm,0.4s,baz=171,slow=10,SNR=7.1						
	comp=Z,2.1nm,0.4s						
SONM	**Songino Array**	**50.35**	**344**	P	**P**	**16 22 31.6**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=164,slow=8.5,SNR=8.3						
	comp=Z,2.4nm,0.9s						
MKAR	**Makanchi Array**	**59.60**	**328**	P	**P**	**16 23 36.8**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=123,slow=8.6,SNR=31						
	comp=Z,0.9nm,0.3s						
MKAR	**Makanchi Array**	**59.60**	**328**	P	**P**	**16 23 36.7**	**-1.2**
MAKZ	**Makanchi**	**59.77**	**327**	P	**P**	**16 23 37.9**	**-1.2**
MAKZ				IAmb	IAmb	16 24 54.6	
	comp=Z,18nm,2.0s						
MAKZ	**Makanchi**	**59.77**	**327**	P	**P**	**16 23 37.8**	**-1.2**
PETK	**Petropavlovsk-**	**59.80**	**22**	P	**P**	**16 23 41.2**	**+2.1**
	comp=Z,3.7nm,0.8s,baz=229,slow=6.6,SNR=2.3						
	comp=Z,3.7nm,0.8s						
KHZ	**Kahutara**	**60.77**	**140**	P	**P**	**16 23 46.1**	**+0.2**
BHW	**Baring Head**	**61.14**	**139**	P	**P**	**16 23 47.4**	**-1.0**
BHW				IAmb	IAmb	16 25 08.5	
	comp=Z,44nm,1.3s						
BKZ	**Black Stump Fm**	**61.21**	**136**	P	**P**	**16 23 49.5**	**+0.4**
BKZ				IAmb	IAmb	16 24 07.5	
	comp=Z,34nm,1.8s						
YAK	**Yakutsk**	**62.14**	**3**	LR	LR	16 52 22.0	
	comp=Z,15nm,19.8s,baz=298,slow=37						
YAK	**Yakutsk**	**62.14**	**3**			**16 23 54.7**	**-0.1**
YAK				IAmb	IAmb	16 23 56.9	
	comp=Z,17nm,0.7s						
YAK	**Yakutsk**	**62.14**	**3**	P	**P**	**16 23 55.4**	**+0.6**
ARSB	**Arslanbob**	**62.24**	**318**	P	**P**	**16 23 54.9**	**-1.2**
ARSB				IAmb	IAmb	16 23 57.2	
	comp=Z,8.4nm,1.2s						
ZALV	**Zalesovo Beam**	**63.12**	**335**	P	**P**	**16 23 58.9**	**-2.6**
	comp=Z,0.9nm,0.3s,baz=138,slow=6.6,SNR=4.2						
	comp=Z,0.9nm,0.3s						
ZALV	**Zalesovo Beam**	**63.12**	**335**	P	**P**	**16 24 00.8**	**-0.7**
KURBB	**Kurchatov Arra**	**63.91**	**329**	P	**P**	**16 24 05.5**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=118,slow=6.2,SNR=21						
	comp=Z,1.4nm,0.6s						
KURK	**Kurchatov**	**63.92**	**329**		**P**	**16 24 05.4**	**-1.4**
KURK				IAmb	IAmb	16 24 08.5	
	comp=Z,3.8nm,0.6s						
KURK	**Kurchatov**	**63.92**	**329**	P	**P**	**16 24 05.4**	**-1.4**
NIUE	**Niue**	**66.82**	**111**	P	**P**	**16 24 24.1**	**-2.1**
BVAR	**Borovoye Array**	**69.45**	**328**	P	**P**	**16 24 40.6**	**-1.5**
	comp=Z,6.0nm,0.3s,baz=122,slow=8.0,SNR=9.0						
	comp=Z,0.6nm,0.3s						
TIXI	**Tiksi**	**71.74**	**1**	LR	LR	16 57 59.0	
	comp=Z,22nm,20.8s,baz=182,slow=37						
NRIK	**Noril'sk**	**73.69**	**347**	P	**P**	**16 25 06.5**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=161,slow=6.3,SNR=3.1						
	comp=Z,1.0nm,0.4s						
NRIK	**Noril'sk**	**73.69**	**347**	IAmb	IAmb	16 26 48.2	
	comp=Z,17nm,1.9s						
AB31	**Akbulak array**	**73.84**	**322**	P	**P**	**16 25 06.8**	**-1.8**
ABKAR	**Akbulak array**	**73.84**	**322**	P	**P**	**16 25 06.9**	**-1.7**
SBA	**Scott Base**	**80.82**	**172**	P	**P**	**16 25 47.4**	**+0.3**
SBA				IAmb	IAmb	16 28 16.8	
	comp=Z,114nm,1.9s						
M14K	**Bethel**	**82.08**	**28**	P	**P**	**16 25 55.9**	**+1.9**
F15K	**North Star Dit**	**82.29**	**23**	P	**P**	**16 25 57.4**	**+2.3**
K15K	**Wolf Creek Mou**	**82.67**	**27**	P	**P**	**16 25 59.2**	**+2.1**
G16K	**Koyuk River**	**83.12**	**24**	P	**P**	**16 26 00.5**	**+1.1**
G16K				IAmb	IAmb	16 28 44.7	
	comp=Z,42nm,1.6s						
L16K	**Owhat River**	**83.47**	**28**	P	**P**	**16 26 03.0**	**+1.7**
L16K				IAmb	IAmb	16 27 43.7	
	comp=Z,67nm,1.9s						
L18K	**Granite Mounta**	**84.86**	**27**	P	**P**	**16 26 10.1**	**+1.7**
L18K				IAmb	IAmb	16 27 07.6	
	comp=Z,64nm,1.9s						
C19K	**Lookout Ridge**	**85.09**	**20**	P	**P**	**16 26 11.1**	**+1.7**
H19K	**Roundabout Mou**	**85.55**	**24**	P	**P**	**16 26 12.9**	**+1.2**
H19K				IAmb	IAmb	16 27 13.2	
	comp=Z,50nm,2.0s						
L22K	**Petersville**	**87.64**	**28**	P	**P**	**16 26 21.7**	**-0.4**
L22K				IAmb	IAmb	16 28 07.8	
	comp=Z,36nm,1.6s						
SYO	**Syowa Base**	**88.07**	**201**	*e*P	**P**	**16 26 24.2**	**+0.3**
SYO	**Syowa Base**	**88.07**	**201**	*e*PcP	**P**	**16 26 26.0**	**+2.1**
TOLK	**Toolik Lake Re**	**88.61**	**21**	P	**P**	**16 26 27.1**	**+0.6**
TOLK				IAmb	IAmb	16 28 44.0	
	comp=Z,38nm,1.9s						
CCB	**Clear Creek Bu**	**89.09**	**25**	P	**P**	**16 26 28.2**	**-0.7**
CCB				IAmb	IAmb	16 27 20.0	
	comp=Z,26nm,1.9s						
IL31		**89.49**	**25**	P	**P**	**16 26 29.5**	**-1.1**
IL31				IAmb	IAmb	16 29 21.1	
	comp=Z,28nm,1.9s						
ILAR	**Eielson Array**	**89.49**	**25**	P	**P**	**16 26 29.4**	**-1.3**
	comp=Z,0.1nm,0.5s,baz=266,slow=5.3,SNR=7.7						
	comp=Z,0.1nm,0.5s						
QSPA	**South Pole Qui**	**89.78**	**180**	P	**P**	**16 26 35.9**	**+3.6**
	comp=Z,1.3nm,0.7s,baz=0.2,slow=3.2,SNR=13						
QSPA	**South Pole Qui**	**89.78**	**180**	P	**P**	**16 26 31.2**	**-1.0**
QSPA				IAmb	IAmb	16 26 43.3	
	comp=Z,20nm,2.0s						
BMAR	**Burnt Mountain**	**90.45**	**23**	P	**P**	**16 26 36.6**	**+1.4**
BCAR	**Beaver Creek A**	**91.77**	**27**	P	**P**	**16 26 41.5**	**+0.1**
BARN	**Barnard Glacie**	**91.94**	**29**	P	**P**	**16 26 43.4**	**+0.9**
LOGN	**Logan Glacier**	**92.28**	**29**	P	**P**	**16 26 44.5**	**+0.6**
G31M	**Satah River**	**94.50**	**23**	P	**P**	**16 26 53.9**	**0.0**
G31M				IAmb	IAmb	16 30 27.9	
	comp=Z,31nm,1.8s						
N31M	**Braeburn, Yuko**	**94.72**	**28**	P	**P**	**16 26 56.3**	**+1.3**
CLL	**Collm**	**103.49**	**323**	*e*Pdif	**Pdif**	**16 27 32.0**	**-2.5**

*SSNC **28** 16:25:32.7±2.0, 18.°21N×71.°85W, h7km±37km, MD2.8, ML2.4*

*SDD **28** 16:25:33.1±1.5, 20.°14N×71.°57W, h36km±11km, MD3.3, ML2.9, MW3.2*

ISC 28 16:25:33.8±1.2, **19.°81N**±0.°05×**71.°43W**±0.°03, **h13**km±9km, **n10,** σ1§**30**/21, **Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCDR	**Montecristi**	**0.23**	**291**	*e*Pg	**Pg**	**16 25 40.1**	**+1.4**
MCDR				*e*Sg	**Sb**	**16 25 45.0**	**+1.2**
MCDR				IAML		16 25 49.2	
	comp=N,520nm,0.2s						
LUDR	**Luperon**	**0.46**	**79**	*e*Pg	**Pg**	**16 25 43.5**	**+0.6**
LUDR				*e*Sg	**Sn**	**16 25 53.6**	**-0.6**
SDDR	**Presa de Saban**	**0.83**	**171**	*e*P	**Pb**	**16 25 48.6**	**-1.6**
SDDR				*e*S	**Sg**	**16 25 59.7**	**-1.3**
SDDR				IAML		16 26 00.6	
	comp=N,83nm,0.2s						
SDDR				IAML		16 26 01.3	
	comp=N,81nm,0.2s						
JIDR	**Jimani**	**1.37**	**197**	*e*Pg	**Pn**	**16 25 59.3**	**+0.6**
JIDR				*e*Sg	**Sb**	**16 26 18.4**	**+1.7**
JIDR				IAML		16 26 19.9	
	comp=N,64nm,0.3s						
DR08	**Loma La Naviza**	**1.57**	**122**	*e*Pg	**Pn**	**16 26 02.4**	**+0.9**
DR08				*e*Sg	**Sb**	**16 26 23.4**	**+0.7**
DR08				IAML		16 26 25.2	
	comp=N,1μm,0.1s						
PODR	**Polo**	**1.64**	**175**	*e*Pg	**Pn**	**16 26 02.9**	**+0.4**
PODR				*e*Sg	**Sn**	**16 26 24.8**	**+1.2**
PODR				IAML		16 26 34.9	
	comp=N,52nm,0.5s						
BANI	**BANI**	**1.74**	**144**	*e*Pg	**Pn**	**16 26 04.2**	**+0.3**
BANI				*e*Sg	**Sb**	**16 26 27.9**	**+0.5**
BANI				IAML		16 26 36.8	
	comp=N,56nm,1.9s						
HATOM	**Hato Mayor del**	**2.19**	**117**	*e*Pg	**Pn**	**16 26 10.4**	**+0.4**
HATOM				*e*Sg	**Sn**	**16 26 37.0**	**+0.1**
HATOM				IAML		16 26 40.7	
	comp=N,29nm,0.2s						
MASC	**Masc**	**2.66**	**278**	*e*P	**Pn**	**16 26 19.0**	**+2.6**
MASC				*e*S	**Sb**	**16 26 53.2**	**-0.7**
MASC				*e*Sg	**Sg**	**16 26 57.2**	**-2.2**
MASC				IAML		16 26 59.4	
	comp=N,7.7nm,0.2s						
MASC				IAML		16 26 59.9	
	comp=E,2.7nm,0.1s						
QMBU	**Quimbuelo**	**3.20**	**278**	*e*P	**Pn**	**16 26 23.4**	**-0.5**
QMBU				*e*S	**Sn**	**16 27 00.8**	**-1.2**
QMBU				IAML		16 27 14.5	
	comp=N,7.3nm,0.2s						
QMBU				IAML		16 27 16.7	
	comp=E,9.0nm,0.2s						

*NEIC **28** 16:40:27.4±1.8, 21.°62S±0.°08×169.°50E±0.°06, h10km±1km, mb4.1/6, Error ellipse: s-maj=13.5km s-min=9.8km az=343.0*

*NOU **28** 16:40:27.7, 21.°66S×169.°44E, h0km, MLv4.7/14, Southeast of Loyalty Islands*

*IDC **28** 16:40:27.2±1.2, 21.°33S×169.°48E, h0km, mb3.8/5, mbtmp3.8/5, MS3.4/1, Error ellipse: s-maj=45.3km s-min=30.6km az=150.0*

ISC 28 16:40:27.9±0.8, **21.°62S**±0.°08×**169.°44E**±0.°07, **h10**km, **n30,** σ1§**40**/33, **mb4.0**/8, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.32**	**276**		**Pn**	**16 40 52.0**	**-0.4**
MARNC				Sn	**Sb**	**16 41 09.6**	**-0.2**
MARNC	**Mare, Loyalty**	**1.32**	**276**	P	**Pn**	**16 40 52.2**	**-0.2**
MARNC	**Mare, Loyalty**	**1.32**	**276**	S	**Sb**	**16 41 09.9**	**+0.1**
INH	**Isangel**	**2.07**	**356**	P	**Pn**	**16 41 04.4**	**+1.7**
PINNC	**Pines Island,**	**2.10**	**242**		**Pn**	**16 41 03.2**	**+0.1**
PINNC				Sn	**Sn**	**16 41 26.8**	**-2.4**
PINNC	**Pines Island,**	**2.10**	**242**	P	**Pn**	**16 41 03.1**	**+0.1**
YATNC	**Mamie plateau,**	**2.41**	**259**	P	**Pn**	**16 41 07.7**	**+0.3**
OUENC	**Ouen Island, N**	**2.54**	**251**	P	**Pn**	**16 41 10.6**	**+1.4**
DZM	**Mont Dzumac**	**2.82**	**260**		**Pn**	**16 41 14.0**	**+0.8**
DZM				Sn	**Sn**	**16 41 46.0**	**-1.2**
DZM	**Mont Dzumac**	**2.

*IDC **28** 17:04:08.2±1.9,35˚.41N×78˚.24E,h0km,mb3.9/9, mbtmp3.9/14,ML3.6/5,MS3.6/1,Error ellipse: s-maj=31.1km s-min=27.1km az=20.0*

*NNC **28** 17:04:26.4±5.3,36˚.64N×78˚.36E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=42.2km s-min=30.5km az=167.0*

ISC 28 17:04:14.7±0.5,36˚.05N±0˚.03×78˚.04E±0˚.05,h10km,n47, σ3°64/62,mb4.1/9,5C-2D,Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALCI	**Alchi Leh**	**1.96**	**201**	*eP*	Pg	17 05 00.0	+7.6
ALCI				*eS*	**Sg**	**17 05 22.7**	**+4.9**
ALCI				IAML		17 05 26.8	
	comp=E,279nm,0.2s						
ALCI				IAML		17 05 27.3	
	comp=N,224nm,0.3s						
TSSA	**Tissa**	**3.57**	**207**	*eP*	**Pg**	**17 05 21.3**	**-1.8**
TSSA				*eS*	**Sb**	**17 06 00.3**	**-1.2**
TSSA				IAML		17 06 06.8	
	comp=N,495nm,0.3s						
TSSA				IAML		17 06 07.1	
	comp=E,473nm,0.3s						
KSH	**Kashi**	**3.83**	**335**	Pn	**Pb**	**17 05 20.3**	**-2.2**
KSH				Sn	**Sn**	**17 05 59.5**	**+0.5**
KSH				smax	smax		
	comp=N,200nm,0.4s						
KSH				smax	smax		
	comp=E,260nm,0.6s						
JMU	**Jammu**	**4.22**	**219**	*eP*	**Pb**	**17 05 28.6**	**-0.4**
JMU				*eS*	**Sb**	**17 06 15.7**	**-4.4**
JMU				IAML		17 06 19.4	
	comp=E,360nm,0.4s						
JMU				IAML		17 06 19.6	
	comp=N,291nm,0.5s						
TLWR	**Talawar**	**4.44**	**204**	*eP*	**Pb**	**17 05 32.3**	**-0.4**
TLWR				*eS*	**Sb**	**17 06 20.8**	**-5.5**
BHK	**Bhakra**	**4.81**	**197**	*eP*	**Pb**	**17 05 37.3**	**-1.9**
BHK				*ex*	x	17 06 27.3	
BHK				IAML		17 06 33.0	
	comp=N,370nm,0.2s						
BHK				IAML		17 06 34.2	
	comp=E,304nm,0.1s						
SMLA	**Simla**	**4.96**	**189**	*eP*	**Pb**	**17 05 38.4**	**-3.3**
SMLA				*eS*	**Sn**	**17 06 30.7**	**+4.0**
SMLA				IAML		17 06 34.9	
	comp=N,506nm,0.2s						
SMLA				IAML		17 06 35.5	
	comp=E,394nm,0.2s						
DDI	**Dehra Dun**	**5.71**	**180**	*eP*	Pb	17 05 49.5	-5.0
DDI				*eS*	**Sn**	**17 06 48.4**	**+3.0**
DDI				IAML		17 06 53.2	
	comp=N,611nm,0.4s						
DDI				IAML		17 06 53.9	
	comp=E,800nm,0.3s						
LGTI	**Lohaghat**	**6.84**	**164**	*eP*	Pn	17 06 02.1	+7.1
LGTI				*eS*	**Sn**	**17 07 13.6**	**+0.7**
LGTI				IAML		17 07 18.1	
	comp=E,57nm,0.3s						
AAK	**Ala-Archa**	**7.13**	**338**	Pn	Pn	17 06 07.1	+7.9
	comp=E,5.7nm,0.3s,baz=148,slow=8.4,SNR=72						
AAK				Sn	**Sb**	**17 07 36.0**	**-7.8**
	comp=E,1.4nm,0.3s,baz=18,slow=20,SNR=1.7						
AAK				Lg	Lg	17 08 15.2	
	comp=E,0.2nm,0.3s,baz=329,slow=18,SNR=1.5 comp=E,9.9nm,0.3s						
AAK	**Ala-Archa**	**7.13**	**338**	⇓P	Pn	17 06 07.1	+7.9
	comp=E,19nm,0.9s						
AAK				⇑S	**Sn**	**17 07 25.9**	**+5.5**
	comp=E,9.7nm,0.9s						
PDGK	**Podgornoye**	**7.36**	**8**	⇓P	Pn	17 06 08.9	+6.6
	comp=E,25nm,0.5s						
PDGK				⇑S	**Sn**	**17 07 26.5**	**+0.6**
	comp=E,78nm,0.5s						
NDI	**New Delhi**	**7.38**	**186**	*eP*	Pn	17 06 10.1	+7.6
NDI				*eS*	**Sn**	**17 07 26.2**	**-0.1**
NPLP	**NPLP New Delhi**	**7.43**	**186**	*eP*	Pn	17 06 10.3	+7.1
NPLP				*eS*	**Sn**	**17 07 26.8**	**-0.7**
LDR	**Lodi Road**	**7.48**	**186**	*eS*	**Sn**	**17 07 29.2**	**+0.5**
KUDL	**Kundal**	**7.99**	**190**	*eP*	Pn	17 06 18.0	+7.1
KUDL				*eS*	**Sn**	**17 07 39.7**	**-1.7**
KUDL				IAML		17 07 46.2	
	comp=E,106nm,0.3s						
KUDL				IAML		17 07 49.7	
	comp=N,78nm,0.3s						
DANN	**Dangsing**	**9.07**	**146**	Pn	**Pn**	**17 06 30.1**	**+4.0**
	baz=147,slow=0.0						
DANN				Sn	**Sn**	**17 08 06.3**	**-2.2**
	comp=N,40nm,0.4s,baz=147,slow=0.0						
KK31	**Karatay Array**	**9.13**	**323**	P	Pn	17 06 32.4	+5.9
	comp=N,1.2nm,0.3s,baz=144,slow=11,SNR=14						
KK31				⇑S	**Sn**	**17 08 15.7**	**+6.4**
	comp=N,2.6nm,0.5s,baz=187,slow=32,SNR=3.5						
KKN	**Kakani**	**10.27**	**141**	Pn	Pn	17 06 47.5	+5.1
	baz=142,slow=0.0						
KKN				Sn	**Sn**	**17 08 33.8**	**-4.0**
	baz=142,slow=0.0						
DMN	**Daman**	**10.34**	**143**	Pn	**Pn**	**17 06 47.6**	**+4.3**
	baz=143,slow=0.0						
DMN				Sn	**Sn**	**17 08 36.2**	**-3.2**
	baz=143,slow=0.0						
GUN	**Gumba**	**10.49**	**138**	Pn	**Pn**	**17 06 49.3**	**+3.8**
	baz=139,slow=0.0						
PKIN	**Phulchoki**	**10.51**	**141**	Pn	**Pn**	**17 06 49.6**	**+3.9**
	baz=142,slow=0.0						
PKIN				Sn	**Sn**	**17 08 40.4**	**-3.2**
	baz=142,slow=0.0						
PKI	**Pulchoki**	**10.52**	**141**	Pn	**Pn**	**17 06 50.1**	**+4.2**
	baz=142,slow=0.0						
PKI				Sn	**Sn**	**17 08 40.3**	**-3.6**
	baz=142,slow=0.0						
JHNI	**Jhansi**	**10.56**	**178**	*eS*	**Sn**	**17 08 39.5**	**-4.9**
JHNI				IAML		17 08 42.6	
	comp=E,44nm,0.2s						
JHNI				IAML		17 08 42.6	
	comp=N,22nm,0.2s						
WMQ	**Urumqi**	**10.72**	**41**	*eP*	**Pn**	**17 06 52.0**	**+3.6**
WMQ				S	**Sn**	**17 08 50.0**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**10.85**	**138**	Pn	**Pn**	**17 06 54.8**	**+4.3**
	baz=139,slow=0.0						
MAKZ	**Makanchi**	**11.14**	**14**	⇑P	**Pn**	**17 06 58.5**	**+4.4**
	comp=Z,6.2nm,0.6s						
MAKZ				⇑S	**Sn**	**17 08 54.9**	**-3.8**
	comp=Z,14nm,0.7s						
MK31	**Makanchi Array**	**11.20**	**15**	P	**Pn**	**17 06 58.9**	**+4.1**
	comp=Z,1.4nm,0.3s,baz=200,slow=12,SNR=81						
MK31				S	**Sn**	**17 08 56.2**	**-3.8**
	comp=Z,8.1nm,0.5s,baz=199,slow=20,SNR=22						
MKAR	**Makanchi Array**	**11.20**	**15**	Pn	**Pn**	**17 06 59.2**	**+4.4**
	comp=Z,1.9nm,0.3s,baz=194,slow=14,SNR=47						
MKAR				Sn	**Sn**	**17 08 56.5**	**-3.5**
	comp=Z,3.1nm,0.3s,baz=196,slow=22,SNR=14 comp=Z,3.0nm,0.4s						
RAMN	**Ramite**	**11.64**	**139**	Pn	**Pn**	**17 07 04.2**	**+3.1**
	baz=140,slow=0.0						
TAPN	**Taplejung**	**11.95**	**134**	Pn	**Pn**	**17 07 09.1**	**+3.6**
	baz=134,slow=0.0						
ODAN	**Odare**	**12.14**	**136**	Pn	**Pn**	**17 07 11.8**	**+3.8**
	baz=137,slow=0.0						
ODAN				Sn	**Sn**	**17 09 18.4**	**-5.2**
	baz=137,slow=0.0						
ODAN				Sn	**Sn**	**17 09 18.4**	**-5.2**
	baz=137,slow=0.0						
BHPL	**Bhopal**	**12.78**	**183**	*eS*	**Sn**	**17 09 31.5**	**-7.3**
KURBB	**Kurchatov Arra**	**14.57**	**1**	Pn	**Pn**	**17 07 43.4**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=187,slow=11,SNR=11 comp=Z,0.7nm,0.9s						
BVAR	**Borovoye Array**	**17.81**	**345**	P	**P**	**17 08 24.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=13 comp=Z,1.3nm,0.3s						
ZALV	**Zalesovo Beam**	**18.51**	**13**	P	**P**	**17 08 31.6**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=205,slow=9.2,SNR=6.5						
ZALV				S	**Sn**	**17 11 50.9**	**-7.0**
	comp=Z,1.0nm,0.6s,baz=191,slow=21,SNR=3.9 comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**20.39**	**321**	P	**P**	**17 08 52.0**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=115,slow=18,SNR=11 comp=Z,4.2nm,0.7s						
SONM	**Songino Array**	**24.01**	**52**	P	**P**	**17 09 28.5**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=270,slow=12,SNR=4.1 comp=Z,0.9nm,0.6s						
DL2	**Dalian**	**34.46**	**72**	P	**P**	**17 11 06.5**	**+3.9**
DL2				pmax	pmax		
	comp=Z,53nm,1.4s						
AKASG	**Malin Array Be**	**37.67**	**308**	P	**P**	**17 11 30.1**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=82,slow=7.7,SNR=4.1 comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**41.08**	**325**	P	**P**	**17 11 58.1**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=102,slow=8.5,SNR=4.8 comp=Z,2.7nm,0.8s						
IDI	**Anoyia**	**42.73**	**285**	LR	LR	17 33 34.5	
	comp=Z,75nm,19.8s,baz=307,slow=41						
ARCES	**ARCESS Array B**	**43.80**	**336**	P	**P**	**17 12 20.4**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=109,slow=9.1,SNR=19 comp=Z,2.6nm,0.8s						
HFS	**Hagfors**	**46.94**	**322**	P	**P**	**17 12 44.9**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=116,slow=6.6,SNR=4.5 comp=Z,3.9nm,0.9s						
NOA	**NORSAR Array B**	**48.16**	**323**	P	**P**	**17 12 54.4**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=89,slow=7.7,SNR=2.3 comp=Z,1.3nm,0.7s						
EKA	**Eskdalemuir Ar**	**56.52**	**317**	P	**P**	**17 13 56.1**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=90,slow=5.7,SNR=4.2 comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**73.53**	**18**	P	**P**	**17 15 44.2**	**-3.1**
	comp=Z,0.2nm,0.7s,baz=333,slow=6.7,SNR=2.2 comp=Z,0.2nm,0.7s						

*IDC **28** 17:11:54.6±5.0,7˚.44S×127˚.73E,h115km±46km,mb3.4/5, mbtmp3.9/9,Error ellipse: s-maj=42.1km s-min=18.1km az=50.0*

ISC 28 17:12:00.9±0.8,7˚.99S±0˚.07×127˚.57E±0˚.07,h200km,n18, σ2°83/21,mb3.4/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.69**	**90**	P	**Pn**	**17 12 58.1**	**-0.8**
SOEI	**Soe**	**3.71**	**241**	P	**Pn**	**17 12 58.7**	**-0.5**
SOEI	**Soe**	**3.71**	**241**	S	**Sn**	**17 13 43.3**	**-1.6**
BATI	**Baumata**	**4.44**	**240**	P	**Pn**	**17 13 07.5**	**-0.8**
	16nm,0.5s,baz=68,slow=3.5,SNR=5.8						
BATI				S	**Sn**	**17 14 01.2**	**-0.1**
	40nm,0.3s,baz=35,slow=7.9,SNR=16						
DRS	**Darwin Rock St**	**5.50**	**144**	P	**Pn**	**17 13 23.6**	**+1.9**
FAKI	**Fak Fak**	**6.86**	**43**	P	**Pn**	**17 13 35.6**	**-3.8**
PLAI	**Plampang**	**9.72**	**264**	P	**Pn**	**17 14 15.8**	**-0.9**
FITZ	**Fitzroy Crossi**	**10.23**	**190**	P	**Pn**	**17 14 24.1**	**+1.1**
	1.5nm,0.4s,baz=26,slow=11,SNR=17						
FITZ				S	**Sn**	**17 16 15.0**	**-2.4**
	3.4nm,0.4s,baz=42,slow=5.0,SNR=4.6						
FITZ	**Fitzroy Crossi**	**10.23**	**190**	P	**Pn**	**17 14 24.7**	**+1.6**
WRAB	**Tennant Creek**	**13.57**	**152**	P	**P**	**17 15 07.8**	**-0.3**
WRA	**Warramunga Arr**	**13.58**	**152**	P	**Pn**	**17 15 06.2**	**+0.6**
	2.7nm,0.3s,baz=337,slow=12,SNR=53						
WRA				S	**S**	**17 17 30.7**	**-6.3**
	1.9nm,0.4s,baz=337,slow=22,SNR=9.2						
COEN	**Coen**	**16.42**	**113**	P	**Pn**	**17 15 43.7**	**+3.2**
ASAR	**Alice Springs**	**16.73**	**159**	P	**Pn**	**17 15 49.5**	**+5.3**
	2.2nm,0.4s,baz=336,slow=10,SNR=116						
ASAR				S	**Sn**	**17 18 50.8**	**-1.9**
	3.0nm,1.0s,baz=350,slow=25,SNR=6.0						
STKA	**Stephens Creek**	**27.12**	**153**	P	**P**	**17 17 30.9**	**+5.4**
	0.9nm,0.6s,baz=354,slow=10,SNR=3.4 0.9nm,0.6s						
MKAR	**Makanchi Array**	**67.76**	**328**	P	**P**	**17 22 37.9**	**+0.8**
	0.4nm,0.5s,baz=122,slow=7.3,SNR=7.0 0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**71.42**	**335**	P	**P**	**17 22 59.0**	**-0.2**
	0.3nm,0.4s,baz=106,slow=5.1,SNR=2.1 0.3nm,0.4s						
VNDA	**Vanda**	**71.78**	**173**	P	P	17 23 07.2	+6.2
	1.0nm,0.8s,baz=331,slow=2.8,SNR=5.7 1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**72.11**	**330**	P	**P**	**17 23 04.2**	**+0.8**
	0.5nm,0.7s,baz=131,slow=4.9,SNR=4.9 0.5nm,0.7s						

*BJI **28** 17:29:40.5,12˚.43N×144˚.88E,h7km,mB5.2/21,mb4.8/64, Ms4.8/52,Ms7 4.5/53*

*IDC **28** 17:29:41.8±0.5,12˚.33N×144˚.63E,h0km,mb4.5/27, mbtmp4.6/29,ML4.0/1,MS4.4/51,Error ellipse: s-maj=18.4km s-min=11.3km az=91.0*

*NEIC **28** 17:29:43.2±2.3,12˚.25N±0˚.05×144˚.77E±0˚.09,h10km±1km, mb5.2/192,Mww5.1/19,Error ellipse: s-maj=15.5km s-min=9.3km az=266.0*

*NEIC **28** 17:29:43.2,12˚.10N×145˚.15E,h16km,Moment Tensor Solution. Duration: 1s7 Moment tensor: Scale 10^16^Nm; Mrr2.60; Mθθ1.83; Mϕϕ-4.42; Mrθ-2.47; Mrϕ-1.90; Mθϕ1.55; Fault plane solution: M0 5.19000×10^16^ NP1: ϕs230.07000°,δ53.09000°,λ147.94000°. NP2: ϕs340.68000°,δ64.88000°,λ41.55000°. Principal axes: T 5.3100, Plg46.0000°, Azm201.0000°; N -0.2508, Plg43.0000°, Azm6.0000°; P -5.0592, Plg7.0000°, Azm103.0000°;*

*NEIC **28** 17:29:43.2,12˚.30N×144˚.75E,h16km*

*GCMT **28** 17:29:47.2±0.2,12˚.24N±0˚.01×144˚.64E±0˚.01,h12km, MW5.0/96,Moment Tensor Solution. s37,c48; s96,c144; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr1.81±.12; Mθθ1.95±.09; Mϕϕ-3.76±.10; Mrθ-1.60±.32; Mϕθ-2.07±.09; Mrϕ-0.23±.26; Best double couple: M0 4.13000×10^16^ NP1:ϕs339.00000°,δ59.00000°,λ24.00000°. NP2: ϕs236.00000°,δ70.00000°,λ147.00000°. Principal axes: T 3.7450, Plg38.0000°, Azm194.0000°; N 0.7710, Plg51.0000°, Azm28.0000°; P -4.5160, Plg7.0000°, Azm289.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **28** 17:29:49.8±1.4,12˚.N±5˚×14˚5E±˚,h53km±12km,M5.0/41, mb5.0/41,mB5.5/19,Mw(mB)5.0/19*

ISC 28 17:29:42.9±1.2,12˚.29N±0˚.04×144˚.77E±0˚.06,h10km±7km, n533,σ1°14/436,mb5.1/159,MS4.5/70,7C-4D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.29**	**4**	Pn	**Pg**	**17 30 08.9**	**+1.1**
	383nm,0.3s,baz=231,slow=3.5,SNR=148						
GUMO				Sn	**Sg**	**17 30 25.5**	**+1.0**
	2µm,0.3s,baz=343,slow=20,SNR=8.9						
JAY	**Jayapura**	**15.26**	**196**	Pn	**Pn**	**17 33 17.9**	**-0.7**
	0.6nm,0.3s,baz=149,slow=14,SNR=4.6						
JAY				LR	LR	17 38 53.7	
	comp=Z,3µm,19.1s,baz=5.5,slow=36 25nm,1.0s						
GENI	**Genyem**	**15.48**	**197**	P	**P**	**17 33 28.5**	**+2.6**
WAMI	**Wamena**	**17.16**	**201**	P	**P**	**17 33 46.9**	**+2.3**
	3µm48nm,0.8s						
FAKI	**Fak Fak**	**19.57**	**220**		**P**	**17 34 08.2**	**-3.1**
FAKI	**Fak Fak**	**19.57**	**220**	P	**Pn**	**17 34 13.3**	**+0.8**
	2µm71nm,1.1s						
DAV	**Davao City (W)**	**19.61**	**256**	P	**P**	**17 34 12.0**	**+0.4**
	186nm,0.4s,baz=112,slow=1.7,SNR=4.0						
TNTI	**Ternate**	**20.71**	**238**	P	**P**	**17 34 20.4**	**-3.2**
TNTI	**Ternate**	**20.71**	**238**	P	Pn	17 34 26.5	+0.6
JOW	**Kunigami**	**21.19**	**315**	P	**P**	**17 34 28.7**	**0.0**
	50nm,0.8s,baz=121,slow=17,SNR=4.1						
JOW				LR	LR	17 41 46.0	
	comp=Z,596nm,20.4s,baz=88,slow=34 50nm,0.8s						
JOW	**Kunigami**	**21.19**	**315**	lAmb	lAmb	17 34 30.6	
	comp=Z,109nm,1.2s						
JHJ	**Hachijo jima 2**	**21.23**	**348**	LR	LR	17 40 37.6	
	comp=Z,518nm,18.8s,baz=202,slow=31						
PMG	**Port Moresby**	**21.69**	**174**	P	**P**	**17 34 34.0**	**-0.1**
	comp=Z,11nm,0.9s,baz=317,slow=8.8,SNR=6.1						
PMG				LR	LR	17 41 48.1	
	comp=Z,604nm,20.4s,baz=340,slow=33 comp=Z,11nm,0.9s						
PMG	**Port Moresby**	**21.69**	**174**	P	**P**	**17 34 33.7**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**22.00**	**71**	T	T	17 57 52.2	
	baz=253,slow=75						
H11S1	**WAKE ISLAND Hy**	**22.02**	**71**	T	T	17 58 09.2	
	baz=253,slow=75						
H11S2	**WAKE ISLAND Hy**	**22.02**	**71**	T	T	17 57 52.0	
	baz=253,slow=75						
H11N1	**WAKE ISLAND Hy**	**22.49**	**68**	T	T	17 58 27.7	
	baz=255,slow=75,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**22.50**	**68**	T	T	17 58 35.9	
	baz=255,slow=75,SNR=8.2						
H11N3	**WAKE ISLAND Hy**	**22.51**	**68**	T	T	17 58 37.2	
	baz=255,slow=75,SNR=6.5						
TGY	**Tagaytay City**	**23.27**	**277**	LR	LR	17 44 28.8	
	comp=Z,1µm,18.4s,baz=116,slow=38						
JNU	**Nakatsue**	**24.32**	**331**	LR	LR	17 43 32.1	
	comp=Z,404nm,20.1s,baz=160,slow=34						
GTOI	**Gorontalo**	**24.49**	**243**	P	**P**	**17 35 04.6**	**+2.0**
	comp=Z,1µmcomp=Z,36nm,1.1s						
MJAR	**Matsushiro Arr**	**24.86**	**347**	P	**P**	**17 35 04.2**	**-1.4**
	comp=Z,12nm,0.9s,baz=170,slow=9.1,SNR=20						
MJAR				LR	LR	17 44 21.3	
	comp=Z,1µm,18.1s,baz=159,slow=36 comp=Z,12nm,0.9s						
MJAR	**Matsushiro Arr**	**24.86**	**347**		**P**	**17 35 04.5**	**-1.2**
MAJO	**Matsushiro**	**24.86**	**347**		**P**	**17 35 04.3**	**-1.4**
YULB	**Yu-li**	**24.88**	**300**	P	**P**	**17 35 05.7**	**-0.3**
YULB				lAmb	lAmb	17 35 08.2	
	comp=Z,45nm,0.7s						
SSLB	**Suanglung**	**25.32**	**300**		**P**	**17 35 08.4**	**-1.6**
MRSI	**Marisa**	**25.51**	**244**	P	**P**	**17 35 14.1**	**+2.4**
	comp=Z,1µmcomp=Z,56nm,1.3s						
LUWI	**Luwuk**	**25.54**	**240**		**P**	**17 35 11.4**	**-0.7**
LUWI	**Luwuk**	**25.54**	**240**	P	**P**	**17 35 13.7**	**+1.6**
APSI	**Ampana**	**26.44**	**242**	P	**P**	**17 35 20.0**	**-0.2**
MYLDM	**Lahad Datu**	**26.89**	**257**	P	**P**	**17 35 25.1**	**+0.8**
MYLDM				lAmb	lAmb	17 35 53.0	
	comp=Z,49nm,1.0s						
MPSI	**Mapaga**	**27.38**	**246**	P	**P**	**17 35 29.9**	**+1.2**
MTN	**Manton Dam**	**28.40**	**209**		**P**	**17 35 37.4**	**-0.3**
MTN				lAmb	lAmb	17 35 39.3	
	comp=Z,35nm,1.2s						
KSRS	**Korea Array**	**29.25**	**332**	P	**P**	**17 35 43.8**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=142,slow=9.8,SNR=6.1 comp=Z,1.2nm,0.5s						
BNSI	**Bone**	**29.60**	**237**	P	**P**	**17 35 50.2**	**+1.8**
SOEI	**Soe**	**29.91**	**224**		**P**	**17 35 50.1**	**-1.3**
SOEI				lAmb	lAmb	17 36 24.1	
	comp=Z,21nm,0.8s						
SOEI	**Soe**	**29.91**	**224**	P	**P**	**17 35 50.9**	**-0.5**
	comp=Z,31nm,1.4s						
BATI	**Baumata**	**30.65**	**224**	LR	LR	17 47 41.2	
	comp=Z,448nm,21.7s,baz=22,slow=35						
KNRA	**Kununurra**	**31.99**	**210**	P	**P**	**17 36 08.3**	**-1.2**
KNRA				lAmb	lAmb	17 36 11.7	
	comp=Z,46nm,1.1s						
CTA	**Charters Tower**	**32.21**	**177**	LR	LR	17 47 49.5	
	comp=Z,10nm,22.0s,baz=0.5,slow=34						
WB0	**Warramunga Arr**	**33.46**	**198**	P	**P**	**17 36 21.3**	**-1.0**
WB0				lAmb	lAmb	17 36 23.6	
	comp=Z,26nm,0.8s						
WHN	**Wuhan**	**33.48**	**308**	P	**P**	**17 36 23.0**	**+0.6**
WHN				pmax	pmax		
	comp=Z,130nm,1.4s						
WR8	**Warramunga Arr**	**33.60**	**198**	P	**P**	**17 36 24.1**	**+0.5**
WR8				lAmb	lAmb	17 36 24.9	
	comp=Z,22nm,0.8s						
USRK	**Ussuriysk Ar.**	**33.64**	**343**	P	**P**	**17 36 22.9**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=133,slow=10.0,SNR=3.3 comp=Z,2.4nm,0.6s						
WRA	**Warramunga Arr**	**33.64**	**198**	P	**P**	**17 36 23.9**	**0.0**
	comp=Z,23nm,0.7s,baz=21,slow=9.7,SNR=68						
WRA				LR	LR	17 50 15.4	
	comp=Z,1µm,20.0s,baz=11,slow=37 comp=Z,23nm,0.7s						
WRA	**Warramunga Arr**	**33.64**	**198**	P	**P**	**17 36 22.2**	**-1.7**
SBUM	**Sibu**	**33.68**	**256**	P	**P**	**17 36 25.4**	**+1.0**
QIZ	**Qiongzhong**	**34.24**	**286**	P	**P**	**17 36 28.5**	**-0.8**
QIZ				S	**S**	**17 41 56.5**	**+0.1**
QIZ				LR	LR		
	comp=Z,810nm,9.6s						
QIZ				LR	LR		
	comp=Z,1µm,14.3s						
QIZ				LR	LR		
	comp=Z,980nm,16.5s						
YSS	**Yuzhno-Sakhali**	**34.59**	**358**	P	**P**	**17 36 31.9**	**0.0**
YSS				lAmb	lAmb	17 37 30.1	
	comp=Z,51nm,1.3s						
FITZ	**Fitzroy Crossi**	**35.61**	**212**	LR	LR	17 51 44.8	
	comp=Z,305nm,20.1s,baz=36,slow=37						
FITZ	**Fitzroy Crossi**	**35.61**	**212**	P	**P**	**17 36 42.6**	**+1.6**
BNX	**BinXian**	**36.46**	**339**	⇓P	**P**	**17 36 47.3**	**-0.7**
BNX				pmax	pmax		
	comp=Z,13nm,0.8s						
HNS	**HongShan**	**36.71**	**318**	⇑P	**P**	**17 36 50.3**	**0.0**
HNS				S	**S**	**17 42 36.0**	**+2.1**
HNS				pmax	pmax		
	comp=Z,39nm,1.1s						
HNS				LR	LR		
	comp=Z,460nm,17.1s						
HNS				LR	LR		
	comp=Z,940nm,17.3s						
HNS				LR	LR		
	comp=Z,1µm,17.3s						
LYN	**LuoYang**	**36.74**	**313**	P	**P**	**17 36 50.3**	**-0.3**
LYN				S	**S**	**17 42 42.3**	**+7.9**
LYN				pmax	pmax		
	comp=Z,57nm,0.9s						
LYN				LR	LR		
	comp=Z,1µm,15.5s						
LYN				LR	LR		
	comp=Z,800nm,15.1s						
LYN				LR	LR		
	comp=Z,1µm,15.1s						
ENH	**Enshi**	**37.22**	**304**	P	**P**	**17 36 53.4**	**-1.3**
ENH				lAmb	lAmb	17 37 07.9	
	comp=Z,42nm,1.1s						
AS31	**Alice Springs**	**37.28**	**197**	P	**P**	**17 36 55.2**	**-0.1**
ASAR	**Alice Springs**	**37.29**	**197**	P	**P**	**17 36 55.8**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=19,slow=6.6,SNR=90						
ASAR				LR	LR	17 52 10.4	
	comp=Z,1µm,21.4s,baz=14,slow=36 comp=Z,4.8nm,0.7s						
ASAR	**Alice Springs**	**37.29**	**197**	P	**P**	**17 36 55.6**	**+0.3**
EIDS	**Eidsvold**	**37.94**	**171**	P	**P**	**17 36 59.1**	**-1.7**
GYA	**Guiyang**	**38.45**	**297**	⇓P	**P**	**17 37 07.0**	**+1.7**
GYA				pmax	pmax		
	comp=Z,19nm,1.1s						
GYA				LR	LR		
	comp=Z,930nm,18.1s						
XAN	**Xi'an**	**39.13**	**310**	⇓P	**P**	**17 37 11.0**	**+0.2**
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				LR	LR		
	comp=Z,600nm,19.2s						
XAN				LR	LR		
	comp=Z,540nm,17.9s						
XAN				LR	LR		
	comp=Z,890nm,17.9s						
TPI	**Tanjungpandan**	**39.79**	**250**	P	**P**	**17 37 18.4**	**+1.9**
	comp=Z,745nmcomp=Z,56nm,1.2s						
XLT	**XiLinHaoTe**	**40.01**	**327**	*eP*	**P**	**17 37 17.3**	**-0.7**
XLT		

BTO S **S** **17 43 51.0 +4.4**
BTO pmax pmax
comp=Z,30nm,1.0s
BTO pmax pmax
comp=Z,500nm,4.0s
BTO LR LR
comp=Z,1µm,13.2s
BTO LR LR
comp=Z,1µm,18.0s
BTO LR LR
comp=Z,2µm,16.5s
PSA00 Pilbara Seismi 41.61 216 P **P** **17 37 31.3 -0.1**
KMI Kunming 41.63 294 P **P** **17 37 33.0 +1.1**
KMI pmax pmax
comp=Z,13nm,1.0s
KMI LR LR
comp=Z,310nm,12.2s
KMI LR LR
comp=Z,390nm,19.0s
KMI LR LR
comp=Z,420nm,16.9s
PETK Petropavlovsk- 42.01 12 P **P** **17 37 34.5 +0.2**
comp=Z,2.3nm,0.9s,baz=242,slow=7.0,SNR=1.1
PETK PcP **PcP** **17 39 30.5 +1.2**
comp=Z,9.3nm,0.9s,baz=225,slow=6.6,SNR=4.9
PETK LR LR 17 54 58.5
comp=Z,450nm,18.9s,baz=187,slow=36
comp=Z,2.3nm,0.9s
CD2 Chengdu 42.09 303 P **P** **17 37 35.5 +0.1**
CD2 S **S** **17 43 56.3 +1.2**
CD2 pmax pmax
comp=Z,60nm,1.1s
CD2 LR LR
comp=Z,760nm,14.0s
CD2 LR LR
comp=Z,950nm,15.9s
CD2 LR LR
comp=Z,1µm,13.3s
HILR Hailar Array B 42.49 336 P **P** **17 37 37.6 -0.7**
comp=Z,1.4nm,0.4s,baz=150,slow=9.6,SNR=5.5
comp=Z,1.4nm,0.4s
PZH PanZhiHua 42.76 296 P **P** **17 37 41.5 +0.5**
PZH S **S** **17 43 59.5 -5.7**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH LR LR
comp=Z,210nm,11.2s
PZH LR LR
comp=Z,300nm,16.1s
PZH LR LR
comp=Z,260nm,15.3s
KLSI 43.23 249 P **P** **17 37 46.0 +1.3**
comp=Z,837nmcomp=Z,54nm,1.5s
MDSI Maura Dua 43.65 250 P **P** **17 37 49.1 +0.9**
comp=Z,983nmcomp=Z,35nm,0.9s
LZH Lanzhou 43.76 310 *e*P **P** **17 37 49.8 +0.8**
LZH sP pwP 17 37 57.5 -3.3
LZH S **S** **17 44 26.5 +6.8**
LZH pmax pmax
comp=Z,31nm,1.2s
LZH LR LR
comp=Z,460nm,13.4s
LZH LR LR
comp=Z,600nm,12.0s
LZH LR LR
comp=Z,690nm,13.4s
LZDM Lanzhou Array 43.82 310 P **P** **17 37 50.1 +0.4**
comp=Z,9.7nm,0.7s,baz=126,slow=7.3,SNR=8.3
LZDM LR LR 17 57 59.4
comp=Z,171nm,18.8s,baz=65,slow=39
comp=Z,9.7nm,0.7s
STKA Stephens Creek 44.02 184 P **P** **17 37 50.4 -0.4**
comp=Z,2.4nm,0.8s,baz=350,slow=12,SNR=3.6
STKA LR LR 17 57 41.2
comp=Z,632nm,18.5s,baz=14,slow=38
comp=Z,2.4nm,0.8s
STKA Stephens Creek 44.02 184 IAmb IAmb 17 38 06.2
comp=Z,81nm,1.6s
KULM Kulim 44.10 265 P **P** **17 37 52.4 +0.6**
KULM IAmb IAmb 17 38 08.1
comp=Z,33nm,0.9s
CMAR Chiang Mai Arr 44.52 284 P **P** **17 37 55.8 +0.7**
comp=Z,13nm,0.6s,baz=88,slow=8.5,SNR=24
CMAR LR LR 17 55 55.2
comp=Z,347nm,19.2s,baz=100,slow=36
comp=Z,13nm,0.6s
KSI Kapahiang 44.81 252 P **P** **17 37 58.3 +0.8**
MASI Maura Aman, Be 44.95 253 P **P** **17 38 00.0 +1.4**
KRJI Kerinci 45.32 255 P **P** **17 38 04.2 +2.5**
TNCH TengChong 45.40 293 ⇑P **P** **17 38 03.0 +0.8**
TNCH pP sP 17 38 06.0 +2.9
TNCH S **S** **17 44 43.0 -0.8**
TNCH sS pS 17 44 50.0 +4.7
TNCH pmax pmax
comp=Z,57nm,1.1s
TNCH pmax pmax
comp=Z,280nm,2.9s
TNCH LR LR
comp=Z,320nm,9.1s
TNCH LR LR
comp=Z,310nm,9.4s
TNCH LR LR
comp=Z,580nm,16.2s
BBOO Buckleboo 45.62 190 P **P** **17 38 02.7 -0.8**
PSI Prapat 46.34 262 LR LR 18 01 60.0
comp=Z,143nm,18.2s,baz=98,slow=42
KCSI Kotacane, Aceh 47.29 263 P **P** **17 38 18.2 +1.1**
comp=Z,427nmcomp=Z,44nm,1.0s
MA2 Magadan 47.41 4 LR LR 17 56 40.8
comp=Z,294nm,21.9s,baz=186,slow=34
SONM Songino Array 47.73 326 P **P** **17 38 19.9 -0.2**
comp=Z,2.5nm,0.6s,baz=143,slow=8.0,SNR=11
SONM PcP **PcP** **17 39 50.3 +1.0**
comp=Z,2.7nm,0.8s,baz=150,slow=6.0,SNR=4.0
SONM ScP **ScP** **17 43 44.0 +0.2**
comp=Z,1.0nm,0.5s,baz=145,slow=3.5,SNR=2.4
SONM LR LR 17 58 33.3
comp=Z,825nm,19.4s,baz=122,slow=36
comp=Z,2.5nm,0.6s
GTA Gaotai 47.96 313 ⇑P **P** **17 38 23.0 +0.9**
GTA pP sP 17 38 27.0 +4.1
GTA PcP **PcP** **17 39 52.0 +1.7**
GTA S **S** **17 45 19.8 -0.2**
GTA pmax pmax
comp=Z,21nm,1.0s
GTA pmax pmax
comp=Z,250nm,6.4s
GTA LR LR
comp=Z,300nm,19.1s
GTA LR LR
comp=Z,470nm,19.1s
GTA LR LR
comp=Z,630nm,17.1s
GSI Gunungsitoli 48.03 261 P **P** **17 38 22.6 -0.1**
MOKO MOKOCHONG 49.14 294 *e*P **P** **17 38 30.8 -0.6**
KOHI KOHIMA 49.44 293 *e*P **P** **17 38 32.5 -1.2**
KOHI IAmb IAmb 17 38 33.5
comp=Z,15nm,0.7s
IMP Imphal 49.51 292 *e*P **P** **17 38 33.0 -1.1**
IMP IAmb IAmb 17 38 36.1
comp=Z,19nm,1.2s
ZIRO ZIRO 49.87 296 *e*P **P** **17 38 37.3 +0.3**
ZIRO IAmb IAmb 17 38 39.4
comp=Z,40nm,1.0s
SAIH SAIHA 50.23 289 *e*P **P** **17 38 39.8 +0.1**
SAIH IAmb IAmb 17 38 43.1
comp=Z,26nm,0.8s
TEZP TEZPUR 50.70 294 *e*P **P** **17 38 43.4 +0.3**
GOMU GeErMu 50.72 307 P **P** **17 38 44.0 +0.5**
GOMU pP sP 17 38 47.8 +3.5
GOMU sP pwP 17 38 51.3 -4.0
GOMU S **S** **17 45 58.5 -0.8**
GOMU pmax pmax
comp=Z,3.0nm,0.9s
GOMU LR LR
comp=Z,160nm,12.0s
GOMU LR LR
comp=Z,290nm,11.2s
GOMU LR LR
comp=Z,320nm,11.5s
YAK Yakutsk 50.84 351 LR LR 18 00 03.7
comp=Z,553nm,18.1s,baz=137,slow=36
YAK Yakutsk 50.84 351 P **P** **17 38 41.6 -1.8**
YAK IAmb IAmb 17 38 45.5
comp=Z,31nm,0.7s
SEY Seymchan 50.85 4 LR LR 17 58 50.9
comp=Z,432nm,21.8s,baz=188,slow=34

SHL Shillong 51.43 293 P **P** **17 38 48.1 -0.7**
SHL IAmb IAmb 17 38 49.6
comp=Z,29nm,0.6s
SHL Shillong 51.43 293 *e*P **P** **17 38 48.6 -0.1**
SHL IAmb IAmb 17 38 50.6
comp=Z,20nm,0.7s
BRDH Bariadhala 51.48 289 LR LR 18 01 42.6
comp=Z,209nm,18.8s,baz=166,slow=37
NWAO Narrogin (SRO) 52.09 210 LR LR 18 02 37.2
comp=Z,534nm,18.7s,baz=20,slow=38
LSA Lhasa 52.50 298 P **P** **17 38 56.1 -0.9**
LSA Lhasa 52.50 298 P **P** **17 38 54.0 -3.1**
LSA pmax pmax
comp=Z,20nm,0.9s
DHUB DHUBRI 53.16 293 *e*P **P** **17 39 01.1 -0.2**
DHUB IAmb IAmb 17 39 01.9
comp=Z,12nm,0.9s
NIKH Nikolski High 54.81 32 P **P** **17 39 12.2 -0.8**
baz=240
EVN Everest 56.12 295 P **P** **17 39 22.7 -1.0**
SPIA Saint Paul Isl 56.36 28 P **P** **17 39 24.2 +0.1**
baz=236
P08K Saint George I 56.37 28 P **P** **17 39 24.3 +0.2**
baz=237
UNV Unalaska Valle 56.47 32 P **P** **17 39 24.8 0.0**
baz=242
BOK Bokaro 56.80 290 *e*P **P** **17 39 28.5 +0.7**
BOK IAmb IAmb 17 39 29.5
comp=Z,22nm,0.8s
GAYA Gaya 57.41 292 *e*P **P** **17 39 32.5 +0.4**
GAYA IAmb IAmb 17 39 33.2
comp=Z,23nm,0.7s
WMQ Urumqi 57.96 314 *e*P **P** **17 39 36.8 +1.1**
WMQ pmax pmax
comp=Z,18nm,1.5s
WMQ LR LR
comp=Z,660nm,18.7s
WMQ LR LR
comp=Z,400nm,24.1s
WMQ LR LR
comp=Z,400nm,22.5s
FALS False Pass 58.53 32 P **P** **17 39 40.0 +0.5**
baz=244
URZ Urewera 58.70 150 LR LR 18 03 44.4
comp=Z,415nm,19.2s,baz=326,slow=35
RAGD RAYAGADA 59.16 285 *e*P **P** **17 39 45.3 +0.9**
RAGD IAmb IAmb 17 39 54.4
comp=Z,8.7nm,0.8s
S12K Black Hills 59.60 32 P **P** **17 39 46.8 -0.1**
baz=245
GAMB Gambell 59.71 21 P **P** **17 39 47.4 -0.1**
baz=231
M11K Mekoryuk 59.87 26 P **P** **17 39 48.2 -0.4**
baz=239
TIXI Tiksi 60.10 354 LR LR 18 06 37.4
comp=Z,49nm,21.5s,baz=196,slow=37
SDPT Sand Point 60.28 32 P **P** **17 39 50.9 -0.5**
baz=247
CHNA Chernabura Isl 60.55 33 P **P** **17 39 53.8 +0.5**
baz=248
ZSN Zaisan 60.79 318 *e*P **P** **17 39 55.4 +0.2**
M13K Dall Lake 61.11 26 P **P** **17 39 57.0 -0.1**
baz=241
S14K Fog Glacier 61.12 32 P **P** **17 39 56.7 -0.7**
baz=247
K13K Kusilvak Mount 61.32 25 P **P** **17 39 58.6 +0.2**
baz=239
O14K Tigyukauivet M 61.52 28 P **P** **17 39 59.6 -0.2**
baz=244
N14K Kuskokwak Cree 61.62 27 P **P** **17 40 01.0 +0.5**
baz=243
L14K Kuka Creek 61.84 26 P **P** **17 40 02.3 +0.3**
baz=242
M14K Bethel 61.88 27 P **P** **17 40 01.7 -0.5**
baz=243
LGTI Lohaghat 61.95 297 *e*P **P** **17 40 03.9 +0.6**
TNA Tin City 62.09 20 P **P** **17 40 03.9 +0.3**
baz=234
O15K Ungalikthiuk R 62.16 29 P **P** **17 40 04.3 +0.2**
baz=246
J14K Nanvaranak Lak 62.17 24 P **P** **17 40 04.0 -0.1**
baz=240
MKAR Makanchi Array 62.35 317 P **P** **17 40 05.8 +0.1**
comp=Z,5.3nm,0.6s,baz=92,slow=7.9,SNR=34
comp=Z,5.3nm,0.6s
MKAR Makanchi Array 62.35 317 **P** **17 40 05.6 -0.1**
M15K Kasigluk River 62.41 27 P **P** **17 40 05.8 0.0**
baz=244
ANM Nome 62.42 22 P **P** **17 40 05.8 -0.1**
baz=237
N15K Kwethluk River 62.45 28 P **P** **17 40 06.1 -0.1**
baz=245
L15K Ungalak Mounta 62.51 26 P **P** **17 40 06.1 -0.3**
baz=243
MAKZ Makanchi 62.56 317 **P** **17 40 06.6 -0.5**
MAKZ IAmb IAmb 17 40 08.7
comp=Z,22nm,1.2s
F14K Arctic Creek 62.59 21 P **P** **17 40 07.3 +0.3**
baz=236
ZALV Zalesovo Beam 62.62 325 P **P** **17 40 06.8 -0.5**
comp=Z,1.9nm,0.6s,baz=118,slow=7.0,SNR=11
ZALV PcP **PcP** **17 40 45.4 -0.8**
comp=Z,5.9nm,0.7s,baz=115,slow=3.7,SNR=11
ZALV LR LR 18 07 35.4
comp=Z,299nm,20.0s,baz=101,slow=36
comp=Z,1.9nm,0.6s
ZALV Zalesovo Beam 62.62 325 P **P** **17 40 06.7 -0.7**
K15K Wolf Creek Mou 62.78 25 P **P** **17 40 08.3 0.0**
baz=242
CHIR Chirikof Islan 63.02 33 P **P** **17 40 10.3 +0.3**
baz=251
O16K Kokwok River B 63.13 29 P **P** **17 40 10.6 -0.1**
baz=247
G15K Niukluk 63.14 22 P **P** **17 40 11.0 +0.4**
baz=239
N16K Nishlik Lake 63.18 28 P **P** **17 40 11.1 +0.1**
baz=246
R17L Mt. Peulik Vol 63.25 31 P **P** **17 40 11.6 +0.1**
baz=250
F15K North Star Dit 63.30 21 P **P** **17 40 11.4 -0.3**
baz=238
M16K Timber Creek 63.32 27 P **P** **17 40 11.9 +0.1**
baz=246
L16K Owhat River 63.38 26 P **P** **17 40 12.5 +0.2**
baz=245
J16K Anvik River 63.61 24 P **P** **17 40 13.9 +0.1**
baz=243
H16K Elim 63.62 23 P **P** **17 40 14.1 +0.3**
baz=241
WUS Wushi 63.63 310 IAmb IAmb 17 40 16.4
comp=Z,22nm,1.3s
O17K Koliganek Bris 63.67 29 P **P** **17 40 14.4 +0.2**
baz=248
SHLS Shalkode 63.70 312 ⇑*i*P **P** **17 40 13.0 -2.0**
comp=Z,8.3nm,1.0s
Q17K Contact Creek 63.70 30 P **P** **17 40 14.9 +0.2**
baz=250
P17K Kvichak River 63.77 29 P **P** **17 40 15.5 +0.7**
baz=249
RAR Rarotonga 63.84 121 LR LR 18 02 31.9
comp=Z,315nm,20.6s,baz=282,slow=31
I17K Unalakleet 63.85 24 P **P** **17 40 14.4 -1.0**
baz=242
N17K Nushagak Hills 63.92 28 P **P** **17 40 15.1 -0.8**
baz=247
HYBB Hyderabad (bro 63.94 283 *e*P **P** **17 40 16.5 -0.3**
G16K Koyuk River 63.95 22 P **P** **17 40 15.8 -0.2**
baz=240
SII Sitkinak Islan 64.02 33 P **P** **17 40 15.5 -1.1**
baz=252
UZB Uzynbulak 64.02 312 *e*P **P** **17 40 17.1 +0.1**
comp=Z,9.8nm,1.0s
L17K Donlin 64.07 26 P **P** **17 40 15.3 -1.5**
baz=246
M17K Holitna River 64.14 27 P **P** **17 40 15.8 -1.5**
baz=247
R18K Karluk 64.19 31 P **P** **17 40 16.6 -1.0**
baz=251
Q18K Katmai Hardscr 64.27 30 P **P** **17 40 16.4 -2.0**
baz=250
J17K VARM Nome 64.28 25 P **P** **17 40 16.8 -1.4**
baz=244
K17K Iditarod 64.31 25 P **P** **17 40 17.0 -1.4**
baz=245
P18K Big Mountain, 64.42 29 P **P** **17 40 18.1 -1.1**
baz=250
SATY Saty 64.46 312 *e*P **P** **17 40 19.9 0.0**
C16K Lisburne Hills 64.48 18 P **P** **17 40 18.3 -1.1**
baz=236
N18K Kilae Creek 64.57 28 P **P** **17 40 18.6 -1.5**
baz=249
O18K Koktuh Hills 64.59 29 P **P** **17 40 19.0 -1.3**
baz=250
G17K Kiwalik Mounta 64.63 22 P **P** **17 40 18.8 -1.6**
baz=242
H17K Granite Mounta 64.64 23 P **P** **17 40 18.9 -1.6**
baz=243
SMLA Simla 64.64 299 *e*P **P** **17 40 20.9 -0.2**
SMLA IAmb IAmb 17 40 22.1
comp=Z,25nm,0.8s
OHAK Old Harbor 64.69 32 P **P** **17 40 19.4 -1.5**
baz=253
ALCI Alchi Leh 64.70 302 *e*P **P** **17 40 21.7 -0.3**
TDK Taldyqorghan 64.71 314 *e*P **P** **17 40 21.6 +0.2**
comp=Z,22nm,1.0s
L18K Granite Mounta 64.79 26 P **P** **17 40 19.9 -1.7**
baz=247
F17K Baldwin Pennin 64.87 21 P **P** **17 40 20.5 -1.4**
baz=241
D17K Noatak River 64.89 19 P **P** **17 40 20.5 -1.5**
baz=238
M18K Stony River 64.90 27 P **P** **17 40 20.8 -1.5**
baz=248
E17K Hotham Inlet 64.98 20 P **P** **17 40 20.9 -1.8**
baz=240
Q19K Cape Douglas, 65.03 30 P **P** **17 40 21.6 -1.7**
baz=252
O19K Port Alsworth 65.12 29 P **P** **17 40 22.0 -1.7**
baz=250
RDOG Red Dog Mine 65.13 19 P **P** **17 40 21.8 -1.8**
baz=238
KDAK Kodiak Island 65.22 32 LR LR 18 07 38.2
comp=Z,153nm,19.6s,baz=242,slow=35
KDAK Kodiak Island 65.22 32 P **P** **17 40 21.9 -2.5**
baz=253
KUDL Kundal 65.25 295 *e*P **P** **17 40 24.8 -0.4**
KUDL IAmb IAmb 17 40 37.8
comp=Z,9.6nm,0.6s
N19K Bonanza Creek 65.26 28 P **P** **17 40 22.7 -2.1**
baz=250
C17K DeLong Mountai 65.27 19 P **P** **17 40 22.5 -2.0**
baz=238
J18K Innoko River 65.27 25 P **P** **17 40 22.6 -2.1**
baz=247
H18K Honhosa River 65.33 23 P **P** **17 40 23.1 -1.9**
baz=244
MDOK Medeo 65.46 312 *e*P **P** **17 40 26.3 -0.1**
P19K Oil Pt 65.47 30 P **P** **17 40 24.7 -1.3**
baz=252
F18K Selawik 65.50 21 P **P** **17 40 24.3 -1.8**
baz=242
TNSS Tian-Shan 65.52 312 *e*P **P** **17 40 26.6 -0.5**
TSSA Tissa 65.53 301 *e*P **P** **17 40 27.0 -0.2**
TSSA IAmb IAmb 17 40 28.7
comp=Z,36nm,0.9s
G18K Tagagawik 65.54 22 P **P** **17 40 24.5 -1.8**
baz=244
KURBB Kurchatov Arra 65.55 320 P **P** **17 40 26.1 -0.5**
comp=Z,11nm,0.9s,baz=103,slow=6.7,SNR=37
KURBB LR LR 18 10 56.1
comp=Z,318nm,18.3s,baz=167,slow=38
comp=Z,11nm,0.9s
Q20K Shuyak Island 65.56 31 P **P** **17 40 24.9 -1.6**
baz=253
AAA Alma-Ata 65.56 312 *e*P **P** **17 40 27.1 +0.1**
comp=Z,21nm,0.9s
E18K Tukpahlearik C 65.57 20 P **P** **17 40 25.3 -1.2**
baz=241
L19K White Mountain 65.58 27 P **P** **17 40 25.9 -0.8**
baz=249
M19K Big River Lodg 65.68 27 P **P** **17 40 27.0 -0.3**
baz=250
GCSA Galena City Sc 65.73 24 P **P** **17 40 27.8 +0.2**
baz=246
KOD Kodaikanal 65.88 276 *e*P **P** **17 40 29.7 -0.1**
J19K Poorman 65.93 25 P **P** **17 40 28.7 -0.2**
baz=247
KSH Kashi 65.95 308 P **P** **17 40 32.8 +3.1**
KSH pmax pmax
comp=Z,17nm,0.9s
KSH LR LR
comp=Z,360nm,16.5s
KSH LR LR
comp=Z,270nm,18.4s
C18K Utukok River 65.98 19 P **P** **17 40 29.1 -0.2**
baz=240
L20K Farewell, AK 66.11 26 P **P** **17 40 29.5 -0.6**
baz=250
H19K Roundabout Mou 66.21 23 P **P** **17 40 30.5 -0.1**
baz=246
G19K Purcell Mounta 66.23 22 IAmb IAmb 17 41 52.5
comp=Z,15nm,1.2s
G19K Purcell Mounta 66.23 22 P **P** **17 40 30.9 +0.1**
baz=245
M20K Styx River 66.24 27 P **P** **17 40 30.8 -0.2**
baz=251
F19K Shaleruckik Mo 66.28 21 P **P** **17 40 30.7 -0.3**
baz=244
K20K Telida 66.34 26 P **P** **17 40 31.3 -0.2**
baz=249
N20K Mount Spurr 66.43 28 P **P** **17 40 31.9 -0.3**
baz=252
SPCR Spurr Chakacha 66.43 28 P **P** **17 40 31.7 -0.6**
baz=252
J20K Nowinta River 66.60 25 P **P** **17 40 33.2 0.0**
baz=249
I20K Naaghedeneel 66.69 24 P **P** **17 40 33.6 -0.1**
baz=248
BRSE Bradley Lake S 66.70 30 P **P** **17 40 33.0 -0.9**
baz=254
C19K Lookout Ridge 66.71 19 P **P** **17 40 33.4 -0.5**
baz=242
E19K Redstone River 66.74 21 P **P** **17 40 34.0 0.0**
baz=244
H20K Anotleneega Mo 66.80 23 P **P** **17 40 34.4 -0.1**
baz=248
D19K Kuna River 66.90 20 P **P** **17 40 34.7 -0.4**
baz=243
PPLA Purkeypile 66.98 26 P **P** **17 40 35.3 -0.5**
baz=251
SKT Skwentna 66.98 27 P **P** **17 40 35.7 -0.1**
baz=252
F20K Avaraart Lake 67.10 22 P **P** **17 40 36.1 -0.2**
baz=246
SGDS Sogindy 67.24 312 *e*P **P** **17 40 37.6 -0.2**
AAK Ala-Archa 67.28 311 LR LR 18 12 15.8
comp=Z,207nm,20.4s,baz=96,slow=38
AAK Ala-Archa 67.28 311 **P** **17 40 37.3 -0.8**
NRIK Noril'sk 67.32 341 P **P** **17 40 38.1 +0.5**
comp=Z,2.5nm,0.5s,baz=101,slow=9.2,SNR=4.3
NRIK LR LR 18 09 47.6
comp=Z,271nm,18.3s,baz=116,slow=36
comp=Z,2.5nm,0.5s
NRIK Noril'sk 67.32 341 IAmb IAmb 17 41 07.7
comp=Z,16nm,1.1s
E20K Nigu River 67.44 20 P **P** **17 40 38.1 -0.4**
baz=245
D20K Etivluk River 67.49 20 P **P** **17 40 39.2 +0.4**
baz=245
RC01 Rabbit Creek A 67.55 29 P **P** **17 40 39.1 -0.2**
baz=254
M22K Willow 67.56 28 P **P** **17 40 39.1 -0.2**
baz=254
H21K Melozitna Rive 67.66 23 P **P** **17 40 39.8 -0.1**
baz=250
G21K Allakaket 67.70 22 P **P** **17 40 40.5 +0.3**
baz=248
BTLS Baital 67.79 314 ⇑*i*P **P** **17 40 41.2 +0.1**
BPAW Bear Paw Mtn. 67.88 25 P **P** **17 40 41.3 0.0**
baz=252
B20K Meade River 67.89 18 P **P** **17 40 41.0 -0.2**
baz=244
NIL Nilore 67.97 301 **P** **17 40 41.8 -0.7**
PMR Palmer 67.97 28 P **P** **17 40 41.3 -0.6**
baz=255
TRF Thorofare Moun 67.97 26 P **P** **17 40 41.2 -0.9**
baz=253
F21K Alatna River 67.98 22 P **P** **17 40 41.1 -0.8**
baz=248
KAD Karad 68.10 284 *e*P **P** **17 40 43.7 +0.1**
PWL Port Wells 68.15 29 P **P** **17 40 42.5 -0.6**
baz=256
KNK Knik Glacier 68.23 28 P **P** **17 40 42.8 -0.8**
baz=255
E21K Killik River 68.27 20 P **P** **17 40 43.4 -0.3**
baz=247

C21K	Knifeblade Rid	68.28	20	P		P		17 40 43.3	-0.5
	baz=246								
H22K	Ishtalitna Cre	68.30	23	P		P		17 40 43.8	-0.1
	baz=251								
SML	Sawmill	68.39	28	P		P		17 40 44.0	-0.6
	baz=255								
P23K	Montague Islan	68.39	30	P		P		17 40 44.2	-0.4
	baz=257								
B21K	Ikpikpuk River	68.52	19	P		P		17 40 44.3	-0.9
	baz=246								
F22K	John River	68.55	22	P		P		17 40 45.4	-0.1
	baz=249								
WAT1	Susitna Watana	68.56	27	P		P		17 40 45.3	-0.3
	baz=255								
G22K	Bettles	68.59	22	P		P		17 40 45.0	-0.7
	baz=250								
MCK	McKinley	68.64	26	P		P		17 40 45.9	-0.2
	baz=254								
M23K	Glacier View	68.67	28	P		P		17 40 46.1	-0.2
	baz=256								
GLI	Glacier Island	68.74	29	P		P		17 40 46.4	-0.4
	baz=257								
Q23K	Middleton Isla	68.79	31	P		P		17 40 46.1	-0.9
	baz=258								
NEA2	Nenana	68.82	25	P		P		17 40 47.0	-0.3
	baz=254								
WAT6	Susitna Watana	68.86	27	P		P		17 40 47.3	-0.4
	baz=256								
SCM	Sheep Creek Mo	68.86	28	P		P		17 40 47.5	-0.1
	baz=256								
I23K	Minto, Yukon-K	68.86	24	IAmb		IAmb		17 41 19.9	
	comp=Z,28nm,1.4s								
I23K	Minto, Yukon-K	68.86	24	P		P		17 40 47.5	0.0
	baz=253								
D22K	Ayikyak River	68.87	20	IAmb		IAmb		17 43 06.2	
	comp=Z,36nm,1.6s								
D22K	Ayikyak River	68.87	20	P		P		17 40 47.8	+0.4
	baz=248								
E22K	Anaktuvuk Pass	68.90	21	IAmb		IAmb		17 42 23.4	
	comp=Z,40nm,1.7s								
E22K	Anaktuvuk Pass	68.90	21	P		P		17 40 47.9	+0.2
	baz=250								
A22K	Sinclair Lake	68.98	18	P		P		17 40 47.8	-0.2
	baz=245								
H23K	Yukon River	68.99	24	P		P		17 40 48.2	0.0
	baz=253								
G23K	Bananza Creek	69.08	23	IAmb		IAmb		17 41 42.3	
	comp=Z,17nm,1.4s								
G23K	Bananza Creek	69.08	23	P		P		17 40 49.5	+0.6
	baz=252								
DHY	Denali Highway	69.14	27	P		P		17 40 49.5	+0.1
	baz=256								
BRZS	Berezniki	69.17	319	*e*P		P		17 40 49.8	+0.1
COLD	Coldfoot	69.18	22	P		P		17 40 49.7	+0.4
	baz=251								
B22K	Teshekpuk Lake	69.19	19	P		P		17 40 49.2	-0.1
	baz=247								
EYAK	Cordova Ski Ar	69.32	30	P		P		17 40 50.4	0.0
	baz=258								
CCB	Clear Creek Bu	69.36	25	IAmb		IAmb		17 40 51.0	
	comp=Z,35nm,1.8s								
KLU	Klutina	69.43	29	P		P		17 40 51.1	-0.1
	baz=258								
D23K	Nanushuk River	69.58	20	P		P		17 40 52.3	+0.5
	baz=250								
DZA	Taraz	69.62	311	*e*P		P		17 40 52.5	-0.1
POKR	Poker Plat Res	69.64	25	P		P		17 40 52.5	+0.2
	baz=255								
H24K	Noodor Dome	69.65	24	IAmb		IAmb		17 40 55.6	
	comp=Z,28nm,1.6s								
H24K	Noodor Dome	69.65	24	P		P		17 40 52.5	+0.1
	baz=254								
E23K	Chandalar	69.65	21	IAmb		IAmb		17 41 22.3	
	comp=Z,12nm,0.9s								
E23K	Chandalar	69.65	21	P		P		17 40 52.7	+0.2
	baz=252								
HDA	Harding Lake	69.66	25	P		P		17 40 53.0	+0.6
	baz=256								
IL31		69.77	25	IAmb		IAmb		17 41 27.4	
	comp=Z,33nm,1.6s								
ILAR	Eielson Array	69.77	25	P		P		17 40 52.5	-0.6
	comp=Z,2.6nm,0.6s,baz=249,slow=6.1,SNR=46								
ILAR				LR		LR		18 11 17.6	
	comp=Z,75nm,19.4s,baz=260,slow=36								
	comp=Z,2.6nm,0.6s								
ILAR	Eielson Array	69.77	25	P		P		17 40 51.9	-1.2
KAIM	Kayak Island	69.85	30	P		P		17 40 53.8	+0.2
	baz=260								
TOLK	Toolik Lake Re	69.85	21	P		P		17 40 53.4	-0.2
	baz=252								
C23K	Itkillik River	69.90	19	P		P		17 40 54.3	+0.5
	baz=250								
BMRM	Bremner River	69.95	29	P		P		17 40 54.7	+0.4
	baz=259								
PAX	Paxson	69.96	27	IAmb		IAmb		17 40 56.5	
	comp=Z,30nm,1.4s								
PAX	Paxson	69.96	27	P		P		17 40 54.8	+0.4
	baz=258								
HARP	HAARP	69.98	28	P		P		17 40 54.7	+0.2
	baz=258								
K24K	Donnelly Dome	70.01	26	P		P		17 40 54.9	+0.2
	baz=257								
G24K	Hadweenzic Riv	70.05	23	P		P		17 40 55.2	+0.4
	baz=254								
E24K	Your Creek	70.06	22	P		P		17 40 55.2	+0.3
	baz=253								
N25K	Chitina, Valde	70.08	29	P		P		17 40 55.3	+0.1
	baz=259								
F24K	Squaw Lake	70.12	22	IAmb		IAmb		17 40 58.0	
	comp=Z,41nm,1.7s								
F24K	Squaw Lake	70.12	22	P		P		17 40 56.0	+0.7
	baz=254								
KK31	Karatay Array	70.23	311	IAmb		IAmb		17 40 57.7	
	comp=Z,16nm,1.0s								
KKAR	Karatay Array	70.23	311			P		17 40 54.7	-1.7
D24K	Happy Valley	70.27	20	IAmb		IAmb		17 40 58.8	
	comp=Z,20nm,0.9s								
D24K	Happy Valley	70.27	20	P		P		17 40 56.6	+0.5
	baz=252,SNR=7.4								
J25K	Salcha River,	70.37	25	IAmb		IAmb		17 41 00.6	
	comp=Z,43nm,1.7s								
J25K	Salcha River,	70.37	25	P		P		17 40 56.8	0.0
	baz=257								
RIDG	Independent Ri	70.40	26	P		P		17 40 56.4	-0.6
	baz=258								
C24K	Franklin Bluff	70.49	20	P		P		17 40 57.3	0.0
	baz=252								
PRP	Porcupine Dome	70.51	24	P		P		17 40 57.5	-0.3
	baz=256								
IUG	Iuzhnay	70.56	310	*e*P		P		17 40 58.6	+0.1
G25K	Bearman Lake	70.59	23	P		P		17 40 58.4	+0.4
	baz=256								
CRQE	Cirque	70.64	30	P		P		17 40 59.0	+0.4
	baz=260								
BRLS	Borolday	70.72	311	⇑*i*P		P		17 40 59.9	+0.5
DOT	Dot Lake	70.72	27	IAmb		IAmb		17 41 01.0	
	comp=Z,11nm,0.8s								
MCARA	McCarthy VSAT	70.78	29	P		P		17 41 00.1	+0.7
	baz=260								
SCRK	Sand Creek	70.82	26			P		17 40 58.9	-0.8
SCRK				IAmb		IAmb		17 41 01.6	
	comp=Z,27nm,1.4s								
SCRK	Sand Creek	70.82	26	P		P		17 40 59.7	0.0
	baz=258								
BVAR	Borovoye Array	70.88	322	P		P		17 40 59.7	-0.4
	comp=Z,5.4nm,0.5s,baz=104,slow=7.2,SNR=20								
BVAR				LR		LR		18 12 51.4	
	comp=Z,558nm,19.9s,baz=95,slow=37								
	comp=Z,5.4nm,0.5s								
CHM	Chimkent	70.88	311	*e*P		P		17 41 00.2	-0.1
	comp=Z,7.0nm,0.7s								
BORK	Borovoye	70.92	322			P		17 40 59.8	-0.6
L26K	Log Cabin Wild	70.92	27	P		P		17 41 00.3	+0.1
	baz=259								
M26K	Nabesna, AK	70.97	28	P		P		17 41 00.9	+0.4
	baz=260								
F25K	Christian Rive	70.97	22	IAmb		IAmb		17 41 03.4	
	comp=Z,25nm,1.6s								
F25K	Christian Rive	70.97	22	P		P		17 41 00.8	+0.4
	baz=256,SNR=7.5								
J26L	Joseph Creek	71.11	26	IAmb		IAmb		17 41 04.5	
	comp=Z,28nm,1.6s								
J26L	Joseph Creek	71.11	26	P		P		17 41 01.6	+0.2
	baz=259								
MESA	MESA	71.11	30	P		P		17 41 02.1	+0.5
	baz=262								
E25K	Arctic Village	71.13	22	P		P		17 41 01.6	+0.3
	baz=256,SNR=6.3								
D25K	Kavik River	71.16	20	IAmb		IAmb		17 41 03.9	
	comp=Z,24nm,1.4s								
D25K	Kavik River	71.16	20	P		P		17 41 02.0	+0.5
	baz=254,SNR=8.3								
PPT	Papeete	71.29	113	LR		LR		18 06 23.8	
	comp=Z,532nm,19.2s,baz=288,slow=31								
PPT2	Papeete2	71.29	113	*e*P		P		17 41 03.5	+0.2
	comp=Z,32nm,23.2s								
PPT2				*e*S		S		17 50 17.5	-3.9
	comp=Z,174nm,24.5s								
PPT2	Papeete2	71.29	113	*e*LR		LR		18 02 30.2	
	comp=Z,457nm,30.5s								
PPT2				*e*LR		LR		18 02 38.1	
	comp=Z,400nm,20.8s								
BMAR	Burnt Mountain	71.33	23			P		17 41 02.6	0.0
KBL	Kabul	71.44	302			P		17 41 03.3	-0.8
KBL				IAmb		IAmb		17 41 06.5	
	comp=Z,31nm,1.1s								
I26K	Coal Creek Min	71.44	25	P		P		17 41 03.5	+0.3
	baz=259								
M27K	Edge Creek, AK	71.47	28	P		P		17 41 03.5	-0.2
	baz=261								
CTG	Chitna Glacier	71.52	30	P		P		17 41 04.0	0.0
	baz=262								
G26K	Porcupine Rive	71.52	23	P		P		17 41 04.6	+0.9
	baz=258,SNR=7.4								
F26K	Sheenjek River	71.55	22	IAmb		IAmb		17 41 08.8	
	comp=Z,16nm,1.1s								
F26K	Sheenjek River	71.55	22	P		P		17 41 04.2	+0.3
	baz=257								
L27K	Beaver Creek,	71.61	27	IAmb		IAmb		17 42 20.8	
	comp=Z,27nm,1.8s								
L27K	Beaver Creek,	71.61	27	P		P		17 41 04.0	-0.4
	baz=261								
K27K	Chicken	71.66	26	P		P		17 41 04.6	0.0
	baz=260								
C26K	Canwell Bay	71.81	20	P		P		17 41 05.3	-0.1
	baz=256								
PINM	Pinnacle	71.94	31	P		P		17 41 06.1	-0.4
	baz=263								
BVCY	Beaver Creek	71.95	28	P		P		17 41 06.4	0.0
	baz=262								
YUK3	Moose Creek	72.05	29	P		P		17 41 06.0	-1.2
	baz=262								
O28M	Mount Upton	72.05	30	P		P		17 41 06.9	-0.5
	baz=263								
I27K	Kandik River	72.12	25	P		P		17 41 07.4	-0.1
	baz=260								
C27K	Jago River	72.14	20	IAmb		IAmb		17 41 10.1	
	comp=Z,37nm,1.7s								
C27K	Jago River	72.14	20	P		P		17 41 07.7	+0.3
	baz=257								
H27K	Steamboat Moun	72.27	24	IAmb		IAmb		17 41 11.7	
	comp=Z,26nm,1.2s								
H27K	Steamboat Moun	72.27	24	P		P		17 41 08.3	0.0
	baz=260,SNR=13								
G27K	Doyon Strip	72.32	23	P		P		17 41 08.8	+0.2
	baz=260								
YUK8	Steele Glacier	72.32	29	P		P		17 41 08.6	-0.4
	baz=263								
E27K	Coleen River	72.59	22	P		P		17 41 10.2	0.0
	baz=259								
I28M	Miner Creek	72.79	25	IAmb		IAmb		17 41 27.8	
	comp=Z,23nm,1.6s								
I28M	Miner Creek	72.79	25	P		P		17 41 11.6	+0.1
	baz=262								
O29M	Mount Kennedy	72.80	30	P		P		17 41 11.7	+0.1
	baz=265								
DAWY	Dawson	72.83	27	P		P		17 41 12.6	+0.9
	baz=263,SNR=5.5								
YUK4	Talbot Arm	72.86	29	P		P		17 41 13.4	+1.3
	baz=264								
YUK6	Outpost Mounta	72.96	30	P		P		17 41 12.8	+0.1
	baz=263								
D27M	Malcolm River	73.01	21	P		P		17 41 13.9	+1.2
	baz=260								
M29M	Somme Creek	73.06	28	IAmb		IAmb		17 42 32.5	
	comp=Z,55nm,1.9s								
M29M	Somme Creek	73.06	28	P		P		17 41 13.0	-0.2
	baz=264								
F28M	Old Crow	73.14	23	IAmb		IAmb		17 41 16.3	
	comp=Z,28nm,1.4s								
F28M	Old Crow	73.14	23	P		P		17 41 14.0	+0.6
	baz=261,SNR=7.3								
L29M	L29M	73.28	28	IAmb		IAmb		17 41 17.8	
	comp=Z,13nm,0.9s								
L29M	L29M	73.28	28	P		P		17 41 15.2	+0.8
	baz=264								
HYT	Haines Junctio	73.37	30	IAmb		IAmb		17 41 51.9	
	comp=Z,23nm,1.4s								
HYT	Haines Junctio	73.37	30	P		P		17 41 15.7	+0.6
	baz=263								
E28M	Babbage River	73.42	22	IAmb		IAmb		17 41 18.8	
	comp=Z,22nm,1.2s								
E28M	Babbage River	73.42	22	P		P		17 41 16.1	+1.0
	baz=261,SNR=8.5								
TBI	Tubuai	73.43	119	*e*S		SKiKP		17 50 46.8	-0.6
	comp=Z,696nm,28.5s								
TBI	Tubuai	73.43	119	*e*LR		LR		18 03 14.0	
	comp=Z,2μm,32.5s								
TBI				*e*LR		LR		18 03 43.8	
	comp=Z,918nm,26.2s								
I29M	Ogilvie Camp,	73.45	25	P		P		17 41 16.1	+0.7
	baz=263,SNR=6.6								
P30M	Million Dollar	73.58	31	P		P		17 41 16.3	0.0
	baz=266								
N30M	Aishikik Lake	73.62	29	P		P		17 41 16.3	-0.1
	baz=266								
K29M	Barlow Dome	73.63	27	P		P		17 41 16.4	-0.1
	baz=264,SNR=5.5								
D28M	Stokes Point	73.81	21	P		P		17 41 17.3	+0.1
	baz=262								
S31K	Pelican	73.83	33	P		P		17 41 17.8	+0.2
	baz=267								
PLBC	Pleasant Camp	73.84	31	P		P		17 41 18.1	+0.5
	baz=267								
M30M	Minto, Yukon	73.85	28	P		P		17 41 17.9	+0.2
	baz=266								
O30N	Mendenhall	74.06	30	P		P		17 41 19.2	+0.3
	baz=265								
R31K	City Hall, Gus	74.11	33	P		P		17 41 19.9	+0.7
	baz=268								
J30M	Hart River	74.21	26	P		P		17 41 20.5	+0.6
	baz=265,SNR=6.7								
I30M	Mount Dempster	74.25	25	P		P		17 41 20.3	+0.3
	baz=265								
N31M	Braeburn, Yuko	74.25	29	IAmb		IAmb		17 41 50.5	
	comp=Z,20nm,1.2s								
N31M	Braeburn, Yuko	74.25	29	P		P		17 41 19.9	-0.1
	baz=267								
SIT	Sitka	74.29	34	P		P		17 41 20.2	-0.1
	baz=268								
SKAG	Skagway	74.37	31	P		P		17 41 21.0	+0.2
	baz=268								
G30M	tAoh Zraii Nji	74.47	24	P		P		17 41 21.3	0.0
	baz=265,SNR=9.1								
WHY	Whitehorse	74.64	30	P		P		17 41 22.2	-0.2
	baz=268								
F30M	Barrier River	74.69	23	P		P		17 41 22.5	0.0
	baz=265								
S32K	Killisnoo	74.71	34	P		P		17 41 22.6	-0.1
	baz=269								
R32K	Eaglecrest	74.75	33	P		P		17 41 23.1	+0.1
	baz=269								
M31M	Drury Creek, Y	74.94	29	P		P		17 41 24.2	+0.1
	baz=268								
H31M	Peel River	75.14	25	P		P		17 41 24.9	-0.2
	baz=267,SNR=5.1								
P32M	Atlin	75.20	31	P		P		17 41 25.7	+0.1
	baz=269								
G31M	Satah River	75.23	24	P		P		17 41 26.0	+0.5
	baz=267,SNR=13								
F31M	Tsiigehtchic	75.46	23	P		P		17 41 27.5	+0.6
	baz=267								
U33K	Whale Pass	75.50	35	IAmb		IAmb		17 41 30.7	
	comp=Z,22nm,1.0s								
U33K	Whale Pass	75.50	35	P		P		17 41 26.9	-0.4
	baz=270								
CRAG	Craig	75.50	36	P		P		17 41 26.7	-0.6
	baz=271								
N32M	Quiet Lake	75.54	30	P		P		17 41 26.8	-0.8
	baz=269								
INK	Inuvik	75.59	22	P		P		17 41 27.3	-0.3
	baz=267								
P33M	Teslin, Yukon	75.66	31	P		P		17 41 27.9	-0.4
	baz=270								
WRAK	Wrangell Islan	75.93	35	IAmb		IAmb		17 41 33.1	
	comp=Z,23nm,0.9s								
WRAK	Wrangell Islan	75.93	35	P		P		17 41 30.2	+0.5
	baz=271,SNR=6.2								
Q32M	Nakina River	75.94	32	P		P		17 41 29.5	-0.6
	baz=270								
V35K	Ketchikan	76.37	36	P		P		17 41 32.3	0.0
	baz=272								
S34M	Telegraph Cree	76.56	33	IAmb		IAmb		17 41 36.9	
	comp=Z,16nm,0.9s								
S34M	Telegraph Cree	76.56	33	P		P		17 41 32.9	-0.4
	baz=272,SNR=8.0								
R33M	Jennings River	76.60	32	P		P		17 41 33.8	+0.1
	baz=272								
HRA	Herat	77.05	303	IAmb		IAmb		17 41 38.7	
	comp=Z,32nm,1.1s								
T35M	Bob Quinn	77.07	34	IAmb		IAmb		17 41 39.8	
	comp=Z,18nm,1.0s								
T35M	Bob Quinn	77.07	34	P		P		17 41 36.3	+0.1
	baz=273,SNR=7.2								
DLBC	Dease Lake	77.12	33	LR		LR		18 12 15.0	
	comp=Z,156nm,19.8s,baz=264,slow=33								
DLBC	Dease Lake	77.12	33	P		P		17 41 37.4	+0.8
	baz=272,SNR=8.1								
ABKAR	Akbulak array	77.43	318			P		17 41 37.0	-1.4
TAOE	Nuku Hiva Isla	77.51	102	*e*LR		LR		18 05 30.5	
	comp=Z,445nm,22.7s								
WTLY	Watson Lake, Y	77.67	31	IAmb		IAmb		17 41 42.8	
	comp=Z,21nm,0.9s								
WTLY	Watson Lake, Y	77.67	31	P		P		17 41 40.6	+1.0
	baz=273,SNR=19								
ARTI	Arti	77.87	325	LR		LR		18 17 38.2	
	comp=Z,231nm,19.4s,baz=90,slow=37								
A36M	Sachs Harbour	78.40	19	IAmb		IAmb		17 41 46.1	
	comp=Z,15nm,0.9s								
A36M	Sachs Harbour	78.40	19	P		P		17 41 43.9	+0.6
	baz=274								
AKTO	Aktyubinsk	78.58	319	LR		LR		18 18 08.3	
	comp=Z,295nm,19.2s,baz=329,slow=37								
BBB	Bella Bella	78.64	39	LR		LR		18 13 55.6	
	comp=Z,232nm,19.0s,baz=244,slow=34								
C36M	Paulatuk	79.00	21	P		P		17 41 47.2	+0.5
	baz=276								
LIRD	Liard River Hi	79.08	31	P		P		17 41 47.7	+0.3
	baz=276,SNR=6.4								
WRGLY	Wrigley	79.93	27	P		P		17 41 51.6	-0.3
	baz=277								
KOTAN	Kotaneelee Air	80.03	31	P		P		17 41 52.5	0.0
	baz=277								
CBB	Campbell River	80.61	41	IAmb		IAmb		17 41 59.5	
	comp=Z,20nm,1.0s								
KIRV	Kirov	82.39	328	LR		LR		18 21 30.6	
	comp=Z,265nm,18.5s,baz=80,slow=38								
GNW	Green Mountain	82.65	43	P		P		17 42 08.6	+1.9
GNW				IAmb		IAmb		17 42 10.5	
	comp=Z,19nm,1.0s								
H04A	Detroit Lake	83.61	46	IAmb		IAmb		17 42 14.9	
	comp=Z,23nm,1.2s								
YBH	Yreka Blue Hor	83.79	49	LR		LR		18 15 23.7	
	comp=Z,15nm,18.6s,baz=273,slow=33								
WIFE	Three Sisters-	83.99	46			P		17 42 13.2	-0.8
YKA	Yellowknife Ar	84.05	27	P		P		17 42 14.4	+0.9
	comp=Z,5.4nm,0.9s,baz=288,slow=5.9,SNR=9.3								
YKA				LR		LR		18 18 27.7	
	comp=Z,146nm,20.4s,baz=273,slow=35								
	comp=Z,5.4nm,0.9s								
YKA	Yellowknife Ar	84.05	27			P		17 42 12.9	-0.7
LTY	Liberty	84.15	43	IAmb		IAmb		17 42 33.6	
	comp=Z,11nm,1.0s								
PINE	Pine Mountain	84.67	46	IAmb		IAmb		17 42 34.9	
	comp=Z,24nm,1.1s								
B08A	Colville Reser	84.80	42	IAmb		IAmb		17 42 20.7	
	comp=Z,15nm,0.9s								
E07A	Sunnyside	84.84	44	IAmb		IAmb		17 42 21.4	
	comp=Z,12nm,1.0s								
WAH2	Wahluke Slope	84.99	43	IAmb		IAmb		17 42 22.1	
	comp=Z,26nm,1.2s								
HAWA	Hanford	85.09	44	IAmb		IAmb		17 42 22.5	
	comp=Z,14nm,1.1s								
SPITS	Spitsbergen Ar	85.31	351	P		P		17 42 20.1	+0.4
	comp=Z,13nm,0.9s,baz=5.7,slow=5.8,SNR=4.4								
SPITS				LR		LR		18 23 10.9	
	comp=Z,159nm,18.2s,baz=38,slow=38								
	comp=Z,13nm,0.9s								
D08A	Wollman Farm,	85.36	43	IAmb		IAmb		17 42 23.1	
	comp=Z,27nm,1.5s								
RES	Resolute Bay	85.83	13			P		17 42 22.8	+0.5
RES				IAmb		IAmb		17 42 25.5	
	comp=Z,25nm,1.2s								
NEW	Newport	86.26	42	LR		LR		18 22 20.5	
	comp=Z,79nm,18.3s,baz=301,slow=37								
WVOR	Wild Horse Val	86.61	47	IAmb		IAmb		17 42 30.4	
	comp=Z,37nm,1.9s								
F10A	Beach Ranch,	86.75	44	IAmb		IAmb		17 42 30.6	
	comp=Z,13nm,1.2s								
BMO	Blue Mountains	86.97	45	IAmb		IAmb		17 42 31.9	
	comp=Z,24nm,1.2s								
RYN	Ryan	87.59	51	IAmb		IAmb		17 42 39.7	
	comp=Z,27nm,1.8s								
NVAR	Mina Array Bea	87.80	51	P		P		17 42 35.2	+2.3
	comp=Z,2.6nm,0.8s,baz=265,slow=7.0,SNR=12								
NVAR				LR		LR		18 22 27.1	
	comp=Z,129nm,18.8s,baz=276,slow=36								
	comp=Z,2.6nm,0.8s								
NVAR	Mina Array Bea	87.80	51	P		P		17 42 33.4	+0.4
NV11	Mina Array Sit	87.92	51	IAmb		IAmb		17 43 10.3	
	comp=Z,12nm,1.4s								
ARCES	ARCESS Array B	88.28	342	P		P		17 42 33.0	-1.3
	comp=Z,4.7nm,0.7s,baz=53,slow=4.9,SNR=14								
ARCES				LR		LR		18 25 01.2	
	comp=Z,158nm,20.3s,baz=67,slow=38								
	comp=Z,4.7nm,0.7s								
ARCES	ARCESS Array B	88.28	342	IAmb		IAmb		17 42 34.1	
	comp=Z,61nm,1.6s								
LRMC	Laurel Mtn Rad	89.00	54	IAmb		IAmb		17 44 32.7	
	comp=Z,11nm,1.1s								
FURC	Furnace Creek,	89.40	53	IAmb		IAmb		17 42 45.2	
	comp=Z,16nm,1.1s								
ELK	Elko	89.50	48	IAmb		IAmb		17 42 58.1	
	comp=Z,13nm,1.0s								
TPNV	Topopah Spring	89.75	52	IAmb		IAmb		17 42 46.9	
	comp=Z,13nm,1.1s								
R11B	Troy Canyon, C	89.89	51	IAmb		IAmb		17 42 47.7	
	comp=Z,17nm,1.5s								
S11A	Rachel	89.95	52	IAmb		IAmb		17 42 53.1	
	comp=Z,22nm,1.2s								
KBZ	Khabaz	90.00	315	P		P		17 42 43.7	+0.9
	comp=Z,2.8nm,0.9s,baz=117,slow=6.8,SNR=5.1								
KBZ				LR		LR		18 28 07.7	
	comp=Z,178nm,18.9

comp=Z,13nm,1.1s
RAYN **Ar Rayn** 93.47 295 P P 17 42 56.9 -2.6
AK03 **Malin Array Si** 96.00 325 P P 17 43 09.4 -1.0
AKBB **Malin Array Si** 96.01 325 P P 17 43 10.1 -0.3
AK08 **Malin Array Si** 96.02 325 P P 17 43 09.0 -1.5
AK10 **Malin Array Si** 96.04 325 P P 17 43 10.4 -0.2
AK11 **Malin Array Si** 96.05 325 P P 17 43 09.2 -1.4
AK05 **Malin Array Si** 96.06 325 P P 17 43 09.4 -1.3
AK19 **Malin Array Si** 96.12 325 P P 17 43 10.1 -0.8
RNPP1 **Kostyukhnivka** 97.61 326 P P 17 43 16.6 -1.1
BRTR **Keskin Array B** 97.88 313 P P 17 43 18.1 -1.2
comp=Z,0.8nm,0.8s,baz=95,slow=3.5,SNR=4.2
BRTR LR LR 18 32 20.8
comp=Z,102nm,19.4s,baz=80,slow=38
comp=Z,0.8nm,0.8s
BR104 **Keskin Array S** 97.88 313 P P 17 43 18.1 -1.3
ANMO **Albuquerque** 97.92 52 LR LR 18 31 09.9
comp=Z,166nm,18.6s,baz=290,slow=38
HFS **Hagfors** 97.94 338 P P 17 43 16.5 -2.5
comp=Z,3.8nm,1.0s,baz=69,slow=7.9,SNR=4.4
MAW **Mawson** 98.20 203 LR LR 18 25 23.8
comp=Z,324nm,18.9s,baz=87,slow=34
NOA **NORSAR Array B** 98.22 339 LR LR 18 31 42.0
comp=Z,97nm,18.7s,baz=65,slow=38
LPIG **La Paz** 98.29 63 LR LR 18 20 17.2
comp=Z,176nm,20.2s,baz=245,slow=31
SYO **Syowa Base** 106.83 201 ‖ *ep*Pdiff **Pdif** 17 43 59.0 +0.8
SYO **Syowa Base** 106.83 201 ‖ *ep*Pdiff pPdif 17 44 01.2 +2.1
ESDC **Sonseca Array** 120.68 332 PKP **PKiKP** 17 48 37.4 +1.7
comp=Z,0.6nm,0.8s,baz=39,slow=2.9,SNR=2.7
MD01 **Mideit array s** 126.49 328 **PKPdf** 17 48 46.5 -0.6
MD31 **MD31** 126.49 328 **PKPdf** 17 48 46.9 -0.1
TORD **Torodi Ar. Bea** 135.50 303 PKP **PKiKP** 17 49 05.9 0.0
comp=Z,0.9nm,0.8s,baz=35,slow=3.9,SNR=4.9
PLCA **Paso Flores** 138.03 139 PKP **PKPdf** 17 49 08.7 +0.2
comp=Z,3.5nm,1.0s,baz=330,slow=8.1,SNR=3.3
ZON **Zonda** 143.75 127 PKPbc 17 49 16.9 +0.4
DBIC **Dimbokro** 144.40 300 PKP PKPbc 17 49 19.6 +0.7
comp=Z,18nm,0.7s,baz=86,slow=3.7,SNR=23
DBIC **Dimbokro** 144.40 300 PKPbc 17 49 19.4 +0.5
PB14 **IPOC Station P** 144.57 115 **PKPab** 17 49 19.1 -0.3
LPAZ **La Paz** 147.90 101 PKPbc **PKiKP** 17 49 32.4 +0.3
comp=Z,8.6nm,1.0s,baz=272,slow=2.4,SNR=20
LPAZ **La Paz** 147.90 101 **PKPdf** 17 49 25.4 -1.7

*IDC **28** 17:38:53.3±0.6,34°.16S×55°.73E, h0km, mb4.1/15, mbtmp4.2/16, ML4.7/1, MS4.0/17, Error ellipse: s-maj=23.5km s-min=17.9km az=53.0*
*NEIC **28** 17:38:55.4±1.3,34°.1S±0°.1×55°.7E±0°.2, h10km±1km, mb4.7/27, Error ellipse: s-maj=24.0km s-min=17.2km az=247.0*
*GCMT **28** 17:38:57.4±0.3,34°.06S±0°.02×55°.64E±0°.05, h14km±1km, MW4.8/87, Moment Tensor Solution. s26,c29; s87,c102; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~2.16±.15; Mθθ 1.51±.09; Mϕϕ 0.65±.10; Mrθ 0.45±.22; Mrϕ 0.31±.07; Mθϕ~0.06±.33; Best double couple: Mo 1.93500×10^16 NP1: ϕs 256.00000°, δ 39.00000°, λ -96.00000°. NP2: ϕs 256.00000°, δ 51.00000°, λ -85.00000°. Principal axes: T 1.6550, Plg6.0000°, Azm343.0000°; N 0.5660, Plg4.0000°, Azm73.0000°; P -2.2160, Plg83.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 17:38:55.2±0.5, 33°.97S±0°.09×55°.6E±0°.1, h10km, n75, σ 1.9 63/43, mb4.5/27, MS4.0/17, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOMA	**Nahampoana Res**	11.71	318	Pn	**Pn**	17 41 43.4	+1.0
H04N2	**CROZET ISLANDS**	12.53	192	T	T	17 54 51.0	
	baz=14,slow=75,SNR=653						
H04N1	**CROZET ISLANDS**	12.53	192	T	T	17 54 51.7	
	baz=14,slow=75,SNR=658						
H04N3	**CROZET ISLANDS**	12.54	192	T	T	17 54 35.5	
	baz=14,slow=75,SNR=695						
VOI	**Vohitsoka**	14.32	325		**Pn**	17 42 19.1	+0.9
ABPO	**Ambohimpanom**	16.67	331		**Pn**	17 42 50.2	+1.0
OPO	**Ambohidratompo**	17.09	332	P	**P**	17 42 58.3	+2.1
	0.2nm,0.3s,baz=134,slow=15,SNR=17						
OPO				S	**Sn**	17 45 57.0	-7.7
	2.0nm,0.7s,baz=293,slow=14,SNR=2.4						
OPO				LR	LR	17 47 57.0	
	comp=Z,416nm,19.1s,baz=23,slow=31						
	4.6nm,0.3s						
BOSA	**Boshof**	26.45	273	LR	LR	17 53 03.1	
	comp=Z,107nm,20.3s,baz=92,slow=32						
LBTB	**Lobatse**	27.55	281	LR	LR	17 53 44.6	
	comp=Z,85nm,21.9s,baz=118,slow=32						
H08S1	**Diego Carcia H**	30.46	34	T	T	18 17 19.7	
	baz=208,slow=76,SNR=39						
H08S2	**Diego Garcia H**	30.47	35	T	T	18 17 11.9	
	baz=208,slow=76,SNR=56						
H08S3	**Diego Garcia H**	30.48	34	T	T	18 17 21.8	
	baz=208,slow=76,SNR=39						
MAW	**Mawson**	33.94	175	LR	LR	17 55 52.5	
	comp=Z,219nm,20.1s,baz=353,slow=30						
TSUM	**Tsumeb**	36.84	284	LR	LR	17 59 05.8	
	comp=Z,178nm,21.6s,baz=136,slow=33						
MBAR	**Mbarara**	40.57	320	LR	LR	18 03 00.0	
	comp=Z,338nm,18.1s,baz=146,slow=36						
ATD	**Arta Tunnel**	46.86	343	LR	LR	18 05 22.7	
	comp=Z,4.6nm,19.4s,baz=133,slow=34						
H01W2	**Cape Leeuwin H**	47.65	108	T	T	18 38 51.2	
	baz=252,slow=76						
H01W3	**Cape Leeuwin H**	47.65	108	T	T	18 38 50.3	
	baz=252,slow=76						
H01W1	**Cape Leeuwin H**	47.66	108	T	T	18 38 53.9	
	baz=252,slow=76						
SNAA	**Sanae**	48.31	201	P	**P**	17 47 34.8	-1.5
	1.5nm,1.0s,baz=135,slow=6.4,SNR=5.2						
SNAA				LR	LR	18 02 35.5	
	comp=Z,78nm,22.0s,baz=66,slow=30						
	1.5nm,1.0s						
SNAA	**Sanae**	48.31	201	IAmb	IAmb	17 47 42.8	
	comp=Z,3.6nm,1.1s						
QSPA	**South Pole Qui**	56.21	180	P	**P**	17 48 36.3	+1.1
	comp=Z,4.2nm,0.8s,baz=246,slow=3.1,SNR=12						
QSPA	**South Pole Qui**	56.21	180	P	**P**	17 48 37.0	+1.8
QSPA				IAmb	IAmb	17 48 46.3	
	comp=Z,5.4nm,0.8s						
VNDA	**Vanda**	60.50	166	P	**P**	17 49 03.8	-1.1
	comp=Z,0.6nm,0.8s,baz=274,slow=15,SNR=1.3						
	comp=Z,0.6nm,0.8s						
VNDA	**Vanda**	60.50	166	IAmb	IAmb	17 49 16.8	
	comp=Z,9.5nm,1.5s						
FITZ	**Fitzroy Crossi**	63.77	95	P	**P**	17 49 27.0	-0.6
	comp=Z,2.7nm,0.8s,baz=203,slow=9.3,SNR=3.6						
	comp=Z,2.7nm,0.8s						
FITZ	**Fitzroy Crossi**	63.77	95	IAmb	IAmb	17 49 28.0	
	comp=Z,1.0nm,1.1s						
CM31	**Chiang Mai Arr**	66.49	45	P	**P**	17 49 45.8	+0.7
CMAR	**Chiang Mai Arr**	66.49	45	P	**P**	17 49 45.8	+0.6
	comp=Z,3.2nm,0.8s,baz=232,slow=6.8,SNR=30						
	comp=Z,3.2nm,0.8s						
CMAR	**Chiang Mai Arr**	66.49	45	P	**P**	17 49 44.9	-0.2
ASAR	**Alice Springs**	67.86	104	P	**P**	17 49 53.1	-0.9
	comp=Z,1.4nm,0.8s,baz=234,slow=6.0,SNR=17						
	comp=Z,1.4nm,0.8s						
ASF	**Jabal al Asfar**	68.12	343	LR	LR	18 16 36.2	
	comp=Z,50nm,20.2s,baz=116,slow=33						
EVN	**Everest**	68.31	30	P	**P**	17 49 57.7	+0.4
EVN				IAmb	IAmb	17 50 06.6	
	comp=Z,3.8nm,0.9s						
SHL	**Shillong**	68.49	35	P	**P**	17 49 58.5	+0.5
MMAI	**Mount Meron Ar**	69.30	342	LR	LR	18 17 17.5	
	comp=Z,100nm,20.4s,baz=100,slow=33						
KBL	**Kabul**	69.30	12	P	**P**	17 50 02.3	-0.6
KBL				IAmb	IAmb	17 50 05.3	
	comp=Z,5.0nm,0.7s						
TORD	**Torodi Ar. Bea**	69.46	303	P	**P**	17 50 04.7	+0.7
	comp=Z,1.4nm,0.8s,baz=90,slow=6.1,SNR=5.5						
	comp=Z,1.4nm,0.8s						
TORD	**Torodi Ar. Bea**	69.46	303	IAmb	IAmb	17 50 22.2	
	comp=Z,2.9nm,0.6s						
DBIC	**Dimbokro**	69.97	293	LR	LR	18 19 01.9	
	comp=Z,55nm,19.2s,baz=154,slow=34						
STKA	**Stephens Creek**	70.00	115	P	**P**	17 50 06.2	-1.0
	comp=Z,1.1nm,0.5s,baz=231,slow=6.5,SNR=3.4						
	comp=Z,1.1nm,0.5s						
STKA	**Stephens Creek**	70.00	115	IAmb	IAmb	17 50 15.6	
	comp=Z,42nm,1.4s						
WRA	**Warramunga Arr**	70.02	101	P	**P**	17 50 06.3	-1.2
	comp=Z,4.0nm,0.9s,baz=237,slow=5.0,SNR=15						
	comp=Z,4.0nm,0.9s						
WB0	**Warramunga Arr**	70.15	101	P	**P**	17 50 07.1	-1.3
WB0				IAmb	IAmb	17 50 08.9	
	comp=Z,4.9nm,0.8s						
DRK	**Karamyk**	74.60	13	P	**P**	17 50 35.6	+1.0
DRK				IAmb	IAmb	17 50 36.9	
	comp=Z,6.3nm,0.7s						
BRTR	**Keskin Array B**	76.10	343	P	**P**	17 50 43.5	+0.5
	comp=Z,1.3nm,0.9s,baz=161,slow=7.9,SNR=6.5						
	comp=Z,1.3nm,0.9s						
BRTR	**Keskin Array B**	76.10	343	P	**P**	17 50 42.9	-0.1
BR131	**Keskin Array S**	76.10	343	P	**P**	17 50 43.9	+0.9
KK31	**Karatay Array**	77.90	11	P	**P**	17 50 53.9	+1.0
KK31				IAmb	IAmb	17 51 03.0	
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	77.90	11		**P**	17 50 54.1	+1.2
AAK	**Ala-Archa**	78.17	14		**P**	17 50 56.2	+1.5
AAK				IAmb	IAmb	17 51 05.3	
	comp=Z,6.1nm,0.9s						
KEST	**Kesra**	81.73	324	P	**P**	17 51 16.4	+2.5
	comp=Z,2.8nm,0.9s,baz=198,slow=3.2,SNR=3.9						
KEST				LR	LR	18 26 48.8	
	comp=Z,108nm,21.7s,baz=315,slow=35						
	comp=Z,2.8nm,0.9s						
KEST	**Kesra**	81.73	324	IAmb	IAmb	17 51 21.9	
	comp=Z,18nm,1.4s						
LZDM	**Lanzhou Array**	82.79	37	P	**P**	17 51 20.1	+0.2
	comp=Z,1.2nm,0.3s,baz=237,slow=6.7,SNR=1.7						
	comp=Z,1.2nm,0.3s						
AB31	**Akbulak array**	82.95	3	P	**P**	17 51 20.7	+0.8
ABKAR	**Akbulak array**	82.95	3	P	**P**	17 51 20.0	+0.2
MAKZ	**Makanchi**	83.84	18	P	**P**	17 51 24.3	-0.3
MAKZ				IAmb	IAmb	17 51 34.3	
	comp=Z,6.8nm,1.1s						
MKAR	**Makanchi Array**	83.91	18	P	**P**	17 51 25.5	+0.6
	comp=Z,1.6nm,0.9s,baz=198,slow=3.6,SNR=6.7						
	comp=Z,1.6nm,0.9s						
PMG	**Port Moresby**	86.07	99	LR	LR	18 27 46.9	
	comp=Z,51nm,18.5s,baz=180,slow=34						
KURBB	**Kurchatov Arra**	86.62	14	P	**P**	17 51 39.3	+0.9
	comp=Z,4.7nm,0.2s,baz=211,slow=5.7,SNR=4.6						
KURK	**Kurchatov**	86.73	14	P	**P**	17 51 39.2	+0.4
KURK	**Kurchatov**	86.73	14	IAmb	IAmb	17 51 48.8	
	comp=Z,7.7nm,1.4s						
MDT	**Midelt**	87.28	313	LR	LR	18 32 03.8	
	comp=Z,112nm,18.9s,baz=85,slow=36						
AKASG	**Malin Array Be**	87.47	344	P	**P**	17 51 42.4	-0.1
	comp=Z,0.2nm,0.3s,baz=165,slow=3.8,SNR=4.2						
	comp=Z,0.2nm,0.3s						
AKASG	**Malin Array Be**	87.47	344	IAmb	IAmb	17 51 53.0	
	comp=Z,3.7nm,1.4s						
BVAR	**Borovoye Array**	87.58	9	P	**P**	17 51 43.1	+0.1
	comp=Z,1.9nm,0.8s,baz=160,slow=4.7,SNR=9.3						
	comp=Z,1.9nm,0.8s						
BORK	**Borovoye**	87.59	9	P	**P**	17 51 43.8	+0.7
BORK				IAmb	IAmb	17 51 53.5	
	comp=Z,4.2nm,1.1s						
VRAC	**Vranov**	89.89	336	LR	LR	18 32 45.6	
	comp=Z,261nm,21.0s,baz=64,slow=36						
DAVOX	**Davos/Dischmat**	90.32	331	LR	LR	18 36 52.4	
	comp=Z,81nm,18.1s,baz=48,slow=38						
GERES	**GERESS Array B**	90.52	334	LR	LR	18 36 26.5	
	comp=Z,133nm,18.1s,baz=48,slow=38						
PLCA	**Paso Flores**	90.65	218	P	**P**	17 51 57.3	-0.9
	comp=Z,1.2nm,0.6s,baz=180,slow=6.1,SNR=2.2						
	comp=Z,1.2nm,0.6s						
PLCA	**Paso Flores**	90.65	218	IAmb	IAmb	17 52 03.7	
	comp=Z,6.1nm,1.1s						
ZALV	**Zalesovo Beam**	91.13	17	P	**P**	17 51 57.6	-2.0
	comp=Z,0.3nm,0.3s,baz=354,slow=4.3,SNR=2.0						
SONM	**Songino Array**	93.26	32	LR	LR	18 31 51.7	
	comp=Z,94nm,19.6s,baz=207,slow=34						
ILAR	**Eielson Array**	146.26	17	PKPbc	**PKPdf**	17 58 34.1	+0.1
	comp=Z,2.8nm,0.9s,baz=319,slow=3.7,SNR=17						
YKA	**Yellowknife Ar**	150.79	351	PKPbc	**PKPbc**	17 58 45.0	-1.9
	comp=Z,2.4nm,0.8s,baz=344,slow=4.4,SNR=3.7						

IDC 28 17:54:29.4±5.9, 6°.88S×129°.46E, h201km±58km, mb3.0/1, mbtmp3.5/4, Error ellipse: s-maj=89.1km s-min=25.6km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	11.76	198	P	Pn	17 57 12.2	+0.9
	1.5nm,0.6s,baz=27,slow=13,SNR=2.1						
WRA	**Warramunga Arr**	13.83	160	P	Pn	17 57 35.3	-1.9
	0.4nm,0.3s,baz=331,slow=13,SNR=11						
WRA				S	S	17 59 58.0	-13
	0.4nm,0.4s,baz=330,slow=21,SNR=6.5						
ASAR	**Alice Springs**	17.23	166	P	P	17 58 17.2	+0.3
	0.2nm,0.4s,baz=344,slow=11,SNR=8.8						
ASAR				S	S	18 01 26.6	+0.6
	0.3nm,0.6s,baz=338,slow=24,SNR=2.5						
MKAR	**Makanchi Array**	67.83	327	P	P	18 05 05.8	-0.1
	0.5nm,0.9s,baz=132,slow=4.1,SNR=1.9						
	0.5nm,0.9s						

*UPP **28** 18:00:56.2±0.1, 67°.06N×20°.94E, h0km, ML2.2, Suspected explosion*
*IDC **28** 18:00:57.5±0.9, 67°.02N×21°.35E, h0km, mbtmp2.9/4, ML2.1/4, Error ellipse: s-maj=17.3km s-min=7.9km az=116.0*
ISC 28 18:00:56.2±0.8, 67°.06N±0°.03×20°.93E±0°.03, h0km, n24, σ 0.9 96/31, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.16	295	P	**Pg**	18 00 59.5	+0.3
DUNU				S	**Sg**	18 01 01.8	+0.6
MASU	**Masugnsbyn**	0.58	45	P	**Pg**	18 01 07.2	-0.1
MASU				S	**Sg**	18 01 14.7	0.0
ERTU	**Ertsjaerv**	0.71	135	P	**Pg**	18 01 09.6	-0.1
ERTU				S	**Sg**	18 01 19.2	+0.3
PAJU	**Pajala**	0.86	91	P	**Pg**	18 01 12.2	-0.3
HARU	**Harads**	0.90	179	P	**Pg**	18 01 13.1	-0.3
HARU				S	**Sg**	18 01 25.6	+0.6
RATU	**Laukkuluspa**	0.93	327	P	**Pg**	18 01 13.4	-0.6
KUA	**Kurravaara**	0.93	346	P	**Pg**	18 01 13.3	-0.7
SALU	**Saltoluokta**	1.00	290	P	**Pg**	18 01 14.8	-0.4
LANU	**Lannavaara**	1.08	22	P	**Pg**	18 01 16.0	-0.8
NIKU	**Nikkaluokta**	1.09	319	P	**Pg**	18 01 16.4	-0.7
KALU	**Kalix**	1.55	140	P	**Pn**	18 01 24.8	-0.1
SJUU	**Sjulsmark**	1.58	170	P	**Pn**	18 01 25.3	-0.1
HEF	**Hetta**	1.71	36	*eP*	**Pn**	18 01 27.2	0.0
KIF	**Kilpisjarvi**	1.96	359	*eP*	**Pb**	18 01 32.5	-0.1
I37NO	**I37NO**	2.21	338	I	I	18 17 05.6	
	baz=148,slow=324,SNR=0.8						
ARCES	**ARCESS Array B**	3.02	32	Pn	**Pn**	18 01 45.6	+0.5
	0.4nm,0.3s,baz=215,slow=14,SNR=52						
ARCES				Sn	**Sn**	18 02 23.1	+1.2
	0.9nm,0.3s,baz=212,slow=25,SNR=11						
	0.8nm,0.3s						
VAF	**Vilstaro**	4.10	169	*eP*	**Pn**	18 02 01.8	+1.8
KEF	**Keszu**	5.19	159	*eP*	**Pn**	18 02 16.7	+1.7
JOF	**Joensuu**	6.05	128	*eP*	**Pn**	18 02 28.1	+1.4
FINES	**FINESS Array B**	6.06	156	Pn	**Pn**	18 02 27.9	+1.0
	0.1nm,0.3s,baz=344,slow=13,SNR=9.2						
FINES				Sn	**Sn**	18 03 35.0	-1.9
	0.3nm,0.3s,baz=345,slow=22,SNR=5.8						
	1.0nm,0.6s						
RAF	**Rauma**	6.07	176	*eP*	**Pn**	18 02 27.8	+0.8
AAL	**Aland**	6.92	184	*eP*	**Pn**	18 02 39.1	+0.4
NOA	**NORSAR Array B**	7.38	220	Pn	**Pn**	18 02 45.3	+0.2
	baz=29,slow=13,SNR=1.0						
NOA				Sn	**Sn**	18 04 09.4	-0.1
	baz=213,slow=13,SNR=1.1						
	0.6nm,0.8s						
HFS	**Hagfors**	7.66	208	Pn	**Pn**	18 02 48.8	0.0
	0.1nm,0.3s,baz=23,slow=12,SNR=6.1						
HFS				Sn	**Sn**	18 04 13.4	-2.7
	0.1nm,0.3s,baz=26,slow=23,SNR=2.3						
	0.4nm,0.3s						

*IDC **28** 18:01:13.9±1.0, 67°.07N×21°.36E, h0km, mbtmp3.2/4, ML2.1/4, Error ellipse: s-maj=17.7km s-min=8.5km az=113.0*
*UPP **28** 18:01:13.4±0.1, 67°.08N×21°.01E, h0km, ML2.5, Suspected explosion*
ISC 28 18:01:13.1±0.9, 67°.07N±0°.03×21°.00E±0°.03, h0km, n13, σ 0.9 86/19, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.17	288	P	**Pg**	18 01 17.0	+0.6
	baz=121						
DUNU				S	**Sg**	18 01 19.6	+0.9
MASU	**Masugnsbyn**	0.55	45	P	**Pg**	18 01 23.6	0.0
MASU				S	**Sg**	18 01 31.2	+0.5
ERTU	**Ertsjaerv**	0.70	137	P	**Pg**	18 01 26.8	+0.3
ERTU				S	**Sg**	18 01 36.3	+0.8
PAJU	**Pajala**	0.83	92	P	**Pg**	18 01 28.9	-0.1
PAJU				S	**Sg**	18 01 40.2	+0.5
HARU	**Harads**	0.91	181	P	**Pg**	18 01 30.4	-0.1
KUA	**Kurravaara**	0.93	344	P	**Pg**	18 01 30.6	-0.1
RATU	**Laukkuluspa**	0.93	325	P	**Pg**	18 01 30.7	-0.2
SALU	**Saltoluokta**	1.02	289	P	**Pg**	18 01 32.5	-0.1
I37NO	**I37NO**	2.21	337	I	I	18 17 23.6	
	baz=148,slow=324						
ARCES	**ARCESS Array B**	2.99	32	Pn	**Pn**	18 02 01.5	-0.2
	0.5nm,0.3s,baz=212,slow=14,SNR=18						
ARCES				Sn	**Sn**	18 02 38.2	0.0
	1.6nm,0.3s,baz=210,slow=26,SNR=7.6						
	1.8nm,0.2s						
FINES	**FINESS Array B**	6.06	156	Pn	**Pn**	18 02 44.5	+0.7
	0.2nm,0.3s,baz=344,slow=12,SNR=6.1						
FINES				Sn	**Sn**	18 03 52.9	-0.9
	0.5nm,0.3s,baz=342,slow=21,SNR=7.9						
	2.2nm,0.7s						
NOA	**NORSAR Array B**	7.41	220	Pn	**Pn**	18 03 03.4	+1.0
	baz=45,slow=19,SNR=0.9						
NOA				Sn	**Sn**	18 04 24.4	-2.6
	baz=27,slow=16,SNR=1.7						
	1.0nm,0.9s						
HFS	**Hagfors**	7.68	208	Pn	**Pn**	18 03 06.3	+0.4
	0.1nm,0.3s,baz=32,slow=12,SNR=1.3						
	3.7nm,0.9s						

*SLM **28** 18:30:54.1±0.6, 36°.55N±0°.01×89°.65W±0°.02, h8km±2km, Error ellipse: s-maj=2.5km s-min=1.5km az=103.0*
NEIC 28 18:30:54.5±0.9, 36°.57N±0°.01×89°.66W±0°.02, h5km±1km, mb_Lg2.7/44, ML3.0/28, Md2.6/50(SLM), Error ellipse: s-maj=3.4km s-min=2.4km az=122.0, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARMO	**Marston**	0.04	194		Pg	18 30 55.9	+0.3
MARMO					Sg	18 30 57.4	+1.0
CATM	**Catron**	0.05	11		Pg	18 30 56.3	+0.5
CATM					Sg	18 30 58.1	+1.4
NMEM	**New Madrid Sch**	0.06	81		Pg	18 30 56.2	+0.2
NMEM					Sg	18 30 58.0	+1.0
NMMO	**New Madrid**	0.09	75		Pg	18 30 56.6	+0.2
WALK	**Watson Lake**	0.10	105		Pg	18 30 56.5	0.0
PENMO	**Penman**	0.12	168		Pg	18 30 56.7	-0.2
PENMO					Sg	18 30 58.9	+0.4
PGVM	**Portageville**	0.12	209		Pg	18 30 56.9	0.0
PARMO	**Parma**	0.12	323		Pg	18 30 57.5	+0.4
PARMO					Sg	18 31 00.1	+1.3
PARMO	**Parma**	0.12	323	IAML		18 31 00.3	
	comp=E,4μm,0.2s						
PARMO				IAML		18 31 00.5	
	comp=N,4μm,0.3s						
KEWM	**Kewanee**	0.14	22		Pg	18 30 57.7	+0.3
COKM	**Charter Oak**	0.15	339		Pg	18 30 58.0	+0.4
POBM	**Portage Bay**	0.16	181		Pg	18 30 57.4	-0.2
SJMO	**Saint John's B**	0.16	66		Pg	18 30 57.8	0.0
PPLM	**Point Pleasant**	0.17	159		Pg	18 30 57.7	-0.2
TOPM	**Tallapoosa**	0.19	258		Pg	18 30 58.3	+0.1
TOPM					Sg	18 30 58.4	-2.3
HENM	**Henderson Moun**	0.21	45		Pg	18 30 58.7	0.0
HENM					Sg	18 31 02.4	+0.8
MATM	**Matthews**	0.21	12		Pg	18 30 58.9	+0.2
MATM					Sg	18 31 02.6	+1.1
MLDM	**Malden**	0.22	286		Pg	18 30 59.1	+0.3
WADM	**Wardell**	0.23	209		Pg	18 30 58.8	-0.1
WYBT	**Wynnburg**	0.25	149		Pg	18 30 59.2	-0.2
EPRM	**East Prairie**	0.28	58		Pg	18 30 59.9	-0.1
FLPT	**Flippin**	0.31	120		Pg	18 31 00.3	-0.3
HICK	**Hickman**	0.35	94		Sg	18 31 06.0	+0.3
HICK	**Hickman**	0.35	94	Pg	Pg	18 31 00.7	-0.6
HICK				IAML		18 31 06.3	
	comp=N,2μm,0.5s						
HICK				IAML		18 31 11.4	
	comp=E,1μm,0.3s						
BRGM	**Braggadocio**	0.39	204		Sg	18 31 07.5	+0.3
MIST	**Miston**	0.41	162		Sg	18 31 08.3	+0.5
GLAT	**Glass**	0.42	134		Pg	18 31 02.0	-0.6
GLAT	**Glass**	0.42	134		Sg	18 31 08.4	+0.3
PEBM	**Pemiscott Bayo**	0.48	200		Pg	18 31 03.5	-0.3
PEBM				IAML		18 31 14.8	
	comp=N,934nm,0.6s						
LNXT	**Lenox**	0.48	164		Pg	18 31 03.2	-0.5
LNXT				IAML		18 31 10.8	
	comp=E,942nm,0.3s						
FPST	**Four Points**	0.61	164		Pg	18 31 05.8	-0.4
FMKY	**Fulgham**	0.61	80		Pg	18 31 05.7	-0.5
PBMO	**Poplar Bluff**	0.66	289		Pg	18 31 06.6	-0.5
PBMO				IAML		18 31 15.9	
	comp=N,838nm,0.3s						
GNAR	**Gosnell**	0.67	206		Pg	18 31 06.8	-0.4
GNAR				IAML		18 31 20.0	
	comp=E,813nm,0.4s						
HALT	**Halls**	0.70	158		Pg	18 31 07.0	-1.0
HALT				IAML		18 31 20.9	
	comp=E,561nm,0.6s						
CGM3	**Cape Girardeau**	0.73	0		Pg	18 31 07.6	-0.9
CGM3					Sg	18 31 17.5	-0.6
CGM3				IAML		18 31 18.0	
	comp=E,629nm,0.2s						
CGM3				IAML		18 31 18.7	
	comp=N,472nm,0.2s

	comp=Z,25nm,0.9s							
Z47A	**Carrollton**	**3.60**	**158**	IAmb_Lg			18 32 53.0	
	comp=Z,23nm,1.0s							
P46A	**Rosedale**	**3.61**	**32**	IAmb_Lg			18 32 48.7	
	comp=Z,27nm,0.9s							
MIAR	**Mount Ida**	**3.78**	**239**			Pn	18 31 53.1	-0.3
W50A	**Signal Mountai**	**3.78**	**110**	IAmb_Lg			18 32 57.0	
	comp=Z,20nm,0.8s							
T50A	**Nancy**	**3.90**	**82**	IAmb_Lg			18 33 00.3	
	comp=Z,20nm,0.9s							
P38A	**Dawn**	**4.32**	**316**			Pn	18 32 00.5	-0.4
P38A				IAmb_Lg			18 33 14.5	
	comp=Z,13nm,1.1s							
TKL	**Tuckaleechee C**	**4.85**	**99**	IAmb_Lg			18 33 31.0	
	comp=Z,16nm,0.8s							
T35A	**Sooner Cattle**	**5.51**	**276**	IAmb_Lg			18 33 50.1	
	comp=Z,17nm,0.9s							
Q51A	**Peebles**	**5.57**	**62**	IAmb_Lg			18 33 50.8	
	comp=Z,14nm,0.9s							
152A	**Waverly Hall**	**5.63**	**132**			Pn	18 32 23.4	+4.6
OK048	**Pawnee Station**	**5.87**	**271**	IAmb_Lg			18 34 14.1	
	comp=Z,14nm,0.9s							
PAULI	**Pauline**	**6.62**	**103**	IAmb_Lg			18 34 22.1	
	comp=Z,13nm,1.1s							

*INMG **28** 18:47:39.7±1.2,37.°11N×9.°39W,h23km±2km,ML1.6,Error ellipse: s-maj=5.1km s-min=3.4km az=59.0, #DIST_RANGE: REGIONAL #IPMA_REGION: NW Cabo S.Vicente*
*MDD **28** 18:47:39.4±1.1,37.°15N×9.°38W,h25km±5km,mb_Lg2.5/9, Error ellipse: s-maj=9.6km s-min=7.7km az=23.0*
*SFS **28** 18:47:39.6,37.°14N×9.°38W,h27km,ML2.6/8,ML2.1/11, MLv1.8/11*
*CNRM **28** 18:47:40.3,36.°97N×9.°21W,h34km,ML1.9*
*IGIL **28** 18:47:40.8,37.°10N×9.°38W,h31km,ML1.7*
ISC 28 18:47:37.5±1.9,37.°09N±0.°05×9.°30W±0.°07,h18km±4km, n41,σ0°84/73,1C,Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.38**	**83**	Pg	**Pn**	**18 47 48.8**	**+0.6**
PFVI				Sg	**Sn**	**18 47 55.2**	**+0.2**
PFVI	**Vila Bisbo**	**0.38**	**83**	⇑*e*Pg	**Pn**	**18 47 48.8**	**+0.6**
PFVI				*e*Sg	**Sn**	**18 47 55.2**	**+0.2**
PFVI				*i* IAML		18 47 55.7	
PFVI				*i* IAML		18 47 55.9	
PFVI				*i* IAML		18 47 56.3	
PFVI	**Vila Bisbo**	**0.38**	**83**	P	**Pn**	**18 47 48.5**	**+0.4**
PFVI	**Vila Bisbo**	**0.38**	**83**	S	**Sn**	**18 47 55.0**	**0.0**
MORF	**Marmelete**	**0.56**	**67**	*e*P	**Pn**	**18 47 51.3**	**+0.6**
MORF				*e*S	**Sn**	**18 47 59.0**	**-0.4**
MORF				IAML		18 48 01.0	
	comp=E,26nm,0.1s						
MORF	**Marmelete**	**0.56**	**67**	*e*Pg	**Pn**	**18 47 51.3**	**+0.6**
MORF				*e*Sg	**Sn**	**18 47 59.9**	**+0.4**
MORF				*i* IAML		18 48 00.0	
MORF				*i* IAML		18 48 00.1	
MORF				*i* IAML		18 48 01.9	
PTEO	**Sao Teotonio**	**0.65**	**45**	*e*Pg	**Pn**	**18 47 52.4**	**+0.6**
PTEO				*e*Sg	**Sn**	**18 48 02.1**	**+0.5**
PTEO				*i* IAML		18 48 02.9	
PTEO				*i* IAML		18 48 10.1	
PBDV	**Barranco-do-Ve**	**1.11**	**81**	Pn	**Pg**	**18 47 59.1**	**+0.1**
PBDV				Sn	**Sg**	**18 48 12.8**	**-0.7**
PBDV	**Barranco-do-Ve**	**1.11**	**81**	*e*S	**Sn**	**18 48 13.3**	**+0.4**
PBDV				*i* IAML		18 48 13.3	
PBDV				*i* IAML		18 48 15.0	
PBDV				*i* IAML		18 48 19.2	
MESJ	**Messejana**	**1.14**	**49**	*e*P	**Pn**	**18 47 59.1**	**+0.5**
MESJ	**Messejana**	**1.14**	**49**	*e*P	**Pn**	**18 47 59.1**	**+0.5**
MESJ				*e*S	**Sb**	**18 48 14.1**	**+0.9**
MESJ				*i* IAML		18 48 16.3	
MESJ				*i* IAML		18 48 20.8	
MESJ				*i* IAML		18 48 22.2	
PCVE	**Castro Verde**	**1.14**	**61**	Pn	**Pg**	**18 47 59.4**	**-0.3**
PCVE				Sn	**Sb**	**18 48 13.1**	**-0.1**
PCVE	**Castro Verde**	**1.14**	**61**	*e*P	**Pg**	**18 47 59.4**	**-0.3**
PCVE				*e*S	**Sg**	**18 48 14.6**	**-0.1**
PCVE				*i* IAML		18 48 15.9	
PCVE				*i* IAML		18 48 16.0	
PCVE				*i* IAML		18 48 16.3	
PVAQ	**Vaqueiros**	**1.30**	**75**	*e*P	**Pb**	**18 48 01.8**	**+0.4**
PVAQ				*e*S	**Sb**	**18 48 17.6**	**-0.2**
PVAQ				*i* IAML		18 48 19.9	
PVAQ				*i* IAML		18 48 22.9	
PVAQ				*i* IAML		18 48 23.9	
PVAQ	**Vaqueiros**	**1.30**	**75**	P	**Pb**	**18 48 01.7**	**+0.2**
EGRO	**El Granado**	**1.52**	**72**	Pn	**Pb**	**18 48 04.7**	**-0.4**
EGRO				Sn	**Sn**	**18 48 23.6**	**0.0**
EGRO	**El Granado**	**1.52**	**72**	Pn	**Pb**	**18 48 05.0**	**0.1**
EGRO				Sn	**Sn**	**18 48 23.2**	**+0.2**
EGRO				*i* IVmb_Lg		18 48 28.8	
MOE	**Montemor**	**1.62**	**27**	*e*P	**Pn**	**18 48 05.7**	**+0.5**
MOE				*e*S	**Sn**	**18 48 25.1**	**-0.5**
MOE				*i* IAML		18 48 25.9	
MOE				*i* IAML		18 48 28.5	
MOE				*i* IAML		18 48 39.0	
EVO	**Evora**	**1.77**	**35**	Pn	**Pn**	**18 48 07.4**	**+0.2**
EVO				Sn	**Sn**	**18 48 28.1**	**-1.0**
EVO	**Evora**	**1.77**	**35**	*e*Pn	**Pn**	**18 48 07.4**	**+0.2**
EVO				*e*Sn	**Sn**	**18 48 28.3**	**-0.9**
EVO				*i* IAML		18 48 28.5	
EVO				*i* IAML		18 48 28.9	
EVO				*i* IAML		18 48 34.2	
PMAFR	**Mafra**	**1.87**	**0**	*e*Sn	**Sn**	**18 48 30.4**	**-1.2**
PMAFR				*i* IAML		18 48 31.2	
PMAFR				*i* IAML		18 48 31.8	
PMAFR				*i* IAML		18 48 40.0	
PARRA	**Arraiolos**	**1.99**	**30**	*e*Pn	**Pb**	**18 48 10.3**	**+1.4**
PARRA				*e*Sn	**Sg**	**18 48 34.4**	**+0.9**
PARRA				*i* IAML		18 48 35.3	
PARRA				*i* IAML		18 48 35.7	
PARRA				*i* IAML		18 48 48.1	
PBAR	**Barrancos**	**2.10**	**58**	Pn	**Pn**	**18 48 12.2**	**+0.5**
PBAR				Sn	**Sn**	**18 48 36.2**	**-1.2**
PBAR	**Barrancos**	**2.10**	**58**	*e*Pn	**Pn**	**18 48 12.3**	**+0.5**
PBAR				*e*Sn	**Sn**	**18 48 36.8**	**-0.6**
PBAR				*i* IAML		18 48 38.9	
PBAR				*i* IAML		18 48 39.3	
PBAR				*i* IAML		18 48 39.3	
PMTG	**Montargil**	**2.15**	**23**	*e*Pn	**Pn**	**18 48 12.8**	**+0.4**
PMTG				*e*Sn	**Sn**	**18 48 37.4**	**-1.3**
PMTG				*i* IAML		18 48 38.8	
PMTG				*i* IAML		18 48 39.1	
PMTG				*i* IAML		18 48 39.8	
EMIN	**Mina Concepcio**	**2.20**	**71**	Pn	**Pn**	**18 48 14.3**	**+1.2**
EMIN				Sn	**Sn**	**18 48 40.2**	**+0.3**
EMIN	**Mina Concepcio**	**2.20**	**71**	Pn	**Pn**	**18 48 14.0**	**+0.9**
EMIN				Sn	**Sn**	**18 48 39.7**	**-0.2**
EMIN				*i* IVmb_Lg		18 48 43.8	
EBAD	**Badajoz**	**2.46**	**47**	Pn	**Pn**	**18 48 16.6**	**-0.1**
EBAD				Sn	**Sn**	**18 48 46.0**	**-0.3**
EBAD	**Badajoz**	**2.46**	**47**	Pn	**Pn**	**18 48 16.6**	**-0.1**
EBAD				Sn	**Sn**	**18 48 45.7**	**-0.5**
EBAD				*i* IVmb_Lg		18 48 51.4	
ESPR	**Espera**	**2.77**	**93**	Sn	**Sn**	**18 48 53.9**	**+0.1**
ESPR	**Espera**	**2.77**	**93**	Pn	**Pn**	**18 48 21.8**	**+0.8**
ESPR				Sn	**Sn**	**18 48 54.2**	**+0.4**
ESPR				*i* IVmb_Lg		18 48 55.5	
PMRV	**Marv??o**	**2.78**	**32**	*e*Pn	**Pn**	**18 48 21.2**	**+0.1**
PMRV				*e*Sn	**Sn**	**18 48 52.9**	**-1.3**
PMRV				*i* IAML		18 48 54.5	
PMRV				*i* IAML		18 48 54.8	
PMRV				*i* IAML		18 48 55.8	
ECAB	**El Cabril**	**3.24**	**71**	Pn	**Pn**	**18 48 28.5**	**+1.0**
ECAB				Sn	**Sn**	**18 49 04.3**	**-1.2**
ECAB	**El Cabril**	**3.24**	**71**	Pn	**Pn**	**18 48 28.4**	**+1.0**
ECAB				Sn	**Sn**	**18 49 04.7**	**-0.8**
ECAB				*i* IVmb_Lg		18 49 06.0	
EPLA	**Plasencia**	**3.90**	**39**	Pn	**Pn**	**18 48 36.9**	**+0.4**
EPLA				*i* IVmb_Lg		18 49 16.4	
EPLA				Sn	**Sn**	**18 49 19.6**	**-2.2**
EADA	**Adamuz**	**3.90**	**73**	Pn	**Pn**	**18 48 37.3**	**+0.7**
EADA				Sn	**Sn**	**18 49 21.1**	**-0.8**
EADA	**Adamuz**	**3.90**	**73**	Pn	**Pn**	**18 48 37.2**	**+0.7**
EADA				Sn	**Sn**	**18 49 20.8**	**-1.2**
EADA				*i* IVmb_Lg		18 49 22.8	
PAB	**San Pablo**	**4.61**	**56**	Pn	**Pn**	**18 48 46.3**	**0.0**
PAB				Sn	**Sn**	**18 49 36.7**	**-2.6**
PAB				*i* IVmb_Lg		18 49 47.1	
PSIM	**Granatula de C**	**4.71**	**67**	Pn	**Pn**	**18 48 48.6**	**+0.9**
PSIM				Sn	**Sn**	**18 49 39.5**	**-2.4**
MD31	**MD31**	**5.62**	**137**	P	**Pn**	**18 48 59.5**	**-0.7**
MDT	**Midelt**	**5.75**	**136**	P	**Pn**	**18 49 01.6**	**-0.4**

*NNC **28** 19:03:54.9±0.4,42.°76N×79.°00E,h0km,mb3.4,mpv3.4, Error ellipse: s-maj=3.3km s-min=1.5km az=162.0*
*KRNET **28** 19:03:54.7±0.1,42.°60N×79.°33E,h35km,mb2.8*
*SOME **28** 19:03:55.4,42.°77N×78.°92E,h5km*
ISC 28 19:03:55.3±1.4,42.°75N±0.°04×78.°94E±0.°04,h2km±11km, n33,σ1°11/57,16C-4D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.40**	**9**	P	**Pg**	**19 04 03.0**	**-0.1**
	23nm,0.1s						
UZB				S	**Sg**	**19 04 08.7**	**+0.3**
	158nm,0.1s						
UZB	**Uzynbulak**	**0.40**	**9**	*e*P	**Pg**	**19 04 03.0**	**-0.1**
	23nm,0.1s						
UZB				*e*S	**Sg**	**19 04 08.7**	**+0.3**
	158nm,0.1s						
PRZ	**Przheval'sk**	**0.48**	**236**	⇑*i*P	**Pn**	**19 04 09.1**	**-0.3**
PRZ				⇑*i*S	**Sb**	**19 04 20.0**	**+5.8**
SATY	**Saty**	**0.50**	**308**	P	**Pg**	**19 04 05.3**	**+0.3**
	19nm,0.1s						
SATY				S	**Sg**	**19 04 12.2**	**+0.8**
	46nm,0.1s						
SHLS	**Shalkode**	**0.56**	**43**	P	**Pn**	**19 04 10.5**	**+0.1**
	10nm,0.1s						
SHLS				S	**Sn**	**19 04 21.5**	**+1.2**
	38nm,0.1s						
SHLS	**Shalkode**	**0.56**	**43**	*e*P	**Pn**	**19 04 10.5**	**+0.1**
	10nm,0.1s						
SHLS				*e*S	**Sn**	**19 04 21.5**	**+1.2**
	38nm,0.1s						
PDGK	**Podgornoye**	**0.70**	**35**	⇑P	**Pg**	**19 04 08.4**	**-0.5**
	2.3nm,0.2s						
PDGK				⇑S	**Sg**	**19 04 17.1**	**-0.9**
	8.0nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.32**	**220**	⇑*i*P	**Pn**	**19 04 19.3**	**-1.9**
TARG				⇑*i*S	**Sb**	**19 04 37.3**	**-1.4**
BLB	**Baldybastay**	**1.39**	**346**	P	**Pn**	**19 04 21.2**	**-0.6**
	40nm,0.1s						
BLB				S	**Sb**	**19 04 39.3**	**-0.9**
	44nm,0.2s						
KOTS	**Kotyrbulak**	**1.43**	**290**	P	**Pn**	**19 04 22.3**	**-0.1**
	16nm,0.2s						
KOTS				S	**Sg**	**19 04 41.6**	**+0.5**
	22nm,0.2s						
KOTS	**Kotyrbulak**	**1.43**	**290**	*e*P	**Pn**	**19 04 22.3**	**-0.1**
	16nm,0.2s						
KOTS				*e*S	**Sg**	**19 04 41.6**	**+0.5**
	22nm,0.2s						
KDJ	**Kajisay**	**1.44**	**245**	⇑*i*P	**Pn**	**19 04 22.5**	**-0.1**
KDJ				⇑*i*S	**Sg**	**19 04 42.4**	**+0.7**
MDOK	**Medeo**	**1.45**	**287**	Pg	**Pb**	**19 04 22.7**	**-0.4**
	5.2nm,0.1s						
MDOK				Lg	Lg	19 04 42.1	
	20nm,0.4s						
KNDC	**Almaty**	**1.52**	**288**	⇑P	**Pn**	**19 04 23.1**	**-0.5**
	14nm,0.7s						
KNDC				⇑S	**Sg**	**19 04 44.8**	**+0.5**
	24nm,0.6s						
KNOS	**Konyrlen**	**1.62**	**6**	P	**Pn**	**19 04 25.2**	**+0.2**
	4.4nm,0.1s						
KNOS				S	**Sb**	**19 04 46.6**	**-0.3**
	42nm,0.1s						
ARXS	**Arharly**	**1.67**	**331**	P	**Pb**	**19 04 26.9**	**0.0**
ARXS				S	**Sg**	**19 04 49.1**	**0.0**
ARXS	**Arharly**	**1.67**	**331**	*e*P	**Pb**	**19 04 26.9**	**0.0**
ARXS				*e*S	**Sg**	**19 04 49.1**	**0.0**
MTBS	**Maitube**	**1.88**	**282**	P	**Pb**	**19 04 30.1**	**-0.3**
	5.3nm,0.3s						
MTBS				S	**Sg**	**19 04 55.3**	**-0.5**
	13nm,0.5s						
MTBS	**Maitube**	**1.88**	**282**	*e*P	**Pb**	**19 04 30.1**	**-0.3**
	5.3nm,0.3s						
MTBS				*e*S	**Sg**	**19 04 55.3**	**-0.5**
	13nm,0.5s						
KST	**Kastek**	**2.21**	**279**	Pg	**Pb**	**19 04 35.8**	**-0.2**
	5.9nm,0.3s						
KST				Lg	Lg	19 05 05.4	
	18nm,0.5s						
KST	**Kastek**	**2.21**	**279**	*e*P	**Pb**	**19 04 35.8**	**-0.2**
	5.9nm,0.3s						
KST				*e*S	**Sg**	**19 05 05.4**	**-0.9**
	18nm,0.5s						
BOOM	**Boomskoye usch**	**2.23**	**264**	⇓*i*P	**Pn**	**19 04 34.4**	**+1.0**
BOOM				⇓*i*S	**Sb**	**19 05 03.2**	**-1.3**
TDK	**Taldyqorghan**	**2.28**	**350**	Pg	**Pb**	**19 04 36.4**	**-0.8**
	9.0nm,0.1s						
TDK				Lg	Lg	19 05 06.4	
	57nm,0.3s						
TDK	**Taldyqorghan**	**2.28**	**350**	*e*P	**Pb**	**19 04 36.4**	**-0.8**
	9.0nm,0.1s						
TDK				*e*S	**Sb**	**19 05 06.4**	**+0.5**
	57nm,0.3s						
DGS	**Degeres**	**2.38**	**283**	Pg	**Pb**	**19 04 38.8**	**0.0**
	6.4nm,0.3s						
DGS				Lg	Lg	19 05 10.4	
	32nm,0.5s						
DGS	**Degeres**	**2.38**	**283**	*e*P	**Pb**	**19 04 38.8**	**0.0**
	6.4nm,0.3s						
DGS				*e*S	**Sg**	**19 05 10.4**	**-1.3**
	32nm,0.5s						
KAPS	**Kapalarasan**	**2.55**	**7**	Pg	**Pb**	**19 04 41.7**	**-0.1**
KAPS				Lg	Lg	19 05 14.6	
KRBS	**Karabastau**	**2.57**	**293**	Pg	**Pb**	**19 04 40.8**	**-1.3**
	3.8nm,0.2s						
KRBS				Lg	Lg	19 05 13.8	
	10nm,0.3s						
KRBS	**Karabastau**	**2.57**	**293**	*e*P	**Pb**	**19 04 41.9**	**-0.3**
KRBS				*e*S	**Sb**	**19 05 14.8**	**+0.7**
JNKS	**Jany-Kuch**	**2.98**	**237**	⇑*e*P	**Pn**	**19 04 43.1**	**-0.7**
JNKS				⇑*e*S	**Sn**	**19 05 18.5**	**-1.7**
AAK	**Ala-Archa**	**3.28**	**270**	⇑Pg	**Pb**	**19 04 55.8**	**+1.5**
	3.1nm,0.9s						
AAK				⇓Lg	Lg	19 05 37.6	
	11nm,1.3s						
MK31	**Makanchi Array**	**4.69**	**29**	Pn	**Pn**	**19 05 08.4**	**+1.3**
	0.2nm,0.3s,baz=212,slow=14,SNR=16						
MK31				⇑Sn	**Sn**	**19 06 01.2**	**-1.0**
	0.7nm,0.5s						
MK31				⇑Lg	Lg	19 06 22.2	
	0.6nm,0.4s						
KK31	**Karatay Array**	**6.20**	**276**	⇓Pg	Pg	19 05 49.4	-4.7
	3.3nm,1.1s,baz=88,slow=15,SNR=4.3						
KK31				⇑Lg	Lg	19 07 11.5	
	1.4nm,0.8s,baz=92,slow=29,SNR=4.4						

*BEO **28** 19:22:30.6±0.5,41.°40N×19.°49E,h7km±2km,ML2.7/13 TIR **28** 19:22:32.7,41.°51N×19.°53E,h13km,Ml3.0/3 PDG **28** 19:22:34.5±0.1,41.°58N×19.°48E,h8km,MD2.9/1, ML2.8/13,Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
ISC 28 19:22:32.2±1.0,41.°51N±0.°02×19.°48E±0.°03,h9km±9km, n57,σ0°78/95,13C-14D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**119**	Pg	**Pg**	**19 22 37.8**	**-0.9**
TIR				AML	AML	19 22 43.6	
	8.4nm,0.3s						
TIR				Sg	**Sg**	**19 22 43.7**	**+0.6**
ULC	**Ulcinj**	**0.49**	**339**	⇓*i*Pg	**Pg**	**19 22 41.9**	**+0.2**
ULC				*e*Sg	**Sg**	**19 22 48.9**	**+0.8**
SDA	**Shkodra**	**0.54**	**1**	Pg	**Pg**	**19 22 42.9**	**+0.2**
SDA				Sg	**Sb**	**19 22 51.5**	**-0.2**
DRME	**Dracevica, Mon**	**0.71**	**342**	*e*Pg	**Pg**	**19 22 44.0**	**-1.9**
DRME				*e*Sg	**Sb**	**19 22 56.2**	**-0.5**
DRME	**Dracevica, Mon**	**0.71**	**342**	⇓*i*Pg	**Pg**	**19 22 45.8**	**-0.1**
DRME				*i* Sg	**Sg**	**19 22 55.7**	**+0.5**
PHP	**Peshkopia**	**0.74**	**76**	Pn	**Pg**	**19 22 46.2**	**-0.2**
PHP				Sn	**Sg**	**19 22 56.5**	**+0.4**
PHP				AML	AML	19 23 01.9	
	2.6nm,0.6s						
BUM	**Brajici-Budva**	**0.91**	**331**	⇓*i*Pg	**Pg**	**19 22 49.3**	**-0.3**
BUM				*i* Sg	**Sb**	**19 23 02.4**	**+0.1**
PDG	**Podgorica**	**0.94**	**350**	⇓P	**Pg**	**19 22 47.8**	**-2.4**
PDG	**Podgorica**	**0.94**	**350**	*e*Pg	**Pg**	**19 22 48.5**	**-1.7**
PDG				*e*Sg	**Sb**	**19 23 04.0**	**+0.9**
PDG	**Podgorica**	**0.94**	**350**	⇓*i*Pg	**Pg**	**19 22 49.8**	**-0.4**
PDG				*i* Sg	**Sb**	**19 23 03.1**	**0.0**
VLO	**Vlora**	**1.04**	**179**	Pn	**Pb**	**19 22 52.1**	**-0.2**
VLO				Sn	**Sn**	**19 23 07.1**	**-0.5**
VLO				AML	AML	19 23 15.4	
	3.8nm,0.4s						
CEME	**Cevo**	**1.12**	**338**	⇑*i*Pg	**Pg**	**19 22 53.3**	**-0.4**
CEME				*i* Sg	**Sn**	**19 23 09.3**	**-0.4**
PVY	**Plav**	**1.14**	**18**	*e*Pg	**Pg**	**19 22 53.1**	**-1.0**
PVY				*e*Sg	**Sn**	**19 23 11.6**	**+1.3**
PVY	**Plav**	**1.14**	**18**	*e*Pg	**Pg**	**19 22 53.5**	**-0.6**
PVY				*i* Sg	**Sb**	**19 23 09.7**	**+0.5**
HCY	**Herceg Novi**	**1.19**	**322**	⇓*i*Pg	**Pb**	**19 22 54.9**	**-0.1**
HCY				*i* Sg	**Sn**	**19 23 12.6**	**+1.2**
NKME	**Niksic**	**1.32**	**343**	⇓*i*Pg	**Pn**	**19 22 56.9**	**+0.1**
NKME				*i* Sg	**Sg**	**19 23 15.1**	**+0.5**
KBN	**Korca**	**1.32**	**131**	Pn	**Pb**	**19 22 57.0**	**-0.3**
KBN				Sn	**Sg**	**19 23 15.2**	**+0.4**
KOME	**Kolasin**	**1.34**	**1**	*e*Pg	**Pb**	**19 22 57.5**	**-0.1**
KOME				*e*Sg	**Sg**	**19 23 17.2**	**+1.9**
KOME	**Kolasin**	**1.34**	**1**	⇑*i*Pg	**Pn**	**19 22 56.9**	**-0.3**
KOME				*e*Sg	**Sg**	**19 23 16.0**	**+0.7**
BEY	**Berane**	**1.40**	**13**	*e*Pg	**Pn**	**19 22 57.6**	**-0.3**
BEY				*e*Sg	**Sg**	**19 23 18.9**	**+1.8**
IVA	**Berane**	**1.40**	**13**	⇓*i*Pg	**Pn**	**19 22 58.0**	**+0.1**
IVA				*i* Sg	**Sg**	**19 23 18.1**	**+1.0**
TREB	**Trebinje**	**1.47**	**325**	*e*Pg	**Pn**	**19 22 59.0**	**+0.1**
TREB				*e*Sg	**Sg**	**19 23 20.3**	**+0.8**
BRY	**Bratogost**	**1.56**	**334**	⇓*i*Pg	**Pb**	**19 23 00.9**	**-0.4**
BRY				*i* Sg	**Sg**	**19 23 24.1**	**+1.8**
UPM	**Unac-Piva**	**1.75**	**346**	⇓*i*Pn	**Pb**	**19 23 04.1**	**-0.4**
UPM				*i* Sn	**Sg**	**19 23 28.3**	**0.0**
SJES	**Sjenica**	**1.79**	**12**	*e*Pn	**Pb**	**19 23 05.1**	**-0.1**
SJES				*e*Sn	**Sb**	**19 23 28.2**	**+0.4**
PLE	**Pljevlja**	**1.82**	**358**	*e*Pg	**Pb**	**19 23 05.5**	**-0.2**
PLE				*e*Sg	**Sg**	**19 23 31.4**	**+0.7**
PLE	**Pljevlja**	**1.82**	**358**	⇓*i*Pn	**Pb**	**19 23 05.6**	**-0.2**
PLE				*i* Sn	**Sg**	**19 23 30.2**	**-0.5**
NOCI	**Noci**	**1.96**	**249**	P	**Pg**	**19 23 09.0**	**-0.8**
SELS	**Selova**	**2.10**	**35**	*e*Pn	**Pn**	**19 23 07.8**	**+0.3**
SELS				*e*Sn	**Sn**	**19 23 34.4**	**+0.7**
RUDO	**Rudo**	**2.11**	**358**	*e*Pn	**Pn**	**19 23 06.8**	**-0.9**
RUDO				*e*Sn	**Sb**	**19 23 36.3**	**-0.6**
IVAS	**Ivanjica**	**2.12**	**13**	*e*Pn	**Pn**	**19 23 08.3**	**+0.4**
IVAS				*e*Sn	**Sb**	**19 23 36.8**	**-0.6**
BARS	**Barje**	**2.17**	**52**	*e*Pn	**Pn**	**19 23 08.2**	**-0.3**
BARS				*e*Sn	**Sn**	**19 23 35.2**	**-0.4**
MATE	**Matera**	**2.27**	**249**	⇓P	**Pn**	**19 23 10.8**	**+1.0**
GOCS	**Kraljevo Serbi**	**2.29**	**26**	*e*Pn	**Pn**	**19 23 10.5**	**+0.2**
GOCS				*e*Sn	**Sn**	**19 23 38.5**	**-0.3**
BBLS	**Lazi&#263i**	**2.36**	**359**	*e*Pn	**Pn**	**19 23 11.0**	**-0.1**
BBLS				*e*Sn	**Sb**	**19 23 42.7**	**-1.4**
BOSS	**Bosilegrad**	**2.44**	**65**	*e*Pn	**Pn**	**19 23 12.4**	**+0.1**
BOSS				*e*Sn	**Sn**	**19 23 41.8**	**-0.5**
GRUS	**Gruza**	**2.55**	**21**	*e*Pn	**Pn**	**19 23 14.3**	**+0.6**
BOVS	**Bovan**	**2.69**	**37**	⇑P	**Pn**	**19 23 15.8**	**+0.2**
BOVS	**Bovan**	**2.69**	**37**	*e*Pn	**Pn**	**19 23 15.6**	**0.0**
BOVS				*e*Sn	**Sn**	**19 23 48.1**	**-0.1**
TRUS	**Trudelj**	**2.80**	**14**	*e*Pn	**Pn**	**19 23 17.9**	**+0.8**
ZAPS	**Zavoj**	**2.93**	**52**	*e*Pn	**Pn**	**19 23 19.4**	**+0.5**
ZAPS				*e*Sn	**Sn**	**19 23 55.3**	**+1.1**
TEKS	**Tekeris**	**3.04**	**1**	*e*Pn	**Pn**	**19 23 19.1**	**-1.4**
ZAGS	**Zajecar**	**3.07**	**40**	*e*Pn	**Pn**	**19 23 20.9**	**+0.1**
ZAGS				*e*Sn	**Sn**	**19 23 56.2**	**-1.5**
TIP	**Timpagrande**	**3.12**	**223**	⇑P	**Pn**	**19 23 22.2**	**+0.6**
BORS2	**Bor- Borsko je**	**3.18**	**35**	*e*Pn	**Pn**	**19 23 22.2**	**-0.3**
BORS2				*e*Sn	**Sn**	**19 24 00.9**	**+0.3**
KUBS	**Kucevo**	**3.32**	**28**	*e*Pn	**Pn**	**19 23 23.4**	**-0.9**
KUBS				*e*Sn	**Sn**	**19 24 03.6**	**-0.3**
BLY	**Banja Luka**	**3.65**	**333**	⇓P	**Pn**	**19 23 28.2**	**-0.6**
MDVR	**Moldovita**	**3.66**	**26**	⇑P	**Pn**	**19 23 28.9**	**-0.1**
HERR	**Herculane**	**4.00**	**31**	⇑P	**Pn**	**19 23 33.7**	**+0.1**
BZS	**Buzias**	**4.39**	**20**	⇑P	**Pn**	**19 23 39.3**	**+0.3**
GZR	**Gura Zlata**	**4.56**	**31**	⇓P	**Pn**	**19 23 41.3**	**-0.2**
ELND	**Elena**	**4.96**	**71**	⇑P	**Pn**	**19 23 48.0**	**+1.2**
ARR	**Arges**	**5.38**	**42**	⇑P	**Pn**	**19 23 52.9**	**+0.3**
VOIR		**5.64**	**44**	⇑P	**Pn**	**19 23 56.6**	**+0.4**
MLR	**Muntele Rosu**	**6.16**	**48**	⇑P	**Pn**	**19 24 03.7**	**+0.3**
PLOR	**Plostina**	**6.77**	**48**	⇑P	**Pn**	**19 24 13.1**	**+1.4**
VRI	**Vrincioaia**	**6.82**	**48**	⇑P	**Pn**	**19 24 13.4**	**+1.0**

*DJA **28** 19:39:02.6±0.2,7.°S±4.°×107.°9E±.°,h10km,M3.4/16, MLv3.4/16*
*IDC **28** 19:39:16.1±2.8,8.°85S×110.°16E,h0km,mb3.5/4

UPM	**Unac-Piva**	**1.85**	**345**	*e*Pn		**Pn**	**20 27 11.3**	**+0.7**
UPM				*e*Sn		**Sb**	**20 27 36.6**	**+0.6**
SJES	**Sjenica**	**1.86**	**9**	*e*Pg		**Pn**	**20 27 12.1**	**+1.3**
SJES				*e*Sg		**Sb**	**20 27 36.4**	**0.0**
PLE	**Pljevlja**	**1.91**	**356**	*e*Pg		**Pn**	**20 27 12.8**	**+1.3**
PLE				*e*Sg		**Sb**	**20 27 38.6**	**+0.8**
PLE	**Pljevlja**	**1.91**	**356**	⇓*i*Pn		**Pn**	**20 27 12.9**	**+1.4**
PLE				*e*Sn		**Sb**	**20 27 38.6**	**+0.8**
SELS	**Selova**	**2.13**	**32**	*e*Pn		**Pn**	**20 27 14.9**	**+0.4**
SELS				*e*Sn		**Sn**	**20 27 41.7**	**+0.1**
BARS	**Barje**	**2.18**	**49**	*e*Pn		**Pn**	**20 27 16.2**	**+1.2**
BARS				*e*Sn		**Sn**	**20 27 42.3**	**-0.3**
IVAS	**Ivanjica**	**2.20**	**11**	*e*Pn		**Pn**	**20 27 15.3**	**0.0**
IVAS				*e*Sn		**Sn**	**20 27 43.0**	**-0.2**
RUDO	**Rudo**	**2.20**	**356**	*e*Pn		**Pn**	**20 27 15.8**	**+0.5**
RUDO				*e*Sn		**Sn**	**20 27 44.3**	**+1.1**
GOCS	**Kraljevo Serbi**	**2.35**	**24**	*e*Pn		**Pn**	**20 27 18.3**	**+0.8**
GOCS				*e*Sn		**Sn**	**20 27 47.1**	**+0.1**
BOSS	**Bosilegrad**	**2.42**	**63**	*e*Pn		**Pn**	**20 27 19.5**	**+1.1**
BOSS				*e*Sn		**Sn**	**20 27 48.8**	**+0.1**
BBLS	**Lazi&#263i**	**2.45**	**357**	*e*Pn		**Pn**	**20 27 20.7**	**+1.9**
BBLS				*e*Sn		**Sb**	**20 27 52.1**	**-1.0**
GRUS	**Gruza**	**2.61**	**19**	*e*Pn		**Pn**	**20 27 20.6**	**-0.3**
BOVS	**Bovan**	**2.72**	**35**	⇑*i*P		**Pn**	**20 27 22.9**	**+0.4**
BOVS				⇑*i*S		**Sn**	**20 27 54.9**	**-1.1**
BOVS	**Bovan**	**2.72**	**35**	*e*Pn		**Pn**	**20 27 22.8**	**+0.4**
BOVS				*e*Sn		**Sn**	**20 27 54.4**	**-1.6**
TRUS	**Trudelj**	**2.87**	**12**	*e*Pn		**Pn**	**20 27 25.9**	**+1.4**
ZAPS	**Zavoj**	**2.93**	**50**	*e*Pn		**Pn**	**20 27 27.4**	**+2.0**
ZAPS				*e*Sn		**Sn**	**20 28 01.2**	**-0.1**
ZAGS	**Zajecar**	**3.10**	**39**	*e*Pn		**Pn**	**20 27 29.0**	**+1.4**
ZAGS				*e*Sn		**Sn**	**20 28 03.6**	**-1.6**
TIP	**Timpagrande**	**3.10**	**225**	⇓P		**Pn**	**20 27 28.2**	**+0.4**
TEKS	**Tekeris**	**3.13**	**360**	*e*Pn		**Pn**	**20 27 28.9**	**+0.8**
TEKS				*e*Sn		**Sn**	**20 28 07.5**	**+1.5**
BLKB	**Belogradchik**	**3.18**	**45**	⇓S		**Sn**	**20 28 07.9**	**+0.4**
BORS2	**Bor- Borsko je**	**3.22**	**33**	*e*Pn		**Pn**	**20 27 29.3**	**-0.1**
BORS2				*e*Sn		**Sn**	**20 28 08.1**	**-0.3**
KUBS	**Kucevo**	**3.37**	**27**	*e*Pn		**Pn**	**20 27 31.3**	**-0.1**
KUBS				*e*Sn		**Sn**	**20 28 10.7**	**-1.3**
MDVR	**Moldovita**	**3.71**	**24**	⇑*i*P		**Pn**	**20 27 36.2**	**+0.1**
MDVR				⇑*i*S		**Sn**	**20 28 18.1**	**-2.3**
HERR	**Herculane**	**4.04**	**30**	⇑*i*P		**Pn**	**20 27 41.1**	**+0.5**
HERR				⇑*i*S		**Sn**	**20 28 27.7**	**-0.8**
BZS	**Buzias**	**4.45**	**19**	⇑*i*P		**Pn**	**20 27 46.2**	**-0.1**
BZS				⇑*i*S		**Sn**	**20 28 35.8**	**-2.9**
GZR	**Gura Zlata**	**4.61**	**29**	⇓P		**Pn**	**20 27 48.5**	**+0.1**
GZR				⇓S		**Sn**	**20 28 41.7**	**-0.9**
SURR	**Surduc**	**4.71**	**22**	⇑*i*P		**Pn**	**20 27 49.4**	**-0.4**
SURR				⇑*i*S		**Sn**	**20 28 42.8**	**-2.3**
MLR	**Muntele Rosu**	**6.17**	**47**	⇑*i*P		**Pn**	**20 28 12.4**	**+2.4**

*AZER **28** 20:29:02.3, 38°.38N×44°.39E, h10km, ml2.6*
*AFAD **28** 20:29:03.7, 38°.42N×44°.42E, h6km±3km, ML2.6*
ISC 28 20:29:04.3±1.3,**38°.37N**±0°.03×**44°.33E**±0°.04,**h11**km±12km,
n13,σ1°**33**/22,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.40**	**318**	P		**Pb**	**20 29 12.3**	**-1.2**
OZAP				S		**Sb**	**20 29 18.7**	**-1.0**
OZAP				*i* IAML			20 29 22.0	
	comp=E,426nm,0.3s							
OZAP				*i* IAML			20 29 23.0	
	comp=N,476nm,0.4s							
TVAN	**Van**	**0.74**	**283**	P		**Pb**	**20 29 19.0**	**-0.4**
YOVA	**Hakkari_Yksek**	**0.78**	**182**	P		**Pb**	**20 29 19.8**	**-0.2**
YOVA				S		**Sn**	**20 29 32.7**	**-0.5**
VMUR	**Van-Muradiye**	**0.86**	**316**	P		**Pb**	**20 29 20.8**	**-0.6**
HAKT	**HAKKARI**	**0.95**	**212**	P		**Pb**	**20 29 23.0**	**+0.1**
HAKT				S		**Sn**	**20 29 38.1**	**+0.7**
HAKT				*i* IAML			20 29 41.0	
	comp=N,148nm,0.3s							
HAKT				*i* IAML			20 29 41.0	
	comp=E,203nm,0.4s							
HAKT	**HAKKARI**	**0.95**	**212**	P		**Pb**	**20 29 23.0**	**+0.1**
HAKT				S		**Sn**	**20 29 38.3**	**+0.9**
NAX	**Nakhchivan**	**1.22**	**48**	P		**Pn**	**20 29 27.0**	**-0.3**
NAX				S		**Sn**	**20 29 44.4**	**+0.6**
SBZ	**Shahbuz**	**1.40**	**42**	P		**Pg**	**20 29 30.2**	**-1.0**
SBZ				S		**Sn**	**20 29 50.5**	**+2.1**
HYR	**Heyderabad**	**1.41**	**17**	P		**Pg**	**20 29 30.7**	**-0.6**
HYR				S		**Sg**	**20 29 51.6**	**+1.9**
ORD	**Ordubad**	**1.42**	**66**	P		**Pg**	**20 29 30.5**	**-1.0**
ORD				S		**Sg**	**20 29 50.2**	**+0.3**
IGDI	**IGDIR**	**1.51**	**353**	P		**Pg**	**20 29 32.3**	**-1.0**
IGDI	**IGDIR**	**1.51**	**353**	P		**Pg**	**20 29 32.6**	**-0.7**
IGDI				S		**Sg**	**20 29 56.7**	**+3.7**
KOTA	**Agri, Merkez-K**	**1.68**	**329**	P		**Pb**	**20 29 34.3**	**-1.0**

*AZER **28** 20:29:32.2, 38°.30N×44°.52E, h10km, ml3.3*
*ISK **28** 20:29:33.0, 38°.19N×44°.40E, h13km, ML3.4/8*
*TEH **28** 20:29:34.6, 38°.48N×44°.48E, h12km±999km*
*AFAD **28** 20:29:35.3, 38°.43N×44°.31E, h7km±4km, ML3.1*
ISC 28 20:29:32.1±1.1,**38°.37N**±0°.02×**44°.46E**±0°.02,**h7**km±10km,
n43,σ2°**12**/74,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.47**	**309**	P		**Pb**	**20 29 41.9**	**-0.9**
OZAP				S		**Sg**	**20 29 47.6**	**+0.1**
OZAP				*i* IAML			20 29 53.0	
	comp=E,2μm,0.4s							
OZAP				*i* IAML			20 29 57.0	
	comp=N,2μm,1.0s							
YOVA	**Hakkari_Yksek**	**0.79**	**190**	P		**Pb**	**20 29 49.0**	**+0.7**
YOVA				S		**Sn**	**20 30 03.3**	**+1.3**
YOVA				*i* IAML			20 30 05.0	
	comp=N,834nm,0.4s							
YOVA				*i* IAML			20 30 07.0	
	comp=E,621nm,0.7s							
TVAN	**Van**	**0.84**	**281**	P		**Pg**	**20 29 47.8**	**-0.5**
TVAN				S		**Sg**	**20 29 58.9**	**-0.4**
TVAN				*i* IAML			20 30 00.0	
	comp=N,889nm,0.7s							
TVAN				*i* IAML			20 30 03.0	
	comp=E,790nm,0.4s							
VANB	**Van**	**0.87**	**285**	Pg		**Pn**	**20 29 50.3**	**-0.6**
VANB				Sg		**Sb**	**20 30 01.9**	**+0.4**
ISHB	**Shabestar**	**0.91**	**95**	Pg		**Pn**	**20 29 51.7**	**+0.2**
ISHB				Sg		**Sn**	**20 30 06.8**	**+1.8**
VMUR	**Van-Muradiye**	**0.93**	**312**	P		**Pb**	**20 29 50.6**	**-0.1**
VMUR				S		**Sn**	**20 30 04.0**	**-1.5**
VMUR				*i* IAML			20 30 09.0	
	comp=E,590nm,0.8s							
VMUR				*i* IAML			20 30 14.0	
	comp=N,599nm,0.5s							
MAKU	**Maku**	**1.00**	**10**	Pg		**Pn**	**20 29 52.5**	**-0.2**
HAKT	**HAKKARI**	**1.01**	**217**	P		**Pn**	**20 29 53.0**	**+0.1**
HAKT				S		**Sn**	**20 30 07.4**	**+0.1**
HAKT				*i* IAML			20 30 10.0	
	comp=N,677nm,0.6s							
HAKT				*i* IAML			20 30 11.0	
	comp=E,1μm,0.4s							
HAKT	**HAKKARI**	**1.01**	**217**	P		**Pn**	**20 29 52.9**	**+0.1**
HAKT				S		**Sn**	**20 30 08.0**	**+0.7**
NAX	**Nakhchivan**	**1.14**	**45**	P		**Pn**	**20 29 56.3**	**+1.8**
NAX				S		**Sn**	**20 30 14.0**	**+3.6**
AKDM	**Akdamar-Van**	**1.17**	**268**	Pn		**Pb**	**20 29 54.7**	**+0.1**
AKDM				Sn		**Sn**	**20 30 11.1**	**-0.1**
ORD	**Ordubad**	**1.32**	**65**	P		**Pg**	**20 29 59.4**	**+1.9**
ORD				S		**Sn**	**20 30 19.3**	**+4.3**
SBZ	**Shahbuz**	**1.33**	**39**	P		**Pg**	**20 29 59.8**	**+2.1**
SBZ				S		**Sn**	**20 30 20.5**	**+5.2**
HYR	**Heyderabad**	**1.38**	**13**	P		**Pg**	**20 30 01.8**	**+3.2**
HYR				S		**Sg**	**20 30 23.4**	**+6.9**
IAZR	**Azarshahr**	**1.38**	**119**	Pg		**Pg**	**20 30 01.4**	**+2.8**
IGDI	**IGDIR**	**1.53**	**349**	P		**Pg**	**20 30 03.2**	**+1.8**
IGDI				S		**Sg**	**20 30 26.2**	**+5.1**
TASB	**TASBURUN-IGDIR**	**1.62**	**354**	Pn		**Pg**	**20 30 04.4**	**+1.2**
AGRB	**Hanur-Agry**	**1.66**	**317**	Pn		**Pg**	**20 30 03.9**	**-0.1**
MLAZ	**Malazgirt-MUS**	**1.68**	**298**	Pn		**Pg**	**20 30 03.7**	**-0.7**
MLAZ				Sn		**Sg**	**20 30 25.9**	**-0.3**
GNI	**Garni**	**1.79**	**7**	Pn		**Pg**	**20 30 06.9**	**+0.5**
SIRN	**Sirnak**	**1.84**	**242**	P		**Pg**	**20 30 07.3**	**-0.1**
SIRN				S		**Sg**	**20 30 33.3**	**+2.0**
SIRN				*i* IAML			20 30 38.0	
	comp=N,437nm,0.7s							
SIRN				*i* IAML			20 30 44.0	
	comp=E,273nm,0.6s							
BLIS	**Bitlis-Merkez**	**1.84**	**272**	P		**Pb**	**20 30 05.9**	**-0.3**
GURO	**Guroymak-BITLI**	**1.92**	**276**	Pn		**Pn**	**20 30 06.0**	**+0.8**
IHRS	**Heris**	**2.03**	**91**	Pn		**Pg**	**20 30 12.3**	**+1.3**
SRTM	**Siirt_Merkez**	**2.04**	**260**	P		**Pg**	**20 30 10.7**	**-0.5**
SRTM				S		**Sg**	**20 30 38.5**	**+1.0**
SRTM				*i* IAML			20 30 43.0	
	comp=E,267nm,0.8s							
SRTM				*i* IAML			20 30 51.0	
	comp=N,348nm,1.1s							
MUSM	**Mu-Merkez**	**2.34**	**280**	P		**Pb**	**20 30 15.2**	**+0.6**
QRD	**Qoradiz**	**2.48**	**63**	P		**Pb**	**20 30 16.4**	**-0.6**
QRD				S		**Sg**	**20 30 50.3**	**-1.5**
GDB	**GEDABAY**	**2.55**	**23**	P		**Pb**	**20 30 18.6**	**+0.3**
GDB				S		**Sg**	**20 30 53.3**	**-0.8**
KOPR	**Koprukoy-ERZUR**	**2.60**	**309**	Pn		**Pb**	**20 30 17.3**	**-1.7**
MIDY	**Mardin/Midyat-**	**2.61**	**249**	P		**Pb**	**20 30 19.7**	**+0.5**
AGDM	**Agdam**	**2.69**	**49**	P		**Pb**	**20 30 19.1**	**-1.4**
AGDM				S		**Sg**	**20 30 55.4**	**-3.1**
GANJ	**Ganja**	**2.69**	**32**	P		**Pb**	**20 30 20.1**	**-0.5**
GANJ				S		**Sg**	**20 30 55.9**	**-2.6**
GRMI	**Germi**	**2.72**	**80**	Pn		**Pg**	**20 30 23.6**	**-0.7**
BLQ	**Beylaqan**	**2.76**	**60**	P		**Pb**	**20 30 20.6**	**-1.2**
BLQ				S		**Sb**	**20 30 56.5**	**+0.7**
QZX	**Qazax, Azerbai**	**2.78**	**14**	P		**Pb**	**20 30 21.5**	**-0.5**
QZX				S		**Sg**	**20 30 57.8**	**-3.5**
YRD	**Yardimli**	**3.01**	**78**	P		**Pb**	**20 30 24.8**	**-1.3**
YRD				S		**Sb**	**20 31 01.9**	**-1.2**
LRK	**Lerik**	**3.05**	**84**	P		**Pb**	**20 30 26.8**	**0.0**
LRK				S		**Sb**	**20 31 02.4**	**-2.0**
ZRD	**Zardab**	**3.14**	**52**	P		**Pb**	**20 30 28.6**	**+0.4**
ZRD				S		**Sb**	**20 31 04.7**	**-2.0**
GLBA	**Clilabad**	**3.19**	**73**	P		**Pg**	**20 30 30.5**	**-2.8**
GLBA				S		**Sb**	**20 31 05.2**	**-3.0**
LKRN	**Lenkeran, Azer**	**3.40**	**83**	P		**Pb**	**20 30 31.2**	**-1.4**
LKRN				S		**Sb**	**20 31 10.1**	**-4.1**
ASTR	**Astara**	**3.40**	**85**	P		**Pb**	**20 30 31.2**	**-1.5**
ASTR				S		**Sn**	**20 31 08.9**	**+2.8**
SEKA	**Sheki**	**3.53**	**36**	P		**Pg**	**20 30 37.3**	**-2.5**
SEKA				S		**Sb**	**20 31 15.4**	**-2.7**
QBL	**Gabala**	**3.66**	**44**	P		**Pg**	**20 30 38.9**	**-3.4**
QBL				S		**Sb**	**20 31 18.7**	**-3.0**

*IDC **28** 20:33:20.8±1.2, 41°.30N×19°.43E, h0km, mb4.2/8, mbtmp4.0/13, ML2.6/4, MS3.0/12, Error ellipse: s-maj=18.4km s-min=13.0km az=41.0*
*NEIC **28** 20:33:23.9±1.9, 41°.34N±0°.04×19°.58E±0°.06, h10km±1km, mb4.4/10, Error ellipse: s-maj=8.7km s-min=6.1km az=221.0*
*BEO **28** 20:33:25.6±0.5, 41°.36N×19°.66E, h12km±2km, ML3.4/19*
*THE **28** 20:33:25.3, 42°.N±8°.×2°.0E±°, h2km±23km, M3.5/16, MLh3.5/16*
*PRU **28** 20:33:25.9, 41°.07N×19°.16E, h10km, M4.4*
*SKO **28** 20:33:26.4, 41°.44N×19°.63E, h5km, ML3.7*
*TIR **28** 20:33:26.2, 41°.41N×19°.69E, h13km±2km, Ml3.9/4*
*PDG **28** 20:33:27.2±0.2, 41°.36N×19°.37E, h20km, MD3.5/7, ML3.5/12, Error ellipse: s-maj=0.7km s-min=1.3km az=0.0*
ISC 28 20:33:25.1±0.9,**41°.38N**±0°.02×**19°.62E**±0°.02,**h18**km±4km,
n225,σ1°**69**/279,**mb4.3**/11,**MS3.0**/8,**36C-15D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.18**	**100**	Pg		**Pg**	**20 33 29.7**	**-0.1**
TIR				Sg		**Sg**	**20 33 31.7**	**-1.3**
TIR				AML	AML		20 33 32.5	
	169nm,0.3s							
TIR	**Tirane**	**0.18**	**100**	⇓*i*Pg		**Pg**	**20 33 29.7**	**-0.1**
TIR				*i* Sg		**Sb**	**20 33 33.6**	**+0.8**
ULC	**Ulcinj**	**0.65**	**334**	⇓*i*Pg		**Pg**	**20 33 37.6**	**-0.3**
ULC				*e*Sg		**Sb**	**20 33 48.0**	**+1.4**
SDA	**Shkodra**	**0.68**	**352**	Pg		**Pb**	**20 33 39.1**	**+0.7**
SDA				Sg		**Sn**	**20 33 50.0**	**0.0**
PHP	**Peshkopia**	**0.69**	**63**	Pg		**Pg**	**20 33 38.1**	**-0.5**
PHP				Sg		**Sg**	**20 33 47.5**	**-0.2**
PHP				AML	AML		20 33 56.1	
	19nm,0.5s							
PHP	**Peshkopia**	**0.69**	**63**	P		**Pg**	**20 33 37.0**	**-1.5**
DRME	**Dracevica, Mon**	**0.87**	**338**	*e*Pg		**Pn**	**20 33 43.5**	**+1.0**
DRME	**Dracevica, Mon**	**0.87**	**338**	⇑*i*Pg		**Pn**	**20 33 42.6**	**+0.1**
DRME				*e*Sg		**Sn**	**20 33 55.5**	**+0.8**
VLO	**Vlora**	**0.92**	**186**	Pn		**Pn**	**20 33 44.1**	**+1.1**
VLO				Sn		**Sn**	**20 33 57.6**	**+1.9**
VLO				AML	AML		20 34 05.5	
	26nm,0.5s							
VLO	**Vlora**	**0.92**	**186**	P		**Pn**	**20 33 45.1**	**+2.1**
OHR	**Ohrid**	**0.93**	**106**	*i* Pg		**Pb**	**20 33 42.7**	**0.0**
OHR				*i* Sg		**Sn**	**20 33 57.7**	**+1.6**
OHR				*e*Lg		Lg	20 33 58.0	
	comp=N,6μm,1.5s							
OHR				*e*Lg		Lg	20 34 01.6	
	comp=E,2μm,0.6s							
BUM	**Brajici-Budva**	**1.07**	**330**	*e*Pg		**Pb**	**20 33 45.3**	**+0.2**
BUM				*e*Sg		**Sn**	**20 34 00.7**	**+1.0**
PDG	**Podgorica**	**1.08**	**345**	Pn		**Pg**	**20 33 46.1**	**-0.1**
PDG				Sn		**Sg**	**20 34 01.7**	**+1.4**
PDG	**Podgorica**	**1.08**	**345**	Pn		**Pb**	**20 33 44.8**	**-0.5**
PDG				Sg		**Sn**	**20 34 00.3**	**+0.3**
PDG	**Podgorica**	**1.08**	**345**	⇑*i*P		**Pg**	**20 33 46.0**	**-0.1**
PDG	**Podgorica**	**1.08**	**345**	*e*Pg		**Pg**	**20 33 46.9**	**+0.8**
PDG				*e*Sg		**Sg**	**20 34 02.2**	**+1.9**
PDG	**Podgorica**	**1.08**	**345**	⇑*i*Pg		**Pg**	**20 33 46.4**	**+0.3**
PDG				*i* Sg		**Sg**	**20 34 02.4**	**+2.1**
KBN	**Korca**	**1.16**	**130**	Pn		**Pg**	**20 33 48.0**	**+0.5**
KBN				Sn		**Sg**	**20 34 02.4**	**+1.4**
KBN				AML	AML		20 34 08.1	
	comp=E,5.8nm,0.6s							
KBN	**Korca**	**1.16**	**130**	P		**Pg**	**20 33 48.3**	**+0.8**
KBN				S		**Sg**	**20 34 07.5**	**+4.7**
PVY	**Plav**	**1.24**	**12**	*e*Pg		**Pg**	**20 33 49.0**	**-0.1**
PVY				*e*Sg		**Sg**	**20 34 05.6**	**+0.3**
PVY	**Plav**	**1.24**	**12**	*e*Pg		**Pg**	**20 33 50.4**	**+1.3**
PVY				*i* Sg		**Sg**	**20 34 09.5**	**+4.2**
CEME	**Cevo**	**1.28**	**336**	⇑*i*Pg		**Pb**	**20 33 49.2**	**+0.5**
CEME				*i* Sg		**Sg**	**20 34 07.4**	**+0.9**
NEST	**Nestorio**	**1.45**	**131**	P		**Pg**	**20 33 53.1**	**+0.1**
NEST				S		**Sg**	**20 34 14.6**	**+2.7**
KOME	**Kolasin**	**1.47**	**357**	*e*Pg		**Pg**	**20 33 53.9**	**+0.4**
KOME				*e*Sg		**Sg**	**20 34 12.1**	**-0.6**
KOME	**Kolasin**	**1.47**	**357**	⇑*i*Pg		**Pb**	**20 33 52.8**	**+0.8**
KOME				⇑*i*Sg		**Sg**	**20 34 14.4**	**+1.7**
NKME	**Niksic**	**1.47**	**340**	⇓*i*Pg		**Pb**	**20 33 52.5**	**+0.5**
NKME				*e*Sg		**Sg**	**20 34 12.3**	**-0.4**
SKO	**Skopje**	**1.48**	**66**	*i* Pg		**Pb**	**20 33 52.9**	**+0.8**
SKO				*i* Sg		**Sg**	**20 34 12.2**	**-0.8**
BEY	**Berane**	**1.50**	**8**	*e*Pg		**Pb**	**20 33 52.5**	**0.0**
BEY				*e*Sg		**Sg**	**20 34 13.9**	**+0.2**
IVA	**Berane**	**1.50**	**8**	⇓*i*Pg		**Pg**	**20 33 54.5**	**+0.4**
IVA				*i* Sg		**Sg**	**20 34 16.4**	**+2.7**
TREB	**Trebinje**	**1.64**	**325**	*e*Pn		**Pn**	**20 33 52.7**	**-0.3**
TREB				*e*Sn		**Sb**	**20 34 16.1**	**+1.0**
KEK	**Kerkira**	**1.67**	**175**	Pg		**Pg**	**20 33 59.3**	**+2.1**
BRY	**Bratogost**	**1.72**	**332**	⇓*i*Pn		**Pb**	**20 33 55.6**	**-0.7**
BRY				*e*Sn		**Sb**	**20 34 18.7**	**+1.1**
SJES	**Sjenica**	**1.90**	**8**	*e*Pg		**Pb**	**20 33 59.2**	**-0.1**
SJES				*e*Sg		**Sg**	**20 34 25.8**	**-0.5**
UPM	**Unac-Piva**	**1.90**	**344**	⇑*i*Pn		**Pb**	**20 33 59.3**	**0.0**
UPM				*e*Sn		**Sb**	**20 34 20.3**	**+0.5**
IGT	**Igoumenitsa**	**1.92**	**163**	P		**Pb**	**20 34 00.3**	**+0.7**
IGT				S		**Sg**	**20 34 27.1**	**+0.1**
KZN	**Kozani**	**1.95**	**123**	P		**Pb**	**20 33 59.8**	**-0.3**
PLE	**Pljevlja**	**1.96**	**355**	*e*Pg		**Pb**	**20 34 00.5**	**+0.2**
PLE				*e*Sg		**Sg**	**20 34 27.8**	**-0.3**
PLE	**Pljevlja**	**1.96**	**355**	⇑*i*Pn		**Pb**	**20 34 00.2**	**-0.1**
PLE				*e*Sn		**Sb**	**20 34 26.2**	**+1.8**
JAN	**Janina**	**1.96**	**151**	P		**Pb**	**20 34 00.2**	**0.0**
JAN				S		**Sg**	**20 34 27.8**	**-0.4**
NOCI	**Noci**	**2.02**	**254**	P		**Pn**	**20 33 57.8**	**-0.6**
GRG	**Griva**	**2.14**	**100**	*i* Pn		**Pb**	**20 34 01.7**	**-1.6**
GRG				S		**Sb**	**20 34 29.7**	**+0.2**
GRG	**Griva**	**2.14**	**100**	*i* Pn		**Pb**	**20 34 01.8**	**-1.6**
SELS	**Selova**	**2.15**	**31**	*e*Pn		**Pb**	**20 34 02.3**	**-1.2**
SELS				*e*Sn		**Sb**	**20 34 29.7**	**-0.1**
PRMD	**Pramanda**	**2.16**	**148**	P		**Pb**	**20 34 03.4**	**-0.3**
BARS	**Barje**	**2.17**	**48**	*i* Pn		**Pn**	**20 34 02.1**	**+1.7**
BARS	**Barje**	**2.17**	**48**	*e*Pn		**Pn**	**20 34 01.8**	**+1.4**
BARS				*e*Sn		**Sb**	**20 34 30.0**	**-0.5**
VAY	**Valandovo**	**2.22**	**91**	*i* Pn		**Pb**	**20 34 03.0**	**-1.7**
VAY				*e*Lg		Lg	20 34 31.3	
	comp=E,235nm,0.7s							
VAY				*i* Sn		**Sn**	**20 34 31.3**	**+3.4**
VAY				*e*Lg		Lg	20 34 35.1	
	comp=N,322nm,0.8s							
IVAS	**Ivanjica**	**2.23**	**10**	*e*Pn		**Pn**	**20 34 02.6**	**+1.4**
IVAS				*e*Sn		**Sn**	**20 34 30.8**	**+2.5**
RUDO	**Rudo**	**2.25**	**355**	*e*Pn		**Pn**	**20 34 02.6**	**+1.2**
RUDO				*e*Sn		**Sb**	**20 34 31.6**	**-1.0**
MATE	**Matera**	**2.33**	**253**	⇓P		**Pn**	**20 34 02.8**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.37**	**23**	*e*Pn		**Pn**	**20 34 05.1**	**+1.9**
GOCS				*e*Sn		**Sn**	**20 34 34.2**	**+2.4**
TETR	**Tetrakomo, Epi**	**2.39**	**148**	P		**Pb**	**20 34 06.7**	**-1.0**
BOSS	**Bosilegrad**	**2.41**	**61**	*e*Pn		**Pn**	**20 34 04.8**	**+1.2**
BOSS				*e*Sn		**Sn**	**20 34 32.1**	**-0.5**
KNT	**Kendrikon**	**2.48**	**94**	P		**Pn**	**20 34 06.3**	**+1.7**
KNT	**Kendrikon**	**2.48**	**94**	*i* Pn		**Pb**	**20 34 06.9**	**-2.2**
BBLS	**Lazi&#263i**	**2.49**	**356**	*e*Pn		**Pn**	**20 34 06.8**	**+2.0**
BBLS				*e*Sn		**Sb**	**20 34 38.1**	**-1.6**
LIT	**Litokhoron**	**2.52**	**119**	P		**Pn**	**20 34 07.4**	**+2.2**
LIT	**Litokhoron**	**2.52**	**119**			**Pn**	**20 34 06.0**	**+0.7**
THL	**Klokotos Trika**	**2.57**	**134**	P		**Pn**	**20 34 08.0**	**+2.2**
TYRN	**Tyrnavos**	**2.59**	**129**	P		**Pn**	**20 34 08.2**	**+2.0**
MRVN	**Minervino Murg**	**2.61**	**264**	P		**Pn**	**20 34 06.6**	**+0.2**
GRUS	**Gruza**	**2.63**	**17**	*e*Pn		**Pn**	**20 34 08.5**	**+1.8**
THE	**Thessaloniki**	**2.64**	**105**	P		**Pn**	**20 34 08.3**	**+1.6**
THE	**Thessaloniki**	**2.64**	**105**	*i* Pn		**Pn**	**20 34 08.2**	**+1.5**
KKB	**Krupnik**	**2.67**	**79**	P		**Pn**	**20 34 08.2**	**+1.0**
KKB	**Krupnik**	**2.67**	**79**	P		**Pn**	**20 34 09.0**	**+1.8**
KKB				S		**Sn**	**20 34 41.5**	**+2.4**
KKB	**Krupnik**	**2.67**	**79**	*i* Pn		**Pn**	**20 34 08.9**	**+1.8**
TRAN	**Tran**	**2.68**	**56**	S		**Sn**	**20 34 42.1**	**+2.7**
BOVS	**Bovan**	**2.73**	**34**	⇑*i*P		**Pn**	**20 34 09.7**	**+1.7**
BOVS	**Bovan**	**2.73**	**34**	*e*Pn		**Pn**	**20 34 09.3**	**+1.3**
BOVS				*e*Sn		**Sn**	**20 34 41.2**	**+0.7**
ACER	**Acerenza**	**2.84**	**259**	Pn		**Pn**	**20 34 08.3**	**-1.3**
SOH	**Sokhos**	**2.87**	**100**	*i* Pn		**Pn**	**20 34 11.8**	**+1.8**
TRUS	**Trudelj**	**2.90**	**11**	*e*Pn		**Pn**	**20 34 11.8**	**+1.4**
TRUS				*e*Sn		**Sn**	**20 34 46.9**	**+2.1**
ZAPS	**Zavoj**	**2.93**	**49**	*e*Pn		**Pn**	**20 34 13.0**	**+2.2**
ZAPS				*e*Sn		**Sn**	**20 34 47.0**	**+1.5**
VTS	**Vitosha**	**2.96**	**64**	⇑*i*P		**Pn**	**20 34 12.8**	**+1.4**
SRS	**Serrai**	**3.00**	**94**	*i* Pn		**Pn**	**20 34 13.4**	**+1.7**
PLNA	**Plana**	**3.04**	**68**	P		**Pn**	**20 34 14.9**	**+2.5**
BLSH	**Balsha**	**3.09**	**60**	P		**Pb**	**20 34 16.8**	**-2.8**
ZAGS	**Zajecar**	**3.10**	**38**	*e*Pn		**Pn**	**20 34 14.8**

BUR08	**Bucovina Ar. S**	**7.42**	**31**		**Pn**	**20 35 14.2 +1.6**
CTI	**Castel Tesino**	**7.42**	**312**		**Pn**	**20 35 11.7 -0.9**
MOA	**Molln**	**7.51**	**331**	*e*Pn	**Pn**	**20 35 17.0 +3.3**
	comp=N,1.2nm,0.3s					
TLCR		**7.71**	**57**	⇓P	**Pn**	**20 35 19.3 +2.9**
LANS	**Liptovska Anna**	**7.77**	**359**	*e*PN	Pn	20 35 22.2 +4.9
LESA	**Schwarzleotal**	**7.82**	**323**	*e*Pn	**Pn**	**20 35 18.8 +0.8**
	comp=N,1.0nm,0.2s					
LESA				*e*Sn	**Sn**	**20 36 43.8 -2.3**
	comp=N,7.1nm,0.6s					
SALO	**Salr**	**7.85**	**306**	Pn	**Pn**	**20 35 17.9 -0.5**
MSSA	**Maissana**	**7.98**	**295**	Pn	**Pn**	**20 35 20.2 -0.1**
STHS	**Stebnicka Huta**	**8.12**	**8**	*e*PN	**Pn**	**20 35 26.7 +4.7**
STHS				*e*SN	**Sn**	**20 36 53.8 +0.5**
WTTA	**Wattenberg**	**8.21**	**318**	*i* Pn	**Pn**	**20 35 25.5 +2.1**
	comp=N,2.7nm,0.3s					
WATA	**Walderalm**	**8.29**	**319**	*i* Pn	**Pn**	**20 35 26.4 +2.0**
	comp=N,6.9nm,0.6s					
KARP	**Karpathos**	**8.30**	**132**	Pn	**Pn**	**20 35 26.4 +1.9**
SQTA	**Sankt Quirin**	**8.39**	**317**	*e*Pn	**Pn**	**20 35 27.3 +1.4**
	comp=N,3.3nm,0.6s					
FETA	**Feichten**	**8.52**	**314**	*i* Pn	**Pn**	**20 35 29.5 +1.8**
	comp=N,1.1nm,0.4s					
MOTA	**Moosalm**	**8.53**	**317**	*i* Pn	**Pn**	**20 35 29.0 +1.2**
	comp=N,1.4nm,0.4s					
GERES	**GERESS Array B**	**8.56**	**333**	Pn	**Pn**	**20 35 28.2 +0.1**
	baz=166,slow=18,SNR=4.1					
GERES				Sn	**Sn**	**20 37 02.7 -1.5**
	baz=155,slow=28,SNR=2.6					
	comp=N,0.3nm,0.3s					
RETA	**Reutte**	**8.80**	**317**	Pn	**Pn**	**20 35 32.5 +1.1**
	comp=N,1.6nm,0.4s					
KHC	**Kasperske Hory**	**8.84**	**333**	*e*SN	**Sn**	**20 37 11.8 +0.7**
DAVOX	**Davos/Dischmat**	**8.85**	**311**	Pn	**Pn**	**20 35 32.6 +0.4**
	comp=N,0.5nm,0.3s,baz=122,slow=17,SNR=6.4					
DAVOX				Sn	**Sn**	**20 37 08.1 -3.3**
	comp=N,0.3nm,0.3s,baz=300,slow=23,SNR=2.1					
DAVOX				LR	LR	20 39 27.8
	comp=N,55nm,19.2s,baz=133,slow=42					
TUE	**Stuetta**	**8.99**	**308**	Pn	**Pn**	**20 35 34.1 -0.1**
DAVA	**Damuels**	**9.14**	**314**	*e*Pn	**Pn**	**20 35 37.6 +1.5**
	comp=N,2.1nm,0.6s					
KEST	**Kesra**	**9.82**	**238**	LR	LR	20 40 13.4
	comp=N,93nm,20.0s,baz=26,slow=43					
SENIN	**Lac Senin/Sane**	**10.20**	**303**	Pn	**Pn**	**20 35 49.7 -1.0**
BRTR	**Keskin Array B**	**10.79**	**94**	Pn	**Pn**	**20 36 00.8 +2.0**
	comp=N,0.1nm,0.3s,baz=278,slow=8.4,SNR=1.7					
BRTR				LR	LR	20 41 01.4
	comp=N,71nm,18.0s,baz=286,slow=42					
	comp=N,0.3nm,0.5s					
AKASG	**Malin Array Be**	**11.45**	**32**	LR	LR	20 40 52.7
	comp=N,54nm,18.4s,baz=231,slow=39					
PABE	**Paberze**	**14.42**	**10**	P	**P**	**20 36 54.4 -0.5**
MMAI	**Mount Meron Ar**	**15.08**	**119**	Pn	**P**	**20 37 01.5 -1.0**
	comp=N,1.0nm,0.3s,baz=323,slow=9.7,SNR=8.1					
GNI	**Garni**	**19.05**	**85**		**Pn**	**20 37 48.2 +1.0**
HFS	**Hagfors**	**19.13**	**351**	P	**P**	**20 37 46.2 -0.8**
	comp=N,0.2nm,0.3s,baz=171,slow=11,SNR=6.2					
	comp=N,1.2nm,0.5s					
NC405	**NORSAR Array S**	**20.34**	**349**	P	**P**	**20 37 59.8 -0.4**
NC405				IAmb	IAmb	20 38 07.5
	comp=Z,26nm,1.4s					
NOA	**NORSAR Array B**	**20.35**	**348**	P	**P**	**20 37 59.6 -0.6**
	comp=Z,0.9nm,0.7s,baz=151,slow=9.8,SNR=3.5					
NOA				LR	LR	20 46 34.3
	comp=Z,21nm,18.8s,baz=325,slow=39					
FINES	**FINESS Array B**	**20.47**	**9**	P	**P**	**20 37 59.9 -1.6**
	comp=Z,3.8nm,0.6s,baz=188,slow=10,SNR=16					
	comp=Z,3.8nm,0.6s					
FINES	**FINESS Array B**	**20.47**	**9**	P	**P**	**20 38 00.1 -1.5**
FIA1	**FINESS Array S**	**20.47**	**9**	P	**P**	**20 38 00.9 -0.6**
MDT	**Midelt**	**21.08**	**254**	LR	LR	20 45 06.9
	comp=Z,13nm,20.1s,baz=146,slow=34					
BELG	**Belogornoye**	**21.94**	**50**	P	**P**	**20 38 16.7 -0.7**
	comp=Z,10.0nm,0.7s,baz=327,slow=5.1,SNR=5.5					
	comp=Z,10.0nm,0.7s					
AKTO	**Aktyubinsk**	**27.93**	**58**	LR	LR	20 52 08.5
	comp=Z,32nm,19.0s,baz=217,slow=40					
ARTI	**Arti**	**29.11**	**46**	LR	LR	20 52 04.2
	comp=Z,54nm,19.0s,baz=224,slow=38					
ARTI	**Arti**	**29.11**	**46**	P	**P**	**20 39 23.9 -0.6**
BORK	**Borovoye**	**35.63**	**53**	P	**P**	**20 40 23.2 +1.5**
BORK				IAmb	IAmb	20 40 23.7
	comp=Z,4.1nm,0.6s					
BVAR	**Borovoye Array**	**35.67**	**53**	P	**P**	**20 40 22.3 +0.3**
	comp=Z,2.8nm,0.6s,baz=269,slow=6.2,SNR=16					
	comp=Z,2.8nm,0.6s					
KKAR	**Karatay Array**	**37.24**	**70**	P	**P**	**20 40 35.6 0.0**
AAK	**Ala-Archa**	**40.18**	**69**	LR	LR	21 02 06.0
	comp=Z,11nm,19.9s,baz=310,slow=43					
DBIC	**Dimbokro**	**40.86**	**219**	LR	LR	20 58 17.9
	comp=Z,38nm,19.4s,baz=128,slow=37					
KURBB	**Kurchatov Arra**	**40.96**	**56**	P	**P**	**20 41 05.8 -0.7**
	comp=Z,0.3nm,0.4s,baz=287,slow=10.0,SNR=4.7					
	comp=Z,0.3nm,0.4s					
KURK	**Kurchatov**	**40.99**	**56**	P	**P**	**20 41 05.8 -1.0**
KURK	**Kurchatov**	**40.99**	**56**	IAmb	IAmb	20 41 08.5
	comp=Z,1.5nm,0.8s					
MAKZ	**Makanchi**	**44.07**	**61**	P	**P**	**20 41 31.3 -0.6**
MAKZ				IAmb	IAmb	20 41 31.4
	comp=Z,4.8nm,1.1s					
ZAA0	**Zalesovo Array**	**44.13**	**50**	P	**P**	**20 41 31.7 -0.4**
ZAA0				IAmb	IAmb	20 41 32.5
	comp=Z,5.0nm,0.6s					
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	**P**	**20 41 31.4 -0.7**
	comp=Z,7.2nm,0.6s,baz=283,slow=8.5,SNR=26					
	comp=Z,7.2nm,0.6s					
ZALV	**Zalesovo Beam**	**44.13**	**50**	P	**P**	**20 41 31.9 -0.3**
NRIK	**Noril'sk**	**44.27**	**28**	LR	LR	21 01 51.0
	comp=Z,27nm,19.6s,baz=46,slow=38					
MKAR	**Makanchi Array**	**44.28**	**61**	P	**P**	**20 41 32.9 -0.7**
	comp=Z,2.5nm,0.7s,baz=283,slow=6.6,SNR=16					
	comp=Z,2.5nm,0.7s					
MKAR	**Makanchi Array**	**44.28**	**61**	P	**P**	**20 41 33.7 +0.1**
EVN	**Everest**	**55.59**	**81**	P	**P**	**20 42 59.2 -1.2**
EVN				IAmb	IAmb	20 43 00.4
	comp=Z,3.1nm,0.8s					
TIXI	**Tiksi**	**56.90**	**21**	LR	LR	21 10 23.3
	comp=Z,26nm,18.1s,baz=31,slow=39					
SONM	**Songino Array**	**58.99**	**52**	P	**P**	**20 43 23.8 +0.2**
	comp=Z,1.7nm,0.7s,baz=285,slow=8.3,SNR=12					
	comp=Z,1.7nm,0.7s					
LZDM	**Lanzhou Array**	**63.38**	**65**	P	**P**	**20 43 53.3 -0.5**
	comp=Z,1.9nm,0.4s,baz=314,slow=11,SNR=2.0					
	comp=Z,1.9nm,0.4s					
WRA	**Warramunga Arr**	**121.28**	**90**	PKP	**PKPdf**	**20 52 15.4 -1.9**
	comp=Z,0.3nm,0.8s,baz=313,slow=2.0,SNR=1.7					
ASAR	**Alice Springs**	**123.13**	**94**	PKP	**PKPdf**	**20 52 19.6 -1.2**
	comp=Z,0.5nm,0.6s,baz=310,slow=2.2,SNR=12					

IDC 28 20:41:19.7±4.2, 14°33N×121°75E, h98km±21km, mb3.1/3, mbtmp3.5/3, MS3.1/1, Error ellipse: s-maj=85.2km s-min=26.9km az=40.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.82**	**254**	P	Pn	20 41 38.5	+0.3
	2μm,0.6s,baz=217,slow=2.9,SNR=34						
TGY				S	Sn	20 41 53.0	+0.9
	2μm,0.4s,baz=348,slow=23,SNR=13						
CMAR	**Chiang Mai Arr**	**22.25**	**284**	P	P	20 46 08.7	-0.1
	0.9nm,0.8s,baz=98,slow=8.3,SNR=7.5						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**36.24**	**160**	P	P	20 48 12.9	-0.6
	0.2nm,0.5s,baz=336,slow=8.8,SNR=2.1						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**39.59**	**162**	P	P	20 48 41.9	+0.2
	0.6nm,0.5s,baz=340,slow=7.0,SNR=12						
ASAR				LR	LR	21 06 44.4	
	comp=Z,24nm,20.1s,baz=178,slow=38						
	0.6nm,0.5s						

*GCG **28** 21:10:46.1±1.1, 12°.54N×90°.41W, h19km, MD4.3, ML4.3*
*CATAC **28** 21:10:49.5±0.7, 13°N±3°×9°.0W±°, h2km±3km, M4.0/22, MLv4.0/22, Error ellipse: s-maj=7.5km s-min=3.6km az=26.0, confirmed*
*SNET **28** 21:10:54.5±2.3, 13°.14N×90°.15W, h20km, ML3.8*
*IDC **28** 21:10:57.1±2.5, 13°.15N×89°.72W, h72km±18km, mb3.5/5, mbtmp3.8/6, MS3.3/4, Error ellipse: s-maj=46.7km s-min=11.1km az=48.0*
ISC 28 21:10:52.1±0.9, 12°.88N±0°.05×90°.23W±0°.04, h29km, n91, σ1°22/92, mb4.0/4, MS3.2/4, 7C-9D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcaldia de Sa**	**0.98**	**12**	S	**Sn**	**21 11 23.6**	**+0.8**
FAME	**Alcaldia de Sa**	**0.98**	**12**	⇑P	**Pb**	**21 11 09.2**	**-1.3**
LALI	**Alcalda de L**	**1.07**	**56**	*e*P	**Pn**	**21 11 10.7**	**-0.5**
LALI	**Alcalda de L**	**1.07**	**56**	P	**Pn**	**21 11 11.1**	**-0.1**
LALI	**Alcalda de L**	**1.07**	**56**	S	**Sn**	**21 11 26.2**	**+1.1**
JAYA	**Jayaque - finc**	**1.08**	**45**	*e*P	**Pn**	**21 11 11.3**	**-0.2**
JAYA	**Jayaque - finc**	**1.08**	**45**	*i* P	**Pn**	**21 11 11.5**	**0.0**
JAYA	**Jayaque - finc**	**1.08**	**45**	S	**Sn**	**21 11 26.8**	**+1.2**
JAYA	**Jayaque - finc**	**1.08**	**45**	⇑P	**Pn**	**21 11 11.5**	**0.0**
NUBE	**Las Nubes**	**1.10**	**23**	*e*P	**Pn**	**21 11 11.2**	**-0.6**
NUBE	**Las Nubes**	**1.10**	**23**	*i* P	**Pn**	**21 11 11.3**	**-0.6**
NUBE	**Las Nubes**	**1.10**	**23**	S	**Sn**	**21 11 27.2**	**+1.0**
NUBE	**Las Nubes**	**1.10**	**23**	⇓P	**Pn**	**21 11 11.3**	**-0.5**
CEVE	**Cerro Verde**	**1.11**	**32**	S	**Sn**	**21 11 27.6**	**+1.2**
CEVE	**Cerro Verde**	**1.11**	**32**	⇑P	**Pb**	**21 11 12.0**	**-0.9**
SBLS	**San Blas**	**1.12**	**32**	*e*P	**Pn**	**21 11 11.6**	**-0.5**
SNJE	**San Jose**	**1.15**	**32**	*e*P	**Pn**	**21 11 12.2**	**-0.3**
RTR	**El Retiro**	**1.16**	**29**	*e*P	**Pn**	**21 11 12.4**	**-0.1**
LOAL	**Lomas de Alarc**	**1.19**	**22**	*e*P	**Pb**	**21 11 12.9**	**-1.3**
LOAL	**Lomas de Alarc**	**1.19**	**22**	S	**Sb**	**21 11 30.3**	**+1.0**
LOAL	**Lomas de Alarc**	**1.19**	**22**	⇑P	**Pb**	**21 11 13.1**	**-1.1**
PMON	**Piamonte**	**1.22**	**47**	*e*P	**Pn**	**21 11 13.2**	**0.0**
PMON	**Piamonte**	**1.22**	**47**	S	**Sb**	**21 11 31.3**	**+1.3**
PMON	**Piamonte**	**1.22**	**47**	⇑P	**Pn**	**21 11 13.3**	**0.0**
CEDA	**San Andres**	**1.23**	**42**	*e*P	**Pn**	**21 11 13.3**	**-0.1**
CEDA	**San Andres**	**1.23**	**42**	S	**Sb**	**21 11 31.3**	**+1.2**
CEDA	**San Andres**	**1.23**	**42**	P	**Pb**	**21 11 13.9**	**-0.7**
PANCS	**Alcalda de**	**1.25**	**55**	P	**Pn**	**21 11 13.7**	**-0.1**
PANCS	**Alcalda de**	**1.25**	**55**	S	**Sb**	**21 11 31.4**	**+0.4**
BOQS	**Boqueron**	**1.26**	**47**	*e*P	**Pn**	**21 11 14.1**	**+0.2**
UEES	**Universidad Ev**	**1.27**	**49**	S	**Sb**	**21 11 32.8**	**+1.3**
UEES	**Universidad Ev**	**1.27**	**49**	⇓P	**Pb**	**21 11 15.0**	**-0.5**
UNIC	**Universidad Ca**	**1.28**	**31**	S	**Sb**	**21 11 33.0**	**+1.2**
UNIC	**Universidad Ca**	**1.28**	**31**	P	**Pb**	**21 11 14.3**	**-1.3**
LOMA	**Loma Larga**	**1.28**	**54**	*e*P	**Pn**	**21 11 13.5**	**-0.7**
LOMA	**Loma Larga**	**1.28**	**54**	S	**Sb**	**21 11 32.0**	**+0.2**
LOMA	**Loma Larga**	**1.28**	**54**	⇑P	**Pn**	**21 11 13.6**	**-0.6**
RBDL	**Robledal**	**1.33**	**23**	*e*P	**Pn**	**21 11 14.9**	**0.0**
LFRS	**El Faro**	**1.36**	**57**	*e*P	**Pn**	**21 11 15.1**	**-0.1**
LFU	**La Fuente**	**1.39**	**51**	*e*P	**Pn**	**21 11 15.7**	**+0.1**
FG16	**Alotenango, Sa**	**1.41**	**349**	IAML		21 11 49.0	
	comp=N,4μm,0.3s						
LBRS	**Las Brisas**	**1.44**	**53**	*e*P	**Pn**	**21 11 16.5**	**+0.2**
PAVA	**Las Pavas**	**1.51**	**57**	*e*P	**Pn**	**21 11 17.7**	**+0.4**
PAVA	**Las Pavas**	**1.51**	**57**	S	**Sb**	**21 11 37.6**	**-0.7**
PAVA	**Las Pavas**	**1.51**	**57**	⇓P	**Pn**	**21 11 18.3**	**+1.0**
JUAM	**Asuncion Mita**	**1.53**	**19**	*e*P	**Pn**	**21 11 18.0**	**-1.9**
TECO	**Alcaldia de Te**	**1.56**	**65**	P	**Pn**	**21 11 18.1**	**+0.2**
TECO	**Alcaldia de Te**	**1.56**	**65**	S	**Sb**	**21 11 39.7**	**+0.1**
UESV	**Universidad de**	**1.59**	**62**	P	**Pn**	**21 11 18.8**	**+0.4**
UESV	**Universidad de**	**1.59**	**62**	S	**Sb**	**21 11 40.7**	**0.0**
SCLA	**Alcaldia de Sa**	**1.68**	**61**	*e*P	**Pn**	**21 11 19.9**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.68**	**61**	S	**Sb**	**21 11 43.2**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.68**	**61**	⇓P	**Pn**	**21 11 20.4**	**+0.9**
MTO3	**Montecristo**	**1.73**	**29**	*e*P	**Pn**	**21 11 20.8**	**+0.3**
MTO3	**Montecristo**	**1.73**	**29**	*e*P	**Pn**	**21 11 21.0**	**+0.6**
MTO3	**Montecristo**	**1.73**	**29**	S	**Sb**	**21 11 45.7**	**+0.9**
MTO3	**Montecristo**	**1.73**	**29**	⇑P	**Pn**	**21 11 21.0**	**+0.6**
LLGN	**La Laguna**	**1.79**	**44**	S	**Sb**	**21 11 46.3**	**+0.1**
LLGN	**La Laguna**	**1.79**	**44**	P	**Pb**	**21 11 22.6**	**-1.6**
TECA	**Tecapa**	**1.79**	**70**	*e*P	**Pn**	**21 11 21.0**	**-0.2**
ESQI	**Esquipulas**	**1.88**	**27**	S	**Sb**	**21 11 49.3**	**+0.3**
ESQI	**Esquipulas**	**1.88**	**27**	⇓P	**Pn**	**21 11 23.7**	**-2.1**
PACA	**Pacayal**	**1.95**	**72**	*e*P	**Pn**	**21 11 24.6**	**+1.2**
PACA	**Pacayal**	**1.95**	**72**	S	**Sb**	**21 11 50.4**	**-0.5**
PACA	**Pacayal**	**1.95**	**72**	⇓P	**Pn**	**21 11 25.1**	**+1.7**
LCY	**Lacayo**	**1.96**	**74**	*e*P	**Pn**	**21 11 23.9**	**+0.3**
RANC	**El Ranchito**	**1.97**	**74**	*e*P	**Pn**	**21 11 24.0**	**+0.3**
BLLM	**Bellamira**	**2.02**	**74**	*e*P	**Pn**	**21 11 24.4**	**+0.1**
APG	**El Apazote**	**2.12**	**354**	P	**Pn**	**21 11 26.9**	**+1.1**
	comp=N,12nm,0.5s,baz=169,slow=10,SNR=111						
APG				S	**Sb**	**21 11 53.4**	**-2.7**
	comp=N,9.9nm,0.5s,baz=231,slow=21,SNR=6.4						
APG	**El Apazote**	**2.12**	**354**	*i* P	**Pn**	**21 11 26.7**	**+0.8**
LCND	**La Caada**	**2.32**	**79**	*e*P	**Pn**	**21 11 28.8**	**+0.4**
LCND	**La Caada**	**2.32**	**79**	⇓P	**Pn**	**21 11 28.9**	**+0.5**
CNCH	**Conchagua**	**2.37**	**80**	*e*P	**Pn**	**21 11 30.1**	**+0.9**
CNCH	**Conchagua**	**2.37**	**80**	S	**Sn**	**21 12 00.2**	**+2.9**
CNCH	**Conchagua**	**2.37**	**80**	⇓P	**Pn**	**21 11 30.3**	**+1.1**
QUIS	**Sacapulas**	**2.54**	**341**	*i* P	**Pn**	**21 11 33.4**	**+1.9**
CSGN	**Cosiguina Volc**	**2.61**	**88**	⇓P	**Pn**	**21 11 32.3**	**-0.1**
CSGN				S	**Sn**	**21 12 05.9**	**+2.7**
POTN	**Potosi Cosigui**	**2.66**	**87**	P	**Pn**	**21 11 33.8**	**+0.8**
POTN				S	**Sn**	**21 12 07.3**	**+3.0**
JTS	**Las Juntas de**	**5.78**	**116**	P	**Pn**	**21 12 17.7**	**+1.8**
	comp=N,7.5nm,0.3s,baz=308,slow=16,SNR=7.3						
JTS				S	**Sn**	**21 13 17.5**	**-3.9**
	comp=N,4.5nm,0.4s,baz=266,slow=20,SNR=1.6						
CMIG	**Matias Romero**	**6.14**	**314**	P	**Pn**	**21 12 23.0**	**+2.1**
	comp=N,4.1nm,0.4s,baz=118,slow=7.9,SNR=6.8						
CMIG				S	**Sn**	**21 13 31.6**	**+1.4**
	comp=N,3.6nm,0.5s,baz=286,slow=16,SNR=1.4						
TEIG	**Tepich**	**7.54**	**14**	P	**Pn**	**21 12 40.5**	**+0.4**
	comp=N,0.5nm,0.6s,baz=311,slow=23,SNR=3.4						
TXAR	**Lajitas Array**	**20.59**	**325**	P	**P**	**21 15 31.0**	**+2.1**
	comp=N,0.8nm,0.6s,baz=143,slow=12,SNR=12						
	comp=N,0.8nm,0.6s						
TKL	**Tuckaleechee C**	**23.41**	**13**	LR	LR	21 25 00.8	
	comp=N,46nm,19.7s,baz=188,slow=37						
SADO	**Sadowa**	**33.16**	**15**	LR	LR	21 31 34.8	
	comp=N,42nm,18.9s,baz=328,slow=38						
NVAR	**Mina Array Bea**	**35.62**	**321**	P	**P**	**21 17 49.9**	**+2.3**
	comp=N,1.7nm,0.7s,baz=137,slow=8.7,SNR=8.5						
NVAR				LR	LR	21 34 11.2	
	comp=N,62nm,18.4s,baz=90,slow=39						
	comp=N,1.7nm,0.7s						
SCHQ	**Schefferville**	**45.70**	**19**	P	**P**	**21 19 07.6**	**-2.8**
	comp=N,3.5nm,0.5s,baz=203,slow=7.3,SNR=7.4						
	comp=N,3.5nm,0.5s						
YKA	**Yellowknife Ar**	**52.51**	**346**	P	**P**	**21 20 00.4**	**-1.9**
	comp=N,1.0nm,0.7s,baz=135,slow=2.7,SNR=5.7						
	comp=N,1.0nm,0.7s						
FRB	**Frobisher Bay**	**53.03**	**12**	LR	LR	21 42 22.3	
	comp=N,25nm,18.3s,baz=339,slow=36						
ILAR	**Eielson Array**	**64.54**	**337**	P	**P**	**21 21 25.3**	**-0.9**
	comp=N,0.4nm,0.8s,baz=105,slow=6.8,SNR=3.8						
	comp=N,0.4nm,0.8s						
ASAR	**Alice Springs**	**136.90**	**249**	PKP	**PKPdf**	**21 30 13.4**	**+0.5**
	comp=N,0.7nm,1.0s,baz=91,slow=3.6,SNR=2.2						
CMAR	**Chiang Mai Arr**	**147.57**	**344**	PKPbc	**PKPdf**	**21 30 33.6**	**+1.7**
	comp=N,0.5nm,0.4s,baz=336,slow=4.3,SNR=5.4						

IDC 28 21:21:09.6±5.7, 6°.36S×149°.85E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=164.1km s-min=35.2km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.23**	**227**	P	Pn	21 25 47.5	-0.8
	0.3nm,0.5s,baz=53,slow=11,SNR=3.2						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**23.05**	**220**	P	P	21 26 16.1	-0.7
	0.2nm,0.4s,baz=50,slow=9.7,SNR=5.8						
	0.2nm,0.4s						
SONM	**Songino Array**	**66.12**	**330**	P	P	21 31 58.8	0.0
	0.4nm,0.6s,baz=126,slow=7.4,SNR=2.2						
	0.4nm,0.6s						

*SNET **28** 21:32:02.1±6.8, 13°.14N×90°.15W, h47km, ML3.3*
*CATAC **28** 21:32:06.4±0.5, 13°N±3°×9°.0W±°, h26km±3km, M3.2/16, MLv3.2/16, Error ellipse: s-maj=6.5km s-min=4.1km az=35.8, confirmed*
*GCG **28** 21:32:08.3±0.5, 13°.24N×89°.56W, h55km±7km, MD3.8*
ISC 28 21:32:07.0±2.0, 13°.06N±0°.09×89°.56W±0°.07, h43km, n63, σ0°45/66, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.48**	**28**	*e*P	**Pn**	**21 32 17.4**	**-0.3**
JAYA	**Jayaque - finc**	**0.60**	**10**	*e*P	**Pn**	**21 32 19.0**	**-0.4**
JAYA	**Jayaque - finc**	**0.60**	**10**	*i* P	**Pn**	**21 32 19.0**	**-0.4**
JAYA				*i* S	**Sn**	**21 32 27.7**	**-0.4**
JAYA	**Jayaque - finc**	**0.60**	**10**	P	**Pn**	**21 32 19.1**	**-0.3**
PMON	**Piamonte**	**0.69**	**20**	*e*P	**Pn**	**21 32 19.9**	**-0.6**
PMON	**Piamonte**	**0.69**	**20**	P	**Pn**	**21 32 20.1**	**-0.4**
LOMA	**Loma Larga**	**0.69**	**33**	*e*P	**Pn**	**21 32 19.4**	**-1.2**
LOMA	**Loma Larga**	**0.69**	**33**	S	**Sn**	**21 32 30.5**	**+0.3**
LOMA	**Loma Larga**	**0.69**	**33**	P	**Pn**	**21 32 19.6**	**-1.0**
BOQS	**Boqueron**	**0.72**	**22**	*e*P	**Pn**	**21 32 20.6**	**-0.5**
LFRS	**El Faro**	**0.74**	**41**	*e*P	**Pn**	**21 32 20.7**	**-0.5**
PIC2	**El Picacho**	**0.74**	**23**	*e*P	**Pn**	**21 32 21.2**	**-0.1**
IGN	**Direccin Gen**	**0.75**	**30**	S	**Sn**	**21 32 31.9**	**+0.3**
CEDA	**San Andres**	**0.75**	**12**	S	**Sn**	**21 32 32.0**	**+0.3**
CEDA	**San Andres**	**0.75**	**12**	P	**Pn**	**21 32 21.1**	**-0.3**
UDBS	**Universidad Do**	**0.76**	**31**	S	**Sn**	**21 32 32.1**	**+0.3**
CEVE	**Cerro Verde**	**0.76**	**355**	*e*P	**Pn**	**21 32 21.1**	**-0.5**
CEVE	**Cerro Verde**	**0.76**	**355**	P	**Pn**	**21 32 21.6**	**-0.1**
CEVE	**Cerro Verde**	**0.76**	**355**	S	**Sn**	**21 32 33.2**	**+1.0**
SBLS	**San Blas**	**0.77**	**355**	*e*P	**Pn**	**21 32 21.6**	**-0.2**
SNJE	**San Jose**	**0.80**	**357**	*e*P	**Pn**	**21 32 21.9**	**-0.3**
LFU	**La Fuente**	**0.81**	**32**	*e*P	**Pn**	**21 32 21.9**	**-0.2**
RTR	**El Retiro**	**0.83**	**354**	*e*P	**Pn**	**21 32 22.5**	**0.0**
LBRS	**Las Brisas**	**0.84**	**37**	*e*P	**Pn**	**21 32 22.4**	**-0.1**
NUBE	**Las Nubes**	**0.86**	**345**	*e*P	**Pn**	**21 32 22.5**	**-0.4**
NUBE	**Las Nubes**	**0.86**	**345**	*i* P	**Pn**	**21 32 22.5**	**-0.4**
NUBE				*e*S	**Sn**	**21 32 33.9**	**-0.6**
NUBE	**Las Nubes**	**0.86**	**345**	P	**Pn**	**21 32 22.6**	**-0.4**
NUBE	**Las Nubes**	**0.86**	**345**	S	**Sn**	**21 32 34.3**	**-0.1**
PAVA	**Las Pavas**	**0.88**	**43**	*e*P	**Pn**	**21 32 22.9**	**-0.3**
PAVA	**Las Pavas**	**0.88**	**43**	S	**Sn**	**21 32 35.7**	**+0.8**
PAVA	**Las Pavas**	**0.88**	**43**	P	**Pn**	**21 32 23.1**	**-0.1**
TECO	**Alcaldia de Te**	**0.89**	**58**	S	**Sn**	**21 32 34.6**	**-0.3**
TECO	**Alcaldia de Te**	**0.89**	**58**	P	**Pn**	**21 32 22.5**	**-0.7**
FAME	**Alcaldia de Sa**	**0.90**	**330**	P	**Pn**	**21 32 23.0**	**-0.2**
UNIC	**Universidad Ca**	**0.91**	**0**	S	**Sn**	**21 32 36.4**	**+0.9**
UNIC	**Universidad Ca**	**0.91**	**0**	P	**Pn**	**21 32 23.5**	**-0.1**
UESV	**Universidad de**	**0.94**	**53**	P	**Pn**	**21 32 23.1**	**-0.8**
UESV	**Universidad de**	**0.94**	**53**	S	**Sn**	**21 32 36.2**	**0.0**
LOAL	**Lomas de Alarc**	**0.95**	**347**	S	**Sn**	**21 32 37.1**	**+0.5**
LOAL	**Lomas de Alarc**	**0.95**	**347**	P	**Pn**	**21 32 24.3**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.02**	**52**	S	**Sn**	**21 32 39.0**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.02**	**52**	P	**Pn**	**21 32 25.0**	**-0.1**
LLGN	**La Laguna**	**1.24**	**28**	P	**Pn**	**21 32 27.9**	**-0.2**
LLGN	**La Laguna**	**1.24**	**28**	S	**Sn**	**21 32 44.1**	**+0.4**
PACA	**Pacayal**	**1.27**	**71**	*e*P	**Pn**	**21 32 28.5**	**+0.1**
PACA	**Pacayal**	**1.27**	**71**	P	**Pn**	**21 32 28.8**	**+0.4**
PACA	**Pacayal**	**1.27**	**71**	S	**Sn**	**21 32 44.4**	**+0.1**
LCY	**Lacayo**	**1.28**	**74**	*e*P	**Pn**	**21 32 28.3**	**-0.3**
RANC

PAVA				*e*S		**Sn**	**22 33 57.7 -1.0**
PAVA	**Las Pavas**	**1.28**	**344**	S		**Sn**	**22 33 58.4 -0.3**
PAVA	**Las Pavas**	**1.28**	**344**	P		**Pn**	**22 33 42.5 +0.5**
LOMA	**Loma Larga**	**1.30**	**333**	*e*P		**Pn**	**22 33 42.0 -0.4**
LOMA				*e*S		**Sn**	**22 33 58.5 -0.7**
LOMA	**Loma Larga**	**1.30**	**333**	P		**Pn**	**22 33 42.3 0.0**
LOMA	**Loma Larga**	**1.30**	**333**	S		**Sn**	**22 33 59.1 -0.2**
LBRS	**Las Brisas**	**1.34**	**340**	*e*P		**Pn**	**22 33 43.4 +0.5**
LFU	**La Fuente**	**1.37**	**337**	*e*P		**Pn**	**22 33 43.1 -0.2**
PMON	**Piamonte**	**1.43**	**329**	*e*P		**Pn**	**22 33 44.2 +0.2**
PMON				*e*S		**Sn**	**22 34 01.7 -0.6**
PMON	**Piamonte**	**1.43**	**329**	P		**Pn**	**22 33 44.3 +0.2**
BOQS	**Boqueron**	**1.43**	**331**	*e*P		**Pn**	**22 33 44.8 +0.6**
JAYA	**Jayaque - finc**	**1.45**	**324**	*e*P		**Pn**	**22 33 44.0 -0.4**
JAYA				*e*S		**Sn**	**22 33 59.2 -1.8**
JAYA	**Jayaque - finc**	**1.45**	**324**	*i* P		**Pn**	**22 33 44.4 0.0**
JAYA				*e*S		**Sn**	**22 33 59.7 -3.2**
JAYA	**Jayaque - finc**	**1.45**	**324**	P		**Pn**	**22 33 44.4 0.0**
JAYA	**Jayaque - finc**	**1.45**	**324**	S		**Sn**	**22 34 02.0 -1.0**
CRIN	**San Cristobal**	**1.50**	**81**	P		**Pn**	**22 33 45.9 +0.9**
CRIN	**San Cristobal**	**1.50**	**81**	S		**Sb**	**22 34 04.8 -0.2**
PKGN	**Cerro Pekin**	**1.56**	**83**	P		**Pb**	**22 33 47.3 -0.2**
PKGN				S		**Sn**	**22 34 05.5 0.0**
SBLS	**San Blas**	**1.70**	**323**	*e*P		**Pn**	**22 33 48.4 +0.4**
SNJE	**San Jose**	**1.71**	**324**	*e*P		**Pn**	**22 33 48.6 +0.5**
LLGN	**La Laguna**	**1.71**	**348**	S		**Sn**	**22 34 10.0 +0.6**
LLGN	**La Laguna**	**1.71**	**348**	P		**Pn**	**22 33 49.6 +1.6**
POLN	**Al Sur del Vol**	**1.72**	**84**	P		**Pn**	**22 33 48.1 0.0**
POLN				S		**Sn**	**22 34 08.5 -1.0**
RTR	**El Retiro**	**1.76**	**323**	*e*P		**Pn**	**22 33 49.6 +0.9**
RTR				*e*S		**Sn**	**22 34 10.0 -0.6**
CNGN	**Cerro Negro**	**1.83**	**89**	P		**Pn**	**22 33 49.6 +0.1**
NUBE	**Las Nubes**	**1.84**	**320**	*e*P		**Pn**	**22 33 50.3 +0.5**
NUBE	**Las Nubes**	**1.84**	**320**	*e*P		**Pn**	**22 33 50.3 +0.5**
NUBE	**Las Nubes**	**1.84**	**320**	P		**Pn**	**22 33 50.4 +0.5**
COPN	**Copaltepe**	**1.95**	**98**	P		**Pn**	**22 33 51.4 +0.1**
FAME	**Alcaldia de Sa**	**1.96**	**314**	P		**Pn**	**22 33 51.9 +0.6**
FAME	**Alcaldia de Sa**	**1.96**	**314**	S		**Sn**	**22 34 16.8 +1.6**
MOMN	**Momotombo**	**1.98**	**92**	P		**Pn**	**22 33 51.5 -0.2**
MTO3	**Montecristo**	**2.06**	**338**	*e*P		**Pn**	**22 33 54.6 +1.7**
MTO3	**Montecristo**	**2.06**	**338**	*e*P		**Pn**	**22 33 54.0 +1.1**
MTO3	**Montecristo**	**2.06**	**338**	P		**Pn**	**22 33 54.7 +1.7**
MTO3	**Montecristo**	**2.06**	**338**	S		**Sn**	**22 34 19.3 +1.2**
LIMN	**Finca el Limon**	**2.23**	**75**	P		**Pn**	**22 33 54.9 -0.2**
YUSH	**Yuscaran**	**2.23**	**49**	P		**Pn**	**22 33 55.5 +0.4**
MGAN	**Managua**	**2.29**	**98**	S		**Sn**	**22 34 22.4 -1.1**
NANN	**Nandasmo**	**2.45**	**102**	P		**Pn**	**22 33 59.6 +1.5**
NANN	**Nandasmo**	**2.45**	**102**	S		**Sn**	**22 34 27.0 -0.5**
RCON	**San Juan de Ri**	**2.56**	**67**	P		**Pn**	**22 34 00.6 +0.9**
RCVN	**Varillal2**	**2.56**	**64**	P		**Pn**	**22 34 00.5 +0.7**
RCVN	**Varillal2**	**2.56**	**64**	S		**Sn**	**22 34 30.9 +0.5**
BOAB	**BOACO BROADBAN**	**2.83**	**90**	P		**Pn**	**22 34 02.8 -0.5**
CARN	**Rivas**	**3.25**	**113**	S		**Sn**	**22 34 47.8 +0.8**
STG8	**El Palmar, Qui**	**3.34**	**306**	*e*P		**Pb**	**22 34 17.8 -0.2**
STG8				*e*S		**Sb**	**22 34 57.3 -1.0**

FUNV ***28*** *22:52:44.5,9.˚61N×73.˚25W,h107km,MW3.3*
RSNC ***28*** *22:52:44.9±0.0,10.˚1'×7.˚3W±.˚,h124km±2km,M2.4, ML2.2*

ISC 28 22:52:43.4±1.7,**9.˚62N**±0.˚04×**73.˚16W**±0.˚05,**h127**km±15km, **n15,σ1§23/26,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.75**	**55**	*e*P	**Pn**	**22 53 03.8**	**-0.1**
MCQV				*e*S	**Sn**	**22 53 17.2**	**-2.1**
ARGC	**Ariguani, Magd**	**1.09**	**282**	P	**Pn**	**22 53 08.4**	**+1.4**
ARGC				S	**Sn**	**22 53 26.2**	**+1.4**
OCAC	**Ocana**	**1.38**	**186**	P	**Pn**	**22 53 10.9**	**+0.7**
OCAC				S	**Sn**	**22 53 30.5**	**0.0**
CRJC	**Cerrejon, Guaj**	**1.42**	**11**	P	**Pn**	**22 53 11.5**	**+1.0**
CRJC				S	**Sn**	**22 53 31.3**	**+0.2**
SMRC	**Santa Marta, M**	**1.85**	**326**	P	**Pn**	**22 53 15.5**	**0.0**
SMRC				S	**Sn**	**22 53 38.5**	**-1.5**
CAPV	**Capacho**	**1.94**	**154**	*e*P	**Pn**	**22 53 16.6**	**-0.1**
CAPV				*e*S	**Sn**	**22 53 40.3**	**-1.8**
SJCC	**San Jacinto, C**	**2.01**	**278**	P	**Pn**	**22 53 17.4**	**0.0**
SJCC				S	**Sn**	**22 53 42.4**	**-1.0**
PAMC	**Pamplona, Colo**	**2.31**	**169**	P	**Pn**	**22 53 23.1**	**+1.4**
PAMC				S	**Sn**	**22 53 51.5**	**+0.6**
URIC	**Uribia, Colomb**	**2.37**	**29**	P	**Pn**	**22 53 22.7**	**+0.9**
URIC				S	**Sn**	**22 53 51.6**	**+0.3**
SOCV	**Socops**	**2.64**	**120**	*e*S	**Sn**	**22 53 56.4**	**-1.1**
BRJC	**Barrancabermej**	**2.69**	**192**	P	**Pn**	**22 53 27.2**	**+1.2**
BRJC				S	**Sn**	**22 53 59.7**	**+0.9**
UREC	**San Jos de Ur**	**2.99**	**232**	P	**Pn**	**22 53 29.7**	**-0.2**
UREC				S	**Sn**	**22 54 02.7**	**-3.0**
PTBC	**PUERTO BERRIO,**	**3.32**	**203**	P	**Pn**	**22 53 35.0**	**+0.8**
PTBC				S	**Sn**	**22 54 13.4**	**0.0**
RUSC	**La Rusia**	**3.71**	**179**	P	**Pn**	**22 53 39.6**	**-0.1**
CACV	**CAICARA DEL OR**	**6.86**	**107**	*e*P	Pn	22 54 28.4	+6.8

IDC ***28*** *22:58:31.1±3.7,24.˚01S×179.˚60E,h549km±33km,mb3.0/4, mbtmp4.0/5,Error ellipse: s-maj=98.0km s-min=26.3km az=158.0*

ISC 28 22:58:30.1±1.1,**24.˚5S**±0.˚1×**179.˚8E**±0.˚2,**h550**km,**n8, σ1§31/10,mb3.7/4,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.55**	**279**	P	**P**	**23 01 14.6**	**+0.1**
	5.4nm,0.6s,baz=98,slow=14,SNR=6.2						
URZ	**Urewera**	**13.88**	**189**	P	**P**	**23 01 28.2**	**+0.4**
	3.7nm,0.7s,baz=334,slow=8.8,SNR=1.3						
URZ				S	**S**	**23 03 53.4**	**-0.8**
	3.0nm,0.6s,baz=79,slow=20,SNR=1.8						
STKA	**Stephens Creek**	**34.35**	**249**	P	**P**	**23 04 32.5**	**+1.0**
	1.7nm,0.6s,baz=108,slow=13,SNR=4.4						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**41.79**	**261**	P	**P**	**23 05 32.1**	**0.0**
	0.5nm,0.5s,baz=98,slow=7.0,SNR=7.8						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**42.22**	**267**	P	**P**	**23 05 34.5**	**-1.1**
	1.7nm,0.5s,baz=104,slow=8.0,SNR=18						
WRA				ScP	**ScP**	**23 10 16.6**	**+1.4**
	0.5nm,0.7s,baz=105,slow=3.4,SNR=3.5						
	1.7nm,0.5s						
TXAR	**Lajitas Array**	**90.89**	**58**	P	**P**	**23 10 36.9**	**+1.2**
	0.4nm,0.7s,baz=237,slow=4.0,SNR=4.5						
	0.4nm,0.7s						
HFS	**Hagfors**	**143.13**	**348**	PKP	**PKPdf**	**23 16 59.3**	**-1.9**
	1.9nm,0.4s,baz=39,slow=2.5,SNR=17						
EKA	**Eskdalemuir Ar**	**149.16**	**3**	PKPbc	**PKiKP**	**23 17 15.7**	**-1.5**
	2.4nm,0.8s,baz=0.0,slow=1.8,SNR=3.6						

GII ***28*** *23:00:40.8±0.0,41.˚41N×19.˚58E,h10km,confirmed*
MOS ***28*** *23:00:41.5±1.0,41.˚29N×19.˚45E,h18km,mb5.0/18,Error ellipse: s-maj=5.4km s-min=3.4km az=72.2*
NEIC ***28*** *23:00:43.2±2.4,41.˚37N±0.˚05×19.˚58E±0.˚07,h10km±1km, mb4.6/59,Error ellipse: s-maj=8.9km s-min=7.9km az=235.0*
BEO ***28*** *23:00:44.2±0.5,41.˚33N×19.˚63E,h11km±2km,ML4.1/19*
ROM ***28*** *23:00:44.6±0.1,41.˚367N±0.˚009×19.˚65E±0.˚02, h23km±1km,ML4.2/200,Error ellipse: s-maj=1.6km s-min=0.7km az=67.0*
MCSM ***28*** *23:00:44.6±0.3,41˚N±3'×2'0E±˚,h10km±2km,mb4.5, mB4.8,MLv4.6,Mw(mB)4.1*
PRU ***28*** *23:00:44.1,41.˚17N×19.˚55E,h10km,M4.5*
MED_RC ***28*** *23:00:44.0±0.4,41.˚49N×19.˚49E,h23km±1km,MW4.4/19, Moment Tensor Solution.Mantle waves: s19,c23; Duration: 1§0 Moment tensor: Scale 10^{15}Nm; M_{rr}3.54±.57; $M_{\theta\theta}$0.81±.30; $M_{\phi\phi}$-4.35±.39; $M_{r\theta}$0.45±.27; $M_{\theta\phi}$1.65±.19; $M_{\phi r}$-1.98±.28; Best double couple: M_{o}4.65000×10^{15} NP1:ϕ_s341.00000°, δ32.00000°, λ86.00000°. NP2:ϕ_s166.00000°, δ58.00000°, λ93.00000°. Principal axes: T 4.0100, Plg77.0000°, Azm85.0000°; N 1.2800, Plg2.0000°, Azm344.0000°; P -5.3000, Plg13.0000°, Azm254.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
SKO ***28*** *23:00:45.5,41.˚40N×19.˚58E,h7km,ML4.4*
IDC ***28*** *23:00:45.9±2.4,41.˚43N×19.˚60E,h28km±17km,mb4.2/23, mbtmp4.3/38,ML3.6/12,MS3.7/45,Error ellipse: s-maj=10.5km s-min=8.5km az=20.0*
PDG ***28*** *23:00:45.1±0.5,41.˚38N×19.˚52E,h24km±1km,MD4.2/10, ML4.2/12,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
TIR ***28*** *23:00:45.2,41.˚47N×19.˚63E,h32km±3km,Ml4.6/6*
THE ***28*** *23:00:45.4,42˚N±6'×2˚0E±˚,h1km±15km,M4.2/14, MLh4.2/14*
RHSSO ***28*** *23:00:47.6±0.9,41.˚51N×19.˚39E,h11km±4km,ML4.3/6*
NAO ***28*** *23:00:49.4,42.˚03N×19.˚23E,h10km,MB4.0*

ISC 28 23:00:44.5±0.6,**41.˚43N**±0.˚01×**19.˚65E**±0.˚02,**h20**km±2km, **n670,σ1§85/737,mb4.7/64,MS3.8/37,82C-61D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.18**	**117**	Pg	**Pg**	**23 00 49.2**	**-0.2**
TIR				AML	AML	23 00 52.1	
	666nm,0.5s						
TIR				Sg	**Sg**	**23 00 52.6**	**-0.1**
TIR	**Tirane**	**0.18**	**117**	⇓*i*Pg	**Pg**	**23 00 49.2**	**-0.2**
TIR				*i* Sg	**Sg**	**23 00 53.4**	**+0.7**
TIR	**Tirane**	**0.18**	**117**	⇓P	**Pb**	**23 00 49.1**	**+0.5**
TIR				S	**Sg**	**23 00 53.0**	**+0.3**
TIR				AML	AML		
TIR				AML	AML		
TIR				AML	AML		
TIR				AML	AML		
ULC	**Ulcinj**	**0.61**	**331**	⇓*i*Pg	**Pb**	**23 00 56.7**	**+0.2**
ULC				*i* Sg	**Sb**	**23 01 05.9**	**+1.1**
SDA	**Shkodra**	**0.63**	**350**	Pg	**Pg**	**23 00 57.0**	**-0.1**
SDA				Sg	**Sn**	**23 01 06.8**	**-1.1**
PHP	**Peshkopia**	**0.65**	**67**	Pg	**Pg**	**23 00 56.9**	**-0.3**
PHP				Sg	**Sn**	**23 01 07.1**	**-1.2**
PHP	**Peshkopia**	**0.65**	**67**	P	**Pb**	**23 00 57.0**	**-0.1**
DRME	**Dracevica, Mon**	**0.83**	**336**	*e*Pg	**Pn**	**23 01 01.5**	**+0.3**
DRME				*e*Sg	**Sn**	**23 01 14.3**	**+1.4**
DRME	**Dracevica, Mon**	**0.83**	**336**	⇑*i*Pg	**Pg**	**23 01 00.8**	**0.0**
DRME				*i* Sg	**Sn**	**23 01 13.5**	**+0.6**
OHR	**Ohrid**	**0.92**	**110**	*i* Pg	**Pg**	**23 01 02.5**	**0.0**
OHR				*i* Sg	**Sn**	**23 01 17.3**	**+2.1**
OHR				*e*Lg	Lg	23 01 17.4	
	comp=N,5μm,0.2s						
OHR				*e*Lg	Lg	23 01 21.2	
	comp=E,13μm,0.6s						
VLO	**Vlora**	**0.97**	**187**	Pg	**Pg**	**23 01 04.4**	**+1.1**
VLO				Sg	**Sn**	**23 01 17.3**	**+1.1**
VLO				AML	AML	23 01 24.6	
	comp=E,161nm,0.6s						
VLO	**Vlora**	**0.97**	**187**	P	**Pg**	**23 01 04.7**	**+1.4**
VLO				S	**Sn**	**23 01 20.4**	**+4.2**
VLO	**Vlora**	**0.97**	**187**	P	**Pg**	**23 01 04.2**	**+0.9**
VLO				S	**Sn**	**23 01 19.1**	**+3.0**
VLO				AML	AML		
	comp=E,35950μm,0.5s						
VLO				AML	AML		
	comp=N,52350μm,0.7s						
VLO				AML	AML		
	comp=N,52343μm,0.7s						
VLO				AML	AML		
	comp=E,35983μm,0.5s						
BUM	**Brajici-Budva**	**1.04**	**327**	⇓*i*Pg	**Pg**	**23 01 04.7**	**0.0**
BUM				*i* Sg	**Sn**	**23 01 20.2**	**+2.2**
PDG	**Podgorica**	**1.04**	**344**	Pg	**Pg**	**23 01 04.8**	**+0.1**
PDG				Sg	**Sg**	**23 01 18.7**	**+0.2**
PDG	**Podgorica**	**1.04**	**344**		**Pg**	**23 01 05.0**	**+0.3**
PDG				Sn	**Sg**	**23 01 20.0**	**+1.5**
PDG	**Podgorica**	**1.04**	**344**	⇑P	**Pg**	**23 01 05.7**	**+1.0**
PDG	**Podgorica**	**1.04**	**344**	*e*Pg	**Pg**	**23 01 05.3**	**+0.5**
PDG				*e*Sg	**Sg**	**23 01 20.6**	**+2.1**
PDG	**Podgorica**	**1.04**	**344**	P	**Pg**	**23 01 05.1**	**+0.3**
PDG				S	**Sg**	**23 01 20.3**	**+1.9**
PDG				AML	AML		
	comp=E,14700μm,0.6s						
PDG				AML	AML		
	comp=N,12150μm,0.6s						
PDG				AML	AML		
	comp=N,12150μm,0.6s						
PDG				AML	AML		
	comp=E,14750μm,0.6s						
PDG				AML	AML		
	comp=N,10725μm,0.4s						
PDG				AML	AML		
	comp=N,10641μm,0.4s						
PDG	**Podgorica**	**1.04**	**344**	⇑*i*Pg	**Pg**	**23 01 04.9**	**+0.1**
PDG				*i* Sg	**Sg**	**23 01 20.9**	**+2.4**
KBN	**Korca**	**1.18**	**133**	Pn	**Pg**	**23 01 08.2**	**+0.8**
KBN				Sn	**Sg**	**23 01 25.2**	**+2.4**
KBN	**Korca**	**1.18**	**133**	P	**Pg**	**23 01 08.2**	**+0.8**
KBN				S	**Sg**	**23 01 26.9**	**+4.0**
KBN	**Korca**	**1.18**	**133**	P	**Pb**	**23 01 06.4**	**+0.1**
PVY	**Plav**	**1.19**	**11**	*e*Pg	**Pg**	**23 01 08.0**	**+0.5**
PVY				*e*Sg	**Sg**	**23 01 25.2**	**+2.1**
PVY	**Plav**	**1.19**	**11**	⇓*i*Pg	**Pg**	**23 01 07.2**	**-0.3**
PVY				*i* Sg	**Sg**	**23 01 25.4**	**+2.3**
HCY	**Herceg Novi**	**1.33**	**320**	⇓*i*Pg	**Pg**	**23 01 09.9**	**-0.4**
HCY				*i* Sg	**Sg**	**23 01 27.9**	**+0.2**
KOME	**Kolasin**	**1.42**	**356**	*e*Pg	**Pg**	**23 01 12.2**	**+0.2**
KOME				*e*Sg	**Sg**	**23 01 34.6**	**+4.0**
KOME	**Kolasin**	**1.42**	**356**	⇓*i*Pg	**Pg**	**23 01 11.8**	**-0.2**
KOME				*i* Sg	**Sg**	**23 01 31.7**	**+1.1**
NKME	**Niksic**	**1.43**	**339**	⇓*i*Pg	**Pg**	**23 01 11.5**	**-0.7**
NKME				*i* Sg	**Sg**	**23 01 31.9**	**+1.0**
SKO	**Skopje**	**1.45**	**67**	*i* Pg	**Pg**	**23 01 12.5**	**0.0**
SKO				*i* Sg	**Sg**	**23 01 33.4**	**+2.1**
BEY	**Berane**	**1.45**	**7**	*e*Pg	**Pg**	**23 01 12.4**	**-0.2**
BEY				*e*Sg	**Sg**	**23 01 32.6**	**+1.1**
IVA	**Berane**	**1.45**	**7**	⇑*i*Pg	**Pb**	**23 01 11.3**	**+0.3**
IVA				*i* Sg	**Sg**	**23 01 31.6**	**+0.1**
NEST	**Nestorio**	**1.47**	**133**	Pn	**Pb**	**23 01 11.7**	**+0.5**
NEST				Sn	**Sg**	**23 01 34.2**	**+2.1**
NEST				AML	AML	23 01 37.6	
	comp=N,19nm,0.8s						
NEST	**Nestorio**	**1.47**	**133**	P	**Pb**	**23 01 12.0**	**+0.8**
NEST				S	**Sg**	**23 01 34.6**	**+2.6**
MESG	**Mesagne**	**1.60**	**239**	P	**Pn**	**23 01 11.5**	**-0.2**
TREB	**Trebinje**	**1.61**	**324**	⇓*i*Pg	**Pb**	**23 01 13.2**	**-0.3**
TREB				*e*Sg	**Sb**	**23 01 33.1**	**-0.4**
TREB	**Trebinje**	**1.61**	**324**	*e*Pg	**Pb**	**23 01 13.3**	**-0.3**
TREB				*e*Sg	**Sg**	**23 01 37.3**	**+0.8**
PENT	**Pentalofos**	**1.67**	**137**	P	**Pg**	**23 01 15.9**	**-0.8**
PENT				S	**Sg**	**23 01 39.3**	**+0.8**
BRY	**Bratogost**	**1.69**	**331**	⇑*i*Pn	**Pb**	**23 01 15.0**	**0.0**
BRY				*i* Sn	**Sb**	**23 01 36.1**	**+0.3**
KEK	**Kerkira**	**1.72**	**176**	Pn	**Pg**	**23 01 18.6**	**+1.0**
KEK	**Kerkira**	**1.72**	**176**	P	**Pg**	**23 01 18.6**	**+1.0**
SJES	**Sjenica**	**1.85**	**7**	*e*Pg	**Pb**	**23 01 18.8**	**+1.1**
SJES				*e*Sg	**Sg**	**23 01 45.0**	**+0.9**
UPM	**Unac-Piva**	**1.86**	**343**	⇓*i*Pn	**Pb**	**23 01 17.1**	**-0.8**
UPM				*i* Sn	**Sb**	**23 01 41.6**	**+0.8**
KLINJ	**Klinje**	**1.91**	**336**	*e*Pn	**Pb**	**23 01 18.4**	**-0.3**
KLINJ				*e*Sn	**Sn**	**23 01 40.4**	**+0.8**
PLE	**Pljevlja**	**1.91**	**354**	*e*Pg	**Pb**	**23 01 19.8**	**+1.1**
PLE				*e*Sg	**Sg**	**23 01 47.0**	**+0.9**
PLE	**Pljevlja**	**1.91**	**354**	⇑*i*Pn	**Pb**	**23 01 18.5**	**-0.2**
PLE				*i* Sn	**Sb**	**23 01 42.9**	**+0.7**
KZN	**Kozani**	**1.96**	**124**	P	**Pb**	**23 01 19.2**	**-0.5**
KZN				S	**Sb**	**23 01 45.7**	**+2.0**
IGT	**Igoumenitsa**	**1.97**	**164**	Pn	**Pn**	**23 01 18.1**	**+1.3**
IGT				Sn	**Sb**	**23 01 44.7**	**+1.0**
IGT				AML	AML	23 01 53.8	
	comp=N,12nm,0.6s						
IGT	**Igoumenitsa**	**1.97**	**164**	P	**Pb**	**23 01 20.6**	**+0.9**
IGT				S	**Sg**	**23 01 47.3**	**-0.5**
JAN	**Janina**	**1.99**	**152**	P	**Pb**	**23 01 21.0**	**+0.9**
JAN				S	**Sg**	**23 01 47.1**	**-1.7**
TAR1	**Taranto**	**2.00**	**244**	P	**Pn**	**23 01 16.7**	**-0.5**
TAR1				AML	AML		
	comp=E,3130μm,1.0s						
TAR1				AML	AML		
	comp=N,3720μm,1.1s						
TAR1				AML	AML		
	comp=N,3718μm,1.1s						
TAR1				AML	AML		
	comp=E,3131μm,1.0s						
LFKM	**Lefkimmi**	**2.01**	**171**	P	**Pb**	**23 01 21.3**	**+1.0**
LFKM				S	**Sg**	**23 01 49.6**	**+0.5**
STON	**Ston**	**2.04**	**315**	P	**Pn**	**23 01 18.4**	**+0.6**
STON				S	**Sn**	**23 01 44.1**	**+1.4**
STON				AML	AML		
	comp=E,2415μm,1.0s						
STON				AML	AML		
	comp=N,2410μm,1.0s						
STON				AML	AML		
	comp=N,2160μm,0.4s						
STON				AML	AML		
	comp=E,2256μm,0.4s						
NOCI	**Noci**	**2.06**	**253**	Pn	**Pn**	**23 01 17.7**	**-0.3**
NOCI				AML	AML	23 01 56.7	
	comp=E,10nm,0.7s						
NOCI	**Noci**	**2.06**	**253**	P	**Pn**	**23 01 17.7**	**-0.3**
NOCI				S	**Sn**	**23 01 41.7**	**-1.3**
NOCI				AML	AML		
	comp=E,3480μm,1.1s						
NOCI				AML	AML		
	comp=N,4700μm,1.0s						
NOCI				AML	AML		
	comp=E,3356μm,0.7s						
NOCI				AML	AML		
	comp=N,4286μm,0.5s						
SELS	**Selova**	**2.10**	**31**	*e*Pn	**Pb**	**23 01 20.9**	**-1.0**
SELS				*e*Sn	**Sb**	**23 01 46.9**	**-0.6**
BARS	**Barje**	**2.13**	**49**	*i* Pn	**Pg**	**23 01 25.9**	**+0.5**
BARS	**Barje**	**2.13**	**49**	*e*Pn	**Pb**	**23 01 21.2**	**-1.2**
BARS				*e*Sn	**Sb**	**23 01 48.3**	**0.0**
GRG	**Griva**	**2.13**	**102**	P	**Pb**	**23 01 21.5**	**-1.0**
GRG				S	**Sb**	**23 01 49.4**	**+0.9**
GRG	**Griva**	**2.13**	**102**	*i* Pn	**Pb**	**23 01 21.4**	**-1.0**
IVAS	**Ivanjica**	**2.18**	**10**	*e*Pn	**Pb**	**23 01 21.6**	**-1.7**
IVAS				*e*Sn	**Sb**	**23 01 50.6**	**+0.7**
PRMD	**Pramanda**	**2.20**	**149**	P	**Pb**	**23 01 23.1**	**-0.5**
RUDO	**Rudo**	**2.20**	**355**	*e*Pn	**Pb**	**23 01 21.8**	**+1.9**
RUDO				*e*Sn	**Sb**	**23 01 49.0**	**-1.4**
RUDO	**Rudo**	**2.20**	**355**	*e*Pn	**Pb**	**23 01 22.4**	**-1.2**
RUDO				*e*Sn	**Sb**	**23 01 50.8**	**+0.4**
VAY	**Valandovo**	**2.20**	**92**	*i* Pn	**Pb**	**23 01 23.5**	**-0.1**
VAY				*i* Sn	**Sb**	**23 01 50.0**	**-0.5**
VAY				*e*Lg	Lg	23 01 50.7	
	comp=E,1μm,0.8s						
VAY				*e*Lg	Lg	23 01 55.0	
	comp=N,2μm,1.1s						
GOCS	**Kraljevo Serbi**	**2.32**	**23**	*e*Pn	**Pb**	**23 01 24.4**	**-1.3**
GOCS				*e*Sn	**Sb**	**23 01 54.6**	**+0.7**
AMUR	**Altamura**	**2.36**	**258**	⇓P	**Pn**	**23 01 22.0**	**-0.1**
AMUR				AML	AML		
	comp=E,2210μm,0.7s						
AMUR				AML	AML		
	comp=N,1855μm,1.0s						
AMUR				AML	AML		
	comp=N,1795μm,0.5s						
AMUR				AML	AML		
	comp=E,2213μm,0.7s						
MATE	**Matera**	**2.36**	**252**	⇑P	**Pn**	**23 01 21.0**	**-1.1**
BOSS	**Bosilegrad**	**2.37**	**62**	*e*Pn	**Pn**	**23 01 24.4**	**+2.1**
BOSS				*e*Sn	**Sb**	**23 01 53.6**	**-1.6**
TETR	**Tetrakomo, Epi**	**2.42**	**149**	P	**Pb**	**23 01 26.2**	**-1.3**
BBLS	**Lazi&#263i**	**2.44**	**356**	*e*Pn	**Pb**	**23 01 25.9**	**-1.9**
BBLS				*e*Sn	**Sb**	**23 01 57.9**	**+0.4**
KNT	**Kendrikon**	**2.46**	**95**	P	**Pn**	**23 01 25.9**	**+2.4**
KNT	**Kendrikon**	**2.46**	**95**	*i* Pn	**Pn**	**23 01 26.0**	**+2.4**
LIT	**Litokhoron**	**2.53**	**121**	P	**Pn**	**23 01 26.9**	**+2.3**
LIT	**Litokhoron**	**2.53**	**121**	Pn	**Pn**	**23 01 25.2**	**+0.6**
LIT	**Litokhoron**	**2.53**	**121**	P	**Pn**	**23 01 25.2**	**+0.6**
GRUS	**Gruza**	**2.58**	**17**	*e*Pn	**Pn**	**23 01 27.2**	**+2.0**
GRUS				*e*Sn	**Sb**	**23 01 59.6**	**-1.8**
THL	**Klokotos Trika**	**2.59**	**135**	P	**Pn**	**23 01 27.0**	**+1.7**
THL				AML	AML		
	comp=E,268μm,1.6s						
THL				AML	AML		
	comp=N,304μm,0.7s						
THL				AML	AML		
	comp=N,305μm,0.7s						
THL				AML	AML		
	comp=E,260μm,1.1s						
MRVN	**Minervino Murg**	**2.63**	**263**	P	**Pn**	**23 01 26.0**	**+0.1**
MRVN				AML	AML		
	comp=E,1210μm,0.9s						
MRVN				AML	AML		
	comp=N,1610μm,0.8s						
MRVN				AML	AML		
	comp=E,1177μm,0.4s						
MRVN				AML	AML		
	comp=N,1609μm,0.8s						
THE	**Thessaloniki**	**2.63**	**107**	*i* Pn	**Pn**	**23 01 27.7**	**+1.8**
TRAN	**Tran**	**2.64**	**57**	P	**Pb**	**23 01 28.7**	**-2.4**
KKB	**Krupnik**	**2.64**	**80**	P	**Pn**	**23 01 28.5**	**+2.4**
KKB	**Krupnik**	**2.64**	**80**	⇑*i*P	**Pn**	**23 01 28.4**	**+2.4**
KKB				S	**Sb**	**23 02 01.8**	**-1.4**
KKB	**Krupnik**	**2.64**	**80**	*i* Pn	**Pn**	**23 01 28.5**	**+2.4**
BOVS	**Bovan**	**2.68**	**34**	⇑P	**Pn**	**23 01 28.8**	**+2.3**
BOVS	**Bovan**	**2.68**	**34**	*e*Pn	**Pn**	**23 01 28.5**	**+2.0**
BOVS				*e*Sn	**Sn**	**23 02 00.8**	**+2.4**
MSAG	**Monte S. Angel**	**2.82**	**277**	P	**Pn

	comp=N,378µm,0.8s						
TDS				AML	AML		
	comp=E,440µm,0.9s						
MMB	**Musomishta**	**3.08**	**86**	P	**Pn**	**23 01 34.2**	**+2.1**
MMB				S	**Sn**	**23 02 12.1**	**+3.6**
MMB	**Musomishta**	**3.08**	**86**	*i* Pn	**Pn**	**23 01 34.4**	**+2.3**
MCEL	**Monticello**	**3.12**	**251**	P	**Pn**	**23 01 32.4**	**-0.3**
MCEL				AML	AML		
	comp=E,1635µm,1.0s						
MCEL				AML	AML		
	comp=N,2260µm,0.6s						
MCEL				AML	AML		
	comp=E,1650µm,1.0s						
MCEL				AML	AML		
	comp=N,2300µm,0.6s						
MCEL				AML	AML		
	comp=N,2261µm,0.6s						
MCEL				AML	AML		
	comp=N,2303µm,0.6s						
MCEL				AML	AML		
	comp=E,1650µm,1.0s						
MCEL				AML	AML		
	comp=E,1633µm,1.0s						
TEKS	**Tekeris**	**3.12**	**358**	*e*Pn	**Pn**	**23 01 34.0**	**+1.4**
TIP	**Timpagrande**	**3.15**	**225**	Pn	**Pn**	**23 01 32.3**	**-0.8**
TIP	**Timpagrande**	**3.15**	**225**	⇑P	**Pn**	**23 01 32.3**	**-0.8**
TIP	**Timpagrande**	**3.15**	**225**	P	**Pn**	**23 01 32.7**	**-0.4**
TIP				AML	AML		
	comp=E,433µm,0.7s						
TIP				AML	AML		
	comp=N,560µm,1.1s						
TIP				AML	AML		
	comp=E,417µm,1.5s						
TIP				AML	AML		
	comp=N,544µm,1.1s						
TIP				AML	AML		
	comp=E,433µm,0.7s						
TIP				AML	AML		
	comp=E,417µm,1.5s						
TIP				AML	AML		
	comp=N,523µm,0.9s						
TIP				AML	AML		
	comp=N,499µm,0.9s						
TIP	**Timpagrande**	**3.15**	**225**	Pn	**Pn**	**23 01 32.7**	**-0.4**
MMN	**Mormanno**	**3.18**	**242**	P	**Pn**	**23 01 33.6**	**+0.2**
MMN				AML	AML		
	comp=E,774µm,1.5s						
MMN				AML	AML		
	comp=N,1175µm,1.1s						
MMN				AML	AML		
	comp=E,774µm,0.5s						
MMN				AML	AML		
	comp=N,1176µm,1.1s						
BORS2	**Bor- Borsko je**	**3.18**	**32**	*e*Pn	**Pn**	**23 01 34.4**	**+0.9**
BORS2				*e*Sn	**Sn**	**23 02 13.0**	**+2.2**
MRLC	**Muro Lucano**	**3.21**	**259**	P	**Pn**	**23 01 34.4**	**+0.4**
MRLC				AML	AML		
	comp=E,660µm,0.8s						
MRLC				AML	AML		
	comp=N,580µm,0.8s						
MRLC				AML	AML		
	comp=E,1355µm,0.9s						
MRLC				AML	AML		
	comp=N,1109µm,0.8s						
MRLC				AML	AML		
	comp=E,660µm,0.8s						
MRLC				AML	AML		
	comp=E,1351µm,0.9s						
MRLC				AML	AML		
	comp=N,1109µm,0.8s						
MRLC				AML	AML		
	comp=N,580µm,0.8s						
SLCN	**Sala Consilina**	**3.22**	**252**	P	**Pn**	**23 01 34.5**	**+0.5**
SLCN				AML	AML		
	comp=E,1575µm,1.1s						
SLCN				AML	AML		
	comp=N,1850µm,1.0s						
SLCN				AML	AML		
	comp=E,1750µm,0.6s						
SLCN				AML	AML		
	comp=N,1990µm,0.9s						
SLCN				AML	AML		
	comp=E,1752µm,0.6s						
SLCN				AML	AML		
	comp=E,1521µm,0.6s						
SLCN				AML	AML		
	comp=N,1864µm,0.8s						
SLCN				AML	AML		
	comp=N,1471µm,0.7s						
CUC	**Castrocucco**	**3.25**	**245**	Pn	**Pn**	**23 01 34.1**	**-0.3**
CUC	**Castrocucco**	**3.25**	**245**	P	**Pn**	**23 01 34.5**	**+0.1**
CUC				AML	AML		
	comp=E,1260µm,0.8s						
CUC				AML	AML		
	comp=N,895µm,0.9s						
CUC				AML	AML		
	comp=E,1205µm,0.8s						
CUC				AML	AML		
	comp=N,895µm,0.8s						
CUC				AML	AML		
	comp=E,1187µm,1.1s						
CUC				AML	AML		
	comp=E,1181µm,1.1s						
CUC				AML	AML		
	comp=N,897µm,0.8s						
CUC				AML	AML		
	comp=N,895µm,0.9s						
SPS2	**Spezzano della**	**3.31**	**231**	P	**Pn**	**23 01 35.4**	**+0.1**
SPS2				AML	AML		
	comp=E,310µm,0.8s						
SPS2				AML	AML		
	comp=N,298µm,0.9s						
SPS2				AML	AML		
	comp=E,307µm,0.7s						
SPS2				AML	AML		
	comp=N,297µm,0.9s						
AVAS	**Avala Beograd**	**3.33**	**11**	*e*Pn	**Pn**	**23 01 37.1**	**+1.6**
AVAS				*e*Sn	**Sn**	**23 02 16.6**	**+2.2**
VLS	**Valsamata**	**3.33**	**167**	P	**Pn**	**23 01 35.4**	**-0.1**
VLS				AML	AML		
	comp=E,968µm,0.5s						
VLS				AML	AML		
	comp=N,1011µm,0.9s						
VLS				AML	AML		
	comp=E,968µm,0.5s						
VLS				AML	AML		
	comp=N,1012µm,0.9s						
KUBS	**Kucevo**	**3.33**	**26**	*e*Pn	**Pn**	**23 01 36.4**	**+0.9**
KUBS				*e*Sn	**Sn**	**23 02 16.6**	**+2.1**
CAFE	**Carife**	**3.35**	**265**	P	**Pn**	**23 01 36.7**	**+0.8**
CAFE				AML	AML		
	comp=E,1365µm,1.1s						
CAFE				AML	AML		
	comp=N,1055µm,1.0s						
CAFE				AML	AML		
	comp=E,1430µm,1.1s						
CAFE				AML	AML		
	comp=N,1064µm,1.0s						
CAFE				AML	AML		
	comp=E,1192µm,0.7s						
CAFE				AML	AML		
	comp=E,1182µm,0.7s						
CAFE				AML	AML		
	comp=N,1064µm,1.0s						
CAFE				AML	AML		
	comp=N,993µm,0.7s						
MGR	**Morigerati**	**3.37**	**249**	P	**Pn**	**23 01 36.8**	**+0.8**
MGR				AML	AML		
	comp=E,1125µm,0.9s						
MGR				AML	AML		
	comp=N,702µm,0.6s						
MGR				AML	AML		
	comp=E,1115µm,0.8s						
MGR				AML	AML		
	comp=N,719µm,0.8s						
MGR				AML	AML		
	comp=E,1118µm,0.8s						
MGR				AML	AML		
	comp=E,1126µm,0.9s						
MGR				AML	AML		
	comp=N,702µm,0.6s						
MGR				AML	AML		
	comp=N,615µm,0.8s						
MELA	**Melanico ??? S**	**3.40**	**276**	⇓P	**Pn**	**23 01 37.0**	**+0.5**
MELA				AML	AML		
	comp=E,1955µm,0.6s						
MELA				AML	AML		
	comp=N,2035µm,1.2s						
MELA				AML	AML		
	comp=E,2025µm,0.6s						
MELA				AML	AML		
	comp=N,2025µm,1.2s						
MELA				AML	AML		
	comp=E,2024µm,0.6s						
MELA				AML	AML		
	comp=E,1952µm,0.6s						
MELA				AML	AML		
	comp=N,1901µm,0.6s						
MELA				AML	AML		
	comp=N,1940µm,0.5s						
CAR1	**CAROLEI**	**3.41**	**232**	P	**Pn**	**23 01 37.0**	**+0.3**
CAR1				AML	AML		
	comp=E,1019µm,0.8s						
CAR1				AML	AML		
	comp=N,1465µm,0.7s						
CAR1				AML	AML		
	comp=E,1155µm,0.6s						
CAR1				AML	AML		
	comp=N,1440µm,0.7s						
CAR1				AML	AML		
	comp=E,1151µm,0.6s						
CAR1				AML	AML		
	comp=E,1019µm,0.8s						
CAR1				AML	AML		
	comp=N,1466µm,0.7s						
CAR1				AML	AML		
	comp=N,1443µm,0.7s						
BEO	**Beograd**	**3.43**	**10**	*e*Pn	**Pn**	**23 01 38.1**	**+1.2**
CMPR	**Campora**	**3.48**	**253**	P	**Pn**	**23 01 37.7**	**+0.1**
CMPR				AML	AML		
	comp=E,617µm,1.2s						
CMPR				AML	AML		
	comp=N,628µm,1.0s						
CMPR				AML	AML		
	comp=E,588µm,0.9s						
CMPR				AML	AML		
	comp=N,628µm,1.0s						
MRB1	**Monte Rocchett**	**3.54**	**267**	⇓P	**Pn**	**23 01 39.2**	**+0.8**
MRB1				AML	AML		
	comp=E,1440µm,0.6s						
MRB1				AML	AML		
	comp=N,1725µm,1.6s						
MRB1				AML	AML		
	comp=E,1530µm,0.6s						
MRB1				AML	AML		
	comp=N,1700µm,1.6s						
MRB1				AML	AML		
	comp=E,1531µm,0.6s						
MRB1				AML	AML		
	comp=E,1445µm,0.6s						
MRB1				AML	AML		
	comp=N,1634µm,0.8s						
MRB1				AML	AML		
	comp=N,1660µm,0.8s						
PGB	**Panagyurishte**	**3.54**	**71**	P	**Pn**	**23 01 41.6**	**+3.1**
MTMR	**Montemarano**	**3.54**	**263**	P	**Pn**	**23 01 38.8**	**+0.3**
MTMR				AML	AML		
	comp=E,1110µm,1.0s						
MTMR				AML	AML		
	comp=N,3600µm,0.6s						
MTMR				AML	AML		
	comp=E,710µm,0.7s						
MTMR				AML	AML		
	comp=N,822µm,0.9s						
MTMR				AML	AML		
	comp=E,1072µm,0.2s						
MTMR				AML	AML		
	comp=N,2882µm,0.2s						
MTMR				AML	AML		
	comp=E,710µm,0.7s						
MTMR				AML	AML		
	comp=N,823µm,0.9s						
GATE	**Gambatesa**	**3.56**	**273**	⇓P	**Pn**	**23 01 40.1**	**+1.4**
GATE				AML	AML		
	comp=E,890µm,0.9s						
GATE				AML	AML		
	comp=N,886µm,0.7s						
GATE				AML	AML		
	comp=E,834µm,0.9s						
GATE				AML	AML		
	comp=N,951µm,0.8s						
GATE				AML	AML		
	comp=E,891µm,0.9s						
GATE				AML	AML		
	comp=E,834µm,0.9s						
GATE				AML	AML		
	comp=N,951µm,0.8s						
GATE				AML	AML		
	comp=N,886µm,0.7s						
CIGN	**Sant'Elia a Pi**	**3.57**	**275**	P	**Pn**	**23 01 39.5**	**+0.8**
CIGN				AML	AML		
	comp=E,670µm,0.9s						
CIGN				AML	AML		
	comp=N,508µm,0.9s						
CIGN				AML	AML		
	comp=N,507µm,0.9s						
CIGN				AML	AML		
	comp=E,596µm,0.8s						
MPEP	**Malo Peshtene**	**3.59**	**56**	P	**Pn**	**23 01 41.9**	**+2.8**
VALD	**Valchedram**	**3.59**	**50**	P	**Pn**	**23 01 41.8**	**+2.7**
MDVR	**Moldovita**	**3.67**	**24**	⇑P	**Pn**	**23 01 42.3**	**+2.0**
SACR	**S. Croce Del S**	**3.72**	**271**	P	**Pn**	**23 01 41.0**	**+0.1**
SACR				AML	AML		
	comp=E,522µm,1.2s						
SACR				AML	AML		
	comp=N,594µm,0.9s						
SACR				AML	AML		
	comp=E,575µm,1.2s						
SACR				AML	AML		
	comp=N,586µm,1.0s						
SACR				AML	AML		
	comp=E,575µm,1.2s						
SACR				AML	AML		
	comp=E,521µm,1.2s						
SACR				AML	AML		
	comp=N,586µm,1.0s						
SACR				AML	AML		
	comp=N,595µm,0.9s						
FRGS	**Fruska Gora**	**3.73**	**2**	*e*Pn	**Pn**	**23 01 42.2**	**+1.2**
PUNG	**Punghina**	**3.73**	**39**	⇓P	**Pn**	**23 01 43.8**	**+2.8**
BAIL	**Bailesti**	**3.76**	**45**	⇑P	**Pn**	**23 01 44.1**	**+2.8**
BLY	**Banja Luka**	**3.78**	**332**	*i* Pn	**Pn**	**23 01 43.7**	**+2.0**
BLY				*e*Sn	**Sn**	**23 02 25.7**	**+0.2**
BLY	**Banja Luka**	**3.78**	**332**	⇑P	**Pn**	**23 01 41.9**	**+0.3**
BLY	**Banja Luka**	**3.78**	**332**	*e*Pn	**Pn**	**23 01 43.6**	**+2.0**
BLY	**Banja Luka**	**3.78**	**332**	P	**Pn**	**23 01 43.7**	**+2.0**
BLY				AML	AML		
	comp=E,1395µm,1.1s						
BLY				AML	AML		
	comp=N,1184µm,1.0s						
BLY				AML	AML		
	comp=E,1400µm,1.1s						
BLY				AML	AML		
	comp=N,1241µm,1.0s						
BLY				AML	AML		
	comp=E,1396µm,1.1s						
BLY				AML	AML		
	comp=E,1402µm,1.1s						
BLY				AML	AML		
	comp=N,1243µm,1.0s						
BLY				AML	AML		
	comp=N,1184µm,1.0s						
VITU	**Vitulano (BN)**	**3.79**	**268**	P	**Pn**	**23 01 43.2**	**+1.4**
VITU				AML	AML		
	comp=E,1130µm,1.4s						
VITU				AML	AML		
	comp=N,1295µm,0.6s						
VITU				AML	AML		
	comp=E,1425µm,1.3s						
VITU				AML	AML		
	comp=N,1310µm,0.7s						
VITU				AML	AML		
	comp=E,1069µm,0.3s						
VITU				AML	AML		
	comp=E,1394µm,0.3s						
VITU				AML	AML		
	comp=N,1292µm,0.6s						
VITU				AML	AML		
	comp=N,1311µm,0.7s						
BSSO	**Busso**	**3.80**	**273**	P	**Pn**	**23 01 42.8**	**+0.7**
BSSO				AML	AML		
	comp=E,381µm,0.8s						
BSSO				AML	AML		
	comp=N,341µm,0.5s						
BSSO				AML	AML		
	comp=N,341µm,0.5s						
BSSO				AML	AML		
	comp=E,381µm,0.8s						
BSSO				AML	AML		
BSSO				AML	AML		
RZN	**Rozhen**	**3.83**	**84**	P	**Pn**	**23 01 45.2**	**+2.7**
TRIV	**Trivento**	**3.84**	**277**	P	**Pn**	**23 01 43.4**	**+0.9**
TRIV				AML	AML		
	comp=E,670µm,0.5s						
TRIV				AML	AML		
	comp=N,698µm,1.2s						
TRIV				AML	AML		
	comp=E,674µm,0.5s						
TRIV				AML	AML		
	comp=N,742µm,1.2s						
TRIV				AML	AML		
	comp=E,670µm,0.5s						
TRIV				AML	AML		
	comp=E,674µm,0.5s						
TRIV				AML	AML		
	comp=N,742µm,1.2s						
TRIV				AML	AML		
	comp=N,698µm,1.2s						
PAOL	**Paolisi**	**3.85**	**266**	Pn	**Pn**	**23 01 43.6**	**+0.9**
PAOL	**Paolisi**	**3.85**	**266**	P	**Pn**	**23 01 43.8**	**+1.1**
PAOL				AML	AML		
	comp=E,587µm,0.8s						
PAOL				AML	AML		
	comp=N,619µm,1.0s						
PAOL				AML	AML		
	comp=E,578µm,0.4s						
PAOL				AML	AML		
	comp=N,584µm,1.6s						
PAOL				AML	AML		
	comp=E,577µm,0.4s						
PAOL				AML	AML		
	comp=E,544µm,0.9s						
PAOL				AML	AML		
	comp=N,528µm,0.9s						
PAOL				AML	AML		
	comp=N,574µm,0.8s						
DJES	**Djerdap**	**3.86**	**32**	⇓P	**Pn**	**23 01 44.9**	**+2.2**
DJES	**Djerdap**	**3.86**	**32**	*e*Pn	**Pn**	**23 01 44.7**	**+1.9**
DJES				*e*Sn	**Sn**	**23 02 30.2**	**+2.7**
PLAC	**Placanica**	**3.87**	**221**	⇓P	**Pn**	**23 01 42.1**	**-0.9**
PLAC				AML	AML		
	comp=E,470µm,0.8s						
PLAC				AML	AML		
	comp=N,353µm,0.6s						
PLAC				AML	AML		
	comp=E,362µm,0.5s						
PLAC				AML	AML		
	comp=N,471µm,0.8s						
PLAC				AML	AML		
	comp=N,353µm,0.6s						
PLAC				AML	AML		
	comp=E,362µm,0.5s						
PLAC				AML	AML		
	comp=N,471µm,0.8s						
PLAC				AML	AML		
	comp=E,470µm,0.8s						
PLD	**Plovdiv**	**3.88**	**78**	P	**Pn**	**23 01 45.5**	**+2.5**
VRSS	**Vrsac**	**3.89**	**18**	*e*Pn	**Pn**	**23 01 44.4**	**+1.2**
KLV	**Kalavryta, Ach**	**3.89**	**149**	P	**Pn**	**23 01 44.5**	**+1.2**
KLV				AML	AML		
	comp=E,436µm,1.6s						
KLV				AML	AML		
	comp=N,467µm,1.3s						
KLV				AML	AML		
	comp=N,467µm,1.3s						
KLV				AML	AML		
	comp=E,438µm,1.6s						
RMGR	**Halanga-Turnu**	**3.93**	**34**	⇑P	**Pn**	**23 01 46.2**	**+2.5**
VCRE	**Vesuvio Crater**	**3.99**	**263**	P	**Pn**	**23 01 45.9**	**+1.3**
VTIR	**Vesuvio Tirone**	**4.00**	**263**	P	**Pn**	**23 01 45.8**	**+1.1**
VTIR				AML	AML		
	comp=E,602µm,1.5s						
VTIR				AML	AML		
	comp=N,504µm,1.2s						
VTIR				AML	AML		
	comp=E,502µm,0.9s						
VTIR				AML	AML		
	comp=N,471µm,0.7s						
HERR	**Herculane**	**4.00**	**29**	⇓P	**Pn**	**23 01 46.8**	**+2.1**
JOPP	**Joppolo**	**4.04**	**227**	⇓P	**Pn**	**23 01 44.6**	**-0.6**
JOPP				AML	AML		
	comp=E,388µm,0.7s						
JOPP				AML	AML		
	comp=N,390µm,1.3s						
JOPP				AML	AML		
	comp=E,389µm,0.7s						
JOPP				AML	AML		
	comp=N,358µm,0.8s						
VAGA	**Valle Agricola**	**4.07**	**272**	P	**Pn**	**23 01 46.9**	**+1.2**
VAGA				AML	AML		
	comp=E,1106µm,0.8s						
VAGA				AML	AML		
	comp=N,1395µm,0.6s						
VAGA				AML	AML		
	comp=E,1147µm,0.8s						
VAGA				AML	AML		
	comp=N,1405µm,0.6s						
VAGA				AML	AML		
	comp=N,1376µm,0.3s						
VAGA				AML	AML		
	comp=N,1349µm,0.3s						
VAGA				AML	AML		
	comp=E,998µm,0.4s						
VAGA				AML	AML		
	comp=E,977µm,0.5s						
BANR	**Banloc**	**4.10**	**15**	⇑P	**Pn**	**23 01 47.7**	**+1.7**
PIGN	**Pignataro Magg**	**4.12**	**269**	P	**Pn**	**23 01 47.1**	**+0.7**
PIGN				AML	AML		
	comp=E,470µm,1.3s						
PIGN				AML	AML		
	comp=N,432µm,0.9s						
PIGN				AML	AML		
	comp=E,422µm,1.2s						
PIGN				AML	AML		
	comp=N,357µm,0.9s						
PIGN				AML	AML		
	comp=N,351µm,0.3s						
PIGN				AML	AML		
	comp=N,400µm,0.8s						
PIGN				AML	AML		
	comp=E,466µm,1.1s						
PIGN				AML	AML		
	comp=E,422µm,1.2s						
RNI2	**Rionero Sannit**	**4.13**	**276**	P	**Pn**	**23 01 47.3**	**+0.7**
LPEL	**Lama dei Pelig**	**4.14**	**280**	P	**Pn**	**23 01 47.4**	**+0.7**
LPEL				AML	AML		
	comp=E,1105µm,1.1s						
LPEL				AML	AML		
	comp=N,1092µm,0.9s						
LPEL				AML	AML		
	comp=E,898µm,0.5s						
LPEL				AML	AML		
	comp=N,1044µm,0.4s						
LPEL				AML	AML		
	comp=N,1025µm,0.4s						
LPEL				AML	AML		
	comp=E,942µm,0.4s						
SRE	**Strehaia**	**4.15**	**38**	⇑P	**Pn**	**23 01 49.2**	**+2.4**
SRE	**Strehaia**	**4.15**	**38**	P	**Pn**	**23 01 49.2**	**+2.4**
PLVB	**Pleven**	**4.17**	**60**	⇑P	**Pn**	**23 01 49.9**	**+2.9**
CERA	**Filignano**	**4.23**	**274**	P	**Pn**	**23 01 49.0**	**+1.1**
CERA				AML	AML		
	comp=E,1750µm,0.8s						
CERA				AML	AML		
	comp=N,2115µm,0.7s						
CERA				AML	AML		
	comp=E,1815µm,0.7s						
CERA				AML	AML		
	comp=N,2170µm,0.7s						
CERA				AML	AML		
	comp=N,2115µm,0.7s						
CERA				AML	AML		
	comp=N,2170µm,0.7s						
CERA				AML	AML		
	comp=E,1815µm,0.7s						
CERA				AML	AML		
	comp=E,1753µm,0.8s						
CEL	**Celeste**	**4.29**	**224**	Pn	**Pn**	**23 01 47.4**	**-1.3**
CEL	**Celeste**	**4.29**	**224**	P	**Pn**	**23 01 48.1**	**-0.6**
CEL				AML	AML		
	comp=E,448µm,0.6s						

CEL AML AML
comp=N,365µm,0.7s
CEL AML AML
comp=E,406µm,0.6s
CEL AML AML
comp=N,360µm,1.1s
CEL AML AML
comp=E,406µm,1.4s
CEL AML AML
comp=E,448µm,1.4s
CEL AML AML
comp=N,361µm,1.1s
CEL AML AML
comp=N,365µm,0.7s
CEL Celeste 4.29 224 Pn Pn 23 01 47.8 -0.9
VLAD Vladila 4.34 52 ⇑P Pn 23 01 52.6 +3.2
SOI Samo 4.35 221 P Pn 23 01 48.5 -1.0
MODR Mondragone 4.36 268 P Pn 23 01 50.0 +0.3
MODR AML AML
comp=E,370µm,0.8s
MODR AML AML
comp=N,432µm,0.7s
MODR AML AML
comp=N,432µm,0.7s
MODR AML AML
comp=E,370µm,0.8s
MCI Monte Cassino 4.38 273 ⇑P Pn 23 01 51.6 +1.6
MCI AML AML
comp=E,1535µm,0.8s
MCI AML AML
comp=N,1039µm,0.8s
MCI AML AML
comp=E,1331µm,0.3s
MCI AML AML
comp=N,1037µm,0.8s
BZS Buzias 4.42 18 ⇑P Pn 23 01 52.3 +1.8
BZS Buzias 4.42 18 P Pn 23 01 52.0 +1.5
PVL Pavlikeni 4.43 66 P Pn 23 01 53.9 +3.2
VCEL Villa Celiera 4.44 284 P Pn 23 01 51.7 +0.8
VCEL AML AML
comp=E,1084µm,0.7s
VCEL AML AML
comp=N,1006µm,0.9s
VCEL AML AML
comp=N,872µm,1.0s
VCEL AML AML
comp=E,1005µm,0.5s
RDO Rodhopi 4.45 92 Pn Pn 23 01 52.5 +1.7
T0110 Collepietro 4.46 282 P Pn 23 01 51.9 +0.9
T0110 AML AML
comp=E,994µm,0.9s
T0110 AML AML
comp=N,850µm,0.7s
T0110 AML AML
comp=N,850µm,0.7s
T0110 AML AML
comp=E,994µm,0.9s
POFI Posta Fibreno 4.46 276 P Pn 23 01 52.1 +1.0
POFI AML AML
comp=E,662µm,0.7s
POFI AML AML
comp=N,353µm,0.8s
POFI AML AML
comp=E,547µm,0.8s
POFI AML AML
comp=N,250µm,0.8s
POFI AML AML
comp=N,353µm,0.8s
POFI AML AML
comp=N,250µm,0.8s
POFI AML AML
comp=E,547µm,0.8s
POFI AML AML
comp=E,663µm,0.7s
DIM Dimitrovgrad 4.48 80 P Pn 23 01 53.8 +2.5
TRTR Tortoreto Alta 4.48 290 P Pn 23 01 53.2 +1.9
TRTR AML AML
comp=E,1600µm,0.4s
TRTR AML AML
comp=N,1470µm,1.1s
TRTR AML AML
comp=E,1599µm,0.5s
TRTR AML AML
comp=N,1340µm,0.9s
VVLD Villa Vallelon 4.54 278 P Pn 23 01 53.0 +0.8
VVLD AML AML
comp=E,524µm,1.6s
VVLD AML AML
comp=N,835µm,1.5s
VVLD AML AML
comp=E,540µm,0.9s
VVLD AML AML
comp=N,818µm,1.5s
VVLD AML AML
comp=E,499µm,0.8s
VVLD AML AML
comp=N,804µm,0.8s
VVLD AML AML
comp=N,769µm,0.7s
VVLD AML AML
comp=E,540µm,0.9s
LRP Arpino 4.55 275 P Pn 23 01 53.3 +0.9
LRP AML AML
comp=E,514µm,0.6s
LRP AML AML
comp=N,144µm,0.8s
LRP AML AML
comp=E,514µm,0.6s
LRP AML AML
comp=N,144µm,0.8s
GZR Gura Zlata 4.57 29 ⇓P Pn 23 01 54.8 +2.2
GZR Gura Zlata 4.57 29 P Pn 23 01 54.3 +1.7
ITM Ithomi 4.60 157 Pn Pn 23 01 53.8 +0.8
ITM Ithomi 4.60 157 P Pn 23 01 53.9 +1.0
ITM AML AML
comp=E,69µm,1.6s
ITM AML AML
comp=N,80µm,1.2s
ITM AML AML
comp=E,67µm,0.6s
ITM AML AML
comp=N,80µm,1.2s
FAGN Fagnano 4.61 282 ⇓P Pn 23 01 53.9 +0.8
FAGN AML AML
comp=E,1580µm,0.4s
FAGN AML AML
comp=N,1265µm,0.4s
FAGN AML AML
comp=E,1576µm,0.4s
FAGN AML AML
comp=N,1265µm,0.4s
GIGS Gran Sasso 4.65 285 P Pn 23 01 54.2 +0.6
GIGS AML AML
comp=E,207µm,0.9s
GIGS AML AML
comp=N,206µm,0.7s
GIGS AML AML
comp=N,206µm,0.7s
GIGS AML AML
comp=E,207µm,0.9s
MPNC Port Mandanici 4.66 227 P Pn 23 01 51.8 -2.0
MPNC AML AML
comp=E,612µm,0.6s
MPNC AML AML
comp=N,815µm,1.1s
MPNC AML AML
comp=N,815µm,1.1s
OFFI Offida 4.68 291 P Pn 23 01 55.4 +1.3
OFFI AML AML
comp=E,1440µm,0.8s
OFFI AML AML
comp=N,1650µm,0.9s
OFFI AML AML
comp=N,1649µm,0.9s
OFFI AML AML
comp=E,1439µm,0.8s
SURR Surduc 4.68 22 ⇑P Pn 23 01 56.0 +1.9
PTQR Pietraquaria 4.71 279 P Pn 23 01 55.5 +0.9
PTQR AML AML
comp=E,274µm,0.9s
PTQR AML AML
comp=N,326µm,0.7s
PTQR AML AML
comp=N,326µm,0.7s
PTQR AML AML
comp=E,274µm,0.9s
AQU L'Aquila 4.75 283 *e*Pn **Pn 23 01 55.7 +0.6**

AQU *e*Sn **Sn 23 02 47.5 -2.2**
AQU L'Aquila 4.75 283 Pn Pn 23 01 56.0 +0.9
CAMP Campotosto 4.78 285 Pn Pn 23 01 55.7 +0.1
CAMP Campotosto 4.78 285 P Pn 23 01 56.3 +0.8
MORH Mrgy, Hungar 4.84 352 *e*Pn **Pn 23 01 59.3 +3.1**
MORH *e*Sn **Sn 23 02 51.7 +0.1**
MORH Mrgy, Hungar 4.84 352 ⇑P Pn 23 01 57.5 +1.3
MORH Mrgy, Hungar 4.84 352 Pn Pn 23 01 57.5 +1.3
MF5 Montefalcone A 4.85 291 ⇓*i*P **Pn 23 01 57.6 +1.1**
MF5 AML AML
comp=E,1106µm,0.3s
MF5 AML AML
comp=N,1093µm,0.6s
MF5 AML AML
comp=E,1103µm,0.3s
MF5 AML AML
comp=N,1093µm,0.6s
SMA1 SAN MARTINO 4.85 286 P Pn 23 01 57.3 +0.7
ELND Elena 4.86 70 ⇑P Pn 23 01 59.3 +2.7
COPA Copaceanca 4.91 55 ⇑P Pn 23 01 59.9 +2.8
RM33 Pellescritta (4.92 285 ⇓*i*P **Pn 23 01 58.4 +1.0**
RM33 AML AML
comp=E,1054µm,1.2s
RM33 AML AML
comp=N,778µm,0.9s
RM33 AML AML
comp=E,976µm,1.2s
RM33 AML AML
comp=N,775µm,0.9s
RM33 AML AML
comp=N,778µm,1.1s
RM33 AML AML
comp=N,775µm,1.1s
RM33 AML AML
comp=E,993µm,0.8s
RM33 AML AML
comp=E,820µm,0.8s
MMO1 Montemonaco 4.92 289 ⇓*i*P **Pn 23 01 58.4 +0.9**
SAP2 Sant'Angelo in 4.93 292 P Pn 23 01 58.3 +0.8
SAP2 AML AML
comp=E,754µm,0.4s
SAP2 AML AML
comp=N,3775µm,0.7s
SAP2 AML AML
comp=N,3320µm,0.4s
SAP2 AML AML
comp=E,754µm,0.4s
FIAM Fiamignano 4.95 282 ⇓*i*P **Pn 23 01 59.6 +1.7**
FIAM AML AML
comp=E,4590µm,1.1s
FIAM AML AML
comp=N,764µm,0.6s
FIAM AML AML
comp=E,467µm,0.8s
FIAM AML AML
comp=N,414µm,0.6s
FIAM AML AML
comp=E,467µm,0.8s
FIAM AML AML
comp=N,764µm,0.6s
FIAM AML AML
comp=N,415µm,0.6s
FIAM AML AML
comp=E,4590µm,1.1s
GUMA Gualdo di Mace 4.96 291 Pn Pn 23 01 57.8 -0.1
HUMR Humele 4.99 50 ⇓P Pn 23 02 00.8 +2.5
LOT Lotru 5.01 35 ⇑P Pn 23 02 00.9 +2.2
CERT Cerreto 5.02 278 P Pn 23 01 59.7 +0.9
DEV Deva 5.04 27 ⇑P Pn 23 02 01.8 +2.8
DEV Deva 5.04 27 P Pn 23 02 01.7 +2.8
SIRR Siria 5.05 16 ⇓P Pn 23 02 00.8 +1.7
NRCA Norcia 5.06 288 Pn Pn 23 01 59.4 +0.1
NRCA Norcia 5.06 288 ⇓*i*P **Pn 23 02 00.3 +1.0**
NRCA AML AML
comp=E,904µm,0.7s
NRCA AML AML
comp=N,1048µm,0.7s
NRCA AML AML
comp=E,871µm,0.7s
NRCA AML AML
comp=N,1040µm,0.7s
NRCA AML AML
comp=E,753µm,0.4s
NRCA AML AML
comp=E,744µm,0.4s
NRCA AML AML
comp=N,780µm,0.3s
NRCA AML AML
comp=N,854µm,0.3s
LNSS Leonessa 5.06 286 ⇓*i*P **Pn 23 02 00.5 +1.2**
LNSS AML AML
comp=E,880µm,1.4s
LNSS AML AML
comp=N,837µm,0.8s
LNSS AML AML
comp=E,822µm,1.6s
LNSS AML AML
comp=N,882µm,0.7s
LNSS AML AML
comp=E,691µm,0.4s
LNSS AML AML
comp=E,722µm,0.4s
LNSS AML AML
comp=N,830µm,0.8s
LNSS AML AML
comp=N,837µm,0.8s
CSP1 Cessapalombo 5.06 291 ⇓*i*P **Pn 23 01 59.9 +0.5**
FDMO Fiordimonte 5.13 290 Pn Pn 23 02 00.7 +0.4
FDMO Fiordimonte 5.13 290 ⇓*i*P **Pn 23 02 00.9 +0.7**
FDMO AML AML
comp=E,698µm,1.0s
FDMO AML AML
comp=N,592µm,0.3s
FDMO AML AML
comp=E,616µm,0.5s
FDMO AML AML
comp=N,592µm,0.3s
BOJS Bojanci 5.18 323 *i* Pn **Pn 23 02 02.2 +1.3**
BOJS Bojanci 5.18 323 ⇑*i*P **Pn 23 02 02.4 +1.5**
STFAR Stefanesti-Arg 5.18 47 ⇑P Pn 23 02 04.2 +3.2
EL6 Elcito 5.21 294 ⇓*i*P **Pn 23 02 01.7 +0.4**
EL6 AML AML
comp=E,826µm,1.1s
EL6 AML AML
comp=N,775µm,0.9s
EL6 AML AML
comp=N,755µm,0.4s
EL6 AML AML
comp=E,754µm,0.3s
CESI CESI - Serrava 5.25 290 ⇓*i*P **Pn 23 02 02.7 +0.8**
ARRO Arrone 5.25 285 P Pn 23 02 03.5 +1.5
SENI Senigallia 5.25 298 ⇑*i*P **Pn 23 02 02.9 +1.0**
SNTG Esanatoglia 5.29 292 ⇓*i*P **Pn 23 02 02.9 +0.3**
EZN Ezine 5.33 105 ⇑P Pn 23 02 04.8 +1.9
EZN Ezine 5.33 105 P Pn 23 02 04.8 +1.9
ARR Arges 5.36 41 ⇑P Pn 23 02 07.0 +3.6
ARVD Arcevia 5.37 295 ⇓*i*P **Pn 23 02 03.9 +0.3**
COR1 Corinaldo 5.38 296 P Pn 23 02 04.7 +1.0
TNR Turnu Rosu 5.39 37 ⇑P Pn 23 02 07.2 +3.3
TNR Turnu Rosu 5.39 37 P Pn 23 02 07.2 +3.3
CESX Cesi 5.40 285 Pn **Pn 23 02 03.7 -0.1**
CESX Cesi 5.40 285 P Pn 23 02 05.0 +1.1
SGRR Singureni 5.42 57 ⇑P Pn 23 02 07.2 +2.9
ASSB Assisi San Ben 5.43 290 ⇓*i*P **Pn 23 02 05.4 +1.0**
MOMA Monte Martano 5.44 287 P Pn 23 02 05.7 +1.1
BEHE Becsehely 5.45 339 Pn Pn 23 02 05.5 +0.9
BEHE Becsehely 5.45 339 *e*Pn **Pn 23 02 06.6 +2.0**
BEHE *e*Sn **Sn 23 03 05.6 -1.1**
MTUR Matau 5.48 44 ⇑P Pn 23 02 08.2 +3.2
MTUR Matau 5.48 44 P Pn 23 02 08.2 +3.2
ATCC AVT- Casa Cast 5.49 291 ⇓P Pn 23 02 06.0 +0.8
LOZB Loznitsa 5.50 67 ⇑P Pn 23 02 07.6 +2.4
RAZG Razgrad 5.50 65 ⇑P Pn 23 02 08.8 +3.5
HLNI Lentini 5.50 224 P Pn 23 02 02.6 -2.8
FRON Frontone 5.53 294 ⇓P Pn 23 02 06.2 +0.5
BRJN Brijuni 5.54 311 P Pn 23 02 06.7 +0.9
MPAG Monte Paganucc 5.54 296 ⇓P Pn 23 02 06.4 +0.4
SSY Sortino 5.55 221 P Pn 23 02 03.4 -2.7
ATFO Monte Foce - G 5.59 293 ⇓P Pn 23 02 07.2 +0.7
MURB Monte Urbino 5.59 292 Pn **Pn 23 02 07.4 +0.9**
MURB Monte Urbino 5.59 292 P Pn 23 02 07.6 +1.0
PESA Pesaro 5.61 299 ⇑P Pn 23 02 07.4 +0.6
VOIR 5.61 43 ⇓P Pn 23 02 09.8 +2.8
VOIR 5.61 43 P Pn 23 02 09.7 +2.8

VOIR 5.61 43 Pn **Pn 23 02 10.0 +3.1**
comp=E,0.3nmcomp=E,733nmcomp=E,49nm,0.6s
VAE Valguarnera 5.66 227 Pn Pn 23 02 07.8 +0.2
comp=E,6.3nm,0.5s,baz=135,slow=4.7,SNR=6.4
VAE Sn **Sn 23 03 14.1 +2.2**
comp=E,1.0nm,0.3s,baz=22,slow=22,SNR=2.2
NARO Abbazia di Nar 5.66 295 ⇓P Pn 23 02 07.9 +0.4
PIEI Pieia 5.67 294 ⇓P Pn 23 02 08.0 +0.3
ATVO AVT- Monte Val 5.71 292 P Pn 23 02 09.0 +0.8
ATPI Pietralunga - 5.73 293 P Pn 23 02 09.2 +0.7
PE3 Peglio 5.75 296 ⇓P Pn 23 02 09.5 +0.8
APEC Apecchio 5.75 294 ⇑P Pn 23 02 09.5 +0.8
ATMI Monte Miggiano 5.79 292 P Pn 23 02 10.6 +1.3
MARR Marisel-Cluj 5.81 24 ⇓P Pn 23 02 11.5 +1.9
MDB Medias 5.82 34 ⇑P Pn 23 02 13.4 +3.6
MDB Medias 5.82 34 P Pn 23 02 13.3 +3.6
BADI Badiali 5.86 293 P Pn 23 02 11.5 +1.3
RAFF Raffo Rosso 5.87 226 Pn **Pn 23 02 08.4 -2.0**
RAFF Raffo Rosso 5.87 226 P Pn 23 02 08.7 -1.6
HPAC Pachino 5.90 218 P Pn 23 02 08.3 -2.5
PARC Parchiule 5.91 295 P Pn 23 02 11.5 +0.6
LJU Ljubljana 5.92 323 P Pn 23 02 12.5 +1.4
SACS San Casciano d 5.93 286 P Pn 23 02 11.6 +0.3
NEF NEVSHA 5.94 69 P Pn 23 02 14.5 +3.1
SSP9 Sansepolcro 5.96 294 ⇑P Pn 23 02 13.1 +1.6
CJR Cluj-Napoca 6.00 27 ⇓P Pn 23 02 15.8 +3.5
CJR Cluj-Napoca 6.00 27 P Pn 23 02 15.7 +3.5
PRD Provadia 6.01 71 P Pn 23 02 15.4 +3.1
TRI Trieste 6.05 317 Pn **Pn 23 02 11.5 -1.3**
TRI Trieste 6.05 317 P Pn 23 02 11.5 -1.3
LEHL Lehliu 6.08 58 ⇓P Pn 23 02 16.5 +3.3
CICN Ciocanesti 6.09 61 ⇑P Pn 23 02 15.9 +2.5
CRE Caprese Michel 6.09 294 P Pn 23 02 14.1 +0.5
MLR Muntele Rosu 6.12 46 Pn **Pn 23 02 17.5 +3.5**
comp=E,4.6nm,0.3s,baz=180,slow=8.3,SNR=85
MLR Sn **Sn 23 03 27.9 +4.4**
comp=E,4.6nm,0.3s,baz=111,slow=19,SNR=6.9
MLR LR LR 23 05 27.2
comp=E,626nm,18.8s,baz=226,slow=46
comp=E,53nm,0.7s
MLR Muntele Rosu 6.12 46 Pn **Pn 23 02 16.7 +2.8**
MLR Muntele Rosu 6.12 46 ⇓P Pn 23 02 17.4 +3.5
MLR Muntele Rosu 6.12 46 P Pn 23 02 17.4 +3.5
MLR Muntele Rosu 6.12 46 Pn **Pn 23 02 17.1 +3.2**
comp=E,0.5nmcomp=E,800nmcomp=E,75nm,0.7s
PERS Pernice 6.14 329 *i* Pn **Pn 23 02 15.2 +1.0**
DOPR Dopca 6.15 41 ⇑P Pn 23 02 17.9 +3.6
LTVH Ltavrtes, Hu 6.17 14 ⇑P Pn 23 02 16.8 +2.4
MESR Meseseni 6.19 21 ⇓P Pn 23 02 17.2 +2.5
TGMR Targu Mures 6.19 33 ⇑P Pn 23 02 18.4 +3.6
VOJS Vojsko 6.21 320 *i* Pn **Pn 23 02 16.0 +0.8**
ISR Istrita 6.24 51 ⇑P Pn 23 02 19.7 +4.2
ISR Istrita 6.24 51 P Pn 23 02 19.7 +4.2
ISR Istrita 6.24 51 Pn **Pn 23 02 18.6 +3.1**
comp=E,0.5nmcomp=E,94nm,0.9s
SFI Santa Sofia 6.26 296 P Pn 23 02 16.6 +0.8
ASQU Asqua 6.26 295 P Pn 23 02 16.8 +1.0
OBKA Obir 6.27 326 *i* Pn **Pn 23 02 17.3 +1.3**
comp=E,12nm,0.3s,SNR=18
OBKA *e*Sn **Sn 23 03 28.2 +1.2**
comp=E,96nm,0.6s
NEHR Nehoiu 6.27 48 ⇑P Pn 23 02 19.1 +3.1
APE Apeiranthos 6.31 132 ⇑P Pn 23 02 17.6 +1.1
APE Apeiranthos 6.31 132 P Pn 23 02 17.5 +1.1
SABO M.te Sabotino 6.32 318 P Pn 23 02 16.9 +0.4
DRE Drenchia 6.43 320 P Pn 23 02 18.7 +0.5
OZUR 6.44 42 ⇑P Pn 23 02 22.1 +3.8
SRO Srobarova 6.45 352 *e*P **Pn 23 02 21.7 +3.3**
SRO Srobarova 6.45 352 *e*PN **Pn 23 02 21.7 +3.3**
AMRR Amara 6.47 58 ⇑P Pn 23 02 21.8 +3.2
AMRR Amara 6.47 58 P Pn 23 02 21.8 +3.2
COVR Voineasa-Covas 6.49 45 ⇑P Pn 23 02 22.6 +3.7
PSZ Piszkesteto 6.49 1 Pn **Pn 23 02 19.5 +0.5**
PSZ Piszkesteto 6.49 1 *e*P **Pn 23 02 21.1 +2.1**
PSZ Piszkesteto 6.49 1 P Pn 23 02 19.5 +0.5
BALB Balikesir 6.52 103 Pn **Pn 23 02 21.2 +1.9**
ARSA Arzberg 6.53 334 Pn **Pn 23 02 19.4 -0.1**
ARSA Arzberg 6.53 334 *e*Pn **Pn 23 02 21.5 +2.1**
comp=E,23nm,0.4s,SNR=6.5
ARSA Arzberg 6.53 334 ⇑P Pn 23 02 21.5 +2.1
TURR Turia 6.53 43 ⇑P Pn 23 02 22.1 +2.7
OSSC Osservatorio P 6.56 291 Pn **Pn 23 02 19.6 -0.2**
ICOR Ion Corvin 6.57 63 ⇑P Pn 23 02 22.6 +2.6
BRIS BRISIGHELLA 6.58 297 P Pn 23 02 18.7 -1.3
GRER 6.64 51 ⇑P Pn 23 02 25.4 +4.5
SEI Scarperia 6.64 296 ⇑P Pn 23 02 22.7 +1.6
RONA Rosalia, Austr 6.71 340 *i* Pn **Pn 23 02 24.2 +2.3**
comp=E,2.6nm,0.4s
PLOR Plostina 6.73 47 ⇑P Pn 23 02 25.4 +3.1
PLOR Plostina 6.73 47 P Pn 23 02 25.3 +3.1
PTCC Patocco-Chiusa 6.74 320 P Pn 23 02 22.7 +0.4
MOCL Monte Cuccoli 6.75 295 ⇑*i*P **Pn 23 02 23.4 +1.0**
MYKA Terra Mystica 6.76 322 *e*Pn **Pn 23 02 23.5 +0.8**
comp=E,7.2nm,0.3s,SNR=8.4
MYKA *e*Sn **Sn 23 03 39.8 +0.6**
comp=E,14nm,0.3s
VRI Vrincioaia 6.78 47 ⇑P Pn 23 02 26.4 +3.4
VRI Vrincioaia 6.78 47 P Pn 23 02 26.3 +3.4
VRI Vrincioaia 6.78 47 Pn **Pn 23 02 26.0 +3.1**
comp=E,0.2nmcomp=E,742nmcomp=E,72nm,0.8s
MPPT Montemurlo 6.79 295 P Pn 23 02 23.4 +0.3
MPRI Monte Prat 6.80 317 P Pn 23 02 23.3 +0.1
TLBR Topalu 6.90 60 ⇓P Pn 23 02 27.1 +2.6
ONER Baraj Valea Uz 6.91 43 ⇑P Pn 23 02 28.5 +3.8
MFTR Murfatlar 7.01 64 ⇑P Pn 23 02 29.0 +3.0
CONA Conrad Observa 7.04 339 *e*Pn **Pn 23 02 29.5 +3.0**
comp=E,1.3nm,0.3s
KECS Kecovo 7.08 5 *e*P **Pn 23 02 30.1 +3.1**
KECS *e* 23 03 47.2
KECS Kecovo 7.08 5 *e*PN **Pn 23 02 30.0 +3.1**
KECS *e*SN **Sn 23 03 47.2 +0.4**
TIRR Tirgusor 7.11 62 Pn **Pn 23 02 28.1 +0.7**
TIRR Tirgusor 7.11 62 ⇑P Pn 23 02 30.4 +3.0
TIRR Tirgusor 7.11 62 P Pn 23 02 28.1 +0.7
TIRR Tirgusor 7.11 62 Pn **Pn 23 02 29.8 +2.5**
comp=E,0.3nmcomp=E,32nm,0.7s
BERU Beregovo 7.13 16 Pn **Pn 23 02 29.8 +2.2**
CIMO Cimolais 7.13 316 Pn **Pn 23 02 26.9 -0.9**
MODS Modra-Piesok 7.14 347 *e*P **Pn 23 02 30.9 +3.0**
MODS *e* 23 03 48.1
MODS Modra-Piesok 7.14 347 *e*PN **Pn 23 02 30.9 +3.0**
MODS *e*SN **Sn 23 03 48.1 -0.4**
TESR Tescani 7.16 42 ⇓P Pn 23 02 31.0 +2.9
TESR Tescani 7.16 42 Pn **Pn 23 02 30.8 +2.7**
comp=E,0.1nmcomp=E,27nm,1.0s
KORU Korolevo 7.17 19 Pn **Pn 23 02 32.0 +3.8**
CFR Carcaliu 7.24 56 ⇑P Pn 23 02 31.6 +2.5
CFR Carcaliu 7.24 56 P Pn 23 02 31.6 +2.5
KBA Koelnbreinsper 7.24 323 *e*Pn **Pn 23 02 30.9 +1.6**
comp=E,7.5nm,0.6s,SNR=7.9
KBA *e*Sn **Sn 23 03 51.3 +0.3**
comp=E,15nm,0.4s
SMOL Smolenice 7.26 348 *e*P **Pn 23 02 32.4 +3.0**
TPGR Topolog 7.27 59 ⇑P Pn 23 02 31.9 +2.3
GHRR 7.28 48 ⇑P Pn 23 02 33.1 +3.4
BRIU Brid 7.31 18 Pn **Pn 23 02 33.1 +3.0**
RAKU Rahkiv 7.34 24 Pn **Pn** 23 02 36.3 +5.8
MUKU Mukachevo 7.35 16 Pn **Pn 23 02 33.5 +2.9**
BURAR Bucovina Array 7.35 31 Pn **Pn 23 02 33.7 +2.9**
BURAR Bucovina Array 7.35 31 ⇑P Pn 23 02 34.7 +3.9
BURAR Bucovina Array 7.35 31 P Pn 23 02 34.7 +3.9
HOLU Holmets 7.36 14 Pn **Pn 23 02 34.5 +3.8**
BUR08 Bucovina Ar. S 7.37 31 Pn **Pn 23 02 34.4 +3.3**
IDI Anoyia 7.38 144 Pn **Pn 23 02 30.0 -1.3**
comp=E,9.9nm,0.4s,baz=330,slow=11,SNR=13
IDI Sn **Sn 23 03 49.9 -4.7**
comp=E,6.5nm,0.3s,baz=95,slow=18,SNR=7.8
IDI Anoyia 7.38 144 Pn **Pn 23 02 31.8 +0.6**
ABTA Abfaltersbach 7.39 318 *e*Pn **Pn 23 02 31.6 +0.2**
comp=E,5.7nm,0.3s,SNR=17
TATR Tatarca 7.39 53 ⇑P Pn 23 02 35.1 +3.9
UZHM Uzhgorod 7.44 14 Pn **Pn 23 02 34.7 +2.8**
MANT Manisa 7.45 110 Pn **Pn 23 02 34.3 +2.1**
MOA Molln 7.48 331 *e*Pn **Pn 23 02 34.9 +2.5**
comp=E,4.9nm,0.3s,SNR=13
JAVC Velka Javorina 7.56 350 *e*PN **Pn 23 02 36.6 +3.0**
BIOA Bad Ischl, Aus 7.59 328 *e*Pn **Pn 23 02 36.2 +2.2**
comp=E,8.7nm,0.4s,SNR=12
TLCR 7.67 58 ⇓P Pn 23 02 38.3 +3.3
TLCR 7.67 58 P Pn 23 02 38.3 +3.3
LANS Liptovska Anna 7.72 359 *e*P **Pn 23 02 39.5 +3.7**
LANS *e* 23 04 02.5

LANS Liptovska Anna 7.72 359 *e*PN **Pn** **23 02 39.5 +3.7**
LANS *e*SN **Sn** **23 04 02.5 -0.2**
LESA Schwarzleotal 7.80 323 *i* Pn **Pn** **23 02 37.9 +1.1**
comp=E,12nm,0.4s,SNR=19
LESA *e*Sn **Sn** **23 04 04.4 -0.2**
comp=E,19nm,0.3s
VASR Vaslui 7.84 46 ⇓P **Pn** **23 02 40.8 +3.3**
KRUC Moravsky 7.97 344 *e*PN **Pn** **23 02 40.4 +1.2**
NIE Niedzica 8.00 3 Pn **Pn** **23 02 43.4 +3.7**
comp=E,13nm,0.8s
MAUC Maruska 8.04 351 *e*PN **Pn** **23 02 43.6 +3.4**
STNU Starunia 8.05 24 Pn **Pn** **23 02 44.3 +4.0**
STHS Stebnicka Huta 8.07 7 *e*P **Pn** **23 02 43.5 +3.0**
STHS *e* 23 04 13.4
STHS Stebnicka Huta 8.07 7 *e*PN **Pn** **23 02 43.5 +3.0**
STHS *e*SN **Sn** **23 04 13.4 +2.3**
VRAC Vranov 8.17 346 Pn **Pn** **23 02 42.7 +0.8**
comp=E,0.1nm,0.3s,baz=184,slow=11,SNR=7.8
VRAC Sn **Sn** **23 04 13.4 -0.2**
comp=E,0.4nm,0.3s,baz=125,slow=13,SNR=1.6
VRAC LR LR 23 06 50.2
comp=E,421nm,18.5s,baz=167,slow=45
comp=E,4.5nm,0.9s
VRAC Vranov 8.17 346 *e*PN **Pn** **23 02 43.3 +1.4**
WTTA Wattenberg 8.18 318 *i* Pn **Pn** **23 02 42.9 +0.7**
comp=E,12nm,0.3s,SNR=21
WATA Walderalm 8.26 318 *e*Pn **Pn** **23 02 44.1 +0.8**
comp=E,19nm,0.4s,SNR=19
CKRC Cesky Krumlov 8.30 335 *e*P **Pn** **23 02 45.2 +1.5**
CKRC MLR MLR
comp=Z,500nm,13.9s
CKRC Cesky Krumlov 8.30 335 *e*PN **Pn** **23 02 45.2 +1.5**
CKRC AMS AMS 23 06 10.0
comp=Z,500nm,13.9s
KARP Karpathos 8.32 133 Pn **Pn** **23 02 44.8 +0.7**
KARP Karpathos 8.32 133 *e*P **Pn** **23 02 45.8 +1.7**
KARP Karpathos 8.32 133 Pn **Pn** **23 02 45.3 +1.3**
comp=Z,107nm,0.8s
SQTA Sankt Quirin 8.37 317 *i* Pn **Pn** **23 02 46.5 +1.7**
comp=Z,12nm,0.3s,SNR=7.2
SQTA *e*Sn **Sn** **23 04 19.3 +0.5**
comp=Z,38nm,0.5s
MORC Moravsky Berou 8.48 351 *e*PN **Pn** **23 02 47.8 +1.6**
FETA Feichten 8.50 314 *i* Pn **Pn** **23 02 47.7 +1.1**
comp=Z,5.3nm,0.4s,SNR=12
FETA *e*Sn **Sn** **23 04 22.8 +0.9**
comp=Z,23nm,0.8s
MOTA Moosalm 8.51 317 *i* Pn **Pn** **23 02 47.9 +1.2**
comp=Z,9.3nm,0.5s,SNR=17
GEC2 GERESS Array S 8.52 332 Pn **Pn** **23 02 48.3 +1.5**
GERES GERESS Array B 8.52 332 Pn **Pn** **23 02 48.3 +1.5**
comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=9.6
GERES Sn **Sn** **23 04 20.6 -1.8**
comp=Z,0.5nm,0.3s,baz=147,slow=24,SNR=10
GERES LR LR 23 06 53.4
comp=Z,277nm,21.0s,baz=127,slow=43
comp=Z,0.9nm,0.3s
KMPD K-Podol'skiy 8.61 32 Pn Pn 23 02 51.1 +3.2
KMPD Pn **Pn** **23 02 50.8 +2.9**
RETA Reutte 8.77 317 *i* Pn **Pn** **23 02 51.3 +1.0**
comp=Z,4.3nm,0.3s
RETA *e*Sn **Sn** **23 04 29.7 +1.1**
comp=Z,33nm,0.4s
OJC Ojcow 8.79 1 Pn **Pn** **23 02 52.9 +2.4**
OJC Ojcow 8.79 1 P **Pn** **23 02 52.9 +2.4**
OJC Ojcow 8.79 1 Pn **Pn** **23 02 53.3 +2.8**
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 8.81 333 Pn **Pn** **23 02 52.0 +1.3**
KHC Kasperske Hory 8.81 333⇑ *e*P **Pn** **23 02 50.7 0.0**
KHC Kasperske Hory 8.81 333 *e*PN **Pn** **23 02 53.3 +2.6**
KHC *e*SN **Sn** **23 04 30.4 +1.0**
KHC AMS AMS 23 06 30.0
comp=Z,600nm,11.7s
KHC Kasperske Hory 8.81 333 Pn **Pn** **23 02 52.1 +1.3**
comp=Z,14nm,0.9s
DAVOX Davos/Dischmat 8.83 311 Pn **Pn** **23 02 51.5 +0.4**
comp=Z,2.8nm,0.3s,baz=114,slow=12,SNR=31
DAVOX Sn **Sn** **23 04 27.7 -2.4**
comp=Z,4.1nm,0.3s,baz=306,slow=19,SNR=9.3
DAVOX LR LR 23 07 25.9
comp=Z,275nm,18.1s,baz=103,slow=46
comp=Z,9.5nm,0.4s
TUE Stuetta 8.98 308 Pn **Pn** **23 02 53.6 +0.4**
DAVA Damuels 9.12 313 *e*Pn **Pn** **23 02 54.4 -0.7**
comp=Z,8.4nm,0.4s
ISP Isparta 9.13 110⇑ *e*P **Pn** **23 02 55.6 +0.4**
DPC Dobruska-Polom 9.22 347 AMS AMS 23 07 10.0
comp=Z,800nm,14.6s
PRU Pruhonice 9.27 339 *e*P **Pn** **23 03 00.0 +3.0**
PRU Pruhonice 9.27 339 *e*PN **Pn** **23 03 00.0 +3.0**
CHVC Chvalec 9.49 346 AMS AMS 23 07 30.0
comp=Z,700nm,12.3s
KEST Kesra 9.87 238 LR LR 23 08 12.9
comp=Z,612nm,18.2s,baz=45,slow=46
BNI Bardonecchia 10.13 295 Pn **Pn** **23 03 06.8 -2.2**
BNI Bardonecchia 10.13 295 P **Pn** **23 03 06.8 -2.2**
LUBAR Lubar, Ukraine 10.21 31 Pn **Pn** **23 03 13.2 +3.4**
BFO Black Forest 10.58 314 Pn **Pn** **23 03 14.3 -0.7**
BFO Black Forest 10.58 314 P **Pn** **23 03 14.3 -0.7**
BR106 Keskin Array S 10.76 94 Pn **Pn** **23 03 20.7 +3.1**
comp=Z,2.9nm,0.8s
BR105 Keskin Array S 10.77 95 Pn **Pn** **23 03 20.3 +2.6**
comp=Z,3.2nm,0.8s
BR131 Keskin Array S 10.78 94 Pn **Pn** **23 03 20.3 +2.4**
BR131 Keskin Array S 10.78 94⇓ *e*P **Pn** **23 03 16.9 -0.9**
BRTR Keskin Array B 10.78 94 Pn **Pn** **23 03 20.9 +3.0**
comp=Z,0.2nm,0.3s,baz=272,slow=12,SNR=8.5
BRTR Sn **Sn** **23 05 17.0 -1.0**
comp=Z,0.1nm,0.3s,baz=254,slow=11,SNR=1.7
BRTR LR LR 23 08 21.1
comp=Z,418nm,18.1s,baz=286,slow=42
comp=Z,1.7nm,0.7s
BR104 Keskin Array S 10.79 95 Pn **Pn** **23 03 20.8 +2.9**
comp=Z,35nmcomp=Z,3.9nm,0.9s
RNPP9 Sopachiv 10.87 21 Pn **Pn** **23 03 22.9 +4.0**
CLL Collm 10.89 337 *e*P Pn 23 03 28.0 +8.9
SIM Simferopol' 11.13 67 *e*P **Pn** **23 03 24.2 +1.7**
SIM pmax pmax
comp=Z,14nm,0.7s
SIM MLR MLR
comp=Z,145nm,16.0s
ECH Echery 11.16 312 Pn **Pn** **23 03 22.2 -0.7**
ECH Echery 11.16 312 P **Pn** **23 03 22.2 -0.7**
AK07 Malin Array Si 11.28 33 Pn **Pn** **23 03 27.1 +2.7**
AK06 Malin Array Si 11.30 33 Pn **Pn** **23 03 27.4 +2.6**
AK17 Malin Array Si 11.32 32 Pn **Pn** **23 03 28.1 +3.0**
AK12 Malin Array Si 11.33 32 Pn **Pn** **23 03 28.1 +2.9**
AK16 Malin Array Si 11.33 32 Pn **Pn** **23 03 28.2 +3.0**
AK05 Malin Array Si 11.33 33 Pn **Pn** **23 03 28.0 +2.8**
AK10 Malin Array Si 11.33 33 Pn **Pn** **23 03 27.5 +2.3**
AK09 Malin Array Si 11.36 33 Pn **Pn** **23 03 28.7 +3.1**
AK08 Malin Array Si 11.36 33 Pn **Pn** **23 03 29.1 +3.5**
KIEV Kiev 11.39 32 Pn **Pn** **23 03 29.0 +3.0**
comp=Z,45nm,1.5s
AK04 Malin Array Si 11.39 32 Pn **Pn** **23 03 28.3 +2.2**
AKASG Malin Array Be 11.40 32 Pn **Pn** **23 03 26.4 +0.3**
comp=Z,0.5nm,0.3s,baz=224,slow=13,SNR=9.3
AKASG LR LR 23 08 38.3
comp=Z,137nm,20.1s,baz=210,slow=41
comp=Z,1.9nm,0.7s
AKBB Malin Array Si 11.40 32⇑ *e*P **Pn** **23 03 28.3 +2.2**
AKBB Malin Array Si 11.40 32 Pn **Pn** **23 03 28.8 +2.7**
AK03 Malin Array Si 11.42 32 Pn **Pn** **23 03 29.6 +3.2**
SSB Saint Sauveur 11.65 294 Pn **Pn** **23 03 27.7 -1.9**
SSB Saint Sauveur 11.65 294 P **Pn** **23 03 27.7 -1.9**
MNK Minsk 14.18 20 *i* P **P** **23 04 09.8 -1.6**
comp=E,25nm,0.9s
MNK *i* P **P** **23 04 09.8 -1.6**
comp=N,12nm,0.8s
MNK *i* P **P** **23 04 09.8 -1.6**
comp=Z,53nm,0.8s,baz=207
MNK *i* PP **PnPn** **23 04 17.7 +5.8**
MNK *i* S Sn 23 06 50.0 +9.3
MNK *i* SS **S** **23 07 01.5 +0.2**
MNK *i* LR LR 23 08 47.5
MNK *i* LRM MLR 23 09 59.8
comp=Z,383nm,15.8s
MNK Minsk 14.18 20 *i* P **P** **23 04 09.8 -1.6**
MNK *i* S Sn 23 06 50.0 +9.3
MNK pmax pmax
comp=E,25nm,0.9s
MNK pmax pmax
comp=Z,53nm,0.8s
MNK pmax pmax
comp=N,12nm,0.8s
MNK MLR MLR
comp=Z,383nm,16.0s
GAZ Gaziantep 14.25 102 P **P** **23 04 12.5 +0.1**
NACGM Naroch 14.29 17 *e*P **P** **23 04 10.1 -2.5**
comp=Z,17nm,0.9s,baz=203
PABE Paberze 14.37 10 P **P** **23 04 13.5 0.0**
PABE Paberze 14.37 10 *e*P **P** **23 04 13.9 +0.4**
ISAL Salakas 14.78 15 *e*P **P** **23 04 19.5 +1.4**
SOC Sochi 14.96 75 *e*P **Pn** **23 04 13.5 -1.2**
SOC *e* 23 07 02.4
SOC MLR MLR
comp=Z,135nm,19.0s
MMA0B Mount Meron ar 15.09 119 P **Pn** **23 04 14.7 -1.9**
MMAI Mount Meron Ar 15.09 119 Pn **Pn** **23 04 15.5 -1.1**
comp=Z,0.6nm,0.3s,baz=279,slow=16,SNR=7.6
MMAI Sn **Sn** **23 06 58.2 -4.9**
comp=Z,0.4nm,0.3s,baz=301,slow=29,SNR=1.6
MMAI LR LR 23 11 10.7
comp=Z,178nm,19.6s,baz=305,slow=41
comp=Z,3.9nm,0.8s
NATI Neve Ativ 15.16 117 P **Pn** **23 04 16.0 -1.4**
VSLR Vesyoloye 15.19 76⇑ *e*P **Pn** **23 04 17.6 -0.2**
VSLR pmax pmax
comp=Z,21nm,1.0s
SLTI Sal'it 15.34 122 P **Pn** **23 04 18.3 -1.6**
KSHT Keshet 15.38 118 P **Pn** **23 04 19.2 -1.2**
HMDT Nahal Hemdat 15.65 121 P **Pn** **23 04 22.2 -1.7**
AMAZ Amatzia 15.74 124 P **Pn** **23 04 23.2 -1.8**
BALJ Balqa 15.83 121 Pn **Pn** **23 04 23.8 -2.4**
KZIT Kziot 15.86 127 P **Pn** **23 04 23.8 -2.7**
YTIR Yattir 15.98 124 P **Pn** **23 04 25.6 -2.6**
DSI Dead Sea 16.00 123 P **Pn** **23 04 26.6 -1.8**
MSBI Mazada 16.16 124 P **Pn** **23 04 28.1 -2.4**
GHAJ Ghor Haditha 16.30 123 Pn **Pn** **23 04 31.7 -0.5**
GHAJ Ghor Haditha 16.30 123 P **Pn** **23 04 30.4 -1.9**
VORD Divnogorie 16.57 48 *e*P **Pn** **23 04 35.5 0.0**
VORD pmax pmax
comp=Z,10.0nm,0.9s
ZFRI Zfri 16.58 126 P **Pn** **23 04 33.0 -2.8**
ASF Jabal al Asfar 16.59 118 Pn **Pn** **23 04 36.1 +0.1**
comp=Z,0.2nm,0.3s,baz=313,slow=7.7,SNR=5.6
ASF LR LR 23 12 18.8
comp=Z,118nm,18.6s,baz=298,slow=42
comp=Z,1.3nm,0.7s
VSR Storozhevoye 16.61 47 *e*P **Pn** **23 04 35.8 -0.3**
VSR pmax pmax
comp=Z,8.0nm,0.9s
PRNI Paran 16.62 127 P **Pn** **23 04 33.7 -2.7**
VORR Voronezh 16.86 46 *e*P **Pn** **23 04 37.3 -1.9**
VORR pmax pmax
comp=Z,10.0nm,1.0s
HRFI Mount Harif 16.86 128 P **Pn** **23 04 37.1 -2.3**
MBRI Mt Berech 16.97 128 P **Pn** **23 04 38.2 -2.6**
EIL Elat 17.08 129 P **Pn** **23 04 38.6 -3.5**
comp=Z,6.9nm,0.6s,baz=330,slow=15,SNR=9.6
EIL S Sn 23 07 40.1 -11
comp=Z,8.9nm,0.8s,baz=92,slow=23,SNR=4.9
EIL Elat 17.08 129 P **Pn** **23 04 39.6 -2.6**
SHA1 Shidzhatmaz 17.09 75⇑ *e*P **Pn** **23 04 41.7 -0.7**
KIV Kislovodsk 17.11 74 *e*P **Pn** **23 04 43.2 +0.6**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,18nm,14.0s
KIV Kislovodsk 17.11 74 P **P** **23 04 45.6 +1.4**
comp=Z,13nm,0.9s
KVAR Kislovodsk Arr 17.12 74 P **P** **23 04 43.8 -0.5**
baz=338,slow=14
comp=Z,3.2nm,1.0s
LPSR Galich'ya Gora 17.19 43 *e*P **Pn** **23 04 42.7 -0.7**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 17.27 75 P **Pn** **23 04 44.8 +0.4**
comp=Z,0.3nm,0.3s,baz=276,slow=9.7,SNR=14
KBZ LR LR 23 12 57.3
comp=Z,58nm,21.6s,baz=262,slow=42
comp=Z,7.2nm,0.8s
KBZ Khabaz 17.27 75⇑ *e*P **P** **23 04 47.1 +1.4**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
GURO Guroymak-BITLI 17.39 92 **P** **23 04 47.9 +0.6**
VSU Vasula 17.63 12 *e*P **P** **23 04 49.4 -0.2**
VSU Vasula 17.63 12 *ce*P **Pn** **23 04 49.1 +0.3**
VSU pmax pmax
comp=Z,70nm,0.7s
OBN Obninsk 17.66 33 P **P** **23 04 50.1 +0.1**
comp=Z,20nm,0.7s,baz=82,slow=19,SNR=6.7
OBN Obninsk 17.66 33 **Pn** **23 04 49.5 +0.4**
OBN IAmb IAmb 23 04 50.6
comp=Z,29nm,0.7s
OBN Obninsk 17.66 33 *d* iP **P** **23 04 49.9 -0.1**
OBN pmax pmax
comp=Z,24nm,0.9s
OBN MLR MLR
comp=Z,179nm,17.0s
NCK Nalchik 17.78 75⇑ *e*P **P** **23 04 52.1 +0.7**
NCK pmax pmax
comp=Z,3.0nm,0.8s
ESDC Sonseca Array 18.02 272 P **Pn** **23 04 54.2 +0.4**
baz=72,slow=12,SNR=8.9
ESDC LR LR 23 12 11.4
comp=Z,149nm,18.7s,baz=96,slow=38
comp=Z,1.3nm,1.0s
VRH Novokhopyorsk 18.05 50 *e*P **Pn** **23 04 49.0 -4.9**
VRH pmax pmax
comp=Z,10.0nm,0.8s
ARBE Arbavere 18.46 10 *e*P **Pn** **23 04 59.3 +0.4**
MOS Moscow 18.53 33 *e*P **P** **23 04 59.4 -0.1**
MOS pmax pmax
comp=Z,39nm,0.7s
AAL Aland 18.77 1 *e*P **P** **23 05 02.1 -0.1**
GNI Garni 19.03 86 P **Pn** **23 05 06.1 0.0**
GNI IAmb IAmb 23 05 08.9
comp=Z,18nm,0.7s
GNI Garni 19.03 86 *de*P **Pn** **23 05 06.0 -0.2**
GNI pmax pmax
comp=Z,17nm,0.9s
GNI Garni 19.03 86 P **Pn** **23 05 06.8 +0.6**
comp=Z,27nm,0.8s
GNI pP **pP** **23 05 11.5 +0.5**
comp=Z,27nm,0.8s
MEF Metsahovi 19.04 7 *e*P **Pn** **23 05 05.9 0.0**
HFS Hagfors 19.09 351 P **P** **23 05 05.7 +0.1**
comp=Z,0.6nm,0.3s,baz=154,slow=11,SNR=17
comp=Z,12nm,0.8s
RAF Rauma 19.66 3 *e*P **P** **23 05 12.5 +0.6**
NC405 NORSAR Array S 20.30 349 P **P** **23 05 18.2 -0.7**
NB201 NORSAR Array S 20.30 348 P **P** **23 05 18.6 -0.3**
NB201 IAmb IAmb 23 05 28.8
comp=Z,50nm,1.4s
NB2 NORSAR Subarra 20.30 348 P **P** **23 05 18.3 -0.7**
comp=Z,9.5nm,1.0s,baz=166,slow=11
NOA NORSAR Array B 20.30 348 P **P** **23 05 19.5 +0.5**
comp=Z,2.5nm,0.8s,baz=166,slow=11,SNR=14
NOA LR LR 23 14 25.9
comp=Z,135nm,18.1s,baz=170,slow=40
comp=Z,2.5nm,0.8s
FINES FINESS Array B 20.42 9 P **P** **23 05 19.6 -0.6**
comp=Z,16nm,0.6s,baz=176,slow=10,SNR=40
FINES PcP **PcP** **23 09 30.9 -0.8**
comp=Z,4.0nm,0.8s,baz=198,slow=5.6,SNR=7.1
FINES LR LR 23 14 18.8
comp=Z,328nm,18.3s,baz=208,slow=40
comp=Z,16nm,0.6s
FIA1 FINESS Array S 20.42 9 P **P** **23 05 19.7 -0.5**
EKA Eskdalemuir Ar 20.44 321 P **P** **23 05 20.8 +0.4**
comp=Z,9.0nm,0.9s,baz=110,slow=9.7,SNR=9.5
comp=Z,9.0nm,0.9s
NC303 NORSAR Array S 20.45 348 P **P** **23 05 19.9 -0.7**
NC303 IAmb IAmb 23 05 31.6
comp=Z,42nm,1.4s
MAK Makhachkala 20.66 76 *d* iP **P** **23 05 19.0 -3.9**
MAK *e*S **S** **23 09 08.7 -4.2**
MAK pmax pmax
comp=Z,241nm,1.5s
MAK MLR MLR
comp=Z,91nm,13.0s
PBAR Barrancos 20.73 270 *e*P Pn 23 05 25.7 -0.5
PBAR *i* IAmb IAmb 23 05 37.9
comp=Z,36nm,1.5s
PESTR Estremoz 20.95 272 *e*P Pn 23 05 28.8 0.0
KEF Keuruu 21.00 7 *e*P **P** **23 05 26.5 0.0**
MDT Midelt 21.11 254 P **P** **23 05 28.2 +0.2**
comp=Z,4.6nm,0.8s,baz=84,slow=12,SNR=12
MDT LR LR 23 13 12.1
comp=Z,133nm,18.3s,baz=59,slow=35
comp=Z,4.6nm,0.8s
MD01 Midelt array s 21.20 254 P **P** **23 05 28.6 -0.4**
MD31 MD31 21.20 254 P **P** **23 05 28.9 0.0**
PARRA Arraiolos 21.30 272 *e*P **P** **23 05 31.2 -6.8**
PCAS Casmilo, Conde 21.34 276 *e*P **P** **23 05 32.4 +2.1**
EVO Evora 21.36 271 *e*P **P** **23 05 34.3 +3.8**
EVO *i* IAmb IAmb 23 05 46.9
comp=Z,33nm,1.9s
PMTG Montargil 21.37 273 *e*P **P** **23 05 34.8 +4.2**
PMTG *i* IAmb IAmb 23 05 42.1
comp=Z,33nm,1.6s
PVAQ Vaqueiros 21.48 268 *e*P **P** **23 05 34.3 +2.5**
PCVE Castro Verde 21.65 269 *e*P **P** **23 05 36.2 +2.5**
PBDV Barranco-do-Ve 21.70 268 *e*P **P** **23 05 35.5 +1.3**
VAF Ylistaro 21.72 4 *e*P **P** **23 05 38.9 +4.7**
BELG Belogornoye 21.89 50 P **P** **23 05 36.4 +0.3**
comp=Z,33nm,0.7s,baz=355,slow=1.5,SNR=16
BELG PcP **PcP** **23 09 34.5 -0.3**
comp=Z,5.4nm,0.6s,baz=225,slow=1.4,SNR=4.3
comp=Z,33nm,0.7s
BELG Belogornoye 21.89 50 *c* iP **P** **23 05 36.1 0.0**
BELG pmax pmax
comp=Z,7.0nm,0.9s
TAM Tamanrasset 22.05 217 P **P** **23 05 38.5 +0.4**
TAM IAmb IAmb 23 05 51.0
comp=Z,18nm,1.0s
TAM Tamanrasset 22.05 217 P **P** **23 05 38.5 +0.4**
TAM pmax pmax
comp=Z,18nm,1.0s
JOF Joensuu 22.61 14 *e*P **P** **23 05 43.9 +0.3**
KLMR Klimovskoe 22.93 25 *e*P **P** **23 05 45.1 -1.9**
KLMR pmax pmax
comp=Z,49nm,1.0s
KIRV Kirov 25.39 37 LR LR 23 16 39.2
comp=Z,229nm,18.4s,baz=239,slow=38
KIRV Kirov 25.39 37 *ce*P **P** **23 06 09.3 -0.9**
AKTO Aktyubinsk 27.89 58 LR LR 23 20 02.6
comp=Z,148nm,18.1s,baz=174,slow=41
ARCES ARCESS Array B 28.34 4 P **P** **23 06 35.4 -1.3**
comp=Z,1.4nm,0.7s,baz=187,slow=8.9,SNR=4.6
ARCES LR LR 23 18 57.2
comp=Z,204nm,19.0s,baz=194,slow=38
comp=Z,1.4nm,0.7s
ARTI Arti 29.07 46 LR LR 23 19 15.1
comp=Z,193nm,20.3s,baz=240,slow=38
ARTI Arti 29.07 46 P **P** **23 06 42.8 -0.5**
ARTI Arti 29.07 46 *d* iP **P** **23 06 43.3 0.0**
ARTI S **S** **23 11 36.2 +2.5**
ARTI SS **SnSn** **23 12 59.1 +1.5**
ARTI pmax pmax
comp=Z,24nm,0.7s
AB31 Akbulak array 29.10 61 P **P** **23 06 42.7 -0.9**
ABKAR Akbulak array 29.10 61 P **P** **23 06 43.3 -0.4**
SVE Sverdlovsk 30.38 45 *e*P **P** **23 06 55.3 +0.4**
SVE pmax pmax
comp=Z,27nm,0.9s
SVE MLR MLR
comp=Z,285nm,15.0s
TORD Torodi Ar. Bea 32.24 214 P **P** **23 07 12.0 +0.4**
comp=Z,1.6nm,0.9s,baz=22,slow=13,SNR=8.4
comp=Z,1.6nm,0.9s
BORG Borgarnes 32.97 329 LR LR 23 22 46.7
comp=Z,107nm,18.6s,baz=128,slow=40
HRA Herat 34.06 88 IAmb IAmb 23 07 29.8
comp=Z,4.2nm,0.8s
UOSS Minazif 34.43 107 P **P** **23 07 29.5 -1.3**
UOSS IAmb IAmb 23 07 30.3
comp=Z,3.8nm,0.6s
BORK Borovoye 35.59 53 P **P** **23 07 40.9 +0.5**
BORK Borovoye 35.59 53 *ce*P **P** **23 07 40.9 +0.5**
BORK pmax pmax
comp=Z,12nm,0.8s
BVAR Borovoye Array 35.63 53 P **P** **23 07 41.5 +0.7**
comp=Z,12nm,0.7s,baz=275,slow=6.5,SNR=82
BVAR PcP **PcP** **23 10 09.2 +0.2**
comp=Z,0.8nm,0.6s,baz=286,slow=3.5,SNR=3.1
BVAR LR LR 23 24 27.0
comp=Z,60nm,19.0s,baz=272,slow=40
comp=Z,12nm,0.7s
KKAR Karatay Array 37.21 70 P **P** **23 07 54.2 -0.2**
KKAR Karatay Array 37.21 70 P **P** **23 07 54.2 -0.2**
CHGR Chuyangaron 37.59 77 IAmb IAmb 23 07 58.6
comp=Z,12nm,0.8s
GAR Garm 38.32 76 IAmb IAmb 23 08 06.0
comp=Z,8.8nm,0.8s
KBL Kabul 39.10 84 P **P** **23 08 11.3 +0.6**
KBL Kabul 39.10 84 P **P** **23 08 11.3 +0.6**
KBL pmax pmax
comp=Z,3.0nm,0.7s
AAK Ala-Archa 40.15 69 LR LR 23 27 47.3
comp=Z,55nm,19.2s,baz=312,slow=40
AAK Ala-Archa 40.15 69 P **P** **23 08 20.0 +0.7**
AAK Ala-Archa 40.15 69 P **P** **23 08 20.0 +0.7**
AAK pmax pmax
comp=Z,3.0nm,0.7s
LODK Lodwar 40.39 155 P **P** **23 08 21.3 0.0**
DBIC Dimbokro 40.91 219 LR LR 23 28 20.3
comp=Z,86nm,18.6s,baz=76,slow=40
KURBB Kurchatov Arra 40.91 56 P **P** **23 08 25.9 +0.7**
comp=Z,1.1nm,0.4s,baz=283,slow=9.2,SNR=11
KURBB PcP **PcP** **23 10 25.6 +0.2**
comp=Z,0.5nm,0.5s,baz=283,slow=3.5,SNR=2.9
comp=Z,1.1nm,0.4s
KURK Kurchatov 40.95 56 P **P** **23 08 24.1 -1.4**
KURK Kurchatov 40.95 56 *de*P **P** **23 08 26.0 +0.4**
KURK pmax pmax
comp=Z,8.0nm,1.3s
NIL Nilore 42.63 82 P **P** **23 08 38.5 -1.0**
NIL IAmb IAmb 23 08 41.5
comp=Z,19nm,1.5s
NIL Nilore 42.63 82 P **P** **23 08 38.5 -1.0**
NIL pmax pmax
comp=Z,19nm,1.5s
MAKZ Makanchi 44.03 61 P **P** **23 08 50.6 0.0**
MAKZ IAmb IAmb 23 08 52.0
comp=Z,7.7nm,0.9s
MAKZ Makanchi 44.03 61 P **P** **23 08 50.7 0.0**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
ZALV Zalesovo Beam 44.08 50 P **P** **23 08 51.2 +0.2**
comp=Z,28nm,0.6s,baz=280,slow=8.5,SNR=109
ZALV PP **PP** **23 10 32.0 -1.5**
comp=Z,0.7nm,0.6s,baz=300,slow=14,SNR=1.8
ZALV LR LR 23 29 29.0
comp=Z,192nm,18.6s,baz=304,slow=39
comp=Z,28nm,0.6s
NRIK Noril'sk 44.22 28 LR LR 23 29 41.2
comp=Z,86nm,18.3s,baz=278,slow=39
MK31 Makanchi Array 44.24 61 *c* iP **P** **23 08 52.2 -0.2**
MKAR Makanchi Array 44.24 61 P **P** **23 08 52.7 +0.3**
comp=Z,12nm,0.7s,baz=282,slow=6.8,SNR=97
MKAR PcP **PcP** **23 10 36.6 0.0**
comp=Z,0.9nm,0.6s,baz=280,slow=3.9,SNR=2.5
MKAR LR LR 23 29 39.6
comp=Z,80nm,18.8s,baz=325,slow=39
comp=Z,12nm,0.7s
MKAR Makanchi Array 44.24 61 P **P** **23 08 52.8 +0.4**
SFJD Kangerlussuaq 45.10 329 LR LR 23 30 30.3
comp=Z,93nm,19.1s,baz=114,slow=40
ILULI Ilulissat 45.23 332 P **P** **23 08 59.7 -0.2**
ILULI Ilulissat 45.23 332 P **P** **23 08 59.7 -0.2**
ILULI pmax pmax
comp=Z,24nm,0.6s
DGZ Jazzator, Alta 46.69 56 *ce*P **P** **23 09 12.7 +0.8**
DGZ pmax pmax
comp=Z,12nm,0.8s
FRB Frobisher Bay 53.06 326 LR LR 23 35 13.7
comp=Z,96nm,18.5s,baz=76,slow=39
EVN Everest 55.56 81 P **P** **23 10 18.2 -1.2**
TLY Talaya 55.61 49 *ce*P **P** **23 10 19.9 +1.2**
TLY pmax pmax
comp=Z,16nm,0.9s
SCHQ Schefferville 55.64 316 LR LR 23 33 22.4
comp=Z,60nm,19.4s,baz=74,slow=35
TIXI Tiksi 56.85 21 LR LR 23 38 01.9
comp=Z,106nm,19.2s,baz=15,slow=39
LSA Lhasa 57.82 77 IAmb IAmb 23 10 35.6
comp=Z,7.1nm,0.7s
LSA Lhasa 57.82 77 P P 23 10 30.5 -4.8
LSA pmax pmax
comp=Z,9.0nm,0.7s
GTA Gaotai 58.91 63 P **P** **23 10 42.0 -0.3**
GTA pP pP 23 10 49.5 +0.9
GTA pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 58.94 52 P **P** **23 10 43.1 +0.7**

comp=Z,9.5nm,0.8s,baz=289,slow=8.8,SNR=56
SONM LR LR 23 38 12.9
comp=Z,115nm,18.6s,baz=327,slow=38
comp=Z,9.5nm,0.8s
ULN Ulaanbaatar 59.32 51 P **P** **23 10 45.6 +0.6**
ULN IAmb IAmb 23 10 46.6
comp=Z,6.4nm,0.8s
ULN Ulaanbaatar 59.32 51 *de*P **P** **23 10 46.0 +1.0**
ULN pmax pmax
comp=Z,7.0nm,1.0s
YAK Yakutsk 62.62 30 LR LR 23 41 02.3
comp=Z,72nm,19.0s,baz=294,slow=39
LZDM Lanzhou Array 63.34 65 P **P** **23 11 13.2 +0.5**
comp=Z,4.2nm,0.5s,baz=305,slow=5.2,SNR=11
comp=Z,4.2nm,0.5s
LZH Lanzhou 63.37 64 *e*P **P** **23 11 12.8 +0.1**
LZH sP sP 23 11 20.5 -0.9
LZH pmax pmax
comp=Z,23nm,1.3s
A36M Sachs Harbour 64.21 349 P **P** **23 11 17.9 +0.5**
A36M IAmb IAmb 23 11 22.3
comp=Z,6.0nm,0.9s
HILR Hailar Array B 65.52 45 P **P** **23 11 27.8 +1.4**
comp=Z,2.9nm,0.8s,baz=295,slow=11,SNR=5.1
comp=Z,2.9nm,0.8s
HHC Hu-ho-hao-te 65.77 56 *e*P **P** **23 11 28.5 +0.3**
HHC pmax pmax
comp=Z,13nm,0.9s
LBTB Lobatse 66.34 174 LR LR 23 42 10.2
comp=Z,67nm,20.0s,baz=358,slow=37
PZH PanZhiHua 67.34 74 P **P** **23 11 37.8 -0.7**
PZH pmax pmax
comp=Z,10.0nm,0.6s
XAN Xi'an 67.96 64 ⇑P **P** **23 11 42.3 +0.1**
XAN pmax pmax
comp=Z,20nm,0.9s
HEH HeiHe 69.01 41 *e*P **P** **23 11 49.0 +0.6**
HEH pmax pmax
comp=Z,10.0nm,0.8s
SEY Seymchan 69.34 21 LR LR 23 48 08.0
comp=Z,59nm,18.6s,baz=320,slow=41
E46A Sault Ste Mari 69.51 314 P **P** **23 11 52.2 +0.7**
F31M Tsiigehtchic 69.59 349 P **P** **23 11 51.4 -0.2**
F31M IAmb IAmb 23 11 52.3
comp=Z,5.8nm,0.8s
BOSA Boshof 69.88 175 P **P** **23 11 54.6 +0.6**
comp=Z,2.7nm,0.9s,baz=341,slow=7.2,SNR=4.9
comp=Z,2.7nm,0.9s
BOSA Boshof 69.88 175 P **P** **23 11 54.1 +0.1**
BOSA IAmb IAmb 23 11 55.5
comp=Z,9.8nm,1.3s
BOSA Boshof 69.88 175 P **P** **23 11 54.1 +0.1**
BOSA pmax pmax
comp=Z,10.0nm,1.3s
TOLK Toolik Lake Re 69.95 356 P **P** **23 11 54.2 +0.2**
TOLK IAmb IAmb 23 12 21.6
comp=Z,5.5nm,1.2s
CMAR Chiang Mai Arr 70.12 83 P **P** **23 11 54.8 -1.0**
comp=Z,1.5nm,0.3s,baz=307,slow=7.7,SNR=13
comp=Z,1.5nm,0.3s
CMAR Chiang Mai Arr 70.12 83 *i*P **P** **23 11 54.7 -1.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
G31M Satah River 70.15 349 P **P** **23 11 54.1 -1.0**
G31M IAmb IAmb 23 11 56.9
comp=Z,11nm,1.5s
F28M Old Crow 70.18 352 P **P** **23 11 55.8 +0.4**
F28M IAmb IAmb 23 12 12.8
comp=Z,5.9nm,1.2s
MA2 Magadan 71.59 24 LR LR 23 47 06.4
comp=Z,93nm,18.5s,baz=309,slow=39
BNX BinXian 71.94 45 ⇓P **P** **23 12 06.5 +0.1**
BNX pmax pmax
comp=Z,6.0nm,0.7s
EPLO Experimental L 72.10 321 P **P** **23 12 07.4 +0.2**
EPLO IAmb IAmb 23 12 08.7
comp=Z,8.8nm,1.0s
J30M Hart River 72.66 349 IAmb IAmb 23 12 12.3
comp=Z,10nm,1.1s
ULM Lac du Bonnet 72.70 323 P **P** **23 12 10.8 +0.1**
comp=Z,5.6nm,0.6s,baz=63,slow=5.1,SNR=6.9
ULM LR LR 23 45 22.9
comp=Z,54nm,18.2s,baz=24,slow=37
comp=Z,5.6nm,0.6s
ULM Lac du Bonnet 72.70 323 P **P** **23 12 11.1 +0.3**
ULM Lac du Bonnet 72.70 323 P **P** **23 12 11.1 +0.3**
ULM pmax pmax
comp=Z,6.0nm,0.6s
H21K Melozitna Rive 73.09 357 IAmb IAmb 23 12 15.8
comp=Z,6.8nm,1.1s
DAWY Dawson 73.54 351 P **P** **23 12 16.3 +0.7**
DAWY IAmb IAmb 23 12 17.8
comp=Z,3.7nm,0.9s
ILAR Eielson Array 73.61 354 P **P** **23 12 15.2 -0.8**
comp=Z,0.9nm,0.9s,baz=1.9,slow=3.8,SNR=9.0
comp=Z,0.9nm,0.9s
ILAR Eielson Array 73.61 354 P **P** **23 12 15.6 -0.4**
ILAR Eielson Array 73.61 354 P **P** **23 12 15.6 -0.4**
BCAR Beaver Creek A 74.80 351 P **P** **23 12 23.4 +0.5**
L27K Beaver Creek, 74.80 351 P **P** **23 12 23.4 +0.4**
USRK Ussuriysk Ar. 75.38 43 P **P** **23 12 25.9 -0.7**
comp=Z,3.2nm,0.8s,baz=310,slow=9.0,SNR=4.6
comp=Z,3.2nm,0.8s
NJ2 Nanjing 75.76 60 *e*P **P** **23 12 27.5 -1.4**
NJ2 pmax pmax
comp=Z,12nm,0.5s
PPLA Purkeypile 75.81 356 P **P** **23 12 28.6 -0.4**
PPLA IAmb IAmb 23 12 30.3
comp=Z,9.5nm,1.1s
TKL Tuckaleechee C 76.09 305 LR LR 23 47 42.4
comp=Z,49nm,18.7s,baz=42,slow=37
L18K Granite Mounta 76.66 358 P **P** **23 12 33.8 +0.3**
ECSD EROS Data Cent 77.71 318 P **P** **23 12 40.4 +0.6**
ECSD IAmb IAmb 23 13 09.6
comp=Z,5.2nm,1.2s
KSRS Korea Array 77.79 51 P **P** **23 12 40.7 +0.4**
comp=Z,2.9nm,0.7s,baz=314,slow=4.9,SNR=6.8
comp=Z,2.9nm,0.7s
PETK Petropavlovsk- 79.12 24 LR LR 23 52 39.9
comp=Z,94nm,19.5s,baz=293,slow=39
KULM Kulim 79.78 92 P **P** **23 12 50.3 -1.2**
ASAJ Asahikawa 80.64 38 LR LR 23 53 43.6
comp=Z,37nm,18.1s,baz=332,slow=39
JNU Nakatsue 82.53 52 LR LR 23 53 53.8
comp=Z,66nm,19.9s,baz=307,slow=39
NEW Newport 82.86 333 LR LR 23 53 12.4
comp=Z,37nm,18.9s,baz=50,slow=38
YNE Yellowstone No 82.87 327 IAmb IAmb 23 13 10.3
comp=Z,3.7nm,0.8s
YHL Hebgen Lake 83.48 327 IAmb IAmb 23 13 14.7
comp=Z,4.6nm,1.1s
MJAR Matsushiro Arr 84.19 45 P **P** **23 13 15.3 +0.8**
comp=Z,2.5nm,0.8s,baz=326,slow=3.9,SNR=4.7
MJAR LR LR 23 54 24.1
comp=Z,42nm,20.2s,baz=290,slow=38
comp=Z,2.5nm,0.8s
PD31 Pinedale Array 84.49 325 IAmb IAmb 23 13 25.7
comp=Z,6.4nm,1.5s
PDAR Pinedale Array 84.49 325 P **P** **23 13 16.6 +0.4**
comp=Z,0.8nm,0.7s,baz=56,slow=4.7,SNR=11
PDAR LR LR 23 51 40.2
comp=Z,39nm,18.5s,baz=31,slow=36
comp=Z,0.8nm,0.7s
HAWA Hanford 85.30 333 P **P** **23 13 21.1 +1.2**
HAWA IAmb IAmb 23 13 58.4
comp=Z,4.1nm,1.1s
BSUT Blindstream Ca 86.83 324 P **P** **23 13 27.7 -0.3**
BSUT IAmb IAmb 23 13 33.4
comp=Z,3.3nm,1.0s
ANMO Albuquerque 89.32 318 LR LR 23 54 22.4
comp=Z,41nm,18.5s,baz=40,slow=36
DRIO Del Rio 90.49 311 P **P** **23 13 46.9 +1.8**
DRIO IAmb IAmb 23 13 48.1
comp=Z,4.1nm,0.9s
NVAR Mina Array Bea 91.75 328 LR LR 23 58 39.7
comp=Z,91nm,21.2s,baz=14,slow=38
TXAR Lajitas Array 92.25 313 P **P** **23 13 54.8 +1.4**
comp=Z,1.3nm,0.8s,baz=78,slow=3.9,SNR=13
comp=Z,1.3nm,0.8s
CPUP Villa Florida 97.98 242 LR LR 00 01 05.5
comp=Z,12nm,18.0s,baz=244,slow=37
NVL N'lazarevskaya 112.03 183 *i* PKIKP **PKiKP** **23 19 20.4 +3.4**
NVL *e* 23 20 03.9
NVL *e*PPP PPP 23 22 25.3
NVL *e*SS SS 23 35 43.2 +4.9
NVL *e*SSS SSS 23 39 53.3
NVL pmax pmax
comp=Z,6.0nm,0.7s
NVL MLR MLR
comp=Z,663nm,25.0s
WB0 Warramunga Arr 121.20 90 PKPdf **PKPdf** **23 19 34.4 -1.9**
WRA Warramunga Arr 121.27 90 PKP **PKPdf** **23 19 35.3 -1.1**
comp=Z,0.7nm,0.6s,baz=326,slow=1.8,SNR=7.7
ASAR Alice Springs 123.12 94 PKP **PKPdf** **23 19 39.1 -0.8**
comp=Z,2.9nm,0.6s,baz=314,slow=1.6,SNR=40
ASAR Alice Springs 123.12 94 PKPdf **PKPdf** **23 19 38.6 -1.3**
BELA Belgrano 2 123.47 192 PKPdf **PKPdf** **23 19 38.4 -0.5**
DZM Mont Dzumac 146.09 66 PKPbc **PKPab** **23 20 24.4 +0.3**
comp=Z,6.1nm,0.8s,baz=203,slow=7.2,SNR=2.3
DZM Mont Dzumac 146.09 66 PKPbc **PKPab** **23 20 24.5 +0.5**

*NEIC **28** 23:10:59.4±0.8, 34°.874N±0°.008×117°.395W±0°.010, h5km±1km, Error ellipse: s-maj=2.1km s-min=1.4km az=58.0*

PAS 28 23:10:59.7±0.8, 34°.875N±0°.007×117°.391W±0°.010, h2km±2km, Mwr3.5/4, ML3.5/169(NEIC), **Error ellipse: s-maj=1.2km s-min=1.1km az=111.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HYS	**Haystack Butte**	**0.15**	**266**		Pg	23 11 03.1	+0.5
HYS					Sg	23 11 05.4	+0.9
VTV	**Victorville**	**0.32**	**171**		Pg	23 11 05.9	+0.1
VTV					Sg	23 11 10.5	+0.5
RRX	**Edison Barstow**	**0.32**	**90**		Pg	23 11 06.2	+0.3
RRX					Sg	23 11 11.3	+1.2
ADO	**Adelanto Recei**	**0.33**	**186**		Pg	23 11 06.5	+0.5
ADO					Sg	23 11 11.9	+1.7
SBB	**Saddle Back Bu**	**0.40**	**243**		Pg	23 11 07.5	+0.1
SBB					Sg	23 11 12.9	+0.2
EDW2	**Edwards Air Fo**	**0.50**	**271**		Pg	23 11 09.1	-0.1
EDW2					Sg	23 11 15.9	+0.2
DTP	**Desert Tortois**	**0.54**	**317**		Pg	23 11 10.0	-0.1
DTP					Sg	23 11 17.7	+0.6
HOLC	**Holcomb Ridge**	**0.56**	**222**		Pg	23 11 10.4	0.0
HOLC					Sg	23 11 17.9	+0.2
CCAC	**Calif City Air**	**0.58**	**298**		Pg	23 11 10.9	0.0
CCAC					Sg	23 11 18.9	+0.4
LRRC	**Littlerock Res**	**0.63**	**237**		Pg	23 11 11.7	-0.1
LRRC					Sg	23 11 20.3	+0.3
JNH	**Juniper Hills**	**0.63**	**228**		Pg	23 11 11.8	-0.1
JNH					Sg	23 11 20.2	+0.2
CCCA	**Chr Cany lake**	**0.65**	**2**	Pg	Pg	23 11 12.1	-0.1
CCCA				Sg	Sg	23 11 20.8	+0.2
LRMC	**Laurel Mtn Rad**	**0.65**	**338**	Pg	Pg	23 11 11.9	-0.2
LRMC				Sg	Sg	23 11 20.7	+0.1
BFSC	**Mount Baldy Ra**	**0.67**	**199**	Pg	Pg	23 11 12.0	-0.6
BFSC				IAML		23 11 21.9	
	comp=N,2μm,0.5s						
BFSC				IAML		23 11 22.8	
	comp=E,2μm,0.4s						
BFSC	**Mount Baldy Ra**	**0.67**	**199**		Sg	23 11 21.4	+0.1
TPO	**Tropico Hills**	**0.69**	**271**	Pg	Pg	23 11 12.7	-0.2
TPO				Sg	Sg	23 11 22.1	+0.2
TPO				IAML		23 11 27.7	
	comp=E,3μm,0.5s						
SIL	**Silver Peak**	**0.70**	**138**		Pg	23 11 13.1	-0.1
SIL					Sg	23 11 22.7	+0.4
CJV	**Casa Juvan**	**0.71**	**241**		Pg	23 11 13.1	-0.2
CJV					Sg	23 11 23.0	+0.5
BBRC	**Big Bear Solar**	**0.72**	**147**		Pg	23 11 13.4	-0.2
BBRC					Sg	23 11 23.5	+0.5
WSHM	**Spangler Hills**	**0.73**	**353**	Pg	Pg	23 11 13.0	-0.7
WSHM				Sg	Sg	23 11 22.9	-0.3
CHFC	**Chilao Flat St**	**0.75**	**224**		Pg	23 11 13.7	-0.5
HLNC	**Highland**	**0.77**	**169**		Pg	23 11 14.2	-0.2
ALPC	**Antelope**	**0.77**	**256**		Pg	23 11 14.2	-0.3
CFSC	**Central Fire S**	**0.77**	**173**		Pg	23 11 14.4	-0.1
CFSC	**Central Fire S**	**0.77**	**173**		Sg	23 11 25.2	+0.7
FON	**Fontana**	**0.78**	**183**		Pg	23 11 14.3	-0.2
FON					Sg	23 11 24.9	+0.3
CLTC	**Calectric**	**0.78**	**176**		Pg	23 11 14.7	-0.1
CLTC					Sg	23 11 25.5	+0.7
LEOC	**Leona Valley**	**0.79**	**252**		Pg	23 11 14.6	-0.3
LEOC					Sg	23 11 25.1	0.0
GPO	**China Lake**	**0.80**	**344**		Pb	23 11 16.4	0.0
SVD	**Seven Oaks Dam**	**0.80**	**162**		Pg	23 11 14.9	-0.2
SVD					Sg	23 11 25.3	-0.3
MWC	**Mount Wilson**	**0.85**	**220**	Pg	Pg	23 11 15.3	-0.7
PSRC	**Puddingstone R**	**0.85**	**204**		Pg	23 11 15.9	-0.2
PSRC					Sg	23 11 27.5	+0.4
SRTC	**Snort**	**0.87**	**340**		Pg	23 11 16.4	+0.1
SRTC					Sg	23 11 28.5	+0.9
CFT	**Crafton Hills**	**0.87**	**165**		Pg	23 11 16.3	-0.1
CFT					Sg	23 11 28.3	+0.6
HEC	**Hector,Ludlow**	**0.87**	**93**		Pg	23 11 15.9	-0.5
HEC					Sg	23 11 27.6	0.0
MLSC	**Mira Loma**	**0.88**	**189**		Pg	23 11 15.7	-0.9
MLSC					Sg	23 11 28.3	+0.4
RVR	**Riverside**	**0.88**	**179**		Pg	23 11 15.9	-0.6
RVR					Sg	23 11 27.8	-0.2
RSBC	**Riverside Bore**	**0.90**	**177**		Pg	23 11 16.4	-0.5
RSBC	**Riverside Bore**	**0.90**	**177**		Pg	23 11 16.5	-0.5
RSBC					Sg	23 11 28.5	-0.1
WBSM	**Bird Springs**	**0.90**	**317**		Pg	23 11 16.7	-0.3
CHNC	**Chino**	**0.91**	**195**		Pg	23 11 16.8	-0.3
CHNC					Sg	23 11 28.9	0.0
CLC	**China Lake**	**0.95**	**350**	Pg	Pg	23 11 17.5	-0.5
CLC				IAML		23 11 32.8	
	comp=N,3μm,0.2s						
GSA	**Caltech--GSA**	**0.96**	**220**		Pg	23 11 17.8	-0.2
PASC	**Pasadena Art C**	**0.96**	**223**	Pg	Pg	23 11 17.3	-0.8
PASC				IAML		23 11 33.9	
	comp=N,2μm,0.3s						
TOW	**Tower One**	**0.98**	**342**		Pg	23 11 18.7	+0.2
DECC	**Green Verdugo**	**0.99**	**232**		Pg	23 11 18.2	-0.6
PEC	**Perris**	**1.00**	**169**		Pg	23 11 18.7	-0.1
BBSC	**Beaumont Base**	**1.01**	**160**		Pg	23 11 19.3	+0.2
RHC	**Rose Hills Cem**	**1.01**	**211**		Pg	23 11 19.1	0.0
GVRC	**Garvey Reservo**	**1.02**	**216**		Pg	23 11 19.1	-0.2
GTM	**Goat Mountain**	**1.03**	**124**		Pg	23 11 18.7	-0.8
THC	**Tehachapi Micr**	**1.05**	**272**		Pg	23 11 19.5	-0.2
WNMM	**Nine Mile Cany**	**1.05**	**337**		Pg	23 11 19.4	-0.5
GR2C	**Griffith Obs.**	**1.06**	**225**		Pg	23 11 19.4	-0.7
WORM	**Onyx Ranch**	**1.07**	**320**		Pg	23 11 19.6	-0.7
DSCC	**Desert Studies**	**1.09**	**75**		Pg	23 11 19.8	-0.8
TJR	**Tejon Ranch**	**1.12**	**278**		Pg	23 11 20.3	-0.9
TEJ	**El Tejon**	**1.12**	**289**		Pg	23 11 20.2	-1.1
WVPM	**Volcano Peak E**	**1.13**	**342**		Pg	23 11 21.0	-0.4
OSI	**Osito Audit: C**	**1.13**	**257**	Pg	Pg	23 11 20.4	-0.9
WHFM	**Hanning Flat**	**1.13**	**317**		Pg	23 11 20.7	-0.8
OAT	**Oat Mountain**	**1.14**	**243**		Pg	23 11 21.3	-0.3
DEVC	**Devers**	**1.15**	**144**		Pg	23 11 21.6	-0.2
BLAC	**Blackrock camp**	**1.15**	**134**		Pg	23 11 21.3	-0.5
JRC2	**Joshua Ridge**	**1.16**	**343**		Pg	23 11 21.4	-0.5
DJJ	**Donna J Jenkin**	**1.17**	**229**		Pg	23 11 21.0	-1.0
QSM	**Queen of Sheba**	**1.17**	**21**	Pg	Pg	23 11 21.4	-0.8
QSM				IAML		23 11 41.6	
	comp=N,2μm,0.6s						
QSM				IAML		23 11 44.4	
	comp=E,1μm,0.6s						
WTT2	**Watts, South G**	**1.17**	**218**		Pn	23 11 23.1	+0.1
ISA	**Isabella, Lake**	**1.19**	**312**		Pg	23 11 21.6	-0.8
ISA					Pb	23 11 21.7	-1.2
ISA				IAML		23 11 39.5	
	comp=E,1μm,0.7s						
ISA				IAML		23 11 39.8	
	comp=N,826nm,0.6s						
WCSM	**Coso Springs S**	**1.19**	**345**		Pg	23 11 22.0	-0.5
WRVM	**Rose V. Centra**	**1.20**	**340**		Pg	23 11 22.2	-0.6
HMTC	**Hemet**	**1.21**	**165**		Pg	23 11 22.0	-0.8
ARIC	**Arvin**	**1.21**	**282**		Pg	23 11 21.8	-1.1
ELS	**Elsinore Mount**	**1.23**	**181**	Pg	Pg	23 11 21.8	-1.4
ELS				IAML		23 11 42.5	
	comp=E,1μm,0.3s						
ELS				IAML		23 11 42.9	
	comp=N,924nm,0.3s						
BLCC	**Black Canyon**	**1.23**	**240**		Pg	23 11 22.9	-0.4
EW2	**E Wide Canyon**	**1.24**	**139**		Pg	23 11 22.5	-0.9
POB	**Polly Butte**	**1.25**	**162**		Pg	23 11 22.9	-0.7
DGR	**Domenigoni Val**	**1.26**	**165**		Pg	23 11 22.9	-1.0
MURC	**Murrieta**	**1.28**	**173**		Pg	23 11 23.1	-1.2
TUQ	**Turquoise Moun**	**1.33**	**65**		Pg	23 11 23.6	-1.6
GMRC	**Granite Mounta**	**1.43**	**93**		Pn	23 11 24.4	-2.4
BELC	**Belle Mtn. Jos**	**1.44**	**127**		Pn	23 11 25.1	-1.8
BELC				IAML		23 11 46.7	
	comp=E,598nm,0.2s						
BELC				IAML		23 11 47.4	
	comp=N,630nm,0.2s						
DNR	**Dunn Ranch,Anz**	**1.45**	**154**		Pn	23 11 26.1	-0.9
PFO	**Pinyon Flats O**	**1.48**	**148**		Pn	23 11 25.9	-1.5
PMD	**Palm Desert**	**1.48**	**145**		Pn	23 11 25.5	-1.9
PMD					IAML	23 11 47.9	
	comp=E,748nm,0.2s						
PMD					IAML	23 11 48.6	
	comp=N,771nm,0.2s						
MTPC	**Mountain Pass**	**1.62**	**67**		Pn	23 11 27.8	-1.7
FURC	**Furnace Creek,**	**1.65**	**15**		Pn	23 11 28.1	-1.4
FURC					IAML	23 11 57.8	
	comp=N,610nm,0.9s						
FURC					IAML	23 11 58.1	
	comp=E,908nm,0.6s						
CWC	**Cottonwood Cre**	**1.66**	**340**		Pn	23 11 28.9	-1.1
CWC					IAML	23 11 53.7	
	comp=N,452nm,0.2s						
CWC					IAML	23 11 56.8	
	comp=E,496nm,0.2s						
DANC	**Danby, Needles**	**1.67**	**98**		Pn	23 11 27.8	-2.2
VES	**Vestal, Richgr**	**1.69**	**305**		Pn	23 11 28.8	-1.4
VES					IAML	23 11 57.5	
	comp=N,712nm,0.4s						
VES					IAML	23 12 00.4	
	comp=E,475nm,0.8s						
BORC	**Borrego Spring**	**1.79**	**153**	Pn	Pn	23 11 30.9	-0.8
BORC					IAML	23 11 57.7	
	comp=E,554nm,0.4s						
BORC					IAML	23 12 00.8	
	comp=N,610nm,0.8s						
DPP	**Dos Picos Cty**	**1.91**	**169**	Pn	Pn	23 11 31.9	-1.3
DPP					IAML	23 11 59.4	
	comp=E,669nm,0.5s						
DPP					IAML	23 11 59.4	
	comp=N,299nm,0.2s						
IRM	**Iron Mountain**	**1.99**	**110**	Pn	Pn	23 11 31.7	-2.6
CPE	**Camp Elliot**	**2.00**	**173**	Pn	Pn	23 11 33.3	-1.1
CPE					IAML	23 12 02.1	
	comp=N,453nm,0.3s						
WCT	**Wildcat Mounta**	**2.01**	**18**	Pn	Pn	23 11 33.2	-1.6
BC3	**Big Chuckawall**	**2.01**	**127**	Pn	Pn	23 11 32.6	-2.2
BC3					IAML	23 12 12.3	
	comp=E,246nm,0.8s						
GRAC	**Grapevine Rang**	**2.12**	**1**		Pn	23 11 35.7	-0.4
GRAC					IAML	23 12 15.8	
	comp=N,561nm,0.9s						
GRAC					IAML	23 12 16.6	
	comp=E,439nm,0.9s						
V12A	**Nelson**	**2.24**	**67**	Pn	Pn	23 11 36.4	-1.5
V12A					IAML	23 12 14.5	
	comp=E,279nm,0.4s						
V12A					IAML	23 12 17.8	
	comp=N,291nm,0.5s						
TPNV	**Topopah Spring**	**2.27**	**24**	Pn	Pn	23 11 37.4	-0.9
TPNV					IAML	23 12 15.4	
	comp=N,394nm,0.6s						
TPNV					IAML	23 12 16.0	
	comp=N,297nm,0.5s						
BAR	**Barrett**	**2.27**	**165**	Pn	Pn	23 11 37.2	-1.0
TIN	**Tinemaha, Big**	**2.28**	**343**	Pn	Pn	23 11 37.7	-0.7
TIN					IAML	23 12 14.2	
	comp=N,468nm,0.4s						
NEE2	**Needles Airpor**	**2.28**	**92**	Pn	Pn	23 11 36.9	-1.5
GMN	**Gold Mountain**	**2.42**	**2**	Pn	Pn	23 11 39.6	-0.9
SHPR	**Sheep Range**	**2.44**	**47**	Pn	Pn	23 11 39.8	-0.8
DSP	**Deep Springs**	**2.53**	**349**	Pn	Pn	23 11 41.3	-0.5
BLYC	**Blythe**	**2.62**	**114**	Pn	Pn	23 11 40.5	-2.6
CBX	**Cerro Bola**	**2.63**	**166**	Pn	Pn	23 11 42.5	-0.7
PKD	**Bear Valley Ra**	**2.79**	**293**	Pn	Pn	23 11 43.9	-1.5
GLA	**Glamis**	**2.80**	**130**	Pn	Pn	23 11 43.2	-2.3
GLA					IAML	23 12 34.1	
	comp=N,170nm,0.9s						
GLA					IAML	23 12 34.1	
	comp=E,268nm,0.8s						
W13A	**Hualapai Mount**	**2.89**	**85**	Pn	Pn	23 11 44.7	-2.2
W13A					IAML	23 12 32.1	
	comp=N,115nm,0.9s						
S11A	**Rachel**	**3.07**	**25**	Pn	Pn	23 11 48.8	-0.5
S11A					IAML	23 12 41.4	
	comp=E,163nm,0.8s						
S11A					IAML	23 12 42.6	
	comp=N,202nm,0.7s						
MDPB	**Devils Postpil**	**3.07**	**334**	Pn	Pn	23 11 49.8	+0.4
MDPB					IAML	23 12 37.8	
	comp=N,96nm,0.6s						
MDPB					IAML	23 12 39.1	
	comp=E,209nm,0.8s						
PMPB	**Monarch Peak**	**3.09**	**297**	Pn	Pn	23 11 48.8	-0.7
PMPB					IAML	23 12 46.5	
	comp=N,112nm,0.8s						
PMPB					IAML	23 12 50.5	
	comp=E,114nm,0.8s						
ESJX	**Sierra Juarez**	**3.11**	**157**	Pn	Pn	23 11 48.7	-1.1
ESJX					IAML	23 12 17.7	
	comp=N,136nm,0.1s						
ESJX					IAML	23 12 36.8	
	comp=E,130nm,0.3s						
PRN	**Pahroc Range**	**3.16**	**36**	Pn	Pn	23 11 50.0	-0.5
PRN					IAML	23 12 45.1	
	comp=N,116nm,0.5s						
PRN					IAML	23 13 01.3	
	comp=E,146nm,0.7s						
HULI	**Fort Hunter Li**	**3.34**	**291**	Pn	Pn	23 11 50.9	-2.0
HULI					IAML	23 13 04.7	
	comp=E,73nm,1.0s						
BBGB	**Big Mountain B**	**3.42**	**301**	Pn	Pn	23 11 52.8	-1.3
BBGB					IAML	23 12 54.6	
	comp=N,174nm,0.8s						
LHV	**Little Huntoon**	**3.49**	**345**	Pn	Pn	23 11 55.2	+0.3
LHV					IAML	23 13 00.2	
	comp=E,128nm,0.8s						
LHV					IAML	23 13 06.2	
	comp=N,87nm,1.1s						
NV11	**Mina Array Sit**	**3.60**	**350**	Pn	Pn	23 11 56.4	-0.3
NVAR	**Mina Array Bea**	**3.62**	**349**	Pn	Pn	23 11 56.4	-0.6
Y14A	**Wickenburg**	**3.74**	**103**	Pn	Pn	23 11 56.0	-2.5
Y14A					IAML	23 13 02.2	
	comp=N,79nm,0.8s						
Y14A					IAML	23 13 05.9	
	comp=E,61nm,0.7s						
R11B	**Troy Canyon, C**	**3.76**	**22**	Pn	Pn	23 11 58.2	-0.7
SAO	**San Andreas Ge**	**3.80**	**301**	Pn	Pn	23 11 57.7	-1.5
RYN	**Ryan**	**3.85**	**347**	Pn	Pn	23 11 59.8	-0.3
CMB	**Columbia Colle**	**3.97**	**323**	Pn	Pn	23 12 01.2	-0.4
CMB					IAML	23 13 08.5	
	comp=N,55nm,0.8s						
CMB					IAML	23 13 08.5	
	comp=E,79nm,0.8s						
WAKR	**Walker**	**3.98**	**336**	Pn	Pn	23 12 01.6	-0.3
WAKR					IAML	23 13 12.4	
	comp=E,53nm,0.8s						
WAKR					IAML	23 13 18.5	
	comp=N,44nm,1.0s						
LCMT	**Little Creek M**	**3.98**	**56**	Pn	Pn	23 12 01.2	-0.6
CCUT	**Cedar City**	**4.21**	**49**	Pn	Pn	23 12 05.2	+0.1
MHC	**Mount Hamilton**	**4.23**	**307**	Pn	Pn	23 12 04.5	-0.8
MHC					IAML	23 13 22.1	
	comp=N,45nm,0.8s						
MHC					IAML	23 13 29.1	
	comp=E,41nm,2.4s						
KNB	**Kanab**	**4.28**	**59**	Pn	Pn	23 12 05.7	-0.3
KNB					IAML	23 13 20.7	
	comp=E,49nm,1.3s						
KNB					IAML	23 13 24.4	
	comp=N,50nm,1.1s						
SZCU	**Shurtz Canyon**	**4.41**	**51**	Pn	Pn	23 12 07.2	-0.6
U15A	**North Rim**	**4.43**	**68**	Pn	Pn	23 12 08.0	-0.2
U15A					IAML	23 13 21.2	
	comp=N,61nm,0.8s						
U15A					IAML	23 13 24.0	
	comp=E,77nm,0.8s						
PSUT	**Pine Spring**	**4.63**	**37**		IAML	23 13 38.6	
	comp=E,40nm,0.8s						
PSUT					IAML	23 13 39.8	
	comp=N,41nm,0.8s						
PKCU	**Pink Cliffs**	**4.84**	**57**	Pn	Pn	23 12 13.4	-0.4
PK

CVS	**Carmenet Viney**	**5.35**	**312**	Pn	Pn	23 12 20.4	-0.1
CVS				IAML		23 13 26.7	
	comp=N,37nm,3.6s						
TCRU	**Three Creeks R**	**5.44**	**45**	Pn	Pn	23 12 21.4	-0.7
SUTB	**Sutter Butte**	**5.59**	**322**	Pn	Pn	23 12 23.6	-0.2
TUC	**Tucson**	**6.08**	**113**	Pn	Pn	23 12 27.4	-3.2
ELK	**Elko**	**6.10**	**16**	Pn	Pn	23 12 30.5	-0.6
X18A	**Snowflake**	**6.14**	**91**	Pn	Pn	23 12 31.8	+0.3
Q16A	**Castle Valley**	**6.41**	**49**	Pn	Pn	23 12 35.1	-0.2
O03E	**Paynes Creek**	**6.44**	**328**	Pn	Pn	23 12 35.9	+0.3
SRU	**San Rafael Swe**	**6.93**	**50**	Pn	Pn	23 12 44.0	+1.5
P17A	**Butcher Ranch,**	**7.02**	**47**	Pn	Pn	23 12 43.6	0.0
P18A	**Preston Nutter**	**7.41**	**48**	Pn	Pn	23 12 51.7	+2.6
PV20	**West Nyswonger**	**7.61**	**60**	Pn	Pn	23 12 52.9	+1.2
PV18	**Skein Mesa, Pa**	**7.61**	**61**	Pn	Pn	23 12 51.9	+0.1
BSUT	**Blindstream Ca**	**7.71**	**41**	Pn	Pn	23 12 54.5	+1.1
BMO	**Blue Mountains**	**9.96**	**0**	Pn	Pn	23 13 23.4	-0.6

*IDC **28** 23:26:44.8±1.2,41°.39N×19°.57E,h0km,mb3.8/6, mbtmp3.7/12,ML3.2/4,MS3.3/1,Error ellipse: s-maj=16.3km s-min=13.9km az=15.0*
*BEO **28** 23:26:47.1±0.5,41°.31N×19°.59E,h12km±2km,ML3.2/17*
*TIR **28** 23:26:48.3,41°.47N×19°.67E,h37km±2km,Ml3.5/7*
*THE **28** 23:26:48.1,42°.N±7°×2°.0E±°,h8km±18km,M3.2/16, MLh3.2/16*
*PDG **28** 23:26:49.8±0.3,41°.44N×19°.55E,h12km±1km,MD3.4/6, ML3.4/12,Error ellipse: s-maj=1.3km s-min=1.8km az=0.0*
*PRU **28** 23:26:50.7,41°.11N×18°.93E,h10km*

ISC 28 23:26:48.1±0.9,41°.41N±0°.02×19°.61E±0°.02,h19km±3km, n137,σ1§68/198,mb3.9/5,32C-15D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.20**	**109**	Pg	**Pg**	**23 26 52.4**	**-0.8**
TIR				AML	AML	23 26 55.2	
	89nm,0.4s						
TIR				Sg	**Sg**	**23 26 56.3**	**-0.3**
ULC	**Ulcinj**	**0.62**	**334**	*i*Pg	**Pg**	**23 26 59.7**	**-0.7**
ULC				*i* Sg	**Sg**	**23 27 08.2**	**-0.4**
SDA	**Shkodra**	**0.65**	**353**	Pg	**Pg**	**23 27 00.0**	**-0.9**
SDA				Sg	**Sb**	**23 27 10.5**	**+1.2**
PHP	**Peshkopia**	**0.68**	**66**	Pg	**Pg**	**23 27 00.0**	**-1.5**
PHP				Sg	**Sg**	**23 27 10.2**	**-0.5**
PHP				AML	AML	23 27 12.3	
	7.9nm,0.2s						
PHP	**Peshkopia**	**0.68**	**66**	P	**Pg**	**23 27 00.3**	**-1.3**
PHP				S	**Sg**	**23 27 10.8**	**+0.1**
DRME	**Dracevica, Mon**	**0.84**	**338**	*e*Pg	**Pg**	**23 27 04.5**	**0.0**
DRME				*e*Sg	**Sn**	**23 27 17.3**	**+0.5**
DRME	**Dracevica, Mon**	**0.84**	**338**	⇓*i*Pg	**Pg**	**23 27 04.4**	**0.0**
DRME				*i* Sg	**Sg**	**23 27 15.8**	**+0.2**
VLO	**Vlora**	**0.95**	**185**	Pg	**Pn**	**23 27 07.3**	**+0.9**
VLO				Sg	**Sn**	**23 27 22.6**	**+3.2**
VLO				AML	AML	23 27 27.6	
	19nm,0.6s						
VLO	**Vlora**	**0.95**	**185**	P	**Pn**	**23 27 08.0**	**+1.6**
VLO				S	**Sn**	**23 27 23.5**	**+4.1**
BUM	**Brajici-Budva**	**1.04**	**329**	⇓*i*Pg	**Pn**	**23 27 07.9**	**+0.1**
BUM				*i* Sg	**Sn**	**23 27 22.4**	**+0.6**
PDG	**Podgorica**	**1.05**	**345**	Pg	**Pn**	**23 27 08.1**	**+0.3**
PDG				Sg	**Sn**	**23 27 22.0**	**0.0**
PDG	**Podgorica**	**1.05**	**345**	⇑P	**Pg**	**23 27 08.6**	**0.0**
PDG				⇑S	**Sg**	**23 27 24.2**	**+1.8**
PDG	**Podgorica**	**1.05**	**345**	*e*Pg	**Pn**	**23 27 08.0**	**+0.1**
PDG				*e*Sg	**Sg**	**23 27 23.7**	**+1.4**
PDG	**Podgorica**	**1.05**	**345**	⇓*i*Pg	**Pb**	**23 27 07.9**	**+0.2**
PDG				*i* Sg	**Sg**	**23 27 23.2**	**+0.8**
KBN	**Korca**	**1.19**	**131**	Pn	**Pb**	**23 27 10.2**	**0.0**
KBN				Sn	**Sg**	**23 27 29.0**	**+2.3**
KBN				AML	AML	23 27 30.9	
	2.8nm,0.6s						
KBN	**Korca**	**1.19**	**131**	P	**Pb**	**23 27 10.4**	**+0.3**
KBN				S	**Sg**	**23 27 30.1**	**+3.4**
PVY	**Plav**	**1.21**	**12**	*e*Pg	**Pn**	**23 27 09.8**	**-0.4**
PVY				*e*Sg	**Sg**	**23 27 30.7**	**+3.3**
PVY	**Plav**	**1.21**	**12**	⇑*i*Pg	**Pn**	**23 27 10.2**	**0.0**
PVY				*i* Sg	**Sg**	**23 27 29.7**	**+2.3**
HCY	**Herceg Novi**	**1.33**	**321**	⇑*i*Pg	**Pb**	**23 27 12.5**	**0.0**
HCY				*i* Sg	**Sg**	**23 27 32.9**	**+1.8**
KOME	**Kolasin**	**1.44**	**357**	*e*Pg	**Pb**	**23 27 14.8**	**+0.4**
KOME				*e*Sg	**Sg**	**23 27 36.8**	**+2.1**
KOME	**Kolasin**	**1.44**	**357**	⇑*i*Pg	**Pb**	**23 27 15.2**	**+0.8**
KOME				*i* Sg	**Sg**	**23 27 36.5**	**+1.8**
NKME	**Niksic**	**1.44**	**340**	⇓*i*Pg	**Pb**	**23 27 14.4**	**0.0**
NKME				*i* Sg	**Sg**	**23 27 35.8**	**+1.1**
BEY	**Berane**	**1.47**	**8**	*e*Pg	**Pb**	**23 27 14.8**	**-0.2**
BEY				*e*Sg	**Sg**	**23 27 35.5**	**-0.3**
IVA	**Berane**	**1.47**	**8**	⇑*i*Pg	**Pb**	**23 27 15.6**	**+0.6**
IVA				*i* Sg	**Sg**	**23 27 37.8**	**+2.0**
NEST	**Nestorio**	**1.48**	**132**	Pn	**Pb**	**23 27 15.3**	**+0.2**
NEST				AML	AML	23 27 40.1	
	2.0nm,0.4s						
NEST	**Nestorio**	**1.48**	**132**	P	**Pb**	**23 27 15.5**	**+0.5**
NEST				S	**Sg**	**23 27 37.6**	**+1.8**
TREB	**Trebinje**	**1.61**	**325**	*e*Pn	**Pn**	**23 27 16.3**	**+0.8**
TREB	**Trebinje**	**1.61**	**325**	*e*Pg	**Pb**	**23 27 16.5**	**-0.7**
TREB				*e*Sg	**Sg**	**23 27 40.4**	**+0.4**
BRY	**Bratogost**	**1.69**	**332**	⇑*i*Pn	**Pb**	**23 27 18.9**	**+0.2**
BRY				*i* Sn	**Sb**	**23 27 42.5**	**-0.1**
UPM	**Unac-Piva**	**1.86**	**344**	⇑*i*Pn	**Pb**	**23 27 21.6**	**-0.1**
UPM				*i* Sn	**Sb**	**23 27 46.2**	**+1.4**
SJES	**Sjenica**	**1.87**	**8**	*e*Pg	**Pb**	**23 27 21.7**	**0.0**
SJES				*e*Sn	**Sb**	**23 27 44.1**	**-0.7**
KLINJ	**Klinje**	**1.91**	**337**	*e*Pn	**Pb**	**23 27 23.1**	**+0.6**
PLE	**Pljevlja**	**1.92**	**355**	*e*Pg	**Pb**	**23 27 22.9**	**+0.2**
PLE				*e*Sg	**Sg**	**23 27 51.7**	**+1.6**
PLE	**Pljevlja**	**1.92**	**355**	⇓*i*Pn	**Pb**	**23 27 22.4**	**-0.3**
PLE				*i* Sn	**Sb**	**23 27 48.0**	**+1.6**
IGT	**Igoumenitsa**	**1.96**	**163**	Pn	**Pb**	**23 27 22.4**	**-0.8**
IGT				Sn	**Sb**	**23 27 49.0**	**+1.8**
IGT	**Igoumenitsa**	**1.96**	**163**	P	**Pb**	**23 27 22.2**	**-1.0**
IGT				S	**Sb**	**23 27 48.6**	**+1.4**
KZN	**Kozani**	**1.98**	**123**	P	**Pb**	**23 27 23.0**	**-0.5**
KZN				S	**Sb**	**23 27 48.2**	**+0.4**
JAN	**Janina**	**1.99**	**151**	P	**Pb**	**23 27 23.2**	**-0.6**
NOCI	**Noci**	**2.02**	**253**	Pn	**Pn**	**23 27 20.9**	**-0.4**
NOCI				Sn	**Sb**	**23 27 50.4**	**+1.3**
NOCI				AML	AML	23 27 59.7	
	2.0nm,0.8s						
SELS	**Selova**	**2.12**	**31**	*e*Pn	**Pn**	**23 27 24.2**	**+1.5**
SELS				*e*Sn	**Sb**	**23 27 51.5**	**-0.6**
GRG	**Griva**	**2.15**	**101**	P	**Pn**	**23 27 24.6**	**+1.5**
GRG				S	**Sb**	**23 27 52.0**	**-0.9**
BARS	**Barje**	**2.16**	**49**	*e*Pn	**Pn**	**23 27 24.4**	**+1.3**
BARS				*e*Sn	**Sn**	**23 27 50.8**	**+1.4**
PRMD	**Pramanda**	**2.19**	**148**	P	**Pb**	**23 27 25.9**	**-1.3**
IVAS	**Ivanjica**	**2.20**	**10**	*e*Pn	**Pn**	**23 27 24.9**	**+1.1**
IVAS				*e*Sn	**Sb**	**23 27 53.6**	**-0.7**
RUDO	**Rudo**	**2.21**	**355**	*e*Pn	**Pn**	**23 27 25.4**	**+1.6**
RUDO	**Rudo**	**2.21**	**355**	*e*Pn	**Pn**	**23 27 25.5**	**+1.6**
RUDO				*e*Sn	**Sb**	**23 27 53.5**	**-1.1**
MATE	**Matera**	**2.33**	**252**	⇑P	**Pn**	**23 27 26.0**	**+0.6**
MATE				⇑S	**Sn**	**23 27 52.9**	**-0.5**
GOCS	**Kraljevo Serbi**	**2.34**	**23**	*e*Pn	**Pn**	**23 27 27.5**	**+1.7**
GOCS				*e*Sn	**Sn**	**23 27 56.7**	**+2.6**
BOSS	**Bosilegrad**	**2.40**	**62**	*e*Pn	**Pn**	**23 27 27.4**	**+1.0**
BOSS				*e*Sn	**Sn**	**23 27 57.7**	**+2.4**
TETR	**Tetrakomo, Epi**	**2.42**	**148**	P	**Pb**	**23 27 29.2**	**-2.1**
BBLS	**Lazi&#263i**	**2.46**	**357**	*e*Pn	**Pb**	**23 27 30.0**	**-1.8**
BBLS				*e*Sn	**Sb**	**23 28 00.4**	**-1.3**
KNT	**Kendrikon**	**2.49**	**95**	P	**Pn**	**23 27 29.0**	**+1.3**
LIT	**Litokhoron**	**2.55**	**120**	P	**Pn**	**23 27 30.0**	**+1.4**
THL	**Klokotos Trika**	**2.60**	**134**	P	**Pn**	**23 27 30.7**	**+1.5**
GRUS	**Gruza**	**2.60**	**18**	*e*Pn	**Pn**	**23 27 31.1**	**+1.8**
TYRN	**Tyrnavos**	**2.62**	**130**	P	**Pn**	**23 27 30.9**	**+1.4**
THE	**Thessaloniki**	**2.65**	**106**	P	**Pn**	**23 27 31.1**	**+1.2**
TRAN	**Tran**	**2.67**	**57**	P	**Pn**	**23 27 32.5**	**+2.3**
KKB	**Krupnik**	**2.67**	**80**	P	**Pn**	**23 27 31.7**	**+1.6**
KKB	**Krupnik**	**2.67**	**80**	P	**Pn**	**23 27 31.6**	**+1.4**
BOVS	**Bovan**	**2.71**	**34**	⇑P	**Pn**	**23 27 32.5**	**+1.9**
BOVS				⇑S	**Sb**	**23 28 06.8**	**-2.0**
BOVS	**Bovan**	**2.71**	**34**	*e*Pn	**Pn**	**23 27 32.1**	**+1.4**
BOVS				*e*Sn	**Sb**	**23 28 06.5**	**-2.3**
TRUS	**Trudelj**	**2.87**	**11**	*e*Pn	**Pn**	**23 27 34.1**	**+1.2**
TRUS				*e*Sn	**Sn**	**23 28 09.0**	**+2.1**
ZAPS	**Zavoj**	**2.91**	**49**	*e*Pn	**Pn**	**23 27 35.2**	**+1.7**
ZAPS				*e*Sn	**Sn**	**23 28 10.1**	**+2.1**
VTS	**Vitosha**	**2.96**	**65**	P	**Pn**	**23 27 35.5**	**+1.3**
PLNA	**Plana**	**3.04**	**68**	P	**Pn**	**23 27 37.6**	**+2.3**
ZAGS	**Zajecar**	**3.08**	**38**	*e*Pn	**Pn**	**23 27 36.7**	**+0.9**
ZAGS				*e*Sn	**Sn**	**23 28 14.4**	**+2.3**
SVIS	**Svilajnac**	**3.09**	**22**	*e*Pn	**Pn**	**23 27 38.7**	**+2.8**
MMB	**Musomishta**	**3.11**	**86**	P	**Pn**	**23 27 38.8**	**+2.5**
TIP	**Timpagrande**	**3.12**	**225**	⇓P	**Pn**	**23 27 36.2**	**-0.2**
TEKS	**Tekeris**	**3.14**	**359**	*e*Pn	**Pn**	**23 27 37.1**	**+0.5**
BLKB	**Belogradchik**	**3.16**	**45**	⇑S	**Sn**	**23 28 18.6**	**+4.4**
BORS2	**Bor- Borsko je**	**3.21**	**33**	*e*Pn	**Pn**	**23 27 37.7**	**+0.1**
BORS2				*e*Sn	**Sn**	**23 28 16.8**	**+1.5**
AVAS	**Avala Beograd**	**3.35**	**11**	*e*Pn	**Pn**	**23 27 40.1**	**+0.6**
AVAS				*e*Sn	**Sn**	**23 28 19.2**	**+0.4**
KUBS	**Kucevo**	**3.36**	**26**	*e*Pn	**Pn**	**23 27 39.6**	**0.0**
KUBS				*e*Sn	**Sn**	**23 28 19.8**	**+0.8**
MPEP	**Malo Peshtene**	**3.62**	**56**	P	**Pn**	**23 27 45.9**	**+2.6**
MDVR	**Moldovita**	**3.70**	**24**	⇑P	**Pn**	**23 27 45.9**	**+1.5**
FRGS	**Fruska Gora**	**3.75**	**2**	*e*Pn	**Pn**	**23 27 45.9**	**+0.9**
PUNG	**Punghina**	**3.76**	**39**	⇓P	**Pn**	**23 27 47.5**	**+2.3**
BLY	**Banja Luka**	**3.78**	**333**	*e*Pn	**Pn**	**23 27 46.6**	**+1.2**
BLY	**Banja Luka**	**3.78**	**333**	⇑P	**Pn**	**23 27 46.8**	**+1.4**
BLY	**Banja Luka**	**3.78**	**333**	*e*Pn	**Pn**	**23 27 47.1**	**+1.7**
VRSS	**Vrsac**	**3.91**	**18**	*e*Pn	**Pn**	**23 27 47.4**	**+0.1**
HERR	**Herculane**	**4.03**	**30**	⇑P	**Pn**	**23 27 50.4**	**+1.6**
SRE	**Strehaia**	**4.18**	**38**	⇑P	**Pn**	**23 27 53.0**	**+2.0**
PLVB	**Pleven**	**4.20**	**60**	⇑P	**Pn**	**23 27 53.6**	**+2.4**
BZS	**Buzias**	**4.45**	**18**	⇑P	**Pn**	**23 27 55.8**	**+1.3**
GZR	**Gura Zlata**	**4.60**	**29**	⇑P	**Pn**	**23 27 59.4**	**+2.6**
SURR	**Surduc**	**4.71**	**22**	⇑P	**Pn**	**23 27 59.9**	**+1.8**
AQU	**L'Aquila**	**4.73**	**284**	*e*Pn	**Pn**	**23 27 58.4**	**-0.1**
MORH	**Mrgy, Hungar**	**4.85**	**352**	*e*Pn	**Pn**	**23 28 00.8**	**+0.7**
MORH	**Mrgy, Hungar**	**4.85**	**352**	⇑P	**Pn**	**23 28 01.1**	**+1.0**
ELND	**Elena**	**4.89**	**70**	⇑P	**Pn**	**23 28 04.2**	**+1.6**
LOT	**Lotru**	**5.04**	**35**	⇓P	**Pn**	**23 28 04.5**	**+1.6**
SIRR	**Siria**	**5.08**	**16**	⇑P	**Pn**	**23 28 05.3**	**+2.1**
ARR	**Arges**	**5.39**	**41**	⇓P	**Pn**	**23 28 10.5**	**+3.0**
BEHE	**Becsehely**	**5.46**	**339**	*e*Pn	**Pn**	23 28 15.2	+6.8
VAE	**Valguarnera**	**5.62**	**227**	Pn	**Pn**	**23 28 10.9**	**+0.1**
	6.9nm,0.8s,baz=238,slow=11,SNR=1.6						
VAE				Sn	**Sn**	**23 29 15.8**	**+0.9**
	0.3nm,0.3s,baz=163,slow=19,SNR=1.8						
VOIR		**5.64**	**43**	⇓P	**Pn**	**23 28 14.0**	**+2.9**
DRGR		**5.82**	**21**	⇓P	**Pn**	**23 28 15.5**	**+2.0**
MARR	**Marisel-Cluj**	**5.84**	**24**	⇑P	**Pn**	**23 28 15.7**	**+1.9**
MLR	**Muntele Rosu**	**6.15**	**46**	Pn	**Pn**	**23 28 19.2**	**+1.1**
	0.9nm,0.3s,baz=159,slow=7.6,SNR=16						
MLR				Sn	**Sn**	**23 29 31.8**	**+3.7**
	0.6nm,0.3s,baz=111,slow=22,SNR=5.6						
	5.1nm,0.6s						
MLR	**Muntele Rosu**	**6.15**	**46**	⇓P	**Pn**	**23 28 21.2**	**+3.1**
DOPR	**Dopca**	**6.18**	**41**	⇑P	**Pn**	**23 28 21.6**	**+3.1**
OBKA	**Obir**	**6.27**	**326**	*e*Pn	**Pn**	**23 28 17.9**	**-1.7**
	0.8nm,0.2s						
OBKA				*e*Sn	**Sn**	**23 29 31.1**	**+0.3**
	9.6nm,0.3s						
NEHR	**Nehoiu**	**6.31**	**48**	⇓P	**Pn**	**23 28 23.3**	**+3.1**
OZUR		**6.47**	**42**	⇓P	**Pn**	**23 28 25.0**	**+2.6**
PSZ	**Piszkesteto**	**6.51**	**2**	⇑P	**Pn**	**23 28 24.0**	**+1.0**
TURR	**Turia**	**6.56**	**43**	⇑P	**Pn**	**23 28 26.2**	**+2.6**
PLOR	**Plostina**	**6.76**	**47**	⇑P	**Pn**	**23 28 29.2**	**+2.8**
VRI	**Vrincioaia**	**6.81**	**47**	⇓P	**Pn**	**23 28 29.7**	**+2.6**
KECS	**Kecovo**	**7.10**	**5**	*e*PN	**Pn**	**23 28 34.2**	**+3.2**
KECS				*e*SN	**Sn**	**23 29 48.8**	**-2.3**
MODS	**Modra-Piesok**	**7.16**	**347**	*e*SN	**Sn**	**23 29 51.5**	**-1.0**
CFR	**Carcaliu**	**7.27**	**56**	⇑P	**Pn**	**23 28 35.1**	**+1.9**
ABTA	**Abfaltersbach**	**7.38**	**319**	*e*Pn	**Pn**	**23 28 35.3**	**+0.3**
	1.1nm,0.3s						
ABTA				*e*Sn	**Sn**	**23 29 55.8**	**-2.5**
	14nm,0.7s						
IDI	**Anoyia**	**7.39**	**144**	Pn	**Pn**	**23 28 34.5**	**-0.6**
	3.5nm,0.5s,baz=124,slow=2.9,SNR=6.5						
IDI				Sn	**Sn**	**23 29 53.6**	**-4.8**
	baz=210,slow=9.5						
BIOA	**Bad Ischl, Aus**	**7.59**	**328**	*e*Pn	**Pn**	**23 28 39.7**	**+2.0**
	1.7nm,0.3s						
TLCR		**7.70**	**58**	⇑P	**Pn**	**23 28 42.4**	**+3.2**
LESA	**Schwarzleotal**	**7.79**	**323**	*e*Pn	**Pn**	**23 28 40.8**	**+0.2**
	1.5nm,0.4s						
LESA				*e*Sn	**Sn**	**23 30 07.4**	**-0.9**
	3.2nm,0.4s						
WTTA	**Wattenberg**	**8.18**	**318**	*i* Pn	**Pn**	**23 28 48.1**	**+2.2**
	4.1nm,0.5s						
WATA	**Walderalm**	**8.25**	**319**	*e*Pn	**Pn**	**23 28 48.8**	**+1.9**
	5.2nm,0.5s						
SQTA	**Sankt Quirin**	**8.36**	**317**	*i* Pn	**Pn**	**23 28 49.9**	**+1.4**
	1.9nm,0.3s						
FETA	**Feichten**	**8.49**	**314**	*e*Pn	**Pn**	**23 28 53.0**	**+2.8**
	1.1nm,0.4s						
MOTA	**Moralm**	**8.50**	**317**	*e*Pn	**Pn**	**23 28 52.1**	**+1.7**
	1.7nm,0.3s						
MOTA				*e*Sn	**Sn**	**23 30 24.5**	**-1.3**
	7.6nm,0.6s						
GERES	**GERESS Array B**	**8.52**	**333**	Pn	**Pn**	**23 28 51.6**	**+1.0**
	baz=268,slow=40,SNR=2.2						
GERES				Sn	**Sn**	**23 30 25.4**	**-0.9**
	0.1nm,0.3s,baz=146,slow=24,SNR=4.9						
	0.3nm,0.5s						
KHC	**Kasperske Hory**	**8.81**	**333**	*e*PN	**Pn**	**23 28 58.3**	**+3.8**
KHC				*e*SN	**Sn**	**23 30 33.3**	**+0.1**
DAVOX	**Davos/Dischmat**	**8.82**	**311**	Pn	**Pn**	**23 28 55.0**	**+0.3**
	0.5nm,0.3s,baz=128,slow=14,SNR=8.0						
DAVOX				Sn	**Sn**	**23 30 29.6**	**-4.1**
	1.0nm,0.3s,baz=290,slow=18,SNR=3.7						
	1.9nm,0.5s						
DAVA	**Damuels**	**9.11**	**313**	*i* Pn	**Pn**	**23 28 59.8**	**+1.0**
	2.2nm,0.4s						
MMAI	**Mount Meron Ar**	**15.10**	**119**	Pn	**P**	**23 30 24.0**	**-1.7**
	0.5nm,0.3s,baz=322,slow=11,SNR=5.4						
HFS	**Hagfors**	**19.10**	**351**	P	**P**	**23 31 08.8**	**-0.8**
	0.1nm,0.3s,baz=165,slow=12,SNR=4.8						
	1.3nm,0.6s						
FINES	**FINESS Array B**	**20.44**	**9**	P	**P**	**23 31 23.1**	**-1.1**
	2.2nm,0.6s,baz=192,slow=10,SNR=12						
	2.2nm,0.6s						
BVAR	**Borovoye Array**	**35.66**	**53**	P	**P**	**23 33 44.8**	**0.0**
	1.5nm,0.7s,baz=282,slow=6.8,SNR=4.6						
	1.5nm,0.7s						
KURBB	**Kurchatov Arra**	**40.95**	**56**	P	**P**	**23 34 28.9**	**-0.4**
	0.2nm,0.3s,baz=286,slow=9.8,SNR=5.1						
	0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**44.11**	**50**	P	**P**	**23 34 54.3**	**-0.7**
	2.2nm,0.4s,baz=281,slow=9.0,SNR=12						
	2.2nm,0.4s						
MKAR	**Makanchi Array**	**44.27**	**61**	P	**P**	**23 34 55.9**	**-0.6**
	1.1nm,0.6s,baz=282,slow=7.4,SNR=14						
	1.1nm,0.6s						
SCHQ	**Schefferville**	**55.63**	**316**	LR	LR	23 58 32.4	
	comp=Z,23nm,18.3s,baz=141,slow=34						
SONM	**Songino Array**	**58.98**	**52**	P	**P**	**23 36 46.1**	**-0.3**
	0.9nm,0.8s,baz=291,slow=7.5,SNR=5.1						
	0.9nm,0.8s						

*RSPR **28** 23:27:10.7,18°.22N×67°.54W,h128km±1km,MD3.0/9*
*SDD **28** 23:27:12.9±1.9,18°.23N×67°.54W,h123km±18km,MD3.4, ML1.9,MW2.9*

ISC 28 23:27:11.0±2.3,18°.3N±0°.1×67°.53W±0°.06,h125km±14km, n23,σ0§66/27,15C-2D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.14**	**23**	*e*P	**Pn**	**23 27 27.5**	**-0.6**
IDE	**Isla Desecheo**	**0.14**	**23**	*e*S	**Sn**	**23 27 41.3**	**+0.3**
LSP	**Las Mesas**	**0.43**	**101**	⇑*e*P	**Pn**	**23 27 29.4**	**+0.3**
LSP	**Las Mesas**	**0.43**	**101**	*e*S	**Sn**	**23 27 43.3**	**+0.5**
AGPR	**Aguadilla, PR**	**0.45**	**62**	⇑*e*Sg	**Sn**	**23 27 41.6**	**-1.2**
AGPR				IAML		23 27 54.5	
	comp=N,41nm,2.5s						
AGPR	**Aguadilla, PR**	**0.45**	**62**	⇑*e*P	**Pn**	**23 27 28.8**	**-0.4**
AGPR	**Aguadilla, PR**	**0.45**	**62**	*e*S	**Sn**	**23 27 43.4**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.47**	**122**	⇑*e*Pg	**Pn**	**23 27 29.0**	**-0.3**
CRPR				⇑*e*Sg	**Sn**	**23 27 43.4**	**+0.3**
CRPR				IAML		23 28 03.5	
	comp=N,33nm,2.5s						
CRPR	**Cabo Rojo, PR**	**0.47**	**122**	⇑*e*P	**Pn**	**23 27 29.0**	**-0.3**
CRPR	**Cabo Rojo, PR**	**0.47**	**122**	*e*S	**Sn**	**23 27 43.1**	**+0.1**
MLPR	**Magueyes Islan**	**0.54**	**122**	⇑*e*Pg	**Pn**	**23 27 29.9**	**+0.2**
MLPR				*e*Sg	**Sn**	**23 27 43.7**	**-0.1**
MLPR				IAML		23 27 58.0	
	comp=N,6.6nm,1.4s						
MLPR	**Magueyes Islan**	**0.54**	**122**	⇑*e*P	**Pn**	**23 27 29.3**	**-0.4**
MLPR	**Magueyes Islan**	**0.54**	**122**	*e*S	**Sn**	**23 27 43.8**	**0.0**
AOPR	**Arecibo Observ**	**0.74**	**83**	⇑*e*Pg	**Pn**	**23 27 32.4**	**+1.2**
AOPR				⇑*e*Sg	**Sn**	**23 27 47.2**	**+0.8**
AOPR	**Arecibo Observ**	**0.74**	**83**	⇑*e*P	**Pn**	**23 27 31.4**	**+0.2**
AOPR	**Arecibo Observ**	**0.74**	**83**	⇑*e*S	**Sn**	**23 27 46.6**	**+0.1**
EMPR	**Esperanza - Ma**	**0.98**	**77**	⇓*e*P	**Pn**	**23 27 32.6**	**-0.5**
EMPR	**Esperanza - Ma**	**0.98**	**77**	*e*S	**Sn**	**23 27 50.5**	**+0.5**
ECPR	**Experimental S**	**1.11**	**87**	⇓*e*P	**Pn**	**23 27 34.7**	**+0.1**
ECPR	**Experimental S**	**1.11**	**87**	*e*S	**Sn**	**23 27 51.8**	**-0.5**
HUMP	**Col San Antoni**	**1.60**	**94**	⇑*e*P	**Pn**	**23 27 39.0**	**-0.9**
HUMP	**Col San Antoni**	**1.60**	**94**	*e*S	**Sn**	**23 28 02.5**	**+0.6**
HATOM	**Hato Mayor del**	**1.83**	**287**	⇑*e*Pg	**Pn**	**23 27 43.7**	**+1.0**
HATOM				⇑*e*Sg	**Sn**	**23 28 05.6**	**-1.3**
HATOM				IAML		23 28 07.6	
	comp=N,14nm,2.1s						

*IPEC **28** 23:30:51.7±0.2,50°.09N×18°.47E,h1km,ML2.8/6,Error ellipse: s-maj=1.7km s-min=1.5km az=5.0*
*PRU **28** 23:30:54.7,50°.05N×18°.26E,h0km*

ISC 28 23:30:50.5±0.8,50°.13N±0°.03×18°.48E±0°.02,h0km,n44, σ1§48/74,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.19**	**256**	*e*PG	**Pg**	**23 30 56.2**	**+2.1**
RAC				*e*SG	**Sg**	**23 30 59.5**	**+2.9**
OKC	**Ostrava-Krasne**	**0.36**	**216**	*e*PG	**Pg**	**23 30 58.3**	**+0.9**
OKC				*e*SG	**Sg**	**23 31 03.0**	**+0.9**
	comp=Z,640nm,0.8s						
STEB	**Steborice**	**0.50**	**247**	*e*PG	**Pg**	**23 31 01.2**	**+1.2**
STEB				*e*SG	**Sg**	**23 31 07.2**	**+0.8**
	comp=Z,781nm,0.3s						
MORC	**Moravsky Berou**	**0.70**	**240**	*e*Pg	**Pg**	**23 31 04.4**	**+0.5**
	baz=62						
MORC				*e*Sg	**Sg**	**23 31 12.8**	**-0.2**
	176nm,0.3s,baz=62						
ANAC	**Anensky vrch**	**0.71**	**266**	*e*Pg	**Pg**	**23 31 05.1**	**+1.0**
	baz=88						
ANAC				*e*Sg	**Sg**	**23 31 13.8**	**+0.5**
	218nm,0.4s,baz=88						
OJC	**Ojcow**	**0.83**	**84**	*e*Pg	**Pb**	**23 31 08.5**	**+0.4**
OJC				*e*Sg	**Sb**	**23 31 20.9**	**+0.8**
LOSC	**Losov**	**0.88**	**235**	*e*Pg	**Pg**	**23 31 07.8**	**+0.5**
	baz=56						
LOSC				*e*Sg	**Sg**	**23 31 18.4**	**-0.3**
	161nm,0.4s,baz=56						

MKAR	**Makanchi Array**	**44.84**	**323**	P		**P**	**23 44 47.3**	**0.0**
	0.7nm,0.5s,baz=123,slow=8.8,SNR=9.5							
	0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**47.80**	**332**	P		**P**	**23 45 09.5**	**-0.8**
	0.7nm,0.3s,baz=126,slow=6.6,SNR=4.8							
	0.7nm,0.3s							
KURBB	**Kurchatov Arra**	**48.98**	**326**	P		**P**	**23 45 18.6**	**-0.8**
	1.5nm,0.4s,baz=125,slow=7.7,SNR=15							
	1.5nm,0.4s							
BVAR	**Borovoye Array**	**54.56**	**325**	P		**P**	**23 45 59.7**	**-1.5**
	1.3nm,0.4s,baz=118,slow=12,SNR=7.7							
	1.3nm,0.4s							

*BEO **28** 23:37:25.3±0.5, 41°.43N×19°.54E, h10km±2km, ML3.2/17*
*TIR **28** 23:37:25.9, 41°.55N×19°.59E, h30km±3km, Ml3.5/6*
*THE **28** 23:37:26.6, 42°.N±19°×2°.0E±1°.5, h1km±24km, M3.3/7, MLh3.3/7*
*PDG **28** 23:37:26.5±0.4, 41°.48N×19°.38E, h24km±1km, MD3.3/4, ML3.3/11, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*SKO **28** 23:37:26.0, 41°.48N×19°.48E, h8km, ML3.2*

ISC 28 23:37:26.0±1.0, 41°.51N±0°.02×19°.52E±0°.02, h10km±8km, n113, σ1s98/167, 20C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**121**	Pg	**Pg**	**23 37 32.0**	**-0.1**
TIR				AML	AML	23 37 36.3	
	154nm,0.4s						
TIR				Sg	**Sg**	**23 37 36.3**	**+0.2**
TIR	**Tirane**	**0.30**	**121**	↑*i*Pg	**Pg**	**23 37 32.0**	**-0.1**
TIR				*i* Sg	**Sg**	**23 37 37.1**	**+0.9**
ULC	**Ulcinj**	**0.50**	**336**	↑*i*Pg	**Pg**	**23 37 35.5**	**-0.3**
ULC				*i* Sg	**Sb**	**23 37 43.5**	**-0.8**
SDA	**Shkodra**	**0.55**	**358**	Pg	**Pg**	**23 37 36.3**	**-0.4**
SDA				Sg	**Sg**	**23 37 44.1**	**+0.2**
PHP	**Peshkopia**	**0.71**	**75**	Pg	**Pg**	**23 37 38.6**	**-1.2**
PHP				Sg	**Sg**	**23 37 48.4**	**-0.7**
PHP				AML	AML	23 37 52.7	
	6.0nm,0.5s						
PHP	**Peshkopia**	**0.71**	**75**	P	**Pg**	**23 37 38.7**	**-1.1**
DRME	**Dracevica, Mon**	**0.73**	**340**	*e*Pg	**Pg**	**23 37 39.7**	**-0.3**
DRME				*e*Sg	**Sb**	**23 37 50.9**	**+0.2**
DRME	**Dracevica, Mon**	**0.73**	**340**	↑*i*Pg	**Pg**	**23 37 39.4**	**-0.6**
DRME				*i* Sg	**Sb**	**23 37 50.5**	**-0.2**
BUM	**Brajici-Budva**	**0.92**	**330**	↑*i*Pg	**Pg**	**23 37 43.6**	**-0.2**
BUM				*i* Sg	**Sb**	**23 37 56.8**	**+0.4**
PDG	**Podgorica**	**0.95**	**348**	Pg	**Pg**	**23 37 43.2**	**-1.0**
PDG				Sg	**Sb**	**23 37 57.1**	**+0.1**
PDG	**Podgorica**	**0.95**	**348**	↓P	**Pg**	**23 37 44.1**	**-0.2**
PDG				↓S	**Sn**	**23 37 58.4**	**-0.4**
PDG	**Podgorica**	**0.95**	**348**	*e*Pg	**Pg**	**23 37 42.9**	**-1.3**
PDG				*e*Sg	**Sn**	**23 37 58.7**	**-0.1**
PDG	**Podgorica**	**0.95**	**348**	↓*i*Pg	**Pg**	**23 37 44.0**	**-0.2**
PDG				*i* Sg	**Sn**	**23 37 58.6**	**-0.2**
VLO	**Vlora**	**1.04**	**181**	Pg	**Pn**	**23 37 46.7**	**+0.3**
VLO				Sg	**Sn**	**23 38 00.8**	**-0.1**
VLO	**Vlora**	**1.04**	**181**	P	**Pn**	**23 37 46.8**	**+0.3**
VLO				S	**Sn**	**23 38 03.3**	**+2.3**
OHR	**Ohrid**	**1.04**	**112**	*i* Pg	**Pg**	**23 37 44.8**	**-1.2**
OHR				*i* Sg	**Sn**	**23 38 00.6**	**-0.6**
OHR				*e*Lg	Lg	23 38 01.6	
	comp=N,1μm,1.1s						
OHR				*e*Lg	Lg	23 38 03.2	
	comp=E,898nm,0.9s						
PVY	**Plav**	**1.14**	**17**	*e*Pg	**Pb**	**23 37 46.3**	**-1.5**
PVY				*e*Sg	**Sn**	**23 38 05.6**	**+1.9**
PVY	**Plav**	**1.14**	**17**	↓*i*Pg	**Pb**	**23 37 46.4**	**-1.4**
PVY				*i* Sg	**Sn**	**23 38 05.2**	**+1.5**
HCY	**Herceg Novi**	**1.21**	**321**	↑*i*Pg	**Pg**	**23 37 49.6**	**+0.3**
HCY				*i* Sg	**Sn**	**23 38 05.4**	**-0.1**
KBN	**Korca**	**1.30**	**132**	Pn	**Pb**	**23 37 50.5**	**0.0**
KBN				Sn	**Sg**	**23 38 08.0**	**+0.1**
KBN				AML	AML	23 38 11.8	
	comp=E,3.5nm,0.7s						
KBN	**Korca**	**1.30**	**132**	P	**Pg**	**23 37 50.9**	**-0.1**
KBN				S	**Sg**	**23 38 09.5**	**+1.6**
NKME	**Niksic**	**1.33**	**342**	↓*i*Pg	**Pn**	**23 37 50.1**	**-0.5**
NKME				*i* Sg	**Sg**	**23 38 09.2**	**+0.4**
KOME	**Kolasin**	**1.34**	**360**	*e*Pg	**Pb**	**23 37 50.9**	**-0.4**
KOME				*e*Sg	**Sg**	**23 38 09.2**	**-0.1**
KOME	**Kolasin**	**1.34**	**360**	↓*i*Pg	**Pb**	**23 37 51.1**	**-0.2**
KOME				*i* Sg	**Sg**	**23 38 10.2**	**+0.9**
BEY	**Berane**	**1.39**	**11**	*e*Pg	**Pn**	**23 37 51.2**	**-0.3**
BEY				*e*Sg	**Sg**	**23 38 13.2**	**+2.3**
IVA	**Berane**	**1.39**	**11**	↓*i*Pg	**Pn**	**23 37 50.9**	**-0.6**
IVA				*i* Sg	**Sg**	**23 38 11.9**	**+1.0**
TREB	**Trebinje**	**1.49**	**325**	*e*Pn	**Pb**	**23 37 53.8**	**0.0**
TREB	**Trebinje**	**1.49**	**325**	*e*Pg	**Pb**	**23 37 53.6**	**-0.2**
TREB				*e*Sg	**Sg**	**23 38 14.3**	**+0.3**
SKO	**Skopje**	**1.51**	**71**	*i* Pg	**Pb**	**23 37 54.0**	**0.0**
SKO				*i* Sg	**Sg**	**23 38 15.0**	**+0.4**
BRY	**Bratogost**	**1.57**	**333**	↑*i*Pg	**Pn**	**23 37 53.9**	**-0.2**
BRY				*i* Sg	**Sg**	**23 38 15.9**	**-0.8**
NEST	**Nestorio**	**1.59**	**133**	Pg	**Pb**	**23 37 55.3**	**-0.2**
NEST				Sg	**Sb**	**23 38 15.7**	**+0.1**
NEST				AML	AML	23 38 25.9	
	comp=E,1.6nm,0.8s						
NEST	**Nestorio**	**1.59**	**133**	P	**Pb**	**23 37 55.5**	**0.0**
SJES	**Sjenica**	**1.79**	**11**	*e*Pg	**Pb**	**23 37 58.3**	**-0.6**
SJES				*e*Sg	**Sg**	**23 38 24.6**	**+1.1**
PENT	**Pentalofos**	**1.79**	**136**	P	**Pb**	**23 37 58.2**	**-0.8**
KLINJ	**Klinje**	**1.80**	**338**	*e*Pn	**Pn**	**23 37 57.9**	**+0.7**
PLE	**Pljevlja**	**1.83**	**357**	*e*Pg	**Pb**	**23 37 59.3**	**-0.2**
PLE				*e*Sg	**Sg**	**23 38 24.7**	**0.0**
PLE	**Pljevlja**	**1.83**	**357**	↓*i*Pn	**Pb**	**23 37 59.1**	**-0.4**
PLE				*i* Sn	**Sb**	**23 38 21.8**	**-0.7**
NOCI	**Noci**	**1.99**	**250**	Pn	**Pn**	**23 37 58.4**	**-1.2**
NOCI				Sn	**Sn**	**23 38 21.0**	**-3.6**
NOCI				AML	AML	23 38 34.0	
	comp=E,1.2nm,0.2s						
IGT	**Igoumenitsa**	**2.06**	**162**	Pn	**Pn**	**23 38 01.1**	**+0.4**
IGT				Sn	**Sn**	**23 38 25.8**	**-0.6**
IGT	**Igoumenitsa**	**2.06**	**162**	P	**Pn**	**23 38 01.9**	**+0.8**
SELS	**Selova**	**2.08**	**34**	*e*Pn	**Pn**	**23 38 01.9**	**+0.9**
SELS				*e*Sn	**Sb**	**23 38 28.3**	**-1.5**
KZN	**Kozani**	**2.08**	**124**	P	**Pn**	**23 38 01.9**	**+0.8**
KZN				S	**Sb**	**23 38 28.9**	**-0.9**
RUDO	**Rudo**	**2.12**	**357**	*e*Pn	**Pn**	**23 38 02.2**	**+0.8**
RUDO	**Rudo**	**2.12**	**357**	*e*Pn	**Pn**	**23 38 02.2**	**+0.8**
RUDO				*e*Sn	**Sb**	**23 38 30.0**	**-0.7**
IVAS	**Ivanjica**	**2.12**	**12**	*e*Pn	**Pn**	**23 38 01.8**	**+0.3**
IVAS				*e*Sn	**Sb**	**23 38 30.6**	**-0.3**
BARS	**Barje**	**2.15**	**52**	*i* Pn	**Pn**	**23 38 02.5**	**+0.7**
BARS	**Barje**	**2.15**	**52**	*e*Pn	**Pn**	**23 38 02.3**	**+0.4**
BARS				*e*Sn	**Sn**	**23 38 27.2**	**-1.4**
GRG	**Griva**	**2.24**	**103**	*i* Pn	**Pn**	**23 38 03.5**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.29**	**25**	*e*Pn	**Pn**	**23 38 04.6**	**+0.8**
GOCS				*e*Sn	**Sb**	**23 38 33.4**	**-2.3**
VAY	**Valandovo**	**2.30**	**94**	*i* Pn	**Pn**	**23 38 04.3**	**+0.4**
VAY				*i* Sn	**Sn**	**23 38 33.0**	**+0.8**
VAY				*e*Lg	Lg	23 38 34.5	
	comp=E,80nm,0.7s						
VAY				*e*Lg	Lg	23 38 35.1	
	comp=N,78nm,0.7s						
PRMD	**Pramanda**	**2.31**	**148**	P	**Pn**	**23 38 05.6**	**+1.5**
BBLS	**Lazi&#263i**	**2.36**	**358**	*e*Pn	**Pn**	**23 38 06.2**	**+1.4**
BBLS				*e*Sn	**Sb**	**23 38 35.5**	**-2.3**
BOSS	**Bosilegrad**	**2.42**	**65**	*e*Pn	**Pn**	**23 38 05.5**	**0.0**
BOSS				*e*Sn	**Sn**	**23 38 34.9**	**-0.3**
GRUS	**Gruza**	**2.54**	**20**	*e*Pn	**Pn**	**23 38 07.6**	**+0.4**
GRUS				*e*Sn	**Sn**	**23 38 39.7**	**+1.5**
KNT	**Kendrikon**	**2.57**	**97**	*i* Pn	**Pn**	**23 38 07.8**	**+0.2**
BOVS	**Bovan**	**2.67**	**36**	↓P	**Pn**	**23 38 10.3**	**+1.3**
BOVS	**Bovan**	**2.67**	**36**	*e*Pn	**Pn**	**23 38 09.7**	**+0.7**
BOVS				*e*Sn	**Sn**	**23 38 41.7**	**+0.3**
TRAN	**Tran**	**2.68**	**59**	P	**Pn**	**23 38 09.9**	**+0.7**
KKB	**Krupnik**	**2.72**	**82**	P	**Pn**	**23 38 10.3**	**+0.5**
KKB	**Krupnik**	**2.72**	**82**	*i* Pn	**Pn**	**23 38 10.3**	**+0.5**
THE	**Thessaloniki**	**2.75**	**107**	*i* Pn	**Pn**	**23 38 09.9**	**-0.1**
TRUS	**Trudelj**	**2.79**	**13**	*e*Pn	**Pn**	**23 38 12.6**	**+1.9**
ZAPS	**Zavoj**	**2.91**	**51**	*e*Pn	**Pn**	**23 38 13.0**	**+0.7**
ZAPS				*e*Sn	**Sn**	**23 38 47.5**	**+0.3**
SOH	**Sokhos**	**2.97**	**102**	*i* Pn	**Pn**	**23 38 13.4**	**+0.1**
VTS	**Vitosha**	**2.98**	**67**	P	**Pn**	**23 38 14.1**	**+0.7**
TEKS	**Tekeris**	**3.04**	**0**	*e*Pn	**Pn**	**23 38 13.9**	**-0.2**
ZAGS	**Zajecar**	**3.05**	**40**	*e*Pn	**Pn**	**23 38 15.0**	**+0.8**
ZAGS				*e*Sn	**Sn**	**23 38 50.9**	**+0.1**
PLNA	**Plana**	**3.07**	**70**	P	**Pn**	**23 38 15.9**	**+1.3**
SRS	**Serrai**	**3.09**	**96**	*i* Pn	**Pn**	**23 38 15.0**	**+0.2**
TIP	**Timpagrande**	**3.14**	**223**	↑P	**Pn**	**23 38 14.6**	**-1.0**
BORS2	**Bor- Borsko je**	**3.17**	**35**	*e*Pn	**Pn**	**23 38 15.4**	**-0.5**
BORS2				*e*Sn	**Sn**	**23 38 52.9**	**-0.8**
MMB	**Musomishta**	**3.17**	**88**	P	**Pn**	**23 38 16.5**	**+0.5**
MMB	**Musomishta**	**3.17**	**88**	*i* Pn	**Pn**	**23 38 16.3**	**+0.3**
AVAS	**Avala Beograd**	**3.27**	**13**	*e*Pn	**Pn**	**23 38 17.3**	**0.0**
AVAS				*e*Sn	**Sn**	**23 38 55.6**	**-0.6**
KUBS	**Kucevo**	**3.31**	**28**	*e*Pn	**Pn**	**23 38 16.7**	**-1.1**
KUBS				*e*Sn	**Sn**	**23 38 56.0**	**-1.1**
MPEP	**Malo Peshtene**	**3.63**	**58**	P	**Pn**	**23 38 23.5**	**+1.3**
MDVR	**Moldovita**	**3.65**	**25**	↑P	**Pn**	**23 38 22.8**	**+0.3**
FRGS	**Fruska Gora**	**3.66**	**3**	*e*Pn	**Pn**	**23 38 22.4**	**-0.2**
BLY	**Banja Luka**	**3.67**	**333**	*e*Pn	**Pn**	**23 38 23.3**	**+0.6**
BLY	**Banja Luka**	**3.67**	**333**	↑P	**Pn**	**23 38 23.3**	**+0.6**
BLY	**Banja Luka**	**3.67**	**333**	*e*Pn	**Pn**	**23 38 23.1**	**+0.4**
VRSS	**Vrsac**	**3.85**	**19**	*e*Pn	**Pn**	**23 38 26.2**	**+1.0**
HERR	**Herculane**	**3.98**	**31**	↑P	**Pn**	**23 38 27.5**	**+0.5**
PLVB	**Pleven**	**4.22**	**62**	↓P	**Pn**	**23 38 31.0**	**+0.8**
BZS	**Buzias**	**4.38**	**20**	↑P	**Pn**	**23 38 32.5**	**0.0**
GZR	**Gura Zlata**	**4.55**	**30**	↑P	**Pn**	**23 38 36.1**	**+1.2**
SURR	**Surduc**	**4.65**	**23**	↑P	**Pn**	**23 38 35.9**	**-0.3**
MORH	**Mrgy, Hungar**	**4.75**	**353**	*e*Pn	**Pn**	**23 38 37.0**	**-0.6**
MORH	**Mrgy, Hungar**	**4.75**	**353**	↑P	**Pn**	**23 38 37.8**	**+0.3**
ELND	**Elena**	**4.93**	**71**	↑P	**Pn**	**23 38 40.4**	**+0.4**
SIRR	**Siria**	**5.01**	**17**	↓P	**Pn**	**23 38 41.7**	**+0.6**
LOT	**Lotru**	**5.01**	**37**	↑P	**Pn**	**23 38 42.7**	**+1.5**
HUMR	**Humele**	**5.01**	**51**	↑P	**Pn**	**23 38 41.7**	**+0.5**
ARR	**Arges**	**5.36**	**42**	↓P	**Pn**	**23 38 47.5**	**+1.5**
VOIR		**5.62**	**44**	↑P	**Pn**	**23 38 51.0**	**+1.3**
DRGR		**5.76**	**22**	↓P	**Pn**	**23 38 52.6**	**+1.1**
MLR	**Muntele Rosu**	**6.14**	**47**	↓P	**Pn**	**23 38 58.4**	**+1.6**
OBKA	**Obir**	**6.15**	**326**	*e*Pn	**Pn**	**23 38 57.1**	**+0.1**
OBKA	comp=N,1.7nm,0.3s						
	comp=N,6.7nm,0.6s			*e*Sn	**Sn**	**23 40 08.7**	**+1.3**
ARSA	**Arzberg**	**6.42**	**335**	*e*Pn	**Pn**	**23 39 01.6**	**+1.1**
	comp=N,5.7nm,0.6s						
PSZ	**Piszkesteto**	**6.42**	**2**	↓P	**Pn**	**23 39 01.1**	**+0.6**
RONA	**Rosalia, Austr**	**6.61**	**341**	*i* Pn	**Pn**	**23 39 05.3**	**+2.2**
	comp=N,1.2nm,0.4s						
MYKA	**Terra Mystica**	**6.64**	**322**	*e*Pn	**Pn**	**23 39 03.6**	**0.0**
	comp=N,1.6nm,0.3s						
VRI	**Vrincioaia**	**6.80**	**48**	↑P	**Pn**	**23 39 06.4**	**+0.6**
KECS	**Kecovo**	**7.01**	**5**	*e*PN	**Pn**	**23 39 11.8**	**+3.2**
KECS				*e*SN	**Sn**	**23 40 29.1**	**+0.8**
MODS	**Modra-Piesok**	**7.05**	**348**	*e*PN	**Pn**	**23 39 13.3**	**+4.1**
MODS				*e*SN	**Sn**	**23 40 28.4**	**-0.9**
ABTA	**Abfaltersbach**	**7.27**	**318**	*e*Pn	**Pn**	**23 39 13.0**	**+0.8**
	comp=N,0.9nm,0.3s						
ABTA				*e*Sn	**Sn**	**23 40 35.1**	**+0.2**
	comp=N,5.6nm,0.7s						
CFR	**Carcaliu**	**7.27**	**57**	↑P	**Pn**	**23 39 13.5**	**+1.3**
LESA	**Schwarzleotal**	**7.68**	**323**	*e*Pn	**Pn**	**23 39 18.6**	**+0.8**
	comp=N,1.6nm,0.5s						
TLCR		**7.71**	**58**	↓P	**Pn**	**23 39 19.8**	**+1.6**
WTTA	**Wattenberg**	**8.06**	**318**	*e*Pn	**Pn**	**23 39 26.2**	**+3.0**
	comp=N,1.2nm,0.3s						
WATA	**Walderalm**	**8.14**	**318**	*e*Pn	**Pn**	**23 39 27.2**	**+2.9**
	comp=N,1.4nm,0.2s						
SQTA	**Sankt Quirin**	**8.25**	**317**	*e*Pn	**Pn**	**23 39 28.0**	**+2.3**
	comp=N,1.0nm,0.2s						
MOTA	**Moosalm**	**8.38**	**317**	*e*Pn	**Pn**	**23 39 30.1**	**+2.4**
	comp=N,0.6nm,0.3s						

*IGIL **28** 23:41:20.8, 36°.24N×8°.52W, h9km, ML0.8*
*SFS **28** 23:41:20.4, 36°.22N×8°.58W, h18km, ML2.5/6, ML1.7/7, MLv1.3/7*
*INMG **28** 23:41:21.0±1.2, 36°.24N×8°.52W, h10km±6km, ML1.1, Error ellipse: s-maj=6.5km s-min=3.7km az=54.0, #DIST_RANGE: LOCAL #IPMA_REGION: SW Albufeira*
*MDD **28** 23:41:21.2±1.2, 36°.31N×8°.38W, h3km±4km, mb_Lg2.3/8, Error ellipse: s-maj=8.4km s-min=5.7km az=30.0*

ISC 28 23:41:20.3±2.4, 36°.3N±0°.1×8°.46W±0°.06, h20km±6km, n32, σ0s89/52, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.93**	**341**	Pg	**Pb**	**23 41 37.2**	**-0.4**
PFVI				Sg	**Sb**	**23 41 50.0**	**+0.4**
PFVI				Sn	**Sn**	**23 41 50.2**	**-0.7**
PFVI	**Vila Bisbo**	**0.93**	**341**	*e*P	**Pb**	**23 41 37.3**	**-0.4**
PFVI				*e*S	**Sn**	**23 41 50.4**	**-0.5**
PFVI				*i* IAML		23 41 51.4	
PFVI				*i* IAML		23 41 51.4	
MORF	**Marmelete**	**1.06**	**352**	*e*P	**Pb**	**23 41 39.6**	**-0.4**
MORF	**Marmelete**	**1.06**	**352**	*e*P	**Pb**	**23 41 39.6**	**-0.4**
MORF				*e*S	**Sn**	**23 41 56.0**	**+1.7**
MORF				*i* IAML		23 41 59.2	
MORF				*i* IAML		23 41 59.9	
PBDV	**Barranco-do-Ve**	**1.07**	**23**	Sn	**Sn**	**23 41 55.5**	**+0.9**
PBDV	**Barranco-do-Ve**	**1.07**	**23**	*e*P	**Pb**	**23 41 40.8**	**+0.6**
PBDV				*e*S	**Sn**	**23 41 55.8**	**+1.2**
PBDV				*i* IAML		23 41 56.1	
PBDV				*i* IAML		23 41 56.2	
PBDV				*i* IAML		23 41 56.8	
PVAQ	**Vaqueiros**	**1.29**	**27**	*e*P	**Pb**	**23 41 43.7**	**-0.2**
PVAQ				*e*S	**Sb**	**23 42 00.9**	**+0.8**
PVAQ				*i* IAML		23 42 01.2	
PVAQ				*i* IAML		23 42 01.4	
PTEO	**Sao Teotonio**	**1.31**	**351**	*e*P	**Pn**	**23 41 43.0**	**-0.4**
PTEO				*e*S	**Sb**	**23 42 00.9**	**+0.4**
PCVE	**Castro Verde**	**1.42**	**14**	Pn	**Pn**	**23 41 45.4**	**+0.5**
PCVE				Sn	**Sb**	**23 42 03.5**	**-0.2**
PCVE	**Castro Verde**	**1.42**	**14**	*e*P	**Pn**	**23 41 45.5**	**+0.5**
PCVE				*e*S	**Sb**	**23 42 04.0**	**+0.3**
PCVE				*i* IAML		23 42 04.5	
PCVE				*i* IAML		23 42 04.8	
EGRO	**El Granado**	**1.50**	**31**	Pn	**Pb**	**23 41 46.8**	**-0.6**
EGRO				Sn	**Sb**	**23 42 05.7**	**-0.3**
EGRO	**El Granado**	**1.50**	**31**	Pg	**Pb**	**23 41 46.8**	**-0.6**
EGRO				Sg	**Sb**	**23 42 05.8**	**-0.3**
EGRO				*i* lVmb_Lg		23 42 06.7	
MESJ	**Messejana**	**1.59**	**7**	*e*P	**Pn**	**23 41 47.5**	**+0.2**
MESJ				*e*S	**Sn**	**23 42 07.2**	**-0.1**
MESJ				IAML		23 42 10.3	
	comp=N,1.0nm,0.1s						
MESJ	**Messejana**	**1.59**	**7**	*e*P	**Pn**	**23 41 47.6**	**+0.2**
EMIN	**Mina Concepcio**	**2.08**	**43**	Sn	**Sn**	**23 42 19.0**	**-0.3**
EMIN				*i* lVmb_Lg		23 42 23.4	
ESPR	**Espera**	**2.18**	**73**	Sn	**Sn**	**23 42 22.6**	**+0.7**
ESPR				*i* lVmb_Lg		23 42 23.4	
PBAR	**Barrancos**	**2.23**	**30**	Pn	**Pn**	**23 41 56.5**	**+0.4**
PBAR				Sn	**Sn**	**23 42 23.1**	**+0.1**
PBAR	**Barrancos**	**2.23**	**30**	*e*P	**Pn**	**23 41 57.6**	**+1.6**
PBAR				*e*S	**Sn**	**23 42 23.1**	**+0.1**
PBAR				*i* IAML		23 42 26.5	
PBAR				*i* IAML		23 42 27.6	
MOE	**Montemor**	**2.27**	**2**	*e*P	**Pn**	**23 41 57.4**	**+0.8**
EVO	**Evora**	**2.30**	**9**	Sn	**Sn**	**23 42 24.5**	**-0.3**
EVO				Pn	**Pn**	**23 41 56.5**	**-0.6**
EVO	**Evora**	**2.30**	**9**	*e*P	**Pn**	**23 41 58.1**	**+1.0**
PARRA	**Arraiolos**	**2.58**	**7**	*e*P	**Pn**	**23 42 01.4**	**+0.2**
PARRA				*e*S	**Sn**	**23 42 31.9**	**-0.3**
EBAD	**Badajoz**	**2.75**	**24**	Pn	**Pn**	**23 42 03.3**	**+0.1**
EBAD	**Badajoz**	**2.75**	**24**	Pn	**Pn**	**23 42 03.8**	**+0.5**
EBAD				Sn	**Sn**	**23 42 35.7**	**-0.1**
EBAD				*i* lVmb_Lg		23 42 38.6	
PMTG	**Montargil**	**2.82**	**4**	*e*P	**Pn**	**23 42 04.6**	**+0.4**
PMTG				*e*S	**Sn**	**23 42 36.6**	**-0.9**
ECAB	**El Cabril**	**3.03**	**52**	Pn	**Pn**	**23 42 08.2**	**+1.0**
ECAB				Sn	**Sn**	**23 42 41.0**	**-1.9**
ECAB				*i* lVmb_Lg		23 42 45.5	
PMRV	**Marv??o**	**3.28**	**15**	*e*P	**Pn**	**23 42 10.6**	**+0.1**
PSARD	**Sardoal**	**3.35**	**4**	*e*P	**Pn**	**23 42 12.1**	**+0.6**
EADA	**Adamuz**	**3.64**	**57**	Pn	**Pn**	**23 42 16.2**	**+0.6**
EADA				Sn	**Sn**	**23 42 56.6**	**-1.2**
EADA				*i* lVmb_Lg		23 42 59.0	
EPLA	**Plasencia**	**4.24**	**26**	Sn	**Sn**	**23 43 11.5**	**-1.2**
PSIM	**Granatula de C**	**4.53**	**54**	Sn	**Sn**	**23 43 19.7**	**-0.1**
PAB	**San Pablo**	**4.62**	**43**	Sn	**Sn**	**23 43 18.6**	**-3.6**
PAB				*i* lVmb_Lg		23 43 20.0	

*IDC **28** 23:50:25.1±0.8, 19°.44N×101°.35E, h0km, mb4.0/10, mbtmp4.0/12, ML4.3/2, MS3.4/15, Error ellipse: s-maj=15.9km s-min=14.7km az=127.0*
*BKK **28** 23:50:25.9±0.9, 20°.N±5°×10°1E±°, h3km±5km, M4.6/11, MLv4.6/11*
*NEIC **28** 23:50:27.6±2.3, 19°.58N±0°.03×101°.26E±0°.09, h10km±1km, mb4.4/16, Error ellipse: s-maj=13.9km s-min=4.2km az=78.0*

ISC 28 23:50:26.2±0.5, 19°.50N±0°.04×101°.37E±0°.06, h10km, n59, σ1s41/49, mb4.2/17, MS3.4/15, 1C-2D, Laos

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UTTA	**Uttaradit**	**1.91**	**204**	P	**Pn**	**23 50 58.8**	**-0.1**
LAMP	**Lampang**	**1.91**	**240**	P	**Pn**	**23 50 58.7**	**-0.2**
LOEI	**Loei**	**1.98**	**183**	P	**Pb**	**23 51 01.3**	**-1.2**
CMAI	**Chiengmai2**	**2.23**	**281**	P	**Pn**	**23 51 03.1**	**-0.4**
CHTO	**Chiang Mai**	**2.40**	**254**	Pn	**Pn**	**23 51 05.0**	**-0.6**
CM31	**Chiang Mai Arr**	**2.52**	**246**	Pn	**Pn**	**23 51 07.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**2.52**	**246**	Pn	**Pn**	**23 51 07.0**	**-0.4**
	17nm,0.3s,baz=60,slow=12,SNR=94						
CMAR				Pg	**Pb**	**23 51 10.5**	**-1.1**
	42nm,0.3s,baz=62,slow=14,SNR=22						
CMAR				Lg	Lg	23 51 43.4	
	106nm,0.3s,baz=58,slow=17,SNR=5.0						
	60nm,0.3s						
CMAR	**Chiang Mai Arr**	**2.52**	**246**	Pn	**Pn**	**23 51 06.6**	**-0.8**
KMI	**Kunming**	**5.74**	**12**	↓Pg	**Pg**	**23 52 15.8**	**-0.4**
KMI				Sg	**Sg**	**23 53 30.3**	**-0.2**
KMI				smax	smax		
	comp=N,140nm,1.2s						
KMI				smax	smax		
	comp=E,190nm,1.1s						
KMI				LR	LR		
	comp=N,3μm,5.3s						
KMI				LR	LR		
	comp=E,880nm,5.7s						
KMI				LR	LR		
	comp=Z,2μm,5.4s						
TNCH	**TengChong**	**6.10**	**335**	Pn	**Pn**	**23 51 59.5**	**+2.8**
TNCH				Sn	**Sn**	**23 53 08.0**	**+1.3**
TNCH				smax	smax		
	comp=Z,1μm,1.3s						
TNCH				smax	smax		
	comp=Z,1μm,1.4s						
TNCH				LR	LR		
	comp=Z,1nm,7.3s						
PZH	**PanZhiHua**	**6.98**	**3**	Pg	**Pg**	**23 52 35.8**	**-4.1**
PZH				Sg	**Sg**	**23 54 06.3**	**-4.0**
PZH				smax	smax		
	comp=N,50nm,1.0s						
PZH				smax	smax		
	comp=E,50nm,1.2s						
QIZ	**Qiongzhong**	**8.01**	**92**	Pn	**Pn**	**23 52 21.3**	**-1.5**
QIZ				Sn	**Sn**	**23 53 51.8**	**-1.8**
QIZ				smax	smax		
	comp=N,55nm,1.9s						
QIZ				smax	smax		
	comp=E,56nm,1.2s						
QIZ				LR	LR		
	comp=N,970nm,5.1s						
QIZ				LR	LR		
	comp=E,600nm,5.0s						
QIZ				LR	LR		
	comp=Z,540nm,12.6s						
SHL	**Shillong**	**10.64**	**306**	Pn	**Pn**	**23 52 59.4**	**+0.3**
PBA	**Port Blair**	**11.40**	**228**	Pn	**Pn**	**23 53 10.4**	**+1.2**
HKPS	**Hong Kong Po S**	**12.25**	**75**	Pn	Pn	23 53 25.9	+5.1
EVN	**Everest**	**15.75**	**305**	Pn	**Pn**	**23 54 08.1**	**-0.8**
XAN	**Xi'an**	**15.96**	**23**	↓P	**P**	**23 54 16.5**	**+1.9**
XAN				pmax	pmax		
	comp=Z,8.0nm,1

ASF	**Jabal al Asfar**	**58.63**	**296**	LR	LR	00 33 11.7			
	comp=Z,24nm,18.1s,baz=171,slow=44								
EIL	**Elat**	**60.54**	**294**	LR	LR	00 31 54.1			
	comp=Z,35nm,19.8s,baz=6.0,slow=41								
BRTR	**Keskin Array B**	**60.86**	**305**	P	**P**	**00 00 37.3**	**-2.0**		
	comp=Z,0.4nm,0.8s,baz=138,slow=41,SNR=1.8								
STKA	**Stephens Creek**	**64.00**	**142**	P	**P**	**00 01 00.3**	**+0.3**		
	comp=Z,1.6nm,0.6s,baz=314,slow=10,SNR=1.7								
	comp=Z,1.6nm,0.6s								
VRAC	**Vranov**	**72.12**	**317**	LR	LR	00 38 47.9			
	comp=Z,25nm,19.5s,baz=94,slow=40								
TXAR	**Lajitas Array**	**125.77**	**27**	PKP	**PKiKP**	**00 09 29.9**	**+0.5**		
	comp=Z,0.3nm,0.7s,baz=343,slow=2.7,SNR=2.7								

*IDC **29** 00:13:43.6±7.3, 7°.40S×128°.22E, h129km±79km, mb3.1/3, mbtmp3.7/7, Error ellipse: s-maj=65.7km s-min=25.0km az=36.0*

ISC 29 00:13:44.9±1.1, **7°.63S**±0°.08×**128°.3E**±0°.1, **h151**km, **n7, σ2s53/11, mb3.3/3, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.24**	**240**	P			**Pn**	**00 15 02.4**	**+0.8**
	50nm,0.6s,baz=150,slow=3.5,SNR=6.3								
BATI				S			**Sn**	**00 16 01.0**	**-0.4**
	51nm,0.4s,baz=100,slow=23,SNR=16								
FITZ	**Fitzroy Crossi**	**10.72**	**194**	P			**Pn**	**00 16 15.0**	**+0.6**
	2.4nm,0.5s,baz=11,slow=9.1,SNR=15								
FITZ				S			**Sn**	**00 18 09.4**	**-3.6**
	4.3nm,0.3s,baz=114,slow=22,SNR=5.6								
WRA	**Warramunga Arr**	**13.57**	**155**	P			**Pn**	**00 16 52.8**	**+1.4**
	1.0nm,0.4s,baz=322,slow=14,SNR=17								
WRA				S			**Sn**	**00 19 18.4**	**-3.3**
	0.6nm,0.3s,baz=327,slow=7.4,SNR=7.3								
ASAR	**Alice Springs**	**16.83**	**162**	P			**Pn**	**00 17 35.8**	**+4.0**
	1.0nm,0.5s,baz=337,slow=9.7,SNR=16								
ASAR				S			**Sn**	**00 20 41.2**	**+1.3**
	0.5nm,0.6s,baz=324,slow=18,SNR=4.7								
SONM	**Songino Array**	**58.52**	**343**	P			**P**	**00 23 23.4**	**-2.1**
	0.4nm,0.8s,baz=169,slow=10.0,SNR=2.2								
	0.4nm,0.8s								
MKAR	**Makanchi Array**	**67.84**	**328**	P			**P**	**00 24 26.2**	**-0.6**
	0.2nm,0.4s,baz=110,slow=8.3,SNR=4.1								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**72.17**	**329**	P			**P**	**00 24 54.5**	**+1.4**
	0.2nm,0.4s,baz=131,slow=4.8,SNR=3.0								
	0.2nm,0.4s								

TAP 29 00:14:54.6, 24°.56N×122°.16E, h30km, ML2.7, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.15**	**155**	P			Pb	00 15 00.0	-0.1
ESAO	**Su ao**	**0.29**	**274**	*e*P			Pn	00 15 02.5	-0.4
TWC	**Suao**	**0.29**	**281**	P			Pb	00 15 01.6	-0.3
TWC				S			Sb	00 15 06.6	-0.2
EOS3	**EOS3**	**0.30**	**152**	P			Pb	00 15 01.5	-0.4
EOS3				S			Sb	00 15 07.1	+0.1
EGS		**0.35**	**324**	P			Pb	00 15 03.1	+0.3
EGS				*e*S			Sn	00 15 09.3	-0.6
EWUT	**Wuta**	**0.37**	**253**	*e*P			Pb	00 15 03.4	+0.4
EWUT				*e*S			Sn	00 15 09.5	-0.6
ENA	**Nanau**	**0.40**	**252**	*e*P			Pn	00 15 04.5	+0.1
ENA				*e*S			Sn	00 15 10.7	-0.4
NTC	**Toucheng**	**0.42**	**315**	*e*P			Pn	00 15 05.2	+0.5
NTC				*e*S			Sn	00 15 11.8	+0.3
EOS4	**EOS4**	**0.46**	**162**	*e*P			Pb	00 15 04.3	+0.2
EOS4				*e*S			Sn	00 15 11.3	-0.6
TWE	**Neicheng**	**0.48**	**290**	*e*P			Pb	00 15 04.8	+0.1
TWE				*e*S			Sn	00 15 12.3	-0.6

*AZER **29** 00:44:27.5, 38°.52N×44°.45E, h8km, ml3.0*
*AFAD **29** 00:44:28.2, 38°.52N×44°.62E, h8km±5km, ML2.9*
*ISK **29** 00:44:28.7, 38°.21N×44°.61E, h14km, ML2.7/12*

ISC 29 00:44:29.1±1.1, **38°.34N**±0°.03×**44°.60E**±0°.02, **h7**km±10km, **n47, σ1s87/83, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.57**	**304**	P			**Pg**	**00 44 39.0**	**-1.1**
OZAP				S			**Sg**	**00 44 46.0**	**-1.6**
OZAP				*i*	IAML			00 44 51.0	
	comp=E,623nm,0.7s								
YOVA	**Hakkari_Yksek**	**0.79**	**198**	P			**Pn**	**00 44 47.0**	**+0.2**
YOVA				S			**Sn**	**00 45 01.9**	**+2.9**
TVAN	**Van**	**0.95**	**281**	P			**Pb**	**00 44 45.0**	**-3.1**
TVAN				*i*	IAML			00 45 20.0	
	comp=E,273nm,1.2s								
VANB	**Van**	**0.98**	**285**	Pg			**Pb**	**00 44 48.4**	**-0.1**
VANB				Sg			**Sb**	**00 45 02.2**	**+0.6**
VMUR	**Van-Muradiye**	**1.03**	**309**	P			**Pb**	**00 44 46.7**	**-2.6**
VMUR				S			**Sb**	**00 45 05.0**	**-2.1**
HAKT	**HAKKARI**	**1.05**	**222**	P			**Pg**	**00 44 49.9**	**+0.6**
HAKT				S			**Sn**	**00 45 08.3**	**+2.8**
HAKT				*i*	IAML			00 45 11.0	
	comp=N,146nm,0.3s								
HAKT				*i*	IAML			00 45 13.0	
	comp=E,188nm,0.6s								
HAKT	**HAKKARI**	**1.05**	**222**	P			**Pg**	**00 44 50.7**	**+1.3**
HAKT				S			**Sn**	**00 45 08.8**	**+3.3**
NAX	**Nakhchivan**	**1.08**	**40**	P			**Pn**	**00 44 50.0**	**-0.7**
NAX				S			**Sb**	**00 45 04.7**	**+0.1**
ERCV	**ERCIS-VAN**	**1.20**	**305**	Pn			**Pb**	**00 44 52.9**	**+0.8**
ORD	**Ordubad**	**1.24**	**61**	P			**Pg**	**00 44 53.8**	**+0.9**
ORD				S			**Sg**	**00 45 12.8**	**+3.8**
AKDM	**Akdamar-Van**	**1.27**	**270**	Pn			**Pn**	**00 44 51.3**	**-2.1**
AKDM				Sn			**Sn**	**00 45 10.1**	**-0.7**
SBZ	**Shahbuz**	**1.29**	**35**	P			**Pn**	**00 44 53.2**	**-0.4**
SBZ				S			**Sg**	**00 45 11.8**	**+1.2**
HYR	**Heyderabad**	**1.39**	**8**	P			**Pn**	**00 44 53.4**	**-1.5**
HYR				S			**Sn**	**00 45 12.4**	**-1.1**
ADCV	**BITLIS_Adilcev**	**1.54**	**288**	P			**Pn**	**00 44 57.2**	**+0.1**
ADCV				S			**Sn**	**00 45 17.5**	**+0.1**
IGDI	**IGDIR**	**1.57**	**345**	P			**Pn**	**00 44 57.9**	**+0.4**
IGDI				S			**Sn**	**00 45 17.1**	**-1.0**
IGDI	**IGDIR**	**1.57**	**345**	P			**Pn**	**00 44 57.0**	**-0.4**
IGDI				S			**Sn**	**00 45 16.4**	**-1.7**
TASB	**TASBURUN-IGDIR**	**1.66**	**350**	Pn			**Pn**	**00 44 59.4**	**+0.7**
TASB				Sn			**Sb**	**00 45 22.9**	**+1.7**
PERV	**Siirt/Pervari-**	**1.67**	**257**	P			**Pg**	**00 45 02.3**	**+1.2**
PERV				S			**Sg**	**00 45 22.8**	**0.0**
PERV				*i*	IAML			00 45 28.0	
	comp=N,131nm,0.6s								
PERV				*i*	IAML			00 45 34.0	
	comp=E,150nm,0.8s								
AGRB	**Hanur-Agry**	**1.75**	**315**	Pn			**Pn**	**00 45 00.9**	**+0.8**
AGRB				Sn			**Sb**	**00 45 24.4**	**+0.4**
DORK	**Agr/Tutak/Do**	**1.76**	**307**	P			**Pn**	**00 44 59.1**	**-1.0**
DORK				S			**Sn**	**00 45 22.2**	**-0.6**
MLAZ	**Malazgirt-MUS**	**1.79**	**297**	Pn			**Pn**	**00 45 01.1**	**+0.6**
GNI	**Garni**	**1.81**	**3**	Pn			**Pb**	**00 45 02.3**	**-0.2**
GNI				Sn			**Sb**	**00 45 26.5**	**+1.1**
KOTA	**Agri, Merkez-K**	**1.81**	**324**	P			**Pn**	**00 45 02.0**	**+1.1**
GURO	**Guroymak-BITLI**	**2.02**	**277**	Pn			**Pn**	**00 45 03.8**	**+0.1**
GURO				Sn			**Sn**	**00 45 29.5**	**+0.2**
SRTM	**Siirt_Merkez**	**2.14**	**261**	P			**Pb**	**00 45 07.9**	**-0.3**
SRTM				S			**Sg**	**00 45 36.8**	**-0.9**
SRTM				*i*	IAML			00 45 48.0	
	comp=N,127nm,0.7s								
SRTM				*i*	IAML			00 45 51.0	
	comp=E,70nm,0.7s								
QRD	**Qoradiz**	**2.40**	**61**	P			**Pb**	**00 45 11.2**	**-1.3**
QRD				S			**Sb**	**00 45 41.9**	**-0.4**
GDB	**GEDABAY**	**2.54**	**20**	P			**Pn**	**00 45 11.9**	**+1.1**
GDB				S			**Sn**	**00 45 44.0**	**+2.1**
KARS	**Kars**	**2.57**	**333**	Pn			**Pn**	**00 45 12.7**	**+1.5**
AGDM	**Agdam**	**2.63**	**47**	P			**Pb**	**00 45 13.9**	**-2.5**
GANJ	**Ganja**	**2.66**	**30**	P			**Pn**	**00 45 13.2**	**+0.9**
GANJ				S			**Sb**	**00 45 47.7**	**-2.1**
BLQ	**Beylaqan**	**2.69**	**58**	P			**Pb**	**00 45 15.4**	**-2.0**
BLQ				S			**Sb**	**00 45 49.7**	**-0.8**
KOPR	**Koprukoy-ERZUR**	**2.69**	**308**	Pn			**Pn**	**00 45 14.3**	**+1.4**
MIDY	**Mardin/Midyat-**	**2.70**	**251**	P			**Pg**	**00 45 16.9**	**-0.8**
MIDY				S			**Sg**	**00 45 54.3**	**-1.4**
QZX	**Qazax, Azerbai**	**2.77**	**12**	P			**Pn**	**00 45 13.3**	**-0.6**
QZX				S			**Sn**	**00 45 46.6**	**-1.1**
SENK	**Senkaya-Erzuru**	**2.82**	**323**	Pn			**Pn**	**00 45 16.4**	**+1.7**
YRD	**Yardimli**	**2.91**	**78**	P			**Pb**	**00 45 19.4**	**-1.9**
YRD				S			**Sb**	**00 45 56.2**	**-1.0**
KARO	**Karliova-Bingo**	**2.93**	**290**	Pn			**Pn**	**00 45 17.4**	**+1.1**
LRK	**Lerik**	**2.95**	**83**	P			**Pb**	**00 45 20.4**	**-1.6**
LRK				S			**Sb**	**00 45 57.2**	**-1.2**
ZRD	**Zardab**	**3.08**	**50**	P			**Pn**	**00 45 19.5**	**+1.5**
ZRD				S			**Sb**	**00 45 57.9**	**-3.9**
GLBA	**Clilabad**	**3.10**	**72**	P			**Pb**	**00 45 21.0**	**-3.4**
GLBA				S			**Sb**	**00 46 00.0**	**-2.4**
DGRG	**David-gareji**	**3.16**	**11**	P			**Pb**	**00 45 27.7**	**+2.2**
VSHL	**Vashlovani**	**3.20**	**25**	P			**Pb**	**00 45 24.1**	**-2.1**
VSHL				S			**Sg**	**00 46 16.4**	**+4.6**
ASTR	**Astara**	**3.30**	**85**	P			**Pb**	**00 45 24.8**	**-3.0**
ASTR				S			**Sb**	**00 46 06.8**	**-1.3**
LKRN	**Lenkeran, Azer**	**3.30**	**82**	P			**Pb**	**00 45 24.2**	**-3.7**
LKRN				S			**Sb**	**00 46 05.9**	**-2.3**
SEKA	**Sheki**	**3.49**	**34**	P			**Pn**	**00 45 25.1**	**+1.3**
SEKA				S			**Sn**	**00 46 08.8**	**+3.4**
QBL	**Gabala**	**3.61**	**43**	P			**Pn**	**00 45 27.1**	**+1.7**
IML	**Ismayilli**	**3.69**	**47**	P			**Pn**	**00 45 28.5**	**+2.0**
IML				S			**Sb**	**00 46 15.1**	**-4.5**

*SOME **29** 00:47:01.3, 39°.25N×76°.55E, h5km*
*NNC **29** 00:47:05.9±3.3, 39°.40N×76°.53E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=23.3km s-min=17.7km az=158.0*
*KRNET **29** 00:47:10.0±0.1, 39°.53N×76°.91E, mb3.0*

ISC 29 00:47:10.6±1.8, **39°.59N**±0°.08×**76°.67E**±0°.04, **h10**km, **n29, σ1s70/43, 16C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.66**	**333**	⇑*i*P			**Pg**	**00 47 43.7**	**+1.3**
JNKS				⇑*i*S			**Sg**	**00 48 08.4**	**+4.5**
TARG	**Taragay, Kyrgy**	**2.31**	**22**	⇑*i*P			**Pb**	**00 47 51.5**	**-1.0**
TARG				⇑*i*S			**Sb**	**00 48 22.1**	**+0.9**
SFK	**Sufi-Kurgan**	**2.47**	**281**	⇑*e*P			**Pg**	**00 47 56.7**	**-1.3**
SFK				⇑*i*S			**Sg**	**00 48 30.5**	**+0.5**
SALK	**Salom-Alik**	**2.53**	**302**	⇓*e*P			**Pb**	**00 47 57.2**	**+1.0**
SALK				⇓*e*S			**Sg**	**00 48 31.9**	**0.0**
KDJ	**Kajisay**	**2.57**	**9**	⇑*e*P			**Pb**	**00 47 55.7**	**-1.1**
KDJ				⇑*i*S			**Sb**	**00 48 28.9**	**+0.4**
ARLS	**Aral**	**2.88**	**323**	⇑*e*P			**Pb**	**00 48 01.6**	**-0.6**
ARLS				⇑*e*S			**Sb**	**00 48 39.2**	**+1.6**
BOOM	**Boomskoye usch**	**2.95**	**350**	⇑*i*P			**Pb**	**00 48 02.1**	**-1.2**
BOOM				⇑*i*S			**Sb**	**00 48 39.8**	**+0.3**
PRZ	**Przheval'sk**	**3.17**	**24**	⇓*e*P			**Pn**	**00 48 03.4**	**+2.6**
PRZ				⇓*e*S			**Sb**	**00 48 42.4**	**-3.6**
TNSS	**Tian-Shan**	**3.45**	**3**	Pg			**Pb**	**00 48 11.8**	**-0.2**
	1.2nm,0.2s								
TNSS				Lg			Lg	00 49 01.7	
	2.2nm,0.5s								
TNSS	**Tian-Shan**	**3.45**	**3**	*e*P			**Pb**	**00 48 11.8**	**-0.2**
	1.2nm,0.2s								
TNSS				*e*S			**Sg**	**00 49 01.7**	**+0.3**
	2.2nm,0.5s								
AAK	**Ala-Archa**	**3.46**	**332**	⇑Pn			**Pn**	**00 48 05.5**	**+0.9**
	2.4nm,0.8s								
AAK				⇑Lg			Lg	00 49 01.3	
	12nm,0.9s								
KST	**Kastek**	**3.49**	**352**	Pg			**Pb**	**00 48 11.9**	**-0.7**
	3.2nm,0.4s								
KST				Lg			Lg	00 49 01.9	
	6.4nm,0.5s								
KST	**Kastek**	**3.49**	**352**	*e*P			**Pb**	**00 48 11.9**	**-0.7**
	3.2nm,0.4s								
KST				*e*S			**Sg**	**00 49 01.9**	**-0.8**
	6.4nm,0.5s								
MTBS	**Maitube**	**3.54**	**357**	Pg			**Pb**	**00 48 12.6**	**-0.8**
	4.7nm,0.7s								
MTBS				Lg			Lg	00 49 03.0	
	6.2nm,0.2s								
MTBS	**Maitube**	**3.54**	**357**	*e*P			**Pb**	**00 48 13.1**	**-0.3**
	1.4nm,0.2s								
MTBS				*e*S			**Sg**	**00 49 03.5**	**-0.8**
	3.9nm,0.2s								
KOTS	**Kotyrbulak**	**3.66**	**5**	Pg			**Pb**	**00 48 15.8**	**+0.4**
	2.5nm,0.4s								
KOTS				Lg			Lg	00 49 08.7	
	16nm,0.5s								
KOTS	**Kotyrbulak**	**3.66**	**5**	*e*P			**Pb**	**00 48 15.8**	**+0.4**
	2.5nm,0.4s								
KOTS				*e*S			**Sg**	**00 49 08.7**	**+0.7**
	16nm,0.5s								
SATY	**Saty**	**3.71**	**20**	Pg			**Pb**	**00 48 16.5**	**+0.4**
	6.3nm,0.7s								
SATY				Lg			Lg	00 49 09.9	
	18nm,0.5s								
DGS	**Degeres**	**3.71**	**350**	Pg			**Pb**	**00 48 16.3**	**+0.1**
	2.6nm,0.6s								
DGS				Lg			Lg	00 49 09.7	
	6.5nm,0.6s								
UZB	**Uzynbulak**	**3.97**	**26**	Pg			**Pb**	**00 48 21.2**	**+0.5**
	5.5nm,0.4s								
UZB				Lg			Lg	00 49 18.0	
	0.5nm,0.3s								
UZB	**Uzynbulak**	**3.97**	**26**	*e*P			**Pb**	**00 48 21.2**	**+0.5**
	5.5nm,0.4s								
UZB				*e*S			**Sg**	**00 49 18.0**	**-0.1**
	0.5nm,0.3s								
MRKS	**Merke**	**4.08**	**322**	Pg			**Pb**	**00 48 21.1**	**-1.5**
	2.0nm,0.4s								
MRKS				Lg			Lg	00 49 17.7	
	6.9nm,0.5s								
MRKS	**Merke**	**4.08**	**322**	*e*P			**Pb**	**00 48 21.1**	**-1.5**
	2.0nm,0.4s								
MRKS				*e*S			**Sg**	**00 49 17.7**	**-3.9**
	6.9nm,0.5s								
SGDS	**Sogindy**	**4.15**	**339**	Pg			**Pb**	**00 48 23.6**	**-0.1**
	3.1nm,0.2s								
SGDS				Lg			Lg	00 49 22.0	
	5.4nm,0.4s								
KRBS	**Karabastau**	**4.17**	**350**	Pg			**Pb**	**00 48 24.4**	**+0.4**
	2.4nm,0.5s								
KRBS				Lg			Lg	00 49 23.4	
	4.9nm,0.5s								
PDGK	**Podgornoye**	**4.30**	**29**	⇑Pg			**Pg**	**00 48 30.6**	**-2.2**
	3.4nm,0.9s								
PDGK				⇑Lg			Lg	00 49 28.2	
	21nm,1.4s								
KK31	**Karatay Array**	**5.81**	**309**	⇓Lg			Lg	00 50 15.0	
	1.1nm,0.5s,baz=136,slow=27,SNR=3.9								
BRLS	**Boroldav**	**6.18**	**306**	Pg			**Pb**	**00 48 59.3**	**+0.9**
	1.5nm,0.5s								
BRLS				Lg			Lg	00 50 23.3	
	1.7nm,0.6s								
BRLS	**Boroldav**	**6.18**	**306**	*e*P			**Pb**	**00 48 59.3**	**+0.9**
	1.5nm,0.5s								
BRLS				*e*S			**Sg**	**00 50 23.4**	**-5.7**
	1.7nm,0.6s								

IDC 29 00:49:17.2±2.8, **26°.04N**×**142°.32E, h0**km, **mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=123.4km s-min=28.6km az=77.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.06**	**353**	Pn			Pg	00 49 30.5	-7.1
	48nm,0.3s,baz=110,slow=17,SNR=28								
JCJ				Sn			Sg	00 49 47.6	-3.7
	65nm,0.3s,baz=270,slow=20,SNR=5.3								
WRA	**Warramunga Arr**	**46.36**	**190**	P			P	00 57 45.2	-0.1
	0.4nm,0.4s,baz=10,slow=8.6,SNR=8.0								
	0.4nm,0.4s								
MKAR	**Makanchi Array**	**51.25**	**310**	P			P	00 58 22.7	0.0
	0.3nm,0.5s,baz=79,slow=7.8,SNR=2.2								
	0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**53.87**	**315**	P			P	00 58 42.2	+0.1
	0.6nm,0.6s,baz=91,slow=8.6,SNR=6.1								
	0.6nm,0.6s								
BVAR	**Borovoye Array**	**58.91**	**318**	P			P	00 59 17.7	-0.2
	1.2nm,0.6s,baz=93,slow=7.6,SNR=5.7								
	1.2nm,0.6s								
FINES	**FINESS Array B**	**78.95**	**334**	P			P	01 01 22.4	-0.1
	1.2nm,0.7s,baz=66,slow=5.2,SNR=8.0								
	1.2nm,0.7s								

*NEIC **29** 00:49:41.9±1.1, 35°.70N±0°.01×117°.55W±0°.01, h14km±2km, Error ellipse: s-maj=1.8km s-min=1.5km az=148.0*

PAS 29 00:49:42.9±1.5, **35°.714N**±0°.010×**117°.57W**±0°.01, **h8**km±6km, **Mwr3.7/6, ML3.7**/182(NEIC), **Error ellipse: s-maj=1.6km s-min=1.3km az=148.0, Central California**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GPO	**China Lake**	**0.10**	**230**				Pg	00 49 45.5	+0.1
GPO							Sg	00 49 47.8	+0.8
CLC	**China Lake**	**0.10**	**347**	Pg			Pg	00 49 45.3	-0.1
CLC							Sg	00 49 47.2	0.0
CLC							IAML	00 49 47.8	
	comp=E,42μm,0.5s								
WSHM	**Spangler Hills**	**0.13**	**151**	Pg			Pg	00 49 45.6	-0.2
WSHM							Sg	00 49 47.9	+0.1
WSHM							IAML	00 49 48.5	
	comp=E,29μm,0.5s								
WSHM							IAML	00 49 48.6	
	comp=E,29μm,0.4s								
SRTC	**Snort**	**0.15**	**262**				Pg	00 49 46.5	+0.4
SRTC							Sg	00 49 49.8	+1.5
TOW	**Tower One**	**0.18**	**301**				Pg	00 49 47.1	+0.4
TOW							Sg	00 49 50.6	+1.3
CCCA	**Chr Cany lake**	**0.25**	**138**	Pg			Pg	00 49 48.0	+0.1
LRMC	**Laurel Mtn Rad**	**0.25**	**202**	Pg			Pg	00 49 47.7	-0.3
WNMM	**Nine Mile Cany**	**0.30**	**295**				Pg	00 49 48.8	-0.1
WNMM							Sg	00 49 53.3	+0.4
WVPM	**Volcano Peak E**	**0.31**	**319**				Pg	00 49 48.9	-0.1
WVPM							Sg	00 49 53.3	0.0
WCSM	**Coso Springs S**	**0.35**	**333**				Pg	00 49 49.6	-0.3
WCSM							Sg	00 49 54.5	0.0
WRVM	**Rose V. Centra**	**0.39**	**318**				Pg	00 49 50.4	-0.3
WRVM							Sg	00 49 55.5	-0.3
MFS	**McCloud Flat S**	**0.47**	**330**				Pg	00 49 51.7	-0.2
MFS							Sg	00 49 58.2	+0.1
DTP	**Desert Tortois**	**0.50**	**207**				Pg	00 49 52.1	-0.4
DTP							Sg	00 49 59.1	0.0
WORM	**Onyx Ranch**	**0.55**	**268**				Pg	00 49 53.0	-0.5
WORM							Sg	00 50 00.2	-0.5
QSM	**Queen of Sheba**	**0.62**	**66**				Sg	00 50 02.9	-0.1
QSM	**Queen of Sheba**	**0.62**	**66**	Pg			Pg	00 49 54.4	-0.5
QSM							IAML	00 50 03.4	
	comp=E,4μm,0.5s								
QSM							IAML	00 50 04.2	
	comp=N,4μm,0.2s								
WHFM	**Hanning Flat**	**0.64**	**269**				Pg	00 49 54.7	-0.5
WHFM							Sg	00 50 03.1	-0.3
CCAC	**Calif City Air**	**0.67**	**213**				Pg	00 49 55.5	-0.3
CCAC							Sg	00 50 04.6	+0.1
ISA	**Isabella, Lake**	**0.74**	**266**				Sg	00 50 06.3	-0.4
ISA	**Isabella, Lake**	**0.74**	**266**	Pg			Pg	00 49 56.2	-0.9
ISA							IAML	00 50 07.4	
	comp=E,3μm,0.5s								
WLHM	**Little Horse**	**0.75**	**306**				Pg	00 49 56.6	-0.7
WLHM							Sg	00 50 06.5	-0.6
WASM	**Alta Sierra Ca**	**0.81**	**272**				Pg	00 49 57.8	-0.6
WASM							Sg	00 50 08.2	-0.6
CWC	**Cottonwood Cre**	**0.83**	**330**				Sg	00 50 09.7	-0.2
CWC	**Cottonwood Cre**	**0.83**	**330**	Pg			Pg	00 49 58.7	-0.3
HYS	**Haystack Butte**	**0.85**	**180**				Pg	00 49 58.4	-0.8
HYS							Sg	00 50 10.0	-0.2
CGO	**Cerro Gordo**	**0.86**	**347**				Pg	00 49 58.6	-0.8
CGO							Sg	00 50 11.1	+0.6
GWY	**Greenwater Val**	**0.87**	**57**	Pg			Pg	00 49 58.9	-0.7
GWY				Sg			Sg	00 50 10.6	-0.4
FURC	**Furnace Creek,**	**0.94**	**37**	Pg			Pg	00 50 00.7	-0.3
FURC							IAML	00 50 17.8	
	comp=N,3μm,0.6s								
TPO	**Tropico Hills**	**0.99**	**213**	Pg			Pg	00 50 01.3	-0.6
TPO				Sg			Sg	00 50 14.6	-0.3
TPO							IAML	00 50 19.4	
	comp=N,2μm,0.8s								
TEJ	**El Tejon**	**1.03**	**242**				Pg	00 50 01.3	-1.4
SHOC	**Shoshone, Teco**	**1.07**	**80**	Pg			Pg	00 50 02.0	-1.4
SPG2	**Springville 2**	**1.09**	**297**				Pg	00 50 02.6	-1.1
VES	**Vestal, Richgr**	**1.24**	**276**	Pg			Pn	00 50 05.5	-0.9
VES				Sg			Sb	00 50 21.8	-0.8
VES							IAML	00 50 24.9	
	comp=N,3μm,0.8s								
VES							IAML	00 50 25.4	
	comp=E,2μm,0.4s								
GRAC	**Grapevine Rang**	**1.29**	**7**				Pn	00 50 06.3	-0.9
GRAC							IAML	00 50 31.0	
	comp=N,2μm,1.0s								
GRAC							IAML	00 50 31.6	
	comp=E,2μm,0.8s								
WCT	**Wildcat Mounta**	**1.32**	**35**				Pn	00 50 06.3	-1.4
WCT							IAML	00 50 26.9	
	comp=N,2μm,0.8s								
WCT							IAML	00 50 27.2	
	comp=E,1μm,0.4s								

BC3	**Big Chuckawall**	**2.69**	**139**	Pn	Pn	00 50 24.9	-1.6
BC3				IAML		00 51 11.1	
	comp=N,494nm,0.7s						
BC3				IAML		00 51 17.5	
	comp=E,300nm,1.3s						
NV11	**Mina Array Sit**	**2.75**	**350**	Pn	Pn	00 50 27.4	-0.1
DPP	**Dos Picos Cty**	**2.76**	**169**	Pn	Pn	00 50 26.6	-0.8
NVAR	**Mina Array Bea**	**2.77**	**348**	Pn	Pn	00 50 27.5	-0.3
CPE	**Camp Elliot**	**2.84**	**172**	Pn	Pn	00 50 27.9	-0.6
CPE				IAML		00 51 13.1	
	comp=E,215nm,0.6s						
BBGB	**Big Mountain B**	**2.94**	**288**	Pn	Pn	00 50 29.8	-0.1
HULI	**Fort Hunter Li**	**2.99**	**277**	Pn	Pn	00 50 30.8	+0.2
HULI				IAML		00 51 31.1	
	comp=E,202nm,1.4s						
HULI				IAML		00 51 33.5	
	comp=N,208nm,0.9s						
RYN	**Ryan**	**3.01**	**346**	Pn	Pn	00 50 30.8	-0.1
W13A	**Hualapai Mount**	**3.07**	**100**	Pn	Pn	00 50 30.2	-1.6
W13A				IAML		00 51 23.3	
	comp=N,191nm,1.6s						
W13A				IAML		00 51 24.0	
	comp=E,127nm,0.9s						
R11B	**Troy Canyon, C**	**3.07**	**31**	Pn	Pn	00 50 31.2	-0.7
R11B				IAML		00 51 21.2	
	comp=E,139nm,0.5s						
BAR	**Barrett**	**3.12**	**166**	Pn	Pn	00 50 31.4	-1.0
BAR				IAML		00 51 20.6	
	comp=E,180nm,0.6s						
Q09A	**Carvers**	**3.13**	**6**	Pn	Pn	00 50 32.5	-0.1
WAKR	**Walker**	**3.16**	**332**	Pn	Pn	00 50 33.2	+0.1
BLYC	**Blythe**	**3.18**	**127**	Pn	Pn	00 50 31.2	-2.0
BLYC				IAML		00 51 24.4	
	comp=N,310nm,0.6s						
CMB	**Columbia Colle**	**3.24**	**317**	Pn	Pn	00 50 32.2	-1.7
CMB				IAML		00 51 28.7	
	comp=N,171nm,0.6s						
CMB				IAML		00 51 29.3	
	comp=E,131nm,1.4s						
SAO	**San Andreas Ge**	**3.31**	**290**	Pn	Pn	00 50 34.1	-0.8
CBX	**Cerro Bola**	**3.47**	**167**	Pn	Pn	00 50 35.9	-1.4
CBX				IAML		00 51 35.3	
	comp=E,275nm,0.7s						
MHC	**Mount Hamilton**	**3.66**	**298**	Pn	Pn	00 50 40.8	+0.9
MHC				IAML		00 51 44.2	
	comp=N,151nm,1.1s						
MHC				IAML		00 51 47.2	
	comp=E,146nm,0.8s						
LCMT	**Little Creek M**	**3.72**	**68**	Pn	Pn	00 50 40.7	0.0
PNTR	**Pine Nut**	**3.74**	**335**	Pn	Pn	00 50 41.0	-0.1
PNTR				IAML		00 51 60.0	
	comp=N,111nm,0.9s						
PNTR				IAML		00 52 01.2	
	comp=E,98nm,1.1s						
CCUT	**Cedar City**	**3.85**	**60**	Pn	Pn	00 50 42.6	0.0
KNB	**Kanab**	**4.04**	**70**	Pn	Pn	00 50 45.2	0.0
SZCU	**Shurtz Canyon**	**4.06**	**61**	Pn	Pn	00 50 46.0	+0.5
PSUT	**Pine Spring**	**4.09**	**45**	Pn	Pn	00 50 45.2	-0.7
PSUT				IAML		00 51 55.6	
	comp=N,87nm,1.0s						
PSUT				IAML		00 52 02.5	
	comp=E,76nm,1.1s						
SPR3	**Spring Creek 3**	**4.17**	**37**	Pn	Pn	00 50 45.3	-1.8
SPR3				IAML		00 51 58.8	
	comp=E,77nm,0.8s						
SPR3				IAML		00 52 06.1	
	comp=N,62nm,0.9s						
PAHR	**Pah Rah Range**	**4.24**	**341**	Pn	Pn	00 50 47.8	-0.1
U15A	**North Rim**	**4.33**	**79**	Pn	Pn	00 50 49.4	+0.1
U15A				IAML		00 52 13.2	
	comp=E,74nm,1.0s						
U15A				IAML		00 52 15.9	
	comp=N,46nm,1.1s						
PKCU	**Pink Cliffs**	**4.57**	**66**	Pn	Pn	00 50 53.2	+0.6
PKCU				IAML		00 52 13.5	
	comp=N,60nm,2.8s						
PKCU				IAML		00 52 21.0	
	comp=E,72nm,0.9s						
BEKR	**Beckworth**	**4.70**	**333**	Pn	Pn	00 50 56.6	+2.4
BEKR				IAML		00 52 29.9	
	comp=E,97nm,0.8s						
BEKR				IAML		00 52 31.6	
	comp=N,63nm,1.1s						
CVS	**Carmenet Viney**	**4.71**	**305**	Pn	Pn	00 50 52.9	-1.4
CVS				IAML		00 52 29.4	
	comp=N,44nm,2.0s						
CVS				IAML		00 52 29.5	
	comp=E,58nm,3.9s						
MTPU	**Mount Pierson**	**4.90**	**60**	Pn	Pn	00 50 57.5	+0.4
WUAZ	**Wupatki**	**5.05**	**90**	Pn	Pn	00 50 57.5	-1.5
WUAZ				IAML		00 52 27.1	
	comp=E,46nm,1.6s						
WUAZ				IAML		00 52 49.8	
	comp=E,56nm,1.2s						
X16A	**Lo Mia Camp, P**	**5.19**	**103**	Pn	Pn	00 51 00.3	-0.6
X16A				IAML		00 52 36.3	
	comp=N,38nm,1.2s						
X16A				IAML		00 52 38.3	
	comp=E,31nm,0.9s						
ELK	**Elko**	**5.35**	**19**	Pn	Pn	00 51 02.9	-0.3
ELK				IAML		00 52 34.2	
	comp=E,37nm,0.7s						
ELK				IAML		00 52 34.3	
	comp=E,24nm,0.7s						
214A	**Organ Pipe Nat**	**5.45**	**132**	Pn	Pn	00 51 03.7	-0.7
O03E	**Paynes Creek**	**5.66**	**325**	Pn	Pn	00 51 06.4	-1.0
DCMP	**DeCamp, Califo**	**5.92**	**311**	Pn	Pn	00 51 10.0	-0.8
HATC	**Hat Creek Radi**	**5.94**	**330**	Pn	Pn	00 51 10.5	-0.7
TMUT	**Trail Mountain**	**6.19**	**53**	Pn	Pn	00 51 13.6	-1.3
BGU	**Big Grassy Mou**	**6.31**	**33**	Pn	Pn	00 51 15.0	-1.3
X18A	**Snowflake**	**6.35**	**99**	Pn	Pn	00 51 17.7	+0.8
TUC	**Tucson**	**6.58**	**119**	Pn	Pn	00 51 17.4	-2.5
P18A	**Preston Nutter**	**7.00**	**54**	Pn	Pn	00 51 26.5	+0.5
BSUT	**Blindstream Ca**	**7.21**	**46**	Pn	Pn	00 51 30.7	+1.9
PV14	**Lion Creek, Pa**	**7.33**	**66**	Pn	Pn	00 51 28.5	-1.9
PV18	**Skein Mesa, Pa**	**7.38**	**67**	Pn	Pn	00 51 29.2	-1.8
PV16	**Nyswonger Mesa**	**7.39**	**67**	Pn	Pn	00 51 28.6	-2.6
PV13	**Radium Mtn., P**	**7.42**	**68**	Pn	Pn	00 51 28.4	-3.2
PV11	**David Mesa, Pa**	**7.42**	**67**	Pn	Pn	00 51 31.2	-0.4
PV03	**Paradox Valley**	**7.43**	**67**	Pn	Pn	00 51 31.5	-0.2
PV04	**Paradox Valley**	**7.43**	**66**	Pn	Pn	00 51 30.9	-0.7

*HEL **29** 00:52:08.4±0.3,67°.84N×19°.95E, h0km, ML1.8, Suspected explosion*
*UPP **29** 00:52:09.5±0.0,67°.83N×20°.21E, h0km, ML2.5, Suspected explosion*
*IDC **29** 00:52:10.4±1.2,67°.81N×20°.86E, h0km, mbtmp3.1/4, ML2.0/4, Error ellipse: s-maj=22.6km s-min=7.9km az=121.0*

ISC 29 00:52:09.8±0.8, 67°.82N±0°.02×20°.24E±0°.02, h0km, n35, σ1s10/54, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**16**	P	**Pg**	**00 52 12.4**	**0.0**
KUA				S	**Sg**	**00 52 14.4**	**+0.2**
RATU	**Laukkuluspa**	**0.24**	**271**	P	**Pg**	**00 52 14.2**	**-0.3**
RATU				S	**Sg**	**00 52 17.7**	**+0.1**
NIKU	**Nikkaluokta**	**0.46**	**276**	P	**Pg**	**00 52 18.1**	**-0.5**
NIKU				S	**Sg**	**00 52 24.3**	**-0.2**
LANU	**Lannavaara**	**0.70**	**70**	P	**Pg**	**00 52 23.0**	**-0.2**
LANU				S	**Sg**	**00 52 32.7**	**+0.4**
LANU	**Lannavaara**	**0.70**	**70**	PG	**Pg**	**00 52 23.1**	**-0.2**
LANU				SG	**Sg**	**00 52 32.9**	**+0.6**
DUNU	**Dundret**	**0.71**	**170**	P	**Pg**	**00 52 23.1**	**-0.4**
DUNU				S	**Sg**	**00 52 32.9**	**+0.2**
MASU	**Masugnsbyn**	**0.77**	**118**	P	**Pg**	**00 52 24.2**	**-0.2**
SALU	**Saltoluokta**	**0.80**	**237**	P	**Pg**	**00 52 24.4**	**-0.6**
KIF	**Kilpisjarvi**	**1.21**	**10**	*eP*	**Pg**	**00 52 32.7**	**-0.2**
KIF	**Kilpisjarvi**	**1.21**	**10**	PN	**Pg**	**00 52 32.8**	**-0.2**
KIF				smax	smax	00 52 46.2	
	comp=Z,11nm,0.2s						
KIF				SN	**Sb**	**00 52 49.2**	**-0.4**
PAJU	**Pajala**	**1.37**	**124**	P	**Pg**	**00 52 34.9**	**-1.1**
PAJU	**Pajala** baz=302	**1.37**	**124**	PG	**Pg**	**00 52 34.9**	**-1.1**
PAJU				SG	**Sg**	**00 52 53.3**	**-0.4**
HEF	**Hetta**	**1.41**	**64**	*i* P	**Pn**	**00 52 35.9**	**-0.9**
HEF	**Hetta**	**1.41**	**64**	PG	**Pn**	**00 52 35.8**	**-1.0**
HEF				smax	smax	00 52 53.5	
	comp=Z,6.4nm,0.2s						
HEF				SG	**Sg**	**00 52 54.5**	**-0.6**
ERTU	**Ertsjaerv**	**1.48**	**148**	P	**Pn**	**00 52 36.8**	**-0.9**
ERTU	**Ertsjaerv**	**1.48**	**148**	PN	**Pn**	**00 52 37.0**	**-0.7**
ERTU				SN	**Sn**	**00 52 57.4**	**-0.3**
KLF	**Kolari**	**1.55**	**111**	PG	**Pn**	**00 52 38.3**	**-0.3**
KLF				smax	smax	00 52 57.9	
	comp=Z,5.5nm,0.2s						
KLF				SN	**Sg**	**00 52 59.4**	**0.0**
KTK1	**Kautokeino**	**1.63**	**41**	PG	**Pn**	**00 52 39.3**	**-0.5**
KTK1				SN	**Sg**	**00 53 03.3**	**+1.1**
HARU	**Harads**	**1.69**	**170**	P	**Pn**	**00 52 40.5**	**0.0**
KALU	**Kalix**	**2.32**	**147**	PB	**Pn**	**00 52 50.0**	**+0.8**
KALU				SG	**Sb**	**00 53 21.8**	**+0.2**
TOF	**Tornio**	**2.38**	**135**	PB	**Pn**	**00 52 51.2**	**+1.3**
TOF				smax	smax	00 53 21.2	
	comp=Z,5.2nm,0.2s						
TOF				SB	**Sb**	**00 53 22.7**	**-0.5**
RNF	**Rovaniemi**	**2.56**	**116**	PB	**Pn**	**00 52 54.1**	**+1.7**
RNF				SB	**Sb**	**00 53 27.9**	**-0.5**
ARA0	**ARCESS Array S**	**2.58**	**46**	PB	**Pn**	**00 52 54.0**	**+1.2**
ARA0				SB	**Sb**	**00 53 27.6**	**-1.6**
ARCES	**ARCESS Array B** comp=Z,0.5nm,0.3s,baz=225,slow=15,SNR=11	**2.58**	**46**	Pn	**Pn**	**00 52 53.9**	**+1.1**
ARCES	comp=Z,1.4nm,0.3s,baz=224,slow=25,SNR=11 comp=Z,1.0nm,0.3s			Lg	Lg	00 53 24.6	
RAJF	**Raja-Jooseppi**	**3.09**	**74**	SB	**Sb**	**00 53 42.9**	**-0.8**
KEV	**Kevo**	**3.13**	**49**	PG	**Pb**	**00 53 04.4**	**-1.9**
KEV				SN	**Sn**	**00 53 39.7**	**+1.3**
RANF	**Ranua**	**3.15**	**122**	PG	**Pg**	**00 53 08.6**	**-1.6**
RANF				SG	**Sb**	**00 53 47.2**	**+1.6**
BURU	**Burvik**	**3.29**	**171**	PB	**Pn**	**00 53 03.8**	**+1.4**
VRF	**Varrio**	**3.56**	**87**	SB	**Sb**	**00 53 58.2**	**+0.9**
KU2	**Taivalkoski**	**3.81**	**120**	PG	**Pb**	**00 53 19.7**	**+1.9**
MSF	**Maaselka**	**3.97**	**115**	PN	**Pn**	**00 53 13.3**	**+1.5**
MSF				SG	**Sb**	**00 54 12.2**	**+3.3**
KU6	**Riekki**	**4.21**	**111**	SG	**Sg**	**00 54 21.8**	**-2.9**
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=2.1	**6.87**	**156**	Pn	**Pn**	**00 53 52.3**	**+0.6**
FINES	comp=Z,0.4nm,0.3s,baz=345,slow=26,SNR=5.6 comp=Z,4.0nm,1.0s			Lg	Lg	00 55 42.4	
NOA	**NORSAR Array B** baz=25,slow=12,SNR=1.7 comp=Z,0.7nm,0.8s	**7.84**	**214**	Pn	**Pn**	**00 54 04.5**	**-0.4**
HFS	**Hagfors** comp=Z,0.1nm,0.3s,baz=16,slow=13,SNR=1.3 comp=Z,1.8nm,0.8s	**8.23**	**203**	Pn	**Pn**	**00 54 09.0**	**-1.2**

RSNC 29 01:07:38.7±0.6, 2°.S×4°.7°.9W×4°, h186km±6km, M3.0, mB4.5, mb3.3, ML2.6, Mw(mB)3.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COHC	**Cochancay**	**0.55**	**232**	P	Pn	01 08 05.9	+1.5
COHC				S	Sn	01 08 23.2	-1.0
PPLP	**Puerto Lpez**	**2.04**	**287**	P	Pn	01 08 19.5	+2.8
PPLP				S	Sn	01 08 45.0	-1.1
OTAV	**Otavalo**	**2.38**	**9**	P	Pn	01 08 21.3	+0.4
OTAV				S	Sn	01 08 58.7	+5.0
GCUF	**Volcan Galeras**	**3.65**	**24**	P	Pn	01 08 35.6	-0.5
BBAC	**Balboa, Cauca**	**4.41**	**21**	P	Pn	01 08 44.9	-0.6
BBAC				S	Sn	01 09 39.3	+1.3
POPC	**Popayan, Colom** 4.5nm,1.5s	**5.11**	**25**	P	Pn	01 08 53.7	-0.8
POPC	4.5nm,1.5s			S	Sn	01 09 54.3	+0.2
GARC	**Garzon, Huila**	**5.43**	**38**	P	Pn	01 08 58.3	-0.3
GARC				S	Sn	01 10 02.6	+1.1
YOTC	**Yotoco, Valle** 5.8nm,1.2s	**6.56**	**22**	P	Pn	01 09 11.5	-1.7
YOTC	5.8nm,1.2s			S	Sn	01 10 19.0	-8.9
URMC	**La Uribe, Meta** 8.4nm,0.7s	**6.95**	**40**	P	Pn	01 09 17.0	-1.3
ORTC	**Ortega, Tolima** 8.1nm,1.2s	**6.98**	**31**	P	Pn	01 09 18.7	0.0
ORTC	8.1nm,1.2s			S	Sn	01 10 40.5	+2.6
PRAC	**Prado**	**7.01**	**34**	P	Pn	01 09 19.5	+0.4

TRN 29 01:07:57.9, 17°.56N×61°.04W, h23km, MD3.9, Far East of Antigua., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.72**	**279**	*eP*	Pn	01 08 14.0	+1.3
ANWB				*eS*	Sn	01 08 25.1	+2.1
DSDZ	**La Diserade, G**	**1.24**	**181**	*eP*	Pb	01 08 20.5	-0.2
DSDZ				*eS*	Sb	01 08 39.2	+2.9
MLYT	**Lee's Yard**	**1.38**	**233**	*eP*	Pb	01 08 24.3	+1.2
MLYT				*eS*	Sb	01 08 43.1	+2.8
DHSZ	**Broadband at M**	**1.46**	**208**	*eP*	Pb	01 08 24.8	+0.4
DHSZ				*eS*	Sb	01 08 44.5	+2.0
ATGZ	**Broadband at L**	**1.60**	**204**	*eP*	Pb	01 08 26.8	0.0
ATGZ				*eS*	Sb	01 08 47.5	+0.9
MMLZ	**Guadeloupe Bro**	**1.62**	**202**	*eP*	Pb	01 08 27.6	+0.4
MMLZ				*eS*	Sb	01 08 48.2	+0.9
SKI	**Saint Kitts**	**1.64**	**262**	*eP*	Pb	01 08 27.7	+0.3
SKI				*eS*	Sb	01 08 48.2	+0.5
TBG	**Guadaloupe-3**	**1.80**	**199**	*eP*	Pb	01 08 29.6	-0.6
TBG				*eS*	Sb	01 08 51.8	-0.4
DWS	**Wesley**	**2.00**	**187**	*eP*	Pb	01 08 32.1	-1.5
DWS				*eS*	Sb	01 08 56.9	-1.2
DSLB	**Salisbury**	**2.14**	**190**	*eP*	Pb	01 08 34.5	-1.6
DSLB				*eS*	Sb	01 09 00.6	-1.7
BIM	**Bigot**	**3.03**	**181**	*eP*	Pn	01 08 45.7	+1.1
BIM				*eS*	Sn	01 09 21.4	+1.2
AOPR	**Arecibo Observ**	**5.49**	**279**	*eP*	Pn	01 09 21.2	+2.8
AOPR				*eS*	Sn	01 10 21.2	+0.2

*SFS **29** 01:13:04.8, 35°.62N×4°.39W, h0km, ML2.5/9, ML2.5/9, MLv2.5/9*
*INMG **29** 01:13:05.1±1.6, 35°.64N×4°.43W, h0km±9km, ML1.2, Error ellipse: s-maj=12.9km s-min=4.4km az=1.0. #DIST_RANGE: REGIONAL #IPMA_REGION: Alboran*
*MDD **29** 01:13:05.0±0.5, 35°.65N×4°.39W, h1km, mb_Lg2.1/14, Error ellipse: s-maj=3.9km s-min=3.3km az=162.0*
*CNRM **29** 01:13:07.3, 35°.64N×4°.37W, h28km, ML1.9*

ISC 29 01:13:03.3±1.1, 35°.65N±0°.02×4°.38W±0°.02, h6km±10km, n51, σ1s27/77, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.56**	**140**	P	**Pn**	**01 13 18.2**	**+0.4**
PALE	**Palemas**	**0.56**	**140**	S	**Sn**	**01 13 26.6**	**-0.9**
SMIR	**Smir Dam**	**0.82**	**272**	P	**Pn**	**01 13 23.2**	**+1.9**
SMIR	**Smir Dam**	**0.82**	**272**	S	**Sn**	**01 13 35.1**	**+1.4**
CEU	**Ceuta**	**0.84**	**287**	S	**Sg**	**01 13 30.8**	**+0.3**
CEU				P	**Pg**	**01 13 20.2**	**+0.7**
ECEU	**Ceuta**	**0.85**	**287**	S	**Sg**	**01 13 31.8**	**+1.1**
ECEU				P	**Pn**	**01 13 22.3**	**+0.6**
ECEU	**Ceuta**	**0.85**	**287**	P	**Pg**	**01 13 20.4**	**+0.8**
ECEU				S	**Sg**	**01 13 30.7**	**+0.1**
ECEU				*i* IVmb_Lg		01 13 35.4	
CHEFC	**Chefchaouen**	**0.96**	**236**	P	**Pn**	**01 13 24.7**	**+1.4**
CHEFC	**Chefchaouen**	**0.96**	**236**	S	**Sn**	**01 13 38.2**	**+1.0**
EMIJ	**Mijas**	**0.96**	**341**	S	**Sb**	**01 13 36.3**	**+0.9**
EMIJ	**Mijas**	**0.96**	**341**	P	**Pb**	**01 13 22.5**	**+0.1**
EMIJ				P	**Pn**	**01 13 23.4**	**0.0**
EMIJ				S	**Sg**	**01 13 34.9**	**+0.6**
EMIJ				S	**Sb**	**01 13 35.4**	**-0.1**
EMIJ				*i* IVmb_Lg		01 13 39.0	
EALB	**Alboran**	**1.13**	**75**	P	**Pn**	**01 13 25.8**	**+0.2**
EALB				S	**Sb**	**01 13 40.1**	**0.0**
EALB				*i* IVmb_Lg		01 13 47.4	
GOG	**Mont Gurugu**	**1.21**	**110**	P	**Pn**	**01 13 28.0**	**+1.2**
GOG	**Mont Gurugu**	**1.21**	**110**	S	**Sn**	**01 13 44.4**	**+0.9**
AKLM	**AKL**	**1.22**	**160**	P	**Pg**	**01 13 26.9**	**+0.3**
AKLM	**AKL**	**1.22**	**160**	S	**Sg**	**01 13 41.2**	**-1.3**
ELGU	**Los Guajares,**	**1.36**	**26**	P	**Pn**	**01 13 29.0**	**+0.2**
ELGU				S	**Sn**	**01 13 47.3**	**+0.2**
ELGU	**Los Guajares,**	**1.36**	**26**	P	**Pg**	**01 13 30.2**	**+0.8**
ELGU				S	**Sg**	**01 13 46.9**	**0.0**
ELGU				*i* IVmb_Lg		01 13 50.5	
EGOR	**Sierra Gorda,**	**1.47**	**8**	P	**Pg**	**01 13 32.4**	**+0.9**
EGOR				S	**Sg**	**01 13 50.9**	**+0.3**
EXMOR	**Moron de la Fr**	**1.70**	**330**	P	**Pn**	**01 13 34.3**	**+0.8**
EXMOR				S	**Sn**	**01 13 56.3**	**+0.7**
EQUE	**Quentar**	**1.72**	**26**	S	**Sn**	**01 13 56.4**	**+0.1**
EQUE				*i* IVmb_Lg		01 14 00.1	
EQTA	**Presa de Quent**	**1.73**	**26**	P	**Pg**	**01 13 36.8**	**+0.4**
EQTA				S	**Sg**	**01 13 58.4**	**-0.4**
TAF	**Taforalt**	**1.81**	**117**	P	**Pb**	**01 13 36.4**	**-0.5**
TAF	**Taforalt**	**1.81**	**117**	S	**Sn**	**01 13 59.1**	**+0.7**
JBK	**JBK**	**1.98**	**131**	P	**Pn**	**01 13 38.9**	**+1.3**
JBK	**JBK**	**1.98**	**131**	S	**Sn**	**01 14 02.3**	**-0.5**
ENIJ	**Nijar**	**2.19**	**52**	*i* IVmb_Lg		01 14 04.7	
ENIJ				S	**Sn**	**01 14 08.0**	**+0.3**
IFR	**Ifrane**	**2.22**	**196**	P	**Pn**	**01 13 41.5**	**+0.7**
IFR				S	**Sn**	**01 14 07.7**	**-0.9**
EQES	**Quesada**	**2.39**	**26**	P	**Pb**	**01 13 45.5**	**-1.2**
EQES				S	**Sn**	**01 14 14.6**	**+2.0**
EQES				*i* IVmb_Lg		01 14 15.7	
EADA	**Adamuz**	**2.51**	**356**	P	**Pn**	**01 13 45.4**	**+0.7**
EADA				S	**Sb**	**01 14 18.7**	**-1.3**
EADA	**Adamuz**	**2.51**	**356**	P	**Pn**	**01 13 45.3**	**+0.7**
EADA				S	**Sn**	**01 14 16.2**	**+0.6**
EADA				*i* IVmb_Lg		01 14 21.7	
ECAB	**El Cabril**	**2.56**	**341**	P	**Pn**	**01 13 47.5**	**+2.2**
ECAB				S	**Sn**	**01 14 18.1**	**+1.3**
ECAB	**El Cabril**	**2.56**	**341**	P	**Pn**	**01 13 46.5**	**+1.2**
ECAB				S	**Sn**	**01 14 17.5**	**+0.8**
ECAB				*i* IVmb_Lg		01 14 19.9	
MD31	**MD31**	**2.80**	**187**	P	**Pn**	**01 13 50.3**	**+1.7**
MD31	**MD31**	**2.80**	**187**	S	**Sn**	**01 14 23.3**	**+0.6**
MDT	**Midelt**	**2.84**	**184**	P	**Pn**	**01 13 51.4**	**+2.2**
MDT	**Midelt**	**2.84**	**184**	S	**Sn**	**01 14 24.4**	**+0.7**
ZHG	**ZHG**	**2.89**	**221**	P	**Pb**	**01 13 53.8**	**-1.4**
ZHG	**ZHG**	**2.89**	**221**	S	**Sb**	**01 14 30.0**	**-0.9**
EGRO	**El Granado**	**3.12**	**308**	P	**Pn**	**01 13 53.7**	**+0.6**
EGRO				S	**Sn**	**01 14 29.9**	**-0.7**
EGRO	**El Granado**	**3.12**	**308**	P	**Pn**	**01 13 54.4**	**+1.3**
EGRO				S	**Sn**	**01 14 30.4**	**-0.2**
EGRO				*i* IVmb_Lg		01 14 32.7	
PSIM	**Granatula de C**	**3.20**	**9**	S	**Sn**	**01 14 33.2**	**+0.6**
PVAQ	**Vaqueiros**	**3.21**	**304**	*eP*	**Pb**	**01 13 58.2**	**-2.4**
PVAQ				*eS*	**Sn**	**01 14 33.7**	**+1.0**
PVAQ				*i* IAML		01 14 34.6	
PVAQ	**Vaqueiros**	**3.21**	**304**	P	**Pn**	**01 13 56.1**	**+1.9**
PBAR	**Barrancos**	**3.30**	**321**	P	**Pn**	**01 13 56.3**	**+0.8**
PBAR				S	**Sn**	**01 14 35.9**	**+1.0**
PBAR	**Barrancos**	**3.30**	**321**	*eP*	**Pn**	**01 13 58.6**	**+3.2**
PBAR				*eS*	**Sn**	**01 14 36.7**	**+1.8**
PBAR				*i* IAML		01 14 38.7	
PBAR				*i* IAML		01 14 38.9	
EBAD	**Badajoz**	**3.74**	**327**	P	**Pn**	**01 14 01.3**	**-0.2**
EBAD				S	**Sn**	**01 14 45.8**	**-0.1**
EBAD	**Badajoz**	**3.74**	**327**	P	**Pn**	**01 14 01.5**	**0.0**
EBAD				S	**Sn**	**01 14 44.4**	**-1.5**
EBAD				*i* IVmb_Lg		01 14 48.4	
PAB	**San Pablo**	**3.89**	**0**	S	**Sn**	**01 14 49.3**	**-0.2**
PAB				*i* IVmb_Lg		01 14 55.0	
EVO	**Evora**	**4.09**	**316**	*eP*	**Pb**	**01 14 11.9**	**-3.8**
EVO				*eS*	**Sn**	**01 14 54.8**	**+0.4**
PARRA	**Arraiolos**	**4.30**	**318**	*eP*	**Pn**	**01 14 13.0**	**-4.2**

*JMA **29** 01:19:47.9±0.1, 36°.2N±0°.3×140°.0E±0°.4, h56km, MV3.4/33, SW IBARAKI PREF*
JMA Felt I J1 at SW IBARAKI PREF .
*IDC **29** 01:19:48.5±3.3, 36°.13N×139°.90E, h75km±28km, mb3.2/4, mbtmp3.5/4, Error ellipse: s-maj=34.7km s-min=25.6km az=82.0*

ISC 29 01:19:47.2±1.0, 36°.17N±0°.07×139°.98E±0°.07, h62km±7km, n12, σ0s42/17, mb3.6/4, 2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.19**	**71**	P	Pn	**01 19 57.0**	**+0.2**
JYT				*eS*	**Sn**	**01 20 03.5**	**-0.1**
JAG	**Ashikaga**	**0.49**	**302**	P	**Pn**	**01 19 59.4**	**+0.2**
JAG				*eS*	**Sn**	**01 20 07.5**	**-0.5**
JKT	**Katashina**	**0.84**	**316**	*eP*	**Pn**	**01 20 03.4**	**+0.1**
JKT				*eS*	**Sn**	**01 20 15.2**	**+0.1**
JRY	**Ryogami san**	**0.88**	**261**	⇓P	**Pn**	**01 20 04.1**	**+0.3**
JRY				⇓*eS*	**Sn**	**01 20 16.0**	**-0.1**
JOD2	**Odawara 2**	**1.15**	**219**	*eP*	**Pn**	**01 20 07.9**	**+0.6**
JFY	**Yanaizu**	**1.26**	**350**	*eP*	**Pn**	**01 20 09.2**	**+0.5**
JUON	**Uonuma**	**1.28**	**325**	*eP*	**Pn**	**01 20 09.3**	**+0.4**
MJAR	**Matsushiro Arr** 14nm,0.5s,baz=98,slow=9.0,SNR=33	**1.47**	**285**	P	**Pn**	**01 20 11.8**	**+0.2**
MJAR	14nm,0.5s,baz=22,slow=24,SNR=5.7			S	**Sn**	**01 20 30.2**	**+0.3**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=90,slow=9.9,SNR=1.7 0.2nm,0.6s	**43.60**	**303**	P	**P**	**01 27 45.1**	**-0.1**
KURBB	**Kurchatov Arra** 0.4nm,0.3s,baz=82,slow=7.5,SNR=4.2 0.4nm,0.3s	**45.63**	**308**	P	**P**	**01 28 00.6**	**-0.6**
ILAR	**Eielson Array** 0.4nm,0.8s,baz=269,slow=5.8,SNR=4.6 0.4nm,0.8s	**50.84**	**32**	P	**P**	**01 28 41.6**	**+0.5**
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=2.4,slow=7.5,SNR=12 0.5nm,0.4s	**56.06**	**186**	P	**P**	**01 29 19.3**	**-0.5**

*RHSSO **29** 01:51:55.0±0.4, 43°.22N×18°.01E, h8km, ML2.7/5*
*BEO **29** 01:51:55.7±0.3, 43°.20N×17°.99E, h12km±2km, ML2.4/15*
*PDG **

BEY				*e*Sg		**Sg**	**01 52 42.3 +2.3**
IVA	**Berane**	**1.39**	**104**	⇓*i*Pg		**Pn**	**01 52 21.4 -0.1**
IVA				*e*Sg		**Sg**	**01 52 42.4 +2.4**
SJES	**Sjenica**	**1.40**	**88**	*e*Pg		**Pb**	**01 52 22.2 +0.1**
SJES				*e*Sg		**Sg**	**01 52 41.2 +0.8**
KIJV	**Kijevo**	**1.44**	**304**	*e*Pn		**Pg**	**01 52 23.1 +0.1**
KIJV				Sg		**Sg**	**01 52 43.5 +1.9**
PVY	**Plav**	**1.53**	**114**	*e*Pg		**Pg**	**01 52 24.7 -0.1**
PVY				*e*Sg		**Sg**	**01 52 47.0 +2.4**
PVY	**Plav**	**1.53**	**114**	*e*Pg		**Pb**	**01 52 23.9 -0.4**
PVY				*e*Sg		**Sg**	**01 52 47.6 +3.0**
ULC	**Ulcinj**	**1.53**	**145**	⇓*i*Pg		**Pn**	**01 52 23.5 +0.1**
ULC				*e*Sg		**Sg**	**01 52 46.6 +2.0**
IVAS	**Ivanjica**	**1.56**	**76**	*e*Pn		**Pn**	**01 52 23.4 -0.5**
IVAS				*e*Sn		**Sn**	**01 52 44.1 -0.5**
BLY	**Banja Luka**	**1.65**	**338**	⇑*i*Pn		**Pn**	**01 52 24.4 -0.7**
BLY				*e*Sn		**Sn**	**01 52 46.1 -0.6**
BLY	**Banja Luka**	**1.65**	**338**	⇑P		**Pb**	**01 52 25.9 -0.5**
BLY				⇑S		**Sg**	**01 52 48.6 +0.1**
BLY	**Banja Luka**	**1.65**	**338**	*e*Pn		**Pb**	**01 52 25.8 -0.5**
BLY				*e*Sg		**Sg**	**01 52 49.3 +0.7**
TEKS	**Tekeris**	**1.70**	**38**	*e*Pn		**Pn**	**01 52 25.3 -0.5**
TEKS				*e*Sn		**Sn**	**01 52 48.2 +0.3**
ZIRJ	**Zirje**	**1.81**	**285**	*e*Pn		**Pn**	**01 52 27.3 0.0**
MORI	**Morici**	**1.83**	**291**	*e*Pn		**Pb**	**01 52 28.5 -0.9**
MORI				Sn		**Sg**	**01 52 53.0 -1.2**
TRUS	**Trudelj**	**1.97**	**59**	*e*Pn		**Pn**	**01 52 29.1 -0.4**
TRUS				*e*Sn		**Sb**	**01 52 56.0 -0.7**
GRUS	**Gruza**	**2.04**	**70**	*e*Pn		**Pn**	**01 52 30.5 +0.1**
GRUS				*e*Sn		**Sn**	**01 52 57.0 +0.7**
UDBI	**Udbina**	**2.11**	**309**	*e*Pn		**Pb**	**01 52 33.6 -0.7**
UDBI				Sn		**Sb**	**01 53 00.6 -0.2**
SELS	**Selova**	**2.23**	**89**	*e*Pn		**Pn**	**01 52 33.1 0.0**
SELS				*e*Sn		**Sn**	**01 53 00.5 -0.6**
AVAS	**Avala Beograd**	**2.30**	**49**	*e*Pn		**Pn**	**01 52 34.7 +0.6**
AVAS				*e*Sn		**Sn**	**01 53 03.9 +1.1**
FRGS	**Fruska Gora**	**2.31**	**32**	*e*Pn		**Pn**	**01 52 33.2 -0.9**
DUGI	**Dugi Otok**	**2.31**	**290**	*e*Pn		**Pn**	**01 52 35.3 +1.1**
DUGI				Sn		**Sb**	**01 53 04.6 -1.9**
PLIT	**Plitvice**	**2.42**	**314**	*e*Pn		**Pb**	**01 52 37.2 -2.2**
PLIT				Sn		**Sb**	**01 53 08.3 -1.2**
VIRC	**Vir**	**2.43**	**297**	*i* Pn		**Pn**	**01 52 37.2 +1.5**
VIRC				Sn		**Sb**	**01 53 08.0 -1.8**
NVLJ	**Novalja**	**2.67**	**301**	*e*Pn		**Pn**	**01 52 40.3 +1.3**
NVLJ				Sn		**Sn**	**01 53 13.0 +1.3**
BOVS	**Bovan**	**2.69**	**80**	⇑P		**Pn**	**01 52 40.7 +1.4**
BOVS	**Bovan**	**2.69**	**80**	*e*Pn		**Pn**	**01 52 40.6 +1.3**
BOVS				*e*Sn		**Sn**	**01 53 12.0 -0.2**
BARS	**Barje**	**2.78**	**97**	*e*Pn		**Pn**	**01 52 41.3 +0.7**
BARS				*e*Sn		**Sn**	**01 53 13.4 -1.2**
RABC	**Rab**	**2.82**	**304**	*e*Pn		**Pn**	**01 52 41.9 +0.9**
RABC				Sn		**Sn**	**01 53 17.1 +1.8**
ZAG	**Zagreb**	**3.00**	**331**	*e*Pn		**Pn**	**01 52 44.8 +1.2**
ZAG				Sn		**Sn**	**01 53 21.7 +1.8**
MORH	**Mrgy, Hungar**	**3.02**	**8**	⇑*i*Pn		**Pn**	**01 52 42.6 -1.3**
MORH				*e*Sn		**Sn**	**01 53 19.6 -0.8**
MDVR	**Moldovita**	**3.06**	**58**	⇑P		**Pn**	**01 52 44.6 +0.1**
PTJ	**Puntijarka**	**3.07**	**332**	*e*Pn		**Pn**	**01 52 45.6 +0.9**
PTJ				Sn		**Sn**	**01 53 23.8 +1.9**
ZAGS	**Zajecar**	**3.09**	**78**	*e*Pn		**Pn**	**01 52 45.3 +0.4**
KALN	**Kalnik**	**3.13**	**339**	*e*Pn		**Pn**	**01 52 45.6 +0.2**
KALN				Sn		**Sn**	**01 53 24.7 +1.6**
LOBO	**Lobor**	**3.26**	**335**	*e*Pn		**Pn**	**01 52 47.8 +0.6**
LOBO				Sn		**Sn**	**01 53 28.7 +2.3**
RIY	**Rijeka**	**3.32**	**311**	*e*Pn		**Pn**	**01 52 49.2 +1.2**
RIY				Sn		**Sn**	**01 53 29.8 +2.0**
ZAPS	**Zavoj**	**3.34**	**88**	*e*Pn		**Pn**	**01 52 49.4 +1.1**
BEHE	**Becsehely**	**3.38**	**345**	*e*Pn		**Pn**	**01 52 47.5 -1.3**
BEHE				*e*Sn		**Sn**	**01 53 26.6 -2.6**
BZS	**Buzias**	**3.50**	**46**	⇑P		**Pn**	**01 52 51.7 +1.3**
HERR	**Herculane**	**3.55**	**61**	⇓P		**Pn**	**01 52 51.5 +0.3**
SURR	**Surduc**	**3.85**	**48**	⇑P		**Pn**	**01 52 55.3 -0.1**
GZR	**Gura Zlata**	**4.02**	**56**	⇑P		**Pn**	**01 52 57.4 -0.4**
OBKA	**Obir**	**4.13**	**324**	*i* Pn		**Pn**	**01 53 00.7 +1.5**
	0.3nm,0.2s						
TIP	**Timpagrande**	**4.16**	**194**	⇑P		**Pn**	**01 52 58.1 -1.5**
ARSA	**Arzberg**	**4.41**	**337**	*e*Pn		**Pn**	**01 53 03.6 +0.6**
	2.9nm,0.5s						
ARSA				*i* Sn		**Sn**	**01 53 54.6 -0.1**
	1.7nm,0.5s						
KBA	**Koelnbreinsper**	**5.10**	**321**	*i* Pn		**Pn**	**01 53 14.1 +1.5**
	0.6nm,0.3s						
KBA				*e*Sn		**Sn**	**01 54 11.4 -0.5**
	0.9nm,0.4s						
MODS	**Modra-Piesok**	**5.18**	**354**	*e*SN		**Sn**	**01 54 08.0 -5.7**
ABTA	**Abfaltersbach**	**5.28**	**314**	*i* Pn		**Pn**	**01 53 16.6 +1.5**
	1.3nm,0.3s						
MOA	**Molln**	**5.34**	**331**	*i* Pn		**Pn**	**01 53 17.4 +1.6**
	0.9nm,0.3s						
MOA				*e*Sn		**Sn**	**01 54 21.2 +3.5**
	1.3nm,0.3s						
MOA				*e*Sn		Sb	01 54 21.3 -12
	2.4nm,0.6s						
BIOA	**Bad Ischl, Aus**	**5.45**	**327**	*i* Pn		**Pn**	**01 53 18.7 +1.5**
	1.1nm,0.3s						
BIOA				⇓*e*Sn		**Sn**	**01 54 23.1 +2.8**
	1.8nm,0.4s						
LESA	**Schwarzleotal**	**5.66**	**320**	*i* Pn		**Pn**	**01 53 21.5 +1.3**
	1.8nm,0.3s						
LESA				*e*Sn		**Sn**	**01 54 26.6 +1.0**
	1.1nm,0.4s						
WTTA	**Wattenberg**	**6.08**	**314**	*e*Pn		**Pn**	**01 53 27.9 +1.9**
	0.9nm,0.3s						
WTTA				*e*Sn		**Sn**	**01 54 36.5 +0.5**
	1.9nm,0.4s						
WATA	**Walderalm**	**6.15**	**314**	*i* Pn		**Pn**	**01 53 29.1 +2.0**
	1.1nm,0.4s						
SQTA	**Sankt Quirin**	**6.28**	**312**	*e*Pn		**Pn**	**01 53 30.9 +2.2**
	0.6nm,0.2s						
SQTA				*e*Sn		**Sn**	**01 54 42.4 +1.6**
	1.9nm,0.3s						
MOTA	**Moosalm**	**6.41**	**312**	*i* Pn		**Pn**	**01 53 32.7 +2.1**
	1.4nm,0.5s						
MOTA				*e*Sn		**Sn**	**01 54 44.7 +0.5**
	1.0nm,0.4s						
FETA	**Feichten**	**6.43**	**309**	*i* Pn		**Pn**	**01 53 34.0 +3.1**
	0.2nm,0.2s						
FETA				*e*Sn		**Sn**	**01 54 48.1 +3.4**
	0.7nm,0.3s						

*IDC **29** 02:08:03.0±2.4,41˚.43N×19˚.36E,h0^{km},mb3.9/4, mbtmp3.9/6,ML1.3/1,Error ellipse: s-maj=46.2km s-min=25.3km az=117.0*

*PDG **29** 02:08:06.6±0.3,41˚.33N×19˚.55E,h15^{km}±1^{km}, MD3.4/3, ML3.3/12,Error ellipse: s-maj=0.9km s-min=1.9km az=0.0*

*THE **29** 02:08:07.5,42˚.N±9˚×2˚.0E±1˚.2,h1^{km}±32^{km},M3.0/27, MLh3.0/27*

*BEO **29** 02:08:07.8±0.5,41˚.41N×19˚.53E,h15^{km}±2^{km}, ML2.9/18*

*TIR **29** 02:08:07.2,41˚.57N×19˚.57E,h50^{km}±1^{km}, Ml3.6/4*

*SKO **29** 02:08:08.9,41˚.46N×19˚.58E,h0^{km}, ML2.9*

ISC 29 02:08:07.2±0.9,41˚.44N±0˚.02×19˚.52E±0˚.02,h15^{km}±7^{km}, n128,σ1§56/181,mb3.8/3,21C-13D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**109**	Pg	**Pg**	**02 08 12.8**	**-0.2**
TIR				Sg	**Sg**	**02 08 16.4**	**-0.6**
TIR				AML	AML	02 08 17.3	
	20nm,0.3s						
ULC	**Ulcinj**	**0.57**	**338**	⇑*i*Pg	**Pg**	**02 08 18.4**	**0.0**
ULC				*i* Sg	**Sn**	**02 08 28.9**	**-0.9**
SDA	**Shkodra**	**0.61**	**358**	Pg	**Pg**	**02 08 18.7**	**-0.6**
SDA				Sg	**Sg**	**02 08 27.3**	**-0.1**
PHP	**Peshkopia**	**0.73**	**70**	Pg	**Pg**	**02 08 20.7**	**-0.8**
PHP				Sg	**Sb**	**02 08 31.4**	**-0.1**
PHP				AML	AML	02 08 34.6	
	6.4nm,0.4s						
PHP	**Peshkopia**	**0.73**	**70**	P	**Pg**	**02 08 20.2**	**-1.3**
DRME	**Dracevica, Mon**	**0.79**	**341**	*e*Pg	**Pb**	**02 08 22.9**	**+0.3**
DRME				*e*Sg	**Sn**	**02 08 36.2**	**+0.9**
DRME	**Dracevica, Mon**	**0.79**	**341**	⇑*i*Pg	**Pb**	**02 08 22.6**	**0.0**
DRME				*e*Sg	**Sn**	**02 08 37.1**	**+1.8**
VLO	**Vlora**	**0.97**	**181**	Pn	**Pn**	**02 08 27.5**	**+1.4**
VLO				Sn	**Sn**	**02 08 41.5**	**+1.9**
VLO				AML	AML	02 08 48.7	
	6.6nm,0.2s						
VLO				AML	AML	02 08 51.1	
	5.5nm,0.5s						
VLO	**Vlora**	**0.97**	**181**	P	**Pn**	**02 08 27.3**	**+1.1**
BUM	**Brajici-Budva**	**0.98**	**332**	*e*Pg	**Pn**	**02 08 27.0**	**+0.5**
BUM				*i* Sg	**Sn**	**02 08 43.0**	**+2.8**
PDG	**Podgorica**	**1.01**	**349**	Pn	**Pg**	**02 08 23.1**	**-3.7**
PDG				Sn	**Sg**	**02 08 37.9**	**-2.1**
PDG	**Podgorica**	**1.01**	**349**	⇑P	**Pn**	**02 08 27.9**	**+1.1**
PDG				⇑S	**Sn**	**02 08 42.0**	**+1.3**
PDG	**Podgorica**	**1.01**	**349**	*e*Pg	**Pg**	**02 08 24.8**	**-2.0**
PDG				*e*Sg	**Sn**	**02 08 40.8**	**+0.1**
PDG	**Podgorica**	**1.01**	**349**	⇑*i*Pg	**Pb**	**02 08 26.8**	**+0.4**
PDG				*i* Sg	**Sn**	**02 08 43.4**	**+2.7**
OHR	**Ohrid**	**1.01**	**108**	*i* Pg	**Pg**	**02 08 26.6**	**-0.3**
OHR				*e*Lg	Lg	02 08 43.6	
	comp=N,388nm,0.4s						
OHR				*e*Lg	Lg	02 08 44.7	
	comp=E,353nm,0.6s						
CEME	**Cevo**	**1.20**	**338**	⇓*i*Pg	**Pn**	**02 08 29.9**	**+0.5**
CEME				*e*Sg	**Sn**	**02 08 49.5**	**+4.1**
PVY	**Plav**	**1.20**	**15**	*e*Pg	**Pb**	**02 08 29.0**	**-0.7**
PVY				*e*Sg	**Sn**	**02 08 47.7**	**+2.1**
PVY	**Plav**	**1.20**	**15**	⇓*i*Pg	**Pb**	**02 08 29.0**	**-0.7**
PVY				*e*Sg	**Sn**	**02 08 49.3**	**+3.7**
KBN	**Korca**	**1.25**	**130**	Pn	**Pn**	**02 08 30.4**	**+0.2**
KBN				Sn	**Sn**	**02 08 47.9**	**+1.0**
KBN				AML	AML	02 08 52.2	
	comp=E,2.3nm,0.5s						
KBN	**Korca**	**1.25**	**130**	P	**Pn**	**02 08 30.9**	**+0.7**
KBN				S	**Sg**	**02 08 50.5**	**+2.8**
HCY	**Herceg Novi**	**1.27**	**323**	⇓*i*Pg	**Pg**	**02 08 32.1**	**+0.5**
HCY				*i* Sg	**Sg**	**02 08 51.0**	**+2.8**
NKME	**Niksic**	**1.40**	**342**	*e*Pg	**Pb**	**02 08 33.1**	**+0.1**
NKME				*i* Sg	**Sg**	**02 08 54.2**	**+2.0**
KOME	**Kolasin**	**1.41**	**360**	*e*Pg	**Pg**	**02 08 34.0**	**-0.4**
KOME				*e*Sg	**Sg**	**02 08 53.8**	**+1.0**
KOME	**Kolasin**	**1.41**	**360**	⇓*i*Pg	**Pb**	**02 08 33.7**	**+0.4**
KOME				*i* Sg	**Sg**	**02 08 54.9**	**+2.1**
BEY	**Berane**	**1.46**	**11**	*e*Pg	**Pn**	**02 08 33.7**	**+0.6**
BEY				*e*Sg	**Sg**	**02 08 55.5**	**+1.2**
IVA	**Berane**	**1.46**	**11**	⇑*i*Pg	**Pb**	**02 08 33.9**	**-0.2**
IVA				*e*Sg	**Sg**	**02 08 55.7**	**+1.4**
SKO	**Skopje**	**1.53**	**69**	*i* Pg	**Pb**	**02 08 35.4**	**+0.2**
SKO				*i* Sg	**Sg**	**02 08 56.0**	**-0.5**
NEST	**Nestorio**	**1.54**	**131**	P	**Pb**	**02 08 36.4**	**+0.9**
NEST				S	**Sg**	**02 08 58.5**	**+1.6**
TREB	**Trebinje**	**1.55**	**326**	*e*Pn	**Pn**	**02 08 34.9**	**+0.7**
TREB	**Trebinje**	**1.55**	**326**	*e*Pg	**Pg**	**02 08 34.8**	**+0.6**
TREB				*e*Sg	**Sg**	**02 08 59.2**	**+2.1**
BRY	**Bratogost**	**1.64**	**334**	⇑*i*Pn	**Pb**	**02 08 37.4**	**+0.3**
BRY				*e*Sn	**Sg**	**02 09 00.7**	**+0.8**
SJES	**Sjenica**	**1.85**	**10**	*e*Pg	**Pb**	**02 08 41.6**	**+0.8**
SJES				*e*Sg	**Sg**	**02 09 06.9**	**+0.1**
KLINJ	**Klinje**	**1.86**	**338**	*e*Pn	**Pb**	**02 08 41.3**	**+0.3**
PLE	**Pljevlja**	**1.89**	**357**	*e*Pg	**Pg**	**02 08 42.5**	**-1.1**
PLE				*e*Sg	**Sg**	**02 09 07.8**	**-0.4**
PLE	**Pljevlja**	**1.89**	**357**	*e*Pn	**Pb**	**02 08 41.0**	**-0.5**
PLE				*e*Sn	**Sg**	**02 09 06.6**	**-1.6**
NOCI	**Noci**	**1.97**	**252**	Pn	**Pn**	**02 08 39.6**	**-0.4**
NOCI				Sn	**Sb**	**02 09 07.5**	**+0.4**
STON	**Ston**	**1.97**	**317**	*e*Pn	**Pn**	**02 08 40.7**	**+0.7**
STON				*e*Sg	**Sg**	**02 09 10.5**	**-0.2**
IGT	**Igoumenitsa**	**2.00**	**162**	P	**Pn**	**02 08 41.6**	**+1.2**
KZN	**Kozani**	**2.04**	**123**	P	**Pb**	**02 08 43.3**	**-0.7**
KZN				S	**Sb**	**02 09 10.2**	**+0.9**
JAN	**Janina**	**2.05**	**150**	P	**Pb**	**02 08 43.5**	**-0.5**
SELS	**Selova**	**2.14**	**33**	*e*Pn	**Pn**	**02 08 43.8**	**+1.5**
SELS				*e*Sn	**Sn**	**02 09 09.4**	**+0.8**
RUDO	**Rudo**	**2.18**	**357**	*e*Pn	**Pn**	**02 08 44.1**	**+1.2**
RUDO	**Rudo**	**2.18**	**357**	*e*Pn	**Pb**	**02 08 45.3**	**-1.1**
RUDO				*e*Sn	**Sn**	**02 09 10.4**	**+0.7**
IVAS	**Ivanjica**	**2.19**	**12**	*e*Pn	**Pn**	**02 08 44.4**	**+1.4**
IVAS				*e*Sn	**Sn**	**02 09 11.5**	**+1.6**
BARS	**Barje**	**2.19**	**50**	*i* Pn	**Pn**	**02 08 44.4**	**+1.4**
BARS	**Barje**	**2.19**	**50**	*e*Pn	**Pn**	**02 08 44.3**	**+1.2**
BARS				*e*Sn	**Sn**	**02 09 10.1**	**+0.2**
GRG	**Griva**	**2.22**	**102**	P	**Pn**	**02 08 44.7**	**+1.2**
GRG	**Griva**	**2.22**	**102**	*i* Pn	**Pn**	**02 08 44.9**	**+1.4**
PRMD	**Pramanda**	**2.25**	**147**	P	**Pn**	**02 08 46.3**	**+2.3**
MATE	**Matera**	**2.27**	**251**	⇓P	**Pn**	**02 08 44.4**	**+0.2**
VAY	**Valandovo**	**2.29**	**92**	*i* Pn	**Pn**	**02 08 46.4**	**+2.0**
VAY				*i* Sn	**Sn**	**02 09 14.3**	**+1.9**
VAY				*e*Lg	Lg	02 09 15.8	
	comp=E,18nm,0.5s						
VAY				*e*Lg	Lg	02 09 19.0	
	comp=N,68nm,0.7s						
GOCS	**Kraljevo Serbi**	**2.35**	**25**	*e*Pn	**Pn**	**02 08 46.2**	**+0.9**
GOCS				*e*Sn	**Sn**	**02 09 15.9**	**+2.1**
BBLS	**Lazi&#263i**	**2.43**	**358**	*e*Pn	**Pn**	**02 08 48.7**	**+2.3**
BBLS				*e*Sn	**Sn**	**02 09 17.4**	**+1.6**
BOSS	**Bosilegrad**	**2.44**	**63**	*e*Pn	**Pn**	**02 08 48.3**	**+1.8**
BOSS				*e*Sn	**Sn**	**02 09 17.4**	**+1.3**
TETR	**Tetrakomo, Epi**	**2.48**	**147**	P	**Pn**	**02 08 49.7**	**+2.6**
KNT	**Kendrikon**	**2.56**	**95**	P	**Pn**	**02 08 49.2**	**+1.1**
KNT	**Kendrikon**	**2.56**	**95**	*i* Pn	**Pn**	**02 08 49.3**	**+1.2**
GRUS	**Gruza**	**2.60**	**19**	*e*Pn	**Pn**	**02 08 50.4**	**+1.7**
GRUS				*e*Sn	**Sn**	**02 09 22.0**	**+2.0**
THL	**Klokotos Trika**	**2.67**	**134**	P	**Pn**	**02 08 51.1**	**+1.6**
THL				S	**Sn**	**02 09 24.2**	**+2.6**
TYRN	**Tyrnavos**	**2.69**	**129**	P	**Pn**	**02 08 51.8**	**+2.0**
BOVS	**Bovan**	**2.72**	**36**	⇑P	**Pn**	**02 08 52.2**	**+1.8**
BOVS	**Bovan**	**2.72**	**36**	*e*Pn	**Pn**	**02 08 51.7**	**+1.3**
BOVS				*e*Sn	**Sn**	**02 09 23.9**	**+0.9**
THE	**Thessaloniki**	**2.72**	**106**	P	**Pn**	**02 08 51.0**	**+0.7**
THE	**Thessaloniki**	**2.72**	**106**	*i* Pn	**Pn**	**02 08 51.2**	**+0.8**
KKB	**Krupnik**	**2.73**	**80**	P	**Pn**	**02 08 51.7**	**+1.2**
KKB	**Krupnik**	**2.73**	**80**	*i* Pn	**Pn**	**02 08 51.7**	**+1.2**
LKD2	**Lefkada island**	**2.79**	**161**	P	**Pn**	**02 08 51.5**	**+0.3**
AMPL	**Ampelaki**	**2.83**	**152**	P	**Pn**	**02 08 52.9**	**+1.2**
TRUS	**Trudelj**	**2.86**	**13**	*e*Pn	**Pn**	**02 08 53.0**	**+0.8**
TRUS				*e*Sn	**Sn**	**02 09 27.0**	**+0.7**
NYDR	**Nydri-Lefkada**	**2.87**	**161**	P	**Pn**	**02 08 52.3**	**0.0**
EVGI	**Lefkada island**	**2.94**	**162**	P	**Pn**	**02 08 53.4**	**0.0**
ZAPS	**Zavoj**	**2.94**	**50**	*e*Pn	**Pn**	**02 08 55.2**	**+1.8**
ZAPS				*e*Sn	**Sn**	**02 09 29.8**	**+1.3**
SOH	**Sokhos**	**2.96**	**101**	P	**Pn**	**02 08 54.6**	**+1.0**
SOH	**Sokhos**	**2.96**	**101**	*i* Pn	**Pn**	**02 08 54.7**	**+1.0**
VTS	**Vitosha**	**3.00**	**66**	P	**Pn**	**02 08 55.6**	**+1.2**
SRS	**Serrai**	**3.08**	**95**	P	**Pn**	**02 08 56.2**	**+0.9**
SRS	**Serrai**	**3.08**	**95**	*i* Pn	**Pn**	**02 08 56.3**	**+1.0**
TIP	**Timpagrande**	**3.09**	**224**	⇓P	**Pn**	**02 08 55.4**	**-0.1**
ZAGS	**Zajecar**	**3.10**	**39**	*e*Pn	**Pn**	**02 08 56.9**	**+1.3**
ZAGS				*e*Sn	**Sn**	**02 09 32.4**	**+0.1**
TEKS	**Tekeris**	**3.11**	**0**	*e*Pn	**Pn**	**02 08 56.5**	**+0.8**
PLG	**Polygyros**	**3.16**	**108**	P	**Pn**	**02 08 57.2**	**+0.8**
MMB	**Musomishta**	**3.18**	**87**	*i* Pn	**Pn**	**02 08 58.1**	**+1.5**
BLKB	**Belogradchik**	**3.19**	**46**	⇓S	**Sn**	**02 09 37.5**	**+2.9**
PVO	**Paravola**	**3.21**	**151**	P	**Pn**	**02 08 58.6**	**+1.6**
BORS2	**Bor- Borsko je**	**3.22**	**34**	*e*Pn	**Pn**	**02 08 57.2**	**-0.1**
BORS2				*e*Sn	**Sn**	**02 09 35.3**	**-0.1**
AGG	**Agios Georgios**	**3.23**	**137**	P	**Pn**	**02 08 58.9**	**+1.6**
AVAS	**Avala Beograd**	**3.34**	**12**	*e*Pn	**Pn**	**02 08 59.5**	**+1.1**
AVAS				*e*Sn	**Sn**	**02 09 38.7**	**+0.6**
VLS	**Valsamata**	**3.36**	**166**	P	**Pn**	**02 08 58.3**	**-0.8**
KUBS	**Kucevo**	**3.37**	**27**	*e*Pn	**Pn**	**02 08 59.0**	**-0.2**
KUBS				*e*Sn	**Sn**	**02 09 38.3**	**-0.6**
ANX	**Ano Chora**	**3.38**	**146**	P	**Pn**	**02 09 01.9**	**+2.4**
MDVR	**Moldovita**	**3.71**	**25**	⇑P	**Pn**	**02 09 05.2**	**+1.3**
FRGS	**Fruska Gora**	**3.72**	**3**	*e*Pn	**Pn**	**02 09 04.4**	**+0.3**
BLY	**Banja Luka**	**3.73**	**333**	*e*Pn	**Pn**	**02 09 05.6**	**+1.5**
BLY	**Banja Luka**	**3.73**	**333**	⇑P	**Pn**	**02 09 05.9**	**+1.8**
BLY	**Banja Luka**	**3.73**	**333**	*e*Pn	**Pn**	**02 09 06.2**	**+2.1**
VRSS	**Vrsac**	**3.91**	**19**	*e*Pn	**Pn**	**02 09 07.3**	**+0.6**
VRSS				*e*Sn	**Sn**	**02 09 51.9**	**-0.4**
HERR	**Herculane**	**4.04**	**31**	⇓P	**Pn**	**02 09 09.9**	**+1.5**
BZS	**Buzias**	**4.45**	**19**	⇑P	**Pn**	**02 09 14.9**	**+0.9**
GZR	**Gura Zlata**	**4.61**	**30**	⇓P	**Pn**	**02 09 18.1**	**+1.8**
SURR	**Surduc**	**4.71**	**23**	⇑P	**Pn**	**02 09 19.1**	**+1.5**
MORH	**Mrgy, Hungar**	**4.82**	**353**	*e*Pn	**Pn**	**02 09 17.5**	**-1.6**
MORH	**Mrgy, Hungar**	**4.82**	**353**	⇑P	**Pn**	**02 09 21.0**	**+1.9**
ELND	**Elena**	**4.95**	**70**	⇓P	**Pn**	**02 09 22.7**	**+1.8**
HUMR	**Humele**	**5.05**	**51**	⇑P	**Pn**	**02 09 24.5**	**+2.1**
LOT	**Lotru**	**5.06**	**36**	⇑P	**Pn**	**02 09 24.9**	**+2.3**
SIRR	**Siria**	**5.07**	**17**	⇑P	**Pn**	**02 09 24.1**	**+1.5**
ARR	**Arges**	**5.41**	**42**	⇓P	**Pn**	**02 09 29.7**	**+2.4**
VOIR		**5.67**	**43**	⇑P	**Pn**	**02 09 33.3**	**+2.4**
DRGR		**5.82**	**22**	⇑P	**Pn**	**02 09 34.7**	**+1.7**
MARR	**Marisel-Cluj**	**5.84**	**25**	⇓P	**Pn**	**02 09 35.5**	**+2.2**
MLR	**Muntele Rosu**	**6.18**	**47**	Pn	**Pn**	**02 09 40.3**	**+2.3**
	comp=N,2.4nm,0.4s,baz=154,slow=13						
MLR				Sn	**Sn**	**02 10 49.1**	**+0.6**
	comp=N,0.4nm,0.3s,baz=183,slow=14,SNR=3.8						
MLR	**Muntele Rosu**	**6.18**	**47**	⇑P	**Pn**	**02 09 40.4**	**+2.4**
OBKA	**Obir**	**6.21**	**326**	*i* Pn	**Pn**	**02 09 39.8**	**+1.5**
NEHR	**Nehoiu**	**6.34**	**49**	⇑P	**Pn**	**02 09 41.6**	**+1.5**
ARSA	**Arzberg**	**6.48**	**335**	*e*Pn	**Pn**	**02 09 43.5**	**+1.6**
	comp=N,0.6nm,0.4s						
MYKA	**Terra Mystica**	**6.70**	**323**	*e*Pn	**Pn**	**02 09 46.1**	**+1.0**
	comp=N,1.1nm,0.5s						
PLOR	**Plostina**	**6.79**	**47**	⇓P	**Pn**	**02 09 48.7**	**+2.4**
VRI	**Vrincioaia**	**6.85**	**47**	⇑P	**Pn**	**02 09 49.8**	**+2.8**
ABTA	**Abfaltersbach**	**7.32**	**319**	*e*Pn	**Pn**	**02 09 54.2**	**+0.6**
	comp=N,0.9nm,0.3s						
MOA	**Molln**	**7.42**	**331**	*e*Pn	**Pn**	**02 09 56.8**	**+1.9**
	comp=N,0.1nm,0.1s						
IDI	**Anoyia**	**7.45**	**144**	Pn	**Pn**	**02 09 54.5**	**-0.8**
	comp=N,0.2nm,0.3s,baz=309,slow=13,SNR=1.9						
IDI				Sn	**Sn**	**02 11 12.8**	**-6.7**
	comp=N,0.7nm,0.3s,baz=337,slow=21,SNR=7.0 comp=N,7.6nm,0.8s						
LESA	**Schwarzleotal**	**7.73**	**323**	*e*Pn	**Pn**	**02 10 00.3**	**+1.1**
	comp=N,0.8nm,0.4s						
WTTA	**Wattenberg**	**8.11**	**319**	*e*Pn	**Pn**	**02 10 07.0**	**+2.5**
	comp=N,0.7nm,0.2s						
SQTA	**Sankt Quirin**	**8.30**	**317**	*e*Pn	**Pn**	**02 10 07.9**	**+0.8**
	comp=N,2.0nm,0.2s						
FINES	**FINESS Array B**	**20.43**	**9**	P	**P**	**02 12 42.1**	**-1.4**
	comp=N,11nm,1.2s,baz=191,slow=11,SNR=5.3 comp=N,11nm,1.2s						
BVAR	**Borovoye Array**	**35.70**	**53**	P	**P**	**02 15 02.5**	**-2.3**
	comp=N,0.2nm,0.3s,baz=254,slow=8.9,SNR=2.2 comp=N,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**44.15**	**50**	P	**P**	**02 16 12.3**	**-2.5**
	comp=N,0.8nm,0.3s,baz=289,slow=9.2,SNR=4.3 comp=N,0.8nm,0.3s						
MKAR	**Makanchi Array**	**44.32**	**61**	P	**P**	**02 16 15.4**	**-1.0**
	comp=N,0.9nm,0.6s,baz=280,slow=7.6,SNR=9.5 comp=N,0.9nm,0.6s						

*IDC **29** 02:21:15.1±2.3,24˚.55N×66˚.28E,h0^{km},mb3

BVAR				LR	LR	02 40 23.5	
	comp=Z,64nm,22.0s,baz=182,slow=40						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**31.21 307**		LR	LR	02 42 14.4	
	comp=Z,46nm,19.2s,baz=102,slow=40						
ARTI	**Arti**	**32.18 352**		LR	LR	02 43 13.1	
	comp=Z,35nm,18.8s,baz=210,slow=41						
ZALV	**Zalesovo Beam**	**32.35 21**		P	P	02 27 48.9	+4.9
	comp=Z,0.8nm,0.5s,baz=224,slow=8.9,SNR=3.9						
ZALV				LR	LR	02 42 55.7	
	comp=Z,50nm,21.6s,baz=128,slow=40						
	comp=Z,0.8nm,0.5s						
KIRV	**Kirov**	**35.91 345**		LR	LR	02 44 32.6	
	comp=Z,41nm,18.6s,baz=190,slow=39						
PSI	**Prapat**	**38.28 120**		LR	LR	02 46 13.5	
	comp=Z,23nm,18.4s,baz=356,slow=39						
FINES	**FINESS Array B**	**45.71 334**		P	**P**	**02 29 39.6**	**+4.1**
	comp=Z,3.0nm,0.8s,baz=136,slow=7.8,SNR=2.1						
FINES				LR	LR	02 50 34.4	
	comp=Z,53nm,19.8s,baz=270,slow=38						
	comp=Z,3.0nm,0.8s						
NRIK	**Noril'sk**	**46.44 10**		LR	LR	02 53 11.0	
	comp=Z,40nm,18.7s,baz=165,slow=41						
ARCES	**ARCESS Array B**	**50.86 343**		P	**P**	**02 30 16.7**	**+1.6**
	comp=Z,4.6nm,1.1s,baz=129,slow=8.5,SNR=1.9						
ARCES				LR	LR	02 55 14.2	
	comp=Z,36nm,18.0s,baz=152,slow=40						
	comp=Z,4.8nm,1.1s						
TIXI	**Tiksi**	**58.22 19**		LR	LR	02 58 51.4	
	comp=Z,49nm,18.4s,baz=196,slow=39						
WRA	**Warramunga Arr**	**79.71 118**		P	**P**	**02 33 24.9**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=305,slow=5.4,SNR=2.1						
	comp=Z,0.3nm,0.7s						

*IDC **29** 02:45:41.2±3.3, 35°.26N×141°.56E, h0km, mb3.6/5, mbtmp3.5/6, ML2.3/1, Error ellipse: s-maj=113.2km s-min=21.7km az=63.0*
*JMA **29** 02:45:44.0±0.2, 35°.2N±0°.3×14°.1E±°, h32km±3km, MV3.0/29, E OFF BOSO PENINSULA*
ISC 29 02:45:47.2±1.4, 35°.10N±0°.08×141°.1E±0°.1, h35km, n17, σ1s44/12, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.46**	**193**	P		**Pn**	**02 45 55.6**	**-1.3**
BSO1				eX			02 46 02.9	
BSO3	**Boso 3**	**0.58**	**239**	P		**Pn**	**02 45 57.8**	**-0.9**
BSO4	**Boso 4**	**0.64**	**260**	P		**Pn**	**02 45 58.9**	**-0.9**
JKUC	**kamogawauchiur**	**0.75**	**275**	eP		**Pn**	**02 45 59.8**	**-1.5**
JKUC				eS		**Sn**	**02 46 10.8**	**-0.6**
JYT	**Yasato**	**1.35**	**327**	eP		**Pn**	**02 46 07.5**	**-2.1**
MJAR	**Matsushiro Arr**	**2.76**	**302**	Pn		**Pn**	**02 46 29.9**	**+0.9**
	0.4nm,0.3s,baz=100,slow=15,SNR=13							
	2.8nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**27.43**	**117**	T		T	03 20 23.1	
	baz=310,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**27.44**	**117**	T		T	03 20 20.0	
	baz=310,slow=75,SNR=7.7							
H11N3	**WAKE ISLAND Hy**	**27.45**	**117**	T		T	03 20 18.2	
	baz=310,slow=75,SNR=6.5							
H11S1	**WAKE ISLAND Hy**	**28.07**	**119**	T		T	03 21 03.3	
	baz=312,slow=76,SNR=16							
H11S3	**WAKE ISLAND Hy**	**28.07**	**119**	T		T	03 21 07.8	
	baz=312,slow=76,SNR=12							
H11S2	**WAKE ISLAND Hy**	**28.09**	**119**	T		T	03 21 04.9	
	baz=312,slow=76,SNR=9.7							
ZALV	**Zalesovo Beam**	**43.05**	**314**	P		**P**	**02 53 43.6**	**+0.3**
	0.5nm,0.5s,baz=81,slow=9.3,SNR=2.2							
	0.5nm,0.5s							
MKAR	**Makanchi Array**	**44.96**	**304**	P		**P**	**02 54 00.5**	**+1.7**
	0.3nm,0.6s,baz=88,slow=10,SNR=6.0							
	0.3nm,0.6s							
KURBB	**Kurchatov Array**	**47.01**	**309**	P		**P**	**02 54 14.3**	**-0.6**
	0.7nm,0.8s,baz=84,slow=7.5,SNR=5.9							
	0.7nm,0.8s							
WRA	**Warramunga Arr**	**55.12**	**188**	P		**P**	**02 55 15.4**	**-0.7**
	1.1nm,0.6s,baz=4.5,slow=7.4,SNR=14							
	1.1nm,0.6s							
ASAR	**Alice Springs**	**58.85**	**188**	P		**P**	**02 55 44.5**	**+2.1**
	0.4nm,0.7s,baz=15,slow=14,SNR=6.4							
	0.4nm,0.7s							

*KOLA **29** 02:46:59.9, 81°.47N×0°.41E, h0km, ML2.6, Error ellipse: s-maj=99.9km s-min=27.2km az=40.0, Arctic Ocean,Knipovich ridge, north*
*BER **29** 02:46:59.2±2.9, 80°.93N×3°.95W, h19km±22km, mb(Pn)3.7, ML2.4(DNK), Confirmed Earthquake*
*DNK **29** 02:47:00.4±3.5, 80°.86N×3°.22W, h36km±26km, ML2.4*
*FCIAR **29** 02:47:01.0, 80°.74N×3°.05W, h10km, station ZFI2 has station magnitude of 3.70*
ISC 29 02:46:54.3±0.9, 80°.77N±0°.06×3°.95W±0°.05, h10km, n28, σ2s70/44, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.13**	**299**	*i* P		**Pn**	**02 47 31.9**	**+2.1**
NOR				*i* S		**Sn**	**02 47 56.1**	**-0.2**
NOR				IAML			02 48 09.7	
	comp=Z,34nm,0.6s							
NOR	**Nord**	**2.13**	**299**	*i* P		**Pn**	**02 47 31.9**	**+2.1**
NOR				*i* S		**Sn**	**02 47 56.1**	**-0.2**
NOR				IAML			02 48 09.7	
	comp=Z,34nm,0.6s							
KBS	**Kingsbay**	**3.36**	**115**	P		**Pn**	**02 47 47.9**	**+1.3**
KBS				S		**Sn**	**02 48 23.5**	**-2.9**
KBS	**Kingsbay**	**3.36**	**115**	*e*P		**Pn**	**02 47 48.8**	**+2.2**
KBS				*e*S		**Sn**	**02 48 27.7**	**+1.2**
KBS				IAML			02 48 28.8	
	comp=Z,13nm,0.9s							
KBS	**Kingsbay**	**3.36**	**115**	*i* P		**Pn**	**02 47 48.9**	**+2.2**
KBS				*i* S		**Sn**	**02 48 23.1**	**-3.3**
BRBB	**Barentsburg B**	**4.27**	**120**	P		**Pn**	**02 48 02.8**	**+3.7**
BRBB				S		**Sn**	**02 48 49.2**	**+0.4**
BRBB	**Barentsburg B**	**4.27**	**120**	*e*P		**Pn**	**02 48 02.5**	**+3.4**
BRBA	**Barentsburg A**	**4.29**	**120**	*e*P		**Pn**	**02 48 03.6**	**+4.1**
SPA0	**Spitsbergen Ar**	**4.52**	**115**	*e*P		**Pn**	**02 48 05.1**	**+2.5**
SPA0				*e*S		**Sn**	**02 48 52.7**	**-2.3**
SPA0	**Spitsbergen Ar**	**4.52**	**115**	*e*P		**Pn**	**02 48 05.2**	**+2.6**
SPA0				*e*S		**Sn**	**02 48 52.9**	**-2.2**
SPA0				IAML			02 49 01.4	
	comp=Z,6.4nm,0.7s							
SPITS	**Spitsbergen Ar**	**4.52**	**115**	P		**Pn**	**02 48 05.0**	**+2.5**
HSPB	**Hornsund (broa**	**5.30**	**125**	P		**Pn**	**02 48 16.9**	**+3.6**
HSPB	**Hornsund (broa**	**5.30**	**125**	*e*P		**Pn**	**02 48 16.5**	**+3.2**
HSPB				*e*S		**Sn**	**02 49 14.2**	**-0.1**
HSPB	**Hornsund (broa**	**5.30**	**125**	*e*P		**Pn**	**02 48 16.8**	**+3.5**
HSPB				IAML			02 49 11.8	
	comp=Z,5.3nm,0.7s							
HSPB				*e*S		**Sn**	**02 49 15.6**	**+1.3**
HOPEN	**Hopen**	**7.04**	**112**	*e*P		**Pn**	**02 48 39.2**	**+2.1**
HOPEN				*e*S		**Sn**	**02 49 51.9**	**-5.1**
HOPEN	**Hopen**	**7.04**	**112**	*e*P		**Pn**	**02 48 39.2**	**+2.1**
HOPEN				*e*S		**Sn**	**02 49 54.5**	**-2.4**
HOPEN				IAML			02 50 01.2	
	comp=Z,12nm,0.9s							
DBG	**Daneborg**	**7.33**	**217**	*e*P		**Pn**	**02 48 45.1**	**+4.0**
DBG				*i* S		**Sn**	**02 50 01.2**	**-3.1**
DBG				IAML			02 50 07.2	
	comp=Z,9.4nm,0.6s							
DBG	**Daneborg**	**7.33**	**217**	*e*P		**Pn**	**02 48 45.1**	**+4.0**
DBG				*i* S		**Sn**	**02 50 01.2**	**-3.1**
DBG				IAML			02 50 07.2	
	comp=Z,9.4nm,0.6s							
ZFI2	**Zemlya Franca-**	**8.04**	**64**	*e*P		**Pn**	**02 48 51.4**	**+0.5**
ZFI2				*e*S		Sn	02 50 13.4	-8.3
	comp=Z,20nm,2.4s							
OMEGA	**Omega**	**8.07**	**64**	*e*P		**Pn**	**02 48 51.3**	**+0.1**
OMEGA				*e*S		Sn	02 50 13.7	-8.6
NEEM	**North Greenlan**	**9.24**	**274**	*i* P		**Pn**	**02 49 09.1**	**+1.5**
NEEM				*i* S		**Sn**	**02 50 47.1**	**-4.5**
NEEM				IAML			02 50 51.5	
	comp=Z,8.5nm,0.6s							
NEEM	**North Greenlan**	**9.24**	**274**	*i* P		**Pn**	**02 49 09.1**	**+1.5**
NEEM				*i* S		**Sn**	**02 50 47.1**	**-4.5**
NEEM				IAML			02 50 51.5	
	comp=Z,8.5nm,0.6s							
SUMG	**Summit**	**11.15**	**242**	*e*P		**Pn**	**02 49 36.1**	**+2.3**
SUMG				*i* S		Sn	02 51 26.7	-12
SUMG	**Summit**	**11.15**	**242**	*e*P		**Pn**	**02 49 36.1**	**+2.3**
SUMG				*i* S		Sn	02 51 26.7	-12
SCO	**Scoresbysund**	**11.16**	**212**	*i* P		**Pn**	**02 49 33.6**	**+0.1**
SCO	**Scoresbysund**	**11.16**	**212**	*i* P		**Pn**	**02 49 33.6**	**+0.1**
TULEG	**Thule**	**12.72**	**286**	*i* P		**Pn**	**02 49 54.3**	**-0.4**
TULEG	**Thule**	**12.72**	**286**	*i* P		**Pn**	**02 49 54.3**	**-0.4**

*IDC **29** 02:47:20.6±1.4, 52°.79N×167°.77W, h0km, mb3.9/9, mbtmp3.9/11, ML3.5/2, Error ellipse: s-maj=32.5km s-min=19.2km az=16.0*
*NEIC **29** 02:47:20.2±1.6, 52°.32N±0°.01×167°.84W±0°.06, h10km±1km, mb4.0/12, ML3.4/8, ML3.2(AEIC), Error ellipse: s-maj=5.9km s-min=2.9km az=267.0*
*AEIC **29** 02:47:21.3±1.2, 52°.34N±0°.05×167°.82W±0°.04, h11km±3km, Error ellipse: s-maj=6.8km s-min=3.4km az=189.0*
ISC 29 02:47:20.0±3.1, 52°.37N±0°.07×167°.80W±0°.04, h7km±20km, n44, σ1s20/50, mb3.9/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.88**	**314**			**Sn**	**02 47 51.0**	**-1.0**
NIKH	**Nikolski High**	**0.88**	**314**			**Pb**	**02 47 38.2**	**+0.6**
OKTU	**Okmok Mt. Tuli**	**1.03**	**352**			**Pb**	**02 47 41.0**	**+0.9**
OKFG	**Magazine Ridge**	**1.04**	**356**			**Pn**	**02 47 41.5**	**+0.4**
OKFG						**Sb**	**02 47 55.6**	**+1.2**
OKCE	**Okmok Cone E**	**1.08**	**348**			**Pn**	**02 47 42.1**	**+0.4**
OKNC	**Okmok New Cone**	**1.11**	**350**			**Pn**	**02 47 42.7**	**+0.7**
OKNC						**Sn**	**02 47 58.8**	**+1.3**
CLCO	**Concord Point,**	**1.24**	**290**			**Pb**	**02 47 43.8**	**0.0**
CLCO						**Sn**	**02 48 00.3**	**-0.5**
CLES	**Cleveland East**	**1.35**	**290**			**Pb**	**02 47 45.3**	**-0.4**
CLES	**Cleveland East**	**1.35**	**290**	IAML			02 48 08.3	
	comp=E,978nm,0.6s							
CLES				IAML			02 48 10.5	
	comp=N,1μm,0.3s							
MGOD	**Makushin Gods**	**1.53**	**21**			**Pn**	**02 47 48.2**	**+0.3**
MREP	**Makushin Rep't**	**1.58**	**23**			**Pn**	**02 47 48.9**	**+0.3**
MREP						**Pb**	**02 47 49.2**	**+0.3**
MNAT	**Makushin Natee**	**1.66**	**24**			**Pn**	**02 47 50.4**	**+0.7**
MSW	**Makushin Switc**	**1.67**	**21**			**Pn**	**02 47 50.1**	**+0.4**
MSW						**Pb**	**02 47 50.5**	**-0.6**
UNV	**Unalaska Valle**	**1.67**	**27**			**Pn**	**02 47 50.3**	**+0.6**
UNV						**Sn**	**02 48 11.2**	**-0.2**
UNV	**Unalaska Valle**	**1.67**	**27**	IAML			02 48 22.9	
	comp=N,238nm,0.6s							
AKMO	**Akutan Morgan**	**2.03**	**31**			**Pn**	**02 47 55.4**	**+0.7**
AKMO						**Pb**	**02 47 55.8**	**-1.6**
AKMO						**Sn**	**02 48 20.6**	**+0.2**
AKRB	**Akutan Reef Bi**	**2.05**	**30**			**Pn**	**02 47 56.0**	**+1.1**
AKRB						**Sn**	**02 48 21.5**	**+0.7**
AKSA	**Akutan Strait**	**2.17**	**35**			**Pn**	**02 47 58.6**	**+2.0**
ATKA	**Atka Island**	**3.93**	**270**	Pn		**Pn**	**02 48 21.6**	**+0.9**
ATKA				IAML			02 49 24.4	
	comp=E,36nm,1.1s							
KDAK	**Kodiak Island**	**10.26**	**52**	Pn		**Pn**	**02 49 47.5**	**-0.1**
	comp=E,0.9nm,0.3s,baz=221,slow=5.2,SNR=5.3							
	comp=E,9.7nm,0.7s							
I23K	**Minto, Yukon-K**	**15.89**	**29**			**Pn**	**02 51 06.1**	**+2.2**
ILAR	**Eielson Array**	**16.42**	**33**	Pn		**Pn**	**02 51 06.7**	**-4.0**
	comp=E,0.1nm,0.3s,baz=234,slow=12,SNR=8.1							
	comp=E,0.4nm,1.0s							
J25K	**Salcha River,**	**16.84**	**35**			**Pn**	**02 51 14.8**	**-1.3**
J26L	**Joseph Creek**	**17.42**	**36**			**Pn**	**02 51 21.0**	**-2.4**
I28M	**Miner Creek**	**19.23**	**36**			**P**	**02 51 45.1**	**+0.5**
I28M				IAmb	IAmb		02 51 50.7	
	comp=Z,4.3nm,0.7s							
M31M	**Drury Creek, Y**	**20.33**	**48**	P		**P**	**02 51 57.2**	**+0.7**
M31M				IAmb	IAmb		02 52 01.7	
	comp=Z,6.3nm,0.8s							
C27K	**Jago River**	**20.61**	**24**	P		**P**	**02 51 59.6**	**+0.1**
C27K				IAmb	IAmb		02 52 06.1	
	comp=Z,7.6nm,1.0s							
G29M	**Pine Creek**	**20.64**	**34**	P		**P**	**02 51 59.6**	**-0.3**
G29M				IAmb	IAmb		02 52 26.7	
	comp=Z,16nm,1.4s							
PETK	**Petropavlovsk-**	**20.79**	**286**	P		**P**	**02 52 00.8**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=58,slow=11,SNR=1.7							
	comp=Z,2.2nm,0.7s							
EPYK	**Eagle Plains**	**20.83**	**36**	P		**P**	**02 52 00.8**	**-1.2**
EPYK				IAmb	IAmb		02 52 06.7	
	comp=Z,7.1nm,0.9s							
INK	**Inuvik**	**22.82**	**33**	P		**P**	**02 52 20.6**	**-2.6**
	comp=Z,1.2nm,0.6s,baz=226,slow=11,SNR=11							
	comp=Z,1.2nm,0.6s							
INK	**Inuvik**	**22.82**	**33**	IAmb	IAmb		02 52 50.0	
	comp=Z,4.1nm,1.1s							
NVAR	**Mina Array Bea**	**36.70**	**92**	P		**P**	**02 54 29.9**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=289,slow=8.6,SNR=8.6							
	comp=Z,0.7nm,0.7s							
PDAR	**Pinedale Array**	**39.46**	**80**	P		**P**	**02 54 51.9**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=304,slow=3.2,SNR=8.2							
	comp=Z,0.4nm,0.6s							
PDAR	**Pinedale Array**	**39.46**	**80**	P		**P**	**02 54 51.6**	**+0.6**
TX31	**Lajitas Ar. Si**	**51.79**	**90**	P		**P**	**02 56 29.3**	**+0.8**
TXAR	**Lajitas Array**	**51.79**	**90**	P		**P**	**02 56 29.4**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=304,slow=6.0,SNR=18							
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**58.02**	**355**	P		**P**	**02 57 12.8**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=12,slow=7.1,SNR=1.6							
	comp=Z,3.6nm,0.9s							
BVAR	**Borovoye Array**	**64.25**	**325**	P		**P**	**02 57 55.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=44,slow=6.4,SNR=3.0							
	comp=Z,0.3nm,0.3s							
FIA1	**FINESS Array S**	**66.00**	**353**	P		**P**	**02 58 06.1**	**-0.5**
FINES	**FINESS Array B**	**66.00**	**353**	P		**P**	**02 58 05.4**	**-1.2**
	comp=Z,1.7nm,0.5s,baz=26,slow=7.2,SNR=17							
	comp=Z,1.7nm,0.5s							
FINES	**FINESS Array B**	**66.00**	**353**	P		**P**	**02 58 05.7**	**-0.9**
HFS	**Hagfors**	**67.84**	**359**	P		**P**	**02 58 17.3**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=35,slow=3.6,SNR=15							
	comp=Z,1.1nm,0.4s							
ABKAR	**Akbulak array**	**70.93**	**329**	P		**P**	**02 58 37.2**	**-0.4**

*BEO **29** 02:53:51.4±0.5, 41°.44N×19°.48E, h9km±2km, ML2.7/13*
*THE **29** 02:53:51.5, 42°N±15°×1°.9E±1°.1, h1km±27km, M3.1/10, MLh3.1/10*
*TIR **29** 02:53:51.4, 41°.54N×19°.44E, h14km±1km, Ml3.2/5*
*PDG **29** 02:53:52.7±0.4, 41°.51N×19°.48E, h13km±1km, MD3.1/3, ML3.0/11, Error ellipse: s-maj=1.7km s-min=2.1km az=0.0*
ISC 29 02:53:51.9±1.1, 41°.52N±0°.02×19°.50E±0°.02, h4km±9km, n60, σ0s86/108, 6C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**122**	Pg		**Pg**	**02 53 58.5**	**+0.4**
TIR				Sg		**Sg**	**02 54 02.2**	**-0.1**
TIR				AML		AML	02 54 04.8	
	8.8nm,0.4s							
TIR	**Tirane**	**0.32**	**122**	*i* Sg		**Sb**	**02 54 04.3**	**-1.4**
ULC	**Ulcinj**	**0.49**	**337**	*e*Pg		**Pg**	**02 54 00.9**	**-0.4**
ULC				*e*Sg		**Sg**	**02 54 08.6**	**+1.0**
SDA	**Shkodra**	**0.54**	**360**	Pn		Pg	02 53 56.9	-5.3
SDA				Sn		**Sg**	**02 54 09.2**	**+0.1**
DRME	**Dracevica, Mon**	**0.71**	**341**	*e*Pg		**Pg**	**02 54 05.6**	**+0.1**
DRME				*e*Sg		**Sb**	**02 54 17.5**	**+0.5**
DRME	**Dracevica, Mon**	**0.71**	**341**	*i* Pg		**Pg**	**02 54 05.4**	**-0.1**
DRME				*e*Sg		**Sb**	**02 54 16.6**	**-0.4**
PHP	**Peshkopia**	**0.72**	**76**	Pg		**Pg**	**02 54 06.0**	**+0.2**
PHP				Sn		**Sb**	**02 54 16.8**	**-0.5**
PHP				AML		AML	02 54 22.5	
	4.4nm,0.5s							
PHP	**Peshkopia**	**0.72**	**76**	P		**Pg**	**02 54 05.2**	**-0.6**
PHP				S		**Sb**	**02 54 16.5**	**-0.9**
BUM	**Brajici-Budva**	**0.91**	**330**	*i* Pg		**Pg**	**02 54 09.3**	**0.0**
BUM				*e*Sg		**Sb**	**02 54 22.0**	**-0.7**
PDG	**Podgorica**	**0.93**	**349**	Pn		**Pg**	**02 54 08.9**	**-0.8**
PDG				Sn		**Sg**	**02 54 22.3**	**+0.4**
PDG	**Podgorica**	**0.93**	**349**	*e*Pg		**Pg**	**02 54 09.0**	**-0.8**
PDG				*e*Sg		**Sb**	**02 54 23.3**	**0.0**
PDG	**Podgorica**	**0.93**	**349**	*i* Pg		**Pg**	**02 54 08.8**	**-1.0**
PDG				*e*Sg		**Sb**	**02 54 24.0**	**+0.7**
VLO	**Vlora**	**1.05**	**180**	Pn		**Pg**	**02 54 11.3**	**-0.7**
VLO				Sn		**Sb**	**02 54 26.4**	**-0.2**
VLO				AML		AML	02 54 41.9	
	6.0nm,0.6s							
VLO	**Vlora**	**1.05**	**180**	P		**Pn**	**02 54 13.3**	**0.0**
VLO				S		**Sn**	**02 54 29.3**	**+1.0**
OHR	**Ohrid**	**1.06**	**112**	*i* Pg		**Pb**	**02 54 12.7**	**0.0**
OHR				*i* Sg		**Sn**	**02 54 29.1**	**+0.3**
CEME	**Cevo**	**1.12**	**337**	*i* Pg		**Pg**	**02 54 12.7**	**-0.6**
CEME				*e*Sg		**Sb**	**02 54 29.6**	**+0.8**
PVY	**Plav**	**1.13**	**17**	*e*Pg		**Pg**	**02 54 12.7**	**-0.9**
PVY				*e*Sg		**Sn**	**02 54 30.5**	**-0.1**
PVY	**Plav**	**1.13**	**17**	*i* Pg		**Pg**	**02 54 12.7**	**-0.9**
PVY				*e*Sg		**Sn**	**02 54 30.5**	**-0.1**
HCY	**Herceg Novi**	**1.20**	**321**	*i* Pg		**Pg**	**02 54 14.9**	**+0.1**
HCY				*e*Sg		**Sn**	**02 54 32.1**	**0.0**
NKME	**Niksic**	**1.31**	**342**	*i* Pg		**Pn**	**02 54 16.3**	**-0.8**
KBN	**Korca**	**1.32**	**132**	Pn		**Pg**	**02 54 16.9**	**-0.2**
KBN				Sn		**Sn**	**02 54 36.0**	**+0.8**
KBN	**Korca**	**1.32**	**132**	P		**Pb**	**02 54 17.5**	**+0.2**
KBN				S		**Sn**	**02 54 37.5**	**+2.3**
KOME	**Kolasin**	**1.33**	**0**	*e*Pg		**Pn**	**02 54 17.0**	**-0.4**
KOME				*e*Sg		**Sn**	**02 54 36.6**	**+1.0**
KOME	**Kolasin**	**1.33**	**0**	*i* Pg		**Pn**	**02 54 16.7**	**-0.7**
KOME				*e*Sg		**Sn**	**02 54 37.3**	**+1.7**
BEY	**Berane**	**1.39**	**12**	*e*Pg		**Pn**	**02 54 17.3**	**-0.8**
BEY				*e*Sg		**Sn**	**02 54 38.4**	**+1.6**
IVA	**Berane**	**1.39**	**12**	*i* Pg		**Pn**	**02 54 17.5**	**-0.6**
IVA				*i* Sg		**Sn**	**02 54 38.5**	**+1.6**
TREB	**Trebinje**	**1.47**	**325**	*e*Pg		**Pn**	**02 54 18.9**	**-0.3**
TREB				*e*Sg		**Sg**	**02 54 40.6**	**+1.3**
SKO	**Skopje**	**1.52**	**72**	*i* Pg		**Pg**	**02 54 20.8**	**-0.3**
SKO				*i* Sg		**Sg**	**02 54 41.6**	**+0.9**
BRY	**Bratogost**	**1.56**	**333**	*i* Pg		**Pn**	**02 54 20.7**	**+0.2**
BRY				*e*Sg		**Sg**	**02 54 42.4**	**+0.4**
NEST	**Nestorio**	**1.61**	**133**	P		**Pg**	**02 54 22.4**	**-0.3**
SJES	**Sjenica**	**1.78**	**11**	*e*Pg		**Pb**	**02 54 24.8**	**-0.3**
SJES				*e*Sg		**Sg**	**02 54 49.3**	**+0.3**
PLE	**Pljevlja**	**1.81**	**357**	*e*Pg		**Pb**	**02 54 25.3**	**-0.4**
PLE				*e*Sg		**Sg**	**02 54 51.4**	**+1.2**
PLE	**Pljevlja**	**1.81**	**357**	*i* Pn		**Pb**	**02 54 25.1**	**-0.6**
PLE				*i* Sn		**Sb**	**02 54 48.9**	**0.0**
STON	**Ston**	**1.91**	**316**	*e*Pg		**Pn**	**02 54 25.9**	**+0.8**
STON				*e*Sg		**Sg**	**02 54 52.6**	**-0.5**
NOCI	**Noci**	**1.98**	**249**	Pn		**Pn**	**02 54 24.7**	**-1.5**
NOCI				Sn		**Sb**	**02 54 53.7**	**+0.2**
NOCI				AML		AML	02 54 57.3	
	1.2nm,0.5s							
IGT	**Igoumenitsa**	**2.08**	**162**	P		**Pn**	**02 54 27.3**	**-0.3**
IGT				S		**Sb**	**02 54 57.2**	**+0.8**
SELS	**Selova**	**2.08**	**35**	*e*Pn		**Pn**	**02 54 27.2**	**-0.4**
SELS				*e*Sn		**Sn**	**02 54 54.1**	**+0.1**
KZN	**Kozani**	**2.10**	**124**	P		**Pn**	**02 54 28.9**	**+1.0**
KZN				S		**Sb**	**02 54 57.4**	**+0.3**
RUDO	**Rudo**	**2.10**	**357**	*e*Pn		**Pn**	**02 54 28.7**	**+0.8**
RUDO				*e*Sn		**Sb**	**02 54 56.4**	**-0.6**
IVAS	**Ivanjica**	**2.11**	**13**	*e*Pn		**Pn**	**02 54 27.8**	**-0.3**
IVAS				*e*Sn		**Sn**	**02 54 54.6**	**-0.2**
BARS	**Barje**	**2.15**	**52**	*e*Pn		**Pn**	**02 54 28.4**	**-0.2**
BARS				*e*Sn		**Sn**	**02 54 55.9**	**+0.1**
GOCS	**Kraljevo Serbi**	**2.28**	**26**	*e*Pn		**Pn**	**02 54 31.0**	**+0.6**
GOCS				*e*Sn		**Sn**	**02 54 59.5**	**+0.3**
VAY	**Valandovo**	**2.31**	**94**	*i* Pn		**Pn**	**02 54 31.0**	**+0.3**
VAY				*i* Pn		**Pg**	**02 54 35.1**	**-1.1**
PRMD	**Pramanda**	**2.33**	**148**	P		**Pn**	**02 54 31.9**	**+0.9**
BBLS	**Lazi&#263i**	**2.35**	**358**	*e*Pn		**Pn**	**02 54 32.3**	**+1.0**
BBLS				*e*Sn		**Sn**	**02 55 01.5**	**+0.9**
BOSS	**Bosilegrad**	**2.42**	**65**	*e*Pn		**Pn**	**02 54 32.6**	**+0.3**
BOSS				*e*Sn		**Sn**	**02 55 03.5**	**+1.1**
GRUS	**Gruza**	**2.53**	**20**	*e*Pn		**Pn**	**02 54 34.0**	**+0.2**
BOVS	**Bovan**	**2.67**	**37**	*e*Pn		**Pn**	**02 54 35.4**	**-0.3**
BOVS				*e*Sn		**Sn**	**02 55 08.1**	**-0.3**
TRUS	**Trudelj**	**2.79**	**13**	*e*Pn		**Pn**	**02 54 37.4**	**+0.1**
LKD2	**Lefkada island**	**2.87**	**162**	P		**Pn**	**02 54 37.1**	**-1.3**
AMPL	**Ampelaki**	**2.90**	**153**	P		**Pn**	**02 54 38.9**	**0.0**
AMPL				S		**Sn**	**02 55 13.6**	**-0.6**
ZAPS	**Zavoj**	**2.91**	**52**	*e*Pn		**Pn**	**02 54 39.9**	**+0.9**
ZAPS				*e*Sn		**Sn**	**02 55 14.1**	**-0.3**
NYDR	**Nyd

STKA	**Stephens Creek**	**43.81**	**161**	P		**P**	**03 36 43.2**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=343,slow=8.2,SNR=4.7							
STKA				pP		**sP**	**03 36 54.8**	**+0.6**
	comp=Z,3.0nm,0.9s,baz=346,slow=3.8,SNR=3.8							
	comp=Z,1.4nm,0.5s							
MKAR	**Makanchi Array**	**52.64**	**323**	P		**P**	**03 37 50.9**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=118,slow=7.9,SNR=9.3							
MKAR				pP		**sP**	**03 38 02.2**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=121,slow=7.9,SNR=10.0							
MKAR				PcP		**PcP**	**03 39 00.7**	**0.0**
	comp=Z,0.5nm,0.6s,baz=107,slow=4.9,SNR=1.7							
	comp=Z,0.8nm,0.6s							
MKAR	**Makanchi Array**	**52.64**	**323**	P		**P**	**03 37 50.5**	**-0.5**
ZALV	**Zalesovo Beam**	**55.23**	**331**	P		**P**	**03 38 08.2**	**-1.5**
	comp=Z,2.0nm,0.7s,baz=114,slow=6.7,SNR=6.5							
ZALV				pP		**pP**	**03 38 20.9**	**+2.2**
	comp=Z,1.2nm,0.7s,baz=101,slow=7.7,SNR=2.9							
ZALV				PcP		**PcP**	**03 39 09.0**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=145,slow=5.3,SNR=2.2							
	comp=Z,2.0nm,0.7s							
ZALV	**Zalesovo Beam**	**55.23**	**331**	P		**P**	**03 38 09.4**	**-0.3**
KURBB	**Kurchatov Arra**	**56.69**	**325**	P		**P**	**03 38 19.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=128,slow=6.8,SNR=8.1							
KURBB				pP		**sP**	**03 38 31.6**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=126,slow=6.9,SNR=7.0							
	comp=Z,1.1nm,0.6s							
BVAR	**Borovoye Array**	**62.28**	**325**	P		**P**	**03 38 58.2**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=120,slow=8.8,SNR=3.7							
BVAR				pP		**sP**	**03 39 10.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=99,slow=9.5,SNR=4.6							
	comp=Z,0.5nm,0.6s							
BORK	**Borovoye**	**62.32**	**325**	P		**P**	**03 38 59.0**	**0.0**
BORK				IAmb		IAmb	03 39 11.4	
	comp=Z,2.1nm,0.8s							
THZ	**Tophouse**	**66.56**	**144**	P		**P**	**03 39 27.1**	**+0.2**
BKZ	**Black Stump Fm**	**67.17**	**140**	P		**P**	**03 39 30.7**	**-0.2**
BKZ				IAmb		IAmb	03 39 44.8	
	comp=Z,5.8nm,0.6s							
ABKAR	**Akbulak array**	**67.48**	**319**	P		**P**	**03 39 31.8**	**-0.9**
K17K	**Iditarod**	**74.54**	**28**	P		**P**	**03 40 16.5**	**+1.3**
ILAR	**Eielson Array**	**79.74**	**26**	P		**P**	**03 40 43.8**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=240,slow=5.7,SNR=5.6							
	comp=Z,0.3nm,0.9s							
BMAR	**Burnt Mountain**	**80.60**	**23**	P		**P**	**03 40 50.1**	**+1.1**
ARCES	**ARCESS Array B**	**84.79**	**340**	P		**P**	**03 41 10.5**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=78,slow=6.0,SNR=13							
ARCES				pP		**sP**	**03 41 23.2**	**+0.8**
	comp=Z,7.1nm,0.9s,baz=80,slow=8.8,SNR=1.9							
	comp=Z,4.9nm,0.9s							
ARCES	**ARCESS Array B**	**84.79**	**340**	P		**P**	**03 41 11.1**	**+0.4**
ARCES				IAmb		IAmb	03 41 29.0	
	comp=Z,8.6nm,1.1s							
FINES	**FINESS Array B**	**86.50**	**332**	P		**P**	**03 41 19.0**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=57,slow=5.5,SNR=14							
FINES				pP		**sP**	**03 41 31.4**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=56,slow=4.8,SNR=2.4							
	comp=Z,3.0nm,0.7s							
FINES	**FINESS Array B**	**86.50**	**332**	P		**P**	**03 41 17.8**	**-1.5**
HFS	**Hagfors**	**92.66**	**333**	P		**P**	**03 41 47.7**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=93,slow=6.5,SNR=10							
	comp=Z,1.6nm,0.5s							
NOA	**NORSAR Array B**	**93.36**	**334**	P		**P**	**03 41 50.4**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=60,slow=4.7,SNR=3.4							
	comp=Z,0.9nm,0.8s							
TXAR	**Lajitas Array**	**117.89**	**49**	PKP		**PKPdf**	**03 47 24.2**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=340,slow=2.1,SNR=1.4							
PLCA	**Paso Flores**	**145.61**	**157**	PKPbc		**PKPdf**	**03 48 14.0**	**-1.4**
	comp=Z,3.3nm,0.7s,baz=257,slow=2.4,SNR=7.8							
PLCA				pPKPbc		sPKPab	03 48 29.2	+0.8
	comp=Z,2.3nm,0.8s,baz=133,slow=1.2,SNR=3.2							
PLCA	**Paso Flores**	**145.61**	**157**			**PKPab**	**03 48 16.9**	**+1.1**

*IDC **29** 03:31:41.2±1.7, 9°.59N×127°.21E, h36km±7km, mb3.7/6, mbtmp3.9/6, Error ellipse: s-maj=134.4km s-min=27.6km az=70.0*
ISC 29 03:31:41.4±1.4, **9°.5N**±0°.4×**127°.0E**±0°.9, **h35**km, **n6,** σ1**9**15/10, **mb4.1/6, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.13**	**166**	P	**P**	**03 37 48.0**	**-0.2**
	0.6nm,1.0s,baz=356,slow=8.7,SNR=2.3						
	0.6nm,1.0s						
SONM	**Songino Array**	**42.00**	**339**	P	**P**	**03 39 28.2**	**-1.2**
	0.5nm,0.7s,baz=141,slow=7.1,SNR=1.9						
SONM				pP	**sP**	**03 39 40.2**	**+0.1**
	0.7nm,0.5s,baz=157,slow=10,SNR=5.4						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**53.08**	**323**	P	**P**	**03 40 54.2**	**-1.2**
	0.3nm,0.6s,baz=118,slow=6.9,SNR=2.5						
MKAR				pP	**pP**	**03 41 05.0**	**+1.9**
	0.7nm,0.7s,baz=121,slow=8.5,SNR=4.8						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**57.12**	**325**	P	**P**	**03 41 25.1**	**+0.7**
	1.3nm,0.2s,baz=126,slow=6.5,SNR=3.4						
KURBB				pP	**sP**	**03 41 34.7**	**-0.7**
	0.8nm,0.6s,baz=122,slow=6.6,SNR=4.5						
	1.3nm,0.2s						
ARCES	**ARCESS Array B**	**85.17**	**340**	P	**P**	**03 44 14.7**	**+0.9**
	2.4nm,0.9s,baz=77,slow=5.2,SNR=4.2						
	2.4nm,0.9s						
FINES	**FINESS Array B**	**86.91**	**332**	P	**P**	**03 44 21.8**	**-0.7**
	1.0nm,0.6s,baz=67,slow=6.7,SNR=5.3						
FINES				pP	**sP**	**03 44 34.4**	**+0.8**
	2.5nm,0.8s,baz=70,slow=9.0,SNR=1.7						
	1.0nm,0.6s						

*SOME **29** 03:37:03.9, 41°.10N×78°.87E, h0km*
*NNC **29** 03:37:07.1±3.4, 41°.14N×78°.71E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=22.9km s-min=18.3km az=164.0*
*KRNET **29** 03:37:07.4±0.1, 41°.27N×78°.87E, h10km, mb2.5*
ISC 29 03:37:06.4±2.2, **41°.14N**±0°.09×**78°.80E**±0°.05, **h11**km±15km, **n19,** σ0**979**/29, **12C, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.95**	**308**	⇑*iP*	**Pg**	**03 37 25.0**	**+0.2**
TARG				⇑*iS*	**Sg**	**03 37 37.9**	**+0.6**
PRZ	**Przheval'sk**	**1.37**	**348**	⇑*eP*	**Pn**	**03 37 31.6**	**-0.1**
PRZ				⇑*eS*	**Sb**	**03 37 49.3**	**-0.6**
KDJ	**Kajisay**	**1.56**	**310**	⇑*iP*	**Pb**	**03 37 36.1**	**+0.6**
KDJ				⇑*iS*	**Sg**	**03 37 57.0**	**+0.2**
SATY	**Saty**	**1.94**	**351**	Pg	**Pb**	**03 37 41.1**	**-0.7**
	2.2nm,0.2s						
SATY				Lg	Lg	03 38 07.9	
	9.0nm,0.2s						
UZB	**Uzynbulak**	**2.01**	**5**	Pg	**Pb**	**03 37 43.0**	**-0.1**
	5.0nm,0.5s						
UZB				Lg	Lg	03 38 11.2	
	4.2nm,0.4s						
UZB	**Uzynbulak**	**2.01**	**5**	*eP*	**Pb**	**03 37 43.0**	**-0.1**
	1.9nm,0.1s						
UZB				*eS*	**Sg**	**03 38 11.2**	**+0.2**
	4.7nm,0.2s						
SHLS	**Shalkode**	**2.07**	**14**	Pg	**Pg**	**03 37 45.2**	**-0.9**
	4.8nm,0.3s						
SHLS				Lg	Lg	03 38 15.2	
	18nm,0.4s						
SHLS	**Shalkode**	**2.07**	**14**	*eP*	**Pg**	**03 37 45.2**	**-0.9**
	4.8nm,0.3s						
SHLS				*eS*	**Sg**	**03 38 15.2**	**+2.2**
	18nm,0.4s						
PDGK	**Podgornoye**	**2.24**	**13**	⇑Pn	**Pg**	**03 37 48.8**	**-0.7**
	1.4nm,0.3s						
PDGK				⇑Sn	**Sg**	**03 38 18.9**	**+0.4**
	11nm,0.7s						
KPKS	**Kokpek**	**2.32**	**358**	Pg	**Pb**	**03 37 48.0**	**-0.4**
	0.8nm,0.3s						
KPKS				Lg	Lg	03 38 19.9	
	6.9nm,0.5s						
TNSS	**Tian-Shan**	**2.34**	**325**	*eP*	**Pb**	**03 37 49.1**	**+0.2**
	1.4nm,0.2s						
TNSS				*eS*	**Sg**	**03 38 21.5**	**-0.3**
	4.0nm,0.5s						
JNKS	**Jany-Kuch**	**2.38**	**269**	⇑*eP*	**Pb**	**03 37 50.4**	**+0.9**
JNKS				⇑*eS*	**Sg**	**03 38 21.7**	**-1.2**
KURS	**Kuram**	**2.39**	**349**	Pg	**Pb**	**03 37 49.9**	**+0.4**
	6.3nm,0.5s						
KURS				Lg	Lg	03 38 23.2	
	5.5nm,0.5s						
MDOK	**Medeo**	**2.40**	**328**	Pg	**Pb**	**03 37 50.9**	**+1.2**
	5.7nm,0.5s						
MDOK				Lg	Lg	03 38 24.8	
	12nm,0.8s						
BOOM	**Boomskoye usch**	**2.53**	**303**	⇑*iP*	**Pb**	**03 37 51.4**	**-0.5**
BOOM				⇑*iS*	**Sb**	**03 38 23.4**	**+0.3**
KTMS	**Ketmen**	**2.57**	**26**	Pg	**Pb**	**03 37 53.5**	**+0.8**
	1.0nm,0.2s						
KTMS				Lg	Lg	03 38 29.0	
	6.7nm,0.1s						
KTMS	**Ketmen**	**2.57**	**26**	*eP*	**Pb**	**03 37 53.5**	**+0.8**
	1.0nm,0.2s						
KTMS				*eS*	**Sg**	**03 38 29.0**	**-0.1**
	6.7nm,0.1s						
DGS	**Degeres**	**3.08**	**314**	Pg	**Pb**	**03 38 01.8**	**+0.5**
	4.2nm,0.6s						
DGS				Lg	Lg	03 38 43.4	
	6.5nm,0.8s						
KNOS	**Konyrlen**	**3.23**	**5**	Pg	**Pb**	**03 38 04.8**	**+1.0**
	1.5nm,0.2s						
KNOS				Lg	Lg	03 38 48.6	
	8.9nm,0.5s						

*FUNV **29** 03:43:14.8, 9°.09N×72°.83W, h2km, MW3.1*
*RSNC **29** 03:43:16.3±0.0, 9°.1×7°.3W°, h10km±3km, M2.0, ML1.9*
ISC 29 03:43:15.6±1.3, **9°.14N**±0°.03×**72°.85W**±0°.03, **h21**km±5km, **n19,** σ1**9**22/30, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.96**	**19**	*eP*	**Pb**	**03 43 33.2**	**-0.4**
MCQV				*eS*	**Sn**	**03 43 47.8**	**+0.8**
OCAC	**Ocana**	**1.00**	**208**	P	**Pn**	**03 43 33.8**	**-0.9**
OCAC				S	**Sb**	**03 43 47.3**	**0.0**
CAPV	**Capacho**	**1.37**	**157**	*eP*	**Pn**	**03 43 39.9**	**+0.1**
CAPV				*eS*	**Sn**	**03 43 57.7**	**+0.3**
ARGC	**Ariguani, Magd**	**1.55**	**298**	P	**Pn**	**03 43 41.4**	**-0.7**
ARGC				S	**Sn**	**03 44 00.8**	**-0.8**
PAMC	**Pamplona, Colo**	**1.79**	**175**	P	**Pn**	**03 43 47.2**	**+1.4**
PAMC				S	**Sn**	**03 44 06.9**	**-1.2**
CRJC	**Cerrejon, Guaj**	**1.87**	**359**	P	**Pn**	**03 43 45.1**	**-1.5**
CRJC				S	**Sn**	**03 44 10.3**	**+0.7**
SOCV	**Socops**	**2.14**	**113**	*eS*	**Sn**	**03 44 16.9**	**+0.6**
SDV	**Santo Domingo**	**2.20**	**96**	P	**Pn**	**03 43 52.1**	**+0.9**
SDV				S	**Sb**	**03 44 23.6**	**+1.8**
BRJC	**Barrancabermej**	**2.32**	**202**	P	**Pb**	**03 43 58.3**	**+1.5**
BRJC				S	**Sb**	**03 44 23.9**	**-1.2**
SJCC	**San Jacinto, C**	**2.42**	**288**	P	**Pn**	**03 43 55.0**	**+0.9**
SJCC				S	**Sn**	**03 44 24.9**	**+1.8**
URIC	**Uribia, Colomb**	**2.69**	**18**	P	**Pn**	**03 43 58.6**	**+0.9**
PTBC	**PUERTO BERRIO,**	**3.03**	**212**	P	**Pn**	**03 44 04.5**	**+2.1**
PTBC				S	**Sn**	**03 44 36.6**	**-1.5**
RUSC	**La Rusia**	**3.23**	**184**	P	**Pb**	**03 44 10.8**	**-1.8**
TEPV	**Terepaima**	**3.70**	**77**	*eP*	**Pn**	**03 44 12.4**	**+0.8**
TEPV				*eS*	**Sn**	**03 44 54.7**	**0.0**
MAPV	**Macapo**	**4.39**	**81**	*eP*	**Pn**	**03 44 21.3**	**+0.2**
MAPV				*eS*	**Sn**	**03 45 09.5**	**-2.2**
TURV	**Turiamo**	**5.11**	**75**	*eP*	**Pn**	**03 44 30.3**	**-0.7**
BENV	**Beln**	**5.24**	**81**	*eP*	**Pn**	**03 44 33.1**	**+0.2**
TACV	**Tcata**	**5.83**	**80**	*eP*	**Pn**	**03 44 39.9**	**-1.1**
CACV	**CAICARA DEL OR**	**6.43**	**104**	*eP*	Pn	03 44 55.2	+6.0

*NIED **29** 04:01:39.5, 39°.13N×143°.03E, h26km, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁷Nm; Mrr0.57; Mθθ0.17; Mϕϕ-0.74; Mrθ0.57; Mθϕ-0.38; Mϕr1.15; Fault plane solution: M₀1.48000×10¹⁷ NP1: ϕs187.00000°, δ15.00000°, λ71.00000°. NP2:ϕs27.00000°, δ75.00000°, λ95.00000°.*
*BJI **29** 04:01:39.1, 39°.16N×142°.89E, h29km, mB5.6/66, mb5.5/89, Ms5.6/99, Ms7 5.5/99*
*JMA **29** 04:01:39.5±0.2, 39°.1N±0°.3×143°.0E±0°.6, h26km±2km, MD5.6/40, MW5.4/40, FAR E OFF SANRIKU*
JMA Felt III J1 at FAR E OFF SANRIKU .
*NEIC **29** 04:01:40.3±1.8, 39°.16N±0°.05×143°.02E±0°.09, h19km±1km, mb5.4/543, Mwb5.5/96, Mww5.4/18, Error ellipse: s-maj=12.7km s-min=8.3km az=106.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.24; Mθθ0.52; Mϕϕ-1.76; Mrθ0.60; Mθϕ-0.98; Mϕr1.03; Fault plane solution: M₀2.20000×10¹⁷ NP1:ϕs32.24000°, δ63.74000°, λ104.60000°. NP2:ϕs181.75000°, δ29.79000°, λ62.93000°. Principal axes: T 1.6561, Plg68.0000°, Azm331.0000°; N 0.8418, Plg13.0000°, Azm206.0000°; P -2.4980, Plg18.0000°, Azm111.0000°;*
*MOS **29** 04:01:41.2±0.9, 39°.34N×142°.89E, h34km, mb5.8/74, MS5.5/35 Error ellipse: s-maj=5.9km s-min=3.7km az=114.7*
*IDC **29** 04:01:42.2±1.9, 39°.08N×143°.03E, h40km±16km, mb4.9/30, mbtmp5.1/37, ML4.5/6, MS5.0/78, Error ellipse: s-maj=12.3km s-min=11.1km az=101.0*
*GCMT **29** 04:01:42.3±0.1, 39°.10N±0°.01×143°.04E±0°.01, h24km, MW5.5/143, Moment Tensor Solution. s110,c193; s143,c273; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.25±.03; Mθθ-0.08±.02; Mϕϕ-1.17±.02; Mrθ0.60±.03; Mθϕ-0.47±.01; Mϕr1.27±.04; Best double couple: M₀1.91000×10¹⁷ NP1:ϕs196.00000°, δ22.00000°, λ83.00000°. NP2:ϕs24.00000°, δ69.00000°, λ93.00000°. Principal axes: T 1.8670, Plg66.0000°, Azm299.0000°; N 0.0850, Plg3.0000°, Azm203.0000°; P -1.9530, Plg24.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **29** 04:01:43, 39°.20N×142°.92E, h24km*
*NEIC **29** 04:01:43, 39°.20N×142°.92E, h35km*
*NEIC **29** 04:01:43, 38°.90N×143°.70E, h24km, Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10¹⁷Nm; Mrr0.72; Mθθ-0.06; Mϕϕ-0.66; Mrθ0.76; Mθϕ-0.29; Mϕr1.09; Fault plane solution: M₀1.52000×10¹⁷ NP1: ϕs189.93000°, δ15.68000°, λ67.48000°. NP2:ϕs33.23000°, δ75.54000°, λ96.14000°. Principal axes: T 1.5056, Plg59.0000°, Azm312.0000°; N 0.0279, Plg6.0000°, Azm212.0000°; P -1.5335, Plg30.0000°, Azm118.0000°;*
*BGR **29** 04:01:45.9, 39°.89N×143°.61E, h33km, mb5.4, Ms5.4*
ISC 29 04:01:41.1±0.4, **39°.13N**±0°.03×**143°.03E**±0°.03, **h30**km±2km, **h30**km:**pP-P, n1487,** σ1**9**58/1258, **mb5.5**/501, **MS5.4**/147, **109C-42D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.04**	**296**	⇓P	**Pn**	**04 01 58.2**	**-1.5**
MIYJ	**Miyakonagasawa**	**1.04**	**296**	A	A	04 01 58.2	
	comp=N,109nm,2.1s,comp=E,229nm,3.2s						
OFUJ	**Ofunato**	**1.06**	**268**	⇓P	**Pn**	**04 01 58.8**	**-1.2**
OFUJ				⇓*eS*	**Sn**	**04 02 12.3**	**-1.5**
OFUJ	**Ofunato**	**1.06**	**268**	A	A	04 01 58.8	
	comp=N,106nm,2.4s,comp=E,101nm,2.1s						
JTH	**Tanohata**	**1.21**	**312**	⇓P	**Pn**	**04 02 00.9**	**-1.2**
JTH	**Tanohata**	**1.21**	**312**	A	A	04 02 00.9	
	comp=N,160nm,2.2s,comp=E,111nm,2.4s						
JKMT	**Kesennumamotoy**	**1.26**	**256**	⇓*iP*	**Pn**	**04 02 01.6**	**-1.0**
JKMT				⇓*eS*	**Sn**	**04 02 17.5**	**-1.0**
JKMT	**Kesennumamotoy**	**1.26**	**256**	A	A	04 02 01.6	
	comp=N,143nm,1.6s,comp=E,86nm,4.2s						
JOM	**Ohasama**	**1.39**	**285**	⇓P	**Pn**	**04 02 04.0**	**-0.5**
JOM	**Ohasama**	**1.39**	**285**	A	A	04 02 04.0	
	comp=N,91nm,2.4s,comp=E,121nm,0.4s						
JMK	**Ichinoseki**	**1.42**	**263**	⇓P	**Pn**	**04 02 04.3**	**-0.6**
JMK	**Ichinoseki**	**1.42**	**263**	A	A	04 02 04.3	
	comp=N,128nm,2.4s,comp=E,79nm,4.1s						
JIKH	**Ishinomakikobu**	**1.48**	**237**	A	A	04 02 04.9	
	comp=N,234nm,2.6s,comp=E,189nm,1.4s						
JIO	**Ouri**	**1.48**	**243**	⇓P	**Pn**	**04 02 04.8**	**-0.9**
JIO				⇓*eS*	**Sn**	**04 02 22.8**	**-1.2**
JIO	**Ouri**	**1.48**	**243**	A	A	04 02 04.8	
	comp=N,161nm,2.7s,comp=E,83nm,3.0s						
JKEN	**Kujiedanarisaw**	**1.48**	**317**	A	A	04 02 05.1	
	comp=N,212nm,1.9s,comp=E,117nm,1.8s						
JKZ	**Kuzumaki**	**1.57**	**303**	A	A	04 02 06.5	
	comp=N,107nm,0.6s,comp=E,87nm,1.7s						
JANG	**Nango**	**1.71**	**317**	P	**Pn**	**04 02 08.0**	**-0.8**
JANG	**Nango**	**1.71**	**317**	A	A	04 02 08.0	
	comp=N,66nm,4.0s,comp=E,77nm,4.3s						
JSZI	**Iwateshizukuis**	**1.72**	**291**	A	A	04 02 08.7	
	comp=N,423nm,3.7s,comp=E,438nm,2.4s						
JOFO	**Osakifurukawao**	**1.74**	**253**	A	A	04 02 08.8	
	comp=N,731nm,1.9s,comp=E,654nm,1.2s						
JRG	**Rokugo**	**1.88**	**279**	⇓P	**Pn**	**04 02 11.6**	**+0.3**
JRG	**Rokugo**	**1.88**	**279**	A	A	04 02 11.6	
	comp=N,178nm,1.4s,comp=E,202nm,2.1s						
JOU	**Okura**	**2.00**	**248**	⇓*eP*	**Pn**	**04 02 13.0**	**0.0**
JOU	**Okura**	**2.00**	**248**	A	A	04 02 13.0	
	comp=N,235nm,2.0s,comp=E,271nm,2.4s						
JYK	**Kaneyama**	**2.09**	**265**	⇓P	**Pn**	**04 02 14.5**	**+0.4**
JYK	**Kaneyama**	**2.09**	**265**	A	A	04 02 14.5	
	comp=N,109nm,4.4s,comp=E,108nm,3.1s						
JAH	**Hinai**	**2.13**	**300**	P	**Pn**	**04 02 14.9**	**+0.3**
JAH	**Hinai**	**2.13**	**300**	A	A	04 02 14.9	
	comp=N,155nm,2.2s,comp=E,143nm,2.8s						
JMM	**Marumori**	**2.17**	**235**	*eP*	**Pn**	**04 02 14.6**	**-0.5**
JMM	**Marumori**	**2.17**	**235**	A	A	04 02 14.6	
	comp=N,91nm,2.8s,comp=E,67nm,1.4s						
JMST	**Minamisoumatoc**	**2.19**	**231**	A	A	04 02 15.4	
	comp=N,88nm,2.0s,comp=E,105nm,1.7s						
JYW	**Yuwa**	**2.23**	**281**	A	A	04 02 16.0	
	comp=N,444nm,2.0s,comp=E,274nm,2.2s						
JTM	**Tenmabayashi**	**2.24**	**318**		**Pn**	**04 02 15.4**	**-0.7**
JTM	**Tenmabayashi**	**2.24**	**318**	P	**Pn**	**04 02 15.4**	**-0.7**
JTM	**Tenmabayashi**	**2.24**	**318**	*eP*	**Pn**	**04 02 15.6**	**-0.5**
JTM	**Tenmabayashi**	**2.24**	**318**	A	A	04 02 15.6	
	comp=N,105nm,2.2s,comp=E,71nm,1.7s						
JARK	**Aomorirokkasho**	**2.27**	**326**	A	A	04 02 16.6	
	comp=N,98nm,2.5s,comp=E,74nm,2.8s						
JYYZ	**Yamagatayuza**	**2.42**	**268**	A	A	04 02 18.7	
	comp=N,275nm,1.9s,comp=E,375nm,2.7s						
JFK	**Kawauchi**	**2.45**	**225**	A	A	04 02 19.0	
	comp=N,55nm,4.4s,comp=E,70nm,4.4s						
JNTW	**Noshirotokiwa**	**2.49**	**298**	A	A	04 02 19.8	
	comp=N,507nm,3.2s,comp=E,534nm,2.3s						
JAHD	**Aomorihigashid**	**2.50**	**329**	A	A	04 02 19.8	
	comp=N,131nm,2.8s,comp=E,165nm,1.9s						
JYS	**Shirataka**	**2.50**	**250**	A	A	04 02 19.8	
	comp=N,155nm,3.1s,comp=E,211nm,2.5s						
JHHS	**Hirosakihyakuz**	**2.56**	**307**	A	A	04 02 20.7	
	comp=N,263nm,2.3s,comp=E,136nm,2.1s						
JYAR	**Yonezawaarcadi**	**2.57**	**243**	A	A	04 02 20.8	
	comp=N,212nm,1.1s,comp=E,183nm,1.2s						
JOTO	**OTAMA OYAMA**	**2.64**	**234**	A	A	04 02 21.8	
	comp=N,162nm,3.0s,comp=E,174nm,1.3s						
JYA	**Atsumi**	**2.65**	**259**	A	A	04 02 22.0	
	comp=N,66nm,1.2s,comp=E,107nm,1.1s						
ONAJ	**Iwakimizuishiy**	**2.69**	**222**	A	A	04 02 22.4	
	comp=N,49nm,1.8s,comp=E,56nm,1.7s						
JTB	**Tobi-shima**	**2.70**	**272**	A	A	04 02 22.8	
	comp=N,76nm,3.4s,comp=E,81nm,3.9s						
JOT	**Ohata**	**2.71**	**327**	A	A	04 02 23.0	
	comp=N,58nm,2.6s,comp=E,54nm,3.1s						
JIW	**Iwasaki**	**2.75**	**303**	A	A	04 02 23.5	
	comp=N,83nm,2.5s,comp=E,61nm,1.8s						
JSI2	**Shiura 2**	**2.78**	**315**	A	A	04 02 24.0	
	comp=N,88nm,2.2s,comp=E,67nm,2.2s						
JFFD	**Fukushimafurud**	**2.82**	**224**	A	A	04 02 24.4	
	comp=N,39nm,3.0s,comp=E,41nm,3.7s						
ERM	**Erimo**	**2.88**	**2**		**Pn**	**04 02 23.4**	**-1.5**
ERM	**Erimo**	**2.88**	**2**	P	**Pn**	**04 02 23.6**	**-1.4**
ERM	**Erimo**	**2.88**	**2**	S	**Sn**	**04 02 58.5**	**-0.1**
ERM	**Erimo**	**2.88**	**2**	P	**Pn**	**04 02 23.4**	**-1.5**
JEM	**Erimo**	**2.88**	**2**	P	**Pn**	**04 02 24.1**	**-0.9**
JEM	**Erimo**	**2.88**	**2**	S	**Sn**	**04 02 59.4**	**+0.8**
JEM	**Erimo**	**2.88**	**2**	A	A	04 02 25.4	
	comp=N,27nm,3.5s,comp=E,24nm,3.5s						
JAW	**Awa shima**	**3.03**	**258**	A	A	04 02 27.5	
	comp=N,105nm,2.9s,comp=E,74nm,4.0s						
JSR	**Shiriuchi**	**3.12**	**321**	A	A	04 02 28.8	
	comp=N,33nm,3.0s,comp=E,36nm,2.8s						
JFY	**Yanaizu**	**3.14**	**238**	A	A	04 02 28.9	
	comp=N,41nm,3.0s,comp=E,52nm,2.6s						
JKB	**Kayabe**	**3.15**	**332**	A	A	04 02 29.2	
	comp=N,40nm,3.9s,comp=E,44nm,3.3s						
JNBK	**Urakawa-nobuka**	**3.15**	**356**	A	A	04 02 29.3	
	comp=N,63nm,4.6s,comp=E,59nm,2.6s						
JOG3	**Oga3**	**3.16**	**286**	A	A	04 02 21.5	
	comp=N,142nm,3.8s,comp=E,148nm,2.5s						
JTHR	**Tokachihiroo**	**3.16**	**4**	A	A	04 02 29.4	
	comp=N,17nm,1.9s,comp=E,34nm,4.0s						
JHO	**Hitachi**	**3.18**	**219**	A	A	04 02 29.5	
	comp=N,32nm,2.5s,comp=E,29nm,4.4s						
JNS	**Sasagawa**	**3.20**	**247**	A	A	04 02 29.8	
	comp=N,63nm,3.2s,comp=E,43nm,3.2s						
JSB	**Shiboa**	**3.27**	**230**	A	A	04 02 30.8	
	comp=N,115nm,1.3s,comp=E,144nm,5.3s						
JSHD	**Hidakashinhida**	**3.30**	**353**	A	A	04 02 31.4	
	comp=N,124nm,2.2s,comp=E,105nm,2.6s						
JHYU	**Hitachinakayam**	**3.40**	**216**	A	A	04 02 32.5	
	comp=N,52nm,3.1s,comp=E,53nm,3.8s						
JCH	**Churui**

comp=N,28nm,5.1s,comp=E,15nm,3.9s
JSZ Suzu 4.77 251 A A 04 02 51.9
comp=N,15nm,4.5s,comp=E,18nm,4.3s
TATJ Tateyama 2 4.80 213 A A 04 02 52.3
comp=N,107nm,2.8s,comp=E,118nm,2.9s
JNSB Nemuroshibetsu 4.87 17 A A 04 02 53.4
comp=N,49nm,1.5s,comp=E,24nm,1.6s
JMP Maruseppu 4.88 23 A A 04 02 53.6
comp=N,10.0nm,2.7s,comp=E,15nm,3.3s
JTKR Abashiri--Toko 4.88 7 A A 04 02 53.6
comp=N,10.0nm,1.8s,comp=E,11nm,2.6s
JHG Hegura jima 4.96 257 A A 04 02 54.7
comp=N,15nm,2.7s,comp=E,16nm,3.1s
JOD2 Odawara 2 4.98 220 A A 04 02 54.9
comp=N,54nm,1.9s,comp=E,38nm,1.8s
JKA Kamikawa-asahi 4.99 356 **Pn** **04 02 52.4 -1.5**
JKA Kamikawa-asahi 4.99 356 **Sn** **04 03 46.2 -4.4**
ASAJ Asahikawa 4.99 356 Pn **Pn** **04 02 53.8 -0.2**
comp=E,17nm,0.3s,baz=207,slow=10.0,SNR=36
ASAJ Sn **Sn** **04 03 46.2 -4.4**
comp=E,47nm,0.3s,baz=157,slow=26,SNR=3.8
comp=E,53nm,0.4s
ASAJ Asahikawa 4.99 356 A A 04 02 55.2
comp=N,15nm,3.4s,comp=E,17nm,5.2s
JRA Rausu 5.05 17 A A 04 02 56.0
comp=N,12nm,2.4s,comp=E,11nm,2.0s
JNT Takato 5.07 232 A A 04 02 56.2
comp=N,26nm,4.8s,comp=E,20nm,4.6s
JYN Shimob 5.09 226 A A 04 02 56.5
comp=N,38nm,5.2s,comp=E,47nm,2.3s
JTT Ttatey 5.17 243 A A 04 02 57.5
comp=N,22nm,6.9s,comp=E,30nm,2.1s
RUSJ Misakicho 5.24 18 *e*P **Pn** **04 02 55.8 -1.5**
RUSJ *i* S **Sn** **04 03 51.5 -5.2**
JFNN Fujinakano 5.25 223 A A 04 02 58.6
comp=N,54nm,1.5s,comp=E,65nm,4.2s
JHTM Izuhatsuma 5.26 219 A A 04 02 58.8
comp=N,62nm,1.6s,comp=E,68nm,1.2s
JIM2 Oshima 3 5.27 214 A A 04 02 58.8
comp=N,44nm,1.0s,comp=E,39nm,1.7s
JSS Shosan 5.34 351 A A 04 03 00.0
comp=N,28nm,3.3s,comp=E,26nm,5.7s
YUK Yuzh-Kuril'sk 5.34 22 *e*P **Pn** **04 02 55.9 -2.8**
YUK *i* S **Sn** **04 03 52.6 -6.5**
YUK pmax pmax
comp=Z,779nm,0.5s
YUK pmax pmax
comp=N,326nm,0.3s
YUK pmax pmax
comp=E,280nm,0.2s
YUK smax smax
comp=E,3μm,0.7s
YUK smax smax
comp=N,4μm,0.5s
JGN Niukaw 5.38 239 A A 04 03 00.6
comp=N,10.0nm,8.0s,comp=E,10.0nm,3.8s
JJH Hakui 5.41 248 A A 04 03 00.9
comp=N,20nm,3.0s,comp=E,10.0nm,3.6s
JIZS Izushimoda 5.52 218 A A 04 03 02.4
comp=N,19nm,3.2s,comp=E,20nm,2.2s
JNY Yasuok 5.59 229 A A 04 03 03.3
comp=N,59nm,2.2s,comp=E,42nm,2.2s
SHZ3 Shizuoka 3 5.60 225 A A 04 03 03.5
comp=N,29nm,3.1s,comp=E,37nm,1.5s
JGF Kuroka 5.73 234 **Pn** **04 03 05.5 +1.2**
JGF Kuroka 5.73 234 P **Pn** **04 03 05.8 +1.6**
JGF Kuroka 5.73 234 A A 04 03 05.4
comp=N,16nm,6.5s,comp=E,13nm,4.1s
JSG Sagara 5.91 223 **Pn** **04 03 08.0 +1.4**
JSG Sagara 5.91 223 A A 04 03 07.8
comp=N,39nm,2.0s,comp=E,33nm,2.1s
JKKS Kakegawashinom 5.96 224 A A 04 03 08.5
comp=N,36nm,4.4s,comp=E,48nm,4.5s
JAO Obara 6.01 232 A A 04 03 09.3
comp=N,19nm,5.0s,comp=E,17nm,3.0s
HMMJ Hamamatsu 2 6.02 227 A A 04 03 09.5
comp=N,13nm,2.3s,comp=E,12nm,2.9s
JSSY Shinshiroyabe 6.10 228 A A 04 03 10.6
comp=N,14nm,3.7s,comp=E,13nm,3.7s
INU Inuyama 6.11 234 **Pn** **04 03 09.4 +0.1**
INU Inuyama 6.11 234 P **Pn** **04 03 10.9 +1.6**
JWK2 Keihoku 6.24 353 A A 04 03 12.6
comp=N,17nm,6.0s,comp=E,19nm,3.6s
JICN Ichinomiyachia 6.25 234 A A 04 03 12.6
comp=N,33nm,2.0s,comp=E,25nm,2.1s
TTO5 TONANKAI O.B.S 6.48 223 A A 04 03 15.8
comp=N,52nm,4.4s,comp=E,50nm,3.8s
JAA Atsumi 6.51 228 A A 04 03 16.3
comp=N,19nm,3.3s,comp=E,10.0nm,4.5s
JHJ2 Mitsune 6.55 204 **Pn** **04 03 14.5 -0.9**
JHJ2 Mitsune 6.55 204 P **Pn** **04 03 14.5 -0.9**
JHJ Hachijo jima 2 6.55 205 Pn **Pn** **04 03 14.2 -1.2**
comp=E,103nm,0.3s,baz=73,slow=14,SNR=6.8
JHJ Sn **Sn** **04 04 22.2 -6.9**
comp=E,118nm,0.3s,baz=209,slow=19,SNR=1.9
JHJ LR LR 04 06 19.8
comp=E,8μm,18.1s,baz=51,slow=43
comp=E,243nm,0.3s
JEG Eigenji 6.64 235 A A 04 03 18.1
comp=N,8.0nm,2.1s,comp=E,8.0nm,4.7s
JFM Mihama 6.67 240 A A 04 03 18.5
comp=N,10.0nm,5.7s,comp=E,9.0nm,2.7s
TTO4 TONANKAI O.B.S 6.76 223 A A 04 03 19.7
comp=N,47nm,3.6s,comp=E,37nm,3.1s
JIE Ise 6.94 229 A A 04 03 22.3
comp=N,9.0nm,3.4s,comp=E,8.0nm,5.5s
TTO3 TONANKAI O.B.S 6.95 223 A A 04 03 22.3
comp=N,49nm,3.6s,comp=E,41nm,2.9s
KUR Kuril'sk 7.07 29 *e*P **Pn** **04 03 19.8 -2.7**
KUR *i* S **Sn** **04 04 33.7 -8.1**
KUR pmax pmax
comp=Z,200nm,0.6s
KUR pmax pmax
comp=E,93nm,0.4s
KUR smax smax
comp=N,710nm,0.8s
KUR smax smax
comp=E,738nm,0.8s
TTO1 TONANKAI O.B.S 7.46 224 A A 04 03 29.5
comp=N,45nm,3.6s,comp=E,43nm,2.9s
TEY Ternei 7.59 323 *e*P Pn 04 03 22.7 -6.9
TEY 04 04 57.8
TEY pmax pmax
comp=N,120nm,1.1s
TEY pmax pmax
comp=E,50nm,1.1s
TEY pmax pmax
comp=Z,160nm,1.1s
TEY MLR MLR
comp=E,100nm,20.0s
TEY MLR MLR
comp=N,600nm,15.0s
TEY MLR MLR
comp=Z,800nm,16.0s
YSS Yuzhno-Sakhali 7.82 359 **Pn** **04 03 31.9 -0.9**
YSS Yuzhno-Sakhali 7.82 359 *c i*P **Pn** **04 03 32.0 -0.8**
YSS *e*S **Sn** **04 04 58.0 -2.2**
YSS pmax pmax
comp=Z,900nm,5.7s
YSS pmax pmax
comp=N,500nm,4.4s
YSS pmax pmax
comp=E,900nm,3.9s
YSS pmax pmax
comp=Z,250nm,1.1s
YSS smax smax
comp=E,2μm,7.8s
YSS MLR MLR
comp=Z,9μm,13.0s
YSS MLR MLR
comp=N,6μm,11.0s
YSS MLR MLR
comp=E,3μm,14.0s
JMN Monobe 9.13 237 **Pn** **04 03 51.4 +0.5**
JMN Monobe 9.13 237 P **Pn** **04 03 51.4 +0.5**
VLA Vladivostok 9.31 299 *de*P **Pn** **04 03 54.6 +1.4**
VLA MLR MLR
comp=Z,21μm,16.0s
MSHR Mys Shultsa 9.63 295⇑ *e*P **Pn** **04 03 58.8 +1.1**
USRK Ussuriysk Ar. 9.69 305 Pn **Pn** **04 03 59.6 +1.2**
comp=Z,4.7nm,0.3s,baz=108,slow=12,SNR=55
comp=Z,86nm,0.9s
PSTR Posyet 9.90 295 *de*P **Pn** **04 04 01.9 +0.6**
MDJ Mudanjiang 11.42 303 **Pn** **04 04 23.4 +1.3**
MDJ Mudanjiang 11.42 303 P **Pn** **04 04 23.5 +1.4**
MDJ S **Sn** **04 06 35.5 +7.0**
MDJ pmax pmax
comp=Z,47nm,1.6s
MDJ LR LR
comp=Z,13μm,15.5s
MDJ LR LR
comp=Z,24μm,14.8s
MDJ LR LR
comp=Z,39μm,17.5s
MDJ Mudanjiang 11.42 303 P **Pn** **04 04 22.8 +0.7**
JNU Nakatsue 11.51 242 Pn **Pn** **04 04 24.1 +0.7**
comp=Z,2.3nm,0.3s,baz=52,slow=6.7,SNR=35
JNU LR LR 04 09 12.7
comp=Z,21μm,19.2s,baz=52,slow=39
comp=Z,73nm,0.8s
JNU Nakatsue 11.51 242 **Pn** **04 04 24.0 +0.5**
JNU Nakatsue 11.51 242 P **Pn** **04 04 23.5 +0.1**
TYV Tymovskoe 11.73 359 *e*P **Pn** **04 04 25.3 -1.0**
TYV *e*S **Sn** **04 06 38.9 +2.7**
TYV pmax pmax
comp=Z,400nm,2.2s
TYV pmax pmax
comp=Z,73nm,1.0s
TYV smax smax
comp=N,1μm,2.6s
TYV smax smax
comp=E,600nm,2.6s
TYV smax smax
comp=N,35nm,1.4s
TYV smax smax
comp=E,39nm,1.4s
TYV MLR MLR
comp=Z,12μm,18.0s
TYV MLR MLR
comp=N,13μm,18.0s
JTU Tsushima 11.85 251 P **Pn** **04 04 29.4 +1.4**
KSRS Korea Array 11.99 267 Pn **Pn** **04 04 31.4 +1.4**
comp=N,1.5nm,0.3s,baz=85,slow=13,SNR=34
comp=N,50nm,0.9s
JCJ Chichijima 12.03 184 Pn Pn 04 04 16.6 -14
JCJ comp=N,26nm,0.3s,baz=281,slow=18,SNR=7.9 Sn Sn 04 06 18.4 -25
comp=N,44nm,0.3s,baz=30,slow=22,SNR=7.0
KS19 Wonju Array Si 12.03 267 **Pn** **04 04 30.4 -0.1**
KSAR Wonju Array Be 12.03 267 **Pn** **04 04 32.9 +2.5**
KSAR Wonju Array Be 12.03 267 P **Pn** **04 04 32.9 +2.5**
GRNR Gornyy 12.54 340⇑ *i*P **Pn** **04 04 36.2 -1.1**
GRNR pmax pmax
comp=N,30nm,1.2s
GRNR pmax pmax
comp=Z,40nm,1.2s
GRNR MLR MLR
comp=E,6μm,17.0s
GRNR MLR MLR
comp=N,3μm,18.0s
GRNR MLR MLR
comp=Z,7μm,15.0s
TJN Taejon 12.70 262 *ce*P **Pn** **04 04 41.1 +1.4**
INCN Inchon 12.99 268 P **Pn** **04 04 42.4 -1.3**
INCN S **Sn** **04 07 07.2 +0.1**
INCN Inchon 12.99 268 **Pn** **04 04 44.1 +0.5**
INCN Inchon 12.99 268 P **Pn** **04 04 44.1 +0.5**
BNX BinXian 13.29 305⇓ P **Pn** **04 04 47.3 -0.3**
BNX S **Sn** **04 07 14.8 +0.6**
BNX sS S 04 07 27.0 -11
BNX pmax pmax
comp=Z,110nm,1.1s
BNX pmax pmax
comp=Z,2μm,4.1s
BNX LR LR
comp=Z,10μm,16.0s
BNX LR LR
comp=Z,16μm,18.7s
BNX LR LR
comp=Z,27μm,16.3s
CN2 Changchun 13.98 295 *e*P **Pn** **04 04 56.0 -1.1**
CN2 *e*S **Sn** **04 07 38.0 +6.8**
CN2 pmax pmax
comp=Z,800nm,6.0s
CN2 LR LR
comp=Z,10μm,17.0s
CN2 LR LR
comp=Z,11μm,17.0s
CN2 LR LR
comp=Z,12μm,18.1s
OKH Okha 14.42 360 *de*P Pn 04 04 58.1 -4.9
OKH *e*S **Sn** **04 07 35.2 -6.5**
OKH pmax pmax
comp=Z,400nm,12.4s
OKH smax smax
comp=N,500nm,18.5s
OKH smax smax
comp=E,700nm,14.1s
OKH MLR MLR
comp=Z,9μm,15.0s
OKH MLR MLR
comp=N,14μm,15.0s
OKH MLR MLR
comp=E,8μm,16.0s
SNY Shenyang 15.05 287⇑ P **Pn** **04 05 10.0 -1.5**
SNY pmax pmax
comp=E,54nm,1.1s
SNY pmax pmax
comp=E,2μm,11.2s
SNY LR LR
comp=E,4μm,13.7s
SNY LR LR
comp=E,10μm,17.1s
SNY LR LR
comp=E,14μm,17.3s
HEH HeiHe 15.68 320 *e*P **Pn** **04 05 17.3 -2.4**
HEH pP **P** **04 05 23.3 -0.2**
HEH S **Sn** **04 08 10.5 -1.9**
HEH pmax pmax
comp=E,150nm,0.9s
HEH pmax pmax
comp=E,1μm,5.3s
HEH LR LR
comp=E,12μm,15.1s
HEH LR LR
comp=E,7μm,16.0s
HEH LR LR
comp=E,16μm,15.7s
JMZ Minamidaito 2 16.58 220 Pn **Pn** **04 05 30.6 -0.7**
JMZ IAmb IAmb 04 05 35.2
comp=Z,404nm,1.2s
DL2 Dalian 16.64 276 P **Pn** **04 05 30.8 -1.2**
DL2 PP **sP** **04 05 44.8 -0.6**
DL2 S **Sn** **04 08 36.0 +0.2**
DL2 SS **SnSn** **04 08 55.5 +6.7**
DL2 pmax pmax
comp=Z,360nm,1.1s
DL2 pmax pmax
comp=Z,2μm,4.5s
DL2 LR LR
comp=Z,8μm,15.6s
DL2 LR LR
comp=Z,10μm,15.2s
DL2 LR LR
comp=Z,14μm,17.3s
PEA0B Petropavlovsk- 17.23 31 **P** **04 05 40.4 -0.3**
PEA0B Petropavlovsk- 17.23 31 P **P** **04 05 40.4 -0.3**
PEA0B pmax pmax
comp=Z,80nm,1.1s
PETK Petropavlovsk- 17.23 31 P **P** **04 05 41.0 +0.3**
comp=Z,24nm,0.9s,baz=216,slow=7.3,SNR=8.6
PETK Petropavlovsk- 17.23 31 P **P** **04 05 40.1 -0.6**
PET Petropavlovsk 17.56 33 *e*P **Pn** **04 05 41.9 -1.6**
PET pmax pmax
comp=Z,122nm,1.6s
PET MLR MLR
comp=Z,4μm,15.0s
PET MLR MLR
comp=Z,4μm,14.0s
ZEA Zeya 18.15 329 *e*P **Pn** **04 05 47.6 -3.1**
ZEA *e*S Sn 04 08 55.3 -17
ZEA pmax pmax
comp=E,200nm,2.6s
ZEA pmax pmax
comp=N,200nm,1.6s
ZEA pmax pmax
comp=Z,400nm,1.4s
ZEA pmax pmax
comp=E,70nm,1.2s
ZEA pmax pmax
comp=N,120nm,0.8s
ZEA pmax pmax
comp=Z,310nm,1.4s
ZEA smax smax
comp=E,400nm,6.8s
ZEA MLR MLR
comp=E,900nm,16.0s
ZEA MLR MLR
comp=N,5μm,15.0s
ZEA MLR MLR
comp=Z,5μm,15.0s
HIA Hailar 19.46 309 IAmb IAmb 04 06 04.1
comp=Z,172nm,1.0s
HIA Hailar 19.46 309 P **P** **04 06 02.5 -2.8**
SSE Sheshan 19.56 252 P **P** **04 06 06.5 +0.1**
SSE S **S** **04 09 43.5 -2.1**
SSE pmax pmax
comp=Z,180nm,1.0s
SSE pmax pmax
comp=Z,360nm,4.1s
SSE LR LR
comp=Z,3μm,16.1s
SSE LR LR
comp=Z,2μm,16.4s
HILR Hailar Array B 19.57 310 P **P** **04 06 03.7 -2.8**
comp=Z,156nm,0.5s,baz=116,slow=13,SNR=216
HILR LR LR 04 13 53.1
comp=Z,13μm,18.4s,baz=95,slow=37
TIA Tai'an 20.69 270 P **P** **04 06 16.3 -2.5**
TIA pP **pP** **04 06 26.8 +0.4**
TIA sP **sP** **04 06 30.0 0.0**
TIA PP **PnPn** **04 06 40.5 +3.5**
TIA S **S** **04 09 58.5 -10**
TIA SS **SnSn** **04 10 35.5 +7.0**
TIA pmax pmax
comp=Z,110nm,1.7s
TIA pmax pmax
comp=Z,1μm,4.0s
TIA LR LR
comp=Z,4μm,12.6s
TIA LR LR
comp=Z,11μm,15.2s
TIA LR LR
comp=Z,16μm,15.7s
XLT XiLinHaoTe 20.70 292 *e*P **P** **04 06 16.3 -2.5**
XLT pP pP 04 06 24.5 -1.9
XLT sP sP 04 06 31.5 +1.5
XLT sS Sn 04 10 16.5 +2.6
XLT SS **SnSn** **04 10 33.8 +5.2**
XLT pmax pmax
comp=Z,110nm,1.2s
XLT pmax pmax
comp=Z,900nm,3.9s
XLT LR LR
comp=Z,8μm,15.6s
XLT LR LR
comp=Z,9μm,15.7s
BJI Beijing 20.70 281 P **P** **04 06 16.0 -2.7**
BJI PP **PnPn** **04 06 36.8 -0.2**
BJI S **S** **04 10 00.5 -7.8**
BJI pmax pmax
comp=Z,57nm,1.4s
BJI LR LR
comp=Z,1μm,13.1s
BJI LR LR
comp=Z,4μm,15.2s
BJI LR LR
comp=Z,6μm,15.8s
BJT Baijiatuan 20.70 281 P **P** **04 06 16.3 -2.5**
NJ2 Nanjing 20.86 258 *e*P **P** **04 06 18.5 -2.0**
NJ2 pP **pP** **04 06 26.5 -1.6**
NJ2 PP **PnPn** **04 06 42.0 +2.7**
NJ2 S **S** **04 10 03.3 -8.3**
NJ2 sS **pS** **04 10 24.8 -1.0**
NJ2 SS **SnSn** **04 10 41.5 +8.9**
NJ2 pmax pmax
comp=Z,52nm,1.3s
NJ2 pmax pmax
comp=Z,630nm,3.5s
NJ2 LR LR
comp=Z,4μm,16.4s
NJ2 LR LR
comp=Z,9μm,15.5s
NJ2 LR LR
comp=Z,10μm,14.5s
MA2 Magadan 21.05 11 P **P** **04 06 22.4 +0.1**
comp=Z,160nm,0.8s,baz=192,slow=8.8,SNR=42
MA2 LR LR 04 16 09.5
comp=Z,3μm,18.1s,baz=198,slow=41
comp=Z,160nm,0.8s
MA2 Magadan 21.05 11 **P** **04 06 22.1 -0.3**
MA2 IAmb IAmb 04 06 23.7
comp=Z,194nm,0.8s
MA2 Magadan 21.05 11 P **P** **04 06 22.6 +0.3**
MA2 Magadan 21.05 11 *c i*P **P** **04 06 22.6 +0.3**
MA2 pmax pmax
comp=Z,179nm,0.8s
MA2 MLR MLR
comp=Z,3μm,17.0s
MA2 Magadan 21.05 11 P **P** **04 06 22.0 -0.3**
comp=Z,288nm,0.8s
HNS HongShan 22.27 274⇑ P **P** **04 06 31.5 -4.2**
HNS PP **PnPn** **04 07 05.0 +6.4**
HNS S **S** **04 10 33.3 -5.7**
HNS sS **pS** **04 10 49.5 +0.7**
HNS SS **SnSn** **04 11 16.5 +9.3**
HNS pmax pmax
comp=Z,73nm,1.2s
HNS pmax pmax
comp=Z,870nm,5.2s
HNS LR LR
comp=Z,2μm,18.1s
HNS LR LR
comp=Z,12μm,15.5s
HNS LR LR
comp=Z,12μm,15.5s
TATO Taipei 23.00 239 P **P** **04 06 42.1 -1.4**
TATO Taipei 23.00 239 P **P** **04 06 42.0 -1.5**
YHNB Yeheng 23.29 238 **P** **04 06 43.6 -2.9**
YHNB IAmb IAmb 04 07 08.9
comp=Z,94nm,0.8s
YHNB Yeheng 23.29 238 P **P** **04 06 43.2 -3.2**
NACB Ninganchiao 23.48 237 **P** **04 06 44.8 -3.5**
NACB Ninganchiao 23.48 237 P **P** **04 06 44.8 -3.5**
TIY Taiyuan 23.96 276 P **P** **04 06 54.0 +1.1**
TIY pP **pP** **04 07 02.0 +1.0**
TIY S **S** **04 11 09.5 +1.8**
TIY pmax pmax
comp=Z,58nm,1.1s
TIY pmax pmax
comp=Z,450nm,5.4s
TIY LR LR
comp=Z,4μm,15.4s
TIY LR LR
comp=Z,7μm,15.6s
TIY LR LR
comp=Z,9μm,16.2s
HHC Hu-ho-hao-te 24.11 284⇑ *i*P **P** **04 06 51.3 -2.9**
HHC sP pwP 04 07 04.3 -0.4
HHC PP **PnPn** **04 07 23.5 -0.3**
HHC S **S** **04 11 02.5 -7.6**
HHC sS pS 04 11 17.8 -1.0
HHC SS **SnSn** **04 11 55.0 +2.7**
HHC pmax pmax
comp=Z,21nm,0.5s
HHC pmax pmax
comp=Z,200nm,3.8s
HHC LR LR
comp=Z,2μm,11.2s
HHC LR LR
comp=Z,10μm,11.3s
HHC LR LR
comp=Z,15μm,12.0s
CIT Chita 24.14 312 *e*P **P** **04 06 51.2 -3.1**
CIT *e* 04 06 58.6
CIT *e* 04 07 04.4
CIT *e* 04 07 29.2
CIT *e* 04 07 44.2
CIT *e*S **S** **04 11 11.0 +0.8**
CIT pmax pmax
comp=Z,1μm,1.9s
SSLB Suanglung 24.17 237 **P** **04 06 51.5 -3.3**
SSLB IAmb IAmb 04 07 07.9
comp=Z,126nm,0.8s
SSLB Suanglung 24.17 237 P **P** **04 06 51.5 -3.3**
YULB Yu-li 24.23 236 P **P** **04 06 51.6 -3.7**
YULB IAmb IAmb 04 07 16.0
comp=Z,108nm,0.9s

YULB	**Yu-li**	**24.23**	**236**	P	**P**	**04 06 52.0**	**-3.3**
YAK	**Yakutsk**	**24.34**	**345**	LR	LR	04 17 47.7	
	comp=Z,4µm,18.4s,baz=148,slow=40						
YAK	**Yakutsk**	**24.34**	**345**		**P**	**04 06 54.4**	**-1.6**
YAK	**Yakutsk**	**24.34**	**345**	*e*P	**P**	**04 06 54.2**	**-1.8**
YAK				*e**PP	**pP**	**04 07 02.5**	**-1.6**
YAK				*e*		04 07 25.1	
YAK				*e*PPP	PPP	04 07 35.6	
YAK				*e*S	**S**	**04 11 15.7**	**+2.5**
YAK				*e*SS	**SnSn**	**04 11 58.1**	**+0.6**
YAK				*e*SSS	SSS	04 12 14.4	
YAK				pmax	pmax		
	comp=Z,394nm,0.9s						
YAK				pmax	pmax		
	comp=N,84nm,1.1s						
YAK				pmax	pmax		
	comp=E,39nm,1.3s						
YAK				pmax	pmax		
	comp=Z,373nm,1.1s						
YAK				pmax	pmax		
	comp=N,475nm,1.5s						
YAK				pmax	pmax		
	comp=E,238nm,1.5s						
YAK				smax	smax		
	comp=E,883nm,3.3s						
YAK				smax	smax		
	comp=N,579nm,2.0s						
YAK				MLR	MLR		
	comp=Z,7µm,14.0s						
YAK				MLR	MLR		
	comp=E,1µm,10.0s						
YAK				MLR	MLR		
	comp=N,3µm,17.0s						
SEY	**Seymchan**	**24.49**	**10**	LR	LR	04 16 58.6	
	comp=N,2µm,19.4s,baz=200,slow=37						
SEY	**Seymchan**	**24.49**	**10***c**e*P		**P**	**04 06 58.2**	**+0.8**
SEY				pmax	pmax		
	comp=Z,118nm,0.9s						
TPUB	**Ta-pu**	**24.73**	**237**		**P**	**04 06 57.5**	**-2.4**
TPUB	**Ta-pu**	**24.73**	**237**	P	**P**	**04 06 57.0**	**-2.9**
TWG	**Pinlang**	**24.78**	**235**	P	**P**	**04 06 59.6**	**-0.8**
TWG				IAmb	IAmb	04 07 12.0	
	comp=Z,124nm,0.8s						
LYN	**LuoYang**	**24.82**	**269**	P	**P**	**04 06 57.5**	**-3.1**
LYN				S	**S**	**04 11 17.5**	**-3.9**
LYN				SS	**SnSn**	**04 12 15.5**	**+5.8**
LYN				pmax	pmax		
	comp=Z,180nm,0.9s						
LYN				pmax	pmax		
	comp=Z,2µm,3.8s						
LYN				LR	LR		
	comp=Z,9µm,15.1s						
LYN				LR	LR		
	comp=Z,13µm,14.8s						
LYN				LR	LR		
	comp=Z,18µm,15.8s						
WHN	**Wuhan**	**24.98**	**259**	⇑P	**P**	**04 07 01.5**	**-0.5**
WHN				pP	**pP**	**04 07 10.8**	**+0.7**
WHN				S	**S**	**04 11 21.8**	**-2.1**
WHN				sS	**sS**	**04 11 38.5**	**+0.9**
WHN				pmax	pmax		
	comp=Z,970nm,1.1s						
WHN				LR	LR		
	comp=Z,10µm,13.5s						
WHN				LR	LR		
	comp=Z,29µm,13.9s						
WHN				LR	LR		
	comp=Z,34µm,14.1s						
QZH	**Quanzhou**	**24.99**	**243**	P	**P**	**04 07 01.8**	**-0.4**
QZH				S	**S**	**04 11 22.5**	**-1.7**
QZH				LR	LR		
	comp=Z,8µm,14.1s						
QZH				LR	LR		
	comp=Z,6µm,14.3s						
QZH				LR	LR		
	comp=Z,11µm,14.5s						
SHEM	**Shemya Is, Ala**	**25.29**	**47**	LR	LR	04 15 27.3	
	comp=Z,969nm,21.3s,baz=275,slow=33						
BTO	**Baotou**	**25.30**	**284**	*e*P	**P**	**04 07 03.8**	**-1.3**
BTO				pP	**pP**	**04 07 13.3**	**+0.1**
BTO				PP	**PnPn**	**04 07 42.5**	**+2.4**
BTO				S	**S**	**04 11 25.5**	**-3.7**
BTO				SS	**SnSn**	**04 12 26.3**	**+4.8**
BTO				pmax	pmax		
	comp=Z,290nm,1.3s						
BTO				pmax	pmax		
	comp=Z,2µm,5.2s						
BTO				LR	LR		
	comp=Z,9µm,14.1s						
BTO				LR	LR		
	comp=Z,30µm,16.8s						
BTO				LR	LR		
	comp=Z,38µm,16.7s						
KNMB	**Chin-men Tao**	**25.44**	**242**	P	**P**	**04 07 06.8**	**+0.5**
KNMB				IAmb	IAmb	04 07 29.9	
	comp=Z,126nm,1.1s						
GUMO	**Guam**	**25.50**	**176**	LR	LR	04 15 53.1	
	comp=Z,2µm,21.9s,baz=7.5,slow=33						
CNSH	**ChangSha**	**27.22**	**255**	P	**P**	**04 07 21.8**	**-0.5**
CNSH				S	**S**	**04 12 02.8**	**+3.4**
CNSH				pmax	pmax		
	comp=Z,190nm,1.1s						
CNSH				LR	LR		
	comp=Z,4µm,15.3s						
CNSH				LR	LR		
	comp=Z,3µm,13.7s						
CNSH				LR	LR		
	comp=Z,6µm,14.0s						
ULN	**Ulaanbaatar**	**27.31**	**300**		**P**	**04 07 23.2**	**-0.1**
ULN				IAmb	IAmb	04 07 24.6	
	comp=Z,100nm,1.1s						
ULN	**Ulaanbaatar**	**27.31**	**300***c**e*P		**P**	**04 07 23.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,113nm,1.3s						
SONM	**Songino Array**	**27.75**	**300**	P	**P**	**04 07 27.1**	**-0.1**
	comp=Z,32nm,0.7s,baz=90,slow=9.7,SNR=146						
SONM				ScP	**ScP**	**04 14 20.4**	**-1.2**
	comp=Z,1.6nm,1.1s,baz=112,slow=1.6,SNR=4.6						
SONM				LR	LR	04 18 55.9	
	comp=Z,11µm,19.2s,baz=100,slow=37						
	comp=Z,32nm,0.7s						
XAN	**Xi'an**	**27.75**	**270**	⇑P	**P**	**04 07 25.8**	**-1.4**
XAN				pP	pP	04 07 35.5	+0.1
XAN				S	**S**	**04 12 05.5**	**-2.5**
XAN				sS	sS	04 12 24.8	+3.0
XAN				pmax	pmax		
	comp=Z,95nm,1.2s						
XAN				pmax	pmax		
	comp=Z,1µm,10.1s						
XAN				LR	LR		
	comp=Z,7µm,19.2s						
XAN				LR	LR		
	comp=Z,6µm,19.2s						
XAN				LR	LR		
	comp=Z,5µm,17.9s						
H11N2	**WAKE ISLAND Hy**	**28.24**	**126**	T	T	04 38 12.0	
	baz=317,slow=75,SNR=329						
H11N1	**WAKE ISLAND Hy**	**28.25**	**126**	T	T	04 38 12.0	
	baz=317,slow=75,SNR=605						
H11N3	**WAKE ISLAND Hy**	**28.26**	**126**	T	T	04 38 12.7	
	baz=317,slow=75,SNR=596						
ENH	**Enshi**	**28.83**	**262**	P	**P**	**04 07 36.3**	**-0.5**
H11S1	**WAKE ISLAND Hy**	**29.04**	**128**	T	T	04 39 11.3	
	baz=318,slow=76,SNR=95						
H11S3	**WAKE ISLAND Hy**	**29.04**	**128**	T	T	04 39 14.4	
	baz=318,slow=76,SNR=100						
H11S2	**WAKE ISLAND Hy**	**29.06**	**128**	T	T	04 39 12.3	
	baz=318,slow=76,SNR=57						
IRK	**Irkutsk**	**29.70**	**309**	*e*P	**P**	**04 07 43.4**	**-0.9**
IRK				pmax	pmax		
	comp=Z,242nm,1.8s						
GZH	**Guangzhou**	**29.86**	**246**	P	**P**	**04 07 41.5**	**-4.4**
GZH				S	**S**	**04 12 36.8**	**-4.2**
GZH				LR	LR		
	comp=Z,9µm,16.9s						
GZH				LR	LR		
	comp=Z,6µm,13.7s						
GZH				LR	LR		
	comp=Z,15µm,15.7s						
TLY	**Talaya**	**29.99**	**308**	P	**P**	**04 07 46.9**	**+0.1**
TLY				P	**P**	**04 07 46.9**	**+0.1**
TLY				S	**S**	**04 12 44.8**	**+2.1**
TLY				S	**S**	**04 12 44.8**	**+2.1**
TLY	**Talaya**	**29.99**	**308**		**P**	**04 07 47.0**	**+0.1**
TLY	**Talaya**	**29.99**	**308***c* i*P*		**P**	**04 07 46.7**	**-0.1**
TLY				pmax	pmax		
	comp=Z,135nm,1.7s						
TLY				MLR	MLR		
	comp=Z,10µm,16.0s						
ZAK	**Zakamensk**	**30.04**	**305**	*e*P	**P**	**04 07 46.9**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,207nm,1.4s						
GULI	**GuiLin**	**30.71**	**253**	P	**P**	**04 07 53.8**	**+0.4**
GULI				S	**S**	**04 12 54.5**	**+0.1**
GULI				pmax	pmax		
	comp=Z,130nm,1.3s						
GULI				LR	LR		
	comp=Z,4µm,16.8s						
GULI				LR	LR		
	comp=Z,3µm,14.6s						
GULI				LR	LR		
	comp=Z,4µm,14.1s						
LZH	**Lanzhou**	**31.03**	**277**	⇑P	**P**	**04 07 55.5**	**-0.9**
LZH				sP	sP	04 08 09.5	+1.4
LZH				S	**S**	**04 13 03.8**	**+4.2**
LZH				pmax	pmax		
	comp=Z,160nm,1.8s						
LZH				pmax	pmax		
	comp=Z,660nm,4.5s						
LZH				LR	LR		
	comp=Z,6µm,14.9s						
LZH				LR	LR		
	comp=Z,10µm,18.1s						
LZH				LR	LR		
	comp=Z,11µm,16.8s						
LZDM	**Lanzhou Array**	**31.19**	**277**	P	**P**	**04 07 57.1**	**-0.8**
	comp=Z,53nm,0.9s,baz=106,slow=4.8,SNR=48						
LZDM				LR	LR	04 21 23.5	
	comp=Z,7µm,18.6s,baz=60,slow=38						
	comp=Z,53nm,0.9s						
MOY	**Mondy**	**31.62**	**307**	*e*P	**P**	**04 08 01.1**	**-0.3**
MOY				pmax	pmax		
	comp=Z,270nm,1.9s						
GYA	**Guiyang**	**32.86**	**258**	⇑P	**P**	**04 08 12.0**	**-0.5**
GYA				pP	pP	04 08 20.0	-0.7
GYA				PP	**PnPn**	**04 09 16.0**	**-5.6**
GYA				S	**S**	**04 13 26.0**	**-2.3**
GYA				pmax	pmax		
	comp=Z,510nm,0.9s						
GYA				LR	LR		
	comp=Z,4µm,16.6s						
GYA				LR	LR		
	comp=Z,4µm,14.2s						
GYA				LR	LR		
	comp=Z,7µm,19.8s						
CD2	**Chengdu**	**32.99**	**268**	⇑P	**P**	**04 08 12.5**	**-1.0**
CD2				S	**S**	**04 13 28.5**	**-1.5**
CD2				pmax	pmax		
	comp=Z,200nm,1.1s						
CD2				pmax	pmax		
	comp=Z,1µm,5.8s						
CD2				LR	LR		
	comp=Z,10µm,15.2s						
CD2				LR	LR		
	comp=Z,5µm,14.6s						
CD2				LR	LR		
	comp=Z,12µm,13.3s						
GTA	**Gaotai**	**33.22**	**284**	⇑P	**P**	**04 08 15.5**	**0.0**
GTA				pP	sP	04 08 27.0	-0.2
GTA				PcP	**PcP**	**04 10 58.0**	**+0.4**
GTA				S	**S**	**04 13 27.8**	**-5.8**
GTA				PcS	**PcS**	**04 14 43.5**	**+0.2**
GTA				SS	**SnSn**	**04 15 36.0**	**+1.5**
GTA				ScS	**ScS**	**04 18 40.0**	**-0.4**
GTA				pmax	pmax		
	comp=Z,52nm,0.8s						
GTA				pmax	pmax		
	comp=Z,930nm,9.6s						
GTA				LR	LR		
	comp=Z,5µm,17.9s						
GTA				LR	LR		
	comp=Z,15µm,18.7s						
GTA				LR	LR		
	comp=Z,19µm,18.3s						
TIXI	**Tiksi**	**33.38**	**352**	LR	LR	04 23 08.0	
	comp=Z,2µm,19.3s,baz=172,slow=38						
TIXI	**Tiksi**	**33.38**	**352**		**P**	**04 08 15.7**	**-0.6**
TIXI	**Tiksi**	**33.38**	**352**‖	*e*P	**P**	**04 08 15.7**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,26nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,2µm,15.0s						
KNGR	**Kungurtug, Tuv**	**33.73**	**305**⇑	*e*P	**P**	**04 08 19.9**	**+0.1**
KNGR				pmax	pmax		
	comp=Z,91nm,1.1s						
KNGR				MLR	MLR		
	comp=Z,10µm,15.0s						
QIZ	**Qiongzhong**	**34.97**	**245**	P	**P**	**04 08 31.3**	**+0.6**
QIZ				S	**S**	**04 14 03.3**	**+2.6**
QIZ				LR	LR		
	comp=Z,4µm,16.4s						
QIZ				LR	LR		
	comp=Z,4µm,15.5s						
QIZ				LR	LR		
	comp=Z,8µm,14.9s						
P08K	**Saint George I**	**35.44**	**45**	P	**P**	**04 08 34.1**	**-0.2**
	baz=261						
NIKH	**Nikolski High**	**35.45**	**51**	P	**P**	**04 08 35.0**	**+0.5**
	baz=267						
DAV	**Davao City (W)**	**35.59**	**211**	LR	LR	04 25 11.1	
	comp=Z,1µm,18.0s,baz=18,slow=40						
GAMB	**Gambell**	**36.26**	**32**	P	**P**	**04 08 42.2**	**+1.0**
	baz=249						
KMI	**Kunming**	**36.57**	**260**	⇑P	**P**	**04 08 44.5**	**-0.1**
KMI				pP	pwP	04 08 54.0	-1.1
KMI				PP	**PP**	**04 10 08.5**	**+0.4**
KMI				S	**S**	**04 14 23.0**	**-2.5**
KMI				pmax	pmax		
	comp=Z,440nm,1.0s						
KMI				pmax	pmax		
	comp=Z,810nm,3.7s						
KMI				LR	LR		
	comp=Z,5µm,17.9s						
KMI				LR	LR		
	comp=Z,5µm,17.9s						
KMI				LR	LR		
	comp=Z,6µm,19.2s						
PZH	**PanZhiHua**	**36.62**	**262**	P	**P**	**04 08 44.5**	**-0.4**
PZH				pP	**pwP**	**04 08 54.8**	**-0.6**
PZH				S	**S**	**04 14 24.0**	**-2.1**
PZH				sS	**sS**	**04 14 43.3**	**+3.3**
PZH				pmax	pmax		
	comp=Z,190nm,1.2s						
PZH				pmax	pmax		
	comp=Z,1µm,3.5s						
PZH				LR	LR		
	comp=Z,2µm,14.1s						
PZH				LR	LR		
	comp=Z,2µm,14.1s						
PZH				LR	LR		
	comp=Z,3µm,12.9s						
UNV	**Unalaska Valle**	**36.90**	**50**	P	**P**	**04 08 47.9**	**+1.1**
	baz=268						
M11K	**Mekoryuk**	**37.83**	**39**	P	**P**	**04 08 55.3**	**+0.7**
	baz=259						
GOMU	**GeErMu**	**37.93**	**281**	P	**P**	**04 08 56.3**	**0.0**
GOMU				pP	pP	04 08 59.5	-5.1
GOMU				sP	pwP	04 09 04.0	-2.7
GOMU				PP	**PnPn**	**04 10 24.0**	**-0.4**
GOMU				S	S	04 14 37.5	-8.9
GOMU				pmax	pmax		
	comp=Z,28nm,0.8s						
GOMU				LR	LR		
	comp=Z,3µm,15.9s						
GOMU				LR	LR		
	comp=Z,2µm,15.8s						
GOMU				LR	LR		
	comp=Z,4µm,15.4s						
TNA	**Tin City**	**38.40**	**30**	P	**P**	**04 09 00.2**	**+0.8**
	baz=251						
FALS	**False Pass**	**38.74**	**48**	P	**P**	**04 09 02.8**	**+0.5**
	baz=269						
K13K	**Kusilvak Mount**	**38.86**	**37**	P	**P**	**04 09 03.7**	**+0.5**
	baz=259						
F14K	**Arctic Creek**	**39.01**	**31**	P	**P**	**04 09 04.2**	**-0.3**
	baz=253						
ANM	**Nome**	**39.14**	**32**	P	**P**	**04 09 06.7**	**+1.0**
ANM				IAmb	IAmb	04 09 36.9	
	comp=Z,78nm,1.3s						
ANM	**Nome**	**39.14**	**32**	P	**P**	**04 09 06.7**	**+1.0**
ANM				pmax	pmax		
	comp=Z,79nm,1.3s						
ANM	**Nome**	**39.14**	**32**	P	**P**	**04 09 05.8**	**+0.2**
	baz=255						
M13K	**Dall Lake**	**39.23**	**39**	P	**P**	**04 09 08.4**	**+2.1**
M13K				IAmb	IAmb	04 09 15.2	
	comp=Z,77nm,1.1s						
M13K	**Dall Lake**	**39.23**	**39**	P	**P**	**04 09 07.5**	**+1.2**
	baz=262						
J14K	**Nanvaranak Lak**	**39.52**	**36**	P	**P**	**04 09 10.0**	**+1.2**
J14K	**Nanvaranak Lak**	**39.52**	**36**	P	**P**	**04 09 08.2**	**-0.5**
	baz=259						
S12K	**Black Hills**	**39.53**	**47**	P	**P**	**04 09 08.6**	**-0.4**
	baz=269						
L14K	**Kuka Creek**	**39.68**	**38**	IAmb	IAmb	04 09 27.3	
	comp=Z,117nm,1.7s						
L14K	**Kuka Creek**	**39.68**	**38**	P	**P**	**04 09 10.6**	**+0.5**
	baz=262						
F15K	**North Star Dit**	**39.74**	**31**	P	**P**	**04 09 12.4**	**+1.8**
F15K	**North Star Dit**	**39.74**	**31**	P	**P**	**04 09 10.9**	**+0.3**
	baz=254						
G15K	**Niukluk**	**39.80**	**32**	P	**P**	**04 09 11.2**	**+0.1**
	baz=256						
TNCH	**TengChong**	**39.86**	**263**	P	**P**	**04 09 12.8**	**+0.5**
TNCH				pP	pwP	04 09 22.5	-0.3
TNCH				sP	sP	04 09 26.8	+2.7
TNCH				S	**S**	**04 15 13.8**	**-1.5**
TNCH				sS	sS	04 15 32.5	+3.2
TNCH				pmax	pmax		
	comp=Z,210nm,1.5s						
TNCH				pmax	pmax		
	comp=Z,2µm,2.7s						
TNCH				LR	LR		
	comp=Z,4µm,15.0s						
TNCH				LR	LR		
	comp=Z,2µm,15.0s						
TNCH				LR	LR		
	comp=Z,4µm,15.4s						
M14K	**Bethel**	**39.95**	**39**		**P**	**04 09 14.6**	**+2.2**
M14K				IAmb	IAmb	04 09 28.0	
	comp=Z,80nm,1.1s						
M14K	**Bethel**	**39.95**	**39**	P	**P**	**04 09 12.6**	**+0.3**
	baz=263						
N14K	**Kuskokwak Cree**	**39.99**	**40**	P	**P**	**04 09 13.0**	**+0.3**
	baz=264						
O14K	**Tigyukauivet M**	**40.14**	**41**	P	**P**	**04 09 14.4**	**+0.4**
	baz=266						
DGZ	**Jazzator, Alta**	**40.24**	**304***c* i*P*		**P**	**04 09 16.1**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,107nm,0.9s						
DGZ				MLR	MLR		
	comp=Z,19µm,16.0s						
C16K	**Lisburne Hills**	**40.26**	**27**	P	**P**	**04 09 14.7**	**-0.1**
	baz=251						
L15K	**Ungalak Mounta**	**40.30**	**37**	P	**P**	**04 09 15.3**	**0.0**
	baz=262						
K15K	**Wolf Creek Mou**	**40.37**	**36**	P	**P**	**04 09 15.6**	**-0.3**
	baz=262						
SDPT	**Sand Point**	**40.43**	**47**	P	**P**	**04 09 16.3**	**-0.1**
	baz=271						
MYLDM	**Lahad Datu**	**40.44**	**220**	IAmb	IAmb	04 10 00.1	
	comp=Z,90nm,1.0s						
H16K	**Elim**	**40.47**	**33**	P	**P**	**04 09 16.6**	**-0.1**
	baz=258						
M15K	**Kasigluk River**	**40.57**	**39**	P	**P**	**04 09 17.7**	**+0.2**
	baz=264,SNR=5.4						
G16K	**Koyuk River**	**40.59**	**32**	P	**P**	**04 09 17.6**	**0.0**
	baz=257						
TNTI	**Ternate**	**40.78**	**204**	IAmb	IAmb	04 09 59.5	
	comp=Z,92nm,1.1s						
TNTI	**Ternate**	**40.78**	**204**	P	**P**	**04 09 19.9**	**+0.2**
	comp=Z,1µmcomp=Z,87nm,1.4s						
N15K	**Kwethluk River**	**40.81**	**40**	IAmb	IAmb	04 09 37.2	
	comp=Z,174nm,1.5s						
N15K	**Kwethluk River**	**40.81**	**40**	P	**P**	**04 09 19.9**	**+0.4**
	baz=266						
PASG	**PASIGHAT**	**40.83**	**269**	*e*P	P	04 09 20.5	-23
PASG				IAmb	IAmb	04 09 31.2	
	comp=Z,58nm,1.6s						
O15K	**Ungaliktiuk R**	**40.88**	**41**	P	**P**	**04 09 20.3**	**+0.2**
	baz=267						
D17K	**Noatak River**	**40.89**	**28**	P	**P**	**04 09 20.1**	**0.0**
	baz=254,SNR=7.0						
J16K	**Anvik River**	**40.94**	**35**	P	**P**	**04 09 20.9**	**+0.3**
	baz=261						
S14K	**Fog Glacier**	**40.94**	**46**	P	**P**	**04 09 20.3**	**-0.5**
	baz=270						
CHNA	**Chernabura Isl**	**40.95**	**48**	P	**P**	**04 09 21.0**	**+0.3**
	baz=272						
I17K	**Unalakleet**	**40.99**	**34**	P	**P**	**04 09 21.2**	**+0.3**
	baz=261						
RDOG	**Red Dog Mine**	**41.06**	**28**	P	**P**	**04 09 21.8**	**+0.3**
	baz=254						
WMQ	**Urumqi**	**41.07**	**295**	*e*P	**P**	**04 09 22.8**	**+0.8**
WMQ				pP	pwP	04 09 31.8	-0.8
WMQ				S	**S**	**04 15 30.8**	**-2.0**
WMQ				sS	sS	04 15 47.5	+0.6
WMQ				pmax	pmax		
	comp=Z,110nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,13.3s						
WMQ				LR	LR		
	comp=Z,3µm,15.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.3s						
C17K	**DeLong Mountai**	**41.08**	**27**	P	**P**	**04 09 21.6**	**-0.1**
	baz=253						
E17K	**Hotham Inlet**	**41.20**	**29**	P	**P**	**04 09 22.9**	**+0.3**
	baz=256,SNR=9.3						
SWI	**Sorong**	**41.24**	**198**	P	**P**	**04 09 25.2**	**+1.7**
	comp=Z,3µmcomp=Z,53nm,1.1s						
L16K	**Owhat River**	**41.26**	**38**	P	**P**	**04 09 23.7**	**+0.5**
	baz=264						
F17K	**Baldwin Pennin**	**41.27**	**30**	P	**P**	**04 09 23.2**	**0.0**
	baz=257,SNR=13						
G17K	**Kiwalik Mounta**	**41.31**	**32**	P	**P**	**04 09 23.6**	**+0.1**
	baz=259						
M16K	**Timber Creek**	**41.44**	**39**	IAmb	IAmb	04 09 51.0	
	comp=Z,89nm,1.5s						
M16K	**Timber Creek**	**41.44**	**39**	P	**P**	**04 09 24.8**	**+0.1**
	baz=266						
ZAA0	**Zalesovo Array**	**41.48**	**311**	IAmb	IAmb	04 09 26.2	
	comp=Z,178nm,1.4s						
ZALV	**Zalesovo Beam**	**41.48**	**311**	P	**P**	**04 09 24.7**	**-0.4**
	comp=Z,35nm,0.5s,baz=90,slow=7.5,SNR=170						
ZALV				PcP	**PcP**	**04 11 22.5**	**+0.2**
	comp=Z,20nm,0.8s,baz=72,slow=4.7,SNR=3.6						
ZALV				LR	LR	04 27 22.7	
	comp=Z,7µm,18.9s,baz=84,slow=37						
	comp=Z,35nm,0.5s						
N16K	**Nishlik Lake**	**41.49**	**39**	P	**P**	**04 09 25.1**	**-0.1**
	baz=266						
JAY	**Jayapura**	**41.50**	**184**	LR	LR	04 27 34.1	
	comp=Z,370nm,19.0s,baz=12,slow=37						
JAY	**Jayapura**	**41.50**	**184**	P	**P**	**04 09 26.8**	**+1.2**
	comp=Z,143nm,1.1s						
H17K	**Granite Mounta**	**41.51**	**33**	P	**P**	**04 09 25.0**	**-0.2**
	baz=260,SNR=10						
GENI	**Genyem**	**41.60**	**184**	P	**P**	**04 09 27.8**	**+1.3**
J17K	**VABM Dome**	**41.63**	**35**	IAmb	IAmb	04 09 44.3	
	comp=Z,87nm,1.2s						
J17K	**VABM Dome**	**41.63**	**35**	P	**P**	**04 09 26.1**	**-0.1**
	baz=263						
E18K	**Tukpahlearik C**	**41.74**	**29**	P	**P**	**04 09 27.3**	**+0.3**
	baz=257						
O16K	**Kokwok River B**	**41.78**	**41**	P	**P**	**04 09 27.7**	**+0.2**
	baz=268						
B18K	**Kokolik River**	**41.82**	**26**	P	**P**	**04 09 27.6**	**-0.1**
	baz=253						
C18K	**Utukok River**	**41.83**	**27**	IAmb	IAmb	04 09 40.7	
	comp=Z,65nm,0.9s						
C18K	**Utukok River**	**41.83**	**27**	P	**P**	**04 09 28.0**	**+0.1**
	baz=255						
L17K	**Donlin**	**41.85**	**37**	P	**P**	**04 09 28.6**	**+0.5**
	baz=265						
K17K	**Iditarod**	**41.91**	**36**	IAmb	IAmb	04 09 45.8	
	comp=Z,81nm,1.1s						
K17K	**Iditarod**	**41.91**	**36**	P	**P**	**04 09 28.6**	**+0.1**
	baz=264,SNR=8.5						
NRIK	**Noril'sk**	**41.92**	**334**	LR	LR	04 28 00.1	
	comp=Z,8µm,19.1s,baz=105,slow=38						
F18K	**Selawik**	**41.93**	**30**	P	**P**	**04 09 28.3**	**-0.2**
	baz=259,SNR=6.2						
KMSI	**Cibinong**	**42.15**	**209**	P	**P**	**04 09 32.0**	**+1.0**
G18K	**Tagagawik**	**42.19**	**31**	P	**P**	**04 09 30.3**	**-0.5**
	baz=260						
H18K	**Honhosa River**	**42.19**	**32**	IAmb	IAmb	04 09 53.7	
	comp=Z,56nm,1.0s						

H18K	**Honhosa River**	42.19	32	P		P		04 09 31.3	+0.5
	baz=262								
M17K	**Holitna River**	42.20	38	IAmb		IAmb		04 10 07.5	
	comp=Z,69nm,1.1s								
M17K	**Holitna River**	42.20	38	P		P		04 09 30.9	0.0
	baz=266								
ZIRO	**ZIRO**	42.23	269	*e*P		P		04 09 32.2	+0.4
ZIRO				IAmb		IAmb		04 09 44.8	
	comp=Z,88nm,1.4s								
ZSN	**Zaisan**	42.27	301	*e*P		P		04 09 31.4	-0.2
	comp=Z,142nm,1.2s								
ZSN				*e*S		S		04 15 50.1	-0.1
ZSN	**Zaisan**	42.27	301	*e*P		P		04 09 31.4	-0.2
ZSN				*e*S		S		04 15 50.1	-0.1
ZSN				pmax		pmax			
	comp=Z,142nm,1.2s								
N17K	**Nushagak Hills**	42.28	39	P		P		04 09 31.2	-0.3
	baz=268								
O17K	**Koliganek Bris**	42.30	41	P		P		04 09 31.2	-0.5
	baz=269								
JORH	**JORHAT**	42.30	268	*e*P		P		04 09 33.0	+0.8
MOKO	**MOKOCHONG**	42.30	267	*e*P		P		04 09 32.8	+0.4
MOKO				IAmb		IAmb		04 09 45.4	
	comp=Z,44nm,0.8s								
A19K	**Wainwright**	42.31	25	P		P		04 09 31.0	-0.6
	baz=253								
GTOI	**Gorontalo**	42.47	210	P		P		04 09 33.1	-0.4
	comp=Z,2µmcomp=Z,111nm,1.2s								
Q16K	**King Salmon**	42.51	42	P		P		04 09 32.7	-0.7
	baz=270								
C19K	**Lookout Ridge**	42.51	27	IAmb		IAmb		04 10 04.1	
	comp=Z,95nm,1.3s								
C19K	**Lookout Ridge**	42.51	27	P		P		04 09 32.3	-1.1
	baz=256								
ITAN	**ITANAGAR**	42.52	269	*e*P		P		04 09 34.5	+0.6
ITAN				IAmb		IAmb		04 09 48.8	
	comp=Z,66nm,1.2s								
L18K	**Granite Mounta**	42.61	37	P		P		04 09 34.1	-0.1
	baz=266								
J18K	**Innoko River**	42.70	35	P		P		04 09 34.8	-0.2
	baz=265								
F19K	**Shaleruckik Mo**	42.70	30	IAmb		IAmb		04 10 11.7	
	comp=Z,180nm,1.9s								
F19K	**Shaleruckik Mo**	42.70	30	P		P		04 09 34.4	-0.5
	baz=260								
GCSA	**Galena City Sc**	42.76	33	P		P		04 09 35.4	0.0
	baz=263								
G19K	**Purcell Mounta**	42.86	31	P		P		04 09 36.3	0.0
	baz=262,SNR=11								
D19K	**Kuna River**	42.89	28	IAmb		IAmb		04 09 49.8	
	comp=Z,72nm,0.9s								
D19K	**Kuna River**	42.89	28	P		P		04 09 36.0	-0.5
	baz=258								
Q17K	**Contact Creek**	42.91	43	P		P		04 09 36.8	-0.1
	baz=271								
N18K	**Kilae Creek**	42.92	39	IAmb		IAmb		04 09 55.1	
	comp=Z,69nm,1.1s								
N18K	**Kilae Creek**	42.92	39	P		P		04 09 36.5	-0.3
	baz=269								
KOHI	**KOHIMA**	42.92	267	*e*P		P		04 09 36.9	-0.5
KOHI				IAmb		IAmb		04 09 49.8	
	comp=Z,73nm,1.1s								
M18K	**Stony River**	42.98	38	P		P		04 09 37.2	0.0
	baz=268								
FAKI	**Fak Fak**	43.01	196	IAmb		IAmb		04 09 46.3	
	comp=Z,76nm,0.9s								
FAKI	**Fak Fak**	43.01	196	P		P		04 09 38.2	+0.3
FAKI	**Fak Fak**	43.01	196	P		P		04 09 38.7	+0.8
	comp=Z,1µmcomp=Z,89nm,0.8s								
E19K	**Redstone River**	43.02	29	IAmb		IAmb		04 10 02.1	
	comp=Z,59nm,1.1s								
E19K	**Redstone River**	43.02	29	P		P		04 09 38.4	+0.9
	baz=260								
H19K	**Roundabout Mou**	43.04	32	IAmb		IAmb		04 10 00.1	
	comp=Z,98nm,1.1s								
H19K	**Roundabout Mou**	43.04	32	P		P		04 09 38.6	+1.0
	baz=263								
MRSI	**Marisa**	43.05	212	P		P		04 09 38.9	+0.7
	comp=Z,3µmcomp=Z,240nm,1.3s								
CHTO	**Chiang Mai**	43.06	255	P		P		04 09 38.0	-0.4
CHTO				S		S		04 16 01.4	-1.0
CHTO	**Chiang Mai**	43.06	255			P		04 09 38.5	+0.2
CHTO				IAmb		IAmb		04 09 39.9	
	comp=Z,146nm,1.2s								
CHTO	**Chiang Mai**	43.06	255	P		P		04 09 38.6	+0.2
CHTO				pmax		pmax			
	comp=Z,146nm,1.3s								
CHIR	**Chirikof Islan**	43.16	46	P		P		04 09 39.2	+0.4
	baz=274								
J19K	**Poorman**	43.23	34	P		P		04 09 39.9	+0.6
	baz=265,SNR=12								
P18K	**Big Mountain,**	43.24	41	P		P		04 09 40.0	+0.5
	baz=271								
O18K	**Koktuh Hills**	43.25	40	P		P		04 09 39.7	+0.3
	baz=270								
CM31	**Chiang Mai Arr**	43.28	254	P		P		04 09 40.3	+0.1
	SNR=15								
CMAR	**Chiang Mai Arr**	43.28	254	P		P		04 09 40.2	0.0
	comp=Z,22nm,0.8s,baz=41,slow=6.9,SNR=6.1								
CMAR				PcP		PcP		04 11 29.9	+1.0
	comp=Z,4.2nm,0.5s,baz=50,slow=2.9,SNR=2.5								
CMAR				LR		LR		04 31 14.8	
	comp=Z,676nm,18.2s,baz=55,slow=41								
	comp=Z,22nm,0.8s								
CMAR	**Chiang Mai Arr**	43.28	254	*i* P		P		04 09 38.9	-1.3
CMAR				pmax		pmax			
	comp=Z,21nm,0.8s								
LSA	**Lhasa**	43.32	274	P		P		04 09 37.3	-3.6
LSA				S		S		04 16 02.8	-4.2
LSA				LR		LR			
	comp=Z,3µm,16.1s								
LSA				LR		LR			
	comp=Z,4µm,16.1s								
LSA				LR		LR			
	comp=Z,8µm,16.8s								
Q18K	**Katmai Hardscr**	43.37	42	P		P		04 09 40.9	+0.3
	baz=272								
L19K	**White Mountain**	43.47	37	P		P		04 09 42.2	+0.9
	baz=268								
D20K	**Etivluk River**	43.48	27	IAmb		IAmb		04 09 50.3	
	comp=Z,86nm,1.1s								
D20K	**Etivluk River**	43.48	27	P		P		04 09 41.8	+0.6
	baz=259								
TEZP	**TEZPUR**	43.49	269	*e*P		P		04 09 41.3	-0.5
TEZP				IAmb		IAmb		04 09 54.2	
	comp=Z,38nm,0.6s								
IMP	**Imphal**	43.50	266	*e*P		P		04 09 40.7	-1.4
IMP				IAmb		IAmb		04 09 53.9	
	comp=Z,42nm,1.3s								
F20K	**Avaraart Lake**	43.53	30	P		P		04 09 42.1	+0.4
	baz=262								
E20K	**Nigu River**	43.55	28	P		P		04 09 40.6	-1.2
	baz=260								
B20K	**Meade River**	43.55	26	P		P		04 09 41.1	-0.6
	baz=258								
N19K	**Bonanza Creek**	43.61	39	IAmb		IAmb		04 10 01.1	
	comp=Z,88nm,1.4s								
N19K	**Bonanza Creek**	43.61	39	P		P		04 09 41.8	-0.7
	baz=270								
M19K	**Big River Lodg**	43.68	37	IAmb		IAmb		04 10 40.7	
	comp=Z,95nm,1.7s								
M19K	**Big River Lodg**	43.68	37	P		P		04 09 42.5	-0.4
	baz=269								
H20K	**Anotlenegga Mo**	43.69	32	P		P		04 09 42.7	-0.2
	baz=264,SNR=7.7								
O19K	**Port Alsworth**	43.69	40	P		P		04 09 43.1	+0.1
	baz=271								
TAWA	**Tawang**	43.74	271	*e*P		P		04 09 45.6	+1.4
I20K	**Naaghedeneel**	43.79	33	IAmb		IAmb		04 10 09.3	
	comp=Z,55nm,1.1s								
I20K	**Naaghedeneel**	43.79	33	P		P		04 09 42.9	-0.8
	baz=266								
K20K	**Telida**	43.88	35	P		P		04 09 43.4	-1.1
	baz=268								
SANI	**Sanana**	43.88	205	P		P		04 09 44.2	-0.7
SANI	**Sanana**	43.88	205	P		P		04 09 44.0	-0.9
	comp=Z,1µmcomp=Z,114nm,0.8s								
J20K	**Nowinta River**	43.89	34	IAmb		IAmb		04 10 02.3	
	comp=Z,66nm,1.3s								
J20K	**Nowinta River**	43.89	34	P		P		04 09 43.9	-0.6
	baz=267								
SII	**Sitkinak Islan**	43.91	45	P		P		04 09 44.8	-0.1
	baz=274								
L20K	**Farewell, AK**	43.93	37	P		P		04 09 44.9	0.0
	baz=269								
A21K	**Barrow**	44.03	24	P		P		04 09 45.2	-0.3
	baz=257								
MPSI	**Mapaga**	44.04	214	P		P		04 09 46.9	+0.7
Q19K	**Cape Douglas,**	44.07	42	P		P		04 09 46.1	0.0
	baz=272								
MK31	**Makanchi Array**	44.12	301	*c i* P		P		04 09 46.2	-0.5
MK31				pmax		pmax			
	comp=Z,216nm,1.0s								
MKAR	**Makanchi Array**	44.12	301	P		P		04 09 46.6	-0.1
	comp=Z,114nm,0.9s,baz=83,slow=8.7,SNR=526								
MKAR				LR		LR		04 28 54.0	
	comp=Z,7µm,19.5s,baz=62,slow=37								
	comp=Z,114nm,0.9s								
IMAR	**Indian Mountai**	44.20	32	P		P		04 09 48.0	+1.0
C21K	**Knifeblade Rid**	44.21	27	P		P		04 09 47.7	+0.6
	baz=261,SNR=10								
P19K	**Oil Pt**	44.25	41	P		P		04 09 47.8	+0.2
	baz=272								
M20K	**Styx River**	44.27	38	P		P		04 09 48.3	+0.6
	baz=270								
MAKZ	**Makanchi**	44.33	301			P		04 09 48.4	+0.1
MAKZ	**Makanchi**	44.33	301	P		P		04 09 48.4	+0.1
MAKZ				pmax		pmax			
	comp=Z,176nm,1.1s								
B21K	**Ikpikpuk River**	44.34	26	IAmb		IAmb		04 10 01.7	
	comp=Z,80nm,0.9s								
B21K	**Ikpikpuk River**	44.34	26	P		P		04 09 49.1	+1.1
	baz=260								
G21K	**Allakaket**	44.34	31	P		P		04 09 48.5	+0.3
	baz=265								
OHAK	**Old Harbor**	44.35	44	P		P		04 09 49.0	+0.7
	baz=274								
E21K	**Killik River**	44.39	28	IAmb		IAmb		04 09 58.2	
	comp=Z,37nm,0.8s								
E21K	**Killik River**	44.39	28	P		P		04 09 49.0	+0.5
	baz=262								
APSI	**Ampana**	44.42	211	P		P		04 09 49.3	0.0
F21K	**Alatna River**	44.42	30	P		P		04 09 50.0	+1.2
	baz=264								
RED	**Redoubt Volcan**	44.46	40	IAmb		IAmb		04 10 04.5	
	comp=Z,69nm,1.2s								
A22K	**Sinclair Lake**	44.48	24	P		P		04 09 49.7	+0.6
	baz=259								
O20K	**Slope Mountain**	44.55	40	P		P		04 09 51.0	+1.1
	baz=272								
H21K	**Melozitna Rive**	44.56	32	P		P		04 09 50.4	+0.5
	baz=266,SNR=9.8								
GUWA	**GUWAHATI**	44.56	269	*e*P		P		04 09 49.2	-1.2
GUWA				IAmb		IAmb		04 10 02.1	
	comp=Z,48nm,0.8s								
CHUM	**Lake Minchumin**	44.68	35	P		P		04 09 51.5	+0.6
	baz=268,SNR=5.9								
KDAK	**Kodiak Island**	44.69	43	LR		LR		04 28 25.4	
	comp=Z,1µm,20.4s,baz=243,slow=36								
KDAK	**Kodiak Island**	44.69	43	P		P		04 09 52.0	+1.0
	baz=274								
N20K	**Mount Spurr**	44.72	38	P		P		04 09 52.2	+0.9
	baz=271,SNR=5.5								
PPLA	**Old Pureypile**	44.72	36	IAmb		IAmb		04 10 17.3	
	comp=Z,102nm,1.2s								
PPLA	**Purkeypile**	44.72	36	P		P		04 09 52.7	+1.3
	baz=270								
SPCR	**Spurr Chakacha**	44.72	38	P		P		04 09 52.5	+1.2
	baz=271,SNR=5.5								
SHL	**Shillong**	44.73	268	P		P		04 09 51.3	-0.7
	SNR=30								
SHL				S		S		04 16 27.3	+0.2
SHL	**Shillong**	44.73	268	*e*P		P		04 09 51.1	-0.9
SHL				IAmb		IAmb		04 10 03.5	
	comp=Z,49nm,1.3s								
Q20K	**Shuyak Island**	44.73	42	P		P		04 09 52.3	+0.9
	baz=274								
AAI	**Ambon**	44.75	201	P		P		04 09 52.7	+0.8
	comp=Z,2µmcomp=Z,117nm,0.9s								
SPU	**Mount Spurr**	44.80	39	IAmb		IAmb		04 10 10.3	
	comp=Z,62nm,1.2s								
B22K	**Teshekpuk Lake**	44.87	25	IAmb		IAmb		04 10 31.6	
	comp=Z,63nm,1.1s								
B22K	**Teshekpuk Lake**	44.87	25	P		P		04 09 53.2	+1.0
	baz=261								
D22K	**Ayikyak River**	44.92	28	IAmb		IAmb		04 09 55.5	
	comp=Z,52nm,0.8s								
D22K	**Ayikyak River**	44.92	28	P		P		04 09 53.5	+0.8
	baz=263								
F22K	**John River**	44.96	30	P		P		04 09 54.0	+1.0
	baz=265,SNR=8.0								
SKT	**Skwentna**	45.03	37	P		P		04 09 54.5	+0.8
	baz=271								
HOM	**Homer**	45.06	41	P		P		04 09 55.0	+1.1
	baz=273								
BNDI	**Bandanaira**	45.10	199	P		P		04 09 55.7	+1.0
E22K	**Anaktuvuk Pass**	45.15	29	IAmb		IAmb		04 10 08.2	
	comp=Z,61nm,0.9s								
E22K	**Anaktuvuk Pass**	45.15	29	P		P		04 09 55.7	+1.0
	baz=265,SNR=24								
H22K	**Ishtalitna Cre**	45.16	32	IAmb		IAmb		04 10 21.4	
	comp=Z,73nm,1.5s								
H22K	**Ishtalitna Cre**	45.16	32	P		P		04 09 55.7	+1.0
	baz=267								
G22K	**Bettles**	45.17	30	P		P		04 09 55.7	+1.0
	baz=266								
PCI	**Palu**	45.18	214	P		P		04 09 55.4	+0.1
	comp=Z,166nm,1.2s								
CAPN	**Captain Cook N**	45.25	39	P		P		04 09 55.9	+0.6
	baz=273								
BPAW	**Bear Paw Mtn.**	45.27	34	P		P		04 09 56.2	+0.6
	baz=270								
L22K	**Petersville**	45.38	37	IAmb		IAmb		04 10 33.5	
	comp=Z,138nm,1.8s								
SUA	**Susitna One**	45.42	38	P		P		04 09 57.6	+0.7
	baz=272								
SAIH	**SAIHA**	45.49	264	*e*P		P		04 09 57.2	-0.8
SAIH				IAmb		IAmb		04 10 11.1	
	comp=Z,54nm,1.1s								
BRSE	**Bradley Lake S**	45.51	41	P		P		04 09 58.9	+1.4
	baz=274								
TRF	**Thorofare Moun**	45.58	35	P		P		04 09 59.3	+1.1
	baz=271								
CUT	**Chulitna**	45.61	37	P		P		04 09 59.6	+1.3
	baz=272								
D23K	**Nanushuk River**	45.65	28	IAmb		IAmb		04 10 11.7	
	comp=Z,92nm,1.4s								
D23K	**Nanushuk River**	45.65	28	P		P		04 09 59.1	+0.6
	baz=265,SNR=8.3								
KURK	**Kurchatov**	45.67	307	P		P		04 09 58.6	-0.3
KURK				P		P		04 09 58.6	-0.3
KURK				S		S		04 16 41.1	+1.4
KURK				S		S		04 16 41.1	+1.4
KURK	**Kurchatov**	45.67	307			P		04 09 58.8	-0.1
KURK	**Kurchatov**	45.67	307	*c i* P		P		04 09 58.5	-0.4
KURK				pmax		pmax			
	comp=Z,262nm,0.9s								
KURK				MLR		MLR			
	comp=Z,4µm,17.0s								
COLD	**Coldfoot**	45.70	30	P		P		04 09 59.7	+0.8
	baz=267								
G23K	**Bananza Creek**	45.74	31	P		P		04 10 00.1	+0.8
	baz=268,SNR=6.2								
KURBB	**Kurchatov Arra**	45.75	307	P		P		04 09 59.3	-0.2
	comp=Z,179nm,0.8s,baz=81,slow=8.3,SNR=522								
KURBB				LR		LR		04 29 49.3	
	comp=Z,4µm,18.7s,baz=84,slow=37								
	comp=Z,179nm,0.8s								
KURBB	**Kurchatov Arra**	45.75	307	P		P		04 09 58.6	-0.9
C23K	**Itkillik River**	45.75	26	P		P		04 10 00.5	+1.2
	baz=264								
H23K	**Yukon River**	45.91	32	IAmb		IAmb		04 10 26.6	
	comp=Z,42nm,1.0s								
H23K	**Yukon River**	45.91	32	P		P		04 10 01.7	+1.1
	baz=269								
RC01	**Rabbit Creek A**	45.92	39	IAmb		IAmb		04 10 18.9	
	comp=Z,72nm,1.1s								
RC01	**Rabbit Creek A**	45.92	39	P		P		04 10 02.2	+1.5
	baz=274								
O22K	**Cooper Landing**	45.97	39	P		P		04 10 01.8	+0.8
	baz=274								
DHUB	**DHUBRI**	45.97	270	*e*P		P		04 10 00.8	-0.8
DHUB				IAmb		IAmb		04 10 06.2	
	comp=Z,43nm,1.1s								
E23K	**Chandalar**	45.97	29	IAmb		IAmb		04 10 29.7	
	comp=Z,88nm,1.2s								
E23K	**Chandalar**	45.97	29	P		P		04 10 02.7	+1.5
	baz=267								
I23K	**Minto, Yukon-K**	45.98	33	IAmb		IAmb		04 10 15.6	
	comp=Z,70nm,1.5s								
I23K	**Minto, Yukon-K**	45.98	33	P		P		04 10 02.4	+1.3
	baz=270,SNR=7.5								
TOLK	**Toolik Lake Re**	46.02	28	IAmb		IAmb		04 10 26.8	
	comp=Z,74nm,1.3s								
TOLK	**Toolik Lake Re**	46.02	28	P		P		04 10 01.7	+0.3
	baz=266,SNR=7.9								
SBUM	**Sibu**	46.05	225			P		04 10 02.7	+0.5
SBUM				IAmb		IAmb		04 10 03.8	
	comp=Z,67nm,1.4s								
NEA2	**Nenana**	46.11	34	IAmb		IAmb		04 10 15.7	
	comp=Z,76nm,1.4s								
NEA2	**Nenana**	46.11	34	P		P		04 10 03.1	+1.0
	baz=271,SNR=10								
SEW	**Seward**	46.13	40	P		P		04 10 03.3	+0.9
	baz=275								
MCK	**McKinley**	46.18	35	IAmb		IAmb		04 10 18.8	
	comp=Z,37nm,1.0s								
MCK	**McKinley**	46.18	35	P		P		04 10 03.3	+0.5
	baz=272,SNR=6.9								
PMR	**Palmer**	46.18	38	IAmb		IAmb		04 10 26.7	
	comp=Z,44nm,1.1s								
PMR	**Palmer**	46.18	38	P		P		04 10 03.4	+0.7
PMR	**Palmer**	46.18	38	P		P		04 10 03.9	+1.1
	baz=274								
RND	**Reindeer**	46.23	35	IAmb		IAmb		04 10 27.6	
	comp=Z,69nm,1.2s								
GHO	**Glory Hole Cre**	46.27	38	IAmb		IAmb		04 10 20.6	
	comp=Z,71nm,1.0s								
D24K	**Happy Valley**	46.33	27	P		P		04 10 04.6	+0.8
	baz=267								
WAT1	**Susitna Watana**	46.39	36	P		P		04 10 05.1	+0.6
	baz=273								
E24K	**Your Creek**	46.39	29	IAmb		IAmb		04 10 41.8	
	comp=Z,68nm,1.2s								
E24K	**Your Creek**	46.39	29	P		P		04 10 05.3	+0.9
	baz=268								
C24K	**Franklin Bluff**	46.41	27	P		P		04 10 05.4	+1.0
	baz=266								
BRDH	**Bariadhala**	46.43	265	LR		LR		04 32 10.2	
	comp=Z,2µm,18.9s,baz=66,slow=39								
KNK	**Knik Glacier**	46.52	38	P		P		04 10 05.6	+0.2
	baz=274								
WRH	**Wood River Hil**	46.53	34	IAmb		IAmb		04 10 22.1	
	comp=Z,29nm,0.9s								
SML	**Sawmill**	46.55	38	P		P		04 10 06.3	+0.5
	baz=274								
H24K	**Noodor Dome**	46.60	32	IAmb		IAmb		04 10 30.6	
	comp=Z,45nm,1.1s								
H24K	**Noodor Dome**	46.60	32	P		P		04 10 06.8	+0.7
	baz=271								
F24K	**Squaw Lake**	46.60	30	P		P		04 10 07.0	+0.9
	baz=269								
PWL	**Port Wells**	46.62	39	P		P		04 10 07.5	+1.3
	baz=275								
COLA	**College**	46.62	33	P		P		04 10 07.4	+1.2
COLA				IAmb		IAmb		04 10 30.6	
	comp=Z,48nm,0.9s								
COLA	**College**	46.62	33	P		P		04 10 07.4	+1.2
COLA	**College**	46.62	33⇑	*e*P		P		04 10 07.0	+0.8
COLA				pmax		pmax			
	comp=Z,70nm,2.7s								
COLA				MLR		MLR			
	comp=Z,530nm,19.0s								
COLA	**College**	46.62	33	P		P		04 10 07.0	+0.8
	baz=272								
G24K	**Hadweenzic Riv**	46.76	31	IAmb		IAmb		04 10 34.0	
	comp=Z,46nm,1.1s								
G24K	**Hadweenzic Riv**	46.76	31	P		P		04 10 08.6	+1.4
	baz=270								
WAT6	**Susitna Watana**	46.78	36	P		P		04 10 08.2	+0.6
	baz=274								
POKR	**Poker Plat Res**	46.80	33	P		P		04 10 08.2	+0.6
	baz=272,SNR=18								
BKB	**Balikpapan**	46.82	217	P		P		04 10 09.3	+1.1
	comp=Z,3µmcomp=Z,220nm,1.2s								
M23K	**Glacier View**	46.84	38	P		P		04 10 08.1	+0.1
	baz=275								
DHY	**Denali Highway**	46.91	36	IAmb		IAmb		04 10 25.0	
	comp=Z,40nm,1.0s								
DHY	**Denali Highway**	46.91	36	P		P		04 10 09.4	+0.7
	baz=274								
PDGK	**Podgornoye**	46.95	297	P		P		04 10 07.9	-1.3
SHLS	**Shalkode**	47.02	296	*e*P		P		04 10 07.2	-2.6
	comp=Z,95nm,1.6s								
SHLS	**Shalkode**	47.02	296	*e*P		P		04 10 07.2	-2.6
SHLS				pmax		pmax			
	comp=Z,95nm,1.6s								
SCM	**Sheep Creek Mo**	47.02	37	P		P		04 10 09.3	-0.2
	baz=275								
HDA	**Harding Lake**	47.03	34	IAmb		IAmb		04 10 26.0	
	comp=Z,90nm,1.6s								
HDA	**Harding Lake**	47.03	34	P		P		04 10 10.2	+0.8
	baz=273,SNR=8.7								
IL31		47.04	33	IAmb		IAmb		04 10 26.1	
	comp=Z,71nm,1.2s								
ILAR	**Eielson Array**	47.04	33	P		P		04 10 09.9	+0.4
	comp=Z,13nm,0.8s,baz=267,slow=5.7,SNR=135								
ILAR				LR		LR		04 31 02.1	
	comp=Z,715nm,21.2s,baz=274,slow=37								
	comp=Z,13nm,0.8s								
ILAR	**Eielson Array**	47.04	33			P		04 10 10.2	+0.8
ILAR	**Eielson Array**	47.04	33	P		P		04 10 10.3	+0.8
P23K	**Montague Islan**	47.16	40	P		P		04 10 10.8	+0.4
	baz=277								
TDK	**Taldyqorghan**	47.20	299	*e*P		P		04 10 10.9	-0.1
TDK				LR		LR		04 30 16.4	
	comp=Z,3µm,16.7s								
TDK	**Taldyqorghan**	47.20	299	*e*P		P		04 10 10.9	-0.1
TDK				pmax		pmax			
	comp=Z,70nm,0.8s								
TDK				MLR		MLR			
	comp=Z,3µm,17.0s								
D25K	**Kavik River**	47.20	27	IAmb		IAmb		04 10 49.6	
	comp=Z,48nm,1.0s								
D25K	**Kavik River**	47.20	27	P		P		04 10 11.0	+0.2
	baz=269								
GLI	**Glacier Island**	47.22	39	P		P		04 10 11.3	+0.4
	baz=276								
G25K	**Bearman Lake**	47.30	31	P		P		04 10 11.7	+0.3
	baz=271								
UZB	**Uzynbulak**	47.33	297⇑	*i* P		P		04 10 11.9	-0.4
	comp=Z,69nm,1.4s								
UZB				*e*S		S		04 17 03.5	-0.6
UZB	**Uzynbulak**	47.33	297	*c i* P		P		04 10 11.8	-0.

HARP	HAARP	47.99	37	P	P	04 10 17.7	+0.8		
	baz=276								
RIDG	Independent Ri	48.00	35	IAmb	IAmb	04 10 33.4			
	comp=Z,26nm,0.8s								
RIDG	Independent Ri	48.00	35	P	P	04 10 17.7	+0.7		
	baz=275								
F26K	Sheenjek River	48.04	29	IAmb	IAmb	04 10 40.9			
	comp=Z,44nm,0.9s								
F26K	Sheenjek River	48.04	29	P	P	04 10 17.7	+0.4		
	baz=272								
C27K	Jago River	48.15	27	P	P	04 10 18.9	+0.9		
	baz=271								
G26K	Porcupine Rive	48.21	30	P	P	04 10 19.9	+1.4		
	baz=273,SNR=12								
BNSI	Bone	48.22	211	P	P	04 10 19.8	+0.7		
	comp=Z,2µmcomp=Z,141nm,1.1s								
N25K	Chitina, Valde	48.34	38	P	P	04 10 20.6	+0.9		
	baz=277								
SCRK	Sand Creek	48.35	34	IAmb	IAmb	04 10 43.7			
	comp=Z,43nm,1.0s								
SCRK	Sand Creek	48.35	34	P	P	04 10 20.5	+0.7		
	baz=276,SNR=15								
BMRM	Bremner River	48.42	38	P	P	04 10 21.4	+1.1		
	baz=278								
STKI	Sintang	48.44	224	P	P	04 10 22.2	+1.4		
	comp=Z,84nm,1.1s								
PMG	Port Moresby	48.44	175	LR	LR	04 29 04.7			
	comp=Z,598nm,21.2s,baz=360,slow=34								
J26L	Joseph Creek	48.49	34	P	P	04 10 21.7	+0.9		
	baz=276,SNR=6.8								
MENT	Mentasta	48.59	36	IAmb	IAmb	04 10 49.5			
	comp=Z,66nm,1.1s								
I26K	Coal Creek Min	48.59	33	P	P	04 10 22.1	+0.7		
	baz=275								
KAIM	Kayak Island	48.66	40	P	P	04 10 23.1	+1.0		
	baz=279								
MDOK	Medeo	48.70	297	*e*P	P	04 10 22.4	-0.4		
MDOK				*e*S	S	04 17 23.0	-0.4		
MDOK				LR	LR	04 31 13.3			
MDOK	Medeo	48.70	297	*e*P	P	04 10 22.4	-0.4		
MDOK				*e*S	S	04 17 22.9	-0.4		
GLB	Gilahina Butte	48.74	38	IAmb	IAmb	04 10 36.2			
	comp=Z,53nm,1.4s								
L26K	Log Cabin Wild	48.74	36	P	P	04 10 23.8	+1.1		
	baz=277,SNR=14								
AAA	Alma-Ata	48.77	297	*e*P	P	04 10 23.1	-0.2		
	comp=Z,76nm,1.2s								
AAA				LR	LR	04 31 18.2			
AAA	Alma-Ata	48.77	297	*e*P	P	04 10 23.0	-0.2		
AAA				pmax	pmax				
	comp=Z,76nm,1.2s								
TNSS	Tian-Shan	48.81	297	*e*P	P	04 10 23.4	-0.6		
TNSS	Tian-Shan	48.81	297	*e*P	P	04 10 23.3	-0.6		
KAPI	Kappang	48.92	211	P	P	04 10 24.7	+0.3		
KAPI				P	P	04 10 24.7	+0.3		
KAPI				S	S	04 17 27.1	+0.6		
KAPI				S	S	04 17 27.1	+0.6		
KAPI	Kappang	48.92	211		P	04 10 24.8	+0.3		
KAPI	Kappang	48.92	211	P	P	04 10 24.8	+0.3		
KAPI				pmax	pmax				
	comp=Z,160nm,1.2s								
VRDI	Verde Repeater	48.94	38	IAmb	IAmb	04 10 37.1			
	comp=Z,34nm,1.0s								
E27K	Coleen River	48.97	29	IAmb	IAmb	04 11 29.2			
	comp=Z,42nm,1.2s								
E27K	Coleen River	48.97	29	P	P	04 10 25.2	+0.8		
	baz=274								
M26K	Nabesna, AK	48.98	36	P	P	04 10 25.5	+0.9		
	baz=278								
BKSI	Bulukumba	49.05	211	P	P	04 10 25.2	-0.3		
G27K	Doyon Strip	49.06	30	P	P	04 10 26.2	+1.1		
	baz=275								
MCARA	McCarthy VSAT	49.12	38	IAmb	IAmb	04 10 53.8			
	comp=Z,61nm,1.1s								
MCARA	McCarthy VSAT	49.12	38	P	P	04 10 26.6	+1.0		
	baz=279								
D27M	Malcolm River	49.13	27	IAmb	IAmb	04 11 11.5			
	comp=Z,55nm,1.3s								
D27M	Malcolm River	49.13	27	P	P	04 10 26.6	+1.0		
	baz=274								
H27K	Steamboat Moun	49.17	31	IAmb	IAmb	04 10 40.3			
	comp=Z,81nm,1.4s								
H27K	Steamboat Moun	49.17	31	P	P	04 10 27.2	+1.3		
	baz=276,SNR=13								
CRQE	Cirque	49.18	39	P	P	04 10 26.9	+0.7		
	baz=279								
K27K	Chicken	49.19	34	IAmb	IAmb	04 10 51.2			
	comp=Z,54nm,1.1s								
K27K	Chicken	49.19	34	P	P	04 10 27.2	+1.2		
	baz=277								
BGLC	Bering Glacier	49.19	39	P	P	04 10 26.1	0.0		
	baz=280								
I27K	Kandik River	49.20	32	P	P	04 10 27.5	+1.3		
	baz=276								
TGL	Tana Glacier	49.31	39	IAmb	IAmb	04 10 40.5			
	comp=Z,68nm,1.1s								
L27K	Beaver Creek,	49.42	35	IAmb	IAmb	04 10 54.1			
	comp=Z,43nm,0.9s								
L27K	Beaver Creek,	49.42	35	P	P	04 10 28.0	0.0		
	baz=278								
BCAR	Beaver Creek A	49.44	35		P	04 10 29.9	+1.8		
M27K	Edge Creek, AK	49.51	36	IAmb	IAmb	04 10 54.1			
	comp=Z,39nm,1.0s								
M27K	Edge Creek, AK	49.51	36	P	P	04 10 29.0	+0.4		
	baz=279								
BRZS	Berezniki	49.55	307	*e*P	P	04 10 28.6	-0.5		
BRZS	Berezniki	49.55	307	*e*P	P	04 10 28.5	-0.5		
F28M	Old Crow	49.67	29	IAmb	IAmb	04 10 58.1			
	comp=Z,33nm,1.1s								
F28M	Old Crow	49.67	29	P	P	04 10 30.9	+1.2		
	baz=276,SNR=12								
E28M	Babbage River	49.70	28	IAmb	IAmb	04 11 13.8			
	comp=Z,35nm,1.1s								
E28M	Babbage River	49.70	28	P	P	04 10 31.0	+1.1		
	baz=276								
BBKI	Banjar Baru	49.72	218	P	P	04 10 30.7	+0.1		
	comp=Z,89nm,1.2s								
GRNC	Granite Creek	49.84	38	IAmb	IAmb	04 11 07.6			
	comp=Z,45nm,1.0s								
MESA	MESA	49.84	39	P	P	04 10 32.3	+0.9		
	baz=281								
I28M	Miner Creek	49.91	32	IAmb	IAmb	04 10 48.2			
	comp=Z,33nm,0.8s								
I28M	Miner Creek	49.91	32	P	P	04 10 32.7	+1.0		
	baz=278								
D28M	Stokes Point	49.91	27	P	P	04 10 32.4	+0.9		
	baz=276								
BVCY	Beaver Creek	49.97	36	P	P	04 10 33.4	+1.3		
	baz=280								
CTG	Chitna Glacier	49.99	38	P	P	04 10 33.2	+0.8		
	baz=281								
CTGM	Chitina Glacie	50.00	38	IAmb	IAmb	04 10 51.4			
	comp=Z,62nm,1.2s								
BVA0	Borovoye Array	50.13	311	P	P	04 10 32.5	-0.9		
BVAR	Borovoye Array	50.13	311	P	P	04 10 33.3	-0.1		
	comp=Z,66nm,0.8s,baz=78,slow=9.2,SNR=224								
BVAR				PcP	PcP	04 11 53.5	+1.0		
	comp=Z,6.6nm,0.7s,baz=31,slow=3.4,SNR=4.7								
BVAR				LR	LR	04 32 40.8			
	comp=Z,3µm,20.1s,baz=75,slow=37								
	comp=Z,66nm,0.8s								
BTLS	Baital	50.13	300⇑	*i*P	P	04 10 33.2	-0.4		
	comp=Z,71nm,1.4s								
BTLS	Baital	50.13	300	*c i*P	P	04 10 33.1	-0.4		
BTLS				pmax	pmax				
	comp=Z,71nm,1.4s								
BORK	Borovoye	50.16	311		P	04 10 33.8	+0.2		
BORK	Borovoye	50.16	311	*c i*P	P	04 10 33.4	-0.2		
BORK				pmax	pmax				
	comp=Z,123nm,1.3s								
BORK				MLR	MLR				
	comp=Z,6µm,16.0s								
YUK3	Moose Creek	50.26	37	P	P	04 10 35.2	+0.7		
	baz=281								
SGDS	Sogindy	50.27	298⇑	*i*P	P	04 10 34.4	-0.3		
GAYA	Gaya	50.29	271	*e*P	P	04 10 34.7	-0.3		
BOK	Bokaro	50.31	270	*e*P	P	04 10 35.4	+0.2		
BOK				IAmb	IAmb	04 10 46.6			
	comp=Z,53nm,1.0s								
E29M	Blow River	50.32	28	IAmb	IAmb	04 10 58.3			
	comp=Z,44nm,0.9s								
E29M	Blow River	50.32	28	P	P	04 10 35.7	+1.1		
	baz=277								
DAWY	Dawson	50.35	34	P	P	04 10 36.2	+1.3		
	baz=280								
H29M	Whitestone	50.44	31	IAmb	IAmb	04 11 22.6			
	comp=Z,86nm,1.5s								
H29M	Whitestone	50.44	31	P	P	04 10 36.6	+1.1		
	baz=279								
G29M	Pine Creek	50.47	30	IAmb	IAmb	04 10 56.6			
	comp=Z,64nm,1.1s								
G29M	Pine Creek	50.47	30	P	P	04 10 36.7	+0.9		
	baz=278								
O28M	Mount Upton	50.58	38	P	P	04 10 37.3	+0.2		
	baz=282								
I29M	Ogilvie Camp,	50.60	32	IAmb	IAmb	04 10 57.3			
	comp=Z,63nm,1.1s								
I29M	Ogilvie Camp,	50.60	32	P	P	04 10 37.6	+0.8		
	baz=280,SNR=16								
AAK	Ala-Archa	50.64	297	LR	LR	04 33 16.8			
	comp=Z,3µm,19.1s,baz=88,slow=37								
AAK	Ala-Archa	50.64	297	P	P	04 10 37.4	-0.2		
AAK				P	P	04 10 37.4	-0.2		
AAK				S	S	04 17 51.6	+1.0		
AAK				S	S	04 17 51.6	+1.0		
AAK	Ala-Archa	50.64	297		P	04 10 37.9	+0.3		
AAK				IAmb	IAmb	04 10 38.3			
	comp=Z,64nm,1.1s								
AAK	Ala-Archa	50.64	297	*i* P	P	04 10 37.6	0.0		
	SNR=15								
AAK	Ala-Archa	50.64	297	*c i*P	P	04 10 37.4	-0.2		
AAK				pmax	pmax				
	comp=Z,49nm,1.0s								
AAK				MLR	MLR				
	comp=Z,3µm,19.0s								
YUK8	Steele Glacier	50.68	37	P	P	04 10 37.9	+0.1		
	baz=282								
PINM	Pinnacle	50.69	39	P	P	04 10 38.0	+0.4		
	baz=282								
KSH	Kashi	50.74	293	P	P	04 10 42.3	+3.9		
KSH				pP	sP	04 10 53.0	+2.8		
KSH				pmax	pmax				
	comp=Z,55nm,1.2s								
KSH				pmax	pmax				
	comp=Z,610nm,6.4s								
KSH				LR	LR				
	comp=Z,3µm,17.9s								
KSH				LR	LR				
	comp=Z,5µm,16.5s								
KSH				LR	LR				
	comp=Z,5µm,16.6s								
J29N	Klondike Camp	50.79	33	P	P	04 10 38.7	+0.4		
	baz=280								
M29M	Somme Creek	51.06	36	IAmb	IAmb	04 10 53.8			
	comp=Z,91nm,1.9s								
M29M	Somme Creek	51.06	36	P	P	04 10 41.9	+1.5		
	baz=282,SNR=6.8								
EPYK	Eagle Plains	51.07	31	IAmb	IAmb	04 11 00.5			
	comp=Z,87nm,1.1s								
EPYK	Eagle Plains	51.07	31	P	P	04 10 41.4	+1.0		
	baz=280,SNR=20								
L29M	L29M	51.08	35	IAmb	IAmb	04 10 59.5			
	comp=Z,42nm,0.9s								
L29M	L29M	51.08	35	P	P	04 10 42.2	+1.7		
	baz=281								
DGPR	DIGLIPUR	51.08	254	*e*P	P	04 10 40.4	-0.6		
DGPR				IAmb	IAmb	04 10 52.4			
	comp=Z,59nm,1.0s								
G30M	tAoh Zraii Nji	51.16	30	IAmb	IAmb	04 11 06.5			
	comp=Z,59nm,1.1s								
G30M	tAoh Zraii Nji	51.16	30	P	P	04 10 42.3	+1.2		
	baz=280								
YUK4	Talbot Arm	51.20	37	P	P	04 10 42.7	+1.1		
	baz=282								
K29M	Barlow Dome	51.20	34	IAmb	IAmb	04 11 06.6			
	comp=Z,68nm,1.2s								
K29M	Barlow Dome	51.20	34	P	P	04 10 42.5	+1.1		
	baz=281,SNR=11								
F30M	Barrier River	51.22	29	IAmb	IAmb	04 11 28.6			
	comp=Z,56nm,0.9s								
F30M	Barrier River	51.22	29	P	P	04 10 43.0	+1.6		
	baz=280								
HNLY	HANLEY	51.30	284	*e*P	P	04 10 44.1	+1.0		
HNLY				IAmb	IAmb	04 11 00.2			
	comp=Z,58nm,1.2s								
MMRI	Maumere	51.30	207	P	P	04 10 42.2	-0.4		
	comp=Z,3µmcomp=Z,101nm,1.5s								
IPM	Ipoh	51.32	239	IAmb	IAmb	04 11 13.6			
	comp=Z,82nm,1.0s								
I30M	Mount Dempster	51.42	32	IAmb	IAmb	04 11 12.6			
	comp=Z,44nm,0.8s								
I30M	Mount Dempster	51.42	32	P	P	04 10 44.0	+0.9		
	baz=281,SNR=37								
YUK6	Outpost Mounta	51.42	38	P	P	04 10 44.1	+0.9		
	baz=283								
O29M	Mount Kennedy	51.46	39	P	P	04 10 44.8	+1.3		
	baz=283								
MYKOM	Kota Tinggi	51.53	234		P	04 10 45.2	+0.8		
J30M	Hart River	51.57	33	P	P	04 10 45.3	+1.1		
	baz=282,SNR=6.4								
EDFI	Ende, Flores	51.60	207	P	P	04 10 43.9	-1.0		
	comp=Z,916nmcomp=Z,73nm,0.8s								
SOEI	Soe	51.68	204	P	P	04 10 45.5	0.0		
	comp=Z,1µmcomp=Z,101nm,1.0s								
M30M	Minto, Yukon	51.79	35	P	P	04 10 47.4	+1.6		
	baz=283,SNR=7.1								
TPRI	Tanjung Pinang	51.79	232	P	P	04 10 47.6	+1.3		
PTH	Pithoragarh	51.83	280	*e*P	P	04 10 46.1	-0.6		
LGTI	Lohaghat	51.85	279	*e*P	P	04 10 47.5	+0.8		
LGTI				IAmb	IAmb	04 10 58.4			
	comp=Z,42nm,0.7s								
HYT	Haines Junctio	51.86	38	IAmb	IAmb	04 11 08.5			
	comp=Z,90nm,1.2s								
HYT	Haines Junctio	51.86	38	P	P	04 10 47.5	+1.1		
	baz=284,SNR=15								
JOSI	Joshimath	51.86	281	*e*P	P	04 10 46.9	-0.1		
JOSI				IAmb	IAmb	04 11 01.3			
	comp=Z,66nm,1.0s								
N30M	Aishikik Lake	51.90	37	P	P	04 10 47.7	+1.0		
	baz=284								
G31M	Satah River	51.93	30	IAmb	IAmb	04 10 60.0			
	comp=Z,65nm,1.4s								
G31M	Satah River	51.93	30	P	P	04 10 46.7	+0.1		
	baz=282,SNR=8.8								
INK	Inuvik	51.94	28	LR	LR	04 35 30.2			
	comp=Z,749nm,19.6s,baz=282,slow=39								
INK	Inuvik	51.94	28	P	P	04 10 47.0	+0.3		
	baz=281,SNR=13								
MAYO	Mayo, Yukon	51.96	34	P	P	04 10 47.3	+0.3		
	baz=283								
ALCI	Alchi Leh	52.01	286	*e*P	P	04 10 49.1	+0.9		
ALCI				IAmb	IAmb	04 10 60.0			
	comp=Z,60nm,0.8s								
F31M	Tsiigehtchic	52.03	29	IAmb	IAmb	04 11 30.9			
	comp=Z,45nm,1.1s								
F31M	Tsiigehtchic	52.03	29	P	P	04 10 47.3	-0.1		
	baz=282,SNR=10								
P29M	Windy Craggy	52.03	39	P	P	04 10 47.7	+0.1		
	baz=284								
H31M	Peel River	52.13	31	IAmb	IAmb	04 11 11.2			
	comp=Z,86nm,1.1s								
H31M	Peel River	52.13	31	P	P	04 10 48.1	-0.1		
	baz=282,SNR=22								
BWNR	Bhubaneshwar	52.27	266	*e*P	P	04 10 50.0	+0.2		
BWNR				IAmb	IAmb	04 11 01.1			
	comp=Z,51nm,0.9s								
P30M	Million Dollar	52.29	39	P	P	04 10 48.9	-0.7		
	baz=285								
BATI	Baumata	52.29	204	LR	LR	04 32 29.1			
	comp=Z,627nm,21.9s,baz=25,slow=35								
BATI	Baumata	52.29	204	P	P	04 10 50.9	+0.9		
	comp=Z,104nm,1.1s								
KDU	Kakadu	52.48	193	P	P	04 10 50.4	-0.9		
N31M	Braeburn, Yuko	52.51	37	IAmb	IAmb	04 11 27.9			
	comp=Z,53nm,1.1s								
N31M	Braeburn, Yuko	52.51	37	P	P	04 10 50.6	-0.5		
	baz=285,SNR=5.4								
O30N	Mendenhall	52.54	38	P	P	04 10 50.9	-0.5		
	baz=285								
ALBI	Allahabad	52.69	274	*e*P	P	04 10 51.2	-1.7		
ALBI				IAmb	IAmb	04 11 05.3			
	comp=Z,61nm,1.0s								
DZA	Taraz	52.72	299	*e*P	P	04 10 52.8	-0.2		
	comp=Z,63nm,0.9s								
DZA	Taraz	52.72	299	*e*P	P	04 10 52.7	-0.2		
DZA				pmax	pmax				
	comp=Z,63nm,0.9s								
PLBC	Pleasant Camp	52.75	39	P	P	04 10 52.1	-0.8		
	baz=286								
COEN	Coen	52.81	180	P	P	04 10 59.0	+5.2		
	comp=Z,149nm,0.9s								
COEN	Coen	52.81	180		P	04 10 54.4	+0.7		
COEN	Coen	52.81	180	P	P	04 10 53.8	+0.1		
DSRI	Dabo	52.86	231	P	P	04 10 55.3	+1.1		
	comp=Z,54nm,1.3s								
MTN	Manton Dam	52.89	195	P	P	04 10 53.0	-1.3		
TPI	Tanjungpandan	52.89	226	P	P	04 10 54.7	+0.3		
	comp=Z,1µmcomp=Z,55nm,1.4s								
M31M	Drury Creek, Y	52.96	36	P	P	04 10 54.3	-0.2		
	baz=285,SNR=8.8								
WHY	Whitehorse	53.15	38	IAmb	IAmb	04 11 14.0			
	comp=Z,74nm,1.4s								
WHY	Whitehorse	53.15	38	P	P	04 10 55.2	-0.8		
	baz=286								
KK31	Karatay Array	53.20	299	*i* P	P	04 10 55.5	-1.0		
KKAR	Karatay Array	53.20	299		P	04 10 56.2	-0.3		
KKAR	Karatay Array	53.20	299	P	P	04 10 56.2	-0.3		
S31K	Pelican	53.23	41	P	P	04 10 56.0	-0.4		
	baz=287								
SKAG	Skagway	53.26	39	P	P	04 10 55.8	-0.8		
	baz=286								
R31K	City Hall, Gus	53.35	40	P	P	04 10 56.8	-0.5		
	baz=287								
BASI	Baing, Sumba	53.36	208	P	P	04 10 58.7	+0.9		
	comp=Z,100nm,1.1s								
SMLA	Simla	53.41	283	*e*P	P	04 10 57.7	-0.5		
SMLA				IAmb	IAmb	04 11 12.7			
	comp=Z,60nm,1.2s								
TWSI	Taliwang, Sumb	53.47	213	P	P	04 10 57.4	-1.2		
	comp=Z,894nmcomp=Z,41nm,1.1s								
BRLS	Borolday	53.68	299⇑	*i*P	P	04 11 01.3	+1.2		
	comp=Z,51nm,1.5s								
BRLS	Borolday	53.68	299	*c i*P	P	04 11 01.2	+1.2		
BRLS				pmax	pmax				
	comp=Z,51nm,1.5s								
A36M	Sachs Harbour	53.84	23	IAmb	IAmb	04 11 03.4			
	comp=Z,62nm,1.0s								
A36M	Sachs Harbour	53.84	23	P	P	04 11 00.5	-0.2		
	baz=286,SNR=36								
BHK	Bhakra	53.85	284	*e*P	P	04 11 01.3	-0.1		
BHK				IAmb	IAmb	04 11 14.5			
	comp=Z,50nm,1.1s								
N32M	Quiet Lake	53.85	37	P	P	04 11 00.3	-0.7		
	baz=287								
IUG	Iuzhnay	53.89	298	*e*P	P	04 11 01.4	-0.3		
	comp=Z,102nm,1.3s								
IUG	Iuzhnay	53.89	298	*e*P	P	04 11 01.4	-0.3		
IUG				pmax	pmax				
	comp=Z,101nm,1.3s								
THN	Thein Dam	53.91	285	*e*P	P	04 11 01.2	-0.5		
THN				IAmb	IAmb	04 11 16.3			
	comp=Z,85nm,0.8s								
PSI	Prapat	53.96	239	LR	LR	04 35 25.7			
	comp=Z,2µm,19.0s,baz=42,slow=38								
SIT	Sitka	53.97	42	P	P	04 11 01.3	-0.5		
	baz=288								
R32K	Eaglecrest	54.01	40	P	P	04 11 03.6	+1.5		
R32K	Eaglecrest	54.01	40	P	P	04 11 02.8	+0.7		
	baz=288								
P32M	Atlin	54.01	39	P	P	04 11 01.9	-0.3		
	baz=288								
RPSI	Rantau Prapat	54.04	239	IAmb	IAmb	04 11 03.5			
	comp=Z,42nm,0.9s								
CHM	Chimkent	54.12	299	*e*P	P	04 11 03.1	-0.2		
	comp=Z,34nm,0.8s								
CHM				LR	LR	04 34 31.4			
	comp=Z,2µm,17.5s								
CHM	Chimkent	54.12	299	*e*P	P	04 11 03.0	-0.2		
CHM				pmax	pmax				
	comp=Z,34nm,0.8s								
CHM				MLR	MLR				
	comp=Z,2µm,17.0s								
BLSP	Bilaspur	54.12	271	*e*P	P	04 11 02.4	-1.1		
BLSP				IAmb	IAmb	04 11 15.3			
	comp=Z,51nm,0.6s								
S32K	Killisnoo	54.23	41	P	P	04 11 04.4	+0.7		
	baz=288								
P33M	Teslin, Yukon	54.25	38	IAmb	IAmb	04 11 35.0			
	comp=Z,43nm,1.2s								
P33M	Teslin, Yukon	54.25	38	P	P	04 11 04.2	+0.2		
	baz=288,SNR=8.0								
SVE	Sverdlovsk	54.43	318	*d i*P	P	04 11 05.8	+0.5		
SVE				pmax	pmax				
	comp=Z,160nm,1.1s								
SVE				MLR	MLR				
	comp=Z,9µm,16.0s								
SVE				MLR	MLR				
	comp=E,6µm,16.0s								
NDI	New Delhi	54.54	280	*e*P	P	04 11 05.6	-0.9		
NDI				IAmb	IAmb	04 11 19.8			
	comp=Z,61nm,1.1s								
NPLP	NPLP New Delhi	54.60	280	*e*P	P	04 11 06.6	-0.3		
MLSI	Meulaboh, Aceh	54.61	243	P	P	04 11 06.1	-1.0		
	comp=Z,87nm,0.9s								
RAGD	RAYAGADA	54.69	267	*e*P	P	04 11 07.8	+0.2		
RAGD				IAmb	IAmb	04 11 20.9			
	comp=Z,46nm,1.1s								
AYAN	Aya Nagar	54.71	280	*e*P	P	04 11 06.2	-1.4		
AYAN				IAmb	IAmb	04 11 18.3			
	comp=Z,48nm,0.6s								
TPTI		54.81	241	P	P	04 11 06.4	-2.1		
Q32M	Nakina River	54.91	39	P	P	04 11 09.4	+0.5		
	baz=289								
SMRI	Semarang	54.99	221	P	P	04 11 10.2	+0.5		
	comp=Z,120nm,1.0s								
C36M	Paulatuk	54.99	26	IAmb	IAmb	04 11 10.6			
	comp=Z,45nm,1.1s								
C36M	Paulatuk	54.99	26	P	P	04 11 10.0	+1.0		
	baz=289,SNR=15								
MNSI	Mandailing Nat	55.03	237	P	P	04 11 09.9	-0.1		
JHNI	Jhansi	55.14	276	*e*P	P	04 11 09.0	-1.9		
NIL	Nilore	55.19	288	P	P	04 11 12.0	+0.9		
NIL	Nilore	55.19	288	P	P	04 11 12.0	+0.9		
NIL				pmax	pmax				
	comp=Z,136nm,1.0s								
T33K	Petersburg	55.28	42	P	P	04 11 12.0	+0.7		
	baz=290								
KUDL	Kundal	55.37	280	*e*P	P	04 11 11.3	-1.1		
KUDL				IAmb	IAmb	04 11 27.3			
	comp=Z,39nm,0.9s								
R33M	Jennings River	55.40	38	P	P	04 11 13.3	+0.9		
	baz=290								
U33K	Whale Pass	55.43	43	P	P	04 11 13.2	+0.8		
U33K				IAmb	IAmb	04 11 31.7			
	comp=Z,40nm,1.1s								
U33K	Whale Pass	55.43	43	P	P	04 11 13.4	+1.0		
	baz=290								
CRAG	Craig	55.65	43	P	P	04 11 14.4	+0.3		
	baz=291								
VIS	Vishakhapatnam	55.66	265	*e*P

MTSU Mount Surprise 56.98 179 P **P** **04 11 24.6 +0.8**
NGP Nagpur 57.05 271 *e*P **P** **04 11 23.3 -1.3**
NGP IAmb IAmb 04 11 34.5
comp=Z,43nm,1.1s
U35K Hyder 57.12 42 P **P** **04 11 25.7 +1.2**
baz=293
BHPL Bhopal 57.18 275 *e*P **P** **04 11 24.4 -1.1**
BHPL IAmb IAmb 04 11 35.4
comp=Z,46nm,1.0s
WRGLY Wrigley 57.39 32 IAmb IAmb 04 12 10.4
comp=Z,38nm,1.1s
WRGLY Wrigley 57.39 32 P **P** **04 11 27.4 +1.1**
baz=293,SNR=6.2
AB31 Akbulak array 57.58 310 *i* P **P** **04 11 27.4 -0.5**
ABKAR Akbulak array 57.58 310 **P** **04 11 27.7 -0.1**
NRDN NARMADA NAGAR 57.66 274 *e*P **P** **04 11 33.2 +4.4**
NRDN IAmb IAmb 04 11 44.5
comp=Z,76nm,1.0s
LIRD Liard River Hi 57.72 37 P **P** **04 11 29.9 +1.2**
baz=293
KBL Kabul 57.87 290 P **P** **04 11 29.9 -0.6**
SNR=60
KBL **P** **P** **04 11 29.9 -0.6**
SNR=60
KBL S **S** **04 19 28.6 +0.2**
KBL S **S** **04 19 28.6 +0.2**
KBL Kabul 57.87 290 **P** **04 11 30.4 0.0**
KBL Kabul 57.87 290 P **P** **04 11 30.4 0.0**
KBL pmax pmax
comp=Z,178nm,1.0s
AKTO Aktyubinsk 58.23 311 LR LR 04 37 56.6
comp=Z,4µm,18.0s,baz=53,slow=37
AKTO Aktyubinsk 58.23 311 P **P** **04 11 30.6 -1.9**
TOAD Toad River Com 58.35 38 P **P** **04 11 33.9 +0.8**
baz=294
KOTAN Kotaneelee Air 58.37 36 P **P** **04 11 33.9 +0.7**
baz=294
SPITS Spitsbergen Ar 58.72 349 P **P** **04 11 35.5 +0.1**
comp=Z,13nm,0.9s,baz=68,slow=12,SNR=2.8
SPITS LR LR 04 40 21.8
comp=Z,2µm,18.6s,baz=32,slow=40
comp=Z,13nm,0.9s
SANVU Saraoutou 58.81 153 P **P** **04 11 36.0 -0.8**
AKL Akola 58.88 272 *e*P **P** **04 11 37.1 -0.2**
AKL IAmb IAmb 04 11 48.4
comp=Z,69nm,0.6s
CTA Charters Tower 58.99 176 LR LR 04 33 26.2
comp=Z,8.0nm,21.8s,baz=356,slow=32
FITZ Fitzroy Crossi 59.21 199 LR LR 04 36 37.7
comp=Z,319nm,20.8s,baz=22,slow=35
WRAB Tennant Creek 59.31 190 P **P** **04 11 39.5 -0.7**
WRAB Tennant Creek 59.31 190 P **P** **04 11 39.1 -1.1**
WRAB Tennant Creek 59.31 190*c e*P **P** **04 11 40.1 -0.1**
WRAB pmax pmax
comp=Z,25nm,0.9s
WRA Warramunga Arr 59.33 190 P **P** **04 11 39.2 -1.1**
comp=Z,21nm,0.8s,baz=8.1,slow=7.0,SNR=69
WRA S **S** **04 19 42.8 -4.0**
comp=Z,4.4nm,1.2s,baz=10.0,slow=13,SNR=7.6
WRA LR LR 04 36 37.1
comp=Z,642nm,21.5s,baz=20,slow=35
WRA PKP2ab **P'P'ab** **04 41 34.9 +7.3**
comp=Z,1.5nm,1.0s,baz=190,slow=2.6,SNR=5.0
comp=Z,21nm,0.8s
WRA Warramunga Arr 59.33 190 **P** **04 11 38.4 -1.9**
WRA IAmb IAmb 04 11 50.6
comp=Z,21nm,0.8s
WRA Warramunga Arr 59.33 190 P **P** **04 11 38.4 -1.9**
WRA pmax pmax
comp=Z,21nm,0.9s
UDPR Udaipur 59.33 278 *e*P **P** **04 11 40.0 -0.5**
KIRV Kirov 59.35 323 LR LR 04 41 16.9
comp=Z,2µm,18.4s,baz=49,slow=40
KIRV Kirov 59.35 323*c i*P **P** **04 11 40.0 0.0**
QIS Mount Isa 59.46 184 P **P** **04 11 43.5 +2.3**
comp=Z,42nm,1.4s
HYBB Hyderabad (bro 59.54 268 *e*P **P** **04 11 41.9 -0.1**
HYBB *es*P **pwP** **04 11 51.9 -1.0**
HYBB *e*PcP **PcP** **04 12 30.4 +1.1**
HYBB *e*S **S** **04 19 52.4 +2.3**
BBB Bella Bella 59.68 45 LR LR 04 33 43.6
comp=Z,339nm,22.0s,baz=294,slow=32
RES Resolute Bay 60.25 15 LR LR 04 39 52.0
comp=Z,290nm,20.6s,baz=350,slow=38
RES Resolute Bay 60.25 15 **P** **04 11 46.2 +0.2**
RES IAmb IAmb 04 11 47.3
comp=Z,37nm,0.9s
RES Resolute Bay 60.25 15 P **P** **04 11 46.2 +0.2**
RES pmax pmax
comp=Z,37nm,0.9s
VADS Vadso 61.06 339 *e*P **P** **04 11 51.6 0.0**
APA Apatity 61.30 336 *ij i*P **P** **04 11 49.6 -3.7**
APA *i* 04 12 31.1
APA *i* S **S** **04 20 03.1 -8.1**
APA *i* 04 21 41.4
APA *i* SS **SS** **04 24 09.9 -1.1**
APA MLR MLR
comp=Z,2µm,22.8s
YKA Yellowknife Ar 61.35 31 P **P** **04 11 53.8 +0.1**
comp=Z,3.0nm,0.9s,baz=306,slow=9.7,SNR=5.4
YKA LR LR 04 40 28.0
comp=Z,340nm,20.9s,baz=287,slow=38
comp=Z,3.0nm,0.9s
KEV Kevo 61.94 339 **P** **04 11 56.4 -1.1**
KEV IAmb IAmb 04 11 58.7
comp=Z,35nm,0.9s
KEV Kevo 61.94 339 P **P** **04 11 56.4 -1.1**
KEV pmax pmax
comp=Z,35nm,0.9s
HAMF Hammerfest 62.26 341 *e*P **P** **04 11 58.9 -0.7**
ARA0 ARCESS Array S 62.48 339 *e*P **P** **04 12 01.4 +0.2**
ARCES ARCESS Array B 62.48 339 P **P** **04 12 01.3 0.0**
comp=Z,9.9nm,0.8s,baz=50,slow=7.7,SNR=22
ARCES LR LR 04 43 57.0
comp=Z,1µm,18.5s,baz=46,slow=40
comp=Z,9.9nm,0.8s
ARCES ARCESS Array B 62.48 339 P **P** **04 12 01.2 0.0**
ARCES ARCESS Array B 62.48 339 P **P** **04 12 01.2 0.0**
ARCES pmax pmax
comp=Z,81nm,1.4s
POO Poona 62.56 272 *e*P **P** **04 12 01.8 -0.8**
KLMR Klimovskoe 62.67 328 *e*P **P** **04 11 59.6 -2.9**
KLMR *e**PP **pP** **04 12 10.0 -1.2**
KLMR *e* 04 14 17.3
KLMR pmax pmax
comp=Z,127nm,1.5s
KLMR MLR MLR
comp=Z,3µm,20.0s
HRA Herat 62.85 293 **P** **04 12 04.9 +0.4**
KAD Karad 63.00 271 *e*P **P** **04 12 04.5 -0.9**
KAD IAmb IAmb 04 12 16.0
comp=Z,56nm,1.2s
AS31 Alice Springs 63.05 189 **P** **04 12 05.3 -0.2**
AS31 IAmb IAmb 04 12 16.7
comp=Z,20nm,0.9s
ASAR Alice Springs 63.05 189 P **P** **04 12 04.8 -0.7**
comp=Z,8.9nm,0.8s,baz=9.9,slow=6.4,SNR=45
ASAR S **S** **04 20 30.1 -4.0**
comp=Z,1.4nm,1.0s,baz=7.5,slow=8.0,SNR=5.0
ASAR LR LR 04 38 41.2
comp=Z,909nm,21.5s,baz=7.5,slow=35
ASAR PKP2ab **P'P'ab** **04 41 17.4 +4.8**
comp=Z,0.8nm,0.8s,baz=184,slow=2.3,SNR=5.4
comp=Z,8.9nm,0.8s
ASAR Alice Springs 63.05 189 P **P** **04 12 05.1 -0.4**
BELG Belogornoye 63.14 317 LR LR 04 42 08.0
comp=Z,3µm,19.1s,baz=85,slow=38
BELG Belogornoye 63.14 317*c i*P **P** **04 12 05.6 -0.2**
BELG pmax pmax
comp=Z,17nm,1.1s
BELG MLR MLR
comp=Z,584nm,17.0s
KTK1 Kautokeino 63.44 340 *e*P **P** **04 12 07.5 0.0**
MBWA Marble Bar 63.82 204 P **P** **04 12 11.6 +1.0**
comp=Z,26nm,1.1s
JETT Jettan, Norway 63.82 341 *e*P **P** **04 12 10.1 0.0**
PALK Pallekele 64.07 258 LR LR 04 40 34.2
comp=Z,859nm,21.9s,baz=42,slow=36
TRO Tromso 64.14 341 *e*P **P** **04 12 11.6 -0.5**
PSA00 Pilbara Seismi 64.17 204 P **P** **04 12 12.7 -0.1**
EIDS Eidsvold 64.61 172 P P 04 12 22.0 +6.4
EIDS Eidsvold 64.61 172 **P** **04 12 16.0 +0.4**
EIDS IAmb IAmb 04 12 27.1
comp=Z,36nm,0.9s
KOD Kodaikanal 64.69 262 *e*P **P** **04 12 16.2 -0.6**
KOD IAmb IAmb 04 12 27.8
comp=Z,51nm,1.1s
DZM Mont Dzumac 64.71 156 *e*P **P** **04 12 15.8 -0.7**
comp=Z,190nm,1.1s
DZM Mont Dzumac 64.71 156 *e*LR LR 04 31 38.6
comp=Z,3µm,22.6s
DZM Mont Dzumac 64.71 156 P **P** **04 12 17.6 +1.1**
DZM Mont Dzumac 64.71 156 P **P** **04 12 17.6 +1.1**
JOF Joensuu 64.72 332 *e*P **P** **04 12 15.9 -0.1**
YATNC Mamie plateau, 64.84 156 P **P** **04 12 17.9 +0.7**
POIN Pond Inlet 64.90 13 IAmb IAmb 04 12 51.9
comp=Z,36nm,1.3s
WRKA Warakurna 65.31 195 P **P** **04 12 19.0 -1.2**
QLP Quilpie 65.38 179 P **P** **04 12 18.7 -2.0**
QLP Quilpie 65.38 179 P **P** **04 12 20.1 -0.5**
LTY Liberty 66.29 48 IAmb IAmb 04 12 47.4
comp=Z,24nm,1.2s
STEI Steigen 66.31 341 *e*P **P** **04 12 25.9 -0.2**
MOS Moscow 66.33 323 *e*P **P** **04 12 24.5 -2.0**
MOS *i* 04 12 37.1
MOS *e* 04 12 51.5
MOS *e*S **S** **04 21 10.7 -3.2**
MOS pmax pmax
comp=Z,188nm,1.6s
MOS pmax pmax
comp=Z,700nm,2.4s
MOS MLR MLR
comp=N,2µm,16.0s
MOS MLR MLR
comp=E,3µm,16.0s
MOS MLR MLR
comp=Z,4µm,16.0s
B08A Colville Reser 66.46 46 IAmb IAmb 04 13 00.2
comp=Z,30nm,1.4s
INKA Innaminka 66.56 182 **P** **04 12 28.5 +0.4**
INKA IAmb IAmb 04 12 39.6
comp=Z,40nm,0.8s
LOF Lofoten 66.58 342 *e*P **P** **04 12 27.6 -0.3**
I03D Drain, OR 66.60 52 IAmb IAmb 04 12 43.5
comp=Z,43nm,1.2s
FAUS Fauske 66.70 341 *e*P **P** **04 12 28.7 0.0**
HOOD Mount Hood Mea 66.76 50 IAmb IAmb 04 12 43.1
comp=Z,40nm,1.0s
H04A Detroit Lake 66.78 51 IAmb IAmb 04 12 42.5
comp=Z,43nm,1.1s
MXC Moxie City 66.88 48 IAmb IAmb 04 12 43.0
comp=Z,40nm,1.4s
VRH Novokhopyorsk 66.88 318 *e*P **P** **04 12 27.3 -2.8**
VRH *e**SP **pP** **04 12 38.9 +0.1**
VRH pmax pmax
comp=Z,80nm,1.0s
VRH MLR MLR
comp=Z,5µm,16.0s
EDM Edmonton 66.91 39 IAmb IAmb 04 12 51.4
comp=Z,27nm,1.1s
BLKN Baker Lake 66.96 24 IAmb IAmb 04 12 47.4
comp=Z,46nm,1.1s
I04A Tendick Farm, 67.12 52 IAmb IAmb 04 12 44.7
comp=Z,40nm,1.3s
E07A Sunnyside 67.14 48 IAmb IAmb 04 12 44.7
comp=Z,41nm,1.4s
OBN Obninsk 67.18 323 LR LR 04 42 25.5
comp=Z,602nm,21.0s,baz=358,slow=36
OBN Obninsk 67.18 323 P **P** **04 12 32.0 +0.1**
OBN Obninsk 67.18 323*c i*P **P** **04 12 31.6 -0.3**
OBN *i* 04 12 42.9
OBN *e* 04 12 58.8
OBN *e* 04 15 04.4
OBN PPP PPP 04 16 35.0
OBN *es*S **S** **04 21 21.5 -2.7**
OBN *e*PS PnS 04 22 05.3 +17
OBN *i* SS **SS** **04 25 49.1 +6.2**
OBN pmax pmax
comp=Z,251nm,2.5s
OBN MLR MLR
comp=Z,4µm,16.0s
OBN Obninsk 67.18 323 P **P** **04 12 31.8 -0.1**
comp=Z,2µmcomp=Z,97nm,1.4s
L02F Cave Junction 67.31 54 IAmb IAmb 04 13 43.4
comp=Z,55nm,1.7s
WIFE Three Sisters- 67.34 51 IAmb IAmb 04 13 06.6
comp=Z,34nm,1.1s
C09A Chrisman Ranch 67.36 46 IAmb IAmb 04 12 45.6
comp=Z,48nm,1.4s
D08A Wollman Farm, 67.40 47 IAmb IAmb 04 13 17.4
comp=Z,39nm,1.3s
G06A Carlson Farm, 67.41 50 IAmb IAmb 04 13 06.0
comp=Z,62nm,1.7s
BBOR Butler Butte 67.45 53 IAmb IAmb 04 13 08.3
comp=Z,45nm,1.6s
F07A Phinny Hill Vi 67.46 49 IAmb IAmb 04 12 52.4
comp=Z,35nm,1.2s
I05D Terrebonne, OR 67.48 51 IAmb IAmb 04 12 52.5
comp=Z,25nm,1.1s
KEF Keuruu 67.50 333 *e*P **P** **04 12 33.1 -0.7**
LPSR Galich'ya Gora 67.51 320 *e*P **P** **04 12 32.6 -1.5**
LPSR *e**SP **pP** **04 12 43.8 +1.0**
LPSR pmax pmax
comp=Z,90nm,0.9s
LPSR MLR MLR
comp=Z,2µm,14.0s
FIA1 FINESS Array S 67.55 332 **P** **04 12 34.0 -0.1**
FINES FINESS Array B 67.55 332 P **P** **04 12 33.9 -0.2**
comp=Z,36nm,0.8s,baz=51,slow=7.6,SNR=50
FINES LR LR 04 44 37.5
comp=Z,4µm,18.8s,baz=40,slow=38
comp=Z,36nm,0.8s
FINES FINESS Array B 67.55 332 P **P** **04 12 34.0 -0.2**
FINES FINESS Array B 67.55 332 P **P** **04 12 34.0 -0.2**
J04A Umpqua Nationa 67.61 52 IAmb IAmb 04 13 18.2
comp=Z,40nm,1.1s
VAF Ylistaro 67.65 335 *e*P **P** **04 12 34.9 +0.1**
VAGH Vaagaholmen 67.72 341 *e*P **P** **04 12 35.0 -0.2**
NEW Newport 67.74 45 IAmb IAmb 04 12 43.9
comp=Z,29nm,1.2s
RAUS Rausandaksla 67.74 340 *e*P **P** **04 12 35.2 -0.1**
MOR8 Moi Rana 67.84 340 *e*P **P** **04 12 34.1 -1.9**
KHMM Horse Mountain 67.89 55 IAmb IAmb 04 12 50.9
comp=Z,37nm,1.2s
VORR Voronezh 67.91 319 *e*P **P** **04 12 36.0 -0.6**
VORR pmax pmax
comp=Z,78nm,0.5s
VORR MLR MLR
comp=Z,6µm,17.0s
PINE Pine Mountain 68.02 51 IAmb IAmb 04 12 51.0
comp=Z,50nm,1.2s
YBH Yreka Blue Hor 68.06 54 LR LR 04 35 01.3
comp=Z,25nm,21.9s,baz=294,slow=29
YBH Yreka Blue Hor 68.06 54 IAmb IAmb 04 12 51.1
comp=Z,31nm,1.3s
J05D Fort Rock, OR 68.12 52 IAmb IAmb 04 13 11.6
comp=Z,41nm,1.3s
MAK Makhachkala 68.17 308*d i*P **P** **04 12 36.7 -1.7**
MAK *e* 04 15 07.5
MAK *e*PPP PPP 04 16 45.6
MAK *es*S **S** **04 21 34.7 -1.8**
MAK *es*S **SS** **04 26 03.2 +4.4**
MAK pmax pmax
comp=Z,136nm,1.3s
MAK MLR MLR
comp=Z,3µm,15.0s
VSR Storozhevoye 68.19 319 *e*P **P** **04 12 34.7 -3.7**
VSR *e**SP **pP** **04 12 47.5 +0.3**
VSR pmax pmax
comp=Z,70nm,0.9s
VSR MLR MLR
comp=Z,5µm,16.0s
VORD Divnogorie 68.28 319 *e*P **P** **04 12 35.9 -3.0**
VORD *e**SP **pP** **04 12 48.4 +0.7**
VORD pmax pmax
comp=Z,50nm,0.9s
VORD MLR MLR
comp=Z,4µm,17.0s
JMIC Jan Mayen 68.30 350 LR LR 04 44 40.9
comp=Z,345nm,18.1s,baz=31,slow=38
LNOR Lincton Mounta 68.43 48 IAmb IAmb 04 13 17.3
comp=Z,39nm,1.7s
NGCH Negor - Chabah 68.47 286 P **P** **04 12 41.1 +0.5**
M03C McCloud 68.68 54 IAmb IAmb 04 13 16.7
comp=Z,34nm,1.1s
AKT Akhty 68.85 307 *e*P **P** **04 12 40.4 -2.5**
AKT *e* 04 13 04.9
AKT *e* 04 15 12.6
AKT *e*S **S** **04 21 43.8 -1.2**
AKT pmax pmax
comp=Z,75nm,1.0s
AKT MLR MLR
comp=Z,4µm,15.0s
ARBE Arbavere 68.93 331 *e*P **P** **04 12 42.2 -0.7**
VSU Vasula 69.29 330 *e*P **P** **04 12 44.2 -0.9**
VSU Vasula 69.29 330*de*P **P** **04 12 43.4 -1.7**
VSU pmax pmax
comp=Z,104nm,0.8s
VSU MLR MLR
comp=Z,3µm,18.0s
RAF Rauma 69.36 334 *e*P **P** **04 12 45.2 -0.3**
O03E Paynes Creek 69.43 54 IAmb IAmb 04 12 59.2
comp=Z,49nm,1.2s
GOF Gofitskoye 69.65 312*c i*P **P** **04 12 48.0 +0.4**
ARMA Armidale 69.66 172 P P 04 12 54.8 +7.1
ARMA Armidale 69.66 172 IAmb IAmb 04 12 59.7
comp=Z,58nm,1.1s
NSS Namsos 69.77 340 *e*P **P** **04 12 48.1 +0.1**
MNRC McLaughlin Min 69.81 56 IAmb IAmb 04 13 21.0
comp=Z,50nm,1.3s
WVOR Wild Horse Val 70.17 51 IAmb IAmb 04 13 24.1
comp=Z,46nm,1.4s
CMSA Cobar Meteorol 70.35 178 P **P** **04 12 54.1 +2.3**
comp=Z,67nm,1.0s
CMSA Cobar Meteorol 70.35 178 P **P** **04 12 51.7 -0.1**
KHAM Kharkiv 70.41 319 P **P** **04 12 52.4 +0.1**
KVAR Kislovodsk Arr 70.49 311 LR LR 04 48 49.8
comp=Z,2µm,18.1s,baz=268,slow=40
KIV Kislovodsk 70.50 311 P **P** **04 12 53.5 +0.6**
KIV P **P** **04 12 53.5 +0.6**
KIV Kislovodsk 70.50 311 P **P** **04 12 53.4 +0.5**
KIV Kislovodsk 70.50 311 ⇑P **P** **04 12 53.7 +0.7**
KIV Kislovodsk 70.50 311 *i* P **P** **04 12 53.4 +0.5**
SNR=34
KIV Kislovodsk 70.50 311 *e*P **P** **04 12 52.4 -0.5**
KIV *e* 04 15 27.6
KIV *e*S **S** **04 22 03.7 -0.4**
KIV *e*SS **SS** **04 26 35.4 +0.6**
KIV pmax pmax
comp=Z,173nm,1.1s
KIV pmax pmax
comp=Z,114nm,3.8s
KIV Kislovodsk 70.50 311 P **P** **04 12 53.7 +0.7**
comp=Z,2µmcomp=Z,254nm,1.3s
KBZ Khabaz 70.50 311 P **P** **04 12 53.0 +0.2**
comp=Z,46nm,0.9s,baz=61,slow=4.6,SNR=52
KBZ LR LR 04 48 49.0
comp=Z,2µm,18.3s,baz=37,slow=40
comp=Z,46nm,0.9s
KBZ Khabaz 70.50 311*c i*P **P** **04 12 53.3 +0.5**
KBZ pmax pmax
comp=Z,71nm,1.0s
KBZ MLR MLR
comp=Z,2µm,18.0s
BEKR Beckworth 70.58 54 **P** **04 12 55.3 +1.7**
BEKR IAmb IAmb 04 13 06.6
comp=Z,23nm,1.0s
STKA Stephens Creek 70.66 181 P P 04 13 02.7 +9.0
STKA Stephens Creek 70.66 181 P **P** **04 12 53.6 -0.1**
comp=Z,2.2nm,0.7s,baz=1.5,slow=4.4,SNR=4.9
comp=Z,2.2nm,0.7s
STKA Stephens Creek 70.66 181 P **P** **04 12 53.5 -0.2**
ERBR Yeremizino-Bor 70.73 314 *e*P **P** **04 12 53.6 -0.6**
ERBR pmax pmax
comp=Z,126nm,1.0s
ERBR MLR MLR
comp=Z,2µm,16.0s
FORT Forrest 70.94 194 P P 04 13 02.5 +7.1
LABN Labinsk 71.23 313 *e*P **P** **04 12 56.5 -0.8**
LABN *es*S **S** **04 22 15.3 +2.9**
LABN pmax pmax
comp=Z,124nm,1.0s
LABN MLR MLR
comp=Z,3µm,18.0s
FFC Flin Flon 71.25 34 P **P** **04 12 57.0 -0.2**
FFC IAmb IAmb 04 13 21.7
comp=Z,39nm,1.2s
FFC Flin Flon 71.25 34 P **P** **04 12 57.0 -0.2**
FFC pmax pmax
comp=Z,39nm,1.3s
PAHR Pah Rah Range 71.29 54 **P** **04 12 59.9 +2.0**
MNK Minsk 71.47 326 *i* P **P** **04 12 59.1 +0.6**
MNK *i* 04 15 38.2
MNK *i* PPP PPP 04 17 22.1
MNK *i* S **S** **04 22 16.8 +1.9**
MNK *i* SS **SS** **04 26 54.0 +5.1**
MNK pmax pmax
comp=Z,109nm,0.9s
MNK pmax pmax
comp=N,33nm,0.9s
MNK pmax pmax
comp=E,60nm,1.0s
MNK MLR MLR
comp=N,2µm,16.0s
MNK MLR MLR
comp=E,2µm,15.0s
MNK MLR MLR
comp=Z,3µm,15.0s
GNI Garni 71.47 307 P **P** **04 12 59.6 +0.5**
GNI P **P** **04 12 59.6 +0.5**
GNI Garni 71.47 307 **P** **04 12 58.9 -0.1**
GNI Garni 71.47 307*c i*P **P** **04 12 59.7 +0.7**
GNI pmax pmax
comp=Z,42nm,1.2s
GNI MLR MLR
comp=Z,3µm,18.0s
GNI Garni 71.47 307 P **P** **04 12 59.8 +0.7**
ISAL Salakas 71.49 328 *e*P **P** **04 12 59.4 +0.8**
FCC Fort Churchill 71.55 27 **P** **04 12 59.0 +0.1**
FCC IAmb IAmb 04 13 36.6
comp=Z,47nm,1.3s
FCC Fort Churchill 71.55 27 P **P** **04 12 59.0 +0.1**
FCC pmax pmax
comp=Z,47nm,1.3s
WSAR Wadi Sarin 71.56 285 P **P** **04 12 59.8 +0.2**
WSAR S **S** **04 22 16.6 -0.3**
SLIT Slitere, Latvi 71.58 331 *e*P **P** **04 12 58.6 -0.4**
JLN Jalan Bani Buh 71.60 284 P **P** **04 13 00.1 +0.2**
JLN P **P** **04 13 00.1 +0.2**
CMB Columbia Colle 71.62 56 IAmb IAmb 04 13 33.6
comp=Z,44nm,1.5s
WBK Wadi Bani Khal 71.66 284 P **P** **04 13 01.0 +0.7**
BANOM Banah 71.75 289 P **P** **04 13 01.2 +0.5**
BANOM P **P** **04 13 01.2 +0.5**
BANOM Banah 71.75 289 *i* P **P** **04 13 00.7 0.0**
SNR=30
BIDO Bidbid 71.77 286 P **P** **04 13 01.3 +0.4**
SNR=12
BIDO P **P** **04 13 01.3 +0.4**
SNR=12
SHME Shamm 71.79 289 P **P** **04 13 01.1 +0.2**
SNR=9.3
SHME P **P** **04 13 01.1 +0.2**
SNR=9.3
SHME Shamm 71.79 289 *i* P **P** **04 13 01.1 +0.2**
SNR=23
EGMT Eagleton 71.86 42 IAmb IAmb 04 13 25.6
comp=Z,25nm,0.9s
LHI Lord Howe Isla 71.86 166 P **P** **04 13 04.9 +4.0**
comp=Z,73nm,1.8s
BBOO Buckleboo 71.87 186 P P 04 13 07.2 +6.1
BBOO Buckleboo 71.87 186 P **P** **04 13 01.1 +0.1**
DLMT Dillon 71.96 46 IAmb IAmb 04 13 27.9
comp=Z,30nm,1.0s
SMDO Samad 72.10 285 P **P** **04 13 03.1 +0.2**
SNR=12
SMDO P **P** **04 13 03.1 +0.2**
SNR=12
MDH Madha 72.11 288 P **P** **04 13 01.7 -1.1**
SNR=9.7
MDH Madha 72.11 288 *i* P **P** **04 13 02.0 -0.8**
SNR=6.6
MASF Masafi 72.17 288 P **P** **04 13 03.7 +0.4**
SNR=20
MASF P **P** **04 13 03.7 +0.4**
SNR=20
MASF S **S** **04 22 23.3 -0.6**
MASF S **S** **04 22 23.3 -0.6**
MSFE Esma-Masafi 72.17 288 *i* P **P** **04 13 03.3 0.0**
SNR=36
KARS Kars 72.22 308 IAmb IAmb 04 13 17.0
comp=Z,65nm,1.0s
HTT Hallett 72.30 184 P **P** **04 13 04.5 +0.9**
VSLR Vesyoloye 72.34 312*c i*P **P** **04 13 04.3 +0.4**
VSLR pmax pmax
comp=Z,86nm,1.0s
HOQ Hoqain 72.35 286 P **P** **04 13 04.3 0.0**

SNR=20
HOQ P P 04 13 04.3 0.0
SNR=20
UOSS Minazif 72.38 288 P P **04 13 04.2 -0.3**
UOSS P P **04 13 04.2 -0.3**
UOSS S S **04 22 25.7 -0.6**
UOSS S S **04 22 25.7 -0.6**
UOSS Minazif 72.38 288 P P **04 13 04.6 +0.1**
PABE Paberze 72.42 329 *eP* P **04 13 04.5 +0.3**
SOC Sochi 72.44 312 *eP* P **04 13 02.9 -1.7**
SOC *e* 04 15 39.9
SOC ePPP PPP 04 17 28.4
SOC *eS* S **04 22 25.0 -1.4**
SOC *eSS* SS **04 27 04.3 -0.1**
SOC *eSSS* SSS 04 30 07.1
SOC pmax pmax
comp=Z,60nm,1.0s
SOC MLR MLR
comp=Z,2µm,17.0s
JMDO Jabal Madar 72.45 285 P P **04 13 04.9 0.0**
SNR=11
JMDO P P **04 13 04.9 0.0**
SNR=11
HATD Hatta, Dubai 72.50 288 P P **04 13 05.4 +0.1**
SNR=24
HATD P P **04 13 05.4 +0.1**
SNR=24
HATD S S **04 22 27.6 -0.1**
HATD S S **04 22 27.6 -0.1**
HATD Hatta, Dubai 72.50 288 *i* P S **04 13 05.4 +0.1**
SNR=16
DOMB Dombas 72.55 339 *eP* P **04 13 04.8 -0.1**
SOHO SOHO 72.61 287 P P **04 13 05.5 -0.3**
SOHO P P **04 13 05.5 -0.3**
SOHO SOHO 72.61 287 *i* P P **04 13 06.0 +0.1**
SNR=57
ASHO Ashiyiah 72.64 288 P P **04 13 06.1 0.0**
SNR=36
ASHO Ashiyiah 72.64 288 *i* P P **04 13 06.2 0.0**
SNR=46
LHV Little Huntoon 72.70 55 IAmb IAmb 04 13 20.1
comp=Z,50nm,1.1s
HFS Hagfors 72.70 336 P P **04 13 05.6 -0.2**
comp=Z,17nm,0.4s,baz=44,slow=6.6,SNR=108
HFS LR LR 04 48 02.3
comp=Z,2µm,19.0s,baz=36,slow=38
comp=Z,17nm,0.4s
NVAR Mina Array Bea 72.72 54 P P **04 13 08.1 +1.5**
comp=Z,3.7nm,0.9s,baz=286,slow=6.6,SNR=23
NVAR LR LR 04 42 37.3
comp=Z,362nm,18.4s,baz=297,slow=34
comp=Z,3.7nm,0.9s
NVAR Mina Array Bea 72.72 54 P P **04 13 07.7 +1.1**
NB2 NORSAR Subarra 72.74 338 P P **04 13 05.8 -0.3**
comp=Z,112nm,1.2s,baz=36,slow=6.2
NOA NORSAR Array B 72.74 338 P P **04 13 06.0 -0.1**
comp=Z,29nm,0.8s,baz=38,slow=6.0,SNR=73
NOA LR LR 04 50 16.9
comp=Z,2µm,18.6s,baz=30,slow=40
comp=Z,29nm,0.8s
NOA NORSAR Array B 72.74 338 P P **04 13 06.0 -0.1**
NAZ Nazwa, Dubai 72.76 288 P P **04 13 06.5 -0.2**
SNR=17
NAZ P P **04 13 06.5 -0.2**
SNR=17
NAZ Nazwa, Dubai 72.76 288 *i* P P **04 13 06.5 -0.2**
SNR=11
NC602 NORSAR Array S 72.89 337 IAmb IAmb 04 13 07.3
comp=Z,54nm,1.2s
NC602 NORSAR Array S 72.89 337 *eP* P **04 13 06.3 -0.6**
BSY Bisya 72.92 286 P P **04 13 07.8 +0.1**
SNR=9.3
FAQ Al Faqa, Dubai 72.95 288 P P **04 13 07.5 -0.4**
SNR=13
FAQ P P **04 13 07.5 -0.4**
SNR=13
FAQ Al Faqa, Dubai 72.95 288 *i* P P **04 13 07.6 -0.3**
SNR=6.7
ANN Anapa 72.99 314 *eP* P **04 13 05.6 -2.2**
ANN *eS* S **04 22 32.0 -0.6**
ANN pmax pmax
comp=Z,203nm,1.4s
ANN MLR MLR
comp=Z,2µm,15.0s
NAO01 NORSAR Array S 72.99 338 IAmb IAmb 04 13 08.0
comp=Z,33nm,0.9s
ARQ Araqi 73.08 286 P P **04 13 09.1 +0.4**
SNR=24
ARQ P P **04 13 09.1 +0.4**
SNR=24
ASUD Al Ashush, Dub 73.21 288 P P **04 13 09.4 -0.1**
SNR=14
ASUD P P **04 13 09.4 -0.1**
SNR=14
ASUD S S **04 22 36.6 +0.9**
ASUD S S **04 22 36.6 +0.9**
ASUD Al Ashush, Dub 73.21 288 *i* P P **04 13 09.6 +0.2**
SNR=31
ALNE Al Ain 73.23 288 P P **04 13 09.6 0.0**
SNR=26
ALNE P P **04 13 09.6 0.0**
SNR=26
ALNE S S **04 22 34.7 -1.3**
ALNE S S **04 22 34.7 -1.3**
ALNE Al Ain 73.23 288 *i* P P **04 13 09.5 0.0**
SNR=38
MHTO MHTO 73.36 284 P P **04 13 10.3 -0.1**
SNR=16
MHTO P P **04 13 10.3 -0.1**
SNR=16
AKASG Malin Array Be 73.42 323 P P **04 13 09.9 -0.2**
comp=Z,24nm,0.7s,baz=46,slow=6.0,SNR=93
AKASG LR LR 04 49 28.5
comp=Z,1µm,18.2s,baz=46,slow=39
comp=Z,24nm,0.7s
AKASG Malin Array Be 73.42 323 P P **04 13 10.0 -0.2**
AKASG IAmb IAmb 04 13 10.5
comp=Z,64nm,1.0s
AKASG Malin Array Be 73.42 323 *i* P P **04 13 09.8 -0.4**
AKASG pmax pmax
comp=Z,24nm,0.7s
AKBB Malin Array Si 73.42 323 *c i* P P **04 13 09.8 -0.4**
KIEV Kiev 73.43 323 P P **04 13 10.0 -0.2**
KIEV IAmb IAmb 04 13 11.0
comp=Z,57nm,0.9s
KIEV Kiev 73.43 323 ⇑P P **04 13 10.1 -0.2**
KIEV Kiev 73.43 323 *i* P P **04 13 09.8 -0.4**
SNR=29
KIEV Kiev 73.43 323 P P **04 13 10.0 -0.2**
AJN Ajban 73.50 288 P P **04 13 10.5 -0.6**
SNR=12
AJN P P **04 13 10.5 -0.6**
SNR=12
AJN S S **04 22 37.2 -1.8**
AJN S S **04 22 37.2 -1.8**
AJN Ajban 73.50 288 *i* P P **04 13 10.6 -0.5**
SNR=11
SFJD Kangerlussuaq 73.68 6 LR LR 04 47 12.8
comp=Z,2µm,21.0s,baz=346,slow=37
SFJD Kangerlussuaq 73.68 6 *P* P **04 13 12.1 +0.7**
SFJD IAmb IAmb 04 13 12.4
comp=Z,39nm,1.1s
SFJD Kangerlussuaq 73.68 6 P P **04 13 12.1 +0.7**
SFJD pmax pmax
comp=Z,39nm,1.1s
SUW Suwalki 73.80 328 *eP* P **04 13 12.1 -0.3**
SUW *eL* L 04 48 04.0
comp=Z,3µm,19.1s
SUW Suwalki 73.80 328 *eP* P **04 13 12.6 +0.2**
KOPT Kop Dagi 74.16 309 IAmb IAmb 04 13 17.8
comp=Z,74nm,1.2s
GRAC Grapevine Rang 74.17 55 IAmb IAmb 04 13 28.3
comp=Z,30nm,1.1s
DQM DQM 74.31 283 P P **04 13 15.6 -0.3**
STRU Stroemstad 74.35 336 *i* P P **04 13 15.5 0.0**
FRB Frobisher Bay 74.44 14 LR LR 04 48 47.5
comp=Z,1µm,20.7s,baz=343,slow=38
UMZA Um Al Zommool 74.46 287 P P **04 13 15.9 -0.9**
UMZA P P **04 13 15.9 -0.9**
SIM Simferopol' 74.72 316 *eP* P **04 13 17.0 -0.9**
SIM *e* 04 13 32.0
SIM *eS* **SKiKP** **04 22 41.0 +0.2**
SIM pmax pmax
comp=Z,113nm,1.2s
SIM MLR MLR
comp=Z,2µm,18.6s

MZWR Madinat Zayed 74.79 288 S S **04 22 50.4 -3.0**
S11A Rachel 74.80 54 IAmb IAmb 04 13 59.5
comp=Z,69nm,1.4s
FURC Furnace Creek, 74.81 55 IAmb IAmb 04 13 31.8
comp=Z,33nm,1.0s
JRN Qarnain Island 74.85 290 P P **04 13 17.8 -1.2**
SNR=6.1
JRN P P **04 13 17.8 -1.2**
SNR=6.1
BORU Boraas 74.96 335 *i* P P **04 13 18.2 -0.8**
TJOU Tjoern 75.02 336 *i* P P **04 13 19.2 -0.2**
GWY Greenwater Val 75.11 55 IAmb IAmb 04 13 32.9
comp=Z,32nm,1.2s
QSM Queen of Sheba 75.11 56 IAmb IAmb 04 13 33.9
comp=Z,37nm,1.0s
TCUT Toone Canyon 75.28 49 IAmb IAmb 04 13 34.4
comp=Z,32nm,1.1s
PDAR Pinedale Array 75.29 47 P P **04 13 22.1 +0.5**
comp=Z,1.2nm,0.5s,baz=26,slow=0.7,SNR=23
PDAR LR LR 04 42 47.9
comp=Z,126nm,21.9s,baz=324,slow=33
comp=Z,1.2nm,0.5s
PDAR Pinedale Array 75.29 47 P P **04 13 22.2 +0.7**
GHWR Ruwais 75.41 289 P P **04 13 21.3 -0.9**
GHWR S S **04 22 56.6 -3.8**
ONAU Onsala 75.43 335 *i* P P **04 13 20.9 -0.8**
DEL Delary 75.50 334 *i* P P **04 13 21.0 -1.2**
MZR Muzera 75.53 288 P P **04 13 22.4 -0.6**
SNR=24
MZR P P **04 13 22.4 -0.6**
SNR=24
MZR S S **04 22 59.3 -2.5**
MZR S S **04 22 59.3 -2.5**
MZR Muzera 75.53 288 *i* P P **04 13 22.5 -0.6**
SNR=28
SHMA Al-Shehemyia 75.68 292 P P **04 13 22.8 -0.9**
BORG Borgarnes 75.73 353 LR LR 04 46 50.3
comp=Z,270nm,20.3s,baz=0.1,slow=36
PURM Purcari 75.91 319 ⇑P P **04 13 24.8 +0.1**
MILA Mila 76.02 175 P P 04 13 32.2 +6.9
BJUU Bjuv 76.11 334 *i* P P **04 13 25.6 0.0**
KIS Kishinev 76.12 320 *eP* P **04 13 24.0 -1.9**
comp=Z,70nm,1.0s
KIS *eS* S **04 23 07.0 -0.5**
KIS *eL* L 04 42 29.0
KIS LRM MLR 04 49 35.0
comp=Z,1µm,18.0s
SNART Snartemo 76.12 338 *i* P P **04 13 25.0 -0.7**
TRNA Turayna 76.17 291 P P **04 13 25.5 -1.1**
MILM Milestii Mici 76.18 320 ⇑P P **04 13 25.4 -0.9**
MILM Milestii Mici 76.18 320 P P **04 13 25.3 -0.9**
MILM Milestii Mici 76.18 320 ⇓*i* P P **04 13 24.0 -2.2**
comp=Z,290nm,2.1s
MILM Milestii Mici 76.18 320 *e*PP PP 04 16 27.0 +10
MILM *eS* S **04 23 07.0 -1.1**
MILM LRM MLR 04 40 27.0
comp=Z,3µm,18.0s
MILM *eL* L 04 40 51.0
BSD Bornholm Skovb 76.19 332 *i* P P **04 13 26.0 -0.2**
BSD IAmb IAmb 04 13 26.4
comp=Z,67nm,1.0s
SLWR Sila 76.22 290 P P **04 13 26.1 -0.7**
LUNU Lund 76.31 333 *i* P P **04 13 26.6 -0.2**
BEL Belsk 76.38 327 *eP* P **04 13 28.0 +0.7**
BEL *eL* L 04 49 29.0
comp=Z,3µm,20.5s
SMRA Abu-Samra 76.44 291 P P **04 13 27.4 -0.7**
COP Copenhagen 76.62 334 *i* P P **04 13 29.1 +0.6**
COP IAmb IAmb 04 13 29.8
comp=Z,142nm,0.8s
RDMU Red Mountain 76.70 48 IAmb IAmb 04 13 42.4
comp=Z,48nm,1.1s
P17A Butcher Ranch, 76.72 50 IAmb IAmb 04 13 42.5
comp=Z,42nm,1.1s
BZK Bozkurt 76.73 314 ⇑P P **04 13 29.9 +0.5**
GKP Gorka Klasztor 76.74 330 *eP* P **04 13 29.5 +0.2**
GKP *eL* L 04 50 18.7
comp=Z,3µm,18.1s
PFO Pinyon Flats O 76.82 57 LR LR 04 39 35.5
comp=Z,457nm,22.0s,baz=282,slow=30
VASR Vaslui 76.88 320 ⇑P P **04 13 30.6 +0.4**
P18A Preston Nutter 76.91 49 IAmb IAmb 04 13 43.8
comp=Z,30nm,1.1s
ULM Lac du Bonnet 77.05 34 P P **04 13 31.2 +0.1**
comp=Z,2.5nm,0.5s,baz=324,slow=5.7,SNR=3.3
comp=Z,2.5nm,0.5s
ULM Lac du Bonnet 77.05 34 IAmb IAmb 04 14 01.6
comp=Z,74nm,1.8s
SRU San Rafael Swe 77.08 50 IAmb IAmb 04 13 45.2
comp=Z,31nm,0.9s
MUD Monsted U'grnd 77.08 336 *i* P P **04 13 31.1 +0.1**
MUD IAmb IAmb 04 13 32.9
comp=Z,52nm,1.0s
RAO Raoul Island 77.16 146 LR LR 04 40 33.2
comp=Z,561nm,20.3s,baz=26,slow=30
KWP Kalwaria Pacla 77.16 325 *eP* P **04 13 32.4 +0.6**
VLDR Vladesti 77.28 319 ⇑P P **04 13 33.0 +0.5**
VARL Varlezi 77.36 320 ⇑P P **04 13 33.8 +0.8**
RSSD Black Hills 77.42 43 P P **04 13 33.5 0.0**
RSSD Black Hills 77.42 43 P P **04 13 33.6 0.0**
RSSD pmax pmax
comp=Z,29nm,1.3s
BUR08 Bucovina Ar. S 77.44 322 IAmb IAmb 04 13 34.5
comp=Z,27nm,0.8s
SCTR Scanteiesti 77.44 319 ⇑P P **04 13 34.2 +0.8**
BURAR Bucovina Array 77.45 322 P P **04 13 34.0 +0.4**
BURAR IAmb IAmb 04 13 34.9
comp=Z,33nm,0.8s
BURAR Bucovina Array 77.45 322 ⇑P P **04 13 33.8 +0.3**
BURAR Bucovina Array 77.45 322 P P **04 13 33.8 +0.3**
TATR Tatarca 77.47 319 ⇑P P **04 13 33.9 +0.3**
GHRR 77.47 320 ⇑P P **04 13 34.5 +1.0**
TESR Tescani 77.53 321 ⇑P P **04 13 33.9 0.0**
DMTO DMTO 77.59 283 P P **04 13 34.1 -0.6**
JURR Jurilovca 77.62 318 ⇑P P **04 13 34.6 +0.3**
IZVR Izvoarele 77.65 319 ⇑P P **04 13 35.3 +0.8**
DOK Doka 77.67 284 P P **04 13 34.3 -0.8**
DOK P P **04 13 34.3 -0.8**
CFR Carcaliu 77.72 319 ⇑P P **04 13 35.2 +0.2**
CFR Carcaliu 77.72 319 P P **04 13 35.1 +0.2**
PANC Panciu 77.73 320 ⇑P P **04 13 36.3 +1.3**
ONER Baraj Valea Uz 77.78 321 ⇑P P **04 13 36.0 +0.7**
TPGR Topolog 77.79 319 ⇑P P **04 13 35.3 -0.1**
VRI Vrincioaia 77.95 320 ⇑P P **04 13 37.0 +0.8**
VRI Vrincioaia 77.95 320 P P **04 13 37.0 +0.8**
STHS Stebnicka Huta 77.97 325 *eP* P **04 13 35.7 -0.6**
STHS pmax pmax
comp=Z,24nm,1.0s
STHS Stebnicka Huta 77.97 325 *eP* P **04 13 35.7 -0.6**
PLOR Plostina 78.00 320 ⇑P P **04 13 37.1 +0.5**
PLOR Plostina 78.00 320 P P **04 13 37.0 +0.5**
OJC Ojcow 78.00 327 *eP* P **04 13 36.9 +0.5**
OJC *eL* L 04 51 00.1
comp=Z,3µm,19.1s
TIRR Tirgusor 78.07 318 IAmb IAmb 04 13 50.5
comp=Z,57nm,1.3s
TIRR Tirgusor 78.07 318 ⇑P P **04 13 36.6 -0.3**
TIRR Tirgusor 78.07 318 P P **04 13 36.5 -0.3**
TURR Turia 78.17 321 ⇑P P **04 13 38.8 +1.3**
TLBR Topalu 78.20 319 ⇑P P **04 13 38.0 +0.3**
COVR Voineasa-Covas 78.22 320 ⇑P P **04 13 38.1 +0.3**
OZUR 78.25 321 ⇑P P **04 13 39.2 +1.3**
RBK Rabkut 78.28 283 P P **04 13 37.8 -0.8**
RBK P P **04 13 37.8 -0.8**
BOSR Bodos 78.33 321 ⇑P P **04 13 39.3 +0.9**
WHFO Wadi Hawf 78.36 284 P P **04 13 37.9 -1.0**
WHFO P P **04 13 37.9 -1.0**
NIE Niedzica 78.38 326 *eP* P **04 13 39.5 +0.9**
NIE *eL* L 04 51 15.6
comp=Z,2µm,18.4s
BR131 Keskin Array S 78.41 312 P P **04 13 39.1 +0.1**
SNR=20
BR131 P P **04 13 39.1 +0.1**
SNR=20
BR131 Keskin Array S 78.41 312 IAmb IAmb 04 13 52.7
comp=Z,53nm,1.2s
BR131 Keskin Array S 78.41 312 *c i* P P **04 13 39.1 +0.1**
BRTR Keskin Array B 78.41 312 P P **04 13 39.2 +0.1**
comp=Z,20nm,1.1s,baz=94,slow=4.0,SNR=55
BRTR PP PP **04 16 37.1 +1.1**
comp=Z,3.1nm,0.8s,baz=63,slow=6.2,SNR=4.6
BRTR LR LR 04 52 52.4
comp=Z,1µm,18.8s,baz=53,slow=39
comp=Z,20nm,1.1s

EPLO Experimental L 78.41 34 IAmb IAmb 04 13 45.9
comp=Z,35nm,1.1s
NEHR Nehoiu 78.47 320 ⇑P P **04 13 39.8 +0.6**
DOPR Dopca 78.54 321 ⇑P P **04 13 40.4 +0.9**
PV17 East Wray Mesa 78.55 50 IAmb IAmb 04 13 52.6
comp=Z,44nm,1.0s
PV16 Nyswonger Mesa 78.55 50 IAmb IAmb 04 13 52.6
comp=Z,40nm,1.1s
ISR Istrita 78.56 320 ⇑P P **04 13 40.5 +0.8**
ISR Istrita 78.56 320 P P **04 13 40.5 +0.8**
PV11 David Mesa, Pa 78.59 50 IAmb IAmb 04 14 18.6
comp=Z,55nm,1.2s
PV05 Paradox Valley 78.60 50 IAmb IAmb 04 13 53.1
comp=Z,57nm,1.0s
MLR Muntele Rosu 78.60 320 LR LR 04 51 44.4
comp=Z,4µm,19.0s,baz=48,slow=38
MLR Muntele Rosu 78.60 320 IAmb IAmb 04 13 41.9
comp=Z,81nm,1.5s
MLR Muntele Rosu 78.60 320 ⇑P P **04 13 39.7 -0.3**
MLR Muntele Rosu 78.60 320 P P **04 13 39.7 -0.3**
ICOR Ion Corvin 78.62 318 ⇑P P **04 13 40.5 +0.6**
PV03 Paradox Valley 78.63 50 IAmb IAmb 04 13 53.1
comp=Z,41nm,1.2s
KIRS Kirsehir-Merke 78.64 311 ⇑P P **04 13 40.5 +0.2**
BSEG Bad Segeberg 78.76 334 *eP* P **04 13 41.2 +0.7**
comp=Z,42nm,1.0s,baz=35,slow=5.3
BSEG *eL* L 04 51 14.5
comp=Z,2µm,19.4s
ANTO Ankara 78.80 313 P P **04 13 41.8 +0.6**
ANTO P P **04 13 41.8 +0.6**
ANTO Ankara 78.80 313 P P **04 13 41.9 +0.8**
ANTO Ankara 78.80 313 ⇑P P **04 13 41.7 +0.6**
ANTO Ankara 78.80 313 P P **04 13 41.9 +0.8**
ANTO pmax pmax
comp=Z,69nm,0.9s
CJR Cluj-Napoca 78.87 322 ⇑P P **04 13 42.3 +0.9**
CJR Cluj-Napoca 78.87 322 P P **04 13 42.2 +0.9**
LANS Liptovska Anna 78.94 326 *eP* P **04 13 42.9 +1.2**
LANS pmax pmax
comp=Z,20nm,1.0s
LANS Liptovska Anna 78.94 326 *eP* P **04 13 42.9 +1.2**
KSP Ksiaz 78.98 329 *eP* P **04 13 42.4 +0.6**
KSP *eL* L 04 51 31.1
comp=Z,3µm,18.3s
OKC Ostrava-Krasne 78.99 327 *eP* P **04 13 42.4 +0.5**
OKC MLR MLR
comp=Z,3µm,14.3s
OKC Ostrava-Krasne 78.99 327 *eP* P **04 13 42.4 +0.5**
OKC AMS AMS 04 52 40.0
comp=Z,3µm,14.3s
ABTO Aybut 79.06 283 P P **04 13 42.1 -0.8**
ABTO P P **04 13 42.1 -0.8**
STEB Steborice 79.07 327 *eP* P **04 13 42.9 +0.6**
VOIR 79.08 321 ⇑P P **04 13 42.9 +0.2**
VOIR 79.08 321 P P **04 13 42.8 +0.2**
MARR Marisel-Cluj 79.12 323 ⇑P P **04 13 43.4 +0.6**
DRGR 79.23 323 ⇑P P **04 13 43.4 +0.1**
DRGR 79.23 323 P P **04 13 43.4 +0.1**
SAHE Sakarya_HENDEK 79.23 314 ⇑P P **04 13 43.3 -0.1**
OSTC Ostas 79.23 329 *eP* P **04 13 43.8 +0.6**
OSTC MLR MLR
comp=Z,2µm,17.0s
OSTC Ostas 79.23 329 *eP* P **04 13 43.8 +0.6**
OSTC AMS AMS 04 51 40.0
comp=Z,2µm,17.0s
CHVC Chvalec 79.28 329 *eP* P **04 13 44.1 +0.6**
CHVC Chvalec 79.28 329 *eP* P **04 13 44.1 +0.6**
MORC Moravsky Berou 79.29 328 IAmb IAmb 04 13 45.5
comp=Z,49nm,1.0s
MORC Moravsky Berou 79.29 328 ⇑P P **04 13 44.2 +0.5**
MORC Moravsky Berou 79.29 328 *eP* P **04 13 44.0 +0.4**
MORC Moravsky Berou 79.29 328 P P **04 13 44.1 +0.5**
ARR Arges 79.34 321 ⇓P P **04 13 45.1 +1.2**
DPC Dobruska-Polom 79.35 328 *eP* P **04 13 44.6 +0.7**
DPC MLR MLR
comp=Z,2µm,16.1s
DPC Dobruska-Polom 79.35 328 *eP* P **04 13 44.6 +0.7**
DPC AMS AMS 04 52 50.0
comp=Z,2µm,16.1s
UPC Upice 79.36 329 *eP* P **04 13 44.5 +0.6**
UPC *eS* S **04 23 46.9 +4.5**
UPC Upice 79.36 329 *eP* P **04 13 44.5 +0.6**
UPC *eS* S **04 23 46.9 +4.5**
KRLC Kraliky 79.38 328 *eP* P **04 13 44.8 +0.7**
KRLC MLR MLR
comp=Z,3µm,15.9s
KRLC Kraliky 79.38 328 *eP* P **04 13 44.8 +0.7**
KRLC AMS AMS 04 52 30.0
comp=Z,3µm,15.9s
MAUC Maruska 79.48 327 *eP* P **04 13 44.7 +0.1**
MVCO Mesa Verde 79.53 50 IAmb IAmb 04 13 53.7
comp=Z,36nm,1.2s
PSZ Piszkesteto 79.68 325 IAmb IAmb 04 13 47.2
comp=Z,45nm,1.0s
PSZ Piszkesteto 79.68 325 ⇑P P **04 13 46.7 +0.9**
PSZ Piszkesteto 79.68 325 P P **04 13 46.7 +0.9**
FLTG Flechtingen 79.74 332 *eP* P **04 13 45.8 -0.1**
comp=Z,65nm,0.9s,baz=35,slow=5.3
LOZB Loznitsa 79.77 318 ⇑P P **04 13 46.6 +0.3**
SUSD Miller 79.81 40 IAmb IAmb 04 14 09.9
comp=Z,49nm,1.0s
BRG Berggiesshubel 79.89 330 *eP* P **04 13 47.0 +0.3**
comp=Z,35nm,0.9s,baz=35,slow=5.3
CLL Collm 79.90 331 ⇑*i* P P **04 13 46.8 0.0**
CLL *e**SP **sP** **04 14 00.0 +1.0**
CLL *eS* S **04 23 48.0 -0.1**
CLL pmax pmax
comp=Z,78nm,1.0s
CLL Collm 79.90 331 *eP* P **04 13 46.8 0.0**
comp=Z,59nm,0.8s,baz=35,slow=5.3
CLL *eL* L 04 54 01.3
comp=Z,1µm,20.4s
PVCC Panska Ves 79.91 329 *eP* P **04 13 47.6 +0.7**
PVCC MLR MLR
comp=Z,3µm,16.9s
PVCC Panska Ves 79.91 329 *eP* P **04 13 47.6 +0.7**
PVCC AMS AMS 04 52 10.0
comp=Z,3µm,16.9s
COPA Copaceanca 79.93 320 ⇑P P **04 13 47.0 -0.1**
JAVC Velka Javorina 79.94 327 *eP* P **04 13 48.5 +1.4**
VRAC Vranov 80.05 328 LR LR 04 52 24.4
comp=Z,3µm,19.2s,baz=34,slow=38
VRAC Vranov 80.05 328 ⇑P P **04 13 48.7 +1.0**
VRAC Vranov 80.05 328 *eP* P **04 13 48.3 +0.6**
VRAC Vranov 80.05 328 P P **04 13 48.7 +1.0**
RETH Rethem/Aller, 80.07 333 *eP* P **04 13 48.0 +0.4**
comp=Z,56nm,1.1s,baz=35,slow=5.3
RICC Richard 80.09 330 *eP* P **04 13 48.8 +1.0**
F33A 5 Mile Ranch, 80.09 38 IAmb IAmb 04 13 55.6
comp=Z,47nm,1.2s
SIRR Siria 80.11 323 ⇑P P **04 13 48.1 +0.1**
BORA Eskisehir 80.12 314 IAmb IAmb 04 14 01.7
comp=Z,54nm,1.1s
GZR Gura Zlata 80.22 322 ⇑P P **04 13 49.2 +0.4**
GZR Gura Zlata 80.22 322 P P **04 13 49.1 +0.4**
SURR Surduc 80.27 322 ⇑P P **04 13 49.2 +0.4**
HSKC Hora Svate Kat 80.30 330 *eP* P **04 13 49.0 0.0**
HSKC AMS AMS 04 55 00.0
comp=Z,2µm,15.8s
SMOL Smolenice 80.31 327 *eP* P **04 13 50.3 +1.2**
SMOL pmax pmax
comp=Z,28nm,1.2s
KRUC Moravsky 80.32 328 *eP* P **04 13 49.7 +0.6**
PRA Prague 80.33 329 *eP* P **04 13 49.6 +0.5**
PRA MLR MLR
comp=Z,3µm,17.8s
PRA Prague 80.33 329 *eP* P **04 13 49.6 +0.5**
PRA AMS AMS 04 52 20.0
comp=Z,3µm,17.8s
KPL Plockton 80.34 343 *eP* P **04 13 49.4 +0.4**
KPL IAmb IAmb 04 13 51.2
comp=Z,40nm,0.9s
PRU Pruhonice 80.35 329 *eP* P **04 13 49.7 +0.4**
PRU *eS* S **04 23 55.5 +2.6**
PRU MLR MLR
comp=Z,3µm,17.4s
PRU Pruhonice 80.35 329 *eP* P **04 13 49.7 +0.4**
PRU *eS* S **04 23 55.5 +2.6**
PRU AMS AMS 04 52 10.0
comp=Z,3µm,17.4s
RAR Rarotonga 80.38 127 LR LR 04 42 47.6
comp=Z,941nm,19.8s,baz=312,slow=31
VLAD Vladila 80.44 320 ⇓P P **04 13 50.0 +0.1**
CLZ Clausthal 80.44 332 *eP* P **04 13 50.3 +0.5**

comp=Z,79nm,1.1s,baz=35,slow=5.3
ELND Elena 80.45 318 ⇑P **P 04 13 49.3 -0.7**
SRO Srobarova 80.46 326 *e*P **P 04 13 50.9 +1.0**
SRO pmax pmax
comp=Z,50nm,1.0s
SRO Srobarova 80.46 326 *e*P **P 04 13 50.9 +1.0**
MODS Modra-Piesok 80.48 327 *e*P **P 04 13 51.0 +1.0**
MODS pmax pmax
comp=Z,145nm,1.4s
MODS Modra-Piesok 80.48 327 *e*P **P 04 13 51.0 +1.0**
PHSR Pinarhisar 80.51 317 ⇑P **P 04 13 51.0 +0.7**
TREC Trest 80.51 328 *e*P **P 04 13 50.6 +0.4**
TREC MLR MLR
comp=Z,2µm,16.3s
TREC Trest 80.51 328 *e*P **P 04 13 50.6 +0.4**
TREC AMS AMS 04 52 10.0
comp=Z,2µm,16.3s
BZS Buzias 80.61 323 ⇑P **P 04 13 50.9 +0.1**
BZS Buzias 80.61 323 P **P 04 13 50.8 +0.1**
K30B Basset 80.74 42 IAmb IAmb 04 14 00.0
comp=Z,82nm,1.2s
PLVB Pleven 80.77 319 ⇑P **P 04 13 52.0 +0.4**
HERR Herculane 80.77 322 ⇓P **P 04 13 51.5 -0.1**
INVG Invergeldie, C 80.80 342 *e*P **P 04 13 51.9 +0.3**
INVG IAmb IAmb 04 13 53.2
comp=Z,24nm,0.9s
TANN Tannenbergstha 80.82 331 *e*P **P 04 13 52.1 +0.2**
comp=Z,24nm,1.1s,baz=35,slow=5.3
GTTG Gottingen 80.83 332 *e*P **P 04 13 52.2 +0.4**
comp=Z,53nm,0.9s,baz=35,slow=5.3
PLN Plauen 80.88 331 *e*P **P 04 13 52.4 +0.3**
comp=Z,12nm,1.1s,baz=35,slow=5.3
MOX Moxa 80.96 331 *e*P **P 04 13 52.8 +0.2**
comp=Z,43nm,1.0s,baz=35,slow=5.3
MOX *e*L L 04 50 12.7
comp=Z,1µm,22.0s
RAYN Ar Rayn 81.03 293 P **P 04 13 53.3 -0.1**
RAYN Ar Rayn 81.03 293 P **P 04 13 53.5 0.0**
RAYN IAmb IAmb 04 13 54.3
comp=Z,50nm,1.0s
RAYN Ar Rayn 81.03 293 *i* P **P 04 13 53.4 -0.1**
SNR=34
RAYN Ar Rayn 81.03 293 P **P 04 13 53.5 0.0**
RAYN pmax pmax
comp=Z,50nm,1.0s
BAND Balkesir-Ban 81.09 315 ⇑P **P 04 13 53.9 +0.5**
MDVR Moldovita 81.18 322 ⇑P **P 04 13 53.9 0.0**
MANZ Manzenberg 81.30 330 *e*P **P 04 13 54.8 +0.4**
comp=Z,7.7nm,0.9s,baz=35,slow=5.3
CKRC Cesky Krumlov 81.36 329 *e*P **P 04 13 55.1 +0.4**
CKRC *e*S **S 04 24 03.9 +0.3**
CKRC MLR MLR
comp=Z,2µm,21.0s
CKRC Cesky Krumlov 81.36 329 *e*P **P 04 13 55.1 +0.4**
CKRC *e*S **S 04 24 03.9 +0.3**
CKRC AMS AMS 04 52 40.0
comp=Z,2µm,21.0s
ASF Jabal al Asfar 81.39 305 LR LR 04 53 33.2
comp=Z,1µm,19.4s,baz=42,slow=38
KHC Kasperske Hory 81.41 329 IAmb IAmb 04 13 56.3
comp=Z,44nm,1.0s
KHC Kasperske Hory 81.41 329*c i*P **P 04 13 55.5 +0.5**
KHC pmax pmax
comp=Z,38nm,1.0s
KHC Kasperske Hory 81.41 329 *e*P **P 04 13 55.5 +0.5**
KHC *e*S **S 04 24 03.2 -0.9**
KHC AMS AMS 04 54 30.0
comp=Z,3µm,16.0s
RONA Rosalia, Austr 81.42 327 *i* P **P 04 13 56.0 +0.9**
comp=Z,28nm,0.8s,SNR=34
CONA Conrad Observa 81.42 327 *i* P **P 04 13 55.9 +0.8**
comp=Z,23nm,0.9s,SNR=23
ROTZ Rotzenmuhle 81.44 330 *e*P **P 04 13 55.8 +0.7**
comp=Z,12nm,1.1s,baz=35,slow=5.3
PGBU Glenifferbraes 81.46 342 *e*P **P 04 13 55.7 +0.6**
PGBU IAmb IAmb 04 13 57.3
comp=Z,125nm,0.9s
ECSD EROS Data Cent 81.48 39 IAmb IAmb 04 14 03.0
comp=Z,29nm,1.1s
ISP Isparta 81.49 312⇓*e*P **P 04 13 55.7 0.0**
ISP pmax pmax
comp=Z,19nm,0.7s
MORH Mrgy, Hungar 81.53 325 ⇑P **P 04 13 55.5 -0.2**
EKA Eskdalemuir Ar 81.57 341 P **P 04 13 56.0 +0.3**
comp=Z,12nm,0.7s,baz=28,slow=4.7,SNR=24
comp=Z,12nm,0.7s
EKA Eskdalemuir Ar 81.57 341 P **P 04 13 56.0 +0.3**
GEC2 GERESS Array S 81.59 329 *e*P **P 04 13 56.2 +0.1**
comp=Z,26nm,1.0s,baz=35,slow=5.3
GEC2 *e*L L 04 53 10.8
comp=Z,2µm,19.0s
GERES GERESS Array B 81.59 329 P **P 04 13 56.1 +0.1**
comp=Z,8.6nm,0.7s,baz=28,slow=6.0,SNR=16
GERES LR LR 04 53 30.3
comp=Z,2µm,18.2s,baz=46,slow=38
comp=Z,8.6nm,0.7s
KASTN Kahler Asten 81.67 333 *e*P **P 04 13 56.4 +0.1**
comp=Z,33nm,1.1s,baz=35,slow=5.3
WET Wettzell 81.68 330 *e*P **P 04 13 57.0 +0.6**
comp=Z,46nm,1.2s,baz=35,slow=5.3
WET *e*L L 04 53 30.9
comp=Z,3µm,18.1s
E38A The Farm, Brul 81.69 35 IAmb IAmb 04 14 32.7
comp=Z,48nm,1.3s
BALB Balikesir 81.71 315 IAmb IAmb 04 14 10.3
comp=Z,70nm,1.2s
CSS Mathiatis 81.77 309 IAmb IAmb 04 13 60.0
comp=Z,55nm,0.9s
MMAI Mount Meron Ar 81.78 306 P **P 04 13 58.0 +0.7**
comp=Z,37nm,0.9s,baz=46,slow=6.0,SNR=45
MMAI LR LR 04 53 54.4
comp=Z,2µm,21.1s,baz=40,slow=38
comp=Z,37nm,0.9s
BUG Bochum--Univer 81.87 334 *e*P **P 04 13 57.3 0.0**
comp=Z,34nm,0.9s,baz=35,slow=5.3
GRF Grafenberg Arr 81.88 331 *e*P **P 04 13 58.3 +0.8**
comp=Z,101nm,0.9s,baz=35,slow=5.3
GRF *e*L L 04 55 36.4
comp=Z,962nm,21.5s
RDO Rodhopi 81.90 317 IAmb IAmb 04 14 11.7
comp=Z,80nm,1.4s
NEWG New Galloway 82.03 342 *e*P **P 04 13 58.4 +0.3**
NEWG IAmb IAmb 04 14 00.8
comp=Z,16nm,0.9s
BOVS Bovan 82.03 321 ⇑P **P 04 13 58.3 0.0**
ARSA Arzberg 82.10 327 IAmb IAmb 04 13 59.8
comp=Z,30nm,1.1s
ARSA Arzberg 82.10 327 *i* P **P 04 13 59.1 +0.5**
comp=Z,9.8nm,0.8s,SNR=12
TOZ Tahuroa Road 82.11 155 IAmb IAmb 04 14 10.9
comp=Z,41nm,0.9s
MANT Manisa 82.14 314 IAmb IAmb 04 14 12.6
comp=Z,31nm,0.9s
MOA Molln 82.15 328 *i* P **P 04 13 59.3 +0.4**
comp=Z,4.4nm,0.7s,SNR=10
TASM ASL Pad, Albuq 82.27 51 IAmb IAmb 04 14 08.6
comp=Z,16nm,1.1s
ANMO Albuquerque 82.27 51 LR LR 04 44 34.0
comp=Z,296nm,21.0s,baz=332,slow=31
ANMO Albuquerque 82.27 51 P **P 04 13 59.9 -0.1**
ANMO Albuquerque 82.27 51⇓*e*P **P 04 14 01.3 +1.3**
ANMO pmax pmax
comp=Z,16nm,2.5s
GAL1 Galloway 82.38 342 *e*P **P 04 14 00.0 +0.1**
GAL1 IAmb IAmb 04 14 01.6
comp=Z,44nm,0.8s
TNS Taunus Mts 82.47 333 *e*P **P 04 14 00.7 +0.2**
comp=Z,30nm,1.0s,baz=35,slow=5.3
TNS *e*L L 04 54 04.8
comp=Z,2µm,18.7s
CLGH Cloghs, Cushen 82.51 343 *e*P **P 04 14 00.8 +0.2**
CLGH IAmb IAmb 04 14 02.2
comp=Z,31nm,0.9s
BIOA Bad Ischl, Aus 82.53 328 *i* P **P 04 14 01.3 +0.4**
comp=Z,6.6nm,0.6s,SNR=19
ELL Elmali 82.58 312 IAmb IAmb 04 14 33.2
comp=Z,53nm,1.0s
PERS Pernice 82.75 327 *i* P **P 04 14 02.2 +0.1**
SOKA Soboth 82.75 327 *i* P **P 04 14 02.4 +0.2**
comp=Z,8.5nm,0.6s,SNR=30
IDGL Inch Island, C 82.83 343 P **P 04 14 03.0 +0.7**
IDGL Inch Island, C 82.83 343 *e*P **P 04 14 03.0 +0.7**
IDGL IAmb IAmb 04 14 04.5
comp=Z,36nm,0.9s
RJOB Jochberg 82.84 329 *e*P **P 04 14 03.1 +0.6**
comp=Z,46nm,0.9s,baz=35,slow=5.3

IOMK Kirk Michael 82.89 342 *e*P **P 04 14 02.5 -0.1**
IOMK IAmb IAmb 04 14 03.9
comp=Z,12nm,0.8s
319A Douglas 82.90 55 IAmb IAmb 04 14 16.7
comp=Z,33nm,1.0s
LBWR Ladybower, Pea 82.93 340 *e*P **P 04 14 03.4 +0.6**
LBWR IAmb IAmb 04 14 05.3
comp=Z,97nm,0.9s
BEBN Eben Emael 82.95 334 *d*P **P 04 14 02.9 0.0**
comp=Z,59nm,0.9s
SCHQ Schefferville 82.97 17 P **P 04 14 03.1 +0.1**
comp=Z,12nm,0.9s,baz=3.6,slow=3.9,SNR=6.3
SCHQ LR LR 04 56 43.8
comp=Z,460nm,18.0s,baz=346,slow=40
comp=Z,12nm,0.9s
BTNL Ternell 82.98 334 *d*P **P 04 14 03.0 -0.2**
comp=Z,30nm,1.0s
MEM Membach 83.00 334 *d*P **P 04 14 02.9 -0.3**
comp=Z,37nm,0.9s
121A Cookes Peak, D 83.08 53 IAmb IAmb 04 14 17.2
comp=Z,27nm,1.1s
OBKA Obir 83.09 327 *i* P **P 04 14 03.7 -0.2**
comp=Z,3.0nm,0.7s,SNR=6.3
FUR Furstenfeldbru 83.10 330 *e*L L 04 53 03.1
comp=Z,1µm,21.4s
URZ Urewera 83.14 154 LR LR 04 48 35.1
comp=Z,607nm,19.7s,baz=343,slow=34
LESA Schwarzleotal 83.14 329 *i* P **P 04 14 04.5 +0.3**
comp=Z,20nm,0.9s,SNR=28
KBA Koelnbreinsper 83.14 328 *i* P **P 04 14 04.3 0.0**
comp=Z,3.6nm,0.7s,SNR=20
BSTI Sart Tilman 83.17 334 *d*P **P 04 14 04.1 0.0**
comp=Z,5.5nm,0.8s
BHOU Houvegnez 83.22 334 *d*P **P 04 14 04.6 +0.2**
comp=Z,19nm,1.1s
BLY Banja Luka 83.31 324 ⇑P **P 04 14 05.1 +0.1**
VAY Valanovo 83.31 319 *i* P **P 04 14 05.4 +0.4**
G40A Rib Lake 83.32 35 IAmb IAmb 04 14 13.0
comp=Z,83nm,1.9s
MYKA Terra Mystica 83.38 328 *i* P **P 04 14 04.7 -0.6**
comp=Z,7.0nm,0.6s,SNR=12
BCLA Clavier 83.40 334 *d*P **P 04 14 05.3 0.0**
comp=Z,21nm,1.0s
CWF Charnwood Fore 83.41 339 *e*P **P 04 14 05.5 +0.2**
CWF IAmb IAmb 04 14 06.9
comp=Z,30nm,0.9s
RTBA Rita Blanca 83.44 48 IAmb IAmb 04 14 13.2
comp=Z,25nm,1.3s
LJU Ljubljana 83.47 327 *i* P **P 04 14 05.3 -0.5**
BGES Gesves 83.50 334 *d*P **P 04 14 05.7 -0.1**
comp=Z,24nm,1.0s
ILTH Belurgan, Co L 83.53 342 P **P 04 14 06.2 +0.3**
RCHB Rochefort 83.65 334 *d*P **P 04 14 06.5 -0.1**
comp=Z,25nm,1.1s
WATA Walderalm 83.65 329 *i* P **P 04 14 07.0 +0.1**
comp=Z,0.9nm,0.2s,SNR=13
BMRD Medsous 83.68 335 *d*P **P 04 14 06.7 -0.1**
comp=Z,38nm,1.0s
WTTA Wattenberg 83.69 329 *i* P **P 04 14 07.2 +0.1**
comp=Z,5.0nm,0.8s,SNR=13
BKZ Black Stump Fm 83.74 154 P **P 04 14 07.1 +0.1**
BKZ IAmb IAmb 04 14 17.7
comp=Z,24nm,1.1s
WLF Walferdange 83.75 333 IAmb IAmb 04 14 09.9
comp=Z,22nm,1.0s
WLF Walferdange 83.75 333 *d*P **P 04 14 07.4 +0.3**
comp=Z,16nm,1.0s
ABTA Abfaltersbach 83.75 328 *i* P **P 04 14 06.3 -1.0**
comp=Z,9.0nm,1.1s,SNR=11
CEY Cerknica 83.75 327 *i* P **P 04 14 06.7 -0.6**
FOEL Foel Wylfa 83.78 340 *e*P **P 04 14 08.0 +0.8**
FOEL IAmb IAmb 04 14 09.4
comp=Z,51nm,0.8s
MOTA Moosalm 83.83 329 *i* P **P 04 14 07.8 0.0**
comp=Z,7.2nm,0.8s,SNR=30
RETA Reutte 83.85 330 *i* P **P 04 14 08.0 +0.3**
comp=Z,6.2nm,0.6s,SNR=27
SQTA Sankt Quirin 83.89 329 *i* P **P 04 14 08.1 0.0**
comp=Z,5.1nm,0.7s,SNR=14
DOU Dourbes 83.91 335 *d*P **P 04 14 07.4 -0.5**
comp=Z,9.7nm,1.1s
TRI Trieste 84.06 327 IAmb IAmb 04 14 07.4
comp=Z,32nm,0.9s
BFO Black Forest 84.09 332 P **P 04 14 08.8 -0.1**
BFO Black Forest 84.09 332 P **P 04 14 08.8 -0.1**
BFO pmax pmax
comp=Z,152nm,1.6s
BFO Black Forest 84.09 332 *e*P **P 04 14 09.0 +0.1**
comp=Z,149nm,1.6s,baz=35,slow=5.3
BFO *e*L L 04 56 55.7
comp=Z,2µm,18.2s
N35A Tabor 84.09 41 IAmb IAmb 04 14 28.6
comp=Z,44nm,1.0s
CIMO Cimolais 84.13 328 IAmb IAmb 04 14 08.6
comp=Z,22nm,1.0s
FETA Feichten 84.25 329 *e*P **P 04 14 09.9 0.0**
comp=Z,5.4nm,0.8s,SNR=13
DSB Dublin 84.26 342 P **P 04 14 10.4 +0.8**
EIL Elat 84.29 304 LR LR 04 56 22.5
comp=Z,2µm,19.1s,baz=27,slow=39
DAVA Damuels 84.36 330 *i* P **P 04 14 10.5 +0.1**
comp=Z,23nm,0.7s,SNR=22
OHR Ohrid 84.36 320 *i* P **P 04 14 10.9 +0.4**
PPT Papeete 84.45 118 LR LR 04 44 48.0
comp=Z,1µm,21.4s,baz=324,slow=31
PPT2 Papeete2 84.47 118 *e*P **P 04 14 12.3 +1.1**
comp=Z,97nm,24.2s
PPT2 Papeete2 84.47 118 *e*S **SKSac 04 24 34.9 +1.8**
comp=Z,289nm,24.0s
PPT2 *e*SS **SS 04 30 14.6 +7.3**
comp=Z,180nm,23.5s
PPT2 *e*LQ LQ 04 37 17.0
comp=Z,981nm,26.8s
PPT2 *e*LR LR 04 40 52.5
comp=Z,2µm,23.0s
PPT2 *e*LR LR 04 40 57.5
comp=Z,3µm,22.5s
STRD Stroud 84.51 339 *e*P **P 04 14 11.3 +0.4**
STRD IAmb IAmb 04 14 12.8
comp=Z,92nm,1.2s
MCH1 Michaelchurch 84.53 340 *e*P **P 04 14 11.2 +0.2**
MCH1 IAmb IAmb 04 14 12.5
comp=Z,29nm,0.9s
HMNX Herstmonceux 84.59 337 *e*P **P 04 14 12.2 +0.9**
HMNX IAmb IAmb 04 14 13.0
comp=Z,40nm,0.8s
MONM Monmouth 84.62 340 *e*P **P 04 14 11.9 +0.4**
MONM IAmb IAmb 04 14 13.5
comp=Z,35nm,1.1s
SWN1 Swindon 84.64 339 *e*P **P 04 14 12.2 +0.6**
SWN1 IAmb IAmb 04 14 14.3
comp=Z,74nm,0.8s
CTI Castel Tesino 84.67 328 IAmb IAmb 04 14 12.2
comp=Z,40nm,1.1s
DAVOX Davos/Dischmat 84.78 330 LR LR 04 56 50.7
comp=Z,nm,18.5s,baz=26,slow=39
IGLA Glengowla, Co 84.78 344 P **P 04 14 12.5 +0.3**
E46A Sault Ste Mari 84.92 31 IAmb IAmb 04 14 28.2
comp=Z,50nm,1.3s
I42A Draeger Farm, 84.97 35 IAmb IAmb 04 14 20.9
comp=Z,25nm,1.0s
RSBS Rosebush, Pemb 85.04 341 *e*P **P 04 14 14.0 +0.4**
RSBS IAmb IAmb 04 14 15.3
comp=Z,27nm,0.9s
AMTX Amarillo 85.14 48 IAmb IAmb 04 14 27.0
comp=Z,28nm,1.0s
MSTX Muleshoe 85.14 50 IAmb IAmb 04 14 22.4
comp=Z,30nm,1.2s
IWEX Carrickbyrne, 85.16 342 P **P 04 14 15.2 +1.0**
TEOL Teolo 85.22 328 IAmb IAmb 04 14 15.5
comp=Z,39nm,0.9s
L40A Anamosa 85.34 37 IAmb IAmb 04 14 22.6
comp=Z,28nm,1.0s
N38A Joes South For 85.34 39 IAmb IAmb 04 14 23.0
comp=Z,42nm,1.0s
TAOE Nuku Hiva Isla 85.46 105 *e*S **SKSac 04 24 42.2 +2.5**
comp=Z,353nm,27.3s
TAOE Nuku Hiva Isla 85.46 105 *e*LR LR 04 41 06.7
comp=Z,2µm,21.5s
KAN08 Anthony NE Sta 85.54 44 IAmb IAmb 04 14 23.9
comp=Z,32nm,1.1s
OK038 West end E0370 85.66 45 IAmb IAmb 04 14 25.1
comp=Z,43nm,1.2s
SMWD Samnorwood 85.81 47 IAmb IAmb 04 14 26.0
comp=Z,33nm,1.1s
CROK Carrier 86.06 45 IAmb IAmb 04 14 26.9
comp=Z,36nm,1.1s

P38A Dawn 86.08 40 IAmb IAmb 04 14 26.8
comp=Z,23nm,0.9s
SENIN Lac Senin/Sane 86.11 331 IAmb IAmb 04 14 19.9
comp=Z,29nm,0.9s
RPZ Rata Peaks 86.27 160 LR LR 04 50 51.8
comp=Z,817nm,19.4s,baz=345,slow=34
DKNS Dickens 86.44 49 IAmb IAmb 04 14 34.5
comp=Z,19nm,1.0s
POST Post 86.53 49 IAmb IAmb 04 14 29.5
comp=Z,37nm,1.5s
T35A Sooner Cattle 86.56 44 IAmb IAmb 04 14 42.0
comp=Z,35nm,1.3s
CAMP Campotosto 86.75 325 IAmb IAmb 04 14 23.0
comp=Z,63nm,1.5s
SN07 Snyder 07 86.87 49 IAmb IAmb 04 14 31.0
comp=Z,49nm,1.9s
P40A Paris 86.89 39 IAmb IAmb 04 14 30.8
comp=Z,39nm,1.0s
LPIG La Paz 87.05 61 LR LR 04 47 12.3
comp=Z,299nm,20.0s,baz=308,slow=31
APMT Aspermont 87.15 48 IAmb IAmb 04 14 32.2
comp=Z,39nm,1.3s
SGCY Sterling City 87.57 50 IAmb IAmb 04 14 39.5
comp=Z,18nm,0.9s
R40A Maddies Statio 87.74 40 IAmb IAmb 04 14 34.5
comp=Z,24nm,1.1s
TX31 Lajitas Ar. Si 87.84 53 IAmb IAmb 04 14 35.8
comp=Z,42nm,1.8s
TXAR Lajitas Array 87.84 53 P **P 04 14 28.3 +0.4**
comp=Z,1.2nm,0.6s,baz=290,slow=3.4,SNR=29
TXAR LR LR 04 48 38.6
comp=Z,273nm,21.2s,baz=322,slow=32
comp=Z,1.2nm,0.6s
TXAR Lajitas Array 87.84 53 P **P 04 14 28.4 +0.5**
TXAR Lajitas Array 87.84 53 P **P 04 14 28.4 +0.5**
ABTX Abilene, Hawle 87.94 49 IAmb IAmb 04 14 36.1
comp=Z,34nm,1.3s
P43A Skaggs, Pawnee 88.04 38 IAmb IAmb 04 14 52.5
comp=Z,31nm,1.2s
SSB Saint Sauveur 88.06 332 IAmb IAmb 04 14 29.4
comp=Z,20nm,1.2s
SADO Sadowa 88.25 29 LR LR 04 58 19.7
comp=Z,376nm,18.9s,baz=1.0,slow=38
CCM Cathedral Cave 88.43 40 P **P 04 14 30.5 +0.1**
CCM Cathedral Cave 88.43 40 P **P 04 14 30.5 +0.1**
CCM pmax pmax
comp=Z,44nm,1.1s
FVM French Village 88.89 39 IAmb IAmb 04 14 40.3
comp=Z,27nm,1.1s
P46A Rosedale 89.14 36 IAmb IAmb 04 14 41.4
comp=Z,26nm,0.9s
BRDY Brady 89.28 49 IAmb IAmb 04 14 46.6
comp=Z,17nm,1.1s
OLIL Olney 89.43 38 IAmb IAmb 04 14 43.0
comp=Z,35nm,1.0s
N49A Columbus Grove 89.44 34 IAmb IAmb 04 14 46.5
comp=Z,33nm,1.2s
O48B Farmland 89.55 35 IAmb IAmb 04 14 43.1
comp=Z,38nm,1.2s
FCAR Ozark Folk Cen 89.65 42 IAmb IAmb 04 14 43.3
comp=Z,24nm,1.1s
S44A Carbondale 89.69 39 IAmb IAmb 04 14 44.1
comp=Z,34nm,1.1s
SIUC Southern Illin 89.70 39 IAmb IAmb 04 14 44.1
comp=Z,42nm,1.1s
CGM3 Cape Girardeau 89.81 39 IAmb IAmb 04 14 44.0
comp=Z,36nm,1.5s
PBMO Poplar Bluff 89.83 40 IAmb IAmb 04 14 44.8
comp=Z,36nm,1.2s
MIAR Mount Ida 89.91 44 IAmb IAmb 04 14 49.6
comp=Z,30nm,1.1s
LCAR Lake Charles 90.01 41 IAmb IAmb 04 14 46.1
comp=Z,53nm,1.8s
WHAR Wooly Hollow 90.03 42 IAmb IAmb 04 14 45.4
comp=Z,28nm,1.0s
VAE Valguarnera 90.31 322 LR LR 05 00 02.0
comp=Z,1µm,18.6s,baz=116,slow=39
P49A Miami Univ. Ec 90.34 35 IAmb IAmb 04 15 12.9
comp=Z,50nm,1.4s
J57A Williamstown 90.56 27 IAmb IAmb 04 14 49.1
comp=Z,35nm,1.1s
ATD Arta Tunnel 90.57 285 LR LR 04 59 47.8
comp=Z,26nm,19.0s,baz=40,slow=38
ATD Arta Tunnel 90.57 285 P **P 04 14 41.8 +0.9**
SNR=6.4
WCI Wyandotte Cave 90.68 37 P **P 04 14 41.4 +0.4**
WCI IAmb IAmb 04 15 07.4
comp=Z,58nm,1.7s
WCI Wyandotte Cave 90.68 37 P **P 04 14 41.4 +0.4**
WCI pmax pmax
comp=Z,58nm,1.7s
WLAR White Oak Lake 90.82 44 IAmb IAmb 04 14 54.4
comp=Z,31nm,1.1s
Q51A Peebles 91.36 34 IAmb IAmb 04 14 53.7
comp=Z,30nm,1.2s
CEST Esterri de Car 91.56 333 IAmb IAmb 04 14 46.8
comp=Z,30nm,1.0s
T50A Nancy 92.33 36 IAmb IAmb 04 15 15.2
comp=Z,45nm,1.7s
TKL Tuckaleechee C 93.94 37 LR LR 05 01 55.4
comp=Z,249nm,18.4s,baz=336,slow=38
M65A Busby, Falmout 94.03 25 P **P 04 14 57.0 +0.7**
baz=335
KEST Kesra 94.11 324 LR LR 05 03 32.4
comp=Z,1µm,18.2s,baz=21,slow=39
PGAV Gavieira, Arco 95.17 339 *e*PP **PP 04 18 56.1 +5.5**
PGAV *e*LQ LQ 04 49 02.1
PGAV *e*LR LR 04 55 53.0
PGAV *i* IAMs_20 IAMs_20 05 06 20.9
comp=Z,683nm,18.0s
MVO Moncorvo 95.55 338 *e*PP **PP 04 18 59.8 +6.3**
MVO *e*LQ LQ 04 50 14.2
MVO *e*LR LR 04 53 47.0
MVO *i* IAMs_20 IAMs_20 05 03 19.2
comp=Z,1µm,20.0s
ESBB Sonseca Array 95.95 335 IAmb IAmb 04 15 05.6
comp=Z,13nm,1.1s
ESDC Sonseca Array 95.95 335 P **P 04 15 04.9 -0.4**
comp=Z,3.9nm,0.8s,baz=14,slow=4.1,SNR=25
ESDC LR LR 05 03 32.0
comp=Z,1µm,19.5s,baz=22,slow=39
comp=Z,3.9nm,0.8s
ESDC Sonseca Array 95.95 335 P **P 04 15 05.2 -0.1**
MTE Manteigas 96.41 338 *e*PP **PP 04 19 05.0 +4.9**
MTE *e*LQ LQ 04 45 43.7
MTE *e*LR LR 04 54 19.7
MTE *i* IAMs_20 IAMs_20 05 04 36.8
comp=Z,1µm,18.0s
PMRV Marv??o 97.25 337 *e*LR LR 04 54 34.7
PMRV *i* IAMs_20 IAMs_20 05 05 22.4
comp=Z,898nm,18.0s
RKT Rikitea 98.38 113 *e*LR LR 04 47 17.9
comp=Z,5µm,24.0s
PVAQ Vaqueiros 99.22 337 *e*PP PKiKP 04 19 32.9 -17
PVAQ *e*LQ LQ 04 49 02.1
PVAQ *e*LR LR 04 54 41.1
PVAQ *i* IAMs_20 IAMs_20 05 04 56.9
comp=Z,2µm,20.0s
TORD Torodi Ar. Bea 116.71 317 PKP **PKPdf 04 20 21.9 -1.1**
comp=Z,1.9nm,0.3s,baz=12,slow=4.2,SNR=2.1
VNDA Vanda 116.96 175 PKP **PKPdf 04 20 20.9 -0.6**
comp=Z,0.5nm,0.4s,baz=0.0,slow=4.0,SNR=7.2
DBIC Dimbokro 125.58 320 PKP **PKPdf 04 20 39.0 -1.0**
comp=Z,5.1nm,0.8s,baz=96,slow=3.5,SNR=4.3
QSPA South Pole Qui 128.87 180 PKP **PKiKP 04 20 45.3 0.0**
comp=Z,1.7nm,0.6s,baz=299,slow=1.0,SNR=12
QSPA South Pole Qui 128.87 180 **PKiKP 04 20 48.9 +3.5**
KOOLE Kule 129.25 271 **PKiKP 04 20 47.6 0.0**
SYO Syowa Base 130.65 208⇓*e*Pdiff **Pdif 04 17 41.4 +2.8**
SYO Syowa Base 130.65 208⇑*e*PPdiff pPdif 04 17 45.6 -2.2
TEFE Tefe 136.53 42 *e*P **PKiKP 04 21 04.4 +2.0**
MACA Manacapuru-AM 138.20 37 *e*P **PKiKP 04 21 06.8 +1.0**
NVL N'lazarevskaya 139.71 203 *e*PKIKP **PKPdf 04 21 05.3 +0.6**
NVL *e*PPP PPP 04 27 04.1
NVL *e*SS SS 04 42 21.4 +2.5
NVL *e*SSS SSS 04 47 34.0
NVL pmax pmax
comp=Z,17nm,1.0s
ITTB Itaituba 141.43 31 *e*P **PKiKP 04 21 12.6 +0.1**
TROLL Troll, Antarti 141.62 199 ⇓P **PKPdf 04 21 00.9 -7.5**
comp=Z,585nm,0.8s
SNAA Sanae 143.13 197 ⇓P PKPab 04 21 06.8 +0.3
comp=Z,462nm,1.1s
SNAA Sanae 143.13 197 PKhKP PKPpre 04 21 06.8
comp=Z,8.2nm,0.7s,baz=213,slow=5.1,SNR=32
LPAZ La Paz 144.52 59 PKP **PKPab 04 21 13.5 -0.7**
comp=Z,0.9nm,0.5s,baz=270,slow=1.0,SNR=4.3

VNA2	**Neumayer--Watz**	**144.69**	**196**	⇑P		**PKPab**	**04 21 12.2**	**-0.2**
	comp=Z,92nm,0.7s,baz=114,slow=3.0							
VNA3	**Neumayer Olymp**	**144.92**	**195**	⇑P		**PKPab**	**04 21 12.5**	**-0.8**
	comp=Z,66nm,0.8s							
VNA1	**Neumayer--Stat**	**145.09**	**196**	⇑P		**PKPbc**	**04 21 13.6**	**-0.2**
	comp=Z,122nm,0.9s							
RCBR	**Riachuelo**	**146.83**	**358**			**PKPbc**	**04 21 20.7**	**-0.2**
RCBR	**Riachuelo**	**146.83**	**358**	PKP2		**PKPbc**	**04 21 20.7**	**-0.2**
LCO	**Las Campanas**	**150.44**	**80**			**PKPbc**	**04 21 29.9**	**-0.2**
LCO	**Las Campanas**	**150.44**	**80**	PKIKP		**PKPbc**	**04 21 29.9**	**-0.2**
GO09	**Cerro Castillo**	**152.56**	**128**			**PKiKP**	**04 21 36.5**	**+2.4**
CFA	**Coronel Fontan**	**153.51**	**83**	PKP		**PKPdf**	**04 21 29.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=348,slow=4.4,SNR=2.3							
CFA				PKPbc		**PKPbc**	**04 21 36.5**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=322,slow=5.3,SNR=7.1							
CFA				PKPab		**sPKPbc**	**04 21 47.6**	**-1.5**
	comp=Z,9.3nm,0.9s,baz=293,slow=4.4,SNR=14							
PLCA	**Paso Flores**	**154.28**	**104**	PKPbc		**PKPbc**	**04 21 35.6**	**-2.5**
	comp=Z,2.5nm,1.1s,baz=315,slow=2.9,SNR=2.5							
PLCA				PKPab		**sPKPbc**	**04 21 50.1**	**-0.4**
	comp=Z,10.0nm,0.9s,baz=267,slow=4.5,SNR=9.3							
BDFB	**Brasilia**	**154.67**	**26**	PKPbc		**PKPbc**	**04 21 37.1**	**-2.6**
	baz=128,slow=0.6							

NEIC ***29*** *04:29:25.3±2.0, 13°.77S±0°.09×76°.58W±0°.06, h35km±2km, mb4.3/6, Error ellipse: s-maj=18.0km s-min=3.0km az=211.0*

IDC ***29*** *04:29:25.6±4.5, 13°.74S×76°.76W, h37km±36km, mb3.3/4, mbtmp3.6/6, ML3.9/2, MS3.1/2, Error ellipse: s-maj=56.0km s-min=19.0km az=58.0*

ISC 29 04:29:23.2±0.8, 13°.94S±0°.09×76°.9W±0°.1, h27km, n35, σ1§52/30, mb3.8/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.94**	**2**	Pn	**Pn**	**04 29 52.0**	**-2.4**
	76nm,0.3s,baz=166,slow=9.3,SNR=47						
NNA				Sn	**Sn**	**04 30 15.6**	**-2.4**
	363nm,0.3s,baz=150,slow=20,SNR=16						
NNA	**Nana**	**1.94**	**2**		**Pn**	**04 29 52.0**	**-2.4**
ATAH	**Atahualpa**	**6.91**	**348**	Pn	**Pn**	**04 31 03.7**	**+0.6**
	2.3nm,0.3s,baz=114,slow=3.4,SNR=15						
ATAH				Sn	**Sn**	**04 32 22.9**	**+1.7**
	1.8nm,0.3s,baz=304,slow=3.6,SNR=1.5 6.3nm,0.3s						
PB12	**IPOC Station P**	**7.86**	**127**		**Pn**	**04 31 14.0**	**-1.9**
PB18	**Visviri**	**8.04**	**118**		**Pn**	**04 31 20.1**	**+1.4**
PB16	**IPOC Station P**	**8.37**	**123**		**Pn**	**04 31 23.9**	**+0.7**
PSGCX	**Pisagua**	**8.61**	**132**	Pn	**Pn**	**04 31 24.6**	**-1.7**
LPAZ	**La Paz**	**8.81**	**106**	Pn	**Pn**	**04 31 31.5**	**+2.1**
	0.7nm,0.3s,baz=252,slow=12,SNR=22						
LPAZ				LR	LR	04 35 30.9	
	comp=Z,96nm,21.4s,baz=244,slow=42 2.1nm,0.3s						
LPAZ	**La Paz**	**8.81**	**106**		**Pn**	**04 31 31.8**	**+2.4**
PB11	**IPOC Station P**	**9.05**	**131**		**Pn**	**04 31 30.6**	**-1.7**
TA01	**Diego Aracena**	**9.22**	**137**		**Pn**	**04 31 33.9**	**-0.5**
HMBC	**Humberstone**	**9.22**	**134**		**Pn**	**04 31 33.6**	**-1.1**
GO01	**Chusmiza**	**9.34**	**129**		**Pn**	**04 31 35.8**	**-0.8**
SLOR	**San Lorenzo -**	**13.21**	**353**		**Pn**	**04 32 30.3**	**+0.7**
SIV	**San Ignacio**	**15.46**	**100**	LR	LR	04 38 58.5	
	comp=Z,87nm,19.9s,baz=296,slow=37						
H03N1	**Juan Fernandez**	**19.50**	**185**	T	T	04 53 46.7	
	baz=7.2,slow=74,SNR=48						
H03N2	**Juan Fernandez**	**19.50**	**185**	T	T	04 53 45.2	
	baz=7.2,slow=74,SNR=47						
H03N3	**Juan Fernandez**	**19.52**	**185**	T	T	04 53 45.5	
	baz=7.2,slow=74,SNR=49						
RUSC	**La Rusia**	**20.07**	**11**	P	**P**	**04 33 54.0**	**-1.1**
RUSC				IAmb	IAmb	04 34 10.2	
	comp=Z,15nm,1.2s						
HNDO	**Hondo**	**48.30**	**334**	P	**P**	**04 38 04.3**	**+2.0**
HNDO				IAmb	IAmb	04 38 04.4	
	comp=Z,3.6nm,0.8s						
TXAR	**Lajitas Array**	**50.17**	**329**	P	**P**	**04 38 17.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=149,slow=9.6,SNR=3.5 comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**50.17**	**329**	P	**P**	**04 38 17.2**	**+0.5**
Q44A	**Meyer Farm, Va**	**53.76**	**348**	P	**P**	**04 38 42.0**	**-1.2**
R40A	**Maddies Statio**	**53.91**	**345**	P	**P**	**04 38 43.6**	**-0.6**
R40A				IAmb	IAmb	04 38 44.4	
	comp=Z,3.6nm,0.9s						
BATG	**Bathurst New B**	**61.71**	**8**	P	**P**	**04 39 37.9**	**-1.0**
PDAR	**Pinedale Array**	**63.88**	**334**	P	**P**	**04 39 54.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=125,slow=9.2,SNR=6.6 comp=Z,0.5nm,0.7s						
NVAR	**Mina Array Bea**	**64.91**	**325**	P	**P**	**04 40 01.2**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=134,slow=7.8,SNR=5.2 comp=Z,0.6nm,0.8s						
NVAR	**Mina Array Bea**	**64.91**	**325**	P	**P**	**04 40 02.1**	**+1.5**
SNAA	**Sanae**	**71.87**	**161**	P	**P**	**04 40 45.0**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=286,slow=6.1,SNR=13 comp=Z,0.3nm,0.8s						
SNAA	**Sanae**	**71.87**	**161**	P	**P**	**04 40 45.1**	**+1.7**
TORD	**Torodi Ar. Bea**	**82.39**	**74**	P	**P**	**04 41 42.8**	**-0.6**
	comp=Z,3.0nm,0.3s,baz=229,slow=4.8,SNR=1.6						
H11N3	**WAKE ISLAND Hyd**	**118.92**	**285**	T	T	06 58 25.3	
	baz=96,slow=74,SNR=4.2						
H11N2	**WAKE ISLAND Hyd**	**118.93**	**285**	T	T	06 58 30.0	
	baz=96,slow=74,SNR=7.0						
H11N1	**WAKE ISLAND Hyd**	**118.94**	**285**	T	T	06 58 26.1	
	baz=96,slow=74,SNR=3.8						
SONM	**Songino Array**	**146.09**	**356**	PKPbc	**PKPbc**	**04 49 01.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=357,slow=3.4,SNR=4.4						

VIE ***29*** *04:34:53.4±0.4, 49°.87N×18°.59E, h0km, mb2.4/7, ml2.6/7, Error ellipse: s-maj=3.6km s-min=3.2km az=20.0 24 km E of Ostrava Suspected Mining induced.*

IPEC ***29*** *04:34:54.2±0.3, 49°.82N×18°.55E, h1km, ML2.4/6, Error ellipse: s-maj=1.8km s-min=1.4km az=74.0*

PRU ***29*** *04:34:55.4, 49°.82N×18°.47E, h0km, Mining Induced Event Csm, E=1.2e+06*

ISC 29 04:34:53.9±0.8, 49°.83N±0°.03×18°.52E±0°.02, h0km, n29, σ0§89/52, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.24**	**271**	*e*PG	**Pg**	**04 34 59.7**	**+1.1**
OKC				*e*SG	**Sg**	**04 35 03.5**	**+1.8**
	comp=Z,441nm,1.6s						
STEB	**Steborice**	**0.50**	**282**	*e*PG	**Pg**	**04 35 03.9**	**+0.5**
STEB				*e*SG	**Sg**	**04 35 11.3**	**+1.5**
	comp=Z,156nm,0.5s						
MORC	**Moravsky Berou**	**0.64**	**265**	*e*Pg	**Pg**	**04 35 06.7**	**+0.6**
	baz=86						
MORC				*e*Sg	**Sg**	**04 35 14.8**	**+0.4**
	78nm,0.4s,baz=86						
LOSC	**Losov**	**0.78**	**255**	*e*Pg	**Pg**	**04 35 09.2**	**+0.4**
	baz=75						
LOSC				*e*Sg	**Sg**	**04 35 19.0**	**+0.2**
	69nm,0.3s,baz=75						
ANAC	**Anensky vrch**	**0.78**	**289**	*e*Pg	**Pg**	**04 35 09.3**	**+0.5**
	baz=108						
ANAC				*e*Sg	**Sg**	**04 35 19.3**	**+0.4**
	102nm,0.2s,baz=108						
OJC	**Ojcow**	**0.91**	**64**	*e*Pg	**Pg**	**04 35 10.5**	**-0.8**
OJC				*e*Sg	**Sb**	**04 35 26.0**	**+0.8**
LANS	**Liptovska Anna**	**0.92**	**138**	*e*PG	**Pg**	**04 35 11.6**	**+0.1**
LANS				*e*SG	**Sb**	**04 35 25.3**	**-0.2**
LANS				*e*LG	Lg	04 35 28.2	
JAVC	**Velka Javorina**	**1.12**	**210**	*e*Pg	**Pb**	**04 35 15.9**	**-0.3**
	baz=31						
KRLC	**Kraliky**	**1.15**	**283**	*e*PG	**Pg**	**04 35 15.2**	**-0.7**
KRLC				*e*SG	**Sg**	**04 35 30.9**	**0.0**
	comp=Z,102nm,0.7s						
NIE	**Niedzica**	**1.23**	**109**	*e*Pg	**Pg**	**04 35 17.3**	**-0.1**
NIE				*e*Sg	**Sn**	**04 35 36.2**	**+0.6**
VRAC	**Vranov**	**1.36**	**248**	*e*Pg	**Pg**	**04 35 19.8**	**-0.2**
	baz=67						
VRAC				*e*Sg	**Sg**	**04 35 37.2**	**-0.4**
	37nm,0.2s,baz=67						
DPC	**Dobruska-Polom**	**1.51**	**291**	*e*PG	**Pn**	**04 35 21.9**	**-0.3**
DPC				*e*SG	**Sg**	**04 35 42.1**	**-0.3**
	comp=Z,47nm,0.3s						
KRUC	**Moravsky**	**1.59**	**242**	*e*Pg	**Pn**	**04 35 23.1**	**-0.2**
	baz=61						
KRUC				*e*Sg	**Sn**	**04 35 44.2**	**-0.3**
	35nm,0.2s,baz=61						
OSTC	**Ostas**	**1.65**	**297**	*e*PG	**Pn**	**04 35 24.5**	**+0.3**
OSTC				*e*SG	**Sn**	**04 35 46.2**	**+0.1**
	comp=Z,68nm,0.8s						
MODS	**Modra-Piesok**	**1.67**	**210**	*e*PG	**Pn**	**04 35 24.2**	**-0.3**
MODS				*e*SG	**Sb**	**04 35 46.7**	**-0.5**
MODS				*e*LG	Lg	04 35 48.3	
KSP	**Ksiaz**	**1.75**	**306**	*e*Pg	**Pb**	**04 35 27.2**	**+0.3**
KSP				*e*Sg	**Sb**	**04 35 49.4**	**0.0**
UPC	**Upice**	**1.75**	**294**	*e*PG	**Pb**	**04 35 26.4**	**-0.5**
STHS	**Stebnicka Huta**	**1.82**	**102**	*e*PN	**Pn**	**04 35 27.0**	**+0.6**
STHS				*e*SG	**Sg**	**04 35 53.5**	**+1.3**
STHS				*e*LG	Lg	04 35 56.2	
KECS	**Kecovo**	**1.87**	**136**	*e*PN	**Pn**	**04 35 26.4**	**-0.7**
KECS				*e*SN	**Sn**	**04 35 51.1**	**-0.2**
KECS				*e*LG	Lg	04 35 56.1	
PRU	**Pruhonice**	**2.58**	**275**	*e*SG	**Sb**	**04 36 14.7**	**+1.5**
	comp=Z,15nm,0.5s						
CONA	**Conrad Observa**	**2.59**	**224**	*e*Pn	**Pn**	**04 35 36.2**	**-1.0**
	2.2nm,0.3s						
CONA				*e*Sn	**Sn**	**04 36 08.9**	**-0.4**
	4.6nm,0.3s						
RONA	**Rosalia, Austr**	**2.59**	**215**	*e*Pn	**Pn**	**04 35 37.4**	**+0.3**
	1.8nm,0.2s						
PVCC	**Panska Ves**	**2.64**	**287**	*e*SG	**Sg**	**04 36 18.3**	**-0.2**
	comp=Z,6.1nm,0.1s						
CKRC	**Cesky Krumlov**	**2.94**	**251**	*e*PG	**Pb**	**04 35 47.9**	**+0.8**
CKRC				*e*SG	**Sg**	**04 36 26.7**	**-1.5**
	comp=Z,17nm,0.7s						
KHC	**Kasperske Hory**	**3.30**	**260**	*e*PN	**Pn**	**04 35 46.0**	**-0.8**
KHC				*e*PG	**Pb**	**04 35 54.7**	**+1.4**
KHC				*e*SG	**Sg**	**04 36 38.3**	**-1.6**
	comp=Z,11nm,0.6s						
MOA	**Molln**	**3.44**	**236**	*e*Pn	**Pn**	**04 35 48.4**	**-0.3**
	0.4nm,0.2s						
MOA				*i* Sn	**Sn**	**04 36 30.2**	**0.0**
	1.0nm,0.2s						
CLL	**Collm**	**3.82**	**295**	*e*Pg	**Pg**	**04 36 06.0**	**-1.0**
CLL				*e*Sg	**Sg**	**04 36 53.0**	**-3.4**
	comp=Z,12nm,0.9s						
OBKA	**Obir**	**4.26**	**220**	*e*Pn	**Pn**	**04 35 59.9**	**-0.1**
	comp=Z,0.5nm,0.3s						
KBA	**Koelnbreinsper**	**4.41**	**233**	*e*Pn	**Pn**	**04 36 02.5**	**+0.2**
	comp=Z,2.0nm,0.4s						

SOME ***29*** *04:35:09.4, 42°.10N×87°.10E, h20km*

NNC ***29*** *04:35:15.3±4.2, 42°.39N×88°.43E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=38.3km s-min=27.3km az=158.0*

IDC ***29*** *04:35:17.4±1.1, 42°.64N×88°.64E, h0km, mb3.9/3, mbtmp3.8/7, ML3.3/4, Error ellipse: s-maj=70.8km s-min=14.9km az=49.0*

ISC 29 04:35:19.0±1.2, 42°.65N±0°.09×88°.23E±0°.09, h10km, n16, σ1§72/20, mb3.8/3, 7C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**5.36**	**335**	*e*P	**Pb**	**04 36 54.0**	**+1.3**
	6.5nm,0.3s						
ZSN				*e*S	**Sg**	**04 38 09.6**	**-1.4**
	20nm,0.7s						
KTMS	**Ketmen**	**5.83**	**281**	*e*P	**Pn**	**04 36 43.5**	**-2.1**
	0.5nm,0.1s						
KTMS				*e*S	**Sn**	**04 37 50.9**	**-1.7**
	6.3nm,0.2s						
MK31	**Makanchi Array**	**5.92**	**316**	⇑Pn	**Pn**	**04 36 48.7**	**+2.0**
	1.6nm,0.3s,baz=140,slow=15,SNR=60						
MK31				⇑Pg	**Pg**	**04 37 11.2**	**-1.2**
	3.1nm,0.3s,baz=124,slow=16,SNR=4.8						
MK31				⇑Lg	Lg	04 38 36.3	
	21nm,0.8s,baz=109,slow=29,SNR=4.5						
MKAR	**Makanchi Array**	**5.92**	**316**	Pn	**Pn**	**04 36 48.5**	**+1.7**
	2.9nm,0.3s,baz=126,slow=15,SNR=51						
MKAR				Pg	Pb	04 37 09.0	+6.7
	3.9nm,0.3s,baz=130,slow=16,SNR=13						
MKAR				Lg	Lg	04 38 30.3	
	2.0nm,0.3s,baz=134,slow=28,SNR=5.9 3.4nm,0.3s						
MAKZ	**Makanchi**	**6.09**	**315**	⇓Pn	**Pn**	**04 36 50.7**	**+1.6**
	2.3nm,0.3s						
MAKZ				⇓Lg	Lg	04 38 37.1	
	8.4nm,0.7s						
PDGK	**Podgornoye**	**6.45**	**279**	⇓Pn	**Pn**	**04 36 56.2**	**+2.1**
	6.4nm,0.3s						
PDGK				⇓Sn	**Sn**	**04 38 10.9**	**+3.1**
	12nm,0.6s						
PDGK				⇑Lg	Lg	04 38 44.8	
	25nm,0.8s						
SHLS	**Shalkode**	**6.46**	**277**	*e*P	Pn	04 36 51.3	-3.0
	14nm,0.4s						
SHLS				*e*S	**Sn**	**04 38 05.0**	**-3.1**
	44nm,0.7s						
ARXS	**Arharly**	**7.73**	**285**	*e*P	Pn	04 37 20.7	+9.0
ARXS				*e*S	Sn	04 38 54.7	+15
KURBB	**Kurchatov Arra**	**10.39**	**323**	Pn	**Pn**	**04 37 47.6**	**-0.3**
	0.2nm,0.3s,baz=134,slow=13,SNR=9.4						
KURBB				Lg	Lg	04 40 56.2	
	baz=128,slow=31 1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**10.39**	**323**	⇑Pn	**Pn**	**04 37 47.2**	**-0.7**
	1.5nm,0.5s						
KURBB				⇓Lg	Lg	04 40 56.8	
	12nm,0.8s						
KURK	**Kurchatov**	**10.42**	**324**	⇑Pn	**Pn**	**04 37 47.5**	**-0.9**
	1.0nm,0.9s						
KURK				⇑Lg	Lg	04 40 56.5	
	3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**11.53**	**350**	Pn	**Pn**	**04 38 04.0**	**+0.4**
	0.4nm,0.3s,baz=172,slow=13,SNR=5.7 1.0nm,0.4s						
BVAR	**Borovoye Array**	**15.80**	**317**	Pn	**Pn**	**04 39 00.9**	**-0.6**
	0.1nm,0.3s,baz=121,slow=14,SNR=7.7 1.6nm,0.4s						
ARCES	**ARCESS Array B**	**41.34**	**332**	P	**P**	**04 43 05.4**	**+0.9**
	3.3nm,0.9s,baz=84,slow=8.3,SNR=3.9						
ARCES				PcP	**PcP**	**04 45 02.5**	**-0.1**
	2.4nm,1.0s,baz=100,slow=3.0,SNR=5.3 3.3nm,0.9s						
WRA	**Warramunga Arr**	**75.39**	**136**	P	**P**	**04 47 02.0**	**-0.9**
	0.5nm,0.7s,baz=329,slow=5.8,SNR=2.0 0.5nm,0.7s						
ASAR	**Alice Springs**	**78.28**	**138**	P	**P**	**04 47 18.0**	**-1.1**
	0.4nm,0.4s,baz=343,slow=4.8,SNR=3.4 0.4nm,0.4s						

RHSSO ***29*** *04:41:59.8±0.5, 43°.21N×18°.03E, h8km, ML2.8/3*

BEO ***29*** *04:41:59.8±0.3, 43°.26N×17°.99E, h8km±2km, ML2.4/13*

PDG ***29*** *04:42:01.0±0.1, 43°.18N×18°.02E, h7km, MD2.8/2, ML2.7/13, Error ellipse: s-maj=0.2km s-min=0.4km az=0.0*

ISC 29 04:41:59.7±1.0, 43°.25N±0°.02×18°.05E±0°.01, h6km±9km, n56, σ0§94/110, 7C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLINJ	**Klinje**	**0.40**	**101**	*e*Pg	**Pg**	**04 42 07.6**	**+0.1**
KLINJ				*e*Sg	**Sg**	**04 42 14.2**	**+1.4**
STON	**Ston**	**0.45**	**214**	*i* Pg	**Pg**	**04 42 08.2**	**-0.3**
STON				Sg	**Sg**	**04 42 14.0**	**-0.3**
STON	**Ston**	**0.45**	**214**	*e*Pg	**Pg**	**04 42 08.1**	**-0.3**
STON				*e*Sg	**Sg**	**04 42 15.3**	**+1.0**
BRY	**Bratogost**	**0.50**	**133**	⇑*i*Pg	**Pg**	**04 42 08.8**	**-0.6**
BRY				*e*Sg	**Sg**	**04 42 16.5**	**+0.6**
TREB	**Trebinje**	**0.57**	**157**	⇑*i*Pg	**Pg**	**04 42 10.1**	**-0.6**
TREB				*e*Sg	**Sg**	**04 42 17.8**	**-0.4**
TREB	**Trebinje**	**0.57**	**157**	*e*Pg	**Pg**	**04 42 10.1**	**-0.6**
TREB				*e*Sg	**Sg**	**04 42 19.2**	**+1.0**
DBRK	**Dubrovnik**	**0.58**	**173**	*e*Pg	**Pg**	**04 42 10.8**	**-0.1**
DBRK				Sg	**Sg**	**04 42 19.2**	**+0.8**
UPM	**Unac-Piva**	**0.63**	**94**	⇓*i*Pg	**Pg**	**04 42 11.9**	**0.0**
UPM				*e*Sg	**Sb**	**04 42 21.5**	**-0.9**
RICI	**Ricice**	**0.71**	**291**	*i* Pg	**Pg**	**04 42 13.3**	**0.0**
RICI				Sg	**Sb**	**04 42 24.5**	**0.0**
MAKA	**Makarska**	**0.75**	**274**	*i* Pg	**Pg**	**04 42 13.7**	**-0.4**
MAKA				Sg	**Sb**	**04 42 24.8**	**-0.8**
NKME	**Niksic**	**0.82**	**125**	⇓*i*Pg	**Pg**	**04 42 14.5**	**-1.0**
NKME				*i* Sg	**Sb**	**04 42 27.2**	**-0.5**
HCY	**Herceg Novi**	**0.86**	**157**	⇓*i*Pg	**Pg**	**04 42 15.3**	**-1.0**
HCY				*i* Sg	**Sb**	**04 42 28.9**	**0.0**
CEME	**Cevo**	**0.95**	**137**	⇑*i*Pg	**Pg**	**04 42 16.9**	**-1.0**
CEME				*i* Sg	**Sb**	**04 42 31.6**	**+0.2**
LSTV	**Lastovo**	**0.97**	**241**	*i* Pg	**Pg**	**04 42 18.4**	**0.0**
LSTV				Sg	**Sb**	**04 42 31.8**	**-0.1**
PLE	**Pljevlja**	**0.98**	**85**	*e*Pg	**Pg**	**04 42 18.8**	**+0.1**
PLE				*e*Sg	**Sb**	**04 42 32.9**	**+0.4**
PLE	**Pljevlja**	**0.98**	**85**	⇓*i*Pg	**Pg**	**04 42 18.7**	**+0.1**
PLE				*i* Sg	**Sn**	**04 42 33.7**	**-0.8**
RUDO	**Rudo**	**1.03**	**68**	⇑*i*Pg	**Pg**	**04 42 18.5**	**-1.1**
RUDO				*e*Sg	**Sg**	**04 42 32.7**	**-0.3**
RUDO	**Rudo**	**1.03**	**68**	*e*Pg	**Pg**	**04 42 18.5**	**-1.1**
RUDO				*e*Sg	**Sg**	**04 42 32.5**	**-0.5**
BUM	**Brajici-Budva**	**1.13**	**146**	⇓*i*Pg	**Pg**	**04 42 20.4**	**-1.0**
BUM				*e*Sg	**Sn**	**04 42 37.8**	**-0.2**
KOME	**Kolasin**	**1.15**	**110**	*e*Pg	**Pg**	**04 42 21.1**	**-0.6**
KOME				*e*Sg	**Sn**	**04 42 38.7**	**+0.3**
KOME	**Kolasin**	**1.15**	**110**	⇓*i*Pg	**Pg**	**04 42 21.0**	**-0.7**
KOME				*i* Sg	**Sn**	**04 42 38.8**	**+0.4**
BBLS	**Lazi&#263i**	**1.17**	**57**	*e*Pg	**Pg**	**04 42 22.1**	**0.0**
BBLS				*e*Sg	**Sb**	**04 42 37.8**	**+0.1**
HVAR	**Hvar**	**1.17**	**267**	*e*Pg	**Pg**	**04 42 21.4**	**-0.7**
HVAR				Sg	**Sn**	**04 42 38.5**	**-0.3**
PDG	**Podgorica**	**1.21**	**132**	*e*Pg	**Pg**	**04 42 21.6**	**-1.2**
PDG				*e*Sg	**Sg**	**04 42 38.2**	**-0.3**
PDG	**Podgorica**	**1.21**	**132**	⇑*i*Pg	**Pg**	**04 42 21.7**	**-1.1**
PDG				*e*Sg	**Sn**	**04 42 39.7**	**0.0**
DRME	**Dracevica, Mon**	**1.35**	**141**	*e*Pg	**Pn**	**04 42 24.7**	**-0.3**
DRME				*e*Sg	**Sn**	**04 42 44.3**	**+1.0**
DRME	**Dracevica, Mon**	**1.35**	**141**	⇓*i*Pg	**Pn**	**04 42 24.8**	**-0.3**
DRME				*e*Sg	**Sn**	**04 42 45.9**	**+2.6**
BEY	**Berane**	**1.41**	**105**	*e*Pg	**Pn**	**04 42 25.9**	**0.0**
BEY				*e*Sg	**Sg**	**04 42 46.6**	**+1.7**
IVA	**Berane**	**1.41**	**105**	⇑*i*Pg	**Pn**	**04 42 25.6**	**-0.3**
IVA				*e*Sg	**Sg**	**04 42 46.9**	**+2.0**
SJES	**Sjenica**	**1.41**	**89**	*e*Pg	**Pg**	**04 42 26.7**	**0.0**
SJES				*e*Sg	**Sb**	**04 42 44.7**	**0.0**
KIJV	**Kijevo**	**1.41**	**303**	*e*Pg	**Pg**	**04 42 26.8**	**0.0**
KIJV				Sg	**Sg**	**04 42 48.0**	**+2.9**
PVY	**Plav**	**1.55**	**114**	*e*Pg	**Pb**	**04 42 28.8**	**-0.1**
PVY				*e*Sg	**Sg**	**04 42 51.5**	**+2.0**
PVY	**Plav**	**1.55**	**114**	⇑*i*Pg	**Pn**	**04 42 28.3**	**+0.4**
PVY				*i* Sg	**Sg**	**04 42 51.7**	**+2.2**
ULC	**Ulcinj**	**1.56**	**145**	*e*Pg	**Pn**	**04 42 27.9**	**0.0**
ULC				*e*Sg	**Sg**	**04 42 51.8**	**+2.1**
IVAS	**Ivanjica**	**1.57**	**77**	*e*Pg	**Pn**	**04 42 28.2**	**0.0**
IVAS				*e*Sg	**Sg**	**04 42 50.3**	**+0.1**
BLY	**Banja Luka**	**1.63**	**338**	*e*Pn	**Pn**	**04 42 29.3**	**+0.4**
BLY				*e*Sn	**Sn**	**04 42 50.4**	**+0.3**
BLY	**Banja Luka**	**1.63**	**338**	*e*Pg	**Pg**	**04 42 30.8**	**-0.1**
BLY				*e*Sg	**Sb**	**04 42 50.9**	**0.0**
TEKS	**Tekeris**	**1.69**	**39**	*e*Pn	**Pn**	**04 42 28.4**	**-1.4**
TEKS				*e*Sn	**Sn**	**04 42 52.1**	**+0.4**
ZIRJ	**Zirje**	**1.79**	**284**	*i* Pn	**Pb**	**04 42 32.0**	**-1.0**
ZIRJ				Sn	**Sg**	**04 42 56.8**	**-0.6**
MORI	**Morici**	**1.81**	**291**	*i* Pn	**Pb**	**04 42 32.8**	**-0.4**
MORI				Sn	**Sg**	**04 42 58.0**	**+0.1**
TRUS	**Trudelj**	**1.97**	**59**	*e*Pn	**Pn**	**04 42 33.2**	**-0.4**
TRUS				*e*Sn	**Sn**	**04 42 59.2**	**+0.6**
GRUS	**Gruza**	**2.04**	**71**	*e*Pn	**Pn**	**04 42 33.7**	**-0.9**
GRUS				*e*Sn	**Sb**	**04 43 02.5**	**-0.4**
GOCS	**Kraljevo Serbi**	**2.09**	**80**	*e*Pn	**Pn**	**04 42 36.6**	**+1.3**
GOCS				*e*Sn	**Sb**	**04 43 03.2**	**-1.0**
UDBI	**Udbina**	**2.09**	**309**	*e*Pn	**Pb**	**04 42 38.1**	**+0.1**
UDBI				Sn	**Sg**	**04 43 05.7**	**-1.1**
SELS	**Selova**	**2.25**	**90**	*e*Pn	**Pn**	**04 42 38.0**	**+0.6**
DUGI	**Dugi Otok**	**2.29**	**290**	*i* Pn	**Pb**	**04 42 40.6**	**-0.9**
DUGI				Sn	**Sb**	**04 43 09.2**	**-0.9**
PLIT	**Plitvice**	**2.39**	**314**	*e*Pn	**Pb**	**04 42 42.0**	**-1.2**
PLIT				Sn	**Sb**	**04 43 13.0**	**+0.1**
VIRC	**Vir**	**2.41**	**297**	*e*Pn	**Pb**	**04 42 42.0**	**-1.4**
VIRC				Sn	**Sb**	**04 43 12.4**	**-0.8**
MOSL	**Moslavina**	**2.54**	**339**	*i* Pn	**Pb**	**04 42 44.4**	**-1.3**
MOSL				Sn	**Sb**	**04 43 17.5**	**+0.3**
NVLJ	**Novalja**	**2.65**	**301**	*e*Pn	**Pn**	**04 42 44.9**	**+2.0**
NVLJ				Sn	**Sb**	**04 43 19.3**	**-0.9**
BOVS	**Bovan**	**2.69**	**80**	*e*Pn	**Pn**	**04 42 44.0**	**+0.4**
BOVS				*e*Sn	**Sn**	**04 43 16.1**	**-0.4**
RABC	**Rab**	**2.79**	**304**	*e*Pn	**

PB08				*i* S	**S**	**05 38 20.2**	**+0.2**
PB08				IAML		05 38 23.7	
	comp=E,47nm,0.2s						
PB08	**IPOC Station P**	**2.05**	**301**	Pg	**Pn**	**05 37 50.4**	**+0.9**
PB01	**IPOC Station P**	**2.06**	**275**	*e*P	**Pn**	**05 37 50.3**	**+1.0**
PB01				*i* S	**S**	**05 38 18.9**	**-0.7**
PB01				IAML		05 38 21.1	
	comp=N,94nm,0.2s						
PB01	**IPOC Station P**	**2.06**	**275**	Pg	**Pn**	**05 37 50.2**	**+1.0**
PB01				Sg	**S**	**05 38 19.5**	**-0.1**
PB01				IAML		05 38 20.8	
	comp=N,42nm,0.3s						
GO01	**Chusmiza**	**2.36**	**311**	*e*P	**Pn**	**05 37 53.7**	**+0.7**
GO01				*i* S	**S**	**05 38 26.3**	**+0.3**
GO01	**Chusmiza**	**2.36**	**311**	Pg	**Pn**	**05 37 53.6**	**+0.7**
PB03	**IPOC Station P**	**2.43**	**250**	*e*P	**Pn**	**05 37 53.8**	**+0.5**
PB03				*i* S	**S**	**05 38 25.9**	**-0.8**
PB03				IAML		05 38 26.3	
	comp=E,91nm,0.4s						
PB07	**IPOC Station P**	**2.46**	**258**	*e*P	**Pn**	**05 37 54.2**	**+0.5**
PB07				*i* S	**S**	**05 38 26.5**	**-1.0**
PB07				IAML		05 38 27.0	
	comp=N,139nm,0.3s						
PB06	**IPOC Station P**	**2.58**	**235**	*e*P	**Pn**	**05 37 55.9**	**+1.0**
PB06				*i* S	**S**	**05 38 29.9**	**+0.2**
PB06				IAML		05 38 31.4	
	comp=E,83nm,0.2s						
PB06	**IPOC Station P**	**2.58**	**235**	Pg	**Pn**	**05 37 56.5**	**+1.6**
PB11	**IPOC Station P**	**2.65**	**303**	*e*P	**Pn**	**05 37 55.9**	**+0.1**
PB11				*i* S	**S**	**05 38 30.3**	**-0.8**
PB11	**IPOC Station P**	**2.65**	**303**	Pg	**Pn**	**05 37 56.1**	**+0.3**
SOEO	**Opoqueri**	**2.71**	**348**	Pg	**Pn**	**05 37 57.8**	**+1.0**
TA01	**Diego Aracena**	**2.78**	**283**	*e*P	**Pn**	**05 37 56.9**	**-0.1**
TA01				*i* S	**S**	**05 38 31.3**	**-2.2**
TA01				IAML		05 38 32.6	
	comp=E,84nm,0.2s						
PB05	**IPOC Station P**	**3.15**	**238**	*e*P	**Pn**	**05 38 02.2**	**+0.8**
PB05				*i* S	**S**	**05 38 40.0**	**-1.4**
PB05				IAML		05 38 42.8	
	comp=E,38nm,0.4s						
SOET	**ToroToro**	**3.39**	**25**	Pg	**Pn**	**05 38 05.4**	**+0.7**
PB12	**IPOC Station P**	**3.86**	**312**	*e*P	**Pn**	**05 38 09.0**	**-1.0**
PB12				*i* S	**S**	**05 38 53.8**	**-3.1**
BBOJ	**La Paz, Jacaqu**	**4.31**	**348**	Pg	**Pn**	**05 38 18.1**	**+2.0**
PB14	**IPOC Station P**	**4.44**	**220**	Pg	**Pn**	**05 38 17.7**	**+0.4**
BBOE	**La Paz, Chanca**	**4.44**	**351**	Pg	**Pn**	**05 38 19.5**	**+1.8**
GO02	**Mina Guanaco**	**4.45**	**208**	Pg	**Pn**	**05 38 18.3**	**+0.8**
BBOD	**La Paz, Gloria**	**4.73**	**345**	Pg	**Pn**	**05 38 22.8**	**+1.5**
LPAZ	**La Paz**	**4.97**	**351**	Pg	**Pn**	**05 38 25.4**	**+0.9**
BBOB	**La Paz, Bander**	**5.12**	**351**	Pg	**Pn**	**05 38 26.8**	**+0.5**

IDC 29 05:41:20.4±1.8, 51°55.5N×82°55.6E, h0km, mbtmp2.0/3, ML1.4/3, Error ellipse: s-maj=20.5km s-min=17.1km az=132.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.70**	**251**	Pn	Pn	05 42 05.8	+0.7
	baz=69,slow=18,SNR=1.5						
KURBB				Lg	Lg	05 42 43.7	
	0.1nm,0.3s,baz=75,slow=36,SNR=5.9						
	0.1nm,0.2s						
I46RU	**ZALESOVO INFRA**	**2.77**	**29**	I	I	05 57 00.0	
	baz=206,slow=326,SNR=3.0						
ZALV	**Zalesovo Beam**	**2.77**	**29**	Pn	Pn	05 42 05.5	-0.6
	0.3nm,0.3s,baz=208,slow=14,SNR=4.5						
ZALV				Sn	Sn	05 42 39.4	-0.8
	0.4nm,0.3s,baz=222,slow=25,SNR=2.9						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**4.76**	**182**	Pn	Pn	05 42 35.2	+1.7
	0.1nm,0.3s,baz=12,slow=11,SNR=3.2						
MKAR				Lg	Lg	05 43 49.7	
	0.1nm,0.3s,baz=14,slow=25,SNR=8.8						
	0.4nm,0.7s						

*NEIC **29** 05:47:44.7±1.1, 37°.75N±0°.01×115°.98W±0°.02, h5km±1km, Error ellipse: s-maj=2.9km s-min=2.4km az=118.0*
REN 29 05:47:45.3±1.5, 37°.73N±0°.01×116°.03W±0°.01, h4km±3km, ML2.6/19, ML2.5/42(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=217.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S11A	**Rachel**	**0.24**	**110**		Pg	05 47 50.1	+0.1
S11A					Sg	05 47 53.9	+0.8
S11A	**Rachel**	**0.24**	**110**	IAML		05 47 54.1	
	comp=N,2μm,0.4s						
S11A				IAML		05 47 54.3	
	comp=E,2μm,0.4s						
R11B	**Troy Canyon, C**	**0.71**	**29**		Sg	05 48 07.0	-1.3
R11B	**Troy Canyon, C**	**0.71**	**29**	Pg	Pg	05 47 57.8	-1.3
R11B				IAML		05 48 07.0	
	comp=E,174nm,0.4s						
R11B				IAML		05 48 07.1	
	comp=N,121nm,0.3s						
TPNV	**Topopah Spring**	**0.80**	**193**		Pg	05 48 00.6	-0.1
TPNV					Sg	05 48 11.4	+0.5
TPNV	**Topopah Spring**	**0.80**	**193**	IAML		05 48 13.3	
	comp=N,161nm,0.3s						
TPNV				IAML		05 48 15.3	
	comp=N,150nm,0.4s						
NSP	**Numbskull Pass**	**1.01**	**188**		Pg	05 48 04.7	0.0
WCT	**Wildcat Mounta**	**1.05**	**207**		Pg	05 48 05.2	-0.2
WCT	**Wildcat Mounta**	**1.05**	**207**	IAML		05 48 23.3	
	comp=E,82nm,0.3s						
MCY	**Mercury**	**1.06**	**177**		Pg	05 48 05.9	+0.1
GMN	**Gold Mountain**	**1.07**	**247**		Pg	05 48 05.5	-0.3
GMN				IAML		05 48 23.8	
	comp=N,92nm,0.5s						
SGV	**South Grapevin**	**1.09**	**227**		Pg	05 48 06.2	-0.1
SDH	**Striped Hills**	**1.11**	**193**		Pg	05 48 06.7	+0.2
AMDNV	**Amargosa**	**1.29**	**189**		Pg	05 48 09.8	-0.2
GRAC	**Grapevine Rang**	**1.29**	**236**		Pg	05 48 10.0	-0.1
GRAC	**Grapevine Rang**	**1.29**	**236**	IAML		05 48 30.5	
	comp=N,109nm,0.4s						
GRAC				IAML		05 48 35.8	
	comp=E,74nm,0.3s						
LCH	**Last Change Ra**	**1.38**	**250**		Pn	05 48 11.5	+0.1
SHPR	**Sheep Range**	**1.40**	**150**		Pn	05 48 11.0	-0.8
Q09A	**Carvers**	**1.43**	**321**		Pn	05 48 11.4	-0.8
Q09A				IAML		05 48 37.7	
	comp=E,89nm,0.6s						
Q09A				IAML		05 48 45.1	
	comp=N,85nm,0.7s						
DSP	**Deep Springs**	**1.58**	**258**		Pn	05 48 13.7	-0.4
DSP				IAML		05 48 38.7	
	comp=N,41nm,0.8s						
DSP				IAML		05 48 39.7	
	comp=E,39nm,0.5s						
NV11	**Mina Array Sit**	**1.82**	**293**		Pn	05 48 17.9	+0.4
NV11				IAML		05 48 44.8	
	comp=N,22nm,0.4s						
QSM	**Queen of Sheba**	**1.88**	**201**		Pn	05 48 17.9	-0.3
QSM				IAML		05 48 47.0	
	comp=N,35nm,0.5s						
PSUT	**Pine Spring**	**1.89**	**64**		Pn	05 48 16.9	-1.7
PSUT				IAML		05 48 44.3	
	comp=N,44nm,0.8s						
PSUT				IAML		05 48 46.0	
	comp=E,52nm,0.7s						
NVAR	**Mina Array Bea**	**1.93**	**292**		Pn	05 48 18.6	-0.5
NV08	**Mina Array Sit**	**1.93**	**291**		Pn	05 48 18.2	-0.9
NV09	**Mina Array Sit**	**1.95**	**292**		Pn	05 48 19.4	0.0
LHV	**Little Huntoon**	**2.02**	**286**		Pb	05 48 22.0	-0.7
RYN	**Ryan**	**2.16**	**295**		Pn	05 48 21.6	-0.6
RYN	**Ryan**	**2.16**	**295**	IAML		05 48 55.8	
	comp=N,35nm,0.4s						
RYN				IAML		05 48 56.1	
	comp=E,40nm,0.5s						
LCMT	**Little Creek M**	**2.33**	**107**		Pn	05 48 24.1	-0.4
SZCU	**Shurtz Canyon**	**2.34**	**92**	Pn	Pn	05 48 24.7	0.0
WSHM	**Spangler Hills**	**2.43**	**209**		Pn	05 48 25.9	+0.1

IDC 29 05:49:02.1±71.0, 21°.67S×178°.93E, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=1265.0km s-min=158.7km az=83.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.70**	**245**	P	P	05 55 53.5	-0.3
	1.1nm,0.5s,baz=83,slow=11,SNR=4.1						
	1.1nm,0.5s						
ASAR	**Alice Springs**	**41.47**	**258**	P	P	05 56 51.0	0.0
	2.1nm,0.6s,baz=98,slow=8.0,SNR=27						
	2.1nm,0.6s						
WRA	**Warramunga Arr**	**41.61**	**264**	P	P	05 56 52.2	-0.1
	1.4nm,0.7s,baz=98,slow=8.0,SNR=10						
	1.4nm,0.7s						

*BEO **29** 06:01:18.4±0.6, 41°.53N×19°.50E, h5km±2km, ML2.1/13*
*TIR **29** 06:01:18.4, 41°.60N×19°.37E, h4km±2km, Md3.1/1, Ml2.2/1*
*PDG **29** 06:01:19.0±0.2, 41°.56N×19°.50E, h12km, ML2.4/11, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
ISC 29 06:01:18.8±1.2, 41°.59N±0°.03×19°.49E±0°.03, h4km±10km, n35, σ0s97/68, 7C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.37**	**130**	Pg	**Pb**	**06 01 27.0**	**-1.0**
TIR				Sg	**Sb**	**06 01 31.7**	**-2.4**
TIR				AML	AML	06 01 33.4	
	1.1nm,0.5s						
ULC	**Ulcinj**	**0.41**	**334**	↑*i* Pg	**Pg**	**06 01 26.8**	**0.0**
ULC				*e*Sg	**Sg**	**06 01 33.5**	**+1.3**
SDA	**Shkodra**	**0.46**	**1**	Pg	**Pg**	**06 01 27.6**	**-0.1**
SDA				Sg	**Sg**	**06 01 35.0**	**+1.3**
SDA				AMd		06 02 36.9	
DRME	**Dracevica, Mon**	**0.64**	**339**	*e*Pg	**Pg**	**06 01 30.5**	**-0.5**
DRME				*e*Sg	**Sg**	**06 01 40.6**	**+1.3**
DRME	**Dracevica, Mon**	**0.64**	**339**	↑*i* Pg	**Pg**	**06 01 30.7**	**-0.3**
DRME				*i* Sg	**Sb**	**06 01 41.3**	**-0.4**
BUM	**Brajici-Budva**	**0.84**	**328**	↑*i* Pg	**Pg**	**06 01 34.5**	**-0.3**
BUM				*i* Sg	**Sb**	**06 01 48.0**	**+0.5**
PDG	**Podgorica**	**0.86**	**348**	Pn	**Pg**	**06 01 33.8**	**-1.4**
PDG				Sn	**Sg**	**06 01 47.2**	**+0.9**
PDG	**Podgorica**	**0.86**	**348**	*e*Pg	**Pg**	**06 01 34.2**	**-1.0**
PDG				*e*Sg	**Sb**	**06 01 47.7**	**-0.3**
PDG	**Podgorica**	**0.86**	**348**	*e*Pg	**Pg**	**06 01 34.6**	**-0.6**
PDG				*e*Sg	**Sb**	**06 01 47.9**	**-0.1**
CEME	**Cevo**	**1.04**	**336**	↑*i* Pg	**Pg**	**06 01 38.2**	**-0.6**
CEME				*e*Sg	**Sn**	**06 01 55.3**	**0.0**
PVY	**Plav**	**1.06**	**19**	*e*Pg	**Pg**	**06 01 38.7**	**-0.5**
PVY				*e*Sg	**Sb**	**06 01 54.5**	**+0.5**
PVY	**Plav**	**1.06**	**19**	↑*i* Pg	**Pg**	**06 01 38.2**	**-1.0**
PVY				*e*Sg	**Sb**	**06 01 54.6**	**+0.5**
HCY	**Herceg Novi**	**1.13**	**319**	*e*Pg	**Pg**	**06 01 40.5**	**0.0**
HCY				*e*Sg	**Sn**	**06 01 57.8**	**+0.5**
NKME	**Niksic**	**1.24**	**342**	*e*Pg	**Pg**	**06 01 41.3**	**-1.3**
NKME				*i* Sg	**Sn**	**06 02 00.5**	**+0.4**
KOME	**Kolasin**	**1.26**	**1**	*e*Pg	**Pg**	**06 01 41.9**	**-1.0**
KOME				*e*Sg	**Sn**	**06 02 00.8**	**+0.2**
KOME	**Kolasin**	**1.26**	**1**	↑*i* Pg	**Pg**	**06 01 41.7**	**-1.2**
KOME				*e*Sg	**Sn**	**06 02 01.8**	**+1.2**
BEY	**Berane**	**1.31**	**13**	*e*Pg	**Pn**	**06 01 43.0**	**-1.0**
BEY				*e*Sg	**Sn**	**06 02 03.0**	**+1.1**
IVA	**Berane**	**1.31**	**13**	↑*i* Pg	**Pn**	**06 01 42.7**	**-1.3**
IVA				*e*Sg	**Sn**	**06 02 03.1**	**+1.1**
KBN	**Korca**	**1.38**	**134**	Pn	**Pg**	**06 01 46.1**	**+1.0**
KBN				Sn	**Sn**	**06 02 06.3**	**+2.8**
TREB	**Trebinje**	**1.41**	**323**	*e*Pg	**Pn**	**06 01 44.8**	**-0.3**
TREB				*e*Sg	**Sg**	**06 02 05.1**	**+1.1**
BRY	**Bratogost**	**1.49**	**332**	↓*i* Pg	**Pn**	**06 01 46.6**	**+0.2**
BRY				*e*Sg	**Sg**	**06 02 08.0**	**+1.4**
SJES	**Sjenica**	**1.71**	**12**	*e*Pg	**Pb**	**06 01 50.2**	**-0.6**
SJES				*e*Sg	**Sg**	**06 02 14.2**	**+0.6**
NOCI	**Noci**	**2.00**	**247**	Pn	**Pb**	**06 01 55.0**	**-0.6**
NOCI				Sn	**Sg**	**06 02 21.9**	**-0.9**
SELS	**Selova**	**2.03**	**36**	*e*Pn	**Pn**	**06 01 54.1**	**+0.4**
SELS				*e*Sn	**Sn**	**06 02 20.4**	**+0.9**
RUDO	**Rudo**	**2.03**	**358**	*e*Pn	**Pb**	**06 01 55.1**	**-1.1**
RUDO				*e*Sn	**Sn**	**06 02 20.7**	**+1.2**
IVAS	**Ivanjica**	**2.04**	**14**	*e*Pn	**Pn**	**06 01 53.9**	**-0.1**
IVAS				*e*Sn	**Sn**	**06 02 19.6**	**-0.3**
BARS	**Barje**	**2.12**	**54**	*e*Pn	**Pn**	**06 01 55.3**	**+0.4**
BARS				*e*Sn	**Sn**	**06 02 20.2**	**-1.5**
GOCS	**Kraljevo Serbi**	**2.22**	**27**	*e*Sn	**Sn**	**06 02 25.4**	**+1.1**
BBLS	**Lazi&#263i**	**2.27**	**359**	*e*Pn	**Pn**	**06 01 57.7**	**+0.6**
BBLS				*e*Sn	**Sn**	**06 02 27.1**	**+1.5**
BOSS	**Bosilegrad**	**2.41**	**67**	*e*Pn	**Pn**	**06 01 59.9**	**+1.0**
BOSS				*e*Sn	**Sn**	**06 02 29.3**	**+0.5**
GRUS	**Gruza**	**2.47**	**21**	*e*Pn	**Pn**	**06 01 59.7**	**0.0**
GRUS				*e*Sn	**Sn**	**06 02 31.4**	**+1.1**
BOVS	**Bovan**	**2.62**	**38**	*e*Pn	**Pn**	**06 02 01.9**	**+0.1**
BOVS				*e*Sn	**Sn**	**06 02 34.2**	**+0.2**
ZAPS	**Zavoj**	**2.87**	**53**	*e*Pn	**Pn**	**06 02 05.9**	**+0.6**
ZAPS				*e*Sn	**Sn**	**06 02 39.8**	**-0.5**
TEKS	**Tekeris**	**2.96**	**1**	*e*Pn	**Pn**	**06 02 07.2**	**+0.7**
ZAGS	**Zajecar**	**3.00**	**41**	*e*Pn	**Pn**	**06 02 05.5**	**-1.6**
ZAGS				*e*Sn	**Sn**	**06 02 43.6**	**+0.1**

*NEIC **29** 06:33:58.8±0.6, 18°.23N±0°.09×146°.5E±0°.2, h36km±6km, mb4.2/13, Error ellipse: s-maj=25.3km s-min=12.4km az=96.0*
*IDC **29** 06:34:04.1±3.3, 18°.21N×146°.58E, h87km±31km, mb3.6/15, mbtmp4.0/17, MS3.3/13, Error ellipse: s-maj=27.5km s-min=15.0km az=85.0*
ISC 29 06:34:01.6±0.6, 18°.28N±0°.07×146°.6E±0°.2, h64km, n47, σ1s13/34, mb4.1/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.95**	**200**	P	**Pn**	**06 35 14.1**	**+0.7**
	122nm,0.6s,baz=195,slow=4.6,SNR=4.0						
GUMO				S	**Sn**	**06 36 11.6**	**+2.1**
	56nm,0.4s,baz=343,slow=19,SNR=1.8						
JOW	**Kunigami**	**18.93**	**300**	LR	LR	06 44 34.0	
	comp=Z,131nm,20.1s,baz=4.5,slow=33						
H11S3	**WAKE ISLAND Hy**	**19.06**	**86**	T	T	06 57 38.0	
	baz=272,slow=74,SNR=3.7						
H11S1	**WAKE ISLAND Hy**	**19.07**	**86**	T	T	06 57 34.7	
	baz=272,slow=74,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**19.08**	**86**	T	T	06 57 44.2	
	baz=272,slow=74,SNR=4.3						
JGF	**Kuroka**	**19.10**	**336**	P	**P**	**06 38 16.5**	**-2.7**
JGF				IAmb	IAmb	06 38 43.3	
	comp=Z,19nm,1.3s						
MJAR	**Matsushiro Arr**	**19.64**	**340**	P	**Pn**	**06 38 26.4**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=166,slow=11,SNR=4.3						
JNU	**Nakatsue**	**20.44**	**319**	LR	LR	06 44 59.7	
	comp=Z,74nm,22.0s,baz=146,slow=32						
ASAJ	**Asahikawa**	**25.98**	**353**	LR	LR	06 50 52.0	
	comp=Z,22nm,19.2s,baz=45,slow=39						
HILR	**Hailar Array B**	**37.94**	**331**	P	**P**	**06 41 13.7**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=151,slow=9.2,SNR=1.5						
	comp=Z,1.4nm,0.5s						
WB0	**Warramunga Arr**	**39.66**	**198**	P	**P**	**06 41 25.4**	**-2.1**
WB0				IAmb	IAmb	06 41 47.5	
	comp=Z,5.8nm,1.4s						
WR8	**Warramunga Arr**	**39.81**	**198**	P	**P**	**06 41 27.5**	**-1.3**
WR8				IAmb	IAmb	06 41 41.4	
	comp=Z,9.4nm,1.4s						
WRA	**Warramunga Arr**	**39.85**	**198**	P	**P**	**06 41 28.4**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=20,slow=9.5,SNR=5.4						
	comp=Z,0.9nm,0.8s						
MA2	**Magadan**	**41.35**	**3**	LR	LR	06 57 07.5	
	comp=Z,31nm,20.8s,baz=184,slow=33						
FITZ	**Fitzroy Crossi**	**41.61**	**211**	P	**P**	**06 41 41.7**	**-1.9**
FUNA	**Funafuti**	**41.76**	**127**	P	**P**	**06 41 44.4**	**-0.5**
AS31	**Alice Springs**	**43.49**	**197**	P	**P**	**06 41 57.5**	**-1.4**
ASAR	**Alice Springs**	**43.49**	**197**	P	**P**	**06 41 59.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=19,slow=6.8,SNR=7.2						
	comp=Z,0.4nm,0.5s						
ASAR	**Alice Springs**	**43.49**	**197**	P	**P**	**06 41 58.0**	**-0.8**
SONM	**Songino Array**	**44.01**	**321**	P	**P**	**06 42 03.8**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=141,slow=9.1,SNR=2.0						
SONM				LR	LR	07 00 38.9	
	comp=Z,36nm,19.4s,baz=260,slow=36						
	comp=Z,0.7nm,0.6s						
SEY	**Seymchan**	**44.79**	**4**	LR	LR	07 00 26.9	
	comp=Z,18nm,19.2s,baz=14,slow=35						
CMAR	**Chiang Mai Arr**	**45.13**	**278**	LR	LR	06 59 38.5	
	comp=Z,15nm,21.3s,baz=90,slow=34						
STKA	**Stephens Creek**	**50.10**	**186**	P	**P**	**06 42 49.0**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=6.1,slow=11,SNR=4.2						
	comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**50.10**	**186**	P	**P**	**06 42 49.1**	**-1.1**
BBOO	**Buckleboo**	**51.79**	**191**	P	**P**	**06 43 02.3**	**-0.6**
ZALV	**Zalesovo Beam**	**58.87**	**323**	P	**P**	**06 43 53.7**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=101,slow=7.7,SNR=5.3						
	comp=Z,0.8nm,0.5s						
ZALV	**Zalesovo Beam**	**58.87**	**323**	P	**P**	**06 43 53.3**	**-0.3**
MKAR	**Makanchi Array**	**59.37**	**314**	P	**P**	**06 43 56.8**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=98,slow=8.2,SNR=4.0						
MKAR				LR	LR	07 09 26.2	
	comp=Z,39nm,21.6s,baz=324,slow=36						
	comp=Z,0.6nm,0.7s						
C19K	**Lookout Ridge**	**60.51**	**19**	P	**P**	**06 44 05.8**	**+1.1**
D20K	**Etivluk River**	**61.30**	**20**	P	**P**	**06 44 10.6**	**+0.6**
KURBB	**Kurchatov Arra**	**62.20**	**318**	P	**P**	**06 44 17.0**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=93,slow=7.4,SNR=15						
	comp=Z,1.6nm,0.6s						
NRIK	**Noril'sk**	**62.30**	**340**	LR	LR	07 11 27.6	
	comp=Z,55nm,21.3s,baz=185,slow=36						
E22K	**Anaktuvuk Pass**	**62.71**	**22**	P	**P**	**06 44 20.0**	**+0.5**
ILAR	**Eielson Array**	**63.64**	**26**	P	**P**	**06 44 25.5**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=279,slow=5.0,SNR=6.9						
	comp=Z,0.5nm,0.7s						
C23K	**Itkillik River**	**63.70**	**20**	P	**P**	**06 44 27.1**	**+1.1**
PALK	**Pallekele**	**64.91**	**270**	LR	LR	07 09 32.1	
	comp=Z,20nm,21.5s,baz=90,slow=33						
D25K	**Kavik River**	**64.96**	**21**	P	**P**	**06 44 34.9**	**+0.5**
D25K				IAmb	IAmb	06 44 38.2	
	comp=Z,2.4nm,0.9s						
BMAR	**Burnt Mountain**	**65.16**	**23**	P	**P**	**06 44 36.8**	**+1.1**
RAR	**Rarotonga**	**65.56**	**124**	LR	LR	07 08 26.7	
	comp=Z,28nm,20.7s,baz=228,slow=32						
BVAR	**Borovoye Array**	**67.34**	**321**	P	**P**	**06 44 50.1**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=86,slow=8.9,SNR=6.5						
	comp=Z,1.8nm,0.5s						
INK	**Inuvik**	**69.42**	**23**	P	**P**	**06 45 03.5**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=243,slow=12,SNR=3.3						
	comp=Z,1.4nm,0.8s						
RES	**Resolute Bay**	**79.63**	**14**	P	**P**	**06 46 02.3**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=234,slow=4.3,SNR=5.0						
	comp=Z,1.1nm,0.6s						
NVAR	**Mina Array Bea**	**82.72**	**52**	P	**P**	**06 46 19.6**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=272,slow=5.9,SNR=6.0						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**83.15**	**342**	P	**P**	**06 46 21.4**	**+1.1**
	comp=Z,3.3nm,0.9s,baz=71,slow=7.9,SNR=5.8						
	comp=Z,3.3nm,0.9s						
FINES	**FINESS Array B**	**87.62**	**336**	P	**P**	**06 46 41.8**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=65,slow=4.2,SNR=10						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**92.14**	**326**	LR	LR	07 29 26.0	
	comp=Z,26nm,19.9s,baz=21,slow=36						
NOA	**NORSAR Array B**	**93.26**	**340**	LR	LR	07 33 34.5	
	comp=Z,14nm,19.6s,baz=325,slow=38						

*TIR **29** 06:50:25.5, 41°.49N×19°.53E, h37km±2km, Md3.1/10, Ml3.4/9*
*PDG **29** 06:50:26.7±0.3, 41°.42N×19°.57E, h11km±1km, MD3.4/4, ML3.3/13, Error ellipse: s-maj=1.2km s-min=1.8km az=0.0*
*BEO **29** 06:50:27.6±0.6, 41°.45N×19°.61E, h11km±3km, ML3.1/14*
*SKO **29** 06:50:27.3, 41°.48N×19°.48E, h1km, ML3.1*
*IDC **29** 06:50:30.6±18.0, 42°.09N×20°.40E, h0km, mb3.9/2, mbtmp3.9/4, ML3.1/2, Error ellipse: s-maj=340.3km s-min=49.0km az=43.0*
ISC 29 06:50:26.4±1.0, 41°.44N±0°.02×19°.53E±0°.02, h13km±7km, n71, σ1s14/115, 6C-21D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**110**	Pg	**Pg**	**06 50 31.9**	**-0.1**
TIR				Sg	**Sg**	**06 50 35.6**	**-0.1**
TIR				AML	AML	06 50 36.9	
	20nm,0.2s						
TIR	**Tirane**	**0.27**	**110**	*i* Sg	**Sb**	**06 50 37.8**	**+0.1**
ULC	**Ulcinj**	**0.56**	**338**	↓*i* Pg	**Pg**	**06 50 37.2**	**-0.2**
ULC				*e*Sg	**Sb**	**06 50 46.5**	**+0.4**
SDA	**Shkodra**	**0.61**	**358**	Pg	**Pg**	**06 50 38.0**	**-0.2**
SDA				Sg	**Sg**	**06 50 45.7**	**-0.6**
SDA				AML	AML	06 50 50.3	
	19μm,0.2s						
SDA				AMd		06 51 34.0	
PHP	**Peshkopia**	**0.73**	**70**	Pg	**Pg**	**06 50 39.5**	**-1.0**
PHP				Sg	**Sg**	**06 50 49.1**	**-0.9**
PHP				AML	AML	06 50 54.8	
	4.8nm,0.6s						
PHP				AMd		06 51 39.2	
DRME	**Dracevica, Mon**	**0.79**	**341**	*e*Pg	**Pg**	**06 50 41.2**	**-0.4**
DRME				*e*Sg	**Sn**	**06 50 54.9**	**0.0**
DRME	**Dracevica, Mon**	**0.79**	**341**	↓*i* Pg	**Pg**	**06 50 41.2**	**-0.4**
DRME				*i* Sg	**Sb**	**06 50 53.3**	**+0.7**
VLO	**Vlora**	**0.97**	**181**	Pn	**Pb**	**06 50 45.0**	**-0.1**
VLO				Sn	**Sg**	**06 50 58.8**	**+0.9**
VLO				AML	AML	06 51 05.8	
	3.4nm,0.3s						
VLO				AMd		06 51 52.3	
**BU

BBLS	**Lazi&#263i**	**2.42**	**358**	*e*Pn	**Pn**	**06 51 07.7**	**+1.9**
BBLS				*e*Sn	**Sn**	**06 51 37.0**	**+1.6**
BOSS	**Bosilegrad**	**2.44**	**63**	*e*Pn	**Pn**	**06 51 06.5**	**+0.5**
MRVN	**Minervino Murg**	**2.54**	**262**	Pn	**Pn**	**06 51 07.7**	**+0.4**
MRVN				Sn	**Sn**	**06 51 38.9**	**+0.7**
MRVN				AML	AML	06 51 51.2	
	comp=E,0.3nm,0.6s						
MRVN				AMd		06 52 46.5	
GRUS	**Gruza**	**2.60**	**19**	*e*Pn	**Pn**	**06 51 09.2**	**+1.1**
GRUS				*e*Sn	**Sn**	**06 51 41.2**	**+1.7**
BOVS	**Bovan**	**2.72**	**36**	⇓P	**Pn**	**06 51 11.8**	**+2.0**
BOVS				⇓S	**Sn**	**06 51 43.8**	**+1.2**
BOVS	**Bovan**	**2.72**	**36**	*e*Pn	**Pn**	**06 51 11.5**	**+1.7**
BOVS				*e*Sn	**Sn**	**06 51 43.4**	**+0.9**
TRUS	**Trudelj**	**2.85**	**13**	*e*Pn	**Pn**	**06 51 12.4**	**+0.8**
ZAPS	**Zavoj**	**2.94**	**50**	*e*Pn	**Pn**	**06 51 14.7**	**+1.8**
ZAPS				*e*Sn	**Sn**	**06 51 47.4**	**-0.7**
ZAGS	**Zajecar**	**3.10**	**39**	*e*Pn	**Pn**	**06 51 16.4**	**+1.4**
ZAGS				*e*Sn	**Sn**	**06 51 52.8**	**+0.9**
TIP	**Timpagrande**	**3.10**	**224**	⇑P	**Pb**	**06 51 20.5**	**-0.9**
TEKS	**Tekeris**	**3.10**	**0**	*e*Pn	**Pn**	**06 51 16.0**	**+0.9**
TEKS				*e*Sn	**Sn**	**06 51 52.8**	**+0.7**
BLKB	**Belogradchik**	**3.19**	**46**	⇓S	**Sn**	**06 51 55.0**	**+0.9**
BORS2	**Bor- Borsko je**	**3.22**	**34**	*e*Pn	**Pn**	**06 51 15.9**	**-0.8**
BORS2				*e*Sn	**Sn**	**06 51 53.6**	**-1.3**
AVAS	**Avala Beograd**	**3.33**	**12**	*e*Pn	**Pn**	**06 51 17.8**	**-0.4**
AVAS				*e*Sn	**Sn**	**06 51 56.3**	**-1.4**
MDVR	**Moldovita**	**3.70**	**25**	⇓P	**Pn**	**06 51 24.3**	**+1.0**
BLY	**Banja Luka**	**3.72**	**333**	⇓P	**Pn**	**06 51 25.6**	**+2.0**
HERR	**Herculane**	**4.03**	**31**	⇓P	**Pn**	**06 51 29.2**	**+1.3**
GZR	**Gura Zlata**	**4.60**	**30**	⇓P	**Pn**	**06 51 37.2**	**+1.4**
MORH	**Mrgy, Hungar**	**4.81**	**353**	*e*Pn	**Pn**	**06 51 37.3**	**-1.2**
MORH	**Mrgy, Hungar**	**4.81**	**353**	⇓P	**Pn**	**06 51 40.9**	**+2.4**
ELND	**Elena**	**4.94**	**70**	⇓P	**Pn**	**06 51 43.1**	**+2.7**
ARR	**Arges**	**5.41**	**42**	⇓P	**Pn**	**06 51 48.9**	**+2.2**
VOIR		**5.67**	**43**	⇑P	**Pn**	**06 51 51.8**	**+1.4**
MLR	**Muntele Rosu**	**6.18**	**47**	⇓P	**Pn**	**06 51 59.5**	**+2.1**
KECS	**Kecovo**	**7.07**	**5**	*e*PN	**Pn**	**06 52 12.9**	**+3.3**
KECS				*e*SN	**Sn**	**06 53 30.3**	**+0.5**
MODS	**Modra-Piesok**	**7.11**	**348**	*e*PN	**Pn**	**06 52 10.9**	**+0.8**
HFS	**Hagfors**	**19.06**	**351**	P	**P**	**06 54 47.6**	**-0.6**
	comp=E,0.1nm,0.3s,baz=152,slow=13,SNR=2.1						
	comp=E,3.4nm,0.9s						
FINES	**FINESS Array B**	**20.42**	**9**	P	**P**	**06 55 01.4**	**-1.6**
	comp=E,0.2nm,0.3s,baz=182,slow=11,SNR=5.7						
	comp=E,2.7nm,0.7s						
ZALV	**Zalesovo Beam**	**44.14**	**50**	P	**P**	**06 58 33.4**	**-1.0**
	comp=E,0.8nm,0.4s,baz=270,slow=8.4,SNR=4.3						
	comp=E,0.8nm,0.4s						
MKAR	**Makanchi Array**	**44.31**	**61**	P	**P**	**06 58 34.6**	**-1.4**
	comp=E,1.1nm,0.6s,baz=295,slow=7.3,SNR=4.4						
	comp=E,1.1nm,0.6s						

IDC ***29*** *06:50:52.5±6.6, 33°.67N×24°.42E, h0km, mb3.9/4, mbtmp3.9/7, ML4.2/3, Error ellipse: s-maj=116.2km s-min=40.7km az=35.0*

ISK ***29*** *06:51:07.4, 34°.59N×25°.43E, h23km, ML3.3/17*

HLW ***29*** *06:51:08.7, 34°.40N×25°.73E, h9km±11km, Md3.8, Ml3.5*

ATH ***29*** *06:51:09.5, 34°.72N×25°.32E, h23km±9km, ML2.9/2, Manual Solution by E.Daskalaki First location: 2019/11/29 06:52:29, This location: 2019/11/29 11:35:45 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 5 km; Longitude uncertainty: 2 km*

THE ***29*** *06:51:10.6, 35°.N±10°×2°.5E±°, h74km±13km, M3.0/8, MLh3.0/8*

AFAD ***29*** *06:51:11.2, 34°.83N×26°.03E, h7km±3km, ML3.1*

GII ***29*** *06:51:12.9±0.0, 34°.85N±0°.04×26°.18E±0°.01, h40km, Mws3.4, confirmed*

ISC 29 06:51:04.5±1.3**, 34°.59N**±0°.04×**25°.68E**±0°.03**, h15**km±9km**, n93**, σ2s61/117**, mb3.8/4, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**0.95**	**317**	Pg	**Pn**	**06 51 24.0**	**+0.7**
IDI				Sg	**Sb**	**06 51 36.1**	**+1.0**
IDI	**Anoyia**	**0.95**	**317**	P	**Pn**	**06 51 24.9**	**+1.6**
IDI				S	**Sb**	**06 51 36.5**	**+1.4**
IDI	**Anoyia**	**0.95**	**317**	P	**Pb**	**06 51 22.6**	**0.0**
IDI				S	**Sg**	**06 51 31.8**	**-3.5**
GVD	**Gavdhos**	**1.33**	**281**	Pn	**Pn**	**06 51 28.4**	**-0.1**
GVD				Sn	**Sn**	**06 51 43.7**	**-2.3**
GVD	**Gavdhos**	**1.33**	**281**	P	**Pn**	**06 51 29.0**	**+0.5**
GVD	**Gavdhos**	**1.33**	**281**	P	**Pn**	**06 51 28.5**	**0.0**
GVD				S	**Sn**	**06 51 41.5**	**-4.4**
KARP	**Karpathos**	**1.55**	**52**	Pn	**Pg**	**06 51 38.4**	**+4.1**
KARP	**Karpathos**	**1.55**	**52**	P	Pg	06 51 38.7	+4.5
KARP	**Karpathos**	**1.55**	**52**	P	Pg	06 51 38.9	+4.6
KARP				S	**Sg**	**06 51 59.6**	**+5.2**
IMMV	**Iera Moni Meta**	**1.64**	**302**	Pn	**Pn**	**06 51 33.3**	**+0.5**
IMMV				Sn	**Sn**	**06 51 52.1**	**-1.5**
IMMV	**Iera Moni Meta**	**1.64**	**302**	P	**Pn**	**06 51 33.9**	**+1.2**
KNDR	**Palaiochora Ch**	**1.80**	**291**	Pn	**Pn**	**06 51 35.2**	**+0.2**
KNDR				Sn	**Sn**	**06 51 55.2**	**-2.4**
KNDR	**Palaiochora Ch**	**1.80**	**291**	P	**Pn**	**06 51 34.6**	**-0.4**
KNDR				S	**Sn**	**06 51 53.8**	**-3.8**
APE	**Apeiranthos**	**2.48**	**357**	Pn	**Pn**	**06 51 46.6**	**+2.3**
APE	**Apeiranthos**	**2.48**	**357**	P	**Pb**	**06 51 46.8**	**-1.9**
APE				S	**Sn**	**06 52 14.1**	**-0.2**
APE	**Apeiranthos**	**2.48**	**357**	P	**Pb**	**06 51 47.9**	**-0.8**
APE				S	**Sn**	**06 52 15.0**	**+0.7**
APE	**Apeiranthos**	**2.48**	**357**	P	**Pn**	**06 51 45.8**	**+1.5**
APE				S	**Sn**	**06 52 13.6**	**-0.7**
YAZI	**Mula-Dat§a-**	**2.54**	**34**	P	**Pb**	**06 51 50.5**	**+0.7**
YAZI				S	**Sb**	**06 52 20.0**	**-0.8**
ARG	**Arkhangelos**	**2.58**	**50**	Pn	**Pb**	**06 51 51.6**	**+1.2**
ARG	**Arkhangelos**	**2.58**	**50**	P	**Pg**	**06 51 52.0**	**-1.9**
ARG				S	**Sg**	**06 52 23.6**	**-3.7**
ARG	**Arkhangelos**	**2.58**	**50**	P	**Pg**	**06 51 51.9**	**-2.0**
DAT	**Datca**	**2.64**	**35**	Pn	**Pb**	**06 51 51.7**	**+0.2**
DATC	**Datca-Mugla**	**2.70**	**36**	Pn	**Pb**	**06 51 52.9**	**+0.4**
KTHA	**Kythira Island**	**2.71**	**309**	Pn	**Pn**	**06 51 48.7**	**+1.3**
KTHA	**Kythira Island**	**2.71**	**309**	P	**Pn**	**06 51 47.7**	**+0.3**
BODT	**Bodrum**	**2.80**	**28**	Pn	**Pb**	**06 51 53.8**	**-0.4**
TURN	**Turunc**	**3.02**	**43**	P	**Pb**	**06 51 57.1**	**-0.8**
TURN				S	**Sb**	**06 52 30.9**	**-3.8**
TURN				*i* IAML		06 52 33.0	
	comp=E,67nm,0.3s						
TURN				*i* IAML		06 52 39.0	
	comp=N,70nm,0.3s						
TURN	**Turunc**	**3.02**	**43**	Pn	**Pb**	**06 51 57.3**	**-0.6**
VLI	**Veliai**	**3.08**	**314**	P	**Pn**	**06 51 52.5**	**0.0**
VLI				S	**Sn**	**06 52 24.3**	**-4.8**
VLI	**Veliai**	**3.08**	**314**	P	**Pn**	**06 51 52.7**	**+0.1**
SLUM	**Salum**	**3.12**	**187**	P	**Pn**	**06 51 55.0**	**+1.9**
SLUM				S	**Sn**	**06 52 29.3**	**-0.7**
DALY	**Dalyan (Mula)**	**3.29**	**47**	Pn	**Pb**	**06 52 01.3**	**-1.2**
YER	**Yerkesik**	**3.31**	**39**	Pn	**Pb**	**06 52 01.4**	**-1.5**
YER	**Yerkesik**	**3.31**	**39**	P	**Pb**	**06 52 01.1**	**-1.7**
IZZE	**Mula-Seydike**	**3.43**	**57**	P	**Pb**	**06 52 02.4**	**-2.6**
IZZE				S	**Sn**	**06 52 41.1**	**+3.2**
IZZE				*i* IAML		06 52 42.0	
	comp=N,209nm,0.6s						
IZZE				*i* IAML		06 52 44.0	
	comp=E,143nm,0.5s						
SABU	**Mula-Dalaman**	**3.48**	**49**	P	**Pb**	**06 52 03.7**	**-2.2**
SABU				S	**Sb**	**06 52 44.3**	**-3.8**
SABU				*i* IAML		06 52 50.0	
	comp=E,34nm,0.3s						
SABU				*i* IAML		06 52 52.0	
	comp=N,53nm,0.3s						
AKAS	**Kas**	**3.60**	**62**	P	**Pb**	**06 52 05.6**	**-2.3**
AKAS				S	**Sb**	**06 52 46.4**	**-5.2**
AKAS				*i* IAML		06 52 48.0	
	comp=E,147nm,0.3s						
AKAS				*i* IAML		06 52 50.0	
	comp=N,208nm,0.6s						
AKAS	**Kas**	**3.60**	**62**	Pn	**Pb**	**06 52 05.7**	**-2.3**
CAME	**Cameli-Denizli**	**3.77**	**50**	Pn	**Pb**	**06 52 07.8**	**-3.0**
AYDB	**Zeytinkoy-Aydi**	**3.80**	**27**	Pn	**Pb**	**06 52 07.6**	**-3.7**
ESEN	**Aydn-Nazilli**	**3.86**	**33**	P	**Pb**	**06 52 08.9**	**-3.4**
ESEN				S	**Sb**	**06 52 53.2**	**-5.7**
ESEN				*i* IAML		06 52 55.0	
	comp=E,36nm,0.4s						
TAVA	**DENIZLI_Tavas**	**3.89**	**42**	P	**Pb**	**06 52 09.8**	**-3.0**
TAVA				S	**Sb**	**06 52 54.3**	**-5.4**
TAVA				*i* IAML		06 53 00.0	
	comp=E,32nm,0.5s						
TAVA				*i* IAML		06 53 02.0	
	comp=N,28nm,0.3s						
KNIK	**Mula-Seydike**	**3.89**	**54**	P	**Pb**	**06 52 09.3**	**-3.5**
KNIK				S	**Sn**	**06 52 52.8**	**+3.6**
KNIK				*i* IAML		06 52 56.0	
	comp=E,35nm,0.4s						
KNIK				*i* IAML		06 52 59.0	
	comp=N,33nm,0.5s						
ITM	**Ithomi**	**3.99**	**311**	P	**Pn**	**06 52 04.3**	**-0.9**
GOLH	**Golhisar**	**4.11**	**49**	P	**Pb**	**06 52 12.5**	**-4.2**
GOLH				*i* IAML		06 53 05.0	
	comp=N,60nm,0.4s						
GOLH				*i* IAML		06 53 07.0	
	comp=E,53nm,0.3s						
AKUM	**Antalya-Kumluc**	**4.18**	**64**	P	Pb	06 52 13.2	-4.6
AKUM				S	**Sn**	**06 53 00.2**	**+3.8**
AKUM				*i* IAML		06 53 03.0	
	comp=N,61nm,0.4s						
AKUM				*i* IAML		06 53 05.0	
	comp=E,61nm,0.3s						
KORT	**Korkueli**	**4.50**	**56**	P	**Pb**	**06 52 19.8**	**-3.4**
KORT				*i* IAML		06 53 13.0	
	comp=E,93nm,0.7s						
KORT				*i* IAML		06 53 14.0	
	comp=N,41nm,0.7s						
PASA	**Karahalli, USA**	**4.85**	**38**	P	Pn	06 52 21.0	+4.1
PASA				S	**Sn**	**06 53 15.2**	**+2.3**
SWA2		**5.33**	**182**	P	**Pn**	**06 52 25.7**	**+2.1**
SWA2				S	**Sn**	**06 53 21.6**	**-3.1**
GAZI	**Gazipasa**	**5.67**	**71**	P	**Pn**	**06 52 31.3**	**+3.2**
GAZI				S	**Sn**	**06 53 34.3**	**+1.3**
GAZI				*i* IAML		06 53 36.0	
	comp=N,74nm,0.6s						
GAZI				*i* IAML		06 53 36.0	
	comp=E,78nm,0.8s						
KOT	**Kottamia**	**6.98**	**130**	P	**Pn**	**06 52 49.3**	**+3.0**
NBNS	**Bani Suef**	**7.64**	**140**	P	**Pn**	**06 52 58.3**	**+3.1**
HFRF	**Wahat Farafira**	**7.76**	**162**	P	**Pn**	**06 52 59.3**	**+2.5**
KZIT	**Kziot**	**8.21**	**114**	P	**Pn**	**06 53 06.3**	**+3.2**
KZIT	**Kziot**	**8.21**	**114**	S	**Sn**	**06 54 34.8**	**-0.8**
TAMRE	**El Minia**	**8.22**	**145**	P	**Pn**	**06 53 06.1**	**+2.9**
MMA0B	**Mount Meron ar**	**8.25**	**98**	P	**Pn**	**06 53 06.5**	**+2.8**
MMA0B	**Mount Meron ar**	**8.25**	**98**	S	**Sn**	**06 54 34.2**	**-2.4**
MMAI	**Mount Meron Ar**	**8.25**	**98**	Pn	**Pn**	**06 53 06.0**	**+2.3**
	2.7nm,0.3s,baz=276,slow=13,SNR=5.1						
MMAI				Sn	**Sn**	**06 54 37.4**	**+0.8**
	6.5nm,0.3s,baz=287,slow=26,SNR=6.0						
	1.4nm,0.3s						
AMAZ	**Amatzia**	**8.33**	**109**	P	**Pn**	**06 53 08.0**	**+3.2**
AMAZ	**Amatzia**	**8.33**	**109**	S	**Sn**	**06 54 36.9**	**-1.7**
SALP	**Salfit**	**8.35**	**105**	P	**Pn**	**06 53 07.3**	**+2.3**
SALP	**Salfit**	**8.35**	**105**	S	**Sn**	**06 54 37.7**	**-1.4**
GEM	**Giv'at Ha'Em**	**8.42**	**97**	P	**Pn**	**06 53 08.5**	**+2.6**
GEM	**Giv'at Ha'Em**	**8.42**	**97**	S	**Sn**	**06 54 37.0**	**-3.7**
MMLI	**Mount Malkishu**	**8.42**	**102**	P	**Pn**	**06 53 08.8**	**+2.8**
MMLI	**Mount Malkishu**	**8.42**	**102**	S	**Sn**	**06 54 39.2**	**-1.5**
HMDT	**Nahal Hemdat**	**8.56**	**103**	P	**Pn**	**06 53 10.5**	**+2.7**
HMDT	**Nahal Hemdat**	**8.56**	**103**	S	**Sn**	**06 54 42.6**	**-1.5**
YTIR	**Yattir**	**8.56**	**109**	P	**Pn**	**06 53 11.1**	**+3.2**
YTIR	**Yattir**	**8.56**	**109**	S	**Sn**	**06 54 42.7**	**-1.6**
KSHT	**Keshet**	**8.59**	**98**	P	**Pn**	**06 53 10.7**	**+2.4**
KSHT	**Keshet**	**8.59**	**98**	S	**Sn**	**06 54 43.0**	**-1.9**
DSI	**Dead Sea**	**8.68**	**108**	P	**Pn**	**06 53 12.8**	**+3.2**
DSI	**Dead Sea**	**8.68**	**108**	S	**Sn**	**06 54 45.4**	**-1.8**
ASUT		**8.77**	**143**	P	**Pn**	**06 53 13.8**	**+3.0**
KRMI	**Paran Flat**	**8.86**	**118**	P	**Pn**	**06 53 15.6**	**+3.6**
IDAN	**Idan**	**8.91**	**112**	P	**Pn**	**06 53 16.0**	**+3.4**
IDAN	**Idan**	**8.91**	**112**	S	**Sn**	**06 54 51.2**	**-1.6**
GHAJ	**Ghor Haditha**	**8.94**	**109**	P	**Pn**	**06 53 16.6**	**+3.6**
GHAJ	**Ghor Haditha**	**8.94**	**109**	S	**Sn**	**06 54 51.9**	**-1.4**
PRNI	**Paran**	**8.94**	**116**	P	**Pn**	**06 53 16.9**	**+3.8**
PRNI	**Paran**	**8.94**	**116**	S	**Sn**	**06 54 53.0**	**-0.6**
ZFRI	**Zfri**	**8.97**	**114**	P	**Pn**	**06 53 16.8**	**+3.3**
ZFRI	**Zfri**	**8.97**	**114**	S	**Sn**	**06 54 53.3**	**-0.9**
MBRI	**Mt Berech**	**9.17**	**119**	P	**Pn**	**06 53 19.9**	**+3.6**
EIL	**Elat**	**9.27**	**119**	P	**Pn**	**06 53 21.2**	**+3.6**
KBZ	**Khabaz**	**16.15**	**50**	P	**P**	**06 54 58.5**	**+4.5**
	0.2nm,0.3s,baz=257,slow=9.7,SNR=6.4						
	3.5nm,0.8s						
AKASG	**Malin Array Be**	**16.31**	**8**	P	**P**	**06 54 55.7**	**0.0**
	3.0nm,0.3s,baz=200,slow=11,SNR=13						
	0.5nm,0.3s						
ARCES	**ARCESS Array B**	**35.00**	**360**	P	**P**	**06 57 54.1**	**-1.8**
	1.4nm,0.8s,baz=184,slow=9.7,SNR=4.8						
	1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**41.15**	**50**	P	**P**	**06 58 50.0**	**+2.1**
	0.7nm,0.4s,baz=274,slow=8.8,SNR=7.5						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**43.74**	**56**	P	**P**	**06 59 10.6**	**+1.5**
	0.7nm,0.6s,baz=282,slow=7.7,SNR=2.8						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**45.09**	**46**	P	**P**	**06 59 20.7**	**+0.9**
	1.2nm,0.4s,baz=273,slow=9.1,SNR=5.7						
	1.2nm,0.4s						

TAP 29 06:55:05.4, 24°.64N×121°.68E, h11km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDS	**Dongshan**	**0.04**	**94**	P	Pg	06 55 07.7	+0.3
TWE	**Neicheng**	**0.09**	**353**	*i* P	Pg	06 55 08.3	+0.4
ENTT	**Nioudou**	**0.10**	**272**	*e*P	Pg	06 55 08.6	+0.5
FUSB	**Fushanzhiwuyua**	**0.15**	**326**	P	Pg	06 55 09.5	+0.6
TWC	**Suao**	**0.16**	**100**	P	Pg	06 55 09.3	+0.3
TWC				*e*S	Sg	06 55 12.8	+1.3
LATG	**Datong**	**0.17**	**234**	P	Pg	06 55 09.7	+0.5
EWUT	**Wuta**	**0.21**	**154**	P	Pg	06 55 10.2	+0.4
NWLT	**Wulai**	**0.21**	**311**	*e*P	Pg	06 55 10.7	+0.7
NWLT				*e*S	Sg	06 55 13.5	+0.5
ENA	**Nanau**	**0.21**	**164**	*i* P	Pg	06 55 10.5	+0.5
ENA				S	Sg	06 55 13.3	+0.4
YHNB	**Yeheng**	**0.28**	**277**	*e*P	Pg	06 55 11.7	+0.5
NSK	**Sanguang**	**0.29**	**278**	*e*P	Pg	06 55 12.0	+0.6
NNSB	**Datong**	**0.34**	**233**	*e*P	Pb	06 55 13.2	-0.4
TIPB	**Shuangxi**	**0.36**	**22**	*e*P	Pg	06 55 13.2	+0.5

IDC ***29*** *07:08:26.1±2.1, 1°.72N×126°.57E, h0km, mb3.4/3, mbtmp3.4/3, MS3.9/1, Error ellipse: s-maj=178.9km s-min=25.9km az=66.0*

DJA 29 07:08:29.9±1.3**, 2°N**±4°×**12°7E**±°**, h22**km±12km**, M3.4**/6**, mb3.8**/1**, MLv3.2**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.30**	**139**	P	Pn	07 08 52.3	-0.5
TGY	**Tagaytay City**	**13.44**	**336**	LR	LR	07 17 06.6	
	comp=Z,467nm,19.9s,baz=123,slow=38						
WRA	**Warramunga Arr**	**22.89**	**161**	P	P	07 13 30.4	-1.9
	1.3nm,0.8s,baz=339,slow=11,SNR=8.5						
	1.3nm,0.8s						
ASAR	**Alice Springs**	**26.28**	**165**	P	P	07 14 03.5	-0.5
	0.1nm,0.3s,baz=347,slow=12,SNR=7.0						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**59.05**	**326**	P	P	07 18 28.4	+0.1
	0.2nm,0.4s,baz=112,slow=7.3,SNR=5.4						
	0.2nm,0.4s						

MEX ***29*** *07:09:52.6±0.7, 14°.82N×92°.58W, h87km±8km, MD4.2*

GCG ***29*** *07:09:53.4±1.4, 14°.87N×92°.54W, h68km±15km, MD4.0, ML4.0*

CATAC ***29*** *07:09:53.9±0.5, 15°N±3°×9°.3W±°, h53km±5km, M3.2/10, MLv3.2/10, Error ellipse: s-maj=8.7km s-min=4.0km az=39.0, confirmed*

ISC 29 07:09:51.3±1.3**, 14°.73N**±0°.05×**92°.64W**±0°.03**, h76**km±9km**, n36, σ2s32/55, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.40**	**64**	*e*P	**Pn**	**07 10 04.6**	**+0.8**
THIG				*i* S	**Sn**	**07 10 13.7**	**+0.6**
THIG		**0.40**	**64**	*e*P	**Pn**	**07 10 04.6**	**+0.8**
PATR	**El Naranjo**	**0.55**	**45**	*e*P	**Pn**	**07 10 05.4**	**0.0**
PATR				*e*S	**Sn**	**07 10 15.5**	**-0.2**
SMCA	**Catarina**	**0.56**	**77**	*e*P	**Pn**	**07 10 05.8**	**+0.6**
SMCA				IAML		07 10 16.7	
	comp=E,5μm,0.2s						
CHUJ	**Union Juarez**	**0.63**	**55**	*e*P	**Pn**	**07 10 06.4**	**+0.3**
CHUJ				*e*S	**Sn**	**07 10 16.8**	**-0.3**
PAVE	**Pavencul**	**0.64**	**44**	*e*P	**Pn**	**07 10 06.4**	**+0.1**
PAVE				*e*S	**Sn**	**07 10 17.0**	**-0.3**
RTAL	**Retalhuleu**	**0.94**	**102**	*e*P	**Pn**	**07 10 11.2**	**+1.8**
RTAL				*e*S	**Sn**	**07 10 24.3**	**+1.5**
RTAL	**Retalhuleu**	**0.94**	**102**	P	**Pn**	**07 10 11.4**	**+2.1**
QUEO	**Labor Ovalle**	**1.09**	**82**	*e*P	**Pn**	**07 10 13.1**	**+1.5**
HUEH	**Huehuetenango**	**1.24**	**62**	*e*P	**Pn**	**07 10 14.0**	**+0.6**
HUEH				*e*S	**Sn**	**07 10 30.8**	**+0.9**
HUEH	**Huehuetenango**	**1.24**	**62**	*e*P	**Pn**	**07 10 14.3**	**+0.9**
HUEH				*e*S	**Sn**	**07 10 30.5**	**+0.6**
HUEH	**Huehuetenango**	**1.24**	**62**	P	**Pn**	**07 10 14.5**	**+1.1**
STG2	**El Palmar, Qui**	**1.26**	**103**	*e*P	**Pn**	**07 10 10.7**	**-2.8**
STG2				*e*S	**Sn**	**07 10 24.6**	**-5.5**
STG8	**El Palmar, Qui**	**1.28**	**102**	*e*P	**Pn**	**07 10 11.3**	**-2.5**
STG8				*e*S	**Sn**	**07 10 25.2**	**-5.4**
STG5	**El Palmar, Qui**	**1.29**	**104**	*e*P	**Pn**	**07 10 11.4**	**-2.4**
STG5				*e*S	**Sn**	**07 10 25.5**	**-5.3**
CCIG	**Comitan**	**1.62**	**17**	*e*P	**Pn**	**07 10 18.7**	**+0.5**
CCIG				*e*S	**Sn**	**07 10 37.1**	**-1.3**
CCIG	**Comitan**	**1.62**	**17**	*e*P	**Pn**	**07 10 19.2**	**+1.0**
CCIG	**Comitan**	**1.62**	**17**	P	**Pn**	**07 10 19.5**	**+1.3**
CCIG	**Comitan**	**1.62**	**17**	S	**Sn**	**07 10 38.5**	**0.0**
TGIG		**2.09**	**347**	*e*P	**Pn**	**07 10 23.9**	**-0.4**
TGIG				*e*S	**Sn**	**07 10 47.6**	**-2.0**
TGIG		**2.09**	**347**	*e*P	**Pn**	**07 10 24.1**	**-0.3**
FG16	**Alotenango, Sa**	**2.11**	**102**	IAML		07 10 53.9	
	comp=E,2μm,0.2s						
FAME	**Alcaldia de Sa**	**2.69**	**109**	P	**Pn**	**07 10 34.3**	**+1.9**
FAME	**Alcaldia de Sa**	**2.69**	**109**	S	**Sn**	**07 11 07.2**	**+3.1**
NUBE	**Las Nubes**	**2.89**	**106**	S	**Sn**	**07 11 12.1**	**+3.1**
NUBE	**Las Nubes**	**2.89**	**106**	P	**Pn**	**07 10 37.7**	**+2.4**
UXUV	**UXUV**	**2.95**	**331**	*e*P	**Pn**	**07 10 36.8**	**+0.9**
UXUV				*e*S	**Sn**	**07 11 09.3**	**-1.0**
PETF	**Flores**	**3.44**	**50**	*e*P	**Pn**	**07 10 42.8**	**+0.2**
PETF				*e*S	**Sn**	**07 11 18.3**	**-3.9**
PETF	**Flores**	**3.44**	**50**	*e*P	**Pn**	**07 10 42.8**	**+0.2**
PETF	**Flores**	**3.44**	**50**	P	**Pn**	**07 10 43.2**	**+0.7**
HUIG	**Huatulco**	**3.51**	**288**	*e*P	**Pn**	**07 10 43.8**	**+0.3**
HUIG				*e*S	**Sn**	**07 11 22.3**	**-1.5**
NEUV	**Arroyo Zacate**	**4.25**	**315**	*e*P	**Pn**	**07 10 53.6**	**+0.1**
NEUV				*e*S	**Sn**	**07 11 37.5**	**-4.5**
PEIG	**Puerto Escondi**	**4.53**	**287**	*e*P	**Pn**	**07 10 58.8**	**+1.4**
PEIG				*e*S	**Sn**	**07 11 45.0**	**-4.0**
YOIG	**Yosondua**	**5.18**	**295**	*e*P	**Pn**	**07 11 08.3**	**+1.8**
YOIG				*e*S	**Sn**	**07 12 02.8**	**-2.3**
TOIG	**Toxpalan**	**5.41**	**309**	*e*P	**Pn**	**07 11 13.9**	**+4.3**
TOIG				*e*S	**Sn**	**07 12 14.3**	**+3.8**
PNIG	**Pinotepa**	**5.54**	**288**	*e*P	**Pn**	**07 11 13.9**	**+2.6**
PNIG				*e*S	**Sn**	**07 12 11.2**	**-2.5**

KRNET ***29*** *07:15:22.6±0.1, 41°.00N×69°.79E, mb2.7*

NNC ***29*** *07:15:24.2±4.9, 40°.97N×69°.89E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=41.7km s-min=25.5km az=57.0, Suspected Mining explosion.*

SOME ***29*** *07:15:24.5, 41°.03N×69°.80E, h15km*

ISC 29 07:15:20.9±1.2**, 41°.03N**±0°.03×**69°.65E**±0°.06**, h0**km**, n16, σ1s82/30, 20C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.15**	**14**	P	**Pn**	**07 15 47.4**	**+3.0**
	34nm,0.3s						
IUG				S	**Sn**	**07 16 02.8**	**+1.9**
	70nm,0.7s						
TRKS	**Terek-Say**	**1.23**	**66**	⇑*i*P	**Pg**	**07 15 44.6**	**+0.1**
TRKS				⇑*i*S	**Sb**	**07 16 00.8**	**-0.8**
ARK	**Arkit**	**1.90**	**66**	⇑*i*P	**Pg**	**07 15 57.0**	**-0.4**
ARK				⇑*i*S	**Sg**	**07 16 21

NUBE	**Las Nubes**	**2.61**	**108**	P		**Pn**	**07 18 15.4**	**+2.2**
NUBE	**Las Nubes**	**2.61**	**108**	S		**Sn**	**07 18 47.7**	**+3.3**
ZAFR2	**Estanzuela, Za**	**2.89**	**93**	*i* P		**Pn**	**07 18 14.2**	**-2.6**
MTO3	**Montecristo**	**2.90**	**96**	P		**Pn**	**07 18 18.1**	**+1.1**
ESQI	**Esquipulas**	**2.90**	**93**	P		**Pn**	**07 18 18.1**	**+1.1**
UXUV	**UXUV**	**3.10**	**326**	*e*P		**Pn**	**07 18 18.8**	**-0.8**
UXUV				*e*S		**Sn**	**07 18 55.9**	**+0.1**
PETF	**Flores**	**3.21**	**47**	*e*P		**Pn**	**07 18 20.4**	**-0.6**
PETF				*e*S		**Sn**	**07 18 54.0**	**-4.5**
PETF	**Flores**	**3.21**	**47**	*i* P		**Pn**	**07 18 20.5**	**-0.5**
PETF	**Flores**	**3.21**	**47**	P		**Pn**	**07 18 20.8**	**-0.2**
SCIG	**Sabancuy**	**4.34**	**15**	P		**Pn**	**07 18 35.1**	**-1.2**
NEUV	**Arroyo Zacate**	**4.45**	**312**	*e*P		**Pn**	**07 18 36.6**	**-1.2**
PEIG	**Puerto Escondi**	**4.81**	**286**	*e*P		**Pn**	**07 18 41.4**	**-1.2**
PEIG				*e*S		Sn	07 19 29.0	-8.2
YOIG	**Yosondua**	**5.44**	**293**	*e*P		**Pn**	**07 18 53.2**	**+1.8**
YOIG				*e*S		**Sn**	**07 19 51.4**	**-1.5**
TOIG	**Toxpalan**	**5.63**	**307**	*e*P		**Pn**	**07 18 55.2**	**+1.3**
TOIG				*e*S		**Sn**	**07 19 55.4**	**-1.9**
TXIG	**Tlaxiaco**	**5.79**	**296**	*e*P		**Pn**	**07 18 57.5**	**+1.3**
TXIG				*e*S		**Sn**	**07 19 58.1**	**-3.4**
PNIG	**Pinotepa**	**5.82**	**287**	*e*P		**Pn**	**07 18 56.4**	**+0.1**
PNIG				*e*S		**Sn**	**07 19 55.4**	**-6.3**
HLIG	**Huajuapan de L**	**6.08**	**301**	*e*P		**Pn**	**07 19 00.4**	**+0.3**
HLIG				*e*S		**Sn**	**07 20 08.8**	**+0.3**
FTIG	**Fresnillo de T**	**6.40**	**300**	*e*P		**Pn**	**07 19 06.1**	**+1.8**
TLIG	**Tlapa**	**6.61**	**296**	*e*P		**Pn**	**07 19 04.9**	**-2.3**
TLIG				*e*S		**Sn**	**07 20 16.0**	**-5.2**
CRIG	**Cruz Grande**	**6.84**	**288**	*e*P		**Pn**	**07 19 10.4**	**+0.2**
MEIG	**Mezcala**	**7.68**	**295**	*e*P		**Pn**	**07 19 23.3**	**+1.6**
MEIG				*e*S		**Sn**	**07 20 42.9**	**-4.2**
CAIG	**El Cayaco**	**7.97**	**288**	*e*P		**Pn**	**07 19 26.9**	**+1.3**
TXAR	**Lajitas Array**	**17.90**	**326**	P		**Pn**	**07 21 36.5**	**+1.2**
	baz=155,slow=5.4,SNR=4.4							
	comp=E,0.5nm,0.9s							
PDAR	**Pinedale Array**	**31.62**	**335**	P		**P**	**07 23 47.9**	**+1.6**
	comp=E,0.2nm,0.5s,baz=143,slow=7.2,SNR=2.4							
	comp=E,0.2nm,0.5s							
NVAR	**Mina Array Bea**	**32.90**	**321**	P		**P**	**07 24 00.1**	**+2.5**
	comp=E,1.3nm,0.6s,baz=128,slow=6.8,SNR=16							
	comp=E,1.3nm,0.6s							
ILAR	**Eielson Array**	**62.03**	**337**	P		**P**	**07 27 42.4**	**+0.1**
	comp=E,0.3nm,0.6s,baz=102,slow=6.5,SNR=6.4							
	comp=E,0.3nm,0.6s							

*ASRS **29** 07:18:15.0±1.1,49.67N×81.67E,h0km,M2.6,The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021.*

*SOME **29** 07:18:18.0,49.60N×81.40E*

*IDC **29** 07:18:20.7±1.2,49.77N×81.65E,h0km,mbtmp2.4/2, ML1.6/2,Error ellipse: s-maj=16.4km s-min=8.6km az=57.0*

*NNC **29** 07:18:20.7±1.9,49.64N×81.79E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=26.5km s-min=4.7km az=54.0, Suspected Mining explosion.*

ISC 29 07:18:15.0±1.2,49.70N±0.06×81.87E±0.06,h0km,n9, σ2.39/11,5C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
KURK	**Kurchatov**	**2.32**	**297**	⇓Pn	**Pg**	**07**	**19 00.3**	**+0.8**
KURK	5.8nm,0.8s			⇓Sn	**Sg**	**07**	**19 29.5**	**0.0**
	18nm,0.9s							
KURBB	**Kurchatov Arra**	**2.34**	**295**	Pg	**Pg**	**07**	**18 59.6**	**-0.2**
	0.2nm,0.3s,baz=112,slow=19,SNR=70							
KURBB				Lg	Lg	07	19 31.2	
	0.4nm,0.3s,baz=109,slow=30,SNR=17							
KURBB	**Kurchatov Arra**	**2.34**	**295**	⇑Pn	**Pg**	**07**	**19 00.6**	**+0.8**
	20nm,0.9s							
KURBB				⇓Sn	**Sg**	**07**	**19 30.5**	**+0.4**
	56nm,0.9s							
MAKZ	**Makanchi**	**2.89**	**178**	⇑Pg	**Pg**	**07**	**19 12.1**	**+1.7**
	1.3nm,0.8s							
MAKZ				⇑Lg	Lg	07	19 52.0	
	5.2nm,0.9s							
MK31	**Makanchi Array**	**2.92**	**174**	⇑Pg	**Pg**	**07**	**19 11.8**	**+0.8**
	0.7nm,0.5s,baz=354,slow=14,SNR=17							
MK31				⇑Lg	Lg	07	19 53.1	
	8.7nm,0.9s,baz=354,slow=29,SNR=9.0							
MKAR	**Makanchi Array**	**2.92**	**174**	Pn	**Pg**	**07**	**19 10.1**	**-0.9**
	0.1nm,0.3s,baz=343,slow=11,SNR=6.4							
MKAR				Pg	Pb	07	19 14.1	+6.1
	0.5nm,0.3s,baz=352,slow=15,SNR=19							
MKAR				Lg	Lg	07	19 50.6	
	0.8nm,0.3s,baz=352,slow=26,SNR=21							
	0.6nm,0.3s							
I46RU	**ZALESOVO INFRA**	**4.63**	**22**	I	I	07	47 00.0	
	baz=202,slow=328,SNR=5.3							
ZALV	**Zalesovo Beam**	**4.63**	**22**	Pn	**Pb**	**07**	**19 33.6**	**-3.5**
	0.2nm,0.3s,baz=207,slow=15,SNR=3.6							
ZALV				Sn	**Sn**	**07**	**20 25.9**	**+5.2**
	0.3nm,0.3s,baz=205,slow=26,SNR=1.8							
ZALV				Lg	Lg	07	20 48.8	
	0.7nm,0.3s,baz=203,slow=36,SNR=10							
	0.4nm,0.3s							
BVAR	**Borovoye Array**	**7.92**	**299**	Sn	**Sn**	**07**	**21 42.1**	**+0.6**
	baz=106,slow=21,SNR=5.6							
BVAR				Lg	Lg	07	22 25.7	
	baz=120,slow=20,SNR=1.3							

*RHSSO **29** 07:32:10.2±0.4,43.26N×18.03E,h8km,ML2.7/3*

*BEO **29** 07:32:10.1±0.4,43.34N×18.01E,h18km±3km,ML2.4/8*

*PDG **29** 07:32:11.0±0.3,43.22N×18.01E,h11km±2km,ML2.6/13, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*

ISC 29 07:32:08.7±1.0,43.32N±0.02×18.02E±0.02,h8km±9km, n45,σ1.06/86,5C-9D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
KLINJ	**Klinje**	**0.44**	**110**	*e*Pg	**Pb**	**07**	**32 17.9**	**-0.8**
KLINJ				*e*Sg	**Sb**	**07**	**32 24.9**	**-0.6**
STON	**Ston**	**0.51**	**208**	*i* Pg	**Pg**	**07**	**32 18.3**	**-0.2**
STON				Sg	**Sg**	**07**	**32 25.0**	**-0.2**
BRY	**Bratogost**	**0.56**	**138**	⇑*i*Pg	**Pg**	**07**	**32 19.4**	**-0.2**
BRY				*i* Sg	**Sb**	**07**	**32 28.0**	**-1.2**
TREB	**Trebinje**	**0.65**	**158**	*e*Pg	**Pg**	**07**	**32 20.7**	**-0.5**
TREB				*e*Sg	**Sg**	**07**	**32 30.0**	**+0.3**
UPM	**Unac-Piva**	**0.66**	**100**	⇓*i*Pg	**Pb**	**07**	**32 22.1**	**-0.4**
UPM				*e*Sg	**Sb**	**07**	**32 32.4**	**+0.6**
DBRK	**Dubrovnik**	**0.66**	**172**	*e*Pg	**Pg**	**07**	**32 21.6**	**+0.2**
DBRK				Sg	**Sg**	**07**	**32 29.2**	**-0.8**
RICI	**Ricice**	**0.67**	**285**	*i* Pg	**Pb**	**07**	**32 22.5**	**-0.1**
RICI				Sg	**Sb**	**07**	**32 31.3**	**-0.8**
MAKA	**Makarska**	**0.73**	**268**	*i* Pg	**Pb**	**07**	**32 23.3**	**-0.4**
MAKA				Sg	**Sb**	**07**	**32 33.6**	**-0.2**
NKME	**Niksic**	**0.88**	**129**	⇓*i*Pg	**Pg**	**07**	**32 25.1**	**-0.5**
NKME				*e*Sg	**Sn**	**07**	**32 39.2**	**-1.1**
HCY	**Herceg Novi**	**0.94**	**158**	⇓*i*Pg	**Pg**	**07**	**32 26.0**	**-0.7**
HCY				*e*Sg	**Sb**	**07**	**32 40.1**	**+0.3**
PLE	**Pljevlja**	**1.00**	**89**	⇓*i*Pg	**Pn**	**07**	**32 29.0**	**0.0**
PLE				*e*Sg	**Sn**	**07**	**32 44.1**	**+0.8**
LSTV	**Lastovo**	**1.00**	**237**	*i* Pg	**Pg**	**07**	**32 27.0**	**-0.9**
LSTV				Sg	**Sb**	**07**	**32 41.2**	**-0.2**
CEME	**Cevo**	**1.02**	**139**	⇑*i*Pg	**Pg**	**07**	**32 27.4**	**-0.8**
CEME				*e*Sg	**Sn**	**07**	**32 42.9**	**-0.8**
RUDO	**Rudo**	**1.02**	**73**	⇑*i*Pg	**Pg**	**07**	**32 28.0**	**-0.3**
RUDO				*e*Sg	**Sn**	**07**	**32 43.0**	**-0.9**
BBLS	**Lazi&#263i**	**1.14**	**61**	*e*Pg	**Pn**	**07**	**32 31.8**	**+0.8**
BBLS				*e*Sg	**Sn**	**07**	**32 47.0**	**+0.1**
HVAR	**Hvar**	**1.16**	**263**	*i* Pg	**Pg**	**07**	**32 30.7**	**-0.2**
HVAR				Sg	**Sn**	**07**	**32 47.0**	**-0.2**
KOME	**Kolasin**	**1.19**	**113**	*e*Pg	**Pn**	**07**	**32 31.9**	**+0.2**
KOME				*e*Sg	**Sn**	**07**	**32 48.5**	**+0.4**
KOME	**Kolasin**	**1.19**	**113**	⇓*i*Pg	**Pn**	**07**	**32 31.5**	**-0.2**
KOME				*e*Sg	**Sn**	**07**	**32 49.5**	**+1.4**
BUM	**Brajici-Budva**	**1.21**	**148**	⇓*i*Pg	**Pb**	**07**	**32 31.2**	**-0.6**
BUM				*e*Sg	**Sn**	**07**	**32 49.4**	**+1.0**
PDG	**Podgorica**	**1.27**	**134**	*e*Pg	**Pg**	**07**	**32 33.3**	**+0.3**
PDG				*e*Sg	**Sn**	**07**	**32 52.4**	**+2.5**
PDG	**Podgorica**	**1.27**	**134**	⇑*i*Pg	**Pn**	**07**	**32 32.3**	**-0.4**
PDG				*e*Sg	**Sn**	**07**	**32 51.7**	**+1.8**
KIJV	**Kijevo**	**1.36**	**301**	*i* Pg	**Pg**	**07**	**32 35.3**	**+0.6**
KIJV				Sg	**Sg**	**07**	**32 54.8**	**+2.4**
DRME	**Dracevica, Mon**	**1.42**	**143**	*e*Pg	**Pb**	**07**	**32 34.9**	**-0.5**
DRME				*e*Sg	**Sg**	**07**	**32 56.1**	**+1.8**
DRME	**Dracevica, Mon**	**1.42**	**143**	⇓*i*Pg	**Pb**	**07**	**32 35.0**	**-0.4**
DRME				*e*Sg	**Sg**	**07**	**32 56.2**	**+1.9**
SJES	**Sjenica**	**1.43**	**92**	*e*Pg	**Pg**	**07**	**32 36.6**	**+0.6**
SJES				*e*Sg	**Sg**	**07**	**32 55.0**	**+0.5**
IVA	**Berane**	**1.44**	**108**	⇑*i*Pg	**Pg**	**07**	**32 36.3**	**0.0**
IVA				*e*Sg	**Sg**	**07**	**32 59.0**	**+4.0**
BLY	**Banja Luka**	**1.55**	**337**	*e*Pn	**Pg**	**07**	**32 39.1**	**+0.7**
BLY				*e*Sn	**Sg**	**07**	**32 59.6**	**+1.1**
BLY	**Banja Luka**	**1.55**	**337**	*e*Pg	**Pg**	**07**	**32 39.8**	**+1.4**
BLY				*e*Sg	**Sg**	**07**	**32 59.6**	**+1.1**
IVAS	**Ivanjica**	**1.57**	**80**	*e*Pg	**Pg**	**07**	**32 38.9**	**+0.1**
IVAS				*e*Sg	**Sg**	**07**	**32 58.9**	**-0.3**
PVY	**Plav**	**1.60**	**116**	⇓*i*Pg	**Pg**	**07**	**32 39.1**	**-0.2**
PVY				*i* Sg	**Sg**	**07**	**33 01.3**	**+1.3**
ULC	**Ulcinj**	**1.63**	**146**	⇓*i*Pg	**Pb**	**07**	**32 38.6**	**-0.4**
ULC				*e*Sg	**Sg**	**07**	**33 01.1**	**+0.1**
TEKS	**Tekeris**	**1.64**	**41**	*e*Pn	**Pn**	**07**	**32 37.4**	**-0.4**
ZIRJ	**Zirje**	**1.76**	**282**	*i* Pn	**Pb**	**07**	**32 41.5**	**+0.3**
ZIRJ				Sn	**Sg**	**07**	**33 05.0**	**-0.3**
MORI	**Morici**	**1.77**	**289**	*e*Pn	**Pg**	**07**	**32 42.0**	**-0.5**
MORI				Sn	**Sg**	**07**	**33 06.1**	**+0.6**
TRUS	**Trudelj**	**1.95**	**62**	*e*Pn	**Pn**	**07**	**32 40.5**	**-1.5**
UDBI	**Udbina**	**2.03**	**307**	*e*Pn	**Pb**	**07**	**32 46.4**	**+0.6**
UDBI				Sn	**Sg**	**07**	**33 12.6**	**-1.3**
GOCS	**Kraljevo Serbi**	**2.09**	**82**	*e*Sn	**Sb**	**07**	**33 11.9**	**-1.1**
DUGI	**Dugi Otok**	**2.25**	**288**	*e*Pn	**Pb**	**07**	**32 49.2**	**-0.4**
DUGI				Sn	**Sb**	**07**	**33 18.7**	**+1.1**
SELS	**Selova**	**2.26**	**92**	*e*Pn	**Pn**	**07**	**32 47.5**	**+1.1**
SELS				*e*Sn	**Sn**	**07**	**33 14.4**	**-0.1**
PLIT	**Plitvice**	**2.33**	**313**	*e*Pn	**Pb**	**07**	**32 50.6**	**-0.2**
PLIT				Sn	**Sb**	**07**	**33 20.5**	**+0.8**
VIRC	**Vir**	**2.36**	**295**	*i* Pn	**Pb**	**07**	**32 50.3**	**-1.1**
VIRC				Sn	**Sb**	**07**	**33 20.8**	**+0.2**
BOVS	**Bovan**	**2.70**	**82**	*e*Pn	**Pn**	**07**	**32 51.9**	**-0.4**
BOVS				*e*Sg	**Sg**	**07**	**33 36.1**	**+0.8**
BARS	**Barje**	**2.82**	**99**	*e*Pn	**Pn**	**07**	**32 55.1**	**+1.0**
BARS				*e*Sn	**Sn**	**07**	**33 29.3**	**+1.0**
MORH	**Mrgy, Hungar**	**2.92**	**8**	*e*Pn	**Pb**	**07**	**32 58.1**	**-2.9**
MORH				*e*Sn	**Sb**	**07**	**33 34.2**	**-2.7**
ZAPS	**Zavoj**	**3.37**	**89**	*e*Pn	**Pn**	**07**	**33 00.9**	**-0.6**

*NEIC **29** 07:45:55.7±2.2,18.2N±0.1×68.18W±0.07,h114km±9km, ML2.3/12,Md2.8/6(RSPR),Error ellipse: s-maj=19.6km s-min=7.8km az=197.0*

*RSPR **29** 07:45:59.7,18.24N×68.04W,h97km±2km,MD2.8/6*

SDD 29 07:45:57.5±2.3,17.95N×68.24W,h106km±26km,MD3.3, ML2.0,MW1.9,17C,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
HIDR	**Higuey Centro**	**0.79**	**324**	*e*Sg	Sn	07	46 27.4	-3.0
HIDR				IAML		07	46 56.3	
	comp=N,20nm,3.0s							
IDE	**Isla Desecheo**	**0.84**	**59**		Pn	07	46 14.6	-2.2
IDE					Sn	07	46 27.5	-3.8
IDE	**Isla Desecheo**	**0.84**	**59**	⇑*e*P	Pn	07	46 14.6	-2.2
IDE	**Isla Desecheo**	**0.84**	**59**	*e*S	Sn	07	46 27.5	-3.8
CRPR	**Cabo Rojo, PR**	**1.07**	**87**	⇑*e*Pg	Pn	07	46 18.5	-0.6
CRPR				⇑*e*Sg	Sn	07	46 33.3	-2.1
CRPR				IAML		07	47 09.2	
	comp=N,24nm,1.6s							
CRPR	**Cabo Rojo, PR**	**1.07**	**87**		Pn	07	46 18.4	-0.7
CRPR					Sn	07	46 33.2	-2.3
CRPR	**Cabo Rojo, PR**	**1.07**	**87**	IAML		07	46 39.2	
	comp=N,22nm,2.3s							
CRPR	**Cabo Rojo, PR**	**1.07**	**87**	⇑*e*P	Pn	07	46 18.4	-0.7
CRPR	**Cabo Rojo, PR**	**1.07**	**87**	*e*S	Sn	07	46 33.2	-2.3
LSP	**Las Mesas**	**1.12**	**78**		Pn	07	46 18.7	-1.0
LSP					Sn	07	46 32.6	-3.8
LSP	**Las Mesas**	**1.12**	**78**	⇑*e*P	Pn	07	46 18.7	-1.0
LSP	**Las Mesas**	**1.12**	**78**	*e*S	Sn	07	46 32.6	-3.8
MLPR	**Magueyes Islan**	**1.13**	**89**	⇑*e*Pg	Pn	07	46 19.4	-0.4
MLPR				⇑*e*Sg	Sn	07	46 34.6	-2.0
MLPR				IAML		07	47 12.7	
	comp=N,7.4nm,2.0s							
MLPR	**Magueyes Islan**	**1.13**	**89**	⇑*e*P	Pn	07	46 19.3	-0.5
MLPR	**Magueyes Islan**	**1.13**	**89**	*e*S	Sn	07	46 34.6	-2.0
AGPR	**Aguadilla, PR**	**1.19**	**64**	⇑*e*Pg	Pn	07	46 18.6	-1.8
AGPR				⇑*e*Sg	Sn	07	46 35.1	-2.6
AGPR				IAML		07	47 18.8	
	comp=N,62nm,2.4s							
AGPR	**Aguadilla, PR**	**1.19**	**64**	Pn	Pn	07	46 18.4	-2.0
AGPR				IAML		07	47 14.7	
	comp=N,44nm,2.5s							
AGPR	**Aguadilla, PR**	**1.19**	**64**	⇑*e*P	Pn	07	46 18.7	-1.7
AGPR	**Aguadilla, PR**	**1.19**	**64**	*e*S	Sn	07	46 32.8	-4.9
MIDR	**Miches**	**1.29**	**323**	⇑*e*Pg	Pn	07	46 20.0	-1.6
MIDR				⇑*e*Sg	Sn	07	46 38.3	-1.5
MIDR				IAML		07	47 22.6	
	comp=N,17nm,2.6s							
DR12	**Loma Pena Alta**	**1.37**	**308**	Pn	Pn	07	46 20.5	-2.1
HATOM	**Hato Mayor del**	**1.37**	**308**	⇑*e*Pg	Pn	07	46 21.0	-1.6
HATOM				⇑*e*Sg	Sn	07	46 38.5	-3.1
HATOM				IAML		07	46 42.2	
	comp=N,14nm,1.9s							
AOPR	**Arecibo Observ**	**1.46**	**74**	*e*Pg	Pn	07	46 21.5	-2.1
AOPR				⇑*e*Sg	Sn	07	46 42.6	-0.9
AOPR				IAML		07	46 44.8	
	comp=N,31nm,4.4s							
AOPR	**Arecibo Observ**	**1.46**	**74**		Pn	07	46 21.1	-2.6
AOPR				IAML		07	46 43.1	
	comp=N,24nm,0.8s							
AOPR				IAML		07	46 43.4	
	comp=E,40nm,0.5s							
AOPR	**Arecibo Observ**	**1.46**	**74**		Sn	07	46 39.5	-4.0
AOPR	**Arecibo Observ**	**1.46**	**74**	⇑*e*P	Pn	07	46 20.9	-2.7
AOPR	**Arecibo Observ**	**1.46**	**74**	*e*S	Sn	07	46 39.5	-4.0
UUPR	**Utuado, UPR, P**	**1.47**	**78**	Pn	Pn	07	46 21.1	-2.6
OBIP	**Obispado Ponce**	**1.55**	**86**	Pn	Pn	07	46 22.5	-2.2
SDD	**Santo Domingo**	**1.67**	**288**	Pn	Pn	07	46 25.5	-0.7
SDD				IAML		07	47 03.0	
	comp=E,25nm,3.4s							
SDD				IAML		07	47 39.3	
	comp=N,28nm,1.9s							

IDC 29 07:51:08.6±1.8,17.04S×177.89W,h0km,mb3.9/5, mbtmp3.9/5,Error ellipse: s-maj=156.3km s-min=24.6km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
STKA	**Stephens Creek**	**39.48**	**240**	P	P	07	58 41.7	+0.7
	1.2nm,0.7s,baz=68,slow=11,SNR=3.2							
	1.2nm,0.7s							
WRA	**Warramunga Arr**	**45.28**	**259**	P	P	07	59 28.0	-0.4
	1.1nm,0.5s,baz=96,slow=7.0,SNR=26							
	1.1nm,0.5s							
ASAR	**Alice Springs**	**45.50**	**253**	P	P	07	59 29.9	-0.4
	6.6nm,0.6s,baz=87,slow=8.6,SNR=98							
	6.6nm,0.6s							
TXAR	**Lajitas Array**	**85.11**	**57**	P	P	08	03 47.1	0.0
	0.3nm,0.7s,baz=249,slow=4.9,SNR=3.6							
	0.3nm,0.7s							
PDAR	**Pinedale Array**	**86.38**	**43**	P	P	08	03 53.2	0.0
	0.1nm,0.3s,baz=244,slow=11,SNR=2.4							
	0.1nm,0.3s							

*IDC **29** 08:02:38.5±0.9,41.41N×19.53E,h0km,mb3.8/14, mbtmp3.8/19,ML3.4/5,MS3.1/9,Error ellipse: s-maj=15.4km s-min=12.9km az=178.0*

*TIR **29** 08:02:40.8,41.55N×19.64E,h45km±2km,Md3.1/7,Ml4.0/6*

*BEO **29** 08:02:40.3±0.6,41.35N×19.63E,h6km±3km,ML3.8/17*

*NEIC **29** 08:02:40.9±2.0,41.51N±0.05×19.58E±0.07,h10km±1km, mb4.3/16,Error ellipse: s-maj=9.0km s-min=7.8km az=251.0*

*SKO **29** 08:02:41.0,41.52N×19.50E,h0km,ML3.6*

*PRU **29** 08:02:41.1,41.15N×19.30E,h10km,M4.3*

*PDG **29** 08:02:41.4±0.6,41.43N×19.50E,h11km±1km,MD3.9/13, ML3.8/12,Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*

ISC 29 08:02:41.1±0.9,41.45N±0.02×19.56E±0.02,h15km±6km, n186,σ1.47/244,mb4.2/16,MS3.4/5,25C-11D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
TIR	**Tirane**	**0.26**	**114**	Pg	**Pg**	**08**	**02 46.6**	**0.0**
TIR				Sg	**Sg**	**08**	**02 49.3**	**-1.0**
TIR				AML	AML	08	02 49.9	
	118nm,0.1s							
TIR	**Tirane**	**0.26**	**114**	*i* Sg	**Sg**	**08**	**02 50.9**	**+0.5**
ULC	**Ulcinj**	**0.56**	**336**	⇓*i*Pg	**Pg**	**08**	**02 52.1**	**-0.1**
ULC				*i* Sg	**Sg**	**08**	**03 00.0**	**+0.3**
SDA	**Shkodra**	**0.60**	**356**	Pg	**Pg**	**08**	**02 52.5**	**-0.4**
SDA				Sg	**Sg**	**08**	**03 01.1**	**+0.2**
SDA				AMd		08	03 56.0	
PHP	**Peshkopia**	**0.70**	**70**	Pg	**Pg**	**08**	**02 53.3**	**-1.5**
PHP				Sg	**Sg**	**08**	**03 02.8**	**-1.4**
PHP				AML	AML	08	03 08.8	
	20nm,0.6s							
PHP				AMd		08	03 44.8	
DRME	**Dracevica, Mon**	**0.79**	**339**	*e*Pg	**Pg**	**08**	**02 56.4**	**0.0**
DRME				*e*Sg	**Sn**	**08**	**03 10.9**	**+1.7**
DRME	**Dracevica, Mon**	**0.79**	**339**	⇑*i*Pg	**Pg**	**08**	**02 55.6**	**-0.8**
DRME				*i* Sg	**Sb**	**08**	**03 07.3**	**+0.4**
BUM	**Brajici-Budva**	**0.98**	**330**	⇓*i*Pg	**Pn**	**08**	**03 00.8**	**+0.4**
BUM				*i* Sg	**Sn**	**08**	**03 14.1**	**0.0**
VLO	**Vlora**	**0.98**	**183**	Pg	**Pn**	**08**	**03 02.4**	**+2.0**
VLO				Sg	**Sn**	**08**	**03 15.1**	**+1.1**
VLO				AML	AML	08	03 23.0	
	45nm,0.7s							
VLO				AMd		08	04 15.1	
OHR	**Ohrid**	**1.00**	**110**	*i* Pg	**Pb**	**08**	**02 59.5**	**-0.6**
OHR				*i* Sg	**Sn**	**08**	**03 15.7**	**+1.3**
OHR				*e*Lg	Lg	08	03 16.2	
	comp=N,1μm,0.5s							
OHR				*e*Lg	Lg	08	03 17.1	
PDG	**Podgorica**	**1.00**	**347**	Pn	**Pb**	**08**	**02 59.1**	**-1.1**
PDG				AMd		08	04 17.4	
PDG	**Podgorica**	**1.00**	**347**		**Pb**	**08**	**02 58.5**	**-1.6**
PDG	**Podgorica**	**1.00**	**347**	⇑P	**Pn**	**08**	**03 00.9**	**+0.3**
PDG				⇑S	**Sn**	**08**	**03 15.4**	**+0.9**
PDG	**Podgorica**	**1.00**	**347**	*e*Pg	**Pb**	**08**	**03 00.1**	**-0.1**
PDG				*e*Sg	**Sn**	**08**	**03 17.0**	**+2.5**
PDG	**Podgorica**	**1.00**	**347**	⇓*i*Pg	**Pb**	**08**	**02 59.5**	**-0.7**
PDG				*e*Sg	**Sn**	**08**	**03 15.3**	**+0.8**
PVY	**Plav**	**1.18**	**15**	⇓*i*Pg	**Pn**	**08**	**03 01.9**	**-1.3**
PVY				*i* Sg	**Sg**	**08**	**03 21.2**	**+1.9**
CEME	**Cevo**	**1.19**	**337**	⇓*i*Pg	**Pn**	**08**	**03 03.4**	**+0.1**
CEME				*i* Sg	**Sg**	**08**	**03 21.1**	**+1.4**
KBN	**Korca**	**1.25**	**131**	Pg	**Pn**	**08**	**03 03.9**	**-0.2**
KBN				Sg	**Sn**	**08**	**03 20.7**	**+0.1**
KBN				AML	AML	08	03 29.9	
	comp=N,5.4nm,0.7s							
KBN				AMd		08	04 26.7	
HCY	**Herceg Novi**	**1.27**	**322**	⇑*i*Pg	**Pb**	**08**	**03 04.9**	**+0.1**
HCY				*i* Sg	**Sg**	**08**	**03 23.0**	**+0.8**
NKME	**Niksic**	**1.39**	**341**	⇑*i*Pg	**Pg**	**08**	**03 07.3**	**+0.5**
NKME				*i* Sg	**Sg**	**08**	**03 27.7**	**+1.8**
KOME	**Kolasin**	**1.40**	**359**	*e*Pg	**Pg**	**08**	**03 07.7**	**-0.3**
KOME				*e*Sg	**Sg**	**08**	**03 26.5**	**+0.3**
KOME	**Kolasin**	**1.40**	**359**	⇑*i*Pg	**Pb**	**08**	**03 07.1**	**+0.1**
KOME				*i* Sg	**Sg**	**08**	**03 29.2**	**+3.0**
IVA	**Berane**	**1.44**	**10**	⇑*i*Pg	**Pn**	**08**	**03 06.8**	**0.0**
IVA				*e*Sg	**Sg**	**08**	**03 30.4**	**+2.8**
SKO	**Skopje**	**1.50**	**69**	*i* Pg	**Pb**	**08**	**03 08.6**	**-0.1**
SKO				*i* Sg	**Sb**	**08**	**03 28.8**	**+1.1**
TREB	**Trebinje**	**1.55**	**325**	*e*Pn	**Pb**	**08**	**03 09.8**	**+0.3**
BRY	**Bratogost**	**1.63**	**333**	⇓*i*Pn	**Pb**	**08**	**03 10.9**	**-0.1**
BRY				*i* Sn	**

BEHE	**Becsehely**	**5.40**	**339**	*e*Pn		Pn	08 04 07.2	+6.1
MURB	**Monte Urbino**	**5.51**	**291**			**Pn**	**08 04 02.9**	**+0.2**
VOIR		**5.64**	**43**	⇓P		**Pn**	**08 04 05.8**	**+1.3**
DRGR		**5.80**	**22**	⇓P		**Pn**	**08 04 07.8**	**+1.2**
MARR	**Marisel-Cluj**	**5.82**	**25**	⇑P		**Pn**	**08 04 08.6**	**+1.7**
TRI	**Trieste**	**5.98**	**317**	Pn		**Pn**	**08 04 08.2**	**-0.9**
MLR	**Muntele Rosu**	**6.16**	**47**	Pn		**Pn**	**08 04 14.3**	**+2.7**
	comp=N,2.4nm,0.3s,baz=152,slow=14,SNR=20							
MLR				Sn		**Sn**	**08 05 25.3**	**+3.5**
	comp=N,1.1nm,0.3s,baz=202,slow=13,SNR=3.7							
MLR				LR		LR	08 07 00.0	
	comp=N,134nm,18.3s,baz=84,slow=42							
	comp=N,14nm,0.6s							
MLR	**Muntele Rosu**	**6.16**	**47**			**Pn**	**08 04 13.3**	**+1.7**
MLR	**Muntele Rosu**	**6.16**	**47**	⇑P		**Pn**	**08 04 13.9**	**+2.4**
SOKA	**Soboth**	**6.16**	**330**	*e*Pn		**Pn**	**08 04 13.1**	**+1.6**
	comp=N,0.9nm,0.3s							
SOKA				*e*Sn		**Sn**	**08 05 20.3**	**-1.3**
	comp=N,2.7nm,0.4s							
OBKA	**Obir**	**6.21**	**326**	*e*Pn		**Pn**	**08 04 14.1**	**+1.8**
	comp=N,0.7nm,0.2s							
OBKA				*e*Sn		**Sn**	**08 05 26.3**	**+3.2**
	comp=N,24nm,0.8s							
SABO	**M.te Sabotino**	**6.25**	**318**			**Pn**	**08 04 13.5**	**+0.7**
PSZ	**Piszkesteto**	**6.47**	**2**			**Pn**	**08 04 16.2**	**+0.4**
ARSA	**Arzberg**	**6.48**	**335**	Pn		**Pn**	**08 04 15.9**	**0.0**
ARSA	**Arzberg**	**6.48**	**335**	*e*Pn		**Pn**	**08 04 17.8**	**+1.9**
	comp=N,3.8nm,0.5s							
RONA	**Rosalia, Austr**	**6.67**	**341**	*e*Sn		**Sn**	**08 05 35.3**	**+1.1**
	comp=N,6.1nm,0.6s							
MYKA	**Terra Mystica**	**6.70**	**323**	*e*Sn		**Sn**	**08 05 36.5**	**+1.4**
	comp=N,14nm,0.5s							
VRI	**Vrincioaia**	**6.82**	**47**	⇓P		**Pn**	**08 04 22.5**	**+2.0**
STAL	**STALIGIAL**	**6.90**	**316**			**Pn**	**08 04 21.3**	**-0.3**
TEOL	**Teolo**	**6.94**	**307**			**Pn**	**08 04 22.2**	**-0.1**
KECS	**Kecovo**	**7.06**	**5**	*e*PN		**Pn**	**08 04 27.6**	**+3.7**
KECS				*e*SN		**Sn**	**08 05 45.6**	**+1.7**
MODS	**Modra-Piesok**	**7.11**	**348**	*e*PN		**Pn**	**08 04 29.3**	**+4.8**
MODS				*e*SN		**Sn**	**08 05 47.5**	**+2.5**
KBA	**Koelnbreinsper**	**7.17**	**324**	*e*Pn		**Pn**	**08 04 27.3**	**+1.7**
	comp=N,1.3nm,0.3s							
KBA				*e*Sn		**Sn**	**08 05 45.3**	**-1.6**
	comp=N,1.0nm,0.3s							
ABTA	**Abfaltersbach**	**7.33**	**319**	*i* Pn		**Pn**	**08 04 29.6**	**+2.0**
	comp=N,1.6nm,0.2s							
ABTA				*e*Sn		**Sn**	**08 05 50.0**	**-0.5**
	comp=N,8.1nm,0.3s							
CTI	**Castel Tesino**	**7.34**	**311**			**Pn**	**08 04 27.3**	**-0.4**
BURAR	**Bucovina Array**	**7.37**	**31**			**Pn**	**08 04 29.5**	**+1.3**
BUR08	**Bucovina Ar. S**	**7.39**	**31**			**Pn**	**08 04 29.9**	**+1.5**
MOA	**Molln**	**7.42**	**331**	*e*Pn		**Pn**	**08 04 33.6**	**+4.7**
	comp=N,0.4nm,0.2s							
MOA				*e*Sn		**Sn**	**08 05 54.5**	**+1.7**
	comp=N,2.7nm,0.3s							
IDI	**Anoyia**	**7.44**	**144**	Sn		**Sn**	**08 05 51.6**	**-1.8**
	comp=N,0.7nm,0.3s,baz=356,slow=14,SNR=1.8							
BIOA	**Bad Ischl, Aus**	**7.53**	**328**	*e*Pn		**Pn**	**08 04 33.8**	**+3.5**
	comp=N,1.1nm,0.2s							
BIOA				*e*Sn		**Sn**	**08 05 56.7**	**+1.2**
	comp=N,8.3nm,0.5s							
LESA	**Schwarzleotal**	**7.74**	**323**	*e*Pn		**Pn**	**08 04 34.3**	**+1.1**
	comp=N,1.4nm,0.3s							
LESA				*e*Sn		**Sn**	**08 05 59.4**	**-1.2**
	comp=N,3.7nm,0.3s							
SALO	**Salr**	**7.77**	**305**	Pn		**Pn**	**08 04 33.0**	**-0.6**
STHS	**Stebnicka Huta**	**8.05**	**8**	*e*PN		**Pn**	**08 04 39.4**	**+1.9**
STHS				*e*SN		**Sn**	**08 06 08.8**	**+0.5**
WTTA	**Wattenberg**	**8.12**	**318**	*e*Pn		**Pn**	**08 04 39.6**	**+1.0**
	comp=N,1.2nm,0.3s							
WTTA				*e*Sn		**Sn**	**08 06 08.8**	**-1.3**
	comp=N,7.0nm,0.4s							
WATA	**Walderalm**	**8.20**	**319**	*e*Pn		**Pn**	**08 04 42.5**	**+2.9**
	comp=N,3.4nm,0.3s							
WATA				*e*Sn		**Sn**	**08 06 11.8**	**-0.2**
	comp=N,32nm,0.8s							
SQTA	**Sankt Quirin**	**8.31**	**317**	*e*Pn		**Pn**	**08 04 43.5**	**+2.4**
	comp=N,3.6nm,0.3s							
SQTA				*e*Sn		**Sn**	**08 06 14.3**	**-0.3**
	comp=N,3.7nm,0.3s							
FETA	**Feichten**	**8.43**	**314**	*e*Pn		**Pn**	**08 04 45.3**	**+2.5**
	comp=N,0.7nm,0.3s							
FETA				*e*Sn		**Sn**	**08 06 17.6**	**-0.2**
	comp=N,11nm,0.8s							
MOTA	**Moosalm**	**8.44**	**317**	*e*Pn		**Pn**	**08 04 42.5**	**-0.4**
	comp=N,2.1nm,0.5s							
MOTA				*e*Sn		**Sn**	**08 06 19.0**	**+1.0**
	comp=N,21nm,0.9s							
GERES	**GERESS Array B**	**8.47**	**333**	Pn		**Pn**	**08 04 45.3**	**+2.0**
	comp=N,0.1nm,0.3s,baz=152,slow=15,SNR=3.1							
GERES				Sn		**Sn**	**08 06 18.8**	**+0.3**
	comp=N,0.1nm,0.3s,baz=166,slow=21,SNR=6.3							
	comp=N,0.9nm,0.4s							
KHC	**Kasperske Hory**	**8.76**	**333**	*e*PN		**Pn**	**08 04 48.7**	**+1.6**
KHC				*e*SN		**Sn**	**08 06 25.9**	**+0.4**
DAVOX	**Davos/Dischmat**	**8.76**	**311**	Pn		**Pn**	**08 04 49.9**	**+2.6**
	comp=N,1.6nm,0.3s,baz=125,slow=12,SNR=11							
DAVOX				Sn		**Sn**	**08 06 27.0**	**+1.1**
	comp=N,2.2nm,0.3s,baz=309,slow=23,SNR=8.9							
DAVOX				LR		LR	08 08 43.4	
	comp=N,60nm,19.6s,baz=66,slow=42							
TUE	**Stuetta**	**8.91**	**308**			**Pn**	**08 04 50.3**	**+0.9**
SENIN	**Lac Senin/Sane**	**10.11**	**303**			**Pn**	**08 05 06.0**	**+0.1**
BRTR	**Keskin Array B**	**10.85**	**95**	LR		LR	08 10 26.7	
	comp=N,32nm,20.1s,baz=283,slow=43							
AKASG	**Malin Array Be**	**11.42**	**33**	Pn		**Pn**	**08 05 22.8**	**-0.8**
	comp=N,0.2nm,0.3s,baz=224,slow=13,SNR=5.0							
AKASG				LR		LR	08 10 13.7	
	comp=N,66nm,18.8s,baz=218,slow=40							
	comp=N,0.3nm,0.4s							
KBZ	**Khabaz**	**17.33**	**75**	P		**Pn**	**08 06 42.2**	**-0.1**
	comp=N,0.1nm,0.3s,baz=245,slow=17,SNR=2.5							
	comp=N,1.5nm,0.8s							
HFS	**Hagfors**	**19.05**	**351**	P		**P**	**08 07 01.9**	**-0.7**
	comp=N,0.4nm,0.3s,baz=142,slow=11,SNR=8.3							
	comp=N,3.7nm,0.7s							
NC602	**NORSAR Array S**	**19.93**	**348**	P		**P**	**08 07 10.6**	**-1.5**
NC405	**NORSAR Array S**	**20.26**	**349**	P		**P**	**08 07 13.4**	**-2.3**
NC405				IAmb		IAmb	08 07 24.8	
	comp=Z,9.1nm,1.1s							
NOA	**NORSAR Array B**	**20.27**	**348**	P		**P**	**08 07 15.8**	**0.0**
	comp=Z,0.8nm,0.8s,baz=149,slow=10.0,SNR=3.3							
NOA				LR		LR	08 16 26.2	
	comp=Z,32nm,19.2s,baz=340,slow=41							
	comp=Z,0.8nm,0.8s							
NBO00	**NORSAR Array S**	**20.33**	**348**	P		**P**	**08 07 15.7**	**-0.8**
NBO00				IAmb		IAmb	08 07 41.8	
	comp=Z,12nm,1.1s							
EKA	**Eskdalemuir Ar**	**20.38**	**321**	P		**P**	**08 07 17.6**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=117,slow=9.1,SNR=4.0							
	comp=Z,1.1nm,0.6s							
FINES	**FINESS Array B**	**20.41**	**9**	P		**P**	**08 07 16.4**	**-0.9**
	comp=Z,4.3nm,0.4s,baz=186,slow=9.1,SNR=41							
	comp=Z,4.3nm,0.4s							
FINES	**FINESS Array B**	**20.41**	**9**	P		**P**	**08 07 16.0**	**-1.3**
FIA1	**FINESS Array S**	**20.41**	**9**	P		**P**	**08 07 16.0**	**-1.3**
ARCES	**ARCESS Array B**	**28.32**	**4**	P		**P**	**08 08 31.9**	**-1.9**
	comp=Z,2.1nm,0.7s,baz=194,slow=9.7,SNR=5.8							
	comp=Z,2.1nm,0.7s							
ARTI	**Arti**	**29.10**	**46**	P		**P**	**08 08 39.3**	**-1.6**
	comp=Z,4.3nm,0.8s,baz=246,slow=8.8,SNR=4.7							
	comp=Z,4.3nm,0.8s							
ARTI	**Arti**	**29.10**	**46**	P		**P**	**08 08 39.2**	**-1.7**
ARTI				IAmb		IAmb	08 08 40.8	
	comp=Z,8.0nm,1.1s							
ABKAR	**Akbulak array**	**29.15**	**61**	P		**P**	**08 08 39.7**	**-1.7**
TORD	**Torodi Ar. Bea**	**32.22**	**214**	P		**P**	**08 09 09.9**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=33,slow=11,SNR=2.0							
	comp=Z,1.1nm,0.3s							
BVAR	**Borovoye Array**	**35.67**	**53**	P		**P**	**08 09 38.0**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=316,slow=4.1,SNR=3.6							
	comp=Z,1.0nm,0.7s							
SPB2	**Spitsbergen Ar**	**36.86**	**359**	P		**P**	**08 09 48.9**	**+0.6**
KBL	**Kabul**	**39.17**	**84**	P		**P**	**08 10 09.1**	**+0.6**
KBL				IAmb		IAmb	08 10 18.7	
	comp=Z,2.9nm,0.5s							
KURBB	**Kurchatov Arra**	**40.96**	**56**	P		**P**	**08 10 22.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=291,slow=7.8,SNR=2.8							
	comp=Z,0.3nm,0.6s							
SUMG	**Summit**	**41.51**	**337**	P		**P**	**08 10 28.2**	**+0.5**
SUMG				IAmb		IAmb	08 10 35.3	
	comp=Z,5.7nm,1.1s							
ZALV	**Zalesovo Beam**	**44.12**	**50**	P		**P**	**08 10 47.9**	**-0.7**
	comp=Z,2.5nm,0.4s,baz=276,slow=10.0,SNR=11							
ZALV				LR		LR	08 31 21.8	
	comp=Z,39nm,18.0s,baz=203,slow=39							
	comp=Z,2.5nm,0.4s							
MKAR	**Makanchi Array**	**44.29**	**61**	P		**P**	**08 10 50.0**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=281,slow=7.1,SNR=15							
MKAR				LR		LR	08 33 10.2	
	comp=Z,22nm,19.1s,baz=316,slow=41							
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**44.29**	**61**	P		**P**	**08 10 49.9**	**-0.3**
TIXI	**Tiksi**	**56.85**	**21**	LR		LR	08 40 06.0	
	comp=Z,30nm,18.0s,baz=206,slow=40							
HAL	**Halifax**	**58.28**	**304**	P		**P**	**08 12 34.2**	**-0.7**
SONM	**Songino Array**	**58.99**	**52**	P		**P**	**08 12 40.1**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=300,slow=11,SNR=5.6							
	comp=Z,1.9nm,0.9s							
A36M	**Sachs Harbour**	**64.17**	**349**	P		**P**	**08 13 14.4**	**0.0**
A36M				IAmb		IAmb	08 13 23.5	
	comp=Z,2.4nm,0.9s							
C27K	**Jago River**	**68.56**	**354**	P		**P**	**08 13 42.5**	**-0.1**
C27K				IAmb		IAmb	08 13 57.1	
	comp=Z,2.5nm,1.1s							
C23K	**Itkillik River**	**68.79**	**356**	P		**P**	**08 13 44.7**	**+0.7**
E29M	**Blow River**	**69.18**	**351**	P		**P**	**08 13 46.7**	**+0.2**
E29M				IAmb		IAmb	08 14 03.7	
	comp=Z,2.9nm,1.1s							
F31M	**Tsiigehtchic**	**69.56**	**349**	P		**P**	**08 13 48.0**	**-0.8**
F31M				IAmb		IAmb	08 13 57.9	
	comp=Z,3.0nm,0.9s							
G31M	**Satah River**	**70.11**	**349**	P		**P**	**08 13 51.2**	**-1.0**
H29M	**Whitestone**	**71.32**	**351**	P		**P**	**08 13 59.0**	**-0.6**
MA2	**Magadan**	**71.60**	**24**	LR		LR	08 48 57.3	
	comp=Z,20nm,19.9s,baz=184,slow=39							
ILAR	**Eielson Array**	**73.58**	**354**	P		**P**	**08 14 13.2**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=14,slow=5.0,SNR=5.4							
	comp=Z,0.2nm,0.8s							
PDAR	**Pinedale Array**	**84.44**	**325**	P		**P**	**08 15 13.6**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=10,slow=8.8,SNR=2.9							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**92.19**	**313**	P		**P**	**08 15 50.2**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=53,slow=6.8,SNR=2.6							
	comp=Z,0.2nm,0.6s							
ASAR	**Alice Springs**	**123.19**	**93**	PKP		**PKPdf**	**08 21 36.4**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=301,slow=1.9,SNR=6.2							

WEL 29 08:17:34.8±0.8, 32°S±7′×18°0E±1′6, h365km±14km, mB4.5/14, ML4.3/17, MLv4.5/18, Mw(mB)3.6/14, Error ellipse: s-maj=22.2km s-min=5.4km az=108.6, confirmed, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.31**	**34**	P	Pn	08 18 37.3	-0.8
GLKZ				S	S	08 19 29.6	+0.4
GRZ	**Great Barrier**	**5.63**	**220**	P	Pn	08 19 02.8	+0.9
MXZ	**Matakaoa Point**	**5.68**	**193**	P	Pn	08 19 03.0	+0.6
MXZ				S	S	08 20 14.7	+1.1
KUZ	**Kuaotunu**	**5.87**	**216**	P	Pn	08 19 06.3	+1.8
HAZ	**Te Kaha**	**5.98**	**197**	P	Pn	08 19 05.7	-0.1
HAZ				S	S	08 20 21.0	+1.2
PKGZ	**Pakihiroa**	**6.02**	**194**	P	Pn	08 19 08.6	+2.3
PKGZ				S	S	08 20 21.0	+0.3
PUZ	**Puketiti**	**6.18**	**193**	P	Pn	08 19 09.1	+1.0
PUZ				S	S	08 20 25.0	+1.0
OUZ	**Omahuta**	**6.19**	**237**	P	Pn	08 19 07.8	-0.5
RUGZ	**Raukumara Rang**	**6.21**	**197**	P	Pn	08 19 08.3	-0.2
TWGZ	**Tauwhareparae**	**6.34**	**194**	P	Pn	08 19 11.6	+1.6
TWGZ				S	S	08 20 29.5	+2.2
OPRZ	**Ohinepanea**	**6.44**	**205**	P	Pn	08 19 12.0	+1.1
MARZ	**Manawahe**	**6.52**	**204**	P	P	08 19 13.0	-0.1
CNGZ	**Carnagh Statio**	**6.59**	**192**	P	P	08 19 13.9	0.0
MWZ	**Matawai**	**6.59**	**197**	P	Pn	08 19 12.9	+0.1
MWZ				S	S	08 20 32.2	-0.4
TKGZ	**Te Karaka**	**6.62**	**195**	P	Pn	08 19 13.5	+0.5
TKGZ				S	S	08 20 32.8	-0.2
URZ	**Urewera**	**6.64**	**200**	P	Pn	08 19 11.1	-2.1
URZ				S	S	08 20 30.4	-3.0
KMRZ	**Kaimai**	**6.67**	**209**	P	Pn	08 19 14.0	+0.3
RAGZ	**Rawiri**	**6.78**	**197**	P	Pn	08 19 14.3	-0.6
RIGZ	**Rimuhau**	**6.90**	**195**	P	Pn	08 19 15.6	-0.7
MUGZ	**Murupara**	**6.94**	**201**	P	Pn	08 19 16.0	-0.8
RTZ	**Ruatahuna**	**7.00**	**200**	P	Pn	08 19 16.2	-1.4
HRRZ	**Handcock Road**	**7.02**	**204**	P	P	08 19 18.6	-0.3
SNGZ	**Shannon Statio**	**7.07**	**197**	P	Pn	08 19 18.1	-0.1
PRGZ	**Paritu Road**	**7.08**	**193**	P	P	08 19 19.2	-0.3
PRRZ	**Plateau Road**	**7.08**	**203**	P	Pn	08 19 18.3	-0.1
ALRZ	**Allen Road**	**7.16**	**203**	P	Pn	08 19 18.4	-0.8
KNZ	**Kokohu**	**7.22**	**194**	P	Pn	08 19 19.1	-0.8
TLZ	**Tolley Road**	**7.25**	**209**	P	Pn	08 19 20.8	+0.5
RAHZ	**Arahi**	**7.26**	**198**	P	Pn	08 19 19.7	-0.7
MTHZ	**Maungataniwha**	**7.26**	**200**	P	Pn	08 19 19.9	-0.6
MRHZ	**Matea Rd**	**7.38**	**202**	P	Pn	08 19 17.6	-4.2
BKZ	**Black Stump Fm**	**7.66**	**201**	P	Pn	08 19 22.8	-2.2
ETVZ	**East Tongariro**	**7.89**	**205**	P	Pn	08 19 25.6	-2.3

*IDC **29** 08:36:36.5±1.6, 54°.64N×83°.75E, h0km, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=14.2km s-min=9.4km az=4.0*
ASRS 29 08:36:35.0±0.9, 54°.65N×83°.64E, h0km, M2.4, The earthquakes of Russia in 2019. Obninsk, GS RAS, 214 p + CD-ROM, 2021., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**135**	I	I	08 42 00.0	
	0.2nm,0.9s,baz=316,slow=335,SNR=10.0						
ZALV	**Zalesovo Beam**	**0.99**	**135**	Pg	Pg	08 36 53.7	-0.2
	0.9nm,0.3s,baz=322,slow=17,SNR=13						
ZALV				Lg	Lg	08 37 08.1	
	7.3nm,0.3s,baz=315,slow=29,SNR=31						
KURBB	**Kurchatov Arra**	**5.09**	**220**	Pn	Pn	08 37 55.7	+3.2
	0.1nm,0.3s,baz=39,slow=13,SNR=5.1						
KURBB				Sn	Sn	08 38 54.3	+2.4
	0.1nm,0.3s,baz=50,slow=46,SNR=4.0						
KURBB				Lg	Lg	08 39 21.9	
	0.1nm,0.3s,baz=42,slow=31,SNR=6.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**7.91**	**187**	Pn	Pn	08 38 32.4	+1.1
	0.1nm,0.3s,baz=8.7,slow=10,SNR=3.6						
MKAR				Lg	Lg	08 40 45.4	
	0.1nm,0.3s,baz=10,slow=25,SNR=2.2						
	0.2nm,0.4s						
BVAR	**Borovoye Array**	**8.01**	**264**	Pn	Pn	08 38 33.0	+0.5
	baz=74,slow=11,SNR=5.3						
	0.8nm,0.5s						

GCG 29 08:50:33.4±0.3, 14°.95N×91°.35W, h145km±17km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.54**	**180**	*e*P	Pn	08 50 54.0	-0.6
APG	**El Apazote**	**0.86**	**86**	*i* P	Pn	08 50 57.5	+0.7
APG				*e*S	Sn	08 51 16.3	+1.7
CCIG	**Comitan**	**1.53**	**330**	*e*P	Pn	08 51 03.9	+0.8

IDC 29 08:57:53.7±3.3, 15°.78S×176°.80W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=408.2km s-min=34.1km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.56**	**257**	P	P	09 06 22.6	-1.0
	0.2nm,0.4s,baz=89,slow=6.2,SNR=8.9						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**46.87**	**252**	P	P	09 06 25.7	-0.4
	5.8nm,0.6s,baz=85,slow=7.7,SNR=79						
	5.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**54.92**	**259**	P	P	09 07 28.3	+1.6
	1.5nm,0.7s,baz=90,slow=10,SNR=1.6						
	1.5nm,0.7s						
TXAR	**Lajitas Array**	**83.56**	**57**	P	P	09 10 24.2	0.0
	0.2nm,0.7s,baz=241,slow=5.7,SNR=2.4						
	0.2nm,0.7s						

IDC 29 08:59:37.4±1.7, 1°.42N×127°.24E, h0km, mb3.3/4, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=111.4km s-min=22.0km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.46**	**185**	P	P	09 04 05.4	-0.4
	0.1nm,0.3s,baz=32,slow=9.5,SNR=1.2						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	**22.34**	**162**	P	P	09 04 36.3	-0.8
	0.8nm,0.5s,baz=342,slow=10,SNR=13						
	0.8nm,0.5s						

ASAR	**Alice Springs**	**25.77**	**166**	P		P	09 05 10.8	+0.7
	0.2nm,0.4s,baz=344,slow=11,SNR=5.9							
	0.2nm,0.4s							
MKAR	**Makanchi Array**	**59.73**	**326**	P		P	09 09 42.9	-1.2
	0.1nm,0.3s,baz=122,slow=8.3,SNR=2.3							
	0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**63.95**	**328**	P		P	09 10 13.6	+1.2
	0.2nm,0.4s,baz=128,slow=7.3,SNR=2.3							
	0.2nm,0.4s							

*AFAD **29** 09:03:31.0, 38°.44N×40°.82E, h26km±11km, ML2.5*
*ISK **29** 09:03:33.5, 38°.21N×41°.03E, h8km, ML2.2/6*
ISC 29 09:03:34.2±1.3, 38°.33N±0°.03×40°.97E±0°.03, h1km±11km, n12, σ1°.09/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTMN	**Batman**	**0.50**	**152**	P	**Pg**	**09 03 42.9**	**-0.9**
BTMN				S	**Sb**	**09 03 56.0**	**+2.2**
BTMN				*i* IAML		09 03 56.0	
	comp=N,184nm,0.5s						
BTMN				*i* IAML		09 03 58.0	
	comp=E,204nm,0.7s						
MUSM	**Mu-Merkez**	**0.58**	**47**	P	**Pg**	**09 03 45.5**	**+0.1**
MUSM				S	**Sn**	**09 03 57.6**	**-2.3**
BNGB	**Bingl**	**0.70**	**341**	Pg	**Pb**	**09 03 49.6**	**+0.3**
BNGB				Sg	**Sn**	**09 04 01.9**	**-0.9**
DYBB	**Diyarbakir**	**0.76**	**240**	Pg	**Pg**	**09 03 48.3**	**-0.4**
DYBB				Sg	**Sg**	**09 03 58.9**	**+0.4**
SRTM	**Siirt_Merkez**	**0.82**	**114**	P	**Pg**	**09 03 49.5**	**-0.6**
SRTM				S	**Sn**	**09 04 05.6**	**-0.4**
SRTM				*i* IAML		09 04 07.0	
	comp=N,109nm,0.5s						
SRTM				*i* IAML		09 04 12.0	
	comp=E,120nm,0.5s						
GURO	**Guroymak-BITLI**	**0.86**	**75**	Pg	**Pg**	**09 03 50.4**	**-0.4**
GURO				Sg	**Sg**	**09 04 02.9**	**+0.9**
MIDY	**Mardin/Midyat-**	**0.98**	**160**	P	**Pg**	**09 03 52.5**	**-0.7**
MIDY				S	**Sn**	**09 04 10.7**	**+0.8**
MIDY				*i* IAML		09 04 11.0	
	comp=N,106nm,0.4s						
MIDY				*i* IAML		09 04 13.0	
	comp=E,102nm,0.3s						
MARD	**Mardin**	**1.03**	**188**	P	**Pg**	**09 03 53.4**	**-0.5**
MARD				S	**Sn**	**09 04 11.1**	**+0.1**
MARD				*i* IAML		09 04 13.0	
	comp=E,154nm,0.4s						
MARD				*i* IAML		09 04 14.0	
	comp=N,130nm,0.5s						
YEDI	**Yedisu-Bingol**	**1.15**	**343**	Pn	**Pn**	**09 03 58.2**	**+0.5**
PERV	**Siirt/Pervari-**	**1.30**	**107**	P	**Pn**	**09 03 58.2**	**-1.5**
PERV				S	**Sn**	**09 04 18.8**	**+1.1**
PERV				*i* IAML		09 04 23.0	
	comp=N,346nm,0.4s						
PERV				*i* IAML		09 04 24.0	
	comp=E,466nm,0.4s						
SVRC	**Sivrice-ELAZID**	**1.31**	**273**	Pn	**Pn**	**09 03 59.5**	**-0.3**
URFA	**Urfa**	**1.92**	**243**	Pn	**Pn**	**09 04 07.1**	**-1.0**

IDC 29 09:23:15.7±1.9, 17°.06S×177°.88W, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=109.0km s-min=26.2km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.48**	**240**	P	P	09 30 48.2	+0.1
	1.1nm,0.5s,baz=51,slow=14,SNR=3.6						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**45.29**	**259**	P	P	09 31 35.6	0.0
	0.4nm,0.4s,baz=97,slow=7.0,SNR=12						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**45.51**	**253**	P	P	09 31 37.1	-0.3
	4.1nm,0.5s,baz=88,slow=9.3,SNR=106						
	4.1nm,0.5s						
ILAR	**Eielson Array**	**84.95**	**13**	P	P	09 35 51.7	-0.7
	0.2nm,0.7s,baz=212,slow=4.9,SNR=6.4						
	0.2nm,0.7s						
TXAR	**Lajitas Array**	**85.12**	**57**	P	P	09 35 54.8	+0.7
	0.5nm,0.9s,baz=239,slow=3.9,SNR=3.8						

MKAR	**Makanchi Array**	**6.62**	**129**	Pn		**Pn**	**09 53 07.8**	**+1.2**
	0.1nm,0.3s,baz=299,slow=8.2,SNR=2.9							
MKAR				Lg		Lg	09 55 00.1	
	0.2nm,0.3s,baz=319,slow=24,SNR=6.8							
	0.4nm,0.7s							
ZALV	**Zalesovo Beam**	**6.71**	**62**	Pn		Pn	09 52 57.8	-10
	0.1nm,0.3s,baz=257,slow=12,SNR=2.4							
	0.6nm,0.5s							
I46RU	**ZALESOVO INFRA**	**6.71**	**62**	I		I	10 29 30.0	
	baz=250,slow=308,SNR=4.8							

*THE **29** 09:52:39.1,36°N±3°×2°3E±°, h21km±3km, M3.1/13, MLh3.1/13*
*ATH **29** 09:52:39.8,35°61N×23°32E, h34km±2km, ML3.4/13, Manual Solution by F.Gkika First location: 2009/11/29 09:53:48, This location: 2021/07/19 09:43:12 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 1 km; Longitude uncertainty: 2 km*

ISC 29 09:52:39.9±1.0, 35°63N±0°04×23°33E±0°04, h31km±7km, n54, σ0°80/73, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**0.24**	**355**	P	**Pb**	**09 52 45.9**	**-0.7**
ANKY				S	**Sb**	**09 52 52.4**	**+1.1**
ANKY	**Antikythira Is**	**0.24**	**355**	P	**Pb**	**09 52 45.7**	**-0.9**
ANKY				S	**Sb**	**09 52 52.3**	**+1.1**
KNDR	**Palaiochora Ch**	**0.46**	**148**	P	**Pb**	**09 52 48.8**	**-1.0**
KNDR				S	**Sn**	**09 52 56.6**	**-0.9**
KNDR	**Palaiochora Ch**	**0.46**	**148**	P	**Pb**	**09 52 48.7**	**-1.1**
KNDR				S	**Sn**	**09 52 56.6**	**-0.9**
IMMV	**Iera Moni Meta**	**0.56**	**107**	P	**Pn**	**09 52 51.5**	**-0.2**
IMMV				S	**Sn**	**09 53 02.1**	**+2.2**
IMMV	**Iera Moni Meta**	**0.56**	**107**	P	**Pb**	**09 52 51.1**	**-0.2**
IMMV				S	**Sn**	**09 53 00.1**	**+0.2**
CH01	**Chania**	**0.58**	**101**	P	**Pn**	**09 52 51.7**	**-0.2**
CH01				S	**Sn**	**09 53 00.2**	**-0.2**
CHAN	**Chania**	**0.59**	**100**	P	**Pn**	**09 52 52.2**	**0.0**
CHAN	**Chania**	**0.59**	**100**	P	**Pn**	**09 52 51.9**	**-0.3**
CHAN				S	**Sb**	**09 52 59.2**	**-0.9**
CHNB	**Souda**	**0.62**	**103**	P	**Pb**	**09 52 51.9**	**-0.4**
CHNB				S	**Sn**	**09 53 01.7**	**+0.3**
KTHA	**Kythira Island**	**0.66**	**341**	P	**Pb**	**09 52 51.5**	**-1.5**
KTHA				S	**Sn**	**09 53 02.9**	**+0.4**
NPS1	**Neapolis Lacon**	**0.91**	**346**	P	**Pb**	**09 52 55.7**	**-1.3**
NPS1				S	**Sb**	**09 53 08.9**	**+0.1**
GVD	**Gavdhos**	**1.01**	**141**	P	**Pn**	**09 52 57.8**	**-0.1**
GVD				S	**Sn**	**09 53 13.3**	**+2.3**
GVD	**Gavdhos**	**1.01**	**141**	P	**Pn**	**09 52 57.4**	**-0.5**
GVD				S	**Sn**	**09 53 11.5**	**+0.5**
MNVA	**Monemvasia**	**1.08**	**348**	P	**Pn**	**09 52 58.5**	**-0.4**
MNVA				S	**Sb**	**09 53 13.0**	**-0.7**
VLI	**Veliai**	**1.13**	**344**	P	**Pn**	**09 52 59.6**	**0.0**
VLI				S	**Sb**	**09 53 15.4**	**+0.2**
VLI	**Veliai**	**1.13**	**344**	P	**Pn**	**09 52 59.4**	**-0.2**
VLI				S	**Sn**	**09 53 14.5**	**+0.4**
IDI	**Anoyia**	**1.32**	**104**	P	**Pb**	**09 53 03.1**	**-1.0**
IDI				S	**Sb**	**09 53 22.6**	**+1.9**
IDI	**Anoyia**	**1.32**	**104**	P	**Pn**	**09 53 02.7**	**+0.4**
IDI				S	**Sn**	**09 53 19.6**	**+0.7**
MHLO	**Agia Marina, M**	**1.37**	**39**	P	**Pn**	**09 53 03.7**	**+0.8**
MHLO				S	**Sn**	**09 53 19.9**	**-0.1**
IACM	**Heraklion**	**1.46**	**102**	P	**Pn**	**09 53 04.1**	**0.0**
SAP3	**Santorini-Thir**	**1.82**	**63**	P	**Pn**	**09 53 09.0**	**-0.1**
SNT5	**Nea Kammeni, S**	**1.85**	**65**	P	**Pn**	**09 53 09.7**	**+0.2**
THERA	**Ancient Thera,**	**1.89**	**66**	P	**Pn**	**09 53 10.5**	**+0.4**
THERA	**Ancient Thera,**	**1.89**	**66**	P	**Pn**	**09 53 10.0**	**-0.1**
VLX	**Vlachokerasia**	**1.90**	**337**	P	**Pn**	**09 53 11.0**	**+0.8**
ITM	**Ithomi**	**1.92**	**324**	P	**Pn**	**09 53 11.1**	**+0.7**
MET1	**Methana Town,**	**1.95**	**1**	P	**Pn**	**09 53 10.6**	**-0.1**
MET2	**Kameni Chora,**	**1.98**	**0**	P	**Pn**	**09 53 10.7**	**-0.5**
MET5	**Makryloggos,Me**	**1.99**	**1**	P	**Pn**	**09 53 11.6**	**+0.2**
MET4	**Agioi Theodoro**	**1.99**	**2**	P	**Pn**	**09 53 11.7**	**+0.3**
VLY	**Voula,Athens**	**2.25**	**9**	P	**Pn**	**09 53 14.6**	**-0.4**
APE	**Apeiranthos**	**2.29**	**50**	P	**Pn**	**09 53 15.1**	**-0.5**
APE	**Apeiranthos**	**2.29**	**50**	P	**Pn**	**09 53 14.8**	**-0.7**
ATHU	**Athens Univers**	**2.36**	**9**	P	**Pn**	**09 53 17.6**	**+1.1**
LOUT	**Loutraki**	**2.37**	**353**	P	**Pn**	**09 53 17.3**	**+0.6**
LTK	**Loutraki**	**2.41**	**353**	P	**Pn**	**09 53 18.1**	**+1.0**
GUR	**Goura**	**2.43**	**341**	P	**Pn**	**09 53 17.4**	**-0.2**
PTL	**Penteli**	**2.45**	**10**	P	**Pn**	**09 53 17.9**	**+0.1**
DION	**Dionisos Attik**	**2.49**	**11**	P	**Pn**	**09 53 18.4**	**+0.1**
DION	**Dionisos Attik**	**2.49**	**11**	P	**Pn**	**09 53 18.3**	**0.0**
VILL	**Villia**	**2.53**	**360**	P	**Pn**	**09 53 18.5**	**-0.4**
KARY	**Karystos**	**2.56**	**20**	P	**Pn**	**09 53 19.5**	**+0.3**
KARY	**Karystos**	**2.56**	**20**	P	**Pn**	**09 53 18.8**	**-0.4**
VIL2	**Platees**	**2.58**	**359**	P	**Pn**	**09 53 18.8**	**-0.7**
KLV	**Kalavryta, Ach**	**2.59**	**339**	P	**Pn**	**09 53 21.1**	**+1.4**
KLV	**Kalavryta, Ach**	**2.59**	**339**	P	**Pn**	**09 53 20.2**	**+0.6**
DRO	**Drossia**	**2.66**	**331**	P	**Pn**	**09 53 22.0**	**+1.4**
EFP	**Efpalio**	**3.01**	**338**	P	**Pn**	**09 53 26.1**	**+0.6**
LKR	**Lokris**	**3.03**	**355**	P	**Pn**	**09 53 25.6**	**0.0**
KYMI	**Kymi, Euboea I**	**3.06**	**11**	P	**Pn**	**09 53 26.8**	**+0.7**
ATAL	**Atalanti**	**3.07**	**356**	P	**Pn**	**09 53 26.9**	**+0.7**
KARP	**Karpathos**	**3.13**	**90**	P	**Pn**	**09 53 26.9**	**-0.1**
ANX	**Ano Chora**	**3.16**	**340**	P	**Pn**	**09 53 28.9**	**+1.3**

NOU 29 09:54:52.6, 10°48S×161°06E, h6km, MLv4.5/17, Solomon Islands, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HURO	**Huro Makira**	**0.83**	**89**	P	Pg	09 55 08.6	+0.1
HURO	**Huro Makira**	**0.83**	**89**	S	Sg	09 55 19.3	0.0
NGOA	**Tingoa Renbel**	**1.45**	**222**	P	Pn	09 55 19.2	-0.2
NGOA	**Tingoa Renbel**	**1.45**	**222**	S	Sn	09 55 37.2	-1.5
ALEG	**Aligegeo Malai**	**1.75**	**348**	P	Pb	09 55 24.4	-0.8
ALEG	**Aligegeo Malai**	**1.75**	**348**	S	Sn	09 55 46.1	-0.1
SAVO	**Savo Central**	**1.81**	**317**	P	Pn	09 55 24.2	-0.1
SAVO	**Savo Central**	**1.81**	**317**	S	Sn	09 55 47.2	-0.4
TATA	**Tatamba Isabel**	**2.42**	**329**	P	Pn	09 55 33.7	+1.0
SANVU	**Saraoutou**	**7.76**	**130**	P	Pn	09 56 45.6	-0.6
RTV	**Rentapao**	**10.19**	**136**	P	Pn	09 57 19.7	+0.2
DZM	**Mont Dzumac**	**12.63**	**157**	P	Pn	09 57 52.9	-0.1
MARNC	**Mare, Loyalty**	**12.82**	**149**	P	Pn	09 57 57.1	+1.5
OUENC	**Ouen Island, N**	**13.10**	**156**	P	Pn	09 57 59.5	+0.2

HEL 29 10:16:02.8±0.4, 60°75N×28°80E, h0km, ML1.3, Suspected explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.65**	**251**	PG	Pg	10 16 14.6	-0.6
	baz=70						
VJF				smax	smax	10 16 23.3	
	comp=Z,5.6nm,0.2s						
VJF				SG	Sg	10 16 23.4	-0.2
RUF	**Ruokolahti**	**0.68**	**6**	PG	Pg	10 16 15.2	-0.6
	baz=185						
RUF				smax	smax	10 16 24.1	
	comp=Z,2.1nm,0.2s						
RUF				SG	Sg	10 16 24.4	-0.2
PVF	**Pernaja**	**1.46**	**263**	smax	smax	10 16 46.9	
	comp=Z,3.0nm,0.2s						
PVF				SN	Sn	10 16 51.4	+1.2
FIA0	**FINESS Array S**	**1.49**	**299**	PG	Pn	10 16 29.4	-1.4
	baz=119						
FIA0				smax	smax	10 16 47.6	
	comp=Z,3.4nm,0.2s						
FIA0				SN	Sg	10 16 50.0	-0.7
NUR	**Nurmijarvi**	**2.06**	**265**	smax	smax	10 17 04.0	
	comp=Z,1.3nm,0.2s						
NUR				SG	Sb	10 17 06.3	-0.8
SUF	**Sumiainen**	**2.34**	**329**	smax	smax	10 17 12.0	
	comp=Z,0.4nm,0.2s						
SUF				SG	Sb	10 17 15.5	+0.2
JOF	**Joensuu**	**2.48**	**28**	SG	Sb	10 17 18.3	-0.9
KPF	**Kankaanpaa**	**3.42**	**291**	SN	Sn	10 17 35.1	-3.5
RAF	**Rauma**	**3.45**	**278**	PG	Pb	10 17 05.1	+0.5
SLIT	**Slitere, Latvi**	**4.58**	**230**	PG	Pb	10 17 22.8	-1.2

*IDC **29** 10:16:12.7±1.3,51°53N×75°72E, h0km, mbtmp2.7/2, ML2.1/2, Error ellipse: s-maj=28.2km s-min=9.6km az=30.0*
*NNC **29** 10:16:13.2±2.1,51°27N×75°54E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=40.6km s-min=13.5km az=23.0,*

Suspected Mining explosion.

ISC 29 10:16:15.8±1.3, 51°45N±0°08×75°98E±0°06, h0km, n10, σ0°68/11, 3C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**1.81**	**116**	Pg	**Pn**	**10 16 48.2**	**0.0**
	0.8nm,0.3s,baz=300,slow=18,SNR=26						
KURBB				Lg	Lg	10 17 16.4	
	0.8nm,0.3s,baz=299,slow=28,SNR=5.9						
KURBB	**Kurchatov Arra**	**1.81**	**116**	⇓Pn	**Pb**	**10 16 49.1**	**-0.8**
	10nm,0.5s						
KURBB				⇑Sn	**Sg**	**10 17 15.5**	**+1.5**
	8.6nm,0.3s						
KURK	**Kurchatov**	**1.82**	**113**	⇓Pn	**Pn**	**10 16 48.4**	**0.0**
	2.7nm,1.1s						
KURK				⇓Sn	**Sg**	**10 17 14.7**	**+0.4**
	2.1nm,0.5s						
BVA0	**Borovoye Array**	**3.78**	**297**	⇑Lg	Lg	10 18 06.7	
	1.2nm,0.6s,baz=117,slow=29,SNR=3.7						
BVAR	**Borovoye Array**	**3.78**	**297**	Pg	**Pn**	**10 17 15.7**	**+0.4**
	0.1nm,0.3s,baz=116,slow=14,SNR=4.8						
BVAR				Lg	Lg	10 18 02.8	
	0.1nm,0.3s,baz=115,slow=27,SNR=5.3						
ZALV	**Zalesovo Beam**	**5.93**	**62**	Pn	**Pn**	**10 17 44.9**	**+0.1**
	0.3nm,0.3s,baz=248,slow=15,SNR=4.4						
ZALV				Sn	**Sn**	**10 18 53.1**	**-0.2**
	0.2nm,0.3s,baz=258,slow=20,SNR=2.8						
	0.8nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.93**	**62**	I	I	10 53 00.0	
	baz=247,slow=326,SNR=3.1						
MAKZ	**Makanchi**	**6.09**	**137**	⇓Lg	Lg	10 19 27.7	
	1.7nm,0.8s						
MK31	**Makanchi Array**	**6.24**	**136**	⇑Sn	**Sn**	**10 19 00.5**	**-0.6**
	0.4nm,0.4s						
MK31				⇓Lg	Lg	10 19 32.1	
	0.4nm,0.3s,baz=317,slow=27,SNR=4.2						
MKAR	**Makanchi Array**	**6.24**	**136**	Pn	**Pn**	**10 17 48.8**	**-0.2**
	baz=318,slow=11,SNR=2.1						
MKAR				Sn	**Sn**	**10 19 01.4**	**+0.3**
	0.1nm,0.3s,baz=318,slow=28,SNR=2.2						
MKAR				Lg	Lg	10 19 35.0	
	0.4nm,0.3s,baz=328,slow=27,SNR=7.0						
	0.1nm,0.6s						

UPP 29 10:17:01.8±1.2, 60°72N×21°30E, h0km, ML1.7, Presumed earthquake, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	**0.84**	**230**	P	Pg	10 17 17.6	-0.4
AAL				S	Sb	10 17 31.0	-0.2
AAL	**Aland**	**0.84**	**230**	PB	Pg	10 17 17.6	-0.3
GRAU	**Graesoe**	**1.42**	**255**	P	Pn	10 17 27.4	-1.4
IGGU	**Iggoen**	**1.96**	**276**	P	Pn	10 17 37.0	+0.8
OSTU	**Oestervaala**	**2.12**	**258**	P	Pn	10 17 39.5	+1.1

*BEO **29** 10:22:24.1±0.8, 41°32N×19°57E, h1km±3km, ML2.6/10*
*PDG **29** 10:22:25.8±0.4, 41°43N×19°46E, h5km±1km, ML2.7/12, Error ellipse: s-maj=1.5km s-min=2.1km az=0.0*
*TIR **29** 10:22:26.0, 41°59N×19°48E, h45km±1km, Md2.9/8, Ml2.8/5*

ISC 29 10:22:25.1±1.1, 41°46N±0°02×19°52E±0°03, h8km±9km, n34, σ1°39/63, 6C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.28**	**114**	Pg	**Pb**	**10 22 32.2**	**-0.2**
TIR				Sg	**Sb**	**10 22 35.7**	**-1.6**
TIR				AML	AML	10 22 37.9	
	2.7nm,0.3s						
ULC	**Ulcinj**	**0.54**	**337**	*e*Pg	**Pg**	**10 22 34.8**	**-0.8**
ULC				*i* Sg	**Sg**	**10 22 43.0**	**+0.3**
SDA	**Shkodra**	**0.59**	**358**	Pg	**Pg**	**10 22 36.4**	**-0.1**
SDA				Sg	**Sb**	**10 22 45.1**	**-1.0**
SDA				AMd		10 23 32.7	
PHP	**Peshkopia**	**0.72**	**72**	Pg	**Pb**	**10 22 39.2**	**-0.7**
PHP				Sg	**Sn**	**10 22 51.3**	**-1.6**
PHP				AML	AML	10 22 56.9	
	1.4nm,0.4s						
PHP				AMd		10 23 25.6	
DRME	**Dracevica, Mon**	**0.77**	**341**	*e*Pg	**Pg**	**10 22 39.3**	**-0.6**
DRME				*e*Sg	**Sb**	**10 22 51.8**	**+0.5**
DRME	**Dracevica, Mon**	**0.77**	**341**	*i* Pg	**Pg**	**10 22 39.5**	**-0.3**
DRME				*e*Sg	**Sb**	**10 22 50.8**	**-0.5**
BUM	**Brajici-Budva**	**0.96**	**331**	*i* Pg	**Pg**	**10 22 43.1**	**-0.5**
BUM				*i* Sg	**Sn**	**10 22 57.3**	**-1.5**
PDG	**Podgorica**	**0.99**	**348**	Pn	**Pg**	**10 22 42.4**	**-1.7**
PDG				Sn	**Sg**	**10 22 55.9**	**-1.0**
PDG				AMd		10 23 40.3	
PDG	**Podgorica**	**0.99**	**348**	*e*Pg	**Pg**	**10 22 43.5**	**-0.6**
PDG				*e*Sg	**Sn**	**10 23 00.6**	**+1.3**
PDG	**Podgorica**	**0.99**	**348**	⇑*i* Pg	**Pb**	**10 22 44.0**	**-0.4**
PDG				*e*Sg	**Sn**	**10 22 59.3**	**0.0**
VLO	**Vlora**	**0.99**	**181**	Pg	**Pn**	**10 22 46.2**	**+0.9**
VLO				Sg	**Sn**	**10 23 01.4**	**+2.0**
VLO				AML	AML	10 23 06.1	
	2.7nm,0.2s						
VLO				AMd		10 23 41.0	
CEME	**Cevo**	**1.17**	**338**	*i* Pg	**Pb**	**10 22 47.0**	**-0.6**
CEME				*i* Sg	**Sn**	**10 23 04.1**	**0.0**
PVY	**Plav**	**1.18**	**16**	*i* Pg	**Pn**	**10 22 50.7**	**+2.7**
PVY				*i* Sg	**Sn**	**10 23 05.9**	**+1.7**
HCY	**Herceg Novi**	**1.25**	**322**	*e*Pg	**Pn**	**10 22 48.0**	**-0.8**
HCY				*e*Sg	**Sn**	**10 23 07.0**	**+1.2**
NKME	**Niksic**	**1.37**	**342**	*e*Pg	**Pb**	**10 22 50.3**	**-0.7**
NKME				*e*Sg	**Sg**	**10 23 10.9**	**+1.7**
KOME	**Kolasin**	**1.39**	**360**	*e*Pg	**Pg**	**10 22 53.1**	**-1.4**
KOME				*e*Sg	**Sg**	**10 23 12.5**	**+2.8**
KOME	**Kolasin**	**1.39**	**360**	⇑*i* Pg	**Pg**	**10 22 50.9**	**-0.8**
KOME				*i* Sg	**Sg**	**10 23 12.7**	**+3.0**
IVA	**Berane**	**1.44**	**11**	⇑*i* Pg	**Pb**	**10 22 51.5**	**-0.6**
IVA				*i* Sg	**Sg**	**10 23 14.7**	**+3.5**
BRY	**Bratogost**	**1.61**	**333**	⇑*i* Pn	**Pb**	**10 22 54.8**	**-0.4**
BRY				*i* Sn	**Sg**	**10 23 19.3**	**+2.3**
KEK	**Kerkira**	**1.76**	**173**	Pn	**Pg**	**10 22 58.7**	**-0.2**
KEK				Sn	**Sg**	**10 23 23.1**	**+1.5**
KEK				AMd		10 24 19.9	
UPM	**Unac-Piva**	**1.80**	**345**	⇑*i* Pn	**Pg**	**10 22 58.6**	**-1.0**
UPM				*e*Sn	**Sg**	**10 23 24.6**	**+1.7**
SJES	**Sjenica**	**1.83**	**10**	*e*Pg	**Pg**	**10 22 59.4**	**-0.7**
SJES				*e*Sg	**Sg**	**10 23 26.7**	**+2.8**
STON	**Ston**	**1.96**	**317**	*e*Pn	**Pb**	**10 23 00.2**	**-0.7**
STON				*e*Sn	**Sg**	**10 23 26.6**	**-1.3**
NOCI	**Noci**	**1.98**	**251**	Pn	**Pn**	**10 22 59.7**	**+0.4**
NOCI				Sn	**Sb**	**10 23 25.3**	**-0.7**
NOCI				AML	AML	10 23 27.5	
	0.3nm,0.3s						
NOCI				AMd		10 24 21.0	
IGT	**Igoumenitsa**	**2.02**	**162**	Pn	**Pb**	**10 23 02.1**	**0.0**
IGT				Sg	**Sg**	**10 23 29.2**	**-0.9**
IGT				AMd		10 24 23.9	
SELS	**Selova**	**2.12**	**33**	*e*Pn	**Pb**	**10 23 02.0**	**-1.7**
SELS				*e*Sn	**Sb**	**10 23 29.5**	**-0.6**
IVAS	**Ivanjica**	**2.16**	**12**	*e*Pn	**Pn**	**10 23 02.1**	**+0.6**
IVAS				*e*Sn	**Sg**	**10 23 32.8**	**-1.8**
BARS	**Barje**	**2.18**	**51**	*e*Pn	**Pb**	**10 23 03.8**	**-0.9**
BARS				*e*Sn	**Sb**	**10 23 32.3**	**+0.5**
BBLS	**Lazi&#263i**	**2.40**	**358**	*e*Pn	**Pb**	**10 23 07.3**	**-1.3**
BBLS				*e*Sn	**Sb**	**10 23 37.5**	**-0.9**
BOSS	**Bosilegrad**	**2.44**	**64**	*e*Pn	**Pn**	**10 23 03.7**	**-1.4**
GRUS	**Gruza**	**2.58**	**20**	*e*Pn	**Pn**	**10 23 08.6**	**+1.5**
TRUS	**Trudelj**	**2.83**	**13**	*e*Pn	**Pb**	**10 23 13.6**	**-2.3**
ZAPS	**Zavoj**	**2.93**	**51**	*e*Sn	**Sn**	**10 23 47.6**	**+0.2**
ZAGS	**Zajecar**	**3.08**	**39**	*e*Sn	**Sn**	**10 23 51.7**	**+0.6**

*DJA **29** 10:39:37.2±1.2, 8°N±20°×12°5E±°, h21km±23km, M4.8/9, mb4.8/9, mB5.7/4, MLv4.6/6, Mw(mB)5.3/4*
*IDC **29** 10:39:40.5±1.4, 6°67N×124°88E, h0km, mb3.7/4, mbtmp3.7/4, MS2.8/2, Error ellipse: s-maj=28.9km s-min=10.5km az=138.0*
*NEIC **29** 10:39:40.5±1.0, 6°92N±0°08×124°80E±0°05, h10km±2km, mb4.0/10, Error ellipse: s-maj=15.2km s-min=6.2km az=336.0*

ISC 29 10:39:41.6±0.9, 6°9N±0°1×124°86E±0°08, h13km, n25, σ1°78/25, mb3.8/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.73**	**77**	Pg	**Pg**	**10 39 56.0**	**+0.2**
	779nm,0.3s,baz=283,slow=1.0,SNR=43						
DAV				LR	LR	10 39 59.2	
	comp=Z,107nm,18.6s,baz=58,slow=23						
DAV				Lg	Lg	10 40 07.0	
	1μm,0.3s,baz=351,slow=22,SNR=8.6						
DAV	**Davao City (W)**	**0.73**	**77**	Pg	**Pg**	**10 39 56.2**	**+0.4**
DAV				Sg	**Sg**	**10 40 05.7**	**+0.2**
GTOI	**Gorontalo**	**6.49**	**197**	P	**Pn**	**10 41 18.0**	**+1.1**
	1μm127nm,0.7s						
MRSI	**Marisa**	**7.02**	**205**	P	**Pn**	**10 41 26.6**	**+2.5**
	0.1nm34nm,0.6s						
TOLI2	**Tolitoli**	**7.05**	**215**	Pn	**Pn**	**10 41 23.3**	**-1.2**
LUWI	**Luwuk**	**8.16**	**195**	P	**Pn**	**10 41 42.7**	**+2.8**
	2μm58nm,0.7s						
APSI	**Ampana**	**8.40**	**203**	P	**Pn**	**10 41 46.4**	**+3.3**
	35nm,0.8s						
TTSI	**Tana Toraja**	**11.09**	**207**	P	**Pn**	**10 42 21.6**	**+1.6**
KAPI	**Kappang**	**12.89**	**203**	LR	LR	10 47 49.1	
	comp=Z,38nm,19.8s,baz=64,slow=38						
MTN	**Manton Dam**	**20.58**	**162**	P	**P**	**10 44 19.8**	**-0.7**
MTN				IAmb	IAmb	10 44 48.4	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**22.77**	**170**		**P**	**10 44 42.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**24.85**	**178**	P	**P**	**10 45 02.8**	**-1.1**
	comp=Z,2.9nm,0.6s,baz=1.2,slow=8.0,SNR=10						
	comp=Z,2.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.85**	**178**	P	**P**	**10 45 02.9**	**-1.1**
FITZ				IAmb	IAmb	10 45 08.4	
	comp=Z,1.3nm,1.1s						
WB0	**Warramunga Arr**	**28.11**	**161**	P	**P**	**10 45 31.3**	**-2.1**
WB0				IAmb	IAmb	10 45 43.6	
	comp=Z,5.7nm,1.2s						
WRAB	**Tennant Creek**	**28.26**	**161**	P	**P**	**10 45 32.5**	**-2.3**
WRA	**Warramunga Arr**	**28.26**	**161**	P	**P**	**10 45 33.6**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=334,slow=10,SNR=6.3						
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**28.26**	**161**	P	**P**	**10 45 33.2**	**-1.6**
WR8	**Warramunga Arr**	**28.33**	**161**	P	**P**	**10 45 33.7**	**-1.7**
WR8				IAmb	IAmb	10 45 54.4	
	comp=Z,5.0nm,1.2s						
AS31	**Alice Springs**	**31.64**	**164**	P	**P**	**10 46 02.9**	**-1.8**
ASAR	**Alice Springs**	**31.64**	**164**	P	**P**	**10 46 03.6**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=343,slow=7.1,SNR=18						
ASAR				LR	LR	10 58 22.5	
	comp=Z,16nm,20.5s,baz=139,slow=36						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**31.64**	**164**	P	**P**	**10 46 03.2**	**-1.5**
BBOO	**Buckleboo**	**40.91**	**166**	P	**P**	**10 47 22.8**	**-0.9**
MKAR	**Makanchi Array**	**53.91**	**325**	P	**P**	**10 49 07.4**	**+2.6**
	comp=Z,0.3nm,0.7s,baz=105,slow=7.8,SNR=2.3						
	comp=Z,0.3nm,0.7s						
KK31	**Karatay Array**	**59.66**	**316**		**P**	**10 49 44.7**	**-1.1**
KKAR	**Karatay Array**	**59.66**	**316**		**P**	**10 49 44.0**	**-1.7**

IDC 29 10:48:40.9±3.0, 9°83N×121°83E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=436.1km s-min=22.9km az=63.0, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.05**	**157**	P	P	10 55 08.9	-0.7
	0.5nm,1.0s,baz=335,slow=8.9,SNR=1.5						
	0.5nm,1.0s						
ASAR	**Alice Springs**	**35.32**	**161**	P	P	10 55 38.5	+0.3
	0.2nm,0.3s,baz=342,slow=8.5,SNR=11						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**49.80**	**325**	P	P	10 57 36.1	+0.5
	0.4nm,0.6s,baz=111,slow=6.8,SNR=2.1						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**54.02**	**327**	P	P	10 58 06.4	-0.5
	0.4nm,0.6s,baz=134,slow=6.3,SNR=6.0						
	0.4nm,0.6s						

*IDC **29** 10:49:05.0±7.1,31°75S×179°44W, h177km±55km, mb3.5/3, mbtmp4.0/4, Error ellipse: s-maj=59.0km s-min=27.4km az=42.0*
*WEL **29** 10:49:10.7±0.9,32°S±7°×17°9W±1°6, h210km±15km, M4.2/12, mB4.5/7, MLv4.6/12, Mw(mB)3.7/7, Error ellipse: s-maj=22.5km s-min=4.7km az=108.9, confirmed*

ISC 29 10:49:10.4±1.1, 32°40S±0°08×178°6W±0°1, h200km, n51, σ1°56/49, mb3.7/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.18**	**11**	P	**Pn**	**10 50 05.0**	**+2.8**
GLKZ				S	**Sn**	**10 50 42.4**	**-0.3**
MXZ	**Matakaoa Point**	**5.74**	**205**	P	**Pn**	**10 50 35.0**	**+0.8**
MXZ				S	**Sn**	**10 51 41.8**	**+1.2**
WMGZ	**Waiomatatini S**	**5.94**	**204**	P	**Pn**	**10 50 38.8**	**+2.1**
WMGZ				S	**Sn**	**10 51 44.3**	**-0.8**
PKGZ	**Pakihiroa**	**6.09**	**206**	P	**Pn**	**10 50 40.0**	**+1.2**

HEL 29 11:00:13.4±0.4, 59°19N×27°93E, h0km, ML1.8, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EE04	**Vaivara Sinima**	**0.18**	**351**	*eP*		Pg	11 00 16.6	-0.3
EE04				*eS*		Sg	11 00 19.0	-0.3
EE03	**Tooma soojaam,**	**0.92**	**250**	*eP*		Pg	11 00 29.8	-1.1
EE03				*eS*		Sg	11 00 41.7	-1.1
VSU	**Vasula**	**0.96**	**221**	*eP*		Pg	11 00 13.4	-18
VSU					AML	AML	11 00 29.7	
	comp=E,57nm,0.3s							
VSU					AML	AML	11 00 51.7	
	comp=N,29nm,0.5s							
VSU					AML	AML	11 01 13.4	
	comp=Z,14nm,0.8s							
VSU	**Vasula**	**0.96**	**221**	*eP*		Pg	11 00 30.6	-1.2
ARBE	**Arbavere**	**1.03**	**285**	*eS*		Sg	11 00 44.1	-2.3
ARBE					AML	AML	11 00 53.2	
	comp=N,136nm,0.1s							
ARBE					AML	AML	11 00 56.8	
	comp=E,187nm,0.1s							
ARBE					AML	AML	11 01 15.1	
	comp=Z,83nm,0.8s							
ARBE	**Arbavere**	**1.03**	**285**	*eS*		Sg	11 00 44.4	-2.0
VJF	**Virojoki**	**1.36**	**352**	*eP*		Pg	11 00 38.3	-1.3
VJF					smax	smax	11 00 54.6	
	comp=Z,8.0nm,0.2s							
VJF				*eSB*		Sg	11 00 55.8	-1.4
EE07	**Piusa Caves, O**	**1.38**	**190**	*ePN*		Pb	11 00 40.0	0.0
EE08	**Sarghaua, Vand**	**1.50**	**250**	*eP*		Pn	11 00 40.2	-1.3
EE08				*eS*		Sg	11 00 58.6	-2.8
EE08				*eSN*		Sb	11 01 00.8	-0.7
EE02	**Kiisa, Saku**	**1.67**	**271**	*ePG*		Pn	11 00 43.5	-0.3
EE02				*eSG*		Sn	11 01 05.0	-0.8
PVF	**Pernaja**	**1.71**	**323**	*ePN*		Pn	11 00 44.6	+0.2
PVF					smax	smax	11 01 04.5	
	comp=Z,3.7nm,0.2s							
PVF				*eSN*		Sn	11 01 07.2	+0.1
HEL1	**Helsinki**	**1.84**	**304**	*eS*		Sn	11 01 09.3	-0.7
HEL5	**Espoo, Suvisaa**	**1.87**	**301**	*ePG*		Pn	11 00 46.9	+0.4
HEL5				*eSG*		Sn	11 01 11.2	+0.4
HEL5					smax	smax	11 01 12.7	
	comp=Z,3.7nm,0.1s							
MEF	**Metsahovi**	**2.07**	**301**	*eP*		Pn	11 00 50.0	+0.7
MEF	**Metsahovi**	**2.07**	**301**	*eP*		Pn	11 00 41.5	-7.8
MEF				*eS*		Sn	11 01 16.0	+0.2
MEF					AML	AML	11 01 17.5	
	comp=N,14nm,0.3s							
MEF					AML	AML	11 01 20.9	
	comp=Z,8.6nm,0.8s							
MEF					AML	AML	11 01 21.3	
	comp=E,6.1nm,0.2s							
MEF	**Metsahovi**	**2.07**	**301**	*ePG*		Pn	11 00 50.5	+1.2
MEF				*eSG*		Sn	11 01 16.5	+0.8
MEF					smax	smax	11 01 17.6	
	comp=Z,3.2nm,0.1s							
NUR	**Nurmijarvi**	**2.12**	**310**	*ePG*		Pn	11 00 51.1	+1.1
NUR					smax	smax	11 01 16.4	
	comp=Z,4.3nm,0.2s							
NUR				*eSB*		Sn	11 01 17.3	+0.3
EE01	**Perakula, Nova**	**2.22**	**272**	*eP*		Pn	11 00 51.6	+0.2
EE01				*ePB*		Pb	11 00 52.5	-1.8
EE01				*eSG*		Sb	11 01 21.0	-1.3
RUF	**Ruokolahti**	**2.30**	**12**	*eP*		Pn	11 00 52.6	+0.1
RUF				*ePB*		Pb	11 00 54.2	-1.4
RUF					smax	smax	11 01 21.3	
	comp=Z,5.0nm,0.2s							
RUF				*eSB*		Sb	11 01 23.2	-1.3
FIA0	**FINESS Array S**	**2.44**	**339**	*eP*		Pn	11 00 54.5	0.0
FIA0					smax	smax	11 01 25.4	
	comp=Z,3.5nm,0.2s							
FIA0				*eSB*		Sn	11 01 26.5	+1.5
FIA0				*eSG*		Sb	11 01 28.9	+0.2
FIA1	**FINESS Array S**	**2.44**	**339**	*eP*		Pn	11 00 54.5	0.0
FIA1				*eSG*		Sb	11 01 28.9	+0.2
FIA1					smax	smax	11 01 30.6	
	comp=Z,2.0nm,0.1s							
TVF	**Tvarminne**	**2.48**	**287**	*ePG*		Pb	11 00 57.9	-0.8
TVF					smax	smax	11 01 26.5	
	comp=Z,1.5nm,0.2s							
TVF				*eSG*		Sb	11 01 28.7	-0.9
EE06	**Soera, Palade,**	**2.63**	**267**	*ePB*		Pb	11 00 59.3	-2.1
EE06				*eSB*		Sb	11 01 32.7	-1.5
KEF	**Keuruu**	**3.34**	**335**	*eP*		Pn	11 01 09.0	+2.1
RAF	**Rauma**	**3.59**	**303**	*eP*		Pn	11 01 11.4	+1.1
KPF	**Kankaanpaa**	**3.93**	**315**	*eP*		Pn	11 01 15.8	+0.9
JOF	**Joensuu**	**4.08**	**22**	*eP*		Pn	11 01 17.3	+0.3
JOF	**Joensuu**	**4.08**	**22**	*eP*		Pn	11 01 17.9	+0.9
VAF	**Ylistaro**	**4.63**	**329**	*eP*		Pn	11 01 23.3	-1.1

*SJA **29** 11:00:16.6±0.8, 36°.04S×72°.75W, h30km, ML3.7, MW3.6*
*GUC **29** 11:00:19.5±0.7, 36°.10S×72°.63W, h48km±139km, ML3.8*
ISC 29 11:00:15.4±1.7, 36°08S±0°.03×72°82W±0°.06, h7km±11km, n56, σ1°90/80, 7C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ML02	**Panimavida**	**1.18**	**75**	*eP*		**Pg**	**11 00 38.6**	**+0.6**
ML02				*eS*		**Sg**	**11 00 52.5**	**-0.9**
ML02					IAML		11 00 54.3	
	comp=N,2μm,0.2s							
ML02	**Panimavida**	**1.18**	**75**	*eP*		**Pg**	**11 00 39.1**	**+1.1**
ML02				*eS*		**Sg**	**11 00 53.5**	**+0.2**
ML02					IAML		11 00 56.3	
	comp=Z,638nm,0.2s							
GO05	**Hualane**	**1.29**	**34**	*eP*		**Pg**	**11 00 41.0**	**+0.8**
GO05				*eS*		**Sg**	**11 00 56.9**	**0.0**
GO05					IAML		11 00 58.0	
	comp=N,2μm,0.2s							
GO05	**Hualane**	**1.29**	**34**	*eP*		**Pg**	**11 00 41.0**	**+0.8**
GO05				*eS*		**Sg**	**11 00 56.9**	**0.0**
GO05					IAML		11 00 58.6	
	comp=Z,679nm,0.3s							
BI02	**San Fabin de**	**1.37**	**115**	*eP*		**Pg**	**11 00 40.9**	**-0.9**
BI02				*eS*		**Sg**	**11 00 56.7**	**-2.9**
BI02	**San Fabin de**	**1.37**	**115**	*eP*		**Pg**	**11 00 41.0**	**-0.7**
BI02					IAML		11 00 59.1	
	comp=Z,476nm,0.2s							
BO03	**Pichilemu**	**1.73**	**24**	*iP*		**Pn**	**11 00 46.8**	**+0.8**
BO03					IAML		11 01 08.8	
	comp=E,755nm,0.2s							
BO02	**Sierra Bellavi**	**2.10**	**53**	*eP*		**Pn**	**11 00 51.5**	**+0.4**
BO02				*eS*		**Sn**	**11 01 15.9**	**-1.7**
BO02					IAML		11 01 16.6	
	comp=N,957nm,0.4s							
BO02	**Sierra Bellavi**	**2.10**	**53**	*eP*		**Pn**	**11 00 51.6**	**+0.5**
BO02				*eS*		**Sn**	**11 01 16.7**	**-0.9**
BO02					IAML		11 01 20.5	
	comp=Z,703nm,0.4s							
BO01	**Tunca**	**2.20**	**41**	*eP*		**Pn**	**11 00 53.2**	**+0.7**
BO01	**Tunca**	**2.20**	**41**	*eP*		**Pn**	**11 00 53.2**	**+0.7**
BO01				*eS*		**Sn**	**11 01 19.2**	**-0.8**
CANA	**Caviahue**	**2.29**	**143**	*eP*		**Pn**	**11 00 54.3**	**+0.6**
CANA				*eS*		**Sn**	**11 01 22.8**	**+0.6**
BI04	**Isla Mocha**	**2.48**	**200**	*eP*		**Pn**	**11 00 56.7**	**+0.5**
MT01	**Popeta**	**2.56**	**31**	*eP*		**Pn**	**11 00 57.9**	**+0.5**
MT01					IAML		11 01 29.8	
	comp=N,503nm,0.2s							
MT01					IAML		11 01 29.9	
MT01	**Popeta**	**2.56**	**31**	*eP*		**Pn**	**11 00 57.8**	**+0.5**
MT01				*eS*		**Sn**	**11 01 27.9**	**-0.9**
MT01					IAML		11 01 29.8	
	comp=Z,368nm,0.1s							
VA05	**Santo Domingo**	**2.61**	**23**	*eP*		**Pn**	**11 00 58.1**	**+0.1**
VA05					IAML		11 01 31.1	
	comp=N,619nm,0.1s							
LC02	**Puerto Saavedr**	**2.74**	**189**	*eP*		**Pn**	**11 01 00.5**	**+0.6**
MT09	**Talagante**	**2.75**	**34**	*eP*		**Pn**	**11 01 00.8**	**+0.7**
BO04	**La Punta**	**2.77**	**42**	*eP*		**Pn**	**11 01 00.7**	**+0.5**
BO04				*eS*		**Sn**	**11 01 32.7**	**-1.2**
BO04					IAML		11 01 34.0	
	comp=E,449nm,0.1s							
EDS3	**Malargue**	**2.79**	**85**	*eP*		**Pn**	**11 01 02.1**	**+1.5**
LC01	**Cunco**	**2.91**	**165**	*eP*		**Pn**	**11 01 02.3**	**+0.1**
MT12	**Pirque**	**3.00**	**39**	*eP*		**Pn**	**11 01 03.9**	**+0.5**
MT12					IAML		11 01 43.3	
	comp=N,458nm,0.3s							
LMEL	**Las Melosas**	**3.10**	**45**	*eP*		**Pn**	**11 01 05.7**	**+0.8**
LMEL				*eS*		**Sn**	**11 01 41.1**	**-1.1**
LMEL					IAML		11 01 43.7	
	comp=N,405nm,0.1s							
LMEL	**Las Melosas**	**3.10**	**45**	*eP*		**Pn**	**11 01 06.0**	**+1.2**
LMEL				*eS*		**Sn**	**11 01 41.4**	**-0.8**
LMEL					IAML		11 01 45.4	
	comp=Z,284nm,0.1s							
MT15	**Las Vizcachas**	**3.12**	**38**	*eP*		**Pn**	**11 01 05.5**	**+0.3**
MT13	**San Alfonso**	**3.13**	**42**	*eP*		**Pn**	**11 01 05.7**	**+0.5**
MT13				*eS*		**Sn**	**11 01 42.2**	**-0.7**
MT13					IAML		11 01 43.2	
	comp=Z,175nm,0.2s							
MT02	**Curacav**	**3.14**	**27**	*eP*		**Pn**	**11 01 05.4**	**+0.1**
MT02	**Curacav**	**3.14**	**27**	*eP*		**Pn**	**11 01 05.4**	**+0.1**
MT02				*eS*		**Sn**	**11 01 40.1**	**-3.0**
MT02					IAML		11 01 43.8	
	comp=Z,326nm,0.5s							
MT05	**Renca**	**3.18**	**33**	*eP*		**Pn**	**11 01 07.2**	**+1.2**
MT05	**Renca**	**3.18**	**33**	*eP*		**Pn**	**11 01 06.5**	**+0.5**
MT05				*eS*		**Sn**	**11 01 43.5**	**-0.8**
MT05					IAML		11 01 45.7	
	comp=Z,279nm,0.1s							
VA01	**Torpederas**	**3.20**	**18**	*eP*		**Pn**	**11 01 06.5**	**+0.4**
VA01	**Torpederas**	**3.20**	**18**	*eP*		**Pn**	**11 01 06.6**	**+0.4**
VA01					IAML		11 01 45.5	
	comp=Z,104nm,0.1s							
MT03	**Universidad Ad**	**3.21**	**37**	*eP*		**Pn**	**11 01 07.0**	**+0.7**
MT03	**Universidad Ad**	**3.21**	**37**	*eP*		**Pn**	**11 01 06.8**	**+0.4**
MT03				*eS*		**Sn**	**11 01 44.4**	**-0.5**
MT03					IAML		11 01 44.8	
	comp=Z,490nm,0.1s							
MT16	**CCHEN**	**3.25**	**36**	*eP*		**Pn**	**11 01 07.4**	**+0.5**
MT16					IAML		11 01 45.2	
	comp=N,175nm,0.5s							
MT14	**Cerro Cal¡n**	**3.27**	**36**	*eP*		**Pn**	**11 01 08.1**	**+0.9**
PEL	**Peldehue**	**3.42**	**32**	*eP*		**Pn**	**11 01 09.7**	**+0.5**
PEL	**Peldehue**	**3.42**	**32**	*eP*		**Pn**	**11 01 10.2**	**+0.9**
PEL				*eS*		**Sn**	**11 01 49.4**	**-0.7**
PEL					IAML		11 01 52.5	
	comp=Z,230nm,0.2s							
ROC1	**El Roble**	**3.44**	**26**	*eP*		**Pn**	**11 01 10.3**	**+0.7**
ROC1				*eS*		**Sn**	**11 01 48.6**	**-2.2**
ROCH	**El Roble**	**3.44**	**26**	*eP*		**Pn**	**11 01 10.4**	**+0.7**
MT04	**Ro Olivares**	**3.46**	**40**	*eP*		**Pn**	**11 01 10.9**	**+0.9**
MT04					IAML		11 01 51.9	
	comp=N,286nm,0.2s							
MT04	**Ro Olivares**	**3.46**	**40**	*eP*		**Pn**	**11 01 11.0**	**+0.9**
MT04				*eS*		**Sn**	**11 01 50.9**	**-0.6**
MT04					IAML		11 01 52.1	
	comp=Z,200nm,0.1s							
MT08	**Bocatoma Ro**	**3.50**	**42**	*eP*		**Pn**	**11 01 11.1**	**+0.7**
MT08				*eS*		**Sn**	**11 01 52.4**	**+0.1**
MT08					IAML		11 01 56.5	
	comp=Z,74nm,0.1s							
GO06	**Curarrehue**	**3.65**	**163**	*eP*		**Pn**	**11 01 13.6**	**+1.1**
GO06	**Curarrehue**	**3.65**	**163**	*eP*		**Pn**	**11 01 14.0**	**+1.5**
GO06				*eS*		**Sn**	**11 01 57.6**	**+1.6**
VA06	**Catapilco**	**3.73**	**20**	*eP*		**Pn**	**11 01 13.8**	**+0.4**
RFA	**San Rafael**	**3.79**	**71**	*eP*		**Pn**	**11 01 15.6**	**+1.3**
VA03	**San Esteban**	**3.80**	**30**	*eP*		**Pn**	**11 01 15.2**	**+0.7**
VA03				*eS*		**Sn**	**11 01 58.9**	**-0.7**
VA03					IAML		11 02 00.8	
	comp=Z,331nm,0.1s							
LR04	**Corral**	**3.82**	**187**	*eP*		**Pn**	**11 01 14.6**	**-0.1**
LR04					IAML		11 01 59.8	
	comp=Z,171nm,0.3s							
CO04	**Los Peladeros**	**4.31**	**21**	*eP*		**Pn**	**11 01 21.6**	**0.0**
AAGR	**Agrelo**	**4.45**	**49**	*eP*		**Pn**	**11 01 24.9**	**+1.5**
ARCO	**CERRO ARCO**	**4.55**	**46**	*eP*		**Pn**	**11 01 27.5**	**+2.5**
PLCA	**Paso Flores**	**4.97**	**160**	*eP*		**Pn**	**11 01 31.7**	**+1.1**
CO02	**Combarbal**	**5.10**	**18**	*eP*		**Pn**	**11 01 32.5**	**+0.2**
CO02	**Combarbal**	**5.10**	**18**	*eP*		**Pn**	**11 01 32.6**	**+0.3**
RTLS	**Leoncito**	**5.18**	**35**	*eP*		**Pn**	**11 01 35.5**	**+1.9**
RTLS				*eS*		**Sn**	**11 02 33.8**	**0.0**
RTLS					IAML		11 02 41.0	
	comp=Z,57nm,0.2s							

*RHSSO **29** 11:04:15.7±0.5, 43°.18N×18°.02E, h8km, ML2.7/4*
*BEO **29** 11:04:15.1±0.3, 43°.21N×17°.92E, h9km±2km, ML2.4/11*
*PDG **29** 11:04:16.0±0.1, 43°.14N×17°.96E, h7km±1km, ML2.8/13,*
Error ellipse: s-maj=0.2km s-min=0.5km az=0.0
ISC 29 11:04:14.1±1.0, 43°24N±0°.02×17°96E±0°.01, h10km±9km, n46, σ1°18/90, 8C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.41**	**207**	*i* Pg		**Pg**	**11 04 21.7**	**-0.4**
STON					Sg	**Sg**	**11 04 27.4**	**-0.2**
STON	**Ston**	**0.41**	**207**	*e*Pg		**Pg**	**11 04 21.8**	**-0.4**
STON				*e*Sg		**Sg**	**11 04 28.4**	**+0.8**
KLINJ	**Klinje**	**0.46**	**98**	*e*Pg		**Pg**	**11 04 23.4**	**+0.3**
KLINJ				*e*Sg		**Sb**	**11 04 30.3**	**-1.0**
BRY	**Bratogost**	**0.54**	**128**	*i* Pg		**Pg**	**11 04 24.2**	**-0.4**
BRY				*i* Sg		**Sg**	**11 04 32.0**	**+0.2**
DBRK	**Dubrovnik**	**0.59**	**166**	*i* Pg		**Pg**	**11 04 25.2**	**-0.2**
DBRK					Sg	**Sb**	**11 04 34.0**	**-0.7**
TREB	**Trebinje**	**0.59**	**151**	*i*Pg		**Pg**	**11 04 24.7**	**-0.9**
TREB				*e*Sg		**Sg**	**11 04 34.0**	**+0.6**
RICI	**Ricice**	**0.66**	**293**	*i* Pg		**Pg**	**11 04 26.7**	**-0.1**
RICI					Sg	**Sb**	**11 04 36.6**	**-0.1**
MAKA	**Makarska**	**0.69**	**274**	*i* Pg		**Pg**	**11 04 27.1**	**-0.3**
MAKA					Sg	**Sb**	**11 04 37.4**	**-0.3**
UPM	**Unac-Piva**	**0.69**	**93**	*i*Pg		**Pb**	**11 04 27.7**	**-0.6**
UPM				*i* Sg		**Sb**	**11 04 38.3**	**+0.3**
NKME	**Niksic**	**0.87**	**123**	*i*Pg		**Pg**	**11 04 30.1**	**-0.7**
NKME				*i* Sg		**Sb**	**11 04 43.4**	**+0.5**
HCY	**Herceg Novi**	**0.88**	**153**	*i*Pg		**Pg**	**11 04 30.4**	**-0.7**
HCY				*i* Sg		**Sb**	**11 04 43.0**	**-0.3**
LSTV	**Lastovo**	**0.91**	**239**	*i* Pg		**Pg**	**11 04 30.3**	**-1.3**
LSTV					Sg	**Sg**	**11 04 43.9**	**+0.3**
CEME	**Cevo**	**0.99**	**134**	*i*Pg		**Pg**	**11 04 32.1**	**-0.9**
CEME				*i* Sg		**Sb**	**11 04 46.6**	**+0.3**
PLE	**Pljevlja**	**1.05**	**85**	*i*Pg		**Pn**	**11 04 34.6**	**-0.3**
PLE				*i* Sg		**Sn**	**11 04 50.5**	**+0.9**
RUDO	**Rudo**	**1.09**	**69**	*e*Pg		**Pg**	**11 04 34.9**	**-0.2**
RUDO				*e*Sg		**Sg**	**11 04 49.6**	**+0.3**
HVAR	**Hvar**	**1.11**	**267**	*e*Pg		**Pb**	**11 04 34.6**	**-0.7**
HVAR					Sg	**Sn**	**11 04 50.4**	**-0.5**
BUM	**Brajici-Budva**	**1.16**	**143**	*i*Pg		**Pn**	**11 04 36.1**	**-0.3**
BUM				*i* Sg		**Sn**	**11 04 52.8**	**+0.4**
KOME	**Kolasin**	**1.21**	**108**	*e*Pg		**Pg**	**11 04 37.7**	**+0.5**
KOME				*e*Sg		**Sn**	**11 04 54.5**	**+1.1**
KOME	**Kolasin**	**1.21**	**108**	*i*Pg		**Pn**	**11 04 36.6**	**-0.4**
KOME				*i* Sg		**Sn**	**11 04 55.3**	**+1.9**
BBLS	**Lazi&#263i**	**1.22**	**59**	*e*Pg		**Pg**	**11 04 37.8**	**+0.2**
BBLS				*e*Sg		**Sn**	**11 04 54.7**	**+0.8**
PDG	**Podgorica**	**1.25**	**130**	*e*Pg		**Pn**	**11 04 36.9**	**-0.6**
PDG				*e*Sg		**Sg**	**11 04 56.0**	**+1.7**
PDG	**Podgorica**	**1.25**	**130**	*i*Pg		**Pn**	**11 04 36.5**	**-1.0**
PDG				*i* Sg		**Sg**	**11 04 56.8**	**+2.5**
KIJV	**Kijevo**	**1.36**	**305**	*e*Pg		**Pg**	**11 04 40.3**	**+0.1**
KIJV					Sg	**Sg**	**11 05 00.3**	**+2.4**
DRME	**Dracevica, Mon**	**1.39**	**139**	*e*Pg		**Pb**	**11 04 39.9**	**-0.1**
DRME				*e*Sg		**Sg**	**11 04 59.9**	**+1.3**
DRME	**Dracevica, Mon**	**1.39**	**139**	*i*Pg		**Pb**	**11 04 39.8**	**-0.2**
DRME				*i* Sg		**Sg**	**11 05 00.3**	**+1.7**
IVA	**Berane**	**1.46**	**104**	*i*Pg		**Pg**	**11 04 41.7**	**-0.5**
IVA				*i* Sg		**Sg**	**11 05 04.2**	**+3.0**
SJES	**Sjenica**	**1.47**	**88**	*e*Pg		**Pg**	**11 04 41.8**	**-0.5**
SJES				*e*Sg		**Sg**	**11 05 02.6**	**+1.2**
ULC	**Ulcinj**	**1.59**	**143**	*i*Pg		**Pb**	**11 04 43.0**	**-0.5**
ULC				*i* Sg		**Sg**	**11 05 06.4**	**+1.3**
PVY	**Plav**	**1.60**	**113**	*i*Pg		**Pb**	**11 04 42.9**	**-0.9**
PVY				*i* Sg		**Sg**	**11 05 07.6**	**+2.0**
BLY	**Banja Luka**	**1.61**	**340**	*e*Pn		**Pg**	**11 04 45.1**	**+0.2**
BLY				*e*Sn		**Sg**	**11 05 07.0**	**+1.2**
BLY	**Banja Luka**	**1.61**	**340**	*e*Pn		**Pb**	**11 04 44.1**	**+0.3**
BLY				*e*Sn		**Sg**	**11 05 06.6**	**+0.8**
IVAS	**Ivanjica**	**1.63**	**77**	*e*Pg		**Pb**	**11 04 44.5**	**+0.2**
IVAS				*e*Sg		**Sg**	**11 05 08.8**	**+2.2**
TEKS	**Tekeris**	**1.73**	**40**	*e*Pn		**Pb**	**11 04 44.9**	**-1.1**
TEKS				*e*Sn		**Sg**	**11 05 09.4**	**-0.4**
ZIRJ	**Zirje**	**1.74**	**285**	*e*Pn		**Pb**	**11 04 45.4**	**-0.6**
ZIRJ					Sn	**Sg**	**11 05 09.8**	**-0.1**
MORI	**Morici**	**1.75**	**292**	*i* Pn		**Pb**	**11 04 46.3**	**0.0**
MORI					Sn	**Sg**	**11 05 10.2**	**-0.2**
TRUS	**Trudelj**	**2.03**	**60**	*e*Pn		**Pg**	**11 04 51.8**	**-1.1**
TRUS				*e*Sn		**Sb**	**11 05 15.9**	**-0.4**
UDBI	**Udbina**	**2.04**	**310**	*e*Pn		**Pb**	**11 04 51.5**	**+0.2**
UDBI					Sn	**Sb**	**11 05 18.0**	**+1.2**
DUGI	**Dugi Otok**	**2.24**	**291**	*e*Pn		**Pb**	**11 04 53.6**	**-0.9**
SELS	**Selova**	**2.31**	**89**	*e*Sn		**Sb**	**11 05 22.3**	**-2.1**
PLIT	**Plitvice**	**2.35**	**315**	*i* Pn		**Pb**	**11 04 55.7**	**-0.8**
PLIT					Sn	**Sb**	**11 05 26.3**	**+0.8**
VIRC	**Vir**	**2.35**	**298**	*i* Pn		**Pb**	**11 04 55.1**	**-1.4**
VIRC					Sn	**Sb**	**11 05 26.0**	**+0.4**
MOSL	**Moslavina**	**2.53**	**340**	*e*Pn		**Pb**	**11 04 57.7**	**-1.8**
MOSL					Sn	**Sb**	**11 05 30.0**	**-0.6**
NVLJ	**Novalja**	**2.59**	**302**	*e*Pn		**Pn**	**11 04 58.1**	**+2.1**
NVLJ					Sn	**Sb**	**11 05 31.7**	**-0.8**
BARS	**Barje**	**2.86**	**97**	*e*Pn		**Pn**	**11 05 01.4**	**+1.7**
BARS				*e*Sn		**Sb**	**11 05 36.7**	**-3.5**
MORH	**Mrgy, Hungar**	**3.02**	**9**	*e*Pn		**Pb**	**11 05 04.9**	**-2.9**
MORH				*e*Sn		**Sb**	**11 05 41.1**	**-3.5**
ZAPS	**Zavoj**	**3.41**	**88**	*e*Sn		**Sn**	**11 05 47.5**	**-0.4**
ZAPS				*e*Sn		**Sn**	**11 05 48.2**	**+0.3**

*NEIC **29** 11:06:02.9±2.0, 21°.36S±0°.04×68°.73W±0°.08, h115km±4km, mb4.8/245, Mwr4.8/44, Mwr4.9(GUC), Error ellipse: s-maj=10.5km s-min=6.5km az=88.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$0.53; $M_{r\theta}$0.06; $M_{\theta\phi}$0.38; $M_{\phi r}$-1.67; Fault plane solution: $M_0$1.78000×10^{16} NP1:ϕ_s241.49000°, δ14.86000°, λ-26.39000°. NP2:ϕ_s357.12000°, δ83.45000°, λ-103.37000°. Principal axes: T 1.8700, Plg37.0000°, Azm99.0000°; N -0.2034, Plg13.0000°, Azm359.0000°; P -1.6667, Plg50.0000°, Azm252.0000°;*
*VAO **29** 11:06:03.4±0.6, 21°.27S×68°.56W, h104km±5km, mb5.2*
*NEIC **29** 11:06:03, 21°.34S×68°.75W, h115km*
*SJA **29** 11:06:03.1±0.7, 21°.34S×68°.99W, h130km±3km, ML4.8, MW4.6*
*GUC **29** 11:06:05.0±0.7, 21°.34S×68°.94W, h121km±4km, ML5.0*
*IDC **29** 11:06:05.2±0.4, 21°.19S×68°.62W, h127km±3km, mb4.3/15, mbtmp4.7/19, MS3.3/13, Error ellipse: s-maj=13.8km s-min=10.3km az=74.0*
*GCMT **29** 11:06:06.9±0.4, 21°.37S±0°.03×68°.90W±0°.03, h145km±4km, MW4.9/76, Moment Tensor Solution. s19,c21; s76,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.79±.13; $M_{\theta\theta}$-0.17±.14; $M_{\phi\phi}$0.96±.20; $M_{r\theta}$0.48±.07; $M_{\theta\phi}$0.38±.15; $M_{\phi r}$-2.63±.10; Best double couple: $M_0$2.84300×10^{16} NP1:ϕ_s224.00000°, δ14.00000°, λ-38.00000°. NP2: ϕ_s351.00000°, δ82.00000°, λ-101.00000°. Principal axes: T 2.8590, Plg36.0000°, Azm91.0000°; N -0.0300, Plg11.0000°, Azm353.0000°; P -2.8280, Plg52.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 11:06:03.7±0.3, 21°30S±0°.03×68°86W±0°.03, h123km±2km, n372, σ1°86/325, mb4.8/132, 19C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.61**	**215**			**Pn**	**11 06 23.1**	**+0.2**
PB09					Sn	**Sn**	**11 06 36.8**	**-0.6**
PB09	**IPOC Station P**	**0.61**	**215**	*e*P		**Pn**	**11 06 23.0**	**+0.1**
PB09				*e*S		**Sn**	**11 06 37.3**	**-0.2**
PB09					IAML		11 06 38.5	
	comp=N,85μm,0.7s							
PB09	**IPOC Station P**	**0.61**	**215**	*e*P		**Pn**	**11 06 22.9**	**0.0**
PB09				*i* S		**Sn**	**11 06 37.0**	**-0.4**
PB09					IAML		11 06 38.6	
	comp=Z,48μm,0.4s							
PB01	**IPOC Station P**	**0.64**	**293**			**Pn**	**11 06 22.9**	**-0.2**
PB01					Sn	**Sn**	**11 06 37.4**	**-0.2**
PB01	**IPOC Station P**	**0.64**	**293**	*e*P		**Pn**	**11 06 23.1**	**0.0**
PB01				*e*S		**Sn**	**11 06 37.4**	**-0.2**
PB01	**IPOC Station P**	**0.64**	**293**	*e*P		**Pn**	**11 06 22.4**	**-0.7**
PB01				*e*S		**Sn**	**11 06 37.7**	**+0.1**
PB01					IAML		11 06 38.2	
	comp=Z,164μm,0.4s							
PB07	**IPOC Station P**	**1.04**	**246**			**Pn**	**11 06 26.3**	**-0.3**

PB05 IPOC Station P 1.98 219 *e*P **Pn** **11 06 36.7 -0.5**
PB05 *e*S **Sn** **11 07 01.2 -1.7**
PB05 IAML 11 07 02.0
comp=Z,8µm,0.5s
PSGCX Pisagua 2.06 325 Pn **11 06 37.4 -0.9**
PB10 IPOC Station P 2.70 215 Pn **11 06 45.0 -1.3**
PB10 IPOC Station P 2.70 215⇓ *e*P **Pn** **11 06 44.9 -1.4**
PB10 IAML 11 07 16.1
comp=E,7µm,0.4s
PB10 IPOC Station P 2.70 215 *i* P **Pn** **11 06 45.3 -0.9**
PB10 *i* S **Sn** **11 07 16.7 -2.3**
PB10 IAML 11 07 17.1
comp=Z,3µm,0.4s
PB12 IPOC Station P 3.01 332 Pn **11 06 49.5 -0.9**
PB12 IPOC Station P 3.01 332⇑ *e*P **Pn** **11 06 49.4 -0.9**
PB12 *e*S **Sn** **11 07 24.5 -1.7**
PB12 IPOC Station P 3.01 332 *e*P **Pn** **11 06 49.5 -0.9**
PB12 *e*S **Sn** **11 07 20.8 -5.5**
PB12 IAML 11 07 27.4
comp=Z,4µm,0.4s
PB16 IPOC Station P 3.01 348 Pn **11 06 51.9 +1.1**
AP01 Chacalluta 3.23 334 Pn **11 06 52.3 -0.9**
AP01 Chacalluta 3.23 334⇓ *e*P **Pn** **11 06 52.2 -0.9**
AP01 Chacalluta 3.23 334 *e*P **Pn** **11 06 52.5 -0.6**
AP01 *e*S **Sn** **11 07 25.8 -5.5**
AP01 IAML 11 07 35.8
comp=Z,4µm,0.3s
YJA Yavi 3.23 106 *e*P **Pn** **11 06 55.1 +1.5**
YJA *e*S **Sn** **11 07 33.4 +1.4**
YJA Yavi 3.23 106 *e*P **Pn** **11 06 56.3 +2.7**
YJA *e*S **Sn** **11 07 35.8 +3.8**
YJA IAML 11 07 43.6
comp=Z,29nm,1.5s
PB14 IPOC Station P 3.60 203 Pn **11 06 56.5 -1.8**
PB14 IPOC Station P 3.60 203 *e*P **Pn** **11 06 56.6 -1.8**
PB14 IPOC Station P 3.60 203 *e*P **Pn** **11 06 56.5 -1.8**
PB14 *e*S Sn **11 07 30.8 -10**
PB14 IAML 11 07 47.4
comp=Z,1µm,0.5s
HJA Humahuaca 3.72 121 *e*P **Pn** **11 07 01.9 +1.9**
HJA IAML 11 07 51.7
comp=Z,102nm,1.2s
SALTA 3.73 142⇑ *e*P **Pn** **11 07 01.2 +1.0**
SALTA 3.73 142 *e*P **Pn** **11 07 01.4 +1.2**
SALTA *e*P 11 07 01.5
SALTA *e*S **Sn** **11 07 47.5 +3.7**
SALTA IAML 11 07 55.6
comp=Z,220nm,0.8s
PB18 Visviri 3.74 351 *e*P **Pn** **11 07 02.2 +1.9**
GO02 Mina Guanaco 3.90 190 Pn **11 07 01.2 -1.2**
GO02 Mina Guanaco 3.90 190⇓ *e*P **Pn** **11 07 01.2 -1.2**
GO02 Mina Guanaco 3.90 190 *e*P **Pn** **11 07 01.1 -1.3**
GO02 *e*S Sn **11 07 36.1 -12**
GO02 IAML 11 08 18.9
comp=Z,2µm,0.6s
SLA San Lorenzo 4.60 138⇑ *e*P **Pn** **11 07 12.8 +1.3**
SLA San Lorenzo 4.60 138 *e*P **Pn** **11 07 12.8 +1.3**
SLA IAML 11 08 07.9
comp=Z,36nm,1.2s
LPAZ La Paz 5.03 8 P **Pn** **11 07 19.3 +1.5**
comp=Z,24nm,0.4s,baz=186,slow=6.2,SNR=95
LPAZ S **Sn** **11 08 12.1 -3.2**
comp=Z,228nm,0.7s,baz=186,slow=13,SNR=7.1
LPAZ LR LR 11 09 56.6
comp=Z,320nm,19.3s,baz=196,slow=47
LPAZ La Paz 5.03 8 Pn **11 07 18.6 +0.8**
LPAZ La Paz 5.03 8 *e*P **Pn** **11 07 19.7 +1.9**
LPAZ IAML 11 08 22.2
comp=Z,107nm,0.8s
LPAZ La Paz 5.03 8 *e*P **Pn** **11 07 16.6 -1.2**
LPAZ La Paz 5.03 8 P **Pn** **11 07 19.9 +2.1**
AC01 Pan de Azucar 5.08 198 Pn **11 07 15.4 -2.4**
AC01 Pan de Azucar 5.08 198 *e*P **Pn** **11 07 15.0 -2.8**
AC01 Pan de Azucar 5.08 198 *e*P **Pn** **11 07 15.1 -2.8**
AC01 *e*S Sn **11 07 56.2 -19**
AC01 IAML 11 08 40.3
comp=Z,507nm,0.6s
AC02 Maricunga 5.52 182 Pn **11 07 23.1 -1.0**
AC06 Mina Casimiro 6.18 192 Pn **11 07 29.5 -3.1**
GO03 Copiapo 6.39 191 Pn **11 07 32.5 -3.0**
AC04 Llanos de Chal 7.16 196 Pn **11 07 41.1 -4.8**
AC05 El Transito 7.61 189 Pn **11 07 48.8 -3.3**
LCO Las Campanas 7.86 192 Pn **11 07 51.3 -4.2**
CO01 Juntas del Tor 8.71 187 Pn **11 08 04.0 -3.0**
GO04 Tololo Observa 9.01 191 Pn **11 08 07.6 -3.4**
SIV San Ignacio 9.07 56 P **Pn** **11 08 09.3 -2.5**
comp=Z,168nm,0.8s,baz=274,slow=13
CO06 Fray Jorge 9.66 194 Pn Pn 11 08 14.0 -5.6
CO02 Combarbal 10.05 191 Pn Pn 11 08 19.8 -5.1
CFA Coronel Fontan 10.28 177 P **Pn** **11 08 23.8 -4.1**
comp=Z,3.2nm,0.3s,baz=14,slow=10,SNR=8.7
MURT Porto Murtinho 10.48 94 *e*P **Pn** **11 08 27.2 -3.5**
PTLB Pontes e Lacer 10.91 59 Pn **11 08 33.7 -2.7**
PTLB Pontes e Lacer 10.91 59 *e*P **Pn** **11 08 33.3 -3.2**
BDQN Bodoquena, MS 11.36 88 *e*P **Pn** **11 08 38.6 -3.8**
BDQN *e*S **Sn** **11 10 39.7 -7.8**
VA03 San Esteban 11.52 187 Pn **11 08 39.9 -4.6**
CPUP Villa Florida 11.68 118 P **Pn** **11 08 43.5 -3.2**
comp=Z,4.7nm,0.8s,baz=156,slow=12,SNR=29
CPUP LR LR 11 14 15.1
comp=Z,23nm,20.3s,baz=164,slow=42
CPUP Villa Florida 11.68 118 Pn **11 08 44.0 -2.6**
CPUP Villa Florida 11.68 118 *e*P **Pn** **11 08 43.0 -3.6**
VILB Vilhena 11.72 46 Pn **11 08 46.0 -1.3**
VILB Vilhena 11.72 46 *e*P **Pn** **11 08 44.6 -2.6**
NNA Nana 12.00 319 P **Pn** **11 08 51.7 +0.7**
comp=Z,5.1nm,0.3s,baz=189,slow=16,SNR=3.8
NNA S **Sn** **11 10 55.8 -7.5**
comp=Z,16nm,0.4s,baz=17,slow=19,SNR=2.6
NNA Nana 12.00 319 Pn **11 08 50.5 -0.5**
NNA Nana 12.00 319 P Pn 11 08 44.5 -6.5
MT08 Bocatoma Ro 12.14 185 Pn **Pn** **11 08 50.3 -2.6**
MT05 Renca 12.16 187 Pn **Pn** **11 08 51.6 -1.4**
MT03 Universidad Ad 12.23 187 Pn **Pn** **11 08 50.7 -3.3**
AQDB Aquidauana 12.33 89 Pn **11 08 51.8 -3.4**
AQDB Aquidauana 12.33 89 *e*P **Pn** **11 08 51.8 -3.4**
MT13 San Alfonso 12.46 186 Pn **11 08 53.6 -3.3**
AMBA Amambai (Brazi 12.96 100 *e*P **Pn** **11 09 01.0 -2.4**
BO01 Tunca 13.19 188 Pn **11 09 04.5 -1.8**
BO02 Sierra Bellavi 13.55 187 Pn **11 09 09.2 -1.7**
SALV Santo Antonio 13.59 69 *e*P **Pn** **11 09 08.2 -3.3**
PP1B Ponte de Pedra 13.69 77 *e*P **Pn** **11 09 10.0 -2.9**
PSAL Palomas, Salto 14.03 136 *e*P **Pn** **11 09 14.2 -2.8**
PDRB Porto dos Gac 15.10 52 *e*P **Pn** **11 09 27.4 -3.4**
C2SB Chapadao do Su 15.27 83 *e*P **Pn** **11 09 30.1 -2.7**
PTGB Pitanga 15.83 106 *e*P **Pn** **11 09 37.9 -2.0**
CLDB Colider 16.27 52 *e*P **Pn** **11 09 43.0 -2.3**
ITAB Concordia 16.36 114 Pn **11 09 43.8 -2.4**
ITAB Concordia 16.36 114 *e*P **Pn** **11 09 44.1 -2.1**
CPSB Cacapava Do Su 16.57 126 *e*P **Pn** **11 09 46.8 -2.0**
ATAH Atahualpa 16.83 325 P **P** **11 09 57.0 +4.4**
comp=Z,10nm,0.8s,baz=162,slow=11,SNR=6.5
ARAG Araguaiana, MT 17.09 74 *e*P **P** **11 09 52.6 -2.4**
PLTB Pedras Altas 17.16 131 P **11 09 52.8 -2.9**
PLTB Pedras Altas 17.16 131 *e*P **P** **11 09 54.1 -1.5**
ITRB Iturama 17.41 88 *e*P **P** **11 09 56.4 -2.2**
TRQA Tornquist 17.73 162 P **P** **11 09 59.4 -2.5**
CNLB Canela 18.12 120 *e*P **P** **11 10 04.8 -1.5**
TEFE Tefe 18.16 14 *e*P **P** **11 10 06.6 -0.1**
BB19B Bebedouro 18.96 93 *e*P **P** **11 10 13.6 -2.0**
SNDB Serra Nova Dou 19.20 64 *e*P **P** **11 10 16.3 -1.9**
NPGB Novo Progresso 19.27 45 *e*P **P** **11 10 17.2 -1.7**
PLCA Paso Flores 19.43 184 P **P** **11 10 21.5 +1.0**
comp=Z,24nm,0.8s,baz=352,slow=10,SNR=29
PLCA Paso Flores 19.43 184 *e*P **P** **11 10 21.2 +0.8**
MACA Manacapuru-AM 19.71 25 P **P** **11 10 22.4 -1.2**
MACA Manacapuru-AM 19.71 25 *e*P **P** **11 10 22.2 -1.4**
IPMB Ipameri, GO 19.73 84 *e*P **P** **11 10 21.3 -2.6**
RCLB Rio Claro- Sao 19.83 97 *e*P **P** **11 10 23.1 -1.9**
SPB Sao Paulo 19.94 101 *e*P **P** **11 10 24.3 -1.7**
MCRA Macar, Loja 19.98 326 P Pn 11 10 28.5 -1.0
comp=Z,39nm,0.9s
PET01 Itanhaem-SP 20.12 103 *e*P **P** **11 10 26.5 -1.6**
VAO Valinhos 20.35 99 P **P** **11 10 28.6 -2.0**
VAO Valinhos 20.35 99 *e*P **P** **11 10 28.6 -2.0**
BDFB Brasilia 20.55 78 P **P** **11 10 31.2 -1.7**
comp=Z,43nm,0.6s,baz=308,slow=6.9
comp=Z,43nm,0.6s
SGC2 Sao Gabriel da 21.10 5 P **P** **11 10 38.2 -0.4**
comp=Z,520nmcomp=Z,27nm,0.7s
ITTB Itaituba 21.11 39 *e*P **P** **11 10 37.3 -1.5**
PMNB Patos De Minas 21.26 87 *e*P **P** **11 10 38.0 -2.4**

PARB Paraibuna 21.59 100 *e*P **P** **11 10 41.3 -2.6**
LL02 Futaleuf 21.97 186 P **P** **11 10 44.7 -2.9**
SLP01 Ubatuba-SP 22.02 100 *e*P **P** **11 10 45.8 -2.6**
PTLC Puerto Leguiza 22.11 344 P **P** **11 10 51.4 +2.1**
comp=Z,1µmcomp=Z,17nm,0.8s
GO07 Milladeo Hill, 22.12 189 P **P** **11 10 47.2 -1.9**
BSCB Bom Sucesso 22.47 94 *e*P **P** **11 10 50.1 -2.8**
AY01 Puyuhuapi 23.27 187 P **P** **11 10 57.8 -2.5**
OTAV Otavalo 23.36 335 P **11 11 01.0 -0.9**
OTAV Otavalo 23.36 335 *e*P **P** **11 11 04.0 +2.0**
OTAV Otavalo 23.36 335 P **P** **11 11 03.5 +1.5**
comp=Z,15nm,1.5s
VAS01 Vassouras-RJ 23.62 97 *e*P **P** **11 11 01.0 -2.7**
FLOC Florencia 23.69 343 P **11 11 04.0 -0.5**
FLOC Florencia 23.69 343 P **P** **11 11 05.5 +1.1**
comp=Z,512nmcomp=Z,42nm,1.0s
PRPB Parauapebas 23.80 54 *e*P **P** **11 11 03.8 -1.6**
GCUF Volcan Galeras 23.87 339 P **P** **11 11 09.4 +2.8**
comp=Z,656nmcomp=Z,28nm,0.8s
DIAM Diamantina, MG 23.88 87 *e*P **P** **11 11 06.2 -0.1**
MAL2 Monte Alegre, 23.91 39 P **P** **11 11 04.4 -2.0**
SMTB Santa Maria do 23.93 62 *e*P **P** **11 11 05.7 -1.0**
JANB Januaria 24.12 79 *e*P **P** **11 11 06.3 -2.1**
GARC Garzon, Huila 24.23 344 P **P** **11 11 11.7 +2.2**
comp=Z,39nm,1.0s
COYC Coyhaique 24.36 185 P **P** **11 11 07.7 -2.4**
SDBA SAO DESIDERIO 24.55 73 *e*P **P** **11 11 11.1 -1.2**
BBAC Balboa, Cauca 24.59 339 P **P** **11 11 15.0 +2.3**
comp=Z,519nmcomp=Z,57nm,0.8s
POPC Popayan, Colom 24.90 341 P **P** **11 11 18.1 +2.5**
comp=Z,30nm,1.0s
BOAV Boa Vista 24.92 20 P **11 11 14.3 -1.2**
BOAV IAmb IAmb 11 11 18.3
comp=Z,21nm,0.7s
BOAV Boa Vista 24.92 20 *e*P **P** **11 11 16.6 +1.0**
BOAV Boa Vista 24.92 20 P **P** **11 11 16.2 +0.6**
comp=Z,32nm,0.9s
CAM01 Campos-RJ 25.30 96 *e*P **P** **11 11 17.6 -1.3**
PRAC Prado 25.55 346 P **P** **11 11 22.6 +1.3**
comp=Z,17nm,1.0s
ORTC Ortega, Tolima 25.82 345 P **P** **11 11 25.2 +1.5**
comp=Z,42nm,1.1s
SJMB Sao Joao De Ma 26.12 89 *e*P **P** **11 11 24.7 -1.7**
YOTC Yotoco, Valle 26.17 343 P **P** **11 11 27.7 +0.7**
comp=Z,10.0nm,1.3s
CHIC Chingaza 26.21 349 P **P** **11 11 28.6 +1.0**
comp=Z,9.3nm,1.9s
BSFB Barra de Sao F 26.42 90 *e*P **P** **11 11 28.1 -1.0**
RIB01 Linhares ES 26.76 91 *e*P **P** **11 11 32.5 +0.4**
GUY2C Guyana, Caldas 27.12 346 P **P** **11 11 36.6 +0.7**
comp=Z,17nm,0.9s
RUSC La Rusia 27.34 351 P **11 11 36.2 -1.6**
TMAB Tom-Au,PA,Br 27.62 50 *e*P **P** **11 11 38.9 -1.0**
GUA01 Guaratinga, BA 27.86 85 *e*P **P** **11 11 40.4 -1.6**
CBOC Ciudad Bolivar 27.89 345 P **P** **11 11 42.5 +0.1**
PTBC PUERTO BERRIO, 28.20 348 P **P** **11 11 43.4 -1.6**
CMC01 Camacan, BA 28.45 83 *e*P **P** **11 11 46.0 -1.2**
SDV Santo Domingo 30.05 357 LR LR 11 26 52.0
comp=Z,74nm,18.2s,baz=229,slow=42
MDP Montagnes des 30.68 33 LR LR 11 25 01.4
comp=Z,66nm,21.1s,baz=214,slow=37
RCBR Riachuelo 35.43 69 P **11 12 45.2 -3.1**
RCBR Riachuelo 35.43 69 *e*P **P** **11 12 47.4 -0.9**
RCBR Riachuelo 35.43 69 P **P** **11 12 49.8 +1.4**
SJG San Juan 39.26 4 LR LR 11 31 38.4
comp=Z,19nm,19.1s,baz=174,slow=39
PMSA Palmer Station 43.57 177 LR LR 11 33 01.3
comp=Z,42nm,20.9s,baz=316,slow=37
SMAI San Martin Ant 46.84 179 P **P** **11 14 23.0 +2.2**
ZAIG Zacatecas 54.76 321 IAmb IAmb 11 15 24.8
comp=Z,17nm,1.2s
X48A Hartselle 58.08 342 P **11 15 44.0 -0.1**
TKL Tuckaleechee C 58.38 346 LR LR 11 43 09.7
comp=Z,20nm,19.1s,baz=171,slow=38
HNDO Hondo 58.41 329 P **P** **11 15 46.0 -0.6**
HNDO IAmb IAmb 11 16 32.8
comp=Z,12nm,0.8s
DRIO Del Rio 58.98 328 P **11 15 50.2 -0.3**
DRIO IAmb IAmb 11 15 52.5
comp=Z,8.1nm,1.0s
V48A Smith Brothers 59.23 343 IAmb IAmb 11 15 53.4
comp=Z,12nm,1.0s
CLTN Cedars of Leba 59.42 344 IAmb IAmb 11 15 54.8
comp=Z,8.9nm,1.0s
JCT Junction City 59.45 329 IAmb IAmb 11 15 55.8
comp=Z,7.8nm,0.8s
WVT Waverly 59.87 342 P **11 15 56.5 +0.1**
WVT IAmb IAmb 11 15 57.2
comp=Z,14nm,0.9s
WVT Waverly 59.87 342 P **P** **11 15 56.6 +0.1**
S54A Dingess, Beckl 59.94 349 P **P** **11 15 56.8 -0.1**
SAND Sanderson 60.18 327 IAmb IAmb 11 16 01.2
comp=Z,16nm,1.2s
VNA3 Neumayer Olymp 60.25 161⇓ P **P** **11 15 60.0 +1.3**
comp=Z,6.4nm,0.7s
VNA1 Neumayer--Stat 60.46 161⇓ P **P** **11 16 00.7 +0.7**
comp=Z,4.0nm,0.9s
OZNA Ozona 60.46 328 IAmb IAmb 11 16 03.3
comp=Z,22nm,1.5s
TXAR Lajitas Array 60.49 325 P **P** **11 16 02.5 +1.6**
comp=Z,1.2nm,0.6s,baz=151,slow=9.1,SNR=17
TXAR PcP **sP** **11 16 43.8 -1.1**
comp=Z,1.8nm,0.8s,baz=107,slow=5.2,SNR=6.9
comp=Z,1.2nm,0.6s
TXAR Lajitas Array 60.49 325 P **P** **11 16 02.1 +1.2**
TX31 Lajitas Ar. Si 60.49 325 P **11 16 01.5 +0.6**
WHAR Wooly Hollow 60.51 338 P **P** **11 16 01.3 +0.5**
PLPT Palo Pinto 60.72 332 IAmb IAmb 11 16 04.7
comp=Z,12nm,1.2s
VNA2 Neumayer--Watz 60.83 161⇑ P **P** **11 16 03.6 +1.1**
comp=Z,9.8nm,0.7s,baz=274,slow=6.9
FCAR Ozark Folk Cen 60.99 338 IAmb IAmb 11 17 40.8
comp=Z,24nm,1.8s
ABTX Abilene, Hawle 61.16 330 IAmb IAmb 11 16 07.4
comp=Z,16nm,1.1s
PBMO Poplar Bluff 61.25 340 IAmb IAmb 11 16 10.6
comp=Z,8.6nm,0.8s
ALPN Alpine 61.30 326 P **11 16 07.6 +1.1**
ALPN IAmb IAmb 11 16 09.0
comp=Z,21nm,1.7s
WCI Wyandotte Cave 61.44 344 P **P** **11 16 07.0 +0.1**
CGM3 Cape Girardeau 61.49 341 IAmb IAmb 11 16 08.7
comp=Z,12nm,1.0s
WTFS Witchita Falls 61.60 332 P **11 16 09.0 +0.7**
MNHN Monahans 61.62 327 IAmb IAmb 11 16 10.8
comp=Z,9.6nm,0.8s
S44A Carbondale 61.74 342 IAmb IAmb 11 16 10.3
comp=Z,14nm,1.0s
APMT Aspermont 61.97 331 IAmb IAmb 11 16 12.8
comp=Z,14nm,1.0s
HHAR Hobbs 61.99 337 IAmb IAmb 11 16 12.4
comp=Z,15nm,1.1s
SN07 Snyder 07 62.13 330 IAmb IAmb 11 16 13.6
comp=Z,11nm,0.7s
MGMO Mountain Grove 62.19 339 IAmb IAmb 11 16 13.1
comp=Z,9.3nm,1.0s
PECS Pecos 62.21 326 IAmb IAmb 11 16 46.9
comp=Z,22nm,1.6s
VHRN Van Horn 62.33 325 IAmb IAmb 11 16 15.3
comp=Z,10nm,0.8s
POST Post 62.40 329 IAmb IAmb 11 16 47.8
comp=Z,8.2nm,0.9s
SNAA Sanae 62.45 161⇓ P **P** **11 16 14.3 +0.8**
comp=Z,150nm,0.6s
SNAA Sanae 62.45 161 P **P** **11 16 14.3 +0.8**
comp=Z,6.3nm,0.7s,baz=287,slow=6.6,SNR=33
comp=Z,6.3nm,0.7s
SNAA Sanae 62.45 161 P **P** **11 16 13.7 +0.1**
SNAA IAmb IAmb 11 17 00.1
comp=Z,21nm,1.4s
CCM Cathedral Cave 62.68 340 P **11 16 15.5 +0.2**
CCM IAmb IAmb 11 16 16.7
comp=Z,14nm,0.8s
CCM Cathedral Cave 62.68 340 P **P** **11 16 15.9 +0.6**
CCM Cathedral Cave 62.68 340 pP pP 11 16 45.8 -0.5
Q44A Meyer Farm, Va 62.79 342 IAmb IAmb 11 16 17.1
comp=Z,19nm,1.0s
R40A Maddies Statio 63.22 340 IAmb IAmb 11 16 20.2
comp=Z,10nm,0.8s
T35A Sooner Cattle 63.51 335 P **11 16 21.9 +1.1**
T35A IAmb IAmb 11 16 23.4
comp=Z,22nm,1.3s
SMWD Samnorwood 63.51 332 P **11 16 21.4 +0.4**
SMWD IAmb IAmb 11 16 22.8
comp=Z,18nm,0.9s
MSTX Muleshoe 63.75 329 P **P** **11 16 21.9 -0.8**

MSTX IAmb IAmb 11 16 25.0
comp=Z,19nm,1.0s
TROLL Troll, Antarti 64.17 161⇓ P **P** **11 16 26.4 +1.4**
comp=Z,471nm,0.6s
P40A Paris 64.28 340 IAmb IAmb 11 16 27.1
comp=Z,15nm,0.9s
P38A Dawn 64.84 339 IAmb IAmb 11 16 30.9
comp=Z,10nm,0.9s
121A Cookes Peak, D 65.19 324 IAmb IAmb 11 16 35.7
comp=Z,13nm,1.1s
N38A Joes South For 65.80 340 IAmb IAmb 11 16 37.0
comp=Z,19nm,1.1s
Y22A Socorro 65.83 326 IAmb IAmb 11 17 09.1
comp=Z,35nm,1.9s
L40A Anamosa 66.35 342 IAmb IAmb 11 16 40.2
comp=Z,18nm,1.1s
ANMO Albuquerque 66.36 327 P **11 16 40.5 +0.9**
ANMO Albuquerque 66.36 327 P **P** **11 16 41.6 +2.0**
ANMO Albuquerque 66.36 327 pP pP 11 17 13.7 +3.4
TASM ASL Pad, Albuq 66.36 327 IAmb IAmb 11 16 42.6
comp=Z,8.7nm,1.0s
SCIA State Center 66.81 340 IAmb IAmb 11 16 44.0
comp=Z,16nm,0.9s
JFWS Jewell Farm 66.86 343 P **P** **11 16 43.3 +0.9**
JFWS IAmb IAmb 11 16 43.7
comp=Z,16nm,0.8s
KSCO Kaye Shedlock' 67.82 332 IAmb IAmb 11 16 51.4
comp=Z,14nm,0.9s
SDCO Great Sand Dun 68.10 329 IAmb IAmb 11 16 53.6
comp=Z,17nm,1.1s
DBIC Dimbokro 68.64 73 P **P** **11 16 53.1 -1.0**
comp=Z,29nm,0.7s,baz=261,slow=6.1,SNR=39
DBIC LR LR 11 45 49.7
comp=Z,24nm,20.0s,baz=352,slow=35
comp=Z,29nm,0.7s
DBIC Dimbokro 68.64 73 P **11 16 54.2 +0.1**
DBIC Dimbokro 68.64 73 P **P** **11 16 54.1 0.0**
DBIC Dimbokro 68.64 73 pP **pP** **11 17 27.0 +1.3**
DBIC sP sP 11 17 39.7 +0.3
I37A Lemond, Waseca 68.78 341 IAmb IAmb 11 16 55.7
comp=Z,14nm,0.8s
QSPA South Pole Qui 68.89 180 P P 11 17 00.4 +5.4
comp=Z,10nm,0.6s,baz=169,slow=0.8,SNR=135
QSPA South Pole Qui 68.89 180 P **P** **11 16 57.1 +2.1**
QSPA IAmb IAmb 11 17 00.9
comp=Z,11nm,0.7s
QSPA South Pole Qui 68.89 180 P P 11 17 01.0 +5.9
QSPA South Pole Qui 68.89 180 pP **pP** **11 17 32.7 +6.2**
QSPA sP sP 11 17 46.0 +5.7
MVCO Mesa Verde 69.15 327 IAmb IAmb 11 17 00.4
comp=Z,16nm,0.9s
WUAZ Wupatki 69.40 324 IAmb IAmb 11 17 02.4
comp=Z,22nm,0.9s
ECSD EROS Data Cent 69.55 339 IAmb IAmb 11 17 44.3
comp=Z,25nm,1.6s
PV13 Radium Mtn., P 70.05 327 IAmb IAmb 11 19 19.4
comp=Z,13nm,0.8s
BC3 Big Chuckawall 70.41 320 IAmb IAmb 11 17 08.4
comp=Z,21nm,0.9s
W13A Hualapai Mount 70.50 322 IAmb IAmb 11 17 09.2
comp=Z,9.1nm,0.8s
O20A White River Ci 71.29 329 IAmb IAmb 11 17 13.3
comp=Z,21nm,0.9s
V12A Nelson 71.50 322 IAmb IAmb 11 17 14.9
comp=Z,12nm,0.9s
LCMT Little Creek M 71.52 324 IAmb IAmb 11 17 15.2
comp=Z,11nm,0.9s
Q16A Castle Valley 71.82 326 IAmb IAmb 11 17 17.5
comp=Z,12nm,0.9s
SZCU Shurtz Canyon 71.86 324 IAmb IAmb 11 17 17.4
comp=Z,46nm,1.9s
RDMU Red Mountain 72.27 329 IAmb IAmb 11 17 18.8
comp=Z,14nm,0.8s
MWC Mount Wilson 72.38 319 P **P** **11 17 17.9 +1.3**
MWC IAmb IAmb 11 17 20.2
comp=Z,15nm,0.8s
PASC Pasadena Art C 72.42 319 P **P** **11 17 17.1 +0.4**
RSSD Black Hills 72.64 334 P **11 17 17.7 -0.3**
RSSD Black Hills 72.64 334 P **P** **11 17 19.8 +1.8**
MPU Maple Canyon 72.88 327 IAmb IAmb 11 17 23.0
comp=Z,16nm,1.0s
GWY Greenwater Val 72.88 321 IAmb IAmb 11 17 22.9
comp=Z,15nm,0.8s
WSHM Spangler Hills 72.96 320 IAmb IAmb 11 17 23.5
comp=Z,15nm,0.8s
TPNV Topopah Spring 73.16 322 IAmb IAmb 11 17 25.3
comp=Z,16nm,0.9s
AGMN Agassiz Nation 73.38 342 IAmb IAmb 11 19 43.1
comp=Z,39nm,2.0s
TCUT Toone Canyon 73.59 328 IAmb IAmb 11 17 26.9
comp=Z,12nm,0.8s
ISA Isabella, Lake 73.59 320 P **P** **11 17 26.2 +2.5**
ISA IAmb IAmb 11 17 27.4
comp=Z,16nm,0.8s
DUG Dugway, Tooele 73.61 326 IAmb IAmb 11 17 27.4
comp=Z,12nm,1.0s
PDAR Pinedale Array 73.96 330 P **P** **11 17 27.1 +1.3**
comp=Z,1.8nm,0.6s,baz=130,slow=7.4,SNR=15
comp=Z,1.8nm,0.6s
PDAR Pinedale Array 73.96 330 P **P** **11 17 26.3 +0.5**
HWUT Hardware Ranch 74.04 328 P **P** **11 17 27.0 +0.7**
HWUT IAmb IAmb 11 17 30.8
comp=Z,14nm,0.8s
HVU Hansel Valley 74.77 327 IAmb IAmb 11 17 33.4
comp=Z,12nm,0.9s
SNOW Snow King Moun 75.05 330 IAmb IAmb 11 17 35.4
comp=Z,13nm,0.8s
ULM Lac du Bonnet 75.14 342 P **P** **11 17 32.7 +0.6**
comp=Z,4.8nm,0.7s,baz=148,slow=6.9,SNR=5.3
comp=Z,4.8nm,0.7s
LHV Little Huntoon 75.36 322 IAmb IAmb 11 17 37.7
comp=Z,10nm,0.8s
NVAR Mina Array Bea 75.36 322 P **P** **11 17 36.4 +2.4**
comp=Z,5.6nm,0.8s,baz=157,slow=6.5,SNR=38
NVAR pP **pP** **11 18 06.4 +1.0**
comp=Z,1.8nm,0.9s,baz=157,slow=7.4,SNR=2.9
comp=Z,5.6nm,0.8s
NVAR Mina Array Bea 75.36 322 P **P** **11 17 34.6 +0.6**
PPT Papeete 75.41 257 P **P** **11 17 38.2 +3.7**
comp=Z,21nm,0.8s,baz=114,slow=14,SNR=2.5
comp=Z,21nm,0.8s
RLMT Red Lodge 75.66 332 IAmb IAmb 11 17 38.7
comp=Z,12nm,0.7s
YNR Norris Junctio 75.98 331 IAmb IAmb 11 18 24.5
comp=Z,26nm,1.6s
YMR Madison River 76.07 330 IAmb IAmb 11 17 42.0
comp=Z,24nm,1.1s
YHB Horse Butte 76.24 330 IAmb IAmb 11 17 42.6
comp=Z,16nm,0.8s
YHL Hebgen Lake 76.31 330 IAmb IAmb 11 17 42.8
comp=Z,11nm,0.8s
PNTR Pine Nut 76.56 322 IAmb IAmb 11 17 44.6
comp=Z,13nm,0.8s
HLID Hailey 76.90 328 IAmb IAmb 11 17 46.4
comp=Z,20nm,0.9s
BCYI Bear Canyon 76.95 329 IAmb IAmb 11 17 46.7
comp=Z,21nm,1.6s
VNDA Vanda 77.05 190 P **P** **11 17 44.9 +2.1**
comp=Z,3.9nm,1.0s,baz=119,slow=7.1,SNR=5.4
comp=Z,3.9nm,1.0s
TORD Torodi Ar. Bea 77.25 70 P **P** **11 17 44.6 -0.2**
comp=Z,13nm,0.8s,baz=269,slow=3.2,SNR=83
TORD pP **pP** **11 18 17.4 +0.2**
comp=Z,5.7nm,0.7s,baz=270,slow=3.4,SNR=3.4
TORD sP **sP** **11 18 29.2 -1.7**
comp=Z,13nm,0.8s,baz=267,slow=3.3,SNR=5.2
comp=Z,13nm,0.8s
DLMT Dillon 77.35 330 IAmb IAmb 11 17 48.5
comp=Z,28nm,1.4s
MFID Camas Ranch 77.50 327 IAmb IAmb 11 17 49.5
comp=Z,21nm,1.2s
BEKR Beckworth 77.51 322 IAmb IAmb 11 17 49.5
comp=Z,39nm,1.8s
ORV Oroville 77.97 321 IAmb IAmb 11 17 52.0
comp=Z,21nm,1.1s
EGMT Eagleton 78.14 333 IAmb IAmb 11 17 51.7
comp=Z,12nm,0.9s
O03E Paynes Creek 78.63 321 IAmb IAmb 11 17 54.3
comp=Z,12nm,0.9s
PLID Pearl Lake 78.79 328 IAmb IAmb 11 17 56.1
comp=Z,22nm,0.8s
BMO Blue Mountains 79.27 327 IAmb IAmb 11 17 58.7
comp=Z,19nm,0.9s
N02D Trinity Center 79.59 322 IAmb IAmb 11 18 00.8
comp=Z,16nm,1.1s
KHBM Hayfork Bally 79.69 321 IAmb IAmb 11 18 01.4
comp=Z,23nm,0.9s
I07A Izee 79.87 326 IAmb IAmb 11 18 02.4

	comp=Z,14nm,0.9s							
F10A	**Beach Ranch, E**	**80.02**	**328**	IAmb	IAmb	11 18 06.0		
	comp=Z,17nm,1.0s							
TSUM	**Tsumeb**	**80.06**	**107**	P	**P**	**11 17 59.2**	**-1.3**	
TSUM				IAmb	IAmb	11 18 02.5		
	comp=Z,17nm,0.8s							
TSUM	**Tsumeb**	**80.06**	**107**	P	**P**	**11 18 01.3**	**+0.8**	
TSUM	**Tsumeb**	**80.06**	**107**	pP	**pP**	**11 18 35.1**	**+2.2**	
TSUM				sP	sP	11 18 47.1	+0.7	
J05D	**Fort Rock, OR**	**80.27**	**324**	IAmb	IAmb	11 18 04.3		
	comp=Z,23nm,1.0s							
LNOR	**Lincton Mounta**	**80.48**	**327**	IAmb	IAmb	11 18 04.1		
	comp=Z,22nm,1.6s							
WIFE	**Three Sisters-**	**81.10**	**324**		**P**	**11 18 04.9**	**-0.5**	
KOOLE	**Kule**	**81.12**	**111**	P	**P**	**11 18 04.8**	**-1.3**	
KOOLE				IAmb	IAmb	11 18 08.5		
	comp=Z,16nm,1.0s							
I04A	**Tendick Farm,**	**81.25**	**324**	IAmb	IAmb	11 18 08.5		
	comp=Z,16nm,1.0s							
F07A	**Phinny Hill Vi**	**81.33**	**327**	IAmb	IAmb	11 18 10.2		
	comp=Z,34nm,1.6s							
HAWA	**Hanford**	**81.47**	**327**	IAmb	IAmb	11 18 10.4		
	comp=Z,16nm,0.8s							
MD31	**MD31**	**81.50**	**50**	P	**P**	**11 18 09.7**	**+2.0**	
MDT	**Midelt**	**81.59**	**50**	LR	LR	11 55 00.0		
	comp=Z,38nm,18.9s,baz=222,slow=36							
H04A	**Detroit Lake**	**81.71**	**325**	IAmb	IAmb	11 18 11.0		
	comp=Z,11nm,0.8s							
WAH2	**Wahluke Slope**	**81.73**	**327**	IAmb	IAmb	11 18 11.6		
	comp=Z,10nm,0.7s							
HOOD	**Mount Hood Mea**	**81.84**	**325**	IAmb	IAmb	11 18 15.6		
	comp=Z,18nm,0.8s							
LTY	**Liberty**	**82.63**	**327**	IAmb	IAmb	11 18 16.0		
	comp=Z,14nm,1.1s							
D05A	**Enumclaw**	**83.25**	**327**	P	**P**	**11 18 15.9**	**-0.4**	
D05A				IAmb	IAmb	11 18 18.9		
	comp=Z,16nm,0.8s							
BOSA	**Boshof**	**83.50**	**118**	P	**P**	**11 18 18.7**	**+0.3**	
	comp=Z,5.3nm,0.9s,baz=160,slow=4.9,SNR=5.1							
BOSA				pP	**pP**	**11 18 51.4**	**+0.3**	
	comp=Z,7.3nm,1.0s,baz=229,slow=4.6,SNR=3.9							
	comp=Z,5.3nm,0.9s							
CCD	**Concordia, Ant**	**83.51**	**183**	P	**P**	**11 18 19.8**	**+1.9**	
CCD	**Concordia, Ant**	**83.51**	**183**	pP	pP	11 18 51.4	+1.0	
EDM	**Edmonton**	**83.60**	**335**	IAmb	IAmb	11 18 19.4		
	comp=Z,16nm,0.8s							
MAW	**Mawson**	**84.51**	**163**	P	**P**	**11 18 24.0**	**+1.5**	
	comp=Z,4.4nm,0.5s,baz=208,slow=5.4,SNR=8.3							
	comp=Z,4.4nm,0.5s							
TAM	**Tamanrasset**	**84.69**	**63**	P	**P**	**11 18 23.7**	**-0.7**	
LBTB	**Lobatse**	**85.06**	**115**	LR	LR	11 52 24.6		
	comp=Z,20nm,20.8s,baz=196,slow=33							
LBTB	**Lobatse**	**85.06**	**115**		**P**	**11 18 25.2**	**-1.1**	
LBTB	**Lobatse**	**85.06**	**115**	P	**P**	**11 18 27.6**	**+1.3**	
LBTB	**Lobatse**	**85.06**	**115**	pP	pP	11 18 59.2	+0.1	
LLLB	**Lillooet**	**85.46**	**329**	IAmb	IAmb	11 18 29.6		
	comp=Z,10nm,0.9s							
ESDC	**Sonseca Array**	**85.66**	**44**	P	**P**	**11 18 28.7**	**0.0**	
	comp=Z,1.6nm,0.8s,baz=240,slow=5.2,SNR=7.8							
ESDC				pP	**pP**	**11 19 02.1**	**+0.5**	
	comp=Z,1.3nm,0.9s,baz=277,slow=5.7,SNR=2.5							
ESDC				sP	**sP**	**11 19 15.9**	**+0.7**	
	comp=Z,1.0nm,0.5s,baz=243,slow=5.5,SNR=4.9							
ESDC				LR	LR	11 58 01.0		
	comp=Z,9.7nm,18.4s,baz=216,slow=36							
	comp=Z,1.6nm,0.8s							
YKA	**Yellowknife Ar**	**91.01**	**341**	P	**P**	**11 18 54.9**	**+1.4**	
	comp=Z,5.7nm,0.8s,baz=141,slow=4.0,SNR=18							
YKA				pP	**pP**	**11 19 27.1**	**+0.6**	
	comp=Z,3.0nm,0.8s,baz=143,slow=4.3,SNR=4.2							
	comp=Z,5.7nm,0.8s							
YKA	**Yellowknife Ar**	**91.01**	**341**	P	**P**	**11 18 54.8**	**+1.2**	
DLBC	**Dease Lake**	**94.05**	**332**	P	**P**	**11 19 09.7**	**+1.9**	
	comp=Z,2.0nm,0.8s,baz=104,slow=6.5,SNR=5.5							
	comp=Z,2.0nm,0.8s							
DAVOX	**Davos/Dischmat**	**97.89**	**43**	LR	LR	11 57 57.6		
	comp=Z,25nm,21.1s,baz=260,slow=32							
MBAR	**Mbarara**	**98.73**	**94**	LR	LR	12 02 30.1		
	comp=Z,24nm,20.4s,baz=22,slow=34							
INK	**Inuvik**	**100.77**	**340**	P	**Pdif**	**11 19 37.0**	**-0.7**	
	comp=Z,1.9nm,1.1s,baz=156,slow=4.1,SNR=2.7							
CLL	**Collm**	**101.44**	**39**	*e*Pdif	**Pdif**	**11 19 44.0**	**+2.9**	
ASAR	**Alice Springs**	**130.11**	**208**	PKP	**PKiKP**	**11 25 00.8**	**+0.1**	
	comp=Z,2.4nm,0.8s,baz=129,slow=1.7,SNR=19							
ASAR				pPKP	**pPKPdf**	**11 25 35.0**	**+0.9**	
	comp=Z,1.2nm,0.8s,baz=150,slow=2.2,SNR=6.1							
WRA	**Warramunga Arr**	**133.15**	**211**	PKP	**PKiKP**	**11 25 06.9**	**0.0**	
	comp=Z,2.0nm,0.6s,baz=156,slow=1.7,SNR=30							
WRA				pPKP	**pPKPdf**	**11 25 39.9**	**0.0**	
	comp=Z,1.0nm,0.8s,baz=153,slow=1.8,SNR=3.8							
BVAR	**Borovoye Array**	**135.60**	**34**	PKP	**PKiKP**	**11 25 11.3**	**+0.5**	
	comp=Z,1.0nm,0.7s,baz=321,slow=1.9,SNR=4.1							
KURBB	**Kurchatov Arra**	**141.15**	**33**	PKP	**PKiKP**	**11 25 21.4**	**-0.8**	
	comp=Z,0.7nm,0.7s,baz=303,slow=3.1,SNR=5.6							
ZALV	**Zalesovo Beam**	**141.75**	**25**	PKP	**PKiKP**	**11 25 22.1**	**-1.2**	
	comp=Z,1.9nm,0.5s,baz=290,slow=2.5,SNR=10							
ZALV				pPKP	**pPKPdf**	**11 25 54.0**	**-1.1**	
	comp=Z,2.1nm,0.8s,baz=287,slow=2.5,SNR=3.9							
KSH	**Kashi**	**144.94**	**51**	PKP	**PKPdf**	**11 25 27.8**	**+1.1**	
KSH				sPKP	sPKPdf	11 26 04.0	-10	
MKAR	**Makanchi Array**	**145.44**	**36**	PKPbc	**PKPab**	**11 25 28.9**	**+1.1**	
	comp=Z,3.7nm,0.6s,baz=323,slow=4.0,SNR=33							
MKAR				pPKPbc	**pPKPdf**	**11 26 02.0**	**+0.2**	
	comp=Z,8.0nm,0.8s,baz=310,slow=2.5,SNR=10.0							
HEH	**HeiHe**	**148.38**	**340**	PKPbc	**PKiKP**	**11 25 36.5**	**-0.6**	
HILR	**Hailar Array B**	**150.98**	**348**	PKPbc	**PKPbc**	**11 25 41.9**	**-0.1**	
	comp=Z,6.4nm,0.7s,baz=85,slow=1.6,SNR=8.6							
HILR				pPKPbc	**pPKPbc**	**11 26 16.6**	**+0.3**	
	comp=Z,2.2nm,0.4s,baz=76,slow=1.1,SNR=3.0							
USRK	**Ussuriysk Ar.**	**151.36**	**328**	PKPbc	**PKPbc**	**11 25 42.8**	**-0.2**	
	comp=Z,4.8nm,0.8s,baz=183,slow=2.6,SNR=4.0							
USRK				pPKPbc	**pPKPbc**	**11 26 17.4**	**+0.3**	
	comp=Z,4.0nm,0.8s,baz=290,slow=4.5,SNR=4.0							
MJAR	**Matsushiro Arr**	**151.98**	**309**	PKPbc	**PKiKP**	**11 25 45.9**	**+0.9**	
	comp=Z,4.3nm,0.8s,baz=85,slow=2.1,SNR=9.3							
MJAR				pPKPbc	**pPKPbc**	**11 26 18.4**	**-0.1**	
	comp=Z,2.8nm,0.8s,baz=106,slow=1.7,SNR=3.9							
MJAR	**Matsushiro Arr**	**151.98**	**309**	PKPbc	**PKiKP**	**11 25 46.0**	**+1.0**	
SONM	**Songino Array**	**153.25**	**7**	PKP	**PKPdf**	**11 25 40.5**	**+0.8**	
	comp=Z,0.6nm,0.5s,baz=0.0,slow=1.4,SNR=5.2							
SONM				PKPbc	**PKiKP**	**11 25 47.9**	**+0.5**	
	comp=Z,0.8nm,0.6s,baz=50,slow=2.7,SNR=3.7							
KSRS	**Korea Array**	**158.31**	**322**	PKPab	**PKPab**	**11 26 22.0**	**+0.7**	
	comp=Z,1.9nm,0.9s,baz=82,slow=2.6,SNR=4.1							
HHC	**Hu-ho-hao-te**	**160.51**	**359**	*e*P	**PKPdf**	**11 25 49.0**	**-0.1**	
NJ2	**Nanjing**	**167.27**	**329**	*e*P	**PKPdf**	**11 25 55.8**	**+0.4**	
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**168.18**	**102**	PKP	**PKPdf**	**11 25 55.4**	**-1.1**	
	comp=Z,0.3nm,0.3s,baz=142,slow=1.3,SNR=4.4							
CMAR				pPKP	**pPKPdf**	**11 26 31.8**	**+0.5**	
	comp=Z,0.4nm,0.4s,baz=254,slow=2.1,SNR=2.1							
CMAR				PKPab	**PKPab**	**11 27 05.0**	**-0.4**	
	comp=Z,0.5nm,0.7s,baz=240,slow=4.0,SNR=4.4							
PZH	**PanZhiHua**	**169.97**	**57**	PKP	**PKPdf**	**11 25 55.8**	**-1.7**	

IDC 29 11:17:01.7±11.0, 32°24N×128°33E, h0km, mb3.5/2, mbtmp3.4/3, ML3.0/1, Error ellipse: s-maj=328.0km s-min=39.3km az=128.0, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**9.22**	**60**	Pn	Pn	11 19 16.4	+0.4
	0.1nm,0.3s,baz=248,slow=17,SNR=7.5						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**52.20**	**173**	P	P	11 26 14.2	-0.3
	0.4nm,0.5s,baz=356,slow=7.4,SNR=14						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**55.85**	**174**	P	P	11 26 41.1	0.0
	0.2nm,0.4s,baz=354,slow=7.4,SNR=11						
	0.2nm,0.4s						

*SJA **29** 11:34:38.8±0.8, 24°.26S×67°.42W, h182km±5km, ML3.2, MW3.5*

*GUC **29** 11:34:40.6±0.7, 24°.22S×67°.65W, h200km±9km, ML3.7*

ISC 29 11:34:38.3±1.8, 24°.25S±0°.03×67°.44W±0°.04, h190km±16km, n33, σ1=35/60, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**1.00**	**89**	*e*P	**Pn**	**11 35 07.2**	**-0.5**
SALTA				IAML		11 35 32.6	
	comp=Z,42nm,0.9s						
SLA	**San Lorenzo**	**1.82**	**105**	*e*P	**Pn**	**11 35 15.1**	**+0.6**
SLA				*e*S	**Sn**	**11 35 41.9**	**-0.7**
SLA				IAML		11 35 42.0	
	comp=Z,32nm,0.8s						
HJA	**Humahuaca**	**2.13**	**61**	*e*P	**Pn**	**11 35 19.1**	**+1.1**
HJA				*i* S	**Sn**	**11 35 47.8**	**-0.9**
HJA				IAML		11 35 50.5	
	comp=Z,12nm,1.5s						
GO02	**Mina Guanaco**	**2.16**	**245**	*i* P	**Pn**	**11 35 19.4**	**+1.2**
GO02				*i* S	**Sn**	**11 35 49.2**	**+0.1**
GO02				IAML		11 35 50.1	
	comp=N,298nm,0.4s						
GO02	**Mina Guanaco**	**2.16**	**245**	*e*P	**Pn**	**11 35 18.7**	**+0.6**
GO02				*i* S	**Sn**	**11 35 48.3**	**-0.8**
GO02				IAML		11 35 52.9	
	comp=Z,195nm,0.5s						
AZAP	**Zapla**	**2.17**	**90**	*e*P	**Pn**	**11 35 18.4**	**+0.3**
AZAP				*e*S	**Sn**	**11 35 48.7**	**-0.3**
AZAP				IAML		11 35 49.4	
	comp=Z,86nm,0.7s						
FSA	**Cafayete**	**2.28**	**145**	*e*P	**Pn**	**11 35 19.8**	**+0.5**
PB06	**IPOC Station P**	**2.49**	**308**	*i* P	**Pn**	**11 35 23.1**	**+1.4**
PB06				*i* S	**Sn**	**11 35 54.6**	**-0.8**
PB06				IAML		11 35 57.2	
	comp=N,288nm,0.4s						
PB06	**IPOC Station P**	**2.49**	**308**	*e*P	**Pn**	**11 35 22.5**	**+0.8**
PB06				*e*S	**Sn**	**11 35 55.3**	**-0.1**
PB06				IAML		11 35 59.8	
	comp=Z,228nm,0.5s						
PB14	**IPOC Station P**	**2.73**	**261**	*i* P	**Pn**	**11 35 25.4**	**+0.8**
PB14				*i* S	**Sn**	**11 35 59.6**	**-0.9**
PB14	**IPOC Station P**	**2.73**	**261**	*e*P	**Pn**	**11 35 25.6**	**+1.0**
PB14				IAML		11 36 09.7	
	comp=Z,55nm,0.5s						
PB05	**IPOC Station P**	**2.89**	**298**	*i* P	**Pn**	**11 35 27.5**	**+1.2**
PB05				*i* S	**Sn**	**11 36 01.9**	**-1.8**
PB05				IAML		11 36 07.9	
	comp=E,96nm,0.3s						
PB05	**IPOC Station P**	**2.89**	**298**	*e*P	**Pn**	**11 35 27.5**	**+1.2**
PB05				*e*S	**Sn**	**11 36 03.0**	**-0.7**
PB05				IAML		11 36 11.0	
	comp=Z,61nm,0.5s						
PB10	**IPOC Station P**	**2.94**	**284**	*i* P	**Pn**	**11 35 28.2**	**+1.3**
PB10				*i* S	**Sn**	**11 36 03.2**	**-1.4**
PB10				IAML		11 36 09.0	
	comp=E,88nm,0.4s						
PB10	**IPOC Station P**	**2.94**	**284**	*e*P	**Pn**	**11 35 28.1**	**+1.3**
PB10				*i* S	**Sn**	**11 36 03.9**	**-0.6**
PB10				IAML		11 36 06.5	
	comp=Z,57nm,0.3s						
PB09	**IPOC Station P**	**2.95**	**325**	*i* P	**Pn**	**11 35 29.0**	**+1.9**
PB09				*i* S	**Sn**	**11 36 04.7**	**-0.4**
PB09				IAML		11 36 09.7	
	comp=E,133nm,0.5s						
PB09	**IPOC Station P**	**2.95**	**325**	*i* P	**Pn**	**11 35 28.1**	**+1.0**
PB09				*i* S	**Sn**	**11 36 04.0**	**-1.1**
PB09				IAML		11 36 05.8	
	comp=Z,141nm,0.5s						
AC02	**Maricunga**	**3.00**	**210**	*e*P	**Pn**	**11 35 29.3**	**+1.4**
AC02				*i* S	**Sn**	**11 36 11.6**	**+4.9**
AC02	**Maricunga**	**3.00**	**210**	*e*P	**Pn**	**11 35 28.6**	**+0.7**
AC02				*e*P		11 35 29.5	
AC02				IAML		11 36 17.6	
	comp=Z,13nm,0.2s						
PB03	**IPOC Station P**	**3.05**	**315**	*i* P	**Pn**	**11 35 29.4**	**+1.1**
PB03				*i* S	**Sn**	**11 36 05.9**	**-1.4**
PB03				IAML		11 36 08.3	
	comp=E,157nm,0.3s						
PB03	**IPOC Station P**	**3.05**	**315**	*e*P	**Pn**	**11 35 29.4**	**+1.1**
PB03				*e*S	**Sn**	**11 36 06.7**	**-0.6**
PB03				IAML		11 36 14.6	
	comp=Z,116nm,0.4s						
PB07	**IPOC Station P**	**3.37**	**318**	*i* P	**Pn**	**11 35 33.3**	**+1.1**
PB07				*i* S	**Sn**	**11 36 12.0**	**-2.2**
PB07	**IPOC Station P**	**3.37**	**318**	*e*P	**Pn**	**11 35 33.4**	**+1.1**
PB07				*i* S	**Sn**	**11 36 13.8**	**-0.5**
PB07				IAML		11 36 13.9	
	comp=Z,89nm,0.5s						
AC01	**Pan de Azucar**	**3.43**	**236**	*e*P	**Pn**	**11 35 32.9**	**+0.2**
AC01				*i* S	**Sn**	**11 36 12.7**	**-2.5**
AC01	**Pan de Azucar**	**3.43**	**236**	*e*P	**Pn**	**11 35 33.1**	**+0.4**
AC01				*e*S	**Sn**	**11 36 13.6**	**-1.7**
AC01				*e*S		11 36 14.5	
AC01				IAML		11 36 18.5	
	comp=Z,84nm,0.9s						
PB01	**IPOC Station P**	**3.71**	**329**	*i* P	**Pn**	**11 35 37.2**	**+0.9**
PB01				*i* S	**Sn**	**11 36 19.5**	**-2.1**
PB01	**IPOC Station P**	**3.71**	**329**	*e*P	**Pn**	**11 35 37.5**	**+1.2**
PB01				*e*S	**Sn**	**11 36 20.4**	**-1.2**
PB01				IAML		11 36 22.3	
	comp=Z,58nm,0.5s						
GO03	**Copiapo**	**4.17**	**216**	*i* P	**Pn**	**11 35 41.9**	**-0.2**
GO03				*i* S	**Sn**	**11 36 29.7**	**-2.4**
GO03	**Copiapo**	**4.17**	**216**	*i* P	**Pn**	**11 35 42.9**	**+0.9**
GO03				*i* S	**Sn**	**11 36 31.7**	**-0.3**
GO03				IAML		11 36 32.7	
	comp=Z,50nm,0.3s						
PATCX	**Punta Patache**	**4.23**	**323**	*i* P	**Pn**	**11 35 43.8**	**+0.9**
PATCX	**Punta Patache**	**4.23**	**323**	*e*P	**Pn**	**11 35 44.0**	**+1.2**
PATCX				*i* S	**Sn**	**11 36 32.9**	**-0.6**
PATCX				IAML		11 36 44.0	
	comp=Z,32nm,0.4s						
PB08	**IPOC Station P**	**4.38**	**338**	*e*P	**Pn**	**11 35 46.2**	**+1.2**
AC04	**Llanos de Chal**	**5.12**	**219**	*e*P	**Pn**	**11 35 54.1**	**+0.2**
AC04				*i* S	**Sn**	**11 36 51.4**	**-2.2**
AC04				IAML		11 37 03.6	
	comp=Z,21nm,0.8s						

GCMT 29 11:48:52.0±0.4, 4°.62S±0°.02×105°.33W±0°.02, h14km±1km, MW4.8/91, Moment Tensor Solution. s22,c24; s91,c116; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}0.57±.09; $M_{\theta\theta}$0.67±.08; $M_{\phi\phi}$-0.10±.09; $M_{r\theta}$-0.16±.19; $M_{\theta\phi}$2.14±.09; $M_{\phi r}$0.04±.17; **Best double couple:** $M_0$2.18200×10^{16} **NP1:**ϕ_s185.00000°,δ85.00000°, λ-177.00000°. **NP2:**ϕ_s95.00000°,δ87.00000°,λ-5.00000°. **Principal axes:** T 2.4610, Plg2.0000°, Azm140.0000°; N -0.5560, Plg84.0000°, Azm249.0000°; P -1.9040, Plg6.0000°, Azm50.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKT	**Rikitea**	**34.02**	**234**	*e*LR	LR	12 04 34.8	
	2μm,26.2s						
TAOE	**Nuku Hiva Isla**	**34.82**	**261**	*e*LR	LR	12 04 43.9	
	275nm,25.6s						
PPT2	**Papeete2**	**45.16**	**250**	*e*S	S	12 03 38.9	-10
	42nm,26.8s						
PPT2				*e*SS	ScS	12 07 04.4	-1.9
	260nm,28.5s						
PPT2				*e*LR	LR	12 09 41.0	
	319nm,24.5s						
PPT2				*e*LR	LR	12 09 48.4	
	316nm,26.2s						
DZM	**Mont Dzumac**	**86.64**	**248**	*e*LR	LR	12 29 02.6	

*IDC **29** 12:05:33.4±2.1, 4°.43S×105°.74W, h0km, mb3.8/5, mbtmp3.8/5, MS4.3/37 Error ellipse: s-maj=115.6km s-min=23.9km az=62.0*

*GCMT **29** 12:05:35.3±0.2, 4°.57S±0°.01×105°.46W±0°.01, h13km±1km, MW5.0/123, Moment Tensor Solution. s57,c74; s123,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.10; $M_{\theta\theta}$1.40±.10; $M_{\phi\phi}$-1.11±.11; $M_{r\theta}$1.88±.33; $M_{\theta\phi}$3.89±.11; $M_{\phi r}$0.36±.23; Best double couple: $M_0$4.48000×10^{16} NP1:ϕ_s8.00000°,δ67.00000°, λ176.00000°. NP2:ϕ_s99.00000°,δ86.00000°,λ23.00000°. Principal axes: T 4.8260, Plg19.0000°, Azm326.0000°; N -0.6910, Plg67.0000°, Azm108.0000°; P -4.1340, Plg13.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **29** 12:05:35.3±0.7, 4°.5S±0°.2×105°.12W±0°.06, h10km±2km, mb4.4/23 Error ellipse: s-maj=26.5km s-min=8.0km az=163.0*

ISC 29 12:05:34.5±0.7, 4°.5S±0°.1×105°.7W±0°.1, h13km, n76, σ1=85/31, mb4.4/17, MS4.3/37, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**22.80**	**188**	LR	LR	12 17 02.1	
	comp=Z,500nm,19.8s,baz=10.0,slow=30						
TLIG	**Tlapa**	**22.99**	**18**	P	**P**	**12 10 38.3**	**-0.9**
TLIG				IAmb	IAmb	12 11 06.5	
	comp=Z,18nm,1.5s						
CMIG	**Matias Romero**	**23.93**	**26**	LR	LR	12 18 04.4	
	comp=Z,712nm,21.9s,baz=204,slow=31						
APG	**El Apazote**	**24.52**	**38**	LR	LR	12 18 26.6	
	comp=Z,97nm,19.4s,baz=256,slow=32						
MTO3	**Montecristo**	**24.76**	**41**	P	**P**	**12 10 54.7**	**-1.6**
MTO3				IAmb	IAmb	12 11 35.1	
	comp=Z,12nm,0.9s						
JTS	**Las Juntas de**	**25.32**	**55**	LR	LR	12 18 16.0	
	comp=Z,2μm,20.6s,baz=234,slow=30						
JRQG	**Juriquilla Cam**	**25.53**	**11**	P	**P**	**12 11 01.7**	**-1.6**
ZAIG	**Zacatecas**	**27.24**	**6**	P	**P**	**12 11 19.4**	**+0.6**
ZAIG				IAmb	IAmb	12 11 57.6	
	comp=Z,8.7nm,1.4s						
ATAH	**Atahualpa**	**27.27**	**97**	LR	LR	12 19 23.8	
	comp=Z,295nm,20.4s,baz=272,slow=30						
OTAV	**Otavalo**	**27.60**	**81**	P	**P**	**12 11 18.2**	**-4.2**
OTAV				IAmb	IAmb	12 11 49.9	
	comp=Z,10.0nm,1.4s						
LPIG	**La Paz**	**28.75**	**351**	LR	LR	12 20 06.4	
	comp=Z,881nm,20.5s,baz=165,slow=30						
NNA	**Nana**	**29.48**	**106**	LR	LR	12 20 00.3	
	comp=Z,560nm,20.2s,baz=284,slow=29						
TEIG	**Tepich**	**29.91**	**34**	P	**P**	**12 11 40.6**	**-1.6**
HPIG		**31.21**	**0**	P	**P**	**12 11 52.8**	**-1.2**
HPIG				IAmb	IAmb	12 11 54.0	
	comp=Z,5.0nm,0.8s						
ROSC	**El Rosal**	**32.66**	**74**	LR	LR	12 22 34.4	
	comp=Z,660nm,20.2s,baz=262,slow=31						
TXAR	**Lajitas Array**	**33.66**	**3**	P	**P**	**12 12 14.9**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=190,slow=5.7,SNR=2.1						
TXAR				LR	LR	12 23 37.9	
	comp=Z,444nm,20.6s,baz=173,slow=32						
	comp=Z,0.3nm,0.8s						
TXAR	**Lajitas Array**	**33.66**	**3**	P	**P**	**12 12 16.0**	**+0.7**
RKT	**Rikitea**	**33.83**	**234**	*e*LR	LR	12 21 12.0	
	comp=Z,4μm,25.8s						
DRIO	**Del Rio**	**34.04**	**8**	P	**P**	**12 12 19.5**	**+1.0**
DRIO				IAmb	IAmb	12 12 34.3	
	comp=Z,7.2nm,1.5s						
SAND	**Sanderson**	**34.39**	**5**	P	**P**	**12 12 22.5**	**+1.0**
SAND				IAmb	IAmb	12 12 24.7	
	comp=Z,6.2nm,1.2s						
TAOE	**Nuku Hiva Isla**	**34.50**	**261**	*e*LR	LR	12 21 26.9	
	comp=Z,1μm,25.6s						
SOR	**Soroa**	**34.99**	**38**	P	**P**	**12 12 25.0**	**-1.9**
JCT	**Junction City**	**35.20**	**9**	P	**P**	**12 12 28.4**	**-0.1**
JCT				IAmb	IAmb	12 12 54.1	
	comp=Z,3.7nm,0.8s						
MNHN	**Monahans**	**35.71**	**4**	P	**P**	**12 12 33.4**	**+0.4**
BRDY	**Brady**	**36.12**	**10**	P	**P**	**12 12 36.8**	**+0.4**
BRDY				IAmb	IAmb	12 12 38.6	
	comp=Z,4.6nm,1.1s						
SDV	**Santo Domingo**	**37.37**	**69**	LR	LR	12 25 22.4	
	comp=Z,830nm,20.7s,baz=252,slow=32						
H03N2	**Juan Fernandez**	**38.10**	**142**	T	T	12 52 53.3	
	baz=317,slow=77,SNR=12						
H03N1	**Juan Fernandez**	**38.12**	**142**	T	T	12 52 51.6	
	baz=317,slow=77,SNR=14						
H03N3	**Juan Fernandez**	**38.12**	**142**	T	T	12 52 49.1	
	baz=317,slow=77,SNR=14						
LPAZ	**La Paz**	**38.67**	**111**	LR	LR	12 26 25.1	
	comp=Z,241nm,19.3s,baz=266,slow=32						
ANMO	**Albuquerque**	**39.21**	**359**	LR	LR	12 26 43.1	
	comp=Z,218nm,19.4s,baz=180,slow=32						
PFO	**Pinyon Flats O**	**39.22**	**346**	LR	LR	12 25 24.4	
	comp=Z,872nm,21.3s,baz=158,slow=30						
SMWD	**Samnorwood**	**39.69**	**7**	P	**P**	**12 13 07.5**	**+1.0**
QSM	**Queen of Sheba**	**41.56**	**346**	P	**P**	**12 13 23.8**	**+1.8**
QSM				IAmb	IAmb	12 13 26.2	
	comp=Z,8.1nm,1.2s						
WCT	**Wildcat Mounta**	**42.30**	**347**	P	**P**	**12 13 30.0**	**+2.0**
WCT				IAmb	IAmb	12 13 33.8	
	comp=Z,10nm,1.3s						
CWC	**Cottonwood Cre**	**42.31**	**345**	P	**P**	**12 13 30.6**	**+2.3**
GMN	**Gold Mountain**	**42.93**	**346**	P	**P**	**12 13 35.9**	**+2.5**
NVAR	**Mina Array Bea**	**44.25**	**346**	P	**P**	**12 13 44.8**	**+0.8**
	comp=Z,1.6nm,1.1s,baz=171,slow=8.4,SNR=7.1						
NVAR				LR	LR	12 28 12.8	
	comp=Z,522nm,22.0s,baz=164,slow=31						
	comp=Z,1.6nm,1.1s						
PPT	**Papeete**	**44.88**	**250**	LR	LR	12 28

H11S1 WAKE ISLAND Hy 89.15 289 T T 13 57 28.4
baz=93,slow=74,SNR=17
H11S3 WAKE ISLAND Hy 89.16 289 T T 13 57 29.2
baz=93,slow=74,SNR=17
BORG Borgarnes 91.59 25 LR LR 12 57 27.4
comp=Z,69nm,20.8s,baz=271,slow=34

GCG 29 12:07:18.2±0.8, 13°.66N×91°.06W, h37km±7km, MD3.5, ML3.4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESSG	**Sabana Grande**	**0.76**	**17**	*e*P	Pn	12 07 32.2	-0.2
STG8	**El Palmar, Qui**	**0.84**	**340**	*i* P	Pn	12 07 39.4	+5.6
STG8				IAML		12 07 55.7	
comp=E,696nm,0.2s							
SOKI	**Kika Raxquin**	**1.21**	**344**	*i* P	Pn	12 07 39.9	+1.0
APG	**El Apazote**	**1.46**	**23**	*i* P	Pn	12 07 43.2	+1.0

IDC 29 12:24:40.3±1.9, 18°.99N×145°.73E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=179.1km s-min=24.9km az=114.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.27**	**197**	P	P	12 32 18.8	-0.4
0.3nm,0.4s,baz=20,slow=8.6,SNR=5.2							
0.3nm,0.4s							
ASAR	**Alice Springs**	**43.94**	**196**	P	P	12 32 49.3	+0.1
0.4nm,1.0s,baz=13,slow=8.1,SNR=3.2							
0.4nm,1.0s							
ILAR	**Eielson Array**	**63.38**	**26**	P	P	12 35 11.1	-0.1
0.2nm,0.6s,baz=259,slow=5.3,SNR=4.9							
0.2nm,0.6s							
NVAR	**Mina Array Bea**	**82.94**	**52**	P	P	12 37 08.0	+0.2
0.4nm,0.6s,baz=290,slow=6.9,SNR=4.2							
0.4nm,0.6s							

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*IDC **29** 12:24:58.6±1.3, 4°.88S×105°.74W, h0km, mb3.8/6, mbtmp3.8/6, MS4.3/47, Error ellipse: s-maj=56.0km s-min=23.1km az=54.0*

*NEIC **29** 12:25:01.9±1.3, 4°.7S±0°.1×105°.6W±0°.1, h10km±1km, mb4.9/187, Error ellipse: s-maj=24.6km s-min=19.3km az=240.0*

*GCMT **29** 12:25:02.9±0.2, 4°.52S±0°.01×105°.35W±0°.01, h15km±1km, MW5.0/113, Moment Tensor Solution. s46,c55; s113,c170; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.23±.11; Mθθ=0.53±.09; Mϕϕ=0.69±.10; Mrθ=1.33±.23; Mθϕ=3.99±.10; Mrϕ=0.41±.19; Best double couple: Mo=4.21600×10^16 NP1:ϕs=359.00000°, δ=70.00000°, λ=-176.00000°. NP2:ϕs=268.00000°, δ=86.00000°, λ=-20.00000°. Principal axes: T 4.8530, Plg11.0000°, Azm315.0000°; N -1.2770, Plg69.0000°, Azm78.0000°; P -3.5790, Plg17.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 12:25:01.3±0.5, 4.71S±0.09×105.50W±0.08, h10km, n181, σ1§23/84, mb4.9/90, MS4.3/48, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**15.72**	**76**	Pn	**Pn**	**12 28 44.0**	**+1.0**
RPN	**Rapa Nui**	**22.59**	**189**	LR	LR	12 36 34.9	
comp=Z,346nm,18.8s,baz=8.5,slow=31							
TLIG	**Tlapa**	**23.16**	**17**	P	**P**	**12 30 08.9**	**+0.7**
TLIG				IAmb	IAmb	12 30 11.1	
comp=Z,63nm,1.9s							
CMIG	**Matias Romero**	**24.07**	**26**	LR	LR	12 37 28.7	
comp=Z,574nm,21.9s,baz=202,slow=31							
HUEH	**Huehuetenango**	**24.25**	**35**	P	**P**	**12 30 20.5**	**+1.5**
MOIG	**Morelia**	**24.60**	**10**	P	**P**	**12 30 23.2**	**+1.1**
APG	**El Apazote**	**24.61**	**37**	LR	LR	12 37 51.1	
comp=Z,73nm,18.9s,baz=270,slow=31							
UNM	**Universidad Na**	**24.68**	**14**	P	**P**	**12 30 23.1**	**+0.2**
CCIG	**Comitan**	**24.69**	**32**		**P**	**12 30 24.1**	**+1.1**
MTO3	**Montecristo**	**24.83**	**40**	P	**P**	**12 30 24.4**	**+0.1**
MTO3				IAmb	IAmb	12 30 26.7	
comp=Z,36nm,1.1s							
ESQI	**Esquipulas**	**24.96**	**40**	P	**P**	**12 30 25.1**	**-0.3**
HERN	**Volcan Telica**	**25.30**	**47**	P	**P**	**12 30 29.0**	**+0.6**
HERN				IAmb	IAmb	12 30 30.6	
comp=Z,84nm,1.0s							
JTS	**Las Juntas de**	**25.32**	**54**	LR	LR	12 37 41.2	
comp=Z,1μm,20.7s,baz=242,slow=30							
JTS	**Las Juntas de**	**25.32**	**54**		**P**	**12 30 28.9**	**+0.4**
JTS				IAmb	IAmb	12 30 36.7	
comp=Z,18nm,0.9s							
MGAN	**Managua**	**25.43**	**49**	P	**P**	**12 30 30.6**	**+1.1**
SOCE	**Pocosol**	**25.64**	**54**	P	**P**	**12 30 32.8**	**+1.4**
SOCE				IAmb	IAmb	12 30 36.2	
comp=Z,40nm,1.2s							
JRQG	**Juriquilla Cam**	**25.74**	**11**	P	**P**	**12 30 33.8**	**+1.4**
TGUH	**Tegucigalpa,Un**	**25.98**	**44**	P	**P**	**12 30 35.5**	**+1.0**
PETF	**Flores**	**26.47**	**35**	P	**P**	**12 30 39.3**	**+0.5**
PETF				IAmb	IAmb	12 30 40.8	
comp=Z,47nm,1.1s							
ATAH	**Atahualpa**	**27.07**	**96**	LR	LR	12 38 53.6	
comp=Z,942nm,18.2s,baz=266,slow=31							
LPIG	**La Paz**	**29.02**	**351**	LR	LR	12 39 33.9	
comp=Z,801nm,19.7s,baz=172,slow=30							
NNA	**Nana**	**29.25**	**106**	LR	LR	12 39 28.8	
comp=Z,1μm,20.7s,baz=270,slow=30							
TEIG	**Tepich**	**30.01**	**34**	P	**P**	**12 31 11.1**	**+0.7**
HPIG		**31.46**	**360**	P	**P**	**12 31 23.6**	**+0.3**
ROSC	**El Rosal**	**32.56**	**73**	LR	LR	12 42 00.3	
comp=Z,468nm,18.9s,baz=267,slow=31							
ROSC	**El Rosal**	**32.56**	**73**	P	**P**	**12 31 33.5**	**0.0**
ROSC				IAmb	IAmb	12 31 42.7	
comp=Z,15nm,1.1s							
TXAR	**Lajitas Array**	**33.89**	**3**	P	**P**	**12 31 45.0**	**+0.5**
comp=Z,1.1nm,0.8s,baz=194,slow=11,SNR=14							
TXAR				PcP	**PcP**	**12 34 22.7**	**-0.6**
comp=Z,0.5nm,0.8s,baz=182,slow=4.8,SNR=4.4							
TXAR				LR	LR	12 43 05.0	
comp=Z,380nm,20.7s,baz=176,slow=32							
comp=Z,1.1nm,0.8s							
TXAR	**Lajitas Array**	**33.89**	**3**	P	**P**	**12 31 44.8**	**+0.2**
TX31	**Lajitas Ar. Si**	**33.89**	**3**		**P**	**12 31 44.8**	**+0.2**
TX31				IAmb	IAmb	12 31 47.2	
comp=Z,28nm,1.9s							
RUSC	**La Rusia**	**34.04**	**72**	P	**P**	**12 31 46.6**	**+0.1**
RUSC				IAmb	IAmb	12 32 10.0	
comp=Z,34nm,1.3s							
DRIO	**Del Rio**	**34.26**	**8**		**P**	**12 31 46.9**	**-0.7**
DRIO				IAmb	IAmb	12 31 49.7	
comp=Z,14nm,1.1s							
HNDO	**Hondo**	**34.56**	**10**	P	**P**	**12 31 50.5**	**+0.2**
HNDO				IAmb	IAmb	12 31 52.0	
comp=Z,8.8nm,0.8s							
SAND	**Sanderson**	**34.62**	**5**		**P**	**12 31 50.8**	**0.0**
SAND				IAmb	IAmb	12 31 53.6	
comp=Z,28nm,1.6s							
TAOE	**Nuku Hiva Isla**	**34.64**	**261**	*e*LR	LR	12 41 02.1	
comp=Z,344nm,24.1s							
ALPN	**Alpine**	**34.93**	**3**		**P**	**12 31 53.1**	**-0.5**
ALPN				IAmb	IAmb	12 31 56.4	
comp=Z,25nm,1.7s							
JCT	**Junction City**	**35.41**	**9**	P	**P**	**12 31 57.5**	**-0.1**
JCT				IAmb	IAmb	12 32 00.0	
comp=Z,20nm,1.3s							
OZNA	**Ozona**	**35.67**	**6**	P	**P**	**12 32 00.7**	**+0.8**
MNHN	**Monahans**	**35.94**	**4**	P	**P**	**12 32 01.9**	**-0.2**
435B	**Jarrell**	**36.09**	**12**	P	**P**	**12 32 04.3**	**+0.9**
435B				IAmb	IAmb	12 32 07.1	
comp=Z,24nm,1.4s							
MNTX	**Cornudas Mount**	**36.20**	**0**	P	**P**	**12 32 04.6**	**+0.2**
BRDY	**Brady**	**36.33**	**9**		**P**	**12 32 04.7**	**-0.7**
BRDY				IAmb	IAmb	12 32 07.3	
comp=Z,19nm,1.2s							
HNVL	**Huntsville, TX**	**36.55**	**15**	P	**P**	**12 32 07.4**	**+0.1**
HNVL				IAmb	IAmb	12 32 10.2	
comp=Z,36nm,1.2s							
SGCY	**Sterling City**	**36.66**	**6**		**P**	**12 32 07.9**	**-0.4**
SGCY				IAmb	IAmb	12 32 11.5	
comp=Z,19nm,0.9s							
HTMS	**Hat Mesa**	**37.02**	**3**	P	**P**	**12 32 11.0**	**-0.4**
WHTX	**Lake Whitney,**	**37.29**	**11**		**P**	**12 32 13.0**	**-0.6**
WHTX				IAmb	IAmb	12 32 15.0	
comp=Z,14nm,1.0s							
SDV	**Santo Domingo**	**37.30**	**69**	LR	LR	12 44 47.7	
comp=Z,400nm,20.5s,baz=252,slow=32							
SDV	**Santo Domingo**	**37.30**	**69**		**P**	**12 32 13.6**	**-0.5**
SDV				IAmb	IAmb	12 32 15.4	
comp=Z,14nm,0.9s							
ABTX	**Abilene, Hawle**	**37.54**	**8**		**P**	**12 32 15.9**	**+0.1**
ABTX				IAmb	IAmb	12 32 17.7	
comp=Z,36nm,1.4s							
PB16	**IPOC Station P**	**37.68**	**114**	P	**P**	**12 32 18.0**	**+0.1**
POST	**Post**	**37.76**	**5**	P	**P**	**12 32 18.3**	**+0.7**
POST				IAmb	IAmb	12 32 20.6	
comp=Z,56nm,2.0s							
H03N2	**Juan Fernandez**	**37.81**	**142**	T	T	13 12 27.7	
baz=317,slow=77,SNR=31							
H03N1	**Juan Fernandez**	**37.82**	**142**	T	T	13 12 29.1	
baz=317,slow=77,SNR=36							
H03N3	**Juan Fernandez**	**37.83**	**142**	T	T	13 12 30.9	
baz=317,slow=77,SNR=40							
SN07	**Snyder 07**	**37.84**	**6**	P	**P**	**12 32 17.9**	**-0.5**
SN07				IAmb	IAmb	12 32 20.1	
comp=Z,22nm,1.2s							
PLPT	**Palo Pinto**	**37.93**	**10**	IAmb	IAmb	12 32 21.4	
comp=Z,28nm,1.1s							
LPAZ	**La Paz**	**38.43**	**110**	P	**P**	**12 32 24.5**	**+0.3**
comp=Z,2.0nm,0.9s,baz=299,slow=6.7,SNR=4.8							
LPAZ				LR	LR	12 45 54.0	
comp=Z,322nm,18.9s,baz=264,slow=32							
comp=Z,2.0nm,0.9s							
LPAZ	**La Paz**	**38.43**	**110**	P	**P**	**12 32 22.1**	**-2.1**
Z35A	**Perchaven, San**	**38.63**	**11**	IAmb	IAmb	12 32 26.8	
comp=Z,24nm,1.1s							
LENM	**Lemitar**	**38.69**	**358**	P	**P**	**12 32 26.2**	**+0.6**
WTFS	**Witchita Falls**	**38.84**	**9**	IAmb	IAmb	12 32 29.0	
comp=Z,25nm,1.1s							
ANMO	**Albuquerque**	**39.45**	**359**	LR	LR	12 46 00.9	
comp=Z,204nm,21.0s,baz=179,slow=32							
ANMO	**Albuquerque**	**39.45**	**359**	P	**P**	**12 32 32.4**	**+0.4**
TASM	**ASL Pad, Albuq**	**39.45**	**359**	IAmb	IAmb	12 32 55.1	
comp=Z,7.0nm,1.4s							
TASM	**ASL Pad, Albuq**	**39.45**	**359**	IAmb	IAmb	12 32 55.1	
comp=Z,7.5nm,1.4s							
PFO	**Pinon Flats O**	**39.50**	**346**	LR	LR	12 44 52.3	
comp=Z,878nm,20.5s,baz=159,slow=30							
AMTX	**Amarillo**	**39.54**	**5**	IAmb	IAmb	12 32 58.7	
comp=Z,44nm,1.8s							
Z41A	**Richland Creek**	**39.63**	**17**	IAmb	IAmb	12 32 35.2	
comp=Z,18nm,0.9s							
SMWD	**Samnorwood**	**39.91**	**7**		**P**	**12 32 36.1**	**+0.4**
MIAR	**Mount Ida**	**40.63**	**15**	IAmb	IAmb	12 32 43.8	
comp=Z,51nm,1.6s							
NOKA	**Waynoka**	**41.58**	**8**	IAmb	IAmb	12 32 53.5	
comp=Z,27nm,1.1s							
WHAR	**Wooly Hollow**	**41.68**	**16**	IAmb	IAmb	12 32 52.5	
comp=Z,27nm,1.3s							
OK048	**Pawnee Station**	**41.69**	**10**	IAmb	IAmb	12 32 51.4	
comp=Z,22nm,1.2s							
SHPR	**Sheep Range**	**41.98**	**348**		**P**	**12 32 52.7**	**-0.2**
152A	**Waverly Hall**	**42.09**	**27**	IAmb	IAmb	12 32 54.8	
comp=Z,19nm,1.1s							
T35A	**Sooner Cattle**	**42.25**	**11**		**P**	**12 32 54.6**	**-0.3**
S22A	**4UR Ranch, Cre**	**42.25**	**358**	P	**P**	**12 32 57.6**	**+2.4**
WCT	**Wildcat Mounta**	**42.57**	**347**	P	**P**	**12 32 57.5**	**-0.1**
SZCU	**Shurtz Canyon**	**42.67**	**351**	IAmb	IAmb	12 33 10.5	
comp=Z,28nm,1.9s							
LCAR	**Lake Charles**	**42.73**	**17**	IAmb	IAmb	12 33 00.8	
comp=Z,37nm,1.5s							
PLAL	**Pickwick Lake**	**42.75**	**21**	IAmb	IAmb	12 33 00.7	
comp=Z,22nm,0.8s							
S11A	**Rachel**	**43.20**	**348**	IAmb	IAmb	12 33 09.9	
comp=Z,71nm,2.0s							
FPAL	**Fort Paine**	**43.31**	**24**	IAmb	IAmb	12 33 04.8	
comp=Z,16nm,1.1s							
Y52A	**Lilburn**	**43.39**	**26**	IAmb	IAmb	12 33 05.2	
comp=Z,25nm,1.1s							
MGMO	**Mountain Grove**	**43.44**	**15**	IAmb	IAmb	12 33 06.7	
comp=Z,29nm,1.4s							
PBMO	**Poplar Bluff**	**43.61**	**18**	IAmb	IAmb	12 33 08.0	
comp=Z,38nm,1.1s							
CBKS	**Cedar Bluff**	**43.63**	**7**	IAmb	IAmb	12 33 08.0	
comp=Z,38nm,1.2s							
X51A	**Quun**	**43.64**	**25**	IAmb	IAmb	12 33 07.3	
comp=Z,32nm,1.0s							
LMEL	**Las Melosas**	**43.77**	**136**	P	**P**	**12 33 03.2**	**-4.3**
SWET	**Sewanee**	**43.77**	**23**	IAmb	IAmb	12 33 08.3	
comp=Z,22nm,1.2s							
SRU	**San Rafael Swe**	**43.84**	**354**	P	**P**	**12 33 08.4**	**+0.5**
SRU				IAmb	IAmb	12 33 11.1	
comp=Z,21nm,1.7s							
R11B	**Troy Canyon, C**	**43.85**	**349**	IAmb	IAmb	12 33 22.1	
comp=Z,23nm,1.9s							
WVT	**Waverly**	**43.87**	**21**		**P**	**12 33 06.0**	**-2.0**
WVT				IAmb	IAmb	12 33 09.5	
comp=Z,41nm,1.3s							
V48A	**Smith Brothers**	**43.89**	**22**	IAmb	IAmb	12 33 09.8	
comp=Z,30nm,1.2s							
BO02	**Sierra Bellavi**	**43.90**	**137**		**P**	**12 33 09.3**	**+0.9**
BO02				IAmb	IAmb	12 33 15.3	
comp=Z,13nm,1.0s							
CFA	**Coronel Fontan**	**44.00**	**132**	LR	LR	12 47 00.8	
comp=Z,411nm,21.2s,baz=36,slow=30							
TMUT	**Trail Mountain**	**44.10**	**354**	P	**P**	**12 33 10.2**	**0.0**
TMUT				IAmb	IAmb	12 33 12.8	
comp=Z,25nm,1.8s							
P17A	**Butcher Ranch,**	**44.23**	**354**	IAmb	IAmb	12 33 14.2	
comp=Z,27nm,1.7s							
R40A	**Maddies Statio**	**44.51**	**15**	IAmb	IAmb	12 33 16.1	
comp=Z,25nm,1.4s							
HODGE	**Hodges**	**44.51**	**28**	IAmb	IAmb	12 33 28.3	
comp=Z,29nm,1.5s							
NVAR	**Mina Array Bea**	**44.53**	**346**	P	**P**	**12 33 14.2**	**+0.7**
comp=Z,0.3nm,0.7s,baz=167,slow=5.6,SNR=2.8							
NVAR				LR	LR	12 47 40.4	
comp=Z,504nm,21.8s,baz=164,slow=30							
comp=Z,0.3nm,0.7s							
NVAR	**Mina Array Bea**	**44.53**	**346**	P	**P**	**12 33 13.0**	**-0.5**
CPCT	**Cooper Cave**	**44.54**	**25**	IAmb	IAmb	12 33 15.2	
comp=Z,24nm,1.1s							
CCM	**Cathedral Cave**	**44.56**	**16**	P	**P**	**12 33 13.2**	**-0.3**
CCM				IAmb	IAmb	12 33 15.2	
comp=Z,21nm,1.2s							
BI02	**San Fabin de**	**44.68**	**140**	P	**P**	**12 33 15.3**	**+0.6**
BI02				IAmb	IAmb	12 33 22.4	
comp=Z,20nm,1.1s							
CMB	**Columbia Colle**	**44.72**	**343**	P	**P**	**12 33 15.2**	**+0.4**
FVM	**French Village**	**44.73**	**17**		**P**	**12 33 14.7**	**-0.1**
FVM				IAmb	IAmb	12 33 16.5	
comp=Z,43nm,1.6s							
MACA	**Manacapuru-AM**	**44.74**	**90**	P	**P**	**12 33 13.9**	**-1.4**
MACA				IAmb	IAmb	12 33 15.5	
comp=Z,12nm,0.6s							
SIUC	**Southern Illin**	**44.84**	**18**	IAmb	IAmb	12 33 16.4	
comp=Z,17nm,0.8s							
WAKR	**Walker**	**44.89**	**344**	IAmb	IAmb	12 33 48.2	
comp=Z,30nm,1.8s							
T47A	**Sharon Grove**	**44.90**	**21**	IAmb	IAmb	12 33 17.0	
comp=Z,24nm,1.3s							
SJG	**San Juan**	**44.95**	**59**	LR	LR	12 48 12.8	
comp=Z,226nm,22.0s,baz=234,slow=31							
PPT	**Papeete**	**44.96**	**250**	LR	LR	12 46 25.8	
comp=Z,193nm,21.3s,baz=74,slow=29							
U49A	**Red Boiling Sp**	**44.96**	**23**	IAmb	IAmb	12 33 18.2	
comp=Z,12nm,1.0s							
PPT2	**Papeete2**	**44.97**	**250**	*e*P	**P**	**12 33 18.7**	**+1.5**
comp=Z,38nm,24.2s							
PPT2				*e*S	**S**	**12 39 50.9**	**-5.0**
comp=Z,83nm,28.0s							
PPT2				*e*SS	**SS**	**12 43 19.0**	**+1.3**
comp=Z,634nm,27.5s							
PPT2				*e*LR	LR	12 45 44.6	
comp=Z,529nm,25.5s							
PPT2				*e*LR	LR	12 45 45.1	
comp=Z,380nm,26.0s							
SIV	**San Ignacio**	**45.02**	**108**	LR	LR	12 49 34.3	
comp=Z,628nm,20.9s,baz=284,slow=33							
TKL	**Tuckaleechee C**	**45.04**	**25**	LR	LR	12 51 46.6	
comp=Z,122nm,18.9s,baz=204,slow=36							
TKL	**Tuckaleechee C**	**45.04**	**25**	IAmb	IAmb	12 33 18.4	
comp=Z,20nm,1.1s							
PAULI	**Pauline**	**45.21**	**28**	IAmb	IAmb	12 33 20.1	
comp=Z,14nm,0.9s							
P40A	**Paris**	**45.73**	**15**	IAmb	IAmb	12 33 24.2	
comp=Z,19nm,1.2s							
WCI	**Wyandotte Cave**	**46.29**	**21**	P	**P**	**12 33 26.8**	**-0.4**
ORV	**Oroville**	**46.45**	**343**	IAmb	IAmb	12 33 41.4	
comp=Z,11nm,1.3s							
PTLB	**Pontes e Lacer**	**46.78**	**107**	P	**P**	**12 33 30.6**	**-0.8**
PTLB				IAmb	IAmb	12 33 37.3	
comp=Z,11nm,1.2s							
LL06	**Loncomilla**	**46.90**	**148**	P	**P**	**12 33 31.9**	**-0.1**
PDAR	**Pinedale Array**	**47.39**	**356**	P	**P**	**12 33 35.2**	**-0.9**
comp=Z,0.7nm,0.7s,baz=165,slow=6.2,SNR=5.5							
PDAR				LR	LR	12 51 08.0	
comp=Z,274nm,18.9s,baz=180,slow=33							
comp=Z,0.7nm,0.7s							
PDAR	**Pinedale Array**	**47.39**	**356**	P	**P**	**12 33 35.1**	**-1.0**
PLCA	**Paso Flores**	**47.64**	**144**	LR	LR	12 48 27.1	
comp=Z,919nm,21.9s,baz=308,slow=30							
P51A	**Williamsport**	**48.60**	**23**	IAmb	IAmb	12 33 45.7	
comp=Z,15nm,0.9s							
RSSD	**Black Hills**	**48.62**	**1**	P	**P**	**12 33 45.0**	**-0.5**
RSSD				IAmb	IAmb	12 33 57.6	
comp=Z,9.4nm,1.1s							
MFID	**Camas Ranch**	**48.80**	**350**	IAmb	IAmb	12 34 00.3	
comp=Z,12nm,1.4s							
YBH	**Yreka Blue Hor**	**48.81**	**343**	LR	LR	12 50 34.1	
comp=Z,22nm,18.2s,baz=159,slow=31							
ACSO	**Alum Creek Sta**	**49.28**	**23**	IAmb	IAmb	12 33 50.8	
comp=Z,11nm,0.8s							
BCYI	**Bear Canyon**	**49.31**	**353**	IAmb	IAmb	12 33 54.1	
comp=Z,25nm,2.0s							
I07A	**Izee**	**50.18**	**347**	IAmb	IAmb	12 34 08.6	
comp=Z,19nm,1.6s							
CPUP	**Villa Florida**	**50.77**	**120**	P	**P**	**12 34 01.4**	**-0.6**
comp=Z,0.7nm,0.6s,baz=166,slow=12,SNR=4.1							
CPUP				LR	LR	12 51 53.9	
comp=Z,111nm,21.4s,baz=156,slow=32							
comp=Z,0.7nm,0.6s							
CPUP	**Villa Florida**	**50.77**	**120**	P	**P**	**12 34 02.2**	**+0.2**
AGMN	**Agassiz Nation**	**53.46**	**8**	IAmb	IAmb	12 34 31.7	
comp=Z,14nm,1.2s							
MDP	**Montagnes des**	**53.69**	**80**	LR	LR	12 55 16.3	
comp=Z,204nm,19.2s,baz=281,slow=34							
NEW	**Newport**	**53.72**	**350**	LR	LR	12 54 16.1	
comp=Z,554nm,18.7s,baz=178,slow=33							
SADO	**Sadowa**	**54.63**	**23**	LR	LR	12 58 04.2	
comp=Z,127nm,18.3s,baz=190,slow=36							
RAR	**Rarotonga**	**55.08**	**247**	LR	LR	12 52 43.5	
comp=Z,74nm,20.8s,baz=120,slow=30							
ULM	**Lac du Bonnet**	**55.37**	**7**	LR	LR	12 56 54.0	
comp=Z,378nm,18.3s,baz=191,slow=34							
BDFB	**Brasilia**	**57.46**	**105**	LR	LR	12 57 28.6	
comp=Z,454nm,18.4s,baz=308,slow=34							
BBB	**Bella Bella**	**59.85**	**344**	LR	LR	12 57 48.1	
comp=Z,218nm,18.5s,baz=168,slow=33							
DLBC	**Dease Lake**	**65.94**	**346**	LR	LR	13 01 09.1	
comp=Z,205nm,20.6s,baz=124,slow=33							
PMSA	**Palmer Station**	**66.81**	**162**	LR	LR	12 57 24.4	
comp=Z,525nm,20.8s,baz=306,slow=29							
YKA	**Yellowknife Ar**	**67.37**	**355**	LR	LR	13 03 42.7	
comp=Z,170nm,18.2s,baz=233,slow=34							
SCHQ	**Schefferville**	**67.44**	**23**	LR	LR	13 04 29.5	
comp=Z,193nm,20.5s,baz=241,slow=35							
L29M	**L29M**	**72.00**	**345**	IAmb	IAmb	12 36 39.4	
comp=Z,9.2nm,1.1s							
KDAK	**Kodiak Island**	**72.86**	**336**	LR	LR	13 00 21.1	
comp=Z,532nm,19.0s,baz=130,slow=29							
FRB	**Frobisher Bay**	**73.67**	**16**	LR	LR	13 08 27.0	
comp=Z,146nm,18.1s,baz=259,slow=35							
K27K	**Chicken**	**73.78**	**344**	IAmb	IAmb	12 36 38.8	
comp=Z,18nm,1.4s							
H27K	**Steamboat Moun**	**75.39**	**346**		**P**	**12 36 45.3**	**+0.4**
H27K				IAmb	IAmb	12 37 36.3	
comp=Z,27nm,1.8s							
INK	**Inuvik**	**75.44**	**350**	LR	LR	13 07 34.3	
comp=Z,422nm,18.4s,baz=262,slow=34							
INK	**Inuvik**	**75.44**	**350**		**P**	**12 36 45.6**	**+0.6**
INK				IAmb	IAmb	12 38 17.8	
comp=Z,35nm,2.0s							
IL31		**75.71**	**343**	P	**P**	**12 36 46.5**	**-0.1**
IL31				IAmb	IAmb	12 37 30.9	
comp=Z,29nm,1.9s							
ILAR	**Eielson Array**	**75.71**	**343**	P	**P**	**12 36 46.1**	**-0.6**
comp=Z,1.7nm,0.8s,baz=157,slow=6.2,SNR=24							
comp=Z,1.7nm,0.8s							
WRH	**Wood River Hil**	**75.85**	**342**	IAmb	IAmb	12 36 59.0	
comp=Z,23nm,1.3s							
URZ	**Urewera**	**77.19**	**232**	LR	LR	13 04 32.9	
comp=Z,116nm,18.4s,baz=94,slow=31							
H21K	**Melozitna Rive**	**78.11**	**342**	IAmb	IAmb	12 37 11.6	
comp=Z,26nm,1.5s							
COLD	**Coldfoot**	**78.42**	**344**		**P**	**12 37 03.8**	**+1.9**
COLD				IAmb	IAmb	12 37 10.5	
comp=Z,27nm,1.5s							
D25K	**Kavik River**	**78.96**	**346**	IAmb	IAmb	12 37 28.7	
comp=Z,28nm,1.8s							
RES	**Resolute Bay**	**79.53**	**3**	LR	LR	13 10 08.6	
comp=Z,127nm,21.2s,baz=253,slow=34							
SFJD	**Kangerlussuaq**	**81.35**	**19**	LR	LR	13 12 10.3	
comp=Z,103nm,20.9s,baz=216,slow=35							
QSPA	**South Pole Qui**	**85.35**	**180**	P	**P**	**12 37 43.4**	**+4.7**
comp=Z,5.2nm,0.9s,baz=17,slow=0.9,SNR=7.9							
QSPA				LR	LR	13 07 30.3	
comp=Z,157nm,22.0s,baz=134,slow=30							
VNDA	**Vanda**	**86.01**	**193**	LR	LR	13 08 40.0	
comp=Z,38nm,18.5s,baz=120,slow=31							
DZM	**Mont Dzumac**	**86.45**	**248**	LR	LR	13 10 51.2	
comp=Z,50nm,18.7s,baz=204,slow=32							
DZM	**Mont Dzumac**	**86.45**	**248**	*e*LR	LR	13 05 04.0	
comp=Z,104nm,25.4s							
SHEM	**Shemya Is, Ala**	**87.91**	**323**	LR	LR	13 08 46.1	
comp=Z,312nm,20.2s,baz=127,slow=30							
H11N3	**WAKE ISLAND Hy**	**89.30**	**290**	T	T	14 16 56.5	
baz=96,slow=74,SN

KNRA	**Kununurra**	**20.68**	**176**	P	**P**	**12 33 54.0**	**+0.2**	
KNRA				IAmb	IAmb	12 34 08.1		
	comp=Z,14nm,1.1s							
FITZ	**Fitzroy Crossi**	**23.08**	**184**	P	**P**	**12 34 19.8**	**+0.5**	
WB0	**Warramunga Arr**	**25.69**	**164**	P	**P**	**12 34 44.9**	**+1.4**	
WB0				IAmb	IAmb	12 34 47.9		
	comp=Z,3.6nm,0.8s							
WRA	**Warramunga Arr**	**25.84**	**164**	P	**P**	**12 34 46.7**	**+1.9**	
	comp=Z,0.9nm,0.5s,baz=343,slow=10,SNR=16							
	comp=Z,0.9nm,0.5s							
WB2	**Warramunga Arr**	**25.85**	**164**	P	**P**	**12 34 45.0**	**+0.1**	
WB2				IAmb	IAmb	12 35 02.4		
	comp=Z,2.3nm,0.7s							
WR8	**Warramunga Arr**	**25.90**	**164**	P	**P**	**12 34 46.1**	**+0.8**	
KULM	**Kulim**	**26.41**	**272**	P	**P**	**12 34 50.1**	**+0.1**	
KULM				IAmb	IAmb	12 34 53.1		
	comp=Z,10nm,1.0s							
RPSI	**Rantau Prapat**	**28.27**	**266**	P	**P**	**12 35 05.8**	**-1.0**	
RPSI				IAmb	IAmb	12 35 22.0		
	comp=Z,2.5nm,0.7s							
AS31	**Alice Springs**	**29.31**	**167**		**P**	**12 35 16.7**	**+0.8**	
ASAR	**Alice Springs**	**29.31**	**167**	P	**P**	**12 35 17.6**	**+1.7**	
	comp=Z,0.3nm,0.6s,baz=354,slow=9.3,SNR=8.3							
ASAR				LR	LR	12 47 39.7		
	comp=Z,64nm,19.6s,baz=114,slow=38							
	comp=Z,0.3nm,0.6s							
ASAR	**Alice Springs**	**29.31**	**167**	P	**P**	**12 35 16.6**	**+0.7**	
INKA	**Innaminka**	**35.16**	**159**	P	**P**	**12 36 07.4**	**+0.4**	
INKA				IAmb	IAmb	12 36 10.0		
	comp=Z,1.2nm,0.9s							
EVN	**Everest**	**44.56**	**305**	P	**P**	**12 37 25.9**	**0.0**	
EVN				IAmb	IAmb	12 37 26.2		
	comp=Z,1.9nm,0.6s							
MKAR	**Makanchi Array**	**56.71**	**325**	P	**P**	**12 38 56.5**	**0.0**	
	comp=Z,0.9nm,0.4s,baz=117,slow=8.2,SNR=14							
	comp=Z,0.9nm,0.4s							
MKAR	**Makanchi Array**	**56.71**	**325**	P	**P**	**12 38 56.9**	**+0.4**	
ZAA0	**Zalesovo Array**	**59.60**	**333**	P	**P**	**12 39 16.7**	**+0.3**	
ZAA0				IAmb	IAmb	12 39 43.1		
	comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**59.60**	**333**	P	**P**	**12 39 15.8**	**-0.7**	
	comp=Z,0.9nm,0.5s,baz=125,slow=7.8,SNR=4.5							
	comp=Z,0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**59.60**	**333**	P	**P**	**12 39 16.1**	**-0.3**	
KURK	**Kurchatov**	**60.85**	**327**	P	**P**	**12 39 24.6**	**-0.5**	
KURBB	**Kurchatov Arra**	**60.85**	**327**	P	**P**	**12 39 25.5**	**+0.4**	
	comp=Z,1.9nm,0.2s,baz=124,slow=6.5,SNR=5.5							
	comp=Z,1.9nm,0.2s							
KBL	**Kabul**	**61.06**	**307**	P	**P**	**12 39 25.2**	**-2.0**	
BVAR	**Borovoye Array**	**66.44**	**327**	P	**P**	**12 40 02.2**	**+0.3**	
	comp=Z,1.6nm,0.7s,baz=131,slow=8.8,SNR=7.3							
	comp=Z,1.6nm,0.7s							
BORK	**Borovoye**	**66.49**	**327**	P	**P**	**12 40 02.0**	**-0.2**	

*UPP **29** 12:38:55.2±0.1, 67.°18N×20.°69E, h0km, ML2.6, Confirmed Induced event*
*HEL **29** 12:38:55.4±0.2, 67.°17N×20.°60E, h0km, ML1.1, Suspected explosion*

ISC 29 12:38:54.9±0.9, **67.°18N**±0.°02×**20.°73E**±0.°03, **h0**km, **n20**, σ0**s59**/33, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.09**	**227**	P	**Pg**	**12 38 56.9**	**+0.3**
DUNU				S	**Sg**	**12 38 58.1**	**+0.4**
KUA	**Kurravaara**	**0.79**	**349**	P	**Pg**	**12 39 10.0**	**0.0**
KUA				S	**Sg**	**12 39 20.4**	**+0.2**
ERTU	**Ertsjaerv**	**0.85**	**137**	P	**Pg**	**12 39 11.3**	**+0.1**
ERTU	**Ertsjaerv**	**0.85**	**137**	PG	**Pg**	**12 39 11.2**	**-0.1**
SALU	**Saltoluokta**	**0.89**	**284**	P	**Pg**	**12 39 11.3**	**-0.5**
PAJU	**Pajala**	**0.94**	**99**	P	**Pg**	**12 39 13.2**	**+0.2**
PAJU				S	**Sg**	**12 39 25.8**	**+0.6**
PAJU	**Pajala**	**0.94**	**99**	PG	**Pg**	**12 39 13.3**	**+0.3**
	baz=283						
PAJU				SB	**Sb**	**12 39 26.7**	**-0.5**
LANU	**Lannavaara**	**1.00**	**29**	PG	**Pg**	**12 39 14.0**	**0.0**
	baz=215						
LANU				SB	**Sb**	**12 39 28.2**	**-0.5**
HARU	**Harads**	**1.03**	**174**	P	**Pg**	**12 39 14.3**	**-0.3**
KLF	**Kolari**	**1.26**	**86**	PG	**Pg**	**12 39 18.7**	**-0.3**
KLF				smax	smax	12 39 35.1	
	comp=Z,0.6nm,0.2s						
KLF				SG	**Sb**	**12 39 36.1**	**-0.2**
HEF	**Hetta**	**1.66**	**41**	PG	**Pn**	**12 39 25.7**	**+0.4**
HEF				smax	smax	12 39 46.2	
	comp=Z,0.9nm,0.2s						
HEF				SN	**Sg**	**12 39 48.6**	**+0.5**
KALU	**Kalix**	**1.69**	**140**	P	**Pb**	**12 39 26.4**	**-0.5**
KALU	**Kalix**	**1.69**	**140**	PG	**Pb**	**12 39 26.3**	**-0.6**
KALU				SN	**Sg**	**12 39 50.5**	**+1.3**
SJUU	**Sjulsmark**	**1.72**	**168**	P	**Pb**	**12 39 26.4**	**-0.9**
TOF	**Tornio**	**1.81**	**126**	PG	**Pb**	**12 39 28.6**	**-0.3**
TOF				smax	smax	12 39 50.4	
	comp=Z,1.1nm,0.2s						
TOF				SG	**Sg**	**12 39 53.5**	**+0.5**
KIF	**Kilpisjarvi**	**1.83**	**1**	PG	**Pb**	**12 39 29.2**	**0.0**
KIF				smax	smax	12 39 51.6	
	comp=Z,1.5nm,0.2s						
KIF				SG	**Sg**	**12 39 54.3**	**+0.6**
KTK1	**Kautokeino**	**2.06**	**26**	PG	**Pb**	**12 39 33.4**	**+0.2**
KTK1				SG	**Sb**	**12 40 00.2**	**+0.8**
RNF	**Rovaniemi**	**2.16**	**103**	PG	**Pb**	**12 39 34.3**	**-0.6**
RNF				SG	**Sg**	**12 40 03.7**	**-0.6**
RANF	**Ranua**	**2.69**	**113**	PG	**Pb**	**12 39 43.2**	**-0.6**
	baz=293						
RANF				SG	**Sb**	**12 40 18.0**	**+0.7**
ARA0	**ARCESS Array S**	**2.95**	**35**	SG	**Sg**	**12 40 28.0**	**-1.6**

*IDC **29** 12:41:14.9±133.0, 41.°48N×19.°47E, h0km, mb3.6/3, mbtmp3.7/3, MS3.9/4, Error ellipse: s-maj=2431.0km s-min=71.8km az=52.0*
*PDG **29** 12:41:18.7±0.2, 41.°50N×19.°57E, h10km, MD3.2/4, ML3.1/13, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*TIR **29** 12:41:18.8, 41.°59N×19.°55E, h26km, Md2.9/5, Ml2.9/4*
*BEO **29** 12:41:19.7±0.5, 41.°53N×19.°46E, h10km±2km, ML3.0/8*

ISC 29 12:41:18.7±1.0, **41.°53N**±0.°03×**19.°46E**±0.°02, **h14**km±**7**km, **n78**, σ1**s11**/115, **MS3.9**/4, **21C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.36**	**121**	Pg	**Pg**	**12 41 26.3**	**+0.4**
TIR				Sg	**Sg**	**12 41 30.7**	**-0.1**
TIR				AML	AML	12 41 32.1	
	3.7nm,0.4s						
TIR				AML	AML	12 41 32.3	
	6.0nm,0.4s						
ULC	**Ulcinj**	**0.46**	**340**	*e*Pg	**Pg**	**12 41 27.6**	**-0.2**
ULC				*i* Sg	**Sb**	**12 41 35.8**	**+0.5**
SDA	**Shkodra**	**0.52**	**3**	Pg	**Pg**	**12 41 28.5**	**-0.4**
SDA				Sg	**Sg**	**12 41 36.4**	**+0.5**
SDA				AMd		12 42 28.6	
DRME	**Dracevica, Mon**	**0.69**	**343**	*e*Pg	**Pg**	**12 41 31.8**	**-0.2**
DRME	**Dracevica, Mon**	**0.69**	**343**	⇑*i*Pg	**Pg**	**12 41 31.6**	**-0.4**
DRME				*i* Sg	**Sb**	**12 41 42.7**	**+0.9**
PHP	**Peshkopia**	**0.75**	**78**	Pg	**Pg**	**12 41 31.9**	**-1.4**
PHP				Sg	**Sg**	**12 41 41.7**	**-1.5**
PHP				AML	AML	12 41 47.5	
	2.4nm,0.4s						
PHP				AMd		12 42 19.8	
BUM	**Brajici-Budva**	**0.88**	**331**	⇑*i*Pg	**Pb**	**12 41 35.5**	**-0.2**
BUM				*i* Sg	**Sn**	**12 41 49.6**	**+0.4**
PDG	**Podgorica**	**0.91**	**351**	Pn	**Pg**	**12 41 35.4**	**-0.9**
PDG				Sn	**Sg**	**12 41 48.1**	**-0.1**
PDG				AMd		12 42 35.5	
PDG	**Podgorica**	**0.91**	**351**	⇑P	**Pn**	**12 41 37.2**	**+0.2**
PDG				⇓S	**Sn**	**12 41 50.0**	**+0.1**
PDG	**Podgorica**	**0.91**	**351**	*e*Pg	**Pb**	**12 41 36.3**	**+0.1**
PDG				*e*Sg	**Sn**	**12 41 50.1**	**+0.1**
PDG	**Podgorica**	**0.91**	**351**	⇓*i*Pg	**Pg**	**12 41 35.6**	**-0.7**
PDG				*i* Sg	**Sn**	**12 41 50.1**	**+0.1**
CEME	**Cevo**	**1.09**	**339**	⇓*i*Pg	**Pb**	**12 41 39.2**	**-0.2**
CEME				*i* Sg	**Sn**	**12 41 56.5**	**+2.0**
PVY	**Plav**	**1.12**	**19**	*e*Pg	**Pb**	**12 41 39.1**	**-0.9**
PVY	**Plav**	**1.12**	**19**	*e*Pg	**Pb**	**12 41 38.5**	**-1.5**
PVY				*i* Sg	**Sn**	**12 41 55.7**	**+0.2**
HCY	**Herceg Novi**	**1.16**	**322**	⇑*i*Pg	**Pg**	**12 41 40.8**	**-0.3**
HCY				*i* Sg	**Sn**	**12 41 58.2**	**+2.0**
NKME	**Niksic**	**1.29**	**343**	⇑*i*Pg	**Pb**	**12 41 42.8**	**+0.1**
KOME	**Kolasin**	**1.32**	**2**	*e*Pg	**Pg**	**12 41 44.4**	**+0.4**
KOME	**Kolasin**	**1.32**	**2**	⇑*i*Pg	**Pb**	**12 41 43.1**	**-0.1**
KOME				*i* Sg	**Sg**	**12 42 03.3**	**+2.1**
BEY	**Berane**	**1.38**	**13**	*e*Pg	**Pb**	**12 41 44.1**	**-0.2**
IVA	**Berane**	**1.38**	**13**	⇑*i*Pg	**Pn**	**12 41 43.3**	**-0.3**
IVA				*e*Sg	**Sg**	**12 42 04.6**	**+1.5**
TREB	**Trebinje**	**1.44**	**326**	*e*Pn	**Pb**	**12 41 44.8**	**-0.5**
TREB	**Trebinje**	**1.44**	**326**	*e*Pg	**Pb**	**12 41 45.4**	**+0.1**
TREB				*e*Sg	**Sg**	**12 42 05.3**	**+0.2**
BRY	**Bratogost**	**1.53**	**334**	⇑*i*Pn	**Pb**	**12 41 47.0**	**+0.1**
BRY				*i* Sn	**Sg**	**12 42 10.1**	**+2.2**
UPM	**Unac-Piva**	**1.72**	**346**	*e*Pn	**Pb**	**12 41 49.7**	**-0.4**
UPM				*i* Sn	**Sg**	**12 42 14.6**	**+0.6**
KLINJ	**Klinje**	**1.76**	**339**	*e*Pn	**Pb**	**12 41 50.0**	**-0.8**
SJES	**Sjenica**	**1.77**	**12**	*e*Pn	**Pb**	**12 41 50.5**	**-0.5**
SJES				*e*Sn	**Sg**	**12 42 14.9**	**-0.7**
PLE	**Pljevlja**	**1.80**	**358**	*e*Pn	**Pb**	**12 41 52.1**	**+0.7**
PLE	**Pljevlja**	**1.80**	**358**	⇑*i*Pn	**Pb**	**12 41 51.1**	**-0.3**
PLE				*i* Sn	**Sg**	**12 42 15.9**	**-0.6**
STON	**Ston**	**1.87**	**316**	*e*Pn	**Pb**	**12 41 52.7**	**+0.1**
STON				*e*Sn	**Sb**	**12 42 15.8**	**0.0**
NOCI	**Noci**	**1.95**	**248**	Sn	**Sg**	**12 42 21.5**	**+0.1**
NOCI				AML	AML	12 42 22.9	
	0.5nm,0.3s						
RUDO	**Rudo**	**2.09**	**358**	*e*Pn	**Pn**	**12 41 54.6**	**+1.4**
RUDO	**Rudo**	**2.09**	**358**	*e*Pn	**Pb**	**12 41 54.8**	**-1.5**
RUDO				*e*Sn	**Sb**	**12 42 22.6**	**+0.5**
SELS	**Selova**	**2.09**	**36**	*e*Pn	**Pn**	**12 41 54.4**	**+1.1**
SELS				*e*Sn	**Sb**	**12 42 21.1**	**-1.0**
IGT	**Igoumenitsa**	**2.11**	**161**	Pg	**Pb**	**12 41 56.1**	**-0.5**
IGT				Sg	**Sb**	**12 42 24.1**	**+1.5**
IGT				AMd		12 43 31.8	
IVAS	**Ivanjica**	**2.11**	**14**	*e*Pn	**Pn**	**12 41 54.5**	**+0.9**
BARS	**Barje**	**2.17**	**53**	*e*Pn	**Pn**	**12 41 56.1**	**+1.7**
GOCS	**Kraljevo Serbi**	**2.28**	**27**	*e*Pn	**Pn**	**12 41 57.5**	**+1.5**
GOCS				*e*Sn	**Sn**	**12 42 25.8**	**+1.8**
BBLS	**Lazi&#263i**	**2.33**	**359**	*e*Pn	**Pn**	**12 41 58.5**	**+1.8**
BOSS	**Bosilegrad**	**2.45**	**66**	*e*Pn	**Pn**	**12 42 00.3**	**+2.1**
BOSS				*e*Sn	**Sn**	**12 42 29.1**	**+1.1**
GRUS	**Gruza**	**2.53**	**21**	*e*Pn	**Pn**	**12 42 01.1**	**+1.8**
BOVS	**Bovan**	**2.68**	**38**	⇓P	**Pn**	**12 42 02.4**	**+1.1**
BOVS				⇓S	**Sn**	**12 42 34.6**	**+1.0**
BOVS	**Bovan**	**2.68**	**38**	*e*Pn	**Pn**	**12 42 03.5**	**+2.2**
BOVS				*e*Sn	**Sn**	**12 42 34.1**	**+0.5**
TRUS	**Trudelj**	**2.78**	**14**	*e*Pn	**Pn**	**12 42 05.1**	**+2.4**
ZAPS	**Zavoj**	**2.93**	**52**	*e*Pn	**Pn**	**12 42 06.5**	**+1.7**
ZAPS				*e*Sn	**Sn**	**12 42 40.8**	**+1.0**
VTS	**Vitosha**	**3.01**	**68**	*e*Pn	**Pn**	**12 42 07.8**	**+1.7**
VTS				*e*Sn	**Sn**	**12 42 43.5**	**+1.4**
TEKS	**Tekeris**	**3.02**	**1**	*e*Pn	**Pn**	**12 42 06.9**	**+0.9**
ZAGS	**Zajecar**	**3.06**	**41**	*e*Pn	**Pn**	**12 42 08.2**	**+1.6**
ZAGS				*e*Sn	**Sn**	**12 42 44.7**	**+1.6**
TIP	**Timpagrande**	**3.13**	**222**	⇑P	**Pn**	**12 42 08.4**	**+0.8**
BLKB	**Belogradchik**	**3.16**	**48**	⇑S	**Sn**	**12 42 46.7**	**+1.1**
BLKB	**Belogradchik**	**3.16**	**48**	*e*Pn	**Pn**	**12 42 10.1**	**+2.0**
BLKB				*e*Sn	**Sn**	**12 42 46.7**	**+1.1**
BORS2	**Bor- Borsko je**	**3.18**	**36**	*e*Pn	**Pn**	**12 42 08.8**	**+0.6**
BORS2				*e*Sn	**Sn**	**12 42 45.6**	**-0.3**
BLY	**Banja Luka**	**3.62**	**333**	*e*Pn	**Pb**	**12 42 22.8**	**+0.4**
FRGS	**Fruska Gora**	**3.63**	**4**	*e*Pn	**Pn**	**12 42 15.5**	**+1.0**
MDVR	**Moldovita**	**3.64**	**26**	⇑P	**Pn**	**12 42 15.1**	**+0.4**
MDVR				⇑S	**Sn**	**12 42 58.1**	**+0.6**
MDVR	**Moldovita**	**3.64**	**26**	*e*Pn	**Pn**	**12 42 15.0**	**+0.4**
MDVR				*e*Sn	**Sn**	**12 42 56.8**	**-0.7**
VRSS	**Vrsac**	**3.84**	**20**	*e*Pn	**Pn**	**12 42 19.0**	**+1.7**
HERR	**Herculane**	**3.98**	**32**	⇑P	**Pn**	**12 42 20.5**	**+1.2**
HERR				⇑S	**Sn**	**12 43 06.1**	**+0.3**
BZS	**Buzias**	**4.37**	**20**	⇑P	**Pn**	**12 42 26.0**	**+1.3**
GZR	**Gura Zlata**	**4.55**	**31**	⇓P	**Pn**	**12 42 28.5**	**+1.3**
GZR				⇑S	**Sn**	**12 43 21.4**	**+1.5**
MORH	**Mrgy, Hungar**	**4.72**	**353**	*e*Pn	**Pn**	**12 42 29.2**	**-0.2**
MORH	**Mrgy, Hungar**	**4.72**	**353**	⇑P	**Pn**	**12 42 30.2**	**+0.8**
MORH	**Mrgy, Hungar**	**4.72**	**353**	*e*Pn	**Pn**	**12 42 31.7**	**+2.3**
SIRR	**Siria**	**4.99**	**18**	⇑P	**Pn**	**12 42 34.4**	**+1.2**
SIRR	**Siria**	**4.99**	**18**	*e*Pn	**Pn**	**12 42 35.4**	**+2.2**
BOJS	**Bojanci**	**5.01**	**324**	*e*Pn	**Pn**	**12 42 34.2**	**+0.8**
BOJS				*e*Sn	**Sn**	**12 43 30.7**	**-0.4**
ARR	**Arges**	**5.37**	**43**	⇑P	**Pn**	**12 42 39.6**	**+1.1**
ARR				⇑S	**Sn**	**12 43 40.3**	**+0.1**
CEY	**Cerknica**	**5.57**	**321**	*e*Pn	**Pn**	**12 42 40.6**	**-0.5**
CEY				*e*Sn	**Sn**	**12 43 43.9**	**-1.0**
SKDS	**Skadanscina**	**5.63**	**317**	*e*Pn	**Pn**	**12 42 42.8**	**+0.8**
SKDS				*e*Sn	**Sn**	**12 43 45.3**	**-1.2**
VOIR		**5.64**	**44**	⇓P	**Pn**	**12 42 43.5**	**+1.4**
MLR	**Muntele Rosu**	**6.16**	**48**	⇓P	**Pn**	**12 42 50.8**	**+1.2**
PLOR	**Plostina**	**6.77**	**48**	⇑P	**Pn**	**12 42 57.8**	**+0.2**
FINES	**FINESS Array B**	**20.34**	**9**	P	**P**	**12 45 53.1**	**-1.1**
	6.8nm,1.1s,baz=195,slow=10,SNR=4.5						
	6.8nm,1.1s						
JMIC	**Jan Mayen**	**32.71**	**343**	LR	LR	13 02 19.0	
	comp=Z,109nm,18.0s,baz=314,slow=39						
SPITS	**Spitsbergen Ar**	**36.78**	**359**	LR	LR	13 05 07.6	
	comp=Z,272nm,19.1s,baz=298,slow=39						
ZALV	**Zalesovo Beam**	**44.13**	**51**	P	**P**	**12 49 24.9**	**-1.5**
	0.4nm,0.3s,baz=282,slow=8.3,SNR=3.8						
	0.4nm,0.3s						
NRIK	**Noril'sk**	**44.20**	**28**	LR	LR	13 11 55.5	
	comp=Z,135nm,20.3s,baz=17,slow=42						
MKAR	**Makanchi Array**	**44.32**	**61**	P	**P**	**12 49 26.6**	**-1.4**
	0.2nm,0.4s,baz=279,slow=8.3,SNR=2.7						
	0.2nm,0.4s						
PSI	**Prapat**	**80.26**	**95**	LR	LR	13 31 51.1	
	comp=Z,72nm,21.3s,baz=155,slow=38						

*IDC **29** 12:46:49.9±1.6, 9.°70S×148.°80E, h0km, mb3.7/4, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=30.3km s-min=26.3km az=145.0*

ISC 29 12:46:53.4±1.3, **9.°7S**±0.°2×**148.°8E**±0.°1, **h22**km, **n7**, σ0**s49**/8, **mb3.6**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.63**	**281**	Pn	**Pn**	**12 47 20.5**	**-0.3**
	29nm,0.3s,baz=86,slow=6.7,SNR=49						
PMG				Sn	**Sb**	**12 47 43.4**	**+0.4**
	97nm,0.3s,baz=64,slow=14,SNR=7.6						
WRA	**Warramunga Arr**	**17.26**	**232**	P	**Pn**	**12 50 53.5**	**+0.3**
	0.1nm,0.3s,baz=50,slow=12,SNR=2.9						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**19.86**	**224**	P	**P**	**12 51 23.4**	**+0.2**
	0.2nm,0.3s,baz=60,slow=10,SNR=37						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**23.04**	**196**	P	**P**	**12 51 57.3**	**+0.1**
	1.3nm,0.5s,baz=354,slow=14,SNR=3.3						
	1.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**23.94**	**247**	P	**P**	**12 52 05.3**	**-0.9**
	4.2nm,0.6s,baz=62,slow=10,SNR=18						
	4.2nm,0.6s						
MKAR	**Makanchi Array**	**81.47**	**320**	P	**P**	**12 59 09.2**	**+0.2**
	0.2nm,0.6s,baz=111,slow=6.3,SNR=2.0						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**88.19**	**23**	P	**P**	**12 59 42.5**	**+0.1**
	0.2nm,0.6s,baz=254,slow=5.4,SNR=4.1						
	0.2nm,0.6s						

*BEO **29** 12:47:06.7±0.7, 41.°49N×19.°55E, h0km, ML2.5/6*
*TIR **29** 12:47:06.9, 41.°58N×19.°56E, h21km±1km, Md3.0/6, Ml2.5/4*
*PDG **29** 12:47:07.0±0.1, 41.°51N×19.°60E, h4km±1km, ML2.5/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

ISC 29 12:47:06.3±0.8, **41.°58N**±0.°03×**19.°61E**±0.°03, **h12**km, **n32**, σ1**s44**/56, **4C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**140**	Pg	**Pb**	**12 47 14.5**	**+1.0**
TIR				Sg	**Sb**	**12 47 19.1**	**+0.7**
TIR				AML	AML	12 47 20.6	
	2.4nm,0.2s						
ULC	**Ulcinj**	**0.47**	**325**	⇓*i*Pg	**Pb**	**12 47 15.7**	**-0.9**
ULC				*i* Sg	**Sb**	**12 47 23.3**	**-0.2**
SDA	**Shkodra**	**0.48**	**350**	Pg	**Pb**	**12 47 16.5**	**-0.2**
SDA				Sg	**Sb**	**12 47 23.5**	**-0.2**
SDA				AMd		12 48 16.1	
PHP	**Peshkopia**	**0.63**	**80**	Pg	**Pb**	**12 47 19.8**	**+0.6**
PHP				Sg	**Sb**	**12 47 29.4**	**+1.3**
PHP				AML	AML	12 47 37.0	
	1.2nm,0.6s						
PHP				AMd		12 48 05.9	
DRME	**Dracevica, Mon**	**0.69**	**333**	*e*Pg	**Pb**	**12 47 20.1**	**-0.1**
DRME	**Dracevica, Mon**	**0.69**	**333**	⇓*i*Pg	**Pb**	**12 47 19.6**	**-0.6**
DRME				*e*Sg	**Sn**	**12 47 31.0**	**-1.4**
PDG	**Podgorica**	**0.89**	**343**	Pn	**Pg**	**12 47 22.2**	**-1.3**
PDG				Sg	**Sn**	**12 47 36.4**	**-1.1**
PDG				AMd		12 48 22.0	
PDG	**Podgorica**	**0.89**	**343**	*e*Pg	**Pn**	**12 47 24.5**	**-0.1**
PDG				*e*Sg	**Sn**	**12 47 37.5**	**0.0**
PDG	**Podgorica**	**0.89**	**343**	⇓*i*Pg	**Pn**	**12 47 23.8**	**-0.8**
PDG				*i* Sg	**Sn**	**12 47 38.0**	**+0.5**
BUM	**Brajici-Budva**	**0.90**	**324**	⇓*i*Pg	**Pn**	**12 47 23.8**	**-1.0**
BUM				*i* Sg	**Sn**	**12 47 38.2**	**+0.4**
PVY	**Plav**	**1.05**	**14**	⇑*i*Pg	**Pn**	**12 47 26.7**	**-0.2**
PVY				*i* Sg	**Sn**	**12 47 43.5**	**+1.9**
CEME	**Cevo**	**1.10**	**332**	*e*Pg	**Pn**	**12 47 27.3**	**-0.2**
CEME				*i* Sg	**Sn**	**12 47 44.7**	**+2.1**
HCY	**Herceg Novi**	**1.20**	**317**	*e*Pg	**Pg**	**12 47 29.3**	**-0.1**
HCY				*e*Sg	**Sn**	**12 47 47.9**	**+2.7**
KOME	**Kolasin**	**1.27**	**357**	⇑*i*Pg	**Pg**	**12 47 31.4**	**+0.6**
KOME				*i* Sg	**Sg**	**12 47 51.2**	**+3.9**
NKME	**Niksic**	**1.28**	**338**	⇑*i*Pg	**Pg**	**12 47 30.9**	**-0.1**
NKME				*i* Sg	**Sg**	**12 47 51.2**	**+3.5**
BEY	**Berane**	**1.31**	**9**	*e*Pg	**Pg**	**12 47 31.5**	**0.0**
IVA	**Berane**	**1.31**	**9**	⇑*i*Pg	**Pg**	**12 47 31.4**	**0.0**
IVA				*e*Sg	**Sg**	**12 47 52.4**	**+3.9**
TREB	**Trebinje**	**1.47**	**321**	*e*Pn	**Pg**	**12 47 33.7**	**-0.9**
TREB				*e*Sg	**Sg**	**12 47 54.1**	**+0.4**
BRY	**Bratogost**	**1.54**	**329**	*e*Pn	**Pg**	**12 47 35.4**	**-0.5**
SJES	**Sjenica**	**1.70**	**9**	*e*Pn	**Pg**	**12 47 39.9**	**+0.9**
SJES				*e*Sn	**Sg**	**12 48 03.5**	**+2.4**
KEK	**Kerkira**	**1.87**	**176**	Pn	**Pb**	**12 47 41.0**	**+0.6**
KEK				AMd		12 48 55.5	
STON	**Ston**	**1.92**	**313**	*e*Pn	**Pb**	**12 47 40.7**	**-0.5**
SELS	**Selova**	**1.98**	**34**	*e*Pn	**Pb**	**12 47 43.2**	**+0.9**
SELS				*e*Sn	**Sg**	**12 48 09.0**	**-1.1**
IVAS	**Ivanjica**	**2.04**	**11**	*e*Pn	**Pb**	**12 47 43.2**	**0.0**
RUDO	**Rudo**	**2.05**	**355**	*e*Pn	**Pb**	**12 47 43.2**	**-0.2**
RUDO				*e*Sn	**Sg**	**12 48 12.2**	**+0.2**
BARS	**Barje**	**2.05**	**52**	*e*Pn	**Pb**	**12 47 43.9**	**+0.4**
BARS				*e*Sn	**Sg**	**12 48 12.0**	**-0.3**
NOCI	**Noci**	**2.08**	**249**	Pn	**Pb**	**12 47 43.2**	**-0.6**
NOCI				AML	AML	12 48 04.5	
	0.2nm,0.1s						
NOCI				AMd		12 49 02.4	
IGT	**Igoumenitsa**	**2.12**	**165**	Pg	**Pb**	**12 47 44.5**	**0.0**
IGT				Sg	**Sg**	**12 48 12.7**	**-1.6**
IGT				AMd		12 48 59.4	
BBLS	**Lazi&#263i**	**2.29**	**356**	*e*Pn	**Pb**	**12 47 47.1**	**-0.5**
BOVS	**Bovan**	**2.57**	**36**	*e*Pn	**Pb**	**12 47 50.3**	**-2.0**
BOVS				*e*Sn	**Sb**	**12 48 22.2**	**-1.7**
ZAPS	**Zavoj**	**2.81**	**52**	*e*Pn	**Pb**	**12 47 54.6**	**-1.8**
ZAPS				*e*Sn	**Sb**	**12 48 28.9**	**-1.8**
ZAGS	**Zajecar**	**2.95**	**40**	*e*Pn	**Pb**	**12 47 56.6**	**-2.2**
ZAGS				*e*Sn	**Sb**	**12 48 32.1**	**-2.8**

IDC 29 12:50:37.3±3.1, **1.°83S×126.°79E, h0**km, **mb3.7**/2, **mbtmp3.8**/3, **ML4.3**/1, **MS3.8**/1, **Error ellipse: s-maj=369.4km s-min=27.9km az=66.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.45**	**158**	P	**P**	**12 55 05.0**	**-0.7**
	1.0nm,0.3s,baz=333,slow=13,SNR=33						
	2

	comp=Z,17nm,1.2s						
WVT	**Waverly**	**43.52**	**21**	P	**P**	**12 59 25.7**	**+0.2**
WVT				IAmb	IAmb	12 59 26.9	
	comp=Z,15nm,1.4s						
V48A	**Smith Brothers**	**43.54**	**22**	P	**P**	**12 59 26.1**	**+0.4**
V48A				IAmb	IAmb	12 59 27.2	
	comp=Z,12nm,1.2s						
MT13	**San Alfonso**	**43.75**	**136**	P	**P**	**12 59 25.5**	**-2.1**
MT13				IAmb	IAmb	12 59 29.4	
	comp=Z,11nm,1.0s						
CGM3	**Cape Girardeau**	**43.98**	**18**	P	**P**	**12 59 30.1**	**+0.9**
CGM3				IAmb	IAmb	12 59 32.5	
	comp=Z,16nm,1.4s						
BO02	**Sierra Bellavi**	**44.01**	**138**	P	**P**	**12 59 27.2**	**-2.5**
BO02				IAmb	IAmb	12 59 27.6	
	comp=Z,11nm,0.8s						
NVAR	**Mina Array Bea**	**44.28**	**345**	P	**P**	**12 59 31.6**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=179,slow=11,SNR=6.4						
NVAR				LR	LR	13 14 00.7	
	comp=Z,100nm,20.9s,baz=170,slow=31						
	comp=Z,0.7nm,0.8s						
NVAR	**Mina Array Bea**	**44.28**	**345**	P	**P**	**12 59 30.2**	**-1.6**
SJG	**San Juan**	**44.64**	**59**	LR	LR	13 14 34.6	
	comp=Z,62nm,21.1s,baz=238,slow=31						
TKL	**Tuckaleechee C**	**44.69**	**25**	LR	LR	13 18 27.4	
	comp=Z,47nm,20.2s,baz=266,slow=36						
BI02	**San Fabin de**	**44.80**	**140**	P	**P**	**12 59 33.9**	**-2.1**
BI02				IAmb	IAmb	12 59 35.3	
	comp=Z,10nm,1.1s						
PPT	**Papeete**	**45.23**	**250**	LR	LR	13 14 00.4	
	comp=Z,76nm,18.7s,baz=70,slow=30						
PNTR	**Pine Nut**	**45.24**	**344**	IAmb	IAmb	12 59 42.6	
	comp=Z,8.2nm,1.0s						
ORV	**Oroville**	**46.21**	**343**	P	**P**	**12 59 47.0**	**+0.1**
ORV				IAmb	IAmb	12 59 49.9	
	comp=Z,5.7nm,1.1s						
R49A	**Shelbyville**	**46.41**	**22**	P	**P**	**12 59 48.6**	**+0.1**
PLCA	**Paso Flores**	**47.79**	**144**	P	**P**	**13 00 02.5**	**+3.1**
	comp=Z,1.5nm,0.8s,baz=348,slow=9.3,SNR=3.1						
PLCA				LR	LR	13 15 12.3	
	comp=Z,93nm,18.5s,baz=260,slow=30						
	comp=Z,1.5nm,0.8s						
NEW	**Newport**	**53.45**	**350**	LR	LR	13 20 36.2	
	comp=Z,63nm,19.9s,baz=148,slow=33						
RAR	**Rarotonga**	**55.36**	**247**	LR	LR	13 18 12.2	
	comp=Z,37nm,21.7s,baz=148,slow=29						
DLBC	**Dease Lake**	**55.69**	**346**	LR	LR	13 29 08.9	
	comp=Z,47nm,18.1s,baz=138,slow=35						
PMSA	**Palmer Station**	**67.05**	**162**	LR	LR	13 23 28.0	
	comp=Z,122nm,20.5s,baz=290,slow=29						
YKA	**Yellowknife Ar**	**67.08**	**355**	P	**P**	**13 02 14.1**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=175,slow=5.7,SNR=5.9						
	comp=Z,1.6nm,0.8s						
KDAK	**Kodiak Island**	**72.65**	**336**	LR	LR	13 28 08.5	
	comp=Z,97nm,20.6s,baz=180,slow=30						
ILAR	**Eielson Array**	**75.47**	**343**	P	**P**	**13 03 04.2**	**-1.5**
	comp=Z,1.0nm,0.9s,baz=138,slow=8.2,SNR=8.8						
	comp=Z,1.0nm,0.9s						
PRP	**Porcupine Dome**	**75.64**	**344**		**P**	**13 03 06.9**	**+0.1**
URZ	**Urewera**	**77.52**	**232**	LR	LR	13 29 55.2	
	comp=Z,30nm,18.2s,baz=51,slow=30						
QSPA	**South Pole Qui**	**85.65**	**180**	P	**P**	**13 04 01.0**	**+0.5**
	comp=Z,5.4nm,1.0s,baz=127,slow=1.4,SNR=22						
	comp=Z,5.4nm,1.0s						
QSPA	**South Pole Qui**	**85.65**	**180**	P	**P**	**13 04 01.0**	**+0.5**
QSPA				IAmb	IAmb	13 04 03.0	
	comp=Z,5.4nm,1.0s						
H11N3	**WAKE ISLAND Hy**	**89.36**	**290**	T	T	14 43 03.8	
	baz=96,slow=74,SNR=29						
H11N2	**WAKE ISLAND Hy**	**89.37**	**290**	T	T	14 43 05.4	
	baz=96,slow=74,SNR=34						
H11N1	**WAKE ISLAND Hy**	**89.38**	**290**	T	T	14 43 09.9	
	baz=96,slow=74,SNR=22						
H11S2	**WAKE ISLAND Hy**	**89.45**	**288**	T	T	14 43 19.8	
	baz=94,slow=74,SNR=28						
H11S1	**WAKE ISLAND Hy**	**89.46**	**288**	T	T	14 43 16.9	
	baz=94,slow=74,SNR=29						
H11S3	**WAKE ISLAND Hy**	**89.47**	**288**	T	T	14 43 20.5	
	baz=94,slow=74,SNR=18						
CMAR	**Chiang Mai Arr**	**152.47**	**302**	PKP	**PKPdf**	**13 11 13.3**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=8.3,slow=2.4,SNR=4.1						
CMAR				PKPbc	**sPKPdf**	**13 11 17.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=49,slow=2.7,SNR=2.1						

*GCG **29** 12:56:19.8±1.6, 13.°72N×89.°22W, h133km±13km, MD4.1, ML4.0*
*SNET **29** 12:56:19.5±0.7, 13.°63N×89.°35W, h137km±4km, ML3.5*
*NEIC **29** 12:56:20.6±1.6, 13.°74N±0.°09×89.°32W±0.°06, h130km±7km, mb4.1/38, Error ellipse: s-maj=14.0km s-min=7.7km az=205.0*
*CATAC **29** 12:56:20.9±0.3, 14°N±3′×8′9W±′, h124km±2km, M3.4/27, MLv3.4/27, Error ellipse: s-maj=7.0km s-min=2.7km az=24.3, confirmed*
*IDC **29** 12:56:38.6±15.0, 14.°53N×89.°38W, h286km±107km, mb3.3/3, mbtmp3.9/4, MS3.3/1, Error ellipse: s-maj=133.5km s-min=42.5km az=167.0*

ISC 29 12:56:19.6±0.7, 13.°72N±0.°05×89.°34W±0.°04, h139km±4km, n152, σ0s90/163, mb4.0/11, 6C-10D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMON	**Piamonte**	**0.02**	**100**	*eP*	**Pn**	**12 56 38.5**	**+0.1**
PMON	**Piamonte**	**0.02**	**100**	S	**Sn**	**12 56 51.1**	**-1.5**
PMON	**Piamonte**	**0.02**	**100**	P	**Pn**	**12 56 38.5**	**+0.1**
BOQS	**Boqueron**	**0.06**	**71**	*eP*	**Pn**	**12 56 39.0**	**+0.5**
PIC2	**El Picacho**	**0.08**	**70**	*eP*	**Pn**	**12 56 39.0**	**+0.4**
UEES	**Universidad Ev**	**0.09**	**90**	S	**Sn**	**12 56 52.4**	**-0.3**
UEES	**Universidad Ev**	**0.09**	**90**	P	**Pn**	**12 56 39.0**	**+0.6**
CEDA	**San Andres**	**0.10**	**327**	*eP*	**Pn**	**12 56 38.6**	**+0.2**
CEDA	**San Andres**	**0.10**	**327**	P	**Pn**	**12 56 38.8**	**+0.4**
CEDA	**San Andres**	**0.10**	**327**	S	**Sn**	**12 56 52.7**	**+0.1**
JAYA	**Jayaque - finc**	**0.13**	**241**	*eP*	**Pn**	**12 56 38.3**	**-0.2**
JAYA				*eS*	**Sn**	**12 56 52.6**	**-0.3**
JAYA	**Jayaque - finc**	**0.13**	**241**	*i* P	**Pn**	**12 56 38.3**	**-0.2**
JAYA				*eS*	**Sn**	**12 56 52.2**	**-0.7**
JAYA	**Jayaque - finc**	**0.13**	**241**	P	**Pn**	**12 56 38.3**	**-0.2**
UTEC	**Universidad Te**	**0.13**	**97**	P	**Pn**	**12 56 38.4**	**-0.1**
IGN	**Direccin Gen**	**0.16**	**91**	P	**Pn**	**12 56 38.7**	**+0.2**
IGN	**Direccin Gen**	**0.16**	**91**	S	**Sn**	**12 56 52.3**	**-0.5**
LOMA	**Loma Larga**	**0.18**	**114**	*eP*	**Pn**	**12 56 38.0**	**-0.6**
LOMA				*eS*	**Sn**	**12 56 52.6**	**-0.4**
LOMA	**Loma Larga**	**0.18**	**114**	P	**Pn**	**12 56 38.3**	**-0.2**
UDBS	**Universidad Do**	**0.18**	**90**	P	**Pn**	**12 56 38.9**	**+0.4**
UDBS	**Universidad Do**	**0.18**	**90**	S	**Sn**	**12 56 52.9**	**+0.1**
PANCS	**Alcalda de**	**0.18**	**124**	S	**Sn**	**12 56 52.7**	**-0.1**
PANCS	**Alcalda de**	**0.18**	**124**	P	**Pn**	**12 56 38.7**	**+0.1**
LFU	**La Fuente**	**0.22**	**81**	*eP*	**Pn**	**12 56 38.8**	**+0.2**
LALI	**Alcalda de L**	**0.23**	**176**	*i* P	**Pn**	**12 56 38.5**	**0.0**
LALI	**Alcalda de L**	**0.23**	**176**	*i* P	**Pn**	**12 56 38.5**	**0.0**
LALI				IAML		12 56 53.5	
	comp=N,1μm,0.4s						
LALI	**Alcalda de L**	**0.23**	**176**	P	**Pn**	**12 56 38.7**	**+0.1**
LALI	**Alcalda de L**	**0.23**	**176**	S	**Sn**	**12 56 52.7**	**-0.2**
LFRS	**El Faro**	**0.28**	**109**	*i* P	**Pn**	**12 56 38.9**	**0.0**
LBRS	**Las Brisas**	**0.29**	**86**	*eP*	**Pn**	**12 56 39.0**	**+0.2**
CEVE	**Cerro Verde**	**0.30**	**292**	*eP*	**Pn**	**12 56 39.4**	**+0.4**
CEVE	**Cerro Verde**	**0.30**	**292**	P	**Pn**	**12 56 39.6**	**+0.6**
CEVE	**Cerro Verde**	**0.30**	**292**	S	**Sn**	**12 56 54.8**	**+1.0**
SNJE	**San Jose**	**0.30**	**300**	*eP*	**Pn**	**12 56 39.4**	**+0.4**
SBLS	**San Blas**	**0.30**	**294**	*i* P	**Pn**	**12 56 39.4**	**+0.3**
SBLS				*eP*		12 56 39.5	
UNIC	**Universidad Ca**	**0.34**	**322**	P	**Pn**	**12 56 38.7**	**-0.3**
UNIC	**Universidad Ca**	**0.34**	**322**	S	**Sn**	**12 56 53.0**	**-0.7**
PAVA	**Las Pavas**	**0.39**	**90**	*i* P	**Pn**	**12 56 39.4**	**+0.2**
PAVA	**Las Pavas**	**0.39**	**90**	P	**Sn**	**12 56 39.2**	**0.0**
PAVA	**Las Pavas**	**0.39**	**90**	S	**Sn**	**12 56 54.5**	**+0.4**
NUBE	**Las Nubes**	**0.47**	**293**	*i* P	**Pn**	**12 56 39.9**	**+0.2**
NUBE	**Las Nubes**	**0.47**	**293**	*i* P	**Pn**	**12 56 39.8**	**+0.2**
NUBE	**Las Nubes**	**0.47**	**293**	P	**Pn**	**12 56 40.2**	**+0.5**
NUBE	**Las Nubes**	**0.47**	**293**	S	**Sn**	**12 56 55.4**	**+0.6**
LOAL	**Lomas de Alarc**	**0.52**	**303**	*eP*	**Pn**	**12 56 40.2**	**+0.4**
LOAL	**Lomas de Alarc**	**0.52**	**303**	P	**Pn**	**12 56 40.2**	**+0.4**
LOAL	**Lomas de Alarc**	**0.52**	**303**	S	**Sn**	**12 56 55.6**	**+0.6**
RBDL	**Robledal**	**0.52**	**319**	*i* P	**Pn**	**12 56 40.3**	**+0.3**
UESV	**Universidad de**	**0.54**	**98**	P	**Pn**	**12 56 39.8**	**-0.1**
UESV	**Universidad de**	**0.54**	**98**	S	**Sn**	**12 56 55.7**	**+0.4**
TECO	**Alcaldia de Te**	**0.57**	**108**	*eP*	**Pn**	**12 56 39.9**	**-0.2**
TECO				*eS*	**Sn**	**12 56 55.5**	**0.0**
TECO	**Alcaldia de Te**	**0.57**	**108**	P	**Pn**	**12 56 40.0**	**-0.1**
TECO	**Alcaldia de Te**	**0.57**	**108**	S	**Sn**	**12 56 56.3**	**+0.8**
LLGN	**La Laguna**	**0.58**	**41**	P	**Pn**	**12 56 40.5**	**+0.3**
LLGN	**La Laguna**	**0.58**	**41**	S	**Sn**	**12 56 56.1**	**+0.1**
SCLA	**Alcaldia de Sa**	**0.59**	**91**	*i* P	**Pn**	**12 56 40.5**	**+0.3**
SCLA	**Alcaldia de Sa**	**0.59**	**91**	P	**Pn**	**12 56 40.8**	**+0.6**
SCLA	**Alcaldia de Sa**	**0.59**	**91**	S	**Sn**	**12 56 57.0**	**+1.2**
FAME	**Alcaldia de Sa**	**0.67**	**281**	P	**Pn**	**12 56 40.6**	**-0.1**
FAME	**Alcaldia de Sa**	**0.67**	**281**	S	**Sn**	**12 56 57.1**	**+0.4**
MTO3	**Montecristo**	**0.68**	**358**	Pn	**Pn**	**12 56 41.2**	**+0.2**
MTO3				Sn	**Sn**	**12 56 56.3**	**-1.0**
MTO3	**Montecristo**	**0.68**	**358**	*i* P	**Pn**	**12 56 41.3**	**+0.2**
MTO3	**Montecristo**	**0.68**	**358**	*i* P	**Pn**	**12 56 41.3**	**+0.2**
MTO3	**Montecristo**	**0.68**	**358**	S	**Sn**	**12 56 57.3**	**0.0**
MTO3	**Montecristo**	**0.68**	**358**	P	**Pn**	**12 56 41.3**	**+0.3**
JUAM	**Asuncion Mita**	**0.71**	**330**	*i* P	**Pn**	**12 56 41.3**	**+0.3**
JUAM				*eS*	**Sn**	**12 56 57.1**	**-0.3**
JUAM				IAML		12 56 58.6	
	comp=E,2μm,1.0s						
ESQI	**Esquipulas**	**0.84**	**360**	Pn	**Pn**	**12 56 42.7**	**+0.6**
ESQI				Sn	**Sn**	**12 56 58.5**	**-0.7**
ESQI	**Esquipulas**	**0.84**	**360**	*i* P	**Pn**	**12 56 42.8**	**+0.7**
ESQI	**Esquipulas**	**0.84**	**360**	P	**Pn**	**12 56 43.1**	**+1.0**
ESQI	**Esquipulas**	**0.84**	**360**	S	**Sn**	**12 56 58.9**	**-0.3**
TECA	**Tecapa**	**0.84**	**105**	*i* P	**Pn**	**12 56 42.3**	**+0.2**
ZAFR2	**Estanzuela, Za**	**0.86**	**359**	*i* P	**Pn**	**12 56 46.8**	**+4.7**
PACA	**Pacayal**	**1.01**	**104**	*eP*	**Pn**	**12 56 44.0**	**+0.4**
PACA	**Pacayal**	**1.01**	**104**	P	**Pn**	**12 56 44.0**	**+0.4**
PACA	**Pacayal**	**1.01**	**104**	S	**Sn**	**12 57 00.8**	**-1.0**
LCY	**Lacayo**	**1.05**	**106**	*eP*	**Pn**	**12 56 44.1**	**+0.3**
RANC	**El Ranchito**	**1.06**	**105**	*eP*	**Pn**	**12 56 44.1**	**+0.2**
FG16	**Alotenango, Sa**	**1.27**	**296**	*i* S	Sn	12 57 18.6	+12
LCND	**La Caada**	**1.46**	**106**	*i* P	**Pn**	**12 56 48.1**	**+0.2**
LCND	**La Caada**	**1.46**	**106**	P	**Pn**	**12 56 48.0**	**+0.1**
CNCH	**Conchagua**	**1.53**	**106**	*i* P	**Pn**	**12 56 48.9**	**+0.2**
CNCH	**Conchagua**	**1.53**	**106**	S	**Sn**	**12 57 09.3**	**-1.6**
CNCH	**Conchagua**	**1.53**	**106**	P	**Pn**	**12 56 48.9**	**+0.2**
APG	**El Apazote**	**1.68**	**320**	*i* P	**Pn**	**12 56 51.7**	**+1.1**
POTN	**Potosi Cosigui**	**1.92**	**112**	P	**Pn**	**12 56 53.5**	**+0.5**
POTN				S	**Sn**	**12 57 19.1**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.03**	**80**		**Pn**	**12 56 54.6**	**0.0**
TGUH				Sn	**Sn**	**12 57 21.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.03**	**80**	P	**Pn**	**12 56 55.2**	**+0.7**
TGUH				S	**Sn**	**12 57 20.7**	**-0.7**
TGUH	**Tegucigalpa,Un**	**2.03**	**80**		**Pn**	**12 56 54.5**	**0.0**
RTAL	**Retalhuleu**	**2.42**	**290**	Pn	**Pn**	**12 57 00.5**	**+1.3**
RTAL				Sn	**Sn**	**12 57 29.9**	**+0.2**
YUSH	**Yuscaran**	**2.43**	**84**	S	**Sn**	**12 57 29.6**	**-0.5**
YUSH	**Yuscaran**	**2.43**	**84**	P	**Pn**	**12 56 59.9**	**+0.5**
CRIN	**San Cristobal**	**2.44**	**114**	Pn	**Pn**	**12 56 59.5**	**-0.1**
PKGN	**Cerro Pekin**	**2.52**	**114**	P	**Pn**	**12 57 00.9**	**+0.5**
PKGN				S	**Sn**	**12 57 32.3**	**+0.5**
POLN	**Al Sur del Vol**	**2.68**	**113**	P	**Pn**	**12 57 02.4**	**0.0**
POLN				S	**Sn**	**12 57 35.8**	**+0.3**
ROCN	**Rota Cerro Neg**	**2.79**	**115**	S	**Sn**	**12 57 37.3**	**-0.7**
CNGA	**Al SSO del Vol**	**2.84**	**115**	S	**Sn**	**12 57 39.3**	**+0.2**
CNGN	**Cerro Negro**	**2.84**	**115**	Pn	**Pn**	**12 57 03.2**	**-1.3**
CNGN	**Cerro Negro**	**2.84**	**115**	S	**Sn**	**12 57 39.2**	**+0.1**
LIMN	**Finca el Limon**	**2.96**	**102**	P	**Pn**	**12 57 06.8**	**+0.6**
MOMN	**Momotombo**	**3.02**	**115**	P	**Pn**	**12 57 08.3**	**+1.5**
MOM2	**El Cardon**	**3.06**	**114**	P	**Pn**	**12 57 10.1**	**+2.9**
MOM2				S	**Sn**	**12 57 45.1**	**+1.1**
COPN	**Copaltepe**	**3.08**	**119**	P	**Pn**	**12 57 08.4**	**+0.8**
CCIG	**Comitan**	**3.72**	**314**	Pn	**Pn**	**12 57 14.0**	**-2.1**
BOAB	**BOACO BROADBAN**	**3.79**	**109**		**Pn**	**12 57 16.4**	**-0.4**
SIUN	**Universidad Ur**	**4.43**	**89**	Pn	**Pn**	**12 57 25.0**	**-0.3**
JUD3	**Juan Diaz 3**	**5.12**	**133**	Pn	**Pn**	**12 57 36.1**	**+1.5**
JTS	**Las Juntas de**	**5.47**	**128**	Pn	**Pn**	**12 57 40.8**	**+1.6**
TEIG	**Tepich**	**6.55**	**9**	Pn	**Pn**	**12 57 53.7**	**+0.1**
PIRO	**Caarate, Puerto**	**7.91**	**131**	Pn	**Pn**	**12 58 13.8**	**+2.0**
BRU2	**Volcan**	**8.15**	**126**	Pn	**Pn**	**12 58 15.5**	**+0.3**
RUSC	**La Rusia**	**17.79**	**114**	P	**P**	**13 00 18.6**	**+0.5**
HNDO	**Hondo**	**18.23**	**331**	P	**P**	**13 00 22.1**	**-0.1**
HNDO				IAmb	IAmb	13 00 26.2	
	comp=Z,4.6nm,0.6s						
DRIO	**Del Rio**	**18.80**	**328**	P	**P**	**13 00 28.3**	**-0.2**
DRIO				IAmb	IAmb	13 00 35.7	
	comp=Z,4.6nm,0.7s						
SDV	**Santo Domingo**	**18.95**	**103**	P	**P**	**13 00 30.8**	**+0.4**
JCT	**Junction City**	**19.27**	**332**	P	**P**	**13 00 34.3**	**+0.7**
JCT				IAmb	IAmb	13 00 35.8	
	comp=Z,11nm,1.1s						
LRAL	**Lakeview Retre**	**19.35**	**6**	P	**Pn**	**13 00 35.7**	**-1.1**
LRAL				IAmb	IAmb	13 00 36.8	
	comp=Z,6.9nm,0.8s						
BRDY	**Brady**	**19.61**	**335**		**P**	**13 00 37.8**	**+0.5**
WHTX	**Lake Whitney,**	**19.65**	**339**	P	**P**	**13 00 37.9**	**+0.3**
WHTX				IAmb	IAmb	13 00 39.0	
	comp=Z,5.7nm,0.6s						
Y49A	**Blount Mountai**	**20.23**	**7**		**P**	**13 00 45.3**	**+1.5**
OZNA	**Ozona**	**20.27**	**330**		**P**	**13 00 45.4**	**+0.9**
OZNA				IAmb	IAmb	13 00 47.4	
	comp=Z,6.8nm,0.9s						
GOGA	**Godfrey**	**20.32**	**14**	P	**P**	**13 00 46.1**	**+1.3**
GOGA				IAmb	IAmb	13 01 03.9	
	comp=Z,7.2nm,1.1s						
TXAR	**Lajitas Array**	**20.44**	**322**	P	Pn	13 00 48.3	-1.5
	comp=Z,1.5nm,0.7s,baz=146,slow=10,SNR=20						
TXAR	**Lajitas Array**	**20.44**	**322**	P	**P**	**13 00 48.2**	**+1.9**
TX31	**Lajitas Ar. Si**	**20.44**	**322**	P	**P**	**13 00 48.2**	**+1.9**
Y52A	**Lilburn**	**20.62**	**13**	P	**P**	**13 00 49.8**	**+1.8**
Y52A				IAmb	IAmb	13 01 02.7	
	comp=Z,11nm,1.1s						
PLPT	**Palo Pinto**	**20.70**	**338**	P	**P**	**13 00 49.7**	**+0.8**
PLPT				IAmb	IAmb	13 00 53.5	
	comp=Z,5.1nm,0.8s						
OXF	**Oxford**	**20.70**	**360**	P	**P**	**13 00 50.3**	**+1.5**
FPAL	**Fort Paine**	**21.01**	**9**	P	**P**	**13 00 52.6**	**+0.4**
MIAR	**Mount Ida**	**21.09**	**350**	P	**P**	**13 00 54.0**	**+1.0**
MIAR				IAmb	IAmb	13 00 56.5	
	comp=Z,7.1nm,0.7s						
SGCY	**Sterling City**	**21.09**	**331**	P	**P**	**13 00 55.1**	**+2.0**
LOOK	**Love County**	**21.41**	**342**	P	**P**	**13 00 57.7**	**+1.3**
MNHN	**Monahans**	**21.44**	**327**	P	**P**	**13 00 58.3**	**+1.3**
MNHN				IAmb	IAmb	13 00 59.8	
	comp=Z,5.0nm,0.7s						
WHAR	**Wooly Hollow**	**21.65**	**353**	P	**P**	**13 00 59.5**	**+0.6**
JSC	**Jenkinsville**	**21.75**	**18**	P	**P**	**13 01 00.8**	**+0.8**
JSC				IAmb	IAmb	13 01 02.4	
	comp=Z,11nm,0.9s						
CPCT	**Cooper Cave**	**22.07**	**11**	P	**P**	**13 01 03.6**	**+0.2**
CPCT				IAmb	IAmb	13 01 03.7	
	comp=Z,7.9nm,1.2s						
X34A	**Smith Ranch, M**	**22.17**	**341**	P	**P**	**13 01 06.4**	**+2.0**
FCAR	**Ozark Folk Cen**	**22.22**	**354**	P	**P**	**13 01 06.4**	**+1.5**
FCAR				IAmb	IAmb	13 01 07.5	
	comp=Z,5.7nm,0.8s						
TKL	**Tuckaleechee C**	**22.41**	**12**	P	**P**	**13 01 06.7**	**-0.1**
TKL				IAmb	IAmb	13 01 23.4	
	comp=Z,7.7nm,1.1s						
WMOK	**Wichita Mounta**	**22.61**	**339**	P	**P**	**13 01 08.9**	**+0.2**
W57A	**Gilead**	**22.95**	**20**	P	**P**	**13 01 12.3**	**+0.5**
PBMO	**Poplar Bluff**	**22.99**	**358**	P	**P**	**13 01 12.9**	**+0.7**
OK052	**Battle Ridge R**	**23.18**	**344**	P	**P**	**13 01 14.5**	**+0.5**
SMWD	**Samnorwood**	**23.46**	**337**		**P**	**13 01 17.9**	**+1.2**
SMWD				IAmb	IAmb	13 01 19.1	
	comp=Z,6.8nm,0.8s						
MGMO	**Mountain Grove**	**23.49**	**354**	P	**P**	**13 01 18.6**	**+1.8**
MGMO				IAmb	IAmb	13 01 19.6	
	comp=Z,8.8nm,1.1s						
U54A	**Nelsons Funny**	**23.69**	**15**	P	**P**	**13 01 20.9**	**+2.2**
CCM	**Cathedral Cave**	**24.30**	**356**		**P**	**13 01 25.1**	**+0.9**
WCI	**Wyandotte Cave**	**24.56**	**6**	P	**P**	**13 01 26.6**	**0.0**
ANMO	**Albuquerque**	**26.19**	**327**	LR	LR	13 13 51.8	
	comp=Z,68nm,18.2s,baz=172,slow=40						
MDND	**Maddock**	**35.09**	**348**	P	**P**	**13 02 59.8**	**+0.4**
SCHQ	**Schefferville**	**44.63**	**18**	P	**P**	**13 04 16.9**	**-1.1**
	comp=Z,4.3nm,0.4s,baz=223,slow=8.6,SNR=15						
	comp=Z,4.3nm,0.4s						
YKA	**Yellowknife Ar**	**51.92**	**345**	P	**P**	**13 05 12.4**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=162,slow=11,SNR=12						
	comp=Z,1.3nm,0.8s						
ILAR	**Eielson Array**	**64.13**	**336**	P	**P**	**13 06 37.5**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=176,slow=5.5,SNR=5.0						
	comp=Z,0.3nm,0.8s						
WRA	**Warramunga Arr**	**137.83**	**255**	PKP	**PKiKP**	**13 15 29.9**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=85,slow=2.0,SNR=9.4						

*GCG **29** 13:07:57.5±1.3, 15.°28N×91.°90W, h163km±13km, MD3.9, ML3.7*
*MEX **29** 13:07:58.5±0.8, 15.°24N×91.°89W, h171km±7km, MD4.1*

ISC 29 13:07:54.1±2.1, 15.°09N±0.°07×92.°00W±0.°08, h185km±13km, n21, σ2s03/33, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHUJ	**Union Juarez**	**0.11**	**274**	*eP*	**Pn**	**13 08 20.1**	**+1.3**
CHUJ				*eS*	**Sn**	**13 08 38.3**	**+0.5**
PAVE	**Pavencul**	**0.20**	**301**	*eP*	**Pn**	**13 08 20.5**	**+1.6**
PAVE				*eS*	**Sn**	**13 08 37.3**	**-0.8**
PATR	**El Naranjo**	**0.23**	**278**	*eP*	**Pn**	**13 08 20.0**	**+1.0**
PATR				*eS*	**Sn**	**13 08 37.0**	**-1.1**
SMCA	**Catarina**	**0.24**	**199**	*i* P	**Pn**	**13 08 20.1**	**+1.3**
THIG		**0.32**	**236**	*eS*	**Sn**	**13 08 38.8**	**+0.9**
HUEH	**Huehuetenango**	**0.53**	**64**	*eP*	**Pn**	**13 08 20.6**	**+0.7**
HUEH				*eS*	**Sn**	**13 08 36.9**	**-2.9**
HUEH	**Huehuetenango**	**0.53**	**64**	*i* P	**Pn**	**13 08 21.0**	**+1.1**
HUEH				IAML		13 08 21.2	
	comp=Z,1μm,0.2s						
RTAL	**Retalhuleu**	**0.63**	**152**	*eP*	**Pn**	**13 08 22.0**	**+1.8**
RTAL				*eS*	**Sn**	**13 08 40.7**	**+0.5**
SOKI	**Kika Raxquin**	**0.63**	**115**	*i* P	**Pn**	**13 08 22.8**	**+2.1**
STG2	**El Palmar, Qui**	**0.88**	**137**	*eP*	**Pn**	**13 08 21.1**	**-0.6**
STG8	**El Palmar, Qui**	**0.89**	**135**	*i* P	**Pn**	**13 08 21.3**	**-0.6**
STG8				IAML		13 08 46.6	
	comp=N,1000nm,0.2s						
QUIS	**Sacapulas**	**0.90**	**77**	*i* P	**Pn**	**13 08 22.9**	**+1.1**
QUIS				IAML		13 08 23.7	
	comp=Z,826nm,0.1s						
STG5	**El Palmar, Qui**	**0.92**	**137**	*eP*	**Pn**	**13 08 21.4**	**-0.6**
STG5				*i* S	**Sn**	**13 08 41.9**	**-1.5**
CCIG	**Comitan**	**1.20**	**353**	*i* P	**Pn**	**13 08 25.5**	**+1.4**
CCIG				*i* S	**Sn**	**13 08 44.8**	**-2.6**
APG	**El Apazote**	**1.48**	**93**	*i* P	**Pn**	**13 08 28.2**	**+1.6**
TGIG		**2.00**	**327**	*eP*	**Pn**	**13 08 33.4**	**+1.8**
TGIG				*eS*	**Sn**	**13 08 59.2**	**-1.7**
TGIG		**2.00**	**327**	*i* P	**Pn**	**13 08 33.2**	**+1.6**
UXUV	**UXUV**	**3.03**	**317**	*eP*	**Pn**	**13 08 45.5**	**+2.1**
UXUV				*eS*	**Sn**	**13 09 21.1**	**-0.9**
HUIG	**Huatulco**	**4.02**	**280**	*eP*	**Pn**	**13 08 58.0**	**+2.3**
HUIG				*eS*	**Sn**	**13 09 39.3**	**-4.6**
NEUV	**Arroyo Zacate**	**4.49**	**306**	*eP*	**Pn**	**13 09 03.7**	**+2.1**
NEUV				*eS*	**Sn**	**13 09 51.5**	**-3.2**
PEIG	**Puerto Escondi**	**5.05**	**281**	*eP*	**Pn**	**13 09 11.7**	**+2.9**
PEIG				*eS*	**Sn**	**13 10 04.1**	**-3.5**

IDC 29 13:23:28.4±3.1, 31.°95S×177.°92W, h0km, mb3.5/2, mbtmp3.6/3, ML2.9/1, MS3.5/1, Error ellipse: s-maj=72.2km s-min=37.0km az=116.0, Kermadec Islands region

| Code | Station Name | Δ° |

NKME	**Niksic**		**1.27**	**340**	⇓*i*Pg	**Pg**	**13**	**40**	**12.3 -0.1**
NKME					*i* Sg	**Sb**	**13**	**40**	**29.9 +0.2**
KOME	**Kolasin**		**1.27**	**359**	*e*Pg	**Pn**	**13**	**40**	**13.4 +0.3**
KOME	**Kolasin**		**1.27**	**359**	⇓*i*Pg	**Pg**	**13**	**40**	**11.9 -0.5**
KOME					*i* Sg	**Sn**	**13**	**40**	**31.0 +0.1**
BEY	**Berane**		**1.32**	**11**	*e*Pg	**Pg**	**13**	**40**	**12.8 -0.5**
IVA	**Berane**		**1.32**	**11**	⇑*i*Pg	**Pg**	**13**	**40**	**12.3 -1.0**
IVA					*i* Sg	**Sn**	**13**	**40**	**32.0 -0.1**
TREB	**Trebinje**		**1.45**	**322**	*e*Pg	**Pn**	**13**	**40**	**15.1 -0.3**
TREB					*e*Sg	**Sn**	**13**	**40**	**35.3 +0.3**
BRY	**Bratogost**		**1.52**	**331**	⇓*i*Pg	**Pn**	**13**	**40**	**16.5 0.0**
BRY					*i* Sg	**Sg**	**13**	**40**	**37.5 +0.6**
UPM	**Unac-Piva**		**1.69**	**344**	⇑*i*Pn	**Pn**	**13**	**40**	**18.9 -0.1**
UPM					*i* Sn	**Sb**	**13**	**40**	**41.8 -0.2**
SJES	**Sjenica**		**1.71**	**10**	*e*Pn	**Pg**	**13**	**40**	**21.5 +0.6**
SJES					*e*Sn	**Sg**	**13**	**40**	**44.3 +1.2**
PLE	**Pljevlja**		**1.76**	**356**	⇑*i*Pn	**Pg**	**13**	**40**	**21.6 -0.1**
PLE					*i* Sn	**Sn**	**13**	**40**	**43.2 +0.3**
STON	**Ston**		**1.89**	**314**	*e*Pn	**Pb**	**13**	**40**	**22.3 -1.0**
STON					*e*Sn	**Sn**	**13**	**40**	**46.1 +0.3**
SELS	**Selova**		**2.01**	**35**	*e*Pn	**Pn**	**13**	**40**	**23.6 +0.4**
SELS					*e*Sn	**Sn**	**13**	**40**	**49.5 +0.4**
NOCI	**Noci**		**2.03**	**248**	Pn	**Pb**	**13**	**40**	**25.6 -0.2**
NOCI					Sn	**Sg**	**13**	**40**	**53.4 +0.1**
NOCI					AML	AML	13 40 56.1		
	0.2nm,0.5s								
NOCI					AMd		13 41 39.8		
RUDO	**Rudo**		**2.04**	**356**	*e*Pn	**Pb**	**13**	**40**	**25.5 -0.5**
IVAS	**Ivanjica**		**2.05**	**12**	*e*Pn	**Pn**	**13**	**40**	**23.9 +0.2**
BARS	**Barje**		**2.09**	**53**	*e*Pn	**Pn**	**13**	**40**	**24.5 +0.2**
GOCS	**Kraljevo Serbi**		**2.21**	**26**	*e*Pn	**Pn**	**13**	**40**	**26.5 +0.5**
GOCS					*e*Sn	**Sn**	**13**	**40**	**54.8 +0.7**
BBLS	**Lazi&#263i**		**2.29**	**357**	*e*Pn	**Pb**	**13**	**40**	**29.2 -1.0**
GRUS	**Gruza**		**2.47**	**20**	*e*Pn	**Pn**	**13**	**40**	**29.9 +0.5**
BOVS	**Bovan**		**2.60**	**37**	⇑P	**Pn**	**13**	**40**	**32.2 +0.9**
BOVS	**Bovan**		**2.60**	**37**	*e*Pn	**Pn**	**13**	**40**	**30.8 -0.5**
BOVS					*e*Sn	**Sn**	**13**	**41**	**03.1 -0.4**
ZAPS	**Zavoj**		**2.85**	**52**	*e*Pn	**Pn**	**13**	**40**	**35.4 +0.7**
ZAPS					*e*Sn	**Sn**	**13**	**41**	**08.8 -0.8**
ZAGS	**Zajecar**		**2.99**	**41**	*e*Pn	**Pn**	**13**	**40**	**37.3 +0.8**
ZAGS					*e*Sn	**Sn**	**13**	**41**	**13.2 +0.2**
BLKB	**Belogradchik**		**3.08**	**47**	*e*Pn	**Pn**	**13**	**40**	**38.9 +1.0**
BLKB					*e*Sn	**Sn**	**13**	**41**	**14.3 -1.2**
BORS2	**Bor- Borsko je**		**3.10**	**35**	*e*Pn	**Pn**	**13**	**40**	**36.9 -1.2**
KUBS	**Kucevo**		**3.24**	**28**	*e*Pn	**Pn**	**13**	**40**	**38.8 -1.2**
MDVR	**Moldovita**		**3.57**	**26**	*e*Pn	**Pn**	**13**	**40**	**44.5 -0.2**
MDVR					*e*Sn	**Sn**	**13**	**41**	**26.2 -1.4**
HERB	**Herculane**		**3.91**	**31**	⇓P	**Pn**	**13**	**40**	**49.6 +0.3**
BZS	**Buzias**		**4.31**	**20**	⇑P	**Pn**	**13**	**40**	**54.6 -0.2**
ARR	**Arges**		**5.30**	**43**	⇓P	**Pn**	**13**	**41**	**09.9 +1.5**
VOIR			**5.56**	**44**	⇓P	**Pn**	**13**	**41**	**13.7 +1.7**
MLR	**Muntele Rosu**		**6.08**	**48**	⇑P	**Pn**	**13**	**41**	**19.6 +0.5**
DOPR	**Dopca**		**6.09**	**42**	⇓P	**Pn**	**13**	**41**	**20.0 +0.7**
PLOR	**Plostina**		**6.69**	**48**	⇓P	**Pn**	**13**	**41**	**30.1 +2.7**
VRI	**Vrincioaia**		**6.74**	**48**	⇓P	**Pn**	**13**	**41**	**29.9 +1.8**

*NEIC **29** 13:43:06.8±1.0,35°.11N±0°.02×95°.39W±0°.02,h7km±2km, Error ellipse: s-maj=3.2km s-min=2.3km az=132.0*

NEIC 29 13:43:06.9±1.0,35°.12N±0°.02×95°.39W±0°.02,h5km±1km, mb_Lg2.1/3,ML2.7/16,ML2.6/9, Error ellipse: s-maj=3.8km s-min=2.6km az=132.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
TUL3	**Leonard**	**0.86**	**338**		Pg	13	43	23.2	-0.2
TUL3					Sg	13	43	34.9	+0.4
RLO	**Rose Lookout**	**1.09**	**16**		Pg	13	43	27.4	-0.4
RLO					Sg	13	43	42.0	+0.1
RLO				IAML		13	43	44.9	
	comp=N,185nm,0.2s								
DEOK	**Depew**	**1.16**	**309**		Pg	13	43	28.8	-0.4
DEOK					Sg	13	43	44.3	+0.1
DEOK				IAML		13	43	44.6	
	comp=N,169nm,0.2s								
DEOK				IAML		13	43	49.2	
	comp=E,170nm,0.2s								
OK052	**Battle Ridge R**	**1.45**	**308**		Pn	13	43	33.5	-0.3
OK052					Sg	13	43	53.6	+0.2
QUOK	**Quay**	**1.50**	**315**		Pn	13	43	34.0	-0.5
QUOK					Sg	13	43	55.0	-0.2
U38A	**Gravette**	**1.55**	**32**		Pn	13	43	35.4	+0.2
U38A					Sb	13	43	56.1	-0.1
MIAR	**Mount Ida**	**1.60**	**110**		Pn	13	43	36.1	+0.3
MIAR					Sn	13	43	56.9	+0.1
FNO	**Franklin**	**1.65**	**275**		Pn	13	43	37.0	+0.4
FNO					Sg	13	43	59.7	-0.3
HHAR	**Hobbs**	**1.66**	**45**		Pb	13	43	37.3	-0.6
HHAR					Sb	13	43	59.2	0.0
OKCSW	**OKLAHOMA CITY**	**1.70**	**280**		Pn	13	43	37.6	+0.3
OK048	**Pawnee Station**	**1.81**	**316**		Pn	13	43	39.3	+0.5
LOOK	**Love County**	**1.85**	**233**	IAmb_Lg		13	44	04.7	
	comp=Z,14nm,0.8s								
Z38A	**Mt. Pleasant**	**1.88**	**170**	Pn	Pn	13	43	38.9	-0.8
T35A	**Sooner Cattle**	**2.01**	**333**		Pb	13	43	43.0	-1.0
X34A	**Smith Ranch, M**	**2.07**	**256**		Pb	13	43	43.8	-1.3
X40A	**Basin Creek Fa**	**2.20**	**106**		Pb	13	43	46.1	-1.0
Z35A	**Perchaven, San**	**2.36**	**221**		Pn	13	43	46.8	+0.5
WHAR	**Wooly Hollow**	**2.55**	**85**	Pn	Pn	13	43	49.7	+0.8
FCAR	**Ozark Folk Cen**	**2.77**	**73**		Pn	13	43	52.4	+0.4
WMOK	**Wichita Mounta**	**2.81**	**263**		Pn	13	43	53.1	+0.5

*IDC **29** 13:43:22.7±4.8,23°.41S×178°.58W,h471km±60km,mb3.0/6, mbtmp3.9/8, Error ellipse: s-maj=54.1km s-min=25.4km az=171.0*

ISC 29 13:43:25.1±1.0,23°.3S±0°.1×178°.7W±0°.2,h500km,n10, σ1s81/10,mb3.3/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DZM	**Mont Dzumac**	**13.78**	**272**	P	**P**	**13**	**46**	**22.2**	**-0.5**
	10nm,0.7s,baz=62,slow=22,SNR=9.8								
URZ	**Urewera**	**15.33**	**193**	P	**P**	**13**	**46**	**35.4**	**-3.2**
	2.9nm,0.5s,baz=262,slow=5.3,SNR=8.7								
URZ				S	**S**	**13**	**49**	**21.2**	**+3.0**
	6.1nm,0.5s,baz=283,slow=22,SNR=1.9								
ASAR	**Alice Springs**	**43.32**	**260**	P	**P**	**13**	**50**	**43.5**	**+1.0**
	0.6nm,0.8s,baz=95,slow=6.1,SNR=7.0								
	0.6nm,0.8s								
WRA	**Warramunga Arr**	**43.65**	**265**	P	**P**	**13**	**50**	**44.9**	**-0.3**
	0.7nm,0.7s,baz=94,slow=8.1,SNR=18								
	0.7nm,0.7s								
NVAR	**Mina Array Bea**	**83.50**	**43**	P	**P**	**13**	**55**	**01.4**	**+1.2**
	0.5nm,0.6s,baz=228,slow=7.6,SNR=7.2								
	0.5nm,0.6s								
CMAR	**Chiang Mai Arr**	**90.45**	**290**	P	**P**	**13**	**55**	**34.3**	**+0.9**
	0.6nm,0.8s,baz=91,slow=5.2,SNR=5.2								
	0.6nm,0.8s								
ILAR	**Eielson Array**	**91.18**	**13**	P	**P**	**13**	**55**	**35.2**	**-0.5**
	0.2nm,0.6s,baz=204,slow=4.8,SNR=6.1								
	0.2nm,0.6s								
PDAR	**Pinedale Array**	**91.43**	**43**	P	**P**	**13**	**55**	**37.6**	**-0.1**
	0.5nm,0.6s,baz=209,slow=3.9,SNR=5.0								
	0.5nm,0.6s								
ARCES	**ARCESS Array B**	**131.54**	**349**	PKP	**PKiKP**	**14**	**01**	**40.5**	**-0.4**
	6.8nm,1.1s,baz=39,slow=1.8,SNR=1.7								
HFS	**Hagfors**	**142.19**	**350**	PKhKP	PKPpre	14	01	55.8	
	1.5nm,0.7s,baz=8.5,slow=2.9,SNR=4.1								

IDC 29 14:03:04.8±1.9,2°.36N×123°.93E,h0km,mb3.6/3, mbtmp3.6/3,MS3.4/1, Error ellipse: s-maj=236.4km s-min=28.7km az=71.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
WRA	**Warramunga Arr**	**24.40**	**156**	P	P	14	08	24.8	-0.3
	0.1nm,0.4s,baz=332,slow=10.0,SNR=1.7								
	0.1nm,0.4s								
ASAR	**Alice Springs**	**27.63**	**160**	P	P	14	08	54.5	+0.3
	0.6nm,0.7s,baz=338,slow=7.6,SNR=12								
	0.6nm,0.7s								
SONM	**Songino Array**	**47.77**	**344**	P	P	14	11	43.7	-0.2
	1.4nm,0.5s,baz=144,slow=5.2,SNR=2.9								
	1.4nm,0.5s								
YAK	**Yakutsk**	**59.69**	**3**	LR	LR	14	40	12.4	
	comp=Z,28nm,20.1s,baz=284,slow=37								

*NEIC **29** 14:06:44.7±0.7,18°.63N±0°.10×145°.6E±0°.2,h183km±9km, mb4.3/16, Error ellipse: s-maj=28.7km s-min=13.8km az=88.0*

*IDC **29** 14:06:46.0±2.8,18°.62N×145°.65E,h211km±28km,mb3.2/9, mbtmp3.8/11, Error ellipse: s-maj=27.0km s-min=12.6km az=84.0*

ISC 29 14:06:45.3±0.7,18°.59N±0°.07×145°.6E±0°.2,h200km,n33, σ0s87/34,mb3.6/14,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GUMO	**Guam**	**5.01**	**188**	P	**Pn**	**14**	**08**	**00.6**	**+0.7**
	32nm,0.3s,baz=140,slow=17,SNR=1.5								
GUMO				S	**Sn**	**14**	**08**	**57.2**	**-1.5**
	126nm,0.4s,baz=339,slow=23,SNR=5.9								
MJAR	**Matsushiro Arr**	**19.02**	**342**	P	**P**	**14**	**10**	**52.2**	**0.0**
	3.5nm,0.9s,baz=153,slow=3.3,SNR=6.6								
MJAR	**Matsushiro Arr**	**19.02**	**342**	P	**P**	**14**	**10**	**52.1**	**0.0**
MJAR				IAmb	IAmb	14	11	26.3	
	comp=Z,6.7nm,1.5s								
MAJO	**Matsushiro**	**19.02**	**342**	P	P	**14**	**10**	**51.7**	**-0.4**
MAJO				IAmb	IAmb	14	10	59.9	
	comp=Z,22nm,1.3s								
MJB9	**Matsu-Tunnel**	**19.03**	**342**	P	**P**	**14**	**10**	**51.8**	**-0.4**
MJB9				IAmb	IAmb	14	11	01.3	
	comp=Z,23nm,1.3s								
KSRS	**Korea Array**	**24.33**	**324**	P	**P**	**14**	**11**	**46.5**	**+1.8**
	comp=Z,1.1nm,0.7s,baz=153,slow=9.1,SNR=5.3								
	comp=Z,1.1nm,0.7s								
MTN	**Manton Dam**	**34.32**	**206**	P	**P**	**14**	**13**	**13.5**	**+0.5**
MTN				IAmb	IAmb	14	13	33.6	
	comp=Z,10nm,1.1s								
WB0	**Warramunga Arr**	**39.66**	**197**	P	**P**	**14**	**13**	**58.7**	**+0.7**
WB0				IAmb	IAmb	14	14	13.8	
	comp=Z,8.2nm,1.4s								
WR8	**Warramunga Arr**	**39.81**	**196**	P	**P**	**14**	**13**	**59.9**	**+0.7**
WR8				IAmb	IAmb	14	14	09.2	
	comp=Z,5.6nm,1.2s								
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**14**	**13**	**59.5**	**0.0**
	comp=Z,0.6nm,0.3s,baz=19,slow=8.5,SNR=17								
	comp=Z,0.6nm,0.3s								
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**14**	**13**	**59.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**41.38**	**209**	P	**P**	**14**	**14**	**13.5**	**+1.5**
SONM	**Songino Array**	**43.14**	**322**	P	**P**	**14**	**14**	**24.9**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=120,slow=8.5,SNR=2.1								
	comp=Z,0.8nm,0.4s								
AS31	**Alice Springs**	**43.51**	**196**	P	**P**	**14**	**14**	**30.0**	**+0.8**
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**14**	**14**	**29.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=11,slow=6.5,SNR=14								
	comp=Z,0.5nm,0.6s								
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**14**	**14**	**29.9**	**+0.7**
DZM	**Mont Dzumac**	**45.28**	**152**	P	**P**	**14**	**14**	**42.8**	**-0.5**
DZM				IAmb	IAmb	14	15	08.3	
	comp=Z,15nm,1.1s								
O15K	**Ungalikthiuk R**	**56.33**	**30**	P	**P**	**14**	**16**	**06.1**	**+1.0**
N15K	**Kwethluk River**	**56.58**	**29**	P	**P**	**14**	**16**	**08.1**	**+1.1**
MKAR	**Makanchi Array**	**58.44**	**314**	P	**P**	**14**	**16**	**20.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=91,slow=7.5,SNR=6.1								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**58.44**	**314**	P	**P**	**14**	**16**	**20.8**	**+0.6**
H17K	**Granite Mounta**	**58.60**	**24**	P	**P**	**14**	**16**	**21.5**	**+0.6**
KURBB	**Kurchatov Arra**	**61.31**	**318**	P	**P**	**14**	**16**	**39.1**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=93,slow=7.3,SNR=13								
	comp=Z,0.8nm,0.6s								
D20K	**Etivluk River**	**61.36**	**21**	P	**P**	**14**	**16**	**40.4**	**+0.7**
E22K	**Anaktuvuk Pass**	**62.80**	**22**	P	**P**	**14**	**16**	**50.1**	**+0.8**
E22K				IAmb	IAmb	14	17	27.5	
	comp=Z,9.5nm,1.5s								
ILAR	**Eielson Array**	**63.81**	**26**	P	**P**	**14**	**16**	**54.2**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=268,slow=7.3,SNR=7.2								
	comp=Z,0.3nm,0.4s								
ILAR	**Eielson Array**	**63.81**	**26**	P	**P**	**14**	**16**	**55.0**	**-0.9**
BMAR	**Burnt Mountain**	**65.27**	**24**	P	**P**	**14**	**17**	**06.6**	**+1.2**
BCAR	**Beaver Creek A**	**65.75**	**28**	P	**P**	**14**	**17**	**08.6**	**+0.1**
BVAR	**Borovoye Array**	**66.47**	**320**	P	**P**	**14**	**17**	**12.2**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=96,slow=6.8,SNR=9.1								
	comp=Z,1.2nm,0.5s								
AB31	**Akbulak array**	**73.33**	**317**	P	**P**	**14**	**17**	**54.8**	**-0.2**
ABKAR	**Akbulak array**	**73.33**	**317**	P	**P**	**14**	**17**	**54.7**	**-0.3**
NVAR	**Mina Array Bea**	**83.32**	**52**	P	**P**	**14**	**18**	**50.3**	**0.0**
	comp=Z,0.5nm,0.7s,baz=267,slow=5.4,SNR=6.3								
	comp=Z,0.5nm,0.7s								

*SJA **29** 14:15:03.0±0.8,33°.05S×70°.50W,h102km±2km,ML3.6, MW3.6*

*GUC **29** 14:15:04.5±0.6,33°.04S×70°.50W,h99km±1km,ML4.0*

ISC 29 14:15:03.7±1.2,33°.06S±0°.02×70°.46W±0°.03,h101km±5km, n71,σ1s11/122,15C-6D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PEL	**Peldehue**	**0.20**	**246**	*i* P	**Pn**	**14**	**15**	**17.1**	**-0.9**
PEL				*i* S	**Sn**	**14**	**15**	**28.0**	**-0.8**
PEL				IAML		14	15	29.2	
	comp=E,6µm,0.2s								
PEL	**Peldehue**	**0.20**	**246**	*e*P	**Pn**	**14**	**15**	**17.1**	**-0.9**
PEL				*e*S	**Sn**	**14**	**15**	**29.2**	**+0.4**
PEL				IAML		14	15	30.4	
	comp=Z,1µm,0.4s								
MT10	**Hacienda Santa**	**0.22**	**196**	⇑*i* P	**Pn**	**14**	**15**	**18.1**	**-0.2**
MT10				*i* S	**Sn**	**14**	**15**	**28.9**	**-0.3**
MT10				IAML		14	15	30.4	
	comp=N,15µm,0.3s								
VA03	**San Esteban**	**0.30**	**346**	⇑*i* P	**Pn**	**14**	**15**	**18.3**	**-0.3**
VA03				*i* S	**Sn**	**14**	**15**	**29.0**	**-0.6**
VA03				IAML		14	15	29.9	
	comp=E,19µm,0.1s								
VA03	**San Esteban**	**0.30**	**346**	*e*P	**Pn**	**14**	**15**	**18.1**	**-0.4**
VA03				*e*S	**Sn**	**14**	**15**	**29.5**	**-0.1**
VA03				IAML		14	15	29.6	
	comp=Z,8µm,0.1s								
MT14	**Cerro Cal¡n**	**0.34**	**190**	⇑*i* P	**Pn**	**14**	**15**	**18.7**	**0.0**
MT14				*i* S	**Sn**	**14**	**15**	**29.8**	**-0.2**
MT14				IAML		14	15	33.4	
	comp=E,6µm,0.6s								
MT16	**CCHEN**	**0.37**	**188**	⇑*i* P	**Pn**	**14**	**15**	**18.9**	**+0.1**
MT16				*i* S	**Sn**	**14**	**15**	**29.9**	**-0.3**
MT05	**Renca**	**0.40**	**215**	⇑*i* P	**Pn**	**14**	**15**	**19.1**	**0.0**
MT05				*i* S	**Sn**	**14**	**15**	**30.2**	**-0.3**
MT05				IAML		14	15	31.9	
	comp=E,7µm,0.2s								
MT05	**Renca**	**0.40**	**215**	*e*P	**Pn**	**14**	**15**	**19.1**	**0.0**
MT05				*e*S	**Sn**	**14**	**15**	**31.3**	**+0.8**
MT05				IAML		14	15	31.8	
	comp=Z,3µm,0.1s								
MT03	**Universidad Ad**	**0.43**	**185**	*i* P	**Pn**	**14**	**15**	**19.5**	**+0.2**
MT03				*i* S	**Sn**	**14**	**15**	**30.8**	**-0.1**
MT03				IAML		14	15	32.2	
	comp=N,17µm,0.2s								
MT03	**Universidad Ad**	**0.43**	**185**	*e*P	**Pn**	**14**	**15**	**19.5**	**+0.2**
MT03				*e*S	**Sn**	**14**	**15**	**31.3**	**+0.3**
MT03				IAML		14	15	32.9	
	comp=Z,5µm,0.1s								
MT04	**Ro Olivares**	**0.44**	**142**	⇓*i* P	**Pn**	**14**	**15**	**19.4**	**-0.1**
MT04				*i* S	**Sn**	**14**	**15**	**31.0**	**-0.2**
MT04				IAML		14	15	31.7	
	comp=E,4µm,0.4s								
MT04	**Ro Olivares**	**0.44**	**142**	*e*P	**Pn**	**14**	**15**	**19.4**	**-0.1**
MT04				*e*S	**Sn**	**14**	**15**	**31.4**	**+0.1**
MT04				IAML		14	15	31.8	
	comp=Z,2µm,0.2s								
ROCH	**El Roble**	**0.47**	**281**	⇑*i* P	**Pn**	**14**	**15**	**19.6**	**-0.1**
ROCH				*i* S	**Sn**	**14**	**15**	**30.9**	**-0.7**
ROCH				IAML		14	15	32.5	
	comp=N,5µm,0.2s								
ROC1	**El Roble**	**0.47**	**280**	*e*P	**Pn**	**14**	**15**	**18.7**	**-1.0**
ROC1				*e*S	**Sn**	**14**	**15**	**31.7**	**0.0**
MT08	**Bocatoma Ro**	**0.54**	**136**	⇓*i* P	**Pn**	**14**	**15**	**20.4**	**+0.3**
MT08				*i* S	**Sn**	**14**	**15**	**32.7**	**+0.3**
MT08	**Bocatoma Ro**	**0.54**	**136**	*e*P	**Pn**	**14**	**15**	**20.6**	**+0.4**
MT08				*e*S	**Sn**	**14**	**15**	**34.0**	**+1.5**
MT08				IAML		14	15	35.9	
	comp=Z,656nm,0.2s								
MT15	**Las Vizcachas**	**0.54**	**184**	*i* P	**Pn**	**14**	**15**	**20.1**	**+0.1**
MT15				*i* S	**Sn**	**14**	**15**	**32.2**	**+0.1**
MT15				IAML		14	15	33.2	
	comp=E,19µm,0.3s								
MT02	**Curacav**	**0.60**	**250**	⇑*i* P	**Pn**	**14**	**15**	**20.4**	**0.0**
MT02				*i* S	**Sn**	**14**	**15**	**32.4**	**-0.5**
MT02	**Curacav**	**0.60**	**250**	*e*P	**Pn**	**14**	**15**	**20.3**	**0.0**
MT02				*e*S	**Sn**	**14**	**15**	**32.9**	**0.0**
MT02				IAML		14	15	37.3	
	comp=Z,524nm,0.7s								
MT12	**Pirque**	**0.68**	**186**	⇑*i* P	**Pn**	**14**	**15**	**21.5**	**+0.4**
MT12				*i* S	**Sn**	**14**	**15**	**34.2**	**+0.1**
MT12				IAML		14	15	35.2	
	comp=N,11µm,0.2s								
MT13	**San Alfonso**	**0.70**	**168**	⇓*i* P	**Pn**	**14**	**15**	**21.7**	**+0.3**
MT13				*i* S	**Sn**	**14**	**15**	**35.0**	**+0.4**
MT13				IAML		14	15	36.1	
	comp=N,6µm,0.3s								
MT13	**San Alfonso**	**0.70**	**168**	*e*P	**Pn**	**14**	**15**	**21.6**	**+0.3**
MT13				*e*S	**Sn**	**14**	**15**	**35.4**	**+0.9**
MT13				IAML		14	15	37.4	
	comp=Z,2µm,0.2s								
LMEL	**Las Melosas**	**0.82**	**165**	⇓*i* P	**Pn**	**14**	**15**	**23.0**	**+0.5**
LMEL				*i* S	**Sn**	**14**	**15**	**37.1**	**+0.5**
LMEL				IAML		14	15	41.1	
	comp=N,6µm,0.2s								
LMEL	**Las Melosas**	**0.82**	**165**	*e*P	**Pn**	**14**	**15**	**23.0**	**+0.5**
LMEL				*e*S	**Sn**	**14**	**15**	**38.5**	**+1.9**
LMEL				IAML		14	15	41.4	
	comp=Z,3µm,0.2s								
MT09	**Talagante**	**0.84**	**211**	⇑*i* P	**Pn**	**14**	**15**	**22.9**	**+0.2**
MT09				*i* S	**Sn**	**14**	**15**	**37.0**	**+0.1**
MT09				IAML		14	15	38.3	
	comp=N,6µm,0.1s								
MT09				IAML		14	15	38.7	
	comp=E,5µm,0.3s								
VA06	**Catapilco**	**0.86**	**305**	⇑*i* P	**Pn**	**14**	**15**	**22.7**	**0.0**
VA06				*i* S	**Sn**	**14**	**15**	**36.4**	**-0.6**
VA06				IAML		14	15	38.0	
	comp=E,8µm,0.2s								
BO04	**La Punta**	**0.94**	**187**	⇑*i* P	**Pn**	**14**	**15**	**24.0**	**+0.5**
BO04				*i* S	**Sn**	**14**	**15**	**38.9**	**+0.4**
VA01	**Torpederas**	**1.00**	**272**	*i* P	**Pn**	**14**	**15**	**24.1**	**0.0**
VA01	**Torpederas**	**1.00**	**272**	*e*P	**Pn**	**14**	**15**	**24.6**	**+0.4**
VA01				*e*S	**Sn**	**14**	**15**	**42.1**	**+2.7**
VA01				IAML		14	15	44.9	
	comp=Z,876nm,0.3s								
MT01	**Popeta**	**1.04**	**219**	⇑*i* P	**Pn**	**14**	**15**	**24.8**	**+0.1**
MT01				*i* S	**Sn**	**14**	**15**	**40.1**	**-0.2**
MT01				IAML		14	15	42.0	
	comp=E,2µm,0.2s								
MT01	**Popeta**	**1.04**	**219**	*e*P	**Pn**	**14**	**15**	**24.0**	**-0.6**
MT01				*e*S	**Sn**	**14**	**15**	**40.4**	**0.0**
MT01				IAML		14	15	42.3	
	comp=Z,1µm,0.2s								
CO04	**Los Peladeros**	**1.10**	**337**	⇑*i* P	**Pn**	**14**	**15**	**25.7**	**+0.1**
CO04				*i* S	**Sn**	**14**	**15**	**42.0**	**0.0**
ARCO	**CERRO ARCO**	**1.30**	**81**	*e*P	**Pn**	**14**	**15**	**28.8**	**+0.9**
ARCO				*e*S	**Sn**	**14**	**15**	**47.7**	**+1.6**
ARCO				IAML		14	15	48.1	
	comp=Z,661nm,0.5s								
AAGR	**Agrelo**	**1.37**	**92**	*e*P	**Pn**	**14**	**15**	**29.7**	**+1.1**
AAGR				*e*S	**Sn**	**14**	**15**	**48.8**	**+1.4**
AAGR				IAML		14	15	49.6	
	comp=Z,319nm,0.4s								
BO01	**Tunca**	**1.43**	**201**	⇑*i* P	**Pn**	**14**	**15**	**29.6**	**+0.4**
BO01				*i* S	**Sn**	**14**	**15**	**48.8**	**+0.4**
BO01	**Tunca**	**1.43**	**201**	*e*P	**Pn**	**14**	**15**	**28.9**	**-0.2**
BO01				*e*S	**Sn**	**14**

PMG S **Sn** **14 22 36.0 -0.6**
8.5nm,0.6s,baz=304,slow=11,SNR=3.1
PMG LR LR 14 24 13.1
comp=Z,58nm,19.9s,baz=126,slow=40
5.5nm,0.3s
WRA **Warramunga Arr 23.20 229** P **P** **14 24 40.3 -0.8**
0.8nm,0.8s,baz=55,slow=9.9,SNR=5.0
0.8nm,0.8s
ASAR **Alice Springs 25.89 223** P **P** **14 25 04.5 -1.2**
0.3nm,0.6s,baz=60,slow=8.5,SNR=7.9
0.3nm,0.6s
MKAR **Makanchi Array 80.43 319** P **P** **14 31 44.9 +0.2**
0.3nm,0.6s,baz=105,slow=6.9,SNR=3.3
0.3nm,0.6s
ZALV **Zalesovo Beam 81.29 326** P **P** **14 31 49.9 +0.8**
0.6nm,0.4s,baz=123,slow=5.5,SNR=4.0
0.6nm,0.4s
QSPA **South Pole Qui 84.92 180** P **P** **14 32 08.2 +0.5**
0.5nm,0.6s,baz=147,slow=0.3,SNR=6.8
0.5nm,0.6s
BVAR **Borovoye Array 89.36 323** P **P** **14 32 29.1 -0.3**
1.4nm,0.7s,baz=106,slow=5.6,SNR=8.9
1.4nm,0.7s
TORD **Torodi Ar. Bea 150.27 288** PKPbc **PKPbc** **14 39 23.5 -1.4**
1.4nm,0.5s,baz=69,slow=4.3,SNR=2.7

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*NNC **29** 14:19:42.6±0.8,42°.28N×79°.67E,h0km,mb3.1,mpv3.2,*
Error ellipse: s-maj=5.1km s-min=3.3km az=140.0
*SOME **29** 14:19:42.6,42°.23N×79°.65E,h15km*
*KRNET **29** 14:19:44.4±0.1,42°.16N×79°.55E,h16km,mb2.7*
ISC 29 14:19:40.6±1.8,42.17N±0°.05×79.67E±0°.05,h0km±11km,
n34,σ1§24/57,14C-7D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.99**	**289**	⇑*iP*	**Pn**	**14 20 02.2**	**+0.2**
PRZ				⇑*iS*	**Sb**	**14 20 14.7**	**+0.2**
SHLS	**Shalkode**	**1.00**	**351**	P	**Pg**	**14 20 00.1**	**+0.3**
24nm,0.1s							
SHLS				S	**Sg**	**14 20 13.0**	**+0.2**
110nm,0.2s							
SHLS	**Shalkode**	**1.00**	**351**	*eP*	**Pg**	**14 20 00.1**	**+0.3**
24nm,0.1s							
SHLS				*eS*	**Sg**	**14 20 13.0**	**+0.2**
110nm,0.2s							
UZB	**Uzynbulak**	**1.09**	**334**	P	**Pg**	**14 20 01.5**	**0.0**
9.4nm,0.1s							
UZB				S	**Sg**	**14 20 14.9**	**-0.7**
47nm,0.2s							
UZB	**Uzynbulak**	**1.09**	**334**	*eP*	**Pg**	**14 20 01.4**	**-0.1**
9.9nm,0.2s							
UZB				*eS*	**Sg**	**14 20 15.2**	**-0.5**
37nm,0.2s							
PDGK	**Podgornoye**	**1.17**	**353**	⇓P	**Pb**	**14 20 02.6**	**-1.1**
1.3nm,0.3s							
PDGK				⇑S	**Sg**	**14 20 17.3**	**-0.9**
34nm,0.7s							
SATY	**Saty**	**1.29**	**314**	P	**Pg**	**14 20 05.9**	**+0.6**
11nm,0.1s							
SATY				S	**Sn**	**14 20 23.2**	**-0.8**
40nm,0.1s							
TARG	**Taragay, Kyrgy**	**1.46**	**253**	⇑*iP*	**Pg**	**14 20 10.2**	**+1.7**
TARG				⇑*iS*	**Sg**	**14 20 29.4**	**+1.9**
KPKS	**Kokpek**	**1.49**	**331**	P	**Pb**	**14 20 08.7**	**-0.4**
1.9nm,0.1s							
KPKS				S	**Sn**	**14 20 27.6**	**-1.3**
16nm,0.3s							
KPKS	**Kokpek**	**1.49**	**331**	*eP*	**Pb**	**14 20 08.7**	**-0.4**
1.9nm,0.1s							
KPKS				*eS*	**Sn**	**14 20 27.6**	**-1.3**
16nm,0.3s							
KURS	**Kuram**	**1.72**	**321**	P	**Pb**	**14 20 13.6**	**+0.4**
5.9nm,0.3s							
KURS				S	**Sg**	**14 20 36.2**	**+0.4**
14nm,0.4s							
KDJ	**Kajisay**	**1.85**	**270**	⇓*iP*	**Pg**	**14 20 17.1**	**+1.0**
KDJ				⇓*iS*	**Sg**	**14 20 40.6**	**+0.5**
BLB	**Baldybastay**	**2.12**	**336**	Pg	**Pb**	**14 20 19.7**	**-0.2**
16nm,0.2s							
BLB				Lg	Lg	14 20 46.9	
51nm,0.3s							
MDOK	**Medeo**	**2.18**	**298**	Pg	**Pb**	**14 20 21.2**	**+0.3**
4.8nm,0.2s							
MDOK				Lg	Lg	14 20 49.4	
9.9nm,0.5s							
TNSS	**Tian-Shan**	**2.19**	**294**	Pg	**Pb**	**14 20 21.4**	**+0.1**
2.0nm,0.2s							
TNSS				Lg	Lg	14 20 50.3	
5.4nm,0.4s							
TNSS	**Tian-Shan**	**2.19**	**294**	*eP*	**Pb**	**14 20 21.4**	**+0.1**
2.0nm,0.2s							
TNSS				*eS*	**Sg**	**14 20 50.3**	**-0.7**
5.4nm,0.4s							
KNOS	**Konyrlen**	**2.22**	**351**	Pg	**Pb**	**14 20 21.6**	**-0.1**
3.2nm,0.0s							
KNOS				Lg	Lg	14 20 49.7	
57nm,0.4s							
ARXS	**Arharly**	**2.45**	**327**	Pg	**Pb**	**14 20 25.1**	**-0.4**
13nm,0.2s							
ARXS				Lg	Lg	14 20 56.9	
35nm,0.5s							
ARXS	**Arharly**	**2.45**	**327**	*eP*	**Pb**	**14 20 25.1**	**-0.4**
13nm,0.2s							
ARXS				*eS*	**Sb**	**14 20 55.9**	**-0.4**
35nm,0.4s							
MTBS	**Maitube**	**2.58**	**293**	Pg	**Pb**	**14 20 28.6**	**+0.9**
5.4nm,0.3s							
MTBS				Lg	Lg	14 21 01.7	
10nm,0.3s							
MTBS	**Maitube**	**2.58**	**293**	*eP*	**Pb**	**14 20 28.6**	**+0.9**
5.4nm,0.3s							
MTBS				*eS*	**Sg**	**14 21 01.7**	**-1.7**
10nm,0.3s							
BOOM	**Boomskoye usch**	**2.79**	**278**	⇑*iP*	**Pb**	**14 20 30.9**	**-0.4**
BOOM				⇑*iS*	**Sb**	**14 21 04.9**	**-1.1**
KST	**Kastek**	**2.87**	**289**	Pg	**Pb**	**14 20 33.1**	**+0.3**
3.9nm,0.5s							
KST				Lg	Lg	14 21 10.8	
19nm,0.8s							
KST	**Kastek**	**2.87**	**289**	*eP*	**Pb**	**14 20 33.1**	**+0.3**
3.9nm,0.2s							
KST				*eS*	**Sb**	**14 21 09.6**	**+1.1**
19nm,0.8s							
DGS	**Degeres**	**3.07**	**292**	Pg	**Pb**	**14 20 37.3**	**+1.2**
1.0nm,0.1s							
DGS				Lg	Lg	14 21 16.8	
9.4nm,0.2s							
DGS	**Degeres**	**3.07**	**292**	*eP*	**Pb**	**14 20 37.3**	**+1.2**
1.0nm,0.1s							
DGS				*eS*	**Sg**	**14 21 16.8**	**-2.3**
9.4nm,0.2s							
KAPS	**Kapalarasan**	**3.13**	**356**	Pg	**Pb**	**14 20 37.5**	**+0.4**
0.8nm,0.1s							
KAPS				Lg	Lg	14 21 16.9	
54nm,0.1s							
JNKS	**Jany-Kuch**	**3.21**	**251**	⇑*eP*	**Pb**	**14 20 36.8**	**-1.8**
JNKS				⇑*eS*	**Sb**	**14 21 15.2**	**-3.1**
KRBS	**Karabastau**	**3.31**	**299**	Pg	**Pb**	**14 20 40.4**	**+0.2**
1.7nm,0.2s							
KRBS				Lg	Lg	14 21 22.8	
3.5nm,0.2s							
KRBS	**Karabastau**	**3.31**	**299**	*eP*	**Pb**	**14 20 40.4**	**+0.2**
KRBS				*eS*	**Sb**	**14 21 22.8**	**+1.8**
AAK	**Ala-Archa**	**3.86**	**279**	⇓Pg	**Pg**	**14 20 54.1**	**-0.6**
0.9nm,0.6s							
AAK				⇑Lg	Lg	14 21 43.7	
1.3nm,0.6s							
ARLS	**Aral**	**4.00**	**267**	⇓*eP*	**Pb**	**14 20 47.5**	**-4.4**
ARLS				⇓*eS*	**Sn**	**14 21 33.8**	**+3.0**
MAKZ	**Makanchi**	**4.92**	**19**	⇑Pn	**Pn**	**14 20 57.1**	**+1.3**
3.5nm,1.4s							
MAKZ				⇓Sn	**Sn**	**14 21 53.2**	**-0.2**
1.9nm,1.1s							
MAKZ				⇑Lg	Lg	14 22 12.6	
1.3nm,1.0s							
MK31	**Makanchi Array**	**4.99**	**21**	Pn	**Pn**	**14 20 57.7**	**+1.0**
0.1nm,0.2s,baz=202,slow=13,SNR=15							
MK31				⇑Sn	**Sn**	**14 21 54.8**	**-0.3**
0.4nm,0.4s,baz=203,slow=18,SNR=3.7							
MK31				⇑Lg	Lg	14 22 13.2	
0.8nm,0.5s,baz=200,slow=30,SNR=4.2							

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*NEIC **29** 14:43:38.4±0.7,8°.1S±0°.1×107°.07W±0°.08,h10km±2km,*
mb4.9/27,Error ellipse: s-maj=26.2km s-min=5.8km
az=206.0

*IDC **29** 14:44:06.3±1.3,4°.89S×105°.80W,h0km,mb3.9/10,*
mbtmp3.9/10,MS4.5/39,Error ellipse: s-maj=45.4km
s-min=19.0km az=55.0
*GCMT **29** 14:44:13.4±0.1,4°.46S×105°.24W×0°.01,h12km,*
MW5.2/130,Moment Tensor Solution. s90,c151;
s130,c221; Duration: 1§0 Moment tensor: Scale 10¹⁶
Nm; Mrr-0.94±.11; Mθθ2.85±.12; Mφφ-1.91±.13;
Mrθ1.66±.29; Mφθ8.60±.12; Mrφ1.29±.29; Best double
couple: Mo9.12900×10¹⁶ NP1:φs98.00000°,δ82.00000°,
λ8.00000°. NP2:φs7.00000°,δ82.00000°,λ172.00000°.
Principal axes: T 9.8050, Plg11.0000°, Azm323.0000°; N
-1.3510, Plg79.0000°, Azm144.0000°; P -8.4530,
Plg0.0000°, Azm53.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
ISC 29 14:44:07.0±0.7,4°.9S±0°.1×105°.9W±0°.1,h10km,n81,
σ1§76/36,mb4.8/23,MS4.7/39,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**22.38**	**188**	LR	LR	14 55 44.0	
comp=Z,1μm,19.8s,baz=9.5,slow=31							
TLIG	**Tlapa**	**23.43**	**18**	P	**P**	**14 49 18.9**	**+2.3**
TLIG				IAmb	IAmb	14 49 39.9	
comp=Z,55nm,2.0s							
CMIG	**Matias Romero**	**24.37**	**26**	LR	LR	14 55 24.2	
comp=Z,226nm,18.9s,baz=204,slow=28							
MOIG	**Morelia**	**24.82**	**11**	P	**P**	**14 49 30.6**	**+0.7**
APG	**El Apazote**	**24.96**	**37**	LR	LR	14 56 59.9	
comp=Z,196nm,19.5s,baz=260,slow=31							
CCIG	**Comitan**	**25.02**	**33**	P	**P**	**14 49 32.2**	**+0.6**
MTO3	**Montecristo**	**25.19**	**40**	P	**P**	**14 49 32.3**	**-1.0**
MTO3				IAmb	IAmb	14 49 39.6	
comp=Z,28nm,1.1s							
ESQI	**Esquipulas**	**25.32**	**40**	P	**P**	**14 49 32.9**	**-1.4**
CNGN	**Cerro Negro**	**25.71**	**48**	P	**P**	**14 49 35.8**	**-2.0**
TGUH	**Tegucigalpa,Un**	**26.34**	**44**	P	**P**	**14 49 42.4**	**-1.2**
TGUH				IAmb	IAmb	14 49 50.6	
comp=Z,29nm,0.9s							
ATAH	**Atahualpa**	**27.42**	**96**	LR	LR	14 57 59.9	
comp=Z,1μm,19.1s,baz=271,slow=30							
ZAIG	**Zacatecas**	**27.66**	**7**	P	**P**	**14 49 55.7**	**+0.2**
LPIG	**La Paz**	**29.12**	**352**	LR	LR	14 58 43.2	
comp=Z,2μm,20.2s,baz=168,slow=30							
NNA	**Nana**	**29.55**	**106**	LR	LR	14 58 35.8	
comp=Z,2μm,20.4s,baz=274,slow=30							
ROSC	**El Rosal**	**32.96**	**73**	LR	LR	15 01 08.2	
comp=Z,2μm,19.6s,baz=256,slow=31							
RKT	**Rikitea**	**33.44**	**234**	*e*LR	LR	15 00 00.6	
comp=Z,9μm,28.0s							
TXAR	**Lajitas Array**	**34.07**	**3**	P	**P**	**14 50 51.8**	**0.0**
comp=Z,0.4nm,0.8s,baz=182,slow=10.0,SNR=5.9							
TXAR				LR	LR	15 02 14.4	
comp=Z,1μm,20.8s,baz=179,slow=32							
comp=Z,0.4nm,0.8s							
TXAR	**Lajitas Array**	**34.07**	**3**	P	**P**	**14 50 51.1**	**-0.7**
TAOE	**Nuku Hiva Isla**	**34.25**	**261**	*e*LR	LR	14 59 51.4	
comp=Z,2μm,25.8s							
DRIO	**Del Rio**	**34.47**	**8**		**P**	**14 50 54.9**	**-0.3**
SAND	**Sanderson**	**34.81**	**6**	P	**P**	**14 50 56.1**	**-2.0**
BRDY	**Brady**	**36.54**	**10**	P	**P**	**14 51 12.2**	**-0.9**
SGCY	**Sterling City**	**36.85**	**7**		**P**	**14 51 14.7**	**-1.0**
SGCY				IAmb	IAmb	14 51 19.7	
comp=Z,16nm,1.1s							
SDV	**Santo Domingo**	**37.70**	**69**	P	**P**	**14 51 22.4**	**-0.9**
comp=Z,8.6nm,0.8s,baz=252,slow=12,SNR=6.5							
SDV				LR	LR	15 03 56.1	
comp=Z,2μm,20.5s,baz=251,slow=32							
comp=Z,8.6nm,0.8s							
SDV	**Santo Domingo**	**37.70**	**69**		P	14 51 13.1	-10
H03N2	**Juan Fernandez**	**37.91**	**142**	T	T	15 31 33.0	
baz=317,slow=78,SNR=116							
H03N1	**Juan Fernandez**	**37.92**	**142**	T	T	15 31 40.1	
baz=317,slow=78,SNR=130							
H03N3	**Juan Fernandez**	**37.92**	**142**	T	T	15 31 32.0	
baz=317,slow=78,SNR=102							
PLPT	**Palo Pinto**	**38.15**	**10**	P	**P**	**14 51 25.9**	**-0.7**
PLPT				IAmb	IAmb	14 51 41.8	
comp=Z,25nm,1.3s							
LPAZ	**La Paz**	**38.72**	**110**	P	**P**	**14 51 32.6**	**+0.3**
comp=Z,0.7nm,0.4s,baz=293,slow=10,SNR=3.7							
LPAZ				LR	LR	15 05 00.7	
comp=Z,741nm,18.6s,baz=270,slow=32							
comp=Z,0.7nm,0.4s							
LENM	**Lemitar**	**38.84**	**359**	P	**P**	**14 51 28.7**	**-3.9**
ANMO	**Albuquerque**	**39.60**	**359**	LR	LR	15 05 09.0	
comp=Z,498nm,21.0s,baz=180,slow=32							
SMWD	**Samnorwood**	**40.11**	**7**		**P**	**14 51 41.4**	**-1.7**
SMWD				IAmb	IAmb	14 51 49.1	
comp=Z,36nm,1.5s							
PASC	**Pasadena Art C**	**40.53**	**344**	P	P	14 51 40.2	-6.3
PASC				IAmb	IAmb	14 51 42.7	
comp=Z,25nm,1.3s							
MIAR	**Mount Ida**	**40.88**	**16**	P	**P**	**14 51 48.2**	**-1.2**
MIAR				IAmb	IAmb	14 52 04.8	
comp=Z,30nm,1.6s							
LCAR	**Lake Charles**	**43.00**	**18**	P	**P**	**14 52 04.7**	**-1.9**
LCAR				IAmb	IAmb	14 52 08.0	
comp=Z,6.9nm,0.8s							
PLAL	**Pickwick Lake**	**43.03**	**22**	P	**P**	**14 52 04.7**	**-2.3**
PLAL				IAmb	IAmb	14 52 19.1	
comp=Z,30nm,1.3s							
PBMO	**Poplar Bluff**	**43.87**	**18**	P	**P**	**14 52 11.9**	**-1.8**
WVT	**Waverly**	**44.15**	**21**		**P**	**14 52 13.9**	**-2.0**
WVT				IAmb	IAmb	14 52 21.3	
comp=Z,24nm,1.5s							
CFA	**Coronel Fontan**	**44.17**	**132**	LR	LR	15 06 07.5	
comp=Z,865nm,20.7s,baz=352,slow=30							
PPT	**Papeete**	**44.57**	**250**	LR	LR	15 06 29.4	
comp=Z,584nm,19.3s,baz=72,slow=30							
PPT2	**Papeete2**	**44.57**	**250**	*e*P	P	14 52 12.6	-7.1
comp=Z,38nm,24.8s							
PPT2				*e*S	**S**	**14 58 53.4**	**-2.5**
comp=Z,239nm,26.8s							
PPT2				*e*SS	**SS**	**15 02 15.5**	**-0.3**
comp=Z,1μm,31.8s							
PPT2				*e*LR	LR	15 04 49.8	
comp=Z,2μm,26.2s							
PPT2				*e*LR	LR	15 04 54.4	
comp=Z,1μm,27.2s							
NVAR	**Mina Array Bea**	**44.59**	**346**	P	**P**	**14 52 21.2**	**+1.4**
comp=Z,0.2nm,0.3s,baz=176,slow=8.3,SNR=5.2							
NVAR				LR	LR	15 07 08.8	
comp=Z,936nm,18.1s,baz=162,slow=31							
comp=Z,0.2nm,0.3s							
CPCT	**Cooper Cave**	**44.84**	**25**	P	**P**	**14 52 19.2**	**-2.3**
CPCT				IAmb	IAmb	14 52 26.6	
comp=Z,10nm,1.1s							
TKL	**Tuckaleechee C**	**45.34**	**26**	LR	LR	15 11 15.6	
comp=Z,325nm,19.9s,baz=210,slow=36							
PDAR	**Pinedale Array**	**47.53**	**356**	P	**P**	**14 52 43.9**	**+1.0**
comp=Z,0.3nm,0.7s,baz=185,slow=8.3,SNR=4.8							
PDAR				LR	LR	15 10 17.4	
comp=Z,658nm,18.8s,baz=175,slow=33							
comp=Z,0.3nm,0.7s							
PLCA	**Paso Flores**	**47.73**	**144**	P	**P**	**14 52 45.8**	**+1.5**
comp=Z,9.5nm,1.2s,baz=340,slow=9.5,SNR=3.4							
comp=Z,9.5nm,1.2s							
YBH	**Yreka Blue Hor**	**48.86**	**343**	LR	LR	15 09 00.1	
comp=Z,62nm,21.7s,baz=159,slow=30							
O53A	**New Philadelph**	**50.29**	**25**	P	**P**	**14 53 00.1**	**-3.7**
O53A				IAmb	IAmb	14 53 08.9	
comp=Z,16nm,0.9s							
CPUP	**Villa Florida**	**51.01**	**120**	P	**P**	**14 53 09.8**	**+0.3**
comp=Z,0.8nm,0.9s,baz=143,slow=10,SNR=3.9							
CPUP				LR	LR	15 11 11.6	
comp=Z,214nm,20.4s,baz=147,slow=32							
comp=Z,0.8nm,0.9s							
LYMT	**Lyon Mountain**	**51.92**	**354**	P	P	14 53 09.5	-6.8
MDP	**Montagnes des**	**54.08**	**80**	LR	LR	15 14 01.5	
comp=Z,584nm,19.6s,baz=276,slow=33							
RAR	**Rarotonga**	**54.68**	**248**	LR	LR	15 10 39.0	
comp=Z,433nm,20.8s,baz=101,slow=29							
ULM	**Lac du Bonnet**	**55.57**	**8**	P	**P**	**14 53 45.2**	**+2.6**
comp=Z,1.9nm,0.5s,baz=209,slow=10,SNR=3.6							
comp=Z,1.9nm,0.5s							
BDFB	**Brasilia**	**57.77**	**105**	LR	LR	15 16 35.7	
comp=Z,938nm,18.2s,baz=300,slow=34							
BBB	**Bella Bella**	**59.91**	**344**	LR	LR	15 16 57.4	
comp=Z,505nm,18.6s,baz=166,slow=33							
DLBC	**Dease Lake**	**66.01**	**346**	LR	LR	15 20 28.5	
comp=Z,478nm,20.0s,baz=130,slow=33							
YKA	**Yellowknife Ar**	**67.50**	**356**	P	**P**	**14 55 05.4**	**+2.4**
comp=Z,1.6nm,0.9s,baz=174,slow=6.5,SNR=5.7							
YKA				LR	LR	15 22 22.9	
comp=Z,446nm,20.6s,baz=224,slow=34							
comp=Z,1.6nm,0.9s							
SCHQ	**Schefferville**	**67.73**	**23**	LR	LR	15 23 38.0	
comp=Z,503nm,20.5s,baz=242,slow=35							
RAO	**Raoul Island**	**71.98**	**241**	LR	LR	15 20 04.1	
comp=Z,150nm,20.0s,baz=128,slow=30							
FRB	**Frobisher Bay**	**73.92**	**16**	LR	LR	15 27 27.1	
comp=Z,386nm,18.2s,baz=235,slow=35							
ILAR	**Eielson Array**	**75.75**	**343**	P	**P**	**14 55 53.6**	**+0.9**
comp=Z,1.9nm,1.0s,baz=155,slow=6.0,SNR=15							
ILAR				LR	LR	15 27 13.8	
comp=Z,241nm,18.2s,baz=116,slow=34							
comp=Z,1.9nm,1.0s							
URZ	**Urewera**	**76.81**	**232**	LR	LR	15 24 45.7	
comp=Z,338nm,18.2s,baz=99,slow=32							
RES	**Resolute Bay**	**79.70**	**3**	LR	LR	15 31 15.7	
comp=Z,402nm,18.2s,baz=184,slow=36							
SFJD	**Kangerlussuaq**	**81.62**	**19**	LR	LR	15 31 48.5	
comp=Z,269nm,18.9s,baz=230,slow=35							
RPZ	**Rata Peaks**	**81.65**	**227**	LR	LR	15 26 23.4	
comp=Z,485nm,19.3s,baz=128,slow=31							
QSPA	**South Pole Qui**	**85.19**	**180**	LR	LR	15 28 07.1	
comp=Z,410nm,19.9s,baz=118,slow=31							
VNDA	**Vanda**	**85.78**	**193**	LR	LR	15 27 57.1	
comp=Z,146nm,18.5s,baz=96,slow=31							
DZM	**Mont Dzumac**	**86.05**	**248**	*e*LR	LR	15 24 41.4	
comp=Z,359nm,26.2s							
H11N3	**WAKE ISLAND Hy**	**89.01**	**290**	T	T	16 36 08.7	
baz=96,slow=74,SNR=70							
H11N2	**WAKE ISLAND Hy**	**89.02**	**290**	T	T	16 36 09.7	
baz=96,slow=74,SNR=106							
H11N1	**WAKE ISLAND Hy**	**89.03**	**290**	T	T	16 36 11.3	
baz=96,slow=74,SNR=37							
H11S2	**WAKE ISLAND Hy**	**89.09**	**289**	T	T	16 36 21.7	
baz=93,slow=74,SNR=65							
H11S1	**WAKE ISLAND Hy**	**89.09**	**289**	T	T	16 36 17.1	
baz=93,slow=74,SNR=43							
H11S3	**WAKE ISLAND Hy**	**89.10**	**289**	T	T	16 36 18.3	
baz=93,slow=74,SNR=45							
SNAA	**Sanae**	**89.49**	**162**	LR	LR	15 30 02.6	
comp=Z,428nm,20.3s,baz=224,slow=31							
BORG	**Borgarnes**	**92.03**	**25**	LR	LR	15 38 15.4	
comp=Z,115nm,18.2s,baz=268,slow=35							
JMIC	**Jan Mayen**	**96.98**	**19**	LR	LR	15 38 57.8	
comp=Z,199nm,21.9s,baz=264,slow=34							
PETK	**Petropavlovsk-**	**97.73**	**323**	LR	LR	15 34 01.5	
comp=Z,392nm,20.5s,baz=83,slow=31							
SEY	**Seymchan**	**99.66**	**333**	LR	LR	15 38 19.2	
comp=Z,348nm,18.3s,baz=40,slow=33							
CMAR	**Chiang Mai Ar**	**152.25**	**301**	PKPbc	**PKPbc**	**15 04 03.1**	**-1.0**
comp=Z,0.3nm,0.3s,baz=54,slow=1.3,SNR=1.9							

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*JMA **29** 14:57:24.3±0.1,24°.9N±0°.6×124°.8E±0°.3,h11km±2km,*
MD4.4/19,MV4.3/19,NEAR MIYAKOJIMA ISLAND
JMA Felt II J1 at NEAR MIYAKOJIMA ISLAND .
*NIED **29** 14:57:24.3,24°.89N×124°.77E,h11km,MW4.1,Moment*
Tension Solution. s3 Moment tensor: Scale 10¹⁵Nm;
Mrr-1.29; Mθθ-0.37; Mφφ1.67; Mrθ-0.41; Mφθ0.11; Mφr-0.59;
Fault plane solution: Mo1.66000×10¹⁵ NP1:
φs165.00000°,δ37.00000°,λ-119.00000°. NP2:
φs20.00000°,δ59.00000°,λ-70.00000°.
*NEIC **29** 14:57:27.9±1.8,24°.84N±0°.10×124°.78E±0°.07,h35km±2km,*
mb4.6/21 Error ellipse: s-maj=17.3km s-min=9.5km
az=160.0
*IDC **29** 14:57:28.0±3.3,25°.01N×124°.79E,h42km±32km,mb3.6/12,*
mbtmp3.8/14,ML3.4/2,MS3.3/6,Error ellipse:
s-maj=20.1km s-min=14.9km az=69.0
ISC 29 14:57:24.8±0.9,24°.84N±0°.06×124°.79E±0°.03,h16km±6km,
n102,σ1§04/99,mb4.3/24,MS3.5/4,1C,Southwestern
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTJ	**Tarama**	**0.21**	**202**	P	**Pg**	**14 57 29.5**	**-0.2**
JTJ				*e*S	**Sg**	**14 57 33.4**	**+0.5**
JTJ	**Tarama**	**0.21**	**202**	A	A	14 57 29.5	
comp=N,66nm,1.9s,comp=E,66nm,0.6s							
JIRB	**Irabujima**	**0.35**	**91**	P	**Pg**	**14 57 31.6**	**-0.4**
JIRB				*e*S	**Sb**	**14 57 37.2**	**-0.7**
JIRB	**Irabujima**	**0.35**	**91**	A	A	14 57 31.6	
comp=N,34nm,1.2s,comp=E,41nm,1.5s							
JIKM	**Ikemajima**	**0.43**	**78**	P	**Pg**	**14 57 33.1**	**-0.3**
JIKM				*e*S	**Sg**	**14 57 39.1**	**-0.2**
JIKM	**Ikemajima**	**0.43**	**78**	A	A	14 57 33.1	
comp=N,52nm,1.5s,comp=E,51nm,0.8s							
JMJ	**Miyako jima 2**	**0.46**	**92**	P	**Pb**	**14 57 34.7**	**+0.2**
JISG	**Ishigakijimahi**	**0.50**	**240**	P	**Pg**	**14 57 34.3**	**-0.4**
JISG				*e*S	**Sg**	**14 57 41.4**	**0.0**
JISG	**Ishigakijimahi**	**0.50**	**240**	A	A	14 57 34.3	
comp=N,41nm,0.5s,comp=E,41nm,0.5s							
JMJ2	**Miyako jima3**	**0.50**	**101**	P	**Pg**	**14 57 34.6**	**-0.2**
JMJ2				*e*S	**Sb**	**14 57 41.9**	**-0.3**
JMJ2	**Miyako jima3**	**0.50**	**101**	A	A	14 57 34.6	
comp=N,30nm,3.9s,comp=E,52nm,4.7s							
JOGS	**Gusukube**	**0.57**	**97**	P	**Pg**	**14 57 35.9**	**-0.1**
JOGS				*e*S	**Sb**	**14 57 44.2**	**0.0**
JOGS	**Gusukube**	**0.57**	**97**	A	A	14 57 35.9	
comp=N,41nm,0.5s,comp=E,50nm,2.6s							
JIJ	**Ishigaki jima**	**0.75**	**231**	P	**Pg**	**14 57 38.7**	**-0.7**
JIJ				*e*S	**Sg**	**14 57 49.1**	**-0.3**
JIJ	**Ishigaki jima**	**0.75**	**231**	A	A	14 57 38.7	
comp=N,14nm,1.0s,comp=E,9.0nm,5.3s							
JKRS	**Kuro-shima**	**0.93**	**230**	P	**Pb**	**14 57 42.2**	**-0.2**
JKRS				*e*S	**Sg**	**14 57 55.3**	**+0.4**
JKRS	**Kuro-shima**	**0.93**	**230**	A	A	14 57 42.2	
comp=N,32nm,1.0s,comp=E,37nm,0.4s							
IRIF	**Iriomote-Funau**	**1.08**	**243**	P	**Pb**	**14 57 44.5**	**-0.6**
IRIF				*e*S	**Sg**	**14 57 59.8**	**-0.2**
IRIF	**Iriomote-Funau**	**1.08**	**243**	A	A	14 57 44.5	
comp=N,25nm,1.4s,comp=E,25nm,1.4s

comp=Z,210nm,11.0s
JHJ Hachijo jima 2 15.49 54 LR LR 15 07 04.9
comp=Z,66nm,18.2s,baz=337,slow=37
MJAR Matsushiro Arr 16.39 41 P **Pn 15 01 14.3 +0.1**
baz=216,slow=10,SNR=3.5
comp=Z,1.3nm,0.7s
MJAR Matsushiro Arr 16.39 41 **P 15 01 16.7 -0.2**
XAN Xi'an 16.57 307 ⇑P **P 15 01 22.8 +3.8**
XAN pP sP 15 01 26.0 +0.4
XAN pmax pmax
comp=Z,5.0nm,1.0s
GUMO Guam 21.98 117 LR LR 15 09 54.7
comp=Z,27nm,20.9s,baz=238,slow=34
JKA Kamikawa-asahi 24.10 33 P **P 15 02 40.2 +0.6**
CHTO Chiang Mai 24.71 261 P **P 15 02 45.1 -0.3**
CMAR Chiang Mai Arr 24.82 260 P **P 15 02 45.9 -0.5**
comp=Z,0.5nm,0.5s,baz=57,slow=7.5,SNR=4.8
CMAR LR LR 15 11 18.8
comp=Z,40nm,21.6s,baz=50,slow=33
comp=Z,0.5nm,0.5s
H11N1 WAKE ISLAND Hy 39.18 89 T T 15 46 33.7
baz=283,slow=75,SNR=3.3
H11N2 WAKE ISLAND Hy 39.18 89 T T 15 46 38.1
baz=283,slow=75,SNR=2.4
H11N3 WAKE ISLAND Hy 39.20 89 T T 15 46 32.5
baz=283,slow=75,SNR=3.7
MKAR Makanchi Array 40.20 314 P **P 15 04 58.9 -1.5**
comp=Z,0.3nm,0.5s,baz=98,slow=11,SNR=6.0
comp=Z,0.3nm,0.5s
MKAR Makanchi Array 40.20 314 **P 15 04 59.3 -1.1**
ZALV Zalesovo Beam 41.54 325 P **P 15 05 08.9 -2.4**
comp=Z,0.8nm,0.5s,baz=124,slow=8.8,SNR=4.2
comp=Z,0.8nm,0.5s
FITZ Fitzroy Crossi 42.68 179 P **P 15 05 21.2 +0.3**
KURK Kurchatov 43.74 318 **P 15 05 27.8 -1.4**
KURBB Kurchatov Arra 43.77 318 P **P 15 05 28.4 -1.1**
comp=Z,0.7nm,0.8s,baz=110,slow=8.3,SNR=5.6
comp=Z,0.7nm,0.8s
WB0 Warramunga Arr 45.31 167 P **P 15 05 42.5 +0.4**
WB0 IAmb IAmb 15 05 47.9
comp=Z,10nm,1.3s
WRA Warramunga Arr 45.47 167 P **P 15 05 44.0 +0.7**
comp=Z,3.9nm,0.9s,baz=348,slow=8.1,SNR=14
comp=Z,3.9nm,0.9s
WR8 Warramunga Arr 45.51 167 P **P 15 05 44.1 +0.4**
WR8 IAmb IAmb 15 06 02.8
comp=Z,12nm,1.5s
KKAR Karatay Array 47.70 307 P **P 15 06 00.4 -0.4**
AS31 Alice Springs 49.02 169 P **P 15 06 11.0 +0.1**
ASAR Alice Springs 49.02 169 P **P 15 06 12.1 +1.1**
comp=Z,1.0nm,0.8s,baz=353,slow=8.2,SNR=18
ASAR PcP **PcP 15 07 35.2 +0.5**
comp=Z,0.9nm,0.8s,baz=342,slow=2.6,SNR=6.0
comp=Z,1.0nm,0.8s
ASAR Alice Springs 49.02 169 P **P 15 06 11.3 +0.4**
BVAR Borovoye Array 49.28 320 P **P 15 06 11.8 -0.9**
comp=Z,0.4nm,0.5s,baz=91,slow=7.2,SNR=2.1
comp=Z,0.4nm,0.5s
AB31 Akbulak array 55.35 314 P **P 15 06 57.5 -0.3**
AB31 IAmb IAmb 15 07 27.0
comp=Z,4.3nm,1.4s
ABKAR Akbulak array 55.35 314 P **P 15 06 56.7 -1.1**
STKA Stephens Creek 58.64 163 P **P 15 07 21.8 +0.6**
comp=Z,2.0nm,0.7s,baz=339,slow=13,SNR=4.3
comp=Z,2.0nm,0.7s
J17K VABM Dome 61.90 30 P **P 15 07 42.7 -0.5**
G18K Tagagawik 62.12 27 P **P 15 07 44.4 -0.3**
G18K IAmb IAmb 15 08 19.7
comp=Z,11nm,1.5s
D19K Kuna River 62.41 24 P **P 15 07 46.3 -0.3**
E21K Killik River 63.94 24 P **P 15 07 57.0 +0.2**
C23K Itkillik River 65.08 22 P **P 15 08 04.3 +0.2**
E24K Your Creek 66.01 24 P **P 15 08 10.4 +0.2**
E24K IAmb IAmb 15 08 16.1
comp=Z,3.6nm,0.8s
F24K Squaw Lake 66.31 25 P **P 15 08 12.9 +0.7**
F24K IAmb IAmb 15 08 14.1
comp=Z,4.4nm,0.8s
ILAR Eielson Array 67.12 28 P **P 15 08 14.8 -2.5**
comp=Z,1.2nm,1.1s,baz=292,slow=8.8,SNR=7.7
comp=Z,1.2nm,1.1s
F25K Christian Rive 67.15 25 P **P 15 08 18.4 +0.9**
F25K IAmb IAmb 15 08 28.4
comp=Z,4.7nm,0.8s
F26K Sheenjek River 67.69 24 P **P 15 08 21.8 +0.9**
F26K IAmb IAmb 15 08 37.2
comp=Z,6.9nm,1.2s
H27K Steamboat Moun 69.01 26 P **P 15 08 30.1 +0.9**
H27K IAmb IAmb 15 08 53.4
comp=Z,8.9nm,1.4s
ARCES ARCESS Array B 70.16 338 LR LR 15 45 28.5
comp=Z,102nm,19.6s,baz=328,slow=41
H29M Whitestone 70.25 25 P **P 15 08 37.5 +0.7**
H29M IAmb IAmb 15 08 55.6
comp=Z,10nm,1.4s
M29M Somme Creek 71.33 29 P **P 15 08 44.7 +1.1**
M29M IAmb IAmb 15 09 25.7
comp=Z,10nm,1.4s
FINES FINESS Array B 72.53 330 P **P 15 08 49.4 -1.3**
comp=Z,2.7nm,0.9s,baz=126,slow=2.4,SNR=1.6
comp=Z,2.7nm,0.9s
BRTR Keskin Array B 75.41 307 P **P 15 09 08.2 +0.1**
comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=2.2
comp=Z,0.5nm,0.8s
BRTR Keskin Array B 75.41 307 P **P 15 09 08.5 +0.4**
HFS Hagfors 78.58 332 LR LR 15 45 53.2
comp=Z,99nm,21.2s,baz=281,slow=37
YKA Yellowknife Ar 81.08 24 P **P 15 09 37.6 -1.2**
comp=Z,2.4nm,0.8s,baz=310,slow=5.7,SNR=6.9
comp=Z,2.4nm,0.8s
KEST Kesra 94.28 313 P **P 15 10 44.4 +0.6**
comp=Z,5.6nm,0.5s,baz=110,slow=2.7,SNR=5.8

*SDD **29** 15:07:25.5±1.6, 19°.12N×67°.11W, h22km±63km, MD3.1, ML2.7, MWS.2*
*RSPR **29** 15:07:26.6, 19°.15N×67°.30W, h25km±24km, MD2.5/12*
*NEIC **29** 15:07:29.0±2.2, 18°.93N±0°.06×67°.18W±0°.03, h35km±2km, ML2.6/12, Md2.5/12(RSPR), Error ellipse: s-maj=9.4km s-min=5.3km az=177.0*
ISC 29 15:07:28.1±1.5, 18°.95N±0°.07×67°.18W±0°.03, h25km±12km, n45, σ0s80/52, 5C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.48**	**172**	⇓*e*P	g	**Pb**	**15 07 37.8**	**-0.3**
AGPR				*e*S	g	**Sb**	**15 07 46.2**	**+1.3**
AGPR					IAML		15 07 48.4	
	comp=N,404nm,0.2s							
AGPR					IAML		15 07 51.6	
	comp=E,406nm,0.3s							
AGPR	**Aguadilla, PR**	**0.48**	**172**			**Pb**	**15 07 37.7**	**-0.4**
AGPR	**Aguadilla, PR**	**0.48**	**172**	⇓*e*P		**Pb**	**15 07 38.0**	**0.0**
AGPR	**Aguadilla, PR**	**0.48**	**172**	*e*S		**Sn**	**15 07 47.2**	**+0.2**
IDE	**Isla Desecheo**	**0.62**	**206**			**Pb**	**15 07 40.1**	**-0.3**
IDE						**Sn**	**15 07 50.4**	**-0.1**
IDE	**Isla Desecheo**	**0.62**	**206**	⇓*e*P		**Pb**	**15 07 40.1**	**-0.3**
IDE	**Isla Desecheo**	**0.62**	**206**	*e*S		**Sn**	**15 07 50.4**	**-0.1**
AOPR	**Arecibo Observ**	**0.72**	**146**	*e*Pg		**Pb**	**15 07 40.9**	**-1.3**
AOPR					IAML		15 08 02.1	
	comp=N,418nm,0.3s							
AOPR	**Arecibo Observ**	**0.72**	**146**			**Pb**	**15 07 41.1**	**-1.0**
AOPR	**Arecibo Observ**	**0.72**	**146**			**Sn**	**15 07 53.2**	**+0.2**
AOPR	**Arecibo Observ**	**0.72**	**146**	⇓*e*P		**Pb**	**15 07 41.2**	**-1.0**
AOPR	**Arecibo Observ**	**0.72**	**146**	*e*S		**Sn**	**15 07 53.2**	**+0.2**
PRSN	**Puerto Rico Se**	**0.73**	**177**	⇓*e*P		**Pb**	**15 07 41.7**	**-0.5**
PRSN	**Puerto Rico Se**	**0.73**	**177**	*e*S		**Sn**	**15 07 54.1**	**+1.0**
LSP	**Las Mesas**	**0.78**	**173**			**Pb**	**15 07 42.6**	**-0.4**
LSP						**Sn**	**15 07 55.5**	**+1.2**
LSP	**Las Mesas**	**0.78**	**173**	⇓*e*P		**Pb**	**15 07 42.6**	**-0.4**
LSP	**Las Mesas**	**0.78**	**173**	*e*S		**Sn**	**15 07 55.5**	**+1.2**
EMPR	**Esperanza - Ma**	**0.78**	**127**			**Pb**	**15 07 43.2**	**+0.2**
EMPR						**Sn**	**15 07 55.2**	**+0.9**
EMPR	**Esperanza - Ma**	**0.78**	**127**	⇓*e*P		**Pb**	**15 07 43.2**	**+0.2**
EMPR	**Esperanza - Ma**	**0.78**	**127**	*e*S		**Sn**	**15 07 55.2**	**+0.9**
CRPR	**Cabo Rojo, PR**	**0.94**	**176**	*e*Pg		**Pb**	**15 07 44.8**	**-0.9**
CRPR				*e*Sg		**Sn**	**15 07 58.5**	**+0.2**
CRPR					IAML		15 08 06.1	
	comp=N,216nm,0.5s							
CRPR					IAML		15 08 07.3	
	comp=E,116nm,0.6s							
CRPR	**Cabo Rojo, PR**	**0.94**	**176**			**Pb**	**15 07 44.9**	**-0.9**
CRPR						**Sn**	**15 07 58.9**	**+0.6**
CRPR	**Cabo Rojo, PR**	**0.94**	**176**	IAML			15 08 06.3	
	comp=N,194nm,0.5s							
CRPR					IAML		15 08 07.1	
	comp=E,153nm,0.7s							
CRPR	**Cabo Rojo, PR**	**0.94**	**176**	⇓*e*P		**Pb**	**15 07 44.9**	**-0.9**
CRPR	**Cabo Rojo, PR**	**0.94**	**176**	*e*S		**Sn**	**15 07 58.9**	**+0.6**
MLPR	**Magueyes Islan**	**0.98**	**172**	⇓*e*P		**Pb**	**15 07 45.5**	**-1.0**
MLPR	**Magueyes Islan**	**0.98**	**172**	*e*S		**Sn**	**15 07 59.9**	**+0.5**
ECPR	**Experimental S**	**1.00**	**129**	⇓*e*P		**Pb**	**15 07 45.2**	**-1.5**
ECPR	**Experimental S**	**1.00**	**129**	*e*S		**Sn**	**15 08 01.3**	**+1.5**
GBPR	**Guanica, Bosqu**	**1.01**	**163**			**Pb**	**15 07 46.3**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.01**	**163**	⇓*e*P		**Pb**	**15 07 46.3**	**-0.7**
OBIP	**Obispado Ponce**	**1.05**	**149**			**Pn**	**15 07 46.5**	**-0.8**
OBIP						**Sn**	**15 08 02.1**	**+1.0**
OBIP	**Obispado Ponce**	**1.05**	**149**	IAML			15 08 04.3	
	comp=N,134nm,0.6s							
OBIP	**Obispado Ponce**	**1.05**	**149**	⇑*e*P		**Pn**	**15 07 46.5**	**-0.8**
OBIP	**Obispado Ponce**	**1.05**	**149**	*e*S		**Sn**	**15 08 02.1**	**+1.0**
GCPR	**Guaynabo City**	**1.22**	**121**			**Pn**	**15 07 48.6**	**-1.0**
GCPR						**Sn**	**15 08 05.9**	**+0.6**
GCPR	**Guaynabo City**	**1.22**	**121**	⇑*e*P		**Pn**	**15 07 48.6**	**-1.0**
GCPR	**Guaynabo City**	**1.22**	**121**	*e*S		**Sn**	**15 08 05.9**	**+0.6**
SJG	**San Juan**	**1.29**	**130**			**Pn**	**15 07 50.4**	**0.0**
SJG					IAML		15 08 15.2	
	comp=N,105nm,0.4s							
SJG					IAML		15 08 17.2	
	comp=N,94nm,0.3s							
HUMP	**Col San Antoni**	**1.50**	**122**			**Pn**	**15 07 53.0**	**-0.4**
HUMP						**Sn**	**15 08 13.3**	**+1.2**
HUMP	**Col San Antoni**	**1.50**	**122**	IAML			15 08 18.1	
	comp=E,91nm,0.2s							
HUMP	**Col San Antoni**	**1.50**	**122**	⇑*e*P		**Pn**	**15 07 53.0**	**-0.4**
HUMP	**Col San Antoni**	**1.50**	**122**	*e*S		**Sn**	**15 08 13.3**	**+1.2**
DR12	**Loma Pena Alta**	**2.09**	**266**			**Pn**	**15 08 01.1**	**-0.4**
HATOM	**Hato Mayor del**	**2.09**	**266**	*e*Pg		**Pn**	**15 08 01.8**	**+0.2**
HATOM				*e*Sg		**Sb**	**15 08 31.1**	**+0.3**
HATOM					IAML		15 08 35.3	
	comp=N,45nm,0.2s							

*SDD **29** 15:08:37.0±3.5, 19°.24N×66°.51W, h54km±150km, MD4.4, ML5.0, MW4.7*
*IDC **29** 15:08:38.0±0.5, 18°.88N×67°.24W, h0km, mb4.3/17, mbtmp4.3/17, MS3.7/16, Error ellipse: s-maj=17.5km s-min=11.7km az=50.0*
*NEIC **29** 15:08:43.5±2.5, 18°.95N±0°.05×67°.19W±0°.04, h35km±2km, mb4.7/131, ML4.4/24, ML4.8/10(RSPR), Error ellipse: s-maj=8.2km s-min=5.9km az=184.0*
*RSPR **29** 15:08:44.7, 18°.98N×67°.19W, h38km±12km, MD4.2/10*
ISC 29 15:08:41.8±1.1, 19°.01N±0°.04×67°.25W±0°.03, h25km±8km, n294, σ2s00/260, mb4.7/81, MS3.7/14, 11C-10D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.56**	**166**	*e*Pg		**Pb**	**15 08 53.2**	**+0.1**
AGPR					IAML		15 09 15.1	
	comp=N,17µm,0.8s							
AGPR	**Aguadilla, PR**	**0.56**	**166**	Pn		**Pb**	**15 08 53.0**	**0.0**
AGPR					IAML		15 09 09.7	
	comp=N,29µm,0.7s							
AGPR					IAML		15 09 10.7	
	comp=N,22µm,0.8s							
AGPR	**Aguadilla, PR**	**0.56**	**166**	⇓*e*P		**Pb**	**15 08 53.6**	**+0.6**
AGPR	**Aguadilla, PR**	**0.56**	**166**	*e*S		**Sn**	**15 09 02.4**	**-0.2**
IDE	**Isla Desecheo**	**0.66**	**199**			**Pn**	**15 08 55.7**	**+0.1**
IDE	**Isla Desecheo**	**0.66**	**199**	⇓*e*P		**Pn**	**15 08 55.7**	**+0.1**
PRSN	**Puerto Rico Se**	**0.80**	**173**	*e*Pg		**Pb**	**15 08 57.0**	**-0.1**
PRSN				*e*Sg		**Sn**	**15 09 09.7**	**+1.2**
PRSN					IAML		15 09 20.7	
	comp=N,17µm,0.3s							
PRSN	**Puerto Rico Se**	**0.80**	**173**	⇑*e*P		**Pb**	**15 08 57.0**	**-0.1**
PRSN	**Puerto Rico Se**	**0.80**	**173**	*e*S		**Sb**	**15 09 08.0**	**+0.6**
AOPR	**Arecibo Observ**	**0.81**	**145**			**Sb**	**15 09 08.0**	**+0.1**
AOPR	**Arecibo Observ**	**0.81**	**145**	Pn		**Pb**	**15 08 56.1**	**-1.2**
AOPR					IAML		15 09 24.7	
	comp=N,14µm,0.6s							
AOPR	**Arecibo Observ**	**0.81**	**145**	⇑*e*P		**Pb**	**15 08 56.2**	**-1.1**
AOPR	**Arecibo Observ**	**0.81**	**145**	*e*S		**Sb**	**15 09 08.0**	**+0.1**
AOPR	**Arecibo Observ**	**0.81**	**145**	*e*P		**Pb**	**15 08 55.9**	**-1.5**
LSP	**Las Mesas**	**0.85**	**169**			**Pb**	**15 08 57.8**	**-0.2**
LSP						**Sb**	**15 09 08.6**	**-0.3**
LSP	**Las Mesas**	**0.85**	**169**	⇑*i*P		**Pb**	**15 08 57.8**	**-0.2**
LSP	**Las Mesas**	**0.85**	**169**	*e*S		**Sb**	**15 09 08.6**	**-0.3**
EMPR	**Esperanza - Ma**	**0.87**	**128**			**Pn**	**15 08 58.9**	**+0.5**
EMPR						**Sn**	**15 09 10.1**	**-0.1**
EMPR	**Esperanza - Ma**	**0.87**	**128**	IAML			15 09 18.5	
	comp=N,9µm,0.6s							
EMPR					IAML		15 09 28.3	
	comp=N,13µm,0.7s							
EMPR	**Esperanza - Ma**	**0.87**	**128**	⇑*e*P		**Pn**	**15 08 58.9**	**+0.5**
EMPR	**Esperanza - Ma**	**0.87**	**128**	*e*S		**Sn**	**15 09 10.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.01**	**172**	*e*Pg		**Pn**	**15 09 00.2**	**-0.1**
CRPR				*e*Sg		**Sb**	**15 09 13.1**	**-0.4**
CRPR					IAML		15 09 22.5	
	comp=E,12µm,0.8s							
CRPR					IAML		15 09 29.9	
	comp=N,8µm,0.4s							
CRPR	**Cabo Rojo, PR**	**1.01**	**172**	Pn		**Pn**	**15 09 00.1**	**-0.3**
CRPR				Sn		**Sb**	**15 09 13.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.01**	**172**	IAML			15 09 14.5	
	comp=N,9µm,0.9s							
CRPR					IAML		15 09 22.7	
	comp=N,11µm,0.8s							
CRPR	**Cabo Rojo, PR**	**1.01**	**172**	⇓*e*P		**Pn**	**15 09 00.1**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.01**	**172**	*e*S		**Sn**	**15 09 14.4**	**+0.7**
MLPR	**Magueyes Islan**	**1.06**	**169**	*e*Pg		**Pn**	**15 09 00.8**	**-0.2**
MLPR				*e*Sg		**Sb**	**15 09 13.6**	**-1.3**
MLPR					IAML		15 09 15.1	
	comp=N,2µm,0.9s							
MLPR	**Magueyes Islan**	**1.06**	**169**	⇓*i*P		**Pn**	**15 09 00.8**	**-0.2**
MLPR	**Magueyes Islan**	**1.06**	**169**	*e*S		**Sn**	**15 09 15.4**	**+0.5**
ECPR	**Experimental S**	**1.09**	**129**	⇓*e*P		**Pn**	**15 09 00.4**	**-1.1**
ECPR	**Experimental S**	**1.09**	**129**	*e*S		**Sb**	**15 09 16.6**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.09**	**161**			**Pn**	**15 09 01.1**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.09**	**161**	⇑*e*P		**Pn**	**15 09 01.1**	**-0.3**
OBIP	**Obispado Ponce**	**1.14**	**148**			**Pn**	**15 09 01.2**	**-1.0**
OBIP				Sn		**Sn**	**15 09 16.5**	**-0.5**
OBIP	**Obispado Ponce**	**1.14**	**148**	⇓*e*P		**Pn**	**15 09 01.8**	**-0.4**
OBIP	**Obispado Ponce**	**1.14**	**148**	*e*S		**Sn**	**15 09 16.7**	**-0.4**
PCDR	**Punta Cana, DR**	**1.18**	**245**	*e*Pg		**Pb**	**15 09 04.2**	**+0.6**
PCDR					IAML		15 09 38.7	
	comp=N,13µm,0.7s							
GCPR	**Guaynabo City**	**1.31**	**122**			**Pn**	**15 09 03.0**	**-1.5**
GCPR	**Guaynabo City**	**1.31**	**122**	⇑*e*P		**Pn**	**15 09 04.7**	**+0.2**
SJG	**San Juan**	**1.38**	**130**	Pn		**Pn**	**15 09 04.4**	**-1.0**
	comp=N,123nm,0.3s,baz=302,slow=13,SNR=26							
SJG				Sn		**Sb**	**15 09 24.2**	**+0.2**
	comp=N,434nm,0.3s,baz=102,slow=19,SNR=10							
SJG				LR	LR		15 09 34.4	
	comp=N,2µm,19.5s,baz=266,slow=44							
SJG	**San Juan**	**1.38**	**130**	Pn		**Pn**	**15 09 04.2**	**-1.2**
SJG	**San Juan**	**1.38**	**130**	⇑*e*P		**Pb**	**15 09 06.4**	**-0.5**
SJG	**San Juan**	**1.38**	**130**	*e*S		**Sn**	**15 09 22.9**	**+0.1**
SJG	**San Juan**	**1.38**	**130**	*e*P		**Pn**	**15 09 03.5**	**-1.9**
HIDR	**Higuey Centro**	**1.45**	**253**	*e*Pg		**Pb**	**15 09 08.0**	**-0.2**
HIDR					IAML		15 09 30.4	
	comp=E,13µm,0.5s							
HIDR					IAML		15 09 34.9	
	comp=N,13µm,0.7s							
HIDR	**Higuey Centro**	**1.45**	**253**	⇓*i*P		**Pb**	**15 09 08.1**	**-0.1**
HIDR	**Higuey Centro**	**1.45**	**253**	*e*S		**Sb**	**15 09 27.6**	**+1.3**
HUMP	**Col San Antoni**	**1.58**	**123**			**Sn**	**15 09 27.3**	**-0.7**
HUMP	**Col San Antoni**	**1.58**	**123**	Pn		**Pn**	**15 09 07.4**	**-0.9**
HUMP					IAML		15 09 41.7	
	comp=N,3µm,0.6s							
HUMP	**Col San Antoni**	**1.58**	**123**	⇑*e*P		**Pn**	**15 09 09.1**	**+0.8**
HUMP	**Col San Antoni**	**1.58**	**123**	*e*S		**Sn**	**15 09 27.3**	**-0.7**
MIDR	**Miches**	**1.70**	**269**	*e*Pg		**Pb**	**15 09 12.9**	**+0.5**
MIDR				*e*Sg		**Sb**	**15 09 37.4**	**+3.9**
MIDR					IAML		15 09 42.8	
	comp=E,6µm,0.5s							
MIDR					IAML		15 09 45.1	
	comp=N,5µm,0.9s							
MIDR					IAML		15 09 45.1	
	comp=N,2µm,0.9s							
MIDR	**Miches**	**1.70**	**269**	⇑*i*P		**Pb**	**15 09 12.9**	**+0.5**
SMDR	**Samana, DR**	**1.85**	**279**	⇓*i*P		**Pn**	**15 09 13.0**	**+1.0**
DR12	**Loma Pena Alta**	**2.03**	**264**			**Pn**	**15 09 16.6**	**+2.1**
HATOM	**Hato Mayor del**	**2.03**	**264**	*e*Pg		**Pb**	**15 09 16.9**	**-1.2**
HATOM				*e*Sg		**Sb**	**15 09 46.7**	**+3.8**
HATOM					IAML		15 09 47.8	
	comp=N,4µm,0.4s							
HATOM					IAML		15 09 50.0	
	comp=E,4µm,0.4s							
SDD	**Santo Domingo**	**2.58**	**258**			**Pn**	**15 09 25.1**	**+3.1**
SDD					IAML		15 10 08.1	
	comp=E,3µm,0.9s							
SDD	**Santo Domingo**	**2.58**	**258**	⇑*e*P		**Pb**	**15 09 26.1**	**-1.3**
CADR	**Cabrera**	**2.62**	**285**	*e*Pg		**Pn**	**15 09 23.4**	**+0.8**
CADR					IAML		15 10 14.5	
	comp=E,6µm,0.9s							
CADR					IAML		15 10 19.7	
	comp=N,10µm,0.5s							
DR08	**Loma La Naviza**	**2.62**	**269**	*e*Pg		**Pn**	**15 09 25.8**	**+3.1**
DR08					IAML		15 10 06.5	
	comp=N,60µm,0.7s							
DR08					IAML		15 10 11.1	
	comp=E,36µm,0.2s							
BANI	**BANI**	**3.01**	**259**	*e*Pg		**Pn**	**15 09 31.9**	**+3.9**
BANI				*e*Sg		**Sb**	**15 10 12.4**	**+1.2**
BANI					IAML		15 10 26.4	
	comp=E,10µm,0.5s							
BANI					IAML		15 10 26.4	
	comp=N,7µm,0.4s							
BANI	**BANI**	**3.01**	**259**			**Pn**	**15 09 31.4**	**+3.4**
BAN1	**Bani Escuela**	**3.01**	**256**	IAML			15 10 25.5	
	comp=N,3µm,0.8s							
ABDR	**Alto Bandera**	**3.20**	**267**	*e*Pg		**Pn**	**15 09 34.6**	**+3.7**
ABDR				*e*Sg		**Sb**	**15 10 17.2**	**+0.2**
ABDR					IAML		15 10 28.5	
	comp=E,97nm,0.5s							
SC01	**Santiago de lo**	**3.31**	**278**			**Pn**	**15 09 34.8**	**+2.7**
SDDR	**Presa de Saban**	**3.82**	**270**			**Pn**	**15 09 42.3**	**+3.1**
SDDR	**Presa de Saban**	**3.82**	**270**	⇓*i*P		**Pn**	**15 09 42.6**	**+3.6**
SDDR	**Presa de Saban**	**3.82**	**270**	*e*P		**Pn**	**15 09 41.6**	**+2.4**
SDDR	**Presa de Saban**	**3.82**	**270**	*i*P		**Pn**	**15 09 42.7**	**+3.6**
SDDR				*i*S		**Sb**	**15 10 33.6**	**-0.9**
PODR	**Polo**	**3.92**	**258**	*e*Pg		**Pn**	**15 09 44.1**	**+3.5**
PODR					IAML		15 10 46.8	
	comp=E,3µm,0.8s							
PODR					IAML		15 10 47.8	
	comp=N,3µm,0.6s							
NEDR	**Neiba UASD**	**3.98**	**263**	*e*Pg		**Pn**	**15 09 46.1**	**+4.8**
NEDR					IAML		15 10 49.9	
	comp=N,2µm,0.7s							
SABA	**Saba**	**4.05**	**109**	Pn		**Pn**	**15 09 41.8**	**-0.5**
SABA					IAML		15 10 53.3	
	comp=N,624nm,1.1s							
SABA	**Saba**	**4.05**	**109**	⇑*e*P		**Pn**	**15 09 44.4**	**+2.1**
MCDR	**Montecristi**	**4.25**	**283**	*e*Pg		**Pn**	**15 09 46.5**	**+1.5**
MCDR					IAML		15 11 09.5	
	comp=N,4µm,0.5s							
SEUS	**St. Eustatius**	**4.33**	**110**	Pn		**Pn**	**15 09 46.4**	**+0.3**
SEUS					IAML		15 10 48.1	
	comp=N,619nm,0.9s							
SEUS					IAML		15 10 58.3	
	comp=E,469nm,1.1s							
GRTK	**Grand Turk**	**4.41**	**305**	*e*Pg		**Pn**	**15 09 45.9**	**-1.3**
GRTK					IAML		15 10 44.2	
	comp=N,455nm,0.3s							
GRTK	**Grand Turk**	**4.41**	**305**	*i*P		**Pn**	**15 09 45.8**	**-1.4**
GRTK				*i*S		**Sn**	**15 10 33.9**	**-3.9**
SKI	**Saint Kitts**	**4.60**	**111**	*e*P		**Pn**	**15 09 47.6**	**-2.3**
PAPH	**Port-au-Prince**	**4.81**	**265**	*i*P		Pn	15 09 58.5	+5.8
PAPH				*i*S		**Sn**	**15 10 55.5**	**+7.9**
ANWB	**Willy Bob**	**5.36**	**104**	*e*P		**Pn**	**15 10 01.2**	**+1.0**
DHSZ	**Broadband at M**	**5.90**	**117**	*e*P		**Pn**	**15 10 06.5**	**-1.0**
GDHS	**Morne Mazeau,**	**5.90**	**117**			**Pn**	**15 10 08.1**	**+0.5**
ATGZ	**Broadband at L**	**6.01**	**118**	*e*P		**Pn**	**15 10 10.5**	**+1.3**
ABD	**La Joyeuse, An**	**6.04**	**114**			**Pn**	**15 10 10.8**	**+1.2**
ABD	**La Joyeuse, An**	**6.04**	**114**	⇑*e*P		**Pn**	**15 10 12.3**	**+2.7**
MMLZ	**Guadeloupe Bro**	**6.09**	**118**	*e*P		**Pn**	**15 10 13.6**	**+3.4**
CBE	**Ff, Capester**	**6.13**	**118**			**Pn**	**15 10 11.1**	**+0.2**
CBE	**Ff, Capester**	**6.13**	**118**	⇑*e*P		**Pn**	**15 10 11.3**	**+0.5**
TBG	**Guadaloupe-3**	**6.20**	**120**	*e*P		**Pn**	**15 10 12.6**	**+0.8**
DSDZ	**La Diserade, G**	**6.48**	**114**	*e*P		**Pn**	**15 10 17.8**	**+2.2**
GDSD	**La Dsirade Is**	**6.48**	**114**	Pn		**Pn**	**15 10 16.6**	**+1.0**
DSLB	**Salisbury**	**6.61**	**122**	*e*P		**Pn**	**15 10 16.2**	**-1.2**
MASC	**Masc**	**6.68**	**281**	⇓*e*Pg		**Pn**	**15 10 17.7**	**-0.7**
MASC					IAML		15 12 12.1	
	comp=N,349nm,0.8s							
MASC	**Masc**	**6.68**	**281**	*i*P		**Pn**	**15 10 17.2**	**-1.2**
MASC					IVmB_BB		15 10 35.3	
	comp=Z,3µm,1.0s							
MASC					IAmb	IAmb	15 10 35.4	
	comp=Z,180nm,0.4s							
MASC				*i*S		**Sn**	**15 11 30.8**	**-3.0**
QMBU	**Quimbuelo**	**7.23**	**281**	*i*P		**Pn**	**15 10 24.2**	**-1.7**
QMBU					IAmb	IAmb	15 10 50.9	
	comp=Z,180nm,1.3s							
QMBU					IVmB_BB		15 10 58.8	
	comp=Z,2µm,1.0s							
QMBU				*i*S		**Sn**	**15 11 42.3**	**-4.9**
BIM	**Bigot**	**7.42**

	comp=Z,50nm,1.2s						
PTBC	**PUERTO BERRIO,**	**14.24**	**210**	P	**Pn**	**15 12 00.8**	**-1.3**
	comp=Z,27nm,0.7s						
060A	**Indiantown**	**14.46**	**306**	*i* S	**Pn**	**15 12 04.2**	**-0.8**
HELC	**Santa Helena**	**15.08**	**213**	P	**Pn**	**15 12 14.7**	**+1.0**
	comp=Z,492nmcomp=Z,49nm,0.7s						
CBOC	**Ciudad Bolivar**	**15.61**	**214**	P	**Pn**	**15 12 21.7**	**+1.2**
	comp=Z,37nm,1.1s						
CHIC	**Chingaza**	**15.63**	**205**	P	**Pn**	**15 12 21.1**	**+0.1**
	comp=Z,621nmcomp=Z,37nm,0.7s						
ROSC	**El Rosal**	**15.69**	**207**	Pn	**Pn**	**15 12 23.8**	**+2.2**
	comp=Z,2.5nm,0.3s,baz=72,slow=20,SNR=2.3						
ROSC	**El Rosal**	**15.69**	**207**	P	**P**	**15 12 24.4**	**-1.1**
	comp=Z,897nmcomp=Z,76nm,0.8s						
GUY2C	**Guyana, Caldas**	**15.83**	**211**	P	**Pn**	**15 12 24.8**	**+1.3**
	comp=Z,718nmcomp=Z,75nm,0.7s						
DWPF	**Disney Wildern**	**15.83**	**308**		**Pn**	**15 12 20.9**	**-2.2**
PLMC	**San Jos del P**	**16.56**	**213**	P	**Pn**	**15 12 32.8**	**+0.2**
	comp=Z,47nm,0.8s						
ORTC	**Ortega, Tolima**	**16.92**	**208**	P	**P**	**15 12 39.3**	**+0.4**
	comp=Z,77nm,0.9s						
PRAC	**Prado**	**16.94**	**207**	P	**Pn**	**15 12 38.2**	**+0.9**
	comp=Z,39nm,0.7s						
URMC	**La Uribe, Meta**	**17.15**	**205**	P	**P**	**15 12 42.2**	**+0.7**
	comp=Z,57nm,0.8s						
YOTC	**Yotoco, Valle**	**17.38**	**212**	P	**Pn**	**15 12 42.5**	**-0.4**
BOAV	**Boa Vista**	**17.78**	**157**		**Pn**	**15 12 44.5**	**-3.2**
BOAV	**Boa Vista**	**17.78**	**157**	*eP*	**P**	**15 12 49.5**	**+1.2**
Y60A	**Bolivia**	**17.85**	**329**	P	**P**	**15 12 49.6**	**+0.7**
Y60A				IAmb	IAmb	15 13 03.9	
	comp=Z,69nm,0.7s						
NHSC	**New Hope**	**18.19**	**323**		**P**	**15 12 54.0**	**+1.3**
X58A	**Rowland**	**18.84**	**328**	P	**Pn**	**15 13 01.3**	**+0.8**
X58A				IAmb	IAmb	15 13 34.1	
	comp=Z,35nm,0.7s						
JTS	**Las Juntas de**	**19.18**	**246**	P	**Pn**	**15 13 07.7**	**+2.9**
	comp=Z,10nm,0.8s,baz=82,slow=15,SNR=4.8						
JTS				LR	LR	15 20 02.0	
	comp=Z,145nm,19.6s,baz=70,slow=36						
W57A	**Gilead**	**19.64**	**327**	P	**Pn**	**15 13 10.5**	**+0.3**
W57A				IAmb	IAmb	15 13 18.0	
	comp=Z,30nm,0.7s						
T59A	**Double "B" Far**	**20.05**	**335**	IAmb	IAmb	15 13 28.4	
	comp=Z,26nm,0.8s						
HODGE	**Hodges**	**20.20**	**322**	IAmb	IAmb	15 13 23.9	
	comp=Z,28nm,0.6s						
152A	**Waverly Hall**	**20.75**	**314**	IAmb	IAmb	15 13 27.6	
	comp=Z,18nm,0.7s						
R58B	**Mineral**	**21.04**	**336**	IAmb	IAmb	15 14 03.5	
	comp=Z,21nm,0.7s						
S57A	**Dark Hollow, R**	**21.29**	**334**	IAmb	IAmb	15 13 39.7	
	comp=Z,26nm,0.5s						
V53A	**Saluda**	**21.55**	**324**	P	**P**	**15 13 31.4**	**+2.0**
V53A				IAmb	IAmb	15 13 52.5	
	comp=Z,36nm,0.7s						
BRAL	**Brewton**	**21.59**	**308**	P	**P**	**15 13 29.9**	**+0.1**
OTAV	**Otavalo**	**21.66**	**212**	P	**P**	**15 13 30.3**	**-0.8**
OTAV				IAmb	IAmb	15 13 50.7	
	comp=Z,51nm,1.2s						
OTAV	**Otavalo**	**21.66**	**212**	*eP*	**P**	**15 13 33.6**	**+2.6**
TKL	**Tuckaleechee C**	**22.09**	**322**	LR	LR	15 24 25.7	
	comp=Z,111nm,18.1s,baz=152,slow=43						
LRAL	**Lakeview Retre**	**22.53**	**312**	P	**P**	**15 13 41.0**	**+1.2**
LRAL				IAmb	IAmb	15 13 43.8	
	comp=Z,17nm,0.8s						
TEFE	**Tefe**	**22.53**	**173**	*eP*	**P**	**15 13 41.5**	**+1.6**
TZTN	**Tazewell**	**22.59**	**324**	IAmb	IAmb	15 13 59.9	
	comp=Z,34nm,0.9s						
Y49A	**Blount Mountai**	**22.59**	**315**	IAmb	IAmb	15 14 07.0	
	comp=Z,16nm,0.7s						
W50A	**Signal Mountai**	**22.71**	**319**	IAmb	IAmb	15 14 00.4	
	comp=Z,37nm,1.1s						
MACA	**Manacapuru-AM**	**22.96**	**163**	P	**P**	**15 13 43.5**	**-1.0**
MACA	**Manacapuru-AM**	**22.96**	**163**	*eP*	**P**	**15 13 44.4**	**-0.1**
Z47A	**Carrollton**	**23.37**	**311**	P	**P**	**15 13 48.6**	**+0.1**
Z47A				IAmb	IAmb	15 13 52.8	
	comp=Z,28nm,0.8s						
T50A	**Nancy**	**23.66**	**323**	P	**P**	**15 13 49.6**	**-1.7**
T50A				IAmb	IAmb	15 14 11.4	
	comp=Z,22nm,1.1s						
PLAL	**Pickwick Lake**	**24.36**	**315**	P	**P**	**15 13 58.2**	**+0.3**
PLAL				IAmb	IAmb	15 14 00.2	
	comp=Z,23nm,0.7s						
WVT	**Waverly**	**24.89**	**317**	P	**P**	**15 14 03.5**	**+0.9**
WVT				IAmb	IAmb	15 14 05.3	
	comp=Z,14nm,0.8s						
ITTB	**Itaituba**	**25.85**	**153**	*eP*	**P**	**15 14 10.9**	**-0.6**
SIUC	**Southern Illin**	**26.73**	**319**	IAmb	IAmb	15 14 21.8	
	comp=Z,26nm,0.8s						
CGM3	**Cape Girardeau**	**26.76**	**318**	IAmb	IAmb	15 14 21.4	
	comp=Z,16nm,0.7s						
WHAR	**Wooly Hollow**	**27.44**	**311**	P	**P**	**15 14 27.1**	**+1.4**
WHAR				IAmb	IAmb	15 14 32.1	
	comp=Z,24nm,0.9s						
X40A	**Basin Creek Fa**	**27.45**	**309**	IAmb	IAmb	15 14 28.6	
	comp=Z,9.6nm,0.7s						
SADO	**Sadowa**	**27.53**	**341**	LR	LR	15 25 23.8	
	comp=Z,297nm,20.7s,baz=172,slow=36						
CCM	**Cathedral Cave**	**28.22**	**317**	P	**P**	**15 14 33.5**	**+0.8**
CCM				IAmb	IAmb	15 14 34.5	
	comp=Z,13nm,0.8s						
NPGB	**Novo Progresso**	**28.42**	**155**	*eP*	**P**	**15 14 33.8**	**-0.8**
HHAR	**Hobbs**	**29.10**	**312**	IAmb	IAmb	15 14 42.7	
	comp=Z,14nm,0.7s						
U38A	**Gravette**	**29.49**	**312**	IAmb	IAmb	15 15 20.7	
	comp=Z,15nm,1.3s						
P40A	**Paris**	**29.60**	**319**	IAmb	IAmb	15 14 46.4	
	comp=Z,8.6nm,0.7s						
L42A	**Oliver, Polo**	**29.80**	**325**	IAmb	IAmb	15 14 48.6	
	comp=Z,9.8nm,0.7s						
TUL3	**Leonard**	**30.25**	**310**	IAmb	IAmb	15 15 33.9	
	comp=Z,15nm,1.0s						
P38A	**Dawn**	**30.59**	**318**	IAmb	IAmb	15 14 57.2	
	comp=Z,8.7nm,0.8s						
DEOK	**Depew**	**30.74**	**309**	IAmb	IAmb	15 15 01.8	
	comp=Z,13nm,0.8s						
HNDO	**Hondo**	**30.93**	**296**	IAmb	IAmb	15 15 00.2	
	comp=Z,13nm,1.2s						
PLPT	**Palo Pinto**	**31.01**	**302**	IAmb	IAmb	15 15 05.4	
	comp=Z,8.0nm,0.7s						
OK052	**Battle Ridge R**	**31.03**	**309**	IAmb	IAmb	15 15 04.0	
	comp=Z,14nm,0.9s						
QUOK	**Quay**	**31.04**	**309**	IAmb	IAmb	15 15 04.7	
	comp=Z,12nm,0.8s						
JCT	**Junction City**	**31.58**	**298**	IAmb	IAmb	15 15 31.5	
	comp=Z,12nm,1.1s						
I40A	**Norwalk**	**31.61**	**327**	IAmb	IAmb	15 15 04.2	
	comp=Z,10nm,0.5s						
ABTX	**Abilene, Hawle**	**32.02**	**301**	IAmb	IAmb	15 15 09.2	
	comp=Z,13nm,0.8s						
PDRB	**Porto dos Gac**	**32.15**	**160**	*eP*	**P**	**15 15 07.3**	**-0.3**
VILB	**Vilhena**	**32.51**	**167**	*eP*	**P**	**15 15 11.0**	**+0.2**
SN07	**Snyder 07**	**33.16**	**302**	IAmb	IAmb	15 15 23.6	
	comp=Z,8.7nm,1.0s						
SMTB	**Santa Maria do**	**33.81**	**143**	*eP*	**P**	**15 15 22.3**	**+0.2**
MNHN	**Monahans**	**34.25**	**298**	IAmb	IAmb	15 15 29.8	
	comp=Z,7.5nm,0.8s						
SNDB	**Serra Nova Dou**	**34.58**	**152**	*eP*	**P**	**15 15 28.1**	**-0.6**
TXAR	**Lajitas Array**	**34.65**	**294**	P	**P**	**15 15 31.2**	**+1.7**
	comp=Z,5.9nm,0.7s,baz=112,slow=9.0,SNR=58						
TXAR				ScP	**ScP**	**15 21 49.9**	**+2.6**
	comp=Z,3.3nm,0.8s,baz=97,slow=5.0,SNR=26						
	comp=Z,5.9nm,0.7s						
TX31	**Lajitas Ar. Si**	**34.65**	**294**	IAmb	IAmb	15 15 32.9	
	comp=Z,8.8nm,0.8s						
ALPN	**Alpine**	**34.80**	**296**	IAmb	IAmb	15 15 33.1	
	comp=Z,13nm,0.8s						
ECSD	**EROS Data Cent**	**34.84**	**322**	P	**P**	**15 15 31.2**	**+0.4**
ECSD				IAmb	IAmb	15 15 32.6	
	comp=Z,10nm,0.7s						
LPAZ	**La Paz**	**35.09**	**181**	P	**P**	**15 15 33.0**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=34,slow=5.5,SNR=7.4						
LPAZ				LR	LR	15 31 50.0	
	comp=Z,68nm,18.5s,baz=11,slow=40						
	comp=Z,1.8nm,0.3s						
LPAZ	**La Paz**	**35.09**	**181**	P	**P**	**15 15 32.1**	**-1.8**
LPAZ	**La Paz**	**35.09**	**181**	*eP*	**P**	**15 15 32.7**	**-1.2**
PTLB	**Pontes e Lacer**	**35.16**	**166**	P	**P**	**15 15 30.1**	**-3.7**
PTLB				IAmb	IAmb	15 15 35.7	
	comp=Z,8.6nm,1.2s						
PTLB	**Pontes e Lacer**	**35.16**	**166**	*eP*	**P**	**15 15 33.2**	**-0.6**
PECS	**Pecos**	**35.18**	**298**	IAmb	IAmb	15 15 37.1	
	comp=Z,7.8nm,0.9s						
SIV	**San Ignacio**	**35.31**	**170**	LR	LR	15 30 46.5	
	comp=Z,150nm,19.4s,baz=288,slow=38						
RTBA	**Rita Blanca**	**35.64**	**307**	IAmb	IAmb	15 15 54.7	
	comp=Z,6.3nm,0.7s						

SCHQ	**Schefferville**	**35.76**	**0**	P	**P**	**15 15 40.0**	**+1.4**
	comp=Z,2.6nm,0.6s,baz=156,slow=10.0,SNR=2.3						
	comp=Z,2.6nm,0.6s						
VHRN	**Van Horn**	**36.02**	**296**	IAmb	IAmb	15 16 06.3	
	comp=Z,16nm,1.1s						
PB18	**Visviri**	**36.44**	**184**	P	**P**	**15 15 42.3**	**-3.0**
SALV	**Santo Antonio**	**36.51**	**161**	*eP*	**P**	**15 15 45.9**	**+0.5**
MNTX	**Cornudas Mount**	**36.52**	**298**	IAmb	IAmb	15 15 48.0	
	comp=Z,12nm,1.2s						
ARAG	**Araguaiana, MT**	**37.70**	**155**	*eP*	**P**	**15 15 54.7**	**-0.7**
ANMO	**Albuquerque**	**38.10**	**303**	LR	LR	15 34 60.0	
	comp=Z,106nm,18.5s,baz=110,slow=41						
SDCO	**Great Sand Dun**	**38.15**	**307**	P	**P**	**15 15 58.4**	**-1.1**
PP1B	**Ponte de Pedra**	**38.36**	**161**	*eP*	**P**	**15 16 01.9**	**+0.9**
GO01	**Chusmiza**	**38.49**	**183**	P	**P**	**15 15 59.7**	**-2.9**
GO01				IAmb	IAmb	15 16 01.2	
	comp=Z,12nm,0.8s						
ULM	**Lac du Bonnet**	**38.61**	**330**	P	**P**	**15 16 02.5**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=131,slow=10,SNR=2.3						
	comp=Z,2.6nm,0.6s						
ULM	**Lac du Bonnet**	**38.61**	**330**	P	**P**	**15 16 01.5**	**-1.3**
PB08	**IPOC Station P**	**38.96**	**183**	IAmb	IAmb	15 16 23.0	
	comp=Z,11nm,1.0s						
HMBC	**Humberstone**	**39.13**	**184**	P	**P**	**15 16 04.1**	**-3.5**
BDFB	**Brasilia**	**39.30**	**150**	P	**P**	**15 16 07.8**	**-1.3**
	comp=Z,6.1nm,0.8s,baz=344,slow=4.6,SNR=6.3						
	comp=Z,6.1nm,0.8s						
PB01	**IPOC Station P**	**39.87**	**183**	P	**P**	**15 16 09.6**	**-4.1**
PB01				IAmb	IAmb	15 16 12.2	
	comp=Z,16nm,0.8s						
LPIG	**La Paz**	**40.25**	**285**	LR	LR	15 34 44.2	
	comp=Z,79nm,22.0s,baz=84,slow=39						
BDQN	**Bodoquena, MS**	**40.55**	**165**	*eP*	**P**	**15 16 19.6**	**+0.4**
PB07	**IPOC Station P**	**40.57**	**184**	P	**P**	**15 16 15.4**	**-4.2**
PB07				IAmb	IAmb	15 16 18.0	
	comp=Z,16nm,0.7s						
JANB	**Januaria**	**40.70**	**145**	*eP*	**P**	**15 16 19.2**	**-1.4**
AQDB	**Aquidauana**	**40.84**	**163**	*eP*	**P**	**15 16 21.1**	**-0.6**
IPMB	**Ipameri, GO**	**41.25**	**152**	*eP*	**P**	**15 16 23.6**	**-1.5**
MURT	**Porto Murtinho**	**41.51**	**166**	*eP*	**P**	**15 16 26.8**	**-0.3**
PDAR	**Pinedale Array**	**42.75**	**313**	P	**P**	**15 16 38.8**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=86,slow=7.7,SNR=9.0						
PDAR				PcP	**PcP**	**15 18 27.7**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=25,slow=3.6,SNR=2.7						
	comp=Z,0.7nm,0.5s						
PDAR	**Pinedale Array**	**42.75**	**313**	P	**P**	**15 16 38.9**	**+1.5**
AMBA	**Amambai (Brazi**	**43.37**	**163**	*eP*	**P**	**15 16 42.1**	**-0.1**
MOOW	**Moose Ponds**	**43.90**	**314**	P	**P**	**15 16 48.2**	**+1.6**
GUA01	**Guaratinga, BA**	**44.50**	**141**	*eP*	**P**	**15 16 50.5**	**-0.9**
YHB	**Horse Butte**	**44.55**	**315**	IAmb	IAmb	15 16 57.1	
	comp=Z,5.8nm,0.6s						
SJMB	**Sao Joao De Ma**	**45.38**	**144**	*eP*	**P**	**15 16 58.1**	**-0.4**
DLMT	**Dillon**	**45.70**	**316**	IAmb	IAmb	15 17 03.4	
	comp=Z,5.2nm,0.8s						
PTGB	**Pitanga**	**45.91**	**161**	*eP*	**P**	**15 17 02.1**	**-0.5**
PFO	**Pinyon Flats O**	**46.03**	**299**	LR	LR	15 39 05.8	
	comp=Z,63nm,20.4s,baz=112,slow=40						
CPUP	**Villa Florida**	**46.09**	**168**	P	**P**	**15 17 01.3**	**-2.6**
	comp=Z,4.2nm,0.9s,baz=204,slow=8.0,SNR=13						
CPUP				LR	LR	15 35 58.4	
	comp=Z,20nm,20.3s,baz=200,slow=36						
	comp=Z,4.2nm,0.9s						
CPUP	**Villa Florida**	**46.09**	**168**	P	**P**	**15 17 01.4**	**-2.4**
TPNV	**Topopah Spring**	**46.28**	**303**	IAmb	IAmb	15 17 10.2	
	comp=Z,5.8nm,0.8s						
RIB01	**Linhares ES**	**46.31**	**144**	*eP*	**P**	**15 17 04.7**	**-1.1**
GWY	**Greenwater Val**	**46.51**	**302**	IAmb	IAmb	15 17 10.8	
	comp=Z,5.7nm,0.9s						
WCT	**Wildcat Mounta**	**46.56**	**303**	IAmb	IAmb	15 17 11.8	
	comp=Z,7.9nm,0.9s						
NV11	**Mina Array Sit**	**48.01**	**305**	IAmb	IAmb	15 17 41.6	
	comp=Z,7.9nm,0.9s						
NVAR	**Mina Array Bea**	**48.12**	**305**	P	**P**	**15 17 22.1**	**+2.1**
	comp=Z,4.4nm,0.9s,baz=104,slow=6.5,SNR=18						
NVAR				LR	LR	15 39 01.8	
	comp=Z,87nm,20.9s,baz=94,slow=38						
	comp=Z,4.4nm,0.9s						
NVAR	**Mina Array Bea**	**48.12**	**305**	P	**P**	**15 17 18.8**	**-1.3**
CO06	**Fray Jorge**	**49.58**	**185**	P	**P**	**15 17 28.7**	**-2.2**
NEW	**Newport**	**49.58**	**318**	LR	LR	15 38 50.9	
	comp=Z,118nm,21.2s,baz=114,slow=36						
NEW	**Newport**	**49.58**	**318**	P	**P**	**15 17 31.2**	**+0.3**
NEW				IAmb	IAmb	15 17 32.6	
	comp=Z,9.5nm,0.8s						
PFVI	**Vila Bisbo**	**53.80**	**58**	*eP*	**P**	**15 18 05.0**	**+2.5**
YKA	**Yellowknife Ar**	**54.24**	**335**	P	**P**	**15 18 05.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=144,slow=11,SNR=7.1						
YKA				LR	LR	15 41 14.2	
	comp=Z,165nm,20.2s,baz=284,slow=36						
	comp=Z,1.2nm,0.7s						
MOE	**Montemor**	**54.25**	**56**	*eP*	**P**	**15 18 07.3**	**+1.5**
MESJ	**Messina**	**54.32**	**57**	*eP*	**P**	**15 18 08.7**	**+2.5**
PSARD	**Sardoal**	**54.47**	**55**	*eP*	**P**	**15 18 08.3**	**+0.9**
PARRA	**Arraiolos**	**54.51**	**56**	*eP*	P	15 18 08.9	+6.9
EVO	**Evora**	**54.52**	**56**	*eP*	**P**	**15 18 09.3**	**+1.6**
PBDV	**Barranco-do-Ve**	**54.52**	**57**	*eP*	P	15 18 13.4	+5.6
PBDV				*i* IAmb	IAmb	15 18 14.6	
	comp=Z,40nm,1.4s						
PGAV	**Gavieira, Arco**	**54.59**	**52**	*i* IAMs_20	IAMs_20	15 36 28.6	
	comp=Z,173nm,20.0s						
PBEJ	**Beja**	**54.61**	**56**	*eP*	**P**	**15 18 10.4**	**+2.0**
PVAQ	**Vaqueiros**	**54.70**	**57**	*eP*	P	15 18 15.1	+6.1
PVAQ				*i* IAMs_20	IAMs_20	15 34 20.9	
	comp=Z,166nm,22.0s						
PESTR	**Estremoz**	**54.87**	**55**	*eP*	P	15 18 17.0	+6.7
PESTR				*i* IAmb	IAmb	15 18 21.8	
	comp=Z,20nm,1.7s						
MTE	**Manteigas**	**55.00**	**54**	*i* IAMs_20	IAMs_20	15 34 11.3	
	comp=Z,118nm,22.0s						
PCBR	**Castelo Branco**	**55.01**	**54**	*eP*	**P**	**15 18 15.1**	**+3.8**
PMRV	**Marv??o**	**55.05**	**55**	*eP*	**P**	**15 18 13.2**	**+1.5**
PMRV				*i* IAMs_20	IAMs_20	15 34 04.8	
	comp=Z,251nm,22.0s						
MVO	**Moncorvo**	**55.45**	**53**	*eP*	P	15 18 19.6	+5.0
MVO				*i* IAmb	IAmb	15 18 21.2	
	comp=Z,32nm,1.4s						
BBB	**Bella Bella**	**57.40**	**320**	LR	LR	15 42 41.0	
	comp=Z,62nm,21.8s,baz=96,slow=36						
ESDC	**Sonseca Array**	**57.71**	**55**	P	**P**	**15 18 32.2**	**+1.6**
	comp=Z,13nm,0.8s,baz=272,slow=7.2,SNR=39						
	comp=Z,13nm,0.8s						
ESBB	**Sonseca Array**	**57.71**	**55**	P	**P**	**15 18 30.6**	**-0.1**
EKA	**Eskdalemuir Ar**	**59.87**	**36**	P	**P**	**15 18 45.7**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=285,slow=5.8,SNR=7.8						
	comp=Z,2.0nm,0.6s						
DBIC	**Dimbokro**	**61.78**	**93**	P	**P**	**15 18 58.4**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=329,slow=8.6,SNR=3.8						
	comp=Z,2.6nm,0.7s						
DBIC	**Dimbokro**	**61.78**	**93**	P	**P**	**15 18 56.8**	**-2.2**
DBIC				IAmb	IAmb	15 19 06.3	
	comp=Z,6.1nm,1.0s						
E29M	**Blow River**	**65.36**	**337**	P	**P**	**15 19 21.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**66.15**	**84**	P	**P**	**15 19 27.8**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=304,slow=6.8,SNR=1.2						
	comp=Z,1.5nm,0.3s						
SCRK	**Sand Creek**	**67.27**	**332**	P	**P**	**15 19 33.0**	**-1.2**
SCRK				IAmb	IAmb	15 19 43.4	
	comp=Z,10nm,1.1s						
DAVA	**Damuels**	**67.62**	**46**	*eP*	**P**	**15 19 37.8**	**+1.0**
	comp=Z,10nm,1.1s						
NB2	**NORSAR Subarra**	**67.98**	**31**	P	**P**	**15 19 40.0**	**+1.4**
	comp=Z,7.3nm,1.0s,baz=269,slow=6.5						
NOA	**NORSAR Array B**	**67.98**	**31**	P	**P**	**15 19 40.2**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=268,slow=6.3,SNR=3.9						
	comp=Z,1.6nm,0.7s						
PRP	**Porcupine Dome**	**68.01**	**334**	P	**P**	**15 19 40.2**	**+1.5**
PRP				IAmb	IAmb	15 19 42.2	
	comp=Z,10nm,1.2s						
FETA	**Feichten**	**68.22**	**46**	*eP*	**P**	**15 19 42.1**	**+1.6**
	comp=Z,5.5nm,0.7s						
SQTA	**Sankt Quirin**	**68.53**	**46**	*eP*	**P**	**15 19 43.2**	**+0.8**
	comp=Z,7.2nm,1.2s						
IL31		**68.56**	**333**	P	**P**	**15 19 43.5**	**+1.5**
IL31				IAmb	IAmb	15 20 01.7	
	comp=Z,8.8nm,1.3s						
ILAR	**Eielson Array**	**68.56**	**333**	P	**P**	**15 19 42.7**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=84,slow=4.1,SNR=15						
ILAR				LR	LR	15 50 32.9	
	comp=Z,221nm,19.9s,baz=76,slow=37						
	comp=Z,0.4nm,0.5s						
F24K	**Squaw Lake**	**69.02**	**336**	P	**P**	**15 19 45.3**	**+0.4**
F24K				IAmb	IAmb	15 20 05.3	
	comp=Z,10.0nm,1.5s						
ABTA	**Abfaltersbach**	**69.47**	**46**	*eP*	**P**	**15 19 50.0**	**+1.8**
	comp=Z,5.6nm,0.9s						
LESA	**Schwarzleotal**	**69.51**	**46**	*i* P	**P**	**15 19 49.2**	**+0.8**
	comp=Z,3.1nm,0.9s						

OBKA	**Obir**	**70.89**	**46**	*eP*	**P**	**15 19 56.9**	**0.0**
	comp=Z,5.4nm,1.0s						
ARCES	**ARCESS Array B**	**73.31**	**22**	P	**P**	**15 20 12.0**	**+1.1**
	comp=Z,3.8nm,0.8s,baz=331,slow=2.7,SNR=7.6						
	comp=Z,3.8nm,0.8s						
ARCES	**ARCESS Array B**	**73.31**	**22**	P	**P**	**15 20 11.7**	**+0.8**
FINES	**FINESS Array B**	**75.07**	**30**	P	**P**	**15 20 21.8**	**+0.6**
	comp=Z,5.0nm,1.0s,baz=270,slow=1.7,SNR=8.0						
	comp=Z,5.0nm,1.0s						
MA2	**Magadan**	**95.77**	**342**	LR	LR	16 10 52.4	
	comp=Z,76nm,18.4s,baz=74,slow=39						
SNAA	**Sanae**	**100.25**	**163**	P	**Pdif**	**15 22 25.4**	**0.0**
	comp=Z,0.4nm,0.7s,baz=290,slow=5.1,SNR=7.8						
CMAR	**Chiang Mai Arr**	**140.37**	**21**	PKP	**PKPdf**	**15 28 09.4**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=358,slow=2.5,SNR=4.4						
TOO	**Toolangi**	**145.99**	**230**	PKPdf	**PKPbc**	**15 28 19.7**	**0.0**
STKA	**Stephens Creek**	**151.07**	**238**	PKPbc	**PKiKP**	**15 28 33.6**	**-0.1**
	comp=Z,5.3nm,0.9s,baz=60,slow=2.3,SNR=7.1						
INKA	**Innaminka**	**152.92**	**246**	PKPbc	**PKiKP**	**15 28 38.4**	**+0.8**
WRA	**Warramunga Arr**	**159.62**	**264**	PKP	**PKPdf**	**15 28 39.3**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=70,slow=1.0,SNR=5.9						
ASAR	**Alice Springs**	**159.76**	**253**	PKP	**PKPdf**	**15 28 39.1**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=124,slow=2.4,SNR=5.8						
ASAR				PKPab	**PKPab**	**15 29 17.9**	**-0.3**
	comp=Z,2.7nm,1.0s,baz=98,slow=4.1,SNR=9.9						

BEO ***29*** *15:14:42.7±0.7, 41°.48N×19°.56E, h2km±3km, ML2.3/4*
TIR ***29*** *15:14:42.6, 41°.52N×19°.49E, h15km±2km, Ml2.6/3*
PDG ***29*** *15:14:44.6±0.4, 41°.53N×19°.42E, h11km±1km, ML2.4/11, Error ellipse: s-maj=1.6km s-min=2.0km az=0.0*
ISC 29 15:14:41.9±1.2, 41°.51N±0°.03×19°.51E±0°.03, h2km±10km, n33, σ0s85/56, 6C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.31**	**120**	⇑Pg	**Pb**	**15 14 50.8**	**+0.6**
TIR				Sg	**Sb**	**15 14 54.8**	**-1.0**
TIR				AML	AML	15 14 57.4	
	3.3nm,0.5s						
ULC	**Ulcinj**	**0.50**	**337**	⇓*i*Pg	**Pg**	**15 14 51.4**	**0.0**
ULC				*i* Sg	**Sg**	**15 14 58.6**	**+0.7**
SDA	**Shkodra**	**0.54**	**359**	⇑Pg	**Pg**	**15 14 52.9**	**+0.6**
SDA				Sg	**Sg**	**15 14 57.6**	**-1.8**
DRME	**Dracevica, Mon**	**0.72**	**341**	*e*Pg	**Pg**	**15 14 55.9**	**+0.2**
DRME	**Dracevica, Mon**	**0.72**	**341**	⇓*i*Pg	**Pg**	**15 14 55.3**	**-0.4**
DRME				*i* Sg	**Sb**	**15 15 06.7**	**-0.9**
PHP	**Peshkopia**	**0.72**	**75**	⇑Pg	**Pb**	**15 14 56.6**	**-0.6**
PHP				Sg	**Sb**	**15 15 07.4**	**-0.3**
PHP				AML	AML	15 15 09.8	
	0.9nm,0.2s						
BUM	**Brajici-Budva**	**0.92**	**330**	⇓*i*Pg	**Pg**	**15 14 59.3**	**-0.1**
BUM				*i* Sg	**Sb**	**15 15 13.0**	**-0.3**
PDG	**Podgorica**	**0.94**	**349**	Pg	**Pg**	**15 15 00.2**	**+0.2**
PDG				Sg	**Sb**	**15 15 14.5**	**+0.7**
PDG	**Podgorica**	**0.94**	**349**	*e*Pg	**Pg**	**15 15 00.1**	**+0.2**
PDG				*e*Sg	**Sn**	**15 15 14.8**	**-1.4**
PDG	**Podgorica**	**0.94**	**349**	⇑*i*Pg	**Pb**	**15 15 00.5**	**-0.5**
PDG				*i* Sg	**Sb**	**15 15 14.6**	**+0.7**
CEME	**Cevo**	**1.13**	**337**	⇓*i*Pg	**Pb**	**15 15 04.1**	**-0.1**
CEME				*i* Sg	**Sn**	**15 15 20.3**	**-0.7**
PVY	**Plav**	**1.14**	**17**	⇓*i*Pg	**Pn**	**15 15 04.7**	**-0.3**
PVY				*i* Sg	**Sn**	**15 15 22.5**	**+1.2**
HCY	**Herceg Novi**	**1.21**	**322**	⇓*i*Pg	**Pg**	**15 15 05.0**	**0.0**
HCY				*i*

KUR	**Kuril'sk**	**1.71**	**238**	*e*P		**Pn**	**15 44 10.8**	**+1.9**
KUR				AMB		AMB	15 44 11.1	
	comp=E,600nm,0.4s							
KUR				*e*S		**Sn**	**15 44 39.7**	**+6.4**
KUR				A		A	15 44 40.6	
	comp=E,240nm,0.5s							
KUR				A		A	15 44 40.6	
	comp=E,160nm,0.5s							
SHO	**Shikotan**	**3.17**	**225**	*e*P		Pn	15 44 34.1	+7.5
SHO				AMB		AMB	15 44 34.7	
	comp=E,80nm,0.4s							
SHO				*e*S		**Sn**	**15 45 10.3**	**+5.5**
SHO				A		A	15 45 12.4	
	comp=E,140nm,0.3s							
SHO				A		A	15 45 12.4	
	comp=E,250nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.58**	**235**	*e*PN		**Pn**	**15 44 32.9**	**+1.1**
YUK				*i* S		**Sn**	**15 45 15.2**	**+1.1**
YUK				pmax		pmax		
	comp=Z,233nm,0.4s							
YUK				pmax		pmax		
	comp=N,63nm,0.3s							
YUK				pmax		pmax		
	comp=E,136nm,0.4s							
YUK				smax		smax		
	comp=N,311nm,0.1s							
YUK				smax		smax		
	comp=E,227nm,0.1s							
YUK	**Yuzh-Kuril'sk**	**3.58**	**235**	*e*P		**Pn**	**15 44 32.6**	**+0.8**
YUK				AMB		AMB	15 44 33.6	
	comp=E,250nm,0.4s							
YUK				*i* S		**Sn**	**15 45 15.8**	**+1.6**
YUK				A		A	15 45 16.9	
	comp=E,190nm,0.4s							
YUK				A		A	15 45 16.9	
	comp=E,200nm,0.4s							
RUSJ	**Misakicho**	**3.90**	**240**	PN		**Pn**	**15 44 40.6**	**+4.7**
RUSJ				*i* S		**Sn**	**15 45 28.7**	**+7.1**
JRA	**Rausu**	**4.06**	**239**	*e*P		**Pn**	**15 44 39.4**	**+1.3**
NEM2	**Nemuro 2**	**4.08**	**228**	P		**Pn**	**15 44 37.5**	**-0.9**
NEM2				*e*S		**Sn**	**15 45 22.1**	**-3.8**
NMR	**Nemuro--Hokkai**	**4.09**	**229**	*e*PN		**Pn**	**15 44 37.4**	**-1.0**
NMR	**Nemuro--Hokkai**	**4.09**	**229**	*e*P		**Pn**	**15 44 37.8**	**-0.6**
JNK	**Nakash**	**4.51**	**237**	*e*P		**Pn**	**15 44 44.7**	**+0.8**
JNK				*e*S		**Sn**	**15 45 36.3**	**+0.4**
AKK	**Akkeshi**	**4.80**	**231**	*e*P		**Pn**	**15 44 47.0**	**-0.8**
JAK	**Akkeshi**	**4.89**	**232**	*e*P		**Pn**	**15 44 48.2**	**-0.8**
JAK				*e*S		**Sn**	**15 45 41.1**	**-3.9**
JAR	**Ashorobuto**	**5.24**	**239**	*e*P		**Pn**	**15 44 55.2**	**+1.6**
JAR				*e*S		**Sn**	**15 45 53.0**	**-0.2**
JOB	**Onbets**	**5.43**	**235**	*e*P		**Pn**	**15 44 56.4**	**+0.2**
JOB				*e*S		**Sn**	**15 45 54.6**	**-3.4**
JKA	**Kamikawa-asahi**	**5.57**	**251**	*e*P		**Pn**	**15 45 00.5**	**+2.5**
ASAJ	**Asahikawa**	**5.57**	**251**	P		**Pn**	**15 45 00.5**	**+2.4**
	comp=E,5.8nm,0.4s,baz=69,slow=14,SNR=9.7							
JCH	**Churui**	**5.89**	**235**	*e*P		**Pn**	**15 45 01.6**	**-0.6**
JCH				*e*S		**Sn**	**15 46 03.8**	**-5.0**
SKR	**Severo-Kuril's**	**6.12**	**40**	*i* PN		**Pn**	**15 45 06.4**	**+1.1**
SKR	**Severo-Kuril's**	**6.12**	**40**	*e*P		**Pn**	**15 45 04.8**	**-0.5**
SKR				*e*S		**Sn**	**15 46 13.7**	**-0.6**
JNBK	**Urakawa-nobuka**	**6.45**	**236**	*e*P		**Pn**	**15 45 08.1**	**-1.6**
PAU	**Pauzhetka**	**6.99**	**38**	*e*P		**Pn**	**15 45 17.2**	**+0.3**
PAU				*e*S		**Sn**	**15 46 34.7**	**-0.5**
JTH	**Tanohata**	**8.57**	**226**	*e*S		Sn	15 47 04.1	-9.1
PEA0B	**Petropavlovsk-**	**8.59**	**33**	*i* PN		**Pn**	**15 45 38.0**	**-0.2**
PETK	**Petropavlovsk-**	**8.59**	**33**	P		**Pn**	**15 45 39.5**	**+1.2**
	comp=E,5.3nm,0.7s,baz=173,slow=10,SNR=14							
PETK				LR		LR	15 48 42.6	
	comp=E,59nm,18.5s,baz=54,slow=36							
PET	**Petropavlovsk**	**8.91**	**36**	*e*P		**Pn**	**15 45 43.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**12.81**	**268**	P		**Pn**	**15 46 33.4**	**-0.3**
	comp=E,1.2nm,0.3s,baz=73,slow=13,SNR=7.0							
MAJO	**Matsushiro**	**13.01**	**227**	*i* PN		**Pn**	**15 46 38.0**	**+1.6**
MJAR	**Matsushiro Arr**	**13.01**	**227**	P		**P**	**15 46 41.9**	**+0.8**
	comp=E,1.9nm,0.3s,baz=45,slow=9.8,SNR=9.0							
SEY	**Seymchan**	**16.88**	**4**	P		**P**	**15 47 22.4**	**-1.2**
	comp=E,1.9nm,0.7s,baz=103,slow=19,SNR=1.7							
KSRS	**Korea Array**	**18.52**	**250**	P		**P**	**15 47 43.2**	**+1.3**
	comp=E,2.5nm,0.7s,baz=56,slow=11,SNR=10.0							
KSRS	**Korea Array**	**18.52**	**250**	*e*P		**Pn**	**15 47 43.4**	**-0.5**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KSRS	**Korea Array**	**18.52**	**250**	*e*P		**Pn**	**15 47 43.4**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**29.82**	**146**	T		T	16 20 46.6	
	baz=336,slow=75,SNR=23							
H11N1	**WAKE ISLAND Hy**	**29.83**	**146**	T		T	16 20 45.9	
	baz=336,slow=75,SNR=25							
H11N3	**WAKE ISLAND Hy**	**29.84**	**146**	T		T	16 20 46.2	
	baz=336,slow=75,SNR=26							
H11S1	**WAKE ISLAND Hy**	**30.86**	**148**	T		T	16 22 04.3	
	baz=336,slow=76,SNR=33							
H11S3	**WAKE ISLAND Hy**	**30.87**	**148**	T		T	16 22 07.1	
	baz=336,slow=76,SNR=18							
H11S2	**WAKE ISLAND Hy**	**30.88**	**148**	T		T	16 22 06.9	
	baz=336,slow=76,SNR=24							
ILAR	**Eielson Array**	**38.38**	**38**	P		**P**	**15 50 43.5**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=262,slow=7.5,SNR=15							
	comp=Z,1.2nm,1.0s							
MK31	**Makanchi Array**	**45.25**	**297**	*i* P		**P**	**15 51 36.3**	**-3.0**
MKAR	**Makanchi Array**	**45.25**	**297**	P		**P**	**15 51 36.4**	**-2.9**
	comp=Z,0.3nm,0.6s,baz=62,slow=5.0,SNR=5.5							
MKAR				PcP		**PcP**	**15 53 15.9**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=68,slow=3.2,SNR=4.1							
	comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**	**45.25**	**297**	*e*P		**P**	**15 51 37.1**	**-2.2**
CMAR	**Chiang Mai Arr**	**50.09**	**254**	P		**P**	**15 52 17.4**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=38,slow=7.1,SNR=10							
	comp=Z,1.4nm,0.5s							
YKA	**Yellowknife Ar**	**52.70**	**36**	P		**P**	**15 52 35.5**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=277,slow=7.8,SNR=7.2							
	comp=Z,0.5nm,0.5s							
PSI	**Prapat**	**61.85**	**242**	LR		LR	16 20 33.6	
	comp=Z,212nm,21.1s,baz=168,slow=36							
FINES	**FINESS Array B**	**63.62**	**334**	P		**P**	**15 53 48.2**	**-3.2**
	comp=Z,5.7nm,1.0s,baz=11,slow=8.5,SNR=2.5							
	comp=Z,5.7nm,1.0s							
NVAR	**Mina Array Bea**	**64.65**	**60**	P		**P**	**15 53 59.0**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=310,slow=6.2,SNR=2.2							
	comp=Z,0.3nm,0.4s							
PDAR	**Pinedale Array**	**66.86**	**52**	P		**P**	**15 54 13.6**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=266,slow=0.8,SNR=9.6							
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**67.28**	**196**	P		**P**	**15 54 15.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=6.9,slow=6.5,SNR=2.6							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**70.99**	**196**	P		**P**	**15 54 39.4**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=11,slow=6.3,SNR=8.5							
	comp=Z,0.4nm,0.4s							
TXAR	**Lajitas Array**	**79.69**	**58**	P		**P**	**15 55 29.2**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=294,slow=4.7,SNR=6.7							
	comp=Z,0.5nm,0.4s							

*IDC **29** 15:45:35.4±3.0, 18°.94S×169°.41E, h246km±28km, mb3.7/7, mbtmp4.3/7, Error ellipse: s-maj=27.3km s-min=18.8km az=10.0*

*NOU **29** 15:45:35.8, 19°.10S×169°.42E, h234km, mb4.0/41, Vanuatu Islands*

ISC 29 15:45:35.9±0.7, 19°.06S±0°.06×169°.42E±0°.09, h246km, n44, σ1§17/44, mb3.8/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
INH	**Isangel**	**0.51**	**196**	P	**Pn**	**15 46 06.6**	**-1.8**
INH	**Isangel**	**0.51**	**196**	S	**S**	**15 46 32.2**	**-1.8**
RTV	**Rentapao**	**1.57**	**323**	P	**Pn**	**15 46 13.9**	**-0.6**
DVP	**Devils Point**	**1.77**	**318**	P	**Pn**	**15 46 15.1**	**-1.0**
DVP	**Devils Point**	**1.77**	**318**	S	**S**	**15 46 46.8**	**-0.8**
MARNC	**Mare, Loyalty**	**2.74**	**208**	P	**Pn**	**15 46 23.4**	**-2.0**
YATNC	**Mamie plateau,**	**3.81**	**218**	P	**Pn**	**15 46 35.1**	**-2.3**
YATNC	**Mamie plateau,**	**3.81**	**218**	S	**S**	**15 47 24.4**	**-1.7**
PINNC	**Pines Island,**	**3.99**	**207**	P	**Pn**	**15 46 38.8**	**-0.6**
DZM	**Mont Dzumac**	**4.09**	**222**	P	**Pn**	**15 46 40.2**	**-0.5**
	5.3nm,0.4s,baz=108,slow=14,SNR=15						
DZM	**Mont Dzumac**	**4.09**	**222**	P	**Pn**	**15 46 40.1**	**-0.7**
OUENC	**Ouen Island, N**	**4.12**	**215**	P	**Pn**	**15 46 40.4**	**-0.6**
SANVU	**Saraoutou**	**4.17**	**329**	P	**Pn**	**15 46 41.1**	**-0.5**
ONTNC	**Ouen Toro**	**4.26**	**220**	P	**Pn**	**15 46 42.3**	**-0.3**
MSVF	**Nonsavu**	**8.30**	**82**	P	**Pn**	**15 47 34.2**	**+1.1**
EIDS	**Eidsvold**	**18.10**	**246**	P	**P**	**15 49 31.5**	**+1.6**
ARMA	**Armidale**	**19.70**	**232**	P	**P**	**15 49 49.0**	**+1.9**
URZ	**Urewera**	**20.27**	**162**	P	**P**	**15 49 54.3**	**+1.2**
	2.5nm,0.3s,baz=108,slow=1.9,SNR=6.4						
	2.5nm,0.3s						
URZ	**Urewera**	**20.27**	**162**	P	**P**	**15 49 54.2**	**+1.2**
BKZ	**Black Stump Fm**	**20.95**	**164**	P	**P**	**15 50 00.5**	**+0.2**
CTA	**Charters Tower**	**21.85**	**263**	P	**P**	**15 50 10.0**	**+0.9**
CTAO	**Charters Tower**	**21.85**	**263**	P	**P**	**15 50 10.0**	**+0.9**
BFZ	**Birch Farm**	**22.33**	**166**	P	**P**	**15 50 12.1**	**-1.1**
SNZO	**South Karori**	**22.64**	**170**	P	**P**	**15 50 15.8**	**-0.1**
KHZ	**Kahutara**	**23.55**	**172**	P	**P**	**15 50 24.4**	**+0.2**
MTSU	**Mount Surprise**	**23.81**	**268**	P	**P**	**15 50 28.2**	**+1.3**
CNB	**Canberra Magne**	**24.02**	**224**	P	**P**	**15 50 29.7**	**+1.0**
CMSA	**Cobar Meteorol**	**24.73**	**235**	P	**P**	**15 50 35.5**	**+0.4**
STKA	**Stephens Creek**	**28.09**	**238**	P	**P**	**15 51 05.8**	**+0.7**
	5.7nm,0.6s,baz=62,slow=7.3,SNR=13						
	5.7nm,0.6s						
STKA	**Stephens Creek**	**28.09**	**238**	P	**P**	**15 51 05.8**	**+0.7**
MOO	**Moorlands**	**29.97**	**214**	P	**P**	**15 51 22.0**	**+0.5**
HTT	**Hallett**	**30.74**	**236**	P	**P**	**15 51 29.0**	**+0.5**
BBOO	**Buckleboo**	**32.83**	**239**	P	**P**	**15 51 46.9**	**+0.2**
WRAB	**Tennant Creek**	**33.04**	**263**	P	**P**	**15 51 47.7**	**-0.9**
WRA	**Warramunga Arr**	**33.05**	**263**	P	**P**	**15 51 47.7**	**-1.0**
	2.1nm,0.5s,baz=98,slow=8.2,SNR=52						
	2.1nm,0.5s						
ASAR	**Alice Springs**	**33.34**	**256**	P	**P**	**15 51 51.1**	**-0.1**
	16nm,0.5s,baz=81,slow=8.9,SNR=435						
	16nm,0.5s						
FITZ	**Fitzroy Crossi**	**41.43**	**264**	P	**P**	**15 52 59.5**	**+0.5**
MBWA	**Marble Bar**	**46.56**	**259**	P	**P**	**15 53 39.9**	**+0.3**
MEEK	**Meekatharra**	**47.18**	**251**	P	**P**	**15 53 44.3**	**0.0**
QSPA	**South Pole Qui**	**71.00**	**180**	P	**P**	**15 56 29.5**	**+2.7**
	1.2nm,0.7s,baz=272,slow=0.7,SNR=11						
NVAR	**Mina Array Bea**	**88.55**	**48**	P	**P**	**15 58 01.6**	**+0.4**
	0.8nm,0.7s,baz=250,slow=5.8,SNR=4.7						
	0.8nm,0.7s						
SNAA	**Sanae**	**89.35**	**182**	P	**P**	**15 58 02.3**	**-1.9**
	0.6nm,0.5s,baz=190,slow=12,SNR=8.4						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**90.01**	**17**	P	**P**	**15 58 05.3**	**-1.7**
	0.5nm,0.8s,baz=239,slow=4.8,SNR=9.5						
	0.5nm,0.8s						
GERES	**GERESS Array B**	**144.41**	**332**	PKP	**PKPab**	**16 04 41.2**	**-0.5**
	0.3nm,0.6s,baz=358,slow=3.3,SNR=3.4						

*IDC **29** 16:09:44.2±0.8, 0°.42S×127°.17E, h0km, mb4.0/12, mbtmp4.0/13, ML3.8/1, MS3.5/2, Error ellipse: s-maj=46.9km s-min=15.0km az=75.0*

*DJA **29** 16:09:47.3±0.3, 1°.5±3°×12°.7E±°, h10km, M3.9/13, mB5.2/1, mb4.2/4, MLv3.8/13, Mw(mB)4.6/1*

ISC 29 16:09:49.3±0.7, 0°.50S±0°.06×127°.19E±0°.09, h35km, n23, σ1§00/21, mb4.0/11, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.27**	**8**	P	**Pn**	**16 10 10.0**	**-0.6**
SANI	**Sanana**	**1.96**	**218**	P	**Pn**	**16 10 18.6**	**-1.4**
NLAI	**Namlea**	**2.73**	**182**	P	**Pn**	**16 10 30.8**	**+0.2**
GTOI	**Gorontalo**	**4.33**	**285**	P	**Pn**	**16 10 54.7**	**+2.0**
LUWI	**Luwuk**	**4.45**	**263**	P	**Pn**	**16 10 53.2**	**-1.1**
ASPI	**Ampana**	**5.56**	**266**	P	**Pn**	**16 11 09.1**	**-0.4**
	0.2nm31nm,0.7s						
TTSI	**Tana Toraja**	**7.79**	**251**	P	**Pn**	**16 11 38.8**	**-1.4**
	1µm15nm,0.7s						
SPSI	**Sidrap Palu**	**8.18**	**245**	P	**Pn**	**16 11 46.5**	**+1.0**
FITZ	**Fitzroy Crossi**	**17.56**	**185**	P	**P**	**16 13 52.3**	**+0.1**
	0.3nm,0.3s,baz=13,slow=8.5,SNR=8.5						
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**20.55**	**161**	P	**P**	**16 14 24.9**	**-0.1**
	3.8nm,0.9s,baz=342,slow=11,SNR=14						
	3.8nm,0.9s						
PMG	**Port Moresby**	**21.75**	**115**	LR	LR	16 26 47.8	
	comp=Z,56nm,18.8s,baz=116,slow=47						
ASAR	**Alice Springs**	**23.93**	**165**	P	**P**	**16 15 00.8**	**+0.5**
	3.0nm,0.6s,baz=344,slow=10,SNR=55						
	3.0nm,0.6s						
STKA	**Stephens Creek**	**34.05**	**158**	P	**P**	**16 16 31.6**	**+1.3**
	2.6nm,0.8s,baz=326,slow=11,SNR=4.9						
	2.6nm,0.8s						
KSRS	**Korea Array**	**37.77**	**1**	P	**P**	**16 17 01.5**	**-0.5**
	1.4nm,0.8s,baz=176,slow=9.4,SNR=4.6						
	1.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**44.71**	**5**	P	**P**	**16 17 58.1**	**-0.9**
	1.0nm,0.6s,baz=204,slow=7.0,SNR=2.0						
	1.0nm,0.6s						
SONM	**Songino Array**	**51.43**	**342**	P	**P**	**16 18 52.3**	**+1.3**
	2.0nm,0.9s,baz=156,slow=8.0,SNR=5.3						
	2.0nm,0.9s						
PETK	**Petropavlovsk-**	**59.17**	**21**	P	**P**	**16 19 46.9**	**+0.3**
	2.9nm,0.8s,baz=234,slow=8.6,SNR=1.3						
	2.9nm,0.8s						
MKAR	**Makanchi Array**	**61.29**	**326**	P	**P**	**16 20 01.1**	**-0.2**
	0.6nm,0.4s,baz=116,slow=7.9,SNR=11						
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**64.55**	**334**	P	**P**	**16 20 22.0**	**-0.7**
	0.3nm,0.3s,baz=141,slow=4.7,SNR=2.7						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**65.54**	**328**	P	**P**	**16 20 28.7**	**-0.5**
	1.4nm,0.2s,baz=125,slow=6.0,SNR=6.7						
	1.4nm,0.2s						
BVAR	**Borovoye Array**	**71.11**	**328**	P	**P**	**16 21 03.2**	**-0.8**
	1.2nm,0.9s,baz=130,slow=4.6,SNR=4.2						
	1.2nm,0.9s						
ILAR	**Eielson Array**	**88.70**	**25**	P	**P**	**16 22 37.8**	**-1.0**
	0.2nm,0.7s,baz=184,slow=19,SNR=4.1						
	0.2nm,0.7s						
SPITS	**Spitsbergen Ar**	**94.69**	**349**	LR	LR	17 10 15.0	
	comp=Z,34nm,18.4s,baz=128,slow=38						

GCG 29 16:20:32.4±0.9, 14°.25N×91°.70W, h47km±15km, MD3.7, ML3.9, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG2	**El Palmar, Qui**	**0.37**	**60**	*i* P	Pn	16 20 43.6	+1.5
STG8	**El Palmar, Qui**	**0.40**	**60**	*i* P	Pn	16 20 43.9	+1.4
SOKI	**Kika Raxquin**	**0.64**	**27**	*e*S	Sn	16 20 57.8	+2.7
SMCA	**Catarina**	**0.70**	**329**	*e*P	Pn	16 20 45.8	-0.3
ESSG	**Sabana Grande**	**0.86**	**81**	*e*P	Pn	16 20 47.8	-0.4
FG16	**Alotenango, Sa**	**1.16**	**89**	*i* P	Pn	16 20 48.8	-3.6
PCG5	**San Vicente Pa**	**1.29**	**91**	*i* S	Sn	16 21 05.6	-4.8
APG	**El Apazote**	**1.41**	**58**	*e*P	Pn	16 20 57.2	+1.3

*THE **29** 16:27:12.7, 38°.N±1°×2°.1E±°, h16km±1km, M3.3/21, MLh3.3/21*

*ATH **29** 16:27:12.4, 37°.77N×20°.80E, h17km±1km, ML3.3/17, Manual Solution by F.Xalaris First location: 2019/11/29 16:28:05, This location: 2019/11/29 16:44:21 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*IDC **29** 16:27:18.4±3.5, 37°.26N×20°.24E, h124km±31km, mb3.3/8, mbtmp3.6/10, Error ellipse: s-maj=37.5km s-min=23.5km az=35.0*

ISC 29 16:27:11.6±0.8, 37°.72N±0°.03×20°.75E±0°.03, h18km±5km, n67, σ1§09/87, mb3.7/8, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.07**	**96**	P	**Pg**	**16 27 14.5**	**-0.4**
LTHK				S	**Sg**	**16 27 16.0**	**-1.1**
ORTH	**Orthonies,Zaky**	**0.14**	**343**	P	**Pb**	**16 27 16.5**	**+0.8**
ORTH				S	**Sg**	**16 27 18.8**	**+0.3**
ORTH	**Orthonies,Zaky**	**0.14**	**343**	P	**Pg**	**16 27 16.2**	**+0.6**
ORTH				S	**Sb**	**16 27 18.9**	**+0.5**
CLEM	**Kyllini,Ilia,G**	**0.35**	**60**	P	**Pg**	**16 27 19.0**	**0.0**
RTZL	**Ratzakli, Kefa**	**0.36**	**3**	P	**Pg**	**16 27 19.4**	**+0.3**
RTZL				S	**Sb**	**16 27 24.8**	**0.0**
VLS	**Valsamata**	**0.48**	**345**	P	**Pg**	**16 27 21.3**	**+0.1**
VLS				S	**Sb**	**16 27 28.4**	**+0.2**
VLS	**Valsamata**	**0.48**	**345**	P	**Pg**	**16 27 21.0**	**-0.2**
VLS				S	**Sg**	**16 27 27.7**	**0.0**
ARG2	**Argostoli**	**0.51**	**336**	P	**Pg**	**16 27 22.2**	**+0.5**
ARG2				S	**Sb**	**16 27 29.7**	**+0.8**
ARG2	**Argostoli**	**0.51**	**336**	P	**Pg**	**16 27 22.2**	**+0.5**
DMLN	**Damoulianata-K**	**0.60**	**330**	P	**Pg**	**16 27 23.9**	**+0.5**
DMLN				S	**Sb**	**16 27 33.1**	**+1.4**
DMLN	**Damoulianata-K**	**0.60**	**330**	P	**Pb**	**16 27 24.3**	**+0.7**
RLS	**Riolos of Patr**	**0.66**	**59**	P	**Pg**	**16 27 24.6**	**0.0**
RLS				S	**Sb**	**16 27 34.7**	**+1.2**
RLS	**Riolos of Patr**	**0.66**	**59**	P	**Pg**	**16 27 24.3**	**-0.3**
RLS				S	**Sg**	**16 27 32.2**	**-1.2**
AXS	**Araxos**	**0.69**	**46**	P	**Pg**	**16 27 25.0**	**-0.1**
AXS				S	**Sb**	**16 27 34.8**	**+0.5**
AXS	**Araxos**	**0.69**	**46**	P	**Pg**	**16 27 24.7**	**-0.4**
VSK1	**VASILIKIADES**	**0.71**	**348**	P	**Pg**	**16 27 25.7**	**+0.3**
VSK1				S	**Sb**	**16 27 35.2**	**+0.4**
ZARO	**Zacharo**	**0.75**	**108**	P	**Pn**	**16 27 28.0**	**+0.7**
ZARO				S	**Sb**	**16 27 36.6**	**+0.6**
FSK	**Fiskardo**	**0.76**	**349**	P	**Pg**	**16 27 26.3**	**-0.2**
FSK				S	**Sb**	**16 27 37.4**	**+1.2**
FSK	**Fiskardo**	**0.76**	**349**	P	**Pg**	**16 27 26.2**	**-0.2**
FSK				S	**Sg**	**16 27 36.4**	**0.0**
AMT	**Artemida-Makis**	**0.78**	**103**	P	**Pb**	**16 27 27.2**	**+0.5**
AMT				S	**Sb**	**16 27 37.6**	**+0.5**
DRO	**Drossia**	**0.80**	**73**	P	**Pb**	**16 27 27.2**	**+0.2**
DRO				S	**Sg**	**16 27 38.8**	**+1.1**
DRO	**Drossia**	**0.80**	**73**	P	**Pb**	**16 27 26.7**	**-0.2**
MSL1	**Messolongi**	**0.84**	**39**	P	**Pb**	**16 27 28.0**	**+0.3**
MSL1				S	**Sb**	**16 27 38.2**	**-0.6**
AST1	**Astakos**	**0.87**	**18**	P	**Pb**	**16 27 28.0**	**-0.1**
AST1				S	**Sn**	**16 27 40.6**	**-0.5**
EVGI	**Lefkada island**	**0.91**	**355**	P	**Pb**	**16 27 28.4**	**-0.4**
EVGI				S	**Sn**	**16 27 42.1**	**0.0**
EVGI	**Lefkada island**	**0.91**	**355**	P	**Pb**	**16 27 28.5**	**-0.3**
DRAG	**Dragano-Lefkad**	**0.97**	**352**	P	**Pb**	**16 27 29.8**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.97**	**352**	P	**Pb**	**16 27 29.5**	**-0.5**
NYDR	**Nydri-Lefkada**	**1.00**	**358**	P	**Pb**	**16 27 29.9**	**-0.4**
NYDR	**Nydri-Lefkada**	**1.00**	**358**	P	**Pb**	**16 27 29.9**	**-0.4**
LKD2	**Lefkada island**	**1.07**	**356**	P	**Pb**	**16 27 31.6**	**-0.1**
LKD2	**Lefkada island**	**1.07**	**356**	P	**Pb**	**16 27 31.4**	**-0.2**
ITM	**Ithomi**	**1.08**	**119**	P	**Pb**	**16 27 32.7**	**+1.0**
ITM	**Ithomi**	**1.08**	**119**	P	**Pb**	**16 27 32.8**	**+1.0**
PVO	**Paravola**	**1.09**	**34**	P	**Pb**	**16 27 32.2**	**+0.4**
PVO	**Paravola**	**1.09**	**34**	P	**Pb**	**16 27 32.1**	**+0.2**
TSLK	**Tsoukalades, L**	**1.11**	**356**	P	**Pb**	**16 27 32.9**	**+0.6**
PYL	**PYLOS**	**1.14**	**136**	P	**Pn**	**16 27 33.3**	**+0.6**
PYL	**PYLOS**	**1.14**	**136**	P	**Pn**	**16 27 33.4**	**+0.8**
EFP	**Efpalio**	**1.16**	**52**	P	**Pn**	**16 27 33.0**	**+0.1**
EFP	**Efpalio**	**1.16**	**52**	P	**Pn**	**16 27 32.9**	**0.0**
KLV	**Kalavryta, Ach**	**1.16**	**73**	P	**Pn**	**16 27 33.2**	**+0.3**
KLV	**Kalavryta, Ach**	**1.16**	**73**	P	**Pn**	**16 27 33.3**	**+0.3**
SERG	**Sergoula**	**1.24**	**56**	P	**Pn**	**16 27 34.2**	**+0.1**
SERG	**Sergoula**	**1.24**	**56**	P	**Pn**	**16 27 34.4**	**+0.3**
AMPL	**Ampelaki**	**1.26**	**17**	P	**Pn**	**16 27 34.5**	**+0.2**
ANX	**Ano Chora**	**1.27**	**46**	P	**Pn**	**16 27 35.0**	**+0.5**
ANX	**Ano Chora**	**1.27**	**46**	P	**Pn**	**16 27 34.9**	**+0.3**
GUR	**Goura**	**1.28**	**80**	P	**Pn**	**16 27 35.6**	**+0.9**
GUR	**Goura**	**1.28**	**80**	P	**Pn**	**16 27 35.7**	**+0.9**
KALE	**Kalithea**	**1.29**	**58**	P	**Pn**	**16 27 35.0**	**+0.3**
KALE	**Kalithea**	**1.29**	**58**	P	**Pn**	**16 27 35.0**	**+0.3**
EVR	**Evrytania**	**1.46**	**35**	P	**Pn**	**16 27 38.1**	**+0.9**
TETR	**Tetrakomo, Epi**	**1.68**	**14**	P	**Pn**	**16 27 42.3**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.69**	**40**	P	**Pn**	**16 27 41.4**	**+1.1**
LTK	**Loutraki**	**1.78**	**79**	P	**Pn**	**16 27 44.8**	**+1.0**
IDI	**Anoyia**	**4.12**	**125**	P	**Pb**	**16 28 21.4**	**-2.3**
	10nm,0.9s,baz=232,slow=15,SNR=1.5						
IDI				S	**Sn**	**16 29 05.1**	**+3.5**
	6.1nm,0.3s,baz=305,slow=13,SNR=8.2						
AKASG	**Malin Array Be**	**14.32**	**22**	P	**P**	**16 30 42.1**	**+1.8**
	0.3nm,0.4s,baz=210,slow=8.9,SNR=7.4						
HFS	**Hagfors**	**22.88**	**351**	P	**P**	**16 32 14.6**	**+0.6**
	1.9nm,0.6s,baz=172,slow=15

5.6nm,1.1s,baz=76,slow=5.6,SNR=7.4
5.6nm,1.1s

SPITS	**Spitsbergen Ar**	**89.04**	**349**	P		**P**	**16 46 09.5**	**-0.1**
	2.3nm,0.6s,baz=64,slow=6.6,SNR=1.1							
	2.3nm,0.6s							

NOU 29 16:47:14.4, 10°.81S×162°.25E, h52km, mb5.5/10,
Solomon Islands, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HURO	**Huro Makira**	**0.48**	**315**	P	Pn	16 47 27.0	+1.4
NGOA	**Tingoa Renbel**	**2.27**	**251**	P	Pn	16 47 49.5	0.0
NGOA	**Tingoa Renbel**	**2.27**	**251**	S	Sn	16 48 16.9	+0.6
SAVO	**Savo Central**	**2.91**	**304**	P	Pn	16 47 58.9	+0.6
TATA	**Tatamba Isabel**	**3.41**	**315**	P	Pn	16 48 04.5	-0.6
TATA	**Tatamba Isabel**	**3.41**	**315**	S	Sn	16 48 45.0	+0.7
SANVU	**Saraoutou**	**6.67**	**134**	P	Pn	16 48 50.7	+0.8
DZM	**Mont Dzumac**	**11.90**	**161**	P	Pn	16 50 01.3	-0.2

*KRNET **29** 16:48:54.4±0.1, 40°.66N×79°.49E, mb3.4*
*SOME **29** 16:48:54.3, 40°.70N×79°.52E, h5km*
*NNC **29** 16:48:56.0±1.2, 40°.72N×79°.43E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=8.3km s-min=6.5km az=159.0*

ISC 29 16:48:57.5±1.8, 40°.74N±0°.08×79°.32E±0°.06, h10km, n34, σ1°84/48, 22C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.51**	**311**	⇓*iP*	**Pb**	**16 49 25.2**	**-0.6**
TARG				⇓*iS*	**Sg**	**16 49 48.4**	**+2.4**
PRZ	**Przheval'sk**	**1.87**	**339**	⇑*iP*	**Pb**	**16 49 31.4**	**-0.4**
PRZ				⇑*iS*	**Sg**	**16 49 58.7**	**+1.1**
KDJ	**Kajisay**	**2.12**	**311**	⇑*iP*	**Pb**	**16 49 35.1**	**-1.0**
KDJ				⇑*iS*	**Sg**	**16 50 04.7**	**-1.0**
SATY	**Saty**	**2.41**	**344**	Pg	**Pg**	**16 49 41.6**	**-2.1**
	19nm,0.3s						
SATY				Lg	Lg	16 50 15.8	
	90nm,0.6s						
UZB	**Uzynbulak**	**2.41**	**355**	Pg	**Pb**	**16 49 40.7**	**-0.3**
	13nm,0.3s						
UZB				Lg	Lg	16 50 14.9	
	35nm,0.3s						
UZB	**Uzynbulak**	**2.41**	**355**	*eP*	**Pb**	**16 49 40.8**	**-0.3**
	13nm,0.3s						
UZB				*eS*	**Sg**	**16 50 14.9**	**-0.1**
	35nm,0.3s						
SHLS	**Shalkode**	**2.41**	**3**	Pg	**Pg**	**16 49 41.3**	**-2.5**
	16nm,0.1s						
SHLS				Lg	Lg	16 50 15.7	
	122nm,0.3s						
SHLS	**Shalkode**	**2.41**	**3**	*eP*	**Pg**	**16 49 41.3**	**-2.5**
	16nm,0.1s						
SHLS				*eS*	**Sg**	**16 50 15.7**	**+0.6**
	122nm,0.3s						
PDGK	**Podgornoye**	**2.59**	**3**	⇑Pn	**Pn**	**16 49 40.1**	**+0.6**
	15nm,0.5s						
PDGK				⇓Lg	Lg	16 50 19.3	
	87nm,0.6s						
KPKS	**Kokpek**	**2.76**	**350**	Pg	**Pb**	**16 49 47.6**	**+0.6**
	10nm,0.7s						
KPKS				Lg	Lg	16 50 26.1	
	102nm,0.5s						
JNKS	**Jany-Kuch**	**2.79**	**278**	⇑*eP*	**Pb**	**16 49 44.6**	**-3.0**
JNKS				⇑*eS*	**Sb**	**16 50 21.1**	**-0.9**
KURS	**Kuram**	**2.87**	**343**	Pg	**Pg**	**16 49 49.8**	**-2.7**
	18nm,0.5s						
KURS				Lg	Lg	16 50 29.9	
	37nm,0.6s						
TNSS	**Tian-Shan**	**2.90**	**323**	Pg	**Pb**	**16 49 50.0**	**+0.5**
	2.8nm,0.3s						
TNSS				Lg	Lg	16 50 30.1	
	15nm,0.3s						
TNSS	**Tian-Shan**	**2.90**	**323**	*eP*	**Pb**	**16 49 50.0**	**+0.5**
	2.8nm,0.3s						
TNSS				*eS*	**Sg**	**16 50 30.1**	**-0.4**
	15nm,0.3s						
MDOK	**Medeo**	**2.95**	**326**	Pg	**Pb**	**16 49 51.1**	**+0.9**
	6.8nm,0.2s						
MDOK				Lg	Lg	16 50 32.2	
	28nm,0.6s						
BOOM	**Boomskoye usch**	**3.07**	**306**	⇑*eP*	**Pn**	**16 49 48.6**	**+2.3**
BOOM				⇑*eS*	**Sb**	**16 50 27.7**	**-2.3**
MTBS	**Maitube**	**3.21**	**319**	Pg	**Pb**	**16 49 56.0**	**+1.3**
	7.0nm,0.3s						
MTBS				Lg	Lg	16 50 40.4	
	20nm,0.4s						
MTBS	**Maitube**	**3.21**	**319**	*eP*	**Pb**	**16 49 56.0**	**+1.3**
	7.0nm,0.3s						
MTBS				*eS*	**Sg**	**16 50 40.4**	**-0.2**
	20nm,0.4s						
KST	**Kastek**	**3.40**	**314**	Pg	**Pb**	**16 49 57.1**	**-0.7**
	5.6nm,0.3s						
KST				Lg	Lg	16 50 43.8	
	24nm,0.6s						
KST	**Kastek**	**3.40**	**314**	*eP*	**Pb**	**16 49 58.6**	**+0.8**
	3.9nm,0.4s						
KST				*eS*	**Sg**	**16 50 44.8**	**-1.8**
	31nm,0.4s						
BLB	**Baldybastay**	**3.41**	**350**	Pg	**Pb**	**16 49 59.0**	**+1.0**
	17nm,0.2s						
BLB				Lg	Lg	16 50 45.6	
	46nm,0.6s						
KNOS	**Konyrlen**	**3.62**	**358**	Pg	**Pb**	**16 50 01.6**	**0.0**
	23nm,0.3s						
KNOS				Lg	Lg	16 50 50.0	
	22nm,0.3s						
ARXS	**Arharly**	**3.64**	**343**	Pg	**Pb**	**16 50 03.3**	**+1.4**
	10nm,0.5s						
ARXS				Lg	Lg	16 50 53.0	
	38nm,0.5s						
ARXS	**Arharly**	**3.64**	**343**	*eP*	**Pb**	**16 50 03.3**	**+1.4**
ARXS				*eS*	**Sg**	**16 50 53.0**	**-1.3**
ARLS	**Aral**	**3.92**	**288**	⇑*eP*	**Pn**	**16 50 00.3**	**+2.4**
ARLS				⇑*eS*	**Sn**	**16 50 47.8**	**+3.7**
AAK	**Ala-Archa**	**4.08**	**299**	⇓Pg	**Pg**	**16 50 13.2**	**-2.3**
	6.9nm,0.9s						
AAK				⇓Lg	Lg	16 51 08.2	
	12nm,0.9s						
SALK	**Salom-Alik**	**4.17**	**274**	⇑*eP*	**Pn**	**16 50 03.2**	**+1.8**
SALK				⇑*eS*	**Sn**	**16 50 54.0**	**+3.7**
SFK	**Sufi-Kurgan**	**4.50**	**263**	⇓*eP*	**Pn**	**16 50 08.0**	**+2.1**
SFK				⇓*eS*	**Sn**	**16 51 01.3**	**+2.9**
KAPS	**Kapalarasan**	**4.54**	**0**	Pg	**Pb**	**16 50 18.4**	**+1.2**
	6.2nm,0.3s						
KAPS				Lg	Lg	16 51 18.9	
	20nm,0.3s						
MAKZ	**Makanchi**	**6.36**	**17**	⇑Pn	**Pn**	**16 50 30.7**	**-0.6**
	1.2nm,0.5s						
MAKZ				⇑Sn	**Sn**	**16 51 47.7**	**+3.8**
	2.7nm,1.1s						
MAKZ				⇑Lg	Lg	16 52 16.6	
	1.6nm,0.8s						
MK31	**Makanchi Array**	**6.42**	**19**	⇑Pn	**Pn**	**16 50 31.1**	**-1.0**
	1.1nm,0.2s,baz=197,slow=13,SNR=104						
MK31				⇑Sn	**Sn**	**16 51 44.7**	**-0.7**
	0.4nm,0.3s,baz=202,slow=25,SNR=7.1						
MK31				⇑Lg	Lg	16 52 15.1	
	2.2nm,0.7s,baz=202,slow=25,SNR=7.1						
KK31	**Karatay Array**	**6.98**	**293**	⇑Pg	**Pg**	**16 51 07.9**	**-3.2**
	0.5nm,0.4s,baz=123,slow=14,SNR=5.0						
KK31				⇑Lg	Lg	16 52 43.8	
	0.9nm,0.5s,baz=106,slow=26,SNR=5.7						
KURBB	**Kurchatov Arra**	**9.90**	**357**	⇓Lg	Lg	16 54 12.1	
	6.6nm,0.8s						
KURK	**Kurchatov**	**9.98**	**357**	⇑Lg	Lg	16 54 13.1	
	1.4nm,0.8s						

GCMT 29 16:50:28.0±0.3, 49°.39S±0°.03×7°.70W±0°.04, h12km,
MW4.8/96, 5C, Moment Tensor Solution. s20,c22;
s96,c118; Duration: 0 Moment tensor: Scale 10^{16}
Nm; M_{rr}-1.91±.07; $M_{\theta\theta}$0.50±.07; $M_{\phi\phi}$1.41±.07;
$M_{r\theta}$-0.94±.30; $M_{\theta\phi}$-0.70±.07; $M_{\phi r}$-0.91±.28; **Best double couple:** M_o2.18800×10^{16} **NP1:**ϕ_s131.00000°,δ44.00000°, λ-127.00000°. **NP2:**ϕ_s357.00000°,δ57.00000°, λ-60.00000°. **Principal axes:** T 1.8380, Plg7.0000°, Azm67.0000°; N 0.7000, Plg25.0000°, Azm160.0000°; P -2.5380, Plg64.0000°, Azm322.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**21.33**	**181**	⇑P	P	16 55 16.3	+1.9
	comp=Z,7.7nm,1.0s						
VNA2	**Neumayer--Watz**	**21.61**	**180**	⇑P	P	16 55 18.4	+1.0
	comp=Z,2.0nm,0.7s,baz=3.1,slow=12						
VNA3	**Neumayer Olymp**	**21.95**	**182**	⇑P	P	16 55 17.9	-3.2
	comp=Z,2.7nm,0.9s						
SNAA	**Sanae**	**22.47**	**176**	⇑P	P	16 55 28.4	+1.7
	comp=Z,44nm,0.7s						
TROLL	**Troll, Antarti**	**23.17**	**172**	⇑P	P	16 55 36.6	+2.5
	comp=Z,116nm,0.9s						

*NEIC **29** 16:51:47.3±0.8, 18°.6N±0°.1×145°.6E±0°.2, h254km±9km, mb3.7/17 Error ellipse: s-maj=24.3km s-min=16.1km az=85.0*
*IDC **29** 16:51:48.0±1.8, 18°.48N×145°.51E, h272km±19km, mb3.4/10, mbtmp4.0/12, Error ellipse: s-maj=25.7km s-min=13.0km az=88.0*

ISC 29 16:51:46.4±0.6, 18°.59N±0°.08×145°.5E±0°.2, h250km, n36,
σ1°03/37, mb3.7/19, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.01**	**187**	P	**Pn**	**16 53 04.1**	**+1.6**
	33nm,0.3s,baz=0.9,slow=21,SNR=1.5						
GUMO				S	**S**	**16 54 02.7**	**-0.4**
	20nm,0.3s,baz=19,slow=21,SNR=1.1						
MJAR	**Matsushiro Arr**	**19.00**	**342**	P	**P**	**16 55 52.0**	**+2.3**
	1.3nm,0.8s,baz=161,slow=9.3,SNR=4.8						
TWG	**Pinlang**	**23.24**	**285**	P	**P**	**16 56 32.4**	**+0.6**
WB0	**Warramunga Arr**	**39.65**	**197**	P	**P**	**16 58 54.6**	**+0.2**
WB0				IAmb	IAmb	16 58 55.2	
	comp=Z,1.6nm,0.7s						
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**16 58 53.2**	**-2.7**
	comp=Z,2.0nm,0.7s,baz=1.7,slow=9.3,SNR=10						
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**39.84**	**197**	P	**P**	**16 58 54.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**41.37**	**209**	P	**P**	**16 59 08.4**	**0.0**
AS31	**Alice Springs**	**43.50**	**196**	P	**P**	**16 59 25.6**	**0.0**
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**16 59 25.9**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=13,slow=6.2,SNR=26						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**43.51**	**196**	P	**P**	**16 59 25.0**	**-0.6**
MKAR	**Makanchi Array**	**58.41**	**314**	P	**P**	**17 01 15.5**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=84,slow=8.8,SNR=2.6						
	comp=Z,0.3nm,0.7s						
G18K	**Tagagawik**	**59.49**	**23**	P	**P**	**17 01 22.9**	**-0.1**
H19K	**Roundabout Mou**	**60.18**	**24**	P	**P**	**17 01 27.9**	**+0.3**
H19K				IAmb	IAmb	17 01 42.4	
	comp=Z,2.8nm,1.1s						
J20K	**Nowinta River**	**60.63**	**26**	P	**P**	**17 01 31.1**	**+0.4**
J20K				IAmb	IAmb	17 01 33.6	
	comp=Z,1.8nm,1.0s						
KURK	**Kurchatov**	**61.23**	**318**	P	**P**	**17 01 35.5**	**+0.5**
KURK				IAmb	IAmb	17 01 36.6	
	comp=Z,1.9nm,1.1s						
KURBB	**Kurchatov Arra**	**61.28**	**318**	P	**P**	**17 01 35.4**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=92,slow=7.3,SNR=11						
	comp=Z,1.0nm,0.5s						
D20K	**Etivluk River**	**61.37**	**21**	P	**P**	**17 01 36.1**	**+0.5**
D20K				IAmb	IAmb	17 01 52.9	
	comp=Z,4.3nm,1.1s						
IMAR	**Indian Mountai**	**61.38**	**24**	P	**P**	**17 01 36.2**	**+0.4**
MLY	**Manley**	**62.29**	**25**	P	**P**	**17 01 41.8**	**-0.1**
MLY				IAmb	IAmb	17 01 59.4	
	comp=Z,1.1nm,0.8s						
D22K	**Ayikyak River**	**62.75**	**21**	P	**P**	**17 01 45.6**	**+0.8**
D22K				IAmb	IAmb	17 02 04.0	
	comp=Z,2.8nm,1.1s						
E22K	**Anaktuvuk Pass**	**62.81**	**22**	P	**P**	**17 01 45.5**	**+0.3**
I23K	**Minto, Yukon-K**	**62.88**	**26**	P	**P**	**17 01 46.1**	**+0.4**
I23K				IAmb	IAmb	17 01 47.6	
	comp=Z,0.6nm,0.3s						
H24K	**Noodor Dome**	**63.65**	**25**	P	**P**	**17 01 51.1**	**+0.3**
H24K				IAmb	IAmb	17 02 09.7	
	comp=Z,1.7nm,1.0s						
ILAR	**Eielson Array**	**63.82**	**26**	P	**P**	**17 01 51.4**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=248,slow=5.6,SNR=9.0						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**63.82**	**26**	P	**P**	**17 01 50.0**	**-1.8**
BVAR	**Borovoye Array**	**66.44**	**320**	P	**P**	**17 02 09.4**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=92,slow=7.7,SNR=20						
	comp=Z,3.1nm,0.6s						
BORK	**Borovoye**	**66.49**	**320**	P	**P**	**17 02 09.2**	**+0.1**
RAR	**Rarotonga**	**66.60**	**124**	P	**P**	**17 02 10.2**	**-0.1**
KKAR	**Karatay Array**	**66.70**	**310**	P	**P**	**17 02 11.0**	**+0.3**
AB31	**Akbulak array**	**73.30**	**317**	P	**P**	**17 02 49.7**	**-0.9**
ABKAR	**Akbulak array**	**73.30**	**317**	P	**P**	**17 02 49.9**	**-0.7**
ARCES	**ARCESS Array B**	**82.54**	**342**	P	**P**	**17 03 40.2**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=86,slow=9.7,SNR=5.9						
	comp=Z,2.0nm,0.7s						
NVAR	**Mina Array Bea**	**83.34**	**52**	P	**P**	**17 03 47.0**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=275,slow=6.5,SNR=6.3						
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**86.91**	**335**	P	**P**	**17 04 00.7**	**-2.1**
	comp=Z,3.3nm,0.9s,baz=29,slow=4.4,SNR=9.4						
	comp=Z,3.3nm,0.9s						
FINES	**FINESS Array B**	**86.91**	**335**	P	**P**	**17 04 00.5**	**-2.3**
PDAR	**Pinedale Array**	**88.02**	**45**	P	**P**	**17 04 08.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=310,slow=4.2,SNR=2.1						
	comp=Z,0.2nm,0.5s						

*JMA **29** 17:08:01.5±0.1, 24°.9N±0°.6×124°.8E±0°.3, h9km±2km, MV3.5/10, NEAR MIYAKOJIMA ISLAND*

ISC 29 17:08:02.1±1.2, 24°.8N±0°.1×124°.78E±0°.04, h12km±12km,
n17, σ0°65/22, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.19**	**203**	*i* P	**Pg**	**17 08 06.5**	**+0.2**
JIRB	**Irabujima**	**0.35**	**88**	*i* P	**Pg**	**17 08 08.7**	**-0.5**
JIRB				*eS*	**Sg**	**17 08 14.1**	**+0.1**
JIKM	**Ikemajima**	**0.43**	**76**	P	**Pg**	**17 08 10.2**	**-0.5**
JMJ	**Miyako jima 2**	**0.46**	**90**	P	**Pb**	**17 08 11.7**	**-0.4**
JISG	**Ishigakijimahi**	**0.49**	**242**	*eP*	**Pg**	**17 08 11.5**	**-0.2**
JISG				*eS*	**Sg**	**17 08 18.4**	**+0.2**
JMJ2	**Miyako jima3**	**0.50**	**99**	P	**Pg**	**17 08 11.7**	**-0.2**
JMJ2				*eS*	**Sg**	**17 08 19.0**	**+0.4**
JOGS	**Gusukube**	**0.57**	**96**	P	**Pg**	**17 08 13.2**	**0.0**
JIJ	**Ishigaki jima**	**0.74**	**232**	P	**Pg**	**17 08 15.9**	**-0.5**
JIJ				*eS*	**Sg**	**17 08 26.1**	**0.0**
JKRS	**Kuro-shima**	**0.91**	**231**	P	**Pg**	**17 08 19.1**	**-0.5**
JKRS				*eS*	**Sg**	**17 08 31.9**	**+0.4**
IRIF	**Iriomote-Funau**	**1.07**	**244**	P	**Pg**	**17 08 21.4**	**-1.3**
HATJ	**Hateruma jima**	**1.17**	**230**	*eP*	**Pb**	**17 08 23.7**	**-0.5**
YOJ	**Yonaguni jima**	**1.65**	**258**	P	**Pg**	**17 08 33.9**	**+0.1**
NACB	**Ninganchiao**	**2.98**	**258**	P	**Pn**	**17 08 49.6**	**+0.5**
YHNB	**Yeheng**	**3.10**	**268**	P	**Pn**	**17 08 51.9**	**+1.0**
YULB	**Yu-li**	**3.49**	**247**	P	**Pn**	**17 08 55.5**	**-0.6**
SSLB	**Suanglung**	**3.64**	**254**	P	**Pn**	**17 08 58.8**	**+0.5**
TPUB	**Ta-pu**	**4.09**	**249**	P	**Pn**	**17 09 05.8**	**+1.4**

*IDC **29** 17:09:59.7±0.9, 24°.94N×124°.74E, h0km, mb3.5/8, mbtmp3.5/9, ML3.5/1, MS3.5/3, Error ellipse: s-maj=26.3km s-min=20.3km az=72.0*
*NIED **29** 17:10:01.7, 24°.89N×124°.76E, h12km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale* 10^{14}*Nm; M_{rr}-4.23; $M_{\theta\theta}$-1.61; $M_{\phi\phi}$5.83; $M_{r\theta}$1.45; $M_{\theta\phi}$-1.17; $M_{\phi r}$-0.13; Fault plane solution: M_o5.46000×10^{14} NP1: ϕ_s194.00000°,δ48.00000°,λ-56.00000°. NP2: ϕ_s329.00000°,δ52.00000°,λ-122.00000°.*
*JMA **29** 17:10:01.7±0.1, 24°.9N±1.0×124°.8E±0°.5, h12km±3km, MV3.8/10, NEAR MIYAKOJIMA ISLAND*
JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .

ISC 29 17:10:00.8±1.5, 24°.93N±0°.07×124°.78E±0°.03, h7km±10km,
n32, σ0°96/40, mb3.5/8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.30**	**193**	P	**Pg**	**17 10 06.9**	**+0.3**
JTJ				*eS*	**Sg**	**17 10 10.9**	**+0.4**
JIRB	**Irabujima**	**0.38**	**106**	*i* P	**Pb**	**17 10 09.0**	**-0.7**
JIRB				*eS*	**Sb**	**17 10 14.6**	**-1.2**
JIKM	**Ikemajima**	**0.43**	**91**	P	**Pb**	**17 10 10.6**	**-0.1**
JIKM				*eS*	**Sb**	**17 10 17.5**	**+0.2**
JMJ	**Miyako jima 2**	**0.48**	**104**	P	**Pb**	**17 10 11.8**	**+0.2**
JMJ	**Miyako jima 2**	**0.48**	**104**	S	**Sb**	**17 10 17.9**	**-1.1**
JMJ2	**Miyako jima3**	**0.54**	**111**	*i* P	**Pb**	**17 10 12.0**	**-0.5**
JMJ2				*eS*	**Sb**	**17 10 19.7**	**-0.7**
JISG	**Ishigakijimahi**	**0.54**	**231**	*i* P	**Pg**	**17 10 11.6**	**+0.3**
JISG				*eS*	**Sg**	**17 10 18.9**	**+0.5**
JOGS	**Gusukube**	**0.60**	**106**	P	**Pb**	**17 10 13.3**	**-0.3**
JIJ	**Ishigaki jima**	**0.81**	**226**	P	**Pg**	**17 10 16.0**	**-0.3**
JIJ				*eS*	**Sg**	**17 10 26.4**	**-0.3**
JKRS	**Kuro-shima**	**0.98**	**225**	P	**Pg**	**17 10 19.4**	**-0.2**
JKRS				*eS*	**Sg**	**17 10 32.4**	**0.0**
IRIF	**Iriomote-Funau**	**1.12**	**238**	P	**Pg**	**17 10 21.7**	**-0.6**
IRIF				*eS*	**Sb**	**17 10 37.6**	**+0.3**
HATJ	**Hateruma jima**	**1.24**	**226**	P	**Pg**	**17 10 24.1**	**-0.5**
HATJ				*eS*	**Sg**	**17 10 40.0**	**-0.7**
TATO	**Taipei**	**2.98**	**272**	P	**Pb**	**17 10 52.8**	**-1.5**
NACB	**Ninganchiao**	**2.99**	**256**	P	**Pn**	**17 10 49.6**	**+0.9**
YHNB	**Yeheng**	**3.10**	**266**	P	**Pn**	**17 10 52.4**	**+2.2**
YULB	**Yu-li**	**3.53**	**245**	P	**Pn**	**17 10 55.6**	**-0.4**
SSLB	**Suanglung**	**3.67**	**253**	P	**Pn**	**17 10 59.1**	**+1.1**
JOW	**Kunigami**	**3.68**	**58**	Pn	**Pn**	**17 10 59.3**	**+1.2**
	7.9nm,0.3s,baz=229,slow=19,SNR=5.6						
JOW				Sn	**Sn**	**17 11 40.5**	**-1.2**
	8.7nm,0.3s,baz=120,slow=28,SNR=1.8						
	15nm,0.2s						
JOW	**Kunigami**	**3.68**	**58**	P	**Pn**	**17 11 00.5**	**+2.4**
TPUB	**Ta-pu**	**4.12**	**248**	P	**Pn**	**17 11 06.0**	**+1.8**
TPUB	**Ta-pu**	**4.12**	**248**	S	**Sn**	**17 11 54.4**	**+1.7**
JNU	**Nakatsue**	**9.75**	**32**	LR	LR	17 16 18.4	
	comp=Z,59nm,19.4s,baz=290,slow=39						
CMAR	**Chiang Mai Arr**	**24.83**	**260**	P	**P**	**17 15 24.6**	**+0.8**
	0.4nm,0.5s,baz=59,slow=9.7,SNR=4.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**40.13**	**314**	P	**P**	**17 17 35.9**	**-1.4**
	0.3nm,0.7s,baz=99,slow=9.3,SNR=5.3						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**41.45**	**325**	P	**P**	**17 17 48.1**	**0.0**
	0.5nm,0.4s,baz=132,slow=6.4,SNR=3.0						
	0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**43.69**	**318**	P	**P**	**17 18 05.9**	**-0.3**
	0.5nm,0.8s,baz=110,slow=8.5,SNR=2.7						
	0.5nm,0.8s						
WRA	**Warramunga Arr**	**45.56**	**167**	P	**P**	**17 18 21.1**	**-0.4**
	1.1nm,0.9s,baz=348,slow=7.7,SNR=4.5						
	1.1nm,0.9s						
PALK	**Palkekele**	**45.59**	**255**	LR	LR	17 39 06.0	
	comp=Z,61nm,18.0s,baz=283,slow=38						
ASAR	**Alice Springs**	**49.11**	**169**	P	**P**	**17 18 49.2**	**+0.1**
	0.2nm,0.5s,baz=352,slow=9.4,SNR=9.0						
ASAR				PcP	**PcP**	**17 20 12.3**	**-0.4**
	0.3nm,0.7s,baz=335,slow=2.2,SNR=4.2						
	0.2nm,0.5s						
NWAO	**Narrogin (SRO)**	**57.98**	**187**	LR	LR	17 43 57.9	
	comp=Z,189nm,20.7s,baz=69,slow=35						
ILAR	**Eielson Array**	**67.04**	**28**	P	**P**	**17 20 54.5**	**+0.1**
	0.3nm,0.8s,baz=270,slow=8.2,SNR=4.3						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**80.99**	**24**	P	**P**	**17 22 15.8**	**-0.1**
	1.1nm,0.8s,baz=300,slow=5.8,SNR=4.0						
	1.1nm,0.8s						

*IDC **29** 17:12:56.4±0.6, 31°.52S×177°.80W, h0km, mb4.4/9, mbtmp4.4/11, ML4.0/2, MS4.3/15, Error ellipse: s-maj=24.1km s-min=19.0km az=131.0*
*NEIC **29** 17:12:57.9±1.8, 31°.42S±0°.08×178°.1W±0°.1, h10km±1km, mb4.9/28, Error ellipse: s-maj=21.6km s-min=13.1km az=98.0*
*GCMT **29** 17:13:03.9±0.4, 31°.68S±0°.03×177°.50W±0°.03, h20km±1km, MW5.0/72, Moment Tensor Solution. s32,c40; s72,c90; Duration: 0 Moment tensor: Scale* 10^{16}*Nm; M_{rr}2.72±.18; $M_{\theta\theta}$-0.81±.12; $M_{\phi\phi}$-1.91±.11; $M_{r\theta}$1.57±.29; $M_{\theta\phi}$-0.66±.07; $M_{\phi r}$1.66±.20; Best double couple: M_o3.35500×10^{16} NP1:ϕ_s199.00000°,δ25.00000°,λ74.00000°. NP2: ϕ_s37.00000°,δ66.00000°,λ97.00000°. Principal axes: T 3.6460, Plg68.0000°, Azm320.0000°; N -0.5850, Plg7.0000°, Azm214.0000°; P -3.0640, Plg21.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 17:12:57.1±0.4, 31°.58S±0°.05×178°.01W±0°.08, h10km,
n118, σ1°62/104, mb4.9/28, MS4.4/14, 2C-5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.31**	**2**	P	**Pn**	**17 13 34.4**	**-0.7**
GLKZ				S	**Sn**	**17 14 02.5**	**-1.1**
RAO	**Raoul Island**	**2.32**	**2**	Pn	**Pn**	**17 13 34.5**	**-0.8**
	181nm,0.3s,baz=246,slow=19,SNR=9.3						
RAO				Sn	**Sn**	**17 14 01.2**	**-2.6**
	253nm,0.3s,baz=275,slow=22,SNR=3.8						
RAO				LR	LR	17 14 02.9	
	comp=Z,1μm,18.2s,baz=156,slow=29						
	623nm,0.4s						
RAO	**Raoul Island**	**2.32**	**2**		**Pn**	**17 13 33.2**	**-2.0**
RIZ	**Raoul Island**	**2.32**	**2**	P	**Pn**	**17 13 35.8**	**+0.5**
MXZ	**Matakaoa Point**	**6.70**	**206**		Pn	17 14 30.3	-5.2
MXZ	**Matakaoa Point**	**6.70**	**206**	P	**Pn**	**17 14 34.6**	**-0.9**
MXZ				S	**Sn**	**17 15 51.0**	**-0.8**
WMGZ	**Waiomatatini S**	**6.89**	**204**	P	**Pn**	**17 14 37.9**	**-0.2**
WMGZ				S	**S

comp=Z,23nm,18.6s,baz=68,slow=35
CTAO Charters Tower 33.99 281 P 17 19 40.1 -1.0
STKA Stephens Creek 34.22 259 P P 17 19 46.5 +3.5
comp=Z,6.7nm,0.8s,baz=95,slow=9.2,SNR=11
STKA LR LR 17 32 59.9
comp=Z,620nm,18.5s,baz=74,slow=35
comp=Z,6.7nm,0.8s
STKA Stephens Creek 34.22 259 P P 17 19 42.4 -0.6
MGBR Mount Gambier 34.41 248 P P 17 19 42.5 -2.0
INKA Innaminka 35.89 265 P 17 19 56.8 -0.6
INKA IAmb IAmb 17 20 16.5
comp=Z,15nm,1.1s
BBOO Buckleboo 38.65 256 P 17 20 20.2 -0.6
BBOO IAmb IAmb 17 20 23.7
comp=Z,29nm,1.1s
PMG Port Moresby 39.11 297 LR LR 17 34 26.8
comp=Z,174nm,18.5s,baz=150,slow=33
COEN Coen 39.59 287 P **P 17 20 28.0 -0.9**
COEN IAmb IAmb 17 21 11.2
comp=Z,21nm,1.1s
TAOE Nuku Hiva Isla 41.79 66 *e*LR LR 17 32 19.4
comp=Z,271nm,23.9s
AS31 Alice Springs 43.05 268 P 17 20 57.4 +0.2
ASAR Alice Springs 43.05 268 P **P 17 20 59.0 +1.7**
comp=Z,7.1nm,0.9s,baz=107,slow=7.9,SNR=58
ASAR ScP **ScP 17 26 40.5 +1.9**
comp=Z,0.9nm,1.0s,baz=103,slow=3.4,SNR=4.9
comp=Z,7.1nm,0.9s
ASAR Alice Springs 43.05 268 P 17 20 56.9 -0.4
WR8 Warramunga Arr 44.00 273 P 17 21 04.8 -0.2
WR8 IAmb IAmb 17 21 08.7
comp=Z,28nm,1.0s
WRAB Tennant Creek 44.14 273 P **P 17 21 04.7 -1.3**
WRA Warramunga Arr 44.14 273 P **P 17 21 08.1 +2.0**
comp=Z,22nm,0.8s,baz=113,slow=7.8,SNR=84
WRA ScP **ScP 17 26 44.8 +1.7**
comp=Z,1.4nm,1.0s,baz=114,slow=3.7,SNR=5.1
WRA LR LR 17 39 11.8
comp=Z,752nm,18.6s,baz=138,slow=36
comp=Z,22nm,0.8s
WRA Warramunga Arr 44.14 273 P P 17 21 05.7 -0.4
FORT Forrest 45.75 256 P P 17 21 18.0 -0.7
FORT IAmb IAmb 17 21 20.8
comp=Z,18nm,1.1s
VNDA Vanda 46.93 186 P P 17 21 29.3 +1.9
comp=Z,0.8nm,0.9s,baz=341,slow=8.6,SNR=1.5
VNDA LR LR 17 37 42.4
comp=Z,186nm,20.8s,baz=17,slow=32
comp=Z,0.8nm,0.9s
VNDA Vanda 46.93 186 IAmb IAmb 17 21 56.5
comp=Z,6.2nm,1.2s
JAY Jayapura 48.43 298 LR LR 17 40 05.6
comp=Z,181nm,21.2s,baz=9.5,slow=34
MTN Manton Dam 50.16 280 P P 17 21 52.1 -1.0
MTN IAmb IAmb 17 22 24.9
comp=Z,27nm,1.5s
KNRA Kununurra 50.79 275 P P 17 21 57.3 -0.6
FITZ Fitzroy Crossi 52.35 271 LR LR 17 44 12.0
comp=Z,783nm,18.8s,baz=120,slow=36
FITZ Fitzroy Crossi 52.35 271 P 17 22 08.7 -0.8
CASY Casey 54.10 208 P P 17 22 21.8 +0.2
SOEI Soe 57.52 279 P P 17 22 47.0 -0.1
BATI Baumata 57.80 278 LR LR 17 48 21.9
comp=Z,860nm,18.6s,baz=140,slow=37
QSPA South Pole Qui 58.54 180 P P 17 22 59.2 +5.6
comp=Z,9.8nm,1.1s,baz=8.3,slow=1.2,SNR=32
QSPA LR LR 17 46 02.2
comp=Z,277nm,18.7s,baz=44,slow=34
QSPA South Pole Qui 58.54 180 P P 17 22 59.7 +6.2
RPN Rapa Nui 59.14 105 LR LR 17 41 28.2
comp=Z,105nm,20.7s,baz=313,slow=29
SANI Sanana 60.30 287 P P 17 23 07.7 +1.4
comp=Z,11nm,1.4s
KAPI Kappang 63.81 281 LR LR 17 51 01.1
comp=Z,264nm,19.7s,baz=72,slow=36
BELA Belgrano 2 68.63 172 P P 17 24 00.4 +0.5
BELA IAmb IAmb 17 25 13.1
comp=Z,16nm,1.3s
MAW Mawson 71.21 201 P P 17 24 17.3 +1.5
comp=Z,3.3nm,0.8s,baz=121,slow=8.9,SNR=2.4
MAW LR LR 17 55 46.8
comp=Z,273nm,19.0s,baz=102,slow=36
comp=Z,3.3nm,0.8s
SYO Syowa Base 75.97 193⇑ *e*P **P 17 24 43.3 -0.5**
SYO Syowa Base 75.97 193⇑ *e*pP pP 17 24 46.6 +1.1
TROLL Troll, Antarti 76.70 180 ⇓P P 17 24 49.5 +1.3
comp=Z,482nm,0.8s
SNAA Sanae 76.98 178 ⇓P P 17 24 51.0 +1.4
comp=Z,157nm,0.9s
SNAA Sanae 76.98 178 P **P 17 24 50.4 +0.8**
comp=Z,5.0nm,1.1s,baz=150,slow=5.6,SNR=7.4
comp=Z,5.0nm,1.1s
SNAA Sanae 76.98 178 P **P 17 24 49.3 -0.3**
SNAA IAmb IAmb 17 25 02.1
comp=Z,18nm,1.2s
VNA3 Neumayer Olymp 77.14 176 ⇓P P 17 24 51.0 +0.6
comp=Z,27nm,0.7s
VNA2 Neumayer--Watz 77.57 177 P **P 17 24 55.0 +2.1**
baz=184,slow=4.8
VNA1 Neumayer--Stat 77.80 177 ⇓P P 17 24 55.1 +1.0
comp=Z,20nm,1.0s
H03S2 Juan Fernandez 79.83 123 T T 18 52 48.2
baz=238,slow=74,SNR=4.5
H03S1 Juan Fernandez 79.84 123 T T 18 52 49.5
baz=238,slow=74,SNR=4.8
H03S3 Juan Fernandez 79.85 123 T T 18 52 48.5
baz=238,slow=74,SNR=4.7
PETK Petropavlovsk- 86.94 346 P P 17 25 43.0 +1.1
comp=Z,8.5nm,0.8s,baz=187,slow=6.6,SNR=4.0
comp=Z,8.5nm,0.8s
NJ2 Nanjing 87.00 311 *e*P **P 17 25 44.3 +1.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
CLC China Lake 87.77 45 P P 17 25 46.5 +0.1
CLC IAmb IAmb 17 25 52.8
comp=Z,5.9nm,1.0s
IRM Iron Mountain 88.19 48 P P 17 25 49.3 +1.0
IRM IAmb IAmb 17 25 56.2
comp=Z,12nm,1.3s
NVAR Mina Array Bea 89.11 43 P P 17 25 52.7 -0.2
comp=Z,0.4nm,0.6s,baz=232,slow=7.1,SNR=5.5
comp=Z,0.4nm,0.6s
CN2 Changchun 91.07 323 *e*P **P 17 26 01.5 0.0**
CN2 Changchun 91.07 323 *e*S **S 17 37 00.0 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,300nm,13.0s
CN2 LR LR
comp=E,400nm,13.0s
CN2 LR LR
comp=Z,500nm,15.0s
GYA Guiyang 92.12 300 ⇓P P 17 26 05.5 -1.5
GYA pmax pmax
comp=Z,10.0nm,1.7s
TXAR Lajitas Array 93.03 57 P P 17 26 12.6 +1.4
comp=Z,1.0nm,1.1s,baz=245,slow=8.1,SNR=4.9
comp=Z,1.0nm,1.1s
PZH PanZhiHua 95.84 297 P P 17 26 24.3 +0.2
HHC Hu-ho-hao-te 97.04 314 *e*P **P 17 26 30.5 +1.3**
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,92nm,3.7s
MKAR Makanchi Array 118.51 310 PKP **PKiKP 17 31 45.6 +0.8**
comp=Z,1.0nm,0.9s,baz=25,slow=1.4,SNR=2.3
KURK Kurchatov 121.85 313 PKiKP 17 31 51.2 0.0
KURBB Kurchatov Arra 121.88 313 PKP **PKiKP 17 31 51.2 -0.1**
comp=Z,1.1nm,0.3s,baz=112,slow=2.0,SNR=6.0
BVAR Borovoye Array 127.23 315 PKP **PKiKP 17 32 02.1 +0.2**
comp=Z,1.4nm,0.6s,baz=128,slow=2.7,SNR=4.7
ARCES ARCESS Array B 139.73 347 PKhKP PKPpre 17 32 19.0
comp=Z,2.7nm,0.9s,baz=52,slow=3.1,SNR=1.2
KBZ Khabaz 145.74 303 PKPbc **PKPab 17 32 37.0 +0.6**
comp=Z,14nm,1.1s,baz=21,slow=1.0,SNR=3.6
KVAR Kislovodsk Arr 145.86 303 PKPbc **PKiKP 17 32 38.9 -1.3**
comp=Z,2.4nm,0.4s,baz=90,slow=20,SNR=1.9
FINES FINESS Array B 146.24 339 PKPbc **PKPab 17 32 37.2 -0.6**
comp=Z,22nm,0.9s,baz=50,slow=4.5,SNR=16
KOPT Kop Dagi 147.85 296 PKPdf 17 32 37.8 -1.9
NB2 NORSAR Subarra149.91 351 PKP **PKPbc 17 32 46.9 0.0**
comp=Z,22nm,1.7s,baz=12,slow=4.0
NOA NORSAR Array B 149.91 351 PKPbc **PKiKP 17 32 47.9 +0.1**
comp=Z,0.5nm,0.7s,baz=16,slow=3.3,SNR=1.6
HFS Hagfors 150.39 348 PKPbc **PKiKP 17 32 49.7 +0.9**
comp=Z,5.6nm,0.8s,baz=4.8,slow=3.5,SNR=4.0
BNN Bunyan 151.52 294 PKPbc 17 32 49.1 -2.4
EIL Elat 151.63 275 PKPbc **PKiKP 17 32 54.0 +1.6**
comp=Z,30nm,1.1s,baz=348,slow=7.6,SNR=3.7
MMAI Mount Meron Ar 151.78 282 PKPbc **PKiKP 17 32 54.4 +1.7**
comp=Z,4.6nm,0.4s,baz=92,slow=5.9,SNR=31
AKASG Malin Array Be 152.22 321 PKP **PKPdf 17 32 45.7 -0.1**
comp=Z,1.2nm,0.7s,baz=115,slow=1.9,SNR=5.4
AKASG PKPbc **PKiKP 17 32 53.3 +0.4**
comp=Z,2.1nm,0.8s,baz=32,slow=1.8,SNR=7.6
AKASG Malin Array Be 152.22 321 PKPdf 17 32 44.0 -1.8
AKASG **pPKPbc 17 32 53.9 -0.4**
AKBB Malin Array Si 152.22 321 PKPdf 17 32 44.7 -1.1
KIEV Kiev 152.23 321 PKPdf 17 32 44.7 -1.2
BRTR Keskin Array B 153.13 296 PKPbc **PKiKP 17 32 55.5 +0.1**
comp=Z,2.1nm,0.9s,baz=140,slow=6.0,SNR=8.6
GERES GERESS Array B 160.61 336 PKPab **PKPab 17 33 39.3 +0.7**
comp=Z,0.9nm,0.8s,baz=9.7,slow=4.4,SNR=3.5

ISK ***29*** *17:16:02.9, 36°.77N×34°.89E, h30km, ML2.6/16*
AFAD ***29*** *17:16:03.6, 36°.85N×34°.80E, h7km±3km, ML2.2*
GII ***29*** *17:16:06.5±0.0, 36°.41N±0°.06×34°.62E±0°.02, h8km, Mws2.1, confirmed*
ISC 29 17:16:03.6±1.0, 36°.77N±0°.03×34°.85E±0°.03, h33km±9km, n41,σ1s03/54, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MERS	**Mersin**	**0.28**	**290**	Pg	**Pb**	**17 16 11.1**	**-0.1**
MERS				Sg	**Sn**	**17 16 17.2**	**+1.4**
GULE	**Gulek**	**0.51**	**354**	P	**Pb**	**17 16 14.0**	**-0.6**
GULE				S	**Sb**	**17 16 22.3**	**+0.2**
KARA	**Karaisali**	**0.52**	**19**	Pg	**Pb**	**17 16 13.7**	**-0.8**
KARA				Sg	**Sb**	**17 16 22.3**	**+0.4**
YURE	**YUREGIR**	**0.63**	**85**	P	**Pn**	**17 16 16.8**	**+0.5**
YURE				S	**Sn**	**17 16 28.0**	**+2.8**
YURE				*i*	IAML	17 16 33.0	
	comp=E,40nm,1.2s						
KIZK	**Mersin**	**0.64**	**243**	P	**Pb**	**17 16 16.1**	**-0.3**
KIZK				*i*	IAML	17 16 26.0	
	comp=N,100nm,0.6s						
KIZK				S	**Sn**	**17 16 26.2**	**+1.0**
KIZK				*i*	IAML	17 16 28.0	
	comp=E,104nm,0.4s						
KIZK	**Mersin**	**0.64**	**243**	Pg	**Pb**	**17 16 16.3**	**-0.1**
KIZK				Sg	**Sn**	**17 16 26.5**	**+1.3**
AKO	**Adana**	**0.84**	**35**	P	**Pn**	**17 16 18.9**	**-0.2**
AKO				S	**Sb**	**17 16 30.9**	**+0.1**
AKO				*i*	IAML	17 16 32.0	
	comp=N,124nm,0.2s						
AKO				*i*	IAML	17 16 32.0	
	comp=E,117nm,0.5s						
KERG	**Konya-Eregli**	**0.86**	**318**	P	**Pn**	**17 16 18.9**	**-0.6**
KERG				S	**Sn**	**17 16 30.4**	**-0.6**
KERG				*i*	IAML	17 16 31.0	
	comp=E,187nm,0.2s						
KERG				*i*	IAML	17 16 32.0	
	comp=N,237nm,0.2s						
CMRD	**Camardi-Nigde**	**0.90**	**7**	Pg	**Pn**	**17 16 19.2**	**-0.8**
CMRD				Sg	**Sn**	**17 16 31.9**	**0.0**
KEBE	**Keben-Mersin**	**0.97**	**251**	Pg	**Pn**	**17 16 21.3**	**+0.4**
KEBE				Sg	**Sb**	**17 16 34.7**	**+0.2**
KOZT	**Kozan**	**1.05**	**48**	Pg	**Pn**	**17 16 21.8**	**-0.3**
IKL	**Isikli**	**1.08**	**241**	Pn	**Pn**	**17 16 22.5**	**+0.2**
TISA	**Tisan-Mersin**	**1.12**	**237**	Pn	**Pn**	**17 16 22.7**	**-0.2**
TAHT	**Tahtakopru-Hat**	**1.15**	**110**	Pn	**Pn**	**17 16 23.8**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.18**	**254**	Pn	**Pn**	**17 16 24.5**	**+0.7**
NIDE	**Nigde/Merkez-G**	**1.23**	**357**	P	**Pn**	**17 16 24.8**	**+0.2**
NIDE				S	**Sn**	**17 16 40.5**	**+0.5**
NIDE				*i*	IAML	17 16 41.0	
	comp=N,93nm,0.4s						
NIDE				*i*	IAML	17 16 44.0	
	comp=E,121nm,0.3s						
KRMN	**Karaman**	**1.33**	**288**	Pn	**Pn**	**17 16 26.4**	**+0.5**
YESY	**Yesilyurt**	**1.34**	**319**	Pn	**Pn**	**17 16 26.6**	**+0.5**
BERE	**Bereket-Mersin**	**1.37**	**252**	Pn	**Pn**	**17 16 27.1**	**+0.5**
YAHY	**KAYSERI_Yahyal**	**1.38**	**17**	P	**Pn**	**17 16 27.2**	**+0.5**
YAHY				S	**Sb**	**17 16 46.3**	**-0.1**
TEKE	**Tekeli-Mersin**	**1.53**	**246**	Pn	**Pn**	**17 16 29.3**	**+0.7**
BSIR	**Belisirma, Guz**	**1.56**	**344**	P	**Pb**	**17 16 30.8**	**-1.1**
BSIR				S	**Sb**	**17 16 52.7**	**+1.3**
BSIR				*i*	IAML	17 16 53.0	
	comp=N,31nm,0.3s						
BSIR				*i*	IAML	17 16 56.0	
	comp=E,24nm,0.3s						
GULA	**Gulagac**	**1.64**	**343**	Pn	**Pn**	**17 16 30.9**	**+0.7**
LFK	**Lefkose**	**1.83**	**216**	Pn	**Pn**	**17 16 33.3**	**+0.5**
HDMB	**Hadim**	**1.90**	**276**	Pn	**Pn**	**17 16 34.8**	**+0.9**
CSS	**Mathiatis**	**2.19**	**215**	P	**Pn**	**17 16 37.3**	**-0.3**
CSS	**Mathiatis**	**2.19**	**215**	S	**Sn**	**17 17 00.3**	**-3.3**
NATI	**Neve Ativ**	**3.58**	**168**	P	**Pn**	**17 16 58.0**	**+1.2**
NATI	**Neve Ativ**	**3.58**	**168**	S	**Sn**	**17 17 37.0**	**-0.9**
GEM	**Giv'at Ha'Em**	**3.62**	**169**	P	**Pn**	**17 16 58.2**	**+1.0**
GEM	**Giv'at Ha'Em**	**3.62**	**169**	S	**Sn**	**17 17 37.4**	**-1.5**
HNTI	**Hanita**	**3.69**	**176**	P	**Pn**	**17 16 59.4**	**+1.1**
HNTI	**Hanita**	**3.69**	**176**	S	**Sn**	**17 17 38.6**	**-2.1**
MMA0B	**Mount Meron ar**	**3.78**	**173**	P	**Pn**	**17 17 00.1**	**+0.6**
MMA0B	**Mount Meron ar**	**3.78**	**173**	S	**Sn**	**17 17 42.0**	**-0.9**
KSHT	**Keshet**	**3.86**	**168**	P	**Pn**	**17 17 02.3**	**+1.6**
KSHT	**Keshet**	**3.86**	**168**	S	**Sn**	**17 17 45.1**	**+0.1**
MMLI	**Mount Malkishu**	**4.35**	**174**	P	**Pn**	**17 17 08.0**	**+0.6**
MMLI	**Mount Malkishu**	**4.35**	**174**	S	**Sn**	**17 17 55.7**	**-1.3**
HMDT	**Nahal Hemdat**	**4.54**	**173**	P	**Pn**	**17 17 11.6**	**+1.6**
HMDT	**Nahal Hemdat**	**4.54**	**173**	S	**Sn**	**17 18 01.1**	**-0.5**

MOS ***29*** *17:20:11.7±1.3, 31°.88N×49°.79E, h11km, mb5.1/53, Error ellipse: s-maj=4.6km s-min=3.5km az=102.3*
NEIC ***29*** *17:20:13.6±1.6, 31°.94N±0°.06×49°.814E±0°.005, h10km±1km, mb5.0/205, Error ellipse: s-maj=10.5km s-min=2.7km az=177.0*
GII ***29*** *17:20:13.2±0.0, 31°.92N×49°.81E, h10km, confirmed*
TEH ***29*** *17:20:14.5, 32°.01N×49°.83E, h13km±15km*
BJI ***29*** *17:20:14.0, 32°.00N×49°.90E, h20km, mB5.0/10, mb4.9/54, Ms4.7/32, Ms7 4.6/31*
GCMT ***29*** *17:20:15.6±0.4, 31°.95N±0°.03×49°.50E±0°.03, h28km±1km, MW4.8/58, Moment Tensor Solution. s30,c34; s58,c75; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.66±.13; Mθθ-0.07±.07; Mϕϕ-1.59±.08; Mrθ0.88±.12; Mrϕ0.14±.06; Mθr-1.05±.11; Best double couple: Mo2.11800×10¹⁶ NP1:ϑs10.00000°,δ29.00000°,λ121.00000°. NP2: ϕs155.00000°,δ65.00000°,λ74.00000°. Principal axes: T 2.2500, Plg66.0000°, Azm36.0000°; N -0.2700, Plg15.0000°, Azm162.0000°; P -1.9850, Plg19.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
THR ***29*** *17:20:15.9±0.0, 31°.97N×49°.84E, h19km±4km, ML4.8*
IDC ***29*** *17:20:16.8±1.6, 32°.01N×49°.77E, h29km±10km, mb4.5/30, mbtmp4.6/36, ML4.6/4, MS4.1/40, Error ellipse: s-maj=11.8km s-min=9.6km az=7.0*
OMAN ***29*** *17:20:21.5±0.1, 31°.44N×50°.00E, h10km, mb5.2/31, Error ellipse: s-maj=2.0km s-min=1.1km az=270.0*
DSN ***29*** *17:20:25.0±2.6, 31°.10N×49°.97E, h15km, ML4.4/13, Error ellipse: s-maj=34.9km s-min=13.1km az=7.0*
BGR ***29*** *17:21:03.6, 35°.02N×44°.55E, h33km, mb4.6, Ms3.5*
ISC 29 17:20:15.4±0.5, 31°.91N±0°.03×49°.78E±0°.03, h24km±3km, h24km:pP-P,n1046,σ1s49/1040,mb5.0/231,MS4.2/53, 51C-34D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTMR	**Gotvand**	**0.80**	**315**	*e*Pg	**Pb**	**17 20 29.3**	**-1.3**
GTMR				*e*Sg	**Sn**	**17 20 42.3**	**0.0**
GTMR					IAML	17 20 45.1	
	comp=Z,41μm,1.0s						
JHBN	**Jahan bin**	**0.81**	**67**	Pg	**Pb**	**17 20 29.6**	**-1.5**
ZNGN	**Zangian**	**0.93**	**77**	Pg	**Pb**	**17 20 31.8**	**-1.3**
AHWZ	**Ahwaz**	**1.13**	**239**	Pg	**Pb**	**17 20 38.7**	**+2.4**
IPIR	**Pirpir**	**1.21**	**50**	Pg	**Pn**	**17 20 36.6**	**-0.6**
IPIR				Sg	**Sn**	**17 20 55.0**	**+2.0**
IBRJ	**Brojen**	**1.26**	**90**	Pg	**Pb**	**17 20 38.3**	**-0.3**
ABEH	**Behbahan**	**1.37**	**163**	Pg	**Pb**	**17 20 42.6**	**+2.2**
KLNJ	**Kolanjah**	**1.79**	**120**	Pn	**Pb**	**17 20 48.4**	**+0.6**
KLNJ	**Kolanjah**	**1.79**	**120**	*e*Pn	**Pb**	**17 20 48.1**	**+0.4**
KLNJ					IAML	17 21 22.3	
	comp=Z,12μm,1.0s						
KHMZ	**Khomeyn**	**1.83**	**5**	*e*Pn	**Pb**	**17 20 48.2**	**-0.1**
KHMZ				*e*Sg	**Sb**	**17 21 13.3**	**+2.5**
KHMZ					IAML	17 21 19.3	
	comp=Z,10μm,1.0s						
IKLH	**Kolahrood**	**2.06**	**47**	Pn	**Pb**	**17 20 50.8**	**-1.5**
BDRS	**Dareh Seyedi**	**2.17**	**340**	Pn	**Pn**	**17 20 52.1**	**+1.7**
IDOB	**Doab**	**2.31**	**325**	Pn	**Pn**	**17 20 54.0**	**+1.9**
IZEF	**Zefreh**	**2.37**	**65**	Pn	**Pn**	**17 20 55.1**	**+2.1**
ASAO	**Ashtian**	**2.63**	**4**	*e*Pn	**Pb**	**17 20 59.6**	**-2.5**
ASAO					IAML	17 21 48.2	
	comp=Z,6μm,1.0s						
NASN	**Na'in**	**2.71**	**70**	*e*Pn	**Pn**	**17 21 00.3**	**+2.6**
NASN					IAML	17 21 47.3	
	comp=Z,3μm,1.0s						
KAZ2	**Kazeron-Fars-I**	**2.81**	**144**	Pn	**Pb**	**17 21 02.6**	**-2.3**
KRSH	**Karshahi**	**2.85**	**43**	Pn	**Pn**	**17 21 02.2**	**+2.6**
GHVR	**GHOM**	**2.86**	**26**	*e*Pn	**Pb**	**17 21 02.8**	**-3.0**
GHVR					IAML	17 22 17.9	
	comp=Z,4μm,1.0s						
HAGD	**Aghdareh**	**2.95**	**350**	Pn	**Pn**	**17 21 02.0**	**+1.0**
IBZA	**Bozab**	**3.02**	**328**	Pn	**Pn**	**17 21 03.4**	**+1.5**
IQOM	**Qom**	**3.11**	**20**	Pn	**Pn**	**17 21 05.5**	**+2.2**
ISFB	**Sefidab**	**3.19**	**40**	Pn	**Pn**	**17 21 06.1**	**+2.0**
SHI	**Shiraz**	**3.26**	**133**	Pn	**Pn**	**17 21 08.1**	**+2.9**
KCHF	**Cheshme Sefid,**	**3.29**	**316**	Pn	**Pn**	**17 21 07.8**	**+2.2**
SNQR	**Sonqor, Kerman**	**3.44**	**329**	Pn	**Pn**	**17 21 09.9**	**+2.0**
IVRN	**Varamin**	**3.48**	**27**	Pn	**Pn**	**17 21 10.2**	**+2.1**
ANAR	**Anarak**	**3.57**	**68**	Pn	**Pn**	**17 21 12.0**	**+2.7**
IGHG	**Ghaleghazi**	**3.62**	**313**	Pn	**Pn**	**17 21 12.3**	**+2.1**
HGHA	**Hamedan- Ghaye**	**3.65**	**348**	Pn	**Pn**	**17 21 12.4**	**+1.8**
DSBU	**Dashti - Bushe**	**3.76**	**160**	Pn	**Pn**	**17 21 15.4**	**+3.4**
SNGE	**Sanandaj**	**3.77**	**328**	*e*Pn	**Pn**	**17 21 13.7**	**+1.5**
SNGE					IAML	17 22 57.1	
	comp=Z,43nm,1.0s						
QABG	**Abgarm-Qazvin**	**3.79**	**358**	Pn	**Pn**	**17 21 14.7**	**+2.2**
GLG1	**Gilan-e-Gharb**	**3.92**	**305**	Pn	**Pn**	**17 21 16.4**	**+2.1**
ICHK	**Chekchek**	**3.94**	**84**	Pn	**Pn**	**17 21 17.4**	**+2.9**
IDHR	**Dehrash**	**3.98**	**315**	Pn	**Pn**	**17 21 16.9**	**+1.8**
THKV	**Tehran--Karaj**	**4.09**	**13**	*e*Pn	**Pn**	**17 21 19.0**	**+2.3**
THKV					IAML	17 22 32.7	
	comp=Z,790nm,1.0s						
IDMV	**Damavand**	**4.11**	**27**	Pn	**Pn**	**17 21 19.0**	**+2.1**
YZKH	**Yazd**	**4.11**	**82**	*e*Pn	**Pn**	**17 21 19.3**	**+2.5**
YZKH					IAML	17 22 31.4	
	comp=Z,1μm,1.0s						
DAMV	**Damavand**	**4.13**	**26**	*e*Pn	**Pn**	**17 21 19.2**	**+2.0**
DAMV					IAML	17 22 41.8	
	comp=Z,4.5nm,1.0s						
CHTH	**Charan**	**4.14**	**15**	*e*Pn	**Pn**	**17 21 20.0**	**+2.7**
CHTH					IAML	17 22 18.9	
	comp=Z,2.1nm,1.0s						
IMEH	**Mehriz**	**4.15**	**96**	Pn	**Pn**	**17 21 20.1**	**+2.6**
ILAS	**Lasjerd**	**4.36**	**37**	Pn	**Pn**	**17 21 22.0**	**+1.7**
QIR1	**Qir**	**4.44**	**140**	Pn	**Pn**	**17 21 24.9**	**+3.6**
IFIR	**Firoozkooh**	**4.47**	**33**	Pn	**Pn**	**17 21 24.0**	**+2.1**
IGZV	**Ghazvin**	**4.48**	**5**	Pn	**Pn**	**17 21 23.7**	**+1.7**
IPRN	**Peran**	**4.81**	**25**	Pn	**Pn**	**17 21 29.8**	**+3.3**
ZNJK	**Zanjan**	**4.83**	**349**	Pn	**Pn**	**17 21 28.1**	**+1.3**
ZNJK	**Zanjan**	**4.83**	**349**	*e*Pn	**Pn**	**17 21 28.2**	**+1.3**
ZNJK					IAML	17 22 27.4	
	comp=Z,4.6nm,1.0s						
IALA	**Alasht**	**4.86**	**30**	Pn	**Pn**	**17 21 30.1**	**+2.9**
IBAF	**Bafgh**	**4.94**	**92**	Pn	**Pn**	**17 21 30.9**	**+2.6**
GIDE	**GILAN DEYLAMAN**	**5.00**	**1**	Pn	**Pn**	**17 21 30.8**	**+1.7**
GIDE	**GILAN DEYLAMAN**	**5.00**	**1**	*e*Pn	**Pn**	**17 21 31.0**	**+1.9**
GIDE					IAML	17 23 19.9	
	comp=Z,3μm,1.0s						
IKIA	**Kiasar**	**5.37**	**36**	Pn	**Pn**	**17 21 36.2**	**+2.0**
LMD1	**Lamerd**	**5.43**	**146**	Pn	**Pn**	**17 21 37.0**	**+2.2**
SRSL	**SARDASHT**	**5.60**	**321**	*e*Pn	**Pn**	**17 21 39.2**	**+1.8**
SRSL					IAML	17 22 45.0	
	comp=Z,2μm,1.0s						
IHSH	**Hashtrud**	**5.76**	**340**	Pn	**Pn**	**17 21 40.9**	**+1.1**
ZRDN	**Zarand Kerman**	**5.85**	**98**	Pn	**Pn**	**17 21 43.9**	**+3.1**
MAHB	**Mahabad**	**5.90**	**326**	Pn	**Pn**	**17 21 43.7**	**+2.3**
TPRV	**Parvadeh(Tabas**	**5.94**	**77**	Pn	**Pn**	**17 21 44.3**	**+2.4**
KHGB	**Koh Gabri**	**5.94**	**103**	Pn	**Pn**	**17 21 43.7**	**+1.7**
TNSJ	**Nastanj**	**6.09**	**69**	Pn	**Pn**	**17 21 46.1**	**+2.1**
SHMA	**Al-Shehemyia**	**6.12**	**170**	P	**Pn**	**17 21 47.0**	**+2.6**
	SNR=67						
SHMA				S	**Sn**	**17 22 52.0**	**-1.6**
	SNR=14						
ISRB	**Sarab**	**6.15**	**344**	Pn	**Pn**	**17 21 45.4**	**+0.5**
KRBR	**Kerman**	**6.29**	**106**	Pn	**Pn**	**17 21 49.6**	**+2.6**
KRBR	**Kerman**	**6.29**	**106**	*e*Pn	**Pn**	**17 21 49.9**	**+2.9**
KRBR					IAML	17 23 41.6	
	comp=Z,260nm,1.0s						
NGRK	**Negar Kerman**	**6.39**	**109**	Pn	**Pn**	**17 21 51.5**	**+3.0**
TKDS	**Koohdasht(Taba**	**6.41**	**73**	Pn	**Pn**	**17 21 50.6**	**+2.1**
TABS	**Tabas**	**6.42**	**72**	*e*Pn	**Pn**	**17 21 50.7**	**+2.2**
TABS					IAML	17 23 58.8	
	comp=Z,450nm,1.0s						
KRM1	**Kerman Provinc**	**6.57**	**100**	Pn	**Pn**	**17 21 52.3**	**+1.6**
SHRO	**Shahrood**	**6.58**	**50**	*e*Pn	**Pn**	**17 21 53.1**	**+2.3**
SHRO					IAML	17 22 43.9	
	comp=Z,3.4nm,1.0s						
IHRS	**Heris**	**6.77**	**341**	Pn	**Pn**	**17 21 53.9**	**+0.4**
TAPT	**Tabas- Tapeh t**	**6.84**	**62**	Pn	**Pn**	**17 21 55.8**	**+1.4**
ITBZ	**Tabriz**	**6.97**	**336**	Pn	**Pn**	**17 21 57.7**	**+1.5**
GRMI	**Germi**	**7.05**	**348**	*e*Pn	**Pn**	**17 21 58.4**	**+1.2**
GRMI					IAML	17 24 11.4	
	comp=Z,100nm,1.0s						
IMND	**Minoodasht**	**7.07**	**39**	Pn	**Pn**	**17 21 58.6**	**+1.3**
BNDS	**Bandar-Abbas**	**7.15**	**127**	*e*Pn	**Pn**	**17 22 00.3**	**+1.6**
BNDS					IAML	17 23 54.5	
	comp=Z,170nm,1.0s						
SMRA	**Abu-Samra**	**7.20**	**172**	P	**Pn**	**17 22 01.2**	**+2.0**
	SNR=9.4						
SMRA				S	**Sn**	**17 23 17.9**	**-2.3**
	SNR=9.0						
ISHB	**Shabestar**	**7.21**	**333**	Pn	**Pn**	**17 21 59.9**	**+0.3**
TRNA	**Turayna**	**7.26**	**170**	P	**Pn**	**17 22 02.3**	**+2.3**
	SNR=26						
TRNA				S	**Sn**	**17 23 19.6**	**-2.1**
	SNR=16						
JRN	**Qarnain Island**	**7.45**	**158**	P	**Pn**	**17 22 04.0**	**+1.4**
	SNR=10						
JRN				S	**Sn**	**17 23 23.8**	**-2.6**

ASUD	**Al Ashush, Dub**	**8.75**	**145**	*i*	P		**Pn**	**17 22 23.4**	**+2.9**
	SNR=9.0									
FAQ	**Al Faqa, Dubai**	**8.79**	**143**		P		**Pn**	**17 22 23.0**	**+2.0**
	SNR=7.6									
IPAY	**Payeh**	**8.87**	**57**		Pn		**Pn**	**17 22 24.2**	**+1.9**
UOSS	**Minazif**	**8.95**	**139**		S		**Sn**	**17 23 58.8**	**-4.5**
	SNR=11									
UOSS	**Minazif**	**8.95**	**139**				**Pn**	**17 22 23.4**	**+0.1**
HATD	**Hatta, Dubai**	**9.01**	**140**		P		**Pn**	**17 22 25.7**	**+1.8**
	SNR=21									
HATD					S		**Sn**	**17 24 02.0**	**-2.7**
	SNR=7.9									
HATD	**Hatta, Dubai**	**9.01**	**140**	*i*	P		**Pn**	**17 22 24.8**	**+0.9**
	SNR=14									
SHRT	**Shahrakht**	**9.02**	**76**		Pn		**Pn**	**17 22 26.7**	**+2.6**
SHRT	**Shahrakht**	**9.02**	**76**	*e*	Pn		**Pn**	**17 22 26.7**	**+2.6**
ASHO	**Ashiyiah**	**9.08**	**141**		P		**Pn**	**17 22 26.9**	**+1.9**
	SNR=36									
ASHO					S		**Sn**	**17 24 04.3**	**-2.2**
	SNR=7.9									
ASHO	**Ashiyiah**	**9.08**	**141**	*i*	P		**Pn**	**17 22 25.3**	**+0.3**
	SNR=36									
GURO	**Guroymak-BITLI**	**9.16**	**318**				**Pn**	**17 22 25.2**	**-1.0**
MARD	**Mardin**	**9.17**	**308**				**Pn**	**17 22 25.1**	**-1.2**
GNI	**Garni**	**9.17**	**335**		Pn		**Pn**	**17 22 24.8**	**-1.6**
GNI	**Garni**	**9.17**	**335**	*i*	P		**Pn**	**17 22 27.7**	**+1.3**
RAYN	**Ar Rayn**	**9.18**	**205**				**Pn**	**17 22 25.8**	**-0.6**
RAYN	**Ar Rayn**	**9.18**	**205**	*i*	P		**Pn**	**17 22 26.0**	**-0.4**
	SNR=138									
RAYN	**Ar Rayn**	**9.18**	**205**		P		**Pn**	**17 22 25.8**	**-0.6**
IKRD	**Kardeh**	**9.39**	**56**		Pn		**Pn**	**17 22 31.7**	**+2.2**
ALNE	**Al Ain**	**9.44**	**145**		P		**Pn**	**17 22 31.5**	**+1.6**
	SNR=41									
ALNE					S		**Sn**	**17 24 13.0**	**-2.2**
	SNR=6.8									
ALNE	**Al Ain**	**9.44**	**145**	*i*	P		**Pn**	**17 22 30.8**	**+0.9**
	SNR=41									
MZR	**Muzera**	**9.46**	**159**		P		**Pn**	**17 22 32.0**	**+1.8**
	SNR=122									
MZR					S		**Sn**	**17 24 13.4**	**-2.5**
	SNR=7.3									
MZR	**Muzera**	**9.46**	**159**	*i*	P		**Pn**	**17 22 31.3**	**+1.0**
	SNR=122									
IMYA	**Miami**	**9.62**	**60**		Pn		**Pn**	**17 22 34.8**	**+2.3**
JRKH	**Jarkhoshk**	**9.64**	**63**		Pn		**Pn**	**17 22 35.0**	**+2.2**
AKT	**Akhty**	**9.69**	**351**	*e*	P		**Pn**	**17 22 34.1**	**+0.7**
AKT				*e*	S		**Sn**	**17 24 22.7**	**+1.2**
AKT					pmax	pmax				
	comp=Z,8.0nm,1.2s									
AKT					smax	smax				
	comp=E,15nm,0.7s									
AKT					smax	smax				
	comp=N,12nm,0.7s									
AKT					MLR	MLR				
	comp=Z,465nm,10.0s									
SOHO	**SOHO**	**9.78**	**141**		P		**Pn**	**17 22 35.5**	**+1.0**
SOHO					S		**Sn**	**17 24 19.6**	**-3.9**
SOHO	**SOHO**	**9.78**	**141**	*i*	P		**Pn**	**17 22 34.0**	**-0.5**
	SNR=14									
KARS	**Kars**	**10.24**	**330**		Pn		**Pn**	**17 22 40.5**	**-0.4**
KARS	**Kars**	**10.24**	**330**		P		**Pn**	**17 22 40.5**	**-0.4**
ARQ	**Araqi**	**10.42**	**143**		P		**Pn**	**17 22 44.8**	**+1.4**
	SNR=30									
ARQ					S		**Sn**	**17 24 37.8**	**-1.6**
HOQ	**Hoqain**	**10.64**	**139**		P		**Pn**	**17 22 47.7**	**+1.2**
	SNR=19									
HRA	**Herat**	**10.73**	**73**				**Pn**	**17 22 46.0**	**-1.8**
ASF	**Jabal al Asfar**	**10.94**	**275**		Pn		**Pn**	**17 22 49.7**	**-0.8**
	comp=Z,11nm,0.3s,baz=81,slow=8.2,SNR=100									
ASF					Sn		**Sn**	**17 24 45.4**	**-6.8**
	comp=Z,6.1nm,0.3s,baz=252,slow=23,SNR=7.2									
ASF					Lg	Lg		17 26 05.6		
	comp=Z,0.8nm,0.3s,baz=308,slow=19,SNR=1.5									
ASF					LR	LR		17 28 20.3		
	comp=Z,1μm,19.7s,baz=82,slow=44									
	comp=Z,62nm,0.6s									
KOPT	**Kop Dagi**	**11.04**	**320**				**Pn**	**17 22 50.6**	**-1.5**
BIDO	**Bidbid**	**11.15**	**136**		P		**Pn**	**17 22 53.9**	**+0.4**
	SNR=6.9									
BIDO					S		**Sn**	**17 24 54.7**	**-2.7**
MAK	**Makhachkala**	**11.18**	**351**	*e*	P		**Pn**	**17 22 52.4**	**-1.2**
MAK				*e*	S		**Sn**	**17 24 58.6**	**+0.9**
MAK					pmax	pmax				
	comp=Z,130nm,0.8s									
MAK					MLR	MLR				
	comp=Z,437nm,8.0s									
BSY	**Bisya**	**11.26**	**142**		P		**Pn**	**17 22 57.1**	**+2.2**
	SNR=9.2									
BSY					S		**Sn**	**17 24 57.0**	**-3.1**
FKH	**Fakeheh**	**11.46**	**285**	*e*	P		**Pn**	**17 22 56.9**	**-0.7**
SMDO	**Samad**	**11.47**	**138**		P		**Pn**	**17 22 58.5**	**+0.7**
	SNR=36									
GAZ	**Gaziantep**	**11.61**	**300**				**Pn**	**17 22 58.3**	**-1.5**
WSAR	**Wadi Sarin**	**11.67**	**136**		P		**Pn**	**17 23 01.1**	**+0.7**
	SNR=7.3									
BEIL	**Beino**	**11.69**	**287**	*e*	P		**Pn**	**17 22 59.6**	**-1.1**
HWQ	**Hawqa**	**11.84**	**285**	*e*	P		**Pn**	**17 23 00.9**	**-1.9**
ZAHL	**Zahle**	**11.84**	**283**	*e*	P		**Pn**	**17 23 02.9**	**0.0**
KSHT	**Keshet**	**11.85**	**279**		P		**Pn**	**17 23 03.1**	**+0.2**
RCY	**Rachaya**	**11.86**	**281**	*e*	P		**Pn**	**17 23 02.2**	**-0.9**
SRVN	**Saravan**	**11.86**	**109**		Pn		**Pn**	**17 23 05.1**	**+2.0**
SRVN	**Saravan**	**11.86**	**109**	*e*	Pn		**Pn**	**17 23 05.3**	**+2.2**
NGCH	**Negor - Chabah**	**11.92**	**120**		P		**Pn**	**17 23 04.1**	**+0.3**
	SNR=23									
SHBL	**Chebaa**	**11.92**	**281**	*e*	P		**Pn**	**17 23 03.2**	**-0.8**
NATI	**Neve Ativ**	**11.93**	**280**		P		**Pn**	**17 23 03.4**	**-0.5**
GEM	**Giv'at Ha'Em**	**11.98**	**280**		P		**Pn**	**17 23 04.9**	**+0.2**
ORWL	**Oaraoun**	**11.99**	**282**	*e*	P		**Pn**	**17 23 04.3**	**-0.6**
BHL	**Bhannes**	**12.04**	**283**	*e*	P		**Pn**	**17 23 05.7**	**+0.1**
JMDO	**Jabal Madar**	**12.05**	**140**		P		**Pn**	**17 23 07.2**	**+1.6**
	SNR=29									
DQRL	**Deir Qamar**	**12.09**	**282**	*e*	P		**Pn**	**17 23 06.3**	**+0.1**
HMDT	**Nahal Hemdat**	**12.10**	**275**		P		**Pn**	**17 23 06.3**	**0.0**
GHAJ	**Ghor Haditha**	**12.14**	**271**				**Pn**	**17 23 05.2**	**-1.5**
GHAJ	**Ghor Haditha**	**12.14**	**271**		P		**Pn**	**17 23 06.2**	**-0.5**
MMLI	**Mount Malkishu**	**12.18**	**276**		P		**Pn**	**17 23 07.3**	**-0.2**
MMA0B	**Mount Meron ar**	**12.20**	**279**		P		**Pn**	**17 23 07.6**	**-0.1**
MMAI	**Mount Meron Ar**	**12.20**	**279**		Pn		**Pn**	**17 23 07.7**	**0.0**
	comp=Z,2.8nm,0.3s,baz=82,slow=15,SNR=15									
MMAI					Sn		**Sn**	**17 25 18.4**	**-4.6**
	comp=Z,3.0nm,0.3s,baz=64,slow=23,SNR=1.1									
MMAI					LR		LR	17 29 10.6		
	comp=Z,1μm,18.9s,baz=85,slow=44									
	comp=Z,2.6nm,0.3s									
DSI	**Dead Sea**	**12.27**	**272**		P		**Pn**	**17 23 08.3**	**-0.3**
WBK	**Wadi Bani Khal**	**12.35**	**136**		P		**Pn**	**17 23 09.9**	**+0.1**
	SNR=10									
HNTI	**Hanita**	**12.39**	**279**		P		**Pn**	**17 23 11.0**	**+0.7**
SLTI	**Sal'it**	**12.51**	**275**		P		**Pn**	**17 23 11.8**	**-0.1**
YTIR	**Yattir**	**12.51**	**271**		P		**Pn**	**17 23 11.6**	**-0.4**
OFRI	**`Ofer**	**12.55**	**277**		P		**Pn**	**17 23 12.1**	**-0.3**
NCK	**Nalchik**	**12.55**	**339**	*i*	P		**Pn**	**17 23 15.1**	**+2.7**
ZFRI	**Zfri**	**12.57**	**268**		P		**Pn**	**17 23 12.1**	**-0.7**
NEUR	**Neytrino**	**12.64**	**336**		P		**Pn**	**17 23 17.4**	**+3.6**
AMAZ	**Amatzia**	**12.66**	**272**		P		**Pn**	**17 23 14.8**	**+0.8**
PRNI	**Paran**	**12.76**	**267**		P		**Pn**	**17 23 15.1**	**-0.2**
HRFI	**Mount Harif**	**12.79**	**265**		P		**Pn**	**17 23 15.1**	**-0.7**
EIL	**Elat**	**12.95**	**264**		Pn		**Pn**	**17 23 16.2**	**-1.7**
	comp=Z,3.3nm,0.3s,baz=46,slow=4.4,SNR=30									
EIL					Sn		**Sn**	**17 25 37.7**	**-3.5**
	comp=Z,0.7nm,0.3s,baz=58,slow=18,SNR=1.1									
EIL					Lg		Lg	17 27 06.1		
	comp=Z,1.3nm,0.3s,baz=292,slow=20,SNR=3.2									
EIL					LR		LR	17 29 32.6		
	comp=Z,2μm,19.6s,baz=84,slow=43									
EIL	**Elat**	**12.95**	**264**		P		**Pn**	**17 23 17.1**	**-0.8**
MBRI	**Mt Berech**	**12.95**	**264**		P		**Pn**	**17 23 17.1**	**-0.9**
KBZ	**Khabaz**	**12.98**	**337**		Pn		**Pn**	**17 23 22.6**	**+4.4**
	comp=Z,5.2nm,1.0s,baz=173,slow=10,SNR=5.1									
KBZ					ScP		**ScP**	**17 32 22.7**	**+0.1**
	comp=Z,5.2nm,0.9s,baz=133,slow=4.0,SNR=5.6									
KBZ	**Khabaz**	**12.98**	**337**	*ce*	P		**Pn**	**17 23 22.0**	**+3.7**
KRMI	**Paran Flat**	**13.04**	**266**		P		**Pn**	**17 23 18.9**	**-0.3**
SHA1	**Shidzhatmaz**	**13.07**	**337**	*i*	P		**Pn**	**17 23 22.1**	**+2.4**
MHTO	**MHTO**	**13.11**	**144**		P		**Pn**	**17 23 21.4**	**+1.2**
	SNR=73									
KZIT	**Kziot**	**13.18**	**270**		P		**Pn**	**17 23 21.3**	**+0.2**
KVAR	**Kislovodsk Arr**	**13.25**	**337**		Pn		**Pn**	**17 23 26.5**	**+4.4**
	comp=Z,1.6nm,0.3s,baz=253,slow=20,SNR=1.7									
KVAR					LR		LR	17 28 02.7		
	comp=Z,623nm,20.1s,baz=89,slow=35									
KIV	**Kislovodsk**	**13.25**	**337**				**Pn**	**17 23 21.9**	**-0.2**
KIV	**Kislovodsk**	**13.25**	**337**	*e*	P		**Pn**	**17 23 26.2**	**+4.1**
KIV				*e*	S		**Sn**	**17 25 55.2**	**+6.5**
KIV					pmax	pmax				
	comp=Z,47nm,1.1s									
KIV					MLR	MLR				
	comp=Z,281nm,13.0s									
BNN	**Bunyan**	**13.30**	**305**				**Pn**	**17 23 22.5**	**-0.4**
TOKA	**Tokat**	**13.63**	**312**		Pn		**Pn**	**17 23 25.6**	**-1.6**
DOK	**Doka**	**13.81**	**162**		P		**Pn**	**17 23 30.2**	**+0.5**
	SNR=63									
VSLR	**Vesyoloye**	**13.86**	**329**	*i*	P		**P**	**17 23 34.9**	**-3.5**
CSS	**Mathiatis**	**14.07**	**287**				**Pn**	**17 23 30.1**	**-3.1**
CSS	**Mathiatis**	**14.07**	**287**		P		**Pn**	**17 23 35.2**	**+2.0**
	comp=Z,38nm,1.1s									
SOC	**Sochi**	**14.10**	**329**	*e*	P		**Pn**	**17 23 32.8**	**-0.7**
SOC				*e*				17 26 10.1		
SOC					MLR	MLR				
	comp=Z,370nm,14.0s									
GOF	**Gofitskoye**	**14.14**	**340**	*ce*	P		**P**	**17 23 42.5**	**+1.1**
WHFO	**Wadi Hawf**	**14.39**	**165**		P		**Pn**	**17 23 37.0**	**-0.7**
	SNR=11									
LABN	**Labinsk**	**14.55**	**333**	*e*	P		**P**	**17 23 46.6**	**+0.6**
LABN					pmax	pmax				
	comp=Z,151nm,0.9s									
SHAO	**Shalim**	**14.80**	**158**		P		**Pn**	**17 23 44.7**	**+1.4**
	SNR=19									
ABTO	**Aybut**	**14.84**	**167**		P		**Pn**	**17 23 42.6**	**-1.3**
	SNR=24									
DMTO	**DMTO**	**14.89**	**160**		P		**Pn**	**17 23 43.6**	**-0.9**
	SNR=62									
RBK	**Rabkut**	**14.90**	**163**		P		**Pn**	**17 23 43.5**	**-1.1**
	SNR=37									
BR131	**Keskin Array S**	**15.23**	**305**				**Pn**	**17 23 47.6**	**-1.3**
BR131	**Keskin Array S**	**15.23**	**305**		P		**Pn**	**17 23 47.6**	**-1.3**
BR131					pmax	pmax				
	comp=Z,7.0nm,1.0s									
BRTR	**Keskin Array B**	**15.23**	**305**		Pn		**Pn**	**17 23 49.9**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=115,slow=12,SNR=11									
BRTR					LR		LR	17 30 53.7		
	comp=Z,548nm,18.1s,baz=110,slow=42									
BRTR					ScP		**ScP**	**17 32 27.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=129,slow=3.3,SNR=4.1									
	comp=Z,2.5nm,0.8s									
BRTR	**Keskin Array B**	**15.23**	**305**				**Pn**	**17 23 48.1**	**-0.8**
BRTR	**Keskin Array B**	**15.23**	**305**	*i*	P		**P**	**17 23 52.2**	**-1.5**
BRTR					pmax	pmax				
	comp=Z,4.0nm,0.6s									
BR106	**Keskin Array S**	**15.24**	**305**		P		**P**	**17 23 52.9**	**-1.0**
	comp=Z,246nmcomp=Z,37nm,0.9s									
ERBR	**Yeremizino-Bor**	**15.55**	**335**	*e*	P		**P**	**17 23 57.5**	**+0.3**
ERBR					pmax	pmax				
	comp=Z,159nm,0.9s									
ANTO	**Ankara**	**15.88**	**305**		S		**S**	**17 27 08.3**	**+1.8**
ANTO	**Ankara**	**15.88**	**305**		Pn		**Pn**	**17 23 55.6**	**-1.7**
ANTO	**Ankara**	**15.88**	**305**		P		**Pn**	**17 23 55.6**	**-1.7**
ANTO					pmax	pmax				
	comp=Z,17nm,0.8s									
KBL	**Kabul**	**16.33**	**76**		P		**P**	**17 24 09.5**	**+3.4**
	SNR=24									
KBL	**Kabul**	**16.33**	**76**				**Pn**	**17 24 04.3**	**+1.0**
KBL	**Kabul**	**16.33**	**76**		P		**Pn**	**17 24 04.3**	**+1.0**
KBL					pmax	pmax				
	comp=Z,46nm,1.6s									
ISP	**Isparta**	**16.86**	**296**		P		**P**	**17 24 12.7**	**+0.9**
ISP					IAmb	IAmb		17 24 19.0		
	comp=Z,118nm,1.1s									
ISP	**Isparta**	**16.86**	**296**	*ce*	P		**P**	**17 24 12.0**	**+0.2**
ISP					pmax	pmax				
	comp=Z,118nm,1.3s									
ELL	**Elmali**	**17.10**	**292**		P		**P**	**17 24 14.5**	**0.0**
ELL	**Elmali**	**17.10**	**292**		P		**P**	**17 24 14.5**	**0.0**
ELL					pmax	pmax				
	comp=Z,71nm,0.8s									
CHGR	**Chuyangaron**	**17.18**	**62**		P		**P**	**17 24 14.6**	**-0.7**
CHGR	**Chuyangaron**	**17.18**	**62**		P		**P**	**17 24 14.6**	**-0.7**
CHGR					pmax	pmax				
	comp=Z,176nm,0.8s									
AKAS	**Kas**	**17.26**	**290**		P		**Pn**	**17 24 15.4**	**+0.5**
AKAS					IAmb	IAmb		17 24 17.9		
	comp=Z,237nm,1.9s									
BORA	**Eskisehir**	**17.54**	**302**		P		**P**	**17 24 19.8**	**+0.5**
SIM	**Simferopol'**	**17.85**	**321**	*e*	P		**P**	**17 24 28.2**	**+5.6**
SIM					pmax	pmax				
	comp=Z,55nm,1.3s									
GAR	**Garm**	**18.14**	**61**		P		**Pn**	**17 24 25.6**	**-0.2**
GAR					IAmb	IAmb		17 24 29.9		
	comp=Z,120nm,0.8s									
ARG	**Arkhangelos**	**18.44**	**289**		P		**Pn**	**17 24 29.6**	**+0.2**
ARG					IAmb	IAmb		17 24 31.6		
	comp=Z,160nm,1.4s									
ARG	**Arkhangelos**	**18.44**	**289**		P		**Pn**	**17 24 29.6**	**+0.2**
ARG					pmax	pmax				
	comp=Z,160nm,1.4s									
MANT	**Manisa**	**18.53**	**297**		P		**P**	**17 24 30.6**	**+0.2**
CHM	**Chimkent**	**18.87**	**51**	*e*	P		**P**	**17 24 34.2**	**+0.3**
CHM	**Chimkent**	**18.87**	**51**	*e*	P		**P**	**17 24 34.2**	**+0.3**
AB31	**Akbulak array**	**18.93**	**21**		P		**P**	**17 24 34.3**	**-0.2**
ABKAR	**Akbulak array**	**18.93**	**21**		P		**P**	**17 24 34.3**	**-0.2**
IUG	**Iuzhnay**	**19.08**	**52**	*e*	P		**P**	**17 24 36.6**	**+0.3**
IUG	**Iuzhnay**	**19.08**	**52**	*e*	P		**P**	**17 24 36.5**	**+0.3**
KARP	**Karpathos**	**19.15**	**287**		P		**P**	**17 24 37.2**	**+0.2**
KARP					IAmb	IAmb		17 24 47.0		
	comp=Z,75nm,0.9s									
BALB	**Balikesir**	**19.34**	**300**		P		**P**	**17 24 38.4**	**-0.6**
BALB					IAmb	IAmb		17 24 44.4		
	comp=Z,130nm,1.8s									
BRLS	**Boroldav**	**19.35**	**49**	*e*	P		**P**	**17 24 36.9**	**-2.3**
BRLS	**Boroldav**	**19.35**	**49**	*e*	P		**P**	**17 24 36.9**	**-2.3**
BAND	**Balkesir-Ban**	**19.40**	**302**	⇓	P		**Pn**	**17 24 42.2**	**+1.3**
AKTO	**Aktyubinsk**	**19.49**	**16**		P		**P**	**17 24 40.9**	**+0.3**
	comp=Z,2.1nm,0.3s,baz=207,slow=9.3,SNR=67									
AKTO					ScP		**ScP**	**17 32 33.2**	**-2.0**
	comp=Z,4.1nm,0.8s,baz=174,slow=0.2,SNR=6.3									
	comp=Z,48nm,1.0s									
NIL	**Nilore**	**19.80**	**79**		P		**P**	**17 24 44.4**	**+0.2**
NIL					IAmb	IAmb		17 24 48.1		
	comp=Z,61nm,0.9s									
NIL	**Nilore**	**19.80**	**79**		P		**P**	**17 24 44.4**	**+0.2**
NIL					pmax	pmax				
	comp=Z,61nm,0.9s									
KK31	**Karatay Array**	**19.82**	**50**		P		**P**	**17 24 43.9**	**-0.4**
KK31	**Karatay Array**	**19.82**	**50**		P		**P**	**17 24 43.9**	**-0.4**
KK31					pmax	pmax				
	comp=Z,48nm,1.2s									
KKAR	**Karatay Array**	**19.82**	**50**		P		**P**	**17 24 43.8**	**-0.5**
KKAR	**Karatay Array**	**19.82**	**50**		P		**P**	**17 24 43.8**	**-0.5**
VRH	**Novokhopyorsk**	**20.17**	**345**	*e*	P		**P**	**17 24 46.3**	**-1.6**
VRH				*e*	S		**S**	**17 28 32.0**	**-1.1**
VRH					pmax	pmax				
	comp=Z,120nm,0.8s									
VRH					smax	smax				
	comp=E,130nm,0.8s									
DZA	**Taraz**	**20.27**	**51**	*e*	P		**P**	**17 24 49.6**	**+0.4**
DZA	**Taraz**	**20.27**	**51**	*e*	P		**P**	**17 24 49.5**	**+0.4**
BELG	**Belogornoye**	**20.53**	**356**		P		**P**	**17 24 51.4**	**-0.3**
	comp=E,289nm,0.9s,baz=123,slow=1.5,SNR=108									
BELG					S		**S**	**17 28 35.7**	**-4.4**
	comp=E,5.9nm,0.8s,baz=217,slow=21,SNR=1.2									
BELG	**Belogornoye**	**20.53**	**356**	*i*	P		**P**	**17 24 51.5**	**-0.3**
BELG					pmax	pmax				
	comp=Z,42nm,0.8s									
VORD	**Divnogorie**	**20.56**	**341**	*e*	P		**P**	**17 24 50.0**	**-2.1**
VORD					pmax	pmax				
	comp=Z,100nm,0.6s									
APE	**Apeiranthos**	**20.62**	**291**	⇑	P		**P**	**17 24 54.2**	**+1.2**
APE	**Apeiranthos**	**20.62**	**291**	⇑	P		**P**	**17 24 54.2**	**+1.2**
NE56	**Odesa**	**20.68**	**321**		P		**P**	**17 24 53.9**	**+0.4**
MFTR	**Murfatlar**	**20.74**	**312**	⇓	P		**P**	**17 24 55.5**	**+1.3**
ARSB	**Arslanbob**	**20.80**	**57**		P		**P**	**17 24 54.8**	**-0.3**
ARSB	**Arslanbob**	**20.80**	**57**		P		**P**	**17 24 54.8**	**-0.3**
ARSB					pmax	pmax				
	comp=Z,51nm,1.0s									
VSR	**Storozhevoye**	**20.82**	**341**	*e*	P		**P**	**17 24 51.8**	**-3.1**
VSR				*e*	S		**S**	**17 28 40.5**	**-5.4**
VSR					pmax	pmax				
	comp=Z,70nm,0.6s									
VSR					smax	smax				
	comp=N,90nm,1.0s									
TIRR	**Tirgusor**	**20.88**	**313**		P		**P**	**17 24 56.1**	**+0.4**
TIRR	**Tirgusor**	**20.88**	**313**	⇑	P		**P**	**17 24 55.9**	**+0.2**
TIRR	**Tirgusor**	**20.88**	**313**	⇑	P		**P**	**17 24 55.9**	**+0.2**
TIRR	**Tirgusor**	**20.88**	**313**		P		**P**	**17 24 56.3**	**+0.6**
	comp=N,57nm,0.9s									
IDI	**Anoyia**	**20.99**	**286**		P		Pn	17 24 58.6	-1.2	
IDI	**Anoyia**	**20.99**	**286**		P		**P**	**17 24 57.5**	**+0.4**
	comp=N,68nm,0.8s,baz=103,slow=8.9,SNR=26									
	comp=N,68nm,0.8s									
IDI	**Anoyia**	**20.99**	**286**		P		**P**	**17 24 57.4**	**+0.4**
TLCR		**21.01**	**315**	⇑	P		**P**	**17 24 58.0**	**+1.0**
TLCR		**21.01**	**315**	⇑	P		**P**	**17 24 58.0**	**+1.0**
TPGR	**Topolog**	**21.07**	**314**	⇑	P		**P**	**17 24 58.9**	**+1.0**
TLBR	**Topalu**	**21.15**	**313**	⇑	P		**P**	**17 24 59.9**	**+1.3**
PURM	**Purcari**	**21.15**	**319**	⇑	P		**P**	**17 24 59.0**	**+0.4**
VORR	**Voronezh**	**21.22**	**342**	*e*	P		**P**	**17 24 57.3**	**-1.9**
VORR					pmax	pmax				
	comp=Z,80nm,0.5s									
ATD	**Arta Tunnel**	**21.27**	**199**		P		**P**	**17 25 03.0**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=5.0,slow=3.3,SNR=5.1									
ATD					LR		LR	17 33 49.2		
	comp=Z,27nm,20.9s,baz=6.0,slow=38									
ATD	**Arta Tunnel**	**21.27**	**199**		P		**P**	**17 25 00.1**	**-0.1**
ATD					IAmb	IAmb		17 25 12.2		
	comp=Z,88nm,1.4s									
CFR	**Carcaliu**	**21.41**	**314**	⇑	P		**P**	**17 25 01.4**	**0.0**
CFR	**Carcaliu**	**21.41**	**314**	⇑	P		**P**	**17 25 01.4**	**0.0**
RDO	**Rodhopi**	**21.50**	**302**		P		**P**	**17 25 02.3**	**-0.1**
RDO					IAmb	IAmb		17 25 18.6		
	comp=Z,70nm,1.1s									
RAZG	**Razgrad**	**21.70**	**309**	⇑	P		P	17 24 56.5	-8.0	
VLDR	**Vladesti**	**21.79**	**316**	⇓	P		**P**	**17 25 06.0**	**+0.5**
ELND	**Elena**	**21.87**	**307**	⇓	P		**P**	**17 25 08.2**	**+1.8**
VARL	**Varlezi**	**21.96**	**316**	⇑	P		**P**	**17 25 06.5**	**-0.8**
MILM	**Milestii Mici**	**21.97**	**319**	⇓	P		**P**	**17 25 06.3**	**-1.1**
MILM	**Milestii Mici**	**21.97**	**319**	⇓	P		**P**	**17 25 06.3**	**-1.1**
MILM	**Milestii Mici**	**21.97**	**319**	*e*	P		**P**	**17 25 05.0**	**-2.4**
	comp=Z,60nm,1.0s									
LPSR	**Galich'ya Gora**	**22.13**	**342**	*e*	P		**P**	**17 25 06.5**	**-2.5**
LPSR				*e*	S		**S**	**17 29 06.6**	**-5.0**
LPSR					pmax	pmax				
	comp=Z,110nm,0.7s									
LPSR					smax	smax				
	comp=N,110nm,1.4s									
GHRR		**22.30**	**316**	⇓	P		**P**	**17 25 12.7**	**+1.7**
AAK	**Ala-Archa**	**22.31**	**54**		LR		LR	17 35 14.2		
	comp=N,1μm,20.5s,baz=266,slow=40									
AAK	**Ala-Archa**	**22.31**	**54**		P		**P**	**17 25 10.5**	**-0.8**
AAK					IAmb	IAmb		17 25 26.1		
	comp=Z,65nm,1.4s									
AAK	**Ala-Archa**	**22.31**	**54**	*ce*	P		**P**	**17 25 11.8**	**+0.5**
AAK					pmax	pmax				
	comp=Z,17nm,1.0s									
ISR	**Istrita**	**22.36**	**313**	⇑	P		**P**	**17 25 14.3**	**+2.6**
ISR	**Istrita**	**22.36**	**313**	⇑	P		**P**	**17 25 14.3**	**+2.6**
ISR	**Istrita**	**22.36**	**313**		P		**P**	**17 25 14.2**	**+2.5**
	comp=Z,110nm,1.2s									
PANC	**Panciu**	**22.36**	**315**	⇓	P		**P**	**17 25 14.2**	**+2.5**
VASR	**Vaslui**	**22.39

LOT Lotru 24.26 311 ⇑P **P** **17 25 30.5 -0.2**
LUBAR Lubar, Ukraine 24.36 324 P **P** **17 25 31.3 -0.1**
TARG Taragay, Kyrgy 24.39 58 P **P** **17 25 32.3 +0.1**
TARG IAmb IAmb 17 25 35.2
comp=Z,36nm,0.9s
TARG Taragay, Kyrgy 24.39 58 P **P** **17 25 32.3 +0.1**
TARG pmax pmax
comp=Z,36nm,0.9s
BURAR Bucovina Array 24.40 317 P **P** **17 25 31.9 0.0**
BURAR Bucovina Array 24.40 317 ⇓P **P** **17 25 33.4 +1.5**
BURAR Bucovina Array 24.40 317 ⇓P **P** **17 25 33.4 +1.5**
MI30 MI30.Zelenitsa 24.68 326 P **P** **17 25 34.4 +0.1**
comp=Z,3µmcomp=Z,282nm,0.8s
BRZS Berezniki 24.83 37 *e*P **P** **17 25 36.6 +0.9**
BRZS Berezniki 24.83 37 *e*P **P** **17 25 36.6 +0.9**
GZR Gura Zlata 24.88 310 ⇓P **P** **17 25 36.9 +0.7**
GZR Gura Zlata 24.88 310 ⇓P **P** **17 25 36.9 +0.7**
CJR Cluj-Napoca 24.93 314 ⇑P **P** **17 25 38.7 +2.1**
CJR Cluj-Napoca 24.93 314 ⇑P **P** **17 25 38.7 +2.1**
BOVS Bovan 24.97 306 ⇑P **P** **17 25 38.0 +1.1**
OBN Obninsk 25.01 342 LR LR 17 37 03.3
comp=Z,334nm,18.4s,baz=48,slow=40
OBN Obninsk 25.01 342 P **P** **17 25 35.9 -1.2**
OBN Obninsk 25.01 342 *d* P **P** **17 25 38.1 +0.9**
OBN *e**PP **pP** **17 25 42.8 -1.8**
OBN PPP PPP 17 26 16.0
OBN *i* S **S** **17 30 04.3 +4.7**
OBN *i* S S 17 30 06.7 +7.1
OBN *e*SS **SnSn** **17 30 53.1 +4.0**
OBN *e*SSS SSS 17 31 07.9
OBN pmax pmax
comp=Z,35nm,1.0s
OBN MLR MLR
comp=Z,295nm,19.0s
OBN Obninsk 25.01 342 P **P** **17 25 36.4 -0.8**
comp=Z,36nm,1.1s
PRZ Przheval'sk 25.01 57 P **P** **17 25 36.7 -0.9**
PRZ Przheval'sk 25.01 57 P **P** **17 25 36.7 -0.9**
PRZ pmax pmax
comp=Z,76nm,0.8s
SATY Saty 25.17 56 *e*P **P** **17 25 39.5 +0.4**
comp=Z,23nm,0.8s
SATY Saty 25.17 56 *e*P **P** **17 25 39.4 +0.4**
SATY pmax pmax
comp=Z,23nm,0.8s
ARTI Arti 25.20 11 LR LR 17 37 56.2
comp=Z,249nm,19.4s,baz=195,slow=42
ARTI Arti 25.20 11 P **P** **17 25 38.1 -0.7**
ARTI IAmb IAmb 17 25 41.8
comp=Z,47nm,0.9s
ARTI Arti 25.20 11 *c i*P **P** **17 25 39.2 +0.3**
ARTI 17 26 12.7
ARTI S **S** **17 30 06.6 +4.0**
ARTI SS **SnSn** **17 30 59.8 +6.1**
ARTI pmax pmax
comp=Z,71nm,1.1s
MARR Marisel-Cluj 25.20 313 ⇑P **P** **17 25 40.2 +1.0**
WUS Wushi 25.30 60 P **P** **17 25 39.5 -0.7**
MOS Moscow 25.30 344 *e*P **P** **17 25 39.4 -0.5**
MOS *e*S **S** **17 30 09.9 +5.6**
MOS pmax pmax
comp=Z,94nm,0.8s
MDVR Moldovita 25.35 308 ⇑P **P** **17 25 41.8 +1.3**
DRGR 25.51 313 ⇑P **P** **17 25 43.5 +1.6**
DRGR 25.51 313 ⇑P **P** **17 25 43.5 +1.6**
MESR Meseseni 25.52 314 ⇓P **P** **17 25 44.0 +2.0**
UZB Uzynbulak 25.63 56 *e*P **P** **17 25 43.7 +0.5**
comp=Z,20nm,0.7s
UZB Uzynbulak 25.63 56 *e*P **P** **17 25 43.7 +0.5**
UZB pmax pmax
comp=Z,20nm,0.7s
TDK Taldyqorghan 25.79 51 *e*P **P** **17 25 45.1 +0.5**
comp=Z,41nm,1.0s
TDK LR LR 17 36 55.8
comp=Z,656nm,11.1s
TDK Taldyqorghan 25.79 51 *e*P **P** **17 25 45.0 +0.5**
TDK pmax pmax
comp=Z,41nm,1.0s
TDK MLR MLR
comp=Z,656nm,11.0s
BORK Borovoye 25.82 29 P **P** **17 25 44.5 0.0**
BORK Borovoye 25.82 29 *ce*P **P** **17 25 45.4 +0.8**
BORK pmax pmax
comp=Z,16nm,1.3s
BVAR Borovoye Array 25.83 29 P **P** **17 25 45.3 +0.6**
comp=Z,11nm,0.7s,baz=230,slow=7.2,SNR=63
BVAR PcP **PcP** **17 29 13.6 0.0**
comp=Z,4.3nm,0.7s,baz=251,slow=1.7,SNR=5.1
BVAR LR LR 17 38 02.8
comp=Z,651nm,18.3s,baz=232,slow=41
comp=Z,11nm,0.7s
SHLS Shalkode 25.94 56 *e*P **P** **17 25 49.0 +2.9**
comp=Z,17nm,0.8s
SHLS Shalkode 25.94 56 *e*P **P** **17 25 48.9 +2.9**
SHLS pmax pmax
comp=Z,17nm,0.8s
SIRR Siria 25.95 312 ⇓P **P** **17 25 48.0 +2.1**
SVE Sverdlovsk 26.02 14 *ce*P **P** **17 25 47.6 +1.2**
SVE pmax pmax
comp=Z,36nm,1.1s
SVE MLR MLR
comp=Z,486nm,16.0s
BRIU Brid 26.04 317 P **P** **17 25 48.4 +1.8**
KIRV Kirov 26.67 360 LR LR 17 38 58.7
comp=Z,320nm,20.4s,baz=184,slow=42
KIRV Kirov 26.67 360 *ce*P **P** **17 25 52.7 +0.5**
MNK Minsk 27.43 332 *i* P **P** **17 25 59.1 0.0**
comp=E,24nm,1.0s
MNK *i* P **P** **17 25 59.1 0.0**
comp=N,31nm,1.1s
MNK *i* P **P** **17 25 59.1 0.0**
comp=Z,34nm,1.0s,baz=136
MNK *i* PP **PnPn** **17 26 42.8 -1.1**
MNK *i* PPP PPP 17 26 53.1
MNK *i* S **S** **17 30 40.9 +3.0**
MNK *i* SS **SnSn** **17 31 54.2 +5.9**
MNK *i* LR LR 17 35 28.0
MNK *i* LRM MLR 17 38 01.3
comp=Z,290nm,17.3s
MNK Minsk 27.43 332 *i* P **P** **17 25 59.1 0.0**
MNK *i* 17 26 42.8
MNK *i* PPP PPP 17 26 53.0
MNK *i* S **S** **17 30 40.9 +3.0**
MNK *i* SS **SnSn** **17 31 54.2 +5.9**
MNK pmax pmax
comp=E,24nm,1.0s
MNK pmax pmax
comp=N,31nm,1.1s
MNK pmax pmax
comp=Z,34nm,1.0s
MNK MLR MLR
comp=Z,290nm,17.0s
MNK MLR MLR
comp=N,267nm,20.0s
MNK MLR MLR
comp=E,260nm,18.0s
STHS Stebnicka Huta 27.59 318 *e*P **P** **17 26 05.4 +4.8**
STHS Stebnicka Huta 27.59 318 *e*P **P** **17 26 05.4 +4.8**
PSZ Piszkesteto 27.72 314 P **P** **17 26 02.7 +0.9**
PSZ Piszkesteto 27.72 314 P **P** **17 26 02.7 +0.9**
PSZ pmax pmax
comp=Z,9.0nm,0.8s
TIP Timpagrande 27.72 294 P **P** **17 26 02.2 +0.2**
TIP Timpagrande 27.72 294 ⇑P **P** **17 26 04.7 +2.7**
MORH Mrgy, Hungar 27.87 310 ⇑P **P** **17 26 03.4 +0.3**
MORH Mrgy, Hungar 27.87 310 P **P** **17 26 04.0 +0.9**
comp=Z,16nm,1.4s
NACGM Naroch 28.16 331 *e*P **P** **17 26 06.4 +0.7**
KURBB Kurchatov Arra 28.30 40 P **P** **17 26 07.8 +0.9**
comp=Z,19nm,0.9s,baz=243,slow=7.1,SNR=4.9
KURBB PcP **PcP** **17 29 19.6 +0.1**
comp=Z,1.6nm,0.7s,baz=236,slow=2.5,SNR=5.0
KURBB LR LR 17 38 55.8
comp=Z,629nm,18.6s,baz=164,slow=40
comp=Z,19nm,0.9s
KURK Kurchatov 28.39 40 P **P** **17 26 07.9 +0.1**
KURK IAmb IAmb 17 26 10.1
comp=Z,23nm,0.8s
KURK Kurchatov 28.39 40 **PcP** **17 29 19.6 -0.1**
KURK Kurchatov 28.39 40 *ce*P **P** **17 26 09.2 +1.5**
KURK pmax pmax
comp=Z,48nm,1.3s
LANS Liptovska Anna 28.50 316 *e*P **P** **17 26 10.6 +1.8**
LANS Liptovska Anna 28.50 316 *e*P **P** **17 26 10.6 +1.8**

MAKZ Makanchi 28.76 50 P **P** **17 26 10.7 -0.4**
MAKZ Makanchi 28.76 50 P **P** **17 26 10.7 -0.4**
MAKZ pmax pmax
comp=Z,10.0nm,1.0s
OJC Ojcow 28.79 318 P **P** **17 26 11.1 -0.2**
OJC Ojcow 28.79 318 P **P** **17 26 11.1 -0.2**
OJC Ojcow 28.79 318 P **P** **17 26 11.6 +0.3**
comp=Z,19nm,1.5s
MK31 Makanchi Array 28.95 50 *i* P **P** **17 26 13.7 +0.9**
MKAR Makanchi Array 28.95 50 P **P** **17 26 13.9 +1.1**
comp=Z,8.9nm,0.7s,baz=244,slow=8.1,SNR=70
MKAR LR LR 17 39 56.5
comp=Z,688nm,18.6s,baz=240,slow=41
comp=Z,8.9nm,0.7s
MKAR Makanchi Array 28.95 50 P **P** **17 26 12.1 -0.8**
MKAR Makanchi Array 28.95 50 *i* P **P** **17 26 13.8 +1.0**
MKAR pmax pmax
comp=Z,10.0nm,0.7s
SUW Suwalki 29.14 327 *e*P **P** **17 26 14.1 -0.1**
SUW Suwalki 29.14 327 P **P** **17 26 13.8 -0.5**
SUW Suwalki 29.14 327 P **P** **17 26 13.8 -0.5**
SEM Semipalatinsk 29.15 42 *e*P **P** **17 26 15.4 +0.6**
SEM LR LR 17 38 51.6
SEM Semipalatinsk 29.15 42 *e*P **P** **17 26 15.3 +0.6**
VAE Valguarnera 29.49 291 LR LR 17 41 08.4
comp=Z,169nm,18.3s,baz=308,slow=42
MODS Modra-Piesok 29.51 313 *e*P **P** **17 26 16.1 -1.6**
MODS Modra-Piesok 29.51 313 *e*P **P** **17 26 16.1 -1.6**
KOGS Kog 29.52 309 *i* P **P** **17 26 18.6 +0.8**
KLMR Klimovskoe 29.73 350 *e*P **P** **17 26 18.1 -1.3**
KLMR S **S** **17 31 14.8 +0.9**
KLMR pmax pmax
comp=Z,77nm,0.9s
HYBB Hyderabad (bro 29.75 112 *e*P **P** **17 26 19.9 -0.3**
STEB Steborice 29.83 316 *e*P **P** **17 26 21.2 +0.7**
RONA Rosalia, Austr 29.89 312 *e*P **P** **17 26 21.8 +0.7**
comp=Z,4.5nm,0.6s
MORC Moravsky Berou 29.90 316 ⇓P **P** **17 26 20.5 -0.7**
MORC Moravsky Berou 29.90 316 *e*P **P** **17 26 21.3 +0.1**
MORC Moravsky Berou 29.90 316 ⇓P **P** **17 26 20.5 -0.7**
BOJS Bojanci 29.92 307 *i* P **P** **17 26 22.2 +0.8**
ARSA Arzberg 30.24 310 *e*P **P** **17 26 25.1 +0.9**
comp=Z,3.6nm,0.6s
CONA Conrad Observa 30.24 312 *e*P **P** **17 26 24.8 +0.5**
comp=Z,4.8nm,1.0s
VRAC Vranov 30.28 315 ⇓P **P** **17 26 25.6 +1.1**
VRAC Vranov 30.28 315 *e*P **P** **17 26 24.9 +0.4**
VRAC Vranov 30.28 315 ⇓P **P** **17 26 25.6 +1.1**
KRUC Moravsky 30.31 314 *e*P **P** **17 26 25.2 +0.4**
SOKA Soboth 30.39 309 *e*P **P** **17 26 26.2 +0.7**
comp=Z,3.3nm,0.9s
AQU L'Aquila 30.61 300 P **P** **17 26 30.6 +3.1**
OBKA Obir 30.66 309 *e*P **P** **17 26 28.9 +0.9**
comp=Z,10nm,1.5s
ZSN Zaisan 30.83 50 *e*P **P** **17 26 30.1 +0.7**
ZSN Zaisan 30.83 50 *e*P **P** **17 26 30.1 +0.7**
DPC Dobruska-Polom 30.86 316 *e*P **P** **17 26 30.0 +0.4**
DPC Dobruska-Polom 30.86 316 *e*P **P** **17 26 30.0 +0.4**
DPC Dobruska-Polom 30.86 316 P **P** **17 26 29.7 +0.1**
comp=Z,8.2nm,1.0s
FDMO Fordimonte 30.94 302 IAmb IAmb 17 26 49.0
comp=Z,21nm,1.0s
OSTC Ostas 31.00 317 *e*P **P** **17 26 31.6 +0.7**
OSTC Ostas 31.00 317 *e*P **P** **17 26 31.6 +0.7**
UPC Upice 31.10 317 *e*P **P** **17 26 32.3 +0.6**
UPC Upice 31.10 317 *e*P **P** **17 26 32.3 +0.6**
CHVC Chvalec 31.11 317 *e*P **P** **17 26 32.1 +0.3**
CHVC Chvalec 31.11 317 *e*P **P** **17 26 32.1 +0.3**
MOA Molln 31.23 311 *e*P **P** **17 26 33.5 +0.6**
comp=Z,12nm,1.0s
LODK Lodwar 31.42 208 P **P** **17 26 34.8 -0.1**
CKRC Cesky Krumlov 31.51 313 *e*P **P** **17 26 35.5 +0.1**
CKRC Cesky Krumlov 31.51 313 *e*P **P** **17 26 35.5 +0.1**
BIOA Bad Ischl, Aus 31.59 310 *e*P **P** **17 26 36.5 +0.4**
comp=Z,1.4nm,0.3s,SNR=6.4
KBA Koelnbreinsper 31.61 309 *e*P **P** **17 26 37.2 +0.7**
comp=Z,11nm,0.6s
ZVC Zvikov 31.79 314 *e*P **P** **17 26 38.2 +0.4**
STAL STALIGIAL 31.83 308 P **P** **17 26 38.4 +0.2**
STAL IAmb IAmb 17 26 53.2
comp=Z,18nm,1.0s
GERES GERESS Array B 31.90 313 P **P** **17 26 38.9 0.0**
comp=Z,1.0nm,0.6s,baz=97,slow=9.5,SNR=8.8
GERES PcP **PcP** **17 29 29.4 +0.4**
comp=Z,0.9nm,0.5s,baz=129,slow=1.9,SNR=4.4
GERES ScP **ScP** **17 33 11.4 +0.5**
comp=Z,4.2nm,0.9s,baz=126,slow=2.3,SNR=17
comp=Z,1.0nm,0.6s
WMQ Urumqi 31.94 57 *e*P **P** **17 26 41.0 +1.7**
WMQ pP pP 17 26 45.8 -1.0
WMQ S **S** **17 31 52.3 +3.2**
WMQ pmax pmax
comp=Z,21nm,0.7s
WMQ LR LR
comp=Z,410nm,9.9s
WMQ LR LR
comp=Z,590nm,12.5s
WMQ LR LR
comp=Z,270nm,16.9s
CIMO Cimolais 32.02 308 P **P** **17 26 38.6 -1.3**
KHC Kasperske Hory 32.07 313 *ce*P **P** **17 26 41.2 +0.9**
KHC pmax pmax
comp=Z,13nm,1.7s
KHC Kasperske Hory 32.07 313 *e*P **P** **17 26 40.7 +0.4**
ABTA Abfaltersbach 32.08 308 *i* P **P** **17 26 41.0 +0.6**
comp=Z,14nm,1.0s,SNR=5.3
LESA Schwarzleotal 32.14 310 *e*P **P** **17 26 41.1 0.0**
comp=Z,5.2nm,0.4s
RJOB Jochberg 32.15 310 *e*P **P** **17 26 41.3 +0.2**
comp=Z,9.3nm,0.8s,baz=108,slow=8.9
EVN Everest 32.23 87 P **P** **17 26 41.2 -1.5**
EVN IAmb IAmb 17 27 00.3
comp=Z,26nm,0.8s
BRG Berggiesshubel 32.45 316 *e*P **P** **17 26 43.4 -0.2**
comp=Z,3.3nm,0.8s,baz=108,slow=8.9
CTI Castel Tesino 32.50 307 IAmb IAmb 17 27 08.8
comp=Z,19nm,1.1s
WET Wettzell 32.51 313 *e*P **P** **17 26 44.2 0.0**
comp=Z,6.2nm,0.9s,baz=108,slow=8.9
WET *e*L L 17 45 32.0
comp=Z,120nm,20.3s
WTTA Wattenberg 32.78 309 *i* P **P** **17 26 46.8 0.0**
comp=Z,12nm,0.5s,SNR=9.3
WTTA *i* S **S** **17 31 59.7 -2.7**
comp=Z,4.1nm,0.6s
WATA Walderalm 32.84 309 *i* P **P** **17 26 47.0 -0.3**
comp=Z,11nm,0.7s,SNR=8.3
SQTA Sankt Quirin 33.06 309 *i* P **P** **17 26 48.9 -0.2**
comp=Z,20nm,0.5s,SNR=10.0
SQTA *e*S **S** **17 32 03.6 -3.0**
comp=Z,11nm,0.7s
SQTA *e*ScP **ScP** **17 33 15.6 +0.6**
comp=Z,2.5nm,0.4s
ROTZ Rotzenmuhle 33.12 314 *e*P **P** **17 26 50.1 +0.6**
comp=Z,2.5nm,1.1s,baz=108,slow=8.9
DGZ Jazzator, Alta 33.14 47 *i* P **P** **17 26 51.0 +1.1**
DGZ pmax pmax
comp=Z,18nm,0.9s
MOTA Moosalm 33.16 309 *i* P **P** **17 26 49.6 -0.4**
comp=Z,20nm,0.8s,SNR=9.7
MOTA *e*S **S** **17 32 05.0 -3.2**
comp=Z,13nm,0.9s
MOTA *e*ScP **ScP** **17 33 15.4 +0.1**
comp=Z,17nm,1.0s
CLL Collm 33.17 317 *i* P **P** **17 26 50.8 +1.0**
CLL pmax pmax
comp=Z,12nm,0.9s
CLL Collm 33.17 317 *e*P **P** **17 26 50.7 +0.8**
comp=Z,11nm,0.9s,baz=108,slow=8.9
CLL *e*L L 17 39 37.3
comp=Z,119nm,21.9s
CLL Collm 33.17 317 P **P** **17 26 49.9 +0.1**
comp=Z,13nm,0.9s
CLL Collm 33.17 317 *i* P **P** **17 26 50.8 +1.0**
comp=Z,12nm,0.9s
CLL *e*PPP PPP 17 28 12.0
CLL *i* ScP **ScP** **17 33 15.4 +0.4**
comp=Z,13nm,1.5s
FUR Furstenfeldbru 33.25 311 *e*P **P** **17 26 51.2 +0.6**
comp=Z,34nm,0.8s,baz=108,slow=8.9
FUR *e*L L 17 43 14.5
comp=Z,146nm,19.9s
MANZ Manzenberg 33.25 314 *e*P **P** **17 26 51.5 +0.8**
comp=Z,2.3nm,1.3s,baz=108,slow=8.9
ZAA0 Zalesovo Array 33.29 38 P **P** **17 26 49.7 -1.1**

ZALV Zalesovo Beam 33.29 38 P **P** **17 26 51.3 +0.4**
comp=Z,23nm,0.8s,baz=254,slow=9.1,SNR=87
ZALV PcP **PcP** **17 29 31.9 -0.6**
comp=Z,2.5nm,0.6s,baz=232,slow=5.0,SNR=4.3
ZALV LR LR 17 42 45.8
comp=Z,246nm,19.4s,baz=231,slow=41
comp=Z,23nm,0.8s
FINES FINESS Array B 33.33 339 P **P** **17 26 50.7 -0.4**
comp=Z,8.0nm,0.8s,baz=144,slow=7.6,SNR=26
FINES LR LR 17 41 22.6
comp=Z,238nm,18.1s,baz=186,slow=38
comp=Z,8.0nm,0.8s
FINES FINESS Array B 33.33 339 *i* P **P** **17 26 51.0 -0.1**
FINES pmax pmax
comp=Z,8.0nm,0.8s
FETA Feichten 33.33 308 *i* P **P** **17 26 51.6 +0.1**
comp=Z,13nm,0.6s,SNR=8.2
FETA *e*S **S** **17 32 07.4 -3.5**
comp=Z,2.4nm,0.6s
FETA *i* ScP **ScP** **17 33 15.4 -0.6**
comp=Z,11nm,0.9s
RETA Reutte 33.41 309 *e*P **P** **17 26 51.7 -0.4**
comp=Z,3.4nm,0.4s
RETA *e*S **S** **17 32 09.0 -3.0**
comp=Z,6.0nm,0.8s
RETA *e*ScP **ScP** **17 33 16.4 +0.3**
comp=Z,4.4nm,0.6s
KEST Kesra 33.64 288 P **P** **17 26 56.7 +2.4**
comp=Z,9.7nm,1.0s,baz=286,slow=4.5,SNR=4.7
GRF Grafenberg Arr 33.70 313 *e*P **P** **17 26 54.7 +0.2**
comp=Z,9.7nm,0.7s,baz=108,slow=8.9
GRF *e*L L 17 49 19.9
comp=Z,113nm,19.2s
BSD Bornholm Skovb 33.75 324 *i* P **P** **17 26 54.4 -0.5**
BSD IAmb IAmb 17 26 54.6
comp=Z,87nm,0.8s
MOX Moxa 33.76 315 *e*L L 17 40 06.9
comp=Z,125nm,21.7s
DAVOX Davos/Dischmat 33.85 308 LR LR 17 43 50.6
comp=Z,153nm,20.8s,baz=89,slow=42
UBR Ueberruh 33.89 309 *e*P **P** **17 26 56.1 -0.2**
comp=Z,17nm,0.8s,baz=108,slow=8.9
DAVA Damuels 33.95 309 *e*P **P** **17 26 56.6 -0.4**
comp=Z,27nm,0.5s,SNR=11
DAVA *e*S **S** **17 32 17.1 -3.4**
comp=Z,21nm,1.5s
FLTG Flechtingen 34.56 318 *e*P **P** **17 27 02.5 +0.7**
comp=Z,12nm,0.9s,baz=108,slow=8.9
LUNU Lund 34.73 324 *i* P **P** **17 27 03.2 -0.2**
GORT1 Trebel 34.76 319 *e*P **P** **17 27 04.7 +1.2**
baz=108,slow=8.9
ASSE Asse, Remlinge 34.81 317 *e*P **P** **17 27 05.0 +0.9**
comp=Z,10nm,1.0s,baz=108,slow=8.9
CLZ Clausthal 34.89 316 *e*P **P** **17 27 05.7 +0.8**
comp=Z,16nm,0.8s,baz=108,slow=8.9
DEL Delary 34.93 325 *i* P **P** **17 27 04.8 -0.3**
BJUU Bjuv 35.15 324 *i* P **P** **17 27 07.2 +0.2**
BFO Black Forest 35.20 310 *e*L L 17 40 47.0
comp=Z,101nm,18.4s
LSA Lhasa 35.45 82 IAmb IAmb 17 27 14.2
comp=Z,39nm,1.5s
LSA Lhasa 35.45 82 P **P** **17 27 08.3 -2.1**
LSA pmax pmax
comp=Z,15nm,1.3s
LSA LR LR
comp=Z,200nm,11.4s
LSA LR LR
comp=Z,400nm,13.5s
TNS Taunus Mts 35.57 313 *e*P **P** **17 27 11.3 +0.5**
comp=Z,9.9nm,1.0s,baz=108,slow=8.9
TNS *e*L L 17 42 13.9
comp=Z,114nm,18.8s
BSEG Bad Segeberg 35.66 320 *e*L L 17 45 38.4
comp=Z,106nm,18.0s
FABU Falkenberg 35.74 326 *i* P **P** **17 27 11.6 -0.4**
BNI Bardonecchia 35.79 304 IAmb IAmb 17 27 17.5
comp=Z,28nm,1.0s
KIBK Kibwezi 35.84 200 P **P** **17 27 15.6 +2.2**
KIBK Kibwezi 35.84 200 P **P** **17 27 13.0 -0.4**
BORU Boraas 36.02 327 *i* P **P** **17 27 14.6 +0.2**
ONAU Onsala 36.31 326 *i* P **P** **17 27 17.2 +0.3**
BUG Bochum--Univer 36.62 315 *e*P **P** **17 27 20.8 +1.2**
comp=Z,16nm,1.0s,baz=108,slow=8.9
SSRD Sdr. Stenderup 36.62 322 *i* P **P** **17 27 20.6 +1.0**
SSRD IAmb IAmb 17 27 21.4
comp=Z,104nm,0.9s
WLF Walferdange 36.88 312 P **P** **17 27 21.5 -0.4**
WLF Walferdange 36.88 312 *e*P **P** **17 27 22.0 +0.1**
comp=Z,11nm,0.9s,baz=108,slow=8.9
HFS Hagfors 36.93 331 P **P** **17 27 22.1 0.0**
comp=Z,34nm,0.8s,baz=128,slow=9.6,SNR=64
HFS LR LR 17 43 41.0
comp=Z,96nm,20.1s,baz=113,slow=38
comp=Z,34nm,0.8s
APA Apatity 36.97 350 ⇓*e*P **P** **17 27 21.0 -1.4**
APA *e* 17 28 42.1
APA MLR MLR
comp=Z,2µm,4.8s
MBAR Mbarara 37.03 213 LR LR 17 43 04.3
comp=Z,346nm,19.4s,baz=35,slow=37
MBAR Mbarara 37.03 213 P **P** **17 27 24.1 +0.5**
MBAR Mbarara 37.03 213 *i* P **P** **17 27 26.0 +2.4**
MBAR pmax pmax
comp=Z,9.0nm,0.9s
LVZ Lovozero 37.10 351 P **P** **17 27 22.9 -0.6**
LVZ Lovozero 37.10 351 *i* P **P** **17 27 22.2 -1.3**
LVZ pmax pmax
comp=Z,168nm,2.0s
MUD Monsted U'grnd 37.25 323 *i* P **P** **17 27 26.0 +1.2**
MUD IAmb IAmb 17 27 27.2
comp=Z,42nm,0.9s
GOMU GeErMu 37.30 71 P **P** **17 27 27.5 +1.4**
GOMU pmax pmax
comp=Z,12nm,1.2s
STRU Stroemstad 37.44 328 *i* P **P** **17 27 26.4 -0.1**
OSL Oslo 38.09 329 *e*P **P** **17 27 32.0 +0.1**
NC602 NORSAR Array S 38.15 331 *e*P **P** **17 27 32.8 +0.4**
NC405 NORSAR Array S 38.28 331 IAmb IAmb 17 27 34.1
comp=Z,33nm,0.8s
HOMB Homborsund 38.34 326 *e*P **P** **17 27 33.3 -0.7**
HOMB Homborsund 38.34 326 *i* P **P** **17 27 34.2 +0.2**
NB2 NORSAR Subarra 38.45 331 P **P** **17 27 34.0 -1.0**
comp=Z,13nm,0.7s,baz=122,slow=8.6
NB2 PP **PP** **17 28 59.5 -3.5**
comp=Z,53nm,2.5s,baz=131,slow=10
NOA NORSAR Array B 38.45 331 P **P** **17 27 34.1 -1.0**
comp=Z,13nm,0.8s,baz=122,slow=8.3,SNR=28
NOA PP **PP** **17 29 02.1 -0.9**
comp=Z,4.3nm,0.9s,baz=110,slow=10.9,SNR=4.1
NOA LR LR 17 45 24.0
comp=Z,129nm,19.2s,baz=120,slow=39
comp=Z,13nm,0.8s
KONO Kongsberg 38.45 328 P **P** **17 27 33.9 -1.1**
KONO IAmb IAmb 17 27 36.5
comp=Z,39nm,1.1s
KONO Kongsberg 38.45 328 *e*P **P** **17 27 34.4 -0.6**
KONO Kongsberg 38.45 328 P **P** **17 27 33.9 -1.1**
KONO pmax pmax
comp=Z,39nm,1.2s
NAO01 NORSAR Array S 38.48 330 IAmb IAmb 17 27 35.6
comp=Z,32nm,1.0s
ETOS Mallorca 38.51 295 P **P** **17 27 38.9 +3.1**
SKAR Skarslia 39.51 329 *e*P **P** **17 27 44.5 +0.6**
KNGR Kungurtug, Tuv 39.65 48 *i* P **P** **17 27 47.6 +2.2**
KNGR pmax pmax
comp=Z,31nm,0.8s
BLS5 Blasjo 39.79 327 *e*P **P** **17 27 46.8 +0.5**
ODD1 Odda 39.91 328 *e*P **P** **17 27 48.3 +1.0**
VADS Vadso 39.92 349 *e*P **P** **17 27 47.5 +0.4**
ARA0 ARCESS Array S 40.08 347 *e*P **P** **17 27 49.0 +0.5**
ARCES ARCESS Array B 40.08 347 P **P** **17 27 48.3 -0.2**
comp=Z,4.8nm,0.8s,baz=154,slow=7.1,SNR=18
ARCES ScP **ScP** **17 33 39.7 -0.6**
comp=Z,8.1nm,0.8s,baz=82,slow=2.6,SNR=5.0
ARCES LR LR 17 45 42.5
comp=Z,204nm,19.3s,baz=156,slow=38
comp=Z,4.8nm,0.8s
KTK1 Kautokeino 40.11 346 *e*P **P** **17 27 48.8 +0.1**
TAM Tamanrasset 40.12 268 P **P** **17 27 49.2 -0.4**
TAM Tamanrasset 40.12 268 P **P** **17 27 49.2 -0.4**
TAM pmax pmax
comp=Z,20nm,0.8s
RAUS Rausandaksla 40.61 339 *e*P **P** **17 27 52.0 -0.9**
HYA Hoyanger 40.65 329 *e*P **P** **17 27 54.3 +1.1**
LEIR Leirfjorden 40.69 338 *e*P **P** **17 27 53.8 +0.3**
MOL Molde 40.72 332 *e*P **P** **17 27 54.2 +0.3**

FAUS Fauske 40.87 340 eP P 17 27 54.3 -0.7
GTA Gaotai 40.90 65 eP P 17 27 56.5 +0.6
GTA pP pP 17 28 00.5 -3.0
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA LR LR
comp=Z,250nm,16.7s
GTA LR LR
comp=Z,500nm,17.9s
GTA LR LR
comp=Z,490nm,19.1s
JETT Jettan, Norway 41.16 345 eP P 17 27 57.3 -0.1
HAMF Hammerfest 41.35 347 eP P 17 27 59.4 +0.4
ECHE Chera 41.44 295 P P 17 28 02.4 +2.2
TRO Tromso 41.55 344 eP P 17 28 00.5 -0.1
ETOB Tobarra 41.99 294 P P 17 28 06.1 +1.3
ENIJ Nijar 42.74 292 P P 17 28 12.1 +1.3
NRIK Noril'sk 43.08 19 P P 17 28 14.1 +1.0
comp=Z,21nm,0.9s,baz=221,slow=5.0,SNR=31
NRIK LR LR 17 50 02.9
comp=Z,425nm,18.4s,baz=212,slow=42
comp=Z,21nm,0.9s
NRIK Noril'sk 43.08 19 IAmb IAmb 17 28 15.3
comp=Z,30nm,1.0s
TNCH TengChong 43.10 86 P P 17 28 15.8 +1.7
TNCH PP **PP 17 29 56.5 +2.2**
TNCH pmax pmax
comp=Z,62nm,1.0s
TNCH pmax pmax
comp=Z,230nm,3.0s
UCM Universidad Co 43.10 297 P P 17 28 14.7 +1.0
ZAK Zakamensk 43.28 49 eP P 17 28 15.4 +0.3
ZAK pmax pmax
comp=Z,10.0nm,1.7s
EKA Eskdalemuir Ar 43.57 319 P P 17 28 16.6 -0.5
comp=Z,3.9nm,0.7s,baz=102,slow=8.4,SNR=11
EKA ScP **ScP 17 33 55.0 +0.6**
comp=Z,0.7nm,0.6s,baz=120,slow=5.9,SNR=4.3
comp=Z,3.9nm,0.7s
ESBB Sonseca Array 43.72 296 P P 17 28 18.6 -0.1
ESDC Sonseca Array 43.72 296 P P 17 28 19.7 +0.9
comp=Z,2.9nm,0.7s,baz=67,slow=6.1,SNR=18
ESDC PcP **PcP 17 30 06.5 +1.0**
comp=Z,2.2nm,0.8s,baz=46,slow=3.7,SNR=5.1
ESDC ScP **ScP 17 33 55.8 +0.3**
comp=Z,0.8nm,0.8s,baz=42,slow=3.4,SNR=4.3
ESDC LR LR 17 49 48.2
comp=Z,53nm,18.8s,baz=108,slow=41
comp=Z,2.9nm,0.7s
ESDC Sonseca Array 43.72 296 P P 17 28 18.4 -0.4
IRK Irkutsk 44.06 46 eP P 17 28 19.6 -1.6
IRK pmax pmax
comp=Z,29nm,1.4s
LZDM Lanzhou Array 44.44 69 P P 17 28 25.8 +0.9
comp=Z,1.3nm,0.3s,baz=283,slow=8.6,SNR=1.4
LZDM LR LR 17 49 56.4
comp=Z,423nm,18.2s,baz=15,slow=40
comp=Z,1.3nm,0.3s
LZH Lanzhou 44.54 69 eP P 17 28 23.3 -2.2
LZH pmax pmax
comp=Z,24nm,1.4s
LZH LR LR
comp=Z,510nm,14.3s
LZH LR LR
comp=Z,640nm,16.2s
LZH LR LR
comp=Z,820nm,16.2s
DSB Dublin 45.16 315 P P 17 28 26.6 -3.4
SONM Songino Array 45.25 52 P P 17 28 31.2 +0.3
comp=Z,1.3nm,0.6s,baz=272,slow=8.8,SNR=9.0
SONM LR LR 17 47 44.2
comp=Z,103nm,19.2s,baz=266,slow=36
comp=Z,1.3nm,0.6s
PZH PanZhiHua 45.32 83 P P 17 28 32.3 +0.5
PZH pmax pmax
comp=Z,20nm,0.7s
PBRG Braganca 45.57 299 eP P 17 28 33.1 -0.3
PBRG *i* IAmb IAmb 17 28 45.3
comp=Z,31nm,1.8s
ULN Ulaanbaatar 45.69 52 P P 17 28 33.9 -0.6
ULN Ulaanbaatar 45.69 52 *i* P P 17 28 34.1 -0.3
ULN pmax pmax
comp=Z,20nm,2.1s
MVO Moncorvo 45.86 298 eP P 17 28 35.2 -0.6
CNIL Conil 45.89 292 P P 17 28 40.1 +4.1
CHTO Chiang Mai 45.94 94 P P 17 28 35.9 -0.7
CHTO IAmb IAmb 17 28 38.5
comp=Z,23nm,1.1s
CHTO Chiang Mai 45.94 94 P P 17 28 37.7 +1.1
CHTO Chiang Mai 45.94 94 P P 17 28 35.9 -0.7
CHTO pmax pmax
comp=Z,23nm,1.1s
CMAR Chiang Mai Arr 46.10 95 P P 17 28 38.5 +0.7
comp=Z,6.6nm,0.7s,baz=292,slow=8.0,SNR=55
CMAR PcP **PcP 17 30 14.4 +0.5**
comp=Z,3.6nm,0.7s,baz=290,slow=5.0,SNR=8.8
CMAR PP **PP 17 30 26.9 +0.8**
comp=Z,4.9nm,0.9s,baz=298,slow=11,SNR=5.5
comp=Z,6.6nm,0.7s
CMAR Chiang Mai Arr 46.10 95 P P 17 28 37.8 -0.1
CMAR PcP **PcP 17 30 13.5 -0.4**
PBAR Barrancos 46.32 294 P P 17 28 40.2 +0.9
PBAR Barrancos 46.32 294 eP P 17 28 40.4 +1.1
PBAR *i* IAmb IAmb 17 28 56.3
comp=Z,35nm,1.0s
MTE Manteigas 46.35 297 eP P 17 28 41.4 +1.7
MTE *i* IAmb IAmb 17 28 51.6
comp=Z,37nm,1.5s
PMRV Marv??o 46.38 296 eP P 17 28 40.8 +1.0
PCBR Castelo Branco 46.38 297 eP P 17 28 41.3 +1.4
PCBR *i* IAmb IAmb 17 28 45.5
comp=Z,45nm,1.1s
POLO Lamas de Olo 46.40 299 eP P 17 28 42.8 +2.7
PVIS Viseu 46.57 298 eP P 17 28 42.9 +1.6
PESTR Estremoz 46.63 295 P P 17 28 43.3 +1.6
PESTR Estremoz 46.63 295 eP P 17 28 43.4 +1.6
PESTR *i* IAmb IAmb 17 28 59.2
comp=Z,24nm,1.2s
KMI Kunming 46.64 84 ⇑P P 17 28 43.0 +0.7
KMI sP pP 17 28 50.0 0.0
KMI pmax pmax
comp=Z,69nm,0.9s
KMI LR LR
comp=Z,180nm,13.1s
KMI LR LR
comp=Z,320nm,15.0s
KMI LR LR
comp=Z,240nm,17.1s
PGAV Gavieira, Arco 46.68 300 eP P 17 28 44.5 +2.3
PSARD Sardoal 46.94 296 eP P 17 28 45.0 +0.7
PBEJ Beja 46.99 294 eP P 17 28 45.9 +1.3
PBEJ *i* IAmb IAmb 17 29 02.2
comp=Z,28nm,1.3s
PVAQ Vaqueiros 46.99 293 eP P 17 28 46.2 +1.6
PVAQ *i* IAmb IAmb 17 29 01.8
comp=Z,27nm,1.3s
EVO Evora 47.01 295 P P 17 28 47.9 +3.1
EVO Evora 47.01 295 eP P 17 28 48.3 +3.5
EVO *i* IAmb IAmb 17 28 56.5
comp=Z,25nm,1.9s
PMTG Montargil 47.08 296 eP P 17 28 44.3 -1.0
PCAS Casmilo, Conde 47.13 297 eP P 17 28 47.3 +1.7
PBDV Barranco-do-Ve 47.19 293 P P 17 28 48.5 +2.3
PCVE Castro Verde 47.20 294 P P 17 28 49.5 +3.3
PCVE Castro Verde 47.20 294 eP P 17 28 50.0 +3.7
PCVE *i* IAmb IAmb 17 29 07.3
comp=Z,22nm,1.5s
MOE Montemor 47.27 295 eP P 17 28 50.5 +3.7
MESJ Messejana 47.30 294 eP P 17 28 50.8 +3.7
MESJ *i* IAmb IAmb 17 29 07.7
comp=Z,19nm,1.8s
TORD Torodi Ar. Bea 47.76 258 P P 17 28 51.5 +0.7
comp=Z,14nm,0.8s,baz=39,slow=15,SNR=5.6
TORD LR LR 17 51 38.9
comp=Z,385nm,20.3s,baz=58,slow=39
comp=Z,14nm,0.8s
TORD Torodi Ar. Bea 47.76 258 P P 17 28 50.8 -0.1
PFVI Vila Bisbo 47.91 293 P P 17 28 54.7 +2.9
BTO Baotou 48.51 62 eP P 17 28 56.8 +0.3
BTO pP **pP 17 29 02.8 -1.5**
BTO sP **sP 17 29 06.0 -1.3**
BTO pmax pmax
comp=Z,25nm,1.0s
BTO pmax pmax
comp=Z,150nm,6.2s
BTO LR LR
comp=Z,640nm,15.9s
BTO LR LR
comp=Z,950nm,14.0s
BTO LR LR
comp=Z,940nm,17.0s
SPB2 Spitsbergen Ar 48.61 351 P P 17 28 56.2 -0.3
SPITS Spitsbergen Ar 48.61 351 P P 17 28 57.4 +0.8
comp=Z,26nm,0.7s,baz=149,slow=9.8,SNR=18
comp=Z,26nm,0.7s
SPITS Spitsbergen Ar 48.61 351 P P 17 28 56.3 -0.3
SPITS pmax pmax
comp=Z,84nm,1.3s
XAN Xi'an 49.05 71 ⇑P P 17 29 01.0 +0.3
XAN sP pP 17 29 07.5 -0.9
XAN pmax pmax
comp=Z,14nm,1.3s
XAN LR LR
comp=Z,420nm,12.4s
XAN LR LR
comp=Z,540nm,14.4s
XAN LR LR
comp=Z,530nm,14.4s
GYA Guiyang 49.48 81 ⇓P P 17 29 05.0 +0.8
GYA pmax pmax
comp=Z,52nm,0.8s
HHC Hu-ho-hao-te 49.62 61 eP P 17 29 04.3 -0.7
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,96nm,5.1s
HHC LR LR
comp=Z,310nm,12.4s
HHC LR LR
comp=Z,390nm,12.4s
HHC LR LR
comp=Z,390nm,12.4s
OPO Ambohidratompo 50.26 183 LR LR 17 50 32.3
comp=Z,148nm,20.6s,baz=150,slow=36
ENH Enshi 50.58 75 P P 17 29 11.8 -0.5
ENH IAmb IAmb 17 29 13.9
comp=Z,19nm,1.0s
ENH Enshi 50.58 75 P P 17 29 13.2 +0.9
HNS HongShan 52.76 65 ⇑P P 17 29 29.0 +0.6
HNS pmax pmax
comp=Z,5.0nm,0.8s
HNS LR LR
comp=Z,360nm,13.1s
HNS LR LR
comp=Z,380nm,15.1s
HNS LR LR
comp=Z,410nm,17.8s
KCSI Kotacane, Aceh 53.12 112 P P 17 29 29.5 -1.9
comp=Z,13nm,0.9s
BORG Borgarnes 53.61 330 LR LR 17 53 07.8
comp=Z,80nm,18.1s,baz=98,slow=37
HILR Hailar Array B 53.92 49 P P 17 29 37.2 +0.3
comp=Z,7.7nm,0.8s,baz=256,slow=6.0,SNR=8.4
comp=Z,7.7nm,0.8s
CNSH ChangSha 54.11 76 P P 17 29 38.8 +0.3
CNSH pmax pmax
comp=Z,23nm,1.0s
PSI Prapat 54.46 112 P P 17 29 41.4 0.0
WHN Wuhan 54.47 73 P P 17 29 43.3 +2.2
RPSI Rantau Prapat 54.53 112 IAmb IAmb 17 29 41.7
comp=Z,10nm,0.8s
TIA Tai'an 54.94 66 P P 17 29 45.3 +0.8
TIA pmax pmax
comp=Z,10.0nm,1.0s
IPM Ipoh 55.14 109 P P 17 29 44.8 -1.3
IPM Ipoh 55.14 109 P P 17 29 45.9 -0.2
TIXI Tiksi 56.63 22 LR LR 17 58 28.7
comp=Z,529nm,18.2s,baz=356,slow=40
TIXI Tiksi 56.63 22 P P 17 29 55.6 -0.4
TIXI IAmb IAmb 17 29 57.3
comp=Z,28nm,1.1s
TIXI Tiksi 56.63 22 *i* P P 17 29 55.2 -0.8
TIXI pmax pmax
comp=Z,31nm,1.2s
DBIC Dimbokro 56.66 256 P P 17 29 57.5 +0.5
comp=Z,14nm,1.1s,baz=82,slow=5.9,SNR=8.1
DBIC LR LR 17 56 51.9
comp=Z,732nm,19.0s,baz=83,slow=39
comp=Z,14nm,1.1s
DBIC Dimbokro 56.66 256 P P 17 29 56.2 -0.8
DBIC IAmb IAmb 17 30 10.7
comp=Z,16nm,0.8s
DBIC Dimbokro 56.66 256 P P 17 29 56.2 -0.8
DBIC pmax pmax
comp=Z,16nm,0.9s
NJ2 Nanjing 57.60 70 eP P 17 30 03.3 -0.2
NJ2 pmax pmax
comp=Z,13nm,0.7s
YAK Yakutsk 57.71 33 LR LR 17 58 43.1
comp=Z,165nm,18.1s,baz=273,slow=40
YAK Yakutsk 57.71 33 P P 17 30 03.0 -0.7
YAK IAmb IAmb 17 30 04.8
comp=Z,14nm,0.8s
YAK Yakutsk 57.71 33 eP P 17 30 03.1 -0.6
YAK *e**PP **pP 17 30 12.2 +0.5**
YAK *e* 17 32 13.2
YAK *e*PPP PPP 17 33 30.6
YAK *e*S **S 17 38 01.6 +0.9**
YAK *e**SS **sS 17 38 16.7 +3.1**
YAK *e*SSS SSS 17 44 15.6
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=Z,263nm,3.7s
YAK pmax pmax
comp=N,399nm,3.2s
YAK pmax pmax
comp=E,31nm,1.6s
YAK smax smax
comp=E,170nm,3.7s
YAK smax smax
comp=N,384nm,3.4s
YAK MLR MLR
comp=Z,152nm,15.0s
YAK MLR MLR
comp=E,155nm,14.0s
YAK MLR MLR
comp=N,42nm,12.0s
ZEA Zeya 57.80 43 eP P 17 30 05.6 +1.0
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,100nm,15.0s
ZEA MLR MLR
comp=Z,200nm,17.0s
PDSI Padang 57.96 114 P P 17 30 06.1 -0.1
comp=Z,3μmcomp=Z,37nm,1.0s
HEH HeiHe 58.65 47 eP P 17 30 10.8 +0.3
HEH PcP **PcP 17 30 59.3 -1.1**
HEH pmax pmax
comp=Z,13nm,0.7s
HEH LR LR
comp=Z,410nm,13.4s
HEH LR LR
comp=Z,680nm,13.4s
HEH LR LR
comp=Z,1μm,13.9s
CN2 Changchun 58.98 55 eP P 17 30 13.0 0.0
CN2 pmax pmax
comp=Z,10.0nm,0.7s
SUMG Summit 59.37 340 P P 17 30 14.9 -0.7
SUMG Summit 59.37 340 P P 17 30 15.0 -0.7
SUMG pmax pmax
comp=Z,28nm,1.2s
TPRI Tanjung Pinang 60.05 110 P P 17 30 20.9 +0.2
comp=Z,65nm,1.0s
MASI Maura Aman, Be 60.74 115 P P 17 30 25.6 +0.2
LBTB Lobatse 61.14 205 LR LR 17 57 55.3
comp=Z,544nm,19.1s,baz=29,slow=37
KSI Kapahiang 61.33 115 P P 17 30 29.9 +0.4
TPUB Ta-pu 62.39 79 P P 17 30 36.5 0.0
YHNB Yeheng 62.44 77 P P 17 30 37.6 +0.7
KSRS Korea Array 62.76 61 P P 17 30 38.1 -0.6
comp=Z,4.0nm,0.7s,baz=284,slow=6.8,SNR=16
comp=Z,4.0nm,0.7s
MDSI Maura Dua 63.08 115 P P 17 30 39.5 -1.6
comp=Z,38nm,0.8s
LWLI Liwa 63.32 115 P P 17 30 42.4 -0.5
USRK Ussuriysk Ar. 63.36 53 P P 17 30 41.9 -0.7
comp=Z,3.0nm,0.7s,baz=269,slow=9.7,SNR=5.6
comp=Z,3.0nm,0.7s
KLSI 63.63 114 P P 17 30 43.4 -1.4
comp=Z,50nm,1.1s
KASI Kota Agung 63.98 115 P P 17 30 46.7 -0.4
comp=Z,592nmcomp=Z,78nm,0.9s
BOSA Boshof 64.56 204 P P 17 30 52.3 +1.6
comp=Z,7.1nm,0.7s,baz=23,slow=6.2,SNR=11
BOSA LR LR 17 59 58.6
comp=Z,276nm,18.9s,baz=29,slow=37
comp=Z,7.1nm,0.7s
BOSA Boshof 64.56 204 P P 17 30 50.4 -0.3
BOSA IAmb IAmb 17 31 06.1
comp=Z,10nm,0.9s
BOSA Boshof 64.56 204 P P 17 30 50.4 -0.3
BOSA pmax pmax
comp=Z,10.0nm,1.0s
TPI Tanjungpandan 64.75 111 P P 17 30 52.0 -0.1
comp=Z,36nm,1.1s
SFJD Kangerlussuaq 64.95 335 LR LR 17 59 38.2
comp=Z,100nm,18.5s,baz=30,slow=36
SBUM Sibu 65.45 103 P P 17 30 56.0 -0.7
SBUM IAmb IAmb 17 30 58.4
comp=Z,16nm,1.0s
SBUM Sibu 65.45 103 P P 17 30 57.6 +0.9
SEY Seymchan 67.48 29 *i* P P 17 31 08.7 -0.3
SEY pmax pmax
comp=Z,36nm,1.1s
BBJI Bungbulang 67.62 115 P P 17 31 11.1 +0.5
YSS Yuzhno-Sakhali 69.33 47 eP P 17 31 20.0 -0.8
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=Z,400nm,19.0s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=E,500nm,13.0s
MPSI Mapaga 73.00 100 P P 17 31 44.0 +0.5
comp=E,33nm,1.0s
TOLI2 Tolitoli 73.32 99 P P 17 31 43.8 -1.7
TOLI2 IAmb IAmb 17 31 46.8
comp=Z,12nm,0.9s
JAGI Jajag, Banyuwa 73.33 111 P P 17 31 43.1 -2.3
PETK Petropavlovsk- 74.81 36 P P 17 31 52.5 -1.1
comp=Z,8.6nm,0.9s,baz=269,slow=13,SNR=3.5
PETK LR LR 18 09 24.7
comp=Z,222nm,18.1s,baz=242,slow=39
comp=Z,8.6nm,0.9s
A21K Barrow 75.37 9 P P 17 31 55.2 -1.2
baz=337
A19K Wainwright 75.77 10 P P 17 31 57.7 -1.0
baz=333
A22K Sinclair Lake 75.87 8 P P 17 31 59.0 -0.3
baz=338
A36M Sachs Harbour 76.33 358 P P 17 32 01.3 -0.5
A36M Sachs Harbour 76.33 358 P P 17 32 02.6 +0.8
baz=4.3
B18K Kokolik River 76.40 11 P P 17 32 03.0 +0.7
baz=333
B20K Meade River 76.51 9 P P 17 32 02.2 -0.7
baz=337
B22K Teshekpuk Lake 76.67 8 P P 17 32 03.8 0.0
baz=340
C16K Lisburne Hills 76.74 13 P P 17 32 04.5 +0.2
baz=330
C17K DeLong Mountai 76.96 12 P P 17 32 04.7 -0.9
baz=332
C19K Lookout Ridge 76.99 10 P P 17 32 05.8 +0.1
baz=335
C18K Utukok River 77.14 11 IAmb IAmb 17 32 08.2
comp=Z,18nm,0.8s
C18K Utukok River 77.14 11 P P 17 32 06.6 0.0
baz=333,SNR=5.1
B21K Ikpikpuk River 77.21 9 P P 17 32 06.5 -0.3
baz=339
RDOG Red Dog Mine 77.38 12 P P 17 32 07.7 -0.2
baz=332
C23K Itkillik River 77.47 7 P P 17 32 08.1 -0.2
baz=342
C21K Knifeblade Rid 77.62 9 P P 17 32 09.1 -0.2
baz=339
D17K Noatak River 77.67 12 P P 17 32 09.6 +0.1
baz=332,SNR=7.9
D19K Kuna River 77.77 10 IAmb IAmb 17 32 11.8
comp=Z,21nm,1.0s
D19K Kuna River 77.77 10 P P 17 32 09.8 -0.3
baz=336
C24K Franklin Bluff 77.77 6 P P 17 32 10.0 +0.1
baz=344
D20K Etivluk River 77.78 10 P P 17 32 10.1 0.0
baz=337
C26K Camden Bay 77.90 5 P P 17 32 10.6 -0.1
baz=347
SCHQ Schefferville 77.96 328 P P 17 32 11.3 -0.1
comp=Z,9.5nm,1.0s,baz=61,slow=10,SNR=2.3
comp=Z,9.5nm,1.0s
SCHQ Schefferville 77.96 328 IAmb IAmb 17 32 13.0
comp=Z,238nm,1.2s
JCJ Chichijima 78.08 66 LR LR 18 10 07.8
comp=Z,370nm,18.9s,baz=114,slow=38
D22K Ayikyak River 78.14 8 IAmb IAmb 17 32 14.3
comp=Z,14nm,0.8s
D22K Ayikyak River 78.14 8 P P 17 32 12.3 +0.2
baz=341,SNR=7.0
WBSI Waikabubak, Su 78.19 109 P P 17 32 11.8 -1.5
comp=Z,78nm,1.0s
E20K Nigu River 78.27 10 P P 17 32 12.8 -0.1
baz=338
C27K Jago River 78.28 5 P P 17 32 13.2 +0.3
baz=348
D23K Nanushuk River 78.29 7 P 17 32 12.8 -0.1
D23K Nanushuk River 78.29 7 P P 17 32 13.4 +0.5
baz=342
D24K Happy Valley 78.31 7 IAmb IAmb 17 32 15.0
comp=Z,18nm,0.9s
D24K Happy Valley 78.31 7 P P 17 32 13.2 +0.2
baz=344
E18K Tukpahlearik C 78.35 12 IAmb IAmb 17 32 14.7
comp=Z,19nm,0.8s
E18K Tukpahlearik C 78.35 12 P P 17 32 13.3 +0.1
baz=334
D25K Kavik River 78.37 6 P P 17 32 13.4 0.0
baz=346
E21K Killik River 78.40 9 IAmb IAmb 17 32 15.1
comp=Z,17nm,1.0s
E21K Killik River 78.40 9 P P 17 32 13.4 -0.2
baz=340
E17K Hotham Inlet 78.44 12 P P 17 32 14.0 +0.2
baz=333
TNA Tin City 78.55 15 P P 17 32 14.3 -0.1
baz=328
TOLK Toolik Lake Re 78.72 7 P P 17 32 15.6 +0.2
baz=343,SNR=13
D27M Malcolm River 78.83 4 IAmb IAmb 17 32 18.0
comp=Z,13nm,0.9s
D27M Malcolm River 78.83 4 P P 17 32 16.1 +0.1
baz=351
E19K Redstone River 78.86 10 IAmb IAmb 17 32 17.5
comp=Z,12nm,0.9s
E19K Redstone River 78.86 10 P P 17 32 16.1 0.0
baz=337,SNR=6.8
D28M Stokes Point 78.86 3 P P 17 32 16.4 +0.4
baz=353
C36M Paulatuk 78.94 358 P P 17 32 15.3 -1.1
C36M Paulatuk 78.94 358 P P 17 32 16.2 -0.2
baz=5.3,SNR=15
E22K Anaktuvuk Pass 78.95 8 IAmb IAmb 17 32 17.9
comp=Z,14nm,0.8s
E22K Anaktuvuk Pass 78.95 8 P P 17 32 16.8 +0.1
baz=341,SNR=7.9
F14K Arctic Creek 78.97 15 P P 17 32 16.8 +0.1
baz=329
TNTI Ternate 79.06 96 P P 17 32 20.1 +2.1
TNTI Ternate 79.06 96 P P 17 32 19.9 +1.9
comp=Z,22nm,1.7s
F17K Baldwin Pennin 79.12 12 P P 17 32 17.6 +0.1
baz=334
F15K North Star Dit 79.12 14 P P 17 32 17.6 0.0
baz=331
GAMB Gambell 79.15 17 P P 17 32 17.4 -0.3
baz=325
F18K Selawik 79.25 12 P P 17 32 17.3 -0.9
baz=335,SNR=7.8
E23K Chandalar 79.28 7 IAmb IAmb 17 32 22.5
comp=Z,15nm,0.9s

E23K	**Chandalar** baz=343,SNR=6.5	79.28	7	P	P	17 32 18.1	-0.4	
F19K	**Shaleruckik Mo** comp=Z,17nm,1.0s	79.35	11	IAmb	IAmb	17 32 20.1		
F19K	**Shaleruckik Mo** baz=336,SNR=8.0	79.35	11	P	P	17 32 18.5	-0.2	
E24K	**Your Creek** comp=Z,13nm,0.9s	79.38	7	IAmb	IAmb	17 32 21.1		
E24K	**Your Creek** baz=344	79.38	7	P	P	17 32 18.7	-0.3	
SANI	**Sanana**	79.40	99	P	P	17 32 17.8	-2.1	
SANI	**Sanana**	79.40	99	P	P	17 32 19.5	-0.4	
SANI	**Sanana** comp=Z,22nm,1.0s	79.40	99	P	P	17 32 18.8	-1.1	
F20K	**Avaraart Lake** comp=Z,14nm,0.9s	79.46	10	IAmb	IAmb	17 32 20.7		
F20K	**Avaraart Lake** baz=338	79.46	10	P	P	17 32 19.7	+0.3	
F22K	**John River** baz=341	79.51	8	P	P	17 32 19.8	+0.2	
E28M	**Babbage River** baz=352,SNR=11	79.55	3	P	P	17 32 19.8	0.0	
E25K	**Arctic Village** comp=Z,24nm,0.8s	79.61	6	IAmb	IAmb	17 32 22.1		
E25K	**Arctic Village** baz=347,SNR=12	79.61	6	P	P	17 32 20.2	0.0	
F21K	**Alatna River** comp=Z,15nm,0.9s	79.61	9	IAmb	IAmb	17 32 22.0		
F21K	**Alatna River** baz=340,SNR=7.4	79.61	9	P	P	17 32 20.2	-0.1	
E29M	**Blow River** comp=Z,19nm,0.9s	79.84	3	IAmb	IAmb	17 32 23.2		
E29M	**Blow River** baz=353,SNR=16	79.84	3	P	P	17 32 21.5	+0.1	
E27K	**Coleen River** comp=Z,34nm,1.4s	79.84	4	IAmb	IAmb	17 32 23.5		
E27K	**Coleen River** baz=350	79.84	4	P	P	17 32 21.5	0.0	
G16K	**Koyuk River** baz=333	79.85	13	P	P	17 32 21.3	-0.2	
G15K	**Niukluk** baz=331	79.87	14	P	P	17 32 21.3	-0.3	
ANM	**Nome** baz=330	79.97	15	P	P	17 32 22.0	-0.2	
F24K	**Squaw Lake** baz=345	79.98	7	P	P	17 32 22.3	+0.1	
COLD	**Coldfoot** comp=Z,15nm,0.9s	80.01	8	IAmb	IAmb	17 32 24.3		
COLD	**Coldfoot** baz=343,SNR=9.8	80.01	8	P	P	17 32 22.3	0.0	
INK	**Inuvik** baz=357,SNR=7.0	80.05	1	P	P	17 32 22.2	-0.3	
G18K	**Tagagawik** baz=336	80.06	11	P	P	17 32 22.7	0.0	
G17K	**Kiwalik Mounta** baz=334	80.07	12	P	P	17 32 22.2	-0.5	
G19K	**Purcell Mounta** comp=Z,22nm,0.8s	80.09	11	IAmb	IAmb	17 32 24.2		
G19K	**Purcell Mounta** baz=337,SNR=16	80.09	11	P	P	17 32 22.6	-0.2	
F25K	**Christian Rive** baz=347,SNR=8.6	80.12	6	P	P	17 32 23.1	0.0	
F26K	**Sheenjek River**	80.14	5	P	P	17 32 23.1	-0.1	
F26K	**Sheenjek River** baz=348,SNR=6.4	80.14	5	P	P	17 32 23.2	+0.1	
G22K	**Bettles** baz=342	80.15	8	P	P	17 32 23.0	-0.1	
G21K	**Allakaket** comp=Z,15nm,0.8s	80.27	9	IAmb	IAmb	17 32 25.1		
G21K	**Allakaket** baz=340,SNR=8.6	80.27	9	P	P	17 32 24.0	+0.2	
BMAR	**Burnt Mountain**	80.37	6	P	P	17 32 24.0	-0.4	
F28M	**Old Crow** baz=352,SNR=8.6	80.51	4	P	P	17 32 25.2	+0.1	
G23K	**Bananza Creek** baz=343,SNR=6.2	80.53	8	P	P	17 32 25.3	0.0	
H16K	**Elim** baz=333	80.55	13	P	P	17 32 25.3	0.0	
F30M	**Barrier River** baz=355,SNR=13	80.69	2	P	P	17 32 25.9	-0.1	
H17K	**Granite Mounta** comp=Z,14nm,1.1s	80.72	12	IAmb	IAmb	17 32 27.4		
H17K	**Granite Mounta** baz=335	80.72	12	P	P	17 32 26.3	+0.1	
IMAR	**Indian Mountai**	80.74	10	P	P	17 32 26.3	0.0	
H19K	**Roundabout Mou** comp=Z,16nm,1.1s	80.77	11	IAmb	IAmb	17 32 28.0		
H19K	**Roundabout Mou** baz=338	80.77	11	P	P	17 32 26.7	+0.3	
H18K	**Honhosa River** baz=336	80.80	12	P	P	17 32 25.7	-0.9	
G24K	**Hadweenzic Riv** comp=Z,16nm,0.9s	80.82	7	IAmb	IAmb	17 32 29.1		
G24K	**Hadweenzic Riv** baz=345	80.82	7	P	P	17 32 26.1	-0.7	
G25K	**Bearman Lake** baz=346	80.89	6	P	P	17 32 27.0	-0.1	
G26K	**Porcupine Rive** comp=Z,20nm,1.3s	80.91	5	IAmb	IAmb	17 32 29.5		
G26K	**Porcupine Rive** baz=348	80.91	5	P	P	17 32 27.1	0.0	
F31M	**Tsiigehtchic** baz=357,SNR=20	80.92	1	P	P	17 32 26.9	-0.3	
H20K	**Anotleneega Mo** baz=339	81.04	10	P	P	17 32 28.2	+0.2	
H22K	**Ishtalitna Cre** comp=Z,23nm,1.1s	81.15	9	IAmb	IAmb	17 32 31.0		
H22K	**Ishtalitna Cre** baz=342	81.15	9	P	P	17 32 29.0	+0.4	
H21K	**Melozitna Rive** H21K comp=Z,22nm,1.0s	81.18	9	P IAmb	P IAmb	17 32 28.8 17 32 30.7	+0.1	
H21K	**Melozitna Rive** baz=341,SNR=15	81.18	9	P	P	17 32 29.0	+0.3	
G27K	**Doyon Strip** comp=Z,11nm,0.8s	81.20	5	IAmb	IAmb	17 32 30.5		
G27K	**Doyon Strip** baz=350,SNR=12	81.20	5	P	P	17 32 28.6	-0.3	
G29M	**Pine Creek** comp=Z,28nm,1.3s	81.31	3	IAmb	IAmb	17 32 30.8		
G29M	**Pine Creek** baz=353	81.31	3	P	P	17 32 29.0	-0.4	
G30M	**tAoh Zraii Nji** baz=355	81.31	2	P	P	17 32 28.7	-0.7	
H25L	**Birch Creek** baz=347	81.40	6	P	P	17 32 29.4	-0.4	
GCSA	**Galena City Sc** baz=337	81.42	11	P	P	17 32 29.6	-0.3	
G31M	**Satah River** baz=356,SNR=21	81.43	2	P	P	17 32 29.5	-0.4	
H23K	**Yukon River** comp=Z,22nm,0.9s	81.44	8	IAmb	IAmb	17 32 32.5		
H23K	**Yukon River** baz=344	81.44	8	P	P	17 32 30.1	+0.1	
I17K	**Unalakleet** baz=334	81.52	13	P	P	17 32 29.9	-0.6	
H24K	**Noodor Dome** comp=Z,10nm,1.0s	81.61	7	IAmb	IAmb	17 32 33.2		
H24K	**Noodor Dome** baz=345,SNR=6.4	81.61	7	P	P	17 32 31.0	0.0	
I20K	**Naaghedeneel** baz=339	81.75	10	P	P	17 32 31.3	-0.4	
H27K	**Steamboat Moun** comp=Z,24nm,1.2s	81.78	5	IAmb	IAmb	17 32 34.0		
H27K	**Steamboat Moun** baz=350,SNR=12	81.78	5	P	P	17 32 31.1	-0.8	
EPYK	**Eagle Plains** baz=354	81.90	3	P	P	17 32 31.6	-1.0	
J14K	**Nanvaranak Lak** baz=332	81.95	15	P	P	17 32 32.7	-0.1	
BATI	**Baumata** comp=Z,67nm,0.8s	81.96	107	P	P	17 32 33.7	+0.1	
H29M	**Whitestone** baz=353,SNR=7.8	81.98	3	P	P	17 32 32.6	-0.3	
MLY	**Manley** comp=Z,12nm,1.1s	82.05	9	IAmb	IAmb	17 32 35.1		
MLY	**Manley** baz=342	82.05	9	P	P	17 32 33.1	-0.2	
J16K	**Anvik River** comp=Z,15nm,0.9s	82.08	13	IAmb	IAmb	17 32 35.4		
J16K	**Anvik River** baz=334	82.08	13	P	P	17 32 32.6	-0.9	
I23K	**Minto, Yukon-K** comp=Z,25nm,1.6s	82.11	8	IAmb	IAmb	17 33 30.9		
I23K	**Minto, Yukon-K** baz=344	82.11	8	P	P	17 32 33.1	-0.4	
PRP	**Porcupine Dome** baz=347	82.16	6	P	P	17 32 33.4	-0.6	
SOEI	**Soe**	82.20	107	P	P	17 32 33.0	-2.0	
SOEI	**Soe**	82.20	107		P	17 32 33.5	-1.5	
SOEI	**Soe**	82.20	107	P	P	17 32 35.3	+0.3	
SOEI	**Soe** comp=Z,39nm,1.1s	82.20	107	P	P	17 32 34.9	-0.1	
J17K	**VABM Dome** baz=336	82.28	13	P	P	17 32 34.1	-0.4	
J19K	**Poorman** comp=Z,23nm,1.3s	82.33	11	IAmb	IAmb	17 32 37.1		
J19K	**Poorman** baz=338	82.33	11	P	P	17 32 34.4	-0.3	
POKR	**Poker Flat Res** baz=345,SNR=5.6	82.36	7	P	P	17 32 34.4	-0.5	
J20K	**Nowinta River** comp=Z,9.2nm,0.7s	82.39	10	IAmb	IAmb	17 32 36.8		
J20K	**Nowinta River** baz=340,SNR=6.2	82.39	10	P	P	17 32 34.7	-0.4	
I27K	**Kandik River** baz=350,SNR=5.5	82.40	5	P	P	17 32 34.7	-0.5	
K13K	**Kusilvak Mount** baz=331	82.43	16	P	P	17 32 35.0	-0.2	
H31M	**Peel River** baz=356,SNR=5.4	82.55	2	P	P	17 32 35.7	-0.2	
COLA	**College**	82.55	7	P	P	17 32 36.6	+0.8	
COLA	**College**	82.55	7 *i*	P	P	17 32 35.7	-0.2	
COLA	comp=Z,21nm,0.9s			pmax	pmax			
COLA	**College** baz=345	82.55	7	P	P	17 32 35.6	-0.2	
I26K	**Coal Creek Min** comp=Z,23nm,1.2s	82.58	5	IAmb	IAmb	17 32 37.6		
I26K	**Coal Creek Min** baz=349	82.58	5	P	P	17 32 35.7	-0.3	
J18K	**Innoko River** baz=338	82.64	12	P	P	17 32 36.3	0.0	
I28M	**Miner Creek** comp=Z,6.5nm,0.7s	82.66	4	IAmb	IAmb	17 32 37.2		
I28M	**Miner Creek** baz=352,SNR=7.6	82.66	4	P	P	17 32 36.2	-0.4	
NEA2	**Nenana** baz=344	82.68	8	P	P	17 32 36.1	-0.5	
IL31	comp=Z,11nm,1.0s	82.75	7	IAmb	IAmb	17 32 37.9		
ILAR	**Eielson Array** comp=Z,4.3nm,0.8s,baz=319,slow=4.4,SNR=43	82.75	7	P	P	17 32 36.4	-0.5	
ILAR	comp=Z,1.2nm,0.9s,baz=349,slow=6.3,SNR=6.2			PP	PP	17 35 47.9	+1.6	
ILAR	comp=Z,0.4nm,0.7s,baz=214,slow=3.1,SNR=5.7			PKKPbc	PKKPbc	17 51 00.8	-0.6	
ILAR	comp=Z,64nm,18.7s,baz=250,slow=40			LR	LR	18 15 49.8		
CCB	comp=Z,4.3nm,0.8s **Clear Creek Bu** comp=Z,24nm,1.7s	82.77	8	IAmb	IAmb	17 33 30.0		
K15K	**Wolf Creek Mou** baz=334	82.79	14	P	P	17 32 36.8	-0.4	
I29M	**Ogilvie Camp,** comp=Z,20nm,1.4s	82.84	3	IAmb	IAmb	17 32 38.5		
I29M	**Ogilvie Camp,** baz=353,SNR=8.1	82.84	3	P	P	17 32 37.5	0.0	
BPAW	**Bear Paw Mtn.** baz=342,SNR=7.7	82.91	9	P	P	17 32 37.8	-0.1	
CHUM	**Lake Minchumin** baz=341,SNR=8.8	82.94	10	P	P	17 32 37.9	0.0	
K17K	**Iditarod** baz=336	83.04	13	P	P	17 32 38.4	-0.1	
J25K	**Salcha River,** comp=Z,15nm,1.0s	83.06	7	IAmb	IAmb	17 32 40.1		
J25K	**Salcha River,** baz=347,SNR=8.2	83.06	7	P	P	17 32 38.4	-0.3	
I30M	**Mount Dempster** I30M comp=Z,13nm,0.8s	83.06	3	IAmb	P IAmb	17 32 38.2 17 32 39.9	-0.5	
I30M	**Mount Dempster** baz=355,SNR=15	83.06	3	P	P	17 32 38.5	-0.2	
HDA	**Harding Lake** baz=346	83.10	7	P	P	17 32 38.9	+0.1	
K20K	**Telida** baz=340	83.17	11	P	P	17 32 39.2	0.0	
J26L	**Joseph Creek** comp=Z,8.8nm,0.7s	83.33	6	IAmb	IAmb	17 32 41.2		
L15K	**Ungalak Mounta** baz=334	83.35	14	P	P	17 32 40.4	+0.4	
L14K	**Kuk Creek** baz=333	83.39	15	P	P	17 32 40.4	+0.1	
M11K	**Mekoryuk** baz=330	83.41	17	P	P	17 32 40.6	+0.2	
MCK	**McKinley** MCK comp=Z,15nm,1.0s	83.53	8	P IAmb	P IAmb	17 32 40.8 17 32 42.0	-0.2	
MCK	**McKinley** MCK comp=Z,15nm,1.0s	83.53	8	P pmax	P pmax	17 32 40.8	-0.2	
MCK	**McKinley** baz=344	83.53	8	P	P	17 32 41.2	+0.2	
L17K	**Donlin** baz=336	83.58	13	P	P	17 32 40.8	-0.4	
TRF	**Thorofare Moun** baz=343	83.63	9	P	P	17 32 41.4	-0.2	
J30M	**Hart River** baz=355,SNR=8.5	83.71	3	P	P	17 32 42.3	+0.2	
L16K	**Owhat River** baz=335	83.74	14	P	P	17 32 42.4	+0.4	
J29N	**Klondike Camp** comp=Z,17nm,1.1s	83.75	3	IAmb	IAmb	17 32 44.1		
J29N	**Klondike Camp** baz=353	83.75	3	P	P	17 32 42.4	+0.2	
L18K	**Granite Mounta** baz=338	83.80	12	P	P	17 32 42.6	+0.3	
K24K	**Donnelly Dome** baz=347	83.81	7	P	P	17 32 42.7	+0.2	
SCRK	**Sand Creek** baz=348,SNR=12	83.81	6	P	P	17 32 42.6	0.0	
PPLA	**Purkeypile** baz=341	83.89	10	P	P	17 32 43.0	0.0	
K27K	**Chicken** comp=Z,17nm,1.0s	83.92	5	IAmb	IAmb	17 32 44.9		
K27K	**Chicken** baz=350	83.92	5	P	P	17 32 43.1	+0.1	
RIDG	**Independent Ri** baz=348	83.97	6	P	P	17 32 43.1	-0.2	
L20K	**Farewell, AK** baz=340	84.03	11	P	P	17 32 43.4	-0.2	
DAWY	**Dawson** comp=Z,13nm,1.0s	84.07	4	IAmb	IAmb	17 32 51.3		
DAWY	**Dawson** baz=352,SNR=7.3	84.07	4	P	P	17 32 43.5	-0.3	
L19K	**White Mountain** baz=339	84.15	11	P	P	17 32 44.1	-0.1	
DHY	**Denali Highway** baz=345	84.35	8	P	P	17 32 44.7	-0.6	
K29M	**Barlow Dome** comp=Z,9.2nm,0.8s	84.39	3	IAmb	IAmb	17 32 47.1		
K29M	**Barlow Dome** baz=354,SNR=7.9	84.39	3	P	P	17 32 45.1	-0.4	
M15K	**Kasigluk River** baz=334	84.41	15	P	P	17 32 45.2	-0.3	
M17K	**Holitna River** baz=337	84.42	13	P	P	17 32 45.4	-0.1	
WAT1	**Susitna Watana** baz=344	84.45	8	P	P	17 32 45.7	0.0	
M16K	**Timber Creek** baz=336	84.47	14	P	P	17 32 45.3	-0.5	
M19K	**Big River Lodg** baz=340	84.49	11	P	P	17 32 45.5	-0.4	
M18K	**Stony River** baz=338	84.63	12	P	P	17 32 46.3	-0.3	
CUT	**Chulitna** baz=343	84.63	9	P	P	17 32 46.3	-0.2	
PAX	**Paxson** baz=347	84.66	7	P	P	17 32 46.7	-0.2	
M20K	**Styx River** baz=341	84.71	11	P	P	17 32 46.9	-0.3	
WAT6	**Susitna Watana** baz=345	84.78	8	P	P	17 32 47.0	-0.6	
L26K	**Log Cabin Wild** baz=349	84.81	6	P	P	17 32 47.4	-0.1	
MENT	**Mentasta** MENT comp=Z,8.1nm,0.8s	84.86	6	P IAmb	P IAmb	17 32 48.4 17 32 49.3	+0.6	
SKT	**Skwentna** baz=342	84.86	10	P	P	17 32 47.6	-0.2	
N14K	**Kuskokwak Cree** baz=334	84.89	15	P	P	17 32 47.3	-0.5	
BCAR	**Beaver Creek A**	84.90	5	P	P	17 32 47.9	-0.1	
L27K	**Beaver Creek,** comp=Z,16nm,1.0s	84.90	5	IAmb	IAmb	17 32 50.1		
L27K	**Beaver Creek,** baz=350,SNR=7.4	84.90	5	P	P	17 32 48.0	0.0	
N16K	**Nishlik Lake** baz=336	85.01	14	P	P	17 32 48.5	-0.1	
N15K	**Kwethluk River** baz=335	85.01	14	P	P	17 32 48.0	-0.5	
YKAW3	**Yellowknife Wh** comp=Z,14nm,1.1s	85.02	353	IAmb	IAmb	17 32 50.3		
SPIA	**Saint Paul Isl** baz=327	85.03	21	P	P	17 32 48.3	-0.3	
YKA	**Yellowknife Ar** comp=Z,8.0nm,1.0s,baz=3.6,slow=5.5,SNR=23	85.09	353	P	P	17 32 48.8	-0.1	
YKA	comp=Z,8.0nm,1.0s **Yellowknife Ar**	85.09	353	P	P	17 32 48.2	-0.7	
L29M	**L29M** comp=Z,20nm,1.2s	85.09	4	IAmb	IAmb	17 32 50.8		
L29M	**L29M** baz=353,SNR=6.1	85.09	4	P	P	17 32 49.0	0.0	
HARP	**HAARP** baz=347	85.25	7	P	P	17 32 49.7	0.0	
N17K	**Nushagak Hills** baz=337	85.27	13	P	P	17 32 49.9	+0.1	
M22K	**Willow** baz=343	85.28	9	P	P	17 32 50.0	+0.2	
N18K	**Kilae Creek** baz=338	85.37	12	P	P	17 32 50.6	+0.2	
M24K	**Tolsona, Glenn** baz=346	85.43	7	P	P	17 32 51.1	+0.4	
M26K	**Nabesna, AK** baz=349	85.45	6	P	P	17 32 50.8	0.0	
SML	**Sawmill** baz=345	85.46	9	P	P	17 32 51.0	+0.1	
SUA	**Susitna One** baz=343	85.47	10	P	P	17 32 51.2	+0.2	
N19K	**Bonanza Creek** baz=340	85.50	12	P	P	17 32 51.4	+0.3	
SPCR	**Spurr Chakacha** baz=341	85.50	10	P	P	17 32 51.6	+0.5	
M23K	**Glacier View** baz=345	85.55	8	P	P	17 32 51.6	+0.3	
SCM	**Sheep Creek Mo** baz=346	85.56	8	P	P	17 32 51.5	+0.1	
PMR	**Palmer**	85.57	9	P	P	17 32 52.4	+1.1	
PMR	**Palmer** baz=344	85.57	9	P	P	17 32 51.4	+0.1	
O14K	**Tigyukauivet M** baz=334	85.58	15	P	P	17 32 51.7	+0.3	
M27K	**Edge Creek, AK** baz=350,SNR=8.0	85.59	5	P	P	17 32 51.7	+0.1	
BVCY	**Beaver Creek** baz=351	85.61	5	P	P	17 32 51.6	0.0	
M30M	**Minto, Yukon** baz=354	85.69	3	P	P	17 32 51.9	0.0	
P08K	**Saint George I** baz=327	85.73	21	P	P	17 32 51.9	-0.3	
M29M	**Somme Creek** comp=Z,24nm,1.5s	85.74	4	IAmb	IAmb	17 32 54.5		
M29M	**Somme Creek** baz=353	85.74	4	P	P	17 32 52.2	-0.1	
KNK	**Knik Glacier** baz=344	85.83	9	P	P	17 32 52.7	+0.1	
O16K	**Kokwok River B** baz=336	85.95	14	P	P	17 32 53.5	+0.3	
RC01	**Rabbit Creek A** baz=343	85.97	9	P	P	17 32 53.6	+0.2	
O15K	**Ungalikthiuk R** baz=335	85.97	15	P	P	17 32 53.7	+0.3	
O17K	**Koliganek Bris** baz=337	85.99	13	P	P	17 32 53.0	-0.3	
KLU	**Klutina**	86.05	7	P	P	17 32 53.9	0.0	
KLU	**Klutina** baz=347,SNR=5.3	86.05	7	P	P	17 32 53.8	0.0	
CAPN	**Captain Cook N** baz=342	86.07	10	P	P	17 32 53.8	+0.1	
N25K	**Chitina, Valde** baz=348	86.08	7	P	P	17 32 54.0	0.0	
M31M	**Drury Creek, Y** comp=Z,8.9nm,1.1s	86.16	2	IAmb	IAmb	17 33 06.0		
M31M	**Drury Creek, Y** baz=356	86.16	2	P	P	17 32 54.5	+0.2	
O18K	**Koktuh Hills** baz=339	86.27	12	P	P	17 32 55.0	+0.2	
YUK3	**Moose Creek** baz=351,SNR=7.6	86.27	5	P	P	17 32 55.1	0.0	
PWL	**Port Wells** baz=345	86.38	9	P	P	17 32 55.2	-0.2	
MCARA	**McCarthy VSAT** baz=349	86.45	6	P	P	17 32 55.5	-0.2	
O20K	**Slope Mountain** baz=341	86.50	11	P	P	17 32 55.5	-0.6	
GLI	**Glacier Island** baz=346	86.52	8	P	P	17 32 55.9	-0.2	
O22K	**Cooper Landing** baz=344	86.56	10	P	P	17 32 56.3	+0.1	
P18K	**Big Mountain,** baz=339	86.70	13	P	P	17 32 56.6	-0.4	
BMRM	**Bremner River** baz=348	86.71	7	P	P	17 32 56.0	-1.0	
N30M	**Aishikik Lake** baz=354	86.79	3	P	P	17 32 58.0	+0.5	
YUK8	**Steele Glacier** baz=352	86.81	5	P	P	17 32 58.1	+0.3	
YUK4	**Talbot Arm** baz=353,SNR=5.4	86.82	4	P	P	17 32 57.3	-0.4	
N31M	**Braeburn, Yuko** baz=355	86.82	3	P	P	17 32 57.0	-0.6	
SEW	**Seward** baz=344	86.96	10	P	P	17 32 57.7	-0.4	
EYAK	**Cordova Ski Ar** baz=347	87.00	8	P	P	17 32 58.6	+0.3	
CTG	**Chitna Glacier** baz=350	87.01	5	P	P	17 32 58.4	-0.2	
HOM	**Homer** baz=342	87.06	11	P	P	17 32 58.7	+0.1	
CRQE	**Cirque** baz=349	87.07	6	P	P	17 32 58.9	0.0	
Q16K	**King Salmon** baz=338	87.09	13	P	P	17 32 58.9	+0.1	
BRSE	**Bradley Lake S** baz=343	87.12	10	P	P	17 32 58.6	-0.4	
LOGN	**Logan Glacier**	87.18	5	P	P	17 32 59.0	-0.4	
YUK6	**Outpost Mounta** baz=353	87.24	4	P	P	17 32 59.6	-0.2	
N32M	**Quiet Lake** comp=Z,14nm,0.9s	87.24	1	IAmb	IAmb	17 33 08.6		
N32M	**Quiet Lake** baz=358	87.24	1	P	P	17 32 59.5	-0.1	
O28M	**Mount Upton** comp=Z,12nm,1.0s	87.29	5	IAmb	IAmb	17 33 02.0		
O28M	**Mount Upton** baz=352	87.29	5	P	P	17 32 59.4	-0.8	
P23K	**Montague Islan** baz=345	87.33	9	P	P	17 32 59.9	-0.1	
HYT	**Haines Junctio** baz=354,SNR=6.4	87.41	4	P	P	17 33 00.1	-0.4	
Q19K	**Cape Douglas,** baz=340	87.42	12	P	P	17 33 00.7	+0.2	
Q18K	**Katmai Hardscr** baz=339	87.43	13	P	P	17 33 00.3	-0.3	
O30N	**Mendenhall** baz=355	87.53	3	P	P	17 33 00.9	-0.1	
Q17K	**Contact Creek** baz=338	87.62	13	P	P	17 33 01.1	-0.5	
BGLC	**Bering Glacier** baz=349	87.67	7	P	P	17 33 01.4	-0.2	
WHY	**Whitehorse** baz=356	87.68	2	P	P	17 33 01.2	-0.6	
MESA	**MESA** baz=350	87.74	6	P	P	17 33 01.5	-0.7	
KAIM	**Kayak Island** baz=348	87.75	7	P	P	17 33 01.2	-0.8	
O29M	**Mount Kennedy** baz=353	87.86	4	P	P	17 33 01.5	-1.2	
Q20K	**Shuyak Island** baz=341	87.93	11	P	P	17 33 02.2	-0.7	
PINM	**Pinnacle** baz=352	87.96	5	P	P	17 33 02.1	-1.0	
FITZ	**Fitzroy Crossi**	87.98	113	P	P	17 33 04.2	+0.5	
Q23K	**Middleton Isla** baz=346	88.02	8	P	P	17 33 02.2	-1.0	
R17L	**Mt. Peulik Vol** baz=338	88.12	14	P	P	17 33 02.5	-1.4	
P30M	**Million Dollar** baz=354	88.14	3	P	P	17 33 02.5	-1.4	
KOTAN	**Kotaneelee Air** baz=5.2	88.15	357	P	P	17 33 02.6	-1.4	
P33M	**Teslin, Yukon** baz=358	88.19	1	P	P	17 33 02.7	-1.6	
WTLY	**Watson Lake, Y**	88.31	359	P	P	17 33 03.5	-1.1	

	baz=1.2							
R18K	**Karluk**	**88.55**	**13**	P	**P**	**17 33 04.7**	**-1.1**	
	baz=340							
S12K	**Black Hills**	**88.58**	**17**	P	**P**	**17 33 05.2**	**-0.9**	
	baz=333							
P29M	**Windy Craggy**	**88.58**	**4**	P	**P**	**17 33 05.1**	**-0.9**	
	baz=354							
M65A	**Busby, Falmout**	**88.60**	**320**	P	**P**	**17 33 05.6**	**-0.8**	
	baz=47							
S14K	**Fog Glacier**	**88.67**	**16**	P	**P**	**17 33 04.5**	**-2.1**	
	baz=335							
KDAK	**Kodiak Island**	**88.69**	**12**	P	**P**	**17 33 05.2**	**-1.2**	
	baz=341							
P32M	**Atlin**	**88.79**	**2**	P	**P**	**17 33 06.1**	**-0.9**	
	baz=357							
PLBC	**Pleasant Camp**	**88.83**	**3**	P	**P**	**17 33 06.0**	**-1.1**	
	baz=355							
SKAG	**Skagway**	**88.87**	**3**	P	**P**	**17 33 06.3**	**-1.0**	
	baz=356							
LIRD	**Liard River Hi**	**88.95**	**358**	P	**P**	**17 33 06.5**	**-1.2**	
	baz=3.5							
FALS	**False Pass**	**88.98**	**18**	P	**P**	**17 33 06.6**	**-1.3**	
	baz=332							
UNV	**Unalaska Valle**	**88.99**	**21**	P	**P**	**17 33 06.4**	**-1.5**	
	baz=330							
NIKH	**Nikolski High**	**89.01**	**22**	P	**P**	**17 33 06.9**	**-1.2**	
	baz=328							
R33M	**Jennings River**	**89.03**	**0**	IAmb	IAmb	17 33 10.7		
	comp=Z,8.3nm,0.9s							
R33M	**Jennings River**	**89.03**	**0**	P	**P**	**17 33 07.0**	**-1.3**	
	baz=359							
OHAK	**Old Harbor**	**89.09**	**12**	P	**P**	**17 33 07.5**	**-0.9**	
	baz=341							
KNRA	**Kununurra**	**89.12**	**109**	P	**P**	**17 33 09.0**	**-0.1**	
SDPT	**Sand Point**	**89.30**	**17**	P	**P**	**17 33 07.8**	**-1.6**	
	baz=335							
Q32M	**Nakina River**	**89.45**	**1**	P	**P**	**17 33 08.7**	**-1.6**	
	baz=358							
TOAD	**Toad River Com**	**89.48**	**357**	P	**P**	**17 33 09.1**	**-1.1**	
	baz=4.2							
SII	**Sitkinak Islan**	**89.55**	**13**	P	**P**	**17 33 09.2**	**-1.4**	
	baz=340							
CHIR	**Chirikof Islan**	**89.96**	**14**	P	**P**	**17 33 11.2**	**-1.3**	
	baz=339							
CHNA	**Chernabura Isl**	**89.98**	**16**	P	**P**	**17 33 11.1**	**-1.5**	
	baz=335							
DLBC	**Dease Lake**	**89.99**	**360**	LR	LR	18 21 54.5		
	comp=Z,58nm,18.7s,baz=299,slow=41							
DLBC	**Dease Lake**	**89.99**	**360**	P	**P**	**17 33 11.2**	**-1.5**	
	baz=0.1							
R32K	**Eaglecrest**	**90.08**	**2**	P	**P**	**17 33 11.9**	**-1.1**	
	baz=356							
S31K	**Pelican**	**90.33**	**3**	P	**P**	**17 33 13.0**	**-1.1**	
	baz=355							
S34M	**Telegraph Cree**	**90.52**	**0**	P	**P**	**17 33 13.5**	**-1.6**	
	baz=359							
S32K	**Killisnoo**	**90.89**	**2**	P	**P**	**17 33 15.7**	**-1.0**	
	baz=356							
SIT	**Sitka**	**91.27**	**3**	P	**P**	**17 33 16.8**	**-1.7**	
	baz=356							
WRAK	**Wrangell Islan**	**92.00**	**1**	P	**P**	**17 33 20.6**	**-1.3**	
	baz=358							
U33K	**Whale Pass**	**92.29**	**2**	P	**P**	**17 33 22.1**	**-1.1**	
	baz=358							
ULM	**Lac du Bonnet**	**92.72**	**339**	LR	LR	18 14 30.2		
	comp=Z,169nm,19.0s,baz=350,slow=35							
CRAG	**Craig**	**92.93**	**2**	P	**P**	**17 33 25.1**	**-1.2**	
	baz=358							
WRA	**Warramunga Arr**	**95.88**	**110**	P	**P**	**17 33 39.3**	**-1.1**	
	comp=Z,1.5nm,0.7s,baz=315,slow=4.2,SNR=9.3							
WRA				PKKP	**PKKPdf**	**17 50 30.4**	**+0.7**	
	comp=Z,0.5nm,0.5s,baz=116,slow=3.5,SNR=11							
	comp=Z,1.5nm,0.7s							
ASAR	**Alice Springs**	**97.48**	**113**	P	**P**	**17 33 46.9**	**-0.7**	
	comp=Z,1.2nm,0.7s,baz=307,slow=4.6,SNR=18							
	comp=Z,1.2nm,0.7s							
MDP	**Montagnes des**	**97.80**	**281**	LR	LR	18 21 20.6		
	comp=Z,69nm,20.2s,baz=138,slow=38							
PDAR	**Pinedale Array**	**103.30**	**345**	PP	**PKiKP**	**17 38 30.9**	**-1.8**	
	comp=Z,0.6nm,0.8s,baz=32,slow=9.2,SNR=3.8							
QSPA	**South Pole Qui**	**121.75**	**180**	PKP	**PKiKP**	**17 39 09.8**	**+3.2**	
	comp=Z,4.7nm,0.9s,baz=262,slow=2.4,SNR=12							
QSPA	**South Pole Qui**	**121.75**	**180**		**PKiKP**	**17 39 10.5**	**+3.9**	
DZM	**Mont Dzumac**	**123.40**	**97**	*e*LR	LR	18 17 24.7		
	comp=Z,83nm,26.2s							
TAOE	**Nuku Hiva Isla**	**155.27**	**24**	*e*LR	LR	18 32 03.9		
	comp=Z,196nm,25.3s							
PPT2	**Papeete2**	**157.42**	**55**	*e*LR	LR	18 33 10.4		
	comp=Z,67nm,25.5s							

IDC ***29*** *17:30:12.0±1.7,31°.95N×49°.73E,h0km,mb3.8/10, mbtmp3.8/10, Error ellipse: s-maj=35.5km s-min=24.1km az=179.0*
NEIC ***29*** *17:30:13.6±2.1,31°.98N±0°.03×49°.87E±0°.07,h10km±1km, mb4.1/16, Error ellipse: s-maj=10.7km s-min=4.3km az=88.0*
TEH ***29*** *17:30:14.9, 32°.01N×49°.84E, h8km±31km*
OMAN ***29*** *17:30:28.8±1.4, 30°.98N×50°.18E, h10km, mb4.8/8, Error ellipse: s-maj=9.9km s-min=9.7km az=106.0*

ISC 29 17:30:13.3±0.5,**31°.98N**±0°.03×**49°.87E**±0°.03,**h10**km,**n88,**
σ3**$10**/104,**mb3.9**/14, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHBN	**Jahan bin**	**0.72**	**69**	Pg	**Pn**	**17 30 29.5**	**-0.4**
JHBN				Sg	**Sn**	17 30 40.7	-0.4
ZNGN	**Zangian**	**0.85**	**80**	Pg	**Pn**	**17 30 31.7**	**+0.1**
IPIR	**Pirpir**	**1.12**	**50**	Pg	**Pn**	**17 30 36.3**	**+1.0**
IBRJ	**Brojen**	**1.18**	**93**	Pg	**Pn**	**17 30 38.4**	**+2.2**
AHWZ	**Ahwaz**	**1.23**	**239**	Pg	**Pg**	**17 30 38.5**	**+1.6**
ABEH	**Behbahan**	**1.41**	**166**	Pg	**Pg**	**17 30 43.0**	**+2.7**
ABEH				Sg	**Sg**	17 31 04.2	+5.6
KLNJ	**Kolanjah**	**1.76**	**123**	Pg	**Pg**	**17 30 48.2**	**+1.1**
IKLH	**Kolahrood**	**1.97**	**47**	Pn	**Pg**	**17 30 51.0**	**0.0**
BDRS	**Dareh Seyedi**	**2.14**	**337**	Pn	**Pb**	**17 30 51.9**	**-0.4**
QAMS	**Qamsar**	**2.18**	**36**	Pn	**Pb**	**17 30 54.1**	**+1.1**
IZEF	**Zefreh**	**2.27**	**66**	Pn	**Pb**	**17 30 55.2**	**+0.6**
IDOB	**Doab**	**2.30**	**322**	Pn	**Pb**	**17 30 54.7**	**-0.3**
KRSH	**Karshahi**	**2.75**	**43**	Pn	**Pb**	**17 31 01.6**	**-1.1**
IQOM	**Qom**	**3.03**	**19**	Pn	**Pb**	**17 31 05.4**	**-2.1**
ISFB	**Sefidab**	**3.09**	**39**	Pn	**Pb**	**17 31 06.2**	**-2.3**
IVRN	**Varamin**	**3.39**	**27**	Pn	**Pb**	**17 31 10.2**	**-3.3**
SNQR	**Sonqor, Kerman**	**3.43**	**328**	Pn	**Pn**	**17 31 10.0**	**+2.9**
ANAR	**Anarak**	**3.48**	**69**	Pn	**Pb**	**17 31 11.6**	**-3.4**
HGHA	**Hamedan- Ghaye**	**3.60**	**347**	Pn	**Pn**	**17 31 12.1**	**+2.7**
QABG	**Abgarm-Qazvin**	**3.73**	**356**	Pn	**Pn**	**17 31 15.2**	**+4.1**
DSBU	**Dashti - Bushe**	**3.80**	**161**	Pn	**Pn**	**17 31 16.0**	**+4.1**
ICHK	**Chekchek**	**3.86**	**85**	Pn	**Pn**	**17 31 16.9**	**+4.0**
IDHR	**Dehrash**	**3.98**	**314**	Pn	**Pn**	**17 31 18.1**	**+3.4**
IDMV	**Damavand**	**4.02**	**26**	Pn	**Pn**	**17 31 18.9**	**+3.8**
IMEH	**Mehriz**	**4.09**	**97**	Pn	**Pn**	**17 31 19.8**	**+3.8**
ILAS	**Lasjerd**	**4.26**	**36**	Pn	**Pn**	**17 31 22.1**	**+3.6**
IFIR	**Firoozkooh**	**4.38**	**33**	Pn	**Pn**	**17 31 23.8**	**+3.7**
IPRN	**Peran**	**4.72**	**25**	Pn	**Pn**	**17 31 29.2**	**+4.5**
IALA	**Alasht**	**4.77**	**30**	Pn	**Pn**	**17 31 29.9**	**+4.4**
IBAF	**Bafgh**	**4.87**	**93**	Pn	**Pn**	**17 31 30.7**	**+4.0**
IKIA	**Kiasar**	**5.28**	**36**	Pn	**Pn**	**17 31 36.5**	**+4.1**
IGLO	**Ghaloghah**	**5.58**	**35**	Pn	**Pn**	**17 31 40.4**	**+3.8**
TPRV	**Parvadeh(Tabas**	**5.85**	**78**	Pn	**Pn**	**17 31 44.4**	**+4.2**
TNSJ	**Nastanj**	**6.00**	**69**	Pn	**Pn**	**17 31 45.9**	**+3.7**
SHMA	**Al-Shehemyia**	**6.17**	**171**	P	**Pn**	**17 31 46.4**	**+1.9**
	SNR=15						
SHMA				S	**Sn**	**17 32 48.3**	**-6.8**
TKDS	**Koohdasht(Taba**	**6.32**	**73**	Pn	**Pn**	**17 31 50.2**	**+3.6**
SMRA	**Abu-Samra**	**7.25**	**173**	P	**Pn**	**17 32 01.7**	**+2.4**
SMRA				S	**Sn**	**17 33 14.7**	**-7.1**
TRNA	**Turayna**	**7.31**	**170**	P	**Pn**	**17 32 02.0**	**+1.9**
	SNR=26						
TRNA				S	**Sn**	**17 33 16.0**	**-7.2**
SLWR	**Sila**	**8.04**	**168**	P	**Pn**	**17 32 12.3**	**+2.2**
SLWR				S	**Sn**	**17 33 34.1**	**-7.0**
BANOM	**Banah**	**8.25**	**135**	P	**Pn**	**17 32 16.0**	**+2.9**
BANOM				S	**Sn**	**17 33 41.7**	**-4.7**
MASF	**Masafi**	**8.59**	**138**	P	Pn	17 32 22.7	+4.9
MASF				S	**Sn**	**17 33 51.0**	**-3.7**
MDH	**Madha**	**8.72**	**138**	P	**Pn**	**17 32 22.6**	**+3.0**
MDH				S	**Sn**	**17 33 53.4**	**-4.6**
UOSS	**Minazif**	**8.95**	**140**	Pn	**Pn**	**17 32 22.6**	**0.0**
UOSS				Sn	**Sn**	**17 33 58.1**	**-5.5**
ASHO	**Ashiyiah**	**9.08**	**142**	P	**Pn**	**17 32 27.8**	**+3.3**
ASHO				S	**Sn**	**17 34 01.9**	**-4.9**
MARD	**Mardin**	**9.19**	**308**		**Pn**	**17 32 25.0**	**-0.9**
RAYN	**Ar Rayn**	**9.26**	**206**	Pn	**Pn**	**17 32 25.7**	**-1.3**

ALNE	**Al Ain**	**9.44**	**145**	P	**Pn**	**17 32 31.6**	**+2.2**
ALNE				S	**Sn**	**17 34 10.8**	**-5.0**
SOHO	**SOHO**	**9.78**	**141**	P	**Pn**	**17 32 36.4**	**+2.4**
SOHO				S	**Sn**	**17 34 19.0**	**-4.9**
KARS	**Kars**	**10.22**	**330**		**Pn**	**17 32 38.0**	**-2.2**
ARQ	**Araqi**	**10.43**	**144**	P	**Pn**	**17 32 46.2**	**+3.3**
	SNR=6.0						
ARQ				S	**Sn**	**17 34 35.1**	**-4.8**
HOQ	**Hoqain**	**10.64**	**140**	P	**Pn**	**17 32 48.7**	**+2.9**
HOQ				S	**Sn**	**17 34 39.1**	**-6.0**
BSY	**Bisya**	**11.26**	**143**	P	**Pn**	**17 32 58.2**	**+3.8**
BSY				S	**Sn**	**17 34 55.8**	**-4.6**
WSAR	**Wadi Sarin**	**11.66**	**136**	P	**Pn**	**17 33 02.2**	**+2.4**
WSAR				S	**Sn**	**17 35 04.3**	**-5.8**
JMDO	**Jabal Madar**	**12.05**	**141**	P	**Pn**	**17 33 08.1**	**+3.1**
JMDO				S	Sn	17 35 10.6	-9.0
DQM	**DQM**	**13.83**	**148**	P	**Pn**	**17 33 32.4**	**+2.9**
DQM				S	Sn	17 35 54.4	-8.8
DOK	**Doka**	**13.84**	**163**	P	**Pn**	**17 33 29.2**	**-0.5**
	SNR=13						
DOK				S	Sn	17 35 53.8	-10
WHFO	**Wadi Hawf**	**14.43**	**165**	P	**Pn**	**17 33 36.1**	**-1.7**
	SNR=23						
WHFO				S	Sn	17 36 08.4	-10
DMTO	**DMTO**	**14.92**	**161**	P	**Pn**	**17 33 43.0**	**-1.4**
	SNR=9.8						
AB31	**Akbulak array**	**18.85**	**21**	P	**P**	**17 34 31.6**	**-1.7**
ABKAR	**Akbulak array**	**18.85**	**21**	P	**P**	**17 34 32.0**	**-1.3**
BELG	**Belogornoye**	**20.47**	**356**	P	**P**	**17 34 51.0**	**+0.1**
	8.4nm,0.9s,baz=166,slow=17,SNR=2.9							
	8.4nm,0.9s							
AAK	**Ala-Archa**	**22.22**	**54**	P	**P**	**17 35 09.8**	**-0.3**
AAK				IAmb	IAmb	17 35 17.6		
	comp=Z,3.6nm,1.0s							
BOOM	**Boomskoye usch**	**23.18**	**56**	P	**P**	**17 35 19.9**	**-0.3**
BOOM				IAmb	IAmb	17 35 23.9		
	comp=Z,14nm,1.0s							
AKASG	**Malin Array Be**	**24.15**	**327**	P	**P**	**17 35 28.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=136,slow=9.0,SNR=1.8							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**24.15**	**327**	P	**P**	**17 35 28.2**	**-1.2**
AKBB	**Malin Array Si**	**24.15**	**327**	P	**P**	**17 35 27.4**	**-2.0**
AKBB				IAmb	IAmb	17 35 51.9		
	comp=Z,11nm,1.4s							
KIEV	**Kiev**	**24.16**	**327**	P	**P**	**17 35 27.4**	**-2.0**
KIEV				IAmb	IAmb	17 35 51.9		
	comp=Z,9.6nm,1.4s							
TARG	**Taragay, Kyrgy**	**24.29**	**58**	P	**P**	**17 35 30.9**	**-0.4**
TARG				IAmb	IAmb	17 35 35.6		
	comp=Z,4.2nm,1.0s							
BURAR	**Bucovina Array**	**24.40**	**317**	P	**P**	**17 35 30.4**	**-1.5**
BVAR	**Borovoye Array**	**25.74**	**29**	P	**P**	**17 35 44.5**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=226,slow=7.9,SNR=2.3							
	comp=Z,0.4nm,0.5s							
KURBB	**Kurchatov Arra**	**28.20**	**40**	P	**P**	**17 36 08.0**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=240,slow=9.6,SNR=1.7							
	comp=Z,0.3nm,0.3s							
MKAR	**Makanchi Array**	**28.86**	**50**	P	**P**	**17 36 13.3**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=238,slow=8.3,SNR=2.9							
	comp=Z,0.4nm,0.6s							
MKAR	**Makanchi Array**	**28.86**	**50**	P	**P**	**17 36 12.7**	**+0.8**
ZAA0	**Zalesovo Array**	**33.19**	**38**	P	**P**	**17 36 50.0**	**0.0**
ZAA0				IAmb	IAmb	17 36 52.1		
	comp=Z,1.1nm,0.7s							
ZALV	**Zalesovo Beam**	**33.19**	**38**	P	**P**	**17 36 50.7**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=252,slow=8.4,SNR=4.3							
	comp=Z,1.4nm,0.9s							
ZALV	**Zalesovo Beam**	**33.19**	**38**	P	**P**	**17 36 50.0**	**0.0**
FINES	**FINESS Array B**	**33.30**	**339**	P	**P**	**17 36 50.6**	**-0.2**
	comp=Z,5.7nm,1.1s,baz=164,slow=12,SNR=1.7							
	comp=Z,5.7nm,1.1s							
FINES	**FINESS Array B**	**33.30**	**339**	P	**P**	**17 36 49.7**	**-1.0**
HFS	**Hagfors**	**36.91**	**331**	P	**P**	**17 37 22.5**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=134,slow=10,SNR=1.2							
	comp=Z,1.8nm,0.8s							
EKB	**Eskdalemuir**	**43.59**	**319**	P	**P**	**17 38 17.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**46.03**	**95**	P	**P**	**17 38 38.2**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=294,slow=7.7,SNR=1.5							
	comp=Z,0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**47.84**	**258**	P	**P**	**17 38 50.8**	**-0.7**
	comp=Z,2.4nm,0.4s,baz=51,slow=9.3,SNR=1.3							
	comp=Z,2.4nm,0.4s							
LBTB	**Lobatse**	**61.23**	**205**	P	**P**	**17 40 28.9**	**+0.3**
BOSA	**Boshof**	**64.64**	**204**	P	**P**	**17 40 51.4**	**+0.1**
B21K	**Ikpikpuk River**	**77.13**	**9**	P	**P**	**17 42 06.8**	**+0.3**
F30M	**Barrier River**	**80.63**	**2**	P	**P**	**17 42 26.1**	**+0.3**
IMAR	**Indian Mountai**	**80.67**	**10**	P	**P**	**17 42 26.2**	**+0.2**
G31M	**Satah River**	**81.36**	**2**	P	**P**	**17 42 30.1**	**+0.4**

NOU ***29*** *17:30:37.6,39°.45S×178°.18E,h20km, MLv4.3/16, Off E. Coast of N. Island, N.Z.*
WEL ***29*** *17:30:41.6±0.7,39°.5S±5°.1°.17°.8E±°, h24km±6km, M4.5/13, ML4.5/13, MLv4.5/13, Error ellipse: s-maj=7.8km s-min=4.2km az=142.5, confirmed*

ISC 29 17:30:39.7±1.3,**39°.41S**±0°.03×**178°.04E**±0°.05,**h24**km±11km,
n170, σ0**98**/180,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**0.27**	**338**	P	**Pb**	**17 30 46.9**	**+0.7**
MHGZ				S	**Sn**	**17 30 52.6**	**-1.0**
KNZ	**Kokohu**	**0.48**	**323**	P	**Pb**	**17 30 49.0**	**-0.4**
KNZ				S	**Sb**	**17 30 55.2**	**-0.9**
PRGZ	**Paritu Road**	**0.50**	**346**	P	**Pb**	**17 30 50.2**	**+0.3**
PRGZ				S	**Sb**	**17 30 57.4**	**+0.6**
WFSS	**Wairoa Fire St**	**0.60**	**308**	P	**Pb**	**17 30 51.3**	**-0.3**
WFSS				S	**Sb**	**17 30 59.2**	**-0.6**
WHHZ	**Waihua**	**0.70**	**297**	P	**Pb**	**17 30 53.2**	**-0.1**
WHHZ				S	**Sb**	**17 31 02.1**	**-0.5**
GKBS	**Kaiti Beach**	**0.72**	**360**	P	**Pn**	**17 30 54.5**	**+0.1**
RIGZ	**Rimuhau**	**0.73**	**343**	P	**Pb**	**17 30 53.7**	**-0.1**
RIGZ				S	**Sb**	**17 31 03.2**	**-0.2**
GISS	**Gisborne 2ZG**	**0.74**	**359**	P	**Pn**	**17 30 54.9**	**+0.4**
GHHS	**Gisborne Hospi**	**0.76**	**359**	P	**Pb**	**17 30 55.1**	**+0.8**
GWTS	**Gisborne Waipa**	**0.78**	**353**	P	**Pb**	**17 30 55.3**	**+0.6**
CKHZ	**Cape Kidnapper**	**0.79**	**251**	P	**Pb**	**17 30 56.0**	**+1.3**
CKHZ				S	**Sn**	**17 31 08.1**	**+1.9**
ARHZ	**Aropaoanui**	**0.82**	**280**	P	**Pb**	**17 30 55.7**	**+0.4**
ARHZ				S	**Sn**	**17 31 06.5**	**-0.6**
SNGZ	**Shannon Statio**	**0.83**	**319**	P	**Pn**	**17 30 54.9**	**-1.0**
SNGZ				S	**Sb**	**17 31 04.9**	**-1.3**
NGHS	**Napier Girls H**	**0.87**	**264**	P	**Pb**	**17 30 57.0**	**+0.8**
RAHZ	**Arahi**	**0.89**	**303**	P	**Pn**	**17 30 55.9**	**-0.7**
RAHZ				S	**Sb**	**17 31 06.7**	**-1.2**
CNGZ	**Carnagh Statio**	**0.93**	**8**	P	**Pb**	**17 30 57.5**	**+0.4**
TKGZ	**Te Karaka**	**0.98**	**351**	P	**Pn**	**17 30 57.5**	**-0.4**
KAHZ	**Kahuranaki**	**0.98**	**246**	P	**Pb**	**17 30 58.8**	**+0.8**
NMHZ	**Naumai**	**1.00**	**287**	P	**Pn**	**17 30 58.3**	**0.0**
RAGZ	**Rawiri**	**1.03**	**332**	P	**Pn**	**17 30 57.9**	**-0.8**
MCHZ	**McNeill Hill**	**1.04**	**267**	P	**Pb**	**17 30 59.2**	**+0.2**
MTHZ	**Maungataniwha**	**1.08**	**300**	P	**Pn**	**17 30 58.6**	**-0.7**
PXZ	**Pawanui**	**1.10**	**235**	P	**Pb**	**17 31 00.3**	**+0.2**
RTZ	**Ruatahuna**	**1.14**	**313**	P	**Pn**	**17 30 59.4**	**-0.8**
MWZ	**Matawai**	**1.14**	**339**	P	**Pn**	**17 30 59.4**	**-0.8**
BKZ	**Black Stump Fm**	**1.22**	**281**	P	**Pn**	**17 31 01.1**	**-0.2**
BKZ	**Black Stump Fm**	**1.22**	**281**	P	**Pn**	**17 31 01.1**	**-0.2**
TWGZ	**Tauwhareparae**	**1.23**	**358**	P	**Pn**	**17 31 01.3**	**-0.1**
KWHZ	**Kaweka Forest**	**1.25**	**269**	P	**Pn**	**17 31 01.8**	**+0.1**
KRHZ	**Kereru**	**1.31**	**259**	P	**Pn**	**17 31 02.6**	**+0.1**
PUZ	**Puketiti**	**1.34**	**7**	P	**Pn**	**17 31 02.4**	**-0.6**
MUGZ	**Murupara**	**1.35**	**313**	P	**Pn**	**17 31 02.5**	**-0.5**
URZ	**Urewera**	**1.35**	**327**	P	**Pn**	**17 31 02.6**	**-0.5**
URZ	**Urewera**	**1.35**	**327**	P	**Pn**	**17 31 02.3**	**-0.8**
PRHZ	**Porangahau**	**1.38**	**231**	P	**Pn**	**17 31 04.0**	**+0.6**
MRHZ	**Matea Rd**	**1.38**	**294**	P	**Pn**	**17 31 03.3**	**-0.2**
WPHZ	**Waipukurau**	**1.40**	**241**	P	**Pn**	**17 31 04.2**	**+0.6**
RUGZ	**Raukumara Rang**	**1.47**	**349**	P	**Pn**	**17 31 03.7**	**-1.0**
PNHZ	**Pukenui**	**1.51**	**250**	P	**Pn**	**17 31 05.5**	**+0.3**
PKGZ	**Pakihiroa**	**1.54**	**1**	P	**Pn**	**17 31 05.1**	**-0.5**
ALRZ	**Allen Road**	**1.57**	**302**	P	**Pn**	**17 31 05.6**	**-0.4**
PRRZ	**Plateau Road**	**1.57**	**305**	P	**Pn**	**17 31 06.4**	**+0.3**
RRRZ	**Republican Roa**	**1.60**	**311**	P	**Pn**	**17 31 06.0**	**-0.5**
WMGZ	**Waiomatatini S**	**1.61**	**11**	P	**Pn**	**17 31 06.4**	**-0.2**
EDRZ	**Edgecumbe**	**1.65**	**322**	P	**Pn**	**17 31 06.5**	**-0.6**
HAZ	**Te Kaha**	**1.66**	**353**	P	**Pn**	**17 31 06.7**	**-0.6**
TARZ	**Mount Tarawera**	**1.67**	**314**	P	**Pn**	**17 31 07.1**	**-0.4**
DVHZ	**Dannevirke**	**1.69**	**238**	P	**Pn**	**17 31 08.0**	**+0.3**
HRRZ	**Handcock Road**	**1.70**	**306**	P	**Pn**	**17 31 08.3**	**+0.3**
WPRZ	**Whakapapatarin**	**1.71**	**301**	P	**Pn**	**17 31 07.8**	**-0.2**
TSZ	**Takapari Road**	**1.73**	**247**	P	**Pn**	**17 31 08.6**	**+0.4**
RITZ	**Rihia Road**	**1.75**	**283**	P	**Pb**	**17 31 09.7**	**-1.4**

HLRZ	**Highlands Stat**	**1.75**	**311**	P	**Pn**	**17 31 08.3**	**-0.2**
WHRZ	**Whale Island**	**1.76**	**331**	P	**Pn**	**17 31 08.2**	**-0.4**
MKRZ	**Makatiti**	**1.76**	**315**	P	**Pn**	**17 31 09.7**	**+0.9**
MOVZ	**Moawhango**	**1.77**	**269**	P	**Pn**	**17 31 09.6**	**+0.7**
MARZ	**Manawahe**	**1.77**	**323**	P	**Pn**	**17 31 08.1**	**-0.8**
HSRZ	**Hossack Road**	**1.78**	**307**	P	**Pn**	**17 31 08.6**	**-0.3**
WHTZ	**Whakaora**	**1.78**	**294**	P	**Pn**	**17 31 09.2**	**+0.2**
ETVZ	**East Tongariro**	**1.83**	**278**	P	**Pn**	**17 31 10.2**	**+0.5**
TMVZ	**Te Maari**	**1.83**	**278**	P	**Pn**	**17 31 10.2**	**+0.5**
GRRZ	**Galatos Road**	**1.84**	**304**	P	**Pb**	**17 31 11.9**	**-0.7**
OMRZ	**Omania**	**1.84**	**314**	P	**Pn**	**17 31 09.0**	**-0.7**
RATZ	**Rangitukua**	**1.84**	**286**	P	**Pn**	**17 31 10.8**	**+1.0**
MXZ	**Matakaoa Point**	**1.85**	**7**	P	**Pn**	**17 31 09.4**	**-0.5**
MXZ	**Matakaoa Point**	**1.85**	**7**	S	**Sn**	**17 31 32.8**	**+0.3**
MXZ	**Matakaoa Point**	**1.85**	**7**	P	**Pn**	**17 31 09.6**	**-0.3**
TUVZ	**Tukino**	**1.85**	**274**	P	**Pn**	**17 31 10.9**	**+0.8**
OTVZ	**Oturere**	**1.86**	**277**	P	**Pn**	**17 31 10.6**	**+0.5**
NTVZ	**North Tongarir**	**1.86**	**279**	P	**Pn**	**17 31 10.6**	**+0.5**
KATZ	**Kakaramea**	**1.87**	**283**	P	**Pn**	**17 31 10.7**	**+0.4**
SNVZ	**South Ngauruho**	**1.87**	**276**	P	**Pn**	**17 31 10.9**	**+0.5**
BFZ	**Birch Farm**	**1.88**	**227**	P	**Pn**	**17 31 10.1**	**-0.1**
BFZ	**Birch Farm**	**1.88**	**227**	S	**Sn**	**17 31 33.6**	**+0.5**
BFZ	**Birch Farm**	**1.88**	**227**	P	**Pn**	**17 31 10.3**	**+0.1**
UTU	**Utuhina**	**1.89**	**310**	P	**Pb**	**17 31 17.3**	**+3.7**
WNVZ	**Wahianoa**	**1.89**	**272**	P	**Pn**	**17 31 11.5**	**+0.8**
NNVZ	**North Ngauruho**	**1.90**	**278**	P	**Pn**	**17 31 11.6**	**+0.8**
WHVZ	**Whangaehu Hut**	**1.90**	**273**	P	**Pn**	**17 31 11.6**	**+0.8**
NGZ	**Ngauruhoe**	**1.91**	**276**	P	**Pn**	**17 31 11.4**	**+0.6**
WTVZ	**West Tongariro**	**1.92**	**278**	P	**Pn**	**17 31 11.7**	**+0.7**
WATZ	**Wairara**	**1.93**	**290**	P	**Pn**	**17 31 10.8**	**-0.1**
MAVZ	**Matarangi**	**1.93**	**273**	P	**Pn**	**17 31 11.9**	**+0.7**
FWVZ	**Far West T-bar**	**1.93**	**274**	P	**Pn**	**17 31 11.7**	**+0.4**
TRVZ	**Turoa**	**1.93**	**272**	P	**Pn**	**17 31 11.8**	**+0.5**
NGRZ	**Ngongotaha**	**1.95**	**311**	P	**Pn**	**17 31 11.2**	**0.0**
COVZ	**Chateau Observ**	**1.95**	**275**	P	**Pn**	**17 31 12.0**	**+0.7**
KUTZ	**Kaahu Road**	**1.96**	**297**	P	**Pn**	**17 31 11.1**	**-0.3**
PRWZ	**Pori Road**	**1.96**	**233**	P	**Pn**	**17 31 12.0**	**+0.6**
KARZ	**Kaharoa**	**1.97**	**314**	P	**Pn**	**17 31 11.1**	**-0.4**
MTVZ	**Mangateitei**	**1.99**	**270**	P	**Pn**	**17 31 13.1**

TNSS				*e*S		**Sg**	**17 39 26.1**	**-1.7**
	2.4nm,0.5s							
KPKS	**Kokpek**	**2.39 360**		Pg		**Pb**	**17 38 56.3**	**+0.4**
	0.3nm,0.1s							
KPKS				Lg		Lg	17 39 26.6	
	6.1nm,0.3s							
MDOK	**Medeo**	**2.42 330**		Pg		**Pb**	**17 38 56.8**	**+0.5**
	4.5nm,0.4s							
MDOK				Lg		Lg	17 39 29.0	
	7.4nm,0.6s							
KURS	**Kuram**	**2.44 351**		Pg		**Pb**	**17 38 58.1**	**+1.3**
	0.9nm,0.2s							
KURS				Lg		Lg	17 39 30.3	
	3.9nm,0.6s							
BOOM	**Boomskoye usch**	**2.49 305**	⇑	*i*P		**Pb**	**17 38 57.4**	**-0.3**
BOOM			⇑	*i*S		**Sb**	**17 39 29.3**	**+0.6**
BLB	**Baldybastay**	**3.02 357**		Pg		**Pb**	**17 39 07.4**	**+0.7**
	1.7nm,0.3s							
BLB				Lg		Lg	17 39 45.8	
	5.6nm,0.4s							
ARXS	**Arharly**	**3.20 349**		*e*P		**Pb**	**17 39 10.1**	**+0.5**
ARXS				*e*S		**Sb**	**17 39 50.2**	**+1.2**

NEIC ***29*** *17:41:24.8±1.6, 16°.7S±0°.1×176°.69E±0°.08, h10km±1km, mb4.8/19, Error ellipse: s-maj=19.2km s-min=9.9km az=28.0*

IDC ***29*** *17:41:25.4±1.2, 16°.33S×176°.52E, h0km, mb4.0/8, mbtmp4.0/9, ML3.2/1, MS3.9/30, Error ellipse: s-maj=43.3km s-min=22.6km az=138.0*

GCMT ***29*** *17:41:28.8±0.2, 16°.60S±0°.01×176°.86E±0°.01, h22km±1km, MW5.0/105, Moment Tensor Solution. s37,c47; s105,c143; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.27±.13; Mθθ-1.00±.13; Mφφ0.72±.11; Mrθ-0.02±.18; Mrφ3.57±.09; Mθφ-0.45±.16; Best double couple: M=3.70100×10^16 NP1:φs263.00000°, δ83.00000°, λ2.00000°. NP2:φs173.00000°, δ88.00000°, λ173.00000°. Principal axes: T 3.5770, Plg6.0000°, Azm128.0000°; N 0.2470, Plg83.0000°, Azm339.0000°; P -3.8240, Plg4.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 17:41:25.2±0.5, 16°.72S±0°.08×176°.69E±0°.08, h10km, n86, σ1§69/60, mb4.5/14, MS4.0/28, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MSVF	**Nonsavu**	**1.64**	**128**		**Pn**		**17 41 53.1**	**-1.1**
MSVF				Sn	**Sn**		**17 42 13.8**	**-1.6**
SANVU	**Saraoutou**	**9.21**	**277**	Pn	**Pn**		**17 43 35.0**	**-3.2**
DZM	**Mont Dzumac**	**11.04**	**240**	Pn	**Pn**		**17 44 04.2**	**+0.9**
	0.2nm,0.3s,baz=91,slow=7.5,SNR=3.7							
DZM				LR	LR		17 47 38.9	
	comp=Z,1μm,21.8s,baz=41,slow=34							
	5.0nm,1.0s							
DZM	**Mont Dzumac**	**11.04**	**240**	*e*P	**Pn**		**17 44 05.2**	**+1.9**
	73nm,1.6s							
DZM				*e*S	Sn		17 46 20.2	+13
	2μm,26.4s							
DZM				*e*LR	LR		17 46 58.5	
	1μm,25.1s							
DZM	**Mont Dzumac**	**11.04**	**240**		**Pn**		**17 44 01.8**	**-1.4**
ONTNC	**Ouen Toro**	**11.14**	**238**	Pn	**Pn**		**17 44 03.3**	**-1.3**
RAO	**Raoul Island**	**13.42**	**159**	LR	LR		17 48 47.3	
	comp=Z,1μm,21.3s,baz=246,slow=32							
MXZ	**Matakaoa Point**	**20.81**	**176**	P	**P**		**17 46 05.4**	**-1.3**
TOZ	**Tahuroa Road**	**20.96**	**183**	P	**P**		**17 46 07.4**	**-0.9**
TOZ				IAmb	IAmb		17 46 25.5	
	comp=Z,34nm,1.2s							
URZ	**Urewera**	**21.46**	**179**	LR	LR		17 53 14.6	
	comp=Z,311nm,19.1s,baz=358,slow=32							
RAR	**Rarotonga**	**22.69**	**105**	LR	LR		17 54 31.6	
	comp=Z,50nm,19.6s,baz=280,slow=34							
TKNZ	**Takaka Hill**	**24.44**	**187**	P	**P**		**17 46 44.5**	**+0.3**
TUWZ	**Tuamarina**	**24.74**	**185**	P	**P**		**17 46 46.1**	**-0.7**
LTZ	**Lake Taylor**	**26.25**	**187**	P	**P**		**17 47 00.4**	**-0.1**
PMG	**Port Moresby**	**29.65**	**280**	LR	LR		17 58 49.3	
	comp=Z,370nm,18.2s,baz=68,slow=36							
PPT2	**Papeete2**	**32.22**	**97**	*e*LR	LR		17 56 09.8	
PPT2	comp=Z,599nm,28.2s			*e*LR	LR		17 56 11.1	
	comp=Z,438nm,31.0s							
PPT	**Papeete**	**32.22**	**97**	LR	LR		17 59 22.9	
	comp=Z,67nm,19.5s,baz=244,slow=33							
INKA	**Innaminka**	**34.92**	**245**	P	**P**		**17 48 16.8**	**-0.4**
STKA	**Stephens Creek**	**35.19**	**238**	P	**P**		**17 48 23.2**	**+3.7**
	comp=Z,7.6nm,1.0s,baz=60,slow=6.9,SNR=7.1							
STKA				LR	LR		18 01 23.7	
	comp=Z,278nm,20.6s,baz=52,slow=34							
	comp=Z,7.6nm,1.0s							
STKA	**Stephens Creek**	**35.19**	**238**	P	**P**		**17 48 18.6**	**-0.9**
JAY	**Jayapura**	**38.09**	**288**	LR	LR		18 04 24.8	
	comp=Z,212nm,18.6s,baz=112,slow=36							
BBOO	**Buckleboo**	**39.95**	**239**	P	**P**		**17 48 59.2**	**-0.7**
BBOO				IAmb	IAmb		17 49 29.2	
	comp=Z,62nm,1.6s							
WR8	**Warraminga Arr**	**40.11**	**259**	P	**P**		**17 49 00.4**	**-1.0**
WR8				IAmb	IAmb		17 49 09.5	
	comp=Z,18nm,1.9s							
WB0	**Warraminga Arr**	**40.22**	**259**		**P**		**17 49 01.3**	**-1.0**
WRA	**Warraminga Arr**	**40.26**	**259**	P	**P**		**17 49 02.8**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=92,slow=8.4,SNR=6.0							
	comp=Z,1.6nm,0.9s							
WRA	**Warraminga Arr**	**40.26**	**259**	P	**P**		**17 49 01.3**	**-1.4**
AS31	**Alice Springs**	**40.63**	**253**	P	**P**		**17 49 04.9**	**-0.9**
ASAR	**Alice Springs**	**40.63**	**253**	P	**P**		**17 49 06.9**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=82,slow=8.6,SNR=11							
ASAR				LR	LR		18 05 46.8	
	comp=Z,131nm,18.8s,baz=86,slow=36							
	comp=Z,1.8nm,0.9s							
ASAR	**Alice Springs**	**40.63**	**253**	P	**P**		**17 49 03.5**	**-2.2**
TAOE	**Nuku Hiva Isla**	**42.73**	**85**	*e*LR	LR		18 01 07.5	
	comp=Z,340nm,27.6s							
MTN	**Manton Dam**	**44.15**	**269**	P	**P**		**17 49 32.7**	**-1.7**
MTN				IAmb	IAmb		17 49 46.0	
	comp=Z,13nm,1.0s							
NWAO	**Narrogin (SRO)**	**55.65**	**241**	LR	LR		18 13 00.5	
	comp=Z,322nm,21.9s,baz=56,slow=34							
DAV	**Davao City (W)**	**55.80**	**291**	LR	LR		18 11 29.8	
	comp=Z,104nm,22.0s,baz=66,slow=32							
VNDA	**Vanda**	**61.28**	**184**	LR	LR		18 15 28.8	
	comp=Z,49nm,18.1s,baz=300,slow=33							
MJAR	**Matsushiro Arr**	**64.24**	**326**	P	**P**		**17 51 59.5**	**-1.1**
	comp=Z,2.4nm,1.1s,baz=137,slow=6.5,SNR=4.7							
MJAR				LR	LR		18 14 02.5	
	comp=Z,83nm,21.0s,baz=149,slow=31							
	comp=Z,2.4nm,1.1s							
MJAR	**Matsushiro Arr**	**64.24**	**326**	P	**P**		**17 51 58.1**	**-2.5**
MJAR				IAmb	IAmb		17 52 00.7	
	comp=Z,10nm,1.6s							
JNU	**Nakatsue**	**66.11**	**319**	LR	LR		18 15 21.2	
	comp=Z,136nm,19.5s,baz=184,slow=31							
ASAJ	**Asahikawa**	**68.09**	**334**	LR	LR		18 16 02.9	
	comp=Z,130nm,21.9s,baz=164,slow=31							
RPN	**Rapa Nui**	**68.56**	**113**	LR	LR		18 16 28.9	
	comp=Z,41nm,21.6s,baz=335,slow=30							
QSPA	**South Pole Qui**	**73.32**	**180**	P	P		17 53 05.0	+8.0
	comp=Z,11nm,1.1s,baz=37,slow=2.2,SNR=14							
QSPA	**South Pole Qui**	**73.32**	**180**	P	**P**		**17 52 56.9**	**-0.1**
QSPA				IAmb	IAmb		17 53 18.3	
	comp=Z,14nm,1.1s							
KDAK	**Kodiak Island**	**78.47**	**16**	LR	LR		18 21 23.0	
	comp=Z,104nm,21.0s,baz=239,slow=31							
MA2	**Magadan**	**78.90**	**347**	LR	LR		18 22 35.1	
	comp=Z,74nm,21.7s,baz=283,slow=32							
PFO	**Pinyon Flats O**	**80.97**	**51**	LR	LR		18 21 09.9	
	comp=Z,65nm,20.4s,baz=306,slow=30							
CWC	**Cottonwood Cre**	**81.10**	**48**	P	**P**		**17 53 40.0**	**-1.0**
CWC				IAmb	IAmb		17 53 46.1	
	comp=Z,25nm,1.8s							
L19K	**White Mountain**	**81.80**	**13**	P	**P**		**17 53 43.4**	**-0.6**
NVAR	**Mina Array Bea**	**81.89**	**46**	LR	LR		18 22 22.4	
	comp=Z,124nm,20.1s,baz=259,slow=30							
LPIG	**La Paz**	**81.96**	**62**	LR	LR		18 24 52.4	
	comp=Z,65nm,18.3s,baz=230,slow=32							
BBB	**Bella Bella**	**83.60**	**31**	LR	LR		18 23 30.9	
	comp=Z,57nm,19.0s,baz=251,slow=30							
CMAR	**Chiang Mai Arr**	**84.09**	**291**	LR	LR		18 27 30.7	
	comp=Z,36nm,22.0s,baz=115,slow=33							
RND	**Reindeer**	**84.25**	**15**		**P**		**17 53 55.5**	**-1.2**
ELK	**Elko**	**85.06**	**45**	LR	LR		18 24 59.8	
	comp=Z,140nm,18.9s,baz=310,slow=31							
IL31		**85.86**	**15**		**P**		**17 54 03.5**	**-1.1**
ILAR	**Eielson Array**	**85.86**	**15**	P	**P**		**17 54 04.3**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=211,slow=4.9,SNR=18							
	comp=Z,1.4nm,0.8s							
ILAR	**Eielson Array**	**85.86**	**15**	P	**P**		**17 54 03.0**	**-1.7**
PMSA	**Palmer Station**	**86.69**	**158**	LR	LR		18 28 24.4	
	comp=Z,49nm,18.2s,baz=136,slow=32							
ANMO	**Albuquerque**	**89.08**	**53**	LR	LR		18 26 59.4	
	comp=Z,82nm,19.1s,baz=349,slow=31							
TXAR	**Lajitas Array**	**89.36**	**59**	P	**P**		**17 54 24.7**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=251,slow=4.6,SNR=1.6							
	comp=Z,0.2nm,0.6s							
TXAR	**Lajitas Array**	**89.36**	**59**	P	**P**		**17 54 22.2**	**-0.3**
YHL	**Hebgen Lake**	**89.53**	**43**	P	**P**		**17 54 21.9**	**-1.2**
YHL				IAmb	IAmb		17 54 36.6	
	comp=Z,6.7nm,0.9s							
SONM	**Songino Array**	**89.64**	**321**	P	**P**		**17 54 24.4**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=128,slow=4.2,SNR=1.3							
SONM				LR	LR		18 29 57.1	
	comp=Z,51nm,20.6s,baz=134,slow=33							
	comp=Z,0.2nm,0.6s							
PDAR	**Pinedale Array**	**89.77**	**45**	LR	LR		18 27 41.0	
	comp=Z,44nm,18.9s,baz=347,slow=31							
SNAA	**Sanae**	**91.83**	**180**	P	**P**		**17 54 36.3**	**+3.1**
	comp=Z,1.8nm,1.0s,baz=175,slow=2.1,SNR=4.4							
	comp=Z,1.8nm,1.0s							
SNAA	**Sanae**	**91.83**	**180**	P	**P**		**17 54 34.1**	**+0.9**
SNAA				IAmb	IAmb		17 54 44.9	
	comp=Z,12nm,1.5s							
TIXI	**Tiksi**	**93.87**	**346**	LR	LR		18 32 34.4	
	comp=Z,91nm,21.0s,baz=196,slow=33							
PLCA	**Paso Flores**	**95.50**	**135**	LR	LR		18 31 57.1	
	comp=Z,48nm,19.2s,baz=199,slow=32							
MOX	**Moxa**	**144.10**	**344**	*e*L	L		19 07 07.6	
	comp=Z,57nm,22.0s							
KHC	**Kasperske Hory**	**144.88**	**341**	*e*PKP	**PKiKP**		**18 01 07.5**	**+1.1**
KHC				*ex*	x		18 01 15.4	
CKRC	**Cesky Krumlov**	**144.91**	**340**	*e*PKP	**PKiKP**		**18 01 07.9**	**+1.5**
CKRC				*ex*	x		18 01 13.2	
GRF	**Grafenberg Arr**	**145.07**	**343**	*e*PKPbc	**PKiKP**		**18 01 04.6**	**-2.1**
	baz=22,slow=3.1							
GRF				*e*L	L		19 07 44.4	
	comp=Z,56nm,18.6s							
GERES	**GERESS Array B**	**145.09**	**340**	PKP	**PKPdf**		**18 01 03.8**	**+0.7**
	comp=Z,1.6nm,1.0s,baz=29,slow=4.3,SNR=4.9							
CONA	**Conrad Observa**	**145.12**	**337**	*i* PKP	**PKiKP**		**18 01 08.6**	**+1.6**
	comp=Z,1.8nm,0.5s							
MOA	**Molln**	**145.76**	**339**	*i* PKP	**PKiKP**		**18 01 08.2**	**0.0**
	comp=Z,1.9nm,0.6s							
ARSA	**Arzberg**	**145.81**	**337**	*e*PKP	**PKiKP**		**18 01 08.6**	**+0.3**
	comp=Z,0.9nm,0.4s							
WLF	**Walferdange**	**146.26**	**349**	*e*PKPbc	**PKiKP**		**18 01 10.9**	**+1.8**
	baz=22,slow=3.1							
LESA	**Schwarzleotal**	**146.66**	**340**	*i* PKP	**PKiKP**		**18 01 12.1**	**+1.9**
	comp=Z,7.2nm,1.4s							
MYKA	**Terra Mystica**	**147.02**	**338**	*e*PKP	**PKiKP**		**18 01 12.5**	**+1.6**
	comp=Z,8.0nm,1.2s							
MYKA				*e*PP	**PP**		**18 04 35.8**	**+3.6**
	comp=Z,6.1nm,1.5s							
BFO	**Black Forest**	**147.06**	**346**	*e*PKPbc	**PKiKP**		**18 01 13.1**	**+2.2**
	baz=22,slow=3.1							
WTTA	**Wattenberg**	**147.13**	**341**	*i* PKP	**PKiKP**		**18 01 12.7**	**+1.5**
	comp=Z,1.5nm,0.5s							
RETA	**Reutte**	**147.20**	**342**	*i* PKP	**PKiKP**		**18 01 13.0**	**+1.7**
	comp=Z,0.2nm,0.1s							
UBR	**Ueberruh**	**147.21**	**343**	*e*PKPbc	**PKiKP**		**18 01 14.1**	**+2.8**
	baz=22,slow=3.1							
MOTA	**Moosalm**	**147.22**	**342**	*i* PKP	**PKiKP**		**18 01 13.2**	**+1.8**
	comp=Z,1.0nm,0.5s							
SQTA	**Sankt Quirin**	**147.30**	**342**	*i* PKP	**PKiKP**		**18 01 13.7**	**+2.2**
	comp=Z,0.3nm,0.2s							
ABTA	**Abfaltersbach**	**147.31**	**340**	*e*PKP	**PKiKP**		**18 01 13.3**	**+1.8**
	comp=Z,0.8nm,0.4s							
FETA	**Feichten**	**147.63**	**342**	*e*PKP	**PKPab**		**18 01 13.6**	**+1.3**
	comp=Z,1.6nm,0.7s							
DAVA	**Damuels**	**147.63**	**343**	*i* PKP	**PKPab**		**18 01 14.1**	**+1.8**
	comp=Z,0.4nm,0.2s							
DAVA				*e*PP	**PP**		**18 04 38.6**	**+2.9**
	comp=Z,9.1nm,1.1s							

NOU 29 17:47:41.2, 14°.44S×172°.24E, h11km, mb4.5/11, Vanuatu Islands Region, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**5.08**	**229**	P	Pn	17 48 56.8	-0.6
MARNC	**Mare, Loyalty**	**8.07**	**209**	P	Pn	17 49 38.1	-0.3
YATNC	**Mamie plateau,**	**9.12**	**213**	P	Pn	17 49 52.9	0.0
PINNC	**Pines Island,**	**9.31**	**209**	P	Pn	17 49 55.6	+0.1
DZM	**Mont Dzumac**	**9.38**	**215**	P	Pn	17 49 55.4	-1.0
OUENC	**Ouen Island, N**	**9.44**	**212**	P	Pn	17 49 58.3	+1.0
ONTNC	**Ouen Toro**	**9.56**	**214**	P	Pn	17 49 59.0	+0.2

BJI ***29*** *17:50:17.1, 13°.63N×93°.45E, h49km, mB5.1/5, mb4.4/32*

IDC ***29*** *17:50:17.8±0.5, 13°.57N×93°.31E, h44km±3km, mb4.1/29, mbtmp4.4/31, MS3.7/10, Error ellipse: s-maj=13.3km s-min=10.6km az=64.0*

NDI ***29*** *17:50:18.6±3.0, 13°.73N×93°.11E, h12km±11km, ML4.7, MW4.3*

BKK ***29*** *17:50:18.0±0.4, 14°.N±2°×9°.3E±°, h54km, mB5.7/37, mb5.7/47, Mjma4.9/54, ML5.7/30, MLv4.8/20, Mw(mB)5.3/37*

NEIC ***29*** *17:50:18.1±1.5, 13°.69N±0°.04×93°.40E±0°.07, h49km±5km, mb4.9/97, Error ellipse: s-maj=10.5km s-min=5.8km az=84.0*

ISC 29 17:50:17.7±0.4, 13°.67N±0°.04×93°.33E±0°.04, h48km±3km, h48km; pP-P, n210, σ1§50/234, mb4.7/75, MS3.8/7, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DGPR	**DIGLIPUR**	**0.63**	**218**	*e*P	**Pn**		**17 50 30.9**	**+0.4**
DGPR				*e*S	**Sn**		**17 50 40.1**	**+0.5**
DGPR				IAML			17 50 42.8	
	comp=N,51μm,0.6s							
DGPR				IAML			17 50 47.1	
	comp=E,27μm,0.5s							
PBA	**Port Blair**	**2.08**	**196**		**Pn**		**17 50 51.5**	**+1.3**
PBA	**Port Blair**	**2.08**	**196**	*e*P	**Pn**		**17 50 51.7**	**+1.5**
PBA				*e*S	**Sn**		**17 51 19.7**	**+4.7**
PBA				IAML			17 51 29.5	
	comp=E,3μm,0.6s							
PBA				IAML			17 51 30.3	
	comp=N,3μm,0.5s							
UTHA	**Uthaitani**	**6.21**	**72**	P	**Pn**		**17 51 50.0**	**+3.1**
	comp=N,1.2nmcomp=N,0.3nmcomp=N,880nmcomp=N,67nm,0.8s							
MHMT	**Maesarieng**	**6.29**	**44**	P	**Pn**		**17 51 49.8**	**+1.8**
	comp=N,0.8nmcomp=N,0.5nmcomp=N,0.3nmcomp=N,1μm							
	comp=N,166nm,0.7s							
RNTT	**Ranong**	**6.60**	**130**	P	**Pn**		**17 51 54.6**	**+2.4**
CM13	**Chiang Mai Arr**	**7.14**	**48**	P	**Pn**		**17 52 00.8**	**+1.1**
CM05	**Chiang Mai Arr**	**7.16**	**48**	P	**Pn**		**17 52 01.9**	**+2.0**
	comp=N,0.2nmcomp=N,505nmcomp=N,52nm,0.8s							
CM15	**Chiang Mai Arr**	**7.17**	**48**	P	**Pn**		**17 52 01.8**	**+1.7**
	comp=N,0.2nmcomp=N,0.1nmcomp=N,600nmcomp=N,43nm,0.7s							
CM01	**Chiang Mai Arr**	**7.18**	**48**	P	**Pn**		**17 52 02.5**	**+2.3**
	comp=N,0.3nmcomp=N,0.2nmcomp=N,599nmcomp=N,77nm,0.8s							
CM02	**Chiang Mai Arr**	**7.18**	**48**	P	**Pn**		**17 52 02.4**	**+2.2**
	comp=N,0.3nmcomp=N,0.2nmcomp=N,48nm,0.9s							
CM04	**Chiang Mai Arr**	**7.18**	**48**	P	**Pn**		**17 52 01.9**	**+1.7**
	comp=N,0.2nmcomp=N,0.1nmcomp=N,556nmcomp=N,60nm,0.9s							
CM31	**Chiang Mai Arr**	**7.19**	**48**		**Pn**		**17 52 01.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**7.19**	**48**	P	**Pn**		**17 52 02.1**	**+1.8**
	comp=N,15nm,0.4s,baz=238,slow=16,SNR=47							
CMAR				S	**Sn**		**17 53 18.3**	**-2.5**
	comp=N,5.0nm,0.4s,baz=236,slow=25,SNR=5.6							
CMAR				LR	LR		17 55 22.1	
	comp=N,254nm,21.6s,baz=240,slow=42							
CMAR	**Chiang Mai Arr**	**7.19**	**48**		**Pn**		**17 52 01.1**	**+0.7**
CM09	**Chiang Mai Arr**	**7.22**	**48**	P	**Pn**		**17 52 02.9**	**+2.2**
	comp=N,0.2nmcomp=N,0.2nmcomp=N,51nm,0.7s							
CHTO	**Chiang Mai**	**7.43**	**46**		**Pn**		**17 52 03.8**	**+0.2**
CHTO	**Chiang Mai**	**7.43**	**46**	P	**Pn**		**17 52 04.9**	**+1.3**
	comp=N,0.2nmcomp=N,0.4nmcomp=N,44nm,0.8s							
PKDT	**Phuket**	**7.56**	**139**	P	**Pn**		**17 52 05.2**	**-0.2**
	comp=N,0.6nmcomp=N,0.5nmcomp=N,1μmcomp=N,85nm,0.8s							
LAMP	**Lampang**	**7.74**	**51**	P	**Pn**		**17 52 10.4**	**+2.5**
	comp=N,0.2nmcomp=N,0.4nmcomp=N,945nmcomp=N,72nm,0.8s							
UTTA	**Uttaradit**	**8.05**	**59**	P	**Pn**		**17 52 14.7**	**+2.6**
	comp=N,0.1nmcomp=N,772nmcomp=N,56nm,0.6s							
CMAI	**Chiengmai2**	**8.29**	**41**	P	**Pn**		**17 52 17.8**	**+2.3**
	comp=N,0.4nmcomp=N,1μmcomp=N,45nm,0.6s							
SAIH	**SAIHA**	**8.78**	**358**	*e*P	**Pn**		**17 52 23.1**	**+0.9**
SAIH				*e*S	**Sn**		**17 53 57.1**	**-2.7**
SAIH				IAML			17 53 59.3	
	comp=E,57nm,0.5s							
SAIH				IAML			17 54 01.8	
	comp=N,64nm,0.6s							
BRDH	**Bariadhala**	**9.10**	**350**	LR	LR		17 58 02.8	
	comp=N,394nm,18.4s,baz=172,slow=50							
BWNR	**Bhubaneshwar**	**9.76**	**313**	*e*P	**Pn**		**17 52 34.5**	**-0.9**
BWNR				*e*S	Sn		17 54 12.1	-12
BWNR				*e*S			17 54 12.2	
BWNR				IAML			17 54 19.4	
	comp=E,564nm,0.5s							
BWNR				IAML			17 54 19.4	
	comp=N,534nm,0.5s							
VIS	**Vishakhapatnam**	**10.44**	**294**	*e*P	**Pn**		**17 52 44.0**	**-0.8**
VIS				*e*S	Sn		17 54 29.7	-11
VIS				IAML			17 54 34.1	
	comp=N,574nm,0.6s							
VIS				IAML			17 54 34.6	
	comp=E,292nm,0.5s							
SKNT	**Sakolnakorn**	**10.79**	**71**	P	**Pn**		**17 52 52.9**	**+3.3**
RAGD	**RAYAGADA**	**10.97**	**302**	*e*P	**Pn**		**17 52 51.0**	**-1.2**
RAGD				*e*S	Sn		17 54 42.5	-11
RAGD				IAML			17 54 47.1	
	comp=N,121nm,0.5s							
RAGD				IAML			17 54 48.2	
	comp=E,130nm,0.8s							
KULM	**Kulim**	**11.02**	**138**		**Pn**		**17 52 51.6**	**-1.2**
IMP	**Imphal**	**11.12**	**3**	*e*P	**Pn**		**17 52 57.1**	**+2.9**
IMP				*ex*	x		17 54 28.7	
IPM	**Ipoh**	**11.88**	**140**		**Pn**		**17 53 03.9**	**-0.7**
SHL	**Shillong**	**11.91**	**354**		**Pn**		**17 53 02.4**	**-2.7**
KOHI	**KOHIMA**	**12.01**	**3**	*e*P	**Pn**		**17 53 05.9**	**-0.5**
JHSG	**JHARSUGUGA**	**12.15**	**313**	*e*S	Sn		17 55 12.1	-10
JHSG				IAML			17 55 34.7	
	comp=N,651nm,0.5s							
JHSG				IAML			17 55 35.6	
	comp=E,817nm,0.9s							
RPSI	**Rantau Prapat**	**12.23**	**153**		**Pn**		**17 53 07.3**	**-2.1**
BOK	**Bokaro**	**12.29**	**326**	*e*P	**Pn**		**17 53 10.4**	**+0.3**
BOK				*e*S	Sn		17 55 15.6	-10
VJD	**Vijayawada**	**12.57**	**285**	*e*P	**Pn**		**17 53 13.8**	**-0.2**
VJD				*e*S	Sn		17 55 20.5	-12
VJD				IAML			17 55 31.6	
	comp=E,69nm,0.4s							
VJD				IAML			17 55 32.1	
	comp=N,71nm,0.5s							
MOKO	**MOKOCHONG**	**12.63**	**5**	*e*P	**Pn**		**17 53 17.1**	**+2.2**
DHUB	**DHUBRI**	**12.68**	**346**	*e*P	**Pn**		**17 53 15.6**	**+0.2**
DHUB				IAML			17 55 29.0	
	comp=E,593nm,0.3s							
DHUB				IAML			17 55 29.0	
	comp=N,754nm,0.3s							
TEZP	**TEZPUR**	**12.89**	**358**	*e*P	**Pn**		**17 53 19.2**	**+1.0**
GAYA	**Gaya**	**13.45**	**327**	*e*P	**Pn**		**17 53 25.4**	**-0.6**
GAYA				*e*S	Sn		17 55 44.6	-9.4
GAYA				IAML			17 55 53.4	
	comp=N,90nm,0.2s							
GAYA				IAML			17 55 54.0	
	comp=E,107nm,0.3s							
BLSP	**Bilaspur**	**13.57**	**310**	*e*P	**Pn**		**17 53 25.0**	**-2.7**
BLSP				*e*S	Sn		17 55 44.0	-13
ZIRO	**ZIRO**	**13.79**	**2**	*e*P	**Pn**		**17 53 30.6**	**-0.2**
TAWA	**Tawang**	**13.92**	**355**	*e*P	**Pn**		**17 53 34.3**	**+1.6**
TAWA				*e*S	**Sn**		**17 55 57.8**	**-8.1**
PALK	**Pallekele**	**13.95**	**244**	P	**Pn**		**17 53 31.7**	**-1.2**
	comp=E,3.0nm,0.5s,baz=56,slow=9.8,SNR=8.3							
PALK				S	Sn		17 55 49.7	-17
	comp=E,20nm,0.6s,baz=145,slow=23,SNR=7.3							
PALK				LR	LR		17 58 27.2	
	comp=E,346nm,21.3s,baz=55,slow=35							
HYBB	**Hyderabad (bro**	**14.72**	**287**	*e*P	**Pn**		**17 53 43.6**	**+0.4**
PZH	**PanZhiHua**	**15.00**	**30**	P	**P**		**17 53 53.3**	**+1.9**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
EVN	**Everest**	**15.46**	**338**		**Pn**		**17 53 52.2**	**-1.0**
MYKOM	**Kota Tinggi**	**15.74**	**138**	Pn	**Pn**		**17 53 55.2**	**-1.0**
KOD	**Kodaikanal**	**15.89**	**259**	*e*P	**Pn**		**17 53 59.8**	**+1.2**
KOD				*e*S	Sn		17 56 39.2	-15
LSA	**Lhasa**	**16.08**	**353**		**Pn**		**17 53

comp=Z,1.7nm,1.0s,baz=197,slow=4.6,SNR=5.2
comp=Z,0.7nm,0.5s
KURBB Kurchatov Arra 38.77 345 P **P** **17 57 38.4 +0.9**
comp=Z,3.3nm,0.8s,baz=164,slow=8.0,SNR=30
KURBB pP **pP** **17 57 51.9 +1.6**
comp=Z,3.8nm,0.7s,baz=167,slow=7.6,SNR=12
KURBB ScP **ScP** **18 03 33.4 +0.8**
comp=Z,0.7nm,0.9s,baz=162,slow=3.0,SNR=4.8
comp=Z,3.3nm,0.8s
KSRS Korea Array 38.83 46 P **P** **17 57 38.9 +0.7**
comp=Z,2.1nm,0.6s,baz=242,slow=8.2,SNR=9.3
comp=Z,2.1nm,0.6s
KURK Kurchatov 38.83 345 **P** **17 57 37.2 -0.7**
KURK Kurchatov 38.83 345 P **P** **17 57 39.4 +1.5**
JNU Nakatsue 39.24 54 P **P** **17 57 39.5 -2.3**
JNU IAmb IAmb 17 57 56.2
comp=Z,58nm,1.7s
CN2 Changchun 40.70 36 *eP* **P** **17 57 54.5 +0.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
ZAA0 Zalesovo Array 40.74 352 **P** **17 57 52.8 -0.9**
ZALV Zalesovo Beam 40.74 352 P **P** **17 57 54.8 +1.0**
comp=Z,3.9nm,0.8s,baz=175,slow=8.1,SNR=15
comp=Z,3.9nm,0.8s
ZALV Zalesovo Beam 40.74 352 **P** **17 57 53.5 -0.2**
HILR Hailar Array B 41.83 26 P **P** **17 58 05.0 +2.1**
comp=Z,1.2nm,0.4s,baz=200,slow=6.9,SNR=2.8
comp=Z,1.2nm,0.4s
BVAR Borovoye Array 43.29 340 P **P** **17 58 15.6 +1.0**
comp=Z,0.9nm,0.4s,baz=137,slow=9.6,SNR=7.4
comp=Z,0.9nm,0.4s
BORK Borovoye 43.33 340 P **P** **17 58 14.6 -0.4**
AB31 Akbulak array 44.83 329 **P** **17 58 27.1 +0.1**
ABKAR Akbulak array 44.83 329 P **P** **17 58 27.5 +0.5**
FITZ Fitzroy Crossi 44.86 134 P **P** **17 58 26.1 -1.5**
MJAR Matsushiro Arr 46.06 52 P **P** **17 58 39.0 +2.0**
comp=Z,3.4nm,1.1s,baz=270,slow=9.7,SNR=4.3
MJAR PcP **PcP** **18 00 13.7 +1.0**
comp=Z,1.8nm,0.6s,baz=228,slow=2.3,SNR=6.1
comp=Z,3.4nm,1.1s
RAYN Ar Rayn 46.20 290 P **P** **17 58 38.1 -0.1**
JAY Jayapura 49.65 105 LR LR 18 23 31.2
comp=Z,54nm,18.4s,baz=204,slow=40
GNI Garni 49.94 311 P **P** **17 59 06.8 -0.2**
GNI IAmb IAmb 17 59 10.8
comp=Z,14nm,0.9s
ARTI Arti 50.33 336 P **P** **17 59 08.9 -0.7**
ARTI IAmb IAmb 17 59 11.1
comp=Z,7.3nm,0.9s
GURO Guroymak-BITLI 51.51 309 **P** **17 59 20.3 +1.3**
GURO IAmb IAmb 17 59 22.0
comp=Z,8.3nm,1.0s
NWAO Narrogin (SRO) 51.66 154 P **P** **17 59 19.0 -0.8**
JKA Kamikawa-asahi 51.70 44 P **P** **17 59 18.9 -1.2**
MARD Mardin 52.19 307 **P** **17 59 23.9 -0.1**
MARD IAmb IAmb 17 59 25.7
comp=Z,6.9nm,0.6s
WRA Warramunga Arr 52.38 129 P **P** **17 59 24.5 -0.9**
comp=Z,3.2nm,0.6s,baz=301,slow=8.9,SNR=21
WRA PcP **PcP** **18 00 36.2 +0.2**
comp=Z,1.6nm,0.4s,baz=313,slow=3.7,SNR=12
WRA ScP **ScP** **18 04 27.5 -1.8**
comp=Z,0.3nm,0.7s,baz=305,slow=4.8,SNR=1.4
comp=Z,3.2nm,0.6s
WRA Warramunga Arr 52.38 129 P **P** **17 59 24.2 -1.3**
WRA **PcP** **18 00 35.6 -0.4**
WRAB Tennant Creek 52.38 129 P **P** **17 59 23.4 -2.1**
WRAB Tennant Creek 52.38 129 P P 17 59 15.0 -10
WR8 Warramunga Arr 52.51 129 P **P** **17 59 25.1 -1.3**
WR8 IAmb IAmb 18 00 52.8
comp=Z,11nm,1.3s
KIV Kislovodsk 52.58 315 P **P** **17 59 25.9 -0.8**
KIV IAmb IAmb 17 59 42.1
comp=Z,22nm,1.0s
AS31 Alice Springs 54.32 133 **P** **17 59 38.4 -1.3**
ASAR Alice Springs 54.32 133 P **P** **17 59 39.2 -0.5**
comp=Z,6.2nm,0.5s,baz=307,slow=6.8,SNR=348
ASAR PcP **PcP** **18 00 43.8 +0.5**
comp=Z,1.1nm,0.5s,baz=308,slow=4.6,SNR=4.1
ASAR ScP **ScP** **18 04 35.8 -1.9**
comp=Z,0.5nm,0.8s,baz=303,slow=3.6,SNR=3.0
comp=Z,6.2nm,0.5s
ASAR Alice Springs 54.32 133 P **P** **17 59 39.0 -0.7**
ASAR PcP **PcP** **18 00 43.5 +0.2**
OPO Ambohidratompo 55.63 236 P **P** **17 59 50.6 +1.2**
comp=Z,2.3nm,0.5s,baz=56,slow=8.1,SNR=6.4
comp=Z,2.3nm,0.5s
NRIK Noril'sk 55.75 358 P **P** **17 59 50.7 +1.5**
comp=Z,2.7nm,0.5s,baz=172,slow=6.3,SNR=4.8
comp=Z,2.7nm,0.5s
COEN Coen 56.48 117 P **P** **17 59 54.5 -0.8**
VOI Vohitsoka 57.74 233 P **P** **18 00 04.8 +0.6**
CSS Mathiatis 57.78 303 P **P** **18 00 05.6 +1.3**
PMG Port Moresby 58.13 110 P **P** **18 00 06.2 -0.8**
PMG IAmb IAmb 18 01 29.7
comp=Z,12nm,0.9s
BR131 Keskin Array S 58.14 308 **P** **18 00 06.4 -0.5**
BR131 IAmb IAmb 18 00 08.0
comp=Z,7.7nm,0.8s
BRTR Keskin Array B 58.14 308 P **P** **18 00 07.1 +0.2**
comp=Z,5.3nm,0.7s,baz=120,slow=7.9,SNR=33
BRTR pP **pP** **18 00 19.8 -0.6**
comp=Z,4.5nm,0.8s,baz=122,slow=7.7,SNR=10
BRTR LR LR 18 29 01.4
comp=Z,62nm,18.4s,baz=102,slow=40
comp=Z,5.3nm,0.7s
BRTR Keskin Array B 58.14 308 P **P** **18 00 06.4 -0.5**
BRTR PcP **PcP** **18 00 56.7 -1.4**
BORA Eskisehir 60.59 308 P **P** **18 00 23.3 -0.5**
BORA IAmb IAmb 18 02 28.6
comp=Z,23nm,1.5s
ELL Elmali 60.71 305 P **P** **18 00 25.0 +0.4**
AKAS Kas 60.91 304 P **P** **18 00 26.7 +0.6**
BBOO Buckleboo 61.66 140 P **P** **18 00 29.6 -1.3**
BBOO IAmb IAmb 18 00 48.3
comp=Z,11nm,0.9s
INKA Innaminka 61.69 132 **P** **18 00 29.6 -1.6**
INKA IAmb IAmb 18 00 32.7
comp=Z,4.8nm,0.8s
TIXI Tiksi 61.75 12 **P** **18 00 30.6 -0.2**
TIXI IAmb IAmb 18 00 47.4
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 63.18 320 P **P** **18 00 40.5 -0.3**
comp=Z,0.6nm,0.5s,baz=92,slow=4.7,SNR=4.4
AKASG pP **pP** **18 00 54.5 +0.1**
comp=Z,2.0nm,0.7s,baz=91,slow=4.4,SNR=3.3
comp=Z,0.6nm,0.5s
AKBB Malin Array Si 63.18 320 P **P** **18 00 40.1 -0.6**
AKBB IAmb IAmb 18 01 09.5
comp=Z,25nm,1.8s
KIEV Kiev 63.19 320 P **P** **18 00 40.3 -0.6**
KIEV IAmb IAmb 18 01 09.5
comp=Z,24nm,1.8s
MBAR Mbarara 63.58 262 LR LR 18 28 37.0
comp=Z,75nm,18.9s,baz=108,slow=36
PETK Petropavlovsk- 63.84 37 P **P** **18 00 45.4 +0.2**
comp=Z,11nm,1.1s,baz=281,slow=2.8,SNR=1.9
comp=Z,11nm,1.1s
STKA Stephens Creek 64.72 135 P **P** **18 00 51.2 0.0**
comp=Z,3.5nm,0.7s,baz=295,slow=8.9,SNR=5.5
STKA sP **sP** **18 01 09.2 -0.6**
comp=Z,1.7nm,0.5s,baz=298,slow=9.6,SNR=2.2
comp=Z,3.5nm,0.7s
BURAR Bucovina Array 65.28 316 P **P** **18 00 55.6 +0.8**
BUR08 Bucovina Ar. S 65.30 316 P **P** **18 00 55.2 +0.3**
BUR08 IAmb IAmb 18 01 10.2
comp=Z,34nm,1.6s
ITM Ithomi 67.11 305 P **P** **18 01 05.7 -0.9**
FIA1 FINESS Array S 67.26 331 P **P** **18 01 07.4 +0.4**
FINES FINESS Array B 67.26 331 P **P** **18 01 07.7 +0.7**
comp=Z,4.2nm,0.7s,baz=99,slow=6.3,SNR=15
comp=Z,4.2nm,0.7s
FINES FINESS Array B 67.26 331 P **P** **18 01 07.3 +0.3**
PSZ Piszkesteto 68.89 316 P **P** **18 01 17.5 -0.1**
PSZ IAmb IAmb 18 01 35.8
comp=Z,29nm,1.9s
OJC Ojcow 69.08 319 P **P** **18 01 18.9 +0.2**
PDG Podgorica 69.19 310 **P** **18 01 19.5 0.0**
PDG IAmb IAmb 18 03 42.3
comp=Z,45nm,1.5s
LANS Liptovska Anna 69.23 318 *eP* **P** **18 01 24.2 +4.5**
ARCES ARCESS Array B 69.58 340 P **P** **18 01 22.4 +1.0**
comp=Z,1.2nm,0.4s,baz=102,slow=5.8,SNR=12
comp=Z,1.2nm,0.4s
ARCES ARCESS Array B 69.58 340 P **P** **18 01 21.7 +0.2**
MORC Moravsky Berou 70.52 318 **P** **18 01 27.5 -0.1**
MORC IAmb IAmb 18 01 43.3
comp=Z,7.8nm,0.9s
MODS Modra-Piesok 70.66 317 *eP* **P** **18 01 30.8 +2.4**
TOO Toolangi 70.66 138 P **P** **18 01 28.1 -0.4**
TOO IAmb IAmb 18 03 39.1
comp=Z,23nm,1.9s
BEHE Becsehely 70.98 315 P **P** **18 01 29.5 -0.9**
BEHE IAmb IAmb 18 01 46.0
comp=Z,5.3nm,0.6s
TIP Timpagrande 71.14 307 P **P** **18 01 31.2 -0.4**
TIP IAmb IAmb 18 02 16.9
comp=Z,27nm,1.3s
POGA Pongola 72.33 235 P **P** **18 01 38.5 -0.3**
POGA IAmb IAmb 18 02 52.1
comp=Z,41nm,1.5s
GEC2 GERESS Array S 73.03 317 P **P** **18 01 43.1 +0.4**
GEC2 IAmb IAmb 18 01 58.1
comp=Z,6.3nm,0.7s
GERES GERESS Array B 73.03 317 P **P** **18 01 43.6 +0.9**
comp=Z,3.1nm,0.7s,baz=76,slow=7.0,SNR=7.6
GERES pP **pP** **18 01 56.8 +0.2**
comp=Z,4.7nm,0.7s,baz=86,slow=6.0,SNR=7.7
comp=Z,3.1nm,0.7s
HFS Hagfors 73.09 329 P **P** **18 01 43.3 +0.6**
comp=Z,3.5nm,0.6s,baz=126,slow=7.7,SNR=15
HFS pP **pP** **18 01 56.8 +0.2**
comp=Z,5.9nm,0.7s,baz=108,slow=8.0,SNR=4.3
comp=Z,3.5nm,0.6s
SABO M.te Sabotino 73.19 314 P **P** **18 01 43.0 -0.7**
SABO IAmb IAmb 18 01 58.6
comp=Z,11nm,0.7s
STAL STALIGIAL 73.80 315 P **P** **18 01 46.7 -0.5**
STAL IAmb IAmb 18 02 02.4
comp=Z,11nm,0.9s
CIMO Cimolais 73.98 315 P **P** **18 01 48.0 -0.3**
CIMO IAmb IAmb 18 02 03.2
comp=Z,11nm,0.7s
SPITS Spitsbergen Ar 74.03 348 P **P** **18 01 49.2 +1.2**
comp=Z,13nm,1.1s,baz=110,slow=9.8,SNR=4.8
comp=Z,13nm,1.1s
NC405 NORSAR Array S 74.09 330 P **P** **18 01 48.3 -0.3**
NC602 NORSAR Array S 74.17 330 P **P** **18 01 49.0 -0.1**
NB2 NORSAR Subarra 74.33 330 P **P** **18 01 50.1 0.0**
comp=Z,1.4nm,0.5s,baz=89,slow=5.9
NOA NORSAR Array B 74.33 330 P **P** **18 01 50.5 +0.4**
comp=Z,2.0nm,0.6s,baz=90,slow=5.7,SNR=7.0
NOA pP **pP** **18 02 03.8 -0.2**
comp=Z,2.5nm,0.8s,baz=89,slow=5.8,SNR=5.0
comp=Z,2.0nm,0.6s
NC204 NORSAR Array S 74.55 330 P **P** **18 01 50.9 -0.5**
LPHEP Lephephe 75.54 241 P **P** **18 01 57.3 -0.5**
LPHEP IAmb IAmb 18 04 12.9
comp=Z,32nm,1.6s
LBTB Lobatse 76.39 240 LR LR 18 31 58.2
comp=Z,100nm,18.1s,baz=118,slow=33
LBTB Lobatse 76.39 240 P **P** **18 02 01.3 -1.3**
LBTB IAmb IAmb 18 02 39.0
comp=Z,28nm,1.6s
KEST Kesra 77.32 304 P **P** **18 02 07.8 +0.1**
comp=Z,5.0nm,0.8s,baz=213,slow=1.6,SNR=4.5
comp=Z,5.0nm,0.8s
KEST Kesra 77.32 304 P **P** **18 02 06.6 -1.1**
KEST IAmb IAmb 18 02 09.3
comp=Z,12nm,1.1s
SENIN Lac Senin/Sane 77.52 315 P **P** **18 02 08.3 -0.4**
SENIN IAmb IAmb 18 02 24.7
comp=Z,5.8nm,0.6s
BOSA Boshof 78.04 236 P **P** **18 02 12.6 +0.7**
comp=Z,5.4nm,0.5s,baz=76,slow=3.4,SNR=22
BOSA pP **pP** **18 02 25.5 -0.2**
comp=Z,3.1nm,0.5s,baz=80,slow=4.4,SNR=4.1
comp=Z,5.4nm,0.5s
BOSA Boshof 78.04 236 P **P** **18 02 12.3 +0.5**
BOSA IAmb IAmb 18 04 34.8
comp=Z,42nm,1.7s
BNI Bardonecchia 78.12 314 P **P** **18 02 12.4 +0.4**
BNI IAmb IAmb 18 04 37.5
comp=Z,30nm,1.6s
KGCAE Kacgae 78.50 243 P **P** **18 02 14.6 +0.2**
KGCAE IAmb IAmb 18 03 39.7
comp=Z,24nm,1.5s
SSB Saint Sauveur 79.58 314 **P** **18 02 19.5 -0.4**
SSB IAmb IAmb 18 03 21.1
comp=Z,27nm,1.6s
LKGWB Lokgwabe 79.78 242 **P** **18 02 18.3 -3.1**
TNA Tin City 81.25 25 P **P** **18 02 26.2 -2.1**
EKA Eskdalemuir Ar 82.53 325 P **P** **18 02 36.3 +1.0**
comp=Z,2.7nm,0.7s,baz=84,slow=6.7,SNR=8.6
EKA pP **pP** **18 02 49.5 +0.1**
comp=Z,1.2nm,0.5s,baz=88,slow=5.0,SNR=3.2
comp=Z,2.7nm,0.7s
ESK Eskdalemuir 82.56 325 P **P** **18 02 35.5 0.0**
SUR Sutherland 83.00 234 P **P** **18 02 39.3 +0.9**
C19K Lookout Ridge 83.29 20 P **P** **18 02 39.9 +0.8**
E18K Tukpahlearik C 83.52 22 P **P** **18 02 39.8 -0.5**
E18K IAmb IAmb 18 04 22.0
comp=Z,18nm,1.4s
E22K Anaktuvuk Pass 86.29 20 P **P** **18 02 54.0 -0.1**
E22K IAmb IAmb 18 05 32.9
comp=Z,25nm,1.8s
IMAR Indian Mountai 86.60 22 **P** **18 02 56.3 +0.6**
TOLK Toolik Lake Re 86.77 19 P **P** **18 02 57.5 +0.9**
ESDC Sonseca Array 86.90 310 P **P** **18 02 58.3 +0.5**
comp=Z,1.1nm,0.6s,baz=63,slow=4.4,SNR=11
ESDC pP **pP** **18 03 11.9 -0.1**
comp=Z,1.8nm,0.8s,baz=60,slow=4.5,SNR=8.8
comp=Z,1.1nm,0.6s
ESDC Sonseca Array 86.90 310 P **P** **18 02 58.3 +0.5**
ESDC IAmb IAmb 18 03 15.2
comp=Z,7.8nm,1.8s
D25K Kavik River 87.40 18 P **P** **18 03 01.1 +1.5**
D25K IAmb IAmb 18 03 26.2
comp=Z,5.6nm,0.9s
SUMG Summit 88.35 347 P **P** **18 03 02.8 -1.7**
TORD Torodi Ar. Bea 88.51 283 P **P** **18 03 06.4 +0.6**
comp=Z,2.9nm,0.4s,baz=32,slow=5.1,SNR=3.2
comp=Z,2.9nm,0.4s
TORD Torodi Ar. Bea 88.51 283 P **P** **18 03 04.5 -1.3**
TORD IAmb IAmb 18 03 30.9
comp=Z,5.1nm,0.5s
N19K Bonanza Creek 88.58 27 P **P** **18 03 03.8 -1.6**
BMAR Burnt Mountain 89.01 19 P **P** **18 03 07.0 -0.2**
MDT Midelt 89.22 303 LR LR 18 52 44.8
comp=Z,62nm,18.1s,baz=124,slow=42
ILAR Eielson Array 89.70 22 P **P** **18 03 09.9 -0.5**
comp=Z,0.5nm,0.7s,baz=304,slow=4.1,SNR=6.3
comp=Z,0.5nm,0.7s
PDAR Pinedale Array 120.03 19 PKP **PKiKP** **18 09 04.2 +0.3**
comp=Z,0.2nm,0.3s,baz=2.9,slow=3.0,SNR=4.8
PDAR Pinedale Array 120.03 19 **PKPdf** **18 09 02.9 -0.8**
NVAR Mina Array Bea 120.31 28 PKP **PKiKP** **18 09 06.4 +2.0**
comp=Z,0.6nm,0.6s,baz=305,slow=0.8,SNR=3.7
TXAR Lajitas Array 134.20 21 PKP **PKiKP** **18 09 32.6 +0.3**
comp=Z,0.4nm,0.4s,baz=12,slow=1.3,SNR=8.6
TXAR SKPbc **SKPbc** **18 12 58.0 +1.4**
comp=Z,1.0nm,0.9s,baz=300,slow=2.5,SNR=5.4
PLCA Paso Flores 149.58 205 PKPbc **PKiKP** **18 10 03.1 -0.2**
comp=Z,3.5nm,0.8s,baz=70,slow=2.8,SNR=4.8
CPUP Villa Florida 149.78 241 PKPbc **PKbc** **18 10 03.3 +0.2**
comp=Z,0.2nm,0.5s,baz=146,slow=2.1,SNR=3.1

IDC 29 18:04:07.1±1.9, 3°.51N×126°.76E, h0km, mb3.3/5, mbtmp3.3/5, MS3.6/1, Error ellipse: s-maj=142.8km s-min=21.7km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.50**	**183**	P	P	18 08 57.8	+0.1
	2.1nm,0.9s,baz=0.0,slow=8.1,SNR=2.0						
	2.1nm,0.9s						
WRA	**Warramunga Arr**	**24.47**	**163**	P	P	18 09 27.2	-0.8
	0.5nm,0.5s,baz=340,slow=10,SNR=7.5						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**27.90**	**166**	P	P	18 09 59.9	+0.9
	0.1nm,0.5s,baz=346,slow=11,SNR=5.7						
	0.1nm,0.5s						
MKAR	**Makanchi Array**	**57.75**	**325**	P	P	18 13 59.9	-0.1
	0.3nm,0.6s,baz=113,slow=7.9,SNR=4.7						
MKAR				LR	LR	18 40 14.8	
	comp=Z,48nm,18.9s,baz=88,slow=38						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**61.93**	**327**	P	P	18 14 28.5	-0.1
	0.3nm,0.8s,baz=114,slow=6.2,SNR=1.8						
	0.3nm,0.8s						

*NEIC **29** 18:16:43.9±1.4, 19°.20N×0°.04×67°.18W±0°.03, h10km±2km, ML2.7/20, Md3.0/15(RSPR), Error ellipse: s-maj=7.7km s-min=4.6km az=6.0*
*SDD **29** 18:16:48.4±0.8, 19°.10N×67°.07W, h29km±22km, MD3.5, ML2.5, MW3.0*
*RSPR **29** 18:16:49.2, 19°.06N×67°.21W, h10km±31km, MD3.0/15*

ISC 29 18:16:45.2±1.4, 19°.18N±0°.06×67°.16W±0°.03, h19km±3km, n53, σ0°.58/62, 15C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.71**	**176**	*eP*	**Pb**	**18 16 59.7**	**+0.8**
AGPR				⇑*eS*	**Sg**	**18 17 08.3**	**-0.5**
AGPR				IAML		18 17 09.6	
	comp=E,254nm,0.3s						
AGPR				IAML		18 17 10.8	
	comp=N,360nm,0.2s						
AGPR	**Aguadilla, PR**	**0.71**	**176**	⇑*eP*	**Pb**	**18 16 59.8**	**+0.8**
AGPR	**Aguadilla, PR**	**0.71**	**176**	*eS*	**Sg**	**18 17 08.3**	**-0.5**
IDE	**Isla Desecheo**	**0.84**	**201**		**Pb**	**18 17 01.7**	**+0.5**
IDE					**Sb**	**18 17 12.3**	**+0.1**
IDE	**Isla Desecheo**	**0.84**	**201**	⇑*eP*	**Pb**	**18 17 01.7**	**+0.5**
IDE	**Isla Desecheo**	**0.84**	**201**	*eS*	**Sb**	**18 17 12.3**	**+0.1**
AOPR	**Arecibo Observ**	**0.91**	**155**	*eP*	**Pg**	**18 17 02.9**	**-0.2**
AOPR				IAML		18 17 22.9	
	comp=N,268nm,0.2s						
AOPR				IAML		18 17 25.1	
	comp=E,347nm,0.2s						
AOPR	**Arecibo Observ**	**0.91**	**155**		**Pg**	**18 17 02.9**	**-0.2**
AOPR					**Sb**	**18 17 13.7**	**-0.5**
AOPR				IAML		18 17 23.0	
	comp=N,271nm,0.3s						
AOPR				IAML		18 17 25.2	
	comp=E,369nm,0.2s						
AOPR	**Arecibo Observ**	**0.91**	**155**	⇑*eP*	**Pg**	**18 17 02.9**	**-0.2**
AOPR	**Arecibo Observ**	**0.91**	**155**	*eS*	**Sb**	**18 17 14.2**	**0.0**
EMPR	**Esperanza - Ma**	**0.92**	**139**		**Pn**	**18 17 04.3**	**+1.2**
EMPR					**Sn**	**18 17 15.5**	**-0.2**
EMPR	**Esperanza - Ma**	**0.92**	**139**	IAML		18 17 24.5	
	comp=E,127nm,0.5s						
EMPR	**Esperanza - Ma**	**0.92**	**139**	⇑*eP*	**Pn**	**18 17 04.3**	**+1.2**
EMPR	**Esperanza - Ma**	**0.92**	**139**	*eS*	**Sn**	**18 17 15.5**	**-0.2**
PRSN	**Puerto Rico Se**	**0.96**	**179**	*ePg*	**Pb**	**18 17 03.6**	**+0.4**
PRSN				IAML		18 17 18.2	
	comp=N,406nm,0.2s						
PRSN	**Puerto Rico Se**	**0.96**	**179**		**Pb**	**18 17 03.7**	**+0.4**
PRSN					**Sb**	**18 17 15.2**	**-0.2**
PRSN	**Puerto Rico Se**	**0.96**	**179**	⇑*eP*	**Pb**	**18 17 03.7**	**+0.4**
PRSN	**Puerto Rico Se**	**0.96**	**179**	*eS*	**Sb**	**18 17 15.2**	**-0.2**
LSP	**Las Mesas**	**1.00**	**176**		**Pb**	**18 17 04.4**	**+0.5**
LSP					**Sb**	**18 17 16.6**	**-0.2**
LSP	**Las Mesas**	**1.00**	**176**	⇑*eP*	**Pb**	**18 17 04.4**	**+0.5**
LSP	**Las Mesas**	**1.00**	**176**	*eS*	**Sb**	**18 17 16.6**	**-0.2**
ECPR	**Experimental S**	**1.14**	**138**	⇑*eP*	**Pg**	**18 17 07.4**	**0.0**
ECPR	**Experimental S**	**1.14**	**138**	*eS*	**Sn**	**18 17 21.4**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.17**	**178**	*ePg*	**Pn**	**18 17 06.8**	**+0.3**
CRPR				⇓*eSg*	**Sb**	**18 17 21.0**	**-0.6**
CRPR				IAML		18 17 22.1	
	comp=E,123nm,0.2s						
CRPR				IAML		18 17 23.4	
	comp=N,122nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.17**	**178**		**Pn**	**18 17 06.5**	**0.0**
CRPR					**Sb**	**18 17 20.4**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.17**	**178**	IAML		18 17 22.1	
	comp=N,128nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.17**	**178**	⇓*eP*	**Pn**	**18 17 06.8**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.17**	**178**	*eS*	**Sb**	**18 17 21.2**	**-0.4**
MLPR	**Magueyes Islan**	**1.21**	**175**	⇑*ePg*	**Pn**	**18 17 07.4**	**+0.4**
MLPR				⇓*eSg*	**Sb**	**18 17 21.8**	**-0.9**
MLPR				IAML		18 17 21.9	
	comp=E,30nm,0.6s						
MLPR				IAML		18 17 22.3	
	comp=N,37nm,0.4s						
MLPR	**Magueyes Islan**	**1.21**	**175**	⇓*eP*	**Pn**	**18 17 07.5**	**+0.4**
MLPR	**Magueyes Islan**	**1.21**	**175**	*eS*	**Sb**	**18 17 21.9**	**-0.8**
GBPR	**Guanica, Bosqu**	**1.23**	**167**		**Pb**	**18 17 08.1**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.23**	**167**	⇑*eP*	**Pb**	**18 17 08.1**	**+0.3**
OBIP	**Obispado Ponce**	**1.25**	**155**		**Pn**	**18 17 07.8**	**+0.2**
OBIP					**Sb**	**18 17 22.3**	**-1.5**
OBIP				IAML		18 17 28.6	
	comp=E,96nm,0.3s						
OBIP	**Obispado Ponce**	**1.25**	**155**	⇑*eP*	**Pn**	**18 17 08.1**	**+0.4**
OBIP	**Obispado Ponce**	**1.25**	**155**	*eS*	**Sb**	**18 17 23.4**	**-0.4**
GCPR	**Guaynabo City**	**1.34**	**130**		**Pn**	**18 17 08.9**	**+0.1**
GCPR					**Sb**	**18 17 25.1**	**-1.3**
GCPR	**Guaynabo City**	**1.34**	**130**	⇑*eP*	**Pg**	**18 17 11.0**	**-0.2**
GCPR	**Guaynabo City**	**1.34**	**130**	*eS*	**Sb**	**18 17 26.5**	**0.0**
SJG	**San Juan**	**1.43**	**138**		**Pn**	**18 17 09.6**	**-0.5**
SJG				IAML		18 17 35.8	
	comp=E,73nm,0.2s						
SJG				IAML		18 17 37.7	
	comp=E,87nm,0.2s						
SJG	**San Juan**	**1.43**	**138**	⇑*eP*	**Pg**	**18 17 12.5**	**-0.4**
HUMP	**Col San Antoni**	**1.61**	**130**		**Sb**	**18 17 34.8**	**+0.4**
HUMP	**Col San Antoni**	**1.61**	**130**		**Pn**	**18 17 13.0**	**+0.4**
HUMP				IAML		18 17 38.5	
	comp=E,63nm,0.2s						
HUMP				IAML		18 17 41.7	
	comp=E,71nm,0.2s						
HUMP	**Col San Antoni**	**1.61**	**130**	⇑*eP*	**Pb**	**18 17 14.4**	**0.0**
HUMP	**Col San Antoni**	**1.61**	**130**	*eS*	**Sb**	**18 17 34.8**	**+0.4**
MIDR	**Miches**	**1.80**	**264**	*ePg*	**Pg**	**18 17 19.9**	**0.0**
MIDR				IAML		18 17 46.8	
	comp=E,20nm,0.5s						
MIDR				IAML		18 17 47.4	
	comp=N,29nm,0.4s						
MIDR				IAML		18 18 09.8	
	comp=N,39nm,2.1s						
MIDR	**Miches**	**1.80**	**264**	⇑*eP*	**Pg**	**18 17 19.9**	**0.0**
MIDR	**Miches**	**1.80**	**264**	*eS*	**Sg**	**18 17 43.9**	**+0.6**
DR12	**Loma Pena Alta**	**2.14**	**260**	Pn	**Pn**	**18 17 18.9**	**-1.1**
HATOM	**Hato Mayor del**	**2.14**	**260**	*ePg*	**Pb**	**18 17 24.1**	**+0.7**
HATOM				IAML		18 17 58.9	
	comp=E,16nm,0.8s						
HATOM				IAML		18 18 13.5	
	comp=N,16nm,2.6s						
BANI	**BANI**	**3.13**	**256**	Pn	**Pn**	**18 17 34.2**	**+0.5**
SC01	**Santiago de lo**	**3.38**	**275**	Pn	**Pn**	**18 17 35.7**	**-1.3**
SDDR	**Presa de Saban**	**3.91**	**268**		**Pn**	**18 17 44.3**	**0.0**
SDDR				IAML		18 18 51.0	
	comp=N,17nm,1.1s						

*WEL **29** 18:17:25.4±0.8, 45°.5S±4°×16°.8E±°, h5km, M3.3/8, ML3.2/6, MLv3.3/8, Error ellipse: s-maj=6.8km s-min=3.7km az=125.0, confirmed*
*NOU **29** 18:17:26.7, 44°.79S×167°.47E, h22km, MLv3.5/11, South Island, New Zealand*

ISC 29 18:17:25.0±1.4, 44°.81S±0°.04×167°.47E±0°.05, h8km±10km, n43, σ0°.84/49, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.35**	**68**	P	**Pg**	**18 17 32.3**	**+0.4**
MSZ				S	**Sg**	**18 17 36.5**	**0.0**
TAFS	**Te Anau Fire S**	**0.63**	**164**	P	**Pg**	**18 17 37.7**	**+0.5**
TAFS				S	**Sg**	**18 17 46.4**	**+0.9**
GLNY	**Glenorchy**	**0.67**	**95**	P	**Pg**	**18 17 38.1**	**+0.2**
DCZ	**Deep Cove**	**0.69**	**199**	P	**Pg**	**18 17 38.3**	**0.0**
DCZ				S	**Sg**	**18 17 47.7**	**+0.3**
MLZ	**Mavora Lakes**	**0.72**	**141**	P	**Pg**	**18 17 38.8**	**-0.1**
MLZ				S	**Sg**	**18 17 47.9**	**-0.4**
QTPS	**Queenstown Pol**	**0.88**	**105**	P	**Pg**	**18 17 41.7**	**-0.1**
QTPS				S	**Sg**	**18 17 52.1**	**-1.0**
MOSS	**Mossburn Schoo**	**1.02**	**148**	P	**Pg**	**18 17 44.2**	**-0.6**
MOSS				S	**Sb**	**18 17 57.9**	**-0.5**
WKZ	**Wanaka**	**1.10**	**92**	P	**Pb**	**18 17 45.8**	**-0.5**
WHZ	**Wether Hill Ro**	**1.14**	**163**	P	**Pb**	**18 17 45.8**	**-1.0**
JCZ	**Jackson Bay**	**1.19**	**52**	P	**Pn**	**18 17 47.9**	**-0.2**
JCZ	**Jackson Bay**	**1.19**	**52**	P	**Pn**	**18 17 47.5**	**-0.6**
EAZ	**Earnscleugh**	**1.37**	**109**	P	**Pn**	**18 17 50.0**	**-0.5**
PYZ	**Puysegur Point**	**1.47**	**202**	P	**Pn**	**18 17 52.0**	**+0.2**
PYZ	**Puysegur Point**	**1.47**	**202**	S	**Sn**	**18 18 11.3**	**+0.1**
PYZ	**Puysegur Point**	**1.47**	**202**	P	**Pn**	**18 17 52.0**	**+0.2**
TUZ	**Tuapeka**	**1

ODZ	**Otahua Downs**	**2.27**	**97**	S		**Sn**	**18 18 30.9**	**0.0**
ODZ	**Otahua Downs**	**2.27**	**97**	P		**Pn**	**18 18 03.5**	**+0.8**
HHSZ	**Highcliff Hill**	**2.45**	**117**	P		**Pn**	**18 18 07.1**	**+1.8**
TMZ	**Timaru**	**2.56**	**82**	P		**Pn**	**18 18 08.6**	**+1.8**
ARCZ	**Arundel**	**2.79**	**73**	P		**Pn**	**18 18 10.9**	**+0.9**
RPZ	**Rata Peaks**	**2.80**	**68**	P		**Pn**	**18 18 09.9**	**-0.2**
RPZ	**Rata Peaks**	**2.80**	**68**	S		**Sn**	**18 18 43.8**	**-0.2**
RPZ	**Rata Peaks**	**2.80**	**68**	P		**Pn**	**18 18 11.3**	**+1.2**
WVZ	**Waitaha Valley**	**2.93**	**55**	P		**Pn**	**18 18 12.7**	**+0.9**
MHCZ	**Mount Hutt**	**3.21**	**68**	P		**Pn**	**18 18 16.8**	**+1.0**
WACZ	**Wakanui South**	**3.25**	**76**	P		**Pn**	**18 18 17.5**	**+1.2**
INZ	**Inchbonnie**	**3.55**	**55**	P		**Pn**	**18 18 21.5**	**+1.0**
LTZ	**Lake Taylor**	**4.02**	**61**	P		**Pn**	**18 18 28.1**	**+1.2**
DSZ	**Denniston Nort**	**4.40**	**47**	P		**Pn**	**18 18 32.3**	**+0.2**
THZ	**Tophouse**	**5.00**	**54**	P		**Pn**	**18 18 42.1**	**+1.7**
MRNZ	**Matariki Terra**	**5.16**	**50**	P		**Pn**	**18 18 44.0**	**+1.5**
QRZ	**Quartz Range**	**5.45**	**45**	P		**Pn**	**18 18 46.3**	**-0.2**
QRZ	**Quartz Range**	**5.45**	**45**	P		**Pn**	**18 18 46.5**	**0.0**
NNZ	**Nelson**	**5.62**	**52**	P		**Pn**	**18 18 50.1**	**+1.2**
OUZ	**Omahuta**	**10.66**	**28**	P		**Pn**	**18 19 58.0**	**0.0**

*JMA **29** 18:19:33.0±0.7,34°N±2°×14°2E±°, h29km, MV3.4/21, FAR SE OFF BOSO PEN*
*IDC **29** 18:19:33.8±1.6, 33°.96N×141°.65E, h0km, mb3.2/3, mbtmp3.4/5, ML3.0/2, Error ellipse: s-maj=31.0km s-min=21.9km az=78.0*
ISC 29 18:19:36.8±1.4, 34°.01N±0°.06×141°.7E±0°.1, h24km, n14, σ1s02/19, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.90**	**316**	*e*P		**Pb**	**18 19 52.4**	**-0.9**
BSO1				*e*S		**Sn**	**18 20 06.2**	**+0.9**
BSO3	**Boso 3**	**1.28**	**308**	*e*P		**Pn**	**18 19 58.6**	**-0.4**
BSO3				*e*S		**Sb**	**18 20 17.9**	**+1.9**
BSO4	**Boso 4**	**1.51**	**311**	*e*P		**Pn**	**18 20 02.2**	**0.0**
KTR	**Katsuura**	**1.63**	**314**	*e*P		**Pn**	**18 20 02.5**	**-1.4**
JKUC	**kamogawauchiur**	**1.71**	**312**	*e*P		**Pn**	**18 20 04.6**	**-0.4**
JMKN	**Mikurajimanish**	**1.79**	**267**	P		**Pn**	**18 20 05.5**	**-0.6**
JMKN				*e*S		**Sn**	**18 20 27.9**	**-0.2**
JHJ2	**Mitsune**	**1.84**	**241**	*e*S		**Sn**	**18 20 30.1**	**+0.8**
JHJ	**Hachijo jima 2**	**1.86**	**242**	Pn		**Pn**	**18 20 06.5**	**-0.6**
	15nm,0.3s,baz=44,slow=19,SNR=7.6							
JHJ				Sn		**Sn**	**18 20 29.2**	**-0.6**
	39nm,0.3s,baz=152,slow=23,SNR=8.1							
JSMT	**Sammumatsuo**	**1.94**	**327**	*e*S		**Sn**	**18 20 29.8**	**-2.0**
MJAR	**Matsushiro Arr**	**3.83**	**312**	Pn		**Pn**	**18 20 34.4**	**+0.1**
	0.6nm,0.3s,baz=131,slow=11,SNR=38							
MJAR				Sn		**Sn**	**18 21 18.0**	**-0.5**
	0.1nm,0.3s,baz=138,slow=20,SNR=4.4 3.7nm,0.3s							
ASAJ	**Asahikawa**	**10.11**	**4**	Pn		**Pn**	**18 22 02.0**	**+1.6**
	0.2nm,0.3s,baz=137,slow=12,SNR=1.5 5.3nm,0.8s							
KURBB	**Kurchatov Arra**	**48.11**	**310**	P		**P**	**18 28 14.2**	**-0.2**
	0.2nm,0.6s,baz=76,slow=7.1,SNR=1.1 0.2nm,0.6s							
WRA	**Warramunga Arr**	**54.12**	**189**	P		**P**	**18 28 59.8**	**0.0**
	0.3nm,0.5s,baz=3.3,slow=7.4,SNR=7.8 0.3nm,0.5s							
ASAR	**Alice Springs**	**57.84**	**188**	P		**P**	**18 29 26.7**	**+0.2**
	0.3nm,0.9s,baz=1.9,slow=7.4,SNR=5.0 0.3nm,0.9s							

*BEO **29** 18:22:22.1±0.7,41°.42N×19°.57E, h3km±3km, ML2.4/5*
*TIR **29** 18:22:22.2,41°.52N×19°.49E, h27km±4km, Ml2.7/6*
*PDG **29** 18:22:23.2±0.1,41°.48N×19°.55E, h13km, ML2.7/12, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
ISC 29 18:22:22.1±1.1, 41°.48N±0°.02×19°.49E±0°.03, h6km±9km, n37, σ0s86/65, 1C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**115**	Pg		**Pg**	**18 22 28.1**	**-0.1**
TIR				Sg		**Sg**	**18 22 32.1**	**-0.1**
TIR				AML		AML	18 22 32.7	
	11nm,0.3s							
ULC	**Ulcinj**	**0.52**	**339**	*i*Pg		**Pg**	**18 22 31.9**	**-0.2**
ULC				*i* Sg		**Sg**	**18 22 39.9**	**+1.0**
SDA	**Shkodra**	**0.57**	**0**	Pg		**Pg**	**18 22 33.2**	**+0.1**
SDA				Sg		**Sg**	**18 22 41.3**	**+0.7**
PHP	**Peshkopia**	**0.74**	**74**	Pg		**Pg**	**18 22 35.0**	**-1.3**
PHP				Sg		**Sg**	**18 22 46.3**	**+0.3**
PHP				AML		AML	18 22 52.8	
	1.5nm,0.3s							
DRME	**Dracevica, Mon**	**0.74**	**342**	*e*Pg		**Pg**	**18 22 36.3**	**-0.1**
DRME	**Dracevica, Mon**	**0.74**	**342**	*i*Pg		**Pg**	**18 22 36.0**	**-0.4**
DRME				*i* Sg		**Sb**	**18 22 47.3**	**-0.7**
BUM	**Brajici-Budva**	**0.93**	**332**	*i*Pg		**Pg**	**18 22 40.3**	**+0.2**
BUM				*i* Sg		**Sb**	**18 22 54.4**	**+0.9**
PDG	**Podgorica**	**0.97**	**350**	Pg		**Pg**	**18 22 39.3**	**-1.3**
PDG				Sg		**Sb**	**18 22 54.4**	**0.0**
PDG	**Podgorica**	**0.97**	**350**	*e*Pg		**Pg**	**18 22 40.2**	**-0.4**
PDG				*e*Sg		**Sb**	**18 22 55.2**	**+0.8**
PDG	**Podgorica**	**0.97**	**350**	*i*Pg		**Pg**	**18 22 40.3**	**-0.4**
PDG				*i* Sg		**Sb**	**18 22 55.1**	**+0.7**
CEME	**Cevo**	**1.15**	**338**	*i*Pg		**Pg**	**18 22 43.7**	**-0.5**
CEME				*i* Sg		**Sn**	**18 23 01.2**	**+0.2**
PVY	**Plav**	**1.17**	**17**	*i*Pg		**Pg**	**18 22 43.6**	**-0.9**
PVY				*i* Sg		**Sn**	**18 23 01.0**	**-0.5**
HCY	**Herceg Novi**	**1.22**	**323**	*i*Pg		**Pg**	**18 22 45.4**	**-0.1**
HCY				*i* Sg		**Sn**	**18 23 03.9**	**+1.2**
KBN	**Korca**	**1.30**	**131**	Pn		**Pg**	**18 22 47.4**	**+0.4**
KBN				Sn		**Sn**	**18 23 05.3**	**+0.6**
KBN				AML		AML	18 23 09.0	
	0.9nm,0.5s							
NKME	**Niksic**	**1.35**	**343**	*e*Pg		**Pn**	**18 22 47.3**	**-0.3**
NKME				*i* Sg		**Sn**	**18 23 07.7**	**+1.8**
KOME	**Kolasin**	**1.37**	**1**	*e*Pg		**Pg**	**18 22 48.4**	**0.0**
KOME	**Kolasin**	**1.37**	**1**	*i*Pg		**Pn**	**18 22 47.3**	**-0.6**
KOME				*i* Sg		**Sn**	**18 23 08.4**	**+1.9**
IVA	**Berane**	**1.42**	**12**	*i*Pg		**Pn**	**18 22 48.1**	**-0.6**
IVA				*i* Sg		**Sg**	**18 23 10.0**	**+2.1**
BRY	**Bratogost**	**1.59**	**334**	*i*Pn		**Pn**	**18 22 51.3**	**+0.3**
BRY				*i* Sn		**Sg**	**18 23 14.2**	**+1.0**
NEST	**Nestorio**	**1.59**	**132**	Pn		**Pb**	**18 22 51.8**	**-0.2**
NEST				Sn		**Sg**	**18 23 14.4**	**+1.3**
NEST				AML		AML	18 23 18.2	
	0.3nm,0.4s							
NEST				AML		AML	18 23 18.3	
	0.3nm,0.4s							
UPM	**Unac-Piva**	**1.78**	**346**	*e*Pn		**Pb**	**18 22 54.4**	**-0.9**
UPM				*i* Sn		**Sg**	**18 23 18.7**	**-0.5**
SJES	**Sjenica**	**1.81**	**11**	*e*Pn		**Pb**	**18 22 56.1**	**+0.2**
SJES				*e*Sn		**Sg**	**18 23 20.1**	**-0.4**
PLE	**Pljevlja**	**1.85**	**358**	*i*Pn		**Pn**	**18 22 55.3**	**+0.7**
PLE				*i* Sn		**Sg**	**18 23 20.8**	**-0.8**
STON	**Ston**	**1.93**	**317**	*e*Pn		**Pn**	**18 22 55.1**	**-0.4**
STON				*e*Sn		**Sg**	**18 23 22.9**	**-1.1**
NOCI	**Noci**	**1.96**	**250**	Pn		**Pn**	**18 22 56.5**	**+0.6**
NOCI				Sn		**Sn**	**18 23 18.1**	**-2.8**
NOCI				AML		AML	18 23 32.2	
	0.3nm,0.4s							
IGT	**Igoumenitsa**	**2.05**	**162**	Pn		**Pn**	**18 22 57.9**	**+0.7**
IGT				Sn		**Sn**	**18 23 22.3**	**-0.8**
SELS	**Selova**	**2.12**	**34**	*e*Pn		**Pn**	**18 22 57.9**	**-0.2**
SELS				*e*Sn		**Sn**	**18 23 25.5**	**+0.7**
IVAS	**Ivanjica**	**2.15**	**13**	*e*Pn		**Pn**	**18 22 59.7**	**+1.0**
IVAS				*e*Sn		**Sn**	**18 23 25.8**	**+0.1**
BARS	**Barje**	**2.18**	**52**	*e*Pn		**Pn**	**18 22 58.8**	**-0.2**
BBLS	**Lazi&#263i**	**2.39**	**358**	*e*Pn		**Pb**	**18 23 04.7**	**-0.9**
BOSS	**Bosilegrad**	**2.45**	**64**	*e*Pn		**Pn**	**18 23 02.5**	**-0.2**
GRUS	**Gruza**	**2.57**	**20**	*e*Pn		**Pn**	**18 23 04.3**	**-0.1**
BOVS	**Bovan**	**2.70**	**36**	*e*Pn		**Pn**	**18 23 05.9**	**-0.3**
BOVS				*e*Sn		**Sn**	**18 23 38.5**	**-0.7**
VTS	**Vitosha**	**3.01**	**67**	*e*Pn		**Pn**	**18 23 10.4**	**-0.1**
VTS				*e*Sn		**Sn**	**18 23 46.1**	**-0.9**
TEKS	**Tekeris**	**3.07**	**0**	*e*Pn		**Pn**	**18 23 12.2**	**+1.0**
ZAGS	**Zajecar**	**3.08**	**40**	*e*Pn		**Pn**	**18 23 11.3**	**-0.1**
BLKB	**Belogradchik**	**3.18**	**47**	*e*Pn		**Pn**	**18 23 13.1**	**+0.3**

*AEIC **29** 18:56:20.0±1.6,54°.49N±0°.04×161°.39W±0°.05, h13km±5km, Error ellipse: s-maj=5.6km s-min=3.5km az=207.0*
NEIC 29 18:56:16.7±0.6, 54°.35N±0°.04×161°.34W±0°.05, h11km±5km, ML2.6/12, ML2.3(AEIC), Error ellipse: s-maj=6.3km s-min=4.0km az=203.0, Alaska Peninsula

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

DOL	**Dolgoi Island**	**0.86**	**339**			Pb	18 56 33.8	+0.2
DOL						Sg	18 56 44.6	+0.2
DT1	**Dutton Round H**	**0.94**	**325**			Pb	18 56 34.9	-0.1
DT1						Sg	18 56 46.4	-0.6
HAG	**Hague Volcano**	**1.02**	**341**			Pn	18 56 37.0	0.0
PS4A	**Pavlof South-4**	**1.04**	**343**			Pn	18 56 37.0	-0.3
PS4A						Sg	18 56 50.3	0.0
PS1A	**Pavlof South-1**	**1.10**	**348**			Pn	18 56 38.0	-0.1
PS1A						Sb	18 56 51.7	-0.3
SDPT	**Sand Point**	**1.12**	**26**			Pg	18 56 38.2	0.0
SDPT					IAML		18 56 54.6	
	comp=N,97nm,0.7s							
SDPT	**Sand Point**	**1.12**	**26**			Sb	18 56 52.4	-0.1
CNBA	**Chernabura Isl**	**1.12**	**64**			Sn	18 56 55.8	+2.1
CNBA	**Chernabura Isl**	**1.12**	**64**	Pn		Pn	18 56 38.3	0.0
FALS	**False Pass**	**1.31**	**294**			Pn	18 56 40.2	-0.8
S12K	**Black Hills**	**1.42**	**343**			Pn	18 56 42.3	-0.1
S12K					IAML		18 57 02.2	
	comp=N,104nm,0.4s							
S12K					IAML		18 57 04.9	
	comp=E,105nm,0.9s							
S12K	**Black Hills**	**1.42**	**343**			Sn	18 57 01.0	-0.1
ISNN	**Isanotski Nort**	**1.50**	**290**			Pg	18 56 45.2	-0.3
O15K	**Ungalikthiuk R**	**4.91**	**9**	Pn		Pn	18 57 30.3	-0.1
O15K					IAML		18 58 34.9	
	comp=N,5.2nm,1.1s							
O15K					IAML		18 59 12.1	
	comp=E,7.7nm,1.1s							
O14K	**Tigyukauivet M**	**4.92**	**0**	Pn		Pn	18 57 30.8	+0.4
O14K					IAML		18 58 35.4	
	comp=E,3.6nm,0.8s							

*NEIC **29** 19:03:20.6±2.2,31°.99N±0°.08×49°.75E±0°.07, h10km±1km, mb4.4/65, Error ellipse: s-maj=12.8km s-min=9.5km az=187.0*
*SGS **29** 19:03:20.2,32°.31N×49°.84E, h12km, Ml4.5*
*TEH **29** 19:03:21.8,32°.06N×49°.84E, h12km±15km*
*THR **29** 19:03:22.6±0.0,31°.98N×49°.82E, h19km±4km, ML4.4*
*IDC **29** 19:03:24.1±2.0,31°.99N×49°.63E, h33km±15km, mb3.9/28, mbtmp4.1/33, ML4.0/5, MS3.7/25, Error ellipse: s-maj=15.1km s-min=10.6km az=175.0*
*OMAN **29** 19:03:29.8±0.9,31°.40N×50°.03E, h10km, mb5.0/22, ms2.9/8, Error ellipse: s-maj=9.8km s-min=6.8km az=56.0*
*DSN **29** 19:03:31.9±1.8,31°.03N×49°.78E, h15km, ML3.8/13, Ms2.7/5, Error ellipse: s-maj=23.0km s-min=10.6km az=4.0*
*NAO **29** 19:03:35.5,32°.99N×48°.34E, h33km, MB3.8*
ISC 29 19:03:19.7±0.3, 31°.89N±0°.02×49°.65E±0°.03, h10km, n293, σ2s09/314, mb4.3/54, MS3.7/24, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GTMR	**Gotvand**	**0.73**	**322**	*e*Pg		**Pn**	**19 03 35.6**	**-0.6**
GTMR				*i* S		**Sn**	**19 03 48.2**	**+0.8**
GTMR					IAML		19 03 53.6	
	comp=Z,20μm,1.0s							
JHBN	**Jahan bin**	**0.93**	**68**	Pg		**Pg**	**19 03 36.3**	**-1.4**
AHWZ	**Ahwaz**	**1.02**	**237**	Pg		Pn	19 03 45.4	+5.4
AHWZ				Sg		Sn	19 04 04.5	+10
ZNGN	**Zangian**	**1.05**	**77**	Pg		**Pg**	**19 03 38.6**	**-1.3**
IPIR	**Pirpir**	**1.32**	**53**	Pg		**Pn**	**19 03 43.2**	**-1.3**
IBRJ	**Brojen**	**1.37**	**89**	Pg		**Pb**	**19 03 45.4**	**-0.2**
ABEH	**Behbahan**	**1.39**	**158**	Pg		**Pg**	**19 03 50.4**	**+4.1**
KHMZ	**Khomeyn**	**1.86**	**8**	*e*Pn		**Pg**	**19 03 54.7**	**-0.7**
KHMZ				*e*Sg		**Sg**	**19 04 19.8**	**+0.2**
KHMZ					IAML		19 04 21.9	
	comp=Z,4μm,1.0s							
KLNJ	**Kolanjah**	**1.88**	**117**	Pn		**Pg**	**19 03 55.4**	**-0.4**
KLNJ	**Kolanjah**	**1.88**	**117**	*i* P		**Pg**	**19 03 55.4**	**-0.4**
KLNJ					IAML		19 04 29.6	
	comp=Z,3μm,1.0s							
BDRS	**Dareh Seyedi**	**2.16**	**343**	Pn		**Pb**	**19 03 58.6**	**-0.4**
IKLH	**Kolahrood**	**2.17**	**48**	Pn		**Pb**	**19 03 57.7**	**-1.4**
IDOB	**Doab**	**2.26**	**327**	Pn		**Pb**	**19 04 00.9**	**+0.1**
IZEF	**Zefreh**	**2.48**	**65**	Pn		**Pn**	**19 04 01.9**	**+1.5**
ASAO	**Ashtian**	**2.67**	**7**	*e*Pn		**Pb**	**19 04 06.0**	**-1.7**
ASAO					IAML		19 04 53.3	
	comp=Z,2μm,1.0s							
NASN	**Na'in**	**2.83**	**70**	*e*Pn		**Pn**	**19 04 07.0**	**+1.8**
NASN					IAML		19 05 04.2	
	comp=Z,400nm,1.0s							
KAZ2	**Kazeron-Fars-I**	**2.86**	**142**	Pn		**Pb**	**19 04 10.0**	**-0.8**
GHVR	**GHOM**	**2.93**	**28**	*e*Pn		**Pb**	**19 04 09.3**	**-2.8**
GHVR					IAML		19 04 57.7	
	comp=Z,2μm,1.0s							
KRSH	**Karshahi**	**2.95**	**45**	Pn		**Pn**	**19 04 08.8**	**+2.1**
HAGD	**Aghdareh**	**2.95**	**352**	Pn		**Pn**	**19 04 08.6**	**+1.8**
IBZA	**Bozab**	**2.98**	**330**	Pn		**Pn**	**19 04 10.8**	**-2.1**
KCHF	**Cheshme Sefid,**	**3.23**	**318**	Pn		**Pb**	**19 04 14.3**	**-3.0**
ISFB	**Sefidab**	**3.28**	**41**	Pn		**Pn**	**19 04 12.3**	**+1.0**
SHI	**Shiraz**	**3.33**	**132**	Pn		**Pb**	**19 04 16.0**	**-3.0**
SNQR	**Sonqor, Kerman**	**3.41**	**331**	Pn		**Pn**	**19 04 16.2**	**+3.1**
IVRN	**Varamin**	**3.55**	**29**	Pn		**Pn**	**19 04 16.5**	**+1.6**
HGHA	**Hamedan- Ghaye**	**3.65**	**350**	Pn		**Pn**	**19 04 18.7**	**+2.3**
ANAR	**Anarak**	**3.68**	**68**	Pn		**Pn**	**19 04 18.9**	**+2.1**
KFJS2	**Khafji**	**3.69**	**197**	S		**Sb**	**19 05 07.6**	**-2.2**
KFJS2				P		**Pb**	**19 04 21.8**	**-3.2**
SNGE	**Sanandaj**	**3.73**	**330**	*e*Pn		**Pn**	**19 04 20.4**	**+2.9**
SNGE					IAML		19 04 42.2	
	comp=Z,72nm,1.0s							
DSBU	**Dashti - Bushe**	**3.78**	**158**	Pn		**Pn**	**19 04 22.0**	**+3.8**
QABG	**Abgarm-Qazvin**	**3.81**	**359**	Pn		**Pn**	**19 04 21.1**	**+2.5**
GLG1	**Gilan-e-Gharb**	**3.84**	**306**	Pn		**Pn**	**19 04 23.0**	**+4.1**
IDHR	**Dehrash**	**3.91**	**317**	Pn		**Pn**	**19 04 23.6**	**+3.6**
KFJS1	**Al Wafrah**	**3.98**	**202**	P		**Pb**	**19 04 26.0**	**-3.8**
KFJS1	**Al Wafrah**	**3.98**	**202**	S		**Sb**	**19 05 16.0**	**-2.0**
ICHK	**Chekchek**	**4.06**	**84**	Pn		**Pn**	**19 04 23.7**	**+1.6**
THKV	**Tehran--Karaj**	**4.14**	**14**	*e*Pn		**Pn**	**19 04 25.6**	**+2.4**
THKV					IAML		19 05 43.5	
	comp=Z,280nm,1.0s							
IDMV	**Damavand**	**4.18**	**28**	Pn		**Pn**	**19 04 25.3**	**+1.5**
CHTH	**Charan**	**4.19**	**17**	*e*Pn		**Pn**	**19 04 26.4**	**+2.5**
CHTH					IAML		19 06 49.7	
	comp=Z,14nm,1.0s							
DAMV	**Damavand**	**4.20**	**27**	*e*Pn		**Pn**	**19 04 25.8**	**+1.7**
DAMV					IAML		19 05 11.7	
	comp=Z,4.8nm,1.0s							
YZKH	**Yazd**	**4.22**	**82**	*e*Pn		**Pn**	**19 04 25.9**	**+1.7**
YZKH					IAML		19 05 42.9	
	comp=Z,170nm,1.0s							
IMEH	**Mehriz**	**4.27**	**95**	Pn		**Pn**	**19 04 26.9**	**+2.0**
ILAS	**Lasjerd**	**4.45**	**38**	Pn		**Pn**	**19 04 28.7**	**+1.3**
QIR1	**Qir**	**4.50**	**138**	Pn		**Pn**	**19 04 32.4**	**+4.4**
IGZV	**Ghazvin**	**4.51**	**6**	Pn		**Pn**	**19 04 29.9**	**+1.7**
IFIR	**Firoozkooh**	**4.55**	**34**	Pn		**Pn**	**19 04 30.3**	**+1.5**
ZNJK	**Zanjan**	**4.83**	**351**	Pn		**Pn**	**19 04 34.8**	**+2.1**
ZNJK	**Zanjan**	**4.83**	**351**	*e*Pn		**Pn**	**19 04 34.6**	**+1.9**
ZNJK					IAML		19 04 59.4	
	comp=Z,3.2nm,1.0s							
IALA	**Alasht**	**4.94**	**31**	Pn		**Pn**	**19 04 36.7**	**+2.5**
IANJ	**Anjilo**	**5.04**	**44**	Pn		**Pn**	**19 04 37.0**	**+1.5**
IBAF	**Bafgh**	**5.05**	**92**	Pn		**Pn**	**19 04 37.8**	**+2.1**
WANAN	**Al Wanan**	**5.08**	**192**	P		**Pn**	**19 04 39.9**	**+4.0**
WANAN	**Al Wanan**	**5.08**	**192**	S		**Sn**	**19 05 37.7**	**+3.2**
IKIA	**Kiasar**	**5.46**	**37**	Pn		**Pn**	**19 04 42.6**	**+1.3**
SRSL	**SARDASHT**	**5.55**	**322**	*e*Pn		**Pn**	**19 04 46.3**	**+3.8**
SRSL					IAML		19 05 51.1	
	comp=Z,630nm,1.0s							
ARIRA	**AirJ**	**5.68**	**187**	P		**Pn**	**19 04 47.8**	**+3.7**
IGLO	**Ghaloghah**	**5.76**	**36**	Pn		**Pn**	**19 04 48.3**	**+2.9**
BOQSS		**6.00**	**182**	P		**Pn**	**19 04 52.5**	**+3.9**
TPRV	**Parvadeh(Tabas**	**6.06**	**77**	Pn		**Pn**	**19 04 51.2**	**+1.8**
SHMA	**Al-Shehemyia**	**6.12**	**169**	P		**Pn**	**19 04 53.4**	**+3.2**
	SNR=42							
TNSJ	**Nastanj**	**6.21**	**69**	Pn		**Pn**	**19 04 52.8**	**+1.3**
KRBR	**Kerman**	**6.40**	**105**	Pn		**Pn**	**19 04 57.3**	**+3.0**
KRBR	**Kerman**	**6.40**	**105**	*e*Pn		**Pn**	**19 04 57.5**	**+3.2**
KRBR					IAML		19 07 01.6	
	comp=Z,58nm,1.0s							
NGRK	**Negar Kerman**	**6.50**	**108**	Pn		**Pn**	**19 04 58.4**	**+2.7**
TKDS	**Koohdasht(Taba**	**6.53**	**73**	Pn		**Pn**	**19 04 57.0**	**+1.1**
TABS	**Tabas**	**6.53**	**72**	*e*Pn		**Pn**	**19 04 57.4**	**+1.4**
TABS					IAML		19 07 08.8	
	comp=Z,100nm,1.0s							
KRM1	**Kerman Provinc**	**6.68**	**100**	Pn		**Pn**	**19 05 00.2**	**+2.2**
SHRO	**Shahrood**	**6.68**	**51**	*e*Pn		**Pn**	**19 04 59.6**	**+1.6**
SHRO					IAML		19 06 55.7	
	comp=Z,3.4nm,1.0s							
SHOFU	**Shofu**	**6.89**	**179**	S		**Sn**	**19 06 20.1**	**+1.0**
SHOFU	**Shofu**	**6.89**	**179**	P		**Pn**	**19 05 04.0**	**+3.2**
TAPT	**Tabas- Tapeh t**	**6.96**	**63**	Pn		**Pn**	**19 05 02.6**	**+0.8**

CHMN	**Cheshme madani**	**7.08**	**105**	Pn		**Pn**	**19 05 05.8**	**+2.1**
SMRA	**Abu-Samra**	**7.19**	**171**	P		**Pn**	**19 05 07.7**	**+2.8**
TRNA	**Turayna**	**7.26**	**169**	P		**Pn**	**19 05 09.0**	**+3.2**
	SNR=55							
TRNA				S		**Sn**	**19 06 26.7**	**-1.7**
ITEG	**Tejag**	**7.76**	**80**	Pn		**Pn**	**19 05 14.4**	**+1.4**
MRVT	**Maraveh tapeh**	**7.82**	**41**	Pn		**Pn**	**19 05 14.9**	**+1.2**
MRVT	**Maraveh tapeh**	**7.82**	**41**	*e*Pn		**Pn**	**19 05 14.8**	**+1.2**
MRVT					IAML		19 07 42.4	
	comp=Z,14nm,1.0s							
BTHS		**7.89**	**172**	P		**Pn**	**19 05 17.1**	**+2.6**
IKOO	**Kooshah**	**7.95**	**84**	Pn		**Pn**	**19 05 17.2**	**+1.6**
SLWR	**Sila**	**8.00**	**166**	P		**Pn**	**19 05 18.9**	**+2.9**
SLWR				S		**Sn**	**19 06 45.8**	**-0.7**
KBAM	**BAM**	**8.08**	**108**	Pn		**Pn**	**19 05 19.3**	**+2.1**
SHME	**Shamm**	**8.14**	**134**	P		**Pn**	**19 05 20.6**	**+2.7**
SHME	**Shamm**	**8.14**	**134**	P		**Pn**	**19 05 20.4**	**+2.5**
BANOM	**Banah**	**8.33**	**134**	P		**Pn**	**19 05 23.5**	**+2.9**
BANOM				S		**Sn**	**19 06 51.0**	**-3.7**
BANOM	**Banah**	**8.33**	**134**	*i* P		**Pn**	**19 05 24.0**	**+3.5**
	SNR=27							
GHWR	**Ruwais**	**8.40**	**159**	P		**Pn**	**19 05 23.6**	**+2.2**
GHWR				S		**Sn**	**19 06 54.5**	**-1.8**
ISFR	**Sfrayin**	**8.61**	**51**	Pn		**Pn**	**19 05 26.1**	**+1.6**
BJRD	**Bojnurd**	**8.62**	**46**	*e*Pn		**Pn**	**19 05 26.5**	**+1.9**
MASF	**Masafi**	**8.65**	**137**	P		**Pn**	**19 05 28.6**	**+3.5**
	SNR=9.4							
MASF				P		**Pn**	**19 05 28.6**	**+3.5**
	SNR=9.4							
MASF				S		**Sn**	**19 07 00.8**	**-1.9**
	SNR=8.7							
MASF				S		**Sn**	**19 07 00.8**	**-1.9**
	SNR=8.7							
MSFE	**Esma-Masafi**	**8.66**	**137**	P		**Pn**	**19 05 26.0**	**+0.8**
NAZ	**Nazwa, Dubai**	**8.68**	**141**	P		**Pn**	**19 05 27.0**	**+1.7**
AJN	**Ajban**	**8.69**	**146**	P		**Pn**	**19 05 29.1**	**+3.7**
AJN				S		**Sn**	**19 07 02.1**	**-1.4**
MDH	**Madha**	**8.79**	**137**	P		**Pn**	**19 05 29.7**	**+2.8**
	SNR=6.2							
MDH				P		**Pn**	**19 05 29.7**	**+2.8**
	SNR=6.2							
MDH	**Madha**	**8.79**	**137**	*i* P		**Pn**	**19 05 28.4**	**+1.5**
	SNR=5.9							
ASUD	**Al Ashush, Dub**	**8.80**	**144**	P		**Pn**	**19 05 31.0**	**+4.0**
	SNR=15							
ASUD				S		**Sn**	**19 07 05.1**	**-1.2**
ASUD	**Al Ashush, Dub**	**8.80**	**144**	*i* P		**Pn**	**19 05 30.3**	**+3.3**
	SNR=15							
FAQ	**Al Faqa, Dubai**	**8.84**	**142**	P		**Pn**	**19 05 30.3**	**+2.8**
FAQ				S		**Sn**	**19 07 06.9**	**-0.3**
FAQ	**Al Faqa, Dubai**	**8.84**	**142**	P		**Pn**	**19 05 30.7**

comp=Z,23nm,1.0s
MANT Manisa 18.43 297 Pn 19 07 36.0 +0.5
MANT IAmb IAmb 19 07 46.6
comp=Z,26nm,1.0s
AB31 Akbulak array 19.00 21 P 19 07 41.2 -0.1
ABKAR Akbulak array 19.00 21 P 19 07 41.0 -0.3
BALB Balikesir 19.25 300 P Pn 19 07 46.0 +0.8
BALB IAmb IAmb 19 08 00.8
comp=Z,43nm,1.5s
AKTO Aktyubinsk 19.55 16 P P 19 07 47.6 +0.3
comp=Z,0.5nm,0.3s,baz=210,slow=14,SNR=8.1
comp=Z,6.5nm,1.0s
NIL Nilore 19.92 79 P P 19 07 51.8 +0.1
KK31 Karatay Array 19.93 50 P 19 07 51.1 -0.5
KKAR Karatay Array 19.93 50 P 19 07 51.8 +0.2
BELG Belogornoye 20.54 356 P P 19 07 58.2 +0.1
comp=Z,44nm,0.9s,baz=110,slow=2.6,SNR=7.0
comp=Z,44nm,0.9s
NE56 Odesa 20.62 321 P Pn 19 08 04.4 +3.0
IDI Anoyia 20.89 286 P Pn 19 08 04.4 -0.2
comp=Z,29nm,0.8s,baz=187,slow=9.2,SNR=12
comp=Z,29nm,0.8s
IDI Anoyia 20.89 286 P Pn 19 08 03.5 -1.1
ARSB Arslanbob 20.91 57 P P 19 08 02.3 -0.2
ATD Arta Tunnel 21.21 199 LR LR 19 16 55.9
comp=Z,8.3nm,20.9s,baz=34,slow=38
RDO Rodhopi 21.41 302 P 19 08 08.5 +0.9
RDO IAmb IAmb 19 08 15.4
comp=Z,26nm,1.0s
AAK Ala-Archa 22.42 54 P P 19 08 21.4 +2.8
comp=Z,2.0nm,0.7s,baz=245,slow=16,SNR=5.8
AAK LR LR 19 18 32.5
comp=Z,397nm,18.0s,baz=264,slow=41
comp=Z,2.0nm,0.7s
AAK Ala-Archa 22.42 54 P 19 08 18.1 -0.6
VRI Vrincioaia 22.55 315 P P 19 08 22.6 +2.8
KSH Kashi 22.64 63 P P 19 08 18.0 -3.0
KSH pP pP 19 08 22.0 -2.1
KSH sP sP 19 08 25.0 -0.5
KSH pmax pmax
comp=Z,12nm,0.9s
KSH LR LR
comp=E,480nm,17.9s
KSH LR LR
comp=Z,520nm,15.8s
MLR Muntele Rosu 22.84 313 P P 19 08 24.6 +1.5
MLR IAmb IAmb 19 08 52.8
comp=Z,15nm,0.9s
VOIR 23.38 312 P P 19 08 31.1 +2.6
AK08 Malin Array Si 24.06 327 P P 19 08 35.3 +0.4
AK02 Malin Array Si 24.10 327 P P 19 08 35.4 +0.1
AK01 Malin Array Si 24.12 327 P P 19 08 36.1 +0.6
AKASG Malin Array Be 24.12 327 P P 19 08 35.7 +0.2
comp=Z,0.4nm,0.2s,baz=134,slow=7.7,SNR=7.8
AKASG S S 19 12 50.1 -3.0
comp=Z,2.3nm,0.9s,baz=134,slow=18,SNR=4.3
comp=Z,0.4nm,0.2s
AKASG Malin Array Be 24.12 327 P P 19 08 35.3 -0.2
AKBB Malin Array Si 24.12 327 P 19 08 35.1 -0.4
AKBB IAmb IAmb 19 08 46.4
comp=Z,23nm,1.4s
KIEV Kiev 24.12 327 P 19 08 35.1 -0.4
KIEV IAmb IAmb 19 08 46.3
comp=Z,19nm,1.4s
KIEV Kiev 24.12 327 P P 19 08 36.2 +0.7
comp=Z,36nm,1.3s
AK11 Malin Array Si 24.13 327 P P 19 08 36.7 +1.1
AK03 Malin Array Si 24.14 327 P P 19 08 36.0 +0.3
AK16 Malin Array Si 24.15 327 P P 19 08 36.1 +0.3
AK17 Malin Array Si 24.19 327 P P 19 08 37.1 +1.0
AK18 Malin Array Si 24.21 327 P P 19 08 36.6 +0.3
AK23 Malin Array Si 24.21 327 P P 19 08 43.3 +7.0
AK22 Malin Array Si 24.23 327 P P 19 08 37.2 +0.7
AK19 Malin Array Si 24.23 327 P P 19 08 37.2 +0.6
AK20 Malin Array Si 24.25 327 P P 19 08 37.3 +0.6
AK21 Malin Array Si 24.26 327 P P 19 08 37.4 +0.6
LUBAR Lubar, Ukraine 24.31 324 P P 19 08 38.5 +1.3
BURAR Bucovina Array 24.34 317 P P 19 08 37.9 +0.2
BUR08 Bucovina Ar. S 24.36 317 P 19 08 38.8 +0.9
BUR08 IAmb IAmb 19 09 07.7
comp=Z,7.5nm,0.9s
TARG Taragay, Kyrgy 24.50 58 P 19 08 38.8 -0.8
TARG IAmb IAmb 19 08 42.2
comp=Z,12nm,1.2s
MI30 MI30,Zelenitsa 24.64 326 P P 19 08 40.5 +0.3
comp=Z,54nm,0.8s
ARTI Arti 25.24 11 P P 19 08 45.4 -0.2
ARTI IAmb IAmb 19 09 10.3
comp=Z,15nm,1.2s
BORK Borovoye 25.89 29 P P 19 08 51.3 -0.3
BVAR Borovoye Array 25.91 29 P P 19 08 51.7 0.0
comp=Z,1.4nm,0.6s,baz=223,slow=7.2,SNR=9.2
BVAR PcP **PcP 19 12 20.6 +0.2**
comp=Z,0.5nm,0.3s,baz=191,slow=1.9,SNR=4.5
BVAR ScP **ScP 19 15 56.7 -3.3**
comp=Z,1.3nm,0.6s,baz=245,slow=1.9,SNR=7.1
BVAR LR LR 19 21 02.5
comp=Z,184nm,18.4s,baz=224,slow=41
comp=Z,1.4nm,0.6s
BRIU Brid 25.98 317 P P 19 08 52.9 +0.5
RNPP5 Staryi Chortor 26.06 325 P P 19 08 58.3 +5.2
RNPP8 Varash 26.14 325 P P 19 08 59.9 +6.1
RNPP9 Sopachiv 26.17 325 P P 19 08 59.7 +5.6
KIRV Kirov 26.70 360 LR LR 19 22 07.4
comp=Z,135nm,19.3s,baz=211,slow=42
MORH Mrgy, Hungar 27.80 310 P P 19 09 21.0 +12
comp=Z,6.2nm,1.3s
KURBB Kurchatov Arra 28.39 40 P P 19 09 14.6 +0.5
comp=Z,2.5nm,0.9s,baz=243,slow=8.8,SNR=7.0
KURBB LR LR 19 22 04.8
comp=Z,181nm,18.9s,baz=186,slow=40
comp=Z,2.5nm,0.9s
LANS Liptovska Anna 28.43 316 eP P 19 09 22.6 +8.1
KURK Kurchatov 28.49 40 P 19 09 14.7 -0.2
MAKZ Makanchi 28.86 50 P P 19 09 17.8 -0.6
MAKZ IAmb IAmb 19 09 27.3
comp=Z,7.2nm,1.4s
MKAR Makanchi Array 29.06 50 P P 19 09 20.4 +0.3
comp=Z,1.5nm,0.8s,baz=252,slow=7.1,SNR=11
MKAR LR LR 19 22 38.0
comp=Z,270nm,18.2s,baz=245,slow=40
comp=Z,1.5nm,0.8s
MKAR Makanchi Array 29.06 50 P P 19 09 20.0 -0.1
GEC2 GERESS Array S 31.83 313 P P 19 09 45.3 +0.7
GERES GERESS Array B 31.83 313 P P 19 09 45.3 +0.7
comp=Z,0.2nm,0.4s,baz=108,slow=8.6,SNR=2.1
GERES ScP **ScP 19 16 18.6 -0.3**
comp=Z,0.8nm,0.8s,baz=50,slow=1.7,SNR=4.2
comp=Z,0.2nm,0.4s
CIMO Cimolais 31.94 308 P P 19 09 47.0 +1.4
CIMO IAmb IAmb 19 10 01.4
comp=Z,6.4nm,1.0s
KHC Kasperske Hory 32.00 313 P P 19 09 47.4 +1.4
KHC IAmb IAmb 19 10 10.1
comp=Z,5.3nm,1.2s
WMQ Urumqi 32.05 57 eP P 19 09 48.5 +1.9
LESA Schwarzleotal 32.06 310 eP P 19 09 47.6 +0.8
comp=Z,1.0nm,0.3s
EVN Evenset 32.35 87 P 19 09 49.8 -0.2
WTTA Wattenberg 32.71 309 eP P 19 09 53.0 +0.6
comp=Z,1.6nm,0.3s
WATA Walderalm 32.77 309 eP P 19 09 53.3 +0.4
comp=Z,1.3nm,0.4s
SQTA Sankt Quirin 32.98 309 eP P 19 09 55.7 +1.0
comp=Z,4.0nm,0.4s
MOTA Moosalm 33.08 309 eP P 19 09 56.2 +0.5
comp=Z,2.0nm,0.3s
FETA Feichten 33.25 308 eP P 19 09 58.2 +1.0
comp=Z,1.5nm,0.4s
FIA1 FINESS Array S 33.31 340 P P 19 09 56.4 -0.9
FINES FINESS Array B 33.31 340 P P 19 09 57.1 -0.2
comp=Z,1.1nm,0.4s,baz=141,slow=8.7,SNR=7.6
comp=Z,1.1nm,0.4s
FINES FINESS Array B 33.31 340 P P 19 09 56.8 -0.5
ZAA0 Zalesovo Array 33.38 38 P 19 09 57.0 -1.0
ZAA0 IAmb IAmb 19 09 59.4
comp=Z,7.3nm,1.1s
ZALV Zalesovo Beam 33.38 38 P P 19 09 57.5 -0.5
comp=Z,1.8nm,0.4s,baz=255,slow=9.1,SNR=17
ZALV LR LR 19 25 13.0
comp=Z,102nm,18.7s,baz=218,slow=39
comp=Z,1.8nm,0.4s
ZALV Zalesovo Beam 33.38 38 P 19 09 57.0 -1.0
KEST Kesra 33.54 288 P P 19 10 01.2 +1.5
comp=Z,2.8nm,0.8s,baz=119,slow=13,SNR=2.7
comp=Z,2.8nm,0.8s
KEST Kesra 33.54 288 P P 19 10 00.5 +0.8
KEST IAmb IAmb 19 10 21.7
comp=Z,7.4nm,1.0s
BSD Bornholm Skovb 33.70 324 *i* **P P 19 10 01.0 +0.2**
BSD IAmb IAmb 19 10 02.5
comp=Z,34nm,1.2s
DAVOX Davos/Dischmat 33.77 308 P P 19 10 02.6 +0.8
comp=Z,1.3nm,0.6s,baz=143,slow=7.5,SNR=4.1
comp=Z,1.3nm,0.6s
DAVA Damuels 33.88 309 *eP* **P 19 10 03.0 +0.3**
comp=Z,3.5nm,0.3s
LUNU Lund 34.68 324 *i* **P P 19 10 11.7 +2.4**
DEL Delary 34.88 325 *i* **P P 19 10 11.5 +0.5**
BJUU Bjuv 35.10 324 *i* **P P 19 10 13.0 +0.1**
SENIN Lac Senin/Sane 35.45 306 P P 19 10 15.1 -1.2
SENIN IAmb IAmb 19 10 48.7
comp=Z,4.5nm,0.9s
BNI Bardonecchia 35.70 304 P P 19 10 17.5 -0.9
BNI IAmb IAmb 19 10 58.3
comp=Z,6.9nm,0.8s
BORU Boraas 35.98 327 *i* **P P 19 10 21.4 +1.0**
HFS Hagfors 36.89 331 P P 19 10 28.5 +0.3
comp=Z,2.7nm,0.4s,baz=124,slow=8.9,SNR=18
HFS LR LR 19 28 10.9
comp=Z,66nm,18.6s,baz=105,slow=40
comp=Z,2.7nm,0.4s
MBAR Mbarara 36.95 213 LR LR 19 26 10.3
comp=Z,107nm,18.1s,baz=7.0,slow=37
STRU Stroemstad 37.40 328 *i* **P P 19 10 32.4 -0.1**
NC405 NORSAR Array S 38.24 331 P P 19 10 38.9 -0.7
HOMB Homborsund 38.29 326 *eP* **P 19 10 40.5 +0.4**
NB201 NORSAR Array S 38.38 331 P P 19 10 40.6 -0.3
KONO Kongsberg 38.41 328 P P 19 10 38.6 -2.5
NB2 NORSAR Subarra 38.41 331 P P 19 10 40.9 -0.2
comp=Z,0.7nm,0.5s,baz=122,slow=8.6
NOA NORSAR Array B 38.41 331 P P 19 10 40.5 -0.6
comp=Z,1.2nm,0.8s,baz=62,slow=9.9,SNR=5.5
NOA LR LR 19 27 39.3
comp=Z,42nm,19.8s,baz=350,slow=38
comp=Z,1.2nm,0.8s
CEST Esterri de Car 39.50 300 P P 19 10 49.1 -1.5
CEST IAmb IAmb 19 10 58.8
comp=Z,18nm,1.4s
ARCES ARCESS Array B 40.08 347 P P 19 10 54.9 0.0
comp=Z,9.8nm,1.1s,baz=134,slow=6.9,SNR=4.7
ARCES LR LR 19 29 46.0
comp=Z,59nm,18.6s,baz=182,slow=40
comp=Z,9.8nm,1.1s
ARCES ARCESS Array B 40.08 347 P P 19 10 53.4 -1.5
ARCES IAmb IAmb 19 10 59.7
comp=Z,16nm,1.1s
NRIK Noril'sk 43.14 19 P P 19 11 20.7 +0.8
comp=Z,1.1nm,0.4s,baz=180,slow=6.7,SNR=4.2
NRIK LR LR 19 33 11.9
comp=Z,118nm,18.8s,baz=202,slow=42
comp=Z,1.1nm,0.4s
NRIK Noril'sk 43.14 19 IAmb IAmb 19 11 21.7
comp=Z,5.7nm,1.2s
EKA Eskdalemuir Ar 43.51 319 P P 19 11 22.6 -0.5
comp=Z,0.2nm,0.3s,baz=104,slow=8.7,SNR=6.1
comp=Z,0.2nm,0.3s
ESDC Sonseca Array 43.63 296 P P 19 11 24.8 +0.4
comp=Z,1.8nm,1.1s,baz=66,slow=7.4,SNR=7.4
comp=Z,1.8nm,1.1s
ESDC Sonseca Array 43.63 296 P P 19 11 25.1 +0.7
PAB San Pablo 43.94 296 P P 19 11 27.0 0.0
PAB IAmb IAmb 19 11 39.6
comp=Z,5.1nm,1.1s
SONM Songino Array 45.35 52 P P 19 11 39.8 +1.7
comp=Z,0.3nm,0.4s,baz=256,slow=5.8,SNR=1.9
SONM LR LR 19 32 24.5
comp=Z,121nm,18.3s,baz=290,slow=38
comp=Z,0.3nm,0.4s
PZH PanZhiHua 45.44 83 P P 19 11 39.8 +0.7
CMAR Chiang Mai Arr 46.21 95 P P 19 11 45.0 -0.2
comp=Z,0.9nm,0.8s,baz=293,slow=7.1,SNR=5.6
CMAR LR LR 19 33 40.8
comp=Z,32nm,18.1s,baz=295,slow=39
comp=Z,0.9nm,0.8s
CMAR Chiang Mai Arr 46.21 95 P P 19 11 44.7 -0.4
TORD Torodi Ar. Bea 47.64 258 P P 19 11 58.0 +1.7
comp=Z,4.6nm,0.5s,baz=53,slow=7.7,SNR=3.6
comp=Z,4.6nm,0.5s
TORD Torodi Ar. Bea 47.64 258 IAmb IAmb 19 11 59.3
comp=Z,4.9nm,0.8s
SPITS Spitzbergen 48.62 351 P P 19 12 04.0 +1.0
comp=Z,6.8nm,0.8s,baz=135,slow=12,SNR=7.2
comp=Z,6.8nm,0.8s
HHC Hu-ho-hao-te 49.74 61 *eP* **P 19 12 12.5 +0.2**
HHC pmax pmax
comp=Z,2.0nm,0.5s
HHC pmax pmax
comp=Z,130nm,4.7s
BORG Borgarnes 53.57 330 LR LR 19 38 36.4
comp=Z,35nm,19.7s,baz=89,slow=40
PSI Prapat 54.56 112 LR LR 19 37 47.1
comp=Z,70nm,20.7s,baz=314,slow=38
DBIC Dimbokro 56.54 256 P P 19 13 03.6 +0.9
comp=Z,1.2nm,0.4s,baz=80,slow=5.8,SNR=4.7
DBIC LR LR 19 40 24.2
comp=Z,149nm,18.1s,baz=96,slow=39
comp=Z,1.2nm,0.4s
DBIC Dimbokro 56.54 256 P P 19 13 02.8 +0.2
TIXI Tiksi 56.70 22 LR LR 19 41 28.0
comp=Z,148nm,18.2s,baz=359,slow=40
TIXI Tiksi 56.70 22 P P 19 13 02.2 -0.7
TIXI IAmb IAmb 19 13 03.8
comp=Z,6.9nm,1.2s
SUMG Summit 59.35 340 P P 19 13 21.8 -0.2
LBTB Lobatse 61.07 205 LR LR 19 41 01.5
comp=Z,125nm,18.8s,baz=10,slow=37
BOSA Boshof 64.49 204 P P 19 13 57.4 +0.7
comp=Z,1.7nm,0.8s,baz=66,slow=5.5,SNR=3.8
BOSA LR LR 19 43 45.6
comp=Z,68nm,19.0s,baz=13,slow=38
comp=Z,1.7nm,0.8s
BOSA Boshof 64.49 204 P P 19 13 55.6 -1.0
JNU Nakatsue 66.75 65 LR LR 19 45 18.1
comp=Z,31nm,20.1s,baz=298,slow=38
ASAJ Asahikawa 70.54 50 LR LR 19 48 20.1
comp=Z,119nm,18.1s,baz=331,slow=38
A36M Sachs Harbour 76.35 358 P P 19 15 07.5 -1.0
C27K Jago River 78.31 5 P P 19 15 17.8 -1.7
D23K Nanushuk River 78.33 7 P P 19 15 18.3 -1.4
E22K Anaktuvuk Pass 78.99 8 P P 19 15 22.8 -0.6
E29M Blow River 79.87 3 P P 19 15 27.0 -1.1
E29M IAmb IAmb 19 15 43.0
comp=Z,3.2nm,0.9s
INK Inuvik 80.08 1 P P 19 15 28.7 -0.5
INK IAmb IAmb 19 15 37.0
comp=Z,2.9nm,0.8s
F30M Barrier River 80.72 2 P P 19 15 31.9 -0.8
IMAR Indian Mountai 80.78 9 P P 19 15 32.6 -0.5
H29M Whitestone 82.01 3 P P 19 15 39.8 +0.2
I26K Coal Creek Min 82.61 5 P P 19 15 41.6 -1.1
ILAR Eielson Array 82.79 7 P P 19 15 43.7 0.0
comp=Z,0.4nm,0.8s,baz=314,slow=4.4,SNR=5.9
comp=Z,0.4nm,0.8s
I30M Mount Dempster 83.09 3 P P 19 15 44.9 -0.5
BCAR Beaver Creek A 84.93 5 P P 19 15 55.0 +0.2
YKA Yellowknife Ar 85.09 353 P P 19 15 56.7 +1.3
comp=Z,0.7nm,0.8s,baz=282,slow=31,SNR=4.1
comp=Z,0.7nm,0.8s
DLBC Dease Lake 90.02 360 LR LR 20 04 31.4
comp=Z,16nm,19.4s,baz=342,slow=41
WRA Warramunga Arr 95.98 110 P P 19 16 48.0 +0.6
comp=Z,0.5nm,1.0s,baz=314,slow=4.3,SNR=4.6
comp=Z,0.5nm,1.0s
ASAR Alice Springs 97.58 113 P Pdif 19 16 54.9 +0.3
comp=Z,0.2nm,0.7s,baz=283,slow=3.8,SNR=4.8
comp=Z,0.2nm,0.7s

IDC ***29*** *19:12:32.1±2.7,31°.85N×49°.62E,h0km,mb4.0/4, mbtmp4.0/5,ML3.6/1, Error ellipse: s-maj=61.2km s-min=31.2km az=156.0*
TEH ***29*** *19:12:33.4,32°.05N×49°.85E,h12km±21km*
OMAN ***29*** *19:12:41.9±0.1,31°.49N×50°.22E,h10km,mb4.5/7, Error ellipse: s-maj=1.7km s-min=1.6km az=322.0*
ISC 29 19:12:34.8±0.7, 31°.95N±0°.05×49°.88E±0°.04, h15km, n55, σ1ᵍ95/66, mb3.9/3, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHBN	**Jahan bin**	**0.73**	**67**	Pg	**Pg**	**19 12 48.5**	**-0.6**
ZNGN	**Zangian**	**0.85**	**78**	Pg	**Pg**	**19 12 51.3**	**-0.1**

IPIR Pirpir 1.13 49 Pg Pb 19 12 55.5 -0.8
IBRJ Brojen 1.18 92 Pg Pn 19 12 58.1 +1.0
AHWZ Ahwaz 1.22 240 Pg Pn 19 12 57.9 +0.5
AHWZ Sg **Sg 19 13 16.7 +2.4**
ABEH Behbahan 1.38 166 Pg Pn 19 13 02.2 +2.6
ABEH Sg **Sg 19 13 23.8 +4.4**
KLNJ Kolanjah 1.74 122 Pn Pn 19 13 07.6 +2.7
IKLH Kolahrood 1.98 46 Pn Pn 19 13 09.9 +1.8
BDRS Dareh Seyedi 2.17 338 Pn Pn 19 13 10.7 0.0
QAMS Qamsar 2.19 35 Pn Pn 19 13 12.5 +1.4
IZEF Zefreh 2.28 65 Pn Pn 19 13 14.1 +1.9
IDOB Doab 2.33 322 Pn Pn 19 13 12.7 -0.1
KRSH Karshahi 2.77 43 Pn Pn 19 13 20.8 +1.9
HAGD Aghdareh 2.93 348 Pn Pn 19 13 20.6 -0.5
IQOM Qom 3.05 19 Pn Pn 19 13 23.4 +0.6
ISFB Sefidab 3.11 39 Pn Pn 19 13 24.8 +1.4
IVRN Varamin 3.41 26 Pn Pn 19 13 28.7 +1.2
SNQR Sonqor, Kerman 3.46 328 Pn Pn 19 13 29.1 +0.7
ANAR Anarak 3.48 68 Pn Pn 19 13 30.7 +2.2
HGHA Hamedan- Ghaye 3.63 347 Pn Pn 19 13 31.2 +0.4
QABG Abgarm-Qazvin 3.76 356 Pn Pn 19 13 33.0 +0.5
ICHK Chekchek 3.86 84 Pn Pn 19 13 36.0 +2.2
GLG1 Gilan-e-Gharb 3.97 304 Pn Pn 19 13 35.8 +0.5
IDHR Dehrash 4.01 314 Pn Pn 19 13 35.7 -0.2
IDMV Damavand 4.04 26 Pn Pn 19 13 37.3 +0.8
ILAS Lasjerd 4.28 36 Pn Pn 19 13 40.9 +1.1
IFIR Firoozkooh 4.39 32 Pn Pn 19 13 42.5 +1.2
IGZV Ghazvin 4.43 4 Pn Pn 19 13 42.3 +0.5
IPRN Peran 4.74 25 Pn Pn 19 13 47.1 +1.1
IALA Alasht 4.79 30 Pn Pn 19 13 48.1 +1.3
IGLO Ghaloghah 5.60 35 Pn Pn 19 13 59.8 +2.0
TPRV Parvadeh(Tabas 5.85 78 Pn Pn 19 14 03.4 +2.3
SAKB Bahrain 5.98 174 P Pn 19 14 04.1 +1.3
SAKB S **Sn 19 15 09.5 -1.4**
TNSJ Nastanj 6.00 69 Pn Pn 19 14 05.1 +1.9
SHMA Al-Shehemyia 6.14 171 P Pn 19 14 06.0 +0.9
SNR=11
SHMA S **Sn 19 15 13.6 -1.6**
SMRA Abu-Samra 7.22 173 P Pn 19 14 21.2 +1.3
SMRA S **Sn 19 15 40.1 -1.6**
TRNA Turayna 7.28 170 P Pn 19 14 21.5 +0.8
SNR=14
TRNA S **Sn 19 15 41.1 -2.1**
SLWR Sila 8.01 168 P Pn 19 14 31.1 +0.4
SLWR S **Sn 19 15 58.4 -2.7**
BANOM Banah 8.23 135 P Pn 19 14 34.9 +1.2
BANOM S **Sn 19 16 02.3 -4.1**
MASF Masafi 8.56 138 P Pn 19 14 39.2 +0.8
MASF S **Sn 19 16 11.4 -3.4**
AJN Ajban 8.63 147 P Pn 19 14 39.9 +0.7
MDH Madha 8.70 138 P Pn 19 14 40.7 +0.6
HATD Hatta, Dubai 8.98 141 P Pn 19 14 43.7 -0.3
HATD S **Sn 19 16 20.7 -4.3**
MZR Muzera 9.47 159 P Pn 19 14 50.9 +0.2
MZR S **Sn 19 16 33.1 -3.8**
SOHO SOHO 9.75 141 P Pn 19 14 55.0 +0.4
SOHO S **Sn 19 16 39.3 -4.7**
ARQ Araqi 10.40 144 P Pn 19 15 04.0 +0.4
ARQ S **Sn 19 16 54.9 -5.0**
ASF Jabal al Asfar 11.02 275 Pn Pn 19 15 08.2 -3.8
0.4nm,0.3s,baz=78,slow=9.3,SNR=2.4
0.9nm,0.4s
BSY Bisya 11.24 143 P Pn 19 15 14.1 -0.9
SMDO Samad 11.44 139 P Pn 19 15 20.2 +2.4
JMDO Jabal Madar 12.02 141 P Pn 19 15 27.1 +1.3
JLN Jalan Bani Buh 12.93 137 P Pn 19 15 38.6 +0.5
MKAR Makanchi Array 28.87 50 P P 19 18 34.6 +1.8
0.6nm,1.0s,baz=248,slow=11,SNR=1.9
0.6nm,1.0s
FINES FINESS Array B 33.33 339 P P 19 19 09.8 -2.1
4.4nm,1.1s,baz=144,slow=7.4,SNR=1.3
4.4nm,1.1s
HFS Hagfors 36.94 331 P P 19 19 43.8 +0.8
1.7nm,0.8s,baz=127,slow=9.2,SNR=4.3
1.7nm,0.8s
TORD Torodi Ar. Bea 47.84 258 P P 19 21 09.8 -2.5
1.8nm,0.4s,baz=60,slow=8.9,SNR=1.6
1.8nm,0.4s

KRNET ***29*** *19:17:44.3±0.1,41°.87N×78°.87E,h19km,mb2.4*
SOME ***29*** *19:17:45.3,41°.25N×78°.80E,h15km*
NNC ***29*** *19:17:45.3±3.1,41°.19N×78°.58E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=21.2km s-min=18.2km az=170.0*
ISC 29 19:17:44.4±2.2, 41°.22N±0°.09×78°.70E±0°.06, h15km±11km, n19, σ1ᵍ91/30, 7C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.84**	**308**	⇓*eP*	**Pg**	**19 17 59.4**	**-1.5**
TARG				⇓*eS*	**Sg**	**19 18 10.7**	**-1.3**
PRZ	**Przheval'sk**	**1.29**	**350**	⇓*eP*	Pn	19 17 58.0	-10
PRZ				⇓*eS*	**Pn**	**19 18 08.0**	**-0.1**
KDJ	**Kajisay**	**1.46**	**309**	⇓*eP*	**Pn**	**19 18 07.7**	**-2.7**
KDJ				⇑*eS*	**Sn**	**19 18 24.8**	**-4.6**
SATY	**Saty**	**1.85**	**353**	P	**Pg**	**19 18 19.7**	**-0.4**
2.3nm,0.3s							
SATY				S	**Sg**	**19 18 44.5**	**+0.4**
6.9nm,0.6s							
UZB	**Uzynbulak**	**1.94**	**7**	P	**Pb**	**19 18 20.2**	**+0.6**
1.1nm,0.1s							
UZB				S	**Sg**	**19 18 45.7**	**-1.3**
3.2nm,0.2s							
UZB	**Uzynbulak**	**1.94**	**7**	*eP*	**Pb**	**19 18 20.2**	**+0.6**
1.1nm,0.1s							
UZB				*eS*	**Sg**	**19 18 45.7**	**-1.3**
3.2nm,0.2s							
SHLS	**Shalkode**	**2.02**	**16**	Pg	**Pg**	**19 18 23.1**	**-0.1**
5.7nm,0.2s							
SHLS				Lg	Lg	19 18 50.9	
20nm,0.7s							
SHLS	**Shalkode**	**2.02**	**16**	*eP*	**Pg**	**19 18 23.1**	**-0.1**
5.7nm,0.2s							
SHLS				*eS*	**Sg**	**19 18 50.3**	**+0.8**
20nm,0.5s							
PDGK	**Podgornoye**	**2.19**	**15**	⇓Pn	**Pb**	**19 18 23.3**	**-0.6**
1.4nm,0.6s							
PDGK				⇑Sn	**Sg**	**19 18 55.3**	**+0.4**
10nm,0.7s							
TNSS	**Tian-Shan**	**2.24**	**325**	Pg	**Pb**	**19 18 27.2**	**+2.4**
0.6nm,0.2s							
TNSS				Lg	Lg	19 18 56.5	
2.5nm,0.5s							
TNSS	**Tian-Shan**	**2.24**	**325**	*eP*	**Pb**	**19 18 26.9**	**+2.1**
1.3nm,0.3s							
TNSS				*eS*	**Sg**	**19 18 56.7**	**+0.3**
1.9nm,0.4s							
KPKS	**Kokpek**	**2.25**	**360**	Pg	**Pb**	**19 18 25.8**	**+1.0**
0.4nm,0.2s							
KPKS				Lg	Lg	19 18 55.6	
8.4nm,0.3s							
MDOK	**Medeo**	**2.30**	**328**	Pg	**Pb**	**19 18 26.7**	**+1.0**
1.1nm,0.2s							
MDOK				Lg	Lg	19 18 56.6	
4.4nm,0.8s							
JNKS	**Jany-Kuch**	**2.30**	**267**	⇑*eP*	**Pb**	**19 18 27.2**	**+1.4**
JNKS				⇑*eS*	**Sb**	**19 18 58.6**	**+4.4**
KURS	**Kuram**	**2.30**	**350**	Pg	**Pb**	**19 18 27.2**	**+1.5**
0.4nm,0.1s							
KURS				Lg	Lg	19 18 57.5	
2.1nm,0.3s							
BOOM	**Boomskoye usch**	**2.42**	**303**	⇑*eP*	**Pn**	**19 18 23.1**	**-0.5**
BOOM				⇑*eS*	**Sn**	**19 18 51.5**	**-1.6**
ARXS	**Arharly**	**3.06**	**348**	Pg	**Pb**	**19 18 39.8**	**+1.2**
1.2nm,0.3s							
ARXS				Lg	Lg	19 19 19.6	
5.6nm,0.5s							
ARXS	**Arharly**	**3.06**	**348**	*eP*	**Pb**	**19 18 40.3**	**+1.6**
ARXS				*eS*	**Sb**	**19 19 17.9**	**+3.8**
KNOS	**Konyrlen**	**3.16**	**6**	Pg	**Pb**	**19 18 41.0**	**+0.6**
1.6nm,0.2s							
KNOS				Lg	Lg	19 19 21.2	
4.4nm,0.5s							

BJI ***29*** *19:23:18.4,24°.91N×124°.33E,h114km,mB4.8/8,mb4.4/43*
MOS ***29*** *19:23:23.8±0.9,25°.29N×124°.04E,h140km,mb4.6/22, Error ellipse: s-maj=10.5km s-min=6.3km az=125.5*
IDC ***29*** *19:23:24.9±1.9,25°.34N×124°.05E,h132km±17km, mb3.9/25,mbtmp4.3/28,MS3.3/2,Error ellipse: s-maj=15.6km s-min=12.2km az=60.0*
NEIC ***29*** *19:23:24.3±1.8,25°.29N±0°.07×124°.10E±0°.06,*

h125km±6km, mb4.6/70, Error ellipse: s-maj=11.3km s-min=7.2km az=152.0
*JMA **29** 19:23:25.2-0.2,25°N-2°×124°.1E±0'.7, h124km±3km, MV4.3/17, NW OFF ISHIGAKIJIMA IS*
*NIED **29** 19:23:25.2,25°.19N×124°.06E, h124km, MW4.5, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr0.44; Mθθ0.68; Mφφ-1.12; Mrθ-4.27; Mθφ-1.90; Mφr-2.52; Fault plane solution: M₀5.34000×10¹⁵ NP1: φs345.00000°, δ20.00000°, λ12.00000°. NP2: φs243.00000°, δ86.00000°, λ110.00000°.*
ISC 29 19:23:24.5±0.4, 25°22N±0'.04×124°08E±0'.03, h132km±3km, h332km:pP-P,n198,σ1°17/231,mb4.4/73,13C,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.67**	**162**	*i* P	**Pn**	**19 23 44.6**	**-0.3**
JISG				*e*S	**Sn**	**19 23 59.5**	**-0.8**
JTJ	**Tarama**	**0.81**	**136**	*i* P	**Pn**	**19 23 46.0**	**+0.1**
JTJ				S	**Sn**	**19 24 02.2**	**0.0**
JIJ	**Ishigaki jima**	**0.86**	**176**	*i* P	**Pn**	**19 23 45.9**	**-0.5**
JIJ				S	**Sn**	**19 24 01.2**	**-1.7**
IRIF	**Iriomote-Funau**	**0.94**	**200**	*i* P	**Pn**	**19 23 46.6**	**-0.5**
IRIF				S	**Sn**	**19 24 03.0**	**-1.1**
JKRS	**Kuro-shima**	**0.98**	**184**	*i* P	**Pn**	**19 23 47.4**	**-0.1**
JKRS				*e*S	**Sn**	**19 24 04.3**	**-0.6**
JIRB	**Irabujima**	**1.06**	**111**	*i* P	**Pn**	**19 23 48.2**	**0.0**
JIRB				*e*S	**Sn**	**19 24 05.5**	**-0.8**
JIKM	**Ikemajima**	**1.10**	**105**	P	**Pn**	**19 23 48.9**	**+0.3**
JIKM				S	**Sn**	**19 24 06.7**	**-0.1**
JMJ	**Miyako jima 2**	**1.17**	**110**	P	**Pn**	**19 23 50.4**	**+1.1**
JMJ	**Miyako jima 2**	**1.17**	**110**	S	**Sn**	**19 24 09.4**	**+1.3**
HATJ	**Hateruma jima**	**1.19**	**192**	*e*P	**Pn**	**19 23 49.4**	**-0.1**
HATJ				S	**Sn**	**19 24 08.0**	**-0.4**
JMJ2	**Miyako jima3**	**1.23**	**113**	*i* P	**Pn**	**19 23 50.4**	**+0.5**
JMJ2				S	**Sn**	**19 24 09.5**	**+0.4**
YOJ	**Yonaguni jima**	**1.23**	**232**		**Pn**	**19 23 49.9**	**0.0**
YOJ				Sn	**Sn**	**19 24 07.4**	**-1.8**
YOJ	**Yonaguni jima**	**1.23**	**232**	P	**Pn**	**19 23 49.9**	**0.0**
YOJ	**Yonaguni jima**	**1.23**	**232**	S	**Sn**	**19 24 10.1**	**+0.9**
YOJ	**Yonaguni jima**	**1.23**	**232**	P	**Pn**	**19 23 49.9**	**0.0**
YOJ						19 24 07.4	
YOJ	**Yonaguni jima**	**1.23**	**232**	P	**Pn**	**19 23 50.0**	**0.0**
YOJ				*e*S	**Sn**	**19 24 08.3**	**-0.9**
JYNG	**Yonagunijimaku**	**1.29**	**234**	P	**Pn**	**19 23 50.5**	**0.0**
JOGS	**Gusukube**	**1.29**	**111**	P	**Pn**	**19 23 51.1**	**+0.7**
JOGS				S	**Sn**	**19 24 10.9**	**+0.7**
TATO	**Taipei**	**2.36**	**265**		**Pn**	**19 24 04.2**	**+1.1**
TATO	**Taipei**	**2.36**	**265**	P	**Pn**	**19 24 04.0**	**+0.9**
TATO	**Taipei**	**2.36**	**265**	S	**Sn**	**19 24 34.2**	**+1.5**
NACB	**Ninganchiao**	**2.49**	**246**		**Pn**	**19 24 04.0**	**-0.7**
NACB				Sn	**Sn**	**19 24 32.6**	**-3.0**
NACB	**Ninganchiao**	**2.49**	**246**	P	**Pn**	**19 24 04.3**	**-0.4**
NACB	**Ninganchiao**	**2.49**	**246**	S	**Sn**	**19 24 35.6**	**0.0**
YHNB	**Yeheng**	**2.52**	**258**		**Pn**	**19 24 06.0**	**+0.9**
YHNB				Sn	**Sn**	**19 24 36.3**	**0.0**
YHNB	**Yeheng**	**2.52**	**258**	P	**Pn**	**19 24 06.4**	**+1.3**
YHNB	**Yeheng**	**2.52**	**258**	S	**Sn**	**19 24 37.3**	**+1.0**
JKE	**Kume jima 2**	**2.67**	**65**	*i* P	**Pn**	**19 24 07.0**	**-0.1**
YULB	**Yu-li**	**3.12**	**235**		**Pn**	**19 24 11.6**	**-1.2**
YULB				Sn	**Sn**	**19 24 46.2**	**-4.0**
YULB	**Yu-li**	**3.12**	**235**	P	**Pn**	**19 24 11.7**	**-1.2**
YULB	**Yu-li**	**3.12**	**235**	S	**Sn**	**19 24 48.9**	**-1.3**
SSLB	**Suanglung**	**3.19**	**244**		**Pn**	**19 24 13.3**	**-0.4**
SSLB				Sn	**Sn**	**19 24 49.0**	**-2.7**
SSLB	**Suanglung**	**3.19**	**244**	P	**Pn**	**19 24 13.6**	**-0.1**
TWGBT	**Beinan**	**3.64**	**230**	P	**Pn**	**19 24 18.4**	**-1.2**
TWG	**Pinlang**	**3.64**	**230**		**Pn**	**19 24 17.7**	**-2.0**
TPUB	**Ta-pu**	**3.69**	**239**		**Pn**	**19 24 20.5**	**+0.3**
TPUB	**Ta-pu**	**3.69**	**239**	P	**Pn**	**19 24 21.0**	**+0.8**
TPUB	**Ta-pu**	**3.69**	**239**	S	**Sn**	**19 25 02.4**	**-0.9**
JOW	**Kunigami**	**4.10**	**66**	P	**Pn**	**19 24 24.3**	**-1.3**
	253nm,0.2s,baz=270,slow=17,SNR=274						
JOW				S	**Sn**	**19 25 08.7**	**-4.4**
	35nm,0.3s,baz=106,slow=26,SNR=1.1						
JOW				LR	LR	19 25 23.0	
	comp=Z,65nm,18.6s,baz=266,slow=29						
JOW	**Kunigami**	**4.10**	**66**		**Pn**	**19 24 24.5**	**-1.2**
KNMB	**Chin-men Tao**	**5.23**	**263**	Pn	**Pn**	**19 24 40.5**	**-0.2**
JMZ	**Minamidaito 2**	**6.48**	**83**	Pn	**Pn**	**19 24 54.7**	**-2.8**
NJ2	**Nanjing**	**8.21**	**327**	*e*P	**Pn**	**19 25 20.0**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
JNU	**Nakatsue**	**9.86**	**35**	P	**Pn**	**19 25 44.2**	**+1.2**
	7.1nm,1.0s,baz=167,slow=8.5,SNR=1.7						
JMN	**Monobe**	**12.02**	**43**	Pn	Pn	19 26 06.6	-5.0
KSRS	**Korea Array**	**12.63**	**14**	P	**Pn**	**19 26 21.3**	**+1.9**
	8.1nm,0.7s,baz=197,slow=12,SNR=14						
HNS	**HongShan**	**14.53**	**329**	⇑P	**P**	**19 26 47.5**	**+0.8**
HNS				pmax	pmax		
	comp=Z,15nm,1.0s						
XAN	**Xi'an**	**15.83**	**307**	⇑P	**P**	**19 27 03.0**	**+1.8**
XAN				pmax	pmax		
	comp=Z,17nm,0.8s						
BJI	**Beijing**	**16.20**	**338**	P	**Pn**	**19 27 03.5**	**-0.9**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,75nm,4.8s						
MJAR	**Matsushiro Arr**	**16.54**	**44**	P	**P**	**19 27 09.9**	**+0.9**
	0.7nm,0.5s,baz=226,slow=9.6,SNR=4.5						
CN2	**Changchun**	**18.57**	**3**	*e*P	**Pn**	**19 27 32.3**	**-0.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC	**Hu-ho-hao-te**	**18.76**	**329**	*e*P	**Pn**	**19 27 35.0**	**-0.3**
HHC				sP	sP	19 28 12.5	-1.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,76nm,3.6s						
CD2	**Chengdu**	**18.80**	**292**	P	**P**	**19 27 34.5**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BTO	**Baotou**	**19.32**	**326**	*e*P	**Pn**	**19 27 42.5**	**+0.6**
BTO				pP	**pP**	**19 28 01.8**	**-1.2**
BTO				sP	**sP**	**19 28 17.5**	**-2.3**
BTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BTO				pmax	pmax		
	comp=Z,510nm,5.5s						
XLT	**XiLinHaoTe**	**19.75**	**343**	*e*P	**Pn**	**19 27 49.3**	**+2.5**
XLT				PP	**pP**	**19 28 11.5**	**+3.8**
XLT				pmax	pmax		
	comp=Z,14nm,1.0s						
PZH	**PanZhiHua**	**20.14**	**278**	P	**P**	**19 27 49.5**	**+1.0**
PZH				pmax	pmax		
	comp=Z,30nm,0.8s						
LZH	**Lanzhou**	**20.46**	**307**	*e*P	**P**	**19 27 52.8**	**+0.9**
LZH				pP	pP	19 28 15.5	-0.3
LZH				pmax	pmax		
	comp=Z,31nm,1.4s						
LZDM	**Lanzhou Array**	**20.51**	**306**	P	**P**	**19 27 53.3**	**+0.7**
	1.6nm,0.3s,baz=155,slow=12,SNR=11						
	1.6nm,0.3s						
BNX	**BinXian**	**20.65**	**7**	⇑P	**P**	**19 27 53.5**	**-0.1**
BNX				pmax	pmax		
	comp=Z,18nm,0.8s						
ERM	**Erimo**	**23.00**	**39**	P	**P**	**19 28 17.8**	**+0.1**
ERM	**Erimo**	**23.00**	**39**	P	**P**	**19 28 17.8**	**+0.1**
ERM				pmax	pmax		
	comp=Z,91nm,1.4s						
ASAJ	**Asahikawa**	**24.13**	**34**	P	**P**	**19 28 27.2**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,59nm,1.4s						
JKA	**Kamikawa-asahi**	**24.14**	**34**	P	**P**	**19 28 27.2**	**-0.9**
CHTO	**Chiang Mai**	**24.14**	**260**		**P**	**19 28 29.0**	**+0.6**
CHTO	**Chiang Mai**	**24.14**	**260**	P	**P**	**19 28 29.0**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.26**	**259**	P	**P**	**19 28 29.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=63,slow=7.9,SNR=11						
	comp=Z,1.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.26**	**259**	P	**P**	**19 28 29.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**24.26**	**259**	P	**P**	**19 28 29.3**	**-0.2**
TNTI	**Ternate**	**24.51**	**172**	P	**P**	**19 28 33.1**	**+1.4**
TNTI				IAmb	IAmb	19 28 38.4	
	comp=Z,28nm,1.4s						
HILR	**Hailar Array B**	**24.53**	**353**	P	**P**	**19 28 29.9**	**-1.7**
	comp=Z,2.2nm,0.6s,baz=164,slow=12,SNR=2.8						
	comp=Z,2.2nm,0.6s						
GTA	**Gaotai**	**24.82**	**311**	*e*P	**P**	**19 28 35.0**	**+0.5**
GTA				pP	pP	19 29 04.5	+2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HEH	**HeiHe**	**25.12**	**5**	*e*P	**P**	**19 28 37.5**	**+0.5**
SBUM	**Sibu**	**25.36**	**209**	P	**P**	**19 28 41.4**	**+1.9**
LUWI	**Luwuk**	**26.14**	**183**	P	**P**	**19 28 46.9**	**+0.4**
LUWI				IAmb	IAmb	19 28 55.7	
	comp=Z,18nm,1.1s						
YSS	**Yuzhno-Sakhali**	**26.29**	**30**	P	**P**	**19 28 45.3**	**-2.2**
ULN	**Ulaanbaatar**	**26.30**	**334**	P	**P**	**19 28 47.1**	**-0.7**
ULN	**Ulaanbaatar**	**26.30**	**334**	P	**P**	**19 28 47.1**	**-0.7**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	**Songino Array**	**26.55**	**333**	P	**P**	**19 28 49.3**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=152,slow=10,SNR=8.2						
SONM				pP	**pP**	**19 29 17.6**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=160,slow=9.3,SNR=4.6						
SONM				PcP	**PcP**	**19 32 12.6**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=151,slow=3.3,SNR=2.7						
	comp=Z,1.5nm,0.8s						
SONM	**Songino Array**	**26.55**	**333**	*e*P	**P**	**19 28 49.3**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SHL	**Shillong**	**29.05**	**278**	P	**P**	**19 29 12.1**	**-0.6**
SHL				IAmb	IAmb	19 29 14.0	
	comp=Z,7.8nm,1.2s						
SHL	**Shillong**	**29.05**	**278**	P	**P**	**19 29 12.1**	**-0.6**
SHL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LSA	**Lhasa**	**29.50**	**286**		**P**	**19 29 15.6**	**-1.3**
LSA	**Lhasa**	**29.50**	**286**	P	**P**	**19 29 15.6**	**-1.3**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YAK	**Yakutsk**	**36.99**	**4**		**P**	**19 30 19.1**	**-1.7**
YAK	**Yakutsk**	**36.99**	**4**	*e*P	**P**	**19 30 17.7**	**-3.1**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.6s						
DGZ	**Jazzator, Alta**	**37.43**	**320**	*i* P	**P**	**19 30 25.3**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PET	**Petropavlovsk**	**37.98**	**34**	P	**P**	**19 30 28.7**	**-0.6**
MTN	**Manton Dam**	**38.45**	**169**	P	**P**	**19 30 33.6**	**-0.1**
MTN				IAmb	IAmb	19 30 35.2	
	comp=Z,20nm,1.4s						
MA2	**Magadan**	**39.04**	**21**	P	**P**	**19 30 36.7**	**-1.4**
MA2	**Magadan**	**39.04**	**21**	P	**P**	**19 30 36.7**	**-1.4**
MA2				pmax	pmax		
	comp=Z,77nm,1.3s						
MK31	**Makanchi Array**	**39.48**	**314**	*ce*P	**P**	**19 30 41.2**	**-0.7**
MKAR	**Makanchi Array**	**39.48**	**314**	P	**P**	**19 30 41.5**	**-0.5**
	comp=Z,3.7nm,0.6s,baz=87,slow=8.1,SNR=42						
MKAR				PcP	**PcP**	**19 32 47.1**	**0.0**
	comp=Z,0.7nm,0.7s,baz=72,slow=4.7,SNR=3.9						
	comp=Z,3.7nm,0.6s						
MAKZ	**Makanchi**	**39.68**	**314**		**P**	**19 30 42.8**	**-0.8**
MAKZ				IAmb	IAmb	19 30 44.6	
	comp=Z,7.5nm,0.7s						
MAKZ	**Makanchi**	**39.68**	**314**	P	**P**	**19 30 42.8**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZAA0	**Zalesovo Array**	**40.86**	**325**		**P**	**19 30 52.1**	**-1.1**
ZALV	**Zalesovo Beam**	**40.86**	**325**	P	**P**	**19 30 52.0**	**-1.1**
	comp=Z,14nm,0.6s,baz=112,slow=8.6,SNR=78						
ZALV				ScP	**ScP**	**19 36 27.4**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=104,slow=4.9,SNR=4.2						
	comp=Z,14nm,0.6s						
KNRA	**Kununurra**	**40.91**	**173**	P	**P**	**19 30 54.4**	**+0.5**
KNRA				IAmb	IAmb	19 30 55.8	
	comp=Z,9.6nm,0.9s						
TARG	**Taragay, Kyrgy**	**41.44**	**305**	P	**P**	**19 30 59.9**	**+1.2**
TARG	**Taragay, Kyrgy**	**41.44**	**305**	P	**P**	**19 30 59.9**	**+1.2**
TARG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KDJ	**Kajisay**	**41.96**	**306**	P	**P**	**19 31 02.8**	**+0.2**
KDJ				IAmb	IAmb	19 31 05.2	
	comp=Z,11nm,0.8s						
KDJ	**Kajisay**	**41.96**	**306**	P	**P**	**19 31 02.8**	**+0.2**
KDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**43.03**	**318**		**P**	**19 31 10.6**	**-0.3**
KURK				IAmb	IAmb	19 31 11.3	
	comp=Z,6.3nm,0.5s						
KURK	**Kurchatov**	**43.03**	**318**		**PcP**	**19 32 58.4**	**-0.2**
KURK	**Kurchatov**	**43.03**	**318**	*ce*P	**P**	**19 31 10.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURBB	**Kurchatov Arra**	**43.05**	**318**	P	**P**	**19 31 10.0**	**-1.0**
	comp=Z,5.1nm,0.2s,baz=112,slow=8.6,SNR=4.9						
KURBB				PcP	**PcP**	**19 32 58.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=104,slow=3.9,SNR=2.9						
	comp=Z,5.1nm,0.2s						
FITZ	**Fitzroy Crossi**	**43.09**	**178**	P	**P**	**19 31 11.8**	**+0.3**
COEN	**Coen**	**43.16**	**152**	P	**P**	**19 31 13.9**	**+1.6**
COEN				IAmb	IAmb	19 31 14.5	
	comp=Z,12nm,0.9s						
AAK	**Ala-Archa**	**44.00**	**306**	P	**P**	**19 31 19.4**	**+0.4**
AAK	**Ala-Archa**	**44.00**	**306**	*ce*P	**P**	**19 31 19.8**	**+0.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NIL	**Nilore**	**44.69**	**293**		**P**	**19 31 23.9**	**-0.5**
NIL				IAmb	IAmb	19 31 25.6	
	comp=Z,12nm,0.7s						
NIL	**Nilore**	**44.69**	**293**	P	**P**	**19 31 23.9**	**-0.5**
NIL				pmax	pmax		
	comp=Z,12nm,0.7s						
ARSB	**Arslanbob**	**44.99**	**304**	P	**P**	**19 31 26.9**	**0.0**
ARSB	**Arslanbob**	**44.99**	**304**	P	**P**	**19 31 26.9**	**0.0**
ARSB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WB0	**Warramunga Arr**	**45.83**	**166**	P	**P**	**19 31 33.9**	**+0.5**
WB0				IAmb	IAmb	19 31 35.4	
	comp=Z,6.6nm,0.9s						
WB0				PcP	**PcP**	**19 33 09.0**	**+0.4**
WRAB	**Tennant Creek**	**45.98**	**167**	P	**P**	**19 31 35.3**	**+0.7**
WRAB				IAmb	IAmb	19 31 36.6	
	comp=Z,5.5nm,0.8s						
WRAB	**Tennant Creek**	**45.98**	**167**	*ce*P	**P**	**19 31 34.3**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,18nm,2.3s						
WRA	**Warramunga Arr**	**45.99**	**167**	P	**P**	**19 31 35.8**	**+1.2**
	comp=Z,6.2nm,0.7s,baz=349,slow=8.6,SNR=39						
	comp=Z,6.2nm,0.7s						
WR8	**Warramunga Arr**	**46.03**	**166**		**P**	**19 31 36.0**	**+1.0**
WR8				IAmb	IAmb	19 31 37.0	
	comp=Z,8.5nm,0.7s						
WR8				PcP	**PcP**	**19 33 05.8**	**-3.5**
MBWA	**Marble Bar**	**46.30**	**186**	P	**P**	**19 31 35.6**	**-1.4**
MBWA				IAmb	IAmb	19 31 59.9	
	comp=Z,22nm,1.1s						
TIXI	**Tiksi**	**46.54**	**2**		**P**	**19 31 37.0**	**-1.3**
TIXI				PcP	**PcP**	**19 33 08.9**	**-1.4**
TIXI	**Tiksi**	**46.54**	**2**	*ce*P	**P**	**19 31 36.5**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,11nm,2.0s						
GAR	**Garm**	**46.94**	**301**		**P**	**19 31 42.6**	**+0.5**
GAR				IAmb	IAmb	19 31 44.0	
	comp=Z,20nm,1.2s						
KK31	**Karatay Array**	**46.96**	**306**		**P**	**19 31 42.4**	**+0.3**
KK31				PcP	**PcP**	**19 33 12.8**	**+0.4**
KK31	**Karatay Array**	**46.96**	**306**	P	**P**	**19 31 42.4**	**+0.3**
KK31						19 33 12.8	
KK31				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KKAR	**Karatay Array**	**46.96**	**306**	P	**P**	**19 31 42.2**	**+0.1**
KKAR				PcP	**PcP**	**19 33 12.8**	**+0.4**
KKAR	**Karatay Array**	**46.96**	**306**	P	**P**	**19 31 42.2**	**+0.1**
KKAR						19 33 12.8	
CHGR	**Chuyangaron**	**47.84**	**300**		**P**	**19 31 49.1**	**0.0**
CHGR				IAmb	IAmb	19 31 50.1	
	comp=Z,9.7nm,0.6s						
CHGR	**Chuyangaron**	**47.84**	**300**	P	**P**	**19 31 49.1**	**0.0**
CHGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KBL	**Kabul**	**48.12**	**295**		**P**	**19 31 51.7**	**+0.3**
KBL	**Kabul**	**48.12**	**295**	P	**P**	**19 31 51.7**	**+0.3**
KBL				pmax	pmax		
	comp=Z,15nm,0.8s						
BVAR	**Borovoye Array**	**48.57**	**320**	P	**P**	**19 31 54.0**	**-0.3**
	comp=Z,4.1nm,0.5s,baz=102,slow=7.9,SNR=46						
BVAR				PcP	**PcP**	**19 33 18.0**	**0.0**
	comp=Z,3.5nm,0.6s,baz=99,slow=3.1,SNR=14						
	comp=Z,4.1nm,0.5s						
BORK	**Borovoye**	**48.62**	**320**		**P**	**19 31 54.1**	**-0.6**
BORK				IAmb	IAmb	19 31 56.2	
	comp=Z,5.0nm,0.6s						
BORK					**PcP**	**19 33 18.1**	**0.0**
BORK	**Borovoye**	**48.62**	**320**	*ce*P	**P**	**19 31 55.7**	**+1.0**
BORK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NRIK	**Noril'sk**	**49.12**	**344**	P	**P**	**19 31 57.5**	**-0.7**
	comp=Z,4.2nm,0.7s,baz=131,slow=7.3,SNR=7.9						
	comp=Z,4.2nm,0.7s						
NRIK	**Noril'sk**	**49.12**	**344**	IAmb	IAmb	19 31 58.0	
	comp=Z,5.3nm,0.7s						
AS31	**Alice Springs**	**49.52**	**168**	P	**P**	**19 32 02.9**	**+1.1**
ASAR	**Alice Springs**	**49.52**	**168**	P	**P**	**19 32 03.1**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=354,slow=13,SNR=26						
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	**49.52**	**168**	P	**P**	**19 32 02.9**	**+1.1**
AB31	**Akbulak array**	**54.62**	**314**		**P**	**19 32 38.8**	**-0.5**
AB31				IAmb	IAmb	19 32 40.4	
	comp=Z,8.2nm,0.8s						
AB31				PcP	**PcP**	**19 33 40.2**	**-0.5**
ABKAR	**Akbulak array**	**54.62**	**314**		**P**	**19 32 39.2**	**-0.1**
ABKAR				PcP	**PcP**	**19 33 39.6**	**-1.1**
SVE	**Sverdlovsk**	**54.79**	**323**	*e*P	**P**	**19 32 40.8**	**+0.4**
SVE				pmax	pmax		
	comp=Z,19nm,0.8s						
INKA	**Innaminka**	**55.05**	**162**	P	**P**	**19 32 42.5**	**0.0**
ARTI	**Arti**	**55.98**	**322**		**P**	**19 32 48.0**	**-1.0**
ARTI	**Arti**	**55.98**	**322**	*c* iP	**P**	**19 32 48.5**	**-0.4**
ARTI						19 33 44.2	
ARTI						19 34 51.7	
ARTI				S	**S**	**19 40 32.1**	**+5.5**
ARTI				SS	**SS**	**19 44 16.6**	**+2.4**
ARTI				pmax	pmax		
	comp=Z,15nm,0.7s						
UOSS	**Minazif**	**60.83**	**286**	P	**P**	**19 33 23.7**	**+0.6**
UOSS				IAmb	IAmb	19 33 36.5	
	comp=Z,4.8nm,0.9s						
KIRV	**Kirov**	**60.89**	**325**	*ce*P	**P**	**19 33 22.3**	**-0.6**
O15K	**Ungalikthiuk R**	**61.62**	**35**	P	**P**	**19 33 28.6**	**+0.8**
L16K	**Owhat River**	**61.72**	**32**	P	**P**	**19 33 28.9**	**+0.4**
L16K				IAmb	IAmb	19 34 08.6	
	comp=Z,9.4nm,1.3s						
J17K	**VABM Dome**	**61.89**	**30**	P	**P**	**19 33 29.1**	**-0.4**
J17K				IAmb	IAmb	19 34 12.3	
	comp=Z,16nm,1.4s						
M16K	**Timber Creek**	**61.99**	**33**	P	**P**	**19 33 30.1**	**-0.2**
K17K	**Iditarod**	**62.25**	**31**	P	**P**	**19 33 32.4**	**+0.3**
BELG	**Belogornoye**	**62.30**	**318**	*i* P	**P**	**19 33 30.8**	**-1.7**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
D19K	**Kuna River**	**62.32**	**24**	P	**P**	**19 33 34.0**	**+1.5**
D20K	**Etivluk River**	**62.88**	**24**	P	**P**	**19 33 36.1**	**0.0**
FUNA	**Funafuti**	**63.26**	**115**	P	**P**	**19 33 40.8**	**+1.4**
J19K	**Poorman**	**63.41**	**29**	P	**P**	**19 33 40.8**	**+1.1**
J19K				IAmb	IAmb	19 34 17.8	
	comp=Z,8.0nm,1.4s						
AKT	**Akhty**	**63.88**	**306**	*i* P	**P**	**19 33 43.6**	**+0.3**
AKT				pmax	pmax		
	comp=Z,46nm,0.6s						
O18K	**Koktuh Hills**	**63.92**	**34**	P	**P**	**19 33 45.1**	**+2.0**
H22K	**Ishtalitna Cre**	**65.05**	**27**	P	**P**	**19 33 51.6**	**+1.2**
H22K				IAmb	IAmb	19 33 52.9	
	comp=Z,3.6nm,0.8s						
KLMR	**Klimovskoe**	**65.70**	**328**	*e*P	**P**	**19 33 52.6**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,21nm,1.4s						
G24K	**Hadweenzic Riv**	**66.51**	**26**	P	**P**	**19 34 01.1**	**+1.4**
G24K				IAmb	IAmb	19 34 04.7	
	comp=Z,7.4nm,1.5s						
KBZ	**Khabaz**	**66.89**	**309**	P	**P**	**19 34 03.0**	**+0.5**
	comp=Z,9.0nm,0.9s,baz=115,slow=3.7,SNR=16						
	comp=Z,9.0nm,0.9s						
KBZ	**Khabaz**	**66.89**	**309**	*e*P	**P**	**19 34 03.3**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	**Kislovodsk**	**66.98**	**309**		**P**	**19 34 03.3**	**+0.1**
KIV	**Kislovodsk**	**66.98**	**309**	*e*P	**P**	**19 34 03.3**	**+0.1**
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
SHA1	**Shidzhatmaz**	**67.06**	**309**	*i* P	**P**	**19 34 03.3**	**-0.5**
ILAR	**Eielson Array**	**67.08**	**28**	P	**P**	**19 34 03.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=262,slow=4.6,SNR=10						
	comp=Z,0.4nm,0.6s						
ILAR	**Eielson Array**	**67.08**	**28**	*e*P	**P**	**19 34 03.3**	**0.0**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
OBN	**Obninsk**	**68.32**	**322**	⇑*e*P	**P**	**19 34 10.6**	**-0.6**
OBN						19 34 36.0	
OBN				*i* *SP	**sP**	**19 34 59.3**	**+1.6**
OBN				*e*		19 43 37.0	
OBN				SS	SS	19 47 22.0	-4.6
OBN				pmax	pmax		
	comp=Z,67nm,2.8s						
OBN				MLR	MLR		
	comp=Z,22nm,6.0s					

comp=Z,2.4nm,0.9s
NVAR Mina Array Bea 93.87 44 P P 19 36 27.5 0.0
comp=Z,0.3nm,0.3s,baz=289,slow=4.5,SNR=3.6
comp=Z,0.3nm,0.3s
PFO Pinyon Flats O 97.95 47 LR LR 20 14 20.4
comp=Z,73nm,21.2s,baz=201,slow=31

*NEIC **29** 19:23:58.0±1.7, 19°.41N±0°.05×67°.27W±0°.06, h10km±2km, ML2.1/12, Md3.0/7(RSPR), Error ellipse: s-maj=9.2km s-min=7.9km az=67.0*
*SDD **29** 19:24:02.8±1.7, 19°.29N×67°.31W, h22km±93km, MD3.1, ML2.2, MW3.0*
*RSPR **29** 19:24:03.4, 19°.36N×67°.41W, h29km±27km, MD3.0/7*
ISC 29 19:23:59.8±1.8, 19°.38N±0°.08×67°.25W±0°.05, h19km±3km, n29, σ0°.44/35, 6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.91**	**172**	*e*Pg		**Pg**	**19 24 17.5**	**-0.1**
AGPR				*e*Sg		**Sb**	**19 24 28.8**	**-0.1**
AGPR				IAML			19 24 33.5	
	comp=E,59nm,1.4s							
AGPR				IAML			19 24 43.1	
	comp=N,79nm,1.9s							
AGPR	**Aguadilla, PR**	**0.91**	**172**	‖ *e*P		**Pn**	**19 24 17.9**	**+0.2**
AGPR	**Aguadilla, PR**	**0.91**	**172**	*e*S		**Sb**	**19 24 28.8**	**-0.1**
IDE	**Isla Desecheo**	**1.01**	**192**			**Pg**	**19 24 19.4**	**0.0**
IDE						**Sb**	**19 24 31.4**	**-0.2**
IDE	**Isla Desecheo**	**1.01**	**192**	⇑ *i*P		**Pg**	**19 24 19.4**	**0.0**
IDE	**Isla Desecheo**	**1.01**	**192**	*e*S		**Sb**	**19 24 31.4**	**-0.2**
AOPR	**Arecibo Observ**	**1.13**	**155**	*e*Pg		**Pg**	**19 24 21.9**	**+0.1**
AOPR				*e*Sg		**Sg**	**19 24 36.8**	**+0.3**
AOPR				IAML			19 24 37.1	
	comp=N,58nm,0.1s							
AOPR				IAML			19 24 39.5	
	comp=E,76nm,0.4s							
AOPR	**Arecibo Observ**	**1.13**	**155**			**Pn**	**19 24 20.0**	**-0.7**
AOPR						**Sn**	**19 24 35.8**	**+0.2**
AOPR				IAML			19 24 48.0	
	comp=N,56nm,0.9s							
AOPR	**Arecibo Observ**	**1.13**	**155**	‖ *e*P		**Pg**	**19 24 21.6**	**-0.1**
AOPR	**Arecibo Observ**	**1.13**	**155**	*e*S		**Sg**	**19 24 36.9**	**+0.3**
LSP	**Las Mesas**	**1.20**	**172**			**Pg**	**19 24 23.4**	**+0.2**
LSP						**Sg**	**19 24 39.2**	**+0.2**
LSP	**Las Mesas**	**1.20**	**172**	‖ *e*P		**Pg**	**19 24 23.4**	**+0.2**
LSP	**Las Mesas**	**1.20**	**172**	*e*S		**Sg**	**19 24 39.2**	**+0.2**
ECPR	**Experimental S**	**1.35**	**141**	‖ *i*P		**Pg**	**19 24 25.7**	**-0.2**
ECPR	**Experimental S**	**1.35**	**141**	*e*S		**Sg**	**19 24 43.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.37**	**174**	*e*Pg		**Pn**	**19 24 24.1**	**+0.1**
CRPR				*e*Sg		**Sn**	**19 24 41.7**	**+0.1**
CRPR				IAML			19 24 43.4	
	comp=E,25nm,0.3s							
CRPR				IAML			19 24 54.4	
	comp=N,32nm,1.0s							
CRPR	**Cabo Rojo, PR**	**1.37**	**174**			**Pn**	**19 24 24.2**	**+0.2**
CRPR						**Sn**	**19 24 40.8**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.37**	**174**	IAML			19 24 48.7	
	comp=N,27nm,1.7s							
CRPR				IAML			19 25 01.1	
	comp=N,35nm,2.3s							
CRPR	**Cabo Rojo, PR**	**1.37**	**174**	‖ *e*P		**Pg**	**19 24 25.8**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.37**	**174**	*e*S		**Sn**	**19 24 41.6**	**0.0**
MLPR	**Magueyes Islan**	**1.41**	**172**	‖ *e*P		**Pb**	**19 24 25.3**	**-0.3**
MLPR	**Magueyes Islan**	**1.41**	**172**	*e*S		**Sn**	**19 24 41.7**	**-0.9**
OBIP	**Obispado Ponce**	**1.46**	**155**	Pn		**Pn**	**19 24 25.7**	**+0.4**
OBIP				IAML			19 24 44.9	
	comp=N,20nm,1.7s							
OBIP				IAML			19 24 45.6	
	comp=E,21nm,0.3s							
GCPR	**Guaynabo City**	**1.53**	**134**	Pn		**Pn**	**19 24 25.9**	**-0.4**
SJG	**San Juan**	**1.64**	**140**	Pn		**Pn**	**19 24 27.4**	**-0.2**
HUMP	**Col San Antoni**	**1.81**	**132**	Pn		**Pn**	**19 24 30.4**	**+0.4**
HUMP	**Col San Antoni**	**1.81**	**132**	IAML			19 25 00.5	
	comp=E,12nm,0.3s							
DR12	**Loma Pena Alta**	**2.10**	**254**	Pn		**Pn**	**19 24 32.8**	**-1.3**
HATOM	**Hato Mayor del**	**2.10**	**254**	*e*Pg		**Pb**	**19 24 38.1**	**+0.8**
HATOM				*e*Sg		**Sb**	**19 25 03.6**	**+0.7**
HATOM				IAML			19 25 11.5	
	comp=N,17nm,3.0s							

*NEIC **29** 19:38:08.6±2.1, 25°.05S±0°.1×179°.0W±0°.2, h397km±12km, mb4.3/13, Error ellipse: s-maj=25.0km s-min=18.1km az=88.0*
*IDC **29** 19:38:08.9±3.2, 25°.28S×178°.90W, h422km±35km, mb2.7/3, mbtmp4.0/5, Error ellipse: s-maj=57.9km s-min=26.9km az=179.0*
ISC 29 19:38:08.0±0.7, 25°.16S±0°.06×178°.94W±0°.10, h400km, n61, σ1°.74/74, mb4.0/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**4.18**	**168**	P		**Pn**	**19 39 22.8**	**+1.1**
	245nm,0.2s,baz=47,slow=4.8,SNR=7.1							
RAO				S		**S**	**19 40 17.1**	**-4.5**
	140nm,0.3s,baz=123,slow=23,SNR=2.1							
RAO	**Raoul Island**	**4.18**	**168**			**Pn**	**19 39 22.5**	**+0.8**
GLKZ	**Green Lake**	**4.18**	**168**	P		**Pn**	**19 39 22.9**	**+1.1**
GLKZ				S		**S**	**19 40 22.9**	**+1.2**
MSVF	**Nonsavu**	**7.90**	**339**			**P**	**19 40 01.9**	**-0.7**
NIUE	**Niue**	**10.32**	**56**			**P**	**19 40 29.2**	**0.0**
OUZ	**Omahuta**	**11.92**	**211**	P		**Pn**	**19 40 49.7**	**+1.5**
WCZ	**Waipu Caves**	**12.20**	**207**	P		**Pn**	**19 40 52.8**	**+1.4**
MXZ	**Matakaoa Point**	**12.58**	**190**			**P**	**19 40 53.3**	**-0.7**
PINNC	**Pines Island,**	**12.71**	**279**	P		**Pn**	**19 41 00.1**	**+2.6**
WMGZ	**Waiomatatini S**	**12.82**	**189**	P		**P**	**19 40 58.5**	**+1.9**
WMGZ				S		**S**	**19 43 15.1**	**-0.8**
HAZ	**Te Kaha**	**12.86**	**192**	P		**P**	**19 40 57.5**	**+0.4**
HAZ				S		**S**	**19 43 14.4**	**-2.4**
MKAZ	**Moumakai**	**12.93**	**202**	P		**P**	**19 40 59.9**	**+2.1**
RUGZ	**Raukumara Rang**	**13.09**	**192**	P		**P**	**19 40 60.0**	**+0.3**
RUGZ				S		**S**	**19 43 17.1**	**-4.5**
TWGZ	**Tauwhareparae**	**13.24**	**191**	P		**P**	**19 41 02.3**	**+1.1**
TWGZ				S		**S**	**19 43 22.8**	**-1.7**
TOZ	**Tahuroa Road**	**13.39**	**199**	P		**P**	**19 41 04.6**	**+1.8**
TOZ	**Tahuroa Road**	**13.39**	**199**	P		**P**	**19 41 05.0**	**+2.1**
MWZ	**Matawai**	**13.47**	**192**	P		**P**	**19 41 04.0**	**+0.2**
MWZ				S		**S**	**19 43 26.9**	**-2.2**
URZ	**Urewera**	**13.48**	**193**	P		**P**	**19 41 01.9**	**-1.9**
	10nm,0.3s,baz=90,slow=2.8,SNR=24							
URZ				S		**S**	**19 43 26.5**	**-2.7**
	16nm,0.7s,baz=239,slow=23,SNR=15							
URZ	**Urewera**	**13.48**	**193**	P		**P**	**19 41 02.9**	**-0.9**
URZ				S		**S**	**19 43 27.9**	**-1.3**
CNGZ	**Carnagh Statio**	**13.50**	**190**	P		**P**	**19 41 03.8**	**-0.3**
RAGZ	**Rawiri**	**13.65**	**192**	P		**P**	**19 41 05.8**	**0.0**
DZM	**Mont Dzumac**	**13.74**	**280**	P		**Pn**	**19 41 09.2**	**-0.4**
	13nm,1.1s,baz=126,slow=19,SNR=3.0							
RTZ	**Ruatahuna**	**13.85**	**193**	P		**P**	**19 41 07.9**	**-0.1**
MTHZ	**Maungataniwha**	**14.11**	**194**	P		**P**	**19 41 11.1**	**+0.4**
MTHZ				S		**S**	**19 43 40.3**	**-1.7**
MRHZ	**Matea Rd**	**14.19**	**195**	P		**P**	**19 41 12.0**	**+0.4**
HIZ	**Hauiti**	**14.31**	**200**	P		**P**	**19 41 14.5**	**+1.6**
HIZ	**Hauiti**	**14.31**	**200**	P		**P**	**19 41 15.1**	**+2.2**
BKZ	**Black Stump Fm**	**14.48**	**194**	P		**P**	**19 41 13.3**	**-1.6**
BKZ				S		**S**	**19 43 49.5**	**+0.1**
TMVZ	**Te Maari**	**14.63**	**197**	P		**P**	**19 41 16.6**	**+0.1**
ETVZ	**East Tongariro**	**14.65**	**197**	P		**P**	**19 41 15.5**	**-1.2**
OTVZ	**Oturere**	**14.68**	**197**	P		**P**	**19 41 15.6**	**-1.5**
SNVZ	**South Ngauruho**	**14.71**	**197**	P		**P**	**19 41 17.0**	**-0.4**
KWHZ	**Kaweka Forest**	**14.75**	**194**	P		**P**	**19 41 16.2**	**-1.5**
WNVZ	**Wahianoa**	**14.86**	**197**	P		**P**	**19 41 17.4**	**-1.6**
KAHZ	**Kahuranaki**	**15.01**	**193**	P		**P**	**19 41 20.0**	**-0.5**
KAHZ				S		**S**	**19 44 00.2**	**+0.3**
PXZ	**Pawanui**	**15.24**	**192**	P		**P**	**19 41 21.3**	**-1.6**
PXZ				S		**S**	**19 44 01.2**	**-3.1**
BFZ	**Birch Farm**	**15.99**	**193**	P		**P**	**19 41 30.3**	**-0.8**
BFZ	**Birch Farm**	**15.99**	**193**	P		**P**	**19 41 30.6**	**-0.5**
BFZ				S		**S**	**19 44 16.0**	**-3.1**
MRZ	**Mangatainoka R**	**16.12**	**195**	P		**P**	**19 41 30.9**	**-1.6**
OGWZ	**Otaki Gorge**	**16.37**	**196**	P		**P**	**19 41 32.9**	**-2.2**
OGWZ				S		**S**	**19 44 27.4**	**+1.0**
DUWZ	**D'Urville Isla**	**16.70**	**199**	P		**P**	**19 41 36.7**	**-2.0**
DUWZ				S		**S**	**19 44 37.1**	**+4.2**
QRZ	**Quartz Range**	**17.17**	**202**	P		**P**	**19 41 42.6**	**-0.9**
INZ	**Inchbonnie**	**19.22**	**202**	P		**P**	**19 42 03.5**	**-1.6**
INZ				IAmb		IAmb	19 42 10.0	
	comp=Z,25nm,1.3s							
FOZ	**Fox Glacier**	**20.51**	**204**	P		**P**	**19 42 15.3**	**-1.6**
CTAO	**Charters Tower**	**32.46**	**272**	P		**P**	**19 44 03.4**	**+0.1**
CTAO				IAmb		IAmb	19 44 13.4	
	comp=Z,10nm,1.5s							
STKA	**Stephens Creek**	**35.17**	**250**	P		**P**	**19 44 26.1**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=110,slow=12,SNR=4.6							
	comp=Z,1.1nm,0.5s							
STKA	**Stephens Creek**	**35.17**	**250**	IAmb		IAmb	19 45 00.6	
	comp=Z,45nm,1.5s							
BBOO	**Buckleboo**	**39.85**	**248**	P		**P**	**19 45 04.3**	**-0.7**
BBOO				IAmb		IAmb	19 45 42.2	
	comp=Z,27nm,1.4s							
ASAR	**Alice Springs**	**42.79**	**262**	P		**P**	**19 45 28.6**	**0.0**
	comp=Z,0.1nm,0.4s,baz=95,slow=7.0,SNR=6.2							
	comp=Z,0.1nm,0.4s							
WR8	**Warramunga Arr**	**43.14**	**267**	P		**P**	**19 45 30.0**	**-1.5**
WB0	**Warramunga Arr**	**43.29**	**267**	P		**P**	**19 45 30.9**	**-1.7**
WRA	**Warramunga Arr**	**43.29**	**267**	P		**P**	**19 45 30.6**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=101,slow=8.1,SNR=23							
	comp=Z,0.2nm,0.3s							
KNRA	**Kununurra**	**49.65**	**270**	P		**P**	**19 46 20.8**	**-0.6**
KNRA				IAmb		IAmb	19 46 27.2	
	comp=Z,25nm,1.5s							
FAKI	**Fak Fak**	**51.87**	**287**	P		**P**	**19 46 36.7**	**-1.1**
FAKI				IAmb		IAmb	19 46 56.9	
	comp=Z,31nm,1.1s							
TOLI2	**Tolitoli**	**63.83**	**285**	P		**P**	**19 47 59.2**	**-0.6**
TOLI2				IAmb		IAmb	19 48 34.6	
	comp=Z,3.3nm,0.8s							
QSPA	**South Pole Qui**	**64.93**	**180**	P		**P**	**19 48 10.4**	**+4.3**
NOA	**NORSAR Array B**	**143.47**	**352**	PKP		PKPab	19 56 52.0	-1.1
	comp=Z,0.3nm,0.6s,baz=21,slow=2.1,SNR=1.2							
HFS	**Hagfors**	**143.96**	**349**	PKP		PKPab	19 56 53.4	-1.4
AKASG	**Malin Array Be**	**146.55**	**327**	PKPbc		**PKPdf**	**19 57 01.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=39,slow=3.9,SNR=2.1							
MMAI	**Mount Meron Ar**	**149.09**	**293**	PKPbc		**PKPbc**	**19 57 10.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=98,slow=2.9,SNR=2.0							
BRTR	**Keskin Array B**	**149.10**	**306**	PKPbc		**PKPbc**	**19 57 08.5**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=2.3,slow=7.2,SNR=2.6							

*IDC **29** 19:52:43.7±5.5, 8°.48S×112°.47E, h112km±50km, mb3.6/13, mbtmp4.0/15, Error ellipse: s-maj=44.1km s-min=16.5km az=58.0*
*NEIC **29** 19:52:43.0±1.9, 8°.68S±0°.10×112°.40E±0°.02, h119km±7km, mb4.2/25, Error ellipse: s-maj=14.6km s-min=2.6km az=189.0*
*DJA **29** 19:52:44.2±0.4, 9°S±4°×11°2E±°, h89km±9km, M4.1/14, MLv4.1/14*
ISC 29 19:52:42.5±0.7, 8°.74S±0°.06×112°.39E±0°.04, h119km±6km, n70, σ1°.44/79, mb4.1/21, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GMJI	**Gumukmas**	**1.14**	**66**	P		**Pn**	**19 53 06.0**	**+0.1**
PCJI	**Pacitan**	**1.31**	**294**	P		**Pn**	**19 53 07.8**	**+0.1**
PCJI				S		**Sn**	**19 53 25.9**	**-1.0**
BLJI	**Banyuglugur**	**1.55**	**51**	P		**Pn**	**19 53 10.8**	**+0.4**
BLJI				S		**Sn**	**19 53 30.9**	**-0.8**
NGJI	**Ngawi**	**1.64**	**326**	P		**Pn**	**19 53 13.0**	**+1.5**
NGJI				S		**Sn**	**19 53 34.1**	**+0.4**
JAGI	**Jajag, Banyuwa**	**1.77**	**81**			**Pn**	**19 53 13.3**	**+0.3**
JAGI				Sn		**Sn**	**19 53 34.8**	**-1.5**
JAGI	**Jajag, Banyuwa**	**1.77**	**81**	P		**Pn**	**19 53 13.1**	**+0.1**
JAGI				S		**Sn**	**19 53 35.2**	**-1.1**
GRJI	**Gresik**	**1.81**	**3**	S		**Sn**	**19 53 36.7**	**-0.7**
TBJI	**Tambak Boyo**	**1.98**	**344**	P		**Pn**	**19 53 17.1**	**+1.4**
TBJI				S		**Sn**	**19 53 41.2**	**+0.1**
UGM	**Wanagama**	**2.02**	**294**			**Pn**	**19 53 16.8**	**+0.6**
UGM				Sn		**Sn**	**19 53 40.3**	**-1.6**
UGM	**Wanagama**	**2.02**	**294**	P		**Pn**	**19 53 16.8**	**+0.6**
UGM				S		**Sn**	**19 53 41.7**	**-0.2**
ABJI	**Asem Bagus**	**2.05**	**63**	P		**Pn**	**19 53 17.5**	**+0.9**
YOGI	**Yogyakarta**	**2.26**	**294**	P		**Pn**	**19 53 21.0**	**+1.7**
KMMI	**Kalianget**	**2.29**	**43**	P		**Pn**	**19 53 20.0**	**+0.4**
SMRI	**Semarang**	**2.56**	**311**	Pn		**Pn**	**19 53 21.5**	**-1.5**
SMRI				Sn		**Sn**	**19 53 48.6**	**-5.6**
SMRI	**Semarang**	**2.56**	**311**	P		**Pn**	**19 53 25.6**	**+2.6**
SMRI				S		**Sn**	**19 53 54.8**	**+0.7**
IGBI	**Denpasar**	**2.73**	**92**	P		**Pn**	**19 53 25.3**	**+0.1**
IGBI				S		**Sn**	**19 53 56.8**	**-1.3**
DNP	**Denpasar**	**2.79**	**89**	P		**Pn**	**19 53 27.6**	**+1.6**
KAPI	**Kappang**	**8.19**	**64**	P		**Pn**	**19 54 40.8**	**+2.1**
	9.3nm,0.3s,baz=188,slow=6.6,SNR=11							
MMRI	**Maumere**	**9.74**	**90**	Pn		**Pn**	**19 54 57.9**	**-1.6**
BATI	**Baumata**	**11.22**	**98**	P		**Pn**	**19 55 18.8**	**-0.7**
	7.7nm,0.2s,baz=151,slow=3.6,SNR=7.1							
BATI				S		Sn	19 57 04.4	-19
	8.9nm,0.4s,baz=130,slow=13,SNR=3.5							
SOEI	**Soe**	**11.77**	**96**			**Pn**	**19 55 24.3**	**-2.6**
GIRL	**Girilia**	**13.94**	**173**	Pn		**Pn**	**19 55 54.3**	**-0.6**
MBWA	**Marble Bar**	**14.24**	**151**	Pn		**Pn**	**19 55 57.6**	**-1.1**
PSA00	**Pilbara Seismi**	**14.64**	**151**	Pn		**Pn**	**19 56 03.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**15.89**	**127**	P		**P**	**19 56 21.7**	**+0.9**
	1.4nm,0.4s,baz=301,slow=6.1,SNR=12							
FITZ				S		Sn	19 59 03.0	-13
	2.7nm,0.3s,baz=187,slow=23,SNR=8.2							
FITZ	**Fitzroy Crossi**	**15.89**	**127**	P		**Pn**	**19 56 19.1**	**-0.4**
KNRA	**Kununurra**	**17.42**	**115**	P		**P**	**19 56 38.1**	**+0.4**
KNRA				IAmb		IAmb	19 56 52.3	
	comp=Z,37nm,1.5s							
MTN	**Manton Dam**	**18.86**	**104**	P		**P**	**19 56 54.0**	**+0.5**
MTN				IAmb		IAmb	19 57 00.0	
	comp=Z,8.7nm,0.8s							
WRA	**Warramunga Arr**	**23.97**	**120**	P		**P**	**19 57 48.6**	**+2.5**
	comp=Z,0.6nm,1.0s,baz=295,slow=11,SNR=5.5							
	comp=Z,0.6nm,1.0s							
WRA	**Warramunga Arr**	**23.97**	**120**	P		**P**	**19 57 46.3**	**+0.2**
WRAB	**Tennant Creek**	**23.98**	**120**	P		**P**	**19 57 46.2**	**0.0**
AS31	**Alice Springs**	**25.38**	**128**	P		**P**	**19 57 59.4**	**+0.4**
ASAR	**Alice Springs**	**25.38**	**128**	P		**P**	**19 58 01.8**	**+2.8**
	comp=Z,0.3nm,0.5s,baz=303,slow=8.6,SNR=7.3							
ASAR				pP		**pP**	**19 58 26.2**	**+2.2**
	comp=Z,1.0nm,0.6s,baz=302,slow=8.8,SNR=5.0							
	comp=Z,0.3nm,0.5s							
ASAR	**Alice Springs**	**25.38**	**128**	P		**P**	**19 57 59.8**	**+0.9**
FORT	**Forrest**	**26.36**	**148**	P		**P**	**19 58 07.9**	**+0.3**
FORT				IAmb		IAmb	19 58 39.7	
	comp=Z,15nm,1.2s							
CMAR	**Chiang Mai Arr**	**30.10**	**334**	P		**P**	**19 58 42.2**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=171,slow=7.9,SNR=8.4							
	comp=Z,0.8nm,0.8s							
STKA	**Stephens Creek**	**35.57**	**134**	P		**P**	**19 59 32.6**	**+4.1**
	comp=Z,1.6nm,0.7s,baz=315,slow=8.6,SNR=2.0							
	comp=Z,1.6nm,0.7s							
STKA	**Stephens Creek**	**35.57**	**134**	P		**P**	**19 59 28.8**	**+0.3**
ENH	**Enshi**	**38.88**	**356**	P		**P**	**19 59 56.4**	**-0.1**
H08S2	**Diego Garcia H**	**39.49**	**269**	T		T	20 41 33.5	
	baz=95,slow=74							
H08S3	**Diego Garcia H**	**39.50**	**269**	T		T	20 41 42.8	
	baz=95,slow=74							
H08S1	**Diego Garcia H**	**39.51**	**269**	T		T	20 41 34.8	
	baz=95							
SHL	**Shillong**	**39.51**	**330**	P		**P**	**20 00 02.0**	**+0.1**
TOO	**Toolangi**	**41.44**	**139**	P		**P**	**20 00 19.7**	**+2.1**
TOO				IAmb		IAmb	20 00 55.4	
	comp=Z,4.2nm,1.1s							
LSA	**Lhasa**	**43.34**	**333**	P		**P**	**20 00 33.6**	**+0.1**
LSA				IAmb		IAmb	20 00 36.1	
	comp=Z,3.8nm,0.6s							
EVN	**Everest**	**44.08**	**327**	P		**P**	**20 00 39.7**	**+0.1**
EVN				IAmb		IAmb	20 00 40.5	
	comp=Z,3.2nm,0.7s							
LZDM	**Lanzhou Array**	**45.20**	**350**	P		**P**	**20 00 49.5**	**+1.5**
	comp=Z,1.3nm,0.4s,baz=179,slow=11,SNR=1.5							
	comp=Z,1.3nm,0.4s							
KSRS	**Korea Array**	**48.20**	**17**	P		**P**	**20 01 12.2**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=196,slow=7.5,SNR=4.5							
	comp=Z,1.0nm,0.5s							
JGF	**Kuroka**	**50.00**	**27**	P		**P**	**20 01 22.7**	**-2.1**
MJAR	**Matsushiro Arr**	**51.16**	**27**	P		**P**	**20 01 32.6**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=191,slow=10,SNR=3.1							
	comp=Z,0.8nm,0.6s							
MJAR	**Matsushiro Arr**	**51.16**	**27**	P		**P**	**20 01 32.4**	**-1.1**
MJAR				IAmb		IAmb	20 01 34.5	
	comp=Z,4.7nm,1.3s							
SONM	**Songino Array**	**56.57**	**355**	P		**P**	**20 02 13.1**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=171,slow=11,SNR=7.2							
	comp=Z,1.0nm,0.5s							
HILR	**Hailar Array B**	**58.40**	**6**	P		**P**	**20 02 25.4**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=179,slow=13,SNR=3.1							
	comp=Z,1.6nm,0.5s							
TARA	**Tarawa**	**61.15**	**84**	P		**P**	**20 02 41.1**	**-3.8**
MK31	**Makanchi Array**	**61.45**	**337**	P		**P**	**20 02 45.8**	**-0.5**
MK31				IAmb		IAmb	20 02 46.9	
	comp=Z,1.7nm,0.7s							
MKAR	**Makanchi Array**	**61.45**	**337**	P		**P**	**20 02 46.5**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=151,slow=7.5,SNR=46							
	comp=Z,1.9nm,0.4s							
MKAR	**Makanchi Array**	**61.45**	**337**	P		**P**	**20 02 45.7**	**-0.6**
GAR	**Garm**	**61.50**	**324**	P		**P**	**20 02 45.8**	**-1.1**
ARSB	**Arslanbob**	**61.57**	**327**	P		**P**	**20 02 47.8**	**+0.3**
ARSB				IAmb		IAmb	20 02 48.9	
	comp=Z,2.7nm,0.9s							
KK31	**Karatay Array**	**64.13**	**327**	P		**P**	**20 03 02.9**	**-1.3**
KK31				IAmb		IAmb	20 03 42.0	
	comp=Z,4.1nm,1.4s							
KKAR	**Karatay Array**	**64.13**	**327**	P		**P**	**20 03 03.1**	**-1.0**
ZAA0	**Zalesovo Array**	**66.66**	**343**	P		**P**	**20 03 19.6**	**-0.5**
ZALV	**Zalesovo Beam**	**66.66**	**343**	P		**P**	**20 03 19.7**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=159,slow=5.6,SNR=11							
	comp=Z,1.2nm,0.4s							
ZALV	**Zalesovo Beam**	**66.66**	**343**	P		**P**	**20 03 19.6**	**-0.6**
AB31	**Akbulak array**	**73.69**	**327**	P		**P**	**20 04 03.6**	**+0.4**
AB31				IAmb		IAmb	20 04 04.3	
	comp=Z,5.4nm,1.1s							
ABKAR	**Akbulak array**	**73.69**	**327**	P		**P**	**20 04 03.3**	**+0.1**
TIXI	**Tiksi**	**80.96**	**5**	P		**P**	**20 04 42.8**	**-0.4**
	comp=Z,3.7nm,0.3s,baz=204,slow=2.2,SNR=13							
	comp=Z,3.7nm,0.3s							
TIXI	**Tiksi**	**80.96**	**5**	P		**P**	**20 04 43.1**	**-0.1**
TIXI				IAmb		IAmb	20 04 43.7	
	comp=Z,4.1nm,0.9s							
BRTR	**Keskin Array B**	**86.98**	**311**	P		**P**	**20 05 16.1**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=130,slow=6.9,SNR=4.9							
	comp=Z,1.1nm,0.8s							
BRTR	**Keskin Array B**	**86.98**	**311**	P		**P**	**20 05 15.2**	**+0.5**

*IDC **29** 19:57:48.4±3.5, 6°.81S×129°.71E, h145km±30km, mb3.6/6, mbtmp4.2/8, MS2.7/1, Error ellipse: s-maj=47.1km s-min=16.8km az=62.0*
*NEIC **29** 19:57:48.5±1.9, 6°.82S±0°.07×129°.60E±0°.07, h146km±7km, mb4.3/24, Error ellipse: s-maj=10.8km s-min=9.7km az=202.0*
*DJA **29** 19:57:49.5±0.5, 7°S±4°×13°0E±°, h159km±17km, M4.4/11, mB4.8/5, mb4.5/6, MLv4.5/11, Mw(mB)4.1/5*
ISC 29 19:57:48.4±0.4, 6°.96S±0°.04×129°.60E±0°.04, h150km, n77, σ1°82/82, mb4.0/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.96**	**121**			**Pn**	**19 58 24.1**	**+1.0**
SAUI				Sn		**Sn**	**19 58 49.1**	**-0.7**
SAUI	**Saumlaki**	**1.96**	**121**	P		**Pn**	**19 58 24.6**	**+1.5**
SAUI	**Saumlaki**	**1.96**	**121**	P		**Pn**	**19 58 24.1**	**+1.0**
BNDI	**Bandanaira**	**2.44**	**7**	P		**Pn**	**19 58 30.5**	**+1.6**
BNDI	**Bandanaira**	**2.44**	**7**	S		**Sn**	**19 59 01.7**	**+1.6**
BNDI	**Bandanaira**	**2.44**	**7**	P		**Pn**	**19 58 29.7**	**+0.8**
NLAI	**Namlea**	**4.46**	**326**	P		Pn	19 58 58.9	+4.1
FAKI	**Fak Fak**	**4.80**	**33**			**Pn**	**19 58 57.0**	**-2.4**
FAKI				Sn		**Sn**	**19 59 47.4**	**-7.2**
DRS	**Darwin Rock St**	**5.58**	**167**	P		**Pn**	**19 59 10.7**	**+1.1**
SOEI	**Soe**	**5.96**	**242**			**Pn**	**19 59 16.1**	**+1.3**
SOEI				Sn		**Sn**	**20 00 20.3**	**-2.0**
SOEI	**Soe**	**5.96**	**242**	P		**Pn**	**19 59 16.6**	**+1.8**
SOEI	**Soe**	**5.96**	**242**	P		**Pn**	**19 59 16.5**	**+1.8**
	0.9nm2μm87nm,0.6s				

ZALV	**Zalesovo Beam**	**71.38**	**334**	P		**P**	**20 08 51.6**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=124,slow=9.2,SNR=3.7							
	comp=Z,0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**71.38**	**334**	P		**P**	**20 08 51.2**	**-0.7**
KURBB	**Kurchatov Arra**	**72.27**	**329**	P		**P**	**20 08 56.8**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=136,slow=5.3,SNR=7.7							
	comp=Z,1.1nm,0.4s							
KURK	**Kurchatov**	**72.28**	**329**	P		**P**	**20 08 56.8**	**-0.6**
KURK	**Kurchatov**	**72.28**	**329**	IAmb		IAmb	20 08 59.5	
	comp=Z,3.0nm,1.1s							
VNDA	**Vanda**	**72.53**	**173**	P		P	20 08 53.6	-4.9
VNDA				IAmb		IAmb	20 09 28.0	
	comp=Z,5.2nm,1.4s							
AB31	**Akbulak array**	**82.24**	**322**	P		**P**	**20 09 51.1**	**-1.8**
ABKAR	**Akbulak array**	**82.24**	**322**	P		**P**	**20 09 51.4**	**-1.5**
QSPA	**South Pole Qui**	**83.01**	**180**	P		**P**	**20 10 00.4**	**+3.7**
	comp=Z,1.2nm,0.8s,baz=267,slow=2.0,SNR=7.4							
QSPA	**South Pole Qui**	**83.01**	**180**	P		**P**	**20 09 59.8**	**+3.0**
QSPA				IAmb		IAmb	20 10 40.6	
	comp=Z,4.3nm,1.4s							
Q19K	**Cape Douglas,**	**89.14**	**30**	P		**P**	**20 10 26.8**	**0.0**
ILAR	**Eielson Array**	**93.48**	**25**	P		**P**	**20 10 45.0**	**-1.7**
	comp=Z,0.2nm,0.7s,baz=248,slow=3.8,SNR=1.5							
	comp=Z,0.2nm,0.7s							
CPUP	**Villa Florida**	**146.23**	**169**	PKPbc		**PKPab**	**20 17 13.2**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=98,slow=2.6,SNR=3.0							
LPAZ	**La Paz**	**150.99**	**143**	PKPbc		**PKiKP**	**20 17 26.8**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=222,slow=9.9,SNR=5.9							

*AEIC **29** 20:08:24.9±1.1,53°.44N±0°.05×165°.20W±0°.06,h26km±7km, Error ellipse: s-maj=6.0km s-min=4.8km az=177.0*

NEIC 29 20:08:25.9±1.1,53°.44N±0°.05×165°.28W±0°.06,h35km±2km, ML3.4/14,ML3.1(AEIC),Error ellipse: s-maj=8.8km s-min=5.8km az=344.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.74**	**341**		Pn	20 08 39.2	-0.7
AKSA					Sn	20 08 49.5	-0.4
AHB	**Akutan Harbor**	**0.75**	**335**		Pn	20 08 39.7	-0.3
AHB					Sn	20 08 50.6	+0.5
AKUT	**Akutan**	**0.76**	**338**		Pn	20 08 39.7	-0.4
AKUT					Sn	20 08 50.5	+0.2
AKUT				IAML		20 08 50.7	
	comp=N,879nm,0.6s						
AKUT				IAML		20 08 50.8	
	comp=E,1μm,0.4s						
AKBBA	**Akutan Broad B**	**0.77**	**330**		Pn	20 08 39.8	-0.4
AKBBA					Sn	20 08 51.0	+0.5
ZRO	**Akutan Zero**	**0.78**	**328**		Pn	20 08 39.9	-0.4
ZRO					Sn	20 08 51.2	+0.4
AKMO	**Akutan Morgan**	**0.79**	**327**		Pn	20 08 40.1	-0.4
AKV	**Akutan Volcano**	**0.80**	**330**		Pn	20 08 40.4	-0.3
AKLV	**Akutan Long Va**	**0.83**	**332**		Pn	20 08 40.7	-0.4
AKLV					Sn	20 08 52.1	-0.1
UNV	**Unalaska Valle**	**0.83**	**300**		Pn	20 08 40.7	-0.5
UNV					Sn	20 08 52.1	-0.1
UNV				IAML		20 08 52.9	
	comp=N,2μm,0.4s						
AKRB	**Akutan Reef Bi**	**0.84**	**326**		Pn	20 08 40.8	-0.4
LVA	**Lava Point**	**0.85**	**329**		Pn	20 08 41.0	-0.4
LVA				Sn	Sn	20 08 52.0	-0.7
LVA				IAML		20 08 56.5	
	comp=N,2μm,0.7s						
LVA				IAML		20 08 58.3	
	comp=E,1μm,0.6s						
AKGG	**Akutan Green G**	**0.87**	**331**		Sn	20 08 53.5	+0.3
MNAT	**Makushin Natee**	**0.95**	**299**		Pn	20 08 42.7	0.0
MGOD	**Makushin Gods**	**1.01**	**291**		Pn	20 08 43.5	-0.1
MSW	**Makushin Switc**	**1.01**	**299**		Pn	20 08 43.6	0.0
MSW					Sn	20 08 57.6	+1.0
MAPS	**Pakushin South**	**1.06**	**291**		Pn	20 08 44.0	-0.2
WEBT	**Westdahl Beart**	**1.20**	**15**		Pn	20 08 45.8	-0.4
ISNN	**Isanotski Nort**	**1.66**	**32**		Pn	20 08 51.8	-0.7
FALS	**False Pass**	**1.80**	**37**		Pn	20 08 52.7	-1.7
FALS				Sn	Sn	20 09 14.2	-1.7
OKSP	**Okmok Steeple**	**1.81**	**265**		Pn	20 08 54.7	0.0
NIKH	**Nikolski High**	**2.20**	**259**	Pn	Pn	20 08 58.9	-1.0
NIKH				IAML		20 09 35.0	
	comp=N,224nm,0.8s						
NIKH				IAML		20 09 38.6	
	comp=E,188nm,0.8s						
DT1	**Dutton Round H**	**2.43**	**45**		Pn	20 09 03.3	+0.3
DOL	**Dolgoi Island**	**2.64**	**48**		Pn	20 09 05.8	-0.1
HAG	**Hague Volcano**	**2.73**	**45**		Pn	20 09 08.1	+0.9
S12K	**Black Hills**	**2.94**	**38**	Pn	Pn	20 09 10.8	+0.7
SDPT	**Sand Point**	**3.40**	**54**	Pn	Pn	20 09 16.3	-0.1
SDPT				IAML		20 10 20.2	
	comp=E,53nm,1.1s						
O14K	**Tigyukauivet M**	**6.24**	**19**	Pn	Pn	20 09 55.6	+0.2
O15K	**Ungalikthiuk R**	**6.50**	**26**	Pn	Pn	20 09 59.4	+0.4
N14K	**Kuskokwak Cree**	**6.80**	**15**	Pn	Pn	20 10 03.3	+0.4
M11K	**Mekoryuk**	**6.99**	**356**	Pn	Pn	20 10 05.8	+0.3
M13K	**Dall Lake**	**7.08**	**8**	Pn	Pn	20 10 07.6	+0.8
SII	**Sitkinak Islan**	**7.11**	**59**	Pn	Pn	20 10 07.9	+0.6
N15K	**Kwethluk River**	**7.32**	**21**	Pn	Pn	20 10 11.0	+0.8
O16K	**Kokwok River B**	**7.34**	**30**	Pn	Pn	20 10 11.6	+1.2
KIWB	**Kanaga Island**	**7.39**	**262**	Pn	Pn	20 10 11.8	+0.6

*IDC **29** 20:23:14.0±2.4,31°.98S×177°.84W,h0km,mb3.7/2, mbtmp3.7/3,ML2.7/1,MS3.8/1,Error ellipse: s-maj=64.6km s-min=35.9km az=122.0*

ISC 29 20:23:11.5±2.5,31.7S±0°.1×177.4W±0°.4,h26km,n7, σ3$47/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.48**	**350**	Pn	**Pn**	**20 23 49.4**	**-0.8**
	48nm,0.3s,baz=38,slow=21,SNR=1.8						
RAO				Sn	**Sn**	**20 24 17.6**	**-2.0**
	72nm,0.3s,baz=126,slow=21,SNR=2.5						
URZ	**Urewera**	**7.94**	**213**	Pn	**Pn**	**20 25 03.2**	**-2.0**
	0.1nm,0.3s,baz=90,slow=3.0,SNR=1.6						
URZ				Sn	**Sn**	**20 26 33.1**	**-1.0**
	2.1nm,0.3s,baz=90,slow=20,SNR=9.8						
	3.0nm,0.9s						
ASAR	**Alice Springs**	**43.56**	**268**	P	**P**	**20 31 16.9**	**+3.4**
	0.2nm,0.3s,baz=102,slow=7.4,SNR=4.5						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**44.66**	**273**	P	**P**	**20 31 25.8**	**+3.5**
	0.6nm,0.3s,baz=111,slow=8.1,SNR=21						
	0.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**52.87**	**271**	LR	LR	20 53 23.6	
	comp=Z,88nm,18.9s,baz=26,slow=34						
FINES	**FINESS Array B**	**146.53**	**340**	PKPbc	**PKiKP**	**20 42 56.0**	**+3.4**
	2.2nm,0.8s,baz=65,slow=4.7,SNR=6.9						
MMAI	**Mount Meron Ar**	**152.31**	**282**	PKPbc	**PKPab**	**20 43 11.5**	**-3.8**
	0.5nm,0.5s,baz=82,slow=3.2,SNR=4.2						

IDC 29 20:28:26.6±1.7,7°.67S×147°.31E,h0km,mb3.3/3, mbtmp3.4/4,ML3.2/1,Error ellipse: s-maj=53.9km s-min=14.7km az=94.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.73**	**185**	Pg	Pn	20 28 57.6	-0.3
	48nm,0.3s,baz=6.2,slow=11,SNR=150						
PMG				Lg	Lg	20 29 21.5	
	21nm,0.3s,baz=0.0,slow=20,SNR=6.3						
WRA	**Warramunga Arr**	**17.52**	**225**	P	Pn	20 32 31.7	-0.8
	0.1nm,0.3s,baz=46,slow=11,SNR=5.1						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**20.46**	**217**	P	P	20 33 05.9	-0.1
	0.7nm,0.6s,baz=48,slow=9.9,SNR=13						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**78.97**	**321**	P	P	20 40 33.1	+0.8
	0.2nm,0.6s,baz=96,slow=6.2,SNR=1.3						
	0.2nm,0.6s						
ILAR	**Eielson Array**	**86.89**	**23**	P	P	20 41 12.9	-0.1
	0.2nm,0.7s,baz=258,slow=5.6,SNR=2.1						
	0.2nm,0.7s						

*IDC **29** 20:28:48.3±0.8,33°.01N×111°.67E,h0km,mb3.8/10, mbtmp3.7/13,ML3.5/3,MS3.2/4,Error ellipse: s-maj=26.7km s-min=14.8km az=57.0*

ISC 29 20:28:50.0±0.8,33°.0N±0°.1×111°.76E±0°.10,h10km,n17, σ1$65/15,mb3.7/10,MS3.2/3,Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZDM	**Lanzhou Array**	**7.30**	**296**	Pn	**Pn**	**20 30 35.6**	**-1.4**
	baz=97,slow=12						
LZDM				Pg	**Pb**	**20 31 00.6**	**+3.6**
	baz=149,slow=17						
LZDM				Lg	Lg	20 32 36.4	
	baz=39,slow=29						
	1.2nm,0.3s						
KSRS	**Korea Array**	**13.95**	**67**	Pn	**P**	**20 32 17.1**	**+1.2**
	0.2nm,0.3s,baz=247,slow=12,SNR=4.3						
SONM	**Songino Array**	**15.40**	**346**	Pn	**Pn**	**20 32 26.8**	**-0.6**
	0.1nm,0.3s,baz=158,slow=14,SNR=5.8						
SONM				Lg	Lg	20 36 56.1	
	0.1nm,0.3s,baz=160,slow=28,SNR=6.4						
SONM				LR	LR	20 38 58.0	
	comp=Z,56nm,19.9s,baz=186,slow=40						
	0.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**18.47**	**222**	P	**Pn**	**20 33 04.1**	**-2.0**
	0.1nm,0.3s,baz=30,slow=9.9,SNR=14						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**26.32**	**310**	P	**P**	**20 34 26.1**	**+0.2**
	0.5nm,0.6s,baz=100,slow=12,SNR=5.2						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**28.39**	**326**	P	**P**	**20 34 43.9**	**-0.4**
	0.6nm,0.5s,baz=118,slow=9.7,SNR=3.1						
	0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**30.08**	**316**	P	**P**	**20 34 57.7**	**-1.6**
	0.2nm,0.5s,baz=115,slow=9.2,SNR=2.1						
	0.2nm,0.5s						
AAK	**Ala-Archa**	**30.78**	**299**	LR	LR	20 47 50.7	
	comp=Z,56nm,18.5s,baz=84,slow=37						
BVAR	**Borovoye Array**	**35.65**	**317**	P	**P**	**20 35 47.3**	**-0.7**
	0.4nm,0.5s,baz=104,slow=11,SNR=2.0						
	0.4nm,0.5s						
KAPI	**Kappang**	**38.52**	**167**	LR	LR	20 54 17.2	
	comp=Z,43nm,18.1s,baz=86,slow=40						
NRIK	**Noril'sk**	**38.89**	**347**	P	**P**	**20 36 15.3**	**+0.1**
	1.7nm,0.3s,baz=115,slow=2.4,SNR=3.7						
	1.7nm,0.3s						
TIXI	**Tiksi**	**39.82**	**8**	LR	LR	20 55 06.7	
	comp=Z,36nm,20.3s,baz=208,slow=40						
FITZ	**Fitzroy Crossi**	**52.47**	**163**	P	**P**	**20 38 03.6**	**+0.5**
	2.0nm,0.9s,baz=0.0,slow=10,SNR=1.9						
	2.0nm,0.9s						
WRA	**Warramunga Arr**	**56.86**	**154**	P	**P**	**20 38 37.2**	**+2.2**
	0.4nm,0.8s,baz=346,slow=7.7,SNR=1.7						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**60.14**	**157**	P	**P**	**20 38 57.5**	**-0.3**
	0.7nm,0.8s,baz=341,slow=7.3,SNR=4.9						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**65.27**	**28**	P	**P**	**20 39 30.7**	**-0.9**
	0.5nm,0.7s,baz=280,slow=5.5,SNR=8.3						
	0.5nm,0.7s						
HFS	**Hagfors**	**65.81**	**327**	P	**P**	**20 39 33.6**	**-1.5**
	4.6nm,1.0s,baz=162,slow=6.1,SNR=1.6						
	4.6nm,1.0s						

*IDC **29** 20:38:04.0±0.8,2°.76S×138°.35E,h0km,mb3.9/9, mbtmp3.9/13,ML3.5/3,MS3.2/8,Error ellipse: s-maj=23.0km s-min=13.9km az=97.0*

*DJA **29** 20:38:07.4±0.3,3°.5±.5°×13°.8E±°,h10km,M4.2/8,mb4.2/2, MLv4.1/8*

ISC 29 20:38:08.0±0.6,2°.74S±0°.06×138°.50E±0°.05,h32km,n27, σ2$41/26,mb3.8/9,MS3.2/6,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.77**	**16**	P	**Pn**	**20 38 19.2**	**-3.5**
GENI	**Genyem**	**1.67**	**85**	P	**Pb**	**20 38 38.0**	**-0.2**
JAY	**Jayapura**	**2.21**	**84**	Pn	**Pn**	**20 38 44.9**	**+2.3**
	5.1nm,0.3s,baz=220,slow=11,SNR=15						
JAY				Sn	**Sb**	**20 39 15.5**	**+1.0**
	4.4nm,0.3s,baz=325,slow=18,SNR=5.2						
JAY				LR	LR	20 39 31.9	
	comp=Z,164nm,19.0s,baz=198,slow=37						
	29nm,0.5s						
JAY	**Jayapura**	**2.21**	**84**	P	**Pn**	**20 38 44.9**	**+2.3**
SRPI	**Serui, Papua**	**2.42**	**291**	P	**Pn**	**20 38 44.2**	**-1.2**
SRPI				S	**Sn**	**20 39 13.3**	**-0.6**
BAKI	**Biak**	**2.84**	**303**	P	**Pn**	**20 38 52.6**	**+1.4**
KMPI	**Kaimana, Papua**	**4.88**	**259**	P	**Pn**	**20 39 21.0**	**+1.8**
FAKI	**Fak Fak**	**6.25**	**268**	P	**Pn**	**20 39 39.5**	**+1.4**
	0.2nm20nm,1.2s						
SWI	**Sorong**	**7.47**	**284**	P	**Pn**	**20 39 55.4**	**+0.5**
BATI	**Banamata**	**16.50**	**243**	Pn	**Pn**	**20 41 56.9**	**-0.4**
	5.6nm,0.4s,baz=133,slow=3.2,SNR=5.1						
WRA	**Warramunga Arr**	**17.57**	**193**	P	**Pn**	**20 42 11.1**	**+0.4**
	0.3nm,0.3s,baz=16,slow=12,SNR=12						
WRA				S	**Sn**	**20 45 20.4**	**-5.3**
	1.7nm,1.1s,baz=9.8,slow=25,SNR=4.0						
WRA				LR	LR	20 48 54.1	
	comp=Z,74nm,18.1s,baz=51,slow=37						
	1.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.80**	**219**	P	**P**	**20 42 35.9**	**-0.1**
	0.1nm,0.3s,baz=35,slow=11,SNR=1.3						
FITZ				S	**S**	**20 46 09.6**	**-7.8**
	4.6nm,0.8s,baz=53,slow=23,SNR=4.4						
	1.2nm,0.8s						
ASAR	**Alice Springs**	**21.27**	**192**	P	**P**	**20 42 52.6**	**+0.7**
	2.8nm,0.9s,baz=14,slow=9.5,SNR=18						
ASAR				S	**S**	**20 46 48.0**	**+1.2**
	0.4nm,0.7s,baz=16,slow=24,SNR=2.3						
	2.8nm,0.9s						
JHJ	**Hachijo jima 2**	**35.69**	**2**	LR	LR	20 56 13.0	
	comp=Z,48nm,21.4s,baz=68,slow=30						
NWAO	**Narrogin (SRO)**	**36.05**	**211**	LR	LR	21 00 28.8	
	comp=Z,73nm,18.2s,baz=206,slow=37						
ASAJ	**Asahikawa**	**46.79**	**4**	LR	LR	21 04 10.6	
	comp=Z,23nm,21.1s,baz=167,slow=34						
SONM	**Songino Array**	**57.66**	**335**	P	**P**	**20 47 55.7**	**+0.2**
	0.4nm,0.7s,baz=151,slow=3.3,SNR=2.6						
	0.4nm,0.7s						
PETK	**Petropavlovsk-**	**57.94**	**14**	LR	LR	21 09 27.0	
	comp=Z,16nm,21.3s,baz=98,slow=32						
MKAR	**Makanchi Array**	**69.68**	**322**	P	**P**	**20 49 15.4**	**+0.7**
	1.5nm,0.9s,baz=117,slow=8.0,SNR=7.2						
	1.5nm,0.9s						
ZALV	**Zalesovo Beam**	**71.86**	**330**	P	**P**	**20 49 27.0**	**-0.7**
	0.6nm,0.7s,baz=108,slow=9.3,SNR=2.2						
	0.6nm,0.7s						
KURBB	**Kurchatov Arra**	**73.63**	**325**	P	**P**	**20 49 40.1**	**+1.8**
	1.0nm,1.0s,baz=123,slow=4.8,SNR=4.9						
	1.0nm,1.0s						
BVAR	**Borovoye Array**	**79.22**	**325**	P	**P**	**20 50 10.5**	**+0.6**
	0.6nm,0.6s,baz=103,slow=3.1,SNR=4.0						
	0.6nm,0.6s						
NRIK	**Noril'sk**	**79.69**	**344**	P	**P**	**20 50 12.8**	**+0.7**
	1.4nm,0.4s,baz=124,slow=3.6,SNR=2.6						
	1.4nm,0.4s						
KDAK	**Kodiak Island**	**81.23**	**30**	LR	LR	21 23 45.5	
	comp=Z,34nm,19.8s,baz=222,slow=34						
ILAR	**Eielson Array**	**85.95**	**24**	P	**P**	**20 50 44.6**	**-0.2**
	0.4nm,0.8s,baz=284,slow=3.6,SNR=2.8						
	0.4nm,0.8s						
QSPA	**South Pole Qui**	**87.21**	**180**	P	**P**	**20 50 52.9**	**+1.8**
	1.7nm,1.1s,baz=0.0,slow=1.0,SNR=2.1						
	1.7nm,1.1s						
KVAR	**Kislovodsk Arr**	**96.07**	**314**	LR	LR	21 39 48.2	
	comp=Z,9.9nm,20.6s,baz=80,slow=39						

*HLW **29** 20:46:29.4,38°.38N×21°.22E,h10km±31km,Ml4.2*

*BEO **29** 20:46:32.9±2.3,38°.77N×22°.05E,h0km,ML3.9/15*

*MOS **29** 20:46:37.5±1.3,39°.05N×22°.08E,h89km,mb4.4/9,Error ellipse: s-maj=6.5km s-min=4.4km az=92.1*

*PDG **29** 20:46:37.9±0.9,39°.02N×22°.13E,h80km±23km,ML4.2/12, Error ellipse: s-maj=1.9km s-min=1.6km az=90.0*

*IDC **29** 20:46:37.9±1.1,38°.95N×22°.25E,h84km±11km,mb3.7/14, mbtmp4.1/24,MS2.8/4,Error ellipse: s-maj=13.3km s-min=9.1km az=56.0*

*NEIC **29** 20:46:38.9±1.6,39°.06N±0°.04×22°.25E±0°.07,h84km±6km, mb4.4/35,Error ellipse: s-maj=8.3km s-min=6.0km az=102.0*

*THE **29** 20:46:40.4,39°.1N±1°.0×22°.3E±0°.9,h80km±1km,M4.2/40, MLh4.2/40*

*ATH **29** 20:46:40.5,39°.05N×22°.32E,h77km,ML4.2/28,Manual Solution by F.Xalaris First location: 2019/11/29 20:47:35, This location: 2019/11/30 21:36:11 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*

*MED_RC **29** 20:46:40.0±0.8,39°.06N×22°.31E,h65km±12km,MW4.2/9, Moment Tensor Solution.Mantle waves: s9,c9; Duration: 1$0 Moment tensor: Scale 10$15Nm; Mrr0.36±.55; Mθθ0.44±.80; Mϕϕ-0.80±.36; Mrθ-0.24±.26; Mθϕ2.28±1.02; Mϕr0.66±.17; Best double couple: M0 2.45000×10$15 NP1:ϕ97.00000°,δ76.00000°,λ-4.00000°. NP2: ϕ188.00000°,δ86.00000°,λ-166.00000°. Principal axes: T 2.2100, Plg7.0000°, Azm322.0000°; N 0.4800, Plg76.0000°, Azm203.0000°; P -2.6900, Plg12.0000°, Azm53.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*GII **29** 20:46:45.1±0.0,37°.74N±0°.03×22°.207E±0°.009,h100km, confirmed*

*NAO **29** 20:46:47.2,40°.28N×21°.91E,h33km,MB3.4*

ISC 29 20:46:37.8±0.5,39°.01N±0°.03×22°.29E±0°.03,h86km±4km, n486,σ2$23/547,mb4.3/36,32C-23D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**0.04**	**67**	P	**Pn**	**20 46 51.6**	**+1.7**
AGG				S	**Sn**	**20 46 59.9**	**+0.9**
AGG	**Agios Georgios**	**0.04**	**67**	P	**Pn**	**20 46 51.6**	**+1.7**
AGG				S	**Sn**	**20 46 59.8**	**+0.9**
MAKR	**Makrakomi, Fth**	**0.12**	**273**	P	**Pn**	**20 46 52.2**	**+2.1**
MAKR				S	**Sn**	**20 47 01.3**	**+2.2**
MAKR	**Makrakomi, Fth**	**0.12**	**273**	P	**Pn**	**20 46 52.2**	**+2.1**
MAKR				S	**Sn**	**20 47 00.8**	**+1.7**
LAM2	**Lamia**	**0.15**	**132**	P	**Pn**	**20 46 52.0**	**+2.0**
LAM2				S	**Sn**	**20 47 00.4**	**+1.3**
SOFA	**Sofades**	**0.36**	**336**	P	**Pn**	**20 46 52.9**	**+1.8**
AXAR	**Agios Charalam**	**0.38**	**129**	P	**Pn**	**20 46 53.4**	**+2.2**
AXAR				S	**Sn**	**20 47 03.6**	**+2.5**
AXAR	**Agios Charalam**	**0.38**	**129**	P	**Pn**	**20 46 53.4**	**+2.2**
EVR	**Evrytania**	**0.38**	**256**	P	**Pn**	**20 46 53.6**	**+2.2**
EVR				S	**Sn**	**20 47 03.4**	**+2.0**
EVR	**Evrytania**	**0.38**	**256**	P	**Pn**	**20 46 53.5**	**+2.2**
EVR				S	**Sn**	**20 47 03.2**	**+1.9**
ANX	**Ano Chora**	**0.50**	**215**	P	**Pn**	**20 46 54.7**	**+2.4**
ANX				S	**Sn**	**20 47 05.4**	**+2.4**
ANX	**Ano Chora**	**0.50**	**215**	P	**Pn**	**20 46 54.5**	**+2.3**
ANX				S	**Sn**	**20 47 04.9**	**+2.0**
DLFA	**Delphi**	**0.55**	**163**	P	**Pn**	**20 46 54.4**	**+2.0**
DLFA				S	**Sn**	**20 47 05.5**	**+2.0**
THL	**Klokotos Trika**	**0.59**	**339**	P	**Pn**	**20 46 54.4**	**+1.5**
THL	**Klokotos Trika**	**0.59**	**339**	P	**Pn**	**20 46 54.3**	**+1.5**
THL				S	**Sn**	**20 47 05.0**	**+0.9**
AIDA	**Aidipsos**	**0.62**	**104**	P	**Pn**	**20 46 55.0**	**+1.9**
SERG	**Sergoula**	**0.62**	**197**	P	**Pn**	**20 46 55.7**	**+2.6**
SERG				S	**Sn**	**20 47 07.1**	**+2.5**
SERG	**Sergoula**	**0.62**	**197**	P	**Pn**	**20 46 55.7**	**+2.6**
SERG				S	**Sn**	**20 47 06.7**	**+2.1**
KALE	**Kalithea**	**0.63**	**191**	P	**Pn**	**20 46 55.7**	**+2.4**
KALE				S	**Sn**	**20 47 07.0**	**+2.2**
KALE	**Kalithea**	**0.63**	**191**	P	**Pn**	**20 46 55.7**	**+2.4**
KALE				S	**Sn**	**20 47 07.0**	**+2.2**
VOL2	**Volos**	**0.63**	**55**	P	**Pn**	**20 46 54.9**	**+1.7**
VOL2				S	**Sn**	**20 47 05.3**	**+0.6**
EFP	**Efpalio**	**0.65**	**207**	P	**Pn**	**20 46 56.1**	**+2.7**
EFP				S	**Sn**	**20 47 08.2**	**+3.2**
EFP	**Efpalio**	**0.65**	**207**	P	**Pn**	**20 46 56.1**	**+2.7**
EFP				S	**Sn**	**20 47 08.2**	**+3.2**
ATAL	**Atalanti**	**0.66**	**118**	P	**Pn**	**20 46 55.6**	**+2.1**
ATAL				S	**Sn**	**20 47 07.2**	**+2.0**
ATAL	**Atalanti**	**0.66**	**118**	P	**Pn**	**20 46 55.5**	**+2.1**
ATAL				S	**Sn**	**20 47 07.0**	**+1.9**
LKR	**Lokris**	**0.66**	**122**	P	**Pn**	**20 46 55.5**	**+2.0**
LKR				S	**Sn**	**20 47 07.2**	**+2.0**
GINA	**Giannouli**	**0.67**	**7**	P	**Pn**	**20 46 55.2**	**+1.7**
LRSO	**Larissa Observ**	**0.67**	**7**	P	**Pn**	**20 46 55.3**	**+1.7**
LRSO				S	**Sn**	**20 47 06.6**	**+1.2**
LRSO	**Larissa Observ**	**0.67**	**7**	P	**Pn**	**20 46 55.2**	**+1.7**
TRKA	**Trikala**	**0.68**	**324**	P	**Pn**	**20 46 55.9**	**+2.2**
PVO	**Paravola**	**0.71**	**237**	P	**Pn**	**20 46 56.8**	**+2.8**
PVO	**Paravola**	**0.71**	**237**	P	**Pn**	**20 46 56.8**	**+2.8**
PVO				S	**Sn**	**20 47 08.6**	**+2.6**
NEO	**Neokhori**	**0.79**	**67**	P	**Pn**	**20 46 56.6**	**+1.8**
NEO				S	**Sn**	**20 47 08.3**	**+0.7**
NEO	**Neokhori**	**0.79**	**67**	P	**Pn**	**20 46 56.4**	**+1.6**
NEO				S	**Sn**	**20 47 08.3**	**+0.7**
UPR	**University Cam**	**0.82**	**209**	P	**Pn**	**20 46 58.9**	**+3.7**
UPR				S	**Sn**	**20 47 13.7**	**+5.6**
AMPL	**Ampelaki**	**0.84**	**265**	P	**Pn**	**20 46 58.2**	**+2.8**
PATC	**Patra C**	**0.84**	**209**	P	**Pn**	**20 46 59.0**	**+3.6**
TETR	**Tetrakomo, Epi**	**0.85**	**294**	P	**Pn**	**20 46 58.2**	**+2.5**
TETR	**Tetrakomo, Epi**	**0.85**	**294**	P	**Pn**	**20 46 58.3**	**+2.7**
MSL1	**Messolongi**	**0.93**	**227**	P	**Pn**	**20 46 59.4**	**+3.1**
KLV	**Kalavryta, Ach**	**0.97**	**186**	P	**Pn**	**20 46 59.5**	**+2.6**
KLV	**Kalavryta, Ach**	**0.97**	**186**	P	**Pn**	**20 46 59.5**	**+2.6**
KLV				S	**Sn**	**20 47 13.8**	**+2.7**
KLV1	**Kalavrita**	**0.98**	**188**	P	**Pn**	**20 46 60.0**	**+2.9**
KLV1				S	**Sn**	**20 47 14.6**	**+3.1**
ART2	**Arta**	**1.01**	**278**	P	**Pn**	**20 46 60.0**	**+2.6**
ART2				S	**

IGT Igoumenitsa 1.60 290 P Pn 20 47 06.4 +1.7
NASA Naoussa 1.63 354 P Pn 20 47 07.4 +2.4
PLG Polygyros 1.63 33 P Pn 20 47 06.1 +1.1
VLY Voula,Athens 1.65 134 P Pn 20 47 08.1 +2.8
DMLN Damoulianata-K 1.68 243 P Pn 20 47 07.5 +1.9
NEST Nestorio 1.70 326 P Pn 20 47 08.3 +2.4
NEST Nestorio 1.70 326 P Pn 20 47 08.4 +2.4
THE Thessaloniki 1.71 18 P Pn 20 47 06.7 +0.8
THE Thessaloniki 1.71 18 P Pn 20 47 06.6 +0.7
HORT Hortiatis 1.71 21 P Pn 20 47 06.8 +0.8
LTHK Lithakia 1.73 222 P Pn 20 47 08.7 +2.5
SKY Skiros Island 1.77 93 P Pn 20 47 09.1 +2.3
LFKM Lefkimmi 1.78 285 P Pn 20 47 09.2 +2.2
ITM Ithomi 1.85 189 Pn 20 47 10.8 +3.0
ITM Sn Sn 20 47 32.2 +1.5
OUR Ouranopolis 1.86 44 P Pn 20 47 09.5 +1.5
GRG Griva 1.95 3 P Pn 20 47 10.7 +1.5
KARY Karystos 1.95 119 P Pn 20 47 11.8 +2.7
KBN Korca 1.98 325 P Pn 20 47 12.1 +2.4
KEK Kerkira 2.05 291 Pn 20 47 16.3 +5.8
KEK Sn Sn 20 47 35.6 +0.1
KNT Kendrikon 2.20 12 P Pn 20 47 14.4 +1.8
VAY Valandovo 2.32 5 *i* Pn Pn 20 47 15.9 +1.8
SRS Serrai 2.33 25 P Pn 20 47 15.7 +1.4
VLI Veliai 2.34 167 P Pn 20 47 16.6 +2.2
OHR Ohrid 2.39 332 *i* Pn Pn 20 47 17.5 +2.4
LIA Limnos Island 2.41 67 P Pn 20 47 17.1 +1.8
THAS Thassos island 2.46 49 P Pn 20 47 17.0 +1.1
KAVA Kavala 2.62 40 P Pn 20 47 19.3 +1.2
MMB Musomishta 2.77 23 P Pn 20 47 22.0 +1.9
SMTH Samothraki Isl 2.90 59 P Pn 20 47 23.0 +1.2
KKB Krupnik 2.90 13 P Pn 20 47 23.7 +1.8
CHOS Chios island 3.01 101 P Pn 20 47 26.5 +3.1
GADA Gvkgeada 3.03 66 P Pn 20 47 25.4 +1.9
PRK Paraskevi 3.11 84 P Pn 20 47 27.2 +2.6
APE Apeiranthos 3.21 126 P Pn 20 47 29.1 +2.9
APE Apeiranthos 3.21 126 *i* P Pn 20 47 29.0 +2.9
APE Apeiranthos 3.21 126 P Pn 20 47 28.3 +2.2
EZN Ezine 3.23 74 P Pn 20 47 28.8 +2.5
RZN Rozhen 3.27 34 P Pn 20 47 28.9 +1.8
RDO Rodhopi 3.29 48 P Pn 20 47 28.4 +1.4
RDO Rodhopi 3.29 48 Pn 20 47 28.1 +1.1
RDO Sn Sn 20 48 04.7 -0.3
CAVK Edirne/Enez-Ca 3.43 59 ⇓P Pn 20 47 31.6 +2.6
BOSS Bosilegrad 3.49 2 *e*Pn Pn 20 47 31.8 +2.0
KDZ Kurdzhali 3.51 41 P Pn 20 47 31.7 +1.6
PLD Plovdiv 3.65 30 *e*Pn Pn 20 47 33.7 +1.7
VTS Vitosha 3.68 11 P Pn 20 47 34.4 +1.9
VTS Vitosha 3.68 11 *e*Pn Pn 20 47 34.4 +1.9
ULC Ulcinj 3.75 323 ⇓*i*Pn Pn 20 47 33.5 +0.1
ULC *i* Sn Sn 20 48 15.1 -1.4
BARS Barje 3.82 355 *e*Pn Pn 20 47 36.0 +1.7
DRME Dracevica, Mon 3.96 324 *e*Pn Pn 20 47 36.8 +0.7
DRME Dracevica, Mon 3.96 324 ⇑*i*Pn Pn 20 47 36.5 +0.4
DRME *i* Sn Sn 20 48 20.3 -1.1
PVY Plav 4.00 335 *e*Pn Pn 20 47 38.4 +1.6
PVY Plav 4.00 335 ⇓*i*Pn Pn 20 47 37.9 +1.1
PVY *i* Sn Sn 20 48 21.1 -1.4
PDG Podgorica 4.12 327 Pn 20 47 38.9 +0.5
PDG Sn Sn 20 48 23.7 -1.7
PDG Podgorica 4.12 327 ⇑P Pn 20 47 39.1 +0.8
PDG Podgorica 4.12 327 *e*Pn Pn 20 47 39.0 +0.6
PDG Podgorica 4.12 327 ⇑*i*Pn Pn 20 47 39.0 +0.6
PDG *e*Sn Sn 20 48 23.2 -2.2
BUM Brajici-Budva 4.18 323 ⇓*i*Pn Pn 20 47 39.3 +0.1
BUM *i* Sn Sn 20 48 24.5 -2.4
IDI Anoyia 4.26 150 P Pn 20 47 40.7 +0.4
18nm,0.3s,baz=278,slow=10,SNR=35
IDI S Sn 20 48 28.6 -0.2
58nm,0.3s,baz=152,slow=7.3,SNR=14
IDI Anoyia 4.26 150 Pn 20 47 40.7 +0.4
IDI Sn Sn 20 48 26.2 -2.6
BEY Berane 4.26 336 *e*Pn Pn 20 47 41.9 +1.5
IVA Berane 4.26 336 ⇓*i*Pn Pn 20 47 41.3 +0.9
IVA *i* Sn Sn 20 48 27.4 -1.6
ZAPS Zavoj 4.27 3 *e*Pn Pn 20 47 43.2 +2.8
SELS Selova 4.30 349 *e*Pn Pn 20 47 41.9 +1.1
TIP Timpagrande 4.30 274 Pn 20 47 42.0 +1.1
TIP Timpagrande 4.30 274 ⇓P Pn 20 47 42.7 +1.7
CEME Cevo 4.36 325 ⇑*i*Pn Pn 20 47 41.7 0.0
CEME *i* Sn Sn 20 48 29.9 -2.7
KOME Kolasin 4.38 332 *e*Pn Pn 20 47 43.6 +1.7
KOME Kolasin 4.38 332 *e*Pn Pn 20 47 43.1 +1.2
KOME *i* Sn Sn 20 48 29.7 -2.0
BALB Balikesir 4.38 80 Pn 20 47 43.7 +1.8
HCY Herceg Novi 4.48 321 ⇓*i*Pn Pn 20 47 42.9 -0.4
HCY *i* Sn Sn 20 48 31.9 -2.3
NKME Niksic 4.53 327 ⇓*i*Pn Pn 20 47 44.0 +0.1
NKME *i* Sn Sn 20 48 32.8 -2.5
SJES Sjenica 4.59 338 *e*Pn Pn 20 47 46.1 +1.2
MATE Matera 4.60 293 ⇓P Pn 20 47 45.6 +0.8
BOVS Bovan 4.64 355 ⇑P Pn 20 47 46.9 +1.4
BOVS Bovan 4.64 355 *e*Pn Pn 20 47 46.7 +1.2
GOCS Kraljevo Serbi 4.67 347 *e*Pn Pn 20 47 46.8 +0.8
BAND Balkesir-Ban 4.68 71 ⇑P Pn 20 47 49.0 +3.0
PLVB Pleven 4.72 21 ⇓P Pn 20 47 49.0 +2.5
TREB Trebinje 4.76 322 *e*Pn Pn 20 47 46.2 -0.8
TREB Trebinje 4.76 322 *e*Pn Pn 20 47 46.3 -0.8
ZAGS Zajecar 4.80 360 *e*Pn Pn 20 47 50.2 +2.6
BRY Bratogost 4.81 325 ⇓*i*Pn Pn 20 47 47.7 -0.2
BRY *i* Sn Sn 20 48 39.7 -2.8
IVAS Ivanjica 4.84 341 *e*Pn Pn 20 47 47.9 -0.3
PLE Pljevlja 4.84 334 *e*Pn Pn 20 47 49.2 +1.0
PLE Pljevlja 4.84 334 ⇑*i*Pn Pn 20 47 49.1 +0.9
PLE *e*Sn Sn 20 48 41.0 -2.0
MANT Manisa 4.93 94 Pn 20 47 52.1 +2.5
KLINJ Klinje 5.01 327 *e*Pn Pn 20 47 51.1 +0.6
GRUS Gruza 5.02 347 *e*Pn Pn 20 47 51.2 +0.7
CEL Celeste 5.06 264 Pn 20 47 52.2 +1.0
BORS2 Bor- Borsko je 5.08 358 *e*Pn Pn 20 47 53.3 +1.8
CUC Castrocucco 5.10 283 Pn 20 47 53.5 +1.8
RUDO Rudo 5.10 335 *e*Pn Pn 20 47 51.1 -0.6
ACER Acerenza 5.19 292 Pn 20 47 53.6 +0.6
STON Ston 5.19 319 *e*Pn Pn 20 47 51.9 -1.0
KARP Karpathos 5.20 130 Pn 20 47 55.5 +2.4
BBS Lazi&#263i 5.32 337 *e*Pn Pn 20 47 54.6 +0.3
TRUS Trudelj 5.40 345 *e*Pn Pn 20 47 55.9 +0.2
ARG Arkhangelos 5.41 119 Pn 20 48 00.1 +4.2
ARG Arkhangelos 5.41 119 P Pn 20 48 00.1 +4.2
KUBS Kucevo 5.42 355 *e*Pn Pn 20 47 55.5 -0.5
LOZB Loznitsa 5.44 35 ⇑P Pn 20 47 58.2 +1.9
RAZG Razgrad 5.55 34 ⇓P Pn 20 48 00.5 +2.6
DJES Djerdap 5.66 2 ⇑P Pn 20 48 01.1 +1.8
SGRT San Giovanni R 5.70 301 Pn 20 47 58.9 -1.0
MDVR Moldovita 5.79 356 ⇓P Pn 20 48 02.2 +1.1
MDVR Moldovita 5.79 356 *e*Pn Pn 20 48 02.1 +1.1
HERR Herculane 5.87 1 ⇑P Pn 20 48 04.5 +2.3
HUMR Humele 5.87 19 ⇑P Pn 20 48 04.4 +2.2
TEKS Tekeris 5.91 340 *e*Pn Pn 20 48 02.1 -0.6
VRSS Vrsac 6.15 354 *e*Pn Pn 20 48 06.1 +0.1
PAOL Paolisi 6.26 291 Pn 20 48 08.1 +0.6
VAE Valguarnera 6.38 259 P Pn 20 48 10.3 +1.1
7.6nm,0.4s,baz=168,slow=9.8,SNR=8.9
VAE S Sn 20 49 18.0 -2.6
51nm,0.6s,baz=34,slow=8.0,SNR=7.6
BORA Eskisehir 6.38 80 Pn 20 48 11.6 +2.4
GZR Gura Zlata 6.39 3 ⇓P Pn 20 48 11.1 +1.7
GZR Gura Zlata 6.39 3 P Pn 20 48 11.0 +1.7
FRGS Fruska Gora 6.42 344 *e*Pn Pn 20 48 09.0 -0.6
AKAS Kas 6.44 113 Pn Pn 20 48 13.7 +3.6
ELL Elmali 6.44 108 Pn Pn 20 48 13.5 +3.4
ELL Elmali 6.44 108 P Pn 20 48 13.5 +3.4
RAFF Raffo Rosso 6.50 257 Pn 20 48 10.1 -0.6
LOT Lotru 6.53 9 ⇑P Pn 20 48 13.8 +2.6
ICOR Ion Corvin 6.57 37 ⇓P Pn 20 48 14.6 +3.0
ISP Isparta 6.58 98 *i* P Pn 20 48 16.2 +4.3
ARR Arges 6.59 15 ⇑P Pn 20 48 14.1 +2.1
BZS Buzias 6.62 356 ⇓P Pn 20 48 13.2 +0.8
BZS Buzias 6.62 356 P Pn 20 48 13.2 +0.8
SURR Surduc 6.74 359 ⇓P Pn 20 48 15.3 +1.3
VOIR 6.75 17 ⇑P Pn 20 48 15.7 +1.6
VOIR 6.75 17 P Pn 20 48 15.7 +1.6
MANR Mangalia 6.75 43 ⇓P Pn 20 48 16.4 +2.3
SAHE Sakarya_HENDEK 6.84 72 ⇑P Pn 20 48 18.7 +3.3
BLY Banja Luka 6.88 328 *e*Pn Pn 20 48 15.6 -0.4
BLY Banja Luka 6.88 328 ⇑P Pn 20 48 16.3 +0.3
BLY Banja Luka 6.88 328 *e*Pn Pn 20 48 15.7 -0.3
MFTR Murfatlar 6.92 40 ⇓P Pn 20 48 19.0 +2.6
WDD Wied Dalam 6.94 245 Pn 20 48 16.1 -0.6
TLBR Topalu 7.01 36 ⇓P Pn 20 48 20.3 +2.6

MLR Muntele Rosu 7.02 22 P Pn 20 48 20.8 +2.8
8.9nm,0.6s,baz=188,slow=7.4,SNR=12
MLR S Sn 20 49 37.5 +1.2
4.2nm,0.6s,baz=151,slow=14,SNR=1.1
MLR Muntele Rosu 7.02 22 Pn 20 48 19.7 +1.7
MLR Muntele Rosu 7.02 22 ⇑P Pn 20 48 20.4 +2.4
MLR Muntele Rosu 7.02 22 P Pn 20 48 19.7 +1.7
MLR 20 49 37.5
TIRR Tirgusor 7.12 38 Pn Pn 20 48 19.6 +0.5
TIRR Tirgusor 7.12 38 ⇑P Pn 20 48 22.3 +3.2
TIRR Tirgusor 7.12 38 P Pn 20 48 19.6 +0.5
SIRR Siria 7.27 357 ⇑P Pn 20 48 22.2 +1.0
DOPR Dopca 7.32 17 ⇓P Pn 20 48 25.2 +3.2
TPGR Topolog 7.42 36 ⇓P Pn 20 48 25.7 +2.4
COVR Voineasa-Covas 7.42 22 ⇑P Pn 20 48 25.1 +1.8
AQU L'Aquila 7.53 299 *e*Pn Pn 20 48 26.1 +1.2
CFR Carcaliu 7.54 33 ⇓P Pn 20 48 28.1 +3.1
CFR Carcaliu 7.54 33 P Pn 20 48 28.0 +3.1
PLOR Plostina 7.56 24 ⇑P Pn 20 48 28.4 +3.1
PLOR Plostina 7.56 24 P Pn 20 48 28.3 +3.1
VRI Vrincioaia 7.60 24 ⇑P Pn 20 48 28.7 +2.9
VRI Vrincioaia 7.60 24 P Pn 20 48 28.6 +2.9
CAMP Campotosto 7.60 300 Pn 20 48 25.4 -0.5
ODBI Odobesti 7.62 26 ⇑P Pn 20 48 29.3 +3.3
MORH Mrgy, Hungar 7.69 341 *e*Pn Pn 20 48 25.7 -1.2
MARR Marisel-Cluj 7.69 4 ⇑P Pn 20 48 27.9 +0.8
DRGR 7.79 2 ⇑P Pn 20 48 30.9 +2.6
DRGR 7.79 2 P Pn 20 48 30.9 +2.6
SLUM Salum 7.87 161 P Pn 20 48 20.7 -8.8
GUMA Gualdo di Mace 7.88 304 Pn 20 48 28.8 -0.9
NRCA Norcia 7.92 302 Pn 20 48 29.6 -0.7
FDMO Fiordimonte 8.03 303 Pn 20 48 30.8 -0.9
CESX Cesi 8.19 299 Pn 20 48 33.9 0.0
BOJS Bojanci 8.32 324 *e*Pn Pn 20 48 34.4 -1.2
BOJS Bojanci 8.32 324 *i* Pn Pn 20 48 34.1 -1.4
BEHE Becsehely 8.49 333 Pn 20 48 36.8 -1.1
BEHE Becsehely 8.49 333 *e*Pn Pn 20 48 36.6 -1.2
MURB Monte Urbino 8.50 303 Pn 20 48 37.1 -1.0
RIY Rijeka 8.56 320 *e*Pn Pn 20 48 37.7 -1.2
MATC Matruh 8.65 151 P Pn 20 48 33.8 -6.2
BR131 Keskin Array S 8.82 82 Pn 20 48 45.9 +3.3
BR131 Keskin Array S 8.82 82 P Pn 20 48 45.9 +3.3
BRTR Keskin Array B 8.82 82 P Pn 20 48 46.9 +4.2
4.1nm,0.5s,baz=260,slow=12,SNR=4.3
BRTR S Sn 20 50 20.2 -0.2
0.4nm,0.5s,baz=278,slow=24,SNR=1.7
BRTR Keskin Array B 8.82 82 Pn Pn 20 48 45.6 +3.0
BRTR Keskin Array B 8.82 82 *e*P Pn 20 48 47.5 +4.9
BRTR pmax pmax
comp=Z,4.0nm,0.5s
BURAR Bucovina Array 8.86 13 Pn Pn 20 48 41.5 -1.5
CEY Cerknica 8.89 322 *e*Pn Pn 20 48 42.0 -1.3
BUR08 Bucovina Ar. S 8.89 13 Pn 20 48 41.9 -1.6
SKDS Skadanscina 8.96 320 *e*Pn Pn 20 48 42.3 -1.9
KIRS Kirsehir-Merke 9.05 86 ⇑P Pn 20 48 49.9 +4.3
LJU Ljubljana 9.06 323 *e*Pn Pn 20 48 44.3 -1.4
PSZ Piszkesteto 9.07 350 Pn 20 48 44.8 -1.1
PSZ Piszkesteto 9.07 350 ⇑P Pn 20 48 46.9 +1.0
PSZ Piszkesteto 9.07 350 P Pn 20 48 44.8 -1.1
TRI Trieste 9.20 319 Pn Pn 20 48 46.0 -1.4
TRI Trieste 9.20 319 P Pn 20 48 46.0 -1.4
PERS Pernice 9.26 328 *i* Pn Pn 20 48 47.1 -1.3
SOKA Soboth 9.33 328 *i* Pn Pn 20 48 48.1 -1.2
comp=Z,5.8nm,0.4s,SNR=28
OBKA Obir 9.41 325 *i* Pn Pn 20 48 49.8 -0.6
comp=Z,3.5nm,0.2s,SNR=8.1
OBKA *e*Sn Sn 20 50 32.4 -2.0
comp=Z,2.9nm,0.3s
CASP Castiglione de 9.44 297 Pn Pn 20 48 51.8 +1.0
SABD M.te Sabotino 9.47 320 Pn 20 48 48.6 -2.6
KECS Kecovo 9.56 353 *e*P Pn 20 48 56.3 +3.9
KECS *e*S Sn 20 50 39.6 +1.6
KECS Kecovo 9.56 353 *e*P Pn 20 48 56.3 +3.9
KECS *e*S Sn 20 50 39.6 +1.6
ARSA Arzberg 9.60 331 Pn 20 48 51.9 -1.2
ARSA Arzberg 9.60 331 *i* Pn Pn 20 48 52.5 -0.6
comp=Z,12nm,0.5s,SNR=16
RONA Rosalia, Austr 9.72 335 *i* Pn Pn 20 48 54.1 -0.5
comp=Z,3.2nm,0.4s
MYKA Terra Mystica 9.91 323 *e*Pn Pn 20 48 56.0 -1.2
comp=Z,0.7nm,0.2s
MYKA *e*Sn Sn 20 50 43.0 -3.7
comp=Z,0.9nm,0.2s
MODS Modra-Piesok 10.04 340 *e*P Pn 20 48 59.8 +0.8
MODS *e*S Sn 20 50 46.9 -2.8
MODS Modra-Piesok 10.04 340 *e*P Pn 20 48 59.8 +0.8
MODS *e*S Sn 20 50 46.9 -2.8
CONA Conrad Observa 10.06 334 *i* Pn Pn 20 48 59.8 +0.5
comp=Z,2.6nm,0.3s,SNR=4.9
SWA2 10.09 164 S Sn 20 50 34.5 -16
STAL STALIGIAL 10.11 319 Pn 20 48 57.8 -2.1
TEOL Teolo 10.11 312 Pn Pn 20 48 57.5 -2.5
KBA Koelnbreinsper 10.38 324 *i* Pn Pn 20 49 03.4 -0.4
comp=Z,2.6nm,0.3s
CTI Castel Tesino 10.53 315 Pn 20 49 03.1 -2.7
CTI Castel Tesino 10.53 315 P Pn 20 49 03.1 -2.7
ABTA Abfaltersbach 10.54 320 *e*Pn Pn 20 49 04.7 -1.2
comp=Z,3.2nm,0.2s,SNR=16
ABTA *e*Sn Sn 20 50 53.6 -8.5
comp=Z,3.6nm,0.4s
MOA Molln 10.58 329 *i* Pn Pn 20 49 05.7 -0.7
comp=Z,14nm,0.7s,SNR=11
BIOA Bad Ischl, Aus 10.72 327 *i* Pn Pn 20 49 06.9 -1.3
comp=Z,6.3nm,0.4s,SNR=10
KEST Kesra 10.80 256 P Pn 20 49 09.9 +0.4
comp=Z,2.5nm,0.7s,baz=91,slow=7.3,SNR=5.3
KEST S Sn 20 51 04.6 -4.0
comp=Z,1.1nm,0.4s,baz=89,slow=20,SNR=1.4
KEST Kesra 10.80 256 Pn Pn 20 49 09.8 +0.3
MSSA Maissana 10.92 303 Pn Pn 20 49 10.1 -1.0
LESA Schwarzleotal 10.94 323 *i* Pn Pn 20 49 10.2 -1.1
comp=Z,1.3nm,0.2s,SNR=11
LESA *e*Sn Sn 20 51 07.4 -4.4
comp=Z,2.6nm,0.5s
VRAC Vranoy 11.08 340 P Pn 20 49 14.3 +1.2
comp=Z,0.5nm,0.4s,baz=163,slow=14,SNR=1.4
WTTA Wattenberg 11.33 320 *e*Pn Pn 20 49 16.1 -0.6
comp=Z,2.2nm,0.2s,SNR=14
WTTA *i* Sn Sn 20 51 17.7 -3.7
comp=Z,5.2nm,0.5s
CKRC Cesky Krumlov 11.36 332 *e*P Pn 20 49 16.1 -0.9
CKRC Cesky Krumlov 11.36 332 *e*P Pn 20 49 16.1 -0.9
WATA Walderalm 11.41 320 *e*Pn Pn 20 49 17.2 -0.5
comp=Z,2.4nm,0.3s,SNR=13
WATA *e*Sn Sn 20 51 22.4 -0.9
comp=Z,5.4nm,0.6s
SQTA Sankt Quirin 11.52 319 *i* Pn Pn 20 49 18.5 -0.7
comp=Z,1.6nm,0.2s,SNR=5.3
GEC2 GERESS Array S 11.61 331 Pn 20 49 18.0 -2.4
GERES GERESS Array B 11.61 331 P Pn 20 49 19.2 -1.1
comp=Z,1.6nm,0.3s,baz=154,slow=14,SNR=17
GERES S Sn 20 51 28.2 +0.1
comp=Z,0.6nm,0.5s,baz=149,slow=22,SNR=4.4
FETA Feichten 11.64 317 *e*Pn Pn 20 49 20.3 -0.6
comp=Z,2.2nm,0.4s,SNR=7.8
FETA *e*Sn Sn 20 51 25.9 -3.0
comp=Z,1.1nm,0.4s
MOTA Moosalm 11.65 319 *e*Pn Pn 20 49 20.4 -0.7
comp=Z,3.6nm,0.4s,SNR=9.3
MOTA *e*Sn Sn 20 51 28.1 -1.1
comp=Z,2.6nm,0.5s
KHC Kasperske Hory 11.89 331 Pn 20 49 22.2 -2.0
KHC Kasperske Hory 11.89 331 *ce*P Pn 20 49 22.0 -2.1
KHC pmax pmax
comp=Z,11nm,1.0s
KHC Kasperske Hory 11.89 331 *e*P Pn 20 49 22.7 -1.4
RYAN Fayoum 11.91 144 P Pn 20 49 21.1 -3.4
ZVC Zvikov 11.93 334 *e*P Pn 20 49 24.1 -0.5
DAVOX Davos/Dischmat 11.95 315 P Pn 20 49 24.8 -0.3
comp=Z,4.0nm,0.4s,baz=134,slow=12,SNR=14
DAVOX S Sn 20 51 30.3 -6.3
comp=Z,1.9nm,0.5s,baz=162,slow=20,SNR=1.7
HNTI Hanita 11.98 116 P Pn 20 49 26.9 +1.4
HNTI Hanita 11.98 116 S Sn 20 51 35.2 -2.0
TUE Stuetta 12.08 312 Pn 20 49 24.9 -1.9
MMA0B Mount Meron ar 12.18 115 P Pn 20 49 29.4 +1.1
MMAI Mount Meron Ar 12.18 115 P Pn 20 49 27.7 -0.6
comp=Z,1.7nm,0.3s,baz=296,slow=14,SNR=23
MMAI S Sn 20 51 40.4 -1.8
comp=Z,0.3nm,0.2s,baz=301,slow=28,SNR=1.9
DAVA Damuels 12.26 316 *i* Pn Pn 20 49 29.3 +0.1
comp=Z,1.2nm,0.3s
GEM Giv'at Ha'Em 12.26 114 P Pn 20 49 30.3 +1.1
NATI Neve Ativ 12.29 114 P Pn 20 49 31.3 +1.8

NATI Neve Ativ 12.29 114 S Sn 20 51 42.7 -1.8
KSHT Keshet 12.49 115 P Pn 20 49 34.0 +1.7
MMLI Mount Malkishu 12.52 118 P Pn 20 49 32.8 +0.1
SALP Salfit 12.58 119 P Pn 20 49 33.6 0.0
SALP Salfit 12.58 119 S Sn 20 51 47.5 -4.2
AKASG Malin Array Be 12.68 20 LR LR 20 54 34.2
comp=Z,28nm,19.1s,baz=144,slow=37
HMDT Nahal Hemdat 12.70 118 P Pn 20 49 35.7 +0.6
HMDT Nahal Hemdat 12.70 118 S Sn 20 51 50.7 -3.8
AMAZ Amatzia 12.72 122 P Pn 20 49 34.9 -0.6
AMAZ Amatzia 12.72 122 S Sn 20 51 48.7 -6.5
NBNS Bani Suef 12.77 141 P Pn 20 49 33.8 -2.3
KZIT Kziot 12.80 125 P Pn 20 49 34.6 -1.8
KZIT Kziot 12.80 125 S Sn 20 51 48.7 -8.3
HFRF Wahat Farafira 12.86 155 P Pn 20 49 31.0 -6.2
YTIR Yattir 12.96 122 P Pn 20 49 38.3 -0.4
YTIR Yattir 12.96 122 S Sn 20 51 54.7 -6.4
DSI Dead Sea 13.01 121 P Pn 20 49 39.4 +0.1
DSI Dead Sea 13.01 121 S Sn 20 51 57.0 -5.1
SENIN Lac Senin/Sane 13.24 309 Pn 20 49 40.8 -1.6
GHAJ Ghor Haditha 13.30 121 Pn Pn 20 49 41.9 -1.1
GHAJ Ghor Haditha 13.30 121 P Pn 20 49 43.2 +0.2
GHAJ Ghor Haditha 13.30 121 S Sn 20 52 03.3 -5.9
TAMRE El Minia 13.39 145 P Pn 20 49 41.7 -2.6
IDAN Idan 13.41 124 P Pn 20 49 43.6 -0.9
IDAN Idan 13.41 124 S Sn 20 52 04.5 -7.3
ZFRI Zfri 13.53 125 P Pn 20 49 44.7 -1.3
ZFRI Zfri 13.53 125 S Sn 20 52 06.8 -8.0
KRMI Paran Flat 13.54 127 P Pn 20 49 44.1 -2.1
KRMI Paran Flat 13.54 127 S Sn 20 52 06.0 -9.1
PRNI Paran 13.56 126 P Pn 20 49 44.9 -1.6
PRNI Paran 13.56 126 S Sn 20 52 07.3 -8.2
ASF Jabal al Asfar 13.70 115 S Sn 20 52 18.0 -1.0
comp=Z,1.3nm,0.9s,baz=104,slow=17,SNR=1.5
BFO Black Forest 13.72 317 Pn Pn 20 49 44.7 -3.8
BFO Black Forest 13.72 317 P Pn 20 49 44.7 -3.8
HRFI Mount Harif 13.79 127 P Pn 20 49 47.9 -1.7
HRFI Mount Harif 13.79 127 S Sn 20 52 11.8 -9.5
MBRI Mt Berech 13.89 128 P Pn 20 49 49.1 -1.7
MBRI Mt Berech 13.89 128 S Sn 20 52 14.5 -9.0
CLL Collm 13.92 335 *e*P Pn 20 49 48.0 -3.0
CLL Collm 13.92 335 *e*P Pn 20 49 48.0 -3.0
EIL Elat 14.00 128 P Pn 20 49 51.9 -0.3
comp=Z,4.1nm,0.6s,baz=285,slow=3.0,SNR=9.7
EIL S Sn 20 52 18.1 -8.0
comp=Z,3.7nm,0.4s,baz=15,slow=24,SNR=5.9
EIL LR LR 20 57 06.3
comp=Z,21nm,18.2s,baz=344,slow=45
EIL Elat 14.00 128 P Pn 20 49 50.3 -1.9
EIL Elat 14.00 128 S Sn 20 52 17.3 -8.8
HDK1 Dakhla 14.70 154 P Pn 20 49 57.5 -3.9
CORI Orista 15.68 287 Pn Pn 20 50 12.6 -1.0
CORI IAmb IAmb 20 50 23.9
comp=Z,33nm,1.3s
KIV Kislovodsk 16.06 66 *e*P P 20 50 19.9 -0.3
KIV pmax pmax
comp=Z,7.0nm,1.1s
KBZ Khabaz 16.17 66 P P 20 50 22.6 +1.2
comp=Z,5.2nm,0.9s,baz=260,slow=14,SNR=11
KBZ Khabaz 16.17 66 *i* P P 20 50 24.5 +3.2
KBZ pmax pmax
comp=Z,4.0nm,0.7s
PABE Paberze 16.55 3 Pn 20 50 22.9 -1.3
PABE IAmb IAmb 20 50 26.0
comp=Z,34nm,0.7s
AKT Akhty 19.56 75 *e*P Pn 20 51 01.7 +0.8
AKT *e*S S 20 54 37.5 +2.4
AKT pmax pmax
comp=Z,6.0nm,0.7s
AKT MLR MLR
comp=Z,41nm,6.0s
VSU Vasula 19.68 7 *ce*P P 20 50 58.8 -0.9
VSU pmax pmax
comp=Z,64nm,2.5s
ESBB Sonseca Array 20.29 280 P P 20 51 06.7 +0.1
ESDC Sonseca Array 20.29 280 P P 20 51 07.4 +0.7
comp=Z,2.8nm,0.7s,baz=76,slow=11,SNR=30
comp=Z,2.8nm,0.7s
ESDC Sonseca Array 20.29 280 P P 20 51 06.6 0.0
PAB San Pablo 20.60 280 P P 20 51 10.2 +0.2
PAB San Pablo 20.60 280 P P 20 51 10.2 +0.2
PAB pmax pmax
comp=Z,4.0nm,0.8s
HFS Hagfors 21.83 348 P P 20 51 22.4 -0.5
comp=Z,3.1nm,0.5s,baz=170,slow=12,SNR=21
comp=Z,3.1nm,0.5s
BELG Belogornoye 22.05 44 *i* P P 20 51 27.6 +2.4
KONO Kongsberg 22.18 343 P P 20 51 26.7 +0.2
KONO IAmb IAmb 20 52 01.1
comp=Z,25nm,1.2s
KONO Kongsberg 22.18 343 P P 20 51 26.7 +0.2
KONO pmax pmax
comp=Z,25nm,1.3s
FINES FINESS Array B 22.59 5 P P 20 51 30.2 -0.6
comp=Z,3.4nm,0.9s,baz=187,slow=9.9,SNR=7.0
FINES ScP ScP 20 58 50.8 +0.2
comp=Z,2.9nm,0.9s,baz=194,slow=10.0,SNR=1.4
comp=Z,3.4nm,0.9s
FINES FINESS Array B 22.59 5 *e*P P 20 51 33.5 +2.7
FINES pmax pmax
comp=Z,2.0nm,0.6s
FIA1 FINESS Array S 22.59 5 P P 20 51 30.6 -0.2
MD01 Midelt array s 22.69 263 P P 20 51 34.1 +1.6
MD31 MD31 22.69 263 P P 20 51 34.0 +1.7
NC602 NORSAR Array S 22.77 346 P P 20 51 32.1 -0.7
NC602 IAmb IAmb 20 51 45.4
comp=Z,26nm,1.4s
NC602 NORSAR Array S 22.77 346 *e*P P 20 51 32.7 -0.1
NAO01 NORSAR Array S 22.99 346 P P 20 51 33.8 -1.1
NAO01 NORSAR Array S 22.99 346 *e*P P 20 51 35.4 -0.4
NC405 NORSAR Array S 23.09 347 P P 20 51 34.8 -1.2
NC405 IAmb IAmb 20 52 17.7
comp=Z,21nm,1.1s
NB201 NORSAR Array S 23.10 346 P P 20 51 35.8 -0.3
NB201 IAmb IAmb 20 52 15.9
comp=Z,47nm,1.5s
NB2 NORSAR Subarra 23.11 346 P P 20 51 36.1 -0.1
comp=Z,1.1nm,0.5s,baz=158,slow=11
NOA NORSAR Array B 23.11 346 P P 20 51 36.0 -0.2
comp=Z,0.7nm,0.6s,baz=184,slow=18,SNR=8.8
comp=Z,0.7nm,0.6s
NOA NORSAR Array B 23.11 346 P P 20 51 36.0 -0.2
NBO00 NORSAR Array S 23.18 346 P P 20 51 36.8 0.0
NC204 NORSAR Array S 23.41 346 P P 20 51 38.9 -0.1
NC204 IAmb IAmb 20 52 02.1
comp=Z,25nm,1.2s
PVAQ Vaqueiros 23.58 276 P P 20 51 40.8 0.0
PVAQ IAmb IAmb 20 52 04.3
comp=Z,27nm,1.4s
EKA Eskdalemuir Ar 23.59 322 P P 20 51 41.5 +1.0
comp=Z,2.5nm,0.3s,baz=123,slow=9.3,SNR=45
comp=Z,2.5nm,0.3s
ESK Eskdalemuir 23.60 322 P P 20 51 41.6 +0.9
ESK IAmb IAmb 20 51 48.8
comp=Z,12nm,0.8s
ESK Eskdalemuir 23.60 322 P P 20 51 41.6 +0.9
ESK pmax pmax
comp=Z,12nm,0.9s
EKB Eskdalemuir 23.60 322 P P 20 51 40.9 +0.2
EKB IAmb IAmb 20 51 49.7
comp=Z,37nm,1.4s
MESJ Messejana 23.88 277 P P 20 51 42.8 -0.5
MESJ Messejana 23.88 277 P P 20 51 42.8 -0.5
MESJ pmax pmax
comp=Z,12nm,1.4s
DSB Dublin 24.23 315 P P 20 51 46.6 +0.3
AB31 Akbulak array 28.63 57 P P 20 52 26.7 +0.7
ABKAR Akbulak array 28.63 57 P P 20 52 26.5 +0.5
ARTI Arti 29.41 42 LR LR 21 03 45.7
comp=Z,27nm,18.9s,baz=212,slow=35
ARTI Arti 29.41 42 P P 20 52 33.6 +0.7
ARTI Arti 29.41 42 *i* P P 20 52 33.2 +0.4
ARTI pmax pmax
comp=Z,5.0nm,0.4s
ARCES ARCESS Array B 30.64 2 P P 20 52 43.8 +0.3
comp=Z,2.9nm,0.9s,baz=339,slow=5.3,SNR=1.8
comp=Z,2.9nm,0.9s
SVE Sverdlovsk 30.73 42 *e*P P 20 52 46.4 +1.9
BORK Borovoye 35.48 51 *ce*P P 20 53 27.4 +1.6
BORK pmax pmax
comp=Z,4.0nm,1.7s
BVAR Borovoye Array 35.52 51 P P 20 53 28.2 +2.0
comp=Z,1.0nm,0.5s,baz=274,slow=5.8,SNR=6.9
comp=Z,1.0nm,0.5s

BORG	**Borgarnes**	**36.08**	**330**	*i* P		P		20 53 24.3	-6.4
CHGR	**Chuyangaron**	**36.20**	**75**	P		**P**		**20 53 32.1**	**-0.1**
CHGR				IAmb		IAmb		20 53 35.6	
	comp=Z,7.8nm,1.1s								
CHGR	**Chuyangaron**	**36.20**	**75**	P		**P**		**20 53 32.1**	**-0.1**
CHGR				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KK31	**Karatay Array**	**36.20**	**68**			**P**		**20 53 32.9**	**+0.8**
KK31				IAmb		IAmb		20 53 35.4	
	comp=Z,4.1nm,1.0s								
KK31	**Karatay Array**	**36.20**	**68**	P		**P**		**20 53 32.9**	**+0.8**
KK31				pmax		pmax			
	comp=Z,4.0nm,1.0s								
KKAR	**Karatay Array**	**36.20**	**68**	P		**P**		**20 53 33.4**	**+1.3**
KKAR	**Karatay Array**	**36.20**	**68**	P		**P**		**20 53 33.4**	**+1.3**
ARSB	**Arslanbob**	**38.37**	**70**	P		**P**		**20 53 51.6**	**+1.0**
ARSB				IAmb		IAmb		20 53 58.9	
	comp=Z,3.8nm,1.0s								
ARSB	**Arslanbob**	**38.37**	**70**	P		**P**		**20 53 51.6**	**+1.0**
ARSB				pmax		pmax			
	comp=Z,4.0nm,1.0s								
BOOM	**Boomskoye usch**	**40.23**	**67**	P		**P**		**20 54 08.1**	**+1.9**
BOOM	**Boomskoye usch**	**40.23**	**67**	P		**P**		**20 54 08.1**	**+1.9**
BOOM				pmax		pmax			
	comp=Z,23nm,1.2s								
KURBB	**Kurchatov Arra**	**40.62**	**54**	P		**P**		**20 54 09.7**	**+0.6**
	comp=Z,1.4nm,0.2s,baz=33,slow=26,SNR=4.5								
	comp=Z,1.4nm,0.2s								
KURK	**Kurchatov**	**40.67**	**54**	P		**P**		**20 54 09.7**	**+0.3**
KURK	**Kurchatov**	**40.67**	**54**	IAmb		IAmb		20 54 12.0	
	comp=Z,2.2nm,0.7s								
KURK	**Kurchatov**	**40.67**	**54**	*ce*P		**P**		**20 54 11.3**	**+1.9**
KURK				pmax		pmax			
	comp=Z,5.0nm,1.7s								
KMBO	**Kilima Mbogo**	**42.24**	**157**	P		**P**		**20 54 21.0**	**-1.9**
	comp=Z,87nm,0.5s,baz=210,slow=16,SNR=5.4								
KMBO	**Kilima Mbogo**	**42.24**	**157**	*i* P		**P**		**20 54 20.6**	**-2.3**
KMBO				pmax		pmax			
	comp=Z,87nm,0.5s								
MK31	**Makanchi Array**	**43.69**	**59**	P		**P**		**20 54 35.2**	**+1.1**
MK31				IAmb		IAmb		20 54 37.4	
	comp=Z,2.7nm,0.8s								
MK31	**Makanchi Array**	**43.69**	**59**	*ce*P		**P**		**20 54 35.2**	**+1.1**
MKAR	**Makanchi Array**	**43.69**	**59**	P		**P**		**20 54 35.3**	**+1.2**
	comp=Z,3.0nm,0.4s,baz=279,slow=7.6,SNR=74								
MKAR				ScP		**ScP**		**21 00 03.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=270,slow=3.6,SNR=4.7								
	comp=Z,3.0nm,0.4s								
MKAR	**Makanchi Array**	**43.69**	**59**	P		**P**		**20 54 35.0**	**+1.0**
ZAA0	**Zalesovo Array**	**44.11**	**49**	P		**P**		**20 54 37.8**	**+0.5**
ZAA0				IAmb		IAmb		20 54 40.7	
	comp=Z,6.2nm,0.6s								
ZALV	**Zalesovo Beam**	**44.11**	**49**	P		**P**		**20 54 38.3**	**+1.1**
	comp=Z,7.7nm,0.5s,baz=274,slow=8.4,SNR=42								
	comp=Z,7.7nm,0.5s								
ZALV	**Zalesovo Beam**	**44.11**	**49**	P		**P**		**20 54 37.6**	**+0.4**
DGZ	**Jazzator, Alta**	**46.42**	**54**	*i* P		**P**		**20 54 56.5**	**+0.7**
DGZ				pmax		pmax			
	comp=Z,1.0nm,0.4s								
SCHQ	**Schefferville**	**58.79**	**317**	P		**P**		**20 56 27.9**	**+1.1**
	comp=Z,5.4nm,0.4s,baz=64,slow=6.1,SNR=14								
	comp=Z,5.4nm,0.4s								
SONM	**Songino Array**	**58.86**	**52**	P		**P**		**20 56 27.8**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=270,slow=7.4,SNR=4.0								
	comp=Z,0.8nm,0.9s								
SONM	**Songino Array**	**58.86**	**52**	*e*P		**P**		**20 56 31.6**	**+4.0**
PALK	**Pallekele**	**61.08**	**105**	LR		LR		21 23 53.0	
	comp=Z,15nm,20.9s,baz=136,slow=37								
HHC	**Hu-ho-hao-te**	**65.43**	**57**	*e*P		**P**		**20 57 13.0**	**+1.5**
HHC				pmax		pmax			
	comp=Z,2.0nm,0.5s								
HHC				pmax		pmax			
	comp=Z,80nm,6.3s								
PZH	**PanZhiHua**	**66.05**	**75**	P		**P**		**20 57 15.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**68.41**	**83**	P		**P**		**20 57 31.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=321,slow=4.4,SNR=1.5								
	comp=Z,0.2nm,0.3s								
E29M	**Blow River**	**71.90**	**352**	P		**P**		**20 57 53.2**	**+2.1**
E29M				IAmb		IAmb		20 58 01.8	
	comp=Z,6.1nm,1.5s								
D23K	**Nanushuk River**	**72.22**	**357**	P		**P**		**20 57 55.1**	**+2.1**
D19K	**Kuna River**	**72.82**	**0**	P		**P**		**20 57 58.2**	**+1.6**
BMAR	**Burnt Mountain**	**73.42**	**355**	P		**P**		**20 58 01.5**	**+1.3**
I28M	**Miner Creek**	**74.96**	**352**	P		**P**		**20 58 09.8**	**+0.5**
NJ2	**Nanjing**	**75.20**	**61**	*e*P		**P**		**20 58 12.0**	**+0.9**
NJ2				pmax		pmax			
	comp=Z,21nm,0.7s								
IMAR	**Indian Mountai**	**75.30**	**358**	P		**P**		**20 58 13.1**	**+2.1**
ILAR	**Eielson Array**	**76.21**	**355**	P		**P**		**20 58 17.5**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=136,slow=23,SNR=1.8								
	comp=Z,0.2nm,0.7s								
WRA	**Warramunga Arr**	**119.19**	**93**	PKP		**PKiKP**		**21 05 17.6**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=318,slow=1.5,SNR=6.0								
ASAR	**Alice Springs**	**120.89**	**97**	PKPdf		**PKPdf**		**21 05 19.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=320,slow=1.5,SNR=2.7								
ASAR	**Alice Springs**	**120.89**	**97**	PKPdf		**PKiKP**		**21 05 20.6**	**+0.1**
ASAR	**Alice Springs**	**120.89**	**97**	PKIKP		**PKiKP**		**21 05 20.6**	**+0.1**

*NEIC **29** 20:53:20.2±1.7,20.1°S±0.1°×177.4°W±0.1°,h169km±3km, mb4.2/18, Error ellipse: s-maj=21.3km s-min=17.9km az=212.0*

*IDC **29** 20:53:43.3±5.1,20.7°S×177.6°W,h397km±49km, mb3.1/6, mbtmp3.9/7, Error ellipse: s-maj=29.3km s-min=18.2km az=89.0*

ISC 29 20:53:43.1±0.8,20.6°S±0.1°×177.6°W±0.2°,h400km,n34, σ1§26/32,mb3.6/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.03**	**304**			Pn	20 54 33.2	-32
URZ	**Urewera**	**18.15**	**193**	P		**P**	**20 57 28.0**	**-1.0**
	1.8nm,0.3s,baz=286,slow=1.4,SNR=6.4							
URZ				S		**S**	**21 00 35.3**	**-0.6**
	1.1nm,0.4s,baz=72,slow=22,SNR=1.1							
RTZ	**Ruatahuna**	**18.52**	**193**			**P**	**20 57 30.6**	**-2.5**
RTZ				IAmb		IAmb	20 57 50.6	
	comp=Z,18nm,1.4s							
BKZ	**Black Stump Fm**	**19.16**	**194**			**P**	**20 57 37.3**	**-2.2**
BKZ				IAmb		IAmb	20 58 21.5	
	comp=Z,18nm,1.4s							
TCW	**Tory Channel**	**21.64**	**197**	P		**P**	**20 58 02.0**	**-0.4**
QRZ	**Quartz Range**	**21.81**	**201**	P		**P**	**20 58 04.2**	**+0.2**
THZ	**Tophouse**	**22.55**	**199**	P		**P**	**20 58 09.7**	**-0.9**
STKA	**Stephens Creek**	**38.07**	**244**	P		**P**	**21 00 26.1**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=54,slow=9.6,SNR=3.2							
	comp=Z,3.0nm,0.9s							
STKA	**Stephens Creek**	**38.07**	**244**	P		**P**	**21 00 25.7**	**+0.3**
BBOO	**Buckleboo**	**42.83**	**244**	P		**P**	**21 01 03.5**	**-0.3**
AS31	**Alice Springs**	**44.86**	**257**	P		**P**	**21 01 20.0**	**+0.1**
ASAR	**Alice Springs**	**44.86**	**257**	P		**P**	**21 01 20.1**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=93,slow=8.1,SNR=20							
ASAR				PcP		**PcP**	**21 02 53.7**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=91,slow=4.0,SNR=2.5							
	comp=Z,2.5nm,0.8s							
ASAR	**Alice Springs**	**44.86**	**257**	P		**P**	**21 01 18.9**	**-1.1**
WB0	**Warramunga Arr**	**44.94**	**262**	P		**P**	**21 01 19.6**	**-0.9**
WB0				IAmb		IAmb	21 01 39.3	
	comp=Z,5.9nm,1.2s							
WRAB	**Tennant Creek**	**44.95**	**262**	P		**P**	**21 01 19.8**	**-0.9**
WRAB				IAmb		IAmb	21 01 59.1	
	comp=Z,5.2nm,1.3s							
WRA	**Warramunga Arr**	**44.96**	**262**	P		**P**	**21 01 20.3**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=97,slow=7.5,SNR=16							
	comp=Z,0.5nm,0.3s							
WRA	**Warramunga Arr**	**44.96**	**262**	P		**P**	**21 01 19.2**	**-1.5**
KNRA	**Kununurra**	**51.03**	**266**	P		**P**	**21 02 05.9**	**-0.7**
KNRA				IAmb		IAmb	21 02 43.0	
	comp=Z,11nm,1.1s							
FITZ	**Fitzroy Crossi**	**53.39**	**262**	P		**P**	**21 02 24.8**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=102,slow=9.3,SNR=1.6							
	comp=Z,0.8nm,0.4s							
FITZ	**Fitzroy Crossi**	**53.39**	**262**	P		**P**	**21 02 24.5**	**+0.8**
SBA	**Scott Base**	**57.76**	**184**	P		**P**	**21 02 56.8**	**+3.3**
VNDA	**Vanda**	**57.81**	**185**	P		**P**	**21 02 55.9**	**+2.1**
VNDA				IAmb		IAmb	21 03 37.3	
	comp=Z,5.7nm,1.4s							
MBWA	**Marble Bar**	**58.20**	**257**	P		**P**	**21 02 57.3**	**-0.1**
GIRL	**Giralia**	**62.88**	**254**	P		**P**	**21 03 28.5**	**-0.1**
QSPA	**South Pole Qui**	**69.43**	**180**	P		P	21 04 14.1	+4.9
	comp=Z,1.6nm,0.7s,baz=51,slow=0.3,SNR=15							
QSPA	**South Pole Qui**	**69.43**	**180**	P		P	21 04 13.8	+4.7
QSPA				IAmb		IAmb	21 04 15.1	
	comp=Z,4.1nm,0.9s							
PV02	**Paradox Valley**	**87.11**	**47**	P		**P**	**21 05 42.9**	**-2.4**
SNAA	**Sanae**	**87.86**	**178**	P		**P**	**21 05 47.7**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=220,slow=5.6,SNR=5.8							
	comp=Z,0.4nm,0.8s							
ILAR	**Eielson Array**	**88.36**	**13**	P		**P**	**21 05 51.4**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=216,slow=5.4,SNR=8.1							
	comp=Z,0.3nm,0.7s							
ILAR	**Eielson Array**	**88.36**	**13**	P		**P**	**21 05 50.7**	**+0.5**
AKASG	**Malin Array Be**	**143.31**	**331**	PKP		PKPab	21 12 28.3	+0.5
	comp=Z,0.9nm,0.5s,baz=44,slow=4.4,SNR=4.6							
EKA	**Eskdalemuir Ar**	**145.10**	**6**	PKPbc		**PKPab**	**21 12 34.9**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=323,slow=1.9,SNR=1.9							
BRTR	**Keskin Array B**	**147.21**	**312**	PKPbc		**PKPbc**	**21 12 40.3**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=116,slow=2.9,SNR=2.7							
MMAI	**Mount Meron Ar**	**148.21**	**300**	PKPbc		**PKPbc**	**21 12 44.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=132,slow=2.1,SNR=1.9							

*IDC **29** 20:54:57.5±1.2,3.03°S×138.61°E,h0km,mb3.4/3, mbtmp3.4/6,ML3.2/3,MS3.1/2, Error ellipse: s-maj=29.5km s-min=23.3km az=136.0*

ISC 29 20:55:04.6±1.1,3.2°S±0.2°×138.7°E±0.1°,h62km,n7,σ1§95/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAY	**Jayapura**	**2.06**	**72**	Pn		**Pn**	**20 55 34.5**	**-2.5**
	2.5nm,0.3s,baz=224,slow=11,SNR=5.1							
JAY				Sn		**Sn**	**20 56 04.5**	**+2.9**
	2.7nm,0.3s,baz=311,slow=19,SNR=1.9							
	10nm,0.5s							
WRA	**Warramunga Arr**	**17.23**	**194**	P		**Pn**	**20 59 01.4**	**+0.2**
	0.1nm,0.3s,baz=15,slow=12,SNR=11							
	0.3nm,0.4s							
FITZ	**Fitzroy Crossi**	**19.63**	**220**	P		**P**	**20 59 28.8**	**+0.5**
	0.1nm,0.3s,baz=27,slow=12,SNR=1.3							
	2.0nm,0.8s							
ASAR	**Alice Springs**	**20.92**	**193**	P		**P**	**20 59 42.1**	**-0.1**
	0.3nm,0.4s,baz=16,slow=11,SNR=4.5							
ASAR				LR		LR	21 07 48.6	
	comp=Z,43nm,18.3s,baz=296,slow=37							
	0.3nm,0.4s							
YAK	**Yakutsk**	**65.38**	**355**	LR		LR	21 32 19.2	
	comp=Z,11nm,18.0s,baz=38,slow=34							
MKAR	**Makanchi Array**	**70.16**	**322**	P		**P**	**21 06 11.1**	**+0.4**
	0.7nm,0.9s,baz=123,slow=7.1,SNR=3.7							
	0.7nm,0.9s							
KURBB	**Kurchatov Arra**	**74.11**	**325**	P		**P**	**21 06 34.5**	**+0.4**
	0.2nm,0.5s,baz=116,slow=6.3,SNR=4.4							
	0.2nm,0.5s							

*IDC **29** 21:00:49.5±1.6,3.50°N×128.85°E,h0km,mb3.4/5, mbtmp3.5/5, Error ellipse: s-maj=101.6km s-min=21.0km az=72.0*

ISC 29 21:00:54.5±1.9,3.5°N±0.3°×129.0°E±0.8,h35km,n5,σ0§66/6, mb3.4/5,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.74**	**189**	P		**P**	**21 05 43.2**	**+0.2**
	1.7nm,1.0s,baz=3.8,slow=11,SNR=1.5							
	1.7nm,1.0s							
WRA	**Warramunga Arr**	**23.91**	**168**	P		**P**	**21 06 04.8**	**-0.5**
	0.7nm,0.6s,baz=347,slow=11,SNR=12							
	0.7nm,0.6s							
ASAR	**Alice Springs**	**27.45**	**170**	P		**P**	**21 06 37.1**	**-0.3**
	0.2nm,0.5s,baz=350,slow=8.2,SNR=4.6							
ASAR				PcP		**PcP**	**21 09 56.5**	**+0.9**
	0.2nm,0.6s,baz=4.2,slow=1.5,SNR=2.2							
	0.2nm,0.5s							
MKAR	**Makanchi Array**	**59.02**	**324**	P		**P**	**21 10 51.0**	**0.0**
	0.5nm,0.8s,baz=120,slow=7.5,SNR=4.6							
	0.5nm,0.8s							
KURBB	**Kurchatov Arra**	**63.14**	**327**	P		**P**	**21 11 18.4**	**-0.4**
	0.4nm,0.7s,baz=128,slow=7.7,SNR=4.0							
	0.4nm,0.7s							

*IDC **29** 21:07:04.7±0.6,32.68°S×71.68°W,h0km,mb4.5/11, mbtmp4.4/14,ML4.5/2,MS3.7/20, Error ellipse: s-maj=25.8km s-min=17.2km az=73.0*
*SJA **29** 21:07:06.0±0.7,32.73°S×71.84°W,h19km±3km,ML4.7, MW4.6*
*GUC **29** 21:07:08.7±0.9,32.73°S×71.78°W,h37km±2km,ML4.7*
*NEIC **29** 21:07:08.5,32.75°S×71.81°W,h21km*
*NEIC **29** 21:07:08.7±1.9,32.74°S±0.03°×71.79°W±0.05,h21km±3km, mb4.8/36,Mwr4.4/61,Mwr4.6(GUC), Error ellipse: s-maj=6.6km s-min=4.2km az=89.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.26; $M_{\theta\theta}$0.45; $M_{\phi\phi}$-3.71; $M_{r\theta}$-0.42; $M_{r\phi}$-0.10; $M_{\theta\phi}$-3.73; Fault plane solution: $M_0$5.14000×10^{15} NP1:φ_s356.46000°, δ21.64000°, λ81.75000°. NP2:φ_s185.33000°, δ68.60000°, λ93.26000°. Principal axes: T 4.9097, Plg66.0000°, Azm101.0000°; N 0.4323, Plg3.0000°, Azm4.0000°; P -5.3420, Plg24.0000°, Azm273.0000°;*
*VAO **29** 21:07:11.6±0.8,32.78°S×71.72W,h62km±7km,mb4.4*

ISC 29 21:07:08.2±0.8,32.73S±0.02×71.84W±0.04,h25km±5km, n214,σ1§11/220,mb4.7/27,MS3.9/16,11C-20D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA01	**Torpederas**	**0.33**	**151**			**Pb**	**21 07 16.2**	**+0.5**
VA01				Sg		**Sb**	**21 07 19.6**	**-1.3**
VA01	**Torpederas**	**0.33**	**151**	*i* P		**Pb**	**21 07 16.2**	**+0.5**
VA01	**Torpederas**	**0.33**	**151**	*e*P		**Pb**	**21 07 15.6**	**-0.1**
VA06	**Catapilco**	**0.49**	**70**	Pg		**Pb**	**21 07 18.1**	**-0.1**
VA06				Sg		**Sb**	**21 07 24.5**	**-0.6**
VA06	**Catapilco**	**0.49**	**70**	*i* P		**Pb**	**21 07 18.2**	**-0.1**
VA06				*i* S		**Sb**	**21 07 24.6**	**-0.4**
VA06				IAML			21 07 25.3	
	comp=N,96μm,0.2s							
ROC1	**El Roble**	**0.74**	**110**	*e*S		Pg	21 07 16.4	
ROC1				*e*P		Pg	21 07 16.4	
ROCH	**El Roble**	**0.74**	**109**	*i* P		**Pb**	**21 07 21.9**	**-0.7**
ROCH				*i* S		**Sb**	**21 07 31.2**	**-1.1**
ROCH				IAML			21 07 32.4	
	comp=E,36μm,0.6s							
MT02	**Curacav**	**0.79**	**132**			**Pb**	**21 07 22.7**	**-0.7**
MT02				Sg		**Sb**	**21 07 32.4**	**-1.4**
MT02	**Curacav**	**0.79**	**132**	*i* P		**Pb**	**21 07 22.6**	**-0.7**
MT02	**Curacav**	**0.79**	**132**	*e*P		**Pb**	**21 07 21.8**	**-1.6**
VA05	**Santo Domingo**	**0.94**	**168**			**Pb**	**21 07 25.9**	**0.0**
VA05	**Santo Domingo**	**0.94**	**168**	*i* P		**Pb**	**21 07 25.5**	**-0.5**
VA05				*i* S		**Sb**	**21 07 37.7**	**-0.4**
VA05				IAML			21 07 41.4	
	comp=E,21μm,0.5s							
CO04	**Los Peladeros**	**1.00**	**47**	*i* P		**Pb**	**21 07 26.4**	**-0.8**
CO04				*i* S		**Sb**	**21 07 39.3**	**-0.7**
CO04				IAML			21 07 42.0	
	comp=E,40μm,0.2s							
PEL	**Peldehue**	**1.05**	**113**	Pn		**Pb**	**21 07 27.0**	**-0.9**
PEL	**Peldehue**	**1.05**	**113**	*i* P		**Pb**	**21 07 26.6**	**-1.2**
PEL				*i* S		**Sb**	**21 07 40.0**	**-1.3**
VA03	**San Esteban**	**1.09**	**92**	*i* P		**Pb**	**21 07 27.1**	**-1.3**
VA03				*i* S		**Sb**	**21 07 41.0**	**-1.3**
VA03				IAML			21 07 41.5	
	comp=E,77μm,0.2s							
VA03	**San Esteban**	**1.09**	**92**	*e*P		**Pb**	**21 07 26.9**	**-1.5**
VA03				*e*S		**Sb**	**21 07 41.1**	**-1.1**
VA03				IAML			21 07 42.5	
	comp=Z,20μm,0.2s							
MT05	**Renca**	**1.14**	**126**	Pn		**Pn**	**21 07 28.4**	**-0.3**
MT05	**Renca**	**1.14**	**126**	*i* P		**Pn**	**21 07 28.3**	**-0.3**
MT05				*i* S		**Sb**	**21 07 42.4**	**-1.3**
MT05				IAML			21 07 46.7	
	comp=E,77μm,0.4s							
MT10	**Hacienda Santa**	**1.22**	**117**	*i* P		**Pn**	**21 07 29.8**	**-0.1**
MT10				*i* S		**Sn**	**21 07 45.4**	**-0.3**
MT10				IAML			21 07 48.1	
	comp=N,77μm,0.6s							
MT01	**Popeta**	**1.23**	**157**	Pn		**Pn**	**21 07 30.0**	**+0.1**
MT01	**Popeta**	**1.23**	**157**	*i* P		**Pn**	**21 07 29.9**	**-0.1**
MT01				*i* S		**Sb**	**21 07 45.4**	**-1.0**
MT01				IAML			21 07 49.3	
	comp=E,11μm,0.2s							
MT01	**Popeta**	**1.23**	**157**	*e*P		**Pn**	**21 07 29.2**	**-0.7**
MT01				IAML			21 07 48.7	
	comp=Z,12μm,0.5s							
MT09	**Talagante**	**1.26**	**146**	Pn		**Pn**	**21 07 30.8**	**+0.3**
MT09	**Talagante**	**1.26**	**146**	*i* P		**Pn**	**21 07 30.5**	**0.0**
MT09				*i* S		**Sb**	**21 07 46.0**	**-1.4**
MT09				IAML			21 07 53.0	
	comp=N,20μm,0.5s							
MT14	**Cerro Cal¡n**	**1.28**	**122**	*i* P		**Pn**	**21 07 30.6**	**0.0**
MT14				*i* S		**Sn**	**21 07 46.4**	**-0.7**
MT14				IAML			21 07 49.3	
	comp=N,35μm,0.5s							
MT16	**CCHEN**	**1.31**	**122**	Pn		**Pn**	**21 07 31.1**	**+0.1**
MT16	**CCHEN**	**1.31**	**122**	*i* P		**Pn**	**21 07 31.1**	**+0.1**
MT16				*i* S		**Sb**	**21 07 47.8**	**-0.8**
MT03	**Universidad Ad**	**1.35**	**125**	Pn		**Pn**	**21 07 32.0**	**+0.4**
MT03	**Universidad Ad**	**1.35**	**125**	*i* P		**Pn**	**21 07 31.8**	**+0.2**
MT03				*i* S		**Sb**	**21 07 49.5**	**-0.4**
MT03				IAML			21 07 55.0	
	comp=N,27μm,0.3s							
MT03	**Universidad Ad**	**1.35**	**125**	*e*P		**Pn**	**21 07 31.3**	**-0.3**
MT03				IAML			21 07 53.3	
	comp=Z,17μm,0.8s							
MT15	**Las Vizcachas**	**1.42**	**128**	*i* P		**Pn**	**21 07 32.7**	**+0.2**
MT15				*i* S		**Sb**	**21 07 51.7**	**+0.1**
MT15				IAML			21 07 55.8	
	comp=N,42μm,0.4s							
MT12	**Pirque**	**1.47**	**133**	*i* P		**Pn**	**21 07 33.8**	**+0.5**
MT12				*i* S		**Sb**	**21 07 52.6**	**-0.7**
MT12				IAML			21 07 56.3	
	comp=N,45μm,0.5s							
MT04	**Ro Olivares**	**1.58**	**116**	*i* P		**Pn**	**21 07 35.3**	**+0.4**
MT04				*i* S		**Sn**	**21 07 54.9**	**+0.2**
MT04	**Ro Olivares**	**1.58**	**116**	*e*P		**Pn**	**21 07 34.6**	**-0.3**
MT04				IAML			21 07 57.1	
	comp=Z,7μm,0.3s							
BO04	**La Punta**	**1.62**	**141**	*i* P		**Pn**	**21 07 36.3**	**+0.9**
BO04				*i* S		**Sb**	**21 07 56.8**	**-0.9**
BO04				IAML			21 08 02.4	
	comp=E,12μm,0.2s							
MT13	**San Alfonso**	**1.65**	**128**	*i* P		**Pn**	**21 07 36.5**	**+0.8**
MT13				*i* S		**Sb**	**21 07 58.1**	**-0.3**
MT13				IAML			21 07 59.8	
	comp=N,23μm,0.2s							
MT13	**San Alfonso**	**1.65**	**128**	*e*P		**Pn**	**21 07 36.4**	**+0.6**
MT13				IAML			21 08 03.0	
	comp=Z,8μm,0.4s							
CO02	**Combarbal**	**1.68**	**25**	Pn		**Pn**	**21 07 37.3**	**+1.1**
CO02	**Combarbal**	**1.68**	**25**	*i* P		**Pn**	**21 07 37.0**	**+0.8**
CO02				*i* S		**Sn**	**21 07 58.5**	**+1.4**
CO02	**Combarbal**	**1.68**	**25**	*e*P		**Pn**	**21 07 36.4**	**+0.2**
CO02				IAML			21 08 04.8	
	comp=Z,10μm,0.7s							
MT08	**Bocatoma Ro**	**1.69**	**115**	*i* P		**Pn**	**21 07 37.3**	**+0.9**
MT08				*i* S		**Sb**	**21 07 58.3**	**-1.4**
MT08				IAML			21 08 04.6	
	comp=N,8μm,0.6s							
MT08	**Bocatoma Ro**	**1.69**	**115**	*e*P		**Pn**	**21 07 36.7**	**+0.3**
MT08				*e*S		**Sb**	**21 07 59.3**	**-0.4**
MT08				IAML			21 08 00.4	
	comp=Z,5μm,0.7s							
BO03	**Pichilemu**	**1.76**	**183**	*i* P		**Pn**	**21 07 37.0**	**-0.2**
LMEL	**Las Melosas**	**1.77**	**130**	Pn		**Pb**	**21 07 38.9**	**-1.2**
LMEL	**Las Melosas**	**1.77**	**130**	*i* P		**Pn**	**21 07 38.5**	**+1.1**
LMEL				*i* S		**Sb**	**21 08 00.5**	**-1.3**
LMEL				IAML			21 08 05.0	
	comp=N,18μm,0.4s							
LMEL	**Las Melosas**	**1.77**	**130**	*e*P		**Pn**	**21 07 38.2**	**+0.8**
LMEL				IAML			21 08 05.5	
	comp=Z,9μm,1.1s							
BO01	**Tunca**	**1.77**	**159**	Pn		**Pn**	**21 07 38.0**	**+0.7**
BO01	**Tunca**	**1.77**	**159**	*i* P		**Pn**	**21 07 37.6**	**+0.3**
BO01				*i* S		**Sb**	**21 08 00.7**	**-1.2**
BO01	**Tunca**	**1.77**	**159**	*e*P		**Pn**	**21 07 37.2**	**-0.2**
BO01				IAML			21 08 06.2	
	comp=Z,4μm,0.5s							
CO06	**Fray Jorge**	**2.06**	**5**	Pn		**Pn**	**21 07 41.4**	**+0.1**
CO06	**Fray Jorge**	**2.06**	**5**	*i* P		**Pn**	**21 07 41.2**	**-0.1**
BO02	**Sierra Bellavi**	**2.24**	**157**	Pn		**Pn**	**21 07 44.3**	**+0.5**
BO02	**Sierra Bellavi**	**2.24**	**157**	*i* P		**Pn**	**21 07 44.5**	**+0.7**
BO02				*i* S		**Sn**	**21 08 12.3**	**+1.6**
BO02	**Sierra Bellavi**	**2.24**	**157**	*e*P		**Pn**	**21 07 44.7**	**+0.9**
BO

PLCA	**Paso Flores**	**8.05**	**173**	Pn		**Pn**	**21 09 04.5**	**+0.8**
PLCA	**Paso Flores**	**8.05**	**173**	*e*P		**Pn**	**21 09 05.0**	**+1.3**
TRQA	**Tornquist**	**9.64**	**126**	Pn		**Pn**	**21 09 26.6**	**+1.2**
PSAL	**Palomas, Salto**	**12.21**	**86**	*e*P		**Pn**	**21 10 00.8**	**+0.3**
CPUP	**Villa Florida**	**14.15**	**67**	Pn		**Pn**	**21 10 28.7**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=94,slow=10,SNR=5.8							
CPUP				Sn		**Sn**	**21 13 06.0**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=133,slow=18,SNR=4.8							
CPUP				LR		LR	21 16 42.7	
	comp=Z,37nm,19.1s,baz=106,slow=41							
CPUP	**Villa Florida**	**14.15**	**67**	Pn		**Pn**	**21 10 28.1**	**+1.0**
PB16	**IPOC Station P**	**14.49**	**9**	Pn		**Pn**	**21 10 32.9**	**+0.6**
PLTB	**Pedras Altas**	**15.46**	**91**	Pn		**Pn**	**21 10 44.1**	**-0.7**
PLTB	**Pedras Altas**	**15.46**	**91**	*e*P		**Pn**	**21 10 45.0**	**+0.2**
LPAZ	**La Paz**	**16.71**	**12**	Pn		**Pn**	**21 11 01.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=189,slow=8.0,SNR=12							
	comp=Z,2.9nm,0.6s							
LPAZ	**La Paz**	**16.71**	**12**	Pn		**Pn**	**21 11 01.9**	**+0.4**
LPAZ	**La Paz**	**16.71**	**12**	*e*P		**Pn**	**21 11 01.8**	**+0.4**
MURT	**Porto Murtinho**	**16.77**	**52**	*e*P		**Pn**	**21 11 02.4**	**+0.9**
AMBA	**Amambai (Brazi**	**17.80**	**61**	*e*P		**Pn**	**21 11 15.0**	**+0.7**
CNLB	**Canela**	**18.31**	**85**	*e*P		**Pn**	**21 11 19.6**	**-1.0**
AQDB	**Aquidauana**	**18.87**	**54**	P		**P**	**21 11 25.6**	**-1.1**
AQDB	**Aquidauana**	**18.87**	**54**	*e*P		**P**	**21 11 26.5**	**-0.3**
PTGB	**Pitanga**	**19.07**	**70**	*e*P		**P**	**21 11 29.3**	**+0.2**
SIV	**San Ignacio**	**19.32**	**33**	P		**P**	**21 11 30.9**	**-0.8**
	comp=Z,4.4nm,0.8s,baz=274,slow=4.5							
SIV				LR		LR	21 20 15.3	
	comp=Z,389nm,19.1s,baz=291,slow=41							
PTLB	**Pontes e Lacer**	**20.71**	**37**	P		**P**	**21 11 45.8**	**-1.0**
PTLB	**Pontes e Lacer**	**20.71**	**37**	*e*P		**P**	**21 11 46.9**	**0.0**
PP1B	**Ponte de Pedra**	**21.46**	**50**	*e*P		**P**	**21 11 54.1**	**-0.9**
FRTB	**Fartura**	**21.74**	**70**	*e*P		**P**	**21 11 57.7**	**-0.2**
SALV	**Santo Antonio**	**22.25**	**45**	*e*P		**P**	**21 12 01.7**	**-1.7**
VILB	**Vilhena**	**22.39**	**31**	P		**P**	**21 12 03.3**	**-1.5**
VILB				IAmb		IAmb	21 12 13.1	
	comp=Z,17nm,0.8s							
VILB	**Vilhena**	**22.39**	**31**	*e*P		**P**	**21 12 04.1**	**-0.7**
PET01	**Itanhaem-SP**	**23.13**	**75**	*e*P		**P**	**21 12 12.2**	**-0.4**
ITRB	**Iturama**	**23.18**	**61**	*e*P		**P**	**21 12 12.5**	**-0.6**
SPB	**Sao Paulo**	**23.32**	**73**	P		**P**	**21 12 13.7**	**-0.9**
SPB	**Sao Paulo**	**23.32**	**73**	*e*P		**P**	**21 12 14.2**	**-0.4**
BB19B	**Bebedouro**	**23.76**	**67**	*e*P		**P**	**21 12 17.4**	**-1.5**
VAO	**Valinhos**	**23.98**	**72**	P		**P**	**21 12 18.7**	**-2.3**
VAO	**Valinhos**	**23.98**	**72**	*e*P		**P**	**21 12 19.4**	**-1.6**
ARAG	**Araguaiana, MT**	**24.84**	**52**	*e*P		**P**	**21 12 27.4**	**-1.4**
PARB	**Paraibuna**	**24.91**	**75**	*e*P		**P**	**21 12 27.5**	**-1.9**
PDRB	**Porto dos Gac**	**25.19**	**37**	*e*P		**P**	**21 12 31.4**	**-0.6**
IPMB	**Ipameri, GO**	**25.83**	**61**	*e*P		**P**	**21 12 35.9**	**-1.9**
ATAH	**Atahualpa**	**26.19**	**345**	LR		LR	21 21 23.4	
	comp=Z,140nm,19.0s,baz=185,slow=33							
CLDB	**Colider**	**26.29**	**38**	*e*P		**P**	**21 12 42.0**	**0.0**
BSCB	**Bom Sucesso**	**26.75**	**71**	*e*P		**P**	**21 12 44.6**	**-1.5**
PMNB	**Patos De Minas**	**26.82**	**64**	*e*P		**P**	**21 12 45.0**	**-1.8**
BDFB	**Brasilia**	**27.50**	**57**	P		**P**	**21 12 51.2**	**-1.7**
	comp=Z,13nm,0.9s,baz=233,slow=6.5,SNR=11							
BDFB				LR		LR	21 24 08.6	
	comp=Z,217nm,20.3s,baz=224,slow=37							
	comp=Z,13nm,0.9s							
BDFB	**Brasilia**	**27.50**	**57**	P		**P**	**21 12 50.6**	**-2.3**
BDFB				IAmb		IAmb	21 12 53.0	
	comp=Z,22nm,1.1s							
SNDB	**Serra Nova Dou**	**27.97**	**47**	*e*P		**P**	**21 12 56.2**	**-0.8**
DUB01	**Friburgo-RJ**	**28.14**	**75**	*e*P		**P**	**21 12 57.7**	**-0.9**
JANB	**Januaria**	**30.57**	**61**	*e*P		**P**	**21 13 18.2**	**-2.0**
SDBA	**SAO DESIDERIO**	**31.90**	**57**	*e*P		**P**	**21 13 30.4**	**-1.5**
PMSA	**Palmer Station**	**32.43**	**174**	LR		LR	21 26 10.8	
	comp=Z,295nm,19.1s,baz=311,slow=35							
RPN	**Rapa Nui**	**32.85**	**270**	LR		LR	21 23 09.4	
	comp=Z,214nm,18.5s,baz=9.0,slow=29							
PRPB	**Parauapebas**	**33.45**	**43**	*e*P		**P**	**21 13 44.3**	**-1.1**
BOAV	**Boa Vista**	**36.54**	**19**	P		**P**	**21 14 11.2**	**-0.9**
BOAV				IAmb		IAmb	21 14 12.4	
	comp=Z,8.4nm,0.8s							
BOAV	**Boa Vista**	**36.54**	**19**	*e*P		**P**	**21 14 11.5**	**-0.5**
RUSC	**La Rusia**	**38.43**	**358**	P		**P**	**21 14 29.2**	**+0.6**
SDV	**Santo Domingo**	**41.40**	**2**	LR		LR	21 33 07.3	
	comp=Z,89nm,20.9s,baz=232,slow=38							
SDV	**Santo Domingo**	**41.40**	**2**	P		**P**	**21 14 52.5**	**-0.4**
MDP	**Montagnes des**	**41.81**	**29**	LR		LR	21 34 14.1	
	comp=Z,150nm,18.3s,baz=210,slow=39							
VNA3	**Neumayer Olymp**	**50.47**	**158**	⇑P		**P**	**21 16 04.4**	**+0.7**
	comp=Z,7.8nm,0.7s							
VNA1	**Neumayer--Stat**	**50.77**	**157**	⇑P		**P**	**21 16 06.9**	**+1.0**
	comp=Z,5.5nm,0.9s							
VNA2	**Neumayer--Watz**	**51.12**	**158**	⇑P		**P**	**21 16 09.1**	**+0.7**
	comp=Z,8.1nm,0.7s,baz=286,slow=8.0							
SNAA	**Sanae**	**52.70**	**158**	⇑P		**P**	**21 16 20.6**	**+0.3**
	comp=Z,106nm,0.7s							
SNAA	**Sanae**	**52.70**	**158**	P		**P**	**21 16 20.6**	**+0.3**
	comp=Z,5.2nm,0.8s,baz=275,slow=6.6,SNR=33							
SNAA				LR		LR	21 37 36.8	
	comp=Z,80nm,19.9s,baz=347,slow=35							
	comp=Z,5.2nm,0.8s							
SNAA	**Sanae**	**52.70**	**158**	P		**P**	**21 16 20.1**	**-0.2**
SNAA				IAmb		IAmb	21 16 21.8	
	comp=Z,6.5nm,0.9s							
TROLL	**Troll, Antarti**	**54.41**	**158**	⇑P		**P**	**21 16 33.5**	**+0.6**
	comp=Z,249nm,0.7s							
QSPA	**South Pole Qui**	**57.50**	**180**	P		**P**	**21 16 59.5**	**+4.3**
	comp=Z,11nm,0.9s,baz=162,slow=2.5,SNR=27							
QSPA	**South Pole Qui**	**57.50**	**180**	P		P	21 17 00.2	+5.1
QSPA				IAmb		IAmb	21 17 00.9	
	comp=Z,12nm,0.9s							
VNDA	**Vanda**	**65.38**	**191**	LR		LR	21 41 01.6	
	comp=Z,23nm,21.9s,baz=168,slow=31							
TXAR	**Lajitas Array**	**68.71**	**330**	P		**P**	**21 18 10.0**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=169,slow=6.7,SNR=1.0							
	comp=Z,0.5nm,0.5s							
SWET	**Sewanee**	**68.87**	**348**	IAmb		IAmb	21 18 11.9	
	comp=Z,8.6nm,0.8s							
TKL	**Tuckaleechee C**	**68.95**	**350**	P		**P**	**21 18 10.4**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=156,slow=12,SNR=3.8							
	comp=Z,3.3nm,0.7s							
TKL	**Tuckaleechee C**	**68.95**	**350**	IAmb		IAmb	21 18 25.6	
	comp=Z,6.9nm,1.0s							
V48A	**Smith Brothers**	**69.55**	**347**	P		**P**	**21 18 14.0**	**-0.8**
WVT	**Waverly**	**70.12**	**346**			**P**	**21 18 18.9**	**+0.6**
MNTX	**Cornudas Mount**	**71.49**	**330**	P		**P**	**21 18 27.2**	**+0.4**
MNTX				IAmb		IAmb	21 18 32.2	
	comp=Z,6.5nm,1.2s							
CCM	**Cathedral Cave**	**72.71**	**344**	P		**P**	**21 18 34.0**	**+0.1**
CCM				IAmb		IAmb	21 18 35.8	
	comp=Z,9.7nm,0.9s							
P48A	**Milroy**	**72.92**	**349**	IAmb		IAmb	21 18 35.6	
	comp=Z,13nm,1.1s							
SBM	**South Baldy**	**74.22**	**330**	P		**P**	**21 18 43.2**	**-0.1**
LENM	**Lemitar**	**74.29**	**330**	P		**P**	**21 18 42.9**	**-0.7**
P40A	**Paris**	**74.30**	**344**	P		**P**	**21 18 43.3**	**+0.1**
P40A				IAmb		IAmb	21 18 45.1	
	comp=Z,12nm,1.0s							
MAW	**Mawson**	**74.35**	**164**	P		**P**	**21 18 43.8**	**+0.5**
	comp=Z,7.8nm,0.9s,baz=223,slow=9.6,SNR=4.0							
MAW				LR		LR	21 54 00.3	
	comp=Z,92nm,19.2s,baz=240,slow=38							
	comp=Z,7.8nm,0.9s							
DBIC	**Dimbokro**	**74.62**	**71**	P		**P**	**21 18 45.2**	**-0.5**
	comp=Z,6.3nm,0.8s,baz=245,slow=7.6,SNR=4.3							
DBIC				LR		LR	21 49 11.3	
	comp=Z,42nm,19.9s,baz=222,slow=34							
	comp=Z,6.3nm,0.8s							
DBIC	**Dimbokro**	**74.62**	**71**	IAmb		IAmb	21 18 45.8	
	comp=Z,6.7nm,0.8s							
ANMO	**Albuquerque**	**74.75**	**331**	P		**P**	**21 18 46.9**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=136,slow=6.9,SNR=2.7							
ANMO				LR		LR	21 47 07.3	
	comp=Z,68nm,19.7s,baz=143,slow=32							
	comp=Z,1.6nm,0.9s							
TSUM	**Tsumeb**	**79.40**	**106**	LR		LR	21 50 42.4	
	comp=Z,75nm,18.1s,baz=196,slow=33							
TSUM	**Tsumeb**	**79.40**	**106**	P		**P**	**21 19 12.1**	**-0.7**
TSUM				IAmb		IAmb	21 19 14.2	
	comp=Z,13nm,0.9s							
BOSA	**Boshof**	**80.51**	**118**	P		**P**	**21 19 18.4**	**-0.3**
	comp=Z,8.0nm,0.9s,baz=243,slow=3.4,SNR=11							
BOSA				LR		LR	21 52 42.9	
	comp=Z,76nm,18.4s,baz=216,slow=34							
	comp=Z,8.0nm,0.9s							
BOSA	**Boshof**	**80.51**	**118**	P		**P**	**21 19 18.1**	**-0.6**
BOSA				IAmb		IAmb	21 19 19.4	
	comp=Z,11nm,1.1s							
GRTLG	**Ghanzi**	**81.20**	**110**	IAmb		IAmb	21 19 23.0	
	comp=Z,11nm,1.1s							
QNGWA	**Qangwa**	**82.12**	**108**	IAmb		IAmb	21 19 28.5	
	comp=Z,8.1nm,0.9s							
LBTB	**Lobatse**	**82.69**	**115**	LR		LR	21 51 44.2	
	comp=Z,48nm,19.7s,baz=206,slow=32							
LBTB	**Lobatse**	**82.69**	**115**	P		**P**	**21 19 29.7**	**-0.5**
XAUDM	**Khaudum**	**82.78**	**107**	IAmb		IAmb	21 19 32.0	
	comp=Z,7.2nm,0.8s							
NVAR	**Mina Array Bea**	**82.94**	**325**	P		**P**	**21 19 32.7**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=154,slow=6.1,SNR=7.9							
	comp=Z,1.3nm,0.8s							
ELK	**Elko**	**83.37**	**328**	P		**P**	**21 19 34.2**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=146,slow=7.3,SNR=4.6							
	comp=Z,2.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.62**	**70**	P		**P**	**21 19 35.1**	**+0.2**
	comp=Z,5.6nm,0.7s,baz=294,slow=3.0,SNR=3.7							
	comp=Z,5.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.62**	**70**	P		**P**	**21 19 33.9**	**-1.0**
TORD				IAmb		IAmb	21 19 35.6	
	comp=Z,7.0nm,1.0s							
YBH	**Yreka Blue Hor**	**87.63**	**324**	P		**P**	**21 19 54.8**	**+0.4**
	comp=Z,0.2nm,0.9s,baz=124,slow=2.5,SNR=4.3							
YBH	**Yreka Blue Hor**	**87.63**	**324**	IAmb		IAmb	21 19 56.0	
	comp=Z,3.1nm,1.1s							
MDT	**Midelt**	**90.89**	**51**	LR		LR	21 59 58.0	
	comp=Z,33nm,20.6s,baz=232,slow=35							
ESDC	**Sonseca Array**	**95.58**	**46**	LR		LR	22 02 37.9	
	comp=Z,33nm,18.5s,baz=260,slow=35							
BRTR	**Keskin Array B**	**121.07**	**60**	PKP		**PKPdf**	**21 25 58.6**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=236,slow=0.5,SNR=4.3							
AKASG	**Malin Array Be**	**121.21**	**47**	PKP		**PKPdf**	**21 25 57.4**	**-1.1**
	comp=Z,0.2nm,0.2s,baz=268,slow=2.6,SNR=5.4							
WRA	**Warramunga Arr**	**121.95**	**209**	PKP		**PKPdf**	**21 26 00.5**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=147,slow=2.6,SNR=3.2							
H11S2	**WAKE ISLAND Hyl**	**125.95**	**270**	T		T	23 45 06.9	
	baz=118,slow=75,SNR=323							
H11S1	**WAKE ISLAND Hyl**	**125.96**	**270**	T		T	23 45 07.3	
	baz=118,slow=75,SNR=246							
H11S3	**WAKE ISLAND Hyl**	**125.96**	**270**	T		T	23 45 08.4	
	baz=118,slow=75,SNR=236							
H11N3	**WAKE ISLAND Hyl**	**126.33**	**271**	T		T	23 45 29.5	
	baz=117,slow=72							
H11N1	**WAKE ISLAND Hyl**	**126.34**	**271**	T		T	23 45 35.0	
	baz=117,slow=72							
H11N2	**WAKE ISLAND Hyl**	**126.34**	**271**	T		T	23 45 31.2	
	baz=117,slow=72							
AB31	**Akbulak array**	**140.76**	**51**	PKPdf		**PKPdf**	**21 26 35.6**	**+0.2**
ABKAR	**Akbulak array**	**140.76**	**51**	PKPdf		**PKPdf**	**21 26 34.7**	**-0.7**
BORK	**Borovoye**	**146.19**	**42**	PKPdf		**PKPdf**	**21 26 45.2**	**+0.4**
BVAR	**Borovoye Array**	**146.23**	**42**	PKPbc		**PKPdf**	**21 26 46.1**	**+1.2**
	comp=Z,6.3nm,0.7s,baz=300,slow=2.8,SNR=31							
TOLI2	**Tolitoli**	**146.38**	**203**	PKPdf		**PKPdf**	**21 26 46.3**	**-0.1**
KK31	**Karatay Array**	**148.78**	**60**	PKPbc		**PKPbc**	**21 26 52.9**	**-0.5**
NIL	**Nilore**	**150.85**	**79**	PKPbc		**PKPbc**	**21 26 58.2**	**-0.6**
AAK	**Ala-Archa**	**151.74**	**60**	PKPbc		**PKPbc**	**21 27 01.1**	**+0.4**
KURBB	**Kurchatov Arra**	**151.83**	**42**	PKPbc		**PKPbc**	**21 27 00.6**	**+0.2**
	comp=Z,7.7nm,0.6s,baz=301,slow=3.0,SNR=42							
KURK	**Kurchatov**	**151.83**	**42**	PKPbc		**PKPbc**	**21 27 00.3**	**-0.1**
ZALV	**Zalesovo Beam**	**153.06**	**31**	PKP		**PKPdf**	**21 26 55.3**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=298,slow=3.1,SNR=4.0							
ZALV				PKPbc		**pPKPdf**	**21 27 03.0**	**-0.6**
	comp=Z,11nm,0.7s,baz=300,slow=3.1,SNR=49							
ZALV	**Zalesovo Beam**	**153.06**	**31**	PKPbc		**PKPbc**	**21 27 02.7**	**-0.4**
MKAR	**Makanchi Array**	**155.79**	**47**	PKP		**PKPdf**	**21 26 60.0**	**+0.2**
	comp=Z,1.0nm,1.0s,baz=0.0,slow=2.9,SNR=3.1							
MKAR				PKPbc		**pPKPdf**	**21 27 08.4**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=282,slow=2.4,SNR=5.5							
MKAR				PKPab		**PKPab**	**21 27 26.4**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=294,slow=3.0,SNR=13							
SONM	**Songino Array**	**164.85**	**5**	PKPab		**PKPab**	**21 28 06.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=1.4,slow=5.8,SNR=3.5							

IDC ***29*** *21:10:47.9±1.4,24.˚65S×179.˚71E,h494km±14km, mb3.6/14,mbtmp4.5/15,Error ellipse: s-maj=15.8km s-min=14.5km az=144.0*

NOU ***29*** *21:10:47.8,24.˚88S×179.˚85W,h540km,mb4.1/26,South of Fiji Islands*

NEIC ***29*** *21:10:49.2±1.9,24.˚9S±0.˚1×179.˚9E±0.˚1,h514km±7km, mb4.5/45,Error ellipse: s-maj=16.7km s-min=15.1km az=92.0*

ISC 29 21:10:48.0±0.4,24.˚87S±0.˚05×179.˚76E±0.˚07,h501km, n148,σ1°57/153,mb4.4/45,5C-1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.83**	**155**	P		**P**	**21 12 14.7**	**+1.4**
	390nm,0.4s,baz=42,slow=20,SNR=6.5							
RAO				S		**S**	**21 13 21.6**	**-1.6**
	140nm,0.2s,baz=100,slow=23,SNR=1.4							
RAO	**Raoul Island**	**4.83**	**155**	P		**P**	**21 12 14.5**	**+1.1**
GLKZ	**Green Lake**	**4.84**	**155**	P		**P**	**21 12 14.8**	**+1.3**
GLKZ				S		**S**	**21 13 21.4**	**-1.9**
LKBA	**Tubou, Lakemba**	**6.74**	**12**	P		**P**	**21 12 32.9**	**+1.2**
MSVF	**Nonsavu**	**7.28**	**347**	P		**P**	**21 12 37.6**	**+0.4**
MSVF	**Nonsavu**	**7.28**	**347**	P		**P**	**21 12 38.5**	**+1.2**
TAVE	**Taveuni**	**8.13**	**2**	P		**P**	**21 12 47.7**	**+1.8**
MARNC	**Mare, Loyalty**	**11.30**	**285**	P		**P**	**21 13 21.8**	**+2.6**
MARNC	**Mare, Loyalty**	**11.30**	**285**	P		**P**	**21 13 22.1**	**+2.9**
PINNC	**Pines Island,**	**11.50**	**279**	P		**P**	**21 13 24.2**	**+3.0**
OUZ	**Omahuta**	**11.61**	**206**	P		**P**	**21 13 25.0**	**+2.8**
OUZ	**Omahuta**	**11.61**	**206**	P		**P**	**21 13 25.2**	**+3.0**
YATNC	**Mamie plateau,**	**12.13**	**281**	P		**P**	**21 13 31.6**	**+3.5**
DZM	**Mont Dzumac**	**12.53**	**280**	P		**P**	**21 13 34.9**	**+2.6**
	9.2nm,0.6s,baz=32,slow=26,SNR=11							
DZM	**Mont Dzumac**	**12.53**	**280**	P		**P**	**21 13 35.0**	**+2.6**
DZM	**Mont Dzumac**	**12.53**	**280**	P		**P**	**21 13 35.7**	**+3.4**
HAZ	**Te Kaha**	**12.95**	**187**	P		**P**	**21 13 37.4**	**+1.0**
TOZ	**Tahuroa Road**	**13.32**	**195**	P		**P**	**21 13 42.9**	**+2.6**
URZ	**Urewera**	**13.53**	**189**	P		**P**	**21 13 40.6**	**-1.9**
	6.8nm,0.5s,baz=28,slow=2.2,SNR=11							
URZ				S		**S**	**21 16 04.1**	**-2.4**
	10nm,0.5s,baz=64,slow=22,SNR=12							
URZ	**Urewera**	**13.53**	**189**	P		**P**	**21 13 42.3**	**-0.3**
URZ	**Urewera**	**13.53**	**189**	S		**S**	**21 16 07.2**	**+0.7**
URZ	**Urewera**	**13.53**	**189**	P		**P**	**21 13 42.3**	**-0.3**
MWZ	**Matawai**	**13.55**	**187**	P		**P**	**21 13 43.1**	**+0.3**
MWZ				S		**S**	**21 16 08.5**	**+1.5**
HIZ	**Hauiti**	**14.22**	**196**	P		**P**	**21 13 50.1**	**+0.3**
BKZ	**Black Stump Fm**	**14.52**	**190**	P		**P**	**21 13 52.8**	**-0.2**
BKZ	**Black Stump Fm**	**14.52**	**190**	S		**S**	**21 16 25.3**	**-0.2**
BKZ	**Black Stump Fm**	**14.52**	**190**	P		**P**	**21 13 53.7**	**+0.7**
TMVZ	**Te Maari**	**14.61**	**193**	P		**P**	**21 13 54.5**	**+0.4**
ETVZ	**East Tongariro**	**14.62**	**193**	P		**P**	**21 13 54.5**	**+0.3**
OTVZ	**Oturere**	**14.66**	**193**	P		**P**	**21 13 55.2**	**+0.6**
SNVZ	**South Ngauruho**	**14.69**	**193**	P		**P**	**21 13 55.6**	**+0.7**
MCHZ	**McNeill Hill**	**14.76**	**189**	P		**P**	**21 13 56.4**	**+0.9**
KWHZ	**Kaweka Forest**	**14.78**	**190**	P		**P**	**21 13 55.2**	**-0.5**
VRZ	**Vera Road**	**14.82**	**195**	P		**P**	**21 13 57.8**	**+1.6**
WNVZ	**Wahianoa**	**14.83**	**193**	P		**P**	**21 13 56.7**	**+0.3**
SANVU	**Saraoutou**	**15.05**	**306**	P		**P**	**21 13 59.3**	**+0.4**
SANVU	**Saraoutou**	**15.05**	**306**	P		**P**	**21 13 59.4**	**+0.6**
KAHZ	**Kahuranaki**	**15.07**	**189**	P		**P**	**21 13 59.7**	**+0.9**
PNHZ	**Pukenui**	**15.29**	**190**	P		**P**	**21 14 00.7**	**-0.4**
PXZ	**Pawanui**	**15.31**	**188**	P		**P**	**21 14 01.2**	**0.0**
BFZ	**Birch Farm**	**16.04**	**190**	P		**P**	**21 14 07.0**	**-1.8**
BFZ	**Birch Farm**	**16.04**	**190**	S		**S**	**21 16 53.1**	**-1.2**
BFZ	**Birch Farm**	**16.04**	**190**	P		**P**	**21 14 06.9**	**-1.9**
SNZO	**South Karori**	**16.92**	**193**	P		**P**	**21 14 17.3**	**-0.6**
QRZ	**Quartz Range**	**17.02**	**199**	P		**P**	**21 14 17.6**	**-1.3**
QRZ	**Quartz Range**	**17.02**	**199**	S		**S**	**21 17 10.2**	**-1.4**
QRZ	**Quartz Range**	**17.02**	**199**	P		**P**	**21 14 17.7**	**-1.1**
NNZ	**Nelson**	**17.14**	**197**	P		**P**	**21 14 19.3**	**-0.8**
THZ	**Tophouse**	**17.78**	**197**	P		**P**	**21 14 24.8**	**-1.4**
DSZ	**Denniston Nort**	**18.07**	**199**	P		**P**	**21 14 28.3**	**-0.5**
KHZ	**Kahutara**	**18.24**	**195**	P		**P**	**21 14 28.6**	**-1.6**
KHZ	**Kahutara**	**18.24**	**195**	P		**P**	**21 14 28.4**	**-1.8**
GVZ	**Greta Valley S**	**18.88**	**195**	P		**P**	**21 14 34.4**	**-1.7**
LTZ	**Lake Taylor**	**18.90**	**197**	P		**P**	**21 14 34.7**	**-1.7**
INZ	**Inchbonnie**	**19.08**	**199**	P		**P**	**21 14 37.0**	**-1.0**
OXZ	**Oxford**	**19.47**	**197**	P		**P**	**21 14 40.6**	**-0.9**
RPZ	**Rata Peaks**	**20.10**	**199**	P		**P**	**21 14 40.5**	**-6.8**
FOZ	**Fox Glacier**	**20.32**	**201**	P		**P**	**21 14 47.7**	**-1.5**
JCZ	**Jackson Bay**	**21.14**	**202**	P		**P**	**21 14 55.2**	**-1.7**
JCZ	**Jackson Bay**	**21.14**	**202**	P		**P**	**21 14 56.2**	**-0.6**
TATA	**Tatamba Isabel**	**25.12**	**307**	P		**P**	**21 15 31.6**	**-1.1**
EIDS	**Eidsvold**	**25.95**	**263**			**P**	**21 15 39.7**	**-0.2**
EIDS				IAmb		IAmb	21 15 42.0	
	comp=Z,15nm,1.0s							
CMSA	**Cobar Meteorol**	**30.66**	**250**	P		**P**	**21 16 21.6**	**+0.6**
CTA	**Charters Tower**	**31.27**	**272**	P		**P**	**21 16 27.5**	**+1.1**
CTAO	**Charters Tower**	**31.27**	**272**				**21 16 27.5**	**+1.1**
CTAO	**Charters Tower**	**31.27**	**272**	P		**P**	**21 16 27.4**	**+1.0**
TOO	**Toolangi**	**31.74**	**238**	P		**P**	**21 16 31.0**	**+0.8**
QLP	**Quilpie**	**31.98**	**259**	P		**P**	**21 16 33.3**	**+0.9**
TAU	**Tasmania Unive**	**32.11**	**228**	P		**P**	**21 16 33.4**	**+0.2**
TAU				IAmb		IAmb	21 16 40.3	
	comp=Z,25nm,1.2s							
MTSU	**Mount Surprise**	**33.58**	**274**	P		**P**	**21 16 47.4**	**+1.3**
STKA	**Stephens Creek**	**34.16**	**249**	P		**P**	**21 16 51.4**	**+0.6**
	comp=Z,6.1nm,0.4s,baz=95,slow=11,SNR=23							
	comp=Z,6.1nm,0.4s							
PMG	**Port Moresby**	**34.61**	**291**			**P**	**21 16 55.2**	**+0.4**
PMG				IAmb		IAmb	21 16 56.1	
	comp=Z,20nm,0.8s							
XMAS	**Kiritimati**	**34.72**	**43**	P		**P**	**21 16 55.3**	**-0.3**
INKA	**Innaminka**	**34.99**	**257**			**P**	**21 16 59.5**	**+1.7**
INKA				IAmb		IAmb	21 17 00.2	
	comp=Z,8.8nm,0.9s							
COEN	**Coen**	**36.06**	**281**			**P**	**21 17 08.2**	**+1.3**
COEN				IAmb		IAmb	21 17 08.8	
	comp=Z,19nm,0.8s							
AS31	**Alice Springs**	**41.66**	**262**			**P**	**21 17 52.6**	**+0.2**
AS31				IAmb		IAmb	21 17 53.3	
	comp=Z,5.4nm,0.4s							
ASAR	**Alice Springs**	**41.66**	**262**	P		**P**	**21 17 52.2**	**-0.1**
	comp=Z,7.0nm,0.4s,baz=94,slow=7.2,SNR=230							
ASAR				ScP		**ScP**	**21 22 40.5**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=102,slow=3.5,SNR=5.3							
ASAR				S		**S**	**21 23 25.0**	**-7.5**
	comp=Z,0.7nm,0.7s,baz=99,slow=17,SNR=5.1							
	comp=Z,7.0nm,0.4s							
WR8	**Warramunga Arr**	**41.98**	**267**			**P**	**21 17 54.5**	**-0.3**
WR8				IAmb		IAmb	21 17 55.2	
	comp=Z,19nm,0.8s							
WRAB	**Tennant Creek**	**42.12**	**267**	P		**P**	**21 17 55.8**	**-0.1**
WB0	**Warramunga Arr**	**42.12**	**268**

FINES				SKPbc	**SKPbc**	**21 32 04.2**	**-0.8**		
	comp=Z,6.6nm,0.8s,baz=44,slow=4.3,SNR=10								
NOA	**NORSAR Array B**	**143.00**	**351**	PKhKP	PKPpre	21 29 20.5			
	comp=Z,0.3nm,0.5s,baz=10,slow=2.6,SNR=1.6								
MARD	**Mardin**	**143.02**	**300**		PKPbc	21 29 22.4	-0.2		
HFS	**Hagfors**	**143.45**	**348**	PKhKP	PKPpre	21 29 21.5			
	comp=Z,2.5nm,0.4s,baz=46,slow=3.6,SNR=24								
PABE	**Paberze**	**144.62**	**336**	PKPdf	**PKPdf**	**21 29 26.3**	**-0.4**		
AKASG	**Malin Array Be**	**145.66**	**326**	PKPbc	**PKPdf**	**21 29 28.4**	**-0.3**		
	comp=Z,1.7nm,0.4s,baz=47,slow=4.5,SNR=13								
KIEV	**Kiev**	**145.67**	**326**	PKPdf	**PKPdf**	**21 29 28.3**	**-0.4**		
BNN	**Bunyan**	**146.56**	**303**		**PKPbc**	**21 29 32.5**	**-0.8**		
MMAI	**Mount Meron Ar**	**147.88**	**293**	PKPbc	**PKPbc**	**21 29 36.8**	**0.0**		
	comp=Z,2.6nm,0.4s,baz=81,slow=6.0,SNR=24								
BR131	**Keskin Array S**	**147.97**	**306**		**PKPbc**	**21 29 35.3**	**-1.6**		
BRTR	**Keskin Array B**	**147.97**	**306**	PKPbc	**PKPbc**	**21 29 35.7**	**-1.2**		
	comp=Z,1.5nm,0.6s,baz=92,slow=1.5,SNR=7.0								
BRTR	**Keskin Array B**	**147.97**	**306**	PKPbc	**PKPbc**	**21 29 35.5**	**-1.4**		
BURAR	**Bucovina Array**	**149.64**	**325**	PKPbc	**PKPbc**	**21 29 40.2**	**-0.5**		

NEIC ***29*** *21:12:19.0±1.1, 61°.30N±0°.03×152°.43W±0°.08, h135km±2km, Error ellipse: s-maj=5.7km s-min=4.2km az=100.0*

AEIC 29 21:12:20.3±1.2, 61°.31N±0°.04×152°.31W±0°.08, h127km±4km, ML3.1, ML3.3/244(NEIC), Error ellipse: s-maj=5.7km s-min=5.0km az=112.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPBG	**Spurr Blockage**	**0.06**	**208**		Pn	21 12 37.2	-0.5
SPBG					Sn	21 12 50.7	-0.1
SPCN	**Chakachatna No**	**0.11**	**144**		Pn	21 12 37.4	-0.3
CKL	**Chakachamna La**	**0.12**	**186**		Pn	21 12 37.1	-0.7
SPCR	**Spurr Chakacha**	**0.12**	**155**		Pn	21 12 37.0	-0.8
SPCR					Sn	21 12 50.8	-0.1
SPWE	**Spurr West**	**0.12**	**252**		Pn	21 12 37.2	-0.6
SPNN	**North Nagishla**	**0.19**	**287**		Pn	21 12 37.3	-0.7
STLK	**Strandline Lak**	**0.30**	**51**		Pn	21 12 37.4	-0.7
STLK				Sn	Sn	21 12 50.7	-1.0
M20K	**Styx River**	**0.69**	**326**		Pn	21 12 39.5	-0.9
M20K					Sn	21 12 54.7	-1.0
RDT	**Redoubt**	**0.74**	**184**		Pn	21 12 39.8	-1.0
RDT					Sn	21 12 55.4	-0.8
DFR	**Drift River**	**0.74**	**194**		Pn	21 12 40.0	-0.8
DFR					Sn	21 12 55.5	-0.8
RDJH	**Redoubt Jeurge**	**0.76**	**199**		Sn	21 12 56.1	-0.6
SKT	**Skwentna**	**0.77**	**29**		Pn	21 12 40.4	-0.6
SKT				Sn	Sn	21 12 56.4	-0.1
SKT				IAML		21 12 57.7	
	comp=E,320nm,1.1s						
SUA	**Susitna One**	**0.77**	**78**		Pn	21 12 41.0	0.0
SUA				IAML		21 12 58.4	
	comp=E,385nm,0.9s						
SUA				IAML		21 13 01.5	
	comp=N,242nm,0.7s						
CAPN	**Captain Cook N**	**0.79**	**133**		Pn	21 12 41.8	+0.8
NCT	**North Crescent**	**0.81**	**202**		Pn	21 12 40.7	-0.7
NCT					Sn	21 12 56.6	-0.7
RED	**Redoubt Volcan**	**0.92**	**194**		Pn	21 12 41.5	-0.8
RED				IAML		21 12 58.6	
	comp=N,336nm,1.1s						
RED				IAML		21 12 59.3	
	comp=E,435nm,1.1s						
RED	**Redoubt Volcan**	**0.92**	**194**		Sn	21 12 58.3	-0.7
FIS	**Fire Island**	**1.03**	**98**	Pn	Pn	21 12 43.4	+0.3
FIS				IAML		21 13 04.0	
	comp=N,681nm,0.7s						
M22K	**Willow**	**1.14**	**66**		Pn	21 12 43.8	-0.4
M22K				Sn	Sn	21 13 02.7	+0.2
M19K	**Big River Lodg**	**1.16**	**302**		Pn	21 12 43.6	-0.9
M19K				IAML		21 13 02.3	
	comp=N,208nm,0.9s						
M19K				IAML		21 13 02.7	
	comp=E,203nm,0.8s						
N19K	**Bonanza Creek**	**1.17**	**246**		Pn	21 12 43.5	-1.2
N19K				Sn	Sn	21 13 00.8	-2.3
N19K				IAML		21 13 02.4	
	comp=N,192nm,0.8s						
N19K				IAML		21 13 02.7	
	comp=E,203nm,1.0s						
O20K	**Slope Mountain**	**1.24**	**187**		Sn	21 13 04.3	-0.2
RC01	**Rabbit Creek A**	**1.27**	**99**		Pn	21 12 45.1	-0.5
RC01				Sn	Sn	21 13 04.7	-0.2
RC01				IAML		21 13 06.0	
	comp=N,291nm,0.3s						
RC01				IAML		21 13 07.4	
	comp=E,157nm,0.4s						
SLKM	**Skilak Lake**	**1.30**	**127**		Pn	21 12 45.4	-0.6
SLKM				Sn	Sn	21 13 04.4	-1.2
ILW	**Iliamna West**	**1.32**	**198**		Pn	21 12 45.5	-0.8
L20K	**Farewell, AK**	**1.39**	**328**		Pn	21 12 45.9	-1.0
L20K				IAML		21 13 06.8	
	comp=N,208nm,1.1s						
L20K				IAML		21 13 07.1	
	comp=E,160nm,1.2s						
L20K	**Farewell, AK**	**1.39**	**328**		Sn	21 13 06.3	-0.9
ILSW	**Iliamna Southw**	**1.39**	**197**		Pn	21 12 46.3	-0.8
L22K	**Petersville**	**1.42**	**30**		Pn	21 12 46.8	-0.5
L22K				Sn	Sn	21 13 07.0	-1.0
L22K				IAML		21 13 08.8	
	comp=E,393nm,0.2s						
CUT	**Chulitna**	**1.46**	**41**		Pn	21 12 47.3	-0.4
CUT	**Chulitna**	**1.46**	**41**		Sn	21 13 08.6	-0.1
L19K	**White Mountain**	**1.49**	**307**		Pn	21 12 47.1	-0.9
L19K				IAML		21 13 08.9	
	comp=N,208nm,0.9s						
L19K	**White Mountain**	**1.49**	**307**		Sn	21 13 08.2	-1.1
O19K	**Port Alsworth**	**1.49**	**222**		Pn	21 12 46.8	-1.2
O19K				IAML		21 13 08.7	
	comp=N,334nm,0.6s						
O19K				IAML		21 13 09.8	
	comp=E,340nm,0.4s						
O22K	**Cooper Landing**	**1.52**	**122**		Pn	21 12 47.9	-0.5
PMR	**Palmer**	**1.56**	**78**		Pn	21 12 47.3	-1.4
PMR				IAML		21 13 10.1	
	comp=E,204nm,0.5s						
PMR	**Palmer**	**1.56**	**78**		Sn	21 13 09.4	-1.0
PMR	**Palmer**	**1.56**	**78**	P	Pn	21 12 47.4	-1.3
PMR	**Palmer**	**1.56**	**78**	P	Sn	21 13 09.8	-0.6
PPLA	**Purkeypile**	**1.59**	**2**		Pn	21 12 48.9	-0.4
PPLA				IAML		21 13 13.3	
	comp=E,119nm,0.9s						
GHO	**Glory Hole Cre**	**1.69**	**73**		Pn	21 12 49.2	-1.2
GHO				IAML		21 13 13.3	
	comp=E,350nm,0.4s						
GHO				IAML		21 13 13.5	
	comp=N,251nm,0.4s						
GHO	**Glory Hole Cre**	**1.69**	**73**		Sn	21 13 12.7	-0.7
HOM	**Homer**	**1.69**	**168**	Pn	Pn	21 12 49.9	-0.5
HOM	**Homer**	**1.69**	**168**		Sn	21 13 13.1	-0.2
M18K	**Stony River**	**1.70**	**278**		Pn	21 12 49.1	-1.3
BRLK	**Bradley Lake**	**1.71**	**155**		Pn	21 12 49.4	-1.2
P19K	**Oil Pt**	**1.73**	**196**		Pn	21 12 50.3	-0.5
P19K	**Oil Pt**	**1.73**	**196**		Sn	21 13 14.8	+0.7
BRSE	**Bradley Lake S**	**1.76**	**153**		Pn	21 12 50.1	-1.0
N18K	**Kilae Creek**	**1.85**	**252**		Sn	21 13 14.4	-2.4
N18K	**Kilae Creek**	**1.85**	**252**		Pn	21 12 51.1	-1.2
N18K				IAML		21 13 15.3	
	comp=N,148nm,1.2s						
SEW	**Seward**	**1.86**	**129**		Pn	21 12 51.1	-1.2
SEW				IAML		21 13 20.8	
	comp=N,294nm,0.8s						
KNK	**Knik Glacier**	**1.86**	**85**		Pn	21 12 51.2	-1.2
KNK				IAML		21 13 17.7	
	comp=N,259nm,0.6s						
KNK				IAML		21 13 24.6	
	comp=E,159nm,0.3s						
CNPM	**China Poot**	**1.87**	**163**		Pn	21 12 51.5	-1.0
CNPM	**China Poot**	**1.87**	**163**		Sn	21 13 15.5	-1.6
SML	**Sawmill**	**1.97**	**74**		Pn	21 12 52.3	-1.4
SML				IAML		21 13 19.1	
	comp=N,165nm,1.0s						
SML				IAML		21 13 20.3	
	comp=E,178nm,0.9s						
PWL	**Port Wells**	**1.99**	**101**		Pn	21 12 52.3	-1.6
PWL				IAML		21 13 19.9	
	comp=E,197nm,0.4s						
PWL	**Port Wells**	**1.99**	**101**		Sn	21 13 18.6	-1.0
AUL	**Augustine Lava**	**2.01**	**197**		Pn	21 12 53.8	-0.5
AUW	**Augustine West**	**2.03**	**197**		Pn	21 12 53.9	-0.6
AUCH	**Augustine Cone**	**2.03**	**197**		Pn	21 12 54.0	-0.6
AGU	**Augustine-Summ**	**2.04**	**196**		Pn	21 12 54.0	-0.7
AUJK	**Augustine Jueg**	**2.04**	**196**		Pn	21 12 53.9	-0.7
O18K	**Koktuh Hills**	**2.04**	**226**		Pn	21 12 53.5	-1.1
O18K				IAML		21 13 20.9	
	comp=N,99nm,1.0s						
K20K	**Telida**	**2.21**	**339**		Pn	21 12 55.4	-1.2
L18K	**Granite Mounta**	**2.27**	**296**		Pn	21 12 56.3	-1.1
L18K				IAML		21 13 24.8	
	comp=N,118nm,1.0s						
TRF	**Thorofare Moun**	**2.34**	**23**		Pn	21 12 57.7	-0.8
TRF				IAML		21 13 28.9	
	comp=N,159nm,1.1s						
TRF				IAML		21 13 29.3	
	comp=E,168nm,0.5s						
SCM	**Sheep Creek Mo**	**2.44**	**75**		Pn	21 12 58.4	-1.2
SCM	**Sheep Creek Mo**	**2.44**	**75**	IAML		21 13 32.2	
	comp=N,137nm,0.7s						
M17K	**Holitna River**	**2.47**	**274**		Pn	21 12 58.8	-1.2
M17K	**Holitna River**	**2.47**	**274**	IAML		21 13 30.4	
	comp=E,73nm,0.8s						
Q19K	**Cape Douglas,**	**2.48**	**196**		Pn	21 12 59.0	-1.1
Q19K	**Cape Douglas,**	**2.48**	**196**	IAML		21 13 26.7	
Q19K	comp=E,168nm,1.0s			IAML		21 13 54.7	
	comp=N,186nm,1.0s						
N17K	**Nushagak Hills**	**2.51**	**254**		Pn	21 12 59.1	-1.3
N17K	**Nushagak Hills**	**2.51**	**254**	IAML		21 13 29.4	
	comp=N,68nm,1.0s						
WAT6	**Susitna Watana**	**2.51**	**57**		Pn	21 12 59.7	-0.9
GLI	**Glacier Island**	**2.57**	**97**	IAML		21 13 32.6	
	comp=N,154nm,0.5s						
GLI				IAML		21 13 33.2	
	comp=E,158nm,0.5s						
CHUM	**Lake Minchumin**	**2.58**	**360**		Pn	21 12 59.8	-1.5
RND	**Reindeer**	**2.65**	**36**	IAML		21 13 33.9	
	comp=E,114nm,0.2s						
RND				IAML		21 13 34.3	
	comp=N,107nm,0.6s						
SYI	**Shuyak Island**	**2.71**	**181**		Pn	21 13 01.8	-1.2
SYI					Sn	21 13 32.9	-2.9
SYI				IAML		21 13 34.6	
	comp=N,138nm,0.6s						
SYI				IAML		21 13 35.6	
	comp=E,168nm,0.3s						
P23K	**Montague Islan**	**2.75**	**116**	Pn	Pn	21 13 02.3	-1.2
BPAW	**Bear Paw Mtn.**	**2.87**	**12**		Pn	21 13 03.4	-1.6
BPAW	**Bear Paw Mtn.**	**2.87**	**12**	IAML		21 13 38.5	
	comp=N,91nm,0.8s						
BPAW				IAML		21 13 39.5	
	comp=E,52nm,0.4s						
MCK	**McKinley**	**2.89**	**31**		Pn	21 13 04.5	-0.8
MCK	**McKinley**	**2.89**	**31**	IAML		21 13 41.8	
	comp=E,94nm,0.4s						
MCK				IAML		21 13 42.6	
	comp=N,67nm,0.6s						
FID	**Port Fidalgo**	**2.90**	**99**		Pn	21 13 03.1	-2.3
FID					Sn	21 13 39.2	-0.9
FID				IAML		21 13 40.6	
	comp=N,126nm,0.4s						
FID				IAML		21 13 41.8	
	comp=E,110nm,0.6s						
DHY	**Denali Highway**	**2.91**	**50**		Pn	21 13 04.8	-0.9
L17K	**Donlin**	**2.96**	**289**		Pn	21 13 05.1	-1.2
J18K	**Innoko River**	**2.98**	**318**		Pn	21 13 05.4	-1.1
J18K	**Innoko River**	**2.98**	**318**	IAML		21 13 41.3	
	comp=N,54nm,1.1s						
J18K				IAML		21 13 41.4	
	comp=E,41nm,0.9s						
HIN	**Hinchinbrook I**	**2.99**	**105**		Pn	21 13 04.4	-2.2
HIN	**Hinchinbrook I**	**2.99**	**105**	IAML		21 13 49.2	
	comp=E,103nm,1.2s						
J20K	**Nowinta River**	**3.00**	**344**		Pn	21 13 05.3	-1.4
KARR	**Katmai Rainbow**	**3.07**	**204**		Pn	21 13 06.8	-0.8
KLU	**Klutina**	**3.08**	**84**		Pn	21 13 06.3	-1.5
KLU	**Klutina**	**3.08**	**84**	IAML		21 13 45.8	
	comp=E,72nm,0.3s						
J19K	**Poorman**	**3.10**	**332**		Pn	21 13 06.6	-1.3
K17K	**Iditarod**	**3.15**	**299**		Pn	21 13 07.7	-1.1
K17K	**Iditarod**	**3.15**	**299**	IAML		21 13 46.0	
	comp=N,79nm,0.9s						
K17K				IAML		21 13 46.1	
	comp=E,73nm,0.9s						
BWN	**Browne**	**3.16**	**23**	Pn	Pn	21 13 08.3	-0.5
BWN				IAML		21 14 06.2	
	comp=E,73nm,0.7s						
BWN				IAML		21 14 09.3	
	comp=N,88nm,0.5s						
DIV	**Divide**	**3.17**	**90**		Pn	21 13 07.5	-1.6
DIV	**Divide**	**3.17**	**90**	Sn	Sn	21 13 45.1	-1.5
DIV				IAML		21 13 46.2	
	comp=E,109nm,0.4s						
M16K	**Timber Creek**	**3.23**	**268**		Pn	21 13 08.6	-1.1
N16K	**Nishlik Lake**	**3.26**	**258**		Pn	21 13 09.1	-1.1
EYAK	**Cordova Ski Ar**	**3.29**	**101**		Pn	21 13 08.7	-1.9
EYAK	**Cordova Ski Ar**	**3.29**	**101**	IAML		21 13 49.3	
	comp=E,48nm,0.9s						
EYAK				IAML		21 13 49.3	
	comp=N,39nm,0.4s						
EYAK	**Cordova Ski Ar**	**3.29**	**101**	P	Pn	21 13 08.7	-1.8
EYAK	**Cordova Ski Ar**	**3.29**	**101**	S	Sn	21 13 48.1	-1.3
O16K	**Kokwok River B**	**3.34**	**242**		Pn	21 13 10.1	-1.1
L16K	**Owhat River**	**3.46**	**280**		Pn	21 13 11.4	-1.3
ACHA	**Angle Creek He**	**3.46**	**207**		Pn	21 13 12.0	-0.9
MGLS	**Mageik Landsli**	**3.50**	**206**		Pn	21 13 12.7	-0.6
ANCK	**Angle Creek**	**3.51**	**209**		Pn	21 13 12.7	-0.9
KDAK	**Kodiak Island**	**3.54**	**182**		Pn	21 13 11.2	-2.6
KDAK				IAML		21 13 52.2	
	comp=N,60nm,0.8s						
KDAK				IAML		21 13 54.4	
	comp=N,72nm,1.1s						
HARP	**HAARP**	**3.56**	**69**		Pn	21 13 14.0	-0.1
CAHL	**Cahill**	**3.60**	**206**		Pn	21 13 14.2	-0.5
NEA2	**Nenana**	**3.61**	**23**		Pn	21 13 12.8	-1.9
NEA2	**Nenana**	**3.61**	**23**	IAML		21 13 54.0	
NEA2	comp=E,25nm,0.9s			IAML		21 13 55.3	
	comp=N,34nm,0.5s						
PAX	**Paxson**	**3.62**	**60**		Pn	21 13 14.7	-0.2
PAX	**Paxson**	**3.62**	**60**	IAML		21 13 58.2	
	comp=E,59nm,0.4s						
PAX				IAML		21 14 12.0	
	comp=N,74nm,1.1s						
I20K	**Naaghedeneel**	**3.63**	**345**		Pn	21 13 13.7	-1.3
I20K	**Naaghedeneel**	**3.63**	**345**	IAML		21 13 47.7	
	comp=N,68nm,1.2s						
I20K				IAML		21 14 43.3	
	comp=E,55nm,1.1s						
KJL	**Kejulik**	**3.66**	**208**		Pn	21 13 15.0	-0.5
WRH	**Wood River Hil**	**3.71**	**30**		Pn	21 13 14.5	-1.5
N25K	**Chitina, Valde**	**3.71**	**82**		Pn	21 13 14.7	-1.5
N25K	**Chitina, Valde**	**3.71**	**82**	IAML		21 14 02.2	
	comp=E,53nm,0.4s						
N25K				IAML		21 14 02.6	
	comp=N,61nm,0.6s						
BMRM	**Bremner River**	**3.75**	**92**		Pn	21 13 14.8	-1.9
BMRM	**Bremner River**	**3.75**	**92**	IAML		21 14 01.0	
	comp=E,32nm,0.5s						
BMRM				IAML		21 14 04.4	
	comp=N,39nm,0.5s						
J17K	**VABM Dome**	**3.78**	**307**		Pn	21 13 15.7	-1.2
J17K				IAML		21 13 59.5	
	comp=N,30nm,1.0s						
J17K				IAML		21 14 00.7	
	comp=E,27nm,1.2s						
RAGM	**Ragged Mountai**	**3.85**	**101**		Pn	21 13 16.1	-1.9
RAGM	**Ragged Mountai**	**3.85**	**101**	IAML		21 14 26.0	
	comp=E,63nm,1.1s						
WACK	**Wrangell Chich**	**3.87**	**76**		Pn	21 13 17.8	-0.5
K24K	**Donnelly Dome**	**3.92**	**48**	Pn	Pn	21 13 20.0	+1.1
CCB	**Clear Creek Bu**	**3.93**	**30**		Pn	21 13 17.4	-1.5
CCB	**Clear Creek Bu**	**3.93**	**30**	IAML		21 14 06.9	
	comp=E,26nm,0.6s						
WASW	**Wrangell South**	**3.94**	**77**		Pn	21 13 18.4	-0.8
N15K	**Kwethluk River**	**3.99**	**257**		Pn	21 13 19.0	-0.7
N15K	**Kwethluk River**	**3.99**	**257**	IAML		21 14 24.7	
	comp=N,26nm,0.9s						
N15K				IAML		21 14 32.2	
	comp=E,22nm,1.1s						
GCSA	**Galena City Sc**	**4.03**	**331**		Pn	21 13 19.1	-1.1
PLK5	**Peulik 5**	**4.05**	**217**		Pn	21 13 19.9	-0.7
I23K	**Minto, Yukon-K**	**4.08**	**18**		Pn	21 13 19.6	-1.3
GLB	**Gilahina Butte**	**4.09**	**84**		Pn	21 13 19.8	-1.3
GLB	**Gilahina Butte**	**4.09**	**84**	IAML		21 14 09.3	
	comp=E,36nm,0.4s						
GLB				IAML		21 14 09.5	
	comp=N,26nm,1.0s						
COLA	**College**	**4.11**	**28**		Pn	21 13 20.2	-1.1
COLA	**College**	**4.11**	**28**	P	Pn	21 13 20.5	-0.8
COLA	**College**	**4.11**	**28**	S	Sn	21 14 09.3	+0.7
M15K	**Kasigluk River**	**4.12**	**265**		Pn	21 13 20.2	-1.3
OHAK	**Old Harbor**	**4.13**	**187**		Pn	21 13 18.6	-3.1
OHAK	**Old Harbor**	**4.13**	**187**	IAML		21 14 11.7	
	comp=E,28nm,1.0s						
OHAK				IAML		21 14 17.4	
	comp=N,38nm,1.1s						
OHAK	**Old Harbor**	**4.13**	**187**	P	Pn	21 13 18.3	-3.3
PLK4	**Peulik 4**	**4.23**	**211**		Pn	21 13 22.6	-0.4
PLK4				IAML		21 14 12.2	
	comp=N,35nm,0.6s						
PLK4				IAML		21 14 14.1	
	comp=E,48nm,0.6s						
ILAR	**Eielson Array**	**4.26**	**33**		Pn	21 13 21.4	-1.9
VRDI	**Verde Repeater**	**4.28**	**87**		Pn	21 13 22.2	-1.6
VRDI	**Verde Repeater**	**4.28**	**87**	IAML		21 14 13.9	
	comp=N,16nm,0.5s						
VRDI				IAML		21 14 14.1	
	comp=E,19nm,1.2s						
BERG	**Berg Lake**	**4.31**	**99**	Pn	Pn	21 13 23.8	-0.3
O15K	**Ungalikthiuk R**	**4.31**	**244**	Pn	Pn	21 13 22.9	-1.2
O15K				IAML		21 14 12.5	
	comp=E,17nm,1.1s						
J16K	**Anvik River**	**4.35**	**301**		Pn	21 13 22.8	-1.6
H20K	**Anotleneega Mo**	**4.35**	**346**		Pn	21 13 23.4	-1.2
MENT	**Mentasta**	**4.35**	**64**		Pn	21 13 24.4	-0.2
L15K	**Ungalak Mounta**	**4.41**	**279**		Pn	21 13 23.9	-1.5
POKR	**Poker Plat Res**	**4.41**	**28**		Pn	21 13 24.3	-1.1
POKR	**Poker Plat Res**	**4.41**	**28**	IAML		21 14 18.6	
	comp=N,34nm,0.6s						
POKR				IAML		21 14 19.0	
	comp=E,21nm,1.2s						
MCARA	**McCarthy VSAT**	**4.47**	**85**		Pn	21 13 25.5	-0.7
MCARA	**McCarthy VSAT**	**4.47**	**85**	IAML		21 14 20.4	
	comp=N,40nm,1.1s						
K15K	**Wolf Creek Mou**	**4.48**	**287**		Pn	21 13 25.1	-1.2
DOT	**Dot Lake**	**4.49**	**55**		Pn	21 13 25.9	-0.5
CRQM	**Cirque**	**4.50**	**93**		Pn	21 13 26.6	0.0
CRQM				IAML		21 14 19.7	
	comp=N,34nm,1.2s						
CRQM				IAML		21 14 19.9	
	comp=E,29nm,0.9s						
KHIT	**Khitrov Hills**	**4.51**	**97**		Pn	21 13 25.8	-1.0
GRIN	**Grindle Hills**	**4.53**	**99**		Pn	21 13 26.3	-0.6
L26K	**Log Cabin Wild**	**4.54**	**64**		Pn	21 13 26.6	-0.5
M26K	**Nabesna, AK**	**4.55**	**72**	IAML		21 14 48.0	
	comp=N,25nm,0.5s						
M26K				IAML		21 14 48.6	
	comp=E,25nm,0.5s						
J25K	**Salcha River,**	**4.58**	**41**	IAML		21 14 21.1	
	comp=E,40nm,0.3s						
H22K	**Ishtalitna Cre**	**4.62**	**5**		Pn	21 13 26.9	-1.2
H19K	**Roundabout Mou**	**4.62**	**338**		Pn	21 13 26.7	-1.4
TGL	**Tana Glacier**	**4.65**	**93**		Pn	21 13 27.2	-1.4
TGL	**Tana Glacier**	**4.65**	**93**	IAML		21 14 22.6	
	comp=N,29nm,0.8s						
TGL				IAML		21 14 25.7	
	comp=E,25nm,0.4s						
I17K	**Unalakleet**	**4.66**	**307**		Pn	21 13 27.6	-0.9
I17K				IAML		21 14 22.6	
	comp=N,14nm,1.0s						
SCRK	**Sand Creek**	**4.68**	**52**	IAML		21 14 21.8	
	comp=E,28nm,0.9s						
SCRK				IAML		21 14 21.8	
	comp=N,30nm,0.5s						
H23K	**Yukon River**	**4.70**	**14**		Pn	21 13 27.9	-1.3
WAX	**Waxell Ridge**	**4.70**	**96**		Pn	21 13 27.5	-1.8
M14K	**Bethel**	**4.72**	**267**		Pn	21 13 28.4	-1.1
M14K	**Bethel**	**4.72**	**267**	IAML		21 14 43.2	
	comp=E,11nm,0.9s						
M14K				IAML		21 15 36.1	
	comp=N,15nm,1.1s						
H18K	**Honhosa River**	**4.73**	**327**		Pn	21 13 28.5	-1.0
IMAR	**Indian Mountai**	**4.73**	**353**	Pn	Pn	21 13 28.7	-1.0
PTPK	**Patty Peak**	**4.76**	**87**		Pn	21 13 29.4	-0.8
SNH	**Sunshine Point**	**4.79**	**100**	Pn	Pn	21 13 30.4	0.0
N14K	**Kuskokwak Cree**	**4.82**	**257**	Pn	Pn	21 13 28.6	-2.2
N14K				IAML		21 14 22.7	
	comp=N,22nm,1.1s						
N14K				IAML		21 15 44.9	
	comp=E,22nm,0.7s						
KIAG	**Kiagna River**	**4.84**	**90**		Pn	21 13 30.0	-1.3
SII	**Sitkinak Islan**	**4.86**	**192**	Pn	Pn	21 13 30.9	-0.6
SII	**Sitkinak Islan**	**4.86**	**192**	P	Pn	21 13 30.0	-1.5
O14K	**Tigyukauivet M**	**4.91**	**249**	Pn	Pn	21 13 30.9	-1.1
O14K				IAML		21 16 57.7	
	comp=E,9.6nm,1.2s						
ISLE	**Juniper Island**	**4.91**	**94**		Pn	21 13 31.8	-0.5
ISLE				IAML		21 14 27.6	
	comp=E,25nm,0.9s						
ISLE				IAML		21 14 39.6	
	comp=N,24nm,1.0s						
H24K	**Noodor Dome**	**4.96**	**22**		Pn	21 13 31.8	-0.9
L14K	**Kuka Creek**	**5.00**	**275**		Pn	21 13 32.4	-0.7
L14K	**Kuka Creek**	**5.00**	**275**	IAML		21 15 23.5	
	comp=N,15nm,1.1s						
L14K				IAML		21 15 39.2	
	comp=E,14nm,1.2s						
H17K	**Granite Mounta**	**5.01**	**320**		Pn	21 13 32.7	-0.7
M27K	**Edge Creek, AK**	**5.06**	**73**		Pn	21 13 34.6	+0.5
M27K				IAML		21 14 34.0	
	comp=E,19nm,1.0s						
M27K				IAML		21 14 36.3	
	comp=N,15nm,0.9s						
BAGL	**Bagley Icefiel**	**5.06**	**95**		Pn	21 13 33.8	-0.2
J26L	**Joseph Creek**	**5.12**	**48**		Pn	21

F25K	**Christian Rive**	**6.93**	**22**			Pn	21 13 57.5	-1.7
E24K	**Your Creek**	**6.99**	**12**	Pn		Pn	21 13 58.6	-1.3
BMAR	**Burnt Mountain**	**6.99**	**25**	Pn		Pn	21 13 58.3	-1.7
E17K	**Hotham Inlet**	**7.12**	**329**			Pn	21 14 00.2	-1.5
E20K	**Nigu River**	**7.17**	**348**			Pn	21 14 02.1	-0.3
E21K	**Killik River**	**7.20**	**355**	Pn		Pn	21 14 01.8	-0.9
HYT	**Haines Junctio**	**7.20**	**87**			Pn	21 14 02.0	-0.9
G27K	**Doyon Strip**	**7.22**	**36**			Pn	21 14 00.9	-2.1
K29M	**Barlow Dome**	**7.29**	**63**	Pn		Pn	21 14 03.7	-0.3
F26K	**Sheenjek River**	**7.31**	**25**	Pn		Pn	21 14 02.4	-1.8
SDPT	**Sand Point**	**7.36**	**219**	P		Pn	21 14 06.2	+1.3
P29M	**Windy Craggy**	**7.40**	**97**			Pn	21 14 05.4	-0.1
M30M	**Minto, Yukon**	**7.43**	**73**	Pn		Pn	21 14 05.8	-0.1
TOLK	**Toolik Lake Re**	**7.45**	**8**	Pn		Pn	21 14 06.3	+0.1
I29M	**Ogilvie Camp,**	**7.49**	**51**	Pn		Pn	21 14 06.2	-0.5
D22K	**Ayikyak River**	**7.60**	**359**	Pn		Pn	21 14 07.7	-0.4
D19K	**Kuna River**	**7.62**	**344**	Pn		Pn	21 14 08.2	-0.2
D20K	**Etivluk River**	**7.65**	**348**	Pn		Pn	21 14 09.0	+0.2
H29M	**Whitestone**	**7.89**	**45**	Pn		Pn	21 14 11.8	-0.3
O30N	**Mendenhall**	**7.89**	**87**	Pn		Pn	21 14 11.8	-0.4
N31M	**Braeburn, Yuko**	**7.94**	**81**	Pn		Pn	21 14 12.7	-0.1
J30M	**Hart River**	**7.98**	**59**	Pn		Pn	21 14 14.1	+0.6
D24K	**Happy Valley**	**8.01**	**9**	Pn		Pn	21 14 12.9	-0.7
I30M	**Mount Dempster**	**8.18**	**54**	Pn		Pn	21 14 17.0	+1.0
E27K	**Coleen River**	**8.27**	**29**	Pn		Pn	21 14 16.0	-1.2
F28M	**Old Crow**	**8.29**	**35**			Pn	21 14 15.8	-1.5
G29M	**Pine Creek**	**8.39**	**42**	Pn		Pn	21 14 18.7	-0.1
D25K	**Kavik River**	**8.41**	**15**	Pn		Pn	21 14 18.5	-0.6
WHY	**Whitehorse**	**8.50**	**87**	Pn		Pn	21 14 19.4	-1.0
C24K	**Franklin Bluff**	**8.57**	**8**	Pn		Pn	21 14 20.6	-0.6
C23K	**Itkillik River**	**8.59**	**4**	Pn		Pn	21 14 20.5	-0.9
S31K	**Pelican**	**8.80**	**105**	Pn		Pn	21 14 24.1	-0.3
G30M	**tAoh Zraii Nji**	**9.02**	**44**	Pn		Pn	21 14 26.3	-1.0
C27K	**Jago River**	**9.07**	**19**	Pn		Pn	21 14 27.2	-0.7
B22K	**Teshekpuk Lake**	**9.08**	**358**	Pn		Pn	21 14 26.3	-1.7
BESE	**Bessie Mountai**	**9.17**	**100**	Pn		Pn	21 14 29.8	+0.4
H31M	**Peel River**	**9.18**	**53**	Pn		Pn	21 14 29.3	-0.1
D27M	**Malcolm River**	**9.25**	**26**	Pn		Pn	21 14 29.2	-1.2
SIT	**Sitka**	**9.69**	**109**	P		Pn	21 14 37.0	+0.7

*NEIC **29** 21:14:45.4±2.4, 43.°89N±0.°09×105.°5W±0.°1, h0km±1km, ML3.5/84, Error ellipse: s-maj=18.5km s-min=8.3km az=41.0*
*IDC **29** 21:14:47.0±1.3, 43.°97N×105.°52W, h0km, mbtmp3.2/7, ML2.9/6, Error ellipse: s-maj=22.0km s-min=9.7km az=144.0*

ISC 29 21:14:46.7±1.0, **44.°02N**±0.°09×**105.°32W**±0.°06, **h0**km, **n38,** σ1§**87**/29, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**83**	Pg	**Pb**	**21 15 06.4**	**+0.5**
K22A	**Casper**	**1.63**	**213**		**Pn**	**21 15 13.4**	**-3.3**
K22A	408nm,0.3s			IAML		21 15 39.3	
K22A	505nm,0.3s			IAML		21 15 40.5	
RLMT	**Red Lodge**	**3.03**	**293**		**Pn**	**21 15 35.6**	**-0.5**
RLMT	100nm,0.4s			IAML		21 16 33.5	
BW06	**Boulder Array**	**3.33**	**249**		**Pn**	**21 15 38.9**	**-1.4**
BW06	80nm,0.7s			IAML		21 16 38.5	
PD31	**Pinedale Array**	**3.33**	**249**		**Pn**	**21 15 39.5**	**-0.8**
PDAR	**Pinedale Array** 5.6nm,0.3s,baz=72,slow=17,SNR=101	**3.33**	**249**	Pn	**Pn**	**21 15 40.3**	**0.0**
PDAR	19nm,0.3s,baz=66,slow=31,SNR=4.5			Lg	Lg	21 16 27.1	
PDAR	**Pinedale Array**	**3.33**	**249**		**Pn**	**21 15 39.1**	**-1.2**
YNE	**Yellowstone No**	**3.49**	**288**		**Pn**	**21 15 40.6**	**-2.0**
YNE	comp=N,84nm,0.6s			IAML		21 16 49.0	
YNE	comp=E,104nm,0.4s			IAML		21 16 49.4	
YMP	**Mirror Lake Pl**	**3.54**	**283**		**Pn**	**21 15 41.7**	**-1.5**
YMP	comp=N,128nm,0.7s			IAML		21 16 48.2	
YMP	comp=E,130nm,1.0s			IAML		21 16 52.4	
LKWY	**Lake**	**3.69**	**280**		**Pn**	**21 15 44.4**	**-0.8**
LKWY	comp=E,100nm,0.6s			IAML		21 16 12.3	
HAYD	**Hayden**	**3.78**	**203**		**Pn**	**21 15 43.2**	**-3.3**
HAYD	comp=E,78nm,1.1s			IAML		21 16 54.1	
HAYD	comp=N,55nm,1.3s			IAML		21 17 25.3	
H17A	**Grant Village**	**3.80**	**277**		**Pn**	**21 15 45.3**	**-1.4**
LOHW	**Long Hollow**	**3.84**	**266**		**Pn**	**21 15 44.3**	**-3.0**
LOHW					**Pb**	**21 15 56.2**	**+0.7**
YNR	**Norris Junctio**	**3.90**	**282**		**Pn**	**21 15 44.3**	**-3.8**
OGNE	**Ogallala**	**3.92**	**141**	Pn	**Pn**	**21 15 47.3**	**-1.0**
MOOW	**Moose Ponds**	**3.93**	**268**		**Pn**	**21 15 47.2**	**-1.3**
YPP	**Pitchstone Pla**	**3.95**	**276**		**Pn**	**21 15 46.5**	**-2.4**
SNOW	**Snow King Moun**	**3.98**	**264**		**Pn**	**21 15 46.5**	**-2.7**
SNOW	comp=N,83nm,1.4s			IAML		21 17 07.3	
SNOW	comp=N,78nm,1.3s			IAML		21 17 11.8	
YFT	**Old Faithful**	**3.99**	**278**	Pn	**Pn**	**21 15 47.7**	**-1.6**
YFT	comp=E,41nm,1.4s			IAML		21 16 58.9	
YHH	**Holmes Hill**	**4.04**	**283**		**Pn**	**21 15 49.4**	**-0.7**
YMR	**Madison River**	**4.10**	**281**		**Pn**	**21 15 49.8**	**-1.1**
YMR	comp=E,50nm,1.0s			IAML		21 17 11.4	
YMR	comp=N,59nm,1.1s			IAML		21 17 50.9	
FXWY	**Fox Creek**	**4.14**	**267**		**Pn**	**21 15 51.9**	**+0.4**
YHB	**Horse Butte** comp=N,32nm,1.0s	**4.27**	**282**	IAML		21 17 10.7	
YHL	**Hebgen Lake** comp=N,57nm,1.2s	**4.28**	**283**	IAML		21 17 10.0	
YHL	comp=E,57nm,1.1s			IAML		21 17 31.2	
O20A	**White River Ci** comp=E,58nm,0.7s	**4.45**	**210**	IAML		21 17 02.3	
O20A	comp=E,75nm,1.6s			IAML		21 17 16.6	
RDMU	**Red Mountain** comp=N,40nm,1.3s	**4.67**	**224**	IAML		21 17 10.6	
RDMU	comp=E,60nm,1.2s			IAML		21 17 14.8	
BOZ	**Bozeman (W)** comp=E,36nm,0.8s	**4.76**	**292**	IAML		21 17 24.1	
BOZ	comp=E,24nm,0.9s			IAML		21 17 24.6	
Q24A	**Divide** comp=N,26nm,0.6s	**5.05**	**178**	IAML		21 17 23.9	
HWUT	**Hardware Ranch** comp=N,43nm,1.2s	**5.19**	**244**	IAML		21 17 45.3	
BSUT	**Blindstream Ca** comp=N,22nm,1.5s	**5.33**	**231**	IAML		21 17 41.3	
BSUT	comp=E,22nm,2.1s			IAML		21 17 49.8	
DLMT	**Dillon** comp=E,26nm,2.9s	**5.36**	**287**	IAML		21 17 39.0	
DLMT	comp=E,27nm,4.0s			IAML		21 18 43.7	
ELK	**Elko** comp=E,0.5nm,0.3s,baz=67,slow=7.0,SNR=5.6 comp=E,0.9nm,0.3s	**8.04**	**249**	Pn	**Pn**	**21 16 46.4**	**+1.5**
ULM	**Lac du Bonnet** comp=E,0.8nm,0.3s,baz=226,slow=13,SNR=3.5	**8.96**	**43**	Pn	**Pn**	**21 16 57.4**	**+0.1**
ULM	comp=E,0.3nm,0.3s,baz=151,slow=19,SNR=1.5 comp=E,1.5nm,0.3s			Lg	Lg	21 19 27.6	
ANMO	**Albuquerque** comp=E,0.1nm,0.3s,baz=4.4,slow=13,SNR=2.7	**9.11**	**186**	Pg	Pn	21 17 31.7	+32
NEW	**Newport** comp=E,0.1nm,0.3s,baz=108,slow=19,SNR=1.5	**9.22**	**302**	Pn	**Pn**	**21 16 59.5**	**-1.5**
NEW	comp=E,0.2nm,0.3s,baz=95,slow=11,SNR=1.9 comp=E,0.9nm,0.5s			Lg	Lg	21 19 28.4	
NVAR	**Mina Array Bea** comp=E,0.1nm,0.3s,baz=48,slow=9.6,SNR=6.2 comp=E,0.7nm,0.6s	**11.25**	**245**	Pn	**Pn**	**21 17 29.9**	**+0.9**
YBH	**Yreka Blue Hor** baz=90,slow=4.0,SNR=3.7 comp=E,0.1nm,0.7s	**12.96**	**266**	Pn	**Pn**	**21 17 54.6**	**+2.4**
YKA	**Yellowknife Ar** comp=E,0.1nm,0.3s,baz=144,slow=11,SNR=4.2 comp=E,0.3nm,0.5s	**19.28**	**347**	P	**Pn**	**21 19 13.6**	**0.0**

*NOU **29** 21:16:32.8, 21.°06S×176.°73W, h491km, mb4.5/4, Fiji Islands Region*
*IDC **29** 21:16:39.3±5.0, 19.°83S×177.°63W, h332km±46km, mb3.4/6, mbtmp4.1/7, Error ellipse: s-maj=27.5km s-min=15.5km az=99.0*

ISC 29 21:16:46.3±0.9, **20.°1S**±0.°1×**177.°6W**±0.°2, **h400**km, **n14,** σ2§**45**/16, **mb3.4/6, Fiji Islands Region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.17**	**326**	P	**Pn**	**21 17 46.2**	**+2.7**
TAVE	**Taveuni**	**4.01**	**326**	P	**Pn**	**21 18 01.9**	**+3.3**
DGTI	**Dogotuki**	**4.54**	**325**	P	**Pn**	**21 18 06.8**	**+3.0**
MSVF	**Nonsavu**	**4.76**	**298**	P	**Pn**	**21 18 08.1**	**+2.0**
URZ	**Urewera** 2.5nm,0.4s,baz=18,slow=12,SNR=2.1	**18.72**	**193**	P	**P**	**21 20 36.3**	**-2.0**
URZ				S	**S**	**21 23 54.5**	**+5.3**
STKA	**Stephens Creek** 2.6nm,0.5s,baz=26,slow=18,SNR=6.0	**38.36**	**244**	P	**P**	**21 23 29.9**	**-1.2**
ASAR	**Alice Springs** 1.4nm,0.5s,baz=73,slow=11,SNR=6.4 1.4nm,0.5s	**45.03**	**256**	P	**P**	**21 24 23.2**	**-1.3**
ASAR	14nm,0.7s,baz=92,slow=8.3,SNR=101			PcP	**PcP**	**21 25 56.6**	**-1.1**
WRA	**Warramunga Arr** 3.4nm,0.3s,baz=96,slow=7.4,SNR=141 3.4nm,0.3s	**45.08**	**262**	P	**P**	**21 24 23.2**	**-1.7**
VNDA	**Vanda** 1.0nm,1.0s,baz=41,slow=11,SNR=2.2 1.0nm,1.0s	**58.39**	**185**	P	**P**	**21 26 02.4**	**+1.3**
ILAR	**Eielson Array** 0.2nm,0.9s,baz=210,slow=4.9,SNR=4.9 0.2nm,0.9s	**87.79**	**13**	P	**P**	**21 28 49.3**	**-1.5**
PDAR	**Pinedale Array** 0.3nm,0.7s,baz=248,slow=4.0,SNR=3.3 0.3nm,0.7s	**88.35**	**43**	P	**P**	**21 28 54.5**	**+0.2**
BRTR	**Keskin Array B** 0.6nm,0.8s,baz=55,slow=7.6,SNR=3.6	**146.85**	**313**	PKPbc	**PKPbc**	**21 35 42.4**	**-0.4**
MMAI	**Mount Meron Ar** 1.1nm,0.6s,baz=72,slow=1.8,SNR=5.2	**147.96**	**301**	PKPbc	**PKPbc**	**21 35 45.8**	**0.0**
GERES	**GERESS Array B** 0.2nm,0.4s,baz=36,slow=1.8,SNR=1.9	**149.88**	**345**	PKPbc	**PKPbc**	**21 35 48.4**	**-1.7**

*TEH **29** 21:23:04.7, 27.°62N×56.°53E, h6km±36km*
*OMAN **29** 21:23:04.9±0.1, 27.°82N×56.°48E, h10km, ml3.3/15, Error ellipse: s-maj=1.7km s-min=1.1km az=32.0*

ISC 29 21:23:05.4±1.4, **27.°71N**±0.°04×**56.°49E**±0.°04, **h1**km±12km, **n38,** σ1§**45**/49, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.26**	**170**	Pg	**Pg**	**21 23 09.3**	**-1.1**
GENO	**Geno**	**0.41**	**223**	Pg	**Pg**	**21 23 13.3**	**0.0**
BNDS	**Bandar-Abbas**	**0.41**	**223**	Pg	**Pg**	**21 23 13.5**	**+0.2**
KHNJ	**Kahnooj**	**1.11**	**77**	Pg	**Pb**	**21 23 25.9**	**-1.4**
KHNJ				Sg	**Sg**	**21 23 43.0**	**+2.1**
SHME	**Shamm**	**1.68**	**191**	P	**Pb**	**21 23 36.7**	**-0.3**
SHME				S	**Sb**	**21 23 59.5**	**+0.8**
BANOM	**Banah**	**1.78**	**185**	P	**Pn**	**21 23 37.6**	**+0.3**
BANOM				S	**Sb**	**21 24 02.2**	**+0.4**
LAR1	**LAR**	**1.87**	**269**	Pn	**Pb**	**21 23 40.4**	**0.0**
NGRK	**Negar Kerman**	**1.94**	**6**	Pn	**Pb**	**21 23 42.5**	**+0.7**
KBAM	**BAM**	**2.24**	**50**	Pn	**Pb**	**21 23 45.5**	**-1.2**
CHMN	**Cheshme madani**	**2.34**	**23**	Pn	**Pb**	**21 23 47.2**	**-1.3**
MASF	**Masafi**	**2.34**	**187**	P	**Pn**	**21 23 45.4**	**+0.4**
MASF				S	**Sb**	**21 24 15.9**	**-2.0**
MDH	**Madha**	**2.40**	**184**	P	**Pn**	**21 23 46.0**	**+0.2**
MDH				S	**Sb**	**21 24 18.5**	**-1.0**
KHGB	**Koh Gabri**	**2.66**	**360**	Pn	**Pb**	**21 23 52.7**	**-1.3**
UOSS	**Minazif**	**2.76**	**185**	P	**Pn**	**21 23 51.6**	**+0.8**
UOSS				S	**Sn**	**21 24 26.7**	**+1.9**
NAZ	**Nazwa, Dubai**	**2.81**	**195**	P	**Pn**	**21 23 51.9**	**+0.5**
KRM1	**Kerman Provinc**	**2.87**	**14**	Pn	**Pb**	**21 23 55.4**	**-2.1**
ASHO	**Ashiyiah** SNR=9.1	**3.04**	**187**	P	**Pn**	**21 23 54.7**	**+0.1**
ASHO				S	**Sn**	**21 24 32.8**	**+1.2**
FAQ	**Al Faqa, Dubai**	**3.06**	**195**	P	**Pn**	**21 23 54.7**	**-0.1**
FAQ				S	**Sn**	**21 24 34.5**	**+2.5**
ASUD	**Al Ashush, Dub** SNR=6.6	**3.24**	**199**	P	**Pn**	**21 23 58.2**	**+0.9**
SOHO	**SOHO**	**3.56**	**179**	P	**Pn**	**21 24 02.4**	**+0.7**
ALNE	**Al Ain**	**3.69**	**190**	P	**Pn**	**21 24 03.8**	**+0.2**
IBAF	**Bafgh**	**3.95**	**349**	Pn	**Pn**	**21 24 10.4**	**+3.1**
IMEH	**Mehriz**	**4.02**	**336**	Pn	**Pn**	**21 24 11.3**	**+3.0**
ARQ	**Araqi** SNR=11	**4.35**	**180**	P	**Pn**	**21 24 13.1**	**+0.4**
MZWR	**Madinat Zayed**	**4.58**	**211**	P	**Pn**	**21 24 15.0**	**-0.8**
DSBU	**Dashti - Bushe**	**4.67**	**279**	Pn	**Pn**	**21 24 19.7**	**+2.7**
SMAD	**Samad**	**4.84**	**163**	P	**Pn**	**21 24 19.5**	**+0.1**
WSAR	**Wadi Sarin**	**4.85**	**156**	P	**Pn**	**21 24 19.1**	**-0.4**
GHWR	**Ruwais**	**4.95**	**222**	P	**Pn**	**21 24 19.8**	**-1.0**
UMZA	**Um Al Zommool**	**5.11**	**194**	P	**Pn**	**21 24 22.5**	**-0.6**
SHMA	**Al-Shehemyia** SNR=7.5	**5.27**	**251**	P	**Pn**	**21 24 23.9**	**-1.3**
SHMA				S	**Sn**	**21 25 25.3**	**-1.3**
KLNJ	**Kolanjah**	**5.39**	**309**	Pn	**Pn**	**21 24 30.2**	**+2.9**
TRNA	**Turayna**	**5.58**	**239**	P	**Pn**	**21 24 29.1**	**-0.5**
TRNA	SNR=5.3			S	**Sn**	**21 25 33.5**	**-0.9**
SMRA	**Abu-Samra**	**5.88**	**241**	P	**Pn**	**21 24 33.0**	**-0.6**
SMRA	SNR=11			S	**Sn**	**21 25 40.4**	**-1.2**
IBRJ	**Brojen**	**6.18**	**314**	Pn	**Pn**	**21 24 40.6**	**+2.6**
ZNGN	**Zangian**	**6.57**	**313**	Pn	**Pn**	**21 24 46.2**	**+2.7**
MHTO	**MHTO** SNR=7.2	**6.83**	**168**	P	**Pn**	**21 24 47.0**	**+0.3**
WHFO	**Wadi Hawf** SNR=35	**10.06**	**195**	P	**Pn**	**21 25 30.7**	**-0.4**

*IDC **29** 21:30:40.3±3.2, 2.°84S×138.°61E, h81km±34km, mb3.3/5, mbtmp3.6/8, Error ellipse: s-maj=32.1km s-min=14.5km az=102.0*

ISC 29 21:30:38.3±0.9, **2.°89S**±0.°10×**138.°47E**±0.°10, **h62**km, **n8,** σ2§**21**/12, **mb3.5/5, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura** 32nm,0.7s,baz=260,slow=12,SNR=8.3	**2.26**	**81**	P	**Pn**	**21 31 12.8**	**-0.6**
JAY	26nm,0.6s,baz=130,slow=21,SNR=1.6			S	**Sn**	**21 31 40.2**	**-0.1**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=12,slow=12,SNR=8.0	**17.42**	**193**	P	**Pn**	**21 34 38.4**	**+1.1**
WRA	0.5nm,0.8s,baz=13,slow=22,SNR=2.2			S	**Sn**	**21 37 48.3**	**-2.3**
FITZ	**Fitzroy Crossi** 2.6nm,1.0s,baz=42,slow=14,SNR=2.0	**19.66**	**219**	P	**P**	**21 35 04.4**	**+2.1**
FITZ	1.6nm,0.7s,baz=342,slow=20,SNR=1.9			S	**S**	**21 38 36.1**	**-4.9**
ASAR	**Alice Springs** 0.8nm,0.6s,baz=25,slow=11,SNR=7.8	**21.12**	**192**	P	**P**	**21 35 20.3**	**+2.2**
ASAR	0.5nm,0.8s,baz=14,slow=24,SNR=3.0 0.8nm,0.6s			S	**S**	**21 39 11.3**	**+1.4**
MKAR	**Makanchi Array** 0.6nm,0.8s,baz=136,slow=7.0,SNR=5.0 0.6nm,0.8s	**69.79**	**323**	P	**P**	**21 41 42.1**	**0.0**
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=109,slow=7.4,SNR=2.0 0.3nm,0.6s	**73.74**	**325**	P	**P**	**21 42 06.1**	**+0.4**
BVAR	**Borovoye Array** 0.3nm,0.5s,baz=126,slow=7.3,SNR=2.4 0.3nm,0.5s	**79.32**	**325**	P	**P**	**21 42 37.7**	**+0.5**
ILAR	**Eielson Array** 0.8nm,1.1s,baz=251,slow=4.5,SNR=2.4 0.8nm,1.1s	**86.10**	**24**	P	**P**	**21 43 11.0**	**-1.2**

DJA 29 21:34:36.7±1.4, **10.°S**±8.°×**117.°E**±.°, **h12**km±9km, **M3.6**/12, **mb3.8**/1, **MLv3.5**/12, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.88**	**24**	P	Pb	21 34 53.8	-0.1
TWSI	**Taliwang, Sumb**	**1.03**	**329**	P	Pb	21 34 56.0	-0.5
WBSI	**Waikabubak, Su**	**1.95**	**90**	P	Pn	21 35 09.4	-0.3
DNP	**Denpasar**	**2.37**	**293**	P	Pn	21 35 15.3	-0.1
IGBI	**Denpasar**	**2.38**	**290**	P	Pn	21 35 15.0	-0.5
WSI	**Waingapu**	**2.85**	**91**	P	Pn	21 35 21.6	-0.4
JAGI	**Jajag, Banyuwa**	**3.42**	**289**	P	Pn	21 35 29.8	-0.1
GMJI	**Gumukmas**	**4.14**	**289**	P	Pn	21 35 40.2	+0.4
EDFI	**Ende, Flores**	**4.32**	**79**	P	Pn	21 35 42.7	+0.4
BSSI	**Bau Bau, Buton**	**4.62**	**42**	P	Pn	21 35 45.7	-0.7
BKSI	**Bulukumba**	**5.05**	**32**	P	Pn	21 35 52.6	+0.2

*IDC **29** 21:37:22.5±1.5, 14.°42N×93.°43W, h0km, mb3.8/7, mbtmp3.8/11, ML3.5/5, MS3.3/17, Error ellipse: s-maj=35.6km s-min=15.4km az=31.0*
*MEX **29** 21:37:26.4±1.0, 14.°53N×93.°34W, h10km, MD4.6*
*GCG **29** 21:37:27.6±1.7, 14.°52N×93.°19W, h37km±999km, MD4.6, ML4.9*
*NEIC **29** 21:37:27.2±1.6, 14.°65N±0.°08×93.°24W±0.°05, h23km±10km, mb4.1/14, Error ellipse: s-maj=11.2km s-min=7.0km az=182.0*
*CATAC **29** 21:37:28.2±0.7, 14.°N±3.°×9.°3W±.°, h12km±3km, M4.7/13, MLv4.7/13, Error ellipse: s-maj=7.8km s-min=6.7km az=60.6, confirmed*

ISC 29 21:37:25.2±1.6, **14.°58N**±0.°05×**93.°21W**±0.°03, **h9**km±10km, **n127,** σ1§**57**/121, **mb3.9**/9, **MS3.3**/15, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.96**	**70**	*e*P	**Pg**	**21 37 44.4**	**+0.7**
THIG				*e*S	**Sb**	**21 37 57.6**	**+0.7**
THIG		**0.96**	**70**	*i* P	**Pg**	**21 37 44.4**	**+0.7**
THIG				*e*S	**Sb**	**21 37 57.2**	**+0.3**
THIG	comp=E,30μm,0.4s			IAML		21 37 59.5	
PATR	**El Naranjo**	**1.08**	**60**	*e*P	**Pg**	**21 37 45.6**	**-0.4**
PATR				*e*S	**Sg**	**21 38 00.1**	**+0.2**
PCIG		**1.11**	**359**	*e*P	Pn	21 37 45.0	-2.0
PCIG				*e*S	**Sb**	**21 37 59.7**	**-1.6**
SMCA	**Catarina**	**1.13**	**76**	*e*P	**Pb**	**21 37 46.5**	**-0.3**
SMCA				*e*S	**Sb**	**21 38 01.6**	**-0.1**
PAVE	**Pavencul**	**1.16**	**58**	*e*P	**Pb**	**21 37 46.9**	**-0.8**
PAVE				*e*S	**Sb**	**21 38 03.1**	**+0.1**
CHUJ	**Union Juarez**	**1.18**	**64**	*e*P	**Pb**	**21 37 47.1**	**-0.7**
CHUJ				*e*S	**Sb**	**21 38 03.2**	**-0.1**
RTAL	**Retalhuleu**	**1.46**	**92**	Pn	**Pn**	**21 37 51.5**	**-0.3**
RTAL	**Retalhuleu**	**1.46**	**92**	*e*P	**Pn**	**21 37 51.6**	**-0.3**
RTAL				*e*S	**Sn**	**21 38 10.5**	**-0.6**
RTAL	**Retalhuleu**	**1.46**	**92**	P	**Pn**	**21 37 51.7**	**-0.1**
QUED	**Labor Ovalle**	**1.66**	**80**	*e*P	**Pn**	**21 37 55.1**	**+0.3**
QUEO				*e*S	**Sn**	**21 38 16.4**	**-0.1**
QUEO	comp=N,21μm,0.3s			IAML		21 38 17.9	
SOKI	**Kika Raxquin**	**1.76**	**82**	*e*P	**Pn**	**21 37 57.0**	**+0.8**
STG2	**El Palmar, Qui**	**1.78**	**94**	*e*P	Pn	21 37 52.1	-4.1
HUEH	**Huehuetenango**	**1.80**	**66**	Pn	**Pn**	**21 37 57.5**	**+0.8**
HUEH	**Huehuetenango**	**1.80**	**66**	*e*P	**Pn**	**21 37 58.0**	**+1.3**
HUEH				*e*S	**Sb**	**21 38 22.5**	**+1.3**
HUEH	**Huehuetenango**	**1.80**	**66**	*e*P	**Pn**	**21 37 58.1**	**+1.4**
HUEH	**Huehuetenango**	**1.80**	**66**	S	**Sb**	**21 38 21.3**	**0.0**
HUEH	**Huehuetenango**	**1.80**	**66**	P	**Pn**	**21 37 58.4**	**+1.7**
STG8	**El Palmar, Qui**	**1.80**	**94**	*e*P	Pn	21 37 52.7	-4.0
STG8	comp=E,12μm,0.2s			IAML		21 38 15.1	
STG5	**El Palmar, Qui**	**1.81**	**95**	*e*P	**Pn**	**21 37 53.0**	**-3.7**
CCIG	**Comitan**	**1.98**	**31**		**Pn**	**21 38 00.6**	**+1.6**
CCIG	**Comitan**	**1.98**	**31**	*e*P	**Pn**	**21 37 59.9**	**+0.9**
CCIG				*e*S	**Sn**	**21 38 26.6**	**+2.5**
CCIG	**Comitan**	**1.98**	**31**	*e*P	**Pn**	**21 38 01.4**	**+2.4**
CCIG				*e*S	**Sn**	**21 38 26.3**	**+2.2**
CCIG	comp=N,5μm,0.5s			IAML		21 38 34.2	
CCIG	**Comitan**	**1.98**	**31**	P	**Pn**	**21 38 01.4**	**+2.4**
QUIS	**Sacapulas**	**2.16**	**71**	*e*P	**Pn**	**21 38 03.9**	**+2.4**
QUIS				*e*S	**Sb**	**21 38 31.7**	**+0.1**
QUIS	comp=N,7μm,0.3s			IAML		21 38 35.6	
TGBT	**Tuxtla Gutierr**	**2.18**	**3**	*e*P	**Pn**	**21 38 02.5**	**+0.8**
TGBT				*e*S	**Sn**	**21 38 29.0**	**+0.1**
TGIG		**2.18**	**2**	*e*P	**Pn**	**21 38 02.3**	**+0.5**
TGIG				*e*S	**Sn**	**21 38 28.5**	**-0.5**
TGIG		**2.18**	**2**	*e*P	**Pn**	**21 38 02.3**	**+0.5**
TGIG				*e*S	**Sn**	**21 38 28.7**	**-0.3**
ESSG	**Sabana Grande**	**2.31**	**95**	*e*P	**Pn**	**21 38 03.3**	**-0.2**
FG16	**Alotenango, Sa**	**2.63**	**96**	*e*P	Pn	21 38 03.2	-4.9
FG16	comp=N,17μm,0.3s			IAML		21 38 37.0	
APG	**El Apazote** comp=N,2.7nm,0.3s,baz=200,slow=14,SNR=78	**2.68**	**81**	Pn	**Pn**	**21 38 10.2**	**+1.3**
APG	comp=N,6.6nm,0.3s,baz=238,slow=23,SNR=9.7			Sn	**Sb**	**21 38 47.1**	**+0.4**
APG	comp=N,10nm,21.1s,baz=242,slow=29 comp=N,8.2nm,0.3s			LR	LR	21 38 48.0	
APG	**El Apazote**	**2.68**	**81**	*e*P	**Pn**	**21 38 10.1**	**+1.3**
PCG5	**San Vicente Pa**	**2.77**	**97**	*e*P	**Pn**	**21 38 06.2**	**-3.6**
UXUV	**UXUV**	**2.87**	**342**	*e*P	**Pn**	**21 38 11.3**	**+0.2**
UXUV				*e*S	**Sn**	**21 38 46.3**	**+0.6**
CMIG	**Matias Romero** comp=N,29nm,0.3s,baz=164,slow=12,SNR=263	**2.97**	**327**	Pn	Pn	21 38 11.0	-1.5
CMIG	comp=N,75nm,0.3s,baz=106,slow=18,SNR=9.1			Sn	Sn	21 38 45.4	-3.0
CMIG	comp=N,150nm,21.7s,baz=172,slow=38 comp=N,74nm,0.3s			LR	LR	21 39 17.3	
HUIG	**Huatulco**	**3.04**	**293**	*e*P	Pn	21 38 09.0	-4.5
HUIG				*e*S	Sn	21 38 42.8	-7.3
FAME	**Alcaldia de Sa**	**3.18**	**103**	P	**Pn**	**21 38 16.0**	**+0.6**
FAME	**Alcaldia de Sa**	**3.18**	**103**	S	**Sn**	**21 38 51.6**	**-2.0**
LOAL	**Lomas de Alarc**	**3.37**	**100**	S	**Sn**	**21 38 58.7**	**+0.4**
LOAL	**Lomas de Alarc**	**3.37**	**100**	P	**Pn**	**21 38 19.7**	**+1.6**
NUBE	**Las Nubes**	**3.39**	**101**	P	**Pn**	**21 38 19.

CRIN	**San Cristobal**	**6.27**	**107**	Pn		**Pn**	**21 38 59.0**	**+1.0**
CNGN	**Cerro Negro**	**6.66**	**107**	Pn		**Pn**	**21 39 04.1**	**+0.8**
DAIG	**Los Arroyos**	**6.66**	**292**	*eP*		Pn	21 39 02.7	-0.7
DAIG				*eS*		Sn	21 40 13.4	-6.0
PPM	**Popocatepetl**	**6.84**	**311**	*eP*		**Pn**	**21 39 08.4**	**+2.2**
PPM				*eS*		Sn	21 40 19.8	-4.8
CXUV	**Coxquihui**	**6.96**	**324**	*eP*		Pn	21 39 04.5	-2.9
CXUV				*eS*		Sn	21 40 22.0	-4.8
MEIG	**Mezcala**	**7.00**	**299**	*eP*		**Pn**	**21 39 09.0**	**+1.0**
MEIG				*eS*		**Sn**	**21 40 29.4**	**+1.5**
YAIG	**Yautepec**	**7.04**	**308**	*eP*		Pn	21 39 04.7	-4.0
YAIG				*eS*		Sn	21 40 25.4	-3.7
CAIG	**El Cayaco**	**7.23**	**291**	*eP*		Pn	21 39 10.5	-0.6
CAIG				*eS*		**Sn**	**21 40 33.0**	**-0.3**
TEIG	**Tepich**	**7.32**	**39**	Pn		**Pn**	**21 39 13.4**	**+1.0**
	comp=N,0.1nm,0.3s,baz=128,slow=23,SNR=27							
TEIG				Sn		**Sn**	**21 40 31.4**	**-4.3**
	comp=N,0.1nm,0.3s,baz=311,slow=24,SNR=9.7							
TEIG	**Tepich**	**7.32**	**39**			**Pn**	**21 39 11.5**	**-0.9**
BOAB	**BOACO BROADBAN**	**7.63**	**105**			**Pn**	**21 39 15.2**	**-1.4**
ARIG	**Puente Sto Nin**	**7.78**	**299**	*eP*		**Pn**	**21 39 19.9**	**+1.2**
ARIG				*eS*		**Sn**	**21 40 52.3**	**+5.3**
ZIIG	**Zihuatanejo**	**8.49**	**292**	*eP*		**Pn**	**21 39 29.1**	**+0.7**
ZIIG				*eS*		**Sn**	**21 41 09.3**	**+4.8**
JUD3	**Juan Diaz 3**	**8.68**	**120**			**Pn**	**21 39 33.7**	**+2.6**
JTS	**Las Juntas de**	**9.12**	**117**	Pn		**Pn**	**21 39 36.0**	**-1.1**
	comp=N,0.5nm,0.3s,baz=295,slow=14,SNR=1.9							
JTS				Sn		**Sn**	**21 41 21.7**	**+1.8**
	comp=N,0.3nm,0.3s,baz=5.1,slow=22,SNR=0.8							
	comp=N,2.4nm,0.4s							
JTS	**Las Juntas de**	**9.12**	**117**	Pn		**Pn**	**21 39 38.9**	**+1.8**
MOIG	**Morelia**	**9.16**	**305**	Pn		Pn	21 39 37.5	-0.3
SOR	**Soroa**	**12.64**	**48**			**Pn**	**21 40 23.6**	**-1.7**
HNDO	**Hondo**	**15.90**	**340**			**Pn**	**21 41 07.7**	**-1.5**
HNDO				IAmb		IAmb	21 41 28.6	
	comp=E,7.5nm,0.7s							
BRDY	**Brady**	**17.45**	**343**			**Pn**	**21 41 28.1**	**-0.9**
TXAR	**Lajitas Array**	**17.58**	**328**	P		**Pn**	**21 41 31.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=158,slow=14,SNR=9.1							
	comp=Z,1.7nm,0.9s							
TXAR	**Lajitas Array**	**17.58**	**328**	Pn		**Pn**	**21 41 28.9**	**-1.7**
TX31	**Lajitas Ar. Si**	**17.58**	**328**			**Pn**	**21 41 29.6**	**-1.0**
OZNA	**Ozona**	**17.82**	**337**			**Pn**	**21 41 33.5**	**-0.1**
OZNA				IAmb		IAmb	21 41 39.0	
	comp=Z,15nm,1.1s							
ALPN	**Alpine**	**18.42**	**330**			**P**	**21 41 39.7**	**-1.3**
LPIG	**La Paz**	**18.69**	**303**	LR		LR	21 48 57.9	
	comp=Z,79nm,18.8s,baz=150,slow=37							
MIAR	**Mount Ida**	**19.88**	**359**			**P**	**21 41 55.4**	**-1.4**
DKNS	**Dickens**	**20.25**	**341**	P		**P**	**21 42 01.4**	**+0.4**
DKNS				IAmb		IAmb	21 42 14.3	
	comp=Z,8.2nm,0.8s							
X48A	**Hartselle**	**20.55**	**15**			**P**	**21 42 04.5**	**+0.4**
X48A				IAmb		IAmb	21 42 10.5	
	comp=Z,7.7nm,0.8s							
Y52A	**Lilburn**	**20.91**	**22**	P		**P**	**21 42 07.8**	**-0.2**
ROSC	**El Rosal**	**20.96**	**116**	P		**P**	**21 42 10.4**	**+1.2**
	comp=Z,3.1nm,0.3s,baz=304,slow=15,SNR=3.7							
	comp=Z,3.1nm,0.3s							
FCAR	**Ozark Folk Cen**	**21.24**	**2**	P		**P**	**21 42 10.6**	**-1.0**
FCAR				IAmb		IAmb	21 42 37.7	
	comp=Z,7.6nm,1.2s							
RUSC	**La Rusia**	**21.59**	**112**	P		**P**	**21 42 16.1**	**+0.1**
RUSC				IAmb		IAmb	21 42 28.9	
	comp=Z,12nm,1.0s							
FLOC	**Florencia**	**21.62**	**125**	P		**P**	**21 42 15.2**	**-0.7**
FLOC				IAmb		IAmb	21 42 27.2	
	comp=Z,14nm,1.1s							
TKL	**Tuckaleechee C**	**22.63**	**20**	P		**P**	**21 42 28.7**	**+2.2**
	comp=Z,3.5nm,1.0s,baz=197,slow=14,SNR=2.8							
TKL				LR		LR	21 52 03.6	
	comp=Z,81nm,19.1s,baz=190,slow=38							
	comp=Z,3.5nm,1.0s							
SDV	**Santo Domingo**	**22.80**	**102**	P		**P**	**21 42 29.6**	**+0.8**
	comp=Z,2.7nm,0.4s,baz=283,slow=14,SNR=5.7							
SDV				LR		LR	21 52 11.4	
	comp=Z,34nm,19.1s,baz=297,slow=39							
	comp=Z,2.7nm,0.4s							
SJG	**San Juan**	**26.19**	**79**	LR		LR	21 53 10.1	
	comp=Z,43nm,21.4s,baz=219,slow=36							
PDAR	**Pinedale Array**	**31.41**	**337**	P		**P**	**21 43 46.3**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=119,slow=8.8,SNR=5.5							
	comp=Z,0.3nm,0.8s							
SADO	**Sadowa**	**32.37**	**19**	LR		LR	21 57 57.7	
	comp=Z,60nm,20.1s,baz=220,slow=38							
NVAR	**Mina Array Bea**	**32.49**	**322**	P		P	21 43 54.8	-1.7
	comp=Z,1.3nm,0.8s,baz=126,slow=6.4,SNR=4.3							
NVAR				LR		LR	21 59 01.9	
	comp=Z,120nm,20.4s,baz=98,slow=40							
	comp=Z,1.3nm,0.8s							
YBH	**Yreka Blue Hor**	**37.19**	**322**	LR		LR	22 01 51.0	
	comp=Z,5.3nm,19.3s,baz=140,slow=40							
F10A	**Beach Ranch, E**	**37.24**	**332**	P		P	21 44 35.9	-1.4
LPAZ	**La Paz**	**39.43**	**140**	LR		LR	22 00 14.9	
	comp=Z,33nm,21.5s,baz=336,slow=35							
MDP	**Montagnes des**	**41.00**	**99**	LR		LR	22 03 22.8	
	comp=Z,43nm,20.4s,baz=286,slow=38							
SCHQ	**Schefferville**	**45.09**	**21**	LR		LR	22 05 36.4	
	comp=Z,54nm,20.3s,baz=255,slow=37							
YKA	**Yellowknife Ar**	**50.20**	**347**	P		P	21 46 19.6	-1.5
	comp=Z,0.8nm,0.8s,baz=166,slow=14,SNR=6.1							
YKA				LR		LR	22 10 01.7	
	comp=Z,22nm,20.7s,baz=78,slow=39							
	comp=Z,0.8nm,0.8s							
FRB	**Frobisher Bay**	**52.02**	**14**	LR		LR	22 09 55.1	
	comp=Z,46nm,19.8s,baz=124,slow=37							
ILAR	**Eielson Array**	**61.85**	**337**	P		**P**	**21 47 44.1**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=108,slow=7.1,SNR=7.1							
	comp=Z,0.7nm,0.9s							
BORG	**Borgarnes**	**69.19**	**26**	LR		LR	22 18 01.2	
	comp=Z,28nm,19.2s,baz=239,slow=35							
JMIC	**Jan Mayen**	**74.59**	**20**	LR		LR	22 22 44.7	
	comp=Z,36nm,18.7s,baz=326,slow=36							
MDT	**Midelt**	**81.09**	**58**	LR		LR	22 21 43.1	
	comp=Z,23nm,18.4s,baz=250,slow=33							
NOA	**NORSAR Array B**	**84.19**	**28**	LR		LR	22 26 08.4	
	comp=Z,31nm,21.2s,baz=270,slow=35							
WRA	**Warramunga Arr**	**134.40**	**256**	PKP		**PKPdf**	**21 56 41.9**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=87,slow=2.3,SNR=5.2							

*NEIC **29** 22:01:22.5±0.6, 60.80N±0.03×151.73W±0.08, h80km±5km, Error ellipse: s-maj=5.9km s-min=4.4km az=115.0*

AEIC 29 22:01:23.6±0.9, 60.79N±0.03×151.72W±0.08, h74km±5km, ML2.5, ML2.8/108(NEIC)**, Error ellipse: s-maj=5.6km s-min=4.2km az=113.0, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPN	**Captain Cook N**	**0.28**	**94**		Pn	22 01 35.6	+0.6
CAPN				IAML		22 01 47.7	
	comp=E,455nm,0.9s						
CAPN				IAML		22 01 50.3	
	comp=N,447nm,1.0s						
RDT	**Redoubt**	**0.40**	**237**		Pn	22 01 35.3	-0.7
RDT					Sn	22 01 45.0	-0.1
SPCR	**Spurr Chakacha**	**0.47**	**330**		Pn	22 01 36.0	-0.7
SPCR					Sn	22 01 46.1	-0.1
SPCR	**Spurr Chakacha**	**0.47**	**330**		Pn	22 01 36.0	-0.6
SPCR					Sn	22 01 46.2	-0.1
SPCN	**Chakachatna No**	**0.49**	**333**		Pn	22 01 36.4	-0.4
CKL	**Chakachamna La**	**0.51**	**324**		Pn	22 01 36.3	-0.7
DFR	**Drift River**	**0.51**	**248**		Pn	22 01 36.3	-0.6
DFR					Sn	22 01 47.0	+0.2
RDJH	**Redoubt Jeurge**	**0.57**	**250**		Pn	22 01 36.8	-0.7
RDJH					Sn	22 01 47.7	-0.1
SPBG	**Spurr Blockage**	**0.57**	**327**		Pn	22 01 37.0	-0.5
RDSO	**Redoubt South**	**0.60**	**237**		Pn	22 01 37.2	-0.7
RDSO					Sn	22 01 48.6	+0.1
RDWB	**Redoubt West**	**0.63**	**242**		Sn	22 01 48.8	-0.1
RED	**Redoubt Volcan**	**0.64**	**235**		Pn	22 01 37.5	-0.7
RED				Sn	Sn	22 01 48.8	-0.1
RED				IAML		22 01 49.3	
	comp=N,163nm,0.4s						
RED				IAML		22 01 50.2	
	comp=E,222nm,0.4s						
STLK	**Strandline Lak**	**0.71**	**356**		Pn	22 01 38.4	-0.6
STLK				Sn	Sn	22 01 50.0	-0.4
SLKM	**Skilak Lake**	**0.79**	**110**		Pn	22 01 39.1	-0.7
SLKM				IAML		22 01 53.4	
	comp=E,158nm,0.3s						
SLKM				IAML		22 01 54.0	
	comp=N,249nm,0.2s						
SUA	**Susitna One**	**0.83**	**35**		Pn	22 01 39.9	-0.4
SUA				IAML		22 01 53.7	
	comp=E,284nm,0.8s						
SUA				IAML		22 01 54.2	
	comp=N,134nm,0.4s						
SUA	**Susitna One**	**0.83**	**35**		Sn	22 01 53.3	+0.6
O20K	**Slope Mountain**	**0.84**	**213**		Sn	22 01 53.5	+0.7
RC01	**Rabbit Creek A**	**1.02**	**72**		Pn	22 01 42.0	-0.5
RC01				IAML		22 01 58.9	
	comp=N,272nm,0.2s						
RC01				IAML		22 01 58.9	
	comp=E,255nm,0.2s						
RC01	**Rabbit Creek A**	**1.02**	**72**		Sn	22 01 57.6	+1.1
O22K	**Cooper Landing**	**1.03**	**107**		Pn	22 01 42.2	-0.4
ILSW	**Iliamna Southw**	**1.07**	**222**	Pn	Pn	22 01 42.6	-0.7
BRSE	**Bradley Lake S**	**1.16**	**155**		Pn	22 01 43.7	-0.6
BRSE					Sn	22 01 59.4	-0.4
SKT	**Skwentna**	**1.20**	**4**		Pn	22 01 44.1	-0.7
SKT				IAML		22 02 03.5	
	comp=N,48nm,0.3s						
M20K	**Styx River**	**1.29**	**329**		Pn	22 01 45.6	-0.4
M20K					Sn	22 02 02.6	-0.2
CNPM	**China Poot**	**1.29**	**169**	Pn	Pn	22 01 45.4	-0.6
CNPM				IAML		22 02 03.2	
	comp=N,89nm,0.3s						
CNPM				IAML		22 02 03.6	
	comp=E,106nm,0.6s						
CNPM	**China Poot**	**1.29**	**169**		Sn	22 02 02.4	-0.4
SEW	**Seward**	**1.32**	**120**	Pn	Pn	22 01 45.1	-1.2
SEW				IAML		22 02 42.1	
	comp=E,139nm,0.1s						
N19K	**Bonanza Creek**	**1.35**	**272**	Pn	Pn	22 01 45.8	-1.1
N19K					Sn	22 02 03.7	-0.6
P19K	**Oil Pt**	**1.37**	**214**	Pn	Pn	22 01 46.4	-0.5
P19K				IAML		22 02 08.3	
	comp=N,82nm,0.6s						
P19K				IAML		22 02 08.9	
	comp=E,74nm,0.7s						
P19K	**Oil Pt**	**1.37**	**214**		Sn	22 02 04.9	+0.4
O19K	**Port Alsworth**	**1.42**	**246**	Pn	Pn	22 01 46.2	-1.3
O19K				IAML		22 02 05.4	
	comp=E,204nm,0.4s						
O19K				IAML		22 02 05.4	
	comp=N,203nm,0.4s						
PMR	**Palmer**	**1.49**	**56**	Pn	Pn	22 01 47.3	-1.2
PMR				IAML		22 02 10.1	
	comp=N,85nm,0.3s						
PMR				IAML		22 02 10.4	
	comp=E,71nm,0.3s						
PMR	**Palmer**	**1.49**	**56**		Sn	22 02 07.0	-0.3
PWL	**Port Wells**	**1.66**	**86**	Pn	Pn	22 01 49.4	-1.4
AUW	**Augustine West**	**1.67**	**212**		Pn	22 01 50.5	-0.4
GHO	**Glory Hole Cre**	**1.67**	**53**		Pn	22 01 50.1	-1.0
GHO				IAML		22 02 15.7	
	comp=N,124nm,0.4s						
KNK	**Knik Glacier**	**1.71**	**67**	Pn	Pn	22 01 50.4	-1.0
KNK				IAML		22 02 19.0	
	comp=E,123nm,0.6s						
KNK				IAML		22 02 20.4	
	comp=N,94nm,0.7s						
CUT	**Chulitna**	**1.76**	**23**	Pn	Pn	22 01 51.8	-0.3
CUT				IAML		22 02 17.8	
	comp=N,152nm,0.3s						
L22K	**Petersville**	**1.80**	**14**		Pn	22 01 52.4	-0.3
L22K				IAML		22 02 20.1	
	comp=E,71nm,0.3s						
L22K				IAML		22 02 21.2	
	comp=N,46nm,0.3s						
SML	**Sawmill**	**1.93**	**57**	Pn	Pn	22 01 53.3	-1.1
SML				IAML		22 02 22.6	
	comp=N,51nm,0.2s						
SML				IAML		22 03 15.6	
	comp=E,50nm,0.5s						
O18K	**Koktuh Hills**	**1.97**	**243**	Pn	Pn	22 01 53.6	-1.3
L20K	**Farewell, AK**	**1.98**	**330**	Pn	Pn	22 01 54.5	-0.6
N18K	**Kilae Creek**	**2.05**	**269**	Pn	Pn	22 01 54.7	-1.2
L19K	**White Mountain**	**2.05**	**314**		Pn	22 01 55.6	-0.4
L19K				IAML		22 02 21.1	
	comp=E,26nm,0.5s						
M18K	**Stony River**	**2.11**	**291**		Pn	22 01 55.6	-1.1
PPLA	**Purkeypile**	**2.13**	**354**	Pn	Pn	22 01 56.8	-0.3
SYI	**Shuyak Island**	**2.21**	**189**	Pn	Pn	22 01 57.7	-0.4
SYI				IAML		22 02 17.6	
	comp=N,32nm,1.0s						
SYI				IAML		22 02 34.4	
	comp=E,35nm,0.8s						
P18K	**Big Mountain,**	**2.25**	**233**	Pn	Pn	22 01 57.3	-1.3
GLI	**Glacier Island**	**2.27**	**86**	Pn	Pn	22 01 56.3	-2.6
SCM	**Sheep Creek Mo**	**2.37**	**62**	Pn	Pn	22 01 59.1	-1.1
WAT7	**Susitna Watana**	**2.46**	**32**		Pn	22 02 01.2	-0.5
WAT1	**Susitna Watana**	**2.54**	**35**		Pn	22 02 02.0	-0.6
FID	**Port Fidalgo**	**2.57**	**89**	Pn	Pn	22 01 59.7	-3.3
WAT6	**Susitna Watana**	**2.62**	**45**		Pn	22 02 02.7	-1.0
N17K	**Nushagak Hills**	**2.70**	**257**	Pn	Pn	22 02 03.7	-1.0
KAHC	**Katmai Hardscr**	**2.72**	**219**		Pn	22 02 04.1	-1.0
KARR	**Katmai Rainbow**	**2.75**	**215**		Pn	22 02 05.0	-0.5
TRF	**Thorofare Moun**	**2.75**	**14**		Pn	22 02 05.1	-0.6
L18K	**Granite Mounta**	**2.78**	**303**	Pn	Pn	22 02 04.9	-0.9
KTH	**Kantishna Hill**	**2.80**	**7**		Pn	22 02 05.9	-0.2
M17K	**Holitna River**	**2.84**	**285**	Pn	Pn	22 02 05.6	-1.1
M17K				IAML		22 02 55.1	
	comp=E,18nm,1.1s						
M17K				IAML		22 04 00.8	
	comp=N,15nm,1.1s						
O17K	**Koliganek Bris**	**2.86**	**251**		Pn	22 02 06.0	-0.8
KLU	**Klutina**	**2.90**	**73**	Pn	Pn	22 02 05.7	-1.8
DIV	**Divide**	**2.92**	**81**	Pn	Pn	22 02 05.7	-2.1
RND	**Reindeer**	**2.95**	**26**	Pn	Pn	22 02 08.4	+0.2
M24K	**Tolsona, Glenn**	**2.98**	**61**	Pn	Pn	22 02 07.6	-0.9
KAKN	**Katmai Knife C**	**3.02**	**216**		Pn	22 02 08.4	-0.8
KDAK	**Kodiak Island**	**3.05**	**189**		Pn	22 02 07.4	-2.0
KDAK	**Kodiak Island**	**3.05**	**189**	IAML		22 03 23.3	
	comp=N,13nm,0.7s						
KDAK				IAML		22 03 24.1	
	comp=N,27nm,1.2s						
DHY	**Denali Highway**	**3.08**	**40**	Pn	Pn	22 02 08.9	-1.1
DHY				IAML		22 03 56.0	
	comp=E,27nm,1.2s						
DHY				IAML		22 04 07.7	
	comp=N,26nm,0.8s						
KABU	**Katmai Buttres**	**3.11**	**217**		Pn	22 02 09.8	-0.5
MCK	**McKinley**	**3.23**	**23**	Pn	Pn	22 02 12.3	+0.4
MCK				IAML		22 04 07.0	
	comp=E,25nm,1.1s						
MCK				IAML		22 04 10.7	
	comp=N,41nm,0.8s						
ANCK	**Angle Creek**	**3.23**	**218**		Pn	22 02 11.3	-0.7
CNTC	**Contact Creek**	**3.30**	**222**		Pn	22 02 12.4	-0.6
BPAW	**Bear Paw Mtn.**	**3.34**	**6**	Pn	Pn	22 02 12.6	-0.8
BPAW				IAML		22 04 25.4	
	comp=N,23nm,0.9s						
BPAW				IAML		22 04 25.6	
	comp=E,27nm,0.6s						
O16K	**Kokwok River B**	**3.40**	**252**	Pn	Pn	22 02 13.2	-0.9
O16K				IAML		22 04 35.4	
	comp=N,6.8nm,0.4s						
L17K	**Donlin**	**3.43**	**296**		Pn	22 02 13.7	-1.0
BMRM	**Bremner River**	**3.48**	**84**	Pn	Pn	22 02 12.7	-2.7
N16K	**Nishlik Lake**	**3.48**	**268**		Pn	22 02 14.8	-0.6
HARP	**HAARP**	**3.53**	**60**		Pn	22 02 14.3	-1.7
M16K	**Timber Creek**	**3.54**	**277**	Pn	Pn	22 02 15.4	-0.7
M16K				IAML		22 04 43.7	
	comp=E,11nm,1.1s						
N25K	**Chitina, Valde**	**3.54**	**74**	Pn	Pn	22 02 14.5	-1.8
J20K	**Nowinta River**	**3.58**	**343**	Pn	Pn	22 02 16.6	-0.1
J20K				IAML		22 04 21.6	
	comp=N,19nm,1.1s						
J20K				IAML		22 04 40.5	
	comp=E,13nm,0.7s						
PAX	**Paxson**	**3.68**	**51**	Pn	Pn	22 02 17.8	-0.3
PAX				IAML		22 04 09.1	
	comp=N,22nm,0.6s						
PAX				IAML		22 04 10.5	
	comp=E,26nm,0.7s						
WACK	**Wrangell Chich**	**3.75**	**68**		Pn	22 02 17.9	-1.4
L16K	**Owhat River**	**3.86**	**287**	Pn	Pn	22 02 19.2	-1.2
L16K				IAML		22 04 56.3	
	comp=N,8.7nm,0.8s						
GLB	**Gilahina Butte**	**3.90**	**77**	Pn	Pn	22 02 19.0	-2.0
N15K	**Kwethluk River**	**4.19**	**265**	Pn	Pn	22 02 24.7	-0.3
N15K				IAML		22 05 07.1	
	comp=E,12nm,0.8s						
N15K				IAML		22 05 10.3	
	comp=N,16nm,1.1s						

*IDC **29** 22:01:42.7±1.3, 1.72N×126.75E, h0km, mb3.7/5, mbtmp3.7/6, ML3.4/1, MS3.0/1, Error ellipse: s-maj=96.6km s-min=17.8km az=70.0*

*DJA **29** 22:01:47.5±2.0, 1.1N±4.4×12.6E±.1, h17km±19km, M3.8/7, mb3.9/1, MLv3.7/7*

ISC 29 22:01:48.6±1.0, 1.6N±0.1×126.5E±0.1, h35km, n8, σ 96/9, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**132**	P	Pn	22 02 09.5	+0.3
TNTI				S	Sn	22 02 25.4	+1.0
GTOI	**Gorontalo**	**3.58**	**255**	P	Pn	22 02 42.4	+0.7
FITZ	**Fitzroy Crossi**	**19.59**	**182**	P	P	22 06 12.8	-1.1
	0.1nm,0.3s,baz=0.0,slow=10,SNR=2.1						
	2.0nm,0.8s						
WRA	**Warramunga Arr**	**22.75**	**161**	P	P	22 06 46.8	-1.2
	2.1nm,0.6s,baz=342,slow=10,SNR=18						
	2.1nm,0.6s						
ASAR	**Alice Springs**	**26.13**	**164**	P	P	22 07 19.7	0.0
	0.8nm,0.5s,baz=349,slow=7.7,SNR=14						
ASAR				LR	LR	22 18 00.6	
	comp=Z,30nm,18.1s,baz=112,slow=37						
	0.8nm,0.5s						
SONM	**Songino Array**	**49.23**	**342**	P	P	22 10 34.3	+0.5
	0.3nm,0.7s,baz=145,slow=8.1,SNR=2.0						
	0.3nm,0.7s						
MKAR	**Makanchi Array**	**59.16**	**326**	P	P	22 11 46.0	0.0
	0.7nm,0.6s,baz=127,slow=8.5,SNR=7.2						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	P	22 12 13.5	-1.0
	1.1nm,0.5s,baz=130,slow=6.2,SNR=13						
	1.1nm,0.5s						

*NOU **29** 22:41:06.2, 35.97S×179.19E, h285km, ML3.8/7, Off E. Coast of N. Island, N.Z.*

*WEL **29** 22:41:31.4±1.0, 37.5S±8.1×17.8E±.1, h110km±10km, M3.0/19, ML2.9/18, MLv3.0/19, Error ellipse: s-maj=10.8km s-min=7.1km az=26.7, confirmed*

ISC 29 22:41:23.9±2.7, 36.9S±0.1×177.98E±0.10, h176km±12km, n98, σ 2s46/103, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.70**	**158**	P	Pn	22 41 50.5	+1.3
MXZ	**Matakaoa Point**	**0.70**	**158**	P	Pn	22 41 50.7	+1.5
MXZ				S	Sn	22 42 06.9	-1.9
HAZ	**Te Kaha**	**0.85**	**190**	P	Pn	22 41 51.4	+1.2
HAZ				S	Sn	22 42 07.0	-3.6
PKGZ	**Pakihiroa**	**0.95**	**175**	P	Pn	22 41 53.0	+2.1
WMGZ	**Waiomatatini S**	**0.97**	**159**	P	Pn	22 41 53.5	+2.5
RUGZ	**Raukumara Rang**	**1.07**	**193**	P	Pn	22 41 52.9	+1.0
PUZ	**Puketiti**	**1.18**	**169**	P	Pn	22 41 54.8	+2.2
PUZ				S	Sn	22 42 13.1	-1.9
TWGZ	**Tauwhareparae**	**1.26**	**180**	P	Pn	22 41 56.3	+2.9
TWGZ				S	Sn	22 42 15.5	-0.6
MYRZ	**Mayor Island**	**1.43**	**255**	P	Pn	22 41 56.5	+1.6
MWZ	**Matawai**	**1.46**	**194**	P	Pn	22 41 57.2	+2.0
OPRZ	**Ohinepanea**	**1.46**	**230**	P	Pn	22 41 56.8	+1.7
OPRZ				S	Sn	22 42 16.3	-3.1
URZ	**Urewera**	**1.51**	**207**	P	Pn	22 41 57.4	+1.9
URZ	**Urewera**	**1.51**	**207**	P	Pn	22 41 57.4	+1.9
URZ				S	Sn	22 42 17.7	-2.5
TKGZ	**Te Karaka**	**1.52**	**184**	P	Pn	22 41 58.6	+2.9
CNGZ	**Carnagh Statio**	**1.58**	**173**	P	Pn	22 41 59.7	+3.5
TGRZ	**Tauranga**	**1.59**	**239**	P	Pn	22 41 58.2	+1.9
RAGZ	**Rawiri**	**1.64**	**196**	P	Pn	22 42 00.2	+3.2
TARZ	**Mount Tarawera**	**1.76**	**221**	P	Pn	22 42 01.2	+3.0
KARZ	**Kaharoa**	**1.76**	**231**	P	Pn	22 42 00.3	+2.1
RIGZ	**Rimuhau**	**1.79**	**185**	P	Pn	22 42 01.4	+2.9
KUZ	**Kuaotunu**	**1.82**	**275**	P	Pn	22 42 00.3	+1.6
KUZ	**Kuaotunu**	**1.82**	**275**	P	Pn	22 41 59.2	+0.5
MUGZ	**Murupara**	**1.83**	**211**	P	Pn	22 42 01.8	+3.0
KMRZ	**Kaimai**	**1.87**	**240**	P	Pn	22 42 01.5	+2.2
RTZ	**Ruatahuna**	**1.87**	**205**	P	Pn	22 42 01.5	+2.2
SNGZ	**Shannon Statio**	**1.93**	**195**	P	Pn	22 42 02.8	+2.9
PRGZ	**Paritu Road**	**2.00**	**182**	P	Pn	22 42 04.1	+3.3
ALRZ	**Allen Road**	**2.09**	**218**	P	Pn	22 42 04.7	+3.0
KNZ	**Kokohu**	**2.12**	**186**	P	Pn	22 42 04.8	+2.9
RAHZ	**Arahi**	**2.12**	**199**	P	Pn	22 42 05.0	+3.0
MTHZ	**Maungataniwha**	**2.13**	**205**	P	Pn	22 42 05.0	+2.8
TOZ	**Tahuroa Road**	**2.13**	**247**	P	Pn	22 42 04.8	+2.7
WHHZ	**Waihua**	**2.24**	**195**	P	Pn	22 42 06.1	+2.8
MKAZ	**Moumakai**	**2.26**	**264**	P	Pn	22 42 06.2	+2.7
MRHZ	**Matea Rd**	**2.28**	**212**	P	Pn	22 42 06.5	+2.6
WIAZ	**Waiheke Island**	**2.28**	**272**	P	Pn	22 42 06.5	+2.7
NMHZ	**Na

KSRS	**Korea Array**	**21.34**	**250**	P	**P**	**00 07 30.5**	**+1.7**
	1.1nm,0.5s,baz=45,slow=9.9,SNR=2.9						
	1.1nm,0.5s						
HILR	**Hailar Array B**	**22.21**	**287**	P	**P**	**00 07 35.6**	**-1.7**
	0.3nm,0.4s,baz=92,slow=12.3,SNR=2.3						
	0.3nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**30.07**	**154**	T	T	00 41 11.0	
	baz=342,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.08**	**154**	T	T	00 41 08.4	
	baz=342,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.08**	**154**	T	T	00 41 14.3	
	baz=342						
H11S1	**WAKE ISLAND Hy**	**31.17**	**155**	T	T	00 42 18.6	
	baz=344,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**31.18**	**155**	T	T	00 42 32.4	
	baz=344,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**31.18**	**155**	T	T	00 42 29.6	
	baz=344,slow=76,SNR=14						
ILAR	**Eielson Array**	**35.59**	**39**	P	**P**	**00 09 34.1**	**-1.1**
	0.8nm,1.2s,baz=273,slow=8.8,SNR=1.8						
	0.8nm,1.2s						
MKAR	**Makanchi Array**	**46.66**	**297**	P	**P**	**00 11 05.4**	**-0.1**
	0.4nm,0.6s,baz=61,slow=5.8,SNR=4.4						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**47.06**	**303**	P	**P**	**00 11 08.6**	**0.0**
	0.3nm,0.5s,baz=70,slow=8.3,SNR=4.6						
	0.3nm,0.5s						
BVAR	**Borovoye Array**	**50.36**	**309**	P	**P**	**00 11 33.9**	**+0.2**
	0.7nm,0.5s,baz=56,slow=8.5,SNR=5.3						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**63.18**	**335**	P	**P**	**00 13 03.3**	**-0.2**
	5.2nm,1.0s,baz=27,slow=7.6,SNR=5.1						
	5.2nm,1.0s						
TXAR	**Lajitas Array**	**76.78**	**61**	P	**P**	**00 14 26.8**	**-0.1**
	0.3nm,0.6s,baz=306,slow=3.0,SNR=4.1						
	0.3nm,0.6s						

*IDC **30** 00:09:07.9±4.4, 7°.88S×126°.29E, h197km±49km, mb3.1/2, mbtmp3.8/7, Error ellipse: s-maj=60.7km s-min=19.4km az=51.0*

ISC 30 00:09:07.5±1.3, 7°.99S±0°.09×126°.4E±0°.1, h200km, n7, σ2s27/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BATI	**Baumata**	**3.47**	**230**	P		**Pn**	**00 10 04.9**	**+2.1**
	51nm,0.4s,baz=101,slow=4.1,SNR=9.4							
BATI				S		**Sn**	**00 10 46.5**	**+0.3**
	35nm,0.3s,baz=360,slow=23,SNR=22							
KAPI	**Kappang**	**7.22**	**294**	P		**Pn**	**00 10 49.3**	**-1.3**
	2.6nm,0.5s,baz=131,slow=20,SNR=5.4							
FITZ	**Fitzroy Crossi**	**10.07**	**184**	P		**Pn**	**00 11 28.2**	**+0.5**
	1.1nm,0.3s,baz=1.7,slow=10.0,SNR=9.1							
FITZ				S		**Sn**	**00 13 15.6**	**-4.8**
	4.7nm,0.4s,baz=39,slow=14,SNR=12							
WRA	**Warramunga Arr**	**14.16**	**148**	P		**Pn**	**00 12 20.6**	**+1.0**
	0.8nm,0.5s,baz=330,slow=13,SNR=22							
WRA				S		S	00 14 50.9	-6.5
	1.2nm,0.3s,baz=333,slow=20,SNR=11							
ASAR	**Alice Springs**	**17.18**	**156**	P		**Pn**	**00 12 58.4**	**+2.3**
	6.2nm,0.5s,baz=336,slow=12,SNR=76							
ASAR				S		**S**	**00 16 03.7**	**+0.6**
	1.2nm,0.6s,baz=318,slow=16,SNR=6.4							
MKAR	**Makanchi Array**	**67.14**	**329**	P		**P**	**00 19 39.5**	**-0.3**
	0.2nm,0.4s,baz=126,slow=7.5,SNR=6.6							
	0.2nm,0.4s							
ZALV	**Zalesovo Beam**	**70.93**	**335**	P		**P**	**00 20 02.6**	**-0.3**
	0.4nm,0.5s,baz=126,slow=5.7,SNR=2.2							
	0.4nm,0.5s							

*NEIC **30** 00:35:20.2±1.5, 19°.13N×0°.04×67°.25W±0°.03, h10km±1km, ML2.1/10, Md2.9/12(RSPR), Error ellipse: s-maj=6.5km s-min=5.3km az=157.0*

*SDD **30** 00:35:23.3±2.0, 19°.04N×67°.07W, h22km±48km, MD3.4, ML2.0, MW2.7*

*RSPR **30** 00:35:23.6, 19°.09N×67°.26W, h21km±31km, MD2.9/12*

ISC 30 00:35:21.0±1.4, 19°.06N±0°.05×67°.12W±0°.03, h7km±10km, n47, σ0s56/59, 13C-11D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.59**	**179**	||*eP*	**Pb**	**00 35 33.9**	**+0.3**
AGPR				↑↑	*eSg*	**Sg**	**00 35 40.7**	**+0.7**
AGPR					IAML		00 35 43.7	
	comp=N,128nm,0.2s							
AGPR	**Aguadilla, PR**	**0.59**	**179**			**Pb**	**00 35 33.9**	**+0.3**
AGPR						**Sb**	**00 35 42.3**	**+0.2**
AGPR	**Aguadilla, PR**	**0.59**	**179**	↓↓	*iP*	**Pb**	**00 35 33.9**	**+0.3**
AGPR	**Aguadilla, PR**	**0.59**	**179**		*eS*	**Sb**	**00 35 42.3**	**+0.2**
IDE	**Isla Desecheo**	**0.75**	**207**			**Pb**	**00 35 36.1**	**-0.2**
IDE						**Sb**	**00 35 46.4**	**-0.4**
IDE	**Isla Desecheo**	**0.75**	**207**	↑↑	*eP*	**Pb**	**00 35 36.1**	**-0.2**
IDE	**Isla Desecheo**	**0.75**	**207**		*eS*	**Sb**	**00 35 46.4**	**-0.4**
AOPR	**Arecibo Observ**	**0.79**	**154**	↓↓	*eP*	**Pb**	**00 35 37.1**	**0.0**
AOPR				↓↓	*eSg*	**Sb**	**00 35 48.7**	**+0.8**
AOPR					IAML		00 35 53.2	
	comp=N,85nm,1.8s							
AOPR	**Arecibo Observ**	**0.79**	**154**			**Pb**	**00 35 37.2**	**+0.2**
AOPR						**Sn**	**00 35 49.6**	**-1.0**
AOPR	**Arecibo Observ**	**0.79**	**154**	↑↑	*eP*	**Pb**	**00 35 37.2**	**+0.2**
AOPR	**Arecibo Observ**	**0.79**	**154**		*eS*	**Sn**	**00 35 49.6**	**-1.0**
EMPR	**Esperanza - Ma**	**0.80**	**136**			**Pn**	**00 35 40.4**	**+1.7**
EMPR						**Sn**	**00 35 50.6**	**-0.3**
EMPR	**Esperanza - Ma**	**0.80**	**136**	↓↓	*eP*	**Pn**	**00 35 40.4**	**+1.7**
EMPR	**Esperanza - Ma**	**0.80**	**136**		*eS*	**Sn**	**00 35 50.6**	**-0.3**
PRSN	**Puerto Rico Se**	**0.84**	**182**			**Pb**	**00 35 37.8**	**-0.1**
PRSN						**Sb**	**00 35 49.3**	**0.0**
PRSN	**Puerto Rico Se**	**0.84**	**182**	↑↑	*eP*	**Pb**	**00 35 37.8**	**-0.1**
PRSN	**Puerto Rico Se**	**0.84**	**182**		*eS*	**Sb**	**00 35 49.3**	**0.0**
LSP	**Las Mesas**	**0.88**	**178**			**Pb**	**00 35 38.7**	**+0.1**
LSP						**Sb**	**00 35 50.7**	**+0.2**
LSP	**Las Mesas**	**0.88**	**178**	↑↑	*iP*	**Pb**	**00 35 38.7**	**+0.1**
LSP	**Las Mesas**	**0.88**	**178**		*eS*	**Sb**	**00 35 50.7**	**+0.2**
ECPR	**Experimental S**	**1.03**	**136**	↓↓	*eP*	**Pn**	**00 35 41.9**	**+0.1**
ECPR	**Experimental S**	**1.03**	**136**		*eS*	**Sn**	**00 35 55.7**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.04**	**179**		*eP*	**Pg**	**00 35 40.8**	**-0.3**
CRPR				↑↑	*eSg*	**Sg**	**00 35 54.1**	**-0.5**
CRPR					IAML		00 36 00.7	
	comp=N,44nm,0.6s							
CRPR	**Cabo Rojo, PR**	**1.04**	**179**			**Pb**	**00 35 41.0**	**-0.4**
CRPR						**Sb**	**00 35 55.0**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.04**	**179**		IAML		00 36 00.8	
	comp=N,37nm,1.0s							
CRPR					IAML		00 36 13.0	
	comp=E,39nm,2.5s							
CRPR	**Cabo Rojo, PR**	**1.04**	**179**	↓↓	*eP*	**Pb**	**00 35 41.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.04**	**179**		*eS*	**Sb**	**00 35 55.0**	**-0.3**
MLPR	**Magueyes Islan**	**1.08**	**176**	↑↑	*eP*	**Pg**	**00 35 41.4**	**-0.4**
MLPR				↓↓	*eSg*	**Sg**	**00 35 55.7**	**-0.2**
MLPR					IAML		00 35 56.0	
	comp=N,15nm,0.3s							
MLPR	**Magueyes Islan**	**1.08**	**176**	↓↓	*iP*	**Pg**	**00 35 41.5**	**-0.3**
MLPR	**Magueyes Islan**	**1.08**	**176**		*eS*	**Sg**	**00 35 55.9**	**-0.1**
OBIP	**Obispado Ponce**	**1.12**	**154**			**Pn**	**00 35 43.1**	**0.0**
OBIP					IAML		00 36 06.4	
	comp=E,30nm,1.2s							
OBIP	**Obispado Ponce**	**1.12**	**154**			**Sb**	**00 35 57.1**	**-0.4**
OBIP	**Obispado Ponce**	**1.12**	**154**		IAML		00 35 52.2	
	comp=N,31nm,2.6s							
OBIP	**Obispado Ponce**	**1.12**	**154**	↓↓	*iP*	**Pn**	**00 35 43.1**	**0.0**
OBIP	**Obispado Ponce**	**1.12**	**154**		*eS*	**Sb**	**00 35 57.1**	**-0.4**
GCPR	**Guaynabo City**	**1.23**	**127**			**Pg**	**00 35 44.6**	**-0.1**
GCPR						**Sb**	**00 36 00.1**	**-0.6**
GCPR	**Guaynabo City**	**1.23**	**127**	↓↓	*eP*	**Pg**	**00 35 44.6**	**-0.1**
GCPR	**Guaynabo City**	**1.23**	**127**		*eS*	**Sb**	**00 36 00.1**	**-0.6**
PCDR	**Punta Cana, DR**	**1.31**	**246**	↑↑	*eP*	**Pg**	**00 35 46.9**	**+0.7**
PCDR				↑↑	*eSg*	**Sn**	**00 36 04.8**	**+1.3**
SJG	**San Juan**	**1.32**	**135**		*eS*	**Sn**	**00 36 03.7**	**+0.1**
HUMP	**Col San Antoni**	**1.51**	**127**			**Pg**	**00 35 49.5**	**-0.4**
HUMP						**Sg**	**00 36 10.0**	**+0.4**
HUMP	**Col San Antoni**	**1.51**	**127**		IAML		00 36 14.6	
	comp=N,22nm,0.2s							
HUMP					IAML		00 36 18.6	
	comp=E,28nm,0.2s							
HUMP	**Col San Antoni**	**1.51**	**127**	↑↑	*eP*	**Pg**	**00 35 49.5**	**-0.4**
HUMP	**Col San Antoni**	**1.51**	**127**		*eS*	**Sg**	**00 36 10.0**	**+0.4**
MIDR	**Miches**	**1.83**	**268**	↓↓	*eSg*	**Sg**	**00 36 20.0**	**+0.2**
MIDR					IAML		00 36 20.7	
	comp=N,15nm,1.3s							
MIDR	**Miches**	**1.83**	**268**	↓↓	*eP*	**Pb**	**00 35 53.9**	**-0.8**
HATOM	**Hato Mayor del**	**2.16**	**263**	↑↑	*eP*	**Pb**	**00 36 00.0**	**-0.4**
HATOM				↑↑	*eSg*	**Sg**	**00 36 29.3**	**-1.0**
HATOM					IAML		00 37 03.3	
	comp=N,14nm,3.1s							

*CATAC **30** 00:41:16.9±0.4, 11°.2°×8°.6W±°, h14km±2km, M3.2/26, MLv3.2/26, Error ellipse: s-maj=4.6km s-min=2.5km az=50.0, confirmed*

ISC 30 00:41:14.7±1.6, 10°.87N±0°.04×86°.42W±0°.05, h10km±10km, n66, σ0s55/83, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LCRUZ	**La Cruz**	**0.80**	**75**	*eP*		**Pn**	**00 41 32.0**	**-0.1**
ARIN	**Rivas**	**0.82**	**45**	P		**Pg**	**00 41 30.8**	**+0.3**
ARIN	**Rivas**	**0.82**	**45**	S		**Sg**	**00 41 40.8**	**-0.3**
ELI1	**Hacienda Flor**	**0.88**	**105**	P		**Pn**	**00 41 33.8**	**+0.7**
ELI1	**Hacienda Flor**	**0.88**	**105**	S		**Sn**	**00 41 46.0**	**0.0**
ELI1	**Hacienda Flor**	**0.88**	**105**	*eP*		**Pn**	**00 41 33.5**	**+0.3**
ALIBA	**Liberia Airpor**	**0.91**	**108**	*eP*		**Pn**	**00 41 33.3**	**-0.2**
CARN	**Rivas**	**0.94**	**70**	P		**Pn**	**00 41 33.8**	**-0.1**
CARN				S		**Sb**	**00 41 45.9**	**+0.4**
CARN	**Rivas**	**0.94**	**70**	*eP*		**Pg**	**00 41 32.8**	**+0.1**
JAPN	**AI SSO del Vol**	**0.98**	**48**	P		**Pn**	**00 41 34.5**	**+0.1**
JAPN				S		**Sg**	**00 41 45.8**	**-0.4**
JAPN	**AI SSO del Vol**	**0.98**	**48**	*eP*		**Pn**	**00 41 34.3**	**-0.1**
LAPC	**Finca la Perla**	**0.98**	**96**	*eP*		**Pb**	**00 41 33.4**	**-0.3**
MORN	**AI O del Volca**	**1.01**	**49**	P		**Pb**	**00 41 34.2**	**-0.1**
MORN				S		**Sb**	**00 41 47.2**	**-0.5**
CONN	**Concepcion**	**1.04**	**49**	P		**Pb**	**00 41 34.7**	**-0.1**
CONN				S		**Sb**	**00 41 48.0**	**-0.5**
VRLE	**La Escondida,**	**1.04**	**95**	*eP*		**Pb**	**00 41 35.1**	**+0.3**
GPS1	**Guardaparques**	**1.06**	**95**	*eP*		**Pb**	**00 41 35.3**	**+0.1**
GPS2	**Hotel Rincn d**	**1.06**	**96**	*eP*		**Pb**	**00 41 35.0**	**-0.1**
SAJU	**San Juanillo,**	**1.06**	**139**	*eP*		**Pb**	**00 41 33.8**	**-1.3**
BUAI	**Buenos Aires**	**1.07**	**90**	*eP*		**Pb**	**00 41 35.3**	**0.0**
NANN	**Nandasmo**	**1.10**	**16**	P		**Pn**	**00 41 37.1**	**+0.9**
NANN	**Nandasmo**	**1.10**	**16**	S		**Sb**	**00 41 49.8**	**-0.4**
SABN	**Sabanita**	**1.11**	**13**	P		**Pb**	**00 41 35.2**	**-0.7**
JUD3	**Juan Diaz 3**	**1.12**	**129**	*eP*		**Pb**	**00 41 35.0**	**-1.2**
MASN	**Masaya**	**1.14**	**13**	P		**Pb**	**00 41 36.6**	**+0.1**
MASN				S		**Sb**	**00 41 51.3**	**-0.1**
MAS3	**AI N del Volca**	**1.17**	**12**	P		**Pb**	**00 41 36.9**	**-0.1**
MAS3				S		**Sb**	**00 41 51.9**	**-0.3**
MESS	**Mesas**	**1.21**	**96**	*eP*		**Pb**	**00 41 38.1**	**+0.4**
COLC	**Colonia**	**1.22**	**100**	*eP*		**Pn**	**00 41 37.9**	**+0.1**
UNAN	**Cigeo UNAN**	**1.24**	**7**	P		**Pn**	**00 41 38.0**	**0.0**
UNAN				S		**Sg**	**00 41 54.6**	**0.0**
CUI	**Cuipilapa**	**1.25**	**100**	*eP*		**Pn**	**00 41 38.0**	**-0.3**
MGAN	**Managua**	**1.28**	**8**	S		**Sb**	**00 41 54.9**	**-0.4**
MGAN	**Managua**	**1.28**	**8**	P		**Pn**	**00 41 38.3**	**-0.2**
VMAR	**Armenia, Volca**	**1.29**	**93**	*eP*		**Pn**	**00 41 38.6**	**-0.1**
CMARA	**Lajas Hojancha**	**1.30**	**131**	P		**Pb**	**00 41 39.7**	**+0.5**
COPN	**Copaltepe**	**1.31**	**353**	P		**Pn**	**00 41 39.2**	**+0.2**
APYN	**Apoyeque**	**1.35**	**3**	P		**Pn**	**00 41 39.8**	**+0.2**
APYN				S		**Sb**	**00 41 57.0**	**-0.6**
UPAL	**Upala**	**1.39**	**89**	P		**Pb**	**00 41 40.8**	**+0.1**
UPAL	**Upala**	**1.39**	**89**	S		**Sg**	**00 41 59.3**	**0.0**
APQ3	**Volcan Apoyequ**	**1.39**	**2**	P		**Pn**	**00 41 40.1**	**0.0**
APQ3				S		**Sn**	**00 41 57.9**	**-0.6**
INVE	**Universidad In**	**1.39**	**106**	*eP*		**Pb**	**00 41 40.8**	**0.0**
TIMP	**Tierras Morena**	**1.41**	**102**	*eP*		**Pn**	**00 41 41.0**	**+0.5**
QUEB	**Quebradon, Cot**	**1.52**	**99**	*eP*		**Pb**	**00 41 43.1**	**+0.2**
JTS	**Las Juntas de**	**1.56**	**112**	P		**Pb**	**00 41 43.8**	**+0.2**
JTS				S		**Sb**	**00 42 03.8**	**+0.4**
JTS	**Las Juntas de**	**1.56**	**112**	*eP*		**Pn**	**00 41 43.2**	**+0.7**
MOM2	**El Cardon**	**1.56**	**358**	P		**Pn**	**00 41 42.8**	**+0.4**
MOM2				S		**Sn**	**00 42 02.3**	**-0.3**
MOM3	**MOM3**	**1.63**	**357**	P		**Pn**	**00 41 43.5**	**+0.1**
MOM3				S		**Sn**	**00 42 04.4**	**-0.1**
CNGA	**AI SSO del Vol**	**1.63**	**350**	P		**Pn**	**00 41 43.7**	**+0.2**
CNGA				S		**Sn**	**00 42 04.7**	**0.0**
CNGN	**Cerro Negro**	**1.64**	**351**	S		**Sb**	**00 42 05.5**	**-0.3**
CNGN	**Cerro Negro**	**1.64**	**351**	P		**Pn**	**00 41 44.1**	**+0.5**
JCR1	**Jicaral**	**1.64**	**128**	*eP*		**Pn**	**00 41 42.6**	**-1.1**
ILCN	**San Idelfonso**	**1.72**	**351**	P		**Pn**	**00 41 45.1**	**+0.5**
ILCN				S		**Sn**	**00 42 06.4**	**-0.2**
VARE2	**V. Arenal**	**1.72**	**104**	*eP*		**Pb**	**00 41 46.4**	**-0.1**
ARE1	**Arenal 1**	**1.72**	**104**	*eP*		**Pb**	**00 41 46.2**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.73**	**25**	P		**Pn**	**00 41 44.3**	**+0.5**
BOAB	**BOACO BROADBAN**	**1.73**	**25**	S		**Sn**	**00 42 06.1**	**-0.1**
CEDE	**Laguna Cedeo**	**1.73**	**103**	*eP*		**Pb**	**00 41 46.1**	**-0.5**
POLN	**AI Sur del Vol**	**1.81**	**348**	P		**Pn**	**00 41 46.5**	**+0.6**
POLN				S		**Sn**	**00 42 08.7**	**-0.2**
PKGN	**Cerro Pekin**	**1.87**	**343**	P		**Pn**	**00 41 47.6**	**+0.9**
PKGN				S		**Sb**	**00 42 11.1**	**-1.1**
CRIN	**San Cristobal**	**1.92**	**341**	S		**Sn**	**00 42 11.1**	**-0.6**
LIMN	**Finca el Limon**	**2.18**	**1**	P		**Pn**	**00 41 52.0**	**+1.0**
LIMN				S		**Sn**	**00 42 17.4**	**-0.7**
POTN	**Potosi Cosigui**	**2.37**	**333**	S		**Sn**	**00 42 22.9**	**+0.2**
CSGN	**Cosiguina Volc**	**2.37**	**332**	P		**Pn**	**00 41 55.0**	**+1.4**
LCR2	**La Lucha 2**	**2.63**	**115**	S		**Sn**	**00 42 30.9**	**+1.4**
RCPN	**Sur Rio San Ju**	**2.66**	**7**	P		**Pn**	**00 41 58.5**	**+0.8**
RCVN	**Varillal2**	**2.70**	**5**	P		**Pn**	**00 41 59.5**	**+1.2**
CNCH	**Conchagua**	**2.76**	**330**	P		**Pn**	**00 42 00.1**	**+1.1**
YUSH	**Yuscaran**	**3.09**	**352**	P		**Pn**	**00 42 04.3**	**+0.7**

*SDD **30** 00:43:38.7±2.4, 19°.09N×67°.03W, h22km±38km, MD3.3, ML1.9, MW3.0*

*RSPR **30** 00:43:40.7, 19°.03N×67°.12W, h11km±2km, MD2.8/11*

ISC 30 00:43:39.6±1.6, 19°.01N±0°.07×67°.10W±0°.05, h33km±3km, n25, σ0s76/30, 17C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.54**	**181**	↓↓	*eP*	**Pn**	**00 43 49.7**	**-1.1**
AGPR				↑↑	*eSg*	**Sb**	**00 43 59.2**	**+0.8**
AGPR					IAML		00 44 09.1	
	comp=N,94nm,2.5s							
AGPR	**Aguadilla, PR**	**0.54**	**181**	↓↓	*eP*	**Pn**	**00 43 50.7**	**-0.2**
AGPR	**Aguadilla, PR**	**0.54**	**181**		*eS*	**Sb**	**00 43 59.5**	**+1.0**
IDE	**Isla Desecheo**	**0.71**	**210**	↑↑	*eP*	**Pn**	**00 43 53.3**	**+0.1**
IDE	**Isla Desecheo**	**0.71**	**210**		*eS*	**Sn**	**00 44 03.6**	**+0.6**
AOPR	**Arecibo Observ**	**0.73**	**153**	↑↑	*eP*	**Pn**	**00 43 53.1**	**-0.5**
AOPR				↑↑	*eSg*	**Sb**	**00 44 04.8**	**+0.9**
AOPR	**Arecibo Observ**	**0.73**	**153**	↑↑	*eP*	**Pb**	**00 43 54.5**	**+0.4**
AOPR	**Arecibo Observ**	**0.73**	**153**		*eS*	**Sb**	**00 44 04.0**	**+0.1**
EMPR	**Esperanza - Ma**	**0.76**	**134**	↑↑	*eP*	**Pb**	**00 43 54.7**	**+0.3**
EMPR	**Esperanza - Ma**	**0.76**	**134**		*eS*	**Sb**	**00 44 05.1**	**+0.7**
LSP	**Las Mesas**	**0.82**	**179**	↑↑	*eP*	**Pn**	**00 43 54.4**	**-0.5**
LSP	**Las Mesas**	**0.82**	**179**		*eS*	**Sb**	**00 44 07.0**	**+0.6**
ECPR	**Experimental S**	**0.98**	**134**	↑↑	*eP*	**Pb**	**00 43 57.4**	**-0.8**
ECPR	**Experimental S**	**0.98**	**134**		*eS*	**Sb**	**00 44 10.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.99**	**180**	*eP*		**Pn**	**00 43 57.3**	**+0.1**
CRPR				↑↑	*eSg*	**Sn**	**00 44 10.2**	**+0.1**
CRPR					IAML		00 44 23.4	
	comp=N,37nm,2.1s							
CRPR	**Cabo Rojo, PR**	**0.99**	**180**	↑↑	*eP*	**Pb**	**00 43 57.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.99**	**180**		*eS*	**Sb**	**00 44 11.3**	**+0.1**
MLPR	**Magueyes Islan**	**1.03**	**177**	↓↓	*eP*	**Pn**	**00 43 57.8**	**+0.1**
MLPR				↑↑	*eSg*	**Sb**	**00 44 12.2**	**0.0**
MLPR					IAML		00 44 12.4	
	comp=N,5.7nm,1.0s							
MLPR	**Magueyes Islan**	**1.03**	**177**	↑↑	*eP*	**Pn**	**00 43 58.0**	**+0.3**
MLPR	**Magueyes Islan**	**1.03**	**177**		*eS*	**Sb**	**00 44 12.2**	**0.0**
OBIP	**Obispado Ponce**	**1.07**	**154**	↑↑	*eP*	**Pb**	**00 43 59.1**	**-0.5**
OBIP	**Obispado Ponce**	**1.07**	**154**		*eS*	**Sb**	**00 44 13.3**	**+0.1**
MIDR	**Miches**	**1.84**	**270**	↑↑	*eP*	**Pn**	**00 44 09.6**	**+0.7**
MIDR	**Miches**	**1.84**	**270**		*eS*	**Sn**	**00 44 31.1**	**+0.1**
HATOM	**Hato Mayor del**	**2.17**	**265**	↑↑	*eP*	**Pb**	**00 44 16.3**	**-1.9**
HATOM				↑↑	*eSg*	**Sb**	**00 44 46.7**	**+1.9**
HATOM					IAML		00 45 21.5	
	comp=N,11nm,1.6s							

*PDG **30** 01:24:52.5±0.3, 41°.37N×19°.54E, h11km±1km, ML2.7/12, Error ellipse: s-maj=1.1km s-min=2.3km az=0.0*

*TIR **30** 01:24:54.9, 41°.57N×19°.58E, h35km±1km, Ml3.0/6*

*BEO **30** 01:24:55.2±0.7, 41°.49N×19°.60E, h2km±3km, ML2.5/8*

ISC 30 01:24:54.7±1.0, 41°.54N±0°.02×19°.59E±0°.03, h13km±9km, n49, σ1s42/78, 10C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.28**	**133**	Pg		**Pg**	**01 25 00.0**	**-0.5**
TIR					AML	AML	01 25 04.4	
	18nm,0.5s							
TIR				Sg		**Sb**	**01 25 05.5**	**-0.7**
ULC	**Ulcinj**	**0.50**	**329**	↓↓	*iPg*	**Pg**	**01 25 03.7**	**-0.9**
ULC				↓↓	*i Sg*	**Sb**	**01 25 13.7**	**+1.1**
SDA	**Shkodra**	**0.52**	**352**		Pg	**Pg**	**01 25 04.2**	**-0.7**
SDA					Sg	**Sb**	**01 25 13.6**	**+0.5**
PHP	**Peshkopia**	**0.65**	**77**		Pg	**Pg**	**01 25 06.9**	**-0.6**
PHP					Sg	**Sb**	**01 25 17.6**	**+0.6**
PHP					AML	AML	01 25 24.9	
	1.2nm,0.6s							
DRME	**Dracevica, Mon**	**0.72**	**335**		*ePg*	**Pg**	**01 25 08.4**	**-0.2**
DRME					*eSg*	**Sn**	**01 25 20.3**	**-1.2**
DRME	**Dracevica, Mon**	**0.72**	**335**	↑↑	*iPg*	**Pg**	**01 25 07.6**	**-1.0**
DRME					*i Sg*	**Sn**	**01 25 21.1**	**-0.4**
BUM	**Brajici-Budva**	**0.92**	**326**		*ePg*	**Pb**	**01 25 11.2**	**-1.5**
BUM					*i Sg*	**Sn**	**01 25 28.0**	**+1.3**
PDG	**Podgorica**	**0.93**	**344**		Pg	**Pb**	**01 25 11.5**	**-1.2**
PDG					Sg	**Sg**	**01 25 25.4**	**+0.6**
PDG	**Podgorica**	**0.93**	**344**		*ePg*	**Pb**	**01 25 11.9**	**-0.8**
PDG					*eSg*	**Sn**	**01 25 26.3**	**-0.3**
PDG	**Podgorica**	**0.93**	**344**	↓↓	*iPg*	**Pb**	**01 25 11.3**	**-1.4**
PDG					*i Sg*	**Sn**	**01 25 28.4**	**+1.8**
VLO	**Vlora**	**1.07**	**184**		Pg	**Pg**	**01 25 15.3**	**0.0**
VLO					Sg	**Sn**	**01 25 30.1**	**0.0**
VLO					AML	AML	01 25 37.8	
	2.1nm,0.5s							
PVY	**Plav**	**1.09**	**14**		*ePg*	**Pb**	**01 25 15.1**	**-0.4**
PVY	**Plav**	**1.09**	**14**	↓↓	*iPg*	**Pb**	**01 25 14.0**	**-1.5**
PVY					*eSg*	**Sn**	**01 25 33.4**	**+2.5**
HCY	**Herceg Novi**	**1.22**	**318**		*ePg*	**Pn**	**01 25 17.0**	**-0.6**
HCY					*i Sg*	**Sg**	**01 25 37.8**	**+3.6**
KBN	**Korca**	**1.28**	**135**		Pn	**Pb**	**01 25 18.0**	**0.0**
KBN					Sn	**Sg**	**01 25 36.0**	**-0.1**
KBN					AML	AML	01 25 43.5	
	0.9nm,0.6s							
KOME	**Kolasin**	**1.31**	**357**		*ePg*	**Pg**	**01 25 19.8**	**-0.2**
KOME					*eSg*	**Sg**	**01 25 39.4**	**+2.3**
KOME	**Kolasin**	**1.31**	**357**	↓↓	*iPg*	**Pn**	**01 25 18.8**	**-0.1**
KOME					*i Sg*	**Sg**	**01 25 40.6**	**+3.5**
NKME	**Niksic**	**1.32**	**339**	↑↑	*iPg*	**Pn**	**01 25 17.6**	**-1.3**
NKME					*i Sg*	**Sg**	**01 25 38.1**	**+0.9**
BEY	**Berane**	**1.35**	**9**		*ePg*	**Pb**	**01 25 19.8**	**-0.2**
IVA	**Berane**	**1.35**	**9**	↑↑	*iPg*	**Pn**	**01 25 19.2**	**-0.2**
IVA

SELS	**Selova**	**2.01**	**34**	*e*Pn	**Pn**	**01 27 19.1**	**+0.2**
SELS				*e*Sn	**Sn**	**01 27 44.3**	**+0.2**
NOCI	**Noci**	**2.05**	**249**	Pn	**Pb**	**01 27 23.4**	**+1.2**
IVAS	**Ivanjica**	**2.06**	**11**	*e*Pn	**Pn**	**01 27 20.6**	**+1.0**
IVAS				*e*Sn	**Sn**	**01 27 44.7**	**-0.7**
BARS	**Barje**	**2.08**	**52**	*e*Pn	**Pb**	**01 27 21.4**	**-1.2**
IGT	**Igoumenitsa**	**2.10**	**164**	Pn	**Pn**	**01 27 20.8**	**+0.8**
IGT				Sn	**Sb**	**01 27 49.9**	**+0.9**
IGT				AML	AML	01 27 57.4	
	0.1nm,0.6s						
BBLS	**Lazi&#263i**	**2.31**	**357**	*e*Pn	**Pn**	**01 27 25.0**	**+2.0**

*IDC **30** 01:29:29.1±3.7,0˚.61S×98˚.50E,h0km,mb3.6/6, mbtmp3.6/6,MS2.5/1,Error ellipse: s-maj=162.4km s-min=23.3km az=56.0*

ISC 30 01:29:32.2±3.7,0˚.6S±0˚.6×98˚.6E±0˚.9,h32km,n16,σ0.9 42/6, mb3.8/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**18.89**	**1**	LR	LR	01 41 05.5	
	comp=Z,13nm,19.6s,baz=195,slow=37						
H08S2	**Diego Garcia H**	**26.97**	**254**	T	T	02 03 06.9	
	baz=75,slow=75,SNR=35						
H08S3	**Diego Garcia H**	**26.98**	**254**	T	T	02 03 00.7	
	baz=75,slow=75,SNR=64						
H08S1	**Diego Carcia H**	**26.99**	**254**	T	T	02 03 08.0	
	baz=75,slow=75,SNR=24						
WRA	**Warramunga Arr**	**39.92**	**121**	P	**P**	**01 37 05.4**	**-0.3**
	0.5nm,0.7s,baz=295,slow=7.9,SNR=2.6 0.5nm,0.7s						
ASAR	**Alice Springs**	**41.22**	**126**	P	**P**	**01 37 16.8**	**+0.3**
	0.2nm,0.6s,baz=301,slow=8.6,SNR=1.5 0.2nm,0.6s						
SONM	**Songino Array**	**48.67**	**7**	P	**P**	**01 38 15.7**	**+0.3**
	0.8nm,0.5s,baz=189,slow=8.3,SNR=4.4 0.8nm,0.5s						
MKAR	**Makanchi Array**	**49.28**	**345**	P	**P**	**01 38 20.1**	**+0.1**
	0.8nm,0.6s,baz=159,slow=9.4,SNR=7.5 0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**53.78**	**344**	P	**P**	**01 38 53.3**	**-0.2**
	0.2nm,0.3s,baz=164,slow=7.1,SNR=4.4 0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**55.51**	**350**	P	**P**	**01 39 05.6**	**-0.4**
	0.9nm,0.5s,baz=173,slow=7.4,SNR=5.1 0.9nm,0.5s						
H04N2	**CROZET ISLANDS**	**61.15**	**215**	T	T	02 45 57.0	
	baz=57,slow=75,SNR=46						
H04N1	**CROZET ISLANDS**	**61.16**	**215**	T	T	02 45 57.5	
	baz=57,slow=75,SNR=42						
H04N3	**CROZET ISLANDS**	**61.17**	**215**	T	T	02 45 56.2	
	baz=57,slow=75,SNR=41						
H04S1	**CROZET ISLANDS**	**61.46**	**215**	T	T	02 46 23.8	
	baz=59						
H04S3	**CROZET ISLANDS**	**61.47**	**215**	T	T	02 46 21.6	
	baz=59						
H04S2	**CROZET ISLANDS**	**61.48**	**215**	T	T	02 46 26.1	
	baz=59						

*NEIC **30** 01:45:09.4,42˚.77N×124˚.72W,h10km*

*IDC **30** 01:45:10.0±0.6,42˚.85N×124˚.23W,h0km,mb4.1/20, mbtmp4.1/26,ML3.3/6,MS3.8/45,Error ellipse: s-maj=12.1km s-min=5.6km az=50.0*

*NEIC **30** 01:45:10.2±2.3,42˚.749N±0˚.004×124˚.63W±0˚.05, h10km±1km,Error ellipse: s-maj=6.5km s-min=2.8km az=266.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.38; $M_{\theta\theta}$-1.61; $M_{\phi\phi}$-0.77; $M_{r\theta}$1.35; $M_{\theta\phi}$2.16; $M_{\phi r}$-4.66; Fault plane solution: $M_0$5.72000×10^{15} NP1:ϕ_s280.93000°,δ23.41000°,λ34.67000°. NP2: ϕ_s158.52000°,δ76.94000°,λ109.60000°. Principal axes: T 5.7321, Plg54.0000°, Azm92.0000°; N -0.0339, Plg19.0000°, Azm334.0000°; P -5.6982, Plg29.0000°, Azm233.0000°;*

*PNSN **30** 01:45:12.6,42˚.78N×124˚.48W,h17km,MD4.5,Fault plane solution: NP1:ϕ_s145.00000°,δ40.00000°,λ-140.00000°.*

*SEA **30** 01:45:12.6±1.5,42˚.78N±0˚.02×124˚.48W±0˚.06,h17km±3km, ML4.5/10,mb4.4/100(NEIC),ML4.4/153(NEIC), Mwr4.4/111(NEIC),Mww4.3/11(NEIC),Error ellipse: s-maj=6.7km s-min=2.1km az=105.0*

ISC 30 01:45:10.3±0.4,42.74N±0˚.03×124.46W±0˚.05,h10km, n195,σ1$51/110,mb4.4/45,MS3.9/41,Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**0.16**	**34**		**Pg**	**01 45 16.4**	**+2.4**
KBO	**Bosley Butte**	**0.55**	**162**		**Pn**	**01 45 24.0**	**-0.4**
KBO	**Bosley Butte**	**0.55**	**162**		Pn	01 45 33.3	+9.0
J01E	**Myrtle Point**	**0.57**	**42**		**Pb**	**01 45 23.0**	**+0.6**
J01E	**Myrtle Point**	**0.57**	**42**		**Sb**	**01 45 32.0**	**+1.4**
K02D	**Willamette Mer**	**0.58**	**94**		**Pn**	**01 45 23.9**	**-0.9**
K02D				IAML		01 45 36.0	
	comp=N,15μm,0.7s						
L02F	**Cave Junction**	**0.90**	**133**		**Pn**	**01 45 29.3**	**+0.2**
L02F				IAML		01 45 44.0	
	comp=N,14μm,0.5s						
L02F	**Cave Junction**	**0.90**	**133**		**Sn**	**01 45 42.8**	**+0.6**
UMPQ	**Umpqua Communi**	**0.99**	**56**		**Pg**	**01 45 29.7**	**+0.3**
UMPQ					**Sb**	**01 45 43.6**	**+0.9**
KSXB	**Camp Six Broad**	**1.00**	**154**		**Pn**	**01 45 30.4**	**-0.2**
KSXB				IAML		01 45 50.2	
	comp=E,8μm,0.7s						
KSXB				IAML		01 45 53.2	
	comp=N,8μm,0.8s						
I03D	**Drain, OR**	**1.25**	**40**		**Pn**	**01 45 33.1**	**-0.8**
I03D				IAML		01 46 02.1	
	comp=E,9μm,0.9s						
I03D				IAML		01 46 02.4	
	comp=N,9μm,1.1s						
HSO	**Harness Mounta**	**1.27**	**51**		**Pn**	**01 45 34.0**	**-0.3**
RNO	**Roman Nose**	**1.28**	**24**		**Pn**	**01 45 33.9**	**-0.5**
BBOR	**Butler Butte**	**1.31**	**83**		**Pb**	**01 45 35.3**	**+0.1**
BBOR				IAML		01 45 55.8	
	comp=N,7μm,1.0s						
BBOR				IAML		01 46 02.6	
	comp=E,5μm,0.9s						
I02E	**Swisshome, OR**	**1.44**	**18**		**Pn**	**01 45 35.6**	**-0.9**
I02E				IAML		01 46 06.6	
	comp=N,5μm,1.1s						
I02E				IAML		01 46 08.4	
	comp=E,5μm,1.1s						
KRPM	**Rodgers**	**1.61**	**168**		**Pb**	**01 45 39.0**	**-1.2**
KRPM				IAML		01 46 00.3	
	comp=E,4μm,0.7s						
KRPM				IAML		01 46 15.0	
	comp=N,3μm,0.9s						
YBH	**Yreka Blue Hor**	**1.64**	**127**	Pg	**Pb**	**01 45 40.8**	**+0.1**
	comp=N,3.5nm,0.3s,baz=334,slow=10,SNR=299						
YBH				Lg	Lg	01 46 00.0	
	comp=N,4.9nm,0.3s,baz=346,slow=23,SNR=6.1						
YBH				LR	LR	01 46 02.8	
	comp=N,23nm,18.1s,baz=306,slow=33						
YBH	**Yreka Blue Hor**	**1.64**	**127**		**Pb**	**01 45 40.3**	**-0.5**
L04D	**Klamath Falls**	**1.67**	**107**		**Pb**	**01 45 41.2**	**-0.2**
L04D				IAML		01 46 08.6	
	comp=N,4μm,1.1s						
J04A	**Umpqua Nationa**	**1.79**	**73**		**Pb**	**01 45 43.1**	**-0.3**
M02C	**Callahan**	**1.80**	**138**		**Pb**	**01 45 42.9**	**-0.5**
M02C				IAML		01 46 20.1	
	comp=E,2μm,0.9s						
BUCK	**Buck Mountain**	**1.81**	**36**		**Pn**	**01 45 41.5**	**-0.2**
BUCK				IAML		01 46 19.9	
	comp=N,5μm,1.1s						
BUCK				IAML		01 46 26.6	
	comp=E,5μm,1.1s						
I04A	**Tendick Farm,**	**1.83**	**54**		**Pn**	**01 45 42.2**	**+0.4**
I04A				IAML		01 46 16.4	
	comp=E,3μm,0.9s						
I04A				IAML		01 46 20.7	
	comp=N,3μm,1.1s						
MPOR	**Mary's Peak**	**1.88**	**20**		**Pn**	**01 45 42.0**	**-0.7**
KHMM	**Horse Mountain**	**1.94**	**164**		**Pn**	**01 45 44.0**	**+0.5**
KHMM				IAML		01 46 09.5	
	comp=N,3μm,0.5s						
KHMM				IAML		01 46 35.5	
	comp=E,2μm,2.1s						
JCC	**Jacoby Creek,**	**1.95**	**170**		**Pn**	**01 45 43.1**	**-0.3**
K04D	**Chiloquin, OR**	**2.00**	**92**		**Pn**	**01 45 45.1**	**+0.9**
COR	**Corvallis**	**2.03**	**24**		**Pn**	**01 45 44.2**	**-0.3**
COR				IAML		01 46 29.8	
	comp=E,4μm,0.8s						
COR				IAML		01 46 39.7	
	comp=E,3μm,1.1s						
H04D	**Lebanon**	**2.18**	**34**		**Pn**	**01 45 46.5**	**-0.1**
H04D				IAML		01 46 33.6	
	comp=N,3μm,1.1s						
N02D	**Trinity Center**	**2.19**	**143**		**Pb**	**01 45 48.5**	**-1.6**
N02D				IAML		01 46 28.4	
	comp=N,2μm,0.7s						
N02D				IAML		01 46 31.3	
	comp=E,2μm,0.7s						
M03C	**McCloud**	**2.27**	**129**		**Pb**	**01 45 50.1**	**-1.4**
M03C				IAML		01 46 44.5	
	comp=N,3μm,1.1s						
KHBM	**Hayfork Bally**	**2.27**	**156**	IAML		01 46 43.5	
	comp=E,1μm,0.9s						
WIFE	**Three Sisters-**	**2.33**	**55**		**Pn**	**01 45 49.5**	**+0.5**
KMPM	**Mount Pierce**	**2.33**	**174**		**Pn**	**01 45 48.3**	**-0.5**
J05D	**Fort Rock, OR**	**2.42**	**76**		**Pn**	**01 45 51.2**	**+1.1**
J05D				IAML		01 46 39.4	
	comp=N,2μm,1.2s						
J05D				IAML		01 46 40.2	
	comp=E,2μm,1.4s						
H04A	**Detroit Lake**	**2.55**	**39**		**Pn**	**01 45 51.7**	**-0.1**
H04A				IAML		01 46 36.3	
	comp=E,2μm,1.0s						
H04A				IAML		01 46 40.7	
	comp=N,1μm,1.0s						
KMRM	**Mail Ridge**	**2.58**	**167**		**Pn**	**01 45 52.8**	**+0.6**
KMRM				IAML		01 46 56.5	
	comp=E,1μm,1.0s						
G03D	**McMinnville, O**	**2.62**	**19**	IAML		01 46 51.9	
	comp=E,2μm,1.1s						
G03D				IAML		01 47 02.5	
	comp=N,2μm,1.5s						
K05A	**Summer Lake**	**2.62**	**89**		**Pn**	**01 45 54.1**	**+1.1**
K05A				IAML		01 46 45.1	
	comp=E,1μm,1.3s						
K05A				IAML		01 46 48.6	
	comp=N,1μm,1.6s						
I05D	**Terrebonne, OR**	**2.77**	**54**	IAML		01 46 49.7	
	comp=N,1μm,1.3s						
PINE	**Pine Mountain**	**2.77**	**67**		**Pn**	**01 45 56.0**	**+0.9**
PINE				IAML		01 46 51.4	
	comp=E,887nm,2.3s						
PINE				IAML		01 46 59.2	
	comp=N,990nm,1.1s						
HATC	**Hat Creek Radi**	**2.95**	**130**	IAML		01 47 07.0	
	comp=E,2μm,2.2s						
LKVW	**Lakeview**	**3.07**	**98**		**Pn**	**01 45 59.8**	**+0.7**
KCPM	**Cahto Peak**	**3.12**	**168**		**Pn**	**01 46 00.6**	**+0.9**
O03E	**Paynes Creek**	**3.15**	**140**		**Pn**	**01 46 01.3**	**+1.2**
O03E				IAML		01 47 04.8	
	comp=N,774nm,1.1s						
O03E				IAML		01 47 12.0	
	comp=E,988nm,1.3s						
F03A	**Seaside**	**3.25**	**11**	IAML		01 47 13.2	
	comp=E,962nm,1.1s						
HOOD	**Mount Hood Mea**	**3.28**	**37**	IAML		01 47 07.2	
	comp=E,1μm,1.0s						
F04D	**Rainier, OR**	**3.50**	**17**	IAML		01 47 22.5	
	comp=E,893nm,1.7s						
RADR	**Rader Ridge**	**3.71**	**7**	IAML		01 47 45.3	
	comp=N,494nm,1.2s						
G06A	**Carlson Farm,**	**3.72**	**47**	IAML		01 47 11.5	
	comp=E,620nm,1.4s						
G06A				IAML		01 47 16.8	
	comp=N,740nm,1.5s						
E03A	**Lebam**	**3.86**	**9**	IAML		01 47 52.7	
	comp=N,368nm,1.4s						
E03A				IAML		01 48 02.3	
	comp=E,459nm,1.6s						
JRO	**Jston Ridge Ob**	**3.88**	**24**	IAML		01 47 35.3	
	comp=N,741nm,1.3s						
WVOR	**Wild Horse Val**	**4.31**	**92**		**Pn**	**01 46 16.2**	**+0.2**
WVOR				IAML		01 47 44.7	
	comp=N,232nm,1.3s						
WVOR				IAML		01 47 55.6	
	comp=N,256nm,1.7s						
WISH	**Wishkah**	**4.41**	**6**	IAML		01 48 14.4	
	comp=E,293nm,1.9s						
WISH				IAML		01 48 23.8	
	comp=N,313nm,1.7s						
D05A	**Enumclaw**	**4.78**	**21**	IAML		01 48 09.2	
	comp=N,330nm,1.6s						
D05A				IAML		01 48 10.6	
	comp=E,330nm,1.7s						
MXC	**Moxie City**	**4.85**	**36**	IAML		01 47 58.0	
	comp=N,224nm,1.4s						
MXC				IAML		01 48 10.5	
	comp=E,290nm,1.2s						
GNW	**Green Mountain**	**4.96**	**13**		**Pn**	**01 46 24.9**	**0.0**
E07A	**Sunnyside**	**5.04**	**39**	IAML		01 48 01.6	
	comp=E,318nm,1.8s						
E07A				IAML		01 48 20.5	
	comp=N,229nm,1.0s						
HAWA	**Hanford**	**5.07**	**42**	IAML		01 48 08.4	
	comp=N,232nm,1.7s						
HAWA				IAML		01 48 08.4	
	comp=N,219nm,1.6s						
PNTR	**Pine Nut**	**5.18**	**133**	IAML		01 48 11.6	
	comp=E,228nm,1.8s						
PNTR				IAML		01 48 26.0	
	comp=N,244nm,1.4s						
LTY	**Liberty**	**5.25**	**29**	IAML		01 48 27.7	
	comp=E,122nm,1.3s						
NVAR	**Mina Array Bea**	**6.36**	**131**	Pn	**Pn**	**01 46 45.2**	**+0.9**
	comp=E,0.4nm,0.3s,baz=301,slow=14,SNR=16						
NVAR				Pg	**Pb**	**01 46 57.6**	**-3.6**
	comp=E,3.3nm,0.3s,baz=300,slow=14,SNR=35						
NVAR				LR	LR	01 49 12.1	
	comp=E,264nm,20.7s,baz=312,slow=38 comp=E,4.2nm,0.9s						
ELK	**Elko**	**7.17**	**103**	Pn	**Pn**	**01 46 57.6**	**+2.1**
	comp=E,0.4nm,0.3s,baz=284,slow=15,SNR=46						
ELK				Sn	**Sn**	**01 48 17.4**	**+0.2**
	baz=266,slow=15						
ELK				Lg	Lg	01 48 52.2	
	comp=E,0.1nm,0.3s,baz=336,slow=14,SNR=1.1 comp=E,6.7nm,0.7s						
NEW	**Newport**	**7.55**	**40**	Pn	**Pn**	**01 47 00.6**	**+0.2**
	comp=E,0.3nm,0.3s,baz=213,slow=13,SNR=7.9						
NEW				Sn	**Sn**	**01 48 23.5**	**-2.6**
	comp=E,0.4nm,0.3s,baz=283,slow=24,SNR=3.1						
NEW				Lg	Lg	01 49 02.6	
	comp=E,0.3nm,0.3s,baz=156,slow=24,SNR=3.1						
NEW				LR	LR	01 50 08.9	
	comp=E,1μm,18.1s,baz=226,slow=41 comp=E,2.2nm,0.6s						
BBB	**Bella Bella**	**9.77**	**347**	Pn	**Pn**	**01 47 32.1**	**+1.3**
	baz=218,slow=19,SNR=2.6 comp=E,7.3nm,1.1s						
YHH	**Holmes Hill**	**10.05**	**74**		**Pn**	**01 47 37.9**	**+2.9**
MOOW	**Moose Ponds**	**10.06**	**80**		**Pn**	**01 47 37.6**	**+2.6**
PDAR	**Pinedale Array**	**10.96**	**85**	Pn	**Pn**	**01 47 50.0**	**+2.6**
	comp=E,0.1nm,0.3s,baz=279,slow=12,SNR=19 comp=E,11nm,1.0s						
PDAR	**Pinedale Array**	**10.96**	**85**		**Pn**	**01 47 50.2**	**+2.9**
RLMT	**Red Lodge**	**11.21**	**73**		**Pn**	**01 47 53.5**	**+2.7**
SDCO	**Great Sand Dun**	**15.30**	**103**	IAmb	IAmb	01 48 56.1	
	comp=Z,16nm,1.0s						
DUN6	**Lazy B Ranch**	**15.83**	**125**	P	**P**	**01 48 56.4**	**-0.9**
DUN6				IAmb	IAmb	01 49 11.3	
	comp=Z,54nm,1.3s						
TASM	**ASL Pad, Albuq**	**16.02**	**113**	IAmb	IAmb	01 49 03.1	
	comp=Z,4.6nm,0.9s						
TASM	**ASL Pad, Albuq**	**16.02**	**113**	IAmb	IAmb	01 49 01.4	
	comp=Z,3.7nm,0.8s						
ANMO	**Albuquerque**	**16.02**	**113**	Pn	**Pn**	**01 48 56.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=317,slow=12,SNR=11						
ANMO				LR	LR	01 54 39.0	
	comp=Z,133nm,19.1s,baz=300,slow=36 comp=Z,5.7nm,1.1s						
ANMO	**Albuquerque**	**16.02**	**113**		**Pn**	**01 48 55.3**	**-0.6**
DLBC	**Dease Lake**	**16.10**	**349**	LR	LR	01 54 40.0	
	comp=Z,194nm,20.7s,baz=148,slow=36						
T25A	**Trinidad**	**16.35**	**103**	IAmb	IAmb	01 49 02.3	
	comp=Z,33nm,1.3s						
121A	**Cookes Peak, D**	**16.65**	**122**	P	**P**	**01 49 06.4**	**0.0**
RTBA	**Rita Blanca**	**17.86**	**103**	IAmb	IAmb	01 49 20.0	
	comp=Z,19nm,0.9s						
FFC	**Flin Flon**	**18.97**	**43**	P	**P**	**01 49 27.7**	**-3.9**
FFC				IAmb	IAmb	01 49 34.3	
	comp=Z,15nm,0.8s						
AMTX	**Amarillo**	**19.37**	**106**	IAmb	IAmb	01 49 38.5	
	comp=Z,20nm,1.0s						
SMWD	**Samnorwood**	**20.28**	**104**	P	Pn	01 49 48.2	+0.1
DKNS	**Dickens**	**20.54**	**108**	P	**P**	**01 49 47.8**	**-1.2**
YKA	**Yellowknife Ar**	**20.62**	**13**	P	**P**	**01 49 49.5**	**0.0**
	comp=Z,5.3nm,0.9s,baz=205,slow=12,SNR=19						
YKA				LR	LR	01 58 58.6	
	comp=Z,285nm,18.1s,baz=128,slow=40 comp=Z,5.3nm,0.9s						
YKAW1	**Yellowknife Wh**	**20.64**	**13**	P	**P**	**01 49 49.8**	**+0.1**
YKAW1				IAmb	IAmb	01 49 52.9	
	comp=Z,12nm,0.8s						
YKAW3	**Yellowknife Wh**	**20.69**	**13**	P	**P**	**01 49 50.8**	**+0.6**
ALPN	**Alpine**	**20.72**	**120**	P	Pn	01 49 52.9	-0.4
AGMN	**Agassiz Nation**	**20.72**	**65**	P	**P**	**01 49 49.6**	**-1.1**
AGMN				IAmb	IAmb	01 49 51.7	
	comp=Z,24nm,1.1s						
SN07	**Snyder 07**	**20.88**	**110**	IAmb	IAmb	01 49 56.7	
	comp=Z,16nm,0.8s						
ULM	**Lac du Bonnet**	**20.97**	**59**	P	**P**	**01 49 51.5**	**-1.9**
	comp=Z,14nm,1.0s,baz=278,slow=10,SNR=9.0						
ULM				LR	LR	01 58 14.1	
	comp=Z,332nm,18.7s,baz=205,slow=38 comp=Z,14nm,1.0s						
ULM	**Lac du Bonnet**	**20.97**	**59**	P	**P**	**01 49 51.6**	**-1.8**
ULM				IAmb	IAmb	01 49 59.6	
	comp=Z,22nm,1.1s						
TX31	**Lajitas Ar. Si**	**21.41**	**122**	P	**P**	**01 50 00.6**	**+2.2**
TXAR	**Lajitas Array**	**21.41**	**122**	P	**P**	**01 49 59.6**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=297,slow=8.3,SNR=24						
TXAR				LR	LR	01 59 20.0	
	comp=Z,466nm,19.6s,baz=302,slow=40 comp=Z,3.9nm,0.8s						
TXAR	**Lajitas Array**	**21.41**	**122**	P	**P**	**01 50 01.1**	**+2.7**
LPIG	**La Paz**	**21.96**	**143**	LR	LR	01 58 53.9	
	comp=Z,137nm,19.9s,baz=332,slow=38						
HPIG		**21.98**	**130**	P	**P**	**01 50 03.7**	**-0.9**
T35A	**Sooner Cattle**	**22.18**	**96**	IAmb	IAmb	01 50 05.1	
	comp=Z,11nm,0.7s						
WTFS	**Witchita Falls**	**22.22**	**105**	IAmb	IAmb	01 50 09.7	
	comp=Z,20nm,0.8s						
OK052	**Battle Ridge R**	**22.35**	**98**	IAmb	IAmb	01 50 11.0	
	comp=Z,11nm,0.8s						
PLPT	**Palo Pinto**	**22.84**	**107**	IAmb	IAmb	01 50 15.7	
	comp=Z,14nm,1.1s						
SPMN	**Marine on St.**	**22.84**	**73**	IAmb	IAmb	01 50 18.6	
	comp=Z,13nm,1.1s						
JCT	**Junction City**	**23.17**	**114**	IAmb	IAmb	01 50 21.0	
	comp=Z,22nm,1.2s						
KDAK	**Kodiak Island**	**23.21**	**320**	LR	LR	01 57 18.0	
	comp=Z,206nm,18.6s,baz=127,slow=31						
DRIO	**Del Rio**	**23.31**	**117**	IAmb	IAmb	01 50 21.4	
	comp=Z,8.3nm,0.9s						
P38A	**Dawn**	**23.42**	**87**	IAmb	IAmb	01 50 22.5	
	comp=Z,9.7nm,0.8s						
U38A	**Gravette**	**23.93**	**95**	IAmb	IAmb	01 50 24.0	
	comp=Z,14nm,1.3s						
HHAR	**Hobbs**	**24.32**	**95**	IAmb	IAmb	01 50 28.5	
	comp=Z,6.4nm,0.8s						
P40A	**Paris**	**24.54**	**86**	IAmb	IAmb	01 50 33.3	
	comp=Z,7.4nm,0.8s						
I40A	**Norwalk**	**24.55**	**76**	IAmb	IAmb	01 50 32.6	
	comp=Z,9.7nm,0.8s						
R40A	**Maddies Statio**	**24.78**	**89**	IAmb	IAmb	01 50 36.0	
	comp=Z,9.5nm,1.2s						
G31M	**Satah River**	**24.82**	**351**	P	**P**	**01 50 33.6**	**+1.3**
G31M				IAmb	IAmb	01 50 40.8	
	comp=Z,9.6nm,0.9s						
MGMO	**Mountain Grove**	**25.20**	**92**	IAmb	IAmb	01 50 37.4	
	comp=Z,17nm,1.4s						
MIAR	**Mount Ida**	**25.36**	**98**	IAmb	IAmb	01 50 40.4	
	comp=Z,8.1nm,0.9s						
ILAR	**Eielson Array**	**25.47**	**338**	P	**P**	**01 50 40.9**	**+2.6**
	comp=Z,1.9nm,0.9s,baz=155,slow=8.0,SNR=18 comp=Z,1.9nm,0.9s						
CCM	**Cathedral Cave**	**25.62**	**89**	P	**P**	**01 50 39.0**	**-0.8**
CCM				IAmb	IAmb	01 50 43.0	
	comp=Z,6.5nm,0.9s						
INK	**Inuvik**	**26.08**	**352**	P	**P**	**01 50 43.9**	**+0.3**
INK				IAmb	IAmb	01 50 59.1	
	comp=Z,9.9nm,1.4s						
FVM	**French Village**	**26.25**	**89**	IAmb	IAmb	01 50 46.1	
	comp=Z,7.8nm,0.8s						
L16K	**Owhat River**	**28.12**	**325**	P	**P**	**01 50 59.8**	**-2.3**
L16K				IAmb	IAmb	01 51 30.1	
	comp=Z,13nm,1.2s						
H19K	**Roundabout Mou**	**28.95**	**333**	IAmb	IAmb	01 51 18.8	
	comp=Z,7.7nm,0.8s						
FPAL	**Fort Paine**	**31.20**	**92**	IAmb	IAmb	01 51 31.1	
	comp=Z,5.1nm,0.9s						
TKL	**Tuckaleechee C**	**32.07**	**89**	LR	LR	02 05 01.4	
	comp=Z,76nm,18.4s,baz=298,slow=37						
SADO	**Sadowa**	**32.47**	**71**	LR	LR	02 05 59.1	
	comp=Z,211nm,19.4s,baz=317,slow=39						
152A	**Waverly Hall**	**32.74**	**95**	IAmb	IAmb	01 51 43.9	
	comp=Z,7.1nm,0.9s						
RES	**Resolute Bay**	**34.70**	**13**	LR	LR	02 07 13.0	
	comp=Z,267nm,20.4s,baz=285,slow=38						
CMIG	**Mas Romero**	**35.87**	**126**	LR	LR	02 08 51.2	
	comp=Z,258nm,18.0s,baz=287,slow=40						
TEIG	**Tepich**	**37.74**	**115**	P	**P**	**01 52 27.6**	**+1.3**
FRB	**Frobisher Bay**	**37.88**	**37**	LR	LR	02 07 19.1	
	comp=Z,100nm,18.1s,baz=278,slow=35						
SCHQ	**Schefferville**	**38.76**	**51**	P	**P**	**01 52 34.0**	**-0.6**
	comp=Z,11nm,0.9s,baz=257,slow=10,SNR=4.2						
SCHQ				LR	LR	02 07 19.4	
	comp=Z,55nm,21.5s,baz=92,slow=34 comp=Z,11nm,0.9s						
SFJD	**Kangerlussuaq**	**45.38**	**32**	LR	LR	02 12 55.4	
	comp=Z,131nm,18.5s,baz=286,slow=37						
JTS	**Las Juntas de**	**47.20**	**121**	LR	LR	02 15 50.2	
	comp=Z,122nm,19.4s,baz=305,slow=39						
PEA0B	**Petropavlovsk-**	**50.73**	**310**	P	**P**	**01 54 10.7**	**+0.7**
PETK	**Petropavlovsk-**	**50.73**	**310**	P	**P**	**01 54 11.7**	**+1.7**
	comp=Z,2.3nm,0.6s,baz=70,slow=13,SNR=5.2 comp=Z,2.3nm,0.6s						
PETK	**Petropavlovsk-**	**50.73**	**310**	P	**P**	**01 54 09.1**	**-1.0**
MA2	**Magadan**	**51.96**	**320**	LR	LR	02 15 59.9	
	comp=Z,72nm,18.2s,baz=76,slow=36						
BORG	**Borgarnes**	**57.38**	**30**	LR	LR	02 20 08.0	
	comp=Z,163nm,18.4s,baz=296,slow=37						
SDV	**Santo Domingo**	**57.76**	**109**	LR	LR	02 24 05.9	
	comp=Z,72nm,18.8s,baz=302,slow=40						
SDV	**Santo Domingo**	**57.76**	**109**	P	**P**	**01 55 01.0**	**-0.9**
JMIC	**Jan Mayen**	**57.78**	**20**	LR	LR	02 19 46.0	
	comp=Z,142nm,19.6s,baz=259,slow

	comp=Z,76nm,20.2s,baz=141,slow=31							
HFS	**Hagfors**	**71.90**	**21**	P		**P**	**01 56 33.9**	**+0.7**
	comp=Z,8.9nm,0.9s,baz=311,slow=5.7,SNR=6.2							
HFS				LR		LR	02 28 06.1	
	comp=Z,153nm,19.0s,baz=297,slow=36							
	comp=Z,8.9nm,0.9s							
MDP	**Montagnes des**	**73.22**	**99**	LR		LR	02 28 43.1	
	comp=Z,32nm,21.9s,baz=6.5,slow=36							
FINES	**FINESS Array B**	**73.45**	**14**	P		**P**	**01 56 42.9**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=22,slow=2.1,SNR=3.5							
FINES				LR		LR	02 28 41.1	
	comp=Z,112nm,19.4s,baz=357,slow=36							
	comp=Z,2.4nm,0.8s							
LPAZ	**La Paz**	**78.24**	**125**	P		**P**	**01 57 11.2**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=305,slow=4.0,SNR=8.2							
	comp=Z,2.1nm,0.8s							
LPAZ	**La Paz**	**78.24**	**125**	P		**P**	**01 57 11.0**	**-0.1**
LPAZ				IAmb		IAmb	01 57 12.7	
	comp=Z,2.2nm,0.8s							
SONM	**Songino Array**	**79.26**	**328**	P		**P**	**01 57 17.7**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=35,slow=5.3,SNR=2.3							
SONM				LR		LR	02 31 35.8	
	comp=Z,42nm,18.3s,baz=68,slow=35							
	comp=Z,0.6nm,0.6s							
CLL	**Collm**	**79.30**	**26**	*e*P		**P**	**01 57 17.0**	**+1.2**
CLL				*e*pP		**PcP**	**01 57 22.0**	**-2.0**
CLL				*e*S		**S**	**02 07 10.0**	**-5.9**
ZALV	**Zalesovo Beam**	**80.47**	**343**	P		**P**	**01 57 23.8**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=350,slow=4.5,SNR=5.9							
ZALV				LR		LR	02 36 43.9	
	comp=Z,49nm,19.3s,baz=30,slow=38							
	comp=Z,0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**80.47**	**343**	P		**P**	**01 57 22.4**	**+0.3**
ARTI	**Arti**	**81.21**	**358**	LR		LR	02 37 51.7	
	comp=Z,46nm,19.6s,baz=340,slow=39							
GERES	**GERESS Array B**	**81.66**	**26**	P		**P**	**01 57 29.7**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=38,slow=10.0,SNR=1.8							
	comp=Z,0.2nm,0.4s							
ESDC	**Sonseca Array**	**81.87**	**42**	P		**P**	**01 57 30.1**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=302,slow=4.1,SNR=7.8							
ESDC				LR		LR	02 29 51.8	
	comp=Z,42nm,21.2s,baz=296,slow=33							
	comp=Z,1.2nm,0.9s							
ESDC	**Sonseca Array**	**81.87**	**42**	IAmb		IAmb	01 57 31.8	
	comp=Z,1.3nm,0.9s							
DAVOX	**Davos/Dischmat**	**82.10**	**30**	LR		LR	02 34 50.3	
	comp=Z,67nm,18.0s,baz=258,slow=36							
VRAC	**Vranov**	**82.17**	**25**	LR		LR	02 34 27.3	
	comp=Z,90nm,20.6s,baz=346,slow=36							
HHC	**Hu-ho-hao-te**	**82.63**	**321**	*e*P		**P**	**01 57 33.0**	**-0.9**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.5s							
HHC				pmax		pmax		
	comp=Z,66nm,4.0s							
BVAR	**Borovoye Array**	**83.76**	**351**	P		**P**	**01 57 40.5**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=64,slow=7.0,SNR=3.2							
BVAR				LR		LR	02 36 53.9	
	comp=Z,43nm,21.9s,baz=358,slow=37							
	comp=Z,1.1nm,0.8s							
AKASG	**Malin Array Be**	**84.15**	**16**	P		**P**	**01 57 41.0**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=349,slow=4.8,SNR=7.9							
AKASG				LR		LR	02 36 51.9	
	comp=Z,59nm,18.4s,baz=346,slow=37							
	comp=Z,2.4nm,0.8s							
AKASG	**Malin Array Be**	**84.15**	**16**	IAmb		IAmb	01 57 46.4	
	comp=Z,3.7nm,1.3s							
KURK	**Kurchatov**	**84.77**	**346**			**P**	**01 57 44.9**	**+0.4**
KURK				IAmb		IAmb	01 57 52.6	
	comp=Z,3.5nm,0.9s							
KURBB	**Kurchatov Arra**	**84.88**	**346**	P		**P**	**01 57 45.0**	**0.0**
	comp=Z,1.3nm,0.8s,baz=17,slow=4.6,SNR=10							
	comp=Z,1.3nm,0.8s							
NJ2	**Nanjing**	**85.64**	**310**	*e*P		**P**	**01 57 49.8**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,12nm,0.6s							
LYN	**LuoYang**	**87.14**	**316**	*e*P		P	01 58 02.8	+6.2
LYN				pP		sP	01 58 07.3	+6.1
LYN				pmax		pmax		
	comp=Z,8.0nm,1.1s							
LYN				pmax		pmax		
	comp=Z,220nm,3.8s							
LYN				LR		LR		
	comp=N,340nm,4.7s							
LYN				LR		LR		
	comp=E,180nm,5.8s							
LYN				LR		LR		
	comp=Z,220nm,5.4s							
AKTO	**Aktyubinsk**	**87.18**	**358**	LR		LR	02 42 03.1	
	comp=Z,80nm,18.1s,baz=146,slow=39							
MKAR	**Makanchi Array**	**87.75**	**342**	P		**P**	**01 57 59.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=18,slow=4.5,SNR=7.7							
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**87.75**	**342**	P		**P**	**01 57 54.6**	**-4.7**
AB31	**Akbulak array**	**88.31**	**357**	P		**P**	**01 58 01.7**	**-0.2**
ABKAR	**Akbulak array**	**88.31**	**357**	P		**P**	**01 58 01.8**	**-0.1**
DZM	**Mont Dzumac**	**90.51**	**240**	*e*LR		LR	02 27 03.9	
	comp=Z,181nm,27.4s							
VAE	**Valguarnera**	**91.82**	**32**	LR		LR	02 38 36.9	
	comp=Z,37nm,18.4s,baz=337,slow=35							
PMG	**Port Moresby**	**95.12**	**262**	LR		LR	02 32 45.9	
	comp=Z,43nm,20.3s,baz=146,slow=30							
BRTR	**Keskin Array B**	**95.55**	**17**	LR		LR	02 42 50.5	
	comp=Z,41nm,21.1s,baz=10,slow=36							
URZ	**Urewera**	**96.51**	**222**	LR		LR	02 34 33.4	
	comp=Z,30nm,19.3s,baz=47,slow=31							
PZH	**PanZhiHua**	**99.02**	**319**	P		Pdif	01 58 52.0	+0.3
KGCAE	**Kacgae**	**145.98**	**65**			**PKPab**	**02 04 51.3**	**+0.2**
LKGWB	**Lokgwabe**	**146.17**	**68**			**PKiKP**	**02 04 53.1**	**-1.2**

IDC 30 02:01:39.9±2.3, 2.08N×125.65E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=295.4km s-min=22.8km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.49**	**159**	P	P	02 06 51.7	+0.1
	1.9nm,0.6s,baz=337,slow=9.9,SNR=10						
	1.9nm,0.6s						
ASAR	**Alice Springs**	**26.82**	**163**	P	P	02 07 21.2	-1.0
	0.2nm,0.6s,baz=347,slow=6.6,SNR=2.5						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**58.30**	**326**	P	P	02 11 36.8	+0.1
	0.2nm,0.4s,baz=127,slow=7.9,SNR=4.8						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**62.55**	**328**	P	P	02 12 06.1	+0.5
	0.3nm,0.7s,baz=138,slow=7.2,SNR=2.2						
	0.3nm,0.7s						

*NEIC **30** 02:08:07.5±2.9, 42.77N±0.01°×124.41W±0.04, h10km±2km, Error ellipse: s-maj=5.1km s-min=3.0km az=273.0*

SEA 30 02:08:07.3±1.6, 42.77N±0.02°×124.49W±0.05, h18km±3km, ML2.3/8, mL2.1/34(NEIC), Error ellipse: s-maj=5.5km s-min=2.4km az=94.0, Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**0.15**	**49**		Pg	02 08 11.5	-0.2
KEBM	**Edson Butte**	**0.15**	**49**	IAML		02 08 16.2	
	comp=E,1µm,0.3s						
KEBM				IAML		02 08 16.3	
	comp=N,1µm,0.5s						
J01E	**Myrtle Point**	**0.57**	**46**		Pg	02 08 18.1	-0.5
J01E					Sb	02 08 26.9	+0.5
J01E	**Myrtle Point**	**0.57**	**46**	IAML		02 08 27.7	
	comp=N,346nm,0.3s						
J01E				IAML		02 08 27.9	
	comp=E,416nm,0.3s						
KBO	**Bosley Butte**	**0.59**	**160**		Pb	02 08 19.6	+0.4
KBO					Sn	02 08 29.3	-0.8
KBO	**Bosley Butte**	**0.59**	**160**	IAML		02 08 31.0	
	comp=E,108nm,0.5s						
K02D	**Willamette Mer**	**0.61**	**97**		Pg	02 08 19.1	-0.4
K02D	**Willamette Mer**	**0.61**	**97**	IAML		02 08 29.6	
	comp=N,150nm,0.3s						
K02D				IAML		02 08 30.4	
	comp=E,123nm,0.7s						
L02F	**Cave Junction**	**0.94**	**133**		Pb	02 08 24.5	-0.6
L02F					Sn	02 08 38.4	-0.3
L02F	**Cave Junction**	**0.94**	**133**	IAML		02 08 38.9	
	comp=N,43nm,0.5s						
L02F				IAML		02 08 39.0	
	comp=E,50nm,0.5s						
KSXB	**Camp Six Broad**	**1.04**	**154**		Pb	02 08 26.7	-0.2
I03D	**Drain, OR**	**1.25**	**42**		Pn	02 08 28.2	-1.6
I03D	**Drain, OR**	**1.25**	**42**	IAML		02 08 48.0	
	comp=N,29nm,0.4s						

HSO	**Harness Mounta**	**1.27**	**53**		Pn	02 08 29.1	-1.2
BBOR	**Butler Butte**	**1.34**	**84**		Pn	02 08 30.8	-0.4
BBOR	**Butler Butte**	**1.34**	**84**	IAML		02 08 57.0	
	comp=E,25nm,0.7s						
I02E	**Swisshome, OR**	**1.42**	**19**		Pn	02 08 30.7	-1.4
I02E	**Swisshome, OR**	**1.42**	**19**	IAML		02 08 53.3	
	comp=N,20nm,0.7s						
I02E				IAML		02 08 56.5	
	comp=E,21nm,0.6s						
L04D	**Klamath Falls**	**1.71**	**108**		Pn	02 08 36.9	+0.5
L04D				IAML		02 09 06.7	
	comp=E,14nm,1.3s						
L04D				IAML		02 09 08.6	
	comp=N,15nm,2.6s						
BUCK	**Buck Mountain**	**1.80**	**37**	Pn	Pn	02 08 36.7	-0.8
BUCK				IAML		02 09 02.8	
	comp=N,17nm,3.8s						
BUCK				IAML		02 09 09.5	
	comp=E,23nm,4.2s						
I04A	**Tendick Farm,**	**1.83**	**55**		Pn	02 08 37.8	-0.1
I04A				IAML		02 09 05.9	
	comp=E,17nm,0.5s						
I04A				IAML		02 09 10.3	
	comp=N,12nm,0.7s						
M02C	**Callahan**	**1.84**	**138**	Pn	Pn	02 08 38.7	+0.6
H04D	**Lebanon**	**2.17**	**35**	Pn	Pn	02 08 42.0	-0.5
WIFE	**Three Sisters-**	**2.34**	**56**		Pn	02 08 45.0	0.0
WIFE				IAML		02 09 21.5	
	comp=E,18nm,5.0s						
WIFE				IAML		02 09 47.8	
	comp=N,14nm,4.6s						
J05D	**Fort Rock, OR**	**2.44**	**77**		Pn	02 08 46.3	-0.1
J05D				IAML		02 09 43.7	
	comp=N,11nm,4.7s						
H04A	**Detroit Lake**	**2.54**	**40**		Pn	02 08 46.9	-0.8

*IDC **30** 02:46:42.8±11.0, 19.04S×175.90W, h87km±97km, mb3.7/6, mbtmp4.0/6, Error ellipse: s-maj=39.5km s-min=31.5km az=20.0*

*NEIC **30** 02:46:55.0±1.5, 19.2S±0.1°×175.3W±0.1, h238km±12km, mb4.3/12, Error ellipse: s-maj=19.5km s-min=15.2km az=187.0*

ISC 30 02:46:53.8±0.7, 19.15S±0.1°×175.29W±0.07, h231km, n25, σ1.14/26, mb3.8/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.07**	**90**		**Pn**	**02 48 11.5**	**+1.5**
NIUE				Sn	**S**	**02 49 09.5**	**-0.9**
AFI	**Afiamalu**	**6.20**	**33**	Pn	**Pn**	**02 48 24.8**	**+0.5**
AFI				Sn	**S**	**02 49 34.6**	**-1.8**
MSVF	**Nonsavu**	**6.47**	**281**	Pn	**Pn**	**02 48 28.9**	**+1.1**
MARNC	**Mare, Loyalty**	**15.82**	**259**	P	**P**	**02 50 23.6**	**-0.2**
PINNC	**Pines Island,**	**16.50**	**255**	Pn	**Pn**	**02 50 33.6**	**+0.9**
DZM	**Mont Dzumac**	**17.34**	**257**	P	**Pn**	**02 50 42.3**	**-0.5**
	4.3nm,0.6s,baz=81,slow=19,SNR=3.6						
DZM	**Mont Dzumac**	**17.34**	**257**	P	**Pn**	**02 50 43.5**	**+0.7**
DZM				IAmb	IAmb	02 50 44.2	
	comp=Z,24nm,1.5s						
URZ	**Urewera**	**20.16**	**198**	P	**P**	**02 51 08.9**	**-1.9**
	comp=Z,2.5nm,0.5s,baz=66,slow=16,SNR=1.6						
	comp=Z,2.5nm,0.5s						
TOZ	**Tahuroa Road**	**20.19**	**202**	P	**P**	**02 51 09.9**	**-1.1**
TOZ				IAmb	IAmb	02 51 52.0	
	comp=Z,16nm,1.5s						
QRZ	**Quartz Range**	**24.00**	**203**	P	**P**	**02 51 47.7**	**+0.2**
QRZ				IAmb	IAmb	02 52 23.4	
	comp=Z,35nm,1.5s						
CTAO	**Charters Tower**	**36.18**	**262**	P	**P**	**02 53 35.3**	**+0.5**
CTAO				IAmb	IAmb	02 54 12.8	
	comp=Z,8.5nm,1.2s						
STKA	**Stephens Creek**	**40.67**	**243**	P	**P**	**02 54 09.6**	**-2.3**
	comp=Z,2.2nm,0.9s,baz=94,slow=14,SNR=3.0						
	comp=Z,2.2nm,0.9s						
WB0	**Warramunga Arr**	**47.30**	**260**	P	**P**	**02 55 04.3**	**-0.4**
AS31	**Alice Springs**	**47.32**	**255**	P	**P**	**02 55 05.0**	**+0.2**
ASAR	**Alice Springs**	**47.32**	**255**	P	**P**	**02 55 04.7**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=93,slow=8.5,SNR=31						
ASAR				PcP	**PcP**	**02 56 34.3**	**+2.4**
	comp=Z,0.6nm,0.7s,baz=109,slow=4.5,SNR=4.4						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**47.32**	**255**	P	**P**	**02 55 03.9**	**-0.9**
WRA	**Warramunga Arr**	**47.33**	**260**	P	**P**	**02 55 04.2**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=97,slow=8.7,SNR=7.4						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**47.33**	**260**	P	**P**	**02 55 04.6**	**-0.2**
KNRA	**Kununurra**	**53.31**	**264**	P	**P**	**02 55 50.1**	**+0.5**
KNRA				IAmb	IAmb	02 56 16.7	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**60.46**	**256**	P	**P**	**02 56 39.6**	**-0.1**
QSPA	**South Pole Qui**	**70.92**	**180**	P	P	02 57 51.7	+5.9
	comp=Z,2.2nm,0.7s,baz=105,slow=1.0,SNR=9.9						
	comp=Z,2.2nm,0.7s						
QSPA	**South Pole Qui**	**70.92**	**180**	P	**P**	**02 57 46.3**	**+0.4**
QSPA				IAmb	IAmb	02 57 53.1	
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**78.30**	**42**	P	P	02 58 35.6	+6.9
	comp=Z,0.3nm,0.6s,baz=224,slow=7.9,SNR=3.1						
	comp=Z,0.3nm,0.6s						
BRTR	**Keskin Array B**	**147.74**	**316**	PKPbc	**PKPab**	**03 06 15.7**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=71,slow=6.2,SNR=1.9						
MMAI	**Mount Meron Ar**	**149.29**	**303**	PKPbc	**PKPab**	**03 06 19.9**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=76,slow=6.1,SNR=5.9						

TAP 30 02:52:37.2, 24.72N×122.41E, h109km, ML2.7, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS2	**EOS2**	**0.34**	**208**	*e*P	Pn	02 52 53.4	+0.4
EOS2				*e*S	Sn	02 53 05.7	+1.0
EOS3	**EOS3**	**0.44**	**191**	*e*P	Pn	02 52 54.2	+0.7
EOS3				*e*S	Sn	02 53 06.8	+1.2
TWB1	**Santiao Chiao**	**0.48**	**307**	S	Sn	02 53 06.1	-0.2
TIPB	**Shuangxi**	**0.59**	**296**	*i* P	Pn	02 52 54.9	+0.3
TIPB				*i* S	Sn	02 53 07.3	-0.5
EOS4	**EOS4**	**0.60**	**188**	*e*P	Pn	02 52 55.2	+0.9
EOS4				S	Sn	02 53 06.8	-0.4
YOJ	**Yonaguni jima**	**0.61**	**115**	P	Pn	02 52 54.8	0.0
EWUT	**Wuta**	**0.64**	**245**	*e*P	Pn	02 52 55.6	+0.6
NDS	**Dongshan**	**0.64**	**262**	*e*P	Pn	02 52 56.2	+1.2
NDS				*e*S	Sn	02 53 07.0	-1.4
ENA	**Nanau**	**0.67**	**245**	P	Pn	02 52 56.2	+0.9
ENA				S	Sn	02 53 09.2	+0.3
TWE	**Neicheng**	**0.67**	**270**	P	Pn	02 52 55.6	+0.3
TNOU	**National Taiwa**	**0.72**	**307**	*e*P	Pn	02 52 55.9	+0.2
EAHA	**Aohua**	**0.72**	**238**	S	Sn	02 53 09.7	+0.2
FUSB	**Fushanzhiwuyua**	**0.75**	**273**	*i* P	Pn	02 52 56.1	+0.1
FUSB				S	Sn	02 53 09.1	-1.0
ENTT	**Nioudou**	**0.77**	**264**	*e*P	Pn	02 52 57.0	+0.9
LATG	**Datong**	**0.82**	**257**	*e*P	Pn	02 52 57.2	+0.4
LATG				S	Sn	02 53 11.7	+0.3
NWLT	**Wulai**	**0.82**	**274**	P	Pn	02 52 56.8	+0.2
NWLT				*e*S	Sn	02 53 10.8	-0.5
NHY	**Taipei**	**0.83**	**293**	*e*P	Pn	02 52 56.8	+0.2
ETL	**Fush Village**	**0.91**	**232**	*e*P	Pn	02 52 59.6	+2.1
NACB	**Ninganchiao**	**0.92**	**234**	*e*P	Pn	02 52 57.3	-0.2
NACB				*i* S	Sn	02 53 12.0	-0.8
YHNB	**Yeheng**	**0.94**	**267**	*i* P	Pn	02 52 58.5	+0.6
YHNB				*i* S	Sn	02 53 13.7	+0.3
NSK	**Sanguang**	**0.96**	**268**	*i* P	Pn	02 52 58.5	+0.5
NSK				*e*S	Sn	02 53 13.6	-0.1
PCYT	**Pengchaiyu**	**0.96**	**341**	*e*P	Pn	02 52 56.9	-1.0
TWD	**Chiawan**	**0.98**	**229**	*e*P	Pn	02 52 57.7	-0.4
NNS	**Nan Shan**	**0.98**	**254**	*e*S	Sn	02 53 14.2	0.0
ETLH	**Xiulin Townshi**	**0.99**	**239**	*e*P	Pn	02 52 58.3	-0.1
ETLH				*e*S	Sn	02 53 13.6	-0.6
ETM	**Tongmen**	**1.12**	**228**	*e*S	Sn	02 53 15.3	-1.3
KSHI	**Guanxi Townshi**	**1.12**	**273**	*e*P	Pn	02 53 00.3	+0.7
KSHI				S	Sn	02 53 17.5	+0.9
NFF	**Wufeng Townshi**	**1.18**	**266**	*i* P	Pn	02 53 00.8	+0.5
NFF				*i* S	Sn	02 53 17.8	0.0
WHF	**Hehuan Shan**	**1.19**	**241**	*e*P	Pn	02 53 00.9	+0.1
WHF				*e*S	Sn	02 53 18.3	-0.4
SHUL	**Shoufeng**	**1.21**	**220**	*e*P	Pn	02 53 01.2	+0.6
SHUL				*e*S	Sn	02 53 18.4	+0.1
TDCB	**Techi**	**1.23**	**248**	S	Sn	02 53 19.1	+0.2
ESL	**Shilin**	**1.27**	**225**	S	Sn	02 53 17.6	-1.9
LIOB	**Emei**	**1.27**	**267**	P	Pn	02 53 01.8	+0.5
LIOB				*i* S	Sn	02 53 19.8	+0.2
OWD	**Renai**	**1.36**	**236**	*e*S	Sn	02 53 22.2	+0.6

WARBT	**Fenglin Townsh**	**1.36**	**223**	*e*P	Pn	02 53 01.6	-0.8
WARBT				*e*S	Sn	02 53 19.4	-2.2
WUSB	**Renai**	**1.38**	**239**	P	Pn	02 53 03.4	+0.7
WUSB				*e*S	Sn	02 53 21.9	-0.1
WHP	**Taichung City**	**1.40**	**252**	P	Pn	02 53 04.1	+1.2
WHP				S	Sn	02 53 23.8	+1.4
HGSD	**Ruisui**	**1.52**	**217**	*e*P	Pn	02 53 04.2	0.0
HGSD				*e*S	Sn	02 53 24.4	-0.3
SMLT	**Sun Moon Lake**	**1.61**	**239**	*i* P	Pn	02 53 06.9	+1.5
SSLB	**Suanglung**	**1.62**	**235**	P	Pn	02 53 06.8	+1.4
SSLB				S	Sn	02 53 29.0	+2.0
TYC	**Yuchr**	**1.63**	**240**	P	Pn	02 53 07.2	+1.6

JMA 30 02:52:46.6±0.3, 24.9N±0.9×124.0E±0.5, h0km, MV2.0/5, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.40**	**142**	*e*P	Pg	02 52 54.9	+0.6
JISG				*e*S	Sg	02 53 00.8	+1.3
JIJ	**Ishigaki jima**	**0.55**	**170**	*e*P	Pg	02 52 57.4	+0.3
JIJ				*e*S	Sg	02 53 04.8	+0.6
IRIF	**Iriomote-Funau**	**0.63**	**206**	*e*P	Pg	02 52 59.2	+0.5
IRIF				*e*S	Sb	02 53 08.5	-1.4
JTJ	**Tarama**	**0.66**	**113**	*e*S	Sg	02 53 09.0	+1.2
JKRS	**Kuro-shima**	**0.67**	**182**	*e*P	Pg	02 52 59.9	+0.6
JKRS				*e*S	Sb	02 53 09.6	-1.2

*IDC **30** 03:10:49.5±0.6, 34.40N×7.46E, h0km, mb4.1/23, mbtmp4.0/31, ML3.4/6, MS3.2/19, Error ellipse: s-maj=14.9km s-min=11.4km az=136.0*

*MOS **30** 03:10:50.0±1.0, 34.44N×7.43E, h12km, mb4.5/11, Error ellipse: s-maj=17.1km s-min=6.2km az=66.5*

*NEIC **30** 03:10:52.2±2.4, 34.41N±0.04×7.50E±0.07, h10km±1km, mb4.6/16, Error ellipse: s-maj=9.5km s-min=7.5km az=105.0*

*MED_RC **30** 03:10:52.0±0.5, 34.31N×7.63E, h29km±1km, MW4.5/17, Moment Tensor Solution. Mantle waves: s17, c21; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr-0.91±.70; Mθθ-4.07±.38; Mϕϕ4.99±.75; Mrθ1.64±.22; Mθϕ4.31±.51; Mϕr0.44±.31; Best double couple: M₀6.50000×10¹⁵ NP1:ϕs337.00000°, δ74.00000°, λ-175.00000°. NP2:ϕs246.00000°, δ85.00000°, λ-16.00000°. Principal axes: T 6.8500, Plg8.0000°, Azm293.0000°; N -0.6900, Plg73.0000°, Azm49.0000°; P -6.1500, Plg15.0000°, Azm201.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*CRAAG **30** 03:10:53.2, 34.46N×7.51E, Ml4.5, Algerie 03km SW Negrine*

ISC 30 03:10:51.4±0.4, 34.36N±0.05×7.56E±0.04, h10km, n141, σ2.04/134, mb4.4/38, MS3.3/13, 1C-2D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGR	**Negrine**	**0.12**	**341**	P	**Pg**	**03 10 54.1**	**-0.2**
CBBAR	**Babar**	**0.84**	**339**	P	**Pg**	**03 11 09.0**	**+1.4**
ABSA	**Djebel Ababsia**	**1.91**	**358**	P	**Pn**	**03 11 25.1**	**+1.0**
CTEI	**Djebel Teioual**	**1.94**	**331**	P	**Pn**	**03 11 25.8**	**+1.2**
CJSR	**Ain Djasser**	**2.00**	**319**	P	**Pn**	**03 11 26.2**	**+0.9**
KEST	**Kesra**	**2.01**	**47**	Pn	**Pn**	**03 11 26.8**	**+1.4**
	14nm,0.3s,baz=214,slow=5.4,SNR=91						
KEST				Sn	**Sn**	**03 11 51.4**	**+0.7**
	59nm,0.3s,baz=202,slow=19,SNR=6.5						
KEST				LR	LR	03 12 33.0	
	comp=Z,814nm,19.1s,baz=169,slow=51						
	783nm,0.8s						
I48TN	**KESRA INFRASON**	**2.04**	**45**	I	I	03 20 50.0	
	baz=224,slow=319,SNR=1.1						
CBST	**Bordj Sabath**	**2.08**	**350**	P	**Pn**	**03 11 27.9**	**+1.5**
CKFL	**Kef-Lekhel**	**2.15**	**342**	P	**Pn**	**03 11 28.4**	**+1.0**
CMAH	**Djebel Manchou**	**2.26**	**357**	P	**Pn**	**03 11 28.8**	**-0.1**
CAEH	**'Ain El Ouahch**	**2.48**	**347**	P	**Pn**	**03 11 32.6**	**+0.7**
SET	**Setif**	**2.54**	**317**	P	**Pn**	**03 11 36.0**	**+3.1**
VSL	**Villasalto**	**5.33**	**15**		**Pn**	**03 12 12.4**	**+1.4**
RAFF	**Raffo Rosso**	**6.22**	**61**	Pn	**Pn**	**03 12 25.0**	**+1.6**
VAE	**Valguarnera**	**6.37**	**59**	Pn	**Pn**	**03 12 25.3**	**-0.1**
	5.2nm,0.5s,baz=313,slow=4.0,SNR=8.1						
VAE				Sn	**Sn**	**03 13 40.5**	**+2.2**
	1.1nm,0.3s,baz=178,slow=18,SNR=3.0						
FIGM	**Figuig**	**7.71**	**256**	P	**Pn**	**03 12 46.4**	**+2.5**
FIGM	**Figuig**	**7.71**	**256**	S	**Sn**	**03 14 08.0**	**-3.4**
TAF	**Taforalt**	**8.23**	**276**	P	**Pn**	**03 12 52.5**	**+1.5**
TAF	**Taforalt**	**8.23**	**276**	S	**Sn**	**03 14 18.7**	**-5.4**
JBK	**JBK**	**8.37**	**273**	P	**Pn**	**03 12 55.5**	**+2.5**
JBK	**JBK**	**8.37**	**273**	S	**Sn**	**03 14 28.5**	**+0.8**
CORI	**Orista**	**8.75**	**332**	Pn	**Pn**	**03 12 59.1**	**+1.1**
AKLM	**AKL**	**9.44**	**274**	P	**Pn**	**03 13 10.1**	**+2.6**
AKLM	**AKL**	**9.44**	**274**	S	**Sn**	**03 14 52.4**	**-1.3**
PALE	**Palemas**	**9.49**	**278**	P	**Pn**	**03 13 09.1**	**+0.9**

KHC	Kasperske Hory	15.42	15	*e*P		Pn	03 14 28.6	-0.4	
KHC	Kasperske Hory	15.42	15	*e*P		Pn	03 14 28.6	-0.4	
RCHB	Rochefort	15.88	355	*d*P		Pn	03 14 36.1	+1.3	
BMRD	Maredsous	16.06	354	*d*P		Pn	03 14 37.8	+0.6	
	comp=Z,7.2nm,1.2s								
VRAC	Vranov	16.36	21	Pn		Pn	03 14 40.9	-0.2	
	comp=Z,0.1nm,0.3s,baz=200,slow=15,SNR=1.6								
VRAC				LR		LR	03 20 53.1		
	comp=Z,56nm,18.4s,baz=216,slow=37								
	comp=Z,1.5nm,0.8s								
LANS	Liptovska Anna	17.21	27	*e*P		P	03 14 56.8	+3.4	
LANS	Liptovska Anna	17.21	27	*e*P		P	03 14 56.8	+3.4	
CLL	Collm	17.39	11	*e*P		P	03 14 58.0	+2.6	
CLL	Collm	17.39	11	*es*P		P	03 14 58.0	+2.6	
MLR	Muntele Rosu	17.91	46	P		Pn	03 15 01.2	+0.5	
	comp=Z,0.1nm,0.3s,baz=250,slow=3.5,SNR=5.7								
MLR				LR		LR	03 22 46.5		
	comp=Z,54nm,19.6s,baz=300,slow=40								
	comp=Z,6.4nm,1.1s								
BURAR	Bucovina Array	18.73	40	P		Pn	03 15 12.9	+2.3	
BR131	Keskin Array S	21.46	68	*i* P		P	03 15 40.7	+0.6	
BRTR	Keskin Array B	21.46	68	P		P	03 15 40.9	+0.7	
	comp=Z,3.7nm,1.0s,baz=248,slow=6.5,SNR=10								
BRTR				LR		LR	03 25 56.3		
	comp=Z,24nm,19.4s,baz=256,slow=42								
	comp=Z,3.7nm,1.0s								
BRTR	Keskin Array B	21.46	68	P		P	03 15 40.6	+0.5	
TORD	Torodi Ar. Bea	21.78	196	P		P	03 15 42.6	-0.8	
	comp=Z,11nm,0.8s,baz=13,slow=14,SNR=11								
	comp=Z,11nm,0.8s								
EKA	Eskdalemuir Ar	22.25	344	P		P	03 15 46.9	-1.4	
	comp=Z,3.3nm,0.7s,baz=153,slow=11,SNR=10								
	comp=Z,3.3nm,0.7s								
AKASG	Malin Array Be	22.71	37	P		P	03 15 51.8	-1.4	
	comp=Z,1.5nm,0.7s,baz=237,slow=11,SNR=6.1								
	comp=Z,1.5nm,0.7s								
AKASG	Malin Array Be	22.71	37	IAmb		IAmb	03 15 55.5		
	comp=Z,5.4nm,1.5s								
AKASG	Malin Array Be	22.71	37	*i* P		P	03 15 53.4	+0.2	
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
AKBB	Malin Array Si	22.71	37	*i* P		P	03 15 54.8	+1.6	
AKBB				pmax		pmax			
	comp=Z,11nm,1.5s								
MMAI	Mount Meron Ar	23.18	85	P		P	03 15 57.4	-1.0	
	comp=Z,1.1nm,0.6s,baz=277,slow=12,SNR=5.0								
	comp=Z,1.1nm,0.6s								
HFS	Hagfors	26.09	7	P		P	03 16 23.5	-1.5	
	comp=Z,2.5nm,0.5s,baz=187,slow=9.0,SNR=12								
HFS				LR		LR	03 27 51.5		
	comp=Z,29nm,18.2s,baz=252,slow=39								
	comp=Z,2.5nm,0.5s								
NOA	NORSAR Array B	26.80	4	P		P	03 16 29.2	-2.2	
	comp=Z,1.8nm,1.1s,baz=191,slow=10,SNR=3.3								
NOA				LR		LR	03 26 41.2		
	comp=Z,28nm,19.6s,baz=25,slow=36								
	comp=Z,1.8nm,1.1s								
KIV	Kislovodsk	28.69	60	*e*P		P	03 16 49.2	+0.5	
KIV				pmax		pmax			
	comp=Z,7.0nm,1.1s								
OBN	Obninsk	28.90	35	*e*P		P	03 16 51.1	+0.9	
OBN				*e*PPP		PPP	03 17 49.1		
OBN				*e*			03 19 56.1		
OBN				pmax		pmax			
	comp=Z,5.0nm,0.8s								
OBN				MLR		MLR			
	comp=Z,24nm,7.0s								
FINES	FINESS Array B	29.58	18	P		P	03 16 55.4	-0.8	
	comp=Z,2.8nm,0.7s,baz=201,slow=9.8,SNR=5.7								
FINES				LR		LR	03 28 00.1		
	comp=Z,74nm,18.3s,baz=227,slow=35								
	comp=Z,2.8nm,0.7s								
DBIC	Dimbokro	29.85	205	P		P	03 16 58.4	-0.7	
	comp=Z,6.2nm,1.0s,baz=26,slow=14,SNR=3.8								
DBIC				LR		LR	03 29 55.6		
	comp=Z,81nm,22.0s,baz=16,slow=38								
	comp=Z,6.2nm,1.0s								
DBIC	Dimbokro	29.85	205	IAmb		IAmb	03 17 02.7		
	comp=Z,17nm,1.2s								
AKT	Akhty	32.26	65	*e*P		P	03 17 17.6	-2.6	
AKT				*e*			03 18 23.3		
AKT				*e*S		S	03 22 29.1	-4.5	
AKT				pmax		pmax			
	comp=Z,7.0nm,1.3s								
BELG	Belogornoye	33.70	45	*i* P		P	03 17 31.7	-0.8	
BELG				pmax		pmax			
	comp=Z,4.0nm,1.0s								
BORG	Borgarnes	35.09	339	LR		LR	03 31 28.5		
	comp=Z,9.8nm,22.0s,baz=196,slow=35								
APA	Apatity	36.44	16	*e*P		P	03 17 49.4	-6.5	
APA				MLR		MLR			
	comp=Z,2µm,6.2s								
ARCES	ARCESS Array B	36.61	10	P		P	03 17 55.9	-1.6	
	comp=Z,3.1nm,0.8s,baz=209,slow=9.7,SNR=5.7								
	comp=Z,3.1nm,0.8s								
ARTI	Arti	40.75	41	P		P	03 18 33.0	+0.6	
ARTI				IAmb		IAmb	03 18 34.2		
	comp=Z,4.2nm,0.7s								
ARTI	Arti	40.75	41	*c i* P		P	03 18 32.0	-0.3	
ARTI							03 20 03.4		
ARTI				S		S	03 24 44.3	+1.6	
ARTI				SS		SS	03 27 35.2	-8.0	
ARTI				pmax		pmax			
	comp=Z,5.0nm,0.8s								
AB31	Akbulak array	40.95	52			P	03 18 34.9	+0.8	
ABKAR	Akbulak array	40.95	52	P		P	03 18 34.5	+0.4	
MBAR	Mbarara	41.01	143	LR		LR	03 36 24.4		
	comp=Z,35nm,20.1s,baz=26,slow=37								
SVE	Sverdlovsk	42.05	41	*e*P		P	03 18 44.3	+1.3	
BORK	Borovoye	47.43	47	*i* P		P	03 19 25.9	-0.1	
BORK				pmax		pmax			
	comp=Z,8.0nm,1.5s								
BVAR	Borovoye Array	47.48	47	P		P	03 19 25.9	-0.4	
	comp=Z,0.9nm,0.7s,baz=276,slow=7.0,SNR=4.7								
	comp=Z,0.9nm,0.7s								
KURBB	Kurchatov Array	52.78	49	P		P	03 20 06.6	+0.1	
	comp=Z,5.5nm,0.9s,baz=284,slow=8.4,SNR=30								
	comp=Z,5.5nm,0.9s								
KURK	Kurchatov	52.82	49	P		P	03 20 07.7	+0.8	
KURK				IAmb		IAmb	03 20 08.1		
	comp=Z,6.8nm,0.6s								
KURK	Kurchatov	52.82	49	*i* P		P	03 20 06.7	-0.1	
KURK				pmax		pmax			
	comp=Z,8.0nm,0.8s								
FRB	Frobisher Bay	53.73	328	LR		LR	03 40 08.6		
	comp=Z,23nm,18.7s,baz=116,slow=33								
SCHQ	Scheffervill	54.05	317	P		P	03 20 14.9	-1.0	
	comp=Z,8.0nm,0.9s,baz=171,slow=4.5,SNR=2.5								
	comp=Z,8.0nm,0.9s								
TSUM	Tsumeb	54.12	168	LR		LR	03 43 13.5		
	comp=Z,45nm,20.3s,baz=344,slow=36								
NRIK	Noril'sk	54.81	25	LR		LR	03 46 13.8		
	comp=Z,35nm,18.7s,baz=325,slow=39								
ZALV	Zalesovo Beam	55.88	44	P		P	03 20 29.1	+0.1	
	comp=Z,1.5nm,0.6s,baz=282,slow=7.8,SNR=7.2								
	comp=Z,1.5nm,0.6s								
MK31	Makanchi Array	56.09	53	*i* P		P	03 20 30.4	-0.4	
MKAR	Makanchi Array	56.09	53	P		P	03 20 31.4	+0.6	
	comp=Z,1.3nm,0.5s,baz=287,slow=6.2,SNR=21								
MKAR				LR		LR	03 48 12.2		
	comp=Z,16nm,19.6s,baz=347,slow=40								
	comp=Z,1.3nm,0.5s								
MKAR	Makanchi Array	56.09	53	P		P	03 20 31.3	+0.5	
DGZ	Jazzator, Alta	58.55	49	*i* P		P	03 20 48.2	-0.1	
DGZ				pmax		pmax			
	comp=Z,2.0nm,1.3s								
LBTB	Lobatse	61.48	161	P		P	03 21 09.2	+0.7	
	comp=Z,2.1nm,0.7s,baz=323,slow=5.1,SNR=2.5								
	comp=Z,2.1nm,0.7s								
LBTB	Lobatse	61.48	161	IAmb		IAmb	03 21 12.9		
	comp=Z,8.1nm,1.2s								
OPO	Ambohidratompo	64.75	138	P		P	03 21 29.5	-0.9	
	comp=Z,1.3nm,0.5s,baz=292,slow=19,SNR=1.6								
	comp=Z,1.3nm,0.5s								
BOSA	Boshof	64.83	163	LR		LR	03 50 47.9		
	comp=Z,51nm,18.6s,baz=1.5,slow=37								
A36M	Sachs Harbour	68.96	346	P		P	03 21 57.2	+0.9	
SONM	Songino Array	70.76	45	P		P	03 22 08.1	+0.1	
	comp=Z,4.2nm,1.0s,baz=290,slow=5.2,SNR=15								
	comp=Z,4.2nm,1.0s								
ULN	Ulaanbaatar	71.13	45	*i* P		P	03 22 10.6	+0.4	
ULN				pmax		pmax			
	comp=Z,17nm,3.5s								
V53A	Saluda	71.23	301	P		P	03 22 11.4	+0.5	
BDFB	Brasilia	72.54	236	P		P	03 22 18.5	-0.5	
	comp=Z,1.6nm,0.9s,baz=48,slow=4.6,SNR=3.2								
	comp=Z,1.6nm,0.9s								
BDFB	Brasilia	72.54	236	IAmb		IAmb	03 22 42.2		
	comp=Z,8.1nm,1.3s								
YKA	Yellowknife Ar	72.95	336	P		P	03 22 20.3	-0.4	
	comp=Z,0.9nm,0.7s,baz=54,slow=16,SNR=6.4								
	comp=Z,0.9nm,0.7s								
YKA	Yellowknife Ar	72.95	336	*i* P		P	03 22 21.7	+1.0	
E29M	Blow River	74.37	347	IAmb		IAmb	03 22 30.8		
	comp=Z,3.8nm,0.8s								
F31M	Tsiigehtchic	74.38	345	P		P	03 22 30.1	+1.1	
F31M				IAmb		IAmb	03 22 31.7		
	comp=Z,4.1nm,0.8s								
G31M	Satah River	74.93	345	P		P	03 22 32.9	+0.7	
G31M				IAmb		IAmb	03 22 45.6		
	comp=Z,4.9nm,1.2s								
HHC	Hu-ho-hao-te	77.63	49	*e*P		P	03 22 48.3	+0.1	
HHC				pmax		pmax			
	comp=Z,3.0nm,0.6s								
HHC				pmax		pmax			
	comp=Z,89nm,5.0s								
DAWY	Dawson	78.48	346	P		P	03 22 53.6	+1.2	
PZH	PanZhiHua	78.74	66	P		P	03 22 53.0	-1.6	
PZH				pmax		pmax			
	comp=Z,10.0nm,0.5s								
ILAR	Eielson Array	79.18	349	P		P	03 22 56.6	+0.5	
	comp=Z,0.2nm,0.7s,baz=329,slow=4.4,SNR=6.6								
	comp=Z,0.2nm,0.7s								
CMAR	Chiang Mai Arr	80.92	74	P		P	03 23 05.7	-0.7	
	comp=Z,1.2nm,0.3s,baz=321,slow=5.6,SNR=1.1								
	comp=Z,1.2nm,0.3s								
PDAR	Pinedale Array	84.12	319	P		P	03 23 21.8	-1.1	
	comp=Z,0.3nm,0.8s,baz=70,slow=7.1,SNR=2.4								
	comp=Z,0.3nm,0.8s								
APMT	Aspermont	84.44	307	P		P	03 23 26.2	+1.7	
APMT				IAmb		IAmb	03 23 27.0		
	comp=Z,3.4nm,0.7s								
CPUP	Villa Florida	86.14	235	LR		LR	04 01 18.7		
	comp=Z,11nm,18.3s,baz=264,slow=35								
NJ2	Nanjing	87.62	52	*e*P		P	03 23 40.3	+0.1	
NJ2				pmax		pmax			
	comp=Z,12nm,0.5s								
WRA	Warramunga Arr	131.03	87	PKP		PKiKP	03 30 04.8	+0.1	
	comp=Z,0.3nm,0.8s,baz=334,slow=1.8,SNR=1.4								
ASAR	Alice Springs	132.36	92	PKP		PKPdf	03 30 06.6	+0.3	
	comp=Z,0.3nm,0.4s,baz=296,slow=1.5,SNR=4.8								

HLW ***30*** *03:24:30.9, 34˚.49N×25˚.94E, h15km±7km, Ml4.0*
ISK ***30*** *03:24:34.8, 34˚.66N×25˚.95E, h15km, ML3.7/28*
IDC ***30*** *03:24:36.9±2.8, 34˚.65N×26˚.06E, h113km±30km, mb3.3/10, mbtmp3.6/14, Error ellipse: s-maj=22.3km s-min=16.6km az=141.0*
NAO ***30*** *03:24:36.9, 35˚.08N×24˚.47E, h33km, MB3.3*
THE ***30*** *03:24:37.4, 35˚N±7˚×2˚6E±˚, h108km±7km, M3.5/17, mb3.6/1, MLh3.5/17*
AFAD ***30*** *03:24:38.0, 34˚.86N×26˚.42E, h8km±2km, ML3.0*
GII ***30*** *03:24:38.9±0.0, 34˚.46N±0˚.01×26˚.407E±0˚.007, h60km, Mws3.2, confirmed*
ATH ***30*** *03:24:38.1, 34˚.75N×25˚.86E, h98km±3km, ML3.6/13, Manual Solution by A.Agalos First location: 2019/11/30 03:25:50, This location: 2019/11/30 04:19:09 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 4 km; Longitude uncertainty: 1 km*

ISC 30 03:24:34.0±0.7, 34˚.44N±0˚.04×26˚.01E±0˚.04, h92km±8km, n188, σ1ŷ53/217, mb3.5/9, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIT2	Siteia	0.77	6	P		Pn		03 24 53.5	+2.0
SIT2				S		Sn		03 25 05.0	+0.5
IACM	Heraklion	1.16	319	P		Pn		03 24 57.3	+1.5
IACM	Heraklion	1.16	319	P		Pn		03 24 57.2	+1.5
IACM				S		Sn		03 25 10.9	-1.2
IDI	Anoyia	1.25	313	P		Pn		03 24 58.1	+1.1
IDI				S		Sn		03 25 14.1	-0.1
IDI	Anoyia	1.25	313	P		Pn		03 24 57.9	+0.9
IDI				S		Sn		03 25 12.9	-1.3
KARP	Karpathos	1.46	40	P		Pn		03 25 02.6	+3.3
KARP	Karpathos	1.46	40	P		Pn		03 25 02.4	+3.0
KARP				S		Sn		03 25 20.5	+1.9
GVD	Gavdhos	1.64	285	Pn		Pn		03 25 02.6	+1.0
GVD				Sn		Sn		03 25 22.6	0.0
GVD	Gavdhos	1.64	285	P		Pn		03 25 02.7	+1.1
GVD	Gavdhos	1.64	285	P		Pn		03 25 03.0	+1.4
VAM	Vamos	1.78	304	P		Pn		03 25 04.6	+1.2
VAM				S		Sn		03 25 26.2	+0.4
VAM	Vamos	1.78	304	P		Pn		03 25 04.5	+1.1
VAM				S		Sn		03 25 26.1	-1.1
CHNB	Souda	1.91	304	P		Pn		03 25 06.9	+1.8
CHAN	Chania	1.95	304	S		Sn		03 25 29.7	+0.1
CHAN	Chania	1.95	304	P		Pn		03 25 06.5	+1.0
CHAN				S		Sn		03 25 28.4	-1.2
IMMV	Iera Moni Meta	1.96	302	Pn		Pn		03 25 06.5	+0.8
IMMV				Sn		Sn		03 25 28.9	-1.0
IMMV	Iera Moni Meta	1.96	302	P		Pn		03 25 07.2	+1.4
IMMV				S		Sn		03 25 29.4	-0.5
IMMV	Iera Moni Meta	1.96	302	P		Pn		03 25 07.0	+1.3
CH01	Chania	1.96	304	P		Pn		03 25 07.3	+1.5
THERA	Ancient Thera,	1.98	347	P		Pn		03 25 06.2	+0.2
THERA				S		Sn		03 25 28.0	-2.4
THERA	Ancient Thera,	1.98	347	P		Pn		03 25 06.2	+0.2
THERA				S		Sn		03 25 27.8	-2.6
SNT5	Nea Kammeni, S	2.03	346	P		Pn		03 25 07.0	+0.3
SNT5	Nea Kammeni, S	2.03	346	P		Pn		03 25 06.8	+0.2
THRA	Thira	2.03	347	P		Pn		03 25 07.0	+0.3
SAP3	Santorini-Thir	2.07	345	P		Pn		03 25 07.6	+0.3
SAP3	Santorini-Thir	2.07	345	P		Pn		03 25 07.5	+0.3
KNDR	Palaiochora Ch	2.12	293	Pn		Pn		03 25 08.7	+0.8
KNDR	Palaiochora Ch	2.12	293	P		Pn		03 25 08.6	+0.8
KNDR				S		Sn		03 25 31.7	-2.0
KNDR	Palaiochora Ch	2.12	293	P		Pn		03 25 08.6	+0.8
ASTA	Astypalaia	2.12	7	P		Pn		03 25 08.3	+0.3
RGE1	Gennadi, Rhode	2.23	44	P		Pn		03 25 12.0	+2.7
ARG	Arkhangelos	2.48	44	Pn		Pn		03 25 14.3	+1.7
ARG				Sn		Sn		03 25 42.9	+0.7
ARG	Arkhangelos	2.48	44	P		Pn		03 25 15.6	+3.0
ARG	Arkhangelos	2.48	44	P		Pn		03 25 15.6	+3.0
YAZI	Mula-Dat§a-	2.53	27	P		Pn		03 25 14.6	+1.3
YAZI				S		Sn		03 25 42.6	-0.8
YAZI				*i*	IAML			03 25 44.0	
	comp=N,85nm,0.6s								
YAZI				*i*	IAML			03 25 44.0	
	comp=E,68nm,0.6s								
MHLO	Agia Marina, M	2.60	330	P		Pn		03 25 14.8	+0.5
DAT	Datca	2.62	29	Pn		Pn		03 25 15.7	+1.1
DAT				Sn		Sn		03 25 45.6	-0.2
KLNA	Kalymnos	2.63	17	P		Pn		03 25 15.4	+0.7
ANKY	Antikythira Is	2.64	304	P		Pn		03 25 16.2	+1.4
APE	Apeiranthos	2.66	352	Pn		Pn		03 25 15.4	+0.4
APE				Sn		Sn		03 25 44.5	-2.0
APE	Apeiranthos	2.66	352	P		Pn		03 25 15.4	+0.4
APE	Apeiranthos	2.66	352	P		Pn		03 25 15.3	+0.2
APE	Apeiranthos	2.66	352	P		Pn		03 25 15.2	+0.2
DATC	Datca-Mugla	2.68	30	Pn		Pn		03 25 16.5	+1.2
DATC				Sn		Sn		03 25 46.7	-0.3
NAX1	Naxos Island	2.71	349	P		Pn		03 25 15.4	-0.3
BODT	Bodrum	2.83	22	Pn		Pn		03 25 18.6	+1.3
BDRM	Kayabasi	2.87	24	P		Pn		03 25 19.2	+1.3
BDRM				S		Sn		03 25 50.8	-0.8
BDRM				*i*	IAML			03 25 53.0	
	comp=E,32nm,0.4s								
YKAV	Yalikavak-Bodr	2.88	21	Pn		Pn		03 25 18.9	+1.0
TURN	Turunc	2.96	37	P		Pn		03 25 21.0	+2.0
TURN				S		Sn		03 25 51.3	-2.4
TURN				*i*	IAML			03 25 57.0	
	comp=N,112nm,0.2s								
TURN				*i*	IAML			03 25 59.0	
	comp=E,111nm,0.4s								
TURN	Turunc	2.96	37	Pn		Pn		03 25 20.8	+1.8
SLUM	Salum	3.01	193	P		Pn		03 25 19.4	-0.3
KTHA	Kythira Island	3.02	308	P		Pn		03 25 19.8	-0.1
KTHA	Kythira Island	3.02	308	P		Pn		03 25 19.7	-0.1
DDIM	Aydin, Didim	3.18	18	P		Pn		03 25 23.7	+1.7
DDIM				S		Sn		03 25 56.5	-2.3
DDIM				*i*	IAML			03 26 01.0	
	comp=N,80nm,0.6s								
DDIM				*i*	IAML			03 26 11.0	
	comp=E,98nm,1.2s								
MLSB	Milas	3.19	26	Pn		Pn		03 25 22.9	+0.7
DALY	Dalyan (Mula)	3.21	41	Pn		Pn		03 25 25.0	+2.7
MATC	Matruh	3.25	161	P		Pn		03 25 21.1	-1.8
MATC				S		Sn		03 25 58.5	-2.1
YER	Yerkesik	3.27	34	P		Pn		03 25 25.5	+2.3
YER	Yerkesik	3.27	34	P		Pn		03 25 25.3	+2.1
FETY	Fethiye	3.33	48	P		Pn		03 25 18.9	-5.2
FETY				S		Sn		03 25 56.0	-6.6
SMG	Samos	3.33	11	P		Pn		03 25 24.9	+0.8
SMG	Samos	3.33	11	P		Pn		03 25 24.3	+0.2
MULA	Mugla, Merkez-	3.38	33	P		Pn		03 25 27.1	+2.3
MULA				S		Sn		03 26 04.7	+0.7
MULA				*i*	IAML			03 26 09.0	
	comp=N,55nm,0.8s								
MULA				*i*	IAML			03 26 10.0	
	comp=E,100nm,0.5s								
VLI	Veliai	3.39	313	P		Pn		03 25 24.1	-0.7
VLI	Veliai	3.39	313	P		Pn		03 25 24.1	-0.7
SABU	Mula-Dalaman	3.39	44	P		Pn		03 25 27.3	+2.5
SABU				S		Sn		03 26 03.5	-0.6
SABU				*i*	IAML			03 26 08.0	
	comp=E,63nm,0.4s								
SABU				*i*	IAML			03 26 09.0	
	comp=N,89nm,0.2s								
GCAM	G?zelcaml?	3.41	17	P		Pn		03 25 26.2	+1.2
GCAM				S		Sn		03 26 03.5	-0.9
GCAM	G?zelcaml?	3.41	17	Pn		Pn		03 25 26.5	+1.5
AKAS	Kas	3.44	58	Pn		Pn		03 25 28.1	+2.5
CAME	Cameli-Denizli	3.67	46	Pn		Pn		03 25 31.4	+2.7
DNZT	Denizli-Tavas-	3.75	40	P		Pn		03 25 32.0	+2.3
DNZT				S		Sn		03 26 12.9	+0.1
DNZT				*i*	IAML			03 26 15.0	
	comp=N,42nm,0.5s								
DNZT				*i*	IAML			03 26 15.0	
	comp=E,54nm,0.5s								
KARY	Karystos	3.81	341	P		Pn		03 25 31.0	+0.5
KARY	Karystos	3.81	341	P		Pn		03 25 30.3	-0.2
AYDB	Zeytinkoy-Aydi	3.82	23	Pn		Pn		03 25 32.5	+1.8
MET4	Agioi Theodoro	3.82	327	P		Pn		03 25 30.5	-0.1
MET5	Makryloggos,Me	3.84	327	P		Pn		03 25 30.7	-0.2
MET2	Kameni Chora,	3.84	326	P		Pn		03 25 30.0	-0.1
ESEN	Aydn-Nazilli	3.85	29	P		Pn		03 25 33.3	+2.3
ESEN				S		Sn		03 26 14.9	-0.3
ESEN				*i*	IAML			03 26 17.0	
	comp=E,44nm,0.4s								
ESEN				*i*	IAML			03 26 18.0	
	comp=N,36nm,0.5s								
VLY	Voula,Athens	3.85	333	P		Pn		03 25 31.4	+0.3
VLY	Voula,Athens	3.85	333	P		Pn		03 25 31.0	-0.1
ELL	Elmali	3.92	53	Pn		Pn		03 25 35.3	+3.1
CHOS	Chios island	3.94	0	Pn		Pn		03 25 33.5	+1.1
CHOS	Chios island	3.94	0	P		Pn		03 25 33.3	+1.0
URLA	Izmir	3.95	7	Pn		Pn		03 25 33.3	+0.9
ATHU	Athens Univers	3.96	334	P		Pn		03 25 32.9	+0.4
ATHU	Athens Univers	3.96	334	P		Pn		03 25 32.4	-0.1
NAZL	Nazilli-Aydin	3.98	27	Pn		Pn		03 25 34.8	+2.0
PTL	Penteli	4.00	335	P		Pn		03 25 33.1	-0.1
DION	Dionisos Attik	4.00	336	P		Pn		03 25 33.7	+0.6
DION	Dionisos Attik	4.00	336	P		Pn		03 25 33.3	+0.2
BLCB	Balcova	4.03	12	Pn		Pn		03 25 35.1	+1.7
APMY	Acipayam-Deniz	4.04	40	Pn		Pn		03 25 35.9	+2.2
ODEM	Odemis-Izmir	4.18	23	Pn		Pn		03 25 37.6	+2.0
STFN	Stefani	4.23	333	P		Pn		03 25 36.7	+0.4
STFN	Stefani	4.23	333	P		Pn		03 25 36.0	-0.3
PYL	PYLOS	4.26	306	P		Pn		03 25 35.4	-1.2
KEMT	Kemer-ANTALYA	4.29	58	Pn		Pn		03 25 40.7	+3.7
ITM	Ithomi	4.30	311	P		Pn		03 25 37.2	0.0
ITM	Ithomi	4.30	311	P		Pn		03 25 36.7	-0.5
VILL	Villia	4.31	330	P		Pn		03 25 37.4	+0.1
LTK	Loutraki	4.34	326	P		Pn		03 25 37.4	-0.3
LTK	Loutraki	4.34	326	P		Pn		03 25 37.0	-0.7
KORT	Korkueli	4.36	53	Pn		Pn		03 25 41.4	+3.3
VIL2	Platees	4.37	330	P		Pn		03 25 37.0	-1.2
KYMI	Kymi, Euboea I	4.46	340	P		Pn		03 25 39.7	+0.4
KYMI	Kymi, Euboea I	4.46	340	P		Pn		03 25 39.3	-0.1
ANTB	Antalya	4.51	56	Pn		Pn		03 25 43.6	+3.7
GUR	Goura	4.58	321	P		Pn		03 25 40.4	-0.7
GUR	Goura	4.58	321	P		Pn		03 25 40.1	-0.9
KULA	Kula-Manisa	4.60	27	Pn		Pn		03 25 42.9	+1.7
DKL	Dikili	4.68	9	Pn		Pn		03 25 43.7	+1.4
KLV	Kalavry

comp=Z,0.2nm,0.4s,baz=156,slow=9.3
NOA NORSAR Array B 28.28 345 P **P** 03 30 17.1 -1.3
comp=Z,0.3nm,0.6s,baz=155,slow=9.1,SNR=1.4
comp=Z,0.3nm,0.6s
EKA Eskdalemuir Ar 29.04 325 P **P** 03 30 25.1 0.0
comp=Z,0.2nm,0.3s,baz=121,slow=9.8,SNR=1.5
comp=Z,0.2nm,0.3s
TORD Torodi Ar. Bea 30.58 232 P **P** 03 30 41.7 +2.6
comp=Z,0.7nm,0.3s,baz=43,slow=11,SNR=1.4
comp=Z,0.7nm,0.3s
DBIC Dimbokro 39.68 233 P **P** 03 31 58.5 +1.3
comp=Z,1.0nm,0.5s,baz=74,slow=5.5,SNR=1.0
comp=Z,1.0nm,0.5s
KURBB Kurchatov Arra 41.04 50 P **P** 03 32 06.6 -1.4
comp=Z,0.2nm,0.3s,baz=275,slow=10,SNR=4.1
comp=Z,0.2nm,0.3s
MKAR Makanchi Array 43.59 56 P **P** 03 32 29.1 +0.2
comp=Z,0.2nm,0.6s,baz=274,slow=9.8,SNR=1.2
comp=Z,0.2nm,0.6s
ZALV Zalesovo Beam 45.00 46 P **P** 03 32 39.7 -0.3
comp=Z,0.3nm,0.3s,baz=298,slow=3.1,SNR=1.7
comp=Z,0.3nm,0.3s

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*GII **30** 03:24:53.8±0.0, 33°.58N±0°.02×35°.81E±0°.01, h0km, Mws1.4, confirmed*
*GRAL **30** 03:24:55.5±0.4, 33°.53N×35°.71E, h0km±6km, MD2.6*
ISC 30 03:24:54.9±1.1, 33°.55N±0°.03×35°.72E±0°.04, h5km±6km, n22, σ1s22/24, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
QRWL	**Qaraoun**	**0.03**	**259**	*eP*		**Pg**		**03 24 55.8**	**-0.2**
QRWL				*eS*		**Sg**		**03 24 56.5**	**-0.3**
RCY	**Rachaya**	**0.11**	**121**	*eP*		**Pg**		**03 24 57.4**	**+0.1**
RCY				*eS*		**Sg**		**03 24 58.9**	**0.0**
DQRL	**Deir Qamar**	**0.20**	**321**	*eP*		**Pg**		**03 24 59.3**	**+0.5**
SHBL	**Chebaa**	**0.21**	**174**	*eP*		**Pg**		**03 24 58.9**	**-0.1**
NATI	**Neve Ativ**	**0.29**	**177**	P		**Pg**		**03 25 00.9**	**+0.4**
NATI	**Neve Ativ**	**0.29**	**177**	S		**Sb**		**03 25 06.4**	**-1.4**
ZAHL	**Zahle**	**0.33**	**24**	*eP*		**Pg**		**03 25 01.9**	**+0.4**
GEM	**Giv'at Ha'Em**	**0.35**	**188**	P		**Pg**		**03 25 02.0**	**+0.4**
GEM	**Giv'at Ha'Em**	**0.35**	**188**	S		**Sb**		**03 25 08.8**	**-0.5**
BHL	**Bhannes**	**0.35**	**351**	*eP*		**Pg**		**03 25 02.3**	**+0.5**
KSHT	**Keshet**	**0.58**	**172**	P		**Pg**		**03 25 06.7**	**+0.7**
KSHT	**Keshet**	**0.58**	**172**	S		**Sb**		**03 25 16.6**	**+0.5**
MMC7	**Mount Meron ar**	**0.60**	**207**	P		**Pb**		**03 25 07.8**	**-0.2**
MMC7	**Mount Meron ar**	**0.60**	**207**	S		**Sn**		**03 25 18.4**	**-1.9**
MMA0B	**Mount Meron ar**	**0.60**	**206**	P		**Pb**		**03 25 07.9**	**0.0**
MMA0B	**Mount Meron ar**	**0.60**	**206**	S		**Sn**		**03 25 18.1**	**-2.2**
HNTI	**Hanita**	**0.66**	**224**	P		**Pb**		**03 25 09.6**	**+0.7**
HNTI	**Hanita**	**0.66**	**224**	S		**Sn**		**03 25 20.4**	**-1.2**
HMDT	**Nahal Hemdat**	**1.31**	**187**	P		**Pg**		**03 25 20.1**	**+0.1**
HMDT	**Nahal Hemdat**	**1.31**	**187**	S		**Sg**		**03 25 39.9**	**+2.9**
SLTI	**Sal'it**	**1.43**	**204**	P		**Pg**		**03 25 22.3**	**0.0**
SLTI	**Sal'it**	**1.43**	**204**	S		**Sg**		**03 25 43.3**	**+2.5**

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*TEH **30** 03:47:31.5, 29°.52N×56°.78E, h90km*
*OMAN **30** 03:47:33.6±0.1, 29°.25N×56°.79E, h90km, mb4.9/19, ml3.9/12, Error ellipse: s-maj=1.5km s-min=1.2km az=226.0*
*DSN **30** 03:47:33.1±1.9, 29°.17N×56°.90E, h15km, ML3.6/13, Error ellipse: s-maj=35.5km s-min=16.4km az=90.0*
ISC 30 03:47:30.4±1.1, 29°.46N±0°.04×56°.79E±0°.05, h102km±11km, n80, σ1s55/102, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NGRK	**Negar Kerman**	**0.19**	**343**		Pg		**Pn**	**03 47 45.7**	**+0.5**
NGRK					Sg		**Sn**	**03 47 55.9**	**-0.4**
KHGB	**Koh Gabri**	**0.95**	**343**		Pg		**Pn**	**03 47 51.6**	**+0.9**
KRM1	**Kerman Provinc**	**1.12**	**22**		Pg		**Pn**	**03 47 53.3**	**+0.7**
KRM1					Sg		**Sn**	**03 48 09.1**	**0.0**
KBAM	**BAM**	**1.48**	**102**		Pg		**Pn**	**03 47 58.4**	**+1.8**
ZRDN	**Zarand Kerman**	**1.52**	**352**		Pg		**Pn**	**03 47 58.4**	**+1.2**
KHNJ	**Kahnooj**	**1.70**	**152**		Pg		**Pn**	**03 48 02.1**	**+2.8**
IBND	**Bandar-abas**	**2.01**	**186**		Pn		**Pn**	**03 48 05.6**	**+2.4**
GENO	**Geno**	**2.12**	**195**		Pn		**Pn**	**03 48 06.8**	**+2.0**
BNDS	**Bandar-Abbas**	**2.12**	**195**		Pn		**Pn**	**03 48 06.8**	**+2.0**
IBAF	**Bafgh**	**2.38**	**334**		Pn		**Pn**	**03 48 09.3**	**+1.2**
IMEH	**Mehriz**	**2.69**	**316**		Pn		**Pn**	**03 48 13.9**	**+1.6**
LAR1	**LAR**	**2.77**	**231**		Pn		**Pn**	**03 48 15.5**	**+2.3**
NHDN	**Nehbandan**	**3.41**	**55**		Pn		**Pn**	**03 48 23.5**	**+1.8**
SHME	**Shamm** SNR=77	**3.44**	**190**		P		**Pn**	**03 48 23.7**	**+1.6**
SHME					S		**Sn**	**03 49 01.0**	**-1.1**
SHME	**Shamm** SNR=77	**3.44**	**190**	*i*	P		**Pn**	**03 48 23.4**	**+1.2**
ICHK	**Chekchek**	**3.45**	**324**		Pn		**Pn**	**03 48 24.5**	**+2.0**
IKOO	**Kooshah**	**3.51**	**32**		Pn		**Pn**	**03 48 24.4**	**+1.1**
BANOM	**Banah**	**3.55**	**187**		P		**Pn**	**03 48 25.4**	**+1.8**
BANOM					S		**Sn**	**03 49 04.4**	**-0.3**
BANOM	**Banah** SNR=312	**3.55**	**187**	*i*	P		**Pn**	**03 48 24.7**	**+1.1**
BANOM					S		**Sn**	**03 49 03.7**	**-1.0**
TPRV	**Parvadeh(Tabas**	**3.56**	**359**		Pn		**Pn**	**03 48 25.5**	**+1.7**
ITEG	**Tejag**	**3.82**	**26**		Pn		**Pn**	**03 48 28.6**	**+1.3**
LMD1	**Lamerd**	**3.83**	**237**		Pn		**Pn**	**03 48 29.7**	**+2.4**
UMQ	**Umm Al-Quwin** SNR=10.0	**4.04**	**195**		P		**Pn**	**03 48 31.2**	**+1.0**
MASF	**Masafi** SNR=41	**4.11**	**188**		P		**Pn**	**03 48 33.0**	**+1.8**
MASF					S		**Sn**	**03 49 18.3**	**+0.1**
MSFE	**Esma-Masafi** SNR=41	**4.12**	**188**	*i*	P		**Pn**	**03 48 33.1**	**+1.8**
TKDS	**Koohdasht(Taba**	**4.15**	**4**		Pn		**Pn**	**03 48 33.3**	**+1.6**
MDH	**Madha** SNR=15	**4.17**	**186**		P		**Pn**	**03 48 32.9**	**+1.0**
MDH					S		**Sn**	**03 49 18.8**	**-0.8**
MDH	**Madha** SNR=18	**4.17**	**186**	*i*	P		**Pn**	**03 48 32.4**	**+0.5**
IDAH	**Dahanechah**	**4.20**	**38**		Pn		**Pn**	**03 48 34.1**	**+1.6**
AFRZ	**Afriz**	**4.39**	**25**		Pn		**Pn**	**03 48 36.5**	**+1.5**
KAZ2	**Kazeron-Fars-I**	**4.47**	**273**		Pn		**Pn**	**03 48 38.5**	**+2.5**
TNSJ	**Nastanj**	**4.50**	**358**		Pn		**Pn**	**03 48 38.4**	**+2.1**
UOSS	**Minazif**	**4.53**	**187**		P		**Pn**	**03 48 38.1**	**+1.3**
UOSS					S		**Sn**	**03 49 27.6**	**-0.6**
ANAR	**Anarak**	**4.55**	**326**		Pn		**Pn**	**03 48 39.2**	**+2.0**
NAZ	**Nazwa, Dubai** SNR=41	**4.56**	**193**		P		**Pn**	**03 48 39.4**	**+2.1**
NAZ	**Nazwa, Dubai** SNR=41	**4.56**	**193**	*i*	P		**Pn**	**03 48 39.4**	**+2.1**
HATD	**Hatta, Dubai** SNR=15	**4.65**	**187**		P		**Pn**	**03 48 40.5**	**+2.0**
HATD					S		**Sn**	**03 49 30.9**	**-0.5**
HATD	**Hatta, Dubai** SNR=7.0	**4.65**	**187**	*i*	P		**Pn**	**03 48 40.0**	**+1.5**
KLNJ	**Kolanjah**	**4.76**	**290**		Pn		**Pn**	**03 48 41.9**	**+1.8**
ASHO	**Ashiyiah** SNR=141	**4.80**	**188**		P		**Pn**	**03 48 42.1**	**+1.6**
ASHO					S		**Sn**	**03 49 34.9**	**0.0**
ASHO	**Ashiyiah** SNR=141	**4.80**	**188**	*i*	P		**Pn**	**03 48 42.2**	**+1.8**
FAQ	**Al Faqa, Dubai** SNR=21	**4.81**	**193**		P		**Pn**	**03 48 42.5**	**+1.8**
FAQ					S		**Sn**	**03 49 34.2**	**-1.1**
FAQ	**Al Faqa, Dubai** SNR=21	**4.81**	**193**	*i*	P		**Pn**	**03 48 42.3**	**+1.7**
ASUD	**Al Ashush, Dub** SNR=51	**4.99**	**196**		P		**Pn**	**03 48 45.0**	**+2.0**
ASUD					S		**Sn**	**03 49 39.4**	**0.0**
ASUD	**Al Ashush, Dub** SNR=51	**4.99**	**196**	*i*	P		**Pn**	**03 48 45.1**	**+2.2**
IZEF	**Zefreh**	**5.14**	**313**		Pn		**Pn**	**03 48 47.0**	**+1.8**
SOHO	**SOHO**	**5.31**	**183**		P		**Pn**	**03 48 47.1**	**-0.2**
SOHO	**SOHO** SNR=11	**5.31**	**183**	*i*	P		**Pn**	**03 48 47.0**	**-0.3**
SRVN	**Saravan**	**5.34**	**111**		Pn		**Pn**	**03 48 51.4**	**+3.5**
IBRJ	**Brojen**	**5.36**	**299**		Pn		**Pn**	**03 48 50.4**	**+2.2**
TAPT	**Tabas- Tapeh t**	**5.42**	**3**		Pn		**Pn**	**03 48 50.4**	**+1.5**
ALNE	**Al Ain** SNR=13	**5.46**	**190**		P		**Pn**	**03 48 50.6**	**+1.2**
ALNE	**Al Ain** SNR=13	**5.46**	**190**	*i*	P		**Pn**	**03 48 50.0**	**+0.6**
NGCH	**Negor - Chabah**	**5.62**	**136**		P		**Pn**	**03 48 51.2**	**-0.3**
ZNGN	**Zangian**	**5.76**	**299**		Pn		**Pn**	**03 48 55.5**	**+1.8**
HOQ	**Hoqain**	**5.87**	**175**		S		**Sn**	**03 49 59.6**	**-1.3**
BIDO	**Bidbid** SNR=9.4	**6.03**	**168**		P		**Pn**	**03 48 57.2**	**0.0**
BIDO					S		**Sn**	**03 50 02.5**	**-2.4**
ARQ	**Araqi** SNR=62	**6.10**	**182**		P		**Pn**	**03 48 59.6**	**+1.5**
ISFB	**Sefidab**	**6.23**	**323**		Pn		**Pn**	**03 49 02.2**	**+2.4**
MZWR	**Madinat Zayed**	**6.24**	**205**		P		**Pn**	**03 49 00.8**	**+0.8**
SHMA	**Al-Shehemyia** SNR=73	**6.29**	**237**		P		**Pn**	**03 49 01.6**	**+0.9**
WSAR	**Wadi Sarin** SNR=20	**6.41**	**165**		P		**Pn**	**03 49 03.3**	**+1.0**
WSAR					S		**Sn**	**03 50 11.2**	**-2.8**
SMDO	**Samad** SNR=14	**6.47**	**170**		P		**Pn**	**03 49 04.5**	**+1.3**
SMDO					S		**Sn**	**03 50 14.0**	**-1.7**
GHWR	**Ruwais**	**6.50**	**214**		P		**Pn**	**03 49 04.2**	**+0.7**
GHWR					S		**Sn**	**03 50 14.0**	**-2.1**
BSY	**Bisya** SNR=14	**6.70**	**177**		P		**Pn**	**03 49 07.3**	**+1.1**
TRNA	**Turayna** SNR=36	**6.84**	**228**		P		**Pn**	**03 49 08.5**	**+0.4**
TRNA					S		**Sn**	**03 50 22.9**	**-1.7**
UMZA	**Um Al Zommool**	**6.87**	**193**		P		**Pn**	**03 49 09.2**	**+0.6**
SLWR	**Sila**	**7.04**	**222**		P		**Pn**	**03 49 11.0**	**+0.1**
SLWR					S		**Sn**	**03 50 26.2**	**-3.2**
MZR	**Muzera**	**7.08**	**206**		P		**Pn**	**03 49 12.8**	**+1.3**
MZR					S		**Sn**	**03 50 29.2**	**-1.3**
SMRA	**Abu-Samra** SNR=24	**7.09**	**230**		P		**Pn**	**03 49 12.0**	**+0.5**
SMRA					S		**Sn**	**03 50 29.8**	**-0.9**
WBK	**Wadi Bani Khal** SNR=16	**7.09**	**163**		P		**Pn**	**03 49 12.3**	**+0.7**
WBK					S		**Sn**	**03 50 29.3**	**-1.5**
JMDO	**Jabal Madar**	**7.16**	**170**		P		**Pn**	**03 49 13.6**	**+1.2**
JMDO					S		**Sn**	**03 50 30.6**	**-1.7**
JLN	**Jalan Bani Buh** SNR=8.4	**7.65**	**161**		P		**Pn**	**03 49 20.0**	**+0.8**
MHTO	**MHTO** SNR=49	**8.50**	**173**		P		**Pn**	**03 49 32.1**	**+1.4**
DOK	**Doka** SNR=44	**11.06**	**193**		P		**Pn**	**03 50 05.0**	**-0.5**
SHAO	**Shalim** SNR=25	**11.43**	**186**		P		**Pn**	**03 50 09.6**	**-0.9**
SHAO	**Shalim** SNR=25	**11.43**	**186**	*i*	P		**Pn**	**03 50 09.8**	**-0.7**
DMTO	**DMTO** SNR=24	**11.81**	**189**		P		**Pn**	**03 50 14.7**	**-0.8**
WHFO	**Wadi Hawf** SNR=8.5	**11.81**	**194**		P		**Pn**	**03 50 15.0**	**-0.7**
ABTO	**Aybut** SNR=59	**12.47**	**196**		P		**Pn**	**03 50 22.8**	**-1.5**

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*MDD **30** 04:24:55.0±0.7, 27°.04N×14°.39W, h30km, mb_Lg3.1/19, Error ellipse: s-maj=7.6km s-min=3.3km az=171.0*
*CNRM **30** 04:25:00.4, 26°.45N×12°.92W, h56km, ML3.1*
ISC 30 04:24:42.8±1.5, 26°.69N±0°.10×14°.35W±0°.04, h10km, n42, σ2s12/65, Western Sahara

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CGIN	**Giniginamar, F**	**1.53**	**9**		P		**Pg**	**04 25 13.0**	**+0.8**
CGIN					S		**Sn**	**04 25 29.0**	**-1.1**
CGIN				*i*	lVmb_Lg			04 25 30.8	
CLUM	**San Bartolome**	**1.61**	**314**		P		**Pg**	**04 25 16.8**	**+3.1**
CLUM					S		**Sb**	**04 25 32.1**	**-1.0**
CLUM				*i*	lVmb_Lg			04 25 34.9	
CFTV	**Fuerteventura**	**1.73**	**8**		P		**Pg**	**04 25 18.0**	**+1.9**
CFTV					S		**Sn**	**04 25 33.3**	**-1.9**
EOSO	**Osorio**	**1.74**	**322**		P		**Pg**	**04 25 16.3**	**0.0**
EOSO					S		**Sn**	**04 25 34.3**	**-1.2**
EOSO				*i*	lVmb_Lg			04 25 38.3	
CGRA	**Granadilla de**	**2.40**	**306**		P		**Pg**	**04 25 28.3**	**-0.5**
CGRA					S		**Sn**	**04 25 51.6**	**0.0**
CGRA				*i*	lVmb_Lg			04 25 57.1	
CTFS	**San Miguel de**	**2.46**	**305**		P		**Pg**	**04 25 28.3**	**-1.7**
CTFS					S		**Sn**	**04 25 52.5**	**-0.6**
CTFS				*i*	lVmb_Lg			04 26 07.1	
MACI	**Morro de la Ar**	**2.47**	**310**		P		**Pg**	**04 25 28.3**	**-1.8**
MACI					S		**Sn**	**04 25 52.4**	**-1.2**
MACI				*i*	lVmb_Lg			04 25 58.9	
CGUI	**Guimar, Teneri**	**2.47**	**312**		P		**Pg**	**04 25 28.2**	**-1.9**
CGUI					S		**Sn**	**04 25 51.8**	**-1.6**
CGUI				*i*	lVmb_Lg			04 26 00.7	
CCAN	**Las Canadas**	**2.52**	**308**		P		**Pb**	**04 25 28.7**	**+0.4**
CCAN					S		**Sn**	**04 25 53.8**	**-1.2**
CCAN				*i*	lVmb_Lg			04 25 58.3	
CDIE	**La Orotava (Te**	**2.52**	**309**		P		**Pg**	**04 25 29.5**	**-1.7**
CDIE					S		**Sn**	**04 25 53.1**	**-1.9**
CLAJ	**Vilaflor (Tene**	**2.53**	**306**		P		**Pb**	**04 25 29.3**	**+0.9**
CLAJ					S		**Sn**	**04 25 53.5**	**-1.6**
CLAJ				*i*	lVmb_Lg			04 25 59.1	
CRAJ	**Montana Rajada**	**2.54**	**309**		P		**Pg**	**04 25 30.0**	**-1.5**
CRAJ					S		**Sn**	**04 25 53.0**	**-1.6**
CRAJ				*i*	lVmb_Lg			04 26 00.9	
CFOR	**Fortaleza, Los**	**2.56**	**310**		P		**Pb**	**04 25 29.7**	**+0.7**
CFOR					S		**Sn**	**04 25 54.7**	**-1.3**
CFOR				*i*	lVmb_Lg			04 26 01.3	
CCHO	**La Orotava (Te**	**2.57**	**307**		P		**Pb**	**04 25 29.4**	**+0.3**
CCHO					S		**Sn**	**04 25 53.8**	**-2.3**
CCHO				*i*	lVmb_Lg			04 25 59.6	
CPVI	**La Orotava (Te**	**2.58**	**308**		P		**Pb**	**04 25 29.6**	**+0.2**
CPVI					S		**Sn**	**04 25 55.1**	**-1.5**
CREA	**Los Realejos,**	**2.58**	**310**		P		**Pb**	**04 25 29.4**	**+0.2**
CREA					S		**Sn**	**04 25 54.4**	**-1.9**
CREA				*i*	lVmb_Lg			04 26 03.7	
CADE	**Adeje, Tenerif**	**2.58**	**305**		P		**Pb**	**04 25 29.6**	**+0.3**
CADE				*i*	lVmb_Lg			04 25 36.6	
CADE					S		**Sn**	**04 25 54.9**	**-1.3**
CDLV	**Cueva Verdes**	**2.59**	**18**		P		**Pn**	**04 25 26.5**	**+1.8**
CDLV					S		**Sn**	**04 25 53.1**	**-3.2**
CNOR	**Icod de los Vi**	**2.61**	**309**		P		**Pb**	**04 25 28.8**	**-1.0**
CNOR					S		**Sn**	**04 25 57.1**	**0.0**
CDOS	**Garachico, Isl**	**2.66**	**308**		P		**Pb**	**04 25 30.6**	**+0.1**
CDOS					S		**Sn**	**04 25 57.9**	**-0.3**
CDOS				*i*	lVmb_Lg			04 26 04.8	
CBOL	**Buenavista del**	**2.73**	**307**		P		**Pb**	**04 25 32.0**	**+0.1**
CBOL					S		**Sn**	**04 25 57.1**	**-2.9**
CBOL				*i*	lVmb_Lg			04 26 04.5	
EGOM	**La Gomera**	**2.93**	**301**		P		**Pb**	**04 25 35.9**	**+0.7**
EGOM					S		**Sn**	**04 26 03.5**	**-1.2**
TANT	**Tantan**	**3.25**	**58**		P		**Pn**	**04 25 37.1**	**+3.2**
TANT	**Tantan**	**3.25**	**58**		S		**Sn**	**04 26 08.5**	**-4.2**
CMCL	**Mercadel, El H**	**3.42**	**288**		P		**Pb**	**04 25 42.7**	**-0.9**
CMCL					S		**Sn**	**04 26 17.9**	**+0.9**
CCUM	**Cumbre, El Hie**	**3.44**	**289**		P		**Pb**	**04 25 43.1**	**-0.8**
CCUM					S		**Sn**	**04 26 18.7**	**+1.3**
CCUM				*i*	lVmb_Lg			04 26 23.4	
CJUL	**El Julan, El H**	**3.48**	**288**		P		**Pn**	**04 25 37.2**	**+0.1**
CJUL					S		**Sn**	**04 26 09.0**	**-9.5**
CMIR	**El Paso, La Pa**	**3.70**	**304**		P		**Pb**	**04 25 45.6**	**-2.7**
CMIR					S		**Sn**	**04 26 23.2**	**-0.7**
CMIR				*i*	lVmb_Lg			04 26 28.5	
TBT	**Taburiente**	**3.73**	**303**		P		**Pb**	**04 25 46.8**	**-1.9**
TBT					S		**Sn**	**04 26 24.1**	**-0.3**
TBT				*i*	lVmb_Lg			04 26 32.0	
OUK	**Oukaimeden**	**7.25**	**50**		P		Pn	04 26 34.5	+5.4
OUK	**Oukaimeden**	**7.25**	**50**		S		**Sn**	**04 27 47.9**	**-3.8**
TIO	**Tiouine**	**7.51**	**54**		P		**Pn**	**04 26 36.0**	**+3.4**
TIO	**Tiouine**	**7.51**	**54**		S		**Sn**	**04 27 50.5**	**-7.5**
OUZM	**OUZ**	**7.87**	**56**		P		**Pn**	**04 26 38.9**	**+1.3**
SRHM	**Skhour des Reh**	**8.04**	**43**		P		**Pn**	**04 26 43.5**	**+3.7**
ZGR	**Zagora**	**8.41**	**64**		P		**Pn**	**04 26 45.8**	**+0.9**
ZGR	**Zagora**	**8.41**	**64**		S		Sn	04 28 10.0	-10
TISM	**Timmit**	**8.54**	**52**		P		**Pn**	**04 26 50.0**	**+3.5**
TZRR	**Tazzarine**	**8.72**	**60**		P		**Pn**	**04 26 50.9**	**+1.7**
TZRR	**Tazzarine**	**8.72**	**60**		S		Sn	04 28 18.2	-9.4
MD31	**MD31**	**10.36**	**51**		P		**Pn**	**04 27 15.2**	**+3.7**
MDT	**Midelt**	**10.43**	**52**		P		**Pn**	**04 27 16.4**	**+3.8**

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*PDG **30** 04:28:06.7±0.3, 41°.52N×19°.52E, h11km±1km, MD3.1/2, ML3.0/10, Error ellipse: s-maj=0.8km s-min=1.5km az=0.0*
*TIR **30** 04:28:07.7, 41°.63N×19°.52E, h29km±4km, Ml2.9/6*
*SKO **30** 04:28:07.5, 41°.51N×19°.39E, h7km, ML2.5*
*BEO **30** 04:28:08.6±0.7, 41°.60N×19°.54E, h9km±3km, ML2.8/7*
*VIE **30** 04:28:12.8±1.1, 41°.68N×18°.78E, h10km, mb3.0/9, ms3.6/9, Error ellipse: s-maj=22.0km s-min=8.1km az=58.0 45 km SSW of Shkoder*
ISC 30 04:28:07.3±1.0, 41°.61N±0°.02×19°.48E±0°.02, h9km±9km, n96, σ1s31/139, 22C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.39**	**132**		Pg		**Pg**	**04 28 14.3**	**-0.7**
TIR					Sg		**Sg**	**04 28 19.6**	**-0.6**
TIR							AML	AML	04 28 20.1
	4.6nm,0.6s								
TIR							AML	AML	04 28 21.1
	3.9nm,0.3s								
TIR	**Tirane**	**0.39**	**132**	⇓	*i*Pg		**Pg**	**04 28 14.3**	**-0.7**
TIR					*i* Sg		**Sg**	**04 28 20.7**	**+0.6**
ULC	**Ulcinj**	**0.39**	**334**		*e*Pg		**Pg**	**04 28 15.4**	**+0.3**
SDA	**Shkodra**	**0.44**	**2**		Pg		**Pg**	**04 28 16.2**	**+0.2**
SDA					Sg		**Sb**	**04 28 23.8**	**-0.3**
DRME	**Dracevica, Mon**	**0.62**	**339**		*e*Pg		**Pg**	**04 28 19.5**	**+0.2**
DRME					*e*Sg		**Sb**	**04 28 30.4**	**+1.3**
DRME	**Dracevica, Mon**	**0.62**	**339**	⇓	*i*Pg		**Pg**	**04 28 19.4**	**+0.2**
DRME					*i* Sg		**Sb**	**04 28 30.1**	**+1.0**
PHP	**Peshkopia**	**0.73**	**84**		Pg		**Pg**	**04 28 20.1**	**-1.2**
PHP					Sg		**Sg**	**04 28 30.9**	**+0.1**
PHP							AML	AML	04 28 40.0
	2.2nm,0.8s								
BUM	**Brajici-Budva**	**0.82**	**328**	⇓	*i*Pg		**Pg**	**04 28 23.1**	**0.0**
BUM					*i* Sg		**Sn**	**04 28 37.1**	**-0.3**
PDG	**Podgorica**	**0.84**	**349**		Pg		**Pg**	**04 28 23.3**	**-0.2**
PDG					Sg		**Sn**	**04 28 36.7**	**-1.1**
PDG	**Podgorica**	**0.84**	**349**	⇑	P		**Pb**	**04 28 24.0**	**-0.1**
PDG					⇓S		**Sg**	**04 28 31.4**	**-2.9**
PDG	**Podgorica**	**0.84**	**349**		*e*Pg		**Pg**	**04 28 23.1**	**-0.3**
PDG					*e*Sg		**Sn**	**04 28 36.9**	**-0.9**
PDG	**Podgorica**	**0.84**	**349**	⇓	*i*Pg		**Pg**	**04 28 22.9**	**-0.5**
PDG					*i* Sg		**Sn**	**04 28 37.5**	**-0.3**
PVY	**Plav**	**1.05**	**20**		*e*Pg		**Pg**	**04 28 26.5**	**-1.0**
PVY	**Plav**	**1.05**	**20**	⇓	*i*Pg		**Pg**	**04 28 26.2**	**-1.3**
PVY					*i* Sg		**Sn**	**04 28 43.5**	**+0.3**
HCY	**Herceg Novi**	**1.11**	**319**		*e*Pg		**Pg**	**04 28 28.7**	**0.0**
HCY					*i* Sg		**Sn**	**04 28 46.8**	**+2.2**
OHR	**Ohrid**	**1.11**	**116**	*i*	Pg		**Pg**	**04 28 27.2**	**-1.5**
OHR					*i* Sg		**Sn**	**04 28 44.5**	**-0.2**
OHR					*e*Lg		Lg	04 28 47.5	
	comp=N,168nm,0.6s								
OHR					*e*Lg		Lg	04 28 49.0	
	comp=E,128nm,0.8s								
VLO	**Vlora**	**1.14**	**179**		Pg		**Pn**	**04 28 30.0**	**+0.5**
VLO					Sg		**Sg**	**04 28 44.5**	**+0.5**
VLO							AML	AML	04 28 55.5
	comp=E,1.5nm,0.5s								
NKME	**Niksic**	**1.22**	**342**	⇓	*i*Pg		**Pb**	**04 28 30.5**	**-0.1**
NKME					*e*Sg		**Sn**	**04 28 50.1**	**+2.7**
KOME	**Kolasin**	**1.24**	**1**		*e*Pg		**Pb**	**04 28 30.8**	**-0.2**
KOME					*e*Sg		**Sn**	**04 28 49.3**	**+1.4**
KOME	**Kolasin**	**1.24**	**1**	⇓	*i*Pg		**Pb**	**04 28 30.6**	**-0.4**
KOME					*i* Sg		**Sn**	**04 28 50.5**	**+2.6**
BEY	**Berane**	**1.30**	**14**		*e*Pg		**Pn**	**04 28 31.3**	**-0.5**
IVA	**Berane**	**1.30**	**14**	⇑	*i*Pg		**Pn**	**04 28 31.2**	**-0.5**
IVA					*i* Sg		**Sn**	**04 28 52.3**	**+3.0**
TREB	**Trebinje**	**1.39**	**323**		*e*Pn		**Pn**	**04 28 33.2**	**+0.3**
TREB	**Trebinje**	**1.39**	**323**		*e*Pg		**Pg**	**04 28 33.9**	**-0.1**
TREB					*e*Sg		**Sg**	**04 28 53.7**	**+1.7**
KBN	**Korca**	**1.40**	**134**		Pg		**Pb**	**04 28 33.8**	**+0.1**
KBN					Sg		**Sg**	**04 28 52.7**	**+0.4**
KBN							AML	AML	04 28 56.8
	comp=E,0.6nm,0.6s								
BRY	**Bratogost**	**1.47**	**332**		*e*Pg		**Pb**	**04 28 35.0**	**+0.1**
BRY					*i* Sg		**Sg**	**04 28 56.8**	**+2.3**
SKO	**Skopje**	**1.51**	**76**	*i*	Pg		**Pg**	**04 28 36.4**	**+0.1**
SKO					*i* Sg		**Sg**	**04 28 57.3**	**+1.4**
UPM	**Unac-Piva**	**1.65**	**345**		*e*Pn		**Pn**	**04 28 37.3**	**+0.6**
UPM					*i* Sn		**Sg**	**04 29 01.1**	**+0.8**
NEST	**Nestorio**	**1.69**	**135**		Pn		**Pn**	**04 28 38.0**	**+0.9**
NEST					Sn		**Sg**	**04 29 02.3**	**+0.8**
NEST							AML	AML	04 29 12.2
	comp=E,0.4nm,1.0s					

LESA	**Schwarzleotal**	**7.57**	**322**	*i* Pn		**Pn**	**04 29 58.2**	**+0.2**
	comp=E,1.1nm,0.5s								
LESA				*i* Sn		**Sn**	**04 31 19.5**	**-4.5**
	comp=E,1.0nm,0.4s								
TLCR		**7.68**	**59**	⇑P		**Pn**	**04 30 01.5**	**+2.1**
WTTA	**Wattenberg**	**7.96**	**318**	*i* Pn		**Pn**	**04 30 03.7**	**+0.3**
	comp=E,1.9nm,0.6s								
WTTA				*i* Sn		**Sn**	**04 31 31.1**	**-2.5**
	comp=E,2.2nm,0.3s								
WATA	**Walderalm**	**8.04**	**318**	*i* Pn		**Pn**	**04 30 04.1**	**-0.3**
	comp=E,1.3nm,0.3s								
SQTA	**Sankt Quirin**	**8.15**	**316**	*i* Pn		**Pn**	**04 30 05.4**	**-0.6**
	comp=E,0.3nm,0.2s								
SQTA				*i* Sn		**Sn**	**04 31 33.8**	**-4.4**
	comp=E,1.7nm,0.3s								
MOTA	**Moosalm**	**8.29**	**317**	*i* Sn		**Sn**	**04 31 38.3**	**-3.3**
	comp=E,3.1nm,0.5s								

*SOME **30** 04:35:23.2, 39°.18N × 72°.05E, h5km*
*NNC **30** 04:35:27.1±0.9, 38°.77N × 72°.34E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=7.5km s-min=5.6km az=172.0*

ISC 30 04:35:23.0±2.5, 39°.2N±0°.1 × 72°.08E±0°.06, h10km, n9, σ2§29/17, 4C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**3.67**	**13**	*e*P			**Pb**	**04 36 30.3**	**+2.3**
	9.4nm,0.3s								
MRKS				*e*S			**Sg**	**04 37 18.6**	**-2.3**
	18nm,0.4s								
AAK	**Ala-Archa**	**3.92**	**27**	⇑P			**Pb**	**04 36 32.7**	**+0.5**
	6.2nm,0.8s								
AAK				⇑S			**Sb**	**04 37 23.4**	**+3.7**
	26nm,1.2s								
KK31	**Karatay Array**	**4.10**	**344**	P			**Pb**	**04 36 37.2**	**+1.9**
	3.6nm,0.4s,baz=150,slow=12,SNR=46								
KK31				⇑S			**Sg**	**04 37 32.0**	**-2.7**
	3.0nm,0.3s								
BRLS	**Borolday**	**4.21**	**337**	*e*P			**Pb**	**04 36 36.7**	**-0.4**
	1.2nm,0.1s								
BRLS				*e*S			**Sb**	**04 37 29.6**	**+1.6**
	8.0nm,0.4s								
KST	**Kastek**	**4.85**	**36**	*e*P			**Pg**	**04 36 54.6**	**-1.3**
	2.1nm,0.1s								
KST				*e*S			**Sg**	**04 38 00.3**	**+1.6**
	12nm,0.6s								
MTBS	**Maitube**	**5.14**	**38**	*e*P			**Pg**	**04 36 59.0**	**-2.3**
	2.0nm,0.3s								
MTBS				*e*S			**Sg**	**04 38 07.8**	**-0.1**
	7.0nm,1.1s								
TNSS	**Tian-Shan**	**5.33**	**42**	*e*P			**Pg**	**04 37 01.7**	**-3.4**
	1.0nm,0.6s								
TNSS				*e*S			**Sg**	**04 38 12.1**	**-2.1**
	1.3nm,1.0s								
KOTS	**Kotyrbulak**	**5.55**	**41**	*e*P			**Pg**	**04 37 06.6**	**-2.8**
	0.7nm,0.2s								
KOTS				*e*S			**Sg**	**04 38 20.9**	**-0.4**
	17nm,0.5s								
AB31	**Akbulak array**	**13.30**	**323**	⇑P			**P**	**04 38 42.8**	**+1.2**
	0.5nm,0.5s,baz=133,slow=13,SNR=8.2								

*IDC **30** 04:35:44.7±0.6, 5°.82N × 125°.41E, h220km±4km, mb3.8/21, mbtmp4.4/23, Error ellipse: s-maj=24.0km s-min=9.0km az=78.0*
*NEIC **30** 04:35:45.7±1.8, 5°.84N±0°.07 × 125°.5E±0°.1, h219km±5km, mb4.6/27, Error ellipse: s-maj=16.0km s-min=10.1km az=80.0*
*DJA **30** 04:35:45.5±0.4, 6°N±3° × 12°6E±°, h206km±4km, M4.5/11, mb4.4/11, mB5.1/6, MLv4.6/10, Mw(mB)4.4/6*

ISC 30 04:35:43.1±0.4, 5°.84N±0°.05 × 125°.57E±0°.08, h200km, n73, σ1§72/79, mb4.3/34, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.22**	**0**	P			**Pn**	**04 36 18.8**	**+4.3**
	494nm,0.4s,baz=225,slow=2.9,SNR=3.8								
DAV				S			**Sn**	**04 36 44.7**	**+5.6**
	635nm,0.4s,baz=246,slow=20,SNR=11								
DAV	**Davao City (W)**	**1.22**	**0**				**Pn**	**04 36 18.9**	**+4.4**
SGSI	**Sangihe**	**2.14**	**181**	P			**Pn**	**04 36 25.1**	**+2.0**
SGSI				S			**Sn**	**04 36 55.5**	**+1.1**
TNTI	**Ternate**	**5.34**	**160**				**Pn**	**04 37 03.4**	**+1.5**
TNTI	**Ternate**	**5.34**	**160**	P			**Pn**	**04 37 02.7**	**+0.7**
	0.6nm3µm115nm,0.7s								
GTOI	**Gorontalo**	**5.76**	**206**	P			**Pn**	**04 37 08.3**	**+0.9**
	66nm,0.9s								
TOLI2	**Tolitoli**	**6.70**	**226**				**Pn**	**04 37 20.4**	**+0.9**
MYLDM	**Lahad Datu**	**7.07**	**265**				**Pn**	**04 37 28.8**	**+4.5**
LUWI	**Luwuk**	**7.38**	**202**				**Pn**	**04 37 31.2**	**+2.8**
LUWI	**Luwuk**	**7.38**	**202**	P			**Pn**	**04 37 29.4**	**+1.0**
SANI	**Sanana**	**7.85**	**177**	P			Pn	04 37 32.1	-2.3
	3µm55nm,0.8s								
MPSI	**Mapaga**	**7.87**	**226**	P			**Pn**	**04 37 35.3**	**+0.6**
NLAI	**Namlea**	**9.14**	**170**	P			**Pn**	**04 37 50.7**	**-0.6**
TTSI	**Tana Toraja**	**10.53**	**213**	P			**Pn**	**04 38 09.8**	**+0.5**
	1µm18nm,0.8s								
SPSI	**Sidrap Palu**	**11.33**	**211**	P			**Pn**	**04 38 20.4**	**+0.8**
KAPI	**Kappang**	**12.24**	**208**	P			**Pn**	**04 38 32.2**	**+1.0**
	7.1nm,0.5s,baz=42,slow=16,SNR=1.9								
SBUM	**Sibu**	**13.73**	**256**				**P**	**04 38 53.1**	**+1.1**
BATI	**Baumata**	**16.05**	**187**	P			**P**	**04 39 18.5**	**+0.8**
	22nm,0.4s,baz=280,slow=18,SNR=1.6								
TPUB	**Ta-pu**	**18.00**	**345**	P			**P**	**04 39 38.1**	**-1.0**
JAGI	**Jajag, Banyuwa**	**18.21**	**219**	P			**Pn**	**04 39 45.9**	**+2.1**
JAGI					IAmb	IAmb		04 39 53.6	
	comp=Z,19nm,1.1s								
SSLB	**Suanglung**	**18.39**	**346**	P			**P**	**04 39 42.3**	**-1.0**
MTN	**Manton Dam**	**19.36**	**163**				**P**	**04 39 54.8**	**+0.9**
MTN					IAmb	IAmb		04 40 36.0	
	comp=Z,13nm,1.2s								
KNRA	**Kununurra**	**21.61**	**172**	P			**P**	**04 40 17.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**23.78**	**180**				**P**	**04 40 38.5**	**+0.8**
COEN	**Coen**	**26.31**	**139**	P			**P**	**04 41 00.8**	**+0.2**
COEN					IAmb	IAmb		04 41 41.3	
	comp=Z,18nm,1.4s								
WB0	**Warramunga Arr**	**26.89**	**161**	P			**P**	**04 41 05.2**	**-0.5**
WB0					IAmb	IAmb		04 41 48.8	
	comp=Z,8.5nm,1.2s								
WRA	**Warramunga Arr**	**27.03**	**162**	P			**P**	**04 41 06.2**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=335,slow=8.9,SNR=9.8								
WRA				ScP			**ScP**	**04 47 41.3**	**-3.3**
	comp=Z,0.5nm,0.9s,baz=342,slow=2.9,SNR=1.0								
	comp=Z,0.8nm,0.6s								
WRA	**Warramunga Arr**	**27.03**	**162**	P			**P**	**04 41 05.4**	**-1.6**
MBWA	**Marble Bar**	**27.43**	**192**	P			**P**	**04 41 11.8**	**+1.2**
MBWA					IAmb	IAmb		04 41 15.6	
	comp=Z,21nm,1.2s								
PSA00	**Pilbara Seismi**	**27.81**	**191**	P			**P**	**04 41 14.3**	**+0.4**
ASAR	**Alice Springs**	**30.43**	**165**	P			**P**	**04 41 37.1**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=343,slow=7.3,SNR=26								
ASAR				PcP			**PcP**	**04 44 31.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=349,slow=2.4,SNR=6.3								
ASAR				ScP			**ScP**	**04 47 51.6**	**-3.7**
	comp=Z,0.4nm,0.7s,baz=339,slow=3.2,SNR=1.7								
	comp=Z,1.0nm,0.5s								
KSRS	**Korea Array**	**31.54**	**4**	P			**P**	**04 41 46.9**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=180,slow=10.0,SNR=14								
	comp=Z,2.9nm,0.6s								
XAN	**Xi'an**	**32.03**	**333**	⇓P			**P**	**04 41 50.5**	**-0.5**
XAN				pmax			pmax		
	comp=Z,18nm,0.9s								
MJAR	**Matsushiro Arr**	**32.68**	**19**	P			**P**	**04 41 56.3**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=195,slow=10,SNR=5.3								
	comp=Z,2.0nm,0.6s								
LZDM	**Lanzhou Array**	**36.09**	**329**	P			**P**	**04 42 25.8**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=158,slow=12,SNR=3.7								
	comp=Z,0.7nm,0.3s								
INKA	**Innaminka**	**36.46**	**157**	P			**P**	**04 42 29.5**	**+0.5**
FORT	**Forrest**	**36.49**	**176**	P			**P**	**04 42 29.5**	**+0.3**
FORT					IAmb	IAmb		04 42 39.1	
	comp=Z,11nm,1.1s								
USRK	**Ussuriysk Ar.**	**38.62**	**7**	P			**P**	**04 42 47.5**	**+0.6**
	comp=Z,4.4nm,0.7s,baz=201,slow=5.7,SNR=4.9								
	comp=Z,4.4nm,0.7s								
BBOO	**Buckleboo**	**39.71**	**166**	P			**P**	**04 42 56.9**	**+0.8**
BBOO					IAmb	IAmb		04 43 17.5	
	comp=Z,42nm,1.5s								
BNX	**BinXian**	**39.78**	**2**	⇓P			**P**	**04 42 58.3**	**+1.8**
BNX				pmax			pmax		
	comp=Z,5.0nm,0.7s								
STKA	**Stephens Creek**	**40.50**	**159**	P			**P**	**04 43 03.0**	**+0.3**
	comp=Z,3.5nm,0.5s,baz=332,slow=8.5,SNR=7.2								
	comp=Z,3.5nm,0.5s								
STKA	**Stephens Creek**	**40.50**	**159**	P			**P**	**04 43 03.2**	**+0.5**
STKA					IAmb	IAmb		04 43 03.9	
	comp=Z,55nm,1.4s								
HILR	**Hailar Array B**	**43.84**	**355**	P			**P**	**04 43 29.4**	**0.0**
	comp=Z,1.3nm,0.4s,baz=172,slow=12,SNR=5.8								
	comp=Z,1.3nm,0.4s								
ARMA	**Armidale**	**43.85**	**147**	P			**P**	**04 43 30.9**	**+1.0**
ARMA					IAmb	IAmb		04 43 37.4	
	comp=Z,23nm,1.4s								
HEH	**HeiHe**	**44.29**	**2**	*e*P			**P**	**04 43 33.5**	**+0.6**
SONM	**Songino Array**	**44.95**	**342**	P			**P**	**04 43 37.0**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=169,slow=8.0,SNR=5.2								
SONM				PcP			**PcP**	**04 45 14.5**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=159,slow=4.5,SNR=2.2								
	comp=Z,0.5nm,0.4s								
CAN	**Canberra**	**46.50**	**153**	P			**P**	**04 43 51.6**	**+1.0**
CAN					IAmb	IAmb		04 44 17.4	
	comp=Z,32nm,1.4s								
TOO	**Toolangi**	**47.01**	**158**	P			**P**	**04 43 56.2**	**+1.8**
PETK	**Petropavlovsk-**	**53.95**	**23**	P			**P**	**04 44 47.2**	**+1.1**
	comp=Z,4.2nm,0.7s,baz=224,slow=6.7,SNR=2.0								
	comp=Z,4.2nm,0.7s								
MKAR	**Makanchi Array**	**55.18**	**325**	P			**P**	**04 44 54.5**	**-0.6**
	comp=Z,1.6nm,0.4s,baz=120,slow=7.4,SNR=30								
MKAR				ScP			**ScP**	**04 49 28.0**	**-5.3**
	comp=Z,0.2nm,0.5s,baz=108,slow=4.7,SNR=2.5								
	comp=Z,1.6nm,0.4s								
YAK	**Yakutsk**	**56.16**	**2**	P			**P**	**04 45 02.3**	**+0.7**
ZALV	**Zalesovo Beam**	**58.20**	**333**	P			**P**	**04 45 14.3**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=127,slow=7.2,SNR=6.8								
	comp=Z,1.2nm,0.4s								
ZALV	**Zalesovo Beam**	**58.20**	**333**	P			**P**	**04 45 14.7**	**-1.4**
KURBB	**Kurchatov Arra**	**59.35**	**327**	P			**P**	**04 45 23.0**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=129,slow=6.6,SNR=10.0								
	comp=Z,1.6nm,0.6s								
KURK	**Kurchatov**	**59.35**	**327**	P			**P**	**04 45 23.5**	**-0.7**
KKAR	**Karatay Array**	**60.91**	**317**	P			**P**	**04 45 34.3**	**-0.7**
LBZ	**Lake Benmore**	**64.07**	**146**	P			**P**	**04 45 56.1**	**+0.3**
LBZ					IAmb	IAmb		04 46 31.8	
	comp=Z,24nm,1.3s								
BVAR	**Borovoye Array**	**64.93**	**327**	P			**P**	**04 45 59.7**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=117,slow=8.5,SNR=3.7								
	comp=Z,1.1nm,0.6s								
RTZ	**Ruatahuna**	**64.96**	**137**	P			**P**	**04 46 01.9**	**+0.2**
TIXI	**Tiksi**	**65.77**	**1**	P			**P**	**04 46 06.0**	**-0.2**
TIXI					IAmb	IAmb		04 46 06.4	
	comp=Z,7.5nm,0.7s								
ADK	**Adak**	**65.90**	**35**	P			**P**	**04 46 07.6**	**+0.2**
NRIK	**Noril'sk**	**68.12**	**346**	P			**P**	**04 46 20.1**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=136,slow=4.7,SNR=2.6								
	comp=Z,2.3nm,0.6s								
AB31	**Akbulak array**	**69.80**	**321**	P			**P**	**04 46 30.5**	**-1.3**
ABKAR	**Akbulak array**	**69.80**	**321**	P			**P**	**04 46 30.6**	**-1.2**
C19K	**Lookout Ridge**	**79.19**	**21**	P			**P**	**04 47 27.1**	**+1.5**
C19K					IAmb	IAmb		04 47 39.7	
	comp=Z,19nm,1.4s								
D19K	**Kuna River**	**79.59**	**21**	P			**P**	**04 47 28.8**	**+1.1**
D19K					IAmb	IAmb		04 47 29.3	
	comp=Z,6.4nm,0.8s								
ILAR	**Eielson Array**	**83.71**	**26**	P			**P**	**04 47 48.5**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=255,slow=4.5,SNR=25								
	comp=Z,0.7nm,0.5s								
MAW	**Mawson**	**85.32**	**200**	P			**P**	**04 47 55.4**	**-1.8**
	comp=Z,4.5nm,0.9s,baz=9.5,slow=6.1,SNR=2.8								
	comp=Z,4.5nm,0.9s								
ARCES	**ARCESS Array B**	**88.08**	**340**	P			**P**	**04 48 09.3**	**-1.3**
	comp=Z,7.2nm,1.1s,baz=2.9,slow=2.4,SNR=1.3								
	comp=Z,7.2nm,1.1s								
SPITS	**Spitsbergen Ar**	**88.20**	**349**	P			**P**	**04 48 10.3**	**-0.8**
	comp=Z,13nm,1.0s,baz=81,slow=8.9,SNR=2.0								
	comp=Z,13nm,1.0s								
FINES	**FINESS Array B**	**89.44**	**332**	P			**P**	**04 48 15.8**	**-1.2**
	comp=Z,15nm,1.3s,baz=86,slow=7.8,SNR=6.3								
	comp=Z,15nm,1.3s								
HFS	**Hagfors**	**95.63**	**332**	P			**P**	**04 48 45.9**	**+0.2**
	comp=Z,8.5nm,1.2s,baz=145,slow=5.3,SNR=2.2								
	comp=Z,8.5nm,1.2s								
TRQA	**Tornquist**	**147.20**	**169**	PKPbc			**PKPdf**	**04 55 03.1**	**+2.4**

*NEIC **30** 04:58:22.8±2.9, 42°.81N±0°.02 × 124°.88W±0°.05, h10km±2km, Error ellipse: s-maj=6.2km s-min=3.2km az=107.0*
*SEA **30** 04:58:27.2±1.7, 42°.778N±0°.008 × 124°.47W±0°.07, h16km±4km, MLJ.5/11, ML3.3/100(NEIC), Error ellipse: s-maj=7.5km s-min=1.1km az=93.0*
*PNSN **30** 04:58:27.2, 42°.78N × 124°.47W, h16km, MD3.5, Fault plane solution: NP1:φs=20.00000°, δ60.00000°, λ-60.00000°.*

ISC 30 04:58:19.9±1.6, 42.79N±0°.03 × 124.96W±0°.09, h10km, n43, σ1§21/36, Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**0.47**	**80**				**Pb**	**04 58 30.9**	**+0.6**
KBO	**Bosley Butte**	**0.80**	**136**				**Pn**	**04 58 38.7**	**+1.4**
KBO							**Sb**	**04 58 47.7**	**+1.0**
J01E	**Myrtle Point**	**0.84**	**64**				**Pn**	**04 58 37.5**	**-0.3**
J01E							**Sg**	**04 58 46.4**	**-0.8**
L02F	**Cave Junction**	**1.23**	**123**				**Pg**	**04 58 43.9**	**+0.4**
L02F					IAML			04 58 58.4	
	comp=N,1µm,0.5s								
L02F	**Cave Junction**	**1.23**	**123**				**Sb**	**04 58 58.0**	**-1.2**
KSXB	**Camp Six Broad**	**1.25**	**140**				**Pg**	**04 58 45.2**	**+1.2**
UMPQ	**Umpqua Communi**	**1.30**	**67**				**Pn**	**04 58 44.3**	**+0.2**
RNO	**Roman Nose**	**1.43**	**38**				**Pg**	**04 58 48.4**	**+0.9**
I03D	**Drain, OR**	**1.49**	**52**				**Pb**	**04 58 47.6**	**0.0**
I03D					IAML			04 59 16.3	
	comp=E,657nm,0.9s								
I02E	**Swisshome, OR**	**1.55**	**31**				**Pg**	**04 58 50.1**	**+0.5**
I02E					IAML			04 59 12.7	
	comp=N,568nm,0.5s								
I02E					IAML			04 59 16.0	
	comp=E,511nm,0.6s								
HSO	**Harness Mounta**	**1.56**	**61**				**Pn**	**04 58 48.5**	**+0.7**
BBOR	**Butler Butte**	**1.68**	**86**				**Pn**	**04 58 50.0**	**+0.4**
BBOR					IAML			04 59 10.0	
	comp=N,655nm,0.7s								
BBOR					IAML			04 59 12.0	
	comp=E,726nm,0.5s								
KRPM	**Rodgers**	**1.78**	**156**				**Pg**	**04 58 53.7**	**-0.3**
YBH	**Yreka Blue Hor**	**1.98**	**122**				**Pb**	**04 58 55.4**	**-0.7**
BUCK	**Buck Mountain**	**2.01**	**45**				**Pb**	**04 58 56.0**	**-0.6**
BUCK					IAML			04 59 25.1	
	comp=N,411nm,0.7s								
BUCK					IAML			04 59 26.9	
	comp=E,325nm,0.6s								
L04D	**Klamath Falls**	**2.05**	**105**				**Pn**	**04 58 56.0**	**+1.5**
L04D					IAML			04 59 23.7	
	comp=N,391nm,1.0s								
L04D					IAML			04 59 26.6	
	comp=E,415nm,0.7s								
JCC	**Jacoby Creek,**	**2.09**	**160**				**Pb**	**04 58 57.8**	**-0.2**
M02C	**Callahan**	**2.10**	**131**				**Pb**	**04 58 57.5**	**-0.7**
I04A	**Tendick Farm,**	**2.12**	**61**				**Pn**	**04 58 57.1**	**+1.7**
I04A					IAML			04 59 25.3	
	comp=E,378nm,0.8s								
I04A					IAML			04 59 29.7	
	comp=N,323nm,0.7s								
KHMM	**Horse Mountain**	**2.13**	**154**				**Pb**	**04 58 58.7**	**0.0**
J04A	**Umpqua Nationa**	**2.14**	**77**				**Pb**	**04 58 57.8**	**-1.1**
COR	**Corvallis**	**2.16**	**33**				**Pb**	**04 58 58.7**	**-0.4**
COR					IAML			04 59 38.8	
	comp=N,256nm,0.6s								
H04D	**Lebanon**	**2.37**	**42**				**Pb**	**04 59 01.2**	**-1.5**
H04D					IAML			04 59 38.8	
	comp=E,314nm,0.7s								
H04D					IAML			04 59 38.9	
	comp=N,252nm,0.6s								
K04D	**Chiloquin, OR**	**2.37**	**93**				**Pn**	**04 58 60.0**	**+0.9**
HOG	**Hogback Mounta**	**2.47**	**102**				**Pn**	**04 59 01.4**	**+1.0**
N02D	**Trinity Center**	**2.48**	**136**				**Pg**	**04 59 07.9**	**+0.5**
N02D					IAML			04 59 46.1	
	comp=E,180nm,0.7s								
M03C	**McCloud**	**2.60**	**125**				**Pb**	**04 59 04.8**	**-2.0**
M03C					IAML			04 59 46.0	
	comp=E,162nm,0.7s								
M03C					IAML			04 59 58.5	
	comp=N,152nm,0.8s								
WIFE	**Three Sisters-**	**2.62**	**60**		IAML			04 59 49.4	
	comp=N,211nm,0.7s								
WIFE					IAML			04 59 50.6	
	comp=E,250nm,0.9s								
G03D	**McMinnville, O**	**2.71**	**26**		IAML			04 59 54.4	
	comp=N,127nm,0.7s								
G03D					IAML			05 00 07.3	
	comp=E,167nm,0.9s								
H04A	**Detroit Lake**	**2.76**	**46**		IAML			04 59 45.4	
	comp=N,176nm,0.5s								
H04A					IAML			04 59 50.5	
	comp=E,212nm,0.6s								
J05D	**Fort Rock, OR**	**2.78**	**79**				**Pn**	**04 59 05.7**	**+1.1**
J05D					IAML			04 59 49.7	
	comp=N,114nm,1.0s								
J05D					IAML			04 59 54.5	
	comp=E,119nm,1.0s								
K05A	**Summer Lake**	**3.00**	**90**				**Pn**	**04 59 08.5**	**+0.8**
K05A					IAML			04 59 54.5	
	comp=N,97nm,0.9s								
K05A					IAML			04 59 59.4	
	comp=E,94nm,1.1s								
G04A	**Mulino**	**3.01**	**36**				**Pb**	**04 59 10.7**	**-2.8**
I05D	**Terrebonne, OR**	**3.05**	**58**				**Pn**	**04 59 10.1**	**+1.7**
I05D					IAML			04 59 58.0	
	comp=N,110nm,0.8s								
I05D					IAML			05 00 06.7	
	comp=E,161nm,1.1s								
O02D	**Mt. Diablo Mer**	**3.08**	**147**				**Pb**	**04 59 11.8**	**-3.1**
PINE	**Pine Mountain**	**3.10**	**70**				**Pn**	**04 59 10.5**	**+1.3**
HATC	**Hat Creek Radi**	**3.28**	**126**		IAML			05 00 33.3	
	comp=N,73nm,2.4s								
HATC					IAML			05 00 37.2	
	comp=E,93nm,2.3s								
F03A	**Seaside**	**3.30**	**17**		IAML			04 59 57.5	
	comp=E,98nm,0.5s								
F03A					IAML			04 59 58.6	
	comp=N,100nm,0.6s								
HOOD	**Mount Hood Mea**	**3.48**	**42**		IAML			05 00 19.9	
	comp=E,107nm,1.2s								
HOOD					IAML			05 00 20.7	
	comp=N,84nm,1.1s								
F04D	**Rainier, OR**	**3.58**	**22**		IAML			05 00 32.5	
	comp=E,95nm,0.7s								
F04D					IAML			05 00 44.7	
	comp=N,95nm,0.8s								
G06A	**Carlson Farm,**	**3.96**	**50**		IAML			05 00 30.9	
	comp=N,41nm,1.5s								
WVOR	**Wild Horse Val**	**4.68**	**92**				**Pn**	**04 59 30.7**	**-0.1**
HAWA	**Hanford**	**5.29**	**45**		IAML			05 01 25.2	
	comp=N,17nm,2.7s								

*DNK **30** 04:58:31.2±2.2, 51°.52N × 15°.99E, h0km±74km, ML2.8*
*BGR **30** 04:58:34.0±0.4, 51°.48N × 16°.16E, h1km, ML3.7/17, Error ellipse: s-maj=4.4km s-min=2.2km az=16.0*
*IDC **30** 04:58:33.3±0.5, 51°.52N × 16°.00E, h0km, mb3.7/9, mbtmp3.7/16, ML3.1/6, Error ellipse: s-maj=9.0km s-min=5.3km az=101.0*
*VIE **30** 04:58:35.6±0.4, 51°.35N × 15°.97E, h0km, mb3.3/20, ml3.4/17, ms3.6/2, Error ellipse: s-maj=4.3km s-min=2.5km az=52.0 78 km WNW of Wroclaw Suspected Mining induced.*
*BNS **30** 04:58:35.4±0.4, 51°.33N × 16°.09E, h5km, ML3.7*
*PRU **30** 04:58:36.0, 51°.43N × 16°.11E, h0km, M4.1*
*IPEC **30** 04:58:46.0±0.3, 50°.77N × 16°.27E, h1km, ML3.1/2, Error ellipse: s-maj=3.6km s-min=1.8km az=95.0*

ISC 30 04:58:31.5±0.5, 51°.56N±0°.02 × 16°.14E±0°.02, h0km, n130, σ1§80/215, mb3.6/8, 8C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**172**	*i* Pg			**Pb**	**04 58 46.5**	**-0.4**
KSP				*e*Sg			**Sg**	**04 58 55.6**	**+1.0**
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg			**Pb**	**04 58 46.6**	**-0.4**
KSP				*e*Sg			**Sg**	**04 58 55.9**	**+1.3**
CHVC	**Chvalec**	**0.97**	**183**	*e*PG			**Pb**	**04 58 51.5**	**+0.3**
CHVC				*e*SG			**Sg**	**04 59 03.9**	**+1.2**
OSTC	**Ostas**	**1.00**	**177**	*e*PG			**Pb**	**04 58 52.1**	**+0.3**
OSTC				*e*SG			**Sg**	**04 59 04.8**	**+1.1**
UPC	**Upice**	**1.05**	**185**	*e*PG			**Pb**	**04 58 52.6**	**0.0**
UPC				*e*SG			**Sg**	**04 59 05.1**	**-0.2**
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*PG			**Pb**	**04 58 55.5**	**+0.1**
DPC				*e*SG			**Sg**	**04 59 10.5**	**0.0**
	comp=Z,524nm,0.8s								
DPC	**Dobruska-Polom**	**1.21**	**175**	*e*Pn			**Pb**	**04 58 55.4**	**0.0**
DPC				*e*Sg			**Sg**	**04 59 10.3**	**-0.1**
PIVO	**Bartosovice**	**1.40**	**169**	*e*Pn			**Pg**	**04 58 58.5**	**+0.3**
	baz=343								
PIVO	**Bartosovice**	**1.40**	**169**	*e*Pg			**Sg**	**04 59 15.3**	**-1.0**
	539nm,0.4s,baz=343								
PVCC	**

KHC				*e*SN		**Sn**	**04 59 54.5**	**-0.8**
KHC				*e*SG		**Sg**	**05 00 03.9**	**-1.8**
	comp=Z,126nm,0.5s							
CKRC	**Cesky Krumlov**	**2.98**	**204**	*e*PN		**Pn**	**04 59 21.1**	**+1.0**
CKRC				*e*PG		**Pg**	**04 59 27.6**	**-1.0**
CKRC				*e*SG		**Sb**	**05 00 05.2**	**+2.7**
	comp=Z,152nm,0.5s							
MOX	**Moxa**	**3.00**	**254**	*e*Pn		**Pn**	**04 59 21.2**	**+1.0**
MOX				*e*Sg		**Sg**	**05 00 09.7**	**+2.0**
MANZ	**Manzenberg**	**3.01**	**240**	*e*Pn		**Pn**	**04 59 21.6**	**+1.2**
MANZ				*e*Sg		**Sg**	**05 00 09.2**	**+1.1**
ROTZ	**Rotzenmuhle**	**3.08**	**236**	*e*Pn		**Pn**	**04 59 22.4**	**+1.0**
ROTZ				*e*Sg		**Sg**	**05 00 08.8**	**-1.6**
GEC2	**GERESS Array S**	**3.13**	**211**	*e*Pn		**Pn**	**04 59 23.0**	**+0.8**
GERES	**GERESS Array B**	**3.13**	**211**	Pn		**Pn**	**04 59 23.1**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=32,slow=12,SNR=161							
GERES				Pg		**Pb**	**04 59 29.4**	**+1.3**
	comp=Z,2.5nm,0.3s,baz=35,slow=17,SNR=37							
GERES				Sn		**Sn**	**04 59 57.0**	**-3.4**
	comp=Z,1.4nm,0.3s,baz=44,slow=25,SNR=5.3							
GERES				Lg		Lg	05 00 09.4	
	comp=Z,3.7nm,0.3s,baz=36,slow=30,SNR=9.1							
	comp=Z,14nm,0.4s							
WET	**Wettzell**	**3.19**	**222**	*e*Pn		**Pn**	**04 59 23.9**	**+0.9**
WET				*e*Sg		**Sg**	**05 00 13.7**	**-0.4**
LANS	**Liptovska Anna**	**3.21**	**137**	*e*PN		**Pn**	**04 59 24.5**	**+1.2**
LANS				*e*PG		**Pg**	**04 59 32.8**	**-0.3**
LANS				*e*SG		**Sg**	**05 00 14.9**	**+0.2**
MODS	**Modra-Piesok**	**3.27**	**167**	*e*PN		**Pn**	**04 59 25.6**	**+1.6**
MODS				*e*PG		**Pg**	**04 59 34.6**	**+0.5**
MODS				*e*SG		**Sg**	**05 00 16.4**	**-0.1**
NIE	**Niedzica**	**3.41**	**127**	*e*Pg		**Pg**	**04 59 37.2**	**+0.4**
NIE				*e*Sg		**Sg**	**05 00 21.6**	**+0.6**
CLZ	**Clausthal**	**3.60**	**277**	*e*Pn		**Pn**	**04 59 30.6**	**+2.0**
CLZ				*e*Sg		**Sg**	**05 00 30.7**	**+3.6**
CONA	**Conrad Observa**	**3.64**	**183**	*i* Pn		**Pn**	**04 59 30.5**	**+1.3**
	comp=Z,11nm,0.4s,SNR=9.5							
CONA				*e*Sg		**Sg**	**05 00 28.6**	**+0.3**
	comp=Z,68nm,0.3s							
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P		**Pn**	**04 59 30.2**	**+1.2**
BSD				*i* S		**Sn**	**05 00 10.8**	**-1.8**
BSD				IAML			05 00 16.3	
	comp=Z,6.3nm,0.2s							
GRF	**Grafenberg Arr**	**3.65**	**241**	*e*Pn		**Pn**	**04 59 30.6**	**+1.4**
GRF				*e*Sg		**Sg**	**05 00 28.2**	**-0.5**
RONA	**Rosalia, Austr**	**3.86**	**178**	*e*Pn		**Pn**	**04 59 33.1**	**+0.9**
	comp=Z,2.9nm,0.3s							
RONA				*e*Sg		**Sg**	**05 00 33.2**	**-2.3**
	comp=Z,51nm,0.4s							
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*PN		**Pn**	**04 59 32.8**	**+0.2**
STHS				*e*PG		**Pg**	**04 59 44.6**	**-1.6**
STHS				*e*SG		**Sg**	**05 00 37.8**	**+1.1**
MOA	**Molln**	**3.91**	**199**	*i* Pn		**Pn**	**04 59 33.9**	**+1.1**
	comp=Z,13nm,0.3s,SNR=12							
MOA				*e*Sg		**Sg**	**05 00 36.8**	**-0.1**
	comp=Z,50nm,0.4s							
SRO	**Srobarova**	**4.00**	**159**	*e*PG		**Pg**	**04 59 49.0**	**+0.8**
SRO				*e*SG		**Sg**	**05 00 39.9**	**-0.1**
KECS	**Kecovo**	**4.16**	**136**	*e*PN		**Pn**	**04 59 36.4**	**+0.2**
KECS				*e*PG		**Pg**	**04 59 53.5**	**+2.3**
KECS				*e*SG		**Sg**	**05 00 45.5**	**+0.4**
BIOA	**Bad Ischl, Aus**	**4.20**	**204**	*i* Pn		**Pn**	**04 59 38.0**	**+1.2**
	comp=Z,23nm,0.3s,SNR=14							
BIOA				*e*Sg		**Sg**	**05 00 47.4**	**+1.1**
	comp=Z,140nm,0.5s							
ARSA	**Arzberg**	**4.33**	**186**	*e*Pn		**Pn**	**04 59 40.8**	**+2.2**
	comp=Z,11nm,0.3s,SNR=7.1							
ARSA				*e*Sg		**Sg**	**05 00 50.4**	**-0.2**
	comp=Z,125nm,0.7s							
PSZ	**Piszkesteto**	**4.38**	**145**	⇑P		**Pn**	**04 59 40.8**	**+1.4**
PSZ	**Piszkesteto**	**4.38**	**145**	*e*P		**Pn**	**04 59 40.7**	**+1.4**
LUNU	**Lund**	**4.39**	**340**	*i* P		**Pn**	**04 59 38.8**	**-0.6**
LUNU				*e*S		**Sn**	**05 00 29.2**	**-1.9**
LESA	**Schwarzleotal**	**4.71**	**210**	*i* Pn		**Pn**	**04 59 45.0**	**+1.1**
	comp=Z,4.9nm,0.3s							
LESA				*e*Sg		**Sg**	**05 01 02.3**	**-0.5**
	comp=Z,19nm,0.4s							
KBA	**Koelnbreinsper**	**4.84**	**203**	*e*Pn		**Pn**	**04 59 47.3**	**+1.5**
	comp=Z,20nm,0.4s							
KBA				*e*Sg		**Sg**	**05 01 07.0**	**0.0**
	comp=Z,19nm,0.3s							
BJUU	**Bjuv**	**4.89**	**339**	*i* P		**Pn**	**04 59 44.9**	**-1.3**
BJUU				*e*S		**Sn**	**05 00 40.2**	**-3.2**
SUW	**Suwalki**	**4.93**	**57**	*e*P		**Pn**	**04 59 50.8**	**+4.1**
SOKA	**Soboth**	**4.94**	**189**	*i* Pn		**Pn**	**04 59 48.7**	**+1.7**
	comp=Z,3.3nm,0.4s							
SOKA				*e*Sg		**Sg**	**05 01 12.1**	**+2.1**
	comp=Z,13nm,0.5s							
DEL	**Delary**	**5.10**	**346**	*i* P		**Pn**	**04 59 49.2**	**+0.1**
DEL				*i* S		**Sn**	**05 00 46.3**	**-2.3**
GROS	**Grobnik**	**5.12**	**185**	*i* Pn		**Pn**	**04 59 50.6**	**+1.1**
OBKA	**Obir**	**5.16**	**192**	*i* Pn		**Pn**	**04 59 51.3**	**+1.3**
	comp=Z,1.6nm,0.3s							
OBKA				*e*Sg		**Sg**	**05 01 17.7**	**+0.6**
	comp=Z,48nm,0.8s							
WATA	**Walderalm**	**5.17**	**217**	*e*Pn		**Pn**	**04 59 52.1**	**+1.9**
	comp=Z,11nm,0.3s,SNR=12							
WATA				*e*Sg		**Sg**	**05 01 18.5**	**+1.1**
	comp=Z,43nm,0.8s							
MYKA	**Terra Mystica**	**5.20**	**199**	*i* Pn		**Pn**	**04 59 51.5**	**+1.0**
	comp=Z,1.2nm,0.2s							
MYKA				*e*Sg		**Sg**	**05 01 18.1**	**-0.3**
	comp=Z,45nm,0.9s							
WTTA	**Wattenberg**	**5.21**	**216**	*i* Pn		**Pn**	**04 59 51.9**	**+1.1**
	comp=Z,11nm,0.4s,SNR=7.6							
WTTA				*i* Sg		**Sg**	**05 01 20.4**	**+1.7**
	comp=Z,89nm,0.8s							
MOTA	**Moosalm**	**5.34**	**220**	*i* Pn		**Pn**	**04 59 53.3**	**+0.6**
	comp=Z,10nm,0.4s,SNR=7.0							
MOTA				*e*Sg		**Sg**	**05 01 26.0**	**+2.8**
	comp=Z,32nm,0.6s							
ABTA	**Abfaltersbach**	**5.37**	**208**	*i* Pn		**Pn**	**04 59 54.6**	**+1.7**
	comp=Z,7.6nm,0.4s,SNR=8.7							
ABTA				*e*Sg		**Sg**	**05 01 23.1**	**-0.8**
	comp=Z,41nm,0.6s							
RETA	**Reutte**	**5.37**	**223**	*i* Pn		**Pn**	**04 59 53.7**	**+0.7**
	comp=Z,5.6nm,0.3s,SNR=5.6							
RETA				*e*Sg		**Sg**	**05 01 22.6**	**-1.4**
	comp=Z,39nm,0.7s							
SQTA	**Sankt Quirin**	**5.41**	**219**	*i* Pn		**Pn**	**04 59 54.8**	**+1.4**
	comp=Z,9.8nm,0.3s,SNR=8.6							
SQTA				Sg		**Sg**	**05 01 24.7**	**-0.4**
	comp=Z,27nm,0.7s							
KOE	**Koeppel**	**5.43**	**261**	*e*Pn		**Pn**	**04 59 55.0**	**+1.3**
SSRD	**Sdr. Stenderup**	**5.53**	**318**	*e*S		**Sn**	**05 00 55.1**	**-4.0**
SSRD				IAML			05 01 00.0	
	comp=Z,14nm,0.3s							
VNDS	**Vrh nad Dolski**	**5.54**	**190**	*i* Pn		**Pn**	**04 59 56.9**	**+1.6**
GOLS	**Golise**	**5.56**	**184**	*i* Pn		**Pn**	**04 59 57.2**	**+1.7**
HOBG	**Hohbusch**	**5.56**	**268**	*e*Pn		**Pn**	**04 59 57.4**	**+2.0**
MORH	**Mrgy, Hungar**	**5.59**	**162**	⇑P		**Pn**	**04 59 56.3**	**+0.4**
BGG	**Burgeitz**	**5.74**	**260**	*e*Pn		**Pn**	**04 59 58.7**	**+0.9**
BGG				*e*Sn		**Sn**	**05 01 02.7**	**-1.6**
	comp=Z,15nm,0.9s							
LAUG	**Laupendahl**	**5.76**	**272**	*e*Pn		**Pn**	**04 59 59.7**	**+1.6**
FETA	**Feichten**	**5.76**	**220**	*i* Pn		**Pn**	**04 59 59.5**	**+1.2**
	comp=Z,1.8nm,0.3s							
FABU	**Falkenberg**	**5.81**	**341**	*i* P		**Pn**	**04 59 58.6**	**-0.2**
FABU				*e*S		**Sn**	**05 01 02.4**	**-3.7**
DAVA	**Damuels**	**5.91**	**226**	*i* Pn		**Pn**	**05 00 01.0**	**+0.6**
	comp=Z,4.9nm,0.3s							
DAVA				*e*Sg		**Sg**	**05 01 45.1**	**+3.8**
	comp=Z,31nm,0.8s							
STB	**Steinbach**	**5.94**	**264**	*e*Pn		**Pn**	**05 00 01.8**	**+1.1**
STB				*e*Sn		**Sn**	**05 01 07.4**	**-2.0**
	comp=Z,25nm,1.0s							
PABE	**Paberze**	**6.12**	**47**	*e*P		**Pn**	**05 00 04.9**	**+1.9**
HILG	**Hillesheim**	**6.12**	**262**	*e*Pn		**Pn**	**05 00 04.2**	**+1.1**
DAVOX	**Davos/Dischmat**	**6.30**	**223**	Pn		**Pn**	**05 00 06.5**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=37,slow=10,SNR=23							
DAVOX				Sn		**Sn**	**05 01 17.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=324,slow=20,SNR=1.3							
DAVOX				Lg		Lg	05 01 45.7	
	comp=Z,1.3nm,0.3s,baz=0.0,slow=20,SNR=3.4							
	comp=Z,6.8nm,0.4s							
DREG	**Dreilaegerbach**	**6.31**	**266**	*e*Pn		**Pn**	**05 00 07.4**	**+1.7**
BORU	**Boraas**	**6.40**	**343**	*i* P		**Pn**	**05 00 06.7**	**-0.2**
BORU				*e*S		**Sn**	**05 01 18.9**	**-1.6**
MUD	**Monsted U'grnd**	**6.40**	**323**	*i* S		**Sn**	**05 01 14.8**	**-5.7**
SIRR	**Siria**	**6.42**	**143**	⇑P		**Pn**	**05 00 07.2**	**-0.1**
DRGR		**6.42**	**135**	⇓P		**Pn**	**05 00 08.2**	**+0.8**
MARR	**Marisel-Cluj**	**6.69**	**134**	⇓P		**Pn**	**05 00 11.6**	**+0.5**
TJOU	**Tjoern**	**6.99**	**340**	*e*P		**Pn**	**05 00 15.0**	**0.0**
BURAR	**Bucovina Array**	**7.09**	**120**	⇑P		**Pn**	**05 00 17.4**	**+0.8**
NACGM	**Naroch**	**7.21**	**58**	*e*P		**Pn**	**05 00 17.0**	**-1.1**
	comp=Z,14nm,0.9s,baz=247							
GZR	**Gura Zlata**	**7.58**	**142**	⇑P		**Pn**	**05 00 26.5**	**+3.2**
MDVR	**Moldovita**	**7.73**	**149**	⇑P		**Pn**	**05 00 24.4**	**-1.0**
HOMB	**Homborsund**	**8.03**	**330**	*e*S		**Sn**	**05 01 53.4**	**-7.3**
KIEV	**Kiev**	**8.27**	**91**	⇑P		**Pn**	**05 00 32.9**	**+0.4**
AKASG	**Malin Array Be**	**8.28**	**91**	Pn		**Pn**	**05 00 32.6**	**-0.1**
	comp=Z,5.0nm,0.5s,baz=282,slow=12,SNR=16							
AKASG				Sn		**Sn**	**05 02 02.3**	**-4.5**
	comp=Z,2.4nm,0.3s,baz=268,slow=24,SNR=4.8							
AKASG				Lg		Lg	05 02 58.0	
	baz=281,slow=29							
HFS	**Hagfors**	**8.71**	**352**	Pn		**Pn**	**05 00 39.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=166,slow=13,SNR=12							
HFS				Sn		**Sn**	**05 02 12.1**	**-5.2**
	comp=Z,0.3nm,0.3s,baz=169,slow=17,SNR=1.8							
HFS				Lg		Lg	05 03 08.6	
	comp=Z,0.3nm,0.3s,baz=181,slow=31,SNR=2.2							
	comp=Z,1.6nm,0.4s							
AAL	**Aland**	**8.91**	**13**	*e*P		**Pn**	**05 00 42.8**	**+1.6**
ARBE	**Arbavere**	**9.66**	**31**	*e*P		**Pn**	**05 00 54.3**	**+2.7**
MEF	**Metsahovi**	**9.83**	**25**	*e*P		**Pn**	**05 00 55.4**	**+1.4**
NOA	**NORSAR Array B**	**9.89**	**346**	Pn		**Pn**	**05 00 53.7**	**-1.1**
	baz=74,slow=19,SNR=5.5							
NOA				Sn		**Sn**	**05 02 40.0**	**-6.4**
	baz=174,slow=16,SNR=1.3							
NOA				Lg		Lg	05 03 47.4	
	baz=219,slow=18,SNR=4.7							
	comp=Z,0.6nm,0.8s							
RAF	**Rauma**	**9.98**	**16**	*e*P		**Pn**	**05 00 57.5**	**+1.4**
FINES	**FINESS Array B**	**11.31**	**25**	Pn		**Pn**	**05 01 13.9**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=204,slow=12,SNR=18							
FINES				Sn		**Sn**	**05 03 12.7**	**-8.5**
	comp=Z,0.7nm,0.3s,baz=213,slow=18,SNR=4.6							
FINES				Lg		Lg	05 04 33.6	
	comp=Z,0.3nm,0.3s,baz=212,slow=23,SNR=1.1							
	comp=Z,2.8nm,0.6s							
VAF	**Ylistaro**	**12.04**	**14**	*e*P		**Pn**	**05 01 23.3**	**-0.7**
EKA	**Eskdalemuir Ar**	**12.10**	**296**	Pn		**Pn**	**05 01 22.4**	**-2.6**
	baz=103,slow=14							
EKA				Sn		**Sn**	**05 03 34.0**	**-6.6**
	baz=101,slow=25							
ARCES	**ARCESS Array B**	**18.57**	**10**	P		**P**	**05 02 48.0**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=192,slow=11,SNR=7.6							
BVAR	**Borovoye Array**	**32.55**	**66**	P		**P**	**05 05 06.8**	**+2.9**
	comp=Z,1.4nm,0.6s,baz=302,slow=8.5,SNR=5.7							
	comp=Z,1.4nm,0.6s							
KURBB	**Kurchatov Arra**	**38.14**	**66**	P		**P**	**05 05 53.7**	**+1.7**
	comp=Z,0.8nm,0.4s,baz=296,slow=9.0,SNR=5.5							
	comp=Z,0.8nm,0.4s							
TORD	**Torodi Ar. Bea**	**40.05**	**202**	P		**P**	**05 06 08.6**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=15,slow=12,SNR=6.1							
	comp=Z,1.1nm,0.8s							
ZALV	**Zalesovo Beam**	**40.16**	**59**	P		**P**	**05 06 10.1**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=270,slow=5.9,SNR=4.1							
	comp=Z,0.9nm,0.8s							
MKAR	**Makanchi Array**	**42.18**	**69**	P		**P**	**05 06 27.5**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=297,slow=7.5,SNR=3.0							
	comp=Z,0.5nm,0.7s							
SONM	**Songino Array**	**54.87**	**55**	P		**P**	**05 08 05.6**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=280,slow=8.6,SNR=4.1							
	comp=Z,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**59.82**	**336**	P		**P**	**05 08 39.3**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=24,slow=6.4,SNR=5.0							
	comp=Z,0.6nm,0.6s							
ILAR	**Eielson Array**	**63.26**	**352**	P		**P**	**05 09 03.4**	**+2.1**
	comp=Z,0.1nm,0.6s,baz=3.4,slow=4.7,SNR=4.1							
	comp=Z,0.1nm,0.6s							
PDAR	**Pinedale Array**	**74.92**	**322**	P		**P**	**05 10 16.4**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=51,slow=7.2,SNR=4.9							
	comp=Z,0.4nm,0.6s							

BEO ***30*** *05:05:50.7±0.6,41°.48N×19°.59E,h0km,ML2.6/14*
TIR ***30*** *05:05:51.2,41°.53N×19°.54E,h22km±9km, Ml2.8/6*
PDG ***30*** *05:05:53.6±0.2,41°.66N×19°.58E,h11km±1km, ML2.4/11,*
Error ellipse: s-maj=1.2km s-min=1.4km az=0.0
ISC 30 05:05:50.7±1.0,41°.51N±0°.02×19°.48E±0°.03,h14km±8km,
n47,σ0s97/70,7C-7D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**119**	Pg		**Pg**	**05 05 57.1**	**-0.4**
TIR				Sg		**Sg**	**05 06 02.2**	**+0.1**
TIR				AML		AML	05 06 02.3	
	3.6nm,0.2s							
ULC	**Ulcinj**	**0.48**	**339**	⇑*i*Pg		**Pg**	**05 06 00.1**	**-0.2**
SDA	**Shkodra**	**0.54**	**2**	Pg		**Pg**	**05 06 00.7**	**-0.6**
SDA				Sg		**Sb**	**05 06 10.4**	**+0.8**
DRME	**Dracevica, Mon**	**0.71**	**342**	*e*Pg		**Pg**	**05 06 04.3**	**-0.2**
DRME	**Dracevica, Mon**	**0.71**	**342**	*e*Pg		**Pg**	**05 06 03.9**	**-0.6**
DRME				*i* Sg		**Sg**	**05 06 12.8**	**-1.1**
PHP	**Peshkopia**	**0.74**	**76**	Pg		**Pg**	**05 06 04.3**	**-0.9**
PHP				Sg		**Sg**	**05 06 14.8**	**-0.2**
PHP				AML		AML	05 06 20.9	
	1.5nm,0.6s							
BUM	**Brajici-Budva**	**0.90**	**331**	⇑*i*Pg		**Pb**	**05 06 08.0**	**-0.2**
BUM				*e*Sg		**Sb**	**05 06 20.2**	**+0.1**
PDG	**Podgorica**	**0.93**	**350**	Pg		**Pb**	**05 06 07.6**	**-1.1**
PDG				Sg		**Sn**	**05 06 22.8**	**+0.1**
PDG	**Podgorica**	**0.93**	**350**	*e*Pg		**Pb**	**05 06 07.9**	**-0.8**
PDG				*e*Sg		**Sn**	**05 06 22.3**	**-0.4**
PDG	**Podgorica**	**0.93**	**350**	⇑*i*Pg		**Pb**	**05 06 07.7**	**-1.0**
PDG				*i* Sg		**Sb**	**05 06 20.0**	**-1.0**
VLO	**Vlora**	**1.04**	**179**	Pg		**Pn**	**05 06 11.9**	**+0.9**
VLO				Sg		**Sn**	**05 06 26.6**	**+1.3**
VLO				AML		AML	05 06 33.8	
	1.9nm,0.3s							
HCY	**Herceg Novi**	**1.19**	**322**	*e*Pg		**Pg**	**05 06 13.8**	**+0.2**
HCY				*i* Sg		**Sg**	**05 06 30.7**	**+1.6**
NKME	**Niksic**	**1.31**	**343**	*e*Pg		**Pn**	**05 06 15.1**	**+0.3**
NKME				*i* Sg		**Sg**	**05 06 33.6**	**+0.5**
KBN	**Korca**	**1.33**	**131**	Pn		**Pn**	**05 06 15.0**	**0.0**
KBN				Sn		**Sg**	**05 06 34.1**	**+0.5**
KBN				AML		AML	05 06 37.3	
	0.7nm,0.5s							
KOME	**Kolasin**	**1.34**	**1**	*e*Pg		**Pb**	**05 06 16.0**	**+0.3**
KOME	**Kolasin**	**1.34**	**1**	⇑*i*Pg		**Pn**	**05 06 14.7**	**-0.4**
KOME				*i* Sg		**Sn**	**05 06 32.9**	**+0.1**
BEY	**Berane**	**1.39**	**13**	*e*Pg		**Pn**	**05 06 16.0**	**+0.1**
IVA	**Berane**	**1.39**	**13**	*e*Pg		**Pn**	**05 06 15.4**	**-0.5**
IVA				*e*Sg		**Sn**	**05 06 34.1**	**-0.1**
TREB	**Trebinje**	**1.47**	**326**	*e*Pg		**Pb**	**05 06 18.0**	**+0.2**
TREB				*e*Sg		**Sg**	**05 06 39.2**	**+1.2**
BRY	**Bratogost**	**1.55**	**334**	⇓*i*Pg		**Pb**	**05 06 19.3**	**-0.1**
BRY				*e*Sg		**Sg**	**05 06 42.0**	**+1.2**
NEST	**Nestorio**	**1.62**	**132**	Pn		**Pb**	**05 06 20.7**	**+0.3**
NEST				Sn		**Sg**	**05 06 43.7**	**+0.9**
NEST				AML		AML	05 06 48.4	
	0.4nm,0.6s							
UPM	**Unac-Piva**	**1.74**	**346**	⇑*i*Pn		**Pb**	**05 06 22.4**	**-0.2**
UPM				*i* Sn		**Sg**	**05 06 46.3**	**-0.5**
SJES	**Sjenica**	**1.79**	**12**	*e*Pg		**Pb**	**05 06 23.6**	**+0.3**
SJES				*e*Sg		**Sg**	**05 06 48.0**	**-0.2**
PLE	**Pljevlja**	**1.82**	**358**	⇓*i*Pn		**Pb**	**05 06 23.4**	**-0.5**
PLE				*i* Sn		**Sb**	**05 06 46.7**	**+0.1**
STON	**Ston**	**1.90**	**316**	*e*Pn		**Pb**	**05 06 25.1**	**0.0**
STON				*e*Sn		**Sg**	**05 06 52.1**	**+0.4**
NOCI	**Noci**	**1.96**	**249**	Pn		**Pb**	**05 06 27.0**	**+0.8**
NOCI				Sn		**Sn**	**05 06 44.3**	**-3.8**
NOCI				AML		AML	05 06 56.0	
	0.3nm,0.4s							
IGT	**Igoumenitsa**	**2.08**	**161**	Pn		**Pn**	**05 06 26.1**	**+0.8**
IGT				Sn		**Sn**	**05 06 49.2**	**-1.8**
SELS	**Selova**	**2.10**	**35**	*e*Pn		**Pn**	**05 06 26.1**	**+0.6**
RUDO	**Rudo**	**2.11**	**358**	*e*Pn		**Pn**	**05 06 27.0**	**+1.4**
IVAS	**Ivanjica**	**2.12**	**13**	*e*Pn		**Pn**	**05 06 26.4**	**+0.5**
BARS	**Barje**	**2.17**	**52**	*e*Pn		**Pn**	**05 06 26.9**	**+0.4**
GOCS	**Kraljevo Serbi**	**2.29**	**26**	*e*Pn		**Pb**	**05 06 31.1**	**-0.9**
BBLS	**Lazi&#263i**	**2.35**	**359**	*e*Pn		**Pn**	**05 06 30.9**	**+1.8**
GRUS	**Gruza**	**2.54**	**21**	*e*Pn		**Pn**	**05 06 32.7**	**+1.1**
BOVS	**Bovan**	**2.69**	**37**	⇑P		**Pn**	**05 06 35.1**	**+1.5**
BOVS	**Bovan**	**2.69**	**37**	*e*Pn		**Pn**	**05 06 34.2**	**+0.6**
TRUS	**Trudelj**	**2.79**	**14**	*e*Pn		**Pn**	**05 06 37.2**	**+2.1**
ZAGS	**Zavoj**	**2.93**	**52**	*e*Pn		**Pn**	**05 06 37.8**	**+0.9**
VTS	**Vitosha**	**3.01**	**67**	*e*Pn		**Pn**	**05 06 39.0**	**+0.8**
ZAGS	**Zajecar**	**3.07**	**41**	*e*Pn		**Pn**	**05 06 39.8**	**+1.0**
TIP	**Timpagrande**	**3.12**	**223**	⇓P		**Pn**	**05 06 39.0**	**-0.7**
BLKB	**Belogradchik**	**3.17**	**47**	*e*Pn		**Pn**	**05 06 41.6**	**+1.4**
MDVR	**Moldovita**	**3.65**	**26**	⇑P		**Pn**	**05 06 47.5**	**+0.5**
HERR	**Herculane**	**3.99**	**32**	⇓P		**Pn**	**05 06 52.3**	**+0.7**
BZS	**Buzias**	**4.39**	**20**	⇓P		**Pn**	**05 06 57.2**	**+0.2**
SURR	**Surduc**	**4.66**	**23**	⇓P		**Pn**	**05 07 01.5**	**+0.9**
ARR	**Arges**	**5.38**	**43**	⇓P		**Pn**	**05 07 12.4**	**+1.8**

THE ***30*** *05:16:24.4,42°N±45°×1°9E±2°.7,h3km±34km,M3.1/9,*
MLh3.1/9
SKO ***30*** *05:16:25.6,41°.55N×19°.41E,h3km*
PDG ***30*** *05:16:25.7±0.4,41°.45N×19°.35E,h11km±1km, MD2.9/2,*
ML2.8/11, Error ellipse: s-maj=1.0km s-min=1.9km az=0.0
TIR ***30*** *05:16:26.1,41°.55N×19°.56E,h23km±2km, Ml3.4/6*
BEO ***30*** *05:16:26.8±0.6,41°.51N×19°.51E,h14km±2km, ML2.9/5*
ISC 30 05:16:25.6±1.0,41°.52N±0°.02×19°.46E±0°.02,h8km±9km,
n81,σ1s05/120,15C-14D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**119**	Pg		**Pg**	**05 16 32.1**	**-0.3**
TIR				AML		AML	05 16 37.2	
	29nm,0.4s							
TIR				Sg		**Sg**	**05 16 37.9**	**+0.9**
TIR	**Tirane**	**0.35**	**119**	⇑*i*Pg		**Pg**	**05 16 32.1**	**-0.3**
TIR				*i* Sg		**Sg**	**05 16 38.0**	**+0.9**
ULC	**Ulcinj**	**0.47**	**340**	*e*Pg		**Pg**	**05 16 34.7**	**-0.1**
ULC				*e*Sg		**Sg**	**05 16 42.1**	**+1.1**
SDA	**Shkodra**	**0.54**	**3**	Pg		**Pg**	**05 16 35.8**	**-0.2**
SDA				Sg		**Sb**	**05 16 44.1**	**-0.9**
DRME	**Dracevica, Mon**	**0.70**	**343**	*e*Pg		**Pg**	**05 16 38.9**	**-0.2**
DRME				*e*Sg		**Sn**	**05 16 53.1**	**+0.3**
DRME	**Dracevica, Mon**	**0.70**	**343**	⇓*i*Pg		**Pg**	**05 16 38.8**	**-0.3**
DRME				*e*Sg		**Sb**	**05 16 49.7**	**-0.1**
PHP	**Peshkopia**	**0.76**	**77**	Pg		**Pg**	**05 16 39.1**	**-1.0**
PHP				Sg		**Sg**	**05 16 49.0**	**-1.0**
PHP				AML		AML	05 16 55.5	
	5.5nm,0.7s							
PHP	**Peshkopia**	**0.76**	**77**	P		**Pg**	**05 16 39.1**	**-1.0**
PHP				S		**Sb**	**05 16 50.8**	**-0.7**
BUM	**Brajici-Budva**	**0.89**	**332**	*e*Pg		**Pg**	**05 16 42.1**	**-0.6**
BUM				*i* Sg		**Sb**	**05 16 55.7**	**+0.3**
PDG	**Podgorica**	**0.93**	**351**	Pg		**Pg**	**05 16 42.6**	**-0.8**
PDG				Sg		**Sb**	**05 16 57.1**	**+0.8**
PDG	**Podgorica**	**0.93**	**351**	⇑P		**Pg**	**05 16 42.6**	**-0.8**
PDG	**Podgorica**	**0.93**	**351**	*e*Pg

AGPR				IAML			05 18 18.1	
	comp=N,234nm,0.2s							
AGPR	**Aguadilla, PR**	**0.62**	**179**	Pg		**Pb**	**05 18 07.0**	**+0.3**
AGPR				IAML			05 18 16.4	
	comp=N,203nm,0.5s							
AGPR				IAML			05 18 16.5	
	comp=N,299nm,0.2s							
AOPR	**Arecibo Observ**	**0.82**	**155**⇑	*e*Pg		**Pb**	**05 18 10.2**	**+0.1**
AOPR				⇑*e*Sg		**Sb**	**05 18 21.4**	**-0.1**
AOPR				IAML			05 18 34.9	
	comp=N,841nm,2.0s							
AOPR	**Arecibo Observ**	**0.82**	**155**			**Pg**	**05 18 09.4**	**+0.3**
AOPR						**Sg**	**05 18 19.0**	**-0.8**
AOPR				IAML			05 18 26.4	
	comp=N,118nm,0.3s							
AOPR	**Arecibo Observ**	**0.82**	**155**⇑	*e*P		**Pb**	**05 18 10.4**	**+0.3**
AOPR	**Arecibo Observ**	**0.82**	**155**	*e*S		**Sb**	**05 18 22.8**	**+1.3**
EMPR	**Esperanza - Ma**	**0.83**	**137**			**Pn**	**05 18 11.8**	**+0.1**
EMPR	**Esperanza - Ma**	**0.83**	**137**	Pg		**Pb**	**05 18 10.3**	**0.0**
EMPR				IAML			05 18 29.4	
	comp=N,81nm,0.9s							
EMPR				IAML			05 18 32.0	
	comp=N,78nm,0.9s							
EMPR	**Esperanza - Ma**	**0.83**	**137**⇑	*e*P		**Pn**	**05 18 11.8**	**+0.1**
PRSN	**Puerto Rico Se**	**0.87**	**181**			**Pb**	**05 18 11.2**	**+0.2**
PRSN						**Sb**	**05 18 22.6**	**-0.3**
PRSN	**Puerto Rico Se**	**0.87**	**181**	Pg		**Pg**	**05 18 10.7**	**+0.6**
PRSN				IAML			05 18 23.7	
	comp=N,396nm,0.2s							
PRSN				IAML			05 18 25.4	
	comp=N,328nm,0.3s							
PRSN	**Puerto Rico Se**	**0.87**	**181**⇑	*e*P		**Pb**	**05 18 11.2**	**+0.2**
PRSN	**Puerto Rico Se**	**0.87**	**181**	*e*S		**Sb**	**05 18 22.6**	**-0.3**
LSP	**Las Mesas**	**0.91**	**178**			**Pb**	**05 18 11.7**	**0.0**
LSP						**Sb**	**05 18 24.5**	**+0.4**
LSP	**Las Mesas**	**0.91**	**178**⇑	*e*P		**Pb**	**05 18 11.7**	**0.0**
LSP	**Las Mesas**	**0.91**	**178**	*e*S		**Sb**	**05 18 24.5**	**+0.4**
UUPR	**Utuado, UPR, P**	**0.92**	**155**	Pg		**Pg**	**05 18 11.3**	**+0.4**
ECPR	**Experimental S**	**1.06**	**137**⇑	*e*P		**Pg**	**05 18 14.0**	**+0.4**
ECPR	**Experimental S**	**1.06**	**137**	*e*S		**Sn**	**05 18 29.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.08**	**179**⇑	*e*Pg		**Pg**	**05 18 14.0**	**-0.1**
CRPR				⇑*e*Sg		**Sg**	**05 18 27.9**	**-0.3**
CRPR				IAML			05 18 37.0	
	comp=N,57nm,0.5s							
CRPR	**Cabo Rojo, PR**	**1.08**	**179**			**Sg**	**05 18 27.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.08**	**179**			**Pg**	**05 18 14.0**	**-0.1**
CRPR				IAML			05 18 29.0	
	comp=N,62nm,0.4s							
CRPR				IAML			05 18 29.4	
	comp=N,56nm,0.3s							
CRPR	**Cabo Rojo, PR**	**1.08**	**179**⇑	*e*P		**Pg**	**05 18 14.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.08**	**179**	*e*S		**Sg**	**05 18 28.3**	**+0.2**
MLPR	**Magueyes Islan**	**1.12**	**176**⇑	*e*Pg		**Pg**	**05 18 14.7**	**-0.2**
MLPR				⇑*e*Sg		**Sg**	**05 18 29.1**	**-0.3**
MLPR				IAML			05 18 29.5	
	comp=N,23nm,0.4s							
MLPR	**Magueyes Islan**	**1.12**	**176**⇑	*e*P		**Pg**	**05 18 14.6**	**-0.2**
MLPR	**Magueyes Islan**	**1.12**	**176**	*e*S		**Sg**	**05 18 29.1**	**-0.3**
OBIP	**Obispado Ponce**	**1.16**	**155**			**Sg**	**05 18 30.4**	**-0.1**
OBIP				IAML			05 18 32.8	
	comp=E,55nm,0.4s							
OBIP	**Obispado Ponce**	**1.16**	**155**			**Pg**	**05 18 15.4**	**-0.1**
OBIP	**Obispado Ponce**	**1.16**	**155**⇑	*e*P		**Pg**	**05 18 15.4**	**-0.1**
OBIP	**Obispado Ponce**	**1.16**	**155**	*e*S		**Sb**	**05 18 31.0**	**-0.1**
GCPR	**Guaynabo City**	**1.26**	**128**			**Sb**	**05 18 33.9**	**-0.2**
GCPR	**Guaynabo City**	**1.26**	**128**			**Pn**	**05 18 17.3**	**-0.2**
GCPR	**Guaynabo City**	**1.26**	**128**⇑	*e*P		**Pn**	**05 18 17.7**	**+0.1**
GCPR	**Guaynabo City**	**1.26**	**128**	*e*S		**Sb**	**05 18 33.9**	**-0.2**
PCDR	**Punta Cana, DR**	**1.32**	**244**⇑	*e*Pg		**Pb**	**05 18 18.7**	**+0.1**
PCDR				⇑*e*Sg		**Sb**	**05 18 35.4**	**-0.5**
PCDR				IAML			05 19 17.2	
	comp=N,105nm,2.3s							
SJG	**San Juan**	**1.34**	**136**			**Pn**	**05 18 18.1**	**-0.7**
SJG				IAML			05 18 43.0	
	comp=N,40nm,0.4s							
SJG				IAML			05 18 44.0	
	comp=N,39nm,0.4s							
SJG	**San Juan**	**1.34**	**136**⇑	*e*P		**Pb**	**05 18 19.2**	**+0.2**
HUMP	**Col San Antoni**	**1.54**	**128**			**Pn**	**05 18 20.7**	**-0.6**
HUMP	**Col San Antoni**	**1.54**	**128**	IAML			05 18 47.9	
	comp=N,37nm,0.2s							
HUMP				IAML			05 18 51.9	
	comp=N,51nm,0.2s							
HUMP	**Col San Antoni**	**1.54**	**128**⇑	*e*P		**Pn**	**05 18 22.1**	**+0.7**
MIDR	**Miches**	**1.82**	**267**⇓	*e*Pg		**Pb**	**05 18 27.1**	**-0.1**
MIDR				IAML			05 18 54.6	
	comp=N,18nm,0.4s							
DR12	**Loma Pena Alta**	**2.16**	**262**	Pn		**Pn**	**05 18 29.3**	**-0.7**
HATOM	**Hato Mayor del**	**2.16**	**262**⇑	*e*Pg		**Pn**	**05 18 31.4**	**+1.4**
HATOM				IAML			05 19 05.6	
	comp=N,18nm,1.9s							

IDC 30 05:20:07.0±4.2, 16°.83S×177°.84W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=182.9km s-min=33.1km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.63**	**240**	P	P	05 27 40.7	+0.1
	1.6nm,0.5s,baz=81,slow=6.9,SNR=4.5						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**45.37**	**258**	P	P	05 28 27.4	-0.1
	1.0nm,0.5s,baz=95,slow=7.4,SNR=24						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**45.62**	**253**	P	P	05 28 29.2	-0.3
	3.9nm,0.6s,baz=86,slow=9.7,SNR=41						
	3.9nm,0.6s						
ILAR	**Eielson Array**	**84.72**	**13**	P	P	05 32 42.4	-0.1
	1.1nm,1.2s,baz=226,slow=4.2,SNR=6.6						
	1.1nm,1.2s						

*AEIC **30** 05:46:59.0±2.9, 52°.0N±0°.2×179°.61E±0°.10, h180km±5km, Error ellipse: s-maj=24.4km s-min=8.4km az=173.0*

NEIC 30 05:46:58.7±0.8, 52°.0N±0°.2×179°.55E±0°.07, h191km±6km, mb3.8/14, ML3.3/10, ML2.8(AEIC), Error ellipse: s-maj=23.4km s-min=5.3km az=188.0, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEPE	**Semis' Perret**	**0.09**	**136**		Pn	05 47 23.8	0.0
CERB	**Semis' Cerberu**	**0.11**	**154**		Pn	05 47 23.7	-0.1
CERB					Sn	05 47 42.7	-0.4
LSPA	**Little Sitkin**	**0.61**	**264**		Pn	05 47 25.1	-0.1
LSPA					Sn	05 47 45.6	0.0
LSSE	**Little Sitkin**	**0.62**	**262**		Pn	05 47 25.2	0.0
LSNW	**Little Sitkin**	**0.64**	**265**		Pn	05 47 24.9	-0.4
AMKA	**Amchitka**	**0.67**	**194**		Pn	05 47 25.6	+0.1
AMKA					Sn	05 47 45.4	-0.7
AMKA	**Amchitka**	**0.67**	**194**	IAML		05 47 46.6	
	comp=E,488nm,0.4s						
GANO	**Gareloi North**	**1.04**	**101**		Pn	05 47 28.0	+0.2
GANO					Sn	05 47 50.4	+0.1
GANE	**Gareloi Northe**	**1.06**	**101**		Pn	05 47 28.0	+0.1
GANE					Sn	05 47 50.2	-0.2
GAKI	**Gareloi-Kavalg**	**1.12**	**114**		Pn	05 47 27.9	-0.4
GAKI					Sn	05 47 51.0	-0.3
TASE	**Tanaga Southea**	**1.50**	**96**		Pn	05 47 31.5	-0.2
TASE					Sn	05 47 56.4	-0.8
TAPA	**Tanaga Point A**	**1.65**	**96**		Pn	05 47 33.1	+0.1
TAPA					Sn	05 47 58.0	-0.7
KIMD	**Kanaga Island**	**2.01**	**96**		Pn	05 47 36.7	+0.2
KIMD					Sn	05 48 06.4	+0.4
KIWB	**Kanaga Island**	**2.05**	**94**		Pn	05 47 36.5	-0.5
KIWB				IAML		05 48 07.4	
	comp=E,84nm,0.8s						
KIWB	**Kanaga Island**	**2.05**	**94**		Sn	05 48 06.4	-0.3
ADK	**Adak**	**2.33**	**92**		Pn	05 47 39.7	-0.4
ADK				IAML		05 48 13.4	
	comp=E,70nm,0.5s						
ADK	**Adak**	**2.33**	**92**		Sn	05 48 11.9	-0.3
ETKA	**Kagalaska Isla**	**2.51**	**92**		Pn	05 47 42.3	+0.3
ETKA					Sn	05 48 15.8	0.0
GSTR	**Great Sitkin T**	**2.71**	**87**	Pn	Pn	05 47 44.4	0.0
GSTR				IAML		05 48 27.2	
	comp=E,130nm,1.1s						
GSMY	**Great Sitkin M**	**2.71**	**88**		Pn	05 47 44.5	+0.1
GSIG	**Igitkin Island**	**2.79**	**89**		Pn	05 47 45.0	-0.4
GSIG					Sn	05 48 21.4	-0.4
ATKA	**Atka Island**	**3.86**	**85**		Pn	05 47 57.5	-0.8
ATKA				IAML		05 48 48.8	
	comp=E,41nm,1.2s						
ATKA				IAML		05 50 23.5	
	comp=N,29nm,1.2s						
NIKH	**Nikolski High**	**7.14**	**78**	Pn	Pn	05 48 38.6	-1.9
UNV	**Unalaska Valle**	**8.62**	**72**	Pn	Pn	05 49 00.2	+0.3
PET	**Petropavlovsk**	**12.76**	**283**	Pn	Pn	05 49 53.4	+0.1
K15K	**Wolf Creek Mou**	**14.46**	**37**		P	05 50 16.0	+0.1
ACHA	**Angle Creek He**	**15.59**	**57**	P	P	05 50 28.7	+0.2
N18K	**Kilae Creek**	**16.04**	**48**	P	P	05 50 33.2	-0.2
N18K				IAmb	IAmb	05 51 00.3	
	comp=E,7.3nm,1.2s						
O18K	**Koktuh Hills**	**16.08**	**51**	P	P	05 50 33.5	-0.4
O18K				IAmb	IAmb	05 50 47.3	
	comp=E,1.6nm,0.8s						
N19K	**Bonanza Creek**	**16.74**	**48**	P	P	05 50 41.5	+0.4
N19K				IAmb	IAmb	05 50 48.8	
	comp=E,3.2nm,1.2s						
KDAK	**Kodiak Island**	**16.95**	**59**	P	P	05 50 42.1	-1.2
L19K	**White Mountain**	**17.10**	**44**	P	P	05 50 44.6	-0.4
ILSW	**Iliamna Southw**	**17.11**	**52**	P	P	05 50 45.2	-0.1
ILSW				IAmb	IAmb	05 51 13.8	
	comp=E,8.5nm,0.7s						
SYI	**Shuyak Island**	**17.18**	**56**	P	P	05 50 44.6	-1.2
J19K	**Poorman**	**17.64**	**38**	P	P	05 50 50.9	0.0
G18K	**Tagagawik**	**17.72**	**30**	P	P	05 50 51.4	-0.4
G18K				IAmb	IAmb	05 50 56.9	
	comp=E,3.6nm,1.1s						
K20K	**Telida**	**17.93**	**41**	P	P	05 50 52.2	-1.8
K20K				IAmb	IAmb	05 51 14.7	
	comp=E,4.2nm,1.2s						
CNPM	**China Poot**	**17.94**	**54**	P	P	05 50 53.6	-0.6
STLK	**Strandline Lak**	**18.18**	**47**	P	P	05 50 55.2	-1.6
STLK				IAmb	IAmb	05 50 59.1	
	comp=E,4.1nm,1.1s						
WR8	**Warramunga Arr**	**81.73**	**222**	P	P	05 58 55.7	-0.1
WR8				IAmb	IAmb	05 59 09.7	
	comp=E,2.9nm,1.1s						
WRA	**Warramunga Arr**	**81.79**	**222**	P	P	05 58 54.6	-1.5

*NEIC **30** 06:14:03.0±1.4, 36°.96N±0°.08×74°.0E±0°.1, h87km±11km, mb4.3/11, Error ellipse: s-maj=12.4km s-min=10.8km az=113.0*

*IDC **30** 06:14:04.3±7.5, 37°.07N×74°.14E, h92km±51km, mb3.6/5, mbtmp4.0/10, Error ellipse: s-maj=59.2km s-min=38.7km az=3.0*

*NNC **30** 06:14:08.2±4.2, 37°.37N×73°.62E, h153km±83km, mb3.0, mpv3.8, Error ellipse: s-maj=44.5km s-min=35.7km az=25.0*

ISC 30 06:14:02.2±0.6, 36°.90N±0°.05×73°.98E±0°.06, h100km, n58, σ2§21/66, mb4.2/10, 1C-2D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.05**	**30**	Pn	**Pn**	**06 14 45.0**	**-3.7**
KSH				Sn	Sn	06 15 14.8	-10
KSH				smax	smax		
	comp=N,430nm,0.4s						
KSH				smax	smax		
	comp=E,360nm,0.9s						
DRK	**Karamyk**	**3.09**	**327**		**Pn**	**06 14 50.0**	**+0.5**
NIL	**Nilore**	**3.30**	**191**		**Pn**	**06 14 53.4**	**+1.4**
GAR	**Garm**	**3.57**	**307**	Pn	**Pn**	**06 14 55.8**	**0.0**
ALCI	**Alchi Leh**	**3.74**	**135**	*e*P	**Pn**	**06 14 59.1**	**+0.8**
ALCI				*e*S	**Sn**	**06 15 41.8**	**+0.2**
ALCI				IAML		06 15 44.3	
	comp=E,210nm,0.3s						
ALCI				IAML		06 15 47.9	
	comp=N,228nm,0.3s						
CHGR	**Chuyangaron**	**4.20**	**296**		**Pn**	**06 15 03.9**	**-0.3**
ARSB	**Arslanbob**	**4.48**	**350**		**Pn**	**06 15 07.3**	**-0.8**
KBL	**Kabul**	**4.66**	**241**		**Pn**	**06 15 11.4**	**+1.0**
DHRM	**DHARAMSHALA**	**5.02**	**157**	*e*P	**Pn**	**06 15 16.8**	**+1.3**
DHRM				*e*S	**Sn**	**06 16 10.5**	**-1.8**
DHRM				IAML		06 16 16.0	
	comp=N,228nm,0.3s						
DHRM				IAML		06 16 16.3	
	comp=E,193nm,0.3s						
TLWR	**Talawar**	**5.20**	**161**	*e*P	**Pn**	**06 15 17.6**	**-0.1**
TLWR				*e*S	**Sn**	**06 16 14.1**	**-2.2**
TARG	**Taragay, Kyrgy**	**5.66**	**30**		**Pn**	**06 15 23.2**	**-1.0**
AAK	**Ala-Archa**	**5.74**	**4**	P	**Pn**	**06 15 25.7**	**+0.6**
	comp=E,10nm,0.5s,baz=181,slow=4.5,SNR=27						
AAK				S	**Sn**	**06 16 28.1**	**-1.5**
	comp=E,8.8nm,0.6s,baz=61,slow=19,SNR=4.3						
AAK	**Ala-Archa**	**5.74**	**4**		**Pn**	**06 15 25.1**	**+0.1**
AAK	**Ala-Archa**	**5.74**	**4**	⇓P	**Pn**	**06 15 25.7**	**+0.6**
	comp=E,6.2nm,0.7s						
AAK				⇓S	**Sn**	**06 16 27.0**	**-2.6**
	comp=E,4.9nm,0.6s						
KDJ	**Kajisay**	**5.78**	**24**	Pn	**Pn**	**06 15 25.9**	**+0.3**
BOOM	**Boomskoye usch**	**5.78**	**15**		**Pn**	**06 15 26.0**	**+0.3**
HNLY	**HANLEY**	**5.81**	**134**	*e*P	**Pn**	**06 15 26.9**	**+0.5**
HNLY				*e*S	**Sn**	**06 16 29.5**	**-2.5**
HNLY				IAML		06 16 32.8	
	comp=E,180nm,0.6s						
HNLY				IAML		06 16 33.9	
	comp=N,190nm,0.4s						
BHK	**Bhakra**	**5.83**	**159**	*e*S	**Sn**	**06 16 30.9**	**-0.9**
SMLA	**Simla**	**6.34**	**154**	*e*P	**Pn**	**06 15 33.5**	**+0.5**
SMLA				*e*S	**Sn**	**06 16 39.5**	**-4.5**
SMLA				IAML		06 16 44.5	
	comp=E,196nm,0.2s						
SMLA				IAML		06 16 46.3	
	comp=N,155nm,0.3s						
KK31	**Karatay Array**	**6.74**	**338**		**Pn**	**06 15 37.6**	**-0.9**
KK31	**Karatay Array**	**6.74**	**338**	P	**Pn**	**06 15 37.6**	**-0.9**
	comp=N,5.7nm,0.4s,baz=152,slow=12,SNR=74						
KK31				⇑S	**Sn**	**06 16 47.8**	**-5.9**
	comp=N,19nm,0.5s,baz=149,slow=22,SNR=7.0						
KKAR	**Karatay Array**	**6.74**	**338**		**Pn**	**06 15 37.6**	**-0.9**
JOSI	**Joshimath**	**7.85**	**142**	*e*S	**Sn**	**06 17 14.1**	**-7.1**
JOSI				IAML		06 17 22.0	
	comp=N,197nm,0.3s						
JOSI				IAML		06 17 23.2	
	comp=E,186nm,0.4s						
KUDL	**Kundal**	**8.99**	**166**	*e*P	**Pn**	**06 16 08.0**	**-1.1**
KUDL				*e*S	Sn	06 17 38.7	-10
KUDL				IAML		06 17 46.1	
	comp=E,181nm,0.5s						
KUDL				IAML		06 17 47.0	
	comp=N,198nm,0.4s						
SONA	**Sohna**	**9.02**	**162**	*e*S	**Sn**	**06 17 43.4**	**-5.8**
MKAR	**Makanchi Array**	**11.66**	**29**	P	**Pn**	**06 16 44.3**	**-0.9**
	comp=N,0.7nm,0.7s,baz=218,slow=15,SNR=4.4						
MKAR	**Makanchi Array**	**11.66**	**29**	Pn	**Pn**	**06 16 43.9**	**-1.3**
WMQ	**Urumqi**	**12.53**	**52**	*e*P	**Pn**	**06 16 56.3**	**-0.5**
WMQ				LR	LR		
	comp=N,190nm,4.9s						
KURBB	**Kurchatov Arra**	**14.10**	**12**	P	**Pn**	**06 17 15.6**	**-1.6**
	comp=N,0.7nm,0.2s,baz=206,slow=10.0,SNR=14						
KURK	**Kurchatov**	**14.20**	**12**	Pn	**Pn**	**06 17 15.4**	**-3.1**
AB31	**Akbulak array**	**16.02**	**325**	Pn	**Pn**	**06 17 38.7**	**-2.7**
AB31	**Akbulak array**	**16.02**	**325**	P	**Pn**	**06 17 38.3**	**-3.2**
	comp=N,0.6nm,0.3s,baz=143,slow=11,SNR=34						
ABKAR	**Akbulak array**	**16.02**	**325**	Pn	**Pn**	**06 17 38.7**	**-2.7**
BVAR	**Borovoye Array**	**16.32**	**352**	P	**Pn**	**06 17 43.9**	**-1.3**
	comp=N,4.5nm,0.5s,baz=158,slow=12,SNR=12						
BORK	**Borovoye**	**16.35**	**352**	Pn	**Pn**	**06 17 43.5**	**-2.0**
BORK				IAmb	IAmb	06 17 49.1	
	comp=E,6.0nm,0.6s						
ZAA0	**Zalesovo Array**	**18.63**	**20**		**P**	**06 18 12.3**	**+0.6**
ZAA0				IAmb	IAmb	06 18 13.6	
	comp=E,6.6nm,0.6s						
ZALV	**Zalesovo Beam**	**18.63**	**20**	P	**Pn**	**06 18 13.1**	**-0.1**
	comp=E,8.5nm,0.5s,baz=212,slow=11,SNR=46						
ZALV	**Zalesovo Beam**	**18.63**	**20**		**Pn**	**06 18 12.7**	**-0.4**
GTA	**Gaotai**	**20.45**	**75**	*e*P	**P**	**06 18 33.8**	**+2.0**
GTA				pP	Pn	06 18 37.0	+2.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARTI	**Arti**	**22.14**	**337**		**P**	**06 18 50.3**	**+0.8**
ARTI				IAmb	IAmb	06 18 51.4	
	comp=Z,18nm,0.5s						
PZH	**PanZhiHua**	**25.71**	**106**	P	**P**	**06 19 25.5**	**+2.2**
HHC	**Hu-ho-hao-te**	**29.37**	**71**	*e*P	**P**	**06 19 56.0**	**+0.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,58nm,5.6s						
FINES	**FINESS Array B**	**38.51**	**325**	P	**P**	**06 21 16.6**	**+2.2**
	comp=Z,1.0nm,0.5s,baz=118,slow=9.9,SNR=9.2						
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**38.51**	**325**	P	**P**	**06 21 15.3**	**+0.9**
ARCES	**ARCESS Array B**	**41.70**	**337**	P	**P**	**06 21 42.8**	**+2.1**
	comp=Z,3.3nm,0.9s,baz=112,slow=9.3,SNR=7.0						
	comp=Z,3.3nm,0.9s						
ARCES	**ARCESS Array B**	**41.70**	**337**	P	**P**	**06 21 42.5**	**+1.9**
ARCES				IAmb	IAmb	06 22 03.3	
	comp=Z,25nm,1.4s						
HFS	**Hagfors**	**44.24**	**321**	P	**P**	**06 22 03.6**	**+2.4**
	comp=Z,2.6nm,0.4s,baz=98,slow=11,SNR=19						
	comp=Z,2.6nm,0.4s						
NC405	**NORSAR Array S**	**45.27**	**323**	P	**P**	**06 22 10.8**	**+1.4**
NB2	**NORSAR Subarra**	**45.51**	**323**	P	**P**	**06 22 13.3**	**+2.0**
	comp=Z,0.6nm,0.4s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**45.51**	**323**	P	**P**	**06 22 13.6**	**+2.3**
	comp=Z,0.5nm,0.4s,baz=101,slow=7.1,SNR=5.1						
	comp=Z,0.5nm,0.4s						
TOLK	**Toolik Lake Re**	**69.91**	**16**	P	**P**	**06 25 03.7**	**+1.7**
TOLK				IAmb	IAmb	06 25 15.8	
	comp=Z,5.7nm,1.5s						
IMAR	**Indian Mountai**	**71.05**	**19**	P	**P**	**06 25 10.3**	**+1.5**
E27K	**Coleen River**	**71.89**	**13**	P	**P**	**06 25 16.0**	**+2.1**
E27K				IAmb	IAmb	06 25 21.5	
	comp=Z,3.3nm,1.5s						
BMAR	**Burnt Mountain**	**71.97**	**15**	P	**P**	**06 25 17.2**	**+2.7**
L16K	**Owhat River**	**72.65**	**24**	P	**P**	**06 25 21.2**	**+2.7**
C36M	**Paulatuk**	**73.23**	**7**	P	**P**	**06 25 23.1**	**+1.3**
ILAR	**Eielson Array**	**73.72**	**17**	P	**P**	**06 25 26.5**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=316,slow=3.8,SNR=4.2						
	comp=Z,0.4nm,0.8s						
H29M	**Whitestone**	**74.22**	**13**	P	**P**	**06 25 29.8**	**+2.1**
H29M				IAmb	IAmb	06 25 41.2	
	comp=Z,4.3nm,1.3s						

CATAC 30 06:14:37.5±0.5, 13°N±3°×88°W±°, h34km±6km, M3.0/21, MLv3.0/21, Error ellipse: s-maj=5.9km s-min=2.0km az=25.3, confirmed, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACA	**Pacayal**	**0.81**	**10**	P	**Pn**	06 14 52.9	+0.2
PACA	**Pacayal**	**0.81**	**10**	S	Sb	06 15 04.5	+0.4
LCND	**La Caada**	**0.86**	**42**	P	Pn	06 14 53.2	+0.2
CNCH	**Conchagua**	**0.87**	**46**	P	Pb	06 14 53.9	-0.4
CNCH	**Conchagua**	**0.87**	**46**	S	Sb	06 15 06.3	+0.6
TECO	**Alcaldia de Te**	**0.92**	**341**	P	Pn	06 14 53.6	-0.3
CSGN	**Cosiguina Volc**	**0.94**	**71**	P	Pn	06 14 54.6	+0.2
POTN	**Potosi Cosigui**	**1.00**	**71**	P	Pn	06 14 55.5	+0.4
POTN				S	Sn	06 15 08.6	+0.6
UESV	**Universidad de**	**1.01**	**342**	S	Sn	06 15 08.9	+0.6
UESV	**Universidad de**	**1.01**	**342**	P	Pn	06 14 55.3	0.0
SCLA	**Alcaldia de Sa**	**1.06**	**347**	P	Pn	06 14 56.0	+0.1
PAVA	**Las Pavas**	**1.13**	**337**	P	Pn	06 14 57.1	0.0
PAVA	**Las Pavas**	**1.13**	**337**	S	Sn	06 15 11.9	+0.4
LOMA	**Loma Larga**	**1.19**	**325**	S	Sn	06 15 13.4	+0.6
IGN	**Direccin Gen**	**1.24**	**327**	S	Sn	06 15 14.7	+0.6
IGN	**Direccin Gen**	**1.24**	**327**	P	Pn	06 14 58.4	0.0
UEES	**Universidad Ev**	**1.28**	**325**	S	Sn	06 15 15.7	+0.5
UEES	**Universidad Ev**	**1.28**	**325**	P	Pn	06 14 59.0	0.0
PMON	**Piamonte**	**1.32**	**322**	P	Pn	06 15 00.0	+0.4
PMON	**Piamonte**	**1.32**	**322**	S	Sn	06 15 17.1	+1.0
JAYA	**Jayaque - finc**	**1.37**	**316**	P	Pn	06 15 00.3	0.0
CRIN	**San Cristobal**	**1.39**	**88**	P	Pn	06 15 01.4	+0.9
PKGN	**Cerro Pekin**	**1.46**	**90**	P	Pn	06 15 01.5	+0.1
PKGN				S	Sn	06 15 20.3	+0.9
LLGN	**La Laguna**	**1.56**	**343**	S	Sn	06 15 22.5	+0.7
LLGN	**La Laguna**	**1.56**	**343**	P	Pn	06 15 02.8	0.0
QUEN	**Al S del Volca**	**1.58**	**92**	P	Pn	06 15 03.4	+0.3
CEVE	**Cerro Verde**	**1.61**	**316**	S	Sn	06 15 23.8	+0.4
POLN	**Al Sur del Vol**	**1.62**	**90**	P	Pn	06 15 03.6	0.0
POLN				S	Sn	06 15 24.1	+0.7
CNGA	**Al SSO del Vol**	**1.74**	**95**	P	Pn	06 15 05.5	+0.2
CNGA				S	Sn	06 15 26.7	+0.4
CNGN	**Cerro Negro**	**1.74**	**95**	P	Pn	06 15 05.5	+0.2
CNGN	**Cerro Negro**	**1.74**	**95**	S	Sn	06 15 27.1	+0.7
NUBE	**Las Nubes**	**1.77**	**314**	P	Pn	06 15 06.1	+0.3
NUBE	**Las Nubes**	**1.77**	**314**	S	Sn	06 15 27.4	+0.2
TGUH	**Tegucigalpa,Un**	**1.81**	**40**	S	Sn	06 15 28.7	+0.5
FAME	**Alcaldia de Sa**	**1.90**	**308**	P	Pn	06 15 08.0	+0.5
FAME	**Alcaldia de Sa**	**1.90**	**308**	S	Sn	06 15 31.0	+0.7
MOM3	**MOM3**	**1.92**	**94**	P	Pn	06 15 07.7	0.0
MOM3				S	Sn	06 15 31.3	+0.7
MTO3

DBRK				Sg		**Sg**	**07 01 14.6**	**+0.3**	
UPM	**Unac-Piva**	**0.62**	**92**	⇑*i* Pg		**Pg**	**07 01 08.2**	**-0.1**	
UPM				*i* Sg		**Sb**	**07 01 18.3**	**-1.1**	
RICI	**Ricice**	**0.73**	**292**	*i* Pg		**Pg**	**07 01 09.9**	**-0.4**	
RICI				Sg		**Sg**	**07 01 18.9**	**-0.9**	
MAKA	**Makarska**	**0.76**	**275**	*e*Pg		**Pg**	**07 01 10.2**	**-0.8**	
MAKA				Sg		**Sg**	**07 01 21.4**	**+0.5**	
NKME	**Niksic**	**0.80**	**124**	⇓*i* Pg		**Pg**	**07 01 11.0**	**-0.7**	
NKME				*i* Sg		**Sb**	**07 01 23.7**	**-0.7**	
HCY	**Herceg Novi**	**0.84**	**157**	⇑*i* Pg		**Pg**	**07 01 11.9**	**-0.5**	
HCY				*i* Sg		**Sb**	**07 01 24.9**	**-0.6**	
LSTV	**Lastovo**	**0.97**	**242**	*e*Pg		**Pg**	**07 01 13.6**	**-1.3**	
LSTV				Sg		**Sg**	**07 01 28.1**	**+0.6**	
PLE	**Pljevlja**	**0.98**	**83**	⇑*i* Pg		**Pg**	**07 01 14.6**	**-0.5**	
PLE				*i* Sg		**Sb**	**07 01 30.2**	**+0.5**	
RUDO	**Rudo**	**1.03**	**67**	*e*Pg		**Pg**	**07 01 14.9**	**-1.3**	
RUDO				*e*Sg		**Sg**	**07 01 29.8**	**+0.2**	
RUDO	**Rudo**	**1.03**	**67**	*e*Pg		**Pg**	**07 01 15.1**	**-1.1**	
RUDO				*e*Sg		**Sb**	**07 01 31.0**	**-0.2**	
BUM	**Brajici-Budva**	**1.11**	**146**	⇓*i* Pg		**Pg**	**07 01 16.7**	**-0.9**	
BUM				*e*Sg		**Sb**	**07 01 33.6**	**+0.3**	
KOME	**Kolasin**	**1.13**	**109**	*e*Pg		**Pg**	**07 01 17.6**	**-0.5**	
KOME	**Kolasin**	**1.13**	**109**	⇓*i* Pg		**Pg**	**07 01 17.5**	**-0.5**	
KOME				*i* Sg		**Sn**	**07 01 35.4**	**-0.3**	
BBLS	**Lazi&#263i**	**1.17**	**56**	*e*Pg		**Pg**	**07 01 18.5**	**-0.3**	
BBLS				*e*Sg		**Sb**	**07 01 35.4**	**+0.2**	
HVAR	**Hvar**	**1.18**	**268**	*i* Pg		**Pg**	**07 01 17.9**	**-1.0**	
HVAR				Sg		**Sg**	**07 01 34.5**	**+0.3**	
PDG	**Podgorica**	**1.19**	**132**	*e*Pg		**Pg**	**07 01 17.7**	**-1.4**	
PDG				*e*Sg		**Sn**	**07 01 37.4**	**+0.6**	
PDG	**Podgorica**	**1.19**	**132**	⇑*i* Pg		**Pg**	**07 01 17.6**	**-1.5**	
PDG				*i* Sg		**Sn**	**07 01 36.4**	**-0.4**	
DRME	**Dracevica, Mon**	**1.33**	**141**	*e*Pg		**Pg**	**07 01 21.2**	**-0.6**	
DRME	**Dracevica, Mon**	**1.33**	**141**	⇑*i* Pg		**Pg**	**07 01 21.0**	**-0.8**	
DRME				*e*Sg		**Sn**	**07 01 41.1**	**+0.7**	
BEY	**Berane**	**1.39**	**104**	*e*Pg		**Pn**	**07 01 22.2**	**-0.8**	
IVA	**Berane**	**1.39**	**104**	⇑*i* Pg		**Pn**	**07 01 22.3**	**-0.7**	
IVA				*e*Sg		**Sn**	**07 01 44.2**	**+2.1**	
SJES	**Sjenica**	**1.40**	**88**	*e*Pg		**Pb**	**07 01 23.2**	**-0.2**	
SJES				*e*Sg		**Sb**	**07 01 41.6**	**-0.2**	
KIJV	**Kijevo**	**1.43**	**304**	*e*Pg		**Pn**	**07 01 23.4**	**-0.1**	
KIJV				Sg		**Sn**	**07 01 43.1**	**+0.1**	
PVY	**Plav**	**1.53**	**114**	*e*Pg		**Pb**	**07 01 25.2**	**-0.4**	
PVY	**Plav**	**1.53**	**114**	⇓*i* Pg		**Pn**	**07 01 24.7**	**-0.3**	
PVY				*e*Sg		**Sg**	**07 01 47.9**	**+2.3**	
ULC	**Ulcinj**	**1.53**	**145**	⇓*i* Pg		**Pn**	**07 01 23.9**	**-1.0**	
ULC				*i* Sg		**Sg**	**07 01 47.0**	**+1.4**	
IVAS	**Ivanjica**	**1.57**	**76**	*e*Pg		**Pg**	**07 01 26.3**	**-0.1**	
IVAS				*e*Sg		**Sg**	**07 01 47.2**	**+0.5**	
BLY	**Banja Luka**	**1.65**	**338**	*e*Pn		**Pn**	**07 01 27.0**	**+0.5**	
BLY				*e*Sn		**Sn**	**07 01 48.4**	**0.0**	
BLY	**Banja Luka**	**1.65**	**338**	*e*Pg		**Pb**	**07 01 27.6**	**0.0**	
BLY				*e*Sg		**Sb**	**07 01 49.3**	**+0.4**	
TEKS	**Tekeris**	**1.70**	**38**	*e*Pg		**Pb**	**07 01 27.9**	**-0.6**	
TEKS				*e*Sg		**Sg**	**07 01 51.8**	**+0.8**	
ZIRJ	**Zirje**	**1.81**	**285**	*e*Pn		**Pn**	**07 01 28.5**	**-0.2**	
ZIRJ				Sn		**Sb**	**07 01 52.9**	**-0.6**	
MORI	**Morici**	**1.83**	**291**	*i* Pn		**Pn**	**07 01 29.4**	**+0.5**	
MORI				Sn		**Sb**	**07 01 54.3**	**+0.3**	
TRUS	**Trudelj**	**1.98**	**59**	*e*Pn		**Pn**	**07 01 31.2**	**+0.2**	
TRUS				*e*Sg		**Sg**	**07 02 00.4**	**+0.6**	
GRUS	**Gruza**	**2.04**	**70**	*e*Pg		**Pb**	**07 01 33.9**	**-0.4**	
GRUS				*e*Sg		**Sg**	**07 02 02.2**	**+0.2**	
UDBI	**Udbina**	**2.11**	**309**	*i* Pn		**Pb**	**07 01 34.6**	**-0.9**	
UDBI				Sn		**Sb**	**07 02 01.2**	**-1.0**	
SELS	**Selova**	**2.24**	**89**	*e*Pn		**Pn**	**07 01 34.0**	**-0.6**	
SELS				*e*Sg		**Sg**	**07 02 08.6**	**0.0**	
FRGS	**Fruska Gora**	**2.31**	**32**	*e*Pg		**Pg**	**07 01 40.7**	**+0.1**	
DUGI	**Dugi Otok**	**2.31**	**290**	*e*Pn		**Pn**	**07 01 37.0**	**+1.4**	
DUGI				Sn		**Sb**	**07 02 06.8**	**-1.0**	
PLIT	**Plitvice**	**2.41**	**314**	*e*Pn		**Pn**	**07 01 38.7**	**+1.7**	
PLIT				Sn		**Sn**	**07 02 08.7**	**+1.5**	
VIRC	**Vir**	**2.42**	**297**	*e*Pn		**Pn**	**07 01 38.4**	**+1.2**	
VIRC				Sn		**Sn**	**07 02 08.6**	**+1.2**	
MOSL	**Moslavina**	**2.57**	**339**	*e*Pn		**Pn**	**07 01 39.6**	**+0.5**	
MOSL				Sn		**Sn**	**07 02 12.6**	**+1.6**	
NVLJ	**Novalja**	**2.67**	**301**	*e*Pn		**Pn**	**07 01 40.6**	**+0.2**	
NVLJ				Sn		**Sn**	**07 02 14.5**	**+1.1**	
RABC	**Rab**	**2.81**	**304**	*i* Pn		**Pn**	**07 01 43.4**	**+0.9**	
RABC				Sn		**Sn**	**07 02 18.2**	**+1.2**	
MORH	**Mrgy, Hungar**	**3.02**	**8**	*e*Pn		**Pn**	**07 01 45.9**	**+0.6**	
MORH				*e*Sn		**Sn**	**07 02 22.3**	**+0.2**	
BOJS	**Bojanci**	**3.04**	**320**	*e*Pn		**Pn**	**07 01 46.1**	**+0.5**	
CEY	**Cerknica**	**3.62**	**315**	*e*Pn		**Pn**	**07 01 54.6**	**+1.0**	
SKDS	**Skadanscina**	**3.71**	**310**	*e*Pn		**Pn**	**07 01 56.7**	**+1.8**	
SOKA	**Soboth**	**4.07**	**329**	*i* Pn		**Pn**	**07 02 00.2**	**+0.4**	
	0.6nm,0.2s								
SOKA				*i* Sn		**Sn**	**07 02 46.2**	**-1.9**	
	2.2nm,0.6s								
OBKA	**Obir**	**4.12**	**324**	*i* Pn		**Pn**	**07 02 02.2**	**+1.6**	
	3.9nm,0.5s								
CONA	**Conrad Observa**	**4.95**	**343**	*i* Sn		**Sn**	**07 03 04.7**	**-5.2**	
	2.0nm,0.6s								
MOA	**Molln**	**5.34**	**331**	*i* Pn		**Pn**	**07 02 18.4**	**+1.2**	
	0.6nm,0.2s								
MOA				*i* Sn		**Sn**	**07 03 19.1**	**-0.2**	
	1.8nm,0.3s								
LESA	**Schwarzleotal**	**5.66**	**320**	*i* Pn		**Pn**	**07 02 22.9**	**+1.2**	
	2.1nm,0.4s								
WTTA	**Wattenberg**	**6.07**	**314**	*i* Pn		**Pn**	**07 02 29.0**	**+1.6**	
	1.3nm,0.2s								
WATA	**Walderalm**	**6.15**	**314**	*i* Pn		**Pn**	**07 02 29.2**	**+0.8**	
	1.4nm,0.2s								
MOTA	**Moosalm**	**6.41**	**312**	*e*Pn		**Pn**	**07 02 33.9**	**+1.9**	
	1.0nm,0.3s								

NEIC 30 07:02:08.2±0.4, 37°00N±0°02×105°00W±0°02, h8km±8km, mb_Lg2.9/82, ML3.1/52, Error ellipse: s-maj=3.6km s-min=1.8km az=135.0, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T25A	**Trinidad**	**0.49**	**74**	Pg	Pg	07 02 18.0	+0.2
T25A				Sg	Sg	07 02 24.5	+0.2
T25A				IAML		07 02 25.0	
	comp=N,1μm,0.3s						
SDCO	**Great Sand Dun**	**0.84**	**332**		Pg	07 02 23.9	-0.5
S22A	**4UR Ranch, Cre**	**1.63**	**298**	Pn	Pb	07 02 38.5	-0.2
S22A				IAML		07 03 03.5	
	comp=E,193nm,0.1s						
S22A				IAML		07 03 03.0	
	comp=N,149nm,0.1s						
RTBA	**Rita Blanca**	**1.91**	**107**		Pb	07 02 42.5	-0.7
Q24A	**Divide**	**1.96**	**357**		Pb	07 02 43.9	-0.4
Q24A				IAML		07 03 11.2	
	comp=N,119nm,0.3s						
ANMO	**Albuquerque**	**2.37**	**210**		Pn	07 02 49.2	+1.7
TASM	**ASL Pad, Albuq**	**2.37**	**210**	IAmb_Lg		07 03 28.9	
	comp=Z,15nm,0.7s						
TASM	**ASL Pad, Albuq**	**2.37**	**210**	IAmb_Lg		07 03 23.4	
	comp=Z,16nm,0.7s						
KSCO	**Kaye Shedlock'**	**2.75**	**42**	IAmb_Lg		07 03 42.0	
	comp=Z,56nm,0.8s						
BNM	**Barren Site**	**3.14**	**205**		Pn	07 02 59.3	+1.2
PV02	**Paradox Valley**	**3.20**	**293**		Pn	07 02 58.3	-0.6
PV13	**Radium Mtn., P**	**3.24**	**292**		Pn	07 02 59.2	-0.4
PV13				IAML		07 03 56.0	
	comp=N,38nm,1.1s						
PV13				IAML		07 03 59.2	
	comp=E,38nm,0.6s						
PV11	**David Mesa, Pa**	**3.33**	**294**	Pn	Pn	07 03 00.4	-0.3
PV11				IAML		07 04 08.6	
	comp=E,62nm,1.3s						
CRNM	**Carthage**	**3.36**	**205**	Pn	Pn	07 03 01.1	0.0
AMTX	**Amarillo**	**3.43**	**127**		Pn	07 03 01.7	-0.2
AMTX				IAmb_Lg		07 03 59.4	
	comp=Z,20nm,0.8s						
O20A	**White River Ci**	**4.03**	**322**	Pn	Pn	07 03 11.3	+1.0
SMWD	**Samnorwood**	**4.30**	**115**	Pn	Pn	07 03 13.7	-0.2
SMWD				IAmb_Lg		07 04 30.7	
	comp=Z,36nm,0.8s						
CBKS	**Cedar Bluff**	**4.54**	**65**		Pn	07 03 17.7	+0.5
OGNE	**Ogallala**	**4.56**	**30**	Pn	Pn	07 03 18.6	+1.0
OGNE				IAmb_Lg		07 04 38.8	
	comp=Z,30nm,0.8s						
ELIS	**Ellis County**	**4.59**	**100**	IAmb_Lg		07 04 46.2	
	comp=Z,26nm,0.8s						
X18A	**Snowflake**	**4.72**	**240**	Pn	Pn	07 03 21.5	+1.7
X18A				IAML		07 04 40.1	
	comp=E,16nm,0.6s						
X18A				IAML		07 04 40.3	
	comp=N,21nm,1.0s						
GDL2	**Guadalupe Moun**	**4.82**	**174**	Pn	Pn	07 03 22.0	+0.9
SRU	**San Rafael Swe**	**4.84**	**297**		Pn	07 03 19.9	-1.5
SRU				IAML		07 04 41.8	
	comp=N,14nm,1.2s						
SRU				IAML		07 04 46.7	
	comp=E,20nm,1.2s						
NOKA	**Waynoka**	**4.89**	**93**	IAmb_Lg		07 04 49.1	
	comp=Z,23nm,0.8s						
121A	**Cookes Peak, D**	**5.01**	**208**		Pn	07 03 24.6	+0.8
SN07	**Snyder 07**	**5.16**	**138**	Pn	Pn	07 03 25.4	-0.3
SN07				IAmb_Lg		07 05 00.1	
	comp=Z,25nm,1.0s						
R32A	**Long Quarter,**	**5.19**	**72**	IAmb_Lg		07 05 01.1	
	comp=Z,24nm,0.7s						
WUAZ	**Wupatki**	**5.36**	**256**		Pn	07 03 29.0	+0.5
APMT	**Aspermont**	**5.43**	**131**	IAmb_Lg		07 05 07.4	
	comp=Z,24nm,1.0s						
WMOK	**Wichita Mounta**	**5.54**	**112**	IAmb_Lg		07 05 08.4	
	comp=Z,14nm,1.0s						
CROK	**Carrier**	**5.66**	**93**	IAmb_Lg		07 05 16.9	
	comp=Z,25nm,1.1s						
SGCY	**Sterling City**	**6.00**	**147**	IAmb_Lg		07 05 28.8	
	comp=Z,11nm,0.8s						
ABTX	**Abilene, Hawle**	**6.21**	**133**	IAmb_Lg		07 05 30.4	
	comp=Z,9.7nm,0.7s						
KNB	**Kanab**	**6.26**	**272**	IAmb_Lg		07 05 30.7	
	comp=Z,16nm,1.1s						
SAND	**Sanderson**	**7.43**	**160**	IAmb_Lg		07 06 17.4	
	comp=Z,8.3nm,1.0s						
TUL3	**Leonard**	**7.50**	**96**	IAmb_Lg		07 06 12.7	
	comp=Z,18nm,1.0s						
JCT	**Junction City**	**7.82**	**145**	IAmb_Lg		07 06 24.4	
	comp=Z,13nm,1.1s						
435B	**Jarrell**	**8.75**	**133**	IAmb_Lg		07 06 56.9	
	comp=Z,13nm,0.8s						

*NNC **30** 07:14:42.1±1.3, 49°.91N×78°.03E, h0km, mb2.5, mpv2.3, Error ellipse: s-maj=24.5km s-min=6.1km az=105.0, Suspected Mining explosion.*
*IDC **30** 07:14:47.0±1.0, 50°.06N×78°.75E, h0km, mbtmp2.4/2, ML1.8/2, Error ellipse: s-maj=12.9km s-min=6.6km az=65.0*
ISC 30 07:14:46.4±2.0, 50°.06N±0°.08×78°.5E±0°.3, h0km, n15, σ0°63/26, 19C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.53**	**358**	⇑P	**Pg**	**07 14 56.2**	**-0.3**
KUR07				⇓S	**Sb**	**07 15 07.0**	**+0.3**
KUR06	**Kurchatov Arra**	**0.55**	**359**	⇑P	**Pg**	**07 14 56.6**	**-0.3**
KUR06				⇑S	**Sb**	**07 15 07.8**	**+0.5**
KUR14	**Kurchatov Arra**	**0.56**	**3**	⇑P	**Pg**	**07 14 56.3**	**-0.8**
KUR14				⇑S	**Sb**	**07 15 07.3**	**-0.3**
KUR15	**Kurchatov Arra**	**0.56**	**1**	⇑P	**Pg**	**07 14 56.8**	**-0.4**
KUR15				⇑S	**Sb**	**07 15 07.8**	**+0.1**
KURBB	**Kurchatov Arra**	**0.56**	**359**	Pg	**Pg**	**07 14 57.2**	**0.0**
	0.7nm,0.3s,baz=166,slow=17,SNR=76						
KURBB				Lg	Lg	07 15 08.2	
	1.1nm,0.3s,baz=164,slow=31,SNR=8.4						
KURBB	**Kurchatov Arra**	**0.56**	**359**	⇑P	**Pg**	**07 14 57.2**	**0.0**
	10nm,0.5s						
KURBB				⇑S	**Sb**	**07 15 08.8**	**+1.0**
	42nm,0.7s						
KUR16	**Kurchatov Arra**	**0.57**	**357**	⇑P	**Pg**	**07 14 57.1**	**-0.2**
KUR16				⇑S	**Sb**	**07 15 08.8**	**+0.8**
KUR17	**Kurchatov Arra**	**0.57**	**355**	⇑P	**Pg**	**07 14 57.6**	**+0.1**
KUR17				⇑S	**Sb**	**07 15 09.7**	**+1.6**
KUR05	**Kurchatov Arra**	**0.58**	**360**	⇓P	**Pg**	**07 14 57.1**	**-0.5**
KUR05				⇑S	**Sb**	**07 15 08.4**	**+0.1**
KUR04	**Kurchatov Arra**	**0.60**	**0**	⇑P	**Pg**	**07 14 58.0**	**0.0**
KUR04				⇑S	**Sb**	**07 15 09.5**	**+0.6**
KURK	**Kurchatov**	**0.66**	**4**	⇓P	**Pb**	**07 15 00.2**	**-0.6**
	0.9nm,0.4s						
KURK				⇓S	**Sb**	**07 15 11.4**	**+0.9**
	18nm,1.0s						
MK31	**Makanchi Array**	**4.11**	**141**	⇑Pn	**Pn**	**07 15 50.7**	**+0.2**
	baz=323,slow=9.9,SNR=13						
MK31				⇑Pg	**Pb**	**07 16 00.5**	**+0.8**
	0.1nm,0.2s,baz=327,slow=14,SNR=5.7						
MK31				⇑Lg	Lg	07 16 54.1	
	4.0nm,0.6s,baz=321,slow=26,SNR=9.0						
MKAR	**Makanchi Array**	**4.11**	**141**	Pn	**Pn**	**07 15 49.7**	**-0.8**
	0.1nm,0.3s,baz=322,slow=10,SNR=13						
MKAR				Pg	**Pb**	**07 15 59.2**	**-0.5**
	0.3nm,0.3s,baz=329,slow=16,SNR=8.6						
MKAR				Lg	Lg	07 16 52.5	
	0.6nm,0.3s,baz=327,slow=26,SNR=9.4						
	0.1nm,0.4s						
ZALV	**Zalesovo Beam**	**5.49**	**42**	Pn	**Pn**	**07 16 09.7**	**+0.2**
	0.2nm,0.3s,baz=234,slow=14,SNR=4.1						
ZALV				Lg	Lg	07 17 37.8	
	0.1nm,0.3s,baz=203,slow=25,SNR=1.6						
	0.4nm,0.3s						
I46RU	**ZALESOVO INFRA**	**5.50**	**42**	I	I	07 47 50.0	
	0.1nm,1.0s,baz=222,slow=324,SNR=5.1						

NNC 30 07:14:57.6±13.0, 36°.98N×70°.81E, h0km, mb3.5, mpv3.1, 4C-2D, Error ellipse: s-maj=139.2km s-min=77.3km az=148.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.12**	**358**	⇑P	Pn	07 16 29.4	+0.1
	1.3nm,0.4s,baz=170,slow=12,SNR=6.3						
KK31				⇓S	Sn	07 17 40.7	+0.8
	0.8nm,0.2s,baz=196,slow=24,SNR=6.0						
AAK	**Ala-Archa**	**6.32**	**26**	⇑P	Pn	07 16 32.7	+0.5
	0.4nm,0.4s						
AAK				⇑S	Sn	07 17 46.6	+1.5
	1.5nm,0.6s						
AB31	**Akbulak array**	**14.59**	**331**	⇑P	Pn	07 18 19.6	-5.6
	0.4nm,0.3s,baz=159,slow=12,SNR=26						
AKTO	**Aktyubinsk**	**16.29**	**330**	⇓P	P	07 18 51.6	+0.9
	0.7nm,0.6s						

*BER **30** 07:27:08.6±1.5, 82°.89N×6°.05W, h10km, mb(Pn)3.6, ML1.8(DNK), Confirmed Earthquake*
*DNK **30** 07:27:08.5±1.8, 82°.65N×5°.08W, h11km±20km, ML1.2*
ISC 30 07:27:07.9±1.6, 82°.5N±0°.1×6°.46W±0°.06, h10km, n12, σ2°.27/19, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.68**	**243**	*i* P	**Pg**	**07 27 40.2**	**+0.2**
NOR				*i* S	**Sg**	**07 28 03.5**	**+1.7**
NOR				IAML		07 28 44.0	
	comp=Z,2.7nm,0.7s						
NOR	**Nord**	**1.68**	**243**	*i* P	**Pg**	**07 27 40.2**	**+0.2**
NOR				IAML		07 28 01.4	
	comp=Z,5.0nm,0.3s						
NOR				*i* S	**Sg**	**07 28 03.5**	**+1.7**
KBS	**Kingsbay**	**4.63**	**131**	*e*P	**Pn**	**07 28 18.9**	**+1.2**
KBS				IAML		07 29 20.7	
	comp=Z,3.8nm,1.0s						
KBS	**Kingsbay**	**4.63**	**131**	*i* P	**Pn**	**07 28 17.8**	**+0.1**
KBS				*i* S	**Sn**	**07 29 07.7**	**-3.7**
BRBB	**Barentsburg B**	**5.58**	**131**	*e*P	**Pn**	**07 28 33.0**	**+2.3**
BRBA	**Barentsburg A**	**5.61**	**131**	*e*P	**Pn**	**07 28 33.4**	**+2.3**
SPA0	**Spitsbergen Ar**	**5.73**	**127**	*e*P	**Pn**	**07 28 33.4**	**+0.7**
HSPB	**Hornsund (broa**	**6.69**	**133**	*e*P	**Pn**	**07 28 48.2**	**+2.3**
DBG	**Daneborg**	**8.63**	**206**	*i* P	**Pn**	**07 29 13.6**	**+1.0**
DBG				*i* S	**Sn**	**07 30 47.2**	**-2.6**
DBG				IAML		07 32 11.1	
	comp=Z,7.0nm,1.6s						
DBG	**Daneborg**	**8.63**	**206**	*i* P	**Pn**	**07 29 13.6**	**+1.0**
DBG				*i* S	**Sn**	**07 30 47.2**	**-2.6**
DBG				IAML		07 30 50.2	
	comp=Z,0.2nm,0.3s						
NEEM	**North Greenlan**	**8.96**	**260**	*i* P	**Pn**	**07 29 18.3**	**+0.9**
NEEM				*i* S	**Sn**	**07 30 54.6**	**-3.7**
NEEM				IAML		07 31 33.6	
	comp=Z,3.6nm,1.0s						
NEEM	**North Greenlan**	**8.96**	**260**	*i* P	**Pn**	**07 29 18.3**	**+0.9**
NEEM				*i* S	**Sn**	**07 30 54.6**	**-3.7**
NEEM				IAML		07 31 00.2	
	comp=Z,1.0nm,0.2s						

*SJA **30** 07:30:48.6±0.8, 32°.76S×71°.92W, h18km±2km, ML4.1, MW4.1*

*NEIC **30** 07:30:51.7±1.4, 32°.74S±0°.04×71°.82W±0°.07, h23km±8km, mb4.4/7, ML4.2(GUC), Error ellipse: s-maj=8.4km s-min=5.0km az=102.0*
*GUC **30** 07:30:52.2±0.8, 32°.73S×71°.77W, h29km±6km, ML4.2*
*IDC **30** 07:30:55.0±3.3, 32°.71S×71°.67W, h47km±27km, mb3.9/4, mbtmp3.9/9, ML4.1/4, MS3.0/2, Error ellipse: s-maj=35.6km s-min=16.6km az=116.0*
ISC 30 07:30:49.2±1.2, 32°.72S±0°.02×71°.78W±0°.03, h6km±8km, n145, σ1°33/173, mb4.3/8, 8C-15D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.32**	**160**		**Pb**	**07 30 59.0**	**+1.7**
VA01	**Torpederas**	**0.32**	**160**	*e*P	**Pb**	**07 30 59.2**	**+1.9**
VA01				*e*S	**Sb**	**07 31 04.0**	**+1.3**
VA01	**Torpederas**	**0.32**	**160**	*e*P	**Pb**	**07 30 58.5**	**+1.2**
VA06	**Catapilco**	**0.44**	**69**		**Pn**	**07 31 01.4**	**-0.5**
VA06	**Catapilco**	**0.44**	**69**	⇓*i* P	**Pn**	**07 31 01.5**	**-0.5**
VA06				*e*S	**Sb**	**07 31 07.9**	**+1.9**
VA06				IAML		07 31 08.6	
	comp=E,44μm,0.4s						
ROC1	**El Roble**	**0.69**	**112**	*e*P	**Pb**	**07 31 04.6**	**+0.9**
ROC1				*e*S	**Sb**	**07 31 14.7**	**+1.1**
ROCH	**El Roble**	**0.69**	**111**	⇓*i* P	**Pn**	**07 31 05.1**	**-0.7**
ROCH				*e*S	**Sb**	**07 31 14.1**	**+0.4**
ROCH				IAML		07 31 15.7	
	comp=N,13μm,0.5s						
MT02	**Curacav**	**0.76**	**135**		**Pb**	**07 31 05.5**	**+0.7**
MT02	**Curacav**	**0.76**	**135**	⇓*i* P	**Pn**	**07 31 05.7**	**+0.9**
MT02				*e*S	**Sb**	**07 31 15.4**	**0.0**
MT02	**Curacav**	**0.76**	**135**	*e*P	**Pb**	**07 31 04.8**	**0.0**
MT02				IAML		07 31 18.7	
	comp=Z,3μm,0.3s						
VA05	**Santo Domingo**	**0.94**	**172**		**Pb**	**07 31 08.4**	**+0.5**
VA05	**Santo Domingo**	**0.94**	**172**	*e*P	**Pb**	**07 31 08.7**	**+0.7**
VA05				*e*S	**Sb**	**07 31 20.7**	**0.0**
VA05				IAML		07 31 23.9	
	comp=E,13μm,0.5s						
CO04	**Los Peladeros**	**0.96**	**45**	⇓*i* P	**Pn**	**07 31 09.7**	**+0.3**
CO04				*e*S	**Sb**	**07 31 22.5**	**+1.1**
CO04				IAML		07 31 26.1	
	comp=E,8μm,0.5s						
PEL	**Peldehue**	**1.01**	**115**		**Pn**	**07 31 10.1**	**+0.1**
PEL	**Peldehue**	**1.01**	**115**	*e*P	**Pn**	**07 31 09.8**	**-0.1**
PEL				*e*S	**Sn**	**07 31 23.9**	**-0.6**
PEL				IAML		07 31 25.8	
	comp=E,16μm,0.2s						
PEL	**Peldehue**	**1.01**	**115**	*e*P	**Pn**	**07 31 10.2**	**+0.3**
PEL				*e*S	**Sn**	**07 31 25.6**	**+1.1**
PEL				IAML		07 31 28.5	
	comp=Z,5μm,0.6s						
VA03	**San Esteban**	**1.03**	**93**		**Pn**	**07 31 10.3**	**0.0**
VA03	**San Esteban**	**1.03**	**93**	⇓*i* P	**Pn**	**07 31 10.4**	**+0.1**
VA03				*e*S	**Sb**	**07 31 23.9**	**+0.5**
VA03				IAML		07 31 27.6	
	comp=N,6μm,0.4s						
VA03	**San Esteban**	**1.03**	**93**	*e*P	**Pb**	**07 31 09.5**	**0.0**
VA03				IAML		07 31 31.8	
	comp=Z,3μm,0.3s						
MT05	**Renca**	**1.10**	**128**		**Pn**	**07 31 11.4**	**+0.2**
MT05	**Renca**	**1.10**	**128**	*e*P	**Pn**	**07 31 11.5**	**+0.2**
MT05				*e*S	**Sn**	**07 31 26.1**	**-0.6**
MT05				IAML		07 31 30.9	
	comp=E,11μm,0.3s						
MT05	**Renca**	**1.10**	**128**	*e*P	**Pb**	**07 31 10.8**	**+0.1**
MT05				IAML		07 31 33.3	
	comp=Z,3μm,0.5s						
MT10	**Hacienda Santa**	**1.18**	**118**	⇓*i* P	**Pn**	**07 31 12.9**	**+0.5**
MT10				*e*S	**Sn**	**07 31 28.4**	**-0.4**
MT10				IAML		07 31 31.4	
	comp=N,21μm,0.6s						
MT01	**Popeta**	**1.22**	**159**		**Pg**	**07 31 12.7**	**+0.1**
MT01	**Popeta**	**1.22**	**159**	⇓*i* P	**Pb**	**07 31 12.9**	**+0.2**
MT01				*e*S	**Sg**	**07 31 28.0**	**-0.5**
MT01				IAML		07 31 34.5	
	comp=E,4μm,0.3s						
MT01	**Popeta**	**1.22**	**159**	*e*P	**Pg**	**07 31 12.2**	**-0.5**
MT01				IAML		07 31 31.3	
	comp=Z,4μm,0.4s						
MT14	**Cerro Cal¡n**	**1.24**	**123**	⇓*i* P	**Pn**	**07 31 13.8**	**+0.6**
MT14				*e*S

CO06	Fray Jorge	2.04	3	↑	eP		Pn	07 31 24.5	+0.4
CO03	El Pedregal	2.09	27				Pn	07 31 26.1	+1.3
CO03	El Pedregal	2.09	27	↑	eP		Pn	07 31 26.6	+1.8
CO03	El Pedregal	2.09	27		eP		Pn	07 31 26.7	+1.8
CO03					eS		Sg	07 31 57.0	+0.6
CO03					IAML			07 31 58.9	
	comp=Z,811nm,0.5s								
BO02	Sierra Bellavi	2.23	158				Pn	07 31 27.0	+0.3
BO02	Sierra Bellavi	2.23	158	↑	eP		Pn	07 31 27.6	+0.9
BO02	Sierra Bellavi	2.23	158		eP		Pn	07 31 27.8	+1.1
BO02					eS		Sn	07 31 55.4	+0.8
BO02					IAML			07 32 04.0	
	comp=Z,1μm,0.5s								
GO05	Hualane	2.29	183	↑	eP		Pn	07 31 27.0	-0.4
GO05	Hualane	2.29	183		eP		Pn	07 31 27.1	-0.4
GO05					eS		Sn	07 31 43.0	-13
GO05					IAML			07 32 08.5	
	comp=Z,445nm,0.8s								
RTLS	Leoncito	2.29	67		eP		Pg	07 31 32.1	-1.0
RTLS					IAML			07 32 17.3	
	comp=Z,1μm,0.7s								
ARCO	CERRO ARCO	2.40	94		eP		Pg	07 31 34.2	-0.9
ARCO					IAML			07 32 15.4	
	comp=Z,724nm,0.5s								
AAGR	Agrelo	2.51	99		eP		Pb	07 31 35.5	+0.8
AAGR					IAML			07 32 14.9	
	comp=Z,491nm,1.4s								
GO04	Tololo Observa	2.67	18				Pn	07 31 33.5	+0.5
GO04	Tololo Observa	2.67	18		eP		Pn	07 31 34.0	+1.0
GO04	Tololo Observa	2.67	18		eP		Pn	07 31 34.5	+1.5
GO04					eS		Sn	07 32 08.8	+3.1
GO04					IAML			07 32 18.9	
	comp=Z,3μm,0.5s								
ZON	Zonda	2.88	67		eP		Pb	07 31 39.7	-1.2
ZON					IAML			07 32 28.7	
	comp=Z,572nm,0.5s								
ML02	Panimavida	3.05	174				Pn	07 31 37.9	-0.1
ML02	Panimavida	3.05	174		eP		Pn	07 31 38.5	+0.5
ML02	Panimavida	3.05	174		eP		Pn	07 31 38.8	+0.9
ML02					eS		Sn	07 32 07.9	-6.8
ML02					IAML			07 32 31.4	
	comp=Z,705nm,1.1s								
CO01	Juntas del Tor	3.09	28				Pn	07 31 40.4	+1.7
CO01	Juntas del Tor	3.09	28	↑	eP		Pn	07 31 40.9	+2.2
CO01	Juntas del Tor	3.09	28		eP		Pn	07 31 40.6	+1.9
CO01					IAML			07 32 34.3	
	comp=Z,428nm,0.8s								
RTLL	Cerro Villicun	3.13	65		eP		Pb	07 31 42.8	-2.4
RTLL					IAML			07 32 40.5	
	comp=Z,451nm,0.5s								
ACCO	Cerro Coronel	3.14	48		eP		Pb	07 31 43.9	-1.7
ACCO					eS		Sb	07 32 24.8	+0.5
CFA	Coronel Fontan	3.20	71		P		Pn	07 31 43.3	+3.3
	comp=Z,12nm,0.3s,baz=250,slow=11,SNR=133								
CFA					S		Sn	07 32 18.4	-0.2
	comp=Z,28nm,0.3s,baz=209,slow=9.3,SNR=4.9								
	comp=Z,48nm,0.3s								
CFA	Coronel Fontan	3.20	71		eP		Pn	07 31 43.0	+3.0
CFA					eS		Sb	07 32 23.2	-2.5
CFA					IAML			07 32 45.5	
	comp=Z,309nm,0.6s								
AROD	Rodeo	3.22	38		eP		Pb	07 31 44.7	-2.2
RFA	San Rafael	3.44	127		eP		Pn	07 31 46.2	+2.9
RFA					eS		Sg	07 32 39.2	-0.3
RFA					IAML			07 32 45.4	
	comp=Z,135nm,1.2s								
LCO	Las Campanas	3.81	14				Pn	07 31 49.5	+0.8
LCO	Las Campanas	3.81	14		eP		Pn	07 31 49.6	+1.0
LCO	Las Campanas	3.81	14		eP		Pn	07 31 44.0	-4.6
LCO					eP		Pb	07 31 48.9	-8.0
LCO					eS		Sn	07 32 37.0	+3.1
LCO					IAML			07 32 55.7	
	comp=Z,567nm,0.5s								
ACAN	Cantantal	3.90	85		eP		Pn	07 31 52.1	+2.4
ACAN					IAML			07 33 01.0	
	comp=Z,632nm,0.4s								
BI02	San Fabin de	3.96	174				Pn	07 31 50.6	+0.1
BI02	San Fabin de	3.96	174		eP		Pn	07 31 51.3	+0.8
BI02	San Fabin de	3.96	174		eP		Pn	07 31 50.9	+0.4
BI02					IAML			07 33 00.6	
	comp=Z,152nm,0.6s								
AC05	El Transito	4.08	19				Pn	07 31 53.7	+1.5
AC05	El Transito	4.08	19	↑	eP		Pn	07 31 53.8	+1.6
AC05	El Transito	4.08	19		eP		Pn	07 31 54.3	+2.0
AC05					eS		Sn	07 32 44.0	+3.6
AC05					IAML			07 33 06.0	
	comp=Z,302nm,0.9s								
AVFE	Valle Fertil	4.22	62		eP		Pn	07 31 59.0	+4.9
AVFE					IAML			07 33 08.2	
	comp=Z,199nm,0.5s								
AC04	Llanos de Chal	4.54	8				Pn	07 31 58.3	-0.1
AC04	Llanos de Chal	4.54	8		eP		Pn	07 31 58.4	0.0
AC04	Llanos de Chal	4.54	8		eP		Pn	07 31 58.8	+0.4
AC04					eS		Sb	07 33 02.5	-1.8
AC04					IAML			07 33 16.8	
	comp=Z,232nm,0.5s								
ACHE	Chepes	4.62	72		eP		Pn	07 32 02.2	+2.6
VCA	Vinchina	5.02	39	↑	eP		Pn	07 32 08.6	+3.4
VCA	Vinchina	5.02	39		eP		Pn	07 32 08.3	+3.1
VCA					eS		Sb	07 33 17.8	-0.4
VCA					IAML			07 33 25.7	
	comp=Z,360nm,0.5s								
APLL	PUNTA DE LOS L	5.04	64		eP		Pn	07 32 08.8	+3.4
APLL					IAML			07 33 36.8	
	comp=Z,67nm,1.0s								
MRA	San Martin	5.13	88		eP		Pn	07 32 09.2	+2.7
MRA					IAML			07 33 44.3	
	comp=Z,129nm,1.2s								
GO03	Copiapo	5.28	15				Pn	07 32 09.2	+0.6
AC06	Mina Casimiro	5.49	13				Pn	07 32 11.8	+0.4
VA04	Juan Fernndez	5.98	259		Pn		Pn	07 32 18.1	-0.1
H03N1	Juan Fernandez	6.03	261		T		T	07 38 45.8	
	baz=90,slow=74,SNR=386								
H03N3	Juan Fernandez	6.04	261		T		T	07 38 45.5	
	baz=90,slow=74,SNR=833								
H03N2	Juan Fernandez	6.05	261		T		T	07 38 46.8	
	baz=90,slow=74,SNR=676								
H03S1	Juan Fernandez	6.07	257		T		T	07 38 34.4	
	baz=82,slow=75,SNR=781								
H03S3	Juan Fernandez	6.07	258		T		T	07 38 35.8	
	baz=82,slow=75,SNR=600								
H03S2	Juan Fernandez	6.09	258		T		T	07 38 35.3	
	baz=82,slow=75,SNR=1270								
TCA	Tanti	6.25	79		eP		Pn	07 32 23.4	+1.4
AC02	Maricunga	6.30	22				Pn	07 32 23.1	0.0
CYA	Choya	6.69	52		eP		Pn	07 32 27.3	-0.7
LR05	Currie	7.50	181		Pn		Pn	07 32 39.0	0.0
PLCA	Paso Flores	8.06	173		P		Pn	07 32 47.6	+0.8
	comp=Z,1.2nm,0.3s,baz=333,slow=12,SNR=47								
PLCA					LR		LR	07 35 27.1	
	comp=Z,45nm,18.4s,baz=330,slow=34								
	comp=Z,3.4nm,0.4s								
PLCA	Paso Flores	8.06	173		Pn		Pn	07 32 47.3	+0.5
PB08	IPOC Station P	12.75	11		Pn		Pn	07 33 53.3	+2.0
GO01	Chusmiza	13.20	11		Pn		Pn	07 33 59.9	+2.2
CPUP	Villa Florida	14.09	67		P		Pn	07 34 12.0	+2.6
	comp=Z,0.1nm,0.3s,baz=88,slow=11,SNR=5.9								
CPUP					S		Sn	07 36 43.5	-2.6
	comp=Z,4.2nm,1.2s,baz=95,slow=9.2,SNR=3.3								
	comp=Z,0.4nm,0.5s								
LPAZ	La Paz	16.69	12		P		Pn	07 34 45.1	+0.8
	comp=Z,0.2nm,0.3s,baz=185,slow=6.4,SNR=12								
	comp=Z,1.4nm,0.6s								
LPAZ	La Paz	16.69	12				Pn	07 34 45.0	+0.7
ITAB	Concordia	17.87	77				Pn	07 34 58.7	+0.3
ITAB					IAmb		IAmb	07 35 41.5	
	comp=Z,18nm,1.3s								
SIV	San Ignacio	19.28	33		P		P	07 35 14.1	-0.5
	comp=Z,1.3nm,0.6s								
SIV					LR		LR	07 43 58.4	
	comp=Z,95nm,19.8s,baz=317,slow=41								
EFI	East Falkland	21.43	156		P		P	07 35 36.9	-0.8
VAO	Valinhos	23.93	72		P		P	07 36 03.5	-0.6
VAO					IAmb		IAmb	07 36 17.7	
	comp=Z,8.8nm,1.0s								
BDFB	Brasilia	27.45	57		P		P	07 36 34.9	-1.2
	comp=Z,1.0nm,0.4s,baz=238,slow=6.2,SNR=3.2								
	comp=Z,1.0nm,0.4s								
BOAV	Boa Vista	36.51	19		P		P	07 37 54.6	-0.9
BOAV					IAmb		IAmb	07 38 16.7	
	comp=Z,9.7nm,1.5s								
RUSC	La Rusia	38.42	358		P		P	07 38 13.1	+1.0
RUSC					IAmb		IAmb	07 38 15.0	
	comp=Z,18nm,1.5s								

BELA	Belgrano 2	48.10	170		P		P	07 39 29.5	+0.3
BELA					IAmb		IAmb	07 39 38.1	
	comp=Z,6.3nm,1.5s								
SNAA	Sanae	52.69	158		P		P	07 40 03.6	-0.4
	comp=Z,1.2nm,0.8s,baz=247,slow=9.2,SNR=7.5								
	comp=Z,1.2nm,0.8s								
QSPA	South Pole Qui	57.51	180		P		P	07 40 40.5	+1.5
	comp=Z,2.8nm,0.9s,baz=149,slow=5.0,SNR=7.4								
	comp=Z,2.8nm,0.9s								
BOSA	Boshof	80.47	118		P		P	07 43 01.1	-1.3
	comp=Z,1.8nm,0.7s,baz=231,slow=6.5,SNR=4.2								
	comp=Z,1.8nm,0.7s								
FINES	FINESS Array B	121.81	34		PKhKP		PKPpre	07 49 38.6	
	comp=Z,3.5nm,1.0s,baz=354,slow=1.9,SNR=3.7								
H11S2	WAKE ISLAND Hyl	26.00	270		T		T	10 08 44.3	
	baz=118,slow=75,SNR=99								
H11S1	WAKE ISLAND Hyl	26.01	270		T		T	10 08 45.6	
	baz=118,slow=75,SNR=82								
H11S3	WAKE ISLAND Hyl	26.02	270		T		T	10 08 45.6	
	baz=118,slow=75,SNR=88								
H11N3	WAKE ISLAND Hyl	26.38	271		T		T	10 09 07.9	
	baz=118,slow=75,SNR=12								
H11N1	WAKE ISLAND Hyl	26.39	271		T		T	10 09 10.5	
	baz=118,slow=75,SNR=8.8								
H11N2	WAKE ISLAND Hyl	26.40	271		T		T	10 09 11.4	
	baz=118,slow=75,SNR=22								
BVAR	Borovoye Array	146.19	42		PKPbc		PKPdf	07 50 29.5	+0.6
	comp=Z,2.3nm,0.5s,baz=304,slow=2.4,SNR=8.7								
KURBB	Kurchatov Arra	151.78	42		PKPbc		PKPbc	07 50 43.8	-0.5
	comp=Z,3.3nm,0.6s,baz=303,slow=2.9,SNR=15								
ZALV	Zalesovo Beam	153.03	31		PKPbc		PKPbc	07 50 46.4	-0.5
	comp=Z,3.2nm,0.6s,baz=312,slow=3.3,SNR=14								
MKAR	Makanchi Array	155.75	47		PKPab		PKPab	07 51 09.8	-0.5
	comp=Z,0.7nm,0.6s,baz=266,slow=3.9,SNR=2.0								

*IDC **30** 07:32:45.6±0.6,56°.81N×121°.98W,h0km,mb4.1/4, mbtmp3.7/12,ML3.7/8,MS2.8/6,Error ellipse: s-maj=8.0km s-min=6.8km az=95.0*

*PGC **30** 07:32:47.1±0.0,56°.81N×122°.13W,h7km,ML4.1/22, Mw3.8, 100km northwest of Fort St. John, Bc British Columbia, Canada*

ISC 30 07:32:45.6±1.1,56°.88N±0°.02×121°.80W±0°.02,h3km±8km, n62,σ2911/97,mb4.4/4,British Columbia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NBC8	Simpson Ranch	0.45	228	P		Pg	Pg	07 32 51.8	-2.4
NBC8				S		Sg	Sg	07 32 56.1	-4.0
NBC7	Fort St John	0.81	139	P		Pn	Pn	07 33 03.5	-0.4
NBC7				S		Sn	Sn	07 33 18.5	+2.1
BMTB	Bullhead Mount	0.85	193	P		Pg	Pg	07 33 01.4	-0.6
BMTB				S		Sb	Sb	07 33 13.8	-1.1
NBC4	NorthernBC 4	1.35	151	P		Pg	Pg	07 33 11.9	+0.4
NBC4				S		Sg	Sg	07 33 30.4	+1.5
NBC6	NorthernBC 6	1.73	8	Pn		Pg	Pg	07 33 19.5	+0.8
NBC6				Sg		Sg	Sg	07 33 43.9	+2.7
WTMTA	White Mountain	1.85	129	Pn		Pb	Pb	07 33 20.1	-0.1
WTMTA				Sn		Sg	Sg	07 33 45.0	-0.2
WTMTA				Sg		Sb	Sb	07 33 47.7	+4.0
FNSB	Fort Nelson	2.00	346	Pn		Pb	Pb	07 33 21.2	-1.4
FNSB				Sg		Sg	Sg	07 33 49.8	0.0
TOAD	Toad River Com	2.70	319	Pn		Pn	Pn	07 33 29.1	-0.7
FSJB	Fort St James	2.80	211	Pn		Pn	Pn	07 33 30.5	-0.8
FSJB				Sg		Sb	Sb	07 34 10.0	-1.0
NBC1	NorthernBC 1	2.99	340	Pn		Pn	Pn	07 33 33.8	0.0
NBC1				Sn		Sn	Sn	07 34 10.1	0.0
NBC1				Sg		Sg	Sg	07 34 21.3	-0.2
LIRD	Liard River Hi	3.41	320	Pn		Pn	Pn	07 33 39.3	-0.4
LIRD				Sg		Sg	Sg	07 34 31.9	-3.2
KOTAN	Kotaneelee Air	3.47	341	Pn		Pn	Pn	07 33 40.5	+0.1
KOTAN				Sn		Sn	Sn	07 34 21.6	-0.4
KOTAN				Sg		Sg	Sg	07 34 35.0	-2.0
STPRA	Salt Prairie L	3.54	108	Pn		Pn	Pn	07 33 43.5	+2.0
STPRA				Pg		Pg	Pg	07 33 52.7	-0.8
STPRA				Sn		Sb	Sb	07 34 28.1	-4.2
BRLDA	Berland Lookou	3.75	136	Pn		Pn	Pn	07 33 46.3	+2.0
BRLDA				Pg		Pg	Pg	07 33 56.5	-0.8
BRLDA				Sn		Sn	Sn	07 34 31.1	+2.2
BRLDA				Sg		Sg	Sg	07 34 45.6	-0.3
NAHA	Nahanni Butte	4.25	349	Pn		Pn	Pn	07 33 51.4	+0.3
NAHA				Sn		Sn	Sn	07 34 40.5	-0.6
T35M	Bob Quinn	4.63	275	Pn		Pn	Pn	07 33 54.2	-2.2
T35M				Pg		Pb	Pb	07 34 08.5	+1.1
T35M				Sg		Sb	Sb	07 35 05.9	+2.4
DLBC	Dease Lake	4.69	293	Pn		Pn	Pn	07 33 55.8	-1.5
	2.5nm,0.3s,baz=62,slow=12,SNR=68								
DLBC				Pg		Pb	Pb	07 34 10.2	+1.8
	11nm,0.3s,baz=99,slow=13,SNR=36								
DLBC				Sn		Sn	Sn	07 34 51.2	-0.9
	4.6nm,0.3s,baz=144,slow=12,SNR=3.4								
DLBC				Lg		Lg	Lg	07 35 13.3	
	9.7nm,0.3s,baz=208,slow=20,SNR=8.0								
DLBC				LR		LR	LR	07 36 04.4	
	comp=Z,74nm,21.1s,baz=140,slow=43								
	6.3nm,0.4s								
KITB	Kitimat	4.79	237	Pn		Pn	Pn	07 33 56.8	-1.8
WTLY	Watson Lake, Y	4.90	314	Sn		Sn	Sn	07 34 52.9	-4.3
S34M	Telegraph Cree	5.15	286	Pn		Pn	Pn	07 34 03.2	-0.3
S34M				Pg		Pb	Pb	07 34 17.2	+0.9
S34M				Sg		Sb	Sb	07 35 21.5	+3.0
BUTB	Butedale	5.41	228	Pn		Pn	Pn	07 34 05.4	-1.8
RUBB	Prince Rupert	5.43	245	Pn		Pn	Pn	07 34 04.8	-2.4
RUBB				Sg		Sb	Sb	07 35 30.1	+3.7
R33M	Jennings River	5.47	301	Pn		Pn	Pn	07 34 06.2	-1.9
R33M				Pg		Pg		07 34 25.8	-4.6
GRIB	Gribbell Islan	5.50	233	Pn		Pn	Pn	07 34 09.2	+0.9
GRIB				Pg		Pb	Pb	07 34 23.3	+1.1
GRIB				Sg		Sb	Sb	07 35 33.3	+4.7
GRNB	Grenville Isla	5.55	240	Pn		Pn	Pn	07 34 07.3	-1.8
WRAK	Wrangell Islan	5.84	270	Pn		Pn	Pn	07 34 10.5	-2.4
Q32M	Nakina River	5.96	295	Pg		Pb	Pb	07 34 33.3	+3.2
BBB	Bella Bella	5.96	221	Pn		Pn	Pn	07 34 13.1	-1.5
	0.8nm,0.3s,baz=38,slow=6.2,SNR=30								
BBB				Sn		Sn	Sn	07 35 20.6	-2.8
	1.4nm,0.3s,baz=53,slow=14,SNR=3.2								
BBB				Lg		Lg		07 35 48.6	
	2.5nm,0.3s,baz=110,slow=22,SNR=6.3								
BBB				LR		LR		07 36 49.9	
	comp=Z,98nm,21.4s,baz=22,slow=42								
	2.5nm,0.4s								
BBB	Bella Bella	5.96	221	Pn		Pn	Pn	07 34 12.7	-1.9
EDM	Edmonton	6.08	123	Pn		Pn	Pn	07 34 18.1	+1.8
EDM				Pg		Pg	Pg	07 34 40.1	-1.9
EDM				Sn		Sn	Sn	07 35 23.5	-2.8
BNAB	Bonilla	6.09	240	Pg		Pb	Pb	07 34 34.8	+2.6
BNAB				Sg		Sb	Sb	07 35 50.1	+4.7
LLLB	Lillooet	6.28	180	Pn		Pn	Pn	07 34 19.1	0.0
YKA	Yellowknife Ar	6.71	30	Pn		Pn	Pn	07 34 25.4	+0.6
	2.9nm,0.3s,baz=236,slow=6.0,SNR=71								
YKA				Sn		Sn	Sn	07 35 41.2	-0.4
	5.4nm,0.3s,baz=213,slow=26,SNR=8.4								
YKA				Lg		Lg		07 36 18.6	
	5.7nm,0.3s,baz=142,slow=23,SNR=7.7								
YKA				LR		LR		07 37 30.5	
	comp=Z,89nm,20.2s,baz=34,slow=42								
	7.8nm,0.6s								
YKAW1	Yellowknife Wh	6.73	30	Pn		Pn	Pn	07 34 25.2	+0.1
YKAW1				Sn		Sn	Sn	07 35 39.6	-2.6
YKAW3	Yellowknife Wh	6.76	30	Pn		Pn	Pn	07 34 25.6	+0.1
YKAW3				Sg		Sg	Sg	07 36 23.5	+1.0
WSLR	Whistler	6.79	186	Pn		Pn	Pn	07 34 25.7	-0.5
P32M	Atlin	6.85	298	Pg		Pb	Pb	07 34 48.8	+3.6
NCRB	Newcastle Ridg	6.96	203	Pn		Pn	Pn	07 34 28.2	-0.2
PHC	Port Hardy	7.02	211	Pn		Pn	Pn	07 34 28.2	-0.9
CBB	Campbell River	7.18	199	Sg		Sb	Sb	07 36 25.1	+8.4
MAYB	Maynard	7.23	208	Pn		Pn	Pn	07 34 31.7	-0.5
PACB	Port Alice, BC	7.28	210	Pn		Pn	Pn	07 34 32.3	-0.4
HOLB	Holberg	7.28	214	Pn		Pn	Pn	07 34 31.8	-1.1
WOSB	Woss	7.30	205	Pn		Pn	Pn	07 34 32.8	-0.3
BPEB	Brooks Peninsu	7.61	210	Pn		Pn	Pn	07 34 37.5	+0.2
MYRA	Myra Falls	7.68	199	Pn		Pn	Pn	07 34 38.2	0.0
MYRA				Sg		Sb	Sb	07 36 37.9	+6.8
PNT	Penticton	7.69	169	Pn		Pn	Pn	07 34 38.1	-0.3
WHY	Whitehorse	7.78	305	Pg		Pg		07 35 08.2	-6.3
NEW	Newport	9.08	160	Pn		Pn	Pn	07 34 55.4	-2.1
	0.1nm,0.3s,baz=32,slow=18,SNR=2.0								
NEW				Sn		Sn	Sn	07 36 36.3	-3.8
	0.1nm,0.3s,baz=12,slow=4.8,SNR=2.5								
NEW				Lg		Lg		07 37 25.4	
	0.3nm,0.3s,baz=195,slow=10,SNR=1.9								
NEW				LR		LR		07 38 40.4	
	comp=Z,55nm,20.5s,baz=12,slow=39								
	0.7nm,0.7s								
J30M	Hart River	10.47	323	Pn		Pn		07 35 16.3	-0.2
H31M	Peel River	10.77	331	Pn		Pn		07 35 21.0	+0.6
INK	Inuvik	12.64	340	Pn		Pn		07 35 44.1	-1.9
	0.5nm,0.3s,baz=150,slow=10,SNR=21								
	2.7nm,0.5s								
ILAR	Eielson Array	14.47	313	Pn		Pn		07 36 09.8	-1.2
	0.1nm,0.3s,baz=108,slow=9.2,SNR=19								
ILAR				Lg		Lg		07 40 23.9	
	baz=114,slow=27,SNR=5.5								
	0.2nm,0.6s								
PDAR	Pinedale Array	16.14	146	Pn		Pn		07 36 33.9	+0.4
	0.1nm,0.3s,baz=331,slow=12,SNR=7.3								
PDAR				Sn		Sn		07 39 28.2	-4.7
	0.4nm,0.3s,baz=86,slow=25,SNR=6.7								
	0.4nm,0.8s								
KDAK	Kodiak Island	16.58	286	LR		LR		07 42 19.7	
	comp=Z,70nm,19.2s,baz=78,slow=35								
ULM	Lac du Bonnet	16.70	102	LR		LR		07 42 52.3	
	comp=Z,37nm,21.8s,baz=11,slow=36								
NVAR	Mina Array Bea	18.60	171	P		Pn		07 37 05.4	+1.2
	0.1nm,0.3s,baz=349,slow=10,SNR=9.2								
	1.3nm,0.7s								
NB2	NORSAR Subarra	56.78	25	P		P		07 42 32.0	+1.6
	comp=Z,4.4nm,0.9s,baz=291,slow=7.4								
NOA	NORSAR Array B	56.78	25	P		P		07 42 31.3	+0.9
	comp=Z,1.3nm,0.8s,baz=328,slow=7.0,SNR=3.8								
	comp=Z,1.3nm,0.8s								
HFS	Hagfors	58.16	24	P		P		07 42 42.7	+2.7
	comp=Z,3.2nm,0.7s,baz=317,slow=6.1,SNR=5.0								
	comp=Z,3.2nm,0.7s								
FINES	FINESS Array B	59.37	17	P		P		07 42 49.5	+1.1
	comp=Z,4.2nm,0.8s,baz=350,slow=6.4,SNR=6.9								
	comp=Z,4.2nm,0.8s								
KURBB	Kurchatov Arra	71.56	347	P		P		07 44 06.9	-0.5
	comp=Z,0.7nm,0.8s,baz=10,slow=5.8,SNR=8.7								
	comp=Z,0.7nm,0.8s								

NEIC 30 07:34:06.4±0.4,37°.502N±0°.010×97°.80W±0°.03,h2km±5km, mb_Lg2.9/82,ML3.2/26,Error ellipse: s-maj=3.7km s-min=1.4km az=87.0,Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAN08	Anthony NE Sta	0.31	207			Pg		07 34 12.1	-0.2
KAN08						Sg	Sg	07 34 16.5	+0.2
KAN01	Argonia South	0.35	175			Pg		07 34 12.8	-0.3
KAN01						Sg	Sg	07 34 17.8	+0.2
KAN01					IAML			07 34 18.2	
	comp=E,2μm,0.1s								
GC02	Grant County #	0.65	185			Pg		07 34 18.4	-0.5
GC02						Sg	Sg	07 34 27.3	0.0
CROK	Carrier	1.01	189			Pg		07 34 24.7	-1.0
CROK						Sg	Sg	07 34 38.4	-0.3
CROK					IAML			07 34 43.9	
	comp=N,830nm,0.4s								
R32A	Long Quarter,	1.17	322			Pg		07 34 27.4	-1.4
R32A					IAML			07 34 47.6	
	comp=N,575nm,0.3s								
R32A					IAML			07 34 47.9	
	comp=N,568nm,0.4s								
T35A	Sooner Cattle	1.18	119			Pg		07 34 27.9	-1.1
T35A					IAML			07 34 50.0	
	comp=N,430nm,0.3s								
T35A					IAML			07 34 50.1	
	comp=N,447nm,0.4s								
NOKA	Waynoka	1.26	227			Pg		07 34 29.2	-1.2
NOKA					IAML			07 34 53.4	
	comp=E,612nm,0.2s								
OK051	E0350 and S346	1.26	142			Pg		07 34 29.2	-1.3
OK048	Pawnee Station	1.28	148			Pg		07 34 29.6	-1.3
OK048					IAML			07 34 50.9	
	comp=E,679nm,0.4s								
OK048					IAML			07 34 51.4	
	comp=E,396nm,0.2s								
QUOK	Quay	1.59	146

OXF	**Oxford**	**7.42**	**111**	IAmb_Lg	07 38 10.3
	comp=Z,16nm,0.9s				
HAYD	**Hayden**	**7.96**	**295**	IAmb_Lg	07 38 28.9
	comp=Z,12nm,1.1s				
HNDO	**Hondo**	**8.05**	**189**	IAmb_Lg	07 38 24.3
	comp=Z,17nm,1.0s				
VHRN	**Van Horn**	**8.96**	**224**	IAmb_Lg	07 39 00.9
	comp=Z,12nm,1.2s				

UCR ***30*** *07:43:37.0±0.6, 13°.62N×95°.75W, h19km, MW4.7*
GCG ***30*** *07:44:20.8±1.8, 13°.82N×91°.98W, h13km±15km, MD5.1, ML5.6*
CATAC ***30*** *07:44:21.2±0.6, 14°.N±3°×9°.2W±°, h29km±7km, M5.5/17, MLv5.5/17, Error ellipse: s-maj=8.3km s-min=4.3km az=57.1, confirmed*
NEIC ***30*** *07:44:21.6±2.4, 13°.84N±0°.06×91°.89W±0°.08, h19km±1km, mb5.1/54, Ms_20 5.3/461, Mwb5.6/129, Mww5.7/33, Error ellipse: s-maj=14.6km s-min=8.8km az=242.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.46; Mθθ-2.05; Mφφ-0.41; Mrθ0.86; Mθφ 1.74; Mφr-0.59; Fault plane solution: M₀3.05000×10¹⁷ NP1: φs301.40000°, δ34.81000°, λ88.46000°. NP2: φs123.27000°, δ55.20000°, λ91.07000°. Principal axes: T 2.6491, Plg80.0000°, Azm38.0000°; N 0.6884, Plg1.0000°, Azm303.0000°; P -3.3376, Plg10.0000°, Azm213.0000°;*
NEIC ***30*** *07:44:22.5, 13°.89N×91°.87W, h23km*
NEIC ***30*** *07:44:22.5, 13°.89N×91°.87W, h24km, Moment Tensor Solution. Duration: 38.7 Moment tensor: Scale 10¹⁷Nm; Mrr4.44; Mθθ-3.61; Mφφ-0.84; Mrθ0.97; Mθφ 1.63; Mφr-0.44; Fault plane solution: M₀4.53000×10¹⁷ NP1: φs294.99000°, δ38.19000°, λ90.23000°. NP2: φs114.70000°, δ51.81000°, λ89.82000°. Principal axes: T 4.5706, Plg83.0000°, Azm24.0000°; N -0.0826, Plg0.0000°, Azm115.0000°; P -4.4880, Plg7.0000°, Azm205.0000°;*
BGR ***30*** *07:44:22.4, 13°.98N×91°.98W, h33km, mb4.9, Ms5.3*
NEIC ***30*** *07:44:22.5, 13°.89N×91°.87W, h23km*
IDC ***30*** *07:44:22.2±2.9, 13°.96N×91°.61W, h33km±20km, mb4.5/22, mbtmp4.7/23, ML5.2/1, MS5.1/62, Error ellipse: s-maj=20.0km s-min=12.0km az=51.0*
SNET ***30*** *07:44:23.4±2.1, 14°.00N×91°.87W, h23km, ML5.3*
MOS ***30*** *07:44:24.4±1.3, 14°.09N×91°.69W, h54km, mb5.5/12, MS5.2/6, Error ellipse: s-maj=11.5km s-min=7.4km az=107.1*
GCMT ***30*** *07:44:25.6±0.1, 13°.91N±0°.01×92°.20W±0°.01, h28km, MW5.8/144, Moment Tensor Solution. s140, c293; s144, c301; Duration: 158 Moment tensor: Scale 10¹⁷ Nm; Mrr4.26±.06; Mθθ-3.27±.04; Mφφ-0.98±.04; Mrθ2.43±.08; Mθφ 1.74±.03; Mφr-2.71±.09; Best double couple: M₀5.58000×10¹⁷ NP1:φs287.00000°, δ26.00000°, λ69.00000°. NP2:φs131.00000°, δ66.00000°, λ100.00000°. Principal axes: T 5.7070, Plg68.0000°, Azm60.0000°; N -0.2490, Plg9.0000°, Azm306.0000°; P -5.4530, Plg20.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IPGP ***30*** *07:44:25.0, 13°.93N×91°.86W, h32km, Mw5.6, Fault plane solution: NP1:φs300.00000°, δ36.00000°, λ90.00000°. NP2:φs120.00000°, δ54.00000°, λ90.00000°.*
RSNC ***30*** *07:44:27.6±1.6, 14°.N±6°×9°.2W±1°.3, h56km±9km, MS5.2, mb5.0, mB5.4, ML4.8, Mw(mB)4.8, MwMwp5.5, Mwp5.6*

ISC 30 07:44:23.8±0.8, 13°.84N±0°.04×91°.97W±0°.04, h49km±6km, n918, σ1§60/674, mb5.0/52, MS5.3/315, 9C-23D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.73**	**21**			**Pn**	**07 44 36.2**	**-1.6**
RTAL	**Retalhuleu**	**0.73**	**21**	*eP*		**Pn**	**07 44 36.2**	**-1.6**
RTAL	**Retalhuleu**	**0.73**	**21**	P		**Pn**	**07 44 36.2**	**-1.6**
RTAL	**Retalhuleu**	**0.73**	**21**	S		**Sn**	**07 44 49.3**	**+1.2**
STG2	**El Palmar, Qui**	**0.82**	**44**	*eP*		**Pn**	**07 44 38.4**	**-0.9**
STG8	**El Palmar, Qui**	**0.85**	**45**	*i* P		**Pn**	**07 44 38.9**	**-0.8**
SMCA	**Catarina**	**1.01**	**354**	*i* P		**Pn**	**07 44 39.2**	**-2.5**
THIG		**1.10**	**345**	*i* P		**Pn**	**07 44 40.3**	**-2.5**
THIG				*eS*		**Sn**	**07 44 55.2**	**-1.7**
QUEO	**Labor Ovalle**	**1.11**	**23**	*eP*		**Pn**	**07 44 41.7**	**-1.6**
SOKI	**Kika Raxquin**	**1.11**	**29**	*eP*		**Pn**	**07 44 41.5**	**-1.9**
ESSG	**Sabana Grande**	**1.23**	**64**	↑*iP*		**Pn**	**07 44 42.7**	**-2.0**
ESSG				IAML			07 45 09.2	
	comp=E,65μm,0.6s							
ESSJ	**San Jos, E**	**1.45**	**101**	*i* P		Pn	07 44 41.8	-5.8
FG16	**Alotenango, Sa**	**1.48**	**73**	*i* P		Pn	07 44 43.4	-4.8
HUEH	**Huehuetenango**	**1.53**	**17**			**Pn**	**07 44 48.2**	**-0.8**
HUEH	**Huehuetenango**	**1.53**	**17**	*eP*		**Pn**	**07 44 48.1**	**-0.8**
HUEH	**Huehuetenango**	**1.53**	**17**	*i* P		**Pn**	**07 44 48.2**	**-0.8**
HUEH				IAML			07 45 28.1	
	comp=N,87μm,0.7s							
HUEH	**Huehuetenango**	**1.53**	**17**	P		**Pn**	**07 44 48.2**	**-0.8**
GCG4	**OSOP**	**1.58**	**62**	*i* P		**Pn**	**07 44 49.0**	**-0.5**
PCGS	**San Vicente Pa**	**1.59**	**76**	*eP*		**Pn**	**07 44 45.4**	**-4.3**
QUIS	**Sacapulas**	**1.67**	**30**	*eP*		**Pn**	**07 44 50.5**	**-0.3**
QUIS				IAML			07 45 17.4	
	comp=E,44μm,0.5s							
APG	**El Apazote**	**1.86**	**51**	Pg		**Pn**	**07 44 52.5**	**-0.9**
	comp=E,30nm,0.3s,baz=205,slow=14,SNR=865							
APG				Lg		Lg	07 45 14.8	
	comp=E,76nm,0.3s,baz=143,slow=10.0,SNR=8.4							
APG				LR		LR	07 45 28.1	
	comp=E,4μm,20.4s,baz=284,slow=43							
APG	**El Apazote**	**1.86**	**51**	*‖iP*		**Pn**	**07 44 53.5**	**+0.1**
FAME	**Alcaldia de Sa**	**1.90**	**90**	P		**Pn**	**07 44 54.2**	**+0.4**
NUBE	**Las Nubes**	**2.13**	**88**	*eP*		**Pn**	**07 44 55.3**	**-1.7**
NUBE	**Las Nubes**	**2.13**	**88**	*eP*		**Pn**	**07 44 55.4**	**-1.6**
NUBE	**Las Nubes**	**2.13**	**88**	P		**Pn**	**07 44 57.0**	**0.0**
NUBE	**Las Nubes**	**2.13**	**88**	S		**Sn**	**07 45 22.9**	**+0.5**
LOAL	**Lomas de Alarc**	**2.13**	**86**	P		**Pn**	**07 44 56.8**	**-0.2**
LOAL	**Lomas de Alarc**	**2.13**	**86**	S		**Sn**	**07 45 23.7**	**+1.4**
AVCB	**Coban**	**2.21**	**43**	*eP*		**Pn**	**07 44 59.6**	**+1.4**
AVCB				IAML			07 45 40.9	
	comp=N,105μm,0.6s							
RBDL	**Robledal**	**2.23**	**83**	*eP*		**Pn**	**07 44 57.3**	**-1.1**
RTR	**El Retiro**	**2.26**	**88**	*eP*		**Pn**	**07 44 57.7**	**-1.1**
CEVE	**Cerro Verde**	**2.28**	**90**	*eP*		**Pn**	**07 44 58.8**	**-0.4**
CEVE				*eS*		**Sn**	**07 45 27.5**	**+1.4**
CEVE	**Cerro Verde**	**2.28**	**90**	P		**Pn**	**07 44 58.7**	**-0.5**
CEVE	**Cerro Verde**	**2.28**	**90**	S		**Sn**	**07 45 27.0**	**+0.8**
SBLS	**San Blas**	**2.28**	**90**	*eP*		**Pn**	**07 44 58.2**	**-1.0**
SBLS				*eS*		**Sn**	**07 45 27.7**	**+1.5**
UNIC	**Universidad Ca**	**2.35**	**86**	P		**Pn**	**07 44 59.2**	**-0.8**
UNIC	**Universidad Ca**	**2.35**	**86**	S		**Sn**	**07 45 29.4**	**+1.6**
CCIG	**Comitan**	**2.43**	**356**			**Pn**	**07 45 01.4**	**+0.2**
CCIG	**Comitan**	**2.43**	**356**	*i* P		**Pn**	**07 45 01.6**	**+0.4**
JAYA	**Jayaque - finc**	**2.46**	**94**	*eP*		**Pn**	**07 45 00.2**	**-1.3**
JAYA				*i* S		**Sn**	**07 45 30.1**	**-0.3**
JAYA	**Jayaque - finc**	**2.46**	**94**	P		**Pn**	**07 45 00.8**	**-0.7**
JAYA	**Jayaque - finc**	**2.46**	**94**	S		**Sn**	**07 45 31.6**	**+1.2**
CEDA	**San Andres**	**2.50**	**91**	*eP*		**Pn**	**07 45 02.3**	**+0.2**
CEDA				*eS*		**Sn**	**07 45 32.6**	**+1.3**
PMON	**Piamonte**	**2.58**	**93**	S		**Sn**	**07 45 35.3**	**+1.8**
MTO3	**Montecristo**	**2.59**	**77**			**Pn**	**07 45 01.5**	**-1.9**
MTO3	**Montecristo**	**2.59**	**77**	P		**Pn**	**07 45 02.9**	**-0.5**
LALI	**Alcalda de L**	**2.60**	**98**	P		**Pn**	**07 45 01.8**	**-1.5**
LALI	**Alcalda de L**	**2.60**	**98**	S		**Sn**	**07 45 35.0**	**+1.3**
BQQS	**Boqueron**	**2.62**	**92**	*eP*		**Pn**	**07 45 03.1**	**-0.6**
ESQI	**Esquipulas**	**2.65**	**74**			**Pn**	**07 45 03.2**	**-0.8**
ESQI	**Esquipulas**	**2.65**	**74**	*eP*		**Pn**	**07 45 03.7**	**-0.4**
UTEC	**Universidad Te**	**2.69**	**93**	S		**Sn**	**07 45 37.3**	**+1.1**
PANCS	**Alcalda de**	**2.72**	**95**	S		**Sn**	**07 45 38.1**	**+1.2**
IGN	**Direccin Gen**	**2.72**	**92**	S		**Sn**	**07 45 38.5**	**+1.7**
LOMA	**Loma Larga**	**2.73**	**94**	P		**Pn**	**07 45 04.0**	**-1.2**
UDBS	**Universidad Do**	**2.74**	**92**	S		**Sn**	**07 45 38.9**	**+1.6**
PAVA	**Las Pavas**	**2.95**	**92**	P		**Pn**	**07 45 07.5**	**-0.7**
TGIG		**3.12**	**339**	*eP*		**Pn**	**07 45 09.2**	**-1.4**
PACA	**Pacayal**	**3.56**	**96**	*eP*		**Pn**	**07 45 16.6**	**-0.1**
BLLM	**Bellamira**	**3.65**	**96**	*eP*		**Pn**	**07 45 17.6**	**-0.2**
PETF	**Flores**	**3.67**	**33**			**Pn**	**07 45 18.1**	**+0.1**
PETF	**Flores**	**3.67**	**33**	*eP*		**Pn**	**07 45 18.1**	**+0.1**
CMIG	**Matias Romero**	**4.28**	**319**	Pn		**Pn**	**07 45 24.4**	**-2.0**
	comp=N,52nm,0.3s,baz=160,slow=13,SNR=383							
CMIG				Sn		**Sn**	**07 46 15.0**	**-0.1**
	comp=N,394nm,0.3s,baz=169,slow=22,SNR=6.9							
TGUH	**Tegucigalpa,Un**	**4.56**	**87**			**Pn**	**07 45 29.7**	**-0.7**
TGUH	**Tegucigalpa,Un**	**4.56**	**87**	P		**Pn**	**07 45 29.5**	**-1.0**
CRIN	**San Cristobal**	**4.92**	**103**			**Pn**	**07 45 35.5**	**+0.2**
CRIN	**San Cristobal**	**4.92**	**103**	P		**Pn**	**07 45 35.8**	**+0.5**
CNGN	**Cerro Negro**	**5.30**	**104**			**Pn**	**07 45 40.1**	**-0.4**
CNGN	**Cerro Negro**	**5.30**	**104**	P		**Pn**	**07 45 38.8**	**-1.7**
MGAN	**Managua**	**5.83**	**106**			**Pn**	**07 45 47.6**	**0.0**
MGAN	**Managua**	**5.83**	**106**	P		**Pn**	**07 45 47.8**	**+0.1**
	comp=N,17μmcomp=N,2μm,1.1s							
BOAB	**BOACO BROADBAN**	**6.29**	**102**			**Pn**	**07 45 53.4**	**-0.7**
SIUN	**Universidad Ur**	**6.99**	**90**			**Pn**	**07 46 03.2**	**-0.5**
ELI1	**Hacienda Flor**	**7.03**	**116**	*eP*		**Pn**	**07 46 06.9**	**+2.7**
ALIBA	**Liberia Airpor**	**7.06**	**117**	*eP*		**Pn**	**07 46 06.2**	**+1.6**
SAJU	**San Juanillo,**	**7.18**	**121**	*eP*		**Pn**	**07 46 06.5**	**+0.2**
SACU	**Santa Cruz**	**7.19**	**119**	*eP*		**Pn**	**07 46 07.4**	**+1.0**
TEIG	**Tepich**	**7.26**	**29**	Pn		**Pn**	**07 46 06.6**	**-0.7**
	comp=N,0.1nm,0.3s,baz=316,slow=24,SNR=94							
TEIG				Sn		**Sn**	**07 47 23.1**	**-5.4**
	baz=132,slow=24,SNR=8.0							
TEIG	**Tepich**	**7.26**	**29**			**Pn**	**07 46 06.9**	**-0.5**
TEIG	**Tepich**	**7.26**	**29**	P		**Pn**	**07 46 07.8**	**+0.5**
	comp=N,114μmcomp=N,46μmcomp=N,3μm,0.9s							
JUD3	**Juan Diaz 3**	**7.28**	**119**			**Pn**	**07 46 08.6**	**+1.0**
JUD3	**Juan Diaz 3**	**7.28**	**119**	*eP*		**Pn**	**07 46 08.8**	**+1.2**
PLVR	**Palo Verde**	**7.34**	**118**	*eP*		**Pn**	**07 46 10.3**	**+1.6**
TLIG	**Tlapa**	**7.35**	**301**			**Pn**	**07 46 09.9**	**+1.2**
CUI	**Cuipilapa**	**7.37**	**115**	*eP*		**Pn**	**07 46 10.9**	**+2.1**
JTS	**Las Juntas de**	**7.72**	**116**	Pn		**Pn**	**07 46 14.8**	**+1.1**
	comp=N,2.3nm,0.3s,baz=111,slow=22,SNR=12							
JTS				Sn		**Sn**	**07 47 39.9**	**+0.1**
	baz=305,slow=19							
JTS	**Las Juntas de**	**7.72**	**116**			**Pn**	**07 46 15.9**	**+2.3**
JTS	**Las Juntas de**	**7.72**	**116**	*d iP*		**Pn**	**07 46 15.6**	**+2.0**
JTS	**Las Juntas de**	**7.72**	**116**	*eP*		**Pn**	**07 46 15.7**	**+2.0**
JTS	**Las Juntas de**	**7.72**	**116**	P		**Pn**	**07 46 16.2**	**+2.6**
	comp=N,11μmcomp=N,3μmcomp=N,342nm,0.8s							
TABAC	**Tabacon**	**7.79**	**114**	*eP*		**Pn**	**07 46 18.5**	**+3.9**
ARE1	**Arenal 1**	**7.84**	**115**	*eP*		**Pn**	**07 46 16.8**	**+1.3**
SOCE	**Pocosol**	**7.97**	**115**			**Pn**	**07 46 18.6**	**+1.5**
HDC	**Heredia**	**8.58**	**116**			**Pn**	**07 46 27.8**	**+2.2**
HDC	**Heredia**	**8.58**	**116**	*eP*		Pn	07 46 32.7	+7.1
ACOS	**Acosta**	**8.63**	**117**	*eP*		**Pn**	**07 46 28.5**	**+2.2**
PICV	**PH. Pirrs**	**8.69**	**118**	*eP*		**Pn**	**07 46 29.1**	**+2.1**
UNM	**Universidad Na**	**8.80**	**309**	Pn		**Pn**	**07 46 29.4**	**+0.6**
UNM	**Universidad Na**	**8.80**	**309**	P		**Pn**	**07 46 29.4**	**+0.6**
PITB	**Pirrs, San**	**8.82**	**117**	*eP*		Pn	07 46 33.9	+5.0
VICA	**Volcano Irazu**	**8.83**	**115**	*eP*		**Pn**	**07 46 31.1**	**+1.9**
PIEC	**Cerro El Cedra**	**8.89**	**117**	*eP*		**Pn**	**07 46 31.8**	**+1.8**
BUS1	**Rivas**	**9.11**	**117**	*eP*		**Pn**	**07 46 36.3**	**+3.1**
EDPE	**Pejibaye, P**	**9.45**	**119**	*eP*		**Pn**	**07 46 40.1**	**+2.7**
BURE	**Buenos Aires**	**9.65**	**118**	*eP*		**Pn**	**07 46 42.5**	**+2.4**
DRK0	**Durika**	**9.68**	**117**	*eP*		**Pn**	**07 46 42.6**	**+1.9**
CEUA	**Cerro Uatsi, L**	**9.79**	**114**	*eP*		**Pn**	**07 46 45.4**	**+3.4**
SAIC	**Isla e San And**	**10.07**	**96**	P		**Pn**	**07 46 46.2**	**+0.3**
	comp=N,9μmcomp=N,105nm,1.4s							
ALCO	**Alturas Coton,**	**10.19**	**118**	*eP*		**Pn**	**07 46 48.8**	**+1.2**
PRVC	**Isla de Provid**	**10.32**	**91**			**Pn**	**07 46 49.6**	**+0.3**
PRVC	**Isla de Provid**	**10.32**	**91**	P		**Pn**	**07 46 48.5**	**-0.8**
	comp=N,12μmcomp=N,206nm,1.8s							
BRU2	**Volcan**	**10.39**	**118**			**Pn**	**07 46 52.2**	**+1.8**
MOIG	**Morelia**	**10.56**	**305**			**Pn**	**07 46 54.7**	**+1.9**
SOR	**Soroa**	**12.31**	**42**			**Pn**	**07 47 15.7**	**-0.7**
SOR	**Soroa**	**12.31**	**42**	P		**Pn**	**07 47 15.7**	**-0.7**
BCIP	**Isla Barro Col**	**12.76**	**110**	P		**Pn**	**07 47 18.4**	**-4.3**
ZAIG	**Zacatecas**	**13.41**	**313**			**Pn**	**07 47 32.6**	**+0.9**
MGV	**Manicaragua**	**14.05**	**53**	*eP*		**Pn**	**07 47 41.2**	**+1.1**
MTDJ	**Mount Denham**	**14.54**	**71**	*i* P		**Pn**	**07 47 47.6**	**+0.7**
MTDJ	**Mount Denham**	**14.54**	**71**	*eP*		**Pn**	**07 47 48.9**	**+2.1**
MTDJ	**Mount Denham**	**14.54**	**71**	P		**Pn**	**07 47 46.0**	**-0.8**
	comp=N,11μmcomp=N,159nm,1.0s							
CCCC	**Ccc**	**15.39**	**60**	*eP*		**P**	**07 48 07.8**	**+6.3**
LMGC	**Las Mercedes**	**15.59**	**65**	*eP*		**P**	**07 48 05.4**	**+1.5**
061Z	**Ochoppi**	**15.84**	**39**	Pn		**Pn**	**07 48 02.1**	**-1.4**
061Z				IAmb		IAmb	07 48 10.1	
	comp=Z,216nm,1.1s							
CHIV	**Chivirico**	**16.08**	**66**	*eP*		**P**	**07 48 10.6**	**+1.3**
EF04	**Eagle Ford 04**	**16.22**	**341**	Pn		**Pn**	**07 48 08.5**	**+0.2**
HKT	**Hockley**	**16.42**	**348**	*‖eP*		**Pn**	**07 48 11.7**	**+0.9**
MARVS	**Santiago de Cu**	**16.54**	**66**	*eP*		**P**	**07 48 16.9**	**+2.4**
RCC	**Rio Carpintero**	**16.72**	**66**	*eP*		**P**	**07 48 22.6**	**+6.2**
PINC	**Pinares de May**	**16.80**	**65**	*eP*		**P**	**07 48 21.1**	**+3.8**
DBBC	**Dabeiba**	**16.91**	**112**	P		**P**	**07 48 20.6**	**+2.0**
GTBY	**Guantanamo Bay**	**17.22**	**67**	*eP*		P	07 48 31.0	+9.1
GTBY	**Guantanamo Bay**	**17.22**	**67**	P		**Pn**	**07 48 20.2**	**-0.8**
	comp=Z,9μmcomp=Z,2μmcomp=Z,92nm,1.1s							
UREC	**San Jos de Ur**	**17.24**	**109**	P		**P**	**07 48 22.1**	**-0.1**
	comp=Z,1μmcomp=Z,25nm,0.8s							
DWPF	**Disney Wildern**	**17.25**	**33**	P		**Pn**	**07 48 21.3**	**0.0**
DWPF				IAmb		IAmb	07 48 25.8	
	comp=Z,152nm,0.9s							
DWPF	**Disney Wildern**	**17.25**	**33**	*eP*		**P**	**07 48 23.3**	**+1.1**
DRIO	**Del Rio**	**17.45**	**334**			**Pn**	**07 48 23.6**	**-0.1**
NMDO	**Nuevo Mundo**	**17.54**	**65**	*eP*		**P**	**07 48 31.8**	**+6.3**
QMBU	**Quimbuelo**	**17.57**	**67**	*eP*		**P**	**07 48 29.5**	**+3.6**
MOAC	**Moa**	**17.59**	**65**	*eP*		**P**	**07 48 32.5**	**+6.5**
CBOC	**Ciudad Bolivar**	**17.60**	**115**	P		**Pn**	**07 48 25.8**	**0.0**
	comp=Z,7μmcomp=Z,2μmcomp=Z,53nm,1.0s							
435B	**Jarrell**	**17.63**	**344**			**Pn**	**07 48 25.9**	**0.0**
553A	**Crawfordville**	**17.69**	**22**	P		**Pn**	**07 48 26.3**	**-0.3**
656A	**Willston**	**17.75**	**28**	P		**Pn**	**07 48 27.1**	**-0.3**
BRAL	**Brewton**	**17.83**	**14**	P		**P**	**07 48 28.9**	**+0.3**
BRAL				IAmb		IAmb	07 48 35.3	
	comp=Z,228nm,0.9s							
PLMC	**San Jos del P**	**17.83**	**118**	P		**P**	**07 48 29.4**	**+0.6**
	comp=Z,8μmcomp=Z,2μmcomp=Z,42nm,1.3s							
NATX	**Nacogdoches**	**18.00**	**353**	P		**P**	**07 48 29.8**	**-0.7**
NATX				IAmb		IAmb	07 48 34.3	
	comp=Z,120nm,0.8s							
HPIG		**18.27**	**318**	P		**Pn**	**07 48 34.8**	**+0.8**
YOTC	**Yotoco, Valle**	**18.27**	**121**	P		**Pn**	**07 48 34.5**	**+0.5**
	comp=Z,6μmcomp=Z,1μmcomp=Z,42nm,1.0s							
JAMC	**Jamundi, Valle**	**18.43**	**124**	P		**Pn**	**07 48 36.3**	**+0.2**
	comp=Z,7μmcomp=Z,1μmcomp=Z,44nm,1.0s							
GUY2C	**Guyana, Caldas**	**18.47**	**116**	P		**Pn**	**07 48 37.1**	**+0.4**
	comp=Z,10μmcomp=Z,3μmcomp=Z,81nm,1.1s							
FLF1	**Flavio Alfaro-**	**18.53**	**139**	P		**Pn**	**07 48 38.7**	**+1.6**
PTBC	**PUERTO BERRIO,**	**18.69**	**111**	P		**P**	**07 48 38.4**	**+0.2**
	comp=Z,6μmcomp=Z,1μmcomp=Z,26nm,1.0s							
BBAC	**Balboa, Cauca**	**18.70**	**128**	P		**Pn**	**07 48 40.1**	**+0.8**
	comp=Z,8μmcomp=Z,1μmcomp=Z,51nm,1.1s							
ANIL	**Santa Ana**	**18.80**	**118**	P		**Pn**	**07 48 40.2**	**-0.3**
	comp=Z,3μmcomp=Z,59nm,0.5s							
POPC	**Popayan, Colom**	**18.83**	**125**	P		**Pn**	**07 48 41.3**	**+0.4**
	comp=Z,9μmcomp=Z,2μmcomp=Z,49nm,1.1s							
TXAR	**Lajitas Array**	**18.84**	**327**	P		**Pn**	**07 48 41.5**	**+0.8**
	comp=Z,1.7nm,0.3s,baz=150,slow=12,SNR=57							
TXAR				LR		LR	07 57 37.9	
	comp=Z,3μm,18.2s,baz=125,slow=42							
	comp=Z,75nm,0.9s							
TX31	**Lajitas Ar. Si**	**18.84**	**327**	P		**Pn**	**07 48 41.2**	**+0.4**
TX31				IAmb		IAmb	07 48 46.3	
	comp=Z,71nm,0.9s							
CRJC	**Cerrejon, Guaj**	**18.85**	**96**	P		**Pn**	**07 48 40.8**	**-0.2**
	comp=Z,6μmcomp=Z,1μmcomp=Z,27nm,0.8s							
146A	**Union**	**18.89**	**8**	P		**P**	**07 48 40.3**	**0.0**
146A				IAmb		IAmb	07 48 48.8	
	comp=Z,73nm,0.9s							
OZNA	**Ozona**	**18.97**	**335**	P		**Pn**	**07 48 42.5**	**+0.2**
OZNA				IAmb		IAmb	07 48 54.6	
	comp=Z,60nm,0.7s							
OCAC	**Ocana**	**19.13**	**105**	P		**P**	**07 48 41.3**	**-1.8**
GCUF	**Volcan Galeras**	**19.14**	**130**	P		**Pn**	**07 48 45.9**	**+1.0**
	comp=Z,7μmcomp=Z,2μmcomp=Z,32nm,0.9s							
TULM	**Tulcn-Chalpat**	**19.16**	**132**	P		Pn	07 48 54.8	+10
BRJC	**Barrancabermej**	**19.17**	**109**	P		**Pn**	**07 48 45.4**	**+0.7**
	comp=Z,2μmcomp=Z,58nm,0.9s							
ORTC	**Ortega, Tolima**	**19.23**	**119**	P		**P**	**07 48 44.5**	**+0.4**
	comp=Z,8μmcomp=Z,2μmcomp=Z,178nm,1.1s							
ROSC	**El Rosal**	**19.56**	**116**	P		**Pn**	**07 48 50.2**	**+0.4**
	comp=Z,31nm,0.8s,baz=30,slow=3.7,SNR=22							
ROSC				LR		LR	07 57 09.6	
	comp=Z,4μm,20.1s,baz=318,slow=40							
ROSC	**El Rosal**	**19.56**	**116**	P		**Pn**	**07 48 50.7**	**+0.9**
	comp=Z,12μmcomp=Z,3μmcomp=Z,126nm,1.2s							
URIC	**Uribia, Colomb**	**19.60**	**94**	P		**P**	**07 48 45.9**	**-2.2**
PRAC	**Prado**	**19.64**	**119**	P		**Pn**	**07 48 49.9**	**-0.4**
	comp=Z,8μmcomp=Z,2μmcomp=Z,114nm,0.9s							
CVER	**Cruz Verde, Cu**	**19.93**	**116**	P		**Pn**	**07 48 55.3**	**+1.1**
ABTX	**Abilene, Hawle**	**19.96**	**341**	P		**P**	**07 48 52.4**	**+0.4**
ABTX				IAmb		IAmb	07 48 59.1	
	comp=Z,51nm,0.6s							
GARC	**Garzon, Huila**	**19.98**	**124**	P		**P**	**07 48 53.4**	**+0.8**
	comp=Z,8μmcomp=Z,1μmcomp=Z,59nm,0.9s							
PAMC	**Pamplona, Colo**	**20.00**	**107**	P		**P**	**07 48 48.3**	**-4.8**
MNHN	**Monahans**	**20.04**	**332**	P		Pn	07 48 54.1	-0.8
LPIG	**La Paz**	**20.10**	**303**	P		Pn	07 48 56.3	+0.7
	comp=Z,85nm,1.2s,baz=257,slow=6.7,SNR=5.8							
LPIG				LR		LR	07 56 33.5	
	comp=Z,4μm,18.4s,baz=121,slow=36							
	comp=Z,85nm,1.2s							
CHIC	**Chingaza**	**20.18**	**115**	P		Pn	07 48 56.5	-0.6
	comp=Z,9μmcomp=Z,2μmcomp=Z,100nm,1.2s							
RUSC	**La Rusia**	**20.20**	**111**	Pn		**P**	**07 48 55.9**	**+0.7**
RUSC				IAmb		IAmb	07 49 08.8	
	comp=Z,42nm,0.8s							
RUSC	**La Rusia**	**20.20**	**111**	P		**P**	**07 48 49.3**	**-5.9**
FLOC	**Florencia**	**20.22**	**126**	P		**P**	**07 48 56.0**	**+1.1**
FLOC				IAmb		IAmb	07 49 11.9	
	comp=Z,182nm,1.2s							
FLOC	**Florencia**	**20.22**	**126**	P		Pn	07 48 56.7	-0.5
	comp=Z,7μmcomp=Z,2μmcomp=Z,241nm,1.4s							
URMC	**La Uribe, Meta**	**20.31**	**120**	P		**P**	**07 48 57.0**	**+1.0**
	comp=Z,1μmcomp=Z,100nm,1.1s							
VILC	**Villavicencio,**	**20.46**	**117**	P		Pn	07 49 00.4	+0.3
	comp=Z,783nmcomp=Z,113nm,0.8s							
SDDR	**Presa de Saban**	**20.48**	**73**	P		**P**	**07 48 57.5**	**-0.2**
SDDR				IAMs_20		IAMs_20	07 57 24.4	
	comp=Z,11μm,19.0s							
SC01	**Santiago de Io**	**21.09**	**72**	P		**P**	**07 49 04.2**	**0.0**
MACC	**Macarena, Meta**	**21.35**	**121**	P		**P**	**07 49 07.8**	**+0.6**
	comp=Z,9μmcomp=Z,2μmcomp=Z,112nm,0.9s							
HTMS	**Hat Mesa**	**21.39**	**332**	P		**P**	**07 49 08.2**	**+0.7**
CLN7	**Carlsbad 7**	**21.42**	**332**	P		**P**	**07 49 08.3**	**+0.5**
SDV	**Santo Domingo**	**21.48**	**101**	P		**P**	**07 49 05.5**	**-3.3**
	comp=Z,10.0nm,0.5s,baz=295,slow=6.5,SNR=14							
SDV				S		**S**	**07 53 04.1**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=61,slow=17,SNR=1.3							
SDV				LR		LR	07 58 22.6	

HRV Adam Dziewonsk 33.57 28 IAMs_20 IAMs_20 08 04 39.4
comp=Z,5µm,22.0s
WES Weston 33.58 28 IAMs_20 IAMs_20 08 05 30.8
comp=Z,6µm,20.0s
BCX Boston College 33.61 28 IAMs_20 IAMs_20 08 05 21.6
comp=Z,7µm,19.0s
ELK Elko 33.64 327 LR LR 08 06 26.6
comp=Z,6µm,20.5s,baz=149,slow=39
ELK Elko 33.64 327 IAMs_20 IAMs_20 08 06 14.9
comp=Z,6µm,20.0s
PKD Bear Valley Ra 33.78 316 IAMs_20 IAMs_20 08 06 15.4
comp=Z,6µm,18.0s
NVAR Mina Array Bea 33.81 321 P P 07 51 03.8 +2.2
comp=Z,58nm,0.8s,baz=131,slow=7.7,SNR=136
NVAR PcP PcP 07 53 41.4 +1.5
comp=Z,4.5nm,0.7s,baz=140,slow=3.5,SNR=4.8
NVAR LR LR 08 06 36.6
comp=Z,7µm,18.7s,baz=132,slow=39
LONY Lake Ozonia 34.06 22 IAMs_20 IAMs_20 08 05 13.7
comp=Z,5µm,20.0s
HNH Hanover 34.21 26 IAMs_20 IAMs_20 08 06 06.5
comp=Z,5µm,18.0s
HULI Fort Hunter Li 34.30 315 IAMs_20 IAMs_20 08 05 59.0
comp=Z,5µm,19.0s
VT1 Waterbury 34.53 25 IAMs_20 IAMs_20 08 05 43.8
comp=Z,6µm,20.0s
I62A Tamworth 34.75 27 IAMs_20 IAMs_20 08 06 38.9
comp=Z,5µm,18.0s
SAO San Andreas Ge 34.84 316 IAMs_20 IAMs_20 08 06 58.4
comp=Z,5µm,18.0s
CMB Columbia Colle 34.87 319 IAMs_20 IAMs_20 08 07 04.9
comp=Z,4µm,18.0s
FORD Fort Ord Natur 35.03 316 IAMs_20 IAMs_20 08 06 52.3
comp=Z,5µm,19.0s
I63A Otisfield 35.23 27 IAMs_20 IAMs_20 08 07 08.3
comp=Z,4µm,20.0s
MHC Mount Hamilton 35.29 317 IAMs_20 IAMs_20 08 07 25.2
comp=Z,5µm,18.0s
HLID Hailey 35.33 331 IAMs_20 IAMs_20 08 07 44.3
comp=Z,5µm,18.0s
MACA Manacapuru-AM 35.33 116 eP P 07 51 14.5 -0.3
H62A Milan 35.39 26 IAMs_20 IAMs_20 08 07 16.8
comp=Z,6µm,18.0s
MCMT McKenzie Canyo 35.62 334 P P 07 51 18.8 +1.7
JRSC Jasper Ridge 35.72 317 IAMs_20 IAMs_20 08 07 23.6
comp=Z,5µm,18.0s
BOZ Bozeman (W) 35.76 336 P P 07 51 19.0 +0.8
BOZ IAmb IAmb 07 51 23.2
comp=Z,15nm,0.8s
BOZ Bozeman (W) 35.76 336 P P 07 51 19.0 +0.8
BOZ pmax pmax
comp=Z,15nm,0.9s
BOZ MLR MLR
comp=Z,3µm,20.0s
MFID Camas Ranch 35.89 330 IAMs_20 IAMs_20 08 08 19.3
comp=Z,5µm,18.0s
DLMT Dillon 35.95 335 P P 07 51 21.5 +1.6
DLMT IAmb IAmb 07 51 24.2
comp=Z,19nm,0.9s
CVS Carmenet Viney 36.38 318 IAMs_20 IAMs_20 08 08 09.1
comp=Z,5µm,19.0s
FARB Farallon Islan 36.39 316 IAMs_20 IAMs_20 08 07 13.3
comp=Z,4µm,19.0s
ULM Lac du Bonnet 36.45 356 P P 07 51 20.9 -2.9
comp=Z,5.0nm,0.7s,baz=180,slow=8.7,SNR=4.9
ULM PcP PcP 07 53 47.1 +0.1
comp=Z,17nm,0.9s,baz=112,slow=1.4,SNR=6.3
ULM LR LR 08 09 42.8
comp=Z,3µm,18.8s,baz=174,slow=42
ULM Lac du Bonnet 36.45 356 eP P 07 51 22.2 -1.6
MCCM Marconi Confer 36.55 317 IAMs_20 IAMs_20 08 07 41.6
comp=Z,5µm,19.0s
WVOR Wild Horse Val 36.64 326 IAMs_20 IAMs_20 08 08 40.3
comp=Z,5µm,18.0s
PKME Peaks-Kenny Pk 36.75 27 IAMs_20 IAMs_20 08 06 25.6
comp=Z,5µm,21.0s
PLID Pearl Lake 37.23 332 IAMs_20 IAMs_20 08 09 03.6
comp=Z,4µm,18.0s
O02D Mt. Diablo Mer 37.63 320 IAMs_20 IAMs_20 08 07 21.1
comp=Z,4µm,20.0s
E62A Clayton Lake 37.72 25 IAMs_20 IAMs_20 08 09 40.3
comp=Z,4µm,18.0s
N02D Trinity Center 38.05 321 IAMs_20 IAMs_20 08 09 03.0
comp=Z,4µm,19.0s
LPAZ La Paz 38.10 141 P P 07 51 38.8 -0.1
comp=Z,3.2nm,0.6s,baz=324,slow=4.9,SNR=22
LPAZ LR LR 08 07 02.5
comp=Z,3µm,20.6s,baz=320,slow=36
comp=Z,3.2nm,0.6s
LPAZ La Paz 38.10 141 P P 07 51 38.8 -0.1
LPAZ La Paz 38.10 141 eP P 07 51 37.6 -1.3
LPAZ La Paz 38.10 141 P P 07 51 39.2 +0.3
KHBM Hayfork Bally 38.18 320 IAMs_20 IAMs_20 08 07 40.4
comp=Z,4µm,19.0s
I07A Izee 38.23 327 P P 07 51 40.3 +1.2
I07A IAmb IAmb 07 51 44.6
comp=Z,33nm,0.9s
KMRM Mail Ridge 38.24 319 IAMs_20 IAMs_20 08 08 34.8
comp=Z,5µm,18.0s
M02C Callahan 38.39 322 IAMs_20 IAMs_20 08 09 26.9
comp=Z,6µm,19.0s
AP01 Chacalluta 38.46 146 IAMs_20 IAMs_20 08 06 06.3
comp=Z,4µm,20.0s
YBH Yreka Blue Hor 38.51 322 LR LR 08 09 53.4
comp=Z,359nm,18.2s,baz=128,slow=40
KMPM Mount Pierce 38.61 319 IAMs_20 IAMs_20 08 09 43.9
comp=Z,5µm,18.0s
PB12 IPOC Station P 38.67 146 IAMs_20 IAMs_20 08 06 10.7
comp=Z,4µm,20.0s
JCC Jacoby Creek, 38.78 320 IAMs_20 IAMs_20 08 08 08.3
comp=Z,4µm,19.0s
PSGCX Pisagua 39.58 147 IAMs_20 IAMs_20 08 05 46.5
comp=Z,4µm,20.0s
MDP Montagnes des 39.70 99 LR LR 08 09 05.2
comp=Z,3µm,21.8s,baz=298,slow=38
HAWA Hanford 39.86 330 IAMs_20 IAMs_20 08 10 51.5
comp=Z,4µm,18.0s
NEW Newport 40.15 334 LR LR 08 11 13.9
comp=Z,4µm,18.9s,baz=137,slow=40
NEW Newport 40.15 334 IAMs_20 IAMs_20 08 11 02.8
comp=Z,5µm,18.0s
ITTB Itaituba 40.25 114 eP P 07 51 55.2 -1.1
COR Corvallis 40.61 325 IAMs_20 IAMs_20 08 11 03.5
comp=Z,4µm,18.0s
VILB Vilhena 41.23 129 P P 07 52 04.6 +0.3
VILB Vilhena 41.23 129 eP P 07 52 04.7 +0.3
NPGB Novo Progresso 41.85 117 eP P 07 52 07.7 -1.7
SIV San Ignacio 42.56 133 LR LR 08 09 14.7
comp=Z,4µm,20.1s,baz=320,slow=35
PDRB Porto dos Gac 43.13 124 eP P 07 52 18.1 -1.8
CLDB Colider 43.48 123 eP P 07 52 21.1 -1.5
PTLB Pontes e Lacer 43.60 131 eP P 07 52 24.0 +0.5
RPN Rapa Nui 44.08 202 LR LR 08 06 06.8
comp=Z,3µm,21.7s,baz=8.5,slow=29
SCHQ Schefferville 45.36 20 P P 07 52 33.9 -3.2
comp=Z,28nm,0.8s,baz=230,slow=6.7,SNR=12
SCHQ LR LR 08 12 24.2
comp=Z,7µm,20.5s,baz=205,slow=37
comp=Z,28nm,0.8s
TMAB Tom-Au,PA,Br 46.38 107 eP P 07 52 43.8 -1.9
SALV Santo Antonio 46.47 128 eP P 07 52 45.5 -0.9
SNDB Serra Nova Dou 47.79 121 eP P 07 52 55.8 -0.9
BBB Bella Bella 47.91 331 LR LR 08 14 29.6
comp=Z,1µm,19.1s,baz=146,slow=38
PP1B Ponte de Pedra 48.12 129 eP P 07 52 58.5 -0.7
BDQN Bodoquena, MS 48.58 134 eP P 07 53 01.7 -1.0
H03N2 Juan Fernandez 48.64 165 T T 08 45 37.0
baz=347,slow=76,SNR=13
H03N1 Juan Fernandez 48.64 165 T T 08 45 31.6
baz=347,slow=76,SNR=20
H03N3 Juan Fernandez 48.65 165 T T 08 45 26.4
baz=347,slow=76,SNR=22
MURT Porto Murtinho 48.80 136 eP P 07 53 03.4 -0.9
AQDB Aquidauana 49.34 133 eP P 07 53 07.2 -1.3
ARAG Araguaiana, MT 49.38 125 eP P 07 53 08.2 -0.7
SMTB Santa Maria do 49.48 115 eP P 07 53 08.8 -1.0
VA06 Catapilco 50.20 157 IAMs_20 IAMs_20 08 09 12.0
comp=Z,3µm,20.0s
VA01 Torpederas 50.49 158 IAMs_20 IAMs_20 08 09 08.6
comp=Z,3µm,21.0s
CFA Coronel Fontan 50.60 154 LR LR 08 10 39.9
comp=Z,815nm,21.0s,baz=357,slow=31
MT02 Curacav 50.89 157 IAMs_20 IAMs_20 08 09 42.1
comp=Z,3µm,20.0s
PEL Peldehue 50.95 157 IAMs_20 IAMs_20 08 09 55.0
comp=Z,2µm,19.0s
VA05 Santo Domingo 51.07 158 IAMs_20 IAMs_20 08 09 35.0
comp=Z,3µm,21.0s
MT05 Renca 51.15 157 IAMs_20 IAMs_20 08 09 49.2
comp=Z,3µm,22.0s
U35K Hyder 51.16 334 P P 07 53 22.5 +0.8
baz=130
YKA Yellowknife Ar 51.18 347 P P 07 53 21.4 -0.4
comp=Z,12nm,0.7s,baz=103,slow=12,SNR=51
YKA PcP PcP 07 54 37.2 +0.6
comp=Z,9.3nm,0.8s,baz=158,slow=3.3,SNR=9.4
comp=Z,12nm,0.7s
YKAW3 Yellowknife Wh 51.24 347 P P 07 53 21.7 -0.6
YKAW3 IAmb IAmb 07 53 24.5
comp=Z,17nm,0.8s
MT16 CCHEN 51.27 157 IAMs_20 IAMs_20 08 09 35.2
comp=Z,3µm,21.0s
TOAD Toad River Com 51.30 339 P P 07 53 23.7 +0.9
baz=137,SNR=8.5
MT03 Universidad Ad 51.33 157 IAMs_20 IAMs_20 08 09 36.9
comp=Z,2µm,21.0s
MT01 Popeta 51.38 158 IAMs_20 IAMs_20 08 09 56.4
comp=Z,3µm,20.0s
MT09 Talagante 51.40 158 IAMs_20 IAMs_20 08 09 57.8
comp=Z,3µm,21.0s
AMBA Amambai (Brazi 51.44 135 eP P 07 53 23.6 -0.8
MT08 Bocatoma Ro 51.48 156 IAMs_20 IAMs_20 08 10 15.7
comp=Z,2µm,18.0s
V35K Ketchikan 51.50 332 IAMs_20 IAMs_20 08 17 59.2
comp=Z,2µm,20.0s
V35K Ketchikan 51.50 332 P P 07 53 25.3 +1.0
baz=128
BO04 La Punta 51.73 157 IAMs_20 IAMs_20 08 10 07.6
comp=Z,3µm,20.0s
LMEL Las Melosas 51.76 157 IAMs_20 IAMs_20 08 09 51.3
comp=Z,3µm,21.0s
KOTAN Kotaneelee Air 51.85 340 P P 07 53 27.8 +0.9
139,SNR=16
BO01 Tunca 51.92 158 IAMs_20 IAMs_20 08 10 12.5
comp=Z,3µm,21.0s
T35M Bob Quinn 51.95 334 P P 07 53 28.6 +0.9
baz=130,SNR=8.5
LIRD Liard River Hi 52.01 339 P P 07 53 28.8 +0.7
baz=136,SNR=7.0
CPUP Villa Florida 52.24 140 P P 07 53 28.9 -1.3
comp=Z,1.7nm,0.9s,baz=197,slow=9.0,SNR=9.0
CPUP LR LR 08 17 15.2
comp=Z,744nm,18.4s,baz=184,slow=38
comp=Z,1.7nm,0.9s
CPUP Villa Florida 52.24 140 P P 07 53 29.0 -1.3
CPUP Villa Florida 52.24 140 P P 07 53 29.0 -1.3
CPUP Villa Florida 52.24 140 eP P 07 53 29.4 -0.9
CRAG Craig 52.27 332 P P 07 53 31.2 +1.2
baz=126
BO02 Sierra Bellavi 52.39 158 IAMs_20 IAMs_20 08 10 26.9
comp=Z,3µm,20.0s
BDFB Brasilia 52.41 122 P P 07 53 30.4 -1.4
comp=Z,4.4nm,0.8s,baz=333,slow=5.5,SNR=9.9
comp=Z,5.4nm,0.8s
BDFB Brasilia 52.41 122 P P 07 53 31.1 -0.7
BDFB Brasilia 52.41 122 P P 07 53 31.1 -0.7
BDFB pmax pmax
comp=Z,16nm,1.2s
FRB Frobisher Bay 52.46 13 LR LR 08 17 37.4
comp=Z,6µm,18.1s,baz=200,slow=38
WRAK Wrangell Islan 52.49 333 P P 07 53 32.4 +0.7
baz=127
U33K Whale Pass 52.65 332 P P 07 53 33.7 +0.9
baz=126
DLBC Dease Lake 52.81 336 LR LR 08 20 13.4
comp=Z,2µm,18.1s,baz=114,slow=41
DLBC Dease Lake 52.81 336 P P 07 53 35.2 +1.1
baz=131,SNR=33
TAOE Nuku Hiva Isla 52.87 247 eP P 07 53 30.8 -4.4
comp=Z,212nm,24.3s
TAOE eS S 08 00 59.7 -1.3
TAOE comp=Z,2µm,25.0s eSS SS 08 04 38.3 -2.3
TAOE comp=Z,654nm,25.1s eLR LR 08 08 51.1
comp=Z,3µm,26.0s
S34M Telegraph Cree 52.91 335 P P 07 53 36.0 +1.3
baz=130,SNR=5.9
T33K Petersburg 53.00 333 P P 07 53 36.8 +1.4
baz=127
ML02 Panimavida 53.03 159 IAMs_20 IAMs_20 08 10 33.0
comp=Z,2µm,20.0s
SDBA SAO DESIDERIO 53.44 117 eP P 07 53 38.2 -1.2
WTLY Watson Lake, Y 53.48 338 P P 07 53 40.4 +1.5
baz=134,SNR=32
IPMB Ipameri, GO 53.51 125 eP P 07 53 38.9 -0.9
R33M Jennings River 53.81 336 P P 07 53 42.6 +1.0
R33M IAmb IAmb 07 53 46.2
comp=Z,25nm,0.9s
R33M Jennings River 53.81 336 P P 07 53 42.5 +1.0
baz=128,SNR=14
BI02 San Fabin de 53.90 159 IAMs_20 IAMs_20 08 11 09.9
comp=Z,2µm,20.0s
Q32M Nakina River 54.04 336 P P 07 53 44.3 +1.0
baz=129
WRGLY Wrigley 54.05 343 P P 07 53 44.3 +1.3
baz=141
S32K Killisnoo 54.10 333 P P 07 53 44.9 +1.4
baz=126
SIT Sitka 54.20 332 P P 07 53 45.8 +1.6
baz=125
R32K Eaglecrest 54.55 334 P P 07 53 47.6 +0.8
baz=126
PTGB Pitanga 54.63 134 eP P 07 53 46.5 -1.4
BB19B Bebedouro 54.99 128 eP P 07 53 49.1 -1.4
P32M Atlin 55.01 336 P P 07 53 51.0 +0.8
baz=128,SNR=6.0
P33M Teslin, Yukon 55.05 337 IAMs_20 IAMs_20 08 20 29.7
comp=Z,3µm,20.0s
P33M Teslin, Yukon 55.05 337 P P 07 53 51.0 +0.6
baz=129,SNR=12
S31K Pelican 55.11 333 IAMs_20 IAMs_20 08 19 26.7
comp=Z,3µm,20.0s
S31K Pelican 55.11 333 P P 07 53 51.7 +0.9
baz=124
R31K City Hall, Gus 55.16 334 P P 07 53 52.0 +0.9
baz=125
JANB Januaria 55.20 120 eP P 07 53 51.4 -0.8
SKAG Skagway 55.59 335 P P 07 53 54.9 +0.7
baz=126
N32M Quiet Lake 55.75 337 IAMs_20 IAMs_20 08 22 15.9
comp=Z,3µm,19.0s
N32M Quiet Lake 55.75 337 P P 07 53 56.7 +1.3
baz=129
RKT Rikitea 55.87 229 eP P 07 53 54.5 -2.2
RKT comp=Z,3µm,42.8s eS S 08 01 44.9 +4.0
RKT comp=Z,4µm,28.2s eLQ LQ 08 07 58.6
RKT comp=Z,6µm,37.2s eLR LR 08 10 23.0
comp=Z,14µm,27.5s
PLBC Pleasant Camp 56.02 334 P P 07 53 58.9 +1.6
baz=125
WHY Whitehorse 56.13 336 P P 07 53 59.6 +1.3
baz=127,SNR=8.4
LR04 Corral 56.17 163 IAMs_20 IAMs_20 08 12 49.1
comp=Z,3µm,19.0s
P30M Million Dollar 56.65 335 P P 07 54 03.1 +1.2
baz=125,SNR=6.5
O30N Mendenhall 56.67 336 P P 07 54 02.9 +0.8
O30N IAMs_20 IAMs_20 08 20 46.8
comp=Z,3µm,19.0s
O30N Mendenhall 56.67 336 P P 07 54 03.1 +1.0
baz=126,SNR=16
P29M Windy Craggy 56.70 334 P P 07 54 03.0 +0.8
baz=124
IVI Ivijut 56.81 24 P P 07 54 00.7 -2.1
M31M Drury Creek, Y 56.90 338 IAMs_20 IAMs_20 08 21 25.5
comp=Z,3µm,19.0s
M31M Drury Creek, Y 56.90 338 P P 07 54 04.6 +1.1
baz=128,SNR=11
N31M Braeburn, Yuko 56.98 337 P P 07 54 05.0 +0.8
baz=127,SNR=12
HYT Haines Junctio 57.27 335 P P 07 54 07.3 +0.9
baz=124
SPB Sao Paulo 57.28 130 IAMs_20 IAMs_20 08 21 20.4
comp=Z,2µm,19.0s
VAO Valinhos 57.29 129 eP P 07 54 06.9 -0.1
O29M Mount Kennedy 57.42 335 IAMs_20 IAMs_20 08 21 16.7
comp=Z,3µm,20.0s
O29M Mount Kennedy 57.42 335 P P 07 54 08.0 +0.6
baz=123,SNR=7.7
N30M Aishikik Lake 57.47 336 P P 07 54 08.6 +0.9
N30M IAmb IAmb 07 54 13.1
comp=Z,24nm,0.9s
N30M IAMs_20 IAMs_20 08 20 52.0
comp=Z,2µm,21.0s
N30M Aishikik Lake 57.47 336 P P 07 54 08.1 +0.4
baz=125,SNR=11
CPSB Cacapava Do Su 57.54 140 eP P 07 54 08.3 -0.2
BCPM Bancas Point 57.68 334 IAMs_20 IAMs_20 08 20 45.5
comp=Z,3µm,19.0s
YUK6 Outpost Mounta 57.69 335 P P 07 54 09.6 +0.2
baz=124,SNR=5.8
PLCA Paso Flores 57.82 161 P P 07 54 10.9 +0.6
comp=Z,5.4nm,1.1s,baz=331,slow=5.8,SNR=3.6
PLCA LR LR 08 14 27.4
comp=Z,3µm,18.4s,baz=357,slow=31
comp=Z,5.4nm,1.1s
PLCA Paso Flores 57.82 161 P P 07 54 12.2 +1.8
PLCA IAmb IAmb 07 54 16.1
comp=Z,34nm,1.6s
PLCA Paso Flores 57.82 161 P P 07 54 12.2 +1.8
PLCA pmax pmax
comp=Z,34nm,1.7s
PLCA Paso Flores 57.82 161 eP P 07 54 11.2 +0.9
BSCB Bom Sucesso 57.86 126 eP P 07 54 10.0 -1.0
M30M Minto, Yukon 58.01 337 IAMs_20 IAMs_20 08 23 04.1
comp=Z,3µm,19.0s
M30M Minto, Yukon 58.01 337 P P 07 54 11.6 +0.1
baz=126,SNR=14
PINM Pinnacle 58.02 334 P P 07 54 11.7 +0.2
baz=121
PCA Pinnacle 58.02 334 IAMs_20 IAMs_20 08 20 55.4
comp=Z,3µm,20.0s
YUK4 Talbot Arm 58.02 336 P P 07 54 12.2 +0.4
baz=124,SNR=7.0
MAYO Mayo, Yukon 58.30 339 P P 07 54 14.1 +0.7
baz=128,SNR=13
O28M Mount Upton 58.35 335 IAMs_20 IAMs_20 08 23 10.9
comp=Z,3µm,19.0s
O28M Mount Upton 58.35 335 P P 07 54 14.5 +0.4
baz=122
YUK8 Steele Glacier 58.44 335 P P 07 54 14.9 +0.2
baz=122
M29M Somme Creek 58.57 337 P P 07 54 15.9 +0.5
baz=124,SNR=51
TABL Table Mountain 58.58 334 IAMs_20 IAMs_20 08 21 12.2
comp=Z,3µm,20.0s
LOGN Logan Glacier 58.72 334 IAMs_20 IAMs_20 08 21 29.8
comp=Z,3µm,20.0s
LL01 San Ignacio de 58.77 163 IAMs_20 IAMs_20 08 14 53.9
comp=Z,2µm,18.0s
TRQA Tornquist 58.79 153 IAMs_20 IAMs_20 08 15 35.9
comp=Z,2µm,20.0s
MESA MESA 58.79 333 IAMs_20 IAMs_20 08 21 51.9
comp=Z,3µm,18.0s
MESA MESA 58.79 333 P P 07 54 17.5 +0.4
baz=120
L29M L29M 58.82 337 IAMs_20 IAMs_20 08 23 28.4
comp=Z,3µm,19.0s
L29M L29M 58.82 337 P P 07 54 17.6 +0.6
baz=125,SNR=17
LL07 Hotel Espejo d 58.90 164 IAMs_20 IAMs_20 08 14 00.4
comp=Z,2µm,19.0s
CTGM Chitina Glacie 58.93 334 IAMs_20 IAMs_20 08 21 37.5
comp=Z,2µm,20.0s
CTG Chitna Glacier 58.93 334 P P 07 54 18.2 +0.2
baz=120
RCBR Riachuelo 58.97 106 IAMs_20 IAMs_20 08 21 35.5
comp=Z,2µm,20.0s
YUK3 Moose Creek 58.99 335 P P 07 54 18.9 +0.5
baz=122,SNR=8.2
K29M Barlow Dome 59.03 338 P P 07 54 19.0 +0.5
baz=126
J30M Hart River 59.05 339 P P 07 54 19.1 +0.3
baz=128,SNR=11
C36M Paulatuk 59.05 347 IAMs_20 IAMs_20 08 23 47.0
comp=Z,3µm,20.0s
C36M Paulatuk 59.05 347 P P 07 54 19.0 +0.6
baz=143
ISLE Juniper Island 59.17 334 IAMs_20 IAMs_20 08 20 54.9
comp=Z,2µm,20.0s
H31M Peel River 59.18 341 P P 07 54 20.1 +0.6
baz=130
WAX Waxell Ridge 59.32 333 IAMs_20 IAMs_20 08 23 35.8
comp=Z,2µm,19.0s
CMC01 Camacan, BA 59.44 117 eP P 07 54 20.2 -1.8
TGL Tana Glacier 59.46 334 IAMs_20 IAMs_20 08 23 23.4
comp=Z,2µm,19.0s
I30M Mount Dempster 59.47 340 IAMs_20 IAMs_20 08 24 52.9
comp=Z,2µm,18.0s
I30M Mount Dempster 59.47 340 P P 07 54 22.2 +0.6
baz=128
BVCY Beaver Creek 59.49 336 P P 07 54 22.2 +0.6
baz=122,SNR=9.0
CRQE Cirque 59.57 334 P P 07 54 22.9 +0.5
baz=119
CRQM Cirque 59.59 334 IAMs_20 IAMs_20 08 24 17.4
comp=Z,2µm,19.0s
J29N Klondike Camp 59.63 339 P P 07 54 23.1 +0.4
baz=126,SNR=7.5
SFJD Kangerlussuaq 59.65 18 LR LR 08 22 06.3
comp=Z,4µm,18.0s,baz=224,slow=38
BERG Berg Lake 59.66 333 IAMs_20 IAMs_20 08 23 21.5
comp=Z,2µm,20.0s
LL02 Futaleuf 59.68 163 IAMs_20 IAMs_20 08 14 39.0
comp=Z,2µm,19.0s
KAIM Kayak Island 59.77 332 P P 07 54 24.3 +0.7
baz=117
DAWY Dawson 59.83 338 P P 07 54 24.8 +0.8
baz=124,SNR=8.2
MCARA McCarthy VSAT 59.85 334 P P 07 54 24.6 +0.5
baz=119,SNR=8.0
M27K Edge Creek, AK 59.86 336 P P 07 54 24.8 +0.4
baz=121
G31M Satah River 59.89 342 P P 07 54 24.9 +0.7
baz=131,SNR=15
VRDI Verde Repeater 59.95 334 IAMs_20 IAMs_20 08 23 48.5
comp=Z,2µm,20.0s
F31M Tsiigehtchic 60.08 343 P P 07 54 26.2 +0.7
baz=132,SNR=11
I29M Ogilvie Camp, 60.20 340 P P 07 54 26.9 +0.5
baz=126,SNR=19
L27K Beaver Creek, 60.21 336 P P 07 54 26.8 +0.2
baz=121,SNR=31
EPYK Eagle Plains 60.29 341 P P 07 54 27.8 +0.7
baz=128,SNR=5.2
BMRM Bremner River 60.32 333 P P 07 54 28.3 +0.9
baz=117
M26K Nabesna, AK 60.34 335 IAMs_20 IAMs_20 08 21 51.7
comp=Z,3µm,21.0s
M26K Nabesna, AK 60.34 335 P P 07 54 28.0 +0.5
baz=120
Q23K Middleton Isla 60.43 331 P P 07 54 28.3 +0.3
baz=115
G30M tAoh Zraii Nji 60.51 342 P P 07 54 28.8 +0.2
baz=129
AY01 Puyuhuapi 60.60 164 IAMs_20 IAMs_20 08 15 11.3
comp=Z,2µm,20.0s
INK Inuvik 60.60 344 LR LR 08 26 54.6
comp=Z,2µm,18.1s,baz=122,slow=42
INK Inuvik 60.60 344 P P 07 54 29.5 +0.4
baz=132,SNR=24
N25K Chitina, Valde 60.62 334 P P 07 54 29.9 +0.5
baz=118,SNR=8.7
EYAK Cordova Ski Ar 60.64 333 IAMs_20 IAMs_20 08 21 07.5
comp=Z,3µm,21.0s
EYAK Cordova Ski Ar 60.64 333 P P 07 54 29.8 +0.3
baz=116
H29M Whitestone 60.73 340 IAMs_20 IAMs_20 08 25 48.8
comp=Z,2µm,20.0s
H29M Whitestone 60.73 340 P P 07 54 29.7 -0.3
baz=126
F30M Barrier River 60.78 342 P P 07 54 30.7 +0.3
baz=130,SNR=20
L26K Log Cabin Wild 60.79 336 P P 07 54 30.6 +0.1
baz=120,SNR=8.6
K27K Chicken 60.81 337 P P 07 54 31.0 +0.4
baz=121
I28M Miner Creek 60.81 339 P P 07 54 31.3 +0.6
baz=124
RES Resolute Bay 60.86 359 LR LR 08 24 18.8
comp=Z,2µm,19.6s,baz=176,slow=39
DIV Divide 60.90 333 IAMs_20 IAMs_20 08 21 55.6
comp=Z,2µm,20.0s
G29M Pine Creek 61.03 341 P P 07 54 32.5 +0.3
baz=127,SNR=18
KLU Klutina 61.13 334 P P 07 54 33.2 +0.2
baz=116,SNR=7.6
P23K Montague Islan 61.15 332 P P 07 54 32.9 -0.1
baz=114

HARP	**HAARP** baz=117	61.22	335	P		P	07 54 33.2	-0.2
GLI	**Glacier Island** baz=115	61.38	333	P		P	07 54 34.0	-0.6
A36M	**Sachs Harbour** baz=142,SNR=9.5	61.41	349	P		P	07 54 34.9	+0.4
I27K	**Kandik River** baz=122,SNR=26	61.48	339	P		P	07 54 35.5	+0.3
SCRK	**Sand Creek** baz=119,SNR=12	61.51	337	P		P	07 54 35.6	+0.1
M24K	**Tolsona, Glenn** baz=116	61.51	334	P		P	07 54 35.5	0.0
J26L	**Joseph Creek** baz=120,SNR=36	61.61	337	P		P	07 54 36.5	+0.3
PAX	**Paxson** comp=Z,2µm,19.0s	61.61	335	IAMs_20	IAMs_20		08 23 56.1	
PAX	**Paxson** baz=117,SNR=13	61.61	335	P		P	07 54 36.5	+0.3
RIDG	**Independent Ri** baz=118,SNR=13	61.72	336	P		P	07 54 37.2	+0.3
H27K	**Steamboat Moun** comp=Z,2µm,19.0s	61.79	340	IAMs_20	IAMs_20		08 26 34.9	
H27K	**Steamboat Moun** baz=123,SNR=21	61.79	340	P		P	07 54 37.5	+0.2
COYC	**Coyhaique** comp=Z,2µm,20.0s	61.81	164	IAMs_20	IAMs_20		08 15 30.2	
I26K	**Coal Creek Min** baz=121	61.87	338	P		P	07 54 38.1	+0.4
SCM	**Sheep Creek Mo** baz=115	61.88	334	P		P	07 54 38.0	0.0
E29M	**Blow River** baz=128,SNR=20	61.89	342	P		P	07 54 38.1	+0.3
PWL	**Port Wells** comp=Z,2µm,20.0s	61.92	332	IAMs_20	IAMs_20		08 22 17.5	
PWL	**Port Wells** baz=114	61.92	332	P		P	07 54 38.0	-0.3
F28M	**Old Crow** baz=125,SNR=91	62.03	341	P		P	07 54 38.8	0.0
M23K	**Glacier View** baz=114	62.04	334	P		P	07 54 38.8	-0.2
K24K	**Donnelly Dome** comp=Z,2µm,20.0s	62.12	336	IAMs_20	IAMs_20		08 22 59.6	
K24K	**Donnelly Dome** baz=117	62.12	336	P		P	07 54 39.8	+0.3
SEW	**Seward** baz=112	62.14	331	P		P	07 54 39.4	-0.2
G27K	**Doyon Strip** baz=123,SNR=9.4	62.15	340	P		P	07 54 40.0	+0.3
KNK	**Knik Glacier** baz=114,SNR=7.2	62.20	333	P		P	07 54 40.0	0.0
SML	**Sawmill** baz=114	62.30	333	P		P	07 54 40.4	-0.4
J25K	**Salcha River,** baz=118	62.34	337	P		P	07 54 40.6	-0.4
WAT6	**Susitna Watana** baz=115,SNR=19	62.37	334	P		P	07 54 41.0	-0.4
O22K	**Cooper Landing** comp=Z,3µm,22.0s	62.41	332	IAMs_20	IAMs_20		08 21 00.3	
O22K	**Cooper Landing** baz=112	62.41	332	P		P	07 54 41.9	+0.5
DHY	**Denali Highway** baz=116	62.44	335	P		P	07 54 41.4	-0.4
E28M	**Babbage River** comp=Z,2µm,19.0s	62.51	342	IAMs_20	IAMs_20		08 26 03.5	
E28M	**Babbage River** baz=126	62.51	342	P		P	07 54 41.4	-0.6
PMR	**Palmer** baz=113	62.57	333	P		P	07 54 42.5	0.0
BRSE	**Bradley Lake S** baz=111	62.61	331	P		P	07 54 42.7	-0.2
RC01	**Rabbit Creek A** comp=Z,2µm,20.0s	62.64	332	IAMs_20	IAMs_20		08 22 37.6	
RC01	**Rabbit Creek A** baz=112	62.64	332	P		P	07 54 42.5	-0.5
D28M	**Stokes Point** baz=127,SNR=24	62.71	343	P		P	07 54 43.1	-0.2
CNPM	**China Poot** comp=Z,2µm,20.0s	62.77	330	IAMs_20	IAMs_20		08 22 05.0	
WAT1	**Susitna Watana** baz=114	62.82	334	P		P	07 54 43.9	-0.3
PRP	**Porcupine Dome** baz=118,SNR=36	62.83	338	P		P	07 54 44.2	-0.2
HDA	**Harding Lake** comp=Z,2µm,20.0s	62.85	336	IAMs_20	IAMs_20		08 24 05.9	
HDA	**Harding Lake** baz=116,SNR=14	62.85	336	P		P	07 54 44.5	+0.1
KDAK	**Kodiak Island** comp=Z,1µm,20.6s,baz=111,slow=36	62.87	328	LR		LR	08 21 41.3	
KDAK	**Kodiak Island** comp=Z,115nm,2.1s	62.87	328	*e*P	pmax	P pmax	07 54 46.4	+1.9
KDAK	**Kodiak Island** baz=108	62.87	328	P		P	07 54 44.7	+0.2
E27K	**Coleen River** baz=124,SNR=36	62.89	341	P		P	07 54 44.9	+0.3
G26K	**Porcupine Rive** comp=Z,2µm,20.0s	62.94	340	IAMs_20	IAMs_20		08 25 40.6	
G26K	**Porcupine Rive** baz=121,SNR=13	62.94	340	P		P	07 54 45.1	+0.3
ILAR	**Eielson Array** comp=Z,36nm,1.0s,baz=101,slow=5.8,SNR=98	62.99	337	P		P	07 54 45.9	+0.6
ILAR	comp=Z,3µm,20.7s,baz=120,slow=38 comp=Z,36nm,1.0s			LR		LR	08 24 25.3	
HOM	**Homer** baz=110	63.01	331	P		P	07 54 45.7	+0.2
Q20K	**Shuyak Island** baz=108	63.03	329	P		P	07 54 45.8	+0.2
OHAK	**Old Harbor** baz=107	63.06	328	P		P	07 54 45.8	0.0
M22K	**Willow** comp=Z,2µm,19.0s	63.06	333	IAMs_20	IAMs_20		08 25 32.7	
M22K	**Willow** baz=112	63.06	333	P		P	07 54 45.1	-0.7
CAPN	**Captain Cook N** baz=111	63.17	332	P		P	07 54 46.3	-0.2
RND	**Reindeer** comp=Z,2µm,21.0s	63.18	335	IAMs_20	IAMs_20		08 23 21.8	
FYU	**Fort Yukon** comp=Z,2µm,20.0s	63.24	339	IAMs_20	IAMs_20		08 25 25.0	
AY03	**Cochrane** comp=Z,2µm,19.0s	63.25	165	IAMs_20	IAMs_20		08 16 10.1	
CCB	**Clear Creek Bu** comp=Z,2µm,20.0s	63.29	336	IAMs_20	IAMs_20		08 24 21.5	
D27M	**Malcolm River** baz=125	63.30	342	P		P	07 54 47.4	0.0
WRH	**Wood River Hil** comp=Z,2µm,19.0s	63.33	336	IAMs_20	IAMs_20		08 23 47.5	
SII	**Sitkinak Islan** baz=106	63.34	327	P		P	07 54 47.7	-0.1
MCK	**McKinley** comp=Z,2µm,20.0s	63.35	335	IAMs_20	IAMs_20		08 23 40.1	
MCK	**McKinley** baz=114,SNR=19	63.35	335	P		P	07 54 47.8	+0.1
POKR	**Poker Plat Res** baz=116,SNR=6.7	63.36	337	P		P	07 54 47.6	-0.1
CUT	**Chulitna** baz=112,SNR=11	63.38	334	P		P	07 54 47.7	-0.1
COLA	**College** comp=Z,2µm,20.0s	63.41	337	IAMs_20	IAMs_20		08 24 24.7	
COLA	**College** comp=Z,35nm,0.9s	63.41	337	*c i*P	pmax	P pmax	07 54 48.3	+0.3
COLA	**College** baz=116	63.41	337	P		P	07 54 48.2	+0.2
F26K	**Sheenjek River** comp=Z,2µm,18.0s	63.44	340	IAMs_20	IAMs_20		08 27 19.4	
F26K	**Sheenjek River** baz=121,SNR=24	63.44	340	P		P	07 54 48.7	+0.4
O20K	**Slope Mountain** baz=109	63.62	331	P		P	07 54 50.1	+0.6
G25K	**Bearman Lake** baz=118,SNR=13	63.64	339	P		P	07 54 49.6	+0.1
L22K	**Petersville**	63.64	334	P		P	07 54 49.6	-0.1
BWN	**Browne** comp=Z,2µm,20.0s	63.74	336	P		P	07 54 50.1	-0.1
BWN				IAMs_20	IAMs_20		08 25 10.8	
Q19K	**Cape Douglas,** baz=108	63.75	329	P		P	07 54 51.0	+0.6
NEA2	**Nenana** comp=Z,2µm,19.0s	63.76	336	IAMs_20	IAMs_20		08 25 25.0	
NEA2	**Nenana** baz=114,SNR=14	63.76	336	P		P	07 54 51.1	+0.8
R18K	**Karluk** baz=106	63.76	328	P		P	07 54 51.1	+0.7
P19K	**Oil Pt** baz=108	63.77	330	P		P	07 54 51.2	+0.6
SKT	**Skwentna**	63.77	333	IAMs_20	IAMs_20		08 25 55.4	
	comp=Z,2µm,18.0s							
SKT	**Skwentna** baz=111,SNR=13	63.77	333	P		P	07 54 50.6	0.0
TRF	**Thorofare Moun** baz=113	63.79	335	P		P	07 54 50.8	0.0
N20K	**Mount Spurr** baz=110,SNR=7.1	63.80	332	P		P	07 54 50.8	0.0
SPCR	**Spurr Chakacha** baz=110,SNR=5.9	63.80	332	P		P	07 54 50.8	0.0
H24K	**Noodor Dome** baz=116,SNR=25	63.85	338	P		P	07 54 51.1	+0.1
F25K	**Christian Rive** baz=119,SNR=22	63.88	340	P		P	07 54 51.1	-0.1
CHIR	**Chirikof Islan** baz=104	63.92	326	P		P	07 54 51.2	-0.4
G24K	**Hadweenzic Riv** baz=117,SNR=17	64.09	339	P		P	07 54 52.6	+0.1
KTH	**Kantishna Hill** comp=Z,2µm,20.0s	64.09	335	IAMs_20	IAMs_20		08 24 27.6	
I23K	**Minto, Yukon-K** comp=Z,2µm,20.0s	64.11	337	IAMs_20	IAMs_20		08 24 13.0	
I23K	**Minto, Yukon-K** baz=114,SNR=50	64.11	337	P		P	07 54 52.4	-0.2
E25K	**Arctic Village** comp=Z,2µm,21.0s	64.12	340	IAMs_20	IAMs_20		08 26 35.3	
E25K	**Arctic Village** baz=120,SNR=24	64.12	340	P		P	07 54 52.5	-0.2
C27K	**Jago River** comp=Z,2µm,19.0s	64.32	342	IAMs_20	IAMs_20		08 27 12.7	
C27K	**Jago River** baz=122,SNR=37	64.32	342	P		P	07 54 53.6	-0.4
BPAW	**Bear Paw Mtn.** comp=Z,2µm,19.0s	64.33	335	IAMs_20	IAMs_20		08 24 07.0	
BPAW	**Bear Paw Mtn.** baz=112,SNR=18	64.33	335	P		P	07 54 53.8	-0.3
Q18K	**Katmai Hardscr** baz=106,SNR=6.3	64.35	329	P		P	07 54 54.3	-0.2
PPLA	**Purkeypile** comp=Z,2µm,22.0s	64.39	334	IAMs_20	IAMs_20		08 23 38.5	
PPLA	**Purkeypile** baz=111	64.39	334	P		P	07 54 54.3	-0.3
M20K	**Styx River** comp=Z,2µm,21.0s	64.45	333	IAMs_20	IAMs_20		08 23 57.3	
M20K	**Styx River** baz=105,SNR=7.3	64.45	333	P		P	07 54 54.5	-0.5
H23K	**Yukon River** baz=115	64.46	337	P		P	07 54 54.8	-0.2
O19K	**Port Alsworth** comp=Z,2µm,21.0s	64.46	331	IAMs_20	IAMs_20		08 21 51.7	
O19K	**Port Alsworth** baz=107	64.46	331	P		P	07 54 54.9	-0.1
F24K	**Squaw Lake** comp=Z,2µm,21.0s	64.61	339	IAMs_20	IAMs_20		08 28 11.2	
F24K	**Squaw Lake** baz=117,SNR=9.2	64.61	339	P		P	07 54 55.8	-0.1
P18K	**Big Mountain,** baz=106	64.67	330	P		P	07 54 56.5	+0.1
Q17K	**Contact Creek** baz=105	64.69	328	P		P	07 54 56.9	+0.3
N19K	**Bonanza Creek** baz=108	64.72	331	P		P	07 54 57.1	+0.3
R17L	**Mt. Peulik Vol** baz=104,SNR=7.5	64.77	328	P		P	07 54 56.9	-0.2
O18K	**Koktuh Hills** baz=106	64.79	330	P		P	07 54 57.4	+0.2
CHUM	**Lake Minchumin** baz=111,SNR=6.4	64.79	335	P		P	07 54 57.3	+0.2
C26K	**Camden Bay** baz=121,SNR=25	64.83	342	P		P	07 54 57.3	0.0
PPT	**Papeete** comp=Z,2µm,18.3s,baz=64,slow=29	64.85	243	LR		LR	08 16 07.9	
PPT2	**Pae2** comp=Z,239nm,25.2s	64.86	243	*e*P		P	07 54 55.1	-3.3
PPT2	**Papeete2** comp=Z,131nm,29.0s	64.86	243	*e*PP		PP	07 57 16.1	-5.5
PPT2	comp=Z,1µm,25.0s			*e*S		S	08 03 36.2	-0.2
PPT2	comp=Z,544nm,29.8s			*e*SS		SS	08 07 48.6	-0.3
PPT2	comp=Z,2µm,29.5s			*e*LQ		LQ	08 11 47.7	
PPT2	comp=Z,3µm,26.5s			*e*LR		LR	08 14 16.6	
PPT2	comp=Z,2µm,21.2s			*e*LR		LR	08 14 28.8	
D25K	**Kavik River** baz=119	64.97	341	P		P	07 54 58.8	+0.5
L20K	**Farewell, AK** baz=109	64.98	333	P		P	07 54 59.0	+0.6
G23K	**Bananza Creek** baz=114,SNR=24	65.01	338	P		P	07 54 58.8	+0.2
M19K	**Big River Lodg** comp=Z,2µm,18.0s	65.02	332	IAMs_20	IAMs_20		08 26 49.5	
M19K	**Big River Lodg** baz=108	65.02	332	P		P	07 54 58.6	-0.1
E24K	**Your Creek** comp=Z,2µm,18.0s	65.06	340	IAMs_20	IAMs_20		08 28 28.3	
E24K	**Your Creek** baz=117,SNR=15	65.06	340	P		P	07 54 59.1	+0.2
H22K	**Ishtalitna Cre** comp=Z,2µm,21.0s	65.18	337	IAMs_20	IAMs_20		08 25 07.5	
H22K	**Ishtalitna Cre** baz=113,SNR=26	65.18	337	P		P	07 55 00.3	+0.6
Q16K	**King Salmon** baz=104	65.18	329	P		P	07 54 59.8	+0.1
COLD	**Coldfoot** baz=114,SNR=29	65.29	339	P		P	07 55 00.4	+0.1
L19K	**White Mountain** comp=Z,2µm,22.0s	65.31	333	IAMs_20	IAMs_20		08 24 12.4	
L19K	**White Mountain** baz=108	65.31	333	P		P	07 55 00.7	+0.1
K20K	**Telida** comp=Z,2µm,22.0s	65.35	334	IAMs_20	IAMs_20		08 23 55.3	
K20K	**Telida** baz=109,SNR=16	65.35	334	P		P	07 55 00.7	-0.1
N18K	**Kilae Creek** baz=106	65.35	331	P		P	07 55 00.6	-0.2
E23K	**Chalar** comp=Z,2µm,20.0s	65.44	340	IAMs_20	IAMs_20		08 28 39.2	
E23K	**Chandalar** baz=115	65.44	340	P		P	07 55 01.3	0.0
M18K	**Stony River** baz=107,SNR=8.1	65.55	332	P		P	07 55 01.9	-0.2
G22K	**Bettles** baz=113	65.63	338	P		P	07 55 02.2	-0.2
H21K	**Melozitna Rive** comp=Z,2µm,19.0s	65.63	337	IAMs_20	IAMs_20		08 28 24.7	
H21K	**Melozitna Rive** baz=111,SNR=18	65.63	337	P		P	07 55 02.3	-0.3
J20K	**Nowinta River** comp=Z,2µm,20.0s	65.65	335	IAMs_20	IAMs_20		08 25 36.2	
J20K	**Nowinta River** baz=109,SNR=16	65.65	335	P		P	07 55 02.3	-0.4
D24K	**Happy Valley** baz=117	65.66	341	P		P	07 55 02.9	+0.2
TOLK	**Toolik Lake Re** baz=116,SNR=28	65.68	340	P		P	07 55 02.4	-0.4
O17K	**Koliganek Bris** baz=105	65.68	330	P		P	07 55 02.8	-0.2
C24K	**Franklin Bluff** baz=117,SNR=39	65.88	341	P		P	07 55 03.8	-0.2
N17K	**Nushagak Hills** comp=Z,2µm,21.0s	65.92	331	IAMs_20	IAMs_20		08 22 32.6	
N17K	**Nushagak Hills** baz=105	65.92	331	P		P	07 55 04.3	-0.2
CHNA	**Chernabura Isl** baz=100	65.93	324	P		P	07 55 05.2	+0.6
I20K	**Naaghedeneel** comp=Z,2µm,20.0s	65.99	335	IAMs_20	IAMs_20		08 26 53.0	
I20K	**Naaghedeneel** baz=109	65.99	335	P		P	07 55 04.7	-0.1
F22K	**John River** baz=113	66.10	339	P		P	07 55 05.7	+0.1
O16K	**Kokwok River B** baz=104	66.13	329	P		P	07 55 06.0	+0.2
L18K	**Granite Mounta** comp=Z,2µm,19.0s	66.15	332	IAMs_20	IAMs_20		08 27 34.5	
L18K	**Granite Mounta** baz=106	66.15	332	P		P	07 55 06.2	+0.3
S14K	**Fog Glacier** baz=101	66.18	326	P		P	07 55 05.9	-0.5
D23K	**Nanushuk River** baz=115,SNR=20	66.18	340	P		P	07 55 06.3	+0.3
J19K	**Poorman** baz=108,SNR=18	66.20	334	P		P	07 55 06.4	+0.2
G21K	**Allakaket** baz=111	66.21	337	P		P	07 55 06.4	+0.2
E22K	**Anaktuvuk Pass** baz=113	66.22	339	P		P	07 55 06.6	+0.2
M17K	**Holitna River** baz=105	66.27	331	P		P	07 55 07.0	+0.3
H20K	**Anotleneega Mo** baz=109,SNR=9.7	66.39	336	P		P	07 55 07.5	+0.1
F21K	**Alatna River** baz=111	66.46	338	P		P	07 55 08.6	+0.7
J18K	**Innoko River** comp=Z,2µm,22.0s	66.51	334	IAMs_20	IAMs_20		08 24 04.1	
J18K	**Innoko River** baz=107	66.51	334	P		P	07 55 09.1	+0.8
SDPT	**Sand Point** baz=100	66.52	325	P		P	07 55 08.9	+0.5
C23K	**Itkillik River** baz=115,SNR=34	66.53	341	P		P	07 55 08.9	+0.7
N16K	**Nishlik Lake** baz=103	66.67	330	P		P	07 55 10.0	+0.7
D22K	**Ayikyak River** baz=113,SNR=26	66.81	340	P		P	07 55 10.3	+0.2
L17K	**Donlin** baz=104	66.85	332	P		P	07 55 11.0	+0.6
M16K	**Timber Creek** baz=104	66.89	331	P		P	07 55 10.7	0.0
O15K	**Ungalikthiuk R** baz=102	66.90	329	P		P	07 55 11.1	+0.4
GCSA	**Galena City Sc** baz=107	66.95	335	P		P	07 55 11.1	+0.1
K17K	**Iditarod** comp=Z,2µm,22.0s	67.00	333	IAMs_20	IAMs_20		08 23 36.8	
K17K	**Iditarod** baz=105	67.00	333	P		P	07 55 11.5	+0.1
H19K	**Roundabout Mou** comp=Z,1µm,19.0s	67.02	336	IAMs_20	IAMs_20		08 30 04.3	
H19K	**Roundabout Mou** baz=108,SNR=33	67.02	336	P		P	07 55 11.6	+0.2
E21K	**Killik River** comp=Z,2µm,20.0s	67.08	339	IAMs_20	IAMs_20		08 27 39.8	
E21K	**Killik River** baz=111,SNR=18	67.08	339	P		P	07 55 11.6	-0.2
F20K	**Avaraart Lake** baz=109,SNR=41	67.22	338	P		P	07 55 12.7	+0.1
N15K	**Kwethluk River** baz=102	67.24	330	P		P	07 55 13.3	+0.3
L16K	**Owhat River** baz=103	67.29	332	P		P	07 55 13.5	+0.4
TBI	**Tubuai** comp=Z,707nm,25.8s	67.29	237	*e*P		P	07 55 14.9	+1.1
TBI	**Tubuai** comp=Z,412nm,28.2s	67.29	237	*e*PP		PP	07 57 41.7	-1.1
TBI	comp=Z,3µm,25.0s			*e*S		S	08 04 04.4	-1.3
TBI	comp=Z,2µm,37.2s			*e*SS		SS	08 08 22.0	-4.5
TBI	comp=Z,3µm,29.0s			*e*LQ		LQ	08 12 36.0	
TBI	comp=Z,3µm,27.0s			*e*LR		LR	08 15 33.2	
TBI	comp=Z,13µm,27.2s			*e*LR		LR	08 15 36.6	
G19K	**Purcell Mounta** comp=Z,2µm,19.0s	67.45	336	IAMs_20	IAMs_20		08 30 31.6	
G19K	**Purcell Mounta** baz=107,SNR=20	67.45	336	P		P	07 55 14.0	-0.2
S12K	**Black Hills** baz=98	67.47	325	P		P	07 55 14.3	-0.2
J17K	**VABM Dome** comp=Z,2µm,20.0s	67.52	333	IAMs_20	IAMs_20		08 26 04.4	
J17K	**VABM Dome** baz=104	67.52	333	P		P	07 55 14.3	-0.3
B22K	**Teshekpuk Lake** baz=112	67.61	341	P		P	07 55 14.9	-0.1
C21K	**Knifeblade Rid** baz=111	67.61	340	P		P	07 55 15.4	+0.3
M15K	**Kasigluk River** baz=102	67.64	330	P		P	07 55 15.3	-0.1
O14K	**Tigyukauivet M** baz=101	67.64	329	P		P	07 55 15.6	+0.1
H18K	**Honhosa River** comp=Z,2µm,20.0s	67.68	335	IAMs_20	IAMs_20		08 30 36.5	
H18K	**Honhosa River** baz=106	67.68	335	P		P	07 55 15.1	-0.5
B21K	**Ikpikpuk River** baz=111,SNR=14	67.72	340	P		P	07 55 15.5	-0.3
E20K	**Nigu River** baz=109	67.79	339	P		P	07 55 16.0	-0.3
E19K	**Redstone River** baz=108	67.91	338	P		P	07 55 16.6	-0.4
F19K	**Shaleruckik Mo** comp=Z,2µm,18.0s	67.92	337	IAMs_20	IAMs_20		08 28 48.1	
F19K	**Shaleruckik Mo** baz=107,SNR=17	67.92	337	P		P	07 55 17.4	+0.3
N14K	**Kuskowak Cree** baz=100	67.97	329	P		P	07 55 17.1	-0.4
G18K	**Tagagawik** comp=Z,2µm,18.0s	68.00	336	IAMs_20	IAMs_20		08 30 51.7	
G18K	**Tagagawik** baz=106	68.00	336	P		P	07 55 17.4	-0.2
D20K	**Etivluk River** baz=109	68.08	339	P		P	07 55 18.0	-0.1
FALS	**False Pass** baz=97	68.12	324	P		P	07 55 18.6	+0.1
J16K	**Anvik River** baz=103,SNR=7.8	68.16	333	P		P	07 55 18.5	-0.1
L15K	**Ungalak Mounta** baz=101	68.22	331	P		P	07 55 18.1	-0.9
H17K	**Granite Mounta** comp=Z,2µm,21.0s	68.25	335	IAMs_20	IAMs_20		08 26 34.0	
H17K	**Granite Mounta** baz=104,SNR=9.8	68.25	335	P		P	07 55 18.8	-0.5
M14K	**Bethel** baz=101,SNR=10	68.26	330	P		P	07 55 19.1	-0.2
I17K	**Unalakleet** comp=Z,2µm,22.0s	68.33	334	IAMs_20	IAMs_20		08 24 58.0	
I17K	**Unalakleet** baz=103	68.33	334	P		P	07 55 19.5	-0.2
A22K	**Sinclair Lake** baz=111	68.34	342	P		P	07 55 19.1	-0.5
K15K	**Wolf Creek Mou** baz=102,SNR=6.0	68.36	332	P		P	07 55 19.3	-0.7
D19K	**Kuna River** baz=107	68.54	339	P		P	07 55 20.6	-0.4
F18K	**Selawik** baz=105,SNR=5.6	68.57	337	P		P	07 55 20.9	-0.3
B20K	**Meade River** baz=109	68.69	340	P		P	07 55 21.8	-0.1
G17K	**Kiwalik Mounta** baz=104,SNR=7.8	68.69	335	P		P	07 55 21.6	-0.3
L14K	**Kuka Creek** baz=100	68.72	331	P		P	07 55 22.5	+0.4
M13K	**Dall Lake** baz=99	68.88	330	P		P	07 55 22.7	-0.4
E18K	**Tukpahlearik C** comp=Z,2µm,19.0s	69.15	337	IAMs_20	IAMs_20		08 29 37.5	
E18K	**Tukpahlearik C** baz=104	69.15	337	P		P	07 55 24.4	-0.3
F17K	**Baldwin Pennin** comp=Z,1µm,20.0s	69.16	336	IAMs_20	IAMs_20		08 30 52.5	
F17K	**Baldwin Pennin** baz=103	69.16	336	P		P	07 55 24.7	-0.1
H16K	**Elim** baz=102,SNR=6.8	69.16	334	P		P	07 55 24.9	+0.1
C19K	**Lookout Ridge** comp=Z,2µm,22.0s	69.23	339	IAMs_20	IAMs_20		08 28 13.6	
C19K	**Lookout Ridge** baz=106,SNR=10	69.23	339	P		P	07 55 24.9	-0.4
BORG	**Borgarnes** comp=Z,2µm,18.7s,baz=261,slow=36	69.34	26	LR		LR	08 26 09.4	
G16K	**Koyuk River** comp=Z,2µm,20.0s	69.36	335	IAMs_20	IAMs_20		08 31 41.1	
G16K	**Koyuk River** baz=102	69.36	335	P		P	07 55 25.9	-0.2
J14K	**Nanvaranak Lak** baz=100	69.37	332	P		P	07 55 26.4	+0.3
E17K	**Hotham Inlet** baz=103,SNR=29	69.53	337	P		P	07 55 26.9	-0.2
C18K	**Utukok River** baz=104	69.67	339	P		P	07 55 27.8	-0.2
K13K	**Kusilvak Mount** baz=99	69.74	331	P		P	07 55 28.5	0.0
UNV	**Unalaska Valle** baz=94	69.82	323	P		P	07 55 28.5	-0.6
PMOZ	**Porto Moniz, M** comp=Z,1µm,20.0s	69.94	60	*e*LR		LR	08 16 56.9	
PMOZ				*i* IAMs_20	IAMs_20		08 23 42.5	
G15K	**Niukluk** baz=100	69.98	335	P		P	07 55 29.7	-0.2
A19K	**Wainwright** baz=105	70.03	340	P		P	07 55 30.0	-0.1
B18K	**Kokolik River**	70.06	339	P		P	07 55 30.2	-0.1

baz=104
D17K Noatak River 70.14 337 P P 07 55 30.4 -0.4
baz=102
RDOG Red Dog Mine 70.15 338 IAMs_20 IAMs_20 08 30 23.7
comp=Z,2µm,19.0s
RDOG Red Dog Mine 70.15 338 P P 07 55 31.1 +0.2
baz=102
M11K Mekoryuk 70.28 329 P P 07 55 31.3 -0.5
baz=97
C17K DeLong Mountai 70.34 338 P P 07 55 31.6 -0.5
baz=102
F15K North Star Dit 70.36 335 IAMs_20 IAMs_20 08 32 20.5
comp=Z,2µm,21.0s
F15K North Star Dit 70.36 335 P P 07 55 31.6 -0.6
baz=100
ANM Nome 70.47 334 IAMs_20 IAMs_20 08 28 08.5
comp=Z,1µm,20.0s
ANM Nome 70.47 334 P P 07 55 32.1 -0.8
baz=99
F14K Arctic Creek 71.01 335 P P 07 55 35.8 -0.4
baz=98
C16K Lisburne Hills 71.09 338 P P 07 55 35.3 -1.2
baz=100
NIKH Nikolski High 71.18 322 P P 07 55 36.2 -1.2
baz=92
USHA Ushuaia 71.26 166 LR LR 08 22 14.9
comp=Z,1µm,19.4s,baz=32,slow=32
TNA Tin City 71.68 335 P P 07 55 38.8 -1.4
baz=97
P08K Saint George I 71.72 325 P P 07 55 39.2 -1.4
baz=92
SPIA Saint Paul Isl 72.13 326 P P 07 55 41.4 -1.7
baz=92
GAMB Gambell 73.15 333 P P 07 55 47.6 -1.3
baz=93
JMIC Jan Mayen 74.88 20 LR LR 08 28 51.3
comp=Z,2µm,21.9s,baz=250,slow=36
RAR Rarotonga 75.12 243 LR LR 08 20 41.2
comp=Z,700nm,18.7s,baz=70,slow=29
LIS Lisbon 75.93 53 *e*P P 07 56 04.9 -0.7
LIS IAMs_20 IAMs_20 08 25 58.1
comp=Z,3µm,22.6s
LIS Lisbon 75.93 53 *e*P P 07 56 04.9 -0.7
PGAV Gavieira, Arco 76.24 50 *e*P P 07 56 05.4 -2.0
PGAV *e*LR LR 08 19 42.6
PGAV *i* IAMs_20 IAMs_20 08 31 16.2
comp=Z,1µm,18.0s
MORF Marmelete 76.49 55 *e*P P 07 56 08.1 -0.8
MORF *e*S S 08 05 50.2 -1.1
MORF IAMs_20 IAMs_20 08 27 08.1
comp=Z,3µm,19.7s
MORF Marmelete 76.49 55 *e*P P 07 56 08.1 -0.8
MORF *e*S S 08 05 50.2 -1.1
MESJ Messejana 76.76 54 *e*P P 07 56 09.8 -0.5
MESJ *e*S S 08 05 53.3 -0.9
MESJ IAMs_20 IAMs_20 08 26 50.2
comp=Z,1µm,20.3s
MESJ Messejana 76.76 54 *e*P P 07 56 09.9 -0.5
MESJ *e*S S 08 05 53.3 -0.9
MTE Manteigas 76.96 51 IAMs_20 IAMs_20 08 29 52.9
comp=Z,1µm,20.0s
MTE Manteigas 76.96 51 *e*P P 07 56 09.8 -1.7
MTE *e*S S 08 05 52.6 -3.8
MTE *e*LR LR 08 22 18.6
MTE *i* IAMs_20 IAMs_20 08 30 08.3
comp=Z,1000nm,18.0s
PMRV Marv??o 77.20 52 *e*P P 07 56 10.2 -2.7
PMRV *e*LR LR 08 23 03.5
PMRV *i* IAMs_20 IAMs_20 08 26 47.4
comp=Z,1µm,20.0s
PVAQ Vaqueiros 77.22 54 *e*P P 07 56 11.8 -1.2
PVAQ *e*S SKiKP 08 05 32.7 +8.8
PVAQ *e*LR LR 08 19 38.2
PVAQ *i* IAMs_20 IAMs_20 08 27 47.1
comp=Z,2µm,20.0s
MVO Moncorvo 77.26 50 *e*P P 07 56 13.3 +0.1
MVO *e*LR LR 08 22 59.2
MVO *i* IAMs_20 IAMs_20 08 29 46.0
comp=Z,1µm,20.0s
AVE Averroes 78.05 58 IAMs_20 IAMs_20 08 26 54.7
comp=Z,2µm,20.0s
EKA Eskdalemuir Ar 78.07 36 P P 07 56 14.8 -2.5
comp=Z,16nm,0.8s,baz=272,slow=6.1,SNR=37
comp=Z,16nm,0.8s
PAB San Pablo 79.52 52 IAMs_20 IAMs_20 08 26 49.5
comp=Z,1µm,21.0s
ESDC Sonseca Array 79.79 52 P P 07 56 24.3 -2.9
comp=Z,2.6nm,0.8s,baz=284,slow=5.1,SNR=10
ESDC LR LR 08 27 10.3
comp=Z,1µm,21.5s,baz=276,slow=32
comp=Z,2.6nm,0.8s
ESDC Sonseca Array 79.79 52 P P 07 56 25.9 -1.3
SPITS Spitsbergen Ar 80.23 11 P P 07 56 28.0 -0.8
comp=Z,5.4nm,0.5s,baz=195,slow=2.6,SNR=14
SPITS LR LR 08 33 57.5
comp=Z,2µm,18.9s,baz=275,slow=37
comp=Z,5.4nm,0.5s
SPITS Spitsbergen Ar 80.23 11 P P 07 56 28.0 -0.8
MDT Midelt 80.45 59 LR LR 08 28 32.7
comp=Z,710nm,19.8s,baz=290,slow=33
PMSA Palmer Station 81.20 168 LR LR 08 23 59.5
comp=Z,944nm,21.8s,baz=333,slow=29
SHEM Shemya Is, Ala 81.47 322 LR LR 08 29 13.1
comp=Z,296nm,21.6s,baz=106,slow=33
BILL Bilibino 81.61 338 IAMs_20 IAMs_20 08 33 23.6
comp=Z,1µm,20.0s
CART Cartagena 82.45 53 IAMs_20 IAMs_20 08 30 12.3
comp=Z,1µm,20.0s
DOU Dourbes 83.66 40 *d*P P 07 56 47.1 -0.1
BGES Gesves 83.90 40 *d*P P 07 56 47.5 -0.9
comp=Z,7.1nm,0.9s
BCLA Clavier 84.02 40 *d*P P 07 56 48.6 -0.5
RCHB Rochefort 84.04 40 *d*P P 07 56 48.2 -1.0
comp=Z,5.9nm,1.0s
BSTI Sart Tilman 84.15 39 *d*P P 07 56 49.5 -0.3
NB2 NORSAR Subarra 84.27 28 P P 07 56 49.3 -0.9
comp=Z,7.9nm,1.0s,baz=292,slow=5.3
NOA NORSAR Array B 84.27 28 P P 07 56 48.9 -1.3
comp=Z,4.4nm,0.8s,baz=290,slow=5.2,SNR=11
NOA LR LR 08 35 04.4
comp=Z,813nm,19.6s,baz=290,slow=36
comp=Z,4.4nm,0.8s
MEM Membach 84.41 39 *d*P P 07 56 49.3 -1.8
comp=Z,7.6nm,1.1s
BTNL Ternell 84.49 39 *d*P P 07 56 50.0 -1.5
WLF Walferdange 84.75 40 IAMs_20 IAMs_20 08 30 28.3
comp=Z,1µm,21.0s
WLF Walferdange 84.75 40 *d*P P 07 56 52.7 -0.1
SSB Saint Sauveur 84.80 45 IAMs_20 IAMs_20 08 29 14.0
comp=Z,1µm,20.0s
DBIC Dimbokro 85.64 84 P P 07 56 55.9 -2.0
comp=Z,2.4nm,0.5s,baz=311,slow=5.1,SNR=5.8
DBIC LR LR 08 33 01.8
comp=Z,1µm,19.9s,baz=303,slow=34
comp=Z,2.4nm,0.5s
HFS Hagfors 85.72 29 P P 07 56 56.1 -1.3
comp=Z,10nm,0.8s,baz=270,slow=3.0,SNR=10
HFS LR LR 08 34 31.1
comp=Z,765nm,19.8s,baz=272,slow=35
comp=Z,10nm,0.8s
ECH Echery 85.77 41 IAMs_20 IAMs_20 08 31 29.5
comp=Z,1µm,20.0s
MAHO Mahon 85.94 50 IAMs_20 IAMs_20 08 34 23.5
comp=Z,1µm,21.0s
ARCES ARCESS Array B 86.28 18 P P 07 56 59.0 -1.0
comp=Z,2.3nm,0.5s,baz=318,slow=3.4,SNR=6.9
ARCES LR LR 08 34 55.0
comp=Z,2µm,21.7s,baz=303,slow=35
comp=Z,2.3nm,0.5s
ARCES ARCESS Array B 86.28 18 P P 07 56 59.0 -1.0
SENIN Lac Senin/Sane 86.38 43 P P 07 56 59.4 -1.9
SENIN IAmb IAmb 07 57 03.1
comp=Z,9.4nm,0.9s
SENIN IAMs_20 IAMs_20 08 35 31.6
comp=Z,1µm,20.0s
BFO Black Forest 86.49 41 IAMs_20 IAMs_20 08 32 02.5
comp=Z,1µm,21.0s
STU Stuttgart 86.91 41 IAMs_20 IAMs_20 08 38 40.6
comp=Z,1µm,19.0s
TUE Stuetta 87.70 43 P P 07 57 06.1 -1.6
TUE IAmb IAmb 07 57 11.4
comp=Z,7.1nm,0.8s
TUE IAMs_20 IAMs_20 08 39 23.6
comp=Z,1µm,18.0s
DAVA Damuels 87.80 42 *i* P P 07 57 06.6 -1.4
comp=Z,13nm,0.9s
MOX Moxa 87.82 38 *e*L L 08 35 33.1
comp=Z,1µm,21.5s
GRF Grafenberg Arr 87.89 39 *e*P P 07 57 07.9 -0.4
comp=Z,6.2nm,0.9s,baz=281,slow=5.2
GRF *e*L L 08 32 38.0
comp=Z,2µm,21.3s
DAVOX Davos/Dischmat 87.96 42 LR LR 08 33 24.5
comp=Z,812nm,19.8s,baz=282,slow=34
RETA Rekute 88.31 41 *i* P P 07 57 09.5 -0.9
comp=Z,6.1nm,0.9s
CLL Collm 88.42 37 IAMs_20 IAMs_20 08 43 08.3
comp=Z,1µm,20.0s
CLL Collm 88.42 37 *e*P P 07 57 12.0 +1.3
CLL *e* 08 07 30.0
CLL MLR MLR
comp=Z,900nm,21.5s
FETA Feichten 88.43 42 *e*P P 07 57 11.1 0.0
comp=Z,3.8nm,0.8s
MOTA Moosalm 88.57 42 *e*PcP P 07 57 12.3 +0.6
comp=Z,9.7nm,1.1s
SEY Seymchan 88.91 336 LR LR 08 40 12.0
comp=Z,627nm,18.4s,baz=58,slow=38
SEY Seymchan 88.91 336⇓ *e*P P 07 57 14.1 +1.4
SEY pmax pmax
comp=Z,22nm,1.1s
HSKC Hora Svate Kat 88.92 38 AMS AMS 08 39 20.0
comp=Z,2µm,18.4s
KHC Kasperske Hory 89.53 39⇓ *e*P P 07 57 15.8 -0.2
KHC pmax pmax
comp=Z,15nm,3.7s
KHC Kasperske Hory 89.53 39 *e*P P 07 57 15.9 -0.1
KHC AMS AMS 08 42 10.0
comp=Z,1µm,16.0s
PVCC Panska Ves 89.62 38 AMS AMS 08 38 30.0
comp=Z,1µm,16.7s
GERES GERESS Array B 89.70 39 P P 07 57 14.6 -2.3
comp=Z,1.0nm,0.8s,baz=328,slow=4.7,SNR=6.4
GERES LR LR 08 33 51.1
comp=Z,933nm,20.8s,baz=294,slow=33
comp=Z,1.0nm,0.8s
PRA Prague 89.71 38 AMS AMS 08 37 00.0
comp=Z,1µm,21.0s
APA Apatity 89.78 18⇓ *e*P P 07 57 10.1 -6.6
APA MLR MLR
comp=Z,3µm,19.0s
ZVC Zvikov 89.79 39 AMS AMS 08 40 10.0
comp=Z,2µm,17.2s
PRU Pruhonice 89.80 38 AMS AMS 08 39 30.0
comp=Z,1µm,18.7s
VSL Villasalto 89.84 49 IAMs_20 IAMs_20 08 31 51.7
comp=Z,1µm,22.0s
CKRC Cesky Krumlov 90.09 39 AMS AMS 08 42 40.0
comp=Z,2µm,18.5s
PET Petropavlovsk 90.30 325 *e*P P 07 57 20.6 +1.2
PET *e* 08 07 51.5
PET *e*S S 08 08 11.6 +1.7
PET *e*PS PS 08 09 17.0 -5.5
PET *e*SS SS 08 14 18.6 +8.9
PET pmax pmax
comp=Z,400nm,16.3s
PET MLR MLR
comp=Z,500nm,16.0s
TORD Torodi Ar. Bea 90.39 76 P P 07 57 18.6 -2.0
comp=Z,3.7nm,0.4s,baz=281,slow=6.0,SNR=2.9
TORD LR LR 08 35 11.3
comp=Z,1µm,21.1s,baz=282,slow=34
comp=Z,3.7nm,0.4s
TIXI Tiksi 90.42 348 LR LR 08 42 17.8
comp=Z,1µm,21.4s,baz=40,slow=38
TIXI Tiksi 90.42 348 P P 07 57 19.2 -0.3
TIXI IAmb IAmb 07 57 22.1
comp=Z,16nm,0.9s
TIXI IAMs_20 IAMs_20 08 42 17.4
comp=Z,1µm,20.0s
TIXI Tiksi 90.42 348 P P 07 57 19.3 -0.3
TIXI pmax pmax
comp=Z,16nm,0.9s
CHVC Chvalec 90.48 37 AMS AMS 08 37 10.0
comp=Z,2µm,23.4s
UPC Upice 90.48 37 *e*P P 07 57 21.2 +0.8
UPC Upice 90.48 37 *e*P P 07 57 21.2 +0.8
UPC AMS AMS 08 37 00.0
comp=Z,2µm,18.9s
OSTC Ostas 90.59 37 *e*P P 07 57 20.4 -0.5
OSTC MLR MLR
comp=Z,2µm,22.4s
OSTC Ostas 90.59 37 *e*P P 07 57 20.4 -0.5
OSTC AMS AMS 08 37 10.0
comp=Z,2µm,22.4s
FINES FINESS Array B 90.63 25 P P 07 57 19.5 -1.3
comp=Z,2.6nm,0.8s,baz=330,slow=6.6,SNR=4.2
FINES LR LR 08 38 26.0
comp=Z,768nm,20.6s,baz=304,slow=36
comp=Z,2.6nm,0.8s
TREC Trest 90.63 39 AMS AMS 08 40 40.0
comp=Z,2µm,20.5s
DPC Dobruska-Polom 90.73 37 *e*P P 07 57 21.6 0.0
DPC MLR MLR
comp=Z,1µm,19.4s
DPC Dobruska-Polom 90.73 37 *e*P P 07 57 21.6 0.0
DPC AMS AMS 08 39 10.0
comp=Z,1µm,19.4s
PETK Petropavlovsk- 90.79 326 P P 07 57 22.6 +0.8
comp=Z,7.3nm,0.9s,baz=60,slow=8.5,SNR=2.4
PETK LR LR 08 36 14.3
comp=Z,199nm,21.5s,baz=52,slow=34
comp=Z,7.3nm,0.9s
KRLC Kraliky 91.11 38 AMS AMS 08 37 00.0
comp=Z,1µm,19.1s
MA2 Magadan 91.25 333 LR LR 08 43 01.9
comp=Z,434nm,19.0s,baz=57,slow=38
VRAC Vranov 91.30 38 LR LR 08 34 56.0
comp=Z,842nm,21.7s,baz=296,slow=33
RAO Raoul Island 93.19 241 LR LR 08 29 23.7
comp=Z,503nm,21.1s,baz=92,slow=29
VAE Valguarnera 94.24 50 LR LR 08 35 34.2
comp=Z,2µm,21.8s,baz=317,slow=33
TIP Timpagrande 95.32 48 IAMs_20 IAMs_20 08 42 01.6
comp=Z,835nm,20.0s
PDG Podgorica 95.77 44 IAMs_20 IAMs_20 08 41 38.2
comp=Z,825nm,20.0s
KLMR Klimovskoe 96.18 22 *e*P P 07 57 44.2 -2.1
KLMR pmax pmax
comp=Z,18nm,1.4s
NRIK Noril'sk 97.03 0 LR LR 08 46 10.3
comp=Z,3µm,18.2s,baz=11,slow=38
YAK Yakutsk 97.61 342 LR LR 08 47 03.3
comp=Z,958nm,21.5s,baz=28,slow=38
YAK Yakutsk 97.61 342 IAMs_20 IAMs_20 08 45 50.6
comp=Z,1µm,21.0s
YAK Yakutsk 97.61 342 *e*P Pdif 07 57 55.2 +2.4
YAK pmax pmax
comp=Z,14nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.1s
AKASG Malin Array Be 97.84 33 P P 07 57 51.2 -2.8
comp=E,0.7nm,0.6s,baz=291,slow=3.9,SNR=1.8
AKASG LR LR 08 47 00.3
comp=E,566nm,18.0s,baz=283,slow=38
comp=E,0.7nm,0.6s
AKBB Malin Array Si 97.84 33⇑ *e*P Pdif 07 57 55.6 +1.5
AKBB pmax pmax
comp=Z,50nm,4.4s
OBN Obninsk 98.81 27 LR LR 08 43 35.7
comp=Z,1µm,19.5s,baz=243,slow=36
OBN Obninsk 98.81 27 *e*P Pdif 07 57 58.8 +0.5
OBN *e* 08 01 59.6
OBN *e*PPP PPP 08 04 06.6
OBN pmax pmax
comp=Z,26nm,1.9s
OBN MLR MLR
comp=Z,1µm,19.0s
URZ Urewera 99.14 233 LR LR 08 32 51.6
comp=Z,607nm,21.7s,baz=87,slow=29
TIRR Tirgusor 100.71 39 IAMs_20 IAMs_20 08 41 55.5
comp=Z,1µm,19.0s
KIRV Kirov 101.24 19⇑ *e*P Pdif 07 58 09.0 0.0
YSS Yuzhno-Sakhali 102.18 325 *e*P Pdif 07 58 23.5 +10
YSS *e* 08 02 29.8
YSS *e*PS PS 08 11 40.6 +8.5
YSS *e*SS SS 08 17 11.8 +14
YSS pmax pmax
comp=Z,200nm,3.9s
SNAA Sanae 102.76 161⇓ *e*P Pdif 07 58 17.0 +1.5
SNAA pmax pmax
comp=Z,20nm,4.5s
DZM Mont Dzumac 105.65 251 *e*SS SS 08 17 48.8 +0.6
comp=Z,2µm,27.4s
DZM Mont Dzumac 105.65 251 *e*LQ LQ 08 28 34.1
comp=Z,1µm,35.5s
DZM *e*LR LR 08 33 20.9
comp=Z,1µm,25.4s
SBA Scott Base 105.82 192 IAMs_20 IAMs_20 08 38 15.4
comp=Z,1µm,20.0s
KIV Kislovodsk 109.18 33 IAMs_20 IAMs_20 08 53 59.3
comp=Z,760nm,19.0s
BVAR Borovoye Array 111.69 11 PKiKP PKiKP 08 02 54.4 +1.3
comp=Z,0.9nm,0.5s,baz=347,slow=3.3,SNR=4.4
MAK Makhachkala 112.37 31 *e*P Pdif 07 58 50.9 -8.0
MAK *i* 08 02 52.5
MAK *e* 08 03 09.1
MAK *e* 08 03 37.4
MAK *e* 08 09 33.0
MAK *e*SP SP 08 14 09.6 +61
MAK *e*SS SS 08 19 14.6 -1.0
MAK *e*SSS SSS 08 23 27.0
MAK pmax pmax
comp=Z,34nm,0.3s
ZALV Zalesovo Beam 112.42 2 PKiKP PKiKP 08 02 54.3 0.0
comp=Z,0.9nm,0.5s,baz=291,slow=2.5,SNR=4.2
WIN Windhoek 112.58 109 IAMs_20 IAMs_20 08 50 37.2
comp=Z,700nm,19.0s
TSUM Tsumeb 112.64 105 IAMs_20 IAMs_20 08 45 53.9
comp=Z,1µm,22.0s
KURK Kurchatov 115.19 7⇓ *i*PKiKP PKiKP 08 02 59.4 -0.4
KURBB Kurchatov Arra 115.27 7 PKP PKPdf 08 03 00.4 +0.5
comp=Z,1.3nm,0.6s,baz=350,slow=2.2,SNR=10
KNGR Kungurtug, Tuv 115.29 353⇓ *i*PKiKP PKPdf 08 03 01.8 +1.6
ULN Ulaanbaatar 116.27 346 IAMs_20 IAMs_20 09 01 17.2
comp=Z,847nm,18.0s
ULN Ulaanbaatar 116.27 346⇓ *i*PKiKP PKiKP 08 03 02.1 -0.1
SONM Songino Array 116.45 346 PKP PKiKP 08 03 02.8 +0.3
comp=Z,1.6nm,0.7s,baz=315,slow=1.7,SNR=6.8
KSRS Korea Array 116.69 325 PKP PKiKP 08 03 03.2 +0.2
comp=Z,2.8nm,0.8s,baz=357,slow=1.8,SNR=6.7
DGZ Jazzator, Alta 116.73 0⇓ *i*PKiKP PKiKP 08 03 04.7 +1.7
SYO Syowa Base 117.00 162⇓ *i*Pdiff Pdif 07 59 18.2 -0.6
MKAR Makanchi Array 119.42 5 PKP PKPdf 08 03 07.8 -0.3
comp=Z,0.7nm,0.5s,baz=327,slow=2.0,SNR=5.4
BOSA Boshof 120.26 115 PKP PKPdf 08 03 10.2 -0.1
comp=Z,3.9nm,0.6s,baz=303,slow=2.0,SNR=12
BJI Beijing 120.34 335 PKP PKiKP 08 03 12.0 +1.9
BJI PP PP 08 04 41.3 +6.0
BJI PKS PKSdf 08 06 45.8 -0.8
BJI AMB AMB
comp=Z,120nm,12.0s
BJI LR LR
comp=Z,340nm,18.6s
BJI LR LR
comp=Z,240nm,19.1s
BJI LR LR
comp=Z,560nm,22.1s
HHC Hu-ho-hao-te 121.38 339 *e*PKP PKiKP 08 03 14.3 +2.0
HHC PP PP 08 04 44.5 +2.0
HHC LR LR
comp=Z,550nm,14.5s
HHC LR LR
comp=Z,570nm,14.6s
HHC LR LR
comp=Z,1µm,15.1s
BTO Baotou 122.11 340 *e*PKP PKiKP 08 03 15.8 +2.1
BTO PP PP 08 04 54.5 +7.1
BTO SS SS 08 21 25.3 +3.3
BTO AMB AMB
comp=Z,660nm,5.0s
BTO LR LR
comp=Z,2µm,18.6s
BTO LR LR
comp=Z,2µm,20.7s
BTO LR LR
comp=Z,3µm,19.4s
LSZ Lusaka 122.22 99 IAMs_20 IAMs_20 08 54 10.8
comp=Z,715nm,21.0s
AAK Ala-Archa 122.44 12 IAMs_20 IAMs_20 09 01 35.0
comp=Z,796nm,20.0s
AAK Ala-Archa 122.44 12⇓ *i*PKiKP PKiKP 08 03 16.0 +1.6
WMQ Urumqi 122.61 0 *e*PKP PKPdf 08 03 13.0 -1.4
WMQ sPKP 08 03 38.5
WMQ LR LR
comp=Z,2µm,21.7s
WMQ LR LR
comp=Z,700nm,19.5s
WMQ LR LR
comp=Z,1µm,21.7s
HNS HongShan 123.19 335 ⇑PKP PKiKP 08 03 16.5 +0.7
HNS PP PP 08 04 56.3 +1.6
HNS SS SS 08 21 40.8 +5.1
HNS LR LR
comp=Z,890nm,18.6s
HNS LR LR
comp=Z,420nm,15.4s
HNS LR LR
comp=Z,1µm,18.2s
NJ2 Nanjing 125.64 328 *e*PKP PKPdf 08 03 20.5 +0.1
KSH Kashi 125.74 11 PKP PKiKP 08 03 23.5 +2.5
KSH LR LR
comp=Z,640nm,22.2s
KSH LR LR
comp=Z,490nm,21.9s
KSH LR LR
comp=Z,930nm,23.1s
GTA Gaotai 125.89 349 *e*PKP PKiKP 08 03 21.3 0.0
LYN LuoYang 126.56 335 PKP PKPdf 08 03 21.5 -0.6
LYN PP PP 08 05 18.8 +1.5
LYN AMB AMB
comp=Z,450nm,7.8s
LYN LR LR
comp=Z,1µm,16.7s
LYN LR LR
comp=Z,550nm,13.7s
LYN LR LR
comp=Z,2µm,19.6s
LZDM Lanzhou Array 128.30 344 PKP PKPdf 08 03 25.7 -0.2
comp=Z,2.0nm,0.4s,baz=0.0,slow=4.4,SNR=4.1
XAN Xi'an 128.40 338 ⇓PKP PKiKP 08 03 28.3 +2.0
XAN LR LR
comp=Z,1µm,20.6s
XAN LR LR
comp=Z,310nm,22.7s
XAN LR LR
comp=Z,1µm,19.9s
ATD Arta Tunnel 128.59 63 IAMs_20 IAMs_20 08 58 42.2
comp=Z,643nm,20.0s
KIBK Kibwezi 129.32 82 IAMs_20 IAMs_20 08 59 32.3
comp=Z,498nm,20.0s
GOMU GeErMu 129.82 353 PKP PKiKP 08 03 30.0 +0.4
GOMU AMB AMB
comp=Z,140nm,5.5s
GOMU LR LR
comp=Z,890nm,19.2s
GOMU LR LR
comp=Z,360nm,19.4s
GOMU LR LR
comp=Z,1µm,18.9s
NIL Nilore 130.71 16 IAMs_20 IAMs_20 09 06 02.3
comp=Z,771nm,21.0s
WB2 Warramunga Arr 135.37 256 P PKPdf 08 03 39.4 +0.2
WB2 P PKiKP 08 03 40.7 0.0
WRAB Tennant Creek 135.38 256⇑ *i*PKiKP PKiKP 08 03 40.5 -0.2
WRA Warramunga Ar 135.38 256 PKP PKiKP 08 03 40.1 -0.6
comp=Z,0.9nm,0.7s,baz=90,slow=2.3,SNR=5.7
ASAR Alice Springs 135.64 250 PKP PKiKP 08 03 41.4 +0.2
comp=Z,0.8nm,0.6s,baz=90,slow=3.2,SNR=6.0
GYA Guiyang 136.03 336 PKP PKPdf 08 03 41.0 +0.6
GYA PP PP 08 06 21.3 +2.7
GYA PKS PKSdf 08 07 13.3 -3.7
GYA AMB AMB
comp=Z,410nm,10.0s
GYA LR LR
comp=Z,690nm,24.5s
LSA Lhasa 136.61 356 IAMs_20 IAMs_20 09 14 29.3
comp=Z,606nm,20.0s
PZH PanZhiHua 137.74 342 PKP PKPdf 08 03 43.3 -0.3
PZH PP PP 08 06 32.8 +3.7
PZH AMB AMB
comp=Z,200nm,11.8s
PZH LR LR
comp=Z,470nm,18.8s
PZH LR LR
comp=Z,440nm,16.3s
PZH LR LR
comp=Z,390nm,18.6s

KMI	**Kunming**	**138.70**	**340**	PKHKP	PKPpre	08 03 36.3		
KMI				PKP	**PKiKP**	**08 03 48.0**	**+0.3**	
KMI				PP	**PP**	**08 06 37.5**	**+2.3**	
KMI				AMB	AMB			
	comp=Z,250nm,6.8s							
KMI				LR	LR			
	comp=N,1μm,17.2s							
KMI				LR	LR			
	comp=E,380nm,20.0s							
KMI				LR	LR			
	comp=Z,900nm,24.2s							
TNCH	**TengChong**	**140.03**	**345**	PKP	**PKPdf**	**08 03 48.8**	**+0.9**	
TNCH				PP	**PP**	**08 06 50.5**	**+7.2**	
TNCH				LR	LR			
	comp=Z,2μm,21.0s							
TNCH				LR	LR			
	comp=Z,2μm,19.1s							
TNCH				LR	LR			
	comp=Z,1μm,19.4s							
QIZ	**Qiongzhong**	**140.90**	**326**	PKP	**PKPdf**	**08 03 50.0**	**+0.7**	
QIZ				PP	**PP**	**08 06 50.3**	**+1.3**	
QIZ				SS	SS	08 25 14.3	+2.2	
QIZ				LR	LR			
	comp=Z,480nm,15.0s							
QIZ				LR	LR			
	comp=Z,520nm,14.1s							
QIZ				LR	LR			
	comp=Z,750nm,16.7s							
CHTO	**Chiang Mai**	**145.81**	**341**	IAMs_20	IAMs_20	09 17 57.8		
	comp=Z,637nm,21.0s							
CMAR	**Chiang Mai Arr**	**146.15**	**341**	PKPbc	**PKPab**	**08 04 00.5**	**+0.3**	
	comp=Z,48nm,0.8s,baz=336,slow=3.8,SNR=98							
HYBB	**Hyderabad (bro**	**147.56**	**17**	*e*PKPbc	**PKPbc**	**08 04 03.6**	**0.0**	
HYBB				*e*PKiKP	**PKiKP**	**08 04 07.0**	**+1.2**	
MEEK	**Meekatharra**	**148.70**	**241**	P	**PKiKP**	**08 04 07.5**	**-0.4**	
MORW	**Morawa**	**149.96**	**235**	P	**PKPbc**	**08 04 09.2**	**-0.2**	
SBUM	**Sibu**	**151.06**	**302**	IAMs_20	IAMs_20	09 25 37.4		
	comp=Z,492nm,21.0s							

*SNET **30** 07:49:10.8±0.9, 13°.82N×92°.09W, h35km±999km, ML4.1*
*GCG **30** 07:49:10.9±0.9, 13°.91N×91°.93W, h6km±28km, MD4.3, ML4.0*

ISC 30 07:49:02.5±5.3**, 13°.5N**±0°.2**×92°.3W**±0°.3**, h32**km, **n18,**
σ0°.82**/19**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.19**	**28**	*e*P	**Pb**	**07 49 25.5**	**+1.0**
RTAL				*e*S	**Sn**	**07 49 37.0**	**-1.0**
STG5	**El Palmar, Qui**	**1.29**	**44**	*i* P	**Pb**	**07 49 27.5**	**+1.2**
STG2	**El Palmar, Qui**	**1.29**	**42**	*e*P	**Pb**	**07 49 27.5**	**+1.1**
STG8	**El Palmar, Qui**	**1.32**	**43**	*e*P	**Pb**	**07 49 28.1**	**+1.2**
QUEO	**Labor Ovalle**	**1.57**	**28**	*e*P	**Pb**	**07 49 30.8**	**-0.4**
SOKI	**Kika Raxquin**	**1.58**	**32**	*e*P	**Pb**	**07 49 31.2**	**-0.3**
ESSG	**Sabana Grande**	**1.67**	**57**	*i* P	**Pb**	**07 49 32.3**	**-0.4**
FG16	**Alotenango, Sa**	**1.89**	**65**	*i* P	**Pn**	**07 49 32.9**	**+0.1**
FG16				IAML		07 49 56.3	
	comp=N,17μm,0.2s						
HUEH	**Huehuetenango**	**1.98**	**22**	*e*P	**Pb**	**07 49 37.4**	**-0.7**
HUEH	**Huehuetenango**	**1.98**	**22**	*e*P	**Pb**	**07 49 37.3**	**-0.7**
PCG5	**San Vicente Pa**	**1.99**	**68**	*e*P	**Pn**	**07 49 35.2**	**+1.1**
QUIS	**Sacapulas**	**2.14**	**32**	*e*P	**Pb**	**07 49 40.1**	**-0.6**
QUIS				IAML		07 50 07.3	
	comp=E,695nm,0.5s						
APG	**El Apazote**	**2.32**	**49**	*i* P	**Pb**	**07 49 43.3**	**-0.6**
NUBE	**Las Nubes**	**2.46**	**80**	*e*P	**Pb**	**07 49 46.0**	**-0.3**
NUBE	**Las Nubes**	**2.46**	**80**	*e*P	**Pb**	**07 49 46.0**	**-0.3**
CEVE	**Cerro Verde**	**2.60**	**82**	*e*P	**Pb**	**07 49 47.9**	**-0.8**
CEVE				IAML		07 50 31.1	
	comp=Z,883nm,0.3s						
SBLS	**San Blas**	**2.61**	**82**	*e*P	**Pb**	**07 49 48.9**	**+0.2**
SNJE	**San Jose**	**2.63**	**81**	*e*P	**Pb**	**07 49 48.3**	**-0.7**

DJA 30 07:50:21.7±0.6**, 0°.N**±4°.**×10°.0E**±°**, h167**km±7**km, M4.2**/12**, mB5.3/1, mb4.8/1, MLv3.8/12, Mw(mB)4.7/1, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKNI	**Bangkinang**	**0.82**	**82**	P	Pn	07 50 47.1	+0.3
MNSI	**Mandailing Nat**	**0.87**	**312**	P	Pn	07 50 47.8	+0.6
PDSI	**Padang**	**1.14**	**168**	P	Pn	07 50 49.2	-0.1
PDSI				S	Sn	07 51 11.1	+0.5
SISI	**Saibi**	**1.91**	**217**	P	Pn	07 50 56.9	+0.1
PBSI	**Pulau Batu**	**1.97**	**262**	P	Pn	07 50 58.4	+0.9
PBSI				S	Sn	07 51 25.2	0.0
KRJI	**Kerinci**	**2.60**	**152**	P	Pn	07 51 04.3	-0.7
GSI	**Gunungsitoli**	**2.87**	**292**	P	Pn	07 51 08.8	+0.7
PPSI	**Pulau Pagai**	**2.96**	**184**	P	Pn	07 51 09.5	+0.2
TPTI		**4.30**	**315**	P	Pn	07 51 26.0	-0.3
SNSI	**Sinabang, Aceh**	**4.47**	**299**	P	Pn	07 51 28.4	-0.1
MLSI	**Meulaboh, Aceh**	**5.55**	**317**	P	Pn	07 51 42.2	-0.5

*NOU **30** 07:56:49.1, 21°.58S×169°.07E, h4km, MLv4.7/15, Southeast of Loyalty Islands*
*IDC **30** 07:56:50.1±0.8, 21°.35S×168°.84E, h0km, mb4.0/10, mbtmp3.9/11, ML3.6/1, MS3.7/2, Error ellipse: s-maj=28.4km s-min=19.0km az=141.0*
*NEIC **30** 07:56:51.7±1.0, 21°.50S±0°.08×168°.74E±0°.06, h10km±1km, mb4.6/16, Error ellipse: s-maj=14.1km s-min=9.1km az=155.0*

ISC 30 07:56:54.0±0.5**, 21°.51S**±0°.06**×168°.85E**±0°.06**, h29**km**, n50,**
σ1°.14**/50**, mb4.3/16, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**0.76**	**272**		**Pb**	**07 57 07.1**	**-1.6**
MARNC	**Mare, Loyalty**	**0.76**	**272**	P	**Pb**	**07 57 07.9**	**-0.8**
MARNC	**Mare, Loyalty**	**0.76**	**272**	S	**Sn**	**07 57 20.1**	**+0.8**
PINNC	**Pines Island,**	**1.70**	**230**		**Pn**	**07 57 20.3**	**-1.4**
PINNC	**Pines Island,**	**1.70**	**230**	P	**Pn**	**07 57 20.7**	**-1.0**
YATNC	**Mamie plateau,**	**1.90**	**253**	P	**Pn**	**07 57 23.7**	**-0.7**
INH	**Isangel**	**1.99**	**12**	P	**Pn**	**07 57 24.3**	**-1.5**
INH	**Isangel**	**1.99**	**12**	P	**Sn**	**07 57 49.8**	**0.0**
OUENC	**Ouen Island, N**	**2.07**	**244**	P	**Pn**	**07 57 27.0**	**+0.2**
DZM	**Mont Dzumac**	**2.30**	**256**	Pn	**Pn**	**07 57 29.9**	**-0.2**
	15nm,0.3s,baz=79,slow=8.0,SNR=116						
DZM				Sn	**Sn**	**07 57 58.5**	**+0.9**
	50nm,0.3s,baz=95,slow=17,SNR=8.7						
DZM				LR	LR	07 57 58.6	
	comp=Z,442nm,18.3s,baz=162,slow=29 42nm,0.3s						
DZM	**Mont Dzumac**	**2.30**	**256**		**Pn**	**07 57 29.2**	**-0.9**
DZM	**Mont Dzumac**	**2.30**	**256**	P	**Pn**	**07 57 30.6**	**+0.5**
ONTNC	**Ouen Toro**	**2.36**	**250**		**Pn**	**07 57 30.3**	**-0.5**
ONTNC	**Ouen Toro**	**2.36**	**250**	P	**Pn**	**07 57 31.1**	**+0.3**
RTV	**Rentapao**	**3.72**	**354**	P	**Pn**	**07 57 49.8**	**+0.3**
DVP	**Devils Point**	**3.82**	**350**	P	**Pn**	**07 57 49.7**	**-1.1**
KOUNC	**Koumac, New Ca**	**4.37**	**282**	P	**Pn**	**07 58 00.4**	**+2.0**
MSVF	**Nonsavu**	**9.45**	**68**	Pn	**Pn**	**07 59 09.4**	**+1.1**
MRZ	**Mangatainoka R**	**19.93**	**165**	P	**P**	**08 01 23.5**	**+0.1**
STKA	**Stephens Creek**	**26.38**	**241**	P	**P**	**08 02 29.4**	**+1.5**
	1.8nm,0.8s,baz=34,slow=7.3,SNR=2.1 1.8nm,0.8s						
WR8	**Warramunga Arr**	**32.12**	**266**	P	**P**	**08 03 17.7**	**-1.4**
WRA	**Warramunga Arr**	**32.28**	**266**	P	**P**	**08 03 20.4**	**0.0**
	0.4nm,0.5s,baz=98,slow=8.3,SNR=6.8 0.4nm,0.5s						
WRA	**Warramunga Arr**	**32.28**	**266**	P	**P**	**08 03 18.8**	**-1.7**
AS31	**Alice Springs**	**32.29**	**259**	P	**P**	**08 03 19.0**	**-1.6**
ASAR	**Alice Springs**	**32.29**	**259**	P	**P**	**08 03 20.4**	**-0.2**
	0.8nm,0.6s,baz=89,slow=9.3,SNR=22 0.8nm,0.6s						
ASAR	**Alice Springs**	**32.29**	**259**	P	**P**	**08 03 18.0**	**-2.5**
MTN	**Manton Dam**	**36.97**	**277**	P	**P**	**08 03 59.8**	**-1.2**
MTN				IAmb	IAmb	08 04 11.7	
	comp=Z,8.1nm,1.0s						
MBWA	**Marble Bar**	**45.60**	**261**	P	**P**	**08 05 11.2**	**-0.7**
SBA	**Scott Base**	**56.40**	**181**	P	**P**	**08 06 32.6**	**+0.4**
MJAR	**Matsushiro Arr**	**64.59**	**333**	P	**P**	**08 07 29.1**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=165,slow=6.7,SNR=5.5 comp=Z,1.0nm,0.5s						
MAJO	**Matsushiro**	**64.59**	**333**	P	**P**	**08 07 28.4**	**-0.3**
MAJO				IAmb	IAmb	08 07 54.9	
	comp=Z,8.3nm,1.1s						
MJB9	**Matsu-Tunnel**	**64.59**	**333**	P	**P**	**08 07 28.1**	**-0.6**
MJB9				IAmb	IAmb	08 07 56.3	
	comp=Z,7.7nm,1.0s						
QSPA	**South Pole Qui**	**68.55**	**180**	P	**P**	**08 07 55.5**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=10.0,slow=2.3,SNR=5.1						
QSPA	**South Pole Qui**	**68.55**	**180**	P	**P**	**08 07 55.0**	**+1.2**
QSPA				IAmb	IAmb	08 08 03.6	
	comp=Z,1.7nm,0.9s						
PETK	**Petropavlovsk-**	**74.93**	**353**	P	**P**	**08 08 32.8**	**+0.8**
	comp=Z,5.9nm,1.1s,baz=181,slow=6.4,SNR=1.1 comp=Z,5.9nm,1.1s						
PETK	**Petropavlovsk-**	**74.93**	**353**	P	**P**	**08 08 32.4**	**+0.4**
MDJ	**Mudanjiang**	**74.94**	**332**	P	**P**	**08 08 32.7**	**+0.4**
MDJ				IAmb	IAmb	08 08 37.3	
	comp=Z,3.8nm,0.5s						
BELA	**Belgrano 2**	**79.88**	**175**	P	**P**	**08 08 58.5**	**-1.0**
BELA				IAmb	IAmb	08 09 10.4	
	comp=Z,3.5nm,0.9s						
N15K	**Kwethluk River**	**85.23**	**15**	P	**P**	**08 09 27.8**	**+0.4**
O18K	**Koktuh Hills**	**86.23**	**17**	P	**P**	**08 09 32.5**	**+0.1**
SNAA	**Sanae**	**86.89**	**183**	P	**P**	**08 09 38.6**	**+2.9**
	comp=Z,1.5nm,1.0s,baz=196,slow=6.5,SNR=5.5 comp=Z,1.5nm,1.0s						
SNAA	**Sanae**	**86.89**	**183**	P	**P**	**08 09 34.9**	**-0.8**
SNAA				IAmb	IAmb	08 09 46.7	
	comp=Z,4.2nm,1.1s						
L19K	**White Mountain**	**88.27**	**16**	P	**P**	**08 09 43.5**	**+1.3**
L19K				IAmb	IAmb	08 09 47.8	
	comp=Z,5.8nm,1.2s						
SONM	**Songino Array**	**88.81**	**323**	P	**P**	**08 09 46.4**	**+1.2**
	comp=Z,0.9nm,0.9s,baz=106,slow=4.7,SNR=5.5 comp=Z,0.9nm,0.9s						
NVAR	**Mina Array Bea**	**90.57**	**49**	P	**P**	**08 09 53.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=220,slow=9.6,SNR=4.8 comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**92.50**	**17**	P	**P**	**08 09 59.9**	**-1.9**
	comp=Z,0.2nm,0.7s,baz=218,slow=5.6,SNR=6.0 comp=Z,0.2nm,0.7s						
ELK	**Elko**	**93.72**	**48**	LR	LR	08 45 06.9	
	comp=Z,107nm,19.5s,baz=88,slow=31						
ARCES	**ARCESS Array B**	**127.16**	**345**	PKP	**PKPdf**	**08 15 53.6**	**-1.2**
	comp=Z,4.2nm,1.0s,baz=27,slow=3.0,SNR=4.6						
EKA	**Eskdalemuir Ar**	**145.70**	**352**	PKPbc	**PKPdf**	**08 16 29.0**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=355,slow=2.7,SNR=8.6						
GERES	**GERESS Array B**	**146.29**	**330**	PKPbc	**PKPab**	**08 16 32.3**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=32,slow=5.2,SNR=7.6						

*IDC **30** 08:10:35.8±1.0, 18°.34N×121°.20E, h0km, mb3.5/7, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=29.7km s-min=20.0km az=76.0*

ISC 30 08:10:41.5±1.0**, 18°.4N**±0°.1**×121°.2E**±0°.2**, h41**km**, n14,**
σ0°.45**/8, mb3.4/7, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**19.93**	**16**	P	**P**	**08 15 09.2**	**-0.6**
	0.1nm,0.3s,baz=201,slow=12,SNR=1.8 0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**21.10**	**274**	P	**P**	**08 15 23.0**	**+0.2**
	1.9nm,0.3s,baz=86,slow=8.2,SNR=5.3 1.9nm,0.3s						
MJAR	**Matsushiro Arr**	**23.53**	**36**	P	**P**	**08 15 48.4**	**+0.4**
	0.6nm,0.7s,baz=232,slow=9.2,SNR=1.7 0.6nm,0.7s						
WRA	**Warramunga Arr**	**40.18**	**161**	P	**P**	**08 18 13.9**	**-0.1**
	0.2nm,0.3s,baz=342,slow=8.4,SNR=5.1 0.2nm,0.3s						
MKAR	**Makanchi Array**	**42.67**	**320**	P	**P**	**08 18 34.5**	**+0.3**
	1.1nm,1.0s,baz=120,slow=8.5,SNR=2.6 1.1nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**43.08**	**82**	T	T	09 04 09.4	
	baz=276,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**43.09**	**82**	T	T	09 04 10.4	
	baz=276						
H11S2	**WAKE ISLAND Hy**	**43.10**	**82**	T	T	09 04 12.1	
	baz=276						
H11N1	**WAKE ISLAND Hy**	**43.13**	**81**	T	T	09 04 44.9	
	baz=277						
H11N2	**WAKE ISLAND Hy**	**43.14**	**80**	T	T	09 04 32.7	
	baz=277						
H11N3	**WAKE ISLAND Hy**	**43.15**	**81**	T	T	09 04 32.0	
	baz=277						
ASAR	**Alice Springs**	**43.57**	**163**	P	**P**	**08 18 41.5**	**-0.2**
	0.2nm,0.4s,baz=340,slow=8.0,SNR=10 0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**46.67**	**324**	P	**P**	**08 19 05.5**	**-0.5**
	0.7nm,0.6s,baz=118,slow=7.7,SNR=5.5 0.7nm,0.6s						
ILAR	**Eielson Array**	**74.40**	**26**	P	**P**	**08 22 15.2**	**+0.3**
	0.2nm,0.6s,baz=270,slow=5.4,SNR=4.9 0.2nm,0.6s						

*CATAC **30** 08:19:31.9±0.7, 14°.N±3°.×9°.2W±°, h34km±10km, M3.5/10, MLv3.5/10, Error ellipse: s-maj=8.3km s-min=3.6km az=33.3, confirmed*
*SNET **30** 08:19:32.8±1.3, 13°.83N×92°.02W, h48km±61km, ML3.7*
*GCG **30** 08:19:33.3±2.2, 13°.89N×91°.86W, h16km±13km, MD3.9, ML4.0*

ISC 30 08:19:32.7±2.7**, 13°.8N**±0°.1**×92°.0W**±0°.1**, h54**km**, n31,**
σ1°.25**/35, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.79**	**22**	*e*P	**Pn**	**08 19 47.1**	**-0.7**
RTAL				*e*S	**Sn**	**08 19 58.4**	**-0.4**
RTAL	**Retalhuleu**	**0.79**	**22**	P	**Pn**	**08 19 47.0**	**-0.7**
RTAL	**Retalhuleu**	**0.79**	**22**	S	**Sn**	**08 19 59.6**	**+0.7**
STG5	**El Palmar, Qui**	**0.88**	**46**	*e*P	**Pn**	**08 19 48.9**	**-0.1**
STG2	**El Palmar, Qui**	**0.89**	**43**	*e*P	**Pn**	**08 19 49.2**	**+0.1**
STG8	**El Palmar, Qui**	**0.91**	**43**	*e*P	**Pn**	**08 19 49.7**	**+0.1**
SMCA	**Catarina**	**1.07**	**356**	*e*P	**Pn**	**08 19 49.8**	**-1.6**
THIG		**1.15**	**347**	*e*P	**Pn**	**08 19 51.0**	**-1.5**
QUEO	**Labor Ovalle**	**1.18**	**23**	*e*P	**Pn**	**08 19 52.5**	**-0.7**
QUEO				*e*S	**Sn**	**08 20 07.0**	**-1.3**
ESSG	**Sabana Grande**	**1.28**	**62**	*e*P	**Pn**	**08 19 53.3**	**-1.0**
FG16	**Alotenango, Sa**	**1.52**	**71**	*e*P	**Pn**	**08 19 54.0**	**-3.7**
FG16				IAML		08 20 15.7	
	comp=N,9μm,0.3s						
HUEH	**Huehuetenango**	**1.60**	**17**	*e*P	**Pn**	**08 19 59.0**	**+0.2**
HUEH	**Huehuetenango**	**1.60**	**17**	*e*P	**Pn**	**08 19 59.1**	**+0.2**
HUEH	**Huehuetenango**	**1.60**	**17**	P	**Pn**	**08 19 59.0**	**+0.2**
PCG5	**San Vicente Pa**	**1.63**	**75**	*e*P	**Pn**	**08 19 56.3**	**-2.9**
QUIS	**Sacapulas**	**1.73**	**30**	*e*P	**Pn**	**08 20 01.6**	**+1.0**
QUIS				IAML		08 20 28.6	
	comp=E,519nm,0.3s						
APG	**El Apazote**	**1.92**	**51**	*e*P	**Pn**	**08 20 04.5**	**+1.3**
FAME	**Alcaldia de Sa**	**1.93**	**88**	P	**Pn**	**08 20 02.3**	**-0.8**
NUBE	**Las Nubes**	**2.16**	**87**	*e*P	**Pn**	**08 20 05.9**	**-0.5**
NUBE	**Las Nubes**	**2.16**	**87**	*e*P	**Pn**	**08 20 06.2**	**-0.2**
NUBE				*i* S	**Sn**	**08 20 30.9**	**-1.1**
NUBE	**Las Nubes**	**2.16**	**87**	P	**Pn**	**08 20 06.2**	**-0.2**
NUBE				S	**Sn**	**08 20 32.6**	**+0.6**
RTR	**El Retiro**	**2.29**	**87**	*e*P	**Pn**	**08 20 09.7**	**+1.5**
CEVE	**Cerro Verde**	**2.31**	**89**	*e*P	**Pn**	**08 20 09.3**	**+0.8**
CEVE				IAML		08 20 43.2	
	comp=Z,384nm,0.3s						
CEVE	**Cerro Verde**	**2.31**	**89**	S	**Sn**	**08 20 36.3**	**+0.5**
SBLS	**San Blas**	**2.31**	**88**	*e*P	**Pn**	**08 20 09.4**	**+0.9**
JAYA	**Jayaque - finc**	**2.48**	**93**	*e*P	**Pn**	**08 20 11.6**	**+0.8**
JAYA	**Jayaque - finc**	**2.48**	**93**	S	**Sn**	**08 20 40.5**	**+0.5**
CCIG	**Comitan**	**2.48**	**357**	*e*P	**Pn**	**08 20 13.5**	**+2.6**
PMON	**Piamonte**	**2.61**	**91**	S	**Sn**	**08 20 43.1**	**+0.1**
UEES	**Universidad Ev**	**2.68**	**91**	S	**Sn**	**08 20 45.5**	**+0.7**
ESQI	**Esquipulas**	**2.69**	**73**	*e*P	**Pn**	**08 20 14.5**	**+0.9**

*IDC **30** 08:39:58.1±1.5, 3°.66S×130°.15E, h0km, mb3.9/4, mbtmp3.9/6, ML4.3/2, Error ellipse: s-maj=80.4km s-min=15.4km az=76.0*
*DJA **30** 08:39:59.8±0.5, 3°.S±4°.×13°.1E±°, h25km±6km, M4.2/12, mb4.6/4, MLv4.0/12*

ISC 30 08:40:00.3±0.9**, 3°.41S**±0°.07**×130°.59E**±0°.08**, h31**km**, n17,**
σ3°.27**/18, mb3.7/3, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.30**	**212**	P	**Pb**	**08 40 27.7**	**+3.5**
MSAI	**Masohi**	**1.66**	**272**	P	**Pb**	**08 40 29.7**	**-0.6**
FAKI	**Fak Fak**	**1.73**	**74**	P	**Pn**	**08 40 27.5**	**-0.7**
AAI	**Ambon**	**2.41**	**263**	P	**Pn**	**08 40 39.6**	**+2.0**
SWI	**Sorong**	**2.62**	**15**	P	Pn	08 40 33.1	-7.4
NLAI	**Namlea**	**3.49**	**273**	P	**Pn**	**08 40 53.3**	**+0.8**
RKPI	**Ransiki, Papua**	**4.05**	**62**	P	**Pn**	**08 40 57.9**	**-2.3**
SANI	**Sanana**	**4.79**	**286**	P	**Pn**	**08 41 06.5**	**-3.9**
BAKI	**Biak**	**5.94**	**68**	P	**Pn**	**08 41 24.3**	**-1.8**
	72nm,0.6s						
GTOI	**Gorontalo**	**8.58**	**298**	P	**Pn**	**08 42 01.6**	**-0.8**
	21nm,0.5s						
APSI	**Ampana**	**9.27**	**285**	P	**Pn**	**08 42 09.9**	**-2.1**
	21nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.38**	**198**	Pn	**Pn**	**08 43 33.6**	**-1.7**
	1.4nm,0.3s,baz=19,slow=10,SNR=26						
FITZ				Sn	**Sn**	**08 46 18.6**	**-6.1**
	0.1nm,0.3s,baz=131,slow=18,SNR=2.6 4.7nm,1.1s						
WRA	**Warramunga Arr**	**16.83**	**168**	Pn	**Pn**	**08 43 52.7**	**-1.2**
	0.9nm,0.3s,baz=346,slow=11,SNR=13						
WRA				Sn	**Sn**	**08 46 53.0**	**-7.1**
	0.4nm,0.3s,baz=353,slow=24,SNR=6.7 0.8nm,0.6s						
ASAR	**Alice Springs**	**20.39**	**171**	P	Pn	08 44 36.6	-0.3
	16nm,0.5s,baz=350,slow=10,SNR=252						
ASAR				S	**S**	**08 48 22.9**	**+1.2**
	1.8nm,0.8s,baz=350,slow=17,SNR=7.6 16nm,0.5s						
ZALV	**Zalesovo Beam**	**68.66**	**333**	P	**P**	**08 51 02.5**	**+1.9**
	0.4nm,0.6s,baz=131,slow=4.0,SNR=1.7 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**69.80**	**328**	P	**P**	**08 51 09.6**	**+2.0**
	0.4nm,0.8s,baz=117,slow=5.0,SNR=2.8 0.4nm,0.8s						
QSPA	**South Pole Qui**	**86.54**	**180**	P	**P**	**08 52 43.8**	**+3.5**
	0.5nm,0.7s,baz=321,slow=4.0,SNR=1.7 0.5nm,0.7s						

*MEX **30** 08:57:34.6±1.3, 14°.54N×92°.33W, h71km±14km, MD4.2*
*GCG **30** 08:57:34.1±1.2, 14°.58N×92°.20W, h68km±6km, MD3.9, ML3.8*
*CATAC **30** 08:57:34.2±0.4, 14°N±3°×9°2W±°, h39km±4km, M3.6/19, MLv3.6/19, Error ellipse: s-maj=7.0km s-min=2.9km az=36.6, confirmed*

ISC 30 08:57:32.9±1.2**, 14°.55N**±0°.05**×92°.34W**±0°.03**, h71**km**±6km,**
n68, σ1°.87**/89, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.36**	**12**	*i* P	**Pn**	**08 57 45.8**	**+1.1**
THIG				*e*S	**Sn**	**08 57 53.0**	**-0.3**
THIG		**0.36**	**12**	*i* P	**Pn**	**08 57 45.8**	**+1.1**
THIG				*e*S	**Sn**	**08 57 54.0**	**+0.7**
THIG				IAML		08 57 55.7	
	comp=N,5μm,0.3s						
SMCA	**Catarina**	**0.40**	**40**	*i* P	**Pn**	**08 57 45.2**	**+0.2**
SMCA				*e*S	**Sn**	**08 57 53.6**	**-0.2**
SMCA				IAML		08 57 54.6	
	comp=E,4μm,0.2s						
PATR	**El Naranjo**	**0.57**	**10**	*e*P	**Pn**	**08 57 46.5**	**-0.4**
PATR				*e*S	**Sn**	**08 57 56.4**	**-0.7**
CHUJ	**Union Juarez**	**0.59**	**23**	*e*P	**Pn**	**08 57 46.8**	**-0.2**
CHUJ				*e*S	**Sn**	**08 57 57.0**	**-0.3**
RTAL	**Retalhuleu**	**0.63**	**92**	*e*P	**Pn**	**08 57 47.5**	**+0.3**
RTAL				*e*S	**Sn**	**08 57 57.1**	**-0.5**
RTAL	**Retalhuleu**	**0.63**	**92**	S	**Sn**	**08 57 58.7**	**+1.1**
RTAL	**Retalhuleu**	**0.63**	**92**	P	**Pn**	**08 57 47.6**	**+0.5**
PAVE	**Pavencul**	**0.66**	**14**	*e*P	**Pn**	**08 57 47.5**	**-0.3**
PAVE				*e*S	**Sn**	**08 57 58.3**	**-0.3**
QUEO	**Labor Ovalle**	**0.86**	**68**	*i* P	**Pn**	**08 57 50.4**	**+0.3**
QUEO				*e*S	**Sn**	**08 58 03.2**	**+0.4**
QUEO				IAML		08 58 04.3	
	comp=N,3μm,0.2s						
STG2	**El Palmar, Qui**	**0.94**	**97**	*e*P	**Pn**	**08 57 47.7**	**-3.2**
STG2				*e*S	**Sn**	**08 57 58.1**	**-6.2**
STG8	**El Palmar, Qui**	**0.96**	**96**	*i* P	**Pn**	**08 57 48.2**	**-3.1**
STG5	**El Palmar, Qui**	**0.97**	**98**	*i* P	**Pn**	**08 57 48.2**	**-3.1**
HUEH	**Huehuetenango**	**1.11**	**47**	*e*P	**Pn**	**08 57 52.9**	**-0.2**
HUEH				*e*S	**Sn**	**08 58 08.6**	**+0.3**
HUEH	**Huehuetenango**	**1.11**	**47**	*i* P	**Pn**	**08 57 53.3**	**+0.2**
HUEH				*i* S	**Sn**	**08 58 08.9**	**+0.7**
HUEH				IAML		08 58 17.9	
	comp=E,2μm,0.7s						
HUEH	**Huehuetenango**	**1.11**	**47**	P	**Pn**	**08 57 53.4**	**+0.2**
HUEH	**Huehuetenango**	**1.11**	**47**	S	**Sn**	**08 58 09.2**	**+1.0**
QUIS	**Sacapulas**	**1.42**	**58**	*e*P	**Pn**	**08 57 57.4**	**+0.5**
PCIG		**1.43**	**324**	*e*P	**Pn**	**08 57 58.4**	**+1.4**
PCIG				*e*P		08 57 58.5	
PCIG				*e*S	**Sn**	**08 58 15.5**	**+0.4**
PCIG				*e*S		08 58 17.1	
ESSG	**Sabana Grande**	**1.47**	**96**	*e*P	**Pn**	**08 57 57.5**	**-0.1**
CCIG	**Comitan**	**1.73**	**6**	*e*P	**Pn**	**08 58 02.3**	**+1.1**
CCIG				*e*S	**Sn**	**08 58 22.2**	**-0.4**
CCIG	**Comitan**	**1.73**	**6**	*i* P	**Pn**	**08 58 02.8**	**+1.5**
CCIG	**Comitan**	**1.73**	**6**	S	**Sn**	**08 58 23.9**	**+1.3**
CCIG	**Comitan**	**1.73**	**6**	P	**Pn**	**08 58 02.7**	**+1.5**
FG16	**Alotenango, Sa**	**

	270nm,0.3s					
TDK			S	Sn	09 03 11.9	-1.3
	411nm,0.4s					
TDK	**Taldyqorghan**	**0.83 299**	*e*P	Pn	09 03 00.4	-0.2
	170nm,0.2s					
TDK			*e*S	Sn	09 03 11.9	-1.3
	573nm,0.2s					
BLB	**Baldybastay**	**0.85 233**	P	Pn	09 02 59.9	-1.1
	76nm,0.1s					
BLB			S	Sb	09 03 10.6	-0.7
	1µm,0.4s					
ARXS	**Arharly**	**1.21 252**	P	Pg	09 03 06.3	+0.9
	54nm,0.2s					
ARXS			S	Sn	09 03 22.0	-0.8
	283nm,0.2s					
ARXS	**Arharly**	**1.21 252**	*e*P	Pg	09 03 06.3	+0.9
ARXS			*e*S	Sn	09 03 22.0	-0.8
KPKS	**Kokpek**	**1.26 205**	P	Pg	09 03 07.0	+0.7
	201nm,0.3s					
KPKS			S	Sg	09 03 23.0	+0.3
	317nm,0.4s					
PDGK	**Podgornoye**	**1.28 178**	⇓P	Pg	09 03 07.2	+0.6
	131nm,0.6s					
PDGK			⇑S	Sn	09 03 23.7	-0.8
	176nm,0.7s					
KTMS	**Ketmen**	**1.34 150**	P	Pn	09 03 06.5	-1.2
	29nm,0.2s					
KTMS			S	Sb	09 03 22.6	-2.8
	142nm,0.4s					
KTMS	**Ketmen**	**1.34 150**	*e*P	Pn	09 03 06.5	-1.2
	29nm,0.2s					
KTMS			*e*S	Sb	09 03 22.6	-2.8
	142nm,0.4s					
KURS	**Kuram**	**1.44 219**	P	Pg	09 03 10.3	+0.5
	50nm,0.5s					
KURS			S	Sg	09 03 28.8	+0.3
	163nm,0.7s					
SHLS	**Shalkode**	**1.45 179**	P	Pg	09 03 10.8	+0.9
	77nm,0.5s					
SHLS			S	Sg	09 03 29.8	+1.1
	428nm,0.3s					
SHLS	**Shalkode**	**1.45 179**	*e*P	Pg	09 03 10.8	+0.9
	77nm,0.5s					
SHLS			*e*S	Sg	09 03 29.8	+1.1
	428nm,0.3s					
UZB	**Uzynbulak**	**1.49 192**	P	Pg	09 03 10.9	+0.2
	98nm,0.3s					
UZB			S	Sb	09 03 29.7	0.0
	972nm,0.6s					
UZB	**Uzynbulak**	**1.49 192**	*e*P	Pg	09 03 10.8	+0.2
	98nm,0.3s					
UZB			*e*S	Sb	09 03 29.7	0.0
	972nm,0.6s					
SATY	**Saty**	**1.72 206**	P	Pg	09 03 14.7	-0.3
	20nm,0.2s					
SATY			S	Sb	09 03 35.9	-0.3
	486nm,0.3s					
KOTS	**Kotyrbulak**	**2.17 231**	Pg	Pb	09 03 22.5	+0.6
	54nm,0.6s					
KOTS			Lg	Lg	09 03 49.6	
	729nm,1.0s					
KOTS	**Kotyrbulak**	**2.17 231**	*e*P	Pb	09 03 22.5	+0.6
	54nm,0.6s					
KOTS			*e*S	Sb	09 03 49.6	+0.4
	729nm,1.0s					
KTBS	**Karatobe**	**2.17 247**	Pg	Pb	09 03 22.2	+0.3
	91nm,0.5s					
KTBS			Lg	Lg	09 03 49.4	
	96nm,0.4s					
MDOK	**Medeo**	**2.25 231**	Pg	Pb	09 03 22.5	-0.9
	34nm,0.7s					
MDOK			Lg	Lg	09 03 49.8	
	318nm,0.5s					
KNDC	**Almaty**	**2.26 233**	⇑Pn	Pg	09 03 24.4	-1.0
	74nm,0.5s					
KNDC			⇑Sn	Sg	09 03 54.3	-0.4
	209nm,0.3s					
AAA	**Alma-Ata**	**2.29 233**	Pg	Pg	09 03 24.9	-1.1
	111nm,0.6s					
AAA			Lg	Lg	09 03 53.7	
	49nm,0.3s					
AAA	**Alma-Ata**	**2.29 233**	*e*P	Pg	09 03 24.9	-1.1
	111nm,0.6s					
AAA			*e*S	Sb	09 03 53.7	+0.9
	49nm,0.3s					
KUU	**Kurty**	**2.33 253**	Pg	Pb	09 03 24.8	+0.1
	27nm,0.7s					
KUU			Lg	Lg	09 03 53.9	
	258nm,0.4s					
KUU	**Kurty**	**2.33 253**	*e*P	Pb	09 03 24.8	+0.1
	27nm,0.7s					
KUU			*e*S	Sb	09 03 53.9	0.0
	258nm,0.4s					
TNSS	**Tian-Shan**	**2.38 230**	Pg	Pg	09 03 26.7	-1.2
	4.1nm,0.6s					
TNSS			Lg	Lg	09 03 57.3	
	30nm,0.4s					
TNSS	**Tian-Shan**	**2.38 230**	*e*P	Pg	09 03 26.7	-1.2
	4.1nm,0.6s					
TNSS			*e*S	Sg	09 03 57.3	-1.4
	30nm,0.4s					
IZV	**Izvestkoviy**	**2.57 233**	Pg	Pb	09 03 28.7	-0.3
	20nm,0.6s					
IZV			Lg	Lg	09 03 59.9	
	216nm,1.3s					
IZV	**Izvestkoviy**	**2.57 233**	*e*P	Pb	09 03 28.6	-0.3
	20nm,0.6s					
IZV			*e*S	Sb	09 03 59.9	-1.0
	216nm,1.3s					
MTBS	**Maitube**	**2.62 237**	Pg	Pg	09 03 31.0	-1.4
	18nm,0.3s					
MTBS			Lg	Lg	09 04 04.4	
	375nm,0.3s					
MTBS	**Maitube**	**2.62 237**	*e*P	Pg	09 03 31.0	-1.4
	18nm,0.3s					
MTBS			*e*S	Sg	09 04 04.4	-2.0
	375nm,0.3s					
KRBS	**Karabastau**	**2.85 253**	Pg	Pb	09 03 33.5	0.0
	14nm,0.3s					
KRBS			Lg	Lg	09 04 09.0	
	51nm,0.6s					
KST	**Kastek**	**2.96 239**	Pg	Pb	09 03 35.7	+0.3
	13nm,0.6s					
KST			Lg	Lg	09 04 12.6	
	123nm,0.4s					
KST	**Kastek**	**2.96 239**	*e*P	Pb	09 03 36.5	+1.1
	5.4nm,0.3s					
KST			*e*S	Sb	09 04 13.7	+1.8
	131nm,0.3s					
MK31	**Makanchi Array**	**2.97 42**	⇑Pn	Pb	09 03 34.6	-1.0
	1.7nm,0.2s,baz=214,slow=11,SNR=200					
MK31			Pg	Pg	09 03 40.5	+1.5
	7.3nm,0.3s,baz=216,slow=17,SNR=27					
MK31			⇑Lg	Lg	09 04 15.9	
	23nm,0.4s,baz=216,slow=26,SNR=18					
DGS	**Degeres**	**2.97 244**	Pg	Pb	09 03 36.5	+0.8
	14nm,0.4s					
DGS			Lg	Lg	09 04 13.9	
	141nm,0.8s					
BTLS	**Baital**	**3.85 278**	Pg	Pg	09 03 54.4	-1.6
	21nm,0.6s					
BTLS			Lg	Lg	09 04 44.1	
	11nm,0.6s					
BTLS	**Baital**	**3.85 278**	*e*P	Pg	09 03 54.4	-1.6
	22nm,0.2s					
BTLS			*e*S	Sg	09 04 44.1	-1.8
	18nm,0.4s					
AAK	**Ala-Archa**	**4.09 243**	⇑Pn	Pn	09 03 48.6	+3.1
	6.4nm,0.4s					
AAK			⇑Lg	Lg	09 04 48.2	
	86nm,0.5s					
ZSN	**Zaisan**	**4.74 51**	*e*P	Pg	09 04 12.7	-0.2
	3.1nm,0.2s					
ZSN			*e*S	Sg	09 05 15.5	+1.3
	37nm,0.5s					
MRKS	**Merke**	**4.87 250**	Pg	Pb	09 04 11.3	+3.3
	2.6nm,0.4s					
MRKS			Lg	Lg	09 05 13.1	
	50nm,0.8s					
MRKS	**Merke**	**4.87 250**	*e*P	Pb	09 04 10.4	+2.4
	2.0nm,0.2s					
MRKS			*e*S	Sb	09 05 11.5	+4.6
	50nm,0.8s					
KURBB	**Kurchatov Arra**	**6.05 355**	⇓Pg	Pg	09 04 35.8	-2.1
	4.1nm,0.6s					
KURBB			⇓Sn	Sn	09 05 26.4	+4.6
KURBB			⇑Lg	Lg	09 05 54.7	
	37nm,0.6s					

KURK	**Kurchatov**	**6.14 355**	⇑Pg	Pg	09 04 36.9	-2.7
	0.8nm,0.7s					
KURK			⇓Sn	Sn	09 05 24.9	+1.0
	1.6nm,0.6s					
KURK			⇑Lg	Lg	09 05 55.6	
	12nm,0.7s					
KK31	**Karatay Array**	**6.62 260**	⇓Pg	Pg	09 04 46.6	-2.3
	1.6nm,0.5s,baz=71,slow=14,SNR=7.7					
KK31			⇑Lg	Lg	09 06 09.5	
	4.8nm,0.4s,baz=77,slow=29,SNR=9.0					
BVA0	**Borovoye Array**	**10.31 328**	Lg	Lg	09 08 08.2	
	9.4nm,0.9s,baz=133,slow=25,SNR=4.9					

IDC 30 09:05:33.5±9.3, 23.75S×179.37E, h695km±120km, mb2.8/7, mbtmp3.8/7, Error ellipse: s-maj=46.7km s-min=28.9km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.49**	**261**	P	P	09 12 24.5	-0.1
	0.5nm,0.3s,baz=100,slow=7.3,SNR=10						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**41.84**	**266**	P	P	09 12 26.8	-0.5
	1.2nm,0.4s,baz=103,slow=7.9,SNR=43						
	1.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**50.26**	**266**	P	P	09 13 31.3	+1.0
	1.7nm,0.8s,baz=99,slow=13,SNR=1.9						
	1.7nm,0.8s						
QSPA	**South Pole Qui**	**66.33**	**180**	P	P	09 15 16.9	+0.3
	0.8nm,0.8s,baz=41,slow=2.1,SNR=8.3						
	0.8nm,0.8s						
SNAA	**Sanae**	**84.83**	**179**	P	P	09 16 56.9	-0.6
	0.3nm,0.4s,baz=199,slow=18,SNR=5.8						
	0.3nm,0.4s						
NVAR	**Mina Array Bea**	**85.05**	**44**	P	P	09 16 59.2	-0.1
	0.1nm,0.4s,baz=241,slow=7.2,SNR=2.3						
	0.1nm,0.4s						
TXAR	**Lajitas Array**	**90.84**	**58**	P	P	09 17 26.5	+0.1
	0.4nm,0.7s,baz=235,slow=4.1,SNR=5.1						
	0.4nm,0.7s						
HFS	**Hagfors**	**142.28**	**348**	PKP	PKPdf	09 23 48.5	-0.6
	3.4nm,1.0s,baz=5.7,slow=1.4,SNR=8.1						

*CATAC **30** 09:11:10.6±0.7, 14.7N×93.2W±., h21km±4km, M3.4/12, MLv3.4/12, Error ellipse: s-maj=7.4km s-min=3.5km az=43.7, confirmed*
*GCG **30** 09:11:12.7±0.7, 14.01N×91.84W, h7km±19km, MD4.1, ML4.0*

ISC 30 09:11:11.8±3.0, 13.8N±0.1×92.0W±0.1, h54km, n29, σ1s02/28, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.76**	**21**	P	**Pn**	**09 11 25.2**	**-1.3**
RTAL	**Retalhuleu**	**0.76**	**21**	S	**Sn**	**09 11 37.1**	**-0.1**
STG5	**El Palmar, Qui**	**0.84**	**46**	*i* P	**Pn**	**09 11 27.1**	**-0.5**
STG8	**El Palmar, Qui**	**0.88**	**43**	*e*P	**Pn**	**09 11 28.0**	**-0.2**
QUEO	**Labor Ovalle**	**1.14**	**23**	*i* P	**Pn**	**09 11 30.8**	**-1.0**
ESSG	**Sabana Grande**	**1.25**	**63**	*i* P	**Pn**	**09 11 32.1**	**-0.9**
FG16	**Alotenango, Sa**	**1.49**	**72**	*e*P	Pn	09 11 32.6	-3.8
FG16				IAML		09 11 56.2	
	comp=N,4µm,0.2s						
HUEH	**Huehuetenango**	**1.56**	**17**	*i* P	**Pn**	**09 11 37.2**	**-0.3**
HUEH	**Huehuetenango**	**1.56**	**17**	P	**Pn**	**09 11 37.0**	**-0.5**
HUEH	**Huehuetenango**	**1.56**	**17**	S	**Sn**	**09 11 56.7**	**-0.1**
APG	**El Apazote**	**1.88**	**51**	*e*P	**Pn**	**09 11 42.7**	**+0.9**
FAME	**Alcaldia de Sa**	**1.90**	**89**	P	**Pn**	**09 11 42.0**	**+0.2**
FAME	**Alcaldia de Sa**	**1.90**	**89**	S	**Sn**	**09 12 03.7**	**-1.0**
NUBE	**Las Nubes**	**2.13**	**87**	P	**Pn**	**09 11 45.0**	**-0.1**
NUBE	**Las Nubes**	**2.13**	**87**	S	**Sn**	**09 12 10.3**	**-0.3**
SLOZ	**Alcaldia de Sa**	**2.13**	**84**	P	**Pn**	**09 11 43.0**	**-2.1**
SLOZ	**Alcaldia de Sa**	**2.13**	**84**	S	**Sn**	**09 12 10.3**	**-0.2**
CEVE	**Cerro Verde**	**2.28**	**89**	P	**Pn**	**09 11 46.6**	**-0.7**
CEVE	**Cerro Verde**	**2.28**	**89**	S	**Sn**	**09 12 16.2**	**+1.8**
JAYA	**Jayaque - finc**	**2.46**	**93**	S	**Sn**	**09 12 19.2**	**+0.7**
JAYA	**Jayaque - finc**	**2.46**	**93**	P	**Pn**	**09 11 50.1**	**+0.5**
CCIG	**Comitan**	**2.46**	**356**	P	**Pn**	**09 11 50.1**	**+0.4**
CCIG	**Comitan**	**2.46**	**356**	S	**Sn**	**09 12 19.7**	**+1.0**
PMON	**Piamonte**	**2.58**	**92**	S	**Sn**	**09 12 23.1**	**+1.5**
PMON	**Piamonte**	**2.58**	**92**	P	**Pn**	**09 11 48.8**	**-2.5**
MTO3	**Montecristo**	**2.60**	**77**	P	**Pn**	**09 11 51.8**	**+0.2**
MTO3	**Montecristo**	**2.60**	**77**	S	**Sn**	**09 12 22.7**	**+0.6**
PACA	**Pacayal**	**3.56**	**95**	P	**Pn**	**09 12 04.9**	**+0.1**
PACA	**Pacayal**	**3.56**	**95**	S	**Sn**	**09 12 46.6**	**+0.9**

*IDC **30** 09:12:11.6±1.4, 0.28S×125.93E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=202.8km s-min=19.2km az=68.0*

ISC 30 09:12:16.8±1.3, 0.1S±0.4×12.6E±., h35km, n8, σ1s38/8, mb3.7/8, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.18**	**159**	P	**P**	**09 16 59.5**	**+0.2**
	0.8nm,0.4s,baz=337,slow=10,SNR=4.2						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**24.51**	**163**	P	**P**	**09 17 31.7**	**-1.4**
	0.3nm,0.4s,baz=342,slow=9.0,SNR=4.7						
	0.3nm,0.4s						
SONM	**Songino Array**	**50.84**	**343**	P	**P**	**09 21 15.3**	**+1.1**
	0.6nm,0.7s,baz=144,slow=8.4,SNR=2.6						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**60.54**	**327**	P	**P**	**09 22 23.1**	**-0.6**
	0.6nm,0.5s,baz=124,slow=7.5,SNR=11						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**63.87**	**334**	P	**P**	**09 22 43.6**	**-2.2**
	0.3nm,0.4s,baz=134,slow=4.2,SNR=2.2						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**64.81**	**329**	P	**P**	**09 22 52.1**	**+0.1**
	0.9nm,0.2s,baz=129,slow=6.4,SNR=2.6						
	0.9nm,0.2s						
BVAR	**Borovoye Array**	**70.36**	**328**	P	**P**	**09 23 26.5**	**-0.5**
	0.3nm,0.4s,baz=122,slow=14,SNR=2.0						
	0.3nm,0.4s						
VNDA	**Vanda**	**79.67**	**173**	P	**P**	**09 24 21.1**	**+0.8**
	1.3nm,1.0s,baz=315,slow=1.4,SNR=1.4						
	1.3nm,1.0s						

IDC 30 09:12:51.7±2.5, 6.84S×129.69E, h0km, mb3.5/1, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=102.1km s-min=30.0km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.87**	**199**	Pn	Pn	09 15 43.0	+0.6
	0.8nm,0.3s,baz=22,slow=13,SNR=18						
FITZ				Sn	Sn	09 17 37.5	-18
	1.2nm,0.3s,baz=360,slow=19,SNR=6.1						
	1.6nm,0.3s						
WRA	**Warramunga Arr**	**13.79**	**161**	Pn	Pn	09 16 08.1	-0.6
	0.6nm,0.3s,baz=338,slow=14,SNR=29						
WRA				Sn	Sn	09 18 28.2	-14
	1.0nm,0.3s,baz=339,slow=22,SNR=9.4						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**17.22**	**167**	P	Pn	09 16 53.7	-0.2
	0.4nm,0.3s,baz=336,slow=11,SNR=17						
ASAR				S	Sn	09 19 52.1	-14
	0.5nm,0.5s,baz=348,slow=25,SNR=5.9						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	09 23 52.4	0.0
	0.2nm,0.3s,baz=120,slow=7.9,SNR=2.1						
	0.2nm,0.3s						

IDC 30 09:37:58.9±1.6, 28.71S×177.83W, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=37.8km s-min=16.0km az=81.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.55**	**188**	Pn	Pn	09 38 14.2	+0.3
	434nm,0.3s,baz=14,slow=19,SNR=39						
RAO				Sn	Sn	09 38 24.0	+0.2
	2µm,0.3s,baz=75,slow=20,SNR=18						
ASAR	**Alice Springs**	**43.37**	**265**	P	P	09 46 03.5	+0.2
	0.2nm,0.4s,baz=110,slow=8.4,SNR=8.2						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**44.21**	**270**	P	P	09 46 09.5	-0.6
	0.8nm,0.4s,baz=110,slow=7.8,SNR=7.7						
	0.8nm,0.4s						
QSPA	**South Pole Qui**	**61.40**	**180**	P	P	09 48 16.8	+0.1
	0.8nm,0.7s,baz=45,slow=7.1,SNR=7.7						
	0.8nm,0.7s						

H03S2	**Juan Fernandez**	**81.28**	**124**	T	T	11 19 29.9
	baz=239,slow=74,SNR=5.5					
H03S1	**Juan Fernandez**	**81.29**	**124**	T	T	11 19 40.4
	baz=239,slow=74,SNR=4.5					
H03S3	**Juan Fernandez**	**81.29**	**124**	T	T	11 19 40.6
	baz=239,slow=74,SNR=5.2					
PETK	**Petropavlovsk-**	**84.22**	**345**	P	P	09 50 32.3	+0.5
	5.0nm,1.0s,baz=162,slow=5.2,SNR=1.9						
	5.0nm,1.0s						
FINES	**FINESS Array B**	**143.61**	**341**	PKP	PKPbc	09 57 32.3	-0.1
	1.6nm,0.5s,baz=48,slow=2.1,SNR=18						

GCG 30 09:43:55.4±0.7, 14.02N×91.81W, h5km±87km, MD3.9, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG5	**El Palmar, Qui**	**0.59**	**49**	*i* P	Pn	09 44 09.6	-1.0
STG2	**El Palmar, Qui**	**0.59**	**45**	*e*P	Pn	09 44 10.2	-0.5
STG8	**El Palmar, Qui**	**0.62**	**46**	*e*P	Pn	09 44 10.5	-0.7
STG8				*e*S	Sn	09 44 23.0	+1.4
FG16	**Alotenango, Sa**	**1.29**	**78**	*e*P	Pg	09 44 15.1	-5.1
APG	**El Apazote**	**1.63**	**53**	*e*P	Pn	09 44 25.3	+0.3

NEIC 30 09:50:32.7±0.3, 37.51N±0.01×97.80W±0.03, h5km±1km, ML2.5/28, Error ellipse: s-maj=3.9km s-min=2.8km az=78.0, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAN08	**Anthony NE Sta**	**0.31**	**206**		Pg	09 50 38.2	-0.6
KAN08				IAML		09 50 43.1	
	comp=N,521nm,0.1s						
KAN01	**Argonia South**	**0.36**	**174**		Pg	09 50 38.9	-0.7
KAN01				Sg	Sg	09 50 44.2	-0.1
GC02	**Grant County #**	**0.66**	**184**		Pg	09 50 44.5	-0.9
GC02				Sg	Sg	09 50 53.3	-0.5
BLOK	**Blackwell**	**0.88**	**148**	Pg	Pg	09 50 48.4	-1.2
CROK	**Carrier**	**1.01**	**188**		Pg	09 50 51.1	-1.0
CROK				IAML		09 51 11.3	
	comp=N,131nm,0.3s						
R32A	**Long Quarter,**	**1.16**	**322**	Pg	Pg	09 50 53.5	-1.5
R32A				Sg	Sg	09 51 09.0	-1.1
R32A				IAML		09 51 13.8	
	comp=N,130nm,0.3s						
R32A				IAML		09 51 14.1	
	comp=N,90nm,0.2s						
T35A	**Sooner Cattle**	**1.19**	**119**		Pg	09 50 54.1	-1.4
T35A				IAML		09 51 16.4	
	comp=N,109nm,0.3s						
T35A				IAML		09 51 17.7	
	comp=N,100nm,0.1s						
NOKA	**Waynoka**	**1.26**	**226**	Pg	Pg	09 50 55.3	-1.5
NOKA				IAML		09 51 24.8	
	comp=E,119nm,0.2s						
OK051	**E0350 and S346**	**1.27**	**142**		Pg	09 50 55.5	-1.5
OK048	**Pawnee Station**	**1.29**	**148**		Pn	09 50 56.0	-1.4
OK048				IAML		09 51 17.6	
	comp=E,84nm,0.2s						
OK048				IAML		09 51 17.8	
	comp=E,107nm,0.4s						
QUOK	**Quay**	**1.60**	**146**		Pn	09 51 01.3	-0.3
OK052	**Battle Ridge R**	**1.71**	**152**		Pn	09 51 03.0	-0.2
KSU1	**Kansas State U**	**1.85**	**30**	Pn	Pn	09 51 05.2	+0.1
DEOK	**Depew**	**1.96**	**147**		Pn	09 51 06.2	-0.5
OKCSW	**OKLAHOMA CITY**	**2.12**	**172**		Pn	09 51 07.5	-1.4
TUL3	**Leonard**	**2.27**	**134**	Pn	Pn	09 51 11.3	+0.4
WMOK	**Wichita Mounta**	**2.88**	**196**	Pn	Pn	09 51 18.5	-0.7
X34A	**Smith Ranch, M**	**2.90**	**181**	Pn	Pn	09 51 19.7	+0.1
HHAR	**Hobbs**	**3.33**	**110**		Pn	09 51 25.8	+0.3

*IDC **30** 10:02:01.2±1.7, 24.24S×67.08W, h144km±17km, mb3.8/2, mbtmp4.0/7, Error ellipse: s-maj=30.8km s-min=12.9km az=103.0*
*SJA **30** 10:02:02.4±0.9, 24.27S×67.22W, h189km±6km, ML3.6, MW3.6*
*GUC **30** 10:02:03.4±0.8, 24.25S×67.26W, h171km±6km, ML3.8*
*NEIC **30** 10:02:03.6±1.7, 24.22S±0.07×67.4W±0.1, h211km±11km, mb4.3/8, Mwr4.2(GUC), Error ellipse: s-maj=18.3km s-min=9.3km az=104.0*
*VAO **30** 10:02:08.2±3.5, 24.11S×66.93W, h209km, mb4.0*

ISC 30 10:02:02.7±0.6, 24.23S±0.04×67.23W±0.04, h187km±6km, n104, σ1s48/126, mb4.3/3, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALTA		**0.81**	**90**	⇓*i*P	**Pn**	**10 02 30.6**	**+0.1**
SALTA				*i* S	**Sn**	**10 02 51.1**	**-0.7**
SALTA		**0.81**	**90**	*e*P	**Pn**	**10 02 30.6**	**+0.1**
AF01	**San Pedro de A**	**1.54**	**326**		**Pn**	**10 02 37.7**	**+1.7**
AF01				Sn	**Sn**	**10 03 03.6**	**+1.8**
AF01	**San Pedro de A**	**1.54**	**326**	*e*P	**Pn**	**10 02 36.5**	**+0.5**
AF01	**San Pedro de A**	**1.54**	**326**	*e*P	Pn	10 02 22.8	-13
AF01				*e*S	**Sn**	**10 03 02.4**	**+0.6**
AF01				IAML		10 03 22.1	
	comp=Z,211nm,0.7s						
SLA	**San Lorenzo**	**1.65**	**108**	*e*P	**Pn**	**10 02 37.9**	**+1.1**
SLA				*e*S	**Sn**	**10 03 03.5**	**+0.2**
SLA	**San Lorenzo**	**1.65**	**108**	*e*P	**Pn**	**10 02 38.0**	**+1.2**
HJA	**Humahuaca**	**1.96**	**59**	*e*P	**Pn**	**10 02 41.1**	**+0.9**
FSA	**Cafayete**	**2.19**	**149**	*e*P	**Pn**	**10 02 38.5**	**-3.9**
GO02	**Mina Guanaco**	**2.34**	**246**		**Pn**	**10 02 45.5**	**+1.2**
GO02				Sn	**Sn**	**10 03 17.0**	**+0.5**
GO02	**Mina Guanaco**	**2.34**	**246**	*e*P	**Pn**	**10 02 45.4**	**+1.2**
GO02				*e*S	**Sn**	**10 03 16.9**	**+0.4**
GO02				IAML		10 03 19.3	
	comp=N,349nm,0.1s						
GO02				IAML		10 03 20.6	
	comp=E,362nm,0.1s						
GO02	**Mina Guanaco**	**2.34**	**246**	*e*P	**Pn**	**10 02 45.0**	**+0.8**
GO02				*e*S	**Sn**	**10 03 17.4**	**+0.9**
GO02				IAML		10 03 19.6	
	comp=Z,230nm,0.1s						
YJA	**Yavi**	**2.59**	**38**	*e*P	**Pn**	**10 02 48.5**	**+1.2**
PB06	**IPOC Station P**	**2.63**	**305**		**Pn**	**10 02 48.5**	**+1.1**
PB06				Sn	**Sn**	**10 03 21.2**	**-1.1**
PB06	**IPOC Station P**	**2.63**	**305**	⇑*i*P	**Pn**	**10 02 48.6**	**+1.2**
PB06	**IPOC Station P**	**2.63**	**305**	*e*P	**Pn**	**10 02 48.7**	**+1.2**
PB06				*e*S	**Sn**	**10 03 21.5**	**-0.8**
PB06				IAML		10 03 23.6	
	comp=Z,298nm,0.3s						
PB14	**IPOC Station P**	**2.92**	**262**		**Pn**	**10 02 51.7**	**+0.7**
PB14				Sn	**Sn**	**10 03 27.1**	**-1.5**
PB14	**IPOC Station P**	**2.92**	**262**	*e*P	**Pn**	**10 02 51.6**	**+0.7**
PB14	**IPOC Station P**	**2.92**	**262**	*e*P	**Pn**	**10 02 51.6**	**+0.7**
PB14				*e*S	**Sn**	**10 03 28.1**	**-0.5**
PB14				IAML		10 03 30.3	
	comp=Z,58nm,0.1s						
PB09	**IPOC Station P**	**3.05**	**322**		**Pn**	**10 02 54.2**	**+1.8**
PB09	**IPOC Station P**	**3.05**	**322**	*e*P	**Pn**	**10 02 54.3**	**+1.8**
PB09				IAML		10 03 32.1	
	comp=N,201nm,0.5s						
PB09	**IPOC Station P**	**3.05**	**322**	*e*P	**Pn**	**10

	comp=Z,98nm,0.5s							
PB03	**IPOC Station P**	**3.18**	**313**			**Pn**	**10 02 54.9**	**+0.9**
PB03	**IPOC Station P**	**3.18**	**313**	*eP*		**Pn**	**10 02 54.8**	**+0.8**
PB03	**IPOC Station P**	**3.18**	**313**	*eP*		**Pn**	**10 02 55.1**	**+1.1**
PB03				IAML			10 03 36.0	
	comp=Z,182nm,0.4s							
PB07	**IPOC Station P**	**3.49**	**315**			**Pn**	**10 02 58.7**	**+0.8**
PB07	**IPOC Station P**	**3.49**	**315**	*eP*		**Pn**	**10 02 58.7**	**+0.8**
PB07				IAML			10 03 45.2	
	comp=Z,143nm,0.3s							
AC01	**Pan de Azucar**	**3.60**	**237**			**Pn**	**10 02 58.9**	**0.0**
AC01	**Pan de Azucar**	**3.60**	**237**	*eP*		**Pn**	**10 02 58.9**	**0.0**
AC01	**Pan de Azucar**	**3.60**	**237**	*eP*		**Pn**	**10 02 58.9**	**0.0**
AC01				*eS*		**Sn**	**10 03 41.0**	**-2.0**
AC01				IAML			10 03 42.5	
	comp=Z,65nm,0.1s							
PB01	**IPOC Station P**	**3.80**	**326**			**Pn**	**10 03 02.1**	**+0.5**
PB01	**IPOC Station P**	**3.80**	**326**	*eP*		**Pn**	**10 03 02.1**	**+0.5**
PB01	**IPOC Station P**	**3.80**	**326**	*eP*		**Pn**	**10 03 02.3**	**+0.8**
PB01				IAML			10 03 51.6	
	comp=Z,44nm,0.1s							
PB02	**IPOC Station P**	**3.80**	**319**			**Pn**	**10 03 02.3**	**+0.7**
PB02	**IPOC Station P**	**3.80**	**319**	*eP*		**Pn**	**10 03 02.0**	**+0.4**
PB02	**IPOC Station P**	**3.80**	**319**	*eP*		**Pn**	**10 03 02.5**	**+0.9**
PB02				IAML			10 03 51.2	
	comp=Z,202nm,0.5s							
TINO	**Tinogasta**	**3.83**	**184**	*eP*		**Pn**	**10 03 04.2**	**+2.2**
AC06	**Mina Casimiro**	**4.20**	**221**			**Pn**	**10 03 06.3**	**-0.2**
GO03	**Copiapo**	**4.30**	**218**			**Pn**	**10 03 07.6**	**-0.2**
GO03	**Copiapo**	**4.30**	**218**	*eP*		**Pn**	**10 03 07.6**	**-0.2**
GO03	**Copiapo**	**4.30**	**218**	*eP*		**Pn**	**10 03 07.8**	**-0.1**
GO03				*eS*		**Sn**	**10 03 57.7**	**-1.4**
GO03				IAML			10 04 01.8	
	comp=Z,70nm,0.3s							
PATCX	**Punta Patache**	**4.34**	**321**			**Pn**	**10 03 08.6**	**+0.2**
PATCX	**Punta Patache**	**4.34**	**321**	*eP*		**Pn**	**10 03 09.2**	**+0.8**
PATCX	**Punta Patache**	**4.34**	**321**	*eP*		Pn	10 02 57.3	-11
PATCX				IAML			10 04 12.2	
	comp=Z,55nm,0.5s							
PB08	**IPOC Station P**	**4.44**	**336**			**Pn**	**10 03 11.0**	**+1.0**
PB08	**IPOC Station P**	**4.44**	**336**	*eP*		**Pn**	**10 03 11.4**	**+1.4**
PB08				IAML			10 04 07.4	
	comp=Z,26nm,0.6s							
TA01	**Diego Aracena**	**4.56**	**323**			**Pn**	**10 03 11.0**	**-0.1**
TA01	**Diego Aracena**	**4.56**	**323**	*eP*		**Pn**	**10 03 11.9**	**+0.8**
TA01				IAML			10 04 13.0	
	comp=Z,32nm,0.8s							
GO01	**Chusmiza**	**4.89**	**338**			**Pn**	**10 03 17.2**	**+1.3**
GO01	**Chusmiza**	**4.89**	**338**	*eP*		**Pn**	**10 03 17.4**	**+1.5**
GO01				*eS*		**Sn**	**10 04 13.8**	**+0.4**
GO01				IAML			10 04 18.8	
	comp=Z,22nm,0.8s							
PB11	**IPOC Station P**	**4.99**	**333**			**Pn**	**10 03 16.7**	**-0.1**
PB11	**IPOC Station P**	**4.99**	**333**	*eP*		**Pn**	**10 03 16.3**	**-0.5**
PB11				IAML			10 04 17.4	
	comp=Z,28nm,0.5s							
ACLC	**CERRO LA CRUZ**	**5.18**	**177**	*eP*		Pn	10 03 11.2	-8.0
AC04	**Llanos de Chal**	**5.25**	**220**			**Pn**	**10 03 19.0**	**-0.9**
AC04	**Llanos de Chal**	**5.25**	**220**	*eP*		**Pn**	**10 03 19.0**	**-0.9**
AC04	**Llanos de Chal**	**5.25**	**220**	*eP*		**Pn**	**10 03 19.1**	**-0.8**
AC04				*eS*		**Sn**	**10 04 18.1**	**-2.7**
AC04				IAML			10 04 19.6	
	comp=Z,37nm,0.4s							
AC05	**El Transito**	**5.33**	**210**			**Pn**	**10 03 21.3**	**+0.2**
AC05	**El Transito**	**5.33**	**210**	*eP*		**Pn**	**10 03 21.2**	**+0.1**
AC05				*eS*		**Sn**	**10 04 21.7**	**-1.3**
AC05				IAML			10 04 25.3	
	comp=Z,30nm,0.9s							
PSGCX	**Pisagua**	**5.34**	**329**			**Pn**	**10 03 20.2**	**-1.1**
AGUA	**GUANDACOL**	**5.35**	**192**	*eS*		**Sn**	**10 04 21.5**	**-2.0**
AGUA				IAML			10 04 28.9	
	comp=Z,13nm,0.5s							
LCO	**Las Campanas**	**5.68**	**212**			**Pn**	**10 03 25.2**	**-0.6**
CO01	**Juntas del Tor**	**6.26**	**203**	Pn		**Pn**	**10 03 34.2**	**+0.8**
PB12	**IPOC Station P**	**6.29**	**332**	Pn		**Pn**	**10 03 33.1**	**-0.6**
GO04	**Tololo Observa**	**6.71**	**207**	Pn		**Pn**	**10 03 39.4**	**+0.1**
CO03	**El Pedregal**	**7.26**	**204**	Pn		**Pn**	**10 03 46.3**	**0.0**
CFA	**Coronel Fontan**	**7.40**	**187**	P		**Pn**	**10 03 48.4**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=13,slow=14,SNR=2.1							
CFA				S		**Sn**	**10 05 07.7**	**-3.9**
	comp=Z,1.1nm,0.3s,baz=325,slow=8.2,SNR=4.3							
CO06	**Fray Jorge**	**7.51**	**210**	Pn		**Pn**	**10 03 48.0**	**-1.5**
CO02	**Combarbal**	**7.70**	**205**	Pn		**Pn**	**10 03 50.6**	**-1.6**
LPAZ	**La Paz**	**7.95**	**354**	P		**Pn**	**10 03 56.3**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=156,slow=6.5,SNR=14							
LPAZ				S		**Sn**	**10 05 23.3**	**-2.4**
	comp=Z,3.0nm,0.8s,baz=256,slow=12,SNR=6.4							
LPAZ	**La Paz**	**7.95**	**354**	Pn		**Pn**	**10 03 55.1**	**-0.8**
MURT	**Porto Murtinho**	**9.23**	**76**	*eP*		**Pn**	**10 04 12.4**	**+0.3**
SIV	**San Ignacio**	**10.03**	**36**	P		**Pn**	**10 04 20.2**	**-2.4**
	comp=Z,3.0nm,0.5s,baz=274,slow=9.0							
SIV				S		**Sn**	**10 06 09.3**	**-5.3**
	baz=270,slow=20							
TRQA	**Tornquist**	**14.49**	**163**			**Pn**	**10 05 19.2**	**+0.1**
PLCA	**Paso Flores**	**16.69**	**189**	P		**Pn**	**10 05 46.9**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=9.5,slow=12,SNR=3.2							
PLCA	**Paso Flores**	**16.69**	**189**	P		**P**	**10 05 43.9**	**-1.1**
PLCA				IAmb	IAmb		10 05 56.1	
	comp=Z,3.1nm,0.7s							
ARAG	**Araguaiana, MT**	**16.78**	**62**	*eP*		**Pn**	**10 05 48.9**	**+1.8**
CLDB	**Colider**	**17.17**	**41**	*eP*		**P**	**10 05 51.1**	**+0.7**
VAO	**Valinhos**	**18.61**	**90**	P		**P**	**10 06 07.0**	**+0.8**
IPMB	**Ipameri, GO**	**18.80**	**74**	*eP*		**P**	**10 06 09.4**	**+1.2**
SNDB	**Serra Nova Dou**	**19.42**	**54**	*eP*		**P**	**10 06 15.5**	**+0.6**
BDFB	**Brasilia**	**19.97**	**68**	P		**P**	**10 06 22.0**	**+1.1**
	comp=Z,10nm,0.6s,baz=241,slow=11,SNR=20							
BDFB	**Brasilia**	**19.97**	**68**	P		**P**	**10 06 21.6**	**+0.8**
BDFB				IAmb	IAmb		10 06 23.0	
	comp=Z,12nm,0.7s							
MACA	**Manacapuru-AM**	**21.88**	**18**	P		**P**	**10 06 38.6**	**-2.3**
MACA				IAmb	IAmb		10 06 41.9	
	comp=Z,8.0nm,0.7s							
JANB	**Januaria**	**23.41**	**71**	*eP*		**P**	**10 06 55.3**	**+0.3**
SDBA	**SAO DESIDERIO**	**24.20**	**65**	*eP*		**P**	**10 07 02.6**	**+0.4**
MAL2	**Monte Alegre,**	**25.44**	**32**	P		**P**	**10 07 11.4**	**-2.0**
PMSA	**Palmer Station**	**40.59**	**178**	P		**P**	**10 09 23.1**	**-0.5**
PMSA				IAmb	IAmb		10 09 33.4	
	comp=Z,12nm,0.9s							
BELA	**Belgrano 2**	**55.84**	**172**	P		**P**	**10 11 19.2**	**-0.9**
SNAA	**Sanae**	**59.20**	**161**	P		**P**	**10 11 45.8**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=275,slow=12,SNR=1.5							
	comp=Z,0.5nm,0.6s							
SNAA	**Sanae**	**59.20**	**161**	P		**P**	**10 11 43.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**76.85**	**69**	P		**P**	**10 13 36.9**	**+2.5**
	comp=Z,2.6nm,0.3s,baz=258,slow=6.6,SNR=3.0							
	comp=Z,2.6nm,0.3s							
ASAR	**Alice Springs**	**128.16**	**205**	PKP		**PKiKP**	**10 20 50.3**	**+2.3**
	comp=Z,0.2nm,0.7s,baz=132,slow=1.2,SNR=2.0							
WRA	**Warramunga Arr**	**131.32**	**207**	PKP		**PKiKP**	**10 20 56.8**	**+2.5**
	comp=Z,0.6nm,0.8s,baz=144,slow=1.8,SNR=6.0							
MKAR	**Makanchi Array**	**146.84**	**40**	PKPbc		**PKiKP**	**10 21 25.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=305,slow=5.1,SNR=2.7							

*SOME **30** 10:20:30.4,39˚.53N×76˚.83E,h15km*
*NNC **30** 10:20:32.7±1.3,39˚.64N×76˚.99E,h0km,mb3.9,mpv3.5,*
Error ellipse: s-maj=9.0km s-min=6.3km az=168.0
*KRNET **30** 10:20:34.8±0.1,39˚.70N×76˚.91E,mb3.6*
ISC 30 10:20:36.3±2.0,39˚.50N±0˚.09×76˚.89E±0˚.05,h25km,n37,
σ2s68/52,20C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKS	**Jany-Kuch**	**1.82**	**329**	⇑*eP*	**Pn**	**10 21 05.8**	**-0.5**
JNKS				⇑*eS*	**Sn**	**10 21 28.6**	**-0.1**
KDJ	**Kajisay**	**2.64**	**5**	⇑*eP*	**Pn**	**10 21 17.9**	**+0.4**
KDJ				⇑*eS*	**Sn**	**10 21 49.3**	**+0.5**
SFK	**Sufi-Kurgan**	**2.66**	**282**	⇑*eP*	**Pb**	**10 21 20.9**	**-2.5**
SFK				⇑*eS*	**Sb**	**10 21 54.4**	**-1.3**
SALK	**Salom-Alik**	**2.73**	**301**	⇑*eP*	**Pb**	**10 21 20.9**	**-3.6**
SALK				⇑*eS*	**Sb**	**10 21 54.4**	**-3.1**
ARLS	**Aral**	**3.06**	**321**	⇓*eP*	**Pn**	**10 21 24.9**	**+1.6**
ARLS				⇓*eS*	**Sn**	**10 22 01.1**	**+1.9**
BOOM	**Boomskoye usch**	**3.08**	**347**	⇑*eP*	**Pn**	**10 21 24.2**	**+0.8**
BOOM				⇑*eS*	**Sn**	**10 22 00.3**	**+0.8**
PRZ	**Przheval'sk**	**3.20**	**20**	⇑*eP*	**Pn**	**10 21 26.0**	**+0.9**
PRZ				⇑*eS*	**Sn**	**10 22 03.3**	**+0.8**
ARSB	**Arslanbob**	**3.50**	**303**	⇑*eP*	**Pn**	**10 21 31.6**	**+2.4**
ARSB				⇑*eS*	**Sn**	**10 22 12.9**	**+3.1**
TNSS	**Tian-Shan** 3.6nm,0.5s	**3.54**	**1**	Pg	**Pb**	**10 21 34.3**	**-4.1**
TNSS				Lg	Lg		10 22 20.6
	5.3nm,0.8s						
TNSS	**Tian-Shan** 4.0nm,0.2s	**3.54**	**1**	*eP*	**Pb**	**10 21 34.3**	**-4.1**
TNSS				*eS*	**Sb**	**10 22 20.6**	**-0.5**
	7.6nm,0.3s						
AAK	**Ala-Archa** 4.1nm,0.5s	**3.62**	**331**	⇑Pg	**Pb**	**10 21 38.0**	**-1.7**
AAK				⇑Lg	Lg		10 22 26.5
	46nm,0.8s						
MTBS	**Maitube** 12nm,0.5s	**3.65**	**355**	Pg	**Pb**	**10 21 36.0**	**-4.1**
MTBS				Lg	Lg		10 22 23.1
	17nm,0.6s						
MTBS	**Maitube** 12nm,0.3s	**3.65**	**355**	*eP*	**Pb**	**10 21 36.0**	**-4.1**
MTBS				*eS*	**Sb**	**10 22 23.4**	**-0.5**
	19nm,0.4s						
MDOK	**Medeo** 6.1nm,0.8s	**3.67**	**2**	Pg	**Pb**	**10 21 36.8**	**-3.6**
MDOK				Lg	Lg		10 22 24.7
	11nm,1.1s						
FRU1	**Bishkek**	**3.72**	**333**	⇑*eP*	**Pn**	**10 21 33.8**	**+1.6**
FRU1				⇑*eS*	**Sn**	**10 22 16.9**	**+1.6**
KOTS	**Kotyrbulak** 16nm,0.4s	**3.74**	**3**	Pg	**Pb**	**10 21 39.5**	**-2.2**
KOTS				Lg	Lg		10 22 29.1
	51nm,0.7s						
KOTS	**Kotyrbulak** 5.4nm,0.5s	**3.74**	**3**	*eP*	**Pb**	**10 21 37.8**	**-3.9**
KOTS				*eS*	**Sb**	**10 22 26.4**	**-0.2**
	51nm,0.7s						
SATY	**Saty** 21nm,0.6s	**3.74**	**17**	Pg	**Pb**	**10 21 38.2**	**-3.5**
SATY				Lg	Lg		10 22 26.6
	33nm,0.9s						
DGS	**Degeres** 6.2nm,0.8s	**3.83**	**348**	Pg	Pb	10 21 38.4	-4.9
DGS				Lg	Lg		10 22 27.3
	22nm,0.7s						
UZB	**Uzynbulak** 15nm,0.6s	**3.98**	**23**	Pg	**Pb**	**10 21 42.8**	**-3.1**
UZB				Lg	Lg		10 22 34.6
	25nm,0.4s						
UZB	**Uzynbulak** 2.0nm,0.1s	**3.98**	**23**	*eP*	**Pb**	**10 21 42.0**	**-3.9**
UZB				*eS*	**Sb**	**10 22 33.4**	**-0.3**
	25nm,0.4s						
SHLS	**Shalkode** 9.6nm,0.4s	**4.14**	**27**	Pg	**Pb**	**10 21 46.6**	**-1.9**
SHLS				Lg	Lg		10 22 41.1
	28nm,0.9s						
SHLS	**Shalkode** 3.9nm,0.1s	**4.14**	**27**	*eP*	**Pb**	**10 21 48.3**	**-0.2**
SHLS				*eS*	**Sb**	**10 22 44.5**	**+6.4**
	51nm,0.3s						
KPKS	**Kokpek** 0.4nm,0.3s	**4.19**	**18**	Pg	**Pb**	**10 21 46.7**	**-2.7**
KPKS				Lg	Lg		10 22 41.3
	34nm,0.5s						
KTBS	**Karatobe** 10nm,0.6s	**4.21**	**358**	Pg	**Pb**	**10 21 47.5**	**-2.3**
KTBS				Lg	Lg		10 22 43.3
	6.4nm,1.0s						
MRKS	**Merke** 4.9nm,0.4s	**4.26**	**321**	Pg	**Pb**	**10 21 49.4**	**-1.2**
MRKS				Lg	Lg		10 22 46.3
	27nm,0.9s						
MRKS	**Merke** 0.3nm,0.1s	**4.26**	**321**	*eP*	**Pb**	**10 21 46.9**	**-3.7**
MRKS				*eS*	**Sb**	**10 22 42.0**	**+0.3**
	35nm,0.7s						
KRBS	**Karabastau** 12nm,1.1s	**4.29**	**348**	Pg	**Pb**	**10 21 48.7**	**-2.3**
KRBS				Lg	Lg		10 22 45.6
	15nm,0.8s						
PDGK	**Podgornoye** 8.3nm,0.5s	**4.30**	**26**	⇓Pg	**Pb**	**10 21 47.7**	**-3.5**
PDGK				⇑Lg	Lg		10 22 44.6
	87nm,0.8s						
KTMS	**Ketmen** 1.8nm,0.7s	**4.73**	**32**	Pg	**Pb**	**10 21 55.1**	**-3.4**
KTMS				Lg	Lg		10 22 55.8
	9.4nm,0.6s						
KTMS	**Ketmen** 0.2nm,0.0s	**4.73**	**32**	*eP*	**Pb**	**10 21 54.9**	**-3.6**
KTMS				*eS*	**Sb**	**10 22 55.8**	**+0.8**
	9.8nm,0.3s						
BLB	**Baldybastay** 16nm,0.5s	**4.75**	**14**	Pg	**Pb**	**10 21 56.4**	**-2.5**
BLB				Lg	Lg		10 22 58.6
	57nm,0.6s						
ARXS	**Arharly** 12nm,0.7s	**4.76**	**8**	Pg	**Pb**	**10 21 56.8**	**-2.3**
ARXS				Lg	Lg		10 22 59.3
	17nm,0.8s						
ARXS	**Arharly**	**4.76**	**8**	*eP*	**Pb**	**10 21 56.8**	**-2.3**
ARXS				*eS*	**Sb**	**10 22 59.3**	**+3.3**
KNOS	**Konyrlen** 4.8nm,0.4s	**5.15**	**19**	Pg	**Pb**	**10 22 04.6**	**-1.1**
KNOS				Lg	Lg		10 23 12.2
	15nm,1.0s						
KK31	**Karatay Array** 0.9nm,0.4s	**6.00**	**309**	⇑Pg	**Pb**	**10 22 22.5**	**+2.4**
KK31				⇓Lg	Lg		10 23 40.6
	3.8nm,0.5s,baz=124,slow=29,SNR=6.6						
MK31	**Makanchi Array** 3.7nm,0.8s,baz=288,slow=27,SNR=4.6	**8.29**	**27**	⇓Lg	Lg		10 24 45.4

*NEIC **30** 10:36:39.8±0.9,19˚.34N±0˚.08×145˚.3E±0˚.2,h147km±4km,*
mb4.2/13,Error ellipse: s-maj=23.5km s-min=12.0km
az=93.0
*IDC **30** 10:36:40.2±2.6,19˚.28N×145˚.52E,h165km±27km,*
mb3.3/12,mbtmp3.8/14,Error ellipse: s-maj=24.3km
s-min=15.0km az=80.0
ISC 30 10:36:38.9±0.6,19˚.34N±0˚.07×145˚.4E±0˚.1,h147km,n33,
σ1s00/34,mb3.9/18,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 40nm,0.3s,baz=7.1,slow=16,SNR=2.5	**5.74**	**185**	P	**Pn**	**10 38 04.4**	**+2.1**
GUMO				S	**Sn**	**10 39 07.3**	**-0.1**
	18nm,0.4s,baz=36,slow=24,SNR=1.3						
INU	**Inuyama**	**17.59**	**337**	P	**P**	**10 40 33.7**	**-0.1**
PATS	**Pohnpei**	**17.66**	**133**	P	**Pn**	**10 40 36.3**	**+0.4**
MJAR	**Matsushiro Arr** 0.8nm,0.5s,baz=166,slow=9.0,SNR=4.3	**18.27**	**341**	P	**P**	**10 40 40.8**	**-0.5**
MANU	**Manus Island**	**21.34**	**175**	P	**P**	**10 41 13.5**	**-1.1**
MANU				IAmb	IAmb		10 41 30.9
	comp=Z,9.7nm,0.7s						
KSRS	**Korea Array**	**23.64**	**323**	P	**P**	**10 41 38.5**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=149,slow=9.4,SNR=5.1						
	comp=Z,0.7nm,0.6s						
MTN	**Manton Dam**	**34.94**	**205**	P	**P**	**10 43 16.6**	**-0.3**
MTN				IAmb	IAmb		10 43 32.0
	comp=Z,8.7nm,1.1s						
KAPI	**Kappang**	**34.98**	**229**	P	**P**	**10 43 17.0**	**-0.4**
SOEI	**Soe**	**35.64**	**218**	P	**P**	**10 43 22.2**	**-1.0**
KNRA	**Kununurra**	**38.46**	**206**	P	**P**	**10 43 46.6**	**-0.2**
WB0	**Warramunga Arr**	**40.34**	**196**	P	**P**	**10 44 02.2**	**-0.1**
WR8	**Warramunga Arr**	**40.49**	**196**	P	**P**	**10 44 03.7**	**+0.2**
WR8				IAmb	IAmb		10 44 28.0
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	**40.52**	**196**	P	**P**	**10 44 03.7**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=19,slow=8.5,SNR=10						
	comp=Z,0.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**41.97**	**209**	P	**P**	**10 44 14.9**	**-0.7**
SONM	**Songino Array**	**42.48**	**321**	P	**P**	**10 44 20.9**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=121,slow=6.7,SNR=2.6						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**44.20**	**195**	P	**P**	**10 44 31.7**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=15,slow=7.4,SNR=4.2						
	comp=Z,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**57.34**	**322**	P	**P**	**10 46 11.7**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=98,slow=6.3,SNR=3.1						
	comp=Z,0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**57.34**	**322**	P	**P**	**10 46 11.8**	**+0.3**
M17K	**Holitna River**	**57.65**	**29**	P	**P**	**10 46 14.7**	**+1.2**
MKAR	**Makanchi Array**	**57.83**	**314**	P	**P**	**10 46 15.2**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=88,slow=8.6,SNR=1.8						
	comp=Z,0.5nm,0.7s						
C19K	**Lookout Ridge**	**59.89**	**20**	P	**P**	**10 46 30.7**	**+1.8**
C19K				IAmb	IAmb		10 46 37.8
	comp=Z,4.7nm,1.1s						
KURK	**Kurchatov**	**60.62**	**318**	P	**P**	**10 46 33.5**	**-0.6**
KURK				IAmb	IAmb		10 46 38.7
	comp=Z,2.6nm,1.1s						
KURBB	**Kurchatov Arra**	**60.66**	**318**	P	**P**	**10 46 34.5**	**0.0**
	comp=Z,0.6nm,0.3s,baz=92,slow=7.3,SNR=8.8						
	comp=Z,0.6nm,0.3s						
D20K	**Etivluk River**	**60.70**	**21**	P	**P**	**10 46 35.6**	**+1.1**
D20K				IAmb	IAmb		10 46 58.6
	comp=Z,2.3nm,1.1s						
ILAR	**Eielson Array**	**63.19**	**26**	P	**P**	**10 46 50.0**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=257,slow=6.3,SNR=13						
	comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**63.19**	**26**	P	**P**	**10 46 50.4**	**-0.7**
BVAR	**Borovoye Array**	**65.81**	**320**	P	**P**	**10 47 08.3**	**0.0**
	comp=Z,1.0nm,0.4s,baz=96,slow=7.2,SNR=6.2						
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**10 48 48.4**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=287,slow=6.7,SNR=6.4						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**10 48 48.5**	**+0.5**
FINES	**FINESS Array B**	**86.19**	**335**	P	**P**	**10 49 01.7**	**-1.7**
	comp=Z,1.0nm,0.4s,baz=56,slow=4.5,SNR=15						
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**86.19**	**335**	P	**P**	**10 49 02.1**	**-1.3**
PDAR	**Pinedale Array**	**87.57**	**45**	P	**P**	**10 49 09.8**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=303,slow=3.1,SNR=2.5						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**87.57**	**45**	P	**P**	**10 49 09.9**	**-0.9**

GCG 30 11:01:05.2±0.8,13˚.87N×91˚.93W,h12km±26km,MD3.9,
ML3.7,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG5	**El Palmar, Qui**	**0.77**	**46**	*eP*	Pn	11 01 21.6	-0.5
STG2	**El Palmar, Qui**	**0.78**	**43**	*eP*	Pn	11 01 22.1	0.0
STG8	**El Palmar, Qui**	**0.81**	**44**	*eP*	Pn	11 01 22.4	-0.3
SOKI	**Kika Raxquin**	**1.07**	**28**	*eP*	Pg	11 01 25.5	-0.5
ESSG	**Sabana Grande**	**1.18**	**64**	*iP*	Pb	11 01 26.5	-1.1
FG16	**Alotenango, Sa**	**1.43**	**73**	*iP*	Pn	11 01 27.1	-4.1
FG16				IAML		11 01 48.6	
	comp=E,2μm,0.2s						
APG	**El Apazote**	**1.81**	**51**	*eP*	Pn	11 01 37.3	+0.8
NUBE	**Las Nubes**	**2.08**	**89**	*eP*	Pn	11 01 39.8	-0.4

*JMA **30** 11:17:46.3±0.3,43˚.N±1˚.×14˚.8E±˚,h17km,MV4.1/28,E*
OFF HOKKAIDO
*SKHL **30** 11:17:47.2±0.2,43˚.20N×147˚.90E,h37km±6km,mb4.6/5*
*MOS **30** 11:17:49.5±1.2,43˚.35N×147˚.67E,h46km,mb4.3/1,Error*
ellipse: s-maj=25.1km s-min=15.2km az=32.4
*IDC **30** 11:17:55.0±4.9,45˚.07N×146˚.98E,h0km,mb3.3/3,*
mbtmp3.3/4,ML3.2/1,Error ellipse: s-maj=137.7km
s-min=28.8km az=157.0
ISC 30 11:17:43.6±3.7,43˚.16N±0˚.08×147˚.87E±0˚.07,h3km±24km,
n35,σ1s93/47,mb3.3/3,3D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.04**	**314**	*iP*	Pn	11 18 13.2	+8.2
SHO				AMB	AMB	11 18 13.4	
	100nm,0.2s						
SHO				*eS*	**Sn**	**11 18 26.7**	**+6.7**
SHO				A	A	11 18 27.0	
	2μm,0.5s						
SHO				A	A	11 18 27.0	
	3μm,0.5s						
NEM2	**Nemuro 2**	**1.56**	**278**	P	**Pn**	**11 18 12.2**	**-0.1**
NEM2				S	**Sn**	**11 18 31.0**	**-2.0**
NMR	**Nemuro--Hokkai**	**1.57**	**278**	⇓*i*PN	**Pn**	**11 18 12.2**	**-0.2**
NMR				*eS*	**Sn**	**11 18 30.9**	**-2.4**
NMR	**Nemuro--Hokkai**	**1.57**	**278**	*iP*	**Pn**	**11 18 12.2**	**-0.2**
NMR				*eS*	**Sn**	**11 18 30.9**	**-2.4**
YUK	**Yuzh-Kuril'sk**	**1.70**	**302**	*d*iPN	**Pn**	**11 18 14.4**	**+0.3**
YUK				*eS*	**Sn**	**11 18 34.6**	**-1.8**
YUK				pmax	pmax		
	comp=Z,229nm,0.2s						
YUK				pmax	pmax		
	comp=N,15nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.2s						
YUK				smax	smax		
	comp=N,518nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**1.70**	**302**	*iP*	**Pn**	**11 18 14.4**	**+0.3**
YUK				AMB	AMB	11 18 14.6	
	comp=N,210nm,0.2s						
YUK				*eS*	**Sn**	**11 18 34.6**	**-1.8**
YUK				A	A	11 18 35.1	
	comp=N,460nm,0.4s						
YUK				A	A	11 18 35.1	
	comp=N,1μm,0.4s						
GLVR	**Golovnino**	**1.80**	**290**	*e*PN	**Pn**	**11 18 16.2**	**+0.6**
GLVR				*eS*	**Sn**	**11 18 38.0**	**-1.0**
GLVR				pmax	pmax		
	comp=Z,88nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.3s

baz=332,slow=76,SNR=6.5
H11S2 WAKE ISLAND Hy 29.30 141 T T 11 56 02.9
baz=332,slow=76,SNR=6.0
ILAR Eielson Array 41.66 36 P **P** **11 25 35.1 +2.2**
comp=E,0.2nm,0.7s,baz=274,slow=10.0,SNR=5.0
comp=E,0.2nm,0.7s
MKAR Makanchi Array 45.32 298 P **P** **11 26 03.0 +0.3**
comp=E,0.5nm,0.7s,baz=79,slow=9.1,SNR=3.8
comp=E,0.5nm,0.7s

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*MOS **30** 11:20:25.6±0.9, 43°.28N×148°.25E, h36km, mb4.4/1, Error ellipse: s-maj=18.8km s-min=12.2km az=42.3*
*NIED **30** 11:20:26.3, 43°.20N×147°.85E, h8km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr-2.08; Mθθ4.43; Mϕϕ-2.35; Mrθ7.27; Mϕr-1.82; Mϕr-2.90; Fault plane solution: M₀8.61000×10¹⁴ NP1:ϕs78.00000°, δ14.00000°, λ-125.00000°. NP2:ϕs294.00000°, δ78.00000°, λ-82.00000°.*
*JMA **30** 11:20:26.3±0.5, 43°.N×2°×14°.8E±°, h8km, MV4.0/23, E OFF HOKKAIDO*
*SKHL **30** 11:20:27.6±0.1, 43°.30N×148°.10E, h46km±4km, mb4.7/2*
*IDC **30** 11:20:40.4±2.1, 45°.61N×146°.41E, h0km, mb3.6/8, mbtmp3.6/10, ML3.1/2, Error ellipse: s-maj=55.5km s-min=21.8km az=159.0*

ISC 30 11:20:27.3±1.3, 43°.23N±0°.09×148°.19E±0°.08, h35km, n42, σ1s71/53, mb3.5/8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.18**	**303**	*e*P		Pn	11 20 54.1	+6.9
SHO				AMB		AMB	11 20 54.5	
	200nm,0.2s							
SHO				*e*S		**Sn**	**11 21 08.2**	**+6.2**
SHO				A		A	11 21 08.8	
	1μm,0.4s							
SHO				A		A	11 21 08.8	
	2μm,0.4s							
NEM2	**Nemuro 2**	**1.79**	**275**	P		**Pn**	**11 20 54.2**	**-1.4**
NEM2				*e*S		**Sn**	**11 21 15.0**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.80**	**275**	*e*PN		**Pn**	**11 20 54.2**	**-1.6**
NMR				*e*S		**Sn**	**11 21 13.9**	**-3.6**
NMR	**Nemuro--Hokkai**	**1.80**	**275**	*e*P		**Pn**	**11 20 54.3**	**-1.6**
NMR				*e*S		**Sn**	**11 21 14.3**	**-3.2**
YUK	**Yuzh-Kuril'sk**	**1.87**	**296**	*e*PN		**Pn**	**11 20 55.5**	**-1.3**
YUK				*e*S		**Sn**	**11 21 16.7**	**-2.5**
YUK				pmax		pmax		
	comp=Z,128nm,0.2s							
YUK				pmax		pmax		
	comp=N,29nm,0.1s							
YUK				pmax		pmax		
	comp=E,58nm,0.1s							
YUK				smax		smax		
	comp=N,697nm,0.3s							
YUK				smax		smax		
	comp=E,892nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.87**	**296**	*e*P		**Pn**	**11 20 55.5**	**-1.3**
YUK				AMB		AMB	11 20 55.6	
	comp=E,200nm,0.3s							
YUK				*e*S		**Sn**	**11 21 16.5**	**-2.7**
YUK				A		A	11 21 18.8	
	comp=E,870nm,0.5s							
YUK				A		A	11 21 18.8	
	comp=E,770nm,0.5s							
GLVR	**Golovnino**	**2.01**	**285**	*e*PN		**Pn**	**11 20 57.6**	**-1.1**
GLVR				*e*S		**Sn**	**11 21 21.6**	**-1.0**
GLVR				pmax		pmax		
	comp=Z,95nm,0.1s							
GLVR				smax		smax		
	comp=N,1μm,0.4s							
GLVR				smax		smax		
	comp=E,328nm,0.1s							
GLVR	**Golovnino**	**2.01**	**285**	*e*P		**Pn**	**11 20 57.6**	**-1.1**
GLVR				AMB		AMB	11 21 01.2	
	comp=E,100nm,0.2s							
GLVR				*e*S		**Sn**	**11 21 21.6**	**-1.0**
GLVR				A		A	11 21 24.9	
	comp=E,1μm,0.4s							
GLVR				A		A	11 21 24.9	
	comp=E,330nm,0.4s							
KUR	**Kuril'sk**	**2.01**	**353**	*e*PN		**Pn**	**11 20 57.2**	**-1.5**
KUR				*e*S		**Sn**	**11 21 21.5**	**-1.2**
KUR				pmax		pmax		
	comp=Z,123nm,0.3s							
KUR				pmax		pmax		
	comp=E,72nm,0.4s							
KUR				smax		smax		
	comp=N,131nm,0.2s							
KUR				smax		smax		
	comp=E,94nm,0.3s							
KUR	**Kuril'sk**	**2.01**	**353**	*e*P		**Pn**	**11 20 57.3**	**-1.5**
KUR				AMB		AMB	11 20 59.8	
	comp=E,90nm,0.2s							
KUR				*e*S		**Sn**	**11 21 19.6**	**-3.1**
KUR				A		A	11 21 23.1	
	comp=E,130nm,0.4s							
KUR				A		A	11 21 23.1	
	comp=E,160nm,0.4s							
JKHN	**Kushirohamanak**	**2.22**	**267**	*e*P		**Pn**	**11 21 01.2**	**-0.4**
RUSJ	**Misakicho**	**2.31**	**293**	*e*PN		**Pn**	**11 21 03.1**	**+0.3**
RUSJ				*e*S		**Sn**	**11 21 29.8**	**-0.1**
JRA	**Rausu**	**2.34**	**289**	P		**Pn**	**11 21 02.6**	**-0.6**
JRA				*e*S		**Sn**	**11 21 29.0**	**-1.7**
JNSB	**Nemuroshibetsu**	**2.38**	**284**	*e*P		**Pn**	**11 21 03.2**	**-0.6**
JNSB				S		**Sn**	**11 21 29.4**	**-2.3**
AKK	**Akkeshi**	**2.46**	**266**	*e*P		**Pn**	**11 21 04.4**	**-0.5**
JNK	**Nakash**	**2.56**	**279**	P		**Pn**	**11 21 05.0**	**-1.2**
JNK				*e*S		**Sn**	**11 21 33.8**	**-2.3**
JAK	**Akkeshi**	**2.57**	**266**	P		**Pn**	**11 21 05.4**	**-1.0**
JTKR	**Abashiri--Toko**	**3.20**	**285**	P		**Pn**	**11 21 15.1**	**+0.1**
JAR	**Ashorobuto**	**3.23**	**273**	*e*P		**Pn**	**11 21 15.3**	**-0.1**
JCH	**Churui**	**3.60**	**262**	P		**Pn**	**11 21 20.6**	**+0.1**
JNBK	**Urakawa-nobuka**	**4.12**	**258**	*e*P		**Pn**	**11 21 27.0**	**-0.6**
JKA	**Kamikawa-asahi**	**4.15**	**284**	*e*P		**Pn**	**11 21 29.9**	**+1.8**
ASAJ	**Asahikawa**	**4.15**	**284**	Pn		**Pn**	**11 21 29.9**	**+1.7**
	comp=E,1.9nm,0.3s,baz=20,slow=16,SNR=8.9							
ASAJ				Sn		Sn	11 22 06.1	-9.4
	comp=E,0.7nm,0.3s,baz=258,slow=24,SNR=1.2							
	comp=E,6.3nm,0.4s							
ASAJ	**Asahikawa**	**4.15**	**284**	PN		**Pn**	**11 21 29.9**	**+1.7**
PETK	**Petropavlovsk-**	**11.73**	**29**	Pn		**Pn**	**11 23 11.8**	**-0.2**
	comp=E,0.5nm,0.3s,baz=218,slow=12,SNR=11							
	comp=E,1.3nm,0.5s							
PETK	**Petropavlovsk-**	**11.73**	**29**	PN		**Pn**	**11 23 11.8**	**-0.2**
SONM	**Songino Array**	**29.37**	**294**	P		**P**	**11 26 27.7**	**+0.7**
	comp=E,0.4nm,0.5s,baz=77,slow=8.3,SNR=2.9							
	comp=E,0.4nm,0.5s							
SONM	**Songino Array**	**29.37**	**294**	P		**P**	**11 26 27.7**	**+0.7**
ILAR	**Eielson Array**	**41.46**	**36**	P		P	11 28 19.7	+9.4
	comp=E,0.3nm,0.6s,baz=278,slow=8.4,SNR=8.2							
	comp=E,0.3nm,0.6s							
MKAR	**Makanchi Array**	**45.50**	**298**	P		**P**	**11 28 43.8**	**+0.7**
	comp=E,0.4nm,0.5s,baz=75,slow=8.2,SNR=3.6							
	comp=E,0.4nm,0.5s							
MKAR	**Makanchi Array**	**45.50**	**298**	P		**P**	**11 28 43.8**	**+0.7**
MKAR	**Makanchi Array**	**45.50**	**298**	*e*P		**P**	**11 28 43.8**	**+0.7**
KURK	**Kurchatov**	**46.45**	**305**	P		**P**	**11 28 50.7**	**+0.3**
KURK	**Kurchatov**	**46.45**	**305**	*e*P		**P**	**11 28 50.7**	**+0.3**
KURBB	**Kurchatov Arra**	**46.53**	**305**	P		**P**	**11 28 50.7**	**-0.4**
	comp=E,0.2nm,0.4s,baz=74,slow=7.9,SNR=2.7							
	comp=E,0.2nm,0.4s							
FINES	**FINESS Array B**	**65.68**	**333**	P		**P**	**11 31 08.3**	**+0.7**
	comp=E,1.3nm,0.6s,baz=38,slow=9.6,SNR=6.7							
	comp=E,1.3nm,0.6s							
FINES	**FINESS Array B**	**65.68**	**333**	P		**P**	**11 31 08.3**	**+0.7**
NOA	**NORSAR Array B**	**70.36**	**339**	P		**P**	**11 31 38.3**	**+1.2**
	comp=E,0.5nm,0.7s,baz=32,slow=6.6,SNR=4.1							
	comp=E,0.5nm,0.7s							
NOA	**NORSAR Array B**	**70.36**	**339**	P		**P**	**11 31 38.3**	**+1.2**
HFS	**Hagfors**	**70.46**	**338**	P		**P**	**11 31 39.0**	**+1.4**
	comp=E,0.5nm,0.3s,baz=35,slow=5.4,SNR=6.3							
	comp=E,0.5nm,0.3s							
HFS	**Hagfors**	**70.46**	**338**	P		**P**	**11 31 39.0**	**+1.4**
TXAR	**Lajitas Array**	**82.30**	**57**	P		P	11 33 02.7	+17
	comp=E,0.3nm,0.7s,baz=323,slow=5.8,SNR=3.7							
	comp=E,0.3nm,0.7s							

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*SOME **30** 11:26:46.8, 43°.78N×69°.62E*
*NNC **30** 11:26:49.7±2.3, 43°.68N×69°.67E, h0km, mb3.6, mpv3.0, Error ellipse: s-maj=16.0km s-min=8.6km az=129.0, Suspected Mining explosion.*
*KRNET **30** 11:26:49.4±0.1, 43°.93N×69°.34E, mb3.0*

ISC 30 11:26:50.5±1.8, 43°.70N±0°.07×70°.00E±0°.07, h0km, n13, σ1s63/21, 9C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.68**	**190**	P		**Pb**	**11 27 05.2**	**-0.1**
	3.6nm,0.5s							
BRLS				S		**Sn**	**11 27 19.2**	**+0.3**
	24nm,0.5s							
KK31	**Karatay Array**	**0.70**	**148**	⇓P		**Pb**	**11 27 05.5**	**-0.2**
	0.7nm,0.2s,baz=327,slow=17,SNR=187							
KK31				⇑S		**Sb**	**11 27 17.0**	**+1.1**
	32nm,0.5s,baz=313,slow=29,SNR=58							
IUG	**luzhnay**	**1.56**	**179**	P		**Pn**	**11 27 18.7**	**-0.8**
	27nm,0.5s							
IUG				S		**Sg**	**11 27 42.2**	**+1.8**
	95nm,0.4s							
MNAS	**Manas**	**2.20**	**123**	⇑*i*P		**Pg**	**11 27 33.1**	**+0.5**
MNAS				⇑*i*S		**Sg**	**11 28 05.2**	**+4.1**
TRKS	**Terek-Say**	**2.33**	**158**	⇓*e*P		**Pg**	**11 27 34.4**	**-0.7**
TRKS				⇓*i*S		**Sg**	**11 28 07.1**	**+1.8**
ARK	**Arkit**	**2.39**	**142**	⇑*i*P		**Pg**	**11 27 35.3**	**-1.0**
ARK				⇑*i*S		**Sg**	**11 28 08.7**	**+1.4**
MRKS	**Merke**	**2.54**	**111**	Pg		**Pg**	**11 27 40.1**	**+0.9**
	4.8nm,0.7s							
MRKS				Lg		Lg	11 28 18.7	
	19nm,0.5s							
BTLS	**Baital**	**3.19**	**64**	Pg		**Pg**	**11 27 53.5**	**+1.8**
	25nm,0.5s							
BTLS				Lg		Lg	11 28 42.4	
	5.3nm,0.6s							
ARSB	**Arslanbob**	**3.24**	**136**	⇓*e*P		**Pb**	**11 27 47.3**	**-1.7**
ARSB				⇓*i*S		**Sb**	**11 28 29.5**	**+0.4**
AAK	**Ala-Archa**	**3.45**	**106**	⇑Pg		**Pg**	**11 27 56.2**	**-0.5**
	1.6nm,0.4s							
AAK				⇑Lg		Lg	11 28 45.9	
	8.8nm,0.9s							
ARLS	**Aral**	**3.67**	**119**	⇑*e*P		**Pb**	**11 27 53.6**	**-2.8**
ARLS				⇑*e*S		**Sb**	**11 28 40.6**	**-0.9**
KST	**Kastek**	**4.39**	**97**	Pg		**Pg**	**11 28 13.1**	**-1.6**
	2.1nm,0.6s							
KST				Lg		Lg	11 29 15.7	
	8.0nm,0.9s							
KTBS	**Karatobe**	**4.84**	**88**	Pg		**Pg**	**11 28 22.4**	**-0.8**
	1.5nm,0.6s							
KTBS				Lg		Lg	11 29 31.8	
	0.3nm,0.5s							

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*HEL **30** 11:29:22.3±0.1, 67°.54N×30°.29E, h0km, ML1.8, Explosion*
*KOLA **30** 11:29:23.3, 67°.54N×30°.54E, h0km, ML2.0, Error ellipse: s-maj=4.4km s-min=2.2km az=50.0, Kovdor City, Mines*
*UPP **30** 11:29:33.8±3.5, 67°.54N×28°.00E, h0km, ML1.8, Presumed earthquake*

ISC 30 11:29:21.2±0.8, 67°.53N±0°.02×30°.47E±0°.02, h0km, n38, σ0s86/57, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.40**	**304**	PG		**Pg**	**11 29 28.0**	**-0.8**
	baz=124							
VRF				SG		**Sg**	**11 29 33.0**	**-0.8**
APA0	**Apatity Array**	**0.97**	**84**	P		**Pg**	**11 29 39.1**	**-0.7**
RAJF	**Raja-Jooseppi**	**1.25**	**320**	PG		**Pg**	**11 29 43.3**	**-1.8**
KVDA	**Kovda**	**1.26**	**131**	P		**Pg**	**11 29 44.6**	**-0.7**
KVDA				S		**Sb**	**11 30 01.6**	**-0.9**
OLKF	**Oulanka, Finla**	**1.28**	**200**	PG		**Pg**	**11 29 45.4**	**-0.4**
OLKF				smax	smax		11 30 00.7	
	comp=Z,8.9nm,0.2s							
OLKF				SN		**Sb**	**11 30 03.4**	**+0.2**
KU6	**Riekki**	**1.53**	**189**	PG		**Pn**	**11 29 49.5**	**-0.2**
	baz=10.0							
KU6				smax	smax		11 30 08.2	
	comp=Z,3.9nm,0.2s							
KU6				SN		**Sg**	**11 30 10.0**	**-0.2**
LVZ	**Lovozero**	**1.64**	**75**	P		**Pb**	**11 29 51.9**	**-0.3**
LVZ				S		**Sg**	**11 30 14.4**	**+0.7**
LVZ	**Lovozero**	**1.64**	**75**	PG		**Pg**	**11 29 52.7**	**+0.2**
LVZ				SG		**Sn**	**11 30 12.6**	**-0.5**
MSF	**Maaselka**	**1.72**	**200**	PG		**Pn**	**11 29 52.7**	**+0.3**
MSF				SN		**Sb**	**11 30 15.9**	**+0.1**
RNF	**Rovaniemi**	**1.98**	**244**	PG		**Pn**	**11 29 56.5**	**+0.7**
	baz=63							
KU1	**Kurvinen**	**2.01**	**191**	PG		**Pb**	**11 29 57.7**	**-0.8**
KU2	**Taivalkoski**	**2.04**	**207**	PG		**Pb**	**11 29 58.2**	**-0.8**
	baz=28							
RANF	**Ranua**	**2.11**	**225**	PG		**Pn**	**11 29 58.6**	**+0.9**
	baz=44							
RANF				SG		**Sb**	**11 30 27.2**	**+0.3**
TERR	**Teriberka**	**2.40**	**44**	S		**Sn**	**11 30 31.6**	**-0.1**
KLF	**Kolari**	**2.53**	**266**	PB		**Pn**	**11 30 03.5**	**0.0**
KLF				smax	smax		11 30 35.1	
	comp=Z,4.2nm,0.2s							
KLF				SG		**Sb**	**11 30 38.4**	**-0.7**
KEV	**Kevo**	**2.57**	**332**	PN		**Pn**	**11 30 04.5**	**+0.5**
KEV				SG		**Sn**	**11 30 38.4**	**+2.5**
VADS	**Vadso**	**2.63**	**352**	P		**Pn**	**11 30 06.2**	**+1.3**
VADS				S		**Sn**	**11 30 37.6**	**+0.2**
HEF	**Hetta**	**2.71**	**292**	PN		**Pn**	**11 30 05.8**	**-0.2**
HEF				smax	smax		11 30 40.3	
	comp=Z,4.6nm,0.2s							
HEF				SG		**Sb**	**11 30 43.1**	**-1.2**
ARA0	**ARCESS Array S**	**2.72**	**320**	PN		**Pn**	**11 30 06.6**	**+0.5**
ARA0				SG		**Sb**	**11 30 44.9**	**+0.4**
ARCES	**ARCESS Array B**	**2.72**	**320**	P		**Pn**	**11 30 07.0**	**+1.0**
ARCES				S		**Sn**	**11 30 40.6**	**+1.0**
TOF	**Tornio**	**2.83**	**242**	PN		**Pn**	**11 30 07.4**	**-0.2**
TOF				smax	smax		11 30 44.2	
	comp=Z,2.3nm,0.2s							
PAJU	**Pajala**	**2.90**	**263**	P		**Pn**	**11 30 08.7**	**+0.1**
PAJU	**Pajala**	**2.90**	**263**	PN		**Pn**	**11 30 08.6**	**0.0**
PAJU				SG		**Sb**	**11 30 49.9**	**+0.2**
OUL	**Oulu**	**3.07**	**219**	PG		**Pb**	**11 30 15.7**	**-0.9**
KTK1	**Kautokeino**	**3.07**	**302**	PB		**Pn**	**11 30 11.7**	**+0.7**
KTK1				SG		**Sb**	**11 30 55.3**	**+0.6**
MASU	**Masugnsbyn**	**3.26**	**273**	P		**Pn**	**11 30 13.3**	**-0.2**
LANU	**Lannavaara**	**3.26**	**283**	P		**Pn**	**11 30 13.7**	**+0.2**
LANU	**Lannavaara**	**3.26**	**283**	PN		**Pn**	**11 30 13.2**	**-0.4**
LANU				SG		**Sb**	**11 31 00.2**	**+0.1**
KALU	**Kalix**	**3.29**	**243**	PB		**Pn**	**11 30 15.3**	**+1.5**
KALU				SG		**Sb**	**11 31 01.8**	**+1.1**
RMF	**Romuvaara**	**3.33**	**184**	PN		**Pn**	**11 30 14.9**	**+0.4**
ERTU	**Ertsjaerv**	**3.39**	**257**	P		**Pn**	**11 30 15.6**	**+0.3**
ERTU	**Ertsjaerv**	**3.39**	**257**	PN		**Pn**	**11 30 15.7**	**+0.5**
ERTU				SB		**Sn**	**11 30 58.6**	**+2.5**
OBF4	**Vikkela, Lumij**	**3.49**	**221**	PN		**Pn**	**11 30 18.0**	**+1.4**
KUA	**Kurravaara**	**3.88**	**281**	P		**Pn**	**11 30 21.8**	**-0.2**
	baz=89							
KIF	**Kilpisjarvi**	**3.89**	**297**	PN		**Pn**	**11 30 23.2**	**+1.1**
KOVU	**Salmi**	**3.96**	**285**	P		**Pn**	**11 30 23.2**	**0.0**
RATU	**Laukkuluspa**	**4.16**	**279**	P		**Pn**	**11 30 25.3**	**-0.6**
FAUS	**Fauske**	**5.84**	**276**	S		**Sn**	**11 31 57.9**	**+1.4**

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*IDC **30** 12:11:53.8±1.7, 59°.73N×152°.84W, h69km±22km, mb3.4/7, mbtmp3.7/11, MS2.8/1, Error ellipse: s-maj=22.3km s-min=13.7km az=108.0*
*NEIC **30** 12:11:54.9±1.0, 59°.76N±0°.03×152°.56W±0°.08, h82km±5km, Error ellipse: s-maj=5.7km s-min=4.2km az=100.0*
*AEIC **30** 12:11:55.9±1.0, 59°.76N±0°.03×152°.57W±0°.08, h79km±5km, ML3.3, mb3.8/3(NEIC), ML3.5/178(NEIC), Error ellipse: s-maj=5.9km s-min=4.6km az=117.0*

ISC 30 12:11:54.8±0.7, 59°.74N±0°.03×152°.50W±0°.04, h80km±5km, n207, σ0s69/191, mb3.7/8, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ILS	**Iliamna Low So**	**0.36**	**308**			**Pn**	**12 12 07.4**	**-0.2**
ILS						**Sn**	**12 12 16.8**	**-0.2**
P19K	**Oil Pt**	**0.38**	**257**			**Pn**	**12 12 07.8**	**+0.1**
P19K						**Sn**	**12 12 16.5**	**-0.6**
IVE	**Iliamna Volcan**	**0.38**	**317**			**Pn**	**12 12 07.4**	**-0.3**
IVE						**Sn**	**12 12 17.2**	**-0.1**
ILSW	**Iliamna Southw**	**0.41**	**307**			**Pn**	**12 12 07.6**	**-0.3**
ILSW						**Sn**	**12 12 17.2**	**-0.5**
ILSW					IAML		12 12 17.8	
	comp=E,2μm,0.7s							
ILSW					IAML		12 12 17.8	
	comp=N,1μm,0.6s							
HOM	**Homer**	**0.44**	**100**			**Pn**	**12 12 08.6**	**+0.6**
HOM						**Sn**	**12 12 19.1**	**+1.4**
AU22	**Augustine Moun**	**0.57**	**230**			**Pn**	**12 12 09.2**	**+0.1**
AU22						**Sn**	**12 12 20.3**	**+0.5**
AUJK	**Augustine Jueg**	**0.61**	**230**			**Pn**	**12 12 09.6**	**+0.1**
AUJK						**Sn**	**12 12 20.9**	**+0.5**
AGU	**Augustine-Summ**	**0.61**	**232**			**Pn**	**12 12 09.7**	**0.0**
AGU						**Sn**	**12 12 21.4**	**+0.8**
CNPM	**China Poot**	**0.67**	**108**			**Pn**	**12 12 10.6**	**+0.4**
CNPM					IAML		12 12 23.3	
	comp=E,2μm,0.3s							
CNPM	**China Poot**	**0.67**	**108**			**Sn**	**12 12 22.1**	**+0.5**
RED	**Redoubt Volcan**	**0.70**	**349**			**Pn**	**12 12 10.5**	**-0.1**
RED						**Sn**	**12 12 22.1**	**-0.1**
RED					IAML		12 12 22.8	
	comp=E,2μm,0.7s							
RED					IAML		12 12 22.9	
	comp=N,1μm,0.5s							
RDSO	**Redoubt South**	**0.73**	**350**			**Pn**	**12 12 10.8**	**-0.1**
RDSO						**Sn**	**12 12 23.0**	**+0.2**
RDWB	**Redoubt West**	**0.77**	**347**			**Pn**	**12 12 11.2**	**-0.2**
RDWB						**Sn**	**12 12 23.8**	**+0.1**
BRLK	**Bradley Lake**	**0.81**	**87**			**Pn**	**12 12 11.8**	**0.0**
BRLK	**Bradley Lake**	**0.81**	**87**		IAML		12 12 26.6	
	comp=E,857nm,0.5s							
BRLK					IAML		12 12 27.6	
	comp=N,1μm,0.1s							
NCT	**North Crescent**	**0.85**	**345**			**Pn**	**12 12 12.1**	**-0.1**
NCT						**Sn**	**12 12 25.3**	**+0.1**
BRSE	**Bradley Lake S**	**0.89**	**89**			**Pn**	**12 12 26.2**	**+0.5**
Q19K	**Cape Douglas,**	**1.00**	**216**			**Pn**	**12 12 13.7**	**-0.2**
Q19K					IAML		12 12 29.0	
	comp=N,1μm,0.8s							
Q19K					IAML		12 12 29.6	
	comp=E,2μm,0.8s							
Q19K	**Cape Douglas,**	**1.00**	**216**			**Sn**	**12 12 28.1**	**0.0**
O19K	**Port Alsworth**	**1.03**	**297**			**Pn**	**12 12 13.7**	**-0.4**
O19K	**Port Alsworth**	**1.03**	**297**			**Sn**	**12 12 28.4**	**-0.1**
SYI	**Shuyak Island**	**1.13**	**177**			**Pn**	**12 12 15.8**	**+0.4**
SYI						**Sn**	**12 12 31.4**	**+0.6**
SYI	**Shuyak Island**	**1.13**	**177**		IAML		12 12 33.2	
	comp=N,950nm,0.6s							
SYI					IAML		12 12 34.1	
	comp=E,711nm,0.6s							
CAPN	**Captain Cook N**	**1.23**	**32**			**Pn**	**12 12 18.6**	**+2.0**
O18K	**Koktuh Hills**	**1.38**	**276**			**Pn**	**12 12 18.0**	**-0.5**
O18K					IAML		12 12 35.9	
	comp=E,472nm,0.7s							
O18K					IAML		12 12 36.0	
	comp=N,906nm,0.7s							
SLKM	**Skilak Lake**	**1.38**	**55**			**Pn**	**12 12 18.8**	**+0.3**
SLKM					IAML		12 12 38.3	
	comp=N,387nm,0.5s							
SLKM					IAML		12 12 41.2	
	comp=E,426nm,0.2s							
P18K	**Big Mountain,**	**1.43**	**257**			**Pn**	**12 12 18.4**	**-0.9**
P18K					IAML		12 12 36.9	
	comp=E,678nm,0.4s							
P18K					IAML		12 12 37.0	
	comp=N,614nm,0.7s							
N19K	**Bonanza Creek**	**1.47**	**318**			**Pn**	**12 12 19.5**	**-0.2**
SPCR	**Spurr Chakacha**	**1.48**	**5**			**Pn**	**12 12 20.2**	**+0.3**
KAPH	**Katmai Pasha**	**1.49**	**221**			**Pn**	**12 12 20.1**	**+0.1**
O22K	**Cooper Landing**	**1.58**	**61**			**Pn**	**12 12 21.6**	**+0.5**
SEW	**Seward**	**1.58**	**75**			**Pn**	**12 12 20.9**	**-0.2**
STLK	**Strandline Lak**	**1.80**	**10**			**Pn**	**12 12 24.7**	**+0.6**
RC01	**Rabbit Creek A**	**1.93**	**44**			**Pn**	**12 12 26.3**	**+0.6**
RC01					IAML		12 12 52.6	
	comp=N,325nm,0.3s							
RC01					IAML		12 12 52.9	
	comp=E,285nm,0.5s							
SUA	**Susitna One**	**1.94**	**26**			**Pn**	**12 12 26.9**	**+1.0**
SUA					IAML		12 12 54.2	
	comp=N,516nm,0.9s							
SUA					IAML		12 12 55.7	
	comp=E,380nm,0.9s							
N18K	**Kilae Creek**	**1.94**	**301**			**Pn**	**12 12 25.7**	**-0.2**
N18K					IAML		12 12 48.7	
	comp=N,220nm,0.8s							
N18K					IAML		12 12 49.4	
	comp=E,182nm,0.7s							
KDAK	**Kodiak Island**	**1.96**	**181**	P		**Pn**	**12 12 25.7**	**-0.4**
	comp=E,36nm,0.5s,baz=42,slow=4.7,SNR=128							
KDAK				S		**Sn**	**12 12 48.7**	**-1.3**
	comp=E,62nm,0.3s,baz=226,slow=21,SNR=10.0							
KDAK	**Kodiak Island**	**1.96**	**181**			**Pn**	**12 12 25.8**	**-0.4**
KABU	**Katmai Buttres**	**2.06**	**226**			**Pn**	**12 12 27.8**	**+0.2**
ACHA	**Angle Creek He**	**2.12**	**225**			**Pn**	**12 12 28.5**	**+0.1**
M20K	**Styx River**	**2.17**	**352**			**Pn**	**12 12 29.6**	**+0.5**
ANCK	**Angle Creek**	**2.19**	**226**			**Pn**	**12 12 29.4**	**+0.1**
CAHL	**Cahill**	**2.23**	**222**			**Pn**	**12 12 30.1**	**+0.3**
CNTC	**Contact Creek**	**2.29**	**231**			**Pn**	**12 12 30.5**	**-0.1**
SKT	**Skwentna**	**2.30**	**11**			**Pn**	**12 12 31.1**	**+0.5**
O17K	**Koliganek Bris**	**2.33**	**273**			**Pn**	**12 12 30.8**	**-0.2**
M22K	**Willow**	**2.33**	**29**			**Pn**	**12 12 31.8**	**+0.7**
M22K	**Willow**	**2.33**	**29**		IAML		12 13 07.3	
	comp=E,314nm,0.5s							
M22K					IAML		12 13 08.7	
	comp=N,392nm,0.4s							
PWL	**Port Wells**	**2.36**	**60**			**Pn**	**12 12 31.2**	**-0.2**
N17K	**Nushagak Hills**	**2.48**	**291**			**Pn**	**12 12 32.8**	**-0.2**
N17K					IAML		12 13 01.4	
	comp=N,139nm,0.5s							
PMR	**Palmer**	**2.49**	**40**			**Pn**	**12 12 33.1**	**-0.2**
PMR	**Palmer**	**2.49**	**40**	P		**Pn**	**12 12 33.0**	**-0.2**
**O

WAT1	Susitna Watana	3.64	30			Pn	12 12 49.4	+0.6	
KLU	Klutina	3.69	59			Pn	12 12 49.2	-0.3	
O15K	Ungalikthiuk R	3.78	265			Pn	12 12 51.2	+0.5	
O15K	Ungalikthiuk R	3.78	265		IAML		12 13 49.4		
	comp=N,49nm,1.0s								
O15K					IAML		12 13 49.6		
	comp=E,43nm,0.8s								
N15K	Kwethluk River	3.84	280			Pn	12 12 52.1	+0.5	
N15K					IAML		12 13 51.3		
	comp=N,65nm,0.7s								
N15K					IAML		12 14 04.8		
	comp=E,72nm,0.8s								
TRF	Thorofare Moun	3.87	15			Pn	12 12 52.1	0.0	
TRF	Thorofare Moun	3.87	15		IAML		12 13 41.7		
	comp=N,58nm,0.7s								
TRF					IAML		12 14 08.2		
	comp=E,42nm,2.7s								
M24K	Tolsona, Glenn	3.89	50			Pn	12 12 53.0	+0.7	
M24K	Tolsona, Glenn	3.89	50		IAML		12 13 39.2		
	comp=N,101nm,1.4s								
L16K	Owhat River	3.96	303			Pn	12 12 53.0	-0.1	
GOAT	Goat Mountain	3.97	74			Pn	12 12 52.5	-0.9	
RND	Reindeer	4.07	24			Pn	12 12 55.2	+0.5	
RND					IAML		12 13 42.7		
	comp=E,59nm,0.4s								
K17K	Iditarod	4.10	319			Pn	12 12 55.2	+0.2	
K17K	Iditarod	4.10	319		IAML		12 13 59.7		
	comp=E,50nm,2.6s								
K17K					IAML		12 14 31.3		
	comp=N,36nm,2.9s								
BMRM	Bremner River	4.11	69			Pn	12 12 54.1	-1.1	
DHY	Denali Highway	4.16	34			Pn	12 12 55.8	-0.1	
DHY	Denali Highway	4.16	34		IAML		12 13 45.5		
	comp=E,49nm,0.4s								
DHY					IAML		12 13 45.7		
	comp=N,56nm,0.4s								
CHIR	Chirikof Islan	4.27	204	P		Pn	12 12 55.7	-1.6	
N25K	Chitina, Valde	4.31	61			Pn	12 12 57.8	-0.2	
N25K					IAML		12 13 46.8		
	comp=E,41nm,0.6s								
N25K					IAML		12 13 49.0		
	comp=N,56nm,0.5s								
MCK	McKinley	4.35	21			Pn	12 12 58.5	0.0	
MCK	McKinley	4.35	21		IAML		12 13 50.0		
	comp=E,36nm,0.5s								
MCK					IAML		12 13 51.0		
	comp=N,44nm,0.4s								
BPAW	Bear Paw Mtn.	4.44	9			Pn	12 12 59.1	-0.5	
BPAW	Bear Paw Mtn.	4.44	9		IAML		12 13 55.1		
	comp=N,24nm,3.8s								
HARP	HAARP	4.45	50			Pn	12 12 59.6	-0.2	
BERG	Berg Lake	4.46	78			Pn	12 12 59.9	0.0	
O14K	Tigyukauivet M	4.50	268			Pn	12 13 01.0	+0.7	
O14K	Tigyukauivet M	4.50	268		IAML		12 14 21.7		
	comp=E,45nm,2.3s								
O14K					IAML		12 14 23.6		
	comp=N,61nm,2.4s								
J20K	Nowinta River	4.52	351			Pn	12 13 01.1	+0.3	
J20K					IAML		12 14 38.6		
	comp=N,24nm,4.2s								
WACK	Wrangell Chich	4.59	57			Pn	12 13 02.0	+0.1	
GLB	Gilahina Butte	4.61	65		IAML		12 13 54.2		
	comp=N,60nm,0.9s								
GLB					IAML		12 13 54.5		
	comp=E,43nm,0.5s								
GRIN	Grindle Hills	4.64	79			Pn	12 13 02.7	+0.3	
N14K	Kuskokwak Cree	4.64	276			Pn	12 13 03.0	+0.7	
BWN	Browne	4.67	17			Pn	12 13 02.7	-0.2	
BWN	Browne	4.67	17		IAML		12 14 36.1		
	comp=E,50nm,2.2s								
BWN					IAML		12 14 40.6		
	comp=N,56nm,1.2s								
KHIT	Khitrov Hills	4.68	77			Pn	12 13 02.8	-0.3	
PAX	Paxson	4.68	43			Pn	12 13 03.3	+0.3	
PAX	Paxson	4.68	43		IAML		12 13 57.6		
	comp=E,20nm,0.6s								
PAX					IAML		12 14 17.9		
	comp=N,26nm,1.0s								
VRDI	Verde Repeater	4.72	68		IAML		12 13 59.4		
	comp=E,36nm,1.2s								
VRDI					IAML		12 14 11.9		
	comp=N,49nm,1.9s								
J17K	VABM Dome	4.83	322			Pn	12 13 04.7	-0.3	
J17K	VABM Dome	4.83	322		IAML		12 14 56.5		
	comp=E,23nm,3.4s								
J17K					IAML		12 15 41.0		
	comp=N,28nm,3.8s								
WAX	Waxell Ridge	4.88	77			Pn	12 13 04.5	-1.3	
TGL	Tana Glacier	4.92	74			Pn	12 13 05.2	-1.2	
MCARA	McCarthy VSAT	4.96	66			Pn	12 13 06.1	-0.6	
BARK	Barkley Ridge	5.06	78			Pn	12 13 08.4	+0.3	
K15K	Wolf Creek Mou	5.09	304			Pn	12 13 08.5	+0.1	
K15K	Wolf Creek Mou	5.09	304		IAML		12 14 50.0		
	comp=E,32nm,3.0s								
K15K					IAML		12 16 10.6		
	comp=N,39nm,3.2s								
NEA2	Nenana	5.13	17		IAML		12 14 06.3		
	comp=E,18nm,2.8s								
NEA2					IAML		12 14 31.7		
	comp=N,19nm,2.9s								
PTPK	Patty Peak	5.17	69			Pn	12 13 09.5	-0.3	
KIAG	Kiagna River	5.18	72			Pn	12 13 08.9	-1.0	
WRH	Wood River Hil	5.18	22			Pn	12 13 09.3	-0.4	
WRH	Wood River Hil	5.18	22		IAML		12 14 08.8		
	comp=E,20nm,0.5s								
WRH					IAML		12 14 54.6		
	comp=N,21nm,4.1s								
BALM	Baldy	5.20	71			Pn	12 13 09.6	-0.5	
BAGL	Bagley Icefiel	5.26	77			Pn	12 13 10.6	-0.2	
J16K	Anvik River	5.26	316			Pn	12 13 10.7	-0.2	
J16K	Anvik River	5.26	316		IAML		12 14 52.2		
	comp=N,25nm,4.1s								
J16K					IAML		12 16 11.2		
	comp=E,26nm,3.6s								
MENT	Mentasta	5.30	49		IAML		12 14 39.3		
	comp=E,32nm,0.8s								
MENT					IAML		12 14 41.7		
	comp=N,30nm,1.2s								
MESA	MESA	5.32	81			Pn	12 13 12.3	+0.5	
M26K	Nabesna, AK	5.33	56		IAML		12 14 13.2		
	comp=N,26nm,0.6s								
M26K					IAML		12 14 14.5		
	comp=E,24nm,3.5s								
CCB	Clear Creek Bu	5.39	22			Pn	12 13 12.3	-0.3	
CCB	Clear Creek Bu	5.39	22		IAML		12 15 19.2		
	comp=E,15nm,3.3s								
CCB					IAML		12 16 06.6		
	comp=N,14nm,4.4s								
GRNC	Granite Creek	5.45	75			Pn	12 13 13.7	+0.2	
L26K	Log Cabin Wild	5.50	49			Pn	12 13 14.7	+0.6	
BARN	Barnard Glacie	5.53	71			Pn	12 13 14.6	-0.1	
COLA	College	5.59	21			Pn	12 13 14.6	-0.6	
COLA	College	5.59	21	P		Pn	12 13 15.4	+0.1	
I23K	Minto, Yukon-K	5.62	14			Pn	12 13 15.8	+0.1	
RKAV	Rock Avalanche	5.62	79			Pn	12 13 15.6	-0.3	
CTGM	Chitina Glacie	5.68	73			Pn	12 13 16.7	0.0	
IL31		5.69	25			Pn	12 13 16.2	-0.4	
ILAR	Eielson Array	5.69	25	P		Pn	12 13 16.3	-0.3	
	comp=N,4.6nm,0.5s,baz=216,slow=14,SNR=67								
ILAR				S		Sn	12 14 19.2	-1.3	
	comp=N,3.5nm,0.4s,baz=205,slow=29,SNR=13								
ILAR	Eielson Array	5.69	25			Pn	12 13 16.1	-0.6	
TABL	Table Mountain	5.73	78			Pn	12 13 16.9	-0.5	
CHX	Chaix Hills	5.74	82			Pn	12 13 17.4	0.0	
M27K	Edge Creek, AK	5.79	58	Pn		Pn	12 13 18.4	+0.2	
LOGN	Logan Glacier	5.82	74			Pn	12 13 18.5	-0.1	
SCRK	Sand Creek	5.86	40			Pn	12 13 18.8	-0.2	
POKR	Poker Plat Res	5.89	21			Pn	12 13 18.1	-1.2	
H21K	Melozitna Rive	5.94	359			Pn	12 13 20.0	-0.2	
YUK2	White River	6.07	65			Pn	12 13 21.3	-0.6	
BCAR	Beaver Creek A	6.13	52	Pn		Pn	12 13 23.5	+0.8	
O28M	Mount Upton	6.21	75			Pn	12 13 24.5	+0.4	
YUK3	Moose Creek	6.24	66			Pn	12 13 23.9	-0.5	
BVCY	Beaver Creek	6.25	60			Pn	12 13 23.8	-0.6	
H17K	Granite Mounta	6.25	330			Pn	12 13 23.6	-0.8	
IMAR	Indian Mountai	6.30	355	Pn		Pn	12 13 25.2	+0.3	
YUK8	Steele Glacier	6.48	71			Pn	12 13 27.7	+0.1	
PRP	Porcupine Dome	6.63	26			Pn	12 13 28.5	-1.0	
O29M	Mount Kennedy	7.00	79			Pn	12 13 34.8	+0.1	
G23K	Bananza Creek	7.09	8			Pn	12 13 35.2	-0.6	
YUK6	Outpost Mounta	7.12	74			Pn	12 13 36.0	-0.4	
M29M	Somme Creek	7.32	62			Pn	12 13 38.3	-0.7	
HYT	Haines Junctio	7.53	75			Pn	12 13 41.5	-0.4	
COLD	Coldfoot	7.59	7			Pn	12 13 41.8	-0.7	
N30M	Aishikik Lake	7.78	71			Pn	12 13 43.8	-1.4	
M30M	Minto, Yukon	8.11	63			Pn	12 13 49.5	-0.1	
I28M	Miner Creek	8.14	40			Pn	12 13 49.3	-0.8	
O30N	Mendenhall	8.22	76			Pn	12 13 50.4	-0.8	
N31M	Braeburn, Yuko	8.40	71	Pn		Pn	12 13 54.1	+0.4	
BMAR	Burnt Mountain	8.48	21	Pn		Pn	12 13 53.9	-0.8	
TOLK	Toolik Lake Re	9.03	7			Pn	12 14 01.2	-1.0	
BESE	Bessie Mountai	9.13	90			Pn	12 14 03.4	-0.3	
SIT	Sitka	9.40	99	P		Pn	12 14 07.0	-0.3	
JIS	Juneau Island	9.46	91	P		Pn	12 14 08.8	+0.8	
P33M	Teslin, Yukon	9.87	79	Pn		Pn	12 14 13.8	+0.1	
E29M	Blow River	10.74	30	Pn		Pn	12 14 26.4	+0.9	
U33K	Whale Pass	10.91	101	Pn		Pn	12 14 26.8	-1.0	
CRAG	Craig	11.22	104	P		Pn	12 14 31.3	-0.7	
DLBC	Dease Lake	11.62	87	P		Pn	12 14 38.8	+1.3	
	comp=N,1.3nm,0.3s,baz=295,slow=3.8,SNR=22								
DLBC					S	Sn	12 16 42.3	-2.9	
	comp=N,0.7nm,0.4s,baz=134,slow=20,SNR=2.2								
INK	Inuvik	11.90	36	P		Pn	12 14 43.2	+2.1	
	comp=N,1.3nm,0.9s,baz=247,slow=9.5,SNR=4.2								
A36M	Sachs Harbour	16.35	30	Pn		Pn	12 15 39.5	+0.4	
A36M				IAmb		IAmb	12 16 01.1		
	comp=Z,5.4nm,0.8s								
YKA	Yellowknife Ar	18.33	65	P		P	12 16 03.0	+0.6	
	comp=Z,1.5nm,0.5s,baz=253,slow=11,SNR=15								
YKA	Yellowknife Ar	18.33	65	P		P	12 16 02.5	+0.1	
NEW	Newport	23.44	104	LR		LR	12 25 38.3		
	comp=Z,23nm,18.3s,baz=315,slow=35								
LYMT	Lyon Mountain	26.72	100	P		P	12 17 28.7	+2.0	
NVAR	Mina Array Bea	30.37	119	P		P	12 18 01.2	+2.0	
	comp=Z,0.7nm,0.8s,baz=305,slow=8.1,SNR=6.5								
	comp=Z,0.7nm,0.8s								
KSRS	Korea Array	53.49	283	P		P	12 21 06.5	-0.2	
	comp=Z,1.3nm,0.8s,baz=40,slow=7.2,SNR=3.2								
	comp=Z,1.3nm,0.8s								
SONM	Songino Array	55.15	306	P		P	12 21 18.9	+0.1	
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5,SNR=2.5								
	comp=Z,0.4nm,0.5s								
ZALV	Zalesovo Beam	57.74	324	P		P	12 21 36.4	-0.4	
	comp=Z,0.6nm,0.5s,baz=22,slow=7.3,SNR=4.3								
	comp=Z,0.6nm,0.5s								
BVAR	Borovoye Array	62.42	332	P		P	12 22 08.3	-0.6	
	comp=Z,1.1nm,0.6s,baz=25,slow=12,SNR=3.8								
	comp=Z,1.1nm,0.6s								
KURBB	Kurchatov Arra	62.50	326	P		P	12 22 08.1	-1.3	
	comp=Z,0.3nm,0.5s,baz=30,slow=6.7,SNR=4.1								
	comp=Z,0.3nm,0.5s								
MKAR	Makanchi Array	64.80	322	P		P	12 22 22.9	-1.7	
	comp=Z,0.3nm,0.5s,baz=30,slow=5.9,SNR=4.8								
	comp=Z,0.3nm,0.5s								
MKAR	Makanchi Array	64.80	322	P		P	12 22 23.7	-0.9	
AB31	Akbulak array	68.20	338	P		P	12 22 45.9	-0.4	
AB31				IAmb		IAmb	12 22 52.7		
	comp=Z,1.2nm,1.0s								
ABKAR	Akbulak array	68.20	338	P		P	12 22 45.6	-0.6	

*BEO **30** 12:19:28.6±0.8, 41°.39N×19°.63E, h10km, ML2.2/9*
*TIR **30** 12:19:28.8, 41°.48N×19°.51E, h6km±1km, Ml2.5/4*
*PDG **30** 12:19:31.3±0.2, 41°.52N×19°.49E, h10km, ML2.4/10, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

ISC 30 12:19:29.7±1.0, 41°.48N±0°.03×19°.55E±0°.03, h15km±8km, n25, σ1s17/49, 5C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res
TIR	Tirane	0.27	119	||Pg		Pg	12 19 35.4	-0.1
TIR					Sg		Sg	12 19 39.4	-0.1
TIR					AML	AML		12 19 39.9	
	3.0nm,0.2s								
ULC	Ulcinj	0.54	335	*e*Pg			Pg	12 19 39.8	-0.6
ULC				*i* Sg			Sb	12 19 48.0	-0.5
SDA	Shkodra	0.58	356	⇑|Pg			Pg	12 19 40.5	-0.6
SDA				Sg			Sg	12 19 48.5	-0.3
PHP	Peshkopia	0.70	72	⇑|Pg			Pg	12 19 43.0	-0.4
PHP				Sg			Sb	12 19 53.4	+0.3
PHP				AML		AML		12 19 56.4	
	1.0nm,0.2s								
DRME	Dracevica, Mon	0.76	339	*e*Pg			Pg	12 19 43.7	-0.8
DRME	Dracevica, Mon	0.76	339	⇑*i*Pg			Pg	12 19 43.8	-0.8
DRME				*i* Sg			Sn	12 19 55.9	-1.2
BUM	Brajici-Budva	0.96	329	*e*Pg			Pg	12 19 47.8	-0.5
BUM				*i* Sg			Sn	12 20 02.3	+0.2
PDG	Podgorica	0.98	347	*e*Pg			Pn	12 19 49.4	+0.5
PDG				*e*Sg			Sn	12 20 04.2	+1.7
PDG	Podgorica	0.98	347	*e*Pg			Pn	12 19 48.9	0.0
PDG				*e*Sg			Sn	12 20 03.3	+0.8
CEME	Cevo	1.17	336	*e*Pg			Pg	12 19 51.8	-0.5
CEME				*i* Sg			Sg	12 20 09.4	+1.8
HCY	Herceg Novi	1.25	321	*e*Pg			Pg	12 19 53.6	-0.3
HCY				*i* Sg			Sg	12 20 12.2	+2.0
NKME	Niksic	1.36	341	*e*Pg			Pg	12 19 55.9	-0.1
NKME				*i* Sg			Sg	12 20 15.6	+2.8
IVA	Berane	1.42	10	⇑*i*Pg			Pg	12 19 56.9	-0.1
IVA				*e*Sg			Sg	12 20 18.9	+3.4
TREB	Trebinje	1.53	325	*e*Pg			Pb	12 19 57.6	-0.2
TREB				*e*Sg			Sg	12 20 19.7	+0.7
NEST	Nestorio	1.55	133	||Pn		Pg	12 19 59.6	0.0
NEST				Sn			Sg	12 20 21.4	+1.6
NEST				AML		AML		12 20 25.2	
	0.1nm,0.3s								
BRY	Bratogost	1.61	332	*e*Pg			Pg	12 20 00.0	-0.7
BRY				*i* Sg			Sg	12 20 22.7	+1.0
SJES	Sjenica	1.81	10	*e*Pg			Pg	12 20 04.3	-0.2
SJES				*e*Sg			Sg	12 20 28.3	+0.2
PLE	Pljevlja	1.86	356	⇑*i*Pn			Pb	12 20 03.2	-0.2
PLE				*i* Sn			Sg	12 20 29.1	-0.4
STON	Ston	1.96	316	*e*Pg			Pg	12 20 06.6	-0.8
STON				*e*Sg			Sg	12 20 31.7	-1.2
NOCI	Noci	2.00	251	Pn			Pb	12 20 05.7	-0.1
NOCI				Sn			Sg	12 20 33.5	-0.6
NOCI				AML		AML		12 20 38.2	
	0.1nm,0.2s								
SELS	Selova	2.09	33	*e*Pg			Pb	12 20 05.8	-1.6
SELS				*e*Sg			Sb	12 20 34.0	+0.8
RUDO	Rudo	2.14	356	*e*Pg			Pg	12 20 09.5	-1.4
RUDO				*e*Sg			Sg	12 20 39.8	+1.1
IVAS	Ivanjica	2.15	12	*e*Pg			Pb	12 20 07.3	-1.0
IVAS				*e*Sg			Sg	12 20 39.4	+0.7
BARS	Barje	2.15	51	*e*Pg			Pb	12 20 06.8	-1.5
BARS				*e*Sg			Sg	12 20 38.3	-0.6
BBLS	Lazi&#263i	2.39	357	*e*Pg			Pg	12 20 14.0	-1.6
BBLS				*e*Sg			Sg	12 20 49.0	+2.4

*IDC **30** 12:20:18.9±2.6, 33°.63N×141°.32E, h0km, mb3.6/2, mbtmp3.6/3, ML2.7/1, Error ellipse: s-maj=50.3km s-min=30.7km az=47.0*
*JMA **30** 12:20:25.5±0.2, 33°.8N±0°.4×140°.9E±0°.8, h62km±3km, MV3.0/39, E OFF HACHIJOJIMA ISLAND*

ISC 30 12:20:26.5±1.3, 33°.75N±0°.04×140°.81E±0°.09, h61km±14km, n16, σ0s76/28, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res
BSO1	Boso 1	0.91	9	P			Pn	12 20 42.0	-0.9
BSO1				*e*X				12 20 55.1	
JMKN	Mikurajimanish	1.03	278	*i* P			Pn	12 20 44.8	-0.1
JMKN				S			Sn	12 20 58.8	+0.2
JHJ2	Mitsune	1.05	233	P			Pn	12 20 45.2	+0.1
JHJ2				*e*S			Sn	12 21 00.1	+1.0
JHJ	Hachijo jima 2	1.07	234	Pn			Pn	12 20 45.4	-0.1
	148nm,0.3s,baz=70,slow=15,SNR=45								
JHJ				Sn			Sn	12 20 59.8	+0.3
	124nm,0.3s,baz=331,slow=23,SNR=8.3								
BSO3	Boso 3	1.08	347	P			Pn	12 20 44.8	-0.5
BSO3				*e*S			Sn	12 21 00.5	+1.2
JHCJ	Hachijojimakas	1.09	232	P			Pn	12 20 45.5	-0.2
JHCJ				S			Sn	12 20 59.8	-0.2
JMYK	Miyake Tsubota	1.10	287	P			Pn	12 20 45.6	-0.2
JMYK				*e*S			Sn	12 21 00.3	+0.1
BSO4	Boso 4	1.30	342	P			Pn	12 20 48.5	+0.1
BSO4				S			Sn	12 21 06.2	+1.5
JSKK	Shikinejimakit	1.45	294	P			Pn	12 20 50.2	-0.4
JIM2	Oshima 3	1.50	310	P			Pn	12 20 50.5	-0.6
JIM2				S			Sn	12 21 08.7	-1.0
KTJ3	Kamata3	1.86	310	P			Pn	12 20 55.6	-0.5
KTJ3				*e*S			Sn	12 21 17.2	-1.4
JIZS	Izushimoda	1.87	302	P			Pn	12 20 56.4	+0.2
JIZS				*e*S			Sn	12 21 19.1	+0.4
JOD2	Odawara 2	2.08	317	P			Pn	12 20 58.7	-0.3
JOD2				*e*S			Sn	12 21 23.2	-0.6
MJAR	Matsushiro Arr	3.51	323	Pn			Pn	12 21 19.2	+0.7
	0.6nm,0.3s,baz=151,slow=12,SNR=62								
MJAR				Sn			Sn	12 22 00.6	+1.8
	0.3nm,0.3s,baz=309,slow=6.4,SNR=5.9								
	3.6nm,0.3s								
WRA	Warramunga Arr	53.75	188	P			P	12 29 42.2	-0.4
	0.7nm,0.4s,baz=4.1,slow=7.4,SNR=13								
	0.7nm,0.4s								
ASAR	Alice Springs	57.48	188	P			P	12 30 09.3	0.0
	0.3nm,0.7s,baz=4.6,slow=6.8,SNR=6.5								
	0.3nm,0.7s								

*NEIC **30** 12:42:09.9±2.0, 15°.96S±0°.02×172°.47W±0°.09, h10km±1km, mb4.3/13, Error ellipse: s-maj=14.2km s-min=3.7km az=96.0*
*IDC **30** 12:42:11.6±0.8, 15°.63S×173°.32W, h0km, mb4.0/9, mbtmp4.0/9, MS3.4/5, Error ellipse: s-maj=38.3km s-min=21.6km az=144.0*

ISC 30 12:42:11.5±0.6, 16°.00S±0°.08×172°.50W±0°.08, h24km, n37, σ1s36/26, mb4.2/14, MS3.6/4, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res
AFI	Afiamalu	2.19	19				Pn	12 42 45.9	-0.6
NIUE	Niue	3.93	142	Pn		Pn	Pn	12 43 10.2	-0.1
MSVF	Nonsavu	9.21	258	Pn		Pn	Pn	12 44 25.0	+2.0
RAR	Rarotonga	13.13	115	LR		LR		12 49 33.9	
	comp=Z,90nm,21.8s,baz=258,slow=32								
RAR	Rarotonga	13.13	115	Pn			Pn	12 45 17.3	+0.7
DZM	Mont Dzumac	20.79	250	P			Pn	12 46 54.2	+0.4
	4.2nm,0.6s,baz=74,slow=16,SNR=6.5								
DZM				LR		LR		12 53 31.8	
	comp=Z,164nm,19.2s,baz=44,slow=34								
DZM	Mont Dzumac	20.79	250	*e*P			Pn	12 46 52.8	-0.9
	24nm,24.6s								
DZM				*e*LR		LR		12 51 47.2	
	448nm,26.6s								
DZM	Mont Dzumac	20.79	250	P			P	12 46 51.8	+0.5
DZM				IAmb		IAmb		12 46 52.5	
	comp=Z,16nm,1.3s								
PPT	Papeete	22.00	97	LR		LR		12 53 58.3	
	comp=Z,45nm,18.9s,baz=265,slow=31								
PPT2	Papeete2	22.00	97	*e*P			P	12 47 02.5	-1.8
	comp=Z,29nm,25.8s								
PPT2				*e*LR		LR		12 52 10.1	
	comp=Z,135nm,26.5s								
TBI	Tubuai	22.88	112	*e*LR		LR		12 52 40.3	
	comp=Z,865nm,27.2s								
TAOE	Nuku Hiva Isla	32.35	81	*e*LR		LR		12 56 52.4	
	comp=Z,77nm,27.7s								
ARMA	Armidale	35.79	240	P			P	12 49 08.0	-1.2
CTAO	Charters Tower	39.36	258	P			P	12 49 39.2	-0.1
COEN	Coen	42.81	267	P			P	12 50 07.9	+0.1
COEN				IAmb		IAmb		12 50 09.4	
	comp=Z,4.4nm,0.8s								
STKA	Stephens Creek	44.49	241	P			P	12 50 20.2	-1.1
	comp=Z,2.5nm,0.7s,baz=94,slow=14,SNR=3.5								
	comp=Z,2.5nm,0.7s								
STKA	Stephens Creek	44.49	241	P			P	12 50 20.5	-0.7
WB0	Warramunga Arr	50.52	257	P			P	12 51 07.2	-1.0
WB0				IAmb		IAmb		12 51 27.3	
	comp=Z,4.0nm,1.0s								
WRA	Warramunga Arr	50.55	257	P			P	12 51 07.0	-1.5
	comp=Z,1.2nm,0.6s,baz=92,slow=7.0,SNR=18								
	comp=Z,1.2nm,0.6s								
WRA	Warramunga Arr	50.55	257	P			P	12 51 07.6	-0.9
AS31	Alice Springs	50.75	252	P			P	12 51 08.3	-1.7
AS31				IAmb		IAmb		12 51 10.3	
	comp=Z,1.4nm,0.7s								
ASAR	Alice Springs	50.75	252	P			P	12 51 08.2	-1.8
	comp=Z,4.7nm,0.6s,baz=87,slow=8.3,SNR=73								
	comp=Z,4.7nm,0.6s								
FORT	Forrest	55.92	243	P			P	12 51 46.4	-1.5
FORT				IAmb		IAmb		12 52 13.6	
	comp=Z,9.4nm,1.0s								
KNRA	Kununurra	56.34	262	P			P	12 51 50.0	-1.0
CCX	Cicese	71.60	48	P			P	12 53 30.4	-0.6
QSPA	South Pole Qui	74.05	180	P			P	12 53 51.7	+6.4
	comp=Z,1.5nm,1.0s,baz=42,slow=4.7,SNR=3.2								
	comp=Z,1.5nm,1.0s								
QSPA	South Pole Qui	74.05	180	P			P	12 53 46.2	+0.9
QSPA				IAmb		IAmb		12 54 03.6	
	comp=Z,4.6nm,1.1s								
NVAR	Mina Array Bea	74.19	41	P			P	12 53 51.2	+4.6
	comp=Z,0.3nm,0.6s,baz=227,slow=10,SNR=4.4								
	comp=Z,0.3nm,0.6s							

0.1nm8.5nm,0.8s
PLAI Plampang 6.44 88 P Pn 13 59 22.6 +0.6
15nm,1.4s

IDC 30 13:58:10.9±2.4,4°.25N×126°.37E,h0km,mb3.3/4, mbtmp3.3/4,MS2.5/1,Error ellipse: s-maj=236.5km s-min=25.0km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.33**	**216**	LR	LR	14 05 43.7	
	comp=Z,22nm,20.2s,baz=98,slow=40						
WRA	**Warramunga Arr**	**25.28**	**162**	P	P	14 03 38.5	-0.7
	0.5nm,0.7s,baz=341,slow=9.6,SNR=2.5						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**28.70**	**165**	P	P	14 04 10.7	+0.7
	0.3nm,0.8s,baz=356,slow=7.2,SNR=4.2						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**56.93**	**325**	P	P	14 07 58.0	0.0
	0.2nm,0.4s,baz=122,slow=6.4,SNR=1.4						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**61.11**	**327**	P	P	14 08 26.7	-0.2
	0.2nm,0.8s,baz=139,slow=6.9,SNR=1.8						
	0.2nm,0.8s						

*NAO **30** 14:11:33.6,36°.78N×21°.16E,h10km,MB3.5*
*IDC **30** 14:11:55.6±1.0,39°.29N×20°.85E,h0km,mb3.7/12, mbtmp3.8/22,ML3.5/8,MS2.9/4,Error ellipse: s-maj=18.2km s-min=12.9km az=33.0*
*ATH **30** 14:11:56.6,39°.33N×20°.81E,h6km±1km,ML3.7/41, Manual Solution by G.Panopoulou First location: 2019/11/30 14:12:54, This location: 2020/11/09 18:06:53 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 0 km; Longitude uncertainty: 0 km*
*THE **30** 14:11:56.8,39°.N±2°×2°.1E±°,h7km,M3.5/26,MLh3.5/26*
*TIR **30** 14:11:57.0,39°.33N×20°.84E,h12km±3km,Ml3.6/3*

ISC 30 14:11:57.2±0.8,39°.33N±0°.01×20°.84E±0°.02,h11km±6km, n159,σ1°.46/204,mb3.8/12,20C-10D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARTB	**Arta**	**0.20**	**147**	P	**Pg**	**14 12 00.6**	**-0.9**
ARTB				S	**Sg**	**14 12 04.4**	**0.0**
ART2	**Arta**	**0.22**	**145**	P	**Pg**	**14 12 00.9**	**-0.9**
ART2				S	**Sg**	**14 12 05.1**	**+0.3**
PRMD	**Pramanda**	**0.29**	**45**	P	**Pg**	**14 12 02.8**	**-0.3**
PRMD				S	**Sb**	**14 12 09.1**	**-0.3**
JAN	**Janina**	**0.33**	**2**	P	**Pg**	**14 12 03.2**	**-0.7**
JAN				S	**Sb**	**14 12 09.6**	**-1.0**
JAN	**Janina**	**0.33**	**2**	P	**Pg**	**14 12 03.2**	**-0.7**
JAN				S	**Sg**	**14 12 08.6**	**+0.2**
PRGA	**Parga**	**0.34**	**263**	P	**Pg**	**14 12 03.3**	**-0.7**
TETR	**Tetrakomo, Epi**	**0.34**	**87**	P	**Pg**	**14 12 03.4**	**-0.6**
TETR				S	**Sb**	**14 12 10.4**	**-0.6**
TETR	**Tetrakomo, Epi**	**0.34**	**87**	P	**Pg**	**14 12 03.5**	**-0.6**
TETR				S	**Sb**	**14 12 10.1**	**-0.8**
IGT	**Igoumenitsa**	**0.44**	**298**	⇑Pg	**Pg**	**14 12 05.0**	**-1.0**
IGT				Sg	**Sb**	**14 12 13.2**	**-0.6**
IGT	**Igoumenitsa**	**0.44**	**298**	P	**Pg**	**14 12 04.9**	**-1.0**
IGT				S	**Sg**	**14 12 12.2**	**+0.4**
IGT	**Igoumenitsa**	**0.44**	**298**	P	**Pg**	**14 12 05.1**	**-0.8**
IGT				S	**Sg**	**14 12 12.0**	**+0.3**
AMPL	**Ampelaki**	**0.50**	**144**	P	**Pg**	**14 12 05.7**	**-1.3**
AMPL				S	**Sb**	**14 12 16.1**	**+0.7**
MSVA	**Metsovo**	**0.52**	**31**	P	**Pg**	**14 12 06.7**	**-0.7**
MSVA				S	**Sg**	**14 12 14.6**	**+0.3**
TSLK	**Tsoukalades, L**	**0.52**	**196**	P	**Pg**	**14 12 07.3**	**-0.1**
TSLK				S	**Sb**	**14 12 17.6**	**+1.6**
TSLK	**Tsoukalades, L**	**0.52**	**196**	P	**Pg**	**14 12 07.2**	**-0.1**
TSLK				S	**Sg**	**14 12 14.7**	**+0.5**
LKD2	**Lefkada island**	**0.55**	**195**	⇑Pg	**Pg**	**14 12 07.7**	**-0.4**
LKD2				Sg	**Sb**	**14 12 16.3**	**-0.7**
LKD2				AML	AML	14 12 23.0	
	18nm,0.8s						
LKD2	**Lefkada island**	**0.55**	**195**	P	**Pg**	**14 12 07.5**	**-0.5**
LKD2				S	**Sb**	**14 12 18.0**	**+1.0**
LKD2	**Lefkada island**	**0.55**	**195**	P	**Pg**	**14 12 07.6**	**-0.5**
LKD2				S	**Sg**	**14 12 15.6**	**+0.3**
LFKM	**Lefkimmi**	**0.61**	**282**	P	**Pg**	**14 12 08.9**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.62**	**190**	P	**Pg**	**14 12 08.6**	**-0.7**
NYDR				S	**Sb**	**14 12 20.4**	**+1.6**
NYDR	**Nydri-Lefkada**	**0.62**	**190**	P	**Pg**	**14 12 08.7**	**-0.6**
NYDR				S	**Sg**	**14 12 17.1**	**-0.3**
DRAG	**Dragano-Lefkad**	**0.67**	**198**	P	**Pg**	**14 12 09.5**	**-0.7**
DRAG	**Dragano-Lefkad**	**0.67**	**198**	P	**Pg**	**14 12 09.5**	**-0.7**
DRAG				S	**Sg**	**14 12 19.6**	**+0.5**
EVGI	**Lefkada island**	**0.72**	**191**	P	**Pg**	**14 12 10.3**	**-0.8**
EVGI				S	**Sb**	**14 12 22.5**	**+0.8**
EVGI	**Lefkada island**	**0.72**	**191**	P	**Pg**	**14 12 10.3**	**-0.8**
KPRO	**Kipourio**	**0.75**	**33**	P	**Pg**	**14 12 11.2**	**-0.5**
KPRO				S	**Sn**	**14 12 24.5**	**-0.8**
KPRO	**Kipourio**	**0.75**	**33**	P	**Pg**	**14 12 11.2**	**-0.5**
KPRO				S	**Sg**	**14 12 21.7**	**+0.2**
KRK1	**kERKIRA**	**0.77**	**293**	P	**Pg**	**14 12 10.4**	**-1.7**
AST1	**Astakos**	**0.81**	**166**	P	**Pg**	**14 12 12.5**	**-0.3**
EVR	**Evrytania**	**0.86**	**118**	P	**Pg**	**14 12 13.1**	**-0.7**
EVR				S	**Sn**	**14 12 28.1**	**0.0**
EVR	**Evrytania**	**0.86**	**118**	P	**Pg**	**14 12 13.3**	**-0.6**
EVR				S	**Sb**	**14 12 25.8**	**-0.1**
PVO	**Paravola**	**0.89**	**143**	P	**Pg**	**14 12 14.1**	**-0.3**
PVO				S	**Sb**	**14 12 26.5**	**-0.1**
FSK	**Fiskardo**	**0.89**	**194**	P	**Pg**	**14 12 13.0**	**-1.4**
FSK	**Fiskardo**	**0.89**	**194**	P	**Pg**	**14 12 13.2**	**-1.2**
FSK				S	**Sg**	**14 12 26.1**	**+0.1**
PENT	**Pentalofos**	**0.90**	**15**	P	**Pg**	**14 12 14.2**	**-0.4**
PENT	**Pentalofos**	**0.90**	**15**	P	**Pg**	**14 12 14.4**	**-0.2**
VSK1	**VASILIKIADES**	**0.94**	**193**	P	**Pg**	**14 12 14.5**	**-0.8**
THL	**Klokotos Trika**	**0.94**	**75**	P	**Pg**	**14 12 14.8**	**-0.7**
THL	**Klokotos Trika**	**0.94**	**75**	P	**Pg**	**14 12 15.0**	**-0.4**
THL				S	**Sb**	**14 12 28.1**	**0.0**
MAKR	**Makrakomi, Fth**	**1.05**	**107**	P	**Pg**	**14 12 17.0**	**-0.5**
MSL1	**Messolongi**	**1.06**	**154**	P	**Pg**	**14 12 17.2**	**-0.4**
MSL1				S	**Sb**	**14 12 31.5**	**+0.1**
NEST	**Nestorio**	**1.10**	**8**	⇑Pg	**Pn**	**14 12 18.6**	**-0.1**
NEST				Sg	**Sn**	**14 12 34.3**	**+0.3**
NEST				AML	AML	14 12 48.0	
	4.7nm,0.9s						
NEST	**Nestorio**	**1.10**	**8**	P	**Pg**	**14 12 18.0**	**-0.4**
NEST	**Nestorio**	**1.10**	**8**	P	**Pg**	**14 12 18.0**	**-0.4**
ANX	**Ano Chora**	**1.12**	**131**	P	**Pg**	**14 12 17.9**	**-0.9**
ANX	**Ano Chora**	**1.12**	**131**	P	**Pb**	**14 12 18.5**	**-0.2**
DMLN	**Damoulianata-K**	**1.15**	**199**	P	**Pg**	**14 12 18.1**	**-1.1**
VLS	**Valsamata**	**1.16**	**190**	P	**Pg**	**14 12 18.2**	**-1.4**
VLS	**Valsamata**	**1.16**	**190**	P	**Pg**	**14 12 18.1**	**-1.4**
ARG2	**Argostoli**	**1.18**	**193**	P	**Pg**	**14 12 19.0**	**-0.9**
AGG	**Agios Georgios**	**1.20**	**104**	P	**Pg**	**14 12 18.7**	**-1.6**
AGG	**Agios Georgios**	**1.20**	**104**	P	**Pg**	**14 12 18.9**	**-1.4**
AXS	**Araxos**	**1.21**	**159**	P	**Pg**	**14 12 19.3**	**-1.1**
AXS	**Araxos**	**1.21**	**159**	P	**Pg**	**14 12 19.3**	**-1.1**
AXS				S	**Sn**	**14 12 36.2**	**-0.2**
KZN	**Kozani**	**1.22**	**36**	P	**Pn**	**14 12 20.4**	**0.0**
KZN	**Kozani**	**1.22**	**36**	P	**Pg**	**14 12 20.0**	**-0.7**
EFP	**Efpalio**	**1.23**	**137**	P	**Pn**	**14 12 20.4**	**0.0**
EFP	**Efpalio**	**1.23**	**137**	P	**Pn**	**14 12 20.3**	**0.0**
RTZL	**Ratzakli, Kefa**	**1.25**	**182**	P	**Pn**	**14 12 19.6**	**-1.1**
UPR	**University Cam**	**1.28**	**144**	P	**Pn**	**14 12 20.5**	**-0.6**
KBN	**Korca**	**1.30**	**358**	⇑Pg	**Pg**	**14 12 25.3**	**+3.2**
KBN				Sg	**Sn**	**14 12 39.8**	**+0.9**
SERG	**Sergoula**	**1.32**	**133**	P	**Pg**	**14 12 22.0**	**-0.5**
RLS	**Riolos of Patr**	**1.36**	**159**	P	**Pb**	**14 12 22.4**	**-0.3**
RLS	**Riolos of Patr**	**1.36**	**159**	P	**Pn**	**14 12 22.2**	**0.0**
KALE	**Kalithea**	**1.38**	**132**	P	**Pn**	**14 12 21.9**	**-0.6**
CLEM	**Kyllini,Ilia,G**	**1.45**	**171**	P	**Pg**	**14 12 24.6**	**-0.5**
ORTH	**Orthonies,Zaky**	**1.48**	**184**	P	**Pn**	**14 12 24.3**	**+0.4**
LIT	**Litokhoron**	**1.49**	**58**	P	**Pb**	**14 12 25.0**	**0.0**
LIT	**Litokhoron**	**1.49**	**58**	P	**Pn**	**14 12 24.1**	**0.0**
KYPS	**Kipseli, Zakin**	**1.50**	**180**	P	**Pb**	**14 12 24.8**	**-0.4**
LMS2	**Laimos Florina**	**1.52**	**9**	P	**Pn**	**14 12 25.0**	**+0.4**
AXAR	**Agios Charalam**	**1.53**	**111**	P	**Pn**	**14 12 24.7**	**+0.2**
DRO	**Drossia**	**1.53**	**153**	P	**Pb**	**14 12 25.2**	**-0.5**
DRO	**Drossia**	**1.53**	**153**	P	**Pn**	**14 12 24.8**	**+0.2**
LTHK	**Lithakia**	**1.61**	**180**	P	**Pn**	**14 12 25.8**	**+0.1**
KLV1	**Kalavrita**	**1.63**	**142**	P	**Pn**	**14 12 26.6**	**+0.6**
KLV	**Kalavryta, Ach**	**1.64**	**141**	P	**Pb**	**14 12 27.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.64**	**141**	P	**Pb**	**14 12 27.2**	**-0.4**
OHR	**Ohrid**	**1.78**	**359**	*i* Pn	**Pg**	**14 12 32.6**	**+1.2**
ATAL	**Atalanti**	**1.82**	**110**	P	**Pn**	**14 12 29.3**	**+0.8**
LKR	**Lokris**	**1.82**	**111**	P	**Pn**	**14 12 29.2**	**+0.7**
GUR	**Goura**	**1.82**	**139**	P	**Pn**	**14 12 29.5**	**+0.9**
NEO	**Neokhori**	**1.85**	**90**	P	**Pn**	**14 12 29.3**	**+0.3**
AMT	**Artemida-Makis**	**1.92**	**159**	P	**Pn**	**14 12 29.8**	**-0.2**
THE	**Thessaloniki**	**2.09**	**51**	Pn	**Pb**	**14 12 34.5**	**-0.7**
VIL2	**Platees**	**2.20**	**120**	P	**Pb**	**14 12 36.0**	**-1.1**
ITM	**Ithomi**	**2.31**	**158**	Pn	**Pb**	**14 12 39.0**	**0.0**
AOS2	**Alonissos-2**	**2.34**	**93**	P	**Pn**	**14 12 35.9**	**+0.2**
PHP	**Peshkopia**	**2.38**	**353**	Pn	**Pb**	**14 12 39.2**	**-0.9**
PHP				Sn	**Sb**	**14 13 09.9**	**+0.4**
PHP				AML	AML	14 13 23.7	
	1.4nm,1.0s						
VAY	**Valandovo**	**2.39**	**33**	*i* Pn	**Pb**	**14 12 38.6**	**-1.7**
MAGU	**Magoula**	**2.44**	**120**	P	**Pn**	**14 12 37.6**	**+0.6**
PYL	**PYLOS**	**2.53**	**163**	P	**Pn**	**14 12 38.7**	**+0.4**
MET2	**Kameni Chora,**	**2.60**	**130**	P	**Pn**	**14 12 40.2**	**+1.0**
MESG	**Mesagne**	**2.62**	**300**	P	**Pn**	**14 12 39.5**	**0.0**
VLY	**Voula,Athens**	**2.75**	**121**	P	**Pn**	**14 12 42.1**	**+0.9**
TIP	**Timpagrande**	**3.17**	**269**	⇑P	**Pn**	**14 12 47.7**	**+0.5**
TIP				⇑S	**Sn**	**14 13 26.7**	**+1.6**
TIP	**Timpagrande**	**3.17**	**269**	P	**Pn**	**14 12 46.7**	**-0.5**
THAS	**Thassos island**	**3.25**	**66**	P	**Pn**	**14 12 48.3**	**+0.2**
KAVA	**Kavala**	**3.27**	**58**	P	**Pn**	**14 12 48.6**	**+0.1**
PDG	**Podgorica**	**3.33**	**339**	⇑P	**Pn**	**14 12 51.9**	**+2.7**
PDG				⇓S	**Sn**	**14 13 30.9**	**+2.2**
MATE	**Matera**	**3.44**	**294**	⇑P	**Pn**	**14 12 52.7**	**+2.0**
MATE				⇓S	**Sn**	**14 13 32.0**	**+0.6**
APE	**Apeiranthos**	**4.33**	**120**	⇑P	**Pn**	**14 13 06.9**	**+3.8**
BOVS	**Bovan**	**4.36**	**8**	⇑P	**Pn**	**14 13 05.8**	**+2.4**
BLKB	**Belogradchik**	**4.51**	**17**	⇑P	**Pn**	**14 13 09.0**	**+3.4**
PLVB	**Pleven**	**4.96**	**34**	⇓P	**Pn**	**14 13 15.2**	**+3.6**
IDI	**Anoyia**	**5.17**	**140**	Pn	**Pn**	**14 13 15.0**	**+0.4**
	4.6nm,0.4s,baz=295,slow=11,SNR=9.5						
IDI				Sn	**Sn**	**14 14 14.6**	**+0.4**
	1.0nm,0.3s,baz=33,slow=18,SNR=2.0						
ELND	**Elena**	**5.24**	**45**	⇓P	**Pn**	**14 13 18.5**	**+3.0**
VAE	**Valguarnera**	**5.37**	**252**	Sn	**Sn**	**14 14 20.0**	**+0.7**
	2.8nm,0.3s,baz=230,slow=16,SNR=3.2						
MDVR	**Moldovita**	**5.49**	**7**	⇓P	**Pn**	**14 13 21.7**	**+2.6**
BLY	**Banja Luka**	**6.06**	**335**	⇓P	**Pn**	**14 13 29.2**	**+2.4**
GZR	**Gura Zlata**	**6.23**	**13**	⇓P	**Pn**	**14 13 32.7**	**+3.5**
BZS	**Buzias**	**6.31**	**5**	⇑P	**Pn**	**14 13 32.7**	**+2.4**
SURR	**Surduc**	**6.49**	**8**	⇑P	**Pn**	**14 13 36.1**	**+3.3**
ARR	**Arges**	**6.66**	**24**	⇑P	**Pn**	**14 13 38.1**	**+3.0**
VOIR		**6.86**	**26**	⇓P	**Pn**	**14 13 41.1**	**+3.2**
MORH	**Mrgy, Hungar**	**7.07**	**348**	⇑P	**Pn**	**14 13 43.5**	**+2.8**
ISR	**Istrita**	**7.17**	**34**	⇑P	**Pn**	**14 13 46.6**	**+4.5**
MLR	**Muntele Rosu**	**7.23**	**30**	Pn	**Pn**	**14 13 44.9**	**+1.9**
	0.7nm,0.3s,baz=250,slow=8.3,SNR=17						
MLR				LR	LR	14 16 36.2	
	comp=Z,62nm,20.1s,baz=247,slow=39						
	29nm,1.0s						
MLR	**Muntele Rosu**	**7.23**	**30**	⇑P	**Pn**	**14 13 46.7**	**+3.8**
NEHR	**Nehoiu**	**7.31**	**32**	⇓P	**Pn**	**14 13 48.4**	**+4.3**
PLOR	**Plostina**	**7.80**	**31**	⇑P	**Pn**	**14 13 54.6**	**+3.8**
VRI	**Vrincioaia**	**7.85**	**32**	⇓P	**Pn**	**14 13 55.4**	**+4.0**
TPGR	**Topolog**	**7.89**	**43**	⇑P	**Pn**	**14 13 55.3**	**+3.4**
ONER	**Baraj Valea Uz**	**8.11**	**28**	⇑P	**Pn**	**14 13 58.6**	**+3.7**
SOKA	**Soboth**	**8.49**	**332**	*i* Pn	**Pn**	**14 14 00.2**	**0.0**
	4.0nm,0.5s,SNR=9.1						
SOKA				*e*Sn	**Sn**	**14 15 31.8**	**-4.2**
	3.0nm,0.8s						
OBKA	**Obir**	**8.53**	**329**	*i* Pn	**Pn**	**14 14 00.8**	**0.0**
	3.8nm,0.4s						
OBKA				*i* Sn	**Sn**	**14 15 36.2**	**-0.9**
	7.2nm,0.7s						
KECS	**Kecovo**	**9.16**	**359**	*e*PN	**Pn**	**14 14 05.7**	**-3.6**
KECS				*e*		14 14 14.0	
ABTA	**Abfaltersbach**	**9.59**	**323**	*i* Pn	**Pn**	**14 14 14.9**	**-0.5**
	2.0nm,0.4s						
MOA	**Molln**	**9.76**	**333**	*e*Pn	**Pn**	**14 14 19.1**	**+1.5**
	2.2nm,0.3s,SNR=5.2						
MOA				*i* Sn	**Sn**	**14 16 05.1**	**-2.0**
	0.3nm,0.1s						
BIOA	**Bad Ischl, Aus**	**9.86**	**330**	*i* Pn	**Pn**	**14 14 19.7**	**+0.8**
	5.2nm,0.4s						
BRTR	**Keskin Array B**	**9.90**	**84**	Pn	**Pn**	**14 14 21.1**	**+1.4**
	0.1nm,0.3s,baz=268,slow=12,SNR=6.0						
	0.4nm,0.4s						
LESA	**Schwarzleotal**	**10.03**	**326**	*i* Pn	**Pn**	**14 14 21.6**	**+0.2**
	3.1nm,0.4s						
LESA				*i* Sn	**Sn**	**14 16 10.4**	**-3.6**
	0.9nm,0.3s						
WTTA	**Wattenberg**	**10.38**	**323**	*i* Pn	**Pn**	**14 14 26.6**	**+0.4**
	2.1nm,0.4s						
WTTA				*i* Sn	**Sn**	**14 16 20.5**	**-2.1**
	5.9nm,0.8s						
VRAC	**Vranov**	**10.43**	**344**	LR	LR	14 19 30.3	
	comp=Z,100nm,18.7s,baz=184,slow=44						
WATA	**Walderalm**	**10.46**	**323**	*e*Pn	**Pn**	**14 14 28.6**	**+1.3**
	7.7nm,0.8s						
WATA				*i* Sn	**Sn**	**14 16 22.0**	**-2.5**
	1.7nm,0.3s						
SQTA	**Sankt Quirin**	**10.55**	**322**	*i* Pn	**Pn**	**14 14 30.4**	**+1.9**
	3.0nm,0.5s						
FETA	**Feichten**	**10.65**	**319**	*i* Pn	**Pn**	**14 14 31.0**	**+1.1**
	0.8nm,0.4s						
FETA				*i* Sn	**Sn**	**14 16 28.6**	**-0.7**
	1.2nm,0.6s						
MOTA	**Moosalm**	**10.69**	**322**	*i* Pn	**Pn**	**14 14 31.8**	**+1.3**
	1.7nm,0.3s						
MOTA				*i* Sn	**Sn**	**14 16 28.0**	**-2.2**
	4.9nm,0.8s						
GERES	**GERESS Array B**	**10.80**	**334**	Pn	**Pn**	**14 14 33.1**	**+1.2**
	baz=161,slow=14,SNR=7.2						
GERES				LR	LR	14 19 30.1	
	comp=Z,78nm,18.3s,baz=169,slow=42						
	0.5nm,0.3s						
DAVOX	**Davos/Dischmat**	**10.94**	**316**	Pn	**Pn**	**14 14 35.4**	**+1.6**
	0.5nm,0.3s,baz=110,slow=16,SNR=5.3						
DAVOX				Sn	**Sn**	**14 16 33.8**	**-2.4**
	0.1nm,0.3s,baz=187,slow=20,SNR=1.8						
	2.1nm,0.5s						
KHC	**Kasperske Hory**	**11.09**	**334**	*e*PN	**Pn**	**14 14 36.5**	**+0.7**
AKASG	**Malin Array Be**	**12.82**	**25**	Pn	**Pn**	**14 15 00.5**	**+1.2**
	0.3nm,0.3s,baz=211,slow=12,SNR=5.1						
	0.9nm,0.6s						
MMAI	**Mount Meron Ar**	**13.34**	**114**	Pn	**Pn**	**14 15 07.4**	**+0.8**
	2.4nm,0.8s,baz=336,slow=12,SNR=2.1						
ASF	**Jabal al Asfar**	**14.86**	**114**	Pn	**Pn**	**14 15 28.4**	**+1.0**
	0.1nm,0.3s,baz=316,slow=11,SNR=1.7						
	0.8nm,0.4s						
EIL	**Elat**	**15.09**	**125**	Pn	**Pn**	**14 15 30.1**	**-0.4**
	0.4nm,0.3s,baz=319,slow=6.9,SNR=4.1						
	2.4nm,0.5s						
ESDC	**Sonseca Array**	**19.13**	**279**	P	**P**	**14 16 20.5**	**+0.1**
	0.1nm,0.3s,baz=72,slow=11,SNR=7.3						
	1.2nm,0.9s						
HFS	**Hagfors**	**21.31**	**350**	P	**P**	**14 16 42.9**	**-0.9**
	1.8nm,0.6s,baz=158,slow=9.6,SNR=8.0						
	1.8nm,0.6s						
MDT	**Midelt**	**21.53**	**260**	P	**P**	**14 16 47.5**	**+1.0**
	1.4nm,0.7s,baz=99,slow=9.3,SNR=4.0						
	1.4nm,0.7s						
FINES	**FINESS Array B**	**22.38**	**7**	P	**P**	**14 16 55.4**	**+0.2**
	1.0nm,0.5s,baz=169,slow=11,SNR=8.4						
	1.0nm,0.5s						
NB2	**NORSAR Subarra**	**22.55**	**348**	P	**P**	**14 16 57.4**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=161,slow=10						
NOA	**NORSAR Array B**	**22.55**	**348**	P	**P**	**14 16 56.9**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=164,slow=10,SNR=6.2						
NOA				LR	LR	14 27 05.4	
	comp=Z,25nm,18.4s,baz=10.0,slow=40						
	comp=Z,1.1nm,0.7s						
EKA	**Eskdalemuir Ar**	**22.65**	**323**	P	**P**	**14 16 58.1**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=123,slow=9.3,SNR=12						
	comp=Z,1.9nm,0.6s						
ARCES	**ARCESS Array B**	**30.37**	**3**	P	**P**	**14 18 08.1**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=193,slow=4.9,SNR=3.8						
	comp=Z,4.1nm,0.8s						
BVAR	**Borovoye Array**	**36.20**	**51**	P	**P**	**14 19 00.4**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=282,slow=7.4,SNR=5.7						
	comp=Z,1.1nm,0.8s						
KURBB	**Kurchatov Arra**	**41.36**	**55**	P	**P**	**14 19 41.9**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=285,slow=8.9,SNR=6.0						
	comp=Z,0.5nm,0.9s						
MKAR	**Makanchi Array**	**44.50**	**59**	P	**P**	**14 20 08.5**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=279,slow=7.7,SNR=10						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**44.75**	**49**	P	**P**	**14 20 10.7**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=265,slow=8.8,SNR=13						
	comp=Z,3.2nm,0.8s						
SONM	**Songino Array**	**59.54**	**51**	P	**P**	**14 22 01.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=282,slow=7.3,SNR=4.9						
	comp=Z,0.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**69.49**	**83**	P	**P**	**14 23 05.2**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=325,slow=6.4,SNR=4.1						
	comp=Z,0.6nm,0.3s						

IDC 30 14:29:39.8±1.9,30°.76N×90°.59E,h0km,mb3.5/4, mbtmp3.5/5,ML4.0/1,MS3.4/1,Error ellipse: s-maj=51.9km s-min=26.7km az=76.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**12.12**	**61**	Pn	Pn	14 32 33.1	-0.9
	baz=242,slow=12						
	0.5nm,0.3s						
SONM	**Songino Array**	**20.91**	**31**	P	P	14 34 24.5	+0.6
	5.0nm,0.7s,baz=215,slow=12,SNR=26						
	5.0nm,0.7s						
KURBB	**Kurchatov Arra**	**21.79**	**339**	P	P	14 34 32.9	-0.3
	0.4nm,0.5s,baz=154,slow=10,SNR=6.2						
	0.4nm,0.5s						
KVAR	**Kislovodsk Arr**	**39.75**	**303**	LR	LR	14 58 41.8	
	comp=Z,51nm,18.0s,baz=324,slow=44						
WRA	**Warramunga Arr**	**65.64**	**134**	P	P	14 40 26.1	+0.1
	0.5nm,0.8s,baz=328,slow=6.7,SNR=5.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**68.21**	**137**	P	P	14 40 42.3	-0.1
	0.2nm,0.6s,baz=318,slow=6.3,SNR=2.2						
	0.2nm,0.6s						

*NEIC **30** 14:46:14.7±1.7,31°.46S±0°.04×72°.15W±0°.05,h10km±1km, mb4.2/1,Mwr4.0(GUC),Error ellipse: s-maj=8.5km s-min=5.8km az=243.0*
*IDC **30** 14:46:14.0±0.9,31°.43S×71°.82W,h0km,mb4.1/3, mbtmp3.8/6,ML3.7/3,Error ellipse: s-maj=33.5km s-min=21.7km az=136.0*
*SJA **30** 14:46:15.1±0.7,31°.50S×71°.91W,h22km±3km,ML4.0, MW4.0*
*GUC **30** 14:46:18.2±0.8,31°.53S×71°.68W,h28km±3km,ML4.0*

ISC 30 14:46:16.6±0.9,31°.52S±0°.02×71°.77W±0°.04,h16km±5km, n118,σ1°.79/157,4C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.73**	**65**		**Pb**	**14 46 31.3**	**+0.3**
CO02	**Combarbal**	**0.73**	**65**	⇓*i*P	**Pb**	**14 46 31.4**	**+0.3**
CO02				*e*S	**Sg**	**14 46 39.6**	**-1.1**
CO02				IAML		14 46 44.7	
	comp=E,20μm,0.3s						
CO02	**Combarbal**	**0.73**	**65**	*e*P	**Pb**	**14 46 31.3**	**+0.3**
CO02				*e*S	**Sg**	**14 46 38.6**	**-2.0**
CO02				IAML		14 46 44.2	
	comp=Z,8μm,0.3s						
CO06	**Fray Jorge**	**0.85**	**8**		**Pg**	**14 46 33.6**	**+0.4**
CO06	**Fray Jorge**	**0.85**	**8**	*i* P	**Pg**	**14 46 33.6**	**+0.4**
CO06				*e*S	**Sg**	**14 46 44.9**	**+0.5**
CO06				IAML		14 46 46.8	
	comp=E,7μm,0.3s						
CO04	**Los Peladeros**	**0.86**	**128**	*i* P	**Pb**	**14 46 33.7**	**+0.4**
CO04				*e*S	**Sb**	**14 46 44.0**	**-0.7**
CO04				IAML		14 46 45.5	
	comp=N,21μm,0.2s						
VA06	**Catapilco**	**1.11**	**159**		**Pb**	**14 46 37.6**	**+0.1**
VA06	**Catapilco**	**1.11**	**159**	⇓*i*P	**Pb**	**14 46 37.6**	**+0.1**
VA06				*e*S	**Sb**	**14 46 51.9**	**+0.1**
VA06				IAML		14 46 56.2	
	comp=N,9μm,0.4s						
CO03	**El Pedregal**	**1.15**	**54**		**Pb**	**14 46 37.9

MT08	**Bocatoma Ro**	**2.42**	**143**	*eP*	**Pb**	**14 46 58.6**	**-1.4**
MT08				*eS*	**Sb**	**14 47 28.4**	**-1.5**
MT08				IAML		14 47 39.7	
	comp=Z,568nm,0.7s						
ACCO	**Cerro Coronel**	**2.50**	**69**	*eP*	**Pb**	**14 47 00.8**	**-0.6**
ACCO				*eS*	**Sg**	**14 47 36.6**	**-0.6**
MT13	**San Alfonso**	**2.55**	**151**		**Pn**	**14 46 59.1**	**+1.7**
MT13	**San Alfonso**	**2.55**	**151**	⇓*eP*	**Pn**	**14 46 59.2**	**+1.7**
MT13				IAML		14 47 40.7	
	comp=N,922nm,0.3s						
MT13	**San Alfonso**	**2.55**	**151**	*eP*	**Pn**	**14 46 59.2**	**+1.7**
MT13				*eS*	**Sn**	**14 47 26.6**	**-1.6**
MT13				IAML		14 47 42.8	
	comp=Z,388nm,0.6s						
ZON	**Zonda**	**2.64**	**91**		**Pb**	**14 47 02.6**	**-1.0**
ZON	**Zonda**	**2.64**	**91**	*eP*	**Pb**	**14 47 03.2**	**-0.5**
ZON				*eS*	**Sb**	**14 47 33.9**	**-2.0**
ZON				IAML		14 47 49.6	
	comp=Z,260nm,0.4s						
ACDV	**Cuesta del Vie**	**2.65**	**60**	*eP*	**Pn**	**14 46 59.5**	**+0.7**
ACDV				*eS*	**Sb**	**14 47 37.5**	**+1.4**
ACDV				IAML		14 47 42.8	
	comp=Z,348nm,0.6s						
LCO	**Las Campanas**	**2.67**	**21**		**Pn**	**14 46 59.5**	**+0.4**
LCO	**Las Campanas**	**2.67**	**21**	⇑*iP*	**Pn**	**14 46 59.6**	**+0.4**
LCO				*eS*	**Sn**	**14 47 34.0**	**+2.6**
LCO	**Las Campanas**	**2.67**	**21**	*eP*	**Pn**	**14 46 59.6**	**+0.4**
LCO				*eS*	**Sn**	**14 47 30.2**	**-1.1**
LCO				IAML		14 47 42.0	
	comp=Z,738nm,0.5s						
LMEL	**Las Melosas**	**2.67**	**151**	*eP*	**Pn**	**14 47 01.2**	**+2.1**
LMEL				IAML		14 47 43.5	
	comp=Z,495nm,0.5s						
SJA	**San Juan**	**2.74**	**91**	*eP*	**Pn**	**14 46 59.5**	**-0.5**
SJA				*eS*	**Sg**	**14 47 45.9**	**+1.2**
SJA				IAML		14 47 51.6	
	comp=Z,454nm,0.5s						
ARCO	**CERRO ARCO**	**2.75**	**119**	*eP*	**Pn**	**14 46 59.9**	**-0.2**
ARCO				IAML		14 47 51.6	
	comp=Z,378nm,0.4s						
RTLL	**Cerro Villicun**	**2.83**	**87**	*eP*	**Pb**	**14 47 05.2**	**-1.6**
RTLL				*eS*	**Sb**	**14 47 38.9**	**-2.2**
RTLL				IAML		14 47 53.1	
	comp=Z,489nm,0.4s						
BO01	**Tunca**	**2.92**	**169**		**Pn**	**14 47 03.1**	**+0.7**
BO01	**Tunca**	**2.92**	**169**	*eP*	**Pn**	**14 47 03.5**	**+1.0**
BO01				IAML		14 47 52.8	
	comp=Z,215nm,0.6s						
AAGR	**Agrelo**	**2.94**	**123**	*eP*	**Pn**	**14 47 02.5**	**-0.3**
AAGR				IAML		14 47 54.9	
	comp=Z,353nm,0.4s						
AC05	**El Transito**	**2.97**	**26**		**Pn**	**14 47 04.7**	**+1.4**
AC05	**El Transito**	**2.97**	**26**	*eP*	**Pn**	**14 47 04.9**	**+1.6**
AC05	**El Transito**	**2.97**	**26**	*eP*	**Pn**	**14 47 04.9**	**+1.6**
AC05				*eS*	**Sn**	**14 47 37.5**	**-1.2**
AC05				*eS*	**Sb**	**14 47 37.9**	**-7.6**
AC05				IAML		14 47 55.3	
	comp=Z,233nm,0.4s						
CFA	**Coronel Fontan**	**3.02**	**93**	*eP*	**Pb**	**14 47 07.1**	**-3.0**
CFA				*eS*	**Sb**	**14 47 44.1**	**-2.6**
AC04	**Llanos de Chal**	**3.36**	**11**	*eP*	**Pn**	**14 47 09.1**	**+0.6**
AC04				*eS*	**Sb**	**14 47 54.5**	**-1.9**
AC04				IAML		14 48 06.5	
	comp=Z,226nm,0.3s						
BO02	**Sierra Bellavi**	**3.37**	**166**		**Pn**	**14 47 10.0**	**+1.4**
BO02	**Sierra Bellavi**	**3.37**	**166**	*eP*	**Pn**	**14 47 10.1**	**+1.4**
BO02				IAML		14 48 10.7	
	comp=Z,278nm,0.4s						
AVIZ	**Vizcacheras**	**3.37**	**126**	*eP*	**Pn**	**14 47 09.3**	**+0.6**
AGUA	**GUANDACOL**	**3.48**	**55**	*eP*	**Pb**	**14 47 14.8**	**-3.1**
AGUA				*eS*	**Sb**	**14 47 59.4**	**-0.8**
AGUA				IAML		14 48 15.2	
	comp=Z,574nm,0.7s						
GO05	**Hualane**	**3.48**	**182**	*eP*	**Pn**	**14 47 10.1**	**-0.1**
AVFE	**Valle Fertil**	**3.80**	**78**	*eP*	**Pn**	**14 47 17.2**	**+2.6**
AVFE				*eS*	**Sb**	**14 48 03.5**	**-5.7**
AVFE				IAML		14 48 20.2	
	comp=Z,394nm,0.8s						
ACAN	**Cantantal**	**3.97**	**102**	*eP*	**Pn**	**14 47 18.7**	**+1.8**
ACAN				IAML		14 48 34.1	
	comp=Z,530nm,0.5s						
GO03	**Copiapo**	**4.14**	**19**	*eP*	**Pn**	**14 47 21.0**	**+1.8**
GO03				*eS*	**Sn**	**14 48 14.2**	**+6.9**
GO03				IAML		14 48 28.0	
	comp=Z,263nm,0.5s						
VCA	**Vinchina**	**4.15**	**49**	*eP*	**Pn**	**14 47 23.6**	**+4.1**
VCA	**Vinchina**	**4.15**	**49**	*eP*	**Pn**	**14 47 24.0**	**+4.4**
VCA				*eS*	**Sb**	**14 48 22.6**	**+3.1**
VCA				IAML		14 48 30.6	
	comp=Z,357nm,0.4s						
RFA	**San Rafael**	**4.27**	**140**	*eP*	**Pn**	**14 47 23.6**	**+2.6**
RFA				IAML		14 48 36.1	
	comp=Z,80nm,0.5s						
ACHE	**Chepes**	**4.38**	**87**	*eP*	**Pn**	**14 47 25.6**	**+2.9**
ACHE				*eS*	**Sb**	**14 48 20.8**	**-5.3**
APLL	**PUNTA DE LOS L**	**4.64**	**77**	*eP*	**Pn**	**14 47 29.0**	**+2.9**
APLL				*eS*	**Sn**	**14 48 24.1**	**+4.3**
APLL				IAML		14 48 33.6	
	comp=Z,123nm,0.4s						
ACLC	**CERRO LA CRUZ**	**4.66**	**65**	*eP*	**Pn**	**14 47 29.1**	**+2.7**
ACLC				*eS*	**Sn**	**14 48 20.7**	**+0.5**
ACLC				IAML		14 48 32.4	
	comp=Z,286nm,0.5s						
TINO	**Tinogasta**	**5.02**	**48**	*eP*	**Pn**	**14 47 33.0**	**+1.6**
TINO				*eS*	**Sb**	**14 48 47.2**	**+2.8**
BI02	**San Fabin de**	**5.15**	**176**		**Pn**	**14 47 33.9**	**+0.7**
BI02	**San Fabin de**	**5.15**	**176**	*eP*	**Pn**	**14 47 33.5**	**+0.4**
BI02				IAML		14 48 59.9	
	comp=Z,39nm,0.5s						
AC02	**Maricunga**	**5.21**	**27**		**Pn**	**14 47 35.0**	**+0.6**
AC02	**Maricunga**	**5.21**	**27**	*eP*	**Pn**	**14 47 33.3**	**-1.0**
AC02				*eS*	**Sn**	**14 48 39.0**	**+4.7**
AC01	**Pan de Azucar**	**5.45**	**11**	Pn	**Pn**	**14 47 35.5**	**-1.8**
CYA	**Choya**	**6.02**	**61**	*eP*	**Pn**	**14 47 46.8**	**+1.7**
CYA				*eS*	**Sn**	**14 48 53.5**	**-0.2**
H03N1	**Juan Fernandez**	**6.33**	**251**	Pn	**Pn**	**14 47 49.4**	**+0.4**
	baz=118,slow=20						
H03N1				T	T	14 54 29.7	
	baz=79,slow=72,SNR=1901						
H03N3	**Juan Fernandez**	**6.34**	**250**	Pn	**Pn**	**14 47 49.1**	**-0.1**
	baz=118,slow=20						
H03N3				T	T	14 54 33.6	
	baz=79,slow=72,SNR=2505						
H03N2	**Juan Fernandez**	**6.34**	**251**	Pn	**Pn**	**14 47 49.3**	**+0.1**
	baz=118,slow=20						
H03N2				T	T	14 54 30.1	
	baz=79,slow=72,SNR=2720						
H03S3	**Juan Fernandez**	**6.44**	**247**	Pn	**Pn**	**14 47 49.5**	**-1.1**
H03S1	**Juan Fernandez**	**6.45**	**247**	Pn	**Pn**	**14 47 48.8**	**-1.8**
H03S2	**Juan Fernandez**	**6.46**	**247**	Pn	**Pn**	**14 47 49.6**	**-1.2**
GO02	**Mina Guanaco**	**6.62**	**17**	Pn	**Pn**	**14 47 52.1**	**-1.5**
PLCA	**Paso Flores**	**9.25**	**174**	Pn	**Pn**	**14 48 30.4**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=340,slow=13,SNR=17						
	comp=Z,0.9nm,0.3s						
PLCA	**Paso Flores**	**9.25**	**174**		**Pn**	**14 48 29.5**	**+0.1**
TRQA	**Tornquist**	**10.36**	**132**	Pn	**Pn**	**14 48 45.8**	**+1.3**
CPUP	**Villa Florida**	**13.66**	**71**	Pn	**Pn**	**14 49 29.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=64,slow=17,SNR=1.7						
	comp=Z,0.2nm,0.3s						
LPAZ	**La Paz**	**15.52**	**13**	Pn	**Pn**	**14 49 54.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=184,slow=16,SNR=2.0						
	comp=Z,0.5nm,0.5s						
BDFB	**Brasilia**	**26.82**	**59**	P	**P**	**14 51 57.2**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=207,slow=4.5,SNR=3.1						
	comp=Z,1.2nm,0.4s						
SNAA	**Sanae**	**53.80**	**159**	P	**P**	**14 55 38.8**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=230,slow=7.9,SNR=4.1						
	comp=Z,0.8nm,0.6s						
SNAA	**Sanae**	**53.80**	**159**	P	**P**	**14 55 38.0**	**-0.1**
SNAA				IAmb	IAmb	14 55 39.4	
	comp=Z,3.3nm,1.2s						
TORD	**Torodi Ar. Bea**	**83.16**	**70**	P	**P**	**14 58 41.6**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=252,slow=5.1,SNR=12						
	comp=Z,2.0nm,0.8s						
H11S2	**WAKE ISLAND Hyl**	**26.00**	**271**	T	T	17 24 09.5	
	baz=116,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hyl**	**26.01**	**271**	T	T	17 24 02.6	
	baz=116,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hyl**	**26.01**	**271**	T	T	17 24 03.2	
	baz=116,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hyl**	**26.35**	**272**	T	T	17 24 26.3	
	baz=116,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hyl**	**26.36**	**272**	T	T	17 24 28.2	
	baz=116,slow=75,SNR=6.7						
H11N2	**WAKE ISLAND Hyl**	**26.36**	**272**	T	T	17 24 36.0	
	baz=116,slow=75,SNR=41						
BVAR	**Borovoye Array**	**145.29**	**41**	PKPbc	**PKPbc**	**15 05 53.0**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=314,slow=2.2,SNR=11						
KURBB	**Kurchatov Arra**	**150.88**	**40**	PKPbc	**PKPbc**	**15 06 07.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=298,slow=3.1,SNR=13						
ZALV	**Zalesovo Beam**	**151.99**	**30**	PKPbc	**PKPbc**	**15 06 10.0**	**-0.5**
	comp=Z,5.5nm,0.4s,baz=308,slow=3.0,SNR=28						
ZALV				PKPab	**sPKPbc**	**15 06 18.7**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=294,slow=1.5,SNR=5.0						

*IDC **30** 14:50:04.9±1.1,34.˚53S×71.˚45W,h0km,mb4.0/6, mbtmp3.9/8,ML4.2/2,MS2.8/3,Error ellipse: s-maj=40.4km s-min=21.2km az=85.0*
*SJA **30** 14:50:07.8±0.7,34.˚78S×71.˚94W,h25km±2km,ML4.3, MW4.1*
*GUC **30** 14:50:10.6±0.8,34.˚79S×71.˚87W,h40km±1km,ML4.4*
*NEIC **30** 14:50:10.9±1.5,34.˚78S±0.˚04×71.˚9W±0.˚1,h47km±7km, mb4.6/10,ML4.4(GUC),Error ellipse: s-maj=12.8km s-min=6.0km az=87.0*

ISC 30 14:50:09.4±0.8,34.˚81S±0.˚03×71.˚94W±0.˚05,h42km±6km, n111,σ1°84/139,mb4.2/9,5C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO05	**Hualane**	**0.20**	**177**	*eP*			**Pn**	**14 50 17.9**	**+0.9**
GO05				*i* S			**Sn**	**14 50 23.2**	**+1.0**
GO05	**Hualane**	**0.20**	**177**	*eP*			**Pn**	**14 50 18.1**	**+1.1**
BO03	**Pichilemu**	**0.31**	**357**	⇑*iP*			**Pn**	**14 50 19.0**	**+1.1**
BO03				*i* S			**Sn**	**14 50 24.9**	**+1.0**
BO03				IAML				14 50 25.4	
	comp=E,23μm,0.2s								
BO01	**Tunca**	**0.82**	**60**				**Pn**	**14 50 24.4**	**0.0**
BO01				Sn			**Sn**	**14 50 34.9**	**-0.6**
BO01	**Tunca**	**0.82**	**60**	⇓*iP*			**Pn**	**14 50 24.6**	**0.0**
BO01				*i* S			**Sn**	**14 50 34.6**	**-0.9**
BO01	**Tunca**	**0.82**	**60**	*eP*			**Pn**	**14 50 24.5**	**0.0**
BO01				IAML				14 50 34.9	
	comp=E,13μm,0.2s								
BO01				*eS*			**Sn**	**14 50 35.0**	**-0.5**
BO02	**Sierra Bellavi**	**0.95**	**89**				**Pn**	**14 50 26.4**	**0.0**
BO02	**Sierra Bellavi**	**0.95**	**89**	⇓*iP*			**Pn**	**14 50 26.5**	**0.0**
BO02				*i* S			**Sn**	**14 50 38.4**	**-0.5**
BO02				IAML				14 50 38.8	
	comp=E,24μm,0.1s								
BO02	**Sierra Bellavi**	**0.95**	**89**	*eP*			**Pn**	**14 50 26.4**	**0.0**
BO02				*eS*			**Sn**	**14 50 39.2**	**+0.3**
BO02				IAML				14 50 40.7	
	comp=Z,22μm,0.1s								
ML02	**Panimavida**	**1.04**	**156**				**Pn**	**14 50 28.6**	**+1.0**
ML02	**Panimavida**	**1.04**	**156**	*eP*			**Pn**	**14 50 28.6**	**+1.0**
ML02				*i* S			**Sn**	**14 50 42.5**	**+1.5**
ML02				IAML				14 50 44.0	
	comp=E,16μm,0.5s								
ML02	**Panimavida**	**1.04**	**156**	*eP*			**Pn**	**14 50 28.7**	**+1.1**
ML02				*eS*			**Sn**	**14 50 39.8**	**-1.2**
ML02				IAML				14 50 50.2	
	comp=Z,4μm,0.3s								
MT01	**Popeta**	**1.10**	**31**				**Pn**	**14 50 28.8**	**+0.5**
MT01	**Popeta**	**1.10**	**31**	*eP*			**Pn**	**14 50 28.9**	**+0.5**
MT01				*i* S			**Sn**	**14 50 42.8**	**+0.4**
MT01				*i* S				14 50 43.4	
MT01				IAML				14 50 44.4	
	comp=E,7μm,0.3s								
MT01	**Popeta**	**1.10**	**31**	*eP*			**Pn**	**14 50 28.9**	**+0.5**
MT01				*eS*			**Sn**	**14 50 43.8**	**+1.4**
MT01				IAML				14 50 46.5	
	comp=Z,4μm,0.2s								
VA05	**Santo Domingo**	**1.18**	**13**				**Pn**	**14 50 30.0**	**+0.6**
VA05	**Santo Domingo**	**1.18**	**13**	*eP*			**Pn**	**14 50 30.0**	**+0.6**
VA05				*i* S			**Sn**	**14 50 45.0**	**+0.8**
VA05				IAML				14 50 48.3	
	comp=E,6μm,0.3s								
MT09	**Talagante**	**1.30**	**38**				**Pn**	**14 50 32.3**	**+1.1**
MT09	**Talagante**	**1.30**	**38**	*eP*			**Pn**	**14 50 32.2**	**+1.1**
MT09				*eS*			**Sn**	**14 50 48.7**	**+1.3**
MT09				IAML				14 50 51.4	
	comp=N,14μm,0.2s								
BO04	**La Punta**	**1.37**	**54**				**Pn**	**14 50 32.7**	**+0.7**
BO04	**La Punta**	**1.37**	**54**	⇓*iP*			**Pn**	**14 50 32.8**	**+0.7**
BO04				*eS*			**Sn**	**14 50 50.0**	**+1.0**
BO04				IAML				14 50 51.7	
	comp=E,19μm,0.4s								
MT12	**Pirque**	**1.57**	**47**	*eP*			**Pn**	**14 50 35.9**	**+1.0**
MT12				*eS*			**Sn**	**14 50 56.0**	**+1.9**
MT12				IAML				14 50 57.7	
	comp=E,16μm,0.2s								
MT02	**Curacav**	**1.68**	**24**				**Pn**	**14 50 37.3**	**+0.9**
MT02	**Curacav**	**1.68**	**24**	*eP*			**Pn**	**14 50 37.2**	**+0.9**
MT02				*eS*			**Sn**	**14 50 57.8**	**+1.1**
MT02	**Curacav**	**1.68**	**24**	*eP*			**Pn**	**14 50 37.3**	**+0.9**
MT02				*eS*			**Sn**	**14 50 58.4**	**+1.8**
MT02				IAML				14 51 02.1	
	comp=Z,2μm,0.3s								
MT15	**Las Vizcachas**	**1.69**	**45**	*eP*			**Pn**	**14 50 37.7**	**+1.2**
MT15				*eS*			**Sn**	**14 50 58.0**	**+1.0**
MT15				IAML				14 51 01.5	
	comp=N,22μm,0.3s								
LMEL	**Las Melosas**	**1.73**	**57**				**Pn**	**14 50 38.0**	**+1.0**
LMEL	**Las Melosas**	**1.73**	**57**	*eP*			**Pn**	**14 50 38.0**	**+1.0**
LMEL				*eS*			**Sn**	**14 50 59.3**	**+1.3**
LMEL				IAML				14 51 03.6	
	comp=N,7μm,0.2s								
LMEL	**Las Melosas**	**1.73**	**57**	*eP*			**Pn**	**14 50 38.1**	**+1.0**
LMEL				*eP*				14 50 38.3	
LMEL				*eS*			**Sn**	**14 51 00.9**	**+2.9**
LMEL				IAML				14 51 02.4	
	comp=Z,3μm,0.1s								
MT05	**Renca**	**1.73**	**36**				**Pn**	**14 50 38.4**	**+1.3**
MT05	**Renca**	**1.73**	**36**	*eP*			**Pn**	**14 50 38.3**	**+1.3**
MT05				*eS*			**Sn**	**14 50 58.6**	**+0.7**
MT05				IAML				14 51 03.4	
	comp=N,7μm,0.3s								
MT05	**Renca**	**1.73**	**36**	*eP*			**Pn**	**14 50 38.4**	**+1.3**
MT05				*eS*			**Sn**	**14 51 02.3**	**+4.4**
MT05				IAML				14 51 03.5	
	comp=Z,3μm,0.2s								
MT13	**San Alfonso**	**1.73**	**53**				**Pn**	**14 50 38.2**	**+1.2**
MT13	**San Alfonso**	**1.73**	**53**	*eP*			**Pn**	**14 50 38.1**	**+1.0**
MT13				*eS*			**Sn**	**14 50 59.2**	**+1.2**
MT13				IAML				14 51 02.1	
	comp=E,8μm,0.3s								
MT13	**San Alfonso**	**1.73**	**53**	*eP*			**Pn**	**14 50 38.4**	**+1.2**
MT13				*eS*			**Sn**	**14 51 01.1**	**+3.0**
MT13				IAML				14 51 01.8	
	comp=Z,2μm,0.3s								
MT03	**Universidad Ad**	**1.77**	**43**				**Pn**	**14 50 38.7**	**+1.1**
MT03	**Universidad Ad**	**1.77**	**43**	*eP*			**Pn**	**14 50 38.6**	**+1.0**
MT03				*eS*			**Sn**	**14 50 59.8**	**+0.9**
MT03				IAML				14 51 04.7	
	comp=N,9μm,0.4s								
MT03	**Universidad Ad**	**1.77**	**43**	*eP*			**Pn**	**14 50 39.0**	**+1.4**
MT03				*eS*			**Sn**	**14 51 02.0**	**+3.1**
MT03				IAML				14 51 03.2	
	comp=Z,5μm,0.3s								
VA01	**Torpederas**	**1.80**	**8**				**Pn**	**14 50 38.8**	**+0.9**
VA01	**Torpederas**	**1.80**	**8**	*eP*			**Pn**	**14 50 38.9**	**+1.1**
VA01	**Torpederas**	**1.80**	**8**	*eP*			**Pn**	**14 50 38.1**	**+0.2**
MT16	**CCHEN**	**1.81**	**41**				**Pn**	**14 50 39.6**	**+1.5**
MT16	**CCHEN**	**1.81**	**41**	*eP*			**Pn**	**14 50 39.2**	**+1.0**
MT16				*eS*			**Sn**	**14 51 01.2**	**+1.3**
MT16				IAML				14 51 05.4	
	comp=N,2μm,0.6s								
MT14	**Cerro Cal¡n**	**1.83**	**40**	*eP*			**Pn**	**14 50 39.6**	**+1.2**
MT14				*eS*			**Sn**	**14 51 03.0**	**+2.6**
MT14				IAML				14 51 07.6	
	comp=N,7μm,0.3s								
MT10	**Hacienda Santa**	**1.92**	**38**	⇑*iP*			**Pn**	**14 50 41.1**	**+1.3**
MT10				*eS*			**Sn**	**14 51 04.6**	**+1.8**
MT10				IAML				14 51 08.9	
	comp=N,9μm,0.6s								
BI02	**San Fabin de**	**1.93**	**164**				**Pn**	**14 50 41.5**	**+1.7**
BI02	**San Fabin de**	**1.93**	**164**	*eP*			**Pn**	**14 50 41.4**	**+1.6**
BI02	**San Fabin de**	**1.93**	**164**	*eP*			**Pn**	**14 50 41.1**	**+1.3**
PEL	**Peldehue**	**1.96**	**33**				**Pn**	**14 50 41.5**	**+1.2**
PEL	**Peldehue**	**1.96**	**33**	*eP*			**Pn**	**14 50 41.4**	**+1.2**
PEL	**Peldehue**	**1.96**	**33**	*eP*			**Pn**	**14 50 41.6**	**+1.5**
PEL				*eS*			**Sn**	**14 51 08.6**	**+5.0**
PEL				IAML				14 51 11.4	
	comp=Z,2μm,0.3s								

ROC1	**El Roble**	**1.98**	**23**	*eP*	**Pn**	**14 50 42.1**	**+1.4**
ROC1				*eS*	**Sn**	**14 51 09.8**	**+5.4**
ROCH	**El Roble**	**1.99**	**23**	⇑*iP*		14 50 41.9	
ROCH				⇑*eP*	**Pn**	**14 50 41.9**	**+1.1**
MT04	**Ro Olivares**	**2.05**	**47**	⇑*iP*	**Pn**	**14 50 43.0**	**+1.5**
MT04	**Ro Olivares**	**2.05**	**47**	*eP*	**Pn**	**14 50 43.1**	**+1.5**
MT04				*eS*	**Sn**	**14 51 09.3**	**+3.3**
MT04				IAML		14 51 12.8	
	comp=Z,2μm,0.4s						
MT08	**Bocatoma Ro**	**2.10**	**50**	*eP*	**Pn**	**14 50 43.9**	**+1.7**
MT08	**Bocatoma Ro**	**2.10**	**50**	*eP*	**Pn**	**14 50 44.1**	**+1.9**
MT08				*eS*	**Sn**	**14 51 11.4**	**+4.2**
MT08				IAML		14 51 16.8	
	comp=Z,2μm,0.6s						
EDS3	**Malargue**	**2.29**	**116**	*eP*	**Pn**	**14 50 46.3**	**+1.5**
VA06	**Catapilco**	**2.30**	**14**		**Pn**	**14 50 45.8**	**+0.9**
VA06	**Catapilco**	**2.30**	**14**	*eP*	**Pn**	**14 50 45.7**	**+0.9**
VA03	**San Esteban**	**2.34**	**30**	Pn	**Pn**	**14 50 46.8**	**+1.3**
VA03	**San Esteban**	**2.34**	**30**	*eP*	**Pn**	**14 50 46.8**	**+1.3**
VA03	**San Esteban**	**2.34**	**30**	*eP*	**Pn**	**14 50 46.7**	**+1.3**
VA03				*eS*	**Sn**	**14 51 12.7**	**-0.5**
VA03				IAML		14 51 22.6	
	comp=Z,1μm,0.2s						
RFA	**San Rafael**	**2.86**	**90**	*eP*	**Pn**	**14 50 55.1**	**+2.5**
RFA				*eS*	Sn	14 51 10.7	-15
CO04	**Los Peladeros**	**2.87**	**17**	*eP*	**Pn**	**14 50 53.3**	**+0.3**
AAGR	**Agrelo**	**3.10**	**57**	*eP*	**Pn**	**14 50 59.2**	**+3.2**
AVIZ	**Vizcacheras**	**3.14**	**66**	*eP*	**Pn**	**14 51 00.6**	**+4.2**
CANA	**Caviahue**	**3.15**	**167**	*eP*	**Pn**	**14 50 58.4**	**+1.7**
CANA				*eS*	Sn	14 51 51.4	+18
ARCO	**CERRO ARCO**	**3.18**	**53**	*eP*	**Pn**	**14 51 01.1**	**+4.0**
CO02	**Combarbal**	**3.68**	**13**	Pn	**Pn**	**14 51 05.0**	**+1.1**
CO02	**Combarbal**	**3.68**	**13**	*eP*	**Pn**	**14 51 04.6**	**+0.7**
CO02	**Combarbal**	**3.68**	**13**	*eP*	**Pn**	**14 51 04.8**	**+1.0**
CO02				*eS*	**Sn**	**14 51 51.0**	**+4.9**
CO02				IAML		14 52 07.1	
	comp=Z,667nm,0.5s						
RTLS	**Leoncito**	**3.73**	**37**	*eS*	Sn	14 51 58.0	+10
RTLS				IAML		14 52 09.1	
	comp=Z,774nm,1.3s						
BI04	**Isla Mocha**	**3.92**	**203**	*eP*	**Pn**	**14 51 07.5**	**+0.5**
CO03	**El Pedregal**	**4.09**	**15**		**Pn**	**14 51 10.6**	**+1.0**
CO03	**El Pedregal**	**4.09**	**15**	⇓*eP*	**Pn**	**14 51 10.6**	**+1.0**
CO06	**Fray Jorge**	**4.13**	**4**		**Pn**	**14 51 09.8**	**-0.1**
ZON	**Zonda**	**4.25**	**41**		**Pn**	**14 51 13.7**	**+2.0**
CFA	**Coronel Fontan**	**4.45**	**45**	*eS*	Sn	14 52 17.3	+12
RTLL	**Cerro Villicun**	**4.53**	**41**	*eP*	**Pn**	**14 51 17.4**	**+1.9**
ACAN	**Cantantal**	**4.70**	**59**	IAML		14 52 44.5	
	comp=Z,359nm,0.7s						
GO04	**Tololo Observa**	**4.72**	**12**	IAML		14 52 44.0	
	comp=Z,520nm,0.5s						
CO01	**Juntas del Tor**	**5.06**	**18**		**Pn**	**14 51 23.9**	**+0.8**
LCO	**Las Campanas**	**5.87**	**11**		**Pn**	**14 51 34.2**	**+0.1**
PLCA	**Paso Flores**	**6.02**	**170**	Pn	**Pn**	**14 51 39.2**	**+3.3**
	comp=Z,1.7nm,0.3s,baz=346,slow=12,SNR=21						
PLCA				Lg	Lg	14 53 14.2	
	comp=Z,0.5nm,0.3s,baz=258,slow=19,SNR=3.2						
PLCA				LR	LR	14 54 05.5	
	comp=Z,88nm,19.0s,baz=350,slow=39						
	comp=Z,6.6nm,0.4s						
PLCA	**Paso Flores**	**6.02**	**170**		**Pn**	**14 51 39.0**	**+3.1**
AC05	**El Transito**	**6.12**	**14**		**Pn**	**14 51 37.5**	**+0.1**
TCA	**Tanti**	**7.07**	**63**	*eP*	**Pn**	**14 51 50.9**	**+0.5**
GO03	**Copiapo**	**7.34**	**12**	Pn	**Pn**	**14 51 52.1**	**-2.0**
AC01	**Pan de Azucar**	**8.71**	**8**	Pn	**Pn**	**14 52 10.0**	**-2.8**
CPUP	**Villa Florida**	**15.15**	**60**	LR	LR	15 00 01.8	
	comp=Z,32nm,19.1s,baz=85,slow=41						
ITAB	**Concordia**	**18.56**	**71**	P	**P**	**14 54 21.2**	**-1.6**
LPAZ	**La Paz**	**18.76**	**11**

	0.2nm,0.1s						
KPKS				Lg	Lg	14 54 36.0	
	25nm,0.3s						
KOTS	**Kotyrbulak**	**2.02**	**332**	Pg	**Pb**	**14 54 07.2**	**-0.4**
	4.5nm,0.3s						
KOTS				Lg	Lg	14 54 37.5	
	18nm,0.3s						
KOTS	**Kotyrbulak**	**2.02**	**332**	*eP*	**Pb**	**14 54 07.2**	**-0.4**
	4.5nm,0.3s						
KOTS				*eS*	**Sg**	**14 54 37.5**	**+2.0**
	18nm,0.3s						
PDGK	**Podgornoye**	**2.02**	**23**	⇓P	**Pn**	**14 54 05.5**	**+0.3**
	1.2nm,0.4s						
PDGK				⇓S	**Sg**	**14 54 33.9**	**-1.8**
	11nm,0.5s						
KURS	**Kuram**	**2.03**	**355**	Pg	**Pb**	**14 54 06.8**	**-1.0**
	8.5nm,0.4s						
KURS				Lg	Lg	14 54 37.4	
	5.4nm,0.3s						
BOOM	**Boomskoye usch**	**2.12**	**300**	⇓*i*P	**Pn**	**14 54 07.0**	**+0.5**
BOOM				⇓*i*S	**Sb**	**14 54 36.4**	**+0.6**
JNKS	**Jany-Kuch**	**2.13**	**260**	⇑*e*P	**Pn**	**14 54 06.0**	**-0.7**
JNKS				⇑*e*S	**Sn**	**14 54 34.2**	**+0.8**
MTBS	**Maitube**	**2.23**	**319**	Pg	**Pb**	**14 54 10.9**	**-0.3**
	1.7nm,0.2s						
MTBS				Lg	Lg	14 54 43.4	
	8.5nm,0.2s						
MTBS	**Maitube**	**2.23**	**319**	*eP*	**Pb**	**14 54 10.9**	**-0.3**
	1.7nm,0.2s						
MTBS				*eS*	**Sg**	**14 54 43.4**	**+1.3**
	8.5nm,0.2s						
KST	**Kastek**	**2.41**	**312**	Pg	**Pb**	**14 54 14.0**	**-0.4**
	1.0nm,0.2s						
KST				Lg	Lg	14 54 49.0	
	8.7nm,0.4s						
KST	**Kastek**	**2.41**	**312**	*eP*	**Pb**	**14 54 14.0**	**-0.4**
	1.0nm,0.2s						
KST				*eS*	**Sg**	**14 54 49.0**	**+0.8**
	8.7nm,0.4s						
KTMS	**Ketmen**	**2.44**	**35**	Pg	**Pn**	**14 54 11.9**	**+1.0**
	0.6nm,0.1s						
KTMS				Lg	Lg	14 54 45.2	
	9.0nm,0.2s						
KTMS	**Ketmen**	**2.44**	**35**	*eP*	**Pn**	**14 54 11.9**	**+1.0**
	0.6nm,0.1s						
KTMS				*eS*	**Sb**	**14 54 45.2**	**+0.1**
	9.0nm,0.2s						
TKM2	**Tokmak 2**	**2.55**	**306**	⇑*i*P	**Pn**	**14 54 13.4**	**+0.9**
TKM2				⇑*i*S	**Sb**	**14 54 47.0**	**-1.5**
DGS	**Degeres**	**2.65**	**313**	Pg	**Pb**	**14 54 17.8**	**-0.6**
	2.1nm,0.4s						
DGS				Lg	Lg	14 54 55.8	
	8.4nm,0.4s						
ARXS	**Arharly**	**2.78**	**351**	Pg	**Pb**	**14 54 20.2**	**-0.4**
	1.4nm,0.2s						
ARXS				Lg	Lg	14 54 59.9	
	3.1nm,0.1s						
ARXS	**Arharly**	**2.78**	**351**	*eP*	**Pb**	**14 54 20.2**	**-0.4**
ARXS				*eS*	**Sg**	**14 54 59.9**	**-0.1**
KNOS	**Konyrlen**	**2.94**	**11**	Pg	**Pb**	**14 54 22.5**	**-1.0**
	0.7nm,0.1s						
KNOS				Lg	Lg	14 55 03.9	
	4.1nm,0.2s						
KRBS	**Karabastau**	**3.01**	**319**	Pg	**Pb**	**14 54 24.6**	**0.0**
	1.0nm,0.3s						
KRBS				Lg	Lg	14 55 07.2	
	3.3nm,0.3s						
AAK	**Ala-Archa**	**3.15**	**293**	⇑Pg	**Pg**	**14 54 30.9**	**-0.1**
	0.1nm,0.4s						
AAK				⇑Lg	Lg	14 55 11.2	
	1.2nm,0.7s						

*IDC **30** 14:53:58.0±3.8, 5°.62S×67°.38E, h0km, mb3.6/7, mbtmp3.6/7, MS3.2/4, Error ellipse: s-maj=108.5km s-min=29.0km az=65.0*

ISC 30 14:54:00.4±3.6, 5°.6S±0°.3×67°.5E±0°.6, h10km, n10, σ1s08/7, mb3.7/7, MS3.1/4, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**32.44**	**76**	LR	LR	15 11 25.4	
	comp=Z,44nm,18.5s,baz=272,slow=32						
BRDH	**Bariadhala**	**36.66**	**39**	LR	LR	15 15 38.0	
	comp=Z,26nm,18.6s,baz=188,slow=35						
CMAR	**Chiang Mai Arr**	**39.10**	**52**	P	**P**	**15 01 28.0**	**-0.3**
	0.2nm,0.3s,baz=220,slow=7.6,SNR=1.5						
CMAR				LR	LR	15 15 23.8	
	comp=Z,15nm,20.3s,baz=235,slow=33						
	0.2nm,0.3s						
LBTB	**Lobatse**	**44.58**	**240**	LR	LR	15 19 00.9	
	comp=Z,44nm,18.6s,baz=114,slow=34						
MKAR	**Makanchi Array**	**53.74**	**13**	P	**P**	**15 03 21.6**	**-1.2**
	0.3nm,0.7s,baz=198,slow=7.6,SNR=1.6						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**56.75**	**8**	P	**P**	**15 03 44.3**	**-0.1**
	0.3nm,0.7s,baz=205,slow=7.1,SNR=2.4						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**61.04**	**12**	P	**P**	**15 04 13.4**	**-0.8**
	0.4nm,0.5s,baz=183,slow=5.8,SNR=4.6						
	0.4nm,0.5s						
SONM	**Songino Array**	**63.19**	**28**	P	**P**	**15 04 30.5**	**+1.5**
	1.4nm,1.1s,baz=216,slow=7.1,SNR=5.2						
	1.4nm,1.1s						
ASAR	**Alice Springs**	**66.17**	**113**	P	**P**	**15 04 48.9**	**0.0**
	0.4nm,0.7s,baz=284,slow=5.7,SNR=4.7						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**66.34**	**109**	P	**P**	**15 04 49.7**	**-0.2**
	1.1nm,0.7s,baz=290,slow=6.3,SNR=6.2						
	1.1nm,0.7s						

*IDC **30** 14:56:10.7±1.2, 43°.43S×171°.53E, h0km, mb4.6/4, mbtmp4.4/5, ML3.4/1, MS3.1/5, Error ellipse: s-maj=35.1km s-min=8.1km az=133.0*

*NOU **30** 14:56:10.0, 43°.68S×171°.75E, h0km, MLv4.5/22, South Island, New Zealand*

*WEL **30** 14:56:12.0±0.4, 44°.5±2°.×17°.2E±°, h6km±2km, M4.3/13, ML4.2/13, MLv4.3/13, Error ellipse: s-maj=2.6km s-min=1.9km az=131.8, confirmed*

*WEL **30** 14:56:12.0, 43°.615×171°.55E, h5km, ML4.4, Mw4.1, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15} Nm; M_T1.15; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-0.41; $M_{r\theta}$0.59; $M_{\theta\phi}$-1.16; M_{rr}0.03; Fault plane solution: $M_0$1.61000×10^{15} NP1: ϕ_s70.00000°, δ58.00000°, λ119.00000°. NP2: ϕ_s204.00000°, δ42.00000°, λ52.00000°. Principal axes: T -1.8219, Plg64.0000°, Azm31.0000°; N 0.4335, Plg24.0000°, Azm233.0000°; P 1.3884, Plg9.0000°, Azm140.0000°; Stations used: MQZ WVZ INZ ODZ WKZ OPZ QRZ REVERSE FAULTING*

ISC 30 14:56:11.9±0.8, 43°.62S±0°.02×171°.58E±0°.02, h12km±5km, n145, σ1s15/165, mb4.2/4, MS3.1/4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHCZ	**Mount Hutt**	**0.08**	**354**	P	**Pg**	**14 56 14.3**	**-0.3**
MHCZ				S	**Sg**	**14 56 15.9**	**-0.8**
MSMC	**Mount Somers S**	**0.16**	**235**	P	**Pg**	**14 56 15.7**	**+0.1**
MSMC				S	**Sg**	**14 56 18.0**	**-0.2**
WSFC	**Westerfield**	**0.22**	**174**	P	**Pg**	**14 56 17.2**	**+0.6**
WSFC				S	**Sg**	**14 56 21.2**	**+1.2**
WCSS	**Whitecliffs**	**0.26**	**53**	P	**Pb**	**14 56 17.9**	**-0.6**
WCSS				S	**Sb**	**14 56 22.5**	**-0.4**
ADCS	**Ashburton**	**0.31**	**157**	P	**Pb**	**14 56 19.0**	**-0.4**
ADCS				S	**Sb**	**14 56 24.4**	**0.0**
RKAC	**Rakaia School**	**0.35**	**113**	P	**Pb**	**14 56 19.8**	**-0.2**
RKAC				S	**Sb**	**14 56 25.8**	**+0.3**
KOWC	**Kowai**	**0.36**	**34**	P	**Pb**	**14 56 19.6**	**-0.5**
KOWC				S	**Sb**	**14 56 25.1**	**-0.6**
GDAL	**Greendale**	**0.37**	**86**	P	**Pb**	**14 56 20.3**	**-0.1**
WACZ	**Wakanui South**	**0.38**	**150**	P	**Pb**	**14 56 20.2**	**-0.3**
WACZ				S	**Sb**	**14 56 26.2**	**-0.1**
RPZ	**Rata Peaks**	**0.39**	**255**	Pg	**Pb**	**14 56 19.7**	**-1.1**
	2μm,0.3s,baz=112,slow=0.9,SNR=1299						
RPZ				Lg	Lg	14 56 25.1	
	2μm,0.3s,baz=81,slow=2.8,SNR=25						
RPZ	**Rata Peaks**	**0.39**	**255**	P	**Pb**	**14 56 20.0**	**-0.8**
RPZ	**Rata Peaks**	**0.39**	**255**	P	**Pb**	**14 56 19.8**	**-1.0**
RPZ				S	**Sb**	**14 56 25.4**	**-1.4**
SHFC	**Sheffield Scho**	**0.39**	**56**	P	**Pb**	**14 56 20.3**	**-0.5**
SHFC				S	**Sb**	**14 56 26.6**	**-0.2**
PEEC	**Peel Forest**	**0.40**	**219**	P	**Pb**	**14 56 20.3**	**-0.5**
PEEC				S	**Sb**	**14 56 26.3**	**-0.6**
DFHS	**Darfield**	**0.40**	**72**	P	**Pb**	**14 56 20.8**	**-0.1**
DFHS				S	**Sb**	**14 56 26.9**	**-0.1**
RACZ	**Rakaia**	**0.42**	**106**	P	**Pb**	**14 56 21.1**	**-0.2**
RACZ				S	**Sb**	**14 56 27.4**	**-0.2**
ARCZ	**Arundel**	**0.44**	**221**	P	**Pb**	**14 56 21.0**	**-0.6**
OXZ	**Oxford**	**0.44**	**49**	P	**Pb**	**14 56 21.1**	**-0.5**
OXZ				S	**Sb**	**14 56 27.9**	**-0.3**
DORC	**Dorie**	**0.47**	**127**	P	**Pb**	**14 56 22.0**	**0.0**
ROLC	**Rolleston Scho**	**0.58**	**88**	P	**Pb**	**14 56 24.4**	**+0.5**
LINC	**Lincoln Crop a**	**0.65**	**91**	P	**Pb**	**14 56 25.4**	**+0.4**
MQZ	**McQueen's Vall**	**0.79**	**97**	P	**Pb**	**14 56 27.5**	**+0.1**
MQZ				S	**Sb**	**14 56 38.5**	**+0.5**
WVZ	**Waitaha Valley**	**0.82**	**311**	P	**Pb**	**14 56 27.7**	**-0.3**
TMZ	**Timaru**	**0.87**	**208**	P	**Pb**	**14 56 28.9**	**-0.1**
TMZ				S	**Sb**	**14 56 41.8**	**+1.2**
AMCZ	**Amberley**	**0.90**	**61**	P	**Pb**	**14 56 29.9**	**+0.6**
AMCZ				S	**Sb**	**14 56 43.0**	**+1.8**
INZ	**Inchbonnie**	**0.90**	**354**	P	**Pb**	**14 56 29.3**	**0.0**
INZ				S	**Sb**	**14 56 41.1**	**-0.1**
LTZ	**Lake Taylor**	**0.97**	**31**	P	**Pb**	**14 56 30.9**	**+0.1**
LTZ				S	**Sn**	**14 56 45.2**	**+0.1**
OKCZ	**Okains Bay**	**1.08**	**96**	P	**Pb**	**14 56 32.3**	**-0.1**
OKCZ				S	**Sb**	**14 56 47.0**	**+0.5**
GVZ	**Greta Valley S**	**1.24**	**59**	P	**Pg**	**14 56 34.4**	**-1.4**
GVZ				S	**Sb**	**14 56 52.5**	**+1.2**
LBZ	**Lake Benmore**	**1.27**	**232**	P	**Pg**	**14 56 35.0**	**-1.3**
FOZ	**Fox Glacier**	**1.28**	**273**	P	**Pn**	**14 56 36.4**	**+0.8**
ODZ	**Otahua Downs**	**1.58**	**205**	P	**Pn**	**14 56 39.1**	**-0.6**
ODZ	**Otahua Downs**	**1.58**	**205**	S	**Sn**	**14 57 00.2**	**+0.2**
ODZ	**Otahua Downs**	**1.58**	**205**	P	**Pn**	**14 56 39.0**	**-0.7**
KHZ	**Kahutara**	**1.87**	**51**	P	**Pn**	**14 56 43.2**	**-0.5**
KHZ	**Kahutara**	**1.87**	**51**	S	**Sn**	**14 57 07.0**	**-0.2**
KHZ	**Kahutara**	**1.87**	**51**	P	**Pn**	**14 56 43.1**	**-0.5**
DSZ	**Dennistoun Nort**	**1.88**	**5**	P	**Pn**	**14 56 43.6**	**-0.2**
JCZ	**Jackson Bay**	**2.07**	**256**	P	**Pn**	**14 56 46.5**	**0.0**
JCZ	**Jackson Bay**	**2.07**	**256**	P	**Pn**	**14 56 46.5**	**0.0**
THZ	**Tophouse**	**2.09**	**28**	P	**Pn**	**14 56 46.6**	**-0.2**
WKZ	**Wanaka**	**2.21**	**236**	P	**Pn**	**14 56 47.2**	**-1.1**
EAZ	**Earnscleugh**	**2.29**	**224**	P	**Pn**	**14 56 48.6**	**-0.9**
HHSZ	**Highcliff Hill**	**2.37**	**197**	P	**Pn**	**14 56 49.3**	**-1.3**
MRNZ	**Matariki Terra**	**2.38**	**22**	P	**Pn**	**14 56 51.1**	**+0.4**
BSWZ	**Blackbirch Sta**	**2.54**	**43**	P	**Pn**	**14 56 52.9**	**0.0**
TUZ	**Tuapeka**	**2.72**	**210**	P	**Pn**	**14 56 54.8**	**-0.5**
NNZ	**Nelson**	**2.74**	**30**	P	**Pn**	**14 56 56.0**	**+0.4**
TKNZ	**Takaka Hill**	**2.78**	**22**	P	**Pn**	**14 56 56.1**	**0.0**
TUWZ	**Tuamarina**	**2.80**	**39**	P	**Pn**	**14 56 57.2**	**+0.8**
MSZ	**Milford Sound**	**2.83**	**247**	P	**Pn**	**14 56 56.2**	**-0.7**
QRZ	**Quartz Range**	**2.88**	**15**	P	**Pn**	**14 56 57.2**	**-0.3**
QRZ	**Quartz Range**	**2.88**	**15**	S	**Sn**	**14 57 33.8**	**+1.8**
QRZ	**Quartz Range**	**2.88**	**15**	P	**Pn**	**14 56 57.3**	**-0.2**
MLZ	**Mavora Lakes**	**3.03**	**235**	P	**Pn**	**14 56 58.3**	**-1.4**
TCW	**Tory Channel**	**3.12**	**41**	P	**Pn**	**14 57 00.1**	**-0.8**
SNZO	**South Karori**	**3.26**	**46**	P	**Pn**	**14 57 01.7**	**-1.1**
SNZO	**South Karori**	**3.26**	**46**	S	**Sn**	**14 57 40.0**	**-1.5**
BHW	**Baring Head**	**3.28**	**49**	P	**Pn**	**14 57 02.0**	**-1.1**
DUWZ	**D'Urville Isla**	**3.31**	**33**	P	**Pn**	**14 57 04.1**	**+0.7**
WEL	**Wellington**	**3.32**	**46**	P	**Pn**	**14 57 03.2**	**-0.4**
SYZ	**Scrubby Hill**	**3.40**	**210**	P	**Pn**	**14 57 04.1**	**-0.5**
SYZ	**Scrubby Hill**	**3.40**	**210**	S	**Sn**	**14 57 44.2**	**-0.5**
SYZ	**Scrubby Hill**	**3.40**	**210**	P	**Pn**	**14 57 04.1**	**-0.5**
PLWZ	**Palliser**	**3.40**	**54**	P	**Pn**	**14 57 03.3**	**-1.4**
WHZ	**Wether Hill Ro**	**3.45**	**227**	P	**Pn**	**14 57 04.2**	**-1.2**
MSWZ	**Moikau Station**	**3.49**	**52**	P	**Pn**	**14 57 04.3**	**-1.7**
PAWZ	**Paruwai Farm**	**3.62**	**53**	P	**Pn**	**14 57 05.9**	**-1.8**
DCZ	**Deep Cove**	**3.67**	**238**	P	**Pn**	**14 57 07.5**	**-0.9**
KIW	**Kapiti Island**	**3.70**	**43**	P	**Pn**	**14 57 08.2**	**-0.6**
TRWZ	**Traveller**	**3.76**	**55**	P	**Pn**	**14 57 08.4**	**-1.3**
MTW	**Mount Morrison**	**3.80**	**51**	P	**Pn**	**14 57 09.1**	**-1.1**
OGWZ	**Otaki Gorge**	**3.86**	**45**	P	**Pn**	**14 57 09.7**	**-1.4**
HOWZ	**Holdsworth Sta**	**3.99**	**48**	P	**Pn**	**14 57 12.2**	**-0.6**
TMWZ	**Te Maipa**	**4.06**	**53**	P	**Pn**	**14 57 11.8**	**-2.0**
APZ	**The Paps**	**4.10**	**217**	P	**Pn**	**14 57 13.0**	**-1.3**
MRZ	**Mangatainoka R**	**4.19**	**47**	P	**Pn**	**14 57 13.5**	**-2.1**
PYZ	**Puysegur Point**	**4.32**	**232**	P	**Pn**	**14 57 18.3**	**+1.0**
PYZ	**Puysegur Point**	**4.32**	**232**	P	**Pn**	**14 57 17.9**	**+0.6**
PRWZ	**Pori Road**	**4.47**	**48**	P	**Pn**	**14 57 18.5**	**-1.0**
POWZ	**Post Office Ro**	**4.49**	**46**	P	**Pn**	**14 57 18.4**	**-1.2**
NMEZ	**Namu Road**	**4.54**	**23**	P	**Pn**	**14 57 22.0**	**+1.7**
BFZ	**Birch Farm**	**4.54**	**51**	P	**Pn**	**14 57 18.4**	**-2.0**
BFZ	**Birch Farm**	**4.54**	**51**	S	**Sn**	**14 58 12.0**	**-1.1**
BFZ	**Birch Farm**	**4.54**	**51**	P	**Pn**	**14 57 18.3**	**-2.1**
WAZ	**Wanganui**	**4.62**	**35**	P	**Pn**	**14 57 23.4**	**+1.8**
LREZ	**Lake Rotokare**	**4.66**	**28**	P	**Pn**	**14 57 24.0**	**+2.0**
NBEZ	**Newall Road No**	**4.67**	**22**	P	**Pn**	**14 57 23.3**	**+1.2**
PREZ	**Palmer Road**	**4.69**	**25**	P	**Pn**	**14 57 24.0**	**+1.5**
KHEZ	**Kahui Hut**	**4.69**	**24**	P	**Pn**	**14 57 22.8**	**+0.3**
KHEZ	**Kahui Hut**	**4.69**	**24**	P	**Pn**	**14 57 24.0**	**+1.5**
DVHZ	**Dannevirke**	**4.76**	**47**	P	**Pn**	**14 57 21.1**	**-2.3**
PKE	**Pukeiti**	**4.77**	**23**	P	**Pn**	**14 57 24.9**	**+1.3**
TSZ	**Takapari Road**	**4.83**	**44**	P	**Pn**	**14 57 22.5**	**-1.9**
DREZ	**Durham Road**	**4.84**	**25**	P	**Pn**	**14 57 25.9**	**+1.4**
PRHZ	**Porangahau**	**5.04**	**50**	P	**Pn**	**14 57 26.0**	**-1.2**
WPHZ	**Waipukurau**	**5.08**	**47**	P	**Pn**	**14 57 26.8**	**-1.0**
VRZ	**Vera Road**	**5.08**	**29**	P	**Pn**	**14 57 28.6**	**+0.8**
MTVZ	**Mangateitei**	**5.14**	**36**	P	**Pn**	**14 57 30.2**	**+1.6**
WNVZ	**Wahianoa**	**5.24**	**37**	P	**Pn**	**14 57 29.7**	**-0.5**
TRVZ	**Turoa**	**5.24**	**36**	P	**Pn**	**14 57 30.7**	**+0.5**
MOVZ	**Moawhango**	**5.24**	**38**	P	**Pn**	**14 57 29.1**	**-1.0**
WHVZ	**Whangaehu Hut**	**5.27**	**36**	P	**Pn**	**14 57 31.2**	**+0.5**
COVZ	**Chateau Observ**	**5.32**	**35**	P	**Pn**	**14 57 32.2**	**+0.9**
PXZ	**Pawanui**	**5.33**	**50**	P	**Pn**	**14 57 29.6**	**-1.6**
KRHZ	**Kereru**	**5.35**	**44**	P	**Pn**	**14 57 30.4**	**-1.1**
NGZ	**Ngauruhoe**	**5.37**	**36**	P	**Pn**	**14 57 33.0**	**+1.1**
SNVZ	**South Ngauruho**	**5.38**	**36**	P	**Pn**	**14 57 31.9**	**-0.1**
TWVZ	**Taurewa**	**5.39**	**34**	P	**Pn**	**14 57 34.5**	**+2.4**
OTVZ	**Oturere**	**5.41**	**36**	P	**Pn**	**14 57 31.9**	**-0.5**
WTVZ	**West Tongariro**	**5.41**	**35**	P	**Pn**	**14 57 32.9**	**+0.4**
KRVZ	**Karewarewa**	**5.45**	**35**	P	**Pn**	**14 57 34.6**	**+1.6**
TMVZ	**Te Maari**	**5.46**	**36**	P	**Pn**	**14 57 33.6**	**+0.5**
NTVZ	**North Tongariro**	**5.46**	**36**	P	**Pn**	**14 57 33.1**	**-0.1**
KAHZ	**Kahuranaki**	**5.50**	**48**	P	**Pn**	**14 57 32.9**	**-0.7**
KWHZ	**Kaweka Forest**	**5.54**	**43**	P	**Pn**	**14 57 33.9**	**-0.4**
KATZ	**Kakaramea**	**5.58**	**35**	P	**Pn**	**14 57 38.1**	**+3.3**
HIZ	**Hauiti**	**5.67**	**27**	P	**Pn**	**14 57 35.6**	**-0.3**
HIZ	**Hauiti**	**5.67**	**27**	P	**Pn**	**14 57 36.2**	**+0.3**
MCHZ	**McNeill Hill**	**5.67**	**44**	P	**Pn**	**14 57 35.8**	**0.0**
BKZ	**Black Stump Fm**	**5.78**	**41**	P	**Pn**	**14 57 36.3**	**-1.2**
BKZ	**Black Stump Fm**	**5.78**	**41**	P	**Pn**	**14 57 36.0**	**-1.5**
ARHZ	**Aropaoanui**	**5.96**	**45**	P	**Pn**	**14 57 38.9**	**-1.0**
TLZ	**Tolley Road**	**6.07**	**31**	P	**Pn**	**14 57 42.1**	**+0.6**
RAHZ	**Arahi**	**6.26**	**43**	P	**Pn**	**14 57 44.5**	**+0.4**
MUGZ	**Murupara**	**6.46**	**39**	P	**Pn**	**14 57 44.9**	**+1.9**
KNZ	**Kokohu**	**6.49**	**47**	P	**Pn**	**14 57 44.8**	**-2.3**
TOZ	**Tahuroa Road**	**6.59**	**28**	P	**Pn**	**14 57 48.8**	**+0.2**
PRGZ	**Paritu Road**	**6.67**	**47**	P	**Pn**	**14 57 47.8**	**-1.9**
URZ	**Urewera**	**6.79**	**40**	Pn	**Pn**	**14 57 49.3**	**-2.0**
	0.7nm,0.3s,baz=246,slow=5.6,SNR=14						
URZ				Sn	**Sn**	**14 59 02.9**	**-5.6**
	2.8nm,0.3s,baz=13,slow=21,SNR=7.3						
URZ				LR	LR	15 00 09.1	
	comp=Z,37nm,19.8s,baz=206,slow=36						
	3.1nm,0.3s						
URZ	**Urewera**	**6.79**	**40**	P	**Pn**	**14 57 50.2**	**-1.1**
URZ	**Urewera**	**6.79**	**40**	P	**Pn**	**14 57 49.3**	**-2.0**
KUZ	**Kuaotunu**	**7.56**	**26**	P	**Pn**	**14 58 01.7**	**-0.1**
OUZ	**Omahuta**	**8.53**	**11**	P	**Pn**	**14 58 15.6**	**+0.5**
DZM	**Mont Dzumac**	**21.91**	**347**	LR	LR	15 09 05.6	
	comp=Z,78nm,18.0s,baz=216,slow=36						
STKA	**Stephens Creek**	**26.30**	**286**	P	**P**	**15 01 47.0**	**-0.3**
	3.6nm,0.9s,baz=123,slow=8.8,SNR=3.3						
STKA				LR	LR	15 11 28.4	
	comp=Z,55nm,20.1s,baz=228,slow=35						
	3.6nm,0.9s						
ASAR	**Alice Springs**	**36.73**	**290**	P	**P**	**15 03 18.9**	**-0.1**
	2.4nm,0.6s,baz=128,slow=7.7,SNR=57						
ASAR				LR	LR	15 18 07.3	
	comp=Z,32nm,18.7s,baz=126,slow=36						
	2.4nm,0.6s						
WRA	**Warramunga Arr**	**39.01**	**295**	P	**P**	**15 03 38.5**	**+0.1**
	3.7nm,0.7s,baz=133,slow=7.7,SNR=31						
	3.7nm,0.7s						
BATI	**Baunata**	**53.12**	**294**	LR	LR	15 26 49.9	
	comp=Z,36nm,18.3s,baz=318,slow=35						
PETK	**Petropavlovsk-**	**97.08**	**352**	P	**P**	**15 09 43.8**	**+0.7**
	11nm,1.1s,baz=297,slow=6.5,SNR=3.5						
	11nm,1.1s						
MMAI	**Mount Meron Ar**	**144.39**	**268**	PKP	**PKPdf**	**15 15 48.0**	**+0.2**
	2.0nm,0.6s,baz=108,slow=3.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**148.41**	**199**	PKPbc	**PKPbc**	**15 16 00.2**	**+1.7**
	2.1nm,0.9s,baz=106,slow=2.9,SNR=8.2						
BRTR	**Keskin Array B**	**148.59**	**278**	PKPbc	**PKPbc**	**15 15 58.0**	**-0.5**
	1.0nm,0.6s,baz=142,slow=6.3,SNR=7.2						
ARCES	**ARCESS Array B**	**148.81**	**338**	PKPbc	**PKPdf**	**15 15 56.8**	**+2.8**
	5.0nm,0.7s,baz=64,slow=2.8,SNR=6.7						
FINES	**FINESS Array B**	**152.93**	**323**	PKPbc	**PKPbc**	**15 16 07.6**	**-0.3**
	3.3nm,0.9s,baz=104,slow=2.4,SNR=5.3						

*TAP **30** 14:57:58.9, 24°.24N×119°.79E, h27km, ML3.7, D*

ISC 30 14:57:59.7±1.0, 24°.26N±0°.02×119°.79E±0°.02, h30km±11km, n150, σ1s00/263, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTCT	**Ta-ch'eng**	**0.59**	**131**	*i*P	**Pb**	**14 58 10.7**	**-0.9**
WTCT				S	**Sn**	**14 58 20.1**	**-0.6**
WMLT	**Mailiao**	**0.60**	**139**	P	**Pb**	**14 58 10.8**	**-0.9**
WMLT				*e*S	**Sn**	**14 58 19.7**	**-1.1**
WCH1	**Changhua City**	**0.71**	**105**	P	**Pn**	**14 58 13.1**	**-0.6**
WCH1				S	**Sn**	**14 58 23.9**	**+0.2**
PNG	**Penghu**	**0.72**	**198**	*i*P	**Pb**	**14 58 12.4**	**-1.3**
PNG				S	**Sb**	**14 58 22.0**	**-1.2**
WCHH	**Zhanghua**	**0.72**	**104**	*i*P	**Pn**	**14 58 13.3**	**-0.5**
WCHH				*e*S	**Sn**	**14 58 23.7**	**-0.2**
WSF	**Szhu**	**0.73**	**147**	P	**Pb**	**14 58 13.0**	**-0.9**
WSF				*i*S	**Sn**	**14 58 23.9**	**-0.2**
PHUB	**P'eng-hu**	**0.77**	**195**	*i*P	**Pb**	**14 58 13.2**	**-1.3**
PHUB				*i*S	**Sb**	**14 58 23.5**	**-1.0**
TCU	**Taichung**	**0.81**	**97**	P	**Pn**	**14 58 15.2**	**+0.1**
TCU				*e*S	**Sn**	**14 58 27.1**	**+1.0**
WSL	**Shuilin Townsh**	**0.83**	**151**	*i*P	**Pn**	**14 58 14.7**	**-0.7**
WSL				*i*S	**Sn**	**14 58 26.6**	**0.0**
WDL	**Douliou City**	**0.87**	**128**	*i*P	**Pn**	**14 58 15.7**	**-0.1**
WDL				S	**Sn**	**14 58 28.5**	**+1.0**
WDLH	**Douliu**	**0.89**	**129**	*i*P	**Pb**	**14 58 15.9**	**-0.6**
WDLH				*i*S	**Sn**	**14 58 28.7**	**+0.8**
WNT	**Mingjian**	**0.90**	**115**	*i*P	**Pb**	**14 58 16.4**	**-0.4**
WNT				S	**Sn**	**14 58 29.2**	**+1.0**
NSY	**Sanyi**	**0.90**	**80**	P	**Pb**	**14 58 17.4**	**+0.7**
NSY				*e*S	**Sn**	**14 58 30.8**	**+2.5**
TWQ1	**Liyutan**	**0.90**	**84**	P	**Pb**	**14 58 16.8**	**0.0**
TWQ1				*i*S	**Sn**	**14 58 30.2**	**+1.8**
WGK	**Gukeng**	**0.90**	**129**	*i*P	**Pb**	**14 58 16.5**	**-0.3**
WGK				S	**Sn**	**14 58 30.1**	**+1.7**
CHY	**Chiayi**	**0.95**	**142**	*i*P	**Pb**	**14 58 17.0**	**-0.6**
CHY				S	**Sn**	**14 58 30.6**	**+1.1**
CHN2	**Minshiung**	**0.95**	**139**	*i*P	**Pb**	**14 58 17.3**	**-0.3**
NMLH	**Miaoli**	**0.95**	**73**	P	**Pb**	**14 58 17.4**	**-0.3**
NMLH				S	**Sn**	**14 58 30.9**	**+1.3**
WJS	**Zhushan**	**0.96**	**117**	P	**Pb**	**14 58 17.1**	**-0.6**
WJS				*i*S	**Sn**	**14 58 30.6**	**+0.9**
CHN8	**Yiju**	**0.98**	**157**	*i*P	**Pb**	**14 58 17.6**	**-0.5**
CHN8				*i*S	**Sn**	**14 58 32.2**	**+1.9**
PTMZ	**Houx

EHY	**Hungye**	**1.59**	**118**	P	**Pb**	**14 58 27.4**	**-1.0**
EHY				*e*S	**Sb**	**14 58 48.1**	**0.0**
EGFH	**Guangfu**	**1.60**	**111**	*e*P	**Pb**	**14 58 27.2**	**-1.4**
LATG	**Datong**	**1.61**	**80**	*e*P	**Pn**	**14 58 26.9**	**+0.7**
LATG				*e*S	**Sn**	**14 58 46.7**	**+0.8**
EHYH	**Wanrong**	**1.61**	**118**	P	**Pb**	**14 58 27.8**	**-1.0**
EHYH				*e*S	**Sb**	**14 58 49.6**	**+0.9**
YULB	**Yu-li**	**1.62**	**122**	P	**Pb**	**14 58 28.0**	**-1.0**
YULB	**Yu-li**	**1.62**	**122**	S	**Sb**	**14 58 50.4**	**+1.3**
YULB	**Yu-li**	**1.62**	**122**	*e*P	**Pn**	**14 58 27.7**	**-1.3**
YULB				*e*S	**Sb**	**14 58 49.8**	**+0.7**
NWLT	**Wulai**	**1.64**	**71**	*e*P	**Pn**	**14 58 26.8**	**+0.2**
NWLT				*e*S	**Sn**	**14 58 47.3**	**+0.6**
TWF1	**Yuli**	**1.65**	**123**	*e*P	**Pb**	**14 58 28.6**	**-1.1**
TWF1				*e*S	**Sb**	**14 58 49.9**	**+0.1**
NACB	**Ninganchiao**	**1.65**	**92**	P	**Pb**	**14 58 28.6**	**-0.8**
NACB	**Ninganchiao**	**1.65**	**92**	*e*P	**Pb**	**14 58 28.0**	**-1.4**
NACB				*i* S	**Sb**	**14 58 47.9**	**-1.9**
SGLT	**Jiouru**	**1.65**	**157**	*e*P	**Pb**	**14 58 29.8**	**+0.3**
TWD	**Chiawan**	**1.66**	**96**	*e*P	**Pb**	**14 58 28.6**	**-1.0**
TWD				*e*S	**Sb**	**14 58 48.9**	**-1.1**
ENTT	**Nioudou**	**1.66**	**76**	*e*P	**Pn**	**14 58 27.5**	**+0.7**
WSSB	**Gushan**	**1.66**	**165**	*e*P	**Pb**	**14 58 29.4**	**-0.3**
EYUL	**Yuli**	**1.67**	**123**	*e*P	**Pb**	**14 58 28.0**	**-1.7**
EYUL				*e*S	**Sb**	**14 58 50.4**	**+0.1**
ETL	**Fush Village**	**1.67**	**93**	*e*S	**Sb**	**14 58 49.4**	**-1.2**
HGSD	**Ruisui**	**1.68**	**117**	*e*P	**Pb**	**14 58 29.3**	**-0.6**
HGSD				*e*S	**Sb**	**14 58 51.0**	**+0.4**
SHUL	**Shoufeng**	**1.68**	**106**	*e*P	**Pb**	**14 58 29.8**	**-0.2**
SHUL				*e*S	**Sb**	**14 58 52.3**	**+1.5**
SSD	**Sandimen**	**1.69**	**153**	P	**Pb**	**14 58 28.8**	**-1.3**
SSD				*e*S	**Sb**	**14 58 50.4**	**-0.6**
TEGC	**Jichi Village**	**1.69**	**108**	*e*S	**Sb**	**14 58 49.3**	**-1.6**
EHD	**Haiduan**	**1.70**	**130**	P	**Pb**	**14 58 28.9**	**-1.4**
EHD				*e*S	**Sb**	**14 58 51.5**	**+0.2**
TATO	**Taipei**	**1.70**	**65**	P	**Pb**	**14 58 29.7**	**-0.6**
TATO	**Taipei**	**1.70**	**65**	S	**Sb**	**14 58 52.2**	**+0.9**
TWS1	**Kuangyinshan**	**1.70**	**60**	*e*P	**Pn**	**14 58 28.1**	**+0.8**
TWS1				*e*S	**Sb**	**14 58 49.5**	**-1.8**
FUSB	**Fushanzhiwuyua**	**1.71**	**73**	*e*P	**Pn**	**14 58 28.1**	**+0.5**
FUSB				*e*S	**Sn**	**14 58 49.5**	**+1.1**
NHDH	**Xindian Distri**	**1.73**	**66**	*e*S	**Sb**	**14 58 50.4**	**-1.6**
TSMG	**Majia**	**1.73**	**153**	*e*P	**Pb**	**14 58 29.0**	**-1.8**
FULB	**Fuli**	**1.73**	**127**	*e*P	**Pb**	**14 58 30.0**	**-0.9**
FULB				*e*S	**Sb**	**14 58 51.5**	**-0.7**
ECS	**Chishang**	**1.74**	**131**	*e*P	**Pb**	**14 58 30.3**	**-0.8**
ECS				*e*S	**Sb**	**14 58 53.1**	**+0.5**
KAU	**Kaohsiung**	**1.75**	**164**	*e*P	**Pb**	**14 58 28.6**	**-2.4**
NTST	**Danshui**	**1.76**	**59**	*e*P	**Pb**	**14 58 29.3**	**-2.0**
NTST				*e*S	**Sn**	**14 58 50.3**	**+0.8**
TWE	**Neicheng**	**1.77**	**74**	*e*P	**Sb**	**14 58 30.5**	**-1.0**
TWE				*e*S	**Sn**	**14 58 50.7**	**+0.9**
EAHA	**Aohua**	**1.78**	**87**	*e*P	**Pn**	**14 58 28.6**	**+0.2**
AXDP	**Jialang**	**1.78**	**292**	*e*P	**Pb**	**14 58 30.5**	**-1.1**
AXDP				*e*S	**Sb**	**14 58 53.6**	**0.0**
TWA	**Mucha**	**1.78**	**66**	*e*P	**Pb**	**14 58 30.3**	**-1.5**
TWA				*e*S	**Sb**	**14 58 51.6**	**-2.0**
ENA	**Nanau**	**1.79**	**84**	*e*P	**Pb**	**14 58 30.2**	**-1.5**
ENA				*e*S	**Sn**	**14 58 51.2**	**+1.0**
NDS	**Dongshan**	**1.79**	**77**	*e*P	**Pn**	**14 58 29.3**	**+0.7**
MASBT	**Mashibuluo**	**1.81**	**155**	*i* P	**Pn**	**14 58 29.5**	**+0.7**
MASBT				*e*S	**Sn**	**14 58 50.1**	**-0.6**
CHKH	**Chenggong**	**1.81**	**125**	*e*P	**Pn**	**14 58 29.3**	**+0.4**
LONT	**Longtian**	**1.82**	**137**	*e*P	**Pb**	**14 58 30.8**	**-1.5**
LONT				*e*S	**Sb**	**14 58 55.1**	**+0.4**
EWUT	**Wuta**	**1.82**	**84**	*e*P	**Pb**	**14 58 30.7**	**-1.6**
EWUT				S	**Sb**	**14 58 52.5**	**-2.2**
ANP	**Anpu**	**1.82**	**59**	*e*P	**Pn**	**14 58 29.9**	**+0.8**
ANP				*e*S	**Sb**	**14 58 54.0**	**-0.9**
ZUZH	**Zhuzihu**	**1.83**	**60**	*e*P	**Sn**	**14 58 29.1**	**-0.1**
ZUZH				*e*S	**Sn**	**14 58 51.4**	**0.0**
YM01	**YM01**	**1.84**	**61**	P	**Pn**	**14 58 30.3**	**+1.0**
YM01				S	**Sn**	**14 58 52.0**	**+0.3**
TWG	**Pinlang**	**1.85**	**140**	*e*P	**Pb**	**14 58 32.1**	**-0.7**
TWG				*e*S	**Sb**	**14 58 54.8**	**-0.8**
ILA	**Ilan**	**1.85**	**74**	*e*P	**Pn**	**14 58 30.5**	**+1.1**
ILA				*e*S	**Sn**	**14 58 51.1**	**-0.7**
TWGBT	**Beinan**	**1.85**	**140**	P	**Pb**	**14 58 30.9**	**-2.0**
TWGBT	**Beinan**	**1.85**	**140**	*e*P	**Pb**	**14 58 30.7**	**-2.3**
TWGBT				*e*S	**Sb**	**14 58 54.7**	**-1.1**
YM08	**YM08**	**1.88**	**60**	*e*S	**Sn**	**14 58 52.8**	**+0.2**
EDH	**Donghe**	**1.88**	**132**	*e*P	**Pn**	**14 58 29.8**	**-0.1**
EDH				*e*S	**Sn**	**14 58 53.2**	**+0.6**
MATB	**Ma-tsu**	**1.89**	**4**	*e*P	**Pn**	**14 58 31.2**	**+1.2**
MATB				*e*S	**Sn**	**14 58 54.4**	**+1.6**
ZPLA	**Ao Xicun**	**1.89**	**261**	P	**Pn**	**14 58 30.2**	**+0.2**
ZPLA				*e*S	**Sn**	**14 58 53.9**	**+1.0**
TWC	**Suao**	**1.91**	**79**	*e*P	**Pn**	**14 58 31.1**	**+0.9**
TWC				*e*S	**Sn**	**14 58 53.3**	**+0.1**
TWY	**Chenhua**	**1.93**	**58**	*e*P	**Pn**	**14 58 31.7**	**+1.2**
TWY				*e*S	**Sn**	**14 58 54.8**	**+1.0**
TTN	**Taitung**	**1.94**	**140**	*e*P	**Pn**	**14 58 31.2**	**+0.5**
MHZQ	**Yeshan**	**1.96**	**340**	P	**Pb**	**14 58 33.9**	**-0.9**
MHZQ				*e*S	**Sn**	**14 58 55.4**	**+0.8**
ECL	**Taimali**	**1.96**	**147**	P	**Pn**	**14 58 31.9**	**+0.9**
TIPB	**Shuangxi**	**1.98**	**68**	*e*P	**Pn**	**14 58 32.1**	**+0.8**
TIPB				*e*S	**Sn**	**14 58 56.3**	**+1.1**
SCZT	**Fangliau**	**2.02**	**158**	P	**Pn**	**14 58 32.6**	**+0.8**
SXI1	**Grass Mountain**	**2.07**	**66**	*e*P	**Pn**	**14 58 33.5**	**+1.0**
EAST	**Anshuo**	**2.10**	**152**	*e*P	**Pb**	**14 58 35.0**	**-2.2**
EAST				*e*S	**Sn**	**14 58 58.0**	**-0.1**
TWB1	**Santiao Chiao**	**2.13**	**69**	P	**Pn**	**14 58 34.3**	**+1.0**
TWB1				S	**Sn**	**14 58 59.7**	**+0.9**
TAWH	**Dawu Township**	**2.16**	**152**	*e*P	**Pn**	**14 58 33.9**	**+0.3**
SLIU	**Shizi**	**2.23**	**155**	*e*P	**Pn**	**14 58 35.4**	**+0.8**
DSXP	**Dongshan**	**2.23**	**256**	*e*P	**Pn**	**14 58 34.7**	**+0.1**
DSXP				S	**Sn**	**14 59 01.1**	**-0.1**
HEN	**Hengchun**	**2.40**	**159**	*e*P	**Pn**	**14 58 37.9**	**+0.9**
SMST	**Manzhou Townsh**	**2.42**	**156**	*e*P	**Pn**	**14 58 37.1**	**-0.1**
PCYT	**Pengchaiyu**	**2.48**	**56**	*e*P	**Pn**	**14 58 39.1**	**+1.1**
TWKBT	**Hengchun**	**2.49**	**158**	*e*P	**Pn**	**14 58 38.9**	**+0.8**
XPSS	**Dashiqiu**	**2.69**	**8**	P	**Pn**	**14 58 41.8**	**+0.9**
XPSS				*e*S	**Sn**	**14 59 13.2**	**+0.8**
SXFK	**Yanhouchang**	**2.89**	**318**	*e*P	**Pn**	**14 58 43.4**	**-0.2**
SXFK				*e*S	**Sn**	**14 59 17.2**	**-0.3**

*SDD **30** 15:11:26.9±0.4, 18°.79N×65°.77W, h54km±9km, MD3.5, ML4.0, MW3.4*
*RSPR **30** 15:11:27.9, 18°.66N×65°.86W, h67km±1km, MD3.2/15*
ISC 30 15:11:27.8±1.5,**18°.7N**±0°.1×**65°.91W**±0°.05,**h68**km±11km,
n41,σ0**°59**/47,**10C-12D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCPR	**Guaynabo City**	**0.39**	**206**	⇓*e*P	**Pn**	**15 11 39.5**	**+0.1**
GCPR	**Guaynabo City**	**0.39**	**206**	*e*S	**Sn**	**15 11 48.0**	**+0.1**
HUMP	**Col San Antoni**	**0.52**	**174**	⇑*i*P	**Pn**	**15 11 40.1**	**-0.5**
HUMP	**Col San Antoni**	**0.52**	**174**	*e*S	**Sn**	**15 11 49.4**	**-0.6**
ECPR	**Experimental S**	**0.55**	**232**	⇓*i*P	**Pn**	**15 11 40.8**	**-0.1**
ECPR	**Experimental S**	**0.55**	**232**	*e*S	**Sn**	**15 11 50.7**	**+0.1**
SJG	**San Juan**	**0.59**	**203**	⇑*e*Pg	**Pn**	**15 11 41.1**	**-0.3**
SJG				⇓*e*Sg	**Sn**	**15 11 51.3**	**-0.1**
SJG	**San Juan**	**0.59**	**203**	⇑*e*P	**Pn**	**15 11 41.1**	**-0.1**
SJG	**San Juan**	**0.59**	**203**	*e*S	**Sn**	**15 11 51.2**	**-0.1**
SJG	**San Juan**	**0.59**	**203**	*e*P	**Pn**	**15 11 40.7**	**-0.7**
EMPR	**Esperanza - Ma**	**0.62**	**253**	⇓*e*P	**Pn**	**15 11 42.1**	**+0.5**
EMPR	**Esperanza - Ma**	**0.62**	**253**	*e*S	**Sn**	**15 11 53.1**	**+1.3**
AOPR	**Arecibo Observ**	**0.86**	**249**	⇑*e*Pg	**Pn**	**15 11 44.2**	**-0.3**
AOPR				⇓*e*Sg	**Sn**	**15 11 57.2**	**+0.3**
AOPR				IAML		15 11 59.6	
	comp=N,4μm,0.2s						
AOPR	**Arecibo Observ**	**0.86**	**249**	⇑*e*P	**Pn**	**15 11 44.3**	**-0.2**
AOPR	**Arecibo Observ**	**0.86**	**249**	*e*P	**Pn**	**15 11 44.0**	**-0.5**
AOPR				*e*S	**Sn**	**15 11 56.4**	**-0.5**
OBIP	**Obispado Ponce**	**0.90**	**228**	⇓*e*P	**Pn**	**15 11 44.9**	**-0.1**
OBIP	**Obispado Ponce**	**0.90**	**228**	*e*S	**Sn**	**15 11 57.4**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.15**	**234**	⇑*e*P	**Pn**	**15 11 48.1**	**0.0**
AGPR	**Aguadilla, PR**	**1.16**	**261**	⇑*e*Pg	**Pn**	**15 11 48.1**	**-0.1**
AGPR				⇑*e*Sg	**Sn**	**15 12 03.8**	**+0.3**
AGPR				IAML		15 12 04.2	
	comp=N,4μm,0.3s						
AGPR	**Aguadilla, PR**	**1.16**	**261**	⇑*i*P	**Pn**	**15 11 48.1**	**-0.1**
AGPR	**Aguadilla, PR**	**1.16**	**261**	*e*S	**Sn**	**15 12 04.0**	**+0.5**
LSP	**Las Mesas**	**1.22**	**247**	⇓*i*P	**Pn**	**15 11 49.1**	**+0.1**
LSP	**Las Mesas**	**1.22**	**247**	*e*S	**Sn**	**15 12 05.5**	**+0.6**
PRSN	**Puerto Rico Se**	**1.25**	**250**	⇑*e*Pg	**Pn**	**15 11 49.5**	**0.0**
PRSN				⇓*e*Sg	**Sn**	**15 12 06.2**	**+0.6**
PRSN				IAML		15 12 07.6	
	comp=N,4μm,0.2s						
PRSN	**Puerto Rico Se**	**1.25**	**250**	⇑*e*P	**Pn**	**15 11 49.4**	**0.0**
PRSN	**Puerto Rico Se**	**1.25**	**250**	*e*S	**Sn**	**15 12 06.5**	**+0.8**
MLPR	**Magueyes Islan**	**1.28**	**238**	⇑*i*P	**Pn**	**15 11 49.7**	**-0.1**
MLPR	**Magueyes Islan**	**1.28**	**238**	*e*S	**Sn**	**15 12 05.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.31**	**241**	⇑*e*Pg	**Pn**	**15 11 50.1**	**-0.1**
CRPR				⇑*e*Sg	**Sn**	**15 12 07.6**	**+0.5**
CRPR				IAML		15 12 09.4	
	comp=N,597nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.31**	**241**	⇓*i*P	**Pn**	**15 11 50.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.31**	**241**	*e*S	**Sn**	**15 12 07.5**	**+0.5**
IDE	**Isla Desecheo**	**1.51**	**260**	⇑*i*P	**Pn**	**15 11 52.9**	**0.0**
IDE	**Isla Desecheo**	**1.51**	**260**	*e*S	**Sn**	**15 12 12.1**	**+0.3**
HIDR	**Higuey Centro**	**2.67**	**269**	⇓*e*P	**Pn**	**15 12 09.7**	**+1.3**
HIDR	**Higuey Centro**	**2.67**	**269**	*e*S	**Sn**	**15 12 38.3**	**-1.4**
MIDR	**Miches**	**3.00**	**277**	⇓*e*P	**Pn**	**15 12 12.3**	**-0.6**
MIDR	**Miches**	**3.00**	**277**	*e*S	**Sn**	**15 12 45.8**	**-1.9**
ANWB	**Willy Bob**	**4.04**	**103**	*e*P	**Pn**	**15 12 26.9**	**-0.2**
DHSZ	**Broadband at M**	**4.61**	**120**	*e*P	**Pn**	**15 12 36.0**	**+1.0**
ATGZ	**Broadband at L**	**4.73**	**122**	*e*P	**Pn**	**15 12 36.6**	**0.0**
DSDZ	**La Diserade, G**	**5.17**	**116**	*e*P	**Pn**	**15 12 42.9**	**+0.2**

*IDC **30** 15:25:46.5±2.2, 8°.13S×119°.79E, h0km, mb3.0/2, mbtmp3.2/4, ML3.3/2, Error ellipse: s-maj=203.0km s-min=27.6km az=55.0*
*DJA **30** 15:26:00.3±0.3, 9°.3×11°.9E±°, h119km±4km, M3.6/15, mb3.8/2, MLv3.5/15*
ISC 30 15:25:59.6±0.9,**8°.95S**±0°.06×**119°.33E**±0°.04,**h131**km±8km,
n19,σ1**°86**/29,**Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.69**	**175**	P	**Pn**	**15 26 20.1**	**0.0**
WBSI				S	**Sn**	**15 26 35.6**	**-0.1**
WSI	**Waingapu**	**1.19**	**127**	P	**Pn**	**15 26 24.8**	**+0.3**
WSI				S	**Sn**	**15 26 43.2**	**-0.2**
PLAI	**Plampang**	**1.54**	**274**	P	**Pn**	**15 26 29.1**	**+0.8**
PLAI				S	**Sn**	**15 26 50.6**	**+0.5**
BASI	**Baing, Sumba**	**1.76**	**136**	P	**Pn**	**15 26 31.7**	**+0.9**
BASI				S	**Sn**	**15 26 54.8**	**+0.2**
EDFI	**Ende, Flores**	**2.34**	**85**	P	**Pn**	**15 26 38.3**	**+0.3**
EDFI				S	**Sn**	**15 27 06.8**	**-0.6**
TWSI	**Taliwang, Sumb**	**2.43**	**275**	P	**Pn**	**15 26 39.9**	**+0.9**
TWSI				S	**Sn**	**15 27 09.5**	**+0.3**
MMRI	**Maumere**	**2.89**	**84**	P	**Pn**	**15 26 45.0**	**+0.1**
MMRI				S	**Sn**	**15 27 20.5**	**+0.7**
BSSI	**Bau Bau, Buton**	**3.02**	**22**	P	**Pn**	**15 26 47.3**	**+0.7**
BSSI				S	**Sn**	**15 27 23.0**	**+0.2**
IGBI	**Denpasar**	**4.14**	**272**	P	**Pn**	**15 27 01.7**	**+0.4**
IGBI				S	**Sn**	**15 27 49.6**	**+0.5**
BATI	**Baumata**	**4.45**	**107**	P	**Pn**	**15 27 06.2**	**+0.7**
BATI				S	**Sn**	**15 27 57.5**	**+0.9**
SOEI	**Soe**	**4.94**	**100**	P	**Pn**	**15 27 12.5**	**+0.5**
JAGI	**Jajag, Banyuwa**	**5.14**	**275**	P	**Pn**	**15 27 13.3**	**-1.4**
	0.1nm19nm,0.9s						
GMJI	**Gumukmas**	**5.86**	**276**	P	**Pn**	**15 27 23.8**	**-0.5**
MTKI	**Muara Teweh, K**	**9.10**	**331**	P	Pn	15 28 18.5	+11
FITZ	**Fitzroy Crossi**	**10.96**	**147**	Pn	**Pn**	**15 28 31.7**	**-1.1**
	0.1nm,0.3s,baz=350,slow=22,SNR=1.4						
FITZ				Sn	Sn	15 30 27.7	-6.1
	0.4nm,0.3s,baz=101,slow=18,SNR=9.2						
	1.3nm,0.7s						
SGSI	**Sangihe**	**13.99**	**26**	P	P	15 29 21.0	+4.9
WRA	**Warramunga Arr**	**18.16**	**129**	P	**P**	**15 30 02.1**	**0.0**
	0.1nm,0.3s,baz=299,slow=12,SNR=1.2						
WRA				S	**S**	**15 33 18.0**	**-5.7**
	0.5nm,0.7s,baz=316,slow=23,SNR=1.5						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**20.21**	**138**	P	**P**	**15 30 26.6**	**+2.2**
	0.2nm,0.6s,baz=324,slow=12,SNR=4.7						
ASAR				S	**S**	**15 34 10.4**	**+6.3**
	0.1nm,0.6s,baz=308,slow=21,SNR=2.9						
	0.2nm,0.6s						
MKAR	**Makanchi Array**	**64.56**	**333**	P	**P**	**15 36 22.1**	**-0.7**
	0.3nm,0.6s,baz=142,slow=7.3,SNR=1.7						
	0.3nm,0.6s						

*IDC **30** 15:29:25.7±4.7, 36°.58N×71°.34E, h163km±38km, mb3.6/9, mbtmp3.9/14, MS2.2/1, Error ellipse: s-maj=36.3km s-min=22.7km az=177.0*
*NNC **30** 15:29:27.6±9.1, 37°.13N×70°.87E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=84.0km s-min=60.9km az=141.0*
ISC 30 15:29:25.0±0.7,**36°.63N**±0°.06×**71°.12E**±0°.09,**h150**km,**n26**,
σ2**°31**/30,**mb3.9**/8,**3C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**4.99**	**140**	*e*S	**Sn**	**15 31 36.6**	**+1.3**
JMU				IAML		15 31 40.0	
	comp=N,160nm,0.3s						
JMU				IAML		15 31 45.2	
	comp=E,134nm,0.5s						
ALCI	**Alchi Leh**	**5.50**	**114**	*e*P	**Pn**	**15 30 47.7**	**+2.3**
ALCI				*e*S	**Sn**	**15 31 48.2**	**+0.1**
ALCI				IAML		15 31 51.2	
	comp=N,109nm,0.3s						
ALCI				IAML		15 31 52.0	
	comp=E,80nm,0.4s						
DHRM	**DHARAMSHALA**	**6.11**	**134**	*e*P	**Pn**	**15 30 56.5**	**+3.1**
DHRM				*e*S	**Sn**	**15 32 02.2**	**-0.3**
DHRM				IAML		15 32 05.0	
	comp=E,396nm,0.6s						
DHRM				IAML		15 32 05.4	
	comp=N,341nm,0.4s						
KK31	**Karatay Array**	**6.49**	**356**	⇓P	**Pn**	**15 30 59.7**	**+1.6**
	comp=N,2.8nm,0.3s						
KK31				⇑S	**Sn**	**15 32 08.1**	**-2.9**
	comp=N,14nm,0.5s						
AAK	**Ala-Archa**	**6.54**	**22**	P	**Pn**	**15 31 01.2**	**+2.2**
	comp=N,2.3nm,0.3s,baz=170,slow=5.5,SNR=14						
AAK				S	**Sn**	**15 32 11.3**	**-1.3**
	comp=N,5.0nm,0.4s,baz=143,slow=22,SNR=11						
AAK	**Ala-Archa**	**6.54**	**22**	⇑P	**Pn**	**15 31 00.6**	**+1.6**
	comp=N,0.2nm,0.3s						
AAK				⇓S	**Sn**	**15 32 11.0**	**-1.6**
	comp=N,2.4nm,0.5s						
BHK	**Bhakra**	**6.80**	**138**	*ex*	x	15 31 35.0	
BHK				IAML		15 32 22.1	
	comp=N,68nm,0.3s						
BHK				*e*S	**Sn**	**15 32 22.4**	**+3.5**
BHK				IAML		15 32 24.1	
	comp=E,62nm,0.2s						
SMLA	**Simla**	**7.44**	**136**	*e*P	**Pn**	**15 31 12.8**	**+2.0**
SMLA				*e*S	**Sn**	**15 32 31.6**	**-2.4**
SMLA				IAML		15 32 35.4	
	comp=N,101nm,0.3s						
SMLA				IAML		15 32 36.0	
	comp=E,115nm,0.3s						
KLP	**Kalpa**	**7.79**	**129**	*e*P	**Pn**	**15 31 17.6**	**+1.7**
KLP				*e*S	**Sn**	**15 32 39.7**	**-3.3**
KLP				IAML		15 32 41.2	
	comp=E,101nm,0.4s						
KLP				IAML		15 32 42.1	
	comp=N,62nm,0.7s						
KUDL	**Kundal**	**9.60**	**150**	*e*S	**Sn**	**15 33 18.2**	**-7.7**
KUDL				IAML		15 33 22.5	
	comp=E,15nm,0.5s						
MKAR	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**15 32 26.0**	**+0.2**
	comp=E,0.3nm,0.4s,baz=208,slow=8.4,SNR=8.6						
KURBB	**Kurchatov Arra**	**14.97**	**19**	P	**Pn**	**15 32 47.8**	**-1.0**
	comp=E,0.4nm,0.7s,baz=208,slow=10,SNR=6.3						
AB31	**Akbulak array**	**15.02**	**331**	P	P	15 32 52.3	+1.1
	comp=E,0.5nm,0.3s,baz=141,slow=12,SNR=58						
BVAR	**Borovoye Array**	**16.41**	**359**	P	**P**	**15 33 06.4**	**-0.1**
	comp=E,1.3nm,0.6s,baz=152,slow=10,SNR=6.1						
AKTO	**Aktyubinsk**	**16.72**	**330**	⇑P	**Pn**	**15 33 11.4**	**+1.1**
	comp=E,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**19.76**	**24**	P	**P**	**15 33 42.8**	**-0.2**
	comp=E,1.3nm,0.3s,baz=214,slow=11,SNR=7.7						
ZALV				LR	LR	15 42 49.4	
	comp=E,8.2nm,21.2s,baz=66,slow=41						
BRTR	**Keskin Array B**	**29.49**	**288**	P	P	15 35 17.5	+2.5
	comp=E,0.8nm,0.9s,baz=93,slow=8.8,SNR=3.2						
	comp=E,0.8nm,0.9s						
AKASG	**Malin Array Be**	**32.94**	**309**	P	**P**	**15 35 45.1**	**+0.1**
	comp=E,0.7nm,0.5s,baz=104,slow=8.3,SNR=2.8						
	comp=E,0.7nm,0.5s						
FINES	**FINESS Array B**	**37.43**	**326**	P	P	15 36 24.3	+1.1
	comp=E,3.0nm,0.8s,baz=111,slow=8.0,SNR=13						
	comp=E,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**15 36 54.1**	**+0.8**
	comp=E,3.9nm,1.0s,baz=113,slow=8.3,SNR=6.4						
	comp=E,3.9nm,1.0s						
HFS	**Hagfors**	**43.03**	**322**	P	**P**	**15 37 10.1**	**+0.8**
	comp=E,3.2nm,0.5s,baz=98,slow=10,SNR=24						
	comp=E,3.2nm,0.5s						
NB2	**NORSAR Subarra**	**44.34**	**323**	P	**P**	**15 37 20.1**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.34**	**323**	P	**P**	**15 37 20.1**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=103,slow=7.1,SNR=8.1						
	comp=Z,0.9nm,0.5s						
KSRS	**Korea Array**	**44.75**	**71**	P	**P**	**15 37 21.4**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=306,slow=7.8,SNR=2.1						
	comp=Z,0.6nm,0.7s						
SPITS	**Spitsbergen Ar**	**47.39**	**347**	P	**P**	**15 37 43.0**	**-0.5**
	comp=Z,24nm,1.0s,baz=108,slow=3.2,SNR=3.1						
	comp=Z,24nm,1.0s						
TORD	**Torodi Ar. Bea**	**65.82**	**269**	P	**P**	**15 39 53.5**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=55,slow=10.0,SNR=4.8						
	comp=Z,0.5nm,0.5s						

*JMA **30** 15:33:17.0±0.2, 43°.2N±0°.7×14°.6E±°, h45km±1km, MV2.5/27, OFF NEMURO PENINSULA*
*SKHL **30** 15:33:18.0±0.2, 43°.30N×146°.10E, h36km±1km, mb3.7/2*
ISC 30 15:33:17.7±1.5,**43°.29N**±0°.07×**146°.07E**±0°.06,**h32**km±9km,
n12,σ1**°30**/20,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.25**	**287**	*i* P	**Pb**	**15 33 25.4**	**+0.6**
NEM2				S	**Sn**	**15 33 31.3**	**+1.3**
NMR	**Nemuro--Hokkai**	**0.27**	**287**	*e*P	**Pb**	**15 33 25.4**	**+0.5**
NMR				*e*S	**Sn**	**15 33 31.1**	**+0.9**
JKHN	**Kushirohamanak**	**0.70**	**253**	*i* P	**Pb**	**15 33 30.9**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**0.76**	**348**	*e*P	**Pb**	**15 33 31.3**	**-1.2**
YUK				AMB	AMB	15 33 32.3	
	40nm,0.2s						
YUK				*e*S	**Sb**	**15 33 41.1**	**-1.4**
YUK				A	A	15 33 42.9	
	80nm,0.4s						
YUK				A	A	15 33 42.9	
	110nm,0.4s						
SHO	**Shikotan**	**0.80**	**43**	*e*P	**Pb**	**15 33 31.7**	**-1.4**
SHO				AMB	AMB	15 33 32.3	
	20nm,0.2s						
SHO				*e*S	**Sn**	**15 33 47.0**	**+3.6**
SHO				A	A	15 33 49.4	
	100nm,0.2s						
SHO				A	A	15 33 49.4	
	130nm,0.2s						
JNSB	**Nemuroshibetsu**	**0.92**	**302**	P	**Pn**	**15 33 34.0**	**-0.3**
AKK	**Akkeshi**	**0.94**	**254**	*e*P	**Pn**	**15 33 34.3**	**-0.3**
AKK				*e*S	**Sb**	**15 33 47.0**	**-0.7**
JRA	**Rausu**	**0.95**	**313**	*e*P	**Pn**	**15 33 34.8**	**+0.1**
JRA				*e*S	**Sb**	**15 33 47.6**	**-0.2**
JNK	**Nakash**	**1.03**	**287**	P	**Pn**	**15 33 35.3**	**-0.5**
JNK				*e*S	**Sn**	**15 33 48.7

comp=Z,65nm,3.4s
MT02 Curacav 3.46 172 *e*P **Pn 15 34 17.7 -1.0**
MT02 *e*S **Sb 15 35 04.8 -3.4**
CFA Coronel Fontan 3.50 121 *e*P **Pn 15 34 20.9 +1.8**
CFA *e*S **Sn 15 35 03.0 +2.1**
AC02 Maricunga 3.77 38 *e*P **Pn 15 34 24.8 +1.5**
AC02 IAML 15 35 27.6
comp=Z,60nm,0.7s
AVFE Valle Fertil 3.80 104 *e*P **Pn 15 34 25.0 +1.6**
AVFE *e*S **Sn 15 35 08.8 +0.4**
AVFE IAML 15 35 27.7
comp=Z,62nm,0.4s
AC01 Pan de Azucar 3.80 16 *e*P **Pn 15 34 22.2 -1.2**
MT04 Ro Olivares 3.82 159 *e*P **Pn 15 34 25.4 +1.6**
MT04 *e*S **Sn 15 35 11.2 +2.1**
MT08 Bocatoma Ro 3.89 158 *e*P **Pn 15 34 27.9 +3.0**
MT08 IAML 15 35 27.0
comp=Z,54nm,0.6s
APLL PUNTA DE LOS L 4.55 98 IAML 15 35 47.1
comp=Z,25nm,0.5s
ACAN Cantantal 4.60 123 *e*P **Pn 15 34 35.0 +0.6**

IDC 30 15:35:38.9±2.3,**0°13S×125°69E, h0**km,**mb3.1**/3,
mbtmp3.2/3,**Error ellipse: s-maj=271.5km**
s-min=26.9km az=64.0,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.43**	**157**	P	P	15 40 28.7	0.0
	0.6nm,0.7s,baz=335,slow=11,SNR=1.5						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**24.71**	**162**	P	P	15 41 02.0	0.0
	0.2nm,0.5s,baz=344,slow=9.0,SNR=9.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**60.16**	**327**	P	P	15 45 48.5	0.0
	0.1nm,0.3s,baz=120,slow=7.3,SNR=5.4						
	0.1nm,0.3s						

*IDC **30** 15:45:03.7*±*1.1,3°.77S×127°.81E, h0*km,*mb3.9/6,*
mbtmp3.8/8, ML3.5/2, Error ellipse: s-maj=68.7km
s-min=21.4km az=74.0
*DJA **30** 15:45:06.9*±*0.3,4°.5*±*3°×12°.8E*±*°, h10*km,*M4.1/14, mB5.5/1,*
mb4.5/5, MLv3.9/14, Mw(mB)4.9/1

ISC 30 15:45:07.4±0.8,**3°.92S**±0°.07×**127°.77E**±0°.06,**h30**km,**n20,**
σ1§30/22, mb4.0/5,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.48**	**61**	P	**Pb**	**15 45 16.7**	**-0.8**
NLAI	**Namlea**	**0.95**	**315**	P	**Pn**	**15 45 22.3**	**-2.4**
NLAI				S	**Sn**	**15 45 35.2**	**-2.1**
MSAI	**Masohi**	**1.29**	**64**	P	**Pb**	**15 45 30.3**	**-0.7**
MSAI				S	**Sb**	**15 45 47.8**	**+0.6**
BNDI	**Bandanaira**	**2.21**	**106**	P	**Pb**	**15 45 45.3**	**-1.3**
SANI	**Sanana**	**2.58**	**316**	P	**Pn**	**15 45 46.9**	**-0.2**
FAKI	**Fak Fak**	**4.58**	**78**	P	**Pn**	**15 46 16.8**	**+2.2**
SWI	**Sorong**	**4.62**	**49**	P	**Pn**	**15 46 16.5**	**+1.3**
TNTI	**Ternate**	**4.68**	**355**	P	**Pn**	**15 46 17.1**	**+1.1**
SAUI	**Saumlaki**	**5.34**	**139**	P	**Pn**	**15 46 27.3**	**+2.1**
	4µm54nm,1.2s						
LUWI	**Luwuk**	**5.76**	**300**	P	**Pn**	**15 46 31.8**	**+1.0**
APSI	**Ampana**	**6.81**	**296**	P	**Pn**	**15 46 46.9**	**+1.6**
	25nm,0.6s						
MRSI	**Marisa**	**7.28**	**307**	P	**Pn**	**15 46 52.8**	**+1.0**
MRSI				S	**Sn**	**15 48 14.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**14.24**	**188**	Pn	**Pn**	**15 48 27.6**	**+0.5**
	0.1nm,0.3s,baz=17,slow=15,SNR=1.9						
	1.7nm,0.7s						
WRA	**Warramunga Arr**	**17.16**	**159**	P	**Pn**	**15 49 05.0**	**-0.2**
	0.2nm,0.3s,baz=330,slow=13,SNR=2.5						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**20.50**	**164**	P	Pn	15 49 46.4	+0.9
	2.0nm,0.6s,baz=346,slow=12,SNR=27						
	2.0nm,0.6s						
KSRS	**Korea Array**	**41.17**	**0**	P	**P**	**15 52 49.1**	**0.0**
	1.6nm,0.9s,baz=181,slow=9.3,SNR=3.2						
	1.6nm,0.9s						
MKAR	**Makanchi Array**	**64.45**	**327**	P	**P**	**15 55 41.9**	**+0.8**
	0.9nm,0.7s,baz=113,slow=6.8,SNR=10						
	0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**67.86**	**334**	P	**P**	**15 56 02.6**	**-0.1**
	0.8nm,0.6s,baz=106,slow=7.7,SNR=3.6						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**68.75**	**329**	P	**P**	**15 56 08.3**	**0.0**
	0.8nm,0.5s,baz=132,slow=5.7,SNR=9.8						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**91.53**	**25**	P	**P**	**15 58 10.5**	**-0.4**
	0.7nm,1.1s,baz=255,slow=4.5,SNR=2.2						
	0.7nm,1.1s						

*IDC **30** 15:47:57.2*±*2.0, 6°.75S×147°.98E, h77*km±*18*km,*mb3.9/7,*
mbtmp4.2/10, Error ellipse: s-maj=30.2km s-min=12.9km
az=110.0

ISC 30 15:47:54.9±1.0,**6°.64S**±0°.08×**148°.0E**±0°.2,**h51**km,**n18,**
σ1§32/18, mb4.0/7,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.88**	**197**	P	**Pn**	**15 48 38.9**	**+0.7**
	114nm,0.4s,baz=41,slow=4.2,SNR=41						
PMG				S	**Sn**	**15 49 12.5**	**+0.8**
	103nm,0.5s,baz=319,slow=13,SNR=3.6						
PMG	**Port Moresby**	**2.88**	**197**	P	**Pn**	**15 48 39.4**	**+1.1**
PMG	**Port Moresby**	**2.88**	**197**	P	**Pn**	**15 48 39.0**	**+0.7**
JAY	**Jayapura**	**8.36**	**299**	P	**Pn**	**15 49 54.2**	**+0.6**
	17nm,1.0s,baz=135,slow=8.6,SNR=1.5						
COEN	**Coen**	**8.69**	**213**	P	**Pn**	**15 49 58.8**	**+0.7**
TATA	**Tatamba Isabel**	**11.81**	**99**	P	Pn	15 50 29.3	-11
SAVO	**Savo Central**	**11.95**	**103**	P	Pn	15 50 31.4	-11
MTSU	**Mount Surprise**	**11.98**	**197**	P	**Pn**	**15 50 43.9**	**+0.8**
WRAB	**Tennant Creek**	**18.73**	**224**	P	**P**	**15 52 08.7**	**-0.8**
WRA	**Warramunga Arr**	**18.74**	**224**	P	**P**	**15 52 08.8**	**-0.9**
	1.9nm,0.6s,baz=50,slow=11,SNR=4.7						
WRA				S	Sn	15 55 29.6	-10
	0.7nm,0.7s,baz=45,slow=26,SNR=2.0						
ASAR	**Alice Springs**	**21.70**	**217**	P	**P**	**15 52 41.4**	**-0.3**
	1.5nm,0.5s,baz=53,slow=8.8,SNR=36						
ASAR				S	**S**	**15 56 35.4**	**-3.9**
	0.8nm,0.9s,baz=36,slow=24,SNR=4.6						
	1.5nm,0.5s						
BATI	**Baumata**	**24.35**	**260**	P	**P**	**15 53 08.8**	**+0.5**
	13nm,0.7s,baz=117,slow=2.3,SNR=4.9						
	13nm,0.7s						
FITZ	**Fitzroy Crossi**	**24.61**	**240**	P	**P**	**15 53 09.8**	**-0.8**
	12nm,0.5s,baz=53,slow=8.1,SNR=83						
	12nm,0.5s						
STKA	**Stephens Creek**	**25.82**	**193**	P	**P**	**15 53 21.3**	**-0.1**
	2.4nm,0.5s,baz=2.7,slow=7.4,SNR=7.0						
	2.4nm,0.5s						
PETK	**Petropavlovsk-**	**60.08**	**7**	P	**P**	**15 57 56.5**	**-0.1**
	5.8nm,1.0s,baz=176,slow=6.5,SNR=6.1						
	5.8nm,1.0s						
MKAR	**Makanchi Array**	**78.63**	**320**	P	**P**	**15 59 52.8**	**+1.3**
	0.7nm,0.9s,baz=93,slow=6.9,SNR=1.4						
	0.7nm,0.9s						
ILAR	**Eielson Array**	**85.67**	**23**	P	**P**	**16 00 26.6**	**-1.3**
	0.4nm,0.7s,baz=242,slow=6.0,SNR=6.3						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**146.23**	**284**	PKPbc	**PKPdf**	**16 07 28.9**	**-0.8**
	0.3nm,0.3s,baz=114,slow=1.1,SNR=4.1						

*IDC **30** 15:58:52.0*±*0.8,27°.70N×101°.21E, h0*km,*mb3.6/11,*
mbtmp3.6/13, ML3.8/2, MS3.3/8, Error ellipse:
s-maj=24.9km s-min=15.1km az=72.0

ISC 30 15:58:53.4±0.8,**27°.71N**±0°.09×**101°.2E**±0°.2,**h8**km,**n17,**
σ0§83/13, mb3.6/10,**MS3.1**/7,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZDM	**Lanzhou Array**	**8.49**	**14**	Pn	**Pn**	**16 00 58.3**	**+1.3**
	baz=164,slow=11						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**9.44**	**193**	Pn	**Pn**	**16 01 10.6**	**+0.8**
	0.3nm,0.3s,baz=14,slow=12,SNR=7.0						
CMAR				Pg		16 01 46.9	
	0.4nm,0.3s,baz=9.6,slow=16,SNR=13						
CMAR				Lg	Lg	16 03 51.6	
	0.5nm,0.3s,baz=15,slow=31,SNR=6.2						
CMAR				LR	LR	16 05 23.8	
	comp=Z,69nm,18.1s,baz=15,slow=42						
	0.7nm,0.8s						
SONM	**Songino Array**	**20.50**	**10**	P	**P**	**16 03 31.3**	**-0.6**
	1.0nm,0.8s,baz=202,slow=11,SNR=4.6						
SONM				LR	LR	16 12 10.4	
	comp=Z,112nm,18.2s,baz=44,slow=39						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**24.17**	**327**	P	**P**	**16 04 10.5**	**+0.3**
	1.0nm,0.6s,baz=124,slow=8.5,SNR=6.3						
	1.0nm,0.6s						
KSRS	**Korea Array**	**24.45**	**60**	P	**P**	**16 04 12.4**	**-0.3**
	0.9nm,0.8s,baz=268,slow=12,SNR=4.1						
	0.9nm,0.8s						
HILR	**Hailar Array B**	**26.05**	**28**	P	**P**	**16 04 27.3**	**+0.1**
	0.2nm,0.3s,baz=215,slow=9.1,SNR=2.3						
	0.2nm,0.3s						
JNU	**Nakatsue**	**26.10**	**71**	LR	LR	16 14 51.1	
	comp=Z,37nm,18.9s,baz=291,slow=37						
AAK	**Ala-Archa**	**26.29**	**312**	LR	LR	16 15 17.8	
	comp=Z,50nm,19.5s,baz=167,slow=38						
KURBB	**Kurchatov Arra**	**28.64**	**329**	P	**P**	**16 04 50.5**	**+0.1**
	0.2nm,0.4s,baz=142,slow=9.3,SNR=4.9						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**28.85**	**340**	P	**P**	**16 04 52.1**	**0.0**
	0.9nm,0.6s,baz=140,slow=9.5,SNR=3.9						
ZALV				LR	LR	16 17 41.2	
	comp=Z,34nm,18.6s,baz=124,slow=39						
	0.9nm,0.6s						
MJAR	**Matsushiro Arr**	**32.39**	**65**	LR	LR	16 20 08.4	
	comp=Z,33nm,18.1s,baz=259,slow=39						
BVAR	**Borovoye Array**	**34.05**	**326**	P	**P**	**16 05 37.0**	**-0.9**
	0.3nm,0.5s,baz=134,slow=10,SNR=2.4						
	0.3nm,0.5s						
ASF	**Jabal al Asfar**	**55.17**	**291**	LR	LR	16 36 41.3	
	comp=Z,47nm,18.5s,baz=258,slow=41						
BRTR	**Keskin Array B**	**56.26**	**301**	P	**P**	**16 08 35.5**	**+0.8**
	0.6nm,0.8s,baz=119,slow=8.4,SNR=3.7						
	0.6nm,0.8s						
WRA	**Warramunga Arr**	**57.21**	**142**	P	**P**	**16 08 40.8**	**-0.5**
	1.5nm,0.6s,baz=330,slow=7.8,SNR=6.1						
	1.5nm,0.6s						
AKASG	**Malin Array Be**	**57.90**	**314**	P	**P**	**16 08 44.4**	**-1.4**
	0.2nm,0.3s,baz=74,slow=6.8,SNR=2.1						
AKASG				LR	LR	16 38 04.9	
	comp=Z,61nm,18.6s,baz=16,slow=41						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**60.04**	**145**	P	**P**	**16 09 00.6**	**-0.5**
	0.5nm,0.5s,baz=327,slow=6.8,SNR=28						
	0.5nm,0.5s						

*TIR **30** 16:04:08.6, 41°.54N×19°.53E, h26km, Md2.8/6, Ml2.8/5*
*BEO **30** 16:04:10.6*±*0.6, 41°.61N×19°.70E, h2km*±*2km, ML2.5/12*
*PDG **30** 16:04:10.8*±*0.3, 41°.58N×19°.59E, h1km*±*11km, ML2.5/12,*
Error ellipse: s-maj=1.1km s-min=1.3km az=0.0

ISC 30 16:04:09.5±1.0,**41°.55N**±0°.02×**19°.56E**±0°.02,**h12**km±8km,
n56,σ1§04/94,21C-5D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**132**	Pg	**Pg**	**16 04 16.2**	**+0.5**
TIR				Sg	**Sg**	**16 04 19.9**	**0.0**
TIR				AML	AML	16 04 22.0	
	1.6nm,0.5s						
TIR				AML	AML	16 04 24.0	
	1.2nm,0.3s						
ULC	**Ulcinj**	**0.47**	**330**	*e*Pg	**Pg**	**16 04 18.3**	**-0.5**
ULC				*i* Sg	**Sg**	**16 04 24.7**	**-0.4**
SDA	**Shkodra**	**0.50**	**355**	Pg	**Pg**	**16 04 19.1**	**-0.1**
SDA				Sg	**Sb**	**16 04 26.5**	**-0.9**
SDA				AMd		16 05 20.2	
PHP	**Peshkopia**	**0.67**	**78**	Pg	**Pg**	**16 04 22.0**	**-0.6**
PHP				Sg	**Sb**	**16 04 32.1**	**-0.3**
PHP				AML	AML	16 04 35.3	
	1.6nm,0.3s						
PHP				AMd		16 05 10.8	
DRME	**Dracevica, Mon**	**0.69**	**336**	*e*Pg	**Pg**	**16 04 22.4**	**-0.5**
DRME	**Dracevica, Mon**	**0.69**	**336**	⇑*i*Pg	**Pg**	**16 04 22.3**	**-0.6**
DRME				*i* Sg	**Sg**	**16 04 32.1**	**+0.1**
BUM	**Brajici-Budva**	**0.90**	**327**	⇑*i*Pg	**Pg**	**16 04 26.2**	**-0.6**
BUM				*i* Sg	**Sb**	**16 04 39.3**	**+0.3**
PDG	**Podgorica**	**0.91**	**346**	Pg	**Pg**	**16 04 26.1**	**-0.9**
PDG				Sg	**Sb**	**16 04 39.2**	**+0.1**
PDG				AMd		16 05 19.0	
PDG	**Podgorica**	**0.91**	**346**	⇑P	**Pg**	**16 04 26.3**	**-0.6**
PDG				⇑S	**Sg**	**16 04 36.7**	**-2.1**
PDG	**Podgorica**	**0.91**	**346**	*e*Pg	**Pg**	**16 04 26.5**	**-0.5**
PDG				*e*Sg	**Sb**	**16 04 39.8**	**+0.7**
PDG	**Podgorica**	**0.91**	**346**	*e*Pg	**Pg**	**16 04 25.9**	**-1.1**
PDG				*i* Sg	**Sb**	**16 04 39.2**	**+0.1**
PVY	**Plav**	**1.08**	**16**	*e*Pg	**Pb**	**16 04 29.2**	**-1.0**
PVY	**Plav**	**1.08**	**16**	⇓*i*Pg	**Pb**	**16 04 29.2**	**-1.0**
PVY				*i* Sg	**Sn**	**16 04 45.1**	**-0.4**
VLO	**Vlora**	**1.08**	**183**	Pg	**Pb**	**16 04 28.5**	**-1.6**
VLO				AML	AML	16 04 54.0	
	3.0nm,0.1s						
VLO				AMd		16 05 15.5	
CEME	**Cevo**	**1.10**	**334**	*e*Pg	**Pb**	**16 04 29.8**	**-0.7**
CEME				*i* Sg	**Sn**	**16 04 46.1**	**+0.1**
HCY	**Herceg Novi**	**1.20**	**319**	*e*Pg	**Pb**	**16 04 31.8**	**-0.3**
HCY				*i* Sg	**Sn**	**16 04 49.7**	**+1.5**
NKME	**Niksic**	**1.29**	**340**	*e*Pg	**Pn**	**16 04 33.3**	**-0.1**
NKME				*i* Sg	**Sg**	**16 04 52.4**	**+1.2**
KOME	**Kolasin**	**1.30**	**358**	*e*Pg	**Pb**	**16 04 33.9**	**+0.1**
KOME	**Kolasin**	**1.30**	**358**	*e*Pg	**Pn**	**16 04 33.2**	**-0.3**
KOME				*i* Sg	**Sg**	**16 04 52.4**	**+1.1**
KBN	**Korca**	**1.31**	**135**	Sn	**Sb**	**16 04 51.1**	**+0.2**
BEY	**Berane**	**1.34**	**10**	*e*Pg	**Pb**	**16 04 34.4**	**-0.2**
IVA	**Berane**	**1.34**	**10**	⇓*i*Pg	**Pn**	**16 04 34.0**	**-0.1**
IVA				*i* Sg	**Sg**	**16 04 53.9**	**+1.2**
TREB	**Trebinje**	**1.47**	**323**	*e*Pg	**Pb**	**16 04 36.6**	**-0.1**
TREB				*e*Sg	**Sg**	**16 04 57.0**	**+0.2**
BRY	**Bratogost**	**1.55**	**331**	*e*Pg	**Pb**	**16 04 38.1**	**0.0**
BRY				*i* Sg	**Sg**	**16 05 01.2**	**+1.9**
SJES	**Sjenica**	**1.73**	**10**	*e*Pg	**Pb**	**16 04 41.7**	**+0.4**
SJES				*e*Sg	**Sb**	**16 05 03.1**	**0.0**
PLE	**Pljevlja**	**1.78**	**356**	*e*Pg	**Pb**	**16 04 42.5**	**+0.4**
PLE	**Pljevlja**	**1.78**	**356**	*e*Pn	**Pb**	**16 04 42.2**	**+0.1**
PLE				*i* Sn	**Sg**	**16 05 08.0**	**+1.3**
STON	**Ston**	**1.91**	**314**	*e*Pn	**Pb**	**16 04 43.3**	**-0.9**
STON				*e*Sg	**Sg**	**16 05 12.9**	**+2.0**
SELS	**Selova**	**2.03**	**34**	*e*Pg	**Pn**	**16 04 44.7**	**+1.3**
SELS				*e*Sg	**Sn**	**16 05 09.9**	**+1.2**
NOCI	**Noci**	**2.03**	**249**	Pn	**Pn**	**16 04 44.4**	**+0.8**
NOCI				Sn	**Sb**	**16 05 10.4**	**-1.1**
NOCI				AML	AML	16 05 17.7	
	0.3nm,0.4s						
NOCI				AMd		16 06 16.4	
IVAS	**Ivanjica**	**2.07**	**12**	*e*Pn	**Pb**	**16 04 45.8**	**-1.2**
IVAS				*e*Sn	**Sb**	**16 05 11.4**	**-1.3**
RUDO	**Rudo**	**2.07**	**356**	*e*Pg	**Pb**	**16 04 47.0**	**+0.1**
BARS	**Barje**	**2.10**	**52**	*e*Pg	**Pn**	**16 04 45.9**	**+1.5**
IGT	**Igoumenitsa**	**2.10**	**164**	Pg	**Pn**	**16 04 45.4**	**+0.9**
IGT				Sg	**Sb**	**16 05 13.0**	**-0.5**
IGT				AML	AML	16 05 25.4	
	0.2nm,1.0s						
IGT				AMd		16 06 10.7	
BBLS	**Lazi&#263i**	**2.31**	**357**	*e*Pn	**Pb**	**16 04 49.7**	**-1.5**
BBLS				*e*Sn	**Sn**	**16 05 16.5**	**+0.6**
MATE	**Matera**	**2.34**	**248**	⇓P	**Pb**	**16 04 52.7**	**+1.1**
MATE				⇑S	**Sg**	**16 05 23.6**	**-1.1**
BOSS	**Bosilegrad**	**2.37**	**66**	*e*Pg	**Pn**	**16 04 49.8**	**+1.6**
GRUS	**Gruza**	**2.48**	**20**	*e*Pn	**Pn**	**16 04 51.0**	**+1.3**
BOVS	**Bovan**	**2.62**	**37**	⇑P	**Pn**	**16 04 53.1**	**+1.7**
BOVS				⇑S	**Sn**	**16 05 22.6**	**-0.5**
BOVS	**Bovan**	**2.62**	**37**	*e*Pn	**Pn**	**16 04 52.6**	**+1.1**
BOVS				*e*Sn	**Sn**	**16 05 23.6**	**+0.5**
TRUS	**Trudelj**	**2.74**	**13**	*e*Pn	**Pn**	**16 04 55.6**	**+2.4**
ZAPS	**Zavoj**	**2.85**	**52**	*e*Pn	**Pn**	**16 04 56.0**	**+1.2**
ZAPS				*e*Sn	**Sn**	**16 05 29.4**	**+0.3**
VTS	**Vitosha**	**2.93**	**68**	*e*Pn	**Pn**	**16 04 56.7**	**+0.7**
TEKS	**Tekeris**	**3.00**	**360**	*e*Pn	**Pn**	**16 04 58.2**	**+1.5**
ZAGS	**Zajecar**	**3.00**	**40**	*e*Pn	**Pn**	**16 04 57.9**	**+1.2**
ZAGS				*e*Sn	**Sn**	**16 05 33.3**	**+0.7**
BORS2	**Bor- Borsko je**	**3.11**	**35**	*e*Pn	**Pn**	**16 04 58.1**	**-0.3**
KUBS	**Kucevo**	**3.25**	**28**	*e*Pn	**Pn**	**16 04 59.6**	**-0.7**
MDVR	**Moldovita**	**3.59**	**25**	⇑P	**Pn**	**16 05 05.7**	**+0.7**
MDVR				⇑S	**Sn**	**16 05 46.3**	**-1.0**
HERR	**Herculane**	**3.93**	**31**	⇑P	**Pn**	**16 05 10.4**	**+0.9**
HERR				⇑S	**Sn**	**16 05 54.4**	**-1.1**
BZS	**Buzias**	**4.33**	**19**	⇑P	**Pn**	**16 05 15.8**	**+0.8**
BZS				⇑S	**Sn**	**16 06 03.7**	**-1.7**
GZR	**Gura Zlata**	**4.50**	**30**	⇓P	**Pn**	**16 05 18.5**	**+1.1**
GZR				⇓S	**Sn**	**16 06 09.0**	**-0.7**
SURR	**Surduc**	**4.59**	**23**	⇑P	**Pn**	**16 05 19.9**	**+1.3**
SURR				⇑S	**Sn**	**16 06 10.2**	**-1.7**
MORH	**Mrgy, Hungar**	**4.71**	**352**	⇑P	**Pn**	**16 05 21.4**	**+1.2**
SIRR	**Siria**	**4.95**	**17**	⇑P	**Pn**	**16 05 24.6**	**+1.0**
SIRR				⇓S	**Sn**	**16 06 18.8**	**-2.0**
VOIR		**5.57**	**44**	⇑P	**Pn**	**16 05 33.3**	**+1.1**
DRGR		**5.71**	**22**	⇑P	**Pn**	**16 05 35.6**	**+1.6**
DRGR				⇑S	**Sn**	**16 06 37.4**	**-2.0**

*BJI **30** 16:16:51.1, 27°.26S×177°.12W, h167km, mB5.4/8,*
mb4.8/19
*NOU **30** 16:16:51.3, 27°.37S×176°.86W, h175km, mb5.2/81,*
Kermadec Islands Region
*NEIC **30** 16:16:52.1, 27°.14S×177°.53W, h160km*
*NEIC **30** 16:16:52.1, 27°.14S×176°.86W, h160km, Moment Tensor*
*Solution. Duration: 2*s*1 Moment tensor: Scale 10^17Nm;*
Mrr0.31; Mθθ-0.64; Mφφ0.33; Mrθ-0.52; Mrφ0.16; Mθφ0.78;
Fault plane solution: M0 1.10000×10^17 NP1:φ0=64.69000°,
δ29.16000°, λ18.53000°. NP2:φ0=318.37000°, δ81.10000°,
λ117.88000°. Principal axes: T 1.1413, Plg47.0000°,
Azm257.0000°; N -0.0799, Plg28.0000°, Azm134.0000°;
P -1.0614, Plg31.0000°, Azm26.0000°;
*IDC **30** 16:16:52.7*±*0.3, 27°.20S×177°.63W, h149km*±*2km, mb4.5/17,*
mbtmp4.9/18, MS4.0/35 Error ellipse: s-maj=10.4km
s-min=7.1km az=100.0
*NEIC **30** 16:16:53.6*±*2.1, 27°.18S*±*0°.08×177°.6W*±*0°.1, h156km*±*4km,*
mb5.1/237, Mww5.3/25, Error ellipse: s-maj=16.8km
s-min=11.5km az=109.0
*GCMT **30** 16:16:56.1*±*0.1, 27°.03S*±*0°.01×177°.33W*±*0°.01,*
h153km, MW5.4/138, Moment Tensor Solution.
s114,c191; s138,c247; Duration: 1§2 Moment tensor:
Scale 10^17Nm; Mrr0.31±.02; Mθθ-0.93±.02; Mφφ0.62±.02;
Mrθ-1.00±.02; Mrφ-0.28±.02; Mθφ0.91±.01; Best double
couple: M0 1.59800×10^17 NP1:φ0=43.00000°, δ32.00000°,
λ12.00000°. NP2:φ0=303.00000°, δ84.00000°, λ122.00000°.
Principal axes: T 1.6860, Plg42.0000°, Azm244.0000°;
N -0.1760, Plg31.0000°, Azm120.0000°; P -1.5100,
Plg31.0000°, Azm8.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function

ISC 30 16:16:53.3±0.3,**27°.25S**±0°.04×**177°.55W**±0°.04,
h158km±2km,**h159**km:**pP-P,n606,σ1§66/462,mb5.1**/184,
15C-3D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**2.02**	**189**	P	**Pn**	**16 17 27.9**	**-1.2**
RIZ				S	**Sn**	**16 17 58.5**	**+1.7**
RAO	**Raoul Island**	**2.02**	**189**	P	**Pn**	**16 17 28.2**	**-0.9**
	12µm,0.2s,baz=74,slow=5.4,SNR=245						
RAO				S	**Sn**	**16 17 56.2**	**-0.7**
	19µm,0.3s,baz=277,slow=23,SNR=12						
RAO	**Raoul Island**	**2.02**	**189**		**Pn**	**16 17 28.2**	**-0.9**
RAO				Sn	**Sn**	**16 17 58.0**	**+1.1**
RAO	**Raoul Island**	**2.02**	**189**	P	**Sn**	**16 17 57.7**	**+0.8**
RAO	**Raoul Island**	**2.02**	**189**	P	**Pn**	**16 17 28.2**	**-0.9**
GLKZ	**Green Lake**	**2.03**	**189**	P	**Pn**	**16 17 28.2**	**-1.0**
GLKZ				S	**Sn**	**16 17 58.2**	**+1.1**
MSVF	**Nonsavu**	**10.30**	**336**		**Pn**	**16 19 16.8**	**-0.5**
MSVF	**Nonsavu**	**10.30**	**336**	P	**Pn**	**16 19 18.0**	**+0.7**
NIUE	**Niue**	**10.74**	**42**	P	Pn	16 19 17.2	-5.6
	comp=Z,682nm,0.7s						
NIUE	**Niue**	**10.74**	**42**	Pn	Pn	16 19 17.7	-5.2
NIUE	**Niue**	**10.74**	**42**	P	Pn	16 19 16.7	-6.2
NIUE	**Niue**	**10.74**	**42**	P	Pn	16 19 16.5	-6.4
NIUE				S	Sn	16 21 06.2	-16
MXZ	**Matakaoa Point**	**10.86**	**198**	P	Pn	16 19 14.9	-9.5
MXZ	**Matakaoa Point**	**10.86**	**198**	P	Pn	16 19 15.4	-9.0
MXZ				S	Sn	16 21 11.3	-13
OUZ	**Omahuta**	**10.97**	**221**	P	**Pn**	**16 19 28.9**	**+3.0**
OUZ	**Omahuta**	**10.97**	**221**	P	**Pn**	**16 19 29.5**	**+3.6**
OUZ	**Omahuta**	**10.97**	**221**	P	**Pn**	**16 19 27.1**	**+1.3**
KUZ	**Kuaotunu**	**11.05**	**209**	P	**Pn**	**16 19 26.0**	**-0.9**
KUZ	**Kuaotunu**	**11.05**	**209**	P	**Pn**	**16 19 25.8**	**-1.1**
WCZ	**Waipu Caves**	**11.07**	**217**	P	**Pn**	**16 19 28.7**	**+1.5**
HAZ	**Te Kaha**	**11.19**	**199**	P	Pn	16 19 19.7	-9.0
HAZ				S	Sn	16 21 21.5	-11
PKGZ	**Pakihiroa**	**11.21**	**198**	P	Pn	16 19 18.0	-11
PKGZ				S	Sn	16 21 20.5	-12
PUZ	**Puketiti**	**11.35**	**197**	P	Pn	16 19 21.2	-10
PUZ				S	Sn	16 21 24.6	-12
RUGZ	**Raukumara Rang**	**11.42**	**199**	P	Pn	16 19 22.4	-9.3
RUGZ				S	Sn	16 21 22.7	-15
TWGZ	**Tauwhareparae**	**11.53**	**198**	P	Pn	16 19 24.1	-9.1
TWGZ				S	Sn	16 21 29.8	-11
MKAZ	**Moumakai**	**11.60**	**210**	P	**Pn**	**

PRWZ **Pori Road** 14.31 200 P Pn 16 20 00.4 -8.3
AFI **Afiamalu** 14.33 23 P Pn 16 20 03.6 -5.5
MARNC **Mare, Loyalty** 14.33 290 P **P** **16 20 13.3 +1.8**
MARNC **Mare, Loyalty** 14.33 290 P **P** **16 20 13.4 +1.9**
BFZ **Birch Farm** 14.35 199 P **Pn** **16 20 08.8 -0.3**
BFZ **Birch Farm** 14.35 199 P Pn 16 19 58.5 -11
BFZ **Birch Farm** 14.35 199 P Pn 16 19 57.3 -12
PINNC **Pines Island,** 14.37 285 **Pn** **16 20 09.4 -0.1**
PINNC **Pines Island,** 14.37 285 P **P** **16 20 16.1 +4.2**
PINNC **Pines Island,** 14.37 285 P **P** **16 20 16.3 +4.4**
MRZ **Mangatainoka R** 14.53 201 P Pn 16 19 59.0 -12
CPWZ **Castlepoint** 14.57 199 P Pn 16 20 04.2 -7.6
HOWZ **Holdsworth Sta** 14.77 201 P Pn 16 20 05.2 -9.2
OGWZ **Otaki Gorge** 14.81 202 P Pn 16 20 02.8 -12
TMWZ **Te Maipa** 14.84 200 P Pn 16 20 03.5 -12
KIW **Kapiti Island** 14.94 203 P Pn 16 20 06.4 -10
OUENC **Ouen Island, N** 14.96 285 P **P** **16 20 22.5 +4.0**
OUENC **Ouen Island, N** 14.96 285 P **P** **16 20 23.2 +4.7**
MTW **Mount Morrison** 15.01 201 P Pn 16 20 07.2 -10
YATNC **Mamie plateau,** 15.05 287 P **P** **16 20 23.1 +3.6**
YATNC **Mamie plateau,** 15.05 287 P **P** **16 20 23.5 +4.0**
TRWZ **Traveller** 15.17 200 P Pn 16 20 11.6 -7.7
PAWZ **Paruwai Farm** 15.24 200 P Pn 16 20 11.1 -9.1
DUWZ **D'Urville Isla** 15.24 205 P Pn 16 20 11.7 -8.5
MSWZ **Moikau Station** 15.32 201 Pn 16 20 11.7 -10
MSWZ **Moikau Station** 15.32 201 P Pn 16 20 11.8 -9.4
ONTNC **Ouen Toro** 15.33 285 P **P** **16 20 27.0 +4.3**
ONTNC **Ouen Toro** 15.33 285 P **P** **16 20 26.9 +4.3**
SNZO **South Karori** 15.41 202 Pn 16 20 13.3 -8.8
SNZO **South Karori** 15.41 202 P Pn 16 20 15.4 -6.8
DZM **Mont Dzumac** 15.43 286 P **P** **16 20 26.1 +2.2**
comp=Z,148nm,0.6s,baz=191,slow=18,SNR=23
DZM S **S** **16 23 21.4 +4.3**
comp=Z,4.6nm,0.7s,baz=133,slow=22,SNR=1.1
DZM LR LR 16 24 32.4
comp=Z,669nm,18.6s,baz=97,slow=30
DZM **Mont Dzumac** **15.43 286** *e*P **P** **16 20 24.4 +0.6**
comp=Z,331nm,0.8s
DZM *e*S **Sn** **16 23 13.3 -1.4**
comp=Z,124nm,1.7s
DZM **Mont Dzumac** **15.43 286** P **P** **16 20 27.6 +3.8**
DZM **Mont Dzumac** **15.43 286** P **P** **16 20 27.0 +3.2**
BHW **Baring Head** 15.44 202 Pn 16 20 13.1 -10
BHW **Baring Head** 15.44 202 P Pn 16 20 13.4 -9.2
PLWZ **Palliser** 15.46 201 Pn 16 20 14.5 -8.4
PLWZ **Palliser** 15.46 201 P Pn 16 20 14.1 -8.8
TCW **Tory Channel** 15.47 204 Pn 16 20 14.2 -8.7
TCW **Tory Channel** 15.47 204 P Pn 16 20 11.7 -11
TUWZ **Tuamarina** 15.78 204 Pn 16 20 17.8 -9.0
NNZ **Nelson** 15.81 206 Pn 16 20 19.6 -7.5
QRZ **Quartz Range** 15.83 209 P **Pn** **16 20 27.0 -0.4**
QRZ **Quartz Range** 15.83 209 P **Pn** **16 20 21.2 -6.2**
CMWZ **Cape Campbell** 15.97 203 P **Pn** **16 20 29.7 +0.6**
CMWZ S S 16 23 09.3 -17
RTV **Rentapao** 16.00 303 P **P** **16 20 33.4 +3.4**
RTV **Rentapao** 16.00 303 P **Pn** **16 20 25.4 -4.2**
DVP **Devils Point** 16.22 303 P **P** **16 20 36.6 +4.2**
DVP **Devils Point** 16.22 303 P **Pn** **16 20 27.8 -4.5**
CTZ **Chatham Island** 16.47 178 P **P** **16 20 31.2 -3.8**
CTZ **Chatham Island** 16.47 178 P **P** **16 20 36.0 +1.0**
CTZ S S 16 23 24.7 -13
KHZ **Kahutara** 16.79 203 P P 16 20 30.0 -8.5
RAR **Rarotonga** 17.29 74 P **P** **16 20 44.2 0.0**
comp=Z,28nm,0.8s,baz=242,slow=6.4,SNR=7.6
RAR S S 16 23 43.7 -13
comp=Z,39nm,0.7s,baz=215,slow=18,SNR=3.7
RAR **Rarotonga** **17.29 74** P P 16 20 36.3 -7.9
RAR **Rarotonga** **17.29 74** P **Pn** **16 20 48.6 +3.5**
GVZ **Greta Valley S** 17.45 204 **P** **16 20 40.0 -5.8**
OXZ **Oxford** 18.13 205 P P 16 20 47.0 -6.3
RPZ **Rata Peaks** 18.84 206 P **P** **16 20 56.9 -4.1**
comp=Z,27nm,0.6s,baz=349,slow=1.5,SNR=16
RPZ S S 16 24 10.0 -17
comp=Z,117nm,0.6s,baz=14,slow=19,SNR=16
RPZ **Rata Peaks** **18.84 206** P P 16 20 54.7 -6.3
RPZ **Rata Peaks** **18.84 206** P **P** 16 20 54.0 -6.9
FOZ **Fox Glacier** 19.20 209 P **P** **16 21 01.1 -3.7**
JCZ **Jackson Bay** 20.08 210 P **P** **16 21 08.4 -6.0**
ODZ **Otahua Downs** 20.12 205 P **P** **16 21 11.1 -3.6**
ODZ **Otahua Downs** 20.12 205 P **P** **16 21 12.8 -1.9**
ODZ **Otahua Downs** 20.12 205 P P 16 21 04.4 -10
LHI **Lord Howe Isla** 20.80 253 P Pn 16 21 26.6 -0.2
comp=Z,231nm,1.3s
LHI **Lord Howe Isla** **20.80 253** P **P** **16 21 23.5 +1.3**
TBI **Tubuai** **25.67 88** *e*P **P** **16 22 12.1 +3.5**
comp=Z,964nm,31.0s
TBI *e*S **S** **16 26 26.4 +1.0**
comp=Z,6μm,32.2s
TBI *e*S**S** **sS** **16 27 27.2 +4.2**
comp=Z,4μm,39.2s
AUWSH **Wavell State H** 26.10 263 P **P** **16 22 14.6 +2.2**
TW1H **Toowoomba 1 Ha** **27.03 262** P **P** **16 22 23.1 +2.3**
PPT2 **Papeete2** **27.54 75** *e*P **P** **16 22 25.3 -0.1**
comp=Z,302nm,30.0s
PPT2 *e*S **S** **16 26 48.8 -6.2**
comp=Z,187nm,23.5s
PPT2 *e*S**S** **sS** **16 27 50.4 -2.5**
comp=Z,666nm,26.5s
PPT **Papeete** **27.55 75** LR LR 16 31 59.0
comp=Z,136nm,19.4s,baz=254,slow=33
MGCD **Mangrove Creek** **27.66 250** P **P** **16 22 28.1 +1.8**
comp=Z,62nm,0.9s
AUPHS **Peel High Scho** 27.77 254 P **P** **16 22 29.1 +1.8**
EIDS **Eidsvold** **28.14 267** P **P** **16 22 31.4 +0.7**
comp=Z,41nm,0.6s
EIDS **Eidsvold** **28.14 267** P **P** **16 22 30.6 -0.1**
EIDS IAmb IAmb 16 22 33.5
comp=Z,25nm,0.6s
EIDS **Eidsvold** **28.14 267** P **P** **16 22 31.9 +1.2**
TATA **Tatamba Isabel** **28.48 307** P **P** **16 22 35.1 +1.4**
AUNRC **North Rockhamp** 29.07 271 P **P** **16 22 41.1 +2.2**
CNB **Canberra Magne** **29.29 246** P **P** **16 22 41.9 +1.1**
comp=Z,37nm,1.6s,comp=Z,0.0nm
AUSIS **Research Schoo** 29.50 246 P **P** **16 22 44.6 +2.0**
CAN **Canberra** **29.59 246** P **P** **16 22 43.1 -0.3**
AUDCS **Dubbo College** 29.70 252 P **P** **16 22 46.4 +2.0**
MILA **Mila** **29.70 242** P **P** **16 22 46.2 +1.8**
comp=Z,29nm,0.8s
YNG **Young** **29.99 248** P **P** **16 22 49.0 +2.1**
comp=Z,30nm,1.7s
AUSMG **Snowy Mountain** 30.04 244 P **P** **16 22 49.5 +2.0**
AULRC **Lightning Ridg** 30.35 258 P **P** **16 22 52.0 +1.8**
GLAD **Gladstone** 31.41 235 P **P** **16 23 00.5 +1.1**
CMSA **Cobar Meteorol** **32.21 253** P **P** **16 23 07.4 +0.9**
comp=Z,59nm,1.5s
CMSA **Cobar Meteorol** **32.21 253** P **P** **16 23 07.7 +1.2**
TAU **Tasmania Unive** **32.44 232** P **P** **16 23 09.1 +0.8**
TOO **Toolangi** **32.67 242** P **P** **16 23 09.6 -0.8**
comp=Z,7.3nm,0.8s
TOO **Toolangi** **32.67 242** P **P** **16 23 11.1 +0.7**
AUMAG **Moama Anglican** 33.11 245 P **P** **16 23 15.8 +1.6**
CTA **Charters Tower** 33.82 274 P **P** **16 23 21.8 +1.2**
CTA **Charters Tower** 33.82 274 P **P** **16 23 21.8 +1.2**
CTAO **Charters Tower** 33.82 274 P **P** **16 23 21.4 +0.9**
CTAO **Charters Tower** 33.82 274 P **P** **16 23 21.9 +1.3**
CTAO **Charters Tower** 33.82 274 P **P** **16 23 21.9 +1.3**
CTAO pP **pP** **16 23 52.6 -0.9**
BRAT **Ballarat** **33.90 243** P **P** **16 23 22.5 +1.5**
AUMTC **Mt Clear Colle** 33.95 242 P **P** **16 23 22.9 +1.5**
QLP **Quilpie** **33.99 262** P **P** **16 23 22.2 +0.3**
comp=Z,57nm,1.4s
QLP **Quilpie** **33.99 262** P **P** **16 23 23.2 +1.2**
ARPS **Mount Arapiles** 35.50 244 P **P** **16 23 35.3 +0.6**
comp=Z,37nm,1.8s
STKA **Stephens Creek** **35.68 253** P **P** **16 23 36.5 +0.1**
comp=Z,179nm,2.2s
STKA **Stephens Creek** **35.68 253** P **P** **16 23 36.5 +0.1**
comp=Z,15nm,0.9s,baz=96,slow=11,SNR=21
STKA pP **pP** **16 24 08.2 -1.3**
comp=Z,7.8nm,0.8s,baz=110,slow=9.9,SNR=2.4
STKA LR LR 16 35 43.3
comp=Z,188nm,20.0s,baz=80,slow=32
comp=Z,15nm,0.9s
STKA **Stephens Creek** **35.68 253** P **P** **16 23 36.7 +0.3**
STKA **Stephens Creek** **35.68 253** P **P** **16 23 37.5 +1.1**
MTSU **Mount Surprise** **36.21 276** P **P** **16 23 41.9 +0.8**
comp=Z,50nm,0.9s
MTSU **Mount Surprise** **36.21 276** P **P** **16 23 42.5 +1.4**
INKA **Innaminka** **36.87 259** P **P** **16 23 47.2 +0.7**
AUMBR **Murray Bridge** 37.52 247 P **P** **16 23 52.3 +0.4**
PMG **Port Moresby** **37.72 291** LR LR 16 36 38.8
comp=Z,350nm,18.6s,baz=131,slow=32
PMG **Port Moresby** **37.72 291** P **P** **16 23 53.5 -0.4**
PMG IAmb IAmb 16 23 57.2
comp=Z,37nm,1.0s
PMG **Port Moresby** **37.72 291** P **P** **16 23 55.5 +1.7**
HTT **Hallett** **37.86 250** P **P** **16 23 54.3 -0.6**
comp=Z,34nm,1.0s
HTT **Hallett** **37.86 250** P **P** **16 23 55.1 +0.2**
AUJCS **Jamestown Cent** **38.13 250** P **P** **16 23 58.5 +1.4**
COEN **Coen** **38.90 282** P **P** **16 24 04.5 +0.9**
comp=Z,18nm,0.5s
COEN **Coen** **38.90 282** P **P** **16 24 04.2 +0.5**
COEN **Coen** **38.90 282** P **P** **16 24 05.0 +1.3**
WHYH **Whyalla** **39.01 250** P **P** **16 24 04.6 +0.2**
QIS **Mount Isa** **39.58 270** P **P** **16 24 09.2 -0.1**
comp=Z,46nm,1.3s
QIS **Mount Isa** **39.58 270** P **P** **16 24 09.8 +0.5**
BBOO **Buckleboo** **40.29 251** P **P** **16 24 13.6 -1.5**
comp=Z,73nm,1.2s
BBOO **Buckleboo** **40.29 251** P **P** **16 24 13.8 -1.2**
BBOO IAmb IAmb 16 24 14.8
comp=Z,51nm,0.9s
BBOO **Buckleboo** **40.29 251** P **P** **16 24 14.5 -0.6**
AS31 **Alice Springs** **43.76 263** P **P** **16 24 43.3 0.0**
AS31 IAmb IAmb 16 24 45.8
comp=Z,18nm,0.5s
ASAR **Alice Springs** **43.76 263** P **P** **16 24 42.8 -0.5**
comp=Z,25nm,0.5s,baz=92,slow=6.8,SNR=673
ASAR pP **pP** **16 25 16.8 -0.7**
comp=Z,11nm,1.0s,baz=112,slow=8.3,SNR=2.4
ASAR PcP **PcP** **16 26 27.6 +0.3**
comp=Z,1.3nm,0.3s,baz=123,slow=3.4,SNR=0.9
ASAR ScP **ScP** **16 30 05.4 +1.3**
comp=Z,0.8nm,0.5s,baz=108,slow=4.2,SNR=2.0
ASAR S **S** **16 31 01.4 -0.7**
comp=Z,1.4nm,0.9s,baz=99,slow=16,SNR=5.1
ASAR LR LR 16 43 54.7
comp=Z,297nm,18.6s,baz=98,slow=37
comp=Z,25nm,0.5s
AUALC **St Philip's Co** **43.77 263** P **P** **16 24 43.5 +0.1**
WR0 **Warramunga Arr** **44.28 269** P **P** **16 24 46.2 -1.3**
comp=Z,68nm,0.9s
WR8 **Warramunga Arr** **44.32 269** P **P** **16 24 47.0 -0.7**
WR8 IAmb IAmb 16 24 48.4
comp=Z,43nm,0.7s
WB1 **Warramunga Ar.** **44.45 269** P **P** **16 24 48.3 -0.5**
WRAB **Tennant Creek** **44.46 269** P **P** **16 24 48.4 -0.5**
WRAB **Tennant Creek** **44.46 269** P **P** **16 24 48.3 -0.5**
WRAB **Tennant Creek** **44.46 269** P **P** **16 24 48.1 -0.8**
WRAB PcP **PcP** **16 26 29.9 +0.2**
WRA **Warramunga Arr** **44.47 269** P **P** **16 24 48.4 -0.6**
comp=Z,62nm,0.6s,baz=104,slow=8.6,SNR=226
WRA pP **pP** **16 25 23.6 +0.4**
comp=Z,19nm,0.9s,baz=105,slow=8.0,SNR=3.2
WRA PcP **PcP** **16 26 29.9 +0.1**
comp=Z,5.4nm,0.7s,baz=115,slow=3.1,SNR=1.8
WRA S **S** **16 31 12.1 -0.1**
comp=Z,3.8nm,1.1s,baz=106,slow=15,SNR=2.8
WRA LR LR 16 42 21.4
comp=Z,171nm,20.2s,baz=70,slow=34
comp=Z,62nm,0.6s
WRA **Warramunga Arr** **44.47 269** P **P** **16 24 47.4 -1.6**
WB0 **Warramunga Arr** **44.47 269** P **P** **16 24 48.2 -0.8**
DRV **Dumont d'Urvil** **47.20 201** P **P** **16 25 09.4 -0.2**
FORT **Forrest** **47.31 252** P **P** **16 25 09.4 -1.7**
comp=Z,50nm,0.6s
FORT **Forrest** **47.31 252** P **P** **16 25 09.6 -1.4**
FORT IAmb IAmb 16 25 10.6
comp=Z,38nm,0.7s
WRKA **Warakurna** **48.34 260** P **P** **16 25 17.7 -1.5**
comp=Z,37nm,0.9s
KDU **Kakadu** **48.84 277** P **P** **16 25 21.8 -1.1**
comp=Z,35nm,0.6s
MTN **Manton Dam** **49.96 276** P **P** **16 25 30.5 -0.9**
comp=Z,28nm,0.6s
MTN **Manton Dam** **49.96 276** P **P** **16 25 31.0 -0.5**
MTN IAmb IAmb 16 25 34.1
comp=Z,20nm,0.6s
SRPI **Serui, Papua** **50.91 292** P **P** **16 25 38.3 -0.3**
comp=Z,3μmcomp=Z,51nm,0.7s
KNRA **Kununurra** **50.94 272** P **P** **16 25 38.5 -0.2**
comp=Z,74nm,0.6s
KNRA **Kununurra** **50.94 272** P **P** **16 25 38.4 -0.3**
SBA **Scott Base** **51.20 184** P **P** **16 25 42.5 +2.7**
VNDA **Vanda** **51.26 186** P **P** **16 25 42.5 +2.2**
comp=Z,20nm,0.6s,baz=2.7,slow=7.8,SNR=74
comp=Z,20nm,0.6s
VNDA **Vanda** **51.26 186** P **P** **16 25 42.2 +1.9**
VNDA IAmb IAmb 16 25 45.9
comp=Z,73nm,1.4s
VNDA **Vanda** **51.26 186** P **P** **16 25 42.5 +2.2**
VNDA pP **pP** **16 26 15.0 -0.8**
DHH **Diamond Head** **51.88 24** P **P** **16 25 45.5 0.0**
KMBL **Kambalda** **52.40 250** P **P** **16 25 47.8 -1.7**
comp=Z,13nm,1.5s
FITZ **Fitzroy Crossi** **52.83 267** P **P** **16 25 52.5 -0.2**
comp=Z,11nm,1.3s
FITZ **Fitzroy Crossi** **52.83 267** LR LR 16 47 16.3
comp=Z,210nm,18.7s,baz=96,slow=35
FITZ **Fitzroy Crossi** **52.83 267** P **P** **16 25 52.0 -0.8**
FITZ **Fitzroy Crossi** **52.83 267** P **P** **16 25 52.8 +0.1**
FAKI **Fak Fak** **53.69 288** P **P** **16 25 57.7 -1.3**
FAKI IAmb IAmb 16 27 06.1
comp=Z,67nm,1.4s
GUMO **Guam** **54.57 313** LR LR 16 45 50.6
comp=Z,81nm,21.5s,baz=146,slow=32
SWI **Sorong** **55.61 289** P **P** **16 26 12.7 -0.2**
comp=Z,125nm,0.8s
KLBR **Kellerberrin** **55.79 249** P **P** **16 26 12.4 -1.6**
comp=Z,81nm,0.7s
KLBR **Kellerberrin** **55.79 249** P **P** **16 26 12.8 -1.2**
NWAO **Narrogin (SRO)** **55.92 247** P **P** **16 26 13.6 -1.3**
NWAO IAmb IAmb 16 26 57.7
comp=Z,36nm,1.2s
CCD **Concordia, Ant** **56.08 196** P **P** **16 26 16.5 +0.7**
MEEK **Meekatharra** **56.32 255** P **P** **16 26 16.5 -1.4**
comp=Z,18nm,1.7s
MEEK **Meekatharra** **56.32 255** P **P** **16 26 16.4 -1.5**
PSAC2 **Pilbara Seismi** **56.74 261** P **P** **16 26 19.3 -1.6**
comp=Z,45nm,0.9s
PSA00 **Pilbara Seismi** **56.78 261** P **P** **16 26 19.1 -2.1**
PSA00 IAmb IAmb 16 26 21.4
comp=Z,53nm,1.8s
PSA00 **Pilbara Seismi** **56.78 261** P **P** **16 26 19.7 -1.5**
PSA00 IAmb IAmb 16 26 21.0
comp=Z,22nm,0.7s
BLDU **Ballidu** **56.90 250** P **P** **16 26 19.6 -2.3**
comp=Z,32nm,0.9s
BLDU **Ballidu** **56.90 250** P **P** **16 26 20.2 -1.7**
MBWA **Marble Bar** **57.02 261** P **P** **16 26 21.9 -0.9**
comp=Z,64nm,0.9s
MBWA **Marble Bar** **57.02 261** P **P** **16 26 20.9 -1.9**
MBWA **Marble Bar** **57.02 261** P **P** **16 26 22.1 -0.7**
SOEI **Soe** **57.36 276** P **P** **16 26 25.7 +0.3**
SOEI **Soe** **57.36 276** P **P** **16 26 26.6 +1.2**
BATI **Baumata** **57.70 275** LR LR 16 50 00.5
comp=Z,555nm,20.4s,baz=148,slow=34
BATI **Baumata** **57.70 275** P **P** **16 26 28.5 +0.8**
comp=Z,86nm,0.8s
MORW **Morawa** **57.85 251** P **P** **16 26 27.0 -1.6**
comp=Z,32nm,0.8s
MORW **Morawa** **57.85 251** P **P** **16 26 27.2 -1.4**
NLAI **Namlea** **57.93 284** P **P** **16 26 28.8 -0.4**
comp=Z,855nmcomp=Z,40nm,0.5s
CASY **Casey** **58.11 207** P **P** **16 26 28.7 -1.0**
CASY **Casey** **58.11 207** P **P** **16 26 29.1 -0.6**
CASY pP **pP** **16 27 04.3 -1.6**
SANI **Sanana** **59.48 285** P **P** **16 26 39.1 -0.9**
SANI **Sanana** **59.48 285** P **P** **16 26 38.8 -1.2**
comp=Z,43nm,0.8s
MMRI **Maumere** **59.65 276** P **P** **16 26 39.2 -1.9**
MMRI **Maumere** **59.65 276** P **P** **16 26 41.0 -0.1**
MMRI **Maumere** **59.65 276** P **P** **16 26 40.3 -0.8**
comp=Z,1μmcomp=Z,48nm,0.5s
TNTI **Ternate** **59.77 288** P **P** **16 26 42.7 +0.8**
EDFI **Ende, Flores** **60.08 276** P **P** **16 26 43.0 -1.2**
comp=Z,950nmcomp=Z,49nm,0.7s
WSI **Waingapu** **60.92 274** P **P** **16 26 49.6 -0.2**
GIRL **Giralia** **61.34 258** P **P** **16 26 52.5 0.0**
WBSI **Waikabubak, Su** **61.73 274** P **P** **16 26 54.8 -0.5**
comp=Z,66nm,0.7s
LUWI **Luwuk** **62.76 284** P **P** **16 27 01.7 -0.4**
LUWI **Luwuk** **62.76 284** P **P** **16 27 02.0 -0.1**
LUWI **Luwuk** **62.76 284** P **P** **16 27 01.8 -0.3**
comp=Z,85nm,1.1s
QSPA **South Pole Qui** **62.85 180** P P 16 27 07.1 +5.0
comp=Z,43nm,0.8s,baz=29,slow=1.0,SNR=222
QSPA **South Pole Qui** **62.85 180** P **P** **16 27 06.0 +3.9**
QSPA **South Pole Qui** **62.85 180** P P 16 27 08.0 +5.9
BKSI **Bulukumba** **63.02 278** P **P** **16 27 02.6 -1.2**
comp=Z,799nmcomp=Z,57nm,0.6s
BNSI **Bone** **63.46 279** P **P** **16 27 06.7 0.0**
comp=Z,51nm,1.3s
KAPI **Kappang** **63.49 278** P **P** **16 27 06.5 -0.4**
PLAI **Plampang** **63.52 274** P **P** **16 27 06.7 -0.4**
PLAI **Plampang** **63.52 274** P **P** **16 27 06.5 -0.6**
APSI **Ampana** **63.80 283** P **P** **16 27 11.8 +2.9**
SPSI **Sidrap Palu** **64.36 279** P **P** **16 27 09.7 -0.3**
TTSI **Tana Toraja** **64.36 280** P **P** **16 27 11.0 -1.5**
TWSI **Taliwang, Sumb** **64.36 273** P **P** **16 27 11.5 -1.1**
comp=Z,974nmcomp=Z,57nm,0.7s
PCI **Palu** **65.38 282** P **P** **16 27 18.7 -0.5**
comp=Z,59nm,1.0s
TOLI2 **Tolitoli** **65.56 285** P **P** **16 27 19.6 -0.7**
TOLI2 **Tolitoli** **65.56 285** P **P** **16 27 20.6 +0.3**
IGBI **Denpasar** **65.86 272** P **P** **16 27 21.6 -0.7**
MPSI **Mapaga** **65.94 284** P **P** **16 27 21.5 -1.2**
JAGI **Jajag, Banyuwa** **66.90 272** P **P** **16 27 27.4 -1.5**
JAGI **Jajag, Banyuwa** **66.90 272** P **P** **16 27 28.0 -0.9**
JAGI **Jajag, Banyuwa** **66.90 272** P **P** **16 27 27.7 -1.2**
comp=Z,973nmcomp=Z,108nm,1.1s
GMJI **Gumukmas** **67.61 272** P **P** **16 27 32.5 -0.9**
comp=Z,932nmcomp=Z,67nm,0.7s
KMMI **Kalianget** **67.69 274** P **P** **16 27 34.0 +0.2**
comp=Z,3μmcomp=Z,133nm,1.6s
BLJI **Banyuglugur** **67.71 273** P **P** **16 27 33.3 -0.7**
comp=Z,79nm,0.7s
BBKI **Banjar Baru** **68.54 277** P **P** **16 27 38.5 -0.6**
comp=Z,44nm,1.2s
PCJI **Pacitan** **69.67 271** P **P** **16 27 46.0 -0.1**
MTKI **Muara Teweh, K** **69.67 280** P **P** **16 27 45.7 -0.5**
UGM **Wanagama** **70.37 271** P **P** **16 27 49.5 -1.0**
KKM **Kota Kinabalu** **71.99 287** P **P** **16 27 58.7 -1.5**
KKM IAmb IAmb 16 28 01.3
comp=Z,85nm,1.5s
KPJI **Karang Pucung** **72.04 271** P **P** **16 27 59.6 -0.8**
comp=Z,65nm,0.5s
SMAI **San Martin Ant** **72.20 158** P **P** **16 28 01.2 +0.8**
JHJ **Hachijo jima 2** **72.44 323** LR LR 16 53 51.8
comp=Z,43nm,19.8s,baz=20,slow=31
BELA **Belgrano 2** **72.85 172** P **P** **16 28 04.2 0.0**
BELA IAmb IAmb 16 28 05.1
comp=Z,35nm,0.7s
BBJI **Bungbulang** **73.12 270** P **P** **16 28 06.4 -0.5**
SBUM **Sibu** **73.65 282** P **P** **16 28 09.4 -0.4**
SBUM **Sibu** **73.65 282** P **P** **16 28 10.2 +0.3**
CNJI **Cibinong** **73.66 270** P **P** **16 28 08.9 -1.0**
comp=Z,622nmcomp=Z,73nm,0.8s
DBJI **Dramaga** **74.33 271** P **P** **16 28 13.2 -0.7**
JSG **Sagara** **74.48 323** P **P** **16 28 13.0 -1.2**
PMSA **Palmer Station** **74.97 156** LR LR 16 57 43.7
comp=Z,86nm,18.0s,baz=245,slow=33
PMSA **Palmer Station** **74.97 156** P **P** **16 28 17.5 +0.9**
PMSA IAmb IAmb 16 28 19.5
comp=Z,39nm,1.1s
TPI **Tanjungpandan** **75.23 275** P **P** **16 28 18.6 -0.4**
comp=Z,972nmcomp=Z,60nm,1.2s
MAW **Mawson** **75.39 200** P **P** **16 28 19.9 +0.9**
comp=Z,14nm,0.6s,baz=135,slow=7.5,SNR=38
MAW LR LR 17 00 13.5
comp=Z,106nm,19.5s,baz=104,slow=34
comp=Z,14nm,0.6s
MJAR **Matsushiro Arr** **75.89 325** P **P** **16 28 22.2 -0.1**
comp=Z,5.8nm,0.8s,baz=152,slow=5.8,SNR=23
comp=Z,5.8nm,0.8s
MJAR **Matsushiro Arr** **75.89 325** P **P** **16 28 22.1 -0.2**
MAJO **Matsushiro** **75.90 325** P **P** **16 28 21.5 -0.8**
KASI **Kota Agung** **76.79 271** P **P** **16 28 26.9 -1.0**
comp=Z,1μmcomp=Z,133nm,1.0s
KLSI **76.95 271** P **P** **16 28 27.6 -1.2**
comp=Z,911nmcomp=Z,61nm,1.0s
LWLI **Liwa** **77.40 271** P **P** **16 28 30.2 -1.3**
comp=Z,3μmcomp=Z,133nm,0.8s
JNU **Nakatsue** **77.48 318** LR LR 16 58 36.5
comp=Z,25nm,21.3s,baz=130,slow=32
JNU **Nakatsue** **77.48 318** P **P** **16 28 31.1 -0.2**
JNU IAmb IAmb 16 29 40.8
comp=Z,42nm,1.3s
MDSI **Maura Dua** **77.53 271** P **P** **16 28 30.6 -1.4**
comp=Z,1μmcomp=Z,129nm,1.0s
TPUB **Ta-pu** **78.03 304** P **P** **16 28 32.9 -1.6**
SSLB **Suanglung** **78.08 305** P **P** **16 28 32.5 -2.4**
ESPZ **Base Esperanza** **78.30 157** P **P** **16 28 35.0 -0.3**
ADK **Adak** **78.79 1** P **P** **16 28 37.6 -0.3**
ADK **Adak** **78.79 1** P **P** **16 28 38.1 +0.1**
ADK PcP **PcP** **16 28 46.6 +0.4**
MG02 **Cerro Sombrero** **78.95 144** P **P** **16 28 39.8 +0.6**
DSRI **Dabo** **79.00 275** P **P** **16 28 39.5 -0.6**
comp=Z,38nm,1.4s
KSI **Kapahiang** **79.32 271** P **P** **16 28 40.7 -1.2**
JKA **Kamikawa-asahi** **79.84 332** P **P** **16 28 44.2 +0.3**
ASAJ **Asahikawa** **79.84 332** LR LR 17 00 10.9
comp=Z,90nm,20.4s,baz=166,slow=33
MASI **Maura Aman, Be** **79.86 272** P **P** **16 28 43.6 -1.2**
SHEM **Shemya Is, Ala** **79.97 355** LR LR 16 56 55.7
comp=Z,86nm,20.3s,baz=172,slow=30
SYO **Syowa Base** **80.26 193**⇑ *e*P **P** **16 28 46.2 +0.3**
SYO **Syowa Base** **80.26 193**⇑ *e*PcP **PcP** **16 28 51.6 -1.0**
SYO **Syowa Base** **80.26 193**⇑ *e*pP pP 16 29 23.6 -1.0
MYKOM **Kota Tinggi** **80.69 277** P **P** **16 28 49.1 -0.1**
MYKOM IAmb IAmb 16 28 50.8
comp=Z,33nm,1.0s
COYC **Coyhaique** **80.95 137** **P** **16 28 51.2 +1.2**
COYC IAmb IAmb 16 28 52.2
comp=Z,26nm,0.8s
COYC **Coyhaique** **80.95 137** P **P** **16 28 51.5 +1.5**
TROLL **Troll, Antarti** **81.01 180** ⇑P **P** **16 28 50.8 +0.7**
comp=Z,3μm,0.6s
SNAA **Sanae** **81.28 178** ⇑P **P** **16 28 51.7 +0.3**
comp=Z,369nm,0.6s
SNAA **Sanae** **81.28 178** P **P** **16 28 51.8 +0.3**
comp=Z,22nm,0.9s,baz=206,slow=8.8,SNR=124
SNAA pP **pP** **16 29 28.9 -1.2**
comp=Z,7.2nm,0.9s,baz=219,slow=10,SNR=2.1
comp=Z,22nm,0.9s
SNAA **Sanae** **81.28 178** **P** **16 28 51.3 -0.1**
UNV **Unalaska Valle** **81.32 7** P **P** **16 28 50.8 -0.7**
VNA3 **Neumayer Olymp** **81.41 176** ⇑P **P** **16 28 52.3 +0.2**
comp=Z,106nm,0.7s
AKUT **Akutan** **81.68 7** P **P** **16 28 52.5 -0.8**
VNA2 **Neumayer--Watz** **81.85 177** ⇑P **P** **16 28 55.0 +0.7**
comp=Z,78nm,0.7s,baz=168,slow=4.5
H03S2 **Juan Fernandez** **81.88 124** T T 17 59 20.1
baz=241,slow=74,SNR=8.1
H03S1 **Juan Fernandez** **81.89 124** T T 17 59 42.9
baz=241,slow=74,SNR=6.4
H03S3 **Juan Fernandez** **81.90 124** T T 17 59 38.2
baz=241,slow=74,SNR=17
VNA1 **Neumayer--Stat** **82.08 176** ⇑P **P** **16 28 56.1 +0.7**
comp=Z,45nm,0.6s
KSRS **Korea Array** **82.22 319** P **P** **16 28 58.0 +1.4**
comp=Z,2.2nm,0.7s,baz=132,slow=6.3,SNR=9.8
KSRS pP **pP** **16 29 33.0 -2.2**
comp=Z,1.0nm,0.6s,baz=126,slow=5.8,SNR=1.4
KSRS LR LR 17 03 36.1
comp=Z,22μm,19.0s,baz=130,slow=34
comp=Z,2.2nm,0.7s
LL02 **Futaleuf** **82.28 135** **P** **16 28 57.5 +0.4**
LL02 IAmb IAmb 16 31 01.1
comp=Z,34nm,0.8s
PDSI **Padang** **82.45 273** P **P** **16 28 56.7 -1.8**
comp=Z,1μmcomp=Z,52nm,0.4s
LPIG **La Paz** **82.55 58** LR LR 16 58 58.2
comp=Z,173nm,18.8s,baz=210,slow=31
SLBS **Sierra La Lagu** **82.59 59** P **P** **16 29 00.6 +1.6**
PKD **Bear Valley Ra** **82.69 43** P **P** **16 29 00.2 +1.0**
PETK **Petropavlovsk-** **82.87 345** P **P** **16 29 00.4 +0.8**
comp=Z,8.6nm,0.6s,baz=112,slow=7.2,SNR=23
PETK pP **pP** **16 29 36.9 -1.5**
comp=Z,4.4nm,0.8s,baz=166,slow=5.2,SNR=1.6
PETK LR LR 16 58 15.0
comp=Z,74nm,20.9s,baz=155,slow=30
comp=Z,8.6nm,0.6s
PETK **Petropavlovsk-** **82.87 345** P **P** **16 29 00.1 +0.5**
VES **Vestal, Richgr** **83.52 44** P **P** **16 29 03.8 +0.4**
BORC **Borrego Spring** **83.60 48** IAmb IAmb 16 29 07.0
comp=Z,38nm,1.3s
DNR **Dunn Ranch,Anz** **83.65 47** IAmb IAmb 16 29 07.5
comp=Z,53nm,1.3s
PFO **Pinyon Flats O** **83.79 47** LR LR 16 57 46.8
comp=Z,93nm,22.0s,baz=234,slow=29
PFO **Pinyon Flats O** **83.79 47** **P** **16 29 05.0 +0.1**
PFO IAmb IAmb 16 29 08.1

comp=Z,31nm,1.2s
PFO Pinyon Flats O 83.79 47 P **P** **16 29 05.1 +0.1**
ISA Isabella, Lake 83.79 45 IAmb IAmb 16 29 08.0
comp=Z,44nm,1.3s
MNSI Mandailing Nat 84.02 274 P **P** **16 29 05.2 -1.2**
comp=Z,2µmcomp=Z,50nm,0.6s
CMB Columbia Colle 84.16 42 **P** **16 29 06.7 +0.1**
LRMC Laurel Mtn Rad 84.17 45 IAmb IAmb 16 29 09.9
comp=Z,35nm,1.3s
BELC Belle Mtn. Jos 84.33 47 IAmb IAmb 16 29 10.9
comp=Z,43nm,1.1s
PLCA Paso Flores 84.37 133 P **P** **16 29 09.2 +1.3**
comp=Z,7.4nm,0.6s,baz=227,slow=4.8,SNR=26
PLCA pP **pP** **16 29 45.3 -1.3**
comp=Z,2.9nm,0.8s,baz=227,slow=5.0,SNR=1.9
comp=Z,7.4nm,0.6s
PLCA Paso Flores 84.37 133 **P** **16 29 08.6 +0.7**
PLCA Paso Flores 84.37 133 P **P** **16 29 09.3 +1.3**
WSHM Spangler Hills 84.37 45 IAmb IAmb 16 29 10.8
comp=Z,32nm,1.2s
CCCA Chr Cany lake 84.40 45 IAmb IAmb 16 29 11.1
comp=Z,50nm,1.2s
CLC China Lake 84.44 45 IAmb IAmb 16 29 11.2
comp=Z,32nm,1.1s
BC3 Big Chuckawall 84.47 48 IAmb IAmb 16 29 11.9
comp=Z,30nm,1.1s
NJ2 Nanjing 84.51 310 *e*P **P** **16 29 07.3 -1.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
MPMC Manoal Prospec 84.66 45 P **P** **16 29 10.4 +1.0**
USRK Ussuriysk Ar. 84.76 326 P **P** **16 29 10.5 +1.1**
USRK comp=Z,2.2nm,0.6s,baz=148,slow=5.3,SNR=9.0 pP **pP** **16 29 46.2 -2.0**
comp=Z,7.0nm,1.0s,baz=157,slow=5.4,SNR=2.5
comp=Z,2.2nm,0.6s
IRM Iron Mountain 84.98 48 IAmb IAmb 16 29 14.4
comp=Z,56nm,1.3s
M02C Callahan 85.00 38 IAmb IAmb 16 29 14.4
comp=Z,42nm,1.2s
WAKR Walker 85.03 42 IAmb IAmb 16 29 14.3
comp=Z,39nm,1.3s
MPK Martis Peak 85.20 41 IAmb IAmb 16 29 15.0
comp=Z,53nm,1.2s
EFI East Falkland 85.21 147 P **P** **16 29 12.6 +0.8**
EFI pP **pP** **16 29 50.5 -0.1**
214A Organ Pipe Nat 85.24 50 IAmb IAmb 16 29 15.6
comp=Z,56nm,1.8s
GWY Greenwater Val 85.25 45 IAmb IAmb 16 29 15.1
comp=Z,42nm,1.5s
PNTR Pine Nut 85.32 41 IAmb IAmb 16 29 53.0
comp=Z,31nm,0.8s
SHOC Shoshone, Teco 85.33 46 IAmb IAmb 16 29 55.6
comp=Z,40nm,1.1s
M03C McCloud 85.33 39 IAmb IAmb 16 29 52.4
comp=Z,34nm,0.8s
BEKR Beckworth 85.38 40 IAmb IAmb 16 29 53.1
comp=Z,41nm,1.6s
HATC Hat Creek Radi 85.39 39 IAmb IAmb 16 29 52.4
comp=Z,32nm,0.8s
RPSI Rantau Prapat 85.47 275 **P** **16 29 11.2 -2.4**
RPSI IAmb IAmb 16 29 14.4
comp=Z,25nm,1.0s
PSI Prapat 85.51 275 LR LR 17 09 44.4
comp=Z,143nm,18.2s,baz=118,slow=37
PSI Prapat 85.51 275 P **P** **16 29 14.0 -0.1**
MTPC Mountain Pass 85.53 46 IAmb IAmb 16 29 17.0
comp=Z,38nm,1.3s
RYN Ryan 85.66 42 IAmb IAmb 16 29 17.0
comp=Z,43nm,1.7s
NVAR Mina Array Bea 85.66 43 P **P** **16 29 15.7 +1.3**
comp=Z,8.5nm,0.8s,baz=222,slow=8.3,SNR=34
NVAR pP **pP** **16 29 52.5 -0.9**
comp=Z,17nm,0.9s,baz=224,slow=8.1,SNR=12
NVAR LR LR 17 01 23.6
comp=Z,52nm,19.9s,baz=268,slow=31
comp=Z,8.5nm,0.8s
NVAR Mina Array Bea 85.66 43 **P** **16 29 14.5 +0.1**
NEE2 Needles Airpor 85.70 47 IAmb IAmb 16 29 17.7
comp=Z,52nm,1.4s
GSI Gunungsitoli 86.03 273 P **P** **16 29 17.2 +0.7**
GSI Gunungsitoli 86.03 273 P **P** **16 29 15.4 -1.1**
comp=Z,2µmcomp=Z,120nm,0.9s
Y14A Wickenburg 86.27 49 IAmb IAmb 16 29 20.5
comp=Z,49nm,1.4s
TUC Tucson 86.84 51 **P** **16 29 20.6 +0.5**
TUC IAmb IAmb 16 29 23.9
comp=Z,59nm,1.5s
TUC Tucson 86.84 51 P **P** **16 29 22.6 +2.5**
TUC pP **pP** **16 29 59.9 +0.6**
K05A Summer Lake 86.98 38 IAmb IAmb 16 30 02.1
comp=Z,35nm,1.2s
PRN Pahroc Range 87.03 45 IAmb IAmb 16 29 24.3
comp=Z,35nm,1.2s
J05D Fort Rock, OR 87.17 37 IAmb IAmb 16 29 24.4
comp=Z,30nm,1.4s
H04D Lebanon 87.21 36 IAmb IAmb 16 30 00.7
comp=Z,37nm,1.3s
KDAK Kodiak Island 87.26 13 LR LR 17 02 52.8
comp=Z,38nm,19.5s,baz=209,slow=32
PINE Pine Mountain 87.67 37 IAmb IAmb 16 29 27.0
comp=Z,19nm,1.0s
CN2 Changchun 87.88 323 P **P** **16 29 25.5 +0.8**
LCMT Little Creek M 87.94 46 IAmb IAmb 16 29 28.6
comp=Z,29nm,1.6s
BNX BinXian 88.16 325 ⇓P **P** **16 29 25.0 -0.9**
BNX pmax pmax
comp=Z,8.0nm,0.8s
CCUT Cedar City 88.18 46 IAmb IAmb 16 29 30.1
comp=Z,34nm,1.6s
WUAZ Wupatki 88.28 48 IAmb IAmb 16 29 30.3
comp=Z,30nm,1.2s
SZCU Shurtz Canyon 88.39 46 IAmb IAmb 16 29 30.9
comp=Z,26nm,1.4s
NLWA Neilton Lookou 88.62 33 IAmb IAmb 16 29 31.4
comp=Z,37nm,1.4s
I07A Izee 88.64 38 IAmb IAmb 16 29 31.3
comp=Z,27nm,1.4s
X18A Snowflake 88.68 50 IAmb IAmb 16 29 32.4
comp=Z,27nm,1.2s
O18K Koktuh Hills 88.71 11 P **P** **16 29 28.2 0.0**
G06A Carlson Farm, 88.79 36 IAmb IAmb 16 29 31.6
comp=Z,27nm,1.3s
ELK Elko 88.96 42 LR LR 17 02 42.6
comp=Z,58nm,19.5s,baz=242,slow=31
W18A Petrified Fore 89.16 49 IAmb IAmb 16 29 34.4
comp=Z,34nm,1.2s
MTPU Mount Pierson 89.23 46 IAmb IAmb 16 29 35.4
comp=Z,30nm,1.4s
CBB Campbell River 89.78 31 IAmb IAmb 16 29 36.5
comp=Z,30nm,1.2s
MXC Moxie City 89.86 35 IAmb IAmb 16 29 36.7
comp=Z,23nm,1.3s
LTY Liberty 90.12 35 IAmb IAmb 16 29 37.7
comp=Z,34nm,1.5s
HAWA Hanford 90.13 36 IAmb IAmb 16 29 38.0
comp=Z,24nm,1.2s
BBB Bella Bella 90.14 28 LR LR 17 05 09.6
comp=Z,34nm,18.9s,baz=220,slow=32
K15K Wolf Creek Mou 90.15 7 **P** **16 29 36.2 +1.3**
ENH Enshi 90.16 304 P **P** **16 29 35.2 -0.5**
YPT Yellepit 90.21 36 IAmb IAmb 16 30 21.6
comp=Z,43nm,2.0s
MFID Camas Ranch 90.26 40 IAmb IAmb 16 29 38.6
comp=Z,19nm,1.2s
BMO Blue Mountains 90.33 38 IAmb IAmb 16 29 38.5
comp=Z,24nm,1.5s
TX31 Lajitas Ar. Si 90.36 57 IAmb IAmb 16 29 39.8
comp=Z,22nm,1.3s
WAH2 Wahluke Slope 90.36 36 IAmb IAmb 16 29 39.0
comp=Z,42nm,1.5s
TXAR Lajitas Array 90.36 57 P **P** **16 29 38.1 +1.3**
comp=Z,5.6nm,1.0s,baz=216,slow=6.2,SNR=30
TXAR pP **pP** **16 30 14.4 -1.7**
comp=Z,5.3nm,0.9s,baz=213,slow=7.2,SNR=9.2
TXAR LR LR 17 02 08.2
comp=Z,118nm,19.3s,baz=239,slow=30
comp=Z,5.6nm,1.0s
TXAR Lajitas Array 90.36 57 **P** **16 29 37.2 +0.4**
HNS HongShan 90.39 313 ⇓P **P** **16 29 38.5 +1.9**
HNS S **S** **16 40 20.3 +2.6**
HNS pmax pmax
comp=Z,10.0nm,1.0s
Y22A Socorro 90.41 52 IAmb IAmb 16 29 40.2
comp=Z,24nm,1.1s
CFA Coronel Fontan 90.79 126 P **P** **16 29 39.8 +0.9**
comp=Z,3.2nm,0.7s,baz=238,slow=4.0,SNR=4.7
comp=Z,3.2nm,0.7s

STLK Strandline Lak 90.85 12 IAmb IAmb 16 29 38.9
comp=Z,26nm,1.5s
D08A Wollman Farm, 90.89 36 IAmb IAmb 16 29 41.5
comp=Z,26nm,1.1s
SRU San Rafael Swe 90.91 46 IAmb IAmb 16 29 41.7
comp=Z,20nm,1.3s
ALPN Alpine 90.91 56 IAmb IAmb 16 29 42.6
comp=Z,22nm,1.4s
E09A Wood Farm, Sta 90.94 36 IAmb IAmb 16 29 41.3
comp=Z,22nm,1.0s
BJI Beijing 90.96 315 P **P** **16 29 38.8 -0.3**
BJI pP **pwP** **16 30 22.8 +1.7**
BJI sP **sP** **16 30 40.5 +5.8**
BJI SKS **SKSac** **16 39 52.3 -3.7**
BJI S **S** **16 40 20.5 -2.3**
BJI sS **sS** **16 41 37.8 +6.8**
BJI pmax pmax
comp=Z,4.0nm,0.9s
L19K White Mountain 90.97 10 IAmb IAmb 16 29 41.7
comp=Z,33nm,1.4s
P17A Butcher Ranch, 90.98 45 IAmb IAmb 16 29 42.2
comp=Z,26nm,1.4s
HVU Hansel Valley 91.06 43 IAmb IAmb 16 29 42.5
comp=Z,28nm,1.3s
PLID Pearl Lake 91.20 39 IAmb IAmb 16 29 42.7
comp=Z,23nm,1.1s
HEH HeiHe 91.24 328 *e*P P 16 29 48.5 +8.3
PV05 Paradox Valley 91.24 47 IAmb IAmb 16 29 43.8
comp=Z,29nm,1.4s
TASM ASL Pad, Albuq 91.30 51 IAmb IAmb 16 29 44.0
comp=Z,20nm,1.3s
TASM ASL Pad, Albuq 91.30 51 IAmb IAmb 16 29 44.0
comp=Z,20nm,1.3s
TASM ASL Pad, Albuq 91.30 51 IAmb IAmb 16 29 44.0
comp=Z,16nm,1.2s
ABQ Albuquerque 91.30 51 IAmb IAmb 16 29 44.0
comp=Z,16nm,1.2s
ANMO Albuquerque 91.30 51 LR LR 17 04 44.4
comp=Z,118nm,18.5s,baz=240,slow=31
ANMO Albuquerque 91.30 51 P **P** **16 29 41.3 +0.2**
ANMO IAmb IAmb 16 29 44.0
comp=Z,17nm,1.2s
CMIG Matias Romero 91.40 72 LR LR 17 02 51.8
comp=Z,65nm,19.6s,baz=200,slow=30
PV10 Paradox Valley 91.45 47 IAmb IAmb 16 30 36.4
comp=Z,23nm,1.2s
PV18 Skein Mesa, Pa 91.46 47 IAmb IAmb 16 30 25.5
comp=Z,15nm,1.0s
PV20 West Nyswonger 91.47 47 IAmb IAmb 16 29 44.2
comp=Z,32nm,1.3s
PV03 Paradox Valley 91.50 47 IAmb IAmb 16 29 45.1
comp=Z,19nm,1.5s
PV11 David Mesa, Pa 91.51 47 IAmb IAmb 16 29 46.0
comp=Z,41nm,1.8s
B08A Colville Reser 91.52 35 **P** **16 29 41.3 -0.3**
PV02 Paradox Valley 91.55 47 IAmb IAmb 16 29 44.7
comp=Z,32nm,1.4s
PV12 Saucer Basin, 91.57 47 IAmb IAmb 16 30 24.7
comp=Z,29nm,1.2s
C09A Chrisman Ranch 91.70 35 IAmb IAmb 16 30 35.9
comp=Z,24nm,1.5s
LLLB Lillooet 91.78 32 IAmb IAmb 16 29 45.2
comp=Z,17nm,1.3s
J18K Innoko River 91.90 9 IAmb IAmb 16 29 45.2
comp=Z,16nm,1.2s
CUT Chulitna 91.98 12 P **P** **16 29 43.2 -0.1**
S22A 4UR Ranch, Cre 92.56 49 IAmb IAmb 16 29 49.8
comp=Z,27nm,1.5s
NEW Newport 92.59 36 LR LR 17 08 17.0
comp=Z,69nm,18.6s,baz=238,slow=33
CMAR Chiang Mai Arr 92.73 289 P **P** **16 29 48.1 +0.3**
comp=Z,1.3nm,0.6s,baz=145,slow=3.8,SNR=15
CMAR pP **pP** **16 30 26.7 -0.5**
comp=Z,1.0nm,0.7s,baz=119,slow=3.2,SNR=1.5
comp=Z,1.3nm,0.6s
TRF Thorofare Moun 92.94 12 IAmb IAmb 16 29 50.5
comp=Z,15nm,1.3s
O20A White River Ci 92.94 46 IAmb IAmb 16 31 58.6
comp=Z,24nm,1.9s
SEY Seymchan 93.01 347 LR LR 17 07 22.9
comp=Z,35nm,19.0s,baz=132,slow=33
DLMT Dillon 93.28 40 IAmb IAmb 16 30 34.1
comp=Z,19nm,1.2s
PD31 Pinedale Array 93.58 43 **P** **16 29 48.6 -2.9**
PDAR Pinedale Array 93.58 43 P **P** **16 29 50.5 -1.1**
comp=Z,2.5nm,0.6s,baz=219,slow=3.8,SNR=18
PDAR pP **pP** **16 30 29.4 -1.6**
comp=Z,4.5nm,0.9s,baz=204,slow=3.3,SNR=5.1
PDAR PKKPbc **PKKPdf** **16 46 57.0 +0.4**
comp=Z,0.2nm,0.6s,baz=83,slow=4.6,SNR=3.9
PDAR LR LR 17 06 47.1
comp=Z,32nm,19.0s,baz=242,slow=32
comp=Z,2.5nm,0.6s
PDAR Pinedale Array 93.58 43 **P** **16 29 49.2 -2.3**
YHL Hebgen Lake 93.80 41 IAmb IAmb 16 30 37.2
comp=Z,13nm,1.0s
YMR Madison River 93.82 41 IAmb IAmb 16 30 34.5
comp=Z,13nm,1.1s
BOZ Bozeman (W) 93.97 40 IAmb IAmb 16 29 55.7
comp=Z,30nm,1.6s
DLBC Dease Lake 94.08 23 LR LR 17 11 34.8
comp=Z,44nm,18.4s,baz=286,slow=35
PZH PanZhiHua 94.20 298 P **P** **16 29 53.0 -1.6**
WRH Wood River Hil 94.28 12 IAmb IAmb 16 29 55.4
comp=Z,7.6nm,0.7s
HHC Hu-ho-hao-te 94.33 314 *e*P **P** **16 29 54.5 -0.4**
HHC S **S** **16 40 50.3 -2.6**
HHC sS sS 16 42 06.8 +5.3
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,4.5s
HDA Harding Lake 94.44 13 IAmb IAmb 16 29 55.9
comp=Z,8.6nm,0.6s
CCB Clear Creek Bu 94.49 12 **P** **16 29 54.7 -0.1**
CCB IAmb IAmb 16 29 55.4
comp=Z,4.9nm,0.5s
YNE Yellowstone No 94.58 41 IAmb IAmb 16 30 38.3
comp=Z,10nm,1.1s
IL31 94.78 13 **P** **16 29 54.6 -1.4**
IL31 IAmb IAmb 16 29 56.8
comp=Z,29nm,1.9s
ILAR Eielson Array 94.78 13 P **P** **16 29 56.0 -0.2**
comp=Z,1.7nm,0.6s,baz=230,slow=5.9,SNR=35
ILAR pP **pP** **16 30 33.5 -2.1**
comp=Z,2.0nm,0.8s,baz=224,slow=5.6,SNR=5.2
ILAR PP **PP** **16 33 46.1 -1.2**
comp=Z,1.5nm,1.1s,baz=218,slow=9.1,SNR=4.1
ILAR LR LR 17 11 48.4
comp=Z,34nm,18.8s,baz=172,slow=35
comp=Z,1.7nm,0.6s
ILAR Eielson Array 94.78 13 P **P** **16 29 55.8 -0.4**
ATAH Atahualpa 94.84 101 LR LR 17 04 32.9
comp=Z,113nm,18.9s,baz=228,slow=30
J26L Joseph Creek 95.22 14 IAmb IAmb 16 30 40.0
comp=Z,10nm,0.8s
JTS Las Juntas de 96.93 82 LR LR 17 05 43.6
comp=Z,83nm,19.1s,baz=237,slow=30
YAK Yakutsk 98.49 338 LR LR 17 16 03.2
comp=Z,34nm,18.6s,baz=95,slow=36
SONM Songino Array 101.07 318 PKKPbc PKKPbc 16 46 36.7 -0.2
comp=Z,1.4nm,0.7s,baz=284,slow=3.0,SNR=7.1
YKA Yellowknife Ar 102.44 25 PKKPbc PKKPbc 16 46 31.4 -1.8
comp=Z,0.3nm,0.4s,baz=155,slow=3.7,SNR=6.5
WMQ Urumqi 111.57 309 *e*PKP **PKiKP** **16 35 02.3 -6.5**
ZALV Zalesovo Beam 115.92 319 PKP **PKPdf** **16 35 15.7 -1.0**
comp=Z,1.8nm,0.7s,baz=150,slow=1.9,SNR=10
MKAR Makanchi Array 116.02 311 PKP **PKPdf** **16 35 16.5 -0.7**
comp=Z,3.6nm,0.8s,baz=62,slow=2.9,SNR=14
MKAR PKKPab **PKKPab** **16 45 53.9 +2.2**
comp=Z,1.1nm,0.8s,baz=272,slow=2.4,SNR=4.1
MKAR Makanchi Array 116.02 311 PKPdf **PKPdf** **16 35 16.7 -0.5**
NRIK Noril'sk 116.92 337 PKP **PKPdf** **16 35 18.2 0.0**
comp=Z,3.9nm,0.7s,baz=123,slow=3.1,SNR=11
KURBB Kurchatov Arra 119.17 315 PKP **PKPdf** **16 35 22.3 -0.7**
comp=Z,3.6nm,0.7s,baz=106,slow=2.0,SNR=32
KURBB pPKP **pPKPdf** **16 36 02.2 -1.9**
comp=Z,0.4nm,0.3s,baz=117,slow=1.9,SNR=2.1
KURBB PKKPab **PKKPab** **16 45 37.8 +0.1**
comp=Z,0.9nm,0.7s,baz=278,slow=4.7,SNR=7.5
BOSA Boshof 120.30 203 PKP **PKPdf** **16 35 26.6 +0.3**
comp=Z,3.3nm,0.5s,baz=167,slow=2.8,SNR=18
SCHQ Schefferville 123.62 41 PKP **PKPdf** **16 35 30.9 -0.6**
comp=Z,6.9nm,1.1s,baz=133,slow=7.5,SNR=1.7
BVAR Borovoye Array 124.39 317 PKP **PKPdf** **16 35 33.0 0.0**
comp=Z,4.4nm,0.7s,baz=94,slow=2.0,SNR=22
BVAR pPKP **pPKPdf** **16 36 13.1 -1.0**

comp=Z,1.0nm,0.5s,baz=169,slow=2.9,SNR=1.6
KOOLE Kule 127.19 201 **PKPdf** **16 35 40.5 +0.9**
SPITS Spitsbergen Ar 128.59 356 PKP **PKPdf** **16 35 40.6 +0.2**
comp=Z,11nm,0.7s,baz=82,slow=6.0,SNR=9.9
ARCES ARCESS Array B 135.59 349 PKP **PKPdf** **16 35 54.1 +0.3**
comp=Z,4.0nm,0.5s,baz=15,slow=3.1,SNR=9.4
ARCES SKPbc **SKPbc** **16 39 11.3 +1.0**
comp=Z,13nm,1.0s,baz=340,slow=6.8,SNR=4.7
H10S3 ASCENSION HYDR 140.38 153 T T 19 12 20.1
SNR=11
H10S2 ASCENSION HYDR 140.38 153 T T 19 13 02.4
SNR=16
H10N3 ASCENSION HYDR 141.45 152 T T 19 13 41.3
baz=203,slow=75,SNR=20
H10N1 ASCENSION HYDR 141.45 152 T T 19 13 41.7
baz=203,slow=75,SNR=45
H10N2 ASCENSION HYDR 141.47 152 T T 19 13 42.6
baz=203,slow=75,SNR=55
NSS Namsos 142.21 353 *e*PKPdf **PKPdf** **16 36 04.2 -1.7**
FINES FINESS Array B 142.31 342 PKhKP PKPpre 16 36 01.9
comp=Z,3.7nm,0.6s,baz=46,slow=3.6,SNR=20
KBZ Khabaz 143.59 308 PKP PKPbc 16 36 06.9 0.0
comp=Z,4.0nm,0.9s,baz=124,slow=6.1,SNR=5.4
MOL Molde 144.52 356 *e*PKPdf **PKPab** **16 36 08.9 0.0**
DOMB Dombas 144.93 355 *e*PKPdf PKPbc 16 36 10.4 -0.1
AKN Aaknes 144.94 356 *e*PKPdf PKPbc 16 36 10.8 +0.3
NC303 NORSAR Array S 145.50 352 **PKPbc** **16 36 12.5 +0.3**
FOO Floro 145.61 358 *e*PKPab **PKPdf** **16 36 12.0 +0.1**
NB2 NORSAR Subarra 145.70 352 PKP **PKPdf** **16 36 12.6 +0.4**
comp=Z,15nm,0.7s,baz=13,slow=4.6
NOA NORSAR Array B 145.70 352 PKPbc **PKPdf** **16 36 12.7 +0.4**
comp=Z,11nm,0.7s,baz=13,slow=4.6,SNR=36
NOA pPKPbc **pPKPdf** **16 36 51.4 -2.1**
comp=Z,16nm,1.0s,baz=16,slow=2.5,SNR=7.5
NC602 NORSAR Array S 145.95 352 *e*PKPab **PKPdf** **16 36 12.9 +0.3**
HYA Hoyanger 145.99 357 *e*PKPab **PKPbc** **16 36 14.0 +0.3**
SUE Sulen 146.16 358 *e*PKPab **PKPbc** **16 36 14.4 +0.2**
HFS Hagfors 146.23 350 PKPbc **PKPdf** **16 36 14.2 +1.1**
comp=Z,20nm,0.6s,baz=64,slow=3.4,SNR=82
HFS pPKPbc **pPKPdf** **16 36 54.0 -0.4**
comp=Z,8.0nm,0.6s,baz=66,slow=5.0,SNR=3.0
SKAR Skarslia 146.34 355 *e*PKPab **PKPbc** **16 36 15.0 +0.1**
ASK Askoy 146.72 358 *e*PKPab **PKPbc** **16 36 16.4 +0.6**
BER Bergen 146.81 357 *e*PKPab **PKPbc** **16 36 16.1 0.0**
OSL Oslo 146.83 352 *e*PKPab **PKPbc** **16 36 16.7 +0.6**
LRW Lerwick 147.03 3 *e*P **PKPbc** **16 36 16.8 +0.1**
ODD1 Odda 147.22 356 *e*PKPab **PKPbc** **16 36 18.0 +0.7**
KONO Kongsberg 147.24 353 *e*PKPab **PKPbc** **16 36 17.2 -0.1**
BLS5 Blasjo 147.72 356 *e*PKPab **PKPbc** **16 36 18.8 +0.1**
PABE Paberze 147.75 337 PKPbc **PKPbc** **16 36 19.6 +0.8**
LEWI Lewis, Hebride 148.43 9 *e*P **PKPbc** **16 36 20.7 +0.2**
HOMB Homborsund 148.70 354 *e*PKPab **PKPbc** **16 36 22.1 +0.9**
SNART Snartemo 148.75 355 *e*PKPab **PKPbc** **16 36 21.9 +0.6**
AKASG Malin Array Be 148.97 326 PKPbc **PKPbc** **16 36 22.0 -0.1**
comp=Z,13nm,0.7s,baz=43,slow=3.4,SNR=55
AKASG pPKPbc **pPKPbc** **16 37 01.3 -1.6**
comp=Z,5.4nm,0.7s,baz=43,slow=3.8,SNR=2.5
KIEV Kiev 148.98 326 **PKPbc** **16 36 22.2 0.0**
KPL Plockton 149.38 9 *e*P **PKPbc** **16 36 22.5 -0.4**
MCD Coleburn Disti 149.41 6 *e*P **PKPbc** **16 36 22.8 -0.2**
DRUM Mains of Drumt 150.15 5 *e*P **PKPbc** **16 36 24.0 -0.8**
INVG Invergeldie, C 150.47 7 *e*P **PKPbc** **16 36 25.6 0.0**
MMAI Mount Meron Ar 151.00 289 PKPbc **PKiKP** **16 36 28.8 +0.5**
comp=Z,22nm,0.8s,baz=76,slow=3.5,SNR=38
ESY Stoneypath 151.12 6 *e*P **PKPbc** **16 36 27.0 -0.1**
IDGL Inch Island, C 151.27 12 *e*P **PKPbc** **16 36 27.9 +0.5**
BRTR Keskin Array B 151.31 304 PKPbc **PKPbc** **16 36 28.2 -0.1**
comp=Z,8.5nm,1.0s,baz=135,slow=3.3,SNR=20
BRTR pPKPbc **pPKPbc** **16 37 08.2 -1.1**
comp=Z,2.8nm,0.6s,baz=134,slow=2.5,SNR=2.8
BRTR Keskin Array B 151.31 304 **PKPbc** **16 36 28.0 -0.4**
EKA Eskdalemuir Ar 151.64 7 PKPbc **PKPbc** **16 36 28.3 0.0**
comp=Z,4.4nm,0.6s,baz=342,slow=1.8,SNR=23
EKA pPKPbc **pPKPbc** **16 37 08.3 -1.1**
comp=Z,1.4nm,0.5s,baz=280,slow=1.0,SNR=2.5
ESK Eskdalemuir 151.65 7 *e*P **PKPbc** **16 36 27.6 -0.7**
GAL1 Galloway 151.91 9 *e*P **PKPbc** **16 36 28.5 -0.5**
BSEG Bad Segeberg 152.71 350 *e*PKPdf **PKiKP** **16 36 31.5 +0.5**
baz=17,slow=2.0
RUE Ruedersdorf 153.40 344 *e*PKPdf **PKiKP** **16 36 33.1 +0.7**
baz=17,slow=2.0
GORT1 Trebel 153.45 348 *e*PKPab **PKPab** **16 36 45.7 +0.5**
baz=17,slow=4.5
RETH Rethem/Aller, 154.02 350 *e*PKPdf **PKiKP** **16 36 34.1 +0.5**
baz=17,slow=2.0
RETH *e*PKPab **PKPab** **16 36 47.8 +0.2**
baz=17,slow=4.5
FLTG Flechtingen 154.09 348 *e*PKPdf **PKiKP** **16 36 34.3 +0.5**
baz=17,slow=2.0
ASSE Asse, Remlinge 154.39 348 *e*PKPdf **PKiKP** **16 36 34.9 +0.5**
baz=17,slow=2.0
OSTC Ostas 154.46 339⇑ *e*PKP **PKiKP** **16 36 35.8 +1.1**
STEB Steborice 154.47 337⇑ *e*PKP **PKPbc** **16 36 34.7 0.0**
STEB *e*PKPAB **PKPab** **16 36 50.8 +1.0**
LANS Liptovska Anna 154.48 334 *e*PKP **PKPdf** **16 36 28.5 +2.2**
LANS *e* 16 36 36.5
DPC Dobruska-Polom 154.61 339⇑ *e*PKP **PKPbc** **16 36 35.3 +0.2**
DPC *e*PKPAB **PKPab** **16 36 52.1 +1.7**
IBBN Ibbenburen 154.65 352 *e*PKPdf **PKiKP** **16 36 35.5 +0.5**
baz=17,slow=2.0
IBBN *e*PKPab **PKPab** **16 36 51.0 +0.6**
baz=17,slow=4.5
CLL Collm 154.67 344 *e*PKPdf **PKiKP** **16 36 35.7 +0.6**
baz=17,slow=2.0
CLL Collm 154.67 344 *i* PKPdf **PKPdf** **16 36 26.5 +0.1**
comp=Z,7.0nm,1.1s
CLL ⇓*i*PKPbc **PKiKP** **16 36 35.7 +0.6**
comp=Z,13nm,0.9s
CLL *i* PKPab **PKPab** **16 36 50.5 0.0**
comp=Z,6.0nm,0.8s
CLL *i* pPKPab **sPKPbc** **16 37 31.3 -0.8**
CLZ Clausthal 154.72 348 *e*PKPdf **PKiKP** **16 36 35.8 +0.5**
baz=17,slow=2.0
CLZ *e*PKPab **PKPab** **16 36 51.2 +0.5**
baz=17,slow=4.5
BRG Berggiesshubel 154.84 343 *e*PKPdf **PKPbc** **16 36 35.9 +0.5**
baz=17,slow=2.0
BRG *e*PKPab **PKPab** **16 36 52.1 +0.9**
baz=17,slow=4.5
MAUC Maruska 154.93 336⇑ *e*PKP **PKiKP** **16 36 36.4 +0.6**
NEUB Neuenburg 155.04 346 *e*PKPdf 16 36 35.9
baz=17,slow=2.0
SCHF Schoenfels 155.40 345 *e*PKPab **PKPab** **16 36 54.6 +1.0**
baz=17,slow=4.5
MOX Moxa 155.61 346 *e*PKPab **PKPab** **16 36 55.0 +0.5**
baz=17,slow=4.5
MODS Modra-Piesok 155.96 335 *e*PKP **PKPdf** **16 36 33.2 +4.9**
MODS *e* 16 36 57.5
ZVC Zvikov 156.06 341⇑ *e*PKP PKPdf 16 36 41.8 +13
ZVC *e*PKPAB **PKPab** **16 36 57.9 +1.3**
MANZ Manzenberg 156.11 344 *e*PKPab **PKPab** **16 36 57.5 +0.7**
baz=17,slow=4.5
ROTZ Rotzenmuhle 156.29 344 *e*PKPab **PKPab** **16 36 58.6 +1.1**
baz=17,slow=4.5
KHC Kasperske Hory 156.51 341⇑ *e*PKP PKPdf 16 36 39.4 +10
KHC *e*PKPAB **PKPab** **16 36 59.7 +1.1**
CKRC Cesky Krumlov 156.58 340⇑ *e*PKP PKPdf 16 36 39.6 +10
WET Wettzell 156.70 343 *e*PKPab **PKPab** **16 37 00.5 +1.2**
baz=17,slow=4.5
GERES GERESS Array B 156.74 341 PKP **PKPdf** **16 36 28.7 -0.7**
comp=Z,0.9nm,0.9s,baz=11,slow=2.0,SNR=4.8
GERES PKPab **PKPab** **16 37 00.0 +0.4**
comp=Z,1.1nm,0.9s,baz=357,slow=2.7,SNR=4.5
CONA Conrad Observa 156.84 337 *e*PKP **PKPab** **16 37 01.3 +1.2**
comp=Z,4.9nm,0.7s
RONA Rosalia, Austr 156.88 336 *i* PKP **PKPab** **16 37 01.4 +1.1**
comp=Z,6.6nm,1.1s
BIOA Bad Ischl, Aus 157.79 340 *i* PKP **PKPab** **16 37 05.3 +1.2**
comp=Z,10nm,1.4s
LESA Schwarzleotal 158.31 341 *e*PKP **PKPab** **16 37 06.6 +0.1**
comp=Z,11nm,1.5s
DBIC Dimbokro 158.39 160 PKP **PKPdf** **16 36 31.9 -0.6**
comp=Z,11nm,1.0s,baz=175,slow=1.3,SNR=8.8
DBIC PKPab **PKPab** **16 37 08.1 +0.7**
comp=Z,8.8nm,0.8s,baz=230,slow=5.4,SNR=6.7
WTTA Wattenberg 158.75 343 *i* PKP **PKPab** **16 37 08.1 -0.4**
comp=Z,4.5nm,0.7s
DAVA Damuels 159.16 346 *i* pPKP **PKPab** **16 37 10.9 +0.7**
comp=Z,12nm,1.3s
TORD Torodi Ar. Bea 165.95 177 PKP **PKPdf** **16 36 39.6 -0.4**
comp=Z,6.7nm,0.7s,baz=41,slow=2.6,SNR=45
TORD PKPab **PKPab** **16 37 41.0 +0.5**
comp=Z,8.5nm,0.7s,baz=53,slow=3.9,SNR=3.7
TORD PP **PP** **16 41 27.2 +0.6**
comp=Z,0.7nm,0.7s,baz=162,slow=4.7,SNR=4.1
ESDC Sonseca Array 166.51 22 PKP **PKPdf** **16 36 40.0 +0.2**

comp=Z,1.7nm,1.1s,baz=301,slow=3.1,SNR=7.4
ESDC PKPab **PKPab 16 37 43.1 +0.6**
comp=Z,2.1nm,1.1s,baz=331,slow=3.5,SNR=7.1
ESDC pPKPab **pPKPab 16 38 21.0 -1.3**
comp=Z,0.2nm,0.3s,baz=210,slow=32,SNR=1.8

*IDC **30** 16:26:43.4±1.6,24°.17S×67°.13W,h154km±15km,mb3.7/7, mbtmp4.0/12,Error ellipse: s-maj=20.8km s-min=11.6km az=86.0*
*SJA **30** 16:26:44.2±0.7,24°.13S×67°.20W,h197km±5km,ML4.1, MW3.9*
*VAO **30** 16:26:44.5±1.0,24°.16S×67°.18W,h182km±5km,mb4.0*
*NEIC **30** 16:26:44.4±1.9,24°.24S±0°.07×67°.1W±0°.1,h170km±8km, mb4.4/9,ML4.4(GUC),Error ellipse: s-maj=15.3km s-min=9.4km az=96.0*
*GUC **30** 16:26:46.4±0.8,24°.18S×67°.44W,h205km±7km,ML4.4*
ISC 30 16:26:45.0±0.6,**24°.19S**±0°.04×**67°.24W**±0°.03,**h183**km±6km, **n145**,σ1°**53**/171,**mb4.2**/12,**10C-7D**,**Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SALTA		**0.82**	**93**	⇓*eP*		**Pn**	**16 27 12.9**	**+0.6**
SALTA		**0.82**	**93**	*eP*		**Pn**	**16 27 13.0**	**+0.6**
SALTA				*eS*		**Sn**	**16 27 38.9**	**+5.5**
AF01	**San Pedro de A**	**1.50**	**325**			**Pn**	**16 27 19.3**	**+1.7**
AF01	**San Pedro de A**	**1.50**	**325**	*eP*		**Pn**	**16 27 19.3**	**+1.7**
AF01				*eS*		**Sn**	**16 27 44.6**	**+1.8**
AF01				IAML			16 27 47.9	
	comp=E,2μm,0.7s							
AF01	**San Pedro de A**	**1.50**	**325**	*eP*		**Pn**	**16 27 19.9**	**+2.4**
AF01				*eS*		Sn	16 27 29.4	-13
AF01				IAML			16 28 04.0	
	comp=Z,902nm,1.0s							
SLA	**San Lorenzo**	**1.67**	**109**	⇓*eP*		**Pn**	**16 27 20.0**	**+1.1**
SLA	**San Lorenzo**	**1.67**	**109**	*eP*		**Pn**	**16 27 20.1**	**+1.1**
SLA				*eS*		**Sn**	**16 27 46.5**	**+1.2**
AZAP	**Zapla**	**1.98**	**92**	*eP*		**Pn**	**16 27 22.9**	**+0.6**
AZAP				*eS*		**Sn**	**16 27 51.4**	**+0.2**
AZAP				IAML			16 27 52.8	
	comp=Z,444nm,0.8s							
FSA	**Cafayete**	**2.23**	**150**	*eP*		**Pn**	**16 27 25.9**	**+1.0**
FSA				*eS*		**Sn**	**16 27 50.8**	**-5.3**
GO02	**Mina Guanaco**	**2.35**	**245**			**Pn**	**16 27 27.8**	**+1.4**
GO02	**Mina Guanaco**	**2.35**	**245**	⇑*eP*		**Pn**	**16 27 27.7**	**+1.2**
GO02				*eS*		**Sn**	**16 27 59.4**	**+0.8**
GO02				IAML			16 28 00.3	
	comp=N,2μm,0.3s							
GO02	**Mina Guanaco**	**2.35**	**245**	*eP*		**Pn**	**16 27 27.7**	**+1.2**
GO02				*eS*		**Sn**	**16 28 00.2**	**+1.5**
GO02				IAML			16 28 01.1	
	comp=Z,1μm,0.2s							
YJA	**Yavi**	**2.55**	**39**	*eP*		**Pn**	**16 27 29.4**	**+0.5**
YJA	**Yavi**	**2.55**	**39**	*eP*		**Pn**	**16 27 30.5**	**+1.5**
YJA				*eS*		**Sn**	**16 28 03.2**	**+0.1**
PB06	**IPOC Station P**	**2.60**	**304**			**Pn**	**16 27 30.4**	**+1.1**
PB06	**IPOC Station P**	**2.60**	**304**	⇑*eP*		**Pn**	**16 27 30.4**	**+1.1**
PB06				*eS*		**Sn**	**16 28 03.2**	**-0.4**
PB06	**IPOC Station P**	**2.60**	**304**	*eP*		**Pn**	**16 27 30.3**	**+1.1**
PB06				*eS*		**Sn**	**16 28 03.6**	**+0.1**
PB06				IAML			16 28 04.5	
	comp=Z,1μm,0.1s							
PB14	**IPOC Station P**	**2.92**	**261**			**Pn**	**16 27 33.7**	**+0.6**
PB14	**IPOC Station P**	**2.92**	**261**	⇑*eP*		**Pn**	**16 27 33.8**	**+0.6**
PB14				*eS*		**Sn**	**16 28 09.3**	**-1.2**
PB14				IAML			16 28 12.7	
	comp=E,280nm,0.3s							
PB14	**IPOC Station P**	**2.92**	**261**	*eP*		**Pn**	**16 27 33.9**	**+0.8**
PB14				*eS*		**Sn**	**16 28 10.3**	**-0.3**
PB14				IAML			16 28 13.1	
	comp=Z,401nm,0.3s							
PB09	**IPOC Station P**	**3.01**	**322**			**Pn**	**16 27 35.6**	**+1.4**
PB09	**IPOC Station P**	**3.01**	**322**	⇑*eP*		**Pn**	**16 27 35.5**	**+1.4**
PB09				*eS*		**Sn**	**16 28 11.9**	**-0.6**
PB09				IAML			16 28 14.0	
	comp=N,519nm,0.5s							
PB09	**IPOC Station P**	**3.01**	**322**	*eP*		**Pn**	**16 27 34.4**	**+0.3**
PB09				*eS*		**Sn**	**16 28 13.0**	**+0.6**
PB09				IAML			16 28 13.5	
	comp=Z,581nm,0.8s							
PB05	**IPOC Station P**	**3.03**	**295**			**Pn**	**16 27 34.7**	**+0.4**
PB05	**IPOC Station P**	**3.03**	**295**	⇑*eP*		**Pn**	**16 27 34.8**	**+0.5**
PB05				*eS*		**Sn**	**16 28 10.4**	**-2.2**
PB05				IAML			16 28 16.0	
	comp=N,599nm,0.5s							
PB05	**IPOC Station P**	**3.03**	**295**	*eP*		**Pn**	**16 27 35.0**	**+0.8**
PB05				*eS*		**Sn**	**16 28 11.9**	**-0.7**
PB05				IAML			16 28 17.4	
	comp=Z,492nm,0.8s							
AHML	**Horco Molle**	**3.11**	**147**	*eP*		Pn	16 27 24.0	-11
AHML				*eS*		Sn	16 28 00.3	-14
PB10	**IPOC Station P**	**3.11**	**282**			**Pn**	**16 27 36.0**	**+0.9**
PB10	**IPOC Station P**	**3.11**	**282**	⇑*eP*		**Pn**	**16 27 36.1**	**+0.9**
PB10				*eS*		**Sn**	**16 28 12.6**	**-1.6**
PB10				IAML			16 28 16.7	
	comp=E,524nm,0.2s							
PB10	**IPOC Station P**	**3.11**	**282**	*eP*		**Pn**	**16 27 36.1**	**+0.9**
PB10				*eS*		**Sn**	**16 28 15.5**	**+1.3**
PB10				IAML			16 28 18.2	
	comp=Z,575nm,0.5s							
AC02	**Maricunga**	**3.14**	**213**			**Pn**	**16 27 37.2**	**+1.2**
AC02	**Maricunga**	**3.14**	**213**	⇑*eP*		**Pn**	**16 27 37.2**	**+1.2**
AC02	**Maricunga**	**3.14**	**213**	*eP*		**Pn**	**16 27 37.3**	**+1.2**
AC02				*eS*		**Sn**	**16 28 17.3**	**+1.5**
PB03	**IPOC Station P**	**3.15**	**312**			**Pn**	**16 27 36.6**	**+0.8**
AC01	**Pan de Azucar**	**3.62**	**237**			**Pn**	**16 27 41.1**	**-0.2**
AC01	**Pan de Azucar**	**3.62**	**237**	⇑*eP*		**Pn**	**16 27 41.1**	**-0.2**
AC01	**Pan de Azucar**	**3.62**	**237**	*eP*		**Pn**	**16 27 41.2**	**-0.2**
AC01				*eS*		**Sn**	**16 28 24.5**	**-1.0**
AC01				IAML			16 28 25.0	
	comp=Z,138nm,0.3s							
PB01	**IPOC Station P**	**3.76**	**326**			**Pn**	**16 27 43.5**	**+0.2**
PB01	**IPOC Station P**	**3.76**	**326**	*eP*		**Pn**	**16 27 43.4**	**+0.2**
PB01				IAML			16 28 31.2	
	comp=E,330nm,0.3s							
PB01	**IPOC Station P**	**3.76**	**326**	*eP*		**Pn**	**16 27 43.5**	**+0.2**
PB01				*eS*		**Sn**	**16 28 28.1**	**-0.7**
PB01				IAML			16 28 33.4	
	comp=Z,177nm,0.2s							
PB02	**IPOC Station P**	**3.76**	**319**			**Pn**	**16 27 43.4**	**0.0**
PB02	**IPOC Station P**	**3.76**	**319**	*eP*		**Pn**	**16 27 43.6**	**+0.2**
PB02				*eS*		**Sn**	**16 28 27.2**	**-1.8**
PB02				IAML			16 28 34.3	
	comp=Z,583nm,0.3s							
TINO	**Tinogasta**	**3.87**	**184**	*eP*		**Pn**	**16 27 46.3**	**+1.6**
AC06	**Mina Casimiro**	**4.23**	**221**			**Pn**	**16 27 48.4**	**-0.7**
AC06	**Mina Casimiro**	**4.23**	**221**	⇑*eP*		**Pn**	**16 27 48.5**	**-0.7**
PATCX	**Punta Patache**	**4.30**	**321**			**Pn**	**16 27 49.5**	**-0.6**
PATCX	**Punta Patache**	**4.30**	**321**	*eP*		**Pn**	**16 27 50.0**	**-0.2**
PATCX	**Punta Patache**	**4.30**	**321**	*eP*		**Pn**	**16 27 50.3**	**+0.1**
PATCX				*eS*		Sn	16 28 29.7	-11
PATCX				IAML			16 28 51.3	
	comp=Z,134nm,0.7s							
GO03	**Copiapo**	**4.33**	**218**			**Pn**	**16 27 49.6**	**-0.9**
GO03	**Copiapo**	**4.33**	**218**	*eP*		**Pn**	**16 27 49.8**	**-0.7**
GO03	**Copiapo**	**4.33**	**218**	*eP*		**Pn**	**16 27 50.0**	**-0.4**
GO03				*eS*		**Sn**	**16 28 40.4**	**-1.6**
GO03				IAML			16 28 42.3	
	comp=Z,155nm,0.2s							
TA01	**Diego Aracena**	**4.52**	**322**			**Pn**	**16 27 52.7**	**-0.2**
TA01	**Diego Aracena**	**4.52**	**322**	*eP*		**Pn**	**16 27 52.6**	**-0.2**
HMBC	**Humberstone**	**4.60**	**327**	*eP*		**Pn**	**16 27 52.8**	**-1.2**
VCA	**Vinchina**	**4.61**	**191**	*eP*		**Pn**	**16 27 53.9**	**-0.3**
VCA				*eS*		Sn	16 28 58.9	+10
GO01	**Chusmiza**	**4.85**	**338**			**Pn**	**16 27 58.1**	**+0.5**
GO01	**Chusmiza**	**4.85**	**338**	*eP*		**Pn**	**16 27 59.0**	**+1.4**
GO01				*eS*		**Sn**	**16 28 52.7**	**-1.8**
GO01				IAML			16 28 57.2	
	comp=Z,72nm,0.6s							
PB11	**IPOC Station P**	**4.94**	**333**			**Pn**	**16 27 57.6**	**-0.9**
PB11	**IPOC Station P**	**4.94**	**333**	*eP*		**Pn**	**16 27 57.4**	**-1.1**
PB11				*eS*		Sn	16 28 43.1	-13
PB11				IAML			16 28 56.6	
	comp=Z,100nm,0.6s							
AC04	**Llanos de Chal**	**5.28**	**220**	⇓*eP*		**Pn**	**16 28 01.4**	**-1.3**
AC04	**Llanos de Chal**	**5.28**	**220**	*eP*		**Pn**	**16 28 01.9**	**-0.7**
AC04				*eS*		**Sn**	**16 29 00.4**	**-3.3**
AC04				IAML			16 29 02.1	
	comp=Z,71nm,0.6s							
AC05	**El Transito**	**5.37**	**210**			**Pn**	**16 28 03.2**	**-0.7**
AC05	**El Transito**	**5.37**	**210**	*eP*		**Pn**	**16 28 03.3**	**-0.6**
AC05				*eS*		**Sn**	**16 29 04.7**	**-1.4**
AC05				IAML			16 29 08.0	
	comp=Z,88nm,0.5s							
LCO	**Las Campanas**	**5.72**	**212**			**Pn**	**16 28 07.3**	**-1.3**
CFA	**Coronel Fontan**	**7.44**	**187**	P		**Pn**	**16 28 31.3**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=321,slow=12,SNR=17							
CFA				S		**Sn**	**16 29 50.5**	**-4.4**
	comp=Z,5.9nm,0.6s,baz=64,slow=16,SNR=12							
LPAZ	**La Paz**	**7.90**	**354**	P		**Pn**	**16 28 37.9**	**+0.2**
	comp=Z,3.7nm,0.4s,baz=164,slow=6.5,SNR=26							
LPAZ				S		**Sn**	**16 30 02.6**	**-4.2**
	comp=Z,4.9nm,0.8s,baz=349,slow=16,SNR=4.9							
LPAZ	**La Paz**	**7.90**	**354**			**Pn**	**16 28 37.5**	**-0.2**
LPAZ	**La Paz**	**7.90**	**354**	*eP*		**Pn**	**16 28 37.5**	**-0.2**
CPUP	**Villa Florida**	**9.22**	**105**	P		**Pn**	**16 28 51.4**	**-2.9**
	comp=Z,1.5nm,0.9s,baz=302,slow=1.6,SNR=5.9							
CPUP	**Villa Florida**	**9.22**	**105**	*eP*		**Pn**	**16 28 51.6**	**-2.7**
MURT	**Porto Murtinho**	**9.22**	**76**	*eP*		**Pn**	**16 28 53.7**	**-0.7**
MT02	**Curacav**	**9.66**	**200**	Pn		**Pn**	**16 28 56.4**	**-3.7**
BDQN	**Bodoquena, MS**	**10.39**	**71**	*eP*		**Pn**	**16 29 07.2**	**-2.5**
PSAL	**Palomas, Salto**	**10.95**	**131**	*eP*		**Pn**	**16 29 16.3**	**-0.6**
AQDB	**Aquidauana**	**11.30**	**73**	*eP*		**Pn**	**16 29 20.3**	**-1.1**
AMBA	**Amambai (Brazi**	**11.30**	**86**	*eP*		**Pn**	**16 29 19.1**	**-2.4**
PTLB	**Pontes e Lacer**	**11.56**	**43**	*eP*		**Pn**	**16 29 22.7**	**-2.0**
BI02	**San Fabin de**	**12.91**	**195**	Pn		**Pn**	**16 29 40.5**	**-1.5**
VILB	**Vilhena**	**13.01**	**32**	*eP*		**P**	**16 29 44.1**	**-2.9**
PP1B	**Ponte de Pedra**	**13.27**	**63**	*eP*		**Pn**	**16 29 44.5**	**-2.1**
SALV	**Santo Antonio**	**13.62**	**55**	*eP*		**Pn**	**16 29 49.1**	**-1.8**
CPSB	**Cacapava Do Su**	**13.74**	**120**	*eP*		**Pn**	**16 29 51.6**	**-0.7**
PTGB	**Pitanga**	**13.83**	**95**	*eP*		**Pn**	**16 29 52.7**	**-0.9**
ITAB	**Concordia**	**13.95**	**106**	*eP*		**Pn**	**16 29 54.3**	**-0.7**
PLTB	**Pedras Altas**	**14.21**	**125**	Pn		**Pn**	**16 29 55.0**	**-3.2**
TRQA	**Tornquist**	**14.54**	**163**			**Pn**	**16 30 01.5**	**-0.7**
PDRB	**Porto dos Gac**	**16.00**	**40**	*eP*		**P**	**16 30 19.0**	**-1.1**
ITRB	**Iturama**	**16.28**	**77**	*eP*		**P**	**16 30 22.0**	**-1.2**
PLCA	**Paso Flores**	**16.73**	**189**	P		**Pn**	**16 30 29.6**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=8.5,slow=8.4,SNR=11							
ARAG	**Araguaiana, MT**	**16.77**	**63**	*eP*		**Pn**	**16 30 29.4**	**0.0**
CLDB	**Colider**	**17.14**	**41**	*eP*		**P**	**16 30 31.8**	**-0.9**
BB19B	**Bebedouro**	**17.55**	**84**	*eP*		**Pn**	**16 30 37.2**	**-1.5**
SPB	**Sao Paulo**	**18.12**	**92**	*eP*		**P**	**16 30 43.0**	**-0.3**
RCLB	**Rio Claro- Sao**	**18.19**	**88**	*eP*		**P**	**16 30 43.5**	**-0.7**
PET01	**Itanhaem-SP**	**18.21**	**94**	*eP*		**P**	**16 30 43.7**	**-0.6**
VAO	**Valinhos**	**18.62**	**90**	P		**P**	**16 30 46.1**	**-2.8**
VAO				IAmb		IAmb	16 30 49.2	
	comp=Z,31nm,0.7s							
VAO	**Valinhos**	**18.62**	**90**	*eP*		**P**	**16 30 47.9**	**-0.9**
IPMB	**Ipameri, GO**	**18.79**	**74**	*eP*		**P**	**16 30 50.5**	**-0.2**
LL07	**Hotel Espejo d**	**19.30**	**194**	P		**P**	**16 30 54.1**	**-1.8**
SNDB	**Serra Nova Dou**	**19.40**	**54**	*eP*		**P**	**16 30 56.3**	**-1.0**
PARB	**Paraibuna**	**19.80**	**92**	*eP*		**P**	**16 31 00.2**	**-1.4**
BDFB	**Brasilia**	**19.96**	**68**	P		**P**	**16 31 02.7**	**-0.7**
	comp=Z,32nm,0.8s,baz=246,slow=10,SNR=44							
BDFB	**Brasilia**	**19.96**	**68**	P		**P**	**16 31 01.8**	**-1.5**
PMNB	**Patos De Minas**	**20.16**	**78**	*eP*		**P**	**16 31 04.9**	**-0.6**
NPGB	**Novo Progresso**	**20.50**	**36**	*eP*		**P**	**16 31 06.5**	**-2.5**
BSCB	**Bom Sucesso**	**20.98**	**86**	*eP*		**P**	**16 31 12.4**	**-1.8**
VAS01	**Vassouras-RJ**	**21.94**	**90**	*eP*		**P**	**16 31 24.0**	**-0.2**
ITTB	**Itaituba**	**22.61**	**31**	*eP*		**P**	**16 31 29.1**	**-1.4**
DIAM	**Diamantina, MG**	**22.72**	**80**	*eP*		**P**	**16 31 30.6**	**-1.0**
DUB01	**Friburgo-RJ**	**22.95**	**90**	*eP*		**P**	**16 31 32.0**	**-1.6**
JANB	**Januaria**	**23.40**	**71**	*eP*		**P**	**16 31 36.4**	**-1.2**
SMTB	**Santa Maria do**	**24.18**	**54**	*eP*		**P**	**16 31 43.3**	**-1.5**
SDBA	**SAO DESIDERIO**	**24.18**	**65**	*eP*		**P**	**16 31 43.5**	**-1.3**
RIB01	**Linhares ES**	**25.38**	**84**	*eP*		**P**	**16 31 54.0**	**-1.5**
GUA01	**Guaratinga, BA**	**26.77**	**79**	*eP*		**P**	**16 32 05.2**	**-2.9**
BOAV	**Boa Vista**	**27.22**	**15**	P		**P**	**16 32 11.3**	**-0.7**
CMC01	**Camacan, BA**	**27.48**	**77**	*eP*		**P**	**16 32 14.0**	**-2.4**
RCBR	**Riachuelo**	**35.20**	**64**	P		**P**	**16 33 21.4**	**-0.6**
RCBR				IAmb		IAmb	16 33 41.1	
	comp=Z,9.5nm,1.0s							
VNA3	**Neumayer Olymp**	**57.05**	**161**	⇓P		**P**	**16 36 12.9**	**+1.4**
	comp=Z,3.7nm,0.7s							
VNA1	**Neumayer--Stat**	**57.25**	**160**	⇓P		**P**	**16 36 14.8**	**+1.9**
	comp=Z,3.6nm,0.8s							
VNA2	**Neumayer--Watz**	**57.62**	**160**	⇑P		**P**	**16 36 15.2**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=291,slow=5.8							
SNAA	**Sanae**	**59.25**	**161**	⇓P		**P**	**16 36 28.0**	**+1.2**
	comp=Z,49nm,0.6s							
SNAA	**Sanae**	**59.25**	**161**	P		**P**	**16 36 28.2**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=282,slow=8.3,SNR=13							
	comp=Z,1.9nm,0.6s							
SNAA	**Sanae**	**59.25**	**161**	P		**P**	**16 36 25.9**	**-0.9**
SNAA				IAmb		IAmb	16 36 28.6	
	comp=Z,2.3nm,0.7s							
TROLL	**Troll, Antarti**	**60.96**	**161**	⇓P		**P**	**16 36 40.1**	**+1.6**
	comp=Z,151nm,0.5s							
TXAR	**Lajitas Array**	**63.70**	**325**	P		**P**	**16 36 59.1**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=146,slow=9.1,SNR=6.0							
	comp=Z,0.6nm,0.7s							
QSPA	**South Pole Qui**	**66.02**	**180**	P		P	16 37 17.4	+5.6
	comp=Z,5.1nm,0.5s,baz=169,slow=2.0,SNR=56							
QSPA	**South Pole Qui**	**66.02**	**180**	P		P	16 37 16.7	+4.9
QSPA				IAmb		IAmb	16 37 18.1	
	comp=Z,5.8nm,0.7s							
VNDA	**Vanda**	**74.48**	**190**	P		**P**	**16 38 05.7**	**+3.0**
	comp=Z,1.4nm,0.8s,baz=37,slow=7.9,SNR=2.6							
	comp=Z,1.4nm,0.8s							
VNDA	**Vanda**	**74.48**	**190**	P		**P**	**16 38 03.7**	**+1.0**
TORD	**Torodi Ar. Bea**	**76.84**	**69**	P		**P**	**16 38 18.5**	**+1.4**
	comp=Z,1.5nm,0.8s,baz=256,slow=5.2,SNR=1.3							
	comp=Z,1.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.84**	**69**	P		**P**	**16 38 16.6**	**-0.5**
TORD				IAmb		IAmb	16 38 28.8	
	comp=Z,3.1nm,1.0s							
PDAR	**Pinedale Array**	**77.20**	**329**	P		**P**	**16 38 20.9**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=134,slow=8.5,SNR=2.6							
	comp=Z,0.4nm,0.6s							
MAW	**Mawson**	**81.32**	**163**	P		**P**	**16 38 42.6**	**+2.1**
	comp=Z,7.6nm,0.9s,baz=207,slow=2.7,SNR=7.5							
	comp=Z,7.6nm,0.9s							
YKA	**Yellowknife Ar**	**94.22**	**340**	P		**P**	**16 39 44.3**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=88,slow=9.3,SNR=2.4							
	comp=Z,0.7nm,0.9s							
ASAR	**Alice Springs**	**128.20**	**205**	PKP		**PKiKP**	**16 45 31.3**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=137,slow=1.8,SNR=21							
WRA	**Warramunga Arr**	**131.36**	**207**	PKP		**PKiKP**	**16 45 37.5**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=161,slow=1.7,SNR=16							
BVAR	**Borovoye Array**	**137.07**	**37**	PKP		**PKiKP**	**16 45 48.4**	**+0.6**
KURBB	**Kurchatov Arra**	**142.66**	**36**	PKP		**PKiKP**	**16 45 57.5**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=294,slow=2.8,SNR=2.2							
ZALV	**Zalesovo Beam**	**143.66**	**28**	PKP		**PKPdf**	**16 45 57.3**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=293,slow=4.6,SNR=9.8							
BATI	**Baumata**	**144.20**	**199**	PKP		**PKPdf**	**16 46 00.8**	**+0.9**
	comp=Z,10nm,0.6s,baz=252,slow=4.2,SNR=4.1							
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc		**PKPab**	**16 46 06.2**	**-1.0**
	comp=Z,2.7nm,0.6s,baz=297,slow=3.2,SNR=14							
MKAR	**Makanchi Array**	**146.81**	**40**			**PKPab**	**16 46 06.8**	**-0.4**
HILR	**Hailar Array B**	**154.09**	**350**	PKPbc		**PKiKP**	**16 46 23.6**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=15,slow=3.8,SNR=2.0							
MJAR	**Matsushiro Arr**	**154.91**	**305**	PKPbc		**PKiKP**	**16 46 26.9**	**+1.9**
	comp=Z,1.0nm,1.0s,baz=294,slow=37,SNR=2.0							
MJAR				PKPab		**PKPab**	**16 46 42.9**	**+1.8**
	comp=Z,1.0nm,0.9s,baz=94,slow=2.1,SNR=4.3							

*SGS **30** 16:29:43.7,29°.33N×34°.87E,h21km,Ml2.5*
*JSO **30** 16:29:43.5±1.7,29°.N±11°×3°.5E±1°.2,h14km±4km,M3.0/9, Md3.7/9,ML2.7/9,MLv2.8/9,MLv2.8/9°*
*GII **30** 16:29:43.5±0.0,29°.351N±0°.005×34°.929E±0°.001,h16km, Mws2.7,confirmed*
ISC 30 16:29:42.4±1.2,**29°.32N**±0°.03×**34°.82E**±0°.06,**h16**km±9km, **n61**,σ0°**40**/62,**Egypt**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HQLS		**0.21**	**94**	S		**Sb**	**16 29 51.8**	**+0.2**
HQLS				P		**Pb**	**16 29 48.3**	**+0.4**
ELOT	**Eilot**	**0.29**	**26**	P		**Pb**	**16 29 49.5**	**+0.2**
JMOS	**Jabal al Moall**	**0.30**	**120**	S		**Sb**	**16 29 54.1**	**+0.1**
JMOS	**Jabal al Moall**	**0.30**	**120**	P		**Pb**	**16 29 49.8**	**+0.5**
EIL	**Elat**	**0.37**	**18**	P		**Pg**	**16 29 50.5**	**+0.5**
EIL	**Elat**	**0.37**	**18**	S		**Sb**	**16 29 55.7**	**-0.4**
BEOR	**Beer Ora**	**0.42**	**21**	P		**Pg**	**16 29 51.1**	**+0.3**
BEOR	**Beer Ora**	**0.42**	**21**	S		**Sb**	**16 29 57.2**	**-0.4**
AQBJ	**Aqaba**	**0.46**	**26**	P		**Pg**	**16 29 51.6**	**0.0**
MBRI	**Mt Berech**	**0.48**	**10**	P		**Pg**	**16 29 52.5**	**+0.5**
MBRI	**Mt Berech**	**0.48**	**10**	P		**Pg**	**16 29 52.5**	**+0.5**
MBRI	**Mt Berech**	**0.48**	**10**	S		**Sb**	**16 29 59.7**	**+0.2**
ELFZ	**Elifaz**	**0.51**	**20**	P		**Pg**	**16 29 52.8**	**+0.3**
ELFZ	**Elifaz**	**0.51**	**20**	S		**Sb**	**16 29 59.9**	**-0.2**
SAMR	**Samar**	**0.54**	**19**	P		**Pg**	**16 29 53.2**	**0.0**
SAMR	**Samar**	**0.54**	**19**	S		**Sb**	**16 30 00.9**	**-0.2**
YTVT	**Yotvata**	**0.61**	**20**	P		**Pg**	**16 29 54.3**	**-0.1**
YTVT	**Yotvata**	**0.61**	**20**	S		**Sb**	**16 30 03.0**	**0.0**
LOTA	**Lotan**	**0.71**	**19**	P		**Pg**	**16 29 55.8**	**-0.4**
LOTA	**Lotan**	**0.71**	**19**	S		**Sb**	**16 30 05.5**	**-0.4**
HRFI	**Mount Harif**	**0.74**	**15**	P		**Pg**	**16 29 56.4**	**-0.5**
HRFI	**Mount Harif**	**0.74**	**15**	P		**Pg**	**16 29 56.5**	**-0.4**
HRFI	**Mount Harif**	**0.74**	**15**	S		**Sg**	**16 30 06.1**	**-0.6**
KRMI	**Paran Flat**	**0.80**	**354**	P		**Pb**	**16 29 58.1**	**+0.2**
KRMI	**Paran Flat**	**0.80**	**354**	P		**Pb**	**16 29 58.2**	**+0.2**
KRMI	**Paran Flat**	**0.80**	**354**	S		**Sb**	**16 30 09.3**	**+0.7**
JLOS		**0.83**	**134**	P		**Pg**	**16 29 58.4**	**-0.2**
JLOS		**0.83**	**134**	S		**Sg**	**16 30 09.4**	**-0.1**
BDAS	**Al Bad`**	**0.92**	**164**	P		**Pb**	**16 30 00.1**	**+0.2**
RSHS		**1.01**	**181**	P		**Pb**	**16 30 01.4**	**-0.1**
PRNI	**Paran**	**1.04**	**9**	P		**Pb**	**16 30 01.6**	**-0.5**
PRNI	**Paran**	**1.04**	**9**	P		**Pb**	**16 30 01.6**	**-0.5**
PRNI	**Paran**	**1.04**	**9**	S		**Sg**	**16 30 15.9**	**-0.3**
AYUS	**`Aynunah**	**1.19**	**160**	P		**Pn**	**16 30 04.0**	**-0.3**
KRABS	**KRABS**	**1.27**	**162**	P		**Pn**	**16 30 04.9**	**-0.6**
ZFRI	**Zfri**	**1.27**	**14**	P		**Pn**	**16 30 05.0**	**-0.5**
ZFRI	**Zfri**	**1.27**	**14**	P		**Pn**	**16 30 05.0**	**-0.5**
ZFRI	**Zfri**	**1.27**	**14**	S		**Sb**	**16 30 21.4**	**-0.7**
RMNI	**Mount Ramon**	**1.28**	**358**	P		**Pn**	**16 30 06.0**	**+0.4**
RMNI	**Mount Ramon**	**1.28**	**358**	S		**Sn**	**16 30 22.8**	**+0.4**
WTBKS	**WTBKS**	**1.56**	**142**	P		**Pn**	**16 30 09.2**	**-0.4**
KZIT	**Kziot**	**1.62**	**347**	P		**Pn**	**16 30 10.9**	**+0.6**
KZIT	**Kziot**	**1.62**	**347**	S		**Sn**	**16 30 31.6**	**+0.6**
MWLHS	**Almuwaylih**	**1.68**	**158**	P		**Pn**	**16 30 10.6**	**-0.5**
TBKS	**Tabuk**	**1.87**	**125**	P		**Pn**	**16 30 14.1**	**+0.4**
LISJ	**El Lisan**	**2.00**	**17**	P		**Pn**	**16 30 15.4**	**0.0**
DESA	**DESA**	**2.16**	**146**	P		**Pn**	**16 30 17.8**	**0.0**
URD07	**Al Amba**	**2.26**	**136**	P		**Pn**	**16 30 20.1**	**+0.9**
DSI	**Dead Sea**	**2.30**	**12**	P		**

BUM	**Brajici-Budva**	**0.85**	**324**	⇑	*i*Pg		**Pg**	16 52 23.5	**+0.1**
BUM					*i* Sg		**Sb**	16 52 36.2	**-0.3**
PVY	**Plav**	**1.02**	**16**		*e*Pg		**Pg**	16 52 26.8	**+0.2**
PVY	**Plav**	**1.02**	**16**	⇓	*i*Pg		**Pg**	16 52 26.0	**-0.6**
PVY					*i* Sg		**Sb**	16 52 41.7	**+0.3**
OHR	**Ohrid**	**1.05**	**118**		*i* Pg		**Pg**	16 52 27.3	**+0.1**
OHR					*i* Sg		**Sn**	16 52 44.1	**0.0**
OHR					*e*Lg		Lg	16 52 45.8	
	comp=N,287nm,0.7s								
OHR					*e*Lg		Lg	16 52 47.5	
	comp=E,436nm,0.6s								
CEME	**Cevo**	**1.05**	**332**		*e*Pg		**Pg**	16 52 27.1	**-0.1**
CEME					*i* Sg		**Sb**	16 52 42.8	**+0.6**
VLO	**Vlora**	**1.15**	**183**		Pg		**Pg**	16 52 28.8	**-0.3**
VLO					Sg		**Sb**	16 52 45.7	**+0.8**
VLO					AML	AML		16 52 53.4	
	comp=E,8.1nm,0.5s								
VLO					AMd			16 53 26.9	
HCY	**Herceg Novi**	**1.16**	**316**		*e*Pg		**Pb**	16 52 29.5	**-0.3**
HCY					*i* Sg		**Sn**	16 52 46.8	**+0.1**
KOME	**Kolasin**	**1.23**	**358**		*e*Pg		**Pg**	16 52 30.6	**-0.1**
KOME	**Kolasin**	**1.23**	**358**		*e*Pg		**Pg**	16 52 30.2	**-0.5**
KOME					*i* Sg		**Sn**	16 52 48.0	**-0.7**
NKME	**Niksic**	**1.24**	**338**		*e*Pg		**Pg**	16 52 30.5	**-0.3**
NKME					*i* Sg		**Sn**	16 52 48.6	**-0.2**
BEY	**Berane**	**1.28**	**11**		*e*Pg		**Pg**	16 52 31.2	**-0.3**
IVA	**Berane**	**1.28**	**11**		*e*Pg		**Pg**	16 52 31.0	**-0.5**
IVA					*i* Sg		**Sn**	16 52 49.5	**-0.2**
KBN	**Korca**	**1.35**	**137**		Pn		**Pn**	16 52 32.1	**-0.8**
KBN					Sn		**Sg**	16 52 51.0	**+0.6**
KBN					AMd			16 53 30.3	
TREB	**Trebinje**	**1.43**	**321**		*e*Pn		**Pn**	16 52 32.3	**-1.7**
TREB	**Trebinje**	**1.43**	**321**		*e*Pg		**Pn**	16 52 34.0	**0.0**
BRY	**Bratogost**	**1.50**	**329**	⇓	*i*Pg		**Pb**	16 52 35.4	**-0.3**
BRY					*i* Sg		**Sn**	16 52 57.7	**+2.5**
SJES	**Sjenica**	**1.67**	**10**		*e*Pn		**Pg**	16 52 38.9	**-0.2**
SJES					*e*Sn		**Sn**	16 52 59.2	**-0.3**
KLINJ	**Klinje**	**1.72**	**335**		*e*Pn		**Pn**	16 52 38.1	**+0.1**
PLE	**Pljevlja**	**1.72**	**355**		*e*Pg		**Pg**	16 52 39.7	**-0.3**
PLE	**Pljevlja**	**1.72**	**355**		*e*Pn		**Pb**	16 52 39.2	**-0.2**
PLE					*i* Sn		**Sg**	16 53 03.6	**+1.3**
STON	**Ston**	**1.88**	**313**		*e*Pn		**Pb**	16 52 41.2	**-0.8**
KEK	**Kerkira**	**1.91**	**175**		Pn		**Pb**	16 52 43.2	**+0.6**
KEK					Sn		**Sb**	16 53 07.5	**+0.7**
KEK					AML	AML		16 53 08.2	
	comp=E,2µm,0.3s								
KEK					AMd			16 54 01.6	
SELS	**Selova**	**1.97**	**35**		*e*Pn		**Pn**	16 52 42.4	**+1.0**
SELS					*e*Sn		**Sn**	16 53 04.8	**-1.9**
IVAS	**Ivanjica**	**2.00**	**12**		*e*Pn		**Pn**	16 52 42.3	**+0.3**
IVAS					*e*Sn		**Sn**	16 53 07.5	**-0.1**
RUDO	**Rudo**	**2.01**	**356**		*e*Pn		**Pb**	16 52 43.1	**-1.2**
RUDO	**Rudo**	**2.01**	**356**		*e*Pg		**Pb**	16 52 43.6	**-0.7**
BARS	**Barje**	**2.05**	**53**		*i* Pn		**Pn**	16 52 43.2	**+0.7**
BARS	**Barje**	**2.05**	**53**		*e*Pn		**Pn**	16 52 43.2	**+0.7**
NOCI	**Noci**	**2.07**	**247**		Sn		**Sn**	16 53 08.7	**-0.4**
NOCI					AML	AML		16 53 18.9	
	comp=E,1.4nm,0.5s								
IGT	**Igoumenitsa**	**2.16**	**164**		Pg		**Pn**	16 52 42.1	**-1.9**
IGT					Sg		**Sn**	16 53 12.2	**+0.8**
IGT					AML	AML		16 53 20.7	
	comp=E,0.4nm,0.6s								
IGT					AMd			16 54 17.1	
GRG	**Griva**	**2.23**	**106**		*i* Pn		**Pn**	16 52 45.7	**+0.7**
BBLS	**Lazi&#263i**	**2.25**	**357**		*e*Pn		**Pn**	16 52 46.1	**+0.7**
VAY	**Valandovo**	**2.27**	**96**		*i* Pn		**Pn**	16 52 46.3	**+0.8**
VAY					*i* Sn		**Sn**	16 53 14.6	**+0.5**
VAY					*e*Lg		Lg	16 53 14.8	
	comp=N,64nm,0.9s								
VAY					*e*Lg		Lg	16 53 15.2	
	comp=E,106nm,0.9s								
BOSS	**Bosilegrad**	**2.33**	**67**		*e*Pn		**Pn**	16 52 47.1	**+0.7**
GRUS	**Gruza**	**2.42**	**20**		*e*Pn		**Pn**	16 52 48.2	**+0.6**
KNT	**Kendrikon**	**2.54**	**99**		*i* Pn		**Pn**	16 52 49.9	**+0.6**
BOVS	**Bovan**	**2.56**	**37**	⇑	P		**Pn**	16 52 50.1	**+0.6**
BOVS	**Bovan**	**2.56**	**37**		*e*Pn		**Pn**	16 52 50.0	**+0.5**
KKB	**Krupnik**	**2.67**	**84**		*i* Pn		**Pn**	16 52 52.0	**+0.9**
TRUS	**Trudelj**	**2.68**	**13**		*e*Pn		**Pn**	16 52 52.0	**+0.9**
THE	**Thessaloniki**	**2.74**	**110**		*i* Pn		**Pn**	16 52 52.5	**+0.5**
ZAPS	**Zavoj**	**2.80**	**53**		*e*Pn		**Pn**	16 52 53.8	**+0.9**
ZAPS					*e*Sn		**Sn**	16 53 25.0	**-2.3**
VTS	**Vitosha**	**2.90**	**69**		*e*Pn		**Pn**	16 52 55.3	**+1.0**
TEKS	**Tekeris**	**2.93**	**359**		*e*Pn		**Pn**	16 52 54.7	**0.0**
ZAGS	**Zajecar**	**2.94**	**41**		*e*Pn		**Pn**	16 52 55.7	**+0.9**
ZAGS					*e*Sn		**Sn**	16 53 28.8	**-1.8**
BORS2	**Bor- Borsko je**	**3.06**	**35**		*e*Pn		**Pn**	16 52 55.2	**-1.2**
BORS2					*e*Sn		**Sn**	16 53 31.6	**-1.9**
MMB	**Musomishta**	**3.13**	**90**		*i* Pn		**Pn**	16 52 58.9	**+1.4**
KUBS	**Kucevo**	**3.19**	**28**		*e*Pn		**Pn**	16 52 55.6	**-2.6**
MDVR	**Moldovita**	**3.53**	**26**	⇓	P		**Pn**	16 53 03.3	**+0.4**
FRGS	**Fruska Gora**	**3.54**	**3**		*e*Pn		**Pn**	16 53 03.4	**+0.3**
BLY	**Banja Luka**	**3.59**	**332**		*e*Pn		**Pb**	16 53 09.3	**-1.9**
VRSS	**Vrsac**	**3.73**	**19**		*e*Pn		**Pn**	16 53 06.1	**+0.5**
HERR	**Herculane**	**3.87**	**31**	⇓	P		**Pn**	16 53 08.4	**+0.9**
BZS	**Buzias**	**4.26**	**20**	⇑	P		**Pn**	16 53 13.5	**+0.5**
GZR	**Gura Zlata**	**4.43**	**31**	⇑	P		**Pn**	16 53 17.0	**+1.7**
MORH	**Mrgy, Hungar**	**4.65**	**352**		*e*Pn		**Pn**	16 53 17.6	**-0.6**
MORH	**Mrgy, Hungar**	**4.65**	**352**	⇓	P		**Pn**	16 53 19.4	**+1.2**
SIRR	**Siria**	**4.89**	**17**		*e*Pn		**Pn**	16 53 21.9	**+0.4**
VOIR		**5.51**	**44**	⇑	P		**Pn**	16 53 31.5	**+1.3**
PSZ	**Piszkesteto**	**6.31**	**2**	⇓	P		**Pn**	16 53 41.6	**+0.5**
PLOR	**Plostina**	**6.64**	**48**	⇓	P		**Pn**	16 53 48.4	**+2.7**
VRI	**Vrincioaia**	**6.70**	**48**	⇑	P		**Pn**	16 53 49.5	**+3.1**
KECS	**Kecovo**	**6.90**	**5**		*e*PN		**Pn**	16 52 53.3	**+3.2**
KECS					*e*SN		**Sn**	16 55 07.5	**-0.6**

*IDC **30** 16:54:17.4±21.0, 16°.46S×174°.36W, h141km±163km, mb3.8/4, mbtmp4.2/4, Error ellipse: s-maj=217.9km s-min=41.5km az=137.0*

ISC 30 16:54:24.0±4.1, 16°S±1°×174°.4W±0°.8, h200km, n7, σ0$32/8, mb3.9/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.63**	**258**	P	**P**	17 02 47.6	**-0.4**
	2.3nm,0.5s,baz=92,slow=7.6,SNR=42						
WRA				PcP	**PcP**	17 04 10.3	**-0.1**
	0.3nm,0.4s,baz=95,slow=3.7,SNR=2.6						
	2.3nm,0.5s						
ASAR	**Alice Springs**	**48.83**	**253**	P	**P**	17 02 49.6	**+0.1**
	6.1nm,0.6s,baz=88,slow=7.8,SNR=224						
	6.1nm,0.6s						
ILAR	**Eielson Array**	**83.69**	**12**	P	**P**	17 06 29.8	**-0.1**
	0.2nm,0.4s,baz=217,slow=6.0,SNR=8.3						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**92.00**	**289**	P	**P**	17 07 11.1	**+0.4**
	0.4nm,0.3s,baz=91,slow=4.4,SNR=4.5						
	0.4nm,0.3s						
BRTR	**Keskin Array B**	**146.34**	**319**	PKPbc	**PKPbc**	17 13 41.4	**-0.3**
	1.0nm,0.7s,baz=45,slow=2.2,SNR=5.2						
GERES	**GERESS Array B**	**147.04**	**350**	PKPbc	**PKPbc**	17 13 43.3	**0.0**
	0.4nm,0.5s,baz=38,slow=6.8,SNR=3.7						
MMAI	**Mount Meron Ar**	**148.44**	**307**	PKPbc	**PKPbc**	17 13 47.8	**+0.3**
	0.4nm,0.4s,baz=151,slow=3.3,SNR=1.8						

TRN 30 16:54:44.5, 16°.16N×61°.55W, h160km, MD3.9, 2D, Near South of Guadeloupe., Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMLZ	**Guadeloupe Bro**	**0.16**	**226**	⇓	*i*P	16 55 07.0	**+1.1**
MMLZ					*e*S	16 55 24.2	**+2.0**
ATGZ	**Broadband at L**	**0.18**	**251**		*e*P	16 55 06.8	**+0.9**
ATGZ					*e*S	16 55 24.2	**+2.0**
DHSZ	**Broadband at M**	**0.24**	**299**		*e*P	16 55 07.0	**+1.0**
DHSZ					*e*S	16 55 22.8	**+0.3**
TBG	**Guadaloupe-3**	**0.32**	**197**		*e*P	16 55 07.1	**+0.8**
DSDZ	**La Diserade, G**	**0.49**	**71**		*e*P	16 55 08.9	**+1.9**
DSDZ					*e*S	16 55 25.0	**+1.0**
DWS	**Wesley**	**0.63**	**159**		*e*P	16 55 08.4	**+0.7**
DWS					*e*S	16 55 25.6	**+0.2**
DSLB	**Salisbury**	**0.72**	**170**		*e*P	16 55 09.1	**+0.8**
DLPL	**La Plaine**	**0.87**	**160**		*e*P	16 55 10.4	**+1.1**
DLPL					*e*S	16 55 29.0	**+0.8**
SVN	**Savane Anatole**	**1.36**	**164**		*e*P	16 55 14.2	**+0.7**
SVN					*e*S	16 55 37.0	**+1.2**
ILAM	**Ilet Lapin Mar**	**1.52**	**155**		*e*P	16 55 16.0	**+0.9**
ILAM					*e*S	16 55 38.4	**-0.2**
ANWB	**Willy Bob**	**1.52**	**351**	⇓	*i*P	16 55 16.9	**+1.8**
ANWB					*e*S	16 55 39.2	**+0.6**

SKI	**Saint Kitts**	**1.64**	**316**		*e*P		Pn	16 55 17.2	**+0.9**
BIM	**Bigot**	**1.69**	**164**		*e*P		Pn	16 55 17.8	**+0.8**
BIM					*e*S		Sn	16 55 43.1	**+1.2**
SLBI	**Saint Lucia, B**	**2.19**	**165**		*e*P		Pn	16 55 23.1	**+0.6**
SLBI					*e*S		Sn	16 55 52.7	**+0.9**
SLAC	**Saint Lucia, A**	**2.33**	**164**		*e*P		Pn	16 55 25.0	**+0.8**
SLAC					*e*S		Sn	16 55 54.9	**0.0**
MCLT	**Moule a Chique**	**2.50**	**166**		*e*P		Pn	16 55 27.1	**+0.9**
MCLT					*e*S		Sn	16 55 59.4	**+1.0**

*TIR **30** 17:11:06.7, 41°.55N×19°.50E, h7km, Md2.7/4, Ml2.3/3*
*PDG **30** 17:11:09.3±0.3, 41°.60N×19°.58E, h11km±2km, ML2.3/11, Error ellipse: s-maj=1.0km s-min=1.7km az=0.0*
*BEO **30** 17:11:11.5±0.7, 41°.72N×19°.59E, h17km±3km, ML2.1/10*

ISC 30 17:11:08.0±1.1, 41°.62N±0°.03×19°.59E±0°.03, h7km±9km, n33, σ1$09/58, 5C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**143**	Pg	**Pg**	17 11 14.7	**+0.1**
TIR				Sg	**Sg**	17 11 18.7	**-0.3**
TIR				AML	AML	17 11 20.2	
	0.8nm,0.2s						
TIR				AML	AML	17 11 20.4	
	1.5nm,0.2s						
ULC	**Ulcinj**	**0.43**	**323**	*e*Pg	**Pg**	17 11 16.6	**+0.2**
ULC				*i* Sg	**Sb**	17 11 23.9	**-0.8**
SDA	**Shkodra**	**0.44**	**351**	Pg	**Pg**	17 11 16.7	**+0.2**
SDA				Sg	**Sb**	17 11 24.0	**-0.9**
SDA				AMd		17 12 01.9	
PHP	**Peshkopia**	**0.64**	**84**	Pg	**Pg**	17 11 20.5	**+0.3**
PHP				Sg	**Sb**	17 11 30.8	**+0.2**
PHP				AML	AML	17 11 34.4	
	0.5nm,0.2s						
PHP				AMd		17 12 01.9	
DRME	**Dracevica, Mon**	**0.65**	**332**	*e*Pg	**Pb**	17 11 21.0	**-0.6**
DRME	**Dracevica, Mon**	**0.65**	**332**	⇓ *i*Pg	**Pg**	17 11 20.7	**+0.3**
DRME				*i* Sg	**Sb**	17 11 31.1	**+0.3**
PDG	**Podgorica**	**0.85**	**343**	Pn	**Pg**	17 11 24.2	**-0.1**
PDG				Sn	**Sn**	17 11 37.6	**-1.4**
PDG				AMd		17 12 13.7	
PDG	**Podgorica**	**0.85**	**343**	*e*Pg	**Pn**	17 11 25.6	**-0.7**
PDG				*e*Sg	**Sn**	17 11 37.7	**-1.4**
PDG	**Podgorica**	**0.85**	**343**	⇑ *i*Pg	**Pg**	17 11 24.2	**-0.1**
PDG				*i* Sg	**Sn**	17 11 38.0	**-1.1**
BUM	**Brajici-Budva**	**0.86**	**323**	⇑ *i*Pg	**Pg**	17 11 24.5	**0.0**
BUM				*i* Sg	**Sn**	17 11 38.5	**-0.9**
PVY	**Plav**	**1.01**	**15**	*e*Pg	**Pg**	17 11 27.3	**-0.1**
PVY				*i* Sg	**Sn**	17 11 43.7	**+0.4**
CEME	**Cevo**	**1.06**	**332**	*e*Pg	**Pg**	17 11 28.1	**-0.1**
CEME				*i* Sg	**Sn**	17 11 45.2	**+0.9**
HCY	**Herceg Novi**	**1.17**	**316**	*e*Pg	**Pb**	17 11 30.2	**-0.2**
HCY				*i* Sg	**Sn**	17 11 48.9	**+2.0**
KOME	**Kolasin**	**1.23**	**357**	*e*Pg	**Pg**	17 11 33.3	**+1.7**
KOME	**Kolasin**	**1.23**	**357**	⇓ *i*Pg	**Pn**	17 11 31.4	**-0.3**
KOME				*i* Sg	**Sn**	17 11 51.2	**+2.5**
NKME	**Niksic**	**1.24**	**338**	⇑ *i*Pg	**Pn**	17 11 31.5	**-0.3**
NKME				*i* Sg	**Sn**	17 11 50.7	**+1.8**
BEY	**Berane**	**1.27**	**10**	*e*Pg	**Pg**	17 11 32.3	**-0.1**
IVA	**Berane**	**1.27**	**10**	⇑ *i*Pg	**Pn**	17 11 32.0	**-0.3**
IVA				*i* Sg	**Sn**	17 11 52.6	**+2.9**
TREB	**Trebinje**	**1.44**	**320**	*e*Pg	**Pb**	17 11 34.6	**-0.4**
TREB				*e*Sg	**Sg**	17 11 54.3	**+0.2**
BRY	**Bratogost**	**1.50**	**329**	⇑ *i*Pg	**Pg**	17 11 36.4	**-0.4**
BRY				*i* Sg	**Sg**	17 11 58.7	**+2.4**
SJES	**Sjenica**	**1.67**	**10**	*e*Pg	**Pg**	17 11 40.5	**+0.6**
SJES				*e*Sg	**Sg**	17 12 02.3	**+0.8**
STON	**Ston**	**1.88**	**312**	*e*Pn	**Pb**	17 11 42.8	**+0.2**
STON				*e*Sn	**Sb**	17 12 05.0	**-1.4**
KEK	**Kerkira**	**1.91**	**175**	Sn	**Sb**	17 12 07.7	**+0.5**
SELS	**Selova**	**1.96**	**35**	*e*Pn	**Pb**	17 11 43.1	**-0.9**
SELS				*e*Sn	**Sn**	17 12 04.9	**-1.6**
IVAS	**Ivanjica**	**2.00**	**12**	*e*Pn	**Pb**	17 11 43.6	**-1.1**
RUDO	**Rudo**	**2.01**	**355**	*e*Pg	**Pb**	17 11 44.5	**-0.3**
RUDO				*e*Sg	**Sg**	17 12 11.2	**-1.2**
BARS	**Barje**	**2.04**	**53**	*e*Pn	**Pb**	17 11 44.5	**-0.8**
BARS				*e*Sn	**Sb**	17 12 09.8	**-1.1**
NOCI	**Noci**	**2.08**	**247**	Sn	**Sb**	17 12 11.7	**-0.4**
NOCI				AML	AML	17 12 16.0	
	0.1nm,0.4s						
IGT	**Igoumenitsa**	**2.16**	**165**	Pn	**Pb**	17 11 45.9	**-1.5**
IGT				Sn	**Sb**	17 12 14.9	**+0.7**
IGT				AMd		17 13 09.3	
BBLS	**Lazi&#263i**	**2.25**	**357**	*e*Pn	**Pb**	17 11 47.4	**-1.6**
BOVS	**Bovan**	**2.55**	**37**	*e*Pn	**Pn**	17 11 50.5	**+0.8**
BOVS				*e*Sn	**Sn**	17 12 20.9	**-0.1**
ZAPS	**Zavoj**	**2.79**	**53**	*e*Pn	**Pn**	17 11 54.9	**+1.8**
ZAPS				*e*Sn	**Sn**	17 12 26.6	**-0.5**
ZAGS	**Zajecar**	**2.93**	**41**	*e*Pn	**Pn**	17 11 56.4	**+1.4**

*IDC **30** 17:34:07.8±4.4, 34°.66N×22°.91E, h49km±28km, mb3.7/7, mbtmp3.7/12, ML3.0/4, MS2.8/1, Error ellipse: s-maj=46.5km s-min=21.5km az=16.0*
*ATH **30** 17:34:13.0, 35°.03N×23°.40E, h29km±11km, ML3.2/8, Manual Solution by G.Panopoulou First location: 2019/11/30 17:35:19, This location: 2019/11/30 18:32:32 ML Amplitudes are expressed in micrometers, All distances are expressed in degrees Latitude uncertainty: 7 km; Longitude uncertainty: 3 km*
*THE **30** 17:34:14.6, 35°N±13°×23°.3E±°, h60km±11km, M3.0/10, MLh3.0/10*

ISC 30 17:34:11.8±1.4, 34°.97N±0°.08×23°.36E±0°.07, h50km±10km, n68, σ1$82/76, mb3.8/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.34**	**39**	P	**Pn**	17 34 20.0	**-1.2**
GVD	**Gavdhos**	**0.61**	**102**	P	**Pn**	17 34 25.0	**+0.7**
GVD				S	**Sn**	17 34 37.7	**+4.3**
GVD	**Gavdhos**	**0.61**	**102**	P	**Pn**	17 34 25.1	**+0.7**
GVD				S	**Sn**	17 34 32.3	**-1.2**
IMMV	**Iera Moni Meta**	**0.70**	**46**	P	**Pn**	17 34 26.5	**+0.9**
IMMV	**Iera Moni Meta**	**0.70**	**46**	P	**Pn**	17 34 26.4	**+0.9**
CH01	**Chania**	**0.76**	**45**	P	**Pn**	17 34 28.0	**+1.6**
CHNB	**Souda**	**0.77**	**48**	P	**Pn**	17 34 28.3	**+1.9**
CHAN	**Chania**	**0.78**	**45**	P	**Pn**	17 34 28.1	**+1.6**
CHAN	**Chania**	**0.78**	**45**	P	**Pn**	17 34 28.1	**+1.6**
CHAN				S	**Sn**	17 34 36.7	**-0.6**
VAM	**Vamos**	**0.81**	**57**	P	**Pn**	17 34 28.4	**+1.5**
VAM	**Vamos**	**0.81**	**57**	P	**Pn**	17 34 28.5	**+1.5**
VAM				S	**Sn**	17 34 37.7	**-0.3**
ANKY	**Antikythira Is**	**0.89**	**357**	P	**Pn**	17 34 29.0	**+0.9**
ANKY				S	**Sn**	17 34 41.4	**+1.3**
ANKY	**Antikythira Is**	**0.89**	**357**	P	**Pn**	17 34 29.0	**+0.9**
ANKY				S	**Sn**	17 34 41.3	**+1.3**
IDI	**Anoyia**	**1.29**	**75**	P	**Pn**	17 34 35.3	**+1.8**
	33nm,0.3s,baz=240,slow=11,SNR=56						
IDI				S	**Sn**	17 34 57.1	**+7.4**
	104nm,0.5s,baz=12,slow=19,SNR=7.4						
IDI	**Anoyia**	**1.29**	**75**	P	**Pn**	17 34 35.1	**+1.6**
IDI	**Anoyia**	**1.29**	**75**	P	**Pn**	17 34 35.1	**+1.6**
IDI				S	**Sn**	17 34 50.6	**+0.9**
KTHA	**Kythira Island**	**1.30**	**349**	P	**Pn**	17 34 34.8	**+1.2**
KTHA	**Kythira Island**	**1.30**	**349**	P	**Pn**	17 34 34.9	**+1.2**
IACM	**Heraklion**	**1.44**	**76**	P	**Pn**	17 34 38.1	**+2.7**
IACM	**Heraklion**	**1.44**	**76**	P	**Pn**	17 34 36.7	**+1.2**
VLI	**Veliai**	**1.77**	**349**	P	**Pn**	17 34 41.9	**+1.9**
VLI	**Veliai**	**1.77**	**349**	P	**Pn**	17 34 41.2	**+1.2**
NPS	**Neapolis**	**1.87**	**80**	P	**Pn**	17 34 43.9	**+2.6**
NPS	**Neapolis**	**1.87**	**80**	P	**Pn**	17 34 43.3	**+2.0**
MHLO	**Agia Marina, M**	**1.91**	**26**	P	**Pn**	17 34 43.0	**+1.1**
SAP3	**Santorini-Thir**	**2.17**	**47**	P	**Pn**	17 34 46.9	**+1.4**
SNT5	**Nea Kammeni, S**	**2.19**	**49**	P	**Pn**	17 34 46.9	**+1.3**
THERA	**Ancient Thera,**	**2.21**	**50**	P	**Pn**	17 34 47.2	**+1.2**
THERA	**Ancient Thera,**	**2.21**	**50**	P	**Pn**	17 34 46.4	**+0.4**
PYL	**PYLOS**	**2.33**	**326**	P	**Pn**	17 34 49.4	**+1.8**
ITM	**Ithomi**	**2.49**	**333**	P	**Pn**	17 34 51.8	**+1.9**
MET2	**Kameni Chora,**	**2.63**	**359**	P	**Pn**	17 34 53.1	**+1.3**
APE	**Apeiranthos**	**2.73**	**39**	P	**Pn**	17 34 53.4	**+0.2**
APE	**Apeiranthos**	**2.73**	**39**	P	**Pn**	17 34 53.2	**0.0**
VLY	**Voula,Athens**	**2.89**	**7**	P	**Pn**	17 34 56.2	**+0.9**
VLY	**Voula,Athens**	**2.89**	**7**	P	**Pn**	17 34 56.1	**+0.7**
ATHU	**Athens Univers**	**3.01**	**6**	P	**Pn**	17 34 57.8	**+0.9**
LTK	**Loutraki**	**3.06**	**354**	P	**Pn**	17 34 59.2	**+1.6**
GUR	**Goura**	**3.07**	**345**	P	**Pn**	17 34 59.4	**+1.5**
GUR	**Goura**	**3.07**	**345**	P	**Pn**	17 34 59.3	**+1.5**
PTL	**Penteli**	**3.10**	**7**	P	**Pn**	17 34 59.1	**+1.0**

MAGU	**Magoula**	**3.10**	**2**		P		**Pn**	17 34 59.3	**+1.1**
DION	**Dionisos Attik**	**3.13**	**8**		P		**Pn**	17 34 59.6	**+0.9**
KARY	**Karystos**	**3.17**	**16**		P		**Pn**	17 34 59.9	**+0.7**
VILL	**Villia**	**3.19**	**359**		P		**Pn**	17 35 00.2	**+0.8**
STFN	**Stefani**	**3.20**	**3**		P		**Pn**	17 35 00.7	**+1.1**
STFN	**Stefani**	**3.20**	**3**		P		**Pn**	17 35 00.6	**+1.0**
KLV	**Kalavryta, Ach**	**3.22**	**343**		P		**Pn**	17 35 00.7	**+0.8**
DRO	**Drossia**	**3.26**	**336**		P		**Pn**	17 35 01.3	**+0.9**
KYMI	**Kymi, Euboea I**	**3.70**	**9**		P		**Pn**	17 35 06.8	**+0.4**
ATAL	**Atalanti**	**3.72**	**356**		P		**Pn**	17 35 07.8	**+1.1**
ANX	**Ano Chora**	**3.79**	**343**		P		**Pn**	17 35 08.8	**+1.1**
VLS	**Valsamata**	**3.90**	**326**		P		**Pn**	17 35 08.1	**-1.0**
AGG	**Agios Georgios**	**4.12**	**349**		P		**Pn**	17 35 13.0	**+0.7**
MAKR	**Makrakomi, Fth**	**4.15**	**347**		P		**Pn**	17 35 13.8	**+1.2**
BRTR	**Keskin Array B**	**9.46**	**57**		P		**Pn**	17 36 28.2	**+2.8**
	baz=231,slow=14,SNR=4.9								
	0.3nm,0.4s								
MMAI	**Mount Meron Ar**	**10.19**	**98**		P		**Pn**	17 36 35.6	**+0.2**
	1.0nm,0.3s,baz=297,slow=13,SNR=5.4								
MMAI					S		**Sn**	17 38 21.6	**-6.6**
	0.5nm,0.3s,baz=290,slow=17,SNR=2.0								
	0.7nm,0.4s								
EIL	**Elat**	**11.13**	**115**		S		Sn	17 38 40.2	-11
	1.8nm,0.4s,baz=16,slow=16,SNR=1.7								
GERES	**GERESS Array B**	**15.60**	**336**		P		**Pn**	17 37 47.9	**-0.3**
	baz=134,slow=9.5,SNR=4.1								
	0.4nm,0.5s								
AKASG	**Malin Array Be**	**16.29**	**13**		P		**Pn**	17 37 58.1	**+1.1**
	0.2nm,0.3s,baz=211,slow=9.4,SNR=6.1								
KBZ	**Khabaz**	**17.43**	**54**		P		**P**	17 38 12.4	**+0.6**
	0.1nm,0.3s,baz=235,slow=12,SNR=1.9								
	1.7nm,0.9s								
HFS	**Hagfors**	**25.95**	**349**		P		**P**	17 39 38.2	**-1.0**
	1.8nm,0.6s,baz=145,slow=10,SNR=6.2								
	1.8nm,0.6s								
FINES	**FINESS Array B**	**26.55**	**3**		P		**P**	17 39 42.8	**-1.8**
	1.9nm,0.9s,baz=211,slow=6.7,SNR=4.0								
	1.9nm,0.9s								
NOA	**NORSAR Array B**	**27.23**	**347**		P		**P**	17 39 48.3	**-2.5**
	0.7nm,0.8s,baz=154,slow=9.2,SNR=1.

HUEH Huehuetenango 1.45 19 *e*P **Pb 17 59 40.1 -0.4**
HUEH IAML 18 00 25.9
comp=E,32µm,0.9s
HUEH Huehuetenango 1.45 19 ⇓P **Pb 17 59 40.1 -0.4**
FG16 Alotenango, Sa 1.47 77 *i* P **Pn 17 59 36.5 -2.0**
FG16 *i* S **Sn 17 59 51.9 -4.8**
FG16 IAML 17 59 54.2
comp=N,145µm,0.2s
GCG4 OSOP 1.55 65 *i* P **Pb 17 59 42.0 -0.1**
GCG4 *e*S **Sb 18 00 01.9 +0.5**
PCG5 San Vicente Pa 1.59 80 *e*P **Pn 17 59 38.6 -1.4**
PCG5 *e*S **Sn 17 59 56.0 -3.5**
QUIS Sacapulas 1.60 33 *e*P **Pb 17 59 42.8 -0.2**
QUIS IAML 18 00 24.4
comp=E,15µm,0.5s
APG El Apazote 1.82 54 P **Pb 17 59 46.4 -0.3**
comp=E,217nm,0.7s,baz=194,slow=12,SNR=1613
APG S **Sn 18 00 03.7 -1.6**
comp=E,86nm,0.3s,baz=100,slow=13,SNR=10
APG LR LR 18 00 18.6
comp=E,105nm,20.7s,baz=281,slow=53
APG El Apazote 1.82 54 *i* P **Pb 17 59 46.4 -0.3**
FAME Alcaldia de Sa 1.92 93 ⇑P **Pn 17 59 45.5 +1.0**
SLOZ Alcaldia de Sa 2.14 87 S **Sb 18 00 16.4 -1.8**
LOAL Lomas de Alarc 2.14 88 ⇓P **Pb 17 59 51.3 -0.8**
NUBE Las Nubes 2.14 91 *e*P **Pn 17 59 48.8 +1.2**
NUBE Las Nubes 2.14 91 ⇓P **Pn 17 59 48.8 +1.2**
AVCB Coban 2.16 45 IAML 18 00 47.8
comp=N,35µm,0.5s
RBDL Robledal 2.24 85 *e*P **Pb 17 59 51.4 -2.4**
RBDL *e*S **Sb 18 00 18.9 -2.3**
CEVE Cerro Verde 2.30 92 *e*P **Pb 17 59 52.9 -1.9**
CEVE Cerro Verde 2.30 92 P **Pb 17 59 52.7 -2.2**
CEVE Cerro Verde 2.30 92 S **Sb 18 00 20.2 -2.7**
SBLS San Blas 2.30 92 *e*P **Pb 17 59 52.7 -2.2**
SBLS *e*S **Sn 18 00 19.1 +1.8**
SNJE San Jose 2.31 91 *e*P **Pn 17 59 52.4 +2.4**
CCIG Comitan 2.34 356 P **Pb 17 59 52.7 -2.8**
CCIG Sn **Sb 18 00 22.0 -2.0**
CCIG Comitan 2.34 356 *e*P **Pb 17 59 52.7 -2.8**
CCIG IAML 18 00 43.1
comp=N,4µm,0.6s
CCIG Comitan 2.34 356 ⇓P **Pb 17 59 52.8 -2.7**
UNIC Universidad Ca 2.37 89 *e*P **Pb 17 59 53.3 -2.6**
UNIC Universidad Ca 2.37 89 P **Pb 17 59 53.4 -2.6**
UNIC Universidad Ca 2.37 89 S **Sb 18 00 22.5 -2.3**
JAYA Jayaque - finc 2.48 96 *e*P **Pn 17 59 54.9 +2.6**
JAYA Jayaque - finc 2.48 96 *e*P **Pn 17 59 53.3 +1.0**
JAYA *e*S **Sn 18 00 22.6 +0.9**
JAYA Jayaque - finc 2.48 96 S **Sb 18 00 24.9 -3.3**
JAYA Jayaque - finc 2.48 96 P **Pn 17 59 53.7 +1.4**
CEDA San Andres 2.52 93 S **Sn 18 00 25.4 +2.9**
MTO3 Montecristo 2.59 79 **Pn 17 59 56.0 +2.1**
MTO3 Sn **Sn 18 00 25.2 +0.8**
MTO3 Montecristo 2.59 79 *e*P **Pn 17 59 56.1 +2.3**
MTO3 Montecristo 2.59 79 ⇓P **Pn 17 59 56.2 +2.3**
MTO3 Montecristo 2.59 79 S **Sn 18 00 26.9 +2.5**
PMON Piamonte 2.60 95 P **Pn 17 59 56.6 +2.6**
LALI Alcalda de L 2.63 99 *e*S **Sn 18 00 25.5 +0.4**
LALI IAML 18 00 33.9
comp=E,2µm,0.4s
LALI Alcalda de L 2.63 99 S **Sn 18 00 27.4 +2.4**
LALI Alcalda de L 2.63 99 P **Pn 17 59 57.1 +2.9**
BOQS Boqueron 2.63 94 *e*P **Pn 17 59 57.2 +2.6**
ESQI Esquipulas 2.64 76 **Pn 17 59 56.7 +2.3**
ESQI Esquipulas 2.64 76 P **Pb 17 59 57.8 -2.8**
UEES Universidad Ev 2.68 94 S **Sn 18 00 29.4 +3.0**
UEES Universidad Ev 2.68 94 P **Pn 17 59 57.9 +2.9**
PANCS Alcaldia de 2.75 96 S **Sn 18 00 30.0 +1.9**
LOMA Loma Larga 2.75 96 *e*P **Pn 17 59 58.5 +2.4**
LOMA Loma Larga 2.75 96 S **Sn 18 00 30.6 +2.3**
LOMA Loma Larga 2.75 96 P **Pn 17 59 58.2 +2.2**
LFRS El Faro 2.86 96 *e*P **Pn 18 00 00.1 +2.6**
LBRS Las Brisas 2.86 94 *e*P **Pn 17 59 59.7 +2.2**
LLGN La Laguna 2.96 85 P **Pn 18 00 01.3 +2.4**
PAVA Las Pavas 2.97 94 P **Pn 18 00 02.1 +3.1**
TGIG 3.03 339 *e*P **Pn 18 00 00.5 +0.6**
TGIG IAML 18 01 13.3
comp=E,2µm,1.0s
TECO Alcaldia de Te 3.14 97 P **Pn 18 00 04.8 +3.5**
TECO Alcaldia de Te 3.14 97 S **Sn 18 00 41.9 +4.2**
SCLA Alcaldia de Sa 3.17 94 S **Sn 18 00 42.3 +3.7**
SCLA Alcaldia de Sa 3.17 94 P **Pn 18 00 04.5 +2.8**
TECA Tecapa 3.41 97 *e*P **Pn 18 00 08.2 +2.9**
PACA Pacayal 3.59 97 P **Pn 18 00 11.3 +3.7**
PETF Flores 3.60 34 **Pn 18 00 09.3 +1.8**
PETF Flores 3.60 34 *e*P **Pn 18 00 10.6 +3.0**
PETF Flores 3.60 34 *e*P **Pn 18 00 10.1 +2.6**
PETF Flores 3.60 34 P **Pn 18 00 10.2 +2.6**
RANC El Ranchito 3.63 97 *e*P **Pn 18 00 12.6 +4.5**
BLLM Bellamira 3.67 97 *e*P **Pn 18 00 11.5 +2.8**
CMIG Matias Romero 4.20 319 P **Pn 18 00 15.6 -0.3**
comp=E,28nm,0.5s,baz=158,slow=9.4,SNR=31
CMIG S **Sn 18 01 03.1 -0.8**
comp=E,189nm,0.5s,baz=101,slow=8.5,SNR=6.0
CMIG LR LR 18 02 22.1
comp=E,1µm,20.1s,baz=126,slow=42
TGUH Tegucigalpa,Un 4.58 88 **Pn 18 00 22.7 +1.6**
CRIN San Cristobal 4.96 104 **Pn 18 00 27.9 +1.5**
SCIG Sabancuy 5.06 9 *i* P **Pn 18 00 28.9 +1.2**
HERN Volcan Telica 5.19 104 **Pn 18 00 30.8 +1.2**
CNGN Cerro Negro 5.34 105 **Pn 18 00 33.9 +2.2**
MGAN Managua 5.87 107 **Pn 18 00 39.7 +0.9**
BOAB BOACO BROADBAN 6.33 103 **Pn 18 00 46.5 +1.4**
SIUN Universidad Ur 7.01 91 **Pn 18 00 56.0 +1.5**
TEIG Tepich 7.19 29 P **Pn 18 01 00.3 +3.4**
comp=E,0.1nm,0.4s,baz=134,slow=24,SNR=33
TEIG S **Sn 18 02 16.3 -1.3**
comp=E,0.1nm,0.3s,baz=131,slow=24,SNR=1.3
TEIG Tepich 7.19 29 **Pn 18 00 58.0 +1.0**
TLIG Tlapa 7.29 300 **Pn 18 00 59.4 +1.0**
JUD3 Juan Diaz 3 7.33 120 **Pn 18 01 01.3 +2.2**
JTS Las Juntas de 7.77 117 P **Pn 18 01 11.3 +6.3**
comp=E,9.2nm,0.3s,baz=307,slow=20,SNR=9.0
JTS S **Sn 18 02 32.0 -0.1**
comp=E,12nm,0.6s,baz=259,slow=22,SNR=0.6
JTS Las Juntas de 7.77 117 **Pn 18 01 07.7 +2.7**
SOCE Pocosol 8.02 115 Pn **Pn 18 01 09.2 +0.8**
HDC Heredia 8.64 116 Pn **Pn 18 01 19.0 +2.0**
RAFA San Farael, Vo 8.92 115 Pn **Pn 18 01 22.6 +1.6**
PIRO Carate, Puerto 10.11 122 **Pn 18 01 39.0 +2.0**
BRU2 Volcan 10.45 118 **Pn 18 01 43.4 +1.6**
MOIG Morelia 10.50 304 Pn **Pn 18 01 42.9 +0.3**
SOR Soroa 12.25 43 **Pn 18 02 06.4 +0.1**
ZAIG Zacatecas 13.34 313 Pn **Pn 18 02 21.6 +0.1**
061Z Ochoppi 15.78 40 Pn **Pn 18 02 52.0 -1.9**
833A Chaparral WMA, 15.89 335 **Pn 18 02 53.5 -1.8**
833A IAmb IAmb 18 03 06.2
comp=Z,53nm,1.4s
HKT Hockley 16.33 348 Pn **Pn 18 02 59.4 -1.5**
HNDO Hondo 16.92 338 P **Pn 18 03 06.8 -1.7**
DRIO Del Rio 17.36 334 **Pn 18 03 13.5 -0.4**
553A Crawfordville 17.61 22 P **P 18 03 17.1 -0.7**
656A Willston 17.68 28 P **Pn 18 03 17.5 -0.3**
NATX Nacogdoches 17.91 353 **P 18 03 20.7 -0.4**
NATX IAmb IAmb 18 03 23.7
comp=Z,56nm,1.4s
JCT Junction City 17.97 338 P **Pn 18 03 20.9 -0.7**
BRDY Brady 18.43 341 **Pn 18 03 27.0 -0.1**
SAND Sanderson 18.49 331 **P 18 03 27.2 -0.4**
352A Blakely 18.62 19 P **P 18 03 28.4 -0.5**
WHTX Lake Whitney, 18.66 345 P **P 18 03 29.1 -0.3**
250A Grady 18.71 15 P **Pn 18 03 30.1 -0.3**
TXAR Lajitas Array 18.76 327 P **Pn 18 03 33.4 +2.3**
comp=Z,0.4nm,0.3s,baz=152,slow=12,SNR=52
TXAR LR LR 18 12 36.8
comp=Z,97nm,19.0s,baz=124,slow=42
comp=Z,10nm,0.8s
TXAR Lajitas Array 18.76 327 P **P 18 03 30.8 +0.2**
TX31 Lajitas Ar. Si 18.76 327 P **Pn 18 03 31.2 0.0**
OZNA Ozona 18.88 335 P **Pn 18 03 32.6 0.0**
TIGA Tifton 19.05 22 P **Pn 18 03 34.2 -0.3**
TIGA IAmb IAmb 18 03 36.4
comp=Z,47nm,0.8s
Z47A Carrollton 19.50 10 P **Pn 18 03 39.8 -0.2**
LRAL Lakeview Retre 19.55 13 P **Pn 18 03 39.7 -0.8**
ROSC El Rosal 19.62 116 P **Pn 18 03 45.8 +3.9**
comp=Z,44nm,0.8s,baz=158,slow=5.6,SNR=14
ROSC LR LR 18 12 54.7
comp=Z,103nm,19.1s,baz=266,slow=42
ROSC El Rosal 19.62 116 P **Pn 18 03 42.3 +0.4**
ROSC IAmb IAmb 18 03 46.4
comp=Z,40nm,0.8s
FW06 Azle 19.62 346 P **P 18 03 39.8 -0.1**
FW06 IAmb IAmb 18 03 49.4
comp=Z,21nm,0.7s
PLPT Palo Pinto 19.66 344 IAmb IAmb 18 03 43.0
comp=Z,33nm,0.6s
152A Waverly Hall 19.79 18 IAmb IAmb 18 03 48.0
comp=Z,23nm,0.6s
Z35A Perchaven, San 19.89 347 IAmb IAmb 18 03 51.7
comp=Z,25nm,0.8s
RUSC La Rusia 20.25 111 P **P 18 03 48.2 +0.8**
RUSC IAmb IAmb 18 04 01.1
comp=Z,27nm,1.0s
154A Montrose 20.28 22 P **P 18 03 47.3 +0.2**
FLOC Florencia 20.29 126 P Pn 18 03 49.7 +0.2
Y49A Blount Mountai 20.47 13 P **P 18 03 49.1 0.0**
Y49A IAmb IAmb 18 04 04.2
comp=Z,23nm,0.9s
X40A Basin Creek Pa 20.48 358 IAmb IAmb 18 04 15.1
comp=Z,36nm,1.5s
ODSA Odessa 20.52 334 P **P 18 03 50.5 +0.8**
ODSA IAmb IAmb 18 03 52.2
comp=Z,26nm,0.7s
MIAR Mount Ida 20.57 356 P **P 18 03 50.3 +0.1**
MIAR IAmb IAmb 18 04 06.9
comp=Z,32nm,1.1s
VHRN Van Horn 20.60 327 P **P 18 03 51.0 +0.3**
OXF Oxford 20.62 6 IAmb IAmb 18 04 16.1
comp=Z,41nm,0.9s
APMT Aspermont 20.67 340 IAmb IAmb 18 03 59.6
comp=Z,16nm,0.7s
UALR University of 20.75 359 IAmb IAmb 18 04 06.9
comp=Z,23nm,0.9s
GOGA Godfrey 20.88 20 P **P 18 03 53.6 +0.1**
GOGA IAmb IAmb 18 04 08.4
comp=Z,25nm,0.9s
X48A Hartselle 20.91 12 IAmb IAmb 18 04 00.6
comp=Z,30nm,1.2s
POST Post 20.93 337 IAmb IAmb 18 04 00.3
comp=Z,20nm,0.8s
Y52A Lilburn 21.10 19 P **P 18 03 55.8 -0.2**
Y52A IAmb IAmb 18 04 11.6
comp=Z,27nm,1.0s
DKNS Dickens 21.25 339 IAmb IAmb 18 04 04.6
comp=Z,14nm,0.7s
WHAR Wooly Hollow 21.26 359 P **P 18 03 57.4 -0.2**
FPAL Fort Paine 21.31 15 P **P 18 03 58.2 0.0**
FPAL IAmb IAmb 18 04 13.6
comp=Z,29nm,0.9s
SDV Santo Domingo 21.52 101 P **P 18 03 57.4 -3.3**
comp=Z,3.2nm,0.4s,baz=359,slow=6.1,SNR=5.3
SDV LR LR 18 13 05.6
comp=Z,189nm,21.1s,baz=254,slow=39
comp=Z,3.2nm,0.4s
SDV Santo Domingo 21.52 101 P **P 18 03 59.9 -0.8**
MNTX Cornudas Mount 21.53 327 IAmb IAmb 18 04 02.9
comp=Z,21nm,0.8s
SWET Sewanee 21.88 13 IAmb IAmb 18 04 06.2
comp=Z,27nm,0.7s
W50A Signal Mountai 22.01 15 IAmb IAmb 18 04 35.1
comp=Z,22nm,0.8s
HODGE Hodges 22.05 22 P **P 18 04 05.0 -1.0**
HODGE IAmb IAmb 18 04 36.4
comp=Z,29nm,0.9s
LCAR Lake Charles 22.05 2 IAmb IAmb 18 04 13.5
comp=Z,16nm,0.9s
TUL3 Leonard 22.15 352 P **P 18 04 06.4 -0.8**
TUL3 IAmb IAmb 18 04 24.9
comp=Z,15nm,0.8s
V48A Smith Brothers 22.20 11 IAmb IAmb 18 04 09.4
comp=Z,30nm,0.8s
W52A Murphy 22.29 18 IAmb IAmb 18 04 32.2
comp=Z,16nm,0.9s
WVT Waverly 22.41 9 P **P 18 04 08.9 -1.1**
WVT IAmb IAmb 18 04 10.6
comp=Z,15nm,0.7s
CPCT Cooper Cave 22.45 16 IAmb IAmb 18 04 25.8
comp=Z,32nm,1.2s
JSC Jenkinsville 22.47 24 IAmb IAmb 18 04 25.6
comp=Z,40nm,1.5s
PAULI Pauline 22.73 22 IAmb IAmb 18 04 31.9
comp=Z,36nm,1.3s
PBMO Poplar Bluff 22.79 3 P **P 18 04 12.0 -2.0**
PBMO IAmb IAmb 18 04 28.9
comp=Z,17nm,0.9s
TKL Tuckaleechee C 22.86 17 IAmb IAmb 18 04 31.1
comp=Z,20nm,0.9s
BIRD Birdtown, Kers 23.10 25 IAmb IAmb 18 04 46.5
comp=Z,14nm,0.7s
V53A Saluda 23.16 19 P **P 18 04 17.1 -0.7**
V53A IAmb IAmb 18 04 38.5
comp=Z,36nm,1.1s
KMSC Kings Mountain 23.20 23 IAmb IAmb 18 04 56.4
comp=Z,23nm,1.0s
121A Cookes Peak, D 23.47 325 IAmb IAmb 18 04 25.3
comp=Z,30nm,0.9s
319A Douglas 23.52 320 P **P 18 04 21.9 +0.3**
319A IAmb IAmb 18 04 25.3
comp=Z,42nm,1.5s
TZTN Tazewell 23.75 17 IAmb IAmb 18 04 46.8
comp=Z,18nm,0.8s
T50A Nancy 23.86 14 IAmb IAmb 18 04 25.1
comp=Z,12nm,0.7s
V55A Taylorsville 23.87 22 IAmb IAmb 18 04 25.9
comp=Z,26nm,0.8s
Y22A Socorro 24.11 328 IAmb IAmb 18 04 32.4
comp=Z,20nm,0.8s
U54A Nelsons Funny 24.26 20 IAmb IAmb 18 05 02.5
comp=Z,21nm,0.8s
RTBA Rita Blanca 24.39 339 IAmb IAmb 18 04 33.3
comp=Z,14nm,0.7s
U56A King 24.62 23 IAmb IAmb 18 04 47.3
comp=Z,24nm,0.9s
ABQ Albuquerque 24.66 331 IAmb IAmb 18 04 35.7
comp=Z,16nm,0.7s
ANMO Albuquerque 24.66 331 LR LR 18 15 27.4
comp=Z,94nm,18.3s,baz=129,slow=39
ANMO Albuquerque 24.66 331 P **P 18 04 33.8 +1.6**
ANMO IAmb IAmb 18 04 35.7
comp=Z,15nm,0.7s
TASM ASL Pad, Albuq 24.66 331 IAmb IAmb 18 04 35.8
comp=Z,16nm,0.7s
TASM ASL Pad, Albuq 24.66 331 IAmb IAmb 18 04 35.8
comp=Z,17nm,0.7s
TASM ASL Pad, Albuq 24.66 331 IAmb IAmb 18 04 35.8
comp=Z,17nm,0.7s
WCI Wyatt Cave 24.72 11 P **P 18 04 30.6 -1.8**
S51A Beattyville 24.76 16 IAmb IAmb 18 04 58.7
comp=Z,23nm,1.1s
ATAH Atahualpa 24.90 146 LR LR 18 13 19.5
comp=Z,218nm,18.3s,baz=300,slow=34
R49A Shelbyville 25.00 13 IAmb IAmb 18 04 49.3
comp=Z,19nm,0.9s
R50A Paris 25.18 14 IAmb IAmb 18 04 37.9
comp=Z,15nm,0.6s
S54A Dingess, Beckl 25.59 20 IAmb IAmb 18 04 40.2
comp=Z,12nm,0.9s
T57A Hurt 25.63 24 IAmb IAmb 18 04 57.9
comp=Z,19nm,1.2s
T25A Trinidad 25.63 337 IAmb IAmb 18 04 44.8
comp=Z,9.8nm,0.7s
P48A Milroy 26.07 12 IAmb IAmb 18 05 16.2
comp=Z,21nm,1.0s
ACSO Alum Creek Sta 27.36 15 IAmb IAmb 18 05 19.7
comp=Z,22nm,1.1s
MVCO Mesa Verde 27.46 331 IAmb IAmb 18 05 01.2
comp=Z,20nm,0.9s
P57A Homestead Farm 28.27 23 IAmb IAmb 18 05 05.8
comp=Z,12nm,0.8s
PV02 Paradox Valley 28.38 331 IAmb IAmb 18 05 09.7
comp=Z,18nm,1.2s
PV13 Radium Mtn., P 28.38 331 IAmb IAmb 18 05 09.0
comp=Z,14nm,1.0s
PV05 Paradox Valley 28.44 331 IAmb IAmb 18 05 09.2
comp=Z,15nm,1.0s
PV03 Paradox Valley 28.47 331 P **P 18 05 07.3 +0.8**
PV03 IAmb IAmb 18 05 09.6
comp=Z,12nm,1.1s
PV18 Skein Mesa, Pa 28.49 331 IAmb IAmb 18 05 09.9
comp=Z,23nm,1.0s
PV12 Saucer Basin, 28.50 332 IAmb IAmb 18 05 10.1
comp=Z,15nm,0.7s
PV11 David Mesa, Pa 28.51 331 IAmb IAmb 18 05 10.0
comp=Z,13nm,1.0s
PV17 East Wray Mesa 28.54 331 IAmb IAmb 18 05 10.2
comp=Z,12nm,0.9s
PV19 Morning Glory 28.57 331 IAmb IAmb 18 05 12.4
comp=Z,12nm,0.8s
PV20 West Nyswonger 28.59 331 IAmb IAmb 18 05 10.6
comp=Z,16nm,1.0s
PV04 Paradox Valley 28.60 331 IAmb IAmb 18 05 13.1
comp=Z,13nm,1.1s
PV14 Lion Creek, Pa 28.64 331 P **P 18 05 08.4 +0.4**
PV10 Paradox Valley 28.65 331 IAmb IAmb 18 05 10.6
comp=Z,18nm,0.9s
PV23 Carpenter Ridg 28.70 331 IAmb IAmb 18 05 13.4
comp=Z,15nm,0.7s
BC3 Big Chuckawall 28.97 317 P **P 18 05 11.8 +0.9**
PFO Pinyon Flats O 29.62 316 LR LR 18 17 17.6
comp=Z,184nm,19.7s,baz=116,slow=36
V12A Nelson 29.88 321 IAmb IAmb 18 05 22.5
comp=Z,9.1nm,0.8s
MTPU Mount Pierson 29.96 327 IAmb IAmb 18 05 25.5
comp=Z,8.3nm,0.7s
Q16A Castle Valley 30.11 329 IAmb IAmb 18 05 24.6
comp=Z,11nm,1.1s
SZCU Shurtz Canyon 30.13 325 IAmb IAmb 18 05 25.1
comp=Z,7.9nm,0.9s
M57A Sunshine Farm, 30.21 23 P **P 18 05 21.0 -0.7**
M57A IAmb IAmb 18 05 21.7
comp=Z,10nm,0.8s
CCUT Cedar City 30.25 325 IAmb IAmb 18 05 26.5
comp=Z,8.8nm,0.9s
P17A Butcher Ranch, 30.33 330 IAmb IAmb 18 05 25.9
comp=Z,11nm,0.8s
MPMC Manual Prospec 31.75 318 P **P 18 05 36.5 +1.0**
CTU Camp Tracy 31.76 331 IAmb IAmb 18 05 38.6
comp=Z,7.0nm,0.7s
RSSD Black Hills 31.80 343 P **P 18 05 35.6 -0.3**
TCUT Toone Canyon 31.94 332 IAmb IAmb 18 05 40.4
comp=Z,11nm,0.9s
HWUT Hardware Ranch 32.40 332 IAmb IAmb 18 05 44.9
comp=Z,6.7nm,0.8s
PDAR Pinedale Array 32.48 336 P **P 18 05 43.8 +1.8**
comp=Z,1.2nm,0.7s,baz=138,slow=9.0,SNR=11
PDAR PcP **PcP 18 08 30.5 +2.0**
comp=Z,0.9nm,0.5s,baz=127,slow=5.4,SNR=7.1
PDAR LR LR 18 21 04.8
comp=Z,88nm,19.3s,baz=145,slow=40
comp=Z,1.2nm,0.7s
PDAR Pinedale Array 32.48 336 P **P 18 05 42.6 +0.7**
PDAR **PcP 18 08 29.3 +0.8**
BGU Big Grassy Mou 32.56 330 IAmb IAmb 18 05 46.1
comp=Z,6.9nm,0.8s
HVU Hansel Valley 33.09 331 IAmb IAmb 18 05 50.4
comp=Z,8.0nm,0.9s
BOAV Boa Vista 33.13 107 P **P 18 05 47.6 0.0**
M65A Busby, Falmout 33.19 30 P **P 18 05 49.8 +2.0**
baz=220
ELK Elko 33.55 327 IAmb IAmb 18 05 55.8
comp=Z,6.3nm,0.7s
NVAR Mina Array Bea 33.73 321 P **P 18 05 56.2 +3.4**
comp=Z,8.1nm,0.7s,baz=134,slow=8.7,SNR=40
NVAR PcP **PcP 18 08 34.2 +2.1**
comp=Z,2.3nm,0.8s,baz=132,slow=4.8,SNR=5.5
NVAR LR LR 18 21 16.4
comp=Z,229nm,18.9s,baz=100,slow=39
comp=Z,8.1nm,0.7s
NVAR Mina Array Bea 33.73 321 P **P 18 05 55.6 +2.7**
NVAR **PcP 18 08 33.1 +1.0**
LHV Little Huntoon 33.74 321 IAmb IAmb 18 05 57.1
comp=Z,8.5nm,0.7s
YNE Yellowstone No 34.55 337 IAmb IAmb 18 06 03.1
comp=Z,5.4nm,0.8s
YMR Madison River 34.63 336 IAmb IAmb 18 06 04.2
comp=Z,5.7nm,0.8s
PNTR Pine Nut 34.93 321 IAmb IAmb 18 06 07.2
comp=Z,7.9nm,0.8s
HLID Hailey 35.24 331 IAmb IAmb 18 06 10.5
comp=Z,5.4nm,0.8s
MFID Camas Ranch 35.80 330 **P 18 06 11.7 +1.1**
MFID IAmb IAmb 18 06 15.4
comp=Z,6.9nm,0.9s
BEKR Beckworth 35.87 321 IAmb IAmb 18 06 15.0
comp=Z,5.6nm,0.9s
ULM Lac du Bonnet 36.35 356 P **P 18 06 14.6 -0.4**
comp=Z,3.5nm,0.6s,baz=182,slow=7.8,SNR=3.8
ULM LR LR 18 22 28.0
comp=Z,109nm,20.5s,baz=184,slow=38
comp=Z,3.5nm,0.6s
SUTB Sutter Butte 36.38 319 P **P 18 06 16.9 +1.5**
SUTB IAmb IAmb 18 06 21.2
comp=Z,7.4nm,0.8s
ORV Oroville 36.39 320 P **P 18 06 17.1 +1.6**
WVOR Wild Horse Val 36.55 326 IAmb IAmb 18 06 24.6
comp=Z,6.7nm,0.8s
PLID Pearl Lake 37.14 331 IAmb IAmb 18 06 24.3
comp=Z,10nm,0.9s
I07A Izee 38.14 327 IAmb IAmb 18 06 34.4
comp=Z,6.8nm,1.0s
LPAZ La Paz 38.18 141 P **P 18 06 32.9 +1.3**
comp=Z,2.1nm,0.6s,baz=338,slow=6.3,SNR=9.6
LPAZ LR LR 18 21 58.1
comp=Z,107nm,20.3s,baz=318,slow=36
comp=Z,2.1nm,0.6s
LPAZ La Paz 38.18 141 P **P 18 06 31.8 +0.2**
YBH Yreka Blue Hor 38.42 322 LR LR 18 24 05.3
comp=Z,13nm,19.6s,baz=128,slow=39
PINE Pine Mountain 38.71 326 IAmb IAmb 18 06 40.6
comp=Z,6.5nm,0.8s
I05D Terrebonne, OR 39.29 326 IAmb IAmb 18 06 43.7
comp=Z,6.3nm,0.8s
MDP Montagnes des 39.73 99 LR LR 18 24 10.0
comp=Z,100nm,20.6s,baz=300,slow=38
G05A Wamic 39.88 327 IAmb IAmb 18 06 55.7
comp=Z,14nm,0.9s
H04D Lebanon 40.17 325 IAmb IAmb 18 06 50.2
comp=Z,11nm,0.8s
C09A Chrisman Ranch 40.21 332 IAmb IAmb 18 06 49.8
comp=Z,13nm,0.9s
MXC Moxie City 40.28 330 IAmb IAmb 18 06 51.3
comp=Z,16nm,1.4s
GNW Green Mountain 42.21 329 P **P 18 07 03.4 -0.6**
GNW IAmb IAmb 18 07 05.7
comp=Z,10nm,1.0s
LLLB Lillooet 43.88 333 P **P 18 07 18.2 +0.7**
LLLB IAmb IAmb 18 07 19.9
comp=Z,12nm,1.0s
SCHQ Schefferville 45.28 20 LR LR 18 27 10.9
comp=Z,20nm,18.5s,baz=244,slow=37
BBB Bella Bella 47.82 331 LR LR 18 29 20.0
comp=Z,104nm,18.5s,baz=150,slow=38
YKA Yellowknife Ar 51.09 347 P **P 18 08 13.0 -0.3**
comp=Z,3.3nm,0.7s,baz=154,slow=6.9,SNR=13
YKA PcP **PcP 18 09 29.4 +0.6**
comp=Z,2.3nm,0.8s,baz=157,slow=3.2,SNR=6.2
comp=Z,3.3nm,0.7s
YKA Yellowknife Ar 51.09 347 P **P 18 08 12.3 -1.0**
YKA PcP **PcP 18 09 29.3 +0.6**
TOAD Toad River Com 51.20 339 P **P 18 08 15.4 +1.1**
baz=137
V35K Ketchikan 51.41 332 P **P 18 08 16.6 +0.8**
baz=128
KOTAN Kotaneelee Air 51.75 340 P **P 18 08 20.0 +1.7**
baz=139
T35M Bob Quinn 51.86 334 P **P 18 08 19.9 +0.8**
baz=130
LIRD Liard River Hi 51.92 339 P **P 18 08 20.8 +1.2**
baz=136
CRAG Craig 52.18 332 P **P 18 08 22.4 +0.9**
baz=126
CPUP Villa Florida 52.33 140 P **P 18 08 22.4 -0.5**
comp=Z,0.7nm,0.7s,baz=188,slow=7.7,SNR=5.3
comp=Z,0.7nm,0.7s
FRB Frobisher Bay 52.37 13 LR LR 18 32 16.1
comp=Z,222nm,19.2s,baz=160,slow=38
WRAK Wrangell Islan 52.40 333 P **P 18 08 24.0 +0.8**
baz=126
BDFB Brasilia 52.48 122 P **P 18 08 24.6 +0.2**
comp=Z,2.1nm,0.6s,baz=259,slow=12,SNR=3.8
BDFB LR LR 18 31 46.2
comp=Z,84nm,19.3s,baz=270,slow=37
comp=Z,2.1nm,0.6s
BDFB Brasilia 52.48 122 IAmb IAmb 18 08 32.5
comp=Z,9.3nm,1.3s
U33K Whale Pass 52.57 332 P **P 18 08 25.5 +1.1**
baz=126
DLBC Dease Lake 52.72 336 P **P 18 08 27.2 +1.6**
baz=131
S34M Telegraph Cree 52.82 335 P **P 18 08 27.5 +1.3**
baz=130
WTLY Watson Lake, Y 53.38 338 P **P 18 08 31.6 +1.2**
baz=134
R33M Jennings River 53.72 336 IAmb IAmb 18 08 45.4
comp=Z,13nm,1.3s

R33M	Jennings River baz=131	53.72 336	P	P	18 08 34.0	+1.0
Q32M	Nakina River baz=129	53.95 336	P	P	18 08 35.4	+0.7
S32K	Killisnoo baz=126	54.01 333	P	P	18 08 36.1	+1.1
SIT	Sitka baz=125	54.11 332	P	P	18 08 36.8	+1.1
R32K	Eaglecrest baz=126	54.46 334	P	P	18 08 38.7	+0.4
P32M	Atlin baz=128	54.92 336	P	P	18 08 42.3	+0.6
P33M	Teslin, Yukon baz=129	54.96 336	P	P	18 08 42.3	+0.3
S31K	Pelican baz=124	55.02 333	P	P	18 08 42.4	+0.1
N32M	Quiet Lake baz=129	55.66 337	P	P	18 08 47.4	+0.5
PLBC	Pleasant Camp baz=125	55.93 334	P	P	18 08 49.4	+0.5
WHY	Whitehorse baz=127	56.04 336	P	P	18 08 50.7	+1.0
P30M	Million Dollar baz=125	56.56 335	P	P	18 08 54.5	+1.1
O30N	Mendenhall comp=Z,9.0nm,1.1s	56.59 336	IAmb	IAmb	18 08 56.7	
O30N	Mendenhall baz=126	56.59 336	P	P	18 08 54.3	+0.7
P29M	Windy Craggy baz=124	56.61 334	P	P	18 08 54.7	+1.0
M31M	Drury Creek, Y baz=128	56.80 338	P	P	18 08 55.9	+0.9
N31M	Braeburn, Yuko baz=127	56.89 337	P	P	18 08 56.7	+1.0
HYT	Haines Junctio baz=124	57.18 335	P	P	18 08 58.9	+1.0
O29M	Mount Kennedy baz=123	57.33 335	P	P	18 09 00.1	+1.1
N30M	Aishikik Lake baz=125	57.38 336	P	P	18 08 59.9	+0.7
YUK6	Outpost Mounta baz=124	57.60 335	P	P	18 09 01.3	+0.3
M30M	Minto, Yukon baz=126	57.92 337	P	P	18 09 03.8	+0.8
PINM	Pinnacle baz=121	57.93 334	P	P	18 09 04.0	+0.9
YUK4	Talbot Arm baz=124	57.94 336	P	P	18 09 03.6	+0.3
O28M	Mount Upton baz=122	58.26 335	P	P	18 09 06.7	+1.0
YUK8	Steele Glacier baz=122	58.35 335	P	P	18 09 07.4	+1.1
M29M	Somme Creek baz=124	58.48 337	P	P	18 09 08.0	+1.0
MESA	MESA baz=120	58.70 333	P	P	18 09 08.9	+0.2
L29M	L29M baz=125	58.73 337	P	P	18 09 08.9	+0.2
CTG	Chitna Glacier baz=121	58.84 334	P	P	18 09 09.8	+0.3
YUK3	Moose Creek baz=122	58.90 335	P	P	18 09 10.7	+0.7
K29M	Barlow Dome baz=126	58.94 338	P	P	18 09 10.0	-0.2
J30M	Hart River baz=128	58.96 339	P	P	18 09 10.8	+0.5
C36M	Paulatuk baz=143	58.96 347	P	P	18 09 10.4	+0.4
H31M	Peel River baz=130	59.09 341	P	P	18 09 12.0	+1.0
BGLC	Bering Glacier baz=118	59.26 333	P	P	18 09 12.4	+0.1
I30M	Mount Dempster	59.38 340		P	18 09 13.7	+0.5
I30M	comp=Z,6.6nm,0.9s		IAmb	IAmb	18 09 14.8	
I30M			PcP	PcP	18 10 01.6	+0.8
I30M	Mount Dempster baz=128,SNR=6.3	59.38 340	P	P	18 09 13.2	+0.1
BVCY	Beaver Creek baz=122	59.40 336	P	P	18 09 14.2	+1.0
CRQE	Cirque baz=119	59.48 334	P	P	18 09 14.1	+0.1
J29N	Klondike Camp baz=126	59.54 339	P	P	18 09 15.1	+0.9
SFJD	Kangerlussuaq comp=Z,134nm,18.6s,baz=194,slow=39	59.57 18	LR	LR	18 37 22.1	
KAIM	Kayak Island baz=117	59.68 332	P	P	18 09 16.3	+1.2
DAWY	Dawson baz=124	59.74 338	P	P	18 09 16.6	+1.0
MCARA	McCarthy VSAT baz=119	59.76 334	P	P	18 09 16.5	+0.8
M27K	Edge Creek, AK baz=121	59.77 336	P	P	18 09 16.8	+0.8
G31M	Satah River baz=131	59.80 342	P	P	18 09 16.7	+0.9
F31M	Tsiigehtchic baz=132	59.98 343	P	P	18 09 18.2	+1.1
BCAR	Beaver Creek A	60.10 336	P	P	18 09 18.7	+0.6
BCAR			PcP	PcP	18 10 04.6	+1.0
I29M	Ogilvie Camp, baz=126,SNR=6.1	60.11 340	P	P	18 09 18.7	+0.7
L27K	Beaver Creek, baz=121	60.12 336	P	P	18 09 18.8	+0.6
EPYK	Eagle Plains baz=128	60.20 341	P	P	18 09 19.3	+0.6
BMRM	Bremner River baz=117	60.23 333	P	P	18 09 20.1	+1.0
M26K	Nabesna, AK baz=120	60.24 335	P	P	18 09 19.7	+0.6
Q23K	Middleton Isla baz=115	60.34 331	P	P	18 09 20.2	+0.5
G30M	tAoh Zraii Nji baz=129	60.42 342	P	P	18 09 20.7	+0.5
INK	Inuvik	60.50 344	P	P	18 09 20.6	0.0
INK			PcP	PcP	18 10 03.4	-1.7
INK	Inuvik baz=132,SNR=6.0	60.50 344	P	P	18 09 21.6	+1.0
N25K	Chitina, Valde baz=118	60.53 334	P	P	18 09 21.6	+0.5
EYAK	Cordova Ski Ar baz=116	60.55 333	P	P	18 09 21.4	+0.3
H29M	Whitestone baz=126	60.63 340	P	P	18 09 22.2	+0.5
F30M	Barrier River baz=130	60.69 342	P	P	18 09 22.6	+0.6
L26K	Log Cabin Wild baz=120	60.70 336	P	P	18 09 22.5	+0.4
I28M	Miner Creek baz=124	60.72 339	P	P	18 09 22.4	+0.1
K27K	Chicken baz=121	60.72 337	P	P	18 09 22.3	+0.1
RES	Resolute Bay comp=Z,97nm,20.6s,baz=324,slow=40	60.76 359	LR	LR	18 39 14.3	
G29M	Pine Creek baz=127	60.94 341	P	P	18 09 24.0	+0.3
KLU	Klutina baz=116	61.04 334	P	P	18 09 24.5	-0.1
P23K	Montague Islan baz=114	61.06 332	P	P	18 09 24.9	+0.3
HARP	HAARP baz=117	61.13 335	P	P	18 09 25.5	+0.4
GLI	Glacier Island baz=115	61.29 333	P	P	18 09 26.7	+0.6
A36M	Sachs Harbour comp=Z,5.1nm,0.8s	61.31 349	IAmb	IAmb	18 10 09.6	
A36M	Sachs Harbour baz=143	61.31 349	P	P	18 09 27.2	+1.1
I27K	Kandik River baz=123	61.38 339	P	P	18 09 27.7	+0.9
SCRK	Sand Creek baz=119	61.41 337	P	P	18 09 27.4	+0.3
M24K	Tolsona, Glenn baz=116	61.42 334	P	P	18 09 27.6	+0.5
J26L	Joseph Creek baz=120,SNR=7.1	61.52 337	P	P	18 09 28.0	+0.2
PAX	Paxson baz=117	61.52 335	P	P	18 09 28.6	+0.8
RIDG	Independent Ri baz=118	61.63 336	P	P	18 09 29.0	+0.5
H27K	Steamboat Moun baz=123,SNR=5.3	61.70 339	P	P	18 09 29.7	+0.8
I26K	Coal Creek Min comp=Z,3.5nm,0.7s	61.77 338	IAmb	IAmb	18 09 31.6	
I26K	Coal Creek Min baz=121	61.77 338	P	P	18 09 29.8	+0.5
SCM	Sheep Creek Mo baz=115	61.79 334	P	P	18 09 29.5	-0.2
E29M	Blow River baz=128	61.80 342	P	P	18 09 30.6	+1.1
PWL	Port Wells baz=114	61.83 332	P	P	18 09 29.9	+0.1
F28M	Old Crow baz=125,SNR=22	61.94 341	P	P	18 09 31.4	+1.0
M23K	Glacier View baz=115	61.95 334	P	P	18 09 30.6	0.0
K24K	Donnelly Dome baz=118	62.03 336	P	P	18 09 30.5	-0.6
SEW	Seward baz=112	62.05 331	P	P	18 09 31.3	0.0
G27K	Doyon Strip baz=123	62.05 340	P	P	18 09 31.7	+0.5
KNK	Knik Glacier baz=114	62.11 333	P	P	18 09 32.4	+0.7
SML	Sawmill baz=114	62.22 333	P	P	18 09 32.5	+0.1
J25K	Salcha River, comp=Z,5.6nm,0.9s	62.25 337	IAmb	IAmb	18 09 36.3	
J25K	Salcha River, baz=118,SNR=5.9	62.25 337	P	P	18 09 33.1	+0.5
WAT6	Susitna Watana baz=115,SNR=6.8	62.28 334	P	P	18 09 33.2	+0.2
O22K	Cooper Landing baz=112	62.32 332	P	P	18 09 33.8	+0.7
DHY	Denali Highway baz=116	62.35 335	P	P	18 09 33.4	0.0
E28M	Babbage River baz=126,SNR=11	62.41 342	P	P	18 09 34.3	+0.7
PMR	Palmer baz=113	62.48 333	P	P	18 09 35.0	+0.9
BRSE	Bradley Lake S baz=111	62.52 331	P	P	18 09 35.0	+0.5
RC01	Rabbit Creek A baz=112	62.55 332	P	P	18 09 35.2	+0.6
D28M	Stokes Point baz=127,SNR=7.0	62.62 343	P	P	18 09 35.4	+0.5
WAT1	Susitna Watana baz=114	62.73 334	P	P	18 09 35.8	0.0
PRP	Porcupine Dome baz=118,SNR=7.1	62.74 338	P	P	18 09 36.9	+0.9
HDA	Harding Lake baz=117	62.76 336	P	P	18 09 36.0	0.0
KDAK	Kodiak Island comp=Z,52nm,20.0s,baz=106,slow=36	62.78 328	LR	LR	18 36 31.0	
KDAK	Kodiak Island baz=108	62.78 328	P	P	18 09 36.3	+0.2
E27K	Coleen River baz=124	62.80 341	P	P	18 09 36.7	+0.5
G26K	Porcupine Rive baz=121	62.84 340	P	P	18 09 36.3	-0.2
IL31		62.90 337	P	P	18 09 37.2	+0.3
ILAR	Eielson Array comp=Z,7.5nm,1.0s,baz=122,slow=4.4,SNR=37	62.90 337	P	P	18 09 37.6	+0.7
ILAR			PcP	PcP	18 10 15.7	+0.8
ILAR	comp=Z,1.2nm,0.7s,baz=140,slow=2.7,SNR=6.8		LR	LR	18 39 14.6	
ILAR	comp=Z,143nm,18.7s,baz=114,slow=38 comp=Z,7.5nm,1.0s	62.90 337		P	18 09 37.9	+1.0
ILAR			PcP	PcP	18 10 15.2	+0.3
HOM	Homer baz=110	62.92 331	P	P	18 09 37.3	+0.2
Q20K	Shuyak Island baz=108	62.94 329	P	P	18 09 37.3	+0.1
OHAK	Old Harbor baz=107	62.97 328	P	P	18 09 37.3	-0.2
M22K	Willow baz=112	62.98 333	P	P	18 09 37.8	+0.4
CAPN	Captain Cook N baz=111	63.08 332	P	P	18 09 38.2	+0.1
RND	Reindeer	63.09 335	P	P	18 09 38.5	+0.2
RND			PcP	PcP	18 10 17.1	+1.4
SUA	Susitna One baz=112	63.15 333	P	P	18 09 38.1	-0.6
D27M	Malcolm River comp=Z,4.2nm,0.8s	63.21 342	IAmb	IAmb	18 09 40.8	
D27M	Malcolm River baz=125	63.21 342	P	P	18 09 39.6	+0.7
SII	Sitkinak Islan baz=106	63.26 327	P	P	18 09 39.4	0.0
MCK	McKinley baz=114	63.26 335	P	P	18 09 39.5	+0.1
POKR	Poker Plat Res baz=116	63.27 337	P	P	18 09 39.9	+0.5
CUT	Chulitna baz=112	63.29 334	P	P	18 09 39.9	+0.4
COLA	College baz=116	63.32 337	P	P	18 09 40.2	+0.6
F26K	Sheenjek River comp=Z,8.5nm,1.1s	63.35 340	IAmb	IAmb	18 09 42.0	
F26K	Sheenjek River baz=121,SNR=5.6	63.35 340	P	P	18 09 40.3	+0.5
BMAR	Burnt Mountain	63.36 340	P	P	18 09 40.8	+0.9
O20K	Slope Mountain baz=109	63.53 331	P	P	18 09 41.8	+0.5
G25K	Bearman Lake baz=118	63.55 339	P	P	18 09 41.4	+0.3
Q19K	Cape Douglas, baz=108	63.66 329	P	P	18 09 42.5	+0.4
NEA2	Nenana comp=Z,8.5nm,1.2s	63.67 336	IAmb	IAmb	18 09 43.6	
NEA2	Nenana baz=115	63.67 336	P	P	18 09 42.1	+0.1
R18K	Karluk baz=106	63.67 328	P	P	18 09 42.0	-0.1
SKT	Skwentna baz=111	63.68 333	P	P	18 09 42.3	+0.2
P19K	Oil Pt baz=108	63.68 330	P	P	18 09 42.4	+0.2
TRF	Thorofare Moun baz=113	63.70 335	P	P	18 09 42.4	-0.1
N20K	Mount Spurr baz=110	63.71 332	P	P	18 09 42.3	-0.1
SPCR	Spurr Chakacha baz=110	63.71 332	P	P	18 09 42.3	-0.1
H24K	Noodor Dome baz=116,SNR=7.7	63.76 338	P	P	18 09 43.4	+0.8
F25K	Christian Rive comp=Z,5.0nm,0.7s	63.79 340	IAmb	IAmb	18 09 45.3	
F25K	Christian Rive baz=119,SNR=6.1	63.79 340	P	P	18 09 43.7	+0.9
CHIR	Chirikof Islan baz=104	63.84 326	P	P	18 09 44.2	+1.0
G24K	Hadweenzic Riv comp=Z,10nm,1.1s	64.00 339	IAmb	IAmb	18 09 56.2	
G24K	Hadweenzic Riv baz=117	64.00 339	P	P	18 09 45.4	+1.2
I23K	Milo, Yukon-K baz=114,SNR=10.0	64.02 337	P	P	18 09 45.5	+1.2
E25K	Arctic Village comp=Z,5.0nm,0.8s	64.03 340	IAmb	IAmb	18 09 46.2	
E25K	Arctic Village baz=120,SNR=5.5	64.03 340	P	P	18 09 45.5	+1.1
C27K	Jago River comp=Z,7.7nm,0.9s	64.23 342	IAmb	IAmb	18 09 47.8	
C27K	Jago River baz=122	64.23 342	P	P	18 09 46.6	+1.0
BPAW	Bear Paw Mtn. baz=112,SNR=6.5	64.24 335	P	P	18 09 46.1	+0.3
Q18K	Katmai Hardscr baz=106	64.26 329	P	P	18 09 46.8	+0.7
M20K	Styx River baz=109	64.36 333	P	P	18 09 47.2	+0.5
H23K	Yukon River baz=115	64.37 337	P	P	18 09 46.9	+0.3
F24K	Squaw Lake baz=117	64.52 339	P	P	18 09 48.2	+0.6
P18K	Big Mountain, baz=106	64.58 330	P	P	18 09 48.2	+0.1
Q17K	Contact Creek baz=105	64.60 328	P	P	18 09 48.8	+0.4
N19K	Bonanza Creek baz=108	64.64 331	P	P	18 09 49.2	+0.7
R17L	Mt. Peulik Vol baz=104	64.68 328	P	P	18 09 49.3	+0.5
O18K	Koktuh Hills baz=106	64.70 330	P	P	18 09 49.6	+0.8
CHUM	Lake Minchumin baz=111	64.70 335	P	P	18 09 49.5	+0.7
C26K	Camden Bay baz=121	64.74 342	P	P	18 09 49.5	+0.7
PPT	Papeete comp=Z,100nm,19.1s,baz=5.5,slow=29	64.87 243	LR	LR	18 30 39.8	
D25K	Kavik River baz=119	64.88 341	P	P	18 09 51.1	+1.2
PPT2	Papeete2	64.88 243	eS	S	18 18 23.9	-6.6
	comp=Z,40nm,25.2s					
PPT2	Papeete2 comp=Z,87nm,23.2s	64.88 243	eLR	LR	18 29 14.1	
PPT2			eLR	LR	18 29 22.3	
L20K	Farewell, AK comp=Z,71nm,21.5s baz=109,SNR=5.4	64.89 333	P	P	18 09 50.5	+0.5
G23K	Bananza Creek comp=Z,5.3nm,0.8s	64.92 338	IAmb	IAmb	18 09 52.4	
G23K	Bananza Creek baz=114	64.92 338	P	P	18 09 50.9	+0.7
M19K	Big River Lodg baz=108	64.93 332	P	P	18 09 50.9	+0.6
E24K	Your Creek baz=117	64.97 340	P	P	18 09 51.4	+0.8
H22K	Ishtalitna Cre comp=Z,8.5nm,1.0s	65.09 337	IAmb	IAmb	18 09 52.7	
H22K	Ishtalitna Cre baz=113	65.09 337	P	P	18 09 52.0	+0.7
Q16K	King Salmon baz=105	65.10 329	P	P	18 09 52.3	+1.0
COLD	Coldfoot comp=Z,10nm,1.2s	65.19 339	IAmb	IAmb	18 09 54.6	
COLD	Coldfoot baz=115	65.19 339	P	P	18 09 53.3	+1.3
L19K	White Mountain baz=108	65.22 333	P	P	18 09 53.4	+1.2
K20K	Telida	65.26 334	P	P	18 09 52.8	+0.4
K20K	Telida baz=109,SNR=5.8	65.26 334	P	P	18 09 53.4	+1.0
N18K	Kilae Creek baz=106	65.26 331	P	P	18 09 53.5	+1.0
E23K	Chandalar baz=116	65.35 340	P	P	18 09 53.7	+0.7
M18K	Stony River baz=107	65.46 332	P	P	18 09 54.2	+0.5
G22K	Bettles baz=113	65.54 338	P	P	18 09 54.7	+0.6
H21K	Melozitna Rive comp=Z,5.4nm,0.9s	65.54 337	IAmb	IAmb	18 09 55.4	
H21K	Melozitna Rive baz=111	65.54 337	P	P	18 09 54.7	+0.5
J20K	Nowinta River comp=Z,10nm,1.2s	65.56 335	IAmb	IAmb	18 10 16.1	
J20K	Nowinta River baz=109	65.56 335	P	P	18 09 54.5	+0.1
D24K	Happy Valley baz=117	65.57 341	P	P	18 09 55.1	+0.8
TOLK	Toolik Lake Re baz=116,SNR=6.0	65.58 340	P	P	18 09 55.2	+0.7
O17K	Koliganek Bris baz=105	65.59 330	P	P	18 09 55.0	+0.4
C24K	Franklin Bluff baz=117,SNR=8.5	65.79 341	P	P	18 09 56.2	+0.5
N17K	Nushagak Hills baz=105	65.83 331	P	P	18 09 56.6	+0.5
I20K	Naaghedeneel baz=109	65.90 335	P	P	18 09 56.2	-0.3
F22K	John River baz=113	66.01 339	P	P	18 09 57.1	-0.1
O16K	Kokwok River B baz=104	66.04 329	P	P	18 09 57.6	+0.1
L18K	Granite Mounta baz=106	66.06 332	P	P	18 09 57.7	+0.2
D23K	Nanushuk River comp=Z,7.9nm,0.9s	66.09 340	IAmb	IAmb	18 10 00.1	
D23K	Nanushuk River baz=115	66.09 340	P	P	18 09 57.7	0.0
S14K	Fog Glacier baz=101	66.09 326	P	P	18 09 57.6	-0.4
J19K	Poorman baz=108	66.12 334	P	P	18 09 58.2	+0.3
G21K	Allakaket baz=111,SNR=6.5	66.12 337	P	P	18 09 58.2	+0.3
E22K	Anaktuvuk Pass baz=113	66.13 339	P	P	18 09 57.9	-0.1
M17K	Holitna River baz=105	66.18 331	P	P	18 09 58.4	0.0
H20K	Anotleneega Mo baz=109	66.30 336	P	P	18 09 59.3	+0.2
F21K	Alatna River baz=111,SNR=14	66.37 338	P	P	18 10 00.0	+0.5
J18K	Innoko River baz=107	66.42 334	P	P	18 09 59.9	-0.1
SDPT	Sand Point baz=100	66.44 325	P	P	18 09 59.9	-0.2
C23K	Itkillik River baz=115,SNR=5.2	66.44 341	P	P	18 10 00.6	+0.7
N16K	Nishlik Lake baz=104	66.58 330	P	P	18 10 00.7	-0.3
D22K	Ayikyak River baz=113,SNR=5.2	66.72 340	P	P	18 10 02.0	+0.3
L17K	Donlin baz=105	66.76 332	P	P	18 10 02.2	+0.2
M16K	Timber Creek baz=104	66.80 331	P	P	18 10 02.5	+0.1
O15K	Ungalikthiuk R baz=102	66.81 329	P	P	18 10 02.3	-0.1
GCSA	Galena City Sc baz=107	66.86 335	P	P	18 10 03.4	+0.7
K17K	Iditarod baz=105	66.91 333	P	P	18 10 02.6	-0.4
H19K	Roundabout Mou	66.93 336	P	P	18 10 03.1	+0.1
H19K	Roundabout Mou baz=108	66.93 336	P	P	18 10 03.3	+0.3
E21K	Killik River baz=111	66.99 339	P	P	18 10 04.1	+0.6
F20K	Avaraart Lake baz=109	67.13 338	P	P	18 10 04.7	+0.4
N15K	Kwethluk River baz=102	67.15 330	P	P	18 10 04.9	+0.3
L16K	Owhat River baz=103	67.20 331	P	P	18 10 05.2	+0.4
TBI	Tubuai comp=Z,522nm,27.0s	67.33 237	eLR	LR	18 30 24.8	
G19K	Purcell Mounta comp=Z,8.4nm,0.9s	67.36 336	IAmb	IAmb	18 10 07.6	
G19K	Purcell Mounta baz=107	67.36 336	P	P	18 10 06.2	+0.3
S12K	Black Hills baz=98	67.38 325	P	P	18 10 05.9	-0.3
J17K	VABM Dome baz=104	67.43 333	P	P	18 10 07.2	+1.0
B22K	Teshekpuk Lake baz=113	67.52 341	P	P	18 10 07.4	+0.7
C21K	Knifeblade Rid baz=111	67.52 340	P	P	18 10 07.2	+0.4
M15K	Kasigluk River baz=102	67.55 330	P	P	18 10 07.3	+0.2
O14K	Tigyukauivet M baz=101	67.55 329	P	P	18 10 06.6	-0.5
H18K	Honhosa River baz=106	67.59 335	P	P	18 10 07.1	-0.2
B21K	Ikpikpuk River baz=111	67.63 340	P	P	18 10 07.6	+0.1
E20K	Nigu River baz=109	67.70 339	P	P	18 10 09.0	+1.0
E19K	Redstone River comp=Z,7.3nm,1.0s	67.82 338	IAmb	IAmb	18 10 18.7	
E19K	Redstone River baz=108	67.82 338	P	P	18 10 09.8	+1.1
F19K	Shaleruckik Mo comp=Z,6.9nm,0.8s	67.83 337	IAmb	IAmb	18 10 10.6	
F19K	Shaleruckik Mo baz=107	67.83 337	P	P	18 10 10.0	+1.3
N14K	Kuskokwak Cree baz=101	67.89 329	P	P	18 10 09.4	+0.2
G18K	Tagagawik baz=106	67.91 336	P	P	18 10 09.6	+0.3
D20K	Etivluk River baz=109	67.99 339	P	P	18 10 10.7	+0.9
FALS	False Pass baz=97	68.04 324	P	P	18 10 10.4	+0.2
J16K	Anvik River baz=103	68.07 333	P	P	18 10 10.7	+0.4
L15K	Ungalak Mounta baz=102	68.13 331	P	P	18 10 11.1	+0.4
H17K	Granite Mounta baz=104	68.17 335	P	P	18 10 11.5	+0.6
M14K	Bethel baz=101	68.18 330	P	P	18 10 11.8	+0.8
I17K	Unalakleet baz=103	68.25 334	P	P	18 10 12.3	+0.9
A22K	Sinclair Lake baz=111	68.25 342	P	P	18 10 11.7	+0.4
K15K	Wolf Creek Mou baz=102	68.27 332	P	P	18 10 12.3	+0.7
D19K	Kuna River	68.45 339	P	P	18 10 12.6	-0.1

D19K				PcP	PcP	18 10 43.0	+5.2	
D19K	**Kuna River**	**68.45**	**339**	P	**P**	**18 10 13.4**	**+0.8**	
	baz=107							
B20K	**Meade River**	**68.60**	**340**	P	**P**	**18 10 14.2**	**+0.7**	
	baz=109							
G17K	**Kiwalik Mounta**	**68.60**	**335**	P	**P**	**18 10 13.8**	**+0.2**	
	baz=104							
L14K	**Kuka Creek**	**68.63**	**331**	P	**P**	**18 10 14.1**	**+0.3**	
	baz=100							
M13K	**Dall Lake**	**68.79**	**330**	P	**P**	**18 10 15.0**	**+0.1**	
	baz=99							
E18K	**Tukpahlearik C**	**69.06**	**337**	P	**P**	**18 10 17.1**	**+0.7**	
	baz=104							
F17K	**Baldwin Pennin**	**69.06**	**336**	P	**P**	**18 10 17.4**	**+0.9**	
	baz=104							
H16K	**Elim**	**69.07**	**334**	P	**P**	**18 10 16.9**	**+0.4**	
	baz=102							
C19K	**Lookout Ridge**	**69.14**	**339**	P	**P**	**18 10 17.3**	**+0.3**	
	baz=106							
G16K	**Koyuk River**	**69.27**	**335**	P	**P**	**18 10 17.9**	**+0.1**	
	baz=102							
J14K	**Nanvaranak Lak**	**69.28**	**332**	P	**P**	**18 10 18.5**	**+0.6**	
	baz=100							
E17K	**Hotham Inlet**	**69.44**	**337**	P	**P**	**18 10 18.9**	**+0.1**	
	baz=103							
C18K	**Utukok River**	**69.58**	**339**	P	**P**	**18 10 20.0**	**+0.3**	
	baz=104							
K13K	**Kusilvak Mount**	**69.66**	**331**	P	**P**	**18 10 20.1**	**-0.1**	
	baz=99							
UNV	**Unalaska Valle**	**69.74**	**323**	P	**P**	**18 10 20.8**	**-0.1**	
	baz=94							
G15K	**Niukluk**	**69.89**	**334**	P	**P**	**18 10 21.8**	**+0.2**	
	baz=100							
A19K	**Wainwright**	**69.94**	**340**	P	**P**	**18 10 22.1**	**+0.3**	
	baz=105							
B18K	**Kokolik River**	**69.97**	**339**	P	**P**	**18 10 22.3**	**+0.2**	
	baz=104							
D17K	**Noatak River**	**70.05**	**337**	P	**P**	**18 10 22.8**	**+0.3**	
	baz=102							
RDOG	**Red Dog Mine**	**70.06**	**338**	P	**P**	**18 10 22.1**	**-0.5**	
	baz=102							
M11K	**Mekoryuk**	**70.19**	**329**	P	**P**	**18 10 23.3**	**-0.1**	
	baz=97							
C17K	**DeLong Mountai**	**70.25**	**338**	P	**P**	**18 10 23.8**	**+0.1**	
	baz=102							
F15K	**North Star Dit**	**70.27**	**335**	P	**P**	**18 10 24.4**	**+0.5**	
	baz=100							
F14K	**Arctic Creek**	**70.92**	**335**	P	**P**	**18 10 27.8**	**-0.1**	
	baz=98							
C16K	**Lisburne Hills**	**71.00**	**338**	P	**P**	**18 10 28.1**	**-0.1**	
	baz=100							
NIKH	**Nikolski High**	**71.10**	**321**	P	**P**	**18 10 28.9**	**-0.3**	
	baz=92							
TNA	**Tin City**	**71.59**	**335**	P	**P**	**18 10 32.0**	**0.0**	
	baz=97							
P08K	**Saint George I**	**71.64**	**325**	P	**P**	**18 10 32.5**	**+0.2**	
	baz=92							
SPIA	**Saint Paul Isl**	**72.04**	**326**	P	**P**	**18 10 34.5**	**-0.3**	
	baz=92							
GAMB	**Gambell**	**73.06**	**333**	P	**P**	**18 10 41.2**	**+0.5**	
	baz=93							
RAR	**Rarotonga**	**75.14**	**243**	LR	LR	18 35 44.5		
	comp=Z,32nm,21.1s,baz=139,slow=29							
EKA	**Eskdalemuir Ar**	**75.41**	**36**	P	**P**	**18 11 07.2**	**-2.0**	
	comp=Z,4.6nm,0.8s,baz=275,slow=6.0,SNR=9.8							
	comp=Z,4.6nm,0.8s							
ESDC	**Sonseca Array**	**79.74**	**52**	P	**P**	**18 11 16.9**	**-2.3**	
	comp=Z,1.3nm,1.0s,baz=295,slow=5.2,SNR=4.2							
	comp=Z,1.3nm,1.0s							
PMSA	**Palmer Station**	**81.29**	**168**	LR	LR	18 40 12.1		
	comp=Z,84nm,18.2s,baz=240,slow=30							
NOA	**NORSAR Array B**	**84.21**	**28**	P	**P**	**18 11 40.8**	**-1.3**	
	comp=Z,1.0nm,0.8s,baz=291,slow=4.0,SNR=3.7							
NOA				LR	LR	18 49 04.9		
	comp=Z,23nm,18.3s,baz=320,slow=36							
	comp=Z,1.0nm,0.8s							
HFS	**Hagfors**	**85.65**	**29**	P	**P**	**18 11 47.7**	**-1.7**	
	comp=Z,3.1nm,0.7s,baz=183,slow=3.0,SNR=4.4							
	comp=Z,3.1nm,0.7s							
GERES	**GERESS Array B**	**89.64**	**39**	P	**P**	**18 12 08.6**	**-0.4**	
	comp=Z,0.5nm,0.7s,baz=297,slow=5.8,SNR=5.1							
GERES				LR	LR	18 48 19.6		
	comp=Z,34nm,21.5s,baz=308,slow=33							
	comp=Z,0.5nm,0.7s							
TIXI	**Tiksi**	**90.32**	**348**	LR	LR	18 57 49.3		
	comp=Z,51nm,20.9s,baz=7.0,slow=39							
TIXI	**Tiksi**	**90.32**	**348**		**P**	**18 12 10.6**	**-0.9**	
TORD	**Torodi Ar. Bea**	**90.38**	**76**	P	**P**	**18 12 10.6**	**-2.3**	
	comp=Z,0.8nm,0.4s,baz=326,slow=4.9,SNR=3.1							
TORD				PKiKP	**PKiKP**	**18 17 07.7**	**-0.4**	
	comp=Z,4.9nm,0.3s,baz=211,slow=2.2,SNR=4.9							
	comp=Z,0.8nm,0.4s							
FINES	**FINESS Array B**	**90.55**	**25**	LR	LR	18 53 31.6		
	comp=Z,29nm,19.1s,baz=342,slow=36							
VAE	**Valguarnera**	**94.19**	**50**	LR	LR	18 50 02.6		
	comp=Z,69nm,19.5s,baz=329,slow=33							
NRIK	**Noril'sk**	**96.94**	**0**	LR	LR	19 01 07.1		
	comp=Z,134nm,18.2s,baz=350,slow=38							
YAK	**Yakutsk**	**97.52**	**342**	LR	LR	19 02 02.9		
	comp=Z,37nm,21.2s,baz=46,slow=39							
DZM	**Mont Dzumac**	**105.67**	**251**	*e*LR	LR	18 48 19.5		
	comp=Z,51nm,24.4s							
KURBB	**Kurchatov Arra**	**115.18**	**7**	PKP	**PKiKP**	**18 17 52.1**	**-0.1**	
	comp=Z,0.4nm,0.5s,baz=347,slow=2.0,SNR=5.8							
KSRS	**Korea Array**	**116.60**	**325**	PKP	**PKiKP**	**18 17 55.8**	**+0.5**	
	comp=Z,0.7nm,0.7s,baz=355,slow=2.0,SNR=2.4							
MKAR	**Makanchi Array**	**119.33**	**5**	PKP	**PKPdf**	**18 18 00.2**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=7.6,slow=3.7,SNR=2.4							
BOSA	**Boshof**	**120.32**	**115**	PKP	**PKiKP**	**18 18 04.1**	**+1.2**	
	comp=Z,2.4nm,0.8s,baz=251,slow=9.7,SNR=4.0							
HHC	**Hu-ho-hao-te**	**121.28**	**339**	*e*P	**PKiKP**	**18 18 05.3**	**+0.7**	
NJ2	**Nanjing**	**125.56**	**328**	*e*P	**PKiKP**	**18 18 13.8**	**+0.7**	
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.6s							
WRA	**Warramunga Arr**	**135.39**	**256**	PKP	**PKPdf**	**18 18 32.5**	**+0.8**	
	comp=Z,0.6nm,0.6s,baz=88,slow=2.2,SNR=6.9							
WRA	**Warramunga Arr**	**135.39**	**256**		**PKPdf**	**18 18 29.6**	**-2.0**	
ASAR	**Alice Springs**	**135.66**	**250**	PKP	**PKPdf**	**18 18 32.3**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=70,slow=2.2,SNR=4.3							
PZH	**PanZhiHua**	**137.65**	**342**	PKP	**PKPdf**	**18 18 35.5**	**-0.4**	
BATI	**Baumata**	**144.97**	**272**	PKPbc	**PKPdf**	**18 18 51.0**	**+1.8**	
	comp=Z,11nm,0.6s,baz=121,slow=2.0,SNR=5.3							
CMAR	**Chiang Mai Arr**	**146.06**	**341**	PKPbc	**PKPab**	**18 18 52.4**	**+0.2**	
	comp=Z,11nm,0.7s,baz=334,slow=3.6,SNR=23							

IDC 30 18:03:45.2±3.0, 56.21S×142.40W, h0km, mb3.8/3, mbtmp3.8/3, MS3.7/5, Error ellipse: s-maj=108.3km s-min=34.8km az=42.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBI	**Tubuai**	**33.23**	**348**	*e*LR	LR	18 19 19.4	
	465nm,24.5s						
QSPA	**South Pole Qui**	**33.95**	**180**	LR	LR	18 21 25.2	
	comp=Z,80nm,21.0s,baz=74,slow=31						
PMSA	**Palmer Statio**	**37.09**	**136**	LR	LR	18 21 21.5	
	comp=Z,94nm,20.4s,baz=246,slow=28						
PPT2	**Papeete2**	**38.93**	**349**	*e*LR	LR	18 21 54.8	
	132nm,25.5s						
PPT2				*e*LR	LR	18 22 04.6	
	108nm,25.0s						
PPT	**Papeete**	**38.95**	**349**	LR	LR	18 21 55.5	
	comp=Z,61nm,21.1s,baz=98,slow=28						
USHA	**Ushuaia**	**40.03**	**120**	LR	LR	18 24 43.1	
	comp=Z,639nm,19.9s,baz=21,slow=31						
H03S2	**Juan Fernandez**	**48.14**	**90**	T	T	19 04 20.6	
	baz=220,slow=74,SNR=207						
H03S1	**Juan Fernandez**	**48.14**	**90**	T	T	19 04 17.0	
	baz=220,slow=74,SNR=207						
H03S3	**Juan Fernandez**	**48.15**	**90**	T	T	19 04 16.1	
	baz=220,slow=74,SNR=190						
H03N3	**Juan Fernandez**	**48.42**	**90**	T	T	19 04 36.3	
	baz=223,slow=72,SNR=106						
H03N2	**Juan Fernandez**	**48.43**	**90**	T	T	19 04 34.8	
	baz=223,slow=72,SNR=103						
H03N1	**Juan Fernandez**	**48.44**	**90**	T	T	19 04 34.2	
	baz=223,slow=72,SNR=132						
SNAA	**Sanae**	**49.29**	**164**	P	P	18 12 35.1	-0.1
	0.8nm,0.5s,baz=214,slow=13,SNR=16						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**67.21**	**261**	P	P	18 14 41.4	+0.2
	0.6nm,0.6s,baz=142,slow=6.6,SNR=12						
	0.6nm,0.6s						
H01W1	**Cape Leeuwin H**	**68.56**	**239**	T	T	19 29 56.8	
	baz=144,slow=76,SNR=78						
H01W2	**Cape Leeuwin H**	**68.57**	**239**	T	T	19 29 57.2	
	baz=144,slow=76,SNR=61						
H01W3	**Cape Leeuwin H**	**68.58**	**239**	T	T	19 29 58.0	
	baz=144,slow=76,SNR=52						
WRA	**Warramunga Arr**	**69.95**	**264**	P	P	18 14 58.0	-0.3
	0.7nm,0.8s,baz=147,slow=6.0,SNR=3.6						
	0.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**76.24**	**258**	LR	LR	18 44 59.4	
	comp=Z,36nm,21.1s,baz=73,slow=32						
H10N3	**ASCENSION HYDR**	**103.16**	**127**	T	T	20 13 43.9	
	baz=207,slow=75,SNR=22						
H10N1	**ASCENSION HYDR**	**103.16**	**127**	T	T	20 13 49.0	
	baz=207,slow=75,SNR=27						
H10N2	**ASCENSION HYDR**	**103.18**	**127**	T	T	20 13 41.8	
	baz=207,slow=75,SNR=31						
MKAR	**Makanchi Array**	**151.10**	**270**	PKPbc	PKPbc	18 23 39.1	-0.1
	1.3nm,0.9s,baz=120,slow=4.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**153.29**	**285**	PKPab	PKPab	18 23 55.2	-0.7
	0.4nm,0.6s,baz=116,slow=3.4,SNR=3.9						

JMA 30 18:11:21.5±0.1, 24.2N±0.5×123.7E±0.4, h18km±1km, MV1.5/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.16**	**21**	*e*P	Pg	18 11 25.8	-0.1
IRIF				*e*S	Sg	18 11 29.1	+0.3
HATJ	**Hateruma jima**	**0.18**	**135**	*e*S	Sb	18 11 29.0	+0.3
JKRS	**Kuro-shima**	**0.32**	**80**	*e*P	Pg	18 11 28.3	-0.1
JKRS				*e*S	Sb	18 11 33.5	0.0
JIJ	**Ishigaki jima**	**0.47**	**68**	*e*P	Pg	18 11 30.8	-0.3
JIJ				*e*S	Sg	18 11 37.2	-0.3
JISG	**Ishigakijimahi**	**0.71**	**56**	P	Pb	18 11 34.9	-0.4
JTJ	**Tarama**	**1.05**	**64**	*e*P	Pb	18 11 40.8	-0.3

*UPP **30** 18:12:52.8±0.1, 67.85N×20.23E, h0km, ML2.9, Confirmed Induced event*
*HEL **30** 18:12:52.0±0.3, 67.87N×20.02E, h0km, ML1.5, Suspected explosion*
*DNK **30** 18:12:53.1±0.4, 67.85N×20.25E, h0km, ML2.9(UPP), Suspected explosion*

ISC 30 18:12:53.3±0.8, 67.85N±0.02×20.27E±0.02, h0km, n28, σ0.93/48, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**14**	P	**Pg**	**18 12 55.2**	**-0.2**
KUA				S	**Sg**	**18 12 56.7**	**-0.1**
KUA	**Kurravaara**	**0.11**	**14**	P	**Pg**	**18 12 55.2**	**-0.2**
KUA				S	**Sg**	**18 12 56.7**	**-0.1**
RATU	**Laukkuluspa**	**0.26**	**264**	P	**Pg**	**18 12 57.5**	**-0.7**
RATU				S	**Sg**	**18 13 01.1**	**-0.4**
RATU	**Laukkuluspa**	**0.26**	**264**	P	**Pg**	**18 12 57.5**	**-0.7**
RATU				S	**Sg**	**18 13 01.1**	**-0.4**
KOVU	**Salmi**	**0.38**	**354**	P	**Pg**	**18 12 59.9**	**-0.6**
KOVU				S	**Sg**	**18 13 05.3**	**-0.1**
KOVU	**Salmi**	**0.38**	**354**	P	**Pg**	**18 12 59.9**	**-0.6**
KOVU				S	**Sg**	**18 13 05.3**	**-0.1**
NIKU	**Nikkaluokta**	**0.47**	**273**	P	**Pg**	**18 13 01.5**	**-0.8**
NIKU				S	**Sg**	**18 13 07.9**	**-0.4**
NIKU	**Nikkaluokta**	**0.47**	**273**	P	**Pg**	**18 13 01.5**	**-0.8**
NIKU				S	**Sg**	**18 13 07.9**	**-0.4**
LANU	**Lannavaara**	**0.68**	**72**	P	**Pg**	**18 13 05.8**	**-0.5**
LANU	**Lannavaara**	**0.68**	**72**	P	**Pg**	**18 13 05.8**	**-0.5**
LANU	**Lannavaara**	**0.68**	**72**	PG	**Pg**	**18 13 05.8**	**-0.5**
LANU				SG	**Sg**	**18 13 15.2**	**0.0**
KIF	**Kilpisjarvi**	**1.18**	**9**	*e*P	**Pg**	**18 13 15.6**	**-0.2**
KIF	**Kilpisjarvi**	**1.18**	**9**	PN	**Pb**	**18 13 16.0**	**-0.5**
KIF				smax	smax	18 13 28.8	
	comp=Z,4.4nm,0.2s						
KIF				SN	**Sb**	**18 13 31.9**	**-0.3**
PAJU	**Pajala**	**1.38**	**126**	PG	**Pg**	**18 13 17.6**	**-2.0**
	baz=304						
PAJU				SG	**Sg**	**18 13 37.6**	**+0.2**
HEF	**Hetta**	**1.39**	**65**	*e*P	**Pn**	**18 13 19.3**	**-0.7**
HEF	**Hetta**	**1.39**	**65**	PN	**Pn**	**18 13 19.2**	**-0.7**
HEF				smax	smax	18 13 36.1	
	comp=Z,2.8nm,0.2s						
HEF				SG	**Sg**	**18 13 37.4**	**-0.4**
ERTU	**Ertsjaerv**	**1.50**	**149**	PG	**Pn**	**18 13 20.0**	**-1.4**
ERTU				SN	**Sn**	**18 13 42.0**	**+0.3**
KLF	**Kolari**	**1.55**	**112**	PG	**Pn**	**18 13 21.8**	**-0.3**
KLF				smax	smax	18 13 41.0	
	comp=Z,2.6nm,0.2s						
KLF				SN	**Sg**	**18 13 43.0**	**+0.1**
KTK1	**Kautokeino**	**1.60**	**42**	PN	**Pb**	**18 13 23.2**	**-0.5**
KALU	**Kalix**	**2.34**	**147**	PB	**Pn**	**18 13 33.1**	**+0.1**
KALU				SG	**Sb**	**18 14 05.4**	**-0.3**
TOF	**Tornio**	**2.39**	**136**	PB	**Pn**	**18 13 34.4**	**+0.7**
TOF				smax	smax	18 14 04.8	
	comp=Z,2.1nm,0.2s						
TOF				SG	**Sb**	**18 14 07.7**	**+0.6**
RNF	**Rovaniemi**	**2.56**	**116**	PB	**Pn**	**18 13 37.5**	**+1.5**
RNF				SB	**Sb**	**18 14 12.0**	**+0.1**
RAJF	**Raja-Jooseppi**	**3.07**	**75**	PN	**Pn**	**18 13 43.5**	**+0.5**
RAJF				SB	**Sb**	**18 14 26.8**	**0.0**
KEV	**Kevo**	**3.11**	**49**	SN	**Sn**	**18 14 22.1**	**+0.9**
BURU	**Burvik**	**3.31**	**172**	PB	**Pn**	**18 13 48.3**	**+2.0**
OUL	**Oulu**	**3.58**	**138**	PG	**Pb**	**18 13 58.8**	**+1.4**
OLKF	**Oulanka, Finla**	**3.89**	**109**	PG	**Pb**	**18 14 04.4**	**+1.7**
OLKF				SG	**Sg**	**18 14 56.2**	**-1.9**
KU6	**Riekki**	**4.21**	**111**	PN	**Pn**	**18 13 59.9**	**+1.3**
KU6				SG	**Sg**	**18 15 05.4**	**-2.8**

NEIC 30 18:20:07.5±1.1, 37.51N±0.01×97.81W±0.03, h5km±2km, mb_Lg2.6/13, ML2.9/30, Error ellipse: s-maj=4.3km s-min=3.1km az=274.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN08	**Anthony NE Sta**	**0.31**	**204**	Pg	Pg	18 20 12.2	-1.3
KAN01	**Argonia South**	**0.36**	**173**	Pg	Pg	18 20 13.6	-0.8
GC02	**Grant County #**	**0.66**	**183**		Pg	18 20 19.0	-1.1
BLOK	**Blackwell**	**0.89**	**147**	Pg	Pg	18 20 24.4	-0.1
BLOK				IAML		18 20 37.2	
	comp=E,417nm,0.2s						
CROK	**Carrier**	**1.01**	**188**		Pg	18 20 25.4	-1.4
CROK				IAML		18 20 41.9	
	comp=N,322nm,0.3s						
R32A	**Long Quarter,**	**1.16**	**322**		Pg	18 20 28.7	-0.9
R32A				IAML		18 20 50.0	
	comp=N,201nm,0.3s						
R32A				IAML		18 20 51.3	
	comp=N,168nm,0.4s						
T35A	**Sooner Cattle**	**1.20**	**119**		Pg	18 20 29.0	-1.3
T35A				IAML		18 20 51.6	
	comp=N,261nm,0.5s						
T35A				IAML		18 20 51.8	
	comp=N,217nm,0.3s						
NOKA	**Waynoka**	**1.25**	**226**	Pg	Pg	18 20 30.6	-0.8
NOKA				IAML		18 20 55.0	
	comp=E,278nm,0.3s						
NOKA				IAML		18 20 57.0	
	comp=N,298nm,0.3s						
OK038	**West end E0370**	**1.27**	**216**	Pg	Pg	18 20 31.0	-0.8
OK051	**E0350 and S346**	**1.27**	**142**	Pg	Pg	18 20 30.3	-1.6
OK048	**Pawnee Station**	**1.29**	**147**		Pn	18 20 30.7	-1.5
OK048				IAML		18 20 53.3	
	comp=N,224nm,0.4s						
OK048				IAML		18 20 54.7	
	comp=N,182nm,0.4s						
QUOK	**Quay**	**1.60**	**146**		Pn	18 20 36.1	-0.4
OK052	**Battle Ridge R**	**1.72**	**152**		Pn	18 20 37.7	-0.3
OK029	**Liberty Lake**	**1.73**	**170**		Pn	18 20 38.7	+0.4
KSU1	**Kansas State U**	**1.85**	**30**	Pn	Pn	18 20 39.1	-0.7
ADOK	**Arcadia Dam**	**1.89**	**169**		Pn	18 20 40.6	+0.2
ELIS	**Ellis County**	**1.93**	**222**		Pn	18 20 40.9	-0.2
DEOK	**Depew**	**1.97**	**147**		Pn	18 20 41.5	0.0
CBKS	**Cedar Bluff**	**2.00**	**311**	Pn	Pn	18 20 41.5	-0.4
OKCSW	**OKLAHOMA CITY**	**2.12**	**172**	Pn	Pn	18 20 42.3	-1.3
FNO	**Franklin**	**2.27**	**171**	Pn	Pn	18 20 44.9	-0.8
TUL3	**Leonard**	**2.28**	**134**		Pn	18 20 45.6	-0.1
TUL3				IAmb_Lg		18 21 18.3	
	comp=Z,18nm,0.7s						
RLO	**Rose Lookout**	**2.61**	**120**	Pn	Pn	18 20 49.1	-1.2
WMOK	**Wichita Mounta**	**2.88**	**196**		Pn	18 20 53.4	-0.6
U38A	**Gravette**	**2.94**	**110**		Pn	18 20 53.7	-1.2
HHAR	**Hobbs**	**3.34**	**110**		Pn	18 21 00.7	+0.3
HHAR				IAmb_Lg		18 21 58.4	
	comp=Z,14nm,0.8s						
N35A	**Tabor**	**3.75**	**26**	IAmb_Lg		18 22 15.3	
	comp=Z,30nm,0.8s						
P38A	**Dawn**	**3.96**	**57**		Pn	18 21 10.1	+1.2
KSCO	**Kaye Shedlock'**	**4.08**	**293**	IAmb_Lg		18 22 24.6	
	comp=Z,16nm,0.9s						
MGMO	**Mountain Grove**	**4.43**	**93**		Pn	18 21 16.2	+0.8
R40A	**Maddies Statio**	**4.45**	**78**		Pn	18 21 15.8	+0.2
MIAR	**Mount Ida**	**4.53**	**129**		Pn	18 21 15.4	-1.3
L34A	**Svendsen Farm,**	**4.59**	**14**	IAmb_Lg		18 22 32.8	
	comp=Z,20nm,0.9s						
WHAR	**Wooly Hollow**	**4.98**	**115**		Pn	18 21 22.1	-0.7
T25A	**Trinidad**	**5.27**	**268**		Pn	18 21 26.7	-0.4
LCAR	**Lake Charles**	**5.53**	**103**		Pn	18 21 31.0	+0.5

*BEO **30** 18:29:22.8±0.3, 43.20N×18.02E, h15km±2km, ML2.6/6*
*PDG **30** 18:29:22.4±0.1, 43.21N×18.03E, h18km, MD3.0/3, ML2.9/12, Error ellipse: s-maj=0.7km s-min=0.5km az=90.0*
*RHSSO **30** 18:29:23.3±0.4, 43.16N×18.12E, h9km, ML2.8/5*
*VIE **30** 18:29:26.9±0.7, 43.59N×18.25E, h10km, mb2.8/5, ml2.4/6, ms3.6/1, Error ellipse: s-maj=10.3km s-min=5.6km az=53.0 31 km SSW of Sarajevo*
*PRU **30** 18:29:26.3, 43.29N×17.90E, h10km*

ISC 30 18:29:22.4±1.0, 43.20N±0.02×18.11E±0.01, h8km±9km, n79, σ1.915/144, 14C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLINJ	**Klinje**	**0.35**	**95**	*e*Pg	**Pb**	**18 29 29.9**	**-1.1**
KLINJ				*e*Sg	**Sb**	**18 29 36.0**	**-0.7**
BRY	**Bratogost**	**0.43**	**134**	*e*Pg	**Pg**	**18 29 30.8**	**-0.1**
BRY				*i* Sg	**Sb**	**18 29 38.2**	**-1.0**
STON	**Ston**	**0.45**	**222**	*i* Pg	**Pg**	**18 29 30.5**	**-0.6**
STON				Sg	**Sg**	**18 29 37.2**	**+0.3**
STON	**Ston**	**0.45**	**222**	*e*Pg	**Pg**	**18 29 30.3**	**-0.8**
STON				*e*Sg	**Sg**	**18 29 37.9**	**+1.0**
TREB	**Trebinje**	**0.52**	**160**	⇑*i*Pg	**Pg**	**18 29 31.9**	**-0.4**
TREB				*e*Sg	**Sb**	**18 29 39.9**	**-1.5**
TREB	**Trebinje**	**0.52**	**160**	*e*Pg	**Pg**	**18 29 32.0**	**-0.4**
TREB				*e*Sg	**Sb**	**18 29 40.5**	**-0.9**
DBRK	**Dubrovnik**	**0.53**	**177**	*e*Pg	**Pg**	**18 29 32.3**	**-0.4**
DBRK				Sg	**Sg**	**18 29 40.2**	**+0.5**
NKME	**Niksic**	**0.76**	**125**	*e*Pg	**Pb**	**18 29 37.3**	**-0.6**
NKME				*i* Sg	**Sb**	**18 29 48.9**	**+0.6**
RICI	**Ricice**	**0.77**	**293**	*e*Pg	**Pg**	**18 29 36.3**	**-0.9**
RICI				Sg	**Sg**	**18 29 47.4**	**+0.1**
MAKA	**Makarska**	**0.80**	**277**	*e*Pg	**Pg**	**18 29 36.4**	**-1.4**
MAKA				Sg	**Sg**	**18 29 48.3**	**+0.1**
HCY	**Herceg Novi**	**0.81**	**159**	*e*Pg	**Pg**	**18 29 37.3**	**-0.6**
HCY				*i* Sg	**Sb**	**18 29 50.0**	**+0.3**
CEME	**Cevo**	**0.88**	**138**	⇑*i*Pg	**Pg**	**18 29 38.9**	**-0.5**
CEME				*i* Sg	**Sn**	**18 29 53.2**	**-1.1**
PLE	**Pljevlja**	**0.94**	**82**	*e*Pg	**Pb**	**18 29 41.4**	**+0.3**
PLE	**Pljevlja**	**0.94**	**82**	*e*Pg	**Pg**	**18 29 40.4**	**-0.1**
PLE				*i* Sg	**Sn**	**18 29 55.8**	**+0.1**
LSTV	**Lastovo**	**0.99**	**245**	*e*Pg	**Pg**	**18 29 40.9**	**-0.6**
LSTV				Sg	**Sg**	**18 29 53.7**	**-0.7**
RUDO	**Rudo**	**1.01**	**65**	⇑*i*Pg	**Pg**	**18 29 41.0**	**-0.8**
RUDO				*e*Sg	**Sb**	**18 29 55.9**	**+0.3**
RUDO	**Rudo**	**1.01**	**65**	*e*Pg	**Pg**	**18 29 41.4**	**-0.4**
RUDO				*e*Sg	**Sb**	**18 29 55.4**	**-0.2**
BUM	**Brajici-Budva**	**1.07**	**147**	*e*Pg	**Pg**	**18 29 42.0**	**-0.9**
BUM				*i* Sg	**Sn**	**18 29 58.5**	**-0.4**
KOME	**Kolasin**	**1.09**	**108**	*e*Pg	**Pb**	**18 29 43.2**	**-0.4**
KOME				*e*Sg	**Sn**	**18 30 01.2**	**+1.8**
KOME	**Kolasin**	**1.09**	**108**	*e*Pg	**Pg**	**18 29 42.5**	**-0.8**
KOME				*i* Sg	**Sn**	**18 30 00.5**	**+1.1**
PDG	**Podgorica**	**1.14**	**132**	⇓P	**Pb**	**18 29 44.1**	**-0.3**
PDG				⇑S	**Sn**	**18 29 59.5**	**-1.0**
PDG	**Podgorica**	**1.14**	**132**	*e*Pg	**Pg**	**18 29 43.9**	**-0.4**
PDG				*e*Sg	**Sn**	**18 30 02.6**	**+2.1**
PDG	**Podgorica**	**1.14**	**132**	⇓*i*Pg	**Pg**	**18 29 43.7**	**-0.6**
PDG				*i* Sg	**Sn**	**18 30 01.9**	**+1.4**
BBLS	**Lazi&#263i**	**1.15**	**54**	*e*Pg	**Pg**	**18 29 44.3**	**-0.2**
BBLS				*e*Sg	**Sn**	**18 30 01.7**	**+0.7**
HVAR	**Hvar**	**1.22**	**269**	*e*Pg	**Pb**	**18 29 44.1**	**-1.5**
HVAR				Sg	**Sb**	**18 30 01.0**	**-0.5**
DRME	**Dracevica, Mon**	**1.29**	**142**	*e*Pg	**Pg**	**18 29 46.7**	**-0.4**
DRME				*e*Sg	**Sn**	**18 30 06.2**	**+2.1**
DRME	**Dracevica, Mon**	**1.29**	**142**	*e*Pg	**Pn**	**18 29 46.2**	**-0.5**
DRME				*i* Sg	**Sn**	**18 30 06.3**	**+2.1**
BEY	**Berane**

ARSA	**Arzberg**	**4.44**	**337**	*i* Pn	**Pn**	**18 30 30.6**	**+0.5**
	3.4nm,0.4s							
CONA	**Conrad Observa**	**4.98**	**342**	*i* Sn	**Sn**	**18 31 32.1**	**-3.3**
	2.7nm,0.6s							
ABTA	**Abfaltersbach**	**5.32**	**314**	*i* Pn	**Pn**	**18 30 43.4**	**+1.2**
	1.3nm,0.5s							
MOA	**Molln**	**5.38**	**331**	*e*Pn	**Pn**	**18 30 44.8**	**+1.9**
	1.0nm,0.5s							
MOA				*i* Sn	**Sn**	**18 31 43.6**	**-1.4**
	2.9nm,0.5s							
LESA	**Schwarzleotal**	**5.70**	**320**	*i* Pn	**Pn**	**18 30 48.7**	**+1.3**
	2.1nm,0.4s							
WTTA	**Wattenberg**	**6.11**	**314**	*i* Pn	**Pn**	**18 30 54.9**	**+1.7**
	0.7nm,0.2s							
WTTA				*e*Sn	**Sn**	**18 32 03.7**	**+0.3**
	3.2nm,0.6s							
MAUC	**Maruska**	**6.17**	**358**	*e*SN	**Sn**	**18 32 04.1**	**-0.4**
WATA	**Walderalm**	**6.19**	**314**	*i* Pn	**Pn**	**18 30 55.7**	**+1.5**
	0.8nm,0.3s							
SQTA	**Sankt Quirin**	**6.32**	**312**	*i* Pn	**Pn**	**18 30 57.9**	**+2.0**
	1.3nm,0.4s							
SQTA				*i* Sn	**Sn**	**18 32 08.9**	**+0.6**
	1.8nm,0.4s							
MOTA	**Moosalm**	**6.45**	**312**	*i* Pn	**Pn**	**18 30 59.8**	**+2.1**
	1.1nm,0.5s							
MOTA				*i* Sn	**Sn**	**18 32 11.4**	**-0.2**
	1.8nm,0.5s							
KHC	**Kasperske Hory**	**6.71**	**334**	*e*SN	**Sn**	**18 32 14.0**	**-3.9**

*AEIC **30** 18:36:44.1±1.2,53°.44N±0°.04×160°.73W±0°.08,h29km±8km, Error ellipse: s-maj=7.0km s-min=5.6km az=64.0*

NEIC 30 18:36:42.4±1.1,53°.42N±0°.08×160°.69W±0°.06,h10km±2km, ML2.8/14,ML2.6(AEIC),Error ellipse: s-maj=14.0km s-min=5.0km az=163.0,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.54**	**24**		Pn	18 37 09.5	-0.5
CNBA	**Chernabura Isl**	**1.54**	**24**		Sn	18 37 29.4	-0.7
CNBA	**Chernabura Isl**	**1.54**	**24**	IAML		18 37 20.6	
	comp=E,22nm,1.0s						
DOL	**Dolgoi Island**	**1.86**	**339**		Pn	18 37 14.3	0.0
DOL					Sn	18 37 37.9	-0.1
DT1	**Dutton Round H**	**1.93**	**332**		Pn	18 37 15.1	-0.2
DT1					Sn	18 37 38.7	-0.9
SDPT	**Sand Point**	**1.94**	**4**		Pn	18 37 15.4	+0.1
SDPT				IAML		18 38 12.5	
	comp=E,40nm,1.2s						
SDPT	**Sand Point**	**1.94**	**4**		Sn	18 37 39.2	-0.5
PS4A	**Pavlof South-4**	**2.05**	**341**		Pn	18 37 17.7	+0.8
PS4A					Sn	18 37 43.0	+0.6
PS1A	**Pavlof South-1**	**2.10**	**343**		Pn	18 37 18.1	+0.5
PS1A					Sn	18 37 43.7	0.0
FALS	**False Pass**	**2.16**	**313**		Pn	18 37 18.1	-0.3
FALS					Sn	18 37 43.9	-1.2
FALS	**False Pass**	**2.16**	**313**	IAML		18 37 47.8	
	comp=E,144nm,0.9s						
S12K	**Black Hills**	**2.42**	**341**		Pn	18 37 22.6	+0.6
S12K					Sn	18 37 52.2	+0.5
S12K	**Black Hills**	**2.42**	**341**	IAML		18 37 54.4	
	comp=N,81nm,1.1s						
S12K				IAML		18 37 56.8	
	comp=E,62nm,0.8s						
AKUT	**Akutan**	**3.10**	**285**	Pn	Pn	18 37 31.1	-0.2
AKUT				IAML		18 38 08.8	
	comp=N,31nm,1.1s						
AKUT				IAML		18 38 09.5	
	comp=E,25nm,1.1s						
ZRO	**Akutan Zero**	**3.21**	**284**		Pn	18 37 32.9	0.0
UNV	**Unalaska Valle**	**3.49**	**279**		Pn	18 37 36.2	-0.5
UNV	**Unalaska Valle**	**3.49**	**279**	IAML		18 38 27.1	
	comp=E,6.5nm,1.1s						
UNV				IAML		18 39 27.1	
	comp=N,13nm,1.1s						
MNAT	**Makushin Natee**	**3.60**	**280**		Pn	18 37 37.6	-0.6
MREP	**Makushin Rep't**	**3.63**	**279**		Pn	18 37 38.6	-0.1
PLK4	**Peulik 4**	**4.88**	**28**	Pn	Pn	18 37 56.9	+1.0

IDC 30 18:37:47.0±2.2,1°.75N×126°.53E,h0km,mb3.4/3, mbtmp3.5/3,Error ellipse: s-maj=177.8km s-min=27.7km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.88**	**161**	P	P	18 42 50.9	-1.5
	1.4nm,0.7s,baz=339,slow=10,SNR=10						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**26.26**	**165**	P	P	18 43 25.3	+1.1
	0.3nm,0.5s,baz=348,slow=9.3,SNR=11						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	18 47 49.1	0.0
	0.4nm,0.7s,baz=120,slow=7.9,SNR=2.0						
	0.4nm,0.7s						

IDC 30 18:41:26.1±6.2,2°.46S×104°.85E,h0km,mb3.5/4, mbtmp3.5/4,Error ellipse: s-maj=354.1km s-min=24.8km az=54.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.63**	**123**	P	P	18 48 07.2	-1.5
	0.2nm,0.6s,baz=292,slow=7.7,SNR=1.3						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**35.14**	**129**	P	P	18 48 22.7	+0.9
	0.1nm,0.4s,baz=299,slow=7.6,SNR=7.6						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**52.91**	**341**	P	P	18 50 43.7	-0.3
	0.5nm,0.6s,baz=152,slow=7.7,SNR=2.7						
	0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**58.63**	**346**	P	P	18 51 25.1	+0.2
	0.7nm,0.4s,baz=157,slow=6.0,SNR=4.7						
	0.7nm,0.4s						

*SJA **30** 19:05:19.9±0.7,31°.81S×71°.47W,h25km±2km, ML3.6, MW3.7*

*GUC **30** 19:05:22.7±0.7,31°.79S×71°.32W,h58km±4km,ML3.8*

ISC 30 19:05:23.1±1.2,31°.81S±0°.02×71°.48W±0°.04,h23km±13km, n54,σ1°85/100,3C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.49**	**119**	⇓*i*P	**Pb**	**19 05 33.6**	**+0.3**
CO04				*i* S	**Sb**	**19 05 41.4**	**+1.2**
CO04				IAML		19 05 42.1	
	comp=N,6μm,0.2s						
CO02	**Combarbal**	**0.73**	**35**	⇑*i*P	**Pb**	**19 05 36.4**	**-0.8**
CO02				*i* S	**Sb**	**19 05 45.9**	**-0.8**
CO02				IAML		19 05 49.9	
	comp=E,7μm,0.2s						
CO02	**Combarbal**	**0.73**	**35**	*e*P	**Pb**	**19 05 35.5**	**-1.7**
CO02				*e*S	**Sb**	**19 05 45.1**	**-1.6**
CO02				IAML		19 05 49.7	
	comp=Z,2μm,0.4s						
VA06	**Catapilco**	**0.77**	**168**	⇑*i*P	**Pb**	**19 05 37.6**	**-0.1**
VA06				*i* S	**Sb**	**19 05 49.1**	**+1.2**
VA06				IAML		19 05 50.2	
	comp=E,3μm,0.3s						
CO06	**Fray Jorge**	**1.14**	**353**	*e*P	**Pn**	**19 05 42.9**	**-0.7**
CO06				*i* S	**Sb**	**19 05 58.3**	**-0.1**
CO06				IAML		19 06 03.5	
	comp=N,2μm,0.1s						
VA01	**Torpederas**	**1.22**	**187**	*e*P	**Pn**	**19 05 44.1**	**-0.7**
VA01				*e*S	**Sb**	**19 06 03.9**	**+3.0**
ROCH	**El Roble**	**1.23**	**161**	⇑*i*P	**Pn**	**19 05 44.1**	**-1.0**
ROCH				*i* S	**Sn**	**19 05 60.0**	**-1.1**
ROCH				IAML		19 06 01.8	
	comp=E,3μm,0.1s						
ROC1	**El Roble**	**1.23**	**161**	*e*P	**Pn**	**19 05 43.8**	**-1.3**
ROC1				*e*S	**Sn**	**19 05 59.7**	**-1.5**
VA03	**San Esteban**	**1.24**	**141**	*e*P	**Pn**	**19 05 43.1**	**-1.9**
VA03				*e*S	**Sn**	**19 05 59.6**	**-1.5**
VA03				IAML		19 06 00.7	
	comp=Z,1μm,0.5s						
MT02	**Curacav**	**1.48**	**169**	*e*P	**Pn**	**19 05 46.9**	**-1.4**
MT02				*i* S	**Sn**	**19 06 05.7**	**-1.2**
MT02	**Curacav**	**1.48**	**169**	*e*P	**Pn**	**19 05 46.2**	**-2.1**
MT02				*e*S	**Sn**	**19 06 05.9**	**-1.0**
MT02				IAML		19 06 08.0	
	comp=Z,734nm,0.2s						
PEL	**Peldehue**	**1.49**	**153**	*e*P	**Pn**	**19 05 47.1**	**-1.5**
PEL				*e*S	**Sn**	**19 06 07.1**	**-0.3**
PEL				IAML		19 06 10.4	
	comp=Z,542nm,0.3s						
MT05	**Renca**	**1.70**	**159**	*e*P	**Pn**	**19 05 50.3**	**-1.1**
MT05				*i* S	**Sn**	**19 06 10.9**	**-1.6**
MT05				IAML		19 06 15.0	
	comp=N,2μm,0.3s						
MT05	**Renca**	**1.70**	**159**	*e*P	**Pn**	**19 05 50.1**	**-1.3**
MT05				*e*S	**Sn**	**19 06 12.5**	**0.0**
MT05				IAML		19 06 14.7	
	comp=Z,576nm,0.3s						
GO04	**Tololo Observa**	**1.73**	**20**	*e*P	**Pn**	**19 05 51.0**	**-1.0**
GO04				*e*S	**Sn**	**19 06 14.1**	**+0.7**
GO04				IAML		19 06 15.5	
	comp=Z,977nm,0.2s						
RTLS	**Leoncito**	**1.86**	**90**	*e*P	**Pn**	**19 05 52.2**	**-1.6**
RTLS				*e*S	**Sn**	**19 06 16.7**	**-0.1**
RTLS				IAML		19 06 17.2	
	comp=Z,483nm,0.4s						
MT03	**Universidad Ad**	**1.87**	**154**	*e*P	**Pn**	**19 05 52.6**	**-1.2**
MT03				*i* S	**Sn**	**19 06 15.6**	**-1.2**
MT03				IAML		19 06 21.6	
	comp=E,3μm,0.1s						
MT03	**Universidad Ad**	**1.87**	**154**	*e*P	**Pn**	**19 05 52.8**	**-1.0**
MT03				*e*S	**Sn**	**19 06 16.6**	**-0.2**
MT03				IAML		19 06 22.9	
	comp=Z,768nm,0.1s						
MT04	**Ro Olivares**	**1.96**	**145**	*e*P	**Pn**	**19 05 54.0**	**-1.1**
MT04				*i* S	**Sn**	**19 06 18.7**	**-0.4**
MT04				IAML		19 06 26.4	
	comp=E,804nm,0.3s						
MT04	**Ro Olivares**	**1.96**	**145**	*e*P	**Pn**	**19 05 54.2**	**-0.9**
MT04				*e*S	**Sn**	**19 06 19.2**	**+0.1**
MT04				IAML		19 06 24.6	
	comp=Z,389nm,0.2s						
MT08	**Bocatoma Ro**	**2.05**	**143**	*e*P	Pn	19 05 51.4	-4.9
MT08				*e*S	**Sn**	**19 06 23.1**	**+1.7**
MT08				*e*S		19 06 23.8	
MT08				IAML		19 06 26.4	
	comp=Z,251nm,0.3s						
MT01	**Popeta**	**2.06**	**175**	*e*P	**Pn**	**19 05 55.2**	**-1.1**
MT01				*i* S	**Sn**	**19 06 21.7**	**+0.3**
MT01				IAML		19 06 28.1	
	comp=E,1μm,0.2s						
MT01	**Popeta**	**2.06**	**175**	*e*P	**Pn**	**19 05 54.6**	**-1.7**
MT01				*e*S	**Sb**	**19 06 27.1**	**+2.0**
MT01				IAML		19 06 27.8	
	comp=Z,532nm,0.2s						
CO01	**Juntas del Tor**	**2.18**	**34**	*e*P	**Pn**	**19 05 57.3**	**-0.9**
CO01				*e*S	**Sn**	**19 06 23.8**	**-0.7**
CO01				IAML		19 06 26.5	
	comp=Z,164nm,0.3s						
BO04	**La Punta**	**2.30**	**162**	*e*P	**Pn**	**19 05 58.6**	**-1.1**
BO04				*i* S	**Sn**	**19 06 25.8**	**-1.4**
BO04				IAML		19 06 31.6	
	comp=E,805nm,0.3s						
LMEL	**Las Melosas**	**2.30**	**152**	*e*P	**Pn**	**19 05 58.9**	**-0.9**
LMEL				*e*S	**Sn**	**19 06 27.8**	**+0.3**
LMEL				IAML		19 06 32.0	
	comp=Z,544nm,0.1s						
AROD	**Rodeo**	**2.38**	**47**	*e*P	**Pn**	**19 06 01.4**	**+0.5**
AROD				*e*S	**Sn**	**19 06 26.4**	**-3.1**
ARCO	**CERRO ARCO**	**2.39**	**116**	*e*P	**Pn**	**19 06 01.8**	**+0.8**
ARCO				IAML		19 06 38.5	
	comp=Z,176nm,0.5s						
ACCO	**Cerro Coronel**	**2.40**	**60**	*e*P	**Pn**	**19 06 01.8**	**+0.5**
ACCO				*e*S	**Sn**	**19 06 32.4**	**+2.2**
ZON	**Zonda**	**2.40**	**85**	*e*P	**Pn**	**19 06 00.3**	**-0.8**
ZON				*e*S	**Sn**	**19 06 32.6**	**+2.7**
ZON				IAML		19 06 38.1	
	comp=Z,131nm,0.6s						
SJA	**San Juan**	**2.51**	**84**	*e*P	Pn	19 05 47.9	-15
SJA				*e*S	**Sb**	**19 06 37.0**	**-0.9**
SJA				IAML		19 06 38.9	
	comp=Z,111nm,0.3s						
AAGR	**Agrelo**	**2.58**	**120**	*e*P	**Pn**	**19 06 04.4**	**+0.8**
AAGR				*e*S	**Sb**	**19 06 40.8**	**+0.7**
AAGR				IAML		19 06 42.3	
	comp=Z,124nm,0.4s						
BO01	**Tunca**	**2.60**	**173**	*e*P	**Pn**	**19 06 02.4**	**-1.3**
BO01				*i* S	**Sn**	**19 06 33.1**	**-1.6**
BO01				IAML		19 06 42.2	
	comp=E,272nm,0.4s						
BO01	**Tunca**	**2.60**	**173**	*e*P	**Pn**	**19 06 02.4**	**-1.3**
BO01				IAML		19 06 43.4	
	comp=Z,169nm,0.2s						
RTLL	**Cerro Villicun**	**2.61**	**80**	*e*P	**Pn**	**19 06 03.5**	**-0.4**
RTLL				*e*S	**Sn**	**19 06 34.9**	**0.0**
RTLL				IAML		19 06 41.9	
	comp=Z,235nm,0.3s						
CFA	**Coronel Fontan**	**2.77**	**87**	*e*P	**Pn**	**19 06 05.1**	**-1.0**
CFA				*e*S	**Sn**	**19 06 40.3**	**+1.4**
LCO	**Las Campanas**	**2.87**	**14**	*e*P	**Pn**	**19 06 06.4**	**-1.2**
LCO				*e*S	**Sn**	**19 06 44.4**	**+2.9**
LCO				IAML		19 06 47.5	
	comp=Z,388nm,0.3s						
BO02	**Sierra Bellavi**	**3.04**	**169**	*e*P	**Pn**	**19 06 08.7**	**-1.1**
BO02	**Sierra Bellavi**	**3.04**	**169**	*e*P	**Pn**	**19 06 08.9**	**-0.9**
BO02				*e*S	**Sn**	**19 06 45.2**	**-0.3**
BO02				IAML		19 06 56.2	
	comp=Z,403nm,0.1s						
AC05	**El Transito**	**3.14**	**20**	*e*P	**Pn**	**19 06 10.4**	**-0.8**
AC05				*e*S	**Sn**	**19 06 48.5**	**+0.4**
AC05				IAML		19 07 06.0	
	comp=Z,114nm,0.8s						
GO05	**Hualane**	**3.22**	**187**	*e*P	**Pn**	**19 06 10.4**	**-1.8**
GO05				*e*S	**Sb**	**19 07 02.2**	**+3.9**
GO05				IAML		19 07 08.8	
	comp=Z,97nm,0.6s						
AGUA	**GUANDACOL**	**3.46**	**49**	*e*P	**Pn**	**19 06 16.5**	**+0.9**
AGUA				*e*S	**Sb**	**19 07 02.4**	**-3.0**
AGUA				IAML		19 07 07.3	
	comp=Z,206nm,0.3s						
AVFE	**Valle Fertil**	**3.63**	**73**	*e*P	**Pn**	**19 06 17.0**	**-1.0**
AVFE				*e*S	**Sn**	**19 06 55.4**	**-4.8**
AVFE				IAML		19 07 05.7	
	comp=Z,171nm,0.5s						
ACAN	**Cantantal**	**3.67**	**98**	*e*P	**Pn**	**19 06 16.3**	**-2.2**
ACAN				IAML		19 07 23.0	
	comp=Z,171nm,0.6s						
RFA	**San Rafael**	**3.89**	**140**	*e*P	**Pn**	**19 06 20.7**	**-0.8**
RFA				*e*S	**Sb**	**19 07 22.7**	**+5.0**
ACHE	**Chepes**	**4.17**	**82**	*e*P	**Pn**	**19 06 23.9**	**-1.5**
ACHE				*e*S	**Sn**	**19 07 15.6**	**+2.2**
VCA	**Vinchina**	**4.17**	**44**	*e*P	**Pn**	**19 06 26.3**	**+0.8**
VCA				*e*S	**Sn**	**19 07 16.3**	**+2.8**
VCA				IAML		19 07 25.9	
	comp=Z,164nm,0.3s						
GO03	**Copiapo**	**4.33**	**15**	*e*P	**Pn**	**19 06 26.1**	**-1.5**
GO03				*e*S	**Sn**	**19 07 22.6**	**+5.1**
GO03				IAML		19 07 31.1	
	comp=Z,60nm,0.7s						
APLL	**PUNTA DE LOS L**	**4.47**	**73**	*e*P	**Pn**	**19 06 27.8**	**-1.8**
APLL				*e*P		19 06 28.5	
APLL				*e*S	**Sn**	**19 07 23.2**	**+2.2**
APLL				IAML		19 07 24.9	
	comp=Z,70nm,0.5s						
ACLC	**CERRO LA CRUZ**	**4.57**	**60**	*e*P	**Pn**	**19 06 30.0**	**-1.0**
ACLC				*e*S	**Sn**	**19 07 23.5**	**0.0**
ACLC				IAML		19 07 30.0	
	comp=Z,77nm,0.4s						
BI02	**San Fabin de**	**4.85**	**178**	*e*P	**Pn**	**19 06 33.4**	**-1.4**
BI02				IAML		19 07 54.9	
	comp=Z,28nm,0.6s						
MRA	**San Martin**	**4.93**	**99**	*e*P	**Pn**	**19 06 33.7**	**-2.2**
MRA				*e*S	**Sn**	**19 07 34.5**	**+2.3**
MRA				IAML		19 07 37.0	
	comp=Z,31nm,0.5s						
TINO	**Tinogasta**	**5.04**	**43**	*e*P	**Pn**	**19 06 37.1**	**-0.3**
TINO				*e*S	**Sn**	**19 07 42.6**	**+7.5**
AC02	**Maricunga**	**5.36**	**23**	*e*P	**Pn**	**19 06 41.0**	**-1.2**
AC02				IAML		19 08 22.2	
	comp=Z,20nm,0.5s						

*TIR **30** 19:35:13.1,41°.53N×19°.41E,h13km±2km,Md2.9/5, Ml2.7/4*
*BEO **30** 19:35:17.2±0.6,41°.60N×19°.48E,h18km±3km, ML2.6/10*
*PDG **30** 19:35:17.0±0.3,41°.63N×19°.60E,h11km±1km, ML2.7/12, Error ellipse: s-maj=1.4km s-min=1.4km az=0.0*

ISC 30 19:35:15.6±1.0,41°.58N±0°.03×19°.55E±0°.03,h11km±8km, n60,σ1°03/90,9C-17D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.34**	**134**	Pg	**Pg**	**19 35 21.8**	**-0.5**
TIR				Sg	**Sg**	**19 35 26.9**	**0.0**
TIR				AML	AML	19 35 27.5	
	3.1nm,0.4s						
TIR				AML	AML	19 35 27.8	
	4.3nm,0.2s						
ULC	**Ulcinj**	**0.44**	**329**	⇓*i*Pg	**Pg**	**19 35 23.9**	**-0.4**
ULC				*i* Sg	**Sg**	**19 35 30.6**	**+0.4**
SDA	**Shkodra**	**0.47**	**356**	Pg	**Pg**	**19 35 23.8**	**-1.0**
SDA				Sg	**Sg**	**19 35 31.6**	**+0.6**
SDA				AMd		19 36 18.4	
DRME	**Dracevica, Mon**	**0.66**	**336**	*e*Pg	**Pg**	**19 35 27.8**	**-0.6**
DRME				*e*Sg	**Sn**	**19 35 40.9**	**-0.5**
DRME	**Dracevica, Mon**	**0.66**	**336**	⇓*i*Pg	**Pg**	**19 35 28.1**	**-0.3**
DRME				*i* Sg	**Sb**	**19 35 38.0**	**-0.4**
PHP	**Peshkopia**	**0.68**	**81**	Pg	**Pg**	**19 35 28.1**	**-0.7**
PHP				Sg	**Sg**	**19 35 37.4**	**-0.3**
PHP				AML	AML	19 35 41.8	
	1.5nm,0.5s						
PHP				AMd		19 36 16.4	
BUM	**Brajici-Budva**	**0.87**	**326**	⇓*i*Pg	**Pb**	**19 35 32.4**	**-0.4**
BUM				*i* Sg	**Sb**	**19 35 44.7**	**+0.3**
PDG	**Podgorica**	**0.87**	**346**	Pg	**Pg**	**19 35 30.5**	**-2.0**
PDG				Sg	**Sb**	**19 35 44.5**	**0.0**
PDG				AMd		19 36 33.1	
PDG	**Podgorica**	**0.87**	**346**	⇑P	**Pg**	**19 35 31.8**	**-0.7**
PDG	**Podgorica**	**0.87**	**346**	*e*Pg	**Pg**	**19 35 31.9**	**-0.6**
PDG				*e*Sg	**Sn**	**19 35 46.7**	**+0.1**
PDG	**Podgorica**	**0.87**	**346**	⇑*i*Pg	**Pg**	**19 35 31.4**	**-1.1**
PDG				*i* Sg	**Sb**	**19 35 44.1**	**-0.4**
PVY	**Plav**	**1.06**	**17**	*e*Pg	**Pn**	**19 35 37.4**	**+0.9**
PVY	**Plav**	**1.06**	**17**	⇑*i*Pg	**Pb**	**19 35 34.3**	**-1.7**
PVY				*i* Sg	**Sb**	**19 35 49.3**	**-0.6**
CEME	**Cevo**	**1.07**	**334**	⇓*i*Pg	**Pb**	**19 35 35.7**	**-0.5**
CEME				*i* Sg	**Sn**	**19 35 51.5**	**-0.1**
HCY	**Herceg Novi**	**1.17**	**318**	⇑*i*Pg	**Pg**	**19 35 37.9**	**-0.1**
HCY				*i* Sg	**Sn**	**19 35 54.7**	**+0.8**
NKME	**Niksic**	**1.26**	**340**	⇓*i*Pg	**Pb**	**19 35 39.3**	**-0.2**
NKME				*i* Sg	**Sg**	**19 35 56.8**	**+0.5**
KOME	**Kolasin**	**1.27**	**359**	*e*Pg	**Pn**	**19 35 38.6**	**-0.8**
KOME				*e*Sg	**Sg**	**19 35 58.0**	**+1.6**
KOME	**Kolasin**	**1.27**	**359**	⇓*i*Pg	**Pn**	**19 35 38.8**	**-0.6**
KOME				*i* Sg	**Sg**	**19 36 00.0**	**+3.6**
BEY	**Berane**	**1.31**	**11**	*e*Pg	**Pn**	**19 35 39.5**	**-0.5**
IVA	**Berane**	**1.31**	**11**	⇑*i*Pg	**Pb**	**19 35 39.4**	**-0.6**
IVA				*i* Sg	**Sg**	**19 35 58.6**	**+0.7**
KBN	**Korca**	**1.34**	**135**	Sn	**Sb**	**19 35 57.5**	**-0.5**
TREB	**Trebinje**	**1.44**	**322**	*e*Pn	**Pb**	**19 35 41.6**	**-0.9**
TREB	**Trebinje**	**1.44**	**322**	*e*Pg	**Pb**	**19 35 42.1**	**-0.4**
TREB				*e*Sg	**Sg**	**19 36 02.7**	**+0.7**
BRY	**Bratogost**	**1.52**	**331**	⇓*i*Pg	**Pb**	**19 35 43.2**	**-0.7**
BRY				*i* Sg	**Sg**	**19 36 05.9**	**+1.5**
SJES	**Sjenica**	**1.71**	**11**	*e*Pg	**Pb**	**19 35 47.4**	**+0.3**
SJES				*e*Sg	**Sg**	**19 36 10.9**	**+0.4**
KLINJ	**Klinje**	**1.74**	**336**	*e*Pn	**Pg**	**19 35 49.1**	**+0.1**
PLE	**Pljevlja**	**1.75**	**356**	*e*Pg	**Pb**	**19 35 48.3**	**+0.5**
PLE	**Pljevlja**	**1.75**	**356**	⇓*i*Pn	**Pb**	**19 35 47.2**	**-0.6**
PLE				*i* Sn	**Sg**	**19 36 11.3**	**-0.6**
KEK	**Kerkira**	**1.88**	**174**	Sn	**Sb**	**19 36 13.5**	**+0.1**
STON	**Ston**	**1.88**	**314**	*e*Pn	**Pb**	**19 35 49.5**	**-0.5**
STON				*e*Sg	**Sb**	**19 36 12.6**	**-0.9**
SELS	**Selova**	**2.01**	**35**	*e*Pn	**Pn**	**19 35 50.6**	**+1.1**
SELS				*e*Sn	**Sn**	**19 36 14.9**	**+0.3**
NOCI	**Noci**	**2.04**	**248**	Sn	**Sn**	**19 36 14.8**	**-0.5**
NOCI				AML	AML	19 36 19.5	
	0.3nm,0.3s						
RUDO	**Rudo**	**2.04**	**356**	*e*Pn	**Pn**	**19 35 50.8**	**+0.9**
RUDO	**Rudo**	**2.04**	**356**	*e*Pn	**Pb**	**19 35 51.7**	**-1.0**
IVAS	**Ivanjica**	**2.04**	**12**	*e*Pn	**Pn**	**19 35 50.6**	**+0.6**
IVAS				*e*Sn	**Sn**	**19 36 15.3**	**-0.2**
BARS	**Barje**	**2.09**	**53**	*e*Pn	**Pn**	**19 35 51.5**	**+0.9**
BARS				*e*Sn	**Sb**	**19 36 19.2**	**-0.3**
IGT	**Igoumenitsa**	**2.13**	**163**	Pn	**Pn**	**19 35 51.6**	**+0.3**
IGT				AMd		19 37 22.8	
BBLS	**Lazi&#263i**	**2.28**	**357**	*e*Pn	**Pb**	**19 35 55.8**	**-1.1**
BOSS	**Bosilegrad**	**2.37**	**66**	*e*Pn	**Pn**	**19 35 55.5**	**+1.1**
GRUS	**Gruza**	**2.46**	**20**	*e*Pn	**Pn**	**19 35 56.4**	**+0.7**
BOVS	**Bovan**	**2.60**	**37**	⇓P	**Pn**	**19 35 58.5**	**+0.9**
BOVS	**Bovan**	**2.60**	**37**	*e*Pn	**Pn**	**19 35 58.5**	**+0.9**
BOVS				*e*Sn	**Sn**	**19 36 28.4**	**-0.7**
ZAPS	**Zavoj**	**2.84**	**53**	*e*Pn	**Pn**	**19 36 02.5**	**+1.5**
VTS	**Vitosha**	**2.93**	**68**	*e*Pn	**Pn**	**19 36 03.6**	**+1.3**
TEKS	**Tekeris**	**2.96**	**360**	*e*Pn	**Pn**	**19 36 03.2**	**+0.5**
ZAGS	**Zajecar**	**2.98**	**41**	*e*Pn	**Pn**	**19 36 03.8**	**+1.0**
ZAGS				*e*Sn	**Sn**	**19 36 38.8**	**+0.2**
MDVR	**Moldovita**	**3.57**	**26**	⇓P	**Pn**	**19 36 11.5**	**+0.5**
MDVR	**Moldovita**	**3.57**	**26**	*e*Pn	**Pn**	**19 36 11.6**	**+0.6**
BLY	**Banja Luka**	**3.60**	**332**	*e*Pn	**Pb**	**19 36 21.0**	**+1.6**
HERR	**Herculane**	**3.91**	**31**	⇓P	**Pn**	**19 36 16.5**	**+1.0**
HERR				⇓S	**Sn**	**19 36 60.0**	**-1.4**
BZS	**Buzias**	**4.30**	**20**	⇓P	**Pn**	**19 36 21.4**	**+0.4**
BZS				⇓S	**Sn**	**19 37 10.5**	**-0.7**
GZR	**Gura Zlata**	**4.47**	**31**	⇑P	**Pn**	**19 36 24.3**	**+0.9**
MORH	**Mrgy, Hungar**	**4.68**	**352**	*e*Pn	**Pn**	**19 36 27.7**	**+1.6**
SIRR	**Siria**	**4.92**	**17**

SAUI Saumlaki 3.51 179 P Pn 19 50 15.9 +3.7
SWI Sorong 3.56 0 P Pn 19 50 12.8 +0.1
RKPI Ransiki, Papua 4.14 45 P Pn 19 50 23.2 +2.5
NLAI Namlea 4.30 286 P Pn 19 50 25.2 +2.3
SRPI Serui, Papua 5.61 63 P Pn 19 50 42.6 +1.6
4µm374nm,0.8s
SANI Sanana 5.76 294 P Pn 19 50 42.2 -0.8
SANI Sanana 5.76 294 P Pn 19 50 42.1 -0.9
1.7nm6µm437nm,0.7s
BAKI Biak 5.84 57 P Pn 19 50 47.3 +3.2
TNTI Ternate 6.47 323 Pn 19 50 53.0 +0.2
TNTI Ternate 6.47 323 P Pn 19 50 53.6 +0.9
TNTI Ternate 6.47 323 P Pn 19 50 53.1 +0.4
3µm166nm,0.7s
SMPI Sarmi 7.85 72 P Pn 19 51 14.3 +2.6
0.8nm97nm,0.8s
DRS Darwin Rock St 7.94 182 P Pn 19 51 14.4 +1.4
KDU Kakadu 8.28 172 P Pn 19 51 18.3 +0.7
MTN Manton Dam 8.35 181 Pn 19 51 19.6 +1.1
KDI Kendari 8.61 273 P Pn 19 51 24.9 +2.7
SOEI Soe 8.70 232 Pn 19 51 27.2 +3.7
SOEI Soe 8.70 232 P Pn 19 51 27.1 +3.6
GENI Genyem 9.10 79 P Pn 19 51 32.5 +3.6
138nm,0.9s
GENI Genyem 9.10 79 P Pn 19 51 30.5 +1.6
3µm142nm,0.8s
LUWI Luwuk 9.11 292 Pn 19 51 29.7 +0.7
LUWI Luwuk 9.11 292 P Pn 19 51 29.7 +0.7
LUWI Luwuk 9.11 292 P Pn 19 51 29.5 +0.5
2µm236nm,0.7s
BATI Baumata 9.44 232 P Pn 19 51 36.5 +2.9
792nm,0.6s,baz=124,slow=1.9,SNR=244
BATI S Sn 19 53 22.6 +3.9
149nm,0.5s,baz=18,slow=21,SNR=2.9
BATI Baumata 9.44 232 P Pn 19 51 36.8 +3.2
JAY Jayapura 9.64 79 P Pn 19 51 38.2 +1.9
1.4nm,0.3s,baz=266,slow=7.6,SNR=4.5
JAY S Sn 19 53 24.0 +0.5
32nm,0.8s,baz=165,slow=20,SNR=2.5
JAY LR LR 19 56 21.2
comp=Z,133nm,18.2s,baz=36,slow=44
31nm,0.8s
JAY Jayapura 9.64 79 P Pn 19 51 38.3 +1.9
GTOI Gorontalo 9.65 301 P Pn 19 51 38.8 +2.4
3µm380nm,1.0s
MMRI Maumere 9.86 245 Pn 19 51 43.0 +3.6
MMRI Maumere 9.86 245 P Pn 19 51 45.0 +5.6
2µm5µm276nm,0.7s
MMPI Merauke 9.92 114 P Pn 19 51 43.5 +3.3
TABU Tabubil 9.98 95 P Pn 19 51 43.9 +2.9
APSI Ampana 10.20 290 P Pn 19 51 43.8 -0.2
2µm121nm,0.6s
EDFI Ende, Flores 10.40 245 P Pn 19 51 51.8 +4.9
3µm378nm,1.1s
MRSI Marisa 10.50 298 P Pn 19 51 47.1 -1.0
1µm122nm,0.7s
BSSI Bau Bau, Buton 10.84 261 P Pn 19 51 55.8 +3.1
3µm295nm,0.9s
BNSI Bone 11.10 270 P Pn 19 51 59.8 +3.5
92nm,1.2s
BKSI Bulukumba 11.11 265 P Pn 19 51 59.1 +2.7
53nm,0.6s
KNRA Kununurra 11.42 192 P Pn 19 51 59.4 -1.3
KNRA Kununurra 11.42 192 Pn 19 51 59.3 -1.5
SPSI Sidrap Palu 11.45 272 P Pn 19 52 02.7 +1.6
57nm,0.7s
KAPI Kappang 11.46 267 P Pn 19 52 05.0 +3.7
8.0nm,0.3s,baz=105,slow=6.5,SNR=22
KAPI LR LR 19 56 23.4
comp=Z,323nm,19.7s,baz=88,slow=37
37nm,0.6s
KAPI Kappang 11.46 267 Pn 19 52 04.2 +2.9
KAPI Kappang 11.46 267 P Pn 19 52 01.9 +0.6
TTSI Tana Toraja 11.48 277 P Pn 19 52 04.0 +2.5
43nm,0.9s
TOLI2 Tolitoli 11.82 298 Pn 19 52 05.4 -0.8
TOLI2 Tolitoli 11.82 298 P Pn 19 52 08.1 +2.0
PCI Palu 11.92 287 P Pn 19 52 09.7 +2.2
135nm,1.1s
BASI Baing, Sumba 12.03 241 P Pn 19 52 10.5 +1.5
WSI Waingapu 12.03 244 P Pn 19 52 11.0 +1.9
MPSI Mapaga 12.29 292 P Pn 19 52 13.2 +0.7
44nm,1.0s
DAV Davao City (W) 12.76 334 P Pn 19 52 21.6 +2.6
77nm,0.2s,baz=195,slow=7.0,SNR=5.0
DAV LR LR 19 58 29.5
comp=Z,285nm,19.7s,baz=155,slow=43
DAV Davao City (W) 12.76 334 Pn 19 52 20.1 +1.1
WBSI Waikabubak, Su 12.84 246 P Pn 19 52 20.5 +0.4
PLAI Plampang 14.06 251 P Pn 19 52 37.9 +1.1
PLAI Plampang 14.06 251 P Pn 19 52 37.3 +0.5
3µm338nm,1.0s
FITZ Fitzroy Crossi 14.63 202 P Pn 19 52 40.2 -4.3
49nm,0.4s,baz=36,slow=11,SNR=92
FITZ S Sn 19 55 14.7 -11
47nm,0.4s,baz=77,slow=19,SNR=8.8
FITZ LR LR 19 59 34.7
comp=Z,128nm,18.8s,baz=24,slow=42
FITZ Fitzroy Crossi 14.63 202 Pn 19 52 39.8 -4.7
BKB Balikpapan 14.67 282 P P 19 52 51.5 +0.6
TWSI Taliwang, Sumb 14.88 253 P Pn 19 52 47.1 -0.9
138nm,0.9s
COEN Coen 15.09 130 P Pn 19 52 49.3 -1.5
COEN Coen 15.09 130 Pn 19 52 49.3 -1.5
WB0 Warramunga Arr 15.54 169 Pn 19 52 52.1 -4.5
WRA Warramunga Arr 15.70 169 P Pn 19 52 54.5 -4.1
25nm,0.5s,baz=356,slow=13,SNR=77
WRA S Sn 19 55 41.5 -10
100nm,0.9s,baz=350,slow=21,SNR=10
WRA LR LR 19 59 41.9
comp=Z,410nm,19.4s,baz=16,slow=39
WRA Warramunga Arr 15.70 169 Pn 19 52 54.6 -4.1
MYLDM Lahad Datu 15.92 307 Pn 19 53 02.7 +1.2
MYLDM IAmb IAmb 19 53 09.5
comp=Z,212nm,1.7s
MYLDM Lahad Datu 15.92 307 P P 19 53 04.8 +0.1
BBKI Banjar Baru 16.39 273 P Pn 19 53 08.5 +1.0
comp=Z,5µmcomp=Z,73nm,0.5s
DNP Denpasar 16.47 254 P Pn 19 53 08.3 -0.1
PMG Port Moresby 16.55 108 P P 19 53 11.2 -0.5
comp=Z,7.2nm,0.3s,baz=269,slow=1.4,SNR=34
PMG S Sn 19 56 04.2 -8.1
comp=Z,11nm,0.8s,baz=225,slow=20,SNR=5.5
comp=Z,62nm,0.8s
PMG Port Moresby 16.55 108 P P 19 53 11.5 -0.3
PMG IAmb IAmb 19 53 16.6
comp=Z,55nm,0.7s
PMG Port Moresby 16.55 108 P P 19 53 11.5 -0.3
PMG Port Moresby 16.55 108 P P 19 53 11.9 +0.1
IGBI Denpasar 16.56 254 P Pn 19 53 08.3 -1.4
comp=Z,2µmcomp=Z,151nm,0.6s
MTKI Muara Teweh, K 16.69 282 P P 19 53 12.5 -0.8
ABJI Asem Bagus 17.23 258 P P 19 53 18.8 -0.5
comp=Z,2µmcomp=Z,117nm,1.1s
KMMI Kalianget 17.38 261 P P 19 53 21.0 +0.1
comp=Z,151nm,1.2s
JAGI Jajag, Banyuwa 17.44 256 Pn 19 53 19.0 -1.6
JAGI IAmb IAmb 19 53 21.5
comp=Z,75nm,0.6s
JAGI Jajag, Banyuwa 17.44 256 P Pn 19 53 19.4 -1.3
JAGI Jajag, Banyuwa 17.44 256 P Pn 19 53 19.1 -1.6
comp=Z,1µmcomp=Z,125nm,0.6s
BLJI Banyuglugur 17.85 259 P Pn 19 53 25.0 -0.7
comp=Z,2µmcomp=Z,162nm,0.6s
QIS Mount Isa 17.96 154 P Pn 19 53 25.5 -1.6
QIS Mount Isa 17.96 154 P Pn 19 53 26.2 -0.9
GMJI Gumukmas 18.09 257 P Pn 19 53 27.1 -1.5
comp=Z,69nm,0.9s
KKM Kota Kinabalu 18.27 305 P P 19 53 30.5 -0.4
KKM IAmb IAmb 19 53 33.8
comp=Z,87nm,0.9s
KKM Kota Kinabalu 18.27 305 P Pn 19 53 32.0 +1.1
MTSU Mount Surprise 18.68 138 P Pn 19 53 36.7 +0.9
comp=Z,71nm,0.5s
MTSU Mount Surprise 18.68 138 P Pn 19 53 36.7 +0.9
AS31 Alice Springs 19.28 173 P P 19 53 41.4 -0.5
AS31 IAmb IAmb 19 53 53.7
comp=Z,29nm,0.6s
ASAR Alice Springs 19.28 173 P P 19 53 42.0 +0.1
comp=Z,7.8nm,0.3s,baz=354,slow=12,SNR=313
ASAR S Sn 19 57 06.8 -12
comp=Z,48nm,0.7s,baz=356,slow=27,SNR=14
comp=Z,54nm,0.6s
ASAR Alice Springs 19.28 173 P P 19 53 42.1 +0.3
AUALC St Philip's Co 19.30 173 P Pn 19 53 43.5 +0.2

NGJI Ngawi 19.88 261 P P 19 53 47.5 -1.0
comp=Z,63nm,1.1s
MBWA Marble Bar 20.02 213 P P 19 53 48.5 -1.4
comp=Z,148nm,1.1s
MBWA Marble Bar 20.02 213 P P 19 53 48.7 -1.3
MBWA IAmb IAmb 19 53 50.4
comp=Z,106nm,0.6s
MBWA Marble Bar 20.02 213 P P 19 53 48.8 -1.2
SBUM Sibu 20.20 289 P P 19 53 52.0 0.0
SBUM IAmb IAmb 19 53 55.0
comp=Z,71nm,1.0s
SBUM Sibu 20.20 289 P P 19 53 52.5 +0.5
PSAC2 Pilbara Seismi 20.26 212 P P 19 53 51.7 -0.9
comp=Z,338nm,0.6s
PCJI Pacitan 20.28 258 P P 19 53 49.2 -3.6
comp=Z,2µmcomp=Z,161nm,0.7s
PSA00 Pilbara Seismi 20.30 212 P P 19 53 51.9 -1.0
PSA00 Pilbara Seismi 20.30 212 P P 19 53 51.8 -1.2
PSA00 IAmb IAmb 19 53 53.6
comp=Z,230nm,0.6s
PSA00 Pilbara Seismi 20.30 212 P P 19 53 52.0 -1.0
WRKA Warakurna 20.67 188 P P 19 53 57.8 +0.8
comp=Z,64nm,0.8s
SMRI Semarang 20.85 262 P P 19 53 57.8 -1.3
SMRI IAmb IAmb 19 54 03.0
comp=Z,72nm,1.0s
SMRI Semarang 20.85 262 P P 19 53 59.0 0.0
RABL Rabaul 20.87 90 P P 19 53 58.2 -1.0
UGM Wanagama 20.88 259 P P 19 53 56.7 -2.6
UGM IAmb IAmb 19 54 02.0
comp=Z,238nm,1.8s
UGM Wanagama 20.88 259 P P 19 53 57.0 -2.3
comp=Z,84nm,1.5s
TGY Tagaytay City 21.07 331 P P 19 54 01.8 +0.4
comp=Z,236nm,0.8s,baz=162,slow=7.3,SNR=7.3
TGY LR LR 20 04 17.9
comp=Z,222nm,19.5s,baz=100,slow=43
TV1H Townsville Har 21.15 135 P P 19 54 04.5 +2.4
CTA Charters Tower 21.34 138 P P 19 54 07.0 +2.8
comp=Z,3.1nm,0.8s
CTA Charters Tower 21.34 138 P P 19 54 06.4 +2.1
CTAO Charters Tower 21.34 138 P P 19 54 05.0 +0.7
CTAO IAmb IAmb 19 54 12.2
comp=Z,79nm,0.8s
CTAO Charters Tower 21.34 138 P P 19 54 06.6 +2.3
KPJI Karang Pucung 22.37 262 P P 19 54 12.9 -2.5
comp=Z,108nm,0.6s
GUMO Guam 22.45 37 LR LR 20 04 04.9
comp=Z,101nm,18.1s,baz=249,slow=39
TPI Tanjungpandan 23.60 273 P P 19 54 25.2 -2.7
CNJI Cibinong 24.15 262 P P 19 54 28.5 -4.5
comp=Z,741nmcomp=Z,68nm,1.2s
GIRL Giralia 24.45 221 P P 19 54 35.5 -0.2
comp=Z,302nm,1.1s
GIRL Giralia 24.45 221 P P 19 54 35.2 -0.6
DBJI Dramaga 24.46 264 P P 19 54 32.6 -3.4
comp=Z,40nm,0.8s
INKA Innaminka 24.88 160 P P 19 54 39.8 +0.3
INKA IAmb IAmb 19 54 53.5
comp=Z,29nm,0.8s
MEEK Meekatharra 25.16 207 P P 19 54 40.6 -1.5
comp=Z,70nm,0.9s
MEEK Meekatharra 25.16 207 P P 19 54 40.4 -1.7
QLP Quilpie 25.28 152 P P 19 54 46.0 +2.8
comp=Z,138nm,0.8s
QLP Quilpie 25.28 152 P P 19 54 44.6 +1.4
FORT Forrest 26.36 186 P P 19 54 53.1 +0.2
comp=Z,48nm,0.7s
FORT Forrest 26.36 186 P P 19 54 53.2 +0.2
FORT IAmb IAmb 19 55 33.1
comp=Z,38nm,0.7s
KLSI 26.43 268 P P 19 54 51.7 -2.0
AUNRC North Rockhamp 26.46 137 P P 19 54 55.9 +2.0
KASI Kota Agung 26.66 267 P P 19 54 53.1 -2.8
TPRI Tanjung Pinang 27.22 281 P P 19 55 00.7 -0.2
comp=Z,53nm,0.9s
MYKOM Kota Tinggi 28.06 282 P P 19 55 07.3 -1.1
MYKOM IAmb IAmb 19 55 09.0
comp=Z,64nm,1.5s
KMBL Kambalda 28.19 197 P P 19 55 08.9 -0.4
comp=Z,40nm,1.6s
EIDS Eidsvold 28.21 139 P P 19 55 11.1 +1.5
comp=Z,13nm,1.1s
EIDS Eidsvold 28.21 139 P P 19 55 10.3 +0.7
EIDS Eidsvold 28.21 139 P P 19 55 11.0 +1.5
MORW Morawa 28.42 209 P P 19 55 10.0 -1.4
comp=Z,59nm,0.9s
MORW Morawa 28.42 209 P P 19 55 10.1 -1.3
MORW IAmb IAmb 19 55 11.2
comp=Z,28nm,0.7s
MORW Morawa 28.42 209 P P 19 55 10.1 -1.3
STKA Stephens Creek 28.97 162 P P 19 55 17.2 +0.9
comp=Z,114nm,0.8s
STKA Stephens Creek 28.97 162 P P 19 55 16.8 +0.5
comp=Z,4.4nm,0.5s,baz=350,slow=10,SNR=12
STKA LR LR 20 08 11.9
comp=Z,295nm,20.1s,baz=340,slow=39
comp=Z,4.4nm,0.5s
STKA Stephens Creek 28.97 162 P P 19 55 17.6 +1.3
BLDU Ballidu 29.42 206 P P 19 55 19.3 -1.0
comp=Z,65nm,0.8s
BLDU Ballidu 29.42 206 P P 19 55 19.3 -1.0
TPUB Ta-pu 29.46 340 P P 19 55 20.6 -0.1
AULRC Lightning Ridg 29.48 149 P P 19 55 22.2 +1.4
SSLB Suanglung 29.80 341 P P 19 55 23.4 -0.4
SSLB IAmb IAmb 19 55 35.2
comp=Z,120nm,2.0s
KRJI Kerinci 29.82 274 P P 19 55 21.5 -2.7
comp=Z,67nm,1.0s
KLBR Kellerberrin 29.83 204 P P 19 55 23.2 -0.7
comp=Z,266nm,0.9s
KLBR Kellerberrin 29.83 204 P P 19 55 23.4 -0.5
TW1H Toowoomba 1 Ha 30.30 141 P P 19 55 30.5 +2.3
MUN Mundaring 30.80 205 P P 19 55 31.6 -0.9
comp=Z,72nm,0.8s
MUN Mundaring 30.80 205 P P 19 55 32.1 -0.4
PDSI Padang 30.94 276 P P 19 55 29.6 -4.4
comp=Z,56nm,0.9s
PPI Padang Panjang 31.06 276 P P 19 55 32.5 -2.5
comp=Z,32nm,0.9s
NWAO Narrogin (SRO) 31.21 203 P P 19 55 35.6 -0.6
comp=Z,61nm,1.1s
NWAO Narrogin (SRO) 31.21 203 P P 19 55 35.5 -0.6
NWAO IAmb IAmb 19 55 36.6
comp=Z,49nm,0.9s
NWAO Narrogin (SRO) 31.21 203 P P 19 55 35.9 -0.2
NWAO Narrogin (SRO) 31.21 203 P P 19 55 35.5 -0.6
JOW Kunigami 31.23 355 LR LR 20 06 24.6
comp=Z,190nm,21.8s,baz=158,slow=33
IPM Ipoh 31.46 286 P P 19 55 37.5 -1.1
IPM IAmb IAmb 19 55 38.8
comp=Z,36nm,0.7s
IPM Ipoh 31.46 286 P P 19 55 37.8 -0.8
AUHAR St Anne's Scho 31.90 205 P P 19 55 42.8 +0.7
KULM Kulim 32.05 287 P P 19 55 43.1 -0.6
KULM IAmb IAmb 19 55 44.1
comp=Z,20nm,1.0s
MNSI Mandailing Nat 32.06 279 P P 19 55 41.4 -2.4
AUDCS Dubbo College 32.09 152 P P 19 55 45.3 +1.5
ARMA Armidale 32.21 146 P P 19 55 48.5 +3.4
comp=Z,25nm,1.9s
ARMA Armidale 32.21 146 P P 19 55 47.3 +2.2
ARMA IAmb IAmb 19 55 48.8
comp=Z,19nm,1.1s
RKGY Rocky Gully 32.80 202 P P 19 55 50.5 +0.5
comp=Z,85nm,1.3s
RPSI Rantau Prapat 33.06 282 P P 19 55 50.9 -1.7
GSI Gunungsitoli 34.12 279 P P 19 55 59.7 -2.1
comp=Z,16nm,0.8s
CAN Canberra 34.84 154 P P 19 56 09.6 +1.8
CAN IAmb IAmb 19 56 27.7
comp=Z,17nm,0.9s
TOO Toolangi 35.45 160 P P 19 56 15.3 +2.2
NJ2 Nanjing 38.16 343 eP P 19 56 37.5 +1.4
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
WHN Wuhan 38.36 336 P P 19 56 38.5 +0.7
WHN sP sP 19 56 55.0 +4.0
GYA Guiyang 38.86 324 P P 19 56 45.3 +3.1
GYA pmax pmax
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 39.13 307 P P 19 56 44.7 +0.2
comp=Z,2.8nm,0.8s,baz=135,slow=7.3,SNR=18
CMAR PcP PcP 19 58 54.8 +1.0
comp=Z,1.6nm,0.8s,baz=126,slow=3.6,SNR=2.8

CMAR ScP ScP 20 02 38.8 -0.9
comp=Z,0.5nm,0.8s,baz=115,slow=4.3,SNR=4.1
comp=Z,2.8nm,0.8s
CMAR Chiang Mai Arr 39.13 307 P P 19 56 44.5 0.0
CHTO Chiang Mai 39.32 307 P P 19 56 45.5 -0.5
CHTO Chiang Mai 39.32 307 P P 19 56 46.2 +0.2
ENH Enshi 40.31 330 P P 19 56 53.4 -0.8
KMI Kunming 40.38 318 P P 19 56 55.5 +0.5
KMI pmax pmax
comp=Z,13nm,1.0s
KMI LR LR
comp=Z,130nm,18.0s
MJAR Matsushiro Arr 41.29 9 P P 19 57 00.7 -1.4
comp=Z,0.7nm,0.6s,baz=172,slow=8.9,SNR=4.0
comp=Z,0.7nm,0.6s
MAJO Matsushiro 41.29 9 P P 19 57 00.7 -1.4
KSAR Wonju Array Be 41.79 356 P P 19 57 05.7 -0.4
KSRS Korea Array 41.80 356 P P 19 57 06.1 -0.1
comp=Z,2.1nm,0.7s,baz=180,slow=8.9,SNR=8.1
KSRS PcP PcP 19 59 01.9 0.0
comp=Z,0.6nm,0.7s,baz=190,slow=2.6,SNR=1.8
comp=Z,2.1nm,0.7s
KS19 Wonju Array Si 41.85 356 P P 19 57 06.4 -0.3
KS19 IAmb IAmb 19 57 44.0
comp=Z,66nm,1.6s
PZH PanZhiHua 41.97 319 P P 19 57 07.5 -0.5
PZH pmax pmax
comp=Z,10.0nm,0.9s
LYN LuoYang 42.63 337 P P 19 57 12.5 -0.6
LYN sP sP 19 57 37.5 +11
LYN pmax pmax
comp=Z,20nm,0.5s
LYN LR LR
comp=Z,500nm,12.9s
XAN Xi'an 43.70 333 ⇑P P 19 57 21.3 -0.5
XAN pP pwP 19 57 38.3 +2.8
XAN pmax pmax
comp=Z,13nm,0.7s
HNS HongShan 44.39 341 ⇓P P 19 57 31.0 +3.9
HNS pmax pmax
comp=Z,5.0nm,0.8s
BJT Baijiatuau 46.37 344 P P 19 57 42.2 -0.6
BJT IAmb IAmb 19 58 04.7
comp=Z,8.7nm,0.7s
BJI Beijing 46.39 344 P P 19 57 43.0 +0.1
BJI pP pwP 19 57 55.3 -0.9
BJI sP sP 19 58 00.5 +4.2
BJI pmax pmax
comp=Z,5.0nm,0.8s
LZDM Lanzhou Array 47.76 330 P P 19 57 54.3 +0.1
comp=Z,1.1nm,0.4s,baz=161,slow=14,SNR=6.1
comp=Z,1.1nm,0.4s
LZH Lanzhou 47.79 330 eP P 19 57 59.3 +5.1
LZH pP sP 19 58 07.3 0.0
LZH pmax pmax
comp=Z,22nm,1.4s
CN2 Changchun 48.31 354 P P 19 57 58.5 +0.6
CN2 sP pwP 19 58 20.8 +9.4
CN2 S S 20 04 53.5 -2.0
CN2 LR LR
comp=Z,240nm,12.0s
USRK Ussuriysk Ar. 48.43 1 P P 19 57 58.9 +0.2
comp=Z,2.8nm,0.5s,baz=182,slow=8.2,SNR=11
comp=Z,2.8nm,0.5s
SHL Shillong 48.45 310 P P 19 57 58.0 -1.5
SHL IAmb IAmb 19 58 16.8
comp=Z,12nm,0.8s
HHC Hu-ho-hao-te 48.55 340 eP P 19 58 00.5 +0.6
HHC pP pP 19 58 11.0 +1.5
HHC sP sP 19 58 18.3 +5.0
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,73nm,4.7s
ASAJ Asahikawa 49.41 11 P P 19 58 06.5 +0.2
comp=Z,10nm,1.1s,baz=216,slow=14,SNR=2.1
comp=Z,10nm,1.1s
JKA Kamikawa-asahi 49.41 11 P P 19 58 05.7 -0.6
BNX BinXian 50.08 356 ⇓P P 19 58 11.3 -0.1
BNX pmax pmax
comp=Z,6.0nm,1.5s
LSA Lhasa 51.27 314 P 19 58 20.6 -0.6
LSA IAmb IAmb 19 58 40.1
comp=Z,12nm,0.8s
LSA Lhasa 51.27 314 P P 19 58 17.5 -3.7
LSA pmax pmax
comp=Z,4.0nm,0.7s
GTA Gaotai 52.38 329 eP P 19 58 30.0 +1.1
GTA pmax pmax
comp=Z,3.0nm,0.8s
HILR Hailar Array B 54.70 351 P P 19 58 45.5 -0.2
comp=Z,0.6nm,0.4s,baz=186,slow=12,SNR=1.4
comp=Z,0.6nm,0.4s
ULN Ulaanbaatar 56.26 341 P P 19 58 57.1 +0.1
HYBB Hyderabad (bro 56.35 294 eP P 19 58 57.5 -0.6
SONM Songino Array 56.45 340 P P 19 58 58.6 +0.2
comp=Z,1.3nm,0.5s,baz=159,slow=8.6,SNR=13
comp=Z,1.3nm,0.5s
DGAR Diego Garcia 58.51 264 P P 19 59 12.9 -0.4
PETK Petropavlovsk- 61.53 18 P P 19 59 33.9 +0.6
comp=Z,7.0nm,1.0s,baz=197,slow=7.5,SNR=2.5
comp=Z,7.0nm,1.0s
PETK Petropavlovsk- 61.53 18 P P 19 59 33.4 0.0
WMQ Urumqi 61.97 326 eP P 19 59 38.5 +1.9
WMQ sP pwP 19 59 59.8 +9.4
WMQ LR LR
comp=Z,130nm,23.9s
CASY Casey 63.40 189 P P 19 59 45.8 +0.2
YAK Yakutsk 66.30 359 P 20 00 03.8 -0.7
YAK Yakutsk 66.30 359 P P 20 00 04.9 +0.4
MKAR Makanchi Array 66.80 326 P P 20 00 08.5 +0.4
comp=Z,4.3nm,0.5s,baz=116,slow=7.9,SNR=66
comp=Z,4.3nm,0.5s
MKAR Makanchi Array 66.80 326 P 20 00 07.6 -0.5
MAKZ Makanchi 66.98 326 P 20 00 08.9 -0.4
MAKZ IAmb IAmb 20 00 31.7
comp=Z,26nm,1.4s
ZAA0 Zalesovo Array 69.87 333 P 20 00 26.4 -0.6
ZALV Zalesovo Beam 69.87 333 P P 20 00 26.6 -0.5
comp=Z,5.2nm,0.8s,baz=122,slow=6.2,SNR=14
comp=Z,5.2nm,0.8s
ZALV Zalesovo Beam 69.87 333 P 20 00 26.3 -0.8
KURBB Kurchatov Arra 71.01 328 P P 20 00 34.2 +0.1
comp=Z,5.9nm,0.8s,baz=127,slow=5.1,SNR=31
comp=Z,5.9nm,0.8s
KURK Kurchatov 71.01 328 P 20 00 34.2 +0.1
KURK IAmb IAmb 20 00 59.5
comp=Z,14nm,0.9s
KURK Kurchatov 71.01 328 P P 20 00 34.8 +0.6
KK31 Karatay Array 72.26 318 P 20 00 41.4 -0.5
KKAR Karatay Array 72.26 318 P 20 00 41.5 -0.4
VNDA Vanda 74.82 173 LR LR 20 32 57.3
comp=Z,40nm,18.8s,baz=334,slow=35
BVAR Borovoye Array 76.59 327 P P 20 01 06.8 0.0
comp=Z,6.4nm,0.8s,baz=116,slow=6.8,SNR=27
comp=Z,6.4nm,0.8s
BORK Borovoye 76.63 327 P 20 01 06.9 -0.2
BORK IAmb IAmb 20 01 27.9
comp=Z,7.3nm,0.7s
BORK Borovoye 76.63 327 P P 20 01 07.3 +0.3
MAW Mawson 77.76 201 P P 20 01 13.4 +0.3
comp=Z,21nm,0.5s,baz=5.2,SNR=48
MAW LR LR 20 34 30.0
comp=Z,84nm,18.8s,baz=76,slow=35
PPT Papeete 78.37 107 LR LR 20 34 19.9
comp=Z,22nm,18.4s,baz=208,slow=34
UOSS Minazif 78.38 296 P 20 01 16.4 -1.0
UOSS IAmb IAmb 20 01 23.4
comp=Z,6.0nm,0.6s
NRIK Noril'sk 79.40 346 P P 20 01 22.4 +0.3
comp=Z,3.3nm,0.7s,baz=107,slow=4.7,SNR=3.8
comp=Z,3.3nm,0.7s
NRIK Noril'sk 79.40 346 P P 20 01 22.1 0.0
AB31 Akbulak array 81.30 321 P 20 01 32.5 -0.2
ABKAR Akbulak array 81.30 321 P P 20 01 32.0 -0.7
AVY Angavokely 82.44 252 P P 20 01 39.9 +0.3
ABM Ambohimiarambe 82.76 251 P P 20 01 41.5 +0.2
ABPO Ambohimpanom 82.91 251 P P 20 01 41.4 -0.6
ABPO IAmb IAmb 20 01 54.6
comp=Z,64nm,1.9s
ABPO Ambohimpanom 82.91 251 P P 20 01 41.9 -0.2
OPO Ambohidratompo 82.97 252 P P 20 01 42.6 +0.3
VOI Vohitsoka 83.21 249 P 20 01 42.9 -0.7
FIRM Firavahana 83.26 252 P P 20 01 44.2 +0.3
DGRM Ambatolahisoa 83.66 251 P P 20 01 46.4 +0.5
ATG Ambohiby 83.90 252 P P 20 01 47.4 +0.3

J17K	VABM Dome	85.00	25	P	P	20 01 51.2	-0.4	
QSPA	South Pole Qui	85.51	180	P	P	20 01 57.2	+2.9	
SYO	Syowa Base	86.47	201	iP	P	20 01 59.0	+0.3	
ILSW	Iliamna Southw	86.68	29	P	P	20 01 59.9	-0.1	
RAYN	Ar Rayn	87.85	294		P	20 02 05.5	-0.9	
RAYN				IAmb	IAmb	20 02 07.2		
	comp=Z,9.3nm,0.9s							
ILAR	Eielson Array	90.53	25	P	P	20 02 16.7	-1.4	
	comp=Z,0.3nm,0.6s,baz=260,slow=4.1,SNR=4.5							
ILAR				LR	LR	20 51 23.3		
	comp=Z,26nm,18.1s,baz=117,slow=41							
	comp=Z,0.3nm,0.6s							
BMAR	Burnt Mountain	91.83	23		P	20 02 24.8	+0.6	
BCAR	Beaver Creek A	92.56	27	P	P	20 02 27.7	+0.2	
KIBK	Kibwezi	93.00	267		P	20 02 29.9	-0.9	
KIBK				IAmb	IAmb	20 02 32.1		
	comp=Z,9.3nm,1.2s							
KMBO	Kilima Mbogo	93.89	269	P	P	20 02 35.0	0.0	
	comp=Z,2.9nm,0.4s,baz=130,slow=6.9,SNR=5.1							
	comp=Z,2.9nm,0.4s							
BELA	Belgrano 2	97.42	183	P	P	20 02 48.8	-0.7	
SNAA	Sanae	98.42	193	P	Pdif	20 02 54.5	+0.2	
FINES	FINESS Array B	101.12	332	P	Pdif	20 03 05.4	-0.8	
	comp=Z,2.3nm,0.9s,baz=60,slow=8.5,SNR=5.3							
BOSA	Boshof	101.81	240	P	Pdif	20 03 09.7	-0.6	
	comp=Z,2.2nm,0.9s,baz=133,slow=3.2,SNR=13							
TXAR	Lajitas Array	122.55	58	PKP	PKPdf	20 08 11.8	-0.8	
	comp=Z,0.2nm,0.5s,baz=284,slow=2.3,SNR=1.2							
PLCA	Paso Flores	130.80	158	PKP	PKPdf	20 08 27.6	-0.6	
	comp=Z,1.0nm,0.5s,baz=270,slow=6.1,SNR=5.9							
PLCA	Paso Flores	130.80	158		PKPdf	20 08 28.1	0.0	
DBIC	Dimbokro	136.26	275	PKP	PKPdf	20 08 39.0	+0.1	
	comp=Z,3.5nm,0.8s,baz=90,slow=3.0,SNR=4.9							
CPUP	Villa Florida	148.30	165	PKPbc	PKPbc	20 09 03.9	+0.6	
	comp=Z,2.2nm,0.4s,baz=153,slow=2.3,SNR=17							
LPAZ	La Paz	151.87	138	PKPbc	PKiKP	20 09 14.2	+0.8	
	comp=Z,6.6nm,0.4s,baz=217,slow=1.8,SNR=21							

BJI ***30*** *19:52:38.6,26˚.28S×178˚.85E,h622km,mB5.2/16, mb4.7/34*

NEIC ***30*** *19:52:39.9,26˚.43S×178˚.75E,h620km,Moment Tensor Solution. Duration: 2s7 Moment tensor: Scale 10^17Nm; Mrr-1.88; Mθθ-0.05; Mϕϕ1.93; Mrθ0.31; Mθϕ0.81; Mrϕ0.13; Fault plane solution: M0 2.10000×10^17 NP1:ϕs10.59000°, δ42.60000°,λ-103.33000°. NP2:ϕs208.43000°, δ48.80000°,λ-78.03000°. Principal axes: T 2.2350, Plg3.0000°, Azm290.0000°; N -0.3005, Plg9.0000°, Azm20.0000°; P -1.9345, Plg80.0000°, Azm181.0000°;*

MOS ***30*** *19:52:39.0±0.9,26˚.56S×178˚.30E,h608km,mb5.2/19 Error ellipse: s-maj=9.3km s-min=9.3km az=31.4*

NOU ***30*** *19:52:39.6,26˚.58S×178˚.60E,h627km,ML5.0/123,South of Fiji Islands*

IDC ***30*** *19:52:39.9±0.3,26˚.59S×178˚.34E,h615km±3km,mb4.2/27, mbtmp5.1/29,Error ellipse: s-maj=8.8km s-min=7.6km az=19.0*

NEIC ***30*** *19:52:39.9,26˚.63S×178˚.30E,h620km*

NEIC ***30*** *19:52:40.7±1.8,26˚.61S±0˚.09×178˚.33E±0˚.10,h614km±4km, mb5.1/116,Mww5.5/12,Error ellipse: s-maj=12.6km s-min=12.3km az=140.0*

GCMT ***30*** *19:52:41.7±0.1,26˚.62S±0˚.02×178˚.36E±0˚.01,h623km±1km, MW5.5/119,Moment Tensor Solution. s119,c199; Duration: 1s4 Moment tensor: Scale 10^17Nm; Mrr-1.82±.03; Mθθ0.03±.05; Mϕϕ1.79±.05; Mrθ0.57±.05; Mθϕ1.26±.05; Mrϕ0.21±.05; Best double couple: M0 2.24000×10^17 NP1:ϕs11.00000°,δ42.00000°, λ-115.00000°. NP2:ϕs223.00000°,δ53.00000°, λ-69.00000°. Principal axes: T 2.4940, Plg6.0000°, Azm298.0000°; N -0.5120, Plg16.0000°, Azm30.0000°; P -1.9860, Plg73.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

BGR ***30*** *19:52:42.3,24˚.55S×178˚.58E,h645km,6Mw*

ISC 30 19:52:40.4±0.2,**26˚.62S**±0˚.04×**178˚.46E**±0˚.03,**h622**km±2km, **h623**km:**pP-P,n967,**σ1s**40**/1156,**mb5.1**/169,**74C-57D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.12**	**130**	P		**P**	**19 54 08.1**	**-0.1**
RIZ				S		**S**	**19 55 21.4**	**+1.4**
RAO	**Raoul Island**	**4.14**	**130**	P		**P**	**19 54 08.1**	**-0.2**
	794nm,0.2s,baz=191,slow=4.3,SNR=28							
RAO				S		**S**	**19 55 20.6**	**+0.4**
	1μm,0.4s,baz=278,slow=23,SNR=9.2							
RAO	**Raoul Island**	**4.14**	**130**	P		**P**	**19 54 08.5**	**+0.2**
RAO				S		**S**	**19 55 20.3**	**+0.1**
RAO	**Raoul Island**	**4.14**	**130**	P		**P**	**19 54 08.8**	**+0.5**
RAO	**Raoul Island**	**4.14**	**130**	P		**P**	**19 54 08.1**	**-0.2**
RAO				S		**S**	**19 55 20.9**	**+0.7**
GLKZ	**Green Lake**	**4.14**	**130**	P		**P**	**19 54 07.8**	**-0.5**
GLKZ				S		**S**	**19 55 19.5**	**-0.7**
MSVF	**Nonsavu**	**8.86**	**357**			**P**	**19 54 46.6**	**-2.3**
MSVF	**Nonsavu**	**8.86**	**357**	P		**P**	**19 54 47.7**	**-1.1**
MSVF	**Nonsavu**	**8.86**	**357**	S		**S**	**19 56 31.8**	**-2.2**
MSVF	**Nonsavu**	**8.86**	**357**	*ce*P		**P**	**19 54 47.4**	**-1.4**
OUZ	**Omahuta**	**9.53**	**205**	P		**P**	**19 54 56.7**	**+1.8**
OUZ	**Omahuta**	**9.53**	**205**	P		**P**	**19 54 56.6**	**+1.8**
NFK	**Norfolk Island**	**9.62**	**253**	P		**P**	**19 54 56.7**	**+0.7**
	comp=Z,509nm,1.0s							
WCZ	**Waipu Caves**	**9.93**	**200**	P		**P**	**19 55 00.7**	**+1.9**
GRZ	**Great Barrier**	**9.93**	**194**	P		**P**	**19 54 59.8**	**+1.0**
KUZ	**Kuaotunu**	**10.36**	**192**	P		**P**	**19 55 03.4**	**+0.5**
KUZ	**Kuaotunu**	**10.36**	**192**	P		**S**	**19 57 02.3**	**+2.3**
KUZ	**Kuaotunu**	**10.36**	**192**	P		**P**	**19 55 03.8**	**+0.9**
PINNC	**Pines Island,**	**10.79**	**289**			**P**	**19 55 06.5**	**-0.9**
PINNC	**Pines Island,**	**10.79**	**289**	P		**P**	**19 55 07.0**	**-0.4**
PINNC	**Pines Island,**	**10.79**	**289**	P		**S**	**19 57 10.5**	**+2.5**
MARNC	**Mare, Loyalty**	**10.82**	**296**			**P**	**19 55 06.5**	**-1.2**
MARNC	**Mare, Loyalty**	**10.82**	**296**	P		**P**	**19 55 07.6**	**-0.1**
MARNC	**Mare, Loyalty**	**10.82**	**296**	P		**S**	**19 57 11.9**	**+3.3**
MXZ	**Matakaoa Point**	**10.91**	**181**	P		**P**	**19 55 05.9**	**-2.4**
MXZ	**Matakaoa Point**	**10.91**	**181**	P		**S**	**19 57 10.4**	**+0.6**
MXZ	**Matakaoa Point**	**10.91**	**181**	P		**P**	**19 55 05.1**	**-3.2**
INH	**Isangel**	**11.00**	**308**	P		**P**	**19 55 08.9**	**-0.7**
HAZ	**Te Kaha**	**11.12**	**183**	P		**P**	**19 55 07.7**	**-2.6**
HAZ				S		**S**	**19 57 06.2**	**-7.2**
TGRZ	**Tauranga**	**11.23**	**189**	P		**P**	**19 55 12.7**	**+1.3**
WHRZ	**Whale Island**	**11.27**	**186**	P		**P**	**19 55 12.7**	**+0.8**
OPRZ	**Ohinepanea**	**11.30**	**188**	P		**P**	**19 55 13.3**	**+1.1**
RUGZ	**Raukumara Rang**	**11.33**	**183**	P		**P**	**19 55 09.5**	**-3.1**
RUGZ				S		**S**	**19 57 13.8**	**-3.6**
TOZ	**Tahuroa Road**	**11.35**	**192**			**P**	**19 55 12.8**	**+0.1**
TOZ	**Tahuroa Road**	**11.35**	**192**	P		**P**	**19 55 13.7**	**+1.0**
OUENC	**Ouen Island, N**	**11.38**	**289**	P		**P**	**19 55 13.2**	**0.0**
OUENC	**Ouen Island, N**	**11.38**	**289**	S		**S**	**19 57 19.6**	**+1.2**
KMRZ	**Kaimai**	**11.39**	**190**	P		**P**	**19 55 14.3**	**+1.2**
PUZ	**Puketiti**	**11.42**	**181**	P		**P**	**19 55 10.3**	**-3.1**
PUZ				S		**S**	**19 57 13.9**	**-4.9**
MARZ	**Manawahe**	**11.43**	**187**	P		**P**	**19 55 13.9**	**+0.4**
YATNC	**Mamie plateau,**	**11.48**	**291**	P		**P**	**19 55 13.3**	**-1.0**
KARZ	**Kaharoa**	**11.52**	**189**	P		**P**	**19 55 15.1**	**+0.7**
TWGZ	**Tauwhareparae**	**11.53**	**182**	P		**P**	**19 55 11.8**	**-2.6**
TWGZ				S		**S**	**19 57 17.1**	**-3.7**
EDRZ	**Edgecumbe**	**11.54**	**187**	P		**P**	**19 55 14.4**	**-0.2**
OMRZ	**Omania**	**11.59**	**188**	P		**P**	**19 55 15.7**	**+0.7**
NGRZ	**Ngongotaha**	**11.61**	**189**	P		**P**	**19 55 16.9**	**+1.7**
URZ	**Urewera**	**11.66**	**185**	P		**P**	**19 55 13.1**	**-2.5**
	comp=Z,102nm,0.4s,baz=268,slow=3.4,SNR=93							
URZ				S		**S**	**19 57 17.2**	**-5.7**
	comp=Z,40nm,0.4s,baz=114,slow=23,SNR=11							
URZ	**Urewera**	**11.66**	**185**	P		**P**	**19 55 13.9**	**-1.7**
URZ	**Urewera**	**11.66**	**185**	S		**S**	**19 57 22.4**	**-0.5**
URZ	**Urewera**	**11.66**	**185**	P		**P**	**19 55 12.6**	**-3.1**
URZ				S		**S**	**19 57 17.5**	**-5.4**
TARZ	**Mount Tarawera**	**11.70**	**188**	P		**P**	**19 55 16.7**	**+0.6**
MWZ	**Matawai**	**11.70**	**184**	P		**P**	**19 55 13.4**	**-2.7**
MWZ				S		**S**	**19 57 18.0**	**-5.9**
ONTNC	**Ouen Toro**	**11.75**	**289**			**P**	**19 55 16.3**	**-0.5**
ONTNC	**Ouen Toro**	**11.75**	**289**	P		**P**	**19 55 16.6**	**-0.2**
DZM	**Mont Dzumac**	**11.85**	**290**	P		**P**	**19 55 17.1**	**-0.8**
	comp=Z,1μm,0.6s,baz=117,slow=9.2,SNR=397							
DZM				S		**S**	**19 57 25.0**	**-2.0**
	baz=83,slow=16							
DZM	**Mont Dzumac**	**11.85**	**290**	*e*P		**P**	**19 55 15.6**	**-2.3**
	comp=Z,3μm,0.9s							
DZM				*e*S		**S**	**19 57 28.6**	**+1.6**
	comp=Z,376nm,1.4s							
DZM	**Mont Dzumac**	**11.85**	**290**	P		**P**	**19 55 17.8**	**-0.1**
DZM	**Mont Dzumac**	**11.85**	**290**	P		**P**	**19 55 17.8**	**-0.1**
GRRZ	**Galatos Road**	**11.86**	**189**	P		**P**	**19 55 18.7**	**+1.0**
HRRZ	**Handcock Road**	**11.88**	**188**	P		**P**	**19 55 18.2**	**+0.4**
MUGZ	**Murupara**	**11.91**	**186**	P		**P**	**19 55 15.9**	**-2.2**
TLZ	**Tolley Road**	**11.93**	**191**	P		**P**	**19 55 19.8**	**+1.4**
RTZ	**Ruatahuna**	**12.02**	**186**	P		**P**	**19 55 17.2**	**-2.1**
ALRZ	**Allen Road**	**12.04**	**188**	P		**P**	**19 55 18.6**	**-0.7**
KUTZ	**Kaahu Road**	**12.04**	**190**	P		**P**	**19 55 20.7**	**+1.3**
SNGZ	**Shannon Statio**	**12.16**	**184**	P		**P**	**19 55 17.8**	**-2.7**
WHTZ	**Whakaora**	**12.19**	**189**	P		**P**	**19 55 22.1**	**+1.2**
HIZ	**Hauiti**	**12.24**	**193**			**P**	**19 55 21.5**	**+0.3**
HIZ	**Hauiti**	**12.24**	**193**	P		**P**	**19 55 22.3**	**+1.1**
HIZ	**Hauiti**	**12.24**	**193**	P		**P**	**19 55 22.4**	**+1.2**
WATZ	**Wairara**	**12.27**	**190**	P		**P**	**19 55 22.3**	**+0.8**
MTHZ	**Maungataniwha**	**12.27**	**196**	P		**P**	**19 55 19.8**	**-1.8**
RAHZ	**Arahi**	**12.31**	**185**	P		**P**	**19 55 19.9**	**-2.1**
KNZ	**Kokohu**	**12.38**	**183**	P		**P**	**19 55 19.6**	**-3.0**
RATZ	**Rangitukua**	**12.42**	**190**	P		**P**	**19 55 22.8**	**-0.2**
RITZ	**Rihia Road**	**12.51**	**189**	P		**P**	**19 55 23.2**	**-0.7**
BKZ	**Black Stump Fm**	**12.62**	**187**	P		**P**	**19 55 23.1**	**-1.9**
BKZ	**Black Stump Fm**	**12.62**	**187**	P		**P**	**19 55 22.1**	**-2.8**
NGZ	**Ngauruhoe**	**12.74**	**190**	P		**P**	**19 55 26.0**	**-0.3**
RTV	**Rentapao**	**12.79**	**311**	P		**P**	**19 55 26.2**	**-0.7**
VRZ	**Vera Road**	**12.85**	**193**	P		**P**	**19 55 28.9**	**+1.8**
DVP	**Devils Point**	**12.99**	**311**	P		**P**	**19 55 27.1**	**-1.8**
NIUE	**Niue**	**13.07**	**57**	P		**P**	**19 55 30.5**	**+0.9**
	comp=Z,386nm,0.8s							
NIUE	**Niue**	**13.07**	**57**	P		**P**	**19 55 29.7**	**+0.1**
NIUE	**Niue**	**13.07**	**57**	P		**P**	**19 55 29.8**	**+0.2**
KHEZ	**Kahui Hut**	**13.17**	**195**	P		**P**	**19 55 31.1**	**+0.7**
WAZ	**Wanganui**	**13.41**	**192**	P		**P**	**19 55 32.3**	**-0.4**
PXZ	**Pawanui**	**13.44**	**185**	P		**P**	**19 55 30.3**	**-2.6**
TSZ	**Takapari Road**	**13.56**	**188**	P		**P**	**19 55 31.5**	**-2.6**
BFZ	**Birch Farm**	**14.14**	**187**	P		**P**	**19 55 38.6**	**-1.0**
BFZ	**Birch Farm**	**14.14**	**187**	P		**P**	**19 55 36.6**	**-3.0**
MRZ	**Mangatainoka R**	**14.20**	**189**	P		**P**	**19 55 36.8**	**-3.4**
KOUNC	**Koumac, New Ca**	**14.33**	**292**	P		**P**	**19 55 41.8**	**+0.1**
SNZO	**South Karori**	**14.97**	**191**	P		**P**	**19 55 45.3**	**-1.8**
SNZO	**South Karori**	**14.97**	**191**	P		**P**	**19 55 46.5**	**-0.7**
QRZ	**Quartz Range**	**14.99**	**198**	P		**P**	**19 55 47.2**	**-0.2**
QRZ	**Quartz Range**	**14.99**	**198**	P		**P**	**19 55 48.1**	**+0.7**
QRZ	**Quartz Range**	**14.99**	**198**	P		**P**	**19 55 47.9**	**+0.5**
TKNZ	**Takaka Hill**	**15.08**	**196**	P		**P**	**19 55 48.0**	**-0.2**
NNZ	**Nelson**	**15.15**	**195**	P		**P**	**19 55 48.4**	**-0.4**
CMWZ	**Cape Campbell**	**15.49**	**192**	P		**P**	**19 55 51.1**	**-0.8**
AFI	**Afiamalu**	**15.60**	**38**	P		**P**	**19 55 51.7**	**-1.7**
AFI	**Afiamalu**	**15.60**	**38**	P		**P**	**19 55 51.4**	**-2.0**
AFI	**Afiamalu**	**15.60**	**38**	P		**P**	**19 55 51.7**	**-1.7**
THZ	**Tophouse**	**15.78**	**195**	P		**P**	**19 55 54.3**	**-0.3**
DSZ	**Denniston Nort**	**16.05**	**198**	P		**P**	**19 55 57.7**	**+0.6**
KHZ	**Kahutara**	**16.26**	**193**	P		**P**	**19 55 57.8**	**-1.1**
KHZ	**Kahutara**	**16.26**	**193**	P		**P**	**19 55 57.8**	**-1.1**
LTZ	**Lake Taylor**	**16.89**	**196**	P		**P**	**19 56 04.1**	**-0.7**
GVZ	**Greta Valley S**	**16.90**	**194**	P		**P**	**19 56 03.9**	**-0.8**
INZ	**Inchbonnie**	**17.06**	**198**	P		**P**	**19 56 05.7**	**-0.5**
OXZ	**Oxford**	**17.46**	**196**	P		**P**	**19 56 08.9**	**-1.1**
OXZ	**Oxford**	**17.46**	**196**	P		**P**	**19 56 09.0**	**-0.9**
CTZ	**Chatham Island**	**17.54**	**168**	P		**P**	**19 56 12.1**	**+1.5**
CTZ	**Chatham Island**	**17.54**	**168**	P		**P**	**19 56 11.2**	**+0.7**
CTZ	**Chatham Island**	**17.54**	**168**	P		**P**	**19 56 12.6**	**+2.1**
WVZ	**Waitaha Valley**	**17.58**	**199**	P		**P**	**19 56 10.4**	**-0.6**
LHI	**Lord Howe Isla**	**17.64**	**249**	P		**P**	**19 56 13.7**	**+2.0**
	comp=Z,568nm,0.8s							
LHI	**Lord Howe Isla**	**17.64**	**249**	P		**P**	**19 56 12.7**	**+1.0**
MQZ	**McQueen's Vall**	**17.68**	**194**	P		**P**	**19 56 11.2**	**-0.6**
FUNA	**Funafuti**	**18.01**	**2**	P		**P**	**19 56 15.2**	**-0.1**
RPZ	**Rata Peaks**	**18.08**	**198**	P		**P**	**19 56 14.4**	**-1.2**
	comp=Z,65nm,0.3s,baz=36,slow=3.2,SNR=41							
RPZ	**Rata Peaks**	**18.08**	**198**	P		**P**	**19 56 14.0**	**-1.6**
RPZ	**Rata Peaks**	**18.08**	**198**	P		**P**	**19 56 14.5**	**-1.0**
FOZ	**Fox Glacier**	**18.27**	**200**	P		**P**	**19 56 16.4**	**-0.8**
TMZ	**Timaru**	**18.72**	**197**	P		**P**	**19 56 19.9**	**-1.4**
LBZ	**Lake Benmore**	**18.94**	**199**	P		**P**	**19 56 21.2**	**-2.1**
JCZ	**Jackson Bay**	**19.09**	**202**	P		**P**	**19 56 24.9**	**+0.1**
JCZ	**Jackson Bay**	**19.09**	**202**	P		**P**	**19 56 24.8**	**+0.1**
ODZ	**Otahua Downs**	**19.43**	**197**	P		**P**	**19 56 26.3**	**-1.4**
ODZ	**Otahua Downs**	**19.43**	**197**	P		**P**	**19 56 26.3**	**-1.4**
WKZ	**Wanaka**	**19.69**	**200**	P		**P**	**19 56 28.9**	**-1.2**
MSZ	**Milford Sound**	**19.91**	**203**	P		**P**	**19 56 33.5**	**+1.5**
EAZ	**Earnscleugh**	**19.97**	**199**	P		**P**	**19 56 31.4**	**-1.2**
MLZ	**Mavora Lakes**	**20.46**	**201**	P		**P**	**19 56 36.9**	**-0.1**
TUZ	**Tuapeka**	**20.54**	**198**	P		**P**	**19 56 37.7**	**0.0**
RAR	**Rarotonga**	**20.60**	**79**	P		**P**	**19 56 39.1**	**+0.5**
	comp=Z,17nm,0.7s,baz=236,slow=7.9,SNR=6.6							
	comp=Z,17nm,0.7s							
DCZ	**Deep Cove**	**20.87**	**203**	P		**P**	**19 56 41.1**	**+0.5**
WHZ	**Wether Hill Ro**	**20.98**	**201**	P		**P**	**19 56 41.4**	**-0.3**
SYZ	**Scrubby Hill**	**21.21**	**198**	P		**P**	**19 56 43.3**	**-0.3**
PYZ	**Puysegur Point**	**21.64**	**203**	P		**P**	**19 56 46.7**	**-0.9**
APZ	**The Paps**	**21.81**	**200**	P		**P**	**19 56 48.9**	**-0.1**
GC1S	**Gold Coast 1 S**	**22.20**	**260**	P		**P**	**19 56 53.2**	**+0.4**
HURO	**Huro Makira**	**22.42**	**313**	P		**P**	**19 56 53.9**	**-1.0**
AUWSH	**Wavell State H**	**22.65**	**262**	P		**P**	**19 56 57.4**	**+0.6**
NGOA	**Tingoa Renbel**	**22.91**	**307**	P		**P**	**19 56 58.0**	**-0.2**
ARMA	**Armidale**	**23.86**	**255**	P		**P**	**19 57 08.4**	**+0.9**
	comp=Z,67nm,0.9s							
ARMA	**Armidale**	**23.86**	**255**	P		**P**	**19 57 07.6**	**0.0**
ARMA	**Armidale**	**23.86**	**255**	P		**P**	**19 57 08.5**	**+0.9**
AUKHS	**Kincumber High**	**24.37**	**247**	P		**P**	**19 57 13.4**	**+1.5**
AUPHS	**Peel High Scho**	**24.53**	**253**	P		**P**	**19 57 14.6**	**+1.2**
MGCD	**Mangrove Creek**	**24.56**	**248**	P		**P**	**19 57 15.1**	**+1.5**
	comp=Z,315nm,0.5s							
MGCD	**Mangrove Creek**	**24.56**	**248**	P		**P**	**19 57 14.8**	**+1.2**
RIV	**Riverview**	**24.61**	**246**	P		**P**	**19 57 15.9**	**+1.9**
	comp=Z,229nm,0.7s,comp=Z,0.0nm							
EIDS	**Eidsvold**	**24.63**	**267**	P		**P**	**19 57 13.9**	**-0.4**
	comp=Z,168nm,0.6s							
EIDS	**Eidsvold**	**24.63**	**267**	P		**P**	**19 57 14.1**	**-0.2**
EIDS	**Eidsvold**	**24.63**	**267**	P		**P**	**19 57 14.0**	**-0.3**
SAVO	**Savo Central**	**24.78**	**311**	P		**P**	**19 57 15.7**	**-0.1**
SYDH	**Sydney Hard Ro**	**24.95**	**247**	P		**P**	**19 57 18.3**	**+1.3**
WOLH	**Wollongong Har**	**24.95**	**245**	P		**P**	**19 57 17.6**	**+0.6**
TATA	**Tatamba Isabel**	**25.34**	**312**	P		**P**	**19 57 19.7**	**-1.0**
AUUHS	**Ulladulla High**	**25.46**	**243**	P		**P**	**19 57 22.1**	**+0.6**
AUNRC	**North Rockhamp**	**25.50**	**271**	P		**P**	**19 57 22.1**	**+0.1**
CNB	**Canberra Magne**	**25.50**	**288**	P		**P**	**19 57 30.7**	**+1.5**
	comp=Z,149nm,0.9s							
CNB	**Canberra Magne**	**26.34**	**244**	P		**P**	**19 57 30.8**	**+1.5**
AUDAR	**Daramalan Coll**	**26.50**	**244**	P		**P**	**19 57 32.5**	**+1.8**
AUDCS	**Duco College**	**26.53**	**251**	P		**P**	**19 57 31.4**	**+0.5**
AUSIS	**Research Schoo**	**26.54**	**244**	P		**P**	**19 57 32.9**	**+1.9**
RMQ	**Roma**	**26.55**	**264**	P		**P**	**19 57 30.5**	**-0.6**
	comp=Z,49nm,1.3s							
AUMHS	**Melrose High S**	**26.57**	**244**	P		**P**	**19 57 32.1**	**+0.8**
AUMTS	**Mt Stromlo**	**26.63**	**244**	P		**P**	**19 57 33.1**	**+1.3**
CAN	**Canberra**	**26.63**	**244**	P		**P**	**19 57 33.3**	**+1.5**
	comp=Z,118nm,0.7s							
CAN	**Canberra**	**26.63**	**244**	P		**P**	**19 57 33.0**	**+1.2**
CAN	**Canberra**	**26.63**	**244**	P		**P**	**19 57 33.1**	**+1.2**
CAN	**Canberra**	**26.63**	**244**	P		**P**	**19 57 33.0**	**+1.2**
MILA	**Mila**	**26.89**	**240**	P		**P**	**19 57 35.1**	**+1.0**
	comp=Z,95nm,0.8s							
YNG	**Young**	**26.95**	**246**	P		**P**	**19 57 35.7**	**+1.1**
	comp=Z,163nm,0.9s							
AULRC	**Lightning Ridg**	**27.02**	**257**	P		**P**	**19 57 36.2**	**+1.0**
AUSMG	**Snowy Mountain**	**27.16**	**242**	P		**P**	**19 57 38.0**	**+1.5**
TARA	**Tarawa**	**28.32**	**348**	P		**P**	**19 57 46.6**	**-0.1**
GLAD	**Gladstone**	**28.91**	**233**	P		**P**	**19 57 52.0**	**+0.6**
CMSA	**Cobar Meteorol**	**28.99**	**252**	P		**P**	**19 57 52.5**	**+0.2**
	comp=Z,127nm,0.7s							
CMSA	**Cobar Meteorol**	**28.99**	**252**	P		**P**	**19 57 52.5**	**+0.2**
TBI	**Tubuai**	**29.22**	**91**	*e*P		**P**	**19 57 55.3**	**+1.0**
	comp=Z,248nm,1.2s							
TBI				*ep*P		**pwP**	**19 59 36.5**	**-0.4**
	comp=Z,2μm,40.0s							
TBI				*e*S		**S**	**20 02 03.9**	**-1.3**
	comp=Z,2μm,31.0s							
TBI				*es*S		**sS**	**20 04 58.2**	**-7.3**
	comp=Z,2μm,27.0s							
TBI				*e*LR		LR	20 06 14.8	
	comp=Z,1μm,24.8s							
CORO	**Coronation Par**	**29.68**	**232**	P		**P**	**19 57 59.7**	**+1.7**
TOO	**Toolangi**	**29.85**	**240**	P		**P**	**19 58 00.3**	**+0.7**
	comp=Z,64nm,0.9s							
TOO	**Toolangi**	**29.85**	**240**	P		**P**	**19 57 60.0**	**+0.4**
TOO				IAmb		IAmb	19 58 01.6	
	comp=Z,43nm,0.8s							
TOO	**Toolangi**	**29.85**	**240**	P		**P**	**19 58 00.0**	**+0.4**
TOO				pmax		pmax		
	comp=Z,43nm,0.9s							
MOO	**Moorlands**	**30.00**	**230**	P		**P**	**19 58 02.2**	**+1.4**
	comp=Z,113nm,1.2s							
MOO	**Moorlands**	**30.00**	**230**	P		**P**	**19 58 01.8**	**+1.0**
TV1H	**Townsville Har**	**30.01**	**277**	P		**P**	**19 58 01.2**	**0.0**
TAU	**Tasmania Unive**	**30.09**	**229**	P		**P**	**19 58 02.0**	**+0.6**
TAU				IAmb		IAmb	19 58 03.5	
	comp=Z,60nm,0.7s							
TAU	**Tasmania Unive**	**30.09**	**229**	P		**P**	**19 58 02.1**	**+0.6**
TAU	**Tasmania Unive**	**30.09**	**229**	P		**P**	**19 58 02.0**	**+0.6**
TAU				pmax		pmax		
	comp=Z,60nm,0.7s							
TAU	**Tasmania Unive**	**30.09**	**229**	P		**P**	**19 58 02.1**	**+0.7**
AUMAG	**Moama Anglican**	**30.17**	**243**	P		**P**	**19 58 03.8**	**+1.5**
CTA	**Charters Tower**	**30.22**	**276**	P		**P**	**19 58 03.1**	**0.0**
	comp=Z,5.0nm,0.8s							
CTA	**Charters Tower**	**30.22**	**276**	P		**P**	**19 58 03.3**	**+0.3**
CTAO	**Charters Tower**	**30.22**	**276**	P		**P**	**19 58 03.0**	**0.0**
CTAO	**Charters Tower**	**30.22**	**276**	P		**P**	**19 58 03.3**	**+0.3**
CTAO	**Charters Tower**	**30.22**	**276**	P		**P**	**19 58 03.0**	**0.0**
CTAO				pmax		pmax		
	comp=Z,105nm,0.7s							
CTAO	**Charters Tower**	**30.22**	**276**	P		**P**	**19 58 02.5**	**-0.5**
MLBS	**Spotswood, Mel**	**30.36**	**240**	P		**P**	**19 58 04.5**	**+0.6**
AUBRN	**Burnie High Sc**	**30.45**	**234**	P		**P**	**19 58 06.1**	**+1.5**
QLP	**Quilpie**	**30.55**	**262**	P		**P**	**19 58 05.5**	**-0.3**
PAE	**Paea**	**30.85**	**80**	*e*P		**P**	**19 58 10.1**	**+1.8**
	comp=Z,30nm,1.3s							
PPT2	**Papeete2**	**30.88**	**80**	*ep*P		**pP**	**19 59 49.3**	**+4.1**
	comp=Z,322nm,26.0s							
PPT2				*e*S		**S**	**20 02 24.8**	**-6.1**
	comp=Z,373nm,31.0s							
PPT2				*es*S		sS	20 05 22.7	-10
	comp=Z,573nm,26.0s							
PPT	**Papeete**	**30.89**	**80**	P		**P**	**19 58 09.4**	**+0.7**
	comp=Z,29nm,0.9s,baz=252,slow=19,SNR=1.2							
	comp=Z,29nm,0.9s							
BRAT	**Ballarat**	**31.06**	**241**	P		**P**	**19 58 11.2**	**+1.3**
TVO	**Taravao**	**31.09**	**80**	*e*P		**P**	**19 58 11.5**	**+1.0**
	comp=Z,22nm,0.7s							
AUMTC	**Mt Clear Colle**	**31.11**	**241**	P		**P**	**19 58 11.6**	**+1.3**
STKA	**Stephens Creek**	**32.48**	**252**	P		**P**	**19 58 21.9**	**-0.1**
	comp=Z,48nm,0.5s,baz=96,slow=10,SNR=26							
STKA				PcP		**PcP**	**20 00 48.8**	**-0.7**
	comp=Z,21nm,0.6s,baz=107,slow=4.4,SNR=5.6							
	comp=Z,48nm,0.5s							
STKA	**Stephens Creek**	**32.48**	**252**	P		**P**	**19 58 22.5**	**+0.5**
STKA	**Stephens Creek**	**32.48**	**252**	*d*iP		**P**	**19 58 21.4**	**-0.6**
ARPS	**Mount Arapiles**	**32.59**	**243**	P	

comp=Z,91nm,0.9s
SBA Scott Base 51.59 183 P **P** **20 00 52.2 +1.9**
SBA pmax pmax
comp=Z,91nm,1.0s
SBA Scott Base 51.59 183 P **P** **20 00 52.5 +2.2**
SBA Scott Base 51.59 183 P **P** **20 00 52.2 +1.9**
GUMO Guam 51.61 317 P **P** **20 00 50.5 -0.8**
comp=Z,286nm,0.7s,baz=158,slow=9.8,SNR=12
SWI Sorong 52.06 292 P **P** **20 00 53.6 -1.0**
JOKA Jonika Flow 52.53 32 P **P** **20 00 58.5 +0.7**
KLBR Kellerberrin 52.69 249 P **P** **20 00 57.9 -1.0**
comp=Z,430nm,0.6s
KLBR Kellerberrin 52.69 249 P **P** **20 00 58.0 -0.9**
RKGY Rocky Gully 52.81 245 P **P** **20 00 59.4 -0.2**
comp=Z,114nm,1.6s
NWAO Narrogin (SRO) 52.88 248 P **P** **20 00 59.4 -0.8**
comp=Z,94nm,0.9s
NWAO Narrogin (SRO) 52.88 248 **P** **20 00 58.8 -1.4**
NWAO IAmb IAmb 20 01 00.4
comp=Z,85nm,1.3s
NWAO Narrogin (SRO) 52.88 248 P **P** **20 00 59.2 -1.0**
NWAO Narrogin (SRO) 52.88 248 P **P** **20 00 58.8 -1.4**
NWAO pmax pmax
comp=Z,85nm,1.3s
MEEK Meekatharra 53.04 256 P **P** **20 01 00.3 -1.2**
comp=Z,41nm,1.5s
PSAC2 Pilbara Seismi 53.31 262 P **P** **20 01 02.3 -1.1**
comp=Z,46nm,0.6s
PSA00 Pilbara Seismi 53.35 262 P **P** **20 01 01.4 -2.4**
PSA00 Pilbara Seismi 53.35 262 P **P** **20 01 02.2 -1.5**
PSA00 IAmb IAmb 20 01 03.6
comp=Z,34nm,0.9s
MBWA Marble Bar 53.58 262 P **P** **20 01 04.1 -1.3**
comp=Z,39nm,0.6s
MBWA Marble Bar 53.58 262 **P** **20 01 03.7 -1.7**
MBWA IAmb IAmb 20 01 04.9
comp=Z,30nm,0.6s
SOEI Soe 53.75 278 P **P** **20 01 06.6 -0.1**
SOEI Soe 53.75 278 P **P** **20 01 07.3 +0.5**
SOEI Soe 53.75 278 P **P** **20 01 05.6 -1.2**
comp=Z,44nm,0.7s
BLDU Ballidu 53.76 250 P **P** **20 01 05.5 -1.0**
comp=Z,121nm,0.8s
BLDU Ballidu 53.76 250 P **P** **20 01 05.4 -1.0**
MUN Mundaring 53.91 249 P **P** **20 01 06.7 -0.8**
comp=Z,53nm,0.9s
MUN Mundaring 53.91 249 P **P** **20 01 06.6 -0.8**
BATI Baumata 54.09 277 P **P** **20 01 09.4 +0.4**
comp=Z,48nm,0.6s
MTKN Mount Kenneth 54.28 249 P **P** **20 01 11.4 +1.4**
comp=Z,200nm,0.8s
NLAI Namlea 54.33 286 P **P** **20 01 09.8 -0.9**
comp=Z,58nm,1.0s
MORW Morawa 54.67 252 P **P** **20 01 11.6 -1.3**
comp=Z,73nm,1.0s
MORW Morawa 54.67 252 **P** **20 01 11.8 -1.1**
MORW IAmb IAmb 20 01 12.7
comp=Z,51nm,0.5s
MORW Morawa 54.67 252 P **P** **20 01 11.9 -1.0**
CCD Concordia, Ant 55.75 195 P **P** **20 01 19.9 0.0**
CCD PcP **PcP** **20 02 10.4 +0.7**
CCD ScP **ScP** **20 05 10.3 +0.5**
SANI Sanana 55.89 287 P **P** **20 01 20.0 -1.5**
SANI Sanana 55.89 287 P **P** **20 01 19.9 -1.5**
comp=Z,78nm,0.7s
MMRI Maumere 56.04 278 **P** **20 01 21.8 -0.7**
MMRI IAmb IAmb 20 01 24.3
comp=Z,103nm,1.6s
MMRI Maumere 56.04 278 P **P** **20 01 22.5 0.0**
MMRI Maumere 56.04 278 P **P** **20 01 21.5 -1.0**
comp=Z,852nmcomp=Z,38nm,0.5s
TNTI Ternate 56.21 291 **P** **20 01 22.6 -1.0**
TNTI Ternate 56.21 291 P **P** **20 01 23.1 -0.5**
TNTI Ternate 56.21 291 P **P** **20 01 22.7 -0.9**
comp=Z,58nm,0.9s
EDFI Ende, Flores 56.48 277 P **P** **20 01 24.8 -0.8**
comp=Z,27nm,0.6s
CASY Casey 57.06 207 P **P** **20 01 27.9 -0.7**
CASY IAmb IAmb 20 01 29.6
comp=Z,165nm,1.2s
CASY Casey 57.06 207 P **P** **20 01 27.8 -0.7**
CASY PcP **PcP** **20 02 15.2 +0.8**
CASY ScP **ScP** **20 05 16.6 +1.4**
WSI Waingapu 57.32 276 P **P** **20 01 30.6 -0.6**
LUWI Luwuk 59.17 286 P **P** **20 01 42.3 -1.3**
LUWI Luwuk 59.17 286 P **P** **20 01 43.1 -0.5**
LUWI Luwuk 59.17 286 P **P** **20 01 42.6 -1.0**
comp=Z,73nm,1.0s
BKSI Bulukumba 59.41 280 P **P** **20 01 43.8 -1.4**
comp=Z,578nmcomp=Z,51nm,0.6s
GTOI Gorontalo 59.82 288 P **P** **20 01 47.7 -0.2**
comp=Z,69nm,0.7s
KAPI Kappang 59.88 280 *ce*P **P** **20 01 48.0 -0.3**
KAPI pmax pmax
comp=Z,7.0nm,0.6s
PLAI Plampang 59.93 275 P **P** **20 01 47.6 -1.0**
PLAI Plampang 59.93 275 P **P** **20 01 47.7 -0.9**
comp=Z,936nmcomp=Z,78nm,0.7s
SPSI Sidrap Palu 60.35 281 P **P** **20 01 49.6 -1.8**
TWSI Taliwang, Sumb 60.76 275 P **P** **20 01 53.3 -0.8**
comp=Z,882nmcomp=Z,64nm,0.5s
PCI Palu 61.77 284 P **P** **20 01 59.8 -0.9**
comp=Z,37nm,0.9s
TOLI2 Tolitoli 61.97 287 P **P** **20 02 00.1 -1.8**
TOLI2 Tolitoli 61.97 287 P **P** **20 02 01.7 -0.3**
IGBI Denpasar 62.28 274 P **P** **20 02 03.0 -0.9**
comp=Z,2µmcomp=Z,126nm,0.5s
MPSI Mapaga 62.34 286 P **P** **20 02 02.9 -1.4**
JAGI Jajag, Banyuwa 63.31 274 P **P** **20 02 09.0 -1.6**
JAGI Jajag, Banyuwa 63.31 274 P **P** **20 02 09.4 -1.2**
JAGI Jajag, Banyuwa 63.31 274 P **P** **20 02 09.0 -1.6**
comp=Z,62nm,0.8s
QSPA South Pole Qui 63.47 180 P **P** **20 02 15.2 +4.4**
comp=Z,69nm,0.6s,baz=12,slow=0.4,SNR=191
QSPA South Pole Qui 63.47 180 P **P** **20 02 15.0 +4.1**
QSPA IAmb IAmb 20 02 16.8
comp=Z,156nm,1.2s
QSPA South Pole Qui 63.47 180 P P 20 02 15.8 +5.0
JCJ Chichijima 63.81 324 P **P** **20 02 12.6 -0.8**
GMJI Gumukmas 64.03 274 P **P** **20 02 14.1 -1.0**
comp=Z,59nm,0.6s
BLJI Banyuglugur 64.12 274 P **P** **20 02 15.0 -0.7**
comp=Z,71nm,0.6s
PCJI Pacitan 66.09 273 P **P** **20 02 27.3 -0.7**
comp=Z,162nm,0.6s
UGM Wanagama 66.79 273 P **P** **20 02 31.6 -0.7**
UGM IAmb IAmb 20 03 48.6
comp=Z,121nm,1.3s
KKM Kota Kinabalu 68.41 289 P **P** **20 02 41.6 -0.6**
KKM IAmb IAmb 20 05 08.1
comp=Z,51nm,1.3s
KPJI Karang Pucung 68.47 273 P **P** **20 02 41.5 -1.0**
comp=Z,55nm,0.5s
BBJI Bungbulang 69.56 272 P **P** **20 02 48.2 -0.9**
SBUM Sibu 70.04 283 P **P** **20 02 51.0 -0.8**
TPI Tanjungpandan 71.62 276 P **P** **20 03 00.3 -0.8**
INU Inuyama 73.03 326 P **P** **20 03 08.6 -0.1**
INU Inuyama 73.03 326 P **P** **20 03 08.5 -0.1**
INU Inuyama 73.03 326 P **P** **20 03 08.3 -0.4**
JGF Kuroka 73.06 326 P **P** **20 03 08.2 -0.7**
JGF Kuroka 73.06 326 P **P** **20 03 07.9 -1.0**
KASI Kota Agung 73.22 272 P **P** **20 03 08.7 -1.5**
comp=Z,49nm,0.5s
MJAR Matsushiro Arr 73.38 327 P **P** **20 03 09.7 -1.0**
comp=Z,9.0nm,0.7s,baz=161,slow=5.7,SNR=39
MJAR pP **pP** **20 05 14.1 -1.6**
comp=Z,2.5nm,0.9s,baz=156,slow=5.4,SNR=3.5
comp=Z,9.0nm,0.7s
MJAR Matsushiro Arr 73.38 327 P **P** **20 03 09.7 -1.0**
MAJO Matsushiro 73.39 327 P **P** **20 03 09.5 -1.2**
MAJO Matsushiro 73.39 327 P **P** **20 03 09.5 -1.2**
MAJO Matsushiro 73.39 327 P **P** **20 03 09.5 -1.2**
MAJO pmax pmax
comp=Z,15nm,0.8s
LWLI Liwa 73.83 272 P **P** **20 03 12.9 -1.0**
comp=Z,93nm,0.6s
BELA Belgrano 2 73.91 173 P **P** **20 03 13.1 +0.1**
BELA IAmb IAmb 20 03 14.7
comp=Z,73nm,0.8s
MDSI Maura Dua 73.95 273 P **P** **20 03 12.4 -2.0**
comp=Z,846nmcomp=Z,95nm,0.7s
SMAI San Martin Ant 74.07 159 P **P** **20 03 15.4 +1.4**
SMAI IAmb IAmb 20 03 17.2
comp=Z,120nm,1.2s
JNU Nakatsue 74.67 320 P **P** **20 03 17.1 -0.9**
comp=Z,14nm,0.8s,baz=124,slow=3.6,SNR=27
comp=Z,14nm,0.8s
JNU Nakatsue 74.67 320 P **P** **20 03 17.3 -0.7**
MAW Mawson 74.72 201 P **P** **20 03 17.9 +0.2**
comp=Z,18nm,1.1s
MAW Mawson 74.72 201 P **P** **20 03 17.9 +0.2**
comp=Z,40nm,0.6s,baz=128,slow=7.0,SNR=47
comp=Z,40nm,0.6s
DSRI Dabo 75.39 277 P **P** **20 03 21.4 -1.0**
comp=Z,28nm,0.8s
KSI Kapahiang 75.74 273 P **P** **20 03 23.0 -1.4**
comp=Z,3µmcomp=Z,166nm,0.7s
MASI Maura Aman, Be 76.28 273 P **P** **20 03 26.4 -1.0**
PMSA Palmer Station 76.96 157 P **P** **20 03 30.7 +0.7**
PMSA Palmer Station 76.96 157 P **P** **20 03 31.4 +1.4**
PMSA PcP **PcP** **20 03 41.0 +3.1**
MYKOM Kota Tinggi 77.08 279 P **P** **20 03 30.9 -0.7**
KRJI Kerinci 77.44 274 P **P** **20 03 32.7 -1.1**
comp=Z,82nm,0.6s
JKA Kamikawa-asahi 77.68 334 P **P** **20 03 35.5 +1.3**
JKA IAmb IAmb 20 04 17.7
comp=Z,87nm,1.5s
ASAJ Asahikawa 77.68 334 P **P** **20 03 34.6 +0.5**
comp=Z,13nm,0.9s,baz=153,slow=9.0,SNR=5.8
comp=Z,13nm,0.9s
ASAJ Asahikawa 77.68 334 P **P** **20 03 35.5 +1.3**
ASAJ pmax pmax
comp=Z,87nm,1.5s
ADK Adak 78.28 3 P **P** **20 03 37.3 +0.1**
PDSI Padang 78.86 275 P **P** **20 03 39.0 -2.2**
comp=Z,41nm,0.5s
PPI Padang Panjang 79.12 275 P **P** **20 03 41.5 -1.1**
comp=Z,26nm,0.6s
KSRS Korea Array 79.46 321 P **P** **20 03 43.9 +0.1**
comp=Z,4.3nm,0.7s,baz=139,slow=6.3,SNR=17
KSRS PP **PP** **20 06 54.7 -1.8**
comp=Z,2.0nm,0.9s,baz=134,slow=8.4,SNR=5.5
comp=Z,4.3nm,0.7s
KSAR Wonju Array Be 79.48 321 P **P** **20 03 43.5 -0.3**
KSAR Wonju Array Be 79.48 321 P **P** **20 03 43.5 -0.3**
YSS Yuzhno-Sakhali 80.02 336 *eP* **P** **20 03 47.3 +0.9**
YSS *e**PP **pP** **20 05 56.6 +2.0**
YSS *e**SP **sP** **20 06 58.0 +1.3**
YSS *eS* **S** **20 13 03.3 +2.7**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS pmax pmax
comp=Z,200nm,6.9s
YSS pmax pmax
comp=E,200nm,6.6s
SYO Syowa Base 80.05 194 ǁ*iP* **P** **20 03 45.6 -0.7**
SYO Syowa Base 80.05 194 ǁ*i*PcP **PcP** **20 03 50.2 -1.2**
ESPZ Base Esperanza 80.24 158 P **P** **20 03 48.5 +1.1**
ESPZ IAmb IAmb 20 03 49.8
comp=Z,63nm,0.7s
MG05 Puerto Natales 80.39 143 P **P** **20 03 49.3 +0.8**
MNSI Mandailing Nat 80.42 276 P **P** **20 03 47.5 -1.8**
comp=Z,55nm,0.6s
QIZ Qiongzhong 80.54 297 P **P** **20 03 49.6 -0.2**
QIZ IAmb IAmb 20 04 49.1
comp=Z,180nm,1.9s
IPM Ipoh 80.82 280 P **P** **20 03 50.8 -0.5**
IPM Ipoh 80.82 280 P **P** **20 03 50.9 -0.5**
PAF Port-aux-Franc 81.15 219 P **P** **20 03 53.0 +0.6**
PAF Port-aux-Franc 81.15 219 P **P** **20 03 53.0 +0.6**
PAF pmax pmax
comp=Z,365nm,1.3s
NJ2 Nanjing 81.42 312 *eP* **P** **20 03 55.3 +1.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
PEA0B Petropavlovsk- 81.43 348 P **P** **20 03 53.9 +0.4**
PEA0B IAmb IAmb 20 05 57.5
comp=Z,164nm,1.6s
PEA0B Petropavlovsk- 81.43 348 ǁ*eP* **P** **20 03 54.3 +0.8**
PETK Petropavlovsk- 81.43 348 P **P** **20 03 53.6 +0.1**
comp=Z,6.3nm,0.5s,baz=119,slow=6.9,SNR=28
PETK PKiKP **PKiKP** **20 09 10.9 -1.1**
comp=Z,4.3nm,0.9s,baz=155,slow=6.2,SNR=4.8
comp=Z,6.3nm,0.5s
PETK Petropavlovsk- 81.43 348 P **P** **20 03 53.5 0.0**
KULM Kulim 81.52 280 P **P** **20 03 54.2 -0.8**
TROLL Troll, Antarti 81.59 181 ǁP **P** **20 03 54.4 -0.1**
comp=Z,8µm,0.6s
RPSI Rantau Prapat 81.86 277 P **P** **20 03 55.6 -1.1**
PSI Prapat 81.91 277 P **P** **20 03 56.1 -1.0**
comp=Z,33nm,0.7s
PSI Prapat 81.91 277 P **P** **20 03 55.6 -1.5**
PSI pmax pmax
comp=Z,18nm,0.7s
SNAA Sanae 81.97 180 ǁP **P** **20 03 55.7 -0.6**
comp=Z,1µm,0.5s
SNAA Sanae 81.97 180 P **P** **20 03 56.2 0.0**
comp=Z,47nm,0.6s,baz=188,slow=7.0,SNR=198
comp=Z,47nm,0.6s
SNAA Sanae 81.97 180 P **P** **20 03 56.0 -0.3**
SNAA Sanae 81.97 180 *d*/P **P** **20 03 55.7 -0.6**
SNAA pmax pmax
comp=Z,133nm,1.3s
VNA3 Neumayer Olymp 82.24 177 ǁP **P** **20 03 57.1 -0.5**
comp=Z,159nm,0.7s
USRK Ussuriysk Ar. 82.31 328 P **P** **20 03 58.1 -0.1**
comp=Z,19nm,1.0s,baz=147,slow=4.3,SNR=12
USRK PP **PP** **20 07 15.9 -3.5**
comp=Z,11nm,1.2s,baz=132,slow=5.7,SNR=4.1
comp=Z,19nm,1.0s
NVL N'lazarevskaya 82.42 184 *eP* **P** **20 03 59.8 +1.4**
NVL *e* 20 07 23.1
NVL *eS* **SKSac** **20 13 22.7 +2.2**
NVL *eSS* **SS** **20 19 07.0 +4.2**
NVL *eSSS* SSS 20 22 43.0
NVL pmax pmax
comp=Z,87nm,1.1s
GSI Gunungsitoli 82.43 275 P **P** **20 03 60.0 +0.4**
GSI Gunungsitoli 82.43 275 P **P** **20 04 00.1 +0.5**
GSI Gunungsitoli 82.43 275 P **P** **20 03 58.9 -0.7**
comp=Z,1µmcomp=Z,124nm,0.6s
VNA2 Neumayer--Watz 82.64 178 ǁP **P** **20 03 59.4 -0.2**
comp=Z,113nm,0.6s,baz=178,slow=5.1
VNA1 Neumayer--Stat 82.88 178 ǁP **P** **20 04 00.4 -0.3**
comp=Z,46nm,0.9s
WHN Wuhan 83.58 309 P **P** **20 04 04.8 0.0**
MDJ Mudanjiang 83.77 327 P **P** **20 04 06.0 +0.6**
MDJ pmax pmax
comp=Z,24nm,1.1s
MDJ Mudanjiang 83.77 327 P **P** **20 04 05.6 +0.2**
COYC Coyhaique 83.81 138 P **P** **20 04 07.4 +1.5**
DL2 Dalian 84.07 319 *eP* **P** **20 04 09.0 +2.0**
DL2 pmax pmax
comp=Z,39nm,1.2s
HULI Fort Hunter Li 84.34 45 P **P** **20 04 10.7 +2.1**
MLSI Meulaboh, Aceh 84.81 277 P **P** **20 04 10.4 -0.9**
CBX Cerro Bola 85.14 50 P **P** **20 04 14.5 +1.9**
CBX IAmb IAmb 20 04 15.6
comp=Z,34nm,0.8s
LL02 Futaleuf 85.22 136 P **P** **20 04 14.1 +1.3**
LL02 IAmb IAmb 20 04 15.7
comp=Z,43nm,0.9s
CN2 Changchun 85.27 325 ǁP **P** **20 04 12.8 +0.1**
CN2 pP pP 20 06 20.3 -2.8
CN2 SKS **SKSac** **20 13 40.0 +1.0**
CN2 sS sS 20 17 42.0 -3.6
CN2 SS **SS** **20 19 53.5 +6.4**
CN2 pmax pmax
comp=Z,30nm,1.1s
LL01 San Ignacio de 85.30 135 P **P** **20 04 15.1 +1.9**
BAR Barrett 85.35 50 P **P** **20 04 14.6 +1.1**
BAR IAmb IAmb 20 04 16.3
comp=Z,94nm,1.9s
SLBS Sierra La Lagu 85.35 61 P **P** **20 04 15.7 +2.0**
SLBS IAmb IAmb 20 04 17.1
comp=Z,37nm,0.8s
SLBS Sierra La Lagu 85.35 61 P **P** **20 04 15.7 +2.0**
SRIG Santa Rosalia 85.52 57 P **P** **20 04 15.9 +1.6**
SRIG IAmb IAmb 20 04 17.4
comp=Z,63nm,0.9s
TPO Tropico Hills 85.59 47 P **P** **20 04 16.5 +1.9**
TPO IAmb IAmb 20 04 17.5
comp=Z,52nm,1.2s
BNX BinXian 85.65 327 ǁP **P** **20 04 13.5 -1.0**
BNX pmax pmax
comp=Z,10.0nm,0.9s
PFO Pinyon Flats O 86.03 49 P **P** **20 04 18.5 +1.7**
PFO IAmb IAmb 20 04 19.7
comp=Z,37nm,1.5s
PFO Pinyon Flats O 86.03 49 *de*P **P** **20 04 18.0 +1.2**
LR05 Currie 86.70 134 P **P** **20 04 21.6 +1.8**
LR05 IAmb IAmb 20 04 23.7
comp=Z,63nm,1.2s
BC3 Big Chuckawall 86.74 50 P **P** **20 04 21.7 +1.5**
BC3 IAmb IAmb 20 04 23.5
comp=Z,36nm,1.3s
L02F Cave Junction 86.83 39 P **P** **20 04 22.0 +1.8**
L02F IAmb IAmb 20 04 23.6
comp=Z,57nm,1.2s
ENH Enshi 86.89 306 P **P** **20 04 20.1 -0.7**
ENH IAmb IAmb 20 06 32.0
comp=Z,39nm,1.6s
ENH Enshi 86.89 306 P **P** **20 04 20.9 +0.1**
ENH Enshi 86.89 306 P **P** **20 04 20.6 -0.2**
ENH pP **pP** **20 06 31.3 -0.5**
GYA Guiyang 86.95 301 P **P** **20 04 23.0 +1.7**
GYA pP pP 20 06 32.5 +0.1
GYA SKS **SKSac** **20 13 48.8 -1.5**
GYA S **S** **20 14 09.0 -0.3**
LYN LuoYang 87.19 311 ⇑P **P** **20 04 23.0 +0.9**
LYN pP pP 20 06 32.8 -0.5
LYN SKS **SKSac** **20 13 50.5 -0.6**
LYN S **S** **20 14 11.3 +0.4**
LYN pmax pmax
comp=Z,30nm,1.2s
PNTR Pine Nut 87.26 43 P **P** **20 04 24.4 +1.8**
PNTR IAmb IAmb 20 04 25.9
comp=Z,62nm,1.2s
PLCA Paso Flores 87.36 135 P **P** **20 04 24.4 +1.4**
comp=Z,8.2nm,0.7s,baz=234,slow=5.4,SNR=20
PLCA PKKPbc **PKKPbc** **20 22 08.8 -0.6**
comp=Z,0.7nm,0.6s,baz=66,slow=2.3,SNR=5.1
comp=Z,8.2nm,0.7s
PLCA Paso Flores 87.36 135 P **P** **20 04 25.0 +2.0**
PLCA IAmb IAmb 20 04 26.3
comp=Z,35nm,1.2s
PLCA Paso Flores 87.36 135 P **P** **20 04 25.0 +2.0**
PLCA pmax pmax
comp=Z,35nm,1.2s
PLCA Paso Flores 87.36 135 P **P** **20 04 24.4 +1.4**
PLCA pP **pP** **20 06 36.1 +1.1**
HNS HongShan 87.38 314 ⇑P **P** **20 04 22.8 0.0**
HNS SKS **SKSac** **20 13 50.0 -2.0**
HNS S **S** **20 14 12.8 +0.3**
HNS sS **sS** **20 18 09.0 +1.3**
HNS pmax pmax
comp=Z,15nm,1.6s
HSIG 87.40 56 P **P** **20 04 25.1 +2.0**
HSIG IAmb IAmb 20 04 26.3
comp=Z,60nm,1.0s
KDAK Kodiak Island 87.52 15 P **P** **20 04 24.6 +1.6**
KDAK Kodiak Island 87.52 15 ǁ*eP* **P** **20 04 23.8 +0.8**
KDAK pmax pmax
comp=Z,50nm,1.6s
EFI East Falkland 87.63 149 P **P** **20 04 25.0 +1.1**
EFI East Falkland 87.63 149 ǁ*eP* **P** **20 04 24.6 +0.7**
EFI pmax pmax
comp=Z,129nm,1.2s
NVAR Mina Array Bea 87.67 45 P **P** **20 04 25.4 +0.9**
comp=Z,13nm,0.9s,baz=222,slow=7.6,SNR=43
NVAR pP **pP** **20 06 37.0 +0.3**
comp=Z,3.7nm,1.0s,baz=225,slow=8.3,SNR=4.6
comp=Z,13nm,0.9s
NVAR Mina Array Bea 87.67 45 P **P** **20 04 26.0 +1.5**
N14K Kuskokwak Cree 87.76 10 P **P** **20 04 25.2 +1.2**
I02E Swisshome, OR 87.97 38 P **P** **20 04 27.6 +2.1**
BJI Beijing 88.05 317 P **P** **20 04 26.0 +0.1**
BJI SKS **SKSac** **20 13 54.5 -1.3**
BJI S **S** **20 14 19.5 +1.0**
BJI pmax pmax
comp=Z,4.0nm,1.3s
I04A Tendick Farm, 88.55 38 P **P** **20 04 29.4 +1.2**
I04A IAmb IAmb 20 04 30.6
comp=Z,26nm,0.9s
K05A Summer Lake 88.74 40 P **P** **20 04 31.2 +1.8**
CM31 Chiang Mai Arr 89.18 291 P **P** **20 04 32.4 +0.7**
CM31 IAmb IAmb 20 06 45.6
comp=Z,40nm,1.5s
CMAR Chiang Mai Arr 89.18 291 P **P** **20 04 32.4 +0.7**
comp=Z,3.0nm,0.7s,baz=139,slow=3.9,SNR=22
CMAR pP **pP** **20 06 44.2 +0.7**
comp=Z,6.3nm,1.1s,baz=128,slow=3.2,SNR=11
CMAR PP **PP** **20 08 12.3 -2.0**
comp=Z,0.9nm,0.6s,baz=128,slow=5.5,SNR=6.7
CMAR PKKPbc **PKKPbc** **20 22 04.8 +0.6**
comp=Z,3.9nm,0.6s,baz=289,slow=4.3,SNR=26
comp=Z,3.0nm,0.7s
CMAR Chiang Mai Arr 89.18 291 P **P** **20 04 32.6 +0.9**
CMAR Chiang Mai Arr 89.18 291 *i* P **P** **20 04 32.9 +1.2**
CMAR pmax pmax
comp=Z,3.0nm,0.7s
TUC Tucson 89.27 53 P **P** **20 04 33.8 +1.9**
TUC IAmb IAmb 20 04 35.5
comp=Z,34nm,1.2s
TUC Tucson 89.27 53 P **P** **20 04 33.8 +1.9**
TUC pmax pmax
comp=Z,33nm,1.3s
TUC Tucson 89.27 53 P **P** **20 04 34.7 +2.8**
XAN Xi'an 89.34 309 ǁP **P** **20 04 32.5 +0.3**
XAN SKS **SKSac** **20 14 01.3 -2.5**
XAN S **ScS** **20 14 32.3 -1.0**
XAN pmax pmax
comp=Z,19nm,1.4s
CHTO Chiang Mai 89.35 291 P **P** **20 04 33.1 +0.6**
CHTO IAmb IAmb 20 06 52.4
comp=Z,19nm,1.1s
CHTO Chiang Mai 89.35 291 P **P** **20 04 32.9 +0.4**
CHTO Chiang Mai 89.35 291 P **P** **20 04 33.1 +0.6**
CHTO pmax pmax
comp=Z,19nm,1.1s
CHTO Chiang Mai 89.35 291 P **P** **20 04 33.4 +0.9**
CHTO pP **pP** **20 06 45.6 +1.2**
NLWA Neilton Lookou 90.10 35 P **P** **20 04 36.8 +1.5**
NLWA IAmb IAmb 20 04 38.2
comp=Z,16nm,1.1s
DIB Dawson Inlet, 90.18 27 P **P** **20 04 36.9 +1.4**
DIB IAmb IAmb 20 06 44.1
comp=Z,54nm,1.3s
HOLB Holberg 90.22 31 P **P** **20 04 37.1 +1.3**
HOLB IAmb IAmb 20 04 38.3
comp=Z,29nm,0.8s
HPIG 90.33 60 P **P** **20 04 38.0 +0.9**
HPIG IAmb IAmb 20 04 39.6
comp=Z,13nm,0.7s
CCUT Cedar City 90.34 48 P **P** **20 04 38.6 +1.6**
CCUT IAmb IAmb 20 04 40.0
comp=Z,21nm,0.9s
BO02 Sierra Bellavi 90.45 130 **P** **20 04 39.0 +1.5**
BO02 IAmb IAmb 20 04 40.0
comp=Z,34nm,1.2s
MT01 Popeta 90.63 129 P **P** **20 04 39.2 +1.0**
ZAIG Zacatecas 90.77 65 **P** **20 04 41.4 +2.1**
PZH PanZhiHua 90.78 299 P **P** **20 04 39.0 -0.1**
PZH SKS **SKSac** **20 14 09.0 -3.4**
PZH S **S** **20 14 43.0 -1.0**
MT02 Curacav 91.04 128 **P** **20 04 41.5 +1.4**
SUA Susitna One 91.24 14 P **P** **20 04 40.5 +0.2**
HHC Hu-ho-hao-te 91.37 316 *eP* **P** **20 04 42.3 +0.9**
HHC SKS **SKSac** **20 14 18.0 +3.0**
HHC S **ScS** **20 14 50.0 0.0**
HHC sS sS 20 18 40.0 -6.4
HHC SS **SS** **20 21 19.0 +4.1**
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,210nm,5.2s
G08A Pilot Rock 91.42 39 P **P** **20 04 42.7 +1.2**
G08A IAmb IAmb 20 07 01.1
comp=Z,22nm,1.2s
ZEA Zeya 91.46 332 *eP* **P** **20 04 41.9 +0.6**
ZEA *e* 20 16 04.7
ZEA pmax pmax
comp=Z,10.0nm,1.1s
J17K VABM Dome 91.46 10 P **P** **20 04 41.9 +0.7**
J17K IAmb IAmb 20 04 42.9
comp=Z,34nm,1.5s
SKT Skwentna 91.54 14 P **P** **20 04 41.0 -0.6**
SKT IAmb IAmb 20 04 41.5
comp=Z,7.6nm,0.6s
SEY Seymchan 91.64 348 P **P** **20 04 41.6 -0.3**
comp=Z,7.2nm,0.6s,baz=150,slow=5.1,SNR=22
SEY pP **pP** **20 06 54.1 -0.2**
comp=Z,5.0nm,0.9s,baz=159,slow=8.4,SNR=3.1
comp=Z,7.2nm,0.6s

SEY	**Seymchan**	**91.64**	**348**	⇑*iP*		**P**		**20 04 42.7**	**+0.8**
SEY					pmax	pmax			
	comp=Z,16nm,0.9s								
TLIG	**Tlapa**	**91.67**	**71**	P		**P**		**20 04 45.2**	**+1.8**
TLIG				IAmb		IAmb		20 04 46.5	
	comp=Z,11nm,0.9s								
GHO	**Glory Hole Cre**	**91.93**	**15**	P		**P**		**20 04 43.5**	**+0.1**
MFID	**Camas Ranch**	**92.12**	**42**	P		**P**		**20 04 46.1**	**+1.3**
MFID				IAmb		IAmb		20 07 04.4	
	comp=Z,17nm,1.1s								
DUG	**Dugway, Tooele**	**92.16**	**46**	P		**P**		**20 04 46.2**	**+1.0**
DUG				IAmb		IAmb		20 04 47.4	
	comp=Z,18nm,1.4s								
DUG	**Dugway, Tooele**	**92.16**	**46**	P		**P**		**20 04 46.2**	**+1.0**
DUG				pmax		pmax			
	comp=Z,18nm,1.4s								
BTO	**Baotou**	**92.21**	**315**	*e*P		**P**		**20 04 45.0**	**-0.3**
BTO				S		**S**		**20 15 02.3**	**+6.5**
BTO				pmax		pmax			
	comp=Z,15nm,0.7s								
BTO				pmax		pmax			
	comp=Z,230nm,5.7s								
TNCH	**TengChong**	**92.62**	**297**	*e*P		**P**		**20 04 48.5**	**+0.9**
TNCH				pP		pP		20 07 00.3	+0.3
TNCH				SKS		**SKSac**		**20 14 25.3**	**+2.6**
TNCH				S		**ScS**		**20 15 01.0**	**-0.2**
TNCH				SS		**SS**		**20 21 38.8**	**+5.7**
TNCH				pmax		pmax			
	comp=Z,10.0nm,2.2s								
MNTX	**Cornudas Mount**	**92.89**	**56**	P		**P**		**20 04 49.5**	**+1.0**
TXAR	**Lajitas Array**	**93.04**	**59**	P		**P**		**20 04 50.7**	**+1.3**
	comp=Z,4.8nm,0.8s,baz=214,slow=6.7,SNR=38								
TXAR				pP		**pP**		**20 07 03.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=195,slow=3.9,SNR=5.5								
TXAR				PKKPbc		**PKKPbc**		**20 21 54.9**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=120,slow=2.5,SNR=13								
	comp=Z,4.8nm,0.8s								
TXAR	**Lajitas Array**	**93.04**	**59**	P		**P**		**20 04 51.1**	**+1.7**
TXAR	**Lajitas Array**	**93.04**	**59**	P		**P**		**20 04 51.1**	**+1.7**
HLID	**Hailey**	**93.05**	**42**	P		**P**		**20 04 50.1**	**+1.0**
TRF	**Thorofare Moun**	**93.11**	**14**	P		**P**		**20 04 48.4**	**-0.6**
TRF				IAmb		IAmb		20 04 49.8	
	comp=Z,16nm,0.7s								
CTU	**Camp Tracy**	**93.11**	**46**	P		**P**		**20 04 50.8**	**+1.3**
CTU				IAmb		IAmb		20 04 51.7	
	comp=Z,22nm,1.1s								
ANMO	**Albuquerque**	**93.72**	**53**⇑	*e*P		**P**		**20 04 54.0**	**+1.6**
ANMO				pmax		pmax			
	comp=Z,6.0nm,1.1s								
CFA	**Coronel Fontan**	**94.00**	**128**	P		**P**		**20 04 53.9**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=245,slow=3.4,SNR=5.7								
	comp=Z,2.2nm,0.6s								
LZDM	**Lanzhou Array**	**94.00**	**308**	P		**P**		**20 04 53.5**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=108,slow=9.3,SNR=1.3								
LZDM				pP		**pP**		**20 07 06.6**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=60,slow=8.8,SNR=1.9								
	comp=Z,0.5nm,0.3s								
WRH	**Wood River Hil**	**94.48**	**14**	P		**P**		**20 04 54.7**	**-0.2**
WRH				IAmb		IAmb		20 07 14.1	
	comp=Z,28nm,1.2s								
MCMT	**McKenzie Canyo**	**94.68**	**42**	P		**P**		**20 04 57.2**	**+0.6**
CCB	**Clear Creek Bu**	**94.69**	**14**	P		**P**		**20 04 55.2**	**-0.6**
CCB				IAmb		IAmb		20 07 15.5	
	comp=Z,14nm,1.0s								
IMAR	**Indian Mountai**	**94.73**	**11**	P		**P**		**20 04 56.2**	**+0.2**
BCAR	**Beaver Creek A**	**94.78**	**17**	P		**P**		**20 04 56.6**	**+0.2**
COLA	**College**	**94.88**	**14**	P		**P**		**20 04 56.1**	**-0.6**
COLA	**College**	**94.88**	**14**⇑	*iP*		**P**		**20 04 56.6**	**-0.1**
COLA				pmax		pmax			
	comp=Z,16nm,1.1s								
ILAR	**Eielson Array**	**95.00**	**14**	P		**P**		**20 04 56.3**	**-1.0**
	comp=Z,2.1nm,0.7s,baz=220,slow=4.9,SNR=19								
ILAR				pP		**pP**		**20 07 10.0**	**-0.2**
	comp=Z,2.3nm,0.9s,baz=262,slow=5.0,SNR=4.5								
ILAR				PKiKP		**PKiKP**		**20 09 34.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=275,slow=2.7,SNR=12								
ILAR				PKKPbc		**PKKPdf**		**20 21 48.9**	**-2.2**
	comp=Z,0.4nm,0.4s,baz=355,slow=2.6,SNR=4.1								
	comp=Z,2.1nm,0.7s								
ILAR	**Eielson Array**	**95.00**	**14**	P		**P**		**20 04 56.6**	**-0.7**
ILAR	**Eielson Array**	**95.00**	**14**	P		**P**		**20 04 56.6**	**-0.7**
PDAR	**Pinedale Array**	**95.60**	**45**	P		**P**		**20 05 01.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=190,slow=3.0,SNR=20								
PDAR				pP		**pP**		**20 07 15.1**	**+0.8**
	comp=Z,3.8nm,1.0s,baz=218,slow=4.2,SNR=8.2								
PDAR				PP		**PP**		**20 09 00.6**	**-3.0**
	comp=Z,1.3nm,1.0s,baz=260,slow=6.9,SNR=3.7								
PDAR				PKiKP		**PKiKP**		**20 09 38.7**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=264,slow=3.0,SNR=1.2								
PDAR				PKKPbc		**PKKPbc**		**20 21 48.5**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=104,slow=6.4,SNR=5.4								
	comp=Z,1.4nm,0.5s								
PDAR	**Pinedale Array**	**95.60**	**45**	P		**P**		**20 05 01.3**	**+0.5**
BOZ	**Bozeman (W)**	**95.83**	**42**	P		**P**		**20 05 02.4**	**+0.7**
BOZ				IAmb		IAmb		20 05 06.9	
	comp=Z,11nm,1.4s								
BOZ	**Bozeman (W)**	**95.83**	**42**	P		**P**		**20 05 02.4**	**+0.7**
BOZ				pmax		pmax			
	comp=Z,11nm,1.4s								
DAWY	**Dawson**	**96.23**	**17**	P		**P**		**20 05 03.1**	**+0.2**
DAWY				IAmb		IAmb		20 07 26.2	
	comp=Z,19nm,1.6s								
SONM	**Songino Array**	**98.26**	**320**	P		Pdif		20 05 12.1	-0.3
	comp=Z,0.5nm,0.5s,baz=114,slow=3.5,SNR=2.4								
SONM				PP		**PP**		**20 09 17.9**	**-5.4**
	comp=Z,3.3nm,0.9s,baz=128,slow=5.7,SNR=6.6								
SONM				PKKPbc		**PKKPbc**		**20 21 41.6**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=270,slow=2.8,SNR=6.7								
	comp=Z,0.5nm,0.5s								
INK	**Inuvik**	**101.02**	**16**	P		**Pdif**		**20 05 24.4**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=230,slow=4.7,SNR=3.3								
INK				PKiKP		**PP**		**20 09 44.0**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=253,slow=1.8,SNR=10								
YKA	**Yellowknife Ar**	**103.41**	**26**	PKiKP		**PKiKP**		**20 09 48.7**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=266,slow=2.3,SNR=6.8								
YKA				PKKPbc		**PKKPbc**		**20 21 25.0**	**-2.4**
	comp=Z,0.8nm,0.5s,baz=155,slow=4.0,SNR=11								
TIXI	**Tiksi**	**103.83**	**346**	PKiKP		**PKiKP**		**20 09 48.7**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=97,slow=3.7,SNR=7.7								
WMQ	**Urumqi**	**108.43**	**310**	Pdif		**Pdif**		**20 05 59.0**	**+1.3**
DGZ	**Jazzator, Alta**	**110.45**	**316**	⇓*i* PKiKP		**PKiKP**		**20 10 03.4**	**+0.2**
MK31	**Makanchi Array**	**112.95**	**312**	*c* PKiKP		**PKiKP**		**20 10 06.8**	**-1.1**
MKAR	**Makanchi Array**	**112.95**	**312**	Pdiff		**Pdif**		**20 06 20.5**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=93,slow=7.6,SNR=2.1								
MKAR				PKiKP		**PKiKP**		**20 10 06.8**	**-1.1**
	comp=Z,2.5nm,0.4s,baz=96,slow=2.3,SNR=44								
MKAR				PKKPbc		**PKKPbc**		**20 20 57.6**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=272,slow=3.5,SNR=33								
ZALV	**Zalesovo Beam**	**113.15**	**320**	PKiKP		**PKiKP**		**20 10 06.9**	**-1.1**
	comp=Z,2.6nm,0.5s,baz=129,slow=0.9,SNR=17								
ZALV				PKKPbc		**PKKPbc**		**20 20 56.9**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=291,slow=4.1,SNR=8.2								
PDGK	**Podgornoye**	**113.99**	**308**	PKiKP		**PKiKP**		**20 10 08.7**	**-1.4**
RES	**Resolute Bay**	**114.57**	**17**	PKP		PKPdf		20 10 09.4	-0.7
	comp=Z,7.1nm,0.7s,baz=270,slow=1.3,SNR=15								
GRHM	**Grahamstown, E**	**114.79**	**206**	PKPdf		PKPdf		20 10 11.8	-0.2
TARG	**Taragay, Kyrgy**	**114.80**	**306**			PKPdf		20 10 11.6	-0.6
TARG	**Taragay, Kyrgy**	**114.80**	**306**	PKIKP		PKPdf		20 10 11.6	-0.5
T57A	**Hurt**	**114.81**	**60**	PKPdf		PKPdf		20 10 11.3	-0.4
NRIK	**Noril'sk**	**114.94**	**337**	PKP		PKPdf		20 10 10.3	-0.7
	comp=Z,5.2nm,0.5s,baz=97,slow=0.7,SNR=9.4								
NRIK	**Noril'sk**	**114.94**	**337**			PKPdf		20 10 10.8	-0.2
NRIK	**Noril'sk**	**114.94**	**337**	PKIKP		PKPdf		20 10 10.8	-0.2
PAMR	**Moraine State**	**115.18**	**55**	PKPdf		**PKPdf**		**20 10 11.2**	**-1.1**
KSH	**Kashi**	**115.61**	**303**	PKP		**PKiKP**		**20 10 14.5**	**+1.1**
MDOK	**Medeo**	**115.69**	**307**	*e*PKP		**PKPdf**		**20 10 12.9**	**-0.6**
MDOK	**Medeo**	**115.69**	**307**	*e*PKIKP		**PKPdf**		**20 10 12.8**	**-0.6**
TNSS	**Tian-Shan**	**115.73**	**307**	*e*PKP		**PKPdf**		**20 10 13.0**	**-0.9**
TNSS	**Tian-Shan**	**115.73**	**307**	*e*PKIKP		**PKPdf**		**20 10 12.9**	**-0.9**
AAA	**Alma-Ata**	**115.79**	**307**	*e*PKP		**PKPdf**		**20 10 13.1**	**-0.5**
AAA	**Alma-Ata**	**115.79**	**307**	*e*PKIKP		**PKPdf**		**20 10 13.0**	**-0.5**
KURK	**Kurchatov**	**116.19**	**316**			**PKPdf**		**20 10 13.0**	**-0.9**
KURK	**Kurchatov**	**116.19**	**316**	*d* PKIKP		**PKPdf**		**20 10 12.3**	**-1.6**
KURBB	**Kurchatov Arra**	**116.23**	**316**	PKP		**PKPdf**		**20 10 12.8**	**-1.2**
	comp=Z,6.2nm,0.5s,baz=108,slow=1.9,SNR=22								
KURBB				SKP		**SKPdf**		**20 12 51.8**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=108,slow=2.0,SNR=5.8								
KURBB				PKKPbc		**PKKPbc**		**20 20 46.2**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=279,slow=4.1,SNR=20								
AAK	**Ala-Archa**	**117.40**	**306**			**PKPdf**		**20 10 16.4**	**-0.4**
AAK	**Ala-Archa**	**117.40**	**306**	*i* PKPdf		**PKPdf**		**20 10 16.1**	**-0.7**
	SNR=7.5								
AAK	**Ala-Archa**	**117.40**	**306**	*d* iPKIKP		**PKiKP**		**20 10 16.9**	**+0.1**
SUR	**Sutherland**	**117.58**	**201**	PKPdf		**PKiKP**		**20 10 17.7**	**0.0**
BTLS	**Baital**	**118.19**	**309**	*e*PKP		**PKPdf**		**20 10 17.7**	**-0.3**
BTLS	**Baital**	**118.19**	**309**	*e*PKIKP		**PKPdf**		**20 10 17.6**	**-0.3**
ARSB	**Arslanbob**	**118.24**	**305**			**PKPdf**		**20 10 18.3**	**-0.1**
ARSB	**Arslanbob**	**118.24**	**305**	PKIKP		**PKPdf**		**20 10 18.3**	**-0.1**
BDFB	**Brasilia**	**118.33**	**127**	PKP		**PKPdf**		**20 10 19.1**	**-0.2**
	comp=Z,6.6nm,0.5s,baz=168,slow=1.0,SNR=13								
BOAV	**Boa Vista**	**118.64**	**103**			**PKPdf**		**20 10 19.8**	**0.0**
BOSA	**Boshof**	**119.35**	**207**	PKP		**PKPdf**		**20 10 20.6**	**-0.5**
	comp=Z,8.4nm,0.6s,baz=144,slow=2.1,SNR=26								
BOSA				PKKPbc		**PKKPbc**		**20 20 34.4**	**-1.7**
	comp=Z,5.3nm,0.7s,baz=349,slow=3.3,SNR=7.5								
BOSA	**Boshof**	**119.35**	**207**			**PKPdf**		**20 10 21.0**	**0.0**
BOSA	**Boshof**	**119.35**	**207**	PKIKP		**PKPdf**		**20 10 21.0**	**0.0**
OBIP	**Obispado Ponce**	**119.75**	**84**	PKPdf		**PKPdf**		**20 10 20.6**	**-1.1**
GAR	**Garm**	**119.78**	**301**			**PKPdf**		**20 10 21.3**	**-0.1**
KBL	**Kabul**	**119.82**	**296**			**PKiKP**		**20 10 21.8**	**0.0**
KBL	**Kabul**	**119.82**	**296**	PKIKP		**PKiKP**		**20 10 21.8**	**0.0**
BRZS	**Berezniki**	**119.84**	**314**	*e*PKP		**PKPdf**		**20 10 20.8**	**-0.2**
BRZS	**Berezniki**	**119.84**	**314**	*e*PKIKP		**PKPdf**		**20 10 20.8**	**-0.2**
GCPR	**Guaynabo City**	**120.31**	**84**	PKPdf		**PKPdf**		**20 10 22.3**	**-0.5**
KK31	**Karatay Array**	**120.37**	**306**			**PKPdf**		**20 10 21.8**	**-0.5**
KK31	**Karatay Array**	**120.37**	**306**	PKIKP		**PKPdf**		**20 10 21.8**	**-0.5**
KKAR	**Karatay Array**	**120.37**	**306**			**PKPdf**		**20 10 21.8**	**-0.5**
KKAR	**Karatay Array**	**120.37**	**306**	PKIKP		**PKPdf**		**20 10 21.8**	**-0.5**
HUMP	**Col San Antoni**	**120.46**	**84**			**PKPdf**		**20 10 22.7**	**-0.4**
IUG	**luzhnay**	**120.56**	**305**	*e*PKP		**PKPdf**		**20 10 22.1**	**-0.7**
IUG				*e*PP		**PP**		**20 10 00.2**	**-1.6**
IUG	**luzhnay**	**120.56**	**305**	*e*PKIKP		**PKPdf**		**20 10 22.1**	**-0.7**
IUG				*e*				20 12 00.1	
BRLS	**Borolday**	**120.84**	**306**	*e*PKP		**PKPdf**		**20 10 22.8**	**-0.4**
BRLS				*e*PP		**PP**		**20 12 02.5**	**-1.1**
BRLS	**Borolday**	**120.84**	**306**	*e*PKIKP		**PKPdf**		**20 10 22.8**	**-0.4**
BRLS				*e*				20 12 02.4	
CHM	**Chimkent**	**120.90**	**305**	*e*PKP		**PKPdf**		**20 10 22.8**	**-0.5**
CHM	**Chimkent**	**120.90**	**305**	*e*PKIKP		**PKPdf**		**20 10 22.8**	**-0.5**
BVA0	**Borovoye Array**	**121.53**	**318**	PKIKP		**PKPdf**		**20 10 23.5**	**-0.7**
BVAR	**Borovoye Array**	**121.53**	**318**	PKP		**PKPdf**		**20 10 23.6**	**-0.6**
	comp=Z,21nm,0.5s,baz=113,slow=1.8,SNR=139								
BVAR				PKKPbc		**PKKPbc**		**20 20 26.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=221,slow=2.8,SNR=4.7								
BORK	**Borovoye**	**121.58**	**318**			**PKPdf**		**20 10 23.4**	**-0.8**
BORK	**Borovoye**	**121.58**	**318**	*d* iPKIKP		**PKPdf**		**20 10 22.7**	**-1.5**
BORK				pmax		pmax			
	comp=Z,29nm,1.3s								
MAL2	**Monte Alegre,**	**121.82**	**111**			**PKiKP**		**20 10 26.3**	**+0.1**
MAKGR	**Makgori**	**122.01**	**208**			**PKiKP**		**20 10 26.5**	**+0.1**
LBTB	**Lobatse**	**122.37**	**209**			**PKPdf**		**20 10 25.9**	**-1.0**
LBTB	**Lobatse**	**122.37**	**209**	PKIKP		**PKPdf**		**20 10 25.9**	**-1.0**
PHPEN	**Phepeng**	**123.11**	**206**			**PKPdf**		**20 10 28.1**	**-0.2**
GDHS	**Morne Mazeau,**	**123.44**	**87**			**PKPdf**		**20 10 28.4**	**-0.6**
CBE	**Ff, Capester**	**123.51**	**88**			**PKPdf**		**20 10 28.8**	**-0.3**
MREMI	**Moremi**	**123.62**	**213**			**PKPdf**		**20 10 29.1**	**-0.2**
GDSD	**La Dsirade Is**	**124.08**	**88**			**PKPdf**		**20 10 29.4**	**-0.7**
LKGWB	**Lokgwabe**	**124.97**	**206**			**PKPdf**		**20 10 31.8**	**-0.1**
HRA	**Herat**	**125.28**	**295**			**PKPdf**		**20 10 31.7**	**-0.6**
SCHQ	**Schefferville**	**125.45**	**40**	PKP		**PKiKP**		**20 10 31.9**	**-0.2**
	comp=Z,15nm,0.8s,baz=266,slow=3.4,SNR=8.0								
KGCAE	**Kacgae**	**125.71**	**207**			**PKiKP**		**20 10 33.6**	**-0.2**
KOOLE	**Kule**	**126.38**	**205**			**PKiKP**		**20 10 35.1**	**-0.1**
LMN	**Caledonia Moun**	**126.89**	**51**			**PKPdf**		**20 10 33.8**	**-0.8**
SVE	**Sverdlovsk**	**127.02**	**322**	*e*PKIKP		**PKPdf**		**20 10 34.8**	**+0.3**
SVE				pmax		pmax			
	comp=Z,20nm,1.2s								
GRTLG	**Ghanzi**	**127.45**	**207**			**PKPdf**		**20 10 36.4**	**-0.4**
SPITS	**Spitsbergen Ar**	**127.72**	**355**	PKP		**PKPdf**		**20 10 35.2**	**-0.2**
	comp=Z,14nm,0.5s,baz=84,slow=4.5,SNR=37								
SOHO	**SOHO**	**127.86**	**281**	*i* PKPdf		**PKPdf**		**20 10 36.6**	**-0.6**
	SNR=16								
WIN	**Windhoek**	**127.88**	**202**			**PKPdf**		**20 10 37.3**	**-0.3**
WIN	**Windhoek**	**127.88**	**202**	PKIKP		**PKPdf**		**20 10 37.3**	**-0.3**
AB31	**Akbulak array**	**128.08**	**313**			**PKPdf**		**20 10 36.8**	**0.0**
AB31	**Akbulak array**	**128.08**	**313**	*i* PKIKP		**PKPdf**		**20 10 36.7**	**-0.1**
ABKAR	**Akbulak array**	**128.08**	**313**			**PKPdf**		**20 10 36.7**	**-0.1**
ARTI	**Arti**	**128.31**	**322**	PKP		**PKPdf**		**20 10 36.7**	**-0.3**
	comp=Z,15nm,0.5s,baz=102,slow=1.4,SNR=36								
ARTI				pPKP		**pPKPdf**		**20 12 58.6**	**+0.1**
	comp=Z,11nm,1.1s,baz=66,slow=2.9,SNR=4.0								
ARTI	**Arti**	**128.31**	**322**	*i* PKIKP		**PKPdf**		**20 10 37.0**	**0.0**
ARTI								20 12 49.9	
ARTI								20 16 51.2	
ARTI				SS		SS		20 29 17.2	-3.2
UOSS	**Minazif**	**128.36**	**282**			**PKPdf**		**20 10 37.3**	**-0.8**
HATD	**Hatta, Dubai**	**128.40**	**282**	*i* PKiKP		**PKPdf**		**20 10 38.0**	**-0.2**
	SNR=8.1								
ASHO	**Ashiyiah**	**128.42**	**281**	*i* PKiKP		**PKPdf**		**20 10 37.9**	**-0.4**
	SNR=7.2								
MSFE	**Esma-Masafi**	**128.51**	**282**	PKiKP		**PKPdf**		**20 10 38.5**	**+0.1**
ALNE	**Al Ain**	**128.53**	**281**	PKiKP		**PKPdf**		**20 10 38.4**	**-0.1**
KSANE	**Kasane**	**128.79**	**213**			**PKiKP**		**20 10 40.0**	**0.0**
NAZ	**Nazwa, Dubai**	**128.85**	**282**	PKiKP		**PKPdf**		**20 10 39.1**	**+0.1**
ASUD	**Al Ashush, Dub**	**129.05**	**281**	PKiKP		**PKiKP**		**20 10 40.1**	**-0.1**
QNGWA	**Qangwa**	**129.10**	**208**			**PKPdf**		**20 10 39.7**	**-0.1**
AKTO	**Aktyubinsk**	**129.25**	**315**	PKP		**PKPdf**		**20 10 38.6**	**-0.4**
	comp=Z,10nm,0.6s,baz=83,slow=2.6,SNR=45								
AKTO				pPKP		**pPKPdf**		**20 13 01.3**	**+0.9**
	comp=Z,1.3nm,0.4s,baz=59,slow=4.0,SNR=2.9								
SUMG	**Summit**	**129.84**	**14**			**PKPdf**		**20 10 40.2**	**+0.2**
SUMG	**Summit**	**129.84**	**14**	PKIKP		**PKPdf**		**20 10 40.2**	**+0.2**
XAUDM	**Khaudum**	**129.91**	**209**			**PKiKP**		**20 10 42.1**	**-0.2**
MZR	**Muzera**	**130.25**	**278**	*i* PKiKP		**PKiKP**		**20 10 42.4**	**-0.3**
	SNR=7.6								
TSUM	**Tsumeb**	**130.81**	**204**	PKPdf		**PKPdf**		**20 10 43.4**	**+0.2**
KIBK	**Kibwezi**	**132.16**	**239**			**PKPdf**		**20 10 46.1**	**+0.4**
KIRV	**Kirov**	**132.46**	**327**	PKP		**PKPdf**		**20 10 45.0**	**+0.2**
	comp=Z,26nm,0.4s,baz=64,slow=1.5,SNR=14								
KIRV				SKPbc		**SKPbc**		**20 13 14.9**	**+0.3**
	comp=Z,22nm,0.6s,baz=49,slow=1.5,SNR=9.6								
KIRV	**Kirov**	**132.46**	**327**	⇓*i* PKIKP		**PKPdf**		**20 10 45.2**	**+0.5**
KMBO	**Kilima Mbogo**	**133.54**	**240**	PKP		**PKiKP**		**20 10 49.4**	**-0.5**
	comp=Z,4.1nm,0.5s,baz=154,slow=1.1,SNR=6.8								
KMBO				SKPbc		**SKPbc**		**20 13 21.4**	**+1.3**
	comp=Z,4.4nm,0.7s,baz=213,slow=2.5,SNR=5.0								
KMBO	**Kilima Mbogo**	**133.54**	**240**	⇓*i* PKIKP		**PKPdf**		**20 10 49.0**	**+0.4**
ARCES	**ARCESS Array B**	**134.24**	**347**	PKP		**PKPdf**		**20 10 47.6**	**-0.3**
	comp=Z,10nm,0.6s,baz=70,slow=1.5,SNR=16								
ARCES				SKPbc		**SKPbc**		**20 13 21.5**	**+1.4**
	comp=Z,32nm,1.1s,baz=342,slow=1.5,SNR=8.2								
BELG	**Belogornoye**	**135.31**	**319**	PKP		**PKPdf**		**20 10 50.3**	**+0.1**
	comp=Z,21nm,0.6s,baz=45,slow=2.9,SNR=11								
BELG				SKPbc		**SKPbc**		**20 13 23.8**	**-0.2**
	comp=Z,57nm,1.0s,baz=153,slow=2.1,SNR=12								
KLMR	**Klimovskoe**	**135.98**	**332**	*e*PKIKP		**PKPdf**		**20 10 50.2**	**-1.1**
KLMR				*e*				20 13 09.6	
KLMR				pmax		pmax			
	comp=Z,48nm,1.4s								
RAYN	**Ar Rayn**	**137.46**	**276**			**PKPdf**		**20 10 55.3**	**0.0**
RAYN	**Ar Rayn**	**137.46**	**276**	*i* PKiKP		**PKPdf**		**20 10 55.8**	**+0.5**
	SNR=6.3								
RAYN	**Ar Rayn**	**137.46**	**276**	PKIKP		**PKPdf**		**20 10 55.3**	**0.0**
MBAR	**Mbarara**	**138.78**	**234**	PKPdf		**PKPdf**		**20 10 58.2**	**0.0**
MBAR	**Mbarara**	**138.78**	**234**	*d* iPKIKP		**PKiKP**		**20 11 01.2**	**+0.7**
VRH	**Novokhopyorsk**	**139.16**	**319**	*e*PKIKP		**PKPdf**		**20 10 56.9**	**-0.5**
VRH				pmax		pmax			
	comp=Z,20nm,0.9s								
MOS	**Moscow**	**139.47**	**327**	*e*PKHKP		PKPpre		20 10 53.2	
GNI	**Garni**	**139.51**	**301**	PKiKP		**PKiKP**		**20 11 00.6**	**-0.6**
GNI	**Garni**	**139.51**	**301**	*ce*PKIKP		**PKPdf**		**20 10 59.7**	**+1.0**
NCK	**Nalchik**	**139.93**	**307**	*e*PKIKP		**PKPdf**		**20 10 59.8**	**+0.7**
LPSR	**Galich'ya Gora**	**140.23**	**322**	*e*PKIKP		**PKPdf**		**20 10 59.6**	**+0.3**
LPSR				pmax		pmax			
	comp=Z,18nm,1.1s								
PUL	**Pulkovo**	**140.28**	**335**	⇑*i* PKIKP		**PKiKP**		**20 11 01.9**	**0.0**
OBN	**Obninsk**	**140.31**	**326**	*e*PKIKP		**PKPdf**		**20 10 59.6**	**+0.3**
OBN				*e*				20 14 07.6	
OBN				*e*PPP		PPP		20 17 16.2	
OBN				pmax		pmax			
	comp=Z,15nm,1.0s								
KBZ	**Khabaz**	**140.39**	**307**	PKhKP		PKPpre		20 10 54.8	
	comp=Z,1.5nm,0.7s,baz=56,slow=3.6,SNR=5.9								
KBZ	**Khabaz**	**140.39**	**307**	⇑*e*PKIKP		**PKPdf**		**20 11 00.4**	**+0.5**
VORR	**Voronezh**	**140.45**	**320**	*e*PKIKP		**PKPdf**		**20 10 58.0**	**-1.7**
VORR				pmax		pmax			
	comp=Z,20nm,0.9s								
KIV	**Kislovodsk**	**140.50**	**308**	*e*PKIKP		**PKPdf**		**20 10 59.8**	**-0.4**
KIV				pmax		pmax			
	comp=Z,9.0nm,1.0s								
FINES	**FINESS Array B**	**140.54**	**339**	PKhKP		PKPpre		20 10 52.8	
	comp=Z,7.8nm,0.5s,baz=42,slow=4.8,SNR=102								
FINES				PKP		**PKPdf**		**20 11 00.1**	**+0.5**
	comp=Z,4.9nm,0.4s,baz=90,slow=1.7,SNR=6.3								
FINES				SKPbc		**SKPbc**		**20 13 38.9**	**+0.5**
	comp=Z,13nm,0.7s,baz=64,slow=4.4,SNR=10.0								
SHA1	**Shidzhatmaz**	**140.56**	**307**	⇓*e*PKIKP		**PKPdf**		**20 11 01.2**	**+0.7**
NEUR	**Neytrino**	**140.61**	**307**	PKIKP		**PKPdf**		**20 11 00.6**	**0.0**
VSR	**Storozhevoye**	**140.65**	**320**	*e*PKIKP		**PKPdf**		**20 11 00.7**	**+0.6**
VSR				pmax		pmax			
	comp=Z,10.0nm,1.0s								
VORD	**Divnogorie**	**140.68**	**319**	*e*PKIKP		**PKPdf**		**20 10 58.4**	**-1.8**
VORD				pmax		pmax			
	comp=Z,9.0nm,1.0s								
ERBR	**Yeremizino-Bor**	**141.62**	**311**	*i* PKIKP		**PKP

TESR	Tescani	150.14	319	⇑P	PKPbc	20 11 22.2	+0.1		
INVG	Invergeldie, C	150.16	3	*e*P	PKPbc	20 11 21.4	-0.4		
PANC	Panciu	150.18	318	⇑P	PKiKP	20 11 22.8	0.0		
MFTR	Murfatlar	150.18	314	⇓P	PKiKP	20 11 23.1	+0.3		
MANR	Mangalia	150.22	313	⇑P	PKiKP	20 11 23.0	+0.1		
TLBR	Topalu	150.25	315	⇓P	PKPbc	20 11 20.3	-2.2		
HARR	Harsova	150.26	315	⇓P	PKPdf	20 11 14.2	-2.3		
HARR	Harsova	150.26	315	⇓PKIKP	PKPdf	20 11 14.2	-2.3		
ODBI	Odobesti	150.29	317	⇓P	PKiKP	20 11 23.3	+0.4		
BORA	Eskisehir	150.33	305		PKPbc	20 11 22.4	-0.5		
BUR08	Bucovina Ar. S	150.34	322		PKPdf	20 11 17.0	+0.3		
KWP	Kalwaria Pacla	150.38	327	*e*PKPbc	PKPbc	20 11 22.5	-0.1		
ONER	Baraj Valea Uz	150.38	319	⇑P	PKiKP	20 11 23.2	0.0		
VRI	Vrincioaia	150.43	318	⇑P	PKPbc	20 11 22.6	-0.3		
VRI	Vrincioaia	150.43	318	⇑PKIKP	PKPbc	20 11 22.6	-0.3		
PLOR	Plostina	150.49	318	⇓P	PKPbc	20 11 22.6	-0.4		
ICOR	Ion Corvin	150.60	314	⇓P	PKiKP	20 11 23.8	+0.2		
EDI	Edinburgh	150.70	2	*e*P	PKPbc	20 11 22.9	-0.2		
ESY	Stoneypath	150.72	1	*e*P	PKPbc	20 11 22.4	-0.8		
COVR	Voineasa-Covas	150.75	318	⇑P	PKPbc	20 11 23.1	-0.5		
TURR	Turia	150.76	319	⇓P	PKiKP	20 11 24.2	+0.2		
OZUR		150.87	319	⇓P	PKPbc	20 11 23.7	-0.2		
ISR	Istrita	150.92	317	⇑P	PKiKP	20 11 24.3	-0.1		
BOSR	Bodos	150.96	319	⇓P	PKiKP	20 11 25.0	+0.6		
MLR	Muntele Rosu	151.09	318	PKPbc	PKPbc	20 11 24.4	-0.1		
	comp=Z,11nm,0.5s,baz=14,slow=4.2,SNR=14								
MLR	Muntele Rosu	151.09	318		PKPbc	20 11 23.8	-0.8		
MLR	Muntele Rosu	151.09	318	⇓P	PKPbc	20 11 24.3	-0.2		
MLR	Muntele Rosu	151.09	318	⇓PKIKP	PKPbc	20 11 24.3	-0.2		
DOPR	Dopca	151.17	319	⇑P	PKiKP	20 11 25.2	+0.4		
STHS	Stebnicka Huta	151.23	328	*e*PKIKP	PKPdf	20 11 17.7	-0.2		
STHS	Stebnicka Huta	151.23	328	*e*PKP	PKPdf	20 11 17.7	-0.2		
STHS				*e*		20 11 23.9			
STHS				*e*		20 13 50.4			
IDGL	Inch Island, C	151.24	7	PKP	PKPbc	20 11 23.7	-0.6		
IDGL	Inch Island, C	151.24	7	*e*P	PKPbc	20 11 23.9	-0.4		
EKA	Eskdalemuir Ar	151.29	2	PKPbc	PKPbc	20 11 24.0	-0.4		
	comp=Z,9.5nm,0.4s,baz=321,slow=2.0,SNR=6.2								
EKA				pPKPbc	pPKPbc	20 13 43.6	-1.5		
	comp=Z,3.4nm,0.8s,baz=350,slow=3.7,SNR=3.0								
ESK	Eskdalemuir	151.31	2		PKPbc	20 11 23.9	-0.6		
ESK	Eskdalemuir	151.31	2	*e*P	PKPbc	20 11 23.3	-1.1		
ESK	Eskdalemuir	151.31	2	PKIKP	PKPbc	20 11 23.9	-0.6		
OJC	Ojcow	151.31	331	*e*PKPbc	PKPbc	20 11 24.6	-0.1		
BSEG	Bad Segeberg	151.34	345	*e*PKPbc	PKiKP	20 11 25.1	+0.3		
	baz=26,slow=2.1								
BSEG				*ep*PKPbc	pPKPab	20 13 50.2	-0.2		
	baz=27,slow=2.4								
NEWG	New Galloway	151.47	3	*e*P	PKPbc	20 11 23.7	-1.1		
VOIR		151.66	318	⇓P	PKPbc	20 11 25.8	+0.1		
VOIR		151.66	318	⇓PKIKP	PKPbc	20 11 25.8	+0.1		
MDB	Medias	151.66	320	⇑P	PKiKP	20 11 26.2	+0.4		
MDB	Medias	151.66	320	⇑PKIKP	PKiKP	20 11 26.2	+0.4		
GAL1	Galloway	151.69	4	*e*P	PKPbc	20 11 24.7	-0.7		
RAZG	Razgrad	151.69	314	⇑P	PKPbc	20 11 25.7	-0.1		
LOZB	Loznitsa	151.72	313	⇑P	PKPbc	20 11 25.7	-0.1		
RUE	Ruedersdorf	151.72	340	*e*PKPbc	PKiKP	20 11 26.0	+0.3		
	baz=26,slow=2.1								
RUE				*ep*PKPbc	pPKPab	20 13 51.9	0.0		
	baz=27,slow=2.4								
CBBR	Cluj-Babes-Bol	151.76	322	⇑P	PKPbc	20 11 25.7	-0.1		
CJR	Cluj-Napoca	151.77	322	⇑P	PKiKP	20 11 26.3	+0.2		
CJR	Cluj-Napoca	151.77	322	⇑PKIKP	PKiKP	20 11 26.3	+0.2		
EDMD	Edmundbyers	151.82	1	*e*P	PKPbc	20 11 25.1	-0.6		
MESR	Meseseni	151.86	323	⇑P	PKiKP	20 11 26.4	+0.2		
ARR	Arges	151.94	319	⇑P	PKPdf	20 11 20.3	+1.2		
GORT1	Trebel	151.97	343	*e*PKPbc	PKiKP	20 11 26.6	+0.5		
	baz=26,slow=2.1								
GORT1				*ep*PKPbc	pPKPab	20 13 52.2	-0.7		
	baz=27,slow=2.4								
KESW	Keswick, Cumbr	152.04	2	*e*P	PKPbc	20 11 24.6	-1.6		
MARR	Marisel-Cluj	152.06	322	⇑P	PKPbc	20 11 25.9	-0.7		
HUMR	Humele	152.18	317	⇑P	PKPbc	20 11 26.2	-0.5		
DRGR		152.21	323	⇑P	PKPbc	20 11 26.9	0.0		
DRGR		152.21	323	⇑PKIKP	PKPbc	20 11 26.9	0.0		
COPA	Copaceanca	152.23	316	⇑P	PKPbc	20 11 26.8	-0.1		
LANS	Liptovska Anna	152.24	330	*e*PKIKP	PKiKP	20 11 28.0	+1.0		
LANS	Liptovska Anna	152.24	330	*e*PKP	PKiKP	20 11 28.0	+1.0		
LANS				*e*		20 13 56.1			
KSP	Ksiaz	152.25	335	*e*PKPbc	PKiKP	20 11 26.9	+0.1		
LTVH	Ltavrtes, Hu	152.26	324	⇓P	PKiKP	20 11 27.6	+0.6		
IOMK	Kirk Michael	152.30	4	*e*P	PKPbc	20 11 26.1	-0.6		
STEB	Steborice	152.38	333	*e*PKPDF	PKPdf	20 11 20.2	+0.6		
STEB				⇑*e*PKP	PKiKP	20 11 27.4	+0.2		
STEB				*ex*	x	20 13 47.5			
ELND	Elena	152.39	313	⇑P	PKiKP	20 11 27.5	+0.1		
ILTH	Belurgan, Co L	152.40	6	PKP	PKPbc	20 11 25.8	-1.1		
LOT	Lotru	152.41	319	⇓P	PKPbc	20 11 27.2	-0.2		
OSTC	Ostas	152.51	335	*e*PKIKP	PKPdf	20 11 20.2	+0.4		
OSTC	Ostas	152.51	335	*e*PKPDF	PKPdf	20 11 20.2	+0.4		
OSTC				⇑*e*PKP	PKiKP	20 11 28.3	+0.9		
OSTC				*ex*	x	20 13 48.6			
CHVC	Chvalec	152.54	335	*e*PKIKP	PKiKP	20 11 27.9	+0.4		
CHVC	Chvalec	152.54	335	⇑*e*PKP	PKiKP	20 11 27.9	+0.4		
FLTG	Flechtingen	152.58	343	*e*PKPdf	PKPdf	20 11 19.5	-0.2		
	baz=30,slow=1.4								
FLTG				*e*PKPbc	PKiKP	20 11 27.5	0.0		
	baz=26,slow=2.1								
FLTG				*ep*PKPbc	pPKPab	20 13 53.8	-1.8		
	baz=27,slow=2.4								
FLTG				*ep*PKPab	pPKPbc	20 14 01.2	+13		
MORC	Moravsky Berou	152.60	333		PKPdf	20 11 19.1	-0.8		
MORC	Moravsky Berou	152.60	333	⇓P	PKPdf	20 11 20.9	+1.0		
MORC	Moravsky Berou	152.60	333	*e*PKP	PKPdf	20 11 19.6	-0.3		
MORC				*e*		20 13 47.2			
MORC	Moravsky Berou	152.60	333	⇓PKIKP	PKPdf	20 11 20.9	+1.0		
IGLA	Glengowla, Co	152.60	10	PKP	PKPbc	20 11 26.9	-0.5		
IGLA	Glengowla, Co	152.60	10	*e*P	PKPbc	20 11 26.9	-0.5		
UPC	Upice	152.62	335	*e*PKIKP	PKiKP	20 11 28.1	+0.4		
UPC	Upice	152.62	335	⇑*e*PKP	PKiKP	20 11 28.1	+0.4		
DPC	Dobruska-Polom	152.63	335	*e*PKIKP	PKPdf	20 11 20.4	+0.4		
DPC	Dobruska-Polom	152.63	335	*e*PKPDF	PKPdf	20 11 20.4	+0.4		
DPC				⇑*e*PKP	PKiKP	20 11 28.1	+0.4		
DPC				*ep*PKP	pPKPab	20 13 54.5	-1.6		
RETH	Rethem/Aller,	152.66	345	*e*PKPdf	PKPdf	20 11 20.2	+0.4		
	baz=30,slow=1.4								
RETH				*e*PKPbc	PKiKP	20 11 27.9	+0.3		
	baz=26,slow=2.1								
RETH				*e*PKPab	PKPab	20 11 41.8	+0.4		
	baz=26,slow=4.4								
RETH				*ep*PKPbc	pPKPab	20 13 54.2	-1.6		
	baz=27,slow=2.4								
RETH				*ep*PKPab	pPKPbc	20 14 01.7	+13		
KRLC	Kraliky	152.67	334	*e*PKIKP	PKPdf	20 11 20.5	+0.5		
KRLC	Kraliky	152.67	334	*e*PKPDF	PKPdf	20 11 20.5	+0.5		
KRLC				⇑*e*PKP	PKiKP	20 11 28.1	+0.3		
KRLC				*ep*PKP	pPKPbc	20 13 48.5	-0.1		
MAUC	Maruska	152.80	332	*e*PKPDF	PKPdf	20 11 20.8	+0.6		
MAUC				⇑*e*PKP	PKiKP	20 11 28.8	+0.7		
ASSE	Asse, Remlinge	152.91	343	*e*PKPdf	PKPdf	20 11 20.3	+0.2		
	baz=30,slow=1.4								
ASSE				*e*PKPbc	PKiKP	20 11 28.4	+0.3		
	baz=26,slow=2.1								
ASSE				*ep*PKPbc	pPKPab	20 13 54.9	-1.9		
	baz=27,slow=2.4								
ASSE				*ep*PKPab	pPKPbc	20 14 02.5	+14		
PSZ	Piszkesteto	152.91	327		PKiKP	20 11 28.5	+0.1		
PSZ	Piszkesteto	152.91	327	PKIKP	PKiKP	20 11 28.5	+0.1		
PLVB	Pleven	152.98	315	⇑P	PKiKP	20 11 28.8	+0.1		
CLL	Collm	152.98	340		PKPdf	20 11 19.9	-0.4		
CLL				PKPbc	PKPbc	20 11 28.1	-0.1		
CLL				PKPab	PKPab	20 11 42.8	-0.1		
CLL	Collm	152.98	340	*e*PKIKP	PKPdf	20 11 21.0	+0.6		
CLL				*i*		20 11 42.7			
CLL				pmax	pmax				
	comp=Z,40nm,0.8s								
CLL				pmax	pmax				
	comp=Z,16nm,0.6s								
CLL	Collm	152.98	340	*e*PKPbc	PKiKP	20 11 28.6	+0.2		
	baz=26,slow=2.1								
CLL				*e*PKPab	PKPab	20 11 42.7	-0.2		
	baz=26,slow=4.4								
CLL				*ep*PKPbc	pPKPab	20 13 54.8	-2.5		
	baz=27,slow=2.4								
GZR	Gura Zlata	153.01	320	⇑P	PKPbc	20 11 28.4	-0.2		
GZR	Gura Zlata	153.01	320	⇑PKIKP	PKPbc	20 11 28.4	-0.2		
BRG	Berggiesshubel	153.05	338	*e*PKPdf	PKPdf	20 11 20.8	+0.3		
	baz=30,slow=1.4								
BRG				*e*PKPbc	PKiKP	20 11 28.8	+0.2		
	baz=26,slow=2.1								
BRG				*ep*PKPbc	pPKPab	20 13 55.1	-2.4		
	baz=27,slow=2.4								
SIRR	Siria	153.10	323	⇑P	PKiKP	20 11 28.8	0.0		
PVCC	Panska Ves	153.13	337	*e*PKIKP	PKPdf	20 11 21.5	+0.9		
PVCC	Panska Ves	153.13	337	*e*PKPDF	PKPdf	20 11 21.5	+0.9		
PVCC				⇑*e*PKP	PKiKP	20 11 29.1	+0.4		
SURR	Surduc	153.16	322	⇑P	PKPbc	20 11 28.6	-0.3		
DSB	Dublin	153.16	6	PKP	PKPbc	20 11 28.0	-0.6		
JAVC	Velka Javorina	153.25	331	*e*PKP	PKPdf	20 11 21.8	+0.9		
JAVC				*e*		20 13 50.0			
CLZ	Clausthal	153.25	343	*e*PKPdf	PKPdf	20 11 20.9	+0.2		
	baz=30,slow=1.4								
CLZ				*e*PKPbc	PKiKP	20 11 29.4	+0.4		
	baz=26,slow=2.1								
CLZ				*e*PKPab	PKPab	20 11 44.3	+0.3		
	baz=26,slow=4.4								
CLZ				*ep*PKPbc	pPKPab	20 13 55.3	-3.1		
	baz=27,slow=2.4								
VRAC	Vranov	153.35	333	PKP	PKPdf	20 11 20.4	-0.6		
	comp=Z,1.9nm,0.5s,baz=20,slow=3.2,SNR=4.5								
VRAC				PKPbc	PKPbc	20 11 28.9	-0.2		
	comp=Z,2.1nm,0.6s,baz=34,slow=3.6,SNR=4.6								
VRAC	Vranov	153.35	333	*e*PKP	PKPdf	20 11 21.0	0.0		
VRAC				*e*		20 13 49.1			
IBBN	Ibbenburen	153.41	347	*e*PKPdf	PKPdf	20 11 21.7	+0.8		
	baz=30,slow=1.4								
IBBN				*e*PKPbc	PKiKP	20 11 29.6	+0.4		
	baz=26,slow=2.1								
IBBN				*e*PKPab	PKPab	20 11 44.8	+0.1		
	baz=26,slow=4.4								
IBBN				*ep*PKPbc	pPKPab	20 13 56.0	-3.0		
	baz=27,slow=2.4								
IBBN				*ep*PKPab	pPKPbc	20 14 04.8	+15		
NEUB	Neuenburg	153.44	341	*e*PKPdf	PKPdf	20 11 21.1	+0.1		
	baz=30,slow=1.4								
NEUB				*e*PKPbc	PKiKP	20 11 29.6	+0.3		
	baz=26,slow=2.1								
NEUB				*e*PKPab	PKPab	20 11 45.4	+0.6		
	baz=26,slow=4.4								
NEUB				*ep*PKPbc	pPKPab	20 13 56.0	-3.1		
	baz=27,slow=2.4								
BZS	Buzias	153.53	322	⇓P	PKPdf	20 11 21.2	-0.1		
BZS	Buzias	153.53	322	⇓PKIKP	PKPdf	20 11 21.2	-0.1		
PRU	Pruhonice	153.59	336	*ex*	x	20 13 55.9			
GTTG	Gottingen	153.62	344	*e*PKPab	PKPab	20 11 46.0	+0.3		
	baz=26,slow=4.4								
GTTG				*ep*PKPab	pPKPab	20 14 05.9	+6.0		
KRUC	Moravsky	153.63	333	*e*PKP	PKPdf	20 11 21.3	-0.1		
KRUC				*e*		20 13 49.0			
MODS	Modra-Piesok	153.79	331	*e*PKIKP	PKPdf	20 11 22.6	+1.0		
MODS				*e*		20 11 46.8			
MODS	Modra-Piesok	153.79	331	*e*PKP	PKPdf	20 11 22.6	+1.0		
MODS				*e*		20 11 30.7			
MODS				*e*		20 11 46.8			
MODS				*e*		20 13 49.0			
MODS				*e*		20 13 57.6			
MODS				*e*		20 14 05.8			
TREC	Trest	153.80	334	*e*PKIKP	PKiKP	20 11 30.3	+0.1		
TREC	Trest	153.80	334	⇑*e*PKP	PKiKP	20 11 30.3	+0.1		
VAL	Valentia	153.87	12	PKP	PKiKP	20 11 31.4	+1.3		
TANN	Tannenbergstha	153.93	339	*e*PKPdf	PKPdf	20 11 21.3	-0.5		
	baz=30,slow=1.4								
TANN				*e*PKPbc	PKPbc	20 11 30.4	0.0		
	baz=26,slow=2.1								
TANN				*ep*PKPbc	pPKPab	20 13 57.1	-4.2		
	baz=27,slow=2.4								
TANN				*ep*PKPab	pPKPbc	20 14 07.3	+16		
PLN	Plauen	153.96	340	*e*PKPbc	PKiKP	20 11 30.8	+0.4		
	baz=26,slow=2.1								
PLN				*e*PKPab	PKPab	20 11 47.3	+0.1		
	baz=26,slow=4.4								
PLN				*ep*PKPbc	pPKPab	20 13 57.2	-4.1		
	baz=27,slow=2.4								
MOX	Moxa	153.99	341	*e*PKPdf	PKPdf	20 11 21.6	-0.2		
	baz=30,slow=1.4								
MOX				*e*PKPbc	PKiKP	20 11 30.6	+0.1		
	baz=26,slow=2.1								
MOX				*e*PKPab	PKPab	20 11 47.3	+0.1		
	baz=26,slow=4.4								
MOX				*ep*PKPbc	pPKPab	20 13 57.1	-4.3		
	baz=27,slow=2.4								
ZVC	Zvikov	154.17	336	*e*PKPDF	PKPdf	20 11 22.3	+0.2		
ZVC				⇑*e*PKP	PKPbc	20 11 31.1	+0.2		
UBBA	Unterbreizbach	154.28	343	*e*PKPdf	PKPdf	20 11 22.0	-0.1		
	baz=30,slow=1.4								
UBBA				*e*PKPbc	PKPbc	20 11 31.1	+0.2		
	baz=26,slow=2.1								
UBBA				*e*PKPab	PKPab	20 11 48.7	+0.3		
	baz=26,slow=4.4								
UBBA				*ep*PKPab	pPKPab	20 14 08.6	+6.1		
KASTN	Kahler Asten	154.31	345	*e*PKPdf	PKPdf	20 11 22.3	0.0		
	baz=30,slow=1.4								
KASTN				*e*PKPbc	PKPbc	20 11 31.2	0.0		
	baz=26,slow=2.1								
KASTN				*ep*PKPab	pPKPab	20 14 08.5	+5.6		
BUG	Bochum--Univer	154.33	347	*e*PKPdf	PKPdf	20 11 22.3	+0.1		
	baz=30,slow=1.4								
BUG				*e*PKPbc	PKPbc	20 11 31.2	+0.1		
	baz=26,slow=2.1								
BUG				*e*PKPab	PKPab	20 11 49.1	+0.5		
	baz=26,slow=4.4								
MANZ	Manzenberg	154.41	339	*e*PKPdf	PKPdf	20 11 22.3	-0.1		
	baz=30,slow=1.4								
MANZ				*e*PKPbc	PKPbc	20 11 32.1	+0.6		
	baz=26,slow=2.1								
MANZ				*ep*PKPbc	pPKPab	20 13 57.9	-5.4		
	baz=27,slow=2.4								
MANZ				*ep*PKPab	pPKPbc	20 14 08.8	+16		
ROTZ	Rotzenmuhle	154.57	339	*e*PKPbc	PKPbc	20 11 31.8	+0.1		
	baz=26,slow=2.1								
ROTZ				*e*PKPab	PKPab	20 11 50.1	+0.3		
	baz=26,slow=4.4								
ROTZ				*ep*PKPab	pPKPab	20 14 10.0	+6.0		
CKRC	Cesky Krumlov	154.64	335	*e*PKIKP	PKPdf	20 11 22.9	+0.1		
CKRC				*e*		20 11 50.4			
CKRC	Cesky Krumlov	154.64	335	*e*PKPDF	PKPdf	20 11 22.9	+0.1		
CKRC				⇑*e*PKP	PKPbc	20 11 32.5	+0.6		
CKRC				*ep*PKPAB	PKPab	20 11 50.4	+0.2		
KHC	Kasperske Hory	154.65	336		PKPdf	20 11 22.2	-0.6		
KHC	Kasperske Hory	154.65	336	*e*PKIKP	PKPdf	20 11 22.8	0.0		
KHC				*e*		20 11 50.5			
KHC	Kasperske Hory	154.65	336	*e*PKPDF	PKPdf	20 11 22.8	0.0		
KHC				⇑*e*PKP	PKPbc	20 11 32.4	+0.4		
KHC				*ep*PKPAB	PKPab	20 11 50.5	+0.3		
EDA	Edea	154.68	208		PKPdf	20 11 22.6	-1.3		
RONA	Rosalia, Austr	154.73	331	*i* PKP	PKPdf	20 11 23.2	+0.2		
	comp=Z,6.3nm,1.1s								
RONA				*i* PKP	PKPbc	20 11 32.5	+0.3		
	comp=Z,19nm,1.5s,SNR=7.2								
RONA				*e*PKP	PKPab	20 11 50.8	+0.2		
	comp=Z,9.7nm,1.1s								
RONA				*e*SKP	SKPdf	20 13 59.3	+1.3		
	comp=Z,14nm,1.1s								
CONA	Conrad Observa	154.74	332	*i* PKP	PKPdf	20 11 23.1	0.0		
	comp=Z,4.9nm,0.9s								
CONA				*i* PKP	PKPbc	20 11 32.5	+0.3		
	comp=Z,12nm,1.0s,SNR=4.9								
CONA				*i* PKP	PKPab	20 11 51.0	+0.3		
	comp=Z,11nm,1.1s								
CONA				*ep*PKP	pPKPbc	20 13 52.2	-1.1		
	comp=Z,19nm,1.6s								
GEC2	GERESS Array S	154.85	336		PKPdf	20 11 22.3	-0.9		
GEC2	GERESS Array S	154.85	336	*e*PKPbc	PKPbc	20 11 32.6	+0.2		
GEC2	baz=26,slow=2.1								
				*ep*PKPbc	pPKPbc	20 13 58.8	+5.3		
	baz=27,slow=2.4								
GERES	GERESS Array B	154.85	336	PKP	PKPdf	20 11 23.0	-0.2		
	comp=Z,1.8nm,0.8s,baz=25,slow=2.7,SNR=12								
GERES				PKPbc	PKPbc	20 11 32.7	+0.2		
	comp=Z,2.8nm,0.7s,baz=16,slow=1.9,SNR=13								
GERES				PKPab	PKPab	20 11 50.6	-0.5		
	comp=Z,0.8nm,0.4s,baz=39,slow=5.3,SNR=7.6								
GERES				SKP	SKPdf	20 13 58.0	-0.2		
	comp=Z,2.6nm,0.9s,baz=27,slow=2.5,SNR=5.5								
WET	Wettzell	154.89	337	*e*PKPdf	PKPdf	20 11 22.9	-0.2		
	baz=30,slow=1.4								
WET				*e*PKPab	PKPab	20 11 51.2	0.0		
	baz=26,slow=4.4								
GRF	Grafenberg Arr	154.95	340	*e*PKPdf	PKPdf	20 11 22.8	-0.4		
	baz=30,slow=1.4								
GRF				*e*PKPab	PKPab	20 11 51.9	+0.5		
	baz=26,slow=4.4								
TNS	Taunus Mts	155.22	345	*e*PKPdf	PKPdf	20 11 23.8	+0.2		
	baz=30,slow=1.4								
TNS				*e*PKPbc	PKPbc	20 11 33.6			
	baz=26,slow=2.1								
TNS				*e*PKPab	PKPab	20 11 53.3	+0.7		
	baz=26,slow=4.4								
ARSA	Arzberg	155.41	331	*i* PKP	PKPdf	20 11 23.5	-0.4		
	comp=Z,3.8nm,1.1s								
ARSA				*e*PKP	PKPab	20 11 52.8	-0.7		
	comp=Z,6.4nm,1.1s								
MOA	Molln	155.45	334	*i* PKP	PKPdf	20 11 23.5	-0.5		
	comp=Z,2.3nm,0.7s								
MOA				*i* PKP	PKPab	20 11 53.8	+0.1		
	comp=Z,11nm,1.1s								
IDI	Anoyia	155.80	297	PKP	PKPdf	20 11 24.6	-0.2		
	comp=Z,15nm,0.9s,baz=117,slow=4.5,SNR=2.8								
IDI				PKPab	PKPab	20 11 55.5	-0.2		
	comp=Z,8.1nm,0.5s,baz=74,slow=4.1,SNR=6.8								
BIOA	Bad Ischl, Aus	155.82	334	*e*PKP	PKPdf	20 11 23.8	-0.7		
	comp=Z,7.2nm,1.3s								
BIOA				*i* PKP	PKPbc	20 11 33.8			
	comp=Z,14nm,1.6s								
BIOA				*i* PKP	PKPab	20 11 55.1	-0.2		
	comp=Z,18nm,1.4s								
SOKA	Soboth	156.06	331	*i* PKP	PKPdf	20 11 24.4	-0.5		
	comp=Z,12nm,1.5s								
SOKA				*i* PKP	PKPab	20 11 57.3	+0.8		
	comp=Z,14nm,1.7s								
SOKA				*i* pPKP	pPKPdf	20 13 53.8	+6.5		
	comp=Z,11nm,1.6s								
WLF	Walferdange	156.24	348	*e*PKPbc	PKPdf	20 11 35.8	+11		
	baz=26,slow=2.1								
WLF				*e*PKPab	PKPab	20 11 57.6	+0.6		
	baz=26,slow=4.4								
FUR	Furstenfeldbru	156.27	338	*e*PKPab	PKPab	20 11 57.6	+0.4		
	baz=26,slow=4.4								
STU	Stuttgart	156.36	342	*e*PKPdf	PKPdf	20 11 25.7	+0.6		
	baz=30,slow=1.4								
OBKA	Obir	156.40	331	*e*PKP	PKPdf	20 11 24.0	-1.3		
	comp=Z,6.3nm,1.2s								
OBKA				*i* PKP	PKPbc	20 11 35.0			
	comp=Z,8.5nm,1.3s								
OBKA				*i* PKP	PKPab	20 11 57.1	-0.8		
	comp=Z,7.1nm,1.0s								
OBKA				*ep*PKP	pPKPdf	20 13 45.7	-2.0		
	comp=Z,16nm,1.6s								
LESA	Schwarzleotal	156.41	335	*i* PKP	PKPdf	20 11 24.9	-0.4		
	comp=Z,13nm,1.3s								
LESA				*i* PKP	PKPab	20 11 57.7	-0.2		
	comp=Z,18nm,1.6s								
LESA				*ep*PKiKP	pPKPdf	20 13 56.2	+8.5		
	comp=Z,9.8nm,1.2s								
KBA	Koelnbreinsper	156.44	334	*e*PKP	PKPdf	20 11 24.5	-0.9		
	comp=Z,4.9nm,1.2s								
MYKA	Terra Mystica	156.69	333	*i* PKP	PKPdf	20 11 25.0	-0.6		
	comp=Z,4.9nm,1.0s								
MYKA				*i* PKP	PKPab	20 11 58.3	-0.8		
	comp=Z,4.4nm,0.5s								
MYKA		

ML2.0,MW2.4
*RSPR **30** 20:00:11.7, 19˚.13N×67˚.27W, h23km±28km, MD3.1/10*

ISC 30 20:00:05.3±1.7, 19˚.31N±0˚.07×67˚.28W±0˚.04, h32km±12km, n47, σ1f14/58, 9C-12D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.86**	**169**	⇑*e*P	**Pn**	**20 00 22.3**	**+1.1**
AGPR				⇓*e*S	**Sb**	**20 00 30.1**	**-2.9**
AGPR				IAML		20 00 33.8	
	comp=N,154nm,0.2s						
AGPR	**Aguadilla, PR**	**0.86**	**169**	Pg	**Pn**	**20 00 22.2**	**+0.9**
AGPR				IAML		20 00 32.2	
	comp=N,171nm,0.8s						
AGPR				IAML		20 00 33.8	
	comp=N,120nm,0.4s						
AGPR	**Aguadilla, PR**	**0.86**	**169**	⇓*i*P	**Pn**	**20 00 22.7**	**+1.5**
AGPR	**Aguadilla, PR**	**0.86**	**169**	*e*S	**Sb**	**20 00 31.2**	**-1.8**
IDE	**Isla Desecheo**	**0.94**	**191**		**Pb**	**20 00 25.0**	**+1.8**
IDE					**Sb**	**20 00 35.0**	**-0.3**
IDE	**Isla Desecheo**	**0.94**	**191**	⇓*i*P	**Pb**	**20 00 25.0**	**+1.8**
IDE	**Isla Desecheo**	**0.94**	**191**	*e*S	**Sb**	**20 00 35.0**	**-0.3**
AOPR	**Arecibo Observ**	**1.08**	**152**	⇓*e*Pg	**Pb**	**20 00 25.8**	**+0.2**
AOPR				⇓*e*Sg	**Sn**	**20 00 37.5**	**-0.9**
AOPR				IAML		20 00 40.2	
	comp=N,95nm,0.2s						
AOPR	**Arecibo Observ**	**1.08**	**152**		**Pb**	**20 00 25.6**	**0.0**
AOPR					**Sn**	**20 00 35.7**	**-2.7**
AOPR				IAML		20 00 40.2	
	comp=N,93nm,0.7s						
AOPR				IAML		20 00 43.2	
	comp=E,156nm,0.3s						
AOPR	**Arecibo Observ**	**1.08**	**152**	⇑*e*P	**Pb**	**20 00 25.8**	**+0.2**
AOPR	**Arecibo Observ**	**1.08**	**152**	*e*S	**Sn**	**20 00 36.3**	**-2.1**
EMPR	**Esperanza - Ma**	**1.10**	**139**		**Pb**	**20 00 27.0**	**+1.2**
EMPR					**Sn**	**20 00 39.4**	**+0.8**
EMPR	**Esperanza - Ma**	**1.10**	**139**	IAML		20 00 46.4	
	comp=E,151nm,1.3s						
EMPR				IAML		20 00 46.6	
	comp=E,172nm,1.3s						
EMPR	**Esperanza - Ma**	**1.10**	**139**	⇓*e*P	**Pb**	**20 00 27.0**	**+1.2**
EMPR	**Esperanza - Ma**	**1.10**	**139**	*e*S	**Sn**	**20 00 39.4**	**+0.8**
PRSN	**Puerto Rico Se**	**1.10**	**173**		**Pb**	**20 00 26.9**	**+1.0**
PRSN					**Sn**	**20 00 37.6**	**-1.0**
PRSN	**Puerto Rico Se**	**1.10**	**173**	⇓*e*P	**Pb**	**20 00 26.9**	**+1.0**
PRSN	**Puerto Rico Se**	**1.10**	**173**	*e*S	**Sn**	**20 00 37.6**	**-1.0**
LSP	**Las Mesas**	**1.15**	**171**		**Pb**	**20 00 26.9**	**+0.3**
LSP					**Sn**	**20 00 40.1**	**+0.2**
LSP	**Las Mesas**	**1.15**	**171**	⇑*e*P	**Pb**	**20 00 26.9**	**+0.3**
LSP	**Las Mesas**	**1.15**	**171**	*e*S	**Sn**	**20 00 40.1**	**+0.2**
UUPR	**Utuado, UPR, P**	**1.18**	**153**	Pg	**Pb**	**20 00 28.1**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.31**	**173**	⇓*e*Pg	**Pb**	**20 00 29.6**	**+0.3**
CRPR				⇑*e*Sg	**Sn**	**20 00 43.7**	**-0.1**
CRPR				IAML		20 00 44.3	
	comp=N,49nm,1.0s						
CRPR	**Cabo Rojo, PR**	**1.31**	**173**		**Pb**	**20 00 29.4**	**0.0**
CRPR					**Sn**	**20 00 43.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.31**	**173**	⇑*e*P	**Pb**	**20 00 29.7**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.31**	**173**	*e*S	**Sn**	**20 00 43.9**	**0.0**
ECPR	**Experimental S**	**1.32**	**138**	⇑*e*P	**Pb**	**20 00 31.0**	**+1.5**
ECPR	**Experimental S**	**1.32**	**138**	*e*S	**Sn**	**20 00 45.4**	**+1.3**
MLPR	**Magueyes Islan**	**1.36**	**170**	⇓*e*Pg	**Pb**	**20 00 30.4**	**+0.2**
MLPR				⇓*e*Sg	**Sn**	**20 00 44.7**	**-0.3**
MLPR				IAML		20 00 55.9	
	comp=N,9.0nm,0.2s						
MLPR	**Magueyes Islan**	**1.36**	**170**	⇓*i*P	**Pb**	**20 00 30.3**	**+0.2**
MLPR	**Magueyes Islan**	**1.36**	**170**	*e*S	**Sn**	**20 00 44.9**	**-0.1**
OBIP	**Obispado Ponce**	**1.42**	**153**		**Pb**	**20 00 31.2**	**0.0**
OBIP					**Sn**	**20 00 46.1**	**-0.4**
OBIP				IAML		20 00 48.6	
	comp=E,49nm,0.4s						
OBIP	**Obispado Ponce**	**1.42**	**153**	⇑*e*P	**Pb**	**20 00 31.2**	**0.0**
OBIP	**Obispado Ponce**	**1.42**	**153**	*e*S	**Sn**	**20 00 46.2**	**-0.4**
GCPR	**Guaynabo City**	**1.51**	**131**		**Pb**	**20 00 32.1**	**-0.7**
GCPR					**Sn**	**20 00 49.9**	**+1.0**
GCPR	**Guaynabo City**	**1.51**	**131**	⇓*e*P	**Pn**	**20 00 30.3**	**0.0**
GCPR	**Guaynabo City**	**1.51**	**131**	*e*S	**Sn**	**20 00 50.3**	**+1.4**
SJG	**San Juan**	**1.61**	**138**		**Pb**	**20 00 34.5**	**0.0**
SJG				IAML		20 00 56.8	
	comp=E,32nm,0.2s						
SJG				IAML		20 00 57.5	
	comp=E,31nm,0.2s						
SJG	**San Juan**	**1.61**	**138**	⇑*e*P	**Pb**	**20 00 35.7**	**+1.2**
SJG	**San Juan**	**1.61**	**138**	*e*S	**Sn**	**20 00 52.5**	**+1.2**
HUMP	**Col San Antoni**	**1.79**	**130**		**Pb**	**20 00 36.6**	**-1.0**
HUMP					**Sn**	**20 00 55.2**	**-0.5**
HUMP	**Col San Antoni**	**1.79**	**130**	IAML		20 01 05.3	
	comp=E,26nm,0.2s						
HUMP				IAML		20 01 10.2	
	comp=E,27nm,0.6s						
HUMP	**Col San Antoni**	**1.79**	**130**	⇑*e*P	**Pb**	**20 00 38.3**	**+0.8**
HUMP	**Col San Antoni**	**1.79**	**130**	*e*S	**Sb**	**20 00 58.8**	**-0.8**
DR12	**Loma Pena Alta**	**2.05**	**256**	Pn	**Pb**	**20 00 44.9**	**+2.9**
BANI	**BANI**	**3.05**	**253**	Pn	**Pb**	**20 00 58.4**	**-0.7**
SDDR	**Presa de Saban**	**3.80**	**266**	Pn	**Pb**	**20 01 09.7**	**-2.1**
SDDR				IAML		20 02 13.3	
	comp=E,8.2nm,1.2s						

IDC 30 20:17:15.5±4.1, 30˚.46N×140˚.88E, h0km, mb3.4/2, mbtmp3.2/3, ML1.8/1, MS3.3/2, Error ellipse: s-maj=220.4km s-min=28.1km az=79.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**6.47**	**341**	Pn	Pn	20 18 52.7	+0.7
	baz=160,slow=16,SNR=1.5						
MJAR				Sn	Sn	20 20 05.0	-1.6
	baz=176,slow=17,SNR=1.7						
	0.8nm,0.9s						
ASAJ	**Asahikawa**	**13.70**	**5**	LR	LR	20 26 03.0	
	comp=Z,129nm,21.9s,baz=260,slow=38						
TGY	**Tagaytay City**	**24.54**	**233**	LR	LR	20 31 04.0	
	comp=Z,75nm,19.3s,baz=21,slow=34						
H11N2	**WAKE ISLAND Hy**	**25.80**	**108**	T	T	20 50 15.3	
	baz=300,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**25.81**	**108**	T	T	20 50 16.2	
	baz=300,slow=75,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**25.82**	**108**	T	T	20 50 16.4	
	baz=300,slow=75,SNR=8.8						
H11S3	**WAKE ISLAND Hy**	**26.26**	**111**	T	T	20 50 58.9	
	baz=312						
H11S1	**WAKE ISLAND Hy**	**26.27**	**111**	T	T	20 51 02.2	
	baz=312						
H11S2	**WAKE ISLAND Hy**	**26.28**	**111**	T	T	20 50 57.0	
	baz=312						
WRA	**Warramunga Arr**	**50.50**	**188**	P	P	20 26 15.6	+0.1
	0.6nm,0.9s,baz=6.7,slow=7.3,SNR=3.0						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**54.23**	**188**	P	P	20 26 42.8	-0.4
	0.2nm,0.6s,baz=2.1,slow=5.5,SNR=4.5						
	0.2nm,0.6s						
H03N2	**Juan Fernandez**	**146.22**	**106**	T	T	23 20 41.2	
	baz=280						
H03N3	**Juan Fernandez**	**146.23**	**106**	T	T	23 20 02.9	
	baz=280						
H03N1	**Juan Fernandez**	**146.24**	**106**	T	T	23 20 22.7	
	baz=280						

*IDC **30** 20:33:18.1±1.0, 5˚.02S×153˚.45E, h0km, mb4.0/9, mbtmp4.0/10, ML2.2/1, Error ellipse: s-maj=28.6km s-min=21.1km az=84.0*
*NEIC **30** 20:33:26.0±1.4, 5˚.09S±0˚.07×153˚.6E±0˚.1, h60km±9km, mb4.4/9, Error ellipse: s-maj=16.6km s-min=8.2km az=64.0*

ISC 30 20:33:25.3±0.7, 5˚.14S±0˚.07×153˚.50E±0˚.09, h56km, n25, σ1f18/29, mb4.0/12, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.63**	**305**		**Pn**	**20 33 53.1**	**+1.3**
RABL				Sn	**Sn**	**20 34 11.1**	**-0.7**
PMG	**Port Moresby**	**7.59**	**236**	Pn	**Pn**	**20 35 10.5**	**-2.9**
	1.8nm,0.3s,baz=80,slow=6.1,SNR=5.8						
PMG				Sn	**Sn**	**20 36 38.4**	**+0.5**
	2.3nm,0.3s,baz=220,slow=3.6,SNR=3.7						
	1.7nm,0.4s						
PMG	**Port Moresby**	**7.59**	**236**		**Pn**	**20 35 15.1**	**+1.7**
PATS	**Pohnpei**	**12.83**	**22**	Pn	**Pn**	**20 36 24.4**	**-0.7**
DZM	**Mont Dzumac**	**20.98**	**145**	P	**P**	**20 38 03.9**	**-0.3**
	23nm,0.5s,baz=335,slow=14,SNR=80						
	23nm,0.5s						

DZM	**Mont Dzumac**	**20.98**	**145**	P	**P**	**20 38 03.7**	**-0.5**
ONTNC	**Ouen Toro**	**21.17**	**145**	P	**P**	**20 38 05.5**	**-0.7**
ONTNC				IAmb	IAmb	20 38 24.9	
	comp=Z,22nm,0.9s						
MARNC	**Mare, Loyalty**	**21.50**	**140**	P	**P**	**20 38 08.7**	**-0.9**
WB0	**Warramunga Arr**	**23.61**	**230**	P	**P**	**20 38 30.8**	**-0.8**
WB0				IAmb	IAmb	20 38 45.6	
	comp=Z,7.2nm,1.3s						
WRA	**Warramunga Arr**	**23.75**	**230**	P	**P**	**20 38 32.2**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=55,slow=10.0,SNR=15						
WRA				PcP	**PcP**	**20 42 15.8**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=52,slow=2.4,SNR=1.1						
	comp=Z,1.4nm,0.5s						
AS31	**Alice Springs**	**26.38**	**224**	P	**P**	**20 38 56.7**	**0.0**
ASAR	**Alice Springs**	**26.38**	**224**	P	**P**	**20 38 56.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=56,slow=8.7,SNR=12						
ASAR				PcP	**PcP**	**20 42 21.6**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=45,slow=2.1,SNR=5.6						
	comp=Z,0.5nm,0.4s						
KNRA	**Kununurra**	**26.45**	**245**	P	**P**	**20 38 57.3**	**-0.1**
KNRA				IAmb	IAmb	20 39 09.3	
	comp=Z,21nm,1.2s						
FITZ	**Fitzroy Crossi**	**30.11**	**242**	P	**P**	**20 39 29.2**	**-0.8**
TUWZ	**Tuamarina**	**40.49**	**156**	P	**P**	**20 40 58.8**	**0.0**
CMAR	**Chiang Mai Arr**	**58.65**	**295**	P	**P**	**20 43 18.2**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=106,slow=6.6,SNR=11						
	comp=Z,0.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**58.65**	**295**	P	**P**	**20 43 17.2**	**-0.3**
SONM	**Songino Array**	**66.98**	**328**	P	**P**	**20 44 12.3**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=111,slow=6.4,SNR=3.6						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**72.47**	**178**	P	**P**	**20 44 45.4**	**-0.1**
VNDA				IAmb	IAmb	20 44 58.5	
	comp=Z,8.9nm,1.5s						
MKAR	**Makanchi Array**	**81.04**	**319**	P	**P**	**20 45 34.1**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=102,slow=6.6,SNR=2.3						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**81.04**	**319**	P	**P**	**20 45 33.7**	**-0.7**
ZALV	**Zalesovo Beam**	**81.82**	**326**	P	**P**	**20 45 37.5**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=108,slow=5.8,SNR=2.1						
	comp=Z,0.3nm,0.4s						
QSPA	**South Pole Qui**	**84.82**	**180**	P	**P**	**20 45 56.7**	**+3.0**
	comp=Z,3.8nm,0.7s,baz=43,slow=2.3,SNR=22						
	comp=Z,3.8nm,0.7s						
QSPA	**South Pole Qui**	**84.82**	**180**	P	**P**	**20 45 56.4**	**+2.6**
QSPA				IAmb	IAmb	20 45 58.0	
	comp=Z,4.8nm,0.8s						
BVAR	**Borovoye Array**	**89.93**	**323**	P	**P**	**20 46 17.4**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=100,slow=7.9,SNR=4.1						
	comp=Z,0.5nm,0.6s						

*AEIC **30** 20:41:01.4±1.7, 54˚.53N±0˚.05×161˚.40W±0˚.05, h25km±8km, Error ellipse: s-maj=8.1km s-min=2.9km az=154.0*

NEIC 30 20:40:59.4±1.2, 54˚.45N±0˚.05×161˚.27W±0˚.04, h20km±12km, ML2.6/14, ML2.2(AEIC), Error ellipse: s-maj=8.1km s-min=2.4km az=159.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOL	**Dolgoi Island**	**0.78**	**334**		Pb	20 41 14.2	-0.1
DOL					Sb	20 41 24.5	+0.2
DT1	**Dutton Round H**	**0.88**	**319**		Pb	20 41 15.5	-0.5
DT1					Sb	20 41 26.8	-0.5
PS4A	**Pavlof South-4**	**0.96**	**340**		Pb	20 41 17.4	+0.1
PS4A					Sn	20 41 30.4	-0.4
PS1A	**Pavlof South-1**	**1.01**	**345**		Pn	20 41 18.4	-0.1
PS1A					Sn	20 41 31.5	-0.5
SDPT	**Sand Point**	**1.01**	**27**		Pn	20 41 18.4	0.0
SDPT					Sn	20 41 32.3	+0.3
SDPT				IAML		20 41 33.0	
	comp=N,182nm,0.7s						
SDPT				IAML		20 41 33.1	
	comp=E,117nm,0.3s						
CNBA	**Chernabura Isl**	**1.04**	**69**	Pn	Pb	20 41 18.1	-0.7
FALS	**False Pass**	**1.31**	**289**		Pn	20 41 21.8	-0.8
FALS					Sn	20 41 39.4	0.0
FALS				IAML		20 41 44.2	
	comp=E,197nm,0.5s						
S12K	**Black Hills**	**1.33**	**340**		Pn	20 41 23.2	+0.4
S12K					Sb	20 41 40.9	+0.6
S12K				IAML		20 41 43.3	
	comp=E,122nm,0.4s						
S12K				IAML		20 41 44.7	
	comp=N,66nm,0.3s						
UNV	**Unalaska Valle**	**3.14**	**261**	Pn	Pn	20 41 47.5	-0.2
UNV				IAML		20 42 36.9	
	comp=E,7.7nm,1.1s						
O15K	**Ungalikthiuk R**	**4.80**	**9**	Pn	Pn	20 42 10.9	+0.4
O15K				IAML		20 43 41.8	
	comp=E,6.3nm,1.0s						
O15K				IAML		20 44 09.8	
	comp=N,6.0nm,1.1s						
O14K	**Tigyukauivet M**	**4.81**	**0**	Pn	Pn	20 42 11.8	+1.1
N14K	**Kuskokwak Cree**	**5.49**	**358**	Pn	Pn	20 42 20.6	+0.7
N15K	**Kwethluk River**	**5.77**	**6**	Pn	Pn	20 42 24.6	+0.8

*PRU **30** 20:53:50.5, 41˚.11N×19˚.49E, h10km, M4.4*
*IDC **30** 20:53:50.0±0.7, 41˚.46N×19˚.56E, h0km, mb3.9/15, mbtmp3.9/29, ML3.1/13, MS3.8/49, Error ellipse: s-maj=12.4km s-min=9.7km az=177.0*
*MOS **30** 20:53:50.1±1.0, 41˚.43N×19˚.38E, h15km, mb4.8/10, MS4.0/4, Error ellipse: s-maj=6.4km s-min=4.1km az=77.6*
*NEIC **30** 20:53:51.8±1.8, 41˚.51N±0˚.04×19˚.48E±0˚.07, h10km±1km, mb4.4/20, Error ellipse: s-maj=8.9km s-min=6.3km az=258.0*
*BEO **30** 20:53:53.2±0.6, 41˚.44N×19˚.50E, h16km±3km, ML4.0/5*
*THE **30** 20:53:53.6, 42˚N±7˚×1˚9E±˚, h103km±18km, M4.4/44, mb4.7/2, MLh4.4/44*
*TIR **30** 20:53:53.2, 41˚.57N×19˚.52E, h25km±2km, Md3.3/9, Ml4.5/7*
*BGR **30** 20:53:53.2±0.5, 41˚.40N×19˚.48E, h25km, ML4.3, Error ellipse: s-maj=17.8km s-min=10.0km az=28.0*
*MCSM **30** 20:53:53.9±0.5, 41˚N±3˚×1˚9E±˚, h17km±4km, mb4.3, mB5.7, MLv4.6, Mw(mB)5.2*
*PDG **30** 20:53:53.6±0.5, 41˚.51N×19˚.41E, h22km±1km, MD4.0/10, ML3.9/12, Error ellipse: s-maj=0.4km s-min=1.1km az=0.0*
*MED_RC **30** 20:53:53.0±0.5, 41˚.55N×19˚.43E, h36km±5km, MW4.4/16, Moment Tensor Solution. Mantle waves: s16,c20; Duration: f≤0 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.82±1.15; $M_{θθ}$=3.95±.83; $M_{φφ}$=-3.13±.64; $M_{rθ}$=0.23±.61; $M_{θφ}$=2.39±.77; M_{rr}-2.48±.67; Best double couple: M_0=4.98000×10^{15} NP1:φs=294.00000°, δ65.00000°, λ=-17.00000°. NP2:φs=31.00000°, δ74.00000°, λ=-154.00000°. Principal axes: T 4.7300, Plg6.0000°, Azm161.0000°; N 0.4900, Plg60.0000°, Azm61.0000°; P -5.2200, Plg29.0000°, Azm255.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*ROM **30** 20:53:53.1±0.2, 41˚.508N±0˚.010×19˚.48E±0˚.03, h23km±4km, ML4.0/168 Error ellipse: s-maj=2.7km s-min=0.8km az=73.0*
*SKO **30** 20:53:55.5, 41˚.54N×19˚.56E, h8km, ML4.4*
*VIE **30** 20:53:55.6±1.1, 41˚.66N×19˚.36E, h10km, mb3.3/16, ms4.1/16, Error ellipse: s-maj=20.8km s-min=8.6km az=41.0 41 km NNW of Durres*
*NAO **30** 20:53:59.3, 41˚.45N×19˚.56E, h10km, MB3.7*

ISC 30 20:53:52.6±0.7, 41˚.51N±0˚.01×19˚.49E±0˚.02, h16km±4km, n551, σ1f78/586, mb4.3/25, MS4.0/38, 39C-30D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.33**	**119**	Pg	**Pg**	**20 53 59.3**	**-0.1**
TIR				Sg	**Sg**	**20 54 03.4**	**-0.7**
TIR				AML	AML	20 54 04.4	
	1μm,0.4s						
TIR				AML	AML	20 54 04.6	
	797nm,0.4s						
TIR	**Tirane**	**0.33**	**119**	⇓P	**Pg**	**20 53 59.3**	**-0.1**
TIR				S	**Sb**	**20 54 05.0**	**0.0**
TIR				AML	AML		
TIR				AML	AML		
ULC	**Ulcinj**	**0.49**	**338**	⇓*i*Pg	**Pg**	**20 54 01.6**	**-0.9**
ULC				*i* Sg	**Sg**	**20 54 09.2**	**0.0**
SDA	**Shkodra**	**0.55**	**1**	Pg	**Pg**	**20 54 02.5**	**-1.0**
SDA				Sg	**Sb**	**20 54 11.5**	**+0.1**
SDA				AMd		20 55 32.5	
DRME	**Dracevica, Mon**	**0.72**	**342**	*e*Pg	**Pg**	**20 54 06.5**	**-0.1**
DRME				*e*Sg	**Sn**	**20 54 22.5**	**+3.7**
DRME	**Dracevica, Mon**	**0.72**	**342**	⇑*i*Pg	**Pg**	**20 54 06.6**	**-0.1**
DRME				*i* Sg	**Sb**	**20 54 17.0**	**+0.6**
PHP	**Peshkopia**	**0.74**	**76**	Pg	**Pg**	**20 54 06.0**	**-1.0**
PHP				Sg	**Sg**	**20 54 16.5**	**-0.4**
PHP				AML	AML	20 54 23.8	
	95nm,0.9s						
PHP				AMd		20 55 04.9	
PHP	**Peshkopia**	**0.74**	**76**	P	**Pg**	**20 54 05.8**	**-1.2**
PHP				S	**Sg**	**20 54 16.8**	**0.0**
BUM	**Brajici-Budva**	**0.91**	**331**	⇓*i*Pg	**Pb**	**20 54 09.9**	**-0.2**
BUM				*i* Sg	**Sn**	**20 54 23.5**	**-0.1**
PDG	**Podgorica**	**0.94**	**349**	Pg	**Pb**	**20 54 09.5**	**-1.1**
PDG				Sg	**Sb**	**20 54 22.8**	**+0.1**
PDG				AMd		20 55 43.3	
PDG	**Podgorica**	**0.94**	**349**		**Pb**	**20 54 09.4**	**-1.1**
PDG				Sg	**Sg**	**20 54 23.4**	**+0.1**
PDG	**Podgorica**	**0.94**	**349**	⇑P	**Pb**	**20 54 10.5**	**0.0**
PDG				⇑S	**Sn**	**20 54 25.3**	**+1.0**
PDG	**Podgorica**	**0.94**	**349**	⇑*e*Pg	**Pb**	**20 54 10.7**	**+0.2**
PDG				*e*Sg	**Sn**	**20 54 26.9**	**+2.7**
PDG	**Podgorica**	**0.94**	**349**	P	**Pb**	**20 54 10.3**	**-0.3**
PDG				S	**Sg**	**20 54 23.6**	**+0.4**
PDG				AML	AML		
	comp=N,2295μm,1.6s						
PDG				AML	AML		
	comp=N,2310μm,1.6s						
PDG				AML	AML		
	comp=E,3045μm,1.2s						
PDG				AML	AML		
	comp=E,3020μm,1.2s						
PDG				AML	AML		
	comp=N,2295μm,0.4s						
PDG				AML	AML		
	comp=N,2310μm,0.4s						
PDG	**Podgorica**	**0.94**	**349**	⇓*i*Pg	**Pb**	**20 54 09.8**	**-0.7**
PDG				*i* Sg	**Sn**	**20 54 24.8**	**+0.6**
VLO	**Vlora**	**1.03**	**180**	Pg	**Pg**	**20 54 14.5**	**+1.9**
VLO				Sg	**Sn**	**20 54 27.3**	**+0.8**
VLO				AML	AML	20 54 39.7	
	comp=N,90nm,0.4s						
VLO				AMd		20 55 36.5	
VLO	**Vlora**	**1.03**	**180**	P	**Pg**	**20 54 15.0**	**+2.3**
VLO				S	**Sn**	**20 54 33.2**	**+6.7**
VLO	**Vlora**	**1.03**	**180**	P	**Pg**	**20 54 13.5**	**+0.8**
VLO				S	**Sn**	**20 54 29.9**	**+3.4**
VLO				AML	AML		
	comp=E,33650μm,1.1s						
VLO				AML	AML		
	comp=N,33950μm,0.6s						
OHR	**Ohrid**	**1.06**	**111**	*i* Pg	**Pn**	**20 54 13.1**	**+0.2**
OHR				*i* Sg	**Sn**	**20 54 29.1**	**+1.7**
OHR				*e*Lg	Lg	20 54 30.1	
	comp=N,22μm,0.8s						
OHR				*e*Lg	Lg	20 54 33.3	
	comp=E,14μm,0.6s						
CEME	**Cevo**	**1.12**	**338**	⇑*i*Pg	**Pb**	**20 54 13.7**	**0.0**
CEME				*i* Sg	**Sg**	**20 54 30.6**	**+1.5**
PVY	**Plav**	**1.14**	**18**	*e*Pg	**Pg**	**20 54 15.1**	**+0.3**
PVY	**Plav**	**1.14**	**18**	⇑*i*Pg	**Pn**	**20 54 13.5**	**-0.6**
PVY				*i* Sg	**Sg**	**20 54 32.1**	**+2.4**
HCY	**Herceg Novi**	**1.20**	**322**	⇓*i*Pg	**Pb**	**20 54 15.3**	**+0.4**
HCY				*i* Sg	**Sg**	**20 54 32.9**	**+1.5**
KBN	**Korca**	**1.32**	**131**	Pg	**Pg**	**20 54 17.9**	**-0.1**
KBN				Sg	**Sg**	**20 54 36.8**	**+1.5**
KBN				AML	AML	20 54 40.2	
	comp=E,52nm,0.5s						
KBN				AMd		20 55 29.6	
KBN	**Korca**	**1.32**	**131**	P	**Pg**	**20 54 17.8**	**-0.4**
KBN				S	**Sg**	**20 54 38.2**	**+2.9**
KBN	**Korca**	**1.32**	**131**	P	**Pg**	**20 54 17.7**	**-0.4**
KBN				S	**Sg**	**20 54 36.6**	**+1.4**
NKME	**Niksic**	**1.32**	**343**	⇓*i*Pg	**Pb**	**20 54 17.1**	**0.0**
NKME				*i* Sg	**Sg**	**20 54 36.5**	**+1.1**
KOME	**Kolasin**	**1.34**	**1**	*e*Pg	**Pg**	**20 54 18.8**	**+0.2**
KOME				*e*Sg	**Sg**	**20 54 40.7**	**+4.6**
KOME	**Kolasin**	**1.34**	**1**	⇓*i*Pg	**Pb**	**20 54 17.6**	**+0.1**
KOME				*i* Sg	**Sg**	**20 54 36.5**	**+0.4**
BEY	**Berane**	**1.40**	**12**	*e*Pg	**Pg**	**20 54 19.2**	**-0.4**
IVA	**Berane**	**1.40**	**12**	⇑*i*Pg	**Pn**	**20 54 17.9**	**+0.4**
IVA				*i* Sg	**Sg**	**20 54 38.4**	**+0.6**
TREB	**Trebinje**	**1.48**	**325**	*e*Pn	**Pb**	**20 54 20.0**	**+0.3**
TREB	**Trebinje**	**1.48**	**325**	*e*Pg	**Pb**	**20 54 20.3**	**+0.6**
SKO	**Skopje**	**1.53**	**72**	*i* Pg	**Pb**	**20 54 21.6**	**+0.9**
SKO				*i* Sg	**Sg**	**20 54 42.4**	**+0.3**
MESG	**Mesagne**	**1.54**	**234**	P	**Pn**	**20 54 19.4**	**+0.1**
BRY	**Bratogost**	**1.56**	**334**	⇑*i*Pg	**Pb**	**20 54 21.3**	**+0.1**
BRY				*i* Sg	**Sg**	**20 54 42.2**	**-0.9**
NEST	**Nestorio**	**1.61**	**132**	P	**Pb**	**20 54 22.8**	**+0.8**
NEST				S	**Sg**	**20 54 46.4**	**+1.9**
SJES	**Sjenica**	**1.79**	**11**	*e*Pg	**Pb**	**20 54 25.7**	**+0.6**
SJES				*e*Sg	**Sg**	**20 54 50.0**	**-0.4**
KLINJ	**Klinje**	**1.79**	**338**	*e*Pn	**Pb**	**20 54 26.0**	**+0.9**
KEK	**Kerkira**	**1.81**	**172**	Sn	**Sg**	**20 54 51.6**	**+0.9**
KEK	**Kerkira**	**1.81**	**172**	P	**Pg**	**20 54 29.3**	**+2.0**
KEK				AML	AML		
	comp=N,7030μm,0.6s						
KEK				AML	AML		
	comp=E,9375μm,0.8s						
PLE	**Pljevlja**	**1.82**	**358**

MIGL Miglionico 2.47 250 P Pn 20 54 33.1 +0.9
MIGL AML AML
comp=N,6380µm,0.8s
MIGL AML AML
comp=E,6520µm,0.9s
MRVN Minervino Murg 2.52 261 P Pn 20 54 33.0 +0.1
MRVN AML AML
comp=E,738µm,1.2s
MRVN AML AML
comp=N,1030µm,1.2s
MRVN AML AML
comp=E,738µm,0.8s
GRUS Gruza 2.55 20 ePn Pn 20 54 35.1 +1.9
KNT Kendrikon 2.59 96 P Pn 20 54 35.7 +1.8
KNT S Sn 20 55 07.0 +2.0
KNT Kendrikon 2.59 96 i Pn Pg 20 54 42.1 -0.2
LIT Litokhoron 2.68 121 Pn 20 54 35.7 +0.7
LIT Litokhoron 2.68 121 P Pn 20 54 35.7 +0.7
BOVS Bovan 2.69 37 ⇓P Pn 20 54 37.7 +2.5
BOVS Bovan 2.69 37 ePn Pn 20 54 36.4 +1.3
BOVS eSn Sn 20 55 08.6 +1.3
MSAG Monte S. Angel 2.69 276 P Pn 20 54 35.2 -0.1
MSAG AML AML
comp=E,1240µm,1.0s
MSAG AML AML
comp=N,1250µm,1.6s
MSAG AML AML
comp=E,493µm,0.9s
MSAG AML AML
comp=N,515µm,0.3s
MSAG AML AML
comp=N,1250µm,0.4s
MSAG AML AML
comp=E,1240µm,1.0s
MSAG AML AML
comp=E,493µm,1.1s
TRAN Tran 2.70 59 P Pn 20 54 37.0 +1.6
ORI Oriolo Calabro 2.72 239 P Pn 20 54 35.2 -0.4
ORI AML AML
comp=E,3090µm,0.6s
ORI AML AML
comp=N,2315µm,0.5s
PALZ Palazzo San Ge 2.72 259 P Pn 20 54 37.2 +1.6
PALZ AML AML
comp=E,3800µm,1.4s
PALZ AML AML
comp=N,3975µm,1.5s
PALZ AML AML
comp=E,3800µm,0.6s
PALZ AML AML
comp=N,3975µm,0.5s
THL Klokotos Trika 2.73 134 P Pn 20 54 38.0 +2.2
THL Klokotos Trika 2.73 134 P Pn 20 54 37.5 +1.8
THL AML AML
comp=E,464µm,0.8s
THL AML AML
comp=N,431µm,0.7s
KKB Krupnik 2.75 82 P Pn 20 54 37.7 +1.8
KKB S Sn 20 55 10.6 +1.7
KKB Krupnik 2.75 82 ⇑i P Pn 20 54 37.8 +1.8
KKB S Sn 20 55 11.5 +2.6
KKB Krupnik 2.75 82 i Pn Pn 20 54 38.2 +2.1
THE Thessaloniki 2.77 107 P Pn 20 54 37.6 +1.3
THE Thessaloniki 2.77 107 i Pn Pn 20 54 37.6 +1.3
ACER Acerenza 2.77 256 Pn 20 54 36.6 +0.3
ACER Acerenza 2.77 256 P Pn 20 54 37.1 +0.7
ACER AML AML
comp=E,2235µm,1.6s
ACER AML AML
comp=N,2250µm,0.8s
ACER AML AML
comp=N,2240µm,0.8s
ACER AML AML
comp=E,2345µm,1.6s
TRUS Trudelj 2.80 14 ePn Pn 20 54 38.0 +1.3
SGRT San Giovanni R 2.82 276 Pn 20 54 36.3 -0.7
SGRT San Giovanni R 2.82 276 P Pn 20 54 36.8 -0.2
SGRT AML AML
comp=E,712µm,1.6s
SGRT AML AML
comp=N,780µm,1.1s
SGRT AML AML
comp=E,712µm,0.4s
TSLK Tsoukalades, L 2.82 161 P Pn 20 54 38.1 +1.1
LKD2 Lefkada island 2.86 161 P Pn 20 54 38.2 +0.7
SALB San Lorenzo Be 2.89 237 P Pn 20 54 37.3 -0.7
SALB AML AML
comp=E,926µm,1.5s
SALB AML AML
comp=N,834µm,1.5s
SALB AML AML
comp=N,834µm,0.5s
SALB AML AML
comp=E,926µm,0.5s
AMPL Ampelaki 2.90 152 P Pn 20 54 39.6 +1.5
SCHR S. Chirico Rap 2.90 244 P Pn 20 54 38.8 +0.6
SCHR AML AML
comp=E,785µm,1.1s
SCHR AML AML
comp=N,741µm,1.1s
SCHR AML AML
comp=N,741µm,0.9s
SCHR AML AML
comp=E,785µm,0.9s
ZAPS Zavoj 2.92 52 ePn Pn 20 54 40.2 +1.7
ZAPS eSn Sn 20 55 14.8 +1.5
DRAG Dragano-Lefkad 2.94 163 P Pn 20 54 39.0 +0.4
NYDR Nydri-Lefkada 2.94 161 P Pn 20 54 39.2 +0.6
APRC Apricena 2.97 276 P Pn 20 54 38.7 -0.3
APRC AML AML
comp=N,791µm,1.3s
APRC AML AML
comp=N,791µm,0.7s
APRC AML AML
comp=E,693µm,0.9s
VTS Vitosha 3.00 67 P Pn 20 54 41.2 +1.6
VTS Vitosha 3.00 67 ⇑i P Pn 20 54 40.8 +1.1
VTS S Sn 20 55 18.3 +2.9
VTS Vitosha 3.00 67 ePn Pn 20 54 41.5 +1.8
EVGI Lefkada island 3.02 162 P Pn 20 54 40.1 +0.5
MCEL Monticello 3.03 248 P Pn 20 54 40.8 +0.8
MCEL AML AML
comp=E,962µm,1.0s
MCEL AML AML
comp=E,964µm,1.0s
MCEL AML AML
comp=N,974µm,0.6s
MCEL AML AML
comp=N,950µm,0.6s
MCEL AML AML
comp=N,974µm,1.4s
MCEL AML AML
comp=E,964µm,1.0s
MCEL AML AML
comp=E,962µm,1.0s
SVIS Svilajnac 3.04 24 ePn Pn 20 54 41.1 +1.2
TEKS Tekeris 3.04 1 ePn Pn 20 54 40.8 +0.7
ZAGS Zajecar 3.07 40 ePn Pn 20 54 41.8 +1.4
PLNA Plana 3.09 70 P Pn 20 54 42.7 +1.9
MRLC Muro Lucano 3.11 257 P Pn 20 54 42.2 +1.2
MRLC AML AML
comp=E,430µm,1.0s
MRLC AML AML
comp=N,417µm,1.5s
MRLC AML AML
comp=E,806µm,1.0s
MRLC AML AML
comp=N,928µm,1.6s
MRLC AML AML
comp=E,430µm,1.0s
MRLC AML AML
comp=N,417µm,0.5s
MRLC AML AML
comp=E,806µm,1.0s
MRLC AML AML
comp=N,928µm,0.4s
SRS Serrai 3.12 96 P Pn 20 54 42.3 +1.3
SRS Serrai 3.12 96 i Pn Pn 20 54 42.5 +1.4
TIP Timpagrande 3.12 223 Pn 20 54 40.7 -0.4
TIP Timpagrande 3.12 223 ⇑P Pn 20 54 39.6 -1.6
TIP Timpagrande 3.12 223 P Pn 20 54 41.1 -0.1
TIP AML AML
comp=E,384µm,1.4s
TIP AML AML
comp=N,613µm,0.9s
TIP AML AML
comp=E,375µm,1.5s
TIP AML AML
comp=E,375µm,0.5s
TIP AML AML
comp=E,384µm,0.6s
TIP AML AML
comp=N,616µm,0.9s
TIP Timpagrande 3.12 223 Pn Pn 20 54 40.8 -0.4
BLSH Balsha 3.12 63 P Pn 20 54 43.8 +2.6
SLCN Sala Consilina 3.12 250 P Pn 20 54 42.3 +1.0
SLCN AML AML
comp=E,1030µm,1.1s
SLCN AML AML
comp=N,850µm,0.8s
SLCN AML AML
comp=E,1160µm,1.1s
SLCN AML AML
comp=N,850µm,1.2s
SLCN AML AML
comp=N,863µm,0.7s
SLCN AML AML
comp=E,1160µm,0.9s
SLCN AML AML
comp=E,1030µm,0.9s
EVR Evrytania 3.14 145 P Pn 20 54 44.4 +2.9
CUC Castrocucco 3.17 243 Pn 20 54 42.2 +0.4
CUC Castrocucco 3.17 243 P Pn 20 54 42.5 +0.7
CUC AML AML
comp=N,584µm,1.0s
CUC AML AML
comp=E,1055µm,1.0s
CUC AML AML
comp=N,622µm,0.9s
CUC AML AML
comp=N,622µm,1.1s
CUC AML AML
comp=N,584µm,1.0s
CUC AML AML
comp=E,1070µm,1.0s
BORS2 Bor- Borsko je 3.19 35 ePn Pn 20 54 42.0 0.0
MMB Musomishta 3.20 88 P Pn 20 54 44.1 +1.8
MMB Musomishta 3.20 88 P Pn 20 54 43.9 +1.6
MMB S Sn 20 55 21.4 +1.3
MAKR Makrakomi, Fth 3.21 140 P Pn 20 54 45.0 +2.7
SPS2 Spezzano della 3.27 228 P Pn 20 54 44.0 +0.8
SPS2 AML AML
comp=E,212µm,1.1s
SPS2 AML AML
comp=N,396µm,1.6s
SPS2 AML AML
comp=E,212µm,0.9s
SPS2 AML AML
comp=N,396µm,0.4s
MELA Melanico ??? S 3.28 275 P Pn 20 54 43.2 0.0
MELA AML AML
comp=E,1082µm,0.9s
MELA AML AML
comp=E,1310µm,0.9s
MELA AML AML
comp=N,1235µm,1.1s
MELA AML AML
comp=E,1310µm,1.1s
MELA AML AML
comp=E,1082µm,1.1s
MELA AML AML
comp=N,1235µm,0.9s
MELA AML AML
comp=N,1170µm,1.0s
AVAS Avala Beograd 3.28 13 ePn Pn 20 54 44.9 +1.6
SNAL S. Angelo Dei 3.28 261 P Pn 20 54 43.7 +0.4
SNAL AML AML
comp=E,1039µm,1.5s
SNAL AML AML
comp=N,1355µm,1.0s
SNAL AML AML
comp=E,1006µm,1.5s
SNAL AML AML
comp=N,1335µm,1.0s
SNAL AML AML
comp=E,1039µm,0.5s
SNAL AML AML
comp=E,1006µm,0.5s
SNAL AML AML
comp=N,1335µm,1.0s
SNAL AML AML
comp=N,1355µm,1.0s
PVO Paravola 3.28 151 P Pn 20 54 45.5 +2.2
MGR Morigerati 3.28 247 P Pn 20 54 44.4 +1.1
MGR AML AML
comp=E,562µm,1.3s
MGR AML AML
comp=N,548µm,0.9s
MGR AML AML
comp=E,562µm,0.7s
MGR AML AML
comp=N,548µm,1.1s
AGG Agios Georgios 3.30 138 P Pn 20 54 45.5 +1.9
KUBS Kucevo 3.32 28 ePn Pn 20 54 43.7 -0.2
KUBS eSn Sn 20 55 22.8 -0.2
CDRU Civita di Ruta 3.32 254 P Pn 20 54 44.5 +0.5
CDRU AML AML
comp=E,419µm,1.4s
CDRU AML AML
comp=N,312µm,1.5s
DMLN Damoulianata-K 3.33 168 P Pn 20 54 44.3 +0.2
CET2 Cetraro 3.34 235 P Pn 20 54 44.8 +0.7
CET2 AML AML
comp=E,2160µm,0.9s
CET2 AML AML
comp=N,1445µm,0.7s
MCRV Calabrutti - M 3.34 259 P Pn 20 54 44.4 +0.1
MCRV AML AML
comp=N,524µm,0.6s
MCRV AML AML
comp=E,340µm,0.5s
CAR1 CAROLEI 3.36 229 P Pn 20 54 45.2 +0.7
CAR1 AML AML
comp=N,924µm,0.9s
CAR1 AML AML
comp=E,1175µm,1.2s
CAR1 AML AML
comp=N,832µm,0.8s
CAR1 AML AML
comp=E,1230µm,0.9s
CAR1 AML AML
comp=E,1175µm,0.8s
CAR1 AML AML
comp=N,924µm,1.1s
CAR1 AML AML
comp=N,832µm,1.2s
CMPR Campora 3.38 251 P Pn 20 54 45.5 +0.7
CMPR AML AML
comp=E,381µm,0.6s
CMPR AML AML
comp=E,381µm,1.4s
CMPR AML AML
comp=N,360µm,1.1s
MRB1 Monte Rocchett 3.42 265 P Pn 20 54 45.7 +0.5
MRB1 AML AML
comp=E,644µm,0.5s
MRB1 AML AML
comp=E,634µm,0.5s
MRB1 AML AML
comp=N,828µm,1.6s
MRB1 AML AML
comp=N,790µm,1.6s
BULG Bulgheria - Ca 3.43 247 P Pn 20 54 46.0 +0.5
BULG AML AML
comp=E,734µm,0.7s
BULG AML AML
comp=N,986µm,1.3s
BULG AML AML
comp=N,1010µm,1.3s
BULG AML AML
comp=N,1010µm,0.7s
BULG AML AML
comp=N,986µm,0.7s
BULG AML AML
comp=E,750µm,0.7s
VLS Valsamata 3.43 165 P Pn 20 54 45.2 -0.2
VLS Valsamata 3.43 165 P Pn 20 54 45.4 0.0
VLS AML AML
comp=N,1410µm,1.5s
VLS AML AML
comp=E,1470µm,0.4s
VLS AML AML
comp=N,1410µm,0.5s
MTMR Montemarano 3.43 262 P Pn 20 54 45.9 +0.4
MTMR AML AML
comp=N,408µm,1.1s
MTMR AML AML
comp=E,363µm,0.5s
CIGN Sant'Elia a Pi 3.44 274 P Pn 20 54 46.2 +0.7
CIGN AML AML
comp=E,358µm,1.2s
CIGN AML AML
comp=N,410µm,1.1s
CIGN AML AML
comp=N,410µm,0.9s
ANX Ano Chora 3.46 146 P Pn 20 54 48.6 +2.8
RTZL Ratzakli, Kefa 3.56 163 P Pn 20 54 47.7 +0.5
EFP Efpalio 3.59 148 P Pn 20 54 50.0 +2.4
OUR Ouranopolis 3.60 107 P Pn 20 54 49.0 +1.3
PGB Panagyurishte 3.63 72 P Pn 20 54 51.2 +3.0
VALD Valchedram 3.64 52 P Pn 20 54 50.3 +2.0
MPEP Malo Peshtene 3.65 58 P Pn 20 54 50.8 +2.4
BLY Banja Luka 3.65 333 ePn Pb 20 54 53.8 -3.0
BLY Banja Luka 3.65 333 ⇑P Pn 20 54 48.2 -0.2
MDVR Moldovita 3.66 26 ⇓P Pn 20 54 50.0 +1.4
MDVR Moldovita 3.66 26 ePn Pn 20 54 50.2 +1.7
AXAR Agios Charalam 3.66 137 P Pn 20 54 51.0 +2.4
FRGS Fruska Gora 3.66 4 ePn Pn 20 54 49.5 +1.0
SERG Sergoula 3.67 147 P Pn 20 54 51.3 +2.7
VITU Vitulano (BN) 3.67 267 P Pn 20 54 50.2 +1.5
VITU AML AML
comp=E,358µm,1.6s
VITU AML AML
comp=E,521µm,0.7s
VITU AML AML
comp=N,604µm,0.6s
VITU AML AML
comp=E,358µm,0.4s
VITU AML AML
comp=E,521µm,1.3s
VITU AML AML
comp=N,640µm,0.7s
TRIV Trivento 3.71 276 P Pn 20 54 50.1 +0.8
TRIV AML AML
comp=E,372µm,1.0s
TRIV AML AML
comp=N,432µm,1.1s
TRIV AML AML
comp=E,382µm,1.0s
TRIV AML AML
comp=N,434µm,1.1s
TRIV AML AML
comp=N,434µm,0.9s
TRIV AML AML
comp=N,432µm,0.9s
TRIV AML AML
comp=E,382µm,1.0s
TRIV AML AML
comp=E,372µm,1.0s
KALE Kalithea 3.72 146 P Pn 20 54 51.9 +2.5
PAOL Paolisi 3.74 264 Pn 20 54 50.4 +0.8
PAOL Paolisi 3.74 264 P Pn 20 54 51.1 +1.4
PAOL AML AML
comp=E,371µm,0.9s
PAOL AML AML
comp=N,594µm,1.5s
PAOL AML AML
comp=N,598µm,1.1s
PAOL AML AML
comp=E,371µm,1.1s
PAOL AML AML
comp=N,598µm,0.9s
PAOL AML AML
comp=N,594µm,0.5s
PAOL AML AML
comp=E,338µm,1.4s
PUNG Punghina 3.75 41 ⇑P Pn 20 54 52.0 +2.2
RLS Riolos of Patr 3.77 155 P Pn 20 54 51.5 +1.5
ORTH Orthonies,Zaky 3.77 165 P Pn 20 54 51.0 +1.0
KAVA Kavala 3.82 96 P Pn 20 54 52.4 +1.6
PLAC Placanica 3.85 218 P Pn 20 54 50.7 -0.4
PLAC AML AML
comp=N,338µm,0.6s
PLAC AML AML
comp=N,424µm,0.6s
PLAC AML AML
comp=E,332µm,0.5s
PLAC AML AML
comp=E,410µm,0.6s
VRSS Vrsac 3.86 20 ePn Pn 20 54 52.4 +1.2
VBKN Vesuvio Bunker 3.88 262 P Pn 20 54 52.2 +0.6
VBKN AML AML
comp=N,950µm,0.6s
VBKN AML AML
comp=E,1063µm,0.9s
VBKN AML AML
comp=N,950µm,1.4s
ATAL Atalanti 3.90 135 P Pn 20 54 53.6 +1.7
MIDA Miranda 3.93 274 P Pn 20 54 52.9 +0.6
MIDA AML AML
comp=E,266µm,1.2s
MIDA AML AML
comp=N,289µm,0.8s
MIDA AML AML
comp=E,266µm,0.8s
MIDA AML AML
comp=N,289µm,1.2s
DRO Drossia 3.94 153 P Pn 20 54 53.7 +1.3
RZN Rozhen 3.94 86 P Pn 20 54 54.9 +2.3
RZN Rozhen 3.94 86 ⇑i P Pn 20 54 54.7 +2.1
VAGA Valle Agricola 3.95 270 P Pn 20 54 53.7 +1.1
VAGA AML AML
comp=E,379µm,0.7s
VAGA AML AML
comp=N,499µm,0.7s
VAGA AML AML
comp=E,384µm,0.7s
VAGA AML AML
comp=N,506µm,0.7s
VAGA AML AML
comp=E,384µm,1.3s
VAGA AML AML
comp=E,379µm,1.3s
VAGA AML AML
comp=N,499µm,1.3s
VAGA AML AML
comp=N,506µm,1.3s
PLD Plovdiv 3.98 79 P Pn 20 54 55.4 +2.4
PLD Plovdiv 3.98 79 P Pn 20 54 55.4 +2.4
PLD Plovdiv 3.98 79 ePn Pn 20 54 55.0 +2.0
HERR Herculane 4.00 31 ⇓P Pn 20 54 54.5 +1.3
JOPP Joppolo 4.00 225 P Pn 20 54 53.0 -0.3
JOPP AML AML
comp=E,316µm,1.1s
JOPP AML AML
comp=N,256µm,0.9s
JOPP AML AML
comp=N,256µm,1.1s
LPEL Lama dei Pelig 4.00 280 P Pn 20 54 54.2 +0.9
LPEL AML AML
comp=N,302µm,0.8s
LPEL AML AML
comp=E,348µm,0.6s
RNI2 Rionero Sannit 4.00 275 P Pn 20 54 54.2 +0.9
RNI2 AML AML
comp=E,372µm,1.1s
RNI2 AML AML
comp=N,318µm,0.9s
RNI2 AML AML
comp=E,365µm,1.1s
RNI2 AML AML
comp=N,316µm,0.9s
KLV Kalavryta, Ach 4.02 148 P Pn 20 54 55.5 +2.0
KLV Kalavryta, Ach 4.02 148 P Pn 20 54 55.7 +2.2
KLV AML AML
comp=E,606µm,1.6s
KLV AML AML
comp=N,596µm,1.1s
KLV AML AML
comp=E,606µm,0.4s
BANR Banloc 4.06 17 ePg Pg 20 55 07.4 -2.9
THAS Thassos island 4.06 101 P Pn 20 54 54.9 +0.9
CERA Filignano 4.11 273 P Pn 20 54 56.0 +1.2
CERA AML AML
comp=E,640µm,1.0s
CERA AML AML
comp=N,458µm,0.7s
CERA AML AML

comp=E,640µm,1.0s
CERA AML AML
comp=N,481µm,0.9s
CERA AML AML
comp=E,640µm,1.0s
CERA AML AML
comp=E,640µm,1.0s
GUR Goura 4.19 147 P **Pn** **20 54 57.2 +1.3**
MODR Mondragone 4.24 267 P **Pn** **20 54 56.8 +0.3**
PLVB Pleven 4.24 62 ⇓P **Pn** **20 54 59.2 +2.8**
CEL Celeste 4.26 222 **Pn** **20 54 56.2 -0.6**
T0110 Collepietro 4.32 281 P **Pn** **20 54 58.6 +0.9**
POFI Posta Fibreno 4.33 275 P **Pn** **20 54 59.5 +1.6**
POFI AML AML
comp=E,218µm,0.7s
POFI AML AML
comp=N,138µm,1.6s
POFI AML AML
comp=E,218µm,1.3s
POFI AML AML
comp=N,138µm,0.4s
BZS Buzias 4.39 20 ⇑P **Pn** **20 54 59.6 +1.0**
BZS Buzias 4.39 20 P **Pn** **20 54 59.5 +1.0**
KDZ Kurdzhali 4.39 86 P **Pn** **20 55 00.5 +1.9**
KDZ Kurdzhali 4.39 86 P **Pn** **20 55 00.8 +2.2**
VVLD Villa Vallelon 4.41 277 P **Pn** **20 54 59.6 +0.7**
VVLD AML AML
comp=E,246µm,0.8s
VVLD AML AML
comp=N,244µm,1.1s
VILL Villia 4.45 137 P **Pn** **20 55 00.7 +1.2**
PVL Pavlikeni 4.51 67 P **Pn** **20 55 02.9 +2.6**
GZR Gura Zlata 4.56 31 ⇓P **Pn** **20 55 02.6 +1.5**
GZR Gura Zlata 4.56 31 P **Pn** **20 55 02.5 +1.5**
RDO Rodhopi 4.57 93 P **Pn** **20 55 02.7 +1.6**
RDO Rodhopi 4.57 93 **Pn** **20 55 02.4 +1.4**
PTQR Pietraquaria 4.58 278 P **Pn** **20 55 02.9 +1.6**
DIM Dimitrovgrad 4.59 81 P **Pn** **20 55 03.3 +2.1**
LIA Limnos Island 4.62 108 P **Pn** **20 55 02.8 +1.1**
AQU L'Aquila 4.62 283 *e*Pn **Pn** **20 55 03.2 +1.5**
AQU L'Aquila 4.62 283 Pn **Pn** **20 55 03.0 +1.3**
MNTT Montottone 4.64 292 P **Pn** **20 55 03.4 +1.4**
MNTT AML AML
comp=E,727µm,0.7s
MNTT AML AML
comp=N,784µm,1.2s
MNTT AML AML
comp=E,727µm,1.3s
MNTT AML AML
comp=N,784µm,0.8s
CAMP Campotosto 4.64 285 **Pn** **20 55 02.7 +0.5**
CAMP Campotosto 4.64 285 P **Pn** **20 55 03.0 +0.8**
CAMP AML AML
comp=E,162µm,0.7s
CAMP AML AML
comp=N,208µm,0.8s
SURR Surduc 4.66 23 ⇑P **Pn** **20 55 03.5 +1.3**
GIUL Giuliano Di Ro 4.68 273 P **Pn** **20 55 03.3 +0.8**
GIUL AML AML
comp=N,178µm,0.8s
GIUL AML AML
comp=E,138µm,0.8s
SMTH Samothraki Isl 4.69 101 P **Pn** **20 55 04.2 +1.6**
MF5 Montefalcone A 4.71 290 P **Pn** **20 55 03.8 +0.7**
MF5 AML AML
comp=N,314µm,0.7s
MF5 AML AML
comp=E,372µm,0.6s
MF5 AML AML
comp=N,314µm,1.3s
ITM Ithomi 4.71 156 P **Pn** **20 55 04.4 +1.3**
ITM Ithomi 4.71 156 **Pn** **20 55 04.1 +1.1**
SMA1 SAN MARTINO 4.72 286 P **Pn** **20 55 03.8 +0.7**
SMA1 AML AML
comp=E,348µm,0.8s
SMA1 AML AML
comp=N,361µm,0.5s
SMA1 AML AML
comp=E,348µm,1.2s
MORH Mrgy, Hungar 4.75 353 *e*Pn **Pn** **20 55 03.9 +0.5**
MORH Mrgy, Hungar 4.75 353 ⇑P **Pn** **20 55 04.2 +0.8**
MORH Mrgy, Hungar 4.75 353 *e*Pn **Pn** **20 55 04.4 +1.0**
MORH Mrgy, Hungar 4.75 353 Pn **Pn** **20 55 08.2 +4.8**
RM33 Pellescritta (4.78 284 P **Pn** **20 55 05.1 +1.1**
MMO1 Montemonaco 4.78 289 P **Pn** **20 55 04.5 +0.4**
FIAM Fiamignano 4.82 281 P **Pn** **20 55 06.0 +1.5**
GUMA Gualdo di Mace 4.82 291 **Pn** **20 55 04.2 -0.3**
DION Dionisos Attik 4.84 134 P **Pn** **20 55 06.4 +1.6**
MC2 Monte Cornacci 4.88 289 P **Pn** **20 55 06.2 +0.6**
NRCA Norcia 4.92 288 **Pn** **20 55 06.3 +0.4**
NRCA Norcia 4.92 288 P **Pn** **20 55 06.4 +0.4**
NRCA AML AML
comp=E,272µm,0.7s
NRCA AML AML
comp=N,254µm,0.6s
NRCA AML AML
comp=E,272µm,1.3s
CSP1 Cessapalombo 4.92 291 P **Pn** **20 55 05.9 -0.1**
CSP1 AML AML
comp=E,196µm,0.8s
CSP1 AML AML
comp=N,206µm,0.5s
CSP1 AML AML
comp=E,196µm,1.2s
VLY Voula,Athens 4.93 136 P **Pn** **20 55 07.6 +1.6**
comp=E,103nm,0.7s
ELND Elena 4.95 71 ⇑P **Pn** **20 55 08.6 +2.3**
FDMO Fiordimonte 4.99 290 **Pn** **20 55 07.2 +0.3**
FDMO Fiordimonte 4.99 290 P **Pn** **20 55 06.9 +0.1**
FDMO AML AML
comp=N,130µm,0.5s
FDMO AML AML
comp=E,149µm,0.5s
SIRR Siria 5.01 18 ⇑P **Pn** **20 55 08.7 +1.5**
SIRR Siria 5.01 18 *e*Pn **Pn** **20 55 09.2 +2.1**
LOT Lotru 5.02 37 ⇑P **Pn** **20 55 09.0 +1.7**
HUMR Humele 5.03 51 ⇓P **Pn** **20 55 09.7 +2.3**
BOJS Bojanci 5.05 324 *e*Pn **Pn** **20 55 08.6 +1.0**
EL6 Elcito 5.07 293 P **Pn** **20 55 07.9 0.0**
CESI CESI - Serrava 5.11 289 P **Pn** **20 55 09.5 +1.0**
SZH Strazhitsa 5.12 68 P **Pn** **20 55 11.1 +2.5**
KARY Karystos 5.15 131 P **Pn** **20 55 10.7 +1.6**
SNTG Esanatoglia 5.16 292 P **Pn** **20 55 08.9 -0.2**
SNTG AML AML
comp=E,100µm,0.7s
SNTG AML AML
comp=N,144µm,0.5s
STFAR Stefanesti-Arg 5.22 48 ⇑P **Pn** **20 55 12.9 +2.9**
COR1 Corinaldo 5.24 296 P **Pn** **20 55 10.6 +0.4**
COR1 AML AML
comp=N,404µm,1.6s
COR1 AML AML
comp=N,404µm,0.4s
COR1 AML AML
comp=E,246µm,1.1s
CESX Cesi 5.26 284 **Pn** **20 55 11.3 +0.8**
RIY Rijeka 5.28 318 *e*Pn **Pn** **20 55 13.4 +2.7**
FOSV Fossato di Vic 5.29 292 P **Pn** **20 55 11.2 +0.3**
ASSB Assisi San Ben 5.29 289 P **Pn** **20 55 12.1 +1.0**
MOMA Monte Martano 5.30 286 P **Pn** **20 55 12.6 +1.4**
SSFR Montelago di S 5.32 293 P **Pn** **20 55 11.6 +0.2**
SSFR AML AML
comp=E,292µm,1.3s
SSFR AML AML
comp=N,250µm,1.2s
SSFR AML AML
comp=E,231µm,1.1s
SSFR AML AML
comp=N,193µm,0.3s
SSFR AML AML
comp=E,231µm,0.9s
BEHE Becsehely 5.33 339 *e*Pn Pn 20 55 18.3 +6.8
JMB Yambol 5.34 77 P **Pn** **20 55 13.3 +1.7**
JMB Yambol 5.34 77 P **Pn** **20 55 13.8 +2.2**
ATCC AVT- Casa Cast 5.34 291 P **Pn** **20 55 12.2 +0.5**
ATCC AML AML
comp=N,228µm,1.2s
ATCC AML AML
comp=E,266µm,0.8s
ARR Arges 5.38 42 ⇓P **Pn** **20 55 14.4 +2.2**
MPAG Monte Paganucc 5.40 295 P **Pn** **20 55 12.5 0.0**
MURB Monte Urbino 5.45 291 **Pn** **20 55 13.8 +0.7**
MURB Monte Urbino 5.45 291 P **Pn** **20 55 13.9 +0.7**
PESA Pesaro 5.47 299 P **Pn** **20 55 13.7 +0.4**

HLNI Lentini 5.48 222 P **Pn** **20 55 11.3 -2.2**
SGRR Singureni 5.49 58 ⇑P **Pn** **20 55 16.5 +3.0**
PIEI Pieia 5.52 294 P **Pn** **20 55 14.4 +0.2**
SSY Sortino 5.53 220 P **Pn** **20 55 11.5 -2.7**
ATTE AVT- Monte Tez 5.55 290 P **Pn** **20 55 15.7 +1.1**
LOZB Loznitsa 5.58 68 ⇓P **Pn** **20 55 17.2 +2.3**
CEY Cerknica 5.60 321 *e*Pn **Pn** **20 55 16.9 +1.7**
CEY Cerknica 5.60 321 *e*Pn **Pn** **20 55 16.7 +1.4**
VAE Valguarnera 5.62 226 Pn **Pn** **20 55 17.2 +1.7**
comp=E,3.5nm,0.3s,baz=66,slow=4.3,SNR=4.8
comp=E,5.7nm,0.4s
VOIR 5.64 44 ⇑P **Pn** **20 55 18.0 +2.2**
VOIR 5.64 44 P **Pn** **20 55 18.0 +2.2**
VOIR 5.64 44 Pn **Pn** **20 55 18.1 +2.2**
comp=E,0.2nmcomp=E,29nm,0.7s
ATMI Monte Miggiano 5.65 291 P **Pn** **20 55 17.5 +1.6**
MGAB Montegabbione 5.66 287 P **Pn** **20 55 16.6 +0.6**
SKDS Skadanscina 5.67 317 *e*Pn **Pn** **20 55 16.7 +0.5**
SKDS Skadanscina 5.67 317 *i* Pn **Pn** **20 55 16.7 +0.5**
BADI Badiali 5.72 293 P **Pn** **20 55 18.4 +1.6**
CPGN Carpegna, Ital 5.76 296 P **Pn** **20 55 18.4 +0.9**
PARC Parchiule 5.76 294 P **Pn** **20 55 18.3 +0.8**
DRGR 5.77 23 ⇓P **Pn** **20 55 19.2 +1.6**
DRGR 5.77 23 P **Pn** **20 55 19.2 +1.6**
LJU Ljubljana 5.79 323 *e*Pn **Pn** **20 55 20.1 +2.4**
LJU Ljubljana 5.79 323 P **Pn** **20 55 19.9 +2.2**
MARR Marisel-Cluj 5.79 26 ⇑P **Pn** **20 55 19.6 +1.7**
MDB Medias 5.83 36 ⇓P **Pn** **20 55 20.9 +2.5**
MDB Medias 5.83 36 P **Pn** **20 55 20.8 +2.5**
RAFF Raffo Rosso 5.83 225 Pn **Pn** **20 55 17.9 -0.5**
TRI Trieste 5.91 317 Pn **Pn** **20 55 18.4 -1.0**
TRI Trieste 5.91 317 P **Pn** **20 55 18.4 -1.0**
CRE Caprese Michel 5.95 293 P **Pn** **20 55 21.2 +1.1**
CJR Cluj-Napoca 5.99 28 ⇓P **Pn** **20 55 23.6 +3.1**
CJR Cluj-Napoca 5.99 28 P **Pn** **20 55 23.6 +3.1**
VOJS Vojsko 6.08 320 *i* Pn **Pn** **20 55 22.4 +0.6**
SOKA Soboth 6.08 330 *e*Pn **Pn** **20 55 22.7 +0.8**
comp=E,6.7nm,0.5s,SNR=14
SOKA *i* Sn **Sn** **20 56 28.7 -2.5**
comp=E,18nm,0.8s
LTVH Ltavrtes, Hu 6.13 16 ⇑P **Pn** **20 55 23.8 +1.4**
OBKA Obir 6.14 326 *i* Pn **Pn** **20 55 24.7 +2.0**
comp=E,2.2nm,0.3s
OBKA *i* Sn **Sn** **20 56 35.2 +2.7**
comp=E,22nm,0.6s
OBKA Obir 6.14 326 *e*Pn **Pn** **20 55 25.5 +2.8**
LEHL Lehliu 6.14 59 ⇓P **Pn** **20 55 25.7 +3.1**
MLR Muntele Rosu 6.16 48 Pn **Pn** **20 55 25.3 +2.3**
comp=E,17nm,0.5s,baz=135,slow=8.7,SNR=26
MLR Sn **Sn** **20 56 33.0 -0.1**
comp=E,2.3nm,0.3s,baz=131,slow=12,SNR=3.7
MLR LR LR 20 58 46.5
comp=E,943nm,18.1s,baz=232,slow=48
MLR Muntele Rosu 6.16 48 **Pn** **20 55 24.6 +1.6**
MLR Muntele Rosu 6.16 48 ⇑P **Pn** **20 55 26.0 +3.0**
MLR Muntele Rosu 6.16 48 Pn **Pn** **20 55 26.0 +3.0**
comp=E,0.3nmcomp=E,50nm,0.7s
CICN Ciocanesti 6.16 62 ⇓P **Pn** **20 55 25.4 +2.6**
DOPR Dopca 6.18 42 ⇓P **Pn** **20 55 25.6 +2.5**
SABO M.te Sabotino 6.18 318 **Pn** **20 55 22.0 -1.1**
SABO M.te Sabotino 6.18 318 P **Pn** **20 55 23.8 +0.7**
ISR Istrita 6.29 53 ⇑P **Pn** **20 55 27.7 +3.1**
ISR Istrita 6.29 53 P **Pn** **20 55 27.7 +3.1**
ISR Istrita 6.29 53 Pn **Pn** **20 55 27.6 +2.9**
comp=E,0.6nmcomp=E,74nm,1.1s
ARSA Arzberg 6.41 335 **Pn** **20 55 26.0 -0.3**
ARSA Arzberg 6.41 335 *e*Pn **Pn** **20 55 28.3 +2.0**
comp=E,12nm,0.5s
OSSC Osservatorio P 6.42 291 **Pn** **20 55 27.0 +0.6**
PSZ Piszkesteto 6.42 2 **Pn** **20 55 26.9 +0.4**
PSZ Piszkesteto 6.42 2 P **Pn** **20 55 26.9 +0.4**
APE Apeiranthos 6.45 131 ⇑P **Pn** **20 55 28.0 +1.1**
APE Apeiranthos 6.45 131 ⇓*i*P **Pn** **20 55 27.9 +1.0**
APE pmax pmax
comp=E,18nm,0.5s
COVR Voineasa-Covas 6.52 46 ⇑P **Pn** **20 55 30.5 +2.7**
CASP Castiglione de 6.54 284 Pn **Pn** **20 55 28.1 +0.1**
TURR Tuia 6.56 44 ⇓P **Pn** **20 55 30.6 +2.2**
RONA Rosalia, Austr 6.60 341 *e*Pn **Pn** **20 55 31.3 +2.4**
comp=E,3.3nm,0.5s
MYKA Terra Mystica 6.63 323 *i* Pn **Pn** **20 55 30.0 +0.6**
comp=E,1.8nm,0.4s
BALB Balikesir 6.66 103 **Pn** **20 55 30.7 +1.0**
PLOR Plostina 6.77 48 ⇓P **Pn** **20 55 33.6 +2.3**
PLOR Plostina 6.77 48 P **Pn** **20 55 33.5 +2.3**
VRI Vrincioaia 6.82 48 ⇓P **Pn** **20 55 34.7 +2.8**
VRI Vrincioaia 6.82 48 P **Pn** **20 55 34.7 +2.8**
VRI Vrincioaia 6.82 48 Pn **Pn** **20 55 35.0 +3.0**
comp=E,2.0nmcomp=Z,24nm,0.6s
STAL STALIGIAL 6.82 316 **Pn** **20 55 31.9 -0.1**
WDD Wied Dalam 6.86 216 Pn **Pn** **20 55 33.1 +0.6**
ZCCA Zocca 6.86 297 **Pn** **20 55 33.4 +0.9**
TEOL Teolo 6.87 307 **Pn** **20 55 32.8 +0.2**
CONA Conrad Observa 6.92 339 *e*Pn **Pn** **20 55 36.1 +2.7**
comp=E,1.5nm,0.4s
ONER Baraj Valea Uz 6.94 44 ⇑P **Pn** **20 55 36.3 +2.7**
CIMO Cimolais 7.00 316 **Pn** **20 55 34.3 0.0**
KECS Kecovo 7.01 5 *e*P **Pn** **20 55 36.9 +2.3**
KECS Kecovo 7.01 5 *e*PN **Pn** **20 55 36.9 +2.3**
MODS Modra-Piesok 7.04 348 *e*P **Pn** **20 55 38.5 +3.5**
MODS *e* 20 57 02.4
MODS Modra-Piesok 7.04 348 *e*PN **Pn** **20 55 38.5 +3.5**
MODS *e*SN **Sn** **20 57 02.4 +7.7**
MODS Modra-Piesok 7.04 348 *e*SN **Sn** **20 57 03.6 +8.9**
BERU Beregovo 7.09 17 Pn **Pn** **20 55 38.7 +3.1**
KBA Koelnbreinsper 7.10 324 *i* Pn **Pn** **20 55 37.2 +1.2**
comp=E,1.8nm,0.3s
KBA Koelnbreinsper 7.10 324 *e*Pn **Pn** **20 55 37.2 +1.2**
KORU Korolevo 7.14 20 Pn **Pn** **20 55 40.1 +3.8**
TIRR Tirgusor 7.18 63 Pn **Pn** **20 55 38.0 +1.2**
TIRR Tirgusor 7.18 63 P **Pn** **20 55 38.0 +1.2**
TESR Tescani 7.19 43 Pn **Pn** **20 55 41.0 +4.0**
comp=Z,0.2nmcomp=Z,20nm,2.6s
ABTA Abfaltersbach 7.25 319 *i* Pn **Pn** **20 55 38.0 0.0**
comp=E,2.2nm,0.3s
ABTA *i* Sn **Sn** **20 57 02.5 +2.5**
comp=E,27nm,0.7s
CTI Castel Tesino 7.26 311 **Pn** **20 55 38.2 +0.1**
CTI Castel Tesino 7.26 311 P **Pn** **20 55 38.2 +0.1**
BRIU Brid 7.28 19 Pn **Pn** **20 55 40.9 +2.7**
CFR Carcaliu 7.29 57 ⇑P **Pn** **20 55 40.7 +2.3**
CFR Carcaliu 7.29 57 P **Pn** **20 55 40.7 +2.3**
MUKU Mukachevo 7.31 17 Pn **Pn** **20 55 41.0 +2.4**
RAKU Rahkiv 7.32 25 Pn Pn 20 55 45.0 +6.2
MOA Molln 7.35 331 *i* Pn **Pn** **20 55 41.1 +1.8**
comp=E,2.7nm,0.3s
MOA *e*Sn **Sn** **20 57 05.7 +3.3**
comp=E,4.6nm,0.4s
MOA Molln 7.35 331 *e*Pn **Pn** **20 55 41.6 +2.4**
BUR08 Bucovina Ar. S 7.37 32 **Pn** **20 55 40.1 +0.6**
DOSS Dosso del Somm 7.43 309 P **Pn** **20 55 40.6 +0.1**
PANI Panarotta 7.45 310 P **Pn** **20 55 40.4 -0.3**
ZIAN Ziano 7.45 312 P **Pn** **20 55 41.6 +1.0**
PRMA PARMA 7.46 299 Pn **Pn** **20 55 40.4 -0.2**
BIOA Bad Ischl, Aus 7.46 328 *e*Pn **Pn** **20 55 42.2 +1.5**
comp=E,6.8nm,0.7s
IDI Anoyia 7.52 144 Pn **Pn** **20 55 40.8 -0.8**
comp=E,1.8nm,0.3s,baz=287,slow=4.6,SNR=15
IDI Sn **Sn** **20 57 03.0 -3.5**
comp=E,10nm,0.3s,baz=331,slow=18,SNR=9.4
IDI LR LR 20 58 31.4
comp=Z,85nm,19.3s,baz=328,slow=38
comp=Z,4.3nm,0.4s
IDI Anoyia 7.52 144 **Pn** **20 55 41.1 -0.5**
MANT Manisa 7.58 110 **Pn** **20 55 43.2 +0.5**
LESA Schwarzleotal 7.66 323 *e*Pn **Pn** **20 55 44.2 +0.7**
comp=Z,3.4nm,0.5s,SNR=7.3
LESA *e*Sn **Sn** **20 57 09.9 -0.1**
comp=E,12nm,0.6s
SALO Salr 7.70 305 **Pn** **20 55 43.7 -0.3**
TLCR 7.73 58 ⇑P **Pn** **20 55 47.4 +3.0**
TLCR 7.73 58 P **Pn** **20 55 47.3 +3.0**
MSSA Maissana 7.84 294 Pn **Pn** **20 55 46.3 +0.3**
KSV Kosov 7.88 28 Pn **Pn** **20 55 50.9 +4.5**
NIE Niedzica 7.93 4 Pn **Pn** **20 55 51.7 +4.5**
comp=Z,13nm,2.9s
MAUC Maruska 7.95 352 *e*PN **Pn** **20 55 50.3 +2.9**
VSL Villasalto 7.96 259 Pn **Pn** **20 55 47.8 +0.1**
STHS Stebnicka Huta 8.01 8 *e*P **Pn** **20 55 49.6 +1.4**
STHS Stebnicka Huta 8.01 8 *e*PN **Pn** **20 55 49.6 +1.4**
STNU Starunia 8.03 24 Pn **Pn** **20 55 52.7 +4.2**
WTTA Wattenberg 8.04 318 *e*Pn **Pn** **20 55 50.9 +2.0**
comp=Z,5.8nm,0.6s,SNR=7.0

WTTA *i* Sn **Sn** **20 57 20.4 +0.8**
comp=Z,17nm,0.6s
WTTA Wattenberg 8.04 318 *e*Pn **Pn** **20 55 51.3 +2.4**
VRAC Vranov 8.06 346 LR LR 20 58 42.9
comp=Z,82nm,21.0s,baz=170,slow=36
WATA Walderalm 8.12 319 *i* Pn **Pn** **20 55 52.0 +2.0**
comp=Z,6.1nm,0.5s,SNR=9.3
WATA *i* Sn **Sn** **20 57 21.3 -0.1**
comp=Z,19nm,1.0s
CKRC Cesky Krumlov 8.18 335 *e*P **Pn** **20 55 52.2 +1.7**
CKRC Cesky Krumlov 8.18 335 *e*PN **Pn** **20 55 52.2 +1.7**
SHIU Shidnytsya 8.19 18 Pn **Pn** **20 55 54.4 +3.7**
SQTA Sankt Quirin 8.23 317 *i* Pn **Pn** **20 55 53.4 +2.0**
comp=Z,5.5nm,0.4s,SNR=4.6
SQTA *e*Sn **Sn** **20 57 24.6 +0.5**
comp=Z,11nm,0.5s
FETA Feichten 8.36 314 *i* Pn **Pn** **20 55 54.6 +1.5**
comp=Z,2.5nm,0.6s
FETA *e*Sn **Sn** **20 57 28.0 +0.8**
comp=Z,10.0nm,0.9s
GEC2 GERESS Array S 8.40 333 Pn **Pn** **20 55 53.5 -0.1**
GERES GERESS Array B 8.40 333 Pn **Pn** **20 55 54.7 +1.0**
baz=154,slow=13,SNR=9.8
GERES LR LR 20 59 57.5
comp=Z,360nm,18.0s,baz=144,slow=43
comp=Z,0.8nm,0.5s
KWP Kalwaria Pacla 8.43 14 Pn **Pn** **20 55 58.5 +4.4**
comp=Z,18nm,1.7s
KARP Karpathos 8.46 132 Pn **Pn** **20 55 54.5 +0.1**
KARP Karpathos 8.46 132 Pn **Pn** **20 55 54.8 +0.4**
comp=Z,58nm,1.4s
ZUGS Zugspitze, Sch 8.48 317 *e*Pn **Pn** **20 55 58.5 +3.5**
BORA Eskisehir 8.49 97 **Pn** **20 55 56.3 +1.4**
ARG Arkhangelos 8.56 125 Pn **Pn** **20 55 56.5 +0.7**
ARG Arkhangelos 8.56 125 P **Pn** **20 55 56.5 +0.7**
KMPD K-Podol'skiy 8.61 33 Pn **Pn** **20 55 59.4 +3.0**
KHC Kasperske Hory 8.69 333 **Pn** **20 55 57.1 -0.5**
KHC Kasperske Hory 8.69 333 *e*P **Pn** **20 55 58.1 +0.6**
KHC *e* 20 57 37.4
KHC Kasperske Hory 8.69 333 *e*PN **Pn** **20 55 58.1 +0.6**
KHC *e*SN **Sn** **20 57 37.4 +2.3**
KHC Kasperske Hory 8.69 333 Pn **Pn** **20 55 59.6 +2.1**
comp=Z,7.3nm,1.6s
DAVOX Davos/Dischmat 8.69 311 Pn **Pn** **20 55 59.4 +1.7**
comp=Z,1.0nm,0.3s,baz=274,slow=5.6,SNR=9.9
DAVOX LR LR 21 00 19.3
comp=Z,393nm,19.3s,baz=112,slow=44
comp=Z,2.2nm,0.3s
TUE Stuetta 8.83 308 **Pn** **20 56 00.5 +0.7**
TUE Stuetta 8.83 308 Pn **Pn** **20 56 00.8 +1.1**
comp=Z,64nm,0.9s
DAVA Damuels 8.98 313 *i* Pn **Pn** **20 56 02.1 +0.4**
comp=Z,3.7nm,0.6s
DAVA *i* Sn **Sn** **20 57 41.9 -0.6**
comp=Z,9.7nm,0.7s
DAVA Damuels 8.98 313 *e*Pn **Pn** **20 56 05.3 +3.6**
UBR Ueberruh 9.10 316 *e*Pn **Pn** **20 56 06.2 +2.9**
DPC Dobruska-Polom 9.12 347 *e*P **Pn** **20 56 06.9 +3.5**
DPC MLR MLR
comp=Z,1µm,9.8s
DPC Dobruska-Polom 9.12 347 *e*PN **Pn** **20 56 06.9 +3.5**
DPC AMS AMS 21 00 30.0
comp=Z,1µm,9.8s
PRU Pruhonice 9.16 340 *e*P **Pn** **20 56 06.6 +2.6**
PRU Pruhonice 9.16 340 *e*PN **Pn** **20 56 06.6 +2.6**
KEST Kesra 9.80 237 Pn **Pn** **20 56 14.2 +1.2**
comp=Z,0.1nm,0.3s,baz=25,slow=14,SNR=4.5
KEST LR LR 21 01 19.0
comp=Z,933nm,18.5s,baz=56,slow=46
comp=Z,2.6nm,0.9s
KEST Kesra 9.80 237 Pn **Pn** **20 56 12.7 -0.3**
BNI Bardonecchia 9.99 295 Pn **Pn** **20 56 15.2 -0.3**
BNI Bardonecchia 9.99 295 P **Pn** **20 56 15.2 -0.3**
SENIN Lac Senin/Sane 10.04 303 **Pn** **20 56 15.8 -0.4**
LUBAR Lubar, Ukraine 10.21 32 Pn **Pn** **20 56 22.1 +3.8**
BFO Black Forest 10.44 315 Pn **Pn** **20 56 21.7 +0.1**
BFO Black Forest 10.44 315 P **Pn** **20 56 21.7 +0.1**
MOX Moxa 10.64 332 *e*Pn **Pn** **20 56 24.4 +0.1**
RNPP5 Staryi Chortor 10.68 22 Pn **Pn** **20 56 29.3 +4.5**
CLL Collm 10.77 338 *e*P Pn 20 56 21.0 -5.1
CLL Collm 10.77 338 *e*Pn Pn 20 56 21.0 -5.1
CLL *e*Sn **Sn** **20 58 18.0 -8.2**
CLL *e*Sb 20 58 56.0
CLL *ex* x 20 59 17.0
CLL *e*Sg 20 59 37.0
CLL AMS AMS 21 00 00.0
comp=N,400nm,20.1s
CLL AMS AMS 21 00 00.0
comp=E,800nm,20.0s
RNPP9 Sopachiv 10.84 22 Pn **Pn** **20 56 31.0 +4.0**
BR106 Keskin Array S 10.89 95 Pn **Pn** **20 56 29.1 +1.3**
comp=E,2.6nm,1.0s
BR131 Keskin Array S 10.91 95 Pn **Pn** **20 56 26.6 -1.5**
BR131 Keskin Array S 10.91 95*d* *i*P **Pn** **20 56 26.6 -1.5**
BRTR Keskin Array B 10.91 95 Pn **Pn** **20 56 27.4 -0.7**
comp=E,0.1nm,0.3s,baz=289,slow=9.0,SNR=5.0
BRTR Sn **Sn** **20 58 26.8 -3.0**
comp=E,0.1nm,0.3s,baz=275,slow=23,SNR=1.5
BRTR LR LR 21 01 34.9
comp=E,762nm,18.3s,baz=288,slow=43
comp=E,0.3nm,0.4s
BRTR Keskin Array B 10.91 95 Pn **Pn** **20 56 27.0 -1.1**
ECH Echery 11.02 312 Pn **Pn** **20 56 28.3 -1.2**
ECH Echery 11.02 312 P **Pn** **20 56 28.3 -1.2**
AK06 Malin Array Si 11.30 33 Pn **Pn** **20 56 37.2 +3.9**
AK05 Malin Array Si 11.33 33 Pn **Pn** **20 56 37.3 +3.6**
AK02 Malin Array Si 11.36 33 Pn **Pn** **20 56 37.5 +3.4**
AK09 Malin Array Si 11.36 33 Pn **Pn** **20 56 37.7 +3.6**
KIEV Kiev 11.39 33 Pn **Pn** **20 56 37.3 +2.8**
comp=E,57nm,2.3s
AKASG Malin Array Be 11.40 33 Pn **Pn** **20 56 35.0 +0.3**
comp=E,0.3nm,0.3s,baz=222,slow=12,SNR=7.5
comp=E,0.2nm,0.2s
AKASG Malin Array Be 11.40 33 *i* P **Pn** **20 56 37.5 +2.8**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 11.40 33 ⇑*i*P **Pn** **20 56 35.8 +1.1**
AKBB Malin Array Si 11.40 33 Pn **Pn** **20 56 37.6 +2.9**
NACGM Naroch 14.25 17 *e*P **Pn** **20 57 16.2 +2.7**
comp=Z,14nm,0.9s,baz=203
GAZ Gaziantep 14.38 102 Pn **Pn** **20 57 15.2 -0.3**
MMAI Mount Meron Ar 15.23 119 Pn **Pn** **20 57 24.8 -2.2**
comp=Z,0.3nm,0.3s,baz=297,slow=15,SNR=5.5
MMAI LR LR 21 04 35.3
comp=Z,298nm,19.4s,baz=309,slow=43
comp=Z,1.9nm,0.7s
GHAJ Ghor Haditha 16.44 123 Pn **Pn** **20 57 41.5 -1.1**
ASF Jabal al Asfar 16.74 118 LR LR 21 05 33.6
comp=Z,260nm,18.4s,baz=296,slow=42
MARD Mardin 16.97 97 **Pn** **20 57 48.5 -0.9**
MARD IAmb IAmb 20 58 03.0
comp=Z,26nm,1.5s
KIV Kislovodsk 17.21 74 *e*P **P** **20 57 53.5 -0.3**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV MLR MLR
comp=Z,61nm,14.0s
KVAR Kislovodsk Arr 17.22 74 P **Pn** **20 57 52.2 -0.2**
baz=288,slow=20
comp=Z,3.8nm,1.1s
EIL Elat 17.22 128 P **Pn** **20 57 51.6 -0.8**
comp=Z,0.3nm,0.3s,baz=319,slow=9.3,SNR=2.8
comp=Z,5.0nm,0.8s
KBZ Khabaz 17.36 75 P **P** **20 57 55.0 -0.3**
KBZ comp=Z,0.2nm,0.3s,baz=263,slow=12,SNR=8.8
LR LR 21 06 30.4
comp=Z,113nm,18.8s,baz=286,slow=44
comp=Z,1.9nm,0.7s
KBZ Khabaz 17.36 75 ⇑*i*P **P** **20 57 56.5 +1.1**
KBZ pmax pmax
comp=Z,5.0nm,1.3s
GURO Guroymak-BITLI 17.51 92 Pn **Pn** **20 57 55.3 -0.8**
OBN Obninsk 17.66 34 LR LR 21 06 19.5
comp=Z,125nm,18.4s,baz=46,slow=42
OBN Obninsk 17.66 34 *e*P **Pn** **20 57 58.1 +0.4**
OBN comp=Z,12nm,0.9s
OBN MLR MLR
comp=Z,372nm,7.0s
ESDC Sonseca Array 17.90 272 P **Pn** **20 57 59.9 -0.9**
baz=82,slow=9.1,SNR=3.2
ESDC LR LR 21 05 05.7
comp=Z,181nm,18.8s,baz=86,slow=38
comp=Z,0.9nm,1.0s
HFS Hagfors 18.99 351 P **P** **20 58 12.8 -0.4**
comp=Z,0.3nm,0.3s,baz=170,slow=9.8,SNR=9.0

HFS LR LR 21 06 34.7
comp=Z,106nm,18.1s,baz=216,slow=40
comp=Z,3.2nm,0.8s
GNI Garni 19.14 86 P P 20 58 14.7 -0.5
GNI IAmb IAmb 20 58 26.9
comp=Z,13nm,0.9s
GNI Garni 19.14 86 ⇓ *i*P Pn 20 58 16.3 +0.2
GNI pmax pmax
comp=Z,18nm,1.1s
GNI Garni 19.14 86 P Pn 20 58 16.7 +0.6
GNI pP sP 20 58 21.7 -0.3
NC405 NORSAR Array S 20.20 349 P P 20 58 25.3 -1.1
NB2 NORSAR Subarra 20.20 348 P P 20 58 20.1 -6.4
comp=Z,4.1nm,1.1s,baz=162,slow=11
NOA NORSAR Array B 20.20 348 P P 20 58 26.6 +0.1
comp=Z,1.3nm,0.8s,baz=165,slow=11,SNR=4.0
NOA LR LR 21 07 30.9
comp=Z,154nm,18.0s,baz=175,slow=40
comp=Z,1.3nm,0.8s
EKA Eskdalemuir Ar 20.30 321 P P 20 58 27.9 +0.4
comp=Z,2.4nm,1.0s,baz=109,slow=9.8,SNR=4.2
comp=Z,2.4nm,1.0s
FINES FINESS Array B 20.36 9 P P 20 58 27.4 -0.7
comp=Z,4.7nm,0.7s,baz=174,slow=7.5,SNR=16
FINES LR LR 21 06 18.7
comp=Z,134nm,19.4s,baz=200,slow=37
comp=Z,4.7nm,0.7s
FINES FINESS Array B 20.36 9 P P 20 58 26.8 -1.3
FIA1 FINESS Array S 20.36 9 P P 20 58 27.1 -1.1
NC204 NORSAR Array S 20.50 348 P P 20 58 28.5 -1.2
MAK Makhachkala 20.76 77 *e*P P 20 58 32.6 0.0
MAK *e*S Sn 21 02 26.7 -2.2
MAK pmax pmax
comp=Z,166nm,1.1s
MAK MLR MLR
comp=Z,200nm,12.0s
MDT Midelt 21.02 253 P P 20 58 35.5 -0.1
comp=Z,7.7nm,1.2s,baz=73,slow=13,SNR=6.4
MDT LR LR 21 06 38.1
comp=Z,135nm,18.3s,baz=58,slow=36
comp=Z,7.7nm,1.2s
MD01 Midelt array s 21.10 254 P P 20 58 34.9 -1.7
MD31 MD31 21.10 254 P P 20 58 35.2 -1.2
MD31 IAmb IAmb 20 58 54.0
comp=Z,18nm,1.5s
BELG Belogornoye 21.94 51 P P 20 58 44.3 -0.9
comp=Z,18nm,0.8s,baz=279,slow=19,SNR=5.7
comp=Z,18nm,0.8s
BELG Belogornoye 21.94 51 ⇓ *i*P P 20 58 45.2 +0.1
BELG pmax pmax
comp=Z,6.0nm,1.0s
TAM Tamanrasset 22.04 216 P P 20 58 46.6 0.0
TAM IAmb IAmb 20 58 49.4
comp=Z,27nm,1.3s
TAM Tamanrasset 22.04 216 P P 20 58 46.6 0.0
TAM pmax pmax
comp=Z,27nm,1.3s
KLMR Klimovskoe 22.91 26 *e*P P 20 58 53.7 -1.7
KLMR *e* 21 02 43.3
KLMR pmax pmax
comp=Z,35nm,1.3s
KLMR MLR MLR
comp=Z,570nm,9.0s
KIRV Kirov 25.40 38 LR LR 21 09 56.9
comp=Z,327nm,19.4s,baz=250,slow=38
KIRV Kirov 25.40 38 ⇑ *i*P P 20 59 18.6 -0.3
AKTO Aktyubinsk 27.96 58 LR LR 21 13 13.0
comp=Z,233nm,19.1s,baz=256,slow=42
ARCES ARCESS Array B 28.27 4 LR LR 21 12 20.7
comp=Z,426nm,20.4s,baz=160,slow=39
ARTI Arti 29.10 46 LR LR 21 12 34.4
comp=Z,424nm,18.3s,baz=254,slow=39
ARTI Arti 29.10 46 P P 20 59 50.8 -1.4
ARTI Arti 29.10 46 *c i*P P 20 59 51.7 -0.5
ARTI 21 00 40.8
ARTI S S 21 04 46.0 +2.9
ARTI SS SnSn 21 06 07.8 +0.6
ARTI pmax pmax
comp=Z,8.0nm,0.7s
AB31 Akbulak array 29.17 61 P P 20 59 52.2 -0.7
ABKAR Akbulak array 29.17 61 P P 20 59 51.5 -1.3
SVE Sverdlovsk 30.41 46 *e*P P 21 00 03.7 -0.1
SVE pmax pmax
comp=Z,11nm,0.8s
TORD Torodi Ar. Bea 32.23 214 P P 21 00 20.4 +0.2
comp=Z,1.6nm,0.5s,baz=25,slow=9.6,SNR=2.2
comp=Z,1.6nm,0.5s
BORG Borgarnes 32.84 329 LR LR 21 16 31.2
comp=Z,136nm,18.8s,baz=134,slow=41
UOSS Minazif 34.57 107 P P 21 00 38.8 -1.7
UOSS IAmb IAmb 21 00 40.1
comp=Z,3.3nm,0.7s
BORK Borovoye 35.64 53 P P 21 00 49.5 0.0
BORK IAmb IAmb 21 00 50.9
comp=Z,5.7nm,0.7s
BORK Borovoye 35.64 53 ⇓ *i*P P 21 00 49.9 +0.4
BORK pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 35.68 53 P P 21 00 49.8 0.0
comp=Z,3.0nm,0.7s,baz=278,slow=5.9,SNR=20
BVAR LR LR 21 17 17.3
comp=Z,199nm,18.2s,baz=278,slow=40
comp=Z,3.0nm,0.7s
KKAR Karatay Array 37.30 70 P P 21 01 02.7 -1.1
KKAR Karatay Array 37.30 70 P P 21 01 02.7 -1.1
AAK Ala-Archa 40.23 69 P P 21 01 27.7 -0.9
AAK IAmb IAmb 21 01 41.8
comp=Z,8.7nm,1.4s
AAK Ala-Archa 40.23 69 P P 21 01 27.7 -0.9
AAK pmax pmax
comp=Z,9.0nm,1.5s
KURBB Kurchatov Arra 40.97 56 P P 21 01 33.5 -0.9
comp=Z,0.9nm,0.7s,baz=286,slow=10.0,SNR=5.7
KURBB LR LR 21 21 57.3
comp=Z,184nm,18.8s,baz=198,slow=41
comp=Z,0.9nm,0.7s
KURK Kurchatov 41.01 56 P P 21 01 34.3 -0.4
KURK Kurchatov 41.01 56 ⇑ *i*P P 21 01 34.5 -0.2
KURK pmax pmax
comp=Z,3.0nm,1.5s
MAKZ Makanchi 44.10 61 P P 21 01 59.3 -0.6
MAKZ IAmb IAmb 21 02 00.7
comp=Z,8.4nm,1.1s
MAKZ Makanchi 44.10 61 P P 21 01 59.3 -0.6
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
ZAA0 Zalesovo Array 44.13 50 P P 21 01 59.5 -0.4
ZAA0 IAmb IAmb 21 02 00.5
comp=Z,6.0nm,0.7s
ZALV Zalesovo Beam 44.13 50 P P 21 01 59.4 -0.6
comp=Z,4.4nm,0.5s,baz=283,slow=8.5,SNR=26
comp=Z,4.4nm,0.5s
ZALV Zalesovo Beam 44.13 50 *i* P P 21 01 59.7 -0.2
ZALV pmax pmax
comp=Z,5.0nm,0.5s
MK31 Makanchi Array 44.31 61 ⇑ *i*P P 21 02 01.4 -0.2
MKAR Makanchi Array 44.31 61 P P 21 02 00.9 -0.7
comp=Z,3.8nm,0.5s,baz=282,slow=7.8,SNR=56
comp=Z,3.8nm,0.5s
MKAR Makanchi Array 44.31 61 P P 21 02 01.1 -0.4
MKAR Makanchi Array 44.31 61 *c*eP P 21 02 01.3 -0.3
MKAR pmax pmax
comp=Z,4.0nm,0.5s
KMBO Kilima Mbogo 45.39 155 LR LR 21 23 06.5
comp=Z,48nm,19.5s,baz=86,slow=39
WMQ Urumqi 48.90 63 *e*P P 21 02 40.0 +2.3
WMQ LR LR
comp=Z,110nm,24.1s
FRB Frobisher Bay 52.93 326 LR LR 21 27 56.6
comp=Z,115nm,18.7s,baz=73,slow=39
SCHQ Schefferville 55.50 316 LR LR 21 26 13.8
comp=Z,96nm,18.8s,baz=260,slow=35
EVN Evenet 55.67 81 P P 21 03 27.6 -1.2
TIXI Tiksi 56.82 21 LR LR 21 31 19.8
comp=Z,179nm,18.5s,baz=16,slow=40
LSA Lhasa 57.92 77 P P 21 03 35.0 -10
SONM Songino Array 58.99 52 P P 21 03 51.3 -0.1
comp=Z,1.3nm,0.9s,baz=298,slow=9.8,SNR=8.1
SONM LR LR 21 31 43.9
comp=Z,244nm,19.8s,baz=323,slow=39
comp=Z,1.3nm,0.9s
ULN Ulaanbaatar 59.37 51 ⇓ *i*P P 21 03 57.7 +3.7
ULN pmax pmax
comp=Z,2.0nm,1.3s
YAK Yakutsk 62.61 30 LR LR 21 34 30.2
comp=Z,151nm,18.1s,baz=281,slow=39

LZDM Lanzhou Array 63.42 64 P P 21 04 21.4 -0.5
comp=Z,0.7nm,0.3s,baz=327,slow=7.2,SNR=1.9
comp=Z,0.7nm,0.3s
HHC Hu-ho-hao-te 65.83 56 *e*P P 21 04 37.3 +0.1
HHC pmax pmax
comp=Z,4.0nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.7s
LBTB Lobatse 66.42 174 LR LR 21 35 53.1
comp=Z,76nm,18.2s,baz=357,slow=38
PZH PanZhiHua 67.44 74 P P 21 04 49.3 +1.6
SADO Sadowa 67.47 310 LR LR 21 33 09.4
comp=Z,58nm,19.2s,baz=78,slow=35
SEY Seymchan 69.32 21 LR LR 21 39 05.3
comp=Z,100nm,18.1s,baz=318,slow=39
BOSA Boshof 69.97 175 LR LR 21 39 31.6
comp=Z,79nm,18.6s,baz=6.0,slow=39
BOSA Boshof 69.97 175 P P 21 05 04.5 +1.3
BOSA Boshof 69.97 175 P P 21 05 04.5 +1.3
BOSA pmax pmax
comp=Z,6.0nm,1.2s
CMAR Chiang Mai Arr 70.23 83 P P 21 05 03.7 -1.4
comp=Z,0.5nm,0.5s,baz=308,slow=8.3,SNR=6.8
comp=Z,0.5nm,0.5s
MA2 Magadan 71.57 24 LR LR 21 40 33.1
comp=Z,187nm,18.1s,baz=310,slow=39
ULM Lac du Bonnet 72.56 323 LR LR 21 37 32.9
comp=Z,70nm,18.1s,baz=1.0,slow=36
ILAR Eielson Array 73.52 354 P P 21 05 24.6 +0.5
comp=Z,0.1nm,0.6s,baz=17,slow=4.8,SNR=5.5
comp=Z,0.1nm,0.6s
TKL Tuckaleechee C 75.95 305 LR LR 21 41 01.1
comp=Z,58nm,20.0s,baz=70,slow=37
KSRS Korea Array 77.83 51 P P 21 05 49.9 +0.7
comp=Z,0.4nm,0.4s,baz=318,slow=5.3,SNR=1.8
comp=Z,0.4nm,0.4s
PETK Petropavlovsk- 79.10 24 LR LR 21 45 27.8
comp=Z,165nm,18.5s,baz=309,slow=39
JNU Nakatsue 82.58 52 LR LR 21 45 18.0
comp=Z,118nm,18.3s,baz=324,slow=37
SHEM Shemya Is, Ala 83.60 15 LR LR 21 48 43.5
comp=Z,34nm,18.9s,baz=222,slow=39
MJAR Matsushiro Arr 84.22 45 LR LR 21 47 22.5
comp=Z,75nm,19.4s,baz=14,slow=38
SDV Santo Domingo 84.28 277 LR LR 21 38 35.8
comp=Z,34nm,21.1s,baz=71,slow=32
PDAR Pinedale Array 84.36 325 LR LR 21 46 49.1
comp=Z,50nm,18.6s,baz=13,slow=38
JOW Kunigami 85.40 58 LR LR 21 49 23.1
comp=Z,108nm,19.0s,baz=154,slow=39
ELK Elko 88.42 327 LR LR 21 49 12.3
comp=Z,80nm,18.4s,baz=35,slow=38
ANMO Albuquerque 89.18 318 LR LR 21 46 42.6
comp=Z,66nm,19.1s,baz=46,slow=36
NVAR Mina Array Bea 91.62 328 LR LR 21 51 32.8
comp=Z,66nm,19.0s,baz=90,slow=38
CMIG Matias Romero 95.95 299 LR LR 21 50 14.2
comp=Z,56nm,20.7s,baz=10,slow=35
CPUP Villa Florida 97.90 242 LR LR 21 54 28.7
comp=Z,31nm,18.2s,baz=216,slow=37
LPIG La Paz 99.86 315 LR LR 21 52 50.8
comp=Z,80nm,18.3s,baz=38,slow=35

*NEIC **30** 20:56:14.7±1.8, 20°.3S±0°.2×175°.34W±0°.09, h196km±13km, mb4.4/18, Error ellipse: s-maj=32.3km s-min=12.0km az=189.0*
*IDC **30** 20:56:23.2±5.9, 20°.44S×175°.91W, h250km±49km, mb3.9/3, mbtmp4.5/4, Error ellipse: s-maj=37.7km s-min=16.5km az=94.0*
ISC 30 20:56:16.4±1.3, 20°.4S±0°.1×175°.6W±0°.2, h200km, n28, σ1§24/30, mb4.4/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.49**	**77**				**Pn**	20 57 33.3	-3.8
NIUE						Sn	Sn	20 58 31.3	-10
MSVF	**Nonsavu**	**6.58**	**293**				**Pn**	**20 57 50.1**	**-1.1**
MARNC	**Mare, Loyalty**	**15.34**	**263**				**Pn**	**20 59 43.4**	**+0.6**
PINNC	**Pines Island,**	**15.94**	**259**				**Pn**	**20 59 51.0**	**+1.0**
DZM	**Mont Dzumac**	**16.84**	**261**	P		P	**P**	**21 00 01.2**	**+1.5**
ONTNC	**Ouen Toro**	**16.84**	**260**	P		P	**P**	**21 00 01.3**	**+1.7**
ONTNC						IAmb	IAmb	21 00 05.5	
	comp=Z,37nm,0.8s								
URZ	**Urewera**	**18.89**	**198**	P		P	**P**	**21 00 24.0**	**+2.3**
URZ	comp=Z,3.4nm,0.3s,baz=283,slow=2.8,SNR=11					S	**S**	**21 03 44.4**	**-1.3**
	comp=Z,5.4nm,0.8s,baz=59,slow=22,SNR=7.3								
BKZ	**Black Stump Fm**	**19.91**	**198**	P		P	**P**	**21 00 31.8**	**-1.0**
BKZ						IAmb	IAmb	21 00 45.4	
	comp=Z,13nm,1.3s								
THZ	**Tophouse**	**23.42**	**202**	P		P	**P**	**21 01 07.8**	**+0.3**
THZ						IAmb	IAmb	21 01 17.6	
	comp=Z,13nm,1.0s								
EIDS	**Eidsvold**	**31.05**	**255**	P		P	**P**	**21 02 15.3**	**-0.4**
EIDS						IAmb	IAmb	21 02 16.5	
	comp=Z,5.2nm,0.8s								
CTAO	**Charters Tower**	**35.75**	**264**	P		P	**P**	**21 02 56.0**	**-0.4**
TOO	**Toolangi**	**37.79**	**235**	P		P	**P**	**21 03 14.5**	**+1.0**
TOO						IAmb	IAmb	21 03 14.6	
	comp=Z,14nm,1.5s								
COEN	**Coen**	**39.84**	**273**	P		P	**P**	**21 03 29.6**	**-1.1**
COEN						IAmb	IAmb	21 03 31.0	
	comp=Z,11nm,0.9s								
AS31	**Alice Springs**	**46.74**	**256**	P		P	**P**	**21 04 25.6**	**-0.3**
ASAR	**Alice Springs**	**46.74**	**256**	P		P	**P**	**21 04 25.5**	**-0.4**
	comp=Z,12nm,0.7s,baz=98,slow=7.9,SNR=172								
ASAR						PcP	**PcP**	**21 05 55.8**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=97,slow=3.6,SNR=2.5								
	comp=Z,12nm,0.7s								
ASAR	**Alice Springs**	**46.74**	**256**	P		P	**P**	**21 04 25.3**	**-0.5**
WB0	**Warramunga Arr**	**46.83**	**262**				**P**	**21 04 25.7**	**-0.9**
WB0						IAmb	IAmb	21 04 26.1	
	comp=Z,7.0nm,0.6s								
WRA	**Warramunga Arr**	**46.85**	**261**	P		P	**P**	**21 04 25.3**	**-1.5**
	comp=Z,3.0nm,0.5s,baz=99,slow=7.7,SNR=48								
	comp=Z,3.0nm,0.5s								
WRA	**Warramunga Arr**	**46.85**	**261**				**P**	**21 04 25.5**	**-1.3**
WRA						PcP	**PcP**	**21 05 55.1**	**-1.3**
MTN	**Manton Dam**	**51.42**	**270**	P		P	**P**	**21 04 59.9**	**-1.5**
MTN						IAmb	IAmb	21 05 01.2	
	comp=Z,8.3nm,0.8s								
KNRA	**Kununurra**	**52.92**	**265**	P		P	**P**	**21 05 11.9**	**-0.6**
KNRA						IAmb	IAmb	21 05 36.0	
	comp=Z,20nm,1.4s								
FITZ	**Fitzroy Crossi**	**55.28**	**262**	P		P	**P**	**21 05 30.0**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=110,slow=6.1,SNR=9.9								
	comp=Z,1.4nm,0.4s								
FITZ	**Fitzroy Crossi**	**55.28**	**262**	P		P	**P**	**21 05 29.6**	**+0.1**
MBWA	**Marble Bar**	**60.08**	**257**	P		P	**P**	**21 06 02.8**	**0.0**
BELA	**Belgrano 2**	**79.36**	**172**	P		P	**P**	**21 07 58.0**	**-1.5**
BELA						IAmb	IAmb	21 08 26.9	
	comp=Z,8.0nm,1.4s								
BRTR	**Keskin Array B**	**148.42**	**314**	PKPbc			**PKPdf**	**21 15 39.3**	**+3.4**
	comp=Z,9.9nm,0.6s,baz=81,slow=4.2,SNR=5.7								
MMAI	**Mount Meron Ar**	**149.72**	**301**	PKPbc			**PKPbc**	**21 15 43.4**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=74,slow=2.9,SNR=6.6								
GERES	**GERESS Array B**	**150.66**	**347**	PKPbc			**PKPbc**	**21 15 44.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=31,slow=2.3,SNR=3.5								

*IDC **30** 21:04:06.9±0.7, 7°.35S×124°.06E, h573km±11km, mb3.2/7, mbtmp4.1/11, Error ellipse: s-maj=31.1km s-min=11.7km az=63.0*
*DJA **30** 21:04:07.4±0.4, 7°.5±4°×12°.4E±°, h579km±5km, M4.2/18, mb4.3/12, mB4.7/6, MLv4.2/18, Mw(mB)3.9/6*
*NEIC **30** 21:04:07.4±1.6, 7°.3S±0°.1×124°.0E±0°.1, h577km±12km, mb4.3/8, Error ellipse: s-maj=19.6km s-min=17.7km az=223.0*
ISC 30 21:04:07.0±0.5, 7°.35S±0°.07×123°.99E±0°.08, h577km±7km, n62, σ1§21/70, mb3.9/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.16**	**233**	P		P	**P**	**21 05 19.3**	**-0.7**
MMRI						S	**S**	**21 06 19.3**	**+0.1**
MMRI	**Maumere**	**2.16**	**233**	P		P	**P**	**21 05 20.1**	**+0.2**
MMRI	**Maumere**	**2.16**	**233**	P		P	**P**	**21 05 20.3**	**+0.4**
SOEI	**Soe**	**2.41**	**173**	P		P	**P**	**21 05 22.1**	**+0.8**
SOEI						S	**S**	**21 06 21.2**	**-0.5**
SOEI	**Soe**	**2.41**	**173**	P		P	**P**	**21 05 21.9**	**+0.6**
SOEI						S	**S**	**21 06 23.1**	**+1.4**
EDFI	**Ende, Flores**	**2.67**	**238**	P		P	**P**	**21 05 22.4**	**-0.2**
BATI	**Baumata**	**2.86**	**186**	P		P	**P**	**21 05 24.4**	**+0.8**
	140nm,0.3s,baz=10,slow=1.2,SNR=43								
BATI						S	**S**	**21 06 25.0**	**-0.8**
	145nm,0.4s,baz=273,slow=2.2,SNR=11								
BATI	**Baumata**	**2.86**	**186**	P		P	**P**	**21 05 25.2**	**+1.6**
BATI						S	**S**	**21 06 27.5**	**+1.6**
BSSI	**Bau Bau, Buton**	**3.67**	**289**	P		P	**P**	**21 05 29.5**	**+0.9**
WSI	**Waingapu**	**4.32**	**237**	P		P	**P**	**21 05 32.3**	**-0.9**
BKSI	**Bulukumba**	**4.34**	**297**	P		P	**P**	**21 05 34.1**	**+0.7**
BASI	**Baing, Sumba**	**4.42**	**229**	P		P	**P**	**21 05 34.4**	**+0.5**
WBSI	**Waikabubak, Su**	**5.09**	**243**	P		P	**P**	**21 05 38.8**	**-0.5**
	0.5nm2µm110nm,0.7s								
NLAI	**Namlea**	**5.12**	**37**	P		P	**P**	**21 05 40.5**	**+0.9**
AAI	**Ambon**	**5.54**	**49**	P		P	**P**	**21 05 43.7**	**+0.6**
SANI	**Sanana**	**5.63**	**21**	P		P	**P**	**21 05 44.5**	**+0.7**
SANI	**Sanana**	**5.63**	**21**	P		P	**P**	**21 05 44.6**	**+0.7**
	0.4nm957nm101nm,1.1s								
PLAI	**Plampang**	**6.32**	**256**	P		P	**P**	**21 05 48.9**	**-1.0**
PLAI	**Plampang**	**6.32**	**256**	P		P	**P**	**21 05 49.5**	**-0.4**
	0.2nm798nm53nm,0.9s								
SAUI	**Saumlaki**	**7.28**	**95**	P		P	**P**	**21 05 58.3**	**-0.4**
SAUI	**Saumlaki**	**7.28**	**95**	P		P	**P**	**21 05 58.7**	**0.0**
SAUI	**Saumlaki**	**7.28**	**95**	P		P	**P**	**21 05 58.7**	**0.0**
GTOI	**Gorontalo**	**7.99**	**353**	P		P	**P**	**21 06 08.0**	**+2.4**
	60nm,0.8s								
MRSI	**Marisa**	**8.04**	**345**	P		P	**P**	**21 06 05.9**	**-0.1**
	674nm63nm,0.8s								
DRS	**Darwin Rock St**	**8.48**	**127**	P		P	**P**	**21 06 11.0**	**+0.7**
TNTI	**Ternate**	**8.74**	**23**	P		P	**P**	**21 06 11.1**	**-1.8**
MTN	**Manton Dam**	**8.90**	**128**	P		P	**P**	**21 06 14.3**	**-0.2**
TOLI2	**Tolitoli**	**8.99**	**339**				**P**	**21 06 15.8**	**+0.4**
TOLI2	**Tolitoli**	**8.99**	**339**	P		P	**P**	**21 06 15.9**	**+0.5**
FAKI	**Fak Fak**	**9.33**	**62**	P		P	**P**	**21 06 18.6**	**-0.1**
KNRA	**Kununurra**	**9.51**	**151**	P		P	**P**	**21 06 20.7**	**+0.3**
SWI	**Sorong**	**9.70**	**49**	P		P	**P**	**21 06 22.9**	**+0.5**
JAGI	**Jajag, Banyuwa**	**9.81**	**263**	P		P	**P**	**21 06 22.1**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.81**	**172**	P		P	**P**	**21 06 33.6**	**+0.1**
	6.6nm,0.3s,baz=354,slow=6.2,SNR=91								
FITZ						S	**S**	**21 08 31.5**	**-2.4**
	4.0nm,0.6s,baz=11,slow=16,SNR=4.2								
FITZ	**Fitzroy Crossi**	**10.81**	**172**	P		P	**P**	**21 06 33.8**	**+0.3**
MBWA	**Marble Bar**	**14.34**	**196**	P		P	**P**	**21 07 08.9**	**-0.6**
PSA00	**Pilbara Seismi**	**14.70**	**195**	P		P	**P**	**21 07 12.3**	**-0.7**
SBUM	**Sibu**	**15.25**	**309**	P		P	**P**	**21 07 18.5**	**+0.1**
SBUM						IAmb	IAmb	21 07 21.6	
	comp=Z,8.6nm,0.8s								
SBUM	**Sibu**	**15.25**	**309**	P		P	**P**	**21 07 19.8**	**+1.4**
WRA	**Warramunga Arr**	**16.05**	**142**	P		P	**P**	**21 07 25.5**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=333,slow=8.6,SNR=13								
WRA						S	**S**	**21 10 10.4**	**+2.3**
	comp=Z,1.9nm,0.9s,baz=313,slow=19,SNR=4.7								
TPI	**Tanjungpandan**	**16.89**	**285**	P		P	**P**	**21 07 36.1**	**+2.4**
TNG	**Tangerang**	**17.26**	**273**	P		P	**P**	**21 07 42.1**	**+5.1**
ASAR	**Alice Springs**	**18.81**	**151**	P		P	**P**	**21 07 52.0**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=317,slow=7.7,SNR=9.3								
ASAR						S	**S**	**21 10 52.9**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=338,slow=22,SNR=3.1								
COEN	**Coen**	**19.96**	**111**	P		P	**P**	**21 08 03.8**	**+2.2**
KULM	**Kulim**	**26.45**	**298**	P		P	**P**	**21 08 58.9**	**-0.5**
KULM						IAmb	IAmb	21 09 06.1	
	comp=Z,14nm,1.2s								
TPUB	**Ta-pu**	**30.64**	**354**	P		P	**P**	**21 09 34.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**35.61**	**316**	P		P	**P**	**21 10 18.6**	**+1.2**
	comp=Z,1.3nm,0.5s,baz=132,slow=7.9,SNR=14								
	comp=Z,1.3nm,0.5s								
CMAR	**Chiang Mai Arr**	**35.61**	**316**	P		P	**P**	**21 10 17.3**	**-0.2**
CHTO	**Chiang Mai**	**35.85**	**317**	P		P	**P**	**21 10 19.2**	**-0.3**
KSRS	**Korea Array**	**44.72**	**4**	P		P	**P**	**21 11 30.3**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=180,slow=9.3,SNR=4.9								
	comp=Z,0.9nm,0.5s								
MJAR	**Matsushiro Arr**	**45.65**	**16**	P		P	**P**	**21 11 36.3**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=190,slow=8.9,SNR=12								
	comp=Z,2.9nm,0.7s								
LSA	**Lhasa**	**48.51**	**321**	P		P	**P**	**21 11 55.8**	**-3.2**
LSA						pmax	pmax		
	comp=Z,4.0nm,0.7s								
EVN	**Everest**	**50.21**	**316**	P		P	**P**	**21 12 12.1**	**+0.3**
EVN						IAmb	IAmb	21 12 13.4	
	comp=Z,7.2nm,0.7s								
MKAR	**Makanchi Array**	**65.38**	**330**	P		P	**P**	**21 13 53.7**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=129,slow=7.4,SNR=18								
	comp=Z,1.5nm,0.6s								
MKAR	**Makanchi Array**	**65.38**	**330**	P		P	**P**	**21 13 53.2**	**-0.1**
ZALV	**Zalesovo Beam**	**69.38**	**336**	P		P	**P**	**21 14 17.0**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=120,slow=5.8,SNR=8.5								
	comp=Z,1.6nm,0.7s								
ZALV	**Zalesovo Beam**	**69.38**	**336**	P		P	**P**	**21 14 16.4**	**-1.0**
KKAR	**Karatay Array**	**69.76**	**321**	P		P	**P**	**21 14 20.1**	**+0.1**
KURBB	**Kurchatov Arra**	**69.80**	**331**	P		P	**P**	**21 14 20.4**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=144,slow=5.3,SNR=2.0								
	comp=Z,2.0nm,0.3s								
BVAR	**Borovoye Array**	**75.27**	**330**	P		P	**P**	**21 14 51.6**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=115,slow=6.8,SNR=5.4								
	comp=Z,1.2nm,0.7s								
AB31	**Akbulak array**	**79.14**	**323**	P		P	**P**	**21 15 12.1**	**-0.3**
ABKAR	**Akbulak array**	**79.14**	**323**	P		P	**P**	**21 15 12.2**	**-0.2**

*MEX **30** 21:05:38.3±0.5, 14°.63N×92°.29W, h87km±5km, MD3.5*
*GCG **30** 21:05:38.8±0.7, 14°.77N×92°.28W, h70km±35km, MD3.6*
ISC 30 21:05:34.6±2.2, 14°.4N±0°.1×92°.3W±0°.1, h81km±15km, n11, σ1§07/21, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**0.50**	**5**	*e*P			**Pn**	**21 05 49.7**	**+1.2**
THIG				*e*S			**Sn**	**21 05 59.0**	**+0.2**
SMCA	**Catarina**	**0.51**	**27**	*e*P			**Pn**	**21 05 49.3**	**+0.7**
PATR	**El Naranjo**	**0.71**	**6**	*e*P			**Pn**	**21 05 51.2**	**+0.4**
PATR				*e*S			**Sn**	**21 06 01.6**	**-1.2**
CHUJ	**Union Juarez**	**0.71**	**16**	*e*P			**Pn**	**21 05 51.6**	**+0.7**
CHUJ				*e*S			**Sn**	**21 06 02.0**	**-0.8**
PAVE	**Pavencul**	**0.80**	**10**	*e*P			**Pn**	**21 05 52.6**	**+0.9**
PAVE				*e*S			**Sn**	**21 06 03.5**	**-0.9**
STG2	**El Palmar, Qui**	**0.91**	**88**	*i* P			**Pn**	**21 05 53.3**	**+0.5**
STG2				*e*S			**Sn**	**21 06 05.4**	**-1.1**
STG8	**El Palmar, Qui**	**0.93**	**87**	*e*P			**Pn**	**21 05 54.1**	**+0.9**
STG8				*e*S			**Sn**	**21 06 06.3**	**-0.8**
STG5	**El Palmar, Qui**	**0.94**	**90**	*i* P			**Pn**	**21 05 54.2**	**+1.1**
STG5				*e*S			**Sn**	**21 06 05.2**	**-1.7**
PCIG		**1.56**	**326**	*e*P			**Pn**	**21 06 01.5**	**+0.7**
PCIG				*e*S			**Sn**	**21 06 19.2**	**-1.3**
CCIG	**Comitan**	**1.88**	**5**	*e*P			**Pn**	**21 06 05.9**	**+0.8**
CCIG				*e*S			**Sn**	**21 06 28.5**	**+0.3**
UXUV	**UXUV**	**3.39**	**329**	*e*P			**Pn**	**21 06 26.1**	**+0.7**
UXUV				*e*S			**Sn**	**21 07 03.0**	**-1.5**

*IDC **30** 21:57:29.1±1.2, 30°.38N×141°.30E, h0km, mb3.5/3, mbtmp3.6/6, ML3.2/3, MS2.9/7, Error ellipse: s-maj=57.5km s-min=20.2km az=86.0*
ISC 30 21:57:32.0±0.9, 30°.4N±0°.1×141°.1E±0°.3, h35km, n20, σ3§80/9, mb3.6/3, MS2.9/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.98**	**338**	Pn			**Pn**	**21 58 18.1**	**+1.4**
	10nm,0.3s,baz=113,slow=20,SNR=5.4								
JHJ							Sn	**Sn**	**21 58 44.9**	**-6.3**
	31nm,0.3s,baz=78,slow=18,SNR=4.9								
	91nm,0.6s

SHEM	**Shemya Is, Ala**	**32.86**	**38**	LR	LR	22 15 34.4		
	comp=Z,21nm,22.0s,baz=285,slow=33							
MKAR	**Makanchi Array**	**47.71**	**307**	LR	LR	22 24 52.1		
	comp=Z,11nm,18.8s,baz=55,slow=34							
WRA	**Warramunga Arr**	**50.43**	**188**	P	**P**	**22 06 29.3**	**+3.1**	
	0.3nm,0.4s,baz=5.6,slow=7.5,SNR=6.1							
	0.3nm,0.4s							
KDAK	**Kodiak Island**	**52.37**	**38**	LR	LR	22 29 15.2		
	comp=Z,19nm,19.3s,baz=31,slow=36							
ASAR	**Alice Springs**	**54.16**	**188**	P	**P**	**22 06 56.7**	**+2.8**	
	0.2nm,0.5s,baz=4.1,slow=5.3,SNR=6.6							
	0.2nm,0.5s							
ILAR	**Eielson Array**	**55.34**	**30**	P	**P**	**22 07 03.5**	**+1.5**	
	0.9nm,1.2s,baz=270,slow=7.3,SNR=4.3							
ILAR				LR	LR	22 32 14.2		
	comp=Z,12nm,19.6s,baz=204,slow=38							
	0.9nm,1.2s							
INK	**Inuvik**	**60.48**	**25**	LR	LR	22 34 48.9		
	comp=Z,20nm,21.3s,baz=282,slow=37							
H03N2	**Juan Fernandez**	**146.02**	**106**	T	T	01 01 07.5		
	baz=280,slow=75,SNR=6.6							
H03N3	**Juan Fernandez**	**146.03**	**106**	T	T	01 01 09.8		
	baz=280,slow=75,SNR=6.9							
H03N1	**Juan Fernandez**	**146.03**	**106**	T	T	01 01 09.9		
	baz=280,slow=75,SNR=5.9							

*IDC **30** 22:35:07.8±1.2,33.52N×131.86E,h69km±10km, mb3.4/9, mbtmp3.7/12, Error ellipse: s-maj=16.2km s-min=14.2km az=64.0*
*JMA **30** 22:35:07.9±0.1,33.5N±0.2×132.0E±0.2, h64km, MV3.5/40, IYONADA SETONAIKAI*
JMA Felt I J1 at IYONADA SETONAIKAI .
*NIED **30** 22:35:07.9,33.47N×131.97E, h64km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.47; Mθθ-6.39; Mφφ2.92; Mrθ2.77; Mθφ1.14; Mrφ2.76; Fault plane solution: Mo6.86000×10¹⁴ NP1: φs312.00000°, δ46.00000°, λ150.00000°. NP2: φs64.00000°, δ69.00000°, λ48.00000°.*

ISC 30 22:35:07.3±0.8, 33.44N±0.04×131.96E±0.03, h68km±6km, n25, σ0s82/38, mb3.7/9, 8D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKI	**Kunimi**	**0.38**	**300**	⇓P		**Pn**	**22 35 19.0**	**+0.2**
JKI				⇓S		**Sn**	**22 35 27.0**	**-0.2**
JUS	**Usuki**	**0.42**	**205**	P		**Pn**	**22 35 19.6**	**+0.4**
JUS				*e*S		**Sn**	**22 35 28.0**	**+0.3**
JNA	**Nagahama**	**0.45**	**75**	P		**Pn**	**22 35 19.6**	**+0.2**
JNA				S		**Sn**	**22 35 28.0**	**-0.3**
OIT2	**Oita 2**	**0.46**	**249**	P		**Pn**	**22 35 20.2**	**+0.7**
OIT2				S		**Sn**	**22 35 28.9**	**+0.4**
JBEP	**Beppuamama**	**0.48**	**257**	*e*P		**Pn**	**22 35 20.0**	**+0.3**
UWA2	**Uwa jima 2**	**0.60**	**112**	P		**Pn**	**22 35 21.0**	**0.0**
UWA2				S		**Sn**	**22 35 30.4**	**-0.6**
JTO	**Tosashimizu**	**0.91**	**129**	P		**Pn**	**22 35 24.8**	**+0.2**
JTO				S		**Sn**	**22 35 36.7**	**-0.8**
JKU	**Kubokawa**	**0.93**	**98**	P		**Pn**	**22 35 24.8**	**0.0**
JKU				S		**Sn**	**22 35 37.7**	**-0.1**
JNU	**Nakatsue**	**0.96**	**251**	P		**Pn**	**22 35 25.9**	**+0.6**
	51nm,0.3s,baz=57,slow=14,SNR=289							
JNU				S		**Sn**	**22 35 38.7**	**+0.1**
	170nm,0.4s,baz=134,slow=9.3,SNR=8.1							
JET	**Tanbara**	**0.97**	**69**	P		**Pn**	**22 35 25.4**	**+0.1**
JET				S		**Sn**	**22 35 38.7**	**+0.1**
JHT	**Toyohira**	**1.27**	**17**	⇓P		**Pn**	**22 35 29.8**	**+0.5**
JHT				⇓S		**Sn**	**22 35 46.5**	**+0.9**
JIU3	**Izumi3**	**1.32**	**228**	⇓P		**Pn**	**22 35 30.4**	**+0.6**
JIU3				⇓*e*S		**Sn**	**22 35 47.1**	**+0.6**
JHGM	**Hagimishima**	**1.50**	**333**	⇓P		**Pn**	**22 35 32.8**	**+0.6**
JHGM				⇓S		**Sn**	**22 35 51.6**	**+0.7**
KSRS	**Korea Array**	**5.18**	**322**	P		**Pn**	**22 36 22.9**	**+0.6**
	0.7nm,0.3s,baz=144,slow=14,SNR=5.2							
KSRS				S		**Sn**	**22 37 18.2**	**-2.5**
	4.7nm,0.3s,baz=139,slow=25,SNR=4.6							
MJAR	**Matsushiro Arr**	**5.99**	**57**	P		**Pn**	**22 36 35.3**	**+2.0**
	4.4nm,0.5s,baz=243,slow=13,SNR=14							
JHJ	**Hachijo jima 2**	**6.56**	**91**	P		**Pn**	**22 36 41.5**	**+0.5**
	155nm,0.8s,baz=270,slow=19,SNR=2.4							
LZDM	**Lanzhou Array**	**23.34**	**284**	P	**P**		**22 40 10.1**	**0.0**
	3.9nm,0.6s,baz=120,slow=8.5,SNR=10							
	3.9nm,0.6s							
SONM	**Songino Array**	**24.00**	**314**	P	**P**		**22 40 16.4**	**+0.6**
	1.4nm,0.5s,baz=134,slow=10,SNR=12							
	1.4nm,0.5s							
MKAR	**Makanchi Array**	**39.62**	**305**	P	**P**		**22 42 31.1**	**-1.1**
	0.3nm,0.5s,baz=92,slow=12,SNR=2.1							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**42.25**	**310**	P	**P**		**22 42 52.6**	**-1.2**
	0.7nm,0.4s,baz=108,slow=3.0,SNR=2.1							
	0.7nm,0.4s							
BVAR	**Borovoye Array**	**47.34**	**314**	P	**P**		**22 43 33.7**	**-0.5**
	1.1nm,0.5s,baz=108,slow=9.5,SNR=6.3							
	1.1nm,0.5s							
WRA	**Warramunga Arr**	**53.13**	**177**	P	**P**		**22 44 18.7**	**+0.5**
	0.4nm,0.8s,baz=1.9,slow=7.4,SNR=2.5							
	0.4nm,0.8s							
ILAR	**Eielson Array**	**56.58**	**30**	P	**P**		**22 44 43.2**	**+0.6**
	0.2nm,0.6s,baz=283,slow=6.6,SNR=2.1							
	0.2nm,0.6s							
ASAR	**Alice Springs**	**56.82**	**178**	P	**P**		**22 44 45.9**	**+1.1**
	0.3nm,0.9s,baz=13,slow=8.1,SNR=2.2							
	0.3nm,0.9s							
HFS	**Hagfors**	**73.94**	**333**	P	**P**		**22 46 33.5**	**-1.4**
	2.1nm,0.9s,baz=60,slow=5.7,SNR=1.4							
	2.1nm,0.9s							

*PDG **30** 22:08:54.6±0.2, 41.57N×19.54E, h11km, ML2.5/12, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*TIR **30** 22:08:54.0, 41.64N×19.61E, h32km, Md2.8/1, Ml2.7/4*
*BEO **30** 22:08:56.0±0.6, 41.65N×19.40E, h32km±4km, ML2.5/7*

ISC 30 22:08:53.9±1.1, 41.60N±0.02×19.59E±0.02, h7km±9km, n49, σ0s90/81, 14C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.33**	**140**	Pg		**Pg**	**22 09 00.1**	**-0.1**
TIR				Sg		**Sg**	**22 09 04.8**	**+0.2**
TIR				AML	AML		22 09 05.6	
	3.8nm,0.4s							
TIR				Sg		**Sb**	**22 09 06.1**	**-1.4**
ULC	**Ulcinj**	**0.45**	**325**	⇑*i*Pg		**Pg**	**22 09 02.1**	**-0.5**
ULC				*i* Sg		**Sg**	**22 09 08.6**	**+0.2**
SDA	**Shkodra**	**0.46**	**352**	Pg		**Pg**	**22 09 03.0**	**+0.2**
SDA				Sg		**Sb**	**22 09 10.3**	**-1.0**
SDA				AMd			22 09 57.1	
PHP	**Peshkopia**	**0.65**	**82**	Pg		**Pg**	**22 09 06.0**	**-0.3**
PHP				Sg		**Sg**	**22 09 15.8**	**+1.0**
PHP				AML	AML		22 09 21.6	
	1.3nm,0.4s							
DRME	**Dracevica, Mon**	**0.66**	**333**	*e*Pg		**Pg**	**22 09 06.3**	**-0.3**
DRME				*e*Sg		**Sn**	**22 09 18.4**	**-1.9**
DRME	**Dracevica, Mon**	**0.66**	**333**	⇑*i*Pg		**Pg**	**22 09 05.9**	**-0.7**
DRME				*i* Sg		**Sb**	**22 09 16.5**	**-0.6**
PDG	**Podgorica**	**0.87**	**344**	Pn		**Pg**	**22 09 10.1**	**-0.5**
PDG				Sn		**Sb**	**22 09 22.4**	**-0.7**
PDG	**Podgorica**	**0.87**	**344**	⇓P		**Pb**	**22 09 11.0**	**-0.2**
PDG				⇓S		**Sb**	**22 09 23.5**	**+0.5**
PDG	**Podgorica**	**0.87**	**344**	*e*Pg		**Pg**	**22 09 10.3**	**-0.3**
PDG				*e*Sg		**Sn**	**22 09 24.9**	**-0.5**
PDG	**Podgorica**	**0.87**	**344**	⇑*i*Pg		**Pg**	**22 09 10.9**	**-0.3**
PDG				*i* Sg		**Sb**	**22 09 23.7**	**+0.6**
BUM	**Brajici-Budva**	**0.87**	**324**	⇑*i*Pg		**Pg**	**22 09 10.0**	**-0.7**
BUM				*i* Sg		**Sb**	**22 09 23.6**	**+0.3**
PVY	**Plav**	**1.03**	**15**	⇑*i*Pg		**Pg**	**22 09 13.1**	**-0.6**
PVY				*i* Sg		**Sn**	**22 09 30.0**	**+0.3**
CEME	**Cevo**	**1.07**	**332**	⇓*i*Pg		**Pg**	**22 09 13.7**	**-0.7**
CEME				*i* Sg		**Sn**	**22 09 30.1**	**-0.4**
VLO	**Vlora**	**1.13**	**184**	Pn		**Pg**	**22 09 15.7**	**+0.1**
VLO				Sn		**Sb**	**22 09 31.4**	**+0.8**
HCY	**Herceg Novi**	**1.18**	**317**	⇓*i*Pg		**Pg**	**22 09 15.9**	**-0.6**
HCY				*i* Sg		**Sn**	**22 09 32.9**	**-0.1**
KOME	**Kolasin**	**1.25**	**358**	*e*Pg		**Pn**	**22 09 18.6**	**+0.7**
KOME				*e*Sg		**Sn**	**22 09 35.6**	**+0.6**
KOME	**Kolasin**	**1.25**	**358**	⇑*i*Pg		**Pn**	**22 09 17.8**	**-0.1**
KOME				*i* Sg		**Sn**	**22 09 36.6**	**+1.6**
NKME	**Niksic**	**1.26**	**338**	⇓*i*Pg		**Pn**	**22 09 17.4**	**-0.5**
NKME				*i* Sg		**Sn**	**22 09 36.4**	**+1.3**
IVA	**Berane**	**1.29**	**10**	⇓*i*Pg		**Pn**	**22 09 18.1**	**-0.3**
IVA				*i* Sg		**Sn**	**22 09 38.6**	**+2.6**
KBN	**Korca**	**1.33**	**137**	Pn		**Pn**	**22 09 18.4**	**-0.6**
KBN				Sn		**Sg**	**22 09 37.0**	**+0.3**
KBN				AML	AML		22 09 48.1	
	0.4nm,0.6s							
TREB	**Trebinje**	**1.45**	**321**	*e*Pn		**Pn**	**22 09 19.9**	**-0.6**
BRY	**Bratogost**	**1.52**	**329**	⇓*i*Pg		**Pn**	**22 09 21.5**	**-0.1**
BRY				*i* Sg		**Sg**	**22 09 44.0**	**+1.3**
SJES	**Sjenica**	**1.69**	**10**	*e*Pg		**Pg**	**22 09 25.9**	**-0.3**
SJES				*e*Sg		**Sb**	**22 09 47.0**	**+0.2**
KLINJ	**Klinje**	**1.74**	**335**	*e*Pn		**Pb**	**22 09 26.3**	**+0.2**
PLE	**Pljevlja**	**1.74**	**355**	⇑*i*Pn		**Pb**	**22 09 25.6**	**-0.6**
PLE				*i* Sn		**Sg**	**22 09 50.0**	**+0.3**
STON	**Ston**	**1.89**	**313**	*e*Pg		**Pb**	**22 09 27.5**	**-1.2**
STON				*e*Sg		**Sn**	**22 09 51.1**	**+0.5**
SELS	**Selova**	**1.98**	**34**	*e*Pn		**Pn**	**22 09 28.5**	**+0.7**
SELS				*e*Sn		**Sn**	**22 09 53.5**	**+0.7**
IVAS	**Ivanjica**	**2.02**	**12**	*e*Pn		**Pn**	**22 09 29.2**	**+0.8**
RUDO	**Rudo**	**2.02**	**356**	*e*Pn		**Pb**	**22 09 29.7**	**-1.3**
BARS	**Barje**	**2.06**	**53**	*e*Pn		**Pn**	**22 09 29.5**	**+0.7**
BARS				*e*Sn		**Sb**	**22 09 56.7**	**-0.6**
NOCI	**Noci**	**2.07**	**248**	Pn		**Pb**	**22 09 30.5**	**-1.3**
NOCI				Sn		**Sb**	**22 09 58.0**	**+0.3**
BBLS	**Lazi&#263i**	**2.27**	**357**	*e*Pn		**Pn**	**22 09 31.3**	**-0.6**
BOSS	**Bosilegrad**	**2.33**	**66**	*e*Pn		**Pn**	**22 09 33.2**	**+0.5**
MATE	**Matera**	**2.38**	**247**	⇓P		**Pb**	**22 09 36.7**	**-0.3**
GRUS	**Gruza**	**2.44**	**20**	*e*Pn		**Pn**	**22 09 35.0**	**+0.9**
BOVS	**Bovan**	**2.57**	**37**	⇑P		**Pn**	**22 09 37.3**	**+1.5**
BOVS				⇑S		**Sn**	**22 10 08.1**	**+0.8**
BOVS	**Bovan**	**2.57**	**37**	*e*Pn		**Pn**	**22 09 36.5**	**+0.6**
BOVS				*e*Sn		**Sn**	**22 10 05.2**	**-2.1**
MRVN	**Minervino Murg**	**2.61**	**259**	P		**Pn**	**22 09 38.3**	**+1.8**
ZAPS	**Zavoj**	**2.81**	**52**	*e*Pn		**Pn**	**22 09 40.5**	**+1.3**
ZAPS				*e*Sn		**Sn**	**22 10 11.4**	**-1.9**
TEKS	**Tekeris**	**2.95**	**359**	*e*Pn		**Pn**	**22 09 40.8**	**-0.3**
MDVR	**Moldovita**	**3.54**	**25**	⇑P		**Pn**	**22 09 49.4**	**+0.1**
MDVR				⇓S		**Sn**	**22 10 31.3**	**-0.1**
BLY	**Banja Luka**	**3.61**	**332**	*e*Pn		**Pb**	**22 09 57.7**	**-0.2**
HERR	**Herculane**	**3.88**	**31**	⇑P		**Pn**	**22 09 54.6**	**+0.8**
BZS	**Buzias**	**4.28**	**19**	⇑P		**Pn**	**22 09 59.8**	**+0.4**
GZR	**Gura Zlata**	**4.45**	**30**	⇑P		**Pn**	**22 10 03.1**	**+1.4**
SURR	**Surduc**	**4.54**	**23**	⇓S		**Sn**	**22 10 55.5**	**-0.5**
MORH	**Mrgy, Hungar**	**4.67**	**352**	*e*Pn		**Pn**	**22 10 05.0**	**+0.3**
MORH	**Mrgy, Hungar**	**4.67**	**352**	⇓P		**Pn**	**22 10 06.3**	**+1.6**
SIRR	**Siria**	**4.90**	**17**	⇑P		**Pn**	**22 10 09.6**	**+1.7**

NEIC 30 22:01:10.6±1.0, 37.01N±0.01×105.01W±0.01, h5km±1km, ML1.7/10, Error ellipse: s-maj=2.8km s-min=2.2km az=177.0, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
T25A	**Trinidad**	**0.50**	**75**	Pg		Pg	22 01 20.7	+0.5
T25A				Sg		Sg	22 01 27.3	+0.6
T25A				IAML			22 01 27.6	
	comp=N,73nm,0.2s							
SDCO	**Great Sand Dun**	**0.83**	**332**	Pg		Pg	22 01 26.9	+0.3
SDCO				Sg		Sg	22 01 37.1	-0.3
S22A	**4UR Ranch, Cre**	**1.62**	**297**			Pn	22 01 39.9	-0.3
RTBA	**Rita Blanca**	**1.91**	**107**	Pn		Pn	22 01 43.6	-0.4
ABQ	**Albuquerque**	**2.37**	**210**	Pn		Pn	22 01 49.2	-1.2
MVCO	**Mesa Verde**	**2.79**	**275**	Pn		Pn	22 01 55.2	-1.0
PV02	**Paradox Valley**	**3.19**	**293**	Pn		Pn	22 02 01.0	-0.7

*TIR **30** 22:54:39.5, 41.65N×19.46E, h34km±1km, Md2.5/1, Ml3.1/3*
*BEO **30** 22:54:40.8±0.7, 41.58N×19.43E, h21km±4km, ML2.8/7*
*SKO **30** 22:54:41.9, 41.62N×19.55E, h10km*

ISC 30 22:54:40.0±1.1, 41.59N±0.03×19.52E±0.03, h8km±9km, n40, σ1s11/61, 6C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.36**	**133**	Pg		**Pg**	**22 54 46.4**	**-0.5**
TIR				Sg		**Sg**	**22 54 52.0**	**+0.3**
SDA	**Shkodra**	**0.46**	**358**	Pg		**Pg**	**22 54 48.6**	**-0.3**
SDA				Sg		**Sg**	**22 54 55.4**	**+0.5**
SDA				AMd			22 55 29.4	
DRME	**Dracevica, Mon**	**0.65**	**337**	*e*Pg		**Pg**	**22 54 51.9**	**-0.5**
DRME				*e*Sg		**Sn**	**22 55 05.6**	**-0.2**
PHP	**Peshkopia**	**0.70**	**82**	Pg		**Pb**	**22 54 52.1**	**-2.3**
PHP				Sg		**Sb**	**22 55 04.4**	**+0.2**
PHP				AML	AML		22 55 05.9	
	3.3nm,0.4s							
PDG	**Podgorica**	**0.86**	**347**	Pn		**Pb**	**22 54 55.7**	**-1.5**
PDG				Sn		**Sb**	**22 55 06.6**	**-2.2**
PDG	**Podgorica**	**0.86**	**347**	⇓P		**Pb**	**22 54 56.4**	**-0.7**
PDG				⇑S		**Sb**	**22 55 08.9**	**+0.1**
PDG	**Podgorica**	**0.86**	**347**	*e*Pg		**Pb**	**22 54 56.1**	**-1.0**
PDG				*e*Sg		**Sg**	**22 55 10.4**	**+2.7**
OHR	**Ohrid**	**1.08**	**116**	*i* Pg		**Pb**	**22 54 59.5**	**-1.4**
OHR				*i* Sg		**Sb**	**22 55 16.5**	**+1.4**
VLO	**Vlora**	**1.12**	**181**	Pn		**Pb**	**22 55 01.1**	**-0.4**
VLO				Sn		**Sn**	**22 55 17.2**	**-0.3**
VLO				AML	AML		22 55 24.8	
	5.0nm,0.5s							
KOME	**Kolasin**	**1.26**	**360**	*e*Pg		**Pn**	**22 55 04.1**	**+0.2**
KOME				*e*Sg		**Sn**	**22 55 21.5**	**+0.4**
KBN	**Korca**	**1.36**	**135**	Pn		**Pn**	**22 55 05.4**	**+0.1**
KBN				Sn		**Sb**	**22 55 24.5**	**+1.2**
SKO	**Skopje**	**1.49**	**75**	*i* Pg		**Pn**	**22 55 08.3**	**+1.4**
SKO				*i* Sg		**Sb**	**22 55 28.5**	**+1.6**
SJES	**Sjenica**	**1.70**	**11**	*e*Pg		**Pn**	**22 55 10.9**	**+0.9**
SJES				*e*Sg		**Sb**	**22 55 33.3**	**+0.1**
STON	**Ston**	**1.86**	**314**	*e*Pg		**Pn**	**22 55 13.3**	**+1.2**
STON				*e*Sg		**Sn**	**22 55 35.9**	**+0.2**
SELS	**Selova**	**2.01**	**36**	*e*Pn		**Pn**	**22 55 14.7**	**+0.5**
SELS				*e*Sn		**Sn**	**22 55 38.7**	**-0.9**
NOCI	**Noci**	**2.02**	**247**	P		**Pn**	**22 55 14.0**	**-0.3**
IVAS	**Ivanjica**	**2.04**	**13**	*e*Pn		**Pn**	**22 55 14.7**	**+0.1**
IVAS				*e*Sn		**Sn**	**22 55 42.0**	**+1.7**
BARS	**Barje**	**2.10**	**54**	*i* Pn		**Pn**	**22 55 15.6**	**+0.2**
BARS	**Barje**	**2.10**	**54**	*e*Pn		**Pn**	**22 55 15.6**	**+0.2**
GOCS	**Kraljevo Serbi**	**2.21**	**26**	*e*Sn		**Sn**	**22 55 44.7**	**+0.2**
BBLS	**Lazi&#263i**	**2.27**	**358**	*e*Pn		**Pn**	**22 55 19.5**	**+1.6**
VAY	**Valandovo**	**2.31**	**96**	*i* Pn		**Pn**	**22 55 18.8**	**+0.5**
VAY				*i* Sn		**Sn**	**22 55 46.8**	**0.0**
BOSS	**Bosilegrad**	**2.38**	**67**	*e*Pn		**Pn**	**22 55 19.5**	**+0.2**
GRUS	**Gruza**	**2.46**	**21**	*e*Pn		**Pn**	**22 55 21.0**	**+0.7**
BOVS	**Bovan**	**2.60**	**38**	⇓P		**Pn**	**22 55 22.6**	**+0.3**
BOVS				⇓S		**Sn**	**22 55 54.6**	**+0.5**
BOVS	**Bovan**	**2.60**	**38**	*e*Pn		**Pn**	**22 55 22.1**	**-0.2**
BOVS				*e*Sn		**Sn**	**22 55 52.0**	**-2.1**
TRUS	**Trudelj**	**2.71**	**14**	*e*Pn		**Pn**	**22 55 25.7**	**+1.9**
ZAPS	**Zavoj**	**2.85**	**53**	*e*Pn		**Pn**	**22 55 26.2**	**+0.4**
BLKB	**Belogradchik**	**3.09**	**48**	⇓S		**Sn**	**22 56 08.0**	**+1.8**
BORS2	**Bor- Borsko je**	**3.10**	**36**	*e*Pn		**Pn**	**22 55 27.9**	**-1.3**
MDVR	**Moldovita**	**3.57**	**26**	⇓P		**Pn**	**22 55 35.7**	**+0.1**
HERR	**Herculane**	**3.91**	**32**	⇓P		**Pn**	**22 55 40.5**	**+0.3**
BZS	**Buzias**	**4.30**	**20**	⇑P		**Pn**	**22 55 45.6**	**0.0**
BZS				⇑S		**Sn**	**22 56 34.4**	**-1.6**
GZR	**Gura Zlata**	**4.48**	**31**	⇓P		**Pn**	**22 55 49.2**	**+1.0**
SIRR	**Siria**	**4.92**	**18**	⇑P		**Pn**	**22 55 54.8**	**+0.6**
LOT	**Lotru**	**4.94**	**37**	⇓P		**Pn**	**22 55 55.4**	**+0.8**
VOIR		**5.56**	**44**	⇑P		**Pn**	**22 56 04.4**	**+1.3**
DRGR		**5.68**	**23**	⇑P		**Pn**	**22 56 05.3**	**+0.6**
DRGR				⇓S		**Sn**	**22 57 08.2**	**-1.9**
MLR	**Muntele Rosu**	**6.08**	**48**	⇓P		**Pn**	**22 56 10.9**	**+0.6**
VRI	**Vrincioaia**	**6.75**	**48**	⇓P		**Pn**	**22 56 21.3**	**+2.1**

*PDG **30** 22:08:54.6±0.2, 41.57N×19.54E, h11km, ML2.5/12, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*TIR **30** 22:08:54.0, 41.64N×19.61E, h32km, Md2.8/1, Ml2.7/4*
*BEO **30** 22:08:56.0±0.6, 41.65N×19.40E, h32km±4km, ML2.5/7*

ISC 30 22:08:53.9±1.1, 41.60N±0.02×19.59E±0.02, h7km±9km, n49, σ0s90/81, 14C-11D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.33**	**140**	Pg		**Pg**	**22 09 00.1**	**-0.1**
TIR				Sg		**Sg**	**22 09 04.8**	**+0.2**
TIR				AML	AML		22 09 05.6	
	3.8nm,0.4s							
TIR				Sg		**Sb**	**22 09 06.1**	**-1.4**
ULC	**Ulcinj**	**0.45**	**325**	⇑*i*Pg		**Pg**	**22 09 02.1**	**-0.5**
ULC				*i* Sg		**Sg**	**22 09 08.6**	**+0.2**
SDA	**Shkodra**	**0.46**	**352**	Pg		**Pg**	**22 09 03.0**	**+0.2**
SDA				Sg		**Sb**	**22 09 10.3**	**-1.0**
SDA				AMd			22 09 57.1	
PHP	**Peshkopia**	**0.65**	**82**	Pg		**Pg**	**22 09 06.0**	**-0.3**
PHP				Sg		**Sg**	**22 09 15.8**	**+1.0**
PHP				AML	AML		22 09 21.6	
	1.3nm,0.4s							
DRME	**Dracevica, Mon**	**0.66**	**333**	*e*Pg		**Pg**	**22 09 06.3**	**-0.3**
DRME				*e*Sg		**Sn**	**22 09 18.4**	**-1.9**
DRME	**Dracevica, Mon**	**0.66**	**333**	⇑*i*Pg		**Pg**	**22 09 05.9**	**-0.7**
DRME				*i* Sg		**Sb**	**22 09 16.5**	**-0.6**
PDG	**Podgorica**	**0.87**	**344**	Pn		**Pg**	**22 09 10.1**	**-0.5**
PDG				Sn		**Sb**	**22 09 22.4**	**-0.7**
PDG	**Podgorica**	**0.87**	**344**	⇓P		**Pb**	**22 09 11.0**	**-0.2**
PDG				⇓S		**Sb**	**22 09 23.5**	**+0.5**
PDG	**Podgorica**	**0.87**	**344**	*e*Pg		**Pg**	**22 09 10.3**	**-0.3**
PDG				*e*Sg		**Sn**	**22 09 24.9**	**-0.5**
PDG	**Podgorica**	**0.87**	**344**	⇑*i*Pg		**Pg**	**22 09 10.9**	**-0.3**
PDG				*i* Sg		**Sb**	**22 09 23.7**	**+0.6**
BUM	**Brajici-Budva**	**0.87**	**324**	⇑*i*Pg		**Pg**	**22 09 10.0**	**-0.7**
BUM				*i* Sg		**Sb**	**22 09 23.6**	**+0.3**
PVY	**Plav**	**1.03**	**15**	⇑*i*Pg		**Pg**	**22 09 13.1**	**-0.6**
PVY				*i* Sg		**Sn**	**22 09 30.0**	**+0.3**
CEME	**Cevo**	**1.07**	**332**	⇓*i*Pg		**Pg**	**22 09 13.7**	**-0.7**
CEME				*i* Sg		**Sn**	**22 09 30.1**	**-0.4**
VLO	**Vlora**	**1.13**	**184**	Pn		**Pg**	**22 09 15.7**	**+0.1**
VLO				Sn		**Sb**	**22 09 31.4**	**+0.8**
HCY	**Herceg Novi**	**1.18**	**317**	⇓*i*Pg		**Pg**	**22 09 15.9**	**-0.6**
HCY				*i* Sg		**Sn**	**22 09 32.9**	**-0.1**
KOME	**Kolasin**	**1.25**	**358**	*e*Pg		**Pn**	**22 09 18.6**	**+0.7**
KOME				*e*Sg		**Sn**	**22 09 35.6**	**+0.6**
KOME	**Kolasin**	**1.25**	**358**	⇑*i*Pg		**Pn**	**22 09 17.8**	**-0.1**
KOME				*i* Sg		**Sn**	**22 09 36.6**	**+1.6**
NKME	**Niksic**	**1.26**	**338**	⇓*i*Pg		**Pn**	**22 09 17.4**	**-0.5**
NKME				*i* Sg		**Sn**	**22 09 36.4**	**+1.3**
IVA	**Berane**	**1.29**	**10**	⇓*i*Pg		**Pn**	**22 09 18.1**	**-0.3**
IVA				*i* Sg		**Sn**	**22 09 38.6**	**+2.6**
KBN	**Korca**	**1.33**	**137**	Pn		**Pn**	**22 09 18.4**	**-0.6**
KBN				Sn		**Sg**	**22 09 37.0**	**+0.3**
KBN				AML	AML		22 09 48.1	
	0.4nm,0.6s							
TREB	**Trebinje**	**1.45**	**321**	*e*Pn		**Pn**	**22 09 19.9**	**-0.6**
BRY	**Bratogost**	**1.52**	**329**	⇓*i*Pg		**Pn**	**22 09 21.5**	**-0.1**
BRY				*i* Sg		**Sg**	**22 09 44.0**	**+1.3**
SJES	**Sjenica**	**1.69**	**10**	*e*Pg		**Pg**	**22 09 25.9**	**-0.3**
SJES				*e*Sg		**Sb**	**22 09 47.0**	**+0.2**
KLINJ	**Klinje**	**1.74**	**335**	*e*Pn		**Pb**	**22 09 26.3**	**+0.2**
PLE	**Pljevlja**	**1.74**	**355**	⇑*i*Pn		**Pb**	**22 09 25.6**	**-0.6**
PLE				*i* Sn		**Sg**	**22 09 50.0**	**+0.3**
STON	**Ston**	**1.89**	**313**	*e*Pg		**Pb**	**22 09 27.5**	**-1.2**
STON				*e*Sg		**Sn**	**22 09 51.1**	**+0.5**
SELS	**Selova**	**1.98**	**34**	*e*Pn		**Pn**	**22 09 28.5**	**+0.7**
SELS				*e*Sn		**Sn**	**22 09

0.6nm,0.9s,baz=271,slow=8.3,SNR=5.1
0.6nm,0.9s
ASAR Alice Springs 55.07 188 P P 23 07 40.3 -15
0.4nm,0.6s,baz=356,slow=6.0,SNR=9.5
ASAR LR LR 23 30 47.1
comp=Z,20nm,18.2s,baz=288,slow=36
0.4nm,0.6s
FINES FINESS Array B 73.87 333 P **P 23 09 55.8 -1.4**
3.0nm,0.9s,baz=35,slow=5.1,SNR=1.8
3.0nm,0.9s
ANMO Albuquerque 88.42 49 LR LR 23 47 26.7
comp=Z,32nm,20.6s,baz=34,slow=33
TXAR Lajitas Array 93.74 52 P **P 23 11 39.4 -0.5**
0.2nm,0.6s,baz=330,slow=5.0,SNR=3.6
0.2nm,0.6s

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*IDC **30** 23:06:19.7±1.6,6°.33S×129°.65E, h0km, mb3.6/3, mbtmp3.7/6, ML3.7/3, Error ellipse: s-maj=78.9km s-min=24.2km az=78.0*
ISC 30 23:06:32.8±1.1,7°.07S±0°.09×129°.5E±0°.2,h139km,n6, σ2§64/9,mb3.4/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.58**	**199**	Pn	**P**	**23 09 18.9**	**-2.9**
	0.6nm,0.3s,baz=24,slow=11,SNR=24						
FITZ				Sn	**Sn**	**23 11 23.4**	**+1.6**
	0.6nm,0.3s,baz=140,slow=20,SNR=6.4						
	2.1nm,0.7s						
WRA	**Warramunga Arr**	**13.63**	**160**	Pn	**P**	**23 09 42.2**	**-2.4**
	0.3nm,0.3s,baz=340,slow=14,SNR=12						
WRA				Sn	**Sn**	**23 12 10.4**	**-0.8**
	0.6nm,0.3s,baz=339,slow=22,SNR=5.5						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**17.03**	**166**	P	**Pn**	**23 10 27.5**	**+4.8**
	0.3nm,0.3s,baz=346,slow=10,SNR=32						
ASAR				S	**Sn**	**23 13 31.8**	**-1.3**
	0.2nm,0.5s,baz=340,slow=37,SNR=2.1						
	1.5nm,0.6s						
SONM	**Songino Array**	**58.35**	**342**	P	**P**	**23 16 13.7**	**+0.2**
	0.2nm,0.4s,baz=153,slow=8.3,SNR=1.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**68.01**	**327**	P	**P**	**23 17 17.3**	**+0.2**
	0.6nm,0.4s,baz=125,slow=7.8,SNR=13						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**72.31**	**329**	P	**P**	**23 17 42.9**	**-0.2**
	0.3nm,0.5s,baz=127,slow=4.8,SNR=4.0						
	0.3nm,0.5s						

IDC 30 23:16:19.3±2.4,1°.85N×127°.32E,h0km,mb3.4/3, mbtmp3.5/3,Error ellipse: s-maj=180.7km s-min=28.5km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.73**	**163**	P	P	23 21 23.3	+0.3
	1.5nm,0.5s,baz=342,slow=10,SNR=14						
	1.5nm,0.5s						
ASAR	**Alice Springs**	**26.16**	**166**	P	P	23 21 54.9	-0.6
	0.2nm,0.5s,baz=336,slow=7.1,SNR=1.6						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.43**	**326**	P	P	23 26 24.0	+0.2
	0.4nm,0.6s,baz=140,slow=7.7,SNR=2.3						
	0.4nm,0.6s						

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*DNK **30** 23:18:18.1±2.0,51°.23N×16°.35E, h39km±118km, ML1.8*
*VIE **30** 23:18:21.4±0.8,51°.39N×15°.96E, h0km, mb2.6/2, ml2.5/7, Error ellipse: s-maj=8.7km s-min=5.0km az=52.0 80 km WNW of Wroclaw Suspected Mining induced.*
*PRU **30** 23:18:22.3,51°.42N×16°.08E, h0km*
ISC 30 23:18:19.2±0.8,51°.54N±0°.03×16°.06E±0°.03,h0km,n32, σ1§21/57,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**168**	*e*Pg	**Pg**	**23 18 33.3**	**+0.5**
KSP				*e*Sg	**Sg**	**23 18 41.9**	**0.0**
CHVC	**Chvalec**	**0.95**	**180**	*e*PG	**Pb**	**23 18 38.0**	**-0.5**
CHVC				*e*SG	**Sg**	**23 18 49.2**	**-0.4**
	comp=Z,25nm,0.4s						
OSTC	**Ostas**	**0.99**	**174**	*e*PG	**Pb**	**23 18 38.9**	**-0.2**
OSTC				*e*SG	**Sg**	**23 18 50.0**	**-0.8**
	comp=Z,31nm,0.6s						
UPC	**Upice**	**1.03**	**182**	*e*PG	**Pb**	**23 18 39.7**	**-0.2**
UPC				*e*SG	**Sg**	**23 18 52.0**	**-0.2**
	comp=Z,53nm,0.4s						
DPC	**Dobruska-Polom**	**1.20**	**172**	*e*PG	**Pg**	**23 18 42.2**	**+0.1**
DPC				*e*SG	**Sg**	**23 18 56.4**	**-1.3**
	comp=Z,20nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**224**	*e*PG	**Pb**	**23 18 46.8**	**+1.0**
PVCC				*e*SG	**Sb**	**23 19 04.3**	**+0.3**
	comp=Z,87nm,0.5s						
KRLC	**Kraliky**	**1.53**	**162**	*e*PG	**Pg**	**23 18 48.5**	**0.0**
KRLC				*e*SG	**Sg**	**23 19 07.4**	**-1.0**
	comp=Z,22nm,0.5s						
RICC	**Richard**	**1.59**	**232**	*e*SG	**Sg**	**23 19 11.3**	**+1.2**
PRU	**Pruhonice**	**1.82**	**212**	*e*SG	**Sg**	**23 19 18.0**	**+0.2**
	comp=Z,30nm,0.4s						
HSKC	**Hora Svate Kat**	**1.90**	**242**	*e*SG	**Sb**	**23 19 19.9**	**+0.9**
	comp=Z,25nm,0.3s						
STEB	**Steborice**	**1.94**	**145**	*e*PN	**Pn**	**23 18 52.8**	**-0.6**
STEB				*e*PG	**Pb**	**23 18 55.1**	**-0.3**
STEB				*e*SG	**Sb**	**23 19 20.1**	**0.0**
	comp=Z,20nm,0.5s						
MORC	**Moravsky Berou**	**2.00**	**151**	*e*PN	**Pn**	**23 18 54.0**	**-0.3**
MORC				*e*SG	**Sn**	**23 19 19.7**	**-0.3**
VRAC	**Vranov**	**2.26**	**171**	*e*PN	**Pn**	**23 18 58.8**	**+1.0**
VRAC				*e*SG	**Sb**	**23 19 28.6**	**-0.6**
TREC	**Trest**	**2.27**	**189**	*e*SG	**Sb**	**23 19 29.8**	**+0.1**
KRUC	**Moravsky**	**2.49**	**175**	*e*PN	**Pn**	**23 19 02.3**	**+1.4**
KRUC				*e*SG	**Sb**	**23 19 36.9**	**+1.1**
OJC	**Ojcow**	**2.71**	**118**	*e*Pg	**Pg**	**23 19 12.7**	**+1.6**
OJC				*e*Sg	**Sg**	**23 19 47.1**	**+0.9**
KHC	**Kasperske Hory**	**2.88**	**214**	*e*PN	**Pn**	**23 19 07.5**	**+1.1**
KHC				*e*PG	**Pb**	**23 19 13.0**	**+1.5**
KHC				*e*SN	**Sn**	**23 19 40.5**	**-1.3**
KHC				*e*SG	**Sg**	**23 19 50.8**	**-1.0**
	comp=Z,8.8nm,0.5s						
CKRC	**Cesky Krumlov**	**2.94**	**203**	*e*SG	**Sb**	**23 19 51.2**	**+2.2**
LANS	**Liptovska Anna**	**3.24**	**136**	*e*PG	**Pg**	**23 19 21.1**	**-0.1**
LANS				*e*SG	**Sg**	**23 20 02.1**	**-1.0**
MODS	**Modra-Piesok**	**3.26**	**166**	*e*PG	**Pg**	**23 19 23.2**	**+1.5**
MODS				*e*SG	**Sg**	**23 20 02.6**	**-1.3**
CONA	**Conrad Observa**	**3.61**	**182**	*i* Pn	**Pn**	**23 19 17.2**	**+0.7**
	0.6nm,0.5s						
CONA				Sg	**Sg**	**23 20 13.1**	**-2.1**
	9.0nm,0.4s						
BSD	**Bornholm Skovb**	**3.65**	**350**	*i* P	**Pn**	**23 19 17.0**	**+0.1**
BSD				*i* S	**Sn**	**23 19 58.5**	**-2.0**
BSD				IAML		23 20 02.9	
	comp=Z,0.8nm,0.2s						
RONA	**Rosalia, Austr**	**3.84**	**178**	*e*Sg	**Sg**	**23 20 20.6**	**-2.0**
	comp=Z,4.6nm,0.4s						
MOA	**Molln**	**3.87**	**198**	*e*Pn	**Pn**	**23 19 20.5**	**+0.6**
	comp=Z,0.5nm,0.3s						
MOA				*e*Sg	**Sg**	**23 20 23.6**	**+0.2**
	comp=Z,4.2nm,0.4s						
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*PG	**Pg**	**23 19 34.7**	**+0.2**
STHS				*e*SG	**Sg**	**23 20 27.7**	**+2.2**
ARSA	**Arzberg**	**4.30**	**185**	*e*Sg	**Sg**	**23 20 34.9**	**-2.5**
	comp=Z,3.1nm,0.4s						
LUNU	**Lund**	**4.39**	**340**	*i* P	**Pn**	**23 19 27.4**	**+0.4**
LUNU				*i* S	**Sn**	**23 20 19.1**	**+0.4**
LESA	**Schwarzleotal**	**4.67**	**209**	*e*Sg	**Sg**	**23 20 46.9**	**-2.2**
	comp=Z,1.2nm,0.2s						
KBA	**Koelnbreinsper**	**4.80**	**203**	*e*Sg	**Sg**	**23 20 51.4**	**-2.0**
	comp=Z,0.9nm,0.3s						
BJUU	**Bjuv**	**4.89**	**340**	*i* P	**Pn**	**23 19 33.5**	**-0.4**
BJUU				*i* S	**Sn**	**23 20 28.5**	**-2.6**
DEL	**Delary**	**5.11**	**346**	*i* P	**Pn**	**23 19 37.0**	**0.0**
DEL				*i* S	**Sn**	**23 20 35.6**	**-1.0**
WTTA	**Wattenberg**	**5.16**	**216**	*e*Sg	**Sg**	**23 21 02.3**	**-2.5**
	comp=Z,2.3nm,0.5s						

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*NEIC **30** 23:32:16.3±0.6,55°.42N±0°.02×158°.76W±0°.08, h42km±21km, Error ellipse: s-maj=6.7km s-min=2.6km az=102.0*
AEIC 30 23:32:15.5±0.9,55°.45N±0°.03×158°.82W±0°.03,h47km±8km, ML2.5,ML2.5/34(NEIC),Error ellipse: s-maj=4.9km s-min=1.2km az=153.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNKR	**Veniaminof 5**	**0.66**	**332**		Pn	23 32 29.8	+1.2
VNKR					Sn	23 32 39.5	+1.5
VNSG	**Veniaminof 6**	**0.69**	**348**		Pn	23 32 30.3	+1.2
VNSG					Sn	23 32 40.7	+1.8
VNSW	**Veniaminof 7**	**0.75**	**326**		Pn	23 32 31.2	+1.4
VNSW					Sn	23 32 41.4	+1.2
CNBA	**Chernabura Isl**	**0.77**	**215**		Pn	23 32 30.1	0.0
CNBA					Sn	23 32 41.0	+0.3
VNFG	**Fog Glacier, M**	**0.93**	**334**		Pn	23 32 34.0	+1.7
VNFG				IAML		23 32 50.5	
	comp=N,191nm,1.0s						
VNFG				IAML		23 33 00.5	
	comp=E,179nm,0.7s						
SDPT	**Sand Point**	**0.95**	**264**		Pn	23 32 33.6	+1.1
SDPT					Sn	23 32 46.3	+1.3
SDPT				IAML		23 32 47.8	
	comp=E,101nm,0.7s						
ANPB	**Aniakchak Plen**	**1.39**	**12**		Pn	23 32 39.5	+1.0
PS1A	**Pavlof South-1**	**1.67**	**270**		Pn	23 32 43.4	+1.1
PS1A					Sn	23 33 04.6	+2.2
PS4A	**Pavlof South-4**	**1.73**	**268**		Pn	23 32 44.0	+0.8
PS4A					Sn	23 33 06.3	+2.2
DOL	**Dolgoi Island**	**1.77**	**261**		Pn	23 32 44.8	+1.1
DOL					Sn	23 33 06.7	+1.8
CHIR	**Chirikof Islan**	**1.85**	**77**		Pn	23 32 45.9	+1.1
CHIR					Sn	23 33 06.8	-0.2
CHIR				IAML		23 33 18.6	
	comp=E,49nm,1.2s						
CHIR				IAML		23 33 29.0	
	comp=N,39nm,1.0s						
S12K	**Black Hills**	**1.86**	**279**		Pn	23 32 47.0	+2.1
S12K				IAML		23 33 11.1	
	comp=N,48nm,1.2s						
S12K				IAML		23 33 14.1	
	comp=E,62nm,0.9s						
DT1	**Dutton Round H**	**2.01**	**261**		Pn	23 32 47.9	+0.9
DT1					Sn	23 33 12.3	+1.5
PLBL	**Peulik Blue Cr**	**2.51**	**25**		Pn	23 32 54.6	+0.8
PLK4	**Peulik 4**	**2.58**	**31**		Pn	23 32 57.1	+2.3
PLK4				IAML		23 33 43.3	
	comp=E,21nm,1.2s						
PLK4				IAML		23 34 17.5	
	comp=N,14nm,1.1s						
PLK3	**Peulik 3**	**2.65**	**31**		Pn	23 32 56.9	+1.2
SII	**Sitkinak Islan**	**2.83**	**65**	Pn	Pn	23 32 59.0	+0.8
CNTC	**Contact Creek**	**3.25**	**29**		Pn	23 33 05.9	+1.9
ACHA	**Angle Creek He**	**3.37**	**33**	Pn	Pn	23 33 07.1	+1.5
OHAK	**Old Harbor**	**3.55**	**58**		Pn	23 33 08.5	+0.4
OHAK				IAML		23 35 05.5	
	comp=N,7.5nm,1.2s						
O15K	**Ungalikthiuk R**	**3.77**	**352**	Pn	Pn	23 33 12.4	+1.2
O15K				IAML		23 33 56.0	
	comp=E,8.7nm,0.9s						
O15K				IAML		23 33 57.9	
	comp=N,7.5nm,1.0s						
O14K	**Tigyukauivet M**	**4.03**	**342**		Pn	23 33 16.1	+1.5
O14K				IAML		23 33 48.5	
	comp=E,7.5nm,0.9s						
O14K				IAML		23 34 35.7	
	comp=N,8.4nm,1.1s						
KDAK	**Kodiak Island**	**4.16**	**53**	Pn	Pn	23 33 16.7	+0.2
KDAK				IAML		23 36 06.0	
	comp=N,5.8nm,1.1s						
O16K	**Kokwok River B**	**4.17**	**5**	Pn	Pn	23 33 18.0	+1.5
P18K	**Big Mountain,**	**4.40**	**25**	Pn	Pn	23 33 21.2	+1.5
P18K				IAML		23 34 11.3	
	comp=E,4.7nm,1.1s						
P18K				IAML		23 35 47.6	
	comp=N,4.5nm,1.1s						
N14K	**Kuskokwak Cree**	**4.74**	**342**	Pn	Pn	23 33 25.9	+1.6
N15K	**Kwethluk River**	**4.78**	**352**	Pn	Pn	23 33 26.8	+1.9
N17K	**Nushagak Hills**	**5.16**	**9**	Pn	Pn	23 33 31.5	+1.4
N17K				IAML		23 34 31.1	
	comp=E,2.0nm,1.1s						
N18K	**Kilae Creek**	**5.47**	**15**	Pn	Pn	23 33 36.1	+1.7
M14K	**Bethel**	**5.57**	**344**	Pn	Pn	23 33 37.2	+1.6
M16K	**Timber Creek**	**5.59**	**359**		Pn	23 33 37.9	+1.9
CNPM	**China Poot**	**5.78**	**42**	Pn	Pn	23 33 39.4	+0.7
N19K	**Bonanza Creek**	**5.84**	**21**	Pn	Pn	23 33 42.0	+2.5
M17K	**Holitna River**	**6.01**	**6**	Pn	Pn	23 33 43.0	+1.3
L14K	**Kuka Creek**	**6.24**	**343**	Pn	Pn	23 33 46.0	+1.1
M18K	**Stony River**	**6.25**	**13**		Pn	23 33 47.7	+2.6
PWL	**Port Wells**	**7.75**	**41**	Pn	Pn	23 34 06.6	+1.0
J16K	**Anvik River**	**7.91**	**354**	Pn	Pn	23 34 08.9	+1.2
HIN	**Hinchinbrook I**	**8.21**	**48**	Pn	Pn	23 34 12.6	+0.6

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*HEL **30** 23:34:09.8±0.7,67°.16N×20°.70E, h0km, ML1.1, Suspected explosion*
UPP 30 23:34:08.6±0.0,67°.18N×20°.70E,h0km,ML1.6, Suspected explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.07**	**223**	P	Pg	23 34 10.3	+0.3
DUNU				S	Sg	23 34 11.5	+0.6
DUNU	**Dundret**	**0.07**	**223**	P	Pg	23 34 10.9	+0.9
	baz=26						
DUNU				S	Sg	23 34 12.0	+1.1
MASU	**Masugnsbyn**	**0.58**	**60**	P	Pg	23 34 19.6	0.0
MASU				S	Sg	23 34 27.4	+0.3
MASU	**Masugnsbyn**	**0.58**	**60**	P	Pg	23 34 20.3	+0.6
MASU				S	Sg	23 34 28.1	+1.0
RATU	**Laukkuluspa**	**0.78**	**327**	P	Pg	23 34 23.3	-0.2
RATU				S	Sg	23 34 33.8	+0.3
RATU	**Laukkuluspa**	**0.78**	**327**	P	Pg	23 34 24.0	+0.5
RATU				S	Sg	23 34 34.6	+1.0
KUA	**Kurravaara**	**0.79**	**350**	P	Pg	23 34 23.4	-0.4
	baz=189						
KUA	**Kurravaara**	**0.79**	**350**	P	Pg	23 34 24.3	+0.5
KUA				S	Sg	23 34 35.2	+1.2
ERTU	**Ertsjaerv**	**0.86**	**136**	P	Pg	23 34 24.4	-0.6
ERTU	**Ertsjaerv**	**0.86**	**136**	P	Pg	23 34 25.4	+0.4
ERTU	**Ertsjaerv**	**0.86**	**136**	PG	Pg	23 34 24.4	-0.6
ERTU				SB	Sg	23 34 36.5	+0.4
SALU	**Saltoluokta**	**0.88**	**285**	P	Pg	23 34 24.8	-0.6
SALU				S	Sg	23 34 36.8	+0.1
SALU	**Saltoluokta**	**0.88**	**285**	P	Pg	23 34 25.6	+0.2
PAJU	**Pajala**	**0.96**	**98**	P	Pg	23 34 26.4	-0.5
PAJU				S	Sg	23 34 39.4	+0.1
PAJU	**Pajala**	**0.96**	**98**	PG	Pg	23 34 26.6	-0.3
LANU	**Lannavaara**	**1.01**	**29**	P	Pg	23 34 27.3	-0.6
LANU	**Lannavaara**	**1.01**	**29**	PG	Pg	23 34 27.6	-0.2
LANU				SN	Sn	23 34 45.6	+0.7
HARU	**Harads**	**1.02**	**174**	P	Pg	23 34 27.4	-0.7
KLF	**Kolari**	**1.27**	**86**	PG	Pg	23 34 32.2	-0.7
KLF				smax	smax	23 34 48.4	
	comp=Z,2.1nm,0.2s						
HEF	**Hetta**	**1.67**	**41**	PG	Pb	23 34 39.8	-0.4
HEF				smax	smax	23 35 00.1	
	comp=Z,0.8nm,0.2s						
HEF				SN	Sg	23 35 04.1	+1.8
KALU	**Kalix**	**1.70**	**140**	P	Pn	23 34 39.7	+0.3
KALU	**Kalix**	**1.70**	**140**	PG	Pn	23 34 39.8	+0.5
KALU				SN	Sg	23 35 04.6	+1.5
TOF	**Tornio**	**1.82**	**126**	PG	Pb	23 34 42.2	-0.4
TOF				smax	smax	23 35 03.7	
	comp=Z,0.9nm,0.2s						
TOF				SG	Sg	23 35 07.0	+0.2
KIF	**Kilpisjarvi**	**1.84**	**1**	smax	smax	23 35 06.0	
	comp=Z,1.3nm,0.2s						
KIF				SG	Sg	23 35 09.3	+1.8
RNF	**Rovaniemi**	**2.17**	**103**	PG	Pb	23 34 47.6	-1.1
RNF				SG	Sg	23 35 17.5	-0.8
KU2	**Taivalkoski**	**3.36**	**112**	SN	Sn	23 35 42.0	-0.9
VRF	**Varrio**	**3.48**	**76**	PN	Pn	23 35 05.3	+1.5
VRF				SN	Sn	23 35 42.4	-3.3
VIKU	**Vikbolandet**	**8.89**	**194**	P	Pn	23 36 14.2	-4.0

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*NEIC **30** 23:38:48.6±1.1,35°.13N±0°.02×95°.37W±0°.02, h5km±1km, mb_Lg2.8/39, ML2.9/14, ML2.7/9, Error ellipse: s-maj=2.9km s-min=2.9km az=188.0*
NEIC 30 23:38:49.2±1.0,35°.135N±0°.008×95°.37W±0°.02,h6km±4km, Error ellipse: s-maj=2.1km s-min=1.1km az=101.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUL3	**Leonard**	**0.85**	**336**		Pg	23 39 05.3	-0.1
TUL3					Sg	23 39 16.7	+0.2
TUL3					IAML	23 39 18.8	
	222nm,0.5s						
RLO	**Rose Lookout**	**1.07**	**15**		Pg	23 39 09.1	-0.5
RLO					Sg	23 39 23.1	-0.4
RLO					IAML	23 39 26.2	
	comp=E,513nm,0.2s						
DEOK	**Depew**	**1.16**	**308**		Pg	23 39 11.0	-0.5
DEOK					Sg	23 39 26.4	-0.1
DEOK					IAML	23 39 31.2	
	comp=E,205nm,0.3s						
DEOK					IAML	23 39 31.6	
	comp=N,387nm,0.3s						
OK052	**Battle Ridge R**	**1.45**	**307**		Pn	23 39 15.8	-0.2
QUOK	**Quay**	**1.50**	**314**		Pn	23 39 16.6	-0.1
U38A	**Gravette**	**1.53**	**31**		Pn	23 39 16.9	-0.1
U38A					Sb	23 39 37.4	-0.1
MIAR	**Mount Ida**	**1.59**	**111**		Pn	23 39 17.9	+0.2
MIAR					Sn	23 39 38.9	+0.3
HHAR	**Hobbs**	**1.63**	**45**		Pn	23 39 18.4	0.0
FNO	**Franklin**	**1.67**	**275**		Pn	23 39 19.3	+0.4
OKCSW	**OKLAHOMA CITY**	**1.72**	**280**		Pn	23 39 19.9	+0.3
OKCSW				IAmb_Lg		23 39 45.1	
	comp=Z,43nm,0.9s						
ADOK	**Arcadia Dam**	**1.72**	**288**		Pn	23 39 19.8	+0.2
OK048	**Pawnee Station**	**1.81**	**315**		Pn	23 39 21.3	+0.5
OK051	**E0350 and S346**	**1.81**	**319**		Pn	23 39 21.8	+0.9
OK029	**Liberty Lake**	**1.83**	**292**		Pn	23 39 21.8	+0.7
Z38A	**Mt. Pleasant**	**1.90**	**170**	Pn	Pn	23 39 21.7	-0.3
Z38A				IAmb_Lg		23 39 53.0	
	comp=Z,55nm,0.8s						
T35A	**Sooner Cattle**	**2.00**	**333**		Pn	23 39 24.2	+0.6
T35A				IAmb_Lg		23 39 53.2	
	comp=Z,25nm,0.7s						
X34A	**Smith Ranch, M**	**2.10**	**256**	IAmb_Lg		23 39 56.1	
	comp=Z,51nm,1.1s						
X40A	**Basin Creek Fa**	**2.18**	**106**		Pn	23 39 26.6	+0.7
X40A				IAmb_Lg		23 40 01.3	
	comp=Z,65nm,0.8s						
Z35A	**Perchaven, San**	**2.38**	**221**		Pn	23 39 29.2	+0.5
UALR	**University of**	**2.51**	**97**		Pn	23 39 31.1	+0.6
WHAR	**Wooly Hollow**	**2.53**	**86**		Pn	23 39 31.2	+0.5
FCAR	**Ozark Folk Cen**	**2.75**	**73**		Pn	23 39 33.9	+0.1
WMOK	**Wichita Mounta**	**2.83**	**263**		Pn	23 39 35.4	+0.4
Z41A	**Richland Creek**	**2.83**	**131**		Pn	23 39 33.8	-1.1
Z41A				IAmb_Lg		23 40 16.6	
	comp=Z,20nm,0.8s						
OK038	**West end E0370**	**3.05**	**297**	IAmb_Lg		23 40 28.5	
	comp=Z,14nm,0.7s						
MGMO	**Mountain Grove**	**3.22**	**50**	IAmb_Lg		23 40 37.2	
	comp=Z,28nm,0.8s						
PLPT	**Palo Pinto**	**3.37**	**227**		Pn	23 39 41.7	-0.6
NATX	**Nacogdoches**	**3.42**	**170**	IAmb_Lg		23 40 45.9	
	comp=Z,17nm,0.8s						
LCAR	**Lake Charles**	**3.56**	**74**	IAmb_Lg		23 40 44.1	
	comp=Z,26nm,0.9s						
SMWD	**Samnorwood**	**4.00**	**271**	IAmb_Lg		23 41 05.6	
	comp=Z,22nm,0.8s						
R40A	**Maddies Statio**	**4.01**	**37**		Pn	23 39 52.0	+0.8
R40A				IAmb_Lg		23 40 56.6	
	comp=Z,29nm,0.8s						
R32A	**Long Quarter,**	**4.24**	**322**	IAmb_Lg		23 41 10.9	
	comp=Z,35nm,1.1s						
CCM	**Cathedral Cave**	**4.42**	**47**		Pn	23 39 56.8	+0.1
CCM	**Cathedral Cave**	**4.42**	**47**	IAmb_Lg		23 41 21.3	
	comp=Z,17nm,0.7s						
OXF	**Oxford**	**4.94**	**96**	IAmb_Lg		23 41 27.3	
	comp=Z,18nm,0.9s						
CGM3	**Cape Girardeau**	**5.09**	**63**	IAmb_Lg		23 41 38.1	
	comp=Z,15nm,0.9s						
AMTX	**Amarillo**	**5.19**	**269**	IAmb_Lg		23 41 43.5	
	comp=Z,14nm,0.8s						
S44A	**Carbondale**	**5.55**	**61**	IAmb_Lg		23 41 47.0	
	comp=Z,27nm,0.9s						
SIUC	**Southern Illin**	**5.59**	**61**	IAmb_Lg		23 41 47.1	
	comp=Z,23nm,0.8s						

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*NEIC **30** 23:40:18.8±1.8,4°.60S±0°.07×102°.23E±0°.07, h43km±3km, mb4.7/41, Error ellipse: s-maj=10.9km s-min=10.0km az=213.0*
*IDC **30** 23:40:19.6±0.9,4°.54S×102°.27E, h50km±5km, mb4.1/20, mbtmp4.4/21, MS3.3/7, Error ellipse: s-maj=21.5km s-min=12.3km az=49.0*
*DJA **30** 23:40:19.6±0.2,5°.2×10°.2E±°, h50km±6km, M4.6/27, mB5.1/6, mb4.7/12, MLv4.6/27, Mw(mB)4.5/6, MwMwp5.1/1, Mwp5.3/1*
ISC 30 23:40:19.1±0.6,4°.63S±0°.05×102°.23E±0°.04,h52km±5km, n124,σ1§11/128,mb4.6/43,MS3.5/5,2C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.03**	**21**	P	**Pn**	**23 40 38.1**	**+0.7**
KSI				S	**Sn**	**23 40 52.2**	**+1.3**
MASI	**Maura Aman, Be**	**1.48**	**1**	P	**Pn**	**23 40 44.5**	**+1.2**
MASI				S	**Sn**	**23 41 03.6**	**+2.1**
LWLI	**Liwa**	**1.87**	**102**	P	**Pn**	**23 40 49.8**	**+1.1**
LWLI				S	**Sn**	**23 41 12.1**	**+0.9**
MDSI	**Maura Dua**	**1.95**	**86**	P	**Pn**	**23 40 51.0**	**+1.2**
MDSI				S	**Sn**	**23 41 14.9**	**+1.8**
KASI	**Kota Agung**	**2.43**	**112**	P	**Pn**	**23 40 57.1**	**+0.8**
KASI				S	**Sn**	**23 41 24.6**	**-0.3**
KLSI		**2.50**	**92**	P	**Pn**	**23 40 58.9**	**+1.6**
KLI	**Kotabumi**	**2.63**	**95**	P	**Pn**	**23 41 00.0**	**+0.9**
KRJI	**Kerinci**	**2.63**	**343**	P	**Pn**	**23 41 01.5**	**+2.3**
PPSI	**Pulau Pagai**	**2.88**	**310**	P	**Pn**	**23 41 04.5**	**+1.9**
PPSI				S	**Sn**	**23 41 37.3**	**+1.2**
PMBI	**Palembang**	**3.05**	**56**	Pn	**Pn**	**23 41 03.6**	**-1.3**
PMBI	**Palembang**	**3.05**	**56**	P	**Pn**	**23 41 05.5**	**+0.7**
PMBI				S	**Sn**	**23 41 41.3**	**+1.2**
BLSI	**Bandar Lampung**	**3.10**	**104**	P	**Pn**	**23 41 06.9**	**+1.4**
BLSI				S	**Sn**	**23 41 42.6**	**+1.3**
JMBI	**JAMBI**	**3.29**	**25**	P	**Pn**	**23 41 10.1**	**+1.9**
PDSI	**Padang**	**4.09**	**334**	P	**Pn**	**23 41 19.7**	**+0.5**

CMAR				pP	**pP**	**23 45 34.0**	**+0.5**		
	comp=Z,4.2nm,0.9s,baz=185,slow=8.1,SNR=4.8								
CMAR				LR	LR	23 54 16.9			
	comp=Z,33nm,20.4s,baz=190,slow=36								
	comp=Z,8.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**23.16**	**352**		**P**	**23 45 19.8**	**-1.5**		
FITZ	**Fitzroy Crossi**	**26.52**	**122**	P	**P**	**23 45 52.0**	**-0.1**		
KNRA	**Kununurra**	**28.29**	**115**	P	**P**	**23 46 06.7**	**-1.3**		
KNRA				IAmb	IAmb	23 46 17.3			
	comp=Z,23nm,1.4s								
MTN	**Manton Dam**	**29.69**	**108**	P	**P**	**23 46 18.6**	**-1.8**		
H08S2	**Diego Garcia H**	**29.71**	**263**	T	T	00 16 54.0			
	baz=85,slow=75,SNR=21								
H08S3	**Diego Garcia H**	**29.72**	**263**	T	T	00 16 54.4			
	baz=85,slow=75,SNR=32								
H08S1	**Diego Carcia H**	**29.73**	**263**	T	T	00 16 55.4			
	baz=85,slow=75,SNR=18								
PZH	**PanZhiHua**	**30.95**	**359**	P	**P**	**23 46 33.5**	**+2.0**		
SHL	**Shillong**	**31.65**	**342**	P	**P**	**23 46 36.7**	**-1.0**		
H01W3	**Cape Leeuwin H**	**32.06**	**161**	T	T	00 20 37.6			
	baz=338,slow=76,SNR=7.0								
H01W2	**Cape Leeuwin H**	**32.08**	**161**	T	T	00 20 37.9			
	baz=338,slow=76,SNR=8.1								
H01W1	**Cape Leeuwin H**	**32.08**	**161**	T	T	00 20 37.9			
	baz=338,slow=76,SNR=8.1								
WB0	**Warramunga Arr**	**34.75**	**118**	P	**P**	**23 47 04.8**	**0.0**		
WRA	**Warramunga Arr**	**34.77**	**119**	P	**P**	**23 47 04.6**	**-0.3**		
	comp=Z,1.5nm,0.8s,baz=301,slow=9.1,SNR=21								
	comp=Z,1.5nm,0.8s								
WRA	**Warramunga Arr**	**34.77**	**119**	P	**P**	**23 47 04.6**	**-0.3**		
EVN	**Everest**	**35.64**	**336**	P	**P**	**23 47 13.2**	**+0.2**		
EVN				IAmb	IAmb	23 47 14.9			
	comp=Z,9.2nm,0.6s								
AS31	**Alice Springs**	**35.93**	**125**		**P**	**23 47 15.4**	**+0.5**		
ASAR	**Alice Springs**	**35.93**	**125**	P	**P**	**23 47 15.6**	**+0.7**		
	comp=Z,1.4nm,0.8s,baz=297,slow=7.6,SNR=30								
	comp=Z,1.4nm,0.8s								
XAN	**Xi'an**	**38.97**	**9**	⇑P	**P**	**23 47 40.0**	**-0.4**		
XAN				pmax	pmax				
	comp=Z,9.0nm,0.9s								
NJ2	**Nanjing**	**39.76**	**22**	*e*P	**P**	**23 47 48.3**	**+1.4**		
NJ2				pmax	pmax				
	comp=Z,11nm,0.6s								
LYN	**LuoYang**	**40.15**	**13**	P	**P**	**23 47 51.0**	**+0.9**		
LYN				pP	pP	23 48 01.8	-1.8		
LYN				pmax	pmax				
	comp=Z,46nm,0.6s								
LYN				pmax	pmax				
	comp=Z,210nm,8.2s								
LZDM	**Lanzhou Array**	**40.39**	**2**	P	**P**	**23 47 52.8**	**+0.3**		
	comp=Z,0.9nm,0.4s,baz=191,slow=15,SNR=4.2								
LZDM				pP	**pP**	**23 48 06.2**	**+0.2**		
	comp=Z,1.2nm,0.4s,baz=172,slow=12,SNR=2.2								
	comp=Z,0.9nm,0.4s								
COEN	**Coen**	**41.40**	**106**	P	**P**	**23 47 59.5**	**-1.3**		
COEN				IAmb	IAmb	23 48 19.1			
	comp=Z,12nm,1.3s								
CTAO	**Charters Tower**	**45.49**	**114**	P	**P**	**23 48 34.2**	**+0.4**		
CTAO				IAmb	IAmb	23 48 54.3			
	comp=Z,11nm,1.1s								
STKA	**Stephens Creek**	**45.76**	**131**	P	**P**	**23 48 37.0**	**+1.3**		
	comp=Z,2.8nm,0.6s,baz=314,slow=10,SNR=4.1								
	comp=Z,2.8nm,0.6s								
HHC	**Hu-ho-hao-te**	**46.06**	**10**	*e*P	**P**	**23 48 41.0**	**+3.1**		
HHC				pmax	pmax				
	comp=Z,6.0nm,0.7s								
HHC				pmax	pmax				
	comp=Z,92nm,6.3s								
NIL	**Nilore**	**46.91**	**326**		**P**	**23 48 44.7**	**+0.1**		
NIL				IAmb	IAmb	23 48 45.8			
	comp=Z,6.1nm,0.7s								
KSRS	**Korea Array**	**48.22**	**28**	P	**P**	**23 48 54.7**	**0.0**		
	comp=Z,2.0nm,0.6s,baz=227,slow=7.1,SNR=11								
	comp=Z,2.0nm,0.6s								
WMQ	**Urumqi**	**49.97**	**346**	*e*P	**P**	**23 49 10.0**	**+1.9**		
WMQ				pP	pP	23 49 23.0	+1.0		
WMQ				pmax	pmax				
	comp=Z,7.0nm,0.7s								
KSH	**Kashi**	**50.15**	**334**	P	**P**	**23 49 09.0**	**-0.6**		
KSH				pmax	pmax				
	comp=Z,5.0nm,0.7s								
WUS	**Wushi**	**50.23**	**337**	P	**P**	**23 49 10.7**	**+0.6**		
WUS				IAmb	IAmb	23 49 11.8			
	comp=Z,7.8nm,0.8s								
TARG	**Taragay, Kyrgy**	**51.23**	**337**	P	**P**	**23 49 15.4**	**-2.6**		
TARG				IAmb	IAmb	23 49 22.6			
	comp=Z,9.8nm,1.0s								
KDJ	**Kajisay**	**51.82**	**336**	P	**P**	**23 49 22.6**	**+0.5**		
SONM	**Songino Array**	**52.37**	**4**	P	**P**	**23 49 26.7**	**+0.7**		
	comp=Z,5.2nm,0.7s,baz=183,slow=8.7,SNR=44								
SONM				pP	**pP**	**23 49 40.4**	**+0.5**		
	comp=Z,10.0nm,0.9s,baz=188,slow=9.2,SNR=15								
	comp=Z,5.2nm,0.7s								
SONM	**Songino Array**	**52.37**	**4**	P	**P**	**23 49 26.6**	**+0.6**		
SONM				IAmb	IAmb	23 49 41.6			
	comp=Z,15nm,1.2s								
ULN	**Ulaanbaatar**	**52.44**	**4**	P	**P**	**23 49 26.6**	**-0.1**		
ULN				IAmb	IAmb	23 49 42.6			
	comp=Z,8.2nm,1.1s								
ARSB	**Arslanbob**	**52.96**	**333**		**P**	**23 49 30.8**	**+0.2**		
ARSB				IAmb	IAmb	23 49 47.6			
	comp=Z,16nm,1.5s								
MJAR	**Matsushiro Arr**	**52.98**	**36**	P	**P**	**23 49 29.3**	**-1.4**		
	comp=Z,0.6nm,0.4s,baz=214,slow=4.1,SNR=1.7								
MJAR				pP	**pP**	**23 49 42.6**	**-2.1**		
	comp=Z,1.4nm,0.8s,baz=205,slow=4.7,SNR=3.0								
	comp=Z,0.6nm,0.4s								
MKAR	**Makanchi Array**	**54.16**	**343**	P	**P**	**23 49 39.3**	**+0.2**		
	comp=Z,7.5nm,0.6s,baz=150,slow=8.8,SNR=53								
	comp=Z,7.5nm,0.6s								
MKAR	**Makanchi Array**	**54.16**	**343**	P	**P**	**23 49 39.0**	**-0.1**		
MAKZ	**Makanchi**	**54.26**	**343**	P	**P**	**23 49 39.7**	**-0.2**		
MAKZ				IAmb	IAmb	23 49 57.8			
	comp=Z,6.7nm,1.1s								
BNX	**BinXian**	**54.93**	**21**	⇑P	**P**	**23 49 44.3**	**-0.4**		
BNX				pmax	pmax				
	comp=Z,11nm,1.0s								
USRK	**Ussuriysk Ar.**	**55.48**	**26**	P	**P**	**23 49 48.6**	**0.0**		
	comp=Z,6.1nm,0.5s,baz=218,slow=5.3,SNR=13								
	comp=Z,6.1nm,0.5s								
HILR	**Hailar Array B**	**56.07**	**14**	P	**P**	**23 49 52.6**	**-0.2**		
	comp=Z,2.1nm,0.5s,baz=194,slow=8.6,SNR=7.5								
HILR				pP	**pP**	**23 50 06.7**	**-0.2**		
	comp=Z,1.7nm,0.5s,baz=196,slow=10,SNR=4.4								
	comp=Z,2.1nm,0.5s								
KURBB	**Kurchatov Arra**	**58.69**	**343**	P	**P**	**23 50 11.4**	**+0.1**		
	comp=Z,3.4nm,0.8s,baz=161,slow=6.3,SNR=20								
KURBB				pP	**pP**	**23 50 25.4**	**+0.1**		
	comp=Z,3.2nm,0.9s,baz=160,slow=6.2,SNR=9.3								
	comp=Z,3.4nm,0.8s								
KURK	**Kurchatov**	**58.75**	**343**	P	**P**	**23 50 11.3**	**-0.4**		
KURK				IAmb	IAmb	23 50 12.5			
	comp=Z,4.9nm,0.7s								
HEH	**HeiHe**	**58.83**	**19**	*e*P	**P**	**23 50 11.8**	**-0.4**		
H04N2	**CROZET ISLANDS**	**60.07**	**218**	T	T	00 55 03.6			
	baz=62,slow=75,SNR=293								
H04N1	**CROZET ISLANDS**	**60.08**	**218**	T	T	00 55 10.0			
	baz=62,slow=75,SNR=304								
H04N3	**CROZET ISLANDS**	**60.09**	**218**	T	T	00 55 08.7			
	baz=62,slow=75,SNR=325								
ZAA0	**Zalesovo Array**	**60.16**	**348**	P	**P**	**23 50 20.6**	**-0.7**		
ZALV	**Zalesovo Beam**	**60.16**	**348**	P	**P**	**23 50 21.1**	**-0.2**		
	comp=Z,7.2nm,0.5s,baz=171,slow=4.9,SNR=47								
	comp=Z,7.2nm,0.5s								
ZALV	**Zalesovo Beam**	**60.16**	**348**	P	**P**	**23 50 20.9**	**-0.4**		
H04S1	**CROZET ISLANDS**	**60.32**	**217**	T	T	00 55 27.0			
	baz=62,slow=75,SNR=10								
H04S3	**CROZET ISLANDS**	**60.33**	**217**	T	T	00 55 08.2			
	baz=62,slow=75,SNR=27								
H04S2	**CROZET ISLANDS**	**60.33**	**217**	T	T	00 55 19.7			
	baz=62,slow=75,SNR=19								
JKA	**Kamikawa-asahi**	**60.57**	**32**	P	**P**	**23 50 24.1**	**-0.2**		
BVAR	**Borovoye Array**	**63.41**	**339**	P	**P**	**23 50 42.8**	**-0.4**		
	comp=Z,4.0nm,0.6s,baz=141,slow=9.3,SNR=31								
BVAR				pP	**pP**	**23 50 57.1**	**-0.1**		
	comp=Z,2.3nm,0.5s,baz=144,slow=7.4,SNR=8.1								
	comp=Z,4.0nm,0.6s								
BORK	**Borovoye**	**63.45**	**339**	P	**P**	**23 50 43.0**	**-0.5**		
BORK				IAmb	IAmb	23 50 43.9			
	comp=Z,4.1nm,0.8s								
AB31	**Akbulak array**	**65.00**	**331**		**P**	**23 50 53.8**	**+0.1**		
AB31				IAmb	IAmb	23 50 54.6			
	comp=Z,5.8nm,0.8s								
ABKAR	**Akbulak array**	**65.00**	**331**		**P**	**23 50 53.6**	**-0.1**		
MAW	**Mawson**	**68.32**	**195**	LR	LR	00 13 43.8			
	comp=Z,39nm,21.7s,baz=40,slow=29								
ARTI	**Arti**	**70.53**	**336**	P	**P**	**23 51 28.1**	**-0.3**		
MBAR	**Mbarara**	**71.50**	**271**	LR	LR	00 19 46.9			
	comp=Z,24nm,18.4s,baz=24,slow=33								
KBZ	**Khabaz**	**71.73**	**319**	P	**P**	**23 51 36.8**	**+0.9**		
	comp=Z,2.0nm,0.9s,baz=129,slow=6.5,SNR=4.0								
	comp=Z,2.0nm,0.9s								
RTZ	**Ruatahuna**	**75.22**	**129**	P	**P**	**23 51 56.5**	**-0.2**		
LPHEP	**Lephephe**	**75.67**	**247**	P	**P**	**23 52 00.6**	**+1.0**		
LPHEP				IAmb	IAmb	23 52 30.0			
	comp=Z,10nm,1.4s								
LBTB	**Lobatse**	**75.95**	**245**	LR	LR	00 18 17.9			
	comp=Z,46nm,19.8s,baz=74,slow=30								
BOSA	**Boshof**	**76.36**	**242**	P	**P**	**23 52 04.8**	**+1.3**		
	comp=Z,2.1nm,0.9s,baz=83,slow=2.4,SNR=4.5								
BOSA				LR	LR	00 17 59.0			
	comp=Z,22nm,21.9s,baz=20,slow=30								
	comp=Z,2.1nm,0.9s								
BOSA	**Boshof**	**76.36**	**242**	P	**P**	**23 52 03.7**	**+0.2**		
BOSA				IAmb	IAmb	23 52 29.3			
	comp=Z,12nm,1.5s								
BRTR	**Keskin Array B**	**76.72**	**312**	P	**P**	**23 52 05.8**	**+0.5**		
	comp=Z,1.0nm,0.6s,baz=124,slow=7.7,SNR=7.3								
	comp=Z,1.0nm,0.6s								
BRTR	**Keskin Array B**	**76.72**	**312**	P	**P**	**23 52 04.4**	**-0.9**		
TIXI	**Tiksi**	**78.10**	**8**	P	**P**	**23 52 11.1**	**-0.9**		
TIXI				IAmb	IAmb	23 52 25.6			
	comp=Z,4.9nm,0.9s								
BURAR	**Bucovina Array**	**84.69**	**319**	P	**P**	**23 52 47.8**	**+0.2**		
FINES	**FINESS Array B**	**87.46**	**332**	P	**P**	**23 53 01.3**	**+0.5**		
	comp=Z,1.6nm,0.7s,baz=74,slow=10,SNR=4.1								
	comp=Z,1.6nm,0.7s								
FINES	**FINESS Array B**	**87.46**	**332**	P	**P**	**23 53 00.5**	**-0.3**		
ARCES	**ARCESS Array B**	**89.68**	**340**	P	**P**	**23 53 11.0**	**-0.2**		
	comp=Z,2.0nm,0.8s,baz=106,slow=7.7,SNR=4.3								
	comp=Z,2.0nm,0.8s								
J16K	**Anvik River**	**97.34**	**27**	P	Pdif	23 53 47.1	+0.5		
F20K	**Avaraart Lake**	**98.93**	**23**	P	**Pdif**	**23 53 52.5**	**-1.0**		
BDFB	**Brasilia**	**144.31**	**235**	PKP	**PKPdf**	**23 59 50.8**	**+0.1**		
	comp=Z,1.3nm,0.4s,baz=114,slow=6.1,SNR=3.5								
BDFB	**Brasilia**	**144.31**	**235**		**PKPdf**	**23 59 50.1**	**-0.6**		
TXAR	**Lajitas Array**	**145.29**	**42**	PKPbc	**PKPab**	**23 59 52.7**	**+0.8**		
	comp=Z,4.5nm,0.7s,baz=275,slow=0.8,SNR=56								
SIUC	**Southern Illin**	**145.45**	**16**	PKPdf	**PKPab**	**23 59 51.6**	**-0.5**		

*NEIC **30** 23:43:31.9±1.2,5.5°,55N±0.0°,07×127.3°E±0.1,h162km±5km, mb4.3/26, Error ellipse: s-maj=15.1km s-min=9.8km az=67.0*

*IDC **30** 23:43:31.3±1.3,5.4°,48N×127.°35E,h164km±10km,mb3.7/15, mbtmp4.2/17,MS2.6/1, Error ellipse: s-maj=23.4km s-min=10.5km az=69.0*

*DJA **30** 23:43:40.3±0.7,5.°N±6.°×12.°7E±.°,h181km±4km,M4.4/12, mB4.8/6,mb4.3/9,MLv4.7/12,Mw(mB)4.1/6*

ISC 30 23:43:30.0±0.5,5.48N±0.05×127.34E±0.07,h150km,n66, σ1§47/74,mb4.3/27,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.35**	**312**	P	**Pn**	**23 44 11.6**	**+2.3**
	204nm,0.4s,baz=78,slow=2.8,SNR=5.5						
DAV				S	**Sn**	**23 44 43.2**	**+3.5**
	351nm,0.4s,baz=272,slow=22,SNR=14						
DAV	**Davao City (W)**	**2.35**	**312**		**Pn**	**23 44 08.7**	**-0.7**
DAV				Sn	**Sn**	**23 44 42.7**	**+3.0**
SGSI	**Sangihe**	**2.54**	**225**	P	**Pn**	**23 44 13.7**	**+2.1**
SGSI				S	**Sn**	**23 44 45.7**	**+2.0**
TNTI	**Ternate**	**4.68**	**180**	Pn	**Pn**	**23 44 40.8**	**+1.5**
KMSI	**Cibinong**	**5.92**	**215**	P	**Pn**	**23 44 57.9**	**+2.2**
GTOI	**Gorontalo**	**6.47**	**222**	P	**Pn**	**23 45 04.3**	**+1.3**
	0.7nm2µm154nm,1.1s						
MRSI	**Marisa**	**7.33**	**227**	P	**Pn**	**23 45 17.3**	**+2.7**
MRSI				S	**Sn**	**23 46 33.8**	**-2.8**
SWI	**Sorong**	**7.42**	**148**	P	**Pn**	**23 45 19.5**	**+3.8**
	0.2nm36nm,0.5s						
SANI	**Sanana**	**7.60**	**190**	P	**Pn**	**23 45 17.7**	**-0.5**
	0.1nm971nm10nm,0.7s						
SANI				S	Sn	23 46 36.2	-6.9
	0.1nm971nm10nm,0.7s						
TOLI2	**Tolitoli**	**7.86**	**237**	Pn	**Pn**	**23 45 23.1**	**+1.6**
LUWI	**Luwuk**	**7.93**	**215**	Pn	**Pn**	**23 45 25.2**	**+2.7**
LUWI	**Luwuk**	**7.93**	**215**	P	**Pn**	**23 45 24.5**	**+2.0**
	0.3nm99nm,0.9s						
APSI	**Ampana**	**8.52**	**222**	P	**Pn**	**23 45 33.1**	**+2.7**
	0.2nm2µm46nm,1.2s						
NLAI	**Namlea**	**8.67**	**182**	P	**Pn**	**23 45 32.6**	**+0.2**
	0.2nm24nm,0.5s						
MPSI	**Mapaga**	**9.02**	**236**	P	**Pn**	**23 45 40.1**	**+3.1**
FAKI	**Fak Fak**	**9.68**	**149**	Pn	**Pn**	**23 45 49.4**	**+3.5**
BATI	**Baumata**	**16.01**	**193**	P	**Pn**	**23 47 09.4**	**+2.4**
	23nm,0.8s,baz=310,slow=6.1,SNR=3.9						
MTN	**Manton Dam**	**18.59**	**168**	P	**P**	**23 47 36.9**	**+1.1**
MTN				IAmb	IAmb	23 47 37.5	
	comp=Z,12nm,1.1s						
GUMO	**Guam**	**19.06**	**64**	LR	LR	23 55 47.6	
	comp=Z,17nm,18.6s,baz=104,slow=39						
JAGI	**Jajag, Banyuwa**	**19.11**	**224**	P	**P**	**23 47 42.4**	**+0.9**
JAGI				IAmb	IAmb	23 47 45.6	
	comp=Z,19nm,1.0s						
FITZ	**Fitzroy Crossi**	**23.49**	**184**	P	**P**	**23 48 26.8**	**+0.4**
MYKOM	**Kota Tinggi**	**23.72**	**262**	P	**P**	**23 48 28.4**	**-0.2**
WB0	**Warramunga Arr**	**26.03**	**165**	P	**P**	**23 48 49.9**	**+0.5**
WB0				IAmb	IAmb	23 49 10.5	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**26.19**	**165**	P	**P**	**23 48 50.2**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=338,slow=10,SNR=15						
WRA				PcP	**PcP**	**23 52 12.7**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=316,slow=3.0,SNR=2.2						
WRA				ScP	**ScP**	**23 55 38.4**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=331,slow=2.7,SNR=1.5						
	comp=Z,2.5nm,1.0s						
WRA	**Warramunga Arr**	**26.19**	**165**	P	**P**	**23 48 51.0**	**+0.2**
PSI	**Prapat**	**28.46**	**266**	P	**P**	**23 49 10.3**	**-1.0**
	comp=Z,4.1nm,0.7s,baz=104,slow=4.2,SNR=5.7						
	comp=Z,4.1nm,0.7s						
RPSI	**Rantau Prapat**	**28.48**	**266**	P	**P**	**23 49 10.3**	**-1.0**
AS31	**Alice Springs**	**29.67**	**168**	P	**P**	**23 49 21.9**	**+0.1**
AS31				PcP	**PcP**	**23 52 22.0**	**-0.5**
ASAR	**Alice Springs**	**29.67**	**168**	P	**P**	**23 49 21.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=340,slow=6.9,SNR=6.3						
ASAR				PcP	**PcP**	**23 52 21.8**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=350,slow=3.9,SNR=5.3						
ASAR				ScP	**ScP**	**23 55 49.5**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=339,slow=3.1,SNR=1.7						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.56**	**297**	P	**P**	**23 49 30.6**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=106,slow=6.9,SNR=12						
	comp=Z,1.6nm,0.6s						
CHTO	**Chiang Mai**	**30.69**	**298**	P	**P**	**23 49 30.5**	**-0.4**
CHTO				IAmb	IAmb	23 49 32.2	
	comp=Z,2.6nm,0.6s						
KSRS	**Korea Array**	**31.83**	**1**	P	**P**	**23 49 40.0**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=181,slow=9.5,SNR=4.6						
	comp=Z,1.4nm,0.7s						
FORT	**Forrest**	**36.06**	**179**	P	**P**	**23 50 17.5**	**+0.3**
SHL	**Shillong**	**39.36**	**304**	P	**P**	**23 50 44.1**	**-1.2**
SHL				IAmb	IAmb	23 50 45.7	
	comp=Z,6.4nm,0.7s						
NWAO	**Narrogin (SRO)**	**39.39**	**193**	P	**P**	**23 50 45.7**	**+0.6**
STKA	**Stephens Creek**	**39.56**	**161**	P	**P**	**23 50 46.9**	**+0.3**
	comp=Z,4.4nm,0.5s,baz=333,slow=9.2,SNR=5.8						
	comp=Z,4.4nm,0.5s						
JKA	**Kamikawa-asahi**	**40.75**	**17**	P	**P**	**23 50 57.1**	**+0.9**
EVN	**Everest**	**44.47**	**305**	P	**P**	**23 51 26.6**	**-0.6**
SONM	**Songino Array**	**45.85**	**340**	P	**P**	**23 51 37.9**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=152,slow=5.7,SNR=2.7						
	comp=Z,0.5nm,0.6s						
PETK	**Petropavlovsk-**	**53.59**	**22**	P	**P**	**23 52 36.2**	**+0.7**
	comp=Z,6.9nm,0.8s,baz=190,slow=7.2,SNR=3.0						
	comp=Z,6.9nm,0.8s						
PETK	**Petropavlovsk-**	**53.59**	**22**	P	**P**	**23 52 35.7**	**+0.2**
MKAR	**Makanchi Array**	**56.48**	**324**	P	**P**	**23 52 56.9**	**+0.5**
	comp=Z,3.2nm,0.5s,baz=117,slow=8.0,SNR=38						
	comp=Z,3.2nm,0.5s						
MKAR	**Makanchi Array**	**56.48**	**324**	P	**P**	**23 52 56.5**	**+0.1**
MAKZ	**Makanchi**	**56.67**	**324**	P	**P**	**23 52 57.9**	**+0.1**
MAKZ				IAmb	IAmb	23 52 59.3	
	comp=Z,9.2nm,1.1s						
ZALV	**Zalesovo Beam**	**59.32**	**332**	P	**P**	**23 53 15.0**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=128,slow=7.6,SNR=2.9						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**59.32**	**332**	P	**P**	**23 53 15.3**	**-0.7**
KURK	**Kurchatov**	**60.61**	**327**	P	**P**	**23 53 24.9**	**+0.1**
KURK				IAmb	IAmb	23 53 25.5	
	comp=Z,3.9nm,0.6s						
KURBB	**Kurchatov Arra**	**60.61**	**327**	P	**P**	**23 53 24.4**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=126,slow=6.6,SNR=30						
	comp=Z,1.9nm,0.5s						
GAR	**Garm**	**61.20**	**312**	P	**P**	**23 53 28.7**	**-0.6**
GAR				IAmb	IAmb	23 53 32.4	
	comp=Z,5.7nm,0.9s						
KKAR	**Karatay Array**	**62.38**	**316**	P	**P**	**23 53 36.0**	**-0.9**
TIXI	**Tiksi**	**66.09**	**1**	P	**P**	**23 54 00.1**	**-0.4**
TIXI				IAmb	IAmb	23 54 36.0	
	comp=Z,5.0nm,1.4s						
BVAR	**Borovoye Array**	**66.20**	**326**	P	**P**	**23 54 01.6**	**0.0**
	comp=Z,2.2nm,0.5s,baz=125,slow=8.2,SNR=13						
	comp=Z,2.2nm,0.5s						
BORK	**Borovoye**	**66.25**	**326**		**P**	**23 54 01.4**	**-0.4**
BORK				IAmb	IAmb	23 54 02.5	
	comp=Z,3.4nm,0.6s						
AB31	**Akbulak array**	**71.19**	**320**	P	**P**	**23 54 31.7**	**-0.8**
ABKAR	**Akbulak array**	**71.19**	**320**	P	**P**	**23 54 32.2**	**-0.3**
ARTI	**Arti**	**73.88**	**327**	P	**P**	**23 54 46.8**	**-1.5**
ARTI				IAmb	IAmb	23 54 47.7	
	comp=Z,4.2nm,0.6s						
L16K	**Owhat River**	**77.25**	**28**	P	**P**	**23 55 06.9**	**-0.5**
J17K	**VABM Dome**	**77.79**	**26**	P	**P**	**23 55 10.6**	**+0.2**
J17K				IAmb	IAmb	23 55 33.5	
	comp=Z,8.2nm,1.4s						
L18K	**Granite Mounta**	**78.64**	**28**	P	**P**	**23 55 15.2**	**+0.2**
RAYN	**Ar Rayn**	**80.36**	**293**	P	**P**	**23 55 24.7**	**-0.6**
RAYN				IAmb	IAmb	23 55 25.8	
	comp=Z,3.3nm,0.8s						
L22K	**Petersville**	**81.42**	**28**	P	**P**	**23 55 29.3**	**-0.8**
L22K				IAmb	IAmb	23 55 30.7	
	comp=Z,5.1nm,0.9s						
ILAR	**Eielson Array**	**83.27**	**25**	P	**P**	**23 55 38.6**	**-1.0**
	comp=Z,0.7nm,1.0s,baz=256,slow=5.2,SNR=4.1						
	comp=Z,0.7nm,1.0s						
VOI	**Vohitsoka**	**83.30**	**247**	P	**P**	**23 55 39.8**	**-1.0**
BMAR	**Burnt Mountain**	**84.23**	**23**	P	**P**	**23 55 45.0**	**+0.5**
ARCES	**ARCESS Array B**	**89.02**	**340**	P	**P**	**23 56 05.6**	**-2.0**
	comp=Z,9.9nm,1.1s,baz=63,slow=5.4,SNR=2.7						
	comp=Z,9.9nm,1.1s						
BRTR	**Keskin Array B**	**89.38**	**310**	P	**P**	**23 56 09.4**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=78,slow=4.3,SNR=1.6						
	comp=Z,0.2nm,0.6s						

ISC Computed Locations for November 2019

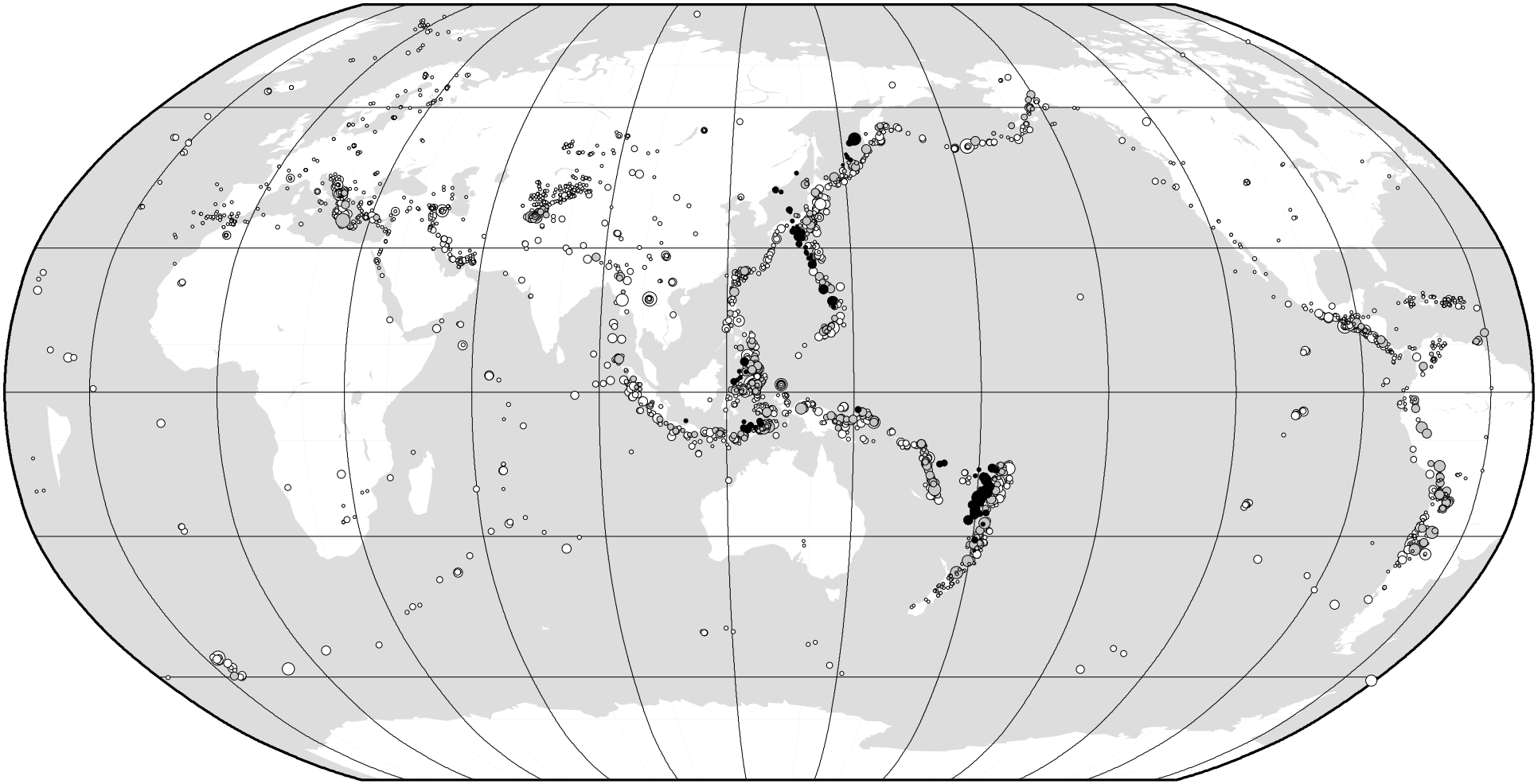

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3509 Events